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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

MOS ***01*** *00:05:15.7±0.9,490S×15355E,h33km,mb5.6/25,Error ellipse: s-maj=9.4km s-min=6.6km az=92.6*

NEIC ***01*** *00:05:17.2±0.2,499S×15366E,h35km,mb5.5/49,MW5.5, Error ellipse: s-maj=6.2km s-min=4.3km az=102.0, Moment Tensor Solution. s18 Moment tensor: Scale 1017Nm; Mrr2.45; Mθθ-1.30; Mϕϕ-1.16; Mrθ0.08; Mrϕ0.85; Mθϕ-0.54; Best double couple: Mo2.30000×1017 NP1: ϕs306.00000°,δ40.00000°,λ80.00000°. NP2: ϕs140.00000°,δ51.00000°,λ99.00000°. Principal axes: T 2.5300, Plg81.0000°, Azm94.0000°; N -0.4200, Plg6.0000°, Azm314.0000°; P -2.1200, Plg5.0000°, Azm223.0000°;*

GCMT ***01*** *00:05:17.2±0.1,522S×15347E,h46km,MW5.4/104, Moment Tensor Solution. s104,c189; s93,c174; Duration: 1s3 Moment tensor: Scale 1017Nm; Mrr1.65±.02; Mθθ-0.72±.02; Mϕϕ-0.93±.02; Mrθ0.27±.02; Mrϕ1.03±.02; Mθϕ-0.28±.02; Best double couple: Mo1.80000×1017 NP1:ϕs319.00000°,δ39.00000°, λ91.00000°. NP2:ϕs137.00000°,δ51.00000°,λ89.00000°. Principal axes: T 1.6940, Plg84.0000°, Azm43.0000°; N 0.2090, Plg1.0000°, Azm138.0000°; P -1.9060, Plg6.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***01*** *00:05:19.3±0.2,503S±003×15362E±003,h68km, mb5.3/111 Error ellipse: s-maj=4.5km s-min=3.7km az=2.3*

IDC ***01*** *00:05:19.8±2.8,508S×15359E,h59km,25km,mb4.8/21, mb1 4.8/23,mb1mx4.8/24,mbtmp4.8/23,ML4.7/2,MS4.5/21, Ms1 4.5/21,ms1mx4.3/30,Error ellipse: s-maj=15.6km s-min=11.3km az=81.0*

BJI ***01*** *00:05:21.6,458S×15377E,h77km,mB5.4,mb5.2,Ms4.8, Msz4.6*

DJA ***01*** *00:05:21,509S×15369E,h64km,Mw5.5/19*

ISC 01 00:05:21.2±0.2,506S±003×15364E±003,h70km, h70km±1.2km:pP-P,n280,σ1§07/260,mb5.3/111,14C-7D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.62**	**125**	P	**Pn**	**00 07 10.1**	**+0.6**
	33nm,0.3s,baz=251,slow=3.2,SNR=7.2						
HNR				S	**Sn**	**00 08 32.6**	**-1.8**
	32nm,0.3s,baz=268,slow=12,SNR=3.7						
HNR				LR	LR	00 09 32.4	
	comp=Z,2μm,21.0s,baz=293,slow=33						
HNR	**Honiara**	**7.62**	**125**	*e*Pn	**Pn**	**00 07 11.1**	**+1.6**
	970nm,0.9s						
HNR				*e*Sn	**Sn**	**00 08 32.4**	**-1.9**
HNR	**Honiara**	**7.62**	**125**	*e*P	**Pn**	**00 07 11.1**	**+1.6**
HNR				*e*		00 08 32.4	
HNR				pmax	pmax		
	comp=Z,970nm,0.9s						
PMG	**Port Moresby**	**7.74**	**236**	*e*Pn	**Pn**	**00 07 09.8**	**-1.4**
PMG				*e*Sn	**Sn**	**00 08 28.7**	**-8.7**
PMG	**Port Moresby**	**7.74**	**236**	P	**Pn**	**00 07 09.7**	**-1.5**
	comp=Z,630nm,0.8s,comp=Z,6μmcomp=Z,5.6nm						
COEN	**Coen**	**13.58**	**229**	*e*Pn	**Pn**	**00 08 29.9**	**-0.8**
	comp=Z,42nm,0.9s						
COEN	**Coen**	**13.58**	**229**	P	**Pn**	**00 08 31.1**	**+0.4**
	comp=Z,74nm,1.0s,comp=Z,1μm						
MMPI	**Merauke**	**13.59**	**255**	P	**Pn**	**00 08 30.3**	**-0.6**
	comp=Z,1μm,0.4s						
CTA	**Charters Tower**	**16.57**	**205**	*e*P	**Pn**	**00 09 09.4**	**+0.2**
	comp=Z,83nm,1.0s						
CTA				*e*S	**S**	**00 12 12.9**	**-7.4**
CTA				*e*		00 14 32.8	
CTA	**Charters Tower**	**16.57**	**205**	P	**Pn**	**00 09 07.8**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=27,slow=13,SNR=44						
CTA				LR	LR	00 14 44.2	
	comp=Z,4μm,21.2s,baz=22,slow=34						
CTA	**Charters Tower**	**16.57**	**205**	*e*P	**Pn**	**00 09 09.4**	**+0.2**
CTA				*e*S	**S**	**00 12 12.9**	**-7.4**
CTA				pmax	pmax		
	comp=Z,83nm,1.0s						
CTAO	**Charters Tower**	**16.57**	**205**	*e*Pn	**Pn**	**00 09 09.4**	**+0.2**
	comp=Z,190nm,1.1s						
CTAO	**Charters Tower**	**16.57**	**205**	*e*P	**Pn**	**00 09 09.4**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,190nm,1.1s						
CTAO	**Charters Tower**	**16.57**	**205**	P	**Pn**	**00 09 09.7**	**+0.5**
	comp=Z,252nm,1.8s,comp=Z,4μm						
TARA	**Tarawa**	**20.29**	**72**	*e*P	**P**	**00 09 53.7**	**+2.2**
	comp=Z,387nm,1.0s						
TARA				*e*		00 10 05.1	
TARA				*e*S	**S**	**00 13 33.2**	**-2.2**
EIDS	**Eidsvold**	**20.34**	**187**	*e*P	**P**	**00 09 52.5**	**+0.7**
	comp=Z,255nm,1.0s						
EIDS				*e*S	**S**	**00 13 35.0**	**-1.1**
GUMO	**Guam**	**20.47**	**335**	P	**P**	**00 09 53.6**	**+0.2**
	comp=Z,222nm,1.1s,baz=166,slow=8.1,SNR=4.6						
GUMO				LR	LR	00 17 07.0	
	comp=Z,381nm,19.5s,baz=133,slow=35						
GUMO	**Guam**	**20.47**	**335**	*e*P	**P**	**00 09 53.5**	**+0.1**
	comp=Z,506nm,1.2s						
GUMO				*e*		00 10 06.9	
GUMO				*e*S	**S**	**00 13 37.0**	**-1.9**
GUMO	**Guam**	**20.47**	**335**	*e*P	**P**	**00 09 53.5**	**+0.1**
GUMO				*e*		00 10 06.9	
GUMO				*e*S	**S**	**00 13 37.0**	**-1.9**
GUMO				pmax	pmax		
	comp=Z,506nm,1.2s						
GUMO	**Guam**	**20.47**	**335**	P	**P**	**00 09 55.1**	**+1.7**
	comp=Z,539nm,1.2s,comp=Z,5μm						
NOUC	**Port Laguerre**	**20.91**	**145**	*e*P	**P**	**00 09 57.7**	**-0.4**
NOUC				*e*S		00 10 10.8	
DZM	**Mont Dzumac**	**20.97**	**145**	*e*P	**P**	**00 09 59.0**	**+0.3**
DZM				*e*		00 10 11.8	
DZM				*e*S	**S**	**00 13 49.0**	**+0.5**
KAKA	**Kakadu**	**22.26**	**249**	*e*P	Px	00 10 03.4	
	comp=Z,193nm,0.5s						
KAKA				*e*S	Sx	00 14 02.2	
SWI	**Sorong**	**22.73**	**280**	P	**P**	**00 10 19.3**	**+1.7**
	comp=Z,261nm,1.0s,comp=Z,2μm,mb5.5						
WRAB	**Tennant Creek**	**23.89**	**230**	P	**P**	**00 10 28.0**	**-0.6**
	comp=Z,726nm,0.8s,mb6.1,SNR=22						
WRAB	**Tennant Creek**	**23.89**	**230**	*e*P	**P**	**00 10 27.9**	**-0.7**
	comp=Z,81nm,0.7s,mb5.2						
WRAB				*e*PcP	PcP	00 10 08.4	-1.5
WRAB	**Tennant Creek**	**23.89**	**230**	*e*P	**P**	**00 10 27.9**	**-0.7**
WRAB				*e*		00 10 08.4	
WRAB				pmax	pmax		
	comp=Z,81nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**23.89**	**230**	P	**P**	**00 10 28.5**	**-0.1**
	comp=Z,141nm,0.9s,comp=Z,2μm,mb5.3						
WB2	**Warramunga Arr**	**23.90**	**230**	*e*P	**P**	**00 10 27.7**	**-0.9**
WB2				*e*S	**S**	**00 14 40.2**	**+0.1**
WB2				*e*		00 17 50.6	
WRA	**Warramunga Arr**	**23.91**	**230**	P	**P**	**00 10 27.2**	**-1.5**
	comp=Z,28nm,0.8s,mb4.6,baz=54,slow=10.0,SNR=122						
WRA				PcP	PcP	00 14 10.4	+0.4
	comp=Z,22nm,0.9s,baz=51,slow=2.0,SNR=8.3						
WRA				LR	LR	00 19 37.6	
	comp=Z,2μm,21.6s,baz=55,slow=36						
WRA	**Warramunga Arr**	**23.91**	**230**	P	**P**	**00 10 27.2**	**-1.5**
WRA						00 14 10.4	
ARMA	**Armidale**	**25.29**	**184**	*e*P	**P**	**00 10 42.3**	**+1.1**
ARMA				*e*S	**S**	**00 15 04.3**	**+2.1**
LBMI	**Labuha**	**26.46**	**279**	P	**P**	**00 10 55.6**	**+3.6**
	comp=Z,328nm,1.2s,comp=Z,2μm,mb5.6						
ASAR	**Alice Springs**	**26.53**	**224**	P	**P**	**00 10 52.2**	**-0.3**
	comp=Z,11nm,0.9s,mb4.4,baz=56,slow=8.9,SNR=29						
ASAR				PcP	PcP	00 14 16.2	+0.5
	comp=Z,19nm,1.0s,baz=60,slow=3.0,SNR=9.2						
STKA	**Stephens Creek**	**28.96**	**202**	*e*P	**P**	**00 11 13.0**	**-1.1**
	comp=Z,15nm,0.9s,mb4.6						
STKA				*e*S	**S**	**00 15 57.9**	**-2.2**
STKA	**Stephens Creek**	**28.96**	**202**	P	**P**	**00 11 13.1**	**-1.0**
	comp=Z,11nm,0.8s,mb4.5,baz=16,slow=8.7,SNR=11						
STKA				LR	LR	00 23 13.6	
	comp=Z,2μm,18.4s,baz=106,slow=37						
BATI	**Baumata**	**30.13**	**258**	P	**P**	**00 11 24.2**	**-0.4**
	comp=Z,31nm,0.6s,mb5.1,baz=247,slow=0.5,SNR=16						
BATI	**Baumata**	**30.13**	**258**	P	**P**	**00 11 25.7**	**+1.0**
	comp=Z,63nm,1.3s,comp=Z,815nm,mb5.1						
CNB	**Canberra Magne**	**30.36**	**187**	*e*P	**P**	**00 11 27.3**	**+0.9**
CNB				*e*S	**S**	**00 16 23.9**	**+2.0**
CAN	**Canberra**	**30.41**	**188**	*e*P	**P**	**00 11 27.4**	**+0.5**
CAN				*e*pP	pP	00 11 42.2	-1.4
CAN				*e*PP	PP	00 12 35.9	-0.8
DAV	**Davao City (W)**	**30.48**	**293**	LR	LR	00 23 45.9	
	comp=Z,781nm,19.9s,baz=288,slow=36						
TOO	**Toolangi**	**33.20**	**192**	*e*P	**P**	**00 11 53.6**	**+2.3**
TOO				*e*S	**S**	**00 17 14.2**	**+8.0**
KAPI	**Kappang**	**33.75**	**269**	P	**P**	**00 11 53.8**	**-2.7**
	comp=Z,14nm,0.9s,mb4.8,baz=133,slow=5.6,SNR=7.9						
KAPI				PcP	PcP	00 14 34.6	-0.1
	comp=Z,20nm,0.9s,baz=164,slow=3.9,SNR=4.1						
KAPI	**Kappang**	**33.75**	**269**	*e*P	**P**	**00 11 54.2**	**-2.3**
KAPI				*e*PcP	PcP	00 14 34.5	-0.3
KAPI				*e*S	**S**	**00 17 14.1**	**-1.2**
KAPI	**Kappang**	**33.75**	**269**	P	**P**	**00 11 55.3**	**-1.2**
	comp=Z,40nm,0.9s,comp=Z,362nm,mb5.2						
FORT	**Forrest**	**35.12**	**220**	*e*P	**P**	**00 12 07.3**	**-0.8**
	comp=Z,49nm,0.6s,mb5.5						
FORT				*e*		00 14 55.0	
AFI	**Afiamalu**	**35.19**	**107**	LR	LR	00 24 54.3	
	comp=Z,701nm,18.8s,baz=46,slow=33						
MBWA	**Marble Bar**	**36.57**	**241**	*e*P	**P**	**00 12 19.8**	**-0.8**
	comp=Z,98nm,1.4s,mb5.5						
MBWA				*e*	pP	00 12 35.8	-1.7
MBWA				*e*PP	PP	00 13 43.5	-1.5
MBWA				*e*S	**S**	**00 17 58.0**	**-0.4**
KHKI	**Kahang-Kahang**	**37.90**	**263**	P	**P**	**00 12 31.7**	**-0.3**
TAU	**Tasmania Unive**	**38.10**	**188**	*e*P	**P**	**00 12 34.9**	**+1.6**
	comp=Z,82nm,1.1s,mb5.5						
TAU				*e*	pP	00 12 49.5	-0.7
TAU				*e*PcP	PcP	00 14 47.0	0.0
TAU	**Tasmania Unive**	**38.10**	**188**	*e*P	**P**	**00 12 34.9**	**+1.7**
TAU				*e*	pP	00 12 49.5	-0.8
TAU				*e*		00 14 47.0	
TAU				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.5						
BBKI	**Banjar Baru**	**38.72**	**271**	P	**P**	**00 12 41.1**	**+2.2**
	comp=Z,152nm,0.9s,mb5.8						
NBBI	**Negara**	**38.88**	**263**	P	**P**	**00 12 47.1**	**+6.9**
	comp=Z,244nm,1.2s,mb5.9						
KKM	**Kota Kinabalu**	**38.96**	**286**	*e*P	**P**	**00 12 40.5**	**-0.3**
KKM				*e*pP	pP	00 12 57.9	-0.1
KKM				*e*PcP	PcP	00 14 47.0	-3.3
URZ	**Urewera**	**39.34**	**150**	P	**P**	**00 12 42.8**	**-0.9**
	comp=Z,30nm,0.9s,mb5.1,baz=9.8,slow=4.0,SNR=11						
JOW	**Kunigami**	**40.10**	**324**	P	**P**	**00 12 50.0**	**-0.1**
	comp=Z,69nm,0.9s,mb5.5,baz=155,slow=9.3,SNR=9.2						
JOW				LR	LR	00 26 36.3	
	comp=Z,416nm,21.6s,baz=124,slow=32						
JHJ	**Hachijo jima 2**	**40.18**	**342**	LR	LR	00 25 31.5	
	comp=Z,256nm,20.9s,baz=248,slow=30						
SNZO	**South Karori**	**40.72**	**155**	*e*P	**P**	**00 12 54.9**	**-0.2**
	comp=Z,167nm,1.3s,mb5.7						
SNZO				*e*PP	PP	00 14 32.8	+2.6
RPZ	**Rata Peaks**	**41.45**	**161**	P	**P**	**00 13 00.8**	**-0.2**
	comp=Z,133nm,0.9s,mb5.8,baz=43,slow=2.1,SNR=40						
RPZ	**Rata Peaks**	**41.45**	**161**	P	**P**	**00 13 00.8**	**-0.2**
SJI	**Sawahan**	**41.68**	**264**	P	**P**	**00 13 03.1**	**-0.3**
SBUM	**Sibu**	**42.04**	**279**	P	**P**	**00 13 07.3**	**+0.9**
STKI	**Sintang**	**42.41**	**276**	P	**P**	**00 13 10.1**	**+0.7**
NACB	**Ninganchiao**	**42.65**	**314**	*e*P	**P**	**00 13 10.3**	**-0.8**
	comp=Z,302nm,1.1s,mb5.9						
NACB				*e*pP	pP	00 13 27.6	-0.8
KLBR	**Kellerberrin**	**42.74**	**227**	*e*P	**P**	**00 13 10.2**	**-1.5**
	comp=Z,25nm,0.9s,mb4.9						
KLBR				*e*		00 15 02.2	
YHNB	**Yeheng**	**43.11**	**315**	*e*P	**P**	**00 13 14.5**	**-0.3**
	comp=Z,273nm,1.6s,mb5.7						
YHNB				*e*pP	pP	00 13 30.8	-1.4
BJII	**Banjamegara**	**43.72**	**265**	P	**P**	**00 13 20.1**	**+0.2**
KSM	**Kuching**	**43.77**	**277**	*e*P	**P**	**00 13 20.1**	**-0.2**
KSM				*e*pP	pP	00 13 36.3	-1.3
KSM	**Kuching**	**43.77**	**277**	P	**P**	**00 13 20.6**	**+0.3**
	comp=Z,49nm,1.2s,mb5.1						
NWAO	**Narrogin (SRO)**	**43.80**	**226**	P	**P**	**00 13 18.6**	**-1.6**
	comp=Z,12nm,0.9s,mb4.6,baz=70,slow=5.4,SNR=6.1						
NWAO				LR	LR	00 31 40.4	
	comp=Z,3μm,21.0s,baz=221,slow=36						
MJAR	**Matsushiro Arr**	**43.83**	**342**	P	**P**	**00 13 18.1**	**-2.3**
	comp=Z,1.5nm,0.4s,mb4.1,baz=166,slow=8.0,SNR=7.0						
MJAR				LR	LR	00 31 36.7	
	comp=Z,299nm,18.7s,baz=180,slow=36						
MAJO	**Matsushiro**	**43.84**	**342**	*e*P	**P**	**00 13 19.1**	**-1.3**
MAT	**Matsushiro**	**43.84**	**342**	P	**P**	**00 13 16.0**	**-4.4**
MAT				S	**S**	**00 19 46.0**	**-0.4**
MUN	**Mundaring**	**44.07**	**228**	*e*P	**P**	**00 13 21.9**	**-0.6**
MUN				*e*S	**S**	**00 19 48.8**	**-1.2**
JCJI	**Jatiwangi**	**45.15**	**266**	P	**P**	**00 13 32.7**	**+1.4**
	comp=Z,491nm,0.8s,mb6.3						
LEM	**Lembang**	**45.79**	**265**	P	**P**	**00 13 38.5**	**+2.1**
	comp=Z,241nm,1.0s,comp=Z,2μm,mb5.9						
TPI	**Tanjungpandan**	**45.92**	**271**	P	**P**	**00 13 38.4**	**+0.9**
	comp=Z,74nm,1.0s,comp=Z,648nm,mb5.4						
SSE	**Sheshan**	**47.46**	**321**	*e*P	**P**	**00 13 49.8**	**+0.6**
SSE				AP	pP	00 14 09.2	+2.5
SSE				XP	sP	00 14 18.8	+4.2
SSE				S	**S**	**00 20 40.6**	**+1.8**
SSE				AMB	AMB		
	comp=Z,42nm,1.3s,mb5.0						
SSE				AMB	AMB		
	comp=Z,141nm,4.0s						
SSE				LR	LR		
	comp=N,232nm,24.5s						
SSE				LR	LR		
	comp=E,466nm,24.7s						
SSE				LR	LR		
	comp=Z,483nm,24.6s						
KSRS	**Korea Array**	**48.61**	**333**	P	**P**	**00 13 58.0**	**+0.1**
	comp=Z,22nm,1.0s,mb5.0,baz=151,slow=9.2,SNR=28						
KS15	**Wonju Array Si**	**48.62**	**333**	*e*P	**P**	**00 13 58.0**	**0.0**
INCN	**Inchon**	**49.24**	**332**	*e*P	**P**	**00 14 03.3**	**+0.6**
	comp=Z,169nm,1.0s,mb5.9						
QIZ	**Qiongzhong**	**49.32**	**300**	P	**P**	**00 14 03.2**	**-0.5**
QIZ				XP	sP	00 14 29.1	-0.1
QIZ				S	**S**	**00 21 04.8**	**-0.5**
QIZ				XS	sS	00 21 35.3	+0.1
QIZ				AMB	AMB		
	comp=Z,41nm,1.6s,mb5.1						
QIZ				LR	LR		
	comp=E,711nm,21.5s						
QIZ				LR	LR		
	comp=Z,1μm,23.4s						
MCQ	**Macquarie Isla**	**49.48**	**176**	*e*P	**P**	**00 14 05.3**	**+1.0**
MCQ				*e*pP	pP	00 14 21.1	-0.8
NJ2	**Nanjing**	**49.57**	**320**	*e*P	**P**	**00 14 06.8**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
WHN	**Wuhan**	**51.62**	**316**	⇑P	**P**	**00 14 21.3**	**+0.5**
WHN				XP	sP	00 14 52.5	+6.0
WHN				S	**S**	**00 21 39.1**	**+2.2**
WHN				AMB	AMB		
	comp=Z,150nm,1.2s,mb5.9						
WHN				AMB	AMB		
	comp=Z,482nm,7.2s						
WHN				LR	LR		
	comp=Z,1μm,26.0s						
PDSI	**Padang**	**53.25**	**273**	P	**P**	**00 14 31.0**	**-2.2**
	comp=Z,76nm,0.8s,mb5.8						
PPI	**Padang Panjang**	**53.36**	**273**	P	**P**	**00 14 32.3**	**-1.7**
	comp=Z,95nm,1.0s,comp=Z,1μm,mb5.8						
IPM	**Ipoh**	**53.40**	**279**	P	**P**	**00 14 34.4**	**+0.1**
	comp=Z,29nm,1.2s,mb5.2						
MDJ	**Mudanjiang**	**53.96**	**339**	P	**P**	**00 14 36.9**	**-0.9**
MDJ				AP	pP	00 14 54.5	-1.2
MDJ				XP	sP	00 15 02.9	-0.6
MDJ				PCP	PcP	00 15 43.0	+0.7
MDJ				S	**S**	**00 22 11.3**	**+3.0**
MDJ				AMB	AMB		
	comp=Z,13nm,1.5s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,151nm,6.1s						
MDJ				LR	LR		
	comp=N,366nm,36.2s						
MDJ				LR	LR		
	comp=E,494nm,37.1s						
MDJ				LR	LR		
	comp=Z,325nm,30.7s						
GYA	**Guiyang**	**55.22**	**307**	⇑P	**P**	**00 14 48.1**	**+0.8**
GYA				AP	pP	00 15 09.4	+4.2
GYA				XP	sP	00 15 18.2	+5.2
GYA				PCP	PcP	00 15 52.0	+4.4
GYA				PP	PP	00 16 54.9	+3.4
GYA				PPP		00 18 05.0	
GYA				SCP	ScP	00 19 39.2	-1.2
GYA				PCS	PcS	00 19 47.3	-0.4
GYA				S	**S**	**00 22 28.5**	**+2.7**
GYA				XS	sS	00 22 58.3	+2.1
GYA				SS	SS	00 26 09.4	-1.7
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,200nm,7.3s						
GYA				LR	LR		
	comp=N,810nm,23.9s						
GYA				LR	LR		
	comp=E,670nm,24.8s						
GYA				LR	LR		
	comp=Z,960nm,21.0s						
HABR	**Khabarovsk**	**55.74**	**345**	*e*P	**P**	**00 14 48.6**	**-2.0**
HABR				*e*		00 14 58.3	
HABR				*e*		00 15 47.4	
HABR				*e*		00 16 52.6	
HABR				*e*		00 18 07.1	
HABR				*e*S	**S**	**00 22 32.7**	**+0.7**
HABR				*e*		00 22 49.5	
HABR				*e*		00 24 34.4	
HABR				*e*		00 26 20.6	
BJI	**Beijing**	**56.57**	**326**	P	**P**	**00 14 56.3**	**-0.4**
BJI				PP	PP	00 17 04.5	+1.1
BJI				S	**S**	**00 22 40.1**	**-3.3**
BJI				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
BJI				AMB	AMB		
	comp=Z,272nm,4.9s						
BJI				LR	LR		
	comp=N,354nm,22.9s						
BJI				LR	LR		
	comp=E,286nm,29.1s						
BJI				LR	LR		
	comp=Z,611nm,30.9s						
NST	**Nakhon Sawan**	**56.83**	**292**	P	**P**	**00 15 00.0**	**+1.1**
PPT	**Papeete**	**56.85**	**108**	*e*S	**S**	**00 22 48.2**	**+0.4**
	comp=Z,430nm,25.5s						
PPT				*e*LR	LR	00 31 47.4	
	comp=Z,749nm,31.5s						
PPT	**Papeete**	**56.85**	**108**	LR	LR	00 33 00.1	
	comp=Z,433nm,19.6s,baz=0.5,slow=29						
TIAR	**Tiarei**	**57.07**	**108**	*e*P	**P**	**00 15 01.5**	**+0.8**
	comp=Z,292nm,0.9s,mb6.3						
KLR	**Kul'dur**	**57.33**	**343**	*e*P	**P**	**00 14 55.9**	**-6.0**
KLR				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.5						
XAN	**Xi'an**	**57.39**	**316**	P	**P**	**00 15 02.6**	**0.0**
XAN				AP	pP	00 15 22.4	+1.8
XAN				XP	sP	00 15 30.5	+2.1
XAN				PCP	PcP	00 15 56.8	+0.9
XAN				PP	PP	00 17 11.4	+0.7
XAN				PPP		00 18 34.0	
XAN				SCP	ScP	00 19 48.3	-1.5
XAN				PCS	PcS	00 19 56.5	-0.5
XAN				S	**S**	**00 22 50.5**	**-3.8**
XAN				PS		00 23 14.4	
XAN				SCS	ScS	00 24 41.2	-4.7
XAN				SS	SS	00 26 42.3	-2.8
XAN				AMB	AMB		
	comp=Z,65nm,1.1s,mb5.6						
XAN				AMB	AMB		
	comp=Z,198nm,12.5s						
XAN				LR	LR		
	comp=N,99nm,22.9s						
XAN				LR	LR		
	comp=E,240nm,20.1s						
XAN				LR	LR		
	comp=Z,568nm,21.0s						
TBI	**Tubuai**	**57.69**	**114**	*e*LR	LR	00 32 12.2	
	comp=Z,1μm,32.5s						
KMI	**Kunming**	**57.82**	**304**	P	**P**	**00 15 06.8**	**+1.0**
KMI				AP	pP	00 15 26.7	+2.8
KMI				XP	sP	00 15 35.7	+4.0
KMI				PCP	PcP	00 15 58.8	+1.0
KMI				PP	PP	00 17 14.3	-0.5
KMI				PPP		00 18 36.0	
KMI				S	**S**	**00 23 00.2**	**-0.1**
KMI				XS	sS	00 23 35.0	+4.1
KMI				SS	SS	00 26 50.2	-2.0
KMI				SSS		00 29 19.9	
KMI				AMB	AMB		
	comp=Z,38nm,1.3s,mb5.3						
KMI				AMB	AMB		
	comp=Z,266nm,4.6s						
KMI				LR	LR		
	comp=N,317nm,20.1s						
KMI				LR	LR		
	comp=E,543nm,21.9s						
KMI				LR	LR		
	comp=Z,902nm,22.0s						
PET	**Petropavlovsk**	**58.02**	**4**	*e*P	**P**	**00 15 06.2**	**-0.5**
PET				*e*S	**S**	**00 23 04.4**	**+2.5**
PET				*e*SS	SS	00 26 58.8	+4.4
PET				pmax	pmax		
	comp=Z,200nm,8.2s						
PEA0B	**Petropavlovsk-**	**58.05**	**3**	*e*P	**P**	**00 15 07.0**	**+0.1**
PEA0B				*e*pP	pP	00 15 26.0	+1.0
PEA0B				*e*PcP	PcP	00 15 57.6	-0.4
PETK	**Petropavlovsk-**	**58.05**	**3**	P	**P**	**00 15 06.6**	**-0.3**
	comp=Z,4.1nm,0.5s,mb4.7,baz=165,slow=4.5,SNR=6.4						
PETK				LR	LR	00 36 03.5	
	comp=Z,334nm,21.7s,baz=176,slow=32						
PETK	**Petropavlovsk-**	**58.05**	**3**	P	**P**	**00 15 06.6**	**-0.3**
PETK				LR	LR	00 36 03.5	
BDT	**Bhumibol Dam**	**58.32**	**294**	P	**P**	**00 15 10.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**58.74**	**295**	P	**P**	**00 15 12.7**	**+0.4**
	comp=Z,44nm,0.9s,mb5.5,baz=112,slow=5.2,SNR=131						
CMAR				LR	LR	00 38 51.8	
	comp=Z,312nm,20.9s,baz=112,slow=34						
CHTO	**Chiang Mai**	**58.85**	**295**	*e*P	**P**	**00 15 13.0**	**-0.1**
CHTO				*e*pP	pP	00 15 30.2	-1.0
CHTO				*e*PcP	PcP	00 16 00.8	-1.1
BSI	**Banda Aceh**	**59.19**	**279**	P	**P**	**00 15 16.0**	**+0.4**
	comp=Z,44nm,1.1s,mb5.4						
CD2	**Chengdu**	**59.54**	**310**	⇑P	**P**	**00 15 18.2**	**+0.5**
CD2				AP	pP	00 15 37.6	+1.8
CD2				XP	sP	00 15 46.3	+2.7
CD2				PCP	PcP	00 16 04.5	0.0
CD2				PP	PP	00 17 32.4	+2.5
CD2				PCS	PcS	00 20 05.2	-1.5
CD2				S	**S**	**00 23 20.8**	**-1.6**
CD2				XS	sS	00 23 54.2	+1.0
CD2				SCS	ScS	00 24 57.7	-4.2
CD2				SS	SS	00 27 18.7	-0.3
CD2				AMB	AMB		
	comp=Z,150nm,0.9s,mb6.0						
CD2				AMB	AMB		
	comp=Z,310nm,7.2s						
CD2				LR	LR		
	comp=N,700nm,23.6s						
CD2				LR	LR		
	comp=E,830nm,25.2s						
CD2				LR	LR		
	comp

comp=Z,995nm,17.5s
DRV Dumont d'Urvil 62.22 186 P **P** **00 15 41.0 +5.8**
DRV Dumont d'Urvil 62.22 186 PP PP 00 18 22.0 +29
DRV S **S** **00 23 52.0 -3.4**
DRV SS SS 00 28 45.0 +45
DRV L 00 31 00.0
DRV R 00 34 00.0
CLNS Chul'man 66.00 343 *e*P **P** **00 16 00.3 +0.3**
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.7
CLNS pmax pmax
comp=E,3.0nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,1.0s
GTA Gaotai 66.42 317⇑ *i*P **P** **00 16 04.5 +1.4**
GTA AP pP 00 16 24.8 +3.3
GTA XP sP 00 16 32.9 +3.7
GTA PP PP 00 18 34.5 +4.3
GTA S S 00 24 52.3 +4.2
GTA XS sS 00 25 20.8 +1.5
GTA SS SS 00 29 06.3 +0.2
GTA AMB AMB
comp=Z,99nm,1.2s,mb5.5
GTA AMB AMB
comp=Z,702nm,7.5s
GTA LR LR
comp=N,205nm,18.9s
GTA LR LR
comp=E,234nm,21.3s
GTA LR LR
comp=Z,431nm,25.5s
ULN Ulaanbaatar 66.66 328 *e*P **P** **00 16 05.0 +0.5**
ULN eqP pP 00 16 22.6 -0.2
SONM Songino Array 66.99 327 P **P** **00 16 06.7 +0.1**
comp=Z,16nm,1.0s,mb4.8,baz=133,slow=5.5,SNR=66
SONM LR LR 00 46 41.5
comp=Z,346nm,18.9s,baz=137,slow=37
SEY Seymchan 67.81 359⇑ *e*P **P** **00 16 11.4 0.0**
SEY Seymchan 67.81 359⇑ *e*P **P** **00 16 11.3 -0.1**
CASY Casey 68.01 197 *e*P **P** **00 16 12.7 0.0**
LSA Lhasa 69.07 304 P **P** **00 16 20.8 +0.8**
LSA PCP PcP 00 16 42.5 -1.2
LSA PP PP 00 18 56.6 +3.1
LSA S S 00 25 21.6 +1.4
LSA AMB AMB
comp=Z,20nm,1.1s,mb4.9
LSA LR LR
comp=E,460nm,24.0s
LSA LR LR
comp=Z,580nm,21.5s
YAK Yakutsk 69.40 348 *e*P **P** **00 16 21.0 -0.3**
YAK pmax pmax
comp=Z,24nm,1.0s,mb5.0
YAK pmax pmax
comp=N,12nm,1.4s
ZAK Zakamensk 70.15 328 *e*P **P** **00 16 25.9 -0.3**
ZAK pmax pmax
comp=Z,39nm,1.1s,mb5.2
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
BOD Bodaibo 70.33 339 *e*P **P** **00 16 25.6 -1.6**
BOD pmax pmax
comp=Z,13nm,1.3s,mb4.6
TLY Talaya 70.72 330 *i*P **P** **00 16 29.7 0.0**
TLY Talaya 70.72 330 *e*P **P** **00 16 29.8 +0.1**
TLY pmax pmax
comp=Z,20nm,1.0s,mb4.9
IRK Irkutsk 70.75 330 *e*P **P** **00 16 29.3 -0.5**
IRK *e*S S 00 25 30.1 -8.8
IRK pmax pmax
comp=Z,44nm,1.2s,mb5.2
RKT Rikitea 70.92 113 *e*SS SS 00 30 18.5 +2.3
comp=Z,281nm,31.0s
RKT *e*LR LR 00 38 19.8
comp=Z,1μm,27.2s
TAPN Taplejung 71.25 301 *e*P **P** **00 16 34.2 +0.8**
comp=Z,110nm,1.1s,mb5.6
ODAN Odare 71.39 300 *e*P **P** **00 16 35.0 +0.7**
comp=Z,90nm,0.9s,mb5.6
BOK Bokaro 71.92 297 *e*P **P** **00 16 37.5 0.0**
MOY Mondy 72.07 329 *e*P **P** **00 16 38.2 +0.4**
MOY pmax pmax
comp=Z,52nm,1.4s,mb5.2
RAMN Ramite 72.10 300 *e*P **P** **00 16 39.0 +0.5**
comp=Z,64nm,1.1s,mb5.3
JIRN Jiri 72.64 301 *e*P **P** **00 16 42.6 +0.9**
comp=Z,38nm,0.8s,mb5.3
VIS Vishakhapatnam 72.94 290 *e*P **P** **00 16 43.2 -0.5**
GUN Gumba 72.97 301 *e*P **P** **00 16 44.6 +0.9**
comp=Z,100nm,0.9s,mb5.6
SBA Scott Base 73.07 177 *e*P **P** **00 16 45.0 +1.6**
comp=Z,89nm,1.1s,mb5.5
SBA Scott Base 73.07 177 *e*P **P** **00 16 45.0 +1.6**
SBA pmax pmax
comp=Z,89nm,1.1s,mb5.5
PKI Pulchoki 73.28 301 *e*P **P** **00 16 45.9 +0.4**
comp=Z,88nm,1.2s,mb5.5
PKI Pulchoki 73.28 301 *e*P **P** **00 16 45.9 +0.4**
PKI pmax pmax
comp=Z,73nm,1.2s,mb5.4
PKIN Phulchoki 73.30 301 *e*P **P** **00 16 45.9 +0.3**
comp=Z,73nm,1.2s,mb5.4
KKN Kakani 73.45 301 *e*P **P** **00 16 47.1 +0.6**
BILL Bilibino 73.48 5 *e*P **P** **00 16 45.8 0.0**
comp=Z,41nm,1.0s,mb5.2
BILL *e* pP 00 17 06.5 +2.0
BILL Bilibino 73.48 5⇓ *e*P **P** **00 16 46.0 +0.2**
BILL *i* pP 00 17 07.1 +2.6
BILL *e* 00 19 28.3
BILL *e*SS SS 00 30 54.7 +1.0
BILL pmax pmax
comp=Z,20nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,300nm,20.0s
DMN Daman 73.55 301 *e*P **P** **00 16 47.9 +0.8**
comp=Z,133nm,1.0s,mb5.6
MIR Mirnyy 73.98 201⇑ *i*P **P** **00 16 50.0 +1.1**
MIR *i* pP 00 17 04.0 -3.6
MIR pmax pmax
comp=Z,400nm,1.0s,mb6.1
GKN Gorkha 74.06 301 *e*P **P** **00 16 50.4 +0.4**
comp=Z,104nm,1.0s,mb5.5
KOLN Koldanda 74.89 300 *e*P **P** **00 16 55.1 +0.2**
DANN Dangsing 74.89 301 *e*P **P** **00 16 55.0 +0.1**
KDAK Kodiak Island 76.04 26 P **P** **00 17 01.9 +1.2**
comp=Z,13nm,1.0s,mb4.6,baz=306,slow=8.7,SNR=2.8
WMQ Urumqi 76.50 317⇑ *i*P **P** **00 17 04.6 +0.9**
WMQ AP pP 00 17 24.7 +2.2
WMQ XP sP 00 17 33.2 +3.0
WMQ PP PP 00 19 59.0 +2.4
WMQ S S 00 26 42.0 -2.2
WMQ SCS ScS 00 27 10.0 -3.7
WMQ SS SS 00 31 41.0 +0.5
WMQ AMB AMB
comp=Z,65nm,1.2s,mb5.2
WMQ AMB AMB
comp=Z,452nm,5.0s
WMQ LR LR
comp=N,283nm,24.0s
WMQ LR LR
comp=E,279nm,24.0s
WMQ LR LR
comp=Z,337nm,22.0s
SVW2 Sparrevohn 76.74 23 *e*P **P** **00 17 05.7 +1.0**
SVW2 PcP PcP 00 17 15.9 +0.2
SVW2 *e*pP pP 00 17 23.5 0.0
HYB Hyderabad 77.36 289 *e*P **P** **00 17 08.5 -0.6**
HYB Hyderabad 77.36 289 *i*P **P** **00 17 08.5 -0.6**
LGTI Lohaghat 78.14 301 *e*P **P** **00 17 14.4 +1.1**
TIXI Tiksi 78.27 352 *e*P **P** **00 17 12.8 -0.3**
TIXI Tiksi 78.27 352 *e*P **P** **00 17 13.4 +0.4**
TIXI pmax pmax
comp=Z,10.0nm,1.4s,mb4.3
SEW Seward 78.67 25 *e*P **P** **00 17 17.5 +2.1**
PPLA Purkeypile 79.10 22 *e*P **P** **00 17 17.7 0.0**
BHPL Bhopal 79.40 295⇑ *i*P **P** **00 17 19.4 -0.9**
BHPL AMb AMB 00 17 20.8
comp=Z,28nm,0.7s,mb5.2
PMR Palmer 79.58 24 P **P** **00 17 16.3 -4.1**
CHUM Lake Minchumin 79.62 21 *e*P **P** **00 17 19.8 -0.7**
comp=Z,16nm,0.4s,mb5.2
KTH Kantishna Hill 79.94 22 *e*P **P** **00 17 21.4 -0.9**
comp=Z,8.7nm,1.0s,mb4.5
TRF Thorofare Moun 80.12 22 *e*P **P** **00 17 22.8 -0.5**
comp=Z,13nm,1.1s,mb4.7
IMA2 Indian Mountai 80.42 19 *e*P **P** **00 17 24.9 0.0**
NDI New Delhi 80.58 300 *e*P **P** **00 17 24.5 -2.0**
MCK McKinley 80.79 22 *e*P **P** **00 17 25.9 -0.9**
comp=Z,37nm,0.9s,mb5.2
MCK McKinley 80.79 22 *e*P **P** **00 17 25.9 -0.9**
MCK pmax pmax
comp=Z,37nm,0.9s,mb5.2
MK31 Makanchi Array 81.07 319 *e*P **P** **00 17 29.0 +0.3**
MKAR Makanchi Array 81.07 319 P **P** **00 17 28.6 -0.1**
comp=Z,17nm,0.8s,mb4.9,baz=93,slow=7.6,SNR=155
MKAR LR LR 00 53 38.0
comp=Z,172nm,21.1s,baz=115,slow=36
KAD Karad 81.47 288 *e*P **P** **00 17 31.1 -0.3**
COLA College 81.79 22 *e*P **P** **00 17 30.9 -1.2**
comp=Z,11nm,0.9s,mb4.7
COLA College 81.79 22 *e*P **P** **00 17 30.9 -1.2**
COLA pmax pmax
comp=Z,11nm,0.9s,mb4.7
ZAA0 Zalesovo Array 81.83 326 *e*P **P** **00 17 31.7 -0.9**
ZALV Zalesovo Beam 81.83 326 P **P** **00 17 31.1 -1.5**
comp=Z,6.1nm,0.5s,mb4.7,baz=102,slow=6.2,SNR=40
ZALV LR LR 00 51 58.6
comp=Z,79nm,20.0s,baz=281,slow=34
POO Poona 81.96 289⇓ *i*P **P** **00 17 32.0 -2.0**
comp=Z,80nm,1.0s,mb5.5
COLD Coldfoot 82.23 19 P **P** **00 17 35.8 +1.4**
comp=Z,7.4nm,1.1s,mb4.4
AJM Ajmer 82.44 297 *e*P **P** **00 17 36.2 -0.2**
AJM AMb AMB 00 17 39.3
comp=Z,42nm,0.9s,mb5.3
THN Thein Dam 82.56 303 *ex* x 00 18 21.9
NVS Novosibirsk 83.01 327⇓ *i*P **P** **00 17 38.4 -0.3**
NVS *e*S S 00 27 45.6 -6.7
NVS pmax pmax
comp=N,23nm,1.5s
NVS pmax pmax
comp=E,37nm,1.5s
NVS pmax pmax
comp=Z,55nm,1.5s,mb5.2
NVS smax
comp=E,39nm,2.7s
KSH Kashi 83.74 311 P **P** **00 17 45.0 +2.2**
KSH *e*AP pP 00 18 05.4 +3.5
KSH *e*XP sP 00 18 14.1 +4.6
KSH *e*PP PP 00 21 00.6 +3.9
KSH *e*PPP 00 22 55.4
KSH *e*SKS 00 27 57.2
KSH *e*S S 00 27 58.8 -1.6
KSH *e*XS sS 00 28 35.0 +2.2
KSH *e*PS 00 29 03.1
KSH *e*SS SS 00 33 29.9 +0.9
EGAK Eagle 84.27 23 *e*P **P** **00 17 44.8 -0.2**
comp=E,22nm,0.9s,mb5.0
EGAK *e*pP pP 00 18 02.8 -1.3
HYT Haines Junctio 84.28 27 *e*P **P** **00 17 46.1 +1.0**
HYT *e*pP pP 00 18 04.0 -0.2
KURK Kurchatov 84.49 322 P **P** **00 17 46.0 -0.4**
comp=E,312nm,1.1s,mb6.0,SNR=36
KURK Kurchatov 84.49 322 *e*P **P** **00 17 46.0 -0.3**
KURK *e*pP pP 00 18 04.4 -1.0
KURK Kurchatov 84.49 322 *c i*P **P** **00 17 46.0 -0.4**
KURK pmax pmax
comp=Z,85nm,1.3s,mb5.4
DAWY Dawson 84.69 24 *e*P **P** **00 17 47.1 0.0**
DAWY *e*pP pP 00 18 05.5 -0.7
TKM2 Tokmak 2 84.71 314 *e*P **P** **00 17 48.4 +0.7**
comp=Z,69nm,1.1s,mb5.5
TKM2 Tokmak 2 84.71 314 *e*P **P** **00 17 48.4 +0.7**
TKM2 pmax pmax
comp=Z,69nm,1.1s,mb5.5
TKM2 Tokmak 2 84.71 314 P **P** **00 17 48.4 +0.7**
SNR=64
KZA Kyzart 84.79 313 P pP 00 18 02.0 -5.2
SNR=13
QSPA South Pole Qui 84.90 180 *e*P **P** **00 17 48.7 +0.8**
comp=Z,159nm,0.9s,mb6.0
QSPA *e*pP pP 00 18 04.8 -2.2
KBK Karagaybulak 85.13 313 P **P** **00 17 50.8 +1.1**
SNR=37
CHMS Chumysh 85.34 314 P **P** **00 17 51.2 +0.4**
SNR=26
UCH Uchtor 85.36 313 *e*P **P** **00 17 52.8 +1.9**
comp=Z,53nm,1.3s,mb5.3
UCH Uchtor 85.36 313 P **P** **00 17 53.0 +2.0**
SNR=13
FRU Bishkek 85.40 314 *i*P **P** **00 17 50.0 -1.1**
FRU *e* 00 18 03.0
FRU pmax pmax
comp=Z,200nm,1.4s,mb5.8
AAK Ala-Archa 85.45 313 P **P** **00 17 52.4 +1.0**
comp=Z,254nm,1.0s,mb6.1,SNR=38
AAK Ala-Archa 85.45 313 P **P** **00 17 52.2 +0.8**
SNR=47
USP Ospenovka 85.57 314 P **P** **00 17 52.5 +0.6**
SNR=75
MAW Mawson 85.65 203⇑ *i*P **P** **00 17 52.1 +0.2**
comp=Z,53nm,1.2s,mb5.3
MAW Mawson 85.65 203 P **P** **00 17 52.2 +0.3**
comp=Z,34nm,0.6s,mb5.4,baz=94,slow=6.2,SNR=70
MAW LR LR 00 51 51.1
comp=Z,378nm,21.7s,baz=75,slow=33
MAW Mawson 85.65 203⇑ *i*P **P** **00 17 52.1 +0.2**
MAW pmax pmax
comp=Z,53nm,1.2s
AML Almayashu 85.94 313 *e*P **P** **00 17 55.2 +1.4**
comp=Z,120nm,1.1s,mb5.7
AML *e*pP pP 00 18 13.9 +1.0
AML Almayashu 85.94 313 P **P** **00 17 55.4 +1.6**
SNR=97
EKS2 Erkin-Say 85.98 313 *e*P **P** **00 17 54.3 +0.3**
comp=Z,44nm,1.0s,mb5.3
EKS2 *e*pP pP 00 18 12.8 -0.3
EKS2 Erkin-Say 85.98 313 P **P** **00 17 55.0 +1.0**
SNR=64
BHJ Bhuj 86.47 294 *e*P **P** **00 17 57.2 +0.3**
BHJ AML AML 00 17 58.3
comp=Z,140nm,1.1s
KBL Kabul 88.39 305 *e*P **P** **00 18 05.1 -0.8**
comp=Z,11nm,0.8s,mb5.0
KBL *e*pP pP 00 18 21.9 -3.2
KBL Kabul 88.39 305 *e*P **P** **00 18 05.1 -0.8**
KBL *e**PP pP 00 18 21.9 -3.2
KBL pmax pmax
comp=Z,11nm,0.8s,mb4.9
INK Inuvik 88.40 21 *e*P **P** **00 18 04.0 -1.1**
comp=Z,204nm,1.0s,mb6.1
INK *e*pP pP 00 18 20.6 -3.7
INK Inuvik 88.40 21 *e*P **P** **00 18 04.0 -1.1**
INK *e**PP pP 00 18 20.6 -3.8
INK pmax pmax
comp=Z,204nm,1.0s
HUMO Hull Mountain 88.55 47 *e*P **P** **00 18 04.8 -1.6**
comp=Z,8.4nm,1.0s,mb4.7
HUMO *e*pP pP 00 18 26.2 +0.6
YBH Yreka Blue Hor 88.61 48 LR LR 00 49 33.5
comp=Z,1μm,21.9s,baz=345,slow=30
VOSK Vostochnaya 89.55 323 P **P** **00 18 09.1 -1.7**
VOSK pmax pmax
comp=Z,50nm,1.4s,mb5.5
BVA0 Borovoye Array 89.95 323 *i*P **P** **00 18 11.4 -1.3**
BVA0 pmax pmax
comp=Z,13nm,1.2s,mb4.9
BRVK Borovoye 90.02 323 P **P** **00 18 12.0 -1.0**
comp=Z,204nm,1.0s,mb6.2,SNR=10
BRVK Borovoye 90.02 323 *e*P **P** **00 18 11.7 -1.3**
BRVK *e**PP pP 00 18 29.6 -2.7
MOD Modoc 90.42 48 *e*P **P** **00 18 14.9 -0.2**
comp=Z,8.2nm,1.1s,mb4.8
MOD *e*pP pP 00 18 34.1 -0.3
PAHR Pah Rah Range 90.88 50 *e*P **P** **00 18 17.3 0.0**
comp=Z,12nm,1.3s,mb4.9
PAHR *e*pP pP 00 18 35.7 -0.9
MTUM Tungsten Hills 91.29 53 P **P** **00 18 19.5 +0.2**
MTUM *e*pP pP 00 18 38.4 -0.2
NVAR Mina Array Bea 91.59 52 P **P** **00 18 20.0 -0.7**
comp=Z,2.3nm,1.1s,mb4.3,baz=259,slow=6.1,SNR=8.5
NVAR PP PP 00 21 59.7 -0.2
comp=Z,1.0nm,0.8s,baz=256,slow=7.3,SNR=4.1
NVAR Mina Array Bea 91.59 52 P **P** **00 18 20.0 -0.7**
NVAR PP PP 00 21 59.7 -0.2
OD2 Odessa Site #2 92.10 43 *e*P **P** **00 18 22.5 -0.3**
OD2 *e*pP pP 00 18 43.4 +1.3
BMO Blue Mountains 92.86 45 *e*P **P** **00 18 24.0 -2.4**
comp=Z,2.2nm,1.0s,mb4.4
BMO *e*pP pP 00 18 44.2 -1.5
BMO pmax pmax
comp=Z,2.0nm,1.0s,mb4.4
TPNV Topopah Spring 93.10 53 *e*P **P** **00 18 27.8 +0.1**
comp=Z,19nm,1.2s,mb5.3
TPNV *e*pP pP 00 18 46.4 -0.6
TPNV Topopah Spring 93.10 53 *e*P **P** **00 18 27.8 +0.1**
TPNV *e**PP pP 00 18 46.4 -0.6
TPNV pmax pmax
comp=Z,19nm,1.2s,mb5.3
SYO Syowa Base 93.70 199⇓ *i*P **P** **00 18 27.6 -2.2**
LDFC Landfair 93.90 55 *e*P **P** **00 18 32.1 +0.6**
comp=Z,45nm,1.3s,mb5.6
LDFC *e*pP pP 00 18 50.6 -0.2
ELK Elko 94.12 50 LR LR 00 53 37.0
comp=Z,794nm,22.0s,baz=301,slow=31
YKA Yellowknife Ar 95.27 28 P **P** **00 18 35.4 -1.6**
comp=Z,2.8nm,0.9s,mb4.7,baz=289,slow=5.1,SNR=4.7
YKA LR LR 00 55 06.2
comp=Z,216nm,20.1s,baz=155,slow=31
YKA Yellowknife Ar 95.27 28 P **P** **00 18 35.4 -1.6**
YKA LR LR 00 55 06.2
CCUT Cedar City 95.43 53 *e*P **P** **00 18 40.7 +2.3**
CCUT *e*pP pP 00 18 57.7 0.0
SVE Sverdlovsk 95.85 327⇑ *e*P **P** **00 18 38.8 -1.0**
SVE pmax pmax
comp=Z,13nm,1.1s,mb5.3
ARU Arti 97.00 326 *e*P **P** **00 18 43.0 -2.0**
comp=Z,12nm,1.1s,mb5.2
ARU *e*pP pP 00 19 01.6 -2.7
ARU Arti 97.00 326 *d i*P **P** **00 18 42.4 -2.6**
ARU *e* 00 22 38.1
ARU *e*PPP 00 24 45.9
ARU S SKSac 00 29 16.6 +0.7
ARU pmax pmax
comp=Z,15nm,1.2s,mb5.3
AKTO Aktyubinsk 97.46 320 P **P** **00 18 44.7 -2.6**
AKTO pmax pmax
comp=Z,2.0nm,1.3s,mb4.4
PDAR Pinedale Array 98.41 48 PP PP 00 22 51.4 -1.3
comp=Z,0.6nm,0.8s,baz=232,slow=7.3,SNR=2.5
SNAA Sanae 101.88 187 *e*Pdiff Pdif 00 19 06.0 -0.9
SNAA *e* 00 19 21.9
SNAA Sanae 101.88 187 *e*Pdif Pdif 00 19 06.1 -0.8
comp=Z,9.5nm,1.1s
SNAA Sanae 101.88 187 *e*P Pdif 00 19 06.1 -0.8
SNAA pmax pmax
comp=Z,10.0nm,1.1s
VNA3 Neumayer Olymp 103.05 185 *e*Pdiff Pdif 00 19 10.8 -1.3
VNA3 *e* 00 19 27.9
VNA2 Neumayer--Watz 103.12 186 *e*Pdiff Pdif 00 19 11.6 -0.8
VNA2 *e* 00 19 28.8
VNA1 Neumayer--Stat 103.47 186 *e*Pdiff Pdif 00 19 14.2 +0.2
TXAR Lajitas Array 103.53 61 PP PP 00 23 33.3 +1.6
comp=Z,0.1nm,0.3s,baz=232,slow=4.4,SNR=2.7
GNI Garni 107.67 310 *e*PKIKP PKiKP 00 23 39.4 -1.3
KIV Kislovodsk 108.53 315 *e*PKIKP PKiKP 00 23 41.4 -0.7
OBN Obninsk 109.40 327 *e*P Pdif 00 19 39.6 -0.8
OBN *e*S SKSac 00 30 13.5 -0.3
OBN *e*SS SS 00 39 35.6 +5.5
OBN pmax pmax
comp=Z,3.0nm,0.6s
OBN MLR MLR
comp=Z,200nm,23.0s
AKASG Malin Array Be 115.19 325 PKP PKiKP 00 23 53.6 -1.0
comp=Z,0.5nm,0.4s,baz=45,slow=3.0,SNR=3.7
AKASG PP PP 00 24 54.3 -1.0
comp=Z,0.3nm,0.3s,baz=59,slow=4.7,SNR=4.0
BOSA Boshof 120.13 233 PKP PKPdf 00 24 05.1 +0.3
comp=Z,4.1nm,0.6s,baz=175,slow=3.7,SNR=12
BOSA Boshof 120.13 233 *e*PKPdf PKPdf 00 24 04.9 0.0
BOSA *ep*PKPdf pPKPdf 00 24 22.5 -2.3
LBTB Lobatse 121.34 237 *e*PKPdf PKPdf 00 24 07.4 +0.2
BZS Buzias 122.04 322⇑ *i*P PKPdf 00 24 06.8 -1.1
LSZ Lusaka 122.32 248 *e*PKPdf PKPdf 00 24 09.1 -0.2
LSZ *ep*PKPdf pPKPdf 00 24 27.0 -2.3
BRG Berggiesshubel 123.31 331 *e*P PKPdf 00 24 10.3 +0.1
BRG *e* 00 24 28.7
BRG *e* 00 24 45.8
BRG LR LR
comp=Z,150nm,22.3s
BRG Berggiesshubel 123.31 331 *e*PKIKP PKPdf 00 24 10.3 +0.1
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,21nm,2.0s
BRG MLR MLR
comp=N,183nm,25.9s
BRG MLR MLR
comp=E,92nm,15.9s
BRG MLR MLR
comp=Z,146nm,22.3s
CLL Collm 123.48 331 PKP pPKPdf 00 24 24.0 -6.5
CLL *e* 00 24 36.0
CLL LR LR
comp=Z,300nm,22.5s
CLL Collm 123.48 331 *e*PKIKP pPKPdf 00 24 24.0 -6.5
CLL *e* 00 24 36.0
CLL MLR MLR
comp=Z,300nm,22.5s
CLL Collm 123.48 331 *e*PKPdf PKPdf 00 24 10.0 -0.5
CLL *es*PKPdf 00 24 24.0
CLL *e*PP PP 00 26 00.0 +7.9
CLL *e*PS PS 00 35 54.0 +3.7
TREC Trest 123.51 328 *e*PKPdf PKPdf 00 24 10.4 -0.2
PKSM Moragy 123.52 324⇓ *i*P PKPdf 00 24 09.1 -1.6
PRU Pruhonice 123.57 330 *e*PKPdf PKPdf 00 24 10.8 +0.1
KHC Kasperske Hory 124.59 329 *e*PKPdf PKPdf 00 24 13.0 +0.3
KHC *ex* x 00 24 37.0
GERES GERESS Array B 124.71 329 PKP PKPdf 00 24 12.0 -1.0
comp=Z,1.9nm,0.8s,baz=70,slow=1.6,SNR=14
TSUM Tsumeb 130.48 240 *e*PKPdf PKPdf 00 24 25.9 +1.1
TSUM *ep*PKPdf pPKPdf 00 24 43.0 -1.8
SSF Saint Saulge 130.89 333 *e*PKIKP PKPdf 00 24 25.0 +0.2
comp=Z,7.7nm,0.9s
TCF Toulx Ste Croi 132.05 333 *e*PKIKP PKPdf 00 24 27.1 +0.1
comp=Z,22nm,1.1s
LPAZ La Paz 133.56 118 PKP PKPdf 00 24 30.7 0.0
comp=Z,2.4nm,1.0s,baz=15,slow=2.0,SNR=5.2
KEST Kesra 135.16 318 PKP PKPdf 00 24 34.5 +1.3
comp=Z,0.7nm,0.7s,baz=215,slow=17,SNR=5.4
TAM Tamanrasset 144.52 303 *e*PKPdf PKPdf 00 24 49.7 -0.8
BDFB Brasilia 150.29 134 PKPbc PKPbc 00 25 04.1 -1.4
comp=Z,2.2nm,0.5s,baz=170,slow=6.1,SNR=5.9
SHEL Horse Pasture 150.80 224 *e*PKPbc PKPbc 00 25 06.5 -0.2
TOA0 Torodi Ar. Sit 151.18 288 *e*PKPdf PKPdf 00 25 01.6 -0.1
TOA0 *e*PKPbc PKPbc 00 25 07.2 -0.4
TOA0 *e*PKPab PKPab 00 25 15.4 -0.2
TORD Torodi Ar. Bea 151.18 288 PKP PKPdf 00 25 03.1 +1.5
comp=Z,19nm,0.4s,baz=37,slow=2.1,SNR=88
TORD PKPbc PKPbc 00 25 06.9 -0.7
comp=Z,20nm,0.4s,baz=40,slow=2.4,SNR=748
KIC Kosan Boka 158.45 274 *e*P PKPab 00 25 45.8 -0.9
comp=Z,100nm,1.0s
DBIC Dimbokro 158.55 275 PKPab PKPab 00 25 46.6 -0.5
comp=Z,12nm,0.9s,baz=51,slow=5.1,SNR=4.3
TIC Toumodi 158.71 275 *e*P PKPab 00 25 44.7 -3.1
comp=Z,100nm,1.1s
LIC Lamto 158.74 274 *e*P PKPab 00 25 43.8 -4.1
comp=Z,49nm,1.2s

*IDC **01** 00:21:48.8±13.0, 3762N×7339E, h137km±174km, mb3.4/1, mb1 3.3/3, mb1mx3.0/22, mbtmp3.3/3, ML3.4/2, Error ellipse: s-maj=167.7km s-min=57.8km az=109.0*
*ISCJB **01** 00:21:51.2±0.5, 3803N±003×7320E±007, h155km±8km, mb3.7/2, Error ellipse: s-maj=9.2km s-min=5.0km az=170.1*
*NEIC **01** 00:21:51.7±0.5, 3796N×7320E, h144km±7km, mb4.5/12, Error ellipse: s-maj=7.7km s-min=4.2km az=67.0*
*MOS **01** 00:21:51.7±0.6, 3797N×7320E, h158km, mb3.9/1, Error ellipse: s-maj=19.8km s-min=10.5km az=83.1*
*NNC **01** 00:21:57.9±4.9, 3855N×7294E, h159km±75km, mb2.8, mpv3.6, Error ellipse: s-maj=52.4km s-min=22.6km az=5.0*
ISC 01 00:21:52.1±0.4, 3802N±003×7321E±007, h148km±8km, n49, σ0992/56, mb3.7/2, 3C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.12**	**5**	*e*Pn	**Pn**		**00 22 53.2**	**-0.7**

AML				*e*Sn		**Sn**	**00 23 39.6**	**-2.3**
AML	**Almayashu**	**4.12**	**5**	P		**Pn**	**00 22 54.0**	**+0.1**
	SNR=306							
CEP	**Cherat**	**4.32**	**195**	⇑P		**Pn**	**00 22 57.1**	**+0.6**
UCH	**Uchtor**	**4.32**	**13**	*e*Pn		**Pn**	**00 22 56.8**	**+0.4**
UCH				*e*Sn		**Sn**	**00 23 44.1**	**-2.5**
UCH	**Uchtor**	**4.32**	**13**	P		**Sn**	**00 23 45.9**	**-0.6**
	SNR=6.2							
KZA	**Kyzart**	**4.35**	**20**	P		**Pn**	**00 22 57.0**	**+0.2**
	SNR=5.5							
CHCP	**Chirah Chowk**	**4.35**	**179**	⇓P		**Pn**	**00 22 59.2**	**+2.3**
EKS2	**Erkin-Say**	**4.66**	**5**	*e*Pn		**Pn**	**00 23 01.1**	**+0.2**
EKS2				*e*Sn		**Sn**	**00 23 49.9**	**-4.6**
EKS2	**Erkin-Say**	**4.66**	**5**	P		**Sn**	**00 23 01.2**	**+0.3**
	SNR=53							
AAK	**Ala-Archa**	**4.71**	**12**	P		**Pn**	**00 23 02.4**	**+0.8**
	SNR=25							
ULHL	**Ulahol**	**4.82**	**28**	P		**Pn**	**00 23 03.8**	**+0.8**
	SNR=16							
KBK	**Karagaybulak**	**4.82**	**15**	P		**Pn**	**00 23 03.7**	**+0.7**
	SNR=7.8							
KBL	**Kabul**	**4.84**	**225**	*e*Pn		**Pn**	**00 23 03.3**	**-0.1**
KBL				*e*Sn		**Sn**	**00 23 54.9**	**-3.9**
CHMS	**Chumysh**	**5.11**	**13**	P		**Pn**	**00 23 07.9**	**+1.0**
	SNR=6.9							
TKM2	**Tokmak 2**	**5.22**	**20**	⇓P		**Pn**	**00 23 09.0**	**+0.6**
	7.3nm,0.7s							
TKM2				⇓S		**Sn**	**00 24 05.2**	**-2.8**
	5.2nm,0.6s							
TKM2	**Tokmak 2**	**5.22**	**20**	*e*Pn		**Pn**	**00 23 09.4**	**+1.0**
TKM2				*e*Sn		**Sn**	**00 24 12.7**	**+4.8**
TKM2	**Tokmak 2**	**5.22**	**20**	P		**Pn**	**00 23 09.2**	**+0.9**
	SNR=9.1							
USP	**Ospenovka**	**5.33**	**10**	P		**Pn**	**00 23 09.9**	**0.0**
	SNR=12							
THW	**Thamme Wali**	**5.35**	**193**	P		**Pn**	**00 23 10.1**	**0.0**
KK31	**Karatay Array**	**5.48**	**339**	P		**Pn**	**00 23 10.5**	**-1.3**
	1.9nm,0.2s,baz=169,slow=12,SNR=161							
KK31				⇑S		**Sn**	**00 24 07.2**	**-6.8**
	35nm,0.3s,baz=157,slow=23,SNR=38							
MK31	**Makanchi Array**	**11.04**	**34**	*e*Pn		**Pn**	**00 24 26.1**	**+0.5**
MKAR	**Makanchi Array**	**11.04**	**34**	P		**Pn**	**00 24 25.9**	**+0.3**
	0.1nm,0.3s,baz=211,slow=14,SNR=6.8							
DANN	**Dangsing**	**13.06**	**134**	*e*P		**Pn**	**00 24 51.5**	**-0.7**
	33nm,0.3s							
KURK	**Kurchatov**	**13.27**	**15**	Pn		**Pn**	**00 24 55.4**	**+0.8**
KOLN	**Koldanda**	**13.43**	**137**	*e*P		**Pn**	**00 24 55.5**	**-1.3**
	11nm,0.4s							
GKN	**Gorkha**	**13.83**	**133**	*e*P		**Pn**	**00 25 01.4**	**-0.5**
	16nm,0.3s							
KKN	**Kakani**	**14.36**	**132**	*e*P		**Pn**	**00 25 08.2**	**-0.4**
	15nm,0.5s							
KKN	**Kakani**	**14.36**	**132**	*e*P		**Pn**	**00 25 08.2**	**-0.4**
KKN				pmax	pmax			
	comp=Z,15nm,0.5s							
PKIN	**Phulchoki**	**14.59**	**132**	*e*P		**Pn**	**00 25 11.5**	**0.0**
	comp=Z,12nm,0.5s							
PKI	**Pulchoki**	**14.60**	**132**	*e*P		**Pn**	**00 25 11.7**	**+0.1**
	comp=Z,13nm,0.6s							
PKI	**Pulchoki**	**14.60**	**132**	*e*P		**Pn**	**00 25 11.7**	**+0.1**
PKI				pmax	pmax			
	comp=Z,13nm,0.6s							
AB02	**Akbulak array**	**14.76**	**324**	⇑P		**Pn**	**00 25 10.1**	**-3.3**
	comp=Z,1.0nm,0.3s							
JIRN	**Jiri**	**15.00**	**130**	*e*P		**Pn**	**00 25 17.0**	**+0.4**
	comp=Z,21nm,0.3s							
BRVK	**Borovoye**	**15.18**	**353**	*e*Pn		**Pn**	**00 25 19.8**	**+1.2**
	comp=Z,2.4nm,0.7s							
BRVK	**Borovoye**	**15.18**	**353**	*e*P		**Pn**	**00 25 19.8**	**+1.2**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
RAMN	**Ramite**	**15.77**	**131**	*e*P		**Pn**	**00 25 25.4**	**-0.7**
	comp=Z,12nm,0.5s							
TAPN	**Taplejung**	**16.17**	**127**	*e*P		**Pn**	**00 25 31.3**	**+0.3**
	comp=Z,13nm,0.5s							
ODAN	**Odare**	**16.32**	**129**	*e*P		**Pn**	**00 25 32.4**	**-0.4**
	comp=Z,10nm,0.5s							
AKTO	**Aktyubinsk**	**16.47**	**324**	⇓P		**Pn**	**00 25 34.6**	**+0.1**
	comp=Z,0.3nm,0.4s							
LSA	**Lhasa**	**17.03**	**114**	*e*P		**Pn**	**00 25 36.1**	**-5.3**
	comp=Z,5.1nm,1.0s							
LSA	**Lhasa**	**17.03**	**114**	*e*P		**Pn**	**00 25 36.1**	**-5.3**
LSA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ZALV	**Zalesovo Beam**	**17.82**	**23**	P		**Pn**	**00 25 50.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=216,slow=12,SNR=11							
KWP	**Kalwaria**	**37.57**	**305**	P		**P**	**00 28 52.5**	**+0.6**
PSZ	**Piszkesteto**	**39.54**	**302**	*e*P		**P**	**00 29 08.2**	**-0.1**
	comp=Z,1.4nm,0.5s,mb3.9							
PSZ	**Piszkesteto**	**39.54**	**302**	*e*P		**P**	**00 29 08.2**	**-0.1**
PSZ				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.7							
ARCES	**ARCESS Array B**	**40.44**	**336**	P		**P**	**00 29 16.4**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.6,baz=117,slow=9.2,SNR=5.4							
ARCES	**ARCESS Array B**	**40.44**	**336**	P		**P**	**00 29 16.4**	**+1.0**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
YHNB	**Yeheng**	**42.79**	**94**	P		**P**	**00 29 30.8**	**-4.4**
TORD	**Torodi Ar. Bea**	**67.51**	**269**	P		**P**	**00 32 31.2**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=47,slow=6.3,SNR=3.9							

IDC 01 00:28:20.7±4.3, 731S×12486E, h476km±60km, mb3.0/2, mb1 3.1/5, mb1mx2.9/16, mbtmp3.0/5, Error ellipse: s-maj=158.9km s-min=19.3km az=53.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.11**	**202**	P	P	00 29 32.1	+1.6
	37nm,0.3s,baz=48,slow=1.9,SNR=14						
BATI				S	S	00 30 27.1	-0.2
	2.5nm,0.3s,baz=331,slow=11,SNR=2.9						
KAKA	**Kakadu**	**9.19**	**126**	*e*P	Px	00 30 20.3	
	5.4nm,0.7s						
WRA	**Warramunga Arr**	**15.56**	**145**	P	P	00 31 35.7	-1.6
	0.4nm,0.3s,baz=311,slow=11,SNR=22						
WB2	**Warramunga Arr**	**15.57**	**145**	*e*P	P	00 31 36.4	-0.9
ASAR	**Alice Springs**	**18.43**	**153**	P	P	00 32 06.8	+0.5
	0.8nm,0.3s,baz=325,slow=8.3,SNR=20						
STKA	**Stephens Creek**	**29.00**	**150**	P	P	00 33 40.8	+0.1
	1.5nm,0.6s,baz=296,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**65.79**	**329**	P	P	00 38 17.7	0.0
	0.5nm,0.5s,baz=121,slow=8.0,SNR=9.8						

IDC 01 00:34:01.8±5.9, 211N×12250E, h612km±96km, mb2.7/5, mb1 2.7/5, mb1mx2.6/17, mbtmp2.7/5, Error ellipse: s-maj=128.2km s-min=23.3km az=69.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.80**	**153**	P	P	00 38 37.9	+0.2
	0.2nm,0.3s,baz=334,slow=9.6,SNR=12						
ASAR	**Alice Springs**	**27.92**	**157**	P	P	00 39 05.0	0.0
	0.3nm,0.5s,baz=341,slow=7.9,SNR=5.3						
SONM	**Songino Array**	**47.63**	**345**	P	P	00 41 44.5	+0.6
	1.1nm,0.6s,baz=165,slow=9.8,SNR=8.2						
MKAR	**Makanchi Array**	**56.57**	**328**	P	P	00 42 47.6	-0.1
	0.7nm,0.3s,baz=128,slow=8.4,SNR=18						
MKAR				PcP	PcP	00 43 35.3	+0.1
	0.7nm,0.6s,baz=132,slow=3.4,SNR=5.1						
ZALV	**Zalesovo Beam**	**60.20**	**335**	P	P	00 43 11.8	-0.1
	0.5nm,0.4s,baz=144,slow=5.9,SNR=3.4						

*IDC **01** 00:42:37.4±1.1, 3334S×17829W, h0km, mb4.4/5, mb1 4.6/7, mb1mx4.3/16, mbtmp4.4/7, ML4.2/2, MS3.8/4, Ms1 3.8/4, ms1mx3.5/16, Error ellipse: s-maj=34.2km s-min=24.2km az=146.0*

*ISCJB **01** 00:42:41.0±0.6, 3330S±007×1784W±0.1, h33km, mb4.5/12, MS3.8/2, Error ellipse: s-maj=13.8km s-min=9.5km az=21.5*

*NEIC **01** 00:42:42.5±0.6, 3343S×17835W, h35km, mb4.8/8, Error ellipse: s-maj=16.9km s-min=10.3km az=118.0*

ISC 01 00:42:39.6±3.6, 3332S±008×1785W±01, h10km±22km, n36, σ1§12/31, mb4.5/12, MS3.8/2, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.08**	**7**	Sn	**Sn**	**00 44 18.2**	**-12**
	58nm,0.3s,baz=116,slow=23,SNR=3.1						
RAO				LR	LR	00 44 26.8	
	comp=Z,711nm,18.4s,baz=91,slow=27						
URZ	**Urewera**	**6.11**	**215**	Pn	**Pn**	**00 44 09.2**	**-0.8**
	7.6nm,0.3s,baz=24,slow=3.6,SNR=13						
URZ				Sn	**Sn**	**00 45 23.9**	**+4.0**
	14nm,0.3s,baz=160,slow=20,SNR=11						
RPZ	**Rata Peaks**	**13.23**	**215**	Pn	**Pn**	**00 45 46.8**	**-0.6**
	0.8nm,0.3s,baz=292,slow=4.0,SNR=4.4						
RPZ				Sn	**Sn**	**00 48 06.5**	**-8.0**
	1.0nm,0.3s,baz=16,slow=19,SNR=6.0						
RPZ				LR	LR	00 51 24.0	
	comp=Z,540nm,19.1s,baz=48,slow=40						
AFI	**Afiamalu**	**20.25**	**19**	*e*P	**P**	**00 47 14.1**	**-1.1**
	143nm,1.6s						
EIDS	**Eidsvold**	**27.64**	**279**	*e*P	**P**	**00 48 28.9**	**+1.4**
	16nm,0.7s,mb4.8						
TAU	**Tasmania Unive**	**28.42**	**240**	P	**P**	**00 48 34.1**	**-0.2**
STKA	**Stephens Creek**	**33.55**	**261**	P	**P**	**00 49 21.6**	**+1.9**
	1.1nm,0.6s,mb4.0,baz=96,slow=8.6,SNR=3.2						
STKA				LR	LR	01 03 00.1	
	comp=Z,476nm,18.5s,MS4.2,baz=24,slow=36						
STKA	**Stephens Creek**	**33.55**	**261**	*e*P	**P**	**00 49 21.7**	**+2.0**
STKA				LR	LR	01 03 00.1	
CTA	**Charters Tower**	**34.00**	**284**	*e*P	**P**	**00 49 25.2**	**+1.5**
	9.9nm,0.6s,mb4.9						
CTA	**Charters Tower**	**34.00**	**284**	P	**P**	**00 49 25.2**	**+1.5**
	12nm,0.7s,mb5.0,baz=114,slow=11,SNR=12						
CTA				LR	LR	01 01 00.7	
	comp=Z,75nm,20.1s,MS3.4,baz=52,slow=32						
ASAR	**Alice Springs**	**42.65**	**270**	P	**P**	**00 50 36.7**	**+0.2**
	6.4nm,0.7s,mb4.6,baz=111,slow=7.4,SNR=72						
ASAR				S	**S**	**00 56 58.1**	**-1.7**
	0.7nm,0.7s,baz=115,slow=16,SNR=6.3						
WB2	**Warramunga Arr**	**43.90**	**275**	*e*P	**P**	**00 50 46.1**	**-0.5**
WRAB	**Tennant Creek**	**43.90**	**275**	*e*P	**P**	**00 50 46.5**	**-0.1**
	7.0nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**43.91**	**275**	P	**P**	**00 50 46.3**	**-0.4**
	9.7nm,0.8s,mb4.6,baz=117,slow=8.4,SNR=76						
SBA	**Scott Base**	**45.11**	**184**	P	**P**	**00 50 54.8**	**-0.8**
KAKA	**Kakadu**	**49.12**	**283**	*e*P	**P**	**00 51 18.6**	**-9.1**
	6.3nm,0.5s,mb4.9						
CASY	**Casey**	**52.40**	**209**	P	**P**	**00 51 50.2**	**-1.5**
	12nm,0.8s,mb4.9						
MAW	**Mawson**	**69.45**	**201**	*e*P	**P**	**00 53 44.8**	**-2.8**
	8.1nm,1.5s,mb4.4						
SYO	**Syowa Base**	**74.20**	**193⇑**	*e*P	**P**	**00 54 16.2**	**+0.1**
KSM	**Kuching**	**75.21**	**282**	*e*P	**P**	**00 54 22.4**	**-0.5**
SNAA	**Sanae**	**75.26**	**179**	*e*	**P**	**00 54 24.0**	**+1.8**
SNAA				*e*		00 54 34.1	
SNAA				*e*		00 54 45.9	
SNAA	**Sanae**	**75.26**	**179**	*e*P	**P**	**00 54 24.4**	**+2.2**
	6.9nm,1.0s,mb4.5						
SNAA				*e*PcP	PcP	00 54 34.1	-1.5
VNA3	**Neumayer Olymp**	**75.43**	**176**	*e*	**P**	**00 54 24.7**	**+1.5**
VNA3				*e*		00 54 35.8	
VNA3				*e*		00 54 46.8	
VNA2	**Neumayer--Watz**	**75.86**	**177**	*e*	**P**	**00 54 25.7**	**0.0**
	baz=176,slow=5.3						
VNA2				*e*		00 54 38.4	
VNA2				*e*		00 54 49.0	
VNA1	**Neumayer--Stat**	**76.09**	**177**	*e*	**P**	**00 54 31.5**	**+4.5**
VNA1				*e*		00 54 40.2	
VNA1				*e*		00 54 50.9	
NVAR	**Mina Array Bea**	**90.63**	**43**	P	**P**	**00 55 43.4**	**+1.2**
	0.4nm,0.7s,mb3.9,baz=202,slow=6.4,SNR=3.6						
MDJ	**Mudanjiang**	**90.81**	**326**	P	**P**	**00 55 41.9**	**-0.9**
CHTO	**Chiang Mai**	**94.19**	**290**	*e*P	**P**	**00 55 58.7**	**-0.4**
	1.0nm,0.3s,mb4.7						
MKAR	**Makanchi Array**	**119.32**	**309**	PKP	PKPdf	01 01 29.2	+0.4
	0.5nm,0.9s,baz=120,slow=2.4,SNR=3.5						
ARCES	**ARCESS Array B**	**141.34**	**347**	PKP	PKPdf	01 02 10.6	+0.9
	4.3nm,1.0s,baz=129,slow=3.3,SNR=2.6						
ARCES	**ARCESS Array B**	**141.34**	**347**	PKP	PKPdf	01 02 10.6	+0.9
KAF	**Kangasniemi**	**147.14**	**339**	*e*p	PKPdf	01 02 20.0	+0.1
	5.3nm,0.6s						
NB2	**NORSAR Subarra**	**151.56**	**350**	PKP	PKPbc	01 02 32.1	-1.1
	comp=Z,2.1nm,0.7s,baz=16,slow=4.1						
NOA	**NORSAR Array B**	**151.56**	**350**	PKPbc	PKPbc	01 02 31.4	-1.8
	comp=Z,3.2nm,0.9s,baz=14,slow=4.1,SNR=5.3						
AKASG	**Malin Array Be**	**153.31**	**319**	PKPbc	PKPbc	01 02 35.1	-2.3
	comp=Z,0.8nm,0.6s,baz=60,slow=3.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**159.92**	**180**	PKPab	PKPab	01 03 17.8	-0.9
	comp=Z,0.5nm,0.7s,baz=192,slow=2.7,SNR=3.6						

*ISCJB **01** 00:45:09.5±0.8, 3969N±005×2036E±005, h5km±8km, Error ellipse: s-maj=8.6km s-min=5.9km az=164.8*

*ATH **01** 00:45:09.0, 3974N×2036E, h23km±1km, MD3.2/6*

*CSEM **01** 00:45:09.1±0.1, 3976N×2036E, h5km, MD3.2, Error ellipse: s-maj=3.8km s-min=2.3km az=178.0*

*NEIC **01** 00:45:09.0, 3974N×2036E, h23km, MD3.2(ATH), After ATH.*

ISC 01 00:45:09.9±0.9, 3963N±005×2037E±005, h4km±8km, n11, σ1§23/16, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.38**	**85**	*e*PB	**Pg**	**00 45 17.0**	**-0.1**
JAN				*e*SB	**Sg**	**00 45 23.2**	**+1.2**
KEK	**Kerkira**	**0.45**	**281**	*e*PB	**Pg**	**00 45 18.0**	**-0.4**
KEK				*e*SB	**Sg**	**00 45 24.9**	**+0.7**
KZN	**Kozani**	**1.27**	**57**	*e*PN	**Pn**	**00 45 32.4**	**-2.0**
THL	**Klokotos Trika**	**1.27**	**92**	*e*PN	**Pn**	**00 45 34.3**	**-0.1**
THL				*e*SN	**Sn**	**00 45 52.0**	**0.0**
EVR	**Evrytania**	**1.33**	**122**	*e*PN	**Pn**	**00 45 35.4**	**+0.3**
VLS	**Valsamata**	**1.46**	**173**	*e*PN	**Pn**	**00 45 37.9**	**+0.9**
OHR	**Ohrid**	**1.52**	**12**	*e*Pn	**Pn**	**00 45 39.9**	**+2.1**
BIA	**Bitola**	**1.57**	**27**	*e*Pn	**Pg**	**00 45 37.9**	**-2.0**
BIA				*i* Sn	**Sg**	**00 46 02.9**	**+2.5**
KRUS	**Krusevo**	**1.86**	**21**	*e*Pn	**Pg**	**00 45 44.4**	**-1.2**
KRUS				*i* Sn	**Sg**	**00 46 10.7**	**+0.9**
PLG	**Polygyros**	**2.48**	**72**	*e*PB	**Pn**	**00 45 50.3**	**-0.7**
STIP	**Stip**	**2.48**	**33**	*e*Pn	**Pg**	**00 45 56.1**	**-1.4**

IDC 01 00:58:15.9±44.0, 1589S×17209W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/17, mbtmp4.1/3, Error ellipse: s-maj=854.0km s-min=174.5km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.90**	**241**	P	P	01 06 33.1	+0.6
	0.9nm,0.3s,baz=98,slow=10,SNR=7.8						
WRA	**Warramunga Arr**	**50.97**	**257**	P	P	01 07 19.0	-0.7
	0.5nm,0.4s,baz=98,slow=7.2,SNR=15						
ASAR	**Alice Springs**	**51.16**	**252**	P	P	01 07 21.2	+0.1
	4.2nm,0.5s,baz=88,slow=8.1,SNR=51						

*RSPR **01** 01:16:15.9, 1846N×68.19W, h150km±1km, MD3.8/4, MD3.8/4*

*NEIC **01** 01:16:15.9, 1846N×68.19W, h150km, MD3.8(RSPR), After RSPR.*

ISC 01 01:16:15.3±2.1, 185N±03×683W±01, h148km±14km, n11, σ0§29/16, 7C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.08**	**89⇑**	*e*P	**Pn**	**01 16 40.4**	**-0.3**
AGPR				*e*S	**Sn**	**01 17 00.3**	**+0.4**
LSP	**Las Mesas**	**1.14**	**104**	*e*S	**Sn**	**01 17 00.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.18**	**112⇑**	*e*P	**Pn**	**01 16 41.5**	**0.0**
CRPR				*e*S	**Sn**	**01 17 01.2**	**-0.2**
LRS	**Lares**	**1.35**	**97**	*e*S	**Sn**	**01 17 04.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.43**	**94⇑**	*e*P	**Pn**	**01 16 43.4**	**-0.5**
AOPR				*e*S	**Sn**	**01 17 05.8**	**0.0**
CELP	**Cerrillos**	**1.64**	**103⇑**	*e*P	**Pn**	**01 16 46.5**	**+0.2**
SJG	**San Juan**	**2.03**	**99**	*e*S	**Sn**	**01 17 18.1**	**+0.4**
HUMP	**Col San Antoni**	**2.31**	**97⇑**	*e*P	**Pn**	**01 16 54.0**	**+0.1**
HUMP				*e*S	**Sn**	**01 17 23.4**	**-0.3**
HUMP	**Col San Antoni**	**2.31**	**97⇑**	*e*P	**Pn**	**01 16 54.5**	**+0.5**
HUMP				*e*S	**Sn**	**01 17 23.4**	**-0.3**
MTP	**Monte Pirata**	**2.59**	**97⇑**	*e*P	**Pn**	**01 16 57.7**	**+0.2**
STVI	**Saint Thomas**	**3.14**	**91**	*e*S	**Sn**	**01 17 42.0**	**-0.3**

*NIED **01** 01:44:00, 2480N×12480E, h8km, Mw4.1 Best double couple: M0 1.49000×10^15 NP1:φs126.00000°, δ57.00000°, λ-122.00000°. NP2:φs356.00000°, δ45.00000°, λ-50.00000°*

*IDC **01** 01:44:54.0±0.8, 2488N×12480E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.1/22, mbtmp4.0/11, ML3.4/1, MS3.1/5, Ms1 3.1/5, ms1mx2.5/35, Error ellipse: s-maj=27.7km s-min=16.4km az=65.0*

*ISCJB **01** 01:44:56.1±0.5, 2479N±006×12483E±003, h22km±5km, mb4.1/16, Error ellipse: s-maj=10.5km s-min=3.3km az=158.2*

*JMA **01** 01:44:56.1±0.1, 2477N×12481E, h11km±2km, M4.4*

JMA Felt I J1.

*NEIC **01** 01:44:59.0±2.5, 2484N×12481E, h31km±18km, mb4.4/5, Error ellipse: s-maj=9.4km s-min=8.6km az=203.0*

NEIC Recorded [1 JMA] on Miyako-jima and Tarama-shima.

ISC 01 01:44:55.8±0.6, 2482N±006×12480E±003, h9km±5km, n41, σ0§86/49, mb4.1/16, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	**Tarama**	**0.20**	**206**	P	**Pg**	**01 45 00.0**	**+0.1**
JTJ				S	**Sg**	**01 45 01.5**	**-1.2**
JMJ	**Miyako jima 2**	**0.45**	**91**	P	**Pg**	**01 45 04.6**	**0.0**
JMJ				S	**Sg**	**01 45 11.1**	**+0.6**
JOGS	**Gusukube**	**0.56**	**96**	P	**Pg**	**01 45 06.6**	**0.0**
JOGS				S	**Sg**	**01 45 14.4**	**+0.5**
JIJ	**Ishigaki jima**	**0.75**	**233**	P	**Pg**	**01 45 09.7**	**-0.6**
JIJ				S	**Sg**	**01 45 20.1**	**0.0**
JKRS	**Kuro-shima**	**0.92**	**231**	P	**Pg**	**01 45 13.3**	**-0.3**
JKRS				S	**Sg**	**01 45 26.2**	**+0.6**
IRIF	**Iriomote-Funau**	**1.09**	**244**	P	**Pg**	**01 45 15.9**	**-0.8**
IRIF				S	**Sg**	**01 45 31.2**	**+0.4**
HATJ	**Hateruma jima**	**1.18**	**230**	P	**Pb**	**01 45 17.8**	**-0.6**
HATJ				S	**Sb**	**01 45 34.3**	**+0.5**
YOJ	**Yonaguni jima**	**1.67**	**258**	P	**Pn**	**01 45 24.9**	**-0.2**
YOJ				*e*S	**Sn**	**01 45 45.5**	**-1.1**
JKE	**Kume jima 2**	**2.34**	**50**	P	**Pn**	**01 45 33.9**	**-0.5**
JAGN	**Aguni-jima**	**2.82**	**51**	P	**Pn**	**01 45 40.2**	**-0.8**
JAGN				*e*S	**Sn**	**01 46 13.6**	**-1.5**
NAH1	**Naha**	**2.95**	**62**	*e*S	**Sn**	**01 46 18.8**	**+0.4**
NACB	**Ninganchiao**	**2.99**	**258**	*e*Pn	**Pn**	**01 45 43.7**	**+0.4**
TATO	**Taipei**	**3.01**	**274**	*e*Pn	**Pn**	**01 45 46.2**	**+2.6**
YHNB	**Yeheng**	**3.12**	**268**	*e*Pn	**Pn**	**01 45 46.4**	**+1.4**
JIH	**Iheya**	**3.61**	**52**	P	**Pn**	**01 45 53.2**	**+1.4**
JOW	**Kunigami**	**3.72**	**57**	Pn	**Pn**	**01 45 53.6**	**+0.2**
	6.6nm,0.3s,baz=246,slow=16,SNR=17						
JOW				Sn	**Sn**	**01 46 35.9**	**-1.4**
	6.2nm,0.3s,baz=105,slow=30,SNR=3.1						
JOW				LR	LR	01 47 33.6	
	comp=Z,298nm,18.9s,baz=153,slow=43						
KSRS	**Korea Array**	**12.87**	**11**	Pn	**Pn**	**01 48 02.8**	**+3.9**
	0.2nm,0.3s,baz=279,slow=39,SNR=4.0						
KSRS				LR	LR	01 52 47.1	
	comp=Z,39nm,18.9s,baz=195,slow=37						
JHJ	**Hachijo jima 2**	**15.49**	**54**	LR	LR	01 53 56.2	
	comp=Z,79nm,19.6s,baz=86,slow=35						
MJAR	**Matsushiro Arr**	**16.40**	**41**	Pn	**Pn**	**01 48 52.0**	**+5.9**
	0.3nm,0.3s,baz=221,slow=11,SNR=3.5						
MJAR				LR	LR	01 55 29.3	
	comp=Z,65nm,19.7s,baz=90,slow=39						
ASAJ	**Asahikawa**	**24.11**	**33**	LR	LR	02 00 17.8	
	comp=Z,43nm,20.7s,baz=319,slow=38						
SONM	**Songino Array**	**27.20**	**332**	P	**P**	**01 50 42.7**	**+3.1**
	0.5nm,0.8s,mb3.1,baz=130,slow=6.4,SNR=3.4						
MK31	**Makanchi Array**	**40.22**	**314**	*e*P	**P**	**01 52 32.3**	**-0.3**
MKAR	**Makanchi Array**	**40.22**	**314**	P	**P**	**01 52 32.4**	**-0.2**
	0.8nm,0.4s,mb3.8,baz=100,slow=10,SNR=6.5						
ZALV	**Zalesovo Beam**	**41.55**	**325**	P	**P**	**01 52 42.2**	**-1.3**
	1.0nm,0.4s,mb3.8,baz=112,slow=8.8,SNR=7.7						
ZALV	**Zalesovo Beam**	**41.55**	**325**	P	**P**	**01 52 42.2**	**-1.3**
KURK	**Kurchatov**	**43.76**	**318**	P	**P**	**01 53 01.0**	**-0.4**
	1.1nm,0.5s,mb3.8,baz=107,slow=8.2,SNR=5.9						
TKM2	**Tokmak 2**	**43.99**	**307**	*e*P	**P**	**01 53 04.4**	**+0.9**
	4.6nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**45.45**	**167**	*e*P	**P**	**01 53 14.9**	**-0.2**
	3.3nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**45.45**	**167**	P	**P**	**01 53 15.1**	**-0.1**
	2.2nm,0.6s,mb4.2,baz=349,slow=8.8,SNR=17						
TIXI	**Tiksi**	**46.92**	**2**	*e*P	**P**	**01 53 27.1**	**+0.9**
	5.4nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**49.00**	**169**	P	**P**	**01 53 42.8**	**-0.1**
	1.6nm,0.9s,mb4.1,baz=352,slow=7.7,SNR=10.0						
BVAR	**Borovoye Array**	**49.30**	**320**	P	**P**	**01 53 44.0**	**-0.9**
	0.5nm,0.3s,mb4.0,baz=105,slow=8.8,SNR=6.0						
BVAR				PcP	PcP	01 55 06.9	-0.6
	0.7nm,0.5s,baz=100,slow=6.2,SNR=3.7						
**BRV

3.5nm,0.3s,baz=212,slow=3.0,SNR=2.1
KHKI **Kahang-Kahang** 16.17 229 P Pn 02 08 31.5 +5.9
STKI **Sintang** 16.56 263 P Pn 02 08 33.8 +3.3
KMMI **Kalianget** 16.70 236 P Pn 02 08 36.3 +4.1
82nm,0.8s
GUMO **Guam** 20.21 55 LR LR 02 15 48.9
comp=Z,82nm,18.5s,MS3.1,baz=121,slow=33
COEN **Coen** 22.10 137 *eP* P 02 09 33.7 +1.1
5.2nm,0.8s,mb4.0
WRAB **Tennant Creek** 22.94 164 *eP* P 02 09 41.3 0.0
24nm,1.1s,mb4.5
WRA **Warramunga Arr** 22.94 164 P P 02 09 41.0 -0.4
8.5nm,0.6s,mb4.3,baz=343,slow=10,SNR=33
WB2 **Warramunga Arr** 22.95 164 *eP* P 02 09 41.1 -0.3
ASAR **Alice Springs** 26.41 168 P P 02 10 13.3 0.0
1.1nm,0.4s,mb3.7,baz=352,slow=8.1,SNR=16
ASAR PcP PcP 02 13 37.7 0.0
0.4nm,0.5s,baz=349,slow=3.2,SNR=4.2
CMAR **Chiang Mai Arr** 32.63 302 P P 02 11 08.5 0.0
0.8nm,0.4s,mb4.0,baz=120,slow=6.5,SNR=5.5
CHTO **Chiang Mai** 32.79 302 *eP* P 02 11 11.0 +1.0
2.9nm,0.7s,mb4.3
KSRS **Korea Array** 35.03 0 P P 02 11 29.4 +0.2
0.6nm,0.3s,mb4.0,baz=179,slow=10,SNR=3.7
MJAR **Matsushiro Arr** 35.43 14 P P 02 11 31.0 -1.6
0.8nm,0.3s,mb4.1,baz=178,slow=9.0,SNR=3.4
MJAR LR LR 02 24 02.8
comp=Z,77nm,18.6s,MS3.5,baz=145,slow=33
XAN **Xi'an** 36.26 333 P P 02 11 38.6 -1.1
XAN AP pP 02 11 48.7 -5.4
XAN AMB AMB
comp=Z,5.0nm,1.3s,mb4.3
XAN AMB AMB
comp=Z,51nm,3.9s
STKA **Stephens Creek** 36.34 160 *eP* P 02 11 41.2 +0.7
comp=Z,9.4nm,0.6s,mb4.9
STKA **Stephens Creek** 36.34 160 P P 02 11 41.1 +0.7
comp=Z,11nm,0.6s,mb5.0,baz=334,slow=9.0,SNR=41
LZH **Lanzhou** 40.36 329 *eP* P 02 12 14.5 +0.3
LZH AP pP 02 12 17.0 -12
LZH XP sP 02 12 19.0 -16
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,53nm,4.3s
SHL **Shillong** 41.69 307 *eP* P 02 12 25.0 -0.3
GTA **Gaotai** 44.96 329 *eP* P 02 12 52.9 +1.5
GTA AP pP 02 12 56.9 -9.3
GTA XP sP 02 13 00.6 -12
GTA AMB AMB
comp=Z,3.0nm,0.7s,mb4.2
TAPN **Taplejung** 45.83 307 *eP* P 02 12 59.7 +1.2
ODAN **Odare** 45.88 306 *eP* P 02 12 59.6 +0.7
comp=Z,13nm,0.7s,mb5.0
RAMN **Ramite** 46.56 306 *eP* P 02 13 04.6 +0.4
comp=Z,9.6nm,0.7s,mb4.8
JIRN **Jiri** 47.18 306 *eP* P 02 13 10.1 +1.0
GUN **Gumba** 47.54 307 *eP* P 02 13 12.3 +0.4
comp=Z,18nm,0.7s,mb5.2
DMN **Daman** 48.04 306 *eP* P 02 13 15.4 -0.4
comp=Z,22nm,1.0s,mb5.1
GKN **Gorkha** 48.58 306 *eP* P 02 13 20.1 +0.2
SONM **Songino Array** 49.07 341 P P 02 13 22.3 -0.9
comp=Z,0.6nm,0.6s,mb3.8,baz=167,slow=6.5,SNR=3.8
SONM PcP PcP 02 14 46.7 +0.4
comp=Z,1.1nm,0.8s,baz=172,slow=2.9,SNR=2.8
SONM **Songino Array** 49.07 341 P P 02 13 22.4 -0.9
SONM PcP PcP 02 14 46.7 +0.4
KOLN **Koldanda** 49.33 305 *eP* P 02 13 25.5 -0.2
comp=Z,14nm,0.7s,mb5.1
DANN **Dangsing** 49.42 306 *eP* P 02 13 25.9 -0.5
comp=Z,23nm,0.6s,mb5.4
MK31 **Makanchi Array** 59.43 325 *eP* P 02 14 37.3 -1.4
MKAR **Makanchi Array** 59.43 325 P P 02 14 38.2 -0.5
comp=Z,2.2nm,0.6s,mb4.4,baz=121,slow=8.4,SNR=13
MKAR **Makanchi Array** 59.43 325 P P 02 14 38.2 -0.5
ZALV **Zalesovo Beam** 62.43 333 P P 02 14 59.6 +0.7
comp=Z,1.2nm,0.7s,mb4.1,baz=133,slow=10,SNR=4.2
AML **Almayashu** 62.56 317 *eP* P 02 15 00.5 +0.5
comp=Z,4.2nm,0.9s,mb4.6
KURK **Kurchatov** 63.61 327 *eP* P 02 15 05.7 -1.1
comp=Z,9.2nm,0.8s,mb4.9
BRVK **Borovoye** 69.26 327 *eP* P 02 15 41.8 -1.1
comp=Z,8.0nm,0.8s,mb4.7
RAR **Rarotonga** 74.39 113 LR LR 02 42 46.6
comp=Z,141nm,20.6s,MS4.2,baz=254,slow=31
PPT **Papeete** 83.55 108 LR LR 02 51 30.2
comp=Z,82nm,18.4s,MS4.1,baz=275,slow=34
TORD **Torodi Ar. Bea** 124.48 288 PKP PKPdf 02 23 36.9 +1.1
comp=Z,0.5nm,0.9s,baz=88,slow=2.3,SNR=2.7

MAN 01 02:16:10,1372N×12420E,h15km,mb4.3,ML3.1,MS2.9, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.13**	**200**	*eP*	Pg	02 16 14.5	+0.9
PVCP				*eS*	Sg	02 16 17.7	+1.7
CNP	**Catarman**	**1.28**	**159**	*eP*	Pn	02 16 32.1	-1.2
AUQP	**San Andres**	**1.53**	**255**	*eP*	Pn	02 16 37.2	+0.4
GQP	**Guinayangan**	**1.71**	**276**	*eP*	Pn	02 16 40.0	+0.7
GQP				*eS*	Sn	02 17 01.5	+0.5
POLP	**Polilio Island**	**2.41**	**295**	*eP*	Pn	02 16 49.9	+1.0
POLP	**Polilio Island**	**2.41**	**295**	*eP*	Pn	02 16 50.5	+1.5
OTRP	**Odiongan**	**2.51**	**238**	*eP*	Pn	02 16 48.5	-1.8
RCP	**Roxas**	**2.57**	**214**	*eP*	Pn	02 16 49.6	-1.5
SJMP	**San Jose**	**3.25**	**248**	*eP*	Pn	02 17 00.7	+0.3
MSLP	**Maasin**	**3.62**	**170**	*eP*	Pn	02 17 10.8	+5.3
CAUP	**Cauayan**	**3.94**	**325**	*eP*	Pn	02 17 10.1	+0.1
CAUP	**Cauayan**	**3.94**	**325**	*eP*	Pn	02 17 10.7	+0.7

*NEIC **01** 02:42:42.4, 24.73S×69.06W, h55km, MD3.8(GUC), After GUC.*

GUC 01 02:42:42.4±0.5,2473S×6906W,h55km±86km,MD3.8, ML3.2,2C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.23**	**275**	*iP*	Pn	02 43 04.3	+1.0
CPN1				*iS*	Sn	02 43 21.3	+2.4
CPN1				AML	AML	02 43 27.2	
	comp=E,979nm,0.4s						
ANCH	**Antofagasta**	**1.62**	**310**	*iP*	Pn	02 43 06.6	-2.0
ANCH				*iS*	Sn	02 43 26.4	-1.8
CEN1	**Los Morros**	**1.69**	**322**	*iP*	Pn	02 43 09.6	0.0
CEN1				*iS*	Sn	02 43 30.1	-0.1
CEN1				AML	AML	02 43 36.5	
	comp=E,296nm,0.4s						
LVC	**Limon Verde**	**2.11**	**4**	*e*Pn	Pn	02 43 15.6	+0.3
LVC				*e*Sn	Sn	02 43 39.2	-1.2
CPCH	**Copiapo**	**2.87**	**204**	*iP*	Pn	02 43 25.2	-0.5
CPCH				*iS*	Sn	02 43 58.5	-0.4
LCO	**Las Campanas**	**4.51**	**199**	*iP*	Pn	02 43 49.4	+1.3
LCO				*iS*	Sn	02 44 40.2	+0.9

*ISCJB **01** 02:46:03.2±3.9, 1745S±009×1788W±01, h494km±44km, mb3.9/25, Error ellipse: s-maj=20.7km s-min=14.7km az=7.0*
*IDC **01** 02:46:03.7±4.3, 1748S×17879W, h488km±50km, mb3.6/13, mb1 3.7/13, mb1mx3.7/20, mbtmp3.6/13, Error ellipse: s-maj=19.8km s-min=16.6km az=75.0*
*NEIC **01** 02:46:05.4±2.2, 1750S×17883W, h513km±24km, mb3.9/13, Error ellipse: s-maj=12.7km s-min=10.9km az=124.0*
ISC 01 02:46:05.6±4.0,1747S±009×1788W±01,h511km±46km, n75,σ0§82/34,mb3.9/25,7C-4D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.02**	**189**	P	P	**02 50 10.9**	**-1.8**
7.1nm,0.3s,mb4.8,baz=253,slow=1.9,SNR=19							
RPZ	**Rata Peaks**	**27.53**	**196**	P	P	**02 51 10.2**	**-0.3**
4.1nm,0.4s,mb4.4,baz=5.0,slow=9.0,SNR=6.1							
ARMA	**Armidale**	**29.83**	**239**	*eP*	P	**02 51 32.2**	**+1.4**
CNB	**Canberra Magne**	**33.39**	**232**	*eP*	P	**02 52 02.5**	**+1.3**
PMG	**Port Moresby**	**34.01**	**279**	*eP*	P	**02 52 06.3**	**-0.4**
12nm,0.9s,mb4.4							
TOO	**Toolangi**	**37.15**	**230**	*eP*	P	**02 52 33.5**	**+1.0**
STKA	**Stephens Creek**	**38.50**	**241**	*eP*	P	**02 52 44.6**	**+0.9**
4.4nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**38.50**	**241**	P	P	**02 52 44.5**	**+0.8**
4.7nm,0.5s,mb4.3,baz=85,slow=8.8,SNR=31							

WRAB	**Tennant Creek**	**44.32**	**259**	*eP*	P	**02 53 29.0**	**-1.1**
0.9nm,0.3s,mb3.8							
WRA	**Warramunga Arr**	**44.33**	**259**	P	P	**02 53 29.4**	**-0.7**
0.6nm,0.3s,mb3.5,baz=97,slow=7.6,SNR=11							
WRA				PP	PP	02 55 25.1	+1.7
0.4nm,0.5s,baz=97,slow=6.8,SNR=4.6							
ASAR	**Alice Springs**	**44.54**	**254**	P	P	**02 53 31.6**	**0.0**
5.4nm,0.3s,mb4.5,baz=89,slow=8.1,SNR=85							
FORT	**Forrest**	**49.85**	**244**	*eP*	P	**02 54 11.1**	**-0.5**
9.4nm,0.6s,mb4.4							
MJAR	**Matsushiro Arr**	**67.33**	**323**	P	P	**02 56 08.9**	**-0.4**
1.4nm,0.5s,mb3.8,baz=241,slow=12,SNR=5.5							
QSPA	**South Pole Qui**	**72.58**	**180**	P	P	**02 56 40.7**	**+0.7**
5.4nm,0.7s,mb4.1,baz=27,slow=0.9,SNR=15							
PETK	**Petropavlovsk-**	**73.16**	**345**	P	P	**02 56 43.7**	**+0.1**
2.0nm,0.6s,mb3.7,baz=132,slow=8.3,SNR=5.8							
KDAK	**Kodiak Island**	**78.07**	**14**	P	P	**02 57 11.4**	**+0.6**
7.8nm,0.7s,mb4.2,baz=144,slow=22,SNR=3.4							
NVAR	**Mina Array Bea**	**79.38**	**44**	P	P	**02 57 19.1**	**+0.8**
1.0nm,0.7s,mb3.3,baz=223,slow=7.9,SNR=9.5							
WVOR	**Wild Horse Val**	**81.33**	**41**	*eP*	P	**02 57 26.5**	**-1.9**
1.2nm,0.8s,mb3.4							
ELK	**Elko**	**82.61**	**43**	*eP*	P	**02 57 35.2**	**+0.3**
1.3nm,0.7s,mb3.6							
TRF	**Thorofare Moun**	**83.67**	**12**	*eP*	P	**02 57 38.3**	**-1.4**
6.7nm,0.8s,mb4.2							
MAW	**Mawson**	**84.14**	**200**	*eP*	P	**02 57 42.0**	**-0.1**
2.6nm,0.6s,mb3.9							
MAW	**Mawson**	**84.14**	**200**	P	P	**02 57 42.2**	**+0.1**
3.4nm,0.7s,mb4.0,baz=125,slow=6.5,SNR=13							
HLID	**Hailey**	**84.56**	**41**	*eP*	P	**02 57 45.1**	**+0.6**
1.2nm,0.8s,mb3.5							
TXAR	**Lajitas Array**	**86.09**	**58**	P	P	**02 57 53.4**	**+1.1**
0.5nm,0.7s,mb3.3,baz=212,slow=8.5,SNR=6.4							
TPAW	**Teton Pass**	**86.73**	**42**	*eP*	P	**02 57 55.5**	**+0.5**
1.3nm,0.8s,mb3.6							
LOHW	**Long Hollow**	**87.01**	**42**	*eP*	P	**02 57 56.7**	**+0.4**
1.2nm,0.7s,mb3.6							
BW06	**Boulder Array**	**87.30**	**44**	*eP*	P	**02 57 57.4**	**-0.3**
0.8nm,0.5s,mb3.6							
PDAR	**Pinedale Array**	**87.30**	**44**	P	P	**02 57 57.9**	**+0.2**
0.6nm,0.5s,mb3.5,baz=215,slow=3.8,SNR=8.1							
BOZ	**Bozeman (W)**	**87.31**	**40**	*eP*	P	**02 57 57.4**	**-0.3**
2.3nm,0.6s,mb4.0							
SNAA	**Sanae**	**91.04**	**179**	*e*	P	**02 58 13.5**	**-1.1**
SNAA	**Sanae**	**91.04**	**179**	*eP*	P	**02 58 13.4**	**-1.2**
1.4nm,0.6s,mb4.1							
VNA3	**Neumayer Olymp**	**91.19**	**177**	*e*	P	**02 58 14.9**	**-0.4**
VNA2	**Neumayer--Watz**	**91.63**	**177**	*e*	P	**02 58 17.1**	**-0.2**
baz=202,slow=2.9							
VNA1	**Neumayer--Stat**	**91.86**	**177**	*e*	P	**02 58 19.0**	**+0.6**
ARCES	**ARCESS Array B**	**125.82**	**350**	PKP	PKPdf	03 04 07.9	-0.4
2.5nm,0.9s,baz=354,slow=2.7,SNR=3.6							
KWP	**Kalwaria**	**143.52**	**336**	*i*P	PKPdf	03 04 39.6	-2.1
TLCR		**144.00**	**326**	*i*P	PKPdf	03 04 41.8	-0.9
BUR08	**Bucovina Ar. S**	**144.04**	**332**	*e*PKPdf	PKPdf	03 04 41.8	-0.8
BURAR	**Bucovina Array**	**144.05**	**332**	*i*P	PKPdf	03 04 41.4	-1.3
BR131	**Keskin Array S**	**144.20**	**315**	*e*PKPdf	PKPdf	03 04 42.4	-0.8
STHS	**Stebnicka Huta**	**144.25**	**337**	*e*PKP	PKPdf	03 04 42.7	-0.2
KOLS	**Kolonicke sedl**	**144.25**	**336**	*e*PKP	PKPdf	03 04 42.4	-0.6
KSP	**Ksiaz**	**144.59**	**343**	*e*P	PKPdf	03 04 43.5	0.0
VRI	**Vrincioaia**	**144.61**	**329**	*i*P	PKPdf	03 04 44.0	+0.3
HARR	**Harsova**	**144.80**	**326**	*i*P	PKPdf	03 04 45.1	+1.0
CLL	**Collm**	**144.96**	**347**	*i*P	PKPdf	03 04 44.0	-0.1
CLL	**Collm**	**144.96**	**347**	*i*PKPbc	PKPdf	03 04 44.0	-0.1
comp=Z,7.0nm,0.6s							
BRG	**Berggiesshubel**	**145.15**	**346**	*e*P	PKPdf	03 04 44.8	+0.3
MORC	**Moravsky Berou**	**145.18**	**341**	*e*PKPbc	PKPbc	03 04 44.6	-0.8
MORC	**Moravsky Berou**	**145.18**	**341**	*i*P	PKPbc	03 04 44.4	-0.1
DRGR		**145.78**	**333**	*i*P	PKPdf	03 04 47.0	+1.3
VYHS	**Vyhne**	**145.88**	**339**	*e*PKP	PKPdf	03 04 46.7	+0.9
VRAC	**Vranov**	**145.88**	**342**	*i*P	PKPbc	03 04 48.1	+0.6
KOLL	**Kolsrud**	**145.95**	**339**	*e*PKP	PKPdf	03 04 47.7	+1.8
MODS	**Modra-Piesok**	**146.50**	**340**	*e*PKP	PKPdf	03 04 48.1	+1.3
GERES	**GERESS Array B**	**147.09**	**345**	PKPbc	PKPbc	03 04 50.3	-0.5
comp=Z,1.9nm,0.6s,baz=26,slow=3.2,SNR=22							
GERES				PKPab	PKPab	03 04 53.7	-0.2
comp=Z,0.5nm,0.5s,baz=33,slow=3.8,SNR=4.9							
BZS	**Buzias**	**147.17**	**333**	*i*P	PKPbc	03 04 50.4	-0.7
GIVF	**Givet**	**147.32**	**356**	*e*PKP1	PKPbc	03 04 50.7	-0.6
comp=Z,4.3nm,0.4s							
BAIF	**Baives**	**147.40**	**356**	*e*PKP1	PKPbc	03 04 51.0	-0.6
WLF	**Walferdange**	**147.64**	**354**	*e*PKPbc	PKPbc	03 04 51.7	-0.5
CDF	**Champ du Feu**	**148.75**	**352**	*e*PKP1	PKPbc	03 04 54.5	-0.5
comp=Z,4.5nm,0.5s							
FLN	**La Foliniere**	**148.76**	**2**	*e*PKP1	PKPbc	03 04 54.1	-0.9
comp=Z,7.1nm,0.5s							
MEZF	**Maizieres J'vi**	**148.89**	**355**	*e*PKP1	PKPbc	03 04 54.9	-0.5
LDF	**La Druitiere**	**148.94**	**2**	*e*PKP1	PKPbc	03 04 54.4	-1.1
ROSF	**Rostrenen**	**149.00**	**6**	*e*PKP1	PKPbc	03 04 55.0	-0.6
GRR	**Gorron**	**149.12**	**3**	*e*PKP1	PKPbc	03 04 55.1	-0.8
comp=Z,4.7nm,0.5s							
SGMF	**Saint Gilles**	**149.15**	**5**	*e*PKP1	PKPbc	03 04 55.5	-0.5
comp=Z,5.2nm,0.7s							
HAU	**Haudompre**	**149.26**	**353**	*e*PKP1	PKPbc	03 04 55.5	-0.8
comp=Z,5.5nm,0.5s							
LOR	**Lormes**	**150.21**	**356**	*e*PKP1	PKPbc	03 04 57.9	-0.6
comp=Z,9.4nm,0.7s							
SSF	**Saint Saulge**	**150.43**	**357**	*e*PKP1	PKPbc	03 04 58.5	-0.6
comp=Z,5.1nm,0.5s							
CABF	**La Chapelle**	**150.66**	**353**	*e*PKP1	PKPbc	03 04 59.5	-0.1
AVF	**Avril sur Loir**	**150.71**	**357**	*e*PKP1	PKPbc	03 04 58.7	-1.0
comp=Z,2.0nm,0.5s							
MFF	**Saint Martin d**	**150.93**	**2**	*e*PKP1	PKPbc	03 04 59.4	-0.8
BGF	**Bois d'Agland**	**150.97**	**358**	*e*PKP1	PKPbc	03 04 59.6	-0.7
comp=Z,6.6nm,0.6s							
TCF	**Toulx Ste Croi**	**151.26**	**359**	*e*PKP1	PKPbc	03 05 00.1	-0.9

*DJA **01** 02:48:16, 251S×121.13E, h20km, MLv3.7/2*
*IDC **01** 02:48:20.1±1.1, 553S×122.14E, h0km, mb3.6/4, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, ML3.7/3, Error ellipse: s-maj=38.2km s-min=17.9km az=52.0*
*ISCJB **01** 02:48:24.9±1.0, 570S±006×122.11E±007, h61km±14km, mb3.7/4, Error ellipse: s-maj=13.1km s-min=9.4km az=144.7*
*NEIC **01** 02:48:24.5±0.7, 571S×122.05E, h35km, mb3.7/1, Error ellipse: s-maj=31.1km s-min=10.0km az=47.0*
ISC 01 02:48:25.9±1.0,570S±006×1221E±007,h48km±14km, n13,σ1§17/14,mb3.7/4,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.80**	**16**	P	Pn	**02 48 49.2**	**-5.3**
KDI	**Kendari**	**1.80**	**16**	S	Sn	**02 49 16.4**	**+0.3**
KAPI	**Kappang**	**2.45**	**286**	Pn	Pn	**02 49 00.9**	**-2.5**
17nm,0.3s,baz=127,slow=5.2,SNR=51							
KAPI				Sn	Sn	**02 49 33.0**	**+0.9**
13nm,0.3s,baz=285,slow=22,SNR=16							
KAPI	**Kappang**	**2.45**	**286**	P	Pn	**02 49 01.1**	**-2.3**
BATI	**Baumata**	**4.74**	**161**	Pn	Pn	**02 49 36.6**	**+1.9**
3.5nm,0.3s,baz=70,slow=20,SNR=3.9							
WRA	**Warramunga Arr**	**18.49**	**141**	P	Pn	**02 52 37.8**	**-0.8**
0.2nm,0.3s,baz=318,slow=12,SNR=21							
WRAB	**Tennant Creek**	**18.49**	**141**	*eP*	Pn	**02 52 37.3**	**-1.2**
3.6nm,0.7s							
WB2	**Warramunga Arr**	**18.50**	**141**	*eP*	Pn	**02 52 38.5**	**-0.2**
ASAR	**Alice Springs**	**21.17**	**149**	P	P	**02 53 08.0**	**+0.9**
1.1nm,0.8s,mb3.3,baz=329,slow=12,SNR=13							
SONM	**Songino Array**	**55.07**	**347**	P	P	**02 57 51.9**	**-0.8**
0.4nm,0.7s,mb3.6,baz=174,slow=7.0,SNR=4.0							
SONM	**Songino Array**	**55.07**	**347**	P	P	**02 57 51.9**	**-0.9**
MKAR	**Makanchi Array**	**63.03**	**330**	P	P	**02 58 47.7**	**-0.2**
1.0nm,0.8s,mb4.0,baz=148,slow=8.5,SNR=3.3							
ZALV	**Zalesovo Beam**	**67.14**	**337**	P	P	**02 59 16.1**	**+1.7**
0.5nm,0.3s,mb4.1,baz=167,slow=7.0,SNR=3.2							

*IDC **01** 02:53:42.3±1.8, 1743S×16779E, h0km, mb4.3/7, mb1 4.4/7, mb1mx4.2/19, mbtmp4.3/7, MS3.5/4, Ms1 3.4/4, ms1mx3.0/27, Error ellipse: s-maj=41.0km s-min=27.3km az=42.0*
*NEIC **01** 02:53:45.7±11.0, 1752S×16776E, h19km±68km, mb4.4/5, Error ellipse: s-maj=30.7km s-min=16.4km az=214.0*
*ISCJB **01** 02:53:46.6±0.8, 1761S±007×1677E±0.1, h33km, mb4.3/11, MS3.4/4, Error ellipse: s-maj=18.7km s-min=10.5km az=176.5*
ISC 01 02:53:48.1±0.8,1758S±008×1678E±01,h35km, (h32km±9km:pP-P),n19,σ0§78/18,mb4.3/11,MS3.4/4, Vanuatu Islands

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

DZM	**Mont Dzumac**	**4.63**	**195**	*e*Pn	Pn	**02 54 55.1**	**-0.6**
DZM				*e*Sn	Sn	**02 55 48.1**	**-0.1**
CTA	**Charters Tower**	**20.50**	**260**	LR	LR	03 04 27.4	
comp=Z,105nm,19.8s,MS3.2,baz=49,slow=31							
URZ	**Urewera**	**22.17**	**160**	P	P	**02 58 41.6**	**+0.5**
3.0nm,0.6s,mb3.9,baz=319,slow=9.3,SNR=2.7							
CNB	**Canberra Magne**	**24.07**	**219**	*eP*	P	**02 59 01.9**	**+1.7**
STKA	**Stephens Creek**	**27.60**	**234**	*eP*	P	**02 59 33.4**	**+1.2**
3.9nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**27.60**	**234**	P	P	**02 59 33.4**	**+1.2**
5.6nm,0.6s,mb4.3,baz=38,slow=8.9,SNR=18							
STKA				LR	LR	03 10 18.1	
comp=Z,108nm,19.0s,MS3.5,baz=24,slow=36							
WRAB	**Tennant Creek**	**31.68**	**260**	*eP*	P	**03 00 07.8**	**-0.7**
2.1nm,0.7s,mb4.1							
WRA	**Warramunga Arr**	**31.69**	**260**	P	P	**03 00 07.2**	**-1.4**
1.7nm,0.7s,mb4.0,baz=89,slow=9.1,SNR=12							
WRA				LR	LR	03 11 58.9	
comp=Z,67nm,18.2s,MS3.4,baz=255,slow=34							
ASAR	**Alice Springs**	**32.20**	**253**	P	P	**03 00 12.9**	**-0.1**
3.7nm,0.5s,mb4.4,baz=79,slow=8.6,SNR=58							
GUMO	**Guam**	**38.33**	**322**	LR	LR	03 13 50.2	
comp=Z,62nm,21.6s,MS3.4,baz=87,slow=32							
MBWA	**Marble Bar**	**45.31**	**257**	*eP*	P	**03 02 03.0**	**+0.1**
14nm,0.8s,mb4.8							
NWAO	**Narrogin (SRO)**	**47.74**	**241**	P	P	**03 02 22.2**	**+0.4**
4.4nm,0.7s,mb4.6,baz=71,slow=9.0,SNR=6.0							
QSPA	**South Pole Qui**	**72.46**	**180**	P	P	**03 05 10.8**	**+0.3**
1.5nm,0.4s,mb4.2,baz=0.3,slow=3.0,SNR=8.4							
ULN	**Ulaanbaatar**	**84.70**	**324**	*eP*	P	**03 06 18.9**	**+0.7**
1.5nm,0.6s,mb4.3							
SONM	**Songino Array**	**85.05**	**324**	P	P	**03 06 20.2**	**+0.1**
1.3nm,0.9s,mb4.1,baz=134,slow=4.2,SNR=7.2							
SNAA	**Sanae**	**90.74**	**183**	*e*	P	**03 06 45.9**	**-1.2**
SNAA				*e*		03 06 50.4	
SNAA				*e*	pP	03 06 56.1	-2.1
SNAA	**Sanae**	**90.74**	**183**	*eP*	P	**03 06 46.1**	**-1.0**
2.2nm,1.2s,mb4.4							
VNA3	**Neumayer Olymp**	**91.39**	**181**	*e*	P	**03 06 49.2**	**-0.9**
VNA3				*e*		03 06 54.1	
VNA3				*e*	pP	03 06 58.6	-2.6
VNA2	**Neumayer--Watz**	**91.66**	**182**	*e*	P	**03 06 51.2**	**-0.1**
baz=174,slow=3.1							
VNA2				*e*		03 06 55.5	
VNA2				*e*	pP	03 07 01.1	-1.4

IDC 01 02:55:13.9±9.3,624S×12982E,h85km±78km,mb3.7/1, mb1 3.6/4,mb1mx3.3/15,mbtmp3.5/4,ML3.9/3,Error ellipse: s-maj=110.8km s-min=47.4km az=175.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.26**	**237**	P	Pn	02 56 57.9	+0.7
10nm,0.3s,baz=66,slow=7.7,SNR=3.1							
BATI				S	Sn	02 58 18.1	-0.1
5.3nm,0.3s,baz=58,slow=9.5,SNR=2.9							
WRA	**Warramunga Arr**	**14.31**	**163**	P	Pn	02 58 32.2	-0.2
0.4nm,0.3s,baz=348,slow=14,SNR=6.4							
WB2	**Warramunga Arr**	**14.31**	**163**	*eP*	Pn	02 58 31.6	-0.8
ASAR	**Alice Springs**	**17.76**	**168**	P	Pn	02 59 16.2	+0.6
0.1nm,0.3s,baz=340,slow=10.0,SNR=8.0							
STKA	**Stephens Creek**	**27.78**	**158**	P	P	03 00 54.4	-0.3
1.3nm,0.7s,baz=340,slow=7.8,SNR=2.8							

JMA 01 03:19:57.4±0.1,2876N×14021E,h464km,M3.5,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.41**	**133**	P	P	03 21 01.8	+0.2
CBIJ				*eS*	S	03 21 53.1	-0.5
JHHJ	**Haha-jima-NKT**	**2.75**	**140**	P	P	03 21 04.2	+0.4
JHHJ				*eS*	S	03 21 57.1	-0.5
BSO1	**Boso 1**	**5.91**	**6**	P	S	03 21 33.4	+2.2
BSO1				*eS*	S	03 22 48.4	+0.5
BSO3	**Boso 3**	**6.03**	**2**	*eS*	S	03 22 50.2	+0.1
BSO4	**Boso 4**	**6.21**	**1**	*eS*	S	03 22 53.9	+0.4
JIE	**Ise**	**6.36**	**333**	P	P	03 21 37.2	+1.5
JKN2	**Miekihoku**	**6.41**	**329**	P	P	03 21 37.4	+1.1
JNY	**Yasuok**	**6.87**	**344**	P	P	03 21 42.1	+1.1
JRY	**Ryogami san**	**7.32**	**352**	P	P	03 21 46.6	+0.9
JAG	**Ashikaga**	**7.67**	**355**	P	P	03 21 49.6	+0.2
JHO	**Hitachi**	**7.83**	**2**	*eS*	S	03 23 16.7	-7.7

*IDC **01** 03:20:06.6±3.5, 1755S×16765E, h18km±20km, mb4.4/12, mb1 4.6/13, mb1mx4.5/20, mbtmp4.5/13, ML5.6/1, MS4.0/14, Ms1 4.0/14, ms1mx3.7/23, Error ellipse: s-maj=24.0km s-min=18.1km az=112.0*
*NEIC **01** 03:20:06.5±5.1, 1755S×16778E, h20km±30km, mb4.9/16, Error ellipse: s-maj=13.7km s-min=9.3km az=73.0*
*ISCJB **01** 03:20:07.2±2.0, 1772S±006×16772E±009, h33km±17km, mb4.8/37, MS4.1/16, Error ellipse: s-maj=14.7km s-min=10.1km az=163.1*
*MOS **01** 03:20:08.2±1.2, 1760S×16747E, h33km, mb5.0/13, Error ellipse: s-maj=13.8km s-min=11.5km az=11.7*
*DJA **01** 03:20:15.3±0.0, 1788S×16777E, h91km*
*BJI **01** 03:20:15.0, 1

WRAB Tennant Creek 31.69 261 *e*P **P** 03 26 27.9 -1.4
WRAB pmax pmax
comp=Z,11nm,0.9s,mb4.7
WRAB Tennant Creek 31.69 261 P **P** 03 26 28.2 -1.1
comp=Z,16nm,1.1s,mb4.8
WRA Warramunga Arr 31.70 261 P **P** 03 26 28.2 -1.2
comp=Z,7.1nm,0.8s,mb4.6,baz=90,slow=9.1,SNR=44
WRA ScP ScP 03 33 02.8 +0.7
comp=Z,0.8nm,0.8s,baz=82,slow=4.8,SNR=5.3
WRA LR LR 03 38 52.0
comp=Z,249nm,18.6s,MS3.9,baz=90,slow=36
ASAR Alice Springs 32.19 254 P **P** 03 26 32.8 -0.9
comp=Z,14nm,0.6s,mb5.0,baz=80,slow=8.7,SNR=190
ASAR ScP ScP 03 33 05.2 +1.4
comp=Z,1.6nm,1.0s,baz=74,slow=3.8,SNR=7.1
FORT Forrest 38.29 243 *e*P **P** 03 27 26.2 +0.1
comp=Z,16nm,0.6s,mb4.9
GUMO Guam 38.43 322 LR LR 03 42 21.9
comp=Z,173nm,18.4s,MS3.9,baz=118,slow=35
TBI Tubuai 40.34 105 *e*LR LR 03 39 00.3
comp=Z,211nm,29.8s
PPT Papeete 40.58 97 *e*LR LR 03 39 27.3
comp=Z,366nm,24.0s
PPT Papeete 40.58 97 LR LR 03 40 41.0
comp=Z,314nm,20.2s,MS4.2,baz=278,slow=30
BATI Baumata 43.37 274 P **P** 03 28 10.0 +1.8
comp=Z,31nm,1.3s,mb4.9
MBWA Marble Bar 45.31 258 *e*P **P** 03 28 24.1 +0.4
comp=Z,46nm,0.9s,mb5.3
MBWA Marble Bar 45.31 258 P **P** 03 28 23.8 +0.1
comp=Z,61nm,0.9s,mb5.4
KLBR Kellerberrin 47.15 243 *e*P **P** 03 28 37.3 -0.7
comp=Z,24nm,0.9s,mb5.1
NWAO Narrogin (SRO) 47.71 241 *e*P **P** 03 28 41.4 -1.0
comp=Z,26nm,0.8s,mb5.3
NWAO Narrogin (SRO) 47.71 241 *e*P **P** 03 28 41.4 -0.9
NWAO pmax pmax
comp=Z,26nm,0.8s
KAPI Kappang 48.59 279 *e*P **P** 03 28 47.9 -1.5
comp=Z,4.2nm,0.4s,mb4.8
RKT Rikitea 53.66 106 *e*LR LR 03 45 13.8
comp=Z,263nm,27.8s
KSM Kuching 59.68 282 *e*P **P** 03 30 09.5 -0.8
KSM Kuching 59.68 282 P **P** 03 30 10.5 +0.2
comp=Z,38nm,1.1s,mb5.3
SBA Scott Base 60.20 180 *e*P **P** 03 30 13.2 +0.4
comp=Z,72nm,0.7s,mb5.8
SBA Scott Base 60.20 180 *e*P **P** 03 30 13.2 +0.3
SBA pmax pmax
comp=Z,72nm,0.7s,mb5.8
MJAR Matsushiro Arr 60.74 333 P **P** 03 30 14.2 -2.8
comp=Z,4.0nm,1.0s,mb4.5,baz=174,slow=7.4,SNR=5.1
MAT Matsushiro 60.74 333 P **P** 03 30 14.4 -2.6
ASAJ Asahikawa 65.67 340 P **P** 03 30 49.7 +0.1
comp=Z,6.2nm,0.5s,mb4.9,baz=149,slow=3.5,SNR=3.8
ASAJ Asahikawa 65.67 340 P **P** 03 30 49.7 +0.1
ASAJ pmax pmax
comp=Z,6.0nm,0.5s
QIZ Qiongzhong 67.60 300 P **P** 03 31 02.8 +0.3
QIZ S S 03 39 50.7 -7.1
NJ2 Nanjing 68.13 316 *e*P **P** 03 31 08.2 +2.7
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
PETK Petropavlovsk- 71.03 354 P **P** 03 31 23.1 +0.2
comp=Z,2.1nm,0.6s,mb4.2,baz=132,slow=7.0,SNR=6.4
PETK LR LR 03 58 24.0
comp=Z,60nm,19.4s,MS3.9,baz=68,slow=32
MDJ Mudanjiang 71.10 332 P **P** 03 31 25.7 +2.1
MDJ AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,70nm,5.1s
GYA Guiyang 73.79 305 P **P** 03 31 41.8 +1.8
GYA PCP PcP 03 31 57.8 +2.3
GYA AP pP 03 32 04.5 +15
GYA XP sP 03 32 15.0 +22
GYA PP PP 03 34 28.6 +3.5
GYA S S 03 41 04.3 -5.3
GYA SKS 03 41 35.8
GYA XS sS 03 41 44.9 +20
GYA SS SS 03 45 51.5 -2.8
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.8s
GYA LR LR
comp=N,510nm,21.9s,MS4.9
GYA LR LR
comp=E,470nm,20.8s,MS4.9
GYA LR LR
comp=Z,460nm,21.0s,MS4.7
KLR Kul'dur 73.89 336 *e*P **P** 03 31 30.7 -9.4
BJI Beijing 74.86 321 P **P** 03 31 45.6 -0.3
BJI AMB AMB
comp=Z,7.0nm,0.7s,mb4.7
KMI Kunming 76.27 302 P **P** 03 31 56.0 +1.6
KMI AMB AMB
comp=Z,11nm,1.0s,mb4.7
CMAR Chiang Mai Arr 76.60 295 P **P** 03 31 55.5 -0.9
comp=Z,0.9nm,0.3s,mb4.1,baz=124,slow=5.2,SNR=7.2
CMAR LR LR 04 08 46.2
comp=Z,29nm,19.1s,MS3.6,baz=190,slow=38
CHTO Chiang Mai 76.74 295 *e*P **P** 03 31 56.6 -0.6
comp=Z,5.2nm,0.8s,mb4.5
CHTO Chiang Mai 76.74 295 *e*P **P** 03 31 56.6 -0.6
CHTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HHC Hu-ho-hao-te 78.14 320 *e*P **P** 03 32 07.2 +2.7
HHC AP pP 03 32 27.6 +14
HHC XP sP 03 32 35.4 +18
HHC PP PP 03 35 08.2 +6.6
HHC S S 03 41 54.3 -2.7
HHC SKS 03 42 09.7
HHC XS sS 03 42 28.7 +16
HHC SS SS 03 46 59.9 +0.2
HHC AMB AMB
comp=Z,21nm,0.6s,mb5.2
HHC LR LR
comp=N,144nm,20.2s,MS4.9
HHC LR LR
comp=E,578nm,25.0s,MS4.9
HHC LR LR
comp=Z,172nm,20.2s,MS4.4
CD2 Chengdu 78.19 308 *e*P **P** 03 32 05.3 +0.3
CD2 AP pP 03 32 27.3 +13
CD2 XP sP 03 32 36.8 +19
CD2 PP PP 03 35 05.0 +2.8
CD2 S S 03 41 52.5 -5.4
CD2 XS sS 03 42 30.2 +17
CD2 SS SS 03 46 58.2 -2.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,230nm,9.6s
CD2 LR LR
comp=E,200nm,8.4s
CD2 LR LR
comp=Z,100nm,9.6s
MAW Mawson 79.34 202 P **P** 03 32 11.4 +0.7
comp=Z,2.5nm,0.9s,mb4.1,baz=78,slow=7.4,SNR=4.5
MAW LR LR 04 02 18.9
comp=Z,134nm,18.9s,MS4.3,baz=63,slow=32
LZH Lanzhou 80.66 312 *e*P **P** 03 32 18.0 -0.3
LZH AP pP 03 32 41.0 +13
LZH XP sP 03 32 51.4 +20
LZH PP PP 03 35 28.2 +5.6
LZH *e*S S 03 42 16.2 -7.7
LZH XS sS 03 43 00.1 +20
LZH SS SS 03 47 35.0 -2.6
LZH AMB AMB
comp=Z,17nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,75nm,4.1s
LZH LR LR
comp=N,175nm,17.3s
LZH LR LR
comp=Z,256nm,18.5s,MS4.6
ULN Ulaanbaatar 84.79 324 *e*P **P** 03 32 38.9 -0.6
comp=Z,7.5nm,0.8s,mb4.9
ULN *e*pP pP 03 32 48.3 -0.8
ULN Ulaanbaatar 84.79 324 *e*P **P** 03 32 38.9 -0.6
ULN *e**PP pP 03 32 48.3 -0.9
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ULN Ulaanbaatar 84.79 324 P **P** 03 32 39.4 -0.1
comp=Z,13nm,0.9s,mb5.0
YAK Yakutsk 84.98 343 *i* P **P** 03 32 42.1 +1.9
YAK pmax pmax
comp=Z,15nm,0.6s,mb5.3
SONM Songino Array 85.15 324 P **P** 03 32 40.1 -1.2
comp=Z,2.2nm,0.7s,mb4.4,baz=133,slow=5.3,SNR=15
BILL Bilibino 85.48 359 *e*P **P** 03 32 42.9 +0.4
BILL *e*SS SS 03 48 48.1 +0.2
BILL pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SYO Syowa Base 86.03 196‖ *e*P **P** 03 32 43.6 -1.9
ZAK Zakamensk 88.23 325 *e*P **P** 03 33 04.1 +7.8
ZAK pmax pmax
comp=Z,4.0nm,1.6s,mb4.4
NVAR Mina Array Bea 88.83 49 P **P** 03 32 59.4 -0.1
comp=Z,0.5nm,0.8s,mb3.9,baz=222,slow=6.6,SNR=3.3
SNAA Sanae 90.64 183 *e*P **P** 03 33 06.2 -1.2
SNAA *e* pP 03 33 16.9 -0.2
SNAA *e* 03 33 24.9
SNAA *e* 03 33 30.1
SNAA Sanae 90.64 183 *e*P **P** 03 33 06.4 -1.0
comp=Z,6.6nm,0.9s,mb5.0
SNAA *e*pP pP 03 33 17.0 0.0
SNAA Sanae 90.64 183 *e*P **P** 03 33 06.4 -1.0
SNAA *e**PP pP 03 33 17.0 -0.1
SNAA pmax pmax
comp=Z,7.0nm,0.9s
VNA3 Neumayer Olymp 91.28 181 *e*P **P** 03 33 09.1 -1.3
VNA3 *e* pP 03 33 19.0 -1.1
VNA3 *e* 03 33 26.9
VNA3 *e* 03 33 32.7
VNA2 Neumayer--Watz 91.56 182 *e*P **P** 03 33 10.8 -0.9
baz=160,slow=3.9
VNA2 *e* pP 03 33 21.0 -0.3
VNA2 *e* 03 33 28.4
VNA2 *e* 03 33 34.5
VNA1 Neumayer--Stat 91.86 181 *e*P **P** 03 33 12.7 -0.3
VNA1 *e* pP 03 33 22.7 0.0
VNA1 *e* 03 33 30.6
VNA1 *e* 03 33 36.6
TIXI Tiksi 92.94 349 *i* P **P** 03 33 17.6 -0.2
TIXI pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
WMQ Urumqi 95.13 314 *e*P **P** 03 33 29.5 +1.0
PDAR Pinedale Array 96.58 47 LR LR 04 07 22.9
comp=Z,92nm,20.4s,MS4.2,baz=267,slow=29
TXAR Lajitas Array 97.25 62 LR LR 04 09 39.1
comp=Z,69nm,20.8s,MS4.1,baz=350,slow=31
YKA Yellowknife Ar 99.93 27 LR LR 04 16 02.2
comp=Z,63nm,20.5s,MS4.1,baz=260,slow=34
ARCES ARCESS Array B 123.22 345 PKP PKPdf 03 39 02.0 +0.6
comp=Z,1.8nm,0.8s,baz=90,slow=1.2,SNR=7.3
GERES GERESS Array B 142.47 332 PKP PKPdf 03 39 38.8 +0.8
comp=Z,0.2nm,0.4s,baz=90,slow=2.0,SNR=3.5
GIVF Givet 144.88 341 *e*PKP1 PKPdf 03 39 39.6 -2.6
BFO Black Forest 145.14 336 *e*PKPbc PKPbc 03 39 41.6 -0.6
FETA Feichten 145.16 332‖ *i*PKPdf PKPdf 03 39 41.8 -1.0
comp=Z,16nm,0.8s
DAVA Damuels 145.33 333‖ *i*PKPdf PKPdf 03 39 42.3 -0.7
comp=Z,17nm,0.9s
CDF Champ du Feu 145.47 337 *e*PKP1 PKPbc 03 39 42.6 -0.7
comp=Z,29nm,0.8s
ECH Echery 145.68 337 *e*PKPbc PKPbc 03 39 44.2 +0.3
HINF Hinteralfeld 146.13 337 *e*PKP1 PKPbc 03 39 44.1 -1.2
HAU Haudompre 146.16 337 *e*PKP1 PKPbc 03 39 44.4 -1.0
MEZF Maizieres J'vi 146.19 339 *e*PKP1 PKPbc 03 39 45.1 -0.4
comp=Z,22nm,0.8s
LDF La Druitiere 147.63 345 *e*PKP1 PKPbc 03 39 47.1 -2.5
comp=Z,6.7nm,0.7s
LOR Lormes 147.66 339 *e*PKP1 PKPbc 03 39 47.9 -1.8
comp=Z,10nm,0.8s
SSF Saint Saulge 147.96 340 *e*PKP1 PKPbc 03 39 48.8 -1.7
comp=Z,13nm,0.8s
ORIF Oris-en-Rattie 148.90 335 *e*PKP1 PKPbc 03 39 49.3 -3.8
comp=Z,27nm,1.1s
ESDC Sonseca Array 156.94 344 PKPab PKPab 03 40 31.9 +1.0
comp=Z,0.5nm,0.7s,baz=4.0,slow=3.4,SNR=4.1
TORD Torodi Ar. Bea 165.84 253 PKP PKPdf 03 40 11.0 0.0
comp=Z,0.7nm,0.9s,baz=63,slow=1.1,SNR=3.5
TORD PKPab PKPab 03 41 09.8 -0.9
comp=Z,1.3nm,1.0s,baz=92,slow=3.7,SNR=5.5
TORD Torodi Ar. Bea 165.84 253 PKP PKPdf 03 40 11.0 0.0
TORD PKPab PKPab 03 41 09.8 -0.9

FUNV 01 03:21:45.2, 672N×7322W, h107km, MW3.6, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.45**	**38**	‖ *i* P		Pn	03 22 11.7	+0.5
CAPV				*e*S		Sn	03 22 29.4	-1.5
VIGV	**El Vigia**	**2.79**	**41**	‖ *i* P		Pn	03 22 28.0	-0.4
VIGV				*e*S		Sn	03 22 59.0	-2.6
SOCV	**Socops**	**2.81**	**56**	*e*P		Pn	03 22 28.1	-0.5
SOCV				*e*S		Sn	03 22 59.5	-2.5
ELOV	**Elorza**	**3.72**	**86**	‖ *i* P		Pn	03 22 39.5	-1.3
ELOV				*e*S		Sn	03 23 19.1	-4.6
VIRV	**Villa del Rosa**	**3.84**	**12**	*e*P		Pn	03 22 40.2	-2.1
VIRV				*e*S		Sn	03 23 22.5	-4.1
QARV	**Quebrada Arrib**	**4.37**	**37**	*e*P		Pn	03 22 48.5	-0.9
QARV				*e*S		Sn	03 23 34.2	-5.2
CURV	**Curarigua**	**4.59**	**44**	*e*P		Pn	03 22 51.0	-1.5
CURV				*e*S		Sn	03 23 39.4	-5.3
TEPV	**Terepaima**	**5.12**	**51**	‖ *i* P		Pn	03 22 58.5	-1.2
TEPV				*e*S		Sn	03 23 52.3	-5.4
SIQV	**Siquisique**	**5.15**	**41**	*e*P		Pn	03 22 58.5	-1.7
SIQV				*e*S		Sn	03 23 52.3	-6.1
BAUV	**El Baul**	**5.58**	**66**	*e*P		Pn	03 23 03.3	-2.6
BAUV				*e*S		Sn	03 24 02.9	-5.9
TURV	**Turiamo**	**6.48**	**55**	*e*P		Pn	03 23 16.2	-1.9
CAOV	**Caicara del Or**	**6.87**	**85**	*e*P		Pn	03 23 20.2	-3.2
BIRV	**Birongo**	**7.81**	**61**	*e*P		Pn	03 23 33.2	-3.0

NEIC 01 03:41:58.6, 4163S×17428E, h5km, ML3.8(WEL), After WEL., Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.13**	**203**	P		Pg	03 42 01.7	+0.5
CMWZ				S		Sg	03 42 05.0	+2.0
BSWZ	**Blackbirch Sta**	**0.32**	**254**	P		Pg	03 42 04.8	+0.1
BSWZ				S		Sg	03 42 09.8	+1.4
TCW	**Tory Channel**	**0.42**	**360**	P		Pg	03 42 06.5	-0.1
SNZO	**South Karori**	**0.45**	**45**	P		Pg	03 42 07.3	0.0
BHW	**Baring Head**	**0.50**	**64**	P		Pg	03 42 08.2	+0.1

IDC 01 04:08:16.3±1.7, 165N×12632E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, Error ellipse: s-maj=168.9km s-min=20.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.85**	**160**	P		P	04 13 21.0	-0.4
	4.0nm,0.8s,baz=339,slow=11,SNR=17							
ASAR	**Alice Springs**	**26.22**	**164**	P		P	04 13 53.6	+0.6
	1.1nm,0.6s,baz=352,slow=10,SNR=7.2							
MKAR	**Makanchi Array**	**59.03**	**326**	P		P	04 18 18.3	+0.2
	0.4nm,0.5s,baz=117,slow=8.3,SNR=2.7							
KURK	**Kurchatov**	**63.27**	**328**	P		P	04 18 46.6	-0.2
	baz=130,slow=5.7							

IDC ***01*** *04:09:45.8±2.5, 2409N×9391E, h0km, mb3.9/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=71.7km s-min=31.4km az=57.0*

ISCJB ***01*** *04:09:50.4±1.0, 2385N±008×9384E±007, h70km±9km, mb3.6/3, Error ellipse: s-maj=13.9km s-min=10.4km az=13.2*

NEIC ***01*** *04:09:52.3±1.0, 2375N×9379E, h79km±32km, Error ellipse: s-maj=53.7km s-min=7.9km az=217.0*

ISC 01 04:09:52.3±0.9, 2392N±008×9390E±007, h65km±9km, n20, σ0s80/22, mb3.7/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.86**	**2**	*i* P		Pn	04 10 09.0	+0.1
IMP				*i* S		Sn	04 10 21.0	-0.1
SHL	**Shillong**	**2.46**	**312**	*e*P		Pn	04 10 32.0	+1.9
SHL				*e*S		Sn	04 10 57.0	-2.1
TAPN	**Taplejung**	**6.55**	**303**	*e*Pn		Pn	04 11 26.7	+0.7
TAPN				*e*Sn		Sx	04 12 36.2	
ODAN	**Odare**	**6.57**	**298**	*e*Pn		Pn	04 11 26.7	+0.4
ODAN				*e*Sn		Sx	04 12 35.8	
	113nm,0.4s							
CMAR	**Chiang Mai Arr**	**7.19**	**138**	Pn		Pn	04 11 34.1	-0.7
	0.5nm,0.3s,baz=313,slow=13,SNR=5.4							
RAMN	**Ramite**	**7.25**	**296**	*e*Pn		Pn	04 11 36.3	+0.6
JIRN	**Jiri**	**7.88**	**300**	*e*Pn		Pn	04 11 45.0	+0.8
JIRN				*e*Sn		Sx	04 13 06.6	
	93nm,0.3s							
GUN	**Gumba**	**8.24**	**301**	*e*Pn		Pn	04 11 49.5	+0.4
GUN				*e*Sn		Sx	04 13 16.0	
PKI	**Pulchoki**	**8.47**	**297**	*e*Pn		Pn	04 11 52.1	-0.2
PKI	**Pulchoki**	**8.47**	**297**	*e*Pn		Pn	04 11 52.7	+0.4
PKI				*e*Sn		Sx	04 13 20.3	
PKIN	**Phulchoki**	**8.49**	**297**	*e*Pn		Pn	04 11 52.7	+0.2
PKIN				*e*Sn		Sx	04 13 20.3	
KKN	**Kakani**	**8.67**	**298**	*e*Pn		Pn	04 11 55.0	0.0
GKN	**Gorkha**	**9.27**	**298**	*e*Pn		Pn	04 12 02.6	-0.7
GKN				*e*Sn		Sx	04 13 39.2	
	45nm,0.3s							
KOLN	**Koldanda**	**10.04**	**295**	*e*Pn		Pn	04 12 12.6	-1.1
KOLN				*e*Sn		Sx	04 13 57.3	
	17nm,0.3s							
DANN	**Dangsing**	**10.12**	**298**	*e*Pn		Pn	04 12 14.1	-0.7
MK31	**Makanchi Array**	**24.66**	**341**	*e*P		P	04 15 07.2	+0.3
MKAR	**Makanchi Array**	**24.66**	**341**	P		P	04 15 07.4	+0.6
	1.7nm,0.5s,mb3.8,baz=150,slow=9.2,SNR=7.8							
SONM	**Songino Array**	**25.86**	**20**	P		P	04 15 17.5	-0.2
	1.2nm,0.6s,mb3.6,baz=197,slow=10,SNR=7.5							
KURK	**Kurchatov**	**29.26**	**340**	P		P	04 15 46.9	-1.2
	baz=155,slow=10.0							
ZALV	**Zalesovo Beam**	**30.76**	**349**	P		P	04 16 01.6	+0.4
	0.5nm,0.3s,mb3.8,baz=168,slow=7.6,SNR=3.5							

DJA 01 04:10:58, 109S×9959E, h10km, MLv3.7/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**0.89**	**79**	P		Pg	04 11 10.9	-4.3
PDSI	**Padang**	**0.89**	**79**	S		Sg	04 11 28.4	+1.6
PPI	**Padang Panjang**	**1.02**	**52**	P		Pg	04 11 18.6	+0.9
PPI	**Padang Panjang**	**1.02**	**52**	S		Sg	04 11 42.2	+11

NIED ***01*** *04:14:00, 4460N×14990E, h17km, Mw4.0 Best double couple: M0 1.08000×10^15 NP1:φ0 4.00000°, δ59.00000°, λ60.00000°. NP2:φ0 232.00000°, δ42.00000°, λ129.00000°.*

BJI ***01*** *04:14:02.9, 4483N×15053E, h21km, mb4.6*

NEIC ***01*** *04:14:05.9±0.5, 4454N×14990E, h10km, mb4.3/1, Error ellipse: s-maj=12.3km s-min=10.3km az=108.0*

JMA ***01*** *04:14:08.3±1.0, 4461N×14992E, h30km, M4.4*

ISCJB ***01*** *04:14:10.7±1.2, 4433N±009×14968E±0.10, h59km±10km, mb4.3/21, MS3.5/3, Error ellipse: s-maj=15.5km s-min=11.3km az=166.4*

MOS ***01*** *04:14:11.4±0.9, 4441N×14963E, h63km, mb4.3/9, Error ellipse: s-maj=19.6km s-min=15.1km az=129.7*

IDC ***01*** *04:14:12.1±1.1, 4455N×14975E, h53km±8km, mb3.7/11, mb1 3.9/12, mb1mx3.8/21, mbtmp3.8/12, MS3.3/3, Ms1 3.4/3, ms1mx2.7/29, Error ellipse: s-maj=27.5km s-min=17.5km az=66.0*

ISC 01 04:14:11.5±1.2, 4438N±009×1498E±01, h49km±10km, h55km±4.9km: pP-P, n67, σ0s98/71, mb4.3/21, MS3.5/3, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.60**	**303**	‖ *i* PN		Pn	04 14 31.8	-5.4
KUR				*e*S		Sn	04 14 50.0	-6.7
KUR				pmax	pmax			
	comp=Z,270nm,0.6s							
KUR				smax				
	comp=N,2μm,0.5s							
KUR				smax				
	comp=E,970nm,0.5s							
KUR				smax				
	comp=N,6μm,1.0s							
KUR				smax				
	comp=E,2μm,1.0s							
NEM2	**Nemuro 2**	**3.08**	**252**	P		Pn	04 14 56.2	-1.4
NEM2				*e*S		Sn	04 15 31.5	-1.7
JRA	**Rausu**	**3.37**	**264**	P		Pn	04 15 02.0	+0.5
JNK	**Nakash**	**3.73**	**259**	P		Pn	04 15 07.1	+0.7
JAK	**Akkeshi**	**3.93**	**251**	P		Pn	04 15 08.7	-0.5
JAR	**Ashorobuto**	**4.47**	**258**	P		Pn	04 15 16.6	0.0
JAR				*e*S		Sn	04 16 08.6	+1.3
JOB	**Onbets**	**4.55**	**253**	P		Pn	04 15 17.9	+0.2
JMP	**Maruseppu**	**4.62**	**268**	P		Pn	04 15 19.7	+1.0
JCH	**Churui**	**4.98**	**251**	P		Pn	04 15 23.5	-0.1
JCH				*e*S		Sn	04 16 19.3	-0.6
JKK2	**Kamakawa 2**	**5.08**	**267**	P		Pn	04 15 26.3	+1.4
ASAJ	**Asahikawa**	**5.16**	**270**	P		Pn	04 15 27.5	+1.5
ASAJ	comp=E,7.0nm,0.3s,baz=92,slow=13,SNR=24			LR	LR		04 17 38.7	
	comp=E,263nm,20.9s,baz=195,slow=40							
ASAJ	**Asahikawa**	**5.16**	**270**	P		Pn	04 15 29.7	+3.7
ASAJ	**Asahikawa**	**5.16**	**270**	PN		Pn	04 15 27.5	+1.5
ASAJ				pmax	pmax			
	comp=Z,7.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,263nm,21.0s							
JFR	**Furan**	**5.33**	**259**	P		Pn	04 15 30.1	+1.6
ERM	**Erimo**	**5.38**	**246**	*e*Pn		Pn	04 15 29.1	0.0
	comp=Z,48nm,0.7s							
ERM	**Erimo**	**5.38**	**246**	*e*PN		Pn	04 15 29.2	+0.1
JEM	**Erimo**	**5.38**	**246**	P		Pn	04 15 29.9	+0.8
JNBK	**Urakawa-nobuka**	**5.53**	**250**	P		Pn	04 15 30.4	-0.8
JBT2	**Biratori 2**	**5.61**	**256**	P		Pn	04 15 32.2	-0.1
JBT2				*e*S		Sn	04 16 37.4	+2.0
JEW	**Eniwo**	**6.23**	**259**	P		Pn	04 15 42.0	+1.2
JNB	**Noboribetsu**	**6.64**	**256**	P		Pn	04 15 46.2	-0.1
JNB				*e*S		Sn	04 17 00.2	-0.4
JKB	**Kayabe**	**6.86**	**252**	P		Pn	04 15 48.7	-0.7
JKB				*e*S		Sn	04 17 02.9	-3.1
JYM2	**Yakumo 2**	**7.22**	**255**	P		Pn	04 15 53.9	-0.5
JANG	**Nango**	**7.30**	**240**	P		Pn	04 15 52.9	-2.6
JANG				*e*S		Sn	04 17 10.9	-6.1
JTH	**Tanohata**	**7.36**	**236**	*e*S		Sn	04 17 10.4	-8.0
JOSM	**Okushiri--Mats**	**7.86**	**257**	P		Pn	04 16 02.9	-0.2
OFUJ	**Ofunato**	**8.04**	**232**	P		Pn	04 16 04.4	-1.2
JIO	**Ouri**	**8.66**	**230**	*e*S		Sn	04 17 42.4	-7.9
BILL	**Bilibino**	**25.25**	**15**	*e*P		pP	04 19 44.7	-0.4
BILL				pmax	pmax			
	comp=Z,8.0nm,1.6s,mb4.0							
SONM	**Songino Array**	**29.97**	**292**	P		P	04 20 15.2	+0.2
	comp=Z,0.6nm,0.4s,mb3.6,baz=81,slow=7.1,SNR=4.5							
SONM				LR	LR		04 33 35.2	
	comp=Z,84nm,18.8s,MS3.4,baz=24,slow=39							
SONM	**Songino Array**	**29.97**	**292**	P		P	04 20 15.2	+0.2
SONM				LR	LR		04 33 35.2	
SONM	**Songino Array**	**29.97**	**292**	P		P	04 20 15.2	+0.3
SONM				pmax	pmax			
	comp=Z,1.0nm,0.4s							
SONM				MLR	MLR			
	comp=Z,85nm,18.8s							
GTA	**Gaotai**	**37.04**	**280**	*e*P		P	04 21 17.2	+0.7
GTA				AP	pP		04 21 21.2	-8.2
GTA				XP	sP		04 21 24.8	-10
GTA				AMB	AMB			
	comp=Z,5.0nm,1.0s,mb4.3							
ZALV	**Zalesovo Beam**	**42.12**	**307**	P		P	04 21 56.9	-1.6
	comp=Z,0.4nm,0.4s,mb3.5,baz=67,slow=11,SNR=2.2							
MK31	**Makanchi Array**	**45.96**	**298**	*e*P		P	04 22 29.1	-0.3
MKAR	**Makanchi Array**	**45.96**	**298**	P		P	04 22 28.9	-0.5
	comp=Z,3.7nm,0.7s,mb4.5,baz=72,slow=8.2,SNR=19							
MKAR				pP	pP		04 22 41.2	-1.3
	comp=Z,1.4nm,0.6s,baz=68,slow=8.8,SNR=3.4							
MKAR	**Makanchi Array**	**45.96**	**298**	P		P	04 22 28.9	-0.4
MKAR				*PP	pP		04 22 41.2	-1.3
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KURK	**Kurchatov**	**46.73**	**304**	P		P	04 22 35.1	-0.2
	baz=73,slow=8.8							
CMAR	**Chiang Mai Arr**	**49.51**	**255**	LR	LR		04 46 51.3	
	comp=Z,33nm,19.6s,MS3.3,baz=225,slow=40							
JIRN	**Jiri**	**52.78**	**274**	*e*P		P	04 23 22.6	+1.0
	comp=Z,16nm,0.9s,mb4.9							

GUN	**Gumba**	**52.85**	**274**	*eP*		**P**		**04 23 23.0**	**+0.9**
	comp=Z,10.0nm,0.5s,mb5.0								
RAMN	**Ramite**	**52.91**	**273**	*eP*		**P**		**04 23 23.1**	**+0.6**
	comp=Z,15nm,0.6s,mb5.1								
DANN	**Dangsing**	**54.11**	**276**	*eP*		**P**		**04 23 31.8**	**+0.5**
	comp=Z,5.9nm,0.4s,mb4.9								
KOLN	**Koldanda**	**54.56**	**276**	*eP*		**P**		**04 23 33.7**	**-1.0**
	comp=Z,5.4nm,0.6s,mb4.8								
ARU	**Arti**	**55.16**	**317**	*c iP*		**P**		**04 23 38.1**	**-0.5**
ARU				*e*				04 25 41.8	
ARU				*eS*		**S**		**04 31 13.8**	**-4.0**
ARU				SS		SS		04 34 57.8	-3.8
ARU				pmax		pmax			
	comp=Z,17nm,2.5s,mb4.6								
WRAB	**Tennant Creek**	**65.54**	**196**	*eP*		**P**		**04 24 50.3**	**+0.5**
	comp=Z,1.5nm,0.8s,mb4.1								
WRAB	**Tennant Creek**	**65.54**	**196**	*eP*		**P**		**04 24 50.3**	**+0.6**
WRAB				pmax		pmax			
	comp=Z,2.0nm,0.8s,mb4.2								
WRA	**Warramunga Arr**	**65.55**	**196**	P		**P**		**04 24 50.5**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=16,slow=6.7,SNR=3.9								
WRA				pP		pP		04 25 06.3	+2.7
	comp=Z,0.8nm,0.7s,baz=15,slow=6.7,SNR=3.3								
WRA	**Warramunga Arr**	**65.55**	**196**	P		**P**		**04 24 50.6**	**+0.8**
WRA				*PP		pP		04 25 06.4	+2.8
WRA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
WRA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
NVAR	**Mina Array Bea**	**65.64**	**60**	pP		pP		04 25 06.1	+1.9
	comp=Z,0.5nm,0.7s,baz=288,slow=5.9,SNR=3.9								
ASAR	**Alice Springs**	**69.26**	**196**	P		**P**		**04 25 14.0**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.6,baz=0.7,slow=4.4,SNR=7.8								
ASAR				pP		pP		04 25 29.8	+2.7
	comp=Z,0.5nm,0.6s,baz=14,slow=6.5,SNR=3.4								
ASAR	**Alice Springs**	**69.26**	**196**	P		**P**		**04 25 14.0**	**+0.8**
ASAR				*PP		pP		04 25 29.8	+2.7
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
NOA	**NORSAR Array B**	**69.67**	**340**	P		**P**		**04 25 13.9**	**-1.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=30,slow=6.3,SNR=4.0								
NOA	**NORSAR Array B**	**69.67**	**340**	*eP*		**P**		**04 25 13.9**	**-1.5**
NOA				pmax		pmax			
	comp=Z,2.0nm,0.6s								
GOF	**Gofitskoye**	**69.79**	**314**	*eP*		**P**		**04 25 20.1**	**+3.7**
HFS	**Hagfors**	**69.82**	**338**	P		**P**		**04 25 14.9**	**-1.3**
	comp=Z,2.9nm,0.7s,mb4.3,baz=54,slow=5.8,SNR=7.2								
HFS	**Hagfors**	**69.82**	**338**	P		**P**		**04 25 14.9**	**-1.4**
HFS				pmax		pmax			
	comp=Z,3.0nm,0.7s								
KIV	**Kislovodsk**	**70.73**	**313**	*eP*		**P**		**04 25 23.2**	**+1.1**
KIV				pmax		pmax			
	comp=Z,19nm,1.1s,mb4.9								
KIV				MLR		MLR			
	comp=Z,52nm,18.0s,MS3.8								
AKASG	**Malin Array Be**	**72.17**	**325**	P		**P**		**04 25 30.4**	**-0.3**
	comp=Z,2.1nm,0.4s,mb4.4,baz=37,slow=5.7,SNR=11								
AKASG	**Malin Array Be**	**72.17**	**325**	*eP*		**P**		**04 25 30.4**	**-0.3**
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.4s								
CLL	**Collm**	**77.60**	**334**	*eP*		**P**		**04 26 01.0**	**-1.0**
CLL				*i*		pP		04 26 13.6	-2.6
CLL				*i*		pP		04 26 17.4	+1.2
MLR	**Muntele Rosu**	**77.60**	**323**	P		**P**		**04 26 03.1**	**+1.0**
	comp=Z,1.6nm,0.5s,mb4.2,baz=205,slow=13,SNR=4.9								
MLR	**Muntele Rosu**	**77.60**	**323**	P		**P**		**04 26 03.1**	**+0.9**
MLR				pmax		pmax			
	comp=Z,2.0nm,0.5s								
GERES	**GERESS Array B**	**79.50**	**332**	P		**P**		**04 26 12.6**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.7,baz=37,slow=6.2,SNR=9.1								
TXAR	**Lajitas Array**	**80.72**	**58**	P		**P**		**04 26 19.4**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=310,slow=4.8,SNR=4.0								
VNA2	**Neumayer--Watz**	**151.11**	**195**	*e*		PKPbc		04 33 58.7	+1.0
	baz=66,slow=1.3								
VNA2				*e*				04 34 14.9	
VNA3	**Neumayer Olymp**	**151.25**	**194**	*e*		PKPbc		04 33 58.5	+0.5
VNA3				*e*				04 34 14.8	

*HLW **01** 04:21:15.7, 3433N×2632E, h19km, Mb3.5*
*ISCJB **01** 04:21:16.2±3.0, 34.10N±0.006×26.38E±0.008, h25km±26km, mb3.6/5, Error ellipse: s-maj=11.8km s-min=10.1km az=19.4*
*IDC **01** 04:21:22.3±4.7, 3429N×2607E, h64km±42km, mb3.4/4, mb1 3.4/4, mb1mx3.2/19, mbtmp3.4/4, Error ellipse: s-maj=56.2km s-min=18.5km az=148.0*
ISC 01 04:21:17.7±3.3, 3414N±0.006×2629E±0.009, h23km±28km, n16, σ0.9/59/18, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDI	**Anoyia**	**1.63**	**315**	P		**Pn**	**04 21 45.4**	**+0.5**
	2.4nm,0.3s,baz=148,slow=11,SNR=6.5							
IDI				S		**Sn**	**04 22 12.9**	**+7.8**
	9.2nm,0.3s,baz=1.1,slow=19,SNR=6.8							
SLUM		**2.79**	**199**	P		**Pn**	**04 22 01.0**	**+0.1**
SLUM				S		**Sn**	**04 22 34.0**	**+0.2**
AWBH		**6.21**	**158**	P		**Pn**	**04 22 48.2**	**+0.3**
GLL	**Jalalah**	**6.47**	**133**	P		**Pn**	**04 22 51.5**	**+0.1**
GLL	**Jalalah**	**6.47**	**133**	P		**Pn**	**04 22 51.5**	**0.0**
AMAG	**Maghara**	**6.81**	**119**	P		**Pn**	**04 22 54.8**	**-1.2**
SUZ		**7.01**	**126**	P		**Pn**	**04 22 58.6**	**-0.3**
HFRF	**Wahat Farafira**	**7.18**	**165**	P		**Pn**	**04 23 01.6**	**+0.4**
HFRF	**Wahat Farafira**	**7.18**	**165**	P		**Pn**	**04 23 01.5**	**+0.3**
ASUT		**8.10**	**145**	P		**Pn**	**04 23 14.1**	**+0.3**
ESDC	**Sonseca Array**	**24.75**	**292**	P		**P**	**04 26 36.1**	**-1.2**
	0.2nm,0.4s,mb3.0,baz=77,slow=9.1,SNR=4.5							
TORD	**Torodi Ar. Bea**	**30.58**	**233**	P		**P**	**04 27 29.6**	**-0.2**
	0.2nm,0.3s,mb3.4,baz=34,slow=8.5,SNR=12							
BVAR	**Borovoye Array**	**36.39**	**45**	P		**P**	**04 28 20.8**	**+0.9**
	0.4nm,0.3s,mb3.8,baz=243,slow=9.5,SNR=2.5							
KURK	**Kurchatov**	**41.11**	**50**	P		**P**	**04 28 59.5**	**-0.1**
	baz=275,slow=9.0							
MKAR	**Makanchi Array**	**43.57**	**56**	P		**P**	**04 29 20.4**	**+0.8**
	0.9nm,0.6s,mb3.7,baz=273,slow=6.1,SNR=5.0							
ZALV	**Zalesovo Beam**	**45.05**	**45**	P		**P**	**04 29 30.9**	**-0.5**
	1.0nm,0.4s,mb4.0,baz=257,slow=9.7,SNR=4.7							

*ISCJB **01** 04:22:36.0±1.5, 33.11N±0.004×34.73E±0.009, h0km, Error ellipse: s-maj=10.8km s-min=4.9km az=11.4*
*CSEM **01** 04:22:37.5, 3349N×3611E, h136km, ML2.8, After GRAL*
*GRAL **01** 04:22:37.5±0.3, 3349N×3611E, h137km±3km, MD2.8*
*GII **01** 04:22:37.7±0.5, 3305N×3487E, h0km, ML1.6/1, EXPLOSION*
ISC 01 04:22:36.4±1.7, 3312N±0.004×3472E±0.010, h0km, n18, σ0.45/24, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNTI	**Hanita**	**0.38**	**95**	Sg		**Sg**	**04 22 47.7**	**-1.0**
MMC7	**Mount Meron ar**	**0.57**	**99**	Pg		**Pg**	**04 22 47.7**	**+0.3**
MMA4	**Mount Meron ar**	**0.58**	**100**	Pg		**Pg**	**04 22 47.8**	**+0.3**
MMA0	**Mount Meron ar**	**0.58**	**100**	Pg		**Pg**	**04 22 47.8**	**+0.2**
MMA0B	**Mount Meron ar**	**0.58**	**100**	Pg		**Pg**	**04 22 47.8**	**+0.2**
MMA1	**Mount Meron ar**	**0.58**	**99**	Pg		**Pg**	**04 22 47.9**	**+0.3**
MATL	**Matirih**	**0.63**	**54**	*eP*		**Sg**	**04 22 57.4**	**+0.7**
KSDI	**Kefar Szold**	**0.79**	**84**	Pg		**Pg**	**04 22 51.7**	**+0.1**
HRI	**Mount Hermon**	**0.86**	**80**	Pg		**Pg**	**04 22 53.2**	**+0.2**
MMLI	**Mount Malkishu**	**0.90**	**139**	Pg		**Pg**	**04 22 53.4**	**-0.2**
MMLI				Sg		**Sg**	**04 23 05.1**	**-0.2**
SLTI	**Sal'it**	**0.91**	**163**	Pg		**Pg**	**04 22 54.3**	**+0.4**
KSHT	**Keshet**	**0.92**	**98**	Pg		**Pg**	**04 22 54.1**	**-0.1**
RCY	**Rachaya**	**0.99**	**68**	*eP*		**Pg**	**04 22 55.5**	**+0.1**
RCY				*eS*		**Sg**	**04 23 08.9**	**+0.7**
RCY	**Rachaya**	**0.99**	**68**	*eP*		**Pg**	**04 22 55.5**	**+0.1**
RCY				*eS*		**Sg**	**04 23 08.9**	**+0.6**
HMDT	**Nahal Hemdat**	**1.09**	**142**	Pg		**Pg**	**04 22 57.0**	**-0.4**
HMDT				Sg		**Sg**	**04 23 11.6**	**0.0**
BHL	**Bhannes**	**1.11**	**44**	*eP*		**Pg**	**04 22 56.9**	**-0.8**
BHL				*eS*		**Sg**	**04 23 11.3**	**-0.8**
BHL	**Bhannes**	**1.11**	**44**	*eP*		**Pg**	**04 22 56.8**	**-0.9**
BHL				*eS*		**Sg**	**04 23 11.3**	**-0.7**
HWQ	**Hawqa**	**1.54**	**41**	*eP*		**Pn**	**04 22 58.6**	**-6.6**

*ISCJB **01** 05:10:33.1±0.8, 5145N±0.004×16.16E±0.003, h0km, Error ellipse: s-maj=6.2km s-min=2.8km az=14.7*
*WAR **01** 05:10:35.7, 5145N×1618E, ML2.5, Mining Induced*
*NEIC **01** 05:10:39.8±1.4, 51.18N×1588E, h5km, MG2.5(WAR), Error ellipse: s-maj=18.0km s-min=7.3km az=197.0*
ISC 01 05:10:34.7±0.8, 5146N±0.004×1617E±0.004, h0km, n16, σ0.88/34, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.63**	**173**	*ePg*		**Pg**	**05 10 46.9**	**+0.2**
KSP				*eSg*		**Sg**	**05 10 54.9**	**+0.1**
KSP	**Ksiaz**	**0.63**	**173**	*iPg*		**Pg**	**05 10 46.8**	**+0.1**
KSP				*eSg*		**Sg**	**05 10 54.8**	**0.0**
UPC	**Upice**	**0.96**	**186**	*ePG*		**Pg**	**05 10 53.2**	**+0.1**
DPC	**Dobruska-Polom**	**1.12**	**175**	*ePG*		**Pg**	**05 10 55.8**	**-0.3**
DPC				*eSG*		**Sg**	**05 11 10.0**	**-0.6**
	comp=Z,28nm,0.6s							
BRG	**Berggiesshubel**	**1.52**	**248**	Pn		**Pn**	**05 11 03.1**	**0.0**
BRG				Pg		**Pg**	**05 11 03.7**	**-0.1**
BRG				Sg		**Sg**	**05 11 23.7**	**+0.2**
PRU	**Pruhonice**	**1.81**	**216**	*ePG*		**Pg**	**05 11 08.3**	**-0.9**
PRU				*eSG*		**Sg**	**05 11 32.0**	**-0.6**
	comp=Z,22nm,0.6s							
MORC	**Moravsky Berou**	**1.90**	**152**	*ePn*		**Pn**	**05 11 07.3**	**-1.1**
MORC				*eSn*		**Sn**	**05 11 33.4**	**+0.4**
CLL	**Collm**	**1.99**	**267**	*ePg*		**Pg**	**05 11 12.0**	**-0.8**
CLL				*ex*		x	05 11 15.0	
CLL				*eSg*		**Sg**	**05 11 39.0**	**+0.4**
	comp=Z,15nm,0.5s							
OKC	**Ostrava-Krasne**	**2.06**	**142**	*ePG*		**Pg**	**05 11 14.1**	**0.0**
OKC				*eSG*		**Sg**	**05 11 40.2**	**-0.5**
	comp=Z,18nm,0.8s							
OJC	**Ojcow**	**2.62**	**117**	*ePg*		**Pg**	**05 11 24.1**	**-0.7**
OJC				*eSg*		**Sg**	**05 11 59.3**	**+0.7**
NKC	**Novy Kostel**	**2.66**	**244**	*ePN*		**Pn**	**05 11 20.5**	**+1.7**
NKC				*ePG*		**Pg**	**05 11 26.2**	**+0.5**
NKC				*eSG*		**Sg**	**05 12 02.6**	**+2.5**
	comp=Z,23nm,0.3s							
KHC	**Kasperske Hory**	**2.87**	**216**	*ePN*		**Pn**	**05 11 21.8**	**+0.2**
KHC				*ePG*		**Pg**	**05 11 27.9**	**-1.7**
KHC				*eSN*		**Sn**	**05 11 55.7**	**-1.0**
KHC				*eSG*		**Sg**	**05 12 05.5**	**-1.2**
	comp=Z,10nm,0.8s							
MOX	**Moxa**	**2.99**	**256**	*ePG*		**Pg**	**05 11 31.3**	**-0.6**
MOX				*eSG*		**Sg**	**05 12 11.6**	**+1.0**
MODS	**Modra-Piesok**	**3.18**	**167**	*eSG*		**Sg**	**05 12 18.6**	**+2.0**
KOLL	**Kolacno**	**3.23**	**153**	*ePG*		**Pg**	**05 11 36.6**	**+0.1**
KOLL				*eSG*		**Sg**	**05 12 19.5**	**+1.2**
STHS	**Stebnicka Huta**	**3.84**	**120**	*ePG*		**Pg**	**05 11 48.0**	**-0.1**
STHS				*eSG*		**Sg**	**05 12 42.7**	**+4.9**

IDC 01 05:15:00.5±3.5, 3044S×13827E, h0km, mb1 3.2/3, mb1mx3.2/14, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=78.0km s-min=15.7km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**3.19**	**118**	Pn		Pn	05 15 51.7	-0.2
	0.6nm,0.3s,baz=299,slow=13,SNR=9.5							
STKA				Pg		Pg	05 15 59.0	-2.7
	1.7nm,0.3s,baz=296,slow=16,SNR=15							
STKA				Sn		Sn	05 16 28.6	-2.0
	3.0nm,0.3s,baz=330,slow=7.6,SNR=6.0							
STKA				Lg			05 16 41.6	
	6.2nm,0.3s,baz=11,slow=16,SNR=6.4							
ASAR	**Alice Springs**	**7.79**	**329**	Pn		Pn	05 16 55.6	+0.6
	0.2nm,0.3s,baz=152,slow=12,SNR=8.0							
ASAR				Sn		Sn	05 18 23.3	-0.7
	0.2nm,0.3s,baz=152,slow=22,SNR=3.5							
WRA	**Warramunga Arr**	**11.04**	**340**	Pn		Pn	05 17 40.1	+0.4
	0.2nm,0.3s,baz=156,slow=12,SNR=9.1							
WRA				Sn		Sn	05 19 44.8	+0.9
	0.1nm,0.3s,baz=162,slow=24,SNR=5.3							

*CSEM **01** 05:24:00.6±1.1, 3854N×2971W, h0km, ML2.6, Error ellipse: s-maj=11.2km s-min=7.0km az=178.0, After PDA*
PDA 01 05:24:00.6±1.1, 3854N×2971W, h0km, MD3.6, ML2.6, Error ellipse: s-maj=11.2km s-min=7.0km az=178.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CALA	**Caldeira**	**0.79**	**87**	*eP*		Pg	05 24 13.8	-1.9
CALA				*eS*		Sg	05 24 24.0	-2.0
HOR	**Horta**	**0.85**	**91**	*eP*		Pg	05 24 14.6	-2.2
HOR				*eS*		Sg	05 24 25.6	-2.2
PICO	**Pico**	**1.01**	**92**	*eP*		Pg	05 24 17.2	-2.7
PICO				*eS*		Sg	05 24 29.6	-3.4
PMAN	**Manadas**	**1.27**	**85**	*eP*		Pg	05 24 20.7	-4.3
PMAN				*eS*		Sg	05 24 36.2	-5.3
PMAN				*A*			05 24 37.0	
	46nm,0.2s							
PMAN	**Manadas**	**1.27**	**85**	*eP*		Pg	05 24 20.7	-4.3
PMAN				*eS*		Sg	05 24 36.2	-5.3
PSCM	**Serra do Cume**	**2.04**	**85**	*eP*		Pn	05 24 31.3	-4.8
PSCM				*eS*		Sn	05 24 54.4	-7.8
PSCM				*A*			05 24 56.6	
	9.7nm,0.3s							
PSCM	**Serra do Cume**	**2.04**	**85**	*eP*		Pn	05 24 31.3	-4.8
PSCM				*eS*		Sn	05 24 54.4	-7.8
PSET	**Sete Cidades**	**3.22**	**102**	*eP*		Pn	05 24 47.9	-4.5
PSET				*eS*		Sn	05 25 23.4	-8.1
PSET				*A*			05 25 26.2	
	2.5nm,0.4s							
PSET	**Sete Cidades**	**3.22**	**102**	*eP*		Pn	05 24 47.9	-4.5
PSET				*eS*		Sn	05 25 23.4	-8.1
PDA	**Ponta Delgada**	**3.29**	**103**	*eP*		Pn	05 24 49.5	-3.8
CMLA	**Cha da Macela**	**3.39**	**102**	*eP*		Pn	05 24 50.4	-4.3
CMLA				*eS*		Sn	05 25 27.3	-8.3
CMLA				*A*			05 25 35.0	
	11nm,0.5s							
CMLA	**Cha da Macela**	**3.39**	**102**	*eP*		Pn	05 24 50.4	-4.3
CMLA				*eS*		Sn	05 25 27.3	-8.3
PSMN	**Pico do Norte,**	**3.99**	**111**	*eP*		Pn	05 24 58.0	-4.9

IDC 01 05:24:54.2±3.4, 1931N×14557E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/19, mbtmp4.1/4, Error ellipse: s-maj=205.8km s-min=32.3km az=119.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WB2	**Warramunga Arr**	**40.53**	**196**	*eP*		P	05 32 35.7	+0.5
WRA	**Warramunga Arr**	**40.53**	**196**	P		P	05 32 35.9	+0.6
	2.3nm,0.4s,baz=17,slow=8.9,SNR=67							
ASAR	**Alice Springs**	**44.20**	**195**	P		P	05 33 05.2	+0.1
	1.5nm,0.6s,baz=16,slow=7.8,SNR=20							
STKA	**Stephens Creek**	**51.03**	**184**	P		P	05 33 56.9	-1.2
	0.7nm,0.3s,baz=16,slow=7.4,SNR=4.9							
NVAR	**Mina Array Bea**	**82.86**	**52**	P		P	05 37 21.3	+0.4
	0.4nm,0.5s,baz=270,slow=6.0,SNR=4.2							

*IDC **01** 05:30:10.0±0.9, 5134N×17842W, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.8/23, mbtmp3.8/7, ML4.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/35, Error ellipse: s-maj=32.5km s-min=22.6km az=159.0*
*NEIC **01** 05:30:15.5, 5122N×17831W, h23km, ML4.1(AEIC), After AEIC.*
*ISCJB **01** 05:30:16.2±1.1, 513N±0.02×17835W±0.007, h52km±8km, mb4.3/10, Error ellipse: s-maj=28.6km s-min=6.2km az=170.3*
ISC 01 05:30:17.3±1.2, 513N±02×17834W±007, h46km±9km, n26, σ1.9/00/24, mb4.3/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**1.21**	**58**	P		**Pn**	**05 30 36.2**	**-1.5**
ADK				S		**Sn**	**05 30 51.5**	**-1.5**
AMKA	**Amchitka**	**1.49**	**276**	P		**Pn**	**05 30 40.4**	**-1.0**
AMKA				S		**Sn**	**05 30 59.4**	**-0.3**
ATKA	**Atka Island**	**2.75**	**68**	P		**Pn**	**05 30 58.9**	**+0.1**
ATKA				S		**Sn**	**05 31 31.4**	**+0.7**
SMY	**Shemya**	**4.90**	**291**	P		**Pn**	**05 31 30.2**	**+1.9**
FX1	**Attu Island--F**	**5.49**	**291**	P		**Pn**	**05 31 36.3**	**-0.1**
SPIA	**Saint Paul Isl**	**7.60**	**35**	P		**Pn**	**05 32 07.0**	**+1.8**
UNV	**Unalaska Valle**	**7.67**	**66**	P		**Pn**	**05 32 07.6**	**+1.3**
PETK	**Petropavlovsk-**	**14.80**	**287**	LR		LR	05 38 59.0	
	comp=Z,43nm,21.6s,baz=98,slow=36							
KDAK	**Kodiak Island**	**16.25**	**56**	Pn		**Pn**	**05 33 58.4**	**-3.6**
	0.8nm,0.3s,baz=311,slow=13,SNR=15							
YKA	**Yellowknife Ar**	**35.11**	**46**	LR		LR	05 52 08.2	
	comp=Z,31nm,19.4s,baz=270,slow=38							

PDAR	**Pinedale Array**	**46.07**	**72**	P		**P**		**05 38 36.5**	**+0.3**
	0.6nm,0.4s,mb3.9,baz=338,slow=3.6,SNR=9.9								
SONM	**Songino Array**	**46.96**	**297**	P		**P**		**05 38 42.7**	**-0.5**
	0.2nm,0.4s,mb3.4,baz=22,slow=8.0,SNR=3.3								
ARCES	**ARCESS Array B**	**58.27**	**350**	P		**P**		**05 40 03.6**	**-2.7**
	4.6nm,1.0s,mb4.5,baz=24,slow=7.5,SNR=8.4								
MKAR	**Makanchi Array**	**60.34**	**309**	P		**P**		**05 40 20.4**	**-0.6**
	0.3nm,0.4s,mb3.7,baz=42,slow=8.2,SNR=4.2								
TAPN	**Taplejung**	**71.52**	**291**	*eP*		**P**		**05 41 33.6**	**+0.4**
GUN	**Gumba**	**72.17**	**292**	*eP*		**P**		**05 41 37.5**	**+0.4**
	42nm,0.5s								
JIRN	**Jiri**	**72.18**	**292**	*eP*		**P**		**05 41 37.7**	**+0.6**
	23nm,0.5s,mb5.3								
RAMN	**Ramite**	**72.47**	**291**	*eP*		**P**		**05 41 39.0**	**+0.1**
	30nm,0.5s								
GKN	**Gorkha**	**72.82**	**293**	*eP*		**P**		**05 41 40.8**	**-0.1**
	12nm,0.5s,mb5.1								
DMN	**Daman**	**72.85**	**293**	*eP*		**P**		**05 41 41.4**	**+0.3**
	6.8nm,0.3s,mb5.0								
DANN	**Dangsing**	**73.07**	**294**	*eP*		**P**		**05 41 42.8**	**+0.4**
	12nm,0.7s,mb4.9								
WRA	**Warramunga Arr**	**82.12**	**224**	P		**P**		**05 42 31.7**	**-1.0**
	0.2nm,0.4s,mb3.4,baz=34,slow=6.0,SNR=3.9								
ASAR	**Alice Springs**	**85.59**	**223**	P		**P**		**05 42 50.6**	**+0.2**
	0.2nm,0.3s,mb3.8,baz=27,slow=6.3,SNR=3.1								
TORD	**Torodi Ar. Bea**	**115.88**	**360**	PKP		PKPdf		05 48 53.2	-1.6
	0.2nm,0.4s,baz=353,slow=3.0,SNR=4.3								
LBTB	**Lobatse**	**148.02**	**316**	PKPbc		PKPbc		05 49 57.2	-0.1
	3.9nm,0.5s,baz=42,slow=2.1,SNR=7.4								
BOSA	**Boshof**	**151.28**	**313**	PKPbc		PKPbc		05 50 04.7	-0.5
	1.8nm,0.5s,baz=75,slow=3.2,SNR=5.3								

*NIED **01** 05:48:00, 4460N×14990E, h17km, Mw4.0 Best double couple: M0 1.31000×10^15 NP1:φs37.00000°, δ58.00000°, λ74.00000°. NP2:φs245.00000°, δ36.00000°, λ114.00000°.*
*JMA **01** 05:48:02.8±0.5, 4462N×14995E, h30km, M4.3*
*ISCJB **01** 05:48:02.1±1.8, 4455N±007×14981E±007, h23km±12km, mb4.3/25, MS3.6/3, Error ellipse: s-maj=12.6km s-min=7.1km az=153.4*
*MOS **01** 05:48:04.5±1.6, 4462N×14978E, h41km, mb4.7/15, Error ellipse: s-maj=16.6km s-min=11.1km az=113.0*
*IDC **01** 05:48:06.8±0.8, 4456N×14986E, h50km±7km, mb3.6/10, mb1 3.8/12, mb1mx3.7/22, mbtmp3.7/12, MS3.4/3, Ms1 3.4/3, ms1mx2.8/26, Error ellipse: s-maj=20.2km s-min=17.2km az=127.0*
*NEIC **01** 05:48:07.0±0.5, 4453N×14987E, mb4.7/11, Error ellipse: s-maj=14.1km s-min=9.4km az=141.0*
ISC 01 05:48:05.5±1.8, 4457N±007×14979E±007, h34km±13km, h48km±3.9km: pP-P, n84, σ1.9/10/83, mb4.3/25, MS3.6/3, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**1.52**	**297**	*ePN*		**Pn**	**05 48 26.8**	**-3.5**
KUR				*eS*		**Sn**	**05 48 47.0**	**-1.9**
KUR				pmax		pmax		
	comp=Z,360nm,0.7s							
KUR				pmax		pmax		
	comp=N,2μm,1.6s							
KUR				pmax		pmax		
	comp=E,4μm,1.6s							
KUR				smax				
	comp=N,1μm,0.6s							
KUR				smax				
	comp=E,520nm,0.6s							
NEM2	**Nemuro 2**	**3.16**	**249**	P		**Pn**	**05 48 51.1**	**-1.7**
NEM2				*eS*		**Sn**	**05 49 26.8**	**-2.5**
JRA	**Rausu**	**3.41**	**261**	P		**Pn**	**05 48 57.3**	**+1.0**
JRA				*eS*		**Sn**	**05 49 37.8**	**+2.2**
JAK	**Akkeshi**	**4.01**	**249**	P		**Pn**	**05 49 03.6**	**-0.9**
JAK				*eS*		**Sn**	**05 49 47.9**	**-2.4**
JTKR	**Abashiri--Toko**	**4.27**	**264**	P		**Pn**	**05 49 09.3**	**+1.3**
JAR	**Ashorobuto**	**4.53**	**256**	P		**Pn**	**05 49 11.9**	**+0.2**
JAR				*eS*		**Sn**	**05 50 03.7**	**+0.6**
JMP	**Maruseppu**	**4.65**	**265**	P		**Pn**	**05 49 14.7**	**+1.4**
JCH	**Churui**	**5.06**	**250**	P		**Pn**	**05 49 18.0**	**-0.9**
JCH				*eS*		Sx	05 50 13.6	
JKK2	**Kamakawa 2**	**5.11**	**265**	P		**Pn**	**05 49 21.5**	**+1.9**
ASAJ	**Asahikawa**	**5.18**	**268**	P		**Pn**	**05 49 22.7**	**+2.1**
	comp=E,3.3nm,0.3s,baz=96,slow=9.8,SNR=9.4							
ASAJ				LR		LR	05 51 33.8	

ASAR	**Alice Springs**	**69.44**	**196**	P		**P**	**05 59 10.3**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.6,baz=6.0,slow=5.7,SNR=5.8							
ASAR				pP		pP	05 59 25.2	+4.8
	comp=Z,0.3nm,0.3s,baz=10,slow=5.5,SNR=2.5							
NB2	**NORSAR Subarra**	**69.51**	**340**	P		**P**	**05 59 09.3**	**-0.9**
	comp=Z,1.1nm,0.7s,mb3.9,baz=30,slow=6.2							
NOA	**NORSAR Array B**	**69.51**	**340**	P		**P**	**05 59 09.0**	**-1.2**
	comp=Z,1.7nm,0.8s,mb4.1,baz=29,slow=6.4,SNR=4.3							
NOA	**NORSAR Array B**	**69.51**	**340**	P		**P**	**05 59 09.0**	**-1.2**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KIV	**Kislovodsk**	**70.62**	**313**	*e*P		**P**	**05 59 18.5**	**+1.2**
KIV				pmax	pmax			
	comp=Z,18nm,1.1s,mb4.9							
KIV				MLR	MLR			
	comp=Z,68nm,19.0s,MS3.9							
AKASG	**Malin Array Be**	**72.03**	**325**	P		**P**	**05 59 25.4**	**-0.3**
	comp=Z,4.0nm,0.6s,mb4.5,baz=34,slow=6.0,SNR=16							
AKASG	**Malin Array Be**	**72.03**	**325**	P		**P**	**05 59 25.4**	**-0.3**
AKASG				pmax	pmax			
	comp=Z,4.0nm,0.6s							
KWP	**Kalwaria**	**75.46**	**328**	⇓*i* P		**P**	**05 59 46.7**	**+0.9**
BURAR	**Bucovina Array**	**76.08**	**325**	⇓*i* P		**P**	**05 59 49.8**	**+0.4**
MORC	**Moravsky Berou**	**77.24**	**331**	⇑*i* P		**P**	**05 59 54.8**	**-1.1**
CLL	**Collm**	**77.45**	**334**	*e*P		**P**	**05 59 57.0**	**0.0**
CLL				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.6							
CLL	**Collm**	**77.45**	**334**	*e*P		**P**	**05 59 57.0**	**0.0**
	comp=Z,10.0nm,1.3s,mb4.6							
GERES	**GERESS Array B**	**79.35**	**332**	P		**P**	**06 00 07.8**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.6,baz=36,slow=5.3,SNR=4.9							
TXAR	**Lajitas Array**	**80.61**	**58**	P		**P**	**06 00 14.2**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=274,slow=4.4,SNR=3.4							
TXAR	**Lajitas Array**	**80.61**	**58**	P		**P**	**06 00 14.2**	**-0.5**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
CDF	**Champ du Feu**	**81.75**	**336**	*e*P		**P**	**06 00 20.7**	**+0.3**
	comp=Z,3.2nm,0.6s,mb4.1							
CDF	**Champ du Feu**	**81.75**	**336**	*e*P		**P**	**06 00 20.7**	**+0.3**
	comp=Z,1.6nm,0.6s,mb4.1							
CDF	**Champ du Feu**	**81.75**	**336**	*e*P		**P**	**06 00 20.7**	**+0.3**
CDF				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
GRR	**Gorron**	**83.92**	**341**	*e*P		**P**	**06 00 31.7**	**0.0**
	comp=Z,14nm,1.0s,mb4.8							
GRR	**Gorron**	**83.92**	**341**	*e*P		**P**	**06 00 31.7**	**0.0**
	comp=Z,7.1nm,1.0s,mb4.8							
GRR	**Gorron**	**83.92**	**341**	*e*P		**P**	**06 00 31.7**	**0.0**
GRR				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8							
SSF	**Saint Saulge**	**84.04**	**338**	*e*P		**P**	**06 00 32.7**	**+0.4**
	comp=Z,8.4nm,1.0s,mb4.5							
SSF	**Saint Saulge**	**84.04**	**338**	*e*P		**P**	**06 00 32.7**	**+0.4**
	comp=Z,4.2nm,1.0s,mb4.5							
SSF	**Saint Saulge**	**84.04**	**338**	*e*P		**P**	**06 00 32.7**	**+0.4**
SSF				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.5							
SMF	**Signal de Mont**	**84.33**	**337**	*e*P		**P**	**06 00 34.4**	**+0.6**
	comp=Z,8.8nm,0.9s,mb4.6							
SMF	**Signal de Mont**	**84.33**	**337**	*e*P		**P**	**06 00 34.4**	**+0.6**
	comp=Z,4.4nm,0.9s,mb4.6							
SMF	**Signal de Mont**	**84.33**	**337**	*e*P		**P**	**06 00 34.4**	**+0.6**
SMF				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5							
TCF	**Toulx Ste Croi**	**85.10**	**338**	*e*P		**P**	**06 00 38.8**	**+1.1**
	comp=Z,13nm,1.1s,mb4.7							
TCF	**Toulx Ste Croi**	**85.10**	**338**	*e*P		**P**	**06 00 38.8**	**+1.1**
	comp=Z,6.7nm,1.1s,mb4.7							
TCF	**Toulx Ste Croi**	**85.10**	**338**	*e*P		**P**	**06 00 38.8**	**+1.1**
TCF				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.7							
MFF	**Saint Martin d**	**85.42**	**340**	*e*P		**P**	**06 00 39.6**	**+0.3**
CAF	**Calviac**	**86.40**	**338**	*e*P		**P**	**06 00 44.4**	**+0.2**
	comp=Z,6.0nm,0.9s,mb4.5							
CAF	**Calviac**	**86.40**	**338**	*e*P		**P**	**06 00 44.4**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.5							
CAF	**Calviac**	**86.40**	**338**	*e*P		**P**	**06 00 44.4**	**+0.2**
CAF				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.5							
LFF	**La Frestale**	**86.74**	**339**	*e*P		**P**	**06 00 46.7**	**+0.9**
	comp=Z,7.9nm,0.7s,mb4.8							
LFF	**La Frestale**	**86.74**	**339**	*e*P		**P**	**06 00 46.7**	**+0.9**
	comp=Z,4.0nm,0.6s,mb4.8							
LFF	**La Frestale**	**86.74**	**339**	*e*P		**P**	**06 00 46.7**	**+0.9**
LFF				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.8							
VNA2	**Neumayer--Watz**	**151.29**	**195**	*e*PKPdf		PKPbc	06 07 53.6	-0.4
	baz=121,slow=1.5							
VNA2				*e*			06 08 10.1	
VNA3	**Neumayer Olymp**	**151.43**	**194**	*e*PKPdf		PKPbc	06 07 52.3	-2.0
VNA3				*e*			06 08 09.8	

*NNC **01** 05:49:44.5±3.2, 44.29N×87.18E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=32.2km s-min=20.5km az=113.0*
*IDC **01** 05:49:45.4±1.1, 44.14N×86.90E, h0km, mb3.7/2, mb1 3.8/6, mb1mx3.6/24, mbtmp3.6/6, ML3.5/4, Error ellipse: s-maj=33.9km s-min=13.2km az=42.0*
*ISCJB **01** 05:49:45.5±0.5, 44.38N±005.86E±006, h10km, mb3.9/7, Error ellipse: s-maj=9.2km s-min=4.3km az=38.8*
*NEIC **01** 05:49:46.9±0.7, 44.19N×86.93E, h10km, Error ellipse: s-maj=12.7km s-min=9.2km az=207.0*
*BJI **01** 05:49:47.5, 44.21N×86.76E, h11km, ML3.7*
*MOS **01** 05:49:48.1±1.5, 44.25N×86.75E, h33km, mb4.3/4, Error ellipse: s-maj=15.1km s-min=10.9km az=114.5*

ISC 01 05:49:47.5±0.5, 44.31N±005×8685E±006, h10km, n31, σ1°33/37, mb3.9/7, 8C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.78**	**129**	⇑*i* P	G	**Pg**	**05 50 03.1**	**+0.5**
WMQ				S	G	**Sg**	**05 50 15.6**	**+2.9**
WMQ				Smax				
	comp=N,2μm,0.4s							
WMQ				Smax				
	comp=E,2μm,0.5s							
MK31	**Makanchi Array**	**4.05**	**309**	⇑Pn		**Pn**	**05 50 51.8**	**+2.3**
	comp=E,9.6nm,0.5s,baz=128,slow=14,SNR=52							
MK31				⇑Lg			05 51 59.0	
	comp=E,30nm,0.4s,baz=122,slow=28,SNR=7.0							
MK31	**Makanchi Array**	**4.05**	**309**	*e*Pn		**Pn**	**05 50 51.8**	**+2.2**
MK31				*e*Sg		**Sg**	**05 51 59.6**	**+2.0**
MKAR	**Makanchi Array**	**4.05**	**309**	Pn		**Pn**	**05 50 52.0**	**+2.4**
	comp=E,1.3nm,0.3s,baz=128,slow=14,SNR=26							
MKAR				Pg		**Pg**	**05 51 03.5**	**-1.6**
	comp=E,4.9nm,0.3s,baz=124,slow=17,SNR=27							
MKAR				Lg			05 51 59.3	
	comp=E,22nm,0.3s,baz=115,slow=27,SNR=11							
MKAR	**Makanchi Array**	**4.05**	**309**	*i* PN		**Pn**	**05 50 52.0**	**+2.5**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
TKM2	**Tokmak 2**	**8.29**	**264**	⇓Pn		**Pn**	**05 51 48.7**	**+1.1**
	comp=Z,3.6nm,0.8s							
TKM2				⇓Lg			05 54 14.0	
	comp=Z,18nm,0.9s							
TKM2	**Tokmak 2**	**8.29**	**264**	*e*Pn		**Pn**	**05 51 47.7**	**0.0**
	comp=Z,5.6nm,0.6s							
TKM2	**Tokmak 2**	**8.29**	**264**	*e*P		**Pn**	**05 51 47.7**	**0.0**
TKM2				pmax	pmax			
	comp=Z,6.0nm,0.6s							
KURBB	**Kurchatov Arra**	**8.46**	**321**	⇑Pn		**Pn**	**05 51 50.4**	**+0.5**
	comp=Z,0.8nm,0.6s							
KURBB				⇓Lg			05 54 16.9	
	comp=Z,7.2nm,1.1s							
KURK	**Kurchatov**	**8.49**	**322**	⇑Pn		**Pn**	**05 51 50.9**	**+0.6**
	comp=Z,1.6nm,0.4s							
KURK				⇑Lg			05 54 17.0	
	comp=Z,27nm,0.7s							
KURK	**Kurchatov**	**8.49**	**322**	Pn		**Pn**	**05 51 50.4**	**+0.1**
	baz=130,slow=13							
KURK				Lg			05 54 21.1	
	baz=135,slow=32							
KURK	**Kurchatov**	**8.49**	**322**	*c i* P		**Pn**	**05 51 51.0**	**+0.7**
ZAA0	**Zalesovo Array**	**9.73**	**353**	*e*Pn		**Pn**	**05 52 08.7**	**+1.2**
ZALV	**Zalesovo Beam**	**9.73**	**353**	Pn		**Pn**	**05 52 08.8**	**+1.4**
	comp=Z,4.9nm,0.3s,baz=174,slow=14,SNR=31							
ZALV				Sn		**Sn**	**05 53 55.9**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=170,slow=27,SNR=15							
ZALV				Lg			05 54 51.5	
	comp=Z,2.7nm,0.3s,baz=173,slow=25,SNR=7.2							
ZALV	**Zalesovo Beam**	**9.73**	**353**	Pn		**Pn**	**05 52 08.8**	**+1.4**
ZALV				Sn		**Sn**	**05 53 55.9**	**-0.8**
ZALV				Lg			05 54 51.5	
ZALV	**Zalesovo Beam**	**9.73**	**353**	P		**Pn**	**05 52 08.8**	**+1.4**
ZALV				pmax	pmax		05 53 55.9	
	comp=Z,5.0nm,0.3s							
ZALV				smax				
	comp=N,2.0nm,0.3s							
KK31	**Karatay Array**	**11.89**	**270**	P		**Pn**	**05 52 37.3**	**+0.2**
	comp=N,2.8nm,0.8s,baz=92,slow=10,SNR=18							
TLY	**Talaya**	**13.42**	**51**	*i* P		**Pn**	**05 53 02.3**	**+4.4**
BVAR	**Borovoye Array**	**13.91**	**315**	Pn		**Pn**	**05 53 05.3**	**+0.8**
	comp=N,0.2nm,0.3s,baz=114,slow=10,SNR=2.4							
SONM	**Songino Array**	**14.01**	**69**	Pn		**Pn**	**05 53 05.2**	**-0.7**
	comp=N,0.0nm,0.3s,baz=263,slow=16,SNR=2.3							
SONM				Lg			05 57 11.5	
	comp=N,0.1nm,0.3s,baz=270,slow=31,SNR=3.4							
ULN	**Ulaanbaatar**	**14.45**	**69**	*e*P		**Pn**	**05 53 15.2**	**+3.2**
AB02	**Akbulak array**	**19.03**	**295**	⇓P		**Pn**	**05 54 09.2**	**-0.9**
	comp=N,1.0nm,0.8s,baz=92,slow=10							
ARU	**Arti**	**21.56**	**314**	*c i* P		**P**	**05 54 35.4**	**-1.4**
ARU							05 54 54.6	
ARU				*e*S		**S**	**05 58 33.4**	**-2.1**
ARU				pmax	pmax			
	comp=Z,6.0nm,1.7s,mb3.8							
NJ2	**Nanjing**	**27.79**	**105**	*e*P		**P**	**05 55 36.1**	**-0.5**
OBN	**Obninsk**	**33.56**	**307**	*e*P		**P**	**05 56 25.2**	**-2.0**
OBN				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5							
TIXI	**Tiksi**	**33.98**	**22**	*e*P		**P**	**05 56 29.3**	**-1.4**
TIXI				pmax	pmax			
	comp=Z,6.0nm,2.5s,mb4.1							
BILL	**Bilibino**	**46.00**	**31**	*e*P		**P**	**05 58 09.5**	**-1.0**
BILL				*e*			05 59 42.8	
BILL				*e*SS		SS	06 08 16.7	-2.7
BILL				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.3							
WRA	**Warramunga Arr**	**77.27**	**135**	P		**P**	**06 01 41.4**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=337,slow=6.3,SNR=9.2							
WRA	**Warramunga Arr**	**77.27**	**135**	*e*P		**P**	**06 01 41.3**	**-0.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.50**	**276**	P		**P**	**06 01 42.4**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=50,slow=5.8,SNR=3.6							
ASAR	**Alice Springs**	**80.18**	**137**	P		**P**	**06 01 57.0**	**-0.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=326,slow=6.4,SNR=4.7							

IDC 01 05:50:19.0±2.5, 688S×15508E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, MS3.2/4, Ms1 3.2/4, ms1mx3.0/17, Error ellipse: s-maj=85.1km s-min=43.5km az=122.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HNR	**Honiara**	**5.45**	**118**	LR		LR	05 53 35.6	
	comp=Z,121nm,21.7s,baz=302,slow=36							
CTA	**Charters Tower**	**15.67**	**212**	LR		LR	05 59 06.0	
	comp=Z,107nm,18.8s,baz=235,slow=34							
WRA	**Warramunga Arr**	**23.95**	**235**	P		P	05 55 35.4	+0.2
	1.9nm,1.0s,baz=63,slow=9.8,SNR=8.3							
ASAR	**Alice Springs**	**26.31**	**228**	P		P	05 55 56.4	-0.2
	0.7nm,0.8s,baz=56,slow=8.5,SNR=6.9							
STKA	**Stephens Creek**	**27.87**	**205**	P		P	05 56 11.0	+0.5
	6.1nm,1.2s,baz=30,slow=7.6,SNR=2.7							
STKA				LR		LR	06 05 41.8	
	comp=Z,110nm,19.0s,baz=208,slow=33							
KSRS	**Korea Array**	**50.88**	**332**	LR		LR	06 19 19.3	
	comp=Z,24nm,19.8s,baz=136,slow=34							
TORD	**Torodi Ar. Bea**	**153.07**	**285**	PKPbc		PKPbc	06 10 19.4	-0.3
	0.4nm,0.6s,baz=73,slow=2.5,SNR=3.1							

*IDC **01** 05:50:40.9±1.1, 44.21N×86.96E, h0km, mb3.8/2, mb1 4.2/4, mb1mx3.7/22, mbtmp4.0/4, ML4.1/2, Error ellipse: s-maj=48.3km s-min=16.2km az=47.0*
*ISCJB **01** 05:50:41.1±0.9, 44.34N±009×86.7E±0.1, h10km, mb3.6/3, Error ellipse: s-maj=19.4km s-min=6.3km az=139.2*
*NEIC **01** 05:50:42.9±1.1, 44.19N×86.703E, h10km, Error ellipse: s-maj=32.6km s-min=15.7km az=60.0*
*BJI **01** 05:50:45.9, 44.24N×86.76E, h16km, ML3.8*

ISC 01 05:50:43.0±0.9, 4425N±009×866E±01, h10km, n8, σ1°10/10, mb3.6/3, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.88**	**119**	PG		**Pg**	**05 50 59.5**	**-0.3**
WMQ				SG		**Sg**	**05 51 12.0**	**+0.8**
WMQ				Smax				
	comp=N,2μm,0.5s							
WMQ				Smax				
	comp=E,2μm,0.5s							
MKAR	**Makanchi Array**	**3.98**	**311**	Pn		**Pn**	**05 51 49.2**	**+5.3**
	comp=E,4.2nm,0.3s,baz=120,slow=17,SNR=5.5							
MKAR				Lg			05 52 54.5	
	comp=E,21nm,0.3s,baz=126,slow=28,SNR=5.2							
KURK	**Kurchatov**	**8.44**	**323**	Pn		**Pn**	**05 52 46.7**	**+1.5**
	baz=134,slow=12							
ZAA0	**Zalesovo Array**	**9.78**	**354**	*e*Pn		**Pn**	**05 53 05.1**	**+1.6**
ZAA0				*e*Sn		**Sn**	**05 54 51.5**	**-1.9**
ZALV	**Zalesovo Beam**	**9.78**	**354**	Pn		**Pn**	**05 53 04.0**	**+0.5**
	comp=E,5.2nm,0.3s,baz=174,slow=13,SNR=14							
WRA	**Warramunga Arr**	**77.34**	**134**	P		**P**	**06 02 36.7**	**-1.1**
	comp=E,1.0nm,0.9s,mb3.8,baz=337,slow=6.4,SNR=6.1							
TORD	**Torodi Ar. Bea**	**77.35**	**276**	P		**P**	**06 02 37.9**	**-0.2**
	comp=E,0.3nm,0.5s,mb3.4,baz=36,slow=5.7,SNR=3.6							
ASAR	**Alice Springs**	**80.24**	**137**	P		**P**	**06 02 52.7**	**-0.9**
	comp=E,0.6nm,0.8s,mb3.6,baz=337,slow=6.5,SNR=4.6							

MEX 01 07:30:29.6±0.6, 1782N×9450W, h83km±28km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TGIG		**1.68**	**128**	*i* P		Pn	07 30 55.6	-1.7
TGIG				*i* S		Sn	07 31 16.9	-1.5
SCX	**San Cristobal**	**2.09**	**121**	*i* P		Pn	07 31 02.3	-0.4
SCX				*i* S		Sn	07 31 27.4	-0.7
VHO	**Vista Hermosa**	**2.26**	**251**	*i* P		Pn	07 31 04.3	-0.7
VHO				*i* S		Sn	07 31 31.0	-1.1
PCIG		**2.44**	**150**	*i* P		Pn	07 31 06.2	-1.3
PCIG				*i* S		Sn	07 31 35.0	-1.4
UTMO	**Huajuapan**	**3.15**	**271**	*i* P		Pn	07 31 16.3	-0.7
UTMO				*i* S		Sn	07 31 52.4	-1.1
THIG		**3.61**	**143**	*e*P		Pn	07 31 22.8	-0.5
THIG				*i* S		Sn	07 32 03.7	-1.0
PNIG	**Pinotepa**	**3.75**	**248**	*e*P		Pn	07 31 23.7	-1.4
PNIG				*i* S		Sn	07 32 06.7	-1.5

IDC 01 07:43:38.7±1.0, 1909N×14555E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.8/19, mbtmp3.7/6, Error ellipse: s-maj=38.2km s-min=21.9km az=96.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.31**	**196**	P		P	07 51 18.4	+0.4
	1.0nm,0.5s,baz=19,slow=8.9,SNR=24							
SONM	**Songino Array**	**42.75**	**321**	P		P	07 51 37.0	-0.7
	0.3nm,0.5s,baz=108,slow=9.3,SNR=2.0							
ASAR	**Alice Springs**	**43.98**	**195**	P		P	07 51 47.2	-0.7
	0.3nm,0.4s,baz=17,slow=7.2,SNR=7.0							
MKAR	**Makanchi Array**	**58.09**	**314**	P		P	07 53 34.9	+1.0
	0.6nm,0.5s,baz=88,slow=10,SNR=4.6							
YKA	**Yellowknife Ar**	**77.71**	**28**	P		P	07 55 37.2	0.0
	0.9nm,0.8s,baz=288,slow=5.6,SNR=2.8							
NVAR	**Mina Array Bea**	**83.01**	**52**	P		P	07 56 06.6	+0.4
	0.5nm,0.6s,baz=280,slow=5.2,SNR=6.0							

*ISK **01** 07:51:47.5, 37.07N×29.24E, h5km, MD2.7*
*CSEM **01** 07:51:47.8±0.3, 36.97N×29.25E, h20km, MD2.7, Error ellipse: s-maj=8.3km s-min=5.8km az=178.0*
*ISCJB **01** 07:51:48.9±0.7, 37.02N±007×29.23E±006, h20km±11km, Error ellipse: s-maj=11.6km s-min=6.9km az=158.7*
*DDA **01** 07:51:51.6, 37.13N×29.41E, h7km±4km, Md2.8*

ISC 01 07:51:48.9±0.7, 3700N±006×2924E±005, h18km±7km, n8, σ0°67/12, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**48**	*i* P		**Pg**	**07 51 55.9**	**-0.4**
GOLH				*i* S		**Sg**	**07 52 01.5**	**+0.3**
TURN	**Turunc**	**0.53**	**256**	*i* P		**Pg**	**07 52 04.2**	**+4.8**
TURN				*i* S		**Sg**	**07 52 16.0**	**+10**
DALT	**Dalyan (Mudla)**	**0.54**	**244**	*e*PG		**Pg**	**07 51 59.2**	**-0.3**
DALT				*e*SG		**Sg**	**07 52 07.3**	**+0.5**
ELL	**Elmali**	**0.59**	**115**	*e*PG		**Pg**	**07 51 59.2**	**-1.4**
ELL				*e*SG		**Sg**	**07 52 09.6**	**+0.9**
BCK	**Bucak**	**1.17**	**67**	*e*PN		**Pn**	**07 52 10.0**	**-0.3**
KHL	**Karahalli**	**1.34**	**10**	*e*PN		**Pn**	**07 52 13.2**	**+0.5**
TKTP	**Tekketepe**	**1.35**	**39**	*i* P		**Pn**	**07 52 13.3**	**+0.6**
KULA	**Kula-Manisa**	**1.58**	**343**	*e*PN		**Pn**	**07 52 15.4**	**-0.5**

*ISCJB **01** 07:59:57.3±1.8, 41.32N±009×39.20E±007, h13km±12km, Error ellipse: s-maj=14.6km s-min=8.5km az=171.4*
*ISK **01** 07:59:57.0, 41.31N×39.17E, h5km, MD3.0*
*CSEM **01** 07:59:57.3±0.2, 41.29N×39.20E, h8km, MD3.0, Error ellipse: s-maj=5.2km s-min=3.2km az=151.0*

ISC 01 07:59:57.6±1.8, 4134N±010×3917E±006, h15km±10km, n13, σ1°10/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ESPY	**Espiye-Giresun**	**0.54**	**219**	*e*PG		**Pg**	**08 00 07.6**	**-0.6**
ESPY				*e*SG		**Sg**	**08 00 14.4**	**-1.0**
MACK	**Trabzon**	**0.60**	**131**	*i* P		**Pg**	**08 00 10.0**	**+0.6**
MACK				*i* S		**Sg**	**08 00 19.1**	**+1.7**
GUMT	**Gumushane**	**0.91**	**165**	*e*PG		**Pg**	**08 00 14.2**	**-1.0**
GUMT				*e*SG		**Sg**	**08 00 26.6**	**-0.5**
EZC	**Erzincan**	**1.66**	**163**	*e*PN		**Pn**	**08 00 26.3**	**0.0**
BCA	**Borcka**	**1.85**	**86**	*e*PN		**Pn**	**08 00 29.7**	**+0.9**
DBAD	**Bademkaya**	**1.93**	**99**	*i* P		**Pn**	**08 00 29.1**	**-0.8**
DBAD	**Bademkaya**	**1.93**	**99**	*i* P		**Pn**	**08 00 29.1**	**-0.8**
DBAD				*i* S		**Sn**	**08 00 52.2**	**-1.7**
DDEM	**Demirkent**	**2.00**	**102**	*i* P		**Pn**	**08 00 31.8**	**+1.0**
DDEM	**Demirkent**	**2.00**	**102**	*i* P		**Pn**	**08 00 31.8**	**+1.0**
DDEM				*i* S		**Sn**	**08 00 55.4**	**-0.2**
ARTV	**Artvin**	**2.08**	**93**	*i* P		**Pn**	**08 00 28.3**	**-3.7**
DAGI	**Agillar**	**2.09**	**96**	*i* P		**Pn**	**08 00 30.9**	**-1.1**
SVSK	**Karacayir**	**2.18**	**230**	*e*PN		**Pn**	**08 00 35.1**	**+1.7**
PTK	**Pertek**	**2.45**	**176**	*e*PN		**Pn**	**08 00 38.4**	**+1.4**

*ISCJB **01** 08:14:47.4±0.5, 2221S±006×6378W±009, h532km±8km, mb4.4/6, Error ellipse: s-maj=13.0km s-min=7.8km az=19.4*
*NEIC **01** 08:14:47.9±0.5, 2218S×6372W, h527km±7km, mb4.9/4, Error ellipse: s-maj=11.7km s-min=9.4km az=126.0*
*IDC **01** 08:14:47.7±1.0, 22.17S×6378W, h518km±10km, mb3.2/5, mb1 3.5/10, mb1mx3.4/19, mbtmp3.4/10, Error ellipse: s-maj=16.8km s-min=12.6km az=107.0*

ISC 01 08:14:47.8±0.5, 2218S±006×6378W±009, h521km±8km, n29, σ1°02/29, mb4.4/6, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LVC	**Limon Verde**	**4.77**	**264**	*e*Pn		**P**	**08 16 14.3**	**+0.3**
LVC				*e*Sn		**S**	**08 17 23.5**	**-0.8**
SIV	**San Ignacio**	**6.67**	**23**	P		**P**	**08 16 32.9**	**+1.3**
	2.6nm,0.3s,baz=218,slow=10.0,SNR=92							
SIV				S		**S**	**08 17 56.7**	**+0.3**
	baz=0.4,slow=20,SNR=3.3							
LPAZ	**La Paz**	**7.16**	**324**	P		**P**	**08 16 38.2**	**+1.8**
	16nm,0.3s,baz=124,slow=6.2,SNR=471							
LPAZ				S		**S**	**08 18 04.0**	**-1.4**
	1.0nm,0.3s,baz=247,slow=8.9,SNR=5.2							
LPAZ	**La Paz**	**7.16**	**324**	P		**P**	**08 16 38.2**	**+1.8**
LPAZ				S		**S**	**08 18 04.0**	**-1.4**
LCO	**Las Campanas**	**9.23**	**221**	*e*Pn		**P**	**08 16 58.4**	**+1.0**
	31nm,0.4s							
LCO				*e*Sn		**S**	**08 18 49.3**	**+5.6**
CFAA	**Coronel Fontan**	**10.19**	**202**	P		**P**	**08 17 07.2**	**-0.1**
	0.2nm,0.3s,baz=25,slow=9.0,SNR=36							
CFAA				S		**S**	**08 18 59.4**	**-2.6**
	0.5nm,0.3s,baz=260,slow=21,SNR=26							
NNA	**Nana**	**16.07**	**307**	P		**P**	**08 18 08.6**	**-0.4**
	1.6nm,0.3s,baz=158,slow=9.9,SNR=6.2							
BDFB	**Brasilia**	**16.26**	**69**	P		**P**	**08 18 10.2**	**-0.7**
	2.3nm,0.3s,baz=235,slow=18,SNR=27							
PLCA	**Paso Flores**	**19.36**	**196**	P		**P**	**08 18 40.0**	**+0.7**
	0.6nm,0.3s,baz=17,slow=9.4,SNR=18							
ROSC	**El Rosal**	**28.79**	**338**	P		**P**	**08 20 03.9**	**+0.3**
	2.6nm,0.4s,mb4.3,baz=103,slow=23,SNR=5.9							
VNA3	**Neumayer Olymp**	**57.93**	**162**	*e*		**P**	**08 23 50.3**	**+0.8**
VNA2	**Neumayer--Watz**	**58.45**	**161**	*e*		**P**	**08 23 54.2**	**+1.2**
	baz=289,slow=7.0							
SNAA	**Sanae**	**60.10**	**161**	*e*

AKHS	**Akhisar**	**1.50**	**265**	*i* P	**Pn**	**08 45 52.1**	**-0.9**
AKHS				*i* S	**Sb**	**08 46 13.7**	**+0.5**
AKS	**Akhisar**	**1.50**	**265**	*e*PN	**Pn**	**08 45 52.4**	**-0.7**
GULT	**Gulveren**	**1.53**	**23**	*e*PN	**Pn**	**08 45 52.8**	**-0.6**
YLV	**Yalova**	**1.57**	**350**	*e*PN	**Pn**	**08 45 53.2**	**-0.7**
KCT	**Karacabey**	**1.63**	**320**	*e*PN	**Pn**	**08 45 54.6**	**-0.2**
KIZT	**Kizilcal**	**1.68**	**94**	*e*PN	**Pn**	**08 45 54.6**	**-0.8**
BCK	**Bucak**	**1.70**	**156**	*e*PN	**Pn**	**08 45 55.0**	**-0.7**
BALY	**Balya**	**1.79**	**294**	*i* P	**Pn**	**08 45 55.9**	**-1.0**
BALY				*i* S	**Sg**	**08 46 22.2**	**-0.2**
GOLH	**Golhisar**	**1.79**	**184**	*i* P	**Pn**	**08 45 57.4**	**+0.5**
GOLH				*i* S	**Sg**	**08 46 27.9**	**+5.5**
HRT	**Hereke**	**1.80**	**358**	*e*PN	**Pn**	**08 45 56.9**	**-0.2**
BNT	**Bandirma**	**1.93**	**314**	*e*PN	**Pn**	**08 45 58.2**	**-0.7**
EDC	**Edincik**	**1.96**	**313**	*e*PN	**Pn**	**08 45 59.0**	**-0.2**
AYDN	**Tasoluk**	**2.00**	**228**	*e*P	**Pn**	**08 45 59.6**	**-0.1**
AYDN				*i* S	**Sg**	**08 46 29.7**	**+0.7**
KDAG	**Bornova**	**2.03**	**253**	*i* P	**Pn**	**08 46 02.0**	**+1.8**
KDAG				*i* S	**Sg**	**08 46 30.4**	**+0.4**
KDAG	**Bornova**	**2.03**	**253**	*i* P	**Pn**	**08 46 02.0**	**+1.8**
ISK	**Istanbul-Kandi**	**2.10**	**346**	*e*PN	**Pn**	**08 46 01.4**	**+0.1**
SILT	**Sile**	**2.13**	**358**	*e*PN	**Pn**	**08 46 01.5**	**-0.1**
BLCB	**Balcova**	**2.20**	**254**	*e*PN	**Pn**	**08 46 02.8**	**+0.2**
LADK	**Ladik-KONYA**	**2.22**	**111**	*e*PN	**Pn**	**08 46 02.5**	**-0.4**
ELL	**Elmali**	**2.27**	**176**	*e*PN	**Pn**	**08 46 03.5**	**-0.1**
BGKT	**Bogazkoy**	**2.28**	**341**	*e*PN	**Pn**	**08 46 03.9**	**+0.2**
MRMT	**Marmara Adasi**	**2.28**	**314**	*e*PN	**Pn**	**08 46 04.6**	**+0.9**
KLYT	**Kilyos**	**2.29**	**347**	*e*PN	**Pn**	**08 46 04.3**	**+0.4**
MLSB	**Milas**	**2.31**	**222**	*e*PN	**Pn**	**08 46 04.3**	**+0.1**
KONT	**Konya--Tatoy**	**2.33**	**117**	*e*PN	**Pn**	**08 46 03.9**	**-0.4**
CTT	**Catalca**	**2.35**	**335**	*e*PN	**Pn**	**08 46 05.0**	**+0.4**
SGKT	**Sivrigoynuk**	**2.37**	**48**	*i* P	**Pn**	**08 46 05.2**	**+0.3**
SGKT				*i* S	**Sg**	**08 46 45.2**	**+4.3**
AYVA	**Ayvalik**	**2.38**	**278**	*e*P	**Pn**	**08 46 11.1**	**+0.5**
AYVA				*i* S	**Sg**	**08 46 41.4**	**-0.1**
CTKS	**Kestanelik-??a**	**2.40**	**337**	*e*PN	**Pn**	**08 46 05.3**	**0.0**
DALT	**Dalyan (Mudla)**	**2.41**	**201**	*e*PN	**Pn**	**08 46 05.7**	**+0.2**
SLVT	**Silivri**	**2.50**	**333**	*e*PN	**Pn**	**08 46 07.0**	**+0.4**
LOD	**Lodumlu**	**2.50**	**69**	*e*PN	**Pn**	**08 46 07.5**	**+0.8**
ANTO	**Ankara**	**2.52**	**69**	*e*PN	**Pn**	**08 46 06.9**	**0.0**
ANTO	**Ankara**	**2.52**	**69**	⇓*i*P	**Pg**	**08 46 15.7**	**+2.6**
RKY	**Sarkoy-Tekirda**	**2.58**	**311**	*e*PN	**Pn**	**08 46 07.8**	**+0.1**
MFT	**Murefte**	**2.58**	**314**	*e*PN	**Pn**	**08 46 08.5**	**+0.7**
KDZE	**Karadeniz Ereo**	**2.63**	**29**	*e*PN	**Pn**	**08 46 08.7**	**+0.2**
CTYL	**Yal??k??y-??at**	**2.69**	**336**	*e*PN	**Pn**	**08 46 09.6**	**+0.3**
BODT	**Bodrum**	**2.74**	**225**	*e*PN	**Pn**	**08 46 10.0**	**0.0**
EZN	**Ezine**	**2.76**	**288**	*e*PN	**Pn**	**08 46 10.7**	**+0.4**
HDMB	**Hadim**	**2.99**	**133**	*e*PN	**Pn**	**08 46 13.5**	**+0.1**
SAFT	**Safranbolu**	**3.17**	**45**	*e*PN	**Pn**	**08 46 17.1**	**+1.2**
GADA	**Gvkgeada**	**3.18**	**293**	*e*PN	**Pn**	**08 46 16.7**	**+0.6**
ENEZ	**Enez**	**3.24**	**303**	*e*PN	**Pn**	**08 46 17.0**	**+0.1**
EDRB	**Edirne**	**3.63**	**322**	*e*PN	**Pn**	**08 46 22.9**	**+0.7**
IKL	**Isikli**	**4.19**	**130**	*e*PN	**Pn**	**08 46 30.9**	**+0.9**
TIRR	**Tirgusor**	**5.52**	**350**	⇑*i*P	**Pn**	**08 46 47.8**	**-0.4**
PLOR	**Plostina**	**7.19**	**343**	⇓*i*P	**Pn**	**08 47 15.5**	**+4.3**
BURAR	**Bucovina Array**	**9.20**	**341**	⇓*i*P	**Pn**	**08 47 31.8**	**-6.8**

MOS ***01*** *08:52:04.4±0.7, 4889N×15468E, h145km, mb4.5/1, Error ellipse: s-maj=99.9km s-min=16.7km az=67.0*

KRSC 01 08:52:14.7±1.7, 4964N×15525E, h184km±83km, ML4.4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.18**	**28**	*e*PN	Pn	08 52 39.5	-4.6
SKR	comp=N,80nm,0.2s			pmax	pmax		
SKR	comp=Z,100nm,0.2s			pmax	pmax		
MIPR	**Malaya Ipel'ka**	**2.81**	**19**	P	Pn	08 53 04.1	+3.0
RUS	**Russkaya**	**3.47**	**35**	*e*P	Pn	08 53 10.1	+0.9
RUS				*i* S	Sn	08 53 50.0	-1.8
NLC	**Nalytchevo**	**4.37**	**34**	P	Pn	08 53 20.7	+0.3
NLC				*i* S	Sn	08 54 09.4	-2.6
SPN	**Mys Shipunski**	**4.58**	**39**	P	Pn	08 53 24.3	+1.2
SPN				*i* S	Sn	08 54 16.0	-0.8
MKZ	**Mys Kozlova**	**6.34**	**37**	P	Pn	08 53 46.9	+1.0
MKZ				*i* S	Sn	08 54 55.3	-2.7
KBTR	**Krutoberegovo**	**8.01**	**32**	P	Pn	08 54 10.4	+2.6

DDA ***01*** *09:06:23.9, 3880N×2420E, h6km±2km, Md3.1*
ISCJB ***01*** *09:06:32.6±0.6, 3873N±003×2477E±003, h20km±6km, Error ellipse: s-maj=4.6km s-min=2.9km az=150.4*
NEIC ***01*** *09:06:32.6, 3875N×2481E, h52km, MD3.5(ATH), After ATH.*
ATH ***01*** *09:06:32.6, 3875N×2481E, h52km±17km, MD3.5/15, ML3.5*
ISK ***01*** *09:06:33.3, 3883N×2481E, h11km, MD3.6*
CSEM ***01*** *09:06:33.2±0.1, 3871N×2481E, h40km, ML3.5, Error ellipse: s-maj=1.6km s-min=1.1km az=150.0*
THE ***01*** *09:06:34.1, 3870N×2482E, h32km±25km, ML3.8/3, Error ellipse: s-maj=25.2km s-min=0.5km az=122.0*

ISC 01 09:06:33.0±1.3, 3872N±003×2476E±003, h19km±9km, n44, σ1§02/69, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTL	**Penteli**	**0.97**	**227**	*e*P	**Pb**	**09 06 51.0**	**-0.3**
CHOS	**Chios island**	**1.07**	**108**	P	**Pb**	**09 06 51.9**	**-0.9**
CHOS				S	**Sb**	**09 07 05.0**	**-1.4**
ATH	**Athens Observa**	**1.11**	**228**	*e*P	**Pb**	**09 06 53.3**	**-0.3**
ATH				*e*S	**Sb**	**09 07 08.7**	**+1.0**
KVR	**Kavouri**	**1.19**	**222**	*e*P	**Pn**	**09 06 55.0**	**+0.4**
LIA	**Limnos Island**	**1.22**	**15**	P	**Pn**	**09 06 54.1**	**-1.0**
LIA				S	**Sb**	**09 07 10.2**	**-0.7**
LIA	**Limnos Island**	**1.22**	**15**	*e*P	**Pn**	**09 06 54.1**	**-1.0**
LIA				*e*S	**Sb**	**09 07 09.1**	**-1.8**
LIA	**Limnos Island**	**1.22**	**15**	*e*P	**Pn**	**09 06 54.1**	**-1.0**
LIA				S	**Sb**	**09 07 10.2**	**-0.7**
PRK	**Paraskevi**	**1.29**	**65**	P	**Pn**	**09 06 55.4**	**-0.6**
PRK				S	**Sb**	**09 07 10.6**	**-2.2**
PRK	**Paraskevi**	**1.29**	**65**	*e*P	**Pn**	**09 06 55.3**	**-0.7**
PRK				*e*S	**Sb**	**09 07 10.8**	**-2.0**
NEO	**Neokhori**	**1.33**	**296**	*e*P	**Pn**	**09 06 56.4**	**-0.3**
NEO				*e*S	**Sn**	**09 07 13.8**	**-0.1**
LKR	**Lokris**	**1.38**	**268**	P	**Pn**	**09 06 57.0**	**-0.3**
LKR				S	**Sn**	**09 07 15.2**	**+0.1**
LKR	**Lokris**	**1.38**	**268**	*e*P	**Pn**	**09 06 57.0**	**-0.3**
LKR				S	**Sn**	**09 07 15.2**	**+0.1**
NAIG	**Nisos Aigina**	**1.39**	**227**	*e*P	**Pn**	**09 06 57.0**	**-0.4**
PAIG	**Palouri**	**1.47**	**325**	P	**Pn**	**09 06 58.2**	**-0.3**
URLA	**Izmir**	**1.48**	**103**	*i* P	**Pn**	**09 06 59.4**	**+0.8**
URLA				*i* S	**Sn**	**09 07 25.9**	**+8.4**
BOZC	**Bozcaada**	**1.50**	**41**	*i* P	**Pn**	**09 06 57.1**	**-1.8**
BOZC				*i* S	**Sn**	**09 07 17.1**	**-0.9**
LTK	**Loutraki**	**1.57**	**244**	P	**Pn**	**09 06 59.7**	**-0.2**
LTK				S	**Sn**	**09 07 19.6**	**-0.2**
AYVA	**Ayvalik**	**1.61**	**68**	*i* P	**Pn**	**09 07 02.3**	**+1.8**
AYVA				*i* S	**Sn**	**09 07 28.4**	**+7.7**
EZN	**Ezine**	**1.64**	**47**	*e*PN	**Pn**	**09 07 01.0**	**+0.1**
EZN				*e*SN	**Sn**	**09 07 21.7**	**+0.3**
DID	**Didima**	**1.71**	**225**	P	**Pn**	**09 07 01.5**	**-0.3**
DID				S	**Sn**	**09 07 22.6**	**-0.5**
GADA	**Gvkgeada**	**1.71**	**31**	*e*PN	**Pn**	**09 07 01.6**	**-0.2**
GADA				*e*SN	**Sn**	**09 07 23.3**	**+0.1**
APE	**Apeiranthos**	**1.76**	**160**	P	**Pn**	**09 07 01.3**	**-1.1**
APE				S	**Sn**	**09 07 22.3**	**-2.0**
APE	**Apeiranthos**	**1.76**	**160**	*e*P	**Pn**	**09 07 01.6**	**-0.8**
APE				S	**Sn**	**09 07 22.3**	**-2.0**
BLCB	**Balcova**	**1.82**	**100**	*e*PN	**Pn**	**09 07 04.9**	**+1.6**
BLCB				*e*SN	**Sn**	**09 07 28.7**	**+2.9**
SMG	**Samos**	**1.92**	**121**	*e*P	**Pn**	**09 07 04.1**	**-0.6**
AGG	**Agios Georgios**	**1.92**	**280**	P	**Pn**	**09 07 04.8**	**+0.1**
AGG				S	**Sn**	**09 07 29.1**	**+0.7**
KDAG	**Bornova**	**1.99**	**98**	*i* P	**Pn**	**09 07 10.4**	**+4.8**
KDAG				*i* S	**Sb**	**09 07 39.9**	**+6.9**
ENEZ	**Enez**	**2.28**	**28**	*e*PN	**Pn**	**09 07 10.7**	**+1.1**
THL	**Klokotos Trika**	**2.30**	**292**	P	**Pn**	**09 07 10.5**	**+0.6**
THL	**Klokotos Trika**	**2.30**	**292**	⇑*i*P	**Pn**	**09 07 10.6**	**+0.7**
THL	**Klokotos Trika**	**2.30**	**292**	P	**Pn**	**09 07 10.5**	**+0.6**
EVR	**Evrytania**	**2.32**	**276**	*e*P	**Pn**	**09 07 09.5**	**-0.6**
AKS	**Akhisar**	**2.39**	**85**	*e*PN	**Pn**	**09 07 12.7**	**+1.5**
ALN	**Alexandroupoli**	**2.39**	**24**	P	**Pn**	**09 07 10.1**	**-1.0**
ALN				S	**Sn**	**09 07 39.4**	**-0.5**
BALY	**Balya**	**2.44**	**64**	*i* P	**Pn**	**09 07 11.3**	**-0.5**
BALY				*i* S	**Sb**	**09 07 51.3**	**+5.3**
VLI	**Veliai**	**2.47**	**216**	*e*P	**Pn**	**09 07 11.8**	**-0.4**
RDO	**Rodhopi**	**2.50**	**14**	*e*P	**Pn**	**09 07 11.5**	**-1.1**
RKY	**Sarkoy-Tekirda**	**2.71**	**43**	*e*PN	**Pn**	**09 07 16.7**	**+1.2**
SART	**Tekirdag**	**2.71**	**43**	*i* P	**Pn**	**09 07 15.2**	**-0.4**
SART				*i* S	**Sb**	**09 07 59.1**	**+5.4**
ITM	**Ithomi**	**2.72**	**236**	*e*P	**Pn**	**09 07 16.8**	**+1.1**
MFT	**Murefte**	**2.83**	**42**	*e*PN	**Pn**	**09 07 19.0**	**+1.7**
DST	**Dursunbey**	**3.13**	**72**	*e*PN	**Pn**	**09 07 22.6**	**+1.3**
EDRB	**Edirne**	**3.47**	**25**	*e*PN	**Pn**	**09 07 27.5**	**+1.5**
YLV	**Yalova**	**4.01**	**61**	*e*PN	**Pn**	**09 07 35.7**	**+2.3**

JMA 01 09:11:55.6±0.3, 4406N×14811E, h0km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.85**	**249**	P	Pn	09 12 28.9	+0.3
NEM2				*e*S	Sn	09 12 53.3	+0.7
JRA	**Rausu**	**2.16**	**268**	P	Pn	09 12 33.4	+0.6
JRA				*e*S	Sn	09 13 01.7	+1.4
JNK	**Nakash**	**2.50**	**260**	P	Pn	09 12 38.3	+0.8
JNK				*e*S	Sn	09 13 09.4	+0.8
JAK	**Akkeshi**	**2.70**	**248**	P	Pn	09 12 41.1	+0.9
JAK				*e*S	Sn	09 13 14.4	+0.8
JTKR	**Abashiri--Toko**	**3.03**	**270**	P	Pn	09 12 47.3	+2.5
JAR	**Ashorobuto**	**3.24**	**258**	P	Pn	09 12 49.3	+1.6
JAR				*e*S	Sn	09 13 29.5	+2.6
JCH	**Churui**	**3.75**	**249**	P	Pn	09 12 56.0	+1.3
JFR	**Furan**	**4.11**	**259**	P	Pn	09 13 03.2	+3.7
JNBK	**Urakawa-nobuka**	**4.30**	**247**	P	Pn	09 13 04.0	+1.7
JOT	**Ohata**	**5.85**	**245**	P	Pn	09 13 24.7	+1.2
JOT				*e*S	Sn	09 14 31.1	-0.1

CSEM ***01*** *09:13:55.9±0.9, 3770N×2517W, h0km±5km, ML2.5, Error ellipse: s-maj=9.5km s-min=2.3km az=48.0, After PDA*

PDA 01 09:13:55.9±0.9, 3770N×2517W, h0km±5km, MD3.5, ML2.5, Error ellipse: s-maj=9.5km s-min=2.3km az=48.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMLA	**Cha da Macela**	**0.29**	**283**	*e*P	Pg	09 14 01.0	-0.4
CMLA				*e*S	Sg	09 14 05.3	+0.1
CMLA				A		09 14 10.2	
	628nm,0.5s						
CMLA	**Cha da Macela**	**0.29**	**283**	*e*P	Pg	09 14 01.0	-0.4
CMLA				*e*S	Sg	09 14 05.3	+0.1
PDA	**Ponta Delgada**	**0.39**	**277**	*e*P	Pg	09 14 03.1	-0.4
PDA				*e*S	Sg	09 14 08.8	+0.2
PSET	**Sete Cidades**	**0.45**	**286**	*e*P	Pg	09 14 04.1	-0.5
PSET				*e*S	Sg	09 14 10.7	+0.2
PSET				A		09 14 12.9	
	266nm,0.4s						
PSET	**Sete Cidades**	**0.45**	**286**	*e*P	Pg	09 14 04.1	-0.5
PSET				*e*S	Sg	09 14 10.7	+0.2
PSMN	**Pico do Norte,**	**0.70**	**173**	*e*P	Pg	09 14 08.1	-1.2
PSMN				*e*S	Sg	09 14 17.1	-1.3
PICO	**Pico**	**2.69**	**288**	*e*P	Pn	09 14 35.8	-4.6
PICO				*e*S	Sn	09 15 06.0	-7.7
HOR	**Horta**	**2.85**	**288**	*e*P	Pn	09 14 43.7	+1.1
CALA	**Caldeira**	**2.92**	**289**	*e*P	Pn	09 14 39.4	-4.2
CALA				*e*S	Sn	09 15 11.7	-7.7

ISCJB ***01*** *09:14:18.5±6.2, 3324S±009×17844W±0.1, h28km±42km, mb4.4/8, Error ellipse: s-maj=20.8km s-min=15.2km az=11.0*
IDC ***01*** *09:14:22.2±1.1, 3319S×17832W, h48km±7km, mb4.1/7, mb1 4.3/8, mb1mx4.1/17, mbtmp4.1/8, MS3.6/1, Ms1 3.5/1, ms1mx2.3/29, Error ellipse: s-maj=20.6km s-min=17.9km az=92.0*

ISC 01 09:14:20.4±6.6, 3318S±009×1783W±01, h31km±45km, h44km±1.5km:pP-P, n23, σ0§64/19, mb4.4/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.28**	**215**	P	**Pn**	**09 15 50.8**	**-0.2**
	2.7nm,0.3s,baz=21,slow=6.2,SNR=19						
URZ				S	**Sn**	**09 17 01.5**	**-0.1**
	7.0nm,0.3s,baz=162,slow=19,SNR=17						
RPZ	**Rata Peaks**	**13.40**	**215**	P	**Pn**	**09 17 23.7**	**-4.7**
	1.3nm,0.3s,baz=45,slow=6.4,SNR=7.1						
RPZ				S	**Sn**	**09 19 44.1**	**-12**
	0.7nm,0.3s,baz=204,slow=21,SNR=6.1						
STKA	**Stephens Creek**	**33.68**	**261**	P	**P**	**09 20 58.3**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=342,slow=19,SNR=2.8						
STKA				LR	LR	09 32 11.0	
	comp=Z,96nm,18.9s,baz=25,slow=32						
CTA	**Charters Tower**	**34.08**	**284**	*e*P	**P**	**09 21 03.5**	**+1.3**
	6.7nm,0.6s,mb4.8						
CTA				*e*		09 21 16.5	
CTA	**Charters Tower**	**34.08**	**284**	P	**P**	**09 21 03.8**	**+1.5**
	9.3nm,0.6s,mb4.9,baz=119,slow=11,SNR=19						
CTA				pP	pP	09 21 16.4	+5.2
	8.3nm,0.6s,baz=116,slow=13,SNR=4.6						
ASAR	**Alice Springs**	**42.77**	**270**	P	**P**	**09 22 15.2**	**0.0**
	3.2nm,0.6s,mb4.3,baz=109,slow=7.8,SNR=54						
ASAR				pP	pP	09 22 28.0	+3.7
	7.0nm,0.9s,baz=109,slow=7.6,SNR=12						
WB2	**Warramunga Arr**	**44.00**	**275**	*e*P	**P**	**09 22 24.7**	**-0.5**
WB2				*e*		09 22 37.5	
WRA	**Warramunga Arr**	**44.01**	**275**	P	**P**	**09 22 24.9**	**-0.3**
	6.8nm,0.7s,mb4.5,baz=116,slow=7.6,SNR=58						
WRA				pP	pP	09 22 37.0	+2.6
	8.1nm,0.7s,baz=116,slow=8.0,SNR=16						
KAKA	**Kakadu**	**49.21**	**282**	*e*P	**P**	**09 22 57.1**	**-9.0**
	7.1nm,1.0s,mb4.7						
KAKA				*e*		09 23 12.0	
QSPA	**South Pole Qui**	**56.93**	**180**	P	**P**	**09 24 03.4**	**+1.3**
	3.2nm,0.9s,mb4.4,baz=40,slow=2.3,SNR=7.4						
QSPA				pP	pP	09 24 15.9	+4.5
	4.1nm,0.7s,baz=58,slow=1.5,SNR=6.9						
MAW	**Mawson**	**69.62**	**201**	*e*P	**P**	**09 25 25.0**	**-1.2**
	2.6nm,0.9s,mb4.2						
MAW	**Mawson**	**69.62**	**201**	P	**P**	**09 25 26.8**	**+0.6**
	3.1nm,0.9s,mb4.2,baz=132,slow=6.9,SNR=6.2						
SNAA	**Sanae**	**75.39**	**179**	*e*	**P**	**09 26 00.2**	**-0.3**
SNAA				*e*		09 26 14.8	
SNAA				*e*		09 26 24.7	
VNA3	**Neumayer Olymp**	**75.55**	**176**	*e*	**P**	**09 26 01.1**	**-0.4**
VNA3				*e*		09 26 14.3	
VNA3				*e*		09 26 26.7	
VNA2	**Neumayer--Watz**	**75.98**	**177**	*e*	**P**	**09 26 04.0**	**+0.1**
	baz=172,slow=5.3						
VNA2				*e*		09 26 17.7	
VNA2				*e*		09 26 29.5	
VNA1	**Neumayer--Stat**	**76.22**	**177**	*e*	**P**	**09 26 05.6**	**+0.3**
VNA1				*e*		09 26 20.5	
VNA1				*e*		09 26 31.4	
NVAR	**Mina Array Bea**	**90.46**	**43**	P	**P**	**09 27 18.3**	**-0.6**
	0.8nm,0.8s,mb4.1,baz=226,slow=6.9,SNR=6.8						
MKAR	**Makanchi Array**	**119.33**	**309**	PKP	PKPdf	09 33 04.7	-1.6
	0.3nm,0.4s,baz=14,slow=3.0,SNR=3.4						
ZALV	**Zalesovo Beam**	**119.91**	**317**	PKP	PKPdf	09 33 05.8	-1.3
	0.5nm,0.5s,baz=132,slow=2.1,SNR=2.9						
JOF	**Joensuu**	**144.88**	**337**	*ep*	PKPdf	09 33 51.6	-1.9
	4.3nm,0.6s						
KAF	**Kangasniemi**	**147.06**	**339**	*ep*	PKPdf	09 33 58.1	+0.9
	5.1nm,0.6s						
NB2	**NORSAR Subarra151.45**	**350**		PKP	PKPbc	09 34 09.6	-0.8
	comp=Z,1.3nm,0.7s,baz=15,slow=2.6						
NOA	**NORSAR Array B151.45**	**350**		PKPbc	PKPbc	09 34 09.1	-1.3
	comp=Z,1.6nm,0.7s,baz=14,slow=4.1,SNR=3.9						

IDC 01 09:58:59.5±1.7, 1892N×14543E, h213km±17km, mb3.4/6, mb1 3.8/8, mb1mx3.5/20, mbtmp3.6/8, Error ellipse: s-maj=30.0km s-min=11.5km az=89.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.33**	**186**	P	Pn	10 00 18.5	0.0
	5.7nm,0.3s,baz=72,slow=19,SNR=4.4						
GUMO				S	S	10 01 21.9	+0.9
	11nm,0.3s,baz=179,slow=22,SNR=3.4						
CBIJ	**Chichi jima**	**8.66**	**340**	P	Pn	10 01 01.4	+0.2
	3.3nm,0.3s,baz=302,slow=22,SNR=5.0						
CBIJ				S	S	10 02 37.5	-1.4
	4.2nm,0.3s,baz=296,slow=22,SNR=3.6						
WRA	**Warramunga Arr**	**40.12**	**196**	P	P	10 06 14.5	-0.2
	4.3nm,0.5s,baz=23,slow=8.9,SNR=40						
SONM	**Songino Array**	**42.81**	**321**	P	P	10 06 37.0	+0.8
	0.3nm,0.3s,baz=129,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**43.80**	**195**	P	P	10 06 43.8	-0.6
	0.9nm,0.7s,baz=139,slow=7.3,SNR=15						
YKA	**Yellowknife Ar**	**77.91**	**28**	P	P	10 10 33.3	-0.2
	1.3nm,0.5s,baz=285,slow=5.5,SNR=5.3						
NVAR	**Mina Array Bea**	**83.20**	**52**	P	P	10 11 02.6	+0.4
	2.4nm,0.7s,baz=266,slow=5.5,SNR=22						
PDAR	**Pinedale Array**	**87.85**	**45**	P	P	10 11 23.8	-1.1
	0.2nm,0.6s,baz=2.2,slow=4.7,SNR=2.9						
LPAZ	**La Paz**	**147.93**	**91**	PKPbc	PKPbc	10 18 21.6	+1.2
	0.6nm,0.5s,baz=288,slow=6.4,SNR=3.2						

CSEM ***01*** *10:04:18.8±0.1, 3697N×2922E, h8km, MD3.2, Error ellipse: s-maj=1.5km s-min=1.0km az=173.0*
NEIC ***01*** *10:04:18.9, 3697N×2922E, h9km, MD3.2(ATH), MD3.1(ISK), After ISK.*
ISK ***01*** *10:04:19.0, 3697N×2922E, h10km, MD3.1*
ISCJB ***01*** *10:04:19.4±0.6, 3695N±003×2924E±003, h4km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=156.8*
ATH ***01*** *10:04:20.7, 3697N×2922E, h23km, MD3.2/3*
DDA ***01*** *10:04:24.3, 3727N×2922E, h7km±5km, Md3.2*

ISC 01 10:04:19.9±0.6, 3694N±003×2924E±003, h6km±5km, n27, σ0§88/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.39**	**41**	*i* P	**Pg**	**10 04 27.2**	**-0.3**
GOLH				*i* S	**Sg**	**10 04 34.2**	**+1.5**
DALT	**Dalyan (Mudla)**	**0.51**	**251**	*e*PG	**Pg**	**10 04 29.4**	**-0.4**
DALT				*e*SG	**Sg**	**10 04 36.9**	**+0.4**
DALT	**Dalyan (Mudla)**	**0.51**	**251**	Pg	**Pg**	**10 04 29.4**	**-0.4**
DALT				Sg	**Sg**	**10 04 36.4**	**0.0**
TURN	**Turunc**	**0.51**	**263**	*i* P	**Pg**	**10 04 35.9**	**+6.1**
TURN				*i* S	**Sg**	**10 04 46.9**	**+10**
ELL	**Elmali**	**0.57**	**109**	*e*PG	**Pg**	**10 04 30.5**	**-0.4**
ELL				*e*SG	**Sg**	**10 04 39.8**	**+1.5**
ELL	**Elmali**	**0.57**	**109**	Pg	**Pg**	**10 04 30.5**	**-0.4**
ELL				Sg	**Sg**	**10 04 39.5**	**+1.2**
DENT	**Denizli**	**0.83**	**349**	*e*PG	**Pg**	**10 04 34.7**	**-1.2**
DENT				*e*SG	**Sg**	**10 04 46.2**	**-0.4**
DENT	**Denizli**	**0.83**	**349**	Pg	**Pg**	**10 04 34.7**	**-1.2**
DENT				Sg	**Sg**	**10 04 46.7**	**+0.1**
KSL	**Kastellorizon**	**0.84**	**161**	*e*PN	**Pn**	**10 04 37.5**	**-0.7**
ANTB	**Antalya**	**1.14**	**92**	*e*PN	**Pn**	**10 04 42.0**	**-0.3**
ARG	**Arkhangelos**	**1.15**	**231**	*e*PN	**Pn**	**10 04 42.9**	**+0.4**
ARG				*e*SN	**Sn**	**10 04 59.1**	**+0.5**
BCK	**Bucak**	**1.20**	**64**	*e*PN	**Pn**	**10 04 42.6**	**-0.6**
MLSB	**Milas**	**1.22**	**287**	*e*PN	**Pn**	**10 04 42.5**	**-1.0**
MLSB	**Milas**	**1.22**	**287**	Pn	**Pn**	**10 04 42.5**	**-1.0**
AYDN	**Tasoluk**	**1.30**	**304**	*i* P	**Pn**	**10 04 45.3**	**+0.7**
AYDN				*i* S	**Sb**	**10 05 03.7**	**+2.0**
TKTP	**Tekketepe**	**1.40**	**38**	*i* P	**Pn**	**10 04 47.1**	**+1.2**
TKTP				*i* S	**Sb**	**10 05 10.2**	**+5.8**
KHL	**Karahalli**	**1.40**	**9**	*e*PN	**Pn**	**10 04 45.5**	**-0.5**
BODT	**Bodrum**	**1.55**	**275**	*e*PN	**Pn**	**10 04 47.1**	**-0.9**
KULA	**Kula-Manisa**	**1.64**	**344**	*e*PN	**Pn**	**10 04 48.2**	**-1.0**
MANT	**Manisa**	**1.64**	**341**	*i* P	**Pn**	**10 04 49.6**	**+0.3**
MANT				*i* S	**Sn**	**10 05 12.3**	**+1.6**
SHUT	**Suhut-Afyon**	**1.92**	**32**	*e*PN	**Pn**	**10 04 52.6**	**-0.4**
KARP	**Karpathos**	**2.18**	**231**	*e*PN	**Pn**	**10 04 58.0**	**+1.3**
ALT	**Altintas**	**2.22**	**18**	*e*PN	**Pn**	**10 04 56.3**	**-0.9**
AKS	**Akhisar**

IGUA	**Igualata**	**1.23**	**116**	S	**Sb**	**10 28 16.3**	**-0.5**
CAMI	**Rancho Maria**	**1.28**	**77**	⇑P	**Pn**	**10 28 01.1**	**-0.3**
BIL2	**Estacion Bilba**	**1.34**	**112**	P	**Pn**	**10 28 02.6**	**+0.3**
BIL2	**Estacion Bilba**	**1.34**	**112**	S	**Sn**	**10 28 19.3**	**-0.4**
JUA2	**San Juan 2**	**1.36**	**57**	P	**Pn**	**10 28 01.9**	**-0.7**
JUI6	**Juive**	**1.36**	**110**	P	**Pn**	**10 28 02.7**	**+0.1**
JUI6	**Juive**	**1.36**	**110**	S	**Sn**	**10 28 19.7**	**-0.5**
PISA	**Pisayambo**	**1.37**	**94**	S	**Pn**	**10 28 02.8**	**+0.1**
PISA	**Pisayambo**	**1.37**	**94**	S	**Sn**	**10 28 19.6**	**-0.7**
VC1	**Cotopaxi 1**	**1.38**	**77**	P	**Pn**	**10 28 03.0**	**+0.1**
TERV	**Terraza Guagua**	**1.38**	**56**	⇓P	**Pn**	**10 28 02.1**	**-0.9**
GGP	**Refugio Guagua**	**1.39**	**56**	P	**Pn**	**10 28 01.9**	**-1.1**
RETU	**Refugio**	**1.39**	**111**	P	**Pn**	**10 28 03.6**	**+0.6**
RETU	**Refugio**	**1.39**	**111**	S	**Sn**	**10 28 22.2**	**+1.2**
RUN5	**Runtun**	**1.40**	**109**	P	**Pn**	**10 28 03.3**	**+0.2**
RUN5	**Runtun**	**1.40**	**109**	S	**Sn**	**10 28 20.6**	**-0.6**
ARRY	**Arrayan**	**1.41**	**113**	P	**Pn**	**10 28 03.4**	**+0.1**
ARRY	**Arrayan**	**1.41**	**113**	S	**Sn**	**10 28 20.7**	**-0.6**
TAMB	**Tambo**	**1.41**	**79**	P	**Pn**	**10 28 03.2**	**0.0**
PATA	**Patacocha**	**1.42**	**112**	P	**Pn**	**10 28 03.9**	**+0.4**
ULBA	**Ulba**	**1.43**	**110**	P	**Pn**	**10 28 03.8**	**+0.2**
ULBA	**Ulba**	**1.43**	**110**	S	**Sn**	**10 28 21.0**	**-0.8**
ANTI	**Antisana**	**1.67**	**72**	P	**Pn**	**10 28 06.9**	**+0.1**
COTA	**Cotacachi**	**1.91**	**48**	⇑P	**Pn**	**10 28 09.9**	**-0.2**
CAYA	**Cayambe**	**2.04**	**60**	P	**Pn**	**10 28 12.9**	**+1.0**
LAV3	**Lava3-Reventad**	**2.28**	**68**	P	**Pn**	**10 28 18.3**	**+3.0**
LAV3	**Lava3-Reventad**	**2.28**	**68**	S	**Sn**	**10 28 45.6**	**+2.7**
CONE	**Cono NE Rev Vo**	**2.28**	**67**	P	**Pn**	**10 28 17.9**	**+2.6**

*CSEM **01** 10:37:16.1, 3023N×3620E, h15km, ML3.0, After SNSN*
SGS 01 10:37:16.1, 3023N×3620E, h15km, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HQLS		**1.36**	**227**	P	Pn	10 37 38.8	-1.8
HQLS		**1.36**	**227**	P	Pn	10 37 38.8	-1.8
HQLS				S	Sn	10 37 55.7	-2.6
JLOS		**1.61**	**203**	P	Pn	10 37 41.0	-3.1
TBKS	**Tabuk**	**2.03**	**172**	P	Pn	10 37 48.0	-1.8
BDAS	**Al Bad'**	**2.04**	**208**	S	Sn	10 38 12.1	-3.0
BDAS	**Al Bad'**	**2.04**	**208**	P	Pn	10 37 48.4	-1.6
RSHS		**2.28**	**213**	P	Pn	10 37 51.3	-2.0

MEX 01 10:51:40.3±0.8, 1432N×9373W, h20km±100km, MD4.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.46**	**20**	*i* P	Pn	10 52 02.0	-3.5
PCIG				*i* S	Sn	10 52 19.7	-4.4
THIG		**1.53**	**68**	*i* P	Pn	10 52 03.4	-3.2
THIG				*i* S	Sn	10 52 21.8	-4.0
TGIG		**2.51**	**13**	*i* P	Pn	10 52 18.4	-1.6
TGIG				*i* S	Sn	10 52 46.9	-3.1
SCX	**San Cristobal**	**2.62**	**24**	*e*P	Pn	10 52 21.6	+0.1
VHO	**Vista Hermosa**	**3.98**	**314**	*e*P	Pn	10 52 37.2	-2.9
VHO				*i* S	Sn	10 53 22.4	-3.8
UTMO	**Huajuapan**	**5.24**	**312**	*i* P	Pn	10 52 56.6	-1.0
UTMO				*i* S	Sn	10 53 55.8	-1.6

*HLW **01** 11:03:23.4, 3036N×3732E, h20km, Mb3.5*
*SGS **01** 11:03:30.6, 3025N×3644E, h5km*
*ISCJB **01** 11:03:32.9±1.2, 2993N±006×3632E±007, h0km, Error ellipse: s-maj=10.2km s-min=6.0km az=136.9*
*CSEM **01** 11:03:32.6±0.9, 3014N×3638E, h30km, ML3.0, Error ellipse: s-maj=24.9km s-min=11.5km az=83.0*
*GII **01** 11:03:33.7±0.0, 2987N×3632E, h0km, ML1.9/1, EXPLOSION*
ISC 01 11:03:31.6±1.3, 3001N±007×3642E±008, h0km, n19, σ1θ06/24, 4D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.20**	**272**	Pg	**Pg**	**11 03 54.7**	**+0.1**
AQBJ	**Aqaba**	**1.22**	**257**	Pg	**Pg**	**11 03 54.4**	**-0.6**
PRNI	**Paran**	**1.27**	**286**	Pg	**Pg**	**11 03 56.7**	**+0.7**
PRNI				Sg	**Sg**	**11 04 14.4**	**+1.9**
EIL	**Elat**	**1.32**	**256**	Pg	**Pg**	**11 03 56.9**	**0.0**
EIL				Sg	**Sg**	**11 04 14.1**	**+0.1**
HQLS		**1.38**	**240**	P	**Pn**	**11 03 56.6**	**-1.4**
HQLS		**1.38**	**240**	P	**Pn**	**11 03 56.6**	**-1.4**
HQLS				S	**Sg**	**11 04 13.3**	**-2.5**
KRMI	**Paran Flat**	**1.48**	**275**	Pn	**Pn**	**11 04 00.0**	**+0.7**
JLOS		**1.50**	**213**	P	**Pn**	**11 03 59.2**	**-0.6**
MZDA	**Masada**	**1.59**	**325**	Pn	**Pn**	**11 04 04.7**	**+3.8**
HBST	**Basata**	**1.67**	**242**	⇓P	**Pn**	**11 04 02.5**	**+0.5**
TBKS	**Tabuk**	**1.78**	**177**	S	**Sn**	**11 04 28.2**	**+1.3**
TBKS	**Tabuk**	**1.78**	**177**	P	**Pn**	**11 04 04.7**	**+1.1**
BDAS	**Al Bad'**	**1.95**	**217**	P	**Pn**	**11 04 05.8**	**-0.1**
RSHS		**2.22**	**220**	P	**Pn**	**11 04 08.7**	**-0.9**
RSHS		**2.22**	**220**	P	**Pn**	**11 04 08.7**	**-0.9**
RSHS				S	**Sn**	**11 04 37.6**	**-0.1**
RSH		**2.52**	**293**	P	**Pn**	**11 04 11.0**	**-2.7**
HKAT	**Jabal Katrina**	**2.59**	**236**	⇓P	**Pn**	**11 04 14.8**	**+0.2**
HRSH	**Kfar Ka'horesh**	**2.86**	**340**	⇓P	**Pn**	**11 04 11.0**	**-7.4**
TR2		**2.86**	**236**	⇓P	**Pn**	**11 04 18.4**	**0.0**
TR2				S	**Sn**	**11 04 59.0**	**+5.4**

*IDC **01** 11:29:59.8±2.0, 2930N×9401E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.5/21, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=79.4km s-min=26.2km az=72.0*
*ISCJB **01** 11:30:03.9±4.1, 294N±0.1×939E±04, h50km±49km, mb3.6/2, Error ellipse: s-maj=52.4km s-min=18.1km az=0.7*
ISC 01 11:30:06.1±3.5, 2940N±010×938E±04, h54km±48km, n5, σ0θ63/6, mb3.6/2, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.18**	**205**	*e*PN	**Pn**	**11 31 07.0**	**-0.5**
SHL				*e*SN	**Sn**	**11 31 55.5**	**+0.4**
MKAR	**Makanchi Array**	**19.55**	**336**	P	**Pn**	**11 34 30.8**	**-0.1**
	0.1nm,0.3s,baz=147,slow=12,SNR=4.1						
SONM	**Songino Array**	**20.82**	**24**	P	**P**	**11 34 43.3**	**+0.4**
	1.3nm,0.7s,baz=214,slow=11,SNR=7.0						
WRA	**Warramunga Arr**	**62.72**	**137**	P	**P**	**11 40 25.9**	**+0.3**
	0.6nm,0.9s,mb3.7,baz=329,slow=6.7,SNR=4.5						
ASAR	**Alice Springs**	**65.35**	**139**	P	**P**	**11 40 42.4**	**-0.5**
	0.5nm,0.8s,mb3.6,baz=326,slow=6.5,SNR=5.9						

KRSC 01 11:43:14.5±1.1, 5495N×16553E, h41km±41km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.99**	**310**	P	Pn	11 43 44.7	-0.9
KBTR				S	Sn	11 44 06.8	-2.4
MKZ	**Mys Kozlova**	**2.24**	**261**	*e*P	Pn	11 43 50.6	+1.6
MKZ				*e*S	Sn	11 44 16.7	+1.4
BZGR	**Bezymyannyi-Gr**	**2.93**	**292**	S	Sn	11 44 35.4	+3.1
BZWR	**Bezymyannyi-We**	**3.04**	**292**	S	Sn	11 44 39.7	+4.6
KLY	**Klyuchi**	**3.08**	**298**	S	Sn	11 44 36.5	+0.3
TUMR	**Tumrok**	**3.11**	**278**	S	Sn	11 44 42.0	+5.2
KIRR	**Kirishev**	**3.12**	**291**	S	Sn	11 44 41.0	+3.9
KMNR	**Kamenistaya**	**3.13**	**287**	S	Sn	11 44 43.0	+5.7
SPN	**Mys Shipunski**	**3.74**	**243**	P	Pn	11 44 11.1	+1.5
SPN				S	Sn	11 44 51.8	-0.5
NLC	**Nalytchevo**	**4.06**	**246**	S	Sn	11 45 00.1	0.0
AVH	**Avacha**	**4.34**	**250**	P	Pn	11 44 21.4	+3.6
AVH				S	Sn	11 45 09.0	+1.9
GNL	**Ganaly**	**4.62**	**257**	P	Pn	11 44 25.2	+3.6
RUS	**Russkaya**	**4.87**	**242**	P	Pn	11 44 27.5	+2.3

*BER **01** 11:46:29.6±2.8, 5929N×2720E, h0km, ML2.1(NAO), Suspected explosion*
*NAO **01** 11:46:29.4±2.9, 5928N×2692E, ML2.1*
*HEL **01** 11:46:30.0±0.3, 5930N×2711E, h0km, ML1.7, ML2.1(NAO), Explosion*
ISC 01 11:46:28.6±1.4, 5933N±005×271E±01, h0km, n14, σ1θ06/19, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**1.23**	**10**	*e*P	**Pg**	**11 46 52.0**	**-0.2**
VJF				*e*S	**Sg**	**11 47 09.0**	**+0.9**
VJF				MSG		11 47 09.0	
	comp=Z,4.2nm,0.4s						
PVF	**Pernaja**	**1.37**	**333**	*e*P	**Pg**	**11 46 55.2**	**+0.3**
PVF				*e*S	**Sg**	**11 47 12.9**	**+0.3**
PVF				MSG		11 47 12.9	
	comp=Z,2.4nm,0.4s						
MEF	**Metsahovi**	**1.64**	**304**	*e*P	**Pn**	**11 46 59.1**	**+0.5**
MEF				MSG		11 47 19.9	
	comp=Z,3.1nm,0.2s						
MEF				*e*S	**Sn**	**11 47 19.9**	**-0.5**
MTSE	**Matsula**	**1.82**	**251**	*e*PG	**Pg**	**11 47 02.5**	**-0.9**
MTSE				*e*SN	**Sn**	**11 47 26.1**	**+1.4**
FIA0	**FINESS Array S** baz=168	**2.18**	**347**	*e*PB	**Pb**	**11 47 08.8**	**-0.1**
FIA0				*e*SG	**Sg**	**11 47 38.1**	**-0.5**
FIA0				MSG		11 47 38.1	
	comp=Z,3.4nm,0.3s						
FIA0	**FINESS Array S** baz=162,slow=18	**2.18**	**347**	Pn	**Pn**	**11 47 07.6**	**+1.5**
FIA0				Pg	**Pg**	**11 47 09.2**	**-1.2**
FIA0				Lg		11 47 38.6	
	baz=171,slow=37						
FIA1	**FINESS Array S**	**2.18**	**347**	*e*PB	**Pb**	**11 47 09.1**	**+0.2**
FIA1				*e*SG	**Sg**	**11 47 38.5**	**-0.1**
FIA1				MSG		11 47 38.5	
	comp=Z,27nm,0.2s						
KAF	**Kangasniemi**	**2.82**	**352**	*e*S	**Sn**	**11 47 52.2**	**+2.7**
KAF				MSG		11 47 52.2	
	comp=Z,3.3nm,0.4s						
KEF	**Keuruu**	**3.05**	**340**	*e*PG	**Pg**	**11 47 24.6**	**-2.4**
HFS	**Hagfors** baz=28,slow=28	**6.83**	**283**	Lg		11 50 01.8	
HFS	**Hagfors**	**6.83**	**283**	*e*SG	**Sg**	**11 50 01.8**	**-6.1**
HFS	**Hagfors** baz=78,slow=28	**6.83**	**283**	Lg		11 50 01.8	
ARA0	**ARCESS Array S** baz=172,slow=14	**10.27**	**357**	Pn	**Pn**	**11 48 55.6**	**-1.4**
ARA0	**ARCESS Array S**	**10.27**	**357**	*e*P	**Pn**	**11 48 55.6**	**-1.4**

IDC 01 11:50:11.8±3.5, 889S×10811E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=153.4km s-min=23.3km az=51.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.64**	**116**	P	P	11 56 01.4	0.0
	0.2nm,0.4s,baz=291,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**28.72**	**124**	P	P	11 56 11.0	0.0
	0.2nm,0.7s,baz=300,slow=7.4,SNR=3.5						
SONM	**Songino Array**	**56.50**	**359**	P	P	11 59 56.7	+1.1
	0.5nm,0.6s,baz=180,slow=6.2,SNR=5.2						
MKAR	**Makanchi Array**	**60.03**	**340**	P	P	12 00 19.8	-0.5
	1.2nm,0.6s,baz=144,slow=7.9,SNR=14						

*HLW **01** 11:52:15.1, 2867N×3845E, h20km, Mb3.7*
*CSEM **01** 11:52:34.7, 3040N×3631E, h18km, ML2.7, After SNSN*
*SGS **01** 11:52:34.7, 3040N×3631E, h18km,*
*ISCJB **01** 11:52:35.7±1.2, 2996N±005×3636E±007, h0km, Error ellipse: s-maj=9.0km s-min=6.5km az=150.8*
*GII **01** 11:52:40.8±0.5, 2997N×3602E, h0km, ML2.1/1, EXPLOSION*
ISC 01 11:52:36.4±1.1, 2993N±004×3637E±006, h0km, n18, σ0θ83/22, 1C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.16**	**276**	Pg	**Pg**	**11 52 58.1**	**-0.6**
AQBJ	**Aqaba**	**1.17**	**261**	Pg	**Pg**	**11 52 58.8**	**+0.1**
PRNI	**Paran**	**1.26**	**290**	Pg	**Pg**	**11 53 00.1**	**-0.4**
PRNI				Sg	**Sg**	**11 53 16.9**	**+0.1**
EIL	**Elat**	**1.26**	**259**	Pg	**Pg**	**11 53 00.2**	**-0.3**
EIL				Sg	**Sg**	**11 53 18.3**	**+1.4**
HQLS		**1.30**	**242**	P	**Pg**	**11 52 60.0**	**-1.3**
HQLS		**1.30**	**242**	P	**Pg**	**11 53 00.0**	**-1.3**
HQLS				S	**Sg**	**11 53 17.7**	**-0.4**
JLOS		**1.41**	**213**	P	**Pn**	**11 53 02.9**	**-0.5**
JLOS		**1.41**	**213**	P	**Pn**	**11 53 02.9**	**-0.5**
JLOS				S	**Sg**	**11 53 22.1**	**+0.3**
KRMI	**Paran Flat**	**1.44**	**278**	Pg	**Pg**	**11 53 03.4**	**-0.6**
HBST	**Basata**	**1.59**	**244**	⇓P	**Pn**	**11 53 05.0**	**-0.8**
MZDA	**Masada**	**1.63**	**328**	Pn	**Pn**	**11 53 08.3**	**+1.9**
TBKS	**Tabuk**	**1.71**	**175**	P	**Pn**	**11 53 08.2**	**+0.9**
BDAS	**Al Bad'**	**1.86**	**217**	S	**Sn**	**11 53 35.1**	**+1.4**
BDAS	**Al Bad'**	**1.86**	**217**	P	**Pn**	**11 53 09.1**	**-0.4**
RSHS		**2.12**	**221**	P	**Pn**	**11 53 12.2**	**-1.0**
TR2		**2.78**	**237**	P	**Pn**	**11 53 17.1**	**-5.0**
TR2				S	**Sb**	**11 54 01.9**	**+0.3**
AMAG	**Maghara**	**2.83**	**285**	⇑P	**Pb**	**11 53 27.9**	**+0.2**
TR1		**2.85**	**229**	⇓P	Px	11 53 14.7	

DJA 01 11:54:25, 990S×11630E, h30km, MLv3.9/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**1.57**	**313**	P	Pn	11 54 50.8	0.0
IGBI	**Denpasar**	**1.57**	**313**	S	Sn	11 55 10.7	+0.6
DNP	**Denpasar**	**1.62**	**318**	P	Pn	11 54 53.3	+1.7
KHKI	**Kahang-Kahang**	**1.67**	**336**	P	Pn	11 54 51.4	-0.9
KHKI	**Kahang-Kahang**	**1.67**	**336**	S	Sn	11 55 14.3	+1.6

KRSC 01 12:11:47.9±0.6, 5318N×15996E, h60km±20km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.09**	**155**	*e*P	Pn	12 11 57.2	+0.3
SPN				*i* S	Sn	12 12 03.7	+0.4
NLC	**Nalytchevo**	**0.37**	**269**	*e*P	Pn	12 11 59.1	+0.6
NLC				*i* S	Sn	12 12 07.0	+0.7
AVH	**Avacha**	**0.74**	**277**	*e*P	Pn	12 12 03.6	+1.0
AVH				*i* S	Sn	12 12 14.4	+1.0
PET	**Petropavlovsk**	**0.80**	**259**	*e*P	Pn	12 12 04.1	+0.7
PET				*i* S	Sn	12 12 15.5	+0.8
KII	**Karymskiy**	**0.91**	**341**	*e*P	Pn	12 12 05.0	+0.3
KII				*i* S	Sn	12 12 17.3	+0.1
RUS	**Russkaya**	**1.15**	**230**	*e*P	Pn	12 12 08.5	+0.6
RUS				*i* S	Sn	12 12 23.4	+0.6
GNL	**Ganaly**	**1.31**	**294**	*e*P	Pn	12 12 10.8	+0.8
GNL				*i* S	Sn	12 12 27.5	+0.9
MKZ	**Mys Kozlova**	**1.73**	**37**	*e*P	Pn	12 12 15.7	0.0
MKZ				*i* S	Sn	12 12 35.6	-1.1
TUMR	**Tumrok**	**2.11**	**3**	*e*P	Pn	12 12 22.1	+1.3
TUMR				*i* S	Sn	12 12 47.6	+1.7
KBTR	**Krutoberegovo**	**3.46**	**28**	P	Pn	12 12 43.3	+4.1

*TIF **01** 12:17:22.0, 4254N×4347E, h12km±1km*
*NEIC **01** 12:17:22.4, 4271N×4342E, h21km, ML3.6(ISK), After ISK,*
*CSEM **01** 12:17:22.6±0.1, 4253N×4343E, h5km, mb4.3, Error ellipse: s-maj=1.4km s-min=0.8km az=127.0*
*ISCJB **01** 12:17:22.9±0.2, 4257N±001×4348E±002, h10km, Error ellipse: s-maj=2.5km s-min=1.9km az=25.8*
*MOS **01** 12:17:24.3±1.1, 4262N×4356E, h20km, mb4.3/1, Error ellipse: s-maj=9.7km s-min=6.0km az=86.0*
*DDA **01** 12:17:25.1, 4273N×4150E, h4km±4km, Md3.3*
ISC 01 12:17:23.6±0.2, 4256N±001×4348E±002, h10km, n49, σ0θ94/80, 2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.03**	**309**	P	**Pg**	**12 17 24.5**	**-0.9**
ONI				S	**Sg**	**12 17 26.1**	**-0.6**
DIGR	**Digorskoe uzhe**	**0.34**	**13**	*i* Pg	**Pg**	**12 17 29.7**	**-0.7**
DIGR				*i* Sg	**Sg**	**12 17 35.2**	**+0.1**
ZEI	**Tsey**	**0.37**	**56**	*i* Pg	**Pg**	**12 17 30.0**	**-0.9**
ZEI				*i* Sg	**Sg**	**12 17 36.0**	**+0.1**
LACR	**Lac**	**0.66**	**66**	*i* Pg	**Pg**	**12 17 35.2**	**-1.1**
LACR				*i* Sg	**Sg**	**12 17 44.6**	**-0.3**
KORR	**Kora**	**0.68**	**39**	*i* Pg	**Pg**	**12 17 36.4**	**-0.3**
KORR				*i* Sg	**Sg**	**12 17 45.7**	**+0.1**
GOR	**Gori**	**0.74**	**141**	*e*Pg	**Pg**	**12 17 37.4**	**-0.5**
GOR	**Gori**	**0.74**	**141**	P	**Pg**	**12 17 37.4**	**-0.6**
GOR				S	**Sg**	**12 17 47.5**	**-0.1**
LSNR	**Lesken**	**0.75**	**19**	*i* Pg	**Pg**	**12 17 37.8**	**-0.3**
LSNR				*e*Sg	**Sg**	**12 17 48.3**	**+0.3**
ARNR	**Ardon**	**0.86**	**43**	*i* Pg	**Pg**	**12 17 39.9**	**-0.3**
ARNR				*e*Sg	**Sg**	**12 17 52.2**	**+0.8**
VLKR	**Vladikavkaz**	**1.01**	**61**	*e*Pg	**Pg**	**12 17 42.4**	**-0.6**
VLKR				*e*Sg	**Sg**	**12 17 56.5**	**+0.5**
SNJR	**Sundja**	**1.10**	**62**	*e*Pg	**Pg**	**12 17 44.4**	**-0.4**
SNJR				*e*Sg	**Sg**	**12 17 59.3**	**+0.1**
BTKR	**Batakoyurt**	**1.12**	**44**	*e*Pg	**Pg**	**12 17 46.1**	**+0.9**
BTKR				*e*Sg	**Sg**	**12 18 01.7**	**+1.9**
KUBR	**Kubataba**	**1.24**	**358**	*d i* PG	**Pg**	**12 17 47.1**	**-0.3**
KUBR				*i* S	**Sg**	**12 18 05.8**	**+2.4**
KUBR				pmax	pmax		
	comp=Z,16nm,0.3s						
KUBR				smax			
	comp=E,589nm,0.6s						
KUBR				smax			
	comp=N,372nm,0.5s						
KUBR	**Kubataba**	**1.24**	**358**	*i* Pg	**Pg**	**12 17 47.1**	**-0.3**
	comp=N,16nm,0.3s						
TBLG	**Delisi**	**1.25**	**131**	*e*Pg	**Pg**	**12 17 46.4**	**-1.2**
TBLG	**Delisi**	**1.25**	**131**	P	**Pn**	**12 17 46.4**	**-0.8**
TBLG				S	**Sb**	**12 18 03.0**	**-0.5**
MTA	**Mtatsminda**	**1.31**	**131**	P	**Pn**	**12 17 45.8**	**-2.1**
MTA				S	**Sb**	**12 18 04.8**	**-0.3**
SHAR	**Shatzhatmas**	**1.32**	**334**	⇓*e*PG	**Pg**	**12 17 47.8**	**-1.1**
SHAR				*e*S	**Sb**	**12 18 05.6**	**+0.2**
TRKR	**Terskaya**	**1.48**	**38**	*e*Pg	**Pg**	**12 17 50.8**	**-1.2**
TRKR				*e*Sg	**Sg**	**12 18 11.1**	**-0.1**
KIV0	**Kislovodsk Arr**	**1.50**	**338**	*i* Pg	**Pg**	**12 17 51.2**	**-1.3**
KIV0				*e*Sg	**Sg**	**12 18 11.1**	**-0.9**
KIV	**Kislovodsk**	**1.51**	**338**	*e*Pn	**Pn**	**12 17 51.1**	**+0.4**
KIV				*e*Sn	**Sn**	**12 18 12.3**	**+2.0**
KIV	**Kislovodsk**	**1.51**	**338**	*e*Pg	**Pg**	**12 17 51.1**	**-1.4**
KIV				*e*Sg	**Sg**	**12 18 12.3**	**+0.2**
BCA	**Borcka**	**1.78**	**232**	*e*PN	**Pn**	**12 17 53.7**	**-0.7**
BCA				*e*SN	**Sn**	**12 18 15.8**	**-1.1**
BCA	**Borcka**	**1.78**	**232**	Pn	**Pn**	**12 17 53.9**	**-0.4**
BCA				Sn	**Sn**	**12 18 16.9**	**-0.1**
BCA	**Borcka**	**1.78**	**232**	Pn	**Pn**	**12 17 53.9**	**-0.5**
BCA				Sn	**Sn**	**12 18 16.9**	**-0.1**
DGRG	**David-gareji**	**1.80**	**128**	*e*Pn	**Pn**	**12 17 55.7**	**+1.1**
DGRG	**David-gareji**	**1.80**	**128**	P	**Pn**	**12 17 55.7**	**+1.1**
DGRG				S	**Sg**	**12 18 23.0**	**+1.6**
ARTV	**Artvin**	**1.80**	**221**	*i* P	**Pn**	**12 17 54.4**	**-0.2**
ARTV				*i* S	**Sn**	**12 18 16.2**	**-1.3**
DBOC	**Borcka**	**1.82**	**229**	*i* P	**Pn**	**12 17 54.1**	**-0.8**
DBOC				*i* S	**Sn**	**12 18 17.7**	**-0.3**
DAGI	**Agillar**	**1.89**	**219**	*i* P	**Pn**	**12 17 56.1**	**+0.2**
KARS	**Kars**	**1.97**	**189**	*e*PN	**Pn**	**12 17 57.4**	**+0.4**
KARS				*e*SN	**Sn**	**12 18 21.7**	**0.0**
KARS	**Kars**	**1.97**	**189**	Pn	**Pn**	**12 17 57.0**	**-0.1**
KARS				Sn	**Sn**	**12 18 23.9**	**+2.2**
DBAD	**Bademkaya**	**2.04**	**221**	*i* P	**Pn**	**12 17 58.3**	**+0.3**
DDEM	**Demirkent**	**2.11**	**218**	*i* P	**Pn**	**12 18 00.1**	**+1.1**
DDEM				*i* S	**Sn**	**12 18 25.8**	**+0.6**
PZAR	**Pazar-Rize**	**2.37**	**235**	*e*PN	**Pn**	**12 18 02.4**	**-0.1**
GNI	**Garni**	**2.59**	**158**	*e*Pn	**Pn**	**12 18 10.1**	**+4.5**
GNI				*e*Sn	**Sn**	**12 18 40.2**	**+3.1**
GNI	**Garni**	**2.59**	**158**	*e*Pn	**Pn**	**12 18 10.1**	**+4.5**
GNI				*e*Sn	**Sn**	**12 18 40.2**	**+3.1**
SOC	**Sochi**	**2.94**	**292**	*e*PN	**Pn**	**12 18 11.2**	**+0.9**
SOC				*e*		12 18 19.0	
SOC				*e*		12 18 47.6	
SOC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,63nm,6.0s						
SOC	**Sochi**	**2.94**	**292**	*e*Pn	**Pn**	**12 18 11.2**	**+0.9**
	comp=Z,8.0nm,0.4s						
AGRB	**Hanur-Agry**	**3.01**	**187**	*e*PN	**Pn**	**12 18 12.5**	**+1.2**
ERZM	**Erzurum**	**3.10**	**212**	*i* P	**Pn**	**12 18 15.9**	**+3.4**
EZM	**Erzurum**	**3.10**	**212**	*e*PN	**Pn**	**12 18 13.3**	**+0.8**
GUMT	**Gumushane**	**3.66**	**236**	*e*PN	**Pn**	**12 18 20.2**	**-0.1**
ESPY	**Espiye-Giresun**	**3.92**	**247**	*e*PN	**Pn**	**12 18 23.6**	**-0.1**
EZC	**Erzincan**	**3.94**	**226**	*e*PN	**Pn**	**12 18 28.8**	**+4.7**
PTK	**Pertek**	**4.80**	**222**	*e*PN	**Pn**	**12 18 36.5**	**+0.6**
PTK	**Pertek**	**4.80**	**222**	Pn	**Pn**	**12 18 36.5**	**+0.5**
ANN	**Anapa**	**4.92**	**299**	*e*PN	**Pn**	**12 18 39.0**	**+1.4**
ANN				*e*S	**Sn**	**12 19 39.0**	**+4.5**
ANN				pmax	pmax		
	comp=Z,33nm,1.7s						
ANN				MLR	MLR		
	comp=Z,178nm,7.0s						
ANN	**Anapa**	**4.92**	**299**	*e*Pn	**Pn**	**12 18 39.0**	**+1.4**
	comp=Z,33nm,1.7s						

*CASC **01** 12:19:23.5±1.1, 703N×7177W, h20km±999km, mb4.9(NEIC)*
*ISCJB **01** 12:20:18.0±1.9, 688N±003×7614W±003, h1km±11km, mb4.8/76, MS4.2/17, Error ellipse: s-maj=6.6km s-min=4.8km az=42.8*
*NEIC **01** 12:20:23.4±0.2, 678N×7629W, mb4.8/62, Error ellipse: s-maj=6.6km s-min=4.0km az=49.0*
NEIC Felt at Medellin.
*BJI **01** 12:20:23.4, 680N×7630W, h25km, mB5.1, Ms5.1, Msz4.7*
*IDC **01** 12:20:25.8±1.8, 680N×7630W, h49km±17km, mb4.1/17, m

5.0nm,0.6s,mb4.3
TKL **Tuckaleechee C** 29.52 347 LR LR 12 38 27.2
comp=Z,328nm,18.4s,MS4.0,baz=25,slow=37
SWET **Sewanee** 29.64 344 eP P **12 26 27.2 +0.2**
LVC **Limon Verde** 30.12 167 eP P **12 26 31.8 +0.3**
15nm,0.9s,mb4.7
OXF **Oxford** 30.13 338 eP P **12 26 30.6 -0.9**
11nm,0.4s,mb5.0
WVT **Waverly** 31.05 342 eP P **12 26 39.0 -0.5**
6.3nm,0.8s,mb4.5
WVT epP pP 12 26 47.5 +3.5
WCI **Wyandotte Cave** 32.57 345 eP P **12 26 53.0 +0.2**
16nm,0.8s,mb5.0
USIN **University of** 32.70 343 eP P **12 26 54.1 +0.1**
65nm,0.7s,mb5.7
SIUC **Southern Illin** 32.94 341 eP P **12 26 55.8 -0.4**
34nm,0.7s,mb5.4
OLIL **Olney** 33.53 343 eP P **12 27 00.8 -0.4**
41nm,1.1s,mb5.3
FVM **French Village** 33.59 339 eP P **12 27 01.5 -0.3**
34nm,0.8s,mb5.3
CCM **Cathedral Cave** 33.95 338 eP P **12 27 03.5 -1.4**
23nm,0.8s,mb5.2
TXAR **Lajitas Array** 34.23 314 P P **12 27 06.0 -1.6**
2.5nm,0.8s,mb4.2,baz=134,slow=10,SNR=14
TXAR LR LR 12 42 20.6
comp=Z,99nm,18.4s,MS3.6,baz=180,slow=38
HDIL **Hopedale** 35.57 343 eP P **12 27 17.7 -1.1**
23nm,0.6s,mb5.3
BDFB **Brasilia** 35.73 129 P P **12 27 19.7 -0.9**
7.3nm,0.8s,mb4.6,baz=284,slow=18,SNR=12
BDFB LR LR 12 43 20.5
comp=Z,425nm,18.6s,MS4.2,baz=106,slow=38
LCO **Las Campanas** 36.03 172 eP P **12 27 23.4 +0.5**
46nm,1.2s,mb5.3
AMTX **Amarillo** 36.48 323 eP P **12 27 26.0 -0.7**
20nm,1.1s,mb5.0
LONY **Lake Ozonia** 37.66 2 eP P **12 27 37.2 +0.5**
16nm,1.0s,mb4.7
CFAA **Coronel Fontan** 38.97 169 P P **12 27 48.0 +0.2**
3.5nm,0.7s,mb4.2,baz=342,slow=7.8,SNR=59
BNM **Barren Site** 39.11 318 eP P **12 27 48.7 -0.3**
BNM epP pP 12 27 57.3 +3.8
LENM **Lemitar** 39.35 318 eP P **12 27 51.4 +0.4**
319A **Douglas** 39.41 313 ⇑P P **12 27 51.8 +0.3**
baz=39,SNR=12
LAZ **Ladron** 39.60 318 eP P **12 27 53.5 +0.3**
LAZ eP PP PP 12 29 30.1 +5.9
219A **White Tail Can** 39.72 313 ⇑P P **12 27 54.5 +0.3**
baz=40,SNR=8.0
318A **Bisbee** 39.96 312 ⇑P P **12 27 56.4 +0.2**
baz=40,SNR=9.6
119A **Ashpeak Ranch,** 40.16 314 ⇓P P **12 27 58.1 +0.3**
baz=40
218A **Dragoon** 40.27 313 ⇑P P **12 27 59.0 +0.3**
baz=40,SNR=15
Z19A **T-Link Ranch,** 40.41 315 ⇓P P **12 28 00.5 +0.6**
baz=40
118A **Homack Ranch,** 40.56 314 ⇓P P **12 28 01.4 +0.3**
baz=40,SNR=9.5
SDCO **Great Sand Dun** 40.68 323 eP P **12 28 02.8 +0.7**
15nm,1.1s,mb4.5
217A **Green Valley** 40.73 312 ⇓P P **12 28 02.7 +0.1**
baz=40,SNR=6.8
Y19A **Nutrioso** 40.77 316 ⇓P P **12 28 03.7 +0.8**
baz=40,SNR=10
Z18A **Geronimo** 40.85 314 ⇑P P **12 28 04.2 +0.7**
baz=41
ECSD **EROS,Sioux Fal** 40.89 337 eP P **12 27 58.8 -4.9**
92nm,2.3s,mb5.0
TUC **Tucson** 40.98 313 eP P **12 28 04.7 0.0**
8.6nm,0.8s,mb4.4
X19A **St. Johns** 41.06 317 ⇓P P **12 28 06.0 +0.7**
baz=41,SNR=12
117A **Oracle** 41.08 313 ⇑P P **12 28 05.8 +0.3**
baz=41
Y18A **Canyon Day Jun** 41.22 315 ⇑P P **12 28 06.9 +0.4**
baz=41,SNR=14
Z17A **San Carlos Hig** 41.27 314 ⇑P P **12 28 07.2 +0.2**
baz=41,SNR=17
216A **Three Points,** 41.32 312 ⇓P P **12 28 07.4 0.0**
baz=41
W19A **Sanders** 41.51 317 ⇓P P **12 28 09.4 +0.4**
baz=41,SNR=7.1
X18A **Snowflake** 41.57 316 ⇑P P **12 28 10.0 +0.6**
baz=41,SNR=10
V19A **Window Rock** 41.63 318 ⇓P P **12 28 11.0 +1.0**
baz=41
Y17A **Roosevelt** 41.74 315 ⇓P P **12 28 11.3 +0.5**
baz=42
W18A **Petrified Fore** 41.75 317 ⇓P P **12 28 11.5 +0.6**
baz=42,SNR=6.2
116A **Eloy** 41.78 313 ⇓P P **12 28 11.5 +0.4**
baz=42
Z16A **Peralta Trail,** 41.97 314 ⇓P P **12 28 12.8 +0.1**
baz=42
X17A **Forest Lakes** 42.06 315 ⇓P P **12 28 14.1 +0.7**
baz=42,SNR=11
ISCO **Idaho Springs** 42.13 326 eP P **12 28 14.4 +0.5**
17nm,1.2s,mb4.5
MVCO **Mesa Verde** 42.17 321 ⇑P P **12 28 14.3 0.0**
baz=42
V18A **Ganado** 42.22 318 ⇓P P **12 28 14.8 0.0**
baz=42
115A **Sonoran Desert** 42.23 312 ⇑P P **12 28 15.2 +0.4**
baz=42
T19A **Beclabito** 42.28 320 ⇓P P **12 28 15.0 -0.1**
baz=42,SNR=7.2
Y16A **Circle Bar Ran** 42.29 314 ⇑P P **12 28 15.7 +0.4**
baz=42,SNR=5.2
214A **Organ Pipe Nat** 42.30 311 ⇓P P **12 28 15.7 +0.2**
baz=42,SNR=9.6
SMCO **Snowmass** 42.49 324 eP P **12 28 17.4 +0.5**
56nm,2.3s,mb4.8
X16A **Lo Mia Camp, P** 42.54 315 ⇑P P **12 28 17.9 +0.5**
baz=42,SNR=10.0
U18A **Rough Rock, Ch** 42.59 319 ⇑P P **12 28 17.8 +0.1**
baz=42,SNR=6.7
PV01 **Paradox Valley** 42.79 322 eP P **12 28 20.1 +0.8**
S19A **Harvey Farm, M** 42.90 321 ⇑P P **12 28 20.2 -0.1**
baz=43,SNR=12
Y15A **Casa Rosa Ranc** 42.94 314 ⇑P P **12 28 20.8 +0.2**
baz=43,SNR=6.4
W16A **Flagstaff** 42.97 316 ⇑P P **12 28 21.4 +0.5**
baz=43,SNR=7.4
EYMN **Ely** 42.99 345 eP P **12 28 19.4 -1.4**
8.3nm,0.7s,mb4.6
T18A **Mexican Hat** 43.01 319 ⇑P P **12 28 21.1 0.0**
baz=43
Z14A **Wintersburg** 43.08 313 ⇑P P **12 28 22.0 +0.2**
baz=43,SNR=6.3
WUAZ **Wupatki** 43.09 316 eP P **12 28 22.1 +0.3**
20nm,0.9s,mb4.8
WUAZ epP pP 12 28 28.0 +1.7
WUAZ **Wupatki** 43.09 316 ⇑P P **12 28 22.0 +0.2**
baz=43,SNR=20
PHWY **Pilot Hill** 43.09 327 eP P **12 28 21.6 -0.1**
X15A **Humboldt** 43.14 315 ⇑P P **12 28 22.5 +0.3**
baz=43,SNR=15
PV10 **Paradox Valley** 43.23 321 eP P **12 28 22.1 -0.7**
U16A **Tuba City** 43.27 317 ⇑P P **12 28 23.5 +0.3**
baz=43,SNR=10
R19A **Curley Farm, L** 43.31 321 ⇓P P **12 28 23.8 +0.3**
baz=43
S18A **Hurst Farm, Bl** 43.41 320 ⇓P P **12 28 24.5 +0.2**
baz=43
T17A **Navajo Res., N** 43.53 319 ⇓P P **12 28 25.5 +0.2**
baz=43
X14A **Yava** 43.59 314 ⇑P P **12 28 26.3 +0.4**
baz=43,SNR=13
Q19A **Hogan Spring (** 43.72 322 ⇓P P **12 28 26.9 +0.1**
baz=44,SNR=8.1
R18A **Canyonlands Na** 43.77 321 ⇓P P **12 28 27.1 -0.1**
baz=44
V15A **Kaibab Nationa** 43.80 316 ⇓P P **12 28 28.2 +0.7**
baz=44,SNR=21
S17A **Black Ridge (B** 43.90 319 ⇑P P **12 28 28.5 +0.2**
baz=44,SNR=9.8
Y13A **Salome** 43.95 313 ⇑P P **12 28 29.1 +0.4**
baz=44
P19A **Cripple Cowboy** 43.98 323 ⇑P P **12 28 28.9 0.0**
baz=44
T16A **Glen Canyon Da** 43.99 318 ⇑P P **12 28 29.1 +0.1**
baz=44
W14A **Seligman** 44.11 315 ⇑P P **12 28 30.6 +0.6**
baz=44,SNR=9.7
U15A **North Rim** 44.21 317 ⇓P P **12 28 31.3 +0.5**
baz=44,SNR=10

R17A **Hanksville Air** 44.30 320 ⇓P P **12 28 31.4 -0.1**
baz=44
GLA **Glamis** 44.32 311 eP P **12 28 32.6 +0.8**
32nm,1.1s,mb5.0
GLA **Glamis** 44.32 311 ⇑P P **12 28 32.2 +0.4**
baz=44,SNR=8.8
X13A **Yucca** 44.33 314 ⇑P P **12 28 31.8 0.0**
baz=44,SNR=9.1
V14A **Boquillas Ranc** 44.34 316 ⇓P P **12 28 32.5 +0.6**
baz=44,SNR=14
Q18A **Rafter H Ranch** 44.35 322 ⇑P P **12 28 31.7 -0.2**
baz=44,SNR=5.1
PDMCI **Parker Dam,Lak** 44.41 313 ⇓P P **12 28 32.7 +0.3**
baz=44
RSSD **Black Hills** 44.41 331 eP P **12 28 31.4 -0.9**
47nm,2.1s,mb4.8
Y12C **Blythe** 44.42 312 ⇑P P **12 28 32.6 0.0**
baz=44,SNR=7.7
S16A **Weppner Ranch,** 44.46 319 ⇑P P **12 28 32.9 +0.1**
baz=44
O19A **Miners Draw (B** 44.48 324 ⇑P P **12 28 32.6 -0.4**
baz=44
AGMN **Agassiz Refuge** 44.57 341 eP P **12 28 32.6 -0.9**
19nm,1.2s,mb4.8
L21A **Rawlins** 44.58 327 ⇓P P **12 28 33.6 -0.1**
baz=44
T15A **Red Dirt Ranch** 44.59 318 ⇓P P **12 28 33.9 +0.1**
baz=44
SRU **San Rafael** 44.59 321 eP P **12 28 34.1 +0.3**
9.3nm,1.0s,mb4.6
SRU epP pP 12 28 41.2 +2.8
SRU **San Rafael** 44.59 321 ⇑P P **12 28 33.7 -0.1**
baz=44,SNR=8.9
W13A **Hualapai Mount** 44.62 314 ⇑P P **12 28 34.6 +0.5**
baz=44,SNR=9.7
R16A **Teasdale** 44.71 320 ⇑P P **12 28 35.0 +0.2**
baz=44,SNR=9.1
P18A **Preston Nutter** 44.74 322 ⇑P P **12 28 35.1 +0.1**
baz=44,SNR=5.4
U14A **Mt Trumbull** 44.81 316 ⇓P P **12 28 36.0 +0.4**
baz=45,SNR=7.9
Q16A **Castle Valley** 44.88 321 ⇑P P **12 28 35.8 -0.3**
baz=45
N19A **John Jarvie Ra** 44.89 324 ⇓P P **12 28 36.1 -0.1**
baz=45
S15A **Panguitch** 44.94 318 ⇑P P **12 28 36.8 +0.2**
baz=45,SNR=5.4
P17A **Butcher Ranch,** 44.95 322 ⇓P P **12 28 36.8 +0.2**
baz=45
SWSC **Sam W. Stewart** 45.00 311 ⇓P P **12 28 37.5 +0.3**
baz=45
BC3 **Big Chuckw Mtn** 45.06 312 ⇑P P **12 28 37.9 +0.3**
baz=45,SNR=10
V13A **Grand Canyon W** 45.07 315 ⇑P P **12 28 38.2 +0.5**
baz=45
IRM **Iron Mountain** 45.07 313 ⇑P P **12 28 38.0 +0.2**
baz=45,SNR=16
T14A **Hurricane** 45.08 317 ⇓P P **12 28 38.3 +0.6**
baz=45,SNR=7.6
DVTC **Desert V Tower** 45.10 310 ⇓P P **12 28 38.3 +0.3**
baz=45
L20A **Wamsutter** 45.15 326 ⇑P P **12 28 38.3 +0.1**
baz=45
R15A **Jution** 45.18 319 ⇓P P **12 28 38.9 +0.3**
baz=45,SNR=5.2
N18A **Larsen Ranch,** 45.23 324 ⇓P P **12 28 39.3 +0.4**
baz=45
MSU **Marysvale** 45.29 320 eP P **12 28 40.1 +0.8**
O17A **Robinson Place** 45.38 322 ⇑P P **12 28 40.3 +0.2**
baz=45,SNR=7.1
W12A **Cal Nev Ari** 45.42 314 ⇓P P **12 28 41.0 +0.5**
baz=45
MONP **Monument Peak** 45.45 310 ⇑P P **12 28 41.0 +0.3**
baz=45,SNR=8.5
S14A **Cedar City** 45.52 318 ⇑P P **12 28 41.6 +0.3**
baz=45
CCUT **Cedar City** 45.53 318 eP P **12 28 41.7 +0.4**
T13A **Saint George** 45.62 317 ⇑P P **12 28 42.2 +0.2**
baz=45
BELC **Belle Mtn.** 45.62 312 ⇓P P **12 28 42.4 +0.3**
baz=45,SNR=13
Q15A **Fillmore** 45.70 320 ⇑P P **12 28 43.2 +0.6**
baz=45
ARUT **Antelope Range** 45.72 318 eP P **12 28 43.3 +0.5**
GMRC **Granite Mounta** 45.74 313 ⇑P P **12 28 43.1 +0.1**
baz=46,SNR=7.7
M18A **Lyman** 45.75 324 ⇓P P **12 28 42.9 -0.1**
baz=46
PFO **Pinyon Flat Ob** 45.79 311 eP P **12 28 44.2 +0.8**
10nm,0.9s,mb4.8
PFO **Pinyon Flat Ob** 45.79 311 ⇓P P **12 28 44.0 +0.6**
baz=46,SNR=7.3
DAU **Daniels Canyon** 45.83 322 eP P **12 28 44.3 +0.6**
O16A **Springville** 45.86 322 ⇑P P **12 28 43.9 +0.1**
baz=46
S13A **Holt Ranch, En** 45.88 317 ⇓P P **12 28 44.8 +0.6**
baz=46,SNR=30
N17A **Moffit Pass** 45.90 323 ⇓P P **12 28 44.4 +0.2**
baz=46,SNR=8.7
NLU **North Lily Min** 46.06 321 eP P **12 28 44.4 -1.0**
NLU epP pP 12 28 54.5 +4.5
JLU **Jordanelle** 46.06 322 eP P **12 28 45.8 +0.4**
V11A **Goodsprings** 46.08 314 ⇓P P **12 28 45.9 +0.2**
baz=46
M17A **Scullys Gap (B** 46.13 324 ⇓P P **12 28 45.8 -0.2**
baz=46
SHPR **Sheep Range** 46.22 315 eP P **12 28 47.3 +0.5**
N16A **Rees Ranch, Co** 46.23 323 ⇓P P **12 28 47.1 +0.3**
baz=46
TUQ **Turquoise Moun** 46.24 314 ⇓P P **12 28 47.0 0.0**
baz=46,SNR=5.4
HEC **Hector,Ludlow** 46.25 313 ⇓P P **12 28 47.3 +0.2**
baz=46,SNR=11
Q14A **Sevier Lake (B** 46.27 319 ⇑P P **12 28 47.5 +0.4**
baz=46,SNR=18
R13A **O'Grain Ranch,** 46.28 318 ⇑P P **12 28 47.7 +0.5**
baz=46,SNR=11
ULM **Lac du Bonnet** 46.30 343 P P **12 28 45.2 -2.0**
7.8nm,0.8s,mb4.7,baz=173,slow=8.8,SNR=5.2
ULM LR LR 12 47 27.8
comp=Z,301nm,21.7s,MS4.2,baz=93,slow=35
BW06 **Boulder Array** 46.32 326 eP P **12 28 47.1 -0.4**
14nm,1.2s,mb4.8
BW06 **Boulder Array** 46.32 326 ⇑P P **12 28 47.4 -0.1**
baz=46
PDAR **Pinedale Array** 46.32 326 P P **12 28 46.7 -0.8**
2.9nm,0.9s,mb4.2,baz=128,slow=9.6,SNR=21
PDAR LR LR 12 48 46.8
comp=Z,168nm,21.1s,MS4.0,baz=143,slow=37
MURC **Murrieta** 46.34 311 ⇓P P **12 28 47.9 +0.1**
baz=46,SNR=6.3
BBRC **Big Bear Sol-O** 46.42 312 ⇓P P **12 28 49.2 +0.8**
baz=46
P14A **Drum Mountains** 46.47 320 ⇓P P **12 28 49.1 +0.3**
baz=46,SNR=6.8
O15A **The Old Anders** 46.50 321 ⇑P P **12 28 49.2 +0.3**
baz=46
S12A **Delamar Landin** 46.57 317 ⇑P P **12 28 50.1 +0.6**
baz=46
M16A **Huntsville** 46.60 323 ⇓P P **12 28 49.8 +0.1**
baz=46
T11A **Corn Creek, Al** 46.63 316 ⇓P P **12 28 50.2 +0.2**
baz=46,SNR=6.9
DUG **Dugway** 46.66 321 eP P **12 28 50.6 +0.4**
10nm,0.7s,mb4.9
DUG **Dugway** 46.66 321 ⇑P P **12 28 50.6 +0.4**
baz=46
SHOC **Shoshone** 46.71 314 ⇓P P **12 28 50.7 0.0**
baz=46,SNR=6.4
Q13A **Wheeler Ranch,** 46.73 319 ⇑P P **12 28 51.2 +0.4**
baz=46,SNR=13
HWUT **Hardware Ranch** 46.74 323 eP P **12 28 50.2 -0.6**
10nm,1.0s,mb4.7
R12A **Pony Springs,** 46.78 318 ⇓P P **12 28 51.5 +0.4**
baz=46,SNR=13
GSC **Goldstone** 46.81 313 eP P **12 28 51.6 +0.1**
12nm,1.1s,mb4.7
GSC epP pP 12 28 57.6 +1.6
GSC **Goldstone** 46.81 313 ⇑P P **12 28 51.9 +0.4**
baz=47
N15A **Stansbury Isla** 46.88 322 ⇑P P **12 28 51.7 -0.2**
baz=47
L16A **Fish Haven** 46.91 324 ⇑P P **12 28 52.1 -0.1**
baz=47
U10A **Ash Meadows, A** 47.00 315 ⇑P P **12 28 53.1 +0.3**
baz=47
P13A **Bates Ranch, G** 47.00 319 ⇓P P **12 28 53.4 +0.5**
baz=47,SNR=11

I18A **Diamond G Ranc** 47.08 327 ⇑P P **12 28 53.3 -0.1**
baz=47
SPUT **South Promonto** 47.09 323 eP P **12 28 52.1 -1.4**
SPUT epP pP 12 28 59.0 +0.9
M15A **Larsen Ranch,** 47.18 323 ⇑P P **12 28 54.3 +0.1**
baz=47
S11A **Rachel** 47.20 316 ⇑P P **12 28 54.9 +0.5**
baz=47
TPNV **Topopah Spring** 47.20 315 eP P **12 28 55.1 +0.6**
6.2nm,0.7s,mb4.7
TPNV **Topopah Spring** 47.20 315 ⇓P P **12 28 54.9 +0.5**
baz=47,SNR=11
BGU **Big Grassy Mou** 47.22 322 eP P **12 28 54.2 -0.3**
N14A **Grayback Hills** 47.27 322 ⇓P P **12 28 54.9 0.0**
baz=47
Q12A **Willow Creek R** 47.31 319 ⇓P P **12 28 55.5 +0.2**
baz=47,SNR=6.2
J17A **Brown Place, J** 47.35 326 ⇑P P **12 28 55.7 +0.2**
baz=47
O13A **Hicks Ranch, I** 47.36 320 ⇓P P **12 28 56.0 +0.3**
baz=47,SNR=9.3
FURC **Furnace Creek,** 47.40 314 ⇑P P **12 28 56.2 +0.2**
baz=47,SNR=9.6
REDW **Red Top Meadow** 47.43 326 eP P **12 28 56.2 0.0**
16nm,0.9s,mb5.0
SNOW **Snow King Moun** 47.44 326 eP P **12 28 56.6 +0.4**
20nm,1.1s,mb5.0
SNOW epP pP 12 29 03.1 +2.3
R11A **Troy Canyon, C** 47.45 317 ⇓P P **12 28 56.5 +0.2**
baz=47,SNR=12
LOHW **Long Hollow** 47.45 326 eP P **12 28 56.2 -0.1**
12nm,1.1s,mb4.7
L15A **Malad City** 47.47 323 ⇑P P **12 28 56.0 -0.4**
baz=47
EDW2 **Edwards Air Fo** 47.49 312 ⇓P P **12 28 56.7 0.0**
baz=47
K16A **Soda Springs** 47.51 325 ⇓P P **12 28 56.2 -0.6**
baz=47
LRMC **Laurel Mountai** 47.53 313 ⇑P P **12 28 57.1 0.0**
baz=47,SNR=8.1
TPAW **Teton Pass** 47.57 326 eP P **12 28 57.0 -0.2**
11nm,1.0s,mb4.8
PLCA **Paso Flores** 47.62 174 P P **12 28 57.2 -0.4**
18nm,1.1s,mb5.0,baz=347,slow=8.9,SNR=12
PLCA LR LR 12 47 44.8
comp=Z,223nm,19.0s,MS4.2,baz=90,slow=34
PLCA **Paso Flores** 47.62 174 eP P **12 28 57.2 -0.4**
15nm,0.9s,mb5.0
PLCA LR LR 12 47 44.8
MOOW **Moose Ponds** 47.62 326 eP P **12 28 57.3 -0.3**
11nm,1.2s,mb4.8
I17A **Pilgram Creek** 47.64 326 ⇑P P **12 28 57.6 -0.2**
baz=47
MPMC **Manual Prospec** 47.66 314 ⇑P P **12 28 58.0 0.0**
baz=47
RRI2 **Red Ridge** 47.69 325 eP P **12 28 58.2 +0.1**
8.5nm,0.8s,mb4.8
RRI2 epP pP 12 29 06.1 +3.4
RLMT **Red Lodge** 47.74 329 eP P **12 28 57.8 -0.7**
8.8nm,1.0s,mb4.7
RLMT **Red Lodge** 47.74 329 ⇑P P **12 28 58.8 +0.3**
baz=48,SNR=6.1
M14A **Sheep Mountain** 47.75 322 ⇓P P **12 28 58.4 -0.3**
baz=48
Q11A **Duckwater** 47.75 318 ⇑P P **12 28 58.7 0.0**
baz=48
J16A **Bone** 47.80 325 ⇑P P **12 28 59.2 +0.2**
baz=48
DGMT **Dagmar** 47.81 335 ⇑P P **12 28 58.5 -0.5**
baz=48
IMW **Indian Meadow** 47.82 326 eP P **12 28 59.2 0.0**
11nm,1.1s,mb4.8
N13A **Wendover, West** 47.91 321 ⇓P P **12 28 59.8 -0.1**
baz=48,SNR=7.4
S10A **Tonopah Range,** 47.92 316 ⇑P P **12 29 00.3 +0.3**
baz=48,SNR=17
O12A **Currie** 47.92 320 ⇑P P **12 29 00.5 +0.5**
baz=48
K15A **Arbon** 47.97 324 ⇓P P **12 29 00.2 -0.2**
baz=48
L14A **Malta** 48.00 323 ⇑P P **12 29 00.4 -0.2**
baz=48
ISA **Isabella** 48.19 313 ⇑P P **12 29 02.5 +0.3**
baz=48
ARVC **Arvin** 48.22 312 ⇑P P **12 29 02.9 +0.6**
baz=48
Q10A **Clear Creek Ra** 48.24 317 ⇑P P **12 29 02.9 +0.5**
baz=48,SNR=6.3
CWC **Cottonwood Cre** 48.25 314 ⇓P P **12 29 02.7 0.0**
baz=48
S09A **Goldfield** 48.26 316 ⇓P P **12 29 02.8 +0.1**
baz=48
K14A **Jones Ranch, D** 48.26 323 ⇑P P **12 29 02.6 0.0**
baz=47
YMR **Madison River** 48.34 327 eP P **12 29 03.4 +0.3**
18nm,1.3s,mb5.0
J15A **Blackfoot** 48.35 325 ⇓P P **12 29 03.2 0.0**
baz=48
R09A **Tonopah** 48.40 316 ⇑P P **12 29 03.8 0.0**
baz=48,SNR=12
TPH **Tonopah** 48.42 316 eP P **12 29 04.5 +0.6**
23nm,1.4s,mb5.0
N12A **Clover Valley,** 48.43 320 ⇓P P **12 29 03.9 0.0**
baz=48
O11A **Cowboy Ranch,** 48.43 319 ⇑P P **12 29 04.3 +0.4**
baz=48
L13A **Double Diamond** 48.45 322 ⇑P P **12 29 03.8 -0.3**
baz=48
ELK **Elko** 48.50 320 eP P **12 29 04.4 -0.1**
F18A **Big Timber** 48.51 329 ⇑P P **12 29 04.3 -0.1**
baz=48
H16A **Russell Place,** 48.52 327 ⇑P P **12 29 04.5 -0.1**
baz=48
G17A **Pierce Place,** 48.65 328 ⇓P P **12 29 05.6 +0.1**
baz=48
M12A **Wells** 48.67 321 ⇓P P **12 29 05.5 -0.3**
baz=48
P10A **Eureka** 48.69 318 ⇑P P **12 29 06.2 +0.2**
baz=48
QLMT **Earthquake Lak** 48.70 327 eP P **12 29 06.9 +1.0**
VES **Vestal, Richgr** 48.71 313 ⇓P P **12 29 06.9 +0.7**
baz=48
I15A **Monteview** 48.75 325 ⇑P P **12 29 06.8 +0.5**
baz=48
J14A **Carey** 48.93 324 ⇑P P **12 29 07.8 +0.1**
baz=49,SNR=19
F17A **Fitzpatrick Pl** 48.99 328 ⇓P P **12 29 08.3 +0.1**
baz=49,SNR=7.2
E18A **Harlowton** 49.06 330 ⇑P P **12 29 08.7 +0.1**
baz=49
O10A **Cortez Mining,** 49.06 319 ⇓P P **12 29 09.1 +0.2**
baz=49
P09A **Austin** 49.10 318 ⇑P P **12 29 09.5 +0.4**
baz=49
L12A **House Creek Ra** 49.14 322 ⇓P P **12 29 09.6 +0.2**
baz=49
G16A **Moss Hill, Enn** 49.16 327 ⇑P P **12 29 09.9 +0.5**
baz=49
SMMC **Simmler** 49.16 312 ⇑P P **12 29 09.8 +0.2**
baz=49
M11A **Holland Ranch,** 49.22 321 ⇑P P **12 29 09.9 -0.1**
baz=49
H15A **Lima** 49.23 326 ⇓P P **12 29 10.5 +0.5**
baz=49,SNR=14
I14A **Mackay** 49.26 325 ⇓P P **12 29 10.6 +0.3**
baz=49
Q08A **Gabbs** 49.29 317 ⇑P P **12 29 10.7 +0.1**
baz=49
NVAR **Mina Array Bea** 49.34 316 P P **12 29 11.1 +0.1**
5.5nm,0.9s,mb4.6,baz=126,slow=6.4,SNR=29
K12A **Draper Farm, C** 49.35 323 ⇓P P **12 29 11.1 +0.1**
baz=49
J13A **Cove Ranch, Pi** 49.36 324 ⇓P P **12 29 11.2 +0.2**
baz=49
D18A **Linhart Farms,** 49.43 330 ⇓P P **12 29 11.7 +0.2**
baz=49
E17A **Martinsdale** 49.47 329 ⇓P P **12 29 11.6 -0.2**
baz=49
MCMT **McKenzie Canyo** 49.47 326 eP P **12 29 12.3 +0.4**
G15A **Dillon** 49.49 327 ⇑P P **12 29 12.1 +0.1**
baz=49
KCC **Kaiser Creek** 49.54 314 ⇓P P **12 29 12.7 +0.2**
baz=49
HLID **Hailey** 49.60 324 eP P **12 29 12.8 -0.1**
5.3nm,0.8s,mb4.6
HLID **Hailey** 49.60 324 ⇓P P **12 29 13.1 +0.2**
baz=49
L11A **Cat Creek Ranc** 49.61 322 ⇑P P **12 29 12.9 0.0**

	baz=49							
H14A	Leadore	49.63	325	⇑P	P	12 29 13.3	+0.2	
	baz=49							
I13A	Wildhorse Cree	49.63	324	⇑P	P	12 29 13.0	-0.1	
	baz=49,SNR=6.1							
DLMT	Dillon	49.67	327	*e*P	P	12 29 14.0	+0.7	
	11nm,1.3s,mb4.7							
T06C	Millerton Lake	49.68	314	⇓P	P	12 29 12.9	-0.7	
	baz=49							
M10A	I.L. Ranch, Tu	49.74	320	⇓P	P	12 29 14.2	+0.2	
	baz=50							
J12A	Stokes Ranch,	49.82	323	⇑P	P	12 29 14.5	0.0	
	baz=50							
D17A	Six Diamond Ra	49.84	330	⇑P	P	12 29 15.0	+0.3	
	baz=50							
LRM	Limekiln Ridge	49.88	327	*e*P	P	12 29 15.0	0.0	
F15A	Butte	49.92	327	⇓P	P	12 29 15.3	+0.1	
	baz=50							
E16A	East Helena	49.94	328	⇑P	P	12 29 15.5	+0.1	
	baz=50							
EGMT	Eagleton	49.98	331	⇑P	P	12 29 15.7	0.0	
	baz=50							
L10A	Juniper Basin	50.00	321	⇑P	P	12 29 15.9	0.0	
	baz=50							
N09A	Rock Creek Ran	50.02	319	⇑P	P	12 29 15.9	-0.2	
	baz=50							
G14A	Jackson	50.07	326	⇓P	P	12 29 16.4	0.0	
	baz=50							
K11A	Parker Ranch,	50.11	322	⇓P	P	12 29 16.8	0.0	
	baz=50							
HRY	Holter Researc	50.13	328	*e*P	P	12 29 16.8	-0.1	
O08A	Rochester Mine	50.15	318	⇓P	P	12 29 17.2	+0.1	
	baz=50							
I12A	Atlanta	50.16	324	⇓P	P	12 29 17.2	+0.1	
	baz=50							
WAKR	Walker	50.16	316	*e*P	P	12 29 18.0	+0.8	
R06C	Coleville	50.18	316	⇓P	P	12 29 17.8	+0.4	
	baz=50							
U04C	Hernandez Rese	50.18	312	⇑P	P	12 29 17.6	+0.2	
	baz=50							
D16A	Dana Ranch, Ca	50.20	329	⇑P	P	12 29 17.2	-0.2	
	baz=50							
C17A	Wharram Farm,	50.21	330	⇑P	P	12 29 17.1	-0.3	
	baz=50							
MFID	Camas Ranch	50.35	323	⇓P	P	12 29 18.4	-0.1	
	baz=50							
F14A	Wisdom	50.38	327	⇑P	P	12 29 18.6	-0.1	
	baz=50							
N08A	GE Springer Mi	50.38	319	⇓P	P	12 29 18.3	-0.6	
	baz=50							
G13A	Cobalt	50.41	325	⇑P	P	12 29 18.8	-0.1	
	baz=50							
H12A	Diamond D Ranc	50.44	325	⇓P	P	12 29 19.1	-0.1	
	baz=50							
K10A	MacKenzie Ranc	50.63	322	⇑P	P	12 29 20.7	0.0	
	baz=50							
PAHR	Pah Rah Range	50.69	317	*e*P	P	12 29 21.6	+0.4	
	6.7nm,0.8s,mb4.6							
I11A	Placerville	50.71	323	⇓P	P	12 29 21.2	-0.1	
	baz=50							
L09A	Wilkinson Ranc	50.72	320	⇓P	P	12 29 21.4	0.0	
	baz=50							
WCN	Washoe City	50.75	316	⇑P	P	12 29 21.7	0.0	
	baz=50							
C16A	Fuhringer Ranc	50.81	330	⇑P	P	12 29 21.8	-0.1	
	baz=50							
PACP	Pacheco Peak	50.82	313	⇓P	P	12 29 22.3	+0.1	
	baz=51							
E14A	Clinton	50.82	327	⇑P	P	12 29 22.1	0.0	
	baz=50							
M08A	Happy Creek Ra	50.88	319	⇑P	P	12 29 22.3	-0.4	
	baz=51							
F13A	Darby	50.89	326	⇑P	P	12 29 22.6	0.0	
	baz=51							
N07B	Gerlach	50.93	318	⇓P	P	12 29 23.2	+0.2	
	baz=51							
P06A	Stead Airport,	51.02	317	⇓P	P	12 29 23.9	+0.2	
	baz=51							
K09A	Rome	51.12	321	⇓P	P	12 29 24.5	+0.1	
	baz=51							
LAVA	Lava Cap Winer	51.18	315	⇓P	P	12 29 24.9	-0.1	
	baz=51							
H11A	Donnelly	51.20	324	⇑P	P	12 29 24.4	-0.5	
	baz=51							
B16A	M & M Farms, S	51.20	330	⇓P	P	12 29 24.4	-0.5	
	baz=51							
O06A	Flanigan	51.21	317	⇓P	P	12 29 25.2	+0.2	
	baz=51							
E13A	Victor	51.21	327	⇓P	P	12 29 24.4	-0.6	
	baz=51							
C15A	Salmond Ranch,	51.23	329	⇓P	P	12 29 25.0	-0.1	
	baz=51							
L08A	Fields	51.24	320	⇓P	P	12 29 25.4	+0.1	
	baz=51							
I10A	Payette	51.31	323	⇓P	P	12 29 25.6	-0.2	
	baz=51							
MSO	Missoula	51.32	327	*e*P	P	12 29 25.9	+0.1	
F12A	Elk City	51.38	326	⇓P	P	12 29 26.1	-0.2	
	baz=51							
J09A	Fry Pan Ranch,	51.48	322	⇓P	P	12 29 27.2	+0.1	
	baz=51							
N06A	Buffalo Meadow	51.49	318	⇑P	P	12 29 26.9	-0.3	
	baz=51							
A16A	West Butte Ran	51.51	331	⇓P	P	12 29 26.9	-0.3	
	baz=51							
WVOR	Wild Horse Val	51.55	320	*e*P	P	12 29 27.3	-0.3	
	17nm,1.0s,mb4.9							
H10A	Noah's Angus R	51.56	324	⇑P	P	12 29 26.8	-0.9	
	baz=51							
K08A	Mann Creek Ran	51.61	321	⇓P	P	12 29 28.0	-0.1	
	baz=51							
G11A	Walters Elk Ra	51.75	325	⇑P	P	12 29 28.3	-0.7	
	baz=52							
D13A	Huson	51.77	327	⇑P	P	12 29 28.9	-0.2	
	baz=52							
L07A	Adell	51.79	320	⇓P	P	12 29 29.2	-0.2	
	baz=52							
C14A	Swan Lake	51.81	328	⇓P	P	12 29 29.1	-0.4	
	baz=52							
I09A	Lost Marbles R	51.81	322	⇑P	P	12 29 29.0	-0.6	
	baz=52							
O05C	Quincy	51.85	317	⇑P	P	12 29 30.1	+0.2	
	baz=52							
J08A	Circle Bar Ran	51.93	321	⇓P	P	12 29 30.1	-0.3	
	baz=52							
B14A	Marquette Ranc	51.95	329	⇓P	P	12 29 30.3	-0.2	
	baz=52							
E12A	Beaver Dam Sad	51.95	326	⇑P	P	12 29 30.1	-0.5	
	baz=52							
OHCM	Honcut	51.96	316	*e*P	P	12 29 30.7	0.0	
F11A	Grangeville	51.97	325	⇑P	P	12 29 29.9	-0.7	
	baz=52							
BMO	Blue Mountains	52.04	324	*e*P	P	12 29 29.8	-1.5	
	2.0nm,0.8s,mb4.1							
ORV	Oroville	52.07	316	⇑P	P	12 29 31.6	+0.1	
	baz=52							
K07A	Rock Creek Ran	52.07	320	⇓P	P	12 29 30.9	-0.6	
	baz=52							
A15A	Johnson Ranch,	52.09	330	⇓P	P	12 29 31.1	-0.4	
	baz=52							
O04C	Chester	52.13	317	⇓P	P	12 29 32.0	+0.1	
	baz=52							
G10A	Bishop Farm, J	52.18	324	⇓P	P	12 29 31.4	-0.9	
	baz=52							
C13A	Hot Springs	52.19	328	⇓P	P	12 29 31.9	-0.4	
	baz=52							
D12A	Red Ives Fores	52.22	327	⇑P	P	12 29 32.4	-0.1	
	baz=52							
E11A	Bogner Ranch,	52.28	326	⇓P	P	12 29 32.2	-0.7	
	baz=52							
I08A	Drewsey	52.28	322	⇓P	P	12 29 32.6	-0.5	
	baz=52							
MOD	Modoc	52.36	319	⇓P	P	12 29 32.9	-0.7	
	baz=52							
BSMT	Bassoo Peak	52.41	328	*e*P	P	12 29 34.2	+0.2	
J07A	Hines	52.46	321	⇑P	P	12 29 33.7	-0.7	
	baz=52							
LBCM	Butte Creek Ri	52.55	317	P	P	12 29 34.5	-0.6	
G09A	Cove	52.56	324	⇑P	P	12 29 35.3	+0.3	
	baz=52							
B13A	Whitefish	52.57	329	⇓P	P	12 29 35.0	-0.1	
	baz=52							
F10A	Beach Ranch, E	52.63	325	⇓P	P	12 29 35.2	-0.3	
	baz=52							
H08A	Prairie City	52.67	323	⇓P	P	12 29 36.0	0.0	
	baz=52							
C12B	Naegeli Ranch,	52.69	327	⇓P	P	12 29 36.0	0.0	
	baz=52							
D11A	Klaveano Farm,	52.76	326	⇑P	P	12 29 36.0	-0.5	
	baz=52							
K06A	Valley Falls	52.77	320	⇑P	P	12 29 35.8	-0.8	
	baz=52							
LTIM	Timbered Crate	52.80	318	P	P	12 29 36.5	-0.4	
E10A	Myers Farm, Un	52.86	325	⇓P	P	12 29 37.0	-0.2	
	baz=53							
F09A	S2 Ranch, Elgi	52.87	324	⇑P	P	12 29 36.9	-0.5	
	baz=53							
HOPS	Hopland	52.93	315	⇓P	P	12 29 38.0	+0.1	
	baz=53							
J06A	Christmas Vall	52.93	321	⇑P	P	12 29 37.4	-0.5	
	baz=53							
I07A	Izee	52.95	322	⇓P	P	12 29 37.8	-0.2	
	baz=53							
GASB	Alder Springs	52.96	315	⇓P	P	12 29 38.7	+0.6	
	baz=53							
LNOR	Lincton Mounta	53.18	324	*e*P	P	12 29 38.5	-1.2	
C11A	Tepee Creek (N	53.19	327	⇓P	P	12 29 39.4	-0.2	
	baz=53							
H07A	Lands Inn, Kim	53.25	322	⇑P	P	12 29 39.9	-0.3	
	baz=53							
G08A	Pilot Rock	53.26	323	⇑P	P	12 29 40.0	-0.2	
	baz=53							
D10A	Wagner Farm, O	53.28	326	⇑P	P	12 29 39.5	-0.8	
	baz=53							
I06A	Prineville	53.31	321	⇑P	P	12 29 40.6	-0.1	
	baz=53							
F08A	Pendleton	53.43	324	⇓P	P	12 29 41.1	-0.3	
	baz=53							
E09A	Wood Farm, Sta	53.46	325	⇓P	P	12 29 41.1	-0.6	
	baz=53							
A12A	Yaak River Ran	53.54	329	⇓P	P	12 29 42.0	-0.2	
	baz=53							
B11A	Sandpoint	53.61	328	⇓P	P	12 29 42.6	-0.1	
	baz=53							
J05A	Fort Rock	53.63	320	⇑P	P	12 29 43.1	+0.1	
	baz=53							
G07A	Ruggs Ranch, H	53.67	323	⇓P	P	12 29 42.9	-0.3	
	baz=53							
H06A	Lindquist Farm	53.80	322	⇑P	P	12 29 43.5	-0.7	
	baz=54							
BUOR	Burton Butte	53.81	319	P	P	12 29 44.0	-0.4	
M02C	Callahan	53.81	317	⇑P	P	12 29 43.1	-1.3	
	baz=54							
N02C	Big Bar	53.87	316	⇓P	P	12 29 44.3	-0.5	
	baz=54							
YBH	Yreka Blue Hor	53.87	318	⇑P	P	12 29 43.1	-1.7	
	baz=54							
NEW	Newport	53.91	327	*e*P	P	12 29 44.1	-0.9	
	4.5nm,0.8s,mb4.5							
A11A	Hall Mountain,	53.92	328	⇓P	P	12 29 45.1	0.0	
	baz=54							
I05A	Bend	54.08	321	⇓P	P	12 29 46.2	-0.1	
	baz=54							
D08A	Wollman Farm,	54.21	325	⇓P	P	12 29 47.1	-0.1	
	baz=54							
G06A	Carlson Farm,	54.24	322	⇓P	P	12 29 47.6	+0.2	
	baz=54,SNR=5.1							
C09A	Chrisman Ranch	54.26	326	⇓P	P	12 29 47.2	-0.3	
	baz=54							
CROR	Criterion Ridg	54.32	322	P	P	12 29 48.7	+0.7	
E07A	Sunnyside	54.47	324	⇑P	P	12 29 48.4	-0.7	
	baz=54							
B09A	Rice	54.55	327	⇓P	P	12 29 49.0	-0.7	
	baz=54							
A10A	Northport	54.56	328	⇑P	P	12 29 49.0	-0.7	
	baz=54							
F06A	Goldendale	54.60	323	⇓P	P	12 29 50.1	+0.1	
	baz=54							
I04A	Tendick Farm,	54.63	320	⇓P	P	12 29 50.0	-0.3	
	baz=54							
C08A	Higginbotham F	54.68	326	⇑P	P	12 29 50.5	-0.1	
	baz=54							
EPH	Ephrata	54.75	325	P	P	12 29 51.0	-0.2	
D07A	Quincy	54.88	325	⇑P	P	12 29 52.0	-0.1	
	baz=55							
HOOD	Mount Hood Mea	54.90	322	*e*P	P	12 29 53.0	+0.8	
	22nm,0.7s,mb5.3							
H04A	Detroit Lake	54.91	321	⇑P	P	12 29 52.2	-0.2	
	baz=55							
EBG	Ellensburg	55.07	324	P	P	12 29 53.5	+0.1	
A09A	Danville	55.11	327	⇓P	P	12 29 53.2	-0.4	
	baz=55							
E06A	Yakima	55.12	324	⇓P	P	12 29 53.5	-0.3	
	baz=55							
B08A	Colville Reser	55.16	326	⇑P	P	12 29 53.4	-0.7	
	baz=55							
J02A	Umpqua	55.18	319	⇑P	P	12 29 53.7	-0.5	
	baz=55							
C07A	Waterville	55.20	325	⇑P	P	12 29 53.9	-0.4	
	baz=55							
EDM	Edmonton	55.23	334	*e*P	P	12 29 53.2	-1.3	
ETW	Entiat	55.31	325	*e*P	P	12 29 54.5	-0.6	
D06A	Cle Elum	55.38	324	⇑P	P	12 29 55.5	-0.2	
	baz=55							
A08A	Turner Farm, O	55.47	327	⇑P	P	12 29 55.9	-0.3	
	baz=55							
H03A	Soap Creek Ran	55.60	321	⇓P	P	12 29 57.3	0.0	
	baz=55							
I02A	Mapleton	55.63	320	⇓P	P	12 29 58.0	+0.5	
	baz=55							
B07A	Winthrop	55.66	326	⇑P	P	12 29 57.6	-0.1	
	baz=55							
G03A	Yamhill	55.90	321	⇑P	P	12 29 59.9	+0.5	
	baz=56							
D05A	Enumclaw	56.05	324	⇓P	P	12 30 00.4	-0.1	
	baz=56							
H02A	Toledo	56.05	320	⇑P	P	12 30 00.2	-0.3	
	baz=56							
A07A	Ashnola River,	56.13	326	⇓P	P	12 30 01.3	+0.3	
	baz=56,SNR=7.4							
RPW	Rexford	56.43	325	*e*P	P	12 30 03.2	0.0	
C04A	Brinnon	56.89	324	⇑P	P	12 30 06.0	-0.4	
	baz=57							
YKA	Yellowknife Ar	62.23	341	P	P	12 30 41.4	-1.6	
	9.8nm,0.7s,mb5.0,baz=132,slow=7.2,SNR=24							
YKA					LR	LR	12 56 17.9	
	comp=Z,70nm,21.0s,MS3.8,baz=135,slow=35							
YKA	Yellowknife Ar	62.23	341	P	P	12 30 41.4	-1.6	
YKA					LR	LR	12 56 17.9	
RES	Resolute Bay	68.66	355	*e*P	P	12 31 23.6	-0.9	
	318nm,1.3s							
SUMG	Summit	69.55	11	*e*P	P	12 31 30.1	+0.1	
	6.4nm,0.8s,mb4.6							
TIC	Toumodi	70.59	85	*e*P	P	12 31 36.6	-0.9	
	11nm,0.2s,mb5.3							
LIC	Lamto	70.62	86	*e*P	P	12 31 37.4	-0.3	
	22nm,0.9s,mb4.8							
LIC	Lamto	70.62	86	*e*P	P	12 31 37.3	-0.4	
	31nm,0.9s,mb5.2							
LIC	Lamto	70.62	86	*e*P	P	12 31 37.4	-0.3	
	11nm,0.9s,mb4.8							
DBIC	Dimbokro	70.75	85	P	P	12 31 38.0	-0.4	
	5.6nm,0.7s,mb4.6,baz=262,slow=6.7,SNR=5.4							
DBIC					LR	LR	13 00 11.9	
	comp=Z,80nm,18.9s,MS4.0,baz=258,slow=34							
DBIC	Dimbokro	70.75	85	*e*P	P	12 31 38.5	0.0	
	5.1nm,0.7s,mb4.6							
DBIC					LR	LR	13 00 11.9	
MDT	Midelt	70.83	58	P	P	12 31 40.1	+1.5	
	0.5nm,0.5s,mb3.7,baz=194,slow=19,SNR=1.9							
KIC	Kosan Boka	70.89	86	*e*P	P	12 31 39.6	+0.3	
	27nm,0.7s,mb5.3							
ESDC	Sonseca Array	71.98	51	P	P	12 31 44.8	-0.6	
	1.1nm,0.7s,mb3.9,baz=265,slow=5.4,SNR=7.1							
INK	Inuvik	72.00	341	*e*P	P	12 31 43.9	-1.1	
	253nm,1.0s							
SJPF	Ste Jean	74.37	47	*e*P	P	12 32 01.7	+2.2	
MFF	Saint Martin d	75.46	44	*e*P	P	12 32 07.6	+1.9	
	32nm,1.1s,mb4.9							
MFF	Saint Martin d	75.46	44	*e*P	P	12 32 07.6	+1.9	
	16nm,1.1s,mb4.9							
TOA0	Torodi Ar. Sit	76.70	78	*e*P	P	12 32 12.6	-0.7	
TORD	Torodi Ar. Bea	76.70	78	P	P	12 32 12.4	-0.9	
	158nm,0.4s,baz=292,slow=5.5,SNR=2.2							
TORD					LR	LR	13 05 15.8	
	comp=Z,96nm,18.9s,baz=255,slow=35							
TORD	Torodi Ar. Bea	76.70	78	P	P	12 32 12.4	-0.9	
TORD					LR	LR	13 05 15.8	
TCF	Toulx Ste Croi	77.06	44	*e*P	P	12 32 17.3	+2.5	
SSF	Saint Saulge	77.99	43	*e*P	P	12 32 22.1	+2.1	
	14nm,1.1s,mb4.5							
SSF	Saint Saulge	77.99	43	*e*P	P	12 32 22.1	+2.1	
	6.8nm,1.1s,mb4.5							
SMF	Signal de Mont	78.20	44	*e*P	P	12 32 23.6	+2.4	
	19nm,1.0s,mb4.7							
SMF	Signal de Mont	78.20	44	*e*P	P	12 32 23.6	+2.4	
	9.6nm,1.0s,mb4.7							
LOR	Lormes	78.25	43	*e*P	P	12 32 22.9	+1.5	
	14nm,1.1s,mb4.5							
LOR	Lormes	78.25	43	*e*P	P	12 32 22.9	+1.5	
	6.8nm,1.1s,mb4.5							
GIVF	Givet	79.01	40	*e*P	P	12 32 27.3	+1.7	
TAM	Tamanrasset	79.75	68	*e*P	P	12 32 32.4	+2.2	
WLF	Walferdange	79.86	41	*e*P	P	12 32 30.0	-0.2	
	9.4nm,0.9s,mb4.7							
CDF	Champ du Feu	80.58	42	*e*P	P	12 32 36.6	+2.5	
	11nm,1.0s,mb4.5							
CDF	Champ du Feu	80.58	42	*e*P	P	12 32 36.6	+2.5	
	5.5nm,1.0s,mb4.4							
NB2	NORSAR Subarra	82.80	29	P	P	12 32 46.1	+0.6	
	comp=Z,1.9nm,0.7s,mb4.2,baz=271,slow=5.3							
NOA	NORSAR Array B	82.80	29	P	P	12 32 46.1	+0.6	
	comp=Z,2.9nm,0.8s,mb4.4,baz=274,slow=5.3,SNR=6.5							
NOA					LR	LR	13 04 50.3	
	comp=Z,95nm,18.2s,MS4.2,baz=285,slow=32							
BRG	Berggiesshubel	84.82	40	*e*P	P	12 33 04.3	+8.2	
	comp=Z,3.8nm,1.0s,mb4.5							
GERES	GERESS Array B	84.82	42	P	P	12 32 56.1	0.0	
	comp=Z,0.7nm,0.8s,mb3.9,baz=318,slow=5.4,SNR=4.7							
GERES					LR	LR	13 07 37.2	
	comp=Z,89nm,19.1s,MS4.2,baz=102,slow=33							
ARCES	ARCESS Array B	87.70	20	P	P	12 33 10.2	+0.3	
	comp=Z,2.5nm,0.6s,mb4.6,baz=278,slow=3.6,SNR=17							
ARCES					LR	LR	13 08 09.0	
	comp=Z,143nm,18.2s,MS4.4,baz=37,slow=33							
VNA3	Neumayer Olymp	89.07	163	*e*P	P	12 33 15.1	-1.2	
VNA3				*e*		12 33 24.0		
VNA1	Neumayer--Stat	89.26	162	*e*P	P	12 33 16.5	-0.7	
VNA1				*e*		12 33 25.2		
VNA2	Neumayer--Watz	89.63	162	*e*P	P	12 33 17.7	-1.2	
VNA2				*e*		12 33 26.9		
SNAA	Sanae	91.27	162	*e*P	P	12 33 25.6	-0.9	
SNAA				*e*		12 33 34.2		
SNAA	Sanae	91.27	162	*e*P	P	12 33 24.8	-1.7	
	comp=Z,6.8nm,1.3s,mb4.8							
MDJ	Mudanjiang	123.77	338	PKP	PKPdf	12 39 20.7	+1.0	
MDJ				LR	LR			
	comp=N,69nm,27.6s,MS4.3							
MDJ				LR	LR			
	comp=E,63nm,31.2s,MS4.3							
MDJ				LR	LR			
	comp=Z,98nm,27.6s,MS4.3							
SONM	Songino Array	125.52	358	PKP	PKPdf	12 39 22.8	-0.2	
	comp=Z,0.4nm,0.7s,baz=287,slow=1.8,SNR=2.9							
CN2	Changchun	125.93	341	*e*PKP	PKPdf	12 39 27.2	+3.3	
HHC	Hu-ho-hao-te	132.02	352	*e*PKP	PKPdf	12 39 38.4	+2.8	
HHC				PP	PP	12 42 02.3	+6.9	
HHC				PKS		12 43 14.3		
HHC				SKS	SKSdf	12 46 44.8	-2.0	
HHC				SKKS	SKKSac	12 48 48.5	-4.2	
HHC				SS	SS	12 59 29.0	-1.8	
HHC				PP	PP			
	comp=Z,109nm,11.9s							
HHC				LR	LR			
	comp=N,165nm,22.6s,MS4.8							
HHC				LR	LR			
	comp=E,134nm,20.2s,MS4.8							
HHC				LR	LR			
	comp=Z,165nm,23.8s,MS4.7							
STKA	Stephens Creek	136.89	230	*e*PKP	PKPdf	12 39 45.0	+0.1	
	comp=Z,3.3nm,1.4s							
STKA	Stephens Creek	136.89	230	PKP	PKPdf	12 39 44.2	-0.7	
	comp=Z,1.5nm,0.7s,baz=120,slow=8.1,SNR=3.4							
NJ2	Nanjing	138.76	340	*e*PKP	PKPdf	12 39 46.2	-2.2	
CD2	Chengdu	142.47	0	*e*PKP	PKPdf	12 39 56.4	+1.2	
CD2				XPKP		12 40 01.2		
CD2				PP	PP	12 43 04.9	+4.3	
CD2				PKS		12 43 31.2		
CD2				SKS	SKSdf	12 47 01.0	-3.9	
CD2				SKKS	SKKSac	12 49 50.8	-4.4	
CD2				SS	SS	13 01 31.7	-3.3	
CD2				PP	PP			
	comp=Z,120nm,10.2s							
CD2				LR	LR			
	comp=N,180nm,18.2s							
CD2				LR	LR			
	comp=Z,160nm,16.8s,MS4.8							
HYB	Hyderabad	145.29	46	*e*P	PKiKP	12 40 04.0	-0.3	
HYB	Hyderabad	145.29	46	*i* PKP	PKPdf	12 40 00.5	+0.1	
HYB				*e*		12 40 04.0		
SHL	Shillong	145.76	19	*e*P	PKPdf	12 40 01.5	+0.5	
ASAR	Alice Springs	146.63	237	PKPbc	PKPbc	12 40 01.8	-2.3	
	comp=Z,5.5nm,1.0s,baz=115,slow=4.0,SNR=36							
GYA	Guiyang	146.79	355	PKP	PKPdf	12 40 02.2	-0.6	
GYA				PKP2	PKPab	12 40 06.9	+1.3	
GYA				PP	PP	12 43 29.8	+3.3	
GYA				PKS		12 43 35.6		
GYA				SKS	SKSdf	12 47 07.2	-4.4	
GYA				SKKS	SKKSac	12 50 17.2	-2.7	
GYA				SS	SS	13 02 22.9	-1.7	
GYA				PP	PP			
	comp=Z,110nm,8.4s							
GYA				LR	LR			
	comp=N,110nm,25.9s,MS4.8							
GYA				LR	LR			
	comp=E,150nm,23.8s,MS4.8							
GYA				LR	LR			
	comp=Z,130nm,25.0s,MS4.6							
WB2	Warramunga Arr	147.66	243	*e*PKP	PKPdf	12 40 03.7	-0.6	
WRAB	Tennant Creek	147.66	243	*e*PKPdf	PKPdf	12 40 03.5	-0.8	
WRA	Warramunga Arr	147.67	243	PKPbc	PKPdf	12 40 03.8	-0.6	
	comp=Z,4.1nm,0.7s,baz=105,slow=2.5,SNR=37							
KMI	Kunming	148.21	2	PKP	PKPbc	12 40 09.6	+1.2	
NWAO	Narrogin (SRO)	151.21	204	PKPbc	PKPbc	12 40 13.6	-2.0	
	comp=Z,7.2nm,0.9s,baz=195,slow=6.7,SNR=3.4							
KAKA	Kakadu	151.22	256	*e*PKP	PKPdf	12 40 06.6	-3.6	
	comp=Z,9.4nm,0.6s							
KLBR	Kellerberrin	152.15	206	*e*PKP	PKPbc	12 40 16.7	-1.1	
	comp=Z,11nm,0.9s							
MUN	Mundaring	152.45	203	*e*PKP	PKPbc	12 40 17.4	-1.0	
CMAR	Chiang Mai Arr	154.41	11	PKPbc	PKPbc	12 40 23.9	+0.8	
	comp=Z,1.3nm,0.6s,baz=322,slow=2.8,SNR=9.7							

NIED ***01*** *12:38:00,2390N×12580E,h20km,Mw3.7 Best double couple: M₀4.36000×10¹

IHVE	**Hveravellir**	**0.65**	**36**	P	Pg	12 48 08.8	-1.0
IHVE				S	Sg	12 48 17.6	-0.6
IKAS	**Kald??rsel**	**0.69**	**242**	P	Pg	12 48 09.7	-0.8
IKAS				S	Sg	12 48 19.5	+0.1
IVAT	**Vatnsfell**	**0.69**	**103**	P	Pg	12 48 09.8	-0.8
IVAT				S	Sg	12 48 19.3	-0.3
IMID	**Miomork**	**0.74**	**160**	P	Pg	12 48 10.5	-0.9
IMID				S	Sg	12 48 20.5	-0.4
IVOS	**Vogsosar**	**0.74**	**228**	P	Pg	12 48 10.4	-1.0
IVOS				S	Sg	12 48 20.5	-0.4
IKRI	**Krysuvik**	**0.85**	**237**	P	Pg	12 48 12.1	-1.5
IKRI				S	Sg	12 48 23.8	-0.7
IVES	**Vestmannaeyjar**	**0.91**	**175**	P	Pg	12 48 13.7	-1.0
IVES				S	Sg	12 48 25.8	-0.7
ISKR	**Skrokkalda**	**0.93**	**76**	P	Pg	12 48 13.8	-1.2
ISKR				S	Sg	12 48 26.4	-0.6
IVOG	**Vogar**	**0.93**	**247**	P	Pg	12 48 13.6	-1.4
IVOG				S	Sg	12 48 26.1	-0.9
IESK	**Eystri-Skogar**	**0.94**	**151**	P	Pg	12 48 13.6	-1.7
IESK				S	Sg	12 48 26.0	-1.4
IGRV	**Grindav??k**	**1.00**	**242**	P	Pg	12 48 14.7	-1.8
IGRV				S	Sg	12 48 28.2	-1.3
ISNB	**Snabyli**	**1.01**	**126**	P	Pg	12 48 14.8	-1.9
ISNB				S	Sg	12 48 29.0	-0.8
INYL	**Nylenda**	**1.06**	**250**	P	Pg	12 48 15.5	-2.2
INYL				S	Sg	12 48 29.9	-1.5
IHVO	**Lagu-Hvolar**	**1.09**	**138**	P	Pg	12 48 16.3	-1.9
IHVO				S	Sg	12 48 31.5	-0.8
IKAL	**Kalfafell**	**1.28**	**107**	P	Pg	12 48 19.3	-2.5
IKAL				S	Sg	12 48 35.9	-2.5
IGRF	**Grimsfjall**	**1.39**	**86**	P	Pn	12 48 22.3	-1.1
IGRF				S	Sb	12 48 39.5	-2.4
ISVA	**Svartarkot**	**1.69**	**53**	P	Pn	12 48 25.6	-2.0
ISVA				S	Sn	12 48 48.3	-1.4
IFAG	**Fagurholsmyri**	**1.74**	**104**	P	Pn	12 48 26.6	-1.6
IFAG				S	Sn	12 48 49.1	-1.7
IHRN	**Hraun**	**1.78**	**4**	P	Pn	12 48 26.7	-2.0
IHRN				S	Sn	12 48 50.1	-1.6
IHLA	**Hella**	**1.83**	**28**	P	Pn	12 48 27.2	-2.3
IHLA				S	Sn	12 48 51.7	-1.3
ISIG	**Siglufjorour**	**1.91**	**19**	P	Pn	12 48 28.9	-1.6
ISIG				S	Sn	12 48 54.1	-0.9
IBRU	**Bruarjokull**	**1.95**	**74**	P	Pn	12 48 29.8	-1.3
IBRU				S	Sn	12 48 55.5	-0.5
IGRA	**Granastaoir**	**1.99**	**36**	P	Pn	12 48 29.8	-1.9
IREN	**Reynihlio**	**2.00**	**48**	P	Pn	12 48 30.1	-1.7
IHVA	**Hvannstoosfjoll**	**2.07**	**71**	P	Pn	12 48 31.7	-1.1
IBRE	**Brettingsstaoi**	**2.08**	**30**	P	Pn	12 48 32.0	-0.9
IVSH	**V-Sauoahnukur**	**2.10**	**75**	P	Pn	12 48 32.0	-1.1
IHED	**Heoinshofoi**	**2.11**	**36**	P	Pn	12 48 33.5	-0.9
IADA	**Aoalbol**	**2.21**	**70**	P	Pn	12 48 33.7	-1.0
IGRS	**Grimsstaoir**	**2.25**	**53**	P	Pn	12 48 34.7	-0.6
IGLU	**Glumsstadir**	**2.40**	**72**	P	Pn	12 48 36.9	-0.4

IDC 01 12:51:31.9±1.1, 2011N×12172E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.5/19, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=71.3km s-min=19.6km az=71.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.10**	**16**	P	Pn	12 55 44.8	0.0
	0.1nm,0.3s,baz=198,slow=11,SNR=6.6						
CMAR	**Chiang Mai Arr**	**21.56**	**269**	P	P	12 56 36.8	+14
	0.9nm,0.9s,baz=69,slow=11,SNR=6.1						
SONM	**Songino Array**	**30.32**	**339**	P	P	12 57 45.0	+0.1
	0.2nm,0.4s,baz=154,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**41.66**	**319**	P	P	12 59 22.2	+0.2
	0.6nm,0.5s,baz=98,slow=8.8,SNR=3.7						
WRA	**Warramunga Arr**	**41.68**	**162**	P	P	12 59 21.7	-0.7
	0.3nm,0.8s,baz=343,slow=8.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**43.95**	**329**	P	P	12 59 40.3	-0.2
	0.4nm,0.4s,baz=123,slow=7.3,SNR=4.1						
ASAR	**Alice Springs**	**45.10**	**164**	P	P	12 59 50.5	+0.5
	0.2nm,0.5s,baz=347,slow=7.1,SNR=6.7						

*DDA **01** 12:55:25.5, 3882N×3572E, h9km±2km, Md3.1*
*ISK **01** 12:55:26.5, 3882N×3579E, h5km, MD3.0*
*CSEM **01** 12:55:26.3±0.1, 3880N×3583E, h5km, MD3.0, Error ellipse: s-maj=3.7km s-min=3.4km az=45.0*
*ISCJB **01** 12:55:27.2±0.5, 3879N±004×3583E±004, h10km, Error ellipse: s-maj=6.6km s-min=4.2km az=29.8*

ISC 01 12:55:27.3±0.5, 3877N±004×3580E±004, h10km, n18, σ1§23/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.09**	**23**	PG	**Pg**	**12 55 28.0**	**-1.7**
BNN				*e*SG	**Sg**	**12 55 29.9**	**-1.5**
PINB	**Pinarbasi**	**0.48**	**101**	*i* P	**Pg**	**12 55 36.1**	**-0.5**
SARI	**SarD1z-Kayseri**	**0.71**	**97**	*e*PG	**Pg**	**12 55 39.1**	**-1.8**
SARI				*e*SG	**Sg**	**12 55 49.0**	**-1.1**
AVNT	**Avonos**	**0.74**	**271**	*i* P	**Pg**	**12 55 38.3**	**-3.2**
AVNT				*i* S	**Sg**	**12 55 48.7**	**-2.5**
YOZ	**Yozgat**	**0.94**	**337**	*e*PG	**Pg**	**12 55 43.7**	**-1.7**
NIG	**Nigde**	**1.15**	**235**	*e*PN	**Pn**	**12 55 49.3**	**0.0**
ANDN	**Andirin**	**1.27**	**160**	*i* P	**Pn**	**12 55 51.2**	**+0.2**
ANDN				*i* S	**Sb**	**12 56 12.4**	**+4.9**
CDAG	**Cicekdag**	**1.40**	**308**	*i* P	**Pn**	**12 55 53.0**	**+0.2**
CDAG				*i* S	**Sn**	**12 56 12.4**	**+1.1**
CDAG	**Cicekdag**	**1.40**	**308**	*i* P	**Pn**	**12 55 53.0**	**+0.2**
CDAG				*i* S	**Sn**	**12 56 12.4**	**+1.1**
SVSK	**Karacayir**	**1.47**	**39**	*e*PN	**Pn**	**12 55 54.0**	**+0.1**
SVSK				*e*SN	**Sn**	**12 56 13.9**	**+0.7**
CORM	**Corum**	**1.67**	**327**	*e*PN	**Pn**	**12 55 56.9**	**+0.3**
AKCD	**Akcadag**	**1.73**	**105**	*i* P	**Pn**	**12 55 59.9**	**+2.5**
KAMT	**Kaman**	**1.73**	**291**	*e*PN	**Pn**	**12 55 58.2**	**+0.8**
GZT	**Gaziantep**	**1.98**	**135**	*i* P	**Pn**	**12 56 02.4**	**+1.5**
CTKT	**Corum**	**2.01**	**337**	*i* P	**Pn**	**12 56 02.2**	**+1.0**
CTKT				*i* S	**Sn**	**12 56 27.3**	**+1.0**
KEMA	**Kemaliye**	**2.15**	**76**	*i* P	**Pn**	**12 56 04.5**	**+1.3**
KVT	**Kavak**	**2.31**	**5**	*e*PN	**Pn**	**12 56 05.5**	**+0.1**
TOS	**Tosya**	**2.64**	**329**	*e*PN	**Pn**	**12 56 10.3**	**+0.4**

*IDC **01** 13:20:52.1±1.2, 008S×12596E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.3/27, Error ellipse: s-maj=133.9km s-min=19.9km az=67.0*
*DJA **01** 13:20:53, 001N×12586E, h60km, MLv3.7/2*
*ISCJB **01** 13:20:54.8±0.8, 0.12S±008×12596E±009, h33km, mb3.7/4, Error ellipse: s-maj=13.4km s-min=10.8km az=42.5*

ISC 01 13:20:54.2±6.4, 010S±010×12603E±009, h14km±41km, n10, σ0§77/9, mb3.7/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.56**	**110**	P	**Pn**	**13 21 21.4**	**-0.2**
TNTI	**Ternate**	**1.59**	**57**	P	**Pn**	**13 21 22.1**	**+0.1**
TNTI	**Ternate**	**1.59**	**57**	S	**Sn**	**13 21 42.3**	**-0.1**
WRA	**Warramunga Arr**	**21.33**	**158**	P	**P**	**13 25 40.7**	**-0.2**
	1.7nm,0.5s,mb3.7,baz=338,slow=11,SNR=39						
WB2	**Warramunga Arr**	**21.33**	**158**	*e*P	**P**	**13 25 40.5**	**-0.5**
GUMO	**Guam**	**23.09**	**53**	LR	LR	13 33 02.1	
	comp=Z,60nm,20.1s,baz=94,slow=32						
ASAR	**Alice Springs**	**24.64**	**162**	P	**P**	**13 26 15.5**	**+1.1**
	1.2nm,0.5s,mb3.6,baz=345,slow=11,SNR=25						
SONM	**Songino Array**	**50.71**	**343**	P	**P**	**13 29 55.0**	**+1.6**
	0.5nm,0.6s,mb3.6,baz=166,slow=8.5,SNR=3.7						
MKAR	**Makanchi Array**	**60.33**	**327**	P	**P**	**13 31 01.9**	**-0.7**
	0.3nm,0.3s,mb3.7,baz=116,slow=7.4,SNR=5.9						
KURK	**Kurchatov**	**64.61**	**329**	P	**P**	**13 31 30.2**	**-1.0**
	baz=132,slow=5.9						

*DJA **01** 13:23:17.1±0.0, 099N×9678E, h30km, mb4.4/1, Mjma3.6/4, MLv4.1/4*
*IDC **01** 13:23:19.8±1.6, 163N×9705E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, ML3.7/1, Error ellipse: s-maj=62.6km s-min=17.0km az=60.0*
*BJI **01** 13:23:20.0, 140N×9660E, h35km, mb4.6*
*ISCJB **01** 13:23:22.5±2.7, 15N±01×967E±02, h44km±19km, mb4.0/12, Error ellipse: s-maj=33.9km s-min=12.6km az=139.6*
*NEIC **01** 13:23:23.0±1.1, 143N×9661E, h35km, mb4.3/3, Error ellipse: s-maj=31.9km s-min=13.1km az=52.0*

ISC 01 13:23:22.8±2.8, 15N±01×968E±02, h28km±18km, n23, σ1§09/23, mb4.0/12, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**2.67**	**40**	P	**Pn**	**13 24 04.5**	**+0.6**
PPI	**Padang Panjang**	**4.04**	**118**	P	**Pn**	**13 24 15.2**	**-7.6**
PPI	**Padang Panjang**	**4.04**	**118**	S	**Pb**	**13 24 33.4**	**0.0**
BSI	**Banda Aceh**	**4.29**	**339**	P	**Pn**	**13 24 26.2**	**-0.1**
PDSI	**Padang**	**4.33**	**123**	P	**Pn**	**13 24 23.2**	**-3.6**
KSM	**Kuching**	**13.47**	**90**	Pn	**Pn**	**13 26 35.8**	**+3.6**
CMAR	**Chiang Mai Arr**	**17.02**	**7**	Pn	**Pn**	**13 27 18.8**	**-0.2**
	0.1nm,0.3s,baz=194,slow=10,SNR=9.7						
KMI	**Kunming**	**24.21**	**13**	P	**P**	**13 28 39.2**	**+2.1**
KMI				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.3						
GTA	**Gaotai**	**37.87**	**4**	*e*P	**P**	**13 30 37.7**	**+0.4**
GTA				AP	pP	13 30 42.1	-3.6
GTA				XP	sP	13 30 45.3	-3.9
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**42.48**	**122**	P	**P**	**13 31 15.8**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.6,baz=302,slow=9.0,SNR=10						
WB2	**Warramunga Arr**	**42.49**	**122**	*e*P	**P**	**13 31 09.1**	**-6.8**
ASAR	**Alice Springs**	**43.84**	**127**	P	**P**	**13 31 27.2**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.6,baz=298,slow=8.6,SNR=7.1						
TKM2	**Tokmak 2**	**45.44**	**338**	P	**P**	**13 31 35.9**	**-3.3**
	comp=Z,5.1nm,1.4s,mb4.2						
KSRS	**Korea Array**	**45.85**	**35**	P	**P**	**13 31 40.8**	**-1.8**
	comp=Z,4.0nm,0.9s,mb4.3,baz=223,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**46.90**	**346**	P	**P**	**13 31 51.3**	**+0.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=147,slow=6.8,SNR=6.8						
SONM	**Songino Array**	**46.93**	**9**	P	**P**	**13 31 51.0**	**+0.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=193,slow=9.3,SNR=5.8						
KURK	**Kurchatov**	**51.45**	**345**	P	**P**	**13 32 25.3**	**-0.1**
	baz=165,slow=7.1						
HIA	**Hailar**	**51.52**	**19**	P	**P**	**13 32 23.6**	**-2.4**
	comp=Z,4.5nm,0.9s,mb4.4						
ZAA0	**Zalesovo Array**	**53.25**	**351**	*e*P	**P**	**13 32 38.7**	**0.0**
ZALV	**Zalesovo Beam**	**53.25**	**351**	P	**P**	**13 32 39.1**	**+0.4**
	comp=Z,2.7nm,0.8s,mb4.2,baz=174,slow=6.0,SNR=11						
STKA	**Stephens Creek**	**53.80**	**132**	P	**P**	**13 32 45.1**	**+1.9**
	comp=Z,1.9nm,0.7s,mb4.2,baz=265,slow=9.4,SNR=5.3						
STKA	**Stephens Creek**	**53.80**	**132**	*e*P	**P**	**13 32 43.8**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.2						
STKA				P		13 32 45.1	
BVAR	**Borovoye Array**	**55.89**	**341**	P	**P**	**13 32 57.7**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=131,slow=8.1,SNR=4.9						

*ISCJB **01** 13:33:23.5±0.7, 499S±01×1143W±02, h10km, mb4.5/11, MS4.2/17, Error ellipse: s-maj=21.4km s-min=14.7km az=19.8*
*IDC **01** 13:33:23.3±0.8, 4982S×11441W, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.2/14, mbtmp4.1/7, MS4.1/17, Ms1 4.1/17, ms1mx4.0/24, Error ellipse: s-maj=33.1km s-min=21.3km az=126.0*
*NEIC **01** 13:33:24.2±0.6, 5012S×11428W, h10km, mb5.0/5, Error ellipse: s-maj=24.3km s-min=17.7km az=138.0*

ISC 01 13:33:25.0±0.7, 498S±01×1144W±02, h10km, n34, σ1§06/17, mb4.5/11, MS4.2/17, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**28.15**	**118**	LR	LR	13 48 05.4	
	comp=Z,548nm,19.5s,MS4.2,baz=26,slow=31						
PMSA	**Palmer Station**	**30.07**	**139**	LR	LR	13 47 55.7	
	comp=Z,745nm,21.4s,MS4.3,baz=106,slow=29						
PLCA	**Pasa Flores**	**31.79**	**90**	LR	LR	13 49 22.7	
	comp=Z,222nm,19.4s,MS3.9,baz=204,slow=30						
CFAA	**Coronel Fontan**	**38.75**	**80**	P	**P**	**13 40 48.1**	**-1.2**
	0.1nm,0.3s,baz=229,slow=9.1,SNR=3.9						
QSPA	**South Pole Qui**	**40.38**	**180**	P	**P**	**13 41 02.6**	**+0.3**
	6.7nm,0.9s,mb4.3,baz=109,slow=5.8,SNR=10						
PPT	**Papeete**	**42.79**	**306**	LR	LR	13 53 48.2	
	comp=Z,588nm,21.6s,MS4.4,baz=103,slow=29						
LVC	**Limon Verde**	**44.72**	**70**	*e*P	**P**	**13 41 37.9**	**-0.4**
	14nm,0.9s,mb4.8						
LVC				*e*		13 41 44.4	
VNA3	**Neumayer Olymp**	**48.12**	**155**	*e*	**P**	**13 42 04.0**	**-0.4**
VNA3				*e*		13 42 09.2	
VNA1	**Neumayer--Stat**	**48.84**	**155**	*e*	**P**	**13 42 12.2**	**+2.3**
VNA1				*e*		13 42 18.8	
VNA2	**Neumayer--Watz**	**48.92**	**155**	*e*	**P**	**13 42 10.8**	**+0.3**
	baz=227,slow=6.5						
VNA2				*e*		13 42 16.7	
URZ	**Urewera**	**48.92**	**256**	LR	LR	13 58 35.4	
	comp=Z,199nm,19.7s,MS4.1,baz=118,slow=31						
RPZ	**Rata Peaks**	**49.45**	**247**	LR	LR	13 57 32.4	
	comp=Z,200nm,19.6s,MS4.1,baz=172,slow=29						
SNAA	**Sanae**	**49.66**	**157**	*e*	**P**	**13 42 19.9**	**+3.7**
SNAA				*e*		13 42 25.0	
SNAA	**Sanae**	**49.66**	**157**	P	**P**	**13 42 14.1**	**-2.1**
	7.7nm,1.4s,mb4.5						
LPAZ	**La Paz**	**50.05**	**65**	P	**P**	**13 42 19.5**	**-0.3**
	7.6nm,1.1s,mb4.6,baz=202,slow=5.4,SNR=12						
LPAZ				LR	LR	13 58 26.7	
	comp=Z,73nm,20.9s,MS3.7,baz=249,slow=30						
ATAH	**Atahualpa**	**52.26**	**48**	LR	LR	13 59 12.7	
	comp=Z,247nm,21.7s,MS4.2,baz=193,slow=30						
PAYG	**Puerto Ayora**	**53.14**	**31**	*e*P	**P**	**13 42 37.5**	**-5.5**
	54nm,1.2s,mb5.3						
MAW	**Mawson**	**62.88**	**179**	P	**P**	**13 43 51.4**	**+0.8**
	5.2nm,1.1s,mb4.6,baz=189,slow=8.2,SNR=7.3						
MAW				LR	LR	14 11 03.1	
	comp=Z,235nm,18.8s,MS4.4,baz=336,slow=36						
MAW	**Mawson**	**62.88**	**179**	*e*P	**P**	**13 43 46.4**	**-4.2**
	5.2nm,0.9s,mb4.7						
MAW				LR	LR	14 11 03.0	
BDFB	**Brasilia**	**63.02**	**82**	LR	LR	14 06 58.8	
	comp=Z,76nm,21.1s,MS3.8,baz=251,slow=32						
ROSC	**El Rosal**	**64.56**	**45**	LR	LR	14 06 05.0	
	comp=Z,127nm,20.5s,MS4.1,baz=197,slow=30						
CMIG	**Matias Romero**	**68.83**	**20**	LR	LR	14 06 18.3	
	comp=Z,148nm,18.1s,MS4.3,baz=125,slow=29						
STKA	**Stephens Creek**	**74.49**	**239**	LR	LR	14 11 54.9	
	comp=Z,101nm,18.3s,MS4.2,baz=62,slow=31						
TXAR	**Lajitas Array**	**79.38**	**10**	P	**P**	**13 45 32.0**	**+1.2**
	1.3nm,0.9s,mb3.9,baz=202,slow=5.4,SNR=5.4						
DWPF	**Disney**	**82.95**	**29**	P	**P**	**13 45 51.0**	**+1.2**
	13nm,0.5s,mb5.2						
ASAR	**Alice Springs**	**85.13**	**239**	P	**P**	**13 46 00.1**	**-1.2**
	1.5nm,0.8s,mb4.2,baz=149,slow=4.8,SNR=12						
WRA	**Warramunga Arr**	**87.84**	**241**	P	**P**	**13 46 14.0**	**-0.6**
	0.8nm,1.0s,mb3.9,baz=138,slow=4.0,SNR=3.6						
WRA				LR	LR	14 20 24.4	
	comp=Z,107nm,20.3s,MS4.2,baz=280,slow=32						
YBH	**Yreka Blue Hor**	**91.46**	**354**	LR	LR	14 18 31.1	
	comp=Z,157nm,19.3s,MS4.5,baz=191,slow=30						
PDAR	**Pinedale Array**	**92.31**	**4**	P	**P**	**13 46 34.5**	**-0.2**
	0.5nm,0.6s,mb4.0,baz=198,slow=5.7,SNR=4.5						
PDAR				LR	LR	14 20 26.7	
	comp=Z,97nm,20.4s,MS4.2,baz=8.8,slow=31						
BOSA	**Boshof**	**94.09**	**145**	LR	LR	14 20 59.9	
	comp=Z,83nm,18.4s,MS4.2,baz=41,slow=30						
TIXI	**Tiksi**	**144.57**	**331**	*e*PKPdf	PKPdf	13 52 57.1	-2.9
HIA	**Hailar**	**145.49**	**290**	PKPdf	PKPdf	13 53 02.4	+0.1
GERES	**GERESS Array B**	**146.74**	**71**	PKPbc	PKPbc	13 53 06.3	+0.1
	0.9nm,0.7s,baz=217,slow=3.3,SNR=7.0						
SONM	**Songino Array**	**153.28**	**282**	PKPbc	PKPbc	13 53 23.9	+1.6
	0.4nm,0.5s,baz=67,slow=3.9,SNR=3.8						

*NEIC **01** 13:34:09.1, 16.15N×9495W, h44km, MD3.9(MEX), After MEX.*

MEX 01 13:34:08.8±1.0, 1603N×9495W, h71km±40km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.70**	**101**	*i* P	Pn	13 34 35.2	-1.2
PCIG				*i* S	Sn	13 34 55.5	-1.9
TGIG		**1.91**	**67**	*i* P	Pn	13 34 37.5	-1.7
TGIG				*i* S	Sn	13 35 01.1	-1.3
OXX	**Oaxaca**	**1.99**	**302**	*e*P	Pn	13 34 38.5	-1.8
OXX				*i* S	Sn	13 35 01.4	-3.0
OXX	**Oaxaca**	**1.99**	**302**	*e*P	Pn	13 34 38.5	-1.8
OXX				*i* S	Sn	13 35 01.7	-2.7
VHO	**Vista Hermosa**	**2.00**	**301**	*i* P	Pn	13 34 39.6	-0.8
VHO				*i* S	Sn	13 34 59.5	-5.0
VHO	**Vista Hermosa**	**2.00**	**301**	*i* P	Pn	13 34 40.4	0.0
VHO				*i* S	Sn	13 35 03.7	-0.8
SCX	**San Cristobal**	**2.33**	**72**	*i* P	Pn	13 34 43.1	-1.9
SCX				*i* S	Sn	13 35 10.4	-2.2
THIG		**2.82**	**113**	*e*P	Pn	13 34 50.5	-1.1
THIG				*i* S	Sn	13 35 23.4	-1.2
PNIG	**Pinotepa**	**3.07**	**277**	*i* P	Pn	13 34 53.2	-1.8
PNIG				*i* S	Sn	13 35 26.4	-4.2
PNIG	**Pinotepa**	**3.07**	**277**	*i* P	Pn	13 34 53.2	-1.8
PNIG				*i* S	Sn	13 35 28.3	-2.3
UTMO	**Huajuapan**	**3.26**	**304**	*i* P	Pn	13 34 57.0	-0.6
UTMO				*i* S	Sn	13 35 34.8	-0.4

*ISCJB **01** 13:46:18.5±1.2, 4471S±005×16730E±008, h19km±9km, Error ellipse: s-maj=11.5km s-min=6.7km az=35.9*
*NEIC **01** 13:46:19.5, 4480S×16739E, h5km, ML4.4(WEL), After WEL.*
*IDC **01** 13:46:27.3±4.1, 4394S×16743E, h53km±45km, mb3.1/2, mb1 3.4/3, mb1mx3.2/12, mbtmp3.2/3, ML3.8/2, Error ellipse: s-maj=57.2km s-min=27.4km az=3.0*

ISC 01 13:46:19.0±1.2, 4477S±004×16734E±008, h11km±7km, n27, σ0§64/30, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.43**	**77**	P	**Pg**	**13 46 27.8**	**+0.4**
MSZ				S	**Sg**	**13 46 33.2**	**+0.1**
DCZ	**Deep Cove**	**0.72**	**191**	P	**Pg**	**13 46 33.1**	**+0.1**
MLZ	**Mavora Lakes**	**0.83**	**135**	P	**Pg**	**13 46 34.6**	**-0.4**
WKZ	**Wanaka**	**1.19**	**94**	P	**Pn**	**13 46 41.3**	**-0.3**
WHZ	**Wether Hill Ro**	**1.21**	**160**	P	**Pn**	**13 46 41.1**	**-0.7**
WHZ				S	**Sb**	**13 46 57.0**	**-0.4**
JCZ	**Jackson Bay**	**1.23**	**56**	P	**Pn**	**13 46 42.3**	**+0.2**
EAZ	**Earnscleugh**	**1.47**	**109**	P	**Pn**	**13 46 45.8**	**+0.4**
TUZ	**Tuapeka**	**2.00**	**127**	P	**Pn**	**13 46 53.7**	**+0.9**
LBZ	**Lake Benmore**	**2.06**	**80**	P	**Pn**	**13 46 54.7**	**+1.1**
FOZ	**Fox Glacier**	**2.07**	**55**	P	**Pn**	**13 46 54.5**	**+0.8**
ODZ	**Otahua Downs**	**2.36**	**98**	P	**Pn**	**13 46 58.7**	**+1.0**
RPZ	**Rata Peaks**	**2.87**	**70**	P	**Pn**	**13 47 05.5**	**+0.9**
	87nm,0.3s,baz=231,slow=5.3,SNR=511						
RPZ				S	**Sn**	**13 47 39.3**	**+0.2**
	33nm,0.3s,baz=6.0,slow=4.9,SNR=4.5						
RPZ	**Rata Peaks**	**2.87**	**70**	P	**Pn**	**13 47 05.3**	**+0.7**
WVZ	**Waitaha Valley**	**2.98**	**57**	P	**Pn**	**13 47 05.6**	**-0.6**
MQZ	**McQueen's Vall**	**3.96**	**76**	P	**Pn**	**13 47 19.5**	**-0.2**
CRLZ	**Canterbury Las**	**3.98**	**74**	P	**Pn**	**13 47 19.4**	**-0.5**
LTZ	**Lake Taylor**	**4.08**	**63**	P	**Pn**	**13 47 20.6**	**-0.7**
DSZ	**Denniston Nort**	**4.44**	**49**	P	**Pn**	**13 47 25.3**	**-1.0**
THZ	**Tophouse**	**5.05**	**55**	P	**Pn**	**13 47 35.3**	**+0.7**
KHZ	**Kahutara**	**5.08**	**65**	P	**Pn**	**13 47 34.6**	**-0.4**
QRZ	**Quartz Range**	**5.48**	**46**	P	**Pn**	**13 47 39.7**	**-0.9**
NNZ	**Nelson**	**5.67**	**53**	P	**Pn**	**13 47 43.1**	**-0.1**
URZ	**Urewera**	**9.79**	**52**	P	**Pn**	**13 48 38.3**	**-1.4**
	0.2nm,0.3s,baz=126,slow=1.2,SNR=2.3						
URZ				S	**Sn**	**13 50 20.6**	**-8.9**
	0.4nm,0.3s,baz=116,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**34.40**	**297**	P	**P**	**13 53 06.9**	**+0.7**
	0.3nm,0.6s,baz=127,slow=6.7,SNR=7.2						
WRA	**Warramunga Arr**	**36.87**	**301**	P	**P**	**13 53 27.9**	**+0.3**
	0.5nm,0.9s,baz=135,slow=8.0,SNR=6.4						
VNA2	**Neumayer--Watz**	**64.56**	**182**	*e*	**P**	**13 56 55.3**	**-0.2**
	baz=186,slow=3.4						
VNA2				*e*	pP	13 56 58.3	-0.8
ARCES	**ARCESS Array B**	**148.65**	**335**	PKPbc	PKPbc	14 06 04.2	-0.7
	1.7nm,0.7s,baz=35,slow=1.9,SNR=6.5						

JMA 01 13:54:59.4±0.8, 4456N×14978E, h30km, M4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.15**	**249**	P	Pn	13 55 45.8	-1.1
NEM2				*e*S	Sn	13 56 21.0	-2.5
JRA	**Rausu**	**3.40**	**261**	P	Pn	13 55 51.7	+1.3
JRA				*e*S	Sn	13 56 30.7	+1.0
JNK	**Nakash**	**3.77**	**257**	P	Pn	13 55 55.7	+0.2
JNK				*e*S	Sn	13 56 38.6	-0.3
JAK	**Akkeshi**	**4.00**	**249**	P	Pn	13 55 57.9	-0.7
JTKR	**Abashiri--Toko**	**4.26**	**264**	P	Pn	13 56 03.6	+1.5
JAR	**Ashorobuto**	**4.52**	**256**	P	Pn	13 56 06.3	+0.5
JAR				*e*S	Sn	13 56 58.0	+0.7
JOB	**Onbets**	**4.62**	**251**	P

Z19A	T-Link Ranch, baz=9.1	8.88	2	⇓P		Pn	13 57 41.1	-1.6
Z17A	San Carlos Hig baz=9.1,SNR=6.5	8.90	356	⇓P		Pn	13 57 41.7	-1.4
Y17A	Roosevelt baz=9.6	9.33	354	⇓P		Pn	13 57 47.0	-1.9
Y18A	Canyon Day Jun baz=9.6,SNR=11	9.36	358	⇑P		Pn	13 57 48.7	-0.7
Y19A	Nutrioso baz=9.7,SNR=15	9.54	2	⇑P		Pn	13 57 52.2	+0.4
Y16A	Circle Bar Ran baz=9.8,SNR=16	9.59	351	⇑P		Pn	13 57 51.9	-0.5
GLA	Glamis baz=10.0	9.74	334	⇓P		Pn	13 57 54.1	-0.5
Y15A	Casa Rosa Ranc baz=10,SNR=8.7	9.81	347	⇓P		Pn	13 57 54.8	-0.6
Y14A	Wickenburg baz=10	9.95	344	⇓P		Pn	13 57 57.8	+0.4
X17A	Forest Lakes baz=10,SNR=5.3	9.96	355	⇑P		Pn	13 57 57.5	-0.1
DVTC	Desert V Tower baz=10	9.99	327	⇓P		Pn	13 57 57.6	-0.4
X19A	St. Johns baz=10,SNR=9.6	10.01	2	⇑P		Pn	13 57 59.3	+1.1
LENM	Lemitar	10.02	13	*e*Pn		Pn	13 57 58.3	-0.1
Y13A	Salome baz=10	10.07	340	⇓P		Pn	13 57 59.9	+0.8
BNM	Barren Site	10.08	15	*e*Pn		Pn	13 57 59.2	0.0
BNM				*e*S		Sn	14 00 36.3	+44
X18A	Snowflake baz=10,SNR=5.4	10.11	359	⇓P		Pn	13 57 59.8	+0.2
X16A	Lo Mia Camp, P baz=10,SNR=13	10.11	352	⇑P		Pn	13 58 00.0	+0.4
LAZ	Ladron	10.22	12	*e*Pn		Pn	13 58 01.5	+0.4
LPM	Los Pinos Moun	10.24	14	*e*Pn		Pn	13 58 01.1	-0.3
Y12C	Blythe baz=10	10.24	337	⇓P		Pn	13 58 01.4	0.0
X15A	Humboldt baz=11,SNR=11	10.30	348	⇓P		Pn	13 58 02.4	+0.1
MONP	Monument Peak baz=11,SNR=8.8	10.33	327	⇓P		Pn	13 58 02.6	0.0
X14A	Yava baz=11,SNR=13	10.43	345	⇑P		Pn	13 58 04.5	+0.6
BC3	Big Chuckw Mtn baz=11,SNR=7.4	10.52	333	⇑P		Pn	13 58 04.9	-0.4
PDMCI	Parker Dam,Lak baz=11,SNR=12	10.61	340	⇑P		Pn	13 58 07.2	+0.7
JCT	Junction City 4.8nm,0.6s	10.66	53	*e*Pn		Pn	13 58 10.8	+3.6
W19A	Sanders baz=11	10.69	1	⇑P		Pn	13 58 08.3	+0.8
X13A	Yucca baz=11,SNR=28	10.79	341	⇓P		Pn	13 58 09.7	+0.7
IRM	Iron Mountain baz=11	10.84	335	⇑P		Pn	13 58 09.7	+0.1
ANMO	Albuquerque 0.1nm,0.3s,baz=209,slow=14,SNR=9.5	10.89	14	Pn		Pn	13 58 09.0	-1.2
ANMO	comp=Z,194nm,19.1s,baz=343,slow=38			LR		LR	14 02 22.5	
ANMO	Albuquerque	10.89	14	Pn		Pn	13 58 09.0	-1.2
ANMO				LR		LR	14 02 22.5	
PFO	Pinyon Flat Ob 18nm,1.3s	10.93	329	*e*Pn		Pn	13 58 09.5	-1.3
PFO	Pinyon Flat Ob baz=11,SNR=6.9	10.93	329	⇑P		Pn	13 58 10.5	-0.4
W15A	Williams baz=11,SNR=11	10.98	349	⇓P		Pn	13 58 12.8	+1.2
BELC	Belle Mtn. baz=11	11.05	331	⇑P		Pn	13 58 12.4	-0.1
W14A	Seligman baz=11,SNR=24	11.18	345	⇑P		Pn	13 58 14.9	+0.6
WUAZ	Wupatki 9.8nm,1.0s	11.19	353	*e*Pn		Pn	13 58 14.0	-0.3
WUAZ	Wupatki baz=11	11.19	353	⇑P		Pn	13 58 14.9	+0.6
W13A	Hualapai Mount baz=12,SNR=29	11.28	342	⇓P		Pn	13 58 16.6	+1.0
V19A	Window Rock baz=12	11.30	3	⇓P		Pn	13 58 16.4	+0.5
V14A	Boquillas Ranc baz=12,SNR=15	11.59	346	⇑P		Pn	13 58 20.0	+0.1
V15A	Kaibab Nationa baz=12	11.59	350	⇑P		Pn	13 58 20.6	+0.7
U16A	Tuba City baz=12,SNR=16	11.78	354	⇑P		Pn	13 58 23.4	+0.9
V13A	Grand Canyon W baz=12,SNR=13	12.01	343	⇑P		Pn	13 58 26.2	+0.5
U15A	North Rim baz=12,SNR=15	12.21	350	⇓P		Pn	13 58 29.4	+1.1
TUQ	Turquoise Moun baz=13,SNR=6.9	12.27	335	⇑P		Pn	13 58 29.8	+0.7
U14A	Mt Trumbull baz=13	12.36	347	⇑P		Pn	13 58 30.8	+0.3
T19A	Beclabito baz=13,SNR=9.5	12.41	2	⇑P		Pn	13 58 32.6	+1.4
GSC	Goldstone 25nm,1.4s	12.51	332	*e*Pn		Pn	13 58 32.3	-0.1
GSC				*e*			13 58 43.8	
GSC	Goldstone baz=13,SNR=8.4	12.51	332	⇑P		Pn	13 58 32.5	+0.1
AMTX	Amarillo 6.5nm,0.9s	12.55	32	Pn		Pn	13 58 33.1	+0.1
T17A	Navajo Res., N baz=13	12.60	356	⇓P		Pn	13 58 34.6	+0.8
T18A	Mexican Hat baz=13,SNR=7.1	12.71	359	⇓P		Pn	13 58 34.4	-0.7
U12A	Valley of Fire baz=13	12.71	342	⇑P		Pn	13 58 35.6	+0.4
T15A	Red Dirt Ranch baz=13,SNR=8.2	12.80	350	⇓P		Pn	13 58 37.8	+1.4
SHOC	Shoshone baz=13,SNR=6.8	12.81	335	⇓P		Pn	13 58 37.6	+1.0
MVCO	Mesa Verde 56nm,1.4s	12.82	4	*e*Pn		Pn	13 58 37.2	+0.6
MVCO	Mesa Verde baz=13	12.82	4	⇓P		Pn	13 58 37.1	+0.5
U11A	Corn Creek baz=13	12.96	339	⇓P		Pn	13 58 39.8	+1.2
T14A	Hurricane baz=13	12.96	348	⇓P		Pn	13 58 39.6	+1.0
LRMC	Laurel Mountai baz=13,SNR=11	13.04	330	⇑P		Pn	13 58 39.6	-0.1
S17A	Black Ridge (B baz=14	13.24	356	⇓P		Pn	13 58 42.7	+0.3
S18A	Hurst Farm, Bl baz=14,SNR=5.6	13.26	359	⇑P		Pn	13 58 43.5	+0.8
S16A	Weppner Ranch, baz=14	13.39	353	⇑P		Pn	13 58 46.1	+1.6
MPMC	Manual Prospec baz=14,SNR=14	13.44	332	⇓P		Pn	13 58 45.1	-0.1
S15A	Panguitch baz=14,SNR=8.3	13.44	351	⇓P		Pn	13 58 47.2	+2.0
CCUT	Cedar City	13.49	347	*e*Pn		Pn	13 58 48.0	+2.2
FURC	Furnace Creek, baz=14,SNR=6.0	13.53	334	⇑P		Pn	13 58 46.9	+0.4
ISA	Isabella 14nm,1.4s	13.57	328	*e*Pn		Pn	13 58 44.8	-2.0
ISA	Isabella baz=14	13.57	328	⇓P		Pn	13 58 45.8	-1.0
S13A	Holt Ranch, En baz=14,SNR=9.5	13.63	346	⇓P		Pn	13 58 49.2	+1.5
T11A	Corn Creek, Al baz=14,SNR=14	13.66	341	⇑P		Pn	13 58 49.3	+1.1
TPNV	Topopah Spring 33nm,1.6s	13.73	337	*e*Pn		Pn	13 58 50.0	+0.9
TPNV	Topopah Spring baz=14	13.73	337	⇑P		Pn	13 58 50.1	+1.0
PV01	Paradox Valley	13.73	4	*e*Pn		Pn	13 58 47.2	-1.9
ARUT	Antelope Range	13.74	347	*e*Pn		Pn	13 58 51.5	+2.2
SDCO	Great Sand Dun 11nm,1.3s	13.78	14	*e*Pn		Pn	13 58 52.6	+2.8
S12A	Delamar Landin baz=14,SNR=19	13.90	343	⇑P		Pn	13 58 52.8	+1.4
PV10	Paradox Valley	13.95	2	*e*Pn		Pn	13 58 52.3	+0.1
R18A	Canyonlands Na baz=14,SNR=6.8	13.96	359	⇓P		Pn	13 58 52.4	+0.2
R17A	Hanksville Air baz=14	14.01	357	⇑P		Pn	13 58 53.8	+0.8
CWC	Cottonwood Cre baz=14,SNR=6.3	14.02	331	⇓P		Pn	13 58 53.4	+0.4
R13A	O'Grain Ranch, baz=14,SNR=7.4	14.23	346	⇑P		Pn	13 58 57.3	+1.4
MSU	Marysvale	14.24	352	*e*Pn		Pn	13 58 57.7	+1.6
R12A	Pony Springs, baz=15,SNR=28	14.52	344	⇓P		Pn	13 59 01.0	+1.2
Q19A	Hogan Spring (baz=15	14.53	1	⇑P		Pn	13 59 00.5	+0.6
Q16A	Castle Valley	14.54	355	⇓P		Pn	13 59 01.4	+1.2
Q18A	Rafter H Ranch baz=15	14.67	359	⇓P		Pn	13 59 02.7	+0.7
SRU	San Rafael 6.4nm,0.9s	14.69	357	*e*Pn		Pn	13 59 01.8	-0.5
SRU	San Rafael baz=15	14.69	357	⇑P		Pn	13 59 02.6	+0.4
S10A	Tonopah Range, baz=15,SNR=16	14.72	338	⇑P		Pn	13 59 03.2	+0.5
S09A	Goldfield baz=15,SNR=17	14.77	336	⇓P		Pn	13 59 03.5	+0.2
R11A	Troy Canyon, C baz=15,SNR=15	14.80	342	⇓P		Pn	13 59 03.9	+0.2
Q14A	Sevier Lake (B baz=15,SNR=11	14.87	349	⇓P		Pn	13 59 05.5	+0.8
SMCO	Snowmass 30nm,1.1s	14.92	8	*e*Pn		Pn	13 59 07.4	+2.1
Q13A	Wheeler Ranch, baz=15	14.98	347	⇓P		Pn	13 59 07.3	+1.1
TPH	Tonopah 18nm,1.1s	15.08	337	*e*Pn		Pn	13 59 07.7	+0.1
R09A	Tonopah baz=16,SNR=18	15.18	337	⇓P		Pn	13 59 09.0	+0.3
P19A	Cripple Cowboy baz=15,SNR=16	15.21	2	⇓P		Pn	13 59 09.4	+0.2
T06C	Millerton Lake baz=15,SNR=5.7	15.24	328	⇑P		Pn	13 59 08.9	-0.6
Q12A	Willow Creek R baz=16,SNR=26	15.24	345	⇑P		Pn	13 59 10.4	+0.8
Q11A	Duckwater baz=16,SNR=15	15.28	342	⇑P		Pn	13 59 09.9	-0.2
KCC	Kaiser Creek baz=16,SNR=8.4	15.31	330	⇓P		Pn	13 59 10.3	-0.2
P14A	Drum Mountains baz=16,SNR=30	15.42	350	⇑P		Pn	13 59 12.7	+0.7
P13A	Bates Ranch, G baz=16,SNR=11	15.46	347	⇑P		Pn	13 59 12.7	+0.2
Q10A	Clear Creek Ra baz=16	15.48	340	⇑P		Pn	13 59 12.1	-0.6
MPU	Maple Canyon 45nm,1.2s	15.67	354	*e*Pn		Pn	13 59 18.0	+2.8
ISCO	Idaho Springs 18nm,1.1s	15.74	12	*e*Pn		Pn	13 59 18.5	+2.3
Q09A	Carvers baz=16	15.74	338	⇑P		Pn	13 59 16.8	+0.6
O17A	Robinson Place baz=16	15.79	357	⇓P		Pn	13 59 16.9	+0.2
NVAR	Mina Array Bea 0.3nm,0.3s,baz=138,slow=14,SNR=36	15.80	334	Pn		Pn	13 59 15.7	-1.3
O18A	Roosevelt baz=16	15.83	359	⇓P		Pn	13 59 18.5	+1.2
O16A	Springville baz=16	15.85	355	⇑P		Pn	13 59 18.8	+1.3
O19A	Miners Draw (B baz=16,SNR=25	15.87	2	⇑P		Pn	13 59 18.2	+0.4
DUG	Dugway 33nm,1.2s	15.98	351	*e*Pn		Pn	13 59 19.9	+0.7
DUG	Dugway baz=16	15.98	351	⇓P		Pn	13 59 20.1	+0.9
O15A	The Old Anders baz=16	16.02	352	⇓P		Pn	13 59 20.5	+0.8
DAU	Daniels Canyon	16.03	356	*e*Pn		Pn	13 59 20.7	+0.8
Q08A	Gabbs baz=16	16.04	336	⇓P		Pn	13 59 20.4	+0.4
P10A	Eureka baz=16	16.23	341	⇑P		Pn	13 59 23.5	+1.0
JLU	Jordanelle	16.23	355	Pn		Pn	13 59 22.8	+0.2
CMB	Columbia Colle 4.9nm,0.9s	16.38	329	Pn		Pn	13 59 22.8	-1.6
O12A	Currie baz=17,SNR=8.0	16.40	346	⇑P		Pn	13 59 24.6	0.0
O11A	Cowboy Ranch, baz=17,SNR=6.1	16.48	344	⇓P		Pn	13 59 25.8	+0.2
N16A	Rees Ranch, Co baz=17	16.52	355	⇑P		Pn	13 59 26.4	+0.3
N17A	Moffit Pass baz=17,SNR=6.9	16.54	357	⇓P		Pn	13 59 26.7	+0.3
N18A	Larsen Ranch, baz=17	16.54	0	⇑P		Pn	13 59 26.3	-0.1
CBKS	Cedar Bluff 106nm,1.1s	16.67	28	*e*Pn		Pn	13 59 29.3	+1.2
N14A	Grayback Hills baz=17,SNR=11	16.68	351	⇓P		Pn	13 59 28.5	+0.3
BGU	Big Grassy Mou	16.73	351	*e*Pn		Pn	13 59 29.3	+0.5
O10A	Cortez Mining, baz=17,SNR=6.0	16.86	342	⇓P		Pn	13 59 30.5	0.0
M16A	Huntsville baz=17,SNR=16	16.96	355	⇑P		Pn	13 59 32.0	+0.3
ELK	Elko 0.1nm,0.3s,baz=172,slow=7.8,SNR=15	16.96	345	Pn		Pn	13 59 31.4	-0.3
ELK	comp=Z,201nm,18.8s,baz=359,slow=37			LR		LR	14 05 58.8	
ELK	Elko	16.96	345	Pn		Pn	13 59 31.4	-0.3
ELK				*e*Pn		Pn	13 59 31.8	+0.1
ELK				LR		LR	14 05 58.8	
M18A	Lyman baz=17	16.99	359	⇑P		Pn	13 59 32.4	+0.3
N12A	Clover Valley, baz=17,SNR=17	17.02	346	P		Pn	13 59 33.0	+0.6
SPUT	South Promonto	17.03	353	*e*Pn		Pn	13 59 33.2	+0.6
M17A	Scullys Gap (B baz=17	17.06	357	⇑P		Pn	13 59 32.6	-0.3
WCN	Washoe City baz=17	17.14	333	⇓P		Pn	13 59 34.1	+0.2
M15A	Larsen Ranch, baz=17,SNR=16	17.18	353	⇑P		Pn	13 59 34.9	+0.4
PHWY	Pilot Hill 27nm,1.5s	17.23	11	*e*Pn		Pn	13 59 37.1	+2.0
HWUT	Hardware Ranch 62nm,1.3s	17.24	355	*e*Pn		Pn	13 59 36.1	+0.9
MIAR	Mount Ida	17.27	50	*e*Pn		Pn	13 59 37.1	+1.4
M14A	Sheep Mountain baz=18,SNR=12	17.34	351	⇑P		Pn	13 59 36.9	+0.5
O07A	Toulon baz=18,SNR=5.8	17.53	336	⇑P		Pn	13 59 39.1	+0.3
M12A	Wells baz=18,SNR=6.3	17.53	347	⇑P		Pn	13 59 38.9	+0.1
HVU	Hansel Valley 25nm,1.3s	17.53	352	*e*Pn		Pn	13 59 39.4	+0.5
L20A	Wamsutter baz=18	17.61	3	⇓P		Pn	13 59 39.7	-0.1
L21A	Rawlins baz=18	17.63	6	⇓P		Pn	13 59 40.6	+0.5
L16A	Fish Haven baz=18	17.64	356	⇑P		Pn	13 59 40.5	+0.3
L19A	Farson baz=18,SNR=14	17.67	1	⇓P		Pn	13 59 40.6	+0.1
L15A	Malad City baz=18,SNR=10	17.71	353	⇑P		Pn	13 59 41.2	+0.2
M11A	Holland Ranch, baz=18	17.74	345	⇓P		Pn	13 59 41.8	+0.3
L14A	Malta baz=18,SNR=14	17.84	351	⇑P		Pn	13 59 42.9	+0.2
BEKR	Beckwourth baz=18	17.86	332	⇓P		Pn	13 59 42.8	-0.2
L13A	Double Diamond baz=18,SNR=6.8	18.00	350	⇑P		Pn	13 59 45.1	+0.4
M10A	I.L. Ranch, Tu baz=18,SNR=8.5	18.02	343	⇑P		Pn	13 59 45.3	+0.5
N07B	Gerlach baz=18	18.10	337	⇑P		Pn	13 59 45.8	-0.1
ORV	Oroville baz=18	18.12	329	⇓P		Pn	13 59 46.1	0.0
M09A	Marrel Ranch, baz=18	18.18	341	⇑P		Pn	13 59 47.2	+0.3
BW06	Boulder Array baz=19	18.33	0	⇑P		Pn	13 59 48.4	-0.3
PDAR	Pinedale Array 0.1nm,0.3s,baz=171,slow=10,SNR=82	18.33	0	Pn		Pn	13 59 48.8	+0.1
K14A	Jones Ranch, D baz=19	18.34	352	⇑P		Pn	13 59 48.5	-0.2
KSU1	Kansas State U 14nm,0.9s	18.37	34	*e*Pn		Pn	13 59 50.3	+1.1
N06A	Buffalo Meadow baz=19	18.40	335	⇑P		Pn	13 59 49.2	-0.3
K15A	Arbon baz=19,SNR=6.6	18.40	353	⇑P		Pn	13 59 49.5	-0.1
K16A	Soda Springs baz=19	18.46	356	⇓P		Pn	13 59 50.3	0.0
M08A	Happy Creek Ra baz=19,SNR=8.1	18.50	339	⇑P		Pn	13 59 50.5	-0.2
L10A	Juniper Basin baz=19,SNR=13	18.52	344	⇓P		Pn	13 59 50.7	-0.3
O04C	Chester baz=19	18.55	332	⇑P		Pn	13 59 50.9	-0.5
K13A	Stover Farm, H baz=19	18.57	350	⇑P		Pn	13 59 51.5	-0.2
K12A	Draper Farm, C	18.70	348	⇓P		Pn	13 59 53.3	+0.1
J16A	Bone baz=19,SNR=23	18.90	356	⇓P		Pn	13 59 55.2	-0.5
J17A	Brown Place, J baz=19	18.94	358	⇓P		Pn	13 59 55.5	-0.6
REDW	Red Top Meadow 32nm,1.4s	18.95	357	*e*Pn		Pn	13 59 55.6	-0.6
RRI2	Red Ridge 57nm,1.4s	18.96	356	*e*Pn		Pn	13 59 56.1	-0.2
SNOW	Snow King Moun 30nm,1.3s	19.05	358	*e*P		Pn	13 59 57.5	+0.1
K11A	Parker Ranch, baz=19,SNR=11	19.07	346	⇓P		Pn	13 59 57.1	-0.6
TPAW	Teton Pass 41nm,1.5s	19.08	357	*e*Pn		Pn	13 59 57.1	-0.7
J15A	Blackfoot baz=19,SNR=14	19.10	354	⇓P		Pn	13 59 57.8	-0.1
J14A	Carey baz=19,SNR=9.0	19.15	351	⇓P		Pn	13 59 57.8	-0.8
L08A	Fields baz=19,SNR=9.9	19.15	340	⇑P		Pn	13 59 57.7	-1.0
LOHW	Long Hollow 22nm,1.2s	19.19	358	*e*Pn		Pn	13 59 58.5	-0.6
DCID1	Drake Creek 60nm,1.3s	19.20	357	*e*P		Pn	13 59 59.3	+0.1
I18A	Diamond G Ranc baz=20,SNR=16	19.26	360	⇓P		Pn	13 59 59.0	-0.9
K10A	MacKenzie Ranc baz=20	19.28	344	⇑P		Pn	13 59 59.2	-1.0
J13A	Cove Ranch, Pi baz=20,SNR=5.2	19.32	350	⇑P		Pn	13 59 59.8	-0.9
L07A	Adell baz=20	19.33	338	⇓P		Pn	13 59 59.6	-1.1
J12A	Stokes Ranch, baz=20	19.34	348	⇓P		Pn	13 59 59.8	-1.0
K09A	Rome baz=20,SNR=17	19.44	342	P		Pn	14 00 01.3	-0.8
IMW	Indian Meadow 31nm,1.3s	19.49	357	*e*P		Pn	14 00 02.1	-0.6
I17A	Pilgram Creek baz=20,SNR=13	19.50	358	⇑P		Pn	14 00 02.1	-0.7
HLID	Hailey 14nm,1.4s	19.52	350	*e*P		Pn	14 00 02.2	-0.8
HLID	Hailey baz=20	19.52	350	⇑P		Pn	14 00 02.2	-0.8
MFID	Camas Ranch baz=20,SNR=6.7	19.64	347	⇑P		Pn	14 00 03.4	-1.1
I14A	Mackay baz=20,SNR=6.7	19.73	352	⇑P		Pn	14 00 04.7	-0.9
I13A	Wildhorse Cree baz=20,SNR=9.4	19.81	350	⇑P		Pn	14 00 05.1	-1.5
I12A	Atlanta baz=20	19.87	348	⇓P		Pn	14 00 05.8	-1.4
K07A	Rock Creek Ran baz=20,SNR=5.2	19.89	339	⇓P		Pn	14 00 05.7	-1.9
YFT	Old Faithful	20.04	358	*e*P		P	14 00 10.7	+3.3
J09A	Fry Pan Ranch, baz=20,SNR=7.0	20.04	343	⇓P		P	14 00 07.3	-0.2
RSSD	Black Hills 2.9nm,0.7s	20.22	12	*e*P		P	14 00 11.3	+1.9
J08A	Circle Bar Ran baz=20,SNR=15	20.26	341	⇓P		P	14 00 09.5	-0.4
YMR	Madison River 20nm,1.1s	20.26	357	*e*P		P	14 00 10.8	+1.0
H16A	Russell Place, baz=20,SNR=15	20.31	357	⇑P		P	14 00 11.2	+0.9
H15A	Lima baz=21,SNR=14	20.32	354	⇓P		P	14 00 12.0	+1.4
K06A	Valley Falls baz=21	20.33	337	⇓P		P	14 00 11.1	+0.5
H14A	Leadore baz=21,SNR=14	20.40	352	⇓P		P	14 00 12.2	+0.8
YBH	Yreka Blue Hor comp=Z,189nm,21.8s,MS3.4,baz=156,slow=32	20.41	331	LR		LR	14 06 15.8	
QLMT	Earthquake Lak	20.44	356	*e*P		P	14 00 12.8	+0.9
K05A	Summer Lake baz=21,SNR=7.1	20.50	336	⇑P		P	14 00 13.0	+0.4
J07A	Hines baz=21	20.53	340	⇓P		P	14 00 13.2	+0.4
H12A	Diamond D Ranc baz=21,SNR=16	20.55	349	⇓P		P	14 00 13.3	+0.3
MCMT	McKenzie Canyo	20.55	354	*e*P		P	14 00 14.7	+1.6
I09A	Lost Marbles R baz=21	20.62	343	⇓P		P	14 00 13.8	0.0
RLMT	Red Lodge 10nm,1.1s	20.69	1	*e*P		P	14 00 14.6	+0.1
RLMT	Red Lodge baz=21	20.69	1	⇑P		P	14 00 14.7	+0.2
J06A	Christmas Vall baz=21,SNR=16	20.70	338	⇑P		P	14 00 14.5	-0.1
I08A	Drewsey baz=21	20.79	342	⇑P		P	14 00 15.8	+0.1
G15A	Dillon baz=21,SNR=14	20.85	354	⇓P		P	14 00 17.6	+1.3
G16A	Moss Hill, Enn baz=21,SNR=22	20.86	356	⇓P		P	14 00 17.5	+1.1
G18A	Lazy EL Ranch, baz=21	20.88	0	⇑P		P	14 00 16.9	+0.3
G17A	Pierce Place, baz=21	20.90	358	⇓P		P	14 00 17.5	+0.7
H11A	Donnelly baz=21	20.91	347	⇓P		P	14 00 17.1	+0.2
H10A	Noah's Angus R baz=21,SNR=14	20.96	346	P		P	14 00 17.1	-0.3
G13A	Cobalt baz=21,SNR=18	20.98	351	P		P	14 00 18.3	+0.6
G14A	Jackson baz=21	21.03	353	⇓P		P	14 00 18.1	-0.1
J05A	Fort Rock baz=21	21.11	336	⇑P		P	14 00 18.4	-0.7
I07A	Izee baz=22	21.23	340	⇑P		P	14 00 19.8	-0.5
H09A	Durkee baz=22	21.25	344	⇓P		P	14 00 20.3	-0.2
BOZ	Bozeman (W) baz=22	21.27	356	⇑P		P	14 00 21.0	+0.2
I06A	Prineville baz=22	21.33	339	⇑P		P	14 00 21.3	-0.2
GCMT	Greycliff	21.35	0	*e*P		P	14 00 15.2	-6.5
H08A	Prairie City baz=22	21.38	342	⇓P		P	14 00 21.9	-0.1
F16A	Kennard Place, baz=22	21.40	356	⇓P		P	14 00 22.7	+0.4
F18A	Big Timber baz=22,SNR=16	21.47	360	⇑P		P	14 00 22.3	-0.6
F17A	Fitzpatrick Pl baz=22	21.48	358	⇓P		P	14 00 24.1	+1.0
F15A	Butte baz=22,SNR=11	21.52	355	⇓P		P	14 00 23.9	+0.3
G11A	Walters Elk Ra baz=22	21.63	347	⇓P		P	14 00 24.2	-0.5
F13A	Darby baz=22	21.68	351	⇑P		P	14 00 24.9	-0.3
H07A	Lands Inn, Kim baz=22	21.71	341	⇑P		P	14 00 25.0	-0.5
G10A	Bishop Farm, J baz=22,SNR=9.0	21.71	346	P		P	14 00 25.0	-0.5
F12A	Elk City baz=22	21.79	349	⇓P		P	14 00 25.9	-0.5
G09A	Cove baz=22,SNR=16	21.85	344	P		P	14 00 26.6	-0.5
E17A	Martinsdale baz=22,SNR=7.7	22.04	358	⇑P		P	14 00 28.8	-0.2
ECSD	EROS,Sioux Fal 18nm,1.1s,mb4.4	22.07	26	*e*P		P	14 00 29.6	+0.2
H06A	Lindquist Farm baz=22	22.07	339	⇑P		P	14 00 29.0	-0.4
F11A	Grangeville baz=22	22.08	348	⇑P		P	14 00 29.4	-0.1
E18A	Harlowton baz=22,SNR=9.5	22.13	360	⇓P		P	14 00 29.6	-0.4
WVT	Waverly	22.15	53	P		P	14 00 32.2	+1.9
E16A	East Helena baz=22,SNR=7.7	22.15	356	⇓P		P	14 00 30.1	-0.1
E13A	Victor baz=23	22.30	352	⇓P		P	14 00 31.2	-0.6
HRY	Holter Researc	22.34	356	*e*P		P	14 00 32.2	0.0
G07A	Ruggs Ranch, H baz=23	22.35	341	⇑P		P	14 00 32.0	-0.4
F10A	Beach Ranch, E baz=23	22.38	346	⇓P		P	14 00 32.4	-0.2
LAO	LASA Array 44nm,1.3s,mb4.7	22.42	6	*e*P		P	14 00 32.9	-0.2
E12A	Beaver Dam Sad baz=23	22.48	349	⇓P		P	14 00 33.3	-0.5
I03A	Eugene baz=23	22.48	334	⇓P		P	14 00 33.3	-0.6
LNOR	Lincton Mounta	22.53	344	*e*P		P	14 00 33.8	-0.5

E11A	**Bogner Ranch,** baz=23	**22.54**	**348**	⇓P		**P**	**14 00 33.1**	**-1.2**
D16A	**Dana Ranch, Ca** baz=23	**22.64**	**357**	⇑P		**P**	**14 00 35.9**	**+0.5**
D15A	**Lincoln** baz=23	**22.72**	**355**	⇑P		**P**	**14 00 36.0**	**-0.3**
D17A	**Six Diamond Ra** baz=23	**22.73**	**358**	⇑P		**P**	**14 00 35.7**	**-0.7**
D14A	**Greenough** baz=23	**22.85**	**353**	⇓P		**P**	**14 00 37.1**	**-0.6**
D12A	**Red Ives Fores** baz=23	**23.07**	**350**	⇑P		**P**	**14 00 38.9**	**-1.0**
C17A	**Wharram Farm,** baz=23	**23.21**	**358**	⇑P		**P**	**14 00 40.9**	**-0.6**
D11A	**Klaveano Farm,** baz=24	**23.23**	**348**	⇑P		**P**	**14 00 40.4**	**-1.2**
C16A	**Fuhringer Ranc** baz=24	**23.42**	**356**	⇓P		**P**	**14 00 42.2**	**-1.4**
EGMT	**Eagleton** 33nm,1.4s,mb4.6	**23.59**	**360**	*e*P		**P**	**14 00 44.8**	**-0.5**
EGMT	**Eagleton** baz=24	**23.59**	**360**	⇓P		**P**	**14 00 44.4**	**-0.9**
E06A	**Yakima** baz=24	**23.89**	**340**	⇑P		**P**	**14 00 46.8**	**-1.4**
C11A	**Tepee Creek (N** baz=24	**23.98**	**349**	⇓P		**P**	**14 00 47.9**	**-1.0**
B15A	**Bradely Ranch,** baz=24	**23.98**	**355**	⇓P		**P**	**14 00 48.0**	**-1.0**
B16A	**M & M Farms, S** baz=24	**24.03**	**357**	⇓P		**P**	**14 00 48.3**	**-1.1**
B14A	**Marquette Ranc** baz=24	**24.09**	**354**	⇓P		**P**	**14 00 49.0**	**-1.0**
E05A	**Randle** baz=24	**24.16**	**339**	⇓P		**P**	**14 00 49.5**	**-1.0**
B13A	**Whitefish** baz=24	**24.23**	**352**	⇓P		**P**	**14 00 49.9**	**-1.4**
DGMT	**Dagmar** 28nm,1.1s,mb4.6	**24.42**	**9**	P		**P**	**14 00 53.9**	**+0.9**
DGMT	**Dagmar** baz=25	**24.42**	**9**	⇓P		**P**	**14 00 51.7**	**-1.2**
NEW	**Newport** 26nm,1.5s,mb4.5	**24.55**	**348**	*e*P		**P**	**14 00 52.9**	**-1.2**
C07A	**Waterville** baz=25	**24.68**	**343**	⇑P		**P**	**14 00 54.3**	**-1.0**
A14A	**Double T Ranch** baz=25	**24.71**	**354**	⇑P		**P**	**14 00 54.5**	**-1.1**
WALA	**Waterton Lakes** 15nm,1.0s,mb4.5	**24.85**	**353**	*e*P		**P**	**14 00 56.6**	**-0.2**
A12A	**Yaak River Ran** baz=25	**24.95**	**351**	⇑P		**P**	**14 00 57.2**	**-0.5**
TKL	**Tuckaleechee C** comp=Z,208nm,21.1s,MS3.6,baz=117,slow=37	**25.01**	**57**	LR	LR	LR	14 11 06.7	
A11A	**Hall Mountain,** baz=25	**25.08**	**350**	⇑P		**P**	**14 00 58.2**	**-0.7**
A10A	**Northport** baz=26	**25.32**	**348**	⇑P		**P**	**14 00 59.9**	**-1.2**
B07A	**Winthrop** baz=26	**25.40**	**344**	⇓P		**P**	**14 01 00.9**	**-1.0**
A09A	**Danville** baz=26	**25.52**	**346**	⇓P		**P**	**14 01 02.1**	**-0.8**
A08A	**Turner Farm, O** baz=26	**25.65**	**345**	⇑P		**P**	**14 01 03.1**	**-1.1**
JTS	**JuntasAbangare** comp=Z,61nm,18.5s,MS3.2,baz=138,slow=42	**27.38**	**117**	LR	LR	LR	14 14 57.4	
ULM	**Lac du Bonnet** comp=Z,170nm,18.2s,MS3.7,baz=353,slow=37	**27.96**	**19**	LR	LR	LR	14 12 51.5	
YKA	**Yellowknife Ar** 2.7nm,0.9s,mb4.0,baz=174,slow=7.1,SNR=5.0	**38.23**	**356**	P		**P**	**14 02 53.0**	**-1.3**
ROSC	**El Rosal** comp=Z,45nm,18.1s,MS3.3,baz=7.0,slow=39	**39.14**	**114**	LR	LR	LR	14 20 59.5	
DAWY	**Dawson**	**44.19**	**342**	*e*P		**P**	**14 03 43.3**	**+0.1**
INK	**Inuvik** 204nm,1.0s	**46.27**	**348**	*e*P		**P**	**14 03 59.1**	**-0.5**
FDF	**Fort de France**	**46.52**	**93**	P		**P**	**14 04 05.6**	**+3.2**
PETK	**Petropavlovsk-** comp=Z,920nm,20.4s,MS4.0,baz=178,slow=33	**72.40**	**321**	LR	LR	LR	14 34 43.9	
TIXI	**Tiksi** 0.7nm,0.4s,mb3.9	**76.19**	**344**	*e*P		**P**	**14 07 20.4**	**-2.0**
ARCES	**ARCESS Array B** 3.3nm,0.8s,mb4.3,baz=312,slow=5.6,SNR=4.2	**80.97**	**15**	P		**P**	**14 07 48.1**	**-0.7**
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=63,slow=3.2,SNR=4.6	**121.00**	**261**	PKP	PKPdf	PKPdf	14 14 27.7	-0.2
ASAR	**Alice Springs** 0.5nm,0.9s,baz=47,slow=2.1,SNR=4.8			PKP	PKPdf	PKPdf	14 14 30.3	-0.1
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=344,slow=3.7,SNR=5.2	**129.09**	**324**	PKP	PKPdf	PKPdf	14 14 44.8	+1.3

*CSEM **01** 14:22:39.7±0.1,3987N×3016E,h2km,MD2.8,Error ellipse: s-maj=2.3km s-min=1.6km az=65.0*
*ISCJB **01** 14:22:40.4±0.7,3985N±004×3016E±005,h10km,Error ellipse: s-maj=7.1km s-min=4.2km az=40.6*
*ISK **01** 14:22:40.2,3986N×3018E,h20km,MD2.8*
*DDA **01** 14:22:41.6,3988N×3026E,h6km±1km,Md2.8*

ISC 01 14:22:40.9±0.7,**3985N**±004×**3017E**±005,**h10**km,**n12,**
σ0**75**/17,**2C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.22**	**83**	⇑*i*P	**Pg**	**14 22 45.1**	**-0.4**
BORA				*e*S	**Sg**	**14 22 47.5**	**-1.0**
CAVI	**Cavuskoy**	**0.43**	**324**	*e*PG	**Pg**	**14 22 49.0**	**-0.4**
CAVI				*e*SG	**Sg**	**14 22 56.6**	**+1.5**
GPA	**Golpazari**	**0.45**	**14**	*e*PG	**Pg**	**14 22 49.2**	**-0.5**
ESKT	**Eskisehir**	**0.62**	**122**	⇑*i*P	**Pg**	**14 22 53.0**	**0.0**
ESKT				*i* S	**Sg**	**14 23 01.7**	**+0.6**
SEYT	**Eskypehyr**	**0.62**	**122**	*i* P	**Pg**	**14 22 53.0**	**0.0**
GULT	**Gulveren**	**0.64**	**24**	*e*PG	**Pg**	**14 22 53.0**	**-0.3**
GULT				*e*SG	**Sg**	**14 23 02.5**	**+0.9**
ADVT	**Abdulvahap**	**0.67**	**330**	*e*PG	**Pg**	**14 22 53.4**	**-0.5**
ALT	**Altintas**	**0.80**	**183**	*e*PG	**Pg**	**14 22 56.6**	**+0.3**
YLV	**Yalova**	**0.94**	**320**	*e*PG	**Pg**	**14 22 59.2**	**+0.2**
GEMT	**Gemlik**	**0.95**	**308**	*e*PG	**Pg**	**14 22 58.5**	**-0.8**
HRT	**Hereke**	**1.04**	**339**	*e*PG	**Pg**	**14 23 00.1**	**-0.9**
SGKT	**Sivrigoynuk**	**1.61**	**63**	*e*P	**Pn**	**14 23 10.8**	**+1.3**
SGKT				*e*S	**Sg**	**14 23 39.1**	**+6.3**

*NEIC **01** 14:36:40.4, 1656N×9956W,h4km,MD3.8(MEX),After MEX.*

MEX 01 14:36:40.5±0.5,**1655N×9957W,h5**km±4km,**MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.46**	**313**	*i* P	Pg	14 36 48.9	-0.4
ACX				*i* S	Sg	14 36 55.5	+0.2
CAIG	**El Cayaco**	**0.83**	**306**	*i* P	Pg	14 36 55.4	-1.1
CAIG				*i* S	Sg	14 37 06.7	-0.6
CAIG	**El Cayaco**	**0.83**	**306**	*i* P	Pg	14 36 55.4	-1.1
CAIG				*i* S	Sg	14 37 05.9	-1.4
PNIG	**Pinotepa**	**1.39**	**96**	*i* P	Pn	14 37 02.5	-4.0
PNIG				*i* S	Sb	14 37 20.0	-5.0
PLIG	**Platanillo**	**1.83**	**2**	*e*P	Pn	14 37 08.9	-3.7
PLIG				*i* S	Sn	14 37 31.9	-4.2
ZIIG	**Zihuatanejo**	**2.10**	**300**	*i* P	Pn	14 37 12.3	-4.0
ZIIG				*i* S	Sn	14 37 37.9	-4.9
UTMO	**Huajuapan**	**2.11**	**53**	*e*P	Pn	14 37 14.0	-2.5
UTMO				*i* S	Sn	14 37 39.5	-3.6
MZVM		**2.64**	**7**	*e*P	Pn	14 37 20.5	-3.3
MZVM				*i* S	Sn	14 37 52.7	-3.5
VHO	**Vista Hermosa**	**2.76**	**79**	*e*P	Pn	14 37 22.6	-2.8
VHO				*i* S	Sn	14 37 54.9	-4.3
IIO	**Organos**	**3.13**	**15**	*i* P	Pn	14 37 29.0	-1.4
IIO				*i* S	Sn	14 38 07.8	-0.4

DJA 01 14:38:04,864S×11034E,h30km,**MLv4.5**/6,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**1.44**	**334**	P	Pn	14 38 26.8	-1.3
BJII	**Banjamegara**	**1.44**	**334**	S	Sn	14 38 47.7	+1.7
SJI	**Sawahan**	**1.67**	**58**	P	Pn	14 38 32.2	+0.9
KRKI	**Karangkates**	**2.14**	**77**	P	Pn	14 38 38.5	+0.8
LEM	**Lembang**	**3.24**	**304**	P	Pn	14 38 53.6	+0.7
SKJI	**Sukabumi**	**4.09**	**293**	P	Pn	14 39 05.8	+1.3

*KRSC **01** 14:52:26.9±2.6,5217N×15330E,h491km±71km,ML4.2*
*ISCJB **01** 14:52:30.9±0.8,523N±01×1534E±03,h466km±11km, mb3.2/6,Error ellipse: s-maj=30.5km s-min=14.9km az=30.5.*
*NEIC **01** 14:52:31.0±0.8,5238N×15288E,h454km±11km,mb3.8/1, Error ellipse: s-maj=26.0km s-min=12.4km az=112.0*
*MOS **01** 14:52:30.1±1.2,5240N×15309E,h462km,mb4.3/1,Error ellipse: s-maj=34.8km s-min=16.7km az=64.9*
*IDC **01** 14:52:31.1±1.6,5235N×15280E,h456km±19km,mb3.0/6, mb1 3.2/8,mb1mx2.9/22,mbtmp3.0/8,Error ellipse: s-maj=26.8km s-min=15.1km az=111.0*

ISC 01 14:52:31.0±0.9,**523N**±01×**1530E**±03,**h453**km±12km,**n19,**
σ0**84**/22,**mb3.2/6,Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 4.9nm,0.3s,baz=234,slow=3.6,SNR=137	**2.94**	**73**	P	**P**	**14 53 38.5**	**+0.8**
GNL	**Ganaly**	**3.26**	**63**	P	**P**	**14 53 40.6**	**+0.5**
RUS	**Russkaya**	**3.36**	**86**	*e*P	**P**	**14 53 40.8**	**-0.1**
RUS				*i* S	**S**	**14 54 35.1**	**-2.8**
PET	**Petropavlovsk**	**3.49**	**76**	P	**P**	**14 53 42.3**	**+0.3**
PET	**Petropavlovsk**	**3.49**	**76**	*e*PN	**P**	**14 53 42.4**	**+0.5**
PET	comp=Z,78nm,1.3s			pmax	pmax		
AVH	**Avacha**	**3.59**	**73**	P	**P**	**14 53 44.0**	**+1.3**
SPN	**Mys Shipunski**	**4.32**	**77**	P	**P**	**14 53 48.4**	**-0.6**
SPN				*i* S	**S**	**14 54 47.3**	**-5.4**
MKZ	**Mys Kozlova**	**5.66**	**63**	P	**P**	**14 54 01.9**	**+0.2**
MKZ				*i* S	**S**	**14 55 10.4**	**-5.6**
KBTR	**Krutoberegovo**	**6.92**	**52**	P	**P**	**14 54 14.4**	**-0.3**
BILL	**Bilibino** comp=Z,2.1nm,0.6s	**17.00**	**17**	P	**P**	**14 56 02.5**	**-0.3**
BILL	**Bilibino** comp=Z,2.0nm,0.6s	**17.00**	**17**	P	**P**	**14 56 02.5**	**-0.2**
BILL				pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,0.5nm,0.3s,baz=11,slow=10.0,SNR=5.4	**18.95**	**219**	P	**P**	**14 56 23.4**	**+0.8**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.3s	**18.95**	**219**	P	**P**	**14 56 23.4**	**+0.9**
MJAR				pmax	pmax		
YKA	**Yellowknife Ar** comp=Z,1.7nm,0.9s,mb3.5,baz=303,slow=6.8,SNR=3.1	**46.56**	**40**	P	**P**	**15 00 16.6**	**+0.7**
ARCES	**ARCESS Array B** comp=Z,1.6nm,0.9s,mb3.4,baz=47,slow=8.1,SNR=7.8	**52.58**	**339**	P	**P**	**15 00 59.6**	**-0.7**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.8s,mb3.0,baz=344,slow=3.0,SNR=3.1	**61.58**	**56**	P	**P**	**15 02 03.9**	**+1.1**
NOA	**NORSAR Array B** comp=Z,1.3nm,0.8s,mb3.5,baz=200,slow=18,SNR=2.5	**62.93**	**340**	P	**P**	**15 02 10.6**	**-0.7**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.7s,mb3.0,baz=17,slow=6.2,SNR=4.7	**73.79**	**198**	P	**P**	**15 03 17.2**	**-0.8**
ASAR	**Alice Springs** comp=Z,0.3nm,0.4s,mb3.0,baz=324,slow=12,SNR=10	**77.50**	**198**	P	**P**	**15 03 38.0**	**-0.6**

*ISCJB **01** 15:10:09.8±0.8,2859S±0.10×1790W±02,h268km±8km, mb3.5/6,Error ellipse: s-maj=22.9km s-min=13.2km az=26.4*
*NEIC **01** 15:10:09.1±1.1,2853S×17838W,h287km±15km,mb3.6/2, Error ellipse: s-maj=41.4km s-min=19.5km az=138.0*
*IDC **01** 15:10:10.1±0.6,2875S×17858W,h280km±9km,mb3.2/4, mb1 3.5/5,mb1mx3.3/15,mbtmp3.2/5,Error ellipse: s-maj=36.8km s-min=18.6km az=143.0*

ISC 01 15:10:10.7±0.8,**286S**±01×**1789W**±02,**h264**km±8km,**n16,**
σ0**97**/16,**mb3.5/6,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 107nm,0.3s,baz=237,slow=19,SNR=9.0	**1.10**	**129**	P	**Pn**	**15 10 48.3**	**+0.6**
RAO	300nm,0.3s,baz=286,slow=23,SNR=6.6			S	**S**	**15 11 16.9**	**-0.2**
RAO	**Raoul Island**	**1.10**	**129**	*e*Pn	**Pn**	**15 10 47.8**	**0.0**
RAO				P		15 10 48.3	
RAO				S	**S**	**15 11 16.9**	**-0.2**
URZ	**Urewera** 0.6nm,0.3s,baz=2.1,slow=1.2,SNR=7.0	**10.23**	**198**	P	**Pn**	**15 12 31.5**	**-0.3**
URZ	2.3nm,0.3s,baz=140,slow=19,SNR=13			S	**S**	**15 14 22.0**	**-4.7**
STKA	**Stephens Creek** 1.1nm,1.0s,mb3.4,baz=100,slow=6.1,SNR=2.9	**34.17**	**255**	P	**P**	**15 16 31.6**	**+0.3**
ASAR	**Alice Springs** 0.8nm,0.6s,mb3.1,baz=94,slow=6.9,SNR=19	**42.45**	**265**	P	**P**	**15 17 40.4**	**+0.2**
WRAB	**Tennant Creek** 2.5nm,0.6s,mb3.6	**43.26**	**271**	*e*P	**P**	**15 17 46.3**	**-0.3**
WRA	**Warramunga Arr** 3.0nm,0.6s,mb3.7,baz=108,slow=7.7,SNR=39	**43.27**	**271**	P	**P**	**15 17 46.4**	**-0.3**
SBA	**Scott Base** 1.7nm,0.6s,mb3.5	**49.81**	**184**	P	**P**	**15 18 38.7**	**+2.3**
KHU	**Kahuku**	**52.59**	**28**	*e*P	**P**	**15 18 59.0**	**+1.3**
STCH	**Steam Cracks**	**52.92**	**28**	*e*P	**P**	**15 18 52.7**	**-7.4**
VNA3	**Neumayer Olymp**	**80.18**	**176**	*e*	**P**	**15 21 50.7**	**-0.5**
VNA3				*e*		15 21 57.6	
VNA2	**Neumayer--Watz** baz=174,slow=3.5	**80.61**	**177**	*e*	**P**	**15 21 53.5**	**0.0**
VNA2				*e*		15 22 01.3	
NVAR	**Mina Array Bea** 0.4nm,0.6s,mb3.4,baz=220,slow=7.9,SNR=3.8	**87.44**	**43**	P	**P**	**15 22 25.8**	**-2.4**
NOA	**NORSAR Array B** 1.2nm,0.7s,baz=16,slow=4.2,SNR=2.8	**146.82**	**351**	PKPbc	PKPbc	15 29 18.3	-2.8
AKASG	**Malin Array Be** 0.9nm,0.3s,baz=48,slow=3.2,SNR=7.5	**149.36**	**324**	PKPbc	PKPbc	15 29 26.1	-1.9
AKASG	1.5nm,0.4s,baz=44,slow=5.2,SNR=8.1			PKPab	PKPab	15 29 32.5	-1.1
AKASG	**Malin Array Be**	**149.36**	**324**	PKPbc	PKPbc	15 29 26.1	-1.9
AKASG				PKPab	PKPab	15 29 32.5	-1.1

*ISCJB **01** 15:11:02.0±2.0,199S±0.1×1760W±0.1,h164km±20km, mb4.3/14,Error ellipse: s-maj=19.9km s-min=12.8km az=143.8*
*IDC **01** 15:11:03.6±8.4,1988S×17595W,h163km±76km,mb4.0/9, mb1 4.2/10,mb1mx4.0/19,mbtmp4.0/10,Error ellipse: s-maj=30.2km s-min=22.4km az=2.0*
*NEIC **01** 15:11:04.8±1.9,1988S×17584W,h180km±20km,mb4.9/8, Error ellipse: s-maj=21.9km s-min=12.0km az=141.0*

ISC 01 15:11:03.6±1.8,**199S**±01×**1759W**±01,**h165**km±18km,**n34,**
σ0**68**/34,**mb4.3**/14,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 97nm,0.6s	**7.15**	**34**	*e*Pn	**Pn**	**15 12 45.6**	**-0.1**
AFI				*e*Sn	**Sn**	**15 13 58.1**	**-8.0**
DZM	**Mont Dzumac**	**16.60**	**259**	*e*P	**Pn**	**15 14 51.8**	**+4.9**
DZM	**Mont Dzumac**	**16.60**	**259**	*e*P	**Pn**	**15 14 52.3**	**+5.4**
NOUC	**Port Laguerre**	**16.73**	**259**	*e*P	**Pn**	**15 14 53.5**	**+5.0**
URZ	**Urewera** 12nm,0.3s,baz=350,slow=2.0,SNR=17	**19.28**	**197**	P	**P**	**15 15 15.2**	**-0.3**
RPZ	**Rata Peaks** 9.1nm,0.5s,mb4.7,baz=109,slow=15,SNR=3.0	**26.14**	**202**	P	**P**	**15 16 23.3**	**+1.1**
EIDS	**Eidsvold** 2.4nm,0.4s,mb5.3	**30.88**	**254**	*e*P	**P**	**15 17 05.6**	**+1.0**
CNB	**Canberra Magne**	**34.17**	**236**	*e*P	**P**	**15 17 33.9**	**+0.8**
CTA	**Charters Tower** 12nm,0.4s,mb4.9	**35.49**	**263**	*e*P	**P**	**15 17 45.6**	**+1.1**
CTA	**Charters Tower** 19nm,0.5s,mb5.0,baz=92,slow=11,SNR=37	**35.49**	**263**	P	**P**	**15 17 45.7**	**+1.1**
CTA	**Charters Tower** 14nm,0.5s,mb4.8	**35.49**	**263**	P	**P**	**15 17 45.7**	**+1.1**
CTAO	**Charters Tower** 1.8nm,0.7s,mb3.8,baz=102,slow=12,SNR=9.5	**35.49**	**263**	*e*P	**P**	**15 17 45.3**	**+0.8**
TOO	**Toolangi**	**37.82**	**234**	*e*P	**P**	**15 18 03.1**	**-1.0**
STKA	**Stephens Creek**	**39.80**	**244**	*e*P	**P**	**15 18 20.8**	**+0.2**
STKA	**Stephens Creek** 3.5nm,0.8s,mb4.0	**39.80**	**244**	P	**P**	**15 18 20.6**	**0.0**
STKA	**Stephens Creek** 4.5nm,0.6s,mb4.3	**39.80**	**244**	*e*P	**P**	**15 18 20.4**	**-0.2**
POHA	**Pohakuloa** 162nm,1.1s	**44.18**	**28**	P	**P**	**15 18 55.4**	**-0.7**
ASAR	**Alice Springs** 5.5nm,0.3s,mb4.6,baz=83,slow=8.7,SNR=102	**46.55**	**256**	P	**P**	**15 19 14.8**	**0.0**
WB2	**Warramunga Arr**	**46.60**	**261**	*e*P	**P**	**15 19 14.7**	**-0.6**
WB2	**Warramunga Arr**	**46.60**	**261**	*e*P	**P**	**15 19 14.7**	**-0.6**
WRAB	**Tennant Creek** 4.5nm,0.6s,mb4.3	**46.60**	**261**	*e*P	**P**	**15 19 14.6**	**-0.7**
WRA	**Warramunga Arr** 5.5nm,0.5s,mb4.4,baz=97,slow=8.7,SNR=83	**46.61**	**261**	P	**P**	**15 19 14.7**	**-0.7**
KAKA	**Kakadu** 7.9nm,0.8s,mb4.4	**49.91**	**270**	*e*P	**P**	**15 19 32.4**	**-8.3**
MBWA	**Marble Bar** 5.1nm,0.6s,mb4.5	**59.88**	**257**	*e*P	**P**	**15 20 51.4**	**-0.9**
NVAR	**Mina Array Bea** 0.6nm,0.7s,mb3.4,baz=223,slow=8.6,SNR=4.5	**79.26**	**42**	P	**P**	**15 22 50.9**	**+0.4**
PMSA	**Palmer Station** 49nm,1.4s,mb5.0	**81.07**	**156**	P	**P**	**15 23 00.1**	**+0.3**
MAW	**Mawson** 1.2nm,0.3s,mb4.1,baz=121,slow=1.9,SNR=14	**82.79**	**199**	P	**P**	**15 23 09.0**	**+0.3**
TXAR	**Lajitas Array** 0.7nm,0.6s,mb3.5,baz=216,slow=7.7,SNR=6.8	**85.10**	**57**	P	**P**	**15 23 22.2**	**+1.1**
SNAA	**Sanae**	**88.56**	**178**	*e*	**P**	**15 23 36.7**	**-0.4**
SNAA				*e*		15 23 39.0	
VNA3	**Neumayer Olymp**	**88.61**	**176**	*e*	**P**	**15 23 37.0**	**-0.3**
VNA3				*e*		15 23 39.1	
VNA2	**Neumayer--Watz** baz=196,slow=3.6	**89.08**	**176**	*e*	**P**	**15 23 38.7**	**-0.8**
VNA2				*e*		15 23 41.0	
VNA1	**Neumayer--Stat**	**89.29**	**176**	*e*	**P**	**15 23 40.2**	**-0.3**
VNA1				*e*		15 23 42.4	
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,mb3.6,baz=140,slow=2.5,SNR=4.6	**91.75**	**289**	P	**P**	**15 23 53.6**	**+0.7**
GERES	**GERESS Array B** 0.3nm,0.6s,baz=0.0,slow=3.9,SNR=3.6	**150.09**	**347**	PKPbc	PKPbc	15 30 33.8	-0.7

*MOS **01** 15:21:33.9±1.4,4456N×15006E,h21km,mb4.2/6,Error ellipse: s-maj=15.3km s-min=13.3km az=132.7*
*JMA **01** 15:21:37.9±0.5,4462N×14980E,h30km,M4.4*
*ISCJB **01** 15:21:38.3±1.2,4421N±009×14978E±0.10,h61km±11km, mb3.9/13,Error ellipse: s-maj=16.4km s-min=10.2km az=154.7*
*IDC **01** 15:21:39.8±0.9,4454N×14992E,h50km±7km,mb3.5/9, mb1 3.7/11,mb1mx3.6/20,mbtmp3.6/11,MS3.1/1, Ms1 3.1/1,ms1mx2.4/34,Error ellipse: s-maj=20.2km s-min=18.7km az=107.0*
*NEIC **01** 15:21:39.8±0.6,4449N×14983E,mb4.6/1,Error ellipse: s-maj=17.0km s-min=11.6km az=122.0*

ISC 01 15:21:39.5±0.9,**4432N**±008×**14981E**±009,**h50**km±9km, **h52**km±2.6km:**pP-P,n56,**σ1**9**20/60,**mb3.9**/13,**2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**2.85**	**266**	PN	**Pn**	**15 22 21.0**	**-1.5**
YUK				*e*S	**Sn**	**15 23 00.5**	**+5.0**
YUK	comp=N,400nm,0.5s			smax			
YUK	comp=E,400nm,0.5s			smax			
NEM2	**Nemuro 2**	**3.09**	**253**	P	**Pn**	**15 22 24.9**	**-0.8**
NEM2				*e*S	**Sn**	**15 22 59.8**	**-1.6**
JRA	**Rausu**	**3.39**	**265**	P	**Pn**	**15 22 30.7**	**+0.8**
JRA				*e*S	**Sn**	**15 23 09.3**	**+0.4**
JNK	**Nakash**	**3.75**	**260**	P	**Pn**	**15 22 34.8**	**+0.1**
JNK				*e*S	**Sn**	**15 23 17.2**	**-0.3**
JAK	**Akkeshi**	**3.94**	**252**	P	**Pn**	**15 22 36.7**	**-0.6**
JAK				*e*S	**Sn**	**15 23 20.1**	**-2.1**
JTKR	**Abashiri--Toko**	**4.26**	**267**	P	**Pn**	**15 22 42.7**	**+0.9**
JAR	**Ashorobuto**	**4.49**	**259**	P	**Pn**	**15 22 45.4**	**+0.5**
JAR				*e*S	**Sn**	**15 23 37.5**	**+1.7**
JOB	**Onbets**	**4.56**	**254**	P	**Pn**	**15 22 46.1**	**+0.2**
JOB				*e*S	**Sn**	**15 23 37.7**	**+0.1**
JMP	**Maruseppu**	**4.65**	**268**	P	**Pn**	**15 22 48.5**	**+1.4**
JCH	**Churui**	**4.99**	**252**	P	**Pn**	**15 22 51.8**	**0.0**
JCH				*e*S	**Sn**	**15 23 47.1**	**-1.0**
JKK2	**Kamakawa 2**	**5.10**	**267**	P	**Pn**	**15 22 55.0**	**+1.7**
ASAJ	**Asahikawa** comp=E,4.3nm,0.3s,baz=96,slow=12,SNR=36	**5.19**	**270**	P	**Pn**	**15 22 56.9**	**+2.4**
ASAJ	comp=E,183nm,18.2s,baz=106,slow=41			LR	LR	15 25 17.0	
ASAJ	**Asahikawa**	**5.19**	**270**	PN	**Pn**	**15 22 56.9**	**+2.4**
ASAJ	comp=Z,4.0nm,0.3s			pmax	pmax		
ASAJ	comp=Z,183nm,18.2s			MLR	MLR		
JFR	**Furan**	**5.35**	**260**	P	**Pn**	**15 22 58.5**	**+1.7**
ERM	**Erimo**	**5.38**	**247**	⇑*e*PN	**Pn**	**15 22 58.4**	**+1.2**
JNBK	**Urakawa-nobuka**	**5.54**	**251**	P	**Pn**	**15 22 59.1**	**-0.2**
JNBK				*e*S	**Sn**	**15 23 59.0**	**-2.6**
YSS	**Yuzh-Sakhalins**	**5.60**	**301**	*i* PN	**Pn**	**15 23 01.0**	**+0.9**
JBT2	**Biratori 2**	**5.62**	**257**	P	**Pn**	**15 23 01.0**	**+0.5**
JEW	**Eniwo**	**6.25**	**259**	P	**Pn**	**15 23 10.5**	**+1.5**
JNB	**Noboribetsu**	**6.65**	**257**	P	**Pn**	**15 23 15.0**	**+0.4**
JNB				*e*S	Sx	15 24 28.4	
JKB	**Kayabe**	**6.87**	**252**	P	**Pn**	**15 23 17.4**	**-0.1**
JKB				*e*S	Sx	15 24 31.3	
JYM2	**Yakumo 2**	**7.24**	**256**	P	**Pn**	**15 23 22.7**	**+0.1**
JYM2				*e*S	Sx	15 24 42.1	
JANG	**Nango**	**7.30**	**240**	P	**Pn**	**15 23 21.4**	**-2.0**
JANG				*e*S	Sx	15 24 38.4	
JTH	**Tanohata**	**7.35**	**236**	*e*S	Sx	15 24 39.9	
JTM	**Tenmabayashi**	**7.35**	**244**	P	**Pn**	**15 23 23.4**	**-0.8**
JTM				*e*S	Sx	15 24 42.1	
JSR	**Shiriuchi**	**7.43**	**251**	P	**Pn**	**15 23 25.0**	**-0.3**
JSR				*e*S	Sx	15 24 44.2	
JOSM	**Okushiri--Mats**	**7.87**	**257**	P	**Pn**	**15 23 31.4**	**+0.1**
OFUJ	**Ofunato**	**8.03**	**232**	*e*S	Sx	15 24 56.9	
JRG	**Rokugo**	**8.43**	**237**	*e*S	**Sn**	**15 25 07.8**	**-4.8**
JIO	**Ouri**	**8.64**	**230**	P	**Pn**	**15 23 39.9**	**-2.0**
JIO				*e*S	Sx	15 25 11.0	
JFK	**Kawauchi**	**9.69**	**227**	*e*S	**Sn**	**15 25 37.1**	**-6.6**
PETK	**Petropavlovsk-** comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=3.8	**10.22**	**28**	P	**Pn**	**15 24 02.3**	**-1.0**
YAK	**Yakutsk**	**21.29**	**333**	⇑*e*P	**P**	**15 26 19.3**	**-2.2**
YAK	comp=Z,9.0nm,1.0s,mb4.0			pmax	pmax		
TIXI	**Tiksi**	**29.22**	**347**	*i* P	**P**	**15 27 32.0**	**-4.0**
TIXI	comp=Z,1.0nm,0.5s,mb3.8			pmax	pmax		
SONM	**Songino Array** comp=Z,0.2nm,0.3s,mb3.3,baz=94,slow=8.0,SNR=3.4	**30.02**	**292**	P	**P**	**15 27 43.4**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=72,slow=4.7,SNR=3.1	**42.18**	**307**	PcP	PcP	15 31 21.1	+0.8
MKAR

*ISCJB **01** 15:32:56.8±0.5,3959N×004×3328E×004,h10km, Error ellipse: s-maj=5.5km s-min=4.3km az=29.3*
*DDA **01** 15:32:56.3,3958N×3330E,h7km×4km,Md3.0*
ISC 01 15:32:56.6±0.8,3959N±004×3328E±004,h4km±7km,n19, σ1§10/27,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.40**	**123**	PG	**Pg**	**15 33 03.6**	**-0.7**
KAMT				*e*SG	**Sg**	**15 33 10.6**	**+1.0**
ANTO	**Ankara**	**0.46**	**307**	*e*PG	**Pg**	**15 33 04.5**	**-1.1**
CDAG	**Cicekdag**	**0.85**	**87**	*e*P	**Pg**	**15 33 12.9**	**+0.1**
CDAG				*e*S	**Sg**	**15 33 26.0**	**+2.2**
CDAG	**Cicekdag**	**0.85**	**87**	*e*P	**Pg**	**15 33 12.9**	**+0.1**
CDAG				*e*S	**Sg**	**15 33 26.0**	**+2.2**
ELDT	**Eldivan**	**0.91**	**7**	*e*P	**Pg**	**15 33 13.7**	**-0.2**
CANT	**Cankiri**	**1.05**	**14**	*e*PG	**Pg**	**15 33 15.7**	**-0.9**
CORM	**Corum**	**1.20**	**60**	*e*PN	**Pn**	**15 33 18.6**	**-1.4**
KIZT	**Kizilcal**	**1.30**	**237**	*e*PN	**Pn**	**15 33 21.1**	**-0.3**
SGKT	**Sivrigoynuk**	**1.36**	**317**	*e*P	**Pn**	**15 33 22.3**	**0.0**
SGKT				*e*S	**Sb**	**15 33 42.0**	**+1.9**
SGKT	**Sivrigoynuk**	**1.36**	**317**	*e*P	**Pn**	**15 33 22.3**	**0.0**
SGKT				*e*S	**Sb**	**15 33 42.0**	**+1.8**
KDHN	**Kadinhani**	**1.40**	**221**	*e*P	**Pn**	**15 33 22.1**	**-0.8**
KDHN				*e*S	**Sb**	**15 33 43.4**	**+2.0**
AVNT	**Avonos**	**1.47**	**123**	⇓*i*P	**Pn**	**15 33 21.1**	**-2.7**
AVNT				*i* S	**Sn**	**15 33 43.3**	**-0.2**
CTKT	**Corum**	**1.55**	**48**	*e*P	**Pn**	**15 33 25.6**	**+0.6**
CTKT				*e*S	**Sn**	**15 33 51.4**	**+5.9**
CTKT	**Corum**	**1.55**	**48**	*e*P	**Pn**	**15 33 25.5**	**+0.6**
TOS	**Tosya**	**1.55**	**21**	*e*PN	**Pn**	**15 33 24.4**	**-0.5**
LADK	**Ladik-KONYA**	**1.56**	**207**	*e*PN	**Pn**	**15 33 24.6**	**-0.5**
YOZ	**Yozgat**	**1.58**	**88**	*e*PN	**Pn**	**15 33 25.2**	**-0.2**
KONT	**Konya--Tatoy**	**1.79**	**204**	*e*PN	**Pn**	**15 33 28.1**	**-0.1**
BALT	**Daday**	**1.94**	**2**	*e*P	**Pn**	**15 33 32.1**	**+1.8**

*ISCJB **01** 15:58:34.5±0.5,5.14S±006×15186E±007,h46km, mb4.5/22, MS3.5/4, Error ellipse: s-maj=9.9km s-min=9.1km az=174.7*
*IDC **01** 15:58:36.0±0.7,520S×15184E,h43km±5km,mb4.3/13, mb1 4.4/15,mb1mx4.3/20,mbtmp4.3/15,ML4.1/2,MS3.5/6, Ms1 3.4/6,ms1mx3.0/31, Error ellipse: s-maj=16.3km s-min=11.8km az=114.0*
*NEIC **01** 15:58:35.0±1.3,508S×15185E,h38km±11km,mb4.8/13, Error ellipse: s-maj=8.9km s-min=8.7km az=81.0*
ISC 01 15:58:37.2±1.4,520S±007×15182E±007,h53km±12km, h48km±1.2km:pP-P,n50,σ0§85/48,mb4.5/21,MS3.5/4,2D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.23**	**228**	*e*Pn	**Pn**	**16 00 06.1**	**-0.6**
PMG	120nm,0.8s			*e*Sn	**Sn**	**16 00 57.6**	**-19**
HNR	**Honiara**	**9.09**	**118**	P	**Pn**	**16 00 45.9**	**0.0**
	14nm,0.3s,baz=258,slow=7.8,SNR=5.8						
HNR	**Honiara**	**9.09**	**118**	*e*Pn	**Pn**	**16 00 43.5**	**-2.4**
CTA	**Charters Tower**	**15.76**	**200**	*e*P	**Pn**	**16 02 21.2**	**+5.3**
	8.6nm,1.0s						
CTA	**Charters Tower**	**15.76**	**200**	P	**Pn**	**16 02 16.9**	**+1.0**
	0.1nm,0.3s,baz=28,slow=14,SNR=4.2						
CTA				LR	LR	16 07 35.1	
	comp=Z,196nm,20.0s,baz=38,slow=34						
CTA	**Charters Tower**	**15.76**	**200**	P	**Pn**	**16 02 16.9**	**+1.0**
CTA				*e*P		16 02 21.2	
CTA				LR	LR	16 07 35.1	
CTAO	**Charters Tower**	**15.76**	**200**	*e*Pn	**Pn**	**16 02 16.2**	**+0.4**
	14nm,0.9s						
GUMO	**Guam**	**19.90**	**340**	LR	LR	16 10 32.3	
	comp=Z,42nm,18.1s,baz=151,slow=36						
EIDS	**Eidsvold**	**20.07**	**182**	*e*P	**P**	**16 03 07.2**	**+0.8**
	58nm,0.8s						
KAKA	**Kakadu**	**20.53**	**247**	⇓*i*P	**P**	**16 03 03.9**	**-7.6**
	61nm,0.5s						
KAKA	**Kakadu**	**20.53**	**247**	*e*P	**P**	**16 03 03.8**	**-7.7**
	123nm,0.5s						
DZM	**Mont Dzumac**	**21.95**	**141**	*e*P	**P**	**16 03 26.0**	**-0.6**
WRAB	**Tennant Creek**	**22.44**	**228**	*e*P	**P**	**16 03 31.8**	**0.0**
	45nm,0.8s,mb5.0						
WRAB				*e*S	**S**	**16 07 34.4**	**-0.9**
WB2	**Warramunga Arr**	**22.44**	**228**	⇓*i*P	**P**	**16 03 32.2**	**+0.3**
WB2				*e*S	**S**	**16 07 32.7**	**-2.7**
WB2	**Warramunga Arr**	**22.44**	**228**	*e*P	**P**	**16 03 32.0**	**+0.1**
WB2				*e*S	**S**	**16 07 24.3**	**-11**
WRA	**Warramunga Arr**	**22.45**	**228**	P	**P**	**16 03 31.9**	**0.0**
	28nm,0.6s,mb4.9,baz=53,slow=9.9,SNR=160						
WRA				S	**S**	**16 07 34.1**	**-1.5**
	4.7nm,1.0s,baz=52,slow=18,SNR=8.9						
ARMA	**Armidale**	**25.09**	**180**	*e*P	**P**	**16 03 58.2**	**+1.2**
ARMA	**Armidale**	**25.09**	**180**	*e*P	**P**	**16 03 57.7**	**+0.7**
	1.0nm,1.4s						
ASAR	**Alice Springs**	**25.20**	**221**	P	**P**	**16 03 58.6**	**+0.5**
	20nm,0.4s,mb5.0,baz=58,slow=9.3,SNR=355						
ASAR				sP	sP	16 04 13.5	-4.2
	18nm,0.7s,baz=55,slow=8.6,SNR=10						
ASAR				S	**S**	**16 08 23.8**	**+3.9**
	0.5nm,0.8s,baz=53,slow=14,SNR=3.2						
STKA	**Stephens Creek**	**28.22**	**199**	*e*P	**P**	**16 04 24.5**	**-0.7**
	4.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**28.22**	**199**	P	**P**	**16 04 24.3**	**-0.9**
	4.4nm,0.6s,mb4.3,baz=31,slow=13,SNR=21						
STKA				LR	LR	16 15 48.1	
	comp=Z,121nm,18.3s,MS3.5,baz=27,slow=37						
STKA	**Stephens Creek**	**28.22**	**199**	*e*P	**P**	**16 04 24.1**	**-1.0**
	4.4nm,0.6s,mb4.3						
STKA				LR	LR	16 15 48.0	
BATI	**Baumata**	**28.33**	**258**	P	**P**	**16 04 27.7**	**+1.3**
	25nm,0.7s,mb5.0,baz=81,slow=1.9,SNR=9.7						
TOO	**Toolangi**	**32.74**	**189**	*e*P	**P**	**16 05 06.6**	**+1.6**
FORT	**Forrest**	**33.87**	**218**	*e*P	**P**	**16 05 14.6**	**-0.3**
	16nm,0.5s,mb5.2						
MBWA	**Marble Bar**	**34.93**	**240**	*e*P	**P**	**16 05 24.1**	**-0.2**
	9.2nm,0.6s,mb4.9						
TAU	**Tasmania Unive**	**37.77**	**185**	*e*P	**P**	**16 05 48.7**	**+0.6**
	14nm,1.0s,mb4.6						
URZ	**Urewera**	**40.15**	**149**	P	**P**	**16 06 08.1**	**-0.1**
	2.4nm,0.3s,mb4.3,baz=268,slow=6.2,SNR=6.8						
KLBR	**Kellerberrin**	**41.32**	**226**	*e*P	**P**	**16 06 16.8**	**-1.2**
	29nm,1.5s,mb4.7						
NACB	**Ninganchiao**	**41.47**	**316**	*e*P	**P**	**16 06 15.4**	**-3.8**
	273nm,1.2s						
RPZ	**Rata Peaks**	**41.95**	**159**	P	**P**	**16 06 21.4**	**-1.4**
	3.7nm,0.6s,mb4.2,baz=27,slow=3.8,SNR=5.4						
RPZ				LR	LR	16 21 13.6	
	comp=Z,126nm,18.7s,MS3.8,baz=19,slow=32						
MUN	**Mundaring**	**42.65**	**227**	*e*P	**P**	**16 06 28.6**	**-0.2**
KSRS	**Korea Array**	**47.92**	**334**	LR	LR	16 23 39.3	
	comp=Z,24nm,18.9s,MS3.2,baz=350,slow=31						
CMAR	**Chiang Mai Arr**	**57.16**	**296**	P	**P**	**16 08 19.3**	**+0.1**
	0.5nm,0.4s,mb3.9,baz=109,slow=5.4,SNR=10.0						
CMAR				pP	pP	16 08 32.7	-0.9
	0.9nm,0.8s,baz=111,slow=4.5,SNR=4.5						
PETK	**Petropavlovsk-**	**58.30**	**4**	LR	LR	16 29 27.5	
	comp=Z,41nm,20.3s,MS3.5,baz=90,slow=32						
ULN	**Ulaanbaatar**	**65.82**	**329**	P	**P**	**16 09 16.9**	**-0.1**
	2.5nm,1.0s,mb4.2						
SONM	**Songino Array**	**66.14**	**328**	P	**P**	**16 09 19.1**	**0.0**
	0.7nm,0.5s,mb3.9,baz=142,slow=4.9,SNR=5.8						
SONM				pP	pP	16 09 32.8	-0.9
	1.2nm,0.5s,baz=147,slow=5.8,SNR=6.3						
LSA	**Lhasa**	**67.66**	**305**	*e*P	**P**	**16 09 30.4**	**+1.2**
	3.1nm,0.6s,mb4.5						
SBA	**Scott Base**	**73.04**	**177**	*e*P	**P**	**16 10 02.2**	**+1.1**
	5.7nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**79.98**	**319**	P	**P**	**16 10 40.3**	**-0.6**
	0.5nm,0.6s,mb3.6,baz=107,slow=9.9,SNR=5.1						
MKAR				pP	pP	16 10 53.0	-3.0
	0.9nm,0.9s,baz=80,slow=8.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**80.94**	**327**	P	**P**	**16 10 45.0**	**-0.9**
	1.0nm,0.4s,mb4.1,baz=113,slow=5.1,SNR=4.6						
ZALV				pP	pP	16 10 58.6	-2.4
	0.8nm,0.4s,baz=100,slow=6.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**80.94**	**327**	P	**P**	**16 10 45.0**	**-0.9**
ZALV				pP	pP	16 10 58.6	-2.4
QSPA	**South Pole Qui**	**84.77**	**180**	*e*P	**P**	**16 11 05.6**	**+0.3**
	7.9nm,0.8s,mb4.9						
MAW	**Mawson**	**84.83**	**203**	P	**P**	**16 11 05.9**	**+0.1**
	5.1nm,0.6s,mb4.8,baz=81,slow=5.3,SNR=23						
NVAR	**Mina Array Bea**	**93.10**	**52**	P	**P**	**16 11 46.2**	**+0.5**
	0.6nm,0.6s,mb4.2,baz=252,slow=4.6,SNR=5.3						
PDAR	**Pinedale Array**	**99.84**	**48**	P	Pdif	16 12 15.8	-0.1
	0.3nm,0.7s,baz=282,slow=4.5,SNR=2.7						
GERES	**GERESS Array B**	**123.87**	**328**	PKP	PKPdf	16 17 28.7	-0.8
	0.5nm,0.5s,baz=50,slow=2.1,SNR=6.2						
GERES				pPKP	pPKPdf	16 17 42.5	-2.8
	0.5nm,0.6s,baz=85,slow=2.8,SNR=3.5						
LPAZ	**La Paz**	**135.09**	**119**	PKP	PKPdf	16 17 52.5	+0.8
	1.4nm,0.8s,baz=225,slow=3.4,SNR=6.2						
TOA0	**Torodi Ar. Sit**	**149.49**	**287**	*e*PKPbc	PKPbc	16 18 20.8	-1.0
TORD	**Torodi Ar. Bea**	**149.49**	**287**	PKPbc	PKPbc	16 18 20.8	-1.0
	189nm,0.4s,baz=86,slow=2.3,SNR=2.2						

*CSEM **01** 16:17:32.9±0.1,4014N×4256E,h2km,MD2.9, Error ellipse: s-maj=2.1km s-min=1.4km az=48.0*
*ISCJB **01** 16:17:34.5±0.7,4015N±003×4257E±004,h4km±7km, Error ellipse: s-maj=5.9km s-min=4.1km az=38.1*
*ISK **01** 16:17:34.0,4014N×4255E,h6km,MD2.9*
*DDA **01** 16:17:34.7,4014N×4260E,h5km,Md2.9*
ISC 01 16:17:35.0±0.5,4015N±003×4257E±004,h11km±6km,n14, σ1§09/24,1C-4D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.52**	**259**	⇑*i*P	**Pg**	**16 17 44.5**	**-0.7**
HOMI				*i* S	**Sg**	**16 17 52.5**	**+0.5**
KARS	**Kars**	**0.61**	**40**	*e*PG	**Pg**	**16 17 46.4**	**-0.6**
KARS				*e*SG	**Sg**	**16 17 55.9**	**+0.9**
AGRB	**Hanur-Agry**	**0.66**	**150**	*e*PG	**Pg**	**16 17 46.6**	**-1.2**
AGRB				*e*SG	**Sg**	**16 17 56.9**	**+0.6**
ERZM	**Erzurum**	**0.95**	**256**	⇓*i*P	**Pg**	**16 17 53.0**	**-0.4**
ERZM				*e*S	**Sg**	**16 18 08.5**	**+2.7**
EZM	**Erzurum**	**0.96**	**256**	*e*PG	**Pg**	**16 17 52.7**	**-0.8**
DDEM	**Demirkent**	**0.97**	**320**	⇓*i*P	**Pg**	**16 17 53.0**	**-0.8**
DDEM				*i* S	**Sg**	**16 18 07.9**	**+1.4**
DYDN	**Diyadin**	**1.05**	**125**	*e*P	**Pb**	**16 17 53.7**	**-1.4**
DYDN				*e*S	**Sb**	**16 18 11.9**	**+3.0**
DAGI	**Agillar**	**1.06**	**332**	⇓*i*P	**Pb**	**16 17 54.6**	**-0.7**
DAGI				*i* S	**Sb**	**16 18 07.5**	**-1.6**
DBAD	**Bademkaya**	**1.10**	**323**	*e*P	**Pb**	**16 17 55.2**	**-0.8**
DBAD				*e*S	**Sb**	**16 18 11.1**	**+0.8**
ARTV	**Artvin**	**1.15**	**335**	⇓*i*P	**Pb**	**16 17 56.2**	**-0.6**
ARTV				*i* S	**Sb**	**16 18 14.0**	**+2.3**
DBOC	**Borcka**	**1.38**	**330**	*e*P	**Pn**	**16 17 59.9**	**-0.3**
DBOC				*e*S	**Sn**	**16 18 17.9**	**-0.4**
CLDR	**Caldiran**	**1.44**	**133**	*e*PN	**Pn**	**16 18 01.3**	**+0.3**
BCA	**Borcka**	**1.48**	**331**	*e*PN	**Pn**	**16 18 01.8**	**+0.2**
GNI	**Garni**	**1.67**	**89**	*e*PN	**Pn**	**16 18 04.9**	**+0.9**

*IDC **01** 16:18:06.7±3.3,2105S×16884E,h0km,mb4.1/6, mb1 4.3/6,mb1mx4.1/15,mbtmp4.1/6,MS3.5/2,Ms1 3.4/2, ms1mx2.9/26,Error ellipse: s-maj=98.3km s-min=35.9km az=138.0*
*NOU **01** 16:18:07.4±0.8, 1992S×16812E,h10km,MD2.1,ML3.8*
*ISCJB **01** 16:18:09.0±1.9,212S±02×169.1E±0.1,h38km±14km, mb4.2/6,MS3.5/2,Error ellipse: s-maj=32.9km s-min=15.5km az=156.0*
*NEIC **01** 16:18:11.1±1.2,2125S×16892E,h35km,mb4.7/2,Error ellipse: s-maj=29.7km s-min=23.2km az=147.0*
ISC 01 16:18:08.3±2.8,211S±02×1690E±01,h18km±19km,n18, σ1§11/22,mb4.2/6,MS3.5/2,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUM	**Mont Dore**	**2.50**	**243**	*e*P	**Pn**	**16 18 49.0**	**+1.0**
PLUM				*e*S	**Sn**	**16 19 19.9**	**+1.8**
PLUM				AMP		16 19 22.9	
	comp=Z,518nm,0.0s						
LASL	**Noumea**	**2.57**	**245**	*e*P	**Pn**	**16 18 49.2**	**+0.2**
DZM	**Mont Dzumac**	**2.59**	**249**	*e*P	**Pn**	**16 18 48.1**	**-1.1**
DZM				*e*S	**Sn**	**16 19 18.1**	**-2.1**
DZM				AMP		16 19 24.3	
	comp=Z,3μm,0.0s						
DZM	**Mont Dzumac**	**2.59**	**249**	*e*Pn	**Pn**	**16 18 47.7**	**-1.5**
DZM				*e*Sn	**Sn**	**16 19 17.4**	**-2.9**
NORM	**Noumea**	**2.61**	**245**	*e*P	**Pn**	**16 18 50.0**	**+0.4**
NORM				*e*S	**Sn**	**16 19 21.5**	**+0.6**
NORM				AMP		16 19 25.6	
	comp=Z,978nm,5.6s						
ONTRN	**Noumea**	**2.67**	**244**	*e*P	**Pn**	**16 18 51.0**	**+0.6**
ONTRN				*e*S	**Sn**	**16 19 23.2**	**+0.9**
ONTRN				AMP		16 19 25.6	
	comp=Z,1μm,0.5s						
NOUC	**Port Laguerre**	**2.72**	**249**	*e*P	**Pn**	**16 18 50.4**	**-0.7**
NOUC				*e*S	**Sn**	**16 19 22.0**	**-1.5**
NOUC				AMP		16 19 24.6	
	comp=Z,254nm,0.0s						
CTA	**Charters Tower**	**21.35**	**269**	P	**P**	**16 22 55.1**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=105,slow=12,SNR=2.3						
STKA	**Stephens Creek**	**26.72**	**241**	*e*P	**P**	**16 23 48.2**	**+1.5**
	comp=Z,2.0nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**26.72**	**241**	P	**P**	**16 23 47.4**	**+0.8**
	comp=Z,2.0nm,0.6s,mb3.8,baz=82,slow=8.9,SNR=9.2						
STKA				LR	LR	16 34 00.8	
	comp=Z,76nm,18.3s,MS3.3,baz=184,slow=36						
WRA	**Warramunga Arr**	**32.48**	**266**	P	**P**	**16 24 35.8**	**-2.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=100,slow=7.9,SNR=6.1						
ASAR	**Alice Springs**	**32.53**	**259**	P	**P**	**16 24 37.9**	**-0.5**
	comp=Z,2.1nm,0.5s,mb4.3,baz=91,slow=9.0,SNR=54						
DAV	**Davao City (W)**	**51.05**	**299**	LR	LR	16 47 29.1	
	comp=Z,60nm,19.9s,MS3.6,baz=259,slow=35						
CASY	**Casey**	**58.32**	**204**	*e*P	**P**	**16 28 01.3**	**-0.5**
	comp=Z,24nm,0.5s,mb5.5						
MAW	**Mawson**	**76.61**	**202**	P	**P**	**16 29 56.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**79.12**	**295**	P	**P**	**16 30 13.1**	**+1.0**
	comp=Z,0.4nm,0.3s,mb3.8,baz=136,slow=4.5,SNR=4.6						
SONM	**Songino Array**	**88.62**	**323**	P	**P**	**16 31 01.0**	**+0.9**
	comp=Z,1.0nm,1.0s,mb4.1,baz=123,slow=5.3,SNR=3.7						
GERES	**GERESS Array B**	**146.06**	**330**	PKPbc	PKPbc	16 37 46.8	-0.2
	comp=Z,0.6nm,0.8s,baz=24,slow=2.7,SNR=3.6						

*ISCJB **01** 16:31:41.4±1.1,2506N±007×141.1E±02,h144km±12km, mb3.8/9, Error ellipse: s-maj=26.4km s-min=8.3km az=163.9*
*IDC **01** 16:31:41.7±1.4,2500N×14126E,h130km±14km,mb3.5/8, mb1 3.7/11,mb1mx3.6/22,mbtmp3.6/11, Error ellipse: s-maj=24.4km s-min=12.2km az=83.0*
*JMA **01** 16:31:42.1±0.2,2539N×14067E,h0km,M5.3*
ISC 01 16:31:42.5±1.1,2507N±007×1411E±02,h137km±12km, n28,σ0§92/39,mb3.8/9,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.81**	**31**	P	**Pn**	**16 32 15.3**	**+0.7**
JHHJ				*e*S	**Sn**	**16 32 39.3**	**+0.1**
CBIJ	**Chichi jima**	**2.22**	**25**	P	**Pn**	**16 32 20.4**	**+0.9**
	213nm,0.3s,baz=162,slow=5.3,SNR=440						
CBIJ				S	**Sn**	**16 32 47.5**	**-0.4**
	131nm,0.3s,baz=280,slow=23,SNR=14						
CBIJ	**Chichi jima**	**2.22**	**25**	P	**Pn**	**16 32 20.4**	**+0.9**
CBIJ				*e*S	**Sn**	**16 32 47.5**	**-0.5**
JHJ2	**Mitsune**	**8.09**	**352**	P	**Pn**	**16 33 39.1**	**+1.9**
JHJ2				*e*S	**Sn**	**16 35 05.2**	**-1.9**
JHJ	**Hachijo jima 2**	**8.11**	**352**	P	**Pn**	**16 33 37.5**	**+0.2**
	4.3nm,0.3s,baz=84,slow=19,SNR=5.7						
JHJ				S	**Sn**	**16 35 08.1**	**+0.7**
	9.5nm,0.3s,baz=73,slow=19,SNR=3.8						
BSO1	**Boso 1**	**9.55**	**359**	P	**Pn**	**16 33 56.2**	**-0.5**
BSO1				*e*S	**Sn**	**16 35 38.2**	**-4.0**
BSO3	**Boso 3**	**9.71**	**357**	P	**Pn**	**16 33 57.8**	**-1.0**
BSO3				*e*S	**Sn**	**16 35 40.3**	**-5.9**
BSO4	**Boso 4**	**9.91**	**356**	P	**Pn**	**16 34 01.7**	**+0.3**
JOD2	**Odawara 2**	**10.31**	**351**	P	**Pn**	**16 34 07.8**	**+1.0**
JOD2				*e*S	**Sn**	**16 35 58.9**	**-1.7**
JHJ	**Hanno**	**10.86**	**352**	P	**Pn**	**16 34 13.2**	**+0.9**
JHJ				*e*S	**Sn**	**16 36 07.5**	**-6.5**
JRY	**Ryogami san**	**11.08**	**351**	P	**Pn**	**16 34 17.7**	**+0.8**
JAG	**Ashikaga**	**11.41**	**353**	P	**Pn**	**16 34 20.1**	**-1.2**
JAG				*e*S	**Sn**	**16 36 21.4**	**-5.7**
MJAR	**Matsushiro Arr**	**11.71**	**348**	P	**Pn**	**16 34 25.4**	**+0.2**
	0.7nm,0.3s,baz=163,slow=12,SNR=12						
JMK	**Ichinoseki**	**13.84**	**0**	P	**Pn**	**16 34 53.7**	**+0.9**
JMK				*e*S	**Sn**	**16 37 16.3**	**-9.4**
ASAJ	**Asahikawa**	**19.04**	**3**	P	**P**	**16 35 58.8**	**+5.0**
	0.4nm,0.3s,baz=186,slow=9.2,SNR=4.4						
CTA	**Charters Tower**	**45.16**	**173**	P	**P**	**16 39 45.1**	**-0.5**
	2.0nm,0.5s,mb4.0,baz=0.0,slow=9.1,SNR=6.2						
WB2	**Warramunga Arr**	**45.23**	**189**	*e*P	**P**	**16 39 46.0**	**-0.2**
WRA	**Warramunga Arr**	**45.23**	**189**	P	**P**	**16 39 45.8**	**-0.4**
	35nm,0.4s,baz=8.9,slow=8.7,SNR=451						
ASAR	**Alice Springs**	**48.95**	**189**	P	**P**	**16 40 13.8**	**-1.2**
	0.7nm,0.3s,mb3.7,baz=8.5,slow=4.9,SNR=65						
MKAR	**Makanchi Array**	**51.06**	**311**	P	**P**	**16 40 32.3**	**+1.6**
	0.3nm,0.5s,mb3.2,baz=89,slow=7.6,SNR=3.4						
KURK	**Kurchatov**	**53.75**	**316**	P	**P**	**16 40 51.5**	**+1.0**
	baz=93,slow=8.1						
STKA	**Stephens Creek**	**56.63**	**180**	*e*P	**P**	**16 41 10.7**	**-0.6**
	1.3nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**56.63**	**180**	P	**P**	**16 41 09.8**	**-1.5**
	1.9nm,0.5s,mb4.2,baz=358,slow=9.6,SNR=10.0						
FORT	**Forrest**	**56.93**	**193**	*e*P	**P**	**16 41 13.3**	**-0.1**
	16nm,0.5s,mb5.1						
BVAR	**Borovoye Array**	**58.91**	**318**	P	**P**	**16 41 27.5**	**+0.5**
	0.5nm,0.5s,mb3.6,baz=79,slow=7.5,SNR=4.4						
YKA	**Yellowknife Ar**	**74.36**	**28**	P	**P**	**16 43 04.8**	**-0.1**
	0.6nm,0.7s,mb3.5,baz=294,slow=6.0,SNR=2.8						
ARCES	**ARCESS Array B**	**75.14**	**341**	P	**P**	**16 43 09.4**	**+0.2**
	4.3nm,1.1s,mb4.0,baz=60,slow=10,SNR=4.7						
NVAR	**Mina Array Bea**	**82.51**	**51**	P	**P**	**16 43 50.6**	**+0.5**
	0.2nm,0.5s,mb3.1,baz=297,slow=5.9,SNR=2.9						

NEIC 01 16:34:31.3,3754N×11881W,h7km,ML3.5(NCEDC), 25C-22D,After NCEDC.,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLAC	**Mammoth Lakes**	**0.09**	**348**	⇓P	Pg	16 34 33.8	+0.3
	baz=0.1						
MLAC				⇑S	Sg	16 34 35.6	+0.6
	baz=0.1						
MTUM	**Tungsten Hills**	**0.27**	**133**	*e*Pg	Pg	16 34 36.5	-0.1
KCC	**Kaiser Creek**	**0.46**	**242**	⇓P	Pg	16 34 40.0	-0.1
	baz=0.5						
KCC				⇑S	Sg	16 34 45.9	-0.2
	baz=0.5						
TIN	**Tinemaha**	**0.67**	**136**	⇑P	Pg	16 34 44.3	+0.1
	baz=0.7						
TIN				⇑S	Sg	16 34 53.6	+0.7
	baz=0.7						
T06C	**Millerton Lake**	**0.89**	**234**	P	Pg	16 34 47.9	-0.5
	baz=0.9,SNR=148						
T06C				⇑S	Sg	16 34 59.7	-0.3
	baz=0.9						
R08A	**Mina**	**0.98**	**34**	⇑S	Sg	16 35 03.8	+0.9
	baz=1.0						
R06C	**Coleville**	**1.10**	**333**	⇓P	Pg	16 34 52.3	-0.1
	baz=1.1,SNR=32						
R06C				⇑S	Sg	16 35 07.4	+0.7
	baz=1.1						
S05C	**Merced**	**1.22**	**261**	P	Pb	16 34 54.0	-0.7
	baz=1.2,SNR=455						
S05C				⇓S	Sg	16 35 09.8	-0.8
	baz=1.2						
CWC	**Cottonwood Cre**	**1.25**	**152**	⇑P	Pn	16 34 54.3	-0.8
	baz=1.2						
CWC				⇓S	Sb	16 35 10.7	-0.5
	baz=1.2						
GRAC	**Grapevine Rang**	**1.27**	**115**	⇓P	Pn	16 34 55.5	+0.1
	baz=1.3						
GRAC				⇑S	Sb	16 35 13.3	+1.2
	baz=1.3						
RCTC	**Rector, Farmer**	**1.27**	**196**	⇑P	Pn	16 34 54.6	-0.8
	baz=1.3						
RCTC				⇓S	Sb	16 35 11.3	-0.9
	baz=1.3						
S09A	**Goldfield**	**1.27**	**81**	P	Pn	16 34 55.4	-0.1
	baz=1.3,SNR=969						
S09A				⇑S	Sb	16 35 13.0	+0.8
	baz=1.3						
CMB	**Columbia Colle**	**1.34**	**292**	*e*Pn	Pn	16 34 55.4	-0.9
CMB				*e*Sn	Sn	16 35 12.3	-2.1
CMB	**Columbia Colle**	**1.34**	**292**	⇓P	Pn	16 34 55.7	-0.7
	baz=1.3						
CMB				⇑S	Sb	16 35 13.4	-0.7
	baz=1.3						
TPH	**Tonopah**	**1.37**	**67**	*e*Pn	Pn	16 34 56.9	+0.2
TPH				*e*Sn	Sn	16 35 15.8	+0.7
Q08A	**Gabbs**	**1.49**	**28**	⇑Pb	Pb	16 34 59.4	+0.2
	baz=1.5,SNR=8.3						
Q08A				⇓Sb	Sb	16 35 19.4	+1.0
	baz=1.5						
**R

PCIG				*i* S	Sg	16 40 13.4	-3.4
THIG		**1.34**	**95**	*i* P	Pn	16 40 12.4	-3.1
THIG				*i* S	Sn	16 40 27.5	-5.5
TGIG		**1.80**	**16**	*i* P	Pn	16 40 18.3	-3.6
TGIG				*i* S	Sn	16 40 39.9	-4.6
CCIG	**Comitan**	**1.91**	**49**	*i* P	Pn	16 40 19.6	-3.7
CCIG				*i* S	Sn	16 40 42.0	-5.0
SCX	**San Cristobal**	**1.95**	**30**	*i* P	Pn	16 40 22.0	-1.9
SCX				*i* S	Sn	16 40 46.4	-1.6
SCX	**San Cristobal**	**1.95**	**30**	*i* P	Pn	16 40 20.4	-3.4
SCX				*i* S	Sn	16 40 45.6	-2.4
CMIG	**Matias Romero**	**2.36**	**330**	*i* P	Pn	16 40 26.9	-2.7
CMIG				*i* S	Sn	16 40 53.3	-5.0
VHO	**Vista Hermosa**	**3.59**	**305**	*e*P	Pn	16 40 44.4	-2.1
VHO				*i* S	Sn	16 41 25.5	-3.2
PNIG	**Pinotepa**	**4.52**	**288**	*e*P	Pn	16 41 00.9	+1.6
PNIG				*i* S	Sn	16 41 50.8	-0.8
UTMO	**Huajuapan**	**4.86**	**305**	*e*P	Pn	16 41 02.5	-1.4
UTMO				*i* S	Sn	16 41 57.1	-2.8

*ISCJB **01** 16:41:27.0±0.6, 454S±01×966E±02, h10km, mb4.3/12, MS4.0/12, Error ellipse: s-maj=20.1km s-min=11.1km az=41.6*
*IDC **01** 16:41:27.5±1.0, 4543S×9658E, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/15, mbtmp4.1/7, MS4.0/12, Ms1 4.0/12, ms1mx3.7/30, Error ellipse: s-maj=34.1km s-min=21.0km az=123.0*
*NEIC **01** 16:41:28.6±0.5, 4545S×9665E, h10km, mb4.4/8, Error ellipse: s-maj=17.1km s-min=10.0km az=131.0*

ISC 01 16:41:29.0±0.6, 454S±01×966E±02, h10km, n28, σ0§86/19, mb4.3/12, MS4.0/12, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**20.20**	**59**	LR	LR	16 52 13.3	
	comp=Z,436nm,18.3s,MS3.8,baz=114,slow=32						
MAW	**Mawson**	**28.36**	**207**	P	**P**	**16 47 22.5**	**-0.3**
	4.0nm,1.1s,mb4.0,baz=62,slow=13,SNR=3.5						
MAW				LR	LR	16 56 39.9	
	comp=Z,116nm,20.1s,MS3.5,baz=238,slow=32						
MAW	**Mawson**	**28.36**	**207**	*e*P	**P**	**16 47 22.3**	**-0.4**
	8.5nm,1.1s,mb4.3						
MAW				LR	LR	16 56 39.9	
TAU	**Tasmania Unive**	**35.99**	**105**	P	**P**	**16 48 32.9**	**+3.1**
	41nm,1.3s,mb5.2						
ASAR	**Alice Springs**	**37.14**	**67**	P	**P**	**16 48 40.0**	**+0.2**
	2.2nm,0.9s,mb4.0,baz=224,slow=7.9,SNR=18						
ASAR				PcP	PcP	16 51 01.1	+1.1
	0.7nm,0.8s,baz=218,slow=1.7,SNR=6.0						
STKA	**Stephens Creek**	**37.17**	**85**	P	**P**	**16 48 40.7**	**+0.7**
	2.6nm,0.8s,mb4.1,baz=254,slow=5.0,SNR=5.9						
STKA				LR	LR	17 01 16.5	
	comp=Z,347nm,18.9s,MS4.2,baz=203,slow=32						
STKA	**Stephens Creek**	**37.17**	**85**	*e*P	**P**	**16 48 39.2**	**-0.8**
	4.5nm,1.0s,mb4.2						
STKA				LR	LR	17 01 16.5	
WRA	**Warramunga Arr**	**40.11**	**63**	P	**P**	**16 49 04.8**	**+0.1**
	4.0nm,0.9s,mb4.2,baz=222,slow=8.1,SNR=29						
WRA				LR	LR	17 04 07.7	
	comp=Z,424nm,19.6s,MS4.3,baz=215,slow=34						
WB2	**Warramunga Arr**	**40.12**	**63**	*e*P	**P**	**16 49 03.0**	**-1.9**
WRAB	**Tennant Creek**	**40.12**	**63**	*e*P	**P**	**16 49 04.6**	**-0.2**
	3.6nm,0.8s,mb4.2						
SBA	**Scott Base**	**41.91**	**163**	*e*P	**P**	**16 49 18.9**	**-0.1**
	6.0nm,1.0s,mb4.2						
BATI	**Baumata**	**42.05**	**42**	LR	LR	17 04 12.9	
	comp=Z,126nm,19.1s,MS3.8,baz=191,slow=32						
QSPA	**South Pole Qui**	**44.75**	**180**	P	**P**	**16 49 41.7**	**-0.1**
	3.2nm,1.0s,mb4.1,baz=317,slow=8.4,SNR=4.1						
QSPA	**South Pole Qui**	**44.75**	**180**	*e*P	**P**	**16 49 41.2**	**-0.7**
	6.5nm,1.2s,mb4.3						
SNAA	**Sanae**	**50.47**	**204**	*e*	**P**	**16 50 25.6**	**-0.7**
SNAA				*e*		16 50 30.8	
SNAA				*e*		16 50 35.0	
SNAA	**Sanae**	**50.47**	**204**	*e*P	**P**	**16 50 25.2**	**-1.1**
	4.8nm,0.8s,mb4.6						
VNA2	**Neumayer--Watz**	**52.11**	**204**	*e*	**P**	**16 50 39.7**	**+1.0**
	baz=117,slow=5.9						
VNA2				*e*	pP	16 50 43.6	+1.8
VNA2				*e*		16 50 47.7	
VNA3	**Neumayer Olymp**	**52.59**	**203**	*e*	**P**	**16 50 42.6**	**+0.4**
VNA3				*e*	pP	16 50 46.9	+1.5
VNA3				*e*		16 50 51.2	
BOSA	**Boshof**	**57.58**	**261**	LR	LR	17 10 06.1	
	comp=Z,102nm,21.4s,MS3.9,baz=146,slow=30						
URZ	**Urewera**	**58.06**	**114**	LR	LR	17 13 18.8	
	comp=Z,127nm,19.0s,MS4.0,baz=82,slow=33						
CMAR	**Chiang Mai Arr**	**63.58**	**2**	P	**P**	**16 51 59.9**	**+0.2**
	1.3nm,0.8s,mb4.0,baz=203,slow=6.0,SNR=11						
CMAR				LR	LR	17 14 53.2	
	comp=Z,87nm,19.9s,MS3.9,baz=196,slow=32						
LSZ	**Lusaka**	**64.16**	**274**	P	**P**	**16 52 03.4**	**-0.3**
	5.5nm,1.1s,mb4.5						
HNR	**Honiara**	**64.69**	**77**	LR	LR	17 18 49.6	
	comp=Z,197nm,18.7s,MS4.3,baz=198,slow=35						
MKAR	**Makanchi Array**	**92.66**	**350**	LR	LR	17 34 34.3	
	comp=Z,55nm,18.6s,MS4.0,baz=132,slow=34						
SONM	**Songino Array**	**93.24**	**7**	P	**P**	**16 54 43.8**	**+0.9**
	0.2nm,0.5s,mb3.9,baz=151,slow=3.3,SNR=2.6						
PLCA	**Paso Flores**	**93.49**	**190**	LR	LR	17 34 49.8	
	comp=Z,211nm,18.1s,MS4.6,baz=186,slow=34						
ZALV	**Zalesovo Beam**	**99.47**	**353**	LR	LR	17 36 29.1	
	comp=Z,53nm,18.8s,MS4.1,baz=75,slow=33						
NVAR	**Mina Array Bea**	**153.26**	**93**	PKPbc	PKPbc	17 01 27.2	+0.5
	0.2nm,0.3s,baz=249,slow=3.8,SNR=2.7						
NVAR				PKPab	PKPab	17 01 38.0	-0.7
	0.4nm,0.3s,baz=217,slow=5.5,SNR=6.7						

JMA 01 16:47:08.6±0.4, 4398N×14810E, h0km, M3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.82**	**251**	P	Pn	16 47 41.4	+0.3
NEM2				*e*S	Sn	16 48 05.6	+0.8
JRA	**Rausu**	**2.15**	**270**	P	Pn	16 47 46.4	+0.7
JNK	**Nakash**	**2.48**	**262**	P	Pn	16 47 51.0	+0.8
JNK				*e*S	Sn	16 48 21.5	+0.3
JAK	**Akkeshi**	**2.67**	**250**	P	Pn	16 47 53.7	+1.0
JAR	**Ashorobuto**	**3.22**	**259**	P	Pn	16 48 02.1	+1.8
JCH	**Churui**	**3.72**	**250**	P	Pn	16 48 09.0	+1.8
JNBK	**Urakawa-nobuka**	**4.27**	**248**	P	Pn	16 48 16.9	+2.1
JKB	**Kayabe**	**5.59**	**250**	P	Pn	16 48 35.1	+2.1
JKB				*e*S	Sn	16 49 38.9	+1.0
JOT	**Ohata**	**5.81**	**246**	P	Pn	16 48 37.4	+1.4

IDC 01 16:50:24.2±1.9, 361N×12401E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=205.2km s-min=25.7km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.52**	**157**	P	P	16 55 54.4	-0.2
	0.6nm,0.4s,baz=335,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.78**	**161**	P	P	16 56 24.2	+0.3
	0.2nm,0.3s,baz=341,slow=7.6,SNR=23						
MKAR	**Makanchi Array**	**56.13**	**327**	P	P	17 00 05.5	0.0
	0.2nm,0.5s,baz=122,slow=7.7,SNR=5.8						

*ISCJB **01** 17:02:49.5±0.5, 4773N×8951E, h10km, mb3.5/3, Error ellipse: s-maj=7.2km s-min=3.7km az=147.1*
*IDC **01** 17:02:51.0±1.1, 4753N×8949E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, ML3.8/3, Error ellipse: s-maj=24.6km s-min=12.3km az=32.0*
*BJI **01** 17:02:52.4, 4755N×8957E, h26km, mB4.3, mb4.1, ML4.0*
*NNC **01** 17:02:56.9±2.2, 4758N×8906E, h12km±10km, mb3.9, mpv4.0, Error ellipse: s-maj=15.5km s-min=13.0km az=55.0*
*NEIC **01** 17:02:56.6±2.1, 4760N×8935E, h41km±21km, mb4.4/1, Error ellipse: s-maj=22.1km s-min=11.9km az=89.0*
*ASRS **01** 17:02:58.4±1.0, 4778N×8953E, h15km, Ms3.3*
*MOS **01** 17:03:09.0±1.5, 4797N×8755E, h33km, mb4.1/1, Error ellipse: s-maj=13.0km s-min=9.8km az=102.8*

ISC 01 17:02:52.2±0.5, 4767N±003×8952E±006, h10km, n52, σ1§12/73, mb3.5/3, 10C-9D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**4.06**	**199**	P	**Pn**	**17 03 56.0**	**+1.7**
WMQ				S	**Sn**	**17 04 42.5**	**+0.7**
WMQ				Smax			
	comp=N,268nm,0.7s						
WMQ				Smax			
	comp=E,245nm,0.8s						
UKR	**Ust'-Kan**	**4.51**	**318**	*e*PN	**Pn**	**17 04 05.4**	**+5.0**
UKR				*e*		17 04 18.4	
UKR				*e*		17 04 57.2	
UKR	**Ust'-Kan**	**4.51**	**318**	*e*Pn	**Pn**	**17 04 05.4**	**+5.0**
UKR				*e*Pg	**Pg**	**17 04 18.4**	**0.0**
UKR				*e*Sn	**Sn**	**17 04 57.2**	**+4.4**
UKR				*e*Sg	**Sg**	**17 05 16.4**	**-0.4**
MK31	**Makanchi Array**	**5.00**	**263**	⇑Pn	**Pn**	**17 04 08.5**	**+1.3**
	comp=E,1.9nm,0.2s,baz=73,slow=16,SNR=161						
MK31				Pg	**Pg**	**17 04 23.5**	**-4.4**
	comp=E,9.1nm,0.3s,baz=81,slow=18,SNR=19						
MK31				⇑Lg		17 05 23.6	
	comp=E,42nm,0.4s,baz=80,slow=33,SNR=11						
MK31	**Makanchi Array**	**5.00**	**263**	*e*PN	**Pn**	**17 04 08.2**	**+1.0**
MKAR	**Makanchi Array**	**5.00**	**263**	Pn	**Pn**	**17 04 08.4**	**+1.1**
	comp=E,2.5nm,0.3s,baz=85,slow=15,SNR=86						
MKAR				Pg	**Pg**	**17 04 19.7**	**-8.2**
	comp=E,5.1nm,0.3s,baz=89,slow=15,SNR=26						
MKAR				Sn	**Sn**	**17 05 13.2**	**+8.2**
	comp=E,7.9nm,0.3s,baz=50,slow=23,SNR=4.0						
MKAR				Lg		17 05 22.3	
	comp=E,9.2nm,0.3s,baz=92,slow=26,SNR=3.8						
MKAR	**Makanchi Array**	**5.00**	**263**	PN	**Pn**	**17 04 08.4**	**+1.2**
MKAR						17 04 19.7	
MKAR						17 05 13.2	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MKAR				smax			
	comp=N,8.0nm,0.3s						
CERR	**Cheremushki**	**5.33**	**12**	*e*Pg	**Pg**	**17 04 32.9**	**-1.2**
CERR				*e*Sg	**Sg**	**17 05 40.9**	**-2.1**
ELT	**Yel'tsovka**	**5.97**	**341**	*e*PN	**Pn**	**17 04 25.8**	**+5.3**
ELT				*e*		17 04 47.3	
ELT	**Yel'tsovka**	**5.97**	**341**	*e*Pn	**Pn**	**17 04 25.8**	**+5.3**
ELT				*e*Pg	**Pg**	**17 04 47.3**	**+0.9**
ELT				*e*Sg	**Sg**	**17 06 01.6**	**-2.1**
ZALV	**Zalesovo Beam**	**6.95**	**336**	Pn	**Pn**	**17 04 37.2**	**+3.3**
	comp=N,1.2nm,0.3s,baz=158,slow=13,SNR=15						
ZALV				Pg	**Pg**	**17 04 59.8**	**-5.3**
	comp=N,1.9nm,0.3s,baz=161,slow=13,SNR=8.7						
ZALV				Sn	**Sn**	**17 06 02.9**	**+10**
	comp=N,2.8nm,0.3s,baz=177,slow=16,SNR=4.7						
ZALV				Lg		17 06 35.0	
	comp=N,4.4nm,0.3s,baz=153,slow=27,SNR=8.9						
ZALV	**Zalesovo Beam**	**6.95**	**336**	Pn	**Pn**	**17 04 37.2**	**+3.3**
ZALV				Pg	**Pg**	**17 04 59.8**	**-5.3**
ZALV				Sn	**Sn**	**17 06 02.9**	**+10**
ZALV				Lg		17 06 35.0	
ZALV	**Zalesovo Beam**	**6.95**	**336**	PN	**Pn**	**17 04 37.2**	**+3.3**
ZALV						17 04 59.8	
ZALV						17 06 02.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV				smax			
	comp=N,3.0nm,0.3s						
KURK	**Kurchatov**	**7.76**	**297**	⇓Pn	**Pn**	**17 04 45.7**	**+0.7**
	comp=N,18nm,0.5s						
KURK				⇑Sn	**Sn**	**17 06 13.6**	**+0.7**
	comp=N,16nm,0.5s						
KURK				⇑Lg		17 06 56.5	
	comp=N,91nm,0.7s						
KURK	**Kurchatov**	**7.76**	**297**	Pn	**Pn**	**17 04 46.5**	**+1.4**
KURK				Sn	**Sn**	**17 06 14.1**	**+1.1**
	baz=206,slow=24						
KURK				Lg		17 06 60.0	
	baz=99,slow=30						
KURK	**Kurchatov**	**7.76**	**297**	*e*P	**Pn**	**17 04 45.7**	**+0.6**
KURK				Sn	**Sn**	**17 06 14.1**	**+1.1**
KURK				Lg		17 06 60.0	
KURBB	**Kurchatov Arra**	**7.79**	**296**	⇑Sn	**Sn**	**17 06 13.7**	**+0.2**
	comp=N,5.7nm,0.9s						
KURBB				⇑Lg		17 06 56.3	
	comp=N,26nm,1.0s						
NVS	**Novosibirsk**	**8.18**	**334**	*e*P	**Pn**	**17 04 57.6**	**+6.8**
NVS				*e*		17 06 28.4	
NVS	**Novosibirsk**	**8.18**	**334**	*e*Pn	**Pn**	**17 04 57.6**	**+6.8**
NVS				*e*Pg	Pn	17 05 34.6	+44
NVS				*e*Sn	**Sn**	**17 06 28.4**	**+5.1**
NVS				*e*Sg	Sn	17 07 10.4	+47
MOY	**Mondy**	**8.45**	**58**	*e*P	Px	17 05 25.1	
MOY				*e*		17 07 15.4	
MOY				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MOY				smax			
	comp=E,122nm,1.6s						
ZAK	**Zakamensk**	**9.44**	**68**	*e*P	Px	17 05 41.9	
ZAK				*e*		17 07 46.0	
ZAK				pmax	pmax		
	comp=Z,13nm,1.6s						
ZAK				smax			
	comp=E,74nm,1.7s						
TKM2	**Tokmak 2**	**10.90**	**249**	⇓Pn	**Pn**	**17 05 28.2**	**+0.2**
	comp=E,1.4nm,0.3s						
TKM2				⇓Sn	**Sn**	**17 07 26.3**	**-3.6**
TKM2				⇑Lg		17 08 30.6	
	comp=E,12nm,0.8s						
TKM2	**Tokmak 2**	**10.90**	**249**	*e*P	**Pn**	**17 05 28.3**	**+0.3**
	comp=E,3.0nm,0.3s						
TKM2	**Tokmak 2**	**10.90**	**249**	*e*P	**Pn**	**17 05 28.3**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.3s						
GTA	**Gaotai**	**11.13**	**134**	*e*P	**Pn**	**17 05 32.9**	**+1.7**
GTA				AP		17 05 36.6	
GTA				XP		17 05 39.6	
GTA				S	**Sn**	**17 07 29.4**	**-6.2**
GTA				AMB	AMB		
	comp=Z,52nm,6.9s						
SONM	**Songino Array**	**11.37**	**83**	Pg	Px	17 06 17.6	
	comp=Z,0.3nm,0.3s,baz=282,slow=18,SNR=4.1						
SONM				Lg		17 08 47.3	
	comp=Z,0.7nm,0.3s,baz=259,slow=29,SNR=8.0						
EKS2	**Erkin-Say**	**12.18**	**251**	*e*P	**Pn**	**17 05 45.9**	**+0.3**
	comp=Z,1.9nm,0.5s						
VOSK	**Vostochnaya**	**12.90**	**300**	⇓Pn	**Pn**	**17 05 54.1**	**-1.2**
	comp=Z,1.6nm,0.4s						
VOSK				⇑Sn	**Sn**	**17 08 18.2**	**-0.5**
	comp=Z,5.7nm,0.9s						
VOSK				⇓Lg		17 09 36.5	
	comp=Z,32nm,1.6s						
BVA0	**Borovoye Array**	**13.32**	**301**	Pn	**Pn**	**17 06 01.1**	**0.0**
	comp=Z,0.7nm,0.9s,baz=102,slow=14,SNR=11						
BVA0				⇓Sn	**Sn**	**17 08 29.8**	**+0.6**
	comp=Z,0.9nm,0.6s						
BVA0				⇑Lg		17 09 54.1	
	comp=Z,4.3nm,1.4s						
BVAR	**Borovoye Array**	**13.32**	**301**	Pn	**Pn**	**17 06 00.3**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=98,slow=14,SNR=10.0						
BVAR				Sn	**Sn**	**17 08 30.6**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=118,slow=24,SNR=3.6						
BRVK	**Borovoye**	**13.39**	**301**	*e*P	**Pn**	**17 06 01.7**	**-0.4**
KK31	**Karatay Array**	**14.11**	**258**	⇓Pn	**Pn**	**17 06 09.6**	**-2.3**
	comp=Z,1.2nm,0.4s,baz=57,slow=15,SNR=31						
KK31				⇑Sn	**Sn**	**17 08 47.2**	**-1.3**
	comp=Z,2.5nm,0.7s,baz=60,slow=24,SNR=4.6						
KK31				⇓Lg		17 10 17.8	
	comp=Z,5.3nm,0.7s,baz=60,slow=14,SNR=3.1						
AB01	**Akbulak array**	**19.62**	**286**	⇓P	**Pn**	**17 07 21.2**	**-0.7**
	comp=Z,2.1nm,0.7s						
DANN	**Dangsing**	**19.81**	**195**	*e*P	**Pn**	**17 07 23.8**	**-0.4**
GUN	**Gumba**	**19.93**	**189**	*e*P	**Pn**	**17 07 23.5**	**-2.2**
GKN	**Gorkha**	**20.00**	**193**	*e*P	**Pn**	**17 07 24.5**	**-2.1**
KKN	**Kakani**	**20.13**	**191**	*e*P	**P**	**17 07 25.9**	**-0.3**
	comp=Z,6.7nm,0.5s						
JIRN	**Jiri**	**20.15**	**189**	*e*P	**P**	**17 07 25.6**	**-0.8**
DMN	**Daman**	**20.33**	**191**	*e*P	**P**	**17 07 28.9**	**+0.6**
TAPN	**Taplejung**	**20.34**	**185**	*e*P	**P**	**17 07 28.5**	**0.0**
	comp=Z,8.3nm,0.7s						
AKTK	**Aktyubinsk**	**20.75**	**289**	P	**P**	**17 07 33.2**	**+0.4**
AKTO	**Aktyubinsk**	**20.75**	**289**	P	**P**	**17 07 35.6**	**+2.8**
	comp=Z,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**20.75**	**289**	P	**P**	**17 07 33.2**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=101,slow=5.2,SNR=2.6						
AKTO	**Aktyubinsk**	**20.75**	**289**	P	**P**	**17 07 33.2**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	**Arti**	**20.80**	**306**	P	**P**	**17 07 37.5**	**+4.2**
RAMN	**Ramite**	**20.81**	**187**	*e*P	**P**	**17 07 33.9**	**+0.3**
ODAN	**Odare**	**20.84**	**185**	*e*P	**P**	**17 07 33.5**	**-0.5**
	comp=Z,11nm,0.6s						
NB2	**NORSAR Subarra**	**44.72**	**317**	P	**P**	**17 11 06.1**	**+1.1**
	comp=Z,1.4nm,0.7s,mb3.9,baz=67,slow=7.9						
NOA	**NORSAR Array B**	**44.72**	**317**	P	**P**	**17 11 05.7**	**+0.6**
	comp=Z,1.3nm,0.8s,mb3.8,baz=72,slow=7.0,SNR=5.1						
NOA	**NORSAR Array B**	**44.72**	**317**	P	**P**	**17 11 05.7**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**78.40**	**137**	P	**P**	**17 14 53.7**	**+0.9**
	comp=Z,0.4nm,0.7s,mb3.4,baz=342,slow=6.1,SNR=6.4						
ASAR	**Alice Springs**	**81.45**	**140**	P	**P**	**17 15 08.6**	**-0.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=334,slow=5.3,SNR=4.9						

*MDD **01** 17:03:07.9±399.0, 3232N×745E, h0km, mbLg2.8/6, Error ellipse: s-maj=2469.0km s-min=125.0km az=132.0, PRIMO SIN SOLUCI*
*CRAAG **01** 17:06:06.1, 3581N×2.14E, Ml3.0*
*CSEM **01** 17:06:06.1, 3581N×2.14E, h0km, ML3.0, After ALG*
*ISCJB **01** 17:06:09.4±0.9, 3584N±008×2.16E±006, h10km, Error ellipse: s-maj=12.0km s-min=7.0km az=6.6*

ISC 01 17:06:09.2±1.0, 3579N±008×212E±007, h10km, n13, σ0§96/13, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.69**	**317**	P	**Pg**	**17 06 23.3**	**+0.6**
ECHA	**Ech Chlef**	**0.71**	**301**	P	**Pg**	**17 06 22.4**	**-0.6**
ECHF	**Ech Chlef**	**0.73**	**300**	P	**Pg**	**17 06 22.4**	**-1.0**
ETRT	**Tiaret**	**0.78**	**240**	P	**Pg**	**17 06 25.3**	**+1.1**
EANR	**'Ain N'Sour**	**0.85**	**281**	P	**Pg**	**17 06 24.6**	**-0.9**
ADJB	**Djebel Djouab**	**1.13**	**70**	P	**Pb**	**17 06 30.4**	**-0.5**
AKET	**Djebel Ketaf**	**1.45**	**79**	P	**Pn**	**17 06 35.8**	**+0.3**
EBEN	**Beniarda**	**3.46**	**328**	S	**Pn**	**17 06 59.8**	**-3.4**
	0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**4.09**	**315**	S	**Sn**	**17 08 09.5**	**+10**
	0.1nm,0.1s,SNR=7.9						
EBER	**Berja**	**4.20**	**287**	S	**Sn**	**17 08 11.0**	**+8.7**
	0.3nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.63**	**297**	S	**Sn**	**17 08 18.4**	**+5.4**
	0.2nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**4.70**	**289**	S	**Sn**	**17 08 20.0**	**+5.2**
	0.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.01**	**337**	S	**Sn**	**17 08 23.3**	**+1.0**
	0.7nm,0.2s,SNR=7.9						

*NIED **01** 17:14:00, 24.10N×122.40E, h29km, Mw4.1 Best double couple: M0 1.71000×10^15 NP1:φ§68.00000°, δ86.00000°, λ77.00000°. NP2:φ§322.00000°, δ14.00000°, λ164.00000°.*
*BJI **01** 17:14:17.1, 2383N×122.49E, h22km, mb4.0, ML3.8*
*ISCJB **01** 17:14:19.4±0.7, 2395N±002×122.43E±001, h9km±5km, mb4.0/9, MS3.1/3, Error ellipse: s-maj=2.8km s-min=2.2km az=160.4*
*TAP **01** 17:14:19.6, 2398N×122.43E, h3km, ML4.3, D*
*JMA **01** 17:14:21.1±0.3, 2411N×122.36E, h31km, M4.0*
*NEIC **01** 17:14:22.6±2.2, 2402N×122.28E, h48km±17km, mb3.9/1, Error ellipse: s-maj=49.4km s-min=12.1km az=66.0*
*IDC **01** 17:14:40.4±12.0, 2441N×122.92E, h238km±139km, mb3.5/7, mb1 3.6/8, mb1mx3.3/22, mbtmp3.5/8, MS3.2/5, Ms1 3.2/5, ms1mx2.7/33, Error ellipse: s-maj=104.9km s-min=11.3km az=60.0*

ISC 01 17:14:19.4±0.4, 2397N±002×122.43E±001, h7km±2km, n85, σ1§03/141, mb4.0/9, MS3.1/3, 4C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.72**	**47**	P	**Pg**	**17 14 34.2**	**+1.0**
YOJ				S	**Sg**	**17 14 43.3**	**+0.7**
HWA	**Hwalien**	**0.76**	**271**	P	**Pg**	**17 14 34.8**	**+0.8**
	baz=269						
HWA				*e*S	**Sg**	**17 14 44.9**	**+1.0**
	baz=269						
TWD	**Chiawan**	**0.77**	**278**	*i* P	**Pg**	**17 14 34.8**	**+0.6**
	baz=277						
TWD				*i* S	**Sg**	**17 14 45.3**	**+1.0**
	baz=277						
ENA	**Nanau**	**0.78**	**306**	⇑*i* P	**Pg**	**17 14 34.4**	**0.0**
	baz=305						
ENA				*e*S	**Sg**	**17 14 44.9**	**+0.4**
	baz=305						
NACB	**Ninganchiao**	**0.79**	**285**	*e*P	**Pg**	**17 14 34.6**	**0.0**
TWC	**Suao**	**0.83**	**320**	⇑*i* P	**Pg**	**17 14 34.9**	**-0.4**
	baz=319						
TWC				*e*S	**Sg**	**17 14 44.8**	**-1.4**
	baz=319						
ESL	**Shilin**	**0.93**	**261**	P	**Pg**	**17 14 36.8**	**-0.5**
	baz=259						
ILA	**Ilan**	**1.01**	**322**	P	**Pg**	**17 14 38.6**	**-0.2**
	baz=321						
ILA				S	**Sg**	**17 14 52.6**	**+0.7**
	baz=321						
TWE	**Neicheng**	**1.02**	**317**	⇑*i* P	**Pg**	**17 14 38.6**	**-0.4**
	baz=316						
TWE				*e*S	**Sg**	**17 14 52.9**	**+0.5**
	baz=316						
NNS	**Nan Shan**	**1.08**	**296**	⇓*i* P	**Pg**	**17 14 39.6**	**-0.4**
	baz=295						
NNS				S	**Sg**	**17 14 54.2**	**+0.2**
	baz=295						
WHF	**Hehuan Shan**	**1.08**	**280**	⇓*i* P	**Pg**	**17 14 39.8**	**-0.4**
	baz=278						
WHF				S	**Sg**	**17 14 53.7**	**-0.5**
	baz=278						
TWB1	**Santiao Chiao**	**1.11**	**339**	P	**Pg**	**17 14 39.9**	**-0.8**

baz=320
JKRS Kuro-shima 1.46 79 P **Pn 17 14 46.7 +0.5**
JKRS S **Sn 17 15 05.6 -0.1**
NSTT Nanjuang 1.46 297 P **Pn 17 14 46.4 +0.1**
baz=296
NSTT *e*S **Sn 17 15 05.2 -0.5**
baz=296
TWY Chenhua 1.51 330 *e*P **Pn 17 14 47.0 +0.2**
baz=329
NCU National Centr 1.51 312 *e*P **Pn 17 14 46.7 -0.2**
baz=311
ELDTW Lidau 1.51 239 *e*P **Pn 17 14 46.0 -0.9**
baz=238
ELDTW *e*S **Sn 17 15 03.4 -3.5**
baz=238
ALS Alishan 1.56 253⇓ *i*P **Pn 17 14 47.8 +0.2**
baz=252
ALS *e*S **Sn 17 15 07.1 -1.0**
baz=252
TWQ1 Liyutan 1.56 284 P **Pn 17 14 48.2 +0.6**
baz=283
TWQ1 *e*S **Sn 17 15 08.4 +0.2**
baz=283
HSN Hsinchu 1.57 302 *e*P **Pn 17 14 48.0 +0.3**
baz=303
NSY Sanyi 1.59 287 *e*P **Pn 17 14 48.9 +0.9**
baz=285
NSY *e*S **Sn 17 15 09.4 +0.5**
baz=285
WNT Mingjian 1.60 267 *e*P **Pn 17 14 48.9 +0.7**
baz=266
WNT *e*S **Sn 17 15 09.3 +0.1**
baz=266
JIJ Ishigaki jima 1.61 76 P **Pn 17 14 48.0 -0.2**
JIJ S **Sn 17 15 07.7 -1.6**
TCU Taichung 1.62 277 *e*P **Pn 17 14 48.5 +0.2**
baz=275
TCU *e*S **Sn 17 15 10.1 +0.6**
baz=275
CHN5 Tsauling 1.65 257 *i* P **Pn 17 14 49.4 +0.6**
baz=256
CHN5 S **Sn 17 15 10.2 -0.1**
baz=256
TTN Taitung 1.69 225 *e*P **Pn 17 14 50.1 +0.7**
baz=224
TTN *e*S **Sn 17 15 09.5 -1.8**
baz=224
TWG Pinlang 1.69 228 *e*P **Pn 17 14 48.3 -1.1**
baz=227
TWG *e*S **Sn 17 15 08.9 -2.4**
baz=227
WGK Gukeng 1.74 261 P **Pn 17 14 50.7 +0.7**
baz=260
WGK *e*S **Sn 17 15 12.7 +0.3**
baz=260
CHN4 Tsaushan 1.80 250 *e*P **Pn 17 14 52.1 +1.3**
baz=249
CHN4 *e*S **Sn 17 15 15.3 +1.5**
baz=249
WTP Ta-pu 1.82 247 P **Pn 17 14 52.0 +0.9**
baz=246
WTP *e*S **Sn 17 15 15.1 +0.6**
baz=246
CHN2 Minshiung 1.85 257 *e*P **Pn 17 14 53.0 +1.5**
baz=256
CHN2 *e*S **Sn 17 15 16.2 +1.1**
baz=256
SGST Jiashian 1.91 243 *e*P **Pn 17 14 53.6 +1.2**
baz=242
SGST S **Sn 17 15 17.2 +0.4**
baz=242
CHN1 Nanshi 1.92 246 *e*P **Pn 17 14 53.8 +1.3**
baz=245
CHN1 *e*S **Sn 17 15 17.7 +0.8**
baz=245
TWK Hsinying 1.92 249 P **Pn 17 14 53.7 +1.2**
baz=248
TWK *e*S **Sn 17 15 17.9 +1.0**
baz=248
ECL Taimali 1.93 225 *e*P **Pn 17 14 51.4 -1.2**
baz=224
WTCT Ta-ch'eng 1.97 267 *e*P **Pn 17 14 53.4 +0.2**
baz=266
WTCT *e*S **Sn 17 15 19.1 +0.9**
baz=266
WSF Szhu 2.05 261 *e*P **Pn 17 14 55.0 +0.7**
baz=260
WSF *e*S **Sn 17 15 21.3 +1.1**
baz=260
SSD Sandimen 2.06 234 P **Pn 17 14 54.8 +0.4**
baz=233
SSD *e*S **Sn 17 15 21.8 +1.5**
baz=233
LAY Lan-yu 2.09 203 *e*P **Pn 17 14 54.0 -0.8**
baz=202
CHN8 Yiju 2.13 254 *e*P **Pn 17 14 55.8 +0.4**
baz=252
CHN8 *e*S **Sn 17 15 22.5 +0.4**
baz=252
TAW Tawu 2.14 222 *e*P **Pn 17 14 56.4 +0.9**
baz=221
EAST Anshuo 2.15 223 *e*P **Pn 17 14 55.0 -0.6**
baz=222
EAST *e*S **Sn 17 15 21.0 -1.6**
baz=222
TWM1 Shoushan 2.17 239 *e*P **Pn 17 14 57.9 +1.9**
baz=238
TWM1 *e*S **Sn 17 15 25.2 +2.1**
baz=238
JTJ Tarama 2.17 72 P **Pn 17 14 56.4 +0.4**
JTJ S **Sn 17 15 23.4 +0.2**
SCLT Jiali 2.20 249 *e*P **Pn 17 14 59.0 +2.7**
baz=248
SCLT *e*S **Sn 17 15 24.9 +1.0**
baz=248
TAI1 Yung-k'ang 2.23 246 *e*P **Pn 17 14 55.8 -0.9**
baz=245
TAI1 *e*S **Sn 17 15 25.5 +1.0**
baz=245
SCZT Fangliau 2.31 227 P **Pn 17 14 59.5 +1.7**
baz=226
SCZT *e*S **Sn 17 15 28.2 +1.8**
baz=226
TSEB Hengchuen, Pin 2.50 215 *e*P **Pn 17 15 01.9 +1.5**
baz=215
TSEB *e*S **Sn 17 15 33.8 +2.5**
baz=215
HEN Hengchun 2.50 219 *e*P **Pn 17 15 01.1 +0.6**
baz=218
HEN *e*S **Sn 17 15 31.2 -0.1**
baz=218
TWK1 Hengchun 2.51 217 *e*P **Pn 17 15 00.5 -0.2**
baz=216
TWK1 *e*S **Sn 17 15 30.2 -1.4**
baz=216
WDGT Dungji 2.64 255 *e*P **Pn 17 15 02.4 0.0**
baz=254
WDGT *e*S **Sn 17 15 33.2 -1.6**
baz=254
PNG Penghu 2.67 262 *e*P **Pn 17 15 03.0 +0.2**
baz=261
PNG *e*S **Sn 17 15 33.2 -2.2**
baz=261
JMJ Miyako jima 2 2.74 72 S **Sn 17 15 36.5 -0.7**
QZH Quanzhou 3.63 286⇑ *i*P **Pn 17 15 14.6 -1.5**
QZH S **Sn 17 15 54.7 -4.5**
QZH Smax
comp=N,280nm,0.8s
QZH Smax
comp=E,210nm,0.7s
KNM Kinmen 3.68 278 *e*P **Pn 17 15 17.1 +0.3**
baz=276
KSRS Korea Array 14.24 18 P **Pn 17 17 45.6 +4.2**
comp=E,0.2nm,0.3s,baz=198,slow=12,SNR=12
KSRS LR LR 17 23 30.7
comp=E,68nm,18.9s,baz=164,slow=39
CBIJ Chichi jima 18.09 76 LR LR 17 25 05.1
comp=E,79nm,18.1s,baz=124,slow=36
GTA Gaotai 24.55 314 *e*P **P 17 19 39.2 -0.5**
GTA AP 17 19 43.4
GTA XP sP 17 19 46.7 +4.1
GTA AMB AMB
comp=Z,5.0nm,0.8s,mb4.1
ASAJ Asahikawa 26.01 34 LR LR 17 30 05.0
comp=Z,64nm,19.6s,MS3.2,baz=205,slow=36
SONM Songino Array 27.02 336 P **P 17 19 58.4 -3.6**
comp=Z,3.3nm,0.8s,mb3.9,baz=151,slow=8.2,SNR=22
SONM LR LR 17 32 16.6
comp=Z,92nm,19.0s,MS3.4,baz=297,slow=39
KAPI Kappang 28.93 186 LR LR 17 34 40.1
comp=Z,22nm,20.2s,MS2.8,baz=290,slow=41
MKAR Makanchi Array 39.29 316 P **P 17 21 46.1 -2.7**
comp=Z,3.0nm,0.7s,mb4.2,baz=104,slow=11,SNR=20
ZALV Zalesovo Beam 41.05 327 P **P 17 21 58.6 -4.7**
comp=Z,4.8nm,0.6s,mb4.3,baz=112,slow=8.0,SNR=26
KURK Kurchatov 42.99 320 P **P 17 22 16.7 -2.5**
baz=112,slow=8.1
WRA Warramunga Arr 45.16 164 P **P 17 22 35.5 -1.4**
comp=Z,1.8nm,0.7s,mb4.0,baz=346,slow=8.8,SNR=14
BVAR Borovoye Array 48.56 321 P **P 17 22 59.7 -3.5**
comp=Z,1.5nm,0.5s,mb4.3,baz=110,slow=8.7,SNR=12
ASAR Alice Springs 48.64 166 P **P 17 23 03.1 -1.0**
comp=Z,0.6nm,0.4s,mb4.0,baz=346,slow=6.9,SNR=23
STKA Stephens Creek 58.48 161 P **P 17 24 13.8 -2.3**
comp=Z,1.0nm,0.9s,mb3.9,baz=315,slow=11,SNR=2.5
BR131 Keskin Array S 74.22 307 *e*P **P 17 25 55.4 -1.8**
comp=Z,0.8nm,0.5s,mb3.9

*IDC **01** 17:22:07.5±1.3, 533S×131.48E, h0km, mb4.1/4, mb1 4.5/7, mb1mx4.2/14, mbtmp4.3/7, ML4.6/3, MS3.4/1, Ms1 3.3/1, ms1mx2.4/30, Error ellipse: s-maj=48.6km s-min=19.2km az=69.0*
*ISCJB **01** 17:22:10.3±0.6, 557S±006×131.13E±009, h33km, mb4.7/16, Error ellipse: s-maj=12.8km s-min=7.3km az=163.3*
*NEIC **01** 17:22:12.4±0.9, 556S×131.18E, h35km, mb4.8/9, Error ellipse: s-maj=40.1km s-min=6.9km az=68.0*
ISC 01 17:22:12.5±0.6, 556S±006×13122E±009, h35km, n24,
σ0s76/26, mb4.7/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**7.21**	**170**	*e*P	Px	17 23 51.7	
	79nm,0.3s						
KAKA				*e*S	Sx	17 25 08.1	
BATI	**Baumata**	**8.79**	**238**	Pn	**Pn**	**17 24 22.3**	**+5.2**
	6.0nm,0.3s,baz=126,slow=2.4,SNR=22						
BATI				Sn	**Sn**	**17 25 55.1**	**+0.1**
	8.1nm,0.3s,baz=135,slow=6.0,SNR=3.6						
WRAB	**Tennant Creek**	**14.61**	**168**	*e*P	**Pn**	**17 25 35.6**	**-1.2**
	8.1nm,0.5s						
WRA	**Warramunga Arr**	**14.62**	**168**	Pn	**Pn**	**17 25 36.0**	**-0.8**
	2.4nm,0.3s,baz=343,slow=13,SNR=53						
WRA				Sn	**Sn**	**17 28 11.4**	**-6.3**
	3.8nm,0.3s,baz=352,slow=24,SNR=9.6						
WB2	**Warramunga Arr**	**14.62**	**168**	*e*P	**Pn**	**17 25 35.3**	**-1.6**
WB2				*e*S	**Sn**	**17 28 10.4**	**-7.3**
ASAR	**Alice Springs**	**18.19**	**172**	P	**Pn**	**17 26 23.2**	**+1.0**
	3.1nm,0.3s,baz=349,slow=8.8,SNR=166						
FORT	**Forrest**	**25.26**	**186**	*e*P	**P**	**17 27 36.7**	**+1.2**
	8.9nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**27.93**	**161**	*e*P	**P**	**17 28 01.1**	**+1.6**
	1.7nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**27.93**	**161**	P	**P**	**17 28 01.2**	**+1.7**
	2.3nm,0.4s,mb4.2,baz=332,slow=8.6,SNR=22						
STKA				LR	LR	17 40 08.6	
	comp=Z,69nm,19.1s,baz=209,slow=38						
KLBR	**Kellerberrin**	**28.81**	**204**	*e*P	**P**	**17 28 08.1**	**+0.8**
	26nm,1.4s,mb4.8						
CMAR	**Chiang Mai Arr**	**39.78**	**308**	P	**P**	**17 29 42.3**	**0.0**
	1.9nm,0.6s,mb4.0,baz=132,slow=6.8,SNR=25						
LSA	**Lhasa**	**52.02**	**315**	*e*P	**P**	**17 31 19.6**	**+0.8**
	2.0nm,0.8s,mb4.1						
ODAN	**Odare**	**53.25**	**309**	*e*P	**P**	**17 31 27.2**	**-0.7**
	9.7nm,0.7s,mb4.8						
TAPN	**Taplejung**	**53.26**	**310**	*e*P	**P**	**17 31 27.8**	**-0.2**
	12nm,0.4s,mb5.2						
RAMN	**Ramite**	**53.91**	**309**	*e*P	**P**	**17 31 32.9**	**+0.2**
	23nm,0.5s,mb5.3						
JIRN	**Jiri**	**54.58**	**310**	*e*P	**P**	**17 31 37.6**	**0.0**
	6.1nm,0.5s,mb4.8						
GUN	**Gumba**	**54.94**	**310**	*e*P	**P**	**17 31 39.8**	**-0.4**
	19nm,0.7s,mb5.3						
KKN	**Kakani**	**55.34**	**309**	*e*P	**P**	**17 31 42.7**	**-0.4**
	11nm,0.9s,mb4.9						
DMN	**Daman**	**55.39**	**309**	*e*P	**P**	**17 31 43.1**	**-0.4**
	5.8nm,0.5s,mb4.9						
GKN	**Gorkha**	**55.94**	**309**	*e*P	**P**	**17 31 47.1**	**-0.3**
	16nm,0.7s,mb5.2						
KOLN	**Koldanda**	**56.64**	**308**	*e*P	**P**	**17 31 52.4**	**0.0**
	13nm,0.6s,mb5.2						
DANN	**Dangsing**	**56.79**	**309**	*e*P	**P**	**17 31 53.3**	**-0.2**
SONM	**Songino Array**	**57.48**	**340**	P	**P**	**17 31 58.8**	**+0.8**
	0.4nm,0.5s,mb3.7,baz=160,slow=6.7,SNR=4.5						
MKAR	**Makanchi Array**	**67.70**	**326**	P	**P**	**17 33 06.1**	**-0.1**
	1.0nm,0.3s,mb4.3,baz=111,slow=8.0,SNR=19						

*ISCJB **01** 17:39:01.0±0.7, 3484N±0.10×1378E±0.1, h284km±5km, mb3.0/4, Error ellipse: s-maj=16.6km s-min=12.5km az=147.3*
*IDC **01** 17:39:01.1±1.0, 3472N×13785E, h270km±30km, mb2.8/4, mb1 2.9/4, mb1mx2.8/21, mbtmp2.8/4, Error ellipse: s-maj=77.1km s-min=18.9km az=59.0*
*JMA **01** 17:39:02.1±0.3, 3492N×13776E, h280km±2km, M2.7*
ISC 01 17:39:02.0±0.7, 3485N±009×1378E±01, h278km±5km, n14,
σ0s92/22, mb3.0/4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**1.00**	**243**	P	**Pn**	**17 39 40.3**	**+0.3**
JIE				S	**S**	**17 40 09.8**	**-0.2**
JOD2	**Odawara 2**	**1.15**	**69**	P	**Pn**	**17 39 41.6**	**+0.9**
JOD2				*e*S	**S**	**17 40 13.2**	**+1.8**
JGM	**Miyama**	**1.21**	**315**	P	**Pn**	**17 39 41.4**	**+0.3**
JGM				*e*S	**S**	**17 40 11.0**	**-1.0**
JRY	**Ryogami san**	**1.48**	**38**	P	**Pn**	**17 39 43.7**	**+0.9**
JRY				S	**S**	**17 40 15.4**	**+0.3**
MJAR	**Matsushiro Arr**	**1.72**	**12**	P	**Pn**	**17 39 44.6**	**+0.1**
	5.6nm,0.3s,baz=191,slow=8.9,SNR=53						
MJAR				S	**S**	**17 40 17.8**	**-0.4**
	baz=189,slow=15,SNR=6.8						
MAT	**Matsushiro**	**1.72**	**11**	P	**Pn**	**17 39 44.8**	**+0.3**
MAT				S	**S**	**17 40 18.0**	**-0.3**
MAT	**Matsushiro**	**1.72**	**11**	P	**Pn**	**17 39 44.8**	**+0.3**
MAT				*e*S	**S**	**17 40 17.8**	**-0.5**
JKG	**Kaga**	**1.85**	**321**	P	**Pn**	**17 39 45.5**	**0.0**
JWT	**Wachi**	**2.00**	**283**	P	**Pn**	**17 39 46.7**	**-0.1**
JAG	**Ashikaga**	**2.08**	**40**	P	**Pn**	**17 39 46.8**	**-0.6**
JAG				*e*S	**S**	**17 40 21.2**	**-2.3**
SONM	**Songino Array**	**26.70**	**309**	P	**P**	**17 44 18.1**	**+2.2**
	0.2nm,0.4s,mb2.9,baz=115,slow=6.5,SNR=3.2						
MKAR	**Makanchi Array**	**42.82**	**304**	P	**P**	**17 46 32.8**	**-0.1**
	0.4nm,0.5s,mb2.9,baz=91,slow=5.8,SNR=5.5						
WRA	**Warramunga Arr**	**54.59**	**184**	P	**P**	**17 48 00.9**	**-1.2**
	0.4nm,0.3s,mb3.3,baz=360,slow=7.6,SNR=23						
ASAR	**Alice Springs**	**58.31**	**184**	P	**P**	**17 48 27.4**	**-0.8**
	0.1nm,0.2s,mb2.8,baz=1.4,slow=6.7,SNR=6.4						

*IDC **01** 17:44:47.6±0.6, 1004N×64.15W, h0km, mb3.9/10, mb1 4.2/10, mb1mx4.1/20, mbtmp3.9/10, Error ellipse: s-maj=16.8km s-min=7.7km az=17.0*
*ISCJB **01** 17:44:52.0±0.6, 1007N±003×6443W±002, h25km±5km, mb4.0/15, Error ellipse: s-maj=5.5km s-min=3.6km az=169.2*
*NEIC **01** 17:44:52.4, 1008N×6435W, h13km, mb4.3/5, MD4.2(TRN), MD3.9(CAR), After CAR.*
*FUNV **01** 17:44:52.4, 1008N×6435W, h13km, MW3.8*
*TRN **01** 17:44:56.5, 971N×6424W, h72km, MD4.2*
ISC 01 17:44:51.9±0.8, 1006N±003×6439W±002, h13km±5km, n60,
σ1s19/69, mb4.0/15, 3C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**0.27**	**296**	Pg	**Pg**	**17 44 57.3**	**-0.3**
	2µm,0.3s,baz=117,slow=8.5,SNR=6368						
PCRV				Lg		17 45 01.4	
	2µm,0.3s,baz=83,slow=13,SNR=56						
PCRV	**Puerto La Cruz**	**0.27**	**296**	⇑ *i*P	**Pg**	**17 44 57.4**	**-0.3**
PCRV				*e*S	**Sg**	**17 45 01.4**	**-0.1**
CRUV	**Carupano**	**1.29**	**61**	*e*P	**Pn**	**17 45 16.1**	**+0.5**
CRUV				*e*S	**Sb**	**17 45 33.2**	**+0.8**
PRGV	**PARIAGUAN**	**1.31**	**191**	⇓ *i*P	**Pn**	**17 45 15.6**	**-0.3**
PRGV				*e*S	**Sb**	**17 45 35.0**	**+1.8**
ORIV	**Oritupano**	**1.38**	**135**	⇓ *e*P	**Pn**	**17 45 16.9**	**+0.1**
ORIV				*e*S	**Sn**	**17 45 35.8**	**+0.9**
CUPV	**Cœpira**	**1.38**	**270**	*e*P	**Pn**	**17 45 17.7**	**+0.9**
CUPV				*e*S	**Sn**	**17 45 36.5**	**+1.6**
GUNV	**Guanoco**	**1.43**	**86**	*e*P	**Pn**	**17 45 17.0**	**-0.5**
GUNV				*e*S	**Sn**	**17 45 35.9**	**-0.2**
IBAV	**Isla La Blanqu**	**1.76**	**354**	⇓ *i*P	**Pn**	**17 45 21.1**	**-1.0**
ITEV	**Isla Los Testi**	**1.78**	**44**	⇓ *i*P	**Pn**	**17 45 21.1**	**-1.3**
ITEV				*e*S	**Sn**	**17 45 43.2**	**-1.7**
BIRV	**Birongo**	**1.90**	**283**	*e*P	**Pn**	**17 45 25.3**	**+1.3**
MERV	**Las Mercedes**	**2.05**	**247**	⇑ *e*P	**Pn**	**17 45 26.1**	**+0.1**
GUIV	**Guiria**	**2.21**	**74**	*e*P	**Pn**	**17 45 27.5**	**-0.7**
FUNV	**FUNVISIS**	**2.42**	**280**	*e*P	**Pn**	**17 45 31.8**	**+0.7**
ORCV	**Isla La Orchil**	**2.49**	**315**	*e*P	**Pn**	**17 45 31.6**	**-0.5**
GURV	**El Guri**	**2.62**	**150**	*e*P	**Pn**	**17 45 32.9**	**-1.0**
TCE	**Chacachacare**	**2.67**	**76**	*e*P	**Pn**	**17 45 37.2**	**+2.6**
TCE				*e*S	**Sn**	**17 46 04.0**	**-2.8**
TCE				*e*S	**Sn**	**17 46 07.5**	**+0.7**
TPP	**Pointe-a-Pierr**	**2.90**	**85**	*e*P	**Pn**	**17 45 40.0**	**+2.2**
TRN	**Trinidad (W)**	**3.00**	**78**	*e*P	**Pn**	**17 45 40.8**	**+1.7**
TRN				*e*S	**Sn**	**17 46 13.5**	**-1.3**
TRN	**Trinidad (W)**	**3.00**	**78**	*e*	**Sn**	**17 46 17.8**	**+3.0**
RIOV	**Rio Grande**	**3.22**	**128**	*e*P	**Pn**	**17 45 41.7**	**-0.4**
TBH	**Brigand Hill**	**3.29**	**82**	*e*P	**Pn**	**17 45 44.8**	**+1.6**
TBH				*e*S	**Sn**	**17 46 17.1**	**-5.2**
TBH	**Brigand Hill**	**3.29**	**82**	*e*P	**Pn**	**17 45 44.8**	**+1.6**
TBH				*e*S	**Sn**	**17 46 20.8**	**-1.5**
CAOV	**Caicara del Or**	**3.32**	**215**	⇑ *i*P	**Pn**	**17 45 42.6**	**-0.9**
GRGR	**Grenville**	**3.38**	**52**	*e*Pn	**Pn**	**17 45 43.8**	**-0.6**
GRGR				*e*S	**Sn**	**17 46 26.8**	**+2.4**
GRW	**Mount Saint Ca**	**3.40**	**52**	*e*P	**Pn**	**17 45 49.6**	**+5.0**
GRW				*e*S	**Sn**	**17 46 27.4**	**+2.7**
TURV	**Turiamo**	**3.42**	**277**	*e*P	**Pn**	**17 45 45.8**	**+0.8**
TPR	**Prospect**	**3.72**	**72**	*e*P	**Pn**	**17 45 51.3**	**+2.2**
TPR				*e*S	**Sn**	**17 46 32.7**	**-0.1**
BAUV	**El Baul**	**3.77**	**253**	*e*P	**Pn**	**17 45 49.3**	**-0.5**
BOT	**Bacolet**	**3.77**	**73**	*e*P	**Pn**	**17 45 53.1**	**+3.4**
JACV	**Jacura**	**4.49**	**284**	*e*P	**Pn**	**17 45 59.5**	**-0.1**
TEPV	**Terepaima**	**4.73**	**269**	*e*P	**Pn**	**17 46 03.0**	**0.0**
LUEV	**Luepa**	**5.09**	**145**	*e*P	**Pn**	**17 46 06.6**	**-1.3**
SANV	**Sanarito**	**5.11**	**264**	*e*P	**Pn**	**17 46 07.9**	**-0.2**
FDF	**Fort de France**	**5.62**	**34**	*e*P	**Pn**	**17 46 14.0**	**-1.2**
FDF	**Fort de France**	**5.62**	**34**	*e*P	**Pn**	**17 46 14.2**	**-1.0**
MVM	**Montagne Vaucl**	**5.62**	**37**	*e*P	**Pn**	**17 46 14.2**	**-1.0**
SIV	**San Ignacio**	**26.09**	**173**	P	**P**	**17 50 23.4**	**-2.1**
	3.0nm,0.7s,mb3.9,baz=18,slow=12,SNR=8.1						
LPAZ	**La Paz**	**26.44**	**188**	P	**P**	**17 50 28.1**	**-0.5**
	0.9nm,0.6s,mb3.5,baz=345,slow=5.0,SNR=5.7						
TXAR	**Lajitas Array**	**41.39**	**303**	P	**P**	**17 52 38.3**	**+0.2**
	2.0nm,0.6s,mb3.9,baz=119,slow=8.8,SNR=23						
CFAA	**Coronel Fontan**	**41.59**	**185**	P	**P**	**17 52 38.1**	**-1.5**
	0.4nm,0.6s,mb3.2,baz=12,slow=6.9,SNR=4.9						
SDCO	**Great Sand Dun**	**46.06**	**314**	*e*P	**P**	**17 53 16.0**	**+0.5**
	2.4nm,0.8s,mb4.2						
PV01	**Paradox Valley**	**48.42**	**313**	*e*P	**P**	**17 53 35.1**	**+1.1**
WUAZ	**Wupatki**	**49.58**	**308**	*e*P	**P**	**17 53 44.0**	**+1.1**
	5.9nm,0.8s,mb4.7						
SRU	**San Rafael**	**50.21**	**313**	*e*P	**P**	**17 53 48.2**	**+0.6**
	1.9nm,0.6s,mb4.3						
PDAR	**Pinedale Array**	**51.05**	**318**	P	**P**	**17 53 53.4**	**-0.5**
	5.6nm,0.7s,mb4.6,baz=118,slow=9.8,SNR=37						
RLMT	**Red Lodge**	**51.93**	**321**	*e*P	**P**	**17 54 00.1**	**-0.4**
	3.7nm,0.6s,mb4.5						
BGU	**Big Grassy Mou**	**52.68**	**314**	*e*P	**P**	**17 54 06.1**	**0.0**
HLID	**Hailey**	**54.61**	**317**	*e*P	**P**	**17 54 20.2**	**-0.1**
	2.1nm,0.8s,mb4.2						
NVAR	**Mina Array Bea**	**55.74**	**310**	P	**P**	**17 54 28.0**	**-0.4**
	0.3nm,0.4s,mb3.7,baz=100,slow=7.1,SNR=4.6						
NVAR	**Mina Array Bea**	**55.74**	**310**	P	**P**	**17 54 28.0**	**-0.4**
ESDC	**Sonseca Array**	**60.96**	**50**	P	**P**	**17 55 02.7**	**-2.2**
	0.2nm,0.3s,mb3.7,baz=258,slow=7.3,SNR=3.9						
YKA	**Yellowknife Ar**	**63.50**	**337**	P	**P**	**17 55 20.7**	**-0.8**
	2.1nm,0.7s,mb4.4,baz=132,slow=8.3,SNR=4.0						
NOA	**NORSAR Array B**	**74.29**	**29**	P	**P**	**17 56 26.0**	**-2.7**
	0.5nm,0.5s,mb3.7,baz=249,slow=6.4,SNR=2.4						
GERES	**GERESS Array B**	**74.66**	**42**	P	**P**	**17 56 27.8**	**-3.3**
	0.9nm,0.7s,mb3.8,baz=247,slow=5.4,SNR=9.4						
SONM	**Songino Array**	**121.79**	**7**	PKP	PKPdf	18 03 44.0	-1.9
	0.5nm,0.5s,baz=202,slow=2.1,SNR=6.3						
CMAR	**Chiang Mai Arr**	**147.24**	**30**	PKPbc	PKPdf	18 04 31.9	-1.8
	1.4nm,0.7s,baz=300,slow=2.7,SNR=16						
STKA	**Stephens Creek**	**147.60**	**224**	PKP	PKPdf	18 04 30.2	-3.7
	1.4nm,0.7s,baz=358,slow=6.5,SNR=4.2						
STKA				PKPbc	PKPbc	18 04 34.0	-2.6
	1.4nm,0.7s,baz=37,slow=5.1,SNR=4.2						
STKA	**Stephens Creek**	**147.60**	**224**	PKP	PKPdf	18 04 30.2	-3.7
STKA				PKPbc	PKPbc	18 04 34.0	-2.6
ASAR	**Alice Springs**	**157.91**	**230**	PKP	PKPdf	18 04 46.1	-3.1
	0.4nm,0.9s,baz=68,slow=16,SNR=3.0						
ASAR				PKPab	PKPab	18 05 19.5	-2.6
	0.2nm,0.6s,baz=100,slow=4.1,SNR=3.2						
WRA	**Warramunga Arr**	**159.44**	**239**	PKP	PKPdf	18 04 47.5	-3.7
	0.3nm,0.6s,baz=123,slow=0.4,SNR=8.0						
WRA				PKPab	PKPab	18 05 25.7	-3.1
	0.6nm,0.9s,baz=110,slow=4.2,SNR=5.8						

*NEIC **01** 17:47:19.1±2.6, 3320S×17958W, h362km±13km, mb3.6/3, Error ellipse: s-maj=52.6km s-min=16.7km az=83.0*
*IDC **01** 17:47:22.0±7.5, 3328S×17994E, h356km±91km, mb3.2/4, mb1 3.4/5, mb1mx3.2/16, mbtmp3.2/5, Error ellipse: s-maj=183.1km s-min=79.8km az=115.0*
ISC 01 17:47:21.1±2.3, 332S±02×1800E±04, h347km±24km, n36,
σ0s79/38, mb3.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.59**	**197**	P	**Pn**	**17 48 35.1**	**-0.9**
PUZ	**Puketiti**	**5.08**	**195**	P	**Pn**	**17 48 40.3**	**-1.1**
PUZ				S	**S**	**17 49 46.5**	**+0.1**
MWZ	**Matawai**	**5.52**	**200**	P	**Pn**	**17 48 45.4**	**-0.9**
URZ	**Urewera**	**5.58**	**204**	P	**Pn**	**17 48 48.0**	**+1.1**
	10.0nm,0.3s,baz=52,slow=2.7,SNR=61						
URZ				S	**S**	**17 49 55.6**	**-1.0**
	12nm,0.3s,baz=273,slow=19,SNR=18						
URZ	**Urewera**	**5.58**	**204**	P	**Pn**	**17 48 47.9**	**+0.9**
KNZ	**Kokohu**	**6.12**	**197**	P	**Pn**	**17 48 52.8**	**-0.3**
BKZ	**Black Stump Fm**	**6.61**	**204**	P	**Pn**	**17 48 59.5**	**+0.8**
NGZ	**Ngauruhoe**	**6.96**	**209**	P	**Pn**	**17 49 04.6**	**+1.9**
TUVZ	**Tukino**	**7.01**	**209**	P	**Pn**	**17 49 05.0**	**+1.6**
WNVZ	**Wahianoa**	**7.08**	**209**	P	**Pn**	**17 49 05.5**	**+1.2**
MOVZ	**Moawhango**	**7.09**	**207**	P	**Pn**	**17 49 05.1**	**+0.7**
TSZ	**Takapari Road**	**7.59**	**204**	P	**Pn**	**17 49 10.6**	**+0.4**
BFZ	**Birch Farm**	**8.06**	**201**	P	**Pn**	**17 49 16.6**	**+0.8**
MRZ	**Mangatainoka R**	**8.26**	**204**	P	**Pn**	**17 49 17.8**	**-0.3**
KIW	**Kapiti Island**	**8.68**	**206**	P	**Pn**	**17 49 22.5**	**-0.6**
MTW	**Mount Morrison**	**8.73**	**203**	P	**Pn**	**17 49 23.7**	**0.0**
MSWZ	**Moikau Station**	**9.04**	**203**	P	**Pn**	**17 49 27.3**	**-0.2**
MRW	**Makara Radio**	**9.07**	**206**	P	**Pn**	**17 49 27.2**	**-0.6**
SNZO	**South Karori**	**9.14**	**206**	P	**Pn**	**17 49 27.9**	**-0.7**
BHW	**Baring Head**	**9.17**	**205**	P	**Pn**	**17 49 28.2**	**-0.8**
TCW	**Tory Channel**	**9.22**	**208**	P	**Pn**	**17 49 28.8**	**-0.8**
NNZ	**Nelson**	**9.60**	**211**	P	**Pn**	**17 49 33.3**	**-0.8**
QRZ	**Quartz Range**	**9.68**	**216**	P	**Pn**	**17 49 34.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**9.80**	**208**	P	**Pn**	**17 49 36.8**	**+0.3**
THZ	**Tophouse**	**10.25**	**211**	P	**Pn**	**17 49 42.1**	**+0.3**
LTZ	**Lake Taylor**	**11.35**	**210**	P	**Pn**	**17 49 55.0**	**0.0**
MQZ	**McQueen's Vall**	**11.97**	**206**	P	**Pn**	**17 50 02.2**	**-0.2**
ODZ	**Otahua Downs**	**13.88**	**209**	P	**Pn**	**17 50 27.1**	**+2.3**
STKA	**Stephens Creek**	**32.27**	**262**	P	**P**	**17 53 18.0**	**-0.5**
	1.7nm,0.

ARG	**Arkhangelos**	**1.18**	**57**	*e*PB	Pb	17 54 02.0	0.0	
ARG				*e*SB	Sb	17 54 17.8	+0.4	
APE	**Apeiranthos**	**1.86**	**324**	*e*PG	Pg	17 54 14.0	-1.2	
VAM	**Vamos**	**2.22**	**267**	*e*PN	Pn	17 54 19.7	+3.2	
VLI	**Veliai**	**3.41**	**291**	*e*PN	Pn	17 54 35.0	+2.1	

*ISCJB **01** 18:27:39.8±0.9, 4299N±005×7730E±008, h10km, Error ellipse: s-maj=9.0km s-min=6.6km az=39.8*
*NNC **01** 18:27:40.0±0.7, 4304N×7718E, h14km±5km, mb3.7, mpv3.1, Error ellipse: s-maj=9.0km s-min=3.8km az=171.0*
*KNET **01** 18:27:41.5±0.7, 4292N×7705E, h9km±4km, ml2.8, Error ellipse: s-maj=4.3km s-min=2.5km az=81.0*

ISC 01 18:27:40.6±0.9, 4297N±005×7724E±007, h10km, n15, σ1§34/18, 15C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
KNDC	**Almaty**	**0.32**	**321**		⇓P	**Pg**	**18 27 46.6**	**-0.5**
	67nm,0.2s							
KNDC					⇑S	**Sg**	**18 27 51.3**	**0.0**
	511nm,0.3s							
ULHL	**Ulahol**	**1.03**	**226**		⇑P	**Pg**	**18 27 59.1**	**-1.4**
	73nm,0.2s,SNR=30							
ULHL					⇑S	**Sg**	**18 28 12.6**	**-1.3**
	118nm,0.2s							
TKM2	**Tokmak 2**	**1.21**	**268**		⇓P	**Pn**	**18 28 01.8**	**-1.7**
	19nm,0.5s							
TKM2					⇑S	**Sb**	**18 28 17.8**	**-1.5**
	62nm,0.5s							
TKM2	**Tokmak 2**	**1.21**	**268**		⇑P	**Pn**	**18 28 02.0**	**-1.6**
	30nm,0.1s,SNR=122							
TKM2					⇓S	**Sb**	**18 28 18.6**	**-0.7**
	137nm,0.1s							
KBK	**Karagaybulak**	**1.72**	**260**		⇑P	**Pn**	**18 28 11.3**	**+0.8**
	51nm,0.1s,SNR=96							
KZA	**Kyzart**	**1.72**	**240**		⇑P	**Pn**	**18 28 11.7**	**+1.1**
	53nm,0.2s,SNR=45							
CHMS	**Chumysh**	**1.83**	**272**		⇑P	**Pn**	**18 28 12.5**	**+0.4**
	24nm,0.2s,SNR=18							
USP	**Ospenovka**	**2.03**	**279**		⇑P	**Pn**	**18 28 16.0**	**+1.2**
	36nm,0.2s,SNR=151							
AAK	**Ala-Archa**	**2.05**	**262**		P	**Pn**	**18 28 16.8**	**+1.7**
	46nm,0.3s,SNR=77							
UCH	**Uchtor**	**2.15**	**251**		⇑P	**Pn**	**18 28 19.2**	**+2.8**
	16nm,0.2s,SNR=14							
KK31	**Karatay Array**	**4.94**	**274**		⇑Pg	**Pg**	**18 29 08.1**	**-7.0**
	0.7nm,0.3s,baz=95,slow=15,SNR=34							
KK31					Lg		18 30 13.2	
	3.0nm,0.3s,baz=92,slow=30,SNR=18							
MK31	**Makanchi Array**	**5.24**	**41**		⇓Pn	**Pn**	**18 29 00.2**	**+1.2**
	1.9nm,0.8s,baz=214,slow=15,SNR=7.7							
MK31					⇑Pg	**Pg**	**18 29 15.7**	**-5.3**
	1.0nm,0.6s,baz=220,slow=16,SNR=4.1							
MK31					⇓Sn	**Sn**	**18 29 57.1**	**-2.3**
	0.8nm,0.5s,baz=215,slow=23,SNR=3.6							
MK31					Lg		18 30 25.1	
	3.3nm,0.5s,baz=215,slow=23,SNR=3.6							
KURBB	**Kurchatov Arra**	**7.71**	**6**		⇑Lg		18 31 39.1	
	0.8nm,0.7s							
KURK	**Kurchatov**	**7.81**	**6**		⇑Lg		18 31 46.1	
	7.7nm,0.9s							
VOSK	**Vostochnaya**	**10.62**	**339**		⇑Lg		18 33 12.6	
	4.8nm,1.6s							

IDC 01 18:28:31.9±1.4, 327N×12895E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/16, mbtmp3.7/6, Error ellipse: s-maj=82.7km s-min=17.3km az=66.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**23.67**	**167**		P	P	18 33 45.9	+0.4
	4.0nm,0.5s,baz=348,slow=10,SNR=47							
ASAR	**Alice Springs**	**27.20**	**170**		P	P	18 34 17.0	-0.5
	0.2nm,0.5s,baz=356,slow=8.0,SNR=13							
CMAR	**Chiang Mai Arr**	**33.02**	**299**		P	P	18 35 09.6	+0.5
	0.3nm,0.7s,baz=116,slow=8.1,SNR=3.9							
STKA	**Stephens Creek**	**36.96**	**162**		P	P	18 35 43.1	+0.1
	2.3nm,0.9s,baz=337,slow=11,SNR=4.6							
SONM	**Songino Array**	**48.47**	**340**		P	P	18 37 16.9	+0.7
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.2							
MKAR	**Makanchi Array**	**59.20**	**324**		P	P	18 38 34.2	-0.7
	1.0nm,0.4s,baz=112,slow=8.2,SNR=34							

*IDC **01** 18:40:38.9±1.8, 1013N×12796E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=70.3km s-min=21.5km az=63.0*
*MAN **01** 18:40:42, 1008N×12722E, h13km, mb4.6, ML3.5, MS3.4*
*ISCJB **01** 18:40:43.3±0.9, 997N±006×12726E±006, h33km, mb3.5/4, Error ellipse: s-maj=10.2km s-min=7.3km az=44.4*

ISC 01 18:40:44.8±0.9, 993N±006×12724E±006, h35km, n17, σ1§31/21, mb3.4/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SCPH	**Surigao**	**1.73**	**265**		*e*P	**Pn**	**18 41 11.3**	**-1.1**
BUTP	**Butuan**	**1.86**	**239**		*e*P	**Pn**	**18 41 14.7**	**+0.5**
BUTP					*e*S	**Sn**	**18 41 35.4**	**-1.1**
MSLP	**Maasin**	**2.35**	**275**		*e*P	**Pn**	**18 41 21.2**	**+0.3**
MSLP					*e*S	**Sn**	**18 41 51.0**	**+2.4**
PLP	**Palo**	**2.54**	**299**	⇓	*e*P	**Pn**	**18 41 22.1**	**-1.4**
PLP					*e*S	**Sn**	**18 41 51.9**	**-1.3**
OCLP	**Ormoc**	**2.82**	**293**		*e*P	**Pn**	**18 41 27.5**	**+0.1**
BUKP	**Musuan**	**2.97**	**227**		*e*P	**Pn**	**18 41 31.7**	**+2.3**
MATI	**Mati**	**3.12**	**198**		*e*P	**Pn**	**18 41 30.3**	**-1.3**
LLP	**Lapu-Lapu**	**3.25**	**277**		*e*P	**Pn**	**18 41 33.4**	**+0.1**
LLP					*e*S	**Sn**	**18 42 11.0**	**+0.3**
TBP	**Tagbilaran**	**3.34**	**266**		*e*S	**Sn**	**18 42 11.1**	**-1.9**
PAGZ	**Pagadian**	**4.34**	**242**		*e*P	**Pn**	**18 41 50.6**	**+2.4**
GUIM	**Jordan**	**4.63**	**279**		*e*P	**Pn**	**18 41 53.3**	**+1.0**
PVCP	**Virac**	**4.73**	**321**		*e*P	**Pn**	**18 41 53.3**	**-0.4**
BATI	**Baumata**	**20.32**	**190**		P	**P**	**18 45 21.7**	**+3.8**
	10nm,0.6s,baz=98,slow=0.6,SNR=6.0							
CMAR	**Chiang Mai Arr**	**28.68**	**290**		P	**P**	**18 46 42.6**	**+4.0**
	0.4nm,0.8s,mb3.2,baz=106,slow=7.3,SNR=4.9							
WRA	**Warramunga Arr**	**30.50**	**167**		P	**P**	**18 46 53.3**	**-1.4**
	0.2nm,0.5s,mb3.1,baz=350,slow=9.9,SNR=4.7							
ASAR	**Alice Springs**	**34.02**	**169**		P	**P**	**18 47 24.9**	**-0.7**
	0.3nm,0.7s,mb3.4,baz=342,slow=8.3,SNR=6.4							
ASAR					PcP	PcP	18 50 03.8	+0.8
	0.1nm,0.5s,baz=348,slow=2.1,SNR=6.0							
MKAR	**Makanchi Array**	**52.87**	**322**		P	**P**	**18 49 58.6**	**+1.5**
	1.6nm,0.8s,mb4.0,baz=115,slow=8.2,SNR=11							

*PLV **01** 19:03:51.2±1.0, 2062N×1010E, h12km±6km, ML4.3*
*SZGRF **01** 19:05:38.8, 1865N×1024E, h33km, mb4.7, Laos*
*ISCJB **01** 19:05:46.1±0.2, 2046N±002×10090E±002, h10km, mb4.6/48, MS3.9/15, Error ellipse: s-maj=3.4km s-min=2.9km az=157.7*
*IDC **01** 19:05:46.4±0.5, 2051N×1007E, h0km, mb4.4/16, mb1 4.5/17, mb1mx4.4/21, mbtmp4.4/17, ML4.3/1, MS3.8/10, Ms1 3.8/10, ms1mx3.5/28, Error ellipse: s-maj=16.8km s-min=12.4km az=82.0*
*BJI **01** 19:05:47.2, 2028N×1008E, h26km, mB4.7, mb4.6, ML4.5, Ms4.5, Msz4.3*
*MOS **01** 19:05:49.0±0.8, 2048N×1009E, h31km, mb4.9/23, Error ellipse: s-maj=10.5km s-min=6.0km az=121.2*
*NEIC **01** 19:05:51.5±1.4, 2046N×1007E, h33km±9km, mb4.7/28, Error ellipse: s-maj=7.2km s-min=4.9km az=47.0*

ISC 01 19:05:47.2±0.5, 2044N±002×10087E±002, h4km±3km, n161, σ1§10/182, mb4.6/48, MS3.9/15, 5C-10D, Laos

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
NANT	**Nan**	**1.64**	**185**		⇓P	**Pn**	**19 06 15.0**	**-1.8**
CHG	**Chiang Mai**	**2.43**	**229**		PN	**Pn**	**19 06 28.0**	**+0.4**
CHG					PG	**Pg**	**19 06 33.3**	**-0.5**
CHG					SG	**Sg**	**19 07 04.9**	**-0.4**
CHTO	**Chiang Mai**	**2.43**	**229**		*e*P	**Pn**	**19 06 27.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**2.68**	**223**		Pn	**Pn**	**19 06 31.4**	**+0.3**
	14nm,0.3s,baz=30,slow=13,SNR=221							
CMAR					Pg	**Pg**	**19 06 37.6**	**-1.0**
	113nm,0.3s,baz=34,slow=16,SNR=320							
CMAR					Lg		19 07 11.5	
	151nm,0.3s,baz=33,slow=29,SNR=8.8							
BDT	**Bhumibol Dam**	**3.64**	**209**		PN	**Pn**	**19 06 46.0**	**+1.8**
BDT					PG	**Pg**	**19 06 57.8**	**+0.9**
BDT					SG	**Sg**	**19 07 50.0**	**+5.9**
KKTK	**Khon Kaen**	**4.49**	**155**		PN	**Pn**	**19 06 59.0**	**+3.1**
KKTK					PG	**Pg**	**19 07 24.0**	**+11**
KKTK					SG	**Sn**	**19 07 46.1**	**-2.4**
HNV	**Hanoi**	**4.65**	**82**		*e*PN	**Pn**	**19 06 58.0**	**-0.2**
HNV					AMP		19 06 31.7	
	comp=Z,1μm,0.8s							
HNV					*e*PG	**Pg**	**19 07 15.4**	**-1.0**
HNV					*e*SG	**Sg**	**19 08 11.9**	**-4.9**
DSV	**Doi Son**	**4.79**	**87**		*e*PN	**Pn**	**19 07 01.0**	**+0.9**
DSV					*e*PG	**Pg**	**19 07 20.1**	**+1.1**
DSV					*e*SG	**Sg**	**19 08 19.5**	**-1.6**
NST	**Nakhon Sawan**	**4.79**	**188**		PN	**Pn**	**19 07 02.5**	**+2.3**
NST					PG	**Pg**	**19 07 19.2**	**+0.1**
NST					SG	**Sg**	**19 08 21.0**	**-0.3**
KMI	**Kunming**	**4.97**	**20**		P	**Pn**	**19 07 05.1**	**+2.5**
KMI					SG	**Sg**	**19 08 26.9**	**0.0**
KMI					Smax			
	comp=N,321nm,1.4s							
KMI					Smax			
	comp=E,383nm,1.2s							
KMI					LR	LR		
	comp=N,2μm,6.4s							
KMI					LR	LR		
	comp=E,3μm,5.4s							
BGV	**Bac-Giang**	**5.09**	**79**		*e*PN	**Pn**	**19 07 04.5**	**+0.4**
BGV					*e*PG	**Pg**	**19 07 25.0**	**+0.3**
BGV					*e*SG	**Sg**	**19 08 28.9**	**-1.7**
MTZV	**Met**	**5.23**	**77**		*e*PN	**Pn**	**19 07 06.8**	**+0.6**
MTZV					*e*PG	**Pg**	**19 07 27.2**	**-0.4**
MTZV					*e*SG	**Sg**	**19 08 33.3**	**-2.1**
PLV	**Phu-Lien**	**5.41**	**85**		*e*PN	**Pn**	**19 07 09.4**	**+0.7**
PLV					*e*PG	**Pg**	**19 07 31.3**	**+0.4**
PLV					*e*SG	**Sg**	**19 08 40.1**	**-1.0**
YTV	**Yen Tu**	**5.52**	**82**		*e*PN	**Pn**	**19 07 11.0**	**+0.9**
YTV					*e*PG	**Pg**	**19 07 34.0**	**+1.0**
YTV					*e*SG	**Sg**	**19 08 43.8**	**-0.8**
UBT	**Ubonrachathani**	**6.51**	**142**		PN	**Pn**	**19 07 26.9**	**+3.2**
	comp=E,694nm,1.0s							
NNT	**Nongplab**	**7.88**	**188**		P	**Pn**	**19 07 43.8**	**+1.2**
GYA	**Guiyang**	**8.01**	**41**		P	**Pn**	**19 07 45.5**	**+1.1**
GYA					S	**Sn**	**19 09 17.3**	**+1.9**
GYA					LR	LR		
	comp=N,1μm,16.8s							
GYA					LR	LR		
	comp=E,2μm,16.3s							
GYA					LR	LR		
	comp=Z,710nm,15.9s							
QIZ	**Qiongzhong**	**8.57**	**98**		P	**Pn**	**19 07 53.4**	**+1.3**
QIZ					S	**Sn**	**19 09 31.0**	**+1.8**
QIZ					LR	LR		
	comp=E,2μm,7.1s							
QIZ					LR	LR		
	comp=Z,2μm,7.6s							
QIZ	**Qiongzhong**	**8.57**	**98**		*e*P	**Pn**	**19 07 53.4**	**+1.3**
CD2	**Chengdu**	**10.74**	**13**		*e*P	**Pn**	**19 08 24.3**	**+2.5**
CD2					AP		19 08 27.5	
CD2					XP		19 08 30.8	
CD2					PP		19 08 33.0	
CD2					S	**Sn**	**19 10 24.0**	**+1.4**
CD2					SS		19 10 37.5	
CD2					AMB	AMB		
	comp=Z,20nm,1.0s							
CD2					AMB	AMB		
	comp=Z,250nm,4.2s							
CD2					LR	LR		
	comp=N,3μm,8.4s							
CD2					LR	LR		
	comp=E,2μm,8.8s							
CD2					LR	LR		
	comp=Z,3μm,11.4s							
LSA	**Lhasa**	**12.74**	**318**		P	**Pn**	**19 08 50.6**	**+1.5**
LSA					LR	LR		
	comp=N,650nm,14.8s							
LSA					LR	LR		
	comp=E,980nm,14.8s							
LSA					LR	LR		
	comp=Z,870nm,13.4s							
LSA	**Lhasa**	**12.74**	**318**		*e*P	**Pn**	**19 08 51.4**	**+2.2**
	comp=Z,33nm,1.1s							
LSA	**Lhasa**	**12.74**	**318**		*e*P	**Pn**	**19 08 51.4**	**+2.3**
LSA					pmax	pmax		
	comp=Z,33nm,1.1s							
TAPN	**Taplejung**	**13.85**	**302**		*e*P	**Pn**	**19 09 05.6**	**+1.2**
	comp=Z,46nm,0.8s							
ODAN	**Odare**	**13.90**	**300**		*e*P	**Pn**	**19 09 04.9**	**-0.1**
	comp=Z,40nm,0.9s							
RAMN	**Ramite**	**14.58**	**299**		*e*P	**Pn**	**19 09 14.2**	**-0.1**
	comp=Z,72nm,1.0s							
JIRN	**Jiri**	**15.20**	**301**		*e*P	**Pn**	**19 09 24.1**	**+1.4**
	comp=Z,98nm,1.0s							
XAN	**Xi'an**	**15.31**	**26**		P	**Pn**	**19 09 21.9**	**-2.2**
XAN					XP		19 09 31.0	
XAN					PPP		19 09 44.1	
XAN					LG2		19 14 03.5	
XAN					AMB	AMB		
	comp=Z,9.0nm,1.2s							
XAN					AMB	AMB		
	comp=Z,153nm,6.5s							
XAN					LR	LR		
	comp=N,722nm,13.8s							
XAN					LR	LR		
	comp=E,2μm,16.1s							
XAN					LR	LR		
	comp=Z,1μm,13.2s							
GUN	**Gumba**	**15.56**	**301**		*e*P	**Pn**	**19 09 28.5**	**+1.1**
	comp=Z,219nm,0.9s							
PKI	**Pulchoki**	**15.80**	**300**		*e*P	**Pn**	**19 09 29.8**	**-0.7**
	comp=Z,118nm,1.4s							
PKI	**Pulchoki**	**15.80**	**300**		*e*P	**Pn**	**19 09 30.7**	**+0.2**
LZH	**Lanzhou**	**15.80**	**9**		*e*P	**Pn**	**19 09 32.0**	**+1.5**
LZH					AP	pP	19 09 40.5	+4.8
LZH					XP	sP	19 09 45.0	+8.7
LZH					*e*PP		19 09 46.0	
LZH					*e*S	**Sn**	**19 12 31.0**	**+4.9**
LZH					XS	**Sn**	**19 12 40.0**	**+14**
LZH					SS		19 12 46.1	
LZH					AMB	AMB		
	comp=Z,76nm,1.5s							
LZH					AMB	AMB		
	comp=Z,280nm,4.0s							
LZH					LR	LR		
	comp=N,1μm,10.0s							
LZH					LR	LR		
	comp=Z,2μm,11.2s							
PKIN	**Phulchoki**	**15.81**	**300**		*e*P	**Pn**	**19 09 30.7**	**0.0**
KKN	**Kakani**	**15.99**	**300**		*e*P	**Pn**	**19 09 33.9**	**+0.9**
	comp=Z,108nm,1.2s							
KKN	**Kakani**	**15.99**	**300**		*e*P	**Pn**	**19 09 33.9**	**+0.9**
KKN					pmax	pmax		
	comp=Z,108nm,1.2s							
DMN	**Daman**	**16.06**	**299**		*e*P	**Pn**	**19 09 33.5**	**-0.4**
	comp=Z,78nm,1.0s							
GKN	**Gorkha**	**16.60**	**300**		*e*P	**Pn**	**19 09 41.2**	**+0.4**
	comp=Z,177nm,1.1s							
KOLN	**Koldanda**	**17.36**	**298**		*e*P	**Pn**	**19 09 49.2**	**-1.2**
	comp=Z,30nm,0.9s							
DANN	**Dangsing**	**17.44**	**300**		*e*P	**Pn**	**19 09 51.0**	**-0.4**
	comp=Z,146nm,1.2s							
NJ2	**Nanjing**	**19.82**	**51**		*e*P	**Pn**	**19 10 19.7**	**-0.6**
NJ2					AP	pP	19 10 23.6	+3.5
NJ2					XP	sP	19 10 26.7	+6.0
NJ2					PP		19 10 38.4	
NJ2					S	**Sn**	**19 13 56.0**	**-7.4**
NJ2					AMB	AMB		
	comp=Z,10.0nm,1.2s							
NJ2					AMB	AMB		
	comp=Z,180nm,7.1s							
NJ2					LR	LR		
	comp=N,900nm,12.6s							
NJ2					LR	LR		
	comp=E,710nm,12.0s							
TIA	**Tai'an**	**21.20**	**39**		⇑P	**P**	**19 10 35.3**	**+1.5**
HYB	**Hyderabad**	**21.32**	**266**		*i* P	**P**	**19 10 37.0**	**+1.8**
BTO	**Baotou**	**21.57**	**19**		*e*P	**P**	**19 10 38.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**22.29**	**22**		*e*P	**P**	**19 10 47.0**	**+1.6**
HHC					AP		19 10 55.9	
HHC					XP	sP	19 11 00.1	+13
HHC					PP		19 11 07.2	
HHC					AMB	AMB		
	comp=Z,30nm,0.9s,mb4.7							
HHC					AMB	AMB		
	comp=Z,184nm,8.9s							
HHC					LR	LR		
	comp=N,817nm,12.5s,MS4.5							
HHC					LR	LR		
	comp=E,1μm,16.7s,MS4.5							
HHC					LR	LR		
	comp=Z,722nm,12.5s,MS4.3							
BJI	**Beijing**	**23.52**	**31**		P	**P**	**19 10 59.5**	**+1.0**
BJI					AMB	AMB		
	comp=Z,37nm,1.2s,mb4.7							
BJI					AMB	AMB		
	comp=Z,198nm,3.2s							
BJI					LR	LR		
	comp=N,554nm,14.6s,MS4.3							
BJI					LR	LR		
	comp=E,572nm,14.0s,MS4.3							
BJI					LR	LR		
	comp=Z,234nm,21.0s							
WMQ	**Urumqi**	**25.78**	**338**		*e*P	**P**	**19 11 20.3**	**+1.3**
WMQ					AMB	AMB		
	comp=Z,15nm,1.0s,mb4.5							
DAV	**Davao City (W)**	**27.38**	**116**		LR	LR	19 22 15.4	
	comp=Z,159nm,20.2s,MS3.6,baz=315,slow=36							
SONM	**Songino Array**	**27.69**	**8**		P	**P**	**19 11 36.6**	**+0.4**
	comp=Z,3.4nm,1.0s,mb3.9,baz=174,slow=6.0,SNR=4.5							
SONM					LR	LR	19 23 55.8	
	comp=Z,254nm,18.8s,MS3.8,baz=170,slow=39							
ULN	**Ulaanbaatar**	**27.81**	**9**		*i* P	**P**	**19 11 38.8**	**+1.5**
KSRS	**Korea Array**	**28.97**	**48**		LR	LR	19 22 16.8	
	comp=Z,57nm,21.0s,MS3.2,baz=59,slow=34							
MK31	**Makanchi Array**	**30.34**	**334**		*e*P	**P**	**19 12 00.2**	**+0.4**
MKAR	**Makanchi Array**	**30.34**	**334**		P	**P**	**19 12 00.3**	**+0.5**
	comp=Z,2.9nm,0.5s,mb4.3,baz=142,slow=9.7,SNR=57							
MKAR					LR	LR	19 26 20.6	
	comp=Z,42nm,18.8s,MS3.1,baz=150,slow=41							
TKM2	**Tokmak 2**	**30.85**	**322**		*e*P	**P**	**19 12 04.2**	**-0.2**
	comp=Z,6.1nm,1.0s,mb4.4							
TKM2	**Tokmak 2**	**30.85**	**322**		*e*P	**P**	**19 12 04.2**	**-0.1**
TKM2					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4							
KBL	**Kabul**	**31.38**	**303**		*e*P	**P**	**19 12 08.9**	**-0.2**
	comp=Z,16nm,1.3s,mb4.7							
KBL	**Kabul**	**31.38**	**303**		*e*P	**P**	**19 12 08.9**	**-0.2**
KBL					pmax	pmax		
	comp=Z,16nm,1.3s,mb4.7							
AML	**Almayashu**	**31.50**	**319**		*e*P	**P**	**19 12 11.1**	**+1.0**
	comp=Z,9.3nm,1.1s,mb4.5							
EKS2	**Erkin-Say**	**31.76**	**320**		*e*P	**P**	**19 12 13.8**	**+1.4**
	comp=Z,12nm,1.3s,mb4.5							
KURK	**Kurchatov**	**34.93**	**335**		*e*P	**P**	**19 12 39.1**	**-0.8**
	comp=Z,21nm,1.3s,mb4.9							
KURK	**Kurchatov**	**34.93**	**335**	⇓	*e*P	**P**	**19 12 39.8**	**-0.1**
KURK					pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8							
ZALV	**Zalesovo Beam**	**35.63**	**344**		P	**P**	**19 12 46.2**	**+0.3**
	comp=Z,6.1nm,1.0s,mb4.5,baz=148,slow=8.7,SNR=22							
MJAR	**Matsushiro Arr**	**36.27**	**56**		P	**P**	**19 12 51.6**	**-0.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=264,slow=9.8,SNR=4.3							
NVS	**Novosibirsk**	**36.85**	**343**		*e*P	**P**	**19 12 53.4**	**-2.9**
BOD	**Bodaibo**	**38.55**	**11**		*e*P	**P**	**19 13 01.6**	**-9.1**
BOD					pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.0							
HABR	**Khabarovsk**	**39.16**	**36**		*e*P	**P**	**19 13 13.1**	**-2.8**
HABR					*e*		19 14 42.7	
HABR					*e*S	**S**	**19 19 13.5**	**-2.8**
HABR					*e*		19 23 23.0	
BVAR	**Borovoye Array**	**40.10**	**332**		P	**P**	**19 13 23.6**	**-0.1**
	comp=Z,2.5nm,0.5s,mb4.2,baz=129,slow=8.9,SNR=25							
BVAR					PcP	PcP	19 15 27.5	-0.8
	comp=Z,0.9nm,0.7s,baz=171,slow=3.6,SNR=3.2							
BRVK	**Borovoye**	**40.17**	**332**		*e*P	**P**	**19 13 24.0**	**-0.2**
	comp=Z,15nm,1.0s,mb4.7							
BRVK	**Borovoye**	**40.17**	**332**		*e*P	**P**	**19 13 24.0**	**-0.3**
BRVK					pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7							
GUMO	**Guam**	**42.52**	**92**		LR	LR	19 29 43.3	
	comp=Z,63nm,19.8s,MS3.5,baz=10,slow=34							
KAKA	**Kakadu**	**45.27**	**134**		*e*P	Px	19 13 30.0	
	comp=Z,2.9nm,0.3s							
MBWA	**Marble Bar**	**45.27**	**155**		*e*P	**P**	**19 14 09.9**	**+3.9**
YAK	**Yakutsk**	**46.09**	**18**		*e*P	**P**	**19 14 10.7**	**-1.3**
YAK					pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5							
YAK					MLR	MLR		
	comp=Z,284nm,16.0s,MS4.3							
YAK					MLR	MLR		
	comp=E,191nm,19.0s,MS4.2							
YAK					MLR	MLR		
	comp=N,152nm,16.0s,MS4.2							
SVE	**Sverdlovsk**	**46.87**	**331**	⇓	*e*P	**P**	**19 14 18.7**	**+0.5**
SVE					pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8							
ARU	**Arti**	**47.62**	**330**		*d i* P	**P**	**19 14 23.3**	**-0.8**
ARU					*e*		19 16 09.2	
ARU					*e*S	**S**	**19 21 18.4**	**-1.7**
ARU					SS	SS	19 24 44.9	-3.1
ARU					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8							
WRAB	**Tennant Creek**	**51.81**	**139**		*i* P	**P**	**19 14 56.6**	**+0.1**
WRA	**Warramunga Arr**	**51.81**	**139**		P	**P**	**19 14 57.4**	**+0.9**
	comp=Z,8.6nm,0.8s,mb4.7,baz=326,slow=8.0,SNR=40							
WB2	**Warramunga Arr**	**51.82**	**139**		*e*P	**P**	**19 15 00.0**	**+3.5**
KIV	**Kislovodsk**	**53.33**	**310**		*e*P	**P**	**19 15 07.7**	**+0.2**
	comp=Z,42nm,1.3s,mb5.2							
KIV	**Kislovodsk**	**53.33**	**310**		*e*P	**P**	**19 15 06.0**	**-1.5**
KIV					pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1							
KIV					MLR	MLR		
	comp=Z,49nm,16.0s,MS3.6							
TIXI	**Tiksi**	**53.73**	**11**		*e*P	**P**	**19 15 09.0**	**-1.0**
	comp=Z,4.4nm,0.9s,mb4.4							
TIXI	**Tiksi**	**53.73**	**11**		*e*P	**P**	**19 15 08.3**	**-1.7**
TIXI					pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6							
ASAR	**Alice Springs**	**54.39**	**142**		P	**P**	**19 15 16.2**	**+0.8**
	comp=Z,3.9nm,0.8s,mb4.4,baz=321,slow=7.0,SNR=38							
ASAR					PcP	PcP	19 16 20.2	+1.0
	comp=Z,1.3nm,0.9s,baz=318,slow=3.6,SNR=4.4

DPC	Dobruska-Polom	71.11	318	*e*P		P	19 17 06.4	-0.3
TOO	Toolangi	71.36	144	*e*P		P	19 17 13.2	+4.9
NB2	NORSAR Subarra	72.18	329	P		P	19 17 11.6	-1.3
	comp=Z,4.1nm,0.8s,mb4.4,baz=83,slow=5.9							
NOA	NORSAR Array B	72.18	329	P		P	19 17 11.0	-1.9
	comp=Z,4.0nm,0.9s,mb4.3,baz=81,slow=5.9,SNR=5.1							
PRU	Pruhonice	72.30	317	*e*P		P	19 17 14.3	+0.4
BRG	Berggiesshubel	72.51	318	*e*P		P	19 17 15.1	0.0
	comp=Z,6.9nm,1.4s,mb4.4							
BRG	Berggiesshubel	72.51	318	*e*P		P	19 17 15.1	0.0
BRG				pmax	pmax			
	comp=Z,7.0nm,1.4s,mb4.4							
CLL	Collm	73.01	319	*e*P		P	19 17 18.0	0.0
GERES	GERESS Array B	73.06	316	P		P	19 17 17.5	-0.9
	comp=Z,2.7nm,1.0s,mb4.2,baz=100,slow=5.5,SNR=12							
KHC	Kasperske Hory	73.09	317	*e*		P	19 17 19.5	+1.0
KHC	Kasperske Hory	73.09	317	*e*P		P	19 17 19.5	+1.0
MOX	Moxa	74.01	319	*e*P		P	19 17 23.2	-0.7
	comp=Z,20nm,1.7s,mb4.8							
MOX	Moxa	74.01	319	*e*P		P	19 17 23.2	-0.7
MOX				pmax	pmax			
	comp=Z,20nm,1.7s,mb4.8							
GRA1	Grafenberg Arr	74.47	318	*e*P		P	19 17 26.8	+0.2
	comp=Z,9.0nm,1.3s,mb4.5							
GRF	Grafenberg Arr	74.47	318	*e*P		P	19 17 26.8	+0.2
GRF				pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.5							
GRF	Grafenberg Arr	74.47	318	*e*P		P	19 17 26.8	+0.2
GRF				pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.5							
GRF	Grafenberg Arr	74.47	318	*e*P		P	19 17 26.8	+0.2
	comp=Z,9.0nm,1.3s,mb4.5							
CDF	Champ du Feu	77.30	317	*e*P		P	19 17 43.0	+0.1
LPG	La Plagne	78.49	314	*e*P		P	19 17 49.3	-0.3
LPL	La Plagne	78.50	314	*e*P		P	19 17 49.1	-0.5
CABF	La Chapelle	78.60	316	*e*P		P	19 17 50.6	+0.5
MEZF	Maizieres J'vi	78.69	318	*e*P		P	19 17 50.0	-0.6
	comp=Z,6.4nm,0.7s,mb4.3							
MEZF	Maizieres J'vi	78.69	318	*e*P		P	19 17 50.0	-0.6
	comp=Z,6.4nm,0.7s,mb4.7							
MBDF	Montbardon	78.71	314	*e*P		P	19 17 50.2	-0.6
	comp=Z,52nm,1.4s,mb5.0							
MBDF	Montbardon	78.71	314	*e*P		P	19 17 50.2	-0.6
	comp=Z,26nm,1.4s,mb5.0							
MBDF	Montbardon	78.71	314	*e*P		P	19 17 50.2	-0.6
MBDF				pmax	pmax			
	comp=Z,26nm,1.4s,mb5.0							
ORIF	Oris-en-Rattie	79.26	314	*e*P		P	19 17 53.2	-0.6
LOR	Lormes	79.84	317	*e*P		P	19 17 55.8	-1.1
	comp=Z,34nm,1.4s,mb4.8							
LOR	Lormes	79.84	317	*e*P		P	19 17 55.8	-1.1
	comp=Z,17nm,1.4s,mb4.8							
LOR	Lormes	79.84	317	*e*P		P	19 17 55.8	-1.1
LOR				pmax	pmax			
	comp=Z,17nm,1.4s,mb4.8							
SMF	Signal de Mont	80.06	316	*e*P		P	19 17 57.2	-0.9
SSF	Saint Saulge	80.14	317	*e*P		P	19 17 57.7	-0.8
	comp=Z,6.7nm,0.7s,mb4.4							
SSF	Saint Saulge	80.14	317	*e*P		P	19 17 57.7	-0.8
	comp=Z,3.3nm,0.7s,mb4.4							
SSF	Saint Saulge	80.14	317	*e*P		P	19 17 57.7	-0.8
SSF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
COLA	College	80.29	24	*i* P		P	19 17 56.1	-2.9
AVF	Avril sur Loir	80.33	316	*e*P		P	19 17 58.6	-0.9
	comp=Z,7.3nm,0.8s,mb4.3							
AVF	Avril sur Loir	80.33	316	*e*P		P	19 17 58.6	-0.9
	comp=Z,3.7nm,0.8s,mb4.4							
AVF	Avril sur Loir	80.33	316	*e*P		P	19 17 58.6	-0.9
AVF				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
BGF	Bois d'Agland	80.73	316	*e*P		P	19 18 00.8	-0.9
TCF	Toulx Ste Croi	81.24	316	*e*P		P	19 18 03.9	-0.5
	comp=Z,19nm,1.1s,mb4.7							
TCF	Toulx Ste Croi	81.24	316	*e*P		P	19 18 03.9	-0.5
	comp=Z,9.4nm,1.1s,mb4.6							
CAF	Calviac	81.81	315	*e*P		P	19 18 07.2	-0.3
RJF	Les Rejaudoux	82.04	315	*e*P		P	19 18 08.4	-0.3
	comp=Z,17nm,1.1s,mb4.6							
RJF	Les Rejaudoux	82.04	315	*e*P		P	19 18 08.4	-0.3
	comp=Z,8.7nm,1.0s,mb4.6							
ROSF	Rostrenen	83.93	319	*e*P		P	19 18 18.2	-0.2
BOSA	Boshof	87.74	238	P		P	19 18 36.8	-0.8
	comp=Z,3.5nm,0.8s,mb4.6,baz=108,slow=7.5,SNR=4.7							
BOSA				LR		LR	19 59 52.0	
	comp=Z,66nm,18.6s,MS4.1,baz=165,slow=37							
ESDC	Sonseca Array	87.96	312	P		P	19 18 37.3	-1.3
	comp=Z,2.1nm,0.9s,mb4.3,baz=57,slow=5.0,SNR=6.5							
TSUM	Tsumeb	90.56	250	LR		LR	19 56 06.8	
	comp=Z,90nm,18.9s,MS4.2,baz=318,slow=33							
MAW	Mawson	92.15	194	P		P	19 18 58.3	+1.1
	comp=Z,4.4nm,1.0s,mb4.8,baz=3.9,slow=8.7,SNR=6.3							
TORD	Torodi Ar. Bea	93.85	285	P		P	19 19 04.2	-2.2
	comp=Z,195nm,0.4s,baz=70,slow=5.2,SNR=2.6							
VNA2	Neumayer--Watz	115.12	200	*e*PKPdf		PKiKP	19 24 32.6	+3.7
	baz=41,slow=3.8							
VNA3	Neumayer Olymp	115.78	200	*e*PKPdf		PKPdf	19 24 37.8	+7.6

*IDC **01** 19:06:05.8±3.0,2120S×17923W,h674km±41km,mb3.3/4, mb1 3.5/4,mb1mx3.1/15,mbtmp3.3/4,Error ellipse: s-maj=88.3km s-min=18.8km az=161.0*

ISC 01 19:06:04.9±3.0,**213S**±06×**1793W**±05,**h642**km±52km,**n12,** σ0**53**/10,**mb4.1**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.17	266	*e*P	P	19 11 43.5	+0.5
	3.4nm,0.4s,mb4.2						
STKA	Stephens Creek	36.31	245	*e*P	P	19 12 18.0	+0.8
	1.4nm,0.4s,mb3.8						
STKA	Stephens Creek	36.31	245	P	P	19 12 18.1	+0.9
	1.4nm,0.4s,mb3.8,baz=88,slow=8.4,SNR=16						
ASAR	Alice Springs	43.12	258	P	P	19 13 11.4	+0.1
	4.3nm,0.4s,mb4.2,baz=89,slow=6.8,SNR=199						
ASAR				PcP	PcP	19 14 44.9	-1.0
	0.6nm,0.6s,baz=98,slow=3.7,SNR=5.7						
ASAR				S	S	19 18 53.5	+0.2
	0.6nm,0.8s,baz=97,slow=15,SNR=5.0						
WB2	Warramunga Arr	43.24	263	*e*P	P	19 13 11.7	-0.7
WRA	Warramunga Arr	43.25	263	P	P	19 13 12.0	-0.4
	3.0nm,0.3s,mb4.2,baz=97,slow=7.4,SNR=81						
WRA				S	S	19 18 55.3	0.0
	0.2nm,0.7s,baz=101,slow=15,SNR=3.0						
FORT	Forrest	47.83	247	*e*P	P	19 13 46.1	-0.7
	8.7nm,0.6s,mb4.3						
CMAR	Chiang Mai Arr	89.21	290	P	P	19 17 55.0	+0.4
	1.1nm,0.9s,mb3.6,baz=119,slow=2.4,SNR=5.7						
BVAR	Borovoye Array	118.89	320	PKP	PKPdf	19 23 39.2	-2.5
	0.5nm,0.3s,baz=125,slow=1.2,SNR=6.9						
ARCES	ARCESS Array B	129.48	349	PKP	PKPdf	19 23 58.9	-2.6
	3.4nm,0.9s,baz=328,slow=4.3,SNR=4.1						
AKASG	Malin Array Be	143.10	330	PKP	PKPdf	19 24 22.6	-4.5
	1.9nm,0.4s,baz=44,slow=4.2,SNR=15						
GERES	GERESS Array B	150.62	342	PKPbc	PKPbc	19 24 44.0	-1.9
	0.8nm,0.7s,baz=325,slow=1.6,SNR=6.4						

*CSEM **01** 19:34:51.5±0.0,3906N×2673E,h10km,MD3.2,Error ellipse: s-maj=1.2km s-min=0.9km az=57.0*
*DDA **01** 19:34:51.9,3910N×2679E,h28km±2km,Md3.2*
*ISK **01** 19:34:51.1,3909N×2676E,h3km,MD3.2*
*ATH **01** 19:34:52.5,3904N×2667E,h29km,MD3.5/5*
*ISCJB **01** 19:34:52.1±0.4,3908N±002×2675E±002,h8km±3km, Error ellipse: s-maj=3.3km s-min=2.4km az=144.6*
*THE **01** 19:34:52.4,3905N×2679E,h10km±2km,ML3.5/4, Error ellipse: s-maj=3.3km s-min=1.4km az=265.0*
*NEIC **01** 19:34:52.5,3904N×2667E,h29km,MD3.5(ATH),After ATH.*

ISC 01 19:34:52.7±0.3,**3908N**±002×**2675E**±002,**h10**km±2km,**n77,** σ1**91**/119,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.23	348	*i* P	Pg	19 34 57.3	-0.3
AYVA				*i* S	Sg	19 35 01.4	+0.6
PRK	Paraskevi	0.41	294	P	Pg	19 35 00.9	+0.1
PRK				S	Sg	19 35 07.2	+1.0
PRK	Paraskevi	0.41	294	*e*PB	Pg	19 35 01.3	+0.5
PRK				*e*SB	Sg	19 35 07.3	+1.1
URLA	Izmir	0.73	190	*i* P	Pg	19 35 05.3	-1.5
URLA				*i* S	Sg	19 35 18.9	+2.6
BLCB	Balcova	0.73	162	PG	Pg	19 35 05.8	-1.0
KDAG	Bornova	0.79	149	*i* P	Pg	19 35 06.7	-1.2
KDAG				*i* S	Sg	19 35 20.2	+2.0
IZM	Izmir	0.79	149	PG	Pg	19 35 06.9	-1.1
IZM				*e*SG	Sg	19 35 18.7	+0.4
EZN	Ezine	0.81	336	*e*PG	Pg	19 35 07.6	-0.9
EZN				*e*SG	Sg	19 35 19.5	+0.4
AKS	Akhisar	0.85	103	*e*PG	Pg	19 35 08.3	-0.9
AKHS	Akhisar	0.85	103	*i* P	Pg	19 35 08.0	-1.2
AKHS				*i* S	Sg	19 35 21.3	+1.1
CHOS	Chios island	0.88	218	P	Pg	19 35 08.9	-0.8
CHOS				S	Sg	19 35 22.4	+1.3
BOZC	Bozcaada	0.93	325	*i* P	Pg	19 35 09.9	-0.9
BOZC				*i* S	Sg	19 35 25.0	+2.1
BALY	Balya	0.94	45	*i* P	Pg	19 35 09.3	-1.6
BALY				*i* S	Sg	19 35 23.2	0.0
GADA	Gvkgeada	1.29	330	*e*PN	Pn	19 35 16.2	-0.6
SMG	Samos	1.37	177	*e*PN	Pn	19 35 16.8	-1.1
SMG				*e*SN	Sn	19 35 34.8	-1.2
GCAM	G?zelcaml?	1.43	164	*i* P	Pn	19 35 18.6	-0.1
GCAM				*i* S	Sn	19 35 38.8	+1.4
LIA	Limnos Island	1.46	304	P	Pn	19 35 18.3	-0.8
LIA				S	Sn	19 35 38.4	+0.1
LIA	Limnos Island	1.46	304	*e*PN	Pn	19 35 18.9	-0.2
LIA				*e*SN	Sn	19 35 37.4	-0.9
LIA	Limnos Island	1.46	304	*e*Pn	Pn	19 35 18.9	-0.2
LIA				*e*Sn	Sn	19 35 37.4	-0.9
LIA				S	Sn	19 35 38.4	+0.1
EDC	Edincik	1.53	34	*e*PN	Pn	19 35 19.4	-0.7
MANT	Manisa	1.53	112	*e*P	Pn	19 35 18.4	-1.6
MANT				*i* S	Sn	19 35 38.8	-1.2
DEMI	Demirci	1.53	91	*i* P	Pn	19 35 18.8	-1.3
DEMI				*i* S	Sn	19 35 40.8	+0.8
DST	Dursunbey	1.55	70	*e*PN	Pn	19 35 20.4	+0.1
BNT	Bandirma	1.56	35	*e*PN	Pn	19 35 19.6	-0.9
KULA	Kula-Manisa	1.60	110	*e*PN	Pn	19 35 20.6	-0.4
RKY	Sarkoy-Tekirda	1.64	11	*e*PN	Pn	19 35 21.5	-0.1
SART	Tekirdag	1.64	11	*i* P	Pn	19 35 21.2	-0.4
SART				*i* S	Sn	19 35 44.1	+1.3
AYDN	Tasoluk	1.67	148	*i* P	Pn	19 35 23.5	+1.5
AYDN				*i* S	Sn	19 35 45.3	+1.8
KCT	Karacabey	1.71	46	*e*PN	Pn	19 35 21.9	-0.7
ENEZ	Enez	1.72	345	*e*PN	Pn	19 35 22.7	+0.1
MFT	Murefte	1.75	13	*e*PN	Pn	19 35 23.4	+0.3
ALN	Alexandroupoli	1.90	344	P	Pn	19 35 24.6	-0.5
ALN				S	Sn	19 35 48.0	-1.0
MLSB	Milas	1.96	155	*e*PN	Pn	19 35 26.4	+0.5
BODT	Bodrum	2.06	167	*e*PN	Pn	19 35 27.9	+0.6
BDRM	Kayabasi	2.08	165	*i* P	Pn	19 35 30.6	+2.9
BDRM				*i* S	Sn	19 36 00.5	+6.9
GDZ	Gediz	2.12	89	*i* P	Pn	19 35 32.4	+4.1
GDZ				*i* S	Sn	19 35 59.5	+4.9
ULDT	Uludag	2.13	59	*i* P	Pn	19 35 30.0	+1.7
ULDT				*i* S	Sn	19 35 59.4	+4.7
APE	Apeiranthos	2.23	206	P	Pn	19 35 27.4	-2.2
APE				S	Sn	19 35 55.4	-1.8
APE	Apeiranthos	2.23	206	*e*Pn	Pn	19 35 28.9	-0.7
APE				S	Sn	19 35 55.4	-1.8
KHAL	Karahalli	2.26	107	*i* P	Pn	19 35 29.1	-1.0
KHAL				*i* S	Sn	19 36 04.0	+6.1
RDO	Rodhopi	2.26	336	*e*PN	Pn	19 35 30.3	+0.1
RDO				*e*SN	Sn	19 35 57.7	-0.4
KHL	Karahalli	2.30	108	*e*PN	Pn	19 35 31.1	+0.5
GEMT	Gemlik	2.32	53	*e*PN	Pn	19 35 31.2	+0.4
SLVT	Silivri	2.42	27	*e*PN	Pn	19 35 32.7	+0.3
OUR	Ouranopolis	2.48	301	P	Pn	19 35 32.8	-0.3
YLV	Yalova	2.51	53	*e*PN	Pn	19 35 34.0	+0.5
PAIG	Paliouri	2.52	291	P	Pn	19 35 34.0	+0.3
PAIG				S	Sn	19 36 05.2	+0.7
CTKS	Kestanelik-??a	2.54	31	*e*PN	Pn	19 35 34.4	+0.4
BGKT	Bogazkoy	2.61	36	*e*PN	Pn	19 35 35.4	+0.5
ALT	Altintas	2.62	89	*e*PN	Pn	19 35 35.4	+0.5
CAVI	Cavuskoy	2.64	64	*e*PN	Pn	19 35 35.7	+0.4
ISK	Istanbul-Kandi	2.66	41	*e*PN	Pn	19 35 36.2	+0.6
DALT	Dalyan (Mudla)	2.75	147	*e*PN	Pn	19 35 37.6	+0.9
HRT	Hereke	2.84	51	*e*PN	Pn	19 35 38.9	+0.9
PLG	Polygyros	2.86	298	P	Pn	19 35 38.0	-0.3
KNT	Kendrikon	3.61	306	P	Pn	19 35 47.9	-0.8
GRG	Griva	3.83	301	P	Pn	19 35 53.0	+1.3

*IDC **01** 19:36:56.4±0.5,5121N×17936E,h0km,mb4.6/24, mb1 4.8/25,mb1mx4.7/29,mbtmp4.6/25,ML5.2/1,MS4.0/16, Ms1 4.0/16,ms1mx3.9/24,Error ellipse: s-maj=17.5km s-min=10.3km az=168.0*
*BGS **01** 19:36:57.8±2.0,5054N×17884E,h33km,mb5.1*
*MOS **01** 19:37:00.9±0.8,5122N×17938E,h40km,mb5.1/78, MS4.0/19,Error ellipse: s-maj=7.9km s-min=4.9km az=98.1*
*ISCJB **01** 19:37:01.3±0.5,5121N±004×17939E±002,h41km±3km, mb4.9/156,MS4.2/37,Error ellipse: s-maj=7.1km s-min=2.3km az=7.6*
*SZGRF **01** 19:37:01.1,5099N×17942W,h33km,mb4.8,Andreanof Islands, Aleutian Islands, United States*
*BJI **01** 19:37:01.2,5146N×17903E,h32km,mB5.1,mb5.0,Ms4.7, Msz4.4*
*NEIC **01** 19:37:02.8±0.4,5121N×17939E,h42km±3km,mb4.9/93, MS4.2/3,ML4.8(AEIC),Error ellipse: s-maj=5.5km s-min=2.3km az=183.0*
*GCMT **01** 19:37:02.8±0.4,5106N×17955E,h31km±1km,MW5.0/52, Moment Tensor Solution. s40,c48; s52,c70; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.95±.18; $M_{\theta\theta}$-2.59±.12; $M_{\phi\phi}$-0.36±. 11; $M_{r\theta}$1.71±.14; $M_{\theta\phi}$-0.27±.08; $M_{r\phi}$0.47±. 16; Best double couple: M_o3.30100×10^{16} NP1:ϕs267.00000°,δ29.00000°,λ97.00000°. NP2: ϕs79.00000°,δ61.00000°,λ86.00000°. Principal axes: T 3.4730, Plg74.0000°, Azm340.0000°; N -0.3500, Plg3.0000°, Azm81.0000°; P -3.1300, Plg16.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 19:37:03.1±0.5,**5126N**±004×**17937E**±002,**h41**km±3km, **h33**km±1.9km:**pP-P,n720,**σ0**64**/720,**mb4.9**/156,**MS4.2**/37, **187C-158D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.13	340	P	Pn	19 37 08.4	-1.6
AMKA				S	Sn	19 37 14.2	-0.5
ADK	Adak	2.54	74	P	Pn	19 37 41.4	-0.3
ADK				S	Sn	19 38 12.4	+1.0
ADK	Adak	2.54	74	P	Pn	19 37 41.3	-0.4
ADK				S	Sn	19 38 12.4	+1.0
SMY	Shemya	3.58	296	P	Pn	19 37 57.6	+1.6
SMY				S	Sn	19 38 42.2	+5.3
ATKA	Atka Island	4.11	74	P	Pn	19 38 03.3	0.0
ATKA				S	Sn	19 38 51.6	+1.6
FX1	Attu Island--F	4.16	295	P	Pn	19 38 02.8	-1.1
FX1				S	Sn	19 38 54.9	+3.6
NIKO	Nikolski	7.45	72	P	Pn	19 38 48.6	-0.5
SPIA	Saint Paul Isl	8.49	42	P	Pn	19 39 07.1	+3.7
UNV	Unalaska Valle	8.99	68	P	Pn	19 39 10.6	+0.4
AKUT	Akutan	9.47	67	*e*P	Pn	19 39 17.1	+0.4
PETK	Petropavlovsk-	13.42	286	Pn	Pn	19 40 12.9	+2.2
	0.6nm,0.3s,baz=84,slow=16,SNR=16						
PETK				Sn	Sn	19 42 33.8	-4.5
	baz=90,slow=18,SNR=2.5						
CHGN	Chignik	14.04	60	*e*P	Pn	19 40 18.5	-0.7
SVW2	Sparrevohn	16.96	45	*e*P	Pn	19 40 59.1	+2.1
OHAK	Old Harbor	16.98	59	*e*P	Pn	19 40 54.8	-2.5
	27nm,0.4s						
KDAK	Kodiak Island	17.45	57	P	Pn	19 41 00.5	-2.6
	7.9nm,0.3s,baz=260,slow=7.4,SNR=33						
KDAK				S	S	19 44 09.2	-14
	0.4nm,0.3s,baz=165,slow=19,SNR=4.6						
KDAK	Kodiak Island	17.45	57	*e*P	Pn	19 41 00.9	-2.2
	35nm,0.6s						
BILL	Bilibino	18.01	344	*e*P	Pn	19 41 12.2	+2.3
	45nm,0.8s						
BILL	Bilibino	18.01	344	*e*P	Pn	19 41 12.1	+2.2
BILL				pmax	pmax		
	comp=Z,23nm,0.9s						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s						
SEY	Seymchan	18.58	319	*i* P	Pn	19 41 15.9	-0.9
SEY	Seymchan	18.58	319	*i* P	Pn	19 41 15.8	-1.0
PPLA	Purkeypile	19.16	42	*e*P	Pn	19 41 24.0	+0.1
	comp=Z,67nm,0.7s						
SLKM	Skilak Lake	19.24	49	*e*P	Pn	19 41 22.6	-2.1
SEW	Seward	19.51	51	*e*P	Pn	19 41 26.8	-1.3

CHUM	Lake Minchumin	19.54	39	*e*P		Pn	19 41 28.0	-0.3
	comp=Z,72nm,1.1s							
PMR	Palmer	20.05	47	*e*P		P	19 41 32.2	-0.1
	comp=Z,6.6nm,0.4s							
PMR	Palmer	20.05	47	*e*P		P	19 41 32.2	-0.1
PMR				pmax	pmax			
	comp=Z,7.0nm,0.4s							
IMA2	Indian Mountai	20.16	32	*e*P		P	19 41 34.8	+1.3
BPAW	Bear Paw Mtn.	20.16	39	*e*P		P	19 41 34.3	+0.8
	comp=Z,28nm,0.7s							
TRF	Thorofare Moun	20.18	41	*e*P		P	19 41 34.6	+0.9
	comp=Z,61nm,0.8s							
MCK	McKinley	20.84	41	*e*P		P	19 41 38.7	-2.3
	comp=Z,76nm,1.3s							
MCK	McKinley	20.84	41	*e*P		P	19 41 38.7	-2.2
MCK				pmax	pmax			
	comp=Z,76nm,1.3s							
COLA	College	21.72	39	*e*P		P	19 41 50.1	-0.3
	comp=Z,19nm,0.7s,mb4.6							
COLA	College	21.72	39	*e*P		P	19 41 50.1	-0.2
COLA				pmax	pmax			
	comp=Z,19nm,0.7s,mb4.6							
COLD	Coldfoot	21.95	32	*e*P		P	19 41 53.0	+0.2
	comp=Z,42nm,1.1s,mb4.8							
YSS	Yuzh-Sakhalins	24.19	274	*e*P		P	19 42 15.7	+0.3
	comp=Z,65nm,1.0s,mb5.0							
YSS	Yuzh-Sakhalins	24.19	274	⇑*i* P		P	19 42 15.5	+0.1
YSS				pmax	pmax			
	comp=Z,60nm,1.0s,mb5.0							
YSS				MLR	MLR			
	comp=Z,500nm,20.0s,MS4.0							
EGAK	Eagle	24.39	41	*e*P		P	19 42 16.1	-1.0
	comp=Z,64nm,1.0s,mb5.0							
DAWY	Dawson	24.98	43	*e*P		P	19 42 21.2	-1.3
HYT	Haines Junctio	25.46	51	*e*P		P	19 42 25.8	-1.1
ASAJ	Asahikawa	25.56	268	P		P	19 42 27.8	-0.1
	comp=Z,67nm,0.8s,mb5.2,baz=60,slow=8.4,SNR=26							
ASAJ				LR	LR		19 51 02.2	
	comp=Z,213nm,19.4s,MS3.7,baz=141,slow=33							
ASAJ	Asahikawa	25.56	268	P		P	19 42 27.8	-0.1
ASAJ				pmax	pmax			
	comp=Z,67nm,0.8s							
ASAJ				MLR	MLR			
	comp=Z,213nm,19.4s							
INK	Inuvik	28.22	35	*e*P		P	19 42 51.2	-0.4
	comp=Z,707nm,1.0s							
INK	Inuvik	28.22	35	*e*P		P	19 42 51.2	-0.3
INK				pmax	pmax			
	comp=Z,707nm,1.0s							
HABR	Khabarovsk	28.38	282	*e*P		P	19 42 51.9	-1.3
HABR				*e*		pP	19 43 01.2	-3.1
HABR				*e*		pP	19 43 05.5	+1.2
HABR				S		S	19 47 37.7	+0.7
HABR				*e*			19 47 54.0	
HABR				*e*			19 48 58.4	
HABR				*e*			19 53 34.7	
YAK	Yakutsk	28.64	311	⇓*e*P		P	19 42 54.0	-1.3
YAK	Yakutsk	28.64	311	*e*P		P	19 42 53.7	-1.6
YAK				pmax	pmax			
	comp=Z,23nm,1.0s,mb4.9							
YAK				pmax	pmax			
	comp=E,23nm,1.4s							
YAK				MLR	MLR			
	comp=Z,235nm,17.0s,MS3.9							
YAK				MLR	MLR			
	comp=E,137nm,16.0s,MS3.7							
YAK				MLR	MLR			
	comp=N,85nm,17.0s,MS3.7							
DLBC	Dease Lake	29.38	56	P		P	19 43 01.8	-0.1
	comp=N,1.8nm,0.7s,mb3.9,baz=299,slow=10,SNR=2.9							
KLR	Kul'dur	30.11	285	⇓*i* P		P	19 43 04.9	-3.6
KLR				pmax	pmax			
	comp=E,32nm,1.0s							
KLR				pmax	pmax			
	comp=Z,100nm,1.0s,mb5.5							
TIXI	Tiksi	30.18	331	*e*P		P	19 43 08.2	-0.7
	comp=Z,2.9nm,0.7s,mb4.1							
TIXI	Tiksi	30.18	331	*e*P		P	19 43 08.7	-0.2
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.2							
TIXI				MLR	MLR			
	comp=Z,492nm,18.0s,MS4.2							
BBB	Bella Bella	31.96	67	LR		LR	19 54 29.4	
	comp=Z,199nm,20.6s,MS3.8,baz=274,slow=33							
MJAR	Matsushiro Arr	32.63	259	P		P	19 43 30.2	-0.6
	comp=Z,3.3nm,0.8s,mb4.3,baz=56,slow=8.0,SNR=8.7							
MJAR				LR	LR		19 54 21.1	
	comp=Z,134nm,20.4s,MS3.6,baz=60,slow=32							
MJAR	Matsushiro Arr	32.63	259	P		P	19 43 30.2	-0.6
MJAR				LR	LR		19 54 21.1	
MJAR	Matsushiro Arr	32.63	259	P		P	19 43 30.2	-0.6
MJAR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MJAR				MLR	MLR			
	comp=Z,135nm,20.4s							
MAT	Matsushiro	32.63	259	P		P	19 43 31.2	+0.4
MAT				*e*S		S	19 48 51.0	+7.2
MDJ	Mudanjiang	33.46	278	P		P	19 43 36.5	-1.4
MD

	baz=38								
C06A	Tall Timber Ra	37.94	71	⇑P		P	19 44 16.8	+0.5	
	baz=38								
F04A	Amboy	37.99	75	⇑P		P	19 44 17.2	+0.5	
	baz=38,SNR=9.7								
E05A	Randle	38.07	73	⇑P		P	19 44 18.0	+0.5	
	baz=38								
H03A	Soap Creek Ran	38.09	77	⇓P		P	19 44 18.2	+0.6	
	baz=38								
B07A	Winthrop	38.15	70	⇓P		P	19 44 18.1	+0.1	
	baz=38,SNR=6.7								
D06A	Cle Elum	38.32	72	⇓P		P	19 44 19.4	-0.1	
	baz=38,SNR=6.0								
A08A	Turner Farm, O	38.41	69	⇑P		P	19 44 20.5	+0.2	
	baz=38								
ETW	Entiat	38.42	71	eP		P	19 44 20.3	-0.1	
TBM	Table Mountain	38.48	72	P		P	19 44 21.0	+0.2	
KSRS	Korea Array	38.49	270	P		P	19 44 21.8	+0.7	
	comp=Z,10.0nm,0.9s,mb4.5,baz=58,slow=8.2,SNR=18								
KSRS				LR		LR	20 00 51.1		
	comp=Z,85nm,18.2s,MS3.6,baz=240,slow=37								
KSRS	Korea Array	38.49	270	P		P	19 44 21.8	+0.7	
KSRS				pmax		pmax			
	comp=Z,10.0nm,0.9s,mb4.5								
KSRS				MLR		MLR			
	comp=Z,85nm,18.2s,MS3.6								
C07A	Waterville	38.54	71	⇑P		P	19 44 21.2	-0.2	
	baz=38								
E06A	Yakima	38.55	73	⇑P		P	19 44 21.5	0.0	
	baz=38								
J02A	Umpqua	38.60	79	⇑P		P	19 44 22.9	+0.9	
	baz=38								
B08A	Colville Reser	38.66	69	⇓P		P	19 44 22.2	-0.2	
	baz=39								
SNY	Shenyang	38.66	278	⇓P		P	19 44 23.5	+1.1	
SNY				AMB		AMB			
	comp=Z,26nm,0.7s,mb5.1								
SNY				LR		LR			
	comp=N,254nm,3.8s								
SNY				LR		LR			
	comp=E,260nm,4.2s								
SNY				LR		LR			
	comp=Z,325nm,12.7s,MS4.3								
H04A	Detroit Lake	38.76	76	⇑P		P	19 44 23.6	+0.3	
	baz=39,SNR=6.7								
A09A	Danville	38.81	68	⇑P		P	19 44 23.5	-0.1	
	baz=39								
D07A	Quincy	38.84	71	⇓P		P	19 44 24.6	+0.7	
	baz=39								
VFP	Flag Point	38.87	75	P		P	19 44 24.9	+0.7	
GL2	New Goldendale	38.94	74	P		P	19 44 25.5	+0.8	
K02A	Glendale	38.98	80	⇑P		P	19 44 26.1	+1.0	
	baz=39								
G05A	Wamic	39.00	75	⇑P		P	19 44 25.6	+0.4	
	baz=39								
C08A	Higginbotham F	39.10	70	⇓P		P	19 44 26.2	+0.1	
	baz=39								
E07A	Sunnyside	39.22	72	⇑P		P	19 44 27.3	+0.3	
	baz=39								
L02A	Cave Junction	39.24	80	⇓P		P	19 44 28.2	+0.8	
	baz=39								
B09A	Rice	39.32	69	⇑P		P	19 44 28.1	+0.2	
	baz=39								
H05A	Madras	39.37	76	⇑P		P	19 44 28.6	+0.3	
	baz=39								
SNIWA	Snively Ranch	39.38	72	P		P	19 44 29.1	+0.6	
A10A	Northport	39.40	68	⇑P		P	19 44 28.9	+0.4	
	baz=39								
G06A	Carlson Farm,	39.42	74	⇑P		P	19 44 29.0	+0.3	
	baz=39								
RSW	Rattlesnake Hi	39.46	72	eP		P	19 44 29.4	+0.4	
OD2	Odessa Site #2	39.49	71	P		P	19 44 29.1	-0.2	
HAWA	Hanford	39.49	72	eP		P	19 44 29.5	+0.2	
	comp=Z,34nm,0.9s,mb5.1								
F07A	Phinny Hill Vi	39.51	73	⇑P		P	19 44 29.8	+0.4	
	baz=39								
D08A	Wollman Farm,	39.53	71	⇓P		P	19 44 29.5	-0.1	
	baz=39								
C09A	Chrisman Ranch	39.55	70	⇓P		P	19 44 30.0	+0.2	
	baz=40								
E08A	Dider Farm, El	39.73	72	⇓P		P	19 44 31.4	+0.1	
	baz=40								
H06A	Lindquist Farm	39.86	75	⇓P		P	19 44 32.7	+0.2	
	baz=40								
D09A	Jones Farm, Ri	39.89	71	⇑P		P	19 44 32.6	0.0	
	baz=40								
G07A	Ruggs Ranch, H	39.99	74	⇑P		P	19 44 33.4	-0.1	
	baz=40								
NEW	Newport	40.00	68	eP		P	19 44 32.4	-1.1	
	comp=Z,11nm,0.5s,mb4.8								
NEW	Newport	40.00	68	eP		P	19 44 32.4	-1.1	
NEW				pmax		pmax			
	comp=Z,11nm,0.5s								
YBH	Yreka Blue Hor	40.03	80	P		P	19 44 34.7	+0.9	
	comp=Z,4.4nm,0.7s,mb4.3,baz=3.6,slow=6.2,SNR=8.9								
YBH	Yreka Blue Hor	40.03	80	P		P	19 44 34.7	+0.8	
YBH				pmax		pmax			
	comp=Z,4.0nm,0.7s								
YBH	Yreka Blue Hor	40.03	80	⇓P		P	19 44 35.0	+1.1	
	baz=40								
J05A	Fort Rock	40.09	77	⇓P		P	19 44 35.2	+0.9	
	baz=40,SNR=8.6								
A11A	Hall Mountain,	40.11	67	⇑P		P	19 44 35.3	+0.9	
	baz=40								
M02C	Callahan	40.14	81	⇓P		P	19 44 35.6	+0.9	
	baz=40								
N02C	Big Bar	40.18	82	⇑P		P	19 44 36.2	+1.1	
	baz=40								
F08A	Pendleton	40.25	73	⇓P		P	19 44 35.5	-0.2	
	baz=40,SNR=5.7								
E09A	Wood Farm, Sta	40.26	71	⇓P		P	19 44 35.5	-0.2	
	baz=40								
RES	Resolute Bay	40.33	24	eP		P	19 44 35.2	-0.7	
	comp=Z,504nm,1.3s								
RES	Resolute Bay	40.33	24	eP		P	19 44 35.2	-0.7	
RES				pmax		pmax			
	comp=Z,504nm,1.3s								
I06A	Prineville	40.36	76	⇑P		P	19 44 36.6	+0.1	
	baz=40								
G08A	Pilot Rock	40.40	73	⇑P		P	19 44 36.9	0.0	
	baz=40								
D10A	Wagner Farm, O	40.51	70	⇑P		P	19 44 37.3	-0.4	
	baz=40								
LNOR	Lincton Mounta	40.51	72	eP		P	19 44 38.0	+0.3	
K05A	Summer Lake	40.60	78	⇓P		P	19 44 39.6	+1.0	
	baz=40,SNR=6.4								
M03C	McCloud	40.66	81	⇑P		P	19 44 39.9	+0.8	
	baz=41								
C11A	Tepee Creek (N	40.71	69	⇑P		P	19 44 39.8	+0.4	
	baz=41								
I07A	Izee	40.71	75	⇓P		P	19 44 39.6	+0.1	
	baz=41,SNR=8.4								
J06A	Christmas Vall	40.77	77	⇓P		P	19 44 40.8	+0.8	
	baz=41,SNR=7.2								
B12A	Libby	40.79	67	⇓P		P	19 44 40.4	+0.3	
	baz=41								
F09A	S2 Ranch, Elgi	40.82	72	⇑P		P	19 44 40.3	0.0	
	baz=41,SNR=7.2								
E10A	Myers Farm, Un	40.89	71	⇓P		P	19 44 40.8	-0.1	
	baz=41								
K06A	Valley Falls	40.96	77	⇑P		P	19 44 42.3	+0.8	
	baz=41,SNR=7.7								
H08A	Prairie City	40.98	74	⇑P		P	19 44 41.4	-0.3	
	baz=41								
D11A	Klaveano Farm,	41.06	70	⇑P		P	19 44 42.2	-0.1	
	baz=41								
F10A	Beach Ranch, E	41.09	72	⇓P		P	19 44 42.2	-0.3	
	baz=41								
G09A	Cove	41.12	73	⇑P		P	19 44 42.7	-0.1	
	baz=41								
J07A	Hines	41.22	76	⇑P		P	19 44 44.1	+0.5	
	baz=41,SNR=7.1								
C12B	Naegeli Ranch,	41.23	68	⇑P		P	19 44 43.9	+0.2	
	baz=41								
I08A	Drewsey	41.37	75	⇓P		P	19 44 45.1	+0.2	
	baz=41,SNR=5.5								
MOD	Modoc	41.42	79	eP		P	19 44 45.7	+0.3	
	comp=Z,9.2nm,0.7s,mb4.5								
MOD	Modoc	41.42	79	⇓P		P	19 44 45.8	+0.5	
	baz=41,SNR=7.8								
B13A	Whitefish	41.49	67	⇓P		P	19 44 46.0	+0.2	
	baz=41								
E11A	Bogner Ranch,	41.49	71	⇓P		P	19 44 45.2	-0.7	
	baz=41								
G10A	Bishop Farm, J	41.51	72	⇓P		P	19 44 46.0	0.0	
	baz=41								
H09A	Durkee	41.51	74	⇓P		P	19 44 45.8	-0.2	
	baz=41								
K07A	Rock Creek Ran	41.63	77	⇑P		P	19 44 47.5	+0.5	
	baz=42,SNR=19								
J08A	Circle Bar Ran	41.73	76	⇓P		P	19 44 48.1	+0.2	
	baz=42,SNR=7.9								
F11A	Grangeville	41.77	71	⇓P		P	19 44 47.8	-0.3	
	baz=42								
A14A	Double T Ranch	41.79	66	⇓P		P	19 44 48.2	-0.1	
	baz=42								
E12A	Beaver Dam Sad	41.84	70	⇓P		P	19 44 48.8	+0.1	
	baz=42								
O04C	Chester	41.85	81	⇓P		P	19 44 49.6	+0.8	
	baz=42								
MNRC	McLaughlin Nat	41.85	84	⇑P		P	19 44 49.1	+0.2	
	baz=42								
L07A	Adell	41.95	78	⇑P		P	19 44 50.4	+0.8	
	baz=42,SNR=9.8								
G11A	Walters Elk Ra	41.96	72	⇓P		P	19 44 49.3	-0.4	
	baz=42								
K08A	Mann Creek Ran	42.07	76	⇓P		P	19 44 51.1	+0.4	
	baz=42								
H10A	Noah's Angus R	42.11	73	⇓P		P	19 44 51.0	+0.1	
	baz=42								
D13A	Huson	42.14	69	⇑P		P	19 44 50.4	-0.8	
	baz=42								
WVOR	Wild Horse Val	42.15	77	eP		P	19 44 51.5	+0.2	
	comp=Z,16nm,0.9s,mb4.7								
WVOR	Wild Horse Val	42.15	77	eP		P	19 44 51.5	+0.2	
WVOR				pmax		pmax			
	comp=Z,16nm,0.9s,mb4.7								
O05C	Quincy	42.16	81	⇑P		P	19 44 50.8	-0.6	
	baz=42								
J09A	Fry Pan Ranch,	42.18	75	⇓P		P	19 44 51.6	+0.1	
	baz=42,SNR=6.2								
A15A	Johnson Ranch,	42.19	65	⇓P		P	19 44 51.1	-0.4	
	baz=42								
B14A	Marquette Ranc	42.19	66	⇓P		P	19 44 51.5	0.0	
	baz=42								
C14A	Swan Lake	42.21	67	⇑P		P	19 44 51.3	-0.4	
	baz=42								
I10A	Payette	42.35	74	⇑P		P	19 44 53.3	+0.4	
	baz=42								
F12A	Elk City	42.37	71	⇑P		P	19 44 52.9	-0.1	
	baz=42								
N06A	Buffalo Meadow	42.37	80	⇑P		P	19 44 53.7	+0.5	
	baz=42,SNR=14								
L08A	Fields	42.47	77	⇑P		P	19 44 54.0	+0.2	
	baz=42,SNR=11								
H11A	Donnelly	42.49	73	⇑P		P	19 44 53.5	-0.4	
	baz=42								
K09A	Rome	42.56	76	⇑P		P	19 44 54.7	+0.1	
	baz=42								
BEKR	Beckwourth	42.57	81	⇓P		P	19 44 54.6	-0.1	
	baz=42								
MSO	Missoula	42.58	69	eP		P	19 44 54.1	-0.6	
	comp=Z,5.2nm,0.5s,mb4.5								
B15A	Bradely Ranch,	42.62	66	⇓P		P	19 44 54.6	-0.4	
	baz=42								
E13A	Victor	42.64	69	⇓P		P	19 44 55.0	-0.2	
	baz=42								
G12A	Big Creek, Yel	42.67	72	⇑P		P	19 44 54.9	-0.5	
	baz=43								
D14A	Greenough	42.70	68	⇑P		P	19 44 55.4	-0.3	
	baz=43								
O06A	Flanigan	42.72	80	⇑P		P	19 44 56.0	0.0	
	baz=43,SNR=7.2								
A16A	West Butte Ran	42.85	65	⇑P		P	19 44 56.8	0.0	
	baz=43								
M08A	Happy Creek Ra	42.87	78	⇓P		P	19 44 57.6	+0.4	
	baz=43,SNR=9.8								
C15A	Salmond Ranch,	42.87	67	⇑P		P	19 44 57.0	-0.1	
	baz=43								
N07B	Gerlach	42.89	79	⇑P		P	19 44 57.7	+0.4	
	baz=43								
F13A	Darby	42.90	70	⇓P		P	19 44 57.2	-0.2	
	baz=43,SNR=5.5								
L09A	Wilkinson Ranc	42.98	77	⇑P		P	19 44 58.3	+0.3	
	baz=43,SNR=7.2								
LAVA	Lava Cap Winer	42.99	83	⇓P		P	19 44 58.2	+0.1	
	baz=43								
K10A	MacKenzie Ranc	43.03	75	⇑P		P	19 44 58.5	+0.1	
	baz=43,SNR=11								
E14A	Clinton	43.06	69	⇑P		P	19 44 58.6	0.0	
	baz=43								
H12A	Diamond D Ranc	43.26	72	⇑P		P	19 45 00.1	-0.1	
	baz=43								
PAHR	Pah Rah Range	43.27	81	eP		P	19 45 00.2	-0.1	
	comp=Z,11nm,0.9s,mb4.6								
MFID	Camas Ranch	43.31	74	⇓P		P	19 45 00.9	+0.2	
	baz=43								
O07A	Toulon	43.31	80	⇑P		P	19 45 00.9	+0.2	
	baz=43,SNR=10								
G13A	Cobalt	43.34	71	⇓P		P	19 45 00.7	-0.1	
	baz=43								
C16A	Fuhringer Ranc	43.35	66	⇓P		P	19 45 01.1	+0.2	
	baz=43								
N08A	GE Springer Mi	43.41	79	⇓P		P	19 45 01.8	+0.3	
	baz=43,SNR=9.9								
M09A	Marrel Ranch,	43.45	77	⇑P		P	19 45 02.0	+0.2	
	baz=43								
I12A	Atlanta	43.51	73	⇓P		P	19 45 02.5	+0.2	
	baz=43,SNR=16								
K11A	Parker Ranch,	43.55	75	⇓P		P	19 45 02.5	-0.1	
	baz=44,SNR=7.6								
E15A	Deer Lodge	43.56	69	⇓P		P	19 45 02.5	-0.1	
	baz=44								
CMB	Columbia Colle	43.65	83	⇑P		P	19 45 04.1	+0.6	
	baz=44								
L10A	Juniper Basin	43.67	76	⇓P		P	19 45 03.7	+0.1	
	baz=44,SNR=8.5								
G14A	Jaxson	43.71	70	⇑P		P	19 45 03.5	-0.4	
	baz=44								
N09A	Rock Creek Ran	43.74	78	⇑P		P	19 45 04.4	+0.3	
	baz=44,SNR=6.8								
J12A	Stokes Ranch,	43.84	74	⇑P		P	19 45 04.9	-0.1	
	baz=44,SNR=8.1								
R06C	Coleville	43.94	82	⇑P		P	19 45 06.2	+0.4	
	baz=44								
M10A	I.L. Ranch, Tu	43.95	77	⇑P		P	19 45 06.2	+0.3	
	baz=44,SNR=8.0								
F15A	Butte	43.96	69	⇑P		P	19 45 05.5	-0.3	
	baz=44								
I13A	Wildhorse Cree	44.06	72	⇑P		P	19 45 06.8	+0.2	
	baz=44								
L11A	Cat Creek Ranc	44.06	75	⇓P		P	19 45 07.0	+0.3	
	baz=44,SNR=15								
E16A	East Helena	44.06	68	⇑P		P	19 45 06.5	-0.1	
	baz=44								
HLID	Hailey	44.08	73	eP		P	19 45 06.5	-0.3	
	comp=Z,27nm,1.2s,mb4.8								
HLID	Hailey	44.08	73	⇓P		P	19 45 07.0	+0.1	
	baz=44,SNR=17								
H14A	Leadore	44.11	71	⇑P		P	19 45 07.1	0.0	
	baz=44,SNR=15								
BMN	Battle Mountai	44.17	78	eP		P	19 45 08.1	+0.4	
	comp=Z,6.5nm,0.6s,mb4.5								
BMN	Battle Mountai	44.17	78	eP		P	19 45 08.1	+0.5	
BMN				pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.5								
BJI	Beijing	44.27	281	P		P	19 45 09.3	+0.9	
BJI				PP		PP	19 46 48.4	-3.5	
BJI				S		S	19 51 32.9	-6.3	
BJI				AMB		AMB			
	comp=Z,35nm,0.9s,mb5.1								
BJI				AMB		AMB			
	comp=Z,151nm,5.7s								
BJI				LR		LR			
	comp=N,237nm,22.2s,MS4.2								
BJI				LR		LR			
	comp=E,223nm,19.6s,MS4.2								
BJI				LR		LR			
	comp=Z,154nm,21.2s,MS3.9								
MCMT	McKenzie Canyo	44.30	71	eP		P	19 45 07.6	-1.1	
J13A	Cove Ranch, Pi	44.31	73	⇓P		P	19 45 09.1	+0.4	
	baz=44,SNR=20								
G15A	Dillon	44.33	70	⇓P		P	19 45 08.4	-0.4	
	baz=44								
U04C	Hernandez Rese	44.44	85	⇓P		P	19 45 10.5	+0.7	
	baz=44								
I14A	Mackay	44.45	72	⇓P		P	19 45 09.8	+0.1	
	baz=44,SNR=12								
M11A	Holland Ranch,	44.46	76	⇑P		P	19 45 10.5	+0.6	
	baz=44								
F16A	Kennard Place,	44.50	69	⇓P		P	19 45 09.9	-0.2	
	baz=44								
L12A	House Creek Ra	44.52	75	⇓P		P	19 45 10.5	+0.1	
	baz=44,SNR=6.4								
H15A	Lima	44.54	71	⇓P		P	19 45 10.1	-0.4	
	baz=44,SNR=9.2								
BOZ	Bozeman (W)	44.57	69	⇑P		P	19 45 10.9	+0.1	
	baz=44								
E17A	Martinsdale	44.58	68	⇑P		P	19 45 10.7	0.0	
	baz=44								
Q08A	Gabbs	44.67	81	⇑P		P	19 45 11.6	0.0	
	baz=45								
G16A	Moss Hill, Enn	44.70	70	⇓P		P	19 45 11.5	-0.3	
	baz=45								
O10A	Cortez Mining,	44.70	78	⇓P		P	19 45 12.6	+0.8	
	baz=45								
NVAR	Mina Array Bea	44.71	81	P		P	19 45 12.4	+0.5	
	comp=Z,5.6nm,0.8s,mb4.4,baz=291,slow=7.4,SNR=30								
NVAR				PcP		PcP	19 46 53.9	+0.2	
	comp=Z,2.6nm,0.8s,baz=275,slow=1.1,SNR=3.9								
T06C	Millerton Lake	44.71	84	⇑P		P	19 45 11.9	0.0	
	baz=45								
J14A	Carey	44.75	73	⇑P		P	19 45 12.3	+0.1	
	baz=45,SNR=9.4								
KCC	Kaiser Creek	44.75	83	⇓P		P	19 45 12.7	+0.3	
	baz=45,SNR=8.0								
F17A	Fitzpatrick Pl	45.00	68	⇑P		P	19 45 14.3	+0.1	
	baz=45								
M12A	Wells	45.01	76	⇑P		P	19 45 14.3	+0.1	
	baz=45,SNR=6.0								
E18A	Harlowton	45.07	67	⇑P		P	19 45 14.8	+0.1	
	baz=45								
P10A	Eureka	45.12	79	⇓P		P	19 45 15.5	+0.3	
	baz=45								
TLY	Talaya	45.16	302	⇑eP		P	19 45 16.1	+0.8	
TLY	Talaya	45.16	302	eP		P	19 45 15.4	+0.1	
TLY				pmax		pmax			
	comp=Z,13nm,0.8s,mb4.8								
TLY				MLR		MLR			
	comp=Z,382nm,18.0s,MS4.4								
L13A	Double Diamond	45.20	74	⇑P		P	19 45 16.2	+0.4	
	baz=45,SNR=7.1								
ELK	Elko	45.20	77	eP		P	19 45 16.1	+0.3	
	comp=Z,13nm,0.8s,mb4.8								
ELK	Elko	45.20	77	eP		P	19 45 16.1	+0.3	
ELK				pmax		pmax			
	comp=Z,13nm,0.8s								
N12A	Clover Valley,	45.26	77	⇓P		P	19 45 16.5	+0.2	
	baz=45,SNR=15								
G17A	Pierce Place,	45.27	69	⇓P		P	19 45 16.5	+0.2	
	baz=45								
ULN	Ulaanbaatar	45.28	295	eP		P	19 45 17.2	+0.8	
	comp=Z,7.7nm,0.7s,mb4.6								
ULN	Ulaanbaatar	45.28	295	⇑P		P	19 45 17.2	+0.8	
O11A	Cowboy Ranch,	45.31	78	⇑P		P	19 45 16.8	+0.1	
	baz=45,SNR=8.5								
H16A	Russell Place,	45.32	70	⇓P		P	19 45 16.2	-0.5	
	baz=45,SNR=16								
J15A	Blackfoot	45.35	72	⇓P		P	19 45 17.0	0.0	
	baz=45,SNR=5.9								
K14A	Jones Ranch, D	45.40	73	⇓P		P	19 45 17.3	-0.1	
	baz=45								
YMR	Madison River	45.51	70	eP		P	19 45 17.5	-0.7	
	comp=Z,38nm,0.9s,mb5.3								
F18A	Big Timber	45.55	68	⇑P		P	19 45 18.5	0.0	
	baz=45								
R09A	Tonopah	45.59	81	⇑P		P	19 45 19.1	+0.2	
	baz=46								
TPH	Tonopah	45.59	81	eP		P	19 45 19.5	+0.5	
	comp=Z,6.6nm,0.6s,mb4.7								
TPH	Tonopah	45.59	81	eP		P	19 45 19.5	+0.5	
TPH				pmax		pmax			
	comp=Z,7.0nm,0.6s,mb4.8								
P11A	Circle Ranch,	45.60	78	⇓P		P	19 45 18.8	-0.2	
	baz=46,SNR=6.8								
TIN	Tinemaha	45.60	83	⇓P		P	19 45 19.4	+0.4	
	baz=46								
Q10A	Clear Creek Ra	45.64	80	⇑P		P	19 45 19.6	+0.3	
	baz=46,SNR=11								
I16A	Newdale	45.65	71	⇑P		P	19 45 19.3	0.0	
	baz=46,SNR=5.0								
L14A	Malta	45.66	74	⇓P		P	19 45 19.6	+0.2	
	baz=46,SNR=6.9								
SONM	Songino Array	45.67	296	P		P	19 45 20.5	+1.1	
	comp=Z,7.2nm,0.6s,mb4.8,baz=60,slow=8.8,SNR=65								
SONM				PcP		PcP	19 46 56.5	-0.4	
	comp=Z,2.1nm,0.7s,baz=45,slow=2.1,SNR=4.0								
SONM				LR		LR	20 06 16.9		
	comp=Z,397nm,18.1s,MS4.4,baz=338,slow=38								
SONM	Songino Array	45.67	296	P		P	19 45 20.5	+1.1	
SONM							19 46 56.5		
SONM				pmax		pmax			
	comp=Z,7.0nm,0.6s								
SONM				pmax		pmax			
	comp=Z,2.0nm,0.7s								
SONM				MLR		MLR			
	comp=Z,397nm,18.1s								
YFT	Old Faithful	45.70	70	eP		P	19 45 21.0	+1.2	
K15A	Arbon	45.71	73	⇓P		P	19 45 20.1	+0.3	
	baz=46,SNR=12								
N13A	Wendover, West	45.77	76	⇓P		P	19 45 20.3	0.0	
	baz=46								
O12A	Currie	45.79	77	⇓P		P	19 45 20.7	+0.2	
	baz=46,SNR=16								
S09A	Goldfield	45.81	81	⇓P		P	19 45 20.4	-0.3	
	baz=46								
VES	Vestal, Richgr	45.83	85	⇓P		P	19 45 20.0	-0.9	
	baz=46								
H17A	Grant Village	45.89	70	⇓P		P	19 45 22.4	+1.2	
	baz=46,SNR=10								
M14A	Sheep Mountain	45.91	75	⇓P		P	19 45 21.6	+0.2	
	baz=46,SNR=7.1								
J16A	Bone	45.92	72	⇑P		P	19 45 21.6	+0.2	
	baz=46,SNR=11								
IMW	Indian Meadow	45.96	71	eP		P	19 45 22.1	+0.3	
	comp=Z,21nm,1.0s,mb5.0								
ZAK	Zakamensk	46.03	300	eP		P	19 45 23.0	+0.8	
ZAK				e			19 46 57.4		
ZAK				pmax		pmax			
	comp=Z,11nm,1.3s,mb4.6								
R10A	Warm Springs	46.03	80	⇑P		P	19 45 21.8	-0.6	
	baz=46,SNR=6.8								
RRI2	Red Ridge	46.05	71	eP		P	19 45 22.8	+0.3	
S10A	Tonopah Range,	46.08	81	⇑P		P	19 45 22.8	+0.1	
	baz=46,SNR=10.0								
HVU	Hansel Valley	46.09	74	eP		P	19 45 23.2	+0.3	
	comp=Z

HHC LR LR
comp=Z,227nm,17.8s,MS4.2
MPMC Manual Prospec 46.69 83 ⇑P **P 19 45 27.9 +0.3**
baz=47
P13A Bates Ranch, G 46.73 77 ⇓P **P 19 45 27.9 0.0**
baz=47,SNR=8.4
I18A Diamond G Ranc 46.74 70 ⇓P **P 19 45 27.9 0.0**
baz=47
L16A Fish Haven 46.76 73 ⇓P **P 19 45 28.0 -0.1**
baz=47,SNR=10
N15A Stansbury Isla 46.77 75 ⇓P **P 19 45 28.2 0.0**
baz=47
TPNV Topopah Spring 46.90 82 *e*P **P 19 45 29.1 -0.1**
comp=Z,18nm,0.8s,mb5.1
TPNV Topopah Spring 46.90 82 *e*P **P 19 45 29.1 -0.1**
TPNV pmax pmax
comp=Z,18nm,0.8s,mb5.0
TPNV Topopah Spring 46.90 82 ⇓P **P 19 45 29.3 0.0**
baz=47
HWUT Hardware Ranch 46.92 74 *e*P **P 19 45 29.4 0.0**
comp=Z,5.1nm,0.6s,mb4.6
LRMC Laurel Mountai 46.94 84 ⇓P **P 19 45 29.3 -0.2**
baz=47
BLG Laguna Peak 46.96 87 ⇑P **P 19 45 29.7 0.0**
baz=47
DUG Dugway 47.01 76 *e*P **P 19 45 30.2 +0.1**
comp=Z,12nm,0.6s,mb5.0
DUG Dugway 47.01 76 *e*P **P 19 45 30.2 +0.1**
DUG pmax pmax
comp=Z,12nm,0.6s,mb5.0
DUG Dugway 47.01 76 ⇑P **P 19 45 30.1 0.0**
baz=47
R12A Pony Springs, 47.06 79 ⇑P **P 19 45 30.4 -0.1**
baz=47,SNR=5.6
M16A Huntsville 47.06 74 ⇑P **P 19 45 30.6 +0.2**
baz=47,SNR=9.5
EDW2 Edwards Air Fo 47.13 85 ⇓P **P 19 45 30.5 -0.6**
baz=47
P14A Drum Mountains 47.23 77 ⇑P **P 19 45 31.9 +0.2**
baz=47,SNR=18
S12A Delamar Landin 47.35 80 ⇑P **P 19 45 32.7 -0.1**
baz=47,SNR=8.1
T11A Corn Creek, Al 47.36 81 ⇑P **P 19 45 33.0 +0.2**
baz=47
BW06 Boulder Array 47.44 71 ⇓P **P 19 45 33.1 -0.3**
baz=47
PDAR Pinedale Array 47.44 71 P **P 19 45 33.1 -0.2**
comp=Z,37nm,0.6s,mb5.5,baz=303,slow=3.5,SNR=133
Q14A Sevier Lake (B 47.47 77 ⇑P **P 19 45 34.1 +0.5**
baz=47,SNR=19
MWC Mount Wilson 47.52 86 *e*P **P 19 45 33.6 -0.4**
comp=Z,8.7nm,0.7s,mb4.9
MWC Mount Wilson 47.52 86 *e*P **P 19 45 33.6 -0.5**
MWC pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
R13A O'Grain Ranch, 47.54 79 ⇑P **P 19 45 34.5 +0.2**
baz=47,SNR=6.0
M17A Scullys Gap (B 47.54 73 ⇓P **P 19 45 33.9 -0.3**
baz=47
SHOC Shoshone 47.55 83 ⇓P **P 19 45 34.2 -0.1**
baz=48
GSC Goldstone 47.60 84 *e*P **P 19 45 34.2 -0.5**
comp=Z,7.9nm,0.5s,mb5.0
GSC Goldstone 47.60 84 *e*P **P 19 45 34.2 -0.5**
GSC pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
GSC Goldstone 47.60 84 ⇑P **P 19 45 34.6 -0.1**
baz=48
NJ2 Nanjing 47.67 271 *e*P **P 19 45 35.5 +0.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
BFSC Mount Baldy St 47.76 85 ⇑P **P 19 45 36.2 +0.2**
baz=48
N17A Moffit Pass 47.76 74 ⇑P **P 19 45 35.8 -0.1**
baz=48
O16A Springville 47.80 75 ⇓P **P 19 45 35.8 -0.4**
baz=48
DAU Daniels Canyon 47.83 75 *e*P **P 19 45 37.0 +0.6**
CIS Catalina Islan 47.84 87 ⇓P **P 19 45 36.0 -0.6**
baz=48
M18A Lyman 47.93 73 ⇑P **P 19 45 36.9 -0.3**
baz=48
L19A Farson 47.95 72 ⇑P **P 19 45 36.6 -0.7**
baz=48,SNR=8.2
S13A Holt Ranch, En 47.98 79 ⇓P **P 19 45 37.8 +0.1**
baz=48,SNR=5.6
TUQ Turquoise Moun 48.07 83 ⇓P **P 19 45 38.2 -0.1**
baz=48
V11A Goodsprings 48.12 82 ⇑P **P 19 45 38.5 -0.2**
baz=48
U12A Valley of Fire 48.29 81 ⇓P **P 19 45 39.9 -0.1**
baz=48
KRAR Krasnoyarsk 48.30 311⇑ *e*P **P 19 45 39.4 -0.4**
KRAR pmax pmax
comp=Z,71nm,0.9s,mb5.7
CCUT Cedar City 48.31 79 *e*P **P 19 45 40.1 -0.1**
M19A Rock Springs 48.43 72 ⇓P **P 19 45 40.2 -0.9**
baz=48,SNR=5.4
MSU Marysvale 48.44 77 *e*P **P 19 45 41.4 +0.2**
N18A Larsen Ranch, 48.44 73 ⇑P **P 19 45 40.4 -0.7**
baz=48
MURC Murrieta 48.47 86 ⇓P **P 19 45 41.3 -0.1**
baz=48
TMUT Trail Mountain 48.54 76 *e*P **P 19 45 41.5 -0.4**
R15A Junction 48.56 78 ⇑P **P 19 45 42.0 -0.1**
baz=48,SNR=6.2
L20A Wamsutter 48.61 71 ⇓P **P 19 45 42.2 -0.2**
baz=48
GMRC Granite Mounta 48.66 83 ⇓P **P 19 45 42.8 -0.1**
baz=49
O18A Roosevelt 48.67 74 ⇓P **P 19 45 43.6 +0.6**
baz=49
P17A Butcher Ranch, 48.72 75 ⇑P **P 19 45 43.4 +0.2**
baz=49
T14A Hurricane 48.79 79 ⇑P **P 19 45 44.2 +0.4**
baz=49
Q16A Castle Valley 48.80 76 ⇓P **P 19 45 44.0 +0.1**
baz=49,SNR=5.7
S15A Panguitch 48.85 78 ⇑P **P 19 45 44.6 +0.3**
baz=49
P18A Preston Nutter 48.92 75 ⇑P **P 19 45 45.2 +0.4**
baz=49,SNR=6.3
PFO Pinyon Flat Ob 48.93 85 ⇓P **P 19 45 44.6 -0.4**
baz=49
BELC Belle Mtn. 48.95 84 ⇑P **P 19 45 44.6 -0.6**
baz=49
R16A Teasdale 49.00 77 ⇑P **P 19 45 46.2 +0.7**
baz=49,SNR=16
V13A Grand Canyon W 49.01 81 ⇓P **P 19 45 45.4 -0.1**
baz=49,SNR=5.9
SRU San Rafael 49.07 76 *e*P **P 19 45 46.2 +0.2**
comp=Z,6.8nm,0.7s,mb4.8
SRU San Rafael 49.07 76 *e*P **P 19 45 46.2 +0.2**
SRU pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
SRU San Rafael 49.07 76 ⇑P **P 19 45 46.4 +0.4**
baz=49
U14A Mt Trumbull 49.14 80 ⇑P **P 19 45 46.4 -0.2**
baz=49
O19A Miners Draw (B 49.19 73 ⇑P **P 19 45 46.9 0.0**
baz=49,SNR=7.5
L21A Rawlins 49.22 71 ⇓P **P 19 45 46.6 -0.5**
baz=49
T15A Red Dirt Ranch 49.25 79 ⇑P **P 19 45 47.9 +0.5**
baz=49,SNR=7.5
S16A Weppner Ranch, 49.29 78 ⇑P **P 19 45 48.2 +0.5**
baz=49
Q18A Rafter H Ranch 49.32 75 ⇓P **P 19 45 47.7 -0.1**
baz=49,SNR=5.7
IRM Iron Mountain 49.38 84 ⇓P **P 19 45 48.0 -0.4**
baz=49
R17A Hanksville Air 49.39 76 ⇓P **P 19 45 48.6 +0.1**
baz=49,SNR=7.2
MONP Monument Peak 49.42 86 ⇑P **P 19 45 48.7 0.0**
baz=49
BC3 Big Chuckw Mtn 49.52 84 ⇑P **P 19 45 48.8 -0.7**
baz=49
W13A Hualapai Mount 49.55 82 ⇓P **P 19 45 49.7 0.0**
baz=50
P19A Cripple Cowboy 49.68 74 ⇑P **P 19 45 50.5 -0.1**
baz=50,SNR=6.3
U15A North Rim 49.69 79 ⇑P **P 19 45 50.8 +0.1**
baz=50,SNR=12
V14A Boquillas Ranc 49.69 81 ⇑P **P 19 45 50.7 0.0**
baz=50
DVTC Desert V Tower 49.78 86 ⇑P **P 19 45 51.1 -0.4**
baz=50
S17A Black Ridge (B 49.83 77 ⇑P **P 19 45 51.8 0.0**
baz=50,SNR=16
R18A Canyonlands Na 49.91 76 ⇓P **P 19 45 51.5 -0.9**
baz=50
PDMCI Parker Dam,Lak 49.92 83 ⇑P **P 19 45 51.9 -0.6**
baz=50
X13A Yucca 49.92 82 ⇓P **P 19 45 52.0 -0.5**
baz=50
Q19A Hogan Spring (49.94 75 ⇑P **P 19 45 52.1 -0.5**
baz=50
W14A Seligman 49.98 81 ⇑P **P 19 45 53.0 0.0**
baz=50
Y12C Blythe 50.04 84 ⇓P **P 19 45 53.0 -0.5**
baz=50
V15A Kaibab Nationa 50.15 80 ⇓P **P 19 45 54.2 0.0**
baz=50,SNR=9.1
T17A Navajo Res., N 50.24 78 ⇑P **P 19 45 54.4 -0.5**
baz=50
S18A Hurst Farm, Bl 50.29 77 ⇓P **P 19 45 55.0 -0.3**
baz=50,SNR=16
GLA Glamis 50.31 85 *e*P **P 19 45 54.9 -0.6**
comp=Z,10nm,0.6s,mb5.0
GLA Glamis 50.31 85 *e*P **P 19 45 54.9 -0.6**
GLA pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
GLA Glamis 50.31 85 ⇑P **P 19 45 55.3 -0.2**
baz=50
R19A Curley Farm, L 50.36 76 ⇑P **P 19 45 55.3 -0.5**
baz=50
SPB4 Spitsbergen Ar 50.41 356 *e*P **P 19 45 55.2 -0.4**
SPITS Spitsbergen Ar 50.41 356 P **P 19 45 55.3 -0.4**
comp=Z,54nm,0.5s,mb5.8,baz=40,slow=6.6,SNR=139
SPITS Spitsbergen Ar 50.41 356 P **P 19 45 55.3 -0.4**
SPITS pmax pmax
comp=Z,54nm,0.5s
Y13A Salome 50.43 83 ⇑P **P 19 45 56.2 -0.2**
baz=50
PV10 Paradox Valley 50.44 75 *e*P **P 19 45 56.6 +0.2**
W15A Williams 50.51 81 ⇓P **P 19 45 57.3 +0.3**
baz=50
U16A Tuba City 50.59 79 ⇓P **P 19 45 56.6 -1.0**
baz=50
X14A Yava 50.59 82 ⇓P **P 19 45 57.3 -0.2**
baz=50,SNR=7.1
ULM Lac du Bonnet 50.70 56 LR LR 20 07 24.5
comp=Z,243nm,20.9s,MS4.2,baz=356,slow=36
T18A Mexican Hat 50.72 77 ⇑P **P 19 45 57.7 -0.8**
baz=51
S19A Harvey Farm, M 50.78 76 ⇓P **P 19 45 58.6 -0.4**
baz=51
WUAZ Wupatki 50.84 80 *e*P **P 19 45 59.2 -0.2**
comp=Z,7.7nm,0.6s,mb4.8
WUAZ Wupatki 50.84 80 ⇓P **P 19 45 59.3 -0.2**
baz=51
Y14A Wickenburg 50.86 82 ⇓P **P 19 45 59.0 -0.7**
baz=51
PV01 Paradox Valley 50.88 75 *e*P **P 19 45 59.7 0.0**
X15A Humboldt 50.98 81 ⇑P **P 19 46 00.6 +0.1**
baz=51
W16A Flagstaff 51.02 80 ⇓P **P 19 46 01.2 +0.4**
baz=51
SMCO Snowmass 51.18 73 *e*P **P 19 46 01.5 -0.4**
comp=Z,3.7nm,0.6s,mb4.5
U18A Rough Rock, Ch 51.18 78 ⇓P **P 19 46 02.1 +0.1**
baz=51
Y15A Casa Rosa Ranc 51.27 82 ⇓P **P 19 46 02.3 -0.4**
baz=51,SNR=5.5
T19A Beclabito 51.44 77 ⇓P **P 19 46 03.5 -0.4**
baz=51,SNR=21
MVCO Mesa Verde 51.51 76 ⇑P **P 19 46 04.2 -0.3**
baz=51
WHN Wuhan 51.52 273 ⇑P **P 19 46 04.0 -0.6**
ISCO Idaho Springs 51.60 72 *e*P **P 19 46 05.5 +0.4**
comp=Z,4.0nm,0.7s,mb4.5
ISCO Idaho Springs 51.60 72 *e*P **P 19 46 05.5 +0.4**
ISCO pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
V18A Ganado 51.60 79 ⇓P **P 19 46 05.3 +0.1**
baz=52,SNR=5.9
DAG Danmarks Havn 51.73 5⇓ *e*P **P 19 46 04.8 -0.8**
comp=Z,5.6nm,0.5s,mb4.8
DAG Danmarks Havn 51.73 5⇓ *e*P **P 19 46 04.8 -0.8**
DAG pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
DAG Danmarks Havn 51.73 5⇓ *i*P **P 19 46 04.8 -0.8**
comp=Z,5.6nm,0.5s,mb4.8
Y16A Circle Bar Ran 51.85 81 ⇑P **P 19 46 06.9 -0.2**
baz=52
115A Sonoran Desert 52.17 83 ⇑P **P 19 46 09.1 -0.3**
baz=52,SNR=8.0
214A Organ Pipe Nat 52.31 84 ⇑P **P 19 46 09.8 -0.7**
baz=52
Y17A Roosevelt 52.37 81 ⇓P **P 19 46 10.5 -0.4**
baz=52,SNR=7.6
X18A Snowflake 52.37 80 ⇓P **P 19 46 10.6 -0.3**
baz=52
XAN Xi'an 52.55 280 P **P 19 46 11.9 -0.3**
XAN AP pP 19 46 21.7 -2.2
XAN XP sP 19 46 28.6 -0.1
XAN AMB AMB
comp=Z,14nm,0.9s,mb4.9
XAN AMB AMB
comp=Z,107nm,8.1s
X19A St. Johns 52.84 79 ⇑P **P 19 46 14.4 0.0**
baz=53
117A Oracle 53.19 82 ⇑P **P 19 46 16.8 -0.1**
baz=53
ZALV Zalesovo Beam 53.27 313 P **P 19 46 16.9 -0.4**
comp=Z,5.5nm,0.6s,mb4.6,baz=50,slow=7.6,SNR=22
ZALV PcP PcP 19 47 24.6 +0.1
comp=Z,4.9nm,0.7s,baz=22,slow=3.6,SNR=6.5
ZALV LR LR 20 10 35.8
comp=Z,128nm,20.0s,MS4.0,baz=153,slow=38
ZALV Zalesovo Beam 53.27 313 P **P 19 46 16.9 -0.4**
ZALV PcP PcP 19 47 24.6 +0.1
ZALV LR LR 20 10 35.8
ZALV Zalesovo Beam 53.27 313 P **P 19 46 16.9 -0.4**
ZALV 19 47 24.6
ZALV pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ZALV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ZALV MLR MLR
comp=Z,128nm,20.0s,MS4.0
TUC Tucson 53.34 82 *e*P **P 19 46 17.5 -0.5**
comp=Z,2.1nm,0.6s,mb4.2
TUC Tucson 53.34 82 *e*P **P 19 46 17.5 -0.5**
TUC pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
NVS Novosibirsk 53.44 314⇑ *i*P **P 19 46 18.1 -0.4**
NVS *e* 19 46 35.4
NVS pmax pmax
comp=Z,18nm,1.0s,mb5.0
NVS pmax pmax
comp=N,10.0nm,1.1s
NVS pmax pmax
comp=E,11nm,1.1s
118A Homack Ranch, 53.62 81 ⇑P **P 19 46 19.5 -0.6**
baz=54,SNR=8.1
217A Green Valley 53.68 83 ⇓P **P 19 46 20.4 -0.2**
baz=54
SUMG Summit 53.68 13 *e*P **P 19 46 20.0 0.0**
comp=E,8.2nm,0.8s,mb4.7
218A Dragoon 54.02 82 ⇑P **P 19 46 22.6 -0.5**
baz=54,SNR=5.6
ANMO Albuquerque 54.24 77 P **P 19 46 25.3 +0.7**
comp=E,3.9nm,0.9s,mb4.3,baz=310,slow=8.9,SNR=6.8
ANMO Albuquerque 54.24 77 P **P 19 46 25.3 +0.7**
ANMO pmax pmax
comp=Z,4.0nm,0.9s
LZH Lanzhou 54.31 285 ⇓P **P 19 46 26.0 +0.9**
LZH AP pP 19 46 34.5 -2.3
LZH XP sP 19 46 39.0 -2.6
LZH PP PP 19 48 30.0 +3.0
LZH *e*S **S 19 54 01.0 +1.1**
LZH XS sS 19 54 15.0 -4.4
LZH SS SS 19 57 39.2 -2.6
LZH AMB AMB
comp=Z,41nm,1.4s,mb5.2
LZH AMB AMB
comp=Z,122nm,4.0s
LZH LR LR
comp=N,646nm,14.3s
LZH LR LR
comp=Z,983nm,15.9s,MS5.0
318A Bisbee 54.42 83 ⇓P **P 19 46 25.4 -0.6**
baz=54
219A White Tail Can 54.49 82 ⇑P **P 19 46 26.2 -0.3**
baz=54
GTA Gaotai 54.54 291 P **P 19 46 27.4 +0.7**
GTA AP pP 19 46 37.7 -0.8
GTA XP sP 19 46 41.1 -2.1
GTA PP PP 19 48 30.2 +1.2
GTA S **S 19 54 02.3 -0.6**
GTA XS sS 19 54 19.1 -3.3
GTA SS SS 19 57 42.4 -2.9
GTA AMB AMB
comp=Z,19nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,89nm,9.0s
GTA LR LR
comp=N,222nm,13.8s,MS4.5
GTA LR LR
comp=E,222nm,16.5s,MS4.5
GTA LR LR
comp=Z,348nm,18.0s,MS4.5
LPM Los Pinos Moun 54.56 78 *e*P **P 19 46 27.3 +0.4**
BNM Barren Site 54.67 78 *e*P **P 19 46 28.1 +0.3**
319A Douglas 54.91 82 ⇑P **P 19 46 28.8 -0.7**
baz=55
CBKS Cedar Bluff 55.72 69 *e*P **P 19 46 35.2 -0.1**
comp=Z,23nm,0.7s,mb5.3
CBKS Cedar Bluff 55.72 69 *e*P **P 19 46 35.2 0.0**
CBKS pmax pmax
comp=Z,23nm,0.7s,mb5.3
KEV Kevo 57.62 349 *e*p **P 19 46 49.7 +1.4**
comp=Z,0.5nm,0.3s,mb4.0
KEV Kevo 57.62 349 *e*P **P 19 46 49.7 +1.4**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
CD2 Chengdu 57.87 281 *e*P **P 19 46 50.4 -0.2**
CD2 AP pP 19 47 00.5 -1.9
CD2 XP sP 19 47 04.8 -2.3
CD2 PP PP 19 49 00.2 +1.3
CD2 S **S 19 54 45.6 -1.7**
CD2 XS sS 19 55 02.8 -4.1
CD2 SS SS 19 58 37.8 -0.3
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,40nm,5.2s
CD2 LR LR
comp=E,370nm,12.0s
CD2 LR LR
comp=Z,380nm,10.8s,MS4.8
ARCES ARCESS Array B 58.01 349 P **P 19 46 49.5 -1.5**
comp=Z,5.9nm,0.8s,mb4.7,baz=27,slow=8.2,SNR=15
ARCES LR LR 20 13 24.4
comp=Z,206nm,19.2s,MS4.3,baz=12,slow=38
ARCES ARCESS Array B 58.01 349 P **P 19 46 49.5 -1.5**
ARCES pmax pmax
comp=Z,6.0nm,0.8s
ARCES MLR MLR
comp=Z,206nm,19.2s
KURK Kurchatov 58.27 313 *e*P **P 19 46 53.2 +0.2**
comp=Z,32nm,0.6s,mb5.5
KURK Kurchatov 58.27 313 *c i*P **P 19 46 53.3 +0.2**
KURK pmax pmax
comp=Z,34nm,0.8s,mb5.4
WMQ Urumqi 58.44 302 P **P 19 46 55.5 +1.1**
WMQ AP pP 19 47 05.5 -0.7
WMQ XP sP 19 47 10.5 -0.4
WMQ S **S 19 54 56.0 +1.6**
WMQ SCS ScS 19 56 39.0 -1.5
WMQ SS SS 19 58 48.0 +1.6
WMQ AMB AMB
comp=Z,35nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,98nm,4.0s
WMQ LR LR
comp=N,325nm,20.0s,MS4.5
WMQ LR LR
comp=E,234nm,20.0s,MS4.5
WMQ LR LR
comp=Z,335nm,20.0s,MS4.5
GYA Guiyang 59.19 275 P **P 19 47 01.0 +1.1**
GYA AP pP 19 47 09.2 -2.5
GYA XP sP 19 47 14.2 -2.2
GYA PCP PcP 19 47 48.9 +0.9
GYA PP PP 19 49 13.0 +2.3
GYA SCP ScP 19 51 45.3 +0.2
GYA S **S 19 55 02.8 -1.8**
GYA PS 19 55 21.6
GYA SS SS 19 58 59.0 0.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,90nm,5.3s
GYA LR LR
comp=N,510nm,19.9s,MS4.8
GYA LR LR
comp=E,450nm,18.8s,MS4.8
GYA LR LR
comp=Z,430nm,19.0s,MS4.6
MK31 Makanchi Array 59.20 307 *e*P **P 19 46 59.2 -0.4**
MKAR Makanchi Array 59.20 307 P **P 19 46 59.3 -0.4**
comp=Z,12nm,0.7s,mb5.0,baz=49,slow=6.3,SNR=132
MKAR LR LR 20 14 01.8
comp=Z,168nm,19.2s,MS4.2,baz=37,slow=38
MKAR Makanchi Array 59.20 307 *i*P **P 19 46 59.2 -0.5**
MKAR pmax pmax
comp=Z,12nm,0.7s
TXAR Lajitas Array 59.81 80 P **P 19 47 03.4 -0.7**
comp=Z,2.3nm,0.5s,mb4.5,baz=302,slow=5.4,SNR=19
TXAR Lajitas Array 59.81 80 P **P 19 47 03.4 -0.7**
TXAR pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 60.25 319 *e*P **P 19 47 07.2 +0.5**
comp=Z,71nm,0.8s,mb5.8
BRVK Borovoye 60.25 319 *e*P **P 19 47 07.2 +0.4**
BRVK pmax pmax
comp=Z,71nm,0.8s,mb5.8
SVE Sverdlovsk 61.07 327⇑ *e*P **P 19 47 13.3 +1.0**
SVE *e* 19 47 55.2
SVE *e*S **S 19 55 34.5 +6.7**
SVE *e* 19 57 02.0
SVE *e*SS SS 19 59 28.6 +1.6
SVE pmax pmax
comp=Z,22nm,1.2s,mb5.2
ARU Arti 62.09 327 *e*P **P 19 47 19.4 +0.2**
comp=Z,26nm,0.8s,mb5.4
ARU Arti 62.09 327 *d i*P **P 19 47 19.1 -0.1**
ARU *e*PPP 19 51 02.1
ARU *e*S **S 19 55 43.8 +3.0**
ARU *e*SS SS 19 59 39.1 -3.9
ARU pmax pmax
comp=Z,41nm,1.2s,mb5.4
MIAR Mount Ida 62.24 69 *e*P **P 19 47 20.2 -0.4**
comp=Z,50nm,1.2s,mb5.5
MIAR Mount Ida 62.24 69 *e*P **P 19 47 20.2 -0.3**
MIAR pmax pmax
comp=Z,50nm,1.2s,mb5.5
OLIL Olney 62.42 62 *e*P **P 19 47 21.1 -0.6**
comp=Z,15nm,0.6s,mb5.3
KMI Kunming 62.60 277 P **P 19 47 22.9 -0.2**
KMI AMB AMB
comp=Z,6.0nm,1.3s,mb4.6
USIN University of 63.20 62 *e*P **P 19 47 26.7 -0.1**
JOF Joensuu 63.41 344 *e*p **P 19 47 26.1 -1.7**
comp=Z,2.5nm,0.4s,mb4.7
JOF Joensuu 63.41 344 *e*P **P 19 47 26.1 -1.7**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
KLMR Klimovskoe 63.69 339 *e*P **P 19 47 28.0 -1.7**
KLMR pmax pmax
comp=Z,18nm,1.4s,mb4.9
OXF Oxford 64.68 66 *e*P **P 19 47 36.5 -0.1**
comp=Z,96nm,1.1s,mb5.7
OXF Oxford 64.68 66 *e*P **P 19 47 36.5 -0.1**
OXF pmax pmax
comp=Z,96nm,1.1s,mb5.7
KAF Kangasniemi 64.97 346 *e*p **P 19 47 36.4 -1.6**
comp=Z,1.0nm,0.5s,mb4.1
KAF Kangasniemi 64.97 346 *e*P **P 19 47 36.4 -1.6**
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
TKM2 Tokmak 2 65.30 308 *e*P **P 19 47 41.3 +0.8**
comp=Z,18nm,1.0s,mb5.0
TKM2 Tokmak 2 65.30 308 *e*P **P 19 47 41.3 +0.8**
TKM2 pmax pmax
comp=Z,18nm,1.0s,mb5.1
TKM2 Tokmak 2 65.30 308 P **P 19 47 41.5 +1.0**
SNR=21

ULHL Ulahol 65.47 307 P **P** **19 47 42.2 +0.5**
SNR=7.6
USP Ospenovka 65.58 309 P **P** **19 47 43.4 +1.1**
SNR=42
CHMS Chumysh 65.65 309 P **P** **19 47 43.8 +1.0**
SNR=7.4
KBK Karagaybulak 65.81 308 P **P** **19 47 44.9 +1.0**
SNR=18
FRU Bishkek 65.84 309 *e*P **P** **19 47 44.0 0.0**
FRU pmax pmax
comp=Z,37nm,1.2s,mb5.3
AAK Ala-Archa 66.05 309 P **P** **19 47 46.5 +1.1**
SNR=21
KZA Kyzart 66.09 308 P **P** **19 47 47.3 +1.6**
SNR=11
EKS2 Erkin-Say 66.38 309 *e*P **P** **19 47 48.4 +1.0**
comp=Z,16nm,0.6s,mb5.2
EKS2 Erkin-Say 66.38 309 P **P** **19 47 48.8 +1.3**
SNR=16
LSA Lhasa 66.39 288 P **P** **19 47 49.6 +1.8**
LSA AMB AMB
comp=Z,30nm,0.8s,mb5.4
LSA Lhasa 66.39 288 *e*P **P** **19 47 49.4 +1.6**
comp=Z,19nm,0.7s,mb5.2
LSA Lhasa 66.39 288 *e*P **P** **19 47 49.4 +1.6**
LSA pmax pmax
comp=Z,19nm,0.7s,mb5.2
AML Almayashu 66.82 309 *e*P **P** **19 47 51.8 +1.5**
AML Almayashu 66.82 309 P **P** **19 47 52.1 +1.8**
SNR=29
TKL Tuckaleechee C 67.02 61 P **P** **19 47 50.6 -1.1**
comp=Z,4.8nm,0.7s,mb4.7,baz=40,slow=2.6,SNR=4.4
TKL Tuckaleechee C 67.02 61 P **P** **19 47 50.6 -1.1**
TKL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KSH Kashi 67.64 306 P **P** **19 47 57.1 +1.5**
KSH *e*AP pP 19 48 07.4 -0.2
KSH *e*XP sP 19 48 11.1 -1.1
KSH *e*PCP PcP 19 48 24.3 +2.0
KSH *e*PP PP 19 50 28.0 +3.5
KSH *e*PPP 19 52 06.2
KSH *e*SCP 19 52 24.0
KSH *e*PCS 19 52 28.3
KSH *e*S S 19 56 49.6 +0.1
KSH *e*XS sS 19 57 06.1 -3.4
KSH PS 19 57 27.3
KSH *e*SCS ScS 19 57 49.3 -1.2
KSH *e*SS SS 20 01 11.1 +1.0
KSH AMB AMB
comp=Z,104nm,0.9s,mb5.9
KSH AMB AMB
comp=Z,480nm,3.9s
KSH LR LR
comp=Z,613nm,4.8s
NOA NORSAR Array B 67.65 354 P **P** **19 47 54.7 -0.5**
comp=Z,18nm,0.8s,mb5.1,baz=8.0,slow=6.3,SNR=38
NOA LR LR 20 19 05.0
comp=Z,99nm,19.1s,MS4.0,baz=345,slow=37
NOA NORSAR Array B 67.65 354 P **P** **19 47 54.7 -0.5**
NOA LR LR 20 19 05.0
NOA NORSAR Array B 67.65 354 P **P** **19 47 54.7 -0.5**
NOA pmax pmax
comp=Z,18nm,0.8s
NOA MLR MLR
comp=Z,99nm,19.1s
LRW Lerwick 68.96 0 *e*P **P** **19 48 02.9 -0.6**
LRW AMb AMB 19 48 09.9
comp=Z,80nm,1.8s,mb5.3
KONO Kongsberg 69.14 354⇑ *e*P **P** **19 48 04.3 -0.2**
JSC Jenkinsville 69.42 61 *e*P **P** **19 48 05.8 -1.0**
OBN Obninsk 69.57 338⇓ *e*P **P** **19 48 06.8 -0.5**
OBN LR LR
comp=Z,400nm,23.0s,MS4.6
OBN Obninsk 69.57 338⇓ *e*P **P** **19 48 06.7 -0.6**
OBN pmax pmax
comp=Z,19nm,0.9s,mb5.0
OBN MLR MLR
comp=Z,400nm,23.0s,MS4.6
CHTO Chiang Mai 69.61 275 *e*P **P** **19 48 07.4 -0.7**
comp=Z,4.6nm,0.7s,mb4.5
CHTO Chiang Mai 69.61 275 *e*P **P** **19 48 07.4 -0.7**
CHTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CMAR Chiang Mai Arr 69.88 275 P **P** **19 48 09.4 -0.3**
comp=Z,6.0nm,0.8s,mb4.6,baz=27,slow=6.7,SNR=62
CMAR LR LR 20 18 16.2
comp=Z,60nm,19.1s,MS3.9,baz=263,slow=36
CMAR Chiang Mai Arr 69.88 275⇑ *e*P **P** **19 48 09.5 -0.3**
TAPN Taplejung 70.17 289 *e*P **P** **19 48 12.4 +1.0**
comp=Z,93nm,0.9s,mb5.7
ODAN Odare 70.72 289 *e*P **P** **19 48 15.4 +0.6**
comp=Z,46nm,0.8s,mb5.5
GUN Gumba 70.83 291 *e*P **P** **19 48 16.6 +1.1**
comp=Z,158nm,0.9s,mb5.9
JIRN Jiri 70.83 290 *e*P **P** **19 48 16.7 +1.2**
comp=Z,107nm,0.8s,mb5.8
RAMN Ramite 71.12 290 *e*P **P** **19 48 18.1 +0.9**
comp=Z,204nm,0.9s,mb6.0
KKN Kakani 71.27 291 *e*P **P** **19 48 19.0 +0.9**
comp=Z,60nm,0.7s,mb5.6
KKN Kakani 71.27 291 *e*P **P** **19 48 19.0 +0.9**
KKN pmax pmax
comp=Z,60nm,0.7s,mb5.6
PKI Pulchoki 71.36 291 *e*P **P** **19 48 19.4 +0.7**
PKIN Phulchoki 71.36 291 *e*P **P** **19 48 19.3 +0.6**
comp=Z,25nm,0.6s,mb5.3
GKN Gorkha 71.49 292 *e*P **P** **19 48 20.0 +0.6**
comp=Z,78nm,0.8s,mb5.7
MCD Coleburn Disti 71.50 1 *e*P **P** **19 48 18.7 -0.3**
DMN Daman 71.51 291 *e*P **P** **19 48 20.3 +0.7**
comp=Z,48nm,0.9s,mb5.4
MDO Dochfour 71.62 2 *e*P **P** **19 48 19.8 0.0**
DANN Dangsing 71.74 293 *e*P **P** **19 48 21.9 +0.9**
comp=Z,81nm,0.8s,mb5.7
PMOR Pomariorio Ree 71.90 147 *e*T 21 06 55.9
comp=Z,10nm,0.2s
KAR1 Arisaig 72.10 3 *e*P **P** **19 48 22.5 -0.1**
KOLN Koldanda 72.27 292 *e*P **P** **19 48 24.6 +0.5**
comp=Z,30nm,0.8s,mb5.3
EBH Black Hill 72.83 2 *e*P **P** **19 48 26.8 -0.2**
EAB Aberfoyle 72.88 2 *e*P **P** **19 48 27.2 -0.1**
EAU Auchinoon 73.24 2 *e*P **P** **19 48 29.4 0.0**
EBL Broad Law 73.32 1 *e*P **P** **19 48 29.9 0.0**
PPT Papeete 73.73 149 *e*LR LR 20 11 21.5
comp=Z,392nm,24.2s
PPT Papeete 73.73 149 *e*T 21 09 12.0
comp=Z,9.9nm,0.2s
ESK Eskdalemuir 73.77 2 *e*P **P** **19 48 31.7 -0.8**
ESK AMb AMB 19 48 33.2
comp=Z,34nm,1.1s,mb5.2
TIAR Tiarei 73.80 149 *e*T 21 09 16.8
comp=Z,136nm,0.4s
ECK Cauldkaine Hil 73.91 1 *e*P **P** **19 48 33.0 -0.3**
CMIG Matias Romero 74.23 82 P **P** **19 48 35.4 -0.4**
comp=Z,6.8nm,0.9s,mb4.6,baz=325,slow=5.4,SNR=6.5
GMM Mts of Mourne 74.78 3 *e*P **P** **19 48 37.3 -1.1**
KBL Kabul 75.00 307 *e*P **P** **19 48 39.6 -0.4**
comp=Z,26nm,0.8s,mb5.2
KBL Kabul 75.00 307 *e*P **P** **19 48 39.6 -0.4**
KBL pmax pmax
comp=Z,26nm,0.8s,mb5.2
AKASG Malin Array Be 75.30 341 P **P** **19 48 40.6 -0.8**
comp=Z,2.9nm,0.3s,mb4.6,baz=23,slow=6.1,SNR=17
AKASG LR LR 20 25 20.9
comp=Z,181nm,19.8s,MS4.4,baz=30,slow=38
AKASG Malin Array Be 75.30 341 *i* P **P** **19 48 40.5 -1.0**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 75.30 341 *e*P **P** **19 48 40.5 -1.0**
KIEV Kiev 75.31 341 *e*P **P** **19 48 40.8 -0.7**
comp=Z,7.9nm,0.5s,mb4.9
KIEV Kiev 75.31 341 *e*P **P** **19 48 40.8 -0.7**
KIEV pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
WTSB Winterswijk 76.96 355 *e*P **P** **19 48 50.5 -0.4**
comp=Z,16nm,0.9s,mb4.9
MCH1 Michaelchurch 77.10 2 *e*P **P** **19 48 51.1 -0.5**
MCH1 AMb AMB 19 48 53.1
comp=Z,28nm,1.5s,mb5.0
OJC Ojcow 77.41 347 *e*P **P** **19 48 52.6 -0.9**
KWP Kalwaria 77.53 345 *e*P **P** **19 48 54.6 +0.4**
KWP Kalwaria 77.53 345⇓ *i*P **P** **19 48 54.4 +0.2**
DPC Dobruska-Polom 77.75 349 *e*P **P** **19 48 55.6 +0.3**
BATI Baumata 77.79 236 P **P** **19 48 54.4 -1.6**
comp=Z,3.5nm,0.4s,mb4.7,baz=63,slow=6.9,SNR=3.5
STHS Stebnicka Huta 77.98 346 *e*P **P** **19 48 57.2 +0.6**
comp=Z,8.1nm,1.4s,mb4.5
STHS Stebnicka Huta 77.98 346 *e*P **P** **19 48 57.2 +0.6**
STHS pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
KIV Kislovodsk 78.00 330⇑ P **P** **19 48 57.2 +0.3**
KIV Kislovodsk 78.00 330 *e*P **P** **19 48 57.2 +0.3**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KIV MLR MLR
comp=Z,71nm,19.0s,MS4.0
KIV Kislovodsk 78.00 330⇑ *i*P **P** **19 48 57.2 +0.3**
OKC Ostrava-Krasne 78.02 348 *e*P **P** **19 48 57.0 +0.2**
HGN Heimansgroeve 78.20 356 *e*P **P** **19 48 57.5 -0.3**
comp=Z,22nm,1.1s,mb5.0
NKC Novy Kostel 78.28 351 *e*P **P** **19 48 58.0 -0.3**
KOLS Kolonicke sedl 78.28 345 *e*P **P** **19 48 58.5 +0.2**
PRU Pruhonice 78.31 350 *e*P **P** **19 48 59.4 +1.0**
MEM Membach 78.35 356 P **P** **19 48 58.8 +0.1**
comp=Z,9.2nm,1.3s,mb4.5
SNF Seneffe 78.53 357 P **P** **19 48 59.6 0.0**
comp=Z,8.4nm,1.5s,mb4.5
BCLA Clavier 78.57 356 P **P** **19 48 59.6 -0.3**
comp=Z,7.6nm,1.5s,mb4.4
TREC Trest 78.88 349 *e*P **P** **19 49 02.0 +0.4**
GIVF Givet 78.91 356 *e*P **P** **19 49 01.4 -0.4**
comp=Z,46nm,1.3s,mb4.9
GIVF Givet 78.91 356 *e*P **P** **19 49 01.4 -0.4**
comp=Z,23nm,1.3s,mb5.0
GIVF Givet 78.91 356 *e*P **P** **19 49 01.4 -0.4**
GIVF pmax pmax
comp=Z,23nm,1.3s,mb5.0
GRA1 Grafenberg Arr 78.92 352 *e*P **P** **19 49 01.6 -0.2**
comp=Z,14nm,1.4s,mb4.7
GRF Grafenberg Arr 78.92 352 *e*P **P** **19 49 01.6 -0.2**
GRF pmax pmax
comp=Z,14nm,1.4s,mb4.7
GRF Grafenberg Arr 78.92 352 *e*P **P** **19 49 01.6 -0.2**
GRF pmax pmax
comp=Z,14nm,1.4s,mb4.7
GRF Grafenberg Arr 78.92 352 *e*P **P** **19 49 01.6 -0.2**
comp=Z,14nm,1.4s,mb4.7
BUR08 Bucovina Ar. S 79.01 343 *e*P **P** **19 49 02.6 +0.2**
BURAR Bucovina Array 79.03 343⇑ P **P** **19 49 02.5 0.0**
BURAR Bucovina Array 79.03 343⇑ *i*P **P** **19 49 02.5 0.0**
TBI Tubuai 79.19 151 *e*LR LR 20 13 53.4
comp=Z,370nm,23.2s
VYHS Vyhne 79.24 347 *e*P **P** **19 49 03.8 +0.2**
KHC Kasperske Hory 79.25 351 *e*P **P** **19 49 03.8 +0.1**
SMOL Smolenice 79.41 348 *e*P **P** **19 49 05.2 +0.7**
GERES GERESS Array B 79.52 350 P **P** **19 49 04.7 -0.5**
comp=Z,1.1nm,0.6s,mb4.0,baz=26,slow=4.6,SNR=15
GERES LR LR 20 27 51.4
comp=Z,153nm,18.6s,MS4.4,baz=188,slow=38
GERES GERESS Array B 79.52 350 P **P** **19 49 04.7 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,153nm,18.6s
MODS Modra-Piesok 79.57 348 *e*P **P** **19 49 05.5 +0.1**
comp=Z,11nm,1.6s,mb4.5
MODS Modra-Piesok 79.57 348 *e*P **P** **19 49 05.5 +0.1**
MODS pmax pmax
comp=Z,11nm,1.6s,mb4.5
ZST Bratislava 79.77 348 *e*P **P** **19 49 06.2 -0.3**
comp=Z,8.0nm,0.8s,mb4.7
ZST Bratislava 79.77 348 *e*P **P** **19 49 06.2 -0.3**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
DRGR 80.28 344⇓ P **P** **19 49 09.4 +0.1**
DRGR 80.28 344⇓ *i*P **P** **19 49 09.4 +0.1**
FLN La Foliniere 80.36 360 *e*P **P** **19 49 09.0 -0.6**
comp=Z,36nm,0.9s,mb5.0
FLN *e*MLR MLR
comp=Z,103nm,17.5s,MS3.9
FLN La Foliniere 80.36 360 *e*P **P** **19 49 09.0 -0.6**
comp=Z,18nm,0.9s,mb5.0
FLN LR LR
comp=Z,100nm,17.5s,MS4.2
FLN La Foliniere 80.36 360 *e*P **P** **19 49 09.0 -0.6**
FLN pmax pmax
comp=Z,18nm,0.9s,mb5.0
FLN MLR MLR
comp=Z,100nm,17.5s,MS4.2
CDF Champ du Feu 80.48 355⇑ *i*P **P** **19 49 09.9 -0.4**
comp=Z,5.0nm,0.6s,mb4.3
CDF Champ du Feu 80.48 355⇑ *i*P **P** **19 49 09.9 -0.4**
comp=Z,2.5nm,0.6s,mb4.3
CDF Champ du Feu 80.48 355⇑ *i*P **P** **19 49 09.9 -0.4**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MEZF Maizieres J'vi 80.50 356 *e*P **P** **19 49 10.3 -0.1**
LDF La Druitiere 80.53 360⇑ *i*P **P** **19 49 09.9 -0.7**
comp=Z,18nm,0.6s,mb4.9
LDF La Druitiere 80.53 360⇑ *i*P **P** **19 49 09.9 -0.7**
comp=Z,9.3nm,0.6s,mb4.9
LDF La Druitiere 80.53 360⇑ *i*P **P** **19 49 09.9 -0.7**
LDF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
GRR Gorron 80.73 0 *e*P **P** **19 49 11.2 -0.5**
comp=Z,29nm,0.8s,mb5.0
GRR Gorron 80.73 0 *e*P **P** **19 49 11.2 -0.5**
comp=Z,15nm,0.8s,mb5.0
GRR Gorron 80.73 0 *e*P **P** **19 49 11.2 -0.5**
GRR pmax pmax
comp=Z,15nm,0.8s,mb5.0
ROSF Rostrenen 80.76 2 *e*P **P** **19 49 11.6 -0.2**
comp=Z,12nm,0.8s,mb4.6
ROSF Rostrenen 80.76 2 *e*P **P** **19 49 11.6 -0.2**
comp=Z,6.3nm,0.8s,mb4.6
ROSF Rostrenen 80.76 2 *e*P **P** **19 49 11.6 -0.2**
ROSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SGMF Saint Gilles 80.85 1 *e*P **P** **19 49 12.0 -0.3**
comp=Z,39nm,0.8s,mb5.1
SGMF Saint Gilles 80.85 1 *e*P **P** **19 49 12.0 -0.3**
comp=Z,20nm,0.8s,mb5.1
SGMF Saint Gilles 80.85 1 *e*P **P** **19 49 12.0 -0.3**
SGMF pmax pmax
comp=Z,20nm,0.8s,mb5.1
MLR Muntele Rosu 80.93 341⇓ P **P** **19 49 14.2 +1.5**
MLR Muntele Rosu 80.93 341⇓ *i*P **P** **19 49 14.3 +1.5**
HAU Haudompre 80.94 355 *e*P **P** **19 49 12.3 -0.4**
HAU *e*MLR MLR
comp=Z,108nm,20.5s,MS3.9
HAU Haudompre 80.94 355 *e*P **P** **19 49 12.3 -0.4**
HAU MLR MLR
comp=Z,110nm,20.5s,MS4.2
HINF Hinteralfeld 81.10 355 *e*P **P** **19 49 12.9 -0.7**
WRAB Tennant Creek 81.13 222 *e*P **P** **19 49 11.9 -2.1**
comp=Z,6.2nm,1.1s,mb4.5
WRAB Tennant Creek 81.13 222 *e*P **P** **19 49 11.9 -2.1**
WRAB pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
WB2 Warramunga Arr 81.14 222 *e*P **P** **19 49 12.2 -1.8**
WRA Warramunga Arr 81.14 222 P **P** **19 49 12.1 -1.9**
comp=Z,3.4nm,0.7s,mb4.4,baz=32,slow=6.0,SNR=32
WRA Warramunga Arr 81.14 222 *i* P **P** **19 49 12.1 -1.9**
WRA pmax pmax
comp=Z,3.0nm,0.7s
VOIR 81.16 342⇓ P **P** **19 49 15.2 +1.2**
VOIR 81.16 342⇓ *i*P **P** **19 49 15.2 +1.2**
QUIF Quistinic 81.18 2 *e*P **P** **19 49 13.6 -0.5**
WATA Walderalm 81.23 352⇑ *i*P **P** **19 49 14.4 +0.1**
comp=Z,7.0nm,0.6s,mb4.8
MOTA Moosalm 81.26 352⇑ *i*P **P** **19 49 14.3 -0.2**
comp=Z,15nm,1.3s,mb4.8
WTTA Wattenberg 81.29 352⇓ *i*P **P** **19 49 15.1 +0.4**
comp=Z,14nm,0.6s,mb5.1
PKSM Moragy 81.50 347⇑ P **P** **19 49 14.9 -0.9**
PKSM Moragy 81.50 347⇑ *i*P **P** **19 49 14.9 -0.9**
SOKA Soboth 81.52 349⇑ *i*P **P** **19 49 16.1 +0.3**
comp=Z,28nm,1.3s,mb5.0
BZS Buzias 81.61 344⇑ P **P** **19 49 16.3 0.0**
BZS Buzias 81.61 344⇑ *i*P **P** **19 49 16.3 -0.1**
GZR Gura Zlata 81.62 344⇑ P **P** **19 49 16.8 +0.3**
GZR Gura Zlata 81.62 344⇑ *i*P **P** **19 49 16.8 +0.3**
LOR Lormes 81.78 357 *e*P **P** **19 49 16.9 -0.3**
comp=Z,11nm,0.8s,mb4.5
LOR *e*MLR MLR
comp=Z,80nm,20.2s,MS3.8
LOR Lormes 81.78 357 *e*P **P** **19 49 16.9 -0.3**
comp=Z,5.5nm,0.8s,mb4.5
LOR LR LR
comp=Z,80nm,20.3s,MS4.1
LOR Lormes 81.78 357 *e*P **P** **19 49 16.9 -0.3**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LOR MLR MLR
comp=Z,80nm,20.3s,MS4.1
SSF Saint Saulge 82.00 357⇑ *i*P **P** **19 49 18.1 -0.3**
comp=Z,5.7nm,0.6s,mb4.3
SSF Saint Saulge 82.00 357⇑ *i*P **P** **19 49 18.1 -0.3**
comp=Z,2.8nm,0.6s,mb4.4
SSF Saint Saulge 82.00 357⇑ *i*P **P** **19 49 18.1 -0.3**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AVF Avril sur Loir 82.27 357 *e*P **P** **19 49 19.3 -0.5**
comp=Z,14nm,0.9s,mb4.6
AVF Avril sur Loir 82.27 357 *e*P **P** **19 49 19.3 -0.5**
comp=Z,6.9nm,0.9s,mb4.6
AVF Avril sur Loir 82.27 357 *e*P **P** **19 49 19.3 -0.5**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CABF La Chapelle 82.34 355 *e*P **P** **19 49 19.9 -0.3**
comp=Z,31nm,1.2s,mb4.8
CABF La Chapelle 82.34 355 *e*P **P** **19 49 19.9 -0.3**
comp=Z,16nm,1.2s,mb4.8
CABF La Chapelle 82.34 355 *e*P **P** **19 49 19.9 -0.3**
CABF pmax pmax
comp=Z,16nm,1.2s,mb4.8
SMF Signal de Mont 82.40 357 *e*P **P** **19 49 20.1 -0.4**
comp=Z,35nm,1.1s,mb4.9
SMF Signal de Mont 82.40 357 *e*P **P** **19 49 20.1 -0.4**
comp=Z,18nm,1.1s,mb4.9
SMF Signal de Mont 82.40 357 *e*P **P** **19 49 20.1 -0.4**
SMF pmax pmax
comp=Z,17nm,1.1s,mb4.9
BGF Bois d'Agland 82.52 358 *e*P **P** **19 49 20.9 -0.2**
MFF Saint Martin d 82.52 360 *e*P **P** **19 49 20.9 -0.2**
comp=Z,16nm,0.8s,mb4.8
MFF Saint Martin d 82.52 360 *e*P **P** **19 49 20.9 -0.2**
comp=Z,8.3nm,0.8s,mb4.8
MFF Saint Martin d 82.52 360 *e*P **P** **19 49 20.9 -0.2**
MFF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 82.80 358 *e*P **P** **19 49 22.1 -0.5**
HYB Hyderabad 83.18 289 *e*P **P** **19 49 24.5 -0.5**
HYB Hyderabad 83.18 289 *i* P **P** **19 49 24.5 -0.5**
LPL La Plagne 83.40 355 *e*P **P** **19 49 26.2 +0.5**
comp=Z,14nm,1.1s,mb4.6
LPL La Plagne 83.40 355 *e*P **P** **19 49 26.2 +0.5**
comp=Z,7.1nm,1.1s,mb4.6
LPL La Plagne 83.40 355 *e*P **P** **19 49 26.2 +0.5**
LPL pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
LPG La Plagne 83.41 355 *e*P **P** **19 49 25.8 0.0**
RJF Les Rejaudoux 83.80 358 *e*P **P** **19 49 27.4 -0.4**
RJF *e*MLR MLR
comp=Z,162nm,21.8s,MS4.1
RJF Les Rejaudoux 83.80 358 *e*P **P** **19 49 27.4 -0.4**
RJF MLR MLR
comp=Z,160nm,21.8s,MS4.4
ORIF Oris-en-Rattie 84.04 355 *e*P **P** **19 49 29.4 +0.4**
ORIF *e*MLR MLR
comp=Z,111nm,23.0s,MS3.9
VIVF Saint-Julien-l 84.16 356 *e*P **P** **19 49 29.5 -0.1**
CAF Calviac 84.17 358 *e*P **P** **19 49 29.7 +0.1**
LFF La Frestale 84.18 359 *e*P **P** **19 49 29.5 -0.2**
comp=Z,9.2nm,0.6s,mb4.8
LFF La Frestale 84.18 359 *e*P **P** **19 49 29.5 -0.2**
comp=Z,4.6nm,0.6s,mb4.8
LFF La Frestale 84.18 359 *e*P **P** **19 49 29.5 -0.2**
LFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
MBDF Montbardon 84.18 355 *e*P **P** **19 49 30.2 +0.5**
comp=Z,14nm,0.8s,mb4.8
MBDF Montbardon 84.18 355 *e*P **P** **19 49 30.2 +0.5**
comp=Z,6.8nm,0.8s,mb4.8
MBDF Montbardon 84.18 355 *e*P **P** **19 49 30.2 +0.5**
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
BR131 Keskin Array S 84.57 334 *e*P **P** **19 49 32.1 +0.4**
comp=Z,4.8nm,0.6s,mb4.8
ASAR Alice Springs 84.63 221 P **P** **19 49 30.8 -1.3**
comp=Z,2.0nm,0.8s,mb4.3,baz=25,slow=5.3,SNR=23
ASAR Alice Springs 84.63 221 P **P** **19 49 30.8 -1.3**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
SMRF Simiane la Rot 84.99 356 *e*P **P** **19 49 33.6 -0.2**
POO Poona 85.06 293 *ex* x 19 49 33.0
FRF La Foret Royal 85.35 355 *e*P **P** **19 49 35.3 -0.3**
comp=Z,88nm,1.2s,mb5.5
FRF La Foret Royal 85.35 355 *e*P **P** **19 49 35.3 -0.3**
comp=Z,44nm,1.3s,mb5.4
FRF La Foret Royal 85.35 355 *e*P **P** **19 49 35.3 -0.3**
FRF pmax pmax
comp=Z,44nm,1.3s,mb5.4
LMR La Mourre 85.58 355 *e*P **P** **19 49 36.5 -0.3**
SJPF Ste Jean 86.01 0 *e*P **P** **19 49 39.3 +0.4**
comp=Z,7.2nm,0.8s,mb4.7
SJPF Ste Jean 86.01 0 *e*P **P** **19 49 39.3 +0.4**
comp=Z,3.6nm,0.8s,mb4.7
SJPF Ste Jean 86.01 0 *e*P **P** **19 49 39.3 +0.4**
SJPF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
EPF Esparros 86.09 359 *e*P **P** **19 49 39.1 -0.2**
comp=Z,8.7nm,0.9s,mb4.7
EPF Esparros 86.09 359 *e*P **P** **19 49 39.1 -0.2**
comp=Z,4.3nm,0.9s,mb4.7
EPF Esparros 86.09 359 *e*P **P** **19 49 39.1 -0.2**
EPF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
PGF Pioggiola 86.20 353 *e*P **P** **19 49 39.6 -0.2**
ETSF Etsaut 86.22 360 *e*P **P** **19 49 40.2 +0.2**
comp=Z,28nm,1.2s,mb5.1
ETSF Etsaut 86.22 360 *e*P **P** **19 49 40.2 +0.2**
comp=Z,14nm,1.2s,mb5.1
ETSF Etsaut 86.22 360 *e*P **P** **19 49 40.2 +0.2**
ETSF pmax pmax
comp=Z,14nm,1.2s,mb5.1
MIB Mutribah 88.91 320 *e*P **P** **19 49 52.6 -0.5**
baz=320
MIB AMb AMB 19 49 53.8
comp=Z,76nm,0.9s,mb6.0,baz=320
STKA Stephens Creek 89.21 211 P **P** **19 49 52.2 -1.9**
comp=Z,2.3nm,0.8s,mb4.5,baz=266,slow=4.2,SNR=4.3
STKA LR LR 20 27 42.4
comp=Z,160nm,18.6s,MS4.5,baz=24,slow=34
STKA Stephens Creek 89.21 211 P **P** **19 49 52.2 -2.0**
STKA LR LR 20 27 42.4
ESDC Sonseca Array 89.40 3 P **P** **19 49 53.2 -2.0**
comp=Z,0.6nm,0.5s,mb4.2,baz=352,slow=4.3,SNR=8.4
ESDC LR LR 20 30 44.9
comp=Z,57nm,19.9s,MS4.0,baz=235,slow=36
NAY Al-Naaiem 89.44 320 *e*P **P** **19 49 54.9 -0.7**
baz=320
NAY AMb AMB 19 49 56.1
comp=Z,24nm,0.9s,mb5.5,baz=320
RDF Al-Radifah 89.60 319 *e*P **P** **19 49 56.0 -0.3**
baz=319
RDF AMb AMB 19 49 57.5
comp=Z,59nm,1.1s,mb5.8,baz=319
MTP Monte Pirata 90.75 59 *e*P **P** **19 50 01.7 -0.1**
TORD Torodi Ar. Bea 115.83 357 PKP PKPdf 19 55 39.6 -1.7
comp=Z,0.7nm,0.6s,baz=346,slow=2.3,SNR=9.1
TORD Torodi Ar. Bea 115.83 357 PKP PKPdf 19 55 39.6 -1.8
DBIC Dimbokro 122.19 5 PKP PKPdf 19 55 51.4 -2.2
comp=Z,2.4nm,0.7s,baz=279,slow=3.9,SNR=5.0
DBIC Dimbokro 122.19 5 PKP PKPdf 19 55 51.4 -2.2
DBIC Dimbokro 122.19 5 PKIKP PKPdf 19 55 51.4 -2.2
DBIC pmax pmax
comp=Z,2.0nm,0.7s
QSPA South Pole Qui 141.01 180 *e*PKPpre 19 56 23.3
TSUM Tsumeb 144.93 329 PKP PKPdf 19 56 35.3 -0.4
comp=Z,20nm,0.9s,baz=357,slow=4.8,SNR=23
TSUM Tsumeb 144.93 329 *e*PKPdf PKPdf 19 56 35.0 -0.7
MAW Mawson 145.69 217 PKPbc PKPbc 19 56 34.6 -1.3
comp=Z,3.4nm,0.7s,baz=75,slow=4.1,SNR=10
MAW Mawson 145.69 217 PKP2 PKPab 19 56 34.6 -1.7
MAW pmax pmax
comp=Z,3.0nm,0.7s
BOSA Boshof 150.19 309 PKPbc PKPbc 19 56 49.4 +0.1
comp=Z,13nm,0.6s,baz=7.1,slow=1.5,SNR=30

BOSA Boshof 150.19 309 *e*PKIKP PKPbc 19 56 49.3 +0.1

*CSEM **01** 19:37:37.8±0.1,3906N×2678E,h10km,MD3.0,Error ellipse: s-maj=2.1km s-min=1.4km az=83.0*
*ISK **01** 19:37:37.1,3911N×2680E,h5km,MD3.1*
*DDA **01** 19:37:38.3,3909N×2680E,h7km±5km,Md3.0*
*ISCJB **01** 19:37:38.7±0.5,3907N±002×2678E±003,h9km±4km, Error ellipse: s-maj=3.9km s-min=2.9km az=150.9*
*THE **01** 19:37:38.8,3905N×2681E,h8km±2km,ML3.1/4,Error ellipse: s-maj=3.9km s-min=1.4km az=267.0*
*ATH **01** 19:37:39.2,3895N×2659E,h28km±3km,MD3.3/5*
*NEIC **01** 19:37:39.2,3895N×2659E,h28km,MD3.3(ATH),After ATH.*

ISC 01 19:37:39.3±0.4,3908N±002×2678E±003,h13km±3km,n49, σ0§98/78,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.24**	**344**	⇑*i*P	**Pg**	**19 37 43.9**	**-0.6**
AYVA				*i* S	**Sg**	**19 37 47.9**	**0.0**
PRK	**Paraskevi**	**0.43**	**294**	P	**Pg**	**19 37 47.4**	**-0.4**
PRK				S	**Sg**	**19 37 54.7**	**+1.2**
PRK	**Paraskevi**	**0.43**	**294**	*e*PB	**Pg**	**19 37 47.7**	**-0.1**
PRK				*e*SB	**Sg**	**19 37 54.4**	**+0.9**
BLCB	**Balcova**	**0.72**	**163**	PG	**Pg**	**19 37 52.3**	**-0.9**
URLA	**Izmir**	**0.73**	**191**	*i* P	**Pg**	**19 37 52.2**	**-1.2**
URLA				*i* S	**Sg**	**19 38 05.0**	**+2.1**
IZM	**Izmir**	**0.78**	**151**	*e*PG	**Pg**	**19 37 53.6**	**-0.7**
IZM				*e*SG	**Sg**	**19 38 05.6**	**+1.2**
AKHS	**Akhisar**	**0.83**	**103**	*i* P	**Pg**	**19 37 54.5**	**-0.8**
AKHS				*i* S	**Sg**	**19 38 07.6**	**+1.4**
AKS	**Akhisar**	**0.83**	**103**	*e*PG	**Pg**	**19 37 54.3**	**-1.0**
CHOS	**Chios island**	**0.89**	**220**	P	**Pg**	**19 37 55.4**	**-1.1**
CHOS				S	**Sg**	**19 38 08.9**	**+0.8**
BALY	**Balya**	**0.93**	**44**	*i* P	**Pg**	**19 37 56.2**	**-1.1**
BALY				*i* S	**Sg**	**19 38 09.7**	**+0.3**
BOZC	**Bozcaada**	**0.95**	**324**	*i* P	**Pg**	**19 37 56.6**	**-1.1**
BOZC				*i* S	**Sg**	**19 38 11.4**	**+1.4**
GADA	**Gvkgeada**	**1.30**	**329**	*e*PN	**Pn**	**19 38 03.0**	**-0.3**
SMG	**Samos**	**1.36**	**178**	*e*PN	**Pn**	**19 38 03.1**	**-0.9**
SMG				*e*SN	**Sn**	**19 38 20.0**	**-2.0**
LIA	**Limnos Island**	**1.48**	**304**	P	**Pn**	**19 38 05.9**	**+0.2**
LIA				S	**Sn**	**19 38 25.0**	**+0.1**
LIA	**Limnos Island**	**1.48**	**304**	*e*Pn	**Pn**	**19 38 06.0**	**+0.3**
LIA				S	**Sn**	**19 38 25.0**	**+0.1**
MANT	**Manisa**	**1.51**	**112**	*i* P	**Pn**	**19 38 07.2**	**+1.2**
MANT				*i* S	**Sn**	**19 38 24.3**	**-1.3**
MANT	**Manisa**	**1.51**	**112**	*i* P	**Pn**	**19 38 07.2**	**+1.2**
MANT				*i* S	**Sn**	**19 38 24.3**	**-1.2**
EDC	**Edincik**	**1.52**	**33**	*e*PN	**Pn**	**19 38 05.8**	**-0.5**
DST	**Dursunbey**	**1.53**	**69**	*e*PN	**Pn**	**19 38 06.3**	**0.0**
BNT	**Bandirma**	**1.55**	**34**	*e*PN	**Pn**	**19 38 06.1**	**-0.5**
KULA	**Kula-Manisa**	**1.57**	**110**	*e*PN	**Pn**	**19 38 07.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.64**	**11**	*e*PN	**Pn**	**19 38 07.7**	**-0.1**
SART	**Tekirdag**	**1.64**	**11**	*i* P	**Pn**	**19 38 07.7**	**-0.1**
SART				*i* S	**Sn**	**19 38 30.7**	**+1.8**
AYDN	**Tasoluk**	**1.66**	**148**	*i* P	**Pn**	**19 38 09.4**	**+1.3**
AYDN				*i* S	**Sn**	**19 38 30.8**	**+1.6**
KCT	**Karacabey**	**1.70**	**45**	*e*PN	**Pn**	**19 38 08.4**	**-0.3**
ENEZ	**Enez**	**1.73**	**344**	*e*PN	**Pn**	**19 38 10.2**	**+0.1**
MFT	**Murefte**	**1.75**	**13**	*e*PN	**Pn**	**19 38 09.4**	**0.0**
ALN	**Alexandroupoli**	**1.91**	**343**	P	**Pn**	**19 38 11.2**	**-0.3**
ALN				S	**Sn**	**19 38 35.2**	**-0.1**
MLSB	**Milas**	**1.94**	**156**	*e*PN	**Pn**	**19 38 12.8**	**+0.8**
BODT	**Bodrum**	**2.05**	**168**	*e*PN	**Pn**	**19 38 14.8**	**+1.3**
APE	**Apeiranthos**	**2.23**	**207**	P	**Pn**	**19 38 13.6**	**-2.4**
APE				S	**Sn**	**19 38 43.4**	**0.0**
APE	**Apeiranthos**	**2.23**	**207**	*e*Pn	**Pn**	**19 38 13.8**	**-2.2**
APE				S	**Sn**	**19 38 43.4**	**0.0**
RDO	**Rodhopi**	**2.28**	**336**	*e*PN	**Pn**	**19 38 17.1**	**+0.5**
PAIG	**Paliouri**	**2.54**	**291**	P	**Pn**	**19 38 19.1**	**-1.2**
KNT	**Kendrikon**	**3.63**	**306**	P	**Pn**	**19 38 36.0**	**+0.8**

NEIC 01 19:38:46.3,3656S×17722E,h26km,ML3.9(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUZ	**Kuaotunu**	**1.22**	**261**	P	Pn	19 39 07.3	-0.4
MXZ	**Matakaoa Point**	**1.33**	**139**	P	Pn	19 39 08.1	-1.0
MXZ				S	Sn	19 39 24.7	-1.2
URZ	**Urewera**	**1.70**	**183**	P	Pn	19 39 12.8	-1.5
PUZ	**Puketiti**	**1.72**	**152**	P	Pn	19 39 16.1	+1.5
PUZ				S	Sn	19 39 38.6	+2.9
MKAZ	**Moumakai**	**1.74**	**251**	P	Pn	19 39 15.0	+0.2
MWZ	**Matawai**	**1.79**	**172**	P	Pn	19 39 14.5	-1.0
WCZ	**Waipu Caves**	**2.41**	**284**	P	Pn	19 39 26.3	+2.3

*CSEM **01** 19:39:23.6±0.1,3906N×2678E,h8km,MD2.9,Error ellipse: s-maj=1.7km s-min=1.2km az=66.0*
*ISCJB **01** 19:39:24.4±0.5,3907N±002×2678E±003,h7km±4km, Error ellipse: s-maj=4.2km s-min=3.1km az=151.0*
*ISK **01** 19:39:24.1,3903N×2674E,h16km,MD3.0*
*DDA **01** 19:39:24.9,3911N×2681E,h7km±6km,Md2.9*
*THE **01** 19:39:25.5,3905N×2676E,h8km±1km,ML2.8/4,Error ellipse: s-maj=2.9km s-min=1.0km az=267.0*

ISC 01 19:39:25.0±0.4,3907N±002×2679E±003,h10km±3km,n44, σ0§79/68,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.25**	**342**	⇑*i*P	**Pg**	**19 39 29.5**	**-0.5**
AYVA				*i* S	**Sg**	**19 39 33.6**	**+0.2**
PRK	**Paraskevi**	**0.44**	**294**	P	**Pg**	**19 39 33.2**	**-0.3**
PRK				S	**Sg**	**19 39 40.4**	**+1.1**
BLCB	**Balcova**	**0.71**	**164**	*e*PG	**Pg**	**19 39 37.8**	**-0.9**
BLCB				*e*SG	**Sg**	**19 39 47.8**	**-0.2**
URLA	**Izmir**	**0.73**	**192**	*i* P	**Pg**	**19 39 37.9**	**-1.1**
URLA				*i* S	**Sg**	**19 39 51.7**	**+3.3**
IZM	**Izmir**	**0.77**	**151**	*e*PG	**Pg**	**19 39 39.2**	**-0.6**
AKS	**Akhisar**	**0.82**	**103**	*e*PG	**Pg**	**19 39 41.1**	**+0.3**
AKHS	**Akhisar**	**0.82**	**103**	*i* P	**Pg**	**19 39 40.4**	**-0.4**
AKHS				*i* S	**Sg**	**19 39 53.7**	**+2.1**
CHOS	**Chios island**	**0.89**	**220**	P	**Pg**	**19 39 41.2**	**-0.9**
CHOS				S	**Sg**	**19 39 54.7**	**+1.0**
BALY	**Balya**	**0.93**	**44**	*i* P	**Pg**	**19 39 41.7**	**-1.1**
BALY				*i* S	**Sg**	**19 39 55.5**	**+0.5**
BOZC	**Bozcaada**	**0.96**	**324**	*i* P	**Pg**	**19 39 42.3**	**-1.1**
BOZC				*i* S	**Sg**	**19 39 57.2**	**+1.3**
GADA	**Gvkgeada**	**1.31**	**329**	*e*PN	**Pn**	**19 39 48.7**	**-0.7**
LIA	**Limnos Island**	**1.49**	**304**	P	**Pn**	**19 39 52.2**	**+0.4**
LIA				S	**Sn**	**19 40 11.2**	**-0.2**
MANT	**Manisa**	**1.50**	**112**	*i* P	**Pn**	**19 39 52.3**	**+0.4**
MANT				*i* S	**Sn**	**19 40 10.7**	**-0.9**
EDC	**Edincik**	**1.52**	**33**	*e*PN	**Pn**	**19 39 51.8**	**-0.5**
DST	**Dursunbey**	**1.52**	**69**	*e*PN	**Pn**	**19 39 52.0**	**-0.3**
BNT	**Bandirma**	**1.55**	**34**	*e*PN	**Pn**	**19 39 52.3**	**-0.4**
KULA	**Kula-Manisa**	**1.57**	**110**	*e*PN	**Pn**	**19 39 52.4**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.64**	**10**	*e*PN	**Pn**	**19 39 53.8**	**-0.2**
SART	**Tekirdag**	**1.64**	**10**	*e*P	**Pn**	**19 39 53.7**	**-0.2**
SART				*e*S	**Sn**	**19 40 16.3**	**+1.2**
AYDN	**Tasoluk**	**1.65**	**148**	*i* P	**Pn**	**19 39 55.6**	**+1.6**
AYDN				*i* S	**Sn**	**19 40 16.7**	**+1.5**
KCT	**Karacabey**	**1.70**	**45**	*e*PN	**Pn**	**19 39 54.5**	**-0.2**
ENEZ	**Enez**	**1.73**	**344**	*e*PN	**Pn**	**19 39 55.0**	**-0.2**
MFT	**Murefte**	**1.75**	**12**	*e*PN	**Pn**	**19 39 55.6**	**+0.2**
ALN	**Alexandroupoli**	**1.91**	**343**	P	**Pn**	**19 39 57.5**	**-0.1**
ALN				S	**Sn**	**19 40 21.6**	**-0.1**
APE	**Apeiranthos**	**2.23**	**207**	P	**Pn**	**19 40 01.7**	**-0.3**
APE				S	**Sn**	**19 40 29.2**	**-0.4**
OUR	**Ouranopolis**	**2.50**	**301**	P	**Pn**	**19 40 05.6**	**-0.2**
PAIG	**Paliouri**	**2.55**	**291**	P	**Pn**	**19 40 06.9**	**+0.5**
KNT	**Kendrikon**	**3.64**	**306**	P	**Pn**	**19 40 21.4**	**0.0**

MAN 01 20:07:08,856N×12671E,h7km,mb4.1,ML3.0,MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.15**	**291**	*e*P	Pg	20 07 30.2	+0.1
BUTP				*e*S	Sg	20 07 46.7	+1.5
MATI	**Mati**	**1.67**	**196**	*e*P	Pn	20 07 36.9	-0.7
SCPH	**Surigao**	**1.71**	**315**	*e*P	Pn	20 07 38.0	-0.3
SCPH				*e*S	Sn	20 08 01.0	+0.6
BUKP	**Musuan**	**1.77**	**248**	*e*P	Pn	20 07 39.9	+0.9

2007 NOV

MAN 01 20:08:32,857N×12671E,h7km,mb3.9,ML2.6,MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.15**	**290**	*e*P	Pg	20 08 54.2	+0.2
BUTP				*e*S	Sg	20 09 11.6	+2.6
MATI	**Mati**	**1.68**	**196**	*e*P	Pn	20 09 02.4	+0.6
BUKP	**Musuan**	**1.77**	**247**	*e*P	Pn	20 09 05.2	+2.1

*ISCJB **01** 20:18:38.3±0.7,3879N±007×14064E±0.10,h150km±4km, mb3.6/3,Error ellipse: s-maj=14.1km s-min=9.3km az=41.7*
*JMA **01** 20:18:40.1±0.1,3881N×14055E,h141km±1km,M3.4*
*IDC **01** 20:18:42.9±10.0,3855N×14018E,h163km±53km,mb3.3/3, mb1 3.4/5,mb1mx3.1/21,mbtmp3.3/5,Error ellipse: s-maj=173.7km s-min=22.3km az=59.0*

ISC 01 20:18:39.5±0.7,3879N±007×14061E±009,h146km±4km, n15,σ0§49/25,mb3.6/3,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYK	**Kaneyama**	**0.23**	**302**	P	**Pn**	**20 18 59.3**	**+0.1**
JYK				*e*S	**Sn**	**20 19 13.6**	**+0.7**
JOU	**Okura**	**0.43**	**175**	P	**Pn**	**20 19 00.5**	**+0.5**
JOU				*e*S	**Sn**	**20 19 16.0**	**+0.5**
JMK	**Ichinoseki**	**0.50**	**71**	P	**Pn**	**20 19 00.5**	**+0.2**
JMK				*e*S	**Sn**	**20 19 16.0**	**-0.1**
JIO	**Ouri**	**0.67**	**120**	P	**Pn**	**20 19 01.5**	**+0.2**
JIO				S	**Sn**	**20 19 17.4**	**-0.4**
JYS	**Shirataka**	**0.71**	**217**	P	**Pn**	**20 19 01.7**	**+0.1**
JYS				*e*S	**Sn**	**20 19 18.4**	**0.0**
JYA	**Atsumi**	**0.73**	**254**	P	**Pn**	**20 19 01.6**	**-0.1**
JYA				S	**Sn**	**20 19 17.9**	**-0.7**
JOM	**Ohasama**	**0.86**	**38**	P	**Pn**	**20 19 03.1**	**+0.5**
JOM				*e*S	**Sn**	**20 19 20.2**	**-0.1**
JMM	**Marumori**	**0.94**	**171**	P	**Pn**	**20 19 03.6**	**+0.3**
JMM				*e*S	**Sn**	**20 19 21.6**	**+0.2**
JAW	**Awa shima**	**1.12**	**253**	P	**Pn**	**20 19 04.7**	**-0.2**
MJAR	**Matsushiro Arr** 11nm,0.3s,baz=244,slow=21,SNR=10.0	**2.95**	**221**	P	**Pn**	**20 19 26.2**	**+0.3**
MAT	**Matsushiro**	**2.95**	**221**	P	**Pn**	**20 19 26.3**	**+0.3**
MAT				*e*S	**Sn**	**20 20 02.5**	**+0.6**
JHJ	**Hachijo jima 2** 29nm,0.3s,baz=257,slow=22,SNR=9.0	**5.70**	**187**	P	**Pn**	**20 20 00.4**	**-1.7**
JHJ				S	**Sn**	**20 21 01.6**	**-5.1**
MKAR	**Makanchi Array** 0.9nm,0.7s,mb3.5,baz=87,slow=9.6,SNR=8.2	**42.67**	**300**	P	**P**	**20 26 21.6**	**+0.2**
WRA	**Warramunga Arr** 0.8nm,0.7s,mb3.6,baz=11,slow=7.3,SNR=13	**58.72**	**187**	P	**P**	**20 28 21.5**	**-0.3**
ASAR	**Alice Springs** 0.6nm,0.8s,mb3.5,baz=8.5,slow=7.0,SNR=9.4	**62.45**	**187**	P	**P**	**20 28 47.0**	**0.0**

MAN 01 20:39:38,854N×12674E,h4km,mb4.2,ML3.0,MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.19**	**291**	*e*P	Pg	20 40 00.8	0.0
BUTP				*e*S	Sg	20 40 15.6	-0.6
MATI	**Mati**	**1.65**	**197**	*e*P	Pn	20 40 07.7	-0.1
SCPH	**Surigao**	**1.75**	**315**	*e*P	Pn	20 40 08.3	-0.8
SCPH				*e*S	Sn	20 40 33.1	+1.3
BUKP	**Musuan**	**1.79**	**249**	*e*P	Pn	20 40 10.7	+1.1
MSLP	**Maasin**	**2.44**	**311**	*e*P	Pn	20 40 20.0	+1.3
PAGZ	**Pagadian**	**3.39**	**259**	*e*P	Pn	20 40 34.4	+2.7

JSN 01 20:52:21.9±1.7,1940N×7824W,h9km±26km,MD4.1,7C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBJ	**Montego Bay**	**1.06**	**160**	*e*P	Pg	20 52 40.8	-1.4
MBJ				*i* S	Sg	20 52 54.1	-1.8
NEJ	**Negril**	**1.15**	**184**	⇑*e*P	Pb	20 52 41.0	-2.9
CVJ	**Coleyville**	**1.35**	**150**	⇑*i*P	Pn	20 52 45.5	-1.4
MCJ	**Malvern**	**1.56**	**160**	⇑*i*P	Pn	20 52 48.6	-1.2
STH	**Stony Hill**	**1.89**	**134**	⇑*i*P	Pn	20 52 52.9	-1.5
STH				*i* S	Sn	20 53 15.7	-2.7
STH				*i* S	Sn	20 53 15.8	-2.6
PCJ	**Portland Cotta**	**1.94**	**148**	⇑*i*P	Pn	20 52 54.6	-0.5
PCJ				*i* S	Sn	20 53 17.6	-2.1
GWJ	**Greenwich**	**1.95**	**132**	⇑*i*P	Pn	20 52 53.6	-1.5
HOJ	**Hope**	**1.98**	**134**	⇑*i*P	Pn	20 52 52.9	-2.7

*ISCJB **01** 20:59:47.6±1.3,3510N±006×27.15E±007,h10km,Error ellipse: s-maj=10.2km s-min=5.7km az=138.1*
*THE **01** 20:59:48.4,3512N×2709E,h0km±6km,Error ellipse: s-maj=15.3km s-min=1.8km az=123.0*
*CSEM **01** 20:59:48.8±0.4,3512N×2696E,h2km,MD3.4,Error ellipse: s-maj=9.6km s-min=4.8km az=149.0*
*NEIC **01** 20:59:50.3,3521N×2699E,h21km,MD3.4(ATH),After ATH.*
*ATH **01** 20:59:50.3,3521N×2699E,h21km±4km,MD3.4/5*

ISC 01 20:59:48.5±1.2,3508N±006×2708E±006,h8km±5km,n32, σ1§08/62,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.47**	**8**	*e*PB	**Pg**	**20 59 57.1**	**-0.6**
KARP				*e*SB	**Sg**	**21 00 03.9**	**+0.1**
ZKR	**Zakros**	**0.71**	**273**	P	**Pg**	**21 00 01.3**	**-0.9**
ZKR				S	**Sg**	**21 00 13.0**	**+1.6**
NPS	**Neapolis**	**1.22**	**279**	*e*PN	**Pn**	**21 00 11.7**	**-0.1**
NPS				*e*SN	**Sn**	**21 00 27.1**	**-1.4**
LAST	**Lasithi**	**1.31**	**274**	P	**Pn**	**21 00 12.3**	**-0.9**
LAST				S	**Sg**	**21 00 32.4**	**+1.6**
ARG	**Arkhangelos**	**1.42**	**37**	*e*PN	**Pn**	**21 00 16.3**	**+1.7**
ARG				*e*SN	**Sn**	**21 00 37.5**	**+4.1**
THR1	**Thera Island**	**1.84**	**315**	P	**Pn**	**21 00 20.2**	**-0.2**
THR1				S	**Sn**	**21 00 44.4**	**+0.5**
SIVA	**Sivas**	**1.86**	**269**	P	**Pn**	**21 00 21.3**	**+0.6**
SIVA				S	**Sn**	**21 00 45.7**	**+1.2**
THR6	**Thira Island,**	**1.87**	**313**	P	**Pn**	**21 00 20.2**	**-0.6**
THR6				S	**Sn**	**21 00 45.6**	**+1.0**
THR3	**Thira Island,**	**1.90**	**315**	P	**Pn**	**21 00 20.7**	**-0.6**
THR3				S	**Sn**	**21 00 45.0**	**-0.4**
THR5	**Thira Island,**	**1.94**	**314**	P	**Pn**	**21 00 20.2**	**-1.6**
THR5				S	**Sn**	**21 00 47.1**	**+0.8**
THR4	**Thira Island,**	**1.94**	**316**	P	**Pn**	**21 00 20.2**	**-1.6**
THR4				S	**Sn**	**21 00 47.2**	**+0.9**
APE	**Apeiranthos**	**2.35**	**328**	P	**Pn**	**21 00 26.9**	**-0.5**
APE				S	**Sn**	**21 00 54.5**	**-1.9**
APE	**Apeiranthos**	**2.35**	**328**	*e*PB	**Pb**	**21 00 27.3**	**-3.8**
SMG	**Samos**	**2.63**	**356**	*e*PN	**Pn**	**21 00 32.3**	**+1.0**

*IDC **01** 21:03:29.9±1.3,280N×12886E,h0km,mb3.9/6,mb1 4.1/6, mb1mx3.9/16,mbtmp3.9/6,Error ellipse: s-maj=84.0km s-min=16.8km az=66.0*
*ISCJB **01** 21:03:33.1±1.2,28N±02×1287E±0.3,h33km,mb4.1/9, Error ellipse: s-maj=55.5km s-min=10.5km az=149.9*

ISC 01 21:03:35.3±1.2,27N±02×1287E±03,h35km,n16,σ0§47/15, mb4.1/9,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu** 4.6nm,0.6s	**15.78**	**167**	*e*P	Px	21 07 14.4	
WRA	**Warramunga Arr** 4.1nm,0.3s,mb4.3,baz=344,slow=10,SNR=125	**23.20**	**166**	P	**P**	**21 08 39.4**	**+0.1**
WB2	**Warramunga Arr**	**23.20**	**166**	*e*P	**P**	**21 08 39.7**	**+0.4**
ASAR	**Alice Springs** 1.0nm,0.6s,mb3.6,baz=357,slow=8.3,SNR=34	**26.72**	**169**	P	**P**	**21 09 11.2**	**-0.4**
CMAR	**Chiang Mai Arr** 0.9nm,0.8s,mb3.7,baz=111,slow=7.4,SNR=6.8	**33.09**	**300**	P	**P**	**21 10 09.1**	**+1.0**
STKA	**Stephens Creek** 2.3nm,0.4s,mb4.4	**36.53**	**161**	*e*P	**P**	**21 10 37.4**	**-0.2**
STKA	**Stephens Creek** 2.8nm,0.4s,mb4.5,baz=339,slow=8.9,SNR=20	**36.53**	**161**	P	**P**	**21 10 37.5**	**-0.1**
TAPN	**Taplejung** 3.4nm,0.6s,mb4.5	**46.20**	**306**	*e*P	**P**	**21 11 56.7**	**-0.4**
ODAN	**Odare** 4.8nm,0.6s,mb4.6	**46.26**	**305**	*e*P	**P**	**21 11 57.7**	**+0.1**
RAMN	**Ramite** 8.1nm,0.6s	**46.94**	**305**	*e*P	**P**	**21 12 03.1**	**+0.2**
JIRN	**Jiri** 5.1nm,0.5s,mb4.8	**47.56**	**306**	*e*P	**P**	**21 12 07.9**	**+0.2**
GUN	**Gumba** 8.3nm,0.6s	**47.91**	**306**	*e*P	**P**	**21 12 09.7**	**-0.7**
SONM	**Songino Array** 0.2nm,0.5s,mb3.4,baz=150,slow=9.9,SNR=2.4	**48.88**	**340**	P	**P**	**21 12 18.2**	**+0.7**
KOLN	**Koldanda**	**49.72**	**305**	*e*P	**P**	**21 12 24.1**	**-0.2**
DANN	**Dangsing** 10nm,0.5s	**49.81**	**305**	*e*P	**P**	**21 12 24.8**	**-0.2**
MKAR	**Makanchi Array** 0.7nm,0.5s,mb4.0,baz=116,slow=8.6,SNR=16	**59.51**	**325**	P	**P**	**21 13 34.3**	**-0.6**

MAN 01 21:11:43,834N×12638E,h28km,mb3.5,ML2.2,MS1.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.97**	**310**	*e*P	Pn	21 12 01.8	+1.0
BUKP	**Musuan**	**1.38**	**251**	*e*P	Pn	21 12 11.0	+4.6
MATI	**Mati**	**1.39**	**185**	*e*P	Pn	21 12 07.7	+1.1
SCPH	**Surigao**	**1.68**	**329**	*e*P	Pn	21 12 08.5	-2.0
SCPH				*e*S	Sn	21 12 32.6	+1.5
MSLP	**Maasin**	**2.33**	**320**	*e*P	Pn	21 12 20.3	+0.8
TBP	**Tagbilaran**	**2.82**	**299**	*e*P	Pn	21 12 28.6	+2.4
TBP				*e*S	Sn	21 13 05.8	+6.5
TBP	**Tagbilaran**	**2.82**	**299**	*e*P	Sn	21 13 16.1	+17
PVCP	**Virac**	**5.66**	**338**	*e*P	Pn	21 13 08.3	+3.0

MAN 01 21:12:44,852N×12670E,h8km,mb4.4,ML3.3,MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.16**	**293**	*e*P	Pg	21 13 04.8	-1.5
MATI	**Mati**	**1.63**	**196**	*e*P	Pn	21 13 12.4	-0.5
SCPH	**Surigao**	**1.73**	**316**	*e*P	Pn	21 13 14.1	-0.4
SCPH				*e*S	Sn	21 13 38.2	+1.5
BUKP	**Musuan**	**1.75**	**249**	*e*P	Pn	21 13 06.0	+1.4
TBP	**Tagbilaran**	**3.04**	**293**	*e*S	Sn	21 14 10.2	+1.3

*IDC **01** 21:17:37.4±6.8,5485S×13882E,h0km,mb3.6/1,mb1 3.9/3, mb1mx3.5/12,mbtmp3.8/3,ML3.8/1,Error ellipse: s-maj=153.7km s-min=64.5km az=120.0*
*NEIC **01** 21:17:46.4±2.8,5995S×13869E,h35km,mb4.1/1,Error ellipse: s-maj=37.4km s-min=22.7km az=178.0*

ISC 01 21:17:42.5±3.8,59S±01×1389E±01,h9km±29km,n8, σ0§87/13,Near south coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**9.04**	**153**	Pn	**Pn**	**21 19 53.9**	**+0.5**
KAKA	**Kakadu** 13nm,0.3s	**9.29**	**223**	*e*P	**Pn**	**21 19 53.6**	**-3.2**
KAKA				*e*S	**Sn**	**21 21 42.7**	**+1.1**
WRAB	**Tennant Creek** 10.0nm,2.0s	**14.63**	**197**	*e*Pn	**Pn**	**21 21 09.8**	**0.0**
WRAB				Sn	**Sn**	**21 23 58.1**	**+5.8**
WB2	**Warramunga Arr**	**14.64**	**197**	*e*P	**Pn**	**21 21 09.7**	**-0.3**
WB2				*e*S	**Sn**	**21 23 51.9**	**-0.6**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=18,slow=13,SNR=26	**14.64**	**197**	Pn	**Pn**	**21 21 09.7**	**-0.3**
WRA	0.5nm,0.3s,baz=16,slow=22,SNR=4.0			Sn	**Sn**	**21 23 52.2**	**-0.3**
WRA	0.4nm,0.3s,baz=19,slow=27,SNR=3.1			Lg		21 25 34.0	
ASAR	**Alice Springs** 0.6nm,0.3s,baz=20,slow=10,SNR=30	**18.30**	**195**	P	**Pn**	**21 21 58.5**	**+1.6**
ASAR	0.1nm,0.3s,baz=20,slow=14,SNR=2.8			S	**Sn**	**21 25 16.8**	**-4.7**
ASAR	0.1nm,0.3s,baz=25,slow=28,SNR=3.6			Lg		21 27 32.3	
STKA	**Stephens Creek** 0.9nm,0.7s,baz=333,slow=11,SNR=2.9	**25.96**	**175**	P	**P**	**21 23 15.4**	**-0.1**
MAW	**Mawson** 2.1nm,1.0s	**79.26**	**202**	*e*P	**P**	**21 29 47.6**	**-0.4**

*NIED **01** 21:28:00,4340N×14720E,h11km,Mw4.4 Best double couple: M₀4.50000×10¹⁵ NP1:φ₀63.00000°,δ76.00000°, λ143.00000°. NP2:φ₀163.00000°,δ54.00000°,λ17.00000°.*
*IDC **01** 21:28:52.9±0.5,4351N×147.15E,h0km,mb4.3/20, mb1 4.4/23,mb1mx4.4/26,mbtmp4.2/23,ML3.6/3,MS3.5/4, Ms1 3.5/4,ms1mx3.1/31,Error ellipse: s-maj=15.7km s-min=12.9km az=158.0*
*SKHL **01** 21:28:53.4±2.1,4360N×14740E,h40km±9km,mb5.0/5, ms4.5/1*
*JMA **01** 21:28:54.1±0.3,4341N×14724E,h20km±4km,M4.6*
JMA Felt I J1.
*MOS **01** 21:28:56.4±0.9,4347N×147.16E,h33km,mb4.9/36,Error ellipse: s-maj=9.9km s-min=5.6km az=113.4*
*ISCJB **01** 21:28:56.3±0.3,4345N±003×14721E±003,h33km, mb4.7/74,MS4.0/10,Error ellipse: s-maj=5.0km s-min=2.8km az=160.6*
*BJI **01** 21:28:57.7,4372N×14732E,h56km,mB4.9,mb4.7,Ms4.2, Msz4.1*
*NEIC **01** 21:28:58.9±0.7,4351N×147.15E,h39km±5km,mb4.9/33, Error ellipse: s-maj=6.8km s-min=3.9km az=148.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*SZGRF **01** 21:29:03.7,4444N×14726E,h33km,mb4.5,Kuril Islands, Russia*

ISC 01 21:28:56.5±0.3,4349N±004×14719E±003,h22km, h22km±2.3km:pP-P,n232,σ0§91/248,mb4.7/74,MS4.0/10, 39C-9D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.06**	**264**	P	**Pn**	**21 29 14.1**	**-1.9**
NEM2			

KUR pmax pmax
comp=Z,740nm,0.6s
KUR smax
comp=N,12µm,2.0s
KUR smax
comp=E,4.0nm,2.0s
KUR smax
comp=N,990nm,0.5s
KUR smax
comp=E,9µm,0.5s
KUR Kuril'sk 1.81 15 *e*P **Pn 21 29 22.0 -4.4**
KUR AMB AMB 21 29 29.0
comp=E,2µm,1.0s
KUR AMB AMB 21 29 31.6
comp=E,740nm,0.6s
KUR *e*S **Sn 21 29 51.0 +2.3**
KUR A 21 29 54.4
comp=E,12µm,2.0s
KUR A 21 29 54.4
comp=E,4µm,2.0s
KUR A 21 29 56.6
comp=E,990nm,0.5s
KUR A 21 29 56.6
comp=E,9µm,0.5s
JAK Akkeshi 1.88 256 P **Pn 21 29 26.0 -1.4**
JAK *e*S **Sn 21 29 49.1 -1.4**
JTKR Abashiri--Toko 2.42 283 P **Pn 21 29 35.1 +0.3**
JTKR *e*S **Sn 21 30 05.7 +1.9**
JAR Ashorobuto 2.50 267 P **Pn 21 29 35.2 -0.6**
JAR *e*S **Sn 21 30 05.2 -0.4**
JOB Onbets 2.52 258 P **Pn 21 29 35.6 -0.5**
JMP Maruseppu 2.82 282 P **Pn 21 29 40.9 +0.6**
JCH Churui 2.94 254 P **Pn 21 29 41.6 -0.2**
JCH *e*S **Sn 21 30 17.8 +1.4**
JKK2 Kamakawa 2 3.24 278 P **Pn 21 29 46.8 +0.7**
ERM Erimo 3.31 245 *e*Pn **Pn 21 29 49.0 +2.0**
ERM Sn **Sn 21 30 26.6 +0.9**
JFR Furan 3.37 266 P **Pn 21 29 47.9 +0.1**
ASAJ Asahikawa 3.38 282 Pn **Pn 21 29 48.5 +0.5**
comp=E,3.3nm,0.3s,baz=80,slow=14,SNR=21
ASAJ Asahikawa 3.38 282 PN **Pn 21 29 48.5 +0.5**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
JNBK Urakawa-nobuka 3.47 251 P **Pn 21 29 49.5 +0.2**
JNBK *e*S **Sn 21 30 30.6 +0.9**
JBT2 Biratori 2 3.60 260 P **Pn 21 29 51.1 +0.1**
JSE Soyaes 3.62 296 P **Pn 21 29 51.9 +0.7**
YSS Yuzh-Sakhalins 4.67 319 *e*Pn **Pn 21 30 06.9 +1.2**
YSS *e*Sn **Sn 21 30 59.6 +0.5**
YSS Yuzh-Sakhalins 4.67 319⇑ *i*PN **Pn 21 30 06.0 +0.3**
YSS *e*S **Sn 21 31 02.0 +2.9**
YSS pmax pmax
comp=Z,60nm,0.6s
YSS MLR MLR
comp=Z,1µm,12.0s
YSS Yuzh-Sakhalins 4.67 319⇑ *i*P **Pn 21 30 06.0 +0.3**
YSS AMB AMB 21 30 07.0
comp=Z,60nm,0.6s
YSS *e*S **Sn 21 31 02.0 +2.9**
YSS AMS AMS 21 32 24.0
comp=Z,1µm,12.0s
TYV Tymovskoe 8.00 339 *e*P **Pn 21 30 55.0 +3.7**
TYV *e*LQ 21 33 12.0
TYV AMS AMS 21 34 40.0
comp=Z,900nm,14.0s
TYV AMS AMS 21 34 40.0
comp=Z,1µm,14.0s
TYV AMS AMS 21 34 40.0
comp=Z,1µm,14.0s
SKR Severo-Kuril's 9.42 37 *e*P **Pn 21 31 09.0 -1.9**
SKR AMB AMB 21 31 10.0
comp=Z,90nm,0.7s
SKR AMS AMS 21 34 47.0
comp=Z,3µm,14.0s
MAJO Matsushiro 9.77 228 *e*Pn **Pn 21 31 16.0 +0.3**
MJAR Matsushiro Arr 9.77 228 Pn **Pn 21 31 12.6 -3.1**
comp=Z,0.5nm,0.3s,baz=33,slow=16,SNR=4.8
MJAR Matsushiro Arr 9.77 228 PN **Pn 21 31 12.6 -3.1**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
HABR Khabarovsk 9.80 305 *e*PN **Pn 21 31 19.5 +3.4**
JHJ Hachijo jima 2 11.87 212 LR LR 21 35 57.0
comp=Z,107nm,18.9s,baz=344,slow=36
PETK Petropavlovsk- 11.89 32 Pn **Pn 21 31 44.5 0.0**
comp=Z,0.7nm,0.3s,baz=188,slow=9.6,SNR=14
PETK LR LR 21 36 50.3
comp=Z,123nm,19.1s,baz=166,slow=40
KLR Kul'dur 12.10 304 *e*PN **Pn 21 31 48.7 +1.2**
KLR MLR MLR
comp=N,500nm,12.0s
KLR MLR MLR
comp=Z,2µm,12.0s
PET Petropavlovsk 12.21 35 *e*PN **Pn 21 31 55.6 +6.7**
PET *e*S **Sn 21 34 10.3 +6.1**
PET MLR MLR
comp=Z,600nm,13.0s
MDJ Mudanjiang 12.71 281 P **Pn 21 31 56.0 +0.1**
MDJ S **Sn 21 34 15.3 -1.3**
MDJ SS 21 34 29.5
MDJ AMB AMB
comp=Z,8.0nm,1.9s
MDJ AMB AMB
comp=Z,127nm,6.3s
MDJ LR LR
comp=N,199nm,14.5s
MDJ LR LR
comp=E,246nm,15.8s
MDJ LR LR
comp=Z,331nm,13.9s
CN2 Changchun 15.74 279 *e*P **Pn 21 32 38.5 +1.8**
CN2 *e*S **Sn 21 35 29.6 -0.8**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,480nm,19.0s
CN2 LR LR
comp=E,410nm,19.0s
CN2 LR LR
comp=Z,470nm,16.0s
KSRS Korea Array 15.84 254 LR LR 21 38 51.8
comp=Z,147nm,18.0s,baz=60,slow=38
ZEA Zeya 16.64 315 *e*P **Pn 21 32 47.8 -0.4**
ZEA AMB AMB 21 32 52.0
comp=Z,28nm,1.4s
SEY Seymchan 19.71 7⇓ *e*P **Pn 21 33 25.4 -0.3**
YAK Yakutsk 21.25 337 *e*P **P 21 33 37.9 -2.9**
YAK pmax pmax
comp=Z,13nm,1.1s,mb4.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK MLR MLR
comp=Z,266nm,16.0s,MS3.7
YAK MLR MLR
comp=N,184nm,17.0s,MS3.7
YAK MLR MLR
comp=E,138nm,15.0s,MS3.7
BJI Beijing 23.32 272 P **P 21 34 04.6 +1.6**
BJI S **S 21 38 11.5 -2.6**
BJI AMB AMB
comp=Z,11nm,0.6s,mb4.5
BJI LR LR
comp=N,200nm,12.7s,MS3.9
BJI LR LR
comp=E,183nm,14.2s,MS3.9
BJI LR LR
comp=Z,69nm,18.2s,MS3.1
BJT Baijiatuau 23.33 272 P **P 21 34 03.6 +0.5**
comp=Z,3.2nm,0.6s,mb3.9
BJT Baijiatuau 23.33 272 P **P 21 34 03.6 +0.4**
BJT pmax pmax
comp=Z,3.0nm,0.6s
NJ2 Nanjing 25.02 252 *e*P **P 21 34 22.3 +3.5**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb4.9
HHC Hu-ho-hao-te 26.41 277 *e*P **P 21 34 32.9 +1.5**
HHC AP pP 21 34 44.3 +6.4
HHC XP sP 21 34 49.6 +9.0
HHC PP 21 35 17.0
HHC PCP PcP 21 37 58.1 +1.7
HHC S **S 21 39 01.8 -1.8**
HHC XS sS 21 39 20.2 +5.8
HHC SCS ScS 21 45 21.5 -3.4
HHC AMB AMB
comp=Z,8.0nm,0.9s,mb4.2
HHC AMB AMB
comp=Z,100nm,4.8s
HHC LR LR
comp=N,189nm,13.7s,MS4.0
HHC LR LR
comp=E,222nm,12.5s,MS4.0
HHC LR LR
comp=Z,200nm,13.7s,MS3.8
ULN Ulaanbaatar 28.15 293 *e*P **P 21 34 46.6 -0.3**
comp=Z,4.0nm,0.7s,mb4.2
ULN Ulaanbaatar 28.15 293⇓ *e*P **P 21 34 45.8 -1.1**
SONM Songino Array 28.60 293 P **P 21 34 51.0 +0.1**
comp=Z,2.5nm,0.5s,mb4.2,baz=89,slow=8.4,SNR=21
SONM LR LR 21 47 21.4
comp=Z,244nm,19.6s,MS3.8,baz=150,slow=39
SONM Songino Array 28.60 293 P **P 21 34 51.0 +0.1**
SONM pmax pmax
comp=Z,3.0nm,0.5s
SONM MLR MLR
comp=Z,244nm,19.6s
LZH Lanzhou 33.81 272 *e*P **P 21 35 37.0 +0.1**
LZH AP pP 21 35 51.0 +7.5
LZH XP sP 21 35 59.0 +13
LZH PP PP 21 36 49.0 -4.5
LZH S **S 21 40 54.2 -5.3**
LZH XS sS 21 41 22.0 +12
LZH SS SS 21 43 01.0 -25
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,100nm,5.2s
LZH LR LR
comp=E,775nm,14.3s
LZH LR LR
comp=Z,960nm,15.5s,MS4.6
CD2 Chengdu 36.41 265 *e*P **P 21 35 59.8 +0.5**
CD2 AP pP 21 36 13.6 +7.6
CD2 XP sP 21 36 19.6 +11
CD2 PP PP 21 37 23.4 +1.2
CD2 S **S 21 41 36.2 -3.4**
CD2 XS sS 21 41 58.6 +8.1
CD2 SS SS 21 44 01.6 -17
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=E,180nm,16.2s
CD2 LR LR
comp=Z,160nm,15.2s,MS3.9
GYA Guiyang 36.88 256⇑ *i*P **P 21 36 04.8 +1.4**
GYA AP pP 21 36 19.4 +9.3
GYA XP sP 21 36 25.6 +13
GYA PP PP 21 37 31.7 +4.2
GYA PCP PcP 21 38 26.5 +1.7
GYA S **S 21 41 44.0 -2.9**
GYA SCP ScP 21 42 07.3 -2.9
GYA SS SS 21 44 13.8 -15
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,580nm,17.9s,MS4.5
GYA LR LR
comp=E,490nm,16.8s,MS4.5
GYA LR LR
comp=Z,460nm,17.0s,MS4.3
IMA2 Indian Mountai 38.88 34 *e*P **P 21 36 19.8 0.0**
KDAK Kodiak Island 39.41 47 P **P 21 36 24.0 -0.3**
comp=Z,6.0nm,0.8s,mb4.4,baz=298,slow=3.7,SNR=5.2
KTH Kantishna Hill 39.94 38 *e*P **P 21 36 30.2 +1.5**
comp=Z,35nm,0.9s,mb5.1
KMI Kunming 40.49 258 P **P 21 36 34.5 +0.8**
KMI AMB AMB
comp=Z,7.0nm,1.7s,mb4.1
MCK McKinley 40.83 38 *e*P **P 21 36 36.6 +0.6**
comp=Z,13nm,0.8s,mb4.6
MCK McKinley 40.83 38 *e*P **P 21 36 36.6 +0.6**
MCK pmax pmax
comp=Z,13nm,0.8s,mb4.6
ZALV Zalesovo Beam 41.18 307 P **P 21 36 37.6 -1.4**
comp=Z,0.6nm,0.4s,mb3.5,baz=65,slow=12,SNR=4.0
ZALV PcP PcP 21 38 37.8 -0.1
comp=Z,1.4nm,0.5s,baz=99,slow=3.6,SNR=6.6
ZALV Zalesovo Beam 41.18 307 P **P 21 36 37.6 -1.4**
ZALV 21 38 37.8
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
COLA College 41.27 36 *e*P **P 21 36 40.5 +0.8**
comp=Z,27nm,0.9s,mb4.9
COLA College 41.27 36⇓ *e*P **P 21 36 39.9 +0.2**
WMQ Urumqi 42.22 292 *e*P **P 21 36 48.0 +0.3**
WMQ AP pP 21 37 03.0 +8.6
WMQ PP PP 21 38 29.0 +3.6
WMQ S **S 21 43 02.0 -4.6**
WMQ SS SS 21 46 05.0 -10
WMQ AMB AMB
comp=Z,20nm,1.0s,mb4.7
WMQ LR LR
comp=N,132nm,18.0s,MS4.1
WMQ LR LR
comp=E,172nm,16.0s,MS4.1
WMQ LR LR
comp=Z,184nm,16.0s,MS4.1
EGAK Eagle 44.13 36 *e*P **P 21 37 03.0 +0.1**
comp=Z,171nm,2.8s,mb5.3
MKAR Makanchi Array 44.73 298 P **P 21 37 07.2 -0.7**
comp=Z,6.6nm,0.9s,mb4.5,baz=79,slow=7.5,SNR=38
MKAR PcP PcP 21 38 49.8 -0.1
comp=Z,0.7nm,0.8s,baz=96,slow=4.3,SNR=2.7
MKAR Makanchi Array 44.73 298 P **P 21 37 07.2 -0.7**
MKAR PcP PcP 21 38 49.8 -0.1
MKAR Makanchi Array 44.73 298 P **P 21 37 07.2 -0.7**
MKAR 21 38 49.8
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 45.70 304 P **P 21 37 15.4 -0.1**
baz=72,slow=8.6
KURK Kurchatov 45.70 304⇑ *e*P **P 21 37 15.5 0.0**
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KURK MLR MLR
comp=Z,200nm,23.0s,MS4.0
LSA Lhasa 46.23 272 P **P 21 37 21.0 +1.0**
INK Inuvik 46.62 30 *e*P **P 21 37 22.9 +0.3**
comp=Z,733nm,1.0s
INK Inuvik 46.62 30 *e*P **P 21 37 22.9 +0.4**
INK pmax pmax
comp=Z,733nm,1.0s
CMAR Chiang Mai Arr 47.48 254 P **P 21 37 29.9 +0.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=42,slow=6.3,SNR=4.3
CMAR Chiang Mai Arr 47.48 254 *i* P **P 21 37 30.6 +0.8**
BVAR Borovoye Array 49.69 310 P **P 21 37 46.8 +0.4**
comp=Z,0.7nm,0.3s,mb4.1,baz=71,slow=9.6,SNR=7.8
BVAR PcP PcP 21 39 07.3 0.0
comp=Z,0.7nm,0.5s,baz=72,slow=4.7,SNR=3.2
BVAR Borovoye Array 49.69 310 P **P 21 37 46.8 +0.3**
BVAR 21 39 07.3
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 49.74 310 *e*P **P 21 37 47.7 +0.9**
comp=Z,75nm,2.4s,mb5.3
BRVK Borovoye 49.74 310 *e*P **P 21 37 47.7 +0.9**
BRVK pmax pmax
comp=Z,75nm,2.4s,mb5.3
TAPN Taplejung 50.04 272 *e*P **P 21 37 50.1 +0.6**
comp=Z,26nm,1.2s,mb5.1
ODAN Odare 50.56 271 *e*P **P 21 37 52.5 -0.9**
comp=Z,45nm,1.6s,mb5.2
TKM2 Tokmak 2 50.64 296 *e*P **P 21 37 54.2 +0.4**
comp=Z,5.0nm,0.8s,mb4.5
TKM2 Tokmak 2 50.64 296 *e*P **P 21 37 54.2 +0.4**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
DLBC Dease Lake 50.85 42 P **P 21 37 54.4 -0.8**
comp=Z,4.0nm,0.9s,mb4.4,baz=308,slow=10,SNR=5.0
JIRN Jiri 50.97 273 *e*P **P 21 37 56.8 +0.3**
GUN Gumba 51.05 274 *e*P **P 21 37 57.8 +0.7**
comp=Z,50nm,0.9s,mb5.4
RAMN Ramite 51.08 272 *e*P **P 21 37 57.1 -0.3**
comp=Z,25nm,0.6s,mb5.3
KKN Kakani 51.56 274 *e*P **P 21 38 01.3 +0.4**
comp=Z,19nm,0.9s,mb5.0
KKN Kakani 51.56 274 *e*P **P 21 38 01.3 +0.4**
KKN pmax pmax
comp=Z,19nm,0.9s,mb5.0
PKI Pulchoki 51.59 273 *e*P **P 21 38 00.7 -0.5**
PKIN Phulchoki 51.60 273 *e*P **P 21 38 00.7 -0.5**
DMN Daman 51.79 274 *e*P **P 21 38 03.4 +0.8**
GKN Gorkha 51.90 274 *e*P **P 21 38 03.2 -0.3**
comp=Z,27nm,1.0s,mb5.1
DANN Dangsing 52.34 275 *e*P **P 21 38 07.3 +0.5**
comp=Z,43nm,0.9s,mb5.4
KOLN Koldanda 52.79 275 *e*P **P 21 38 10.3 +0.2**
SVE Sverdlovsk 53.35 317⇓ *e*P **P 21 38 14.1 +0.3**
SVE *e*S **S 21 45 46.4 +2.3**
SVE *e*SS SS 21 49 20.2 -3.2
SVE *e*SSS 21 51 18.5
SVE pmax pmax
comp=Z,11nm,0.9s,mb4.8
LGTI Lohaghat 54.26 279 *e*P **P 21 38 22.6 +1.8**
ARU Arti 54.55 317 *e*P **P 21 38 21.4 -1.2**
comp=Z,5.9nm,0.9s,mb4.6
ARU Arti 54.55 317 *d i*P **P 21 38 22.0 -0.6**
ARU *e* 21 40 21.2
ARU *e*S **S 21 46 01.0 +0.6**
ARU *e*SS SS 21 49 39.2 -3.2
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
RES Resolute Bay 55.21 17 *e*P **P 21 38 26.4 -0.7**
comp=Z,501nm,0.9s
RES Resolute Bay 55.21 17 *e*P **P 21 38 26.4 -0.7**
RES pmax pmax
comp=Z,501nm,0.9s
YKA Yellowknife Ar 56.01 34 P **P 21 38 32.7 -0.2**
comp=Z,2.4nm,0.6s,mb4.4,baz=300,slow=7.0,SNR=5.7
YKA Yellowknife Ar 56.01 34 P **P 21 38 32.7 -0.3**
YKA Yellowknife Ar 56.01 34⇑ *e*P **P 21 38 33.0 +0.1**
APA Apatity 58.63 336⇓ *e*P sP 21 39 06.0 +5.1
APA pmax pmax
comp=Z,85nm,1.6s,mb5.5
ARCES ARCESS Array B 59.50 340 P **P 21 38 56.8 -0.6**
comp=Z,3.7nm,0.8s,mb4.5,baz=52,slow=7.9,SNR=4.1
ARCES ARCESS Array B 59.50 340 P **P 21 38 56.8 -0.6**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
JOF Joensuu 62.33 332 *e*p **P 21 39 15.3 -1.4**
comp=Z,2.3nm,0.4s,mb4.7
JOF Joensuu 62.33 332 *e*P **P 21 39 15.3 -1.4**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
YBH Yreka Blue Hor 63.02 57 P **P 21 39 21.8 +0.2**
comp=Z,1.0nm,0.4s,mb4.3,baz=337,slow=13,SNR=3.2
YBH Yreka Blue Hor 63.02 57 P **P 21 39 21.8 +0.2**
YBH pmax pmax
comp=Z,1.0nm,0.4s
SUMG Summit 64.17 2 *e*P **P 21 39 29.5 +0.8**
WRAB Tennant Creek 64.20 193⇑ *e*P **P 21 39 28.7 -0.8**
WRA Warramunga Arr 64.21 193 P **P 21 39 29.1 -0.5**
comp=Z,2.7nm,0.8s,mb4.3,baz=13,slow=6.7,SNR=21
WRA Warramunga Arr 64.21 193 *i* P **P 21 39 29.1 -0.5**
WRA pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 64.56 333 *e*p **P 21 39 30.4 -1.0**
comp=Z,1.3nm,0.4s,mb4.3,baz=41,slow=6.0
KAF Kangasniemi 64.56 333 *e*P **P 21 39 30.4 -1.0**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ABKT Ailbek 64.59 299 P **P 21 39 32.7 +0.7**
comp=Z,42nm,0.5s,mb5.7,SNR=5.5
OBN Obninsk 65.54 324⇓ *e*P **P 21 39 37.4 -0.5**
OBN pmax pmax
comp=Z,16nm,1.0s,mb5.0
VRHR Novokhopersk 65.85 318 *e*P **P 21 39 39.2 -0.8**
VRHR *e**PP pP 21 39 45.2 -1.8
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,9.0nm,0.6s
VSR Storozhevoye 66.95 319 *e*P **P 21 39 46.9 -0.1**
VSR *e**PP pP 21 39 54.1 +0.1
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,5.0nm,0.5s
VORD Divnogorie 67.05 319 *e*P **P 21 39 47.3 -0.4**
VORD *e**PP pP 21 39 53.6 -1.1
VORD *e* 21 40 16.5
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VORD pmax pmax
comp=N,6.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.9s
NVAR Mina Array Bea 67.70 58 P **P 21 39 53.2 +1.2**
comp=E,2.6nm,0.7s,mb4.4,baz=289,slow=6.0,SNR=15
ASAR Alice Springs 67.93 193 P **P 21 39 54.2 +0.8**
comp=E,1.5nm,0.8s,mb4.0,baz=14,slow=6.5,SNR=14
ASAR Alice Springs 67.93 193 P **P 21 39 54.3 +0.9**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
GOF Gofitskoye 69.04 313 *e*P pP 21 40 11.8 +4.5
GOF pmax pmax
comp=Z,70nm,0.8s,mb5.6
NB2 NORSAR Subarra 69.86 339 P **P 21 40 03.4 -1.6**
comp=Z,3.9nm,0.6s,mb4.5,baz=31,slow=6.5
NOA NORSAR Array B 69.86 339 P **P 21 40 04.3 -0.7**
comp=Z,8.3nm,0.8s,mb4.7,baz=33,slow=6.2,SNR=21
NOA NORSAR Array B 69.86 339 P **P 21 40 04.3 -0.7**
NOA NORSAR Array B 69.86 339 P **P 21 40 04.3 -0.7**
NOA pmax pmax
comp=Z,8.0nm,0.8s
KIV Kislovodsk 69.96 312 *e*P **P 21 40 06.5 +0.5**
comp=Z,38nm,0.7s,mb5.4
KIV Kislovodsk 69.96 312 *e*P **P 21 40 06.6 +0.6**
KIV pmax pmax
comp=Z,49nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,127nm,17.0s,MS4.2
KIV Kislovodsk 69.96 312⇓ *i*P **P 21 40 07.7 +1.7**
PDAR Pinedale Array 70.06 50 P **P 21 40 06.9 +0.3**
comp=Z,1.7nm,0.7s,mb4.1,baz=226,slow=1.6,SNR=16
GNI Garni 71.32 308 *i* P **P 21 40 15.4 +1.0**
GNI pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 71.81 324 P **P 21 40 16.6 -0.5**
comp=Z,11nm,0.7s,mb4.9,baz=39,slow=6.3,SNR=28
AKASG Malin Array Be 71.81 324 *i* P **P 21 40 16.6 -0.5**
AKASG pmax pmax
comp=Z,11nm,0.7s
ANN Anapa 72.15 315 *e*P **P 21 40 18.4 -0.9**
ANN pmax pmax
comp=Z,21nm,0.9s,mb5.1
STKA Stephens Creek 75.17 185 P **P 21 40 37.0 +0.1**
comp=Z,3.1nm,1.0s,mb4.2,baz=356,slow=4.6,SNR=4.0
STKA Stephens Creek 75.17 185 P **P 21 40 37.0 +0.1**
KWP Kalwaria 75.34 326⇑ *i*P **P 21 40 36.9 -1.0**
KWP Kalwaria 75.34 326⇑ *i*P **P 21 40 36.8 -1.1**
BURAR Bucovina Array 75.86 324⇓ *i*P **P 21 40 40.4 -0.5**
BURAR Bucovina Array 75.86 324⇓ *i*P **P 21 40 40.4 -0.5**
OJC Ojcow 76.02 328 *e*P **P 21 40 41.9 +0.2**
KOLS Kolonicke sedl 76.06 326 *e*P **P 21 40 42.1 +0.1**
STHS Stebnicka Huta 76.09 327 *e*P **P 21 40 42.8 +0.6**
comp=Z,6.7nm,0.9s,mb4.6
STHS Stebnicka Huta 76.09 327 *e*P **P 21 40 42.8 +0.6**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
OKC Ostrava-Krasne 76.95 329 *e*P **P 21 40 48.6 +1.6**
MLR Muntele Rosu 77.18 322⇑ *i*P **P 21 40 48.3 -0.1**
MLR Muntele Rosu 77.18 322⇑ *i*P **P 21 40 48.3 -0.1**
UPC Upice 77.19 330 *e*P **P 21 40 49.4 +1.1**
DPC Dobruska-Polom 77.20 330 *e*P **P 21 40 49.2 +0.8**
DPC *e*pP pP 21 40 54.1 -1.4
MORC Moravsky Berou 77.23 329⇑ *i*P **P 21 40 46.9 -1.7**
MORC Moravsky Berou 77.23 329⇑ *i*P **P 21 40 46.9 -1.7**
CLL Collm 77.56 333⇑ *i*P **P 21 40 49.9 -0.5**
comp=Z,15nm,1.0s,mb4.9
CLL *i* pP 21 40 56.4 -1.1
CLL Collm 77.56 333⇑ *i*P **P 21 40 49.9 -0.5**

CLL *i* pP 21 40 56.4 -1.1
CLL pmax pmax
comp=Z,15nm,1.0s,mb4.9
CLL Collm 77.56 333 ⇑*i*P **P 21 40 49.9 -0.5**
comp=Z,15nm,1.0s,mb4.9
CLL *i* x x 21 40 56.4
CLL *i* PcP PcP 21 40 59.4 -1.2
DRGR 77.57 325 ⇑*i*P **P 21 40 49.9 -0.7**
VOIR 77.62 322 ⇑P **P 21 40 50.7 -0.2**
VOIR 77.62 322 ⇑P **P 21 40 50.7 -0.2**
PVCC Panska Ves 77.68 331 *e*P **P 21 40 53.7 +2.6**
VYHS Vyhne 77.78 328 *e*P **P 21 40 51.3 -0.4**
VYHS Vyhne 77.78 328 *e*P **P 21 40 51.2 -0.5**
PSZ Piszkesteto 77.83 327 *e*P **P 21 40 50.3 -1.7**
comp=Z,73nm,2.4s,mb5.2
PSZ Piszkesteto 77.83 327 *e*P **P 21 40 50.3 -1.7**
PSZ pmax pmax
comp=Z,73nm,2.4s,mb5.2
KOLL Kolacno 77.88 328 *e*P **P 21 40 52.7 +0.4**
PRU Pruhonice 78.14 331 *e*P **P 21 40 54.0 +0.3**
SMOL Smolenice 78.31 329 *e*P **P 21 40 55.4 +0.8**
MODS Modra-Piesok 78.48 329 *e*P **P 21 40 56.2 +0.6**
BZS Buzias 78.97 324 ⇑P **P 21 40 57.6 -0.7**
BZS Buzias 78.97 324 ⇑*i*P **P 21 40 57.6 -0.7**
KHC Kasperske Hory 79.20 331 *e*P **P 21 40 59.8 +0.3**
KHC *e*PCP PcP 21 41 06.1 -1.7
GERES GERESS Array B 79.40 331 P **P 21 41 00.4 -0.3**
comp=Z,0.7nm,0.6s,mb3.8,baz=35,slow=4.9,SNR=9.0
GERES GERESS Array B 79.40 331 P **P 21 41 00.4 -0.2**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GRA1 Grafenberg Arr 79.53 333 *e*P **P 21 41 01.3 0.0**
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 79.53 333 *e*P **P 21 41 01.3 0.0**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 79.53 333 *e*P **P 21 41 01.3 0.0**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 79.53 333 *e*P **P 21 41 01.3 0.0**
comp=Z,6.0nm,1.1s,mb4.4
MEM Membach 80.37 336 P **P 21 41 05.0 -0.8**
UCC Uccle 80.68 337 P **P 21 41 06.7 -0.8**
comp=Z,24nm,2.8s,mb4.6
BCLA Clavier 80.75 336 P **P 21 41 07.4 -0.5**
DOU Dourbes 81.24 337 P **P 21 41 09.1 -1.4**
CDF Champ du Feu 81.93 334 ⇑*i*P **P 21 41 13.7 -0.5**
comp=Z,10nm,1.0s,mb4.4
CDF Champ du Feu 81.93 334 ⇑*i*P **P 21 41 13.7 -0.5**
comp=Z,5.2nm,1.0s,mb4.4
CDF Champ du Feu 81.93 334 ⇑*i*P **P 21 41 13.7 -0.5**
CDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MEZF Maizieres J'vi 82.53 336 *e*P **P 21 41 17.0 -0.3**
TXAR Lajitas Array 82.78 56 P **P 21 41 19.6 +0.7**
comp=Z,1.4nm,0.7s,mb4.1,baz=291,slow=3.6,SNR=14
TXAR Lajitas Array 82.78 56 P **P 21 41 19.6 +0.7**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
FLN La Foliniere 83.84 339 *e*P **P 21 41 23.5 -0.6**
CABF La Chapelle 83.90 334 *e*P **P 21 41 23.9 -0.5**
LDF La Druitiere 83.91 339 *e*P **P 21 41 24.2 -0.2**
LOR Lormes 84.00 336 ⇑*i*P **P 21 41 24.3 -0.6**
comp=Z,13nm,0.9s,mb4.8
LOR Lormes 84.00 336 ⇑*i*P **P 21 41 24.3 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
LOR Lormes 84.00 336 ⇑*i*P **P 21 41 24.3 -0.6**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
GRR Gorron 84.29 339 *e*P **P 21 41 26.0 -0.4**
comp=Z,13nm,0.6s,mb4.9
GRR Gorron 84.29 339 *e*P **P 21 41 26.0 -0.4**
comp=Z,6.4nm,0.6s,mb4.9
GRR Gorron 84.29 339 *e*P **P 21 41 26.0 -0.4**
GRR pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
SSF Saint Saulge 84.29 336 *e*P **P 21 41 25.8 -0.6**
comp=Z,8.2nm,0.9s,mb4.6
SSF Saint Saulge 84.29 336 *e*P **P 21 41 25.8 -0.6**
comp=Z,4.1nm,0.9s,mb4.6
SSF Saint Saulge 84.29 336 *e*P **P 21 41 25.8 -0.6**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SMF Signal de Mont 84.56 336 ⇑*i*P **P 21 41 27.4 -0.4**
comp=Z,13nm,0.9s,mb4.8
SMF Signal de Mont 84.56 336 ⇑*i*P **P 21 41 27.4 -0.4**
comp=Z,6.6nm,0.9s,mb4.8
SMF Signal de Mont 84.56 336 ⇑*i*P **P 21 41 27.4 -0.4**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
AVF Avril sur Loir 84.58 336 *e*P **P 21 41 27.5 -0.4**
comp=Z,10nm,0.8s,mb4.7
AVF Avril sur Loir 84.58 336 *e*P **P 21 41 27.5 -0.4**
comp=Z,5.2nm,0.8s,mb4.7
AVF Avril sur Loir 84.58 336 *e*P **P 21 41 27.5 -0.4**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
LPL La Plagne 84.66 333 *e*P **P 21 41 28.4 +0.1**
comp=Z,12nm,1.0s,mb4.7
LPL La Plagne 84.66 333 *e*P **P 21 41 28.4 +0.1**
comp=Z,6.1nm,1.0s,mb4.7
LPL La Plagne 84.66 333 *e*P **P 21 41 28.4 +0.1**
LPL pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
LPG La Plagne 84.67 333 *e*P **P 21 41 28.6 +0.2**
SGMF Saint Gilles 84.84 340 ⇑*i*P **P 21 41 29.2 +0.1**
comp=Z,21nm,0.9s,mb5.0
SGMF Saint Gilles 84.84 340 ⇑*i*P **P 21 41 29.2 +0.1**
comp=Z,10nm,0.9s,mb5.0
SGMF Saint Gilles 84.84 340 ⇑*i*P **P 21 41 29.2 +0.1**
SGMF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ROSF Rostrenen 84.94 341 ⇑*i*P **P 21 41 29.8 +0.2**
comp=Z,47nm,1.2s,mb5.2
ROSF Rostrenen 84.94 341 ⇑*i*P **P 21 41 29.8 +0.2**
comp=Z,24nm,1.2s,mb5.2
ROSF Rostrenen 84.94 341 ⇑*i*P **P 21 41 29.8 +0.2**
ROSF pmax pmax
comp=Z,24nm,1.2s,mb5.2
QUIF Quistinic 85.30 340 *e*P **P 21 41 31.3 -0.2**
TCF Toulx Ste Croi 85.37 336 *e*P **P 21 41 31.8 0.0**
comp=Z,8.2nm,0.9s,mb4.5
TCF Toulx Ste Croi 85.37 336 *e*P **P 21 41 31.8 0.0**
comp=Z,4.1nm,0.9s,mb4.6
TCF Toulx Ste Croi 85.37 336 *e*P **P 21 41 31.8 0.0**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MFF Saint Martin d 85.74 338 *e*P **P 21 41 33.7 0.0**
comp=Z,11nm,0.7s,mb4.9
MFF Saint Martin d 85.74 338 *e*P **P 21 41 33.7 0.0**
comp=Z,5.3nm,0.7s,mb4.9
MFF Saint Martin d 85.74 338 *e*P **P 21 41 33.7 0.0**
MFF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
CAF Calviac 86.65 336 *e*P **P 21 41 38.8 +0.6**
ESDC Sonseca Array 93.21 338 P **P 21 42 08.3 -0.8**
comp=Z,0.8nm,0.8s,mb4.2,baz=29,slow=4.1,SNR=3.7
TORD Torodi Ar. Bea 115.42 322 PKP PKPdf 21 47 35.6 -1.3
comp=Z,0.1nm,0.3s,baz=15,slow=2.2,SNR=6.7
SNAA Sanae 148.21 197 *e*PKPdf PKPbc 21 48 39.4 0.0
SNAA *e* 21 48 46.5
SNAA *e* 21 48 51.2
VNA2 Neumayer--Watz 149.74 196 *e*PKPdf PKPbc 21 48 44.1 +0.9
baz=106,slow=1.9
VNA2 *e* 21 48 51.4
VNA2 *e* 21 48 56.5
VNA3 Neumayer Olymp 149.93 195 *e*PKPdf PKPbc 21 48 43.7 0.0
VNA3 *e* 21 48 51.1
VNA3 *e* 21 48 57.0
VNA1 Neumayer--Stat 150.14 196 *e*PKPdf PKPbc 21 48 45.8 +1.6
VNA1 *e* 21 48 52.3
VNA1 *e* 21 48 57.5
PLCA Paso Flores 152.03 97 PKPab PKPab 21 48 57.5 -1.6
comp=Z,2.5nm,0.9s,baz=333,slow=4.5,SNR=4.2
PLCA Paso Flores 152.03 97 PKIKP PKPab 21 48 57.5 -1.6
PLCA pmax pmax
comp=Z,3.0nm,0.9s

IDC ***01*** *21:45:35.2±1.6, 660S×15475E, h19km±9km, mb4.9/18, mb1 5.0/20, mb1mx4.9/21, mbtmp4.9/20, ML4.0/2, MS4.8/18, Ms1 4.9/18, ms1mx4.5/30, Error ellipse: s-maj=13.6km s-min=11.6km az=114.0*
MOS ***01*** *21:45:36.9±1.1, 646S×15467E, h33km, mb5.4/32, MS5.1/9, Error ellipse: s-maj=8.5km s-min=7.3km az=79.8*
GCMT ***01*** *21:45:37.9±0.1, 688S×15476E, h28km, MW5.6/106, Moment Tensor Solution. s105,c199; s106,c236; Duration: 1s6 Moment tensor: Scale 10¹⁷Nm; Mrr2.60±.04; Mθθ-1.52±.03; Mϕϕ-1.08±.03; Mre1.55±.06; Mrθ0.56±.03; Mrϕ-1.24±.06; Best double couple: M₀3.38200×10¹⁷ NP1:ϕs313.00000°,δ27.00000°, λ93.00000°. NP2:ϕs130.00000°,δ63.00000°,λ89.00000°. Principal axes: T 3.2450, Plg72.0000°, Azm36.0000°; N 0.2740, Plg1.0000°, Azm130.0000°; P -3.5190, Plg18.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***01*** *21:45:37.6, 637S×155.18E, h58km, mB5.5, mb5.1, Ms5.1, Msz4.9*
NEIC ***01*** *21:45:37.9±0.1, 659S×15476E, h35km, mb5.4/57, MW5.5, Error ellipse: s-maj=5.1km s-min=4.1km az=129.0, Moment Tensor Solution. s25 Moment tensor: Scale 10¹⁷Nm; Mrr1.76; Mθθ-0.80; Mϕϕ-0.95; Mrθ0.99; Mrϕ1.38; Mθϕ-0.73; Best double couple: M₀2.40000×10¹⁷ NP1: ϕs326.00000°,δ30.00000°,λ104.00000°. NP2: ϕs130.00000°,δ61.00000°,λ82.00000°. Principal axes: T 2.1200, Plg72.0000°, Azm20.0000°; N 0.4800, Plg6.0000°, Azm133.0000°; P -2.6000, Plg15.0000°, Azm225.0000°;*
ISCJB ***01*** *21:45:38.7±0.1, 664S±003×15469E±002, h54km, mb5.3/109, MS4.9/40 Error ellipse: s-maj=4.7km s-min=3.4km az=175.7*
DJA ***01*** *21:46:32.2±0.0, 8.19S×15124E, h228km, mB5.6/12, MLv4.7/1, Mw(mB)5.3/12, Mwp5.2/13*

ISC 01 21:45:40.3±0.1, 666S±003×15475E±002, h56km, h56km±1.4km:pP-P, n507, σ0s81/439, mb5.3/109, MS4.9/40, 104C-105D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**		**5.84 119**	Pn	**Pn**	**21 47 01.4**	**-3.1**
	6.9nm,0.3s,baz=277,slow=19,SNR=2.5						
HNR				Sn	**Sn**	**21 48 13.9**	**+3.8**
	41nm,0.3s,baz=108,slow=20,SNR=2.8						
HNR				LR	LR	21 48 15.8	
	comp=Z,5μm,19.0s,baz=280,slow=27						
HNR	**Honiara**		**5.84 119**	*e*Pn	**Pn**	**21 47 03.1**	**-1.4**
	2μm,0.8s						
HNR				*e*Sn	**Sn**	**21 48 07.7**	**-2.5**
HNR	**Honiara**		**5.84 119**	*e*P	**Pn**	**21 47 03.1**	**-1.3**
HNR				*e*		21 48 07.7	
HNR				pmax	pmax		
	comp=Z,2μm,0.8s						
PMG	**Port Moresby**		**7.99 250**	*e*Pn	**Pn**	**21 47 35.0**	**+1.1**
PMG				*e*Sn	**Sn**	**21 48 59.6**	**-3.3**
PMG	**Port Moresby**		**7.99 250**	P	**Pn**	**21 47 36.7**	**+2.8**
COEN	**Coen**		**13.49 237**	*e*Pn	**Pn**	**21 48 49.5**	**+0.4**
	comp=Z,88nm,1.3s						
COEN	**Coen**		**13.49 237**	P	**Pn**	**21 48 53.7**	**+4.6**
	comp=Z,80nm,1.8s,comp=Z,1μm						
CTA	**Charters Tower**		**15.69 211**	*e*P	**Pn**	**21 49 17.8**	**-0.2**
	comp=Z,38nm,1.6s						
CTA				*e*S	**S**	**21 52 28.0**	**+4.7**
CTA	**Charters Tower**		**15.69 211**	Pn	**Pn**	**21 49 15.8**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=36,slow=14,SNR=11						
CTA				LR	LR	21 53 13.7	
	comp=Z,2μm,21.5s,baz=18,slow=29						
CTA	**Charters Tower**		**15.69 211**	*e*P	**Pn**	**21 49 17.8**	**-0.2**
CTA				pmax	pmax		
	comp=Z,38nm,1.6s						
CTAO	**Charters Tower**		**15.69 211**	*e*Pn	**Pn**	**21 49 18.9**	**+1.0**
	comp=Z,671nm,2.3s						
CTAO	**Charters Tower**		**15.69 211**	*e*P	**Pn**	**21 49 18.9**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,671nm,2.3s						
CTAO	**Charters Tower**		**15.69 211**	P	**Pn**	**21 49 21.9**	**+3.9**
	comp=Z,120nm,1.9s,comp=Z,3μm						
EIDS	**Eidsvold**		**18.94 190**	*e*P	**Pn**	**21 49 56.8**	**-1.1**
	comp=Z,300nm,1.3s						
NOUC	**Port Laguerre**		**18.98 145**	*e*P	**Pn**	**21 49 57.6**	**-0.9**
DZM	**Mont Dzumac**		**19.04 145**	*e*P	**Pn**	**21 49 58.6**	**-0.6**
DZM	**Mont Dzumac**		**19.04 145**	*e*P	**Pn**	**21 49 58.1**	**-1.2**
TARA	**Tarawa**		**19.81 67**	*e*P	**Pn**	**21 50 07.7**	**-0.8**
	comp=Z,288nm,1.0s						
GUMO	**Guam**		**22.38 334**	LR	LR	21 58 12.2	
	comp=Z,840nm,22.0s,MS4.1,baz=150,slow=34						
KAKA	**Kakadu**		**22.79 253**	*e*P	**P**	**21 50 29.7**	**-8.7**
	comp=Z,43nm,0.6s,mb5.0						
KAKA				*e*PCP	PcP	21 54 20.2	-8.4
KAKA				*e*S	**S**	**21 54 37.9**	**-5.8**
KAKA	**Kakadu**		**22.79 253**	P	**P**	**21 50 30.1**	**-8.3**
	comp=Z,129nm,0.8s,comp=Z,890nm,mb5.4						
WRAB	**Tennant Creek**		**23.79 234**	*e*P	**P**	**21 50 48.0**	**-0.1**
	comp=Z,310nm,1.5s,mb5.5						
WRAB	**Tennant Creek**		**23.79 234**	*e*P	**P**	**21 50 48.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,310nm,1.5s,mb5.5						
WRAB	**Tennant Creek**		**23.79 234**	P	**P**	**21 50 47.9**	**-0.3**
	comp=Z,198nm,1.8s,comp=Z,4μm,mb5.2						
WB2	**Warramunga Arr**		**23.80 234**	*e*P	**P**	**21 50 47.2**	**-1.0**
WB2				*e*PCP	PcP	21 54 31.9	+1.3
WB2				*e*S	**S**	**21 55 00.2**	**+0.1**
WB2				*e*SCP	ScP	21 58 07.4	+2.9
WRA	**Warramunga Arr**		**23.81 234**	P	**P**	**21 50 47.3**	**-1.0**
	comp=Z,47nm,0.9s,mb4.9,baz=57,slow=9.4,SNR=118						
WRA				PcP	PcP	21 54 31.5	+0.9
	comp=Z,21nm,0.9s,baz=59,slow=2.3,SNR=13						
WRA				S	**S**	**21 55 03.6**	**+3.3**
	comp=Z,9.7nm,1.3s,baz=55,slow=14,SNR=5.0						
WRA				ScP	ScP	21 58 08.2	+3.7
	comp=Z,5.0nm,0.8s,baz=61,slow=3.0,SNR=9.2						
WRA				LR	LR	21 59 59.6	
	comp=Z,6μm,20.6s,MS5.0,baz=50,slow=36						
WRA	**Warramunga Arr**		**23.81 234**	P	**P**	**21 50 47.3**	**-1.0**
WRA						21 54 31.5	
WRA				S	**S**	**21 55 03.6**	**+3.4**
ARMA	**Armidale**		**23.82 187**	*e*P	**P**	**21 50 49.0**	**+0.7**
ARMA				*e*S	**S**	**21 55 03.6**	**+3.4**
ASAR	**Alice Springs**		**26.21 228**	P	**P**	**21 51 09.2**	**-0.9**
	comp=Z,9.9nm,0.8s,mb4.4,baz=60,slow=8.7,SNR=55						
ASAR				PcP	PcP	21 54 37.7	+1.8
	comp=Z,7.7nm,0.9s,baz=60,slow=2.6,SNR=8.9						
ASAR				ScP	ScP	21 58 15.6	+4.4
	comp=Z,3.0nm,0.7s,baz=54,slow=2.6,SNR=10						
ASAR	**Alice Springs**		**26.21 228**	P	**P**	**21 51 09.2**	**-0.9**
ASAR						21 54 37.7	
LBMI	**Labuha**		**27.82 281**	P	**P**	**21 51 26.6**	**+1.9**
	comp=Z,236nm,1.6s,comp=Z,3μm,mb5.6						
STKA	**Stephens Creek**		**27.94 204**	*e*P	**P**	**21 51 24.9**	**-0.6**
	comp=Z,6.0nm,0.6s,mb4.4						
STKA				*e*PCP	PcP	21 54 39.6	-0.3
STKA				*e*SCP	ScP	21 58 19.6	+3.4
STKA	**Stephens Creek**		**27.94 204**	P	**P**	**21 51 24.1**	**-1.4**
	comp=Z,5.4nm,0.5s,mb4.4,baz=32,slow=12,SNR=9.5						
STKA				PcP	PcP	21 54 39.6	-0.3
	comp=Z,12nm,0.9s,baz=2.2,slow=2.2,SNR=5.2						
STKA				ScP	ScP	21 58 19.4	+3.2
	comp=Z,7.3nm,0.9s,baz=332,slow=2.4,SNR=6.7						
STKA				LR	LR	22 02 41.7	
	comp=Z,8μm,19.3s,MS5.3,baz=15,slow=37						
CNB	**Canberra Magne**		**28.95 189**	*e*P	**P**	**21 51 34.9**	**+0.5**
CNB				*e*PCP	PcP	21 54 43.5	+1.2
CNB				*e*S	**S**	**21 56 24.4**	**+3.0**
BATI	**Baumata**		**30.94 261**	P	**P**	**21 51 52.1**	**-0.2**
	comp=Z,14nm,0.6s,mb5.0,baz=160,slow=4.4,SNR=5.0						
BATI	**Baumata**		**30.94 261**	P	pP	21 52 08.6	+2.3
TOO	**Toolangi**		**31.91 194**	*e*P	**P**	**21 52 08.6**	**+8.1**
TOO				*e*PCP	PcP	21 54 51.3	+1.3
TOO				*e*S	**S**	**21 57 11.9**	**+4.3**
TOO				*e*SCP	ScP	21 58 31.2	+2.3
DAV	**Davao City (W)**		**32.13 295**	LR	LR	22 03 09.1	
	comp=Z,1μm,20.5s,MS4.6,baz=281,slow=33						
FORT	**Forrest**		**34.66 223**	*e*P	**P**	**21 52 23.6**	**-1.1**
	comp=Z,33nm,0.7s,mb5.4						
FORT				*e*SCP	ScP	21 58 43.2	+4.5
KAPI	**Kappang**		**34.84 271**	P	**P**	**21 52 25.2**	**-1.3**
	comp=Z,14nm,0.7s,mb5.0,baz=86,slow=6.9,SNR=13						
KAPI				ScP	ScP	21 58 41.9	+2.2
	comp=Z,8.9nm,0.8s,baz=117,slow=5.3,SNR=6.6						
KAPI	**Kappang**		**34.84 271**	*e*P	**P**	**21 52 25.6**	**-0.9**
KAPI				*e*ScP	ScP	21 58 42.1	+2.4
KAPI	**Kappang**		**34.84 271**	P	**P**	**21 52 26.8**	**+0.3**
	comp=Z,37nm,1.3s,comp=Z,573nm,mb5.2						
PCI	**Palu**		**35.28 278**	P	**P**	**21 52 36.2**	**+6.0**
	comp=Z,218nm,1.1s,comp=Z,1μm,mb6.0						
MBWA	**Marble Bar**		**36.80 243**	*e*P	**P**	**21 52 42.6**	**-0.6**
	comp=Z,60nm,2.1s,mb5.1						
URZ	**Urewera**		**37.42 150**	P	**P**	**21 52 47.5**	**-0.6**
	comp=Z,9.3nm,0.7s,mb4.7,baz=330,slow=3.6,SNR=8.2						
RPZ	**Rata Peaks**		**39.59 161**	P	**P**	**21 53 05.8**	**-0.5**
	comp=Z,12nm,0.6s,mb4.8,baz=236,slow=2.2,SNR=12						
BBKI	**Banjar Baru**		**39.87 273**	P	**P**	**21 53 17.1**	**+8.1**
	comp=Z,70nm,2.0s,comp=Z,1μm,mb5.0						
KLBR	**Kellerberrin**		**42.52 229**	*e*P	**P**	**21 53 29.3**	**-1.2**
	comp=Z,21nm,0.9s,mb4.9						
KLBR				*e*SCP	ScP	21 59 13.7	+5.0
SJI	**Sawahan**		**42.64 266**	P	pP	21 53 45.7	-0.5
NWAO	**Narrogin (SRO)**		**43.53 228**	P	**P**	**21 53 38.9**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.4,baz=151,slow=13,SNR=3.1						
NWAO				LR	LR	22 11 24.2	
	comp=Z,5μm,21.8s,MS5.4,baz=68,slow=36						
STKI	**Sintang**		**43.68 277**	P	pP	21 54 00.0	+5.3
	comp=Z,33nm,1.5s						
NACB	**Ninganchiao**		**44.54 315**	*e*P	**P**	**21 53 46.8**	**-0.1**
	comp=Z,266nm,1.1s,mb6.0						
BJII	**Banjamegara**		**44.69 266**	P	**P**	**21 53 55.4**	**+7.1**
YHNB	**Yeheng**		**45.01 315**	*e*P	**P**	**21 53 51.6**	**+1.0**
	comp=Z,192nm,2.0s,mb5.6						
MJAR	**Matsushiro Arr**		**45.68 341**	P	**P**	**21 53 54.2**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=158,slow=9.3,SNR=3.0						
MJAR				LR	LR	22 12 17.5	
	comp=Z,442nm,19.4s,MS4.4,baz=195,slow=35						
MAT	**Matsushiro**		**45.68 341**	P	**P**	**21 53 55.0**	**-0.7**
MAT				S	**S**	**22 00 47.0**	**+12**
LEM	**Lembang**		**46.79 267**	P	**P**	**21 54 07.0**	**+2.2**
	comp=Z,141nm,1.8s,comp=Z,2μm,mb5.6						
TPI	**Tanjungpandan**		**47.08 272**	P	**P**	**21 54 16.6**	**+10**
QZH	**Quanzhou**		**47.17 313**	P	**P**	**21 54 08.6**	**+1.0**
QZH				AMB	AMB		
	comp=Z,170nm,0.8s,mb6.0						
SSE	**Sheshan**		**49.39 321**	*e*P	**P**	**21 54 25.9**	**+1.3**
SSE				AP	pP	21 54 41.8	+2.5
SSE				S	**S**	**22 01 31.2**	**+3.6**
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
SSE				AMB	AMB		
	comp=Z,316nm,5.2s						
SSE				LR	LR		
	comp=N,808nm,20.9s,MS4.8						
SSE				LR	LR		
	comp=E,426nm,20.9s,MS4.8						
SSE				LR	LR		
	comp=Z,1μm,22.9s,MS4.8						
KSRS	**Korea Array**		**50.52 332**	P	**P**	**21 54 31.4**	**-1.6**
	comp=Z,14nm,0.8s,mb4.9,baz=148,slow=8.3,SNR=29						
KSRS				LR	LR	22 12 50.8	
	comp=Z,611nm,21.3s,MS4.6,baz=134,slow=32						
KS15	**Wonju Array Si**		**50.53 332**	*e*P	**P**	**21 54 32.5**	**-0.7**
QIZ	**Qiongzhong**		**51.07 301**	P	**P**	**21 54 37.8**	**+0.2**
QIZ				AP	pP	21 54 50.6	-1.7
QIZ				XP	sP	21 54 57.5	-1.2
QIZ				S	**S**	**22 01 52.8**	**+1.4**
QIZ				XS	sS	22 02 14.7	-1.6
QIZ				AMB	AMB		
	comp=Z,426nm,5.3s						
QIZ				LR	LR		
	comp=E,1μm,22.8s						
QIZ				LR	LR		
	comp=Z,2μm,22.8s,MS5.1						
NJ2	**Nanjing**		**51.49 320**	*e*P	**P**	**21 54 42.2**	**+1.7**
NJ2				AP	pP	21 54 57.9	+2.6
NJ2				XP	sP	21 55 04.9	+3.2
NJ2				PP	PP	21 56 41.1	+2.7
NJ2				S	**S**	**22 01 56.0**	**-0.9**
NJ2				XS	sS	22 02 19.0	-2.8
NJ2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,200nm,11.3s						
NJ2				LR	LR		
	comp=N,710nm,31.4s,MS4.8						
NJ2				LR	LR		
	comp=E,1μm,28.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,1μm,23.7s,MS4.8						
WHN	**Wuhan**		**53.52 316**	⇑P	**P**	**21 54 53.9**	**-1.6**
WHN				AP	pP	21 55 12.3	+1.9
WHN				S	**S**	**22 02 27.6**	**+2.9**
WHN				AMB	AMB		
	comp=Z,792nm,12.2s						
WHN				LR	LR		
	comp=N,2μm,18.1s,MS5.4						
WHN				LR	LR		
	comp=E,2μm,19.3s,MS5.4						
WHN				LR	LR		
	comp=Z,3μm,16.8s,MS5.4						
YSS	**Yuzh-Sakhalins**		**54.42 350**	*e*P	**P**	**21 55 00.0**	**-1.8**
DL2	**Dalian**		**54.75 329**	*e*P	**P**	**21 55 06.9**	**+2.6**
DL2				AMB	AMB		
	comp=Z,200nm,14.1s						
DL2				LR	LR		
	comp=N,390nm,22.6s,MS4.6						
DL2				LR	LR		
	comp=E,410nm,19.9s,MS4.6						
DL2				LR	LR		
	comp=Z,560nm,17.8s,MS4.7						
PPT	**Papeete**		**55.33 107**	*e*S	**S**	**22 02 52.8**	**+3.4**
	comp=Z,796nm,24.0s						
PPT				*e*LQ		22 08 59.7	
	comp=Z,3μm,27.2s						
PPT				*e*LR	LR	22 11 36.7	
	comp=Z,1μm,21.0s						
PPT	**Papeete**		**55.33 107**	LR	LR	22 14 18.9	
	comp=Z,2μm,20.5s,MS5.1,baz=133,slow=31						
MDJ	**Mudanjiang**		**55.83 338**	P	**P**	**21 55 10.9**	**-1.1**
MDJ				AP	pP	21 55 24.5	-2.5
MDJ				XP	sP	21 55 30.7	-2.6
MDJ				PP	PP	21 57 16.3	-0.9
MDJ				SCP	ScP	22 00 04.1	-0.8
MDJ				S	**S**	**22 02 54.5**	**-0.7**
MDJ				XS	sS	22 03 17.9	-2.5
MDJ				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.9						
MDJ				LR	LR		
	comp=N,516nm,41.6s,MS4.5						
MDJ				LR	LR		
	comp=E,768nm,41.6s,MS4.5						
MDJ				LR	LR		
	comp=Z,474nm,27.8s						
TBI	**Tubuai**		**56.04 114**	*e*S	**S**	**22 03 04.4**	**+5.6**
	comp=Z,603nm,28.0s						
TBI				*e*LQ		22 09 18.9	
	comp=Z,5μm,30.8s						
TBI				*e*LR	LR	22 11 53.0	
	comp=Z,2μm,24.0s,baz=289						
CN2	**Changchun**		**56.78 335**	*e*P	**P**	**21 55 17.5**	**-1.2**
CN2				*e*AP	pP	21 55 33.5	-0.2
CN2				*e*XP	sP	21 55 40.5	+0.4
CN2				*e*S	**S**	**22 03 05.5**	**-2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=N,390nm,20.0s,MS4.8						
CN2				LR	LR		
	comp=E,630nm,20.0s,MS4.8						
CN2				LR	LR		
	comp=Z,550nm,23.0s,MS4.6						
GYA	**Guiyang**		**57.05 307**	⇑*i*P	**P**	**21 55 21.7**	**+0.7**
GYA				AP	pP	21 55 38.6	+2.6
GYA				XP	sP	21 55 45.2	+2.9
GYA				PCP	PcP	21 56 19.5	+4.0
GYA				PP	PP	21 57 33.0	+4.6
GYA				SCP	ScP	22 00 10.2	-0.5
GYA				PCS	P

HABR *eS* **S** **22 03 12.4 -5.4**
HABR *e* 22 03 39.8
HABR *e* 22 05 03.3
HABR *e* 22 07 03.3
NST Nakhon Sawan 58.45 293 P **P** **21 55 31.8 +0.8**
BJT Baijiatuau 58.49 326 *eP* **P** **21 55 31.4 +0.6**
comp=Z,5.4nm,0.6s,mb4.8
BJT Baijiatuau 58.49 326 *eP* **P** **21 55 31.4 +0.6**
BJT pmax pmax
comp=Z,5.0nm,0.6s
BJI Beijing 58.50 326 P **P** **21 55 31.2 +0.3**
BJI PP PP 21 57 39.5 -1.5
BJI S **S** **22 03 30.3 -0.1**
BJI SS SS 22 07 22.2 -1.7
BJI AMB AMB
comp=Z,12nm,0.9s,mb4.9
BJI AMB AMB
comp=Z,316nm,7.7s
BJI LR LR
comp=N,856nm,19.3s,MS4.9
BJI LR LR
comp=E,527nm,20.6s,MS4.9
BJI LR LR
comp=Z,873nm,24.5s,MS4.8
NANT Nan 58.96 296 ⇑P **P** **21 55 30.0 -4.5**
comp=Z,175nm,1.0s,mb6.0
KLR Kul'dur 59.17 343 *eP* **P** **21 55 29.0 -6.4**
KLR pmax pmax
comp=Z,85nm,1.8s,mb5.5
TIY Taiyuan 59.17 322 P **P** **21 55 38.8 +3.2**
TIY S **S** **22 03 44.2 +5.0**
TIY LR LR
comp=N,418nm,7.2s
TIY LR LR
comp=E,907nm,19.2s
TIY LR LR
comp=Z,796nm,16.8s,MS4.9
XAN Xi'an 59.29 316 P **P** **21 55 35.5 -1.0**
XAN AP pP 21 55 51.8 +0.2
XAN XP sP 21 55 58.7 +0.8
XAN PCP PcP 21 56 22.3 -1.9
XAN PP PP 21 57 49.2 +1.1
XAN PPP 21 59 15.0
XAN SCP ScP 22 00 17.9 -2.5
XAN PCS PcS 22 00 24.0 -2.3
XAN S **S** **22 03 37.8 -3.1**
XAN PS 22 04 02.6
XAN SCS ScS 22 05 16.7 -5.4
XAN SS SS 22 07 35.0 -1.6
XAN AMB AMB
comp=Z,21nm,0.9s,mb5.2
XAN AMB AMB
comp=Z,396nm,9.9s
XAN LR LR
comp=N,343nm,20.4s,MS4.8
XAN LR LR
comp=E,621nm,21.7s,MS4.8
XAN LR LR
comp=Z,2µm,20.8s,MS5.2
PET Petropavlovsk 59.54 3 *eP* **P** **21 55 41.6 +3.8**
PET *eS* **S** **22 03 48.3 +4.9**
PET *eSS* SS 22 07 45.6 +5.8
PET *eSSS* 22 10 13.2
PET pmax pmax
comp=Z,90nm,0.8s,mb5.8
PET pmax pmax
comp=Z,600nm,13.0s
PET pmax pmax
comp=Z,500nm,18.9s
PETK Petropavlovsk- 59.59 2 P **P** **21 55 37.9 -0.3**
comp=Z,35nm,0.7s,mb5.5,baz=156,slow=4.1,SNR=24
PETK LR LR 22 17 21.6
comp=Z,1µm,21.2s,MS5.0,baz=180,slow=32
KMI Kunming 59.62 304 ⇑P **P** **21 55 40.4 +1.4**
KMI AP pP 21 55 54.3 +0.2
KMI XP sP 21 56 01.4 +1.0
KMI PCP PcP 21 56 29.5 +3.8
KMI PP PP 21 57 50.8 -0.4
KMI S **S** **22 03 44.3 -1.2**
KMI SCS ScS 22 05 24.5 -0.4
KMI AMB AMB
comp=Z,97nm,1.1s,mb5.8
KMI AMB AMB
comp=Z,427nm,5.8s
KMI LR LR
comp=N,866nm,18.7s,MS5.0
KMI LR LR
comp=E,821nm,21.0s,MS5.0
KMI LR LR
comp=Z,1µm,19.8s,MS5.0
BDT Bhumibol Dam 59.97 294 P **P** **21 55 43.0 +1.5**
CM31 Chiang Mai Arr 60.41 295 *eP* **P** **21 55 46.7 +2.1**
comp=Z,25nm,0.9s,mb5.2
CMAR Chiang Mai Arr 60.41 295 P **P** **21 55 44.8 +0.3**
comp=Z,19nm,0.9s,mb5.1,baz=123,slow=5.1,SNR=68
CMAR LR LR 22 22 39.8
comp=Z,655nm,18.1s,MS4.8,baz=107,slow=37
CMAR PKPPKP 22 25 06.8
comp=Z,0.4nm,0.5s,baz=262,slow=4.4,SNR=4.4
CMAR PKP2bc 22 25 15.9
comp=Z,0.5nm,0.3s,baz=274,slow=2.6,SNR=9.1
CMAR Chiang Mai Arr 60.41 295 P **P** **21 55 44.8 +0.3**
CMAR LR LR 22 22 39.8
CMAR P'P' 22 25 06.8
CMAR ⇑*e* 22 25 15.9
CHTO Chiang Mai 60.53 296 *eP* **P** **21 55 47.1 +1.8**
comp=Z,132nm,1.8s,mb5.8
CHTO Chiang Mai 60.53 296 *eP* **P** **21 55 47.2 +1.9**
CHTO pmax pmax
comp=Z,132nm,1.8s,mb5.8
DRV Dumont d'Urvil 60.77 187 P pP 21 55 57.0 -4.3
DRV S **S** **22 04 11.0 +12**
DRV SS SS 22 08 02.0 +3.5
DRV L 22 11 00.0
DRV R 22 14 00.0
CD2 Chengdu 61.41 310⇓ *i*P **P** **21 55 52.0 +1.0**
CD2 PCP PcP 21 56 33.3 +0.5
CD2 PP PP 21 58 09.8 +2.9
CD2 PCS PcS 22 00 34.5 -1.3
CD2 S **S** **22 04 11.8 +3.7**
CD2 AMB AMB
comp=Z,130nm,0.6s,mb6.2
CD2 AMB AMB
comp=Z,600nm,8.4s
CD2 LR LR
comp=N,550nm,20.4s,MS5.2
CD2 LR LR
comp=E,1µm,15.6s,MS5.2
CD2 LR LR
comp=Z,1µm,18.0s,MS5.2
HHC Hu-ho-hao-te 61.67 324 *eP* **P** **21 55 52.4 -0.2**
HHC AP pP 21 56 04.5 -3.3
HHC XP sP 21 56 10.4 -3.7
HHC PCP PcP 21 56 33.0 -0.6
HHC PP PP 21 58 10.5 +1.4
HHC PCS PcS 22 00 34.4 -2.2
HHC S **S** **22 04 10.9 -0.2**
HHC XS sS 22 04 33.5 -3.2
HHC SCS ScS 22 05 36.5 -3.1
HHC SS SS 22 08 15.3 +1.6
HHC AMB AMB
comp=Z,14nm,0.9s,mb5.1
HHC AMB AMB
comp=Z,280nm,9.5s
HHC LR LR
comp=N,567nm,26.2s,MS4.8
HHC LR LR
comp=E,602nm,23.8s,MS4.8
HHC LR LR
comp=Z,902nm,26.2s,MS4.8
HIA Hailar 63.51 335 *eP* **P** **21 56 03.9 -0.8**
comp=Z,30nm,1.0s,mb5.3
HIA Hailar 63.51 335⇓ *eP* **P** **21 56 04.1 -0.6**
LZH Lanzhou 63.90 316 ⇓P **P** **21 56 07.0 -0.6**
LZH AP pP 21 56 22.5 -0.3
LZH XP sP 21 56 29.6 +0.5
LZH *e*PP PP 21 58 30.0 +1.2
LZH S **S** **22 04 39.0 -0.2**
LZH XS sS 22 05 00.0 -4.9
LZH SS SS 22 08 49.0 +0.3
LZH AMB AMB
comp=Z,76nm,1.6s,mb5.5
LZH AMB AMB
comp=Z,282nm,4.0s
LZH LR LR
comp=E,905nm,15.5s
LZH LR LR
comp=Z,2µm,16.7s,MS5.3
IMP Imphal 66.90 300 *i* P **P** **21 56 27.0 -0.2**
CLNS Chul'man 67.83 343 *eP* **P** **21 56 32.3 -0.1**
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=Z,17nm,0.9s,mb5.1
CLNS pmax pmax
comp=N,12nm,1.1s
GTA Gaotai 68.32 317 *eP* **P** **21 56 36.0 +0.1**
GTA AP pP 21 56 52.7 +1.4
GTA XP sP 21 56 59.8 +2.3
GTA PP PP 21 59 08.0 +0.6
GTA S S 22 05 31.7 -1.2
GTA XS sS 22 05 59.7 +0.9
GTA SS SS 22 09 56.8 -0.5
GTA AMB AMB
comp=Z,20nm,1.8s,mb4.8
GTA AMB AMB
comp=Z,376nm,6.3s
GTA LR LR
comp=N,334nm,19.8s,MS4.9
GTA LR LR
comp=E,564nm,20.1s,MS4.9
GTA LR LR
comp=Z,622nm,21.3s,MS4.8
ULN Ulaanbaatar 68.58 328 *eP* **P** **21 56 37.2 -0.1**
comp=Z,10nm,0.8s,mb4.8
ULN Ulaanbaatar 68.58 328 *eP* **P** **21 56 37.2 -0.1**
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SHL Shillong 68.91 301⇑ *i*P **P** **21 56 40.0 +0.2**
SHL *ex* x 21 56 53.5
SHL *i* S S 22 05 43.5 +3.2
SONM Songino Array 68.92 327 P **P** **21 56 39.0 -0.4**
comp=Z,11nm,0.8s,mb4.8,baz=135,slow=6.0,SNR=58
SONM PKPPKP 22 24 51.5
comp=Z,2.9nm,0.9s,baz=282,slow=2.6,SNR=4.1
RKT Rikitea 69.30 112 *eS* S 22 05 51.4 +6.3
comp=Z,720nm,24.8s
RKT *eLQ* 22 14 50.4
comp=Z,2µm,29.8s
RKT *eLR* LR 22 17 44.4
comp=Z,2µm,23.8s,baz=277
SEY Seymchan 69.41 359 *i* P **P** **21 56 41.3 -0.8**
LSA Lhasa 70.88 304 P **P** **21 56 53.0 +1.2**
LSA PCP PcP 21 57 07.6 -4.5
LSA AMB AMB
comp=Z,60nm,1.0s,mb5.5
LSA LR LR
comp=E,600nm,23.2s
LSA LR LR
comp=Z,1µm,22.6s,MS5.1
LSA Lhasa 70.88 304 *eP* **P** **21 56 53.1 +1.3**
comp=Z,60nm,1.0s,mb5.5
LSA Lhasa 70.88 304 *eP* **P** **21 56 53.1 +1.3**
LSA pmax pmax
comp=Z,60nm,1.0s,mb5.5
YAK Yakutsk 71.17 348 *eP* **P** **21 56 51.9 -1.0**
comp=Z,24nm,1.1s,mb5.0
YAK Yakutsk 71.17 348 *eP* **P** **21 56 51.6 -1.3**
YAK *e* pP 21 57 10.2 +1.8
YAK *e**PP PcP 21 57 16.5 +3.9
YAK *e* 21 59 32.5
YAK *e*PPP 22 01 15.0
YAK *eS* S 22 06 02.4 -3.0
YAK *e* 22 06 47.5
YAK *eSS* SS 22 10 35.5 -4.8
YAK pmax pmax
comp=Z,40nm,1.4s,mb5.2
YAK pmax pmax
comp=Z,83nm,2.6s,mb5.2
YAK pmax pmax
comp=N,140nm,3.6s
YAK pmax pmax
comp=E,108nm,3.0s
YAK smax
comp=N,174nm,14.6s
YAK smax
comp=E,106nm,13.1s
SBA Scott Base 71.44 177 *eP* **P** **21 56 55.6 +1.2**
comp=E,19nm,1.3s,mb4.9
SBA Scott Base 71.44 177 *eP* **P** **21 56 55.6 +1.2**
SBA pmax pmax
comp=Z,19nm,1.3s,mb4.9
ZAK Zakamensk 72.08 328 *eP* **P** **21 56 56.4 -2.2**
ZAK pmax pmax
comp=Z,17nm,1.0s,mb4.9
BOD Bodaibo 72.21 338 *eP* **P** **21 56 56.9 -2.3**
BOD pmax pmax
comp=Z,11nm,1.8s,mb4.5
TLY Talaya 72.64 329 *eP* **P** **21 57 02.1 +0.2**
TLY *eS* S 22 06 20.5 -2.2
TLY *e* 22 06 59.6
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,724nm,19.0s,MS5.0
MIR Mirnyy 72.92 202 *eP* **P** **21 57 03.0 -0.3**
MIR *i* 21 57 10.0
MIR *i* S S 22 06 28.0 +2.6
MIR *i* 22 07 04.0
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.5
MIR MLR MLR
comp=Z,2µm,20.0s,MS5.3
TAPN Taplejung 73.01 301 *eP* **P** **21 57 05.3 +0.6**
comp=Z,245nm,1.0s,mb6.1
ODAN Odare 73.15 301 *eP* **P** **21 57 05.9 +0.4**
comp=Z,457nm,0.8s,mb6.5
BOK Bokaro 73.62 297 *eP* **P** **21 57 08.9 +0.6**
BOK AMb AMB 21 57 12.2
comp=Z,115nm,1.6s,mb5.5
RAMN Ramite 73.85 300 *eP* **P** **21 57 09.8 +0.2**
comp=Z,101nm,0.7s,mb5.8
MOY Mondy 73.99 328 *eP* **P** **21 57 08.0 -1.9**
MOY pmax pmax
comp=Z,40nm,2.4s,mb4.9
JIRN Jiri 74.40 301 *eP* **P** **21 57 13.3 +0.5**
comp=Z,228nm,1.0s,mb6.0
VIS Vishakhapatnam 74.52 290 *eP* **P** **21 57 15.0 +1.4**
VIS AMb AMB 21 57 17.5
comp=Z,68nm,1.4s,mb5.4
GUN Gumba 74.73 301 *eP* **P** **21 57 15.0 +0.3**
comp=Z,411nm,0.9s,mb6.3
BILL Bilibino 74.96 4 *eP* **P** **21 57 15.0 -0.2**
comp=Z,38nm,1.0s,mb5.3
BILL Bilibino 74.96 4⇓ *eP* **P** **21 57 14.7 -0.5**
BILL *i* pP 21 57 25.9 -4.9
BILL *eSS* SS 22 11 37.2 -0.7
BILL pmax pmax
comp=Z,47nm,1.3s,mb5.3
BILL MLR MLR
comp=Z,700nm,24.0s,MS4.9
PKI Pulchoki 75.04 301 *eP* **P** **21 57 16.4 -0.1**
PKI Pulchoki 75.04 301 *eP* **P** **21 57 16.5 0.0**
PKIN Phulchoki 75.05 301 *eP* **P** **21 57 16.5 -0.1**
KKN Kakani 75.21 301 *eP* **P** **21 57 17.6 +0.1**
comp=Z,228nm,0.9s,mb6.1
KKN Kakani 75.21 301 *eP* **P** **21 57 17.6 +0.1**
KKN pmax pmax
comp=Z,228nm,0.9s,mb6.1
DMN Daman 75.31 301 *eP* **P** **21 57 18.5 +0.5**
comp=Z,336nm,0.8s,mb6.3
GKN Gorkha 75.81 301 *eP* **P** **21 57 20.8 -0.1**
comp=Z,265nm,0.9s,mb6.2
OHAK Old Harbor 76.33 26 *eP* **P** **21 57 23.0 -0.2**
KOLN Koldanda 76.64 300 *eP* **P** **21 57 25.3 -0.3**
comp=Z,141nm,0.8s,mb5.9
DANN Dangsing 76.65 301 *eP* **P** **21 57 25.4 -0.3**
comp=Z,200nm,0.9s,mb6.0
SVW2 Sparrevohn 77.78 22 *eP* **P** **21 57 31.7 +0.4**
WMQ Urumqi 78.41 317 *eP* **P** **21 57 35.0 -0.1**
WMQ PP PP 22 00 35.0 +1.8
WMQ S S 22 07 28.0 +1.2
WMQ SCS ScS 22 07 50.0 -1.2
WMQ SS SS 22 12 34.0 +3.0
WMQ AMB AMB
comp=Z,12nm,1.2s,mb4.7
WMQ AMB AMB
comp=Z,185nm,5.0s
WMQ LR LR
comp=N,452nm,20.0s,MS4.9
WMQ LR LR
comp=E,375nm,20.0s,MS4.9
WMQ LR LR
comp=Z,504nm,20.0s,MS4.8
KOD Kodaikanal 78.75 282 *eP* **P** **21 57 37.5 -0.2**
KOD AMb AMB 21 57 55.6
comp=Z,54nm,2.1s,mb5.1
HYB Hyderabad 78.92 289 *eP* **P** **21 57 38.5 0.0**
HYB *eS* S 22 07 34.0 +0.7
HYB Hyderabad 78.92 289 *i* P **P** **21 57 38.5 0.0**
HYB *e* 21 57 46.0
HYB *ep*P pP 21 57 51.0 -3.2
HYB *eS* S 22 07 34.0 +0.7
SLKM Skilak Lake 79.53 24 *eP* **P** **21 57 40.6 -0.3**
LGTI Lohaghat 79.91 301 *eP* **P** **21 57 44.5 +0.8**
TIXI Tiksi 79.98 352 P **P** **21 57 43.2 +0.1**
comp=Z,16nm,1.3s,mb4.8
TIXI Tiksi 79.98 352⇓ *eP* **P** **21 57 41.7 -1.5**
TIXI pmax pmax
comp=Z,16nm,1.7s,mb4.7
KRAR Krasnoyarsk 80.34 330 *i* P **P** **21 57 44.6 -0.8**
KRAR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
KRAR MLR MLR
comp=Z,200nm,15.0s,MS4.6
PMR Palmer 80.58 24 *eP* **P** **21 57 46.1 -0.4**
comp=Z,84nm,1.5s,mb5.5
PMR Palmer 80.58 24 *eP* **P** **21 57 46.1 -0.4**
PMR pmax pmax
comp=Z,84nm,1.5s,mb5.5
CHUM Lake Minchumin 80.69 21 *eP* **P** **21 57 47.9 +0.8**
comp=Z,53nm,1.0s,mb5.4
CHUM *ep*P pP 21 58 02.7 -0.2
AKL Akola 80.96 292 *eP* **P** **21 57 49.0 -0.5**
AKL AMb AMB 21 57 51.8
comp=Z,113nm,1.2s,mb5.7
KTH Kantishna Hill 81.00 22 *eP* **P** **21 57 48.1 -0.7**
comp=Z,43nm,1.1s,mb5.3
KTH *ep*P pP 21 58 02.8 -1.7
BHPL Bhopal 81.06 295 *eP* **P** **21 57 48.0 -2.0**
BHPL AMb AMB 21 57 51.2
comp=Z,89nm,1.0s,mb5.7
IMA2 Indian Mountai 81.56 19 *eP* **P** **21 57 51.1 -0.6**
MCK McKinley 81.83 22 *eP* **P** **21 57 53.0 -0.2**
comp=Z,86nm,1.0s,mb5.6
MCK *ep*P pP 21 58 07.8 -1.1
MCK McKinley 81.83 22 *eP* **P** **21 57 53.0 -0.2**
MCK *e**PP pP 21 58 07.8 -1.1
MCK pmax pmax
comp=Z,86nm,1.0s,mb5.6
DDI Dehra Dun 81.96 302 *ex* x 21 57 49.8
COLA College 82.86 21 *eP* **P** **21 57 57.9 -0.6**
comp=Z,43nm,1.0s,mb5.4
COLA *ep*P pP 21 58 12.6 -1.7
COLA College 82.86 21 *eP* **P** **21 57 57.9 -0.6**
COLA *e**PP pP 21 58 12.6 -1.7
COLA pmax pmax
comp=Z,43nm,1.0s,mb5.4
SMLA Simla 82.88 302 *i* P **P** **21 57 59.6 +0.2**
MKAR Makanchi Array 82.99 319 P **P** **21 57 58.3 -1.3**
comp=Z,23nm,0.8s,mb5.2,baz=104,slow=4.4,SNR=99
MKAR PKKPbc PKKPbc 22 16 20.6 -3.2
comp=Z,0.6nm,0.8s,baz=250,slow=1.7,SNR=3.9
MKAR PKPPKP 22 24 25.7
comp=Z,0.4nm,0.8s,baz=2.9,slow=5.8,SNR=3.2
MKAR LR LR 22 36 35.4
comp=Z,683nm,18.6s,MS5.0,baz=104,slow=37
MKAR Makanchi Array 82.99 319 P **P** **21 57 58.3 -1.3**
MKAR PKKPbc PKKPbc 22 16 20.6 -3.2
MKAR P'P' 22 24 25.7
MKAR LR LR 22 36 35.4
QSPA South Pole Qui 83.32 180 *eP* **P** **21 58 00.8 +0.1**
comp=Z,56nm,1.1s,mb5.5
COLD Coldfoot 83.37 19 *eP* **P** **21 58 00.8 -0.3**
comp=Z,36nm,1.4s,mb5.2
COLD *ep*P pP 21 58 16.7 -0.1
POO Poona 83.53 289 *eP* **P** **21 58 02.5 -0.4**
POO AMb AMB 21 58 05.7
comp=Z,71nm,1.3s,mb5.6
ZALV Zalesovo Beam 83.76 326 P **P** **21 58 01.6 -1.7**
comp=Z,11nm,0.7s,mb5.1,baz=106,slow=5.3,SNR=36
ZALV LR LR 22 37 00.6
comp=Z,384nm,19.1s,MS4.8,baz=211,slow=37
AJM Ajmer 84.15 297 *eP* **P** **21 58 03.8 -2.2**
AJM AMb AMB 21 58 08.3
comp=Z,164nm,1.2s,mb6.0
DLH Dalhousie 84.17 304 *eP* **P** **21 58 05.0 -0.9**
THN Thein Dam 84.35 303 *eP* **P** **21 58 05.3 -1.6**
MAW Mawson 84.61 203 *eP* **P** **21 58 07.6 +0.1**
comp=Z,9.5nm,0.8s,mb5.0
MAW Mawson 84.61 203 P **P** **21 58 06.4 -1.1**
comp=Z,11nm,0.7s,mb5.1,baz=96,slow=7.9,SNR=37
MAW LR LR 22 32 48.9
comp=Z,867nm,19.6s,MS5.1,baz=84,slow=34
MAW Mawson 84.61 203 *eP* **P** **21 58 07.6 +0.1**
MAW pmax pmax
comp=Z,10.0nm,0.8s
NVS Novosibirsk 84.93 327 *eP* **P** **21 58 07.2 -2.1**
NVS pmax pmax
comp=N,13nm,1.6s
NVS pmax pmax
comp=Z,37nm,1.6s,mb5.3
NVS pmax pmax
comp=E,28nm,1.5s
HYT Haines Junctio 85.19 27 *eP* **P** **21 58 10.6 +0.2**
HYT *ep*P pP 21 58 26.4 +0.1
EGAK Eagle 85.30 23 *eP* **P** **21 58 11.5 +0.6**
comp=E,17nm,0.8s,mb5.2
EGAK *ep*P pP 21 58 26.2 -0.6
KSH Kashi 85.60 310 P **P** **21 58 14.9 +1.9**
KSH *eAP* pP 21 58 31.7 +2.8
KSH *eXP* sP 21 58 38.6 +3.6
KSH *ePP* PP 22 01 38.2 +5.7
KSH *ePPP* 22 03 31.9
KSH *eSKS* 22 08 31.3
KSH *eS* S 22 08 39.6 -1.3
KSH *eXS* sS 22 09 08.5 +0.8
KSH PS 22 09 45.2
KSH *eSS* SS 22 14 18.6 +0.5
KSH AMB AMB
comp=Z,101nm,0.9s,mb6.0
KSH AMB AMB
comp=Z,1µm,4.3s
KSH LR LR
comp=N,951nm,5.0s
KSH LR LR
comp=E,553nm,3.6s
KSH LR LR
comp=Z,961nm,5.7s
DAWY Dawson 85.69 24 *eP* **P** **21 58 13.4 +0.6**
KURK Kurchatov 86.41 322 *eP* **P** **21 58 15.3 -1.4**
comp=Z,4.5nm,0.4s,mb5.0
KURK Kurchatov 86.41 322⇓ *eP* **P** **21 58 15.4 -1.3**
KURK pmax pmax
comp=Z,16nm,1.5s,mb5.0
TKM2 Tokmak 2 86.60 314 *eP* **P** **21 58 18.3 +0.5**
comp=Z,4.8nm,0.6s,mb4.9
TKM2 Tokmak 2 86.60 314 *eP* **P** **21 58 18.3 +0.5**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
TKM2 Tokmak 2 86.60 314 P **P** **21 58 19.0 +1.2**
SNR=9.3
KZA Kyzart 86.68 313 P **P** **21 58 19.4 +1.2**
SNR=17
UCH Uchtor 87.24 313 *eP* **P** **21 58 22.7 +1.7**
comp=Z,26nm,2.1s,mb5.1
AAK Ala-Archa 87.34 313 P **P** **21 58 22.6 +1.2**
SNR=6.3
USP Ospenovka 87.46 314 P **P** **21 58 22.8 +0.8**
SNR=10
AML Almayashu 87.82 313 *eP* **P** **21 58 25.2 +1.4**
comp=Z,21nm,1.0s,mb5.3
AML Almayashu 87.82 313 P **P** **21 58 25.2 +1.5**
SNR=14
EKS2 Erkin-Say 87.86 313 *eP* **P** **21 58 24.9 +1.0**
comp=Z,9.6nm,1.1s,mb4.9
EKS2 Erkin-Say 87.86 313 P **P** **21 58 25.1 +1.2**
SNR=6.6
BHJ Bhuj 88.11 294 *eP* **P** **21 58 23.8 -1.8**
BHJ AML AML 21 58 27.2
comp=Z,86nm,1.6s
GASB Alder Springs 88.49 50 ⇑P **P** **21 58 27.7 +0.7**
baz=88
J02A Umpqua 88.51 46 ⇑P **P** **21 58 27.7 +0.7**

baz=89
MNRC McLaughlin Nat 88.56 51 ⇑P P 21 58 28.1 +0.7
baz=89
WDC Whiskeytown Da 88.78 49 ⇓P P 21 58 29.1 +0.8
baz=89
HUMO Hull Mountain 88.82 47 ⇓P P 21 58 28.9 +0.5
baz=89
YBH Yreka Blue Hor 88.85 48 ⇑P P 21 58 29.4 +0.8
baz=89
V03C Hunter Liggett 89.06 54 ⇓P P 21 58 31.1 +1.4
baz=89
PACP Pacheco Peak 89.17 53 ⇑P P 21 58 30.8 +0.5
baz=89
M03C McCloud 89.20 48 ⇑P P 21 58 31.0 +0.7
baz=89
ORV Oroville 89.40 50 ⇓P P 21 58 30.9 -0.3
baz=89
U04C Hernandez Rese 89.47 53 ⇑P P 21 58 32.6 +0.9
baz=90
INK Inuvik 89.49 21 eP P 21 58 29.8 -1.3
INK epP pP 21 58 45.5 -1.5
PKD Parkfield 89.60 54 ⇑P P 21 58 33.3 +1.0
baz=90
G04A Mulino 89.61 45 ⇓P P 21 58 33.2 +1.1
baz=90
C04A Brinnon 89.70 42 ⇑P P 21 58 32.2 -0.3
baz=90,SNR=5.5
H04A Detroit Lake 89.72 45 ⇑P P 21 58 33.0 +0.3
baz=90
O04C Chester 89.83 50 ⇑P P 21 58 33.8 +0.6
baz=90
LAVA Lava Cap Winer 89.86 51 ⇓P P 21 58 33.5 0.0
baz=90
SMMC Simmler 89.94 55 ⇑P P 21 58 35.6 +1.7
baz=90
S05C Merced 89.97 53 ⇓P P 21 58 34.7 +0.7
baz=90
PKM Peak Mountain 90.03 55 ⇓P P 21 58 35.4 +1.0
baz=90
J05A Fort Rock 90.18 47 ⇓P P 21 58 34.9 +0.1
baz=90,SNR=11
KBL Kabul 90.20 305 eP P 21 58 34.1 -1.0
comp=Z,9.4nm,0.9s,mb5.1
KBL epP pP 21 58 48.3 -2.8
KBL Kabul 90.20 305 eP P 21 58 34.1 -1.0
KBL e*PP pP 21 58 48.3 -2.8
KBL pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
BEKR Beckwourth 90.31 50 ⇑P P 21 58 35.5 -0.1
baz=90,SNR=8.2
E05A Randle 90.33 43 ⇓P P 21 58 35.2 -0.2
baz=90
K05A Summer Lake 90.34 47 ⇓P P 21 58 35.6 +0.1
baz=90
B05A Bryant 90.38 42 ⇑P P 21 58 35.8 +0.2
baz=90
T06C Millerton Lake 90.42 53 ⇓P P 21 58 36.2 +0.1
baz=90,SNR=8.4
JCW Jim Creek 90.48 42 eP P 21 58 35.9 -0.2
MOD Modoc 90.65 48 ⇓P P 21 58 37.2 +0.2
baz=91
WCN Washoe City 90.70 51 ⇓P P 21 58 38.2 +0.9
baz=91
O06A Flanigan 90.76 50 ⇓P P 21 58 38.0 +0.4
baz=91,SNR=10
KCC Kaiser Creek 90.77 53 ⇑P P 21 58 37.7 0.0
baz=91,SNR=6.4
RPW Rockport 90.79 41 eP P 21 58 36.8 -0.8
K06A Valley Falls 90.82 47 ⇓P P 21 58 37.5 -0.3
baz=91
R06C Coleville 90.83 51 ⇓P P 21 58 38.2 +0.3
baz=91
SCI San Clemente I 90.83 57 ⇑P P 21 58 37.8 -0.3
baz=91
N06A Buffalo Meadow 90.84 49 ⇓P P 21 58 38.0 0.0
baz=91,SNR=14
E06A Yakima 90.86 43 ⇓P P 21 58 37.6 -0.3
baz=91,SNR=5.5
ARVC Arvin 90.87 55 ⇓P P 21 58 37.9 -0.4
baz=91
F06A Goldendale 90.87 44 ⇑P P 21 58 37.7 -0.3
baz=91
A06A Chilliwack 90.92 41 ⇑P P 21 58 37.8 -0.3
baz=91
J06A Christmas Vall 90.95 47 ⇓P P 21 58 38.0 -0.4
baz=91,SNR=6.4
CIS Catalina Islan 91.00 57 ⇓P P 21 58 39.0 +0.1
baz=91,SNR=6.4
I06A Prineville 91.01 46 ⇑P P 21 58 38.5 -0.2
baz=91
H06A Lindquist Farm 91.03 45 ⇑P P 21 58 38.4 -0.3
baz=91,SNR=5.8
PAHR Pah Rah Range 91.04 50 eP P 21 58 39.4 +0.5
comp=Z,23nm,1.1s,mb5.4
D06A Cle Elum 91.04 43 ⇑P P 21 58 38.8 +0.1
baz=91
ISA Isabella 91.23 54 ⇓P P 21 58 39.8 -0.1
baz=91,SNR=6.1
L07A Adell 91.38 48 ⇓P P 21 58 40.3 -0.1
baz=91,SNR=15
MWC Mount Wilson 91.39 56 eP P 21 58 41.0 +0.4
comp=Z,123nm,1.5s,mb6.0
MWC Mount Wilson 91.39 56 eP P 21 58 41.0 +0.3
MWC pmax pmax
comp=Z,123nm,1.5s,mb6.0
ETW Entiat 91.45 42 eP P 21 58 40.2 -0.4
O07A Toulon 91.48 50 ⇑P P 21 58 40.7 -0.2
baz=92,SNR=20
N07B Gerlach 91.49 49 ⇓P P 21 58 41.1 +0.1
baz=92,SNR=18
EDW2 Edwards Air Fo 91.52 55 ⇑P P 21 58 41.7 +0.5
baz=92,SNR=10
I07A Izee 91.53 46 ⇑P P 21 58 40.5 -0.6
baz=92,SNR=5.3
K07A Rock Creek Ran 91.53 47 ⇑P P 21 58 40.5 -0.6
baz=92,SNR=6.5
H07A Lands Inn, Kim 91.56 45 ⇑P P 21 58 40.5 -0.7
baz=92
G07A Ruggs Ranch, H 91.58 45 ⇑P P 21 58 40.4 -0.8
baz=92,SNR=5.2
J07A Hines 91.58 47 ⇑P P 21 58 40.7 -0.6
baz=92
A07A Ashnola River, 91.62 41 ⇓P P 21 58 40.6 -0.8
baz=92,SNR=8.4
E07A Sunnyside 91.62 43 ⇓P P 21 58 40.6 -0.8
baz=92
D07A Quincy 91.63 43 ⇓P P 21 58 40.5 -0.9
baz=92,SNR=7.2
CWC Cottonwood Cre 91.64 54 ⇑P P 21 58 42.5 +0.7
baz=92,SNR=14
C07A Waterville 91.64 42 ⇑P P 21 58 40.9 -0.6
baz=92
NVAR Mina Array Bea 91.71 52 P P 21 58 41.9 -0.1
comp=Z,25nm,1.0s,mb5.5,baz=252,slow=6.0,SNR=51
BFSC Mount Baldy St 91.72 56 ⇓P P 21 58 42.4 +0.2
baz=92,SNR=5.2
RSW Rattlesnake Hi 91.78 44 eP P 21 58 42.0 -0.2
LRMC Laurel Mountai 91.84 55 ⇑P P 21 58 43.2 +0.5
baz=92,SNR=8.7
BVAR Borovoye Array 91.88 323 LR LR 22 40 58.9
comp=Z,456nm,19.2s,MS4.9,baz=96,slow=36
BRVK Borovoye 91.94 323 eP P 21 58 41.3 -1.5
comp=Z,16nm,1.2s,mb5.2
BRVK Borovoye 91.94 323 eP P 21 58 41.3 -1.5
BRVK pmax pmax
comp=Z,16nm,1.2s,mb5.2
WVOR Wild Horse Val 91.95 48 eP P 21 58 42.9 -0.2
comp=Z,8.9nm,0.9s,mb5.1
WVOR Wild Horse Val 91.95 48 eP P 21 58 42.9 -0.2
WVOR pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
M08A Happy Creek Ra 92.02 49 ⇓P P 21 58 44.2 +0.8
baz=92,SNR=8.2
Q08A Gabbs 92.05 51 ⇓P P 21 58 43.8 +0.2
baz=92,SNR=11
MPMC Manual Prospec 92.07 54 ⇑P P 21 58 43.8 0.0
baz=92,SNR=22
G08A Pilot Rock 92.08 45 ⇑P P 21 58 43.1 -0.5
baz=92,SNR=8.9
K08A Mann Creek Ran 92.10 47 ⇓P P 21 58 43.6 -0.1
baz=92
N08A GE Springer Mi 92.12 49 ⇓P P 21 58 43.5 -0.4
baz=92,SNR=21
L08A Fields 92.14 48 ⇓P P 21 58 43.7 -0.2
baz=92,SNR=9.0
E08A Dider Farm, El 92.16 44 ⇓P P 21 58 43.5 -0.5
baz=92
J08A Circle Bar Ran 92.18 47 ⇑P P 21 58 43.4 -0.7
baz=92,SNR=9.2
H08A Prairie City 92.18 46 ⇓P P 21 58 43.6 -0.5
baz=92
GRAC Grapevine Rang 92.27 53 ⇑P P 21 58 44.8 +0.1
baz=92,SNR=5.8
D08A Wollman Farm, 92.33 43 ⇑P P 21 58 44.1 -0.6
baz=92
A08A Turner Farm, O 92.33 41 ⇑P P 21 58 44.0 -0.7
baz=92
C08A Higginbotham F 92.33 42 ⇓P P 21 58 44.0 -0.7
baz=92
S09A Goldfield 92.47 52 ⇓P P 21 58 45.7 +0.1
baz=92,SNR=36
OD2 Odessa Site #2 92.51 43 eP P 21 58 44.4 -1.1
TPH Tonopah 92.51 52 eP P 21 58 46.2 +0.5
comp=Z,20nm,0.9s,mb5.5
TPH Tonopah 92.51 52 eP P 21 58 46.2 +0.4
TPH pmax pmax
comp=Z,20nm,0.9s,mb5.5
GSC Goldstone 92.54 55 eP P 21 58 46.1 +0.2
comp=Z,12nm,0.8s,mb5.4
GSC Goldstone 92.54 55 eP P 21 58 46.2 +0.3
GSC pmax pmax
comp=Z,12nm,0.8s,mb5.4
GSC Goldstone 92.54 55 ⇑P P 21 58 45.5 -0.4
baz=93,SNR=5.9
SYO Syowa Base 92.56 199 eP P 21 58 44.6 -0.8
SYO Syowa Base 92.56 199 eP pP 21 59 01.0 -0.4
MONP Monument Peak 92.59 57 ⇑P P 21 58 46.7 +0.4
baz=93,SNR=8.9
FURC Furnace Creek, 92.62 54 ⇑P P 21 58 46.3 0.0
baz=93
Q09A Carvers 92.63 51 ⇑P P 21 58 46.8 +0.5
baz=93
PFO Pinyon Flat Ob 92.64 57 eP P 21 58 46.6 +0.1
comp=Z,36nm,1.5s,mb5.6
PFO epP pP 21 59 02.0 -0.4
PFO Pinyon Flat Ob 92.64 57 eP P 21 58 46.6 +0.1
PFO e*PP pP 21 59 02.0 -0.4
PFO pmax pmax
comp=Z,36nm,1.5s,mb5.6
PFO Pinyon Flat Ob 92.64 57 ⇓P P 21 58 46.2 -0.3
baz=93
R09A Tonopah 92.65 52 ⇑P P 21 58 46.0 -0.4
baz=93,SNR=20
K09A Rome 92.65 48 ⇓P P 21 58 46.4 +0.1
baz=93
J09A Fry Pan Ranch, 92.70 47 ⇑P P 21 58 46.0 -0.5
baz=93,SNR=5.4
M09A Marrel Ranch, 92.71 49 ⇑P P 21 58 46.6 0.0
baz=93
D09A Jones Farm, Ri 92.74 43 ⇑P P 21 58 46.0 -0.6
baz=93,SNR=6.6
BMN Battle Mountai 92.77 50 eP P 21 58 47.2 +0.3
comp=Z,20nm,1.0s,mb5.5
BMN Battle Mountai 92.77 50 eP P 21 58 47.2 +0.3
BMN pmax pmax
comp=Z,20nm,1.0s,mb5.5
I09A Lost Marbles R 92.78 46 ⇓P P 21 58 46.4 -0.5
baz=93
A09A Danville 92.78 41 ⇓P P 21 58 45.7 -1.1
baz=93
HEC Hector,Ludlow 92.87 55 ⇓P P 21 58 47.6 +0.1
baz=93,SNR=11
G09A Cove 92.90 45 ⇓P P 21 58 47.3 -0.1
baz=93,SNR=8.0
S10A Tonopah Range, 92.99 52 ⇑P P 21 58 48.1 +0.1
baz=93,SNR=38
B09A Rice 93.01 42 ⇑P P 21 58 46.9 -0.8
baz=93
BELC Belle Mtn. 93.06 56 ⇓P P 21 58 48.8 +0.4
baz=93,SNR=23
TPNV Topopah Spring 93.16 53 eP P 21 58 49.5 +0.8
comp=Z,30nm,1.1s,mb5.6
TPNV Topopah Spring 93.16 53 eP P 21 58 49.6 +0.8
TPNV pmax pmax
comp=Z,30nm,1.1s,mb5.6
TPNV Topopah Spring 93.16 53 ⇑P P 21 58 49.2 +0.5
baz=93
Q10A Clear Creek Ra 93.23 51 ⇑P P 21 58 49.4 +0.3
baz=93,SNR=13
R10A Warm Springs 93.25 52 ⇓P P 21 58 50.0 +0.8
baz=93
P10A Eureka 93.26 51 ⇓P P 21 58 49.7 +0.5
baz=93
TUQ Tuquoise Moun 93.27 55 ⇓P P 21 58 49.8 +0.4
baz=93,SNR=7.0
K10A MacKenzie Ranc 93.28 47 ⇑P P 21 58 49.1 -0.1
baz=93
O10A Cortez Mining, 93.31 50 ⇑P P 21 58 49.1 -0.3
baz=93,SNR=5.6
F10A Beach Ranch, E 93.36 44 ⇑P P 21 58 49.1 -0.4
baz=93,SNR=8.7
G10A Bishop Farm, J 93.37 45 ⇓P P 21 58 49.3 -0.3
baz=93,SNR=7.9
M10A I.L. Ranch, Tu 93.40 49 ⇑P P 21 58 49.8 0.0
baz=93
GMRC Granite Mounta 93.42 56 ⇑P P 21 58 50.2 +0.2
baz=93,SNR=20
D10A Wagner Farm, O 93.44 43 ⇓P P 21 58 49.0 -0.9
baz=94,SNR=7.7
A10A Northport 93.46 41 ⇑P P 21 58 49.1 -0.7
baz=94
BC3 Big Chuckw Mtn 93.48 57 ⇑P P 21 58 50.5 +0.2
baz=94,SNR=14
L10A Juniper Basin 93.51 48 ⇑P P 21 58 50.1 -0.2
baz=94,SNR=7.2
H10A Noah's Angus R 93.56 46 ⇑P P 21 58 50.4 0.0
baz=94
S11A Rachel 93.63 53 ⇑P P 21 58 51.4 +0.4
baz=94
V11A Goodsprings 93.71 55 ⇑P P 21 58 51.4 +0.1
baz=94,SNR=7.2
IRM Iron Mountain 93.78 56 ⇓P P 21 58 52.3 +0.6
baz=94,SNR=15
Q11A Duckwater 93.81 52 ⇓P P 21 58 51.9 +0.2
baz=94,SNR=19
R11A Troy Canyon, C 93.82 52 ⇓P P 21 58 52.2 +0.4
baz=94,SNR=20
K11A Parker Ranch, 93.90 48 ⇓P P 21 58 51.4 -0.7
baz=94,SNR=5.3
O11A Cowboy Ranch, 93.93 50 ⇓P P 21 58 52.6 +0.3
baz=94,SNR=16
GLA Glamis 93.94 57 ⇓P P 21 58 52.6 +0.2
baz=94
M11A Holland Ranch, 93.95 49 ⇑P P 21 58 52.1 -0.2
baz=94
G11A Walters Elk Ra 93.97 45 ⇑P P 21 58 52.7 +0.3
baz=94,SNR=6.7
T11A Corn Creek, Al 94.01 53 ⇓P P 21 58 53.2 +0.6
baz=94,SNR=13
L11A Cat Creek Banc 94.05 48 ⇓P P 21 58 52.6 -0.2
baz=94
I11A Placerville 94.06 46 ⇓P P 21 58 52.3 -0.4
baz=94
D11A Klaveano Farm, 94.08 43 ⇓P P 21 58 52.6 -0.1
baz=94
H11A Donnelly 94.09 46 ⇓P P 21 58 52.7 -0.2
baz=94
F11A Grangeville 94.10 44 ⇓P P 21 58 52.4 -0.5
baz=94
E11A Bogner Ranch, 94.11 44 ⇑P P 21 58 52.6 -0.3
baz=94,SNR=7.2
C11A Tepee Creek (N 94.21 42 ⇓P P 21 58 53.1 -0.3
baz=94,SNR=5.2
A11A Hall Mountain, 94.24 41 ⇑P P 21 58 53.1 -0.4
baz=94,SNR=9.8
S12A Delamar Landin 94.33 53 ⇑P P 21 58 54.6 +0.4
baz=94,SNR=7.6
N12A Clover Valley, 94.47 50 ⇑P P 21 58 54.9 +0.2
baz=94,SNR=20
Q12A Willow Creek R 94.47 51 ⇓P P 21 58 54.9 +0.2
baz=94,SNR=18
E12A Beaver Dam Sad 94.55 44 ⇑P P 21 58 54.9 0.0
baz=95,SNR=8.0
R12A Pony Springs, 94.58 52 ⇑P P 21 58 56.0 +0.7
baz=95,SNR=15
L12A House Creek Ra 94.59 48 ⇓P P 21 58 55.8 +0.6
baz=95
M12A Wells 94.61 49 ⇓P P 21 58 55.9 +0.6
baz=95,SNR=12
PDMCI Parker Dam,Lak 94.62 56 ⇓P P 21 58 55.7 +0.1
baz=95
J12A Stokes Ranch, 94.62 47 ⇓P P 21 58 55.7 +0.3
baz=95,SNR=7.4
O12A Currie 94.64 50 ⇑P P 21 58 55.7 +0.2
baz=95,SNR=14
I12A Atlanta 94.64 47 ⇑P P 21 58 55.5 +0.1
baz=95
F12A Elk City 94.72 45 ⇓P P 21 58 55.8 +0.1
baz=95
V13A Grand Canyon W 94.88 55 ⇑P P 21 58 57.1 +0.4
baz=95,SNR=22
W13A Hualapai Mount 94.90 55 ⇓P P 21 58 57.7 +0.9
baz=95,SNR=20
H12A Diamond D Ranc 94.90 46 ⇑P P 21 58 56.2 -0.4
baz=95
X13A Yucca 94.90 56 ⇑P P 21 58 57.1 +0.3
baz=95,SNR=7.8
T13A Saint George 95.03 53 ⇑P P 21 58 57.8 +0.4
baz=95,SNR=5.7
R13A O'Grain Ranch, 95.07 52 ⇑P P 21 58 58.3 +0.8
baz=95,SNR=13
Q13A Wheeler Ranch, 95.09 52 ⇓P P 21 58 57.9 +0.3
baz=95,SNR=12
S13A Holt Ranch, En 95.11 53 ⇓P P 21 58 58.1 +0.4
baz=95,SNR=7.4
P13A Bates Ranch, G 95.14 51 ⇓P P 21 58 58.4 +0.6
baz=95,SNR=10
HLID Hailey 95.14 47 ⇑P P 21 58 57.9 +0.2
baz=95
F13A Darby 95.36 45 ⇓P P 21 58 57.8 -0.8
baz=95,SNR=10
I13A Wildhorse Cree 95.38 47 ⇓P P 21 58 58.2 -0.6
baz=95,SNR=9.7
ARUT Antelope Range 95.46 53 eP P 21 59 00.3 +0.9
ARUT pP pP 21 59 14.8 -0.5
CCUT Cedar City 95.50 53 eP P 21 59 01.2 +1.6
W14A Seligman 95.56 55 ⇑P P 21 59 00.2 +0.4
baz=96,SNR=5.2
U14A Mt Trumbull 95.57 54 ⇓P P 21 59 00.5 +0.6
baz=96,SNR=26
V14A Boquillas Ranc 95.57 55 ⇑P P 21 59 00.3 +0.4
baz=96,SNR=9.6
X14A Yava 95.67 56 ⇓P P 21 59 00.6 +0.2
baz=96
Q14A Sevier Lake (B 95.67 52 ⇑P P 21 59 00.4 +0.1
baz=96,SNR=12
T14A Hurricane 95.69 53 ⇑P P 21 59 00.5 +0.1
baz=96
M14A Sheep Mountain 95.79 49 ⇓P P 21 59 00.6 -0.1
baz=96,SNR=8.3
I14A Mackay 95.86 47 ⇑P P 21 59 00.9 -0.1
baz=96
N14A Grayback Hills 95.87 50 ⇑P P 21 59 00.9 -0.2
baz=96,SNR=8.7
P14A Drum Mountains 95.88 51 ⇓P P 21 59 01.2 0.0
baz=96,SNR=9.6
L14A Malta 95.90 48 ⇑P P 21 59 01.0 -0.2
baz=96
YKA Yellowknife Ar 96.15 28 P P 21 59 00.7 -1.1
comp=Z,5.1nm,0.6s,mb5.1,baz=265,slow=4.6,SNR=16
YKA LR LR 22 43 28.5
comp=Z,294nm,18.4s,MS4.8,baz=205,slow=36
X15A Humboldt 96.21 56 ⇓P P 21 59 03.8 +1.0
baz=96
T15A Red Dirt Ranch 96.25 54 ⇑P P 21 59 03.8 +0.8
baz=96
U15A North Rim 96.29 54 ⇑P P 21 59 04.0 +0.8
baz=96,SNR=18
V15A Kaibab Nationa 96.34 55 ⇓P P 21 59 04.1 +0.7
baz=96,SNR=8.0
N15A Stansbury Isla 96.37 50 ⇓P P 21 59 03.9 +0.5
baz=96
O15A The Old Anders 96.38 50 ⇑P P 21 59 04.0 +0.6
baz=96
EDM Edmonton 96.42 37 eP P 21 59 02.9 -0.4
EDM epP pP 21 59 18.5 -0.8
M15A Larsen Ranch, 96.46 49 ⇑P P 21 59 03.5 -0.3
baz=96,SNR=6.9
H15A Lima 96.48 46 ⇑P P 21 59 04.2 +0.4
baz=96
MSU Marysvale 96.50 52 eP P 21 59 06.0 +1.9
S16A Weppner Ranch, 96.92 53 ⇓P P 21 59 06.5 +0.6
baz=97,SNR=7.6
WUAZ Wupatki 96.97 55 eP P 21 59 07.2 +1.0
comp=Z,8.2nm,1.0s,mb5.1
WUAZ Wupatki 96.97 55 ⇑P P 21 59 06.6 +0.3
baz=97
R16A Teasdale 97.03 52 ⇑P P 21 59 07.1 +0.7
baz=97,SNR=20
HWUT Hardware Ranch 97.13 49 eP P 21 59 06.9 +0.1
comp=Z,4.5nm,0.7s,mb5.0
A16A West Butte Ran 97.37 42 ⇓P P 21 59 06.8 -0.9
baz=97
RRI2 Red Ridge 97.38 47 P P 21 59 09.1 +1.2
comp=Z,5.2nm,1.0s,mb4.9
T17A Navajo Res., N 97.51 54 ⇓P P 21 59 08.8 +0.2
baz=98
S17A Black Ridge (B 97.54 53 ⇓P P 21 59 08.8 0.0
baz=98
R17A Hanksville Air 97.65 52 ⇑P P 21 59 09.5 +0.3
baz=98,SNR=6.9
P17A Butcher Ranch, 97.67 51 ⇑P P 21 59 09.1 -0.2
baz=98
O17A Robinson Place 97.70 50 ⇑P P 21 59 09.6 +0.2
baz=98,SNR=7.5
SRU San Rafael 97.82 52 eP P 21 59 09.7 -0.3
comp=Z,2.9nm,0.8s,mb4.9
SRU epP pP 21 59 25.1 -0.9
SRU San Rafael 97.82 52 eP P 21 59 09.7 -0.3
SRU e*PP pP 21 59 25.1 -0.9
SRU pmax pmax
comp=Z,3.0nm,0.8s,mb4.9
SRU San Rafael 97.82 52 ⇑P P 21 59 09.5 -0.5
baz=98
F17A Fitzpatrick Pl 97.93 45 ⇓P P 21 59 10.1 -0.2
baz=98
P18A Preston Nutter 98.06 51 ⇓P P 21 59 11.5 +0.5
baz=98
Q18A Rafter H Ranch 98.12 52 ⇓P P 21 59 10.7 -0.6
baz=98,SNR=5.1
V18A Ganado 98.16 55 ⇑P P 21 59 11.7 +0.1
baz=98
S18A Hurst Farm, Bl 98.18 53 ⇓P P 21 59 11.3 -0.4
baz=98,SNR=7.2
M18A Lyman 98.25 49 ⇓P P 21 59 12.0 +0.1
baz=98
R18A Canyonlands Na 98.29 52 ⇓P P 21 59 12.3 +0.2
baz=98
E18A Harlowton 98.46 44 ⇓P P 21 59 12.7 0.0
baz=98
N18A Larsen Ranch, 98.53 50 ⇑P P 21 59 13.0 -0.1
baz=98
PDAR Pinedale Array 98.66 48 P P 21 59 12.8 -0.8
comp=Z,2.7nm,0.6s,mb4.9,baz=242,slow=3.2,SNR=8.9
PDAR LR LR 22 46 01.2
comp=Z,848nm,18.0s,MS5.3,baz=302,slow=37
S19A Harvey Farm, M 98.86 53 ⇓P P 21 59 14.4 -0.3
baz=99,SNR=7.3
TXAR Lajitas Array 103.32 62 Pdiff Pdif 21 59 36.8 +2.7
comp=Z,0.1nm,0.4s,baz=220,slow=6.9,SNR=2.6
TXAR PKiKP PKiKP 22 03 52.5 -1.3
comp=Z,0.8nm,0.9s,baz=254,slow=4.7,SNR=4.4
TXAR PKKPbc PKKPbc 22 15 30.8 +1.0
comp=Z,0.3nm,0.8s,baz=177,slow=3.6,SNR=3.6
APA Apatity 107.73 340 eP Pdif 21 59 54.0 +0.2
APA pmax pmax
comp=Z,38nm,1.4s
KIV Kislovodsk 110.43 314 ePKPdf PKiKP 22 04 05.7 -0.9
KIV Kislovodsk 110.43 314 eP Pdif 22 00 02.5 -3.2
KIV i 22 04 04.8
KIV e 22 04 40.8
KIV eSS SS 22 20 01.9 -4.6
KIV pmax pmax
comp=Z,5.0nm,1.0s
OLIL Olney 115.23 50 ePKPdf PKiKP 22 04 15.9 -0.1
WCI Wyandotte Cave 116.73 50 ePKPdf PKPdf 22 04 17.9 -0.9
AKASG Malin Array Be 117.12 324 PKP PKPdf 22 04 17.1 -2.1
comp=Z,4.0nm,0.8s,baz=66,slow=2.4,SNR=10
AKASG PKKPbc PKKPbc 22 14 43.9 -1.8
comp=Z,2.0nm,0.6s,baz=263,slow=3.8,SNR=8.1
PLCA Paso Flores 117.14 143 PKP PKPdf 22 04 19.6 0.0
comp=Z,1.7nm,0.6s,baz=229,slow=6.8,SNR=6.0
KMBO Kilima Mbogo 117.14 265 PKP PKPdf 22 04 20.9 +0.5
comp=Z,3.6nm,0.8s,baz=63,slow=1.3,SNR=6.6
KMBO Kilima Mbogo 117.14 265 ePKPdf PKPdf 22 04 21.5 +1.2
KMBO Kilima Mbogo 117.14 265 i PKiKP PKPdf 22 04 20.8 +0.4
ACSO Alum Creek Sta 118.69 48 ePKPdf PKPdf 22 04 21.4 -1.1
CPCT Cooper Cave 118.75 53 ePKPdf PKPdf 22 04 22.0 -0.8
NB2 NORSAR Subarra 119.30 341 PKPdf PKPdf 22 04 22.5 -0.6
comp=Z,2.3nm,0.8s,baz=39,slow=1.9
NOA NORSAR Array B 119.30 341 PKP PKPdf 22 04 22.9 -0.2
comp=Z,2.0nm,0.7s,baz=44,slow=1.9,SNR=8.3
BOSA Boshof 120.04 232 PKP PKPdf 22 04 25.9 +0.4

comp=Z,9.2nm,0.8s,baz=144,slow=1.6,SNR=21
BOSA PKKPbc PKKPbc 22 14 34.6 +0.1
comp=Z,3.2nm,0.9s,baz=234,slow=3.0,SNR=3.8
BOSA Boshof 120.04 232 *e*PKIKP PKPdf 22 04 26.6 +1.1
BOSA *e* 22 05 50.9
MCWV Mont Chateau 121.17 47 *e*PKPdf PKPdf 22 04 26.9 -0.4
LBTB Lobatse 121.37 235 *e*PKPdf PKPdf 22 04 29.1 +1.0
SUR Sutherland 121.45 226 *e*PKPdf PKPdf 22 04 30.3 +2.2
BLA Blacksburg 121.49 50 *e*PKPdf PKPdf 22 04 27.8 -0.3
KOLS Kolonicke sedl 121.93 325 *e*PKP PKPdf 22 04 27.3 -1.2
SSPA Standing Stone 122.24 46 *e*PKPdf PKPdf 22 04 29.2 -0.2
STHS Stebnicka Huta 122.26 326 *e*PKP PKPdf 22 04 26.7 -2.4
LSZ Lusaka 122.74 247 *e*PKPdf PKPdf 22 04 31.9 +0.9
URVA University of 123.56 49 *e*PKPdf PKPdf 22 04 31.8 -0.2
MVL Millersville 123.57 46 *e*PKPdf PKPdf 22 04 32.0 +0.1
OKC Ostrava-Krasne 123.71 328 AMS AMS 23 01 30.0
VYHS Vyhne 124.09 326 *e*PKP PKPdf 22 04 32.4 -0.3
KOLL Kolacno 124.29 326 *e*PKP PKPdf 22 04 33.3 +0.3
DPC Dobruska-Polom 124.36 329 AMS AMS 23 00 30.0
comp=Z,700nm,17.8s
UPC Upice 124.43 329 *e*PKPDF PKPdf 22 04 34.0 +0.8
MODS Modra-Piesok 125.02 327 *e*PKP PKPdf 22 04 32.8 -1.6
PVCC Panska Ves 125.14 330 *e*PKPDF PKPdf 22 04 35.2 +0.6
PVCC AMS AMS 23 03 20.0
comp=Z,700nm,18.2s
BRG Berggiesshubel 125.23 331 *e*P PKPdf 22 04 34.5 -0.3
BRG Berggiesshubel 125.23 331 *e*PKIKP PKPdf 22 04 34.5 -0.3
BRG pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 125.40 332 ||*i*PKP PKPdf 22 04 35.3 +0.2
CLL *e*PP PP 22 06 30.0 +4.4
CLL LR LR
comp=Z,600nm,19.3s,MS5.3
CLL Collm 125.40 332 ||*i*PKIKP PKPdf 22 04 35.3 +0.2
CLL *e* 22 06 30.0
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL MLR MLR
comp=Z,600nm,19.3s,MS5.3
CLL Collm 125.40 332 ||*i*PKPdf PKPdf 22 04 35.3 +0.2
comp=Z,8.0nm,0.9s
CLL *e*PP PP 22 06 30.0 +4.4
CLL *e*SPP 22 17 54.0
CLL *e*SS SS 22 23 29.0 +10
CLL Lm 23 05 00.0
comp=N,500nm,18.5s
CLL Lm 23 05 00.0
comp=E,200nm,19.8s
CLL Lm 23 05 00.0
comp=Z,600nm,19.3s
TREC Trest 125.43 328 AMS AMS 23 01 30.0
comp=Z,700nm,18.6s
PRU Pruhonice 125.49 330 *e*PKPDF PKPdf 22 04 35.9 +0.6
PRU AMS AMS 23 03 00.0
comp=Z,900nm,17.5s
NKC Novy Kostel 126.37 331 *e*PKPDF PKPdf 22 04 37.8 +0.8
NKC AMS AMS 23 04 30.0
comp=Z,800nm,18.0s
KHC Kasperske Hory 126.52 329 ||*i*PKIKP PKPdf 22 04 37.0 -0.3
KHC Kasperske Hory 126.52 329 *e*PKPDF PKPdf 22 04 37.8 +0.5
KHC AMS AMS 23 04 00.0
comp=Z,800nm,17.5s
GERES GERESS Array B 126.64 329 PKP PKPdf 22 04 37.3 -0.2
comp=Z,4.4nm,0.8s,baz=70,slow=1.4,SNR=39
GRA1 Grafenberg Arr 127.32 331 *e*PKP PKPdf 22 04 38.7 -0.1
GRA1 LR LR
comp=Z,400nm,21.1s,MS5.1
GRF Grafenberg Arr 127.32 331 *e*PKPdf PKPdf 22 04 38.7 -0.1
GRF *e*L 23 06 42.1
comp=Z,397nm,21.1s
MEM Membach 129.03 335 PKP PKPdf 22 04 42.2 +0.2
WLF Walferdange 129.67 334 PKP PKPdf 22 04 44.0 +0.7
GIVF Givet 129.91 335 *e*PKP1 PKPdf 22 04 44.2 +0.5
HINF Hinteralfeld 130.70 332 *e*PKP1 PKPdf 22 04 45.0 -0.3
HAU Haudompre 130.80 332 *e*PKP1 PKPdf 22 04 45.4 -0.1
MEZF Maizieres J'vi 131.02 334 *e*PKP1 PKPdf 22 04 44.7 -1.2
comp=Z,7.4nm,0.6s
ROSC El Rosal 131.16 89 PKP PKPdf 22 04 48.4 +1.2
comp=Z,8.3nm,0.4s,baz=106,slow=23,SNR=5.6
ROSC SKPbc SKPbc 22 08 10.6 +3.2
comp=Z,4.7nm,0.4s,baz=261,slow=11,SNR=7.4
LPAZ La Paz 131.84 119 PKP PKPdf 22 04 47.8 -0.6
comp=Z,6.8nm,1.2s,baz=51,slow=5.6,SNR=9.6
LPAZ SKPbc SKPbc 22 08 13.7 +3.9
comp=Z,3.3nm,0.7s,baz=228,slow=6.9,SNR=10
LPAZ La Paz 131.84 119 *e*PKIKP PKPdf 22 04 49.9 +1.5
CABF La Chapelle 131.93 331 *e*PKP1 PKPdf 22 04 46.7 -1.0
comp=Z,24nm,1.1s
LPL La Plagne 132.40 330 *e*PKP1 PKPdf 22 04 49.3 +0.7
LPG La Plagne 132.40 330 *e*PKP1 PKPdf 22 04 49.2 +0.6
LOR Lormes 132.48 333 *e*PKP1 PKPdf 22 04 48.7 0.0
comp=Z,10nm,1.0s
SSF Saint Saulge 132.79 333 *e*PKP1 PKPdf 22 04 49.4 +0.1
comp=Z,11nm,0.9s
MBDF Montbardon 132.93 329 *e*PKP1 PKPdf 22 04 49.8 +0.2
SMF Signal de Mont 132.96 333 *e*PKP1 PKPdf 22 04 48.7 -0.9
FLN La Foliniere 133.09 338 *e*PKP1 PKPdf 22 04 49.6 -0.2
ORIF Oris-en-Rattie 133.24 330 *e*PKP1 PKPdf 22 04 50.4 +0.2
comp=Z,23nm,0.9s
BGF Bois d'Agland 133.47 333 *e*PKP1 PKPdf 22 04 50.9 +0.3
VIVF Saint-Julien-l 133.89 331 *e*PKP1 PKPdf 22 04 51.5 +0.1
comp=Z,14nm,0.9s
TCF Toulx Ste Croi 133.96 334 *e*PKP1 PKPdf 22 04 51.8 +0.3
MFF Saint Martin d 134.71 336 *e*PKP1 PKPdf 22 04 53.8 +0.9
comp=Z,6.7nm,0.7s
LASF Ste Croix 134.85 330 *e*PKP1 PKPdf 22 04 54.5 +1.2
comp=Z,70nm,1.3s
KEST Kesra 137.07 317 PKhKP 22 04 50.5
comp=Z,1.0nm,0.9s,baz=45,slow=8.6,SNR=2.4
KEST SKPbc SKPbc 22 08 29.3 +3.1
comp=Z,2.2nm,1.0s,baz=339,slow=8.6,SNR=2.9
ETSF Etsaut 137.84 333 *e*PKP1 PKPdf 22 04 59.4 +0.6
comp=Z,7.6nm,0.7s
SIV San Ignacio 138.01 123 PKhKP 22 04 48.1
comp=Z,0.9nm,0.4s,baz=245,slow=4.3,SNR=5.8
SIV PKP PKPdf 22 04 58.6 -1.3
comp=Z,2.2nm,0.7s,baz=236,slow=2.4,SNR=8.9
SIV SKPbc SKPbc 22 08 32.0 +2.5
comp=Z,2.8nm,0.8s,baz=301,slow=0.9,SNR=6.9
SIV San Ignacio 138.01 123 PKP PKPdf 22 04 58.6 -1.3
SIV SKPbc SKPbc 22 08 32.0 +2.5
ESDC Sonseca Array 141.96 333 PKhKP 22 05 03.0
comp=Z,0.5nm,0.6s,baz=17,slow=2.0,SNR=5.9
VAO Valinhos 143.67 145 *e*P PKPdf 22 05 07.5 -2.5
VAO *i* 22 05 09.2
VAO *i* 22 05 16.9
EVO Evora 144.64 336 *e*PKIKP PKPdf 22 05 09.1 -2.1
comp=Z,10.0nm,0.9s
TAM Tamanrasset 146.30 302 *e*PKPbc PKPbc 22 05 16.3 +0.6
CAM4 Nova Friburgo 146.55 150 *e*P PKPdf 22 05 06.8 -8.1
CAM4 *i* 22 05 09.7
CAM4 *i* 22 05 16.8
CAM4 *i* 22 05 23.4
BDFB Brasilia 148.40 135 PKP PKPdf 22 05 17.9 -0.3
comp=Z,20nm,0.6s,baz=203,slow=8.8,SNR=14
BDFB PKPbc PKPbc 22 05 21.9 +0.3
comp=Z,20nm,0.6s,baz=201,slow=7.4,SNR=24
CAM3 Guarapari 148.93 151 *e*P PKPdf 22 05 19.1 +0.2
CAM3 *i* 22 05 23.1
CAM3 *i* 22 05 26.3
CAM3 *i* 22 05 39.5
TOA0 Torodi Ar. Sit 152.69 286 *e*PKPbc PKPbc 22 05 31.3 -0.6
TORD Torodi Ar. Bea 152.69 286 PKP PKPdf 22 05 23.3 -1.5
comp=Z,6.2nm,0.9s,baz=41,slow=1.4,SNR=28
TORD PKPbc PKPbc 22 05 30.9 -1.0
comp=Z,41nm,0.7s,baz=58,slow=2.1,SNR=85
TORD PKPab PKPab 22 05 43.0 +0.2
comp=Z,20nm,0.8s,baz=79,slow=3.5,SNR=14
TORD PP PP 22 09 13.2 -2.7
comp=Z,1.7nm,1.0s,baz=116,slow=3.4,SNR=2.6
DBIC Dimbokro 159.74 271 PKP PKPdf 22 05 34.3 +0.2
comp=Z,5.4nm,0.9s,baz=2.4,slow=4.2,SNR=4.3
DBIC PKPab PKPab 22 06 12.6 -0.5
comp=Z,8.7nm,0.9s,baz=63,slow=4.8,SNR=7.9
DBIC Dimbokro 159.74 271 *e*PKIKP PKPdf 22 05 34.7 +0.6
LIC Lamto 159.90 270 *e*PKIKP PKPdf 22 05 33.3 -1.0
comp=Z,48nm,1.3s

IDC 01 21:48:51.7±3.1, 374N×9458E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=120.2km s-min=26.2km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.24**	**16**	Pn	Pn	21 52 29.3	+1.0
	0.2nm,0.3s,baz=206,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	**44.20**	**348**	P	P	21 57 02.2	-0.2
	0.3nm,0.4s,baz=152,slow=7.7,SNR=4.0						
WRA	**Warramunga Arr**	**45.60**	**123**	P	P	21 57 13.3	-0.7
	2.0nm,0.6s,baz=302,slow=9.4,SNR=4.0						
ASAR	**Alice Springs**	**47.01**	**127**	P	P	21 57 25.6	+0.6
	0.6nm,0.5s,baz=299,slow=7.9,SNR=3.3						

*ISCJB **01** 21:54:05.5±0.8, 1656N×0905W×003, h28km±8km, Error ellipse: s-maj=8.5km s-min=3.8km az=11.0*
*NEIC **01** 21:54:07.9, 1660N×9904W, h9km, MD4.1(MEX), After MEX.*
*MEX **01** 21:54:08.5±0.5, 1658N×9906W, h15km±4km, MD4.1*
ISC 01 21:54:05.8±0.8, 1655N±005×9905W±003, h22km±9km, n23, σ0.8 82/45, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.89**	**291**	*i* P	**Pb**	**21 54 22.1**	**-0.3**
ACX				*i* S	**Sb**	**21 54 33.0**	**-0.9**
PNIG	**Pinotepa**	**0.90**	**100**	*i* P	**Pb**	**21 54 23.1**	**+0.4**
PNIG				*i* S	**Sb**	**21 54 34.4**	**+0.1**
CAIG	**El Cayaco**	**1.27**	**293**	*i* P	**Pn**	**21 54 27.9**	**-0.2**
CAIG				*i* S	**Sn**	**21 54 45.1**	**+0.6**
CAIG	**El Cayaco**	**1.27**	**293**	*i* P	**Pn**	**21 54 27.9**	**-0.2**
CAIG				*i* S	**Sn**	**21 54 43.5**	**-1.0**
MEIG	**Mezcala**	**1.47**	**338**	*i* P	**Pn**	**21 54 31.0**	**0.0**
MEIG				*i* S	**Sn**	**21 54 47.6**	**-1.9**
UTMO	**Huajuapan**	**1.74**	**43**	*e*P	**Pn**	**21 54 34.5**	**-0.2**
UTMO				*i* S	**Sn**	**21 54 55.0**	**-1.3**
PLIG	**Platanillo**	**1.88**	**347**	*i* P	**Pn**	**21 54 36.3**	**-0.4**
PLIG				*i* S	**Sn**	**21 54 55.2**	**-4.4**
PLIG	**Platanillo**	**1.88**	**347**	*i* P	**Pn**	**21 54 36.3**	**-0.4**
PLIG				*i* S	**Sn**	**21 54 58.7**	**-1.0**
VHO	**Vista Hermosa**	**2.28**	**77**	*e*P	**Pn**	**21 54 42.0**	**-0.1**
VHO				*i* S	**Sn**	**21 55 10.1**	**+0.6**
OXX	**Oaxaca**	**2.29**	**76**	*i* P	**Pn**	**21 54 41.5**	**-0.7**
OXX				*i* S	**Sn**	**21 55 10.3**	**+0.4**
TPIG	**Tehuac#an**	**2.46**	**41**	*i* P	**Pn**	**21 54 44.8**	**+0.2**
TPIG				*i* S	**Sn**	**21 55 13.0**	**-1.0**
PPM	**Popocatepetl**	**2.53**	**9**	*e*P	**Pn**	**21 54 50.7**	**+5.1**
PPM				*i* S	**Sn**	**21 55 22.4**	**+6.6**
PPM	**Popocatepetl**	**2.53**	**9**	*i* P	**Pn**	**21 54 46.1**	**+0.5**
PPM				*e*P		21 54 50.7	
PPM				*i* S	**Sn**	**21 55 16.4**	**+0.6**
PPM				*i* S	**Sn**	**21 55 22.4**	**+6.6**
ZIIG	**Zihuatanejo**	**2.54**	**295**	*i* P	**Pn**	**21 54 46.4**	**+0.7**
ZIIG				*i* S	**Sn**	**21 55 16.2**	**+0.4**
MZVM		**2.63**	**356**	*e*P	**Pn**	**21 54 47.3**	**+0.4**
MZVM				*i* S	**Sn**	**21 55 18.2**	**+0.1**
PBVM	**Pinon**	**2.87**	**359**	*e*P	**Pn**	**21 54 50.5**	**+0.3**
PBVM				*i* S	**Sn**	**21 55 23.9**	**-0.2**
PTVM	**Pico Tres Padr**	**3.02**	**359**	*e*P	**Pn**	**21 54 53.4**	**+1.0**
PTVM				*i* S	**Sn**	**21 55 28.6**	**+0.6**
IIO	**Organos**	**3.04**	**6**	*e*P	**Pn**	**21 54 53.5**	**+0.9**
IIO				*i* S	**Sn**	**21 55 28.5**	**+0.2**
MOIG	**Morelia**	**3.71**	**327**	*i* S	**Sn**	**21 55 46.9**	**+1.9**
LVIG	**Laguna Verde**	**4.03**	**38**	*e*P	**Pn**	**21 55 05.4**	**-0.7**
LVIG				*i* S	**Sn**	**21 55 55.9**	**+3.2**
MMIG	**Aquila**	**4.45**	**293**	*e*P	**Pn**	**21 55 12.4**	**+0.5**
MMIG				*i* S	**Sn**	**21 56 02.2**	**-0.8**
TGIG		**5.69**	**87**	*e*P	**Pn**	**21 55 29.4**	**+0.4**
TGIG				*i* S	**Sn**	**21 56 32.3**	**-1.4**
TEIG	**Tepich**	**10.86**	**69**	Pn	**Pn**	**21 56 44.0**	**+4.0**

*NEIC **01** 21:57:38.3±2.4, 662S×12966E, h60km±25km, mb4.1/4, Error ellipse: s-maj=26.3km s-min=15.4km az=71.0*
*IDC **01** 21:57:43.0±5.3, 667S×12981E, h107km±52km, mb3.8/9, mb1 3.9/11, mb1mx3.9/16, mbtmp3.8/11, Error ellipse: s-maj=33.1km s-min=16.3km az=81.0*
*ISCJB **01** 21:57:43.6±2.1, 669S±008×13003E±009, h136km±21km, mb3.9/8, Error ellipse: s-maj=17.2km s-min=10.1km az=142.4*
ISC 01 21:57:44.1±2.2, 67S±01×13007E±010, h123km±22km, n22, σ1.9 07/23, mb4.0/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.43**	**159**	*e*P	Px	21 59 11.2	
	157nm,0.6s						
KAKA				*e*S	Sx	22 00 19.7	
BATI	**Baumata**	**7.24**	**241**	P	**Pn**	**21 59 29.4**	**+2.1**
	28nm,0.3s,baz=73,slow=2.5,SNR=20						
BATI				S	**Sn**	**22 00 47.2**	**-0.9**
	34nm,0.3s,baz=241,slow=21,SNR=11						
WRAB	**Tennant Creek**	**13.81**	**163**	*e*Pn	**Pn**	**22 00 54.1**	**-0.6**
	9.6nm,0.4s						
WRA	**Warramunga Arr**	**13.82**	**163**	P	**Pn**	**22 00 54.0**	**-0.8**
	1.7nm,0.3s,baz=341,slow=13,SNR=43						
WRA				S	**Sn**	**22 03 18.9**	**-8.5**
	3.2nm,0.3s,baz=335,slow=22,SNR=13						
WB2	**Warramunga Arr**	**13.82**	**163**	*e*P	**Pn**	**22 00 53.5**	**-1.3**
WB2				*e*S	**Sn**	**22 03 18.3**	**-9.1**
COEN	**Coen**	**14.77**	**120**	*e*P	**Pn**	**22 01 12.8**	**+5.8**
	17nm,0.9s						
ASAR	**Alice Springs**	**17.28**	**168**	P	**Pn**	**22 01 39.5**	**+1.6**
	1.3nm,0.3s,baz=343,slow=9.5,SNR=47						
ASAR				S	**S**	**22 04 43.6**	**-6.8**
	1.0nm,0.3s,baz=348,slow=26,SNR=6.4						
MBWA	**Marble Bar**	**17.53**	**214**	*e*P	**Pn**	**22 01 41.4**	**+0.5**
	41nm,1.9s						
CTA	**Charters Tower**	**20.60**	**132**	*e*P	**P**	**22 02 09.9**	**-3.6**
	5.8nm,0.8s						
CTA	**Charters Tower**	**20.60**	**132**	P	**P**	**22 02 16.9**	**+3.4**
	6.5nm,0.6s,baz=307,slow=11,SNR=8.6						
CTAO	**Charters Tower**	**20.60**	**132**	*e*P	**P**	**22 02 17.5**	**+4.0**
STKA	**Stephens Creek**	**27.28**	**158**	*e*P	**P**	**22 03 18.3**	**+1.3**
	1.9nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**27.28**	**158**	P	**P**	**22 03 18.1**	**+1.2**
	2.2nm,0.8s,mb3.8,baz=322,slow=11,SNR=5.0						
NWAO	**Narrogin (SRO)**	**28.71**	**203**	P	**P**	**22 03 28.6**	**-1.1**
	15nm,1.2s,mb4.5,baz=50,slow=7.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**39.58**	**310**	P	**P**	**22 05 02.5**	**-1.0**
	0.5nm,0.4s,mb3.7,baz=138,slow=7.4,SNR=6.1						
CMAR				PcP	PcP	22 07 09.2	+0.6
	0.6nm,0.7s,baz=140,slow=3.5,SNR=4.5						
MJAR	**Matsushiro Arr**	**43.67**	**10**	P	**P**	**22 05 36.2**	**-0.4**
	0.9nm,0.5s,mb3.8,baz=182,slow=9.2,SNR=3.7						
MDRS	**Chennai**	**53.24**	**292**	*ex*	x	22 06 14.2	
SONM	**Songino Array**	**58.16**	**341**	P	**P**	**22 07 25.8**	**+0.9**
	0.3nm,0.4s,mb3.7,baz=161,slow=5.8,SNR=4.4						
MKAR	**Makanchi Array**	**68.00**	**327**	P	**P**	**22 08 30.1**	**+0.2**
	8.0nm,0.6s,mb4.7,baz=123,slow=8.1,SNR=64						
ZALV	**Zalesovo Beam**	**71.33**	**334**	P	**P**	**22 08 49.5**	**-0.7**
	1.3nm,0.7s,mb3.9,baz=112,slow=6.4,SNR=4.1						
MAW	**Mawson**	**75.27**	**201**	P	**P**	**22 09 13.8**	**+0.7**
	1.6nm,0.7s,mb3.9,baz=93,slow=8.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**128.82**	**281**	PKP	PKPdf	22 16 37.2	-0.8
	0.6nm,0.8s,baz=107,slow=1.4,SNR=2.9						

*IDC **01** 22:19:06.0±0.5, 653S×15491E, h0km, mb4.5/16, mb1 4.6/17, mb1mx4.6/18, mbtmp4.4/17, ML3.9/1, MS4.0/6, Ms1 4.0/6, ms1mx3.4/35, Error ellipse: s-maj=18.5km s-min=13.1km az=106.0*
*ISCJB **01** 22:19:09.9±0.4, 659S±005×15491E±007, h33km, mb4.9/50, MS4.3/11, Error ellipse: s-maj=9.9km s-min=7.1km az=4.9*
*MOS **01** 22:19:11.0±1.3, 638S×15468E, h33km, mb5.0/8, Error ellipse: s-maj=11.4km s-min=11.0km az=7.2*
*BJI **01** 22:19:11.0, 629S×15491E, h33km, mB5.2, mb5.0, Ms5.0, Msz4.6*
*NEIC **01** 22:19:12.2±0.3, 654S×15472E, h35km, mb5.4/20, Error ellipse: s-maj=9.9km s-min=8.1km az=81.0*
*DJA **01** 22:19:13, 689S×155.10E, h30km, mb5.1/6*
ISC 01 22:19:11.9±0.4, 663S±005×15489E±007, h35km, (h38km±2.2km: pP-P), n106, σ0.9 93/93, mb4.9/50, MS4.3/11, 4C-2D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.72**	**119**	Pn	**Pn**	**22 20 41.7**	**+7.3**
HNR				Sn	**Sn**	**22 21 48.9**	**+10**
	2.3nm,0.3s,baz=94,slow=1.9,SNR=3.8						
HNR				LR	LR	22 22 28.7	
	comp=Z,1μm,20.0s,baz=270,slow=35						
HNR	**Honiara**	**5.72**	**119**	P	**Pn**	**22 20 41.7**	**+7.3**
HNR						22 21 48.9	
PMG	**Port Moresby**	**8.14**	**250**	||*e*P	**Pn**	**22 21 11.3**	**+3.7**
PMG	**Port Moresby**	**8.14**	**250**	P	**Pn**	**22 21 11.6**	**+4.0**
	171nm,1.1s,0.8nm						
COEN	**Coen**	**13.63**	**237**	P	**Pn**	**22 22 33.8**	**+11**
CTA	**Charters Tower**	**15.79**	**211**	*e*P	**Pn**	**22 22 51.6**	**0.0**
	4.7nm,1.0s						
CTA				*e*		22 22 57.1	
CTA	**Charters Tower**	**15.79**	**211**	Pn	**Pn**	**22 22 51.6**	**-0.1**
	0.3nm,0.3s,baz=32,slow=17,SNR=3.0						
CTA				LR	LR	22 28 11.8	
	comp=Z,662nm,19.6s,baz=52,slow=34						
CTA	**Charters Tower**	**15.79**	**211**	*e*P	**Pn**	**22 22 51.6**	**0.0**
CTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GUMO	**Guam**	**22.42**	**334**	LR	LR	22 30 28.7	
	comp=Z,89nm,19.8s,MS3.2,baz=124,slow=31						
KAKA	**Kakadu**	**22.93**	**253**	*e*	**P**	**22 24 11.1**	**-2.1**
KAKA				*e*PCP	PcP	22 27 55.3	-7.7
ARMA	**Armidale**	**23.86**	**187**	*e*P	**P**	**22 24 22.5**	**+0.4**
WRAB	**Tennant Creek**	**23.93**	**234**	*e*P	**P**	**22 24 22.5**	**-0.3**
	comp=Z,30nm,1.2s,mb4.6						
WRAB				*e*PcP	PcP	22 28 05.6	+0.7
WRAB	**Tennant Creek**	**23.93**	**234**	*e*P	**P**	**22 24 22.5**	**-0.3**
WRAB				*e*		22 28 05.6	
WRAB				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.6						
WRAB	**Tennant Creek**	**23.93**	**234**	P	**P**	**22 24 23.2**	**+0.4**
	comp=Z,26nm,1.1s,mb4.6						
WB2	**Warramunga Arr**	**23.93**	**234**	*e*P	**P**	**22 24 22.4**	**-0.5**
WB2				*e*PCP	PcP	22 28 05.4	+0.4
WRA	**Warramunga Arr**	**23.94**	**234**	P	**P**	**22 24 22.2**	**-0.8**
	comp=Z,8.3nm,0.9s,mb4.2,baz=55,slow=9.5,SNR=52						
WRA				PcP	PcP	22 28 05.2	+0.2
	comp=Z,5.4nm,0.7s,baz=58,slow=2.3,SNR=14						
WRA				S	**S**	**22 28 43.3**	**+5.9**
	comp=Z,2.0nm,1.1s,baz=53,slow=15,SNR=7.1						
SWI	**Sorong**	**24.26**	**283**	P	**P**	**22 24 27.6**	**+1.6**
	comp=Z,57nm,1.1s,mb4.9						
ASAR	**Alice Springs**	**26.34**	**228**	P	**P**	**22 24 44.1**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=60,slow=9.2,SNR=16						
ASAR				PcP	PcP	22 28 10.6	+0.3
	comp=Z,2.9nm,0.9s,baz=50,slow=3.0,SNR=10.0						
LBMI	**Labuha**	**27.97**	**281**	P	**P**	**22 25 00.5**	**+1.0**
	comp=Z,87nm,1.2s,mb5.3						
STKA	**Stephens Creek**	**28.02**	**205**	*e*P	**P**	**22 24 59.1**	**-0.6**
	comp=Z,2.6nm,0.6s,mb4.0						
STKA				*e*PCP	PcP	22 28 13.8	-0.3
STKA	**Stephens Creek**	**28.02**	**205**	P	**P**	**22 24 59.1**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=12,slow=18,SNR=3.0						
STKA				PcP	PcP	22 28 13.0	-1.1
	comp=Z,3.3nm,0.8s,baz=119,slow=2.5,SNR=4.7						
STKA				LR	LR	22 34 56.4	
	comp=Z,539nm,18.1s,MS4.2,baz=280,slow=34						
FORT	**Forrest**	**34.78**	**223**	*e*P	**P**	**22 25 58.5**	**-0.7**
	comp=Z,9.4nm,0.7s,mb4.8						
KAPI	**Kappang**	**34.99**	**271**	*e*P	**P**	**22 25 59.9**	**-1.4**
KAPI				*e*PcP	PcP	22 28 33.0	-0.2
KAPI	**Kappang**	**34.99**	**271**	P	**P**	**22 26 07.1**	**+5.8**
	comp=Z,14nm,1.1s,mb4.8						
URZ	**Urewera**	**37.37**	**151**	P	**P**	**22 26 22.2**	**+0.9**
	comp=Z,13nm,1.2s,mb4.6,baz=225,slow=5.7,SNR=3.6						
RPZ	**Rata Peaks**	**39.57**	**162**	P	**P**	**22 26 40.3**	**+0.7**
	comp=Z,5.6nm,1.0s,mb4.3,baz=18,slow=3.2,SNR=3.8						
MJAR	**Matsushiro Arr**	**45.71**	**341**	P	**P**	**22 27 26.6**	**-2.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=173,slow=11,SNR=4.1						
KSRS	**Korea Array**	**50.57**	**332**	P	**P**	**22 28 06.2**	**-1.0**
	comp=Z,5.5nm,0.9s,mb4.5,baz=143,slow=8.3,SNR=12						
KSRS				LR	LR	22 48 16.4	
	comp=Z,109nm,18.5s,MS3.9,baz=85,slow=35						
NJ2	**Nanjing**	**51.57**	**320**	*e*P	**P**	**22 28 15.7**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
ASAJ	**Asahikawa**	**51.72**	**349**	LR	LR	22 47 33.3	
	comp=Z,364nm,18.3s,MS4.4,baz=131,slow=33						
WHN	**Wuhan**	**53.61**	**316**	||P	**P**	**22 28 30.7**	**+0.8**
MDJ	**Mudanjiang**	**55.87**	**338**	P	**P**	**22 28 47.0**	**+1.0**
MDJ				XP	sP	22 28 59.9	-0.8
MDJ				AMB	AMB		
	comp=Z,9.0nm,2.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,127nm,7.2s						
CN2	**Changchun**	**56.82**	**335**	*e*P	**P**	**22 28 57.4**	**+4.6**
GYA	**Guiyang**	**57.16**	**307**	P	**P**	**22 28 56.0**	**+0.5**
GYA				AP	pP	22 29 07.8	+1.7
GYA				XP	sP	22 29 12.4	+2.2
GYA				PCP	PcP	22 29 51.3	+1.4
GYA				PP	PP	22 31 06.0	+3.2
GYA				SCP	ScP	22 33 47.8	+0.6
GYA				S	**S**	**22 36 48.6**	**-0.1**
GYA				PS		22 37 05.0	
GYA				SS	SS	22 40 38.2	-0.1
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
GYA				AMB	AMB		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,560nm,19.6s,MS4.8						
GYA				LR	LR		
	comp=E,480nm,18.5s,MS4.8						
GYA				LR	LR		
	comp=Z,460nm,19.3s,MS4.6						
XAN	**Xi'an**	**59.38**	**316**	P	**P**	**22 29 09.6**	**-1.3**
XAN				PCP	PcP	22 29 53.4	-5.2
XAN				PP	PP	22 31 24.2	+1.8
XAN				PPP		22 32 50.2	
XAN				S	**S**	**22 37 06.1**	**-11**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
XAN				AMB	AMB		
	comp=Z,410nm,13.1s						
PETK	**Petropavlovsk-**	**59.56**	**2**	P	**P**	**22 29 11.5**	**-0.2**
	comp=Z,4.6nm,0.8s,mb4.6,baz=165,slow=6.7,SNR=6.7						
KMI	**Kunming**	**59.73**	**304**	||P	**P**	**22 29 14.5**	**+1.0**
KMI				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.4						
CMAR	**Chiang Mai Arr**	**60.54**	**295**	P	**P**	**22 29 19.5**	**+0.4**
	comp=Z,5.8nm,0.8s,mb4.8,baz=114,slow=5.1,SNR=36						
CMAR	**Chiang Mai Arr**	**60.54**	**295**	*i* P	**P**	**22 29 20.2**	**+1.1**
CMAR				pmax	pmax		

comp=Z,19nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,143nm,5.9s
LZH LR LR
comp=N,715nm,15.7s
LZH LR LR
comp=Z,920nm,16.3s,MS5.0
GTA Gaotai 68.41 317 *e*P **P 22 30 10.5 +0.3**
GTA PP PP 22 32 44.2 +2.6
GTA S S 22 38 56.9 -13
GTA AMB AMB
comp=Z,6.0nm,1.3s,mb4.5
GTA AMB AMB
comp=Z,255nm,7.5s
GTA LR LR
comp=N,165nm,15.6s,MS4.5
GTA LR LR
comp=E,126nm,14.7s,MS4.5
GTA LR LR
comp=Z,181nm,15.6s,MS4.4
SONM Songino Array 68.98 327 P **P 22 30 13.1 -0.5**
comp=Z,4.0nm,0.9s,mb4.3,baz=135,slow=5.4,SNR=22
SHL Shillong 69.03 300⇑ *i*P **P 22 30 15.0 +0.6**
LSA Lhasa 70.99 304 P **P 22 30 27.6 +1.3**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.0
LSA Lhasa 70.99 304 *e*P **P 22 30 27.8 +1.5**
comp=Z,20nm,0.9s,mb5.0
LSA Lhasa 70.99 304 *e*P **P 22 30 27.8 +1.5**
LSA pmax pmax
comp=Z,19nm,0.9s,mb5.0
YAK Yakutsk 71.18 348⇑ *e*P **P 22 30 26.9 +0.1**
YAK pmax pmax
comp=Z,23nm,1.2s,mb5.0
ZAK Zakamensk 72.13 328 *e*P **P 22 30 31.7 -1.1**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TAPN Taplejung 73.13 301 *e*P **P 22 30 39.2 0.0**
comp=Z,77nm,0.9s,mb5.6
ODAN Odare 73.26 300 *e*P **P 22 30 40.4 +0.4**
comp=Z,147nm,0.7s,mb6.0
RAMN Ramite 73.97 300 *e*P **P 22 30 44.2 +0.1**
comp=Z,29nm,0.6s,mb5.4
JIRN Jiri 74.51 301 *e*P **P 22 30 47.8 +0.5**
comp=Z,47nm,0.7s,mb5.5
GUN Gumba 74.85 301 *e*P **P 22 30 49.8 +0.6**
comp=Z,101nm,0.7s,mb5.8
BILL Bilibino 74.93 4 *i*P **P 22 30 48.5 -0.3**
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.2
PKI Pulchoki 75.15 301 *e*P **P 22 30 51.2 +0.2**
comp=Z,85nm,1.1s,mb5.6
PKI Pulchoki 75.15 301 *e*P **P 22 30 51.2 +0.2**
PKI pmax pmax
comp=Z,85nm,1.1s,mb5.6
PKIN Phulchoki 75.17 301 *e*P **P 22 30 50.9 -0.2**
KKN Kakani 75.32 301 *e*P **P 22 30 52.1 +0.1**
comp=Z,60nm,0.7s,mb5.6
KKN Kakani 75.32 301 *e*P **P 22 30 52.1 +0.1**
KKN pmax pmax
comp=Z,60nm,0.7s,mb5.6
DMN Daman 75.42 301 *e*P **P 22 30 53.0 +0.4**
comp=Z,117nm,0.8s,mb5.9
GKN Gorkha 75.93 301 *e*P **P 22 30 55.5 0.0**
comp=Z,104nm,0.9s,mb5.8
KOLN Koldanda 76.75 300 *e*P **P 22 31 00.0 -0.2**
comp=Z,50nm,0.8s,mb5.5
DANN Dangsing 76.77 301 *e*P **P 22 30 59.8 -0.4**
comp=Z,53nm,0.7s,mb5.5
WMQ Urumqi 78.49 317 *e*P **P 22 31 13.0 +3.5**
WMQ AMB AMB
comp=Z,12nm,1.2s,mb4.7
HYB Hyderabad 79.06 289 *e*P **P 22 31 12.5 -0.7**
HYB Hyderabad 79.06 289 *i*P **P 22 31 12.5 -0.7**
TIXI Tiksi 79.98 352 *i*P **P 22 31 18.2 +1.1**
MK31 Makanchi Array 83.07 319 *e*P **P 22 31 33.5 -0.4**
MKAR Makanchi Array 83.07 319 P **P 22 31 33.3 -0.6**
comp=Z,7.2nm,0.8s,mb4.7,baz=99,slow=5.3,SNR=47
QSPA South Pole Qui 83.34 180 *e*P **P 22 31 35.6 +0.9**
comp=Z,15nm,1.0s,mb5.0
POO Poona 83.66 289 *ex* x 22 31 35.0
ZALV Zalesovo Beam 83.83 326 P **P 22 31 36.0 -1.6**
comp=Z,3.9nm,0.8s,mb4.6,baz=112,slow=5.8,SNR=17
MAW Mawson 84.69 203 P **P 22 31 41.8 0.0**
comp=Z,4.2nm,0.7s,mb4.7,baz=86,slow=4.8,SNR=13
MAW Mawson 84.69 203 *e*P **P 22 31 42.2 +0.4**
comp=Z,14nm,1.3s,mb4.9
MAW Mawson 84.69 203 *e*P **P 22 31 42.2 +0.4**
MAW pmax pmax
comp=Z,14nm,1.3s
NVS Novosibirsk 85.00 327 *e*P **P 22 31 39.9 -3.6**
KURK Kurchatov 86.49 322 *e*P **P 22 31 49.9 -1.1**
comp=Z,8.1nm,1.3s,mb4.8
AML Almayashu 87.92 313 *e*P **P 22 31 58.9 +0.7**
comp=Z,4.8nm,0.8s,mb4.8
KBL Kabul 90.31 305 *e*P **P 22 32 08.9 -0.7**
comp=Z,2.5nm,0.8s,mb4.6
KBL Kabul 90.31 305 *e*P **P 22 32 08.9 -0.7**
KBL pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
NVAR Mina Array Bea 91.58 52 P **P 22 32 16.1 +0.7**
comp=Z,7.4nm,1.0s,mb5.0,baz=250,slow=6.2,SNR=19
SHPR Sheep Range 93.85 54 *e*P **P 22 32 26.3 +0.3**
ELK Elko 94.18 50 *e*P **P 22 32 25.9 -1.5**
YKA Yellowknife Ar 96.06 28 P **P 22 32 34.7 -0.7**
comp=Z,2.7nm,0.8s,mb4.8,baz=264,slow=4.6,SNR=4.6
PDAR Pinedale Array 98.53 48 P **P 22 32 46.0 -1.0**
comp=Z,0.9nm,0.9s,mb4.3,baz=153,slow=1.3,SNR=5.9
OBN Obninsk 111.39 327 *e*P Pdif 22 33 43.0 -1.0
OBN *e* 22 38 23.7
OBN *e*PS PS 22 47 55.7 +0.7
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.5
SFJD Kangerlussuaq 117.25 11 *e*PKPdf PKPdf 22 37 54.7 +1.7
BOSA Boshof 120.17 232 PKP PKPdf 22 37 59.5 -0.3
comp=Z,2.5nm,0.6s,baz=91,slow=4.7,SNR=7.3
BOSA Boshof 120.17 232 *e*PKIKP PKPdf 22 38 00.0 +0.1
LBTB Lobatse 121.50 235 PKP PKPdf 22 38 01.8 -0.8
baz=105,slow=20
LBTB Lobatse 121.50 235 *e*PKIKP PKPdf 22 38 02.5 0.0
SUR Sutherland 121.58 226 PKP PKPdf 22 38 02.7 +0.2
comp=Z,4.3nm,0.8s,baz=72,slow=3.2
SUR Sutherland 121.58 226 *e*PKPdf PKPdf 22 38 03.9 +1.4
LSZ Lusaka 122.89 247 *e*PKPdf PKPdf 22 38 05.8 +0.4
GERES GERESS Array B 126.69 329 PKP PKPdf 22 38 11.6 -0.1
comp=Z,0.6nm,0.6s,baz=85,slow=1.1,SNR=8.0
TSUM Tsumeb 130.73 238 *e*PKPdf PKPdf 22 38 21.8 +1.5
TAM Tamanrasset 146.41 302 *e*PKPdf PKPdf 22 38 49.6 +0.9
BDFB Brasilia 148.30 134 PKPbc PKPbc 22 38 53.6 -1.9
comp=Z,5.6nm,0.7s,baz=191,slow=7.8,SNR=9.8
TOA0 Torodi Ar. Sit 152.83 286 *e*PKPbc PKPbc 22 39 05.3 -1.0
TORD Torodi Ar. Bea 152.83 286 PKP PKPdf 22 38 57.5 -1.7
comp=Z,1.6nm,0.9s,baz=52,slow=1.9,SNR=8.0
TORD PKPbc PKPbc 22 39 05.2 -1.1
comp=Z,9.7nm,0.7s,baz=70,slow=2.3,SNR=45
TORD Torodi Ar. Bea 152.83 286 PKP PKPdf 22 38 57.5 -1.7
TORD PKPbc PKPbc 22 39 05.2 -1.1
DBIC Dimbokro 159.89 271 PKPab PKPab 22 39 46.3 -1.5
comp=Z,2.1nm,0.7s,baz=104,slow=5.5,SNR=5.3

IDC 01 22:26:01.7±3.8, 480S×15082E, h0km, mb3.4/2, mb1 3.8/2, mb1mx3.4/14, mbtmp3.5/2, Error ellipse: s-maj=151.1km s-min=49.2km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.00**	**225**	P	P	22 30 58.1	+0.4
	0.5nm,0.5s,baz=51,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**24.86**	**219**	P	P	22 31 25.8	-0.3
	1.0nm,0.5s,baz=55,slow=8.8,SNR=7.4						
TORD	**Torodi Ar. Bea**	**148.43**	**287**	PKPbc	PKPbc	22 45 50.9	-0.5
	0.2nm,0.6s,baz=74,slow=2.8,SNR=4.9						

*ISCJB **01** 22:29:58.7±1.0, 572S×0.1×254W×05, h10km, mb4.2/3, Error ellipse: s-maj=41.5km s-min=13.8km az=157.5*
*IDC **01** 22:29:58.4±1.1, 57.19S×2537W, h0km, mb4.4/2, mb1 4.5/2, mb1mx3.8/14, mbtmp4.4/2, Error ellipse: s-maj=44.6km s-min=30.9km az=75.0*

*NEIC **01** 22:30:03.8±0.8, 57.19S×2524W, h35km, mb3.9/1, Error ellipse: s-maj=33.6km s-min=15.6km az=71.0*
ISC 01 22:30:00.7±1.0, 572S×01×253W×05, h10km, n11, σ0§66/10, mb4.2/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.36**	**158**	*e*Pdiff	**Pn**	**22 33 38.4**	**+1.3**
VNA1				*e*		22 33 47.3	
VNA3	**Neumayer Olymp**	**15.58**	**161**	*e*Pdiff	**Pn**	**22 33 39.4**	**-0.6**
VNA3				*e*		22 33 49.0	
VNA2	**Neumayer--Watz**	**15.75**	**158**	*e*Pdiff	**Pn**	**22 33 41.5**	**-0.8**
	baz=322,slow=14						
VNA2				*e*		22 33 51.0	
SNAA	**Sanae**	**17.29**	**156**	*e*Pdiff	**Pn**	**22 34 02.3**	**+0.6**
SNAA				*e*		22 34 11.9	
SNAA	**Sanae**	**17.29**	**156**	*e*Pn	**Pn**	**22 34 02.0**	**+0.2**
	22nm,2.3s						
QSPA	**South Pole Qui**	**33.07**	**180**	P	P	**22 36 35.6**	**-0.2**
	2.9nm,0.6s,mb4.4,baz=202,slow=3.5,SNR=3.6						
LPAZ	**La Paz**	**51.87**	**304**	P	P	**22 39 08.8**	**-0.3**
	3.4nm,0.6s,mb4.5,baz=195,slow=5.3,SNR=15						
LPAZ	**La Paz**	**51.87**	**304**	*e*P	P	**22 39 09.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**73.55**	**27**	P	P	**22 41 33.5**	**-0.1**
	0.7nm,0.6s,mb3.8,baz=201,slow=5.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**73.55**	**27**	P	**P**	**22 41 33.5**	**-0.1**
SONM	**Songino Array**	**149.75**	**87**	PKPbc	PKPbc	22 49 48.5	-1.1
	1.3nm,0.7s,baz=211,slow=1.7,SNR=9.5						

IDC 01 22:32:40.7±1.6, 4580S×9687E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/14, mbtmp3.9/5, MS4.0/3, Ms1 4.0/3, ms1mx3.4/27, Error ellipse: s-maj=64.4km s-min=25.3km az=138.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**28.09**	**207**	P	P	22 38 33.2	-0.3
	1.0nm,0.5s,baz=31,slow=16,SNR=2.2						
STKA	**Stephens Creek**	**37.02**	**84**	*e*P	P	22 39 53.8	+1.8
	1.7nm,1.0s						
STKA	**Stephens Creek**	**37.02**	**84**	P	P	22 39 53.7	+1.6
	1.6nm,0.9s,baz=228,slow=14,SNR=3.4						
STKA				LR	LR	22 51 46.9	
	comp=Z,325nm,20.8s,baz=205,slow=31						
ASAR	**Alice Springs**	**37.13**	**66**	P	P	22 39 52.1	-0.9
	1.0nm,0.7s,baz=224,slow=7.1,SNR=12						
WRA	**Warramunga Arr**	**40.13**	**63**	P	P	22 40 17.6	-0.6
	2.2nm,0.7s,baz=223,slow=8.5,SNR=27						
WRA				LR	LR	22 55 19.3	
	comp=Z,252nm,19.0s,baz=240,slow=34						
WB2	**Warramunga Arr**	**40.13**	**63**	*e*P	P	22 40 17.9	-0.4
CMAR	**Chiang Mai Arr**	**63.97**	**2**	LR	LR	23 09 07.2	
	comp=Z,62nm,18.1s,baz=205,slow=34						
SONM	**Songino Array**	**93.62**	**6**	P	P	22 45 59.1	+1.0
	0.2nm,0.5s,baz=174,slow=1.4,SNR=4.5						

*ISCJB **01** 22:34:21.1±4.3, 123S±0.1×1654E±0.2, h47km±33km, mb4.0/8, Error ellipse: s-maj=35.0km s-min=18.1km az=160.8*
*IDC **01** 22:34:23.0±5.2, 1236S×16541E, h47km±41km, mb3.9/8, mb1 4.0/10, mb1mx3.8/19, mbtmp3.9/10, ML4.0/2, Error ellipse: s-maj=40.6km s-min=21.6km az=80.0*
ISC 01 22:34:23.5±3.7, 123S±01×1654E±02, h54km±28km, n13, σ1§00/13, mb4.0/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.09**	**297**	P	**Pn**	**22 35 50.8**	**-0.2**
	12nm,0.3s,baz=194,slow=8.3,SNR=4.6						
HNR				S	**Sn**	**22 36 59.7**	**+0.3**
	13nm,0.3s,baz=221,slow=20,SNR=4.9						
CTA	**Charters Tower**	**19.96**	**245**	*e*P	**Pn**	**22 38 52.7**	**-0.7**
	3.8nm,0.8s						
CTA	**Charters Tower**	**19.96**	**245**	P	**Pn**	**22 38 52.5**	**-0.9**
	0.2nm,0.3s,baz=86,slow=13,SNR=4.1						
ARMA	**Armidale**	**22.10**	**213**	*e*P	**P**	**22 39 16.6**	**+2.4**
STKA	**Stephens Creek**	**29.32**	**225**	P	**P**	**22 40 21.6**	**+0.5**
	2.3nm,0.8s,mb4.0,baz=40,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**30.78**	**252**	P	**P**	**22 40 33.6**	**-0.5**
	0.9nm,0.7s,mb3.7,baz=84,slow=9.2,SNR=13						
RPZ	**Rata Peaks**	**31.67**	**172**	P	**P**	**22 40 41.2**	**-0.5**
	3.0nm,0.7s,mb4.2,baz=215,slow=23,SNR=3.5						
ASAR	**Alice Springs**	**31.96**	**245**	P	**P**	**22 40 43.0**	**-1.5**
	1.3nm,0.6s,mb3.9,baz=68,slow=9.1,SNR=16						
CMAR	**Chiang Mai Arr**	**72.33**	**294**	P	**P**	**22 45 45.9**	**+1.8**
	0.7nm,0.4s,mb4.0,baz=134,slow=3.8,SNR=4.8						
SONM	**Songino Array**	**79.49**	**324**	P	**P**	**22 46 24.2**	**0.0**
	0.5nm,0.8s,mb3.5,baz=118,slow=4.5,SNR=4.3						
MKAR	**Makanchi Array**	**94.22**	**317**	P	**P**	**22 47 37.0**	**+0.3**
	1.3nm,0.6s,mb4.5,baz=85,slow=6.2,SNR=15						
ZALV	**Zalesovo Beam**	**94.39**	**324**	P	**P**	**22 47 36.4**	**-0.9**
	1.1nm,0.8s,mb4.4,baz=116,slow=4.3,SNR=5.6						
ARCES	**ARCESS Array B**	**117.47**	**345**	PKP	PKPdf	22 53 03.8	+1.2
	6.1nm,0.9s,baz=62,slow=2.8,SNR=7.1						

*ISCJB **01** 22:51:34.5±4.4, 66S±0.1×1547E±0.2, h46km±34km, mb4.3/17, Error ellipse: s-maj=36.9km s-min=23.4km az=13.2*
*IDC **01** 22:51:40.3±10.0, 685S×15479E, h95km±95km, mb3.6/8, mb1 3.9/9, mb1mx3.8/16, mbtmp3.7/9, ML3.7/1, MS3.7/3, Ms1 3.6/3, ms1mx3.3/27, Error ellipse: s-maj=46.3km s-min=32.6km az=84.0*
*NEIC **01** 22:51:40.4±0.6, 628S×15374E, h35km, mb4.8/11, Error ellipse: s-maj=13.7km s-min=10.7km az=94.0*
ISC 01 22:51:37.0±3.7, 68S±01×1547E±02, h59km±28km, n28, σ0§76/25, mb4.3/17, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.79**	**117**	LR	LR	22 55 06.0	
	comp=Z,304nm,20.6s,baz=155,slow=36						
HNR	**Honiara**	**5.79**	**117**	Pn	Px	22 53 19.3	
	115nm,1.0s						
PMG	**Port Moresby**	**7.93**	**250**	Pn	**Pn**	**22 53 29.7**	**0.0**
CTA	**Charters Tower**	**15.56**	**211**	*e*P	**Pn**	**22 55 18.3**	**+5.5**
	4.7nm,0.8s						
CTA	**Charters Tower**	**15.56**	**211**	P	**Pn**	**22 55 15.6**	**+2.8**
	0.2nm,0.3s,baz=32,slow=13,SNR=5.0						
CTA				LR	LR	23 00 50.0	
	comp=Z,264nm,18.5s,baz=47,slow=35						
CTAO	**Charters Tower**	**15.56**	**211**	*e*P	**Pn**	**22 55 17.7**	**+4.9**
	12nm,1.2s						
KAKA	**Kakadu**	**22.73**	**253**	*e*P	**P**	**22 56 32.4**	**-1.8**
	8.9nm,1.0s,mb4.2						
WRAB	**Tennant Creek**	**23.70**	**235**	*e*P	**P**	**22 56 44.1**	**+0.5**
	12nm,1.4s,mb4.1						
WB2	**Warramunga Arr**	**23.70**	**235**	*e*P	**P**	**22 56 43.8**	**+0.1**
WRA	**Warramunga Arr**	**23.71**	**235**	P	**P**	**22 56 44.2**	**+0.4**
	5.7nm,0.9s,mb4.0,baz=58,slow=9.5,SNR=21						
ASAR	**Alice Springs**	**26.11**	**228**	P	**P**	**22 57 05.8**	**+0.4**
	0.3nm,0.3s,mb3.3,baz=65,slow=8.3,SNR=5.1						
STKA	**Stephens Creek**	**27.80**	**204**	P	**P**	**22 57 19.1**	**-1.6**
	1.3nm,0.7s,mb3.7,baz=14,slow=12,SNR=2.4						
STKA				LR	LR	23 08 55.2	
	comp=Z,250nm,18.0s,baz=20,slow=37						
STKA	**Stephens Creek**	**27.80**	**204**	*e*P	**P**	**22 57 19.5**	**-1.1**
	53nm,2.6s,mb4.7						
STKA				LR	LR	23 08 55.2	
CMAR	**Chiang Mai Arr**	**60.46**	**296**	P	**P**	**23 01 42.2**	**+1.1**
	0.7nm,0.3s,mb4.1,baz=112,slow=5.1,SNR=5.3						
SONM	**Songino Array**	**69.02**	**327**	P	**P**	**23 02 35.6**	**-0.7**
	0.4nm,0.3s,mb3.4,baz=118,slow=7.7,SNR=2.7						
TAPN	**Taplejung**	**73.07**	**301**	*e*P	**P**	**23 03 02.1**	**+0.8**
ODAN	**Odare**	**73.20**	**301**	*e*P	**P**	**23 03 02.4**	**+0.3**
	19nm,0.8s,mb5.1						
JIRN	**Jiri**	**74.45**	**301**	*e*P	**P**	**23 03 09.7**	**+0.3**
	6.5nm,0.6s,mb4.7						
GUN	**Gumba**	**74.79**	**301**	*e*P	**P**	**23 03 11.6**	**+0.3**
	17nm,0.8s,mb5.0						
KKN	**Kakani**	**75.26**	**301**	*e*P	**P**	**23 03 14.0**	**-0.1**
DMN	**Daman**	**75.36**	**301**	*e*P	**P**	**23 03 14.9**	**+0.3**
	21nm,0.8s,mb5.1						
GKN	**Gorkha**	**75.87**	**301**	*e*P	**P**	**23 03 17.5**	**0.0**
	21nm,1.0s,mb5.0						
KOLN	**Koldanda**	**76.69**	**301**	*e*P	**P**	**23 03 22.1**	**-0.1**
	7.3nm,0.7s,mb4.7						
DANN	**Dangsing**	**76.71**	**301**	*e*P	**P**	**23 03 22.4**	**+0.1**
	11nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**83.08**	**319**	P	**P**	**23 03 56.1**	**-0.2**
	0.8nm,0.7s,mb3.9,baz=81,slow=7.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**83.86**	**326**	P	**P**	**23 03 58.5**	**-1.7**
	0.5nm,0.6s,mb3.9,baz=79,slow=7.5,SNR=3.3						
NVAR	**Mina Array Bea**	**91.81**	**52**	P	**P**	**23 04 39.2**	**+0.4**
	0.4nm,0.4s,mb4.1,baz=258,slow=5.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.72**	**285**	PKPbc	PKPbc	23 11 27.5	-0.7
	1.9nm,0.7s,baz=56,slow=1.9,SNR=13						

*CSEM **01** 22:55:36.7±0.1, 3637N×2778E, h80km, MD3.4, Error ellipse: s-maj=1.6km s-min=1.4km az=41.0*
*ISCJB **01** 22:55:37.1±0.3, 3640N±002×2767E±003, h97km±5km, Error ellipse: s-maj=4.2km s-min=3.8km az=23.2*
*DDA **01** 22:55:38.8, 3651N×2772E, h30km±3km, Md3.2*
*HLW **01** 22:55:38.6, 3631N×2756E, h30km, Mb3.9*
*ATH **01** 22:55:39.9, 3648N×2742E, h33km±6km, MD3.5/7*
*NEIC **01** 22:55:39.9, 3648N×2742E, h33km, MD3.5(ATH), After ATH.*
*THE **01** 22:55:41.0, 3658N×2751E, h15km±31km, ML2.4/1, Error ellipse: s-maj=31.6km s-min=3.0km az=0.0*
*ISK **01** 22:55:41.2, 3668N×2769E, h73km, MD3.4*
ISC 01 22:55:38.5±0.3, 3641N±002×2764E±003, h85km±6km, n51, σ1§16/77, 1C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.44**	**117**	*e*PN	**Pn**	**22 55 53.4**	**+1.2**
ARG				*e*SN	**Sn**	**22 56 02.6**	**+0.1**
BDRM	**Kayabasi**	**0.67**	**346**	*i*P	**Pn**	**22 55 54.2**	**-0.1**
BDRM				*i*S	**Sn**	**22 56 04.9**	**-1.1**
BODT	**Bodrum**	**0.70**	**338**	*e*PG	**Pn**	**22 55 54.5**	**-0.1**
BODT				*e*SG	**Sn**	**22 56 04.2**	**-2.3**
DALT	**Dalyan (Mudla)**	**0.88**	**66**	*e*PG	**Pn**	**22 55 58.0**	**+1.6**
DALT				*e*SG	**Sn**	**22 56 09.8**	**-0.1**
MLSB	**Milas**	**0.89**	**7**	*e*PG	**Pn**	**22 55 56.7**	**+0.1**
TURN	**Turunc**	**0.90**	**59**	*i*P	**Pn**	**22 55 53.7**	**-3.0**
TURN				*i*S	**Sn**	**22 56 03.6**	**-6.7**
KARP	**Karpathos**	**0.95**	**204**	*e*PN	**Pn**	**22 55 58.0**	**+0.7**
KARP				*e*SN	**Sn**	**22 56 11.5**	**+0.2**
AYDN	**Tasoluk**	**1.26**	**9**	*i*P	**Pn**	**22 56 01.6**	**+0.6**
AYDN				*i*S	**Sn**	**22 56 17.0**	**-0.9**
GCAM	**G?zelcaml?**	**1.32**	**346**	*i*P	**Pn**	**22 56 02.0**	**+0.2**
GCAM				*i*S	**Sn**	**22 56 18.6**	**-0.7**
GCAM	**G?zelcaml?**	**1.32**	**346**	*i*P	**Pn**	**22 56 02.0**	**+0.2**
GCAM				*i*S	**Sn**	**22 56 18.6**	**-0.7**
SMG	**Samos**	**1.44**	**334**	*e*PN	**Pn**	**22 56 03.4**	**+0.1**
SMG				*e*SN	**Sn**	**22 56 21.2**	**-0.8**
DENT	**Denizli**	**1.74**	**39**	*e*PN	**Pn**	**22 56 07.3**	**+0.2**
GOLH	**Golhisar**	**1.75**	**61**	*i*P	**Pn**	**22 56 08.8**	**+1.6**
GOLH				*i*S	**Sn**	**22 56 30.6**	**+1.6**
THR1	**Thera Island**	**1.76**	**269**	P	**Pn**	**22 56 07.8**	**+0.4**
THR1				S	**Sn**	**22 56 30.8**	**+1.5**
THR3	**Thira Island,**	**1.81**	**271**	P	**Pn**	**22 56 08.5**	**+0.5**
THR4	**Thira Island,**	**1.81**	**272**	P	**Pn**	**22 56 08.6**	**+0.6**
THR6	**Thira Island,**	**1.81**	**269**	P	**Pn**	**22 56 08.7**	**+0.7**
APE	**Apeiranthos**	**1.82**	**292**	P	**Pn**	**22 56 08.6**	**+0.5**
APE				S	**Sn**	**22 56 28.3**	**-2.3**
APE	**Apeiranthos**	**1.82**	**292**	*e*Pn	**Pn**	**22 56 08.8**	**+0.7**
THR5	**Thira Island,**	**1.85**	**271**	P	**Pn**	**22 56 09.3**	**+0.8**
ELL	**Elmali**	**1.85**	**79**	*e*PN	**Pn**	**22 56 10.5**	**+1.9**
ELL				*e*SN	**Sn**	**22 56 32.9**	**+1.4**
IZM	**Izmir**	**2.00**	**351**	*e*PN	**Pn**	**22 56 10.5**	**0.0**
NPS	**Neapolis**	**2.01**	**236**	*e*PN	**Pn**	**22 56 11.0**	**+0.4**
BLCB	**Balcova**	**2.02**	**347**	*e*PN	**Pn**	**22 56 11.1**	**+0.3**
BLCB				*e*SN	**Sn**	**22 56 32.3**	**-3.2**
MANT	**Manisa**	**2.20**	**19**	*i*P	**Pn**	**22 56 13.7**	**+0.6**
MANT				*i*S	**Sn**	**22 56 37.3**	**-2.3**
KULA	**Kula-Manisa**	**2.25**	**21**	*e*PN	**Pn**	**22 56 14.2**	**+0.4**
CHOS	**Chios island**	**2.34**	**328**	P	**Pn**	**22 56 15.5**	**+0.5**
CHOS				S	**Sn**	**22 56 41.4**	**-1.6**
KHL	**Karahalli**	**2.42**	**38**	*e*PN	**Pn**	**22 56 17.1**	**+0.9**
KHAL	**Karahalli**	**2.45**	**36**	*i*P	**Pn**	**22 56 17.1**	**+0.7**
KHAL				*i*S	**Sn**	**22 56 44.5**	**-1.1**
AKS	**Akhisar**	**2.46**	**3**	*e*PN	**Pn**	**22 56 17.1**	**+0.4**
BCK	**Bucak**	**2.58**	**65**	*e*PN	**Pn**	**22 56 20.2**	**+1.9**
DEMI	**Demirci**	**2.76**	**18**	*i*P	**Pn**	**22 56 21.1**	**+0.5**
DEMI				*i*S	**Sn**	**22 56 52.0**	**-1.1**
VAM	**Vamos**	**2.97**	**251**	*e*PN	**Pn**	**22 56 25.7**	**+2.2**
VAM				*e*SN	**Sn**	**22 56 58.5**	**+0.4**
SHUT	**Suhut-Afyon**	**3.15**	**46**	*e*PN	**Pn**	**22 56 27.1**	**+1.2**
DST	**Dursunbey**	**3.28**	**13**	*e*PN	**Pn**	**22 56 28.2**	**+0.5**
ALT	**Altintas**	**3.28**	**36**	*e*PN	**Pn**	**22 56 28.7**	**+1.0**
BALY	**Balya**	**3.32**	**360**	*i*P	**Pn**	**22 56 28.7**	**+0.5**
BALY				*i*S	**Sn**	**22 57 05.0**	**-1.7**
BALY	**Balya**	**3.32**	**360**	*i*P	**Pn**	**22 56 28.7**	**+0.5**
BALY				*i*S	**Sn**	**22 57 04.9**	**-1.7**
VLI	**Veliai**	**3.80**	**276**	*e*PN	**Pn**	**22 56 36.5**	**+1.8**
SLUM		**5.31**	**203**⇓	*e*P	**Pn**	**22 56 53.2**	**-2.1**
SLUM				S	**Sn**	**22 57 48.8**	**-6.3**
HRSH	**Kfar Ka'horesh**	**7.31**	**118**	⇑P	**Pn**	**22 57 23.4**	**+0.9**
HRSH				S	**Sn**	**22 58 40.8**	**-3.1**
AMAG	**Maghara**	**7.40**	**139**	P	**Pn**	**22 57 22.9**	**-0.8**
RSH		**7.43**	**135**	P	**Pn**	**22 57 23.5**	**-0.7**
HHAG	**Hagoal**	**7.45**	**149**⇓	*i*P	**Pn**	**22 57 23.5**	**-1.0**
HHAG				S	**Sn**	**22 58 41.5**	**-5.9**
HSAF	**As Saff**	**7.53**	**153**	P	**Pn**	**22 57 24.5**	**-1.0**
GLL	**Jalalah**	**7.62**	**152**	P	**Pn**	**22 57 25.8**	**-1.1**
SUZ		**7.87**	**145**	P	**Pn**	**22 57 29.2**	**-0.9**
AWBH		**8.14**	**172**	P	**Pn**	**22 57 32.1**	**-1.8**
AWBH				S	**Sn**	**22 58 57.0**	**-7.3**
ZAF		**8.22**	**148**	P	**Pn**	**22 57 33.8**	**-1.2**
HFRF	**Wahat Farafira**	**9.26**	**176**	P	**Pn**	**22 57 47.2**	**-1.9**
TR2		**9.51**	**146**	P	**Pn**	**22 57 51.7**	**-0.9**

*NEIC **01** 23:13:03.1±1.9, 630S×15131E, h35km, mb4.2/1, Error ellipse: s-maj=54.3km s-min=29.7km az=124.0*
IDC 01 23:12:58.9±2.0, 616S×15109E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, MS4.7/2, Ms1 4.7/2, ms1mx3.0/26, Error ellipse: s-maj=76.6km s-min=37.0km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**21.26**	**228**	*e*P	P	23 17 47.3	+0.5
	11nm,0.9s						
WB2	**Warramunga

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.10**	**58**	*e*PG	Pg	23 52 40.5	-0.2
DLMR				*i* S	Sg	23 52 47.3	+4.2
DBC	**Dubki**	**0.23**	**89**	*i* PG	Pg	23 52 45.0	+2.6
DBC				*i* S	Sg	23 52 51.5	+5.4
KRNR	**Karanay**	**0.35**	**123**	*i* PG	Pg	23 52 46.1	+1.8
KRNR				*i* S	Sg	23 52 54.8	+5.6
BTLR	**Botlikh**	**0.41**	**211**	*i* PG	Pg	23 52 47.7	+2.2
BTLR				*i* S	Sg	23 52 57.8	+6.7
BTLR				pmax	pmax		
	comp=Z,90nm,0.2s						
BTLR	**Botlikh**	**0.41**	**211**	*i* Pg	Pg	23 52 47.7	+2.2
	comp=Z,90nm,0.2s						
BTLR				*i* Sg	Sg	23 52 57.8	+6.7
KMKR	**Kumukh**	**0.98**	**154**	*e*PG	Pg	23 52 55.5	-0.6
KMKR				*i* S	Sb	23 53 10.0	+1.9
KMKR				pmax	pmax		
	comp=Z,19nm,0.3s						
KMKR	**Kumukh**	**0.98**	**154**	*e*Pg	Pg	23 52 55.5	-0.6
	comp=Z,19nm,0.3s						
KMKR				*i* Sg	Sg	23 53 10.0	+0.9
SNJR	**Sundja**	**1.25**	**273**	*e*Pg	Pg	23 52 58.7	-2.4
SNJR				*e*Sg	Sg	23 53 14.0	-3.4
VLKR	**Vladikavkaz**	**1.35**	**272**	*e*Pg	Pg	23 53 00.2	-2.8
TRKR	**Terskaya**	**1.48**	**299**	*i* Pg	Pg	23 53 04.6	-0.9
TRKR				*e*Sg	Sg	23 53 25.2	+0.5
BTKR	**Batakoyurt**	**1.48**	**285**	*e*Pg	Pg	23 53 03.2	-2.4
BTKR				*e*Sg	Sg	23 53 22.4	-2.5
LACR	**Lac**	**1.64**	**264**	*i* Pn	Pn	23 53 04.3	-0.6
ARNR	**Ardon**	**1.64**	**277**	*e*Pn	Pn	23 53 05.4	+0.4
KMSR	**Komsomolskaya**	**1.66**	**283**	*e*Pn	Pn	23 53 06.5	+1.3
KMSR				*e*Sg	Sg	23 53 27.7	-2.9
PRTR	**Priterechnaya**	**1.78**	**295**	*i* Pn	Pn	23 53 09.4	+2.5
PRTR				*i* Sg	Sg	23 53 32.7	-1.8
KORR	**Kora**	**1.79**	**273**	*e*Pn	Pn	23 53 07.8	+0.8
ZEI	**Tsey**	**1.94**	**264**	*i* Pn	Pn	23 53 09.2	+0.2
DIGR	**Digorskoe uzhe**	**2.15**	**268**	*i* Pn	Pn	23 53 13.0	+1.0

MEX 02 00:05:14.2±0.4, 1672N×9556W, h55km±21km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.75**	**60**	*e*P	Pn	00 05 27.1	-1.6
CMIG				*i* S	Sn	00 05 37.8	-1.6
VHO	**Vista Hermosa**	**1.18**	**288**	*i* P	Pn	00 05 33.2	-1.2
VHO				*i* S	Sn	00 05 47.8	-1.7
TGIG		**2.34**	**88**	*e*P	Pn	00 05 49.8	-0.4
TGIG				*i* S	Sn	00 06 16.1	-1.6
UTMO	**Huajuapan**	**2.41**	**298**	*i* P	Pn	00 05 50.6	-0.7
UTMO				*i* S	Sn	00 06 17.8	-1.8
PNIG	**Pinotepa**	**2.48**	**263**	*i* P	Pn	00 05 51.6	-0.6
PNIG				*i* S	Sn	00 06 18.9	-2.4

CSEM ***02*** *00:07:46.8±0.4, 4002N×2016E, h5km, MD2.9, Error ellipse: s-maj=10.3km s-min=2.9km az=167.0*
ISCJB ***02*** *00:07:47.2±2.3, 3978N±009×20.16E±006, h1km±18km, Error ellipse: s-maj=14.8km s-min=6.9km az=167.5*
ATH ***02*** *00:07:47.2, 3991N×2014E, h22km±3km, MD2.9/4*
ISC 02 00:07:49.1±0.7, 3979N±005×2015E±006, h14km±7km, n8, σ0s77/13, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.28**	**255**	*e*PB	**Pg**	**00 07 54.7**	**-0.3**
KEK				*e*SB	**Sg**	**00 07 59.4**	**+0.4**
JAN	**Janina**	**0.55**	**103**	*e*PB	**Pb**	**00 07 58.7**	**-1.9**
JAN				*e*SN	**Sg**	**00 08 07.8**	**+0.5**
THL	**Klokotos Trika**	**1.45**	**98**	*e*PN	**Pn**	**00 08 14.1**	**-0.9**
THL				*e*SN	**Sn**	**00 08 34.7**	**+0.9**
BIA	**Bitola**	**1.52**	**36**	*e*Pn	**Pn**	**00 08 15.6**	**-0.3**
BIA	**Bitola**	**1.52**	**36**	*e*Pn	**Pn**	**00 08 15.7**	**-0.2**
BIA				*e*Sg	**Sg**	**00 08 37.9**	**-0.3**
EVR	**Evrytania**	**1.55**	**124**	*e*PN	**Pn**	**00 08 17.1**	**+0.8**
KRUS	**Krusevo**	**1.79**	**27**	*e*Pn	**Pn**	**00 08 20.1**	**+0.5**
KRUS	**Krusevo**	**1.79**	**27**	*e*Pn	**Pn**	**00 08 20.2**	**+0.6**
KRUS				*e*Sg	**Sg**	**00 08 47.0**	**+0.4**

ISCJB ***02*** *00:35:04.7±0.6, 3342N±004×10405E±007, h10km, mb3.5/4, Error ellipse: s-maj=7.9km s-min=5.3km az=176.9*
IDC ***02*** *00:35:05.7±1.1, 3351N×10392E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/21, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=82.8km s-min=19.6km az=57.0*
BJI ***02*** *00:35:05.7, 3333N×10379E, h16km, ML3.8*
ISC 02 00:35:06.4±0.5, 3336N±003×10395E±007, h10km, n11, σ1s12/17, mb3.5/4, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.44**	**184**	*e*P	**Pn**	**00 35 47.9**	**+1.6**
CD2				PG	**Pg**	**00 35 51.4**	**-1.8**
CD2				S	**Sn**	**00 36 16.5**	**+0.3**
CD2				SG	**Sg**	**00 36 23.6**	**-1.3**
CD2				Smax			
	comp=N,580nm,1.4s						
CD2				Smax			
	comp=E,670nm,1.1s						
LZH	**Lanzhou**	**2.73**	**358**	P	**Pn**	**00 35 54.2**	**+4.0**
LZH				PG	**Pg**	**00 35 58.0**	**-0.6**
LZH				SG	**Sg**	**00 36 34.1**	**+0.2**
LZH				Smax			
	comp=N,514nm,1.2s						
LZH				Smax			
	comp=E,707nm,1.0s						
XAN	**Xi'an**	**4.20**	**79**	PG	**Pg**	**00 36 21.5**	**-5.3**
XAN				SG	**Sg**	**00 37 20.8**	**-0.5**
XAN				Smax			
	comp=N,316nm,0.9s						
XAN				Smax			
	comp=E,341nm,1.0s						
GTA	**Gaotai**	**6.90**	**332**	*e*P	**Pn**	**00 36 47.9**	**+0.4**
GYA	**Guiyang**	**7.27**	**160**	PG	**Pn**	**00 37 09.4**	**+17**
GYA				Smax			
	comp=N,30nm,1.2s						
GYA				Smax			
	comp=E,50nm,1.4s						
SONM	**Songino Array**	**14.58**	**7**	Pn	**Pn**	**00 38 31.5**	**-1.1**
	comp=E,0.1nm,0.3s,baz=184,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**21.24**	**316**	P	**P**	**00 39 52.5**	**+0.1**
	comp=E,1.2nm,0.8s,mb3.3,baz=110,slow=10,SNR=6.1						
ZALV	**Zalesovo Beam**	**24.66**	**332**	P	**P**	**00 40 26.5**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.2,baz=145,slow=5.3,SNR=3.7						
KURK	**Kurchatov**	**25.39**	**321**	P	**P**	**00 40 33.1**	**-0.6**
	baz=124,slow=10						
WRA	**Warramunga Arr**	**60.42**	**147**	P	**P**	**00 45 17.8**	**+1.7**
	comp=E,0.6nm,0.8s,mb3.7,baz=336,slow=7.5,SNR=3.3						
ASAR	**Alice Springs**	**63.48**	**149**	P	**P**	**00 45 39.0**	**+2.3**
	comp=E,0.5nm,0.8s,mb3.7,baz=339,slow=5.4,SNR=4.8						

BGS ***02*** *00:45:27.8±1.6, 4755N×15530E, h33km, mb5.2*
SKHL ***02*** *00:45:28.5±3.0, 4812N×15537E, h49km±18km, mb5.1/4, Ms4.3/4, msh5.4/1*
ISCJB ***02*** *00:45:31.2±0.7, 4837N±004×15479E±005, h33km±5km, mb4.7/114, MS4.2/35, Error ellipse: s-maj=7.5km s-min=3.6km az=148.0*
MOS ***02*** *00:45:32.1±0.9, 4837N×15474E, h40km, mb4.9/58, MS4.3/15, Error ellipse: s-maj=9.4km s-min=5.5km az=90.1*
BJI ***02*** *00:45:32.1, 4842N×15504E, h60km, mB4.7, mb4.6, Ms4.4, Msz4.1*
NEIC ***02*** *00:45:33.5±0.9, 4839N×15473E, h37km±7km, mb4.8/66, MS4.4/4, Error ellipse: s-maj=6.1km s-min=3.6km az=160.0*
IDC ***02*** *00:45:34.5±0.6, 4843N×15472E, h50km±6km, mb4.1/22, mb1 4.3/23, mb1mx4.3/24, mbtmp4.1/23, MS4.1/22, Ms1 4.1/22, ms1mx3.8/38, Error ellipse: s-maj=14.8km s-min=11.9km az=141.0*
SZGRF ***02*** *00:45:37.3, 4844N×153.12E, h33km, mb4.8, Kuril Islands, Russia*
ISC 02 00:45:34.6±0.6, 4845N±004×15475E±005, h44km±5km, h58km±4.4km: pP-P, n331, σ0s85/331, mb4.7/114, MS4.2/35, 18C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.41**	**21**	*e*PN	**Pn**	**00 46 09.2**	**-2.3**
SKR				*e*S	**Sn**	**00 46 37.5**	**-2.2**
SKR				pmax	pmax		
	comp=N,240nm,0.5s						
SKR				pmax	pmax		
	comp=Z,540nm,0.5s						
SKR				pmax	pmax		
	comp=E,200nm,0.3s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=Z,1μm,0.5s						
SKR				smax			
	comp=E,2μm,0.3s						
SKR				smax			
	comp=N,6μm,2.0s						
SKR				smax			
	comp=E,5μm,2.0s						
SKR				MLR	MLR		
	comp=N,6μm,14.0s						
SKR				MLR	MLR		
	comp=E,5μm,14.0s						
SKR				MLR	MLR		
	comp=Z,6μm,14.0s						
SKR	**Severo-Kuril's**	**2.41**	**21**	*e*P	**Pn**	**00 46 09.2**	**-2.3**
SKR				AMB	AMB	00 46 14.5	
	comp=Z,200nm,0.2s						
SKR				AMB	AMB	00 46 14.5	
	comp=Z,240nm,0.5s						
SKR				AMB	AMB	00 46 14.5	
	comp=Z,540nm,0.5s						
SKR				*e*S	**Sn**	**00 46 37.5**	**-2.2**
SKR				A		00 46 45.9	
	comp=Z,2μm,0.2s						
SKR				A		00 46 45.9	
	comp=Z,2μm,0.5s						
SKR				A		00 46 45.9	
	comp=Z,1μm,0.5s						
SKR				A		00 46 49.6	
	comp=Z,5μm,2.0s						
SKR				A		00 46 49.6	
	comp=Z,4μm,2.0s						
SKR				A		00 46 49.6	
	comp=Z,6μm,2.0s						
SKR				A		00 46 49.6	
	comp=Z,5μm,2.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,6μm,14.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,5μm,14.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,6μm,14.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,6μm,14.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,5μm,14.0s						
SKR				AMS	AMS	00 47 16.0	
	comp=Z,6μm,14.0s						
SKR				*e*rx	rx	00 55 07.5	
SKR				*e*rx	rx	00 55 36.4	
PETK	**Petropavlovsk-**	**5.03**	**21**	P	**Pn**	**00 46 48.5**	**+1.0**
	comp=Z,16nm,0.3s,baz=184,slow=12,SNR=200						
PETK				S	**Sn**	**00 47 50.1**	**+6.0**
	comp=Z,3.0nm,0.3s,baz=201,slow=16,SNR=2.3						
PETK				LR	LR	00 49 08.1	
	comp=Z,2μm,18.2s,baz=327,slow=42						
PET	**Petropavlovsk**	**5.21**	**27**	*e*Pn	**Pn**	**00 46 49.8**	**-0.2**
PET	**Petropavlovsk**	**5.21**	**27**	*e*PN	**Pn**	**00 46 49.7**	**-0.2**
PET				pmax	pmax		
	comp=Z,300nm,20.0s						
PET				pmax	pmax		
	comp=Z,100nm,0.6s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
KUR	**Kuril'sk**	**5.71**	**238**	↓*i* P	**Pn**	**00 46 54.9**	**-1.9**
KUR				AMB	AMB	00 46 55.6	
	comp=Z,70nm,0.6s						
KUR				AMB	AMB	00 46 55.6	
	comp=Z,300nm,0.6s						
KUR				*i* S	**Sn**	**00 48 02.0**	**+1.0**
KUR				A		00 48 11.9	
	comp=Z,570nm,0.9s						
KUR				A		00 48 11.9	
	comp=Z,880nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**7.57**	**238**	*e*P	**Pn**	**00 47 22.1**	**-0.3**
YUK				*e*S	**Sn**	**00 48 55.0**	**+8.2**
YUK				A		00 49 07.5	
	comp=Z,270nm,0.7s						
YUK				A		00 49 07.5	
	comp=Z,560nm,0.8s						
TYV	**Tymovskoe**	**8.21**	**292**	↑*e*P	**Pn**	**00 47 35.5**	**+4.5**
TYV				AMB	AMB	00 47 37.0	
	comp=Z,40nm,0.8s						
TYV				*e*LQ		00 49 46.0	
TYV				*e*LR	LR	00 50 26.0	
TYV				AMS	AMS	00 51 12.0	
	comp=Z,2μm,16.0s						
TYV				AMS	AMS	00 51 12.0	
	comp=Z,2μm,16.0s						
YSS	**Yuzh-Sakhalins**	**8.23**	**264**	*e*Pn	**Pn**	**00 47 34.8**	**+3.5**
YSS	**Yuzh-Sakhalins**	**8.23**	**264**	↑*e*PN	**Pn**	**00 47 35.0**	**+3.7**
YSS				pmax	pmax		
	comp=N,50nm,0.8s						
YSS				pmax	pmax		
	comp=E,50nm,0.8s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS	**Yuzh-Sakhalins**	**8.23**	**264**	↑*e*P	**Pn**	**00 47 35.0**	**+3.7**
YSS				AMB	AMB	00 47 37.5	
	comp=Z,50nm,0.8s						
YSS				AMB	AMB	00 47 37.5	
	comp=Z,50nm,0.8s						
YSS				*e*S	**Sn**	**00 49 04.3**	**+1.5**
YSS				A		00 49 12.0	
	comp=Z,50nm,0.9s						
YSS				*e*LQ		00 49 40.0	
YSS				*e*LR	LR	00 50 03.0	
YSS				AMS	AMS	00 50 46.0	
	comp=Z,600nm,14.0s						
YSS				AMS	AMS	00 50 46.0	
	comp=Z,800nm,14.0s						
UGL	**Uglegorsk**	**8.40**	**279**	*e*rx	rx	00 48 34.0	
UGL				*e*L		00 49 58.0	
UGL				AMS	AMS	00 50 54.0	
	comp=Z,1μm,20.0s						
UGL				AMS	AMS	00 50 54.0	
	comp=Z,4μm,20.0s						
UGL				AMS	AMS	00 50 54.0	
	comp=Z,1μm,15.0s						
ASAJ	**Asahikawa**	**9.46**	**247**	P	**Pn**	**00 47 50.2**	**+2.1**
	comp=Z,3.9nm,0.3s,baz=82,slow=14,SNR=11						
ASAJ				LR	LR	00 51 13.5	
	comp=Z,1μm,19.2s,baz=29,slow=36						
ASAJ	**Asahikawa**	**9.46**	**247**	PN	**Pn**	**00 47 50.3**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,19.2s						
ERM	**Erimo**	**10.39**	**236**	*i* PN	**Pn**	**00 48 00.4**	**-0.6**
HABR	**Khabarovsk**	**13.07**	**277**	PN	**Pn**	**00 48 35.6**	**-1.9**
SEY	**Seymchan**	**14.58**	**356**	*i* P	**Pn**	**00 48 58.5**	**+0.6**
KLR	**Kul'dur**	**15.15**	**282**	*e*P	**Pn**	**00 49 09.8**	**+4.3**
KLR				MLR	MLR		
	comp=E,500nm,12.0s						
KLR				MLR	MLR		
	comp=Z,3μm,12.0s						
MAJO	**Matsushiro**	**16.99**	**232**	*e*Pn	**Pn**	**00 49 25.6**	**-3.4**
	comp=Z,12nm,0.7s						
MAJO	**Matsushiro**	**16.99**	**232**	*e*P	**Pn**	**00 49 25.6**	**-3.4**
MAJO				pmax	pmax		
	comp=Z,12nm,0.7s						
MAT	**Matsushiro**	**16.99**	**232**	P	**Pn**	**00 49 25.0**	**-4.0**
MAT				*e*S	**S**	**00 52 44.2**	**-0.9**
MJAR	**Matsushiro Arr**	**16.99**	**232**	P	**Pn**	**00 49 24.6**	**-4.4**
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=12						
MDJ	**Mudanjiang**	**17.70**	**267**	P	**Pn**	**00 49 38.4**	**+0.8**
MDJ				AP	pP	00 49 51.1	+2.6
MDJ				XP	sP	00 49 59.5	+5.5
MDJ				S	**S**	**00 52 52.1**	**-7.2**
MDJ				SCP	ScP	00 57 44.5	-0.7
MDJ				PCS	PcS	00 57 51.4	+1.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,38nm,4.5s						
MDJ				LR	LR		
	comp=N,195nm,15.8s						
MDJ				LR	LR		
	comp=E,317nm,16.3s						
MDJ				LR	LR		
	comp=Z,499nm,13.7s						
JHJ	**Hachijo jima 2**	**18.99**	**222**	LR	LR	00 56 54.9	
	comp=Z,141nm,19.9s,baz=25,slow=36						
YAK	**Yakutsk**	**19.55**	**323**	P	**Pn**	**00 49 51.7**	**-8.2**
	comp=Z,31nm,0.6s						
YAK	**Yakutsk**	**19.55**	**323**	*e*P	sP	00 50 14.0	-0.3
YAK				pmax	pmax		
	comp=E,11nm,1.0s						
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
BILL	**Bilibino**	**20.49**	**12**	*e*P	**P**	**00 50 07.3**	**-1.2**
	comp=N,7.1nm,0.5s						
BILL	**Bilibino**	**20.49**	**12**	↑*e*P	**P**	**00 50 06.0**	**-2.4**
BILL				*e*S	**S**	**00 53 52.7**	**-2.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.0						
CN2	**Changchun**	**20.76**	**268**	↑P	**P**	**00 50 09.8**	**-1.8**
CN2				*e*AP		00 50 23.1	
CN2				*e*XP	sP	00 50 31.0	+3.4
CN2				*e*S	**S**	**00 53 51.9**	**-8.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,13.0s,MS4.2						
CN2				LR	LR		
	comp=E,500nm,13.0s,MS4.2						
CN2				LR	LR		
	comp=Z,500nm,15.0s,MS4.0						
KSRS	**Korea Array**	**22.38**	**251**	P	**P**	**00 50 28.7**	**-0.3**
	comp=Z,16nm,0.7s,mb4.6,baz=50,slow=10.0,SNR=30						
KSRS	**Korea Array**	**22.38**	**251**	P	**P**	**00 50 28.7**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.6						
KS15	**Wonju Array Si**	**22.41**	**251**	*e*P	**P**	**00 50 29.6**	**+0.3**
UNV	**Unalaska Valle**	**24.68**	**63**	*e*P	**P**	**00 50 51.0**	**-0.1**
	comp=Z,55nm,1.1s,mb5.0						
TIXI	**Tiksi**	**26.18**	**342**	*e*P	**P**	**00 51 04.4**	**-0.1**
	comp=Z,20nm,1.6s,mb4.4						
TIXI	**Tiksi**	**26.18**	**342**	*e*P	**P**	**00 51 05.3**	**+0.8**
TIXI				*e*S	**S**	**00 55 38.3**	**+5.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,507nm,14.0s,MS4.2						
BJI	**Beijing**	**28.63**	**267**	P	**P**	**00 51 27.2**	**+0.5**
BJI				S	**S**	**00 56 11.2**	**-1.0**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.6						
BJI				AMB	AMB		
	comp=Z,181nm,4.8s						
BJI				LR	LR		
	comp=N,335nm,13.1s,MS4.2						
BJI				LR	LR		
	comp=E,315nm,14.4s,MS4.2						
BJI				LR	LR		
	comp=Z,197nm,16.7s,MS3.8						
HHC	**Hu-ho-hao-te**	**31.30**	**272**	*e*P	**P**	**00 51 51.5**	**+1.1**
HHC				AP	pP	00 52 06.4	+4.3
HHC				XP	sP	00 52 14.1	+6.8
HHC				PP	PP	00 52 56.3	-5.1
HHC				PCP	PcP	00 54 46.3	+2.7
HHC				S	**S**	**00 56 53.0**	**-1.1**
HHC				XS	sS	00 57 18.2	+4.6
HHC				PCS	PcS	00 58 27.5	-0.3
HHC				SS	SS	00 58 41.4	-27
HHC				AMB	AMB		
	comp=Z,14nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,150nm,6.7s						
HHC				LR	LR		
	comp=N,323nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=E,248nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=Z,405nm,20.2s						
NJ2	**Nanjing**	**31.56**	**252**	*e*P	**P**	**00 51 55.3**	**+2.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
IMA2	**Indian Mountai**	**31.78**	**37**	*e*P	**P**	**00 51 54.4**	**+0.1**
SONM	**Songino Array**	**31.84**	**287**	P	**P**	**00 51 54.4**	**-0.7**
	comp=Z,0.9nm,0.8s,mb3.7,baz=50,slow=10,SNR=5.9						
SONM				PcP	PcP	00 54 44.5	-0.4
	comp=Z,0.9nm,0.7s,baz=84,slow=2.6,SNR=5.3						
SONM				LR	LR	01 05 59.6	
	comp=Z,612nm,19.6s,MS4.3,baz=184,slow=38						
SONM	**Songino Array**	**31.84**	**287**	P	**P**	**00 51 54.4**	**-0.7**
SONM						00 54 44.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,612nm,19.6s						
TLY	**Talaya**	**32.42**	**295**	*e*P	sP	00 52 15.1	-1.9
TLY				*e*		00 53 07.4	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
TLY				MLR	MLR		
	comp=Z,517nm,17.0s,MS4.3						
MCK	**McKinley**	**33.65**	**42**	*e*P	**P**	**00 52 11.1**	**+0.5**
COLA	**College**	**34.12**	**40**	*e*P	**P**	**00 52 14.1**	**-0.6**
	comp=Z,5.6nm,0.8s,mb4.5						
COLA	**College**	**34.12**	**40**	*e*P	**P**	**00 52 14.1**	**-0.7**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
YHNB	**Yeheng**	**35.35**	**240**	*e*P	**P**	**00 52 26.9**	**+1.1**
WHN	**Wuhan**	**35.44**	**255**	*e*P	**P**	**00 52 24.4**	**-2.1**
GUMO	**Guam**	**35.71**	**197**	LR	LR	01 03 51.4	
	comp=Z,121nm,19.8s,MS3.7,baz=86,slow=31						
LZH	**Lanzhou**	**38.95**	**271**	*e*P	**P**	**00 52 56.6**	**+0.4**
LZH				AP	pP	00 53 13.0	+4.9
LZH				XP	sP	00 53 21.0	+7.7
LZH				PP	PP	00 54 30.3	+4.4
LZH				*e*S	**S**	**00 58 51.0**	**-0.7**
LZH				XS	sS	00 59 16.1	+4.6
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,60nm,4.9s						
LZH				LR	LR		
	comp=E,315nm,13.7s						
LZH				LR	LR		
	comp=Z,533nm,15.5s,MS4.5						
SIT	**Sitka**	**41.43**	**51**	*e*P	**P**	**00 53 15.5**	**-0.9**
CD2	**Chengdu**	**42.13**	**265**	*e*P	**P**	**00 53 22.6**	**+0.1**
CD2				AP	pP	00 53 38.0	+3.5
CD2				XP	sP	00 53 45.2	+5.6
CD2				PP	PP	00 55 03.9	+3.4
CD2				S	**S**	**00 59 36.8**	**-2.3**
CD2				XS	sS	01 00 03.1	+4.0
CD2				SS	SS	01 02 39.8	-7.9
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,6.2s						
CD2				LR	LR		
	comp=N,150nm,13.4s,MS4.2						
CD2				LR	LR		
	comp=E,180nm,14.2s,MS4.2						
CD2				LR	LR		
	comp=Z,130nm,15.2s,MS3.9						
ZALV	**Zalesovo Beam**	**42.53**	**305**	P	**P**	**00 53 24.3**	**-1.2**
	comp=Z,1.3nm,0.4s,mb4.0,baz=59,slow=6.6,SNR=5.4						
ZALV				PcP	PcP	00 55 17.2	-0.1
	comp=Z,1.1nm,0.5s,baz=90,slow=4.4,SNR=4.4						
ZALV				LR	LR	01 11 43.7	
	comp=Z,183nm,20.5s,MS4.0,baz=70,slow=37						
ZALV	**Zalesovo Beam**	**42.53**	**305**	P	**P**	**00 53 24.3**	**-1.2**
ZALV						00 55 17.2	
ZALV				pmax	pmax		

comp=Z,1.0nm,0.4s,mb3.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ZALV MLR MLR
comp=Z,183nm,20.5s,MS4.0
GYA Guiyang 43.16 257 P **P** **00 53 31.6 +0.7**
GYA AP pP 00 53 50.2 +7.2
GYA XP sP 00 53 56.9 +8.8
GYA PP PP 00 55 15.8 +4.1
GYA PCP PcP 00 55 22.3 +2.4
GYA SCP ScP 00 59 07.2 -0.1
GYA PCS PcS 00 59 14.6 +2.1
GYA S **S** **00 59 54.2 -0.2**
GYA XS sS 01 00 22.0 +7.6
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,80nm,4.8s
DLBC Dease Lake 43.63 47 LR LR 01 11 58.1
comp=Z,197nm,18.8s,MS4.0,baz=309,slow=36
DLBC Dease Lake 43.63 47 *eP* **P** **00 53 34.6 +0.3**
WMQ Urumqi 45.35 290 *eP* **P** **00 53 50.0 +1.8**
WMQ AMB AMB
comp=Z,11nm,1.0s,mb4.6
QIZ Qiongzhong 46.53 247 P **P** **00 53 58.9 +1.1**
QIZ S **S** **01 00 39.6 -3.6**
QIZ LR LR
comp=Z,122nm,17.2s,MS3.9
KMI Kunming 46.64 259 P **P** **00 53 58.5 -0.1**
KMI AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
MK31 Makanchi Array 47.15 297 *eP* **P** **00 54 00.9 -1.4**
MKAR Makanchi Array 47.15 297 P **P** **00 54 01.5 -0.9**
comp=Z,3.2nm,0.6s,mb4.5,baz=32,slow=3.5,SNR=26
MKAR LR LR 01 15 09.8
comp=Z,244nm,19.6s,MS4.2,baz=47,slow=38
MKAR Makanchi Array 47.15 297 *i P* **P** **00 54 01.5 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 47.36 303 P **P** **00 54 03.5 -0.4**
baz=67,slow=8.6
KURK Kurchatov 47.36 303⇓ *eP* **P** **00 54 02.4 -1.5**
KURK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KURK MLR MLR
comp=Z,400nm,23.0s,MS4.3
RES Resolute Bay 48.87 19 *eP* **P** **00 54 15.4 +0.2**
comp=Z,849nm,1.6s
RES Resolute Bay 48.87 19 *eP* **P** **00 54 15.4 +0.1**
RES pmax pmax
comp=Z,849nm,1.6s
YKA Yellowknife Ar 48.91 38 P **P** **00 54 15.6 0.0**
comp=Z,2.7nm,0.7s,mb4.4,baz=298,slow=7.2,SNR=4.6
YKA LR LR 01 18 41.2
comp=Z,60nm,18.0s,MS3.6,baz=185,slow=41
YKA Yellowknife Ar 48.91 38 P **P** **00 54 15.7 0.0**
YKA LR LR 01 18 41.2
BVAR Borovoye Array 50.64 309 P **P** **00 54 27.9 -1.1**
comp=Z,1.4nm,0.4s,mb4.2,baz=59,slow=7.4,SNR=11
BVAR PcP PcP 00 55 44.7 -1.2
comp=Z,1.0nm,0.5s,baz=59,slow=3.1,SNR=4.4
BVAR pPcP 00 56 07.1
comp=Z,1.7nm,0.7s,baz=52,slow=3.7,SNR=4.2
BVAR Borovoye Array 50.64 309 P **P** **00 54 27.9 -1.1**
BVAR 00 55 44.7
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 50.68 309 *eP* **P** **00 54 28.0 -1.3**
comp=Z,13nm,1.8s,mb4.6
BRVK Borovoye 50.68 309 *eP* **P** **00 54 28.0 -1.2**
BRVK pmax pmax
comp=Z,13nm,1.8s,mb4.6
SPITS Spitsbergen Ar 51.14 350 P **P** **00 54 31.4 -1.0**
comp=Z,7.9nm,0.9s,mb4.7,baz=31,slow=9.9,SNR=4.9
SPITS Spitsbergen Ar 51.14 350 P **P** **00 54 31.4 -1.0**
SPITS pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 51.29 273 *eP* **P** **00 54 35.2 +1.0**
comp=Z,15nm,0.6s,mb5.1
LSA Lhasa 51.29 273 *eP* **P** **00 54 35.2 +1.1**
LSA pmax pmax
comp=Z,15nm,0.6s,mb5.1
TKM2 Tokmak 2 53.25 296 *eP* **P** **00 54 48.6 +0.1**
comp=Z,2.9nm,0.7s,mb4.3
TKM2 *ep*P pP 00 55 04.9 +4.0
TKM2 Tokmak 2 53.25 296 *eP* **P** **00 54 48.6 +0.1**
TKM2 *e**PP pP 00 55 04.9 +4.1
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CHTO Chiang Mai 53.58 257 *eP* **P** **00 54 51.5 +0.3**
comp=Z,4.7nm,0.7s,mb4.5
CHTO Chiang Mai 53.58 257 *eP* **P** **00 54 51.5 +0.3**
CHTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CMAR Chiang Mai Arr 53.84 256 P **P** **00 54 53.0 -0.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=33,slow=7.3,SNR=17
CMAR LR LR 01 19 40.5
comp=Z,166nm,18.7s,MS4.1,baz=55,slow=38
CMAR Chiang Mai Arr 53.84 256 *i P* **P** **00 54 54.0 +0.9**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
UCH Uchtor 54.30 296 P **P** **00 54 54.7 -1.6**
EKS2 Erkin-Say 54.49 296 *eP* **P** **00 54 57.3 -0.3**
comp=Z,2.5nm,0.8s,mb4.2
ARU Arti 54.51 317 *eP* **P** **00 54 56.6 -0.9**
comp=Z,3.0nm,0.4s,mb4.7
ARU Arti 54.51 317 *eP* **P** **00 54 56.6 -0.9**
ARU pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
TAPN Taplejung 55.11 273 *eP* **P** **00 55 02.9 +0.6**
comp=Z,15nm,0.6s,mb5.2
NEW Newport 55.28 54 *eP* **P** **00 55 03.7 +0.5**
JIRN Jiri 55.91 275 *eP* **P** **00 55 08.6 +0.6**
comp=Z,27nm,0.6s,mb5.4
GUN Gumba 55.95 275 *eP* **P** **00 55 08.7 +0.4**
comp=Z,17nm,0.6s,mb5.2
YBH Yreka Blue Hor 55.98 64 LR LR 01 15 52.3
comp=Z,122nm,18.7s,MS4.0,baz=285,slow=32
RAMN Ramite 56.11 274 *eP* **P** **00 55 09.7 +0.2**
comp=Z,30nm,0.6s,mb5.5
KKN Kakani 56.43 275 *eP* **P** **00 55 12.7 +1.0**
comp=Z,22nm,0.7s,mb5.3
KKN Kakani 56.43 275 *eP* **P** **00 55 12.7 +1.0**
KKN pmax pmax
comp=Z,22nm,0.7s,mb5.3
PKI Pulchoki 56.49 275 *eP* **P** **00 55 12.9 +0.7**
WALA Waterton Lakes 56.52 52 *eP* **P** **00 55 11.7 -0.3**
ARCES ARCESS Array B 56.61 341 P **P** **00 55 11.6 -0.8**
comp=Z,4.2nm,0.9s,mb4.5,baz=21,slow=8.7,SNR=2.9
ARCES LR LR 01 23 00.5
comp=Z,397nm,19.3s,MS4.5,baz=212,slow=40
ARCES ARCESS Array B 56.61 341 P **P** **00 55 11.6 -0.8**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES MLR MLR
comp=Z,397nm,19.3s
DMN Daman 56.66 275 *eP* **P** **00 55 14.1 +0.7**
comp=Z,41nm,0.6s,mb5.6
GKN Gorkha 56.72 276 *eP* **P** **00 55 13.9 +0.1**
comp=Z,29nm,0.6s,mb5.5
DANN Dangsing 57.07 277 *eP* **P** **00 55 16.9 +0.7**
comp=Z,54nm,0.6s,mb5.8
KOLN Koldanda 57.56 276 *eP* **P** **00 55 20.1 +0.4**
comp=Z,26nm,0.7s,mb5.4
HNR Honiara 57.81 174 LR LR 01 16 21.1
comp=Z,137nm,19.1s,MS4.1,baz=324,slow=32
FFC Flin Flon 58.73 41 *eP* **P** **00 55 27.6 +0.1**
comp=Z,7.3nm,0.9s,mb4.7
FFC Flin Flon 58.73 41 *eP* **P** **00 55 27.6 +0.1**
FFC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SUMG Summit 58.93 5 *eP* **P** **00 55 29.6 +1.0**
FCC Fort Churchill 59.24 34 *eP* **P** **00 55 30.4 -0.5**
HLID Hailey 59.65 57 *eP* **P** **00 55 35.2 +1.1**
QLMT Earthquake Lak 60.49 55 *eP* **P** **00 55 41.3 +1.5**
NVAR Mina Array Bea 60.68 64 P **P** **00 55 40.8 -0.4**
comp=Z,1.0nm,0.6s,mb4.1,baz=305,slow=7.1,SNR=8.4
NVAR sP sP 00 56 01.3 +2.6
comp=Z,1.1nm,0.7s,baz=295,slow=6.9,SNR=5.3
GCMT Greycliff 60.81 53 *eP* **P** **00 55 42.8 +0.8**
YMR Madison River 60.84 55 P **P** **00 55 43.1 +0.9**
comp=Z,15nm,0.3s,mb5.6

ELK Elko 60.99 60 *eP* **P** **00 55 43.0 -0.2**
RLMT Red Lodge 61.46 53 *eP* **P** **00 55 46.8 +0.4**
comp=Z,16nm,1.5s,mb4.9
TPAW Teton Pass 61.62 56 *eP* **P** **00 55 49.5 +2.0**
LOHW Long Hollow 61.73 55 *eP* **P** **00 55 50.0 +1.8**
REDW Red Top Meadow 61.76 56 *eP* **P** **00 55 49.5 +1.1**
KBL Kabul 62.46 292 *eP* **P** **00 55 51.8 -1.4**
comp=Z,2.1nm,0.5s,mb4.5
KBL Kabul 62.46 292 *eP* **P** **00 55 51.8 -1.5**
KBL pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
HWUT Hardware Ranch 62.52 58 *eP* **P** **00 55 52.7 -0.8**
comp=Z,1.4nm,0.4s,mb4.4
DUG Dugway 62.75 59 *eP* **P** **00 55 54.5 -0.5**
comp=Z,8.5nm,1.4s,mb4.7
DUG Dugway 62.75 59 *eP* **P** **00 55 54.6 -0.5**
DUG pmax pmax
comp=Z,9.0nm,1.4s,mb4.7
BW06 Boulder Array 62.86 55 *eP* **P** **00 55 55.6 -0.2**
comp=Z,5.7nm,1.1s,mb4.6
PDAR Pinedale Array 62.86 55 P **P** **00 55 55.9 +0.1**
comp=Z,2.3nm,0.8s,mb4.4,baz=270,slow=2.1,SNR=12
PDAR pP pP 00 56 08.3 -0.1
comp=Z,1.7nm,0.8s,baz=276,slow=2.7,SNR=3.4
PDAR LR LR 01 24 03.0
comp=Z,80nm,19.6s,MS3.9,baz=168,slow=37
JLU Jordanelle 63.25 58 P **P** **00 55 58.6 +0.1**
ULM Lac du Bonnet 64.52 42 P **P** **00 56 04.2 -2.3**
comp=Z,2.3nm,0.5s,mb4.5,baz=285,slow=5.2,SNR=2.9
ULM LR LR 01 27 22.9
comp=Z,162nm,19.0s,MS4.2,baz=289,slow=39
SRU San Rafael 64.78 59 *eP* **P** **00 56 08.7 +0.2**
RSSD Black Hills 64.89 51 *eP* **P** **00 56 09.1 0.0**
comp=Z,7.6nm,0.6s,mb4.9
RSSD Black Hills 64.89 51 *eP* **P** **00 56 09.1 0.0**
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
PV01 Paradox Valley 66.57 59 P **P** **00 56 18.1 -1.9**
NB2 NORSAR Subarra 66.97 342 P **P** **00 56 21.2 -1.0**
comp=Z,3.5nm,0.7s,mb4.5,baz=25,slow=6.5
NOA NORSAR Array B 66.97 342 P **P** **00 56 21.1 -1.1**
comp=Z,2.2nm,0.6s,mb4.3,baz=25,slow=6.3,SNR=11
NOA LR LR 01 28 52.0
comp=Z,124nm,18.7s,MS4.2,baz=20,slow=39
NOA NORSAR Array B 66.97 342 P **P** **00 56 21.1 -1.1**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA MLR MLR
comp=Z,124nm,18.7s
ISCO Idaho Springs 67.06 56 *eP* **P** **00 56 23.5 +0.4**
comp=Z,7.9nm,1.3s,mb4.6
ISCO Idaho Springs 67.06 56 *eP* **P** **00 56 23.5 +0.4**
ISCO pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
SDCO Great Sand Dun 68.57 57 P **P** **00 56 33.2 +0.6**
CTA Charters Tower 68.64 189 LR LR 01 23 39.1
comp=Z,90nm,19.2s,MS4.0,baz=51,slow=33
CTAO Charters Tower 68.64 189 P **P** **00 56 34.0 +0.9**
ECSD EROS,Sioux Fal 68.92 47 *eP* **P** **00 56 33.8 -0.9**
comp=Z,9.7nm,0.9s,mb4.7
LAZ Ladron 70.01 61 *eP* **P** **00 56 42.2 +0.6**
ANMO Albuquerque 70.01 60 *eP* **P** **00 56 41.4 -0.2**
ANMO Albuquerque 70.01 60‖ *eP* **P** **00 56 42.0 +0.4**
POO Poona 70.39 276 *ex* x 00 56 39.0
KIV Kislovodsk 70.40 315 *eP* **P** **00 56 42.2 -1.6**
KIV Kislovodsk 70.40 315 *eP* **P** **00 56 42.2 -1.6**
WRAB Tennant Creek 70.47 200 *eP* **P** **00 56 42.4 -2.0**
comp=Z,4.2nm,0.7s,mb4.5
WRAB Tennant Creek 70.47 200 *eP* **P** **00 56 42.4 -2.0**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
WB2 Warramunga Arr 70.48 200 *eP* **P** **00 56 42.4 -2.0**
WRA Warramunga Arr 70.48 200 P **P** **00 56 42.9 -1.5**
comp=Z,3.8nm,0.7s,mb4.5,baz=16,slow=6.2,SNR=24
WRA pP pP 00 56 57.7 +0.6
comp=Z,1.4nm,0.7s,baz=14,slow=6.3,SNR=3.5
WRA Warramunga Arr 70.48 200 P **P** **00 56 42.9 -1.5**
WRA *PP pP 00 56 57.7 +0.5
WRA pmax pmax
comp=Z,4.0nm,0.7s
WRA pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 70.74 327 P **P** **00 56 44.9 -0.9**
comp=Z,1.4nm,0.5s,mb4.2,baz=33,slow=6.1,SNR=5.9
AKASG LR LR 01 30 05.6
comp=Z,155nm,18.6s,MS4.3,baz=350,slow=38
AKASG Malin Array Be 70.74 327 *i P* **P** **00 56 46.2 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
MVH1 Achvaich 72.57 348 *eP* **P** **00 56 56.6 0.0**
MDO Dochfour 73.07 348 *eP* **P** **00 56 59.4 -0.2**
KAC Achnashellach 73.13 349 *eP* **P** **00 56 59.6 -0.3**
KSB Sheil Bridge 73.43 349 *eP* **P** **00 57 01.4 -0.3**
KAR1 Arisaig 73.77 349 *eP* **P** **00 57 03.6 -0.1**
EBH Black Hill 74.11 348 *eP* **P** **00 57 05.4 -0.3**
ASAR Alice Springs 74.17 200 P **P** **00 57 05.8 -0.6**
comp=Z,2.1nm,0.6s,mb4.3,baz=13,slow=5.7,SNR=21
ASAR Alice Springs 74.17 200 P **P** **00 57 05.8 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
ESY Stoneypath 74.30 347 *eP* **P** **00 57 06.5 -0.3**
EAU Auchinoon 74.49 347 *eP* **P** **00 57 08.3 +0.3**
EBL Broad Law 74.50 347 *eP* **P** **00 57 08.2 +0.2**
STHS Stebnicka Huta 74.59 331 *eP* **P** **00 57 09.7 +1.0**
comp=Z,4.6nm,0.6s,mb4.6
STHS Stebnicka Huta 74.59 331 *eP* **P** **00 57 09.7 +1.0**
STHS pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
STHS Stebnicka Huta 74.59 331 *eP* **P** **00 57 09.6 +0.9**
PGBU Glenifferbraes 74.67 348 *eP* **P** **00 57 09.1 +0.1**
PGBU AMb AMB 00 57 09.2
comp=Z,70nm,1.2s,mb5.5
KOLS Kolonicke sedl 74.67 330 *eP* **P** **00 57 09.0 -0.1**
KOLS *ep*P pP 00 57 19.9 -2.0
PCA1 Carrot 74.74 348 *eP* **P** **00 57 09.3 -0.1**
BUR08 Bucovina Ar. S 74.75 327 *eP* **P** **00 57 09.7 0.0**
BURAR Bucovina Array 74.77 327⇑ *iP* **P** **00 57 10.2 +0.5**
KSP Ksiaz 74.87 334 *eP* **P** **00 57 10.5 +0.3**
ESK Eskdalemuir 74.96 347 P **P** **00 57 10.1 -0.6**
ESK AMb AMB 00 57 15.5
comp=Z,39nm,1.7s,mb5.0
ESK Eskdalemuir 74.96 347 *eP* **P** **00 57 10.1 -0.6**
ESK AMb AMB 00 57 15.5
comp=Z,39nm,1.7s,mb5.0
ECK Cauldkaine Hil 75.08 347 *eP* **P** **00 57 11.2 -0.2**
OKC Ostrava-Krasne 75.20 333 *eP* **P** **00 57 12.5 +0.3**
UPC Upice 75.25 334 *eP* **P** **00 57 12.3 -0.1**
XAL Allendale 75.25 346 *eP* **P** **00 57 12.1 -0.3**
DPC Dobruska-Polom 75.30 334 *eP* **P** **00 57 13.3 +0.6**
CLL Collm 75.37 336⇑ *iP* **P** **00 57 12.7 -0.4**
CLL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CLL MLR MLR
comp=Z,200nm,21.3s,MS4.4
CLL Collm 75.37 336 *eP* **P** **00 57 12.6 -0.5**
comp=Z,9.0nm,0.8s,mb4.8
CLL Collm 75.37 336⇑ *iP* **P** **00 57 12.7 -0.4**
comp=Z,7.0nm,0.6s,mb4.8
CLL Lm 01 32 00.0
comp=Z,200nm,21.3s
KRLC Kraliky 75.41 334 *eP* **P** **00 57 14.3 +1.0**
MORC Moravsky Berou 75.44 333 *eP* **P** **00 57 12.9 -0.6**
comp=Z,5.0nm,0.6s,mb4.6
MORC Moravsky Berou 75.44 333 *eP* **P** **00 57 13.0 -0.6**
MORC pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
MORC Moravsky Berou 75.44 333⇑ *iP* **P** **00 57 14.0 +0.4**
BRG Berggiesshubel 75.50 336 *eP* **P** **00 57 13.1 -0.8**
comp=Z,4.0nm,0.9s,mb4.3
CLZ Clausthal 75.56 338 *eP* **P** **00 57 14.1 -0.1**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLZ Clausthal 75.56 338 *eP* **P** **00 57 14.1 -0.1**
comp=Z,8.0nm,0.9s,mb4.7
GAL1 Galloway 75.62 348 P **P** **00 57 14.2 -0.2**
GAL1 AMb AMB 00 57 14.6
comp=Z,45nm,1.5s,mb5.2
GAL1 Galloway 75.62 348 *eP* **P** **00 57 14.2 -0.2**
GAL1 AMb AMB 00 57 14.6
comp=Z,45nm,1.5s,mb5.2
PVCC Panska Ves 75.64 335 *eP* **P** **00 57 14.7 0.0**
TXAR Lajitas Array 75.71 62 P **P** **00 57 15.0 -0.4**
comp=Z,4.8nm,0.7s,mb4.5,baz=299,slow=4.3,SNR=59
TXAR Lajitas Array 75.71 62 P **P** **00 57 15.0 -0.4**
TXAR pmax pmax

comp=Z,5.0nm,0.7s
IBBN Ibbenburen 75.75 340 *eP* **P** **00 57 15.7 +0.4**
comp=Z,7.0nm,0.5s,mb4.8
HPK Haverah Park 76.03 346 P **P** **00 57 16.4 -0.4**
HPK AMb AMB 00 57 22.2
comp=Z,40nm,1.6s,mb5.1
HPK Haverah Park 76.03 346 *eP* **P** **00 57 16.4 -0.4**
HPK AMb AMB 00 57 22.2
comp=Z,40nm,1.6s,mb5.1
PRU Pruhonice 76.13 335 *eP* **P** **00 57 17.8 +0.3**
VRAC Vranov 76.14 333⇓ *iP* **P** **00 57 17.9 +0.3**
VYHS Vyhne 76.17 332 *eP* **P** **00 57 18.2 +0.4**
KOLL Kolacno 76.24 332 *eP* **P** **00 57 18.5 +0.4**
MLR Muntele Rosu 76.30 326⇓ *iP* **P** **00 57 19.8 +1.3**
TANN Tannenbergstha 76.32 336 *eP* **P** **00 57 18.7 +0.1**
comp=Z,6.0nm,1.0s,mb4.5
DRGR 76.36 328⇓ *iP* **P** **00 57 19.0 +0.1**
GMM Mts of Mourne 76.40 348 *eP* **P** **00 57 18.5 -0.4**
TREC Trest 76.48 334 *eP* **P** **00 57 19.8 +0.3**
NKC Novy Kostel 76.49 336 *eP* **P** **00 57 19.3 -0.2**
UBBA Unterbreizbach 76.59 338 *eP* **P** **00 57 20.7 +0.6**
comp=Z,5.0nm,0.8s,mb4.5
SMOL Smolenice 76.60 332 *eP* **P** **00 57 21.0 +0.9**
VOIR 76.68 326⇑ *iP* **P** **00 57 21.3 +0.6**
MODS Modra-Piesok 76.77 332 *eP* **P** **00 57 21.8 +0.7**
DMUB Kingscourt 76.85 349⇓ *iP* **P** **00 57 21.8 +0.3**
ZST Bratislava 76.98 332 *eP* **P** **00 57 23.0 +0.7**
comp=Z,4.2nm,0.6s,mb4.5
ZST Bratislava 76.98 332 *eP* **P** **00 57 23.0 +0.7**
ZST pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ROTZ Rotzenmuhle 76.98 336 *eP* **P** **00 57 22.6 +0.3**
comp=Z,4.0nm,0.8s,mb4.4
CWF Charnwood Fore 77.15 345 *eP* **P** **00 57 23.4 +0.2**
CWF AMb AMB 00 57 25.4
comp=Z,37nm,1.7s,mb5.0
KHC Kasperske Hory 77.18 335 *eP* **P** **00 57 23.9 +0.5**
GRA1 Grafenberg Arr 77.31 337 *eP* **P** **00 57 24.7 +0.6**
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.31 337 *eP* **P** **00 57 24.7 +0.6**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.31 337 *eP* **P** **00 57 24.7 +0.6**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.31 337 *eP* **P** **00 57 24.7 +0.6**
comp=Z,10.0nm,0.8s,mb4.8
WET Wettzell 77.36 335 *eP* **P** **00 57 24.7 +0.3**
WET pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
WET Wettzell 77.36 335 *eP* **P** **00 57 24.7 +0.3**
comp=Z,6.0nm,0.7s,mb4.6
DLF Lyons Farm 77.40 349⇓ *iP* **P** **00 57 24.7 +0.1**
GEC2 GERESS Array S 77.40 335 *eP* **P** **00 57 24.9 +0.2**
GEC2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
GEC2 GERESS Array S 77.40 335 *eP* **P** **00 57 24.9 +0.2**
comp=Z,6.0nm,0.7s,mb4.6
GERES GERESS Array B 77.40 335 P **P** **00 57 25.0 +0.3**
comp=Z,4.3nm,0.6s,mb4.6,baz=33,slow=5.1,SNR=58
GERES LR LR 01 34 38.9
comp=Z,196nm,18.4s,MS4.5,baz=347,slow=38
GERES GERESS Array B 77.40 335 P **P** **00 57 25.0 +0.3**
GERES pmax pmax
comp=Z,4.0nm,0.6s
GERES MLR MLR
comp=Z,196nm,18.4s
GZR Gura Zlata 77.54 328⇑ *iP* **P** **00 57 24.4 -1.1**
MEM Membach 77.74 340 P **P** **00 57 26.6 +0.1**
BZS Buzias 77.76 328⇑ *iP* **P** **00 57 26.8 +0.1**
BCLA Clavier 78.07 341 P **P** **00 57 28.7 +0.3**
comp=Z,14nm,2.6s,mb4.4
ZIMR 78.07 325⇑ *iP* **P** **00 57 27.6 -0.9**
GIVF Givet 78.47 341 *eP* **P** **00 57 30.5 -0.1**
WOL Wolverton 78.51 345 *eP* **P** **00 57 29.9 -0.8**
WOL AMb AMB 00 57 31.2
comp=Z,122nm,1.7s,mb5.6
WLF Walferdange 78.59 340 *eP* **P** **00 57 32.7 +1.5**
comp=Z,31nm,1.7s,mb5.0
BAIF Baives 78.65 341 *eP* **P** **00 57 31.6 0.0**
RJOB Jochberg 78.66 335 *eP* **P** **00 57 32.3 +0.6**
comp=Z,9.0nm,0.9s,mb4.7
MIB Mutribah 78.71 302 *eP* **P** **00 57 31.9 -0.3**
baz=302
MIB AMb AMB 00 57 44.3
comp=Z,32nm,1.6s,mb5.0,baz=302
SOKA Soboth 78.97 333⇑ *iP* **P** **00 57 33.6 +0.2**
NAY Al-Naaiem 79.18 302 *eP* **P** **00 57 34.3 -0.6**
baz=302
NAY AMb AMB 00 57 41.5
comp=Z,22nm,1.6s,mb4.8,baz=302
RDF Al-Radifah 79.25 302 *eP* **P** **00 57 34.7 -0.6**
baz=302
RDF AMb AMB 00 57 43.4
comp=Z,91nm,1.3s,mb5.5,baz=302
WATA Walderalm 79.37 335⇑ *iP* **P** **00 57 36.3 +0.7**
comp=Z,6.3nm,0.5s,mb4.8
WTTA Wattenberg 79.42 335⇑ *iP* **P** **00 57 36.8 +1.0**
comp=Z,16nm,0.7s,mb5.1
CDF Champ du Feu 79.49 339 *eP* **P** **00 57 36.3 +0.1**
comp=Z,11nm,0.7s,mb4.6
CDF Champ du Feu 79.49 339 *eP* **P** **00 57 36.3 +0.1**
comp=Z,5.4nm,0.7s,mb4.6
CDF Champ du Feu 79.49 339 *eP* **P** **00 57 36.3 +0.1**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MOTA Moosalm 79.49 336⇑ *iP* **P** **00 57 36.3 +0.1**
comp=Z,7.9nm,0.7s,mb4.8
ECH Echery 79.70 339 *eP* **P** **00 57 36.9 -0.4**
DAVA Damuels 79.87 337⇑ *iP* **P** **00 57 38.8 +0.5**
comp=Z,6.8nm,0.9s,mb4.6
MEZF Maizieres J'vi 79.93 340 *eP* **P** **00 57 38.9 +0.3**
comp=Z,21nm,0.9s,mb4.8
MEZF Maizieres J'vi 79.93 340 *eP* **P** **00 57 38.9 +0.3**
comp=Z,21nm,0.9s,mb5.1
HAU Haudompre 80.09 339 *eP* **P** **00 57 39.4 -0.1**
comp=Z,4.7nm,0.6s,mb4.3
HAU *e*MLR MLR
comp=Z,166nm,22.5s,MS4.0
HAU Haudompre 80.09 339 *eP* **P** **00 57 39.4 -0.1**
comp=Z,2.3nm,0.6s,mb4.3
HAU LR LR
comp=Z,170nm,22.5s,MS4.3
HAU Haudompre 80.09 339 *eP* **P** **00 57 39.4 -0.1**
HAU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HAU MLR MLR
comp=Z,170nm,22.5s,MS4.3
HINF Hinteralfeld 80.15 339 *eP* **P** **00 57 39.5 -0.3**
comp=Z,15nm,1.1s,mb4.5
HINF Hinteralfeld 80.15 339 *eP* **P** **00 57 39.5 -0.3**
comp=Z,7.4nm,1.1s,mb4.5
HINF Hinteralfeld 80.15 339 *eP* **P** **00 57 39.5 -0.3**
HINF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
TUE Stuetta 80.77 337 *eP* **P** **00 57 43.2 +0.1**
comp=Z,10.0nm,0.7s,mb4.8
STKA Stephens Creek 80.82 191 P **P** **00 57 42.0 -1.3**
comp=Z,0.7nm,0.4s,mb3.9,baz=342,slow=13,SNR=2.6
STKA LR LR 01 33 49.1
comp=Z,87nm,18.1s,MS4.2,baz=205,slow=36
FLN La Foliniere 80.83 344 *eP* **P** **00 57 43.2 -0.2**
comp=Z,12nm,0.9s,mb4.5
FLN *e*MLR MLR
comp=Z,130nm,20.0s,MS4.0
FLN La Foliniere 80.83 344 *eP* **P** **00 57 43.2 -0.2**
comp=Z,6.3nm,0.9s,mb4.5
FLN LR LR
comp=Z,130nm,20.0s,MS4.3
FLN La Foliniere 80.83 344 *eP* **P** **00 57 43.2 -0.2**
FLN pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
FLN MLR MLR
comp=Z,130nm,20.0s,MS4.3
LDF La Druitiere 80.92 343 *eP* **P** **00 57 43.6 -0.3**
comp=Z,17nm,1.1s,mb4.6
LDF La Druitiere 80.92 343 *eP* **P** **00 57 43.6 -0.3**
comp=Z,8.7nm,1.1s,mb4.6
LDF La Druitiere 80.92 343 *eP* **P** **00 57 43.6 -0.3**
LDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
GRR Gorron 81.26 344 *eP* **P** **00 57 45.8 +0.1**
comp=Z,24nm,1.0s,mb4.8
GRR Gorron 81.26 344 *eP* **P** **00 57 45.8 +0.1**
comp=Z,12nm,1.0s,mb4.8
GRR Gorron 81.26 344 *eP* **P** **00 57 45.8 +0.1**

GRR				pmax	pmax				
	comp=Z,12nm,1.0s,mb4.8								
LOR	**Lormes**	**81.36**	**340**	*eP*	**P**	**00**	**57**	**46.2**	**-0.1**
	comp=Z,9.7nm,0.7s,mb4.6								
LOR				*e*MLR	MLR				
	comp=Z,200nm,21.2s,MS4.1								
LOR	**Lormes**	**81.36**	**340**	*eP*	**P**	**00**	**57**	**46.2**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.5								
LOR				LR	LR				
	comp=Z,200nm,21.3s,MS4.4								
LOR	**Lormes**	**81.36**	**340**	*eP*	**P**	**00**	**57**	**46.2**	**-0.1**
LOR				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.5								
LOR				MLR	MLR				
	comp=Z,200nm,21.3s,MS4.4								
CABF	**La Chapelle**	**81.46**	**339**	*eP*	**P**	**00**	**57**	**46.4**	**-0.4**
	comp=Z,9.5nm,0.8s,mb4.5								
CABF	**La Chapelle**	**81.46**	**339**	*eP*	**P**	**00**	**57**	**46.4**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.5								
CABF	**La Chapelle**	**81.46**	**339**	*eP*	**P**	**00**	**57**	**46.4**	**-0.4**
CABF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
SSF	**Saint Saulge**	**81.64**	**341**	*eP*	**P**	**00**	**57**	**47.8**	**+0.1**
	comp=Z,11nm,0.8s,mb4.6								
SSF	**Saint Saulge**	**81.64**	**341**	*eP*	**P**	**00**	**57**	**47.8**	**+0.1**
	comp=Z,5.5nm,0.8s,mb4.5								
SSF	**Saint Saulge**	**81.64**	**341**	*eP*	**P**	**00**	**57**	**47.8**	**+0.1**
SSF				pmax	pmax				
	comp=Z,6.0nm,0.8s,mb4.6								
SGMF	**Saint Gilles**	**81.69**	**345**	*eP*	**P**	**00**	**57**	**48.2**	**+0.2**
	comp=Z,10nm,0.8s,mb4.5								
SGMF	**Saint Gilles**	**81.69**	**345**	*eP*	**P**	**00**	**57**	**48.2**	**+0.2**
	comp=Z,5.2nm,0.8s,mb4.5								
SGMF	**Saint Gilles**	**81.69**	**345**	*eP*	**P**	**00**	**57**	**48.2**	**+0.2**
SGMF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
ROSF	**Rostrenen**	**81.73**	**345**	*eP*	**P**	**00**	**57**	**48.4**	**+0.2**
	comp=Z,36nm,1.1s,mb4.9								
ROSF	**Rostrenen**	**81.73**	**345**	*eP*	**P**	**00**	**57**	**48.4**	**+0.2**
	comp=Z,18nm,1.1s,mb4.9								
ROSF	**Rostrenen**	**81.73**	**345**	*eP*	**P**	**00**	**57**	**48.4**	**+0.2**
ROSF				pmax	pmax				
	comp=Z,18nm,1.1s,mb4.9								
CSS	**Prodhromos**	**81.92**	**315**	*eP*	**P**	**00**	**57**	**49.4**	**0.0**
	comp=Z,9.5nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**81.93**	**341**	*eP*	**P**	**00**	**57**	**49.3**	**0.0**
	comp=Z,19nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**81.93**	**341**	*eP*	**P**	**00**	**57**	**49.3**	**0.0**
	comp=Z,9.6nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**81.93**	**341**	*eP*	**P**	**00**	**57**	**49.3**	**0.0**
AVF				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.8								
SMF	**Signal de Mont**	**81.95**	**340**	*eP*	**P**	**00**	**57**	**49.5**	**+0.1**
	comp=Z,26nm,1.1s,mb4.8								
SMF	**Signal de Mont**	**81.95**	**340**	*eP*	**P**	**00**	**57**	**49.5**	**+0.1**
	comp=Z,13nm,1.1s,mb4.8								
SMF	**Signal de Mont**	**81.95**	**340**	*eP*	**P**	**00**	**57**	**49.5**	**+0.1**
SMF				pmax	pmax				
	comp=Z,13nm,1.1s,mb4.8								
BGF	**Bois d'Agland**	**82.26**	**341**	*eP*	**P**	**00**	**57**	**51.1**	**+0.1**
	comp=Z,11nm,0.7s,mb4.6								
BGF	**Bois d'Agland**	**82.26**	**341**	*eP*	**P**	**00**	**57**	**51.1**	**+0.1**
	comp=Z,5.5nm,0.7s,mb4.6								
BGF	**Bois d'Agland**	**82.26**	**341**	*eP*	**P**	**00**	**57**	**51.1**	**+0.1**
BGF				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.6								
LPL	**La Plagne**	**82.33**	**338**	*eP*	**P**	**00**	**57**	**52.4**	**+1.0**
	comp=Z,19nm,0.7s,mb4.8								
LPL	**La Plagne**	**82.33**	**338**	*eP*	**P**	**00**	**57**	**52.4**	**+1.0**
	comp=Z,9.4nm,0.7s,mb4.8								
LPL	**La Plagne**	**82.33**	**338**	*eP*	**P**	**00**	**57**	**52.4**	**+1.0**
LPL				pmax	pmax				
	comp=Z,9.0nm,0.7s,mb4.8								
LPG	**La Plagne**	**82.34**	**338**	*eP*	**P**	**00**	**57**	**52.6**	**+1.1**
	comp=Z,23nm,0.9s,mb4.8								
LPG	**La Plagne**	**82.34**	**338**	*eP*	**P**	**00**	**57**	**52.6**	**+1.1**
	comp=Z,11nm,0.9s,mb4.8								
LPG	**La Plagne**	**82.34**	**338**	*eP*	**P**	**00**	**57**	**52.6**	**+1.1**
LPG				pmax	pmax				
	comp=Z,11nm,0.9s,mb4.8								
TCF	**Toulx Ste Croi**	**82.65**	**341**	*eP*	**P**	**00**	**57**	**53.3**	**+0.2**
	comp=Z,7.0nm,0.7s,mb4.5								
TCF	**Toulx Ste Croi**	**82.65**	**341**	*eP*	**P**	**00**	**57**	**53.3**	**+0.2**
	comp=Z,3.5nm,0.7s,mb4.5								
TCF	**Toulx Ste Croi**	**82.65**	**341**	*eP*	**P**	**00**	**57**	**53.3**	**+0.2**
TCF				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.6								
MFF	**Saint Martin d**	**82.84**	**343**	*eP*	**P**	**00**	**57**	**54.3**	**+0.3**
	comp=Z,20nm,0.8s,mb4.9								
MFF	**Saint Martin d**	**82.84**	**343**	*eP*	**P**	**00**	**57**	**54.3**	**+0.3**
	comp=Z,9.8nm,0.8s,mb4.9								
MFF	**Saint Martin d**	**82.84**	**343**	*eP*	**P**	**00**	**57**	**54.3**	**+0.3**
MFF				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.9								
MBDF	**Montbardon**	**83.06**	**338**	*eP*	**P**	**00**	**57**	**55.7**	**+0.5**
	comp=Z,13nm,0.9s,mb4.7								
MBDF	**Montbardon**	**83.06**	**338**	*eP*	**P**	**00**	**57**	**55.7**	**+0.5**
	comp=Z,6.7nm,0.9s,mb4.7								
MBDF	**Montbardon**	**83.06**	**338**	*eP*	**P**	**00**	**57**	**55.7**	**+0.5**
MBDF				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.7								
ORIF	**Oris-en-Rattie**	**83.10**	**338**	*eP*	**P**	**00**	**57**	**56.3**	**+0.9**
	comp=Z,51nm,1.3s,mb5.1								
ORIF				*e*MLR	MLR				
	comp=Z,124nm,20.2s,MS4.0								
ORIF	**Oris-en-Rattie**	**83.10**	**338**	*eP*	**P**	**00**	**57**	**56.3**	**+0.9**
	comp=Z,26nm,1.3s,mb5.1								
ORIF	**Oris-en-Rattie**	**83.10**	**338**	*eP*	**P**	**00**	**57**	**56.3**	**+0.9**
ORIF				pmax	pmax				
	comp=Z,26nm,1.3s,mb5.1								
VIVF	**Saint-Julien-l**	**83.45**	**339**	*eP*	**P**	**00**	**57**	**57.7**	**+0.5**
RJF	**Les Rejaudoux**	**83.74**	**341**	*eP*	**P**	**00**	**57**	**59.8**	**+1.1**
	comp=Z,17nm,1.1s,mb4.8								
RJF				*e*MLR	MLR				
	comp=Z,170nm,20.2s,MS4.1								
RJF	**Les Rejaudoux**	**83.74**	**341**	*eP*	**P**	**00**	**57**	**59.8**	**+1.1**
	comp=Z,8.4nm,1.1s,mb4.8								
RJF				LR	LR				
	comp=Z,170nm,20.3s,MS4.4								
RJF	**Les Rejaudoux**	**83.74**	**341**	*eP*	**P**	**00**	**57**	**59.8**	**+1.1**
RJF				pmax	pmax				
	comp=Z,8.0nm,1.1s,mb4.8								
RJF				MLR	MLR				
	comp=Z,170nm,20.3s,MS4.4								
CAF	**Calviac**	**83.98**	**341**	*eP*	**P**	**00**	**58**	**00.5**	**+0.6**
LFF	**La Frestale**	**84.25**	**342**	*eP*	**P**	**00**	**58**	**01.7**	**+0.4**
	comp=Z,8.0nm,0.7s,mb4.7								
LFF	**La Frestale**	**84.25**	**342**	*eP*	**P**	**00**	**58**	**01.7**	**+0.4**
	comp=Z,4.0nm,0.7s,mb4.7								
LFF	**La Frestale**	**84.25**	**342**	*eP*	**P**	**00**	**58**	**01.7**	**+0.4**
LFF				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.7								
NWAO	**Narrogin (SRO)**	**87.68**	**211**	P	**P**	**00**	**58**	**16.8**	**-1.3**
	comp=Z,6.3nm,0.7s,mb4.9,baz=31,slow=5.9,SNR=3.5								
NWAO	**Narrogin (SRO)**	**87.68**	**211**	P	**P**	**00**	**58**	**16.8**	**-1.3**
NWAO				pmax	pmax				
	comp=Z,6.0nm,0.7s								
ESDC	**Sonseca Array**	**90.25**	**344**	P	**P**	**00**	**58**	**29.1**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.8,baz=358,slow=3.1,SNR=4.0								
ESDC				LR	LR	01	44	01.8	
	comp=Z,122nm,19.0s,MS4.3,baz=15,slow=39								
KEST	**Kesra**	**90.69**	**332**	P	**P**	**00**	**58**	**31.7**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.3,baz=66,slow=20,SNR=6.6								
KEST				LR	LR	01	44	11.3	
	comp=Z,64nm,20.9s,MS4.0,baz=284,slow=39								
TORD	**Torodi Ar. Bea**	**114.17**	**331**	PKiKP	PKiKP	01	04	07.5	-1.9
	comp=Z,0.3nm,0.6s,baz=6.7,slow=1.4,SNR=5.3								
PLCA	**Paso Flores**	**147.24**	**94**	PKPbc	PKPbc	01	05	11.9	-0.6
	comp=Z,2.2nm,0.6s,baz=252,slow=3.2,SNR=11								
PLCA	**Paso Flores**	**147.24**	**94**	PKP2	PKPab	01	05	12.0	-2.4
PLCA				pmax	pmax				
	comp=Z,2.0nm,0.6s								
SNAA	**Sanae**	**154.49**	**196**	*e*	PKPab	01	05	41.8	-1.7
VNA2	**Neumayer--Watz**	**155.92**	**194**	*e*	PKPab	01	05	48.3	-1.4
	baz=126,slow=3.5								
VNA3	**Neumayer Olymp**	**155.99**	**192**	*e*	PKPab	01	05	48.2	-1.7
VNA1	**Neumayer--Stat**	**156.30**	**194**	*e*	PKPab	01	05	50.4	-0.9

*MAN **02** 00:47:19, 12.43N×12.44E, h25km, mb4.6, ML3.5,MS3.5*
MAN INTENSITY II - MONDRAGON, NORTHERN SAMAR.
*ISCJB **02** 00:47:20.3±0.6, 1236N±004×12.443E±003, h21km±6km, mb3.6/3, Error ellipse: s-maj=7.2km s-min=4.8km az=33.2*
*IDC **02** 00:47:20.1±1.4, 1204N×124.14E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.3/37, Error ellipse: s-maj=65.1km s-min=22.7km az=58.0*

ISC 02 00:47:20.0±0.6, 1228N±003×12441E±003, h4km±5km, n26, σ0992/33, mb3.6/3,1C-3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CNP	**Catarman**	**0.34**	**47**	*eP*	**Pg**	**00**	**47**	**26.2**	**-0.3**
CNP				*eS*	**Sg**	**00**	**47**	**31.6**	**+0.7**
MMPH	**Masbate**	**0.78**	**276**	*eP*	**Pg**	**00**	**47**	**34.4**	**-0.5**
MMPH				*eS*	**Sg**	**00**	**47**	**45.7**	**+0.8**
BESP	**Borongan**	**1.21**	**124**	*eP*	**Pg**	**00**	**47**	**41.9**	**-1.3**
BESP				*eS*	**Sg**	**00**	**47**	**58.8**	**-0.1**
OCLP	**Ormoc**	**1.23**	**171**	*eP*	**Pg**	**00**	**47**	**44.4**	**+0.7**
OCLP				*eS*	**Sg**	**00**	**48**	**04.7**	**+5.0**
PLP	**Palo**	**1.24**	**153**	*eP*	**Pg**	**00**	**47**	**42.7**	**-1.0**
PLP				*eS*	**Sg**	**00**	**48**	**01.0**	**+1.2**
PVCP	**Virac**	**1.33**	**349**	*eP*	**Pn**	**00**	**47**	**40.6**	**-4.9**
RCP	**Roxas**	**1.78**	**247**	*eP*	**Pn**	**00**	**47**	**51.1**	**-0.5**
RCP				*/ S*	**Sn**	**00**	**48**	**15.5**	**+0.8**
AUQP	**San Andres**	**1.99**	**302**	*eP*	**Pn**	**00**	**47**	**56.5**	**+2.0**
LLP	**Lapu-Lapu**	**2.00**	**193**	*eP*	**Pn**	**00**	**47**	**53.9**	**-0.7**
LLP				*eS*	**Sn**	**00**	**48**	**20.3**	**+0.2**
MSLP	**Maasin**	**2.17**	**168**	*eP*	**Pn**	**00**	**47**	**57.5**	**+0.5**
OTRP	**Odiongan**	**2.34**	**272**	*eP*	**Pn**	**00**	**47**	**57.7**	**-1.6**
GUIM	**Jordan**	**2.43**	**228**	*eP*	**Pn**	**00**	**48**	**00.6**	**0.0**
GQP	**Guinayangan**	**2.51**	**310**	*eP*	**Pn**	**00**	**48**	**01.8**	**+0.2**
GQP				*eS*	**Sn**	**00**	**48**	**24.8**	**-7.9**
TBP	**Tagbilaran**	**2.63**	**192**	*eP*	**Pn**	**00**	**48**	**02.7**	**-0.6**
TBP				*eS*	**Sn**	**00**	**48**	**35.9**	**+0.3**
SCPH	**Surigao**	**2.70**	**157**	*eP*	**Pn**	**00**	**48**	**04.8**	**+0.6**
SCPH				*eS*	**Sn**	**00**	**48**	**37.4**	**0.0**
POLP	**Polilio Island**	**3.42**	**316**	*eP*	**Pn**	**00**	**48**	**14.9**	**+0.6**
CUYO	**Cuyo Island**	**3.62**	**247**	*eP*	**Pn**	**00**	**48**	**16.6**	**-0.3**
BUSP	**Coron**	**4.13**	**267**	*eP*	**Pn**	**00**	**48**	**22.1**	**-1.8**
BUKP	**Musuan**	**4.42**	**172**	*eP*	**Pn**	**00**	**48**	**30.8**	**+2.9**
DAV	**Davao City (W)**	**5.30**	**167**	LR	LR	00	50	54.4	
	comp=Z,127nm,21.7s,baz=81,slow=42								
KAPI	**Kappang**	**17.79**	**195**	LR	LR	00	57	47.8	
	comp=Z,74nm,19.6s,baz=266,slow=36								
CMAR	**Chiang Mai Arr**	**25.30**	**287**	P	**P**	**00**	**52**	**47.1**	**-0.8**
	0.8nm,0.4s,mb3.6,baz=91,slow=9.3,SNR=5.2								
WRA	**Warramunga Arr**	**33.48**	**163**	P	**P**	**00**	**54**	**00.6**	**0.0**
	0.4nm,0.6s,mb3.5,baz=342,slow=9.1,SNR=3.2								
ASAR	**Alice Springs**	**36.91**	**165**	P	**P**	**00**	**54**	**28.8**	**-1.3**
	0.8nm,0.6s,mb3.8,baz=343,slow=6.9,SNR=6.8								
KURK	**Kurchatov**	**53.39**	**325**	P	**P**	**00**	**56**	**41.6**	**+0.8**
	baz=124,slow=7.8								
TXAR	**Lajitas Array**	**117.85**	**47**	PKP	PKPdf	01	06	10.1	+1.5
	0.3nm,0.6s,baz=289,slow=3.8,SNR=4.3								

*ISCJB **02** 00:49:01.1±1.5, 1897N±009×1455E±02, h257km±15km, mb3.7/15, Error ellipse: s-maj=23.6km s-min=13.0km az=164.4*
*IDC **02** 00:49:01.8±2.7, 1898N×14552E, h245km±27km, mb3.4/9, mb1 3.7/12, mb1mx3.5/22, mbtmp3.5/12, Error ellipse: s-maj=27.6km s-min=17.4km az=71.0*
*NEIC **02** 00:49:02.3±1.2, 1894N×14549E, h254km±12km, mb4.0/6, Error ellipse: s-maj=15.1km s-min=9.2km az=72.0*

ISC 02 00:49:02.0±1.4, 1894N±008×1455E±01, h251km±15km, n30, σ0979/30, mb3.7/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GUMO	**Guam**	**5.36**	**187**	P	**Pn**	**00**	**50**	**21.4**	**-0.9**
	12nm,0.3s,baz=14,slow=22,SNR=2.5								
GUMO				S	**S**	**00**	**51**	**21.2**	**-5.3**
	7.8nm,0.3s,baz=26,slow=19,SNR=2.2								
GUMO	**Guam**	**5.36**	**187**	Pn	**Pn**	**00**	**50**	**22.3**	**0.0**
GUMO				*eS*	**S**	**00**	**51**	**26.6**	**+0.2**
JOW	**Kunigami**	**17.71**	**299**	P	**P**	**00**	**52**	**53.1**	**+1.7**
	15nm,0.3s,baz=122,slow=13,SNR=7.6								
MJAR	**Matsushiro Arr**	**18.68**	**341**	P	**P**	**00**	**53**	**01.7**	**0.0**
	1.4nm,0.3s,baz=168,slow=9.5,SNR=10								
MAJO	**Matsushiro**	**18.68**	**341**	*eP*	**P**	**00**	**53**	**01.7**	**-0.1**
	8.6nm,0.4s								
YHNB	**Yeheng**	**23.12**	**289**	P	**P**	**00**	**53**	**46.4**	**+0.2**
KSRS	**Korea Array**	**24.02**	**324**	P	**P**	**00**	**53**	**53.9**	**-0.3**
	2.2nm,0.6s,mb4.0,baz=158,slow=8.7,SNR=5.6								
INCN	**Inchon**	**24.78**	**322**	P	**P**	**00**	**54**	**00.4**	**-0.6**
BJT	**Baijiatuan**	**32.84**	**316**	*eP*	**P**	**00**	**55**	**12.2**	**+0.1**
QIZ	**Qiongzhong**	**33.70**	**276**	P	**P**	**00**	**55**	**18.6**	**-1.4**
ENH	**Enshi**	**34.51**	**296**	*eP*	**P**	**00**	**55**	**26.6**	**-0.2**
	0.4nm,0.5s,mb3.2								
WRA	**Warramunga Arr**	**40.17**	**196**	P	**P**	**00**	**56**	**14.7**	**+0.6**
	0.3nm,0.3s,mb3.1,baz=24,slow=8.9,SNR=4.2								
SONM	**Songino Array**	**42.85**	**321**	P	**P**	**00**	**56**	**35.7**	**+0.2**
	0.9nm,0.5s,mb3.5,baz=134,slow=9.6,SNR=7.5								
CMAR	**Chiang Mai Arr**	**44.02**	**277**	P	**P**	**00**	**56**	**46.4**	**+1.1**
	1.1nm,0.3s,mb3.6,baz=74,slow=6.7,SNR=3.9								
STKA	**Stephens Creek**	**50.67**	**184**	*eP*	**P**	**00**	**57**	**35.6**	**-0.4**
ZALV	**Zalesovo Beam**	**57.72**	**322**	P	**P**	**00**	**58**	**25.9**	**-0.7**
	0.7nm,0.4s,mb3.6,baz=107,slow=9.2,SNR=3.1								
MKAR	**Makanchi Array**	**58.17**	**314**	P	**P**	**00**	**58**	**30.1**	**+0.4**
	1.6nm,0.6s,mb3.8,baz=91,slow=7.9,SNR=9.9								
KURK	**Kurchatov**	**60.98**	**318**	P	**P**	**00**	**58**	**48.9**	**+0.1**
	baz=95,slow=7.3								
KURK	**Kurchatov**	**60.98**	**318**	*eP*	**P**	**00**	**58**	**48.4**	**-0.4**
	2.3nm,0.8s,mb3.9								
TKM2	**Tokmak 2**	**62.77**	**309**	*eP*	**P**	**00**	**59**	**01.8**	**+1.0**
AML	**Almayashu**	**64.20**	**308**	*eP*	**P**	**00**	**59**	**10.5**	**+0.3**
	5.7nm,1.5s,mb4.0								
BVAR	**Borovoye Array**	**66.18**	**320**	P	**P**	**00**	**59**	**22.6**	**-0.1**
	2.7nm,0.4s,mb4.2,baz=96,slow=7.8,SNR=14								
BRVK	**Borovoye**	**66.25**	**320**	*eP*	**P**	**00**	**59**	**23.2**	**+0.1**
	3.5nm,0.6s,mb4.2								
YKA	**Yellowknife Ar**	**77.85**	**28**	P	**P**	**01**	**00**	**31.7**	**+0.1**
	0.6nm,0.7s,mb3.4,baz=292,slow=4.7,SNR=2.7								
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**01**	**01**	**02.5**	**+2.5**
	0.6nm,0.7s,mb3.4,baz=281,slow=6.3,SNR=3.4								
JOF	**Joensuu**	**83.73**	**335**	*ep*	**P**	**01**	**01**	**01.6**	**-1.0**
	1.2nm,0.4s,mb4.0								
OBN	**Obninsk**	**84.98**	**327**	P	**P**	**01**	**01**	**07.8**	**-1.2**
KAF	**Kangasniemi**	**86.13**	**336**	*ep*	**P**	**01**	**01**	**13.6**	**-0.9**
	0.7nm,0.4s,mb3.7								
CEL	**Celeste**	**106.04**	**321**	Pdif	Pdif	01	02	45.2	-0.1
TORD	**Torodi Ar. Bea**	**132.17**	**309**	PKP	PKPdf	01	07	47.5	+0.7
	0.5nm,1.0s,baz=355,slow=2.4,SNR=2.8								

*NIED **02** 01:01:00, 3020N×142.50E, h8km, Mw4.2 Best double couple: Mo1.95000×10^15 NP1:φ169.00000°, δ81.00000°, λ-117.00000°. NP2:φ62.00000°, δ28.00000°, λ-19.00000°.*
*IDC **02** 01:01:09.0±0.6, 3012N×142.71E, h0km, mb4.2/16, mb1 4.3/20, mb1mx4.3/25, mbtmp4.2/20, ML3.9/4, MS3.7/2, Ms1 3.7/2, ms1mx2.9/37, Error ellipse: s-maj=20.5km s-min=13.2km az=84.0*
*BJI **02** 01:01:11.4, 3020N×142.70E, h20km, mB4.7, mb4.4*
*ISCJB **02** 01:01:12.3±0.4, 3024N±003×14255E±007, h33km, mb4.4/36, Error ellipse: s-maj=9.6km s-min=3.2km az=163.7*
*JMA **02** 01:01:12.0±0.2, 3016N×142.47E, h48km, M4.4*
*NEIC **02** 01:01:14.5±0.3, 3018N×142.68E, h35km, mb4.6/13, MW4.1(NIED), Error ellipse: s-maj=9.3km s-min=6.6km az=78.0*

ISC 02 01:01:14.5±0.4, 3025N±003×14260E±007, h35km, n64, σ1921/78, mb4.4/36, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CBIJ	**Chichi jima**	**3.16**	**187**	Pn	**Pn**	**01**	**01**	**58.5**	**-3.4**
	23nm,0.3s,baz=84,slow=23,SNR=5.3								
CBIJ				Sn	**Sn**	**01**	**02**	**34.2**	**-4.1**
	50nm,0.3s,baz=102,slow=23,SNR=8.2								
CBIJ	**Chichi jima**	**3.16**	**187**	P	**Pn**	**01**	**01**	**59.5**	**-2.3**
CBIJ				*eS*	**Sn**	**01**	**02**	**32.5**	**-5.8**
JHHJ	**Haha-jima-NKT**	**3.63**	**186**	P	**Pn**	**01**	**02**	**06.2**	**-2.0**
JHHJ				*eS*	**Sn**	**01**	**02**	**47.2**	**-2.5**
JHJ2	**Mitsune**	**3.71**	**321**	P	**Pn**	**01**	**02**	**09.2**	**-0.1**
JHJ2				*eS*	**Sn**	**01**	**02**	**51.7**	**0.0**
JHJ	**Hachijo jima 2**	**3.73**	**321**	Pn	**Pn**	**01**	**02**	**08.8**	**-0.8**
	14nm,0.3s,baz=68,slow=11,SNR=4.5								
JHJ				Sn	**Sn**	**01**	**02**	**50.9**	**-1.4**
	21nm,0.3s,baz=230,slow=20,SNR=4.4								
BSO2	**Boso 2**	**4.75**	**341**	*eS*	**Sn**	**01**	**03**	**15.9**	**-1.5**
BSO3	**Boso 3**	**4.87**	**339**	P	**Pn**	**01**	**02**	**24.7**	**-0.5**
BSO3				*eS*	**Sn**	**01**	**03**	**18.6**	**-1.7**
BSO4	**Boso 4**	**5.09**	**339**	P	**Pn**	**01**	**02**	**29.5**	**+1.2**
BSO4				*eS*	**Sn**	**01**	**03**	**26.0**	**+0.1**
JOD2	**Odawara 2**	**5.81**	**330**	P	**Pn**	**01**	**02**	**38.9**	**+0.8**
JOD2				*eS*	**Sn**	**01**	**03**	**41.3**	**-2.1**
JHU	**Hanno**	**6.24**	**334**	P	**Pn**	**01**	**02**	**44.6**	**+0.5**
JHU				*eS*	**Sn**	**01**	**03**	**50.3**	**-3.8**
JNY	**Yasuok**	**6.47**	**323**	P	**Pn**	**01**	**02**	**48.5**	**+1.3**
JNY				*eS*	**Sn**	**01**	**04**	**01.3**	**+1.6**
JRY	**Ryogami san**	**6.53**	**333**	P	**Pn**	**01**	**02**	**47.5**	**-0.6**
JRY				*eS*	**Sn**	**01**	**03**	**59.2**	**-2.1**
JHO	**Hitachi**	**6.57**	**346**	P	**Pn**	**01**	**02**	**46.1**	**-2.4**
JHO				*eS*	**Sn**	**01**	**03**	**55.3**	**-6.8**
JAG	**Ashikaga**	**6.70**	**338**	P	**Pn**	**01**	**02**	**48.9**	**-1.4**
JAG				*eS*	**Sn**	**01**	**04**	**01.4**	**-3.9**
JFK	**Kawauchi**	**7.24**	**349**	P	**Pn**	**01**	**02**	**54.8**	**-3.0**
JFK				*eS*	**Sn**	**01**	**04**	**10.3**	**-8.5**
MJAR	**Matsushiro Arr**	**7.27**	**331**	Pn	**Pn**	**01**	**02**	**57.1**	**-1.1**
	1.8nm,0.3s,baz=155,slow=11,SNR=31								
MJAR				Sn	**Sn**	**01**	**04**	**19.5**	**+0.1**
	1.4nm,0.3s,baz=231,slow=31,SNR=8.3								
MAJO	**Matsushiro**	**7.27**	**331**	*e*Pn	**Pn**	**01**	**02**	**58.0**	**-0.1**
	20nm,0.6s								
MAJO				*e*Sn	**Sn**	**01**	**04**	**19.5**	**+0.1**
MAT	**Matsushiro**	**7.27**	**331**	P	**Pn**	**01**	**02**	**58.1**	**-0.1**
MAT				*eS*	**Sn**	**01**	**04**	**18.0**	**-1.4**
KSRS	**Korea Array**	**14.14**	**304**	Pn	**Pn**	**01**	**04**	**34.0**	**+1.8**
	0.4nm,0.3s,baz=115,slow=13,SNR=9.5								
KSRS				LR	LR	01	10	18.7	
	comp=Z,114nm,18.1s,baz=90,slow=38								
HIA	**Hailar**	**25.70**	**324**	*eP*	**P**	**01**	**06**	**41.8**	**+0.5**
	45nm,1.2s,mb4.9								
XAN	**Xi'an**	**28.69**	**286**	P	**P**	**01**	**07**	**07.5**	**-0.7**
XAN				AP	pP	01	07	18.7	+0.5
XAN				XP	sP	01	07	24.6	+2.1
XAN				AMB	AMB				
	comp=Z,10.0nm,1.3s,mb4.4								
ULN	**Ulaanbaatar**	**32.36**	**313**	*eP*	**P**	**01**	**07**	**43.2**	**+2.7**
	comp=Z,16nm,1.2s,mb4.7								
SONM	**Songino Array**	**32.77**	**313**	P	**P**	**01**	**07**	**47.0**	**+2.9**
	comp=Z,2.3nm,0.8s,mb4.2,baz=111,slow=8.5,SNR=15								
GTA	**Gaotai**	**36.01**	**296**	*eP*	**P**	**01**	**08**	**12.3**	**+0.1**
GTA				AP	pP	01	08	16.8	-5.5
GTA				XP	sP	01	08	19.9	-6.7
GTA				AMB	AMB				
	comp=Z,4.0nm,1.6s,mb4.1								
CHTO	**Chiang Mai**	**41.09**	**264**	*eP*	**P**	**01**	**08**	**55.1**	**0.0**
	comp=Z,9.8nm,1.3s,mb4.3								
CMAR	**Chiang Mai Arr**	**41.23**	**264**	P	**P**	**01**	**08**	**56.3**	**0.0**
	comp=Z,0.6nm,0.3s,m

comp=Z,55nm,18.6s,baz=146,slow=33
CMAR Chiang Mai Arr 49.25 43 P P 01 32 08.2 +1.6
1.1nm,0.3s,baz=239,slow=8.1,SNR=3.7
ASAR Alice Springs 63.16 108 P P 01 33 45.5 -0.7
0.7nm,0.7s,baz=270,slow=6.9,SNR=7.3
WRA Warramunga Arr 64.24 104 P P 01 33 54.1 +0.7
1.3nm,0.9s,baz=264,slow=5.8,SNR=6.0
MKAR Makanchi Array 66.90 12 P P 01 34 09.6 -0.3
0.6nm,0.9s,baz=189,slow=8.2,SNR=3.5
STKA Stephens Creek 68.55 118 LR LR 01 58 57.3
comp=Z,83nm,20.5s,baz=207,slow=31
ZALV Zalesovo Beam 74.21 12 P P 01 34 53.3 -1.1
0.7nm,0.5s,baz=188,slow=4.5,SNR=4.7
SONM Songino Array 75.58 27 P P 01 35 03.0 +0.6
0.9nm,0.9s,baz=224,slow=4.0,SNR=4.1
KSRS Korea Array 80.83 45 LR LR 02 10 32.9
comp=Z,24nm,18.9s,baz=245,slow=35

NIED ***02*** *01:33:00,24.30N×12.300E,h71km,Mw4.7 Best double couple: M₀1.20000×10¹⁶ NP1:φs92.00000°,δ72.00000°, λ112.00000°. NP2:φs220.00000°,δ28.00000°,λ41.00000°.*
ISCJB ***02*** *01:33:14.6±0.2,24.31N±002×12.300E±001,h58km±2km, mb4.0/21,MS3.4/5,Error ellipse: s-maj=3.9km s-min=2.2km az=168.3*
TAP ***02*** *01:33:14.9,24.29N×12.294E,h35km±1km,ML4.7,D*
IDC ***02*** *01:33:15.3±3.2,24.39N×12.290E,h51km±29km,mb3.7/14, mb1 3.9/15,mb1mx3.8/23,mbtmp3.7/15,ML3.5/1,MS3.4/7, Ms1 3.4/7,ms1mx3.0/29,Error ellipse: s-maj=19.6km s-min=14.0km az=59.0*
JMA ***02*** *01:33:15.2±0.1,24.33N×12.300E,h48km±1km,M4.1*
JMA Felt I J1.
NEIC ***02*** *01:33:15.8±0.6,24.39N×12.294E,h56km±5km,mb4.3/6, Error ellipse: s-maj=7.4km s-min=6.0km az=218.0*
NEIC Recorded [1 JMA] on Yonaguni-jima, Ryukyu Islands.
BJI ***02*** *01:33:16.7,24.40N×12.290E,h56km,mB4.5,mb4.4*
ISC 02 01:33:15.5±0.2,2432N±002×12300E±002,h52km±3km, n101,σ1%17/155,mb4.0/21,MS3.4/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.14**	**3**	P	**Pn**	**01 33 22.9**	**-0.8**
YOJ				S	**Sn**	**01 33 28.3**	**-1.3**
IRIF	**Iriomote-Funau**	**0.66**	**89**	P	**Pn**	**01 33 28.4**	**-0.5**
IRIF				S	**Sn**	**01 33 38.3**	**-0.3**
HATJ	**Hateruma jima**	**0.78**	**110**	P	**Pn**	**01 33 29.9**	**-0.4**
HATJ				*e*S	**Sn**	**01 33 41.2**	**0.0**
JKRS	**Kuro-shima**	**0.92**	**95**	P	**Pn**	**01 33 32.3**	**+0.1**
JKRS				*e*S	**Sn**	**01 33 44.6**	**+0.1**
JIJ	**Ishigaki jima**	**1.04**	**88**	P	**Pn**	**01 33 33.5**	**-0.3**
JIJ				*e*S	**Sn**	**01 33 46.2**	**-1.2**
TWC	**Suao**	**1.09**	**285**	*i* P	**Pn**	**01 33 33.2**	**-1.2**
	baz=298						
TWC				S	**Sn**	**01 33 47.0**	**-1.5**
	baz=298						
TWB1	**Santiao Chiao**	**1.15**	**307**	P	**Pn**	**01 33 34.6**	**-0.6**
	baz=309						
TWB1				S	**Sn**	**01 33 48.0**	**-1.9**
	baz=309						
ENA	**Nanau**	**1.16**	**275**	P	**Pn**	**01 33 34.8**	**-0.6**
	baz=287						
ENA				*e*S	**Sn**	**01 33 49.5**	**-0.6**
	baz=287						
ILA	**Ilan**	**1.22**	**291**	*e*P	**Pn**	**01 33 36.8**	**+0.5**
	baz=293						
ILA				*e*S	**Sn**	**01 33 51.1**	**-0.7**
	baz=293						
TWE	**Neicheng**	**1.28**	**288**	P	**Pn**	**01 33 36.5**	**-0.5**
	baz=300						
TWE				S	**Sn**	**01 33 52.6**	**-0.5**
	baz=300						
NACB	**Ninganchiao**	**1.29**	**264**	*e*Pn	**Pn**	**01 33 36.1**	**-1.1**
NACB				*e*Sn	**Sn**	**01 33 49.0**	**-4.4**
TWD	**Chiawan**	**1.31**	**260**	*e*P	**Pn**	**01 33 36.7**	**-0.7**
	baz=246						
TWD				*e*S	**Sn**	**01 33 52.2**	**-1.5**
	baz=246						
HWA	**Hwalien**	**1.32**	**255**	*e*P	**Pn**	**01 33 37.1**	**-0.5**
	baz=241						
NWF	**Wu-fen Shan**	**1.34**	**304**	*i* P	**Pn**	**01 33 37.8**	**-0.1**
	baz=306						
NWF				*e*S	**Sn**	**01 33 53.7**	**-0.8**
	baz=306						
NNS	**Nan Shan**	**1.49**	**275**	P	**Pn**	**01 33 40.2**	**+0.3**
	baz=261						
YHNB	**Yeheng**	**1.52**	**283**	*e*Pn	**Pn**	**01 33 40.5**	**+0.2**
ESL	**Shilin**	**1.52**	**251**	P	**Pn**	**01 33 38.9**	**-1.4**
	baz=250						
ESL				*e*S	**Sn**	**01 33 56.2**	**-2.8**
	baz=250						
TAP1	**Taipei**	**1.52**	**298**	*e*P	**Pn**	**01 33 40.2**	**-0.1**
	baz=310						
TAP1				*e*S	**Sn**	**01 33 58.1**	**-0.9**
	baz=310						
TATO	**Taipei**	**1.52**	**296**	*e*Pn	**Pn**	**01 33 39.9**	**-0.4**
TATO				*e*Sn	**Sn**	**01 33 57.3**	**-1.7**
NSK	**Sanguang**	**1.54**	**283**	P	**Pn**	**01 33 40.2**	**-0.4**
	baz=294						
NSK				*e*S	**Sn**	**01 34 00.0**	**+0.6**
	baz=294						
PCYT	**Pengchaiyu**	**1.55**	**327**	*e*P	**Pn**	**01 33 40.5**	**-0.3**
	baz=318						
JTJ	**Tarama**	**1.58**	**78**	P	**Pn**	**01 33 41.6**	**+0.5**
JTJ				*e*S	**Sn**	**01 34 00.6**	**+0.2**
TWY	**Chenhua**	**1.59**	**307**	*e*P	**Pn**	**01 33 41.1**	**-0.2**
	baz=308						
TWY				*e*S	**Sn**	**01 34 00.5**	**-0.2**
	baz=308						
WHF	**Hehuan Shan**	**1.60**	**264**	*i* P	**Pn**	**01 33 41.1**	**-0.3**
	baz=250						
WHF				*e*S	**Sn**	**01 34 00.2**	**-0.6**
	baz=250						
TWS1	**Kuangyinshan**	**1.64**	**299**	*e*P	**Pn**	**01 33 42.8**	**+1.0**
	baz=300						
TWT	**Tachien**	**1.67**	**268**	*i* P	**Pn**	**01 33 43.1**	**+0.8**
	baz=268						
TWT				*e*S	**Sn**	**01 34 02.9**	**+0.3**
	baz=268						
EHY	**Hungye**	**1.74**	**242**	*i* P	**Pn**	**01 33 41.8**	**-1.5**
	baz=241						
EHY				*e*S	**Sn**	**01 34 02.2**	**-2.2**
	baz=241						
NCU	**National Centr**	**1.77**	**292**	*e*P	**Pn**	**01 33 45.8**	**+2.1**
	baz=302						
NCU				*e*S	**Sn**	**01 34 06.9**	**+1.8**
	baz=302						
TWF1	**Yuli**	**1.84**	**239**	*i* P	**Pn**	**01 33 43.1**	**-1.5**
	baz=237						
TWF1				*e*S	**Sn**	**01 34 04.5**	**-2.2**
	baz=237						
NSTT	**Nanjuang**	**1.85**	**280**	*e*P	**Pn**	**01 33 45.7**	**+0.9**
	baz=294						
NSTT				*e*S	**Sn**	**01 34 08.7**	**+1.7**
	baz=294						
CHKT	**Chengkung**	**1.93**	**231**	*e*P	**Pn**	**01 33 44.0**	**-2.0**
	baz=219						
CHKT				*e*S	**Sn**	**01 34 04.3**	**-4.8**
	baz=219						
SMLT	**Sun Moon Lake**	**1.97**	**258**	*i* P	**Pn**	**01 33 46.6**	**+0.2**
	baz=257						
SMLT				*e*S	**Sn**	**01 34 09.8**	**-0.2**
	baz=257						
TYC	**Yuchr**	**2.00**	**258**	*i* P	**Pn**	**01 33 46.8**	**-0.1**
	baz=258						
TYC				*e*S	**Sn**	**01 34 09.6**	**-1.2**
	baz=258						
TWQ1	**Liyutan**	**2.03**	**271**	P	**Pn**	**01 33 48.6**	**+1.3**
	baz=271						
TWQ1				*e*S	**Sn**	**01 34 13.1**	**+1.6**
	baz=271						
NSY	**Sanyi**	**2.05**	**273**	*e*P	**Pn**	**01 33 49.2**	**+1.7**
	baz=273						
NSY				*e*S	**Sn**	**01 34 14.5**	**+2.7**
	baz=273						
YUS	**Yu-Shan**	**2.05**	**247**	*i* P	**Pn**	**01 33 47.5**	**-0.1**
	baz=245						
YUS				*e*S	**Sn**	**01 34 10.3**	**-1.6**
	baz=245						
TCU	**Taichung**	**2.13**	**266**	P	**Pn**	**01 33 49.9**	**+1.3**
	baz=266						
TCU				*e*S	**Sn**	**01 34 15.6**	**+1.7**
	baz=266						
ELDTW	**Lidau**	**2.14**	**239**	P	**Pn**	**01 33 47.3**	**-1.5**
	baz=237						
ELDTW				*e*S	**Sn**	**01 34 11.3**	**-2.8**
	baz=237						
JMJ	**Miyako jima 2**	**2.14**	**76**	*e*S	**Sn**	**01 34 15.7**	**+1.5**
WNT	**Mingjian**	**2.16**	**259**	*e*P	**Pn**	**01 33 50.6**	**+1.5**
	baz=258						
WNT				*e*S	**Sn**	**01 34 16.0**	**+1.3**
	baz=258						
ALS	**Alishan**	**2.17**	**248**	*i* P	**Pn**	**01 33 49.5**	**+0.4**
	baz=247						
ALS				*e*S	**Sn**	**01 34 13.9**	**-0.9**
	baz=247						
JOGS	**Gusukube**	**2.23**	**78**	*e*S	**Sn**	**01 34 18.7**	**+2.3**
CHN5	**Tsauling**	**2.25**	**252**	*i* P	**Pn**	**01 33 51.1**	**+0.9**
	baz=251						
CHN5				*e*S	**Sn**	**01 34 17.2**	**+0.5**
	baz=251						
TTN	**Taitung**	**2.31**	**228**	*e*P	**Pn**	**01 33 50.2**	**-0.9**
	baz=216						
TTN				*e*S	**Sn**	**01 34 17.2**	**-1.2**
	baz=216						
TWG	**Pinlang**	**2.32**	**230**	P	**Pn**	**01 33 49.3**	**-1.9**
	baz=239						
TWG				*e*S	**Sn**	**01 34 14.2**	**-4.4**
	baz=239						
WGK	**Gukeng**	**2.32**	**255**	*e*P	**Pn**	**01 33 52.7**	**+1.4**
	baz=254						
WGK				*e*S	**Sn**	**01 34 19.8**	**+1.2**
	baz=254						
CHN4	**Tsaushan**	**2.41**	**247**	P	**Pn**	**01 33 53.8**	**+1.3**
	baz=246						
CHN4				*e*S	**Sn**	**01 34 22.1**	**+1.3**
	baz=246						
WTP	**Ta-pu**	**2.44**	**244**	*i* P	**Pn**	**01 33 53.5**	**+0.7**
	baz=243						
WTP				*e*S	**Sn**	**01 34 22.3**	**+0.9**
	baz=243						
CHN2	**Minshiung**	**2.44**	**252**	*e*P	**Pn**	**01 33 54.5**	**+1.6**
	baz=251						
CHN2				*e*S	**Sn**	**01 34 23.3**	**+1.7**
	baz=251						
WTCT	**Ta-ch'eng**	**2.53**	**260**	*e*P	**Pn**	**01 33 55.6**	**+1.6**
	baz=260						
WTCT				*e*S	**Sn**	**01 34 25.0**	**+1.3**
	baz=260						
TWK	**Hsinying**	**2.53**	**246**	P	**Pn**	**01 33 55.3**	**+1.2**
	baz=245						
TWK				*e*S	**Sn**	**01 34 24.5**	**+0.7**
	baz=245						
CHN1	**Nanshi**	**2.54**	**244**	P	**Pn**	**01 33 55.1**	**+1.0**
	baz=243						
CHN1				*e*S	**Sn**	**01 34 24.8**	**+0.9**
	baz=243						
SGST	**Jiashian**	**2.54**	**241**	P	**Pn**	**01 33 55.3**	**+1.0**
	baz=240						
SGST				*e*S	**Sn**	**01 34 24.9**	**+0.9**
	baz=240						
ECL	**Taimali**	**2.55**	**228**	*e*P	**Pn**	**01 33 52.1**	**-2.3**
	baz=236						
ECL				*e*S	**Sn**	**01 34 19.7**	**-4.5**
	baz=236						
WSF	**Szhu**	**2.63**	**256**	*e*P	**Pn**	**01 33 57.1**	**+1.6**
	baz=255						
WSF				*e*S	**Sn**	**01 34 27.8**	**+1.6**
	baz=255						
LAY	**Lan-yu**	**2.64**	**211**	*e*P	**Pn**	**01 33 52.6**	**-3.0**
	baz=208						
SSD	**Sandimen**	**2.68**	**235**	*e*P	**Pn**	**01 33 56.6**	**+0.3**
	baz=227						
CHN8	**Yiju**	**2.73**	**250**	*e*P	**Pn**	**01 33 58.1**	**+1.2**
	baz=249						
CHN8				*e*S	**Sn**	**01 34 29.7**	**+1.0**
	baz=249						
TAW	**Tawu**	**2.75**	**225**	*e*P	**Pn**	**01 33 54.8**	**-2.4**
	baz=232						
EAST	**Anshuo**	**2.77**	**226**	P	**Pn**	**01 33 55.6**	**-1.8**
	baz=224						
EAST				*e*S	**Sn**	**01 34 25.8**	**-3.7**
	baz=224						
TWM1	**Shoushan**	**2.80**	**238**	*e*P	**Pn**	**01 33 59.8**	**+2.0**
	baz=237						
TWM1				*e*S	**Sn**	**01 34 31.5**	**+1.2**
	baz=237						
SCLT	**Jiali**	**2.82**	**247**	*e*P	**Pn**	**01 33 57.7**	**-0.3**
	baz=245						
SCLT				*e*S	**Sn**	**01 34 32.3**	**+1.6**
	baz=245						
SCZT	**Fangliau**	**2.93**	**229**	*e*P	**Pn**	**01 33 58.7**	**-0.8**
	baz=220						
SCZT				*e*S	**Sn**	**01 34 32.9**	**-0.6**
	baz=220						
TSEB	**Hengchuen, Pin**	**3.09**	**219**	*e*P	**Pn**	**01 34 02.9**	**+1.1**
	baz=218						
HEN	**Hengchun**	**3.11**	**223**	*e*P	**Pn**	**01 34 02.5**	**+0.5**
	baz=212						
TWK1	**Hengchun**	**3.12**	**221**	*e*P	**Pn**	**01 34 01.8**	**-0.3**
	baz=210						
TWK1				*e*S	**Sn**	**01 34 36.4**	**-1.7**
	baz=210						
TWP	**Hsiaoliuchiu**	**3.12**	**231**	*e*P	**Pn**	**01 34 05.0**	**+2.7**
	baz=243						
WDGT	**Dungji**	**3.24**	**252**	*e*P	**Pn**	**01 34 04.1**	**+0.3**
	baz=250						
WDGT				*e*S	**Sn**	**01 34 39.9**	**-1.3**
	baz=250						
PNG	**Penghu**	**3.24**	**257**	*e*P	**Pn**	**01 34 05.8**	**+1.9**
	baz=256						
QZH	**Quanzhou**	**4.06**	**280**	*i* P	**Pn**	**01 34 14.5**	**-0.6**
QZH				S	**Sn**	**01 34 57.6**	**-3.8**
KNM	**Kinmen**	**4.17**	**272**	*e*P	**Pn**	**01 34 17.7**	**+1.1**
	baz=272						
KNM				*e*S	**Sn**	**01 35 04.3**	**+0.3**
	baz=272						
JOW	**Kunigami**	**5.38**	**61**	P	**Pn**	**01 34 33.5**	**+0.4**
	3.4nm,0.3s,baz=300,slow=20,SNR=2.8						
JOW				S	**Sn**	**01 35 36.2**	**+2.5**
	2.8nm,0.3s,baz=74,slow=23,SNR=2.7						
KSRS	**Korea Array**	**13.75**	**17**	P	**Pn**	**01 36 31.3**	**+3.7**
	1.1nm,0.3s,baz=198,slow=12,SNR=14						
KSRS				LR	LR	01 41 36.0	
	comp=Z,87nm,20.1s,baz=200,slow=37						
JHJ	**Hachijo jima 2**	**17.11**	**55**	LR	LR	01 43 07.7	
	comp=Z,86nm,18.6s,baz=73,slow=34						
CHTO	**Chiang Mai**	**23.02**	**261**	*e*P	**P**	**01 38 16.3**	**+0.1**
	3.3nm,0.8s,mb3.8						
CMAR	**Chiang Mai Arr**	**23.13**	**260**	P	**P**	**01 38 17.9**	**+0.4**
	1.3nm,0.6s,mb3.5,baz=57,slow=8.0,SNR=6.2						
GUMO	**Guam**	**23.24**	**113**	LR	LR	01 45 23.1	
	comp=Z,50nm,19.4s,MS3.0,baz=103,slow=31						
ASAJ	**Asahikawa**	**25.42**	**34**	LR	LR	01 48 47.0	
	comp=Z,80nm,19.7s,MS3.2,baz=160,slow=37						
SONM	**Songino Array**	**26.91**	**335**	P	**P**	**01 38 50.7**	**-0.9**
	1.3nm,0.7s,mb3.6,baz=147,slow=9.4,SNR=5.8						
SONM				PcP	PcP	01 42 12.7	+0.1
	0.3nm,0.5s,baz=135,slow=5.3,SNR=2.5						
SONM				LR	LR	01 49 56.0	
	comp=Z,92nm,19.1s,MS3.4,baz=174,slow=37						
MK31	**Makanchi Array**	**39.40**	**315**	*e*P	**P**	**01 40 39.5**	**-0.6**
MKAR	**Makanchi Array**	**39.40**	**315**	P	**P**	**01 40 39.0**	**-1.1**
	0.7nm,0.5s,mb3.7,baz=104,slow=11,SNR=5.0						
MKAR				PcP	PcP	01 42 47.2	-0.2
	0.9nm,0.6s,baz=89,slow=6.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**41.04**	**326**	P	**P**	**01 40 52.2**	**-1.3**
	0.8nm,0.4s,mb3.7,baz=133,slow=9.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**41.04**	**326**	P	**P**	**01 40 52.2**	**-1.3**
COEN	**Coen**	**42.85**	**151**	*e*P	**P**	**01 41 09.5**	**+0.8**
	1.1nm,0.5s,mb3.8						
KURK	**Kurchatov**	**43.06**	**319**	P	**P**	**01 41 08.7**	**-1.3**
	baz=118,slow=7.7						
WRAB	**Tennant Creek**	**45.36**	**165**	*e*P	**P**	**01 41 28.4**	**-0.3**
	3.7nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**45.36**	**165**	P	**P**	**01 41 28.6**	**-0.2**
	1.7nm,0.6s,mb4.1,baz=346,slow=8.6,SNR=7.1						
WRA				PcP	PcP	01 43 07.4	-0.2
	0.3nm,0.3s,baz=349,slow=4.0,SNR=2.9						
BVAR	**Borovoye Array**	**48.62**	**320**	P	**P**	**01 41 52.2**	**-1.7**
	0.6nm,0.4s,mb3.9,baz=110,slow=7.7,SNR=6.5						
BVAR				PcP	PcP	01 43 17.9	-0.8
	0.9nm,0.6s,baz=92,slow=2.5,SNR=3						
BRVK	**Borovoye**	**48.69**	**320**	*e*P	**P**	**01 41 53.1**	**-1.3**
	1.7nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**48.86**	**167**	P	**P**	**01 41 56.8**	**+0.8**
	0.7nm,0.4s,mb4.0,baz=348,slow=6.6,SNR=15						
ASAR				PcP	PcP	01 43 20.0	0.0
	0.4nm,0.6s,baz=357,slow=5.6,SNR=3.2						
HNR	**Honiara**	**49.26**	**128**	LR	LR	01 59 58.3	
	comp=Z,47nm,18.2s,MS3.5,baz=0.0,slow=32						
STKA	**Stephens Creek**	**58.64**	**161**	P	**P**	**01 43 07.4**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=311,slow=7.8,SNR=2.6						
JOF	**Joensuu**	**69.40**	**331**	*e*p	**P**	**01 44 16.8**	**-0.8**
	0.8nm,0.4s,mb4.0						
AKASG	**Malin Array Be**	**73.87**	**319**	P	**P**	**01 44 44.0**	**-0.7**
	0.3nm,0.3s,mb3.8,baz=67,slow=7.0,SNR=2.5						
HFS	**Hagfors**	**78.25**	**331**	P	**P**	**01 45 08.9**	**-0.6**
	1.9nm,0.7s,mb4.2,baz=76,slow=9.1,SNR=4.0						
NOA	**NORSAR Array B**	**78.87**	**333**	P	**P**	**01 45 12.1**	**-0.7**
	1.1nm,0.8s,mb3.8,baz=54,slow=5.8,SNR=3.7						
YKA	**Yellowknife Ar**	**82.19**	**23**	P	**P**	**01 45 30.7**	**+0.1**
	3.5nm,0.8s,mb4.3,baz=308,slow=4.7,SNR=6.2						
GERES	**GERESS Array B**	**83.78**	**321**	P	**P**	**01 45 38.9**	**-0.3**
	0.7nm,0.8s,mb3.9,baz=46,slow=5.8,SNR=5.3						
GERES				LR	LR	02 25 49.9	
	comp=Z,47nm,18.2s,MS3.9,baz=300,slow=38						
NEW	**Newport**	**89.94**	**35**	*e*P	**P**	**01 46 09.7**	**+0.6**
	4.5nm,0.9s,mb4.8						
FFC	**Flin Flon**	**92.33**	**24**	*e*P	**P**	**01 46 20.0**	**-0.1**
	5.9nm,0.7s,mb5.0						
NVAR	**Mina Array Bea**	**95.19**	**44**	P	**P**	**01 46 34.8**	**+1.2**
	0.5nm,0.5s,mb4.2,baz=284,slow=5.2,SNR=5.0						

ATH ***02*** *01:43:03.0,38.14N×2702E,h38km±8km,MD3.2/3*
CSEM ***02*** *01:43:03.9±0.1,3820N×2672E,h8km,MD2.8,Error ellipse: s-maj=2.8km s-min=2.4km az=66.0*
ISCJB ***02*** *01:43:04.2±0.7,3816N±003×2672E±004,h6km±5km, Error ellipse: s-maj=6.0km s-min=4.4km az=164.4*
DDA ***02*** *01:43:04.4,3820N×2677E,h7km±4km,Md2.8*
ISC 02 01:43:04.7±0.6,3818N±003×2673E±004,h10km±4km,n12, σ0%73/22,1C-1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.20**	**330**	⇑*i*P	**Pg**	**01 43 08.7**	**-0.3**
URLA				*i* S	**Sg**	**01 43 12.0**	**+0.1**
BLCB	**Balcova**	**0.32**	**51**	*e*PG	**Pg**	**01 43 11.0**	**-0.1**
BLCB				*e*SG	**Sg**	**01 43 15.4**	**+0.1**
IZM	**Izmir**	**0.47**	**63**	*e*PG	**Pg**	**01 43 14.1**	**+0.1**
KDAG	**Bornova**	**0.48**	**63**	*e*P	**Pg**	**01 43 13.7**	**-0.3**
KDAG				*e*S	**Sg**	**01 43 20.3**	**-0.1**
SMG	**Samos**	**0.48**	**169**	*e*PB	**Pg**	**01 43 14.3**	**+0.2**
SMG				*e*SB	**Sg**	**01 43 20.9**	**+0.5**
GCAM	**G?zelcaml?**	**0.63**	**140**	⇓*i*P	**Pg**	**01 43 17.0**	**+0.2**
GCAM				*i* S	**Sg**	**01 43 25.3**	**+0.2**
AYDN	**Tasoluk**	**1.05**	**119**	*e*P	**Pb**	**01 43 25.0**	**0.0**
AYDN				*e*S	**Sg**	**01 43 43.0**	**+4.4**
PRK	**Paraskevi**	**1.12**	**342**	*e*PN	**Pn**	**01 43 25.4**	**-1.0**
PRK				*e*SN	**Sn**	**01 43 42.3**	**+0.4**
AYVA	**Ayvalik**	**1.12**	**359**	*e*P	**Pb**	**01 43 25.7**	**-0.5**
AYVA				*e*S	**Sb**	**01 43 42.8**	**+1.9**
APE	**Apeiranthos**	**1.46**	**221**	*e*PN	**Pn**	**01 43 30.1**	**+1.0**
APE				*e*SN	**Sn**	**01 43 51.0**	**+0.7**
MANT	**Manisa**	**1.47**	**77**	*e*P	**Pn**	**01 43 31.3**	**0.0**
MANT				*e*S	**Sn**	**01 43 51.1**	**+0.5**
KULA	**Kula-Manisa**	**1.56**	**77**	*e*PN	**Pn**	**01 43 29.4**	**-3.1**

NNC 02 01:49:19.0±5.1,3686N×6990E,h0km,mb3.7,mpv3.4, 5C-1D,Error ellipse: s-maj=43.0km s-min=38.8km az=95.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.25**	**4**	⇓Pn	Pn	01 50 55.3	+2.8
	0.8nm,0.3s,baz=183,slow=14,SNR=59						
KK31				⇑Sn	Sn	01 52 11.5	+6.9
	1.2nm,0.4s,baz=190,slow=23,SNR=4.6						
TKM2	**Tokmak 2**	**7.47**	**34**	⇑Pn	Pn	01 51 07.9	-1.2
	2.4nm,0.9s						
TKM2				⇑Sn	Sn	01 52 34.3	-0.2
	5.7nm,0.8s						
AB09	**Akbulak array**	**14.37**	**333**	⇑Pn	Pn	01 52 44.9	+1.4
	0.4nm,0.3s						
AB09				⇑Sn	Sn	01 55 23.6	+0.1
	0.6nm,0.5s						

CSEM ***02*** *02:15:34.7±0.1,4029N×2552E,h8km,MD3.1,Error ellipse: s-maj=2.2km s-min=1.7km az=26.0*
ISCJB ***02*** *02:15:34.8±0.5,4031N±002×2551E±003,h7km±4km, Error ellipse: s-maj=3.4km s-min=3.3km az=9.0*
NEIC ***02*** *02:15:34.7,4030N×2557E,h26km,MD3.3(ATH),After ATH.*
ATH ***02*** *02:15:34.7,4030N×2557E,h26km±2km,MD3.3/5*
ISK ***02*** *02:15:34.6,4030N×2558E,h5km,MD3.1*
THE ***02*** *02:15:35.7,4031N×2555E,h13km±1km,ML2.5/2,Error ellipse: s-maj=1.2km s-min=0.7km az=98.0*
DDA ***02*** *02:15:35.1,4034N×2565E,h7km±3km,Md3.0*
ISC 02 02:15:35.2±0.5,4030N±002×2551E±003,h10km±4km,n44, σ1%07/75,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.32**	**111**	PG	**Pg**	**02 15 41.4**	**-0.2**
GADA				*e*SG	**Sg**	**02 15 45.6**	**-0.2**
LIA	**Limnos Island**	**0.48**	**212**	P	**Pg**	**02 15 45.4**	**+0.9**
LIA				S	**Sg**	**02 15 52.9**	**+2.1**
LIA	**Limnos Island**	**0.48**	**212**	*e*PB	**Pg**	**02 15 45.6**	**+1.1**
LIA				*e*SB	**Sg**	**02 15 52.3**	**+1.5**
LIA	**Limnos Island**	**0.48**	**212**	*e*Sb	**Sg**	**02 15 52.3**	**+1.5**
LIA				S	**Sg**	**02 15 52.9**	**+2.1**
BOZC	**Bozcaada**	**0.62**	**138**	*i* P	**Pg**	**02 15 47.1**	**-0.1**
BOZC				*i* S	**Sg**	**02 15 55.3**	**-0.1**
ENEZ	**Enez**	**0.65**	**48**	*e*PG	**Pg**	**02 15 47.5**	**-0.4**
ENEZ				*e*SG	**Sg**	**02 15 57.2**	**+0.8**
ALN	**Alexandroupoli**	**0.72**	**34**	P	**Pg**	**02 15 48.9**	**-0.2**
ALN				S	**Sg**	**02 15 58.9**	**+0.4**
EZN	**Ezine**	**0.79**	**127**	*e*PG	**Pg**	**02 15 49.7**	**-0.7**
RDO	**Rodhopi**	**0.84**	**1**	*e*PN	**Pn**	**02 15 52.0**	**-1.1**
RDO				*e*SN	**Sn**	**02 16 02.6**	**-3.0**
OUR	**Ouranopolis**	**1.17**	**272**	P	**Pb**	**02 15 56.9**	**-0.6**
PRK	**Paraskevi**	**1.21**	**151**	P	**Pn**	**02 15 57.5**	**-0.7**
PRK				S	**Sb**	**02 16 14.0**	**+0.2**
PRK	**Paraskevi**	**1.21**	**151**	*e*PN	**Pn**	**02 15 57.7**	**-0.5**
PRK				*e*SN	**Sn**	**02 16 13.7**	**-1.5**
PRK	**Paraskevi**	**1.21**	**151**	*e*Pn	**Pn**	**02 15 57.7**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.33**	**73**	*e*PN	**Pn**	**02 15 59.9**	**+0.1**
SART	**Tekirdag**	**1.33**	**73**	*i* P	**Pn**	**02 15 57.9**	**-2.0**
SART				*i* S	**Sb**	**02 16 18.1**	**+0.7**
KDZ	**Kurdz

PNIG				*i* S	Sn	02 45 30.0	-4.3
UTMO	**Huajuapan**	**5.45**	**310**	*e*P	Pn	02 44 41.0	-2.1
UTMO				*e*S	Sn	02 45 42.9	-3.3
PPM	**Popocatepetl**	**6.84**	**314**	*e*P	Pn	02 45 01.1	-1.2
PPM				*i* S	Sn	02 46 19.3	-1.3

IGQ 02 03:07:04.6, 103S×8103W, h12^{km}±4^{km}, Mb4.0, Ms3.8, 2C, Error ellipse: s-maj=11.3km s-min=3.3km az=5.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.30**	**93**	⇑P	Pg	03 07 10.1	-0.6
JAMA	**Jama**	**1.12**	**47**	P	Pb	03 07 25.4	-0.6
JAMA	**Jama**	**1.12**	**47**	S	Sb	03 07 40.1	-0.5
MAG1	**Magdalena**	**1.58**	**53**	P	Pn	03 07 33.6	+1.2
MAG1	**Magdalena**	**1.58**	**53**	S	Sn	03 07 58.9	+6.1
IGUA	**Igualata**	**2.43**	**101**	P	Pn	03 07 46.2	+2.0
CAMI	**Rancho Maria**	**2.55**	**82**	P	Pn	03 07 49.1	+3.3
GGP	**Refugio Guagua**	**2.58**	**71**	P	Pn	03 07 47.7	+1.5
JUI6	**Juive**	**2.59**	**99**	P	Pn	03 07 50.1	+3.7
ARRY	**Arrayan**	**2.61**	**100**	P	Pn	03 07 47.9	+1.2
RUN5	**Runtun**	**2.63**	**98**	P	Pn	03 07 49.5	+2.5
PATA	**Patacocha**	**2.63**	**100**	P	Pn	03 07 49.2	+2.2
PISA	**Pisayambo**	**2.64**	**91**	P	Pn	03 07 50.5	+3.5
ULBA	**Ulba**	**2.65**	**99**	P	Pn	03 07 50.0	+2.8
VC1	**Cotopaxi 1**	**2.65**	**82**	P	Pn	03 07 50.0	+2.7
TAMB	**Tambo**	**2.68**	**83**	P	Pn	03 07 50.6	+3.0
ANTI	**Antisana**	**2.92**	**79**	P	Pn	03 07 54.3	+3.3
COTA	**Cotacachi**	**3.01**	**63**	P	Pn	03 07 54.1	+1.9
CAYA	**Cayambe**	**3.23**	**70**	⇑P	Pn	03 07 58.9	+3.7

BJI ***02*** *03:20:04.5, 437S×10183E, h24^{km}, mB5.0, mb4.9, Ms4.5, Msz4.4*
MOS ***02*** *03:20:06.8±0.9, 4.17S×101.86E, h33^{km}, mb5.1/20, MS4.0/4, Error ellipse: s-maj=15.3km s-min=7.5km az=105.0*
NEIC ***02*** *03:20:08.6±1.7, 4.29S×101.85E, h35^{km}±15^{km}, mb4.8/14, Error ellipse: s-maj=11.8km s-min=4.6km az=49.0*
IDC ***02*** *03:20:09.3±2.8, 4.30S×101.82E, h41^{km}±23^{km}, mb4.3/15, mb1 4.4/16, mb1mx4.2/22, mbtmp4.3/16, ML4.3/1, MS4.0/18, Ms1 4.0/18, ms1mx3.8/32, Error ellipse: s-maj=23.6km s-min=11.0km az=46.0*
DJA ***02*** *03:20:10, 4.40S×101.52E, h66^{km}, Mw5.2/7*
ISCJB ***02*** *03:20:13.1±0.8, 4.23S±0.05×101.85E±0.05, h94^{km}±6^{km}, mb4.7/56, Error ellipse: s-maj=11.6km s-min=5.0km az=135.4*

ISC 02 03:20:12.5±0.7, 431S±005×10171E±005, h72^{km}±5^{km}, h25^{km}±5.2^{km}: pP-P, n139, σ1§16/123, mb4.7/56, 3C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.09**	**53**	P	**Pn**	**03 20 29.3**	**-2.9**
KSI	**Kapahiang**	**1.09**	**53**	S	**Sn**	**03 20 51.8**	**+4.8**
KRJI	**Kerinci**	**2.22**	**353**	P	**Pn**	**03 20 47.6**	**+0.5**
KRJI	**Kerinci**	**2.22**	**353**	S	**Sn**	**03 21 17.8**	**+4.3**
KLJ	**Kotabumi**	**3.18**	**100**	P	**Pn**	**03 21 02.0**	**+1.8**
JMBI	**JAMBI**	**3.28**	**36**	P	**Pn**	**03 21 01.1**	**-0.5**
PDSI	**Padang**	**3.60**	**340**	P	**Pn**	**03 21 03.6**	**-2.3**
BLSI	**Bandar Lampung**	**3.67**	**107**	P	**Pn**	**03 21 07.9**	**+1.0**
RGRI	**Rengat**	**3.98**	**9**	P	**Pn**	**03 21 12.6**	**+1.5**
PPI	**Padang Panjang**	**4.04**	**341**	P	**Pn**	**03 21 10.1**	**-1.9**
PPI	**Padang Panjang**	**4.04**	**341**	S	**Sn**	**03 22 07.0**	**+8.8**
SBJI	**Serang**	**4.75**	**112**	P	**Pn**	**03 21 23.0**	**+1.4**
SBJI	**Serang**	**4.75**	**112**	S	**Sn**	**03 22 17.2**	**+1.7**
DSRI	**Dabo**	**4.76**	**37**	P	**Pn**	**03 21 21.6**	**-0.1**
PPBI	**Pangkal Pinang** 109nm,1.1s,1.2nm	**4.90**	**64**	P	**Pn**	**03 21 23.1**	**-0.6**
DBJI	**Dramaga** 222nm,1.0s,7μm2.3nm	**5.49**	**114**	P	**Pn**	**03 21 33.0**	**+1.3**
CBJI	**Citeko** 1μm,1.0s,4.7nm	**5.53**	**113**	P	**Pn**	**03 21 36.5**	**+4.3**
TPI	**Tanjungpandan**	**6.12**	**76**	P	**Pn**	**03 21 41.7**	**+1.3**
LEM	**Lembang** 259nm,0.9s,2μm0.8nm	**6.39**	**113**	P	**Pn**	**03 21 45.5**	**+1.5**
GSI	**Gunungsitoli** 50nm,1.1s,0.9nm	**6.94**	**323**	P	**Pn**	**03 21 48.4**	**-3.2**
BJII	**Banjamegara**	**8.50**	**111**	P	**Pn**	**03 22 23.5**	**+11**
SMRI	**Semarang**	**9.10**	**108**	P	**Pn**	**03 22 20.1**	**-1.0**
SJI	**Sawahan**	**10.56**	**109**	P	**Pn**	**03 22 38.5**	**-2.6**
STKI	**Sintang**	**10.68**	**66**	P	**Pn**	**03 22 51.7**	**+9.0**
BSI	**Banda Aceh** 38nm,1.1s	**11.66**	**327**	P	**Pn**	**03 22 51.9**	**-4.1**
KAPI	**Kappang** 0.9nm,0.3s,baz=260,slow=6.6,SNR=9.7	**17.99**	**93**	P	**Pn**	**03 24 14.2**	**-3.7**
KAPI	3.8nm,0.3s,baz=186,slow=17,SNR=4.6			S	**S**	**03 27 29.9**	**-9.2**
KAPI	comp=Z,532nm,19.6s,baz=283,slow=39			LR	LR	03 31 54.5	
KAPI	**Kappang** 24nm,1.1s	**17.99**	**93**	P	**Pn**	**03 24 15.1**	**-2.8**
PCI	**Palu** 93nm,1.6s,1μm	**18.41**	**80**	P	**Pn**	**03 24 25.0**	**+2.0**
KDI	**Kendari** 34nm,1.0s,1μm	**20.85**	**90**	P	**P**	**03 24 48.6**	**-0.1**
BATI	**Baumata** 26nm,0.6s,mb4.7,baz=270,slow=3.0,SNR=3.5	**22.54**	**106**	P	**P**	**03 25 04.3**	**-2.4**
BATI	7.2nm,0.3s,baz=336,slow=18,SNR=2.4			S	**S**	**03 29 00.1**	**-9.0**
BATI	**Baumata** 48nm,0.8s,429nm,mb4.9	**22.54**	**106**	P	**P**	**03 25 07.6**	**+0.9**
CMAR	**Chiang Mai Arr** 4.0nm,0.6s,mb4.0,baz=185,slow=7.8,SNR=18	**22.79**	**353**	P	**P**	**03 25 06.8**	**-2.3**
CMAR	1.1nm,0.3s,baz=195,slow=4.0,SNR=7.5			PcP	PcP	03 29 00.3	+1.7
CMAR	comp=Z,325nm,19.6s,baz=178,slow=38			LR	LR	03 34 37.6	
CMAR	**Chiang Mai Arr**	**22.79**	**353**	P	**P**	**03 25 06.9**	**-2.3**
CMAR						03 29 00.3	
CHTO	**Chiang Mai** 20nm,1.5s,mb4.2	**23.14**	**353**	*e*P	**P**	**03 25 10.5**	**-2.2**
CHTO	**Chiang Mai**	**23.14**	**353**	*e*P	**P**	**03 25 10.5**	**-2.2**
CHTO	comp=Z,20nm,1.5s,mb4.2			pmax	pmax		
CHTO	**Chiang Mai**	**23.14**	**353**	P	**P**	**03 25 10.5**	**-2.2**
QIZ	**Qiongzhong**	**24.53**	**19**	P	**P**	**03 25 23.2**	**-2.3**
QIZ				S	**S**	**03 29 42.5**	**+1.3**
QIZ	comp=Z,587nm,15.7s			LR	LR		
DAV	**Davao City (W)**	**26.36**	**65**	LR	LR	03 36 56.7	
KMI	comp=Z,193nm,19.2s,baz=352,slow=38 **Kunming**	**29.27**	**2**	P	**P**	**03 26 09.4**	**+1.4**
KMI	comp=Z,13nm,0.8s,mb4.6			AMB	AMB		
KMI	comp=N,341nm,12.9s			LR	LR		
KMI	comp=E,362nm,17.8s			LR	LR		
KMI	comp=Z,365nm,18.6s			LR	LR		
SHL	**Shillong**	**31.19**	**343**	*e*P	**P**	**03 26 23.5**	**-1.4**
NWAO	**Narrogin (SRO)**	**31.95**	**155**	LR	LR	03 38 17.3	
TAPN	comp=Z,417nm,19.3s,baz=65,slow=34 **Taplejung**	**34.26**	**338**	*e*P	**P**	**03 26 52.8**	**+1.1**
RAMN	comp=Z,58nm,1.0s,mb5.3 **Ramite**	**34.34**	**336**	*e*P	**P**	**03 26 53.9**	**+1.5**
JIRN	comp=Z,9.3nm,0.6s,mb4.8 **Jiri**	**35.13**	**336**	*e*P	**P**	**03 27 00.5**	**+1.2**
LSA	comp=Z,18nm,0.4s,mb5.2 **Lhasa**	**35.30**	**344**	*e*P	**P**	**03 27 01.7**	**+1.1**
LSA	comp=Z,9.0nm,0.4s,mb5.0 **Lhasa**	**35.30**	**344**	*e*P	**P**	**03 27 01.7**	**+1.0**
LSA	comp=Z,9.0nm,0.4s,mb5.0			pmax	pmax		
WRA	**Warramunga Arr**	**35.37**	**119**	P	**P**	**03 27 00.4**	**-1.1**
WRA	comp=Z,2.6nm,0.5s,mb4.3,baz=304,slow=9.0,SNR=30			PcP	PcP	03 29 31.1	+0.8
WRA	comp=Z,2.0nm,0.7s,baz=295,slow=2.3,SNR=7.4			S	**S**	**03 32 31.1**	**+0.1**
WRAB	comp=Z,1.0nm,1.1s,baz=315,slow=20,SNR=3.2 **Tennant Creek**	**35.38**	**119**	*e*P	**P**	**03 27 00.5**	**-1.1**
WRAB	comp=Z,5.5nm,0.6s,mb4.6 **Tennant Creek**	**35.38**	**119**	⇑*e*P	**P**	**03 27 00.9**	**-0.6**
WB2	**Warramunga Arr**	**35.38**	**119**	*e*P	**P**	**03 27 00.2**	**-1.3**
GUN	**Gumba**	**35.48**	**335**	*e*P	**P**	**03 27 03.5**	**+1.2**
DMN	comp=Z,34nm,0.5s,mb5.4 **Daman**	**35.55**	**334**	*e*P	**P**	**03 27 04.1**	**+1.3**
KKN	**Kakani**	**35.63**	**335**	*e*P	**P**	**03 27 04.2**	**+0.7**
GKN	**Gorkha**	**36.09**	**334**	*e*P	**P**	**03 27 08.5**	**+1.0**
	comp=Z,46nm,1.0s,mb5.4						
FORT	**Forrest**	**36.19**	**140**	*e*P	**P**	**03 27 06.8**	**-1.4**
	comp=Z,3.6nm,1.1s,mb4.2						
KOLN	**Koldanda**	**36.36**	**332**	*e*P	**P**	**03 27 10.9**	**+1.1**
ASAR	comp=Z,31nm,0.8s,mb5.3 **Alice Springs**	**36.53**	**125**	P	**P**	**03 27 10.8**	**-0.6**
	comp=Z,4.8nm,0.8s,mb4.5,baz=299,slow=7.9,SNR=48						
ASAR				PcP	PcP	03 29 34.5	+0.8
	comp=Z,1.6nm,0.8s,baz=321,slow=3.5,SNR=6.0						
ASAR				S	**S**	**03 32 49.5**	**+0.8**
	comp=Z,3.2nm,1.3s,baz=293,slow=15,SNR=7.0						
DANN	**Dangsing**	**36.78**	**333**	*e*P	**P**	**03 27 14.3**	**+0.9**
	comp=Z,31nm,0.6s,mb5.4						
XAN	**Xi'an**	**38.74**	**10**	P	**P**	**03 27 28.9**	**-0.9**
XAN				AP	pP	03 27 34.7	-13
XAN				XP	sP	03 27 38.8	-17
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
XAN				AMB	AMB		
	comp=Z,108nm,4.8s						
NJ2	**Nanjing**	**39.66**	**23**	*e*P	**P**	**03 27 35.8**	**-1.7**
NJ2				AP	pP	03 27 45.6	-9.5
NJ2				XP	sP	03 27 49.5	-14
NJ2				PP	PP	03 29 11.2	+1.2
NJ2				S	**S**	**03 33 38.0**	**+2.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,190nm,8.1s						
NJ2				LR	LR		
	comp=N,210nm,17.7s						
NJ2				LR	LR		
	comp=E,450nm,21.8s						
NJ2				LR	LR		
	comp=Z,470nm,23.0s						
JOW	**Kunigami**	**40.22**	**38**	LR	LR	03 42 52.5	
	comp=Z,234nm,18.3s,baz=113,slow=34						
LZH	**Lanzhou**	**40.23**	**3**	*e*P	**P**	**03 27 42.0**	**-0.2**
LZH				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.6						
LZH				AMB	AMB		
	comp=Z,58nm,4.3s						
LZH				LR	LR		
	comp=N,414nm,15.9s						
LZH				LR	LR		
	comp=Z,616nm,16.8s						
CTA	**Charters Tower**	**46.09**	**114**	P	**P**	**03 28 28.9**	**-0.8**
	comp=Z,9.7nm,0.8s,mb4.6,baz=291,slow=10.0,SNR=10						
CTA				LR	LR	03 48 46.3	
	comp=Z,143nm,18.3s,baz=48,slow=37						
CTA	**Charters Tower**	**46.09**	**114**	P	**P**	**03 28 28.9**	**-0.8**
CTA				LR	LR	03 48 46.3	
CTAO	**Charters Tower**	**46.09**	**114**	*e*P	**P**	**03 28 28.7**	**-1.0**
	comp=Z,17nm,1.0s,mb4.7						
CTAO	**Charters Tower**	**46.09**	**114**	*e*P	**P**	**03 28 28.7**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**46.35**	**131**	P	**P**	**03 28 31.6**	**0.0**
	comp=Z,7.9nm,0.8s,mb4.5,baz=300,slow=8.5,SNR=20						
STKA				LR	LR	03 48 39.8	
	comp=Z,205nm,19.7s,baz=278,slow=37						
KSRS	**Korea Array**	**48.18**	**28**	P	**P**	**03 28 45.8**	**+0.2**
	comp=Z,8.3nm,0.8s,mb4.6,baz=217,slow=7.9,SNR=24						
KSRS				LR	LR	03 52 35.8	
	comp=Z,53nm,19.6s,baz=353,slow=40						
WMQ	**Urumqi**	**49.55**	**347**	*e*P	**P**	**03 28 57.3**	**+1.3**
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,124nm,4.0s						
WMQ				LR	LR		
	comp=N,112nm,20.0s						
WMQ				LR	LR		
	comp=E,102nm,18.0s						
WMQ				LR	LR		
	comp=Z,138nm,20.0s						
SONM	**Songino Array**	**52.08**	**4**	P	**P**	**03 29 16.2**	**+1.2**
	comp=Z,10nm,0.6s,mb5.0,baz=186,slow=8.6,SNR=57						
SONM				PcP	PcP	03 30 26.4	+0.3
	comp=Z,3.5nm,0.9s,baz=196,slow=2.4,SNR=4.0						
SONM				LR	LR	03 56 05.3	
	comp=Z,217nm,18.8s,baz=161,slow=41						
SONM	**Songino Array**	**52.08**	**4**	P	**P**	**03 29 16.2**	**+1.2**
SONM						03 30 26.4	
ULN	**Ulaanbaatar**	**52.16**	**5**	*e*P	**P**	**03 29 16.4**	**+0.8**
	comp=Z,11nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**52.16**	**5**	*e*P	**P**	**03 29 16.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
CN2	**Changchun**	**52.45**	**22**	*e*P	**P**	**03 29 17.3**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.8						
TKM2	**Tokmak 2**	**52.62**	**336**	*e*P	**P**	**03 29 19.6**	**+0.5**
	comp=Z,6.2nm,0.4s,mb5.0						
TKM2	**Tokmak 2**	**52.62**	**336**	*e*P	**P**	**03 29 19.6**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0						
AML	**Almayashu**	**52.77**	**334**	*e*P	**P**	**03 29 20.9**	**+0.7**
	comp=Z,3.8nm,0.6s,mb4.6						
MAJO	**Matsushiro**	**53.03**	**37**	*e*P	**P**	**03 29 20.7**	**-1.5**
	comp=Z,6.9nm,0.6s,mb4.8						
MAJO	**Matsushiro**	**53.03**	**37**	*e*P	**P**	**03 29 20.7**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
MJAR	**Matsushiro Arr**	**53.03**	**37**	P	**P**	**03 29 21.3**	**-1.0**
	comp=Z,9.5nm,0.9s,mb4.8,baz=218,slow=7.4,SNR=18						
MJAR				LR	LR	03 50 27.9	
	comp=Z,68nm,19.7s,baz=235,slow=34						
EKS2	**Erkin-Say**	**53.17**	**334**	*e*P	**P**	**03 29 23.8**	**+0.7**
	comp=Z,7.1nm,0.7s,mb4.8						
MK31	**Makanchi Array**	**53.70**	**344**	*e*P	**P**	**03 29 27.1**	**+0.2**
MKAR	**Makanchi Array**	**53.70**	**344**	P	**P**	**03 29 27.1**	**+0.2**
	comp=Z,8.0nm,0.8s,mb4.8,baz=147,slow=8.3,SNR=58						
MKAR				LR	LR	03 58 37.0	
	comp=Z,68nm,18.8s,baz=162,slow=43						
ZAK	**Zakamensk**	**54.49**	**1**	*e*P	**P**	**03 29 33.0**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
HIA	**Hailar**	**55.61**	**14**⇓	*e*P	**P**	**03 29 40.6**	**-0.1**
TLY	**Talaya**	**55.80**	**1**	*e*P	**P**	**03 29 43.1**	**+1.1**
	comp=Z,7.9nm,0.8s,mb4.8						
TLY	**Talaya**	**55.80**	**1**⇓	*e*P	**P**	**03 29 42.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
TLY				MLR	MLR		
	comp=Z,100nm,14.0s						
KURK	**Kurchatov**	**58.29**	**343**	*e*P	**P**	**03 29 59.6**	**0.0**
	comp=Z,6.1nm,0.5s,mb4.9						
KURK	**Kurchatov**	**58.29**	**343**⇓	*e*P	**P**	**03 30 00.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KURK				MLR	MLR		
	comp=Z,100nm,18.0s						
KLR	**Kul'dur**	**59.36**	**22**	*e*P	**P**	**03 30 03.3**	**-3.8**
KLR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.2						
ZALV	**Zalesovo Beam**	**59.74**	**349**	P	**P**	**03 30 09.6**	**-0.1**
	comp=Z,14nm,0.7s,mb5.1,baz=175,slow=5.2,SNR=64						
ZALV				LR	LR	03 59 27.9	
	comp=Z,104nm,19.7s,baz=236,slow=40						
KRAR	**Krasnoyarsk**	**60.55**	**354**	*i* P	**P**	**03 30 14.4**	**-0.7**
KRAR				pmax	pmax		
	comp=Z,15nm,0.3s,mb5.5						
ASAJ	**Asahikawa**	**60.58**	**33**	LR	LR	03 56 41.8	
	comp=Z,98nm,20.9s,baz=2.1,slow=36						
NVS	**Novosibirsk**	**60.91**	**348**	*e*P	**P**	**03 30 17.4**	**-0.1**
VOSK	**Vostochnaya**	**62.48**	**339**	P	**P**	**03 30 27.5**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
YSS	**Yuzh-Sakhalins**	**62.55**	**30**	*e*P	**P**	**03 30 28.6**	**-0.2**
	comp=Z,25nm,0.7s,mb5.2						
YSS	**Yuzh-Sakhalins**	**62.55**	**30**⇑	*i* P	**P**	**03 30 28.8**	**0.0**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
BOD	**Bodaibo**	**62.72**	**7**	*e*P	**P**	**03 30 28.8**	**-0.8**
BOD				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
BRVK	**Borovoye**	**62.99**	**339**	*e*P	**P**	**03 30 30.9**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.4						
BRVK	**Borovoye**	**62.99**	**339**	*e*P	**P**	**03 30 30.9**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KMBO	**Kilima Mbogo**	**64.45**	**271**	LR	LR	03 57 26.1	
	comp=Z,109nm,18.4s,baz=243,slow=35						
AB31	**Akbulak array**	**64.47**	**331**	P	**P**	**03 30 41.1**	**-0.3**
AB31				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
MAW	**Mawson**	**68.50**	**195**	LR	LR	03 54 15.3	
	comp=Z,291nm,18.3s,baz=56,slow=30						
SVE	**Sverdlovsk**	**69.45**	**337**	*e*P	**P**	**03 31 13.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
YAK	**Yakutsk**	**69.55**	**14**⇓	*e*P	**P**	**03 31 12.8**	**-0.5**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
YAK				MLR	MLR		
	comp=Z,100nm,21.0s						
ARU	**Arti**	**69.99**	**336**	*e*P	**P**	**03 31 15.6**	**-0.6**
	comp=Z,6.5nm,1.0s,mb4.4						
ARU				*e*pP	pP	03 31 23.9	-11
ARU	**Arti**	**69.99**	**336**	*c i* P	**P**	**03 31 16.5**	**+0.3**
ARU				*e*		03 33 47.7	
ARU				*e*S	S	03 40 26.3	+5.4
ARU				*e*SS	SS	03 45 00.2	+8.6
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.6						
KIV	**Kislovodsk**	**71.40**	**319**	*e*P	**P**	**03 31 25.9**	**+0.9**
	comp=Z,4.6nm,0.4s,mb4.7						
KIV	**Kislovodsk**	**71.40**	**319**⇓	*e*P	**P**	**03 31 25.0**	**0.0**
KIV				*e*		03 34 01.1	
KIV				*e*S	S	03 40 35.0	-2.7
KIV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
GOF	**Gofitskoye**	**71.65**	**320**	*e*P	**P**	**03 31 33.0**	**+6.5**
MATP	**Matopo**	**72.78**	**250**	P	**P**	**03 31 33.8**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.8,baz=115,slow=8.2,SNR=5.1						
PETK	**Petropavlovsk-**	**73.93**	**31**	P	**P**	**03 31 39.1**	**-0.7**
	comp=Z,3.5nm,0.8s,mb4.2,baz=204,slow=3.2,SNR=3.2						
PETK				LR	LR	04 06 40.5	
	comp=Z,42nm,21.3s,baz=158,slow=38						
ANN	**Anapa**	**75.19**	**318**	*e*P	**P**	**03 31 46.1**	**-1.2**
ANN				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
BOSA	**Boshof**	**76.06**	**242**	LR	LR	03 59 27.1	
	comp=Z,169nm,18.2s,baz=131,slow=31						
BR131	**Keskin Array S**	**76.13**	**313**	*e*P	**P**	**03 31 52.3**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.6						
TIXI	**Tiksi**	**77.86**	**9**⇓	*e*P	**P**	**03 32 00.9**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,100nm,15.0s						
OBN	**Obninsk**	**79.64**	**328**⇓	*e*P	**P**	**03 32 12.2**	**+0.3**
OBN				*e*		03 35 18.2	
OBN				*e*S	S	03 42 18.2	+10
OBN				pmax	pmax		
	comp=Z,48nm,2.2s,mb4.9						
AKASG	**Malin Array Be**	**82.34**	**322**	P	**P**	**03 32 26.4**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.9,baz=93,slow=4.3,SNR=5.8						
BUR08	**Bucovina Ar. S**	**84.13**	**319**	*e*P	**P**	**03 32 37.1**	**+1.4**
SNAA	**Sanae**	**90.49**	**198**	*e*	**P**	**03 33 07.2**	**+1.3**
SNAA	**Sanae**	**90.49**	**198**	*e*P	**P**	**03 33 08.0**	**+2.0**
	comp=Z,1.9nm,0.9s,mb4.2						
SNAA	**Sanae**	**90.49**	**198**	*e*P	**P**	**03 33 08.0**	**+2.1**
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**91.90**	**319**	P	**P**	**03 33 13.1**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.9,baz=100,slow=4.6,SNR=6.0						
VNA3	**Neumayer Olymp**	**92.69**	**198**	*e*	**P**	**03 33 14.8**	**-1.4**
NOA	**NORSAR Array B**	**93.98**	**331**	LR	LR	04 20 10.1	
	comp=Z,89nm,16.9s,baz=195,slow=38						
BOZ	**Bozeman (W)**	**129.61**	**30**	*e*PKPdf	PKPdf	03 39 14.9	+1.4
NVAR	**Mina Array Bea**	**130.24**	**41**	PKP	PKPdf	03 39 16.8	+1.9
	comp=Z,0.2nm,0.5s,baz=270,slow=1.2,SNR=3.7						
NVAR	**Mina Array Bea**	**130.24**	**41**	PKP	PKPdf	03 39 16.8	+1.9
LOHW	**Long Hollow**	**131.56**	**31**	*e*PKPdf	PKPdf	03 39 18.9	+1.7
PDAR	**Pinedale Array**	**132.70**	**31**	PKP	PKPdf	03 39 20.1	+0.7
	comp=Z,0.3nm,0.4s,baz=204,slow=2.0,SNR=3.2						
RSSD	**Black Hills**	**134.32**	**26**	*e*PKPdf	PKPdf	03 39 23.2	+0.8
SIUC	**Southern Illin**	**145.28**	**15**	*e*PKPbc	PKPbc	03 39 42.5	+0.2
TXAR	**Lajitas Array**	**145.39**	**41**	PKPbc	PKPbc	03 39 44.0	+1.0
	comp=Z,9.2nm,0.7s,baz=296,slow=1.0,SNR=107						
USIN	**University of**	**145.42**	**13**	*e*PKPbc	PKPbc	03 39 42.9	+0.1
WCI	**Wyandotte Cave**	**145.46**	**11**	*e*PKPbc	PKPbc	03 39 42.9	+0.1
MIAR	**Mount Ida**	**146.74**	**23**	*e*PKPbc	PKPbc	03 39 47.0	+0.2
JCT	**Junction City**	**146.99**	**36**	*e*PKPbc	PKPbc	03 39 47.6	0.0
WVT	**Waverly**	**147.13**	**14**	*e*PKPbc	PKPbc	03 39 47.9	+0.1
HKT	**Hockley**	**149.57**	**31**	*e*PKPbc	PKPbc	03 39 55.1	+0.7

IDC 02 03:28:18.1±4.1, 665S×12848E, h295^{km}±75^{km}, mb3.1/1, mb1 3.4/4, mb1mx3.1/15, mbtmp3.3/4, Error ellipse: s-maj=71.7km s-min=43.0km az=113.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.94**	**233**	P	Pn	03 29 47.1	+0.6
	19nm,0.3s,baz=68,slow=5.4,SNR=8.4						
BATI				S	S	03 30 56.5	-1.2
	3.2nm,0.3s,baz=331,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**14.39**	**157**	P	Pn	03 31 28.7	-0.8
	0.3nm,0.3s,baz=340,slow=11,SNR=8.6						
WRA				S	S	03 34 05.6	-1.4
	0.1nm,0.3s,baz=338,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**17.71**	**163**	P	P	03 32 06.0

*DDA **02** 04:04:26.4, 36.11N×2890E, h45km±1km, Md3.3*
*HLW **02** 04:04:37.2, 3527N×2922E, h33km, Mb3.5*
ISC 02 04:04:26.3±0.7, 3603N±003×2890E±004, h21km±7km, n42, σ1º04/58, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.57**	**78**	*e*PN	**Pn**	**04 04 38.0**	**-1.1**
ARG	**Arkhangelos**	**0.65**	**287**	*e*PN	**Pn**	**04 04 40.3**	**+0.1**
ARG				*e*SN	**Sb**	**04 04 50.0**	**+2.5**
DALT	**Dalyan (Mudla)**	**0.76**	**344**	PG	**Pb**	**04 04 38.9**	**-2.0**
DALT				*e*SG	**Sb**	**04 04 48.9**	**-2.0**
TURN	**Turunc**	**0.87**	**344**	*i* P	**Pb**	**04 04 42.0**	**-0.7**
TURN				*i* S	**Sb**	**04 04 55.1**	**+1.1**
ELL	**Elmali**	**1.08**	**49**	*e*PG	**Pn**	**04 04 45.3**	**-0.9**
ELL				*e*SG	**Sb**	**04 05 00.0**	**-0.1**
GOLH	**Golhisar**	**1.31**	**24**	*i* P	**Pn**	**04 04 48.3**	**-1.1**
GOLH				*i* S	**Sn**	**04 05 07.4**	**+1.1**
KARP	**Karpathos**	**1.49**	**252**	*e*PB	**Pb**	**04 04 54.6**	**+1.3**
KARP				*e*SN	**Sn**	**04 05 15.2**	**+4.6**
NISR	**Nisiros**	**1.54**	**293**	*e*PN	**Pn**	**04 04 50.0**	**-2.5**
MLSB	**Milas**	**1.55**	**325**	*e*PN	**Pn**	**04 04 52.6**	**0.0**
BDRM	**Kayabasi**	**1.56**	**312**	*i* P	**Pn**	**04 04 52.7**	**0.0**
BDRM				*i* S	**Sn**	**04 05 16.6**	**+4.3**
BODT	**Bodrum**	**1.64**	**309**	*e*PN	**Pn**	**04 04 54.1**	**+0.2**
ANTB	**Antalya**	**1.66**	**58**	*e*PN	**Pn**	**04 04 53.7**	**-0.5**
DENT	**Denizli**	**1.72**	**4**	*e*PN	**Pn**	**04 04 54.9**	**-0.1**
AYDN	**Tasoluk**	**1.82**	**334**	*i* P	**Pn**	**04 04 56.8**	**+0.4**
AYDN				*i* S	**Sn**	**04 05 18.5**	**-0.2**
BCK	**Bucak**	**1.97**	**43**	*e*PN	**Pn**	**04 04 58.2**	**-0.2**
GCAM	**G?zelcaml?**	**2.13**	**322**	*i* P	**Pn**	**04 05 00.8**	**+0.1**
GCAM				*i* S	**Sn**	**04 05 25.7**	**-0.7**
TKTP	**Tekketepe**	**2.31**	**29**	*i* P	**Pn**	**04 05 04.4**	**+1.4**
TKTP				*i* S	**Sn**	**04 05 32.8**	**+2.0**
KHL	**Karahalli**	**2.34**	**12**	*e*PN	**Pn**	**04 05 03.7**	**+0.2**
SMG	**Samos**	**2.35**	**316**	*e*PN	**Pn**	**04 05 00.0**	**-3.6**
SMG				*e*SN	**Sn**	**04 05 23.9**	**-7.9**
KHAL	**Karahalli**	**2.38**	**11**	*i* P	**Pn**	**04 05 02.9**	**-1.2**
KHAL				*i* S	**Sn**	**04 05 33.2**	**+0.7**
KHAL	**Karahalli**	**2.38**	**11**	*i* P	**Pn**	**04 05 02.9**	**-1.2**
KHAL				*i* S	**Sn**	**04 05 33.2**	**+0.6**
KULA	**Kula-Manisa**	**2.48**	**356**	*e*PN	**Pn**	**04 05 05.8**	**+0.4**
IZM	**Izmir**	**2.70**	**332**	*e*PN	**Pn**	**04 05 09.3**	**+0.9**
KDAG	**Bornova**	**2.70**	**332**	*i* P	**Pn**	**04 05 09.3**	**+0.9**
KDAG				*i* S	**Sn**	**04 05 39.3**	**-1.2**
BLCB	**Balcova**	**2.77**	**328**	*e*PN	**Pn**	**04 05 10.1**	**+0.6**
NPS	**Neapolis**	**2.78**	**255**	*e*PN	**Pn**	**04 05 12.0**	**+2.4**
SHUT	**Suhut-Afyon**	**2.84**	**27**	*e*PN	**Pn**	**04 05 10.7**	**+0.3**
URLA	**Izmir**	**2.96**	**322**	*i* P	**Pn**	**04 05 11.8**	**-0.3**
URLA				*i* S	**Sn**	**04 05 44.2**	**-2.7**
AKS	**Akhisar**	**2.97**	**343**	*e*PN	**Pn**	**04 05 12.1**	**0.0**
HDMB	**Hadim**	**3.04**	**71**	*e*PN	**Pn**	**04 05 14.1**	**+1.0**
ALT	**Altintas**	**3.17**	**17**	*e*PN	**Pn**	**04 05 15.2**	**+0.3**
KONT	**Konya--Tatoy**	**3.37**	**54**	*e*PN	**Pn**	**04 05 18.0**	**+0.4**
KIZT	**Kizilcal**	**3.70**	**39**	*e*PN	**Pn**	**04 05 22.9**	**+0.6**
HRSH	**Kfar Ka'horesh**	**6.24**	**120**	P	**Pn**	**04 06 00.1**	**+3.0**
RSH		**6.47**	**140**	P	**Pn**	**04 06 00.1**	**-0.2**
AMAG	**Maghara**	**6.47**	**145**	P	**Pn**	**04 05 59.7**	**-0.6**
AMAG				S	**Sn**	**04 07 00.5**	**-13**
KOT	**Kottamia**	**6.57**	**157**	P	**Pn**	**04 06 01.4**	**-0.2**
HHAG	**Hagoal**	**6.63**	**155**	P	**Pn**	**04 06 01.9**	**-0.7**
GLL	**Jalalah**	**6.86**	**159**	⇓P	**Pn**	**04 06 04.8**	**-0.8**
SUZ		**7.00**	**151**	P	**Pn**	**04 06 07.1**	**-0.5**
AWBH		**7.69**	**180**	P	**Pn**	**04 06 16.9**	**-0.2**
HKAT	**Jabal Katrina**	**8.64**	**149**	P	**Pn**	**04 06 30.0**	**-0.1**

*MDD **02** 06:00:49.3±2.9, 3724N×1326W, h0km, mb4.2/5, Error ellipse: s-maj=25.8km s-min=17.9km az=64.0, PRIMO*
*NEIC **02** 06:00:49.3, 3727N×1328W, h0km, MG4.2(MDD), After MDD.*
INMG 02 06:00:51.1±0.9, 3698N×1358W, h10km, ML2.5, Error ellipse: s-maj=5.5km s-min=4.3km az=104.0, Azores-Cape St. Vincent Ridge
ISC 02 06:00:53.6±1.5, 3744N±006×1291W±009, h10km, n24, σ1º05/47, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**3.40**	**91**	Pn	**Pn**	**06 01 45.4**	**-1.2**
MORF				Sn	**Sn**	**06 02 26.7**	**-0.3**
	0.0nm,0.6s						
EGRO	**El Granado**	**4.32**	**87**	Pn	**Pn**	**06 01 59.0**	**-0.3**
	1.1nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**06 02 50.8**	**+1.1**
	0.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.32**	**87**	Pn	**Pn**	**06 01 59.0**	**-0.3**
	1.1nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**06 02 50.8**	**+1.1**
	0.7nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.83**	**72**	Pn	**Pn**	**06 02 06.4**	**0.0**
EBAD				Sn	**Sn**	**06 03 03.3**	**+0.9**
EBAD				Sn	**Sn**	**06 03 03.9**	**+1.5**
EBAD	**Badajoz**	**4.83**	**72**	Pn	**Pn**	**06 02 06.4**	**0.0**
	1.1nm,0.1s,SNR=11						
EBAD				Sn	**Sn**	**06 03 03.3**	**+0.9**
	1.0nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.83**	**72**	Pn	**Pn**	**06 02 06.4**	**0.0**
	1.1nm,0.1s,SNR=11						
EBAD				Sn	**Sn**	**06 03 03.3**	**+0.9**
	1.0nm,0.1s,SNR=7.9						
ESPR	**Espera**	**5.67**	**94**	Pn	**Pn**	**06 02 17.0**	**-0.8**
	2.3nm,0.2s,SNR=7.2						
ESPR				Sn	**Sn**	**06 03 21.9**	**-1.0**
	0.3nm,0.1s,SNR=7.9						
ESPR	**Espera**	**5.67**	**94**	Pn	**Pn**	**06 02 17.0**	**-0.8**
	2.3nm,0.2s,SNR=7.2						
ESPR				Sn	**Sn**	**06 03 21.9**	**-1.1**
	0.3nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.71**	**33**	Sn	**Sn**	**06 03 23.3**	**-0.7**
	0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.79**	**39**	Pn	**Pn**	**06 02 20.4**	**+0.9**
	0.2nm,0.1s,SNR=4.0						
ELOB				Sn	**Sn**	**06 03 26.3**	**+0.3**
	1.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.79**	**39**	Pn	**Pn**	**06 02 20.4**	**+0.9**
	0.2nm,0.1s,SNR=4.0						
ELOB				Sn	**Sn**	**06 03 26.3**	**+0.3**
	1.3nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.95**	**62**	Pn	**Pn**	**06 02 22.8**	**+1.1**
	0.9nm,0.1s,SNR=7.9						
EPLA				Sn	**Sn**	**06 03 31.3**	**+1.5**
	1.2nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.97**	**82**	Pn	**Pn**	**06 02 21.8**	**-0.2**
	1.0nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**06 03 30.3**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.97**	**82**	Pn	**Pn**	**06 02 21.8**	**-0.2**
	1.0nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**06 03 30.3**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.27**	**27**	Pn	**Pn**	**06 02 25.8**	**-0.3**
EMAZ				Sn	**Sn**	**06 03 34.2**	**-3.5**
EMAZ				Sn	**Sn**	**06 03 34.9**	**-2.9**
EMAZ	**Mazaricos**	**6.27**	**27**	Pn	**Pn**	**06 02 25.8**	**-0.3**
	0.5nm,0.2s,SNR=7.9						
EMAZ				Sn	**Sn**	**06 03 34.2**	**-3.6**
	1.3nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.27**	**27**	Pn	**Pn**	**06 02 25.8**	**-0.3**
	0.5nm,0.2s,SNR=7.9						
EMAZ				Sn	**Sn**	**06 03 34.2**	**-3.5**
	1.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.55**	**45**	Pn	**Pn**	**06 02 31.2**	**+1.3**
	0.5nm,0.1s,SNR=4.0						
ECAL				Sn	**Sn**	**06 03 45.6**	**+1.0**
	1.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.55**	**45**	Pn	**Pn**	**06 02 31.2**	**+1.3**
	0.5nm,0.1s,SNR=4.0						
ECAL				Sn	**Sn**	**06 03 45.6**	**+1.1**
	1.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.64**	**81**	Pn	**Pn**	**06 02 31.1**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**06 03 47.0**	**+0.1**
	0.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.64**	**81**	Pn	**Pn**	**06 02 31.1**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**06 03 47.0**	**+0.1**
	0.1nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.34**	**35**	Sn	**Sn**	**06 04 01.9**	**-2.2**
	0.4nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.34**	**35**	Sn	**Sn**	**06 04 01.9**	**-2.2**
	0.4nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.09**	**65**	Pn	**Pn**	**06 03 05.7**	**+1.0**
	3.0nm,0.6s,SNR=7.6						
ETOR				Sn	**Sn**	**06 04 44.3**	**-2.7**
	1.9nm,0.7s,SNR=7.9						

*IDC **02** 06:13:06.4±1.0, 3011N×14271E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.8/21, mbtmp3.8/10, ML3.3/2, Error ellipse: s-maj=29.7km s-min=22.5km az=68.0*
*JMA **02** 06:13:07.1±0.3, 3023N×14284E, h45km, M4.1*
*ISCJB **02** 06:13:08.2±2.2, 3029N×1007×1425E±0.2, h21km±17km, mb3.7/7, Error ellipse: s-maj=24.9km s-min=7.2km az=157.8*
*NEIC **02** 06:13:12.0±0.8, 3025N×14261E, h35km, MG4.1(JMA), Error ellipse: s-maj=25.0km s-min=14.9km az=55.0*
ISC 02 06:13:10.9±2.3, 3042N±008×1428E±01, h22km±18km, n21, σ0º96/30, mb3.7/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.35**	**189**	Pn	**Pn**	**06 13 54.6**	**-7.4**
	2.7nm,0.3s,baz=349,slow=18,SNR=2.1						
CBIJ				Sn	**Sn**	**06 14 29.7**	**-11**
	19nm,0.3s,baz=288,slow=23,SNR=4.7						
CBIJ	**Chichi jima**	**3.35**	**189**	P	**Pn**	**06 13 56.1**	**-5.9**
BSO1	**Boso 1**	**4.49**	**341**	P	**Pn**	**06 14 16.7**	**-0.9**
BSO1				*e*S	**Sn**	**06 15 08.4**	**-0.7**
BSO3	**Boso 3**	**4.77**	**337**	P	**Pn**	**06 14 21.6**	**+0.2**
BSO3				*e*S	**Sn**	**06 15 18.0**	**+2.0**
JOD2	**Odawara 2**	**5.74**	**328**	P	**Pn**	**06 14 35.2**	**+0.4**
JOD2				*e*S	**Sn**	**06 15 40.7**	**+0.8**
JHU	**Hanno**	**6.16**	**333**	P	**Pn**	**06 14 41.0**	**+0.5**
JHU				*e*S	**Sn**	**06 15 48.4**	**-1.8**
JRY	**Ryogami san**	**6.45**	**331**	P	**Pn**	**06 14 44.6**	**0.0**
JRY				*e*S	**Sn**	**06 15 57.5**	**-0.1**
JFK	**Kawauchi**	**7.11**	**348**	P	**Pn**	**06 14 51.6**	**-2.0**
JFK				*e*S	**Sn**	**06 16 08.2**	**-5.4**
MJAR	**Matsushiro Arr**	**7.20**	**329**	Pn	**Pn**	**06 14 54.7**	**-0.1**
	2.2nm,0.3s,baz=158,slow=11,SNR=20						
MJAR				Sn	**Sn**	**06 16 15.1**	**-0.8**
	0.8nm,0.3s,baz=139,slow=22,SNR=4.6						
MAJO	**Matsushiro**	**7.20**	**329**	*e*Pn	**Pn**	**06 14 55.2**	**+0.4**
MAT	**Matsushiro**	**7.20**	**329**	P	**Pn**	**06 14 55.0**	**+0.2**
MAT				*e*S	**Sn**	**06 16 15.5**	**-0.4**
KSRS	**Korea Array**	**14.17**	**304**	Pn	**Pn**	**06 16 31.6**	**+1.3**
	baz=102,slow=16,SNR=2.6						
SONM	**Songino Array**	**32.77**	**312**	P	**P**	**06 19 43.3**	**+1.1**
	0.6nm,0.5s,mb3.8,baz=112,slow=8.1,SNR=5.5						
ZALV	**Zalesovo Beam**	**47.37**	**317**	P	**P**	**06 21 42.9**	**-0.2**
	0.6nm,0.5s,mb3.8,baz=106,slow=5.2,SNR=3.4						
MKAR	**Makanchi Array**	**48.81**	**307**	P	**P**	**06 21 54.4**	**0.0**
	0.5nm,0.5s,mb3.8,baz=87,slow=8.9,SNR=5.7						
MKAR	**Makanchi Array**	**48.81**	**307**	P	**P**	**06 21 54.4**	**0.0**
WRA	**Warramunga Arr**	**50.72**	**190**	P	**P**	**06 22 05.8**	**-3.3**
	0.7nm,0.6s,mb3.7,baz=8.9,slow=7.8,SNR=3.9						
YKA	**Yellowknife Ar**	**68.99**	**29**	P	**P**	**06 24 13.8**	**-0.4**
	0.5nm,0.5s,mb3.7,baz=292,slow=6.4,SNR=2.5						
NVAR	**Mina Array Bea**	**78.08**	**52**	P	**P**	**06 25 09.3**	**+1.1**
	0.1nm,0.3s,mb3.2,baz=312,slow=5.9,SNR=3.9						
NVAR	**Mina Array Bea**	**78.08**	**52**	P	**P**	**06 25 09.3**	**+1.1**
TXAR	**Lajitas Array**	**93.21**	**53**	P	**P**	**06 26 25.0**	**+1.0**
	0.5nm,0.8s,mb4.0,baz=303,slow=2.5,SNR=5.6						

IDC 02 06:15:24.5±2.8, 054S×13245E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.8/15, mbtmp3.9/4, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=188.5km s-min=23.5km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**10.20**	**318**	LR	LR	06 21 01.6	
	comp=Z,61nm,18.5s,baz=100,slow=33						
WRA	**Warramunga Arr**	**19.37**	**175**	P	Pn	06 19 52.3	-0.7
	0.5nm,0.3s,baz=354,slow=10,SNR=50						
WRA				S	Sn	06 23 14.9	-16
	0.3nm,0.3s,baz=354,slow=23,SNR=5.3						
ASAR	**Alice Springs**	**23.03**	**177**	P	P	06 20 31.5	+0.1
	3.2nm,0.7s,baz=356,slow=10,SNR=38						
ASAR				S	S	06 24 34.6	-8.7
	0.3nm,0.6s,baz=358,slow=20,SNR=3.3						
STKA	**Stephens Creek**	**32.35**	**165**	P	P	06 21 55.4	-0.3
	0.9nm,0.6s,baz=330,slow=8.4,SNR=2.6						
MKAR	**Makanchi Array**	**64.32**	**324**	P	P	06 26 02.1	+0.2
	0.4nm,0.5s,baz=111,slow=7.9,SNR=4.4						

*ISCJB **02** 06:33:00.1±1.4, 537N×0.1×879E±0.1, h10km, Error ellipse: s-maj=15.2km s-min=9.6km az=174.5*
*IDC **02** 06:33:03.0±2.4, 5352N×8791E, h0km, mb1 3.3/2, mb1mx3.1/24, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=20.9km s-min=15.2km az=41.0*
*NNC **02** 06:33:10.5±1.6, 5323N×8732E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=11.9km s-min=8.5km az=56.0*
ISC 02 06:33:02.6±1.8, 539N±02×879E±01, h15km±19km, n7, σ1º30/12, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.81**	**274**	Pg	**Pg**	**06 33 36.3**	**-0.9**
	1.9nm,0.3s,baz=102,slow=14,SNR=28						
ZALV				Lg		06 34 02.9	
	5.7nm,0.3s,baz=98,slow=26,SNR=17						
ZALV				Rg		06 34 15.8	
	5.1nm,0.5s,baz=96,slow=28,SNR=6.8						
KURK	**Kurchatov**	**6.49**	**245**	⇓Pn	**Pn**	**06 34 38.3**	**+0.8**
	2.3nm,1.0s						
KURK				⇓Sn	**Sn**	**06 35 49.4**	**-1.8**
	1.7nm,0.8s						
KURK				⇑Lg		06 36 19.9	
	6.9nm,1.0s						
KURK	**Kurchatov**	**6.49**	**245**	Pn	**Pn**	**06 34 40.5**	**+3.1**
	baz=63,slow=14						
KURK				Sn	**Sn**	**06 35 52.2**	**+1.0**
	baz=60,slow=24						
KURK				Lg		06 36 29.9	
	baz=60,slow=32						
KURBB	**Kurchatov Arra**	**6.59**	**244**	⇑Pn	**Pn**	**06 34 40.6**	**+1.8**
	0.2nm,0.3s,baz=61,slow=14						
KURBB				⇑Sn	**Sn**	**06 35 52.7**	**-1.0**
	1.1nm,0.6s						
KURBB				⇓Lg		06 36 22.0	
	0.7nm,0.6s,baz=61,slow=35						
MK31	**Makanchi Array**	**7.93**	**209**	Pn	**Pn**	**06 35 00.2**	**+3.1**
	0.3nm,0.5s,baz=30,slow=12,SNR=4.8						
MK31				⇑Sn	**Sn**	**06 36 26.0**	**-0.5**
	0.2nm,0.3s,baz=291,slow=24,SNR=4.5						
MK31				⇑Lg		06 36 58.0	
	0.6nm,0.5s,baz=44,slow=28,SNR=5.8						
MKAR	**Makanchi Array**	**7.93**	**209**	Pn	**Pn**	**06 34 57.2**	**+0.1**
	0.1nm,0.3s,baz=34,slow=10,SNR=3.8						
MKAR				Sn	**Sn**	**06 36 21.4**	**-5.1**
	0.3nm,0.3s,baz=31,slow=26,SNR=3.2						
MKAR				Lg		06 37 04.5	
	0.1nm,0.3s,baz=21,slow=28,SNR=3.4						
SONM	**Songino Array**	**13.15**	**110**	Pn	**Pn**	**06 36 07.6**	**-1.0**
	0.5nm,0.3s,baz=295,slow=14,SNR=6.0						

*IDC **02** 06:34:29.4±1.4, 196S×10026E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.1/9, Error ellipse: s-maj=62.7km s-min=15.5km az=59.0*
*NEIC **02** 06:34:35.7±1.0, 177S×10063E, h35km, mb4.4/3, Error ellipse: s-maj=48.5km s-min=8.3km az=55.0*
*ISCJB **02** 06:34:37.6±1.9, 18S±02×1005E±02, h74km±10km, mb4.2/11, Error ellipse: s-maj=48.6km s-min=8.8km az=142.8*
*DJA **02** 06:34:41.6±0.0, 155S×10066E, h18km, MLv4.1/5*
ISC 02 06:34:38.3±2.2, 18S±02×1004E±02, h62km±14km, n22, σ1º10/21, mb4.2/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.87**	**1**	P	**Pn**	**06 34 54.2**	**-0.7**
PDSI	**Padang**	**0.87**	**1**	S	**Sn**	**06 35 04.4**	**-2.6**
KRJI	**Kerinci**	**1.06**	**106**	P	**Pn**	**06 34 58.4**	**+1.1**
KRJI	**Kerinci**	**1.06**	**106**	S	**Sn**	**06 35 12.7**	**+1.3**
PPI	**Padang Panjang**	**1.32**	**358**	P	**Pn**	**06 35 01.2**	**+0.4**
KSI	**Kapahiang**	**2.84**	**131**	P	**Pn**	**06 35 26.2**	**+5.0**
CMAR	**Chiang Mai Arr**	**20.17**	**356**	P	**P**	**06 39 08.0**	**+0.1**
	1.3nm,0.3s,baz=187,slow=10,SNR=5.7						
CMAR	**Chiang Mai Arr**	**20.17**	**356**	P	**P**	**06 39 08.0**	**+0.1**
WRA	**Warramunga Arr**	**37.72**	**121**	P	**P**	**06 41 46.8**	**-1.4**
	1.0nm,0.5s,mb3.8,baz=301,slow=9.3,SNR=17						
WRA				PcP	PcP	06 44 03.9	-0.5
	0.3nm,0.6s,baz=314,slow=2.6,SNR=5.0						
WRAB	**Tennant Creek**	**37.73**	**121**	*e*P	**P**	**06 41 47.0**	**-1.3**
	1.2nm,0.4s,mb4.0						
WB2	**Warramunga Arr**	**37.73**	**121**	*e*P	**P**	**06 41 46.4**	**-2.0**
ASAR	**Alice Springs**	**39.02**	**127**	P	**P**	**06 41 58.6**	**-0.5**
	2.8nm,0.6s,mb4.2,baz=302,slow=8.0,SNR=41						
ASAR				PcP	PcP	06 44 08.9	+0.5
	0.5nm,0.5s,baz=308,slow=2.7,SNR=4.9						
KSRS	**Korea Array**	**46.62**	**30**	P	**P**	**06 43 01.3**	**+0.9**
	0.6nm,0.3s,mb4.0,baz=221,slow=6.3,SNR=4.0						
STKA	**Stephens Creek**	**48.96**	**132**	P	**P**	**06 43 18.8**	**+0.1**
	1.3nm,0.7s,mb4.1,baz=294,slow=13,SNR=3.6						
SONM	**Songino Array**	**49.69**	**5**	P	**P**	**06 43 24.1**	**+0.2**
	1.2nm,0.5s,mb4.2,baz=192,slow=8.1,SNR=7.1						
SONM				PcP	PcP	06 44 44.7	+0.4
	0.5nm,0.5s,baz=189,slow=1.9,SNR=2.3						
TKM2	**Tokmak 2**	**49.82**	**336**	*e*P	**P**	**06 43 26.6**	**+1.6**
	7.0nm,0.9s,mb4.7						
AML	**Almayashu**	**49.97**	**334**	*e*P	**P**	**06 43 27.9**	**+1.8**
	3.3nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**50.95**	**344**	P	**P**	**06 43 34.0**	**+0.6**
	3.5nm,0.6s,mb4.5,baz=148,slow=8.0,SNR=25						
KURK	**Kurchatov**	**55.53**	**343**	P	**P**	**06 44 07.1**	**0.0**
	baz=166,slow=7.2						
ZALV	**Zalesovo Beam**	**57.05**	**349**	P	**P**	**06 44 17.6**	**-0.1**
	6.1nm,0.8s,mb4.7,baz=173,slow=6.0,SNR=27						
BVAR	**Borovoye Array**	**60.14**	**340**	P	**P**	**06 44 38.7**	**-0.6**
	0.7nm,0.4s,mb4.0,baz=141,slow=7.3,SNR=4.1						
TXAR	**Lajitas Array**	**144.27**	**38**	PKP	PKPdf	06 54 07.3	-0.7
	1.0nm,0.5s,baz=229,slow=1.0,SNR=19						

*NEIC **02** 06:47:05.6, 1467N×9445W, h20km, MD4.1(MEX), After MEX.*
MEX 02 06:47:06.0±1.5, 1470N×9446W, h20km±53km, MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.56**	**50**	*i* P	Pn	06 47 29.1	-3.5
PCIG				*i* S	Sn	06 47 47.0	-5.2
THIG		**2.13**	**84**	*i* P	Pn	06 47 37.6	-2.8
THIG				*i* S	Sn	06 48 02.6	-3.7
CMIG	**Matias Romero**	**2.41**	**350**	*e*P	Pn	06 47 42.5	-1.8
CMIG				*i* S	Sn	06 48 09.2	-4.0
TGIG		**2.43**	**32**	*i* P	Pn	06 47 43.1	-1.5
TGIG				*i* S	Sn	06 48 11.1	-2.6
SCX	**San Cristobal**	**2.68**	**41**	*i* P	Pn	06 47 46.2	-1.8
SCX				*i* S	Sn	06 48 18.1	-1.7
VHO	**Vista Hermosa**	**3.22**	**317**	*e*P	Pn	06 47 54.1	-1.3
VHO				*i* S	Sn	06 48 35.8	+2.7
PNIG	**Pinotepa**	**3.92**	**296**	*e*P	Pn	06 48 11.8	+6.8
PNIG				*i* S	Sn	06 48 44.4	-6.0
UTMO	**Huajuapan**	**4.47**	**314**	*e*P	Pn	06 48 10.8	-1.9
UTMO				*i* S	Sn	06 49 01.7	-2.5
PPM	**Popocatepetl**	**5.89**	**318**	*e*P	Pn	06 48 38.7	+6.5
PPM				*i* S	Sn	06 49 44.2	+4.9
TEIG	**Tepich**	**8.06**	**46**	*e*Pn	Pn	06 48 60.0	-2.0

*ISCJB **02** 07:08:34.3±0.3, 3023N±004×13878E±007, h435km±4km, mb4.0/31, Error ellipse: s-maj=9.4km s-min=5.2km az=166.4*
*JMA **02** 07:08:34.8±0.3, 3033N×139.19E, h458km±4km, M4.1*
*BJI **02** 07:08:35.3, 30.11N×13858E, h447km, mB4.6, mb4.5*
*NEIC **02** 07:08:35.6±0.7, 3021N×13859E, h429km±7km, mb4.8/12, Error ellipse: s-maj=7.2km s-min=6.1km az=143.0*
*IDC **02** 07:08:35.9±1.0, 3021N×13858E, h431km±11km, mb3.4/19, mb1 3.5/24, mb1mx3.5/28, mbtmp3.4/24, Error ellipse: s-maj=13.2km s-min=9.0km az=82.0*
ISC 02 07:08:35.1±0.3, 3020N±004×13872E±007, h423km±4km, n70, σ1º09/87, mb4.0/31, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.05**	**17**	P	**P**	**07 09 42.4**	**+2.1**
	138nm,0.3s,baz=194,slow=10,SNR=37						
JHJ				S	**S**	**07 10 31.6**	**-1.6**
	58nm,0.3s,baz=234,slow=20,SNR=4.4						
JHJ2	**Mitsune**	**3.05**	**18**	P	**P**	**07 09 42.1**	**+1.8**
JHJ2				*e*S	**S**	**07 10 31.8**	**-1.5**
TK02	**Tokai 2**	**3.82**	**348**	P	**P**	**07 09 50.1**	**+3.3**
CBIJ	**Chichi jima**	**4.34**	**135**	P	**P**	**07 09 52.0**	**+0.3**
	25nm,0.3s,baz=291,slow=15,SNR=9.4						
CBIJ				S	**S**	**07 10 52.3**	**

2007 NOV

MKAR PcP PcP 07 17 47.0 -0.5
comp=Z,0.4nm,0.5s,baz=76,slow=6.1,SNR=5.3
MKAR ScP ScP 07 20 56.3 -3.3
comp=Z,0.7nm,0.9s,baz=79,slow=6.3,SNR=4.0
PKI Pulchoki 46.40 281 *eP* **P 07 16 21.3 -0.6**
KKN Kakani 46.45 281 *eP* **P 07 16 21.7 -0.6**
comp=Z,21nm,0.4s,mb4.8
DMN Daman 46.65 281 *eP* **P 07 16 23.3 -0.5**
comp=Z,13nm,0.3s,mb4.7
GKN Gorkha 46.94 281 *eP* **P 07 16 25.5 -0.5**
comp=Z,18nm,0.3s,mb5.0
DANN Dangsing 47.58 282 *eP* **P 07 16 30.9 0.0**
comp=Z,24nm,0.2s,mb5.1
KOLN Koldanda 47.88 281 *eP* **P 07 16 33.0 -0.1**
comp=Z,24nm,0.5s,mb4.8
KURK Kurchatov 48.65 313 P **P 07 16 37.9 -0.6**
baz=91,slow=7.8
KURK Kurchatov 48.65 313 P **P 07 16 37.9 -0.6**
WRA Warramunga Arr 50.03 185 P **P 07 16 48.9 -0.2**
comp=Z,5.5nm,0.6s,mb4.1,baz=1.6,slow=7.8,SNR=133
WRA PcP PcP 07 18 02.1 +0.3
comp=Z,0.6nm,0.4s,baz=358,slow=4.0,SNR=5.3
BVAR Borovoye Array 53.70 316 P **P 07 17 14.9 -0.5**
comp=Z,2.2nm,0.4s,mb3.7,baz=96,slow=7.1,SNR=8.8
ASAR Alice Springs 53.76 185 P **P 07 17 16.2 +0.1**
comp=Z,2.2nm,0.5s,mb3.6,baz=16,slow=12,SNR=59
ASAR PcP PcP 07 18 16.6 +0.8
comp=Z,0.4nm,0.7s,baz=2.3,slow=4.7,SNR=3.4
KDAK Kodiak Island 53.76 38 P **P 07 17 16.3 +0.6**
comp=Z,18nm,1.0s,mb4.2,baz=42,slow=3.2,SNR=6.8
MBWA Marble Bar 54.23 202 *eP* **P 07 17 19.2 -0.4**
comp=Z,4.4nm,0.5s,mb3.9
AKTK Aktyubinsk 61.69 314 P **P 07 18 09.8 -0.4**
AKTO Aktyubinsk 61.69 314 P **P 07 18 09.8 -0.4**
comp=Z,1.6nm,0.7s,mb3.7,baz=89,slow=14,SNR=5.5
STKA Stephens Creek 61.80 177 P **P 07 18 11.4 +0.3**
comp=Z,2.1nm,0.6s,mb3.8,baz=322,slow=6.9,SNR=7.7
NWAO Narrogin (SRO) 66.00 200 P **P 07 18 37.9 -0.2**
comp=Z,3.9nm,0.5s,mb4.3,baz=35,slow=6.4,SNR=5.9
ARCES ARCESS Array B 69.60 340 P **P 07 18 59.4 -0.4**
comp=Z,1.4nm,0.5s,mb3.8,baz=60,slow=7.3,SNR=8.6
ARCES ARCESS Array B 69.60 340 P **P 07 18 59.4 -0.4**
YKA Yellowknife Ar 70.85 28 P **P 07 19 07.3 0.0**
comp=Z,1.5nm,0.8s,mb3.6,baz=304,slow=6.2,SNR=5.1
YKA Yellowknife Ar 70.85 28 P **P 07 19 07.3 0.0**
AKASG Malin Array Be 78.32 322 P **P 07 19 48.5 -1.4**
comp=Z,0.3nm,0.3s,mb3.4,baz=52,slow=4.9,SNR=4.6
NOA NORSAR Array B 79.59 337 P **P 07 19 56.0 -0.5**
comp=Z,0.9nm,0.8s,mb3.5,baz=49,slow=4.9,SNR=2.8
NOA NORSAR Array B 79.59 337 P **P 07 19 56.0 -0.6**
NVAR Mina Array Bea 80.96 51 P **P 07 20 05.7 +1.5**
comp=Z,0.5nm,0.5s,mb3.5,baz=292,slow=5.6,SNR=7.0
PDAR Pinedale Array 84.11 43 P **P 07 20 20.9 +0.8**
comp=Z,0.8nm,0.9s,mb3.5,baz=278,slow=1.0,SNR=5.2
TXAR Lajitas Array 96.11 51 P **P 07 21 18.2 +1.8**
comp=Z,0.3nm,0.7s,mb3.6,baz=293,slow=3.3,SNR=4.4
QSPA South Pole Qui 119.96 180 PKP PKPdf 07 26 34.7 -0.4
comp=Z,0.8nm,0.6s,baz=324,slow=3.6,SNR=8.9
TORD Torodi Ar. Bea 120.26 310 PKP PKPdf 07 26 36.3 -1.4
comp=Z,0.3nm,0.5s,baz=42,slow=1.2,SNR=3.5

*NEIC **02** 07:24:54.2, 1699N×10056W, h5km, MD4.0(MEX), After MEX.*
MEX 02 07:24:54.2±1.2, 1699N×10056W, h5km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.28**	**78**	*i* P	Pg	07 24 58.5	-1.2
CAIG				*i* S	Sg	07 25 03.2	-0.1
ACX	**Acapulco**	**0.62**	**101**	*i* P	Pg	07 25 05.2	-1.0
ACX				*i* S	Sg	07 25 15.1	+0.7
ZIIG	**Zihuatanejo**	**1.06**	**305**	*i* P	Pg	07 25 11.2	-3.5
ZIIG				*i* S	Sg	07 25 26.4	-2.0
MEIG	**Mezcala**	**1.29**	**44**	*i* P	Pn	07 25 15.7	-3.1
MEIG				*eS*	Sg	07 25 31.9	-3.8
PLIG	**Platanillo**	**1.72**	**36**	*i* P	Pn	07 25 20.8	-3.9
PLIG				*i* S	Sn	07 25 42.8	-4.3
PNIG	**Pinotepa**	**2.40**	**104**	*eP*	Pn	07 25 31.7	-2.5
PNIG				*i* S	Sn	07 26 01.1	-3.0
MZVM		**2.52**	**30**	*i* P	Pn	07 25 32.3	-3.6
MZVM				*i* S	Sn	07 26 02.6	-4.5
UTMO	**Huajuapan**	**2.76**	**72**	*eP*	Pn	07 25 36.7	-2.4
UTMO				*i* S	Sn	07 26 09.4	-3.4
PPM	**Popocatepetl**	**2.76**	**41**	*i* P	Pn	07 25 36.5	-2.7
PPM				*i* S	Sn	07 26 11.5	-1.4
PBVM	**Pinon**	**2.81**	**30**	*eP*	Pn	07 25 36.8	-3.0
PBVM				*i* S	Sn	07 26 13.2	-0.9
PTVM	**Pico Tres Padr**	**2.93**	**28**	*eP*	Pn	07 25 41.1	-0.3
PTVM				*i* S	Sn	07 26 14.4	-2.6
IIO	**Organos**	**3.12**	**34**	*i* P	Pn	07 25 46.4	+2.4
IIO				*i* S	Sn	07 26 20.6	-1.1
TPIG	**Tehuac#an**	**3.36**	**65**	*eP*	Pn	07 25 50.8	+3.5
TPIG				*i* S	Sn	07 26 24.0	-3.6
VHO	**Vista Hermosa**	**3.66**	**88**	*eP*	Pn	07 25 51.5	+0.1
VHO				*i* S	Sn	07 26 28.3	-6.7

*ISK **02** 08:02:41.9, 3721N×4284E, h7km, MD3.9*
*CSEM **02** 08:02:41.2±0.1, 3713N×4287E, h15km, MD3.9, Error ellipse: s-maj=1.8km s-min=1.6km az=46.0*
*DDA **02** 08:02:42.0, 3713N×4281E, h20km±3km, Md3.5*
ISC 02 08:02:42.4±0.9, 3715N±004×4285E±003, h3km±6km, n38, σ1§18/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.48**	**317**	*eP*	G	**08 02 50.5**	**-1.1**
SIRT				*eS*	G	**08 02 57.4**	**-0.5**
MSL	**Mosul**	**0.78**	**164**	*i* x	x	08 02 27.0	
MSL				*i* x	x	08 03 09.0	
HAKT	**HAKKARI**	**0.80**	**59**	*i* P	**Pg**	**08 02 58.2**	**+0.5**
HAKT				*i* S	**Sg**	**08 03 08.6**	**+0.6**
HKR	**Hakkari**	**0.83**	**59**	*e* PG	**Pg**	**08 02 57.7**	**-0.6**
VANT	**Van**	**1.39**	**18**	*e* PN	**Pn**	**08 03 06.1**	**-2.2**
TVAN	**Van**	**1.44**	**18**	*i* P	**Pn**	**08 03 08.7**	**-0.9**
TVAN	**Van**	**1.44**	**18**	*i* P	**Pn**	**08 03 08.6**	**-0.9**
TVAN				*i* S	**Sg**	**08 03 30.7**	**+1.9**
BEST	**Besiri**	**1.46**	**301**	*i* S	**Sg**	**08 03 28.9**	**-0.3**
BEST	**Besiri**	**1.46**	**301**	*i* P	**Pn**	**08 03 09.6**	**-0.1**
VANB	**Van**	**1.50**	**16**	*e* PN	**Pn**	**08 03 08.9**	**-1.4**
VANB				*e* SN	**Sn**	**08 03 28.7**	**-1.7**
MARD	**Mardin**	**1.66**	**276**	*i* S	**Sn**	**08 03 35.0**	**+0.7**
MARD	**Mardin**	**1.66**	**276**	*i* P	**Pn**	**08 03 12.5**	**+0.1**
CLDR	**Caldiran**	**2.16**	**23**	*e* PN	**Pn**	**08 03 18.9**	**-0.5**
TUTA	**Tutak**	**2.25**	**359**	*i* P	**Pn**	**08 03 21.6**	**+1.0**
TUTA	**Tutak**	**2.25**	**359**	*i* P	**Pn**	**08 03 21.6**	**+1.0**
TUTA				*i* S	**Sn**	**08 03 51.5**	**+2.7**
DIYA	**Diyarbakir**	**2.30**	**290**	*i* P	**Pn**	**08 03 19.7**	**-1.6**
DIYA	**Diyarbakir**	**2.30**	**290**	*i* P	**Pn**	**08 03 19.7**	**-1.6**
DIYA				*i* S	**Sn**	**08 03 47.4**	**-2.7**
AGRB	**Hanur-Agry**	**2.42**	**3**	*e* PN	**Pn**	**08 03 22.3**	**-0.7**
HOMI	**Horasan**	**2.98**	**346**	*i* P	**Pn**	**08 03 35.6**	**+4.9**
ERZM	**Erzurum**	**2.98**	**338**	*i* P	**Pn**	**08 03 37.2**	**+6.5**
ERZM	**Erzurum**	**2.98**	**338**	*i* S	**Sb**	**08 04 16.3**	**+3.1**
EZM	**Erzurum**	**2.99**	**337**	*e* PN	**Pn**	**08 03 30.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**3.06**	**295**	*e* PN	**Pn**	**08 03 31.1**	**-0.7**
URFA	**Urfa**	**3.23**	**276**	*e* PN	**Pn**	**08 03 34.6**	**+0.6**
PTK	**Pertek**	**3.24**	**304**	*e* PN	**Pn**	**08 03 33.5**	**-0.6**
GNI	**Garni**	**3.34**	**26**	*e* PN	**Pn**	**08 03 35.9**	**+0.3**
ELZG	**Elazig**	**3.34**	**295**	*i* P	**Pn**	**08 03 35.0**	**-0.6**
ELZG	**Elazig**	**3.34**	**295**	*i* S	**Sb**	**08 04 27.6**	**+4.2**
EZC	**Erzincan**	**3.52**	**318**	*e* PN	**Pn**	**08 03 42.1**	**+4.1**
BHD	**Baghdad**	**4.07**	**162**	*ex*	x	08 03 40.0	
BHD				*ex*	x	08 04 27.0	
GUMT	**Gumushane**	**4.22**	**322**	*e* PN	**Pn**	**08 03 48.5**	**+0.8**
GAZ	**Gaziantep**	**4.50**	**272**	*e* PN	**Pn**	**08 03 53.0**	**+1.5**
KMRS	**Kahramanmaras**	**4.75**	**276**	*e* PN	**Pn**	**08 03 56.5**	**+1.4**
SARI	**SarD1z-Kayseri**	**5.10**	**289**	*e* PN	**Pn**	**08 04 02.5**	**+2.7**
MIB	**Mutribah** baz=152	**8.23**	**152**	*e* P	**Pn**	**08 04 42.8**	**0.0**
MIB					AML	AML	08 06 14.2
	comp=Z,9.0nm,0.6s,baz=152						
NAY	**Al-Naaiem**	**8.70**	**154**	*e* P	**Pn**	**08 04 49.0**	**-0.2**
NAY	**Al-Naaiem** baz=154	**8.70**	**154**	*e* P	**Pn**	**08 04 49.0**	**-0.1**
NAY					AML	AML	08 06 25.9
	comp=Z,3.0nm,0.6s,baz=154						
RDF	**Al-Radifah** baz=153	**9.10**	**153**	*e* P	**Pn**	**08 04 55.3**	**+0.6**
RDF					AML	AML	08 06 35.8
	comp=Z,7.0nm,0.9s,baz=153						

IDC 02 08:07:22.6±2.4, 1463S×17752W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.5/3, Error ellipse: s-maj=293.0km s-min=33.4km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.15**	**256**	P	P	08 15 49.1	-0.2
	0.3nm,0.8s,baz=90,slow=7.6,SNR=7.0						
ASAR	**Alice Springs**	**46.57**	**251**	P	P	08 15 52.6	0.0
	1.1nm,0.6s,baz=86,slow=8.2,SNR=20						
TXAR	**Lajitas Array**	**83.53**	**58**	P	P	08 19 53.0	+0.2
	0.2nm,0.7s,baz=212,slow=4.4,SNR=3.9						

*MOS **02** 08:35:26.9±0.9, 1354S×16686E, h33km, mb4.9/21, Error ellipse: s-maj=14.6km s-min=10.9km az=13.3*
*BJI **02** 08:35:28.5, 1282S×16662E, h18km, mB5.3, mb4.9*
*IDC **02** 08:35:30.7±3.2, 1353S×16686E, h55km±25km, mb4.4/15, mb1 4.6/16, mb1mx4.4/20, mbtmp4.5/16, ML5.8/1, MS3.8/13, Ms1 3.8/13, ms1mx3.7/21, Error ellipse: s-maj=23.3km s-min=16.9km az=106.0*
*ISCJB **02** 08:35:30.3±2.1, 1355S±006×16675E±0.10, h59km±16km, mb5.0/38, MS3.8/13, Error ellipse: s-maj=16.9km s-min=8.5km az=159.5*
*NEIC **02** 08:35:34.0±1.2, 1351S×16674E, h82km±10km, mb5.1/21, Error ellipse: s-maj=9.7km s-min=7.6km az=77.0*
*DJA **02** 08:35:56.5±0.0, 1383S×166.12E, h264km, mB5.0/1, Mw(mB)5.0/1*
ISC 02 08:35:33.1±1.6, 1353S±006×16674E±009, h70km±12km, n110, σ0§97/83, mb4.8/38, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.81**	**301**	P	**Pn**	**08 37 24.2**	**+0.2**
	128nm,0.3s,baz=172,slow=3.0,SNR=49						
HNR				S	**Sn**	**08 38 48.7**	**-2.3**
	46nm,0.3s,baz=159,slow=22,SNR=6.7						
HNR	**Honiara**	**7.81**	**301**	*e*Pn	**Pn**	**08 37 24.1**	**0.0**
	701nm,0.8s						
HNR				*e*Sn	**Sn**	**08 38 50.3**	**-0.7**
HNR	**Honiara**	**7.81**	**301**	P	**Pn**	**08 37 24.2**	**+0.1**
HNR				S	**Sn**	**08 38 48.7**	**-2.3**
HNR				pmax	pmax		
	comp=Z,128nm,0.3s						
HNR				smax			
	comp=N,46nm,0.3s						
DZM	**Mont Dzumac**	**8.50**	**182**	*e*Pn	**Pn**	**08 37 35.2**	**+1.7**
DZM				*e*Sn	**Sn**	**08 39 06.8**	**-1.1**
EIDS	**Eidsvold**	**18.86**	**229**	*e*Pn	**Pn**	**08 39 50.4**	**+1.3**
	comp=N,157nm,1.1s						
CTA	**Charters Tower**	**20.66**	**249**	P	**P**	**08 40 08.8**	**+1.5**
	comp=N,22nm,0.7s,baz=84,slow=12,SNR=24						
CTA	**Charters Tower**	**20.66**	**249**	P	**P**	**08 40 08.8**	**+1.5**
CTA	**Charters Tower**	**20.66**	**249**	P	**P**	**08 40 08.8**	**+1.5**
CTA				pmax	pmax		
	comp=Z,22nm,0.7s						
CTAO	**Charters Tower**	**20.66**	**249**	*e*P	**P**	**08 40 08.0**	**+0.6**
	comp=Z,23nm,0.8s						
CTAO	**Charters Tower**	**20.66**	**249**	*e*P	**P**	**08 40 08.0**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,23nm,0.8s						
CTAO	**Charters Tower**	**20.66**	**249**	P	**P**	**08 40 11.2**	**+3.9**
	comp=Z,45nm,1.2s						
AFI	**Afiamalu**	**20.87**	**94**	LR	LR	08 46 04.9	
	comp=Z,300nm,20.6s,baz=245,slow=31						
ARMA	**Armidale**	**21.84**	**217**	*e*P	**P**	**08 40 19.8**	**-0.1**
	comp=Z,0.8nm,0.8s						
COEN	**Coen**	**22.89**	**266**	*e*P	**P**	**08 40 30.8**	**-0.5**
	comp=Z,13nm,1.0s,mb4.2						
COEN	**Coen**	**22.89**	**266**	P	**P**	**08 40 33.1**	**+1.9**
	comp=Z,18nm,1.4s,mb4.2						
URZ	**Urewera**	**26.29**	**161**	LR	LR	08 49 18.3	
	comp=Z,125nm,20.4s,baz=293,slow=32						
STKA	**Stephens Creek**	**29.40**	**227**	P	**P**	**08 41 29.9**	**0.0**
	comp=Z,7.4nm,0.5s,mb4.6,baz=42,slow=8.9,SNR=39						
STKA				PcP	PcP	08 44 33.6	-1.0
	comp=Z,4.1nm,0.7s,baz=4.1,slow=1.0,SNR=4.5						
STKA				LR	LR	08 52 33.5	
	comp=Z,276nm,20.0s,baz=286,slow=35						
STKA	**Stephens Creek**	**29.40**	**227**	*e*P	**P**	**08 41 29.7**	**-0.2**
	comp=Z,10.0nm,0.6s,mb4.6						
RPZ	**Rata Peaks**	**30.31**	**174**	P	**P**	**08 41 37.0**	**-0.8**
	comp=Z,7.4nm,0.9s,mb4.3,baz=73,slow=7.4,SNR=3.7						
RPZ				LR	LR	08 51 29.9	
	comp=Z,179nm,21.2s,baz=39,slow=32						
WB2	**Warramunga Arr**	**31.63**	**254**	*e*P	**P**	**08 41 48.9**	**-0.9**
WB2				*e*PcP	PcP	08 44 39.9	-0.8
WRAB	**Tennant Creek**	**31.63**	**254**	*e*P	**P**	**08 41 49.0**	**-0.8**
	comp=Z,7.4nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**31.63**	**254**	*e*P	**P**	**08 41 49.0**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**31.63**	**254**	P	**P**	**08 41 49.0**	**-0.8**
	comp=Z,17nm,1.8s,mb4.5						
WRA	**Warramunga Arr**	**31.64**	**254**	P	**P**	**08 41 49.0**	**-0.9**
	comp=Z,6.5nm,0.6s,mb4.6,baz=85,slow=9.3,SNR=112						
WRA				PcP	PcP	08 44 40.1	-0.6
	comp=Z,3.2nm,0.9s,baz=81,slow=2.7,SNR=9.9						
WRA				LR	LR	08 54 07.3	
	comp=Z,342nm,19.2s,baz=85,slow=35						
WRA	**Warramunga Arr**	**31.64**	**254**	P	**P**	**08 41 49.0**	**-0.9**
WRA						08 44 40.1	
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA				MLR	MLR		
	comp=Z,342nm,19.2s						
ASAR	**Alice Springs**	**32.64**	**247**	P	**P**	**08 41 57.6**	**-1.0**
	comp=Z,7.6nm,0.6s,mb4.7,baz=73,slow=9.4,SNR=178						
ASAR				PcP	PcP	08 44 42.6	-0.8
	comp=Z,2.9nm,0.7s,baz=84,slow=2.6,SNR=11						
ASAR				ScP	ScP	08 48 24.1	+2.7
	comp=Z,0.9nm,0.8s,baz=72,slow=3.7,SNR=5.5						
ASAR	**Alice Springs**	**32.64**	**247**	P	**P**	**08 41 57.6**	**-1.0**
ASAR						08 44 42.6	
ASAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
KAKA	**Kakadu**	**33.40**	**267**	*e*P	**P**	**08 41 57.1**	**-8.3**
KAKA	**Kakadu**	**33.40**	**267**	P	**P**	**08 41 57.2**	**-8.2**
	comp=N,43nm,0.7s,comp=N,321nm,mb5.4						
GUMO	**Guam**	**34.58**	**320**	LR	LR	08 55 16.8	
	comp=N,155nm,18.5s,baz=90,slow=34						
SWI	**Sorong**	**37.31**	**287**	P	**P**	**08 42 41.2**	**+2.2**
	comp=N,63nm,1.3s,mb5.4						
FORT	**Forrest**	**39.48**	**238**	*e*P	**P**	**08 42 55.9**	**-1.1**
	comp=N,4.0nm,0.8s,mb4.3						
PPT	**Papeete**	**42.21**	**101**	*e*LR	LR	08 55 13.2	
	comp=N,333nm,27.8s						
BATI	**Baumata**	**42.25**	**270**	P	**P**	**08 43 20.2**	**+0.2**
	comp=N,17nm,0.5s,mb5.0,baz=188,slow=2.8,SNR=3.9						
TBI	**Tubuai**	**42.54**	**110**	*e*LR	LR	08 55 15.3	
	comp=N,215nm,24.0s						
KAPI	**Kappang**	**47.07**	**276**	P	**P**	**08 43 58.4**	**0.0**
	comp=N,14nm,0.7s,mb4.8,baz=113,slow=3.8,SNR=7.4						
KAPI	**Kappang**	**47.07**	**276**	*e*P	**P**	**08 43 58.5**	**+0.2**
	comp=N,14nm,0.7s,mb4.8						
KAPI	**Kappang**	**47.07**	**276**	P	**P**	**08 43 59.6**	**+1.2**
	comp=N,30nm,1.4s,mb4.8						
NWAO	**Narrogin (SRO)**	**48.93**	**238**	*e*P	**P**	**08 44 12.2**	**-0.3**
	comp=N,29nm,0.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**48.93**	**238**	*e*P	**P**	**08 44 12.2**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,29nm,0.8s						
RKT	**Rikitea**	**55.84**	**109**	*e*LR	LR	09 01 24.7	
	comp=Z,275nm,32.2s						
MJAR	**Matsushiro Arr**	**56.61**	**333**	P	**P**	**08 45 07.9**	**-1.0**
	comp=Z,4.0nm,0.6s,mb4.6,baz=172,slow=8.8,SNR=13						
MJAR	**Matsushiro Arr**	**56.61**	**333**	P	**P**	**08 45 07.9**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LEM	**Lembang**	**58.46**	**270**	P	**P**	**08 45 24.2**	**+1.8**
	comp=Z,88nm,1.0s,mb5.8						
KSRS	**Korea Array**	**62.47**	**326**	P	**P**	**08 45 49.3**	**+0.1**
	comp=Z,3.4nm,0.8s,mb4.4,baz=138,slow=7.1,SNR=9.9						
KSRS				LR	LR	09 11 48.5	
	comp=Z,32nm,19.9s,baz=143,slow=35						
SBA	**Scott Base**	**64.33**	**180**	*e*P	**P**	**08 46 01.4**	**+0.4**
	comp=Z,6.8nm,0.9s,mb4.5						
SBA	**Scott Base**	**64.33**	**180**	*e*P	**P**	**08 46 01.4**	**+0.4**
SBA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
PETK	**Petropavlovsk-**	**66.82**	**354**	LR	LR	09 14 29.8	
	comp=Z,40nm,18.8s,baz=305,slow=35						
CN2	**Changchun**	**68.36**	**329**	*e*P	**P**	**08 46 26.6**	**-0.6**
XAN	**Xi'an**	**72.51**	**313**	P	**P**	**08 46 52.5**	**-0.2**
XAN				AP	pP	08 46 58.1	-13
XAN				XP	sP	08 47 00.5	-18
XAN				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.7						
XAN				AMB	AMB		
	comp=Z,141nm,5.1s						
CMAR	**Chiang Mai Arr**	**74.00**	**294**	P	**P**	**08 47 02.8**	**+1.0**
	comp=Z,11nm,0.8s,mb4.7,baz=126,slow=4.6,SNR=48						
CMAR				LR	LR	09 18 14.9	
	comp=Z,27nm,18.7s,baz=100,slow=35						
CHTO	**Chiang Mai**	**74.12**	**294**	*e*P	**P**	**08 47 03.1**	**+0.6**
	comp=Z,12nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**74.12**	**294**	*e*P	**P**	**08 47 03.1**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
LZH	**Lanzhou**	**77.14**	**312**	*e*P	**P**	**08 47 21.0**	**+1.6**
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,68nm,4.0s						
ULN	**Ulaanbaatar**	**80.87**	**324**	*e*P	**P**	**08 47 40.4**	**+0.9**
	comp=Z,7.6nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**80.87**	**324**	*e*P	**P**	**08 47 40.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**80.87**	**324**	P	**P**	**08 47 40.1**	**+0.6**
	comp=Z,14nm,1.1s,mb4.7						
SONM	**Songino Array**	**81.23**	**324**	P	**P**	**08 47 41.3**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.1,baz=136,slow=5.6,SNR=10						
SONM				LR	LR	09 22 52.4	
	comp=Z,41nm,20.7s,baz=174,slow=35						
SONM	**Songino Array**	**81.23**	**324**	P	**P**	**08 47 41.3**	**-0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,41nm,20.7s						
GTA	**Gaotai**	**81.47**	**314**	*e*P	**P**	**08 47 44.3**	**+1.4**
GTA				AP	pP	08 47 48.3	-14
GTA				XP	sP	08 47 51.9	-18
GTA				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.7						
MAW	**Mawson**	**82.80**	**202**	P	**P**	**08 47 48.9**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=98,slow=10,SNR=6.3						
MAW				LR	LR	09 20 28.3	
	comp=Z,100nm,18.8s,baz=239,slow=33						
ZAK	**Zakamensk**	**84.28**	**325**	*e*P	**P**	**08 47 56.4**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
LSA	**Lhasa**	**84.49**	**302**	*e*P	**P**	**08 47 60.0**	**+1.2**
	comp=Z,7.6nm,0.6s,mb4.7						
LSA	**Lhasa**	**84.49**	**302**	*e*P	**P**	**08 48 00.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
TAPN	**Taplejung**	**86.66**	**299**	*e*P	**P**	**08 48 09.7**	**+0.1**
ODAN	**Odare**	**86.79**	**298**	*e*P	**P**	**08 48 10.7**	**+0.5**
NVAR	**Mina Array Bea**	**86.88**	**49**	P	**P**	**08 48 11.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=240,slow=7.2,SNR=3.5						
RAMN	**Ramite**	**87.49**	**298**	*e*P	**P**	**08 48 13.8**	**+0.2**
	comp=Z,14nm,0.6s,mb5.1						
JIRN	**Jiri**	**88.04**	**299**	*e*P	**P**	**08 48 16.5**	**+0.3**
	comp=Z,36nm,0.8s,mb5.4						
GUN	**Gumba**	**88.37**	**299**	*e*P	**P**	**08 48 18.0**	**+0.2**
	comp=Z,35nm,0.9s,mb5.4						
PKI	**Pulchoki**	**88.68**	**299**	*e*P	**P**	**08 48 19.2**	**0.0**
	comp=Z,36nm,0.7s,mb5.5						
PKI	**Pulchoki**	**88.68**	**299**	*e*P	**P**	**08 48 19.2**	**0.0**
PKI				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.5						
KKN	**Kakani**	**88.85**	**299**	*e*P	**P**	**08 48 20.0**	**0.0**
	comp=Z,38nm,0.7s,mb5.5						
KKN	**Kakani**	**88.85**	**299**	*e*P	**P**	**08 48 20.0**	**0.0**
KKN				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.5						
DMN	**Daman**	**88.95**	**299**	*e*P	**P**	**08 48 20.8**	**+0.3**
	comp=Z,65nm,0.7s,mb5.8						
GKN	**Gorkha**	**89.45**	**299**	*e*P	**P**	**08 48 22.3**	**-0.6**
	comp=Z,35nm,0.7s,mb5.5						
DANN	**Dangsing**	**90.29**	**299**	*e*P	**P**	**08 48 26.1**	**-0.7**
	comp=Z,22nm,0.7s,mb5.4						
PDAR	**Pinedale Array**	**94.51**	**47**	LR	LR	09 25 47.3	
	comp=Z,60nm,20.8s,baz=152,slow=32						
SNAA	**Sanae**	**94.71**	**183**	*e*P	**P**	**08 48 45.5**	**-0.8**
	comp=Z,5.9nm,1.0s,mb5.0						
SNAA	**Sanae**	**94.71**	**183**	*e*P	**P**	**08 48 45.5**	**-0.9**
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	**Makanchi Array**	**95.99**	**317**	*e*P	**P**	**08 48 52.5**	**-0.1**
MKAR	**Makanchi Array**	**95.99**	**317**	P	**P**	**08 48 52.0**	**-0.6**
	comp=Z,3.3nm,0.8s,mb4.8,baz=102

ASAR	**Alice Springs**	**25.30**	**162**	P		P	08 41 12.5	0.0
	0.4nm,0.7s,baz=341,slow=7.7,SNR=8.3							
MKAR	**Makanchi Array**	**59.61**	**327**	P		P	08 45 49.9	+0.1
	0.2nm,0.6s,baz=142,slow=5.4,SNR=2.8							

*ISK **02** 08:50:23.5, 3694N×2923E, h12km, MD2.8*
*CSEM **02** 08:50:23.4±0.1, 3693N×2924E, h5km, ML3.5, Error ellipse: s-maj=2.7km s-min=2.0km az=15.0*
*ISCJB **02** 08:50:24.1±0.6, 3693N±004×2923E±004, h10km, Error ellipse: s-maj=6.1km s-min=4.6km az=166.9*
*DDA **02** 08:50:25.3, 3704N×2917E, h7km±6km, Md3.3, Ml3.5*
ISC 02 08:50:24.6±0.7, 3690N±004×2926E±004, h8km±8km, n9, σ1§19/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.41**	**36**	*i* P	**Pg**	**08 50 31.4**	**-1.3**
GOLH				*i* S	**Sg**	**08 50 39.0**	**+0.9**
DALT	**Dalyan (Mudla)**	**0.51**	**255**	*e*PG	**Pg**	**08 50 33.6**	**-0.9**
DALT				*e*SG	**Sg**	**08 50 41.8**	**+0.6**
ELL	**Elmali**	**0.55**	**106**	*e*PG	**Pg**	**08 50 35.0**	**-0.2**
ELL				*e*SG	**Sg**	**08 50 43.8**	**+1.4**
DENT	**Denizli**	**0.87**	**348**	*e*PG	**Pg**	**08 50 40.0**	**-1.3**
DENT				*e*SG	**Sg**	**08 50 51.9**	**-0.7**
AYDN	**Tasoluk**	**1.33**	**305**	*i* P	**Pn**	**08 50 48.7**	**-0.8**
AYDN				*i* S	**Sg**	**08 51 09.3**	**+1.8**
BDRM	**Kayabasi**	**1.46**	**277**	*i* P	**Pn**	**08 50 51.0**	**-0.3**
BDRM				*i* S	**Sb**	**08 51 13.0**	**+2.3**
KHAL	**Karahalli**	**1.48**	**7**	*i* P	**Pn**	**08 50 51.3**	**-0.2**
KHAL				*i* S	**Sb**	**08 51 13.0**	**+1.8**
BODT	**Bodrum**	**1.56**	**276**	*e*PN	**Pn**	**08 50 51.5**	**-1.2**
KULA	**Kula-Manisa**	**1.68**	**344**	*e*PN	**Pn**	**08 50 52.9**	**-1.4**

*SOF **02** 08:55:40.7, 3816N×2251E, h20km, MD3.3*
*IDC **02** 08:55:42.4±0.7, 3780N×2110E, h0km, mb4.0/9, mb1 4.0/17, mb1mx3.9/31, mbtmp3.8/17, ML3.8/8, MS3.2/2, Ms1 3.2/2, ms1mx2.5/35, Error ellipse: s-maj=15.0km s-min=13.8km az=163.0*
*ATH **02** 08:55:42.8, 3771N×2108E, h5km±3km, MD4.1/26, ML4.0*
*CSEM **02** 08:55:43.2±0.1, 3768N×2107E, h2km, mb4.1/3, Error ellipse: s-maj=1.8km s-min=1.5km az=18.0*
*ISCJB **02** 08:55:43.5±0.2, 3769N±002×2098E±002, h10km, mb4.1/12, MS3.3/2, Error ellipse: s-maj=2.6km s-min=2.2km az=26.7*
*NEIC **02** 08:55:43.1, 3773N×2107E, h5km, MD4.1(ATH), After ATH.*
*THE **02** 08:55:44.2, 3771N×2107E, h0km±2km, ML4.6/6, Error ellipse: s-maj=3.2km s-min=0.8km az=231.0*
*MOS **02** 08:55:44.4±1.7, 3775N×2097E, h18km, mb4.4/9, Error ellipse: s-maj=8.8km s-min=5.1km az=77.3*
ISC 02 08:55:45.0±0.2, 3771N±002×2102E±002, h10km, n145, σ1§32/180, mb4.1/12, MS3.3/2, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.44**	**335**	P	**Pg**	**08 55 52.4**	**-1.3**
RLS	**Riolos of Patr**	**0.49**	**45**	*e*PB	**Pg**	**08 55 51.4**	**-3.3**
VLS	**Valsamata**	**0.58**	**324**	P	**Pg**	**08 55 55.4**	**-0.9**
VLS				S	**Sg**	**08 56 05.0**	**+1.1**
VLS	**Valsamata**	**0.58**	**324**	*e*PB	**Pg**	**08 55 55.3**	**-1.0**
VLS				*e*SB	**Sg**	**08 56 04.4**	**+0.5**
VLS	**Valsamata**	**0.58**	**324**	*e*Pb	**Pg**	**08 55 55.3**	**-1.0**
VLS				*e*Sb	**Sg**	**08 56 04.4**	**+0.5**
VLS				S	**Sg**	**08 56 05.0**	**+1.1**
ITM	**Ithomi**	**0.89**	**126**	*e*PG	**Pg**	**08 55 59.0**	**-3.2**
ITM	**Ithomi**	**0.89**	**126**	*e*Pb	**Pg**	**08 56 01.0**	**-1.2**
PYL	**PYLOS**	**0.99**	**145**	P	**Pg**	**08 56 03.2**	**-0.9**
PYL				S	**Sg**	**08 56 17.4**	**+0.4**
LKD	**Levkas**	**1.04**	**344**	P	**Pg**	**08 56 02.3**	**-2.7**
	5μm,1.1s						
LKD				S	**Sg**	**08 56 19.6**	**+1.1**
VLX	**Vlachokerasia**	**1.13**	**107**	P	**Pg**	**08 56 04.2**	**-2.5**
VLX				S	**Sg**	**08 56 21.1**	**-0.3**
EVR	**Evrytania**	**1.36**	**27**	*e*PB	**Pn**	**08 56 08.1**	**-1.9**
EVR				*e*SB	**Sg**	**08 56 27.6**	**-1.1**
LTK	**Loutraki**	**1.57**	**78**	P	**Pn**	**08 56 11.1**	**-1.8**
LTK				S	**Sn**	**08 56 34.1**	**+0.8**
AGG	**Agios Georgios**	**1.67**	**38**	P	**Pn**	**08 56 12.7**	**-1.6**
AGG				S	**Sn**	**08 56 36.6**	**+0.9**
DID	**Didima**	**1.77**	**96**	P	**Pn**	**08 56 15.2**	**-0.5**
DID				S	**Sn**	**08 56 39.3**	**+1.1**
LKR	**Lokris**	**1.82**	**58**	P	**Pn**	**08 56 15.7**	**-0.7**
LKR				S	**Sn**	**08 56 39.7**	**+0.2**
LKR	**Lokris**	**1.82**	**58**	*e*PG	**Pn**	**08 56 15.5**	**-0.9**
LKR				*e*SN	**Sg**	**08 56 41.5**	**-2.0**
LKR	**Lokris**	**1.82**	**58**	*e*Pg	**Pn**	**08 56 15.5**	**-0.9**
LKR				S	**Sn**	**08 56 39.7**	**+0.2**
VLI	**Veliai**	**1.82**	**122**	*e*Pn	**Pn**	**08 56 18.0**	**+1.6**
VLI	**Veliai**	**1.82**	**122**	*e*PN	**Pn**	**08 56 17.0**	**+0.6**
JAN	**Janina**	**1.95**	**356**	*e*PN	**Pn**	**08 56 19.4**	**+1.2**
JAN	**Janina**	**1.95**	**356**	*e*Pn	**Pg**	**08 56 20.4**	**-2.0**
NAIG	**Nisos Aigina**	**1.96**	**88**	*e*PN	**Pn**	**08 56 19.3**	**+1.1**
THL	**Klokotos Trika**	**2.01**	**22**	P	**Pn**	**08 56 19.8**	**+0.8**
THL				S	**Sn**	**08 56 45.4**	**+1.2**
THL	**Klokotos Trika**	**2.01**	**22**	*e*PN	**Pn**	**08 56 20.2**	**+1.2**
THL				*e*SN	**Sn**	**08 56 47.0**	**+2.8**
THL	**Klokotos Trika**	**2.01**	**22**	*e*Pn	**Pn**	**08 56 20.2**	**+1.2**
THL				S	**Sn**	**08 56 45.4**	**+1.2**
MEV	**Metsovon**	**2.08**	**4**	P	**Pn**	**08 56 20.6**	**+0.7**
MEV				S	**Sn**	**08 56 47.5**	**+1.6**
ATH	**Athens Observa**	**2.15**	**82**	*e*Pg	**Pn**	**08 56 22.1**	**+1.2**
ATH				*e*Sn	**Sg**	**08 56 50.5**	**-3.6**
KYTH	**Kithira**	**2.15**	**131**	*e*Pg	**Pg**	**08 56 24.0**	**-2.3**
KYTH	**Kithira**	**2.15**	**131**	*e*PG	**Pn**	**08 56 22.5**	**+1.6**
KVR	**Kavouri**	**2.18**	**86**	*e*PN	**Pn**	**08 56 22.0**	**+0.7**
KEK	**Kerkira**	**2.22**	**335**	*e*PN	**Pn**	**08 56 22.5**	**+0.6**
KEK	**Kerkira**	**2.22**	**335**	*e*Pb	**Pn**	**08 56 21.8**	**-0.1**
PTL	**Penteli**	**2.27**	**81**	*e*PN	**Pn**	**08 56 23.0**	**+0.4**
SRN	**Sarande**	**2.31**	**340**	*e*PN	**Pg**	**08 56 27.1**	**-2.2**
NEO	**Neokhori**	**2.35**	**47**	*e*PN	**Pn**	**08 56 23.5**	**-0.2**
LIT	**Litokhoron**	**2.65**	**25**	P	**Pn**	**08 56 28.6**	**+0.8**
LIT				S	**Sn**	**08 57 01.7**	**+1.8**
KZN	**Kozani**	**2.66**	**12**	*e*PN	**Pn**	**08 56 29.5**	**+1.6**
KZN	**Kozani**	**2.66**	**12**	*e*Pn	**Pn**	**08 56 30.5**	**+2.6**
KBN	**Korca**	**2.92**	**356**	*e*PN	**Pg**	**08 56 39.1**	**-1.8**
PAIG	**Paliouri**	**3.04**	**42**	P	**Pn**	**08 56 33.0**	**-0.1**
FNA	**Florina**	**3.08**	**5**	P	**Pn**	**08 56 33.9**	**+0.2**
PLG	**Polygyros**	**3.26**	**35**	P	**Pn**	**08 56 36.2**	**0.0**
PLG	**Polygyros**	**3.26**	**35**	*e*PN	**Pn**	**08 56 36.0**	**-0.2**
PLG	**Polygyros**	**3.26**	**35**	P	**Pn**	**08 56 36.2**	**0.0**
HORT	**Hortiatis**	**3.31**	**29**	P	**Pn**	**08 56 36.1**	**-0.7**
HORT				S	**Sn**	**08 57 17.7**	**+1.6**
BIA	**Bitola**	**3.31**	**4**	*e*Pn	**Pn**	**08 56 37.0**	**+0.1**
BIA	**Bitola**	**3.31**	**4**	*e*Pn	**Pn**	**08 56 37.1**	**+0.1**
OHR	**Ohrid**	**3.40**	**357**	P	**Pn**	**08 56 39.9**	**+1.8**
OHR	**Ohrid**	**3.40**	**357**	*e*Pn	**Pn**	**08 56 39.6**	**+1.5**
OHR	**Ohrid**	**3.40**	**357**	*e*Pn	**Pn**	**08 56 39.7**	**+1.5**
GRG	**Griva**	**3.42**	**18**	P	**Pn**	**08 56 37.9**	**-0.4**
GRG				S	**Sn**	**08 57 20.8**	**+2.0**
VAM	**Vamos**	**3.44**	**131**	*e*PB	**Pn**	**08 56 39.7**	**+1.1**
OUR	**Ouranopolis**	**3.49**	**40**	P	**Pn**	**08 56 39.5**	**+0.2**
SOH	**Sokhos**	**3.60**	**29**	P	**Pn**	**08 56 40.4**	**-0.4**
SOH				S	**Sn**	**08 57 25.2**	**+1.9**
APE	**Apeiranthos**	**3.65**	**99**	*e*PB	**Pn**	**08 56 43.1**	**+1.6**
TIP	**Timpagrande**	**3.66**	**295**	*e*Pn	**Pn**	**08 56 41.6**	**0.0**
TIP				*e*Sn	**Sn**	**08 57 26.4**	**+1.7**
TIP	**Timpagrande**	**3.66**	**295**	*e*Pn	**Pn**	**08 56 41.6**	**0.0**
TIP				*e*Sn	**Sn**	**08 57 26.4**	**+1.6**
KRUS	**Krusevo**	**3.66**	**3**	*e*Pn	**Pn**	**08 56 42.6**	**+0.9**
KRUS	**Krusevo**	**3.66**	**3**	*e*Pn	**Pn**	**08 56 42.7**	**+1.0**
THR5	**Thira Island,**	**3.69**	**109**	P	**Pn**	**08 56 42.1**	**0.0**
KNT	**Kendrikon**	**3.74**	**22**	P	**Pn**	**08 56 42.8**	**0.0**
GVD	**Gavdhos**	**3.79**	**138**	*e*PN	**Pn**	**08 56 44.0**	**+0.6**
VAY	**Valandovo**	**3.80**	**18**	*e*Pn	**Pn**	**08 56 42.9**	**-0.7**
VAY	**Valandovo**	**3.80**	**18**	*e*Pn	**Pn**	**08 56 43.0**	**-0.7**
VAY	**Valandovo**	**3.80**	**18**	*e*Pg	**Pn**	**08 56 44.4**	**+0.8**
VAY				*e*Sg	**Sn**	**08 57 28.7**	**+0.3**
QSH	**Qafa e Shtames**	**3.91**	**348**	*e*PN	**Pn**	**08 56 48.0**	**+3.0**
LIA	**Limnos Island**	**3.92**	**55**	P	**Pn**	**08 56 45.5**	**+0.3**
IDI	**Anoyia**	**3.94**	**127**	Pn	**Pn**	**08 56 45.6**	**+0.1**
	2.2nm,0.3s,baz=294,slow=16,SNR=8.7						
IDI				Sn	**Sn**	**08 57 33.8**	**+1.9**
	5.5nm,0.3s,baz=113,slow=21,SNR=6.6						
CHOS	**Chios island**	**4.03**	**79**	P	**Pn**	**08 56 46.8**	**0.0**
PE1	**Pezze di Greco**	**4.17**	**319**	*e*Pn	**Pn**	**08 56 48.4**	**-0.2**
MTTG	**Motta San Giov**	**4.23**	**276**	Pn	**Pn**	**08 56 49.1**	**-0.4**
NVR	**Nevrokopi**	**4.25**	**30**	*e*PN	**Pn**	**08 56 50.5**	**+0.8**
SKO	**Skopje**	**4.27**	**4**	*e*Pg	**Pn**	**08 56 58.4**	**+8.3**
MMB	**Musomiste**	**4.40**	**27**	*e*Pg	**Pn**	**08 56 51.0**	**-0.9**
NPS	**Neapolis**	**4.43**	**122**	*e*PN	**Pn**	**08 56 54.0**	**+1.7**
NPS	**Neapolis**	**4.43**	**122**	*e*Pb	**Pn**	**08 56 56.1**	**+3.8**
KKB	**Krupnik**	**4.45**	**20**	*e*Pg	**Pn**	**08 56 54.3**	**+1.8**
KKB				*e*Sg	**Sn**	**08 57 43.3**	**-0.9**
SG1	**Sgolgore (BA)**	**4.60**	**314**	*e*Pn	**Pn**	**08 56 53.5**	**-1.0**
SMG	**Samos**	**4.61**	**88**	*e*PN	**Pn**	**08 56 56.2**	**+1.5**
CUC	**Castrocucco**	**4.66**	**301**	*e*Pn	**Pn**	**08 56 56.5**	**+1.1**
CUC	**Castrocucco**	**4.66**	**301**	*e*Pn	**Pn**	**08 56 56.5**	**+1.1**
HAVL	**Avola**	**4.76**	**263**	Pn	**Pn**	**08 56 55.4**	**-1.4**
RZN	**Rozhen**	**4.89**	**34**	*e*Pg	**Pn**	**08 56 59.0**	**+0.4**
RDO	**Rodhopi**	**4.90**	**44**	*e*PN	**Pn**	**08 56 59.0**	**+0.3**
MNO	**Monte Soro**	**5.01**	**274**	Pn	**Pn**	**08 57 00.4**	**+0.1**
HVZN	**Vizzini**	**5.05**	**266**	Pn	**Pn**	**08 56 59.1**	**-1.6**
VAE	**Valguarnera**	**5.25**	**270**	Pn	**Pn**	**08 57 05.0**	**+1.4**
	8.9nm,0.3s,baz=57,slow=12,SNR=2.2						
VAE				Sn	**Sn**	**08 58 05.4**	**+1.2**
	5.3nm,0.3s,baz=37,slow=6.9,SNR=2.9						
SGO	**Sicignano**	**5.28**	**304**	P	**Pn**	**08 57 05.8**	**+1.9**
SGO				pmax	pmax		
	comp=Z,31nm,0.5s						
SGO	**Sicignano**	**5.28**	**304**	Pn	**Pn**	**08 57 05.8**	**+1.9**
	comp=Z,31nm,0.5s						
KARP	**Karpathos**	**5.39**	**112**	*e*PN	**Pn**	**08 57 06.5**	**+1.1**
KARP	**Karpathos**	**5.39**	**112**	*e*Pb	**Pn**	**08 57 10.9**	**+5.5**
WDD	**Wield Dalam**	**5.53**	**253**	*e*Pn	**Pn**	**08 57 07.7**	**+0.3**
	comp=Z,132nm,0.5s						
WDD				*e*Sn	**Sn**	**08 58 12.0**	**+1.0**
WDD	**Wield Dalam**	**5.53**	**253**	*e*Pn	**Pn**	**08 57 07.7**	**+0.3**
	comp=Z,132nm,0.5s						
CSSN	**Cassano Irpino**	**5.62**	**306**	Pn	**Pn**	**08 57 05.4**	**-3.2**
	comp=Z,21nm,0.5s						
RGNG	**Rignano Grg**	**5.77**	**315**	Pn	**Pn**	**08 57 10.1**	**-0.5**
ARG	**Arkhangelos**	**5.88**	**103**	*e*PN	**Pn**	**08 57 13.9**	**+1.7**
ARG	**Arkhangelos**	**5.88**	**103**	*e*Pb	**Pn**	**08 57 17.9**	**+5.7**
MLR	**Muntele Rosu**	**8.60**	**24**	Pn	**Pn**	**08 57 49.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=188,slow=15,SNR=2.1						
MLR	**Muntele Rosu**	**8.60**	**24**	P	**Pn**	**08 57 49.6**	**+0.1**
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BOJS	**Bojanci**	**8.90**	**333**	*i* Pn	**Pn**	**08 57 56.5**	**+2.9**
BOJS				*e*Sn	**Sn**	**08 59 31.6**	**-2.4**
VISS	**Visnje**	**9.31**	**332**	*i* Pn	**Pn**	**08 57 59.3**	**+0.1**
VISS				*i* Sn	**Sn**	**08 59 39.0**	**-4.9**
KEST	**Kesra**	**9.58**	**262**	Pn	**Pn**	**08 58 03.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=14,slow=12,SNR=1.9						
JAVS	**Javornik**	**9.68**	**330**	*i* Pn	**Pn**	**08 58 03.7**	**-0.7**
JAVS				*e*Sn	**Sn**	**08 59 48.9**	**-4.2**
DAVOX	**Davos/Dischmat**	**12.25**	**321**	Pn	**Pn**	**08 58 39.9**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=179,slow=18,SNR=2.1						
GERES	**GERESS Array B**	**12.34**	**337**	Pn	**Pn**	**08 58 38.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=177,slow=8.8,SNR=3.0						
MMAI	**Mount Meron Ar**	**12.63**	**107**	Pn	**Pn**	**08 58 43.0**	**-1.8**
	comp=Z,1.6nm,0.3s,baz=256,slow=18,SNR=2.9						
LPL	**La Plagne**	**13.22**	**311**	*e*P	**Pn**	**08 58 53.9**	**+1.2**
	comp=Z,2.6nm,0.4s						
ANN	**Anapa**	**14.22**	**55**	*e*P	**Pn**	**08 59 03.2**	**-3.1**
ANN				*e*S	**Sn**	**09 01 39.7**	**-4.4**
ANN				pmax	pmax		
	comp=Z,49nm,1.4s						
AKASG	**Malin Array Be**	**14.25**	**22**	Pn	**Pn**	**08 59 09.2**	**+2.6**
	comp=Z,0.8nm,0.3s,baz=212,slow=9.8,SNR=2.3						
AKASG	**Malin Array Be**	**14.25**	**22**	P	**Pn**	**08 59 09.3**	**+2.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HAU	**Haudompre**	**14.86**	**318**	*e*P	**Pn**	**08 59 22.1**	**+7.0**
	comp=Z,17nm,0.7s						
MEZF	**Maizieres J'vi**	**15.85**	**318**	*e*P	**Pn**	**08 59 33.3**	**+5.2**
	comp=Z,6.5nm,0.5s						
GIVF	**Givet**	**16.98**	**322**	*e*P	**Pn**	**08 59 45.3**	**+2.9**
KIV	**Kislovodsk**	**17.52**	**62**	*e*P	**Pn**	**08 59 50.3**	**+1.0**
KIV				*e*S	**Sn**	**09 03 01.1**	**-3.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KIV	**Kislovodsk**	**17.52**	**62**	*e*P	**Pn**	**08 59 50.3**	**+1.0**
	comp=Z,4.0nm,0.5s						
GNI	**Garni**	**18.61**	**75**	LR	LR	09 07 10.5	
	comp=Z,38nm,19.3s,baz=337,slow=37						
ESDC	**Sonseca Array**	**19.59**	**283**	P	**Pn**	**09 00 13.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=11,SNR=4.4						
OBN	**Obninsk**	**20.36**	**26**	*e*P	**P**	**09 00 20.9**	**-0.6**
OBN				*e*S	**S**	**09 04 06.7**	**-2.7**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.3						
OBN	**Obninsk**	**20.36**	**26**	*e*P	**P**	**09 00 20.9**	**-0.6**
	comp=Z,6.0nm,0.8s						
OBN				*e*S	**S**	**09 04 06.7**	**-2.7**
	comp=Z,100nm,14.0s						
MDT	**Midelt**	**21.47**	**265**	P	**P**	**09 00 32.4**	**-1.2**
	comp=Z,3.5nm,1.0s,mb3.6,baz=84,slow=14,SNR=2.5						
EVO	**Evora**	**22.82**	**281**	*e*P	**P**	**09 00 52.2**	**+4.2**
	comp=Z,59nm,1.6s,mb4.5						
HFS	**Hagfors**	**22.93**	**351**	P	**P**	**09 00 46.7**	**-2.2**
	comp=Z,2.0nm,0.4s,mb3.9,baz=157,slow=13,SNR=8.6						
HFS				LR	LR	09 11 13.1	
	comp=Z,109nm,18.6s,MS3.3,baz=173,slow=41						
HFS	**Hagfors**	**22.93**	**351**	P	**P**	**09 00 46.7**	**-2.2**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS				MLR	MLR		
	comp=Z,109nm,18.6s						
EKA	**Eskdalemuir Ar**	**24.04**	**325**	P	**P**	**09 00 59.1**	**-0.8**
	comp=Z,2.3nm,0.5s,mb3.8,baz=129,slow=9.6,SNR=12						
EKA	**Eskdalemuir Ar**	**24.04**	**325**	P	**P**	**09 00 59.2**	**-0.8**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NB2	**NORSAR Subarra**	**24.16**	**348**	P	**P**	**09 00 58.6**	**-2.4**
	comp=Z,5.4nm,1.1s,mb3.9,baz=159,slow=11						
NOA	**NORSAR Array B**	**24.16**	**348**	P	**P**	**09 00 59.2**	**-1.7**
	comp=Z,1.1nm,0.6s,mb3.5,baz=158,slow=8.7,SNR=4.8						
NOA	**NORSAR Array B**	**24.16**	**348**	P	**P**	**09 00 59.3**	**-1.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.92**	**220**	P	**P**	**09 01 53.6**	**+0.4**
	comp=Z,281nm,0.4s,baz=30,slow=9.4,SNR=2.4						
ARU	**Arti**	**31.15**	**41**	*c* P	**P**	**09 02 03.3**	**-0.4**
ARU				*e*		09 03 02.9	
ARU						09 04 54.5	
ARU				*e*S	**S**	**09 07 09.3**	**0.0**
ARU				*e*SS	SS	09 08 48.6	-34
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
ARU	**Arti**	**31.15**	**41**	*i* P	**P**	**09 02 03.3**	**-0.4**
	comp=Z,8.0nm,0.9s,mb4.5						
ARU	**Arti**	**31.15**	**41**	PcP	PcP	09 04 54.5	-4.0
ARCES	**ARCESS Array B**	**31.98**	**3**	P	**P**	**09 02 08.4**	**-2.4**
	comp=Z,4.4nm,1.0s,mb4.3,baz=201,slow=6.4,SNR=3.8						
ARCES	**ARCESS Array B**	**31.98**	**3**	P	**P**	**09 02 08.5**	**-2.3**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC	**Dimbokro**	**38.82**	**224**	P	**P**	**09 03 08.8**	**-1.5**
	comp=Z,2.0nm,0.7s,mb3.9,baz=52,slow=12,SNR=3.7						
DBIC	**Dimbokro**	**38.82**	**224**	P	**P**	**09 03 08.8**	**-1.4**
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MBAR	**Mbarara**	**39.16**	**165**	*e*P	**P**	**09 03 14.1**	**+1.0**
LIC	**Lamto**	**39.28**	**224**	*e*P	**P**	**09 03 13.8**	**-0.3**
	comp=Z,12nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**45.21**	**58**	P	**P**	**09 03 60.0**	**-2.2**
	comp=Z,0.7nm,0.4s,mb3.8,baz=275,slow=7.2,SNR=19						
MKAR	**Makanchi Array**	**45.21**	**58**	P	**P**	**09 04 00.0**	**-2.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**45.71**	**48**	P	**P**	**09 04 03.8**	**-2.2**
	comp=Z,3.2nm,0.4s,mb4.6,baz=268,slow=8.9,SNR=12						
ZALV	**Zalesovo Beam**	**45.71**	**48**	P	**P**	**09 04 03.8**	**-2.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
CMAR	**Chiang Mai Arr**	**69.56**	**82**	P	**P**	**09 06 52.4**	**-2.0**
	comp=Z,0.9nm,0.3s,mb4.2,baz=303,slow=5.3,SNR=5.7						
CMAR	**Chiang Mai Arr**	**69.56**	**82**	P	**P**	**09 06 52.4**	**-2.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**121.73**	**97**	PKP	PKPdf	09 14 38.3	-1.0
	comp=Z,0.2nm,0.7s,baz=300,slow=1.8,SNR=3.0						

*ISK **02** 09:36:16.8, 3962N×2937E, h5km, MD2.6*
*CSEM **02** 09:36:16.6±0.3, 3962N×2935E, h0km±2km, MD3.1, Error ellipse: s-maj=2.6km s-min=2.2km az=74.0*

*ISCJB **02** 09:36:17.8±0.5, 3963N±003×2939E±005, h10km, Error ellipse: s-maj=5.9km s-min=4.1km az=175.2*
*DDA **02** 09:36:17.7, 3965N×2932E, h7km±3km, Md3.1*
ISC 02 09:36:18.0±0.7, 3961N±003×2940E±005, h6km±8km, n16, σ1§12/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.57**	**339**	*i* P	**Pg**	**09 36 27.1**	**-1.9**
ULDT				*i* S	**Sg**	**09 36 35.9**	**-0.6**
DST	**Dursunbey**	**0.59**	**270**	*e*PG	**Pg**	**09 36 29.3**	**-0.2**
DEMI	**Demirci**	**0.77**	**223**	*i* P	**Pg**	**09 36 32.6**	**-0.2**
DEMI				*i* S	**Sg**	**09 36 49.4**	**+6.6**
GEMT	**Gemlik**	**0.84**	**349**	*e*PG	**Pg**	**09 36 33.9**	**-0.4**
GEMT				*e*SG	**Sg**	**09 36 46.4**	**+1.2**
ADVT	**Abdulvahap**	**0.87**	**17**	*e*PG	**Pg**	**09 36 34.4**	**-0.3**
YLV	**Yalova**	**0.96**	**359**	*e*PG	**Pg**	**09 36 35.8**	**-0.7**
YLV				*e*SG	**Sg**	**09 36 50.6**	**+1.6**
KCT	**Karacabey**	**1.04**	**310**	*e*PG	**Pg**	**09 36 36.7**	**-1.2**
KCT				*e*SG	**Sg**	**09 36 52.1**	**+0.7**
ESKT	**Eskisehir**	**1.13**	**94**	*i* P	**Pg**	**09 36 36.9**	**-2.7**
ESKT				*i* S	**Sg**	**09 36 57.6**	**+3.4**
SEYT	**Eskypehyr**	**1.13**	**94**	*i* S	**Sg**	**09 36 57.6**	**+3.4**
GULT	**Gulveren**	**1.19**	**46**	*e*PN	**Pn**	**09 36 40.5**	**-0.7**
KULA	**Kula-Manisa**	**1.23**	**208**	*e*PN	**Pn**	**09 36 41.5**	**-0.2**
KHAL	**Karahalli**	**1.23**	**177**	*i* P	**Pg**	**09 36 41.8**	**+0.1**
KHAL				*i* S	**Sg**	**09 37 02.6**	**+4.9**
BALY	**Balya**	**1.38**	**276**	*i* P	**Pn**	**09 36 42.7**	**-1.1**
BALY				*i* S	**Sg**	**09 37 04.1**	**+1.8**
AKHS	**Akhisar**	**1.43**	**240**	*i* P	**Pn**	**09 36 44.4**	**0.0**
AKHS				*i* S	**Sg**	**09 37 07.7**	**+3.7**
AKS	**Akhisar**	**1.43**	**240**	*e*PN	**Pn**	**09 36 45.0**	**+0.5**
KIZT	**Kizilcal**	**2.06**	**110**	*e*PN	**Pn**	**09 36 54.3**	**+1.2**

IDC 02 09:51:45.1±2.2, 163N×12655E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=179.1km s-min=27.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.76**	**161**	P	P	09 56 47.9	-1.3
	0.6nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.14**	**165**	P	P	09 57 22.7	+1.5
	0.2nm,0.5s,baz=342,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	10 01 47.7	-0.1
	0.3nm,0.5s,baz=108,slow=8.0,SNR=3.9						

TAP 02 09:57:09.3, 2255N×11974E, h47km±1km, ML3.5, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAU	**Kaohsiung**	**0.53**	**88**	*e*P	Pn	09 57 21.2	+0.5
	baz=88						
KAU				S	Sn	09 57 29.9	+1.0
	baz=88						
TWP	**Hsiaoliuchiu**	**0.61**	**109**	P	Pn	09 57 22.3	+0.6
	baz=109						
TWP			

RAO	**Raoul Island**	**8.15**	**167**	P	**P**	**10 00 54.4**	**0.0**
	332nm,0.3s							
DZM	**Mont Dzumac**	**12.55**	**264**	*eP*	**P**	**10 01 35.1**	**-1.2**
CTA	**Charters Tower**	**31.48**	**266**	P	**P**	**10 04 26.2**	**+1.6**
	5.2nm,0.4s,mb4.4,baz=86,slow=10,SNR=10.0							
CTA	**Charters Tower**	**31.48**	**266**	P	**P**	**10 04 26.2**	**+1.6**
CTAO	**Charters Tower**	**31.48**	**266**	*eP*	**P**	**10 04 25.8**	**+1.2**
	5.0nm,0.5s,mb4.3							
STKA	**Stephens Creek**	**35.68**	**245**	P	**P**	**10 04 58.9**	**-0.5**
	2.7nm,0.6s,mb4.0,baz=91,slow=10.0,SNR=11							
STKA	**Stephens Creek**	**35.68**	**245**	*eP*	**P**	**10 04 58.2**	**-1.2**
	5.5nm,0.9s,mb4.1							
ASAR	**Alice Springs**	**42.44**	**258**	P	**P**	**10 05 54.0**	**+0.6**
	5.0nm,0.8s,mb4.0,baz=94,slow=8.4,SNR=60							
WB2	**Warramunga Arr**	**42.55**	**263**	*eP*	**P**	**10 05 54.7**	**+0.4**
WRAB	**Tennant Creek**	**42.56**	**263**	*eP*	**P**	**10 05 54.9**	**+0.5**
	2.0nm,0.3s,mb4.0							
WRA	**Warramunga Arr**	**42.57**	**263**	P	**P**	**10 05 54.9**	**+0.5**
	2.0nm,0.3s,mb4.1,baz=96,slow=7.7,SNR=142							
KAKA	**Kakadu**	**46.05**	**273**	*eP*	**P**	**10 06 13.8**	**-7.3**
POHA	**Pohakuloa**	**47.36**	**32**	P	**P**	**10 06 32.5**	**+1.8**
	32nm,0.8s,mb4.7							
MIDW	**Midway**	**49.30**	**3**	P	**P**	**10 06 43.3**	**-1.6**
	95nm,1.3s,mb5.0							
MBWA	**Marble Bar**	**55.78**	**258**	*eP*	**P**	**10 07 30.1**	**-0.9**
	3.8nm,0.4s,mb3.9							
NVAR	**Mina Array Bea**	**82.95**	**44**	P	**P**	**10 10 11.4**	**-0.3**
	0.7nm,0.8s,mb3.2,baz=218,slow=7.0,SNR=4.2							
TXAR	**Lajitas Array**	**89.13**	**58**	P	**P**	**10 10 41.1**	**-0.2**
	0.7nm,0.9s,mb3.4,baz=216,slow=6.9,SNR=4.8							

*IDC **02** 09:58:58.9±1.7,5717S×2544W,h0km,mb4.6/2,mb1 4.6/2, mb1mx3.9/13,mbtmp4.6/2,Error ellipse: s-maj=60.9km s-min=38.7km az=177.0*
*ISCJB **02** 09:58:59.9±0.9,569S±0.1×254W±05,h10km,mb4.5/2, Error ellipse: s-maj=39.4km s-min=12.4km az=162.6*
*NEIC **02** 09:59:00.9±0.6,5698S×2552W,h10km,mb4.0/1,Error ellipse: s-maj=30.5km s-min=15.9km az=67.0*

ISC 02 09:59:01.9±0.9,569S±01×253W±05,h10km,n13,σ0§54/9, mb4.5/2,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.59**	**159**	*eP*	**Pn**	**10 02 41.0**	**-0.4**
VNA3	**Neumayer Olymp**	**15.81**	**161**	*eP*	**Pn**	**10 02 43.6**	**-0.7**
VNA2	**Neumayer--Watz**	**15.98**	**158**	*eP*	**Pn**	**10 02 47.3**	**+0.8**
	baz=321,slow=14						
SNAA	**Sanae**	**17.51**	**156**	*eP*	**Pn**	**10 03 06.9**	**+1.1**
SNAA	**Sanae**	**17.51**	**156**	*ePn*	**Pn**	**10 03 05.3**	**-0.5**
	6.8nm,0.6s						
LPAZ	**La Paz**	**51.73**	**304**	P	**P**	**10 08 09.3**	**+0.1**
	9.2nm,0.5s,mb5.0,baz=98,slow=5.8,SNR=71						
DBIC	**Dimbokro**	**65.57**	**22**	P	**P**	**10 09 45.5**	**-0.1**
	1.4nm,0.7s,mb4.1,baz=164,slow=9.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**10 10 33.7**	**0.0**
	192nm,0.3s,baz=198,slow=6.6,SNR=1.8						
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**10 10 33.7**	**0.0**
YKA	**Yellowknife Ar**	**137.52**	**317**	PKP	PKPdf	10 18 23.1	-1.2
	0.6nm,0.5s,baz=138,slow=1.9,SNR=7.3						
YKA	**Yellowknife Ar**	**137.52**	**317**	PKP	PKPdf	10 18 23.1	-1.2
SONM	**Songino Array**	**149.76**	**87**	PKPbc	PKPbc	10 18 49.8	-1.1
	2.3nm,0.6s,baz=226,slow=3.4,SNR=12						
KDAK	**Kodiak Island**	**152.12**	**294**	PKPbc	PKPbc	10 18 54.0	-2.0
	6.1nm,0.7s,baz=116,slow=4.3,SNR=4.9						

*IDC **02** 10:11:04.7±3.4,2430N×14130E,h194km±65km,mb3.3/4, mb1 3.4/6,mb1mx3.2/21,mbtmp3.3/6,Error ellipse: s-maj=122.5km s-min=17.3km az=73.0*
*ISCJB **02** 10:11:05.1±0.9,2441N±009×1416E±03,h229km±15km, mb3.6/6,Error ellipse: s-maj=52.2km s-min=13.0km az=171.6*
*JMA **02** 10:11:08.6±0.2,2456N×14051E,h129km,M4.0*
*NEIC **02** 10:11:19.9±2.1,2448N×14208E,h391km±33km,mb4.4/3, Error ellipse: s-maj=54.4km s-min=11.9km az=83.0*

ISC 02 10:11:06.1±0.9,2442N±010×1418E±03,h225km±14km, n17,σ0§70/21,mb3.6/6,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**2.24**	**9**	P	**Pn**	**10 11 49.8**	**+1.0**
JHHJ				S	**S**	**10 12 21.4**	**-1.1**
CBIJ	**Chichi jima**	**2.70**	**8**	P	**Pn**	**10 11 54.4**	**+0.8**
	22nm,0.3s,baz=303,slow=19,SNR=28						
CBIJ				S	**S**	**10 12 30.4**	**-0.8**
	37nm,0.3s,baz=96,slow=24,SNR=23						
CBIJ	**Chichi jima**	**2.70**	**8**	P	**Pn**	**10 11 55.1**	**+1.5**
CBIJ				*eS*	**S**	**10 12 30.3**	**-0.9**
BSO1	**Boso 1**	**10.23**	**356**	P	**Pn**	**10 13 27.5**	**-0.3**
BSO3	**Boso 3**	**10.41**	**354**	P	**Pn**	**10 13 31.3**	**+1.2**
GUMO	**Guam**	**11.16**	**164**	Pn	**Pn**	**10 13 51.5**	**+12**
	63nm,1.3s						
JHO	**Hitachi**	**12.20**	**355**	*eS*	**S**	**10 15 58.4**	**-10**
JMM	**Marumori**	**13.44**	**357**	P	**Pn**	**10 14 07.9**	**-0.1**
JMM				*eS*	**S**	**10 16 27.9**	**-9.4**
KSRS	**Korea Array**	**17.58**	**321**	P	**P**	**10 14 56.2**	**+0.6**
	0.1nm,0.3s,baz=136,slow=12,SNR=3.3						
YSS	**Yuzh-Sakhalins**	**22.51**	**2**	*eP*	**P**	**10 15 46.7**	**+0.1**
	5.9nm,0.4s,mb4.5						
WRAB	**Tennant Creek**	**44.67**	**190**	*eP*	**P**	**10 18 56.4**	**-0.3**
	4.4nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**44.68**	**190**	*eP*	**P**	**10 18 56.4**	**-0.4**
WRA	**Warramunga Arr**	**44.68**	**190**	P	**P**	**10 18 56.7**	**-0.1**
	3.5nm,0.4s,mb4.0,baz=8.2,slow=8.6,SNR=68						
ASAR	**Alice Springs**	**48.40**	**190**	P	**P**	**10 19 26.1**	**+0.5**
	0.2nm,0.5s,mb2.7,baz=9.2,slow=14,SNR=6.1						
MK31	**Makanchi Array**	**51.92**	**311**	*eP*	**P**	**10 19 50.7**	**-1.1**
MKAR	**Makanchi Array**	**51.92**	**311**	P	**P**	**10 19 51.8**	**0.0**
	0.3nm,0.5s,mb3.0,baz=99,slow=9.3,SNR=4.3						
BVAR	**Borovoye Array**	**59.77**	**319**	P	**P**	**10 20 47.1**	**-0.2**
	0.7nm,0.4s,mb3.6,baz=81,slow=8.8,SNR=3.6						

*ISCJB **02** 10:12:26.1±0.4,2372N±002×12188E±002,h24km±3km, Error ellipse: s-maj=4.0km s-min=2.4km az=41.7*
*TAP **02** 10:12:26.9,2376N×12179E,h36km,ML3.4,C*
*JMA **02** 10:12:27.2±0.1,2481N×12200E,h120km,M2.5*

ISC 02 10:12:26.2±0.4,2373N±002×12187E±002,h21km±3km, n47,σ0§78/89,5C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.30**	**267**	*eP*	**Pb**	**10 12 33.7**	**+0.6**
	baz=251						
TEGC				*eS*	**Sb**	**10 12 40.5**	**+2.8**
	baz=251						
HWA	**Hwalien**	**0.35**	**316**	P	**Pb**	**10 12 34.7**	**+0.9**
	baz=323						
HWA				*eS*	**Sb**	**10 12 40.9**	**+2.0**
	baz=323						
ESF	**Shoufeng Towns**	**0.36**	**293**	*eP*	**Pb**	**10 12 35.0**	**+1.0**
	baz=298						
ESF				*eS*	**Sb**	**10 12 40.7**	**+1.4**
	baz=298						
ESL	**Shilin**	**0.41**	**282**	*iP*	**Pb**	**10 12 35.1**	**+0.3**
	baz=279						
ESL				*i S*	**Sb**	**10 12 41.6**	**+0.9**
	baz=279						
TWD	**Chiawan**	**0.43**	**324**	*i P*	**Pb**	**10 12 35.6**	**+0.4**
	baz=336						
TWD				*i S*	**Sb**	**10 12 42.1**	**+0.8**
	baz=336						
EHY	**Hungye**	**0.55**	**247**	*i P*	**Pb**	**10 12 37.2**	**0.0**
	baz=249						
EHY				S	**Sb**	**10 12 44.8**	**+0.1**
	baz=249						
TWF1	**Yuli**	**0.65**	**235**	*i P*	**Pb**	**10 12 38.7**	**-0.1**
	baz=237						
TWF1				*eS*	**Sb**	**10 12 47.4**	**+0.1**
	baz=237						
WHF	**Hehuan Shan**	**0.69**	**307**	*iP*	**Pb**	**10 12 39.3**	**-0.3**
	baz=302						
WHF				S	**Sb**	**10 12 48.0**	**-0.8**
	baz=302						
ENA	**Nanau**	**0.71**	**350**	*iP*	**Pb**	**10 12 39.7**	**-0.2**
	baz=357						
ENA				*i S*	**Sb**	**10 12 49.1**	**-0.2**
	baz=357						
CHKT	**Chengkung**	**0.78**	**217**	P	**Pb**	**10 12 40.2**	**-0.9**
	baz=200						
CHKT				S	**Sb**	**10 12 50.0**	**-1.2**
	baz=200						
TWT	**Tachien**	**0.82**	**310**	P	**Pb**	**10 12 41.6**	**-0.3**
	baz=304						
TWT				S	**Sb**	**10 12 51.8**	**-0.8**
	baz=304						
NNS	**Nan Shan**	**0.84**	**327**	P	**Pb**	**10 12 41.7**	**-0.5**
	baz=331						
NNS				S	**Sb**	**10 12 52.3**	**-0.8**
	baz=331						
YUS	**Yu-Shan**	**0.88**	**255**	*iP*	**Pb**	**10 12 42.8**	**+0.1**
	baz=256						
YUS				*i S*	**Sb**	**10 12 53.4**	**-0.6**
	baz=256						
TWC	**Suao**	**0.88**	**359**	*i P*	**Pb**	**10 12 42.6**	**-0.2**
	baz=5.0						
TWC				*i S*	**Sb**	**10 12 54.1**	**-0.1**
	baz=5.0						
SMLT	**Sun Moon Lake**	**0.90**	**280**	*iP*	**Pb**	**10 12 42.6**	**-0.7**
	baz=283						
SMLT				S	**Sb**	**10 12 54.5**	**-0.3**
	baz=283						
TYC	**Yuchr**	**0.95**	**281**	P	**Pb**	**10 12 43.1**	**-0.8**
	baz=279						
ELDTW	**Lidau**	**0.95**	**236**	P	**Pb**	**10 12 42.8**	**-1.2**
	baz=230						
ELDTW				S	**Sb**	**10 12 54.6**	**-1.5**
	baz=230						
ALS	**Alishan**	**1.00**	**258**	*iP*	**Pb**	**10 12 44.8**	**-0.1**
	baz=254						
ALS				S	**Sb**	**10 12 57.0**	**-0.6**
	baz=254						
TWE	**Neicheng**	**1.01**	**349**	P	**Pb**	**10 12 44.4**	**-0.6**
	baz=343						
TWE				*eS*	**Sb**	**10 12 57.3**	**-0.5**
	baz=343						
NSK	**Sanguang**	**1.06**	**334**	*i P*	**Pn**	**10 12 44.9**	**-0.9**
	baz=337						
NSK				S	**Sb**	**10 12 57.4**	**-1.8**
	baz=337						
WNT	**Mingjian**	**1.10**	**278**	*eP*	**Pn**	**10 12 46.3**	**-0.1**
	baz=276						
WNT				*eS*	**Sb**	**10 13 01.1**	**+0.7**
	baz=276						
CHN5	**Tsauling**	**1.10**	**264**	P	**Pn**	**10 12 46.3**	**-0.1**
	baz=260						
CHN5				*eS*	**Sb**	**10 13 00.4**	**-0.1**
	baz=260						
TWG	**Pinlang**	**1.16**	**219**	*eP*	**Pn**	**10 12 45.6**	**-1.6**
	baz=213						
TWG				*eS*	**Sb**	**10 12 59.7**	**-2.6**
	baz=213						
TCU	**Taichung**	**1.17**	**291**	*eP*	**Pn**	**10 12 47.6**	**+0.3**
	baz=290						
TCU				*eS*	**Sb**	**10 13 03.6**	**+1.1**
	baz=290						
TWQ1	**Liyutan**	**1.18**	**302**	P	**Pn**	**10 12 47.6**	**+0.1**
	baz=302						
TWQ1				*eS*	**Sn**	**10 13 02.8**	**-0.1**
	baz=302						
WGK	**Gukeng**	**1.20**	**268**	*eP*	**Pn**	**10 12 48.2**	**+0.4**
	baz=265						
WGK				*eS*	**Sn**	**10 13 03.6**	**+0.2**
	baz=265						
NSTT	**Nanjuang**	**1.20**	**319**	*eP*	**Pn**	**10 12 47.5**	**-0.2**
	baz=320						
NSTT				*eS*	**Sn**	**10 13 02.0**	**-1.5**
	baz=320						
NSY	**Sanyi**	**1.23**	**304**	*eP*	**Pn**	**10 12 48.3**	**+0.2**
	baz=305						
CHN4	**Tsaushan**	**1.23**	**253**	*eP*	**Pn**	**10 12 48.5**	**+0.3**
	baz=248						
CHN4				*eS*	**Sn**	**10 13 04.0**	**-0.2**
	baz=248						
WTP	**Ta-pu**	**1.25**	**248**	*eP*	**Pn**	**10 12 48.8**	**+0.4**
	baz=243						
WTP				*eS*	**Sn**	**10 13 05.3**	**+0.7**
	baz=243						
YOJ	**Yonaguni jima**	**1.27**	**55**	P	**Pn**	**10 12 49.2**	**+0.5**
YOJ				*eS*	**Sn**	**10 13 05.9**	**+0.7**
CHN2	**Minshiung**	**1.30**	**262**	*eP*	**Pn**	**10 12 49.9**	**+0.8**
	baz=258						
CHN2				*eS*	**Sn**	**10 13 06.7**	**+0.9**
	baz=258						
NWF	**Wu-fen Shan**	**1.34**	**356**	*eP*	**Pn**	**10 12 50.1**	**+0.4**
	baz=345						
NWF				*eS*	**Sn**	**10 13 06.7**	**-0.2**
	baz=345						
SGST	**Jiashian**	**1.35**	**242**	*eP*	**Pn**	**10 12 50.4**	**+0.6**
	baz=238						
SGST				*eS*	**Sn**	**10 13 08.2**	**+1.2**
	baz=238						
CHN1	**Nanshi**	**1.35**	**247**	*eP*	**Pn**	**10 12 50.3**	**+0.6**
	baz=242						
CHN1				*eS*	**Sn**	**10 13 07.3**	**+0.3**
	baz=242						
TWK	**Hsinying**	**1.35**	**250**	*eP*	**Pn**	**10 12 50.3**	**+0.5**
	baz=246						
TWK				*eS*	**Sn**	**10 13 07.2**	**+0.1**
	baz=246						
ECL	**Taimali**	**1.41**	**217**	*eP*	**Pn**	**10 12 49.8**	**-0.8**
	baz=211						
TWS1	**Kuangyinshan**	**1.43**	**343**	*eP*	**Pn**	**10 12 50.0**	**-0.9**
	baz=347						
TWS1				*eS*	**Sn**	**10 13 08.6**	**-0.5**
	baz=347						
SSD	**Sandimen**	**1.50**	**230**	*eP*	**Pn**	**10 12 52.3**	**+0.4**
	baz=216						
SSD				*eS*	**Sn**	**10 13 11.6**	**+0.8**
	baz=216						
WSF	**Szhu**	**1.52**	**267**	*eP*	**Pn**	**10 12 51.3**	**-0.8**
	baz=264						
WSF				*eS*	**Sn**	**10 13 10.9**	**-0.2**
	baz=264						
CHN8	**Yiju**	**1.57**	**256**	*eP*	**Pn**	**10 12 52.6**	**-0.3**
	baz=253						
CHN8				*eS*	**Sn**	**10 13 12.3**	**-0.2**
	baz=253						
TWM1	**Shoushan**	**1.61**	**236**	*eP*	**Pn**	**10 12 54.5**	**+1.1**
	baz=232						
EAST	**Anshuo**	**1.64**	**215**	*eP*	**Pn**	**10 12 53.3**	**-0.5**
	baz=201						
SCZT	**Fangliau**	**1.77**	**221**	*eP*	**Pn**	**10 12 56.3**	**+0.7**
	baz=204						
SCZT				*eS*	**Sn**	**10 13 17.4**	**-0.2**
	baz=204						
IRIF	**Iriomote-Funau**	**1.80**	**70**	P	**Pn**	**10 12 56.5**	**+0.4**
IRIF				*eS*	**Sn**	**10 13 18.6**	**+0.3**
JKRS	**Kuro-shima**	**2.02**	**75**	P	**Pn**	**10 13 00.1**	**+1.1**
JKRS				*eS*	**Sn**	**10 13 24.7**	**+1.1**
JIJ	**Ishigaki jima**	**2.17**	**73**	P	**Pn**	**10 13 00.9**	**-0.2**
JIJ				S	**Sn**	**10 13 26.5**	**-0.9**

*NEIC **02** 10:14:40.9±1.9,1897S×17160W,h35km,mb4.6/4,Error ellipse: s-maj=41.8km s-min=11.6km az=99.0*
*IDC **02** 10:14:49.3±1.1,1773S×17375W,h0km,mb3.9/5, mb1 4.2/6,mb1mx4.0/19,mbtmp4.0/6,ML2.2/1,MS3.8/4, Ms1 3.7/4,ms1mx3.0/31,Error ellipse: s-maj=51.6km s-min=20.8km az=136.0*
*ISCJB **02** 10:14:51.9±1.2,182S±03×1737W±02,h33km,mb4.3/9, MS3.9/3,Error ellipse: s-maj=49.2km s-min=18.4km az=148.8*

ISC 02 10:14:53.8±1.2,183S±03×1736W±02,h35km,n18, σ0§88/14,mb4.3/9,MS3.9/3,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.65**	**22**	Pn	**Pn**	**10 15 55.0**	**-6.5**
	7.7nm,0.3s,baz=214,slow=22,SNR=7.8						
AFI				Sn	Sx	10 16 36.4	
	30nm,0.3s,baz=220,slow=23,SNR=8.0						
AFI	**Afiamalu**	**4.65**	**22**	*ePn*	**Pn**	**10 15 54.4**	**-7.1**
AFI				*eSn*	Sx	10 16 39.3	
RAO	**Raoul Island**	**11.65**	**199**	*ePn*	**Pn**	**10 17 26.4**	**-11**
	810nm,0.3s						
RAR	**Rarotonga**	**13.33**	**105**	LR	LR	10 22 01.1	
	comp=Z,370nm,19.6s,baz=257,slow=32						
URZ	**Urewera**	**21.53**	**200**	P	**P**	**10 19 45.0**	**+5.1**
	3.7nm,0.5s,mb4.1,baz=300,slow=4.7,SNR=8.0						
PMG	**Port Moresby**	**39.05**	**278**	*eP*	**P**	**10 22 11.9**	**-5.7**
	63nm,1.8s,mb5.0						
STKA	**Stephens Creek**	**42.52**	**243**	P	**P**	**10 22 43.4**	**-2.6**
	1.0nm,0.3s,mb4.0						
WB2	**Warramunga Arr**	**49.07**	**259**	*eP*	**P**	**10 23 38.0**	**+0.1**
WRAB	**Tennant Creek**	**49.07**	**259**	*eP*	**P**	**10 23 37.9**	**0.0**
	0.6nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**49.08**	**259**	P	**P**	**10 23 38.7**	**+0.7**
	0.6nm,0.4s,mb4.0,baz=98,slow=7.4,SNR=16						
ASAR	**Alice Springs**	**49.12**	**254**	P	**P**	**10 23 38.5**	**+0.2**
	2.0nm,0.4s,mb4.5,baz=96,slow=7.3,SNR=21						
GUMO	**Guam**	**51.76**	**305**	P	**P**	**10 23 58.0**	**-0.3**
	322nm,1.6s						
NWAO	**Narrogin (SRO)**	**63.10**	**242**	P	**P**	**10 25 19.2**	**+1.1**
	93nm,2.2s,mb5.5						
NVAR	**Mina Array Bea**	**76.56**	**42**	P	**P**	**10 26 41.0**	**+0.5**
	0.5nm,0.5s,mb3.7,baz=226,slow=8.6,SNR=5.0						
KSRS	**Korea Array**	**78.07**	**316**	LR	LR	10 55 43.3	
	comp=Z,23nm,18.6s,MS3.5,baz=115,slow=32						
PDAR	**Pinedale Array**	**84.49**	**42**	P	**P**	**10 27 22.4**	**-0.6**
	0.3nm,0.6s,mb3.6,baz=219,slow=7.0,SNR=3.0						
MAW	**Mawson**	**85.05**	**199**	LR	LR	11 01 01.3	
	comp=Z,68nm,18.8s,MS4.1,baz=61,slow=32						
SONM	**Songino Array**	**96.84**	**318**	LR	LR	11 04 40.2	
	comp=Z,47nm,21.0s,MS4.0,baz=343,slow=31						

*IDC **02** 10:20:19.3±5.9,2377N×123.15E,h0km,mb3.2/2, mb1 3.6/3,mb1mx3.4/21,mbtmp3.4/3,ML3.5/1,MS3.0/1, Ms1 3.0/1,ms1mx2.3/17,Error ellipse: s-maj=305.3km s-min=41.4km az=95.0*
*ISCJB **02** 10:20:22.0±0.3,2428N±003×12298E±002,h46km±8km, mb3.3/2,Error ellipse: s-maj=5.3km s-min=2.6km az=179.2*
*JMA **02** 10:20:21.9±0.1,2440N×12298E,h51km±1km,M3.1*
*TAP **02** 10:20:22.1,2429N×12292E,h49km±1km,ML4.0,D*

ISC 02 10:20:22.5±0.3,2430N±003×12299E±002,h45km±7km, n54,σ1§11/94,mb3.3/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.16**	**8**	P	**Pn**	**10 20 29.6**	**-0.5**
YOJ				S	**Sn**	**10 20 35.1**	**-0.3**
IRIF	**Iriomote-Funau**	**0.68**	**87**	P	**Pn**	**10 20 35.2**	**-0.6**
IRIF				S	**Sn**	**10 20 45.6**	**+0.2**
HATJ	**Hateruma jima**	**0.79**	**108**	P	**Pn**	**10 20 37.2**	**0.0**
HATJ				S	**Sn**	**10 20 49.4**	**+1.5**
JKRS	**Kuro-shima**	**0.94**	**94**	P	**Pn**	**10 20 39.4**	**+0.1**
JKRS				S	**Sn**	**10 20 52.1**	**+0.6**
JIJ	**Ishigaki jima**	**1.06**	**86**	P	**Pn**	**10 20 40.3**	**-0.6**
JIJ				S	**Sn**	**10 20 53.6**	**-0.9**
TWC	**Suao**	**1.08**	**287**	*i P*	**Pn**	**10 20 40.1**	**-1.1**
	baz=298						
TWC				*eS*	**Sn**	**10 20 53.2**	**-1.8**
	baz=298						
ENA	**Nanau**	**1.14**	**277**	P	**Pn**	**10 20 41.6**	**-0.5**
	baz=286						
ENA				*eS*	**Sn**	**10 20 55.2**	**-1.4**
	baz=286						
TWB1	**Santiao Chiao**	**1.15**	**308**	P	**Pn**	**10 20 41.7**	**-0.5**
	baz=319						
TWB1				*eS*	**Sn**	**10 20 55.0**	**-1.7**
	baz=319						
ILA	**Ilan**	**1.22**	**293**	*eP*	**Pn**	**10 20 43.1**	**0.0**
	baz=305						
ILA				*eS*	**Sn**	**10 20 58.0**	**-0.4**
	baz=305						
TWE	**Neicheng**	**1.27**	**290**	P	**Pn**	**10 20 43.3**	**-0.5**
	baz=299						
TWE				*eS*	**Sn**	**10 20 58.8**	**-1.0**
	baz=299						
TWD	**Chiawan**	**1.29**	**261**	*eP*	**Pn**	**10 20 43.1**	**-1.0**
	baz=248						
TWD				*eS*	**Sn**	**10 20 58.6**	**-1.5**
	baz=248						
NWF	**Wu-fen Shan**	**1.34**	**305**	*i P*	**Pn**	**10 20 44.5**	**-0.2**
	baz=307						
NWF				*eS*	**Sn**	**10 21 00.4**	**-1.0**
	baz=307						
NNS	**Nan Shan**	**1.48**	**276**	*eP*	**Pn**	**10 20 47.3**	**+0.7**
	baz=265						
NNS				*eS*	**Sn**	**10 21 05.0**	**+0.3**
	baz=265						
ESL	**Shilin**	**1.50**	**252**	P	**Pn**	**10 20 45.3**	**-1.6**
	baz=241						
ESL				*eS*	**Sn**	**10 21 03.0**	**-2.3**
	baz=241						
NSK	**Sanguang**	**1.53**	**285**	P	**Pn**	**10 20 48.2**	**+0.9**
	baz=297						
NSK				*eS*	**Sn**	**10 21 05.8**	**-0.3**
	baz=297						
WHF	**Hehuan Shan**	**1.58**	**265**	P	**Pn**	**10 20 47.9**	**-0.2**
	baz=253						
WHF				*eS*	**Sn**	**10 21 07.7**	**+0.4**
	baz=253						
TWY	**Chenhua**	**1.59**	**308**	*eP*	**Pn**	**10 20 48.3**	**+0.1**
	baz=310						
TWY				*eS*	**Sn**	**10 21 08.0**	**+0.4**
	baz=310						
JTJ	**Tarama**	**1.60**	**77**	P	**Pn**	**10 20 48.4**	**+0.1**
JTJ				*eS*	**Sn**	**10 21 08.3**	**+0.5**
TWS1	**Kuangyinshan**	**1.63**	**300**	*eP*	**Pn**	**10 20 48.8**	**0.0**
	baz=301						
TWS1				*eS*	**Sn**	**10 21 09.6**	**+1.0**
	baz=301						
TWT	**Tachien**	**1.65**	**269**	*eP*	**Pn**	**10 20 49.1**	**+0.1**
	baz=269						
TWT				*eS*	**Sn**	**10 21 09.2**	**+0.1**
	baz=269						
EHY	**Hungye**	**1.71**	**243**	*eP*	**Pn**	**10 20 48.6**	**-1.3**
	baz=242						
EHY				*eS*	**Sn**	**10 21 08.5**	**-2.1**
	baz=242						
TWF1	**Yuli**	**1.81**	**239**	P	**Pn**	**10 20 49.9**	**-1.3**
	baz=238						
TWF1				*eS*	**Sn**	**10 21 10.7**	**-2.3**
	baz=238						
NSTT	**Nanjuang**	**1.84**	**281**	*eP*	**Pn**	**10 20 51.6**	**+0.1**
	baz=282						
NSTT				*eS*	**Sn**	**10 21 14.0**	**+0.3**
	baz=282						
CHKT	**Chengkung**	**1.91**	**232**	*eP*	**Pn**	**10 20 51.9**	**-0.7**
	baz=221						
CHKT				*eS*	**Sn**	**10 21 10.5**	**-4.8**
	baz=221						
SMLT	**Sun Moon Lake**	**1.95**	**258**	P	**Pn**	**10 20 53.1**	**0.0**
	baz=249						
SMLT				*eS*	**Sn**	**10 21 16.2**	**-0.3**
	baz=249						
TYC	**Yuchr**	**1.98**	**259**	P	**Pn**	**10 20 53.9**	**+0.3**
	baz=250						
TYC				*eS*	**Sn**	**10 21 17.6**	**+0.3**
	baz=250						
TWQ1	**Liyutan**	**2.02**	**272**	*eP*	**Pn**	**10 20 55.6**	**+1.5**
	baz=272						
TWQ1				*eS*	**Sn**	**10 21 18.9**	**+0.8**
	baz=272						
YUS	**Yu-Shan**	**2.03**	**247**	P	**Pn**	**10 20 53.9**	**-0.3**
	baz=246						
YUS				*eS*	**Sn**	**10 21 17.2**	**-1.1**
	baz=246						
NSY	**Sanyi**	**2.03**	**274**	*eS*	**Sn**	**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
	baz=244						
CHN2	**Minshiung**	**2.42**	**252**	*e*S	**Sn**	**10 21 30.3**	**+2.3**
	baz=252						
TWK	**Hsinying**	**2.51**	**246**	*e*P	**Pn**	**10 21 02.6**	**+1.8**
	baz=245						
TWK				*e*S	**Sn**	**10 21 30.5**	**+0.3**
	baz=245						
CHN1	**Nanshi**	**2.51**	**244**	P	**Pn**	**10 21 02.0**	**+1.2**
	baz=243						
CHN1				*e*S	**Sn**	**10 21 30.7**	**+0.5**
	baz=243						
SGST	**Jiashian**	**2.51**	**242**	*e*P	**Pn**	**10 21 02.1**	**+1.2**
	baz=232						
SGST				*e*S	**Sn**	**10 21 30.8**	**+0.5**
	baz=232						
ECL	**Taimali**	**2.52**	**228**	*e*P	**Pn**	**10 20 58.9**	**-2.1**
	baz=236						
WSF	**Szhu**	**2.61**	**256**	*e*S	**Sn**	**10 21 33.9**	**+1.2**
	baz=269						
SSD	**Sandimen**	**2.66**	**235**	*e*P	**Pn**	**10 21 02.6**	**-0.2**
	baz=229						
SSD				*e*S	**Sn**	**10 21 34.6**	**+0.8**
	baz=229						
CHN8	**Yiju**	**2.71**	**250**	*e*S	**Sn**	**10 21 36.1**	**+0.9**
	baz=249						
EAST	**Anshuo**	**2.74**	**226**	*e*P	**Pn**	**10 21 02.2**	**-1.7**
	baz=224						
TWM1	**Shoushan**	**2.77**	**239**	*e*P	**Pn**	**10 21 07.7**	**+3.2**
	baz=237						
TWM1				*e*S	**Sn**	**10 21 41.0**	**+4.3**
	baz=237						
SCZT	**Fangliau**	**2.90**	**229**	P	**Pn**	**10 21 06.8**	**+0.6**
	baz=222						
SCZT				*e*S	**Sn**	**10 21 39.1**	**-0.7**
	baz=222						
KSRS	**Korea Array**	**13.78**	**17**	Pn	**Pn**	**10 23 41.9**	**+6.8**
	0.2nm,0.3s,baz=199,slow=12,SNR=7.3						
SONM	**Songino Array**	**26.93**	**335**	LR	LR	10 37 25.4	
	comp=Z,31nm,19.1s,baz=218,slow=37						
WRA	**Warramunga Arr**	**45.34**	**165**	P	**P**	**10 28 34.6**	**-1.8**
	0.2nm,0.5s,mb3.2,baz=347,slow=8.8,SNR=6.1						
ASAR	**Alice Springs**	**48.84**	**167**	P	**P**	**10 29 02.7**	**-0.9**
	0.2nm,0.5s,mb3.4,baz=351,slow=6.9,SNR=6.1						

NEIC ***02*** *10:22:51.0, 3694N×2925E, h6km, MD3.7(ATH), MD3.6(ISK), After ISK.*
DDA ***02*** *10:22:51.3, 3686N×2923E, h16km±2km, Md3.5*
CSEM ***02*** *10:22:51.8±0.1, 3700N×2927E, h5km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.4km az=158.0*
ISK ***02*** *10:22:51.6, 3697N×2924E, h5km, MD3.6*
ISCJB ***02*** *10:22:52.3±0.6, 3696N±003×2925E±003, h5km±5km, Error ellipse: s-maj=4.6km s-min=3.4km az=161.0*
ATH ***02*** *10:22:53.0, 3694N×2913E, h11km±5km, MD3.7/9*

ISC 02 10:22:52.9±0.6, 3696N±003×2924E±003, h4km±4km, n48, σ0§99/64, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
GOLH	**Golhisar**	**0.38**	**43**	*i* P	**Pg**	**10 23 00.1**	**-0.1**
GOLH				*i* S	**Sg**	**10 23 07.3**	**+2.2**
TURN	**Turunc**	**0.52**	**261**	*i* P	**Pg**	**10 23 07.0**	**+4.2**
TURN				*i* S	**Sg**	**10 23 19.4**	**+10**
DALT	**Dalyan (Mudla)**	**0.52**	**249**	*e*PG	**Pg**	**10 23 02.0**	**-0.8**
DALT				*e*SG	**Sg**	**10 23 09.9**	**+0.3**
ELL	**Elmali**	**0.58**	**111**	*e*PG	**Pg**	**10 23 03.0**	**-0.9**
ELL				*e*SG	**Sg**	**10 23 12.2**	**+0.8**
DENT	**Denizli**	**0.81**	**348**	*e*PG	**Pg**	**10 23 07.5**	**-1.0**
DENT				*e*SG	**Sg**	**10 23 18.8**	**-0.2**
KSL	**Kastellorizon**	**0.85**	**161**	*e*PG	**Pg**	**10 23 09.3**	**+0.1**
ANTB	**Antalya**	**1.13**	**93**	*e*PN	**Pn**	**10 23 13.7**	**-1.8**
ARG	**Arkhangelos**	**1.16**	**231**	*e*Pb	**Pb**	**10 23 13.4**	**-2.1**
ARG				*e*Sn	**Sn**	**10 23 33.5**	**+1.4**
BCK	**Bucak**	**1.19**	**65**	*e*PN	**Pn**	**10 23 15.1**	**-1.1**
MLSB	**Milas**	**1.22**	**286**	*e*PN	**Pn**	**10 23 15.4**	**-1.2**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**10 23 16.6**	**-1.0**
AYDN				*i* S	**Sg**	**10 23 35.4**	**+1.0**
TKTP	**Tekketepe**	**1.38**	**38**	*i* P	**Pn**	**10 23 19.6**	**+0.8**
TKTP				*i* S	**Sb**	**10 23 42.7**	**+5.5**
KHL	**Karahalli**	**1.38**	**9**	*e*PN	**Pn**	**10 23 18.1**	**-0.8**
KHAL	**Karahalli**	**1.42**	**8**	*i* P	**Pn**	**10 23 19.7**	**+0.3**
KHAL				*i* S	**Sb**	**10 23 41.3**	**+2.9**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**10 23 19.0**	**-0.7**
BDRM				*i* S	**Sb**	**10 23 39.0**	**+0.1**
BODT	**Bodrum**	**1.55**	**274**	*e*PN	**Pn**	**10 23 20.9**	**-0.2**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**10 23 21.4**	**-0.7**
NISR	**Nisiros**	**1.73**	**259**	*e*PB	**Pb**	**10 23 24.5**	**-0.7**
SHUT	**Suhut-Afyon**	**1.90**	**33**	*e*PN	**Pn**	**10 23 24.9**	**-1.1**
SMG	**Samos**	**2.06**	**292**	*e*PN	**Pn**	**10 23 28.0**	**-0.2**
SMG				*e*SN	**Sn**	**10 23 53.8**	**-0.4**
DEMI	**Demirci**	**2.12**	**349**	*i* P	**Pn**	**10 23 28.7**	**-0.4**
DEMI				*i* S	**Sn**	**10 23 59.4**	**+3.5**
IZM	**Izmir**	**2.13**	**313**	*e*PN	**Pn**	**10 23 29.0**	**-0.1**
KARP	**Karpathos**	**2.19**	**231**	*e*PN	**Pn**	**10 23 30.5**	**+0.5**
ALT	**Altintas**	**2.20**	**18**	*e*PN	**Pn**	**10 23 30.0**	**-0.2**
AKS	**Akhisar**	**2.23**	**330**	*e*PN	**Pn**	**10 23 29.7**	**-0.8**
BLCB	**Balcova**	**2.25**	**310**	*e*PN	**Pn**	**10 23 30.5**	**-0.4**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**10 23 35.0**	**-0.7**
KONT	**Konya--Tatoy**	**2.67**	**67**	*e*PN	**Pn**	**10 23 36.2**	**-0.4**
LADK	**Ladik-KONYA**	**2.77**	**63**	*e*PN	**Pn**	**10 23 37.8**	**-0.2**
KIZT	**Kizilcal**	**2.83**	**47**	*e*PN	**Pn**	**10 23 39.0**	**+0.2**
APE	**Apeiranthos**	**2.97**	**273**	*e*Pn	**Pn**	**10 23 41.1**	**+0.4**
APE				S	**Sn**	**10 24 17.5**	**+0.7**
ZKR	**Zakros**	**3.06**	**234**	P	**Pn**	**10 23 43.3**	**+1.3**
PRK	**Paraskevi**	**3.27**	**315**	*e*PB	**Pb**	**10 23 47.0**	**-4.4**
CAVI	**Cavuskoy**	**3.27**	**8**	*e*PN	**Pn**	**10 23 44.9**	**0.0**
NPS	**Neapolis**	**3.39**	**241**	*e*Pn	**Pn**	**10 23 48.0**	**+1.5**
NPS				*e*Sn	**Sn**	**10 24 26.0**	**-1.1**
YLV	**Yalova**	**3.60**	**2**	*e*PN	**Pn**	**10 23 49.2**	**-0.2**
GULT	**Gulveren**	**3.61**	**16**	*e*PN	**Pn**	**10 23 49.5**	**0.0**
IKL	**Isikli**	**3.65**	**100**	*e*PN	**Pn**	**10 23 50.4**	**+0.4**
SIVA	**Sivas**	**4.08**	**243**	P	**Pn**	**10 23 58.1**	**+2.1**
BR131	**Keskin Array S**	**4.43**	**50**	*e*Pn	**Pn**	**10 24 01.9**	**+1.2**
KARA	**Karaisali**	**4.66**	**85**	*e*PN	**Pn**	**10 24 04.9**	**+1.0**
VLI	**Veliai**	**5.06**	**269**	*e*PN	**Pn**	**10 24 11.5**	**+2.0**

SKHL ***02*** *10:30:27.7±1.8, 4666N×153.19E, h60km±28km, mb5.2/4*
JMA ***02*** *10:30:28.9±0.7, 4695N×153.11E, h30km, M5.0*
ISCJB ***02*** *10:30:29.6±0.9, 4669N±006×15291E±008, h53km±9km, mb3.7/8, MS3.3/2, Error ellipse: s-maj=12.6km s-min=5.4km az=138.5*
MOS ***02*** *10:30:31.0±1.3, 4684N×15289E, h68km, mb4.0/6, Error ellipse: s-maj=16.5km s-min=10.5km az=50.9*
NEIC ***02*** *10:30:31.5±1.9, 4693N×15262E, h35km, Error ellipse: s-maj=69.3km s-min=10.8km az=130.0*
IDC ***02*** *10:30:32.2±0.7, 4688N×15271E, h57km±5km, mb3.3/8, mb1 3.7/10, mb1mx3.6/22, mbtmp3.5/10, MS3.2/3, Ms1 3.2/3, ms1mx2.5/23, Error ellipse: s-maj=24.6km s-min=15.7km az=137.0*

ISC 02 10:30:31.5±0.7, 4666N±006×15297E±008, h51km±8km, n62, σ1§47/79, mb3.7/8, MS3.3/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
KUR	**Kuril'sk**	**3.83**	**250**	*e*P	**Pn**	**10 31 27.4**	**-0.5**
KUR				AMB	AMB	10 31 28.1	
	80nm,0.6s						
KUR				AMB	AMB	10 31 28.1	
	340nm,0.6s						
KUR				*e*S	**Sn**	**10 32 12.9**	**+1.2**
KUR				A		10 32 23.0	
	420nm,0.6s						
KUR				A		10 32 23.0	
	590nm,0.6s						
SKR	**Severo-Kuril's**	**4.54**	**26**	*e*PN	**Pn**	**10 31 35.6**	**-1.9**
SKR				*e*S	**Sn**	**10 32 24.5**	**-4.4**
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,130nm,0.5s						
SKR				smax			
	comp=E,470nm,0.2s						
SKR				smax			
	comp=N,230nm,0.5s						
SKR	**Severo-Kuril's**	**4.54**	**26**	*e*P	**Pn**	**10 31 35.6**	**-1.9**
SKR				AMB	AMB	10 31 36.5	
	comp=N,90nm,0.5s						
SKR				AMB	AMB	10 31 36.5	
	comp=N,130nm,0.5s						
SKR				*e*S	**Sn**	**10 32 24.5**	**-4.4**
SKR				A		10 32 32.1	
	comp=N,470nm,0.2s						
SKR				A		10 32 32.1	
	comp=N,230nm,0.5s						
SKR				A		10 32 32.1	
	comp=N,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.66**	**245**	*e*PN	**Pn**	**10 31 55.4**	**+2.5**
YUK				*e*S	**Sn**	**10 33 02.2**	**+5.7**
YUK				pmax	pmax		
	comp=Z,400nm,0.5s						
YUK				smax			
	comp=N,1μm,0.7s						
YUK				smax			
	comp=E,870nm,0.7s						
YUK				smax			
	comp=N,4μm,3.0s						
YUK				smax			
	comp=E,2μm,0.9s						
YUK	**Yuzh-Kuril'sk**	**5.66**	**245**	*e*P	**Pn**	**10 31 55.4**	**+2.5**
YUK				AMB	AMB	10 31 57.5	
	comp=E,400nm,0.5s						
YUK				*e*S	**Sn**	**10 33 02.2**	**+5.7**
YUK				A		10 33 18.9	
	comp=E,1μm,0.7s						
YUK				A		10 33 18.9	
	comp=E,870nm,0.7s						
YUK				A		10 33 23.0	
	comp=E,4μm,3.0s						
YUK				A		10 33 23.0	
	comp=E,2μm,0.9s						
NEM2	**Nemuro 2**	**6.09**	**240**	P	**Pn**	**10 31 59.2**	**+0.3**
NEM2				*e*S	**Sn**	**10 33 05.7**	**-1.4**
JRA	**Rausu**	**6.17**	**247**	P	**Pn**	**10 32 02.7**	**+2.8**
JNK	**Nakash**	**6.60**	**245**	P	**Pn**	**10 32 07.9**	**+2.1**
JAK	**Akkeshi**	**6.93**	**241**	P	**Pn**	**10 32 09.8**	**-0.5**
JAK				*e*S	**Sn**	**10 33 26.1**	**-1.6**
JTKR	**Abashiri--Toko**	**6.93**	**250**	P	**Pn**	**10 32 13.2**	**+2.8**
YSS	**Yuzh-Sakhalins**	**7.02**	**276**	*e*PN	**Pn**	**10 32 12.1**	**+0.5**
YSS	**Yuzh-Sakhalins**	**7.02**	**276**	*e*P	**Pn**	**10 32 12.3**	**+0.7**
YSS				*e*S	**Sn**	**10 33 31.0**	**+1.1**
YSS				A		10 33 34.7	
	comp=E,50nm,0.7s						
PETK	**Petropavlovsk-**	**7.14**	**24**	P	**Pn**	**10 32 12.2**	**-1.0**
	comp=E,2.9nm,0.3s,baz=182,slow=12,SNR=14						
PETK				LR	LR	10 34 58.8	
	comp=E,86nm,18.5s,baz=18,slow=38						
JAR	**Ashorobuto**	**7.34**	**246**	P	**Pn**	**10 32 18.0**	**+2.0**
JAR				*e*S	**Sn**	**10 33 39.4**	**+1.6**
PET	**Petropavlovsk**	**7.35**	**28**	*e*P	**Pn**	**10 32 14.1**	**-2.0**
	comp=E,30nm,0.4s						
PET	**Petropavlovsk**	**7.35**	**28**	*e*PN	**Pn**	**10 32 16.7**	**+0.6**
PET				pmax	pmax		
	comp=Z,27nm,0.6s						
JOB	**Onbets**	**7.50**	**243**	P	**Pn**	**10 32 19.2**	**+0.9**
JOB				*e*S	**Sn**	**10 33 41.0**	**-0.9**
JKK2	**Kamakawa 2**	**7.73**	**253**	P	**Pn**	**10 32 24.6**	**+3.3**
ASAJ	**Asahikawa**	**7.73**	**255**	P	**Pn**	**10 32 24.9**	**+3.6**
	comp=Z,4.1nm,0.3s,baz=82,slow=13,SNR=22						
ASAJ	**Asahikawa**	**7.73**	**255**	P	**Pn**	**10 32 25.6**	**+4.2**
ASAJ	**Asahikawa**	**7.73**	**255**	PN	**Pn**	**10 32 25.0**	**+3.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JCH	**Churui**	**7.95**	**243**	P	**Pn**	**10 32 25.2**	**+0.8**
JCH				*e*S	**Sn**	**10 33 50.7**	**-2.2**
TYV	**Tymovskoe**	**8.01**	**305**	*e*P	**Pn**	**10 32 26.0**	**+0.9**
TYV				AMB	AMB	10 32 27.5	
	comp=Z,70nm,1.0s						
JFR	**Furan**	**8.15**	**248**	P	**Pn**	**10 32 30.3**	**+3.2**
JEM	**Erimo**	**8.42**	**240**	*e*S	**Sn**	**10 34 01.8**	**-2.7**
ERM	**Erimo**	**8.43**	**240**	*e*Pn	**Pn**	**10 32 31.9**	**+1.1**
	comp=Z,40nm,0.4s						
ERM				*e*Sn	**Sn**	**10 34 07.6**	**+3.1**
ERM	**Erimo**	**8.43**	**240**	*e*PN	**Pn**	**10 32 31.9**	**+1.1**
ERM				*e*		10 34 07.6	
ERM				pmax	pmax		
	comp=Z,40nm,0.4s						
JBT2	**Biratori 2**	**8.49**	**247**	P	**Pn**	**10 32 33.5**	**+1.8**
JNBK	**Urakawa-nobuka**	**8.52**	**243**	P	**Pn**	**10 32 32.6**	**+0.5**
JNBK				*e*S	**Sn**	**10 34 05.3**	**-1.4**
JNB	**Noboribetsu**	**9.49**	**248**	P	**Pn**	**10 32 45.8**	**+0.4**
JNB				*e*S	**Sn**	**10 34 28.8**	**-1.8**
JKB	**Kayabe**	**9.80**	**245**	P	**Pn**	**10 32 48.9**	**-0.7**
JYM2	**Yakumo 2**	**10.10**	**248**	P	**Pn**	**10 32 54.1**	**+0.4**
JTM	**Tenmabayashi**	**10.42**	**240**	P	**Pn**	**10 32 56.6**	**-1.5**
JTM				*e*S	**Sn**	**10 34 47.1**	**-6.2**
JANG	**Nango**	**10.42**	**237**	P	**Pn**	**10 32 56.1**	**-2.0**
JANG				*e*S	**Sn**	**10 34 44.7**	**-8.6**
JTH	**Tanohata**	**10.51**	**234**	*e*S	**Sn**	**10 34 46.3**	**-9.3**
OFUJ	**Ofunato**	**11.22**	**232**	P	**Pn**	**10 33 06.6**	**-2.5**
OFUJ				*e*S	**Sn**	**10 35 05.0**	**-8.0**
JRG	**Rokugo**	**11.57**	**236**	P	**Pn**	**10 33 12.7**	**-1.2**
JRG				*e*S	**Sn**	**10 35 13.9**	**-7.7**
JIO	**Ouri**	**11.85**	**230**	P	**Pn**	**10 33 16.0**	**-1.7**
JIO				*e*S	**Sn**	**10 35 19.2**	**-9.1**
HABR	**Khabarovsk**	**12.24**	**285**	*e*PN	**Pn**	**10 33 21.9**	**-1.1**
MAJO	**Matsushiro**	**14.95**	**233**	P	**Pn**	**10 33 59.8**	**+0.3**
	comp=Z,10nm,1.0s						
MAJO	**Matsushiro**	**14.95**	**233**	P	**Pn**	**10 33 59.8**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MJAR	**Matsushiro Arr**	**14.95**	**233**	P	**Pn**	**10 33 58.3**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=23,slow=12,SNR=5.8						
MJAR	**Matsushiro Arr**	**14.95**	**233**	*e*P	**Pn**	**10 34 00.2**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**20.35**	**328**	*e*P	**P**	**10 35 04.1**	**+0.9**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS	**Korea Array**	**20.68**	**253**	P	**P**	**10 35 08.4**	**+1.4**
	comp=Z,2.1nm,0.5s,baz=57,slow=10,SNR=11						
KSRS	**Korea Array**	**20.68**	**253**	P	**P**	**10 35 08.5**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.59**	**306**	LR	LR	10 56 59.5	
	comp=Z,33nm,19.1s,MS3.2,baz=79,slow=38						
DAV	**Davao City (W)**	**45.92**	**219**	LR	LR	10 55 55.9	
	comp=Z,41nm,21.4s,MS3.3,baz=216,slow=33						
MKAR	**Makanchi Array**	**46.90**	**297**	P	**P**	**10 38 54.8**	**-1.7**
	comp=Z,0.3nm,0.5s,mb3.4,baz=65,slow=8.7,SNR=3.7						
MKAR				pP	pP	10 39 08.8	-1.3
	comp=Z,0.6nm,0.7s,baz=61,slow=6.1,SNR=3.6						
MKAR	**Makanchi Array**	**46.90**	**297**	P	**P**	**10 38 54.8**	**-1.7**
MKAR				*PP	pP	10 39 08.8	-1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**47.33**	**304**	*e*P	**P**	**10 38 58.8**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
NVAR	**Mina Array Bea**	**62.56**	**62**	P	**P**	**10 40 51.5**	**+1.5**
	comp=Z,0.4nm,0.6s,mb3.7,baz=297,slow=7.9,SNR=3.2						
PDAR	**Pinedale Array**	**64.88**	**54**	P	**P**	**10 41 05.8**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=253,slow=1.5,SNR=4.0						
PDAR				sP	sP	10 41 28.1	+3.0
	comp=Z,0.5nm,0.8s,baz=338,slow=3.5,SNR=2.9						
NB2	**NORSAR Subarra**	**68.28**	**341**	P	**P**	**10 41 24.6**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.9,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.28**	**341**	P	**P**	**10 41 24.4**	**-2.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=27,slow=6.3,SNR=4.7						
NOA	**NORSAR Array B**	**68.28**	**341**	*e*P	**P**	**10 41 24.4**	**-2.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**68.39**	**199**	P	**P**	**10 41 28.4**	**+0.8**
	comp=Z,0.3nm,0.7s,mb3.4,baz=16,slow=6.8,SNR=6.9						
WRA	**Warramunga Arr**	**68.39**	**199**	*e*P	**P**	**10 41 28.2**	**+0.6**
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**	**10 41 51.2**	**+1.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=11,slow=5.6,SNR=13						
ASAR				sP	sP	10 42 13.2	+2.9
	comp=Z,0.4nm,0.5s,baz=10,slow=5.6,SNR=3.3						
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**	**10 41 51.3**	**+1.1**
ASAR				*SP	sP	10 42 13.2	+2.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**77.62**	**60**	P	**P**	**10 42 22.2**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=292,slow=4.8,SNR=6.2						
TXAR				pP	pP	10 42 39.4	+2.5
	comp=Z,1.5nm,0.8s,baz=296,slow=4.0,SNR=8.3						
TXAR	**Lajitas Array**	**77.62**	**60**	P	**P**	**10 42 22.2**	**-0.1**
TXAR				*PP	pP	10 42 39.4	+2.5
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						

TAP 02 10:39:49.4, 2392N×12146E, h15km, ML3.8, 11C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
ESF	**Shoufeng Towns**	**0.06**	**139**	⇑*i* P	Pg	**10 39 52.4**	**+0.2**
	baz=139						
ESF				*i* S	Sg	10 39 54.2	-0.1
	baz=139						
ESL	**Shilin**	**0.11**	**195**	⇓*i* P	Pg	10 39 52.9	+0.2
	baz=195						
ESL				*i* S	Sg	10 39 55.0	0.0
	baz=195						
HWA	**Hwalien**	**0.14**	**66**	*i* P	Pg	10 39 53.7	+0.5
	baz=58						
HWA				*e*S	Sg	10 39 56.2	+0.4
	baz=58						
TWD	**Chiawan**	**0.20**	**37**	⇓*i* P	Pg	10 39 54.3	+0.3
	baz=35						
TWD				*i* S	Sg	10 39 57.4	+0.1
	baz=35						
TEGC	**Jichi Village**	**0.22**	**161**	P	Pg	10 39 54.7	+0.4
	baz=167						
TEGC				*e*S	Sg	10 39 58.6	+0.9
	baz=167						
WHF	**Hehuan Shan**	**0.29**	**321**	⇑*i* P	Pg	10 39 56.2	+0.7
	baz=313						
WHF				*e*S	Sg	10 40 00.3	+0.7
	baz=313						
TWT	**Tachien**	**0.42**	**322**	*i* P	Pg	10 39 58.8	+0.9
	baz=314						
TWT				S	Sg	10 40 04.8	+1.1
	baz=314						
EHY	**Hungye**	**0.43**	**198**	P	Pg	10 39 57.2	-0.8
	baz=191						
EHY				*e*S	Sg	10 40 04.5	+0.6
	baz=191						
EHP	**Heping Village**	**0.47**	**33**	*e*P	Pg	10 40 00.3	+1.6
	baz=33						
SMLT	**Sun Moon Lake**	**0.52**	**266**	⇑*i* P	Pg	10 40 00.2	+0.6
	baz=267						
SMLT				*i* S	Sg	10 40 07.5	+1.0
	baz=267						
NNS	**Nan Shan**	**0.53**	**351**	⇑*i* P	Pg	10 40 00.3	+0.5
	baz=351						
NNS				S	Sg	10 40 07.4	+0.6
	baz=351						
TYC	**Yuchr**	**0.56**	**269**	⇑*i* P	Pg	10 40 00.8	+0.4
	baz=277						
TYC				S	Sg	10 40 07.9	+0.2
	baz=277						
ENA	**Nanau**	**0.57**	**27**	⇑*i* P	Pg	10 40 00.4	-0.1
	baz=26						
ENA				*e*S	Sg	10 40 07.7	-0.4
	baz=26						
TWF1	**Yuli**	**0.58**	**195**	*e*P	Pg	10 39 59.4	-1.4
	baz=195						
TWF1				S	Sg	10 40 08.8	+0.2
	baz=195						
YUS	**Yu-Shan**	**0.63**	**228**	⇑*i* P	Pg	10 40 02.5	+0.7
	baz=218						
YUS				S	Sg	10 40 10.8	+0.6
	baz=218						
WNT	**Mingjian**	**0.71**	**267**	⇑P	Pg	10 40 04.7	+1.4
	baz=270						
WNT				*e*S	Sg	10 40 15.0	+2.3
	baz=270						
ALS	**Alishan**	**0.73**	**236**	⇑*i* P	Pg	10 40 04.2	+0.6
	baz=226						
ALS				S	Sg	10 40 13.8	+0.6
	baz=226						
TCU	**Taichung**	**0.76**	**288**	*e*P	Pg	10 40 05.6	+1.5
	baz=288						
NSK	**Sanguang**	**0.76**	**353**	⇑*i* P	Pg	10 40 04.5	+0.3
	baz=352						
NSK				*i* S	Sg	10 40 14.2	-0.1
	baz=352						
TWQ1	**Liyutan**	**0.76**	**304**	P	Pg	10 40 05.3	+1.1
	baz=305						
TWC	**Suao**	**0.77**	**27**	*e*P	Pg	10 40 03.8	-0.6
	baz=26						
TWC				S	Sg	10 40 14.4	-0.2
	baz=26						
CHN5	**Tsauling**	**0.79**	**246**	⇑*i* P	Pg	10 40 05.7	+1.0
	baz=246						
CHN5				S	Sg	10 40 16.7	+1.6
	baz=246						
NSY	**Sanyi**	**0.81**	**308**	*e*P	Pg	10 40 06.4	+1.3
	baz=308						
CHKT	**Chengkung**	**0.82**	**186**	P	Pg	10 40 04.0	-1.4
	baz=173						
CHKT				*e*S	Sg	10 40 15.3	-0.8
	baz=173						
TWE	**Neicheng**	**0.82**	**13**	*e*P	Pg	10 40 04.8	-0.6
	baz=13						
TWE				S	Sg	10 40 16.7	+0.5
	baz=13						
NSTT	**Nanjuang**	**0.83**	**329**	P	Pg	10 40 06.0	+0.5
	baz=330						
NSTT				*e*S	Sg	10 40 16.3	0.0
	baz=330						
ELDTW	**Lidau**	**0.83**	**210**	*e*P	Pg	10 40 03.9	-1.7
	baz=218						
ELDTW				*e*S	Sg	10 40 15.9	-0.6
	baz=218						
WGK	**Gukeng**	**0.86**	**255**	*e*P	Pb	10 40 07.0	+1.0
	baz=255						
WGK				*e*S	Sg	10 40 19.1	+1.9
	baz=255						
CHN4	**Tsaushan**	**0.98**	**235**	*e*P	Pb	10 40 08.6	+0.6
	baz=221						
CHN4				*e*S	Sb	10 40 23.1	+2.3
	baz=221						
CHN2	**Minshiung**	**0.98**	**247**	*e*P	Pb	10 40 09.0	+0.8
	baz=261						
CHN2				*e*S	Sb	10 40 23.1	+2.1
	baz=261						
HSN	**Hsinchu**	**0.99**	**333**	*e*P	Pb	10 40 10.1	+1.9
	baz=342						
WTP	**Ta-pu**	**1.03**	**230**	*e*P	Pb	10 40 09.5	+0.6
	baz=229						
WTP				*e*S	Sb	10 40 24.

SCLT				*e*S	Sn	10 40 34.8	+2.7
	baz=237							
SSD	**Sandimen**	**1.39**	**213**	*e*P	Pn	10 40 15.0	+0.6
	baz=212							
SSD				*e*S	Sn	10 40 34.0	+1.6
	baz=212							
ECL	**Taimali**	**1.40**	**200**	*e*P	Pn	10 40 14.5	+0.2
	baz=185							
TWM1	**Shoushan**	**1.45**	**221**	*e*P	Pn	10 40 17.2	+2.1
	baz=220							
EAST	**Anshuo**	**1.63**	**200**	*e*P	Pn	10 40 18.6	+1.0
	baz=188							
EAST				*e*S	Sn	10 40 39.7	+1.4
	baz=188							
SCZT	**Fangliau**	**1.72**	**207**	*e*P	Pn	10 40 19.7	+0.9
	baz=199							
WDGT	**Dungji**	**1.78**	**249**	*e*P	Pn	10 40 20.0	+0.4
	baz=246							
PNG	**Penghu**	**1.78**	**259**	*e*P	Pn	10 40 19.2	-0.5
	baz=259							
PNG				*e*S	Sn	10 40 42.3	+0.2
	baz=259							
KNM	**Kinmen**	**2.81**	**281**	*e*P	Pn	10 40 35.5	+1.7
	baz=294							

IDC 02 10:51:28.9±2.0, 137N×12593E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=174.0km s-min=25.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.73**	**159**	P	P	10 56 31.5	-1.2
	1.4nm,0.5s,baz=337,slow=11,SNR=28						
ASAR	**Alice Springs**	**26.07**	**163**	P	P	10 57 05.5	+1.1
	0.5nm,0.4s,baz=346,slow=11,SNR=14						
MKAR	**Makanchi Array**	**59.04**	**326**	P	P	11 01 30.7	0.0
	0.3nm,0.4s,baz=118,slow=7.5,SNR=5.4						

CASC 02 11:06:59.8±1.6, 1251N×8747W, h71km±10km, MD3.9, ML3.6, 4C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.45**	**65**	*e*P	Pn	11 07 12.5	+0.3
CRIN				*e*S	Sn	11 07 22.8	+1.4
TEL3	**Telica 3**	**0.61**	**84**	*e*P	Pn	11 07 14.9	+1.1
MIRN	**Miramar**	**0.74**	**95**	*e*P	Pn	11 07 16.4	+1.2
CNGN	**Cerro Negro**	**0.75**	**91**	*e*P	Pn	11 07 15.0	-0.3
CNGN				*e*S	Sn	11 07 28.2	+1.4
CNCH	**Conchagua**	**0.84**	**335**	*i*P	x	11 07 16.1	
CNCH				*e*S	x	11 07 29.1	
MOMN	**Momotombo**	**0.91**	**96**	*e*P	Pn	11 07 17.2	0.0
MOMN				*e*S	Sn	11 07 30.4	+0.2
COPN	**Copaltepe**	**0.92**	**111**	*e*P	Pn	11 07 16.5	-0.8
CSAN		**1.07**	**107**	*e*P	Pn	11 07 20.6	+1.4
CSAN				*e*S	Sn	11 07 35.0	+1.3
APYN	**Apoyeque**	**1.12**	**104**	*e*P	Pn	11 07 19.7	-0.2
APYN				*e*S	Sn	11 07 34.6	-0.3
APYN				AML	AML	11 07 36.1	
	comp=Z,724nm,0.2s						
XAVN	**Gruta Xavier**	**1.17**	**108**	*e*P	Pn	11 07 20.2	-0.3
BLLM	**Bellamira**	**1.20**	**321**	*e*P	x	11 07 20.9	
BLLM				*e*S	x	11 07 37.6	
TISN	**Laguna Tiscapa**	**1.23**	**107**	*e*P	Pn	11 07 20.8	-0.4
MGAN	**Managua**	**1.24**	**107**	*e*P	Pn	11 07 21.2	-0.2
MGAN				*e*S	Sn	11 07 38.1	+0.5
HUEN		**1.27**	**98**	*e*P	Pn	11 07 21.9	0.0
TICN	**Ticuantepe**	**1.30**	**111**	*e*P	Pn	11 07 23.5	+1.4
CAHU	**Cacacuatique**	**1.45**	**330**	*e*P	x	11 07 24.6	
CAHU				*e*S	x	11 07 44.0	
TGUH	**Tegucigalpa,Un**	**1.55**	**7**	*e*P	Pn	11 07 26.0	+0.6
TGUH				*e*S	Sn	11 07 45.6	+0.8
TGUH				AML	AML	11 07 47.9	
	comp=N,1μm,0.3s						
LFRS	**El Faro**	**1.91**	**306**	*e*P	x	11 07 30.1	
LFRS				*e*S	x	11 07 54.5	
SBLS	**San Blas**	**2.48**	**302**	*e*P	x	11 07 39.2	
RTR	**El Retiro**	**2.53**	**303**	*e*P	x	11 07 39.8	
CHI2		**15.65**	**119**	*i*P		11 07 11.7	

MOS 02 11:12:57.0±1.8, 4402N×4277E, h15km, mb3.7/1, 2C-1D, Error ellipse: s-maj=18.7km s-min=12.3km az=98.6, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYR	**Belyy Ugol+**	**0.03**	**99**	*i* PG	Pg	11 13 00.2	+0.5
KIV0	**Kislovodsk Arr**	**0.08**	**223**	*e*PG	Pg	11 13 01.6	+1.5
KIV	**Kislovodsk**	**0.09**	**225**	*e*PG	Pg	11 13 01.7	+1.6
SHAR	**Shatzhatmas**	**0.28**	**195**	*e*PG	Pg	11 13 04.9	+1.9
DIGR	**Digorskoe uzhe**	**1.26**	**152**	*e*PG	Pg	11 13 18.8	-2.5
DIGR				*e*S	Sb	11 13 46.0	+10
KORR	**Kora**	**1.32**	**134**	*e*PG	Pg	11 13 24.2	+1.7
ZEI	**Tsey**	**1.49**	**146**	*e*PG	Pg	11 13 21.5	-4.2
ZEI				*e*S	Sn	11 13 50.8	+8.4
LACR	**Lac**	**1.63**	**137**	*e*PN	Pn	11 13 25.5	+0.4
LACR				*e*S	Sn	11 13 57.7	+12

*ATH **02** 11:25:30.0, 3797N×2207E, h23km±1km, MD3.1/5*
*NEIC **02** 11:25:30.0, 3797N×2206E, h25km, MD3.1(ATH), After ATH.*
*CSEM **02** 11:25:32.6±0.1, 3785N×2188E, h27km±1km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.1km az=31.0*
*ISCJB **02** 11:25:33.0±0.5, 3786N±003×2187E±004, h30km±5km, Error ellipse: s-maj=6.0km s-min=4.3km az=28.9*
*THE **02** 11:25:33.1, 3788N×2187E, h22km±3km, ML2.6/1, Error ellipse: s-maj=3.1km s-min=0.9km az=136.0*

ISC 02 11:25:33.1±0.5, 3785N±003×2186E±004, h28km±5km, n32, σ0s72/62, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.37**	**303**	*e*PB	**Pb**	**11 25 40.3**	**-1.1**
RLS				*e*SB	**Sb**	**11 25 47.4**	**+0.3**
VLX	**Vlachokerasia**	**0.63**	**139**	P	**Pb**	**11 25 45.9**	**+0.3**
VLX				S	**Sb**	**11 25 55.0**	**+0.8**
ITM	**Ithomi**	**0.68**	**176**	*e*PN	**Pn**	**11 25 45.5**	**-1.3**
KFL	**Anninata**	**0.89**	**287**	P	**Pn**	**11 25 49.3**	**-0.4**
KFL				S	**Sb**	**11 26 02.6**	**+1.2**
LTK	**Loutraki**	**0.89**	**79**	P	**Pn**	**11 25 49.3**	**-0.4**
LTK				S	**Sb**	**11 26 00.9**	**-0.5**
PYL	**PYLOS**	**0.96**	**186**	P	**Pn**	**11 25 50.8**	**+0.1**
PYL				S	**Sn**	**11 26 03.9**	**+0.4**
VLS	**Valsamata**	**1.06**	**288**	P	**Pn**	**11 25 52.3**	**+0.3**
VLS				S	**Sn**	**11 26 05.4**	**-0.4**
VLS	**Valsamata**	**1.06**	**288**	*e*Pn	**Pn**	**11 25 52.5**	**+0.5**
VLS				S	**Sn**	**11 26 05.4**	**-0.4**
VLS				*e*Sn	**Sn**	**11 26 08.3**	**+2.5**
EVR	**Evrytania**	**1.06**	**358**	*e*PN	**Pn**	**11 25 48.6**	**-3.5**
DID	**Didima**	**1.14**	**107**	P	**Pn**	**11 25 52.7**	**-0.5**
DID				S	**Sn**	**11 26 08.8**	**+0.8**
LKR	**Lokris**	**1.20**	**48**	P	**Pn**	**11 25 54.2**	**+0.2**
LKR				S	**Sn**	**11 26 10.1**	**+0.8**
AGG	**Agios Georgios**	**1.22**	**17**	P	**Pn**	**11 25 54.3**	**0.0**
AGG				S	**Sn**	**11 26 10.3**	**+0.4**
LKD	**Levkas**	**1.28**	**312**	P	**Pn**	**11 25 54.5**	**-0.6**
LKD				S	**Sn**	**11 26 11.6**	**+0.3**
VLI	**Veliai**	**1.42**	**143**	*e*PN	**Pn**	**11 25 56.6**	**-0.5**

IDC 02 11:31:16.4±4.7, 2220S×17036E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.9/14, mbtmp3.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=173.3km s-min=49.4km az=150.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LASL	**Noumea**	**3.54**	**269**	*e*S	Sn	11 32 48.7	-6.5
NOUC	**Port Laguerre**	**3.76**	**271**	*e*P	Pn	11 32 15.2	-0.5
NOUC				*e*S	Sn	11 32 53.0	-7.7
CTA	**Charters Tower**	**22.57**	**271**	LR	LR	11 42 59.5	
	comp=Z,50nm,20.8s,baz=233,slow=31						
ASAR	**Alice Springs**	**33.55**	**260**	P	P	11 37 58.6	+0.4
	1.0nm,0.6s,baz=85,slow=9.3,SNR=19						
WRA	**Warramunga Arr**	**33.64**	**267**	P	P	11 37 58.1	-1.0
	0.8nm,0.8s,baz=101,slow=7.9,SNR=11						
CMAR	**Chiang Mai Arr**	**80.67**	**294**	P	P	11 43 32.5	+0.8
	1.2nm,0.6s,baz=130,slow=4.2,SNR=9.1						
GERES	**GERESS Array B**	**147.57**	**331**	PKPbc	PKPbc	11 51 01.6	-0.9
	0.8nm,0.6s,baz=29,slow=3.0,SNR=7.7						

*IDC **02** 11:45:09.1±1.5, 687S×15527E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/16, mbtmp3.9/6, ML4.3/1, Error ellipse: s-maj=34.6km s-min=29.5km az=103.0*
*ISCJB **02** 11:45:12.3±2.5, 685S±02×1554E±01, h36km±25km, mb3.8/7, Error ellipse: s-maj=26.7km s-min=18.0km az=162.7*
*NEIC **02** 11:45:14.1±1.0, 675S×15541E, h35km, mb3.9/2, Error ellipse: s-maj=19.2km s-min=16.2km az=4.0*

ISC 02 11:45:15.9±2.0, 695S±02×1555E±01, h57km±21km, n12, σ0s83/13, mb3.8/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.11**	**120**	Pn	**Pn**	**11 46 29.7**	**-0.2**
	11nm,0.3s,baz=236,slow=5.0,SNR=4.6						
HNR				Sn	**Sn**	**11 47 21.8**	**-5.8**
	7.6nm,0.3s,baz=298,slow=17,SNR=3.5						
PMG	**Port Moresby**	**8.58**	**253**	Pn	**Pn**	**11 47 17.2**	**-0.3**
	17nm,0.8s						
CTA	**Charters Tower**	**15.86**	**213**	Pn	**Pn**	**11 48 57.1**	**+1.5**
	0.1nm,0.3s,baz=48,slow=13,SNR=5.3						
WRAB	**Tennant Creek**	**24.23**	**236**	*e*P	**P**	**11 50 27.4**	**-0.2**
	7.6nm,1.1s,mb4.0						
WB2	**Warramunga Arr**	**24.24**	**236**	*e*P	**P**	**11 50 27.3**	**-0.3**
WRA	**Warramunga Arr**	**24.25**	**236**	P	**P**	**11 50 27.2**	**-0.6**
	2.8nm,0.7s,mb3.8,baz=63,slow=9.8,SNR=23						
ASAR	**Alice Springs**	**26.58**	**229**	P	**P**	**11 50 47.7**	**-1.2**
	0.5nm,0.6s,mb3.2,baz=59,slow=9.4,SNR=8.9						
STKA	**Stephens Creek**	**28.02**	**206**	*e*P	**P**	**11 51 05.1**	**+3.5**
	1.6nm,0.9s,mb3.6						
CMAR	**Chiang Mai Arr**	**61.16**	**295**	P	**P**	**11 55 25.9**	**+0.9**
	0.3nm,0.3s,mb3.9,baz=115,slow=4.6,SNR=4.0						
SONM	**Songino Array**	**69.50**	**327**	P	**P**	**11 56 18.3**	**-0.1**
	1.1nm,0.7s,mb3.9,baz=136,slow=5.3,SNR=7.2						
MKAR	**Makanchi Array**	**83.64**	**319**	P	**P**	**11 57 38.5**	**+0.2**
	0.6nm,0.7s,mb3.9,baz=104,slow=5.4,SNR=4.4						
MKAR	**Makanchi Array**	**83.64**	**319**	P	**P**	**11 57 38.5**	**+0.2**

*IDC **02** 11:47:19.1±0.7, 4730N×155.19E, h0km, mb3.9/14, mb1 4.2/15, mb1mx4.1/22, mbtmp4.0/15, ML3.7/1, MS2.9/4, Ms1 2.9/4, ms1mx2.5/30, Error ellipse: s-maj=22.1km s-min=15.5km az=160.0*
*ISCJB **02** 11:47:21.0±2.6, 4691N±006×155.12E±009, h32km±18km, mb4.0/15, MS3.0/4, Error ellipse: s-maj=12.5km s-min=7.2km az=136.2*
*NEIC **02** 11:47:22.4±0.6, 4680N×155.19E, h35km, mb3.6/1, Error ellipse: s-maj=16.2km s-min=7.5km az=142.0*
*SKHL **02** 11:47:22.6±1.8, 4666N×15492E, h70km±30km, mb4.9/2*
*MOS **02** 11:47:23.8±2.0, 4701N×15492E, h47km, mb4.2/10, Error ellipse: s-maj=12.9km s-min=9.9km az=71.4*

ISC 02 11:47:23.8±1.2, 4695N±007×15516E±010, h39km±10km, n49, σ1s29/56, mb4.0/15, MS3.0/4, 3C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.79**	**9**	*e*P	**Pn**	**11 48 24.0**	**+4.4**
SKR				*e*S	**Sn**	**11 49 04.5**	**+1.6**
SKR				A		11 49 07.1	
	90nm,0.5s						
SKR				A		11 49 07.1	
	610nm,0.2s						
KUR	**Kuril'sk**	**5.36**	**254**	*i*P	**Pn**	**11 48 36.5**	**-4.7**
KUR				AMB	AMB	11 48 37.0	
	50nm,0.5s						
KUR				AMB	AMB	11 48 37.0	
	150nm,0.5s						
KUR				*i* S	**Sn**	**11 49 33.3**	**-8.2**
KUR				A		11 49 34.0	
	640nm,0.9s						
KUR				A		11 49 34.0	
	910nm,0.9s						
PETK	**Petropavlovsk-**	**6.38**	**14**	Pn	**Pn**	**11 48 57.1**	**+2.0**
	2.0nm,0.3s,baz=199,slow=13,SNR=32						
PETK				Sn	**Sn**	**11 50 05.9**	**-0.7**
	1.2nm,0.3s,baz=174,slow=17,SNR=2.8						
PET	**Petropavlovsk**	**6.48**	**19**	*e*Pn	**Pn**	**11 48 56.2**	**-0.4**
	61nm,0.4s						
PET				*e*Sn	**Sn**	**11 50 07.0**	**-2.2**
PET	**Petropavlovsk**	**6.48**	**19**	*e*PN	**Pn**	**11 48 56.2**	**-0.4**
PET				pmax	pmax		
	comp=Z,61nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.49**	**275**	*i*PN	**Pn**	**11 49 27.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**8.49**	**275**	*i*P	**Pn**	**11 49 27.0**	**+2.9**
YSS				AMB	AMB	11 49 28.0	
	comp=Z,30nm,0.9s						
YSS				*e*S	**Sn**	**11 50 59.0**	**+0.4**
TYV	**Tymovskoe**	**9.12**	**300**	*e*P	**Pn**	**11 49 36.0**	**+3.3**
ASAJ	**Asahikawa**	**9.26**	**257**	Pn	**Pn**	**11 49 34.5**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=90,slow=11,SNR=5.8						
ASAJ				LR	LR	11 52 10.9	
	comp=Z,28nm,21.8s,baz=119,slow=31						
ASAJ	**Asahikawa**	**9.26**	**257**	PN	**Pn**	**11 49 34.5**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,28nm,21.8s						
ERM	**Erimo**	**9.89**	**244**	*e*Pn	**Pn**	**11 49 41.6**	**-1.7**
	comp=Z,33nm,0.9s						
ERM				*e*Sn	**Sn**	**11 51 23.0**	**-10**
ERM	**Erimo**	**9.89**	**244**	*e*PN	**Pn**	**11 49 41.6**	**-1.8**
ERM				pmax	pmax		
	comp=Z,33nm,0.9s						
ERM	**Erimo**	**9.89**	**244**	*e*P	**Pn**	**11 49 41.3**	**-2.1**
HABR	**Khabarovsk**	**13.63**	**284**	*e*PN	**Pn**	**11 50 34.1**	**-0.2**
HABR				*e*		11 53 04.9	
MAJO	**Matsushiro**	**16.34**	**237**	Pn	**Pn**	**11 51 07.8**	**-2.4**
	comp=Z,4.0nm,0.7s						
MAJO	**Matsushiro**	**16.34**	**237**	P	**Pn**	**11 51 07.8**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL	**Bilibino**	**21.90**	**11**	*e*P	**P**	**11 52 16.6**	**+3.4**
BILL				*e*S	**S**	**11 56 13.0**	**+0.5**
BILL				pmax	pmax		
	comp=Z,40nm,2.5s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.2						
KSRS	**Korea Array**	**22.20**	**255**	P	**P**	**11 52 18.9**	**+2.3**
	comp=Z,1.4nm,0.6s,mb3.6,baz=54,slow=10,SNR=7.6						
KSRS				LR	LR	12 00 52.4	
	comp=Z,16nm,18.7s,MS2.5,baz=45,slow=36						
KSRS	**Korea Array**	**22.20**	**255**	P	**P**	**11 52 18.9**	**+2.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
KSRS				MLR	MLR		
	comp=Z,16nm,18.7s,MS2.5						
HIA	**Hailar**	**23.63**	**289**	*e*P	**P**	**11 52 29.9**	**-1.3**
ZALV	**Zalesovo Beam**	**43.63**	**306**	P	**P**	**11 55 22.2**	**-1.8**
	comp=Z,0.7nm,0.4s,mb3.8,baz=62,slow=10,SNR=4.2						
ZALV				LR	LR	12 13 29.9	
	comp=Z,23nm,19.1s,MS3.1,baz=70,slow=36						
ZALV	**Zalesovo Beam**	**43.63**	**306**	P	**P**	**11 55 22.2**	**-1.8**
ZALV				LR	LR	12 13 29.9	
ZALV	**Zalesovo Beam**	**43.63**	**306**	P	**P**	**11 55 22.3**	**-1.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV				MLR	MLR		
	comp=Z,23nm,19.1s,MS3.1						
MK31	**Makanchi Array**	**48.09**	**298**	*e*P	**P**	**11 55 59.1**	**-0.2**
MKAR	**Makanchi Array**	**48.09**	**298**	P	**P**	**11 55 59.1**	**-0.3**
	comp=Z,1.4nm,0.8s,mb4.1,baz=70,slow=7.3,SNR=10						
MKAR				LR	LR	12 17 07.3	
	comp=Z,38nm,18.4s,MS3.4,baz=154,slow=37						
MKAR	**Makanchi Array**	**48.09**	**298**	*e*P	**P**	**11 55 59.6**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**48.42**	**304**	P	**P**	**11 56 02.5**	**+0.7**
	baz=71,slow=8.6						
YKA	**Yellowknife Ar**	**49.92**	**37**	P	**P**	**11 56 13.6**	**+0.6**
	comp=Z,2.3nm,0.6s,mb4.4,baz=294,slow=7.1,SNR=6.4						
YKA	**Yellowknife Ar**	**49.92**	**37**	*e*P	**P**	**11 56 13.6**	**+0.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**51.81**	**310**	P	**P**	**11 56 27.6**	**+0.2**
	comp=Z,1.0nm,0.3s,mb4.2,baz=54,slow=8.1,SNR=5.8						
BVAR	**Borovoye Array**	**51.81**	**310**	P	**P**	**11 56 27.6**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.78**	**258**	P	**P**	**11 56 42.2**	**-0.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=37,slow=6.7,SNR=6.7						
CMAR	**Chiang Mai Arr**	**53.78**	**258**	*e*P	**P**	**11 56 42.2**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PMG	**Port Moresby**	**56.55**	**189**	*e*P	**P**	**11 57 04.7**	**+2.4**
PMG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NVAR	**Mina Array Bea**	**61.09**	**64**	P	**P**	**11 57 33.0**	**-0.7**
	comp=Z,0.8nm,0.7s,mb4.0,baz=282,slow=6.7,SNR=6.8						
PDAR	**Pinedale Array**	**63.49**	**55**	P	**P**	**11 57 49.6**	**-0.1**
	comp=Z,1.1nm,0.9s,mb4.0,baz=294,slow=2.4,SNR=7.8						
NB2	**NORSAR Subarra**	**68.48**	**342**	P	**P**	**11 58 27.4**	**+6.0**
	comp=Z,4.4nm,0.8s,mb4.5,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.48**	**342**	P	**P**	**11 58 21.2**	**-0.2**
	comp=Z,1.4nm,0.8s,mb4.0,baz=27,slow=6.4,SNR=2.6						
NOA	**NORSAR Array B**	**68.48**	**342**	P	**P**	**11 58 21.2**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRAB	**Tennant Creek**	**69.17**	**201**	*e*P	**P**	**11 58 27.0**	**+0.9**
WRA	**Warramunga Arr**	**69.18**	**201**	P	**P**	**11 58 30.2**	**+4.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=21,slow=6.9,SNR=5.4						
AKASG	**Malin Array Be**	**72.15**	**327**	P	**P**	**11 58 43.6**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=33,slow=6.8,SNR=3.9						
AKASG	**Malin Array Be**	**72.15**	**327**	P	**P**	**11 58 43.6**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**72.86**	**200**	P	**P**	**11 58 52.5**	**+4.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=16,slow=5.6,SNR=10						
ASAR	**Alice Springs**	**72.86**	**200**	P	**P**	**11 58 52.5**	**+4.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**76.17**	**62**	P	**P**	**11 59 07.2**	**-0.7**
	comp=Z,4.0nm,0.6s,mb4.5,baz=303,slow=4.2,SNR=68						
TXAR	**Lajitas Array**	**76.17**	**62**	*e*P	**P**	**11 59 07.1**	**-0.7**
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**78.88**	**335**	P	**P**	**11 59 22.3**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.6,baz=50,slow=8.9,SNR=4.7						
GERES	**GERESS Array B**	**78.88**	**335**	P	**P**	**11 59 22.3**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **02** 11:54:53.5±1.4, 2033S±009×178.0W±0.1, h545km±20km, mb3.8/13, Error ellipse: s-maj=19.5km s-min=12.2km az=30.5*
*IDC **02** 11:54:55.0±1.9, 2024S×177.95W, h547km±21km, mb3.4/11, mb1 3.6/13, mb1mx3.5/19, mbtmp3.4/13, Error ellipse: s-maj=25.3km s-min=14.0km az=148.0*
*NEIC **02** 11:54:54.4±1.0, 2026S×177.99W, h542km±12km, mb4.1/3, Error ellipse: s-maj=18.8km s-min=9.5km az=147.0*

ISC 02 11:54:54.4±1.4, 203S±01×1780W±01, h540km±19km, n22, σ0s77/21, mb3.8/13, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.68**	**44**	P	**P**	**11 56 59.0**	**+0.1**
	2.9nm,0.3s,baz=140,slow=20,SNR=4.1						
AFI				S	**S**	**11 58 31.8**	**-9.0**
	2.2nm,0.3s,baz=37,slow=18,SNR=4.1						
AFI	**Afiamalu**	**8.68**	**44**	P	**P**	**11 56 59.0**	**+0.1**
AFI				S	**S**	**11 58 31.8**	**-9.0**
URZ	**Urewera**	**18.42**	**192**	P	**P**	**11 58 35.7**	**-0.7**
	1.8nm,0.3s,baz=280,slow=2.3,SNR=16						
URZ				S	**S**	**12 01 32.7**	**-4.3**
	0.2nm,0.3s,baz=227,slow=21,SNR=6.4						
CTA	**Charters Tower**	**33.52**	**264**	P	**P**	**12 00 50.3**	**+0.7**
	2.8nm,0.5s,mb4.0,baz=87,slow=12,SNR=4.8						
CTAO	**Charters Tower**	**33.52**	**264**	*e*P	**P**	**12 00 49.5**	**0.0**
	3.8nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**44.58**	**257**	P	**P**	**12 02 19.6**	**+0.8**
	3.4nm,0.8s,mb3.9,baz=96,slow=7.9,SNR=54						
ASAR				ScP	ScP	12 06 48.5	-2.4
	0.3nm,0.9s,baz=111,slow=5.1,SNR=2.8						
WB2	**Warramunga Arr**	**44.63**	**262**	*e*P	**P**	**12 02 18.9**	**-0.2**
WRAB	**Tennant Creek**	**44.63**	**262**	*e*P	**P**	**12 02 18.5**	**-0.6**
	2.3nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**44.64**	**262**	P	**P**	**12 02 19.5**	**+0.2**
	2.2nm,0.4s,mb4.0,baz=96,slow=7.6,SNR=118						
BATI	**Baumata**	**56.93**	**271**	P	**P**	**12 03 50.3**	**+1.5**
	13nm,0.9s,mb4.2,baz=35,slow=4.6,SNR=2.3						
MJAR	**Matsushiro Arr**	**70.03**	**324**	P	**P**	**12 05 11.2**	**-0.8**
	1.7nm,0.5s,mb3.9,baz=157,slow=5.8,SNR=8.8						
MAJO	**Matsushiro**	**70.03**	**324**	*e*P	**P**	**12 05 10.7**	**-1.3**
	3.3nm,0.3s,mb4.3						
PETK	**Petropavlovsk-**	**76.06**	**345**	P	**P**	**12 05 45.8**	**-0.3**
	6.1nm,0.7s,mb4.2,baz=121,slow=6.0,SNR=9.9						
KSRS	**Korea Array**	**76.72**	**319**	P	**P**	**12 05 49.5**	**-0.8**
	0.7nm,0.5s,mb3.4,baz=130,slow=4.9,SNR=5.0						
NVAR	**Mina Array Bea**	**80.86**	**43**	P	**P**	**12 06 12.8**	**+0.6**
	1.5nm,0.9s,mb3.4,baz=226,slow=8.7,SNR=7.7						
TXAR	**Lajitas Array**	**86.93**	**57**	P	**P**	**12 06 43.1**	**+0.8**
	3.3nm,0.6s,mb3.1,baz=218,slow=8.2,SNR=4.7						
PDAR	**Pinedale Array**	**88.79**	**43**	P	**P**	**12 06 50.5**	**-0.3**
	0.9nm,0.6s,mb3.8,baz=209,slow=3.5,SNR=8.1						
CMAR	**Chiang Mai Arr**	**90.05**	**290**	P	**P**	**12 06 58.0**	**+0.9**
	1.6nm,0.8s,mb3.9,baz=121,slow=2.4,SNR=10						
AKASG	**Malin Array Be**	**142.82**	**331**	PKhKP		12 13 22.6	
	5.0nm,0.6s,baz=43,slow=4.4,SNR=16						
ASF	**Jabal al Asfar**	**146.68**	**298**	PKPbc	PKPbc	12 13 36.1	0.0
	0.9nm,0.3s,baz=242,slow=5.

BALP	**Baler**	**2.45**	**355**	*e*P		Pn	12 21 48.1	+5.5

SGS ***02*** *12:21:48.4, 30.16N×36.25E, h5km*
ISCJB ***02*** *12:21:50.4±0.9, 2987N×004×3618E±006, h0km, Error ellipse: s-maj=8.1km s-min=5.4km az=152.7*
GII ***02*** *12:21:51.3±0.0, 2995N×3622E, h0km, ML2.1/2, EXPLOSION*
HLW ***02*** *12:21:57.1, 2940N×3618E, h22km, Mb2.9*
CSEM ***02*** *12:21:58.5±0.5, 2945N×3580E, h15km, ML2.9, Error ellipse: s-maj=13.4km s-min=6.6km az=75.0*

ISC 02 12:21:50.7±0.9, 2985N±004×3620E±006, h0km, n18, σ0s70/23, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.01**	**263**	**Pg**	**Pg**	**12 22 10.3**	**+0.2**
AQBJ				Sg	**Sg**	**12 22 27.3**	**+4.2**
HRFI	**Mount Harif**	**1.02**	**281**	Pg	**Pg**	**12 22 10.0**	**-0.4**
EIL	**Elat**	**1.10**	**261**	Pg	**Pg**	**12 22 12.2**	**+0.4**
EIL				Sg	**Sg**	**12 22 30.0**	**+3.9**
HQLS		**1.13**	**241**	P	**Pg**	**12 22 11.9**	**-0.6**
HQLS				S	**Sg**	**12 22 27.2**	**0.0**
PRNI	**Paran**	**1.15**	**296**	Pg	**Pg**	**12 22 12.5**	**-0.3**
JLOS		**1.27**	**209**	P	**Pg**	**12 22 14.5**	**-0.6**
KRMI	**Paran Flat**	**1.30**	**282**	Pg	**Pg**	**12 22 15.0**	**-0.7**
KRMI				Sg	**Sg**	**12 22 33.1**	**+0.4**
HBST	**Basata**	**1.43**	**244**	P	**Pn**	**12 22 18.4**	**+0.5**
MZDA	**Masada**	**1.62**	**334**	Pn	**Pn**	**12 22 20.9**	**+0.3**
TBKS	**Tabuk**	**1.66**	**170**	S	**Sn**	**12 22 44.3**	**+1.3**
TBKS	**Tabuk**	**1.66**	**170**	P	**Pn**	**12 22 20.6**	**-0.5**
BDAS	**Al Bad'**	**1.71**	**214**	S	**Sn**	**12 22 45.5**	**+1.1**
BDAS	**Al Bad'**	**1.71**	**214**	P	**Pn**	**12 22 21.3**	**-0.5**
DSI	**Dead Sea**	**1.85**	**338**	Pn	**Pn**	**12 22 24.6**	**+0.9**
RSHS		**1.98**	**219**	P	**Pn**	**12 22 24.3**	**-1.2**
HKAT	**Jabal Katrina**	**2.34**	**236**	P	**Pn**	**12 22 30.2**	**-0.3**
HKAT				S	**Sn**	**12 22 54.2**	**-5.7**
TR2		**2.61**	**237**	P	**Pn**	**12 22 33.6**	**-0.6**
AMAG	**Maghara**	**2.70**	**288**	P	**Pn**	**12 22 40.4**	**+5.0**

IDC 02 12:35:22.5±6.8, 1048N×14654E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML4.0/1, MS3.8/1, Ms1 3.8/1, ms1mx2.6/27, Error ellipse: s-maj=243.5km s-min=23.8km az=83.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.50**	**332**	Pn	Pn	12 36 16.3	-1.9
	13nm,0.3s,baz=155,slow=14,SNR=12						
GUMO				Sn	Sn	12 36 52.0	-8.3
	46nm,0.3s,baz=33,slow=21,SNR=12						
KAPI	**Kappang**	**30.80**	**241**	LR	LR	12 53 40.2	
	comp=Z,169nm,18.2s,baz=22,slow=36						
WRA	**Warramunga Arr**	**32.53**	**202**	P	P	12 41 54.6	-0.7
	0.3nm,0.7s,baz=27,slow=9.5,SNR=6.4						
ASAR	**Alice Springs**	**36.11**	**200**	P	P	12 42 26.9	+0.5
	0.5nm,0.8s,baz=22,slow=7.5,SNR=7.3						
SONM	**Songino Array**	**50.20**	**326**	P	P	12 44 21.0	+0.9
	0.3nm,0.5s,baz=138,slow=6.4,SNR=3.3						

IDC ***02*** *12:40:08.4±0.5, 1548S×173.12W, h0km, mb4.9/19, mb1 5.0/19, mb1mx5.0/22, mbtmp4.9/19, MS5.2/19, Ms1 5.3/19, ms1mx5.1/24, Error ellipse: s-maj=18.1km s-min=13.0km az=138.0*
ISCJB ***02*** *12:40:09.5±0.2, 1535S±005×173.10W±003, h15km, mb5.3/129, MS5.5/124, Error ellipse: s-maj=7.4km s-min=4.0km az=160.2*
SZGRF ***02*** *12:40:09.7, 1582S×172.44W, h33km, mb5.6, Samoa Islands region*
NEIC ***02*** *12:40:10.2±0.2, 1538S×173.17W, h10km, mb5.4/88, MS5.5/85, MW5.6, Error ellipse: s-maj=8.1km s-min=4.7km az=152.0, Moment Tensor Solution. s60 Moment tensor: Scale 10^{17}Nm; M_{rr}1.61; $M_{\theta\theta}$1.37; $M_{\phi\phi}$-2.98; $M_{r\theta}$0.50; $M_{\theta\phi}$-1.16; $M_{r\phi}$1.75; Best double couple: M_o3.40000×10^{17} NP1:ϕ_s19.00000°, δ64.00000°, λ96.00000°. NP2: ϕ_s185.00000°, δ27.00000°, λ78.00000°. Principal axes: T 2.2200, Plg70.0000°, Azm301.0000°; N 1.6500, Plg5.0000°, Azm196.0000°; P -3.8700, Plg18.0000°, Azm104.0000°;*
GCMT ***02*** *12:40:10.2±0.1, 1528S×172666W, h15km, MW5.8/102, Moment Tensor Solution. s99,c200; s102,c287; Duration: 18 Moment tensor: Scale 10^{17}Nm; M_{rr}3.53±.05; $M_{\theta\theta}$0.76±.04; $M_{\phi\phi}$-4.28±.04; $M_{r\theta}$0.16±.12; $M_{\theta\phi}$1.15±.03; $M_{r\phi}$3.34±.16; Best double couple: M_o5.25800×10^{17} NP1:ϕ_s153.00000°, δ27.00000°, λ66.00000°. NP2:ϕ_s359.00000°, δ65.00000°, λ102.00000°. Principal axes: T 4.8390, Plg68.0000°, Azm291.0000°; N 0.8450, Plg11.0000°, Azm174.0000°; P -5.6770, Plg20.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***02*** *12:40:14.1, 1474S×17401W, h10km, mB5.8, mb5.3, Ms5.5, Msz5.2*
MOS ***02*** *12:40:14.1±1.3, 1509S×17295W, h33km, mb5.5/36, MS5.5/33, Error ellipse: s-maj=10.6km s-min=7.5km az=62.7*
DJA ***02*** *12:40:14.8±0.0, 1570S×17327W, h10km, mB6.0/3, Mw(mB)5.6/3, Mwp5.4/3*

ISC 02 12:40:14.2±1.8, 1543S±005×17309W±003, h37km±16km, h11km±2.5km; pP-P, n951, σ0s64/629, mb5.3/129, MS5.5/124, 222C-200D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.97**	**40**	Pn	**Pn**	**12 40 35.8**	**-9.3**
	334nm,0.3s,baz=231,slow=14,SNR=177						
AFI				Sn	**Sn**	**12 40 54.8**	**-14**
AFI	**Afiamalu**	**1.97**	**40**	*e*P	**Pn**	**12 40 36.0**	**-9.1**
FUNA	**Funafuti**	**10.19**	**311**	Pn	**Pn**	**12 42 30.7**	**-7.4**
FUNA				*e*Sn	**Sn**	**12 44 21.6**	**-10**
RAR	**Rarotonga**	**13.89**	**116**	Pn	**Pn**	**12 43 21.5**	**-7.1**
	8.6nm,0.3s,baz=270,slow=10,SNR=15						
RAR				LR	LR	12 47 13.6	
	comp=Z,15μm,20.8s,baz=300,slow=31						
RAR	**Rarotonga**	**13.89**	**116**	*e*Pn	**Pn**	**12 43 21.5**	**-7.0**
	222nm,0.9s						
RAR	**Rarotonga**	**13.89**	**116**	*e*P	**Pn**	**12 43 21.5**	**-7.1**
RAR				pmax	pmax		
	comp=Z,223nm,0.9s						
RAO	**Raoul Island**	**14.46**	**197**	LR	LR	12 47 57.5	
	comp=Z,5μm,19.2s,baz=18,slow=33						
DZM	**Mont Dzumac**	**20.46**	**248**	*e*P	**P**	**12 44 51.0**	**+2.2**
NOUC	**Port Laguerre**	**20.60**	**248**	*e*P	**P**	**12 44 55.5**	**+5.2**
TARA	**Tarawa**	**21.66**	**319**	*e*P	**P**	**12 45 02.5**	**+0.7**
PAE	**Paea**	**22.64**	**99**	*e*P	**P**	**12 45 12.5**	**+0.3**
	comp=Z,395nm,0.8s,mb5.9						
PAE	**Paea**	**22.64**	**99**	*e*P	**P**	**12 45 12.5**	**+0.3**
PAE				pmax	pmax		
	comp=Z,395nm,0.8s,mb5.9						
PPT	**Papeete**	**22.64**	**99**	*e*P	**P**	**12 45 12.8**	**+0.6**
	comp=Z,154nm,1.4s,mb5.2						
PPT				*e*LQ		12 49 31.9	
	comp=Z,29μm,28.2s						
PPT				*e*LR	LR	12 50 32.8	
	comp=Z,23μm,26.2s,baz=265						
PPT	**Papeete**	**22.64**	**99**	P	**P**	**12 45 12.1**	**-0.1**
	comp=Z,36nm,0.6s,mb5.0,baz=259,slow=5.4,SNR=3.6						
PPT				LR	LR	12 51 23.4	
	comp=Z,7μm,21.1s,MS5.1,baz=274,slow=30						
TIAR	**Tiarei**	**22.86**	**99**	*e*P	**P**	**12 45 14.8**	**+0.2**
	comp=Z,1μm,1.2s,mb6.2						
TVO	**Taravao**	**22.96**	**99**	*e*P	**P**	**12 45 15.9**	**+0.3**
	comp=Z,818nm,0.9s,mb6.2						
TVO	**Taravao**	**22.96**	**99**	*e*P	**P**	**12 45 15.9**	**+0.3**
TVO				pmax	pmax		
	comp=Z,818nm,0.9s,mb6.2						
XMAS	**Kiritimati**	**23.26**	**43**	P	**P**	**12 45 18.5**	**-0.2**
	comp=Z,675nm,1.9s,mb5.8						
TBI	**Tubuai**	**23.62**	**113**	*e*LQ		12 49 56.7	
	comp=Z,20μm,30.2s						
TBI				*e*LR	LR	12 51 05.2	
	comp=Z,21μm,26.2s,baz=286						
PMOR	**Pomariorio Ree**	**24.32**	**92**	*e*P	**P**	**12 45 29.3**	**+0.8**
	comp=Z,591nm,1.4s,mb5.8						
URZ	**Urewera**	**24.33**	**199**	P	**P**	**12 45 28.2**	**-0.3**
	comp=Z,19nm,0.7s,mb4.7,baz=23,slow=5.1,SNR=16						
VAH	**Vaihoa**	**24.56**	**93**	*e*P	**P**	**12 45 31.1**	**+0.4**
	comp=Z,142nm,0.9s,mb5.5						
HNR	**Honiara**	**26.98**	**280**	LR	LR	12 54 55.8	
	comp=Z,9μm,19.3s,MS5.4,baz=315,slow=33						
RPZ	**Rata Peaks**	**31.27**	**202**	P	**P**	**12 46 28.1**	**-2.4**
	comp=Z,9.6nm,0.6s,mb4.8,baz=299,slow=1.9,SNR=9.5						
TAOE	**Nuku Hiva Isla**	**32.83**	**82**	*e*LR	LR	12 55 07.2	
	comp=Z,57μm,27.8s,baz=261						
EIDS	**Eidsvold**	**34.91**	**248**	*e*P	**P**	**12 47 01.3**	**-1.2**
	comp=Z,35nm,1.0s,mb5.2						
ARMA	**Armidale**	**35.58**	**239**	*e*P	**P**	**12 47 07.0**	**-1.3**
	comp=Z,0.5nm,0.9s						
RKT	**Rikitea**	**36.70**	**108**	*e*P	**P**	**12 47 17.5**	**-0.4**
	comp=Z,132nm,1.4s,mb5.6						
RKT				*e*S	**S**	**12 52 58.0**	**-1.2**
	comp=Z,774nm,26.0s						
RKT				*e*LQ		12 55 38.9	
	comp=Z,4μm,28.2s						
RKT				*e*LR	LR	12 57 06.7	
	comp=Z,12μm,26.2s,baz=280						
RKT	**Rikitea**	**36.70**	**108**	*e*P	**P**	**12 47 17.5**	**-0.4**
	comp=Z,132nm,1.4s,mb5.6						
RKT				*e*S	**S**	**12 52 58.0**	**-1.2**
RKT				*e*LQ		12 55 38.9	
RKT	**Rikitea**	**36.70**	**108**	*e*P	**P**	**12 47 17.5**	**-0.4**
RKT				*e*S	**S**	**12 52 58.0**	**-1.2**
RKT				pmax	pmax		
	comp=Z,132nm,1.4s,mb5.6						
CTA	**Charters Tower**	**38.93**	**257**	P	**P**	**12 47 34.8**	**-2.0**
	comp=Z,2.8nm,0.5s,mb4.2,baz=102,slow=9.1,SNR=6.6						
CTA				LR	LR	13 01 50.7	
	comp=Z,6μm,18.4s,MS5.4,baz=83,slow=34						
CTAO	**Charters Tower**	**38.93**	**257**	*e*P	**P**	**12 47 33.7**	**-3.1**
CTAO				LR	LR		
	comp=Z,5μm,19.0s,MS5.4						
PMG	**Port Moresby**	**39.23**	**274**	*e*P	**P**	**12 47 37.8**	**-1.6**
	comp=Z,20nm,1.0s,mb4.8						
PMG				*e*PP	PP	12 49 11.3	+1.4
PMG	**Port Moresby**	**39.23**	**274**	*e*P	**P**	**12 47 37.8**	**-1.6**
PMG				*e*		12 49 11.3	
PMG				pmax	pmax		
	comp=Z,20nm,1.0s						
CAN	**Canberra**	**39.25**	**233**	*e*P	**P**	**12 47 39.8**	**+0.5**
KIP	**Kipapa**	**39.49**	**22**	*e*P	**P**	**12 47 39.9**	**-1.5**
	comp=Z,204nm,1.2s,mb5.7						
KIP	**Kipapa**	**39.49**	**22**	*e*P	**P**	**12 47 39.9**	**-1.5**
KIP				pmax	pmax		
	comp=Z,204nm,1.2s,mb5.7						
COEN	**Coen**	**42.28**	**266**	*e*P	**P**	**12 48 04.7**	**+0.2**
	comp=Z,22nm,1.0s,mb4.7						
COEN	**Coen**	**42.28**	**266**	P	**P**	**12 48 03.6**	**-0.9**
	comp=Z,25nm,1.3s,mb4.7						
COEN	**Coen**	**42.28**	**266**	P	**P**	**12 48 04.7**	**+0.2**
	comp=Z,25nm,1.3s,mb4.7						
STKA	**Stephens Creek**	**44.28**	**240**	P	**P**	**12 48 19.6**	**-0.9**
	comp=Z,20nm,0.9s,mb4.9,baz=80,slow=8.4,SNR=35						
STKA	**Stephens Creek**	**44.28**	**240**	*e*P	**P**	**12 48 20.1**	**-0.4**
	comp=Z,29nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	**50.12**	**257**	*e*P	**P**	**12 49 04.6**	**-1.5**
	comp=Z,55nm,1.2s,mb5.5						
WRAB	**Tennant Creek**	**50.12**	**257**	*e*P	**P**	**12 49 03.9**	**-2.3**
WRAB	**Tennant Creek**	**50.12**	**257**	P	**P**	**12 49 04.5**	**-1.7**
	comp=Z,40nm,1.3s,mb5.3						
WRAB	**Tennant Creek**	**50.12**	**257**	P	**P**	**12 49 04.6**	**-1.6**
	comp=Z,40nm,1.3s,mb5.3						
WRA	**Warramunga Arr**	**50.13**	**257**	P	**P**	**12 49 04.0**	**-2.2**
	comp=Z,24nm,1.0s,mb5.2,baz=91,slow=6.9,SNR=106						
WRA				LR	LR	13 08 39.6	
	comp=Z,4μm,20.2s,MS5.4,baz=80,slow=34						
ASAR	**Alice Springs**	**50.39**	**252**	P	**P**	**12 49 06.5**	**-1.6**
	comp=Z,44nm,0.9s,mb5.5,baz=87,slow=7.3,SNR=106						
GUMO	**Guam**	**50.60**	**303**	LR	LR	13 08 31.3	
	comp=Z,2μm,18.1s,MS5.2,baz=294,slow=34						
GUMO	**Guam**	**50.60**	**303**	PFAKE		12 49 20.0	+10
GUMO				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
KAKA	**Kakadu**	**52.79**	**266**	*e*P	**P**	**12 49 16.6**	**-10**
	comp=Z,26nm,0.6s,mb5.3						
FORT	**Forest**	**55.67**	**243**	*e*P	**P**	**12 49 45.6**	**-1.4**
	comp=Z,4.1nm,0.8s,mb4.5						
AAI	**Ambon**	**58.89**	**275**	P	**P**	**12 50 12.1**	**+2.1**
	comp=Z,33nm,1.1s,mb5.3						
AAI	**Ambon**	**58.89**	**275**	P	**P**	**12 50 12.3**	**+2.3**
	comp=Z,33nm,1.1s,mb5.3						
AAI	**Ambon**	**58.89**	**275**	P	**P**	**12 50 15.0**	**+5.0**
	comp=Z,33nm,1.1s,mb5.3						
DRV	**Dumont d'Urvil**	**59.67**	**200**	P	**P**	**12 50 14.0**	**-0.5**
DRV				S	**S**	**12 58 34.0**	**+12**
DRV				SS	SS	13 02 32.0	+14
DRV				L		13 05 00.0	
DRV				R		13 08 00.0	
LBMI	**Labuha**	**60.41**	**278**	P	**P**	**12 50 21.3**	**+0.8**
	comp=Z,48nm,1.3s,mb5.4						
LBMI	**Labuha**	**60.41**	**278**	P	**P**	**12 50 22.9**	**+2.4**
	comp=Z,48nm,1.3s,comp=Z,725nm,mb5.4						
BATI	**Baumata**	**61.71**	**267**	P	**P**	**12 50 31.6**	**+2.3**
	comp=Z,6.1nm,0.4s,mb5.0,baz=17,slow=9.8,SNR=3.1						
SBA	**Scott Base**	**63.25**	**185**	*e*P	**P**	**12 50 41.6**	**+3.1**
	comp=Z,480nm,2.6s,mb6.2						
SBA	**Scott Base**	**63.25**	**185**	*e*P	**P**	**12 50 41.6**	**+3.1**
SBA				pmax	pmax		
	comp=Z,480nm,2.6s,mb6.2						
MBWA	**Marble Bar**	**63.64**	**254**	*e*P	**P**	**12 50 42.9**	**+0.8**
	comp=Z,37nm,1.4s,mb5.2						
MBWA	**Marble Bar**	**63.64**	**254**	P	**P**	**12 50 41.4**	**-0.6**
MBWA	**Marble Bar**	**63.64**	**254**	P	**P**	**12 50 48.5**	**+6.5**
	comp=Z,26nm,1.2s,mb5.1						
KDI	**Kendari**	**64.18**	**273**	P	**P**	**12 50 47.0**	**+1.3**
KDI	**Kendari**	**64.18**	**273**	P	**P**	**12 50 48.7**	**+3.0**
	comp=Z,20nm,1.4s,comp=Z,1μm,mb5.0						
DAV	**Davao City (W)**	**64.73**	**286**	PFAKE		12 51 00.0	+11
DAV				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
NWAO	**Narrogin (SRO)**	**64.87**	**241**	P	**P**	**12 50 50.0**	**+0.1**
	comp=Z,9.6nm,0.8s,mb4.9,baz=113,slow=6.9,SNR=8.4						
NWAO	**Narrogin (SRO)**	**64.87**	**241**	*e*P	**P**	**12 50 49.2**	**-0.7**
	comp=Z,134nm,1.8s,mb5.7						
NWAO	**Narrogin (SRO)**	**64.87**	**241**	*e*P	**P**	**12 50 49.2**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,134nm,1.8s						
JHJ	**Hachijo jima 2**	**65.99**	**318**	P	**P**	**12 50 57.0**	**0.0**
	comp=Z,192nm,0.9s,mb6.1,baz=152,slow=5.4,SNR=3.3						
KAPI	**Kappang**	**66.68**	**271**	PFAKE		12 51 10.0	+8.1
KAPI				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
ADK	**Adak**	**67.10**	**358**	*e*P	**P**	**12 51 03.5**	**-0.2**
	comp=Z,93nm,1.2s,mb5.7						
ADK				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
ADK	**Adak**	**67.10**	**358**	*e*P	**P**	**12 51 03.5**	**-0.2**
ADK				pmax	pmax		
	comp=Z,93nm,1.2s,mb5.7						
ADK				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.2						
PCI	**Palu**	**67.68**	**275**	P	**P**	**12 51 11.9**	**+3.7**
MJAR	**Matsushiro Arr**	**69.15**	**320**	P	**P**	**12 51 17.0**	**+0.1**
	comp=Z,22nm,1.1s,mb5.0,baz=160,slow=5.6,SNR=29						
MJAR				LR	LR	13 15 41.0	
	comp=Z,3μm,22.0s,MS5.5,baz=130,slow=31						
MAJO	**Matsushiro**	**69.15**	**320**	*e*P	**P**	**12 51 17.2**	**+0.2**
	comp=Z,53nm,1.2s,mb5.3						
MAJO	**Matsushiro**	**69.15**	**320**	*e*P	**P**	**12 51 17.2**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
MAT	**Matsushiro**	**69.15**	**320**	P	**P**	**12 51 16.9**	**0.0**
MAT				S	S	13 00 30.0	+10
ERM	**Erimo**	**69.95**	**327**	PFAKE		12 51 30.0	+8.3
ERM				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
CASY	**Casey**	**70.51**	**205**	*e*P	**P**	**12 51 21.4**	**-3.4**
	comp=Z,33nm,1.3s,mb5.1						
CASY				LR	LR		
	comp=Z,911nm,19.0s,MS5.0						
BSC	**Santa Cruz Isl**	**70.73**	**45**	⇑P	**P**	**12 51 27.2**	**+0.5**
	baz=71						
V03C	**Hunter Liggett**	**70.84**	**42**	⇑P	**P**	**12 51 28.1**	**+0.8**
	baz=71						
SCI	**San Clemente I**	**70.91**	**46**	⇓P	**P**	**12 51 28.1**	**+0.3**
	baz=71						
BLG	**Laguna Peak**	**71.19**	**45**	⇓P	**P**	**12 51 29.9**	**+0.5**
	baz=71						
SMMC	**Simmler**	**71.24**	**44**	⇑P	**P**	**12 51 30.4**	**+0.7**
	baz=71						
PKD	**Parkfield**	**71.25**	**43**	⇓P	**P**	**12 51 30.2**	**+0.4**
	baz=71						
PTRM	**Twissleman Ran**	**71.30**	**43**	*e*P	**P**	**12 51 33.6**	**+3.5**
U04C	**Hernandez Rese**	**71.34**	**42**	⇓P	**P**	**12 51 31.0**	**+0.7**
	baz=71						
PACP	**Pacheco Peak**	**71.40**	**42**	⇓P	**P**	**12 51 31.4**	**+0.7**
	baz=71						
HOPS	**Hopland**	**71.50**	**39**	PFAKE		12 51 40.0	+8.7
HOPS				LR	LR		
	comp=Z,4μm,19.0s,MS5.7						
MNRC	**McLaughlin Nat**	**71.81**	**39**	⇓P	**P**	**12 51 33.8**	**+0.6**
	baz=72						
ARVC	**Arvin**	**71.92**	**44**	⇑P	**P**	**12 51 34.0**	**+0.1**
	baz=72						
MWC	**Mount Wilson**	**71.94**	**46**	*e*P	**P**	**12 51 34.2**	**+0.2**
	comp=Z,61nm,1.4s,mb5.3						
MWC	**Mount Wilson**	**71.94**	**46**	*e*P	**P**	**12 51 34.2**	**+0.2**
MWC				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.3						
GASB	**Alder Springs**	**72.13**	**39**	⇑P	**P**	**12 51 34.8**	**-0.2**
	baz=72						
VES	**Vestal, Richgr**	**72.16**	**44**	⇓P	**P**	**12 51 35.3**	**0.0**
	baz=72						
MURC	**Murrieta**	**72.19**	**47**	⇑P	**P**	**12 51 35.8**	**+0.2**
	baz=72						
BFSC	**Mount Baldy St**	**72.22**	**46**	⇓P	**P**	**12 51 35.8**	**+0.1**
	baz=72						
EDW2	**Edwards Air Fo**	**72.35**	**45**	⇓P	**P**	**12 51 35.9**	**-0.5**
	baz=72,SNR=17						
MONP	**Monument Peak**	**72.36**	**48**	⇓P	**P**	**12 51 36.5**	**-0.1**
	baz=72						
PET	**Petropavlovsk**	**72.39**	**343**	*e*P	**P**	**12 51 36.4**	**+0.2**
PET				*e*S	S	13 00 57.5	+0.4
PET				*e*PS		13 01 30.5	
PET				*e*SS	SS	13 05 39.5	+3.0
PET				pmax	pmax		
	comp=Z,700nm,12.3s						
PET				pmax	pmax		
	comp=Z,1μm,10.9s						
PET				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.5						
PET				MLR	MLR		
	comp=Z,2μm,19.0s						
T06C	**Millerton Lake**	**72.42**	**42**	⇓P	**P**	**12 51 36.2**	**-0.6**
	baz=72						
ISA	**Isabella**	**72.46**	**44**	*e*P	**P**	**12 51 37.6**	**+0.5**
	comp=Z,46nm,1.4s,mb5.2						
ISA	**Isabella**	**72.46**	**44**	*e*P	**P**	**12 51 37.6**	**+0.5**
ISA				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.2						
ISA	**Isabella**	**72.46**	**44**	⇑P	**P**	**12 51 36.9**	**-0.2**
	baz=72,SNR=6.2						
DVTC	**Desert V Tower**	**72.47**	**48**	⇓P	**P**	**12 51 36.6**	**-0.6**
	baz=72						
CMB	**Columbia Colle**	**72.59**	**41**	*e*P	**P**	**12 51 38.4**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
CMB				LR	LR		
	comp=Z,3μm,22.0s,MS5.5						
CMB	**Columbia Colle**	**72.59**	**41**	*e*P	**P**	**12 51 38.4**	**+0.6**
CMB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
CMB				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.5						
CMB	**Columbia Colle**	**72.59**	**41**	⇑P	**P**	**12 51 37.5**	**-0.3**
	baz=72						
OHCM	**Honcut**	**72.68**	**40**	*e*P	**P**	**12 51 39.2**	**+0.9**
PFO	**Pinyon Flat Ob**	**72.72**	**47**	*e*P	**P**	**12 51 38.7**	**+0.1**
	comp=Z,24nm,1.3s,mb5.0						
PFO	**Pinyon Flat Ob**	**72.72**	**47**	*e*P	**P**	**12 51 38.7**	**0.0**
PFO				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
PFO	**Pinyon Flat Ob**	**72.72**	**47**	⇑P	**P**	**12 51 38.5**	**-0.2**
	baz=73						
PETK	**Petropavlovsk-**	**72.75**	**342**	P	**P**	**12 51 38.8**	**+0.5**
	comp=Z,42nm,0.9s,mb5.4,baz=123,slow=8.6,SNR=21						
ORV	**Oroville**	**72.81**	**39**	⇓P	**P**	**12 51 39.2**	**+0.1**
	baz=73						
WDC	**Whiskeytown Da**	**72.81**	**38**	*e*P	**P**	**12 51 40.1**	**+1.0**
	comp=Z,40nm,1.4s,mb5.2						
WDC	**Whiskeytown Da**	**72.81**	**38**	*e*P	**P**	**12 51 40.1**	**+1.0**
WDC				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.2						
WDC	**Whiskeytown Da**	**72.81**	**38**	⇓P	**P**	**12 51 39.0**	**-0.1**
	baz=73						
SWSC	**Sam W. Stewart**	**72.83**	**48**	⇑P	**P**	**12 51 39.3**	**-0.1**
	baz=73						
KCC	**Kaiser Creek**	**72.86**	**42**	⇑P	**P**	**12 51 39.3**	**-0.1**
	baz=73						
LRMC	**Laurel Mountai**	**72.89**	**45**	⇑P	**P**	**12 51 39.3**	**-0.3**
	baz=73						
M02C	**Callahan**	**73.14**	**37**	⇓P	**P**	**12 51 40.6**	**-0.4**
	baz=73						
CWC	**Cottonwood Cre**	**73.16**	**44**	⇓P	**P**	**12 51 41.3**	**0.0**
	baz=73						
BELC	**Belle Mtn.**	**73.25**	**47**	⇓P	**P**	**12 51 41.8**	**0.0**
	baz=73						
MPMC	**Manual Prospec**	**73.35**	**44**	⇓P	**P**	**12 51 42.1**	**-0.2**
	baz=73,SNR=30						
MTUM	**Longsten Hills**	**73.36**	**43**	*e*P	**P**	**12 51 43.3**	**+0.9**
GSC	**Goldstone**	**73.39**	**45**	*e*P	**P**	**12 51 42.7**	**+0.1**
	comp=Z,22nm,1.1s,mb5.0						
GSC				LR	LR		
	comp=Z,4μm,19.0s,MS5.7						
GSC	**Goldstone**	**73.39**	**45**	*e*P	**P**	**12 51 42.7**	**+0.1**
GSC				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
GSC				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.7						
GSC	**Goldstone**	**73.39**	**45**	⇓P	**P**	**12 51 42.4**	**-0.2**

GRAC Grapevine Rang 73.95 44 ⇓P P 12 51 45.9 +0.1
baz=74
FURC Furnace Creek, 74.00 44 ⇓P P 12 51 45.8 -0.4
baz=74
TUQ Turquoise Moun 74.07 46 ⇑P P 12 51 46.3 -0.2
baz=74
SHOC Shoshone 74.08 45 ⇓P P 12 51 46.5 -0.1
baz=74
NVAR Mina Array Bea 74.15 42 P P 12 51 47.2 +0.3
comp=Z,5.1nm,0.9s,mb4.4,baz=226,slow=8.5,SNR=18
NVAR Mina Array Bea 74.15 42 P P 12 51 47.2 +0.3
Y12C Blythe 74.16 48 ⇓P P 12 51 46.9 -0.3
baz=74
O06A Flanigan 74.20 40 ⇓P P 12 51 47.3 0.0
baz=74
PAHR Pah Rah Range 74.20 40 eP P 12 51 47.5 +0.3
comp=Z,29nm,1.3s,mb5.0
113A Mohawk Valley, 74.21 49 ⇑P P 12 51 47.1 -0.3
baz=74
I02A Mapleton 74.26 35 ⇓P P 12 51 47.9 +0.4
baz=74
U10A Ash Meadows, A 74.33 44 ⇓P P 12 51 48.3 +0.3
baz=74
LDFC Landfair 74.44 46 eP P 12 51 49.4 +0.6
S09A Goldfield 74.45 43 ⇑P P 12 51 48.9 +0.2
baz=74
214A Organ Pipe Nat 74.50 50 ⇑P P 12 51 49.1 -0.1
baz=74
N06A Buffalo Meadow 74.55 39 ⇓P P 12 51 49.3 0.0
baz=74
V11A Goodsprings 74.63 45 ⇑P P 12 51 49.8 0.0
baz=75
Q08A Gabbs 74.63 42 ⇓P P 12 51 49.6 -0.1
baz=75
TPH Tonopah 74.65 43 eP P 12 51 52.8 +2.9
comp=Z,22nm,0.9s,mb5.1
TPH Tonopah 74.65 43 eP P 12 51 52.8 +2.9
TPH pmax pmax
comp=Z,22nm,0.9s,mb5.1
TPNV Topopah Spring 74.67 44 eP P 12 51 50.4 +0.3
comp=Z,63nm,1.7s,mb5.3
TPNV Topopah Spring 74.67 44 eP P 12 51 50.4 +0.4
TPNV pmax pmax
comp=Z,63nm,1.7s,mb5.3
TPNV Topopah Spring 74.67 44 ⇑P P 12 51 49.7 -0.3
baz=75
Y13A Salome 74.69 48 ⇑P P 12 51 49.8 -0.4
baz=75
PDMCI Parker Dam,Lak 74.72 47 ⇑P P 12 51 50.0 -0.4
baz=75
O07A Toulon 74.79 40 ⇓P P 12 51 50.7 0.0
baz=75
R09A Tonopah 74.84 43 ⇓P P 12 51 50.6 -0.4
baz=75,SNR=12
KDAK Kodiak Island 74.89 11 P P 12 51 50.4 -0.4
comp=Z,50nm,1.2s,mb5.3,baz=235,slow=2.9,SNR=5.4
COR Corvallis 74.93 34 PFAKE 12 52 00.0 +8.6
COR LR LR
comp=Z,3μm,20.0s,MS5.6
MOD Modoc 74.96 38 eP P 12 51 51.6 0.0
comp=Z,36nm,1.4s,mb5.1
MOD Modoc 74.96 38 ⇓P P 12 51 51.2 -0.4
baz=75,SNR=9.6
S10A Tonopah Range, 74.97 43 ⇓P P 12 51 51.5 -0.3
baz=75,SNR=8.5
X13A Yucca 75.09 47 ⇓P P 12 51 52.4 -0.1
baz=75,SNR=19
N07B Gerlach 75.09 40 ⇑P P 12 51 52.3 -0.1
baz=75
Z14A Wintersburg 75.10 49 ⇑P P 12 51 52.7 +0.1
baz=75
K05A Summer Lake 75.11 37 ⇑P P 12 51 52.8 +0.3
baz=75
SHPR Sheep Range 75.17 45 eP P 12 51 53.1 +0.2
J05A Fort Rock 75.26 36 ⇓P P 12 51 53.4 +0.1
baz=75,SNR=14
O08A Rochester Mine 75.31 40 ⇓P P 12 51 53.4 -0.2
baz=75
W13A Hualapai Mount 75.31 47 ⇑P P 12 51 53.4 -0.4
baz=75
Y14A Wickenburg 75.35 48 ⇑P P 12 51 53.5 -0.5
baz=75
R10A Warm Springs 75.37 43 ⇓P P 12 51 53.9 -0.2
baz=75,SNR=15
S11A Rachel 75.38 44 ⇑P P 12 51 54.2 +0.1
baz=75
T11A Corn Creek, Al 75.52 44 ⇓P P 12 51 55.0 +0.1
baz=76,SNR=16
216A Three Points, 75.53 51 ⇓P P 12 51 54.8 -0.3
baz=76,SNR=7.1
K06A Valley Falls 75.53 37 ⇑P P 12 51 55.0 +0.1
baz=76,SNR=10
P09A Austin 75.53 41 ⇓P P 12 51 55.1 +0.1
baz=76
U12A Valley of Fire 75.55 45 ⇑P P 12 51 55.2 0.0
baz=76
L07A Adell 75.60 38 ⇓P P 12 51 55.5 +0.2
baz=76,SNR=11
Q10A Clear Creek Ra 75.60 42 ⇓P P 12 51 55.6 +0.2
baz=76
H04A Detroit Lake 75.60 35 ⇓P P 12 51 55.5 +0.3
baz=76
N08A GE Springer Mi 75.61 40 ⇑P P 12 51 55.4 0.0
baz=76
116A Eloy 75.61 50 ⇑P P 12 51 55.5 -0.1
baz=76
V13A Grand Canyon W 75.63 46 ⇑P P 12 51 55.4 -0.2
baz=76
X14A Yava 75.69 48 ⇓P P 12 51 55.7 -0.3
baz=76
G04A Mulino 75.78 34 ⇓P P 12 51 56.1 -0.1
baz=76
I05A Bend 75.79 36 ⇑P P 12 51 56.4 +0.1
baz=76
Y15A Casa Rosa Ranc 75.84 48 ⇓P P 12 51 56.9 +0.1
baz=76,SNR=27
M08A Happy Creek Ra 75.85 39 ⇑P P 12 51 56.6 -0.1
baz=76
J06A Christmas Vall 75.86 37 ⇑P P 12 51 56.5 -0.3
baz=76,SNR=13
R11A Troy Canyon, C 75.87 43 ⇓P P 12 51 56.6 -0.3
baz=76,SNR=13
217A Green Valley 75.90 51 ⇓P P 12 51 57.0 -0.2
baz=76,SNR=7.5
W14A Seligman 75.93 47 ⇑P P 12 51 57.2 -0.1
baz=76,SNR=25
S12A Delamar Landin 75.97 44 ⇑P P 12 51 57.5 +0.1
baz=76
BMN Battle Mountai 75.98 41 PFAKE 12 52 10.0 +13
BMN LR LR
comp=Z,2μm,19.0s,MS5.5
P10A Eureka 76.00 42 ⇓P P 12 51 58.0 +0.4
baz=76
N09A Rock Creek Ran 76.03 40 ⇓P P 12 51 58.0 +0.3
baz=76
K07A Rock Creek Ran 76.06 38 ⇓P P 12 51 57.7 -0.2
baz=76,SNR=11
Q11A Duckwater 76.10 43 ⇓P P 12 51 57.9 -0.3
baz=76,SNR=15
H05A Madras 76.11 35 ⇑P P 12 51 58.5 +0.4
baz=76
V14A Boquillas Ranc 76.13 47 ⇓P P 12 51 58.5 0.0
baz=76,SNR=25
X15A Humboldt 76.17 48 ⇑P P 12 51 58.8 +0.1
baz=76,SNR=20
TUC Tucson 76.18 51 eP P 12 51 59.2 +0.4
comp=Z,28nm,1.2s,mb5.1
TUC Tucson 76.18 51 eP P 12 51 59.2 +0.4
TUC pmax pmax
comp=Z,28nm,1.2s,mb5.1
Z16A Peralta Trail, 76.20 49 ⇓P P 12 51 58.5 -0.4
baz=76
I06A Prineville 76.25 36 ⇓P P 12 51 59.2 +0.2
baz=76,SNR=19
WVOR Wild Horse Val 76.27 38 eP P 12 51 57.9 -1.2
comp=Z,35nm,1.4s,mb5.1
WVOR Wild Horse Val 76.27 38 eP P 12 51 57.9 -1.2
WVOR pmax pmax
comp=Z,35nm,1.4s,mb5.1
F04A Amboy 76.27 34 ⇑P P 12 51 59.3 +0.3
baz=76
T13A Saint George 76.29 45 ⇓P P 12 51 59.3 -0.1
baz=76
L08A Fields 76.30 39 ⇑P P 12 51 58.8 -0.4
baz=76,SNR=15
HOOD Mount Hood Mea 76.30 35 eP P 12 51 59.5 +0.4
comp=Z,50nm,1.2s,mb5.3
117A Oracle 76.33 50 ⇓P P 12 51 59.6 -0.1
baz=76,SNR=6.1
O10A Cortez Mining, 76.35 41 ⇓P P 12 51 59.9 +0.3
baz=76
318A Bisbee 76.36 52 ⇓P P 12 51 59.6 -0.2
baz=76,SNR=8.0
KSRS Korea Array 76.39 315 P P 12 52 01.1 +1.3
comp=Z,17nm,1.1s,mb4.9,baz=126,slow=6.8,SNR=31
KSRS LR LR 13 19 27.0
comp=Z,1μm,21.8s,MS5.2,baz=115,slow=31
M09A Marrel Ranch, 76.40 40 ⇓P P 12 51 59.9 0.0
baz=76
KS15 Wonju Array Si 76.41 315 eP P 12 52 02.3 +2.3
Y16A Circle Bar Ran 76.42 49 ⇓P P 12 51 59.4 -0.8
baz=76
P11A Circle Ranch, 76.42 42 ⇑P P 12 52 00.0 0.0
baz=76
J07A Hines 76.43 37 ⇑P P 12 51 59.7 -0.3
baz=76,SNR=9.2
G05A Wamic 76.44 35 ⇑P P 12 51 59.9 -0.1
baz=76
U14A Mt Trumbull 76.48 46 ⇑P P 12 52 00.3 -0.1
baz=76,SNR=32
W15A Williams 76.50 47 ⇑P P 12 52 00.1 -0.4
baz=76
R12A Pony Springs, 76.51 44 ⇑P P 12 52 00.4 -0.2
baz=76,SNR=12
K08A Mann Creek Ran 76.53 38 ⇓P P 12 52 00.6 +0.1
baz=76,SNR=9.9
E04A Onalaska 76.54 33 ⇑P P 12 52 00.8 +0.3
baz=76
218A Dragoon 76.57 51 ⇓P P 12 52 01.1 0.0
baz=76
N10A Dunphy 76.59 41 ⇓P P 12 52 01.1 +0.1
baz=76
L09A Wilkinson Ranc 76.61 39 ⇓P P 12 52 01.0 -0.1
baz=77
S13A Holt Ranch, En 76.62 45 ⇑P P 12 52 01.0 -0.2
baz=77,SNR=19
H06A Lindquist Farm 76.67 36 ⇑P P 12 52 01.0 -0.2
baz=77,SNR=18
X16A Lo Mia Camp, P 76.71 48 ⇓P P 12 52 01.6 -0.2
baz=77,SNR=26
I07A Izee 76.74 37 ⇑P P 12 52 02.0 +0.2
baz=77,SNR=15
Q12A Willow Creek R 76.75 43 ⇑P P 12 52 01.8 0.0
baz=77
F05A White Salmon 76.76 34 ⇓P P 12 52 01.6 -0.2
baz=77
Y17A Roosevelt 76.79 49 ⇑P P 12 52 02.2 -0.1
baz=77
O11A Cowboy Ranch, 76.80 42 ⇑P P 12 52 02.0 -0.1
baz=77
G06A Carlson Farm, 76.81 35 ⇑P P 12 52 02.0 -0.1
baz=77,SNR=7.4
D04A Dobbs Creek Ra 76.83 33 ⇓P P 12 52 02.8 +0.7
baz=77
R13A O'Grain Ranch, 76.86 44 ⇓P P 12 52 03.0 +0.4
baz=77
319A Douglas 76.87 52 ⇑P P 12 52 02.8 0.0
baz=77
Z17A San Carlos Hig 76.88 50 ⇓P P 12 52 02.9 +0.2
baz=77
T14A Hurricane 76.88 45 ⇑P P 12 52 03.1 +0.4
baz=77
V15A Kaibab Nationa 76.88 47 ⇑P P 12 52 03.1 +0.4
baz=77,SNR=23
J08A Circle Bar Ran 76.91 38 ⇑P P 12 52 02.8 +0.1
baz=77,SNR=12
118A Homack Ranch, 76.94 51 ⇑P P 12 52 03.3 +0.2
baz=77
CCUT Cedar City 76.94 45 eP P 12 52 03.1 +0.1
K09A Rome 76.97 39 ⇑P P 12 52 03.2 +0.2
baz=77,SNR=17
W16A Flagstaff 76.98 48 ⇓P P 12 52 03.0 -0.3
baz=77
ARUT Antelope Range 77.01 45 eP P 12 52 02.4 -1.0
H07A Lands Inn, Kim 77.02 36 ⇓P P 12 52 03.0 -0.2
baz=77,SNR=16
M10A I.L. Ranch, Tu 77.02 40 ⇑P P 12 52 03.4 0.0
baz=77
E05A Randle 77.03 34 ⇓P P 12 52 02.9 -0.3
baz=77,SNR=11
F06A Goldendale 77.06 35 ⇑P P 12 52 03.2 -0.2
baz=77,SNR=8.4
B04A Port Angeles 77.09 32 ⇓P P 12 52 03.8 +0.2
baz=77
U15A North Rim 77.10 46 ⇑P P 12 52 04.2 +0.3
baz=77,SNR=23
X17A Forest Lakes 77.13 49 ⇑P P 12 52 04.5 +0.3
baz=77
C04A Brinnon 77.14 32 ⇓P P 12 52 04.2 +0.3
baz=77
219A White Tail Can 77.17 51 ⇑P P 12 52 04.3 -0.1
baz=77,SNR=7.0
S14A Cedar City 77.18 45 ⇑P P 12 52 04.5 +0.2
baz=77
I08A Drewsey 77.18 37 ⇓P P 12 52 04.2 0.0
baz=77,SNR=9.8
WPW White Pass 77.23 34 P P 12 52 04.6 +0.2
Q13A Wheeler Ranch, 77.23 43 ⇓P P 12 52 04.7 +0.1
baz=77
INCN Inon 77.28 315 eP P 12 52 06.4 +1.5
comp=Z,47nm,1.0s,mb5.4
WUAZ Wupatki 77.30 47 eP P 12 52 05.8 +0.7
comp=Z,36nm,1.3s,mb5.1
WUAZ Wupatki 77.30 47 ⇓P P 12 52 04.8 -0.3
baz=77
D05A Enumclaw 77.31 33 ⇑P P 12 52 05.0 +0.2
baz=77,SNR=13
J09A Fry Pan Ranch, 77.33 38 ⇑P P 12 52 05.1 +0.1
baz=77,SNR=12
T15A Red Dirt Ranch 77.34 46 ⇑P P 12 52 05.1 -0.1
baz=77,SNR=24
G07A Ruggs Ranch, H 77.37 36 ⇑P P 12 52 04.8 -0.4
baz=77,SNR=10
L10A Juniper Basin 77.38 40 ⇓P P 12 52 05.3 -0.1
baz=77,SNR=9.4
ELK Elko 77.41 41 eP P 12 52 06.0 +0.5
ELK LR LR
comp=Z,3μm,22.0s,MS5.6
GSM Grass Mountain 77.42 33 P P 12 52 06.0 +0.6
Y18A Canyon Day Jun 77.43 50 ⇑P P 12 52 05.9 +0.1
baz=77,SNR=26
E06A Yakima 77.44 34 ⇑P P 12 52 05.5 -0.1
baz=77,SNR=9.3
M11A Holland Ranch, 77.44 40 ⇓P P 12 52 05.8 +0.2
baz=77
O12A Currie 77.46 42 ⇑P P 12 52 05.9 0.0
baz=77
H08A Prairie City 77.48 37 ⇓P P 12 52 05.9 0.0
baz=77
119A Ashpeak Ranch, 77.50 51 ⇓P P 12 52 05.9 -0.3
baz=77
P13A Bates Ranch, G 77.50 43 ⇑P P 12 52 05.9 -0.2
baz=78,SNR=14
PGC Sidney 77.51 31 eP P 12 52 06.1 +0.2
comp=Z,327nm,2.2s,mb5.9
MIR Mirnyy 77.52 204 ⇑iP P 12 52 06.0 +0.2
MIR i 12 52 12.0
MIR e 12 55 08.0
MIR iS S 13 02 04.0 +10
MIR e 13 02 30.0
MIR eSS SS 13 07 10.0 +17
MIR pmax pmax
comp=Z,200nm,1.8s,mb5.8
MIR MLR MLR
comp=Z,2μm,19.0s,MS5.3
K10A MacKenzie Ranc 77.53 39 ⇓P P 12 52 06.1 -0.1
baz=78,SNR=13
W17A Winslow 77.56 48 ⇓P P 12 52 07.0 +0.5
baz=78
R14A James Farms, M 77.56 44 ⇓P P 12 52 06.6 +0.2
baz=78
RMW Rattlesnake Mo 77.58 33 P P 12 52 06.8 +0.4
N12A Clover Valley, 77.59 41 ⇓P P 12 52 06.6 0.0
baz=78,SNR=6.7
F07A Phinny Hill Vi 77.61 35 ⇑P P 12 52 06.6 0.0
baz=78
S15A Panguitch 77.69 45 ⇑P P 12 52 08.0 +0.8
baz=78,SNR=9.6
I09A Lost Marbles R 77.70 37 ⇑P P 12 52 07.1 0.0
baz=78
QZH Quanzhou 77.72 300 ⇑P P 12 52 07.1 -0.6
QZH S S 13 01 54.1 -3.5
QZH AMB AMB
comp=Z,2μm,6.6s
QZH LR LR
comp=Z,3μm,29.9s,MS5.4
Q14A Sevier Lake (B 77.74 44 ⇑P P 12 52 07.4 0.0
baz=78,SNR=21
Z19A T-Link Ranch, 77.77 50 ⇑P P 12 52 07.6 -0.1
baz=78
U16A Tuba City 77.78 47 ⇑P P 12 52 08.1 +0.4
baz=78,SNR=24
G08A Pilot Rock 77.78 36 ⇓P P 12 52 07.1 -0.4
baz=78,SNR=24
X18A Snowflake 77.84 49 ⇓P P 12 52 08.2 +0.1
baz=78,SNR=5.3
L11A Cat Creek Ranc 77.87 40 ⇓P P 12 52 08.4 +0.3
baz=78,SNR=9.8
SLKM Skilak Lake 77.88 11 eP P 12 52 06.2 -1.5
O13A Hicks Ranch, I 77.88 42 ⇑P P 12 52 08.2 0.0
baz=78
D06A Cle Elum 77.91 33 ⇓P P 12 52 08.4 +0.2
baz=78
A04A Legoe Bay, Lum 77.92 31 ⇑P P 12 52 08.6 +0.4
baz=78
T16A Glen Canyon Da 77.93 46 ⇓P P 12 52 08.6 0.0
baz=78
B05A Bryant 77.94 32 ⇓P P 12 52 08.3 0.0
baz=78,SNR=6.1
J10A Berg Farm, Mel 77.96 38 ⇓P P 12 52 08.0 -0.5
baz=78
M12A Wells 77.98 41 ⇓P P 12 52 08.8 +0.1
baz=78,SNR=10.0
JCW Jim Creek 77.98 32 eP P 12 52 08.3 -0.2
R15A Junction 78.02 45 ⇓P P 12 52 09.7 +0.7
baz=78
K11A Parker Ranch, 78.03 39 ⇑P P 12 52 09.0 +0.1
baz=78,SNR=12
E07A Sunnyside 78.05 34 ⇑P P 12 52 09.2 +0.2
baz=78
Y19A Nutrioso 78.08 50 ⇓P P 12 52 10.0 +0.6
baz=78,SNR=30
RSW Rattlesnake Hi 78.10 35 P P 12 52 09.7 +0.5
N13A Wendover, West 78.12 42 ⇓P P 12 52 09.5 0.0
baz=78
HAWA Hanford 78.13 35 eP P 12 52 09.8 +0.3
comp=Z,87nm,1.6s,mb5.4
HAWA LR LR
comp=Z,4μm,19.0s,MS5.7
MDW Midway 78.14 34 P P 12 52 09.9 +0.4
H09A Durkee 78.15 37 ⇓P P 12 52 09.2 -0.4
baz=78,SNR=11
F08A Pendleton 78.19 35 ⇓P P 12 52 09.5 -0.2
baz=78,SNR=12
P14A Drum Mountains 78.19 43 ⇓P P 12 52 10.2 +0.2
baz=78,SNR=17
SSE Sheshan 78.21 307 eP P 12 52 08.8 -1.4
SSE XP sP 12 52 13.8 -12
SSE S S 13 02 03.3 +0.6
SSE XS sS 13 02 10.1 -11
SSE AMB AMB
comp=Z,13nm,0.7s,mb5.0
SSE AMB AMB
comp=Z,207nm,4.3s
SSE LR LR
comp=N,406nm,25.9s,MS5.0
SSE LR LR
comp=E,813nm,25.9s,MS5.0
SSE LR LR
comp=Z,1μm,26.5s,MS5.0
S16A Weppner Ranch, 78.23 45 ⇑P P 12 52 10.1 -0.1
baz=78
MSU Marysvale 78.23 44 eP P 12 52 11.5 +1.3
X19A St. Johns 78.28 49 ⇑P P 12 52 10.8 +0.3
baz=78,SNR=5.9
W18A Petrified Fore 78.28 48 ⇑P P 12 52 10.6 +0.1
baz=78
L12A House Creek Ra 78.31 40 ⇑P P 12 52 10.6 0.0
baz=78,SNR=6.3
I10A Payette 78.32 38 ⇓P P 12 52 10.7 +0.2
baz=78
U17A Shonto 78.33 47 ⇓P P 12 52 10.8 0.0
baz=78
C06A Tall Timber Ra 78.34 33 ⇑P P 12 52 10.7 +0.1
baz=78
Q15A Fillmore 78.35 44 ⇓P P 12 52 10.6 -0.2
baz=78
RPW Rockport 78.36 32 eP P 12 52 08.7 -1.9
D07A Quincy 78.38 34 ⇑P P 12 52 10.7 -0.1
baz=78
B06A Marblemount 78.42 32 ⇓P P 12 52 11.1 +0.1
baz=78
V18A Ganado 78.42 48 ⇓P P 12 52 11.6 +0.4
baz=78,SNR=18
A05A Maple Falls 78.42 32 ⇑P P 12 52 10.9 0.0
baz=78
T17A Navajo Res., N 78.42 46 ⇑P P 12 52 11.8 +0.5
baz=78,SNR=22
G09A Cove 78.44 36 ⇓P P 12 52 10.9 -0.2
baz=78,SNR=12
ETW Entiat 78.44 33 eP P 12 52 10.6 -0.5
E08A Dider Farm, El 78.45 35 ⇑P P 12 52 11.0 -0.2
baz=78,SNR=9.8
BMO Blue Mountains 78.47 37 eP P 12 52 11.2 -0.1
comp=Z,62nm,1.8s,mb5.2
BMO LR LR
comp=Z,2μm,19.0s,MS5.5
BMO Blue Mountains 78.47 37 eP P 12 52 11.2 -0.1
BMO pmax pmax
comp=Z,61nm,1.8s,mb5.2
BMO MLR MLR
comp=Z,2μm,19.0s,MS5.5
LNOR Lincton Mounta 78.51 36 eP P 12 52 09.5 -2.0
HABR Khabarovsk 78.52 328 ⇑eP P 12 52 11.0 -0.5
HABR e 12 52 18.7
HABR eP pP 12 52 24.0 +1.1
HABR e 12 55 06.4
HABR eS S 13 02 04.6 -0.6
HABR e 13 02 20.4
HABR e 13 02 27.1
HABR e 13 07 06.6
HABR pmax pmax
comp=Z,152nm,2.2s,mb5.5
MFID Camas Ranch 78.52 39 ⇑P P 12 52 11.4 -0.3
baz=78,SNR=9.7
R16A Teasdale 78.59 45 ⇑P P 12 52 12.7 +0.5
baz=78
F09A S2 Ranch, Elgi 78.62 36 ⇑P P 12 52 12.4 +0.3
baz=79
C07A Waterville 78.64 33 ⇑P P 12 52 11.7 -0.6
baz=79,SNR=6.9
H10A Noah's Angus R 78.64 37 ⇓P P 12 52 11.9 -0.4
baz=79,SNR=18
K12A Draper Farm, C 78.65 40 ⇓P P 12 52 11.8 -0.6
baz=79
DUG Dugway 78.68 43 eP P 12 52 12.9 +0.3
comp=Z,41nm,1.6s,mb5.1
DUG LR LR
comp=Z,2μm,20.0s,MS5.5
DUG Dugway 78.68 43 eP P 12 52 12.9 +0.3
DUG pmax pmax
comp=Z,41nm,1.6s,mb5.1
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.5
DUG Dugway 78.68 43 ⇓P P 12 52 12.3 -0.3
baz=79,SNR=12
WTV Waterville 78.70 33 P P 12 52 11.9 -0.7
I11A Placerville 78.72 38 ⇑P P 12 52 12.8 +0.1
baz=79,SNR=8.4
S17A Black Ridge (B 78.74 46 ⇓P P 12 52 12.7 -0.3
baz=79,SNR=19
N14A Grayback Hills 78.78 42 ⇓P P 12 52 12.8 -0.4
baz=79,SNR=12
A06A Chilliwack 78.79 32 ⇓P P 12 52 12.7 -0.3
baz=79
U18A Rough Rock, Ch 78.80 47 ⇓P P 12 52 13.5 +0.1
baz=79,SNR=16
G10A Bishop Farm, J 78.83 37 ⇓P P 12 52 13.1 -0.3
baz=79,SNR=14
D08A Wollman Farm, 78.87 34 ⇓P P 12 52 13.3 -0.2
baz=79,SNR=9.5
J12A Stokes Ranch, 78.87 39 ⇓P P 12 52 13.6 +0.1
baz=79,SNR=12
O15A The Old Anders 78.95 43 ⇓P P 12 52 14.1 0.0
baz=79
L13A Double Diamond 78.95 41 ⇓P P 12 52 14.1 0.0
baz=79,SNR=6.8
M14A Sheep Mountain 79.02 41 ⇓P P 12 52 14.3 -0.1
baz=79,SNR=22
NLU North Lily Min 79.04 43 eP P 12 52 14.8 +0.2
V19A Window Rock 79.05 48 ⇑P P 12 52 14.4 -0.4
baz=79
B07A Winthrop 79.09 33 ⇑P P 12 52 14.3 -0.3

baz=79,SNR=6.5
PMR Palmer 79.09 11 *e*P **P 12 52 13.5 -0.8**
comp=Z,86nm,1.4s,mb5.5
PMR LR LR
comp=Z,1µm,18.0s,MS5.3
PMR Palmer 79.09 11 *e*P **P 12 52 13.5 -0.8**
PMR pmax pmax
comp=Z,86nm,1.4s,mb5.5
PMR MLR MLR
comp=Z,1µm,18.0s,MS5.3
Q16A Castle Valley 79.12 44 ⇑P **P 12 52 15.0 -0.1**
baz=79
H11A Donnelly 79.14 38 ⇑P **P 12 52 14.7 -0.3**
baz=79,SNR=12
P16A Fountain Green 79.14 44 ⇑P **P 12 52 15.5 +0.3**
baz=79
T18A Mexican Hat 79.14 47 ⇑P **P 12 52 15.4 +0.1**
baz=79,SNR=52
I12A Atlanta 79.15 39 ⇑P **P 12 52 15.4 +0.3**
baz=79
F10A Beach Ranch, E 79.16 36 ⇑P **P 12 52 14.5 -0.6**
baz=79,SNR=10
K13A Stover Farm, H 79.17 40 ⇑P **P 12 52 15.0 -0.2**
baz=79
OD2 Odessa Site #2 79.18 34 P **P 12 52 15.3 +0.1**
R17A Hanksville Air 79.19 45 ⇓P **P 12 52 15.4 -0.1**
baz=79,SNR=13
D09A Jones Farm, Ri 79.20 35 ⇑P **P 12 52 15.0 -0.3**
baz=79
MDJ Mudanjiang 79.23 322 P **P 12 52 15.9 +0.4**
MDJ AP pP 12 52 19.1 -7.8
MDJ XP sP 12 52 20.4 -11
MDJ S S 13 02 18.2 +5.3
MDJ XS sS 13 02 21.7 -10
MDJ AMB AMB
comp=Z,23nm,2.3s,mb4.7
MDJ AMB AMB
comp=Z,864nm,7.8s
MDJ LR LR
comp=N,1µm,25.6s,MS5.3
MDJ LR LR
comp=E,2µm,23.4s,MS5.3
MDJ LR LR
comp=Z,3µm,22.3s,MS5.5
MDJ Mudanjiang 79.23 322 *e*P **P 12 52 16.7 +1.2**
comp=Z,10.0nm,1.0s,mb4.7
N15A Stansbury Isla 79.23 42 ⇓P **P 12 52 15.2 -0.4**
baz=79
C08A Higginbotham F 79.24 34 ⇑P **P 12 52 15.1 -0.4**
baz=79,SNR=7.9
TMUT Trail Mountain 79.28 44 *e*P **P 12 52 17.2 +1.3**
A07A Ashnola River, 79.31 32 ⇑P **P 12 52 15.7 -0.2**
baz=79
S18A Hurst Farm, Bl 79.32 46 ⇓P **P 12 52 16.2 0.0**
baz=79
MPU Maple Canyon 79.36 43 *e*P **P 12 52 17.1 +0.8**
comp=Z,34nm,1.5s,mb5.0
L14A Malta 79.37 41 ⇓P **P 12 52 16.4 0.0**
baz=79,SNR=7.3
G11A Walters Elk Ra 79.38 37 ⇑P **P 12 52 15.8 -0.5**
baz=79,SNR=19
B08A Colville Reser 79.44 33 ⇓P **P 12 52 15.6 -0.9**
baz=79,SNR=5.7
HLID Hailey 79.46 39 *e*P **P 12 52 17.5 +0.7**
comp=Z,29nm,1.3s,mb5.0
HLID Hailey 79.46 39 ⇓P **P 12 52 17.0 +0.2**
baz=79,SNR=22
J13A Cove Ranch, Pi 79.52 39 ⇑P **P 12 52 17.3 +0.2**
baz=80,SNR=18
E10A Myers Farm, Un 79.53 36 ⇓P **P 12 52 16.6 -0.5**
baz=80
HVU Hansel Valley 79.53 41 *e*P **P 12 52 17.7 +0.5**
comp=Z,86nm,2.0s,mb5.3
HVU Hansel Valley 79.53 41 *e*P **P 12 52 17.7 +0.5**
HVU pmax pmax
comp=Z,86nm,2.0s,mb5.3
O16A Springville 79.55 43 ⇓P **P 12 52 17.2 -0.2**
baz=80
M15A Larsen Ranch, 79.57 42 ⇓P **P 12 52 17.0 -0.5**
baz=80
T19A Beclabito 79.59 47 ⇓P **P 12 52 18.1 +0.4**
baz=80,SNR=25
SRU San Rafael 79.65 45 *e*P **P 12 52 18.6 +0.6**
comp=Z,34nm,1.6s,mb5.0
SRU San Rafael 79.65 45 *e*P **P 12 52 18.6 +0.6**
SRU pmax pmax
comp=Z,34nm,1.6s,mb5.0
SRU San Rafael 79.65 45 ⇑P **P 12 52 18.0 +0.1**
baz=80,SNR=13
C09A Chrisman Ranch 79.66 34 ⇓P **P 12 52 17.4 -0.4**
baz=80,SNR=7.2
K14A Jones Ranch, D 79.68 41 ⇑P **P 12 52 18.0 0.0**
baz=80,SNR=14
P17A Butcher Ranch, 79.69 44 ⇑P **P 12 52 18.0 -0.2**
baz=80
F11A Grangeville 79.73 37 ⇓P **P 12 52 17.6 -0.6**
baz=80
R18A Canyonlands Na 79.73 45 ⇓P **P 12 52 18.2 -0.2**
baz=80,SNR=17
H12A Diamond D Ranc 79.73 38 ⇑P **P 12 52 18.0 -0.3**
baz=80,SNR=11
PPLA Purkeypile 79.77 10 *e*P **P 12 52 15.4 -2.6**
comp=Z,25nm,1.2s,mb5.0
D10A Wagner Farm, O 79.77 35 ⇑P **P 12 52 17.8 -0.6**
baz=80,SNR=6.8
JLU Jordanelle 79.78 43 *e*P **P 12 52 19.1 +0.5**
DAU Daniels Canyon 79.81 43 *e*P **P 12 52 20.0 +1.2**
I13A Wildhorse Cree 79.83 39 ⇑P **P 12 52 18.6 -0.2**
baz=80,SNR=12
A08A Turner Farm, O 79.83 33 ⇑P **P 12 52 18.3 -0.4**
baz=80,SNR=13
LAZ Ladron 79.85 50 *e*P **P 12 52 19.5 +0.4**
LENM Lemitar 79.86 50 *e*P **P 12 52 21.2 +2.0**
J14A Carey 79.88 40 ⇑P **P 12 52 19.5 +0.4**
baz=80,SNR=16
L15A Malad City 79.89 41 ⇓P **P 12 52 19.0 -0.2**
baz=80,SNR=9.7
Q18A Rafter H Ranch 79.91 45 ⇓P **P 12 52 18.9 -0.4**
baz=80,SNR=13
N16A Rees Ranch, Co 79.93 43 ⇑P **P 12 52 19.3 -0.1**
baz=80
S19A Harvey Farm, M 79.95 46 ⇑P **P 12 52 19.6 0.0**
baz=80
E11A Bogner Ranch, 79.96 36 ⇓P **P 12 52 18.8 -0.6**
baz=80
M16A Huntsville 80.02 42 ⇓P **P 12 52 19.7 -0.3**
baz=80,SNR=9.6
O17A Robinson Place 80.05 44 ⇓P **P 12 52 20.6 +0.6**
baz=80,SNR=12
P18A Preston Nutter 80.09 44 ⇑P **P 12 52 20.3 -0.1**
baz=80
B09A Rice 80.10 34 ⇓P **P 12 52 19.7 -0.4**
baz=80
BNM Barren Site 80.11 51 *e*P **P 12 52 19.7 -0.8**
R19A Curley Farm, L 80.12 46 ⇓P **P 12 52 20.0 -0.5**
baz=80
MVCO Mesa Verde 80.14 47 *e*P **P 12 52 26.5 +5.8**
comp=Z,52nm,1.8s,mb5.2
K15A Arbon 80.16 41 ⇑P **P 12 52 20.7 +0.1**
baz=80
F12A Elk City 80.17 37 ⇓P **P 12 52 20.0 -0.6**
baz=80,SNR=19
LPM Los Pinos Moun 80.18 50 *e*P **P 12 52 21.6 +0.7**
C10A Spilker Farm, 80.20 34 ⇑P **P 12 52 20.4 -0.3**
baz=80
A09A Danville 80.20 33 ⇑P **P 12 52 20.5 -0.2**
baz=80,SNR=9.0
HWUT Hardware Ranch 80.21 42 *e*P **P 12 52 21.0 0.0**
comp=Z,34nm,1.5s,mb5.0
HWUT LR LR
comp=Z,3µm,21.0s,MS5.6
I14A Mackay 80.24 39 ⇓P **P 12 52 21.1 +0.1**
baz=80,SNR=11
D11A Klaveano Farm, 80.29 35 ⇑P **P 12 52 21.0 -0.2**
baz=80
PV10 Paradox Valley 80.31 46 *e*P **P 12 52 20.8 -0.8**
N17A Moffit Pass 80.36 43 ⇓P **P 12 52 21.3 -0.4**
baz=80
E12A Beaver Dam Sad 80.36 36 ⇓P **P 12 52 21.6 0.0**
baz=80
TXAR Lajitas Array 80.38 56 P **P 12 52 22.7 +0.6**
comp=Z,9.9nm,1.2s,mb4.6,baz=216,slow=6.2,SNR=24
TXAR LR LR 13 22 44.1
comp=Z,1µm,18.5s,MS5.3,baz=30,slow=32
G13A Cobalt 80.40 38 ⇑P **P 12 52 21.5 -0.4**
baz=80,SNR=8.5
NJ2 Nanjing 80.42 307 *e*P **P 12 52 21.1 -1.2**
NJ2 AP pP 12 52 25.8 -7.8
NJ2 XP sP 12 52 28.1 -10
NJ2 PP PP 12 55 24.4 -1.5
NJ2 S S 13 02 24.0 -2.1
NJ2 XS sS 13 02 32.5 -12
NJ2 SKS 13 02 33.5
NJ2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
NJ2 AMB AMB
comp=Z,130nm,7.9s
NJ2 LR LR
comp=N,2µm,26.1s,MS5.4
NJ2 LR LR
comp=E,840nm,25.4s,MS5.4
NJ2 LR LR
comp=Z,830nm,27.4s,MS4.9
Q19A Hogan Spring (80.44 45 ⇑P **P 12 52 22.2 0.0**
baz=80,SNR=18
L16A Fish Haven 80.51 42 ⇑P **P 12 52 22.1 -0.4**
baz=80
PV01 Paradox Valley 80.53 46 *e*P **P 12 52 22.5 -0.2**
NEW Newport 80.56 34 *e*P **P 12 52 22.2 -0.4**
comp=Z,25nm,1.4s,mb5.0
NEW Newport 80.56 34 *e*P **P 12 52 22.3 -0.3**
NEW pmax pmax
comp=Z,25nm,1.4s
O18A Roosevelt 80.57 44 ⇓P **P 12 52 22.8 -0.1**
baz=80
KTH Kantishna Hill 80.58 10 *e*P **P 12 52 20.8 -1.7**
comp=Z,134nm,1.5s,mb5.7
ANMO Albuquerque 80.59 50 *e*P **P 12 52 23.8 +0.6**
comp=Z,39nm,1.4s,mb5.1
ANMO LR LR
comp=Z,1µm,19.0s,MS5.3
ANMO Albuquerque 80.59 50 *e*P **P 12 52 21.8 -1.3**
J15A Blackfoot 80.59 40 ⇓P **P 12 52 23.3 +0.4**
baz=80,SNR=14
TRF Thorofare Moun 80.60 10 *e*P **P 12 52 21.3 -1.1**
comp=Z,93nm,1.3s,mb5.5
H14A Leadore 80.66 39 ⇓P **P 12 52 23.6 +0.3**
baz=81,SNR=14
CHUM Lake Minchumin 80.67 9 *e*P **P 12 52 21.7 -1.1**
comp=Z,78nm,1.1s,mb5.5
KLR Kul'dur 80.70 327 *e*P **P 12 52 19.8 -3.6**
KLR *e*S S 13 02 17.5 -11
KLR *e*SS SS 13 07 42.0 -0.3
KLR pmax pmax
comp=Z,160nm,2.2s,mb5.6
KLR pmax pmax
comp=Z,2µm,11.5s
F13A Darby 80.73 37 ⇓P **P 12 52 23.2 -0.4**
baz=81,SNR=8.3
M17A Scullys Gap (B 80.73 42 ⇑P **P 12 52 23.6 -0.1**
baz=81
A10A Northport 80.75 33 ⇓P **P 12 52 22.9 -0.7**
baz=81,SNR=6.7
C11A Tepee Creek (N 80.79 35 ⇑P **P 12 52 23.5 -0.3**
baz=81,SNR=14
K16A Soda Springs 80.83 41 ⇓P **P 12 52 24.2 0.0**
baz=81,SNR=9.3
TNA Tin City 80.84 2 *e*P **P 12 52 24.8 +1.0**
D12A Red Ives Fores 80.84 36 ⇑P **P 12 52 23.4 -0.7**
baz=81,SNR=9.2
I15A Monteview 80.87 40 ⇓P **P 12 52 24.0 -0.5**
baz=81
G14A Jackson 80.94 38 ⇓P **P 12 52 24.8 +0.1**
baz=81,SNR=15
P19A Cripple Cowboy 80.95 45 ⇑P **P 12 52 25.0 +0.1**
baz=81
J16A Bone 81.04 41 ⇓P **P 12 52 25.3 0.0**
baz=81,SNR=17
B11A Sandpoint 81.07 34 ⇑P **P 12 52 25.3 -0.1**
baz=81
BPAW Bear Paw Mtn. 81.09 10 *e*P **P 12 52 22.9 -2.2**
comp=Z,44nm,1.4s,mb5.2
MCMT McKenzie Canyo 81.09 39 *e*P **P 12 52 25.5 0.0**
MCK McKinley 81.09 11 *e*P **P 12 52 24.5 -0.7**
comp=Z,98nm,1.0s,mb5.7
MCK McKinley 81.09 11 *e*P **P 12 52 24.5 -0.6**
MCK pmax pmax
comp=Z,98nm,1.0s,mb5.7
M18A Lyman 81.10 43 ⇓P **P 12 52 25.6 0.0**
baz=81
AHID Auburn Hatcher 81.10 41 PFAKE 12 52 40.0 +14
AHID LR LR
comp=Z,2µm,22.0s,MS5.4
H15A Lima 81.10 39 ⇑P **P 12 52 25.8 +0.2**
baz=81,SNR=24
N18A Larsen Ranch, 81.14 43 ⇑P **P 12 52 25.6 -0.3**
baz=81
C12B Naegeli Ranch, 81.15 35 ⇑P **P 12 52 25.3 -0.5**
baz=81,SNR=7.5
HYT Haines Junctio 81.15 17 *e*P **P 12 52 25.2 -0.3**
E13A Victor 81.17 37 ⇑P **P 12 52 25.3 -0.6**
baz=81,SNR=11
O19A Miners Draw (B 81.17 44 ⇓P **P 12 52 25.9 -0.2**
baz=81
RRI2 Red Ridge 81.26 41 *e*P **P 12 52 27.2 +0.7**
comp=Z,95nm,1.8s,mb5.4
CN2 Changchun 81.30 320 ⇑P **P 12 52 27.5 +0.8**
CN2 *e*AP pP 12 52 37.7 -0.4
CN2 *e*XP sP 12 52 41.6 -0.7
CN2 PP PP 12 55 31.4 -1.5
CN2 *e*S S 13 02 34.8 +0.1
CN2 AMB AMB
comp=Z,40nm,1.1s,mb5.3
CN2 AMB AMB
comp=Z,1µm,6.0s
CN2 LR LR
comp=N,800nm,16.0s,MS5.5
CN2 LR LR
comp=E,1µm,16.0s,MS5.5
CN2 LR LR
comp=Z,2µm,19.0s,MS5.4
F14A Wisdom 81.30 38 ⇓P **P 12 52 26.6 0.0**
baz=81,SNR=7.5
D13A Huson 81.37 36 ⇓P **P 12 52 26.0 -1.0**
baz=81,SNR=15
A11A Hall Mountain, 81.38 34 ⇓P **P 12 52 26.8 -0.2**
baz=81,SNR=7.2
I16A Newdale 81.42 40 ⇑P **P 12 52 28.0 +0.7**
baz=81
N19A John Jarvie Ra 81.42 44 ⇑P **P 12 52 27.0 -0.4**
baz=81
G15A Dillon 81.48 39 ⇓P **P 12 52 27.6 -0.1**
baz=81,SNR=10
SNY Shenyang 81.50 318 ⇑P **P 12 52 29.2 +1.4**
SNY AMB AMB
comp=Z,58nm,1.4s,mb5.3
SNY LR LR
comp=N,451nm,16.8s,MS5.2
SNY LR LR
comp=E,887nm,19.5s,MS5.2
SNY LR LR
comp=Z,1µm,18.9s,MS5.2
B12A Libby 81.52 35 ⇑P **P 12 52 27.5 -0.2**
baz=82
DLMT Dillon 81.52 38 *e*P **P 12 52 28.4 +0.5**
comp=Z,49nm,1.5s,mb5.2
MSO Missoula 81.52 37 *e*P **P 12 52 27.4 -0.3**
comp=Z,34nm,1.5s,mb5.0
E14A Clinton 81.56 37 ⇑P **P 12 52 27.5 -0.5**
baz=82,SNR=14
REDW Red Top Meadow 81.56 41 *e*P **P 12 52 28.2 +0.2**
comp=Z,71nm,1.5s,mb5.4
TPAW Teton Pass 81.56 41 *e*P **P 12 52 28.1 0.0**
comp=Z,46nm,1.3s,mb5.2
BSMT Bassoo Peak 81.61 35 *e*P **P 12 52 28.2 0.0**
C13A Hot Springs 81.63 36 ⇑P **P 12 52 27.7 -0.6**
baz=82,SNR=14
J17A Brown Place, J 81.65 41 ⇑P **P 12 52 28.3 -0.2**
baz=82,SNR=12
SNOW Snow King Moun 81.67 41 *e*P **P 12 52 29.5 +0.8**
comp=Z,65nm,1.4s,mb5.4
M19A Rock Springs 81.73 43 ⇑P **P 12 52 28.8 -0.3**
baz=82
A12A Yaak River Ran 81.75 34 ⇑P **P 12 52 28.5 -0.5**
baz=82
IMW Indian Meadow 81.78 40 *e*P **P 12 52 30.0 +0.8**
comp=Z,33nm,1.3s,mb5.1
MOOW Moose Ponds 81.82 40 *e*P **P 12 52 30.0 +0.5**
comp=Z,31nm,1.5s,mb5.0
F15A Butte 81.84 38 ⇓P **P 12 52 29.2 -0.3**
baz=82,SNR=8.9
LOHW Long Hollow 81.84 41 *e*P **P 12 52 30.0 +0.4**
comp=Z,84nm,1.8s,mb5.4
LRM Limekiln Ridge 81.85 38 *e*P **P 12 52 29.8 +0.2**
L19A Farson 81.89 42 ⇑P **P 12 52 29.5 -0.4**
baz=82,SNR=8.0
D14A Greenough 81.91 37 ⇑P **P 12 52 29.1 -0.8**
baz=82,SNR=8.8
G16A Moss Hill, Enn 81.93 39 ⇓P **P 12 52 30.2 +0.2**
baz=82,SNR=10
QLMT Earthquake Lak 81.95 39 *e*P **P 12 52 31.0 +0.9**
CHMT Chamberlain Mo 81.97 37 *e*P **P 12 52 30.0 -0.1**
H16A Russell Place, 82.00 39 ⇓P **P 12 52 31.3 +0.9**
baz=82,SNR=17
I17A Pilgram Creek 82.01 40 ⇑P **P 12 52 31.4 +0.9**
baz=82,SNR=7.5
E15A Deer Lodge 82.06 37 ⇓P **P 12 52 30.2 -0.4**
baz=82,SNR=10.0
B13A Whitefish 82.08 35 ⇑P **P 12 52 30.2 -0.5**
baz=82,SNR=6.6
BW06 Boulder Array 82.08 42 *e*P **P 12 52 30.8 0.0**
comp=Z,68nm,1.8s,mb5.3
BW06 LR LR
comp=Z,3µm,19.0s,MS5.7
BW06 Boulder Array 82.08 42 ⇑P **P 12 52 30.7 -0.1**
baz=82,SNR=14
PDAR Pinedale Array 82.09 42 P **P 12 52 30.3 -0.6**
comp=Z,2.5nm,0.8s,mb4.2,baz=204,slow=3.3,SNR=24
PDAR LR LR 13 24 53.0
comp=Z,3µm,18.1s,MS5.6,baz=252,slow=33
SMCO Snowmass 82.11 46 *e*P **P 12 52 31.7 +0.6**
comp=Z,59nm,1.6s,mb5.3
YFT Old Faithful 82.12 40 *e*P **P 12 52 33.0 +2.0**
C14A Swan Lake 82.15 36 ⇑P **P 12 52 30.2 -0.9**
baz=82
YMR Madison River 82.15 40 *e*P **P 12 52 31.9 +0.7**
comp=Z,74nm,1.5s,mb5.4
BOZ Bozeman (W) 82.25 38 *e*P **P 12 52 31.5 -0.1**
comp=Z,56nm,1.6s,mb5.2
BOZ LR LR
comp=Z,2µm,20.0s,MS5.5
BOZ Bozeman (W) 82.25 38 *e*P **P 12 52 31.5 -0.2**
BOZ pmax pmax
comp=Z,56nm,1.6s,mb5.2
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.5
BOZ Bozeman (W) 82.25 38 ⇑P **P 12 52 31.6 -0.1**
baz=82,SNR=21
H17A Grant Village 82.25 40 ⇑P **P 12 52 32.0 +0.3**
baz=82,SNR=10
F16A Kennard Place, 82.33 38 ⇓P **P 12 52 32.1 +0.1**
baz=82,SNR=9.3
COLA College 82.33 11 PFAKE 12 52 40.0 +8.4
COLA LR LR
comp=Z,2µm,20.0s,MS5.4
COLA College 82.33 11*c i*P **P 12 52 30.7 -0.9**
YNR Norris Junctio 82.35 40 *e*P **P 12 52 34.7 +2.5**
I18A Diamond G Ranc 82.38 41 ⇓P **P 12 52 32.6 +0.3**
baz=82,SNR=8.1
LKWY Lake 82.45 40 *e*P **P 12 52 35.6 +2.9**
comp=Z,42nm,1.4s,mb5.2
LKWY Lake 82.45 40 *e*P **P 12 52 35.6 +2.9**
LKWY pmax pmax
comp=Z,42nm,1.4s,mb5.2
D15A Lincoln 82.46 37 ⇓P **P 12 52 32.3 -0.4**
baz=82,SNR=10
L20A Wamsutter 82.51 43 ⇓P **P 12 52 33.1 0.0**
baz=82
SDCO Great Sand Dun 82.51 48 *e*P **P 12 52 33.8 +0.5**
comp=Z,51nm,1.7s,mb5.3
IMA2 Indian Mountai 82.55 8 *e*P **P 12 52 32.8 +0.1**
G17A Pierce Place, 82.62 39 ⇓P **P 12 52 34.3 +0.7**
baz=83
E16A East Helena 82.68 38 ⇑P **P 12 52 33.7 -0.2**
baz=83,SNR=11
HRY Holter Researc 82.69 37 *e*P **P 12 52 33.9 0.0**
B14A Marquette Ranc 82.74 36 ⇓P **P 12 52 33.4 -0.7**
baz=83,SNR=10
WALA Waterton Lakes 82.76 35 *e*P **P 12 52 34.2 0.0**
comp=Z,36nm,1.4s,mb5.2
C15A Salmond Ranch, 82.80 36 ⇑P **P 12 52 33.8 -0.6**
baz=83,SNR=18
F17A Fitzpatrick Pl 82.97 39 ⇓P **P 12 52 35.8 +0.4**
baz=83,SNR=15
A14A Double T Ranch 82.99 35 ⇓P **P 12 52 35.0 -0.4**
baz=83,SNR=10
D16A Dana Ranch, Ca 83.02 37 ⇑P **P 12 52 35.3 -0.3**
baz=83,SNR=9.7
RWWY Rawlins 83.11 44 *e*P **P 12 52 36.6 +0.4**
comp=Z,147nm,1.7s,mb5.7
B15A Bradely Ranch, 83.11 36 ⇓P **P 12 52 34.9 -1.1**
baz=83,SNR=10
L21A Rawlins 83.13 43 ⇓P **P 12 52 36.3 0.0**
baz=83
E17A Martinsdale 83.13 38 ⇓P **P 12 52 36.0 -0.2**
baz=83
QIZ Qiongzhong 83.19 292 P **P 12 52 36.4 -0.8**
QIZ XP sP 12 52 41.3 -11
QIZ PP PP 12 55 46.4 -2.6
QIZ S S 13 02 56.2 +1.1
QIZ XS sS 13 03 02.0 -12
QIZ AMB AMB
comp=Z,260nm,3.6s
QIZ LR LR
comp=E,1µm,20.0s
QIZ LR LR
comp=Z,2µm,22.2s,MS5.4
ISCO Idaho Springs 83.33 46 *e*P **P 12 52 37.9 +0.4**
comp=Z,62nm,1.9s,mb5.3
ISCO Idaho Springs 83.33 46 *e*P **P 12 52 37.9 +0.5**
ISCO pmax pmax
comp=Z,62nm,1.9s,mb5.3
G18A Lazy EL Ranch, 83.34 39 ⇑P **P 12 52 37.5 +0.2**
baz=83,SNR=12
A15A Johnson Ranch, 83.37 35 ⇓P **P 12 52 36.5 -0.9**
baz=83,SNR=23
RLMT Red Lodge 83.42 40 *e*P **P 12 52 38.0 +0.3**
comp=Z,52nm,1.4s,mb5.4
RLMT Red Lodge 83.42 40 ⇓P **P 12 52 37.8 0.0**
baz=83,SNR=16
GCMT Greycliff 83.51 39 *e*P **P 12 52 38.3 +0.1**
F18A Big Timber 83.54 39 ⇑P **P 12 52 38.5 +0.2**
baz=84,SNR=10
EGAK Eagle 83.58 13 *e*P **P 12 52 38.0 -0.1**
EGAK LR LR
comp=Z,2µm,19.0s,MS5.6
D17A Six Diamond Ra 83.58 37 ⇑P **P 12 52 38.4 -0.2**
baz=84,SNR=27
B16A M & M Farms, S 83.65 36 ⇓P **P 12 52 37.8 -1.0**
baz=84,SNR=11
E18A Harlowton 83.75 38 ⇑P **P 12 52 39.6 +0.2**
baz=84,SNR=16
C17A Wharram Farm, 83.79 37 ⇓P **P 12 52 39.1 -0.4**
baz=84,SNR=35
JCT Junction City 83.92 56 *e*P **P 12 52 46.1 +5.4**
A16A West Butte Ran 83.99 36 ⇑P **P 12 52 40.1 -0.5**
baz=84,SNR=28
PHWY Pilot Hill 84.11 44 *e*P **P 12 52 41.6 +0.3**
COLD Coldfoot 84.12 9 *e*P **P 12 52 40.3 -0.5**
comp=Z,62nm,1.2s,mb5.6
D18A Linhart Farms, 84.13 38 ⇑P **P 12 52 41.5 +0.2**
baz=84,SNR=13
AMTX Amarillo 84.13 52 *e*P **P 12 52 41.6 0.0**
comp=Z,102nm,1.6s,mb5.7
AMTX LR LR
comp=Z,2µm,20.0s,MS5.5
EGMT Eagleton 84.57 37 *e*P **P 12 52 43.7 +0.2**
comp=Z,60nm,1.4s,mb5.5
EGMT LR LR
comp=Z,3µm,19.0s,MS5.6
EGMT Eagleton 84.57 37 ⇓P **P 12 52 43.4 -0.2**
baz=84,SNR=8.9
BILL Bilibino 84.57 352 *e*P **P 12 52 42.7 -0.4**
comp=Z,29nm,1.1s,mb5.3
BILL LR LR
comp=Z,2µm,21.0s,MS5.6
BILL Bilibino 84.57 352 *e*P **P 12 52 42.9 -0.2**
BILL *e*S S 13 02 56.2 -11
BILL pmax pmax
comp=Z,18nm,1.2s,mb5.1
EDM Edmonton 85.35 31 *e*P **P 12 52 46.9 -0.4**
BJT Baijiatuau 85.70 313 PFAKE 12 53 00.0 +11
BJT LR LR
comp=Z,944nm,21.0s,MS5.2
BJI Beijing 85.70 313 P **P 12 52 50.7 +1.3**
BJI S S 13 03 18.0 -1.4
BJI AMB AMB
comp=Z,64nm,1.3s,mb5.7
BJI AMB AMB
comp=Z,1µm,5.6s
BJI LR LR

comp=N,528nm,19.3s,MS5.2
BJI LR LR
comp=E,781nm,21.9s,MS5.2
BJI LR LR
comp=Z,1μm,26.4s,MS5.1
LAO LASA Array 86.04 39 *e*P **P 12 52 50.8 -0.1**
comp=Z,550nm,2.4s,mb6.4
RSSD Black Hills 86.28 42 *e*P **P 12 52 51.1 -1.0**
comp=Z,41nm,1.5s,mb5.4
RSSD Black Hills 86.28 42 *e*P **P 12 52 51.1 -1.0**
RSSD pmax pmax
comp=Z,41nm,1.5s,mb5.4
COCO West Island 86.89 258 PFAKE 12 53 10.0 +14
COCO LR LR
comp=Z,941nm,19.0s,MS5.2
HKT Hockley 86.94 58 PFAKE 12 53 10.0 +14
HKT LR LR
comp=Z,1μm,20.0s,MS5.4
CBKS Cedar Bluff 87.09 49 PFAKE 12 53 10.0 +14
CBKS LR LR
comp=Z,1μm,20.0s,MS5.3
HIA Hailar 87.40 323 PFAKE 12 53 10.0 +13
HIA LR LR
comp=Z,3μm,22.0s,MS5.6
TIY Taiyuan 87.50 310 ⇑P **P 12 53 03.5 +5.3**
TIY PS 13 04 58.4
TIY AMB AMB
comp=Z,535nm,4.6s
TIY LR LR
comp=N,658nm,15.3s,MS5.2
TIY LR LR
comp=E,343nm,12.6s,MS5.2
TIY LR LR
comp=Z,864nm,18.1s
MAW Mawson 87.86 199 P **P 12 53 00.7 +1.2**
comp=Z,8.8nm,0.7s,mb5.1,baz=114,slow=6.4,SNR=22
MAW LR LR 13 32 12.7
comp=Z,2μm,18.5s,MS5.6,baz=4.9,slow=36
DGMT Dagmar 88.06 38 *e*P **P 12 53 01.1 +0.5**
DGMT LR LR
comp=Z,3μm,20.0s,MS5.8
DGMT Dagmar 88.06 38 ⇑P **P 12 53 00.4 -0.2**
baz=88,SNR=5.2
INK Inuvik 88.22 14 *e*P **P 12 53 00.8 -0.2**
comp=Z,1μm,1.1s
INK Inuvik 88.22 14 *e*P **P 12 53 00.8 -0.2**
INK pmax pmax
comp=Z,1μm,1.1s
GYA Guiyang 88.32 298 P **P 12 53 02.4 0.0**
GYA PP PP 12 56 31.0 +0.5
GYA PPP 12 58 29.8
GYA SKS 13 03 28.0
GYA S S 13 03 44.9 -0.3
GYA SSS 13 13 08.6
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.7
GYA AMB AMB
comp=Z,140nm,5.9s
GYA LR LR
comp=N,4μm,20.5s,MS5.9
GYA LR LR
comp=E,3μm,22.6s,MS5.9
GYA LR LR
comp=Z,3μm,20.8s,MS5.6
XAN Xi'an 88.89 306 P **P 12 53 05.8 +0.9**
XAN AP pP 12 53 10.6 -5.9
XAN XP sP 12 53 13.2 -7.4
XAN PPP 12 58 41.8
XAN SKS 13 03 32.7
XAN PS 13 05 07.4
XAN AMB AMB
comp=Z,15nm,2.5s,mb4.9
XAN AMB AMB
comp=Z,550nm,10.7s
XAN LR LR
comp=N,275nm,21.1s,MS5.1
XAN LR LR
comp=E,754nm,19.6s,MS5.1
XAN LR LR
comp=Z,1μm,20.4s,MS5.2
YAK Yakutsk 89.25 337 *e*P **P 12 53 04.9 -1.1**
comp=Z,32nm,0.8s,mb5.7
YAK Yakutsk 89.25 337 *e*P **P 12 53 04.5 -1.5**
YAK e*PP pP 12 53 10.7 -6.8
YAK *e* 12 56 45.2
YAK *e*S S 13 03 30.5 -22
YAK *e* 13 03 56.4
YAK *e*SS SS 13 09 44.0 -3.7
YAK pmax pmax
comp=Z,32nm,1.3s,mb5.5
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,244nm,4.7s
YAK pmax pmax
comp=E,306nm,4.4s
YAK pmax pmax
comp=N,390nm,3.7s
YAK smax
comp=N,275nm,3.4s
YAK smax
comp=E,311nm,3.7s
HHC Hu-ho-hao-te 89.26 313 *e*P **P 12 53 08.3 +1.8**
HHC AP pP 12 53 12.4 -5.6
HHC XP sP 12 53 14.8 -7.4
HHC SKS 13 03 35.6
HHC S S 13 03 53.4 -0.1
HHC XS sS 13 04 01.7 -11
HHC AMB AMB
comp=Z,54nm,1.6s,mb5.6
HHC AMB AMB
comp=Z,744nm,8.5s
HHC LR LR
comp=N,434nm,16.7s,MS5.1
HHC LR LR
comp=E,480nm,21.4s,MS5.1
HHC LR LR
comp=Z,854nm,21.4s,MS5.1
PLCA Paso Flores 89.27 132 P **P 12 53 12.2 +5.5**
comp=Z,2.9nm,0.9s,mb4.6,baz=263,slow=5.0,SNR=4.0
PLCA LR LR 13 24 34.2
comp=Z,1μm,19.4s,MS5.4,baz=79,slow=30
YKA Yellowknife Ar 90.00 23 P **P 12 53 09.3 -0.2**
comp=Z,7.7nm,0.9s,mb5.0,baz=235,slow=4.5,SNR=14
YKA LR LR 13 27 25.3
comp=Z,483nm,18.6s,MS5.0,baz=160,slow=32
YKW3 Yellowknife Ar 90.04 23 *e*P **P 12 53 09.6 0.0**
BTO Baotou 90.28 312 *e*P **P 12 53 12.9 +1.6**
JTS JuntasAbangare 90.92 80 *e*P **P 12 53 16.3 +1.4**
JTS LR LR
comp=Z,1μm,20.0s,MS5.3
ECSD EROS,Sioux Fal 91.07 45 PFAKE 12 53 30.0 +15
ECSD LR LR
comp=Z,2μm,22.0s,MS5.5
KMI Kunming 91.31 296 P **P 12 53 17.1 +0.7**
KMI AP pP 12 53 20.4 -7.6
KMI XP sP 12 53 21.6 -11
KMI PP PP 12 56 56.0 +1.7
KMI PPP 12 58 56.4
KMI SKS 13 03 47.0
KMI S S 13 04 11.7 -1.3
KMI XS sS 13 04 18.8 -13
KMI PS PS 13 05 19.9 -6.3
KMI SS SS 13 10 15.9 -3.2
KMI SSS 13 13 55.6
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb5.0
KMI AMB AMB
comp=Z,336nm,6.9s
KMI LR LR
comp=N,516nm,18.5s,MS5.2
KMI LR LR
comp=E,639nm,17.0s,MS5.2
KMI LR LR
comp=Z,839nm,26.2s
FFC Flin Flon 91.96 33 PFAKE 12 53 30.0 +11
FFC LR LR
comp=Z,1μm,20.0s,MS5.4
CD2 Chengdu 92.08 301 *e*P **P 12 53 19.2 -0.7**
CD2 AP pP 12 53 23.9 -7.5
CD2 XP sP 12 53 26.2 -9.4
CD2 PP PP 12 57 00.6 +0.3
CD2 SKS 13 03 49.6
CD2 S S 13 04 17.0 -2.8
CD2 XS sS 13 04 25.0 -14
CD2 PS PS 13 05 33.3 -1.3
CD2 AMB AMB
comp=Z,50nm,0.9s,mb5.8
CD2 AMB AMB
comp=Z,540nm,9.6s
CD2 LR LR
comp=N,1μm,24.0s,MS5.4
CD2 LR LR
comp=E,980nm,21.6s,MS5.4
CD2 LR LR
comp=Z,880nm,20.4s,MS5.2
CIT Chita 92.13 324 *e*P **P 12 53 21.0 +1.4**
SYO Syowa Base 92.63 191⇓*e*P **P 12 53 20.4 -1.3**
SYO Syowa Base 92.63 191⇓*e*P **P 12 53 24.7 +3.0**
SYO Syowa Base 92.63 191⇑*e*P pP 12 53 38.6 +5.3
EFI East Falkland 92.71 146 PFAKE 12 53 30.0 +7.6
EFI LR LR
comp=Z,3μm,21.0s,MS5.7
SNAA Sanae 92.86 177 *e* **P 12 53 23.3 +0.5**
SNAA *e* 12 53 27.6
SNAA Sanae 92.86 177 *e*P **P 12 53 23.1 +0.3**
comp=Z,12nm,1.1s,mb5.2
SNAA Sanae 92.86 177 *e*P **P 12 53 23.1 +0.3**
SNAA pmax pmax
comp=Z,12nm,1.1s
CM31 Chiang Mai Arr 92.91 288 *e*P **P 12 53 24.0 +0.1**
comp=Z,15nm,1.3s,mb5.3
CM31 LR LR
comp=Z,923nm,20.0s,MS5.2
CMAR Chiang Mai Arr 92.91 288 P **P 12 53 25.2 +1.3**
comp=Z,2.0nm,0.9s,mb4.5,baz=90,slow=2.8,SNR=9.4
CMAR LR LR 13 29 54.3
comp=Z,855nm,21.1s,MS5.2,baz=282,slow=32
CHTO Chiang Mai 93.00 289 *e*P **P 12 53 31.2 +6.8**
CHTO LR LR
comp=Z,888nm,22.0s,MS5.2
CCM Cathedral Cave 93.11 51 PFAKE 12 53 40.0 +16
CCM LR LR
comp=Z,2μm,20.0s,MS5.5
AGMN Agassiz Refuge 93.12 41 PFAKE 12 53 40.0 +16
AGMN LR LR
comp=Z,3μm,20.0s,MS5.7
LZH Lanzhou 93.48 306 *e*P **P 12 53 27.5 +1.3**
LZH AP pP 12 53 32.0 -5.8
LZH XP sP 12 53 33.5 -8.4
LZH SKS 13 03 53.0
LZH S S 13 04 34.0 +2.0
LZH XS sS 13 04 40.0 -11
LZH AMB AMB
comp=Z,43nm,1.6s,mb5.6
LZH AMB AMB
comp=Z,90nm,4.0s
LZH LR LR
comp=E,822nm,17.6s
LZH LR LR
comp=Z,1μm,19.0s,MS5.4
VNA1 Neumayer--Stat 93.50 175 *e* **P 12 53 29.7 +4.0**
FVM French Village 93.71 52 *e*P **P 12 53 26.8 -0.4**
ULM Lac du Bonnet 93.77 39 LR LR 13 31 53.5
comp=Z,2μm,18.3s,MS5.7,baz=255,slow=33
ULN Ulaanbaatar 94.65 318 *e*P **P 12 53 31.5 +0.2**
comp=Z,34nm,1.6s,mb5.5
ULN Ulaanbaatar 94.65 318⇑*e*P **P 12 53 31.9 +0.6**
ULN Ulaanbaatar 94.65 318 P **P 12 53 32.6 +1.3**
SONM Songino Array 95.06 318 P **P 12 53 33.4 +0.2**
comp=Z,2.3nm,1.0s,mb4.6,baz=83,slow=4.4,SNR=11
SONM PP PP 12 57 22.7 -0.5
comp=Z,0.8nm,0.9s,baz=132,slow=6.2,SNR=4.4
SONM LR LR 13 31 19.7
comp=Z,1μm,21.6s,MS5.3,baz=176,slow=32
SONM Songino Array 95.06 318 P **P 12 53 33.4 +0.2**
SONM 12 57 22.7
TIXI Tiksi 95.11 344 *e*P **P 12 53 32.2 -0.6**
TIXI Tiksi 95.11 344 *e*P **P 12 53 31.5 -1.4**
TIXI pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
TIXI MLR MLR
comp=Z,851nm,17.0s,MS5.3
HDIL Hopedale 95.27 50 PFAKE 12 53 50.0 +16
HDIL LR LR
comp=Z,3μm,21.0s,MS5.7
BCIP Isla Barro Col 95.50 82 PFAKE 12 53 50.0 +14
BCIP LR LR
comp=Z,721nm,22.0s,MS5.1
EYMN Ely 95.79 42 PFAKE 12 53 50.0 +13
EYMN LR LR
comp=Z,2μm,20.0s,MS5.6
COWI Conover 96.84 44 PFAKE 12 53 50.0 +8.6
COWI LR LR
comp=Z,3μm,21.0s,MS5.8
GTA Gaotai 97.43 309 *e*P **P 12 53 45.8 +1.6**
GTA AP pP 12 53 50.1 -5.6
GTA XP sP 12 53 53.0 -6.9
GTA SKS 13 04 23.1
GTA AMB AMB
comp=Z,7.0nm,2.3s,mb4.7
GTA AMB AMB
comp=Z,270nm,9.3s
GTA LR LR
comp=N,661nm,21.0s,MS5.4
GTA LR LR
comp=E,1μm,22.8s,MS5.4
GTA LR LR
comp=Z,2μm,23.1s,MS5.5
TLY Talaya 97.84 321 *e*P **P 12 53 46.1 +0.4**
TLY *e*S S 13 05 13.1 +4.1
TLY *e*SS SS 13 12 00.8 +10
TLY pmax pmax
comp=Z,7.0nm,1.1s,mb5.1
GOGA Godfrey 98.02 58 PFAKE 12 54 00.0 +13
GOGA LR LR
comp=Z,2μm,20.0s,MS5.5
LPAZ La Paz 99.52 110 LR LR 13 29 13.1
comp=Z,469nm,20.7s,MS5.0,baz=73,slow=30
GLMI Grayling 99.64 46 PFAKE 12 54 10.0 +16
GLMI LR LR
comp=Z,2μm,20.0s,MS5.6
ROSC El Rosal 99.71 88 LR LR 13 29 36.3
comp=Z,596nm,20.5s,MS5.1,baz=192,slow=30
AAM Ann Arbor 99.80 49 PFAKE 12 54 10.0 +15
AAM LR LR
comp=Z,2μm,19.0s,MS5.6
ACSO Alum Creek Sta 99.87 51 PFAKE 12 54 10.0 +15
ACSO LR LR
comp=Z,2μm,19.0s,MS5.7
LHS Liberty Hill 100.41 57 *e*Pdif Pdif 12 54 03.0 +5.8
BLA Blacksburg 101.25 54 PFAKE 12 54 10.0 +9.0
BLA LR LR
comp=Z,2μm,19.0s,MS5.7
ERPA Erie 102.44 50 PFAKE 12 54 20.0 +14
ERPA LR LR
comp=Z,2μm,19.0s,MS5.7
CNNC Cliffs of the 102.91 57 PFAKE 12 54 20.0 +12
CNNC LR LR
comp=Z,2μm,19.0s,MS5.6
CBN Corbin 103.80 54 PFAKE 12 54 20.0 +7.7
CBN LR LR
comp=Z,2μm,19.0s,MS5.7
BINY Binghamton 105.40 50 PFAKE 12 58 50.0 +17
BINY LR LR
comp=Z,3μm,19.0s,MS5.8
WMQ Urumqi 107.11 312 *e*PDIF Pdif 12 54 28.6 +1.6
WMQ PP PP 12 58 57.6 +3.3
WMQ PP PP
comp=Z,98nm,8.0s
WMQ LR LR
comp=N,324nm,20.0s,MS5.0
WMQ LR LR
comp=E,334nm,20.0s,MS5.0
WMQ LR LR
comp=Z,405nm,20.0s,MS5.0
MKAR Makanchi Array 111.06 315 PKiKP PKiKP 12 58 43.4 -0.4
comp=Z,0.7nm,0.6s,baz=103,slow=3.1,SNR=6.0
DGAR Diego Garcia 111.23 256 PFAKE 12 59 00.0 +15
DGAR LR LR
comp=Z,1μm,19.0s,MS5.5
BBSR BB Station 113.48 61 PFAKE 12 59 00.0 +11
BBSR LR LR
comp=Z,681nm,22.0s,MS5.2
GRGR Grenville 113.57 83 PFAKE 12 59 00.0 +11
GRGR LR LR
comp=Z,723nm,21.0s,MS5.2
BBGH Gun Hill 115.77 83 PFAKE 12 59 10.0 +16
BBGH LR LR
comp=Z,2μm,19.0s,MS5.8
EKS2 Erkin-Say 117.25 310 PFAKE 12 59 10.0 +14
EKS2 LR LR
comp=Z,1μm,20.0s,MS5.5
AML Almayashu 117.35 310 PFAKE 12 59 10.0 +14
AML LR LR
comp=Z,992nm,19.0s,MS5.5
BDFB Brasilia 117.59 117 PFAKE 12 59 10.0 +13
BDFB LR LR
comp=Z,749nm,22.0s,MS5.3
BRVK Borovoye 118.14 322 PFAKE 12 59 10.0 +13
BRVK LR LR
comp=Z,2μm,20.0s,MS5.8
KBL Kabul 121.42 301 *e*PKPdf PKPdf 12 59 04.4 +0.4
ARU Arti 123.52 328 PFAKE 12 59 20.0 +13
ARU LR LR
comp=Z,2μm,22.0s,MS5.8
ARU Arti 123.52 328 *i* PKIKP PKPdf 12 59 08.0 +0.7
ARU 13 00 48.4
ARU MLR MLR
comp=Z,2μm,22.0s,MS5.7
ARCES ARCESS Array B 124.68 352 PKP PKPdf 12 59 10.7 +1.5
comp=Z,9.4nm,1.0s,baz=0.0,slow=2.1,SNR=4.8
ABPO Ambohimpanom 127.60 231 PFAKE 12 59 30.0 +14
ABPO LR LR
comp=Z,1μm,21.0s,MS5.5
KLMR Klimovskoe 128.92 340 PKIKP PKPdf 12 59 16.4 -1.1
BOSA Boshof 132.76 202 PFAKE 12 59 40.0 +14
BOSA LR LR
comp=Z,934nm,19.0s,MS5.5
OBN Obninsk 134.26 337⇓*i* PKIKP PKPdf 12 59 28.0 +0.2
OBN *e* 13 02 00.4
OBN *e*SS SS 13 19 46.8 +1.3
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,1μm,20.0s,MS5.5
MAK Makhachkala 135.81 317 *i* PKIKP PKPdf 12 59 30.0 -1.1
MAK *e*PPP 13 05 04.9
MAK *e* 13 06 36.0
MAK pmax pmax
comp=Z,25nm,0.3s
KIV Kislovodsk 138.41 320⇓*i* PKIKP PKPdf 12 59 35.2 -0.7
KIV *e* 13 02 26.7
KIV *e* 13 06 33.7
KIV pmax pmax
comp=Z,5.0nm,0.6s
GNI Garni 138.91 314 PFAKE 12 59 50.0 +13
GNI LR LR
comp=Z,818nm,20.0s,MS5.5
ESK Eskdalemuir 139.43 9 PFAKE 12 59 50.0 +13
ESK LR LR
comp=Z,1μm,19.0s,MS5.7
ARTV Artvin 140.31 317 *i* P PKPdf 12 59 40.0 +0.6
BCA Borcka 140.38 318 *e*P PKPdf 12 59 48.4 +8.8
AKASG Malin Array Be 140.48 338 PKP PKPdf 12 59 38.9 -0.6
comp=Z,0.4nm,0.3s,baz=41,slow=0.5,SNR=4.0
AKASG Malin Array Be 140.48 338 *i* PKHKP 12 59 35.0
MSL Mosul 141.63 310 *ex* x 12 59 37.0
LSZ Lusaka 142.95 216 *e*PKPdf PKPdf 12 59 40.0 -5.0
KWP Kalwaria 143.54 343 *e*PKP PKPdf 12 59 42.6 -2.3
KWP Kalwaria 143.54 343 *e*PKIKP PKPdf 12 59 42.6 -2.3
KWP Kalwaria 143.54 343⇑*i*P PKPdf 12 59 42.6 -2.3
WTSB Winterswijk 143.55 0 *e*PKP PKPdf 12 59 44.4 -0.5
KEMA Kemaliye 143.55 317 *i* P PKPdf 12 59 43.5 -1.8
CLZ Clausthal 143.57 356 *e*PKPbc PKPdf 12 59 42.8 -2.1
ELZG Elazig 143.62 315 *i* P PKPdf 12 59 44.2 -1.3
CMLA Cha da Macela 143.74 46 *e*SS SS 13 21 29.7 -9.0
CMLA *e*LQ 13 40 02.6
CMLA *e*LR LR 13 46 28.5
OJC Ojcow 143.76 346 *e*PKP PKPdf 12 59 42.9 -2.4
KSP Ksiaz 143.87 350 *e*PKP PKPdf 12 59 42.2 -3.3
KSP *e*SS SS 13 21 43.0 +4.8
KSP LR LR
comp=Z,2μm,23.2s,MS5.8
CLL Collm 143.88 354 *e*PKP PKPdf 12 59 44.0 -1.5
CLL *e*PP PP 13 02 59.0 +0.9
CLL LR LR
comp=Z,1μm,18.9s,MS5.7
CLL Collm 143.88 354 *e*PKPdf PKPdf 12 59 44.0 -1.5
CLL *e*PP PP 13 02 59.0 +0.9
CLL *e*PPP 13 06 16.0
CLL *e*PSKS 13 13 18.0
CLL *ex* x 13 14 51.0
CLL *e*PPS 13 15 34.0
CLL *e*SS SS 13 21 34.0 -4.1
CLL *e*PSPS 13 22 24.0
CLL *e*(SSS) 13 27 15.0
CLL *ex* x 13 29 54.0
CLL LmH 14 04 00.0
comp=N,800nm,21.9s
CLL LmH 14 04 00.0
comp=E,500nm,20.8s
CLL LmV 14 08 00.0
comp=Z,1μm,18.9s
TSUM Tsumeb 144.02 197 *e*PKPdf PKPdf 12 59 45.7 -1.0
STHS Stebnicka Huta 144.14 344 *e*PKP PKPdf 12 59 44.5 -1.5
STHS *e* 12 59 49.3
SVSK Karacayir 144.17 319 *e*P PKPdf 12 59 46.1 -0.3
DARE Darende-Malaty 144.17 317 *e*P PKPdf 12 59 47.9 +1.5
BRG Berggiesshubel 144.19 352 *e*PKP PKPdf 12 59 50.3 +4.3
BRG *e* 13 02 56.0
BRG SS SS 13 21 36.0 -5.8
BRG Berggiesshubel 144.19 352 *e*PKIKP PKPdf 12 59 50.3 +4.3
BRG *e* 13 02 56.0
BRG SS SS 13 21 36.0 -5.8
BRG pmax pmax
comp=Z,9.0nm,1.4s
UPC Upice 144.24 350 *e*PKP PKPdf 12 59 44.1 -2.0
URFA Urfa 144.26 314 *e*P PKPdf 12 59 45.9 -0.7
KOLS Kolonicke sedl 144.29 343 *e*PKP PKPdf 12 59 44.9 -1.4
DPC Dobruska-Polom 144.34 350 *e*PKP PKPdf 12 59 55.4 +9.1
DPC AMS AMS 14 02 10.0
comp=Z,2μm,18.9s
NIE Niedzica 144.38 345 *e*PKP PKPdf 12 59 45.8 -0.6
AKCD Akcadag 144.44 316 *i* P PKPdf 12 59 47.1 +0.2
PVCC Panska Ves 144.44 352 *e*PKP PKPdf 12 59 46.1 -0.4
PVCC AMS AMS 14 06 20.0
comp=Z,1μm,15.4s
OKC Ostrava-Krasne 144.48 347 *e*PKP PKPdf 12 59 44.6 -2.0
BUR08 Bucovina Ar. S 144.48 339 *e*PKPdf PKPdf 12 59 45.6 -1.0
BURAR Bucovina Array 144.50 339⇑P PKPdf 12 59 46.5 -0.2
BURAR Bucovina Array 144.50 339⇑*i*P PKPdf 12 59 46.5 -0.2
KRLC Kraliky 144.52 349 *e*PKP PKPdf 12 59 45.8 -0.8
ATAB Bozova 144.61 314 *i* P PKPdf 12 59 47.6 +0.4
UBBA Unterbreizbach 144.61 357 *e*PKPbc PKPdf 12 59 44.9 -1.9
UCC Uccle 144.66 3 PKP PKPdf 12 59 46.3 -0.6
MORC Moravsky Berou 144.66 348 *e*PKPdf PKPdf 12 59 45.5 -1.4
MOX Moxa 144.67 355 *e*PKP PKPdf 12 59 45.8 -1.1
comp=Z,44nm,1.8s
MOX
comp=Z,800nm,20.0s
MOX Moxa 144.67 355 *e*PKIKP PKPdf 12 59 45.8 -1.1
MOX pmax pmax
comp=Z,44nm,1.8s
MOX MLR MLR
comp=Z,800nm,20.0s,MS5.5
MOX Moxa 144.67 355 *e*PKPbc PKPdf 12 59 45.3 -1.6
HGN Heimansgroeve 144.74 1⇑*e*PKP PKPdf 12 59 45.4 -1.6
comp=Z,36nm,1.5s
HGN Heimansgroeve 144.74 1 *e*PP PP 13 03 04.1 +0.9
MENF Mencas 144.75 5 PKP PKPdf 12 59 45.7 -1.3
TANN Tannenbergstha 144.81 354 *e*PKPbc PKPdf 12 59 46.1 -1.0
MEM Membach 144.90 1 PKP PKPdf 12 59 46.7 -0.6
SNF Seneffe 144.94 3 PKP PKPdf 12 59 46.9 -0.4
PRU Pruhonice 144.97 351 *e*PKP PKPdf 12 59 46.7 -0.7
PRU AMS AMS 14 06 50.0
comp=Z,1μm,17.4s
SARI SarD1z-Kayseri 145.05 317 *e*P PKPbc 12 59 48.9 +1.5
BCLA Clavier 145.07 2 PKP PKPdf 12 59 47.1 -0.5
CTKT Corum 145.12 322 *i* P PKPbc 12 59 49.8 +2.2
GZT Gaziantep 145.17 315 *i* P PKPbc 12 59 49.3 +1.5
PINB Pinarbasi 145.24 317 *i* P PKPbc 12 59 49.2 +1.3
MANZ Manzenberg 145.27 354 *e*PKPbc PKPbc 12 59 47.9 +0.2
TNS Taunus Mts 145.27 358 *e*PKPbc PKPbc 12 59 47.3 -0.4
VRAC Vranov 145.29 349 P PKPbc 12 59 48.8 +1.0
VRAC Vranov 145.29 349⇓*i*P PKPbc 12 59 49.0 +1.2
BALT Daday 145.36 324 *i* P PKPbc 12 59 50.4 +2.1
DOU Dourbes 145.37 3 PKP PKPdf 12 59 47.6 -0.5
GIVF Givet 145.37 2⇑*i*PKP1 PKPbc 12 59 47.7 -0.3
comp=Z,79nm,1.2s
BAIF Baives 145.39 3⇑*i*PKP1 PKPbc 12 59 47.9 -0.2

	comp=Z,176nm,1.5s								
VRI	**Vrincioaia**	**145.39**	**335**		P		PKPbc	12 59 49.0	+0.8
VRI	**Vrincioaia**	**145.39**	**335**	⇑	*i*P		PKPbc	12 59 48.4	+0.2
PLOR	**Plostina**	**145.44**	**335**	⇑	*i*P		PKPbc	12 59 49.3	+0.9
ROTZ	**Rotzenmuhle**	**145.48**	**354**		*e*PKPbc		PKPbc	12 59 48.6	+0.2
ILGA	**Ilgaz**	**145.48**	**323**		*i* P		PKPdf	12 59 50.3	+1.7
CORM	**Corum**	**145.49**	**321**		*e*P		PKPdf	12 59 48.9	+0.2
GAZ	**Gaziantep**	**145.50**	**315**		*e*P		PKPdf	12 59 50.1	+1.3
TREC	**Trest**	**145.50**	**350**		*e*PKP		PKPdf	12 59 48.6	+0.2
TREC					AMS		AMS	14 01 30.0	
	comp=Z,1μm,20.9s								
BNN	**Bunyan**	**145.51**	**318**		*e*P		PKPdf	12 59 47.9	-0.8
KMRS	**Kahramanmaras**	**145.54**	**315**		*e*P		PKPdf	12 59 50.4	+1.6
VYHS	**Vyhne**	**145.59**	**346**		*e*PKP		PKPdf	12 59 49.2	+0.7
KOLL	**Kolacno**	**145.62**	**346**		*e*PKP		PKPdf	12 59 49.3	+0.7
KOLL					*e*			12 59 58.2	
ABH	**Alteburg**	**145.63**	**359**		PKP		PKPdf	12 59 48.6	0.0
GRF	**Grafenberg Arr**	**145.65**	**355**		*e*PKIKP		PKPdf	12 59 49.0	+0.4
GRF					*e*			13 03 12.3	
GRF					*e*SS		SS	13 22 04.6	+6.2
GRF	**Grafenberg Arr**	**145.65**	**355**		*e*PKPbc		PKPbc	12 59 49.0	+0.1
GRF					*e*PP		PP	13 03 12.3	+3.7
GRF					*e*SS		SS	13 22 04.6	+6.2
GRF					*e*L			14 08 27.3	
	comp=Z,931nm,19.9s								
KMBO	**Kilima Mbogo**	**145.79**	**244**		PKPbc		PKPbc	12 59 51.2	+0.8
	comp=Z,15nm,1.1s,baz=67,slow=2.7,SNR=20								
TIRR	**Tirgusor**	**145.80**	**332**		P		PKPab	12 59 50.6	+0.7
TIRR	**Tirgusor**	**145.80**	**332**	⇑	*i*P		PKPab	12 59 50.9	+1.0
RUP	**Ruppelstein**	**145.82**	**360**		PKP		PKPdf	12 59 49.3	+0.4
CANT	**Cankiri**	**145.82**	**322**		*e*P		PKPdf	12 59 50.2	+1.1
HARR	**Harsova**	**145.83**	**333**		P		PKPab	12 59 51.0	+1.0
HARR	**Harsova**	**145.83**	**333**	⇑	*i*P		PKPab	12 59 51.0	+0.9
WLF	**Walferdange**	**145.85**	**1**		PKP		PKPdf	12 59 50.0	+1.1
WLF	**Walferdange**	**145.85**	**1**		*e*PKP2		PKPab	12 59 49.7	-0.2
WLF	**Walferdange**	**145.85**	**1**		*e*PKPbc		PKPbc	12 59 49.9	+0.4
PSZ	**Piszkesteto**	**145.87**	**344**		P		PKPab	12 59 50.2	+0.2
PSZ	**Piszkesteto**	**145.87**	**344**	⇓	*e*PKP		PKPab	12 59 50.2	+0.1
PSZ	**Piszkesteto**	**145.87**	**344**	⇑	*i*P		PKPab	12 59 50.4	+0.3
ANDN	**Andirin**	**145.88**	**316**		*i* P		PKPab	12 59 51.5	+1.0
TOD	**Tromm**	**145.88**	**358**		PKP		PKPdf	12 59 49.0	0.0
KHC	**Kasperske Hory**	**145.95**	**352**		*e*PKP		PKPdf	12 59 49.6	+0.7
KHC					*ex*		x	12 59 58.5	
KHC					*ex*		x	13 00 18.0	
KHC					AMS		AMS	14 08 40.0	
	comp=Z,2μm,16.4s								
CDAG	**Cicekdag**	**145.98**	**320**		*i* P		PKPab	12 59 51.4	+0.6
ELDT	**Eldivan**	**146.01**	**322**		*i* P		PKPab	12 59 51.8	+0.9
MLR	**Muntele Rosu**	**146.01**	**336**		P		PKPdf	12 59 50.7	+1.3
MLR	**Muntele Rosu**	**146.01**	**336**	⇓	*i*P		PKPdf	12 59 50.9	+1.5
WET	**Wettzell**	**146.02**	**353**		*e*PKPbc		PKPbc	12 59 50.6	+0.6
MODS	**Modra-Piesok**	**146.05**	**348**		*e*PKP		PKPdf	12 59 50.9	+1.6
MODS					*e*			13 00 11.6	
DRGR		**146.06**	**340**		P		PKPdf	12 59 50.7	+1.3
DRGR		**146.06**	**340**	⇓	*i*P		PKPdf	12 59 50.7	+1.3
ROSF	**Rostrenen**	**146.13**	**12**		*e*PKP1		PKPbc	12 59 49.7	-0.7
	comp=Z,174nm,1.8s								
AVNT	**Avonos**	**146.18**	**319**		*i* P		PKPdf	12 59 49.0	-0.9
KTD	**Kalmit**	**146.19**	**359**		PKP		PKPdf	12 59 50.3	+0.8
FLN	**La Foliniere**	**146.21**	**9**	⇑	*i*PKP1		PKPbc	12 59 50.1	-0.5
FLN					*e*MLR		MLR		
	comp=Z,1μm,20.5s,MS5.4								
FLN	**La Foliniere**	**146.21**	**9**	⇑	*i*PKP2		PKPbc	12 59 50.1	-0.5
FLN					MLR		MLR		
	comp=Z,1μm,20.5s,MS5.7								
GEC2	**GERESS Array S**	**146.21**	**352**		*e*PKPbc		PKPbc	12 59 50.8	+0.2
GERES	**GERESS Array B**	**146.21**	**352**		PKPbc		PKPbc	12 59 51.3	+0.7
	comp=Z,16nm,1.0s,baz=38,slow=2.4,SNR=39								
ZST	**Bratislava**	**146.26**	**348**		*e*PKP		PKPab	12 59 52.0	+0.5
ZST					*e*			12 59 55.3	
ZST					LR		LR		
	comp=Z,300nm,18.3s,MS5.1								
ZST	**Bratislava**	**146.26**	**348**		*e*PKP		PKPab	12 59 52.0	+0.5
ZST					*e*			12 59 55.3	
SGMF	**Saint Gilles**	**146.35**	**11**		*e*PKP1		PKPbc	12 59 50.3	-0.8
	comp=Z,155nm,1.5s								
BR131	**Keskin Array S**	**146.36**	**321**		*e*PKPdf		PKPab	12 59 52.0	-0.2
BR131					LR		LR		
	comp=Z,663nm,19.0s,MS5.4								
VOIR		**146.41**	**337**		P		PKPab	12 59 52.5	+0.2
VOIR		**146.41**	**337**	⇑	*i*P		PKPab	12 59 52.7	+0.5
LDF	**La Druitiere**	**146.42**	**8**		*e*PKP1		PKPbc	12 59 50.6	-0.7
	comp=Z,239nm,1.8s								
BUD	**Budapest**	**146.49**	**345**	⇓	*e*KP/p		PKPab	12 59 52.7	+0.2
GRR	**Gorron**	**146.51**	**9**		*e*PKP1		PKPbc	12 59 51.1	-0.4
	comp=Z,158nm,1.5s								
LANF	**Langenberg**	**146.53**	**359**		PKP		PKPab	12 59 51.4	-1.2
KAMT	**Kaman**	**146.54**	**321**		*e*P		PKPdf	12 59 51.2	+0.7
QUIF	**Quistinic**	**146.55**	**12**	⇑	*i*PKP1		PKPbc	12 59 51.1	-0.6
	comp=Z,76nm,1.3s								
CEYT	**Ceyhan**	**146.58**	**315**		*e*P		PKPab	12 59 53.0	-0.2
STU	**Stuttgart**	**146.58**	**357**		*e*PKPbc		PKPbc	12 59 52.1	+0.1
SGKT	**Sivrigoynuk**	**146.75**	**324**		*i* P		PKPbc	12 59 53.5	+1.0
CONA	**Conrad Observa**	**146.76**	**349**	⇓	*i*pPKPdf		PKPbc	12 59 52.8	+0.6
	comp=Z,30nm,1.2s								
CSNA	**Conrad Observa**	**146.76**	**349**	⇑	*i*pPKPdf		PKPbc	12 59 52.8	+0.6
	comp=Z,31nm,1.3s								
ANTO	**Ankara**	**146.78**	**322**		*e*P		PKPbc	12 59 54.0	+1.3
ANTO	**Ankara**	**146.78**	**322**		P		PKPbc	12 59 54.4	+1.8
ANTO					LR		LR		
	comp=Z,556nm,22.0s,MS5.3								
ANTO	**Ankara**	**146.78**	**322**	⇓	*i*P		PKPbc	12 59 53.3	+0.7
LOD	**Lodumlu**	**146.78**	**322**		*e*P		PKPdf	12 59 49.3	-1.5
SOP	**Sopron**	**146.86**	**348**		*e*PKP		PKPbc	12 59 53.2	+0.6
KARA	**Karaisali**	**146.91**	**316**		*e*P		PKPdf	12 59 53.0	+1.9
MEZF	**Maizieres J'vi**	**146.98**	**2**	⇑	*i*PKP1		PKPbc	12 59 53.0	+0.1
	comp=Z,84nm,1.2s								
MOA	**Molln**	**147.10**	**351**	⇑	*i*pPKPdf		PKPbc	12 59 53.4	+0.2
	comp=Z,29nm,1.1s								
CDF	**Champ du Feu**	**147.11**	**360**	⇑	*i*PKP1		PKPbc	12 59 53.2	0.0
	comp=Z,119nm,1.2s								
FUR	**Furstenfeldbru**	**147.16**	**355**		*e*PKPbc		PKPbc	12 59 53.8	+0.4
BFO	**Black Forest**	**147.17**	**358**		*e*PKPbc		PKPbc	12 59 52.6	-0.8
NEF	**NEVSHA**	**147.25**	**332**		*e*P		PKPdf	12 59 50.8	-0.7
GZR	**Gura Zlata**	**147.27**	**339**		P		PKPbc	12 59 54.6	+0.8
GZR	**Gura Zlata**	**147.27**	**339**	⇓	*i*P		PKPbc	12 59 53.9	+0.1
THEF	**They Montfort**	**147.28**	**1**		PKP		PKPbc	12 59 53.4	-0.3
ECH	**Echery**	**147.30**	**360**		PKP		PKPbc	12 59 53.8	0.0
ECH	**Echery**	**147.30**	**360**		*e*PKP2		PKPbc	12 59 53.3	-0.5
LIBD	**Limburg**	**147.36**	**359**		PKP		PKPbc	12 59 53.8	-0.2
SPAK	**Spaichingen-Ko**	**147.38**	**358**		PKP		PKPbc	12 59 53.8	-0.2
RJOB	**Jochberg**	**147.42**	**353**		*e*PKPbc		PKPbc	12 59 54.3	+0.2
BZS	**Buzias**	**147.46**	**341**		P		PKPbc	12 59 54.6	+0.2
BZS	**Buzias**	**147.46**	**341**	⇓	*i*P		PKPbc	12 59 54.8	+0.5
ARSA	**Arzberg**	**147.47**	**349**	⇓	*i*pPKPdf		PKPbc	12 59 54.4	+0.1
	comp=Z,31nm,1.8s								
MERS	**Mersin**	**147.48**	**316**		*e*P		PKPbc	12 59 55.1	+0.5
HAU	**Haudompre**	**147.51**	**1**	⇑	*i*PKP1		PKPbc	12 59 54.4	0.0
	comp=Z,160nm,1.5s								
HAU					*e*MLR		MLR		
	comp=Z,1μm,20.0s,MS5.3								
HAU	**Haudompre**	**147.51**	**1**	⇑	*i*PKP2		PKPbc	12 59 54.4	0.0
HAU					MLR		MLR		
	comp=Z,1μm,20.0s,MS5.6								
MOF	**Molkenrain**	**147.67**	**360**		PKP		PKPdf	12 59 53.1	+1.0
HINF	**Hinteralfeld**	**147.70**	**0**	⇑	*i*PKP1		PKPbc	12 59 54.8	-0.1
	comp=Z,58nm,1.2s								
GULT	**Gulveren**	**147.71**	**325**		*e*P		PKPbc	12 59 54.4	-0.8
PKSM	**Moragy**	**147.77**	**345**		P		PKPbc	12 59 55.6	+0.4
PKSM	**Moragy**	**147.77**	**345**	⇓	PKP2		PKPbc	12 59 55.4	+0.3
PKSM	**Moragy**	**147.77**	**345**	⇓	*i*P		PKPbc	12 59 55.3	+0.2
HWQ	**Hawqa**	**147.82**	**311**		*e*P		PKPbc	12 59 56.2	+0.6
SZH	**Strazhica**	**147.84**	**333**		*e*P		PKPbc	12 59 56.8	+1.4
RETA	**Reutte**	**147.87**	**355**	⇑	*i*pPKPdf		PKPbc	12 59 55.8	+0.4
	comp=Z,41nm,1.3s								
KIZT	**Kizilcal**	**147.96**	**322**		*e*P		PKPbc	12 59 55.4	-0.5
MOTA	**Moosalm**	**147.99**	**355**	⇑	*i*pPKPdf		PKPbc	12 59 55.7	0.0
	comp=Z,35nm,1.1s,SNR=9.0								
KBA	**Koelnbreinsper**	**147.99**	**352**	⇑	*i*pPKPdf		PKPbc	12 59 55.4	-0.3
	comp=Z,24nm,1.4s								
KDHN	**Kadinhani**	**148.04**	**321**		*i* P		PKPbc	12 59 56.5	+0.4
BBS	**Basel-Blauen**	**148.05**	**359**		PKP		PKPbc	12 59 55.1	-0.8
LADK	**Ladik-KONYA**	**148.09**	**320**		*e*P		PKPbc	12 59 56.9	+0.7
SOKA	**Soboth**	**148.11**	**349**	⇑	*i*pPKPdf		PKPbc	12 59 55.8	-0.2
	comp=Z,33nm,1.2s								
BORA	**Eskisehir**	**148.12**	**324**		*i* P		PKPbc	12 59 56.7	+0.4
ADVT	**Abdulvahap**	**148.13**	**326**		*e*P		PKPdf	12 59 50.2	-2.8
DAVA	**Damuels**	**148.14**	**356**	⇑	*i*pPKPdf		PKPbc	12 59 56.3	+0.2
	comp=Z,36nm,1.2s,SNR=9.3								
PERS	**Pernice**	**148.14**	**349**		*i* PKPdf		PKPbc	12 59 57.0	+0.9
LOR	**Lormes**	**148.15**	**4**	⇑	*i*PKP1		PKPbc	12 59 56.1	0.0
LOR					*e*MLR		MLR		
	comp=Z,2μm,20.5s,MS5.5								
LOR	**Lormes**	**148.15**	**4**	⇑	*i*PKP2		PKPbc	12 59 56.1	0.0
LOR					MLR		MLR		
	comp=Z,2μm,20.5s,MS5.8								
LOMF	**Lomont**	**148.17**	**0**		PKP		PKPdf	12 59 54.5	+1.6
BHL	**Bhannes**	**148.22**	**311**		*e*P		PKPbc	12 59 57.8	+1.0
CAVI	**Cavuskoy**	**148.24**	**325**		*e*P		PKPbc	12 59 56.3	-0.3
KONT	**Konya--Tatoy**	**148.25**	**320**		*e*P		PKPbc	12 59 56.3	-0.4
SSF	**Saint Saulge**	**148.33**	**4**	⇑	*i*PKP1		PKPbc	12 59 56.6	0.0
	comp=Z,80nm,1.1s								
FETA	**Feichten**	**148.34**	**355**	⇑	*i*PKiKP		PKiKP	12 59 57.3	-1.0
	comp=Z,17nm,1.2s,SNR=6.3								
MFF	**Saint Martin d**	**148.36**	**9**	⇑	*i*PKP1		PKPbc	12 59 56.2	-0.5
	comp=Z,162nm,1.7s								
MYKA	**Terra Mystica**	**148.39**	**351**	⇑	*i*pPKPdf		PKPbc	12 59 56.3	-0.5
	comp=Z,27nm,1.1s								
IKL	**Isikli**	**148.39**	**316**		*e*P		PKPbc	12 59 57.2	+0.1
ABTA	**Abfaltersbach**	**148.42**	**353**	⇑	*i*pPKPdf		PKPbc	12 59 56.4	-0.4
	comp=Z,28nm,1.2s,SNR=7.8								
GEMT	**Gemlik**	**148.43**	**326**		*e*P		PKPbc	12 59 56.3	-0.8
AVF	**Avril sur Loir**	**148.59**	**5**	⇑	*i*PKP1		PKPbc	12 59 56.9	-0.4
	comp=Z,83nm,1.3s								
BOLV	**Bolvadin**	**148.61**	**322**		*i* P		PKPbc	12 59 58.5	+0.9
ASCN	**Ascension**	**148.65**	**136**		PFAKE			13 00 10.0	+15
ASCN					LR		LR		
	comp=Z,901nm,20.0s,MS5.6								
ULDT	**Uludag**	**148.66**	**326**		*i* P		PKPbc	12 59 58.0	+0.4
HDMB	**Hadim**	**148.76**	**318**		*e*P		PKPbc	12 59 56.3	-1.8
SMF	**Signal de Mont**	**148.77**	**4**	⇑	*i*PKP1		PKPbc	12 59 57.6	-0.1
	comp=Z,193nm,1.6s								
BGF	**Bois d'Agland**	**148.78**	**5**	⇑	*i*PKP1		PKPbc	12 59 57.6	-0.2
	comp=Z,155nm,1.5s								
ALT	**Altintas**	**148.88**	**324**		*e*P		PKPbc	12 59 58.1	-0.2
CABF	**La Chapelle**	**148.90**	**1**	⇑	*i*PKP1		PKPbc	12 59 58.7	+0.6
	comp=Z,100nm,1.1s								
BRMO	**Bormio**	**148.91**	**355**		PKP		PKPbc	12 59 58.7	+0.6
SHUT	**Suhut-Afyon**	**148.96**	**322**		*e*P		PKPbc	12 59 58.6	+0.1
TUE	**Stuetta**	**148.98**	**357**		*e*PKPbc		PKPbc	12 59 58.6	+0.3
TCF	**Toulx Ste Croi**	**148.98**	**6**	⇑	*i*PKP1		PKPbc	12 59 58.0	-0.3
	comp=Z,116nm,1.5s								
JAVS	**Javornik**	**149.04**	**350**		*i* PKPdf		PKPab	13 00 01.3	-1.3
BOJS	**Bojanci**	**149.20**	**349**		*e*PKPdf		PKPbc	12 59 59.1	+0.2
GDZ	**Gediz**	**149.21**	**324**		*i* P		PKPbc	12 59 59.7	+0.6
CTI	**Castel Tesino**	**149.21**	**354**		PKP		PKPbc	12 59 59.3	+0.4
PLD	**Plovdiv**	**149.31**	**334**		*e*P		PKPbc	12 59 58.7	-0.6
CSS	**Prodhromos**	**149.34**	**314**		*e*P		PKPbc	12 59 58.3	-1.2
CSS	**Prodhromos**	**149.34**	**314**		*e*PKPbc		PKPbc	12 59 59.8	+0.2
CSS					LR		LR		
	comp=Z,785nm,21.0s,MS5.5								
PLDF	**La Plantade**	**149.43**	**5**		PKP		PKPbc	13 00 00.9	+1.5
PLDF	**La Plantade**	**149.43**	**5**		PKHKP		PKPdf	12 59 53.0	-2.0
TKTP	**Tekketepe**	**149.43**	**322**		*i* P		PKPbc	13 00 00.0	+0.3
LEF	**Lefka**	**149.55**	**315**		*e*P		PKPbc	12 59 58.6	-1.5
PYM	**Petit Puy Mans**	**149.59**	**5**		PKP		PKPbc	13 00 00.0	+0.2
PYM	**Petit Puy Mans**	**149.59**	**5**		PKIKP		PKPdf	12 59 54.8	-0.5
VAI	**Varese**	**149.61**	**357**		PKP		PKPbc	12 59 59.8	-0.1
DEMI	**Demirci**	**149.67**	**325**		*i* P		PKPbc	13 00 00.6	+0.4
KHAL	**Karahalli**	**149.70**	**323**		*i* P		PKPbc	13 00 01.0	+0.7
BALY	**Balya**	**149.76**	**327**		*i* P		PKPbc	13 00 00.7	+0.2
RJF	**Les Rejaudoux**	**149.87**	**8**		*e*PKP1		PKPbc	13 00 00.4	-0.1
RJF					*e*MLR		MLR		
	comp=Z,1μm,22.2s,MS5.4								
RJF	**Les Rejaudoux**	**149.87**	**8**		*e*PKP2		PKPbc	13 00 00.4	-0.1
RJF					MLR		MLR		
	comp=Z,1μm,22.3s,MS5.7								
TRAV	**Traversella**	**150.00**	**359**		PKP		PKPbc	13 00 00.6	-0.2
LPL	**La Plagne**	**150.00**	**0**	⇑	*i*PKP1		PKPbc	13 00 02.0	+1.1
	comp=Z,58nm,1.2s								
LPG	**La Plagne**	**150.02**	**0**	⇑	*i*PKP1		PKPbc	13 00 02.2	+1.3
	comp=Z,86nm,1.2s								
KULA	**Kula-Manisa**	**150.07**	**324**		*e*P		PKPdf	12 59 58.1	+1.9
LFF	**La Frestale**	**150.12**	**9**		*e*PKP1		PKPbc	13 00 01.0	-0.2
	comp=Z,159nm,1.4s								
LBL	**Lubilhac**	**150.13**	**5**		PKP		PKPbc	13 00 01.4	+0.2
LBL	**Lubilhac**	**150.13**	**5**		PKIKP		PKPdf	12 59 52.0	-4.1
MMB	**Musomiste**	**150.15**	**334**		*e*P		PKPbc	13 00 01.0	-0.3
SSB	**Saint Sauveur**	**150.17**	**3**		*e*PKPbc		PKPbc	13 00 01.3	0.0
KKB	**Krupnik**	**150.18**	**335**		*e*P		PKPbc	13 00 01.2	-0.2
AKHS	**Akhisar**	**150.28**	**326**		*i* P		PKPbc	13 00 02.0	+0.2
CAF	**Calviac**	**150.31**	**7**		*e*PKP1		PKPbc	13 00 01.5	-0.1
	comp=Z,95nm,1.5s								
GOLH	**Golhisar**	**150.41**	**321**		*i* P		PKPbc	13 00 02.5	+0.3
BNI	**Bardonecchia**	**150.47**	**0**		*e*PKPbc		PKPbc	13 00 01.7	-0.2
BNI					LR		LR		
	comp=Z,1μm,19.0s,MS5.7								
BOZC	**Bozcaada**	**150.48**	**329**		*i* P		PKPbc	13 00 02.0	-0.2
ELL	**Elmali**	**150.52**	**320**		*e*P		PKPbc	13 00 02.3	-0.1
ORIF	**Oris-en-Rattie**	**150.59**	**1**		*e*PKP1		PKPbc	13 00 03.0	+0.7
	comp=Z,60nm,1.4s								
ORIF					*e*MLR		MLR		
	comp=Z,1μm,21.5s,MS5.3								
VIVF	**Saint-Julien-l**	**150.60**	**3**		*e*PKP1		PKPbc	13 00 02.8	+0.5
	comp=Z,93nm,1.5s								
MBDF	**Mourdon**	**150.79**	**0**		*e*PKP1		PKPbc	13 00 03.3	+0.5
	comp=Z,96nm,1.4s								
IZM	**Izmir**	**150.93**	**326**		*e*P		PKPdf	12 59 58.6	+1.0
AYDN	**Tasoluk**	**151.11**	**324**		*i* P		PKPbc	13 00 04.2	+0.5
SEI	**Scarperia**	**151.22**	**353**		PKP		PKPbc	13 00 06.5	+2.7
TURN	**Turunc**	**151.23**	**322**		*i* P		PKPdf	12 59 58.6	+0.5
DALT	**Dalyan (Mudla)**	**151.28**	**322**		*e*P		PKPbc	13 00 03.2	-0.9
VMG	**Vicchio**	**151.29**	**353**		PKP		PKPbc	13 00 06.6	+2.7
URLA	**Izmir**	**151.31**	**327**		*i* P		PKPdf	12 59 57.6	-0.5
LASF	**Ste Croix**	**151.33**	**5**		*e*PKP1		PKPbc	13 00 04.5	+0.5
MLSB	**Milas**	**151.42**	**324**		*e*P		PKPbc	13 00 03.7	-0.8
GCAM	**G?zelcaml?**	**151.44**	**325**		*i* P		PKPbc	13 00 04.6	+0.1
SMRF	**Simiane la Rot**	**151.52**	**2**		*e*PKP1		PKPbc	13 00 05.4	+0.9
SJPF	**Ste Jean**	**151.54**	**13**		*e*PKP1		PKPbc	13 00 04.6	0.0
BDRM	**Kayabasi**	**151.77**	**324**		*i* P		PKPbc	13 00 05.7	+0.4
BODT	**Bodrum**	**151.85**	**324**		*i* P		PKPbc	13 00 03.7	-1.8
ETSF	**Etsaut**	**151.88**	**12**		*e*PKP1		PKPbc	13 00 05.7	+0.4
MTLF	**Montolieu**	**151.89**	**7**		*e*PKP1		PKPbc	13 00 05.6	+0.2
EPF	**Esparros**	**151.92**	**10**		*e*PKP1		PKPbc	13 00 06.3	+0.9
MTE	**Manteigas**	**152.11**	**24**		*e*PKPbc		PKPbc	13 00 05.6	-0.3
EVO	**Evora**	**153.49**	**27**		*e*PKIKP		PKPdf	13 00 01.9	+0.5
EVO					*e*MLR		MLR		
	comp=Z,2μm,21.5s,MS5.5								
PAB	**San Pablo**	**154.03**	**20**		*e*PKPab		PKPab	13 00 23.3	-0.2
ESDC	**Sonseca Array**	**154.04**	**19**		PKPbc		PKPbc	13 00 10.1	-0.1
	comp=Z,0.6nm,0.5s,baz=357,slow=3.2,SNR=4.9								
ESDC					PKPab		PKPab	13 00 23.8	+0.2
	comp=Z,7.3nm,1.1s,baz=321,slow=3.2,SNR=16								
ESLA	**Sonseca Array**	**154.04**	**19**		PFAKE			13 00 10.0	+7.9
ESLA					LR		LR		
	comp=Z,5μm,19.0s,MS6.3								
CUC	**Castrocucco**	**154.32**	**344**		PFAKE			13 00 10.0	+7.5
CUC					LR		LR		
	comp=Z,1μm,20.0s,MS5.8								
CEL	**Celeste**	**155.91**	**342**		PFAKE			13 00 20.0	+15
CEL					LR		LR		
	comp=Z,51μm,22.0s								
DBIC	**Dimbokro**	**165.55**	**126**		PKP		PKPdf	13 00 16.1	+0.2
	comp=Z,2.2nm,0.8s,baz=90,slow=1.0,SNR=3.0								
DBIC					PKPab		PKPab	13 01 14.5	0.0
	comp=Z,3.6nm,0.8s,baz=254,slow=3.1,SNR=4.2								
DBIC	**Dimbokro**	**165.55**	**126**		PKIKP		PKPdf	13 00 16.1	+0.2
DBIC								13 01 14.5	
DBIC					MLR		MLR		
	comp=Z,1μm,19.0s								
TORD	**Torodi Ar. Bea**	**174.46**	**113**		PKP		PKPdf	13 00 19.3	-1.6
	comp=Z,299nm,0.5s,baz=180,slow=1.3,SNR=2.3								
TORD					PKPab		PKPab	13 01 53.0	-0.9
	comp=Z,179nm,0.4s,baz=261,slow=4.6,SNR=2.2								

*NEIC **02** 12:47:51.4±0.6, 1531S×17277W, h10km, mb4.9/3, Error ellipse: s-maj=21.2km s-min=12.2km az=156.0*

*GCMT **02** 12:47:51.4±0.4, 1533S×17270W, h28km±1km, MW5.2/60, Moment Tensor Solution. s18,c20; s60,c87; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr0.89±.07; Mθθ-0.24±.04; Mφφ-0.64±.04; Mrθ0.17±.08; Mθφ0.09±.02; Mφr0.05±.05; Best double couple: M0.79000×10^17 NP1:φs357.00000°, δ45.00000°, λ78.00000°. NP2: φs160.00000°, δ46.00000°, λ102.00000°. Principal axes: T 0.9130, Plg81.0000°, Azm345.0000°; N -0.2460, Plg9.0000°, Azm168.0000°; P -0.6670, Plg0.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **02** 12:47:53.4±0.5, 1528S×008×17269W±009, h33km, mb4.4/11 Error ellipse: s-maj=15.3km s-min=7.8km az=40.8*

*IDC **02** 12:47:53.5±0.8, 1529S×17329W, h0km, mb4.1/11, mb1 4.3/11, mb1mx4.2/20, mbtmp4.1/11, MS3.9/1, Ms1 3.9/1, ms1mx2.8/28, Error ellipse: s-maj=31.6km s-min=17.3km az=128.0*

ISC 02 12:47:55.4±0.5, **1523S**×008×**17267W**×009, **h35**km, **n26**, σ1§**56**/23, **mb4.4**/11, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.58**	**34**	Pn	**Pn**	**12 48 21.0**	**+0.1**
	120nm,0.3s,baz=103,slow=1.2,SNR=8.5						
AFI				Sn	**Sn**	**12 48 38.3**	**-1.8**
	232nm,0.3s,baz=49,slow=20,SNR=7.1						
AFI				LR	LR	12 49 01.5	
	comp=Z,3μm,22.0s,baz=221,slow=34						
AFI	**Afiamalu**	**1.58**	**34**	*e*Pn	**Pn**	**12 48 20.1**	**-0.8**
AFI				*e*Sn	**Sn**	**12 48 39.5**	**-0.6**
RAR	**Rarotonga**	**13.62**	**118**	Pn	**Pn**	**12 51 05.8**	**-0.3**
	3.4nm,0.3s,baz=250,slow=12,SNR=3.7						
DZM	**

VAY				*e*Lg		13 04 18.0		
	comp=E,971nm,0.4s							
VAY	**Valandovo**	**1.17**	**90**	Pg	**Pg**	**13 04 01.1**	**-1.3**
VAY				Sg	**Sg**	**13 04 17.0**	**-0.5**
KZN	**Kozani**	**1.18**	**151**	*e*PN	**Pn**	**13 04 02.1**	**-1.4**
KZN				*e*SN	**Sn**	**13 04 19.9**	**-0.4**
KNT	**Kendrikon**	**1.43**	**97**	P	**Pn**	**13 04 06.3**	**-0.7**
KNT				S	**Sg**	**13 04 25.7**	**-0.2**
ULC	**Ulcinj**	**1.46**	**296**⇑	*i*Pg	**Pg**	**13 04 05.2**	**-2.6**
ULC				*e*Sg	**Sg**	**13 04 28.3**	**+1.6**
ULC	**Ulcinj**	**1.46**	**296**⇑	*i*Pg	**Pg**	**13 04 05.0**	**-2.8**
ULC				*e*Sg	**Sg**	**13 04 28.0**	**+1.3**
PVY	**Plav**	**1.47**	**329**⇓	Pg	**Pg**	**13 04 05.7**	**-2.4**
PVY				*e*Sg	**Sg**	**13 04 28.4**	**+1.3**
PVY	**Plav**	**1.47**	**329**	*i*PG	**Pg**	**13 04 05.7**	**-2.4**
PVY				*i*SG	**Sg**	**13 04 28.4**	**+1.3**
PVY	**Plav**	**1.47**	**329**⇓	*i*Pg	**Pg**	**13 04 05.0**	**-3.1**
PVY				*e*Sg	**Sg**	**13 04 28.0**	**+0.9**
MEV	**Metsovon**	**1.56**	**174**	P	**Pn**	**13 04 09.1**	**+0.3**
BARS	**Barje**	**1.59**	**22**	*e*Pn	**Pn**	**13 04 08.0**	**-1.2**
BARS				*e*Sg	**Sn**	**13 04 30.2**	**-0.2**
KKB	**Krupnik**	**1.64**	**71**	P	**Pn**	**13 04 09.3**	**-0.5**
KKB				S	**Sn**	**13 04 32.2**	**+0.6**
LIT	**Litokhoron**	**1.67**	**137**	P	**Pn**	**13 04 09.4**	**-0.9**
LIT				S	**Sn**	**13 04 33.2**	**+0.8**
JAN	**Janina**	**1.69**	**184**	*e*PN	**Pn**	**13 04 11.1**	**+0.6**
JAN				*e*SN	**Sn**	**13 04 33.6**	**+0.9**
PDG	**Podgorica**	**1.70**	**310**	*i*PG	**Pn**	**13 04 10.2**	**-0.5**
PDG	**Podgorica**	**1.70**	**310**⇑	*i*Pn	**Pn**	**13 04 10.0**	**-0.7**
PDG				*e*Sn	**Sn**	**13 04 34.0**	**+0.9**
	comp=E,277nm,0.6s							
TTG	**Podgorica**	**1.70**	**310**⇑	*i*Pn	**Pn**	**13 04 10.2**	**-0.5**
TTG				*e*Sn	**Sn**	**13 04 34.2**	**+1.1**
BEY	**Berane**	**1.74**	**332**⇑	*i*Pn	**Pn**	**13 04 10.0**	**-1.2**
BEY				*e*Sn	**Sn**	**13 04 35.0**	**+0.9**
	comp=E,207nm,0.5s							
IVA	**Berane**	**1.74**	**332**⇑	*i*Pn	**Pn**	**13 04 10.8**	**-0.4**
IVA				*e*Sn	**Sn**	**13 04 35.2**	**+1.1**
HORT	**Hortiatis**	**1.75**	**114**	P	**Pn**	**13 04 10.1**	**-1.2**
SOH	**Sokhos**	**1.84**	**106**	P	**Pn**	**13 04 11.9**	**-0.8**
SOH				S	**Sn**	**13 04 37.3**	**+0.7**
BUM	**Brajici-Budva**	**1.85**	**302**⇑	*i*Pn	**Pn**	**13 04 12.2**	**-0.5**
BUM				*e*Sn	**Sn**	**13 04 38.1**	**+1.4**
BUM	**Brajici-Budva**	**1.85**	**302**	*i*PG	**Pn**	**13 04 12.2**	**-0.5**
BUM				*i*SG	**Sn**	**13 04 38.1**	**+1.4**
BUM	**Brajici-Budva**	**1.85**	**302**⇑	*i*Pn	**Pn**	**13 04 12.0**	**-0.7**
BUM				*e*Sn	**Sn**	**13 04 38.0**	**+1.3**
KEK	**Kerkira**	**1.87**	**210**	*e*PN	**Pn**	**13 04 13.0**	**0.0**
KEK				*e*SN	**Sn**	**13 04 37.6**	**+0.3**
THL	**Klokotos Trika**	**1.93**	**156**	P	**Pn**	**13 04 13.1**	**-0.7**
THL				S	**Sn**	**13 04 38.9**	**+0.1**
THL	**Klokotos Trika**	**1.93**	**156**	*e*PB	**Pn**	**13 04 13.1**	**-0.7**
MMB	**Musomiste**	**2.06**	**82**	P	**Pn**	**13 04 15.3**	**-0.3**
SJES	**Sjenica**	**2.07**	**338**	*e*Pn	**Pn**	**13 04 16.2**	**+0.5**
SJES				*e*Sn	**Sn**	**13 04 42.8**	**+0.7**
SJES				*e*Sg	**Sg**	**13 04 47.4**	**+1.1**
PLG	**Polygyros**	**2.08**	**117**	P	**Pn**	**13 04 15.3**	**-0.6**
PLG	**Polygyros**	**2.08**	**117**	*e*PN	**Pn**	**13 04 15.4**	**-0.5**
NKY	**Niksic**	**2.10**	**315**⇓	*i*Pn	**Pn**	**13 04 15.5**	**-0.7**
NKY				*e*Sn	**Sn**	**13 04 43.8**	**+0.9**
NKY	**Niksic**	**2.10**	**315**	*i*PG	**Pn**	**13 04 15.5**	**-0.7**
NKY				*i*SG	**Sn**	**13 04 43.8**	**+0.9**
NKY	**Niksic**	**2.10**	**315**⇓	*i*Pn	**Pn**	**13 04 15.0**	**-1.2**
NKY				*e*Sn	**Sn**	**13 04 43.0**	**+0.1**
	comp=E,167nm,0.6s							
NVR	**Nevrokopi**	**2.15**	**89**	*e*PN	**Pn**	**13 04 16.7**	**-0.1**
HCY	**Herceg Novi**	**2.18**	**301**⇓	*i*Pn	**Pn**	**13 04 16.8**	**-0.4**
HCY				*e*Sn	**Sn**	**13 04 45.7**	**+0.8**
HCY	**Herceg Novi**	**2.18**	**301**	*i*PG	**Pn**	**13 04 16.8**	**-0.4**
HCY				*i*SG	**Sn**	**13 04 45.7**	**+0.8**
HCY	**Herceg Novi**	**2.18**	**301**⇓	*i*Pn	**Pn**	**13 04 16.0**	**-1.2**
HCY				*e*Sn	**Sn**	**13 04 45.0**	**+0.1**
	comp=E,183nm,0.7s							
ZAPS	**Zavoj**	**2.28**	**31**	*e*Pn	**Pn**	**13 04 18.7**	**+0.1**
ZAPS				*e*Sg	**Sg**	**13 04 54.8**	**+1.9**
PLE	**Pljevlja**	**2.32**	**329**⇓	*i*Pn	**Pn**	**13 04 18.7**	**-0.5**
PLE				*e*Sn	**Sn**	**13 04 49.3**	**+0.9**
PLE	**Pljevlja**	**2.32**	**329**⇓	*i*Pn	**Pn**	**13 04 18.0**	**-1.2**
PLE				*e*Sn	**Sn**	**13 04 49.0**	**+0.6**
	comp=E,84nm,0.2s							
BRY	**Bratogost**	**2.41**	**311**⇑	*i*Pn	**Pn**	**13 04 20.3**	**-0.1**
BRY				*e*Sn	**Sn**	**13 04 51.3**	**+0.8**
BRY	**Bratogost**	**2.41**	**311**	*i*PG	**Pn**	**13 04 20.3**	**-0.1**
BRY				*i*SG	**Sn**	**13 04 51.3**	**+0.8**
BRY	**Bratogost**	**2.41**	**311**⇑	*i*Pn	**Pn**	**13 04 20.0**	**-0.4**
BRY				*e*Sn	**Sn**	**13 04 51.0**	**+0.5**
	comp=E,118nm,0.4s							
TREB	**Trebinje**	**2.41**	**306**	*e*Pn	**Pn**	**13 04 21.7**	**+1.2**
UPM	**Unac-Piva**	**2.43**	**321**⇓	*i*Pn	**Pn**	**13 04 20.1**	**-0.6**
UPM				*e*Sn	**Sn**	**13 04 51.8**	**+0.8**
UPM	**Unac-Piva**	**2.43**	**321**⇓	*i*Pn	**Pn**	**13 04 20.0**	**-0.7**
UPM				*e*Sn	**Sn**	**13 04 51.0**	**0.0**
OUR	**Ouranopolis**	**2.47**	**113**	P	**Pn**	**13 04 21.1**	**-0.1**
PAIG	**Paliouri**	**2.47**	**124**	P	**Pn**	**13 04 20.3**	**-1.0**
EVR	**Evrytania**	**2.50**	**166**	*e*PB	**Pn**	**13 04 23.1**	**+1.5**
AGG	**Agios Georgios**	**2.53**	**156**	P	**Pn**	**13 04 21.5**	**-0.5**
AGG				S	**Sn**	**13 04 53.9**	**+0.4**
GRUS	**Gruza**	**2.56**	**355**	*e*Pn	**Pn**	**13 04 23.4**	**+1.0**
GRUS				*e*Sg	**Sg**	**13 05 01.6**	**-0.3**
NEO	**Neokhori**	**2.64**	**140**	P	**Pn**	**13 04 23.9**	**+0.3**
PGB	**Panagyurishte**	**2.65**	**62**	P	**Pn**	**13 04 23.6**	**-0.1**
BBLS	**Lazići**	**2.79**	**335**	*e*Pn	**Pn**	**13 04 27.3**	**+1.7**
RZN	**Rozhen**	**2.80**	**82**	P	**Pn**	**13 04 25.9**	**+0.1**
PLD	**Plovdiv**	**2.87**	**73**	P	**Pn**	**13 04 26.6**	**-0.1**
PLD	**Plovdiv**	**2.87**	**73**	*e*Pn	**Pn**	**13 04 26.7**	**0.0**
PLD				*e*Sn	**Sn**	**13 05 00.5**	**-1.4**
LKR	**Lokris**	**3.09**	**150**	P	**Pn**	**13 04 31.2**	**+1.4**
VLS	**Valsamata**	**3.18**	**186**	*e*PN	**Pn**	**13 04 32.4**	**+1.4**
VLS	**Valsamata**	**3.18**	**186**	*e*Pn	**Pn**	**13 04 27.4**	**-3.6**
RDO	**Rodhopi**	**3.42**	**92**	*e*PN	**Pn**	**13 04 33.8**	**-0.5**
LTK	**Loutraki**	**3.64**	**155**	P	**Pn**	**13 04 37.3**	**0.0**
FGMS	**Monte Sant'Ang**	**3.81**	**277**	Pn	**Pn**	**13 04 38.3**	**-1.4**
ALN	**Alexandroupoli**	**3.83**	**95**	P	**Pn**	**13 04 39.7**	**-0.2**
TIP	**Timpagrande**	**3.91**	**238**	P	**Pn**	**13 04 41.7**	**+0.7**
FGSL	**Fruska Gora**	**3.91**	**347**	*e*Pn	**Pn**	**13 04 39.1**	**-2.0**
FGSL				*e*Sn	**Sn**	**13 05 25.2**	**-2.5**
FGSL	**Fruska Gora**	**3.91**	**347**	*e*Pn	**Pn**	**13 04 38.8**	**-2.3**
FGSL				*e*Sn	**Sn**	**13 05 23.6**	**-4.1**
RGNG	**Rignano Grg**	**4.09**	**276**	Pn	**Pn**	**13 04 41.5**	**-2.0**
CUC	**Castrocucco**	**4.17**	**253**	Pn	**Pn**	**13 04 43.9**	**-0.8**
GZR	**Gura Zlata**	**4.25**	**17**⇑	P	**Pn**	**13 04 44.7**	**-1.0**
GZR	**Gura Zlata**	**4.25**	**17**⇑	*i*P	**Pn**	**13 04 44.7**	**-1.0**
BZS	**Buzias**	**4.30**	**6**	*e*Pn	**Pn**	**13 04 44.3**	**-2.0**
MGR	**Morigerati**	**4.32**	**256**	Pn	**Pn**	**13 04 45.9**	**-0.7**
SGO	**Sicignano**	**4.39**	**262**	Pn	**Pn**	**13 04 46.8**	**-0.8**
BLY	**Banja Luka**	**4.41**	**322**	*e*Pn	**Pn**	**13 04 48.3**	**+0.4**
CSSN	**Cassano Irpino**	**4.55**	**266**	Pn	**Pn**	**13 04 49.2**	**-0.6**
SGG	**Gregorio Mates**	**4.99**	**273**	Pn	**Pn**	**13 04 46.5**	**-9.4**
VOIR		**5.04**	**34**⇑	P	**Pn**	**13 05 00.1**	**+3.5**
VOIR		**5.04**	**34**⇑	*i*P	**Pn**	**13 05 00.1**	**+3.5**
PKSM	**Moragy**	**5.16**	**341**	⇓P	**Pn**	**13 04 56.8**	**-1.4**
PKSM	**Moragy**	**5.16**	**341**	*e*Pn	**Pn**	**13 04 56.3**	**-1.9**
PKSM	**Moragy**	**5.16**	**341**	⇓*i*P	**Pn**	**13 04 56.8**	**-1.4**
PKSM	**Moragy**	**5.16**	**341**	⇓*i*P	**Pn**	**13 04 56.8**	**-1.4**
SDI	**San Donato**	**5.42**	**276**	Pn	**Pn**	**13 05 01.7**	**-0.1**
	comp=E,7.5nm,0.3s							
MLR	**Muntele Rosu**	**5.49**	**39**	*e*Pn	**Pn**	**13 05 02.0**	**-0.7**
APE	**Apeiranthos**	**5.52**	**139**	P	**Pn**	**13 05 04.5**	**+1.3**
BOJS	**Bojanci**	**5.91**	**317**	*i*Pn	**Pn**	**13 05 10.7**	**+2.3**
BOJS				*i*Sn	**Sn**	**13 06 18.4**	**+1.6**
NRCA	**Norcia**	**6.06**	**287**	Pn	**Pn**	**13 05 09.9**	**-0.7**
PLOR	**Plostina**	**6.09**	**40**⇓	*i*P	**Pn**	**13 05 12.6**	**+1.6**
VRI	**Vrincioaia**	**6.14**	**41**⇓	*i*P	**Pn**	**13 05 13.3**	**+1.7**
ASS	**Assisi**	**6.44**	**288**	Pn	**Pn**	**13 05 15.6**	**-0.2**
FSSB	**Fossombrone**	**6.52**	**294**	Pn	**Pn**	**13 05 15.6**	**-1.3**
PSZ	**Piszkesteto**	**6.62**	**353**	P	**Pn**	**13 05 20.7**	**+2.4**
PSZ	**Piszkesteto**	**6.62**	**353**⇓	*i*P	**Pn**	**13 05 20.7**	**+2.4**
PERS	**Pernice**	**6.79**	**323**	*i*Pn	**Pn**	**13 05 22.3**	**+1.7**
PERS				*i*Sn	**Sn**	**13 06 40.0**	**+1.5**
JAVS	**Javornik**	**6.79**	**314**	*e*Pn	**Pn**	**13 05 20.0**	**-0.6**
JAVS				*e*Sn	**Sn**	**13 06 36.9**	**-1.6**
VYHS	**Vyhne**	**7.32**	**349**	*e*SN	**Sn**	**13 06 48.7**	**-2.8**
VYHS	**Vyhne**	**7.32**	**349**	*e*Sn	**Sn**	**13 06 48.7**	**-2.8**
PTCC	**Patocco-Chiusa**	**7.50**	**315**	Pn	**Pn**	**13 05 29.9**	**-0.4**
MODS	**Modra-Piesok**	**7.51**	**341**	*e*PN	**Pn**	**13 05 22.5**	**-8.0**
MODS				*e*		13 07 08.5		
STHS	**Stebnicka Huta**	**8.08**	**1**	*e*PN	**Pn**	**13 05 28.2**	**-10**

*ISK **02** 13:10:45.8, 35.42N×27.11E, h5km, ML3.1*

*DDA **02** 13:10:49.0, 3552N×2786E, h8km, Md3.0*
*ISCJB **02** 13:10:49.1±1.0, 35.39N±0.006×2747E±0.006, h10km, Error ellipse: s-maj=10.2km s-min=5.3km az=152.2*
*CSEM **02** 13:10:50.0±0.3, 3542N×2748E, h15km, MD3.6, Error ellipse: s-maj=7.5km s-min=3.3km az=149.0*
*ATH **02** 13:10:50.5, 3549N×2740E, h26km±1km, MD3.6/7*
*NEIC **02** 13:10:50.5, 3549N×2740E, h26km, MD3.6(ATH), After ATH.*

ISC 02 13:10:49.0±1.5, 3537N±007×2751E±007, h10km±7km, n14, σ0§96/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.34**	**302**	*e*PB	**Pg**	**13 10 55.5**	**-0.2**
KARP				*e*SB	**Sg**	**13 11 01.0**	**+0.7**
ARG	**Arkhangelos**	**0.98**	**30**	*e*PN	**Pn**	**13 11 08.6**	**-0.3**
ARG				*e*SN	**Sn**	**13 11 22.5**	**-0.4**
NISR	**Nisiros**	**1.28**	**346**	*e*PN	**Pn**	**13 11 12.5**	**-0.5**
NPS	**Neapolis**	**1.56**	**267**	*e*PN	**Pn**	**13 11 17.3**	**+0.5**
NPS				*e*SN	**Sn**	**13 11 37.4**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.67**	**33**	*e*PN	**Pn**	**13 11 19.7**	**+1.4**
DALT				*e*SN	**Sn**	**13 11 44.3**	**+4.5**
BDRM	**Kayabasi**	**1.69**	**358**	*i*P	**Pn**	**13 11 18.7**	**0.0**
BDRM				*i*S	**Sn**	**13 11 41.0**	**+0.5**
BODT	**Bodrum**	**1.70**	**355**	*e*PN	**Pn**	**13 11 17.0**	**-1.8**
BODT				*e*SN	**Sn**	**13 11 39.7**	**-0.9**
TURN	**Turunc**	**1.74**	**30**	*i*P	**Pn**	**13 11 17.8**	**-1.5**
TURN				*i*S	**Sn**	**13 11 37.8**	**-3.9**
MLSB	**Milas**	**1.94**	**6**	*e*PN	**Pn**	**13 11 21.3**	**-0.7**
MLSB				*e*SN	**Sn**	**13 11 47.2**	**+0.8**
AYDN	**Tasoluk**	**2.31**	**7**	*i*P	**Pn**	**13 11 27.8**	**+0.6**
AYDN				*i*S	**Sn**	**13 11 56.9**	**+1.3**
APE	**Apeiranthos**	**2.33**	**317**	*e*PN	**Pn**	**13 11 26.8**	**-0.7**
ELL	**Elmali**	**2.38**	**54**	*e*PN	**Pn**	**13 11 30.7**	**+2.5**
SMG	**Samos**	**2.40**	**347**	*e*PN	**Pn**	**13 11 27.8**	**-0.6**
VLI	**Veliai**	**3.95**	**291**	*e*PN	**Pn**	**13 11 49.5**	**-0.1**

*IDC **02** 13:23:50.7±0.7, 4667N×15279E, h0km, mb3.6/12, mb1 3.9/14, mb1mx3.9/22, mbtmp3.7/14, ML3.0/2, Error ellipse: s-maj=23.1km s-min=15.8km az=147.0*
*NEIC **02** 13:23:51.8±0.4, 4664N×15290E, h10km, mb4.6/2, Error ellipse: s-maj=13.4km s-min=6.6km az=139.0*
*ISCJB **02** 13:23:55.3±1.1, 4660N±009×1527E±0.1, h51km±11km, mb3.8/13, Error ellipse: s-maj=18.3km s-min=6.9km az=141.7*
*MOS **02** 13:23:55.4±1.8, 4671N×15274E, h57km, mb4.1/7, Error ellipse: s-maj=19.4km s-min=10.2km az=56.7*

ISC 02 13:23:56.4±0.8, 4667N±009×1528E±01, h42km±8km, n59, σ1§41/68, mb3.8/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.58**	**27**	*e*PN	**Pn**	**13 25 03.0**	**-0.1**
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
NEM2	**Nemuro 2**	**5.99**	**239**	P	**Pn**	**13 25 22.8**	**+0.3**
NEM2				*e*S	**Sn**	**13 26 28.6**	**-1.2**
JRA	**Rausu**	**6.07**	**246**	P	**Pn**	**13 25 26.8**	**+3.3**
JNK	**Nakash**	**6.50**	**245**	P	**Pn**	**13 25 31.8**	**+2.4**
JTKR	**Abashiri--Toko**	**6.83**	**250**	P	**Pn**	**13 25 37.8**	**+3.9**
JAK	**Akkeshi**	**6.83**	**240**	P	**Pn**	**13 25 34.7**	**+0.7**
JAK				*e*S	**Sn**	**13 26 49.3**	**-1.1**
YSS	**Yuzh-Sakhalins**	**6.90**	**276**	*e*Pn	**Pn**	**13 25 35.3**	**+0.4**
	comp=Z,14nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.90**	**276**	*e*PN	**Pn**	**13 25 42.7**	**+7.8**
PETK	**Petropavlovsk-**	**7.18**	**24**	Pn	**Pn**	**13 25 36.0**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=191,slow=13,SNR=12						
JAR	**Ashorobuto**	**7.24**	**245**	P	**Pn**	**13 25 42.6**	**+3.0**
JAR				*e*S	**Sn**	**13 27 01.1**	**+0.7**
PET	**Petropavlovsk**	**7.40**	**29**	*e*Pn	**Pn**	**13 25 39.4**	**-2.4**
	comp=Z,33nm,0.9s						
PET				*e*Sn	**Sn**	**13 26 55.2**	**-9.1**
PET	**Petropavlovsk**	**7.40**	**29**	*e*PN	**Pn**	**13 25 39.4**	**-2.3**
PET				pmax	pmax		
	comp=Z,33nm,0.9s						
JOB	**Onbets**	**7.41**	**243**	*e*S	**Sn**	**13 27 04.0**	**-0.5**
ASAJ	**Asahikawa**	**7.62**	**254**	Pn	**Pn**	**13 25 47.8**	**+2.9**
	comp=Z,1.2nm,0.3s,baz=72,slow=17,SNR=10						
ASAJ	**Asahikawa**	**7.62**	**254**	P	**Pn**	**13 25 50.5**	**+5.6**
ASAJ	**Asahikawa**	**7.62**	**254**	PN	**Pn**	**13 25 47.8**	**+2.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JKK2	**Kamakawa 2**	**7.62**	**252**	P	**Pn**	**13 25 48.6**	**+3.7**
JCH	**Churui**	**7.86**	**242**	P	**Pn**	**13 25 49.5**	**+1.4**
JCH				*e*S	**Sn**	**13 27 14.1**	**-1.5**
ERM	**Erimo**	**8.33**	**240**	*e*Pn	**Pn**	**13 25 52.9**	**-1.7**
	comp=Z,296nm,1.4s						
ERM				*e*Sn	**Sn**	**13 27 26.7**	**-0.6**
ERM	**Erimo**	**8.33**	**240**	*e*PN	**Pn**	**13 25 52.9**	**-1.6**
ERM				pmax	pmax		
	comp=Z,296nm,1.4s						
JBT2	**Biratori 2**	**8.39**	**246**	P	**Pn**	**13 25 58.3**	**+3.0**
JNBK	**Urakawa-nobuka**	**8.42**	**242**	P	**Pn**	**13 25 56.4**	**+0.7**
JNBK				*e*S	**Sn**	**13 27 26.0**	**-3.4**
JNB	**Noboribetsu**	**9.38**	**248**	P	**Pn**	**13 26 11.0**	**+2.0**
JKB	**Kayabe**	**9.70**	**245**	P	**Pn**	**13 26 13.8**	**+0.5**
JKB				*e*S	**Sn**	**13 27 56.4**	**-4.4**
JYM2	**Yakumo 2**	**9.99**	**247**	P	**Pn**	**13 26 18.7**	**+1.4**
JTM	**Tenmabayashi**	**10.32**	**240**	P	**Pn**	**13 26 21.1**	**-0.7**
JTM				*e*S	**Sn**	**13 28 09.1**	**-7.0**
JANG	**Nango**	**10.33**	**237**	P	**Pn**	**13 26 18.1**	**-3.8**
JTH	**Tanohata**	**10.42**	**234**	*e*S	**Sn**	**13 28 09.2**	**-9.4**
JIO	**Ouri**	**11.77**	**230**	*e*S	**Sn**	**13 28 42.1**	**-9.4**
MAJO	**Matsushiro**	**14.86**	**232**	*e*Pn	**Pn**	**13 27 21.8**	**-1.8**
MAJO				*e*Pn	**Pn**	**13 27 22.1**	**-1.5**
MAT	**Matsushiro**	**14.86**	**232**	P	**Pn**	**13 27 31.3**	**+7.7**
MJAR	**Matsushiro Arr**	**14.86**	**232**	Pn	**Pn**	**13 27 21.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=36,slow=9.1,SNR=2.8						
YAK	**Yakutsk**	**20.27**	**328**	*e*P	pP	13 28 39.3	+0.9
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
KSRS	**Korea Array**	**20.57**	**252**	P	**P**	**13 28 29.3**	**-2.2**
	comp=Z,0.8nm,0.8s,baz=50,slow=13,SNR=2.9						
KSRS	**Korea Array**	**20.57**	**252**	P	**P**	**13 28 29.3**	**-2.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TIXI	**Tiksi**	**27.49**	**344**	*e*P	**P**	**13 29 47.5**	**+9.3**
SONM	**Songino Array**	**31.16**	**289**	P	**P**	**13 30 11.1**	**+0.1**
	comp=Z,0.1nm,0.3s,mb3.1,baz=116,slow=6.6,SNR=2.0						
IMA2	**Indian Mountai**	**34.00**	**36**	*e*P	**P**	**13 30 34.8**	**-0.8**
COLA	**College**	**36.33**	**38**	*e*P	**P**	**13 30 54.6**	**-1.1**
	comp=Z,5.9nm,1.1s,mb4.4						
COLA	**College**	**36.33**	**38**	*e*P	**P**	**13 30 54.6**	**-1.1**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ZALV	**Zalesovo Beam**	**42.48**	**306**	P	**P**	**13 31 45.6**	**-1.4**
	comp=Z,0.4nm,0.3s,mb3.5,baz=72,slow=6.2,SNR=2.2						
MK31	**Makanchi Array**	**46.79**	**297**	P	**P**	**13 32 21.5**	**+0.1**
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**13 32 21.7**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=56,slow=7.3,SNR=3.2						
YKA	**Yellowknife Ar**	**51.12**	**37**	P	**P**	**13 32 55.4**	**+1.0**
	comp=Z,1.1nm,0.9s,mb3.8,baz=295,slow=7.3,SNR=2.5						
YKA	**Yellowknife Ar**	**51.12**	**37**	P	**P**	**13 32 55.4**	**+1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**52.14**	**256**	P	**P**	**13 33 04.4**	**+1.8**
	comp=Z,1.2nm,0.9s,mb3.8,baz=34,slow=7.4,SNR=7.9						
CMAR	**Chiang Mai Arr**	**52.14**	**256**	*e*P	**P**	**13 33 04.4**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**62.66**	**62**	P	**P**	**13 34 17.6**	**+1.0**
	comp=Z,0.7nm,0.7s,mb3.9,baz=274,slow=8.2,SNR=5.4						
PDAR	**Pinedale Array**	**64.97**	**54**	P	**P**	**13 34 31.9**	**+0.3**
	comp=Z,0.9nm,0.9s,mb3.8,baz=294,slow=1.5,SNR=4.8						
CTAO	**Charters Tower**	**66.70**	**187**	*e*P	**P**	**13 34 41.5**	**-1.4**
	comp=Z,9.1nm,1.3s,mb4.7						
CTAO	**Charters Tower**	**66.70**	**187**	*e*P	**P**	**13 34 41.5**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
NOA	**NORSAR Array B**	**68.24**	**341**	P	**P**	**13 34 53.5**	**+1.3**
	comp=Z,0.4nm,0.7s,mb3.6,baz=26,slow=6.4,SNR=2.5						
WRA	**Warramunga Arr**	**68.36**	**199**	P	**P**	**13 34 52.5**	**-0.8**
	comp=Z,0.7nm,0.9s,mb3.7,baz=17,slow=6.9,SNR=5.7						
WRA	**Warramunga Arr**	**68.36**	**199**	*e*P	**P**	**13 34 54.6**	**+1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**72.06**	**198**	P	**P**	**13 35 17.4**	**+1.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=12,slow=6.2,SNR=11						
ASAR	**Alice Springs**	**72.06**	**198**	P	**P**	**13 35 17.4**	**+1.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**77.72**	**60**	P	**P**	**13 35 48.7**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=298,slow=5.0,SNR=4.5						
TXAR	**Lajitas Array**	**77.72**	**60**	P	**P**	**13 35 48.7**	**-0.1**
TXAR	**Lajitas Array**	**77.72**	**60**	*e*P	**P**	**13 35 48.6**	**-0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC 02 13:25:07.9±7.8, 591S×15085E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/14, mbtmp3.6/3, Error ellipse: s-maj=121.7km s-min=85.2km az=16.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.26**	**227**	P	P	13 29 56.1	+0.2
	1.1nm,0.6s,baz=52,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.03**	**221**	P	P	13 30 25.4	+0.6
	0.4nm,0.5s,baz=57,slow=9.2,SNR=12						
STKA	**Stephens Creek**	**27.25**	**197**	P	P	13 30 53.1	-0.8
	2.3nm,1.0s,baz=30,slow=8.1,SNR=3.0						

*SZGRF **02** 13:30:40.7, 1684S×17256W, h10km, mb5.8, Samoa Islands region*
*ISCJB **02** 13:30:43.1±0.2, 1556S±004×173.10W±003, h12km, mb5.4/164, MS5.6/95, Error ellipse: s-maj=6.7km s-min=3.6km az=157.4*
*BJI **02** 13:30:43.8, 1521S×17287W, h13km, mB6.0, mb5.4, Ms5.7, Msz5.5*
*NEIC **02** 13:30:44.0±0.2, 1559S×17307W, h10km, mb5.5/109, MS5.6/51, MW5.7, Error ellipse: s-maj=8.1km s-min=5.3km az=154.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}1.97; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-3.46; $M_{r\theta}$0.87; $M_{\theta\phi}$-1.30; $M_{r\phi}$2.62; Best double couple: M_o4.30000×10^{17} NP1:ϕ_s21.00000°, δ67.00000°, λ98.00000°. NP2: ϕ_s180.00000°, δ24.00000°, λ71.00000°. Principal axes: T 3.1000, Plg66.0000°, Azm306.0000°; N 1.7800, Plg7.0000°, Azm197.0000°; P -4.8900, Plg21.0000°, Azm104.0000°;*
*GCMT **02** 13:30:44.0±0.1, 1524S×17276W, h17km, MW5.8/106, Moment Tensor Solution. s99,c210; s106,c321; Duration: 2§0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.13±.06; $M_{\theta\theta}$1.63±.04; $M_{\

RKT eLQ 13 46 16.9
CTA Charters Tower 38.88 257 P **P** **13 38 09.2 -1.1**
comp=Z,9.1nm,0.8s,mb4.6,baz=83,slow=10,SNR=8.8
CTA LR LR 13 52 23.7
comp=Z,9μm,18.6s,MS5.6,baz=79,slow=33
CTAO Charters Tower 38.88 257 *e*P **P** **13 38 09.2 -1.1**
comp=Z,25nm,1.1s,mb4.9
CTAO LR LR
comp=Z,9μm,20.0s,MS5.6
CTAO Charters Tower 38.88 257 P **P** **13 38 12.3 +2.0**
comp=Z,28nm,1.3s,mb4.8
POHA Pohakuloa 39.12 27 *e*P **P** **13 38 09.9 -2.3**
POHA LR LR
comp=Z,4μm,20.0s,MS5.2
CAN Canberra 39.16 233 *e*P **P** **13 38 11.3 -1.1**
PMG Port Moresby 39.22 274 *e*P **P** **13 38 14.0 +0.7**
PMG LR LR
comp=Z,6μm,19.0s,MS5.5
PMG Port Moresby 39.22 274 P **P** **13 38 15.0 +1.7**
comp=Z,83nm,1.2s,comp=Z,2μm,mb5.3
KIP Kipapa 39.62 22 *e*P **P** **13 38 15.4 -1.0**
comp=Z,146nm,1.2s,mb5.6
KIP Kipapa 39.62 22 *e*P **P** **13 38 15.4 -1.0**
KIP pmax pmax
comp=Z,150nm,1.2s,mb5.6
COEN Coen 42.25 266 *e*P **P** **13 38 37.9 -0.4**
comp=Z,55nm,1.0s,mb5.1
COEN Coen 42.25 266 P **P** **13 38 39.2 +0.9**
comp=Z,79nm,1.5s,comp=Z,622nm,mb5.1
TAU Tasmania Unive 43.39 223 *e*P **P** **13 38 46.3 -0.9**
TAU LR LR
comp=Z,4μm,19.0s,MS5.4
MIDW Midway 43.71 355 PFAKE 13 39 00.0 +10
MIDW LR LR
comp=Z,7μm,19.0s,MS5.6
STKA Stephens Creek 44.20 240 P **P** **13 38 53.6 -0.2**
comp=Z,54nm,0.9s,mb5.3,baz=85,slow=9.2,SNR=70
STKA Stephens Creek 44.20 240 *e*P **P** **13 38 53.1 -0.8**
comp=Z,74nm,0.8s,mb5.5
WB2 Warramunga Arr 50.07 257 *e*P **P** **13 39 38.4 -1.4**
WRAB Tennant Creek 50.07 257 *e*P **P** **13 39 38.3 -1.5**
comp=Z,129nm,1.3s,mb5.8
WRAB LR LR
comp=Z,10μm,20.0s,MS5.8
WRAB Tennant Creek 50.07 257 *d i*P **P** **13 39 39.4 -0.4**
WRAB Tennant Creek 50.07 257 P **P** **13 39 38.5 -1.3**
comp=Z,92nm,1.5s,mb5.6
WRA Warramunga Arr 50.08 257 P **P** **13 39 38.5 -1.4**
comp=Z,23nm,0.7s,mb5.3,baz=92,slow=7.3,SNR=189
WRA LR LR 13 59 12.7
comp=Z,8μm,20.4s,MS5.7,baz=85,slow=34
ASAR Alice Springs 50.33 252 P **P** **13 39 40.8 -1.0**
comp=Z,91nm,0.7s,mb5.9,baz=86,slow=8.0,SNR=342
ASAR S **S** **13 46 52.0 -2.6**
comp=Z,1.5nm,0.9s,baz=86,slow=15,SNR=5.3
GUMO Guam 50.65 303 P **P** **13 39 45.0 +0.8**
comp=Z,122nm,0.9s,mb5.8,baz=186,slow=0.5,SNR=3.7
GUMO LR LR 13 59 04.2
comp=Z,3μm,18.6s,MS5.4,baz=154,slow=34
GUMO Guam 50.65 303 *e*P **P** **13 39 44.2 0.0**
comp=Z,489nm,1.5s,mb6.2
GUMO LR LR
comp=Z,4μm,19.0s,MS5.4
GUMO Guam 50.65 303 *e*P **P** **13 39 44.2 0.0**
GUMO pmax pmax
comp=Z,489nm,1.5s,mb6.2
GUMO MLR MLR
comp=Z,4μm,19.0s,MS5.4
KAKA Kakadu 52.77 266 *e*P Px 13 39 50.4
comp=Z,74nm,0.6s
FORT Forrest 55.60 243 *e*P **P** **13 40 19.3 -1.2**
comp=Z,14nm,0.7s,mb5.1
AAI Ambon 58.88 275 P **P** **13 40 46.7 +2.7**
comp=Z,73nm,1.3s,comp=Z,1μm,mb5.6
DRV Dumont d'Urvil 59.54 200 P **P** **13 40 56.0 +8.3**
DRV S **S** **13 49 05.0 +8.1**
DRV L 13 55 00.0
DRV R 13 59 00.0
LBMI Labuha 60.42 278 P **P** **13 40 56.3 +1.7**
comp=Z,122nm,1.1s,comp=Z,2μm,mb5.8
CBIJ Chichi jima 60.66 314 LR LR 14 02 14.6
comp=Z,5μm,20.8s,MS5.6,baz=308,slow=31
BATI Baumata 61.69 267 P **P** **13 41 02.5 -0.8**
comp=Z,20nm,0.8s,mb5.3,baz=198,slow=2.6,SNR=5.3
BATI Baumata 61.69 267 P **P** **13 41 09.5 +6.3**
comp=Z,31nm,1.0s,comp=Z,589nm,mb5.4
SBA Scott Base 63.12 185 *e*P **P** **13 41 15.7 +3.9**
comp=Z,88nm,1.2s,mb5.8
SBA LR LR
comp=Z,2μm,22.0s,MS5.2
MBWA Marble Bar 63.59 254 *e*P **P** **13 41 15.0 -0.8**
comp=Z,202nm,2.1s,mb5.8
MBWA LR LR
comp=Z,4μm,19.0s,MS5.6
MBWA Marble Bar 63.59 254 P **P** **13 41 17.9 +2.1**
comp=Z,37nm,1.6s,mb5.2
KDI Kendari 64.17 273 P **P** **13 41 21.5 +1.7**
comp=Z,26nm,1.3s,comp=Z,3μm,mb5.1
DAV Davao City (W) 64.75 286 *e*P **P** **13 41 21.2 -2.3**
NWAO Narrogin (SRO) 64.79 241 P **P** **13 41 22.9 -0.6**
comp=Z,16nm,0.8s,mb5.1,baz=62,slow=6.9,SNR=7.2
NWAO Narrogin (SRO) 64.79 241 *e*P **P** **13 41 24.1 +0.6**
comp=Z,124nm,1.7s,mb5.7
NWAO LR LR
comp=Z,3μm,19.0s,MS5.4
JHJ Hachijo jima 2 66.07 318 P **P** **13 41 30.3 -1.4**
comp=Z,250nm,0.9s,mb6.3,baz=174,slow=5.0,SNR=5.8
JHJ LR LR 14 07 42.2
comp=Z,2μm,19.3s,MS5.3,baz=126,slow=34
KAPI Kappang 66.66 271 P **P** **13 41 34.5 -1.4**
comp=Z,10nm,0.7s,mb5.0,baz=175,slow=9.3,SNR=4.8
KAPI LR LR 14 08 08.5
comp=Z,2μm,21.8s,MS5.3,baz=109,slow=34
KAPI Kappang 66.66 271 *e*P **P** **13 41 34.7 -1.2**
KAPI Kappang 66.66 271 P **P** **13 41 41.4 +5.5**
comp=Z,28nm,1.2s,comp=Z,846nm,mb5.2
ATKA Atka Island 67.48 359 *e*P **P** **13 41 38.6 -1.6**
PCI Palu 67.67 276 P **P** **13 41 45.7 +3.3**
comp=Z,162nm,1.2s,comp=Z,2μm,mb5.9
MJAR Matsushiro Arr 69.24 320 P **P** **13 41 50.4 -1.2**
comp=Z,26nm,0.9s,mb5.1,baz=157,slow=5.7,SNR=39
MJAR LR LR 14 06 14.4
comp=Z,6μm,21.9s,MS5.8,baz=130,slow=31
MAJO Matsushiro 69.24 320 *e*P **P** **13 41 51.5 -0.1**
comp=Z,117nm,1.2s,mb5.7
MAJO LR LR
comp=Z,7μm,22.0s,MS5.8
MAT Matsushiro 69.24 320 P **P** **13 41 51.3 -0.3**
MAT S S 13 51 05.0 +7.4
KHKI Kahang-Kahang 69.84 267 P **P** **13 42 00.3 +4.4**
CASY Casey 70.38 205 *e*P **P** **13 41 58.7 +0.5**
comp=Z,33nm,1.1s,mb5.2
CASY LR LR
comp=Z,1μm,19.0s,MS5.2
JOW Kunigami 70.80 306 LR LR 14 07 01.1
comp=Z,4μm,21.7s,MS5.7,baz=125,slow=31
SKR Severo-Kuril's 71.26 340 *e*P **P** **13 42 06.0 +2.3**
SKR *e* 13 52 08.0
SKR MLR MLR
comp=N,6μm,20.0s
SKR MLR MLR
comp=Z,6μm,20.0s,MS5.8
PTRM Twissleman Ran 71.41 43 *e*P **P** **13 42 01.9 -3.0**
U04C Hernandez Rese 71.45 42 ⇑P **P** **13 42 05.4 +0.2**
baz=72
BBKI Banjar Baru 71.79 271 P **P** **13 42 12.4 +4.6**
comp=Z,96nm,1.3s,mb5.6
MWC Mount Wilson 72.04 46 *e*P **P** **13 42 09.2 +0.4**
comp=Z,131nm,2.2s,mb5.5
MWC Mount Wilson 72.04 46 *e*P **P** **13 42 09.2 +0.4**
MWC pmax pmax
comp=Z,130nm,2.2s,mb5.5
VES Vestal, Richgr 72.26 44 ⇓P **P** **13 42 09.8 -0.2**
baz=72
BFSC Mount Baldy St 72.33 46 ⇑P **P** **13 42 10.3 -0.2**
baz=72
EDW2 Edwards Air Fo 72.45 45 ⇓P **P** **13 42 11.0 -0.3**
baz=73,SNR=12
MONP Monument Peak 72.46 48 ⇓P **P** **13 42 11.2 -0.1**
baz=73
PET Petropavlovsk 72.51 343 *e*P **P** **13 42 11.4 +0.3**
PET *e*S S 13 51 33.9 -1.1
PET *e*PS 13 52 05.4
PET *e*PPS 13 52 19.1
PET pmax pmax
comp=Z,1μm,6.2s
PET pmax pmax
comp=Z,2μm,11.0s
PET MLR MLR
comp=Z,3μm,18.0s,MS5.6
PET MLR MLR
comp=Z,3μm,14.0s
T06C Millerton Lake 72.53 42 ⇓P **P** **13 42 11.4 -0.2**
baz=73
DVTC Desert V Tower 72.57 48 ⇑P **P** **13 42 11.7 -0.3**
baz=73
ISA Isabella 72.57 44 *e*P **P** **13 42 12.6 +0.7**
comp=Z,24nm,1.2s,mb5.0
ISA LR LR
comp=Z,4μm,20.0s,MS5.7
ISA Isabella 72.57 44 ⇑P **P** **13 42 11.9 0.0**
baz=73
CHGN Chignik 72.64 9 *e*P **P** **13 42 10.8 -1.0**
CMB Columbia Colle 72.69 41 *e*P **P** **13 42 12.8 +0.3**
comp=Z,23nm,1.3s,mb4.9
CMB LR LR
comp=Z,3μm,20.0s,MS5.6
CMB Columbia Colle 72.69 41 ⇑P **P** **13 42 12.5 -0.1**
baz=73
OHCM Honcut 72.80 40 *e*P **P** **13 42 14.6 +1.5**
PFO Pinyon Flat Ob 72.82 47 *e*P **P** **13 42 14.0 +0.6**
comp=Z,159nm,2.8s,mb5.5
PFO Pinyon Flat Ob 72.82 47 *e*P **P** **13 42 14.0 +0.5**
PFO pmax pmax
comp=Z,160nm,2.8s,mb5.5
PFO Pinyon Flat Ob 72.82 47 ⇑P **P** **13 42 13.5 0.0**
baz=73
PETK Petropavlovsk- 72.86 342 P **P** **13 42 12.7 -0.5**
comp=Z,33nm,0.8s,mb5.3,baz=129,slow=8.3,SNR=24
PETK LR LR 14 10 27.1
comp=Z,1μm,18.8s,MS5.2,baz=174,slow=33
LAVA Lava Cap Winer 72.90 40 ⇓P **P** **13 42 13.7 -0.1**
baz=73
ORV Orville 72.92 39 ⇓P **P** **13 42 14.2 +0.3**
baz=73
WDC Whiskeytown Da 72.93 38 *e*P **P** **13 42 15.5 +1.6**
comp=Z,31nm,1.3s,mb5.1
WDC Whiskeytown Da 72.93 38 *e*P **P** **13 42 15.5 +1.6**
WDC pmax pmax
comp=Z,31nm,1.3s,mb5.1
WDC Whiskeytown Da 72.93 38 ⇓P **P** **13 42 14.3 +0.3**
baz=73
SWSC Sam W. Stewart 72.93 48 ⇓P **P** **13 42 14.3 +0.1**
baz=73
KCC Kaiser Creek 72.96 42 ⇓P **P** **13 42 14.3 +0.1**
baz=73
LRMC Laurel Mountai 72.99 45 ⇓P **P** **13 42 14.6 +0.1**
baz=73
M02C Callahan 73.25 37 ⇓P **P** **13 42 16.1 +0.2**
baz=73
BELC Belle Mtn. 73.35 47 ⇓P **P** **13 42 16.4 -0.2**
baz=74
MPMC Manual Prospec 73.45 44 ⇑P **P** **13 42 17.2 +0.1**
baz=74,SNR=20
MLAC Mammoth Lakes 73.45 42 ⇓P **P** **13 42 16.9 -0.2**
baz=74
MTUM Tungsten Hills 73.47 43 *e*P **P** **13 42 18.3 +1.1**
GSC Goldstone 73.50 45 *e*P **P** **13 42 17.4 -0.1**
comp=Z,20nm,1.0s,mb5.0
GSC Goldstone 73.50 45 *e*P **P** **13 42 17.4 0.0**
GSC pmax pmax
comp=Z,20nm,1.0s,mb5.0
GSC Goldstone 73.50 45 ⇓P **P** **13 42 17.1 -0.3**
baz=74
YBH Yreka Blue Hor 73.55 37 P **P** **13 42 18.1 +0.6**
comp=Z,10nm,0.9s,mb4.7,baz=248,slow=3.0,SNR=7.5
YBH Yreka Blue Hor 73.55 37 *e*P **P** **13 42 18.5 +0.9**
comp=Z,88nm,1.7s,mb5.4
YBH Yreka Blue Hor 73.55 37 *e*P **P** **13 42 18.5 +0.9**
YBH pmax pmax
comp=Z,89nm,1.7s
YBH Yreka Blue Hor 73.55 37 ⇓P **P** **13 42 18.1 +0.5**
baz=74
BC3 Big Chuckw Mtn 73.56 47 ⇑P **P** **13 42 17.7 -0.1**
baz=74
HEC Hector,Ludlow 73.57 46 ⇑P **P** **13 42 17.9 0.0**
baz=74
WAKR Walker 73.58 41 *e*P **P** **13 42 19.2 +1.4**
M03C McCloud 73.61 38 ⇑P **P** **13 42 18.6 +0.7**
baz=74
O04C Chester 73.64 39 ⇑P **P** **13 42 18.9 +0.8**
baz=74
GLA Glamis 73.69 48 *e*P **P** **13 42 19.1 +0.5**
comp=Z,33nm,1.4s,mb5.1
GLA Glamis 73.69 48 *e*P **P** **13 42 19.1 +0.5**
GLA pmax pmax
comp=Z,33nm,1.4s,mb5.1
GLA Glamis 73.69 48 ⇓P **P** **13 42 18.9 +0.3**
baz=74
SJI Sawahan 73.69 266 P **P** **13 42 21.2 +2.2**
YSS Yuzh-Sakhalins 73.76 330 *e*P **P** **13 42 18.7 0.0**
comp=Z,200nm,1.7s,mb5.8
YSS LR LR
comp=Z,1μm,20.0s,MS5.2
YSS Yuzh-Sakhalins 73.76 330 *oe*P **P** **13 42 19.0 +0.4**
YSS *e*S S 13 51 50.0 +0.6
YSS *e*PPS 13 52 32.0
YSS pmax pmax
comp=Z,370nm,2.0s,mb6.0
YSS pmax pmax
comp=Z,1μm,10.0s
YSS smax
comp=E,1μm,14.0s
YSS MLR MLR
comp=N,1μm,18.0s,MS5.3
YSS MLR MLR
comp=E,1μm,18.0s,MS5.3
YSS MLR MLR
comp=Z,2μm,18.0s,MS5.3
K02A Glendale 73.77 36 ⇓P **P** **13 42 19.7 +0.9**
baz=74
BEKR Beckwourth 73.81 40 ⇑P **P** **13 42 19.3 +0.2**
baz=74
WCN Washoe City 73.84 40 ⇓P **P** **13 42 19.7 +0.4**
baz=74
HUMO Hull Mountain 73.97 36 *e*P **P** **13 42 20.8 +0.8**
comp=Z,41nm,1.3s,mb5.2
HUMO Hull Mountain 73.97 36 ⇑P **P** **13 42 20.1 +0.2**
baz=74
P06A Stead Airport, 73.98 40 ⇑P **P** **13 42 20.9 +0.8**
baz=74
GMRC Granite Mounta 74.01 46 ⇑P **P** **13 42 20.8 +0.4**
baz=74
IRM Iron Mountain 74.03 47 ⇓P **P** **13 42 20.7 +0.2**
baz=74
GRAC Grapevine Rang 74.06 43 ⇑P **P** **13 42 21.2 +0.5**
baz=74
FURC Furnace Creek, 74.10 44 ⇓P **P** **13 42 21.5 +0.6**
baz=74
TUQ Turquoise Moun 74.17 46 ⇑P **P** **13 42 22.1 +0.7**
baz=74
SHOC Shoshone 74.18 45 ⇓P **P** **13 42 21.8 +0.4**
baz=74
NVAR Mina Array Bea 74.26 42 P **P** **13 42 21.9 +0.2**
comp=Z,3.3nm,0.9s,mb4.3,baz=227,slow=9.4,SNR=19
Y12C Blythe 74.26 48 ⇓P **P** **13 42 22.3 +0.4**
baz=74
PAHR Pah Rah Range 74.31 40 *e*P **P** **13 42 23.2 +1.1**
comp=Z,82nm,1.8s,mb5.4
OHAK Old Harbor 74.36 11 *e*P **P** **13 42 20.6 -1.3**
QSPA South Pole Qui 74.49 180 PFAKE 13 42 30.0 +7.5
QSPA LR LR
comp=Z,2μm,22.0s,MS5.4
LDFC Landfair 74.55 46 *e*P **P** **13 42 23.1 -0.5**
S09A Goldfield 74.56 43 ⇓P **P** **13 42 24.0 +0.4**
baz=75,SNR=10
214A Organ Pipe Nat 74.60 50 ⇑P **P** **13 42 23.8 -0.1**
baz=75
N06A Buffalo Meadow 74.66 39 ⇓P **P** **13 42 24.5 +0.4**
baz=75,SNR=6.6
V11A Goodsprings 74.73 45 ⇓P **P** **13 42 24.4 -0.2**
baz=75
Q08A Gabbs 74.74 42 ⇑P **P** **13 42 24.8 +0.2**
baz=75
TPH Tonopah 74.75 43 *e*P **P** **13 42 27.0 +2.3**
comp=Z,50nm,1.4s,mb5.2
TPH LR LR
comp=Z,4μm,21.0s,MS5.7
TPNV Topopah Spring 74.78 44 *e*P **P** **13 42 27.1 +2.3**
comp=Z,20nm,1.0s,mb5.0
TPNV Topopah Spring 74.78 44 *e*P **P** **13 42 27.1 +2.3**
TPNV pmax pmax
comp=Z,20nm,1.0s,mb5.0
TPNV Topopah Spring 74.78 44 ⇓P **P** **13 42 25.0 +0.1**
baz=75,SNR=10
Y13A Salome 74.79 48 ⇓P **P** **13 42 24.9 -0.1**
baz=75
PDMCI Parker Dam,Lak 74.82 47 ⇑P **P** **13 42 25.4 +0.3**
baz=75
O07A Toulon 74.90 40 ⇓P **P** **13 42 25.7 +0.3**
baz=75,SNR=19
R09A Tonopah 74.95 43 ⇑P **P** **13 42 26.2 +0.4**
baz=75,SNR=9.7
KDAK Kodiak Island 75.02 11 P **P** **13 42 24.6 -1.1**
comp=Z,28nm,0.9s,mb5.2,baz=253,slow=4.8,SNR=7.4
PBKI Pangkalan Bun 75.04 271 P **P** **13 42 33.9 +7.0**
comp=Z,190nm,1.1s,comp=Z,2μm,mb5.9
MOD Modoc 75.07 38 *e*P **P** **13 42 26.9 +0.4**
comp=Z,41nm,1.0s,mb5.3
MOD Modoc 75.07 38 ⇑P **P** **13 42 27.0 +0.6**
baz=75,SNR=24
S10A Tonopah Range, 75.08 43 ⇓P **P** **13 42 27.1 +0.5**
baz=75,SNR=9.2
H03A Soap Creek Ran 75.11 34 ⇑P **P** **13 42 27.2 +0.6**
baz=75
P08A Dixie Valley 75.13 41 ⇓P **P** **13 42 27.3 +0.5**
baz=75
X13A Yucca 75.19 47 ⇑P **P** **13 42 28.0 +0.7**
baz=75,SNR=13
N07B Gerlach 75.20 40 ⇓P **P** **13 42 27.4 +0.2**
baz=75,SNR=8.3
K05A Summer Lake 75.23 37 ⇑P **P** **13 42 27.7 +0.4**
baz=75
J05A Fort Rock 75.38 36 ⇓P **P** **13 42 28.6 +0.5**
baz=76,SNR=26
TATO Taipei 75.39 301 PFAKE 13 42 40.0 +11
TATO LR LR
comp=Z,2μm,20.0s,MS5.5
W13A Hualapai Mount 75.41 47 ⇑P **P** **13 42 28.5 -0.1**
baz=76
O08A Rochester Mine 75.42 40 ⇑P **P** **13 42 28.9 +0.4**
baz=76,SNR=7.7
Y14A Wickenburg 75.45 48 ⇓P **P** **13 42 29.5 +0.7**
baz=76,SNR=9.1
R10A Warm Springs 75.48 43 ⇓P **P** **13 42 29.4 +0.5**
baz=76,SNR=8.3
S11A Rachel 75.49 44 ⇓P **P** **13 42 29.6 +0.6**
baz=76
T11A Corn Creek, Al 75.62 44 ⇑P **P** **13 42 30.5 +0.7**
baz=76,SNR=12
K06A Valley Falls 75.65 37 ⇓P **P** **13 42 30.2 +0.5**
baz=76,SNR=26
L07A Adell 75.71 38 ⇓P **P** **13 42 30.7 +0.6**
baz=76,SNR=18
H04A Detroit Lake 75.72 35 ⇑P **P** **13 42 31.0 +0.9**
baz=76
N08A GE Springer Mi 75.72 40 ⇑P **P** **13 42 30.8 +0.6**
baz=76,SNR=7.2
V13A Grand Canyon W 75.73 46 ⇓P **P** **13 42 31.1 +0.7**
baz=76
X14A Yava 75.80 48 ⇓P **P** **13 42 31.4 +0.6**
baz=76,SNR=9.7
G04A Mulino 75.89 34 ⇓P **P** **13 42 31.8 +0.7**
baz=76
Y15A Casa Rosa Ranc 75.94 48 ⇑P **P** **13 42 32.2 +0.6**
baz=76,SNR=19
M08A Happy Creek Ra 75.96 39 ⇑P **P** **13 42 32.3 +0.8**
baz=76,SNR=7.1
STKI Sintang 75.97 274 P **P** **13 42 35.1 +2.8**
comp=Z,46nm,0.2s,comp=Z,7μm,mb6.0
J06A Christmas Vall 75.98 37 ⇑P **P** **13 42 32.0 +0.4**
baz=76,SNR=13
R11A Troy Canyon, C 75.98 43 ⇑P **P** **13 42 32.4 +0.6**
baz=76,SNR=9.2
217A Green Valley 75.99 51 ⇓P **P** **13 42 32.3 +0.4**
baz=76,SNR=9.3
W14A Seligman 76.03 47 ⇓P **P** **13 42 33.0 +0.9**
baz=76,SNR=17
S12A Delamar Landin 76.07 44 ⇑P **P** **13 42 33.0 +0.7**
baz=76,SNR=9.6
BMN Battle Mountai 76.09 41 *e*P **P** **13 42 37.2 +4.9**
comp=Z,74nm,1.6s,mb5.4
BMN Battle Mountai 76.09 41 *e*P **P** **13 42 37.2 +4.9**
BMN pmax pmax
comp=Z,74nm,1.6s,mb5.4
P10A Eureka 76.11 42 ⇓P **P** **13 42 33.0 +0.6**
baz=76
K07A Rock Creek Ran 76.17 38 ⇑P **P** **13 42 33.5 +0.8**
baz=76,SNR=24
Q11A Duckwater 76.21 43 ⇑P **P** **13 42 33.4 +0.4**
baz=76,SNR=16
H05A Madras 76.23 35 ⇓P **P** **13 42 33.8 +0.8**
baz=76
V14A Boquillas Ranc 76.23 47 ⇑P **P** **13 42 33.6 +0.4**
baz=76,SNR=12
X15A Humboldt 76.27 48 ⇑P **P** **13 42 33.9 +0.5**
baz=76,SNR=14
TUC Tucson 76.27 51 *e*P **P** **13 42 33.6 +0.1**
comp=Z,19nm,1.1s,mb4.9
TUC Tucson 76.27 51 *e*P **P** **13 42 33.6 +0.1**
TUC pmax pmax
comp=Z,19nm,1.1s,mb4.9
BMW Boistfort Moun 76.31 33 *e*P **P** **13 42 34.0 +0.6**
I06A Prineville 76.37 36 ⇓P **P** **13 42 34.4 +0.6**
baz=76,SNR=26
WVOR Wild Horse Val 76.38 38 *e*P **P** **13 42 34.3 +0.4**
comp=Z,33nm,1.1s,mb5.2
WVOR Wild Horse Val 76.38 38 *e*P **P** **13 42 34.3 +0.4**
WVOR pmax pmax
comp=Z,33nm,1.1s,mb5.2
F04A Amboy 76.39 34 ⇑P **P** **13 42 34.1 +0.2**
baz=77,SNR=5.7
T13A Saint George 76.40 45 ⇑P **P** **13 42 34.6 +0.4**
baz=77,SNR=6.1
L08A Fields 76.41 39 ⇓P **P** **13 42 34.4 +0.3**
baz=77,SNR=32
HOOD Mount Hood Mea 76.42 35 *e*P **P** **13 42 34.8 +0.7**
comp=Z,68nm,1.2s,mb5.5
117A Oracle 76.43 50 ⇑P **P** **13 42 35.3 +0.9**
baz=77,SNR=11
318A Bisbee 76.46 52 ⇓P **P** **13 42 34.3 -0.3**
baz=77,SNR=12
KSRS Korea Array 76.46 315 P **P** **13 42 35.8 +1.2**
comp=Z,17nm,0.9s,mb5.0,baz=127,slow=6.2,SNR=40
KSRS LR LR 14 10 11.6
comp=Z,2μm,22.0s,MS5.4,baz=114,slow=31
VIPM Ingram Point 76.48 36 P **P** **13 42 35.8 +1.3**
KS15 Wonju Array Si 76.48 315 *e*P **P** **13 42 34.2 -0.4**
Y16A Circle Bar Ran 76.52 49 ⇑P **P** **13 42 35.3 +0.4**
baz=77
P11A Circle Ranch, 76.53 42 ⇓P **P** **13 42 35.3 +0.4**
baz=77
J07A Hines 76.54 37 ⇑P **P** **13 42 35.1 +0.3**
baz=77,SNR=9.7
G05A Wamic 76.55 35 ⇑P **P** **13 42 35.2 +0.4**
baz=77,SNR=6.1
U14A Mt Trumbull 76.58 46 ⇓P **P** **13 42 35.9 +0.7**
baz=77,SNR=27
R12A Pony Springs, 76.62 44 ⇑P **P** **13 42 35.8 +0.5**
baz=77,SNR=15
K08A Mann Creek Ran 76.64 38 ⇑P **P** **13 42 36.2 +0.8**
baz=77,SNR=27
218A Dragoon 76.67 51 ⇑P **P** **13 42 36.5 +0.7**
baz=77,SNR=13
S13A Holt Ranch, En 76.72 45 ⇓P **P** **13 42 36.5 +0.6**
baz=77
L09A Wilkinson Ranc 76.72 39 ⇓P **P** **13 42 36.0 +0.2**
baz=77,SNR=7.6
TDL Tradedollar La 76.77 34 P **P** **13 42 36.1 +0.1**
H06A Lindquist Farm 76.78 36 ⇓P **P** **13 42 35.9 -0.2**
baz=77,SNR=30
X16A Lo Mia Camp, P 76.81 48 ⇑P **P** **13 42 36.7 +0.2**
baz=77,SNR=21
I07A Izee 76.86 37 ⇓P **P** **13 42 36.8 +0.2**
baz=77,SNR=28
F05A White Salmon 76.88 34 ⇑P **P** **13 42 37.3 +0.7**
baz=77,SNR=9.4
Y17A Roosevelt 76.89 49 ⇑P **P** **13 42 37.7 +0.7**
baz=77,SNR=9.5
O11A Cowboy Ranch, 76.91 42 ⇑P **P** **13 42 37.7 +0.7**
baz=77,SNR=14
G06A Carlson Farm, 76.92 35 ⇓P **P** **13 42 37.6 +0.7**
baz=77
R13A O'Grain Ranch, 76.96 44 ⇓P **P** **13 42 37.7 +0.4**
baz=77
319A Douglas 76.97 52 ⇓P **P** **13 42 37.3 -0.2**
baz=77
V15A Kaibab Nationa 76.98 47 ⇓P **P** **13 42 38.2 +0.7**
baz=77,SNR=18
J08A Circle Bar Ran 77.02 38 ⇓P **P** **13 42 38.1 +0.6**
baz=77,SNR=28
118A Homack Ranch, 77.03 51 ⇑P **P** **13 42 38.6 +0.7**
baz=77

CCUT	Cedar City	77.04	45	eP		P	13 42 37.7	-0.1		
K09A	Rome	77.08	38	⇓P		P	13 42 38.8	+0.9		
	baz=77,SNR=31									
ARUT	Antelope Range	77.11	45	eP		P	13 42 39.0	+0.9		
H07A	Lands Inn, Kim	77.13	36	⇓P		P	13 42 39.0	+0.9		
	baz=77,SNR=15									
M10A	I.L. Ranch, Tu	77.13	40	⇓P		P	13 42 39.5	+1.4		
	baz=77,SNR=7.3									
E05A	Randle	77.14	34	⇓P		P	13 42 38.7	+0.6		
	baz=77,SNR=12									
F06A	Goldendale	77.17	35	⇓P		P	13 42 39.0	+0.7		
	baz=77,SNR=5.7									
U15A	North Rim	77.20	46	⇑P		P	13 42 39.4	+0.6		
	baz=77,SNR=18									
LON	Longmire	77.24	33	eP		P	13 42 37.4	-1.3		
	comp=Z,29nm,1.3s,mb5.0									
LON	Longmire	77.24	33	eP		P	13 42 37.4	-1.2		
LON					pmax	pmax				
	comp=Z,29nm,1.3s,mb5.0									
C04A	Brinnon	77.26	32	⇓P		P	13 42 39.5	+0.7		
	baz=77,SNR=6.0									
219A	White Tail Can	77.27	51	⇓P		P	13 42 39.8	+0.6		
	baz=77,SNR=8.7									
I08A	Drewsey	77.29	37	⇑P		P	13 42 39.4	+0.3		
	baz=78,SNR=7.9									
Q13A	Wheeler Ranch,	77.34	43	⇑P		P	13 42 39.7	+0.2		
	baz=78,SNR=14									
INCN	Inchon	77.36	315	eP		P	13 42 40.9	+1.3		
	comp=Z,161nm,1.2s,mb5.8									
WUAZ	Wupatki	77.40	47	eP		P	13 42 41.1	+1.3		
	comp=Z,38nm,1.4s,mb5.1									
WUAZ	Wupatki	77.40	47	⇑P		P	13 42 39.8	0.0		
	baz=78									
MIR	Mirnyy	77.40	204	iP		P	13 42 42.0	+2.7		
MIR				i			13 42 55.0			
MIR				iS		S	13 52 33.0	+3.7		
MIR				eSS		SS	13 57 42.0	+15		
MIR					pmax	pmax				
	comp=Z,200nm,2.5s,mb5.6									
MIR					pmax	pmax				
	comp=Z,2μm,8.0s									
MIR					MLR	MLR				
	comp=Z,2μm,19.0s,MS5.5									
D05A	Enumclaw	77.42	33	⇑P		P	13 42 39.8	+0.1		
	baz=78,SNR=7.0									
J09A	Fry Pan Ranch,	77.44	38	⇓P		P	13 42 39.9	+0.1		
	baz=78,SNR=27									
T15A	Red Dirt Ranch	77.44	46	⇑P		P	13 42 40.2	+0.2		
	baz=78,SNR=21									
G07A	Ruggs Ranch, H	77.48	36	⇑P		P	13 42 39.6	-0.5		
	baz=78,SNR=6.9									
L10A	Juniper Basin	77.49	40	⇑P		P	13 42 40.0	-0.1		
	baz=78,SNR=30									
ELK	Elko	77.51	41	eP		P	13 42 41.0	+0.6		
Y18A	Canyon Day Jun	77.52	50	⇑P		P	13 42 40.3	-0.2		
	baz=78,SNR=6.3									
M11A	Holland Ranch,	77.55	40	⇑P		P	13 42 40.6	+0.1		
	baz=78,SNR=8.3									
E06A	Yakima	77.55	34	⇓P		P	13 42 40.2	-0.2		
	baz=78,SNR=7.3									
O12A	Currie	77.57	42	⇑P		P	13 42 40.8	+0.2		
	baz=78,SNR=8.4									
119A	Ashpeak Ranch,	77.59	51	⇓P		P	13 42 40.9	0.0		
	baz=78,SNR=5.5									
H08A	Prairie City	77.60	37	⇓P		P	13 42 40.6	-0.1		
	baz=78,SNR=6.5									
P13A	Bates Ranch, G	77.61	43	⇓P		P	13 42 40.7	-0.2		
	baz=78,SNR=16									
PGC	Sidney	77.62	31	eP		P	13 42 39.9	-0.9		
	comp=Z,58nm,1.0s,mb5.5									
K10A	MacKenzie Ranc	77.64	39	⇓P		P	13 42 40.7	-0.3		
	baz=78,SNR=36									
SVW2	Sparrevohn	77.67	9	eP		P	13 42 39.5	-1.2		
N12A	Clover Valley,	77.70	41	⇓P		P	13 42 40.9	-0.4		
	baz=78,SNR=6.7									
QZH	Quanzhou	77.77	300	⇑iP		P	13 42 41.5	-0.6		
QZH				S		S	13 52 30.6	-4.1		
QZH					AMB	AMB				
	comp=Z,2μm,10.6s									
QZH					LR	LR				
	comp=Z,4μm,24.0s,MS5.7									
S15A	Panguitch	77.79	45	⇑P		P	13 42 42.7	+0.8		
	baz=78,SNR=10									
I09A	Lost Marbles R	77.81	37	⇑P		P	13 42 41.6	-0.3		
	baz=78,SNR=5.9									
Q14A	Sevier Lake (B	77.85	44	⇑P		P	13 42 42.1	-0.1		
	baz=78,SNR=24									
U16A	Tuba City	77.88	47	⇑P		P	13 42 42.8	+0.4		
	baz=78,SNR=12									
G08A	Pilot Rock	77.89	36	⇑P		P	13 42 42.7	+0.4		
	baz=78,SNR=47									
LEM	Lembang	77.90	266	P		P	13 42 46.4	+3.3		
	comp=Z,125nm,1.0s,comp=Z,2μm,mb5.8									
C05A	Tolt Reservoir	77.90	33	⇑P		P	13 42 42.6	+0.2		
	baz=78,SNR=6.6									
X18A	Snowflake	77.94	49	⇑P		P	13 42 43.0	+0.2		
	baz=78,SNR=5.4									
L11A	Cat Creek Ranc	77.98	40	⇑P		P	13 42 43.0	+0.1		
	baz=78,SNR=29									
TWW	Teanaway	77.98	33	P		P	13 42 44.5	+1.7		
SLKM	Skilak Lake	78.01	11	eP		P	13 42 41.0	-1.6		
T16A	Glen Canyon Da	78.03	46	⇑P		P	13 42 43.7	+0.4		
	baz=78,SNR=6.0									
D06A	Cle Elum	78.03	33	⇑P		P	13 42 43.0	-0.1		
	baz=78,SNR=5.5									
A04A	Legoe Bay, Lum	78.04	31	⇓P		P	13 42 43.2	+0.1		
	baz=78									
B05A	Bryant	78.06	32	⇓P		P	13 42 43.0	-0.1		
	baz=78									
M12A	Wells	78.09	41	⇓P		P	13 42 43.7	+0.2		
	baz=78,SNR=33									
JCW	Jim Creek	78.10	32	eP		P	13 42 43.0	-0.4		
K11A	Parker Ranch,	78.15	39	⇓P		P	13 42 43.8	0.0		
	baz=78,SNR=22									
E07A	Sunnyside	78.17	34	⇓P		P	13 42 43.9	0.0		
	baz=78,SNR=7.9									
Y19A	Nutrioso	78.18	50	⇑P		P	13 42 44.3	+0.1		
	baz=78,SNR=32									
RSW	Rattlesnake Hi	78.21	35	eP		P	13 42 42.4	-1.7		
N13A	Wendover, West	78.23	42	⇑P		P	13 42 44.0	-0.3		
	baz=78,SNR=6.9									
HAWA	Hanford	78.24	35	eP		P	13 42 44.8	+0.5		
	comp=Z,42nm,1.1s,mb5.3									
H09A	Durkee	78.26	37	⇓P		P	13 42 44.0	-0.4		
	baz=78,SNR=7.6									
SSE	Sheshan	78.27	307	⇑P		P	13 42 45.0	+0.2		
SSE					AP	pP	13 42 47.8	-1.3		
SSE					S	S	13 52 38.5	-1.4		
SSE					XS	sS	13 52 46.0	-0.9		
SSE					SCS	ScS	13 53 03.6	-1.5		
SSE					AMB	AMB				
	comp=Z,25nm,0.8s,mb5.2									
SSE					AMB	AMB				
	comp=Z,899nm,12.0s									
SSE					LR	LR				
	comp=N,635nm,25.7s,MS5.2									
SSE					LR	LR				
	comp=E,1μm,25.7s,MS5.2									
SSE					LR	LR				
	comp=Z,2μm,26.2s,MS5.3									
P14A	Drum Mountains	78.30	43	⇑P		P	13 42 44.4	-0.4		
	baz=78,SNR=28									
F08A	Pendleton	78.30	35	⇑P		P	13 42 44.1	-0.5		
	baz=78,SNR=9.8									
S16A	Weppner Ranch,	78.34	45	⇓P		P	13 42 44.7	-0.3		
	baz=78,SNR=6.8									
MSU	Marysvale	78.34	44	eP		P	13 42 46.6	+1.6		
X19A	St. Johns	78.37	49	⇓P		P	13 42 45.3	0.0		
	baz=78,SNR=21									
GBL	Gable Mountain	78.41	35	P		P	13 42 45.9	+0.7		
L12A	House Creek Ra	78.42	40	⇓P		P	13 42 46.0	+0.6		
	baz=79,SNR=5.1									
U17A	Shonto	78.43	47	⇓P		P	13 42 46.3	+0.7		
	baz=79,SNR=6.9									
C06A	Tall Timber Ra	78.46	33	⇓P		P	13 42 45.8	+0.3		
	baz=79									
RPW	Rockport	78.47	32	eP		P	13 42 44.0	-1.5		
D07A	Quincy	78.50	34	⇑P		P	13 42 45.8	+0.2		
	baz=79									
V18A	Ganado	78.52	48	⇑P		P	13 42 46.5	+0.4		
	baz=79,SNR=14									
T17A	Navajo Res., N	78.52	46	⇑P		P	13 42 46.4	+0.4		
	baz=79,SNR=19									
G09A	Cove	78.56	36	⇓P		P	13 42 45.7	-0.3		
	baz=79,SNR=27									
ETW	Entiat	78.56	33	eP		P	13 42 44.5	-1.5		
E08A	Dider Farm, El	78.56	35	⇑P		P	13 42 45.7	-0.4		
	baz=79,SNR=7.6									
BMO	Blue Mountains	78.58	37	eP		P	13 42 45.6	-0.6		
	comp=Z,24nm,1.0s,mb5.1									
BMO	Blue Mountains	78.58	37	eP		P	13 42 45.6	-0.6		
BMO					pmax	pmax				
	comp=Z,24nm,1.0s,mb5.1									
HABR	Khabarovsk	78.62	328	⇑iP		P	13 42 46.7	+0.4		
HABR				e			13 42 54.0			
HABR				e			13 42 58.3			
HABR				e			13 45 40.3			
HABR				e			13 47 27.8			
HABR				eS		S	13 52 41.1	-1.7		
HABR				e			13 52 52.4			
HABR				e			13 53 00.8			
HABR				e			13 57 39.6			
HABR				e			14 01 03.5			
HABR					pmax	pmax				
	comp=Z,260nm,2.2s,mb5.8									
LNOR	Lincton Mounta	78.62	36	eP		P	13 42 44.0	-2.3		
MFID	Camas Ranch	78.63	39	⇓P		P	13 42 46.6	+0.1		
	baz=79,SNR=10									
RC01	Rabbit Creek A	78.64	11	eP		P	13 42 40.2	-5.9		
	comp=Z,59nm,1.1s,mb5.4									
R16A	Teasdale	78.69	45	⇓P		P	13 42 47.9	+0.9		
	baz=79,SNR=23									
F09A	S2 Ranch, Elgi	78.74	36	⇓P		P	13 42 46.7	-0.3		
	baz=79,SNR=9.4									
CBJI	Citeko	78.74	266	P		P	13 42 54.0	+6.2		
	comp=Z,254nm,1.2s,mb6.0									
H10A	Noah's Angus R	78.75	37	⇓P		P	13 42 46.6	-0.6		
	baz=79,SNR=47									
C07A	Waterville	78.76	33	⇓P		P	13 42 46.4	-0.7		
	baz=79									
K12A	Draper Farm, C	78.76	40	⇓P		P	13 42 46.8	-0.4		
	baz=79,SNR=7.1									
DUG	Dugway	78.78	43	eP		P	13 42 48.1	+0.7		
	comp=Z,26nm,1.1s,mb5.1									
DUG	Dugway	78.78	43	eP		P	13 42 48.1	+0.7		
DUG					pmax	pmax				
	comp=Z,26nm,1.1s,mb5.1									
DUG	Dugway	78.78	43	⇑P		P	13 42 47.4	0.0		
	baz=79,SNR=9.0									
DBJI	Dramaga	78.80	266	P		P	13 42 53.1	+5.0		
	comp=Z,84nm,0.9s,mb5.7									
I11A	Placerville	78.83	38	⇑P		P	13 42 47.1	-0.5		
	baz=79,SNR=11									
S17A	Black Ridge (B	78.84	46	⇑P		P	13 42 47.5	-0.2		
	baz=79,SNR=8.6									
N14A	Grayback Hills	78.89	42	⇓P		P	13 42 47.6	-0.4		
	baz=79,SNR=15									
TPI	Tanjungpandan	78.90	270	P		P	13 42 55.7	+7.0		
	comp=Z,37nm,1.5s,comp=Z,802nm,mb5.1									
U18A	Rough Rock, Ch	78.90	47	⇑P		P	13 42 48.1	0.0		
	baz=79,SNR=6.4									
A06A	Chilliwack	78.91	32	⇓P		P	13 42 47.7	-0.1		
	baz=79									
G10A	Bishop Farm, J	78.94	37	⇓P		P	13 42 47.5	-0.7		
	baz=79,SNR=33									
EYAK	Cordova Ski Ar	78.97	13	P		P	13 42 47.7	-0.2		
	comp=Z,140nm,1.6s,mb5.6									
D08A	Wollman Farm,	78.98	34	⇓P		P	13 42 48.1	-0.2		
	baz=79,SNR=7.7									
J12A	Stokes Ranch,	78.98	39	⇑P		P	13 42 48.3	-0.1		
	baz=79,SNR=24									
BGU	Big Grassy Mou	79.03	42	eP		P	13 42 49.2	+0.5		
L13A	Double Diamond	79.06	41	⇑P		P	13 42 48.7	-0.2		
	baz=79,SNR=9.2									
M14A	Sheep Mountain	79.13	41	⇓P		P	13 42 48.9	-0.3		
	baz=79,SNR=52									
NLU	North Lily Min	79.14	43	eP		P	13 42 50.3	+0.9		
V19A	Window Rock	79.15	48	⇓P		P	13 42 49.0	-0.6		
	baz=79									
B07A	Winthrop	79.20	33	⇓P		P	13 42 48.9	-0.6		
	baz=79,SNR=17									
PMR	Palmer	79.22	11	eP		P	13 42 47.7	-1.6		
	comp=Z,78nm,1.2s,mb5.5									
PMR					LR	LR				
	comp=Z,2μm,20.0s,MS5.4									
PMR	Palmer	79.22	11	eP		P	13 42 47.8	-1.5		
PMR					pmax	pmax				
	comp=Z,75nm,1.2s,mb5.5									
T18A	Mexican Hat	79.24	47	⇓P		P	13 42 50.2	+0.2		
	baz=79,SNR=80									
H11A	Donnelly	79.25	38	⇓P		P	13 42 49.4	-0.5		
	baz=79,SNR=11									
I12A	Atlanta	79.26	39	⇓P		P	13 42 49.9	0.0		
	baz=79,SNR=41									
K13A	Stover Farm, H	79.28	40	⇑P		P	13 42 49.6	-0.4		
	baz=79,SNR=8.3									
F10A	Beach Ranch, E	79.28	36	⇑P		P	13 42 48.8	-1.2		
	baz=80,SNR=36									
R17A	Hanksville Air	79.29	45	⇓P		P	13 42 50.1	-0.1		
	baz=79,SNR=30									
OD2	Odessa Site #2	79.30	34	P		P	13 42 50.9	+0.9		
MDJ	Mudanjiang	79.32	322	P		P	13 42 50.6	+0.4		
MDJ					AP	pP	13 42 53.7	-0.8		
MDJ					S	S	13 52 52.3	+1.9		
MDJ					XS	sS	13 52 58.0	+0.5		
MDJ					SCS	ScS	13 53 13.6	+0.7		
MDJ					SS	SS	13 58 00.5	+2.6		
MDJ					AMB	AMB				
	comp=Z,58nm,2.3s,mb5.1									
MDJ					AMB	AMB				
	comp=Z,1μm,7.5s									
MDJ					LR	LR				
	comp=N,2μm,26.9s,MS5.6									
MDJ					LR	LR				
	comp=E,3μm,22.6s,MS5.6									
MDJ					LR	LR				
	comp=Z,5μm,21.6s,MS5.8									
MDJ	Mudanjiang	79.32	322	eP		P	13 42 50.8	+0.6		
	comp=Z,110nm,1.6s,mb5.5									
MDJ					LR	LR				
	comp=Z,6μm,21.0s,MS5.9									
D09A	Jones Farm, Ri	79.32	35	⇓P		P	13 42 49.2	-1.0		
	baz=80,SNR=9.3									
C08A	Higginbotham F	79.36	34	⇓P		P	13 42 49.3	-1.1		
	baz=80,SNR=7.9									
S18A	Hurst Farm, Bl	79.42	46	⇓P		P	13 42 50.2	-0.8		
	baz=80,SNR=5.4									
A07A	Ashnola River,	79.43	32	⇓P		P	13 42 50.1	-0.7		
	baz=80,SNR=19									
MPU	Maple Canyon	79.47	43	eP		P	13 42 53.1	+1.9		
	comp=Z,28nm,1.2s,mb5.1									
L14A	Malta	79.48	41	⇓P		P	13 42 50.6	-0.6		
	baz=80,SNR=7.1									
G11A	Walters Elk Ra	79.50	37	⇓P		P	13 42 50.7	-0.4		
	baz=80,SNR=39									
B08A	Colville Reser	79.55	33	⇑P		P	13 42 50.1	-1.3		
	baz=80,SNR=18									
HLID	Hailey	79.57	39	eP		P	13 42 52.0	+0.4		
	comp=Z,44nm,1.0s,mb5.3									
HLID	Hailey	79.57	39	⇓P		P	13 42 50.9	-0.8		
	baz=80,SNR=55									
J13A	Cove Ranch, Pi	79.63	39	⇓P		P	13 42 52.0	+0.1		
	baz=80,SNR=29									
HVU	Hansel Valley	79.64	41	eP		P	13 42 53.8	+1.7		
	comp=Z,32nm,1.0s,mb5.2									
HVU	Hansel Valley	79.64	41	eP		P	13 42 53.8	+1.8		
HVU					pmax	pmax				
	comp=Z,32nm,1.0s,mb5.2									
E10A	Myers Farm, Un	79.64	36	⇑P		P	13 42 51.3	-0.7		
	baz=80,SNR=5.5									
M15A	Larsen Ranch,	79.68	42	⇑P		P	13 42 51.4	-0.9		
	baz=80,SNR=6.5									
T19A	Beclabito	79.69	47	⇑P		P	13 42 51.9	-0.5		
	baz=80,SNR=7.9									
SRU	San Rafael	79.76	45	eP		P	13 42 54.6	+1.9		
	comp=Z,26nm,1.3s,mb5.0									
SRU	San Rafael	79.76	45	eP		P	13 42 54.6	+1.9		
SRU					pmax	pmax				
	comp=Z,26nm,1.3s,mb5.0									
SRU	San Rafael	79.76	45	⇑P		P	13 42 52.4	-0.3		
	baz=80,SNR=17									
C09A	Chrisman Ranch	79.78	34	⇓P		P	13 42 52.3	-0.4		
	baz=80									
K14A	Jones Ranch, D	79.79	41	⇑P		P	13 42 52.8	-0.1		
	baz=80,SNR=26									
P17A	Butcher Ranch,	79.79	44	⇓P		P	13 42 53.5	+0.6		
	baz=80,SNR=5.8									
R18A	Canyonlands Na	79.83	45	⇑P		P	13 42 52.8	-0.4		
	baz=80,SNR=40									
F11A	Grangeville	79.84	36	⇓P		P	13 42 53.0	-0.1		
	baz=80,SNR=12									
H12A	Diamond D Ranc	79.85	38	⇓P		P	13 42 53.2	+0.1		
	baz=80,SNR=11									
D10A	Wagner Farm, O	79.88	35	⇓P		P	13 42 52.5	-0.8		
	baz=80,SNR=11									
JLU	Jordanelle	79.89	43	eP		P	13 42 56.0	+2.5		
PPLA	Purkeypile	79.89	10	eP		P	13 42 51.6	-1.3		
	comp=Z,20nm,1.0s,mb5.0									
DAU	Daniels Canyon	79.92	43	eP		P	13 42 56.1	+2.5		
I13A	Wildhorse Cree	79.94	39	⇓P		P	13 42 53.9	+0.2		
	baz=80,SNR=12									
LAZ	Ladron	79.94	50	eP		P	13 42 55.4	+1.5		
A08A	Turner Farm, O	79.95	33	⇓P		P	13 42 53.2	-0.3		
	baz=80,SNR=26									
LENM	Lemitar	79.96	50	eP		P	13 42 56.1	+2.2		
J14A	Carey	79.99	40	⇑P		P	13 42 53.7	-0.2		
	baz=80,SNR=42									
L15A	Malad City	80.00	41	⇓P		P	13 42 53.8	-0.2		
	baz=80,SNR=9.4									
Q18A	Rafter H Ranch	80.02	45	⇓P		P	13 42 53.6	-0.6		
	baz=80,SNR=26									
N16A	Rees Ranch, Co	80.04	43	⇓P		P	13 42 54.1	-0.1		
	baz=80,SNR=5.8									
S19A	Harvey Farm, M	80.05	46	⇑P		P	13 42 54.2	-0.2		
	baz=80									
E11A	Bogner Ranch,	80.08	36	⇓P		P	13 42 53.6	-0.7		
	baz=80,SNR=5.6									
M16A	Huntsville	80.13	42	⇑P		P	13 42 54.6	-0.1		
	baz=80,SNR=7.1									
O17A	Robinson Place	80.15	44	⇑P		P	13 42 54.3	-0.6		
	baz=80,SNR=29									
P18A	Preston Nutter	80.20	44	⇑P		P	13 42 54.2	-0.9		
	baz=80,SNR=10									
BNM	Barren Site	80.21	51	eP		P	13 42 53.1	-2.2		
B09A	Rice	80.22	34	⇓P		P	13 42 54.2	-0.9		
	baz=80,SNR=6.5									
MVCO	Mesa Verde	80.24	47	eP		P	13 42 55.4	0.0		
	comp=Z,29nm,1.3s,mb5.0									
MVCO	Mesa Verde	80.24	47	⇓P		P	13 42 55.2	-0.2		
	baz=80,SNR=5.4									
K15A	Arbon	80.27	41	⇓P		P	13 42 53.6	-1.8		
	baz=80,SNR=12									
LPM	Los Pinos Moun	80.28	50	eP		P	13 42 57.7	+2.0		
F12A	Elk City	80.28	37	⇓P		P	13 42 54.9	-0.6		
	baz=80,SNR=13									
HWUT	Hardware Ranch	80.32	42	eP		P	13 42 55.8	+0.1		
	comp=Z,17nm,0.9s,mb5.0									
HWUT					LR	LR				
	comp=Z,4μm,20.0s,MS5.8									
A09A	Danville	80.32	33	⇑P		P	13 42 54.6	-1.0		
	baz=80,SNR=19									
I14A	Mackay	80.35	39	⇓P		P	13 42 56.1	+0.2		
	baz=80,SNR=6.0									
D11A	Klaveano Farm,	80.40	35	⇓P		P	13 42 55.0	-1.0		
	baz=81,SNR=6.7									
PV10	Paradox Valley	80.42	46	eP		P	13 42 55.3	-1.0		
N17A	Moffit Pass	80.46	43	⇓P		P	13 42 55.8	-0.7		
	baz=81,SNR=7.7									
TXAR	Lajitas Array	80.47	56	P		P	13 42 58.6	+1.8		
	comp=Z,13nm,1.0s,mb4.8,baz=216,slow=6.2,SNR=29									
TXAR					LR	LR	14 11 54.8			
	comp=Z,3μm,18.9s,MS5.6,baz=55,slow=31									
E12A	Beaver Dam Sad	80.47	36	⇑P		P	13 42 56.1	-0.3		
	baz=81									
NJ2	Nanjing	80.48	307	eP		P	13 42 56.1	-0.7		
NJ2					AP	pP	13 43 00.8	-0.3		
NJ2					XP	sP	13 43 03.1	+0.4		
NJ2					PP	PP	13 46 01.1	+0.7		
NJ2					S	S	13 53 00.0	-3.3		
NJ2					XS	sS	13 53 10.0	-0.4		
NJ2					SKS		13 53 11.0			
NJ2					AMB	AMB				
	comp=Z,10.0nm,1.0s,mb4.7									
NJ2					AMB	AMB				
	comp=Z,340nm,6.6s									
NJ2					LR	LR				
	comp=N,1μm,25.0s,MS5.4									
NJ2					LR	LR				
	comp=E,2μm,28.1s,MS5.4									
NJ2					LR	LR				
	comp=Z,2μm,28.0s,MS5.3									
G13A	Cobalt	80.52	38	⇑P		P	13 42 56.2	-0.5		
	baz=81,SNR=13									
Q19A	Hogan Spring (	80.54	45	⇓P		P	13 42 56.4	-0.6		
	baz=81,SNR=18									
L16A	Fish Haven	80.62	42	⇑P		P	13 42 56.6	-0.7		
	baz=81,SNR=9.4									
PV01	Paradox Valley	80.63	46	eP		P	13 42 57.1	-0.4		
NEW	Newport	80.68	34	eP		P	13 42 56.5	-0.9		
	comp=Z,16nm,1.1s,mb4.9									
NEW					LR	LR				
	comp=Z,3μm,19.0s,MS5.7									
ANMO	Albuquerque	80.69	50	eP		P	13 42 59.2	+1.4		
	comp=Z,31nm,1.1s,mb5.2									
ANMO					LR	LR				
	comp=Z,2μm,19.0s,MS5.5									
ANMO	Albuquerque	80.69	50	⇑eP		P	13 42 59.5	+1.6		
J15A	Blackfoot	80.70	40	⇑P		P	13 42 57.9	+0.2		
	baz=81,SNR=40									
KTH	Kantishna Hill	80.72	10	eP		P	13 42 54.3	-3.0		

SNY LR LR
comp=N,1μm,19.8s,MS5.4
SNY LR LR
comp=E,1μm,18.6s,MS5.4
SNY LR LR
comp=Z,2μm,19.5s,MS5.4
DCID1 Drake Creek 81.58 40 *e*P **P 13 43 03.5 +1.1**
G15A Dillon 81.60 39 ⇑P **P 13 43 02.3 -0.2**
baz=82,SNR=11
MSO Missoula 81.64 37 *e*P **P 13 43 01.8 -0.8**
comp=Z,38nm,1.1s,mb5.2
REDW Red Top Meadow 81.67 41 *e*P **P 13 43 02.3 -0.6**
comp=Z,49nm,1.2s,mb5.3
E14A Clinton 81.67 37 ⇑P **P 13 43 02.1 -0.7**
baz=82,SNR=33
BSMT Bassoo Peak 81.72 35 P **P 13 43 02.5 -0.5**
DLBC Dease Lake 81.74 21 *e*P **P 13 43 02.6 -0.3**
C13A Hot Springs 81.75 36 ⇓P **P 13 43 02.4 -0.8**
baz=82,SNR=24
J17A Brown Place, J 81.76 41 ⇑P **P 13 43 03.1 -0.2**
baz=82,SNR=9.6
SNOW Snow King Moun 81.78 41 *e*P **P 13 43 04.8 +1.3**
comp=Z,54nm,1.1s,mb5.4
M19A Rock Springs 81.84 43 ⇑P **P 13 43 03.6 -0.2**
baz=82
A12A Yaak River Ran 81.86 34 ⇑P **P 13 43 03.6 -0.2**
baz=82
IMW Indian Meadow 81.89 40 *e*P **P 13 43 04.8 +0.7**
comp=Z,58nm,1.1s,mb5.4
MOOW Moose Ponds 81.93 40 *e*P **P 13 43 04.3 +0.1**
comp=Z,26nm,1.2s,mb5.0
F15A Butte 81.95 38 ⇓P **P 13 43 03.8 -0.5**
baz=82,SNR=19
LOHW Long Hollow 81.95 41 *e*P **P 13 43 06.0 +1.6**
comp=Z,41nm,1.3s,mb5.2
LRM Limekiln Ridge 81.97 38 *e*P **P 13 43 04.5 +0.1**
L19A Farson 82.00 42 ⇓P **P 13 43 04.5 -0.2**
baz=82
D14A Greenough 82.03 37 ⇓P **P 13 43 03.7 -1.0**
baz=82,SNR=30
G16A Moss Hill, Enn 82.04 39 ⇓P **P 13 43 04.6 -0.2**
baz=82,SNR=7.4
QLMT Earthquake Lak 82.06 39 *e*P **P 13 43 04.9 0.0**
CHMT Chamberlain Mo 82.08 37 *e*P **P 13 43 04.3 -0.6**
H16A Russell Place, 82.11 39 ⇓P **P 13 43 05.2 0.0**
baz=82,SNR=32
I17A Pilgram Creek 82.12 40 ⇑P **P 13 43 05.6 +0.4**
baz=82,SNR=8.1
E15A Deer Lodge 82.17 37 ⇑P **P 13 43 04.9 -0.5**
baz=82,SNR=8.1
BW06 Boulder Array 82.19 42 *e*P **P 13 43 05.7 +0.1**
comp=Z,45nm,1.2s,mb5.3
BW06 Boulder Array 82.19 42 ⇑P **P 13 43 05.5 -0.2**
baz=82
B13A Whitefish 82.19 35 ⇓P **P 13 43 05.6 +0.1**
baz=82,SNR=7.5
PDAR Pinedale Array 82.19 42 P **P 13 43 05.5 -0.2**
comp=Z,13nm,1.1s,mb4.8,baz=222,slow=2.0,SNR=15
PDAR LR LR 14 15 37.3
comp=Z,4μm,18.1s,MS5.8,baz=248,slow=33
SMCO Snowmass 82.22 46 *e*P **P 13 43 07.2 +1.3**
comp=Z,46nm,1.1s,mb5.3
YFT Old Faithful 82.23 40 *e*P **P 13 43 06.4 +0.5**
YMR Madison River 82.26 40 *e*P **P 13 43 06.4 +0.4**
comp=Z,93nm,1.2s,mb5.6
LCCM Lewis and Clar 82.31 38 P **P 13 43 05.7 -0.5**
BOZ Bozeman (W) 82.36 38 *e*P **P 13 43 06.4 -0.1**
comp=Z,52nm,1.3s,mb5.3
BOZ Bozeman (W) 82.36 38 *e*P **P 13 43 06.4 -0.1**
BOZ pmax pmax
comp=Z,52nm,1.3s,mb5.3
BOZ Bozeman (W) 82.36 38 ⇑P **P 13 43 06.5 +0.1**
baz=82,SNR=31
H17A Grant Village 82.36 40 ⇑P **P 13 43 07.0 +0.5**
baz=82,SNR=10
F16A Kennard Place, 82.44 38 ⇑P **P 13 43 06.3 -0.6**
baz=83,SNR=8.7
COLA College 82.46 11⇑*i*P **P 13 43 04.6 -1.9**
comp=Z,114nm,0.9s,mb5.8
COLA LR LR
comp=Z,3μm,20.0s,MS5.6
COLA College 82.46 11*c i*P **P 13 43 05.0 -1.5**
YNR Norris Junctio 82.46 40 *e*P **P 13 43 09.1 +2.0**
I18A Diamond G Ranc 82.49 41 ⇓P **P 13 43 07.2 0.0**
baz=83,SNR=7.0
LKWY Lake 82.56 40 *e*P **P 13 43 09.0 +1.5**
comp=Z,52nm,1.0s,mb5.5
LKWY Lake 82.56 40 *e*P **P 13 43 09.0 +1.5**
LKWY pmax pmax
comp=Z,52nm,1.0s,mb5.5
D15A Lincoln 82.57 37 ⇑P **P 13 43 07.3 -0.3**
baz=83,SNR=21
SDCO Great Sand Dun 82.61 48 *e*P **P 13 43 08.8 +0.8**
comp=Z,34nm,1.2s,mb5.3
SDCO LR LR
comp=Z,2μm,20.0s,MS5.5
L20A Wamsutter 82.62 43 ⇓P **P 13 43 07.9 0.0**
baz=83
IMA2 Indian Mountai 82.68 8 *e*P **P 13 43 07.1 -0.5**
G17A Pierce Place, 82.73 39 ⇓P **P 13 43 08.8 +0.4**
baz=83
SEY Seymchan 82.74 345 *e*P **P 13 43 08.5 +0.5**
E16A East Helena 82.80 38 ⇑P **P 13 43 08.3 -0.4**
baz=83,SNR=26
HRY Holter Researc 82.80 37 *e*P **P 13 43 08.2 -0.5**
B14A Marquette Ranc 82.85 36 ⇓P **P 13 43 07.9 -1.1**
baz=83,SNR=30
C15A Salmond Ranch, 82.91 36 ⇑P **P 13 43 08.5 -0.8**
baz=83,SNR=30
F17A Fitzpatrick Pl 83.08 39 ⇓P **P 13 43 10.4 +0.2**
baz=83,SNR=31
A14A Double T Ranch 83.10 35 ⇑P **P 13 43 10.0 -0.2**
baz=83,SNR=22
D16A Dana Ranch, Ca 83.13 37 ⇑P **P 13 43 09.9 -0.5**
baz=83,SNR=29
RWWY Rawlins 83.21 44 *e*P **P 13 43 09.9 -1.1**
comp=Z,100nm,1.2s,mb5.7
QIZ Qiongzhong 83.22 292 P **P 13 43 10.6 -0.9**
QIZ S S 13 53 31.1 -0.9
QIZ SS SS 13 58 56.3 -0.8
QIZ AMB AMB
comp=Z,629nm,4.7s
QIZ LR LR
comp=E,2μm,22.6s
QIZ LR LR
comp=Z,2μm,23.4s,MS5.5
B15A Bradely Ranch, 83.23 36 ⇓P **P 13 43 09.4 -1.5**
baz=83,SNR=7.0
L21A Rawlins 83.23 43 ⇓P **P 13 43 11.0 -0.1**
baz=83
E17A Martinsdale 83.24 38 ⇑P **P 13 43 10.6 -0.4**
baz=83,SNR=6.0
ISCO Idaho Springs 83.44 46 *e*P **P 13 43 12.7 +0.5**
comp=Z,19nm,1.0s,mb5.1
ISCO Idaho Springs 83.44 46 *e*P **P 13 43 12.7 +0.5**
ISCO pmax pmax
comp=Z,19nm,1.0s,mb5.1
G18A Lazy EL Ranch, 83.45 39 ⇓P **P 13 43 11.3 -0.9**
baz=84,SNR=7.8
A15A Johnson Ranch, 83.49 35 ⇑P **P 13 43 11.1 -1.1**
baz=84,SNR=28
DAWY Dawson 83.50 14 *e*P **P 13 43 11.5 -0.5**
RLMT Red Lodge 83.53 40 *e*P **P 13 43 13.1 +0.5**
comp=Z,61nm,1.0s,mb5.7
RLMT Red Lodge 83.53 40 ⇓P **P 13 43 12.3 -0.3**
baz=84,SNR=27
KSI Kapahiang 83.54 268 P **P 13 43 19.8 +6.4**
comp=Z,101nm,0.8s,comp=Z,3μm,mb6.0
GCMT Greycliff 83.62 39 *e*P **P 13 43 12.8 -0.1**
F18A Big Timber 83.65 39 ⇓P **P 13 43 12.8 -0.4**
baz=84,SNR=25
CMIG Matias Romero 83.67 70 P **P 13 43 19.9 +6.0**
comp=Z,4.8nm,1.0s,mb4.6,baz=230,slow=4.2,SNR=3.9
CMIG Matias Romero 83.67 70 P **P 13 43 19.9 +6.0**
D17A Six Diamond Ra 83.70 37 ⇓P **P 13 43 12.7 -0.7**
baz=84,SNR=19
EGAK Eagle 83.71 13 *e*P **P 13 43 12.2 -0.8**
comp=Z,47nm,1.2s,mb5.5
B16A M & M Farms, S 83.76 36 ⇑P **P 13 43 12.6 -1.0**
baz=84,SNR=7.0
E18A Harlowton 83.86 38 ⇑P **P 13 43 13.9 -0.3**
baz=84,SNR=16
C17A Wharram Farm, 83.90 37 ⇓P **P 13 43 13.7 -0.7**
baz=84,SNR=41
PMSA Palmer Station 83.92 156 *e*P **P 13 43 13.0 -1.3**
PMSA LR LR
comp=Z,3μm,22.0s,MS5.7

JCT Junction City 84.00 56 *e*P **P 13 43 15.2 -0.1**
comp=Z,19nm,0.9s,mb5.2
JCT Junction City 84.00 56 *e*P **P 13 43 15.2 -0.1**
JCT pmax pmax
comp=Z,19nm,1.0s,mb5.2
A16A West Butte Ran 84.11 36 ⇑P **P 13 43 14.1 -1.3**
baz=84,SNR=25
PHWY Pilot Hill 84.21 44 *e*P **P 13 43 16.0 -0.1**
AMTX Amarillo 84.22 52 *e*P **P 13 43 16.4 0.0**
comp=Z,79nm,0.9s,mb5.8
D18A Linhart Farms, 84.24 38 ⇑P **P 13 43 15.5 -0.6**
baz=84,SNR=22
COLD Coldfoot 84.25 9 *e*P **P 13 43 15.1 -0.6**
comp=Z,53nm,1.1s,mb5.6
RGRI Rengat 84.66 271 P **P 13 43 23.1 +4.0**
comp=Z,556nm,0.5s
EGMT Eagleton 84.68 37 *e*P **P 13 43 18.2 -0.1**
comp=Z,58nm,0.9s,mb5.7
EGMT Eagleton 84.68 37 ⇓P **P 13 43 17.9 -0.5**
baz=85
BILL Bilibino 84.70 352 *e*P **P 13 43 16.9 -1.1**
BILL LR LR
comp=Z,4μm,22.0s,MS5.8
BILL Bilibino 84.70 352 *e*P **P 13 43 16.8 -1.2**
BILL *e*S S 13 53 28.8 -16
BILL pmax pmax
comp=Z,91nm,2.5s,mb5.5
EDM Edmonton 85.47 31 *e*P **P 13 43 21.3 -0.9**
BJT Baijiatuao 85.77 313 *e*P **P 13 43 25.7 +1.7**
comp=Z,162nm,1.4s,mb6.1
BJT LR LR
comp=Z,2μm,22.0s,MS5.5
BJT Baijiatuao 85.77 313 *e*P **P 13 43 25.7 +1.7**
BJT pmax pmax
comp=Z,162nm,1.4s
BJT MLR MLR
comp=Z,2μm,22.0s
BJI Beijing 85.78 313 P **P 13 43 24.6 +0.6**
BJI SS SS 13 59 35.5 +1.4
BJI AMB AMB
comp=Z,117nm,2.1s,mb5.8
BJI AMB AMB
comp=Z,2μm,3.5s
BJI LR LR
comp=N,984nm,23.1s,MS5.2
BJI LR LR
comp=E,954nm,26.8s,MS5.2
BJI LR LR
comp=Z,2μm,25.6s,MS5.4
LAO LASA Array 86.15 39 *e*P **P 13 43 25.8 +0.1**
comp=Z,104nm,1.1s,mb6.0
RSSD Black Hills 86.39 42 *e*P **P 13 43 27.6 +0.7**
comp=Z,64nm,1.7s,mb5.6
RSSD LR LR
comp=Z,3μm,19.0s,MS5.7
PPI Padang Panjang 86.50 270 P **P 13 43 35.5 +7.3**
comp=Z,26nm,0.8s,comp=Z,1μm,mb5.5
COCO West Island 86.85 258 PFAKE 13 43 40.0 +10
COCO LR LR
comp=Z,2μm,21.0s,MS5.5
HKT Hockley 87.03 58 *e*P **P 13 43 31.0 +0.5**
comp=Z,38nm,1.5s,mb5.4
HKT Hockley 87.03 58 *e*P **P 13 43 31.0 +0.6**
HKT pmax pmax
comp=Z,38nm,1.5s,mb5.4
CBKS Cedar Bluff 87.19 49 *e*P **P 13 43 35.3 +4.3**
comp=Z,23nm,0.8s,mb5.5
CBKS Cedar Bluff 87.19 49 *e*P **P 13 43 35.3 +4.3**
CBKS pmax pmax
comp=Z,23nm,0.8s,mb5.5
HIA Hailar 87.49 323⇑*i*P **P 13 43 32.0 -0.2**
HIA LR LR
comp=Z,5μm,22.0s,MS5.9
TIY Taiyuan 87.56 310⇑*i*P **P 13 43 38.4 +5.6**
TIY AMB AMB
comp=Z,1μm,9.6s
TIY LR LR
comp=N,2μm,20.7s,MS5.5
TIY LR LR
comp=E,996nm,16.1s,MS5.5
TIY LR LR
comp=Z,2μm,20.2s,MS5.4
MAW Mawson 87.74 199 P **P 13 43 35.2 +2.0**
comp=Z,30nm,1.0s,mb5.5,baz=130,slow=6.9,SNR=26
MAW LR LR 14 22 47.3
comp=Z,3μm,18.6s,MS5.8,baz=116,slow=36
DGMT Dagmar 88.17 38 *e*P **P 13 43 35.6 +0.1**
comp=Z,69nm,1.0s,mb5.8
DGMT Dagmar 88.17 38 ⇑P **P 13 43 35.1 -0.4**
baz=88
INK Inuvik 88.35 14 *e*P **P 13 43 33.8 -2.1**
INK Inuvik 88.35 14 *e*P **P 13 43 33.8 -2.1**
INK pmax pmax
comp=Z,2μm,1.2s
GYA Guiyang 88.36 298 P **P 13 43 37.8 +0.9**
GYA PP PP 13 47 07.9 +3.1
GYA PPP 13 49 05.0
GYA SKS 13 54 04.6
GYA S S 13 54 21.8 -0.5
GYA SS SS 14 00 14.7 +2.2
GYA SSS 14 03 46.2
GYA AMB AMB
comp=Z,50nm,0.9s,mb5.7
GYA AMB AMB
comp=Z,170nm,6.3s
GYA LR LR
comp=N,4μm,20.8s,MS5.9
GYA LR LR
comp=E,4μm,22.4s,MS5.9
GYA LR LR
comp=Z,3μm,20.6s,MS5.6
CLNS Chul'man 88.50 331 *e*P **P 13 43 36.4 -0.4**
CLNS pmax pmax
comp=E,8.0nm,1.2s
CLNS pmax pmax
comp=Z,31nm,1.2s,mb5.5
CLNS pmax pmax
comp=N,11nm,1.3s
CLNS MLR MLR
comp=N,2μm,21.0s,MS5.7
CLNS MLR MLR
comp=E,1μm,16.0s,MS5.7
CLNS MLR MLR
comp=Z,3μm,21.0s,MS5.7
NATX Nacogdoches 88.58 57 *e*P **P 13 43 39.4 +1.6**
comp=Z,67nm,1.0s,mb5.9
XAN Xi'an 88.95 306 P **P 13 43 39.8 +0.3**
XAN AP pP 13 43 43.7 -0.1
XAN PP PP 13 47 15.6 +6.2
XAN PPP 13 49 15.9
XAN SKS 13 54 08.7
XAN S S 13 54 30.5 +3.0
XAN AMB AMB
comp=Z,34nm,2.5s,mb5.2
XAN AMB AMB
comp=Z,869nm,10.0s
XAN LR LR
comp=N,328nm,20.7s,MS5.3
XAN LR LR
comp=E,1μm,20.0s,MS5.3
XAN LR LR
comp=Z,2μm,20.0s,MS5.6
PLCA Paso Flores 89.20 132 P **P 13 43 44.6 +4.0**
comp=Z,5.4nm,1.2s,mb4.8,baz=323,slow=4.5,SNR=2.5
PLCA LR LR 14 14 50.0
comp=Z,3μm,20.7s,MS5.7,baz=189,slow=30
PLCA Paso Flores 89.20 132 P **P 13 43 40.2 -0.5**
comp=Z,17nm,1.5s,mb5.2
PLCA LR LR
comp=Z,2μm,20.0s,MS5.6
PLCA Paso Flores 89.20 132 P **P 13 43 40.2 -0.5**
PLCA pmax pmax
comp=Z,17nm,1.5s
PLCA MLR MLR
comp=Z,2μm,20.0s
HHC Hu-ho-hao-te 89.34 313 *e*P **P 13 43 42.4 +1.3**
HHC AP pP 13 43 45.8 +0.3
HHC XP sP 13 43 48.2 +1.2
HHC PP PP 13 47 16.3 +4.0
HHC SKS 13 54 09.0
HHC S S 13 54 29.2 -1.6
HHC XS sS 13 54 36.4 -1.6
HHC PS PS 13 55 40.5 +3.2
HHC SS SS 14 00 28.4 +2.3
HHC AMB AMB
comp=Z,94nm,1.6s,mb5.9

HHC LR LR
comp=N,803nm,20.2s,MS5.3
HHC LR LR
comp=E,882nm,25.0s,MS5.3
HHC LR LR
comp=Z,1μm,20.2s,MS5.4
YAK Yakutsk 89.36 337 *e*P **P 13 43 39.6 -1.1**
comp=Z,41nm,1.0s,mb5.7
YAK LR LR
comp=Z,2μm,20.0s,MS5.5
YAK Yakutsk 89.36 337 *e*P **P 13 43 38.7 -2.0**
YAK *e**PP pP 13 43 44.7 -0.4
YAK *e* 13 47 07.8
YAK *e*S SKSac 13 54 06.0 -4.3
YAK *e*PS PS 13 55 24.1 -13
YAK pmax pmax
comp=Z,19nm,1.1s,mb5.3
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,88nm,2.5s
YAK pmax pmax
comp=Z,516nm,4.5s
YAK pmax pmax
comp=E,252nm,4.7s
YAK smax
comp=N,268nm,4.3s
YAK smax
comp=E,286nm,4.0s
YKA Yellowknife Ar 90.13 23 P **P 13 43 43.1 -1.2**
comp=E,10.0nm,0.9s,mb5.1,baz=232,slow=4.3,SNR=13
YKA LR LR 14 17 31.0
comp=E,688nm,20.4s,MS5.1,baz=175,slow=31
BTO Baotou 90.35 312 *e*P **P 13 43 47.0 +1.1**
JTS JuntasAbangare 90.96 80 P **P 13 43 54.7 +5.3**
comp=E,44nm,1.0s,mb5.7,baz=294,slow=3.9,SNR=19
JTS JuntasAbangare 90.96 80 P **P 13 43 56.9 +7.6**
comp=E,278nm,1.1s,mb6.5,SNR=5.3
JTS JuntasAbangare 90.96 80 *e*P **P 13 43 55.8 +6.5**
NST Nakhon Sawan 91.09 286 P **P 13 43 40.0 -10**
KMI Kunming 91.34 296 P **P 13 43 52.5 +1.6**
KMI AP pP 13 43 54.9 -0.3
KMI PP PP 13 47 34.6 +6.0
KMI PPP 13 49 34.7
KMI SKS 13 54 21.1
KMI S S 13 54 48.0 -2.0
KMI PS PS 13 56 01.5 +1.3
KMI SS SS 14 00 54.9 -0.9
KMI SSS 14 04 33.5
KMI AMB AMB
comp=Z,15nm,1.9s,mb5.0
KMI AMB AMB
comp=Z,682nm,5.7s
KMI LR LR
comp=N,825nm,16.8s,MS5.5
KMI LR LR
comp=E,1μm,16.8s,MS5.5
KMI LR LR
comp=Z,1μm,19.2s,MS5.4
UALR University of 91.38 54 *e*P **P 13 43 55.9 +5.1**
comp=Z,23nm,1.0s,mb5.5
NANT Nan 91.42 289 P **P 13 43 49.0 -2.3**
CD2 Chengdu 92.13 301 *e*P **P 13 43 54.0 -0.4**
CD2 AP pP 13 43 58.8 +0.1
CD2 XP sP 13 44 01.2 +0.9
CD2 PP PP 13 47 36.2 +1.5
CD2 SKS 13 54 24.7
CD2 S S 13 54 52.7 -4.2
CD2 SS SS 14 01 04.8 -2.1
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.6
CD2 AMB AMB
comp=Z,280nm,6.0s
CD2 LR LR
comp=N,2μm,19.2s,MS5.7
CD2 LR LR
comp=E,2μm,21.6s,MS5.7
CD2 LR LR
comp=Z,2μm,16.8s,MS5.6
CIT Chita 92.22 324 *e*P **P 13 43 54.6 +0.3**
CIT *e* 13 44 09.8
CIT pmax pmax
comp=Z,310nm,2.4s,mb6.2
SYO Syowa Base 92.50 191⇓*e*P **P 13 43 54.6 -0.8**
BDT Bhumibol Dam 92.55 287 P **P 13 43 58.0 +1.4**
EFI East Falkland 92.61 146 PFAKE 13 44 10.0 +14
EFI LR LR
comp=Z,4μm,20.0s,MS5.8
VNA3 Neumayer Olymp 92.68 175 *e* **P 13 44 01.8 +5.6**
VNA3 *e* pP 13 44 06.2 +5.7
CMAR Chiang Mai Arr 92.93 288 P **P 13 43 59.8 +1.5**
comp=Z,4.3nm,0.8s,mb4.9,baz=89,slow=2.8,SNR=30
CMAR LR LR 14 20 27.5
comp=Z,1μm,21.2s,MS5.4,baz=279,slow=32
CHG Chiang Mai 93.02 289 ⇓P pP 13 44 08.9 +5.8
comp=Z,14nm,0.9s
CHTO Chiang Mai 93.02 289 *e*P **P 13 44 00.0 +1.3**
comp=Z,12nm,0.9s,mb5.3
CHTO Chiang Mai 93.02 289 *e*P **P 13 44 00.0 +1.2**
CHTO pmax pmax
comp=Z,12nm,0.9s,mb5.3
VNA2 Neumayer--Watz 93.18 175 *e* **P 13 44 04.9 +6.4**
VNA2 *e* pP 13 44 09.0 +6.2
CCM Cathedral Cave 93.21 52 *e*P **P 13 43 58.0 -1.1**
comp=Z,16nm,1.1s,mb5.3
CCM Cathedral Cave 93.21 52 *e*P **P 13 43 58.0 -1.2**
CCM pmax pmax
comp=Z,16nm,1.1s,mb5.4
VNA1 Neumayer--Stat 93.37 175 *e* **P 13 44 05.3 +5.9**
VNA1 *e* pP 13 44 09.8 +6.0
LZH Lanzhou 93.54 306 *e*P **P 13 44 02.5 +1.7**
LZH AP pP 13 44 05.2 +0.1
LZH XP sP 13 44 06.5 -0.2
LZH PP PP 13 47 50.0 +4.3
LZH SKS 13 54 34.2
LZH S S 13 55 09.3 +0.1
LZH XS sS 13 55 15.5 -0.9
LZH SS SS 14 01 31.0 +4.1
LZH AMB AMB
comp=Z,60nm,1.1s,mb5.9
LZH AMB AMB
comp=Z,272nm,4.0s
LZH LR LR
comp=E,2μm,17.6s
LZH LR LR
comp=Z,2μm,18.5s,MS5.6
FVM French Village 93.80 52 *e*P **P 13 44 03.5 +1.6**
comp=Z,34nm,1.3s,mb5.6
FVM French Village 93.80 52 *e*P **P 13 44 03.6 +1.7**
FVM pmax pmax
comp=Z,34nm,1.3s,mb5.6
NVL N'lazarevskaya 93.83 182 P **P 13 44 05.1 +3.6**
NVL pmax pmax
comp=Z,30nm,1.4s,mb5.5
ULM Lac du Bonnet 93.88 39 P **P 13 44 00.2 -1.8**
comp=Z,5.4nm,1.0s,mb5.0,baz=185,slow=3.2,SNR=3.2
ULM LR LR 14 22 09.9
comp=Z,3μm,18.5s,MS5.8,baz=254,slow=33
ULM Lac du Bonnet 93.88 39 P **P 13 44 00.2 -1.8**
ULM LR LR 14 22 09.9
CFAA Coronel Fontan 94.14 124 P **P 13 44 05.0 +1.3**
comp=Z,0.2nm,0.4s,baz=226,slow=12,SNR=2.8
ULN Ulaanbaatar 94.73 318 *e*P **P 13 44 06.9 +1.0**
comp=Z,36nm,1.3s,mb5.6
ULN Ulaanbaatar 94.73 318⇑*e*P **P 13 44 06.2 +0.2**
ULN Ulaanbaatar 94.73 318 P **P 13 44 07.6 +1.6**
SONM Songino Array 95.15 318 P **P 13 44 07.3 -0.6**
comp=Z,3.5nm,1.0s,mb4.7,baz=116,slow=3.7,SNR=21
SONM PP PP 13 47 56.2 -1.7
comp=Z,2.8nm,1.1s,baz=135,slow=2.9,SNR=7.8
SONM LR LR 14 21 53.3
comp=Z,2μm,21.8s,MS5.6,baz=140,slow=32
SONM Songino Array 95.15 318 P **P 13 44 07.3 -0.6**
SONM 13 47 56.2
TIXI Tiksi 95.23 344 *e*P **P 13 44 06.5 -1.2**
comp=Z,16nm,1.3s,mb5.3
TIXI Tiksi 95.23 344 *e*P **P 13 44 07.2 -0.5**
TIXI pmax pmax
comp=Z,15nm,1.4s,mb5.2
TIXI MLR MLR
comp=Z,1μm,18.0s,MS5.5
JFWS Jewell Farm 95.33 47 *e*P **P 13 44 07.0 -1.8**
comp=Z,32nm,0.8s,mb5.8

JFWS Jewell Farm 95.33 47 *e*P **P** **13 44 07.0 -1.8**
JFWS pmax pmax
comp=Z,32nm,0.9s,mb5.8
HDIL Hopedale 95.36 50 *e*P **P** **13 44 12.9 +3.8**
comp=Z,28nm,0.9s,mb5.7
GTA Gaotai 97.49 309 *e*P **P** **13 44 19.2 +0.5**
GTA AP pP 13 44 23.4 +0.3
GTA XP sP 13 44 26.5 +1.9
GTA PP PP 13 48 15.3 -1.0
GTA SKS 13 54 55.6
GTA S S 13 55 41.7 -1.6
GTA SS SS 14 02 20.8 -2.1
GTA AMB AMB
comp=Z,13nm,2.2s,mb5.0
GTA AMB AMB
comp=Z,479nm,9.6s
GTA LR LR
comp=N,1μm,20.4s,MS5.6
GTA LR LR
comp=E,2μm,22.2s,MS5.6
GTA LR LR
comp=Z,3μm,22.8s,MS5.7
IRK Irkutsk 97.70 322 *e*P **P** **13 44 16.0 -3.3**
IRK pmax pmax
comp=Z,41nm,3.0s
ZAK Zakamensk 97.82 320 *e*P **P** **13 44 19.6 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.5s,mb5.0
TLY Talaya 97.93 321 *e*P **P** **13 44 20.2 -0.2**
TLY Talaya 97.93 321 *e*P **P** **13 44 20.1 -0.3**
TLY pmax pmax
comp=Z,7.0nm,1.3s,mb5.0
LPAZ La Paz 99.50 110 LR LR 14 20 11.6
comp=Z,744nm,20.6s,MS5.2,baz=270,slow=30
ROSC El Rosal 99.73 88 LR LR 14 20 02.5
comp=Z,1μm,21.7s,MS5.4,baz=191,slow=30
LSA Lhasa 102.43 298 PFAKE 13 44 50.0 +9.5
LSA LR LR
comp=Z,670nm,21.0s,MS5.1
WMQ Urumqi 107.18 312 *e*PDIF Pdif 13 45 03.5 +1.9
WMQ PP PP 13 49 33.0 +4.1
WMQ PS PS 13 58 49.0 -0.9
WMQ SS SS 14 04 37.0 +0.4
WMQ PP PP
comp=Z,452nm,8.0s
WMQ LR LR
comp=N,897nm,24.0s,MS5.4
WMQ LR LR
comp=E,675nm,22.0s,MS5.4
WMQ LR LR
comp=Z,812nm,22.0s,MS5.2
ZALV Zalesovo Beam 109.52 322 Pdiff Pdif 13 45 11.4 -0.7
comp=Z,0.5nm,0.4s,baz=134,slow=4.3,SNR=4.6
ZALV PKiKP PKiKP 13 49 14.4 -0.6
comp=Z,1.5nm,0.8s,baz=11,slow=0.8,SNR=5.2
MK31 Makanchi Array 111.13 315 *e*PKPdf PKiKP 13 49 16.1 -2.1
MKAR Makanchi Array 111.13 315 Pdiff Pdif 13 45 19.3 +0.1
comp=Z,0.4nm,0.8s,baz=90,slow=2.9,SNR=3.3
MKAR PKiKP PKiKP 13 49 17.5 -0.8
comp=Z,1.4nm,0.8s,baz=64,slow=2.8,SNR=8.0
MKAR PP PP 13 49 53.2 -4.3
comp=Z,1.0nm,0.8s,baz=96,slow=6.2,SNR=3.9
KURK Kurchatov 113.44 319 *e*PKPdf PKiKP 13 49 21.0 -1.5
BRVK Borovoye 118.23 322⇑ *e*PKP PKPdf 13 49 30.7 -1.0
KBL Kabul 121.47 301 *e*P PKPdf 13 49 38.0 -0.5
SVE Sverdlovsk 122.41 328 *i* PKIKP PKPdf 13 49 40.0 +0.4
SVE pmax pmax
comp=Z,17nm,1.4s
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.8
ARU Arti 123.62 328⇑ *e*PKP PKPdf 13 49 41.3 -0.6
ARU LR LR
comp=Z,3μm,20.0s,MS6.0
ARU Arti 123.62 328 *i* PKIKP PKPdf 13 49 41.1 -0.8
ARU 13 51 22.1
ARU SS SS 14 08 03.0 -8.1
ARU MLR MLR
comp=Z,3μm,22.0s,MS5.9
ARCES ARCESS Array B 124.80 352 PKP PKPdf 13 49 41.8 -2.0
comp=Z,5.2nm,0.9s,baz=35,slow=2.2,SNR=3.3
KLMR Klimovskoe 129.03 340 *e*PKIKP PKPdf 13 49 51.7 -0.4
BOSA Boshof 132.63 202 PKP PKPdf 13 50 00.1 0.0
comp=Z,3.5nm,0.8s,baz=205,slow=5.4,SNR=5.1
OBN Obninsk 134.37 337 PFAKE 13 50 10.0 +7.6
OBN LR LR
comp=Z,2μm,20.0s,MS5.9
OBN Obninsk 134.37 337⇓ *i*PKIKP PKPdf 13 50 03.7 +1.3
OBN *e* 13 52 31.5
OBN pmax pmax
comp=Z,14nm,0.7s
OBN MLR MLR
comp=Z,2μm,20.0s,MS5.7
NB2 NORSAR Subarra134.47 357 PKP PKPdf 13 50 00.8 -1.6
comp=Z,8.8nm,1.4s,baz=11,slow=4.0
NOA NORSAR Array B 134.47 357 PKP PKPdf 13 50 00.8 -1.7
comp=Z,2.0nm,0.9s,baz=29,slow=2.0,SNR=3.8
VSR Storozhevoye 136.03 331 *e*PKIKP PKPdf 13 50 07.5 +1.9
VSR pmax pmax
comp=Z,3.0nm,0.5s
VSR pmax pmax
comp=N,7.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.4s
VORD Divnogorie 136.14 331 *e*PKIKP PKPdf 13 50 05.9 +0.1
VORD pmax pmax
comp=Z,4.0nm,0.8s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.8s
KIV Kislovodsk 138.50 320 PFAKE 13 50 20.0 +10
KIV LR LR
comp=Z,2μm,19.0s,MS5.8
KIV Kislovodsk 138.50 320⇓ *i*PKIKP PKPdf 13 50 12.0 +1.6
KIV *e* 13 53 01.1
KIV pmax pmax
comp=Z,5.0nm,1.1s
GNI Garni 138.98 314 PFAKE 13 50 20.0 +8.6
GNI LR LR
comp=Z,1μm,20.0s,MS5.6
DAGI Agillar 140.46 317 *i* P PKPdf 13 50 12.9 -1.2
SOC Sochi 140.50 322 *i* PKIKP PKPdf 13 50 13.9 -0.2
SOC *e* 13 53 08.7
SOC *e*SS SS 14 11 36.6 -0.5
SOC *e*SSS 14 16 41.8
SOC MLR MLR
comp=Z,966nm,18.0s,MS5.6
AKASG Malin Array Be 140.59 338 PKhKP 13 50 06.9
comp=Z,0.4nm,0.3s,baz=45,slow=4.1,SNR=5.2
AKASG PKP PKPdf 13 50 11.6 -2.4
comp=Z,0.4nm,0.3s,baz=31,slow=2.0,SNR=6.3
AKASG Malin Array Be 140.59 338 PKP PKPdf 13 50 06.9 -7.1
AKASG PKP PKPdf 13 50 11.6 -2.5
MSL Mosul 141.70 310 *ex* x 13 50 12.0
MSL *ex* x 13 53 55.0
MARD Mardin 143.01 312 *i* P PKPdf 13 50 16.7 -2.1
LVV L'vov 143.09 341 *e*PKHKP 13 50 05.0
PTK Pertek 143.23 316 *e*P PKPdf 13 50 13.8 -5.3
SVRC Sivrice-ELAZID 143.54 315 *e*P PKPdf 13 50 15.7 -4.0
KEMA Kemaliye 143.63 317 *i* P PKPdf 13 50 16.8 -3.0
KWP Kalwaria 143.65 343 *e*PKP PKPdf 13 50 17.6 -2.0
CLZ Clausthal 143.69 356 *e*PKPbc PKPdf 13 50 17.8 -1.7
KIS Kishinev 143.73 334 *e*PKIKP PKPdf 13 50 28.0 +8.2
KIS *e* 13 53 34.0
KIS MLR MLR
comp=Z,2μm,20.0s,MS5.9
KIS MLR MLR
comp=Z,2μm,24.0s
PDA Ponta Delgada 143.75 46 *e*LR LR 14 38 40.0
CMLA Cha da Macela 143.84 46 *e*SS SS 14 11 38.1 -38
CMLA *e*LQ 14 30 27.6
CMLA *e*LR LR 14 38 11.9
OJC Ojcow 143.88 346 *e*PKPdf PKPdf 13 50 17.2 -2.7
TSUM Tsumeb 143.89 197 *e*PKPdf PKPdf 13 50 19.8 -1.1
KSP Ksiaz 143.99 350 *e*PKIKP PKPdf 13 50 19.2 -0.9
KSP *e* 13 50 25.7
KSP MLR MLR
comp=Z,4μm,22.5s,MS6.1
CLL Collm 144.00 353 *e*PKP PKPdf 13 50 18.0 -2.1
CLL *i* 13 50 26.6
CLL LR LR
comp=Z,2μm,19.7s,MS5.8
CLL Collm 144.00 353 *e*PKIKP PKPdf 13 50 18.0 -2.1
CLL *i* 13 50 26.6
CLL pmax pmax
comp=Z,13nm,1.0s
CLL MLR MLR
comp=Z,2μm,19.7s,MS5.8
CLL Collm 144.00 353 *e*PKPdf PKPdf 13 50 18.0 -2.1
comp=Z,13nm,1.0s
CLL *i* pPKiKP 13 50 26.6
CLL *e*PP PP 13 53 31.0 -2.0
CLL *e*SS SS 14 12 18.0 +1.9
CLL *e*SSS 14 17 45.0
CLL LmH 14 55 00.0
comp=N,1μm,21.4s
CLL LmH 14 55 00.0
comp=E,500nm,19.5s
BUG Bochum--Univer 144.20 360 *e*PKPbc PKPdf 13 50 17.2 -3.2
SVSK Karacayir 144.25 319 *e*P PKPdf 13 50 18.5 -2.4
DARE Darende-Malaty 144.25 317 *e*P PKPdf 13 50 22.4 +1.5
STHS Stebnicka Huta 144.25 344 *e*PKP PKPdf 13 50 18.1 -2.5
BRG Berggiesshubel 144.32 352 *e*PKP PKPdf 13 50 25.3 +4.7
BRG LR LR
comp=Z,1μm,16.7s,MS5.7
BRG Berggiesshubel 144.32 352 *e*PKIKP PKPdf 13 50 25.3 +4.7
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG MLR MLR
comp=N,764nm,17.7s
BRG MLR MLR
comp=E,398nm,26.6s
BRG MLR MLR
comp=Z,1μm,16.7s,MS5.7
BRG Berggiesshubel 144.32 352 *e*PKPbc PKPdf 13 50 18.3 -2.3
URFA Urfa 144.33 314 *e*P PKPdf 13 50 20.4 -0.7
UPC Upice 144.37 350 *e*PKP PKPdf 13 50 20.2 -0.5
DPC Dobruska-Polom 144.46 350 *e*PKP PKPdf 13 50 19.6 -1.3
DPC *ep*PKP pPKPdf 13 50 25.2 -0.2
DPC AMS AMS 14 52 50.0
comp=Z,2μm,22.4s
NIE Niedzica 144.50 345 *e*PKPdf PKPdf 13 50 21.4 +0.4
AKCD Akcadag 144.52 316 *i* P PKPdf 13 50 21.2 -0.2
PVCC Panska Ves 144.57 352 AMS AMS 14 52 30.0
comp=Z,2μm,19.9s
BUR08 Bucovina Ar. S 144.60 338 *e*PKPdf PKPdf 13 50 19.5 -1.8
OKC Ostrava-Krasne 144.60 347 *e*PKP PKPdf 13 50 20.4 -0.8
OKC *e* 13 50 24.0
OKC Ostrava-Krasne 144.60 347 *e*PKP PKPdf 13 50 20.4 -0.8
OKC *ep*PKP pPKPdf 13 50 24.0 -1.6
OKC AMS AMS 14 54 00.0
comp=Z,2μm,17.5s
BURAR Bucovina Array 144.62 338⇑ P PKPdf 13 50 20.4 -0.9
BURAR Bucovina Array 144.62 338⇑ *i*P PKPdf 13 50 20.4 -0.9
ATAB Bozova 144.68 314 *i* P PKPdf 13 50 21.6 -0.1
BYBT Boyabat 144.70 323 *e*P PKPdf 13 50 19.9 -1.7
UBBA Unterbreizbach 144.74 357 *e*PKPbc PKPdf 13 50 18.6 -2.8
MORC Moravsky Berou 144.78 348⇑ P PKPdf 13 50 21.1 -0.4
MORC Moravsky Berou 144.78 348 PKIKP PKPdf 13 50 22.1 +0.6
MORC Moravsky Berou 144.78 348⇑ *i*P PKPdf 13 50 21.1 -0.4
UCC Uccle 144.79 3 PKP PKPdf 13 50 20.7 -0.8
MOX Moxa 144.79 355 *e*PKP PKPdf 13 50 21.5 0.0
comp=Z,86nm,1.9s
MOX pmax pmax
comp=Z,2μm,22.0s
MOX Moxa 144.79 355 *e*PKIKP PKPdf 13 50 21.5 0.0
MOX pmax pmax
comp=Z,86nm,1.9s
MOX MLR MLR
comp=Z,2μm,22.0s,MS5.8
MOX Moxa 144.79 355 *e*PKPbc PKPdf 13 50 19.6 -1.9
BZK Bozkurt 144.82 324 *e*P PKPdf 13 50 20.4 -1.4
HGN Heimansgroeve 144.87 1 *e*PKP PKPdf 13 50 19.9 -1.7
comp=Z,61nm,2.6s
MENF Menczas 144.88 5 PKP PKPdf 13 50 16.3 -5.3
WERD Werda 144.92 354 *e*PKPbc PKPdf 13 50 19.9 -1.8
TANN Tannenbergstha 144.94 354 *e*PKPbc PKPdf 13 50 20.2 -1.5
MEM Membach 145.03 1 PKP PKPdf 13 50 20.9 -1.0
SNF Seneffe 145.07 3 PKP PKPdf 13 50 21.1 -0.9
WERN Wernitzgruen 145.07 354 *e*PKPbc PKPbc 13 50 21.1 -0.3
PRU Pruhonice 145.10 351 *e*PKP PKPdf 13 50 21.0 -1.0
PRU AMS AMS 14 52 50.0
comp=Z,2μm,19.7s
NKC Novy Kostel 145.12 354 *e*PKP PKPdf 13 50 21.3 -0.8
SARI SarD1z-Kayseri 145.13 317 *e*P PKPbc 13 50 24.5 +2.5
BCLA Clavier 145.20 2 PKP PKPdf 13 50 21.3 -0.9
CTKT Corum 145.21 321 *i* P PKPbc 13 50 23.4 +1.2
PINB Pinarbasi 145.32 317 *i* P PKPbc 13 50 23.5 +0.9
MANZ Manzenberg 145.40 354 *e*PKPbc PKPbc 13 50 22.0 -0.4
TNS Taunus Mts 145.40 358 *e*PKPbc PKPbc 13 50 21.9 -0.5
TOS Toqya 145.40 323 *e*P PKPbc 13 50 23.2 +0.4
VRAC Vranov 145.42 349⇑ P PKPbc 13 50 22.6 +0.1
VRAC Vranov 145.42 349 PKIKP PKPdf 13 50 22.9 +0.3
VRAC Vranov 145.42 349⇑ *i*P PKPbc 13 50 22.6 +0.1
BALT Daday 145.45 324 *i* P PKPbc 13 50 24.8 +1.9
DOU Dourbes 145.50 3 PKP PKPdf 13 50 22.3 -0.4
GIVF Givet 145.50 2⇑ *i*PKP1 PKPbc 13 50 21.9 -0.9
comp=Z,169nm,1.4s
VRI Vrincioaia 145.50 335⇑ *i*P PKPdf 13 50 23.5 +0.6
BAIF Baives 145.52 3⇑ *i*PKP1 PKPbc 13 50 22.2 -0.6
comp=Z,299nm,1.5s
PLOR Plostina 145.55 335⇑ *i*P PKPdf 13 50 23.5 +0.6
CORM Corum 145.57 321 *e*P PKPdf 13 50 23.2 0.0
GAZ Gaziantep 145.58 314 *e*P PKPdf 13 50 24.8 +1.5
BNN Bunyan 145.59 318 *e*P PKPdf 13 50 24.6 +1.4
ROTZ Rotzenmuhle 145.61 354 *e*PKPbc PKPbc 13 50 22.9 -0.2
KMRS Kahramanmaras 145.62 315 *e*P PKPdf 13 50 24.6 +1.2
TREC Trest 145.63 350 *e*PKP PKPdf 13 50 22.6 -0.4
TREC *ep*PKP pPKPdf 13 50 27.8 +0.4
TREC AMS AMS 14 52 30.0
comp=Z,2μm,20.0s
VYHS Vyhne 145.72 346 *e*PKP PKPdf 13 50 23.1 0.0
KMBO Kilima Mbogo 145.72 244 PKPbc PKPbc 13 50 25.6 +1.0
comp=Z,28nm,1.1s,baz=103,slow=1.9,SNR=42
KOLL Kolacno 145.74 346 *e*PKP PKPdf 13 50 23.9 +0.7
ABH Alteburg 145.76 359 PKP PKPdf 13 50 23.0 -0.2
GRF Grafenberg Arr 145.77 355 *e*PKIKP PKPdf 13 50 23.4 +0.2
GRF *e* 13 53 47.0
GRF Grafenberg Arr 145.77 355 *e*PKPbc PKPbc 13 50 23.4 -0.2
GRF *e*PP PP 13 53 47.0 +3.4
GRF *e*L 15 01 00.0
comp=Z,2μm,19.4s
TIRR Tirgusor 145.90 332 PKIKP PKPab 13 50 26.5 +1.9
TIRR Tirgusor 145.90 332⇑ *i*P PKPdf 13 50 25.0 +1.4
CANT Cankiri 145.91 322 *e*P PKPdf 13 50 25.1 +1.3
HARR Harsova 145.94 333 PKIKP PKPdf 13 50 25.1 +1.5
RUP Ruppelstein 145.94 360 PKP PKPdf 13 50 23.7 +0.2
ANDN Andirin 145.96 316 *i* P PKPdf 13 50 24.0 +0.1
WLF Walferdange 145.98 1 PKP PKPdf 13 50 24.6 +1.0
WLF Walferdange 145.98 1 *e*PKP2 PKPab 13 50 23.8 -0.9
WLF Walferdange 145.98 1 *e*PKPbc PKPbc 13 50 24.2 0.0
PSZ Piszkesteto 145.99 344 PKIKP PKPdf 13 50 25.3 +1.7
PSZ Piszkesteto 145.99 344⇓ *e*PKP PKPdf 13 50 25.0 +1.4
PSZ Piszkesteto 145.99 344⇑ *i*P PKPdf 13 50 22.9 -0.7
TOD Tromm 146.00 358 PKP PKPdf 13 50 23.4 -0.2
SMOL Smolenice 146.01 347 *e*PKP PKPdf 13 50 25.3 +1.7
SAFT Safranbolu 146.04 324 *e*P PKPdf 13 50 25.5 +1.6
CDAG Cicekdag 146.07 320 *i* P PKPdf 13 50 25.0 +1.0
KHC Kasperske Hory 146.07 352 *e*PKP PKPdf 13 50 24.3 +0.6
KHC *ep*PKP pPKPdf 13 50 29.5 +1.3
KHC AMS AMS 14 58 20.0
comp=Z,3μm,18.8s
ELDT Eldivan 146.10 322 *i* P PKPdf 13 50 25.0 +1.0
MLR Muntele Rosu 146.12 336⇓ P PKPab 13 50 26.3 +0.9
MLR Muntele Rosu 146.12 336⇓ *i*P PKPab 13 50 26.3 +0.9
WET Wettzell 146.15 353 *e*PKPbc PKPbc 13 50 24.7 -0.1
MODS Modra-Piesok 146.17 348 *e*PKP PKPdf 13 50 25.1 +1.2
MODS Modra-Piesok 146.17 348 *e*PKP PKPdf 13 50 25.0 +1.1
DRGR 146.18 340⇓ P PKPdf 13 50 24.4 +0.5
DRGR 146.18 340⇓ *i*P PKPdf 13 50 24.5 +0.5
ROSF Rostrenen 146.26 12 *e*PKP1 PKPbc 13 50 23.8 -1.3
comp=Z,101nm,1.4s
AVNT Avonos 146.26 319 *i* P PKPdf 13 50 23.7 -0.7
KTD Kalmit 146.31 359 PKP PKPdf 13 50 24.5 +0.4
GEC2 GERESS Array S 146.34 352 *e*PKPbc PKPbc 13 50 25.0 -0.3
GERES GERESS Array B 146.34 352 PKPbc PKPbc 13 50 25.0 -0.3
comp=Z,17nm,1.0s,baz=29,slow=3.0,SNR=57
FLN La Foliniere 146.34 9 *e*PKP1 PKPbc 13 50 24.5 -0.9
FLN *e*MLR MLR
comp=Z,2μm,20.0s,MS5.6
FLN La Foliniere 146.34 9 *e*PKIKP PKPdf 13 50 24.5 +0.3
FLN MLR MLR
comp=Z,2μm,20.0s,MS5.9
ZST Bratislava 146.38 348 *e*PKP PKPdf 13 50 25.0 +0.7
ZST *e* 13 50 32.0
ZST LR LR
comp=Z,500nm,21.5s,MS5.3
ZST Bratislava 146.38 348 *e*PKP PKPdf 13 50 25.0 +0.7
ZST *e* 13 50 32.0
BR131 Keskin Array S 146.45 321 *e*PKPbc PKPbc 13 50 26.1 +0.1
SGMF Saint Gilles 146.48 11 *e*PKP1 PKPdf 13 50 24.5 +0.1
VOIR 146.52 337⇓ P PKPab 13 50 26.8 -0.1
VOIR 146.52 337⇓ *i*P PKPab 13 50 26.8 -0.2
LDF La Druitiere 146.55 8 *e*PKP1 PKPdf 13 50 24.6 0.0
BUD Budapest 146.61 345⇓ *e*PKP PKPab 13 50 27.2 0.0
KAMT Kaman 146.63 321 *e*P PKPab 13 50 26.5 -1.1
GRR Gorron 146.64 9 *e*PKP1 PKPbc 13 50 25.3 -1.0
LANF Langenberg 146.66 359 PKP PKPdf 13 50 25.6 +0.9
CEYT Ceyhan 146.66 315 *e*P PKPdf 13 50 24.6 -0.5
QUIF Quistinic 146.68 12 *e*PKP1 PKPbc 13 50 25.2 -1.2
comp=Z,104nm,1.3s
NIG Nigde 146.81 318 *e*P PKPbc 13 50 27.4 +0.3
STU Stuttgart 146.82 357 *e*PKPbc PKPbc 13 50 27.6 +0.8
SGKT Sivrigoynuk 146.84 324 *i* P PKPbc 13 50 27.6 +0.5
ANTO Ankara 146.87 322 *e*P PKPdf 13 50 26.2 +0.9
ANTO Ankara 146.87 322⇑ *i*P PKPbc 13 50 28.0 +0.8
LOD Lodumlu 146.87 322 *e*P PKPdf 13 50 22.7 -2.7
CONA Conrad Observa 146.88 349⇓ *i*PKPab PKPbc 13 50 27.1 +0.1
comp=Z,36nm,1.1s,SNR=17
CSNA Conrad Observa 146.88 349⇑ *i*PKPab PKPbc 13 50 27.2 +0.2
comp=Z,33nm,1.1s
SOP Sopron 146.98 348⇑ *e*PKP PKPbc 13 50 27.4 +0.1
KARA Karaisali 146.99 316 *e*P PKPbc 13 50 27.4 -0.3
MEZF Maizieres J'vi 147.11 2 *e*PKP1 PKPbc 13 50 27.3 -0.3
comp=Z,144nm,1.4s
MOA Molln 147.23 351⇑ *i*pPKPdf PKPbc 13 50 27.9 -0.1
comp=Z,36nm,1.0s,SNR=13
CDF Champ du Feu 147.23 360 *e*PKP1 PKPbc 13 50 27.6 -0.3
comp=Z,149nm,1.2s
FUR Furstenfeldbru 147.28 355 *e*PKPbc PKPbc 13 50 28.9 +0.8
BFO Black Forest 147.30 358 *e*PKPbc PKPbc 13 50 27.3 -0.8
PRD Provadia 147.34 332 P PKPbc 13 50 28.5 +0.1
GZR Gura Zlata 147.38 339⇑ P PKPab 13 50 31.2 +0.9
GZR Gura Zlata 147.38 339⇑ *i*P PKPab 13 50 31.2 +0.9
ECH Echery 147.43 360 PKP PKPdf 13 50 27.3 +1.3
ECH Echery 147.43 360 *e*PKP2 PKPbc 13 50 28.1 -0.4
LIBD Limburg 147.49 359 PKP PKPbc 13 50 28.6 -0.1
SPAK Spaichingen-Ko 147.51 358 PKP PKPbc 13 50 28.2 -0.5
RJOB Jochberg 147.54 353 *e*PKPbc PKPbc 13 50 28.7 -0.1
MERS Mersin 147.56 316 *e*P PKPdf 13 50 27.9 +1.2
BZS Buzias 147.57 341⇑ P PKPbc 13 50 29.3 +0.3
BZS Buzias 147.57 341⇑ *i*P PKPbc 13 50 29.3 +0.3
ARSA Arzberg 147.59 349⇑ *i*pPKPdf PKPbc 13 50 28.7 -0.3
comp=Z,25nm,1.2s,SNR=7.6
HAU Haudompre 147.64 1 *e*PKP1 PKPbc 13 50 28.6 -0.5
comp=Z,100nm,1.0s
HAU *e*MLR MLR
comp=Z,2μm,20.0s,MS5.5
HAU Haudompre 147.64 1 *e*PKP2 PKPbc 13 50 28.6 -0.5
HAU MLR MLR
comp=Z,2μm,20.0s,MS5.8
FELD Feldberg im Sc 147.76 359 PKP PKPbc 13 50 28.2 -1.2
MOF Molkenrain 147.80 360 PKP PKPbc 13 50 28.6 -0.9
GULT Gulveren 147.80 325 *e*P PKPdf 13 50 26.0 -0.9
HINF Hinteralfeld 147.83 0 *e*PKP1 PKPbc 13 50 29.0 -0.6
PKSM Moragy 147.89 345⇑ P PKPdf 13 50 27.9 +1.1
PKSM Moragy 147.89 345⇑ *i*P PKPdf 13 50 27.9 +1.0
HWQ Hawqa 147.90 311 *e*P PKPdf 13 50 27.1 -0.2
SZH Strazhica 147.94 333 P PKPbc 13 50 31.2 +1.1
KIZT Kizilcal 148.04 321 *e*P PKPbc 13 50 31.5 +1.0
MOTA Moosalm 148.11 355⇑ *i*pPKPdf pPKPdf 13 50 29.8 -1.9
comp=Z,29nm,1.0s,SNR=9.5
KBA Koelnbreinsper 148.11 352⇑ *i*pPKPdf PKPbc 13 50 29.5 -0.9
comp=Z,22nm,1.2s
WTTA Wattenberg 148.14 354⇑ *i*pPKPdf PKPbc 13 50 30.3 -0.2
comp=Z,30nm,0.9s,SNR=9.4
LADK Ladik-KONYA 148.18 320 *e*P PKPbc 13 50 31.1 +0.3
BBS Basel-Blauen 148.18 359 PKP PKPbc 13 50 29.7 -0.8
BGKT Bogazkoy 148.20 328 *e*P PKPdf 13 50 27.4 -0.2
BORA Eskisehir 148.22 324 *i* P PKPbc 13 50 31.2 +0.3
ADVT Abdulvahap 148.23 326 *e*P PKPdf 13 50 29.3 +1.6
SOKA Soboth 148.24 349⇑ *i*PKPbc PKPbc 13 50 29.3 -1.4
comp=Z,31nm,1.2s
DAVA Damuels 148.26 356⇑ *i*PKiKP PKiKP 13 50 31.0 -1.5
comp=Z,45nm,1.1s,SNR=10
LOR Lormes 148.28 4⇑ *i*PKP1 PKPbc 13 50 30.4 -0.4
comp=Z,110nm,1.4s
LOR *e*MLR MLR
comp=Z,3μm,21.5s,MS5.7
LOR Lormes 148.28 4⇑ *i*PKP2 PKPbc 13 50 30.4 -0.4
LOR MLR MLR
comp=Z,3μm,21.5s,MS6.0
BHL Bhannes 148.29 310 *e*P PKPdf 13 50 26.8 -1.1
LOMF Lomont 148.30 0 PKP PKPbc 13 50 30.1 +0.8
CAVI Cavuskoy 148.33 325 *e*P PKPdf 13 50 27.9 -0.1
SSF Saint Saulge 148.46 4 *e*PKP1 PKPbc 13 50 31.0 -0.3
comp=Z,142nm,1.3s
FETA Feichten 148.47 355⇑ *i*PKPbc PKPbc 13 50 31.1 -0.2
comp=Z,28nm,1.1s,SNR=11
IKL Isikli 148.47 316 *e*P PKPbc 13 50 32.0 +0.3
MFF Saint Martin d 148.49 9 *e*PKP1 PKPbc 13 50 30.7 -0.7
GEMT Gemlik 148.52 326 *e*P PKPdf 13 50 27.4 -0.7
EREN Erenkoy 148.53 314 *e*P PKPbc 13 50 31.6 -0.3
ABTA Abfaltersbach 148.55 353⇑ *i*PKPbc PKPbc 13 50 30.5 -1.1
comp=Z,46nm,1.3s,SNR=12
SEST Monte Rota 148.58 353 PKP PKPbc 13 50 31.1 -0.5
BOLV Bolvadin 148.70 322 *i* P PKPbc 13 50 32.7 +0.5
DAVOS Davos 148.72 356 PKP2 PKPbc 13 50 32.4 +0.4
AVF Avril sur Loir 148.72 5 *e*PKP1 PKPbc 13 50 31.4 -0.6
comp=Z,94nm,1.4s
ULDT Uludag 148.76 326 *i* P PKPbc 13 50 32.7 +0.4
DAVOX Davos/Dischmat 148.77 356 PKPbc PKPbc 13 50 32.4 +0.3
comp=Z,22nm,0.9s,baz=343,slow=4.2,SNR=15
PTCC Patocco-Chiusa 148.77 351 PKP PKPbc 13 50 32.2 +0.1
HDMB Hadim 148.85 318 *e*P PKPdf 13 50 30.2 +1.5
SMF Signal de Mont 148.90 4 *e*PKP1 PKPbc 13 50 31.8 -0.6
comp=Z,162nm,1.5s
BGF Bois d'Agland 148.91 5 *e*PKP1 PKPbc 13 50 31.9 -0.6
comp=Z,128nm,1.4s
GMNA Gemona 148.92 351 PKP PKPbc 13 50 32.5 0.0
LJU Ljubljana 148.94 350 *e*PKPdf PKPbc 13 50 31.5 -1.1
ALT Altintas 148.97 323 *e*P PKPbc 13 50 31.1 -1.7
CABF La Chapelle 149.03 1 *e*PKP1 PKPbc 13 50 33.1 +0.3
comp=Z,109nm,1.0s
BRMO Bormio 149.04 355 PKP PKPbc 13 50 32.8 0.0
SHUT Suhut-Afyon 149.05 322 *e*P PKPbc 13 50 33.5 +0.4
VOY Vojsko 149.05 350 *e*PKPdf PKPbc 13 50 33.2 +0.3
VOY *e* 13 50 45.5
LFK Lefkose 149.10 314 *e*P PKPbc 13 50 31.6 -1.7
TUE Stuetta 149.11 357 *e*PKPbc PKPbc 13 50 32.1 -0.9
TCF Toulx Ste Croi 149.11 6 *e*PKP1 PKPbc 13 50 32.2 -0.8
comp=Z,266nm,1.9s
JAVS Javornik 149.16 350 *e*PKPdf PKPbc 13 50 33.1 0.0
GDZ Gediz 149.31 324 *i* P PKPdf 13 50 28.8 -0.6
BOJS Bojanci 149.33 348 *i* PKPdf PKPbc 13 50 35.0 +1.5
CSS Prodhromos 149.41 314 *e*PKPbc PKPbc 13 50 34.2 0.0
CSS LR LR
comp=Z,1μm,22.0s,MS5.7
AGO Saint Agoulin 149.43 5 PKP PKPab 13 50 36.5 -2.0
AGO Saint Agoulin 149.43 5 PKP PKPbc 13 50 33.0 -0.8
MABI Malga Bissina 149.44 355 PKP PKPbc 13 50 32.5 -1.3
KDZ Kurdzhali 149.47 332 P PKPbc 13 50 32.9 -1.1
TKTP Tekketepe 149.52 322 *i* P PKPbc 13 50 34.6 +0.3
PLDF La Plantade 149.56 5 PKP PKPbc 13 50 36.1 +2.0
PLDF La Plantade 149.56 5 PKP2 PKPbc 13 50 33.7 -0.4
OGOS Jujurieux 149.59 2 PKP PKPbc 13 50 35.0 +0.8
LEF Lefka 149.63 315 *e*P PKPdf 13 50 30.2 +0.1
PYM Petit Puy Mans 149.72 5 PKP PKPbc 13 50 36.5 +2.0
PYM Petit Puy Mans 149.72 5 PKP2 PKPbc 13 50 34.0 -0.5
VAI Varese 149.74 357 PKP PKPbc 13 50 34.7 +0.1
DEMI Demirci 149.76 325 *i* P PKPbc 13 50 34.9 0.0
KHAL Karahalli 149.79 323 *i* P PKPdf 13 50 30.0 -0.2
BALY Balya 149.85 327 *i* P PKPbc 13 50 34.7 -0.3
RSL Roselend 149.96 0 PKP PKPbc 13 50 35.5 +0.4
RJF Les Rejaudoux 150.00 8 *e*PKP1 PKPbc 13 50 34.6 -0.6
RJF *e*MLR MLR
comp=Z,3μm,22.2s,MS5.7
RJF Les Rejaudoux 150.00 8 *e*PKHKP PKPbc 13 50 34.6 -0.6
RJF MLR MLR
comp=Z,3μm,22.3s,MS6.0
ORO Oropa 150.01 358 PKP PKPbc 13 50 36.0 +0.8
LPL La Plagne 150.13 0 *e*PKP1 PKPbc 13 50 36.4 +0.9
comp=Z,180nm,1.4s
LPG La Plagne 150.15 0 *e*PKP1 PKPbc 13 50 36.5 +0.9
comp=Z,145nm,1.2s
KULA Kula-Manisa 150.16 324 *e*P PKPbc 13 50 34.9 -1.0
LFF La Frestale 150.25 9 *e*PKP1 PKPbc 13 50 35.3 -0.5
comp=Z,149nm,1.2s
LBL Lubilhac 150.26 5 PKP PKPbc 13 50 35.8 0.0
LBL Lubilhac 150.26 5 PKHKP PKPbc 13 50 34.2 -1.6

SSB	**Saint Sauveur**	**150.30**	**3**	*e*PKPbc	PKPbc	13 50 35.5	-0.4
AKHS	**Akhisar**	**150.38**	**326**	*i* P	PKPbc	13 50 36.1	-0.2
CAF	**Calviac**	**150.44**	**7**	*e*PKP1	PKPbc	13 50 35.9	-0.4
GOLH	**Golhisar**	**150.50**	**321**	*i* P	PKPbc	13 50 37.2	+0.5
BOZC	**Bozcaada**	**150.58**	**329**	*i* P	PKPbc	13 50 36.2	-0.5
BNI	**Bardonecchia**	**150.60**	**0**	*e*PKPbc	PKPbc	13 50 36.1	-0.5
ELL	**Elmali**	**150.61**	**320**	*e*P	PKPbc	13 50 35.8	-1.2
ORIF	**Oris-en-Rattie**	**150.72**	**1**	*e*PKP1	PKPbc	13 50 37.3	+0.3
	comp=Z,137nm,1.5s						
ORIF				*e*MLR	MLR		
	comp=Z,2µm,21.2s,MS5.5						
VIVF	**Saint-Julien-l**	**150.73**	**3**	*e*PKP1	PKPbc	13 50 36.9	-0.1
	comp=Z,139nm,1.3s						
STIP	**Stip**	**150.79**	**336**	*e*PKP	PKPdf	13 50 31.9	+0.2
BOB	**Bobbio (Coli)**	**150.80**	**356**	PKP	PKPbc	13 50 37.1	-0.1
SKO	**Skopje**	**150.84**	**337**	*e*PKP	PKPdf	13 50 31.1	-0.6
MBDF	**Montbardon**	**150.92**	**0**	*e*PKP1	PKPbc	13 50 37.9	+0.5
	comp=Z,58nm,1.0s						
VAY	**Valandovo**	**150.96**	**335**	*e*PKP	PKPdf	13 50 33.5	+1.6
IZM	**Izmir**	**151.02**	**326**	*e*P	PKPbc	13 50 35.4	-2.5
GSCL	**Gusciola**	**151.13**	**355**	PKP	PKPbc	13 50 39.4	+1.5
BLCB	**Balcova**	**151.15**	**326**	*e*P	PKPdf	13 50 33.0	+0.7
AYDN	**Tasoluk**	**151.20**	**324**	*i* P	PKPdf	13 50 32.3	-0.2
FNVD	**Fontana Vidola**	**151.25**	**354**	PKP	PKPbc	13 50 38.3	+0.1
TURN	**Turunc**	**151.32**	**322**	*i* P	PKPdf	13 50 33.3	+0.7
VLC	**Villacollemand**	**151.34**	**355**	*e*PKPdf	PKPdf	13 50 33.4	+1.0
DALT	**Dalyan (Mudla)**	**151.37**	**322**	*e*P	PKPbc	13 50 37.2	-1.5
URLA	**Izmir**	**151.41**	**326**	*i* P	PKPdf	13 50 32.2	-0.5
VMG	**Vicchio**	**151.41**	**353**	PKP	PKPbc	13 50 39.9	+1.3
LASF	**Ste Croix**	**151.46**	**5**	*e*PKP1	PKPbc	13 50 38.7	0.0
MLSB	**Milas**	**151.51**	**323**	*e*P	PKPbc	13 50 35.4	-3.7
GCAM	**G?zelcaml?**	**151.54**	**325**	*i* P	PKPdf	13 50 32.0	-0.9
SJPF	**Ste Jean**	**151.67**	**13**	*e*PKP1	PKPbc	13 50 38.8	-0.4
PIEI	**Pieia**	**151.70**	**351**	PKP	PKPdf	13 50 33.1	+0.1
BADI	**Badiali**	**151.77**	**352**	PKP	PKPab	13 50 48.8	+0.6
OHR	**Ohrid**	**151.82**	**337**	*e*PKP	PKPdf	13 50 30.6	-2.7
BDRM	**Kayabasi**	**151.86**	**323**	*i* P	PKPbc	13 50 39.9	+0.1
BODT	**Bodrum**	**151.94**	**324**	*e*P	PKPdf	13 50 31.1	-2.4
ETSF	**Etsaut**	**152.01**	**12**	*e*PKP1	PKPbc	13 50 39.9	-0.1
	comp=Z,108nm,1.3s						
MTLF	**Montolieu**	**152.02**	**7**	*e*PKP1	PKPbc	13 50 39.7	-0.3
EPF	**Esparros**	**152.05**	**10**	*e*PKP1	PKPbc	13 50 40.0	-0.1
FRF	**La Foret Royal**	**152.09**	**0**	*e*PKP1	PKPbc	13 50 39.7	-0.5
	comp=Z,137nm,1.6s						
EVO	**Evora**	**153.62**	**27**	*e*PKIKP	PKPdf	13 50 36.2	+0.2
	comp=Z,40nm,1.0s						
EVO				*e*MLR	MLR		
	comp=Z,2µm,21.0s,MS5.7						
ESDC	**Sonseca Array**	**154.16**	**19**	PKP	PKPdf	13 50 35.0	-1.7
	comp=Z,0.2nm,0.3s,baz=324,slow=3.1,SNR=2.7						
ESDC				PKPbc	PKPbc	13 50 42.8	-2.0
	comp=Z,0.9nm,0.5s,baz=334,slow=3.0,SNR=6.1						
ESDC				PKPab	PKPab	13 50 56.7	-1.7
	comp=Z,6.4nm,1.0s,baz=326,slow=2.4,SNR=5.1						
ESLA	**Sonseca Array**	**154.16**	**19**	*e*PKPab	PKPab	13 50 58.0	-0.4
TIP	**Timpagrande**	**154.92**	**342**	*e*PKPdf	PKPdf	13 50 38.3	+0.6
KEST	**Kesra**	**159.79**	**354**	PKPab	PKPab	13 51 22.4	-0.3
	comp=Z,2.3nm,0.9s,baz=39,slow=5.9,SNR=4.5						
LIC	**Lamto**	**165.08**	**127**	*e*PKIKP	PKPdf	13 50 47.9	-2.0
	comp=Z,39nm,1.2s						
LIC				*e*MLR	MLR		
	comp=Z,3µm,20.5s						
LIC	**Lamto**	**165.08**	**127**	*e*PKIKP	PKPdf	13 50 53.9	+4.0
	comp=Z,41nm,1.2s						
LIC	**Lamto**	**165.08**	**127**	*e*PKPdf	PKPdf	13 50 47.9	-2.0
LIC				*e*PKPdf	PKPdf	13 50 53.9	+4.0
LIC				LR	LR		
	comp=Z,1µm,20.5s						
TIC	**Toumodi**	**165.34**	**126**	*e*PKIKP	PKPdf	13 50 54.1	+3.9
	comp=Z,9.8nm,0.3s						
KIC	**Kosan Boka**	**165.38**	**127**	*e*PKIKP	PKPdf	13 50 54.2	+4.0
	comp=Z,63nm,1.2s						
DBIC	**Dimbokro**	**165.49**	**126**	PKP	PKPdf	13 50 49.5	-0.8
	comp=Z,3.3nm,0.9s,baz=101,slow=2.4,SNR=3.2						
DBIC				PKPab	PKPab	13 51 48.4	0.0
	comp=Z,4.1nm,0.9s,baz=135,slow=2.9,SNR=2.2						
TAM	**Tamanrasset**	**172.69**	**10**	*e*PKPdf	PKPdf	13 50 53.7	-0.8
TOA0	**Torodi Ar. Sit**	**174.43**	**115**	*e*PKPdf	PKPdf	13 50 53.2	-2.1
TOA0				*e*PKPab	PKPab	13 52 24.9	-3.2
TORD	**Torodi Ar. Bea**	**174.43**	**115**	PKP	PKPdf	13 50 54.2	-1.2
	comp=Z,184nm,0.3s,baz=188,slow=1.0,SNR=1.9						
TORD				PKPab	PKPab	13 52 26.9	-1.2
	comp=Z,192nm,0.4s,baz=256,slow=4.4,SNR=1.5						

ISCJB ***02*** *13:33:20.6±1.3,3542N×007×2749E±007,h21km±7km, Error ellipse: s-maj=14.1km s-min=5.6km az=139.0*
ATH ***02*** *13:33:21.5,3549N×2741E,h25km,MD3.3/3*
CSEM ***02*** *13:33:21.0±0.7,3544N×2748E,h15km±4km,MD3.3, Error ellipse: s-maj=14.6km s-min=6.4km az=146.0*

ISC 02 13:33:19.9±1.5,3539N±006×2752E±007,h16km±6km,n14, σ1§04/21,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.33**	**298**	*e*PB	**Pg**	**13 33 26.6**	**-0.2**
KARP				*e*SB	**Sg**	**13 33 32.1**	**+0.6**
ARG	**Arkhangelos**	**0.96**	**31**	*e*PN	**Pn**	**13 33 39.5**	**+0.8**
ZKR	**Zakros**	**1.10**	**256**	P	**Pb**	**13 33 39.6**	**-1.0**
ZKR				S	**Sn**	**13 33 55.5**	**0.0**
NPS	**Neapolis**	**1.56**	**266**	*e*PN	**Pb**	**13 33 48.5**	**0.0**
BDRM	**Kayabasi**	**1.67**	**358**	*i* P	**Pb**	**13 33 49.6**	**-0.7**
BDRM	**Kayabasi**	**1.67**	**358**	*i* P	**Pb**	**13 33 49.6**	**-0.7**
BDRM				*i* S	**Sb**	**13 34 13.0**	**+1.8**
LAST	**Lasithi**	**1.69**	**263**	P	**Pb**	**13 33 50.3**	**-0.2**
LAST				S	**Sb**	**13 34 13.0**	**+1.5**
TURN	**Turunc**	**1.72**	**30**	*i* P	**Pn**	**13 33 50.4**	**+1.2**
TURN	**Turunc**	**1.72**	**30**	*i* P	**Pn**	**13 33 50.4**	**+1.2**
TURN				*i* S	**Sn**	**13 34 10.2**	**-0.6**
THR3	**Thira Island,**	**2.00**	**301**	P	**Pb**	**13 33 54.2**	**-1.7**
AYDN	**Tasoluk**	**2.29**	**7**	*i* P	**Pb**	**13 33 59.1**	**-1.6**
AYDN	**Tasoluk**	**2.29**	**7**	*i* P	**Pb**	**13 33 59.1**	**-1.7**
AYDN				*i* S	**Sb**	**13 34 28.4**	**-0.4**
APE	**Apeiranthos**	**2.32**	**317**	P	**Pn**	**13 33 57.8**	**+0.3**
APE				S	**Sn**	**13 34 24.4**	**-1.3**
CHOS	**Chios island**	**3.21**	**339**	P	**Pn**	**13 34 11.4**	**+1.7**

ISCJB ***02*** *13:39:59.0±0.7,682N×006×7300W±006,h167km±8km, Error ellipse: s-maj=12.7km s-min=7.2km az=43.3*
FUNV ***02*** *13:39:59.1,674N×73.19W,h166km,MW3.4*
IDC ***02*** *13:40:04.2±6.0,466N×7659W,h107km±65km,mb3.0/1, mb1 3.5/2,mb1mx3.2/18,mbtmp3.2/2, Error ellipse: s-maj=77.1km s-min=32.8km az=49.0*

ISC 02 13:39:59.9±0.7,682N±006×7300W±006,h162km±8km,n16, σ0§92/21,2C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**33**	*e*P	**Pn**	**13 40 28.9**	**+0.9**
CAPV				*e*S	**Sn**	**13 40 50.3**	**+0.8**
ROSC	**El Rosal**	**2.36**	**214**	P	**Pn**	**13 40 40.6**	**+0.6**
	19nm,0.3s,baz=284,slow=14,SNR=30						
ROSC				S	**Sn**	**13 41 09.6**	**-1.3**
	15nm,0.3s,baz=258,slow=22,SNR=9.2						
SOCV	**Socops**	**2.58**	**55**	*e*P	**Pn**	**13 40 43.5**	**+1.0**
SOCV				*e*S	**Sn**	**13 41 15.8**	**+0.2**
VIGV	**El Vigia**	**2.58**	**39**	*e*P	**Pn**	**13 40 43.3**	**+0.7**
VIGV				*e*S	**Sn**	**13 41 15.7**	**0.0**
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**13 40 55.0**	**+0.9**
ELOV				*e*S	**Sn**	**13 41 35.6**	**-0.4**
VIRV	**Villa del Rosa**	**3.71**	**9**	*e*P	**Pn**	**13 40 55.5**	**-1.3**
VIRV				*e*S	**Sn**	**13 41 38.2**	**-2.9**
QARV	**Quebrada Arrib**	**4.16**	**36**	*e*P	**Pn**	**13 41 03.2**	**+0.6**
CURV	**Curarigua**	**4.37**	**43**	*e*P	**Pn**	**13 41 05.8**	**+0.5**
CURV				*e*S	**Sn**	**13 41 55.1**	**-1.2**
TEPV	**Terepaima**	**4.89**	**50**	*e*P	**Pn**	**13 41 12.4**	**+0.2**
SIQV	**Siquisique**	**4.94**	**39**	*e*P	**Pn**	**13 41 13.7**	**+0.9**
BAUV	**El Baul**	**5.35**	**66**	*e*P	**Pn**	**13 41 17.1**	**-1.0**
CAOV	**Caicara del Or**	**6.65**	**85**	*e*P	**Pn**	**13 41 34.4**	**-0.9**
CUPV	**Cepira**	**7.83**	**65**	*e*P	**Pn**	**13 41 50.4**	**-0.6**
TXAR	**Lajitas Array**	**36.55**	**312**	P	**P**	**13 46 50.8**	**+0.6**
	0.3nm,0.7s,baz=123,slow=9.8,SNR=3.0						
ASAR	**Alice Springs**	**149.21**	**234**	PKPbc	PKPbc	13 59 28.7	-1.4
	0.2nm,0.5s,baz=128,slow=3.5,SNR=4.2						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	PKPbc	13 59 32.4	-0.7
	0.2nm,0.4s,baz=108,slow=2.7,SNR=12						

IDC 02 13:46:32.9±2.8,1346S×17062W,h0km,mb4.1/4, mb1 4.3/4,mb1mx3.9/19,mbtmp4.1/4,Error ellipse: s-maj=60.0km s-min=38.1km az=175.0,Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.21**	**248**	Pn	Pn	13 46 57.8	+0.7
	baz=218,slow=12,SNR=1.4						
AFI				Sn	Sn	13 47 14.8	+0.5
	37nm,0.3s,baz=56,slow=23,SNR=5.4						
URZ	**Urewera**	**27.00**	**202**	P	P	13 52 17.0	+0.5
	2.1nm,0.4s,baz=288,slow=6.4,SNR=4.9						
STKA	**Stephens Creek**	**47.34**	**239**	P	P	13 55 06.9	-1.9
	1.4nm,0.8s,baz=72,slow=9.3,SNR=4.5						
WRA	**Warramunga Arr**	**52.93**	**255**	P	P	13 55 51.8	+0.4
	0.8nm,0.4s,baz=91,slow=7.0,SNR=31						
ASAR	**Alice Springs**	**53.28**	**250**	P	P	13 55 54.1	+0.1
	2.1nm,0.5s,baz=89,slow=7.4,SNR=25						

KRSC 02 13:51:34.4±0.5,5470N×16144E,h82km±38km,ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.22**	**130**	*e*P	Pn	13 51 46.4	-0.1
MKZ				*i* S	Sn	13 51 54.9	-0.5
TUMR	**Tumrok**	**0.95**	**309**	*e*P	Pn	13 51 53.9	+1.0
TUMR				*i* S	Sn	13 52 08.2	+1.5
KMNR	**Kamenistaya**	**1.26**	**327**	*e*P	Pn	13 51 58.2	+1.5
KMNR				*i* S	Sn	13 52 16.1	+2.6
BZGR	**Bezymyannyi-Gr**	**1.31**	**341**	*e*P	Pn	13 51 58.3	+1.0
BZGR				*i* S	Sn	13 52 15.6	+1.0
KII	**Karymskiy**	**1.34**	**241**	*e*P	Pn	13 51 59.1	+1.4
BZWR	**Bezymyannyi-We**	**1.38**	**337**	*e*P	Pn	13 51 59.6	+1.5
BZWR				*i* S	Sn	13 52 18.5	+2.4
KIRR	**Kirishev**	**1.40**	**334**	*e*P	Pn	13 52 00.0	+1.5
KIRR				*i* S	Sn	13 52 18.8	+2.1
KPT	**Kopyto**	**1.45**	**332**	*e*P	Pn	13 52 00.5	+1.5
KPT				*i* S	Sn	13 52 19.0	+1.3
KRSR	**Krestovskiy**	**1.60**	**342**	*e*P	Pn	13 52 01.8	+0.8
KRSR				*i* S	Sn	13 52 22.2	+1.0
KOZ	**Kozyrevsk**	**1.63**	**327**	*e*P	Pn	13 52 02.8	+1.4
KOZ				*i* S	Sn	13 52 23.9	+2.1
KLY	**Klyuchi**	**1.68**	**345**	*e*P	Pn	13 52 02.9	+0.9
KLY				*i* S	Sn	13 52 23.4	+0.4
KBTR	**Krutoberegovo**	**1.70**	**27**	*e*P	Pn	13 52 03.4	+1.0
KBTR				*i* S	Sn	13 52 24.0	+0.4
SPN	**Mys Shipunski**	**1.81**	**208**	*e*P	Pn	13 52 04.3	+0.5
SPN				*i* S	Sn	13 52 25.9	-0.2
SRKR	**Sorokina**	**1.96**	**356**	*e*P	Pn	13 52 07.4	+1.6
SRKR				*i* S	Sn	13 52 31.5	+1.8
NLC	**Nalytchevo**	**1.97**	**220**	*e*P	Pn	13 52 07.5	+1.6
NLC				*i* S	Sn	13 52 31.3	+1.4
AVH	**Avacha**	**2.15**	**229**	*e*P	Pn	13 52 10.5	+2.3
GNL	**Ganaly**	**2.29**	**245**	*e*P	Pn	13 52 12.5	+2.4
PET	**Petropavlovsk**	**2.35**	**226**	P	Pn	13 52 12.9	+1.9
PET				*i* S	Sn	13 52 40.9	+1.9
RUS	**Russkaya**	**2.86**	**219**	P	Pn	13 52 19.2	+1.3
RUS				*i* S	Sn	13 52 52.0	+0.7

CSEM ***02*** *13:52:14.3,3484N×2532E,h5km, MD3.2/3,After ATH*

ATH 02 13:52:14.3,3484N×2532E,h5km,MD3.2/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.48**	**30**	*e*PB	Pg	13 52 23.0	-0.7
NPS				*e*SB	Sg	13 52 30.4	+0.4
VAM	**Vamos**	**1.08**	**302**	*e*PN	Pn	13 52 34.9	-1.2
VAM				*e*SB	Sb	13 52 50.4	+0.6
KARP	**Karpathos**	**1.67**	**64**	*e*PB	Pb	13 52 46.3	+0.9

MAN 02 13:55:38,1327N×12171E,h1km,mb4.1,ML2.9,MS2.6, 1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.94**	**86**	*e*P	Pg	13 55 55.5	-0.6
AUQP				*e*S	Sg	13 56 12.0	+3.7
OTRP	**Odiongan**	**0.95**	**161**	*e*P	Pg	13 55 55.5	-0.7
OTRP				*e*S	Sg	13 56 08.9	+0.4
GQP	**Guinayangan**	**0.96**	**48**	*e*P	Pg	13 55 54.1	-2.3
GQP				*e*S	Sg	13 56 07.4	-1.4
SJMP	**San Jose**	**0.99**	**216**	*e*P	Pg	13 55 57.1	+0.2
POLP	**Polilio Island**	**1.47**	**9**	*e*P	Pn	13 56 06.6	+0.9
POLP				*e*S	Sg	13 56 23.5	-1.8
LUBP	**Lubang**	**1.50**	**288**	*e*P	Pn	13 56 06.1	+0.1
LUBP				*e*S	Sb	13 56 26.8	+0.7
PVCP	**Virac**	**2.40**	**82**	*e*P	Pn	13 56 19.7	+1.3

IDC ***02*** *14:01:21.4±0.9,1028N×12690E,h0km,mb4.0/10, mb1 4.1/10,mb1mx4.0/19,mbtmp4.0/10,MS4.0/1, Ms1 4.0/1,ms1mx2.4/28,Error ellipse: s-maj=44.5km s-min=14.5km az=73.0*
ISCJB ***02*** *14:01:24.1±1.3,1033N±005×12697E±007,h34km±12km, mb4.2/14,Error ellipse: s-maj=12.0km s-min=8.0km az=169.4*
NEIC ***02*** *14:01:25.9±0.5,1035N×127.19E,h35km,mb4.8/6,Error ellipse: s-maj=16.9km s-min=10.2km az=60.0*
MAN ***02*** *14:01:25,1051N×12693E,h85km, mb4.6,ML3.5,MS3.5*

ISC 02 14:01:25.2±2.3,1033N±005×12692E±005,h27km±17km, n32,σ1§06/36,mb4.2/14,1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.51**	**249**	*e*P	**Pn**	**14 01 48.8**	**-1.6**
SCPH				*i* S	**Sn**	**14 02 09.3**	**0.0**
BUTP	**Butuan**	**1.86**	**223**	*e*P	**Pn**	**14 01 54.1**	**-1.2**
BESP	**Borongan**	**1.93**	**311**	*e*P	**Pn**	**14 01 56.2**	**-0.1**
MSLP	**Maasin**	**2.03**	**265**	*e*P	**Pn**	**14 01 58.9**	**+1.2**
MSLP				*e*S	**Sn**	**14 02 24.9**	**+2.6**
PLP	**Palo**	**2.08**	**294**	*i*P	**Pn**	**14 01 57.7**	**-0.6**
PLP				*i* S	**Sn**	**14 02 22.2**	**-1.2**
OCLP	**Ormoc**	**2.38**	**288**	*e*P	**Pn**	**14 02 03.5**	**+1.0**
BUKP	**Musuan**	**3.05**	**217**	*e*P	**Pn**	**14 02 15.1**	**+3.4**
TBP	**Tagbilaran**	**3.07**	**258**	*e*P	**Pn**	**14 02 13.3**	**+1.2**
TBP				*e*S	**Sn**	**14 02 47.2**	**-0.8**
CNP	**Catarman**	**3.10**	**315**	*e*P	**Pn**	**14 02 10.2**	**-2.2**
CNP				*e*S	**Sn**	**14 02 46.3**	**-2.1**
DAV	**Davao City (W)**	**3.50**	**202**	LR	LR	14 03 53.5	
	comp=Z,3µm,21.5s,baz=46,slow=44						
PVCP	**Virac**	**4.22**	**321**	*e*P	**Pn**	**14 02 28.0**	**+0.2**
RCP	**Roxas**	**4.28**	**287**	*e*P	**Pn**	**14 02 29.7**	**+1.1**
GUMO	**Guam**	**17.86**	**78**	*e*P	**Pn**	**14 05 26.3**	**-5.6**
	20nm,0.6s						
BATI	**Baumata**	**20.66**	**189**	P	**P**	**14 06 03.4**	**+0.3**
	13nm,0.5s,baz=9.0,slow=1.6,SNR=4.4						
KSRS	**Korea Array**	**27.02**	**2**	P	**P**	**14 07 05.8**	**+0.6**
	2.2nm,0.8s,mb3.7,baz=178,slow=9.0,SNR=6.5						
CMAR	**Chiang Mai Arr**	**28.24**	**290**	P	**P**	**14 07 16.0**	**-0.3**
	0.4nm,0.5s,mb3.3,baz=97,slow=7.5,SNR=4.0						
WRAB	**Tennant Creek**	**30.95**	**166**	*e*P	**P**	**14 07 38.7**	**-1.4**
	0.9nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**30.95**	**166**	P	**P**	**14 07 39.4**	**-0.9**
	0.6nm,0.6s,mb3.6,baz=348,slow=9.4,SNR=11						
BJT	**Baijiatuan**	**31.07**	**344**	*e*P	**P**	**14 07 41.5**	**+0.5**
	21nm,0.4s,mb5.3						
ASAR	**Alice Springs**	**34.47**	**169**	P	**P**	**14 08 10.8**	**-0.2**
	0.5nm,0.6s,mb3.6,baz=352,slow=7.0,SNR=24						
SONM	**Songino Array**	**41.19**	**339**	P	**P**	**14 09 08.4**	**+1.0**
	1.0nm,0.7s,mb3.6,baz=160,slow=10,SNR=5.5						
STKA	**Stephens Creek**	**44.26**	**162**	P	**P**	**14 09 32.7**	**+0.2**
	0.9nm,0.8s,mb3.6,baz=345,slow=9.5,SNR=2.8						
STKA	**Stephens Creek**	**44.26**	**162**	*e*P	**P**	**14 09 32.5**	**0.0**
	1.9nm,0.8s,mb3.9						
MK31	**Makanchi Array**	**52.37**	**322**	*e*P	**P**	**14 10 35.9**	**+0.9**
MKAR	**Makanchi Array**	**52.37**	**322**	P	**P**	**14 10 36.3**	**+1.4**
	3.3nm,0.7s,mb4.4,baz=120,slow=8.2,SNR=42						
ZALV	**Zalesovo Beam**	**54.88**	**331**	P	**P**	**14 10 53.2**	**-0.1**
	1.0nm,0.5s,mb4.1,baz=114,slow=7.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**54.88**	**331**	P	**P**	**14 10 53.2**	**-0.1**
KURK	**Kurchatov**	**56.38**	**325**	*e*P	**P**	**14 11 04.9**	**+0.8**
	11nm,1.2s,mb4.8						
BRVK	**Borovoye**	**62.05**	**325**	*e*P	**P**	**14 11 42.9**	**-0.4**
	8.6nm,1.1s,mb4.8						
POHA	**Pohakuloa**	**74.95**	**72**	*e*P	**P**	**14 13 04.6**	**0.0**
	182nm,1.4s						
PMR	**Palmer**	**78.11**	**29**	*e*P	**P**	**14 13 20.4**	**-1.2**
	14nm,0.3s,mb5.4						
ARCES	**ARCESS Array B**	**84.36**	**340**	P	**P**	**14 13 55.1**	**+0.4**
	8.0nm,1.0s,mb4.8,baz=72,slow=8.6,SNR=3.4						

ISCJB ***02*** *14:20:21.6±0.8,3206N±004×13197E±006,h30km±6km, mb3.6/6,Error ellipse: s-maj=8.9km s-min=6.0km az=27.5*
JMA ***02*** *14:20:22.7±0.1,3209N×13189E,h23km±2km,M4.0*
Broadband fault plane solution: P waves. NP1: φ≈230.00000°,δ19.00000°,λ97.00000°. NP2:φ≈42.00000°, δ71.00000°,λ88.00000°. Principal axes: T Plg64.0000°, Azm308.0000°; N Plg2.0000°, Azm43.0000°; P Plg26.0000°, Azm134.0000°;
JMA Felt II J1.
NEIC ***02*** *14:20:22.8,3209N×13189E,h23km,MG4.1(JMA),After JMA.*
IDC ***02*** *14:20:27.3±3.2,3206N×13149E,h66km±34km,mb3.3/6, mb1 3.5/9,mb1mx3.4/24,mbtmp3.4/9,ML3.7/3,Error ellipse: s-maj=33.7km s-min=18.7km az=51.0*

ISC 02 14:20:23.0±0.8,3208N±004×13188E±006,h26km±6km, n18,σ0§82/25,mb3.6/6,2C-5D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.36**	**297**	⇓P	**Pb**	**14 20 30.1**	**-0.8**
JTSN				S	**Sb**	**14 20 35.6**	**-0.8**
JKIT	**Kitakata**	**0.65**	**326**	⇓P	**Pb**	**14 20 35.3**	**-0.5**
JKIT				*e*S	**Sb**	**14 20 45.2**	**+0.7**
JTZ	**Takazaki**	**0.70**	**255**	⇓P	**Pb**	**14 20 35.9**	**-0.6**
JTZ				*e*S	**Sb**	**14 20 46.6**	**+0.9**
JNAR	**Kushima--Naru**	**0.76**	**223**	⇑P	**Pb**	**14 20 37.6**	**+0.1**
JNAR				*e*S	**Sb**	**14 20 48.2**	**+0.8**
JUS	**Usuki**	**0.99**	**354**	⇓P	**Pb**	**14 20 41.2**	**0.0**
JUS				*e*S	**Sn**	**14 20 54.5**	**+0.2**
JIU2	**Izumi 2**	**1.02**	**297**	⇓P	**Pn**	**14 20 41.5**	**0.0**
JIU2				S	**Sn**	**14 20 55.7**	**+0.7**
JZO	**Okuchi**	**1.09**	**274**	⇑P	**Pn**	**14 20 42.4**	**-0.2**
KSRS	**Korea Array**	**6.27**	**330**	P	**Pn**	**14 21 54.9**	**+1.1**
	1.1nm,0.3s,baz=147,slow=15,SNR=14						
JHJ	**Hachijo jima 2**	**6.75**	**79**	P	**Pn**	**14 22 10.2**	**+10**
	12nm,0.3s,baz=32,slow=23,SNR=4.2						
MAJO	**Matsushiro**	**6.87**	**48**	*e*Pn	**Pn**	**14 22 02.9**	**+0.9**
	5.8nm,0.3s						
MAT	**Matsushiro**	**6.87**	**48**	P	**Pn**	**14 22 03.0**	**+1.0**
MAT				S	**Sn**	**14 23 18.7**	**-0.6**
MJAR	**Matsushiro Arr**	**6.87**	**48**	P	**Pn**	**14 22 07.8**	**+5.8**
	0.9nm,0.3s,baz=245,slow=14,SNR=6.4						
SONM	**Songino Array**	**24.93**	**317**	P	**P**	**14 25 42.9**	**-0.9**
	2.8nm,0.7s,mb3.9,baz=128,slow=10,SNR=14						
MKAR	**Makanchi Array**	**40.35**	**306**	P	**P**	**14 27 55.8**	**-2.5**
	0.3nm,0.5s,mb3.3,baz=92,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**51.78**	**177**	P	**P**	**14 29 27.3**	**-1.2**
	0.6nm,1.0s,mb3.5,baz=352,slow=8.1,SNR=4.9						
ASAR	**Alice Springs**	**55.46**	**178**	P	**P**	**14 29 56.1**	**+0.7**
	0.2nm,0.7s,mb3.3,baz=14,slow=9.9,SNR=5.8						
STKA	**Stephens Creek**	**64.27**	**171**	P	**P**	**14 30 55.5**	**-0.3**
	1.1nm,0.8s,mb4.0,baz=337,slow=13,SNR=3.5						
NVAR	**Mina Array Bea**	**84.19**	**48**	P	**P**	**14 32 53.0**	**+0.9**
	0.2nm,0.6s,mb3.5,baz=270,slow=5.3,SNR=3.7						

CSEM ***02*** *14:38:23.9±0.1,3725N×2823E,h1km±1km,MD2.7,Error ellipse: s-maj=2.4km s-min=1.7km az=4.0*
ISK ***02*** *14:38:24.9,3724N×2823E,h8km,MD2.7*
ISCJB ***02*** *14:38:25.3±0.5,3726N±003×2823E±003,h10km,Error ellipse: s-maj=4.7km s-min=3.5km az=12.2*
DDA ***02*** *14:38:25.1,3720N×2814E,h7km±7km,Md3.0*

ISC 02 14:38:25.7±0.5,3724N±004×2826E±003,h5km±8km,n14, σ1§25/24,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.39**	**278**	*e*PG	**Pg**	**14 38 32.4**

RZN				Sg	Sg	14 51 46.5	+0.8	
THL	**Klokotos Trika**	**1.52**	**225**	P	Pn	14 51 26.9	-0.4	
THL				S	Sn	14 51 47.3	-0.1	
THL	**Klokotos Trika**	**1.52**	**225**	*e*PN	Pn	14 51 26.9	-0.4	
THL				*e*SN	Sn	14 51 47.4	0.0	
FNA	**Florina**	**1.55**	**276**	P	Pn	14 51 28.2	+0.5	
LIA	**Limnos Island**	**1.55**	**118**	P	Pn	14 51 26.6	-1.2	
LIA	**Limnos Island**	**1.55**	**118**	*e*PN	Pn	14 51 26.6	-1.2	
BIA	**Bitola**	**1.62**	**284**	*e*Pg	Pg	14 51 28.8	-1.7	
BIA				*e*Sg	Sg	14 51 50.1	-1.4	
BIA	**Bitola**	**1.62**	**284**	*e*Pg	Pg	14 51 28.9	-1.6	
BIA				*e*Sg	Sg	14 51 50.1	-1.4	
BIA				*e*Lg		14 51 53.8		
	comp=N,29nm,0.4s							
BIA				*e*Lg		14 51 55.2		
	comp=E,39nm,0.3s							
RDO	**Rodhopi**	**1.69**	**72**	*e*PN	Pn	14 51 28.4	-1.4	
PLD	**Plovdiv**	**1.76**	**33**	Pg	Pg	14 51 33.2	+0.1	
KRUS	**Krusevo**	**1.78**	**295**	*e*Pg	Pg	14 51 31.7	-1.9	
KRUS				*e*Sg	Sg	14 51 54.7	-2.0	
KRUS	**Krusevo**	**1.78**	**295**	*e*Pg	Pg	14 51 31.7	-1.9	
KRUS				*e*Sg	Sg	14 51 54.8	-2.0	
KRUS				*e*Lg		14 51 57.2		
	comp=E,15nm,0.4s							
KRUS				*e*Lg		14 51 57.6		
	comp=N,28nm,0.7s							
AGG	**Agios Georgios**	**1.82**	**207**	P	Pn	14 51 31.3	-0.2	
KDZ	**Kurdzhali**	**1.82**	**56**	Pg	Pn	14 51 31.3	-0.2	
PGB	**Panagyurishte**	**1.99**	**17**	Pg	Pg	14 51 36.5	-1.1	
LKR	**Lokris**	**2.02**	**189**	P	Pn	14 51 33.9	-0.3	
ALN	**Alexandroupoli**	**2.02**	**82**	P	Pn	14 51 33.3	-1.0	
EVR	**Evrytania**	**2.12**	**216**	*e*PB	Pn	14 51 35.7	+0.1	
DIM	**Dimitrovgrad**	**2.13**	**48**	Pg	Pg	14 51 39.9	-0.4	
BARS	**Barje**	**2.47**	**332**	*e*Pn	Pn	14 51 41.2	+0.7	
BARS				*e*Sg	Sg	14 52 21.4	+2.5	
LTK	**Loutraki**	**2.64**	**187**	P	Pn	14 51 42.7	-0.1	
LTK				S	Sn	14 52 15.1	-0.1	
RLS	**Riolos of Patr**	**2.99**	**211**	*e*Pb	Pn	14 51 49.9	+2.4	
CHOS	**Chios island**	**3.05**	**137**	P	Pn	14 51 48.3	-0.1	
SZH	**Strazhica**	**3.23**	**35**	P	Pn	14 51 51.3	+0.4	
SZH				S	Sg	14 52 44.3	+1.1	
GRUS	**Gruza**	**3.81**	**329**	*e*Pn	Pn	14 51 58.7	-0.1	
SVIS	**Svilajnac**	**3.96**	**337**	*e*Sg	Sg	14 53 05.8	-0.9	
VOIR		**4.94**	**14**	⇑*i*P	Pn	14 52 14.9	+0.5	
BZS	**Buzias**	**5.14**	**346**	⇓*i*P	Pn	14 52 17.5	+0.4	
MLR	**Muntele Rosu**	**5.19**	**20**	⇑*i*P	Pn	14 52 19.6	+1.8	

*IDC **02** 14:53:18.2±0.9, 1500S×17355W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/17, mbtmp4.0/9, MS3.6/2, Ms1 3.6/2, ms1mx3.0/25, Error ellipse: s-maj=39.1km s-min=18.7km az=138.0*

*NEIC **02** 14:53:19.4±0.5, 1510S×17347W, h10km, mb4.3/4, Error ellipse: s-maj=19.7km s-min=11.8km az=137.0*

*ISCJB **02** 14:53:21.4±0.6, 151S±0.1×1736W±0.1, h33km, mb4.0/12, Error ellipse: s-maj=24.8km s-min=13.9km az=43.6*

ISC 02 14:53:23.4±0.6, 151S±01×1736W±01, h35km, n24, σ0§54/17, mb4.0/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.08**	**57**	Pn	**Pn**	**14 53 45.1**	**-11**
	41nm,0.3s,baz=40,slow=3.3,SNR=39						
AFI				Sn	**Sn**	**14 54 02.8**	**-18**
	226nm,0.3s,baz=49,slow=22,SNR=30						
AFI				LR	LR	14 54 42.7	
	comp=Z,602nm,21.1s,baz=296,slow=42						
AFI	**Afiamalu**	**2.08**	**57**	*e*Pn	**Pn**	**14 53 44.6**	**-11**
RAR	**Rarotonga**	**14.46**	**117**	LR	LR	15 01 43.5	
	comp=Z,477nm,18.0s,baz=73,slow=35						
PPT	**Papeete**	**23.15**	**99**	*e*LR	LR	15 03 28.8	
	335nm,24.0s						
TBI	**Tubuai**	**24.18**	**114**	*e*LR	LR	15 04 11.7	
	381nm,27.2s						
URZ	**Urewera**	**24.53**	**198**	P	**P**	**14 58 39.3**	**-0.3**
	4.3nm,0.8s,mb4.0,baz=11,slow=10,SNR=4.8						
RKT	**Rikitea**	**37.25**	**108**	*e*LR	LR	15 10 14.3	
	278nm,24.8s						
STKA	**Stephens Creek**	**44.07**	**240**	P	**P**	**15 01 28.2**	**+0.1**
	2.5nm,0.8s,mb4.0,baz=75,slow=8.1,SNR=4.9						
STKA	**Stephens Creek**	**44.07**	**240**	*e*P	**P**	**15 01 28.3**	**+0.1**
	2.6nm,0.8s,mb4.0						
WB2	**Warramunga Arr**	**49.76**	**256**	*e*P	**P**	**15 02 12.4**	**-0.4**
WRAB	**Tennant Creek**	**49.76**	**257**	*e*P	**P**	**15 02 13.1**	**+0.3**
	2.5nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**49.77**	**256**	P	**P**	**15 02 13.4**	**+0.5**
	0.7nm,0.5s,mb4.0,baz=91,slow=6.9,SNR=29						
ASAR	**Alice Springs**	**50.07**	**252**	P	**P**	**15 02 15.8**	**+0.7**
	4.4nm,0.6s,mb4.6,baz=85,slow=7.9,SNR=74						
SBA	**Scott Base**	**63.57**	**185**	*e*P	**P**	**15 03 49.6**	**-0.4**
	1.8nm,0.8s,mb4.2						
PETK	**Petropavlovsk-**	**72.27**	**342**	P	**P**	**15 04 44.4**	**-0.5**
	4.0nm,0.8s,mb4.4,baz=151,slow=3.3,SNR=3.1						
NVAR	**Mina Array Bea**	**74.19**	**42**	P	**P**	**15 04 57.3**	**+0.7**
	0.4nm,0.8s,mb3.4,baz=225,slow=10,SNR=2.7						
TXAR	**Lajitas Array**	**80.56**	**56**	P	**P**	**15 05 33.3**	**+0.8**
	0.2nm,0.7s,mb3.2,baz=204,slow=4.0,SNR=2.3						
COLA	**College**	**82.06**	**11**	*e*P	**P**	**15 05 39.5**	**-0.1**
	8.1nm,0.9s,mb4.7						
PDAR	**Pinedale Array**	**82.12**	**42**	P	**P**	**15 05 39.9**	**-0.6**
	0.3nm,0.5s,mb3.4,baz=199,slow=5.3,SNR=3.9						
SONM	**Songino Array**	**94.49**	**318**	P	**P**	**15 06 39.2**	**-0.8**
	0.2nm,0.4s,mb3.9,baz=101,slow=3.1,SNR=3.7						
LPAZ	**La Paz**	**100.07**	**110**	P	Pdif	15 07 04.2	-1.0
	0.8nm,0.4s,baz=240,slow=3.8,SNR=7.0						
KHC	**Kasperske Hory**	**145.53**	**352**	*e*PKP	PKPdf	15 12 59.5	+1.7
GERES	**GERESS Array B**	**145.79**	**351**	PKPbc	PKPbc	15 12 59.0	+0.3
	2.2nm,1.1s,baz=336,slow=2.9,SNR=4.4						
BR131	**Keskin Array S**	**145.80**	**321**	*e*PKP	PKPdf	15 13 00.0	+1.4

IDC 02 15:01:28.9±7.8, 246N×12599E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=185.3km s-min=123.5km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.73**	**160**	P	P	15 06 42.9	0.0
	0.6nm,0.8s,baz=337,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**27.09**	**164**	P	P	15 07 14.8	+1.3
	0.2nm,0.6s,baz=353,slow=8.0,SNR=8.1						
STKA	**Stephens Creek**	**37.23**	**158**	P	P	15 08 41.1	-1.2
	0.6nm,0.4s,baz=328,slow=13,SNR=3.2						

IDC 02 15:02:16.1±7.4, 1562S×17239W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=247.2km s-min=26.2km az=127.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.80**	**19**	Pn	Pn	15 02 48.5	0.0
	21nm,0.3s,baz=217,slow=10,SNR=24						
AFI				Sn	Sn	15 03 06.1	-6.0
	125nm,0.3s,baz=322,slow=19,SNR=30						
STKA	**Stephens Creek**	**44.77**	**240**	P	P	15 10 31.9	+0.2
	2.2nm,1.0s,baz=85,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**50.74**	**257**	P	P	15 11 18.0	-0.2
	0.4nm,0.6s,baz=96,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**50.97**	**252**	P	P	15 11 19.9	0.0
	1.5nm,0.6s,baz=85,slow=7.8,SNR=37						

JMA 02 15:20:41.5±0.2, 2817N×14111E, h272km±3km, M4.2, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.43**	**138**	P	Pn	15 21 21.8	+0.3
CBIJ				*e*S	S	15 21 52.9	-0.2
JHHJ	**Haha-jima-NKT**	**1.80**	**148**	P	Pn	15 21 24.4	+0.1
JHHJ				*e*S	S	15 21 57.3	-0.8
JHJ2	**Mitsune**	**5.05**	**348**	P	Pn	15 21 59.4	+0.9
BSO1	**Boso 1**	**6.46**	**359**	P	Pn	15 22 16.8	+1.1
BSO3	**Boso 3**	**6.63**	**356**	P	Pn	15 22 18.6	+0.8
BSO4	**Boso 4**	**6.83**	**355**	P	Pn	15 22 21.4	+1.2
JOD2	**Odawara 2**	**7.28**	**347**	P	Pn	15 22 26.4	+0.6
JNY	**Yasuok**	**7.68**	**340**	P	Pn	15 22 31.7	+0.9
JRY	**Ryogami san**	**8.04**	**347**	P	Pn	15 22 35.5	+0.2
JYT	**Yasato**	**8.07**	**355**	P	Pn	15 22 35.9	+0.3
JAG	**Ashikaga**	**8.35**	**351**	P	Pn	15 22 38.2	-0.9
JHO	**Hitachi**	**8.43**	**357**	P	Pn	15 22 40.6	+0.5

*ISCJB **02** 15:33:08.3±0.5, 3745N×004×7230E±008, h173km±15km, mb4.2/2, Error ellipse: s-maj=11.1km s-min=5.7km az=153.5*

*NEIC **02** 15:33:08.6±0.6, 3765N×7187E, h248km±8km, mb4.5/8, Error ellipse: s-maj=11.3km s-min=7.0km az=76.0*

*NNC **02** 15:33:13.7±4.5, 3820N×7199E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=35.6km s-min=27.8km az=9.0*

ISC 02 15:33:08.6±0.6, 3750N±004×721E±01, h186km±20km, n22, σ1§21/27, mb4.2/2, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.87**	**221**	*e*Pn	**Pn**	**15 34 10.8**	**+2.5**
KBL				*e*Sn	**Sn**	**15 34 54.8**	**-0.1**
AML	**Almayashu**	**4.78**	**14**	*e*Pn	**Pn**	**15 34 20.7**	**+1.0**
EKS2	**Erkin-Say**	**5.31**	**13**	*e*Pn	**Pn**	**15 34 27.4**	**+0.9**
	5.3nm,0.6s						
KK31	**Karatay Array**	**5.73**	**348**	⇑Pn	**Pn**	**15 34 33.4**	**+1.3**
	3.4nm,0.5s,baz=162,slow=12,SNR=50						
KK31				Sn	**Sn**	**15 35 35.9**	**-2.0**
	7.3nm,0.3s,baz=169,slow=23,SNR=24						
THN	**Thein Dam**	**5.85**	**149**	*e*P	**Pn**	**15 34 33.2**	**-0.5**
THN				*e*S	**Sn**	**15 35 36.6**	**-4.1**
DLH	**Dalhousie**	**5.86**	**146**	*e*S	Sx	15 35 35.0	
TKM2	**Tokmak 2**	**6.03**	**25**	⇑Pn	**Pn**	**15 34 36.7**	**+0.9**
	4.3nm,0.9s						
TKM2				⇑Sn	**Sn**	**15 35 40.1**	**-4.7**
	2.6nm,0.9s						
TKM2	**Tokmak 2**	**6.03**	**25**	*e*Pn	**Pn**	**15 34 36.3**	**+0.5**
	2.1nm,0.5s						
TKM2				*e*S	**Sn**	**15 35 39.4**	**-5.4**
SMLA	**Simla**	**7.59**	**145**	*i* P	**Pn**	**15 34 55.9**	**-0.6**
SMLA				*i* S	**Sn**	**15 36 15.6**	**-6.4**
SMLA				*i* S	**Sn**	**15 36 15.9**	**-6.2**
SMLA				*ex*	x	15 36 18.5	
	comp=E,286nm,0.4s						
SMLA				*ex*	x	15 36 20.7	
	comp=N,272nm,0.3s						
KLP	**Kalpa**	**7.80**	**138**	*e*P	**Pn**	**15 34 58.2**	**-1.1**
KLP				*e*S	**Sn**	**15 36 22.3**	**-4.6**
JOSI	**Joshimath**	**9.26**	**136**	*e*S	Sx	15 36 53.0	
KUDL	**Kundal**	**10.02**	**157**	*e*S	Sx	15 37 12.4	
SONA	**Sohna**	**10.12**	**154**	*e*S	Sx	15 37 11.6	
GKN	**Gorkha**	**14.14**	**128**	*e*P	**Pn**	**15 36 21.7**	**+0.9**
	comp=N,37nm,0.4s						
AB08	**Akbulak array**	**14.69**	**327**	⇓Pn	**Pn**	**15 36 30.7**	**+3.3**
	comp=N,1.3nm,0.5s						
AB08				⇓Sn	**Sn**	**15 39 08.1**	**-3.1**
	comp=N,1.0nm,0.6s						
KKN	**Kakani**	**14.69**	**127**	*e*P	**Pn**	**15 36 27.8**	**+0.2**
	comp=N,10nm,0.5s						
DMN	**Daman**	**14.71**	**128**	*e*P	**Pn**	**15 36 28.7**	**+0.9**
	comp=N,10nm,0.4s						
JIRN	**Jiri**	**15.36**	**126**	*e*P	**Pn**	**15 36 35.8**	**0.0**
RAMN	**Ramite**	**16.12**	**127**	*e*P	**Pn**	**15 36 44.1**	**-0.9**
	comp=N,35nm,0.7s						
ODAN	**Odare**	**16.69**	**125**	*e*P	**Pn**	**15 36 51.0**	**-0.8**
	comp=N,16nm,0.7s						
NAO01	**NORSAR Array S**	**44.29**	**322**	*e*P	**P**	**15 40 51.7**	**-7.7**
	comp=N,37nm,1.5s,mb4.8						
COLD	**Coldfoot**	**70.76**	**16**	P	**P**	**15 43 56.7**	**-7.3**
	comp=N,1.0nm,0.8s,mb3.6						

IDC 02 15:37:26.3±2.0, 072N×12558E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/16, mbtmp3.2/3, Error ellipse: s-maj=179.5km s-min=26.5km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.26**	**158**	P	P	15 42 25.0	0.0
	0.3nm,0.5s,baz=336,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.55**	**162**	P	P	15 42 57.0	+0.1
	0.1nm,0.3s,baz=340,slow=9.5,SNR=4.1						
MKAR	**Makanchi Array**	**59.39**	**327**	P	P	15 47 30.6	+0.1
	0.3nm,0.4s,baz=115,slow=7.5,SNR=5.0						

*IDC **02** 15:45:37.8±8.5, 3593N×7451E, h0km, mb4.4/1, mb1 4.2/4, mb1mx3.6/23, mbtmp4.1/4, ML3.8/3, Error ellipse: s-maj=131.2km s-min=54.6km az=152.0*

*ISCJB **02** 15:46:11.2±0.7, 3818N±005×743E±0.1, h160km±12km, Error ellipse: s-maj=17.3km s-min=6.1km az=163.0*

*NEIC **02** 15:46:12.2±1.1, 3814N×7435E, h149km±12km, mb4.3/7, Error ellipse: s-maj=21.9km s-min=5.7km az=70.0*

*NNC **02** 15:46:18.0±5.3, 3892N×7344E, h0km, mb3.9, mpv6.7, Error ellipse: s-maj=44.9km s-min=27.5km az=167.0*

ISC 02 15:46:11.8±0.6, 3814N±004×743E±01, h150km±11km, n31, σ1§00/37, 3C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.01**	**354**	*e*Pn	**Pn**	**15 47 12.4**	**+0.3**
AML				*e*Sn	Sn	15 47 34.7	-24
AML	**Almayashu**	**4.01**	**354**	P	**Pn**	**15 47 12.3**	**+0.3**
	SNR=57						
UCH	**Uchtor**	**4.08**	**3**	P	**Sn**	**15 47 59.8**	**-1.0**
	SNR=7.7						
ULHL	**Ulahol**	**4.37**	**20**	P	**Pn**	**15 47 17.7**	**+0.9**
	SNR=9.5						
AAK	**Ala-Archa**	**4.49**	**2**	P	**Pn**	**15 47 19.3**	**+0.9**
	SNR=6.4						
EKS2	**Erkin-Say**	**4.53**	**356**	*e*Pn	**Pn**	**15 47 19.7**	**+0.9**
EKS2				*e*Sn	**Sn**	**15 48 08.6**	**-2.6**
EKS2	**Erkin-Say**	**4.53**	**356**	P	**Pn**	**15 47 19.8**	**+0.9**
	SNR=11						
KBK	**Karagaybulak**	**4.54**	**6**	P	**Pn**	**15 47 20.2**	**+1.2**
	SNR=31						
CHMS	**Chumysh**	**4.86**	**4**	P	**Pn**	**15 47 24.3**	**+1.0**
	SNR=8.5						
TKM2	**Tokmak 2**	**4.88**	**12**	⇓Pn	**Pn**	**15 47 24.3**	**+0.8**
	11nm,0.7s						
TKM2				⇑Sn	**Sn**	**15 48 17.7**	**-1.8**
	12nm,0.7s						
TKM2	**Tokmak 2**	**4.88**	**12**	*e*Pn	**Pn**	**15 47 23.8**	**+0.3**
TKM2				*e*Sn	**Sn**	**15 48 11.6**	**-7.9**
TKM2	**Tokmak 2**	**4.88**	**12**	P	**Pn**	**15 47 24.6**	**+1.0**
	SNR=18						
USP	**Ospenovka**	**5.12**	**2**	P	**Pn**	**15 47 27.5**	**+0.8**
	SNR=6.5						
KK31	**Karatay Array**	**5.71**	**331**	Pn	**Pn**	**15 47 33.8**	**-0.8**
	530µm,0.1s,baz=130,slow=11,SNR=49						
KK31				⇑Sn	**Sn**	**15 48 32.8**	**-6.6**
	9.8nm,0.3s,baz=133,slow=21,SNR=25						
THN	**Thein Dam**	**5.82**	**168**	*e*P	**Pn**	**15 47 37.0**	**+0.9**
THN				*e*S	**Sn**	**15 48 40.0**	**-2.0**
MK31	**Makanchi Array**	**10.48**	**32**	*e*Pn	**Pn**	**15 48 37.9**	**-0.1**
MKAR	**Makanchi Array**	**10.48**	**32**	Pn	**Pn**	**15 48 37.7**	**-0.2**
	0.1nm,0.3s,baz=206,slow=16,SNR=12						
DANN	**Dangsing**	**12.59**	**138**	*e*P	**Pn**	**15 49 05.6**	**-0.1**
	6.9nm,0.3s						
KURK	**Kurchatov**	**12.95**	**12**	Pn	**Pn**	**15 49 07.2**	**-2.8**
	baz=200,slow=11						
KURK	**Kurchatov**	**12.95**	**12**	*e*Pn	**Pn**	**15 49 14.7**	**+4.6**
	4.4nm,0.8s						
KOLN	**Koldanda**	**12.97**	**140**	*e*P	**Pn**	**15 49 10.6**	**-0.1**
	3.6nm,0.3s						
GKN	**Gorkha**	**13.33**	**136**	*e*P	**Pn**	**15 49 15.6**	**+0.4**
	17nm,0.4s						
KKN	**Kakani**	**13.85**	**135**	*e*P	**Pn**	**15 49 22.2**	**+0.4**
	7.9nm,0.5s						
DMN	**Daman**	**13.90**	**136**	*e*P	**Pn**	**15 49 22.9**	**+0.5**
	4.2nm,0.3s						
JIRN	**Jiri**	**14.47**	**133**	*e*P	**Pn**	**15 49 29.8**	**+0.2**
	7.5nm,0.5s						
BVAR	**Borovoye Array**	**15.12**	**351**	Pn	**Pn**	**15 49 40.2**	**+2.7**
	0.4nm,0.3s,baz=161,slow=10,SNR=13						
AB08	**Akbulak array**	**15.15**	**322**	⇑Pn	**Pn**	**15 49 37.5**	**-0.4**
	0.7nm,0.6s						
AB08				⇓Sn	**Sn**	**15 52 14.5**	**-12**
	1.1nm,0.6s						
RAMN	**Ramite**	**15.24**	**133**	*e*P	**Pn**	**15 49 38.3**	**-0.9**
	8.0nm,0.5s						
ZAA0	**Zalesovo Array**	**17.39**	**21**	*e*P	**Pn**	**15 50 04.1**	**-1.0**
ZALV	**Zalesovo Beam**	**17.39**	**21**	P	**Pn**	**15 50 04.8**	**-0.3**
	1.0nm,0.3s,baz=214,slow=12,SNR=24						
ARCES	**ARCESS Array B**	**40.66**	**336**	P	**P**	**15 53 36.4**	**-0.4**
	6.5nm,1.0s,baz=102,slow=10.0,SNR=5.2						

IDC 02 16:19:04.5±3.9, 450S×15216E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.2/15, mbtmp3.1/2, Error ellipse: s-maj=156.2km s-min=52.3km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.17**	**227**	P	P	16 24 13.3	+0.3
	0.4nm,0.5s,baz=52,slow=9.7,SNR=12						
ASAR	**Alice Springs**	**25.95**	**221**	P	P	16 24 38.7	-0.1
	0.3nm,0.9s,baz=54,slow=9.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**149.61**	**288**	PKPbc	PKPbc	16 38 56.6	-0.5
	181nm,0.4s,baz=96,slow=1.4,SNR=1.9						

GUC 02 16:37:43.4±0.6, 2342S×6958W, h78km±9km, MD3.5, ML3.4, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.57**	**273**	*i* P	Pn	16 37 59.3	+1.7
CEN1				*i* S	Sn	16 38 11.0	+3.0
CEN1				AML	AML	16 38 13.3	
	comp=N,905nm,0.3s						
ANCH	**Antofagasta**	**0.81**	**251**	⇑*i*P	Pn	16 38 00.3	+0.3
ANCH				*i* S	Sn	16 38 13.0	+0.6
ANCH				AML	AML	16 38 14.6	
	comp=E,2µm,0.1s						
SPCH	**San Pedro de A**	**1.37**	**68**	*i* P	Pn	16 38 07.9	+1.0
SPCH				*i* S	Sn	16 38 26.6	+2.1
SPCH				AML	AML	16 38 35.9	
	comp=N,2µm,0.4s						
CPN1	**Cerro Paranal**	**1.42**	**212**	⇓*i*P	Pn	16 38 08.4	+0.9
CPN1				*i* S	Sn	16 38 28.0	+2.3
CPN1				AML	AML	16 38 29.2	
	comp=E,704nm,0.3s						

*IDC **02** 17:03:29.8±1.1, 025N×12366E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.5/17, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=38.2km s-min=18.5km az=69.0*

*ISCJB **02** 17:03:33.2±0.9, 040N±007×12387E±009, h33km, mb3.4/5, Error ellipse: s-maj=12.4km s-min=10.2km az=11.6*

*DJA **02** 17:03:43.9±0.0, 0.14S×12343E, h0km, Mjma3.4/4, MLv4.2/4*

ISC 02 17:03:35.5±0.9, 036N±007×12387E±008, h35km, n13, σ1§25/11, mb3.4/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.52**	**83**	P	Px	17 04 48.8	
TNTI	**Ternate**	**3.52**	**83**	S	Sx	17 05 35.4	
LBMI	**Labuha**	**3.77**	**105**	P	Px	17 04 50.2	
PCI	**Palu**	**4.22**	**253**	P	**Pn**	**17 04 42.0**	**+4.6**
PCI	**Palu**	**4.22**	**253**	S	**Sn**	**17 05 26.4**	**+0.9**
KDI	**Kendari**	**4.47**	**196**	P	**Pn**	**17 04 45.1**	**+4.3**
KDI	**Kendari**	**4.47**	**196**	S	**Sn**	**17 05 32.8**	**+1.2**
KAPI	**Kappang**	**6.74**	**218**	P	**Pn**	**17 05 05.9**	**-6.1**
	0.8nm,0.3s,baz=69,slow=23,SNR=5.3						
KAPI				Sn	**Sn**	**17 06 24.6**	**-3.0**
	baz=53,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**22.64**	**154**	P	**P**	**17 08 33.9**	**+0.3**
	0.9nm,0.6s,mb3.4,baz=332,slow=10,SNR=24						
ASAR	**Alice Springs**	**25.80**	**158**	P	**P**	**17 09 03.0**	**-0.5**
	0.3nm,0.6s,mb3.0,baz=333,slow=9.1,SNR=5.1						
ASAR				PcP	PcP	17 12 29.5	-3.1
	0.2nm,0.5s,baz=339,slow=2.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**30.37**	**308**	P	**P**	**17 09 44.2**	**-0.2**
	0.6nm,0.7s,mb3.5,baz=132,slow=6.4,SNR=7.6						
SONM	**Songino Array**	**49.66**	**345**	P	**P**	**17 12 25.2**	**+1.5**
	0.6nm,0.6s,mb3.8,baz=162,slow=9.2,SNR=6.4						
MKAR	**Makanchi Array**	**58.77**	**328**	P	**P**	**17 13 28.4**	**-1.6**
	0.2nm,0.3s,mb3.6,baz=127,slow=8.6,SNR=7.7						

CASC 02 17:03:49.5±1.8, 1063N×8495W, h139km±8km, mb5.3, MD4.0, ML4.1, 8C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUI	**Cuipilapa**	**0.23**	**280**	⇑*i*P	Pn	17 04 08.7	+0.3
2RIO	**Dos Rios de Up**	**0.30**	**251**	⇑*e*P	Pn	17 04 10.9	+2.2
2RIO				*e*S	Sn	17 04 27.2	+4.0
JTS	**JuntasAbangare**	**0.33**	**181**	*e*P	Pn	17 04 08.9	+0.1
JTS				*e*S	Sn	17 04 24.2	+0.8
JTS				AMP		17 04 24.9	
	comp=N,64µm,0.2s						
CGA2	**Cerro Gallo 2**	**0.77**	**142**	⇑*i*P	Pn	17 04 11.8	+0.5
CGA2				*e*S	Sn	17 04 28.4	+0.6
JCR	**Jicaral**	**0.79**	**192**	⇑*e*P	Pn	17 04 11.7	+0.2
JCR				*e*S	Sn	17 04 29.2	+1.1
VCR	**Vista de Mar**	**0.84**	**234**	⇑*i*P	Pn	17 04 11.7	-0.2
PRS1	**Puriscal**	**0.89**	**136**	⇑*i*P	Pn	17 04 13.2	+0.9
CONN	**Concepcion**	**1.15**	**325**	*e*P	Pn	17 04 14.6	0.0
LCR2	**La Lucha 2**	**1.28**	**133**	*e*P	Pn	17 04 16.5	+0.7
LCR2				*e*S	Sn	17 04 35.6	-0.4
URSC	**Urasca**	**1.39**	**124**	⇓*e*P	Pn	17 04 18.0	+1.0
URSC				*e*S	Sn	17 04 40.2	+2.2
QCR	**Quepos**	**1.42**	**147**	⇑*e*P	Pn	17 04 18.1	+0.7
QCR				*e*S	Sn	17 04 39.5	+0.9
BUS	**Buena Vista**	**1.58**	**132**

comp=E,10nm,0.4s,baz=119,slow=27,SNR=5.1
KBL Kabul 6.70 225 *e*Pn **Pn 17 25 34.9 +0.4**
comp=E,4.6nm,0.5s
KBL *e*Sn **Sn 17 26 51.5 +2.2**
DLH Dalhousie 6.91 172 *ex* **Pn 17 25 37.0 -0.4**
DLH *e*S **Sn 17 26 56.0 +1.4**
THN Thein Dam 6.99 174 *ex* **Pn 17 25 38.9 +0.3**
THN *e*S **Sn 17 26 56.8 +0.2**
KLP Kalpa 8.34 159 *e*S **Sn 17 27 28.8 -0.8**
KLP AML AML 17 27 42.7
comp=N,34nm,0.5s
KLP AML AML 17 27 47.3
comp=E,44nm,0.6s
SMLA Simla 8.48 166 *i* P **Pn 17 26 02.9 +4.1**
SMLA *i* S **Sn 17 27 33.2 +0.3**
SMLA *i* S **Sn 17 27 33.6 +0.7**
SMLA *ex* x 17 27 38.6
comp=N,213nm,0.3s
SMLA *ex* x 17 27 40.6
comp=E,217nm,0.3s
MK31 Makanchi Array 9.19 34 *e*Pn **Pn 17 26 08.9 +0.4**
MKAR Makanchi Array 9.19 34 Pn **Pn 17 26 09.5 +1.0**
comp=E,0.1nm,0.3s,baz=214,slow=14,SNR=6.5
MKAR Lg 17 28 53.3
comp=E,0.1nm,0.3s,baz=218,slow=28,SNR=2.9
MKAR Makanchi Array 9.19 34 Pn **Pn 17 26 09.5 +1.0**
MKAR Lg 17 28 53.3
JOSI Joshimath 9.64 155 *e*P **Pn 17 26 19.9 +5.0**
JOSI *e*S **Sn 17 27 59.2 -2.4**
JOSI AML AML 17 28 09.2
comp=N,59nm,0.8s
JOSI AML AML 17 28 14.3
comp=E,48nm,0.9s
SONA Sohna 11.28 170 *e*S **Sn 17 28 35.3 -6.3**
KUDL Kundal 11.31 172 *e*S **Sn 17 28 37.8 -4.6**
KURK Kurchatov 11.63 12 Pn **Pn 17 26 37.7 -4.0**
baz=193,slow=12
KURK Pg Pn 17 27 23.8 +42
baz=212,slow=18
KURK Lg 17 29 51.8
baz=197,slow=30
BVAR Borovoye Array 13.96 349 Pn **Pn 17 27 09.2 -4.1**
comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=2.2
BRVK Borovoye 14.01 349 *e*Pn **Pn 17 27 12.7 -1.2**
comp=E,6.9nm,0.8s
ZALV Zalesovo Beam 16.07 22 Pn **Pn 17 27 40.9 +0.5**
comp=E,0.1nm,0.3s,baz=212,slow=9.7,SNR=3.5
AKTK Aktyubinsk 16.18 318 Pn **Pn 17 27 37.6 -4.3**
AKTO Aktyubinsk 16.18 318 Pn **Pn 17 27 37.6 -4.3**
comp=E,0.1nm,0.3s,baz=121,slow=14,SNR=5.0
BR131 Keskin Array S 31.55 284 *e*P **P 17 30 14.6 -0.3**
comp=E,1.8nm,0.6s,mb4.1
ARCES ARCESS Array B 39.69 335 P **P 17 31 23.9 -0.3**
comp=E,5.4nm,0.8s,mb4.4,baz=93,slow=9.7,SNR=7.7
GERES GERESS Array B 43.79 303 P **P 17 31 57.6 -0.3**
comp=E,0.8nm,0.6s,mb3.6,baz=69,slow=8.9,SNR=7.9
NOA NORSAR Array B 43.95 321 P **P 17 31 58.0 -1.0**
comp=E,0.4nm,0.6s,mb3.4,baz=90,slow=7.9,SNR=2.4
BORG Borgarnes 57.62 330 P **P 17 33 42.8 +1.1**
comp=E,25nm,1.0s,mb5.2,baz=60,slow=9.2,SNR=3.0
TORD Torodi Ar. Bea 68.77 270 P **P 17 34 55.0 -1.2**
comp=E,176nm,0.4s,baz=48,slow=5.8,SNR=1.7
WRA Warramunga Arr 81.07 125 P **P 17 36 08.1 +1.1**
comp=E,1.3nm,0.6s,mb4.0,baz=326,slow=5.1,SNR=33
ASAR Alice Springs 83.54 128 P **P 17 36 20.6 +0.9**
comp=E,0.6nm,0.6s,mb3.9,baz=318,slow=5.1,SNR=15

FUNV 02 17:43:34.1, 1066N×7042W, h7km, MW3.7, 2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DABV	**Dabajuro**	**0.34**	**321**	*e*P	Pg	17 43 40.5	-0.3
DABV				*e*S	Sg	17 43 46.4	+1.0
QARV	**Quebrada Arrib**	**0.46**	**193**	*e*P	Pg	17 43 42.5	-0.5
QARV				*e*S	Sg	17 43 49.9	+0.9
SIQV	**Siquisique**	**0.60**	**91**	*e*P	Pg	17 43 45.4	-0.3
SIQV				*e*S	Sg	17 43 53.8	+0.3
CURV	**Curarigua**	**0.78**	**145**	*e*P	Pg	17 43 48.5	-0.6
CURV				*e*S	Sg	17 43 59.5	+0.2
TEPV	**Terepaima**	**1.39**	**120**	*e*P	Pn	17 43 59.2	-0.6
TEPV				*e*Sb	Sb	17 44 17.9	-0.4
SANV	**Sanarito**	**1.44**	**143**	*e*P	Pn	17 44 00.5	-0.1
SANV				*e*S	Sn	17 44 19.8	+0.1
JACV	**Jacura**	**1.62**	**74**	*e*P	Pn	17 44 02.7	-0.3
JACV				*e*S	Sn	17 44 23.7	-0.4
VIRV	**Villa del Rosa**	**1.96**	**266**	*e*P	Pn	17 44 06.6	-1.1
VIRV				*e*S	Sn	17 44 31.1	-1.5
VIGV	**El Vigia**	**2.03**	**207**	*e*P	Pn	17 44 08.8	+0.1
SOCV	**Socops**	**2.40**	**190**	*e*P	Pn	17 44 13.1	-0.6
SOCV				*e*S	Sn	17 44 41.6	-1.7
TURV	**Turiamo**	**2.54**	**94**	*e*P	Pn	17 44 14.3	-1.4
TURV				*e*S	Sn	17 44 45.3	-1.6
BAUV	**El Baul**	**2.90**	**126**	*e*P	Pn	17 44 20.6	0.0
CAPV	**Capacho**	**3.34**	**214**	*e*P	Pn	17 44 26.2	-0.6
BIRV	**Birongo**	**4.08**	**92**	*e*P	Pn	17 44 35.8	-1.1
CUPV	**Cœpira**	**4.59**	**97**	*e*P	Pn	17 44 42.4	-1.6
CAOV	**Caicara del Or**	**5.23**	**129**	*e*P	Pn	17 44 50.7	-2.0

*ISCJB **02** 17:52:40.6±0.2, 4931N±001×670E±003, h0km, Error ellipse: s-maj=2.5km s-min=1.9km az=14.2*
*LDG **02** 17:52:42.8±0.0, 4935N×684E, h1km, Md2.5/3, Ml2.5/32, Error ellipse: s-maj=0.7km s-min=0.6km az=138.0, Suspected Mining induced.*
*BGR **02** 17:52:42.8±0.3, 4937N×682E, h1km, ML1.8/3, Error ellipse: s-maj=3.3km s-min=3.3km az=66.0*
*BNS **02** 17:52:42.9±0.5, 4935N×681E, h1km, ML1.6*
*NEIC **02** 17:52:42.8, 4935N×684E, h1km, ML2.5(LDG), ML2.3(STR), ML1.8(SZGRF), After LDG.*
*CSEM **02** 17:52:42.8±0.0, 4936N×684E, h1km, ML2.5/28, Error ellipse: s-maj=0.7km s-min=0.5km az=116.0*

ISC 02 17:52:41.6±0.2, 4933N±001×674E±002, h0km, n85, σ1§15/174, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.42**	**29**	*e*Pg	**Pg**	**17 52 49.8**	**+0.1**
	SNR=22						
RUP	**Ruppelstein**	**0.42**	**29**	Pg	**Pg**	**17 52 49.7**	**0.0**
RUP				Sg	**Sg**	**17 52 54.3**	**-0.9**
RUP	**Ruppelstein**	**0.42**	**29**	Pg	**Pg**	**17 52 49.8**	**+0.1**
	SNR=22						
RUP				Sg	**Sg**	**17 52 54.3**	**-0.9**
WLF	**Walferdange**	**0.51**	**311**	*e*Pg	**Pg**	**17 52 53.3**	**+2.1**
	SNR=3.6						
WLF				*e*Sg	**Sg**	**17 52 59.1**	**+1.2**
	SNR=3.3						
WLF	**Walferdange**	**0.51**	**311**	P	**Pg**	**17 52 53.3**	**+2.1**
ABH	**Alteburg**	**0.76**	**43**	*e*Pg	**Pg**	**17 52 56.2**	**+0.1**
	SNR=3.8						
LANF	**Langenberg**	**0.78**	**116**	*e*Pg	**Pg**	**17 52 56.8**	**+0.2**
	SNR=3.9						
LANF	**Langenberg**	**0.78**	**116**	Pg	**Pg**	**17 52 56.4**	**-0.2**
LANF				Sg	**Sg**	**17 53 08.2**	**+1.5**
LANF	**Langenberg**	**0.78**	**116**	Pg	**Pg**	**17 52 56.8**	**+0.2**
	SNR=3.9						
LANF				Sg	**Sg**	**17 53 08.2**	**+1.5**
BGG	**Burgeitz**	**0.96**	**24**	*e*Pg	**Pg**	**17 53 00.1**	**+0.2**
HILG	**Hillesheim**	**0.96**	**358**	*e*Pg	**Pg**	**17 53 00.7**	**+0.7**
CDF	**Champ du Feu**	**0.99**	**159**	*e*Pn	**Pn**	**17 53 02.2**	**-0.4**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**17 53 13.6**	**+0.4**
	19nm,0.2s,SNR=1.0						
CDF				*e*Sn	**Sn**	**17 53 16.0**	**-1.3**
	SNR=1.0						
CDF	**Champ du Feu**	**0.99**	**159**	*e*Pg	**Pg**	**17 53 01.3**	**+0.8**
CDF				*e*Pn	**Pn**	**17 53 02.2**	**-0.4**
CDF				*e*Sg	**Sg**	**17 53 13.6**	**+0.4**
CDF				*e*Sn	**Sn**	**17 53 16.0**	**-1.3**
CDF	**Champ du Feu**	**0.99**	**159**	*e*Pn	**Pn**	**17 53 02.2**	**-0.4**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**17 53 13.6**	**+0.4**
	9.6nm,0.2s,SNR=1.0						
CDF				*e*Sn	**Sn**	**17 53 16.0**	**-1.3**
	SNR=1.0						
RFYF	**Reffroy**	**1.09**	**230**	*e*Pg	**Pg**	**17 53 04.4**	**+2.0**
	baz=46						
RFYF				*e*Sn	**Sn**	**17 53 19.9**	**+0.1**
	31nm,0.2s						
RFYF	**Reffroy**	**1.09**	**230**	*e*Pg	**Pg**	**17 53 04.4**	**+2.0**
RFYF				*e*Sn	**Sn**	**17 53 19.9**	**+0.1**
	15nm,0.2s						
ECH	**Echery**	**1.15**	**166**	*e*Pg	**Pg**	**17 53 04.8**	**+1.2**
	SNR=9.9						
ECH	**Echery**	**1.15**	**166**	Pg	**Pg**	**17 53 05.1**	**+1.5**
THEF	**They Montfort**	**1.21**	**204**	*e*Pg	**Pg**	**17 53 06.5**	**+1.7**
	SNR=6.8						
THEF	**They Montfort**	**1.21**	**204**	Pg	**Pg**	**17 53 06.2**	**+1.4**
THEF				Sg	**Sg**	**17 53 23.3**	**+2.8**
THEF	**They Montfort**	**1.21**	**204**	Pg	**Pg**	**17 53 06.5**	**+1.7**
	SNR=6.8						
THEF				Sg	**Sg**	**17 53 23.3**	**+2.8**
STB	**Steinbach**	**1.27**	**3**	*e*Pg	**Pg**	**17 53 06.0**	**+0.1**
STB				*e*Sg	**Sg**	**17 53 22.8**	**+0.6**
	9.9nm,0.5s						
STB	**Steinbach**	**1.27**	**3**	Pg	**Pg**	**17 53 05.9**	**+0.1**
STB				Sg	**Sg**	**17 53 22.8**	**+0.6**
	9.9nm,0.5s						
KOE	**Koeppel**	**1.27**	**30**	*e*Pg	**Pg**	**17 53 05.8**	**-0.1**
KLL	**Kalltalsperre**	**1.34**	**348**	*e*Pg	**Pg**	**17 53 06.8**	**-0.6**
HAU	**Haudompre**	**1.35**	**191**	*e*Pg	**Pg**	**17 53 08.7**	**+1.2**
HAU				*e*Sn	**Sn**	**17 53 25.6**	**-0.7**
	14nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**1.35**	**191**	*e*Pn	**Pn**	**17 53 07.8**	**+0.1**
HAU				*e*Pg	**Pg**	**17 53 08.7**	**+1.2**
HAU				*e*Sn	**Sn**	**17 53 25.6**	**-0.7**
HAU	**Haudompre**	**1.35**	**191**	*e*Pg	**Pg**	**17 53 08.7**	**+1.2**
HAU				*e*Sn	**Sn**	**17 53 25.6**	**-0.7**
	6.8nm,0.3s,SNR=1.0						
MEM	**Membach**	**1.36**	**340**	P	**Pg**	**17 53 08.2**	**+0.6**
TOD	**Tromm**	**1.38**	**78**	*e*Pg	**Pg**	**17 53 07.5**	**-0.4**
	SNR=3.1						
TOD	**Tromm**	**1.38**	**78**	Pg	**Pg**	**17 53 07.1**	**-0.8**
MEZF	**Maizieres J'vi**	**1.39**	**234**	*e*Pg	**Pg**	**17 53 10.4**	**+2.2**
	baz=53,SNR=1.0						
MEZF				*e*Sg	**Sg**	**17 53 28.8**	**+2.7**
	12nm,0.4s						
MEZF	**Maizieres J'vi**	**1.39**	**234**	*e*Pn	**Pn**	**17 53 08.5**	**+0.4**
MEZF				*e*Pg	**Pg**	**17 53 10.4**	**+2.2**
MEZF				*e*Sg	**Sg**	**17 53 28.8**	**+2.7**
MEZF	**Maizieres J'vi**	**1.39**	**234**	*e*Pg	**Pg**	**17 53 10.4**	**+2.2**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**17 53 28.8**	**+2.7**
	5.9nm,0.4s						
TNS	**Taunus Mts**	**1.42**	**51**	*e*Pg	**Pg**	**17 53 07.9**	**-0.9**
	SNR=4.7						
TNS				*e*Sg	**Sg**	**17 53 26.0**	**-1.2**
	SNR=3.8						
TNS	**Taunus Mts**	**1.42**	**51**	*e*Pg	**Pg**	**17 53 07.8**	**-1.0**
BCLA	**Clavier**	**1.43**	**320**	P	**Pn**	**17 53 10.7**	**+2.0**
BFO	**Black Forest**	**1.45**	**133**	*e*Pg	**Pg**	**17 53 09.9**	**+0.5**
	SNR=2.9						
BFO				*e*Sg	**Sg**	**17 53 28.5**	**+0.3**
	SNR=6.8						
BFO	**Black Forest**	**1.45**	**133**	*e*Pg	**Pg**	**17 53 09.8**	**+0.4**
BFO				*e*Sg	**Sg**	**17 53 26.7**	**-1.5**
BFO	**Black Forest**	**1.45**	**133**	*e*Pg	**Pg**	**17 53 09.8**	**+0.4**
BFO				Sg	**Sg**	**17 53 28.5**	**+0.3**
	SNR=6.8						
GIVF	**Givet**	**1.46**	**303**	*e*Pn	**Pn**	**17 53 09.5**	**+0.3**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**17 53 28.7**	**-0.3**
	20nm,0.4s,SNR=1.0						
GIVF	**Givet**	**1.46**	**303**	*e*Pn	**Pn**	**17 53 09.5**	**+0.3**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**17 53 28.7**	**-0.3**
	10nm,0.4s,SNR=1.0						
MOF	**Molkenrain**	**1.50**	**170**	*e*Pg	**Pg**	**17 53 11.6**	**+1.2**
	SNR=13						
HINF	**Hinteralfeld**	**1.52**	**177**	*e*Pg	**Pg**	**17 53 10.4**	**-0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**17 53 31.3**	**+1.0**
	20nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**1.52**	**177**	*e*Pg	**Pg**	**17 53 10.4**	**-0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**17 53 31.3**	**+1.0**
	9.9nm,0.3s,SNR=1.0						
HGN	**Heimansgroeve**	**1.52**	**340**	*e*Pg	**Pg**	**17 53 10.3**	**-0.5**
HGN				*e*Sg	**Sg**	**17 53 30.2**	**-0.3**
DOU	**Dourbes**	**1.59**	**300**	P	**Pn**	**17 53 12.1**	**+1.2**
SFTF	**Sexfontaines**	**1.59**	**226**	*e*Pg	**Pg**	**17 53 13.4**	**+1.3**
SFTF				*e*Sg	**Sg**	**17 53 34.9**	**+2.2**
	5.7nm,0.3s						
SFTF	**Sexfontaines**	**1.59**	**226**	*e*Pn	**Pn**	**17 53 11.1**	**+0.1**
SFTF				*e*Pg	**Pg**	**17 53 13.4**	**+1.3**
SFTF				*e*Sg	**Sg**	**17 53 34.9**	**+2.2**
SFTF	**Sexfontaines**	**1.59**	**226**	*e*Pg	**Pg**	**17 53 13.4**	**+1.3**
SFTF				*e*Sg	**Sg**	**17 53 34.9**	**+2.2**
	2.8nm,0.3s						
FELD	**Feldberg im Sc**	**1.68**	**150**	*e*Pg	**Pg**	**17 53 14.7**	**+1.0**
	SNR=4.2						
FELD	**Feldberg im Sc**	**1.68**	**150**	Pg	**Pg**	**17 53 14.2**	**+0.4**
BAIF	**Baives**	**1.80**	**295**	*e*Pg	**Pg**	**17 53 17.1**	**+1.1**
BAIF				*e*Sn	**Sn**	**17 53 36.7**	**-0.6**
	4.8nm,0.3s,SNR=1.0						
BAIF	**Baives**	**1.80**	**295**	*e*Pn	**Pn**	**17 53 13.9**	**+0.1**
BAIF				*e*Pg	**Pg**	**17 53 17.1**	**+1.1**
BAIF				*e*Sn	**Sn**	**17 53 36.7**	**-0.6**
BAIF	**Baives**	**1.80**	**295**	*e*Pg	**Pg**	**17 53 17.1**	**+1.1**
BAIF				*e*Sn	**Sn**	**17 53 36.7**	**-0.6**
	2.4nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**2.76**	**189**	*e*Pg	**Pg**	**17 53 34.7**	**+0.3**
CABF				*e*Sn	**Sn**	**17 53 59.1**	**-1.8**
	1.8nm,0.4s						
CABF				*e*Sg	**Sg**	**17 54 10.5**	**+0.4**
	7.7nm,0.6s						
CABF	**La Chapelle**	**2.76**	**189**	*e*Pn	**Pn**	**17 53 27.3**	**+0.3**
CABF				*e*Pg	**Pg**	**17 53 34.7**	**+0.3**
CABF				*e*Sn	**Sn**	**17 53 59.1**	**-1.8**
CABF				*e*Sg	**Sg**	**17 54 10.5**	**+0.4**
CABF	**La Chapelle**	**2.76**	**189**	*e*Pg	**Pg**	**17 53 34.7**	**+0.3**
CABF				*e*Sn	**Sn**	**17 53 59.1**	**-1.8**
	0.9nm,0.4s						
CABF				*e*Sg	**Sg**	**17 54 10.5**	**+0.4**
	3.8nm,0.6s						
LOR	**Lormes**	**2.82**	**224**	*e*Pn	**Pn**	**17 53 27.5**	**-0.3**
	baz=45,SNR=1.0						
LOR				*e*Sn	**Sn**	**17 54 01.1**	**-1.4**
	5.7nm,0.4s						
LOR				*e*Sg	**Sg**	**17 54 13.4**	**+1.2**
	3.7nm,0.3s						
LOR	**Lormes**	**2.82**	**224**	*e*Pn	**Pn**	**17 53 27.5**	**-0.3**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**17 54 01.1**	**-1.4**
	2.8nm,0.4s						
LOR				*e*Sg	**Sg**	**17 54 13.4**	**+1.2**
	1.9nm,0.3s						
SSF	**Saint Saulge**	**3.14**	**225**	*e*Pn	**Pn**	**17 53 31.0**	**-1.2**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**17 54 08.9**	**-1.4**
	1.4nm,0.3s						
SSF				*e*Sg	**Sg**	**17 54 23.1**	**+0.8**
	3.8nm,0.4s						
SSF	**Saint Saulge**	**3.14**	**225**	*e*Pn	**Pn**	**17 53 31.0**	**-1.2**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**17 54 08.9**	**-1.4**
	0.7nm,0.3s						
SSF				*e*Sg	**Sg**	**17 54 23.1**	**+0.8**
	1.9nm,0.4s						
SMF	**Signal de Mont**	**3.32**	**217**	*e*Pn	**Pn**	**17 53 34.0**	**-0.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**17 54 13.1**	**-1.7**
	2.8nm,0.3s,SNR=1.0						
SMF				*e*Sg	**Sg**	**17 54 28.9**	**+0.8**
	3.7nm,0.5s						
SMF	**Signal de Mont**	**3.32**	**217**	*e*Pn	**Pn**	**17 53 34.0**	**-0.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**17 54 13.1**	**-1.7**
	1.4nm,0.3s,SNR=1.0						
SMF				*e*Sg	**Sg**	**17 54 28.9**	**+0.8**
	1.9nm,0.5s						
AVF	**Avril sur Loir**	**3.41**	**223**	*e*Pn	**Pn**	**17 53 35.8**	**-0.1**
AVF				*e*Sn	**Sn**	**17 54 15.1**	**-1.9**
	1.2nm,0.2s						
AVF				*e*Sg	**Sg**	**17 54 31.3**	**+0.3**
	1.4nm,0.3s						
AVF	**Avril sur Loir**	**3.41**	**223**	*e*Pn	**Pn**	**17 53 35.8**	**-0.1**
AVF				*e*Sn	**Sn**	**17 54 15.1**	**-1.9**
	0.6nm,0.2s						
AVF				*e*Sg	**Sg**	**17 54 31.3**	**+0.3**
	0.7nm,0.3s						
HYF	**Humbligny**	**3.43**	**234**	*e*Pn	**Pn**	**17 53 36.4**	**+0.2**
HYF				*e*Sn	**Sn**	**17 54 15.9**	**-1.6**
BGF	**Bois d'Agland**	**3.81**	**225**	*e*Pn	**Pn**	**17 53 40.5**	**-1.0**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**17 54 25.2**	**-1.8**
	7.1nm,0.5s,SNR=1.0						
BGF				*e*Sg	**Sg**	**17 54 44.4**	**+0.4**
	9.8nm,0.6s						
BGF	**Bois d'Agland**	**3.81**	**225**	*e*Pn	**Pn**	**17 53 40.5**	**-1.0**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**17 54 25.2**	**-1.8**
	3.5nm,0.5s,SNR=1.0						
BGF				*e*Sg	**Sg**	**17 54 44.4**	**+0.4**
	4.9nm,0.6s						
LPL	**La Plagne**	**3.82**	**180**	*e*Pn	**Pn**	**17 53 41.0**	**-0.5**
LPL				*e*Sn	**Sn**	**17 54 24.5**	**-2.6**
	1.4nm,0.5s						
LPL	**La Plagne**	**3.82**	**180**	*e*Pn	**Pn**	**17 53 41.0**	**-0.5**
LPL				*e*Sn	**Sn**	**17 54 24.5**	**-2.6**
	0.7nm,0.5s						
LPG	**La Plagne**	**3.84**	**180**	*e*Pn	**Pn**	**17 53 41.7**	**-0.1**
LPG				*e*Sn	**Sn**	**17 54 24.9**	**-2.7**
	1.2nm,0.4s						
LPG	**La Plagne**	**3.84**	**180**	*e*Pn	**Pn**	**17 53 41.7**	**-0.1**
LPG				*e*Sn	**Sn**	**17 54 24.9**	**-2.7**
	0.6nm,0.4s						
TCF	**Toulx Ste Croi**	**4.31**	**227**	*e*Pn	**Pn**	**17 53 48.2**	**-0.1**
TCF				*e*Sn	**Sn**	**17 54 36.9**	**-2.3**
	0.3nm,0.2s						
TCF				*e*Sg	**Sg**	**17 55 00.0**	**0.0**
	4.4nm,0.6s						
TCF	**Toulx Ste Croi**	**4.31**	**227**	*e*Pn	**Pn**	**17 53 48.2**	**-0.1**
TCF				*e*Sn	**Sn**	**17 54 36.9**	**-2.3**
	0.2nm,0.2s						
TCF				*e*Sg	**Sg**	**17 55 00.0**	**0.0**
	2.2nm,0.6s						
LDF	**La Druitiere**	**4.58**	**263**	*e*Pn	**Pn**	**17 53 52.1**	**+0.1**
LDF				*e*Sn	**Sn**	**17 54 43.5**	**-2.4**
	1.4nm,0.4s						
LDF	**La Druitiere**	**4.58**	**263**	*e*Pn	**Pn**	**17 53 52.1**	**+0.1**
LDF				*e*Sn	**Sn**	**17 54 43.5**	**-2.4**
	0.7nm,0.4s						
FLN	**La Foliniere**	**4.78**	**266**	*e*Pn	**Pn**	**17 53 54.8**	**0.0**
FLN				*e*Sn	**Sn**	**17 54 48.0**	**-2.9**
	3.0nm,0.4s,baz=84						
FLN	**La Foliniere**	**4.78**	**266**	*e*Pn	**Pn**	**17 53 54.8**	**0.0**
FLN				*e*Sn	**Sn**	**17 54 48.0**	**-2.9**
	1.5nm,0.4s						
GRR	**Gorron**	**5.10**	**262**	*e*Pn	**Pn**	**17 53 59.2**	**0.0**
GRR				*e*Sn	**Sn**	**17 54 55.9**	**-2.8**
	1.3nm,0.3s						
GRR	**Gorron**	**5.10**	**262**	*e*Pn	**Pn**	**17 53 59.2**	**0.0**
GRR				*e*Sn	**Sn**	**17 54 55.9**	**-2.8**
	0.6nm,0.3s						
MFF	**Saint Martin d**	**5.37**	**242**	*e*Pn	**Pn**	**17 54 02.9**	**0.0**
MFF				*e*Sn	**Sn**	**17 55 02.4**	**-2.9**
	2.2nm,0.3s						
MFF	**Saint Martin d**	**5.37**	**242**	*e*Pn	**Pn**	**17 54 02.9**	**0.0**
MFF				*e*Sn	**Sn**	**17 55 02.4**	**-2.9**
	1.1nm,0.3s						
CAF	**Calviac**	**5.44**	**218**	*e*Pn	**Pn**	**17 54 03.6**	**-0.2**
CAF				*e*Sn	**Sn**	**17 55 03.5**	**-3.6**
	0.6nm,0.3s						
CAF	**Calviac**	**5.44**	**218**	*e*Pn	**Pn**	**17 54 03.6**	**-0.2**
CAF				*e*Sn	**Sn**	**17 55 03.5**	**-3.6**
	0.3nm,0.3s						

*IDC **02** 17:54:32.9±1.8, 4818N×15490E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/20, mbtmp3.6/8, ML3.2/1, Error ellipse: s-maj=47.2km s-min=24.7km az=153.0*
*NEIC **02** 17:54:34.0±1.3, 4801N×15486E, h10km, mb4.6/1, Error ellipse: s-maj=29.2km s-min=12.6km az=142.0*
*ISCJB **02** 17:54:41.0±2.2, 487N±03×154.1E±04, h33km, mb3.6/8, Error ellipse: s-maj=51.9km s-min=9.4km az=138.1*
*MOS **02** 17:54:44.5±1.2, 4906N×15361E, h37km, mb4.2/1, Error ellipse: s-maj=24.3km s-min=15.4km az=53.4*

ISC 02 17:54:38.6±1.4, 4819N±02×1548E±02, h35km, n19, σ1§01/17, mb3.6/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.69**	**18**	*e*PN	**Pn**	**17 55 21.0**	**+1.7**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.30**	**19**	Pn	**Pn**	**17 55 55.3**	**+0.1**
PETK	**Petropavlovsk-**	**5.30**	**19**	Pn	**Pn**	**17 55 54.5**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=180,slow=12,SNR=8.0						
YSS	**Yuzh-Sakhalins**	**8.25**	**266**	*e*PN	**Pn**	**17 56 41.2**	**+5.5**
	comp=Z,28nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.25**	**266**	*e*PN	**Pn**	**17 56 34.9**	**-0.8**
ASAJ	**Asahikawa**	**9.39**	**249**	Pn	**Pn**	**17 56 55.3**	**+3.9**
	comp=Z,0.4nm,0.3s,baz=83,slow=20,SNR=4.7						
KSRS	**Korea Array**	**22.33**	**251**	P	**P**	**17 59 34.4**	**+1.3**
	comp=Z,3.3nm,1.0s,mb3.7,baz=55,slow=10.0,SNR=6.1						
KSRS	**Korea Array**	**22.33**	**251**	*e*P	**P**	**17 59 34.4**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
SONM	**Songino Array**	**31.99**	**288**	P	**P**	**18 01 01.2**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.4,baz=70,slow=8.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.76**	**305**	P	**P**	**18 02 30.7**	**-1.5**
	comp=Z,0.4nm,0.2s,mb3.7,baz=53,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**47.34**	**297**	P	**P**	**18 03 07.4**	**-1.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=66,slow=7.4,SNR=11						
KURK	**Kurchatov**	**47.57**	**303**	*e*P	**P**	**18 03 10.3**	**-0.2**
	comp=Z,3.2nm,0.6s,mb4.5						
KURK	**Kurchatov**	**47.57**	**303**	*e*P	**P**	**18 03 10.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**53.82**	**257**	P	**P**	**18 03 57.8**	**-0.1**
	comp=Z,0.2nm,0.3s,mb3.5,baz=34,slow=7.5,SNR=4.5						
WRA	**Warramunga Arr**	**70.21**	**200**	pP	pP	18 05 59.0	+0.5
	comp=Z,0.8n

HVU	**Hansel Valley**	**5.90**	**253**	*e*Pn	**Pn**	18 10 30.2	**-0.9**
	5.8nm,0.4s						
BGU	**Big Grassy Mou**	**6.44**	**246**	*e*Pn	**Pn**	18 10 37.0	**-1.5**
CHMT	**Chamberlain Mo**	**6.45**	**302**	*e*Pn	**Pn**	18 10 38.8	**+0.1**
WALA	**Waterton Lakes**	**7.98**	**314**	*e*Pn	**Pn**	18 10 59.2	**-0.4**
ELK	**Elko**	**8.02**	**251**	Pn	**Pn**	18 11 00.3	**+0.1**
	0.5nm,0.3s,baz=58,slow=11,SNR=7.9						
ELK	**Elko**	**8.02**	**251**	Pn	**Pn**	18 11 00.3	**+0.1**
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	18 11 14.2	**-0.6**
	6.6nm,0.3s,baz=232,slow=11,SNR=23						
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	18 11 14.2	**-0.6**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	18 11 45.6	**+1.7**
	0.1nm,0.3s,baz=52,slow=13,SNR=2.7						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	18 11 45.6	**+1.7**
ROSC	**El Rosal**	**47.38**	**136**	LR	LR	18 38 00.0	
	comp=Z,523nm,19.4s,baz=18,slow=36						
ARCES	**ARCES Array B**	**61.36**	**18**	P	**P**	18 19 18.7	**-0.9**
	2.7nm,0.6s,baz=323,slow=6.9,SNR=6.7						
ARCES	**ARCES Array B**	**61.36**	**18**	P	**P**	18 19 18.7	**-0.9**

NEIC ***02*** *18:11:10.6, 1955N×6882W, h110km, MD3.8(RSPR), After RSPR.*

RSPR 02 18:11:10.6, 1955N×6882W, h110km±6km, MD3.8/15, MD3.8/15, 15C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**1.67**	**149**	⇑	*e*P		Pn	18 11 39.4	0.0
AGPR	**Aguadilla, PR**	**1.94**	**123**	⇑	*e*P		Pn	18 11 42.0	-0.8
AGPR					*e*S		Sn	18 12 07.5	+0.1
LSP	**Las Mesas**	**2.14**	**130**	⇑	*e*P		Pn	18 11 44.8	-0.5
LSP					*e*S		Sn	18 12 12.2	+0.4
CRPR	**Cabo Rojo, PR**	**2.23**	**133**	⇑	*e*P		Pn	18 11 46.1	-0.4
CRPR					*e*S		Sn	18 12 14.1	0.0
LRS	**Lares**	**2.25**	**124**	⇑	*e*P		Pn	18 11 46.6	-0.1
LRS					*e*S		Sn	18 12 14.4	0.0
AOPR	**Arecibo Observ**	**2.29**	**121**	⇑	*e*P		Pn	18 11 46.9	-0.3
AOPR					*e*S		Sn	18 12 15.5	+0.1
GBPR	**Guanica, Bosqu**	**2.42**	**130**		*e*S		Sn	18 12 18.6	+0.3
OBIP	**Obispado Ponce**	**2.58**	**125**	⇑	*e*P		Pn	18 11 50.7	-0.3
OBIP					*e*S		Sn	18 12 22.4	+0.4
CELP	**Cerrillos**	**2.58**	**124**	⇑	*e*P		Pn	18 11 50.5	-0.6
CELP					*e*S		Sn	18 12 22.5	+0.4
ICM	**Isla Caja Muer**	**2.73**	**127**	⇑	*e*P		Pn	18 11 52.8	-0.2
ICM					*e*S		Sn	18 12 25.8	+0.1
SJG	**San Juan**	**2.90**	**119**	⇑	*e*P		Pn	18 11 55.4	+0.1
SJG					*e*S		Sn	18 12 29.9	+0.1
SJG	**San Juan**	**2.90**	**119**	⇑	*e*P		Pn	18 11 55.2	0.0
SJG					*e*S		Sn	18 12 29.7	-0.1
CPD	**Cerro la Pandu**	**3.13**	**118**	⇑	*e*P		Pn	18 11 58.8	+0.5
CPD					*e*S		Sn	18 12 35.2	0.0
HUMP	**Col San Antoni**	**3.14**	**116**	⇑	*e*P		Pn	18 11 58.3	-0.1
HUMP					*e*S		Sn	18 12 35.4	0.0
MTP	**Monte Pirata**	**3.41**	**115**	⇑	*e*P		Pn	18 12 02.1	0.0
MTP					*e*S		Sn	18 12 42.9	+1.0
STVI	**Saint Thomas**	**3.85**	**107**	⇑	*e*P		Pn	18 12 08.5	+0.7
STVI					*e*S		Sn	18 12 53.1	+0.9
TBVI	**Tortola**	**4.13**	**105**		*e*S		Sn	18 12 59.9	+0.8
ABV	**Anegada**	**4.32**	**100**		*e*S		Sn	18 13 04.4	+0.8

ISCJB ***02*** *18:11:43.7±0.4, 2441N±002×12205E±002, h6km±2km, Error ellipse: s-maj=3.0km s-min=2.5km az=137.3*
JMA ***02*** *18:11:44.3±0.2, 2486N×12203E, h45km, M2.8*
TAP ***02*** *18:11:44.6, 2441N×12194E, h18km, ML3.5, B*

ISC 02 18:11:44.1±0.4, 2441N±002×12205E±002, h7km±3km, n52, σ0§90/100, 2C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.27**	**318**	⇓	*i*P		**Pg**	**18 11 50.0**	**+0.6**
	baz=342								
TWC					*i* S		**Sg**	18 11 53.4	+0.4
	baz=342								
ENA	**Nanau**	**0.28**	**274**	⇑	*i*P		**Pg**	**18 11 49.5**	**-0.1**
	baz=277								
ENA					*e*S		**Sg**	18 11 52.7	-0.6
	baz=277								
EHP	**Heping Village**	**0.29**	**250**		P		**Pg**	**18 11 49.5**	**-0.4**
	baz=249								
EHP					S		**Sg**	18 11 53.5	-0.3
	baz=249								
ILA	**Ilan**	**0.45**	**323**		*i* P		**Pg**	**18 11 53.5**	**+0.8**
	baz=326								
ILA					*i* S		**Sg**	18 11 59.4	+0.8
	baz=326								
TWE	**Neicheng**	**0.46**	**312**	⇓	*i*P		**Pg**	**18 11 53.3**	**+0.2**
	baz=321								
TWE					*i* S		**Sg**	18 11 58.8	-0.4
	baz=321								
TWD	**Chiawan**	**0.53**	**231**		*e*P		**Pg**	**18 11 53.6**	**-0.7**
	baz=229								
TWD					*e*S		**Sg**	18 12 03.3	+2.1
	baz=229								
HWA	**Hwalien**	**0.59**	**223**		*e*P		**Pg**	**18 11 56.3**	**+0.8**
	baz=220								
HWA					*e*S		**Sg**	18 12 06.6	+3.4
	baz=220								
TWB1	**Santiao Chiao**	**0.60**	**355**		P		**Pg**	**18 11 56.4**	**+0.7**
	baz=356								
TWB1					S		**Sg**	18 12 04.3	+0.8
	baz=356								
NNS	**Nan Shan**	**0.61**	**273**	⇓	*i*P		**Pg**	**18 11 55.2**	**-0.8**
	baz=276								
NNS					*e*S		**Sg**	18 12 02.5	-1.5
	baz=276								
NSK	**Sanguang**	**0.68**	**293**	⇓	*i*P		**Pg**	**18 11 56.6**	**-0.6**
	baz=297								
NSK					S		**Sg**	18 12 04.6	-1.5
	baz=297								
NWF	**Wu-fen Shan**	**0.70**	**340**		P		**Pg**	**18 11 58.6**	**+1.0**
	baz=338								
NWF					S		**Sg**	18 12 07.6	+0.8
	baz=338								
WHF	**Hehuan Shan**	**0.76**	**250**		P		**Pg**	**18 11 57.8**	**-1.0**
	baz=255								
WHF					*e*S		**Sg**	18 12 08.0	-0.6
	baz=255								
TAP1	**Taipei**	**0.79**	**323**		*e*P		**Pg**	**18 11 59.8**	**+0.5**
	baz=320								
TAP1					*e*S		**Sg**	18 12 09.6	+0.1
	baz=320								
TWT	**Tachien**	**0.81**	**259**		*e*P		**Pg**	**18 11 59.2**	**-0.5**
	baz=259								
TWT					*e*S		**Sg**	18 12 09.9	-0.3
	baz=259								
ESL	**Shilin**	**0.82**	**223**		*e*P		**Pg**	**18 11 59.0**	**-0.8**
	baz=229								
ESL					*e*S		**Sg**	18 12 12.8	+2.4
	baz=229								
YOJ	**Yonaguni jima**	**0.88**	**86**		P		**Pg**	**18 12 01.8**	**+0.7**
YOJ					S		**Sg**	18 12 14.7	+2.2
YOJ	**Yonaguni jima**	**0.88**	**86**		*e*P		**Pg**	**18 12 01.9**	**+0.8**
	baz=76								
YOJ					*e*S		**Sg**	18 12 14.6	+2.1
	baz=76								
TWS1	**Kuangyinshan**	**0.89**	**320**		*e*P		**Pg**	**18 12 01.9**	**+0.5**
	baz=318								
TWS1					*e*S		**Sg**	18 12 13.3	+0.4
	baz=318								
TWY	**Chenhua**	**0.95**	**335**		*e*P		**Pg**	**18 12 02.1**	**-0.3**
	baz=339								
TWY					*e*S		**Sg**	18 12 15.4	+0.6
	baz=339								
NCU	**National Centr**	**0.96**	**306**		*e*P		**Pg**	**18 12 02.8**	**+0.2**
	baz=316								
NCU					*e*S		**Sg**	18 12 15.2	+0.2
	baz=316								
NSTT	**Nanjuang**	**0.98**	**283**	⇑	P		**Pg**	**18 12 02.4**	**-0.5**
	baz=286								
NSTT					*e*S		**Sg**	18 12 14.4	-1.2
	baz=286								
HSN	**Hsinchu**	**1.05**	**292**		*e*P		**Pg**	**18 12 04.0**	**-0.4**
	baz=297								
HSN					*e*S		**Sg**	18 12 17.6	-0.5
	baz=297								
EHY	**Hungye**	**1.12**	**217**		*e*P		**Pg**	**18 12 03.8**	**-1.8**
	baz=215								
EHY					*e*S		**Sg**	18 12 21.8	+1.7
	baz=215								
TWQ1	**Liyutan**	**1.16**	**267**		*e*P		**Pg**	**18 12 06.2**	**-0.2**
	baz=269								
TWQ1					*e*S		**Sg**	18 12 21.3	-0.2
	baz=269								
SMLT	**Sun Moon Lake**	**1.17**	**244**		*e*P		**Pg**	**18 12 05.8**	**-0.8**
	baz=244								
SMLT					*e*S		**Sg**	18 12 21.0	-0.8
	baz=244								
NSY	**Sanyi**	**1.17**	**271**		*e*P		**Pg**	**18 12 06.8**	**+0.1**
	baz=278								
NSY					*e*S		**Sg**	18 12 21.8	-0.1
	baz=278								
TYC	**Yuchr**	**1.20**	**245**		*e*P		**Pg**	**18 12 06.1**	**-1.0**
	baz=255								
TYC					*e*S		**Sg**	18 12 22.9	+0.3
	baz=255								
TWF1	**Yuli**	**1.26**	**213**		*e*P		**Pn**	**18 12 05.6**	**-2.5**
	baz=225								
TCU	**Taichung**	**1.28**	**258**		*e*P		**Pn**	**18 12 08.2**	**-0.2**
	baz=275								
TCU					*e*S		**Sb**	18 12 24.9	-0.3
	baz=275								
WNT	**Mingjian**	**1.35**	**247**		*e*P		**Pn**	**18 12 09.4**	**-0.1**
	baz=244								
WNT					*e*S		**Sb**	18 12 27.3	0.0
	baz=244								
YUS	**Yu-Shan**	**1.36**	**228**		*e*P		**Pn**	**18 12 09.0**	**-0.5**
	baz=227								
YUS					*e*S		**Sb**	18 12 26.9	-0.6
	baz=227								
ALS	**Alishan**	**1.45**	**232**		*e*P		**Pn**	**18 12 10.9**	**+0.2**
	baz=219								
ALS					*e*S		**Sn**	18 12 30.2	+0.2
	baz=219								
CHKT	**Chengkung**	**1.45**	**206**		*e*P		**Pn**	**18 12 10.5**	**-0.3**
	baz=187								
CHN5	**Tsauling**	**1.49**	**237**		*e*P		**Pn**	**18 12 11.5**	**+0.1**
	baz=238								
CHN5					*e*S		**Sn**	18 12 32.4	+1.3
	baz=238								
WGK	**Gukeng**	**1.54**	**242**		*e*P		**Pn**	**18 12 12.4**	**+0.4**
	baz=244								
WGK					*e*S		**Sn**	18 12 33.1	+0.8
	baz=244								
IRIF	**Iriomote-Funau**	**1.54**	**92**		P		**Pn**	**18 12 11.1**	**-0.9**
IRIF					S		**Sn**	18 12 31.2	-1.1
ELDTW	**Lidau**	**1.54**	**218**		*e*P		**Pn**	**18 12 10.2**	**-1.8**
	baz=208								
ELDTW					*e*S		**Sn**	18 12 32.4	+0.1
	baz=208								
CHN2	**Minshiung**	**1.68**	**239**		*e*P		**Pn**	**18 12 14.5**	**+0.5**
	baz=241								
CHN2					*e*S		**Sn**	18 12 36.2	+0.3
	baz=241								
CHN4	**Tsaushan**	**1.70**	**232**		*e*P		**Pn**	**18 12 15.2**	**+1.0**
	baz=233								
CHN4					*e*S		**Sn**	18 12 36.6	+0.4
	baz=233								
WTP	**Ta-pu**	**1.75**	**229**		*e*P		**Pn**	**18 12 14.5**	**-0.4**
	baz=230								
WTP					*e*S		**Sn**	18 12 38.3	+0.8
	baz=230								
JKRS	**Kuro-shima**	**1.80**	**95**		P		**Pn**	**18 12 15.5**	**-0.1**
JKRS					S		**Sn**	18 12 37.7	-1.0
TWG	**Pinlang**	**1.82**	**210**		*e*P		**Pn**	**18 12 13.2**	**-2.7**
	baz=210								
TWG					*e*S		**Sn**	18 12 37.0	-2.2
	baz=210								
TWK	**Hsinying**	**1.82**	**232**		*e*P		**Pn**	**18 12 16.5**	**+0.5**
	baz=233								
TWK					*e*S		**Sn**	18 12 39.4	+0.1
	baz=233								
WSF	**Szhu**	**1.84**	**246**		*e*P		**Pn**	**18 12 16.2**	**+0.1**
	baz=256								
WSF					*e*S		**Sn**	18 12 39.6	-0.1
	baz=256								
CHN1	**Nanshi**	**1.85**	**229**		*e*P		**Pn**	**18 12 16.8**	**+0.5**
	baz=230								
CHN1					*e*S		**Sn**	18 12 40.7	+0.7
	baz=230								
SGST	**Jiashian**	**1.88**	**226**		*e*P		**Pn**	**18 12 17.3**	**+0.5**
	baz=227								
SGST					*e*S		**Sn**	18 12 41.6	+0.8
	baz=227								
JIJ	**Ishigaki jima**	**1.91**	**91**		P		**Pn**	**18 12 16.6**	**-0.6**
JIJ					S		**Sn**	18 12 39.2	-2.3
ECL	**Taimali**	**2.06**	**209**		*e*P		**Pn**	**18 12 19.8**	**+0.5**
	baz=196								
SSD	**Sandimen**	**2.10**	**218**		*e*P		**Pn**	**18 12 20.6**	**+0.8**
	baz=219								
SSD					*e*S		**Sn**	18 12 47.2	+0.9
	baz=219								
EAST	**Anshuo**	**2.30**	**209**		*e*P		**Pn**	**18 12 22.5**	**0.0**
	baz=198								
EAST					*e*S		**Sn**	18 12 52.1	+1.1
	baz=198								
SCZT	**Fangliau**	**2.42**	**213**		*e*P		**Pn**	**18 12 25.6**	**+1.5**
	baz=200								
SCZT					*e*S		**Sn**	18 12 54.8	+0.9
	baz=200								
KNM	**Kinmen**	**3.29**	**271**		*e*P		**Pn**	**18 12 35.1**	**-1.1**
	baz=273								

NIED ***02*** *18:13:00, 2420N×12530E, h44km, Mw4.2 Best double couple: M0 2.44000×10^15 NP1:φs48.00000°, δ77.00000°, λ76.00000°. NP2:φs277.00000°, δ19.00000°, λ137.00000°.*
IDC ***02*** *18:13:49.4±1.0, 2425N×12498E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.7/21, mbtmp3.7/8, ML3.2/2, MS3.3/10, Ms1 3.3/10, ms1mx3.0/32, Error ellipse: s-maj=25.2km s-min=18.7km az=76.0*
BJI ***02*** *18:13:50.7, 2436N×12538E, h29km, mB4.5, mb4.4, Ms3.9, Msz3.8*
JMA ***02*** *18:13:53.4±0.2, 2424N×12525E, h0km, M4.3*
ISCJB ***02*** *18:13:54.4±0.7, 2437N±007×12532E±005, h53km±4km, mb3.9/14, MS3.2/5, Error ellipse: s-maj=12.3km s-min=6.1km az=154.6*
NEIC ***02*** *18:13:55.7±1.2, 2428N×125.19E, h49km±12km, mb4.2/7, Error ellipse: s-maj=12.2km s-min=10.9km az=168.0*

ISC 02 18:13:55.5±0.7, 2436N±007×12530E±005, h45km±5km, h27km±5.2km:pP-P, n37, σ1§14/40, mb3.9/14, MS3.2/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.41**	**13**			P	**Pn**	**18 14 04.5**	**-0.8**
JOGS						*e*S	**Sn**	18 14 12.3	+0.1
JMJ	**Miyako jima 2**	**0.45**	**359**			P	**Pn**	**18 14 04.9**	**-0.9**
JMJ						S	**Sn**	18 14 13.0	-0.1
JTJ	**Tarama**	**0.61**	**297**			P	**Pn**	**18 14 06.3**	**-1.6**
JTJ						S	**Sn**	18 14 15.5	-1.3
JIJ	**Ishigaki jima**	**1.06**	**270**			P	**Pn**	**18 14 13.2**	**-0.7**
JIJ						S	**Sn**	18 14 27.4	0.0
JKRS	**Kuro-shima**	**1.19**	**264**			P	**Pn**	**18 14 14.9**	**-0.7**
JKRS						S	**Sn**	18 14 31.5	+1.0
HATJ	**Hateruma jima**	**1.40**	**258**			P	**Pn**	**18 14 19.2**	**+0.7**
IRIF	**Iriomote-Funau**	**1.44**	**269**			P	**Pn**	**18 14 19.9**	**+0.9**
IRIF						S	**Sn**	18 14 39.3	+2.6
YOJ	**Yonaguni jima**	**2.09**	**273**			P	**Pn**	**18 14 28.6**	**+0.6**
JKE	**Kume jima 2**	**2.37**	**34**			P	**Pn**	**18 14 32.4**	**+0.6**
NACB	**Ninganchiao**	**3.39**	**268**		*e*P	n	**Pn**	**18 14 43.6**	**-2.3**
TATO	**Taipei**	**3.52**	**281**		*e*P	n	**Pn**	**18 14 50.1**	**+2.4**
YHNB	**Yeheng**	**3.59**	**276**		*e*P	n	**Pn**	**18 14 49.2**	**+0.6**
JOW	**Kunigami**	**3.64**	**47**		P	n	**Pn**	**18 14 50.7**	**+1.4**
	2.6nm,0.3s,baz=308,slow=20,SNR=2.9								
JOW						Sn	**Sn**	**18 15 40.5**	**+10**
	4.3nm,0.3s,baz=357,slow=19,SNR=2.3								
JOW						LR	LR	18 16 36.5	
	comp=Z,312nm,19.0s,baz=244,slow=42								
KSRS	**Korea Array**	**13.24**	**9**		Pn		**Pn**	**18 17 07.8**	**+7.0**
	0.1nm,0.3s,baz=189,slow=13,SNR=3.7								
KSRS						LR	LR	18 22 36.9	
	comp=Z,88nm,18.1s,baz=185,slow=39								
JHJ	**Hachijo jima 2**	**15.39**	**52**		LR		LR	18 23 30.4	
	comp=Z,76nm,18.1s,baz=108,slow=37								
CBIJ	**Chichi jima**	**15.46**	**76**		LR		LR	18 23 23.4	
	comp=Z,81nm,19.3s,baz=96,slow=36								
MJAR	**Matsushiro Arr**	**16.45**	**39**		Pn		**Pn**	**18 17 45.7**	**+2.7**
	0.1nm,0.3s,baz=227,slow=10,SNR=3.9								
MJAR	**Matsushiro Arr**	**16.45**	**39**		Pn		**Pn**	**18 17 45.7**	**+2.7**
DAV	**Davao City (W)**	**17.20**	**179**		LR		LR	18 23 45.8	
	comp=Z,70nm,19.7s,baz=193,slow=35								
GUMO	**Guam**	**21.35**	**117**		LR		LR	18 24 53.6	
	comp=Z,67nm,21.3s,MS3.0,baz=28,slow=31								
CMAR	**Chiang Mai Arr**	**25.21**	**262**		P		**P**	**18 19 14.1**	**-3.1**
	0.4nm,0.8s,mb3.0,baz=61,slow=8.2,SNR=5.0								
CMAR						LR	LR	18 30 03.9	
	comp=Z,57nm,19.4s,MS3.1,baz=80,slow=39								

GTA	**Gaotai**	**26.21**	**311**	*e*P	**P**	**18 19 25.9**	**-0.2**
GTA				AP	pP	18 19 30.1	-7.8
GTA				XP	sP	18 19 33.3	-10
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb3.9						
ULN	**Ulaanbaatar**	**27.57**	**333**	*e*P	**P**	**18 19 38.4**	**+0.3**
	comp=Z,3.8nm,1.2s,mb3.9						
SONM	**Songino Array**	**27.82**	**332**	P	**P**	**18 19 39.1**	**-1.2**
	comp=Z,0.4nm,0.7s,mb3.2,baz=155,slow=8.7,SNR=4.2						
SONM				LR	LR	18 32 24.7	
	comp=Z,125nm,18.0s,MS3.5,baz=198,slow=40						
MK31	**Makanchi Array**	**40.87**	**314**	*e*P	**P**	**18 21 32.5**	**-0.4**
MK31				*e*	pP	18 21 42.0	-3.2
MKAR	**Makanchi Array**	**40.87**	**314**	P	**P**	**18 21 32.8**	**-0.1**
	comp=Z,1.7nm,0.5s,mb3.9,baz=99,slow=9.8,SNR=30						
MKAR				LR	LR	18 39 08.4	
	comp=Z,37nm,19.8s,MS3.2,baz=148,slow=37						
ZALV	**Zalesovo Beam**	**42.19**	**325**	P	**P**	**18 21 42.9**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.7,baz=116,slow=9.0,SNR=6.2						
ZALV				LR	LR	18 39 08.4	
	comp=Z,35nm,18.2s,MS3.3,baz=63,slow=36						
ZALV	**Zalesovo Beam**	**42.19**	**325**	P	**P**	**18 21 42.9**	**-0.8**
ZALV				LR	LR	18 39 08.4	
KURK	**Kurchatov**	**44.41**	**319**	P	**P**	**18 21 59.6**	**-2.0**
	comp=Z,4.4nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**44.64**	**307**	*e*P	**P**	**18 22 04.5**	**+1.0**
	comp=Z,4.0nm,0.7s,mb4.4						
TKM2				*e*	pP	18 22 13.6	-2.2
WRAB	**Tennant Creek**	**44.90**	**168**	*e*P	**P**	**18 22 05.0**	**-0.8**
	comp=Z,4.2nm,1.0s,mb4.2						
WRA	**Warrumunga Arr**	**44.91**	**168**	P	**P**	**18 22 05.3**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.8,baz=348,slow=8.7,SNR=14						
AML	**Almayashu**	**45.94**	**306**	*e*P	**P**	**18 22 15.3**	**+1.4**
	comp=Z,2.0nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**48.47**	**169**	P	**P**	**18 22 33.5**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=354,slow=12,SNR=12						
KBL	**Kabul**	**49.48**	**295**	*e*P	**P**	**18 22 42.6**	**+1.1**
	comp=Z,2.0nm,0.6s,mb4.3						
BRVK	**Borovoye**	**50.01**	**320**	P	**P**	**18 22 45.6**	**+0.4**
BRVK				*e*	pP	18 22 54.3	-3.4
ARU	**Arti**	**57.24**	**323**	P	**P**	**18 23 32.8**	**-5.3**
	comp=Z,5.7nm,1.0s,mb4.6						

ISCJB ***02*** *18:15:11.0±0.7, 1040N±007×6230W±003, h18km±8km, Error ellipse: s-maj=11.3km s-min=5.0km az=165.5*
FUNV ***02*** *18:15:10.9, 1036N×6227W, h4km, MW2.9*
TRN ***02*** *18:15:11.5, 1041N×6222W, h3km, MD3.0*
NEIC ***02*** *18:15:11.6, 1043N×6222W, h3km, MD3.0(TRN), After TRN.*

ISC 02 18:15:10.6±0.7, 1038N±006×6229W±003, h9km±6km, n14, σ0§98/20, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.28**	**15**		*e*P		**Pg**	**18 15 16.4**	**+0.2**
GUIV					*e*S		**Sg**	**18 15 21.2**	**+1.2**
TCE	**Chacachacare**	**0.62**	**59**		*e*P		**Pg**	**18 15 21.9**	**-0.8**
TCE					*e*S		**Sg**	**18 15 29.9**	**-0.9**
GUNV	**Guanoco**	**0.67**	**252**	⇓	*i*P		**Pg**	**18 15 23.5**	**-0.1**
GUNV					*e*S		**Sg**	**18 15 34.7**	**+2.3**
TPP	**Pointe-a-Pierr**	**0.83**	**94**		*e*P		**Pg**	**18 15 30.3**	**+3.6**
TPP	**Pointe-a-Pierr**	**0.83**	**94**		*e*P		**Pg**	**18 15 26.1**	**-0.6**
TRN	**Trinidad (W)**	**0.92**	**73**		*e*P		**Pg**	**18 15 27.0**	**-1.3**
CRUV	**Carupano**	**0.97**	**288**		*e*P		**Pg**	**18 15 28.2**	**-1.2**
CRUV					*e*S		**Sg**	**18 15 41.7**	**-0.4**
TBH	**Brigand Hill**	**1.21**	**85**		*e*P		**Pb**	**18 15 34.1**	**+0.4**
ITEV	**Isla Los Testi**	**1.27**	**320**		*e*P		**Pn**	**18 15 34.2**	**-0.4**
TPR	**Prospect**	**1.69**	**61**		*e*P		**Pn**	**18 15 42.1**	**+1.8**
GRW	**Mount Saint Ca**	**1.88**	**19**		*e*P		**Pn**	**18 15 43.8**	**+0.9**
PCRV	**Puerto La Cruz**	**2.31**	**265**		*e*P		**Pn**	**18 15 48.7**	**-0.2**
PCRV					*e*S		**Sn**	**18 16 15.5**	**-0.9**
PRGV	**PARIAGUAN**	**2.82**	**236**		*e*P		**Pn**	**18 15 56.4**	**+0.6**
CUPV	**Cœpira**	**3.45**	**265**		*e*P		**Pn**	**18 16 05.2**	**+0.7**
CUPV					*e*S		**Sn**	**18 16 44.5**	**-1.0**

IDC ***02*** *18:27:10.7±0.8, 949S×7975W, h0km, mb3.8/7, mb1 4.1/12, mb1mx4.0/21, mbtmp3.9/12, ML3.6/5, MS4.0/14, Ms1 4.0/14, ms1mx3.8/24, Error ellipse: s-maj=20.2km s-min=14.0km az=77.0*
ISCJB ***02*** *18:27:12.5±2.6, 944S±007×7979W±009, h23km±18km, mb4.2/11, MS3.9/12, Error ellipse: s-maj=17.7km s-min=8.0km az=142.6*
NEIC ***02*** *18:27:15.8±1.3, 930S×7967W, h37km±13km, mb4.3/3, Error ellipse: s-maj=23.7km s-min=9.6km az=55.0*

ISC 02 18:27:15.7±2.5, 939S±007×7975W±009, h32km±18km, n39, σ1§24/26, mb4.2/11, MS3.9/12, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.73**	**29**			Pn	**Pn**	**18 27 56.8**	**-0.5**
	29nm,0.3s,baz=230,slow=4.1,SNR=38								
ATAH						Lg		18 28 37.6	
	38nm,0.3s,baz=117,slow=20,SNR=10								
ATAH						LR	LR	18 28 59.5	
	comp=Z,2µm,21.6s,baz=11,slow=40								
NNA	**Nana**	**3.85**	**132**			P

DBIC	**Dimbokro**	**76.30**	**81**	P		**P**	**18 39 02.1**	**0.0**
	6.2nm,0.8s,mb4.6,baz=204,slow=4.4,SNR=7.0							
DBIC				LR		LR	19 11 42.3	
	comp=Z,98nm,18.2s,MS4.2,baz=245,slow=35							
KIC	**Kosan Boka**	**76.35**	**81**	*e*P		**P**	**18 39 02.9**	**+0.5**
	50nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.89**	**76**	P		**P**	**18 39 42.1**	**-0.9**
	138nm,0.3s,baz=276,slow=5.1,SNR=1.9							
TORD				LR		LR	19 16 04.5	
	comp=Z,136nm,18.2s,baz=250,slow=35							
ESDC	**Sonseca Array**	**85.18**	**49**	P		**P**	**18 39 48.1**	**-0.9**
	0.4nm,0.6s,mb3.8,baz=257,slow=4.7,SNR=3.8							
ESDC				LR		LR	19 15 18.5	
	comp=Z,92nm,19.6s,MS4.2,baz=265,slow=34							
URZ	**Urewera**	**94.40**	**230**	LR		LR	19 13 08.6	
	comp=Z,126nm,19.9s,MS4.4,baz=50,slow=29							
KEST	**Kesra**	**94.68**	**55**	LR		LR	19 20 13.1	
	comp=Z,39nm,20.3s,MS3.9,baz=221,slow=34							
RPZ	**Rata Peaks**	**97.10**	**224**	LR		LR	19 13 23.7	
	comp=Z,91nm,19.5s,MS4.3,baz=329,slow=29							
BOSA	**Boshof**	**98.47**	**121**	LR		LR	19 22 17.5	
	comp=Z,96nm,18.0s,MS4.3,baz=70,slow=34							
ASAR	**Alice Springs**	**133.51**	**224**	PKP		PKPdf	18 46 28.5	**-1.2**
	0.4nm,0.8s,baz=128,slow=2.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**133.87**	**13**	PKP		PKPdf	18 46 28.4	-1.0
	0.3nm,0.3s,baz=348,slow=3.5,SNR=4.9							
WRA	**Warramunga Arr**	**135.55**	**229**	PKP		PKPdf	18 46 31.5	-2.1
	0.8nm,0.8s,baz=128,slow=1.9,SNR=6.2							
SONM	**Songino Array**	**141.34**	**353**	PKP		PKPdf	18 46 41.7	-1.7
	0.2nm,0.5s,baz=48,slow=2.1,SNR=3.1							

MEX 02 18:37:47.2±1.1,1453N×9334W,h15km±229km,MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.11**	**70**	*i* P	Pb	18 38 04.6	-3.5
THIG				*i* S	Sb	18 38 17.6	-4.7
PCIG		**1.17**	**6**	*e*P	Pn	18 38 04.2	-4.9
PCIG				*i* S	Sb	18 38 19.4	-4.8
TGIG		**2.24**	**5**	*e*P	Pn	18 38 21.5	-2.3
TGIG				*i* S	Sn	18 38 47.7	-3.6
SCX	**San Cristobal**	**2.29**	**17**	*i* P	Pn	18 38 22.5	-2.0
SCX				*i* S	Sn	18 38 48.5	-4.0

*ISCJB **02** 21:02:46.8±1.0,658S±0.10×1309E±0.1,h33km,mb3.6/3, Error ellipse: s-maj=20.7km s-min=12.3km az=156.5*
*NEIC **02** 21:02:49.4±3.1,665S×13081E,h38km±33km,mb3.9/1, Error ellipse: s-maj=34.0km s-min=25.0km az=68.0*
*IDC **02** 21:02:56.5±6.7,695S×13049E,h109km±67km,mb3.4/3, mb1 3.8/6,mb1mx3.5/16,mbtmp3.7/6, Error ellipse: s-maj=54.1km s-min=21.0km az=47.0*
ISC 02 21:02:52.9±3.6,68S±02×1308E±02,h74km±36km,n11, σ0°61/13,mb3.6/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.11**	**165**	*e*Pn	Px	21 04 16.6	
	103nm,0.5s						
KAKA				*e*Sn	Sx	21 05 23.4	
BATI	**Baumata**	**7.87**	**244**	P	**Pn**	**21 04 45.0**	**+0.3**
	10nm,0.3s,baz=82,slow=4.7,SNR=13						
BATI				S	**Sn**	**21 06 05.4**	**-6.9**
	7.0nm,0.3s,baz=129,slow=19,SNR=5.9						
WRAB	**Tennant Creek**	**13.52**	**166**	*e*Pn	**Pn**	**21 06 01.5**	**0.0**
	6.6nm,0.6s						
WRAB				*e*Sn	**Sn**	**21 08 21.9**	**-8.1**
WRA	**Warramunga Arr**	**13.52**	**166**	P	**Pn**	**21 06 01.1**	**-0.5**
	1.6nm,0.3s,baz=348,slow=13,SNR=61						
WRA				S	**Sn**	**21 08 24.4**	**-5.8**
	1.1nm,0.3s,baz=341,slow=22,SNR=6.2						
WB2	**Warramunga Arr**	**13.53**	**166**	*e*Pn	**Pn**	**21 06 01.0**	**-0.6**
WB2				*e*Sn	Sx	21 08 23.3	
ASAR	**Alice Springs**	**17.05**	**170**	P	**Pn**	**21 06 48.1**	**+1.5**
	1.2nm,0.3s,baz=343,slow=9.6,SNR=46						
ASAR				S	Sx	21 09 49.2	
	0.3nm,0.3s,baz=352,slow=25,SNR=5.4						
MBWA	**Marble Bar**	**17.89**	**216**	*e*P	**Pn**	**21 06 56.2**	**-0.6**
	3.6nm,0.4s						
STKA	**Stephens Creek**	**26.92**	**159**	P	**P**	**21 08 27.3**	**+0.1**
	1.7nm,0.8s,mb3.6,baz=332,slow=14,SNR=4.8						
SONM	**Songino Array**	**58.50**	**341**	P	**P**	**21 12 41.5**	**+0.2**
	0.3nm,0.5s,mb3.6,baz=158,slow=8.4,SNR=4.9						
MKAR	**Makanchi Array**	**68.50**	**326**	P	**P**	**21 13 47.0**	**-0.3**
	0.3nm,0.4s,mb3.4,baz=117,slow=8.4,SNR=8.5						
MKAR	**Makanchi Array**	**68.50**	**326**	P	**P**	**21 13 47.0**	**-0.3**

*ISCJB **02** 21:05:21.7±0.6,493N±0.1×1518E±02,h309km±12km, mb3.5/5,Error ellipse: s-maj=28.0km s-min=10.0km az=41.6*
*MOS **02** 21:05:21.4±1.1,4921N×15206E,h331km,mb3.7/4,Error ellipse: s-maj=23.9km s-min=14.1km az=64.2*
*KRSC **02** 21:05:21.7±3.0,4925N×15228E,h343km±72km,ML4.6*
*IDC **02** 21:05:23.3±1.8,4952N×15141E,h296km±19km,mb3.2/6, mb1 3.4/9,mb1mx3.1/24,mbtmp3.2/9,Error ellipse: s-maj=29.2km s-min=15.7km az=143.0*
*NEIC **02** 21:05:23.4±1.0,4952N×15142E,h296km±13km,Error ellipse: s-maj=24.4km s-min=12.5km az=141.0*
ISC 02 21:05:22.8±0.6,494N±01×1516E±02,h294km±11km,n29, σ0°82/33,mb3.4/5,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.18**	**65**	*e*PN	**Pn**	**21 06 19.0**	**-0.8**
SKR				*e*S	**S**	**21 07 04.8**	**-0.6**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,90nm,0.3s						
SKR				smax			
	comp=E,110nm,0.3s						
MIPR	**Malaya Ipel'ka**	**4.35**	**47**	P	**Pn**	**21 06 33.0**	**+0.6**
RUS	**Russkaya**	**5.32**	**53**	P	**Pn**	**21 06 43.6**	**-0.1**
RUS				S	**S**	**21 07 43.6**	**-5.1**
PEA0B	**Petropavlovsk-**	**5.33**	**44**	*e*Pn	**Pn**	**21 06 44.6**	**+0.8**
PETK	**Petropavlovsk-**	**5.33**	**44**	P	**Pn**	**21 06 44.4**	**+0.7**
	comp=E,1.0nm,0.3s,baz=211,slow=6.9,SNR=16						
PETK	**Petropavlovsk-**	**5.33**	**44**	P	**Pn**	**21 06 44.4**	**+0.7**
GNL	**Ganaly**	**5.84**	**40**	P	**Pn**	**21 06 50.2**	**+0.4**
NLC	**Nalytchevo**	**6.15**	**49**	S	**S**	**21 08 00.5**	**-6.1**
SPN	**Mys Shipunski**	**6.45**	**52**	P	**Pn**	**21 06 56.5**	**-0.7**
SPN				S	**S**	**21 08 04.9**	**-8.4**
ASAJ	**Asahikawa**	**8.13**	**233**	P	**Pn**	**21 07 17.9**	**+0.1**
	comp=E,2.4nm,0.3s,baz=106,slow=9.0,SNR=17						
ASAJ	**Asahikawa**	**8.13**	**233**	PN	**Pn**	**21 07 18.0**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KBTR	**Krutoberegovo**	**9.61**	**41**	P	**Pn**	**21 07 35.1**	**-0.8**
KBTR				S	**S**	**21 09 14.0**	**-10**
MAT	**Matsushiro**	**16.13**	**222**	P	**P**	**21 08 52.7**	**+0.2**
MJAR	**Matsushiro Arr**	**16.13**	**222**	P	**P**	**21 08 52.9**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=20,slow=12,SNR=32						
MJAR	**Matsushiro Arr**	**16.13**	**222**	P	**P**	**21 08 52.9**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	**17.54**	**324**	*e*P	**P**	**21 09 10.7**	**+3.2**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.6s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
KSRS	**Korea Array**	**20.84**	**244**	P	**P**	**21 09 42.0**	**-0.4**
	comp=N,1.0nm,0.8s,baz=40,slow=9.3,SNR=4.2						
IMA2	**Indian Mountai**	**32.30**	**39**	*e*P	**P**	**21 11 24.8**	**+0.6**
ZALV	**Zalesovo Beam**	**40.27**	**303**	P	**P**	**21 12 30.9**	**-0.5**
	comp=N,0.8nm,0.3s,mb3.5,baz=56,slow=7.1,SNR=5.2						
ZALV				PcP	PcP	21 14 28.2	-0.4
	comp=N,1.3nm,0.3s,baz=88,slow=3.8,SNR=8.5						
ZALV	**Zalesovo Beam**	**40.27**	**303**	P	**P**	**21 12 30.9**	**-0.5**
ZALV				PcP	PcP	21 14 28.2	-0.4
ZALV	**Zalesovo Beam**	**40.27**	**303**	P	**P**	**21 12 30.9**	**-0.4**
ZALV						21 14 28.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
MKAR	**Makanchi Array**	**44.86**	**294**	P	**P**	**21 13 07.5**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.1,baz=66,slow=9.3,SNR=6.6						
MKAR				PcP	PcP	21 14 43.4	-0.7
	comp=Z,0.3nm,0.5s,baz=85,slow=3.0,SNR=4.2						
KURK	**Kurchatov**	**45.08**	**301**	P	**P**	**21 13 10.2**	**+0.4**
	baz=68,slow=9.8						
ARCES	**ARCESS Array B**	**55.00**	**340**	P	**P**	**21 14 22.3**	**-1.2**
	comp=Z,2.8nm,0.8s,mb3.7,baz=28,slow=7.5,SNR=7.4						
ARCES	**ARCESS Array B**	**55.00**	**340**	P	**P**	**21 14 22.3**	**-1.3**
ARCES	**ARCESS Array B**	**55.00**	**340**	P	**P**	**21 14 22.3**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**64.00**	**54**	P	**P**	**21 15 26.6**	**+1.5**
	comp=Z,0.6nm,0.6s,mb3.4,baz=36,slow=0.6,SNR=4.8						
NOA	**NORSAR Array B**	**65.38**	**340**	P	**P**	**21 15 32.3**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.4,baz=28,slow=6.5,SNR=3.4						
NOA	**NORSAR Array B**	**65.38**	**340**	P	**P**	**21 15 32.3**	**-1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*ISCJB **02** 21:20:11.7±0.5,5534S±0.10×129.1W±02,h10km,mb4.5/13, MS4.9/64,Error ellipse: s-maj=14.0km s-min=13.7km az=159.5*
*IDC **02** 21:20:12.7±0.8,5490S×12950W,h0km,mb4.2/6, mb1 4.4/6,mb1mx4.2/14,mbtmp4.2/6,MS4.8/23, Ms1 4.8/23,ms1mx4.6/31,Error ellipse: s-maj=31.4km s-min=24.0km az=151.0*
*BJI **02** 21:20:13.3,5520S×12920W,h10km,mB5.6,Ms5.3, Msz4.9*
*NEIC **02** 21:20:13.4±0.6,5517S×12921W,h10km,mb4.8/10, MS5.0/40,Error ellipse: s-maj=27.0km s-min=17.4km az=157.0*
*GCMT **02** 21:20:13.4±0.1,5537S×12882W,h21km,MW5.6/106, Moment Tensor Solution. s90,c168; s106,c263; Duration: 1s5 Moment tensor: Scale 10^17Nm; Mrr-0.40±.04; Mθθ1.89±.04; Mϕϕ-1.49±.03; Mrθ-0.15±.07; Mθϕ2.51±.03; Mrϕ0.11±.06; Best double couple: M◎3.03300×10^17 NP1◎s197.00000°,δ86.00000°, λ-178.00000°. NP2◎s107.00000°,δ88.00000°, λ-4.00000°. Principal axes: T 3.2280, Plg1.0000°, Azm152.0000°; N -0.3900, Plg86.0000°, Azm261.0000°; P -2.8370, Plg4.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISC 02 21:20:13.4±0.5,5539S±009×1291W±02,h10km,n120, σ0°97/21,mb4.5/13,MS4.9/64,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.20**	**202**	*e*P	**P**	**21 26 34.8**	**+2.6**
	15nm,1.3s,mb4.7						
SBA				LR	LR		
	comp=Z,852nm,20.0s,MS4.4						
PMSA	**Palmer Station**	**32.32**	**133**	LR	LR	21 36 01.6	
	comp=Z,2μm,21.3s,MS4.8,baz=279,slow=29						
RKT	**Rikitea**	**32.52**	**350**	*e*S	**S**	**21 31 59.9**	**+0.7**
	comp=Z,534nm,35.0s						
RKT				*e*LQ		21 33 46.9	
	comp=Z,2μm,32.2s						
RKT				*e*LR	LR	21 35 12.4	
	comp=Z,7μm,29.2s,baz=174						
USHA	**Ushuaia**	**33.75**	**115**	LR	LR	21 37 34.0	
	comp=Z,1μm,18.1s,MS4.6,baz=226,slow=30						
QSPA	**South Pole Qui**	**34.78**	**180**	P	**P**	**21 27 08.4**	**+5.1**
	comp=Z,5.7nm,1.0s,mb4.5,baz=71,slow=4.3,SNR=7.3						
QSPA	**South Pole Qui**	**34.78**	**180**	*e*P	**P**	**21 27 04.2**	**+0.9**
	comp=Z,25nm,1.1s,mb5.0						
QSPA				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
TBI	**Tubuai**	**35.38**	**326**	*e*S	**S**	**21 32 43.2**	**-0.2**
	comp=Z,501nm,28.0s						
TBI				*e*LR	LR	21 36 22.9	
	comp=Z,7μm,29.8s,baz=164						
SNZO	**South Karori**	**38.80**	**267**	PFAKE		21 27 50.0	+12
SNZO				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
RPZ	**Rata Peaks**	**39.34**	**261**	LR	LR	21 40 11.6	
	comp=Z,3μm,20.3s,MS5.1,baz=119,slow=31						
URZ	**Urewera**	**39.48**	**273**	LR	LR	21 40 19.3	
	comp=Z,3μm,19.7s,MS5.1,baz=137,slow=31						
PLCA	**Paso Flores**	**40.54**	**94**	LR	LR	21 40 46.8	
	comp=Z,974nm,18.1s,MS4.7,baz=228,slow=30						
PLCA	**Paso Flores**	**40.54**	**94**	*e*P	**P**	**21 27 53.0**	**+0.6**
	comp=Z,16nm,1.7s,mb4.4						
PLCA				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
EFI	**East Falkland**	**40.71**	**115**	PFAKE		21 28 10.0	+16
EFI				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
PPT	**Papeete**	**40.86**	**329**	*e*S	**S**	**21 34 08.2**	**+1.8**
	comp=Z,1μm,26.0s						
PPT				*e*LR	LR	21 39 09.6	
	comp=Z,8μm,26.5s,baz=168						
PPT	**Papeete**	**40.86**	**329**	LR	LR	21 39 38.3	
	comp=Z,3μm,21.7s,MS5.1,baz=132,slow=29						
RAR	**Rarotonga**	**41.12**	**314**	LR	LR	21 40 25.5	
	comp=Z,1μm,21.8s,MS4.8,baz=129,slow=30						
CASY	**Casey**	**50.62**	**207**	*e*P	**P**	**21 29 18.7**	**+6.8**
	comp=Z,26nm,1.3s,mb5.0						
CASY				LR	LR		
	comp=Z,730nm,19.0s,MS4.7						
TAU	**Tasmania Unive**	**52.84**	**246**	PFAKE		21 29 40.0	+11
TAU				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
LVC	**Limon Verde**	**54.83**	**79**	P	**P**	**21 29 42.4**	**-1.1**
	comp=Z,4.9nm,0.8s,mb4.6						
MAW	**Mawson**	**57.00**	**185**	P	**P**	**21 30 03.0**	**+4.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=120,slow=17,SNR=2.8						
MAW				LR	LR	21 52 03.0	
	comp=Z,605nm,20.0s,MS4.7,baz=166,slow=33						
MAW	**Mawson**	**57.00**	**185**	*e*P	**P**	**21 30 02.5**	**+4.0**
	comp=Z,8.7nm,1.0s,mb4.7						
MAW				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
NNA	**Nana**	**59.26**	**64**	PFAKE		21 30 30.0	+15
NNA				LR	LR		
	comp=Z,422nm,20.0s,MS4.6						
LPAZ	**La Paz**	**60.35**	**75**	P	**P**	**21 30 23.2**	**+0.8**
	comp=Z,2.6nm,0.7s,mb4.3,baz=168,slow=3.9,SNR=10						
LPAZ	**La Paz**	**60.35**	**75**	*e*P	**P**	**21 30 22.5**	**+0.1**
	comp=Z,9.1nm,1.1s,mb4.7						
LPAZ				LR	LR		
	comp=Z,280nm,21.0s,MS4.4						
STKA	**Stephens Creek**	**64.05**	**251**	LR	LR	21 53 01.7	
	comp=Z,1μm,21.4s,MS5.1,baz=85,slow=31						
OTAV	**Otavalo**	**69.00**	**56**	PFAKE		21 31 30.0	+11
OTAV				LR	LR		
	comp=Z,151nm,19.0s,MS4.2						
CTAO	**Charters Tower**	**70.70**	**263**	*e*P	**P**	**21 31 29.3**	**0.0**
	comp=Z,9.2nm,0.9s,mb4.7						
CTAO				LR	LR		
	comp=Z,692nm,19.0s,MS4.9						
BDFB	**Brasilia**	**72.23**	**92**	LR	LR	22 00 00.9	
	comp=Z,457nm,21.2s,MS4.7,baz=16,slow=33						
BDFB	**Brasilia**	**72.23**	**92**	PFAKE		21 31 50.0	+11
BDFB				LR	LR		
	comp=Z,687nm,22.0s,MS4.9						
ASAR	**Alice Springs**	**74.68**	**251**	P	**P**	**21 31 53.4**	**+0.4**
	comp=Z,2.8nm,0.8s,mb4.2,baz=143,slow=4.3,SNR=13						
ROSC	**El Rosal**	**75.00**	**57**	LR	LR	21 58 20.7	
	comp=Z,272nm,20.7s,MS4.5,baz=4.6,slow=30						
JTS	**JuntasAbangare**	**75.10**	**45**	LR	LR	21 57 36.4	
	comp=Z,362nm,20.1s,MS4.7,baz=261,slow=30						
JTS	**JuntasAbangare**	**75.10**	**45**	PFAKE		21 32 10.0	+15
JTS				LR	LR		
	comp=Z,352nm,22.0s,MS4.6						
NWAO	**Narrogin (SRO)**	**75.42**	**233**	P	**P**	**21 31 56.0**	**-1.1**
	comp=Z,3.1nm,0.7s,mb4.3						
NWAO				LR	LR		
	comp=Z,840nm,21.0s,MS5.0						
WB2	**Warramunga Arr**	**77.45**	**253**	*e*P	**P**	**21 32 08.8**	**0.0**
WRA	**Warramunga Arr**	**77.45**	**253**	P	**P**	**21 32 07.6**	**-1.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=142,slow=5.2,SNR=8.4						
WRA				LR	LR	22 02 33.8	
	comp=Z,852nm,19.6s,MS5.1,baz=150,slow=33						
WRAB	**Tennant Creek**	**77.46**	**253**	*e*P	**P**	**21 32 08.0**	**-0.9**
	comp=Z,17nm,1.3s,mb4.8						
WRAB				LR	LR		
	comp=Z,998nm,20.0s,MS5.1						
CMIG	**Matias Romero**	**77.80**	**33**	LR	LR	21 59 21.0	
	comp=Z,192nm,20.6s,MS4.4,baz=192,slow=30						
PMG	**Port Moresby**	**78.77**	**270**	PFAKE		21 32 30.0	+14
PMG				LR	LR		
	comp=Z,766nm,19.0s,MS5.0						
LPIG	**La Paz**	**80.79**	**17**	LR	LR	22 00 13.1	
	comp=Z,302nm,18.4s,MS4.7,baz=202,slow=30						
MBWA	**Marble Bar**	**84.12**	**241**	PFAKE		21 33 00.0	+16
MBWA				LR	LR		
	comp=Z,613nm,21.0s,MS5.0						
RCBR	**Riachuelo**	**87.07**	**96**	PFAKE		21 33 10.0	+11
RCBR				LR	LR		
	comp=Z,336nm,20.0s,MS4.8						
TXAR	**Lajitas Array**	**87.16**	**22**	P	**P**	**21 32 58.9**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.9,baz=183,slow=1.8,SNR=4.1						
SUR	**Sutherland**	**88.86**	**155**	P	**P**	**21 33 06.9**	**-0.6**
	comp=Z,516nm,2.6s						
SJG	**San Juan**	**90.41**	**58**	PFAKE		21 33 30.0	+15
SJG				LR	LR		
	comp=Z,303nm,20.0s,MS4.7						
ISA	**Isabella**	**91.15**	**9**	PFAKE		21 33 30.0	+12
ISA				LR	LR		
	comp=Z,862nm,20.0s,MS5.2						
BATI	**Baumata**	**91.25**	**250**	LR	LR	22 10 32.7	
	comp=Z,1μm,20.8s,MS5.3,baz=160,slow=33						
ANMO	**Albuquerque**	**92.05**	**18**	LR	LR	22 05 42.1	
	comp=Z,217nm,18.0s,MS4.6,baz=356,slow=30						
ANMO	**Albuquerque**	**92.05**	**18**	PFAKE		21 33 30.0	+8.0
ANMO				LR	LR		
	comp=Z,210nm,20.0s,MS4.6						
CMB	**Columbia Colle**	**93.36**	**7**	PFAKE		21 33 40.0	+12
CMB				LR	LR		
	comp=Z,778nm,21.0s,MS5.1						
BOSA	**Boshof**	**93.50**	**158**	LR	LR	22 12 42.3	
	comp=Z,502nm,18.1s,MS5.0,baz=187,slow=34						
TPH	**Tonopah**	**93.65**	**9**	PFAKE		21 33 40.0	+11
TPH				LR	LR		
	comp=Z,701nm,22.0s,MS5.1						
SDCO	**Great Sand Dun**	**94.94**	**19**	PFAKE		21 33 50.0	+15
SDCO				LR	LR		
	comp=Z,375nm,21.0s,MS4.8						
ELK	**Elko**	**96.49**	**11**	LR	LR	22 08 04.1	
	comp=Z,432nm,20.3s,MS4.9,baz=196,slow=30						
YBH	**Yreka Blue Hor**	**96.90**	**5**	LR	LR	22 07 48.3	
	comp=Z,840nm,19.9s,MS5.2,baz=188,slow=30						
HWUT	**Hardware Ranch**	**97.78**	**13**	PFAKE		21 34 00.0	+12
HWUT				LR	LR		
	comp=Z,674nm,20.0s,MS5.1						
TKL	**Tuckaleechee C**	**98.63**	**36**	LR	LR	22 09 54.0	
	comp=Z,219nm,18.9s,MS4.7,baz=11,slow=30						
GUMO	**Guam**	**98.81**	**281**	LR	LR	22 09 07.8	
	comp=Z,152nm,19.5s,MS4.5,baz=116,slow=30						
PDAR	**Pinedale Array**	**99.19**	**14**	LR	LR	22 09 51.6	
	comp=Z,510nm,20.8s,MS5.0,baz=208,slow=30						
COCO	**West Island**	**102.45**	**226**	PFAKE		21 34 20.0	+10
COCO				LR	LR		
	comp=Z,493nm,21.0s,MS5.0						
NEW	**Newport**	**103.77**	**8**	PFAKE		21 34 30.0	+14
NEW				LR	LR		
	comp=Z,584nm,22.0s,MS5.1						
PMR	**Palmer**	**117.70**	**349**	PFAKE		21 39 10.0	+12
PMR				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
MAJO	**Matsushiro**	**120.56**	**291**	PFAKE		21 39 20.0	+16
MAJO				LR	LR		
	comp=Z,357nm,22.0s,MS5.0						
COLA	**College**	**120.79**	**351**	PFAKE		21 39 20.0	+16
COLA				LR	LR		
	comp=Z,845nm,20.0s,MS5.4						
QIZ	**Qiongzhong**	**122.99**	**255**	PKP	PKPdf	21 39 13.4	+3.7
QIZ				SS	SS	21 57 39.3	+6.6
QIZ				LR	LR		
	comp=Z,186nm,35.3s,MS4.5						
CMAR	**Chiang Mai Arr**	**128.35**	**244**	PKP	PKPdf	21 39 22.8	+2.8
	comp=Z,0.3nm,0.8s,baz=67,slow=0.8,SNR=4.4						
MDJ	**Mudanjiang**	**130.89**	**292**	PFAKE		21 39 40.0	+16
MDJ				LR	LR		
	comp=Z,686nm,20.0s,MS5.3						
KMI	**Kunming**	**131.78**	**253**	PKP	PKPdf	21 39 27.7	+1.4
BILL	**Bilibino**	**131.99**	**333**	PFAKE		21 39 40.0	+15
BILL				LR	LR		
	comp=Z,719nm,21.0s,MS5.3						
BJT	**Baijiatuan**	**135.17**	**278**	PFAKE		21 39 40.0	+7.8
BJT				LR	LR		
	comp=Z,215nm,19.0s,MS4.9						
CD2	**Chengdu**	**135.71**	**259**	*e*PKP	PKPdf	21 39 34.2	+0.7
CD2				XPKP		21 39 39.0	
CD2				PP	PP	21 42 17.4	+5.5
CD2				PKS		21 43 09.2	
CD2				SKS	SKSdf	21 46 39.6	-4.7
CD2				SKKS	SKKSac	21 49 04.2	-2.3
CD2				PP	PP		
	comp=Z,220nm,7.2s						
CD2				LR	LR		
	comp=E,270nm,19.2s						
CD2				LR	LR		
	comp=Z,300nm,18.0s,MS5.1						
HHC	**Hu-ho-hao-te**	**138.34**	**276**	*e*PKP	PKPdf	21 39 35.5	-2.5
HHC				PP	PP	21 42 30.4	+2.1
HHC				PKS		21 43 10.9	
HHC				SKS	SKSdf	21 46 41.4	-6.9
HHC				SKKS	SKKSac	21 49 18.3	-3.4
HHC				PP	PP		
	comp=Z,83nm,5.1s						
HHC				LR	LR		
	comp=N,208nm,20.2s,MS5.0						
HHC				LR	LR		
	comp=E,169nm,17.8s,MS5.0						
HHC				LR	LR		
	comp=Z,218nm,20.2s,MS4.9						
HIA	**Hailar**	**139.06**	**291**	PFAKE		21 39 50.0	+11
HIA				LR	LR		
	comp=Z,630nm,19.0s,MS5.4						
YAK	**Yakutsk**	**140.94**	**313**	PFAKE		21 39 50.0	+7.9
YAK				LR	LR		
	comp=Z,421nm,21.0s,MS5.2						
LSA	**Lhasa**	**141.60**	**245**	PFAKE		21 40 00.0	+16
LSA				LR	LR		
	comp=Z,509nm,20.0s,MS5.3						
GTA	**Gaotai**	**144.07**	**264**	*e*PKP	PKPdf	21 39 49.2	+0.8
GTA				APKP		21 39 53.7	
GTA				XPKP		21 39 57.2	
SJPF	**Ste Jean**	**144.67**	**88**	*e*PKP1	PKPdf	21 39 52.2	+2.9
	comp=Z,25

BAIF Baives 151.67 81 *e*PKP1 PKiKP 21 40 09.3 +2.1
comp=Z,21nm,1.2s
HAU Haudompre 151.84 86 *e*PKP1 PKiKP 21 40 10.5 +2.9
comp=Z,19nm,1.1s
HAU *e*MLR MLR
comp=Z,294nm,23.0s,MS4.7
HAU Haudompre 151.84 86 *e*PKP PKiKP 21 40 10.5 +2.9
HAU LR LR
comp=Z,290nm,23.0s,MS5.0
HINF Hinteralfeld 152.02 87 *e*PKP1 PKPbc 21 40 11.5 +3.8
comp=Z,11nm,0.9s
WMQ Urumqi 153.81 259 *e*PKP PKPdf 21 40 06.0 +2.2
WMQ PP PP 21 44 06.0 +6.2
WMQ SKS SKSdf 21 47 11.0 +0.7
WMQ SKKS SKKSac 21 50 53.0 +3.9
WMQ PP PP
comp=Z,45nm,10.0s
WMQ LR LR
comp=N,245nm,25.0s,MS5.1
WMQ LR LR
comp=E,234nm,25.0s,MS5.1
WMQ LR LR
comp=Z,154nm,24.0s,MS4.7
MOX Moxa 156.14 85 *e*(P) PKPdf 21 40 10.4 +3.6
comp=Z,24nm,1.8s
CSS Prodhromos 156.24 142 PFAKE 21 40 20.0 +13
CSS LR LR
comp=Z,444nm,19.0s,MS5.3
GERES GERESS Array B 156.47 91 PKP PKPdf 21 40 10.0 +2.7
comp=Z,0.7nm,0.8s,baz=270,slow=1.3,SNR=4.8
CLL Collm 157.22 84 P PKPdf 21 40 00.0 -8.2
CLL *e* 21 40 17.0
MKAR Makanchi Array 158.64 259 PKPab PKPab 21 40 47.5 +2.0
comp=Z,1.5nm,0.9s,baz=107,slow=4.1,SNR=6.8
KURK Kurchatov 162.75 266 PFAKE 21 40 30.0 +16
KURK LR LR
comp=Z,633nm,22.0s
GNI Garni 164.21 162 PFAKE 21 40 30.0 +14
GNI LR LR
comp=Z,1μm,21.0s
KIV Kislovodsk 167.39 152 PFAKE 21 40 30.0 +11
KIV LR LR
comp=Z,889nm,22.0s
BVAR Borovoye Array 168.34 266 PKPab PKPab 21 41 28.8 +0.8
comp=Z,0.8nm,0.9s,baz=107,slow=8.0,SNR=3.6
BRVK Borovoye 168.41 266 PFAKE 21 40 30.0 +11
BRVK LR LR
comp=Z,1μm,22.0s
OBN Obninsk 171.81 86 PFAKE 21 40 30.0 +9.2
OBN LR LR
comp=Z,1μm,22.0s
ARU Arti 175.56 287 PFAKE 21 40 30.0 +7.8
ARU LR LR
comp=Z,1μm,20.0s

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*NDI **02** 21:25:36.4±2.7, 3336N×7579E, h35km, ML3.6*
*IDC **02** 21:25:37.0±2.6, 3331N×7645E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/25, mbtmp3.3/5, ML2.4/1, Error ellipse: s-maj=66.5km s-min=24.5km az=57.0*
*ISCJB **02** 21:25:39.5±0.5, 3329N±004×7623E±006, h33km, mb3.5/3, Error ellipse: s-maj=8.2km s-min=4.0km az=153.3*
*NEIC **02** 21:25:41.4±1.2, 3327N×7638E, h35km, Error ellipse: s-maj=18.2km s-min=15.4km az=210.0*

ISC 02 21:25:41.6±0.5, 3327N±003×7636E±006, h35km, n18, σ1§20/28, mb3.5/3, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**0.80**	**205**	*e*P	**Pn**	**21 25 47.0**	**-9.3**
DLH				*e*S	**Sn**	**21 25 59.0**	**-7.9**
THN	**Thein Dam**	**0.99**	**213**	*e*P	**Pn**	**21 25 52.1**	**-6.9**
THN				*e*S	**Sn**	**21 26 06.0**	**-5.8**
JMU	**Jammu**	**1.34**	**246**	*ex*	**Sn**	**21 26 21.0**	**+0.6**
SDNR	**Sundarnagar**	**1.84**	**164**	*e*P	**Pn**	**21 26 09.0**	**-1.6**
SDNR				*e*S	**Sn**	**21 26 34.0**	**+1.4**
BHK	**Bhakra**	**1.85**	**178**	*e*S	**Sn**	**21 26 32.2**	**-0.7**
SMLA	**Simla**	**2.24**	**162**	*i* P	**Pn**	**21 26 15.9**	**-0.3**
SMLA				*e*S	**Sn**	**21 26 42.9**	**+0.3**
SMLA				*ex*	x	21 26 50.6	
	comp=E,1μm,0.4s						
SMLA				*ex*	x	21 26 51.8	
	comp=N,1μm,0.3s						
KLP	**Kalpa**	**2.36**	**137**	*e*P	**Pn**	**21 26 19.1**	**+1.3**
KLP				*e*S	**Sn**	**21 26 49.3**	**+3.9**
KLP				AML	AML	21 27 03.4	
	comp=E,282nm,0.6s						
KLP				AML	AML	21 27 03.5	
	comp=N,358nm,0.6s						
DDI	**Dehra Dun**	**3.27**	**153**	*ex*	**Pn**	**21 26 35.8**	**+5.4**
DDI				*e*S	**Sn**	**21 27 06.4**	**-1.7**
JOSI	**Joshimath**	**3.84**	**134**	*e*P	**Pn**	**21 26 39.7**	**+1.6**
JOSI				*e*S	**Sn**	**21 27 25.1**	**+3.2**
JOSI				AML	AML	21 27 46.1	
	comp=E,84nm,0.5s						
JOSI				AML	AML	21 27 48.3	
	comp=N,66nm,0.6s						
SONA	**Sohna**	**5.04**	**173**	*e*P	**Pn**	**21 26 52.2**	**-2.5**
SONA				*e*S	**Sn**	**21 27 47.9**	**-3.8**
KBL	**Kabul**	**6.21**	**284**	Pn	**Pn**	**21 27 10.5**	**-0.3**
KBL				*e*Sn	**Sn**	**21 28 21.4**	**+0.9**
AML	**Almayashu**	**9.10**	**347**	*e*Pn	**Pn**	**21 27 51.9**	**+1.6**
AML				*e*Sn	**Sn**	**21 29 30.5**	**-0.8**
MKAR	**Makanchi Array**	**14.24**	**17**	Pn	**Pn**	**21 28 59.3**	**-1.3**
	comp=N,0.0nm,0.3s,baz=221,slow=17,SNR=2.4						
BVAR	**Borovoye Array**	**20.21**	**350**	P	**P**	**21 30 14.2**	**+1.0**
	comp=N,0.2nm,0.3s,baz=169,slow=8.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**21.53**	**14**	P	**P**	**21 30 26.7**	**-0.8**
	comp=N,0.4nm,0.4s,mb3.2,baz=201,slow=12,SNR=2.7						
AKTK	**Aktyubinsk**	**21.83**	**327**	P	**P**	**21 30 30.4**	**-0.3**
AKTO	**Aktyubinsk**	**21.83**	**327**	P	**P**	**21 30 30.4**	**-0.2**
	comp=N,2.1nm,0.7s,mb3.7,baz=123,slow=7.6,SNR=6.8						
CMAR	**Chiang Mai Arr**	**25.03**	**121**	P	**P**	**21 31 02.6**	**+0.1**
	comp=N,0.9nm,0.5s,mb3.5,baz=306,slow=9.0,SNR=9.5						

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*ISCJB **02** 21:38:09.9±3.1, 170S±04×1744W±03, h80km±28km, mb4.0/6, Error ellipse: s-maj=77.5km s-min=21.4km az=146.4*
*IDC **02** 21:38:10.7±4.1, 1718S×17429W, h75km±35km, mb3.9/6, mb1 4.1/7, mb1mx3.8/17, mbtmp3.9/7, MS4.1/3, Ms1 4.2/3, ms1mx3.4/40, Error ellipse: s-maj=62.4km s-min=17.9km az=145.0*

ISC 02 21:38:10.7±3.1, 172S±04×1743W±03, h75km±28km, n11, σ0§45/8, mb4.0/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.06**	**38**	P	**Pn**	**21 39 10.5**	**+0.1**
	6.8nm,0.3s,baz=258,slow=12,SNR=7.5						
AFI				S	**Sn**	**21 39 51.6**	**-5.1**
	73nm,0.3s,baz=41,slow=18,SNR=18						
STKA	**Stephens Creek**	**42.41**	**241**	P	**P**	**21 45 58.5**	**+0.5**
	1.9nm,0.4s,mb4.2,baz=113,slow=12,SNR=5.9						
WRA	**Warramunga Arr**	**48.60**	**258**	P	**P**	**21 46 47.0**	**-0.1**
	1.4nm,0.3s,mb4.3,baz=97,slow=6.8,SNR=70						
WRA				PcP	PcP	21 48 11.9	+0.1
	0.4nm,0.6s,baz=92,slow=3.2,SNR=3.3						
ASAR	**Alice Springs**	**48.74**	**253**	P	**P**	**21 46 47.9**	**-0.3**
	9.2nm,0.6s,mb4.9,baz=88,slow=8.5,SNR=196						
NVAR	**Mina Array Bea**	**76.22**	**42**	P	**P**	**21 49 51.5**	**+0.5**
	0.6nm,0.6s,mb3.5,baz=203,slow=6.3,SNR=3.3						
PDAR	**Pinedale Array**	**84.16**	**42**	P	**P**	**21 50 33.4**	**-0.3**
	0.5nm,0.8s,mb3.4,baz=264,slow=6.9,SNR=2.9						
CMIG	**Matias Romero**	**85.30**	**71**	LR	LR	22 18 08.5	
	comp=Z,76nm,21.0s,baz=19,slow=28						
MAW	**Mawson**	**85.85**	**199**	P	**P**	**21 50 41.5**	**-0.2**
	1.1nm,0.5s,mb4.0,baz=166,slow=4.2,SNR=4.2						
CMAR	**Chiang Mai Arr**	**92.33**	**288**	LR	LR	22 31 56.0	
	comp=Z,192nm,18.6s,baz=121,slow=35						
JTS	**JuntasAbangare**	**92.39**	**80**	LR	LR	22 24 52.9	
	comp=Z,67nm,20.5s,baz=266,slow=30						
GERES	**GERESS Array B**	**147.73**	**350**	PKPbc	PKPbc	21 57 46.6	-0.1
	0.5nm,0.7s,baz=48,slow=2.0,SNR=5.8						

IDC 02 21:44:03.5±2.1, 273N×12707E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=169.8km s-min=25.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.64**	**163**	P	P	21 49 16.4	-0.4
	0.8nm,0.5s,baz=342,slow=10,SNR=11						
ASAR	**Alice Springs**	**27.07**	**166**	P	P	21 49 48.1	+0.2
	0.2nm,0.5s,baz=348,slow=7.6,SNR=4.5						
MKAR	**Makanchi Array**	**58.56**	**325**	P	P	21 54 02.2	+0.2
	0.3nm,0.7s,baz=116,slow=8.3,SNR=3.1						

IDC 02 21:44:45.3±2.7, 1489S×17301W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/18, mbtmp3.8/3, MS4.2/6, Ms1 4.2/6, ms1mx3.4/41, Error ellipse: s-maj=198.8km s-min=22.7km az=147.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.54**	**51**	Pn	Pn	21 45 14.1	+0.1
	21nm,0.3s,baz=13,slow=2.8,SNR=14						
AFI				Sn	Sn	21 45 31.5	-3.2
	176nm,0.3s,baz=60,slow=20,SNR=46						
AFI				LR	LR	21 45 51.4	
	comp=Z,616nm,19.4s,baz=303,slow=43						
STKA	**Stephens Creek**	**44.62**	**240**	P	P	21 52 58.6	-1.0
	1.4nm,0.7s,baz=83,slow=8.1,SNR=3.0						
WRA	**Warramunga Arr**	**50.33**	**256**	P	P	21 53 44.7	+0.4
	0.5nm,0.6s,baz=91,slow=6.8,SNR=11						
ASAR	**Alice Springs**	**50.63**	**252**	P	P	21 53 46.6	+0.1
	1.9nm,0.7s,baz=83,slow=7.9,SNR=25						
CBIJ	**Chichi jima**	**60.28**	**314**	LR	LR	22 17 03.0	
	comp=Z,179nm,19.7s,baz=150,slow=32						
MJAR	**Matsushiro Arr**	**68.80**	**319**	LR	LR	22 21 43.3	
	comp=Z,183nm,21.0s,baz=135,slow=32						
ASAJ	**Asahikawa**	**71.31**	**328**	LR	LR	22 22 04.5	
	comp=Z,157nm,20.1s,baz=347,slow=31						
PETK	**Petropavlovsk-**	**72.27**	**342**	LR	LR	22 21 19.5	
	comp=Z,197nm,20.8s,baz=157,slow=30						
LPIG	**La Paz**	**72.45**	**58**	LR	LR	22 18 10.7	
	comp=Z,101nm,21.2s,baz=288,slow=28						
KSRS	**Korea Array**	**76.06**	**315**	LR	LR	22 26 48.5	
	comp=Z,105nm,20.3s,baz=128,slow=33						

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*NIED **02** 21:52:00, 2320N×12460E, h20km, Mw4.5 Best double couple: M0 5.32000×10^15 NP1: φ§250.00000°, δ§90.00000°, λ§-169.00000°. NP2: φ§160.00000°, δ§79.00000°, λ§0.00000°.*
*BJI **02** 21:52:17.9, 2325N×12451E, h15km, mB4.6, mb4.4, ML4.2, Ms4.2, Ms2.3.8*
*JMA **02** 21:52:18.8±0.3, 2317N×12455E, h38km, M4.4*
*ISCJB **02** 21:52:19.1±0.3, 2321N±003×12469E±003, h42km, mb4.3/31, MS3.7/8, Error ellipse: s-maj=4.4km s-min=3.5km az=143.8*
*IDC **02** 21:52:21.0±0.5, 2321N×12480E, h40km±4km, mb4.0/16, mb1 4.1/18, mb1mx4.1/26, mbtmp4.1/18, ML4.1/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/35, Error ellipse: s-maj=12.9km s-min=9.9km az=87.0*
*NEIC **02** 21:52:21.6±0.4, 2309N×12445E, mb4.6/12, MW4.4(NIED), Error ellipse: s-maj=9.3km s-min=7.7km az=49.0*

ISC 02 21:52:21.2±0.3, 2326N±003×12466E±003, h44km, h44km±1.1km: pP-P, n92, σ1§36/109, mb4.3/31, MS3.7/8, 2D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.12**	**316**	P	**Pn**	**21 52 38.1**	**-2.3**
HATJ				S	**Sn**	**21 52 52.2**	**-2.4**
JKRS	**Kuro-shima**	**1.15**	**329**	P	**Pn**	**21 52 39.8**	**-0.9**
JKRS				S	**Sn**	**21 52 54.9**	**-0.4**
JIJ	**Ishigaki jima**	**1.20**	**337**	P	**Pn**	**21 52 40.3**	**-1.2**
JIJ				S	**Sn**	**21 52 55.4**	**-1.2**
IRIF	**Iriomote-Funau**	**1.37**	**322**	P	**Pn**	**21 52 42.6**	**-1.2**
IRIF				S	**Sn**	**21 52 59.5**	**-1.3**
JTJ	**Tarama**	**1.38**	**2**	P	**Pn**	**21 52 43.6**	**-0.4**
JTJ				S	**Sn**	**21 53 02.5**	**+1.5**
JOGS	**Gusukube**	**1.65**	**24**	P	**Pn**	**21 52 47.7**	**+0.1**
JOGS				S	**Sn**	**21 53 09.3**	**+1.7**
JMJ	**Miyako jima 2**	**1.66**	**20**	P	**Pn**	**21 52 47.8**	**0.0**
JMJ				S	**Sn**	**21 53 09.2**	**+1.4**
YOJ	**Yonaguni jima**	**1.93**	**309**	P	**Pn**	**21 52 50.2**	**-1.3**
YOJ				S	**Sn**	**21 53 11.9**	**-2.6**
NACB	**Ninganchiao**	**2.95**	**289**	*e*Pn	**Pn**	**21 53 02.2**	**-3.4**
YHNB	**Yeheng**	**3.32**	**296**	*e*Pn	**Pn**	**21 53 09.0**	**-1.6**
TATO	**Taipei**	**3.37**	**301**	*e*Pn	**Pn**	**21 53 09.7**	**-1.5**
JKE	**Kume jima 2**	**3.62**	**32**	P	**Pn**	**21 53 14.2**	**-0.5**
JKE				S	**Sn**	**21 53 54.7**	**-1.4**
JJT2	**Tamagusuku 2**	**4.02**	**44**	*e*S	**Sn**	**21 54 04.4**	**-1.6**
NAH1	**Naha**	**4.03**	**43**	*e*S	**Sn**	**21 54 04.3**	**-1.9**
JAGN	**Aguni-jima**	**4.06**	**35**	P	**Pn**	**21 53 20.2**	**-0.6**
JAGN				*e*S	**Sn**	**21 54 06.4**	**-0.7**
JIH	**Iheya**	**4.81**	**38**	P	**Pn**	**21 53 30.2**	**-0.9**
JIH				*e*S	**Sn**	**21 54 25.7**	**+0.2**
JOW	**Kunigami**	**4.84**	**42**	P	**Pn**	**21 53 30.6**	**-0.9**
	19nm,0.3s,baz=195,slow=9.9,SNR=23						
JOW				S	**Sn**	**21 54 23.6**	**-2.7**
	15nm,0.3s,baz=131,slow=29,SNR=8.2						
JOW	**Kunigami**	**4.84**	**42**	P	**Pn**	**21 53 30.7**	**-0.8**
JOW				S	**Sn**	**21 54 23.5**	**-2.8**
QZH	**Quanzhou**	**5.79**	**288**	⇓*i*P	**Pn**	**21 53 41.7**	**-2.9**
QZH				S	**Sn**	**21 54 40.8**	**-8.9**
QZH				Smax			
	comp=N,250nm,0.7s						
QZH				Smax			
	comp=E,150nm,0.4s						
JTK	**Tokunoshima**	**5.95**	**40**	P	**Pn**	**21 53 44.8**	**-1.9**
JTK				S	**Sn**	**21 54 48.7**	**-4.8**
CVP	**Callao Caves**	**6.13**	**206**	*e*P	**Pn**	**21 53 44.0**	**-5.2**
JMZ	**Minamidaito 2**	**6.50**	**66**	*e*S	**Sn**	**21 54 59.6**	**-7.5**
PALP	**Palanan**	**6.51**	**199**	*e*P	**Pn**	**21 53 49.7**	**-4.8**
ABRA	**Dolores**	**6.69**	**214**	*e*P	**Pn**	**21 53 52.2**	**-4.8**
JAM	**Amami Oshima**	**6.80**	**40**	P	**Pn**	**21 53 56.3**	**-2.0**
JAM				*e*S	**Sn**	**21 55 09.0**	**-5.4**
CAUP	**Cauayan**	**6.82**	**204**	*e*P	**Pn**	**21 53 56.3**	**-2.4**
BALP	**Baler**	**8.02**	**202**	*e*P	**Pn**	**21 54 11.7**	**-3.5**
POLP	**Polilio Island**	**8.86**	**197**	*e*P	**Pn**	**21 54 21.8**	**-4.9**
PVCP	**Virac**	**9.62**	**183**	*e*P	**Pn**	**21 54 32.2**	**-4.9**
NJ2	**Nanjing**	**10.16**	**331**	*e*P	**Pn**	**21 54 45.8**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
KS15	**Wonju Array Si**	**14.41**	**10**	*e*Pn	**Pn**	**21 55 44.5**	**+2.1**
KSRS	**Korea Array**	**14.43**	**10**	P	**Pn**	**21 55 43.1**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=189,slow=12,SNR=28						
KSRS				LR	LR	22 01 14.3	
	comp=Z,101nm,19.8s,baz=347,slow=37						
DAV	**Davao City (W)**	**16.12**	**177**	LR	LR	22 01 20.0	
	comp=Z,150nm,19.0s,baz=56,slow=34						
JHJ	**Hachijo jima 2**	**16.55**	**50**	LR	LR	22 01 51.7	
	comp=Z,74nm,19.6s,baz=175,slow=35						
GYA	**Guiyang**	**16.64**	**285**	P	**Pn**	**21 56 09.8**	**-1.5**
GYA				PP		21 56 23.8	
GYA				S	**S**	**21 59 13.4**	**-11**
GYA				SS		21 59 33.2	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
GYA				AMB	AMB		
	comp=Z,70nm,4.2s						
GYA				LR	LR		
	comp=N,450nm,11.5s						
GYA				LR	LR		
	comp=E,380nm,10.6s						
GYA				LR	LR		
	comp=Z,410nm,12.8s						
XAN	**Xi'an**	**17.48**	**311**	P	**Pn**	**21 56 25.0**	**+3.3**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s						
XAN				AMB	AMB		
	comp=Z,135nm,10.9s						
MAJO	**Matsushiro**	**17.67**	**38**	*e*Pn	**Pn**	**21 56 28.4**	**+4.3**
	comp=Z,36nm,1.0s						
MAT	**Matsushiro**	**17.67**	**38**	P	**Pn**	**21 56 28.4**	**+4.4**
MJAR	**Matsushiro Arr**	**17.67**	**38**	P	**Pn**	**21 56 28.8**	**+4.7**
	comp=Z,1.6nm,0.3s,baz=226,slow=9.2,SNR=33						
MJAR	**Matsushiro Arr**	**17.67**	**38**	P	**Pn**	**21 56 28.8**	**+4.7**
BJI	**Beijing**	**18.21**	**339**	P	**Pn**	**21 56 31.5**	**+0.9**
BJI				S	**S**	**21 59 56.4**	**-0.1**
BJI				AMB	AMB		
	comp=Z,13nm,0.7s						
BJI				AMB	AMB		
	comp=Z,135nm,3.7s						
BJI				LR	LR		
	comp=N,181nm,15.2s						
BJI				LR	LR		
	comp=E,198nm,16.1s						
BJI				LR	LR		
	comp=Z,112nm,26.5s						
SNY	**Shenyang**	**18.54**	**357**	⇓P	**Pn**	**21 56 35.9**	**+1.3**
SNY				AMB	AMB		
	comp=Z,16nm,0.8s						
SNY				LR	LR		
	comp=N,277nm,13.5s						
SNY				LR	LR		
	comp=E,257nm,12.3s						
SNY				LR	LR		
	comp=Z,389nm,14.4s						
KMI	**Kunming**	**20.08**	**280**	P	**P**	**21 56 52.6**	**+1.6**
KMI				AP		21 56 54.9	
KMI				XP	sP	21 56 56.9	-10
KMI				S	**S**	**22 00 30.9**	**-3.5**
KMI				AMB	AMB		
	comp=Z,4.0nm,1.9s						
KMI				LR	LR		
	comp=N,364nm,16.3s,MS4.0						
KMI				LR	LR		
	comp=E,225nm,11.7s,MS4.0						
KMI				LR	LR		
	comp=Z,225nm,11.1s,MS3.8						
CD2	**Chengdu**	**20.09**	**297**	*e*P	**P**	**21 56 52.1**	**+1.0**
CD2				AP		21 56 56.2	
CD2				XP	sP	21 56 59.5	-7.7
CD2				PP		21 57 11.3	
CD2				S	**S**	**22 00 31.2**	**-3.3**
CD2				XS	sS	22 00 37.1	-14
CD2				SS		22 00 59.4	
CD2				AMB	AMB		
	comp=Z,20nm,1.1s						
CD2				AMB	AMB		
	comp=Z,60nm,4.2s						
CD2				LR	LR		
	comp=N,310nm,10.8s						
CD2				LR	LR		
	comp=E,250nm,9.6s						
CD2				LR	LR		
	comp=Z,290nm,14.4s,MS3.8						
HHC	**Hu-ho-hao-te**	**20.71**	**331**	*e*P	**P**	**21 57 01.6**	**+3.8**
HHC				XP	sP	21 57 05.6	-8.3
HHC				PP		21 57 24.1	
HHC				S	**S**	**22 00 49.2**	**+2.5**
HHC				XS	sS	22 00 55.9	-7.9
HHC				PCP	PcP	22 01 08.8	+2.6
HHC				PCS	PcS	22 04 46.5	+2.6
HHC				AMB	AMB		
	comp=Z,18nm,0.7s						
HHC				LR	LR		
	comp=N,266nm,16.1s,MS3.9						
HHC				LR	LR		
	comp=E,320nm,16.7s,MS3.9						
HHC				LR	LR		
	comp=Z,305nm,17.8s,MS3.7						
MDJ	**Mudanjiang**	**21.69**	**10**	P	**P**	**21 57 11.8**	**+3.6**
MDJ				AP		21 57 14.7	
MDJ				XP	sP	21 57 16.0	-8.4
MDJ				XS	sS	22 01 20.7	-2.2
MDJ				SCP	ScP	22 04 46.3	+4.7
MDJ				PCS	PcS	22 04 47.8	+1.6
MDJ				SCS	ScS	22 08 31.4	+5.6
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,44nm,5.3s						
MDJ				LR	LR		
	comp=N,98nm,19.2s						
MDJ				LR	LR		
	comp=E,140nm,13.4s						
MDJ				LR	LR		
	comp=Z,146nm,19.5s,MS3.4						
LZH	**Lanzhou**	**22.09**	**310**	*e*P	**P**	**21 57 13.0**	**+0.4**
LZH				AP		21 57 16.5	
LZH				XP	sP	21 57 18.5	-10
LZH				PP		21 57 40.3	
LZH				S	**S**	**22 01 10.2**	**-3.5**
LZH				XS	sS	22 01 16.4	-15
LZH				SS		22 01 49.0	
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.4						
LZH				AMB	AMB		
	comp=Z,56nm,4.5s						
LZH				LR	LR		
	comp=N,249nm,10.3s						
LZH				LR	LR		
	comp=Z,375nm,11.0s,MS4.1						
CMAR	**Chiang Mai Arr**	**24.49**	**264**	P	**P**	**21 57 37.6**	**+1.2**
	comp=Z,2.1nm,0.7s,mb3.6,baz=66,slow=8.3,SNR=16						
CMAR				pP		21 57 49.3	
	comp=Z,2.8nm,0.7s,baz=66,slow=8.0,SNR=9.5						
CMAR				PcP	PcP	22 01 13.8	-0.4
	comp=Z,0.7nm,0.6s,baz=44,slow=0.7,SNR=6.9						
CMAR				LR	LR	22 08 30.4	
	comp=Z,107nm,19.3s,MS3.4,baz=85,slow=39						
ASAJ	**Asahikawa**	**25.50**	**31**	P	**P**	**21 57 45.9**	**+0.5**
	comp=Z,8.1nm,0.4s,mb4.6,baz=304,slow=7.0,SNR=17						
GTA	**Gaotai**	**26.52**	**313**	*e*P	**P**	**21 57 55.7**	**+1.1**
GTA				AP	pP	21 58 00.2	-6.0
GTA				XP	sP	21 58 03.7	-7.8
GTA				PCP	PcP	22 01 20.9	+2.4
GTA				AMB	AMB		
	comp=Z,2.0nm,1.3s,mb3.5						
ULN	**Ulaanbaatar**	**28.29**	**335**	*e*P	**P**	**21 58 13.1**	**+2.8**
	comp=Z,7.8nm,1.3s,mb4.2						
SONM	**Songino Array**	**28.53**	**334**	P	**P**	**21 58 13.4**	**+0.9**
	comp=Z,1.4nm,0.7s,mb3.8,baz=152,slow=9.2,SNR=11						
SONM				LR	LR	22 09 41.1	
	comp=Z,83nm,20.5s,MS3.3,baz=151,slow=36						
LSA	**Lhasa**	**30.60**	**289**	P	**P**	**21 58 33.4**	**+2.3**
LSA	**Lhasa**	**30.60**	**289**	*e*P	**P**	**21 58 32.5**	**+1.4**
WMQ	**Urumqi**	**36.60**	**313**	*e*P	**P**	**21 59 25.0**	**+1.9**
WMQ				XP	sP	21 59 32.0	-8.2
WMQ				PP	PP	22 00 50.0	+3.1
WMQ				S	**S**	**22 05 07.0**	**+4.2**
WMQ				SS	SS	22 07 34.0	-10
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,127nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=E,165nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,81nm,13.0s,MS3.7						
PETK	**Petropavlovsk-**	**38.92**	**32**	P	**P**	**21 59 43.8**	**+1.3**
	comp=Z,6.4nm,0.9s,mb4.3,baz=214,slow=4.7,SNR=3.9						
MK31	**Makanchi Array**	**41.23**	**315**	*e*P	**P**	**22 00 03.0**	**+1.3**
MKAR	**Makanchi Array**	**41.23**	**315**	P	**P**	**22 00 02.9**	**+1.2**
	comp=Z,1.9nm,0.4s,mb4.1,baz=100,slow=9.9,SNR=63						
MKAR				pP	pP	22 00 14.6	+0.9
	comp=Z,5.8nm,0.5s,baz=101,slow=10,SNR=17						
MKAR				PcP	PcP	22 02 00.9	+0.9
	comp=Z,0.7nm,0.8s,baz=94,slow=4.5,SNR=2.3						
ZAA0	**Zalesovo Array**	**42.77**	**326**	*e*P	**P**	**22 00 14.5**	**+0.3**
ZALV	**Zalesovo Beam**	**42.77**	**326**	P	**P**	**22 00 13.9**	**-0.2**
	comp=Z,4.5nm,0.9s,mb4.2,baz=101,slow=7.7,SNR=12						
ZALV				pP	pP	22 00 26.5	+0.3
	comp=Z,2.8nm,0.5s,baz=112,slow=8.5,SNR=8.4						
ZALV	**Zalesovo Beam**	**42.77**	**326**	P	**P**	**22 00 13.9**	**-0.2**
ZALV				pP	pP	22 00 26.5	+0.3
WRAB	**Tennant Creek**	**43.95**	**167**	*e*P	**P**	**22 00 22.9**	**-1.1**
	comp=Z,7.4nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**43.96**	**167**	P	**P**	**22 00 23.0**	**-1.1**
	comp=Z,2.6nm,0.6s,mb4.1,baz=346,slow=8.9,SNR=32						
WRA				pP	pP	22 00 34.5	-1.8
	comp=Z,9.5nm,1.0s,baz=348,slow=8.7,SNR=16						
WB2	**Warramunga Arr**	**43.96**	**167**	*e*P	**P**	**22 00 23.4**	**-0.7**
TKM2	**Tokmak 2**	**44.84**

BVAR				PcP	PcP	22 02 32.4	+0.5	
	comp=Z,2.0nm,0.5s,baz=136,slow=3.7,SNR=8.3							
BVAR				pPcP		22 02 45.1		
	comp=Z,1.8nm,0.7s,baz=122,slow=4.1,SNR=5.2							
BRVK	**Borovoye**	**50.48**	**321**	*eP*	**P**	**22 01 15.8**	**+1.2**	
	comp=Z,6.2nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**57.16**	**163**	P	**P**	**22 02 03.3**	**-0.3**	
	comp=Z,1.1nm,0.5s,mb4.1,baz=323,slow=12,SNR=3.3							
STKA				pP	pP	22 02 14.7	-1.4	
	comp=Z,2.8nm,0.7s,baz=39,slow=4.4,SNR=3.8							
AKTK	**Aktyubinsk**	**57.66**	**316**	P	**P**	**22 02 07.8**	**+0.8**	
AKTO	**Aktyubinsk**	**57.66**	**316**	P	**P**	**22 02 07.8**	**+0.8**	
	comp=Z,1.6nm,0.5s,mb4.3,baz=95,slow=8.9,SNR=6.0							
KDAK	**Kodiak Island**	**66.82**	**35**	P	**P**	**22 03 09.2**	**+1.0**	
	comp=Z,6.2nm,0.7s,mb4.8,baz=323,slow=10,SNR=3.1							
COLD	**Coldfoot**	**66.92**	**25**	*e*P	**P**	**22 03 11.8**	**+3.2**	
	comp=Z,2.0nm,0.6s,mb4.3							
ARCES	**ARCESS Array B**	**71.58**	**339**	P	**P**	**22 03 37.8**	**+0.4**	
	comp=Z,4.2nm,0.9s,mb4.4,baz=57,slow=8.8,SNR=4.1							
AKASG	**Malin Array Be**	**75.67**	**319**	P	**P**	**22 04 01.7**	**-0.1**	
	comp=Z,0.5nm,0.4s,mb3.8,baz=61,slow=5.3,SNR=4.8							
AKASG				pP	pP	22 04 14.0	-0.6	
	comp=Z,0.9nm,0.4s,baz=60,slow=6.2,SNR=3.6							
AKASG	**Malin Array Be**	**75.67**	**319**	P	**P**	**22 04 01.7**	**-0.1**	
AKASG				pP	pP	22 04 14.0	-0.6	
KWP	**Kalwaria**	**79.95**	**320**	*e*P	**P**	**22 04 26.8**	**+1.1**	
	comp=Z,11nm,0.8s,mb4.8							
NB2	**NORSAR Subarra**	**80.51**	**333**	P	**P**	**22 04 28.5**	**+0.1**	
	comp=Z,3.0nm,0.8s,mb4.3,baz=55,slow=5.3							
NOA	**NORSAR Array B**	**80.51**	**333**	P	**P**	**22 04 29.0**	**+0.6**	
	comp=Z,1.9nm,0.7s,mb4.1,baz=56,slow=5.2,SNR=4.9							
NOA				pP	pP	22 04 41.5	0.0	
	comp=Z,2.3nm,0.7s,baz=53,slow=5.5,SNR=4.5							
STHS	**Stebnicka Huta**	**80.91**	**320**	*e*pP	pP	22 04 42.6	-1.2	
GERES	**GERESS Array B**	**85.56**	**322**	P	**P**	**22 04 55.7**	**+1.0**	
	comp=Z,0.7nm,0.6s,mb4.1,baz=56,slow=5.0,SNR=7.4							
GERES				pP	pP	22 05 08.5	+0.6	
	comp=Z,2.7nm,0.9s,baz=57,slow=4.9,SNR=8.9							
LPG	**La Plagne**	**91.36**	**322**	*e*P	**P**	**22 05 22.9**	**+0.5**	
	comp=Z,9.2nm,0.8s,mb4.9							
LPG	**La Plagne**	**91.36**	**322**	*e*P	**P**	**22 05 22.9**	**+0.5**	
	comp=Z,4.6nm,0.8s,mb4.9							
LPL	**La Plagne**	**91.36**	**322**	*e*P	**P**	**22 05 22.7**	**+0.3**	
	comp=Z,9.0nm,0.8s,mb4.8							
LPL	**La Plagne**	**91.36**	**322**	*e*P	**P**	**22 05 22.7**	**+0.3**	
	comp=Z,4.5nm,0.8s,mb4.8							
JFWS	**Jewell Farm**	**106.72**	**26**	*e*PKP	PKiKP	22 10 44.0	+2.2	
LONY	**Lake Ozonia**	**110.20**	**15**	*e*PKP	PKiKP	22 10 48.6	+0.3	
CCM	**Cathedral Cave**	**110.31**	**30**	*e*PKP	PKiKP	22 10 51.8	+3.1	

JMA 02 21:54:54.1±0.4, 2319N×12456E, h37km, M3.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**1.11**	**321**	P	Pn	21 55 13.4	+0.3
HATJ				*e*S	Sn	21 55 27.1	0.0
JKRS	**Kuro-shima**	**1.16**	**334**	P	Pn	21 55 15.0	+1.2
JKRS				S	Sn	21 55 29.7	+1.3
JJJ	**Ishigaki jima**	**1.23**	**342**	P	Pn	21 55 15.3	+0.5
JJJ				S	Sn	21 55 30.3	+0.1
IRIF	**Iriomote-Funau**	**1.37**	**326**	P	Pn	21 55 17.8	+1.1
IRIF				S	Sn	21 55 34.5	+0.8
JTJ	**Tarama**	**1.45**	**5**	P	Pn	21 55 18.8	+1.0
JTJ				*e*S	Sn	21 55 37.8	+2.2
JOGS	**Gusukube**	**1.74**	**26**	P	Pn	21 55 22.8	+0.9
JOGS				S	Sn	21 55 44.4	+1.5
JMJ	**Miyako jima 2**	**1.75**	**22**	P	Pn	21 55 22.7	+0.7
JMJ				S	Sn	21 55 44.3	+1.2
YOJ	**Yonaguni jima**	**1.90**	**312**	P	Pn	21 55 25.2	+1.2
YOJ				S	Sn	21 55 47.4	+0.6
JKE	**Kume jima 2**	**3.72**	**32**	P	Pn	21 55 48.5	-0.5
JKE				*e*S	Sn	21 56 30.0	-1.6

CASC 02 21:58:53.5±1.7, 1223N×8918W, h3km±10km, MD4.1, ML2.9, 3C-6D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**1.39**	**5**	⇑*e*P	x	21 59 19.2	
SNVI	**San Vicente**	**1.41**	**14**	*e*P	x	21 59 19.7	
VSM	**San Miguel**	**1.48**	**37**	⇓*e*P	x	21 59 20.5	
BOQS	**Boqueron**	**1.50**	**356**	*e*P	x	21 59 21.2	
BOQS				⇓*e*P	x	21 59 21.2	
BOQS				*e*S	x	21 59 42.3	
LBRS	**Las Brisas**	**1.50**	**5**	*e*P	x	21 59 21.0	
BLLM	**Bellamira**	**1.51**	**37**	*e*P	x	21 59 20.4	
SBLS	**San Blas**	**1.65**	**345**	⇓*e*P	x	21 59 23.6	
CNCH	**Conchagua**	**1.67**	**52**	⇑*e*P	x	21 59 22.3	
CNCH				*e*S	x	21 59 47.5	
SNJE	**San Jose**	**1.68**	**346**	⇓*e*P	x	21 59 23.8	
RTR	**El Retiro**	**1.71**	**345**	⇓*e*P	x	21 59 24.6	
RTR				*e*S	x	21 59 47.8	
CAHU	**Cacacuatique**	**1.80**	**32**	⇓*e*P	x	21 59 25.4	
CAHU				*e*S	x	21 59 52.1	
CAHU				AML	x	21 59 53.4	
	comp=Z,126nm,0.3s						
RBDL	**Robledal**	**1.93**	**345**	⇑*e*P	x	21 59 27.9	

CSEM ***02*** *22:00:30.4±0.1, 39.39N×2787E, h2km, MD3.1, Error ellipse: s-maj=1.5km s-min=1.3km az=147.0*
DDA ***02*** *22:00:31.1, 3940N×2785E, h7km±6km, Md3.1*
ISK ***02*** *22:00:31.4, 3942N×2787E, h5km, MD3.2*
ISCJB ***02*** *22:00:31.6±0.5, 3941N±002×2785E±003, h9km±3km, Error ellipse: s-maj=3.3km s-min=2.8km az=14.5*
ATH ***02*** *22:00:32.0, 3938N×2783E, h24km, MD3.4/3*
THE ***02*** *22:00:34.5, 3937N×2790E, h29km±12km, ML3.8/3, Error ellipse: s-maj=12.6km s-min=1.2km az=101.0*

ISC 02 22:00:32.0±0.4, 3940N±002×2785E±003, h10km±3km, n62, σ0≤80/80, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.38**	**333**	*i*P	**Pg**	**22 00 39.6**	**0.0**
BALY				*i*S	**Sg**	**22 00 45.3**	**+0.6**
AKHS	**Akhisar**	**0.52**	**183**	*i*P	**Pg**	**22 00 42.4**	**+0.2**
AKHS				*i*S	**Sg**	**22 00 49.7**	**+0.7**
AKS	**Akhisar**	**0.52**	**183**	PG	**Pg**	**22 00 42.2**	**+0.1**
DST	**Dursunbey**	**0.64**	**71**	PG	**Pg**	**22 00 43.3**	**-1.1**
DST				*e*SG	**Sg**	**22 00 51.8**	**-0.9**
DEMI	**Demirci**	**0.76**	**118**	*i*P	**Pg**	**22 00 46.3**	**-0.4**
AYVA	**Ayvalik**	**0.90**	**265**	*i*P	**Pg**	**22 00 49.4**	**0.0**
EDC	**Edincik**	**0.95**	**1**	*e*PG	**Pg**	**22 00 49.7**	**-0.6**
KCT	**Karacabey**	**0.95**	**24**	PG	**Pg**	**22 00 49.6**	**-0.7**
BNT	**Bandirma**	**0.96**	**3**	*e*PG	**Pg**	**22 00 49.7**	**-0.7**
BNT				*e*SG	**Sg**	**22 01 02.7**	**-0.3**
KULA	**Kula-Manisa**	**1.09**	**144**	*e*PN	**Pn**	**22 00 52.8**	**-0.5**
KDAG	**Bornova**	**1.09**	**205**	*i*P	**Pb**	**22 00 52.4**	**-0.6**
KDAG				*i*S	**Sb**	**22 01 08.4**	**+1.1**
IZM	**Izmir**	**1.10**	**205**	*e*PN	**Pn**	**22 00 52.9**	**-0.5**
BLCB	**Balcova**	**1.19**	**212**	*e*PN	**Pn**	**22 00 55.0**	**+0.2**
MRMT	**Marmara Adasi**	**1.22**	**351**	*e*PN	**Pn**	**22 00 55.2**	**+0.1**
PRK	**Paraskevi**	**1.23**	**263**	P	**Pn**	**22 00 55.2**	**-0.1**
PRK				S	**Sn**	**22 01 11.9**	**-0.1**
PRK	**Paraskevi**	**1.23**	**263**	P	**Pn**	**22 00 55.2**	**-0.1**
PRK				S	**Sn**	**22 01 11.9**	**-0.1**
PRK	**Paraskevi**	**1.23**	**263**	*e*PN	**Pn**	**22 00 55.1**	**-0.2**
PRK				*e*SN	**Sn**	**22 01 11.9**	**-0.1**
ULDT	**Uludag**	**1.24**	**53**	*i*P	**Pn**	**22 00 54.7**	**-0.7**
ULDT				*i*S	**Sb**	**22 01 08.2**	**-3.3**
GDZ	**Gediz**	**1.30**	**103**	*i*P	**Pn**	**22 00 56.3**	**0.0**
GDZ				*i*S	**Sb**	**22 01 13.1**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.39**	**338**	*e*PN	**Pn**	**22 00 57.8**	**+0.4**
SART	**Tekirdag**	**1.39**	**338**	*i*P	**Pn**	**22 00 56.8**	**-0.6**
SART				*i*S	**Sn**	**22 01 14.7**	**-1.1**
URLA	**Izmir**	**1.43**	**224**	*i*P	**Pn**	**22 00 57.0**	**-0.9**
URLA				*i*S	**Sn**	**22 01 15.8**	**-0.9**
MFT	**Murefte**	**1.45**	**343**	*e*PN	**Pn**	**22 00 59.2**	**+0.9**
BOZC	**Bozcaada**	**1.46**	**288**	*i*P	**Pn**	**22 00 57.6**	**-0.7**
GEMT	**Gemlik**	**1.46**	**44**	*e*PN	**Pn**	**22 00 58.3**	**-0.1**
TKR	**Tekirdag**	**1.61**	**352**	*e*PN	**Pn**	**22 01 00.1**	**-0.3**
TKR	**Tekirdag**	**1.61**	**352**	*e*Pn	**Pn**	**22 01 00.1**	**-0.3**
KHAL	**Karahalli**	**1.64**	**128**	*i*P	**Pn**	**22 01 00.7**	**-0.2**
KHAL				*i*S	**Sn**	**22 01 20.8**	**-1.2**
YLV	**Yalova**	**1.65**	**45**	*e*PN	**Pn**	**22 01 02.1**	**+1.1**
KHL	**Karahalli**	**1.69**	**129**	*e*PN	**Pn**	**22 01 02.5**	**+1.0**
GADA	**Gvkgeada**	**1.70**	**298**	*e*PN	**Pn**	**22 01 02.5**	**+0.8**
CHOS	**Chios island**	**1.73**	**235**	P	**Pn**	**22 01 01.8**	**-0.3**
CHOS				S	**Sn**	**22 01 23.1**	**-1.0**
CHOS	**Chios island**	**1.73**	**235**	P	**Pn**	**22 01 01.8**	**-0.3**
CHOS				S	**Sn**	**22 01 23.1**	**-1.0**
CAVI	**Cavuskoy**	**1.73**	**62**	*e*PN	**Pn**	**22 01 02.9**	**+0.8**
GCAM	**G?zelcaml?**	**1.76**	**196**	*i*P	**Pn**	**22 01 01.3**	**-1.3**
ADVT	**Abdulvahap**	**1.78**	**54**	*e*PN	**Pn**	**22 01 04.0**	**+1.2**
ALT	**Altintas**	**1.79**	**100**	*e*PN	**Pn**	**22 01 03.8**	**+0.9**
ELBA	**Catalca**	**1.80**	**14**	*i*P	**Pn**	**22 01 02.0**	**-1.1**
ELBA				*i*S	**Sn**	**22 01 24.1**	**-1.9**
ELBA	**Catalca**	**1.80**	**14**	*i*P	**Pn**	**22 01 02.0**	**-1.1**
SLVT	**Silivri**	**1.85**	**8**	*e*PN	**Pn**	**22 01 04.3**	**+0.5**
ENEZ	**Enez**	**1.86**	**316**	*e*PN	**Pn**	**22 01 04.9**	**+0.9**
SMG	**Samos**	**1.86**	**206**	*e*PN	**Pn**	**22 01 04.2**	**+0.2**
CTKS	**Kestanelik-??a**	**1.90**	**15**	*e*PN	**Pn**	**22 01 05.1**	**+0.6**
ISK	**Istanbul-Kandi**	**1.91**	**29**	*e*PN	**Pn**	**22 01 04.9**	**+0.4**
BGKT	**Bogazkoy**	**1.92**	**21**	*e*PN	**Pn**	**22 01 05.7**	**+1.0**
HRT	**Hereke**	**1.99**	**44**	*e*PN	**Pn**	**22 01 07.0**	**+1.3**
ALN	**Alexandroupoli**	**2.04**	**318**	P	**Pn**	**22 01 05.7**	**-0.6**
ALN				S	**Sn**	**22 01 31.1**	**-0.7**
ALN	**Alexandroupoli**	**2.04**	**318**	P	**Pn**	**22 01 06.2**	**-0.1**
ALN				S	**Sn**	**22 01 31.3**	**-0.5**
KLYT	**Kilyos**	**2.06**	**26**	*e*PN	**Pn**	**22 01 07.0**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.10**	**9**	*e*PN	**Pn**	**22 01 08.0**	**+0.8**
LIA	**Limnos Island**	**2.12**	**284**	P	**Pn**	**22 01 07.8**	**+0.4**
LIA	**Limnos Island**	**2.12**	**284**	P	**Pn**	**22 01 07.8**	**+0.4**
SHUT	**Suhut-Afyon**	**2.27**	**111**	*e*PN	**Pn**	**22 01 10.5**	**+1.0**
GULT	**Gulveren**	**2.29**	**62**	*e*PN	**Pn**	**22 01 11.2**	**+1.3**
ESKT	**Eskisehir**	**2.33**	**86**	*i*P	**Pn**	**22 01 10.0**	**-0.3**
SEYT	**Eskypehyr**	**2.33**	**86**	*i*P	**Pn**	**22 01 10.0**	**-0.3**
BODT	**Bodrum**	**2.37**	**190**	*e*PN	**Pn**	**22 01 12.1**	**+1.1**
RDO	**Rodhopi**	**2.48**	**315**	*e*PN	**Pn**	**22 01 13.2**	**+0.7**
APE	**Apeiranthos**	**2.96**	**219**	P	**Pn**	**22 01 17.8**	**-1.2**
JMB	**Yambol**	**3.21**	**343**	P	**Pn**	**22 01 23.4**	**+0.9**
JMB	**Yambol**	**3.21**	**343**	P	**Pn**	**22 01 23.4**	**+0.9**
PLD	**Plovdiv**	**3.61**	**320**	P	**Pn**	**22 01 28.7**	**+0.8**

DJA ***02*** *22:07:55, 1869S×174.45W, h10km, mb5.3/9*
ISCJB ***02*** *22:08:13.6±2.0, 2022S±009×17588W±009, h116km±18km, mb4.8/22, Error ellipse: s-maj=17.0km s-min=11.2km az=138.7*
NEIC ***02*** *22:08:16.8±1.6, 2015S×17584W, h135km±14km, mb5.1/7, Error ellipse: s-maj=14.1km s-min=8.9km az=138.0*
IDC ***02*** *22:08:17.0±2.0, 2017S×17589W, h134km±17km, mb4.3/15, mb1 4.4/17, mb1mx4.3/23, mbtmp4.3/17, MS3.7/1, Ms1 3.7/1, ms1mx2.5/28, Error ellipse: s-maj=16.8km s-min=11.2km az=136.0*

ISC 02 22:08:15.5±1.7, 2018S±009×17585W±009, h118km±16km, n76, σ0≤87/44, mb4.8/22, 2C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.36**	**33**	P	**Pn**	**22 10 00.2**	**-0.2**
	11nm,0.3s,baz=358,slow=4.1,SNR=12						
AFI				S	**Sn**	**22 11 13.7**	**-8.6**
	72nm,0.3s,baz=205,slow=23,SNR=8.5						
AFI	**Afiamalu**	**7.36**	**33**	*e*Pn	**Pn**	**22 10 00.6**	**+0.3**
AFI				*e*Sn	**Sn**	**22 11 15.3**	**-7.0**
RAO	**Raoul Island**	**9.22**	**191**	LR	LR	22 13 09.7	
	comp=Z,425nm,18.0s,baz=100,slow=32						
DZM	**Mont Dzumac**	**16.62**	**260**	*e*Pn	**Pn**	**22 12 07.7**	**+6.1**
NOUC	**Port Laguerre**	**16.75**	**260**	*e*P	**Pn**	**22 12 09.1**	**+5.9**
URZ	**Urewera**	**19.02**	**197**	P	**P**	**22 12 27.6**	**-0.5**
	3.6nm,0.3s,baz=80,slow=2.3,SNR=13						
URZ				S	**S**	**22 15 41.9**	**-16**
	0.7nm,0.3s,baz=223,slow=19,SNR=4.7						
RPZ	**Rata Peaks**	**25.89**	**202**	P	**P**	**22 13 36.4**	**+0.2**
	17nm,0.5s,mb4.8,baz=1,slow=2.2,SNR=16						
EIDS	**Eidsvold**	**30.87**	**254**	*e*P	**P**	**22 14 20.9**	**+0.1**
	50nm,0.6s,mb5.4						
CAN	**Canberra**	**34.36**	**237**	*e*P	**P**	**22 14 50.4**	**-0.7**
CTA	**Charters Tower**	**35.52**	**263**	P	**P**	**22 15 02.0**	**+0.8**
	82nm,0.5s,mb5.9,baz=94,slow=10,SNR=199						
CTAO	**Charters Tower**	**35.52**	**263**	*e*P	**P**	**22 15 02.4**	**+1.2**
	81nm,0.5s,mb5.9						
CTAO	**Charters Tower**	**35.52**	**263**	P	**P**	**22 15 02.2**	**+0.9**
	1um159nm,0.8s						
PMG	**Port Moresby**	**37.24**	**281**	*e*P	**P**	**22 15 16.8**	**+0.9**
	47nm,0.9s,mb5.4						
PMG	**Port Moresby**	**37.24**	**281**	P	**P**	**22 15 17.3**	**+1.3**
	92nm,1.0s,mb5.7						
COEN	**Coen**	**39.58**	**272**	*e*P	**P**	**22 15 36.4**	**+0.9**
	24nm,0.8s,mb5.1						
COEN	**Coen**	**39.58**	**272**	P	**P**	**22 15 36.5**	**+1.0**
	39nm,0.9s,mb5.2						
STKA	**Stephens Creek**	**39.74**	**244**	P	**P**	**22 15 36.2**	**-0.4**
	7.6nm,0.5s,mb4.8,baz=93,slow=11,SNR=22						
STKA				PcP	PcP	22 17 40.6	-0.2
	0.9nm,0.5s,baz=35,slow=2.0,SNR=3.1						
ASAR	**Alice Springs**	**46.55**	**256**	P	**P**	**22 16 30.9**	**-0.6**
	24nm,0.6s,mb5.1,baz=100,slow=8.4,SNR=278						
ASAR				PcP	PcP	22 18 03.2	-0.7
	2.1nm,0.5s,baz=113,slow=4.7,SNR=5.5						
ASAR				ScP	ScP	22 21 43.2	-3.4
	1.1nm,0.7s,baz=114,slow=4.8,SNR=5.9						
ASAR				S	**S**	**22 23 02.7**	**-8.8**
	0.6nm,0.8s,baz=91,slow=16,SNR=4.1						
WB2	**Warramunga Arr**	**46.63**	**261**	*e*P	**P**	**22 16 31.2**	**-0.9**
WRAB	**Tennant Creek**	**46.63**	**261**	*e*P	**P**	**22 16 31.4**	**-0.8**
	39nm,0.9s,mb5.1						
WRAB	**Tennant Creek**	**46.63**	**261**	P	**P**	**22 16 31.6**	**-0.6**
	57nm,1.1s,mb5.2						
WRA	**Warramunga Arr**	**46.64**	**261**	P	**P**	**22 16 31.4**	**-0.8**
	20nm,0.5s,mb5.1,baz=94,slow=5.2,SNR=354						
WRA				ScP	ScP	22 21 43.7	-3.4
	0.8nm,0.9s,baz=87,slow=3.8,SNR=3.9						
SBA	**Scott Base**	**58.33**	**184**	P	**P**	**22 17 58.7**	**+1.2**
	3.7nm,0.7s,mb4.5						
LBMI	**Labuha**	**58.65**	**282**	P	**P**	**22 18 02.6**	**+1.7**
	39nm,1.1s,mb5.3						
BATI	**Baumata**	**58.94**	**270**	P	**P**	**22 18 03.6**	**+0.8**
	23nm,0.6s,mb5.4,baz=190,slow=4.9,SNR=5.5						
BATI	**Baumata**	**58.94**	**270**	P	**P**	**22 18 08.0**	**+5.2**
	23nm,0.7s,mb5.3						
NWAO	**Narrogin (SRO)**	**60.31**	**243**	P	**P**	**22 18 11.8**	**-0.2**
	4.4nm,0.5s,mb4.7,baz=45,slow=5.7,SNR=8.7						
NWAO	**Narrogin (SRO)**	**60.31**	**243**	P	**P**	**22 18 11.8**	**-0.2**
KAPI	**Kappang**	**64.27**	**274**	P	**P**	**22 18 38.1**	**-0.5**
	4.0nm,0.4s,mb4.6,baz=147,slow=3.3,SNR=4.8						
QSPA	**South Pole Qui**	**69.89**	**180**	P	**P**	**22 19 13.6**	**+0.6**
	8.3nm,0.7s,mb4.7,baz=42,slow=1.9,SNR=24						
QSPA	**South Pole Qui**	**69.89**	**180**	*e*P	**P**	**22 19 13.3**	**+0.3**
	7.8nm,0.7s,mb4.7						
MJAR	**Matsushiro Arr**	**71.17**	**322**	P	**P**	**22 19 21.2**	**-0.2**
	2.1nm,0.6s,mb4.2,baz=156,slow=6.4,SNR=5.4						
PETK	**Petropavlovsk-**	**76.50**	**344**	P	**P**	**22 19 50.5**	**-1.6**
	5.7nm,1.0s,mb4.2,baz=172,slow=4.2,SNR=3.0						
PETK	**Petropavlovsk-**	**76.50**	**344**	P	**P**	**22 19 50.5**	**-1.6**
NVAR	**Mina Array Bea**	**79.42**	**42**	P	**P**	**22 20 09.5**	**+0.8**
	1.7nm,0.6s,mb4.0,baz=223,slow=7.7,SNR=13						
MAW	**Mawson**	**82.53**	**199**	P	**P**	**22 20 24.3**	**-0.5**
	1.0nm,0.5s,mb3.9,baz=125,slow=7.4,SNR=4.8						
ELK	**Elko**	**82.69**	**42**	*e*P	**P**	**22 20 23.4**	**-2.6**
TXAR	**Lajitas Array**	**85.20**	**57**	P	**P**	**22 20 39.7**	**+0.8**
	1.2nm,0.6s,mb4.0,baz=220,slow=8.8,SNR=14						
PDAR	**Pinedale Array**	**87.36**	**42**	P	**P**	**22 20 49.6**	**+0.4**
	0.3nm,0.7s,baz=204,slow=2.0,SNR=2.8						
CMIG	**Matias Romero**	**87.66**	**71**	P	**P**	**22 20 51.0**	**-0.2**
	2.7nm,0.7s,mb4.4,baz=202,slow=11,SNR=3.8						
CMAR	**Chiang Mai Arr**	**91.91**	**289**	P	**P**	**22 21 11.7**	**+0.6**
	3.4nm,1.1s,mb4.5,baz=115,slow=3.1,SNR=10						
MKAR	**Makanchi Array**	**112.44**	**313**	PKiKP	PKiKP	22 26 36.0	-1.5
	0.3nm,0.4s,baz=171,slow=0.9,SNR=17						
KURK	**Kurchatov**	**115.12**	**317**	PKP	PKiKP	22 26 40.6	-1.9
	baz=94,slow=1.5						
BVAR	**Borovoye Array**	**120.13**	**320**	PKP	PKPdf	22 26 49.6	-2.5
	0.5nm,0.4s,baz=92,slow=2.4,SNR=5.1						
ARCES	**ARCESS Array B**	**128.96**	**351**	PKP	PKPdf	22 27 07.4	-1.1
	4.2nm,0.9s,baz=0.0,slow=2.4,SNR=5.4						
AKASG	**Malin Array Be**	**143.68**	**333**	PKhKP		22 27 32.5	
	1.0nm,0.4s,baz=38,slow=3.9,SNR=9.6						
AKASG	**Malin Array Be**	**143.68**	**333**	PKP		22 27 32.5	
BURAR	**Bucovina Array**	**147.74**	**333**	⇑*i*P	PKPbc	22 27 47.6	+1.3
STHS	**Stebnicka Huta**	**147.79**	**339**	*e*PKP	PKPbc	22 27 46.3	-0.1
KOLS	**Kolonicke sedl**	**147.84**	**337**	*e*P	PKPab	22 27 53.4	+4.2
KOLS				*e*		22 51 33.5	
KOLS				*e*		22 51 52.3	
KOLS	**Kolonicke sedl**	**147.84**	**337**	*e*	PKPab	22 27 53.4	+4.2
KOLS				*e*		22 51 33.5	
KOLS				*e*		22 51 52.3	
BR131	**Keskin Array S**	**148.09**	**314**	*e*PKPbc	PKPbc	22 27 47.0	-0.5
CLL	**Collm**	**148.17**	**349**	⇓*i*PKPbc	PKPbc	22 27 46.7	-0.6
	comp=Z,5.0nm,0.6s						
CLL				⇑*i*PKPab	PKPab	22 27 49.4	-1.1
	comp=Z,4.0nm,0.5s						
VYHS	**Vyhne**	**149.38**	**341**	*e*P	PKPbc	22 27 50.8	+0.4
MODS	**Modra-Piesok**	**149.95**	**342**	*e*P	PKPbc	22 27 50.9	-0.9
MODS	**Modra-Piesok**	**149.95**	**342**	*e*PKP	PKPbc	22 27 50.8	-1.0
KHC	**Kasperske Hory**	**150.15**	**348**	*e*PKPbc	PKPbc	22 27 52.0	-0.3
KHC				*ex*	x	22 28 40.5	
BAIF	**Baives**	**150.19**	**360**	*e*PKP1	PKPbc	22 27 52.0	-0.4
	comp=Z,3.0nm,0.5s						
GERES	**GERESS Array B**	**150.39**	**347**	PKPbc	PKPbc	22 27 52.8	-0.1
	comp=Z,1.7nm,0.7s,baz=32,slow=2.3,SNR=17						
BZS	**Buzias**	**150.83**	**334**	⇓*i*P	PKPbc	22 27 53.5	-0.5
FLN	**La Foliniere**	**151.25**	**6**	*e*PKP1	PKPbc	22 27 54.1	-0.8
	comp=Z,6.3nm,0.5s						
LDF	**La Druitiere**	**151.45**	**6**	*e*PKP1	PKPbc	22 27 54.3	-1.1
	comp=Z,4.9nm,0.5s						
SGMF	**Saint Gilles**	**151.48**	**9**	*e*PKP1	PKPbc	22 27 54.4	-1.0
GRR	**Gorron**	**151.57**	**7**	*e*PKP1	PKPbc	22 27 54.9	-0.8
	comp=Z,6.7nm,0.5s						
CDF	**Champ du Feu**	**151.73**	**356**	*e*PKP1	PKPbc	22 27 56.1	+0.1
	comp=Z,5.7nm,0.7s						
MEZF	**Maizieres J'vi**	**151.74**	**359**	*e*PKP1	PKPbc	22 27 56.5	+0.5
	comp=Z,4.7nm,0.5s						
HAU	**Haudompre**	**152.19**	**357**	*e*PKP1	PKPbc	22 27 56.4	-0.7
	comp=Z,3.8nm,0.6s						
HINF	**Hinteralfeld**	**152.35**	**356**	*e*PKP1	PKPbc	22 27 56.6	-0.8
LOR	**Lormes**	**152.98**	**0**	*e*PKP1	PKPbc	22 27 58.3	-0.6
	comp=Z,2.1nm,0.5s						
SSF	**Saint Saulge**	**153.19**	**1**	*e*PKP1	PKPbc	22 27 58.8	-0.5
	comp=Z,1.8nm,0.6s						
MFF	**Saint Martin d**	**153.42**	**7**	*e*PKP1	PKPbc	22 27 59.0	-0.8
	comp=Z,3.4nm,0.6s						
AVF	**Avril sur Loir**	**153.45**	**1**	*e*PKP1	PKPbc	22 27 59.4	-0.5
CABF	**La Chapelle**	**153.59**	**357**	*e*PKP1	PKPbc	22 28 00.9	+0.7
TCF	**Toulx Ste Croi**	**153.92**	**3**	*e*PKP1	PKPbc	22 28 00.6	-0.3
ESDC	**Sonseca Array**	**159.36**	**18**	PKPab	PKPab	22 28 38.3	+0.2
	comp=Z,0.3nm,0.5s,baz=338,slow=4.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**172.62**	**161**	PKPab	PKPab	22 29 36.1	-0.9
	comp=Z,0.7nm,0.7s,baz=195,slow=5.5,SNR=4.8						

IDC ***02*** *22:12:35.4±0.7, 258N×12690E, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/16, mbtmp4.2/11, Error ellipse: s-maj=38.6km s-min

FKH	**Fakeheh**	**1.78**	**188**	*e*P	**Pn**	**22 28 08.2**	**-0.9**
FKH				*e*S	**Sn**	**22 28 29.2**	**-2.3**
HWQ	**Hawqa**	**1.82**	**200**	*e*P	**Pn**	**22 28 10.7**	**+1.0**
ATAB	**Bozova**	**1.95**	**41**	*i* P	**Pn**	**22 28 12.1**	**+0.6**
BHL	**Bhannes**	**2.26**	**203**	*e*P	**Pn**	**22 28 16.9**	**+1.2**
BHL				*e*S	**Sn**	**22 28 44.2**	**+0.8**

IDC 02 22:27:43.4±2.2, 1036N×9155E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/22, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=72.2km s-min=26.6km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.77**	**41**	Pn	Pn	22 30 19.1	+0.1
	0.1nm,0.3s,baz=228,slow=18,SNR=3.7						
MKAR	**Makanchi Array**	**37.15**	**349**	P	P	22 34 55.9	0.0
	0.3nm,0.7s,baz=169,slow=8.2,SNR=3.8						
WRA	**Warramunga Arr**	**51.78**	**126**	P	P	22 36 52.8	-0.5
	0.7nm,0.5s,baz=304,slow=8.8,SNR=5.8						
ASAR	**Alice Springs**	**53.46**	**130**	P	P	22 37 06.1	+0.4
	0.1nm,0.4s,baz=307,slow=7.7,SNR=3.3						

*IDC **02** 22:31:40.1±0.4, 5518S×12914W, h0km, mb4.7/12, mb1 4.9/12, mb1mx4.8/15, mbtmp4.7/12, MS5.9/20, Ms1 5.9/20, ms1mx5.8/23, Error ellipse: s-maj=24.0km s-min=14.5km az=164.0*

*SZGRF **02** 22:31:40.2, 5591S×12948W, h33km, mb6.1, Pacific-Antarctic Ridge*

*ISCJB **02** 22:31:41.4±0.3, 5559S±006×12880W±0.10, h10km, mb5.1/32, MS6.0/247, Error ellipse: s-maj=9.0km s-min=7.5km az=143.3*

*MOS **02** 22:31:43.5±1.6, 5526S×12993W, h10km, mb5.6/18, MS6.0/33, Error ellipse: s-maj=27.5km s-min=13.8km az=74.5*

*GCMT **02** 22:31:43.9±0.1, 5540S×12880W, h14km, MW6.2/116, Moment Tensor Solution. s114,c268; s116,c431; Duration: 2s9 Moment tensor: Scale 10^18 Nm; Mrr-0.19±.01; Mθθ 1.31±.01; Mϕϕ-1.13±.01; Mrθ-0.05±.03; Mθϕ 1.73±.01; Mϕr 0.02±.03; Best double couple: M☐2.11800×10^18 NP1:ϕs198.00000°, δ89.00000°, λ-180.00000°. NP2:ϕs108.00000°, δ90.00000°, λ-1.00000°. Principal axes: T 2.2070, Plg1.0000°, Azm153.0000°; N -0.1880, Plg89.0000°, Azm279.0000°; P -2.0280, Plg1.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **02** 22:31:43.8, 5550S×12900W, h20km, mB6.1, Ms5.9, Msz5.8*

*NEIC **02** 22:31:43.9±0.2, 5547S×12897W, h10km, mb5.5/21, MS6.0/206, MW6.1, Error ellipse: s-maj=14.2km s-min=9.9km az=154.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^18 Nm; Mrr-0.37; Mθθ 1.16; Mϕϕ-0.79; Mrθ 0.12; Mθϕ 1.14; Mϕr-0.12; Best double couple: M☐1.50000×10^18 NP1:ϕs290.00000°, δ84.00000°, λ-8.00000°. NP2:ϕs21.00000°, δ82.00000°, λ-174.00000°. Principal axes: T 1.6900, Plg1.0000°, Azm335.0000°; N -0.3500, Plg80.0000°, Azm75.0000°; P -1.3400, Plg9.0000°, Azm245.0000°;*

ISC 02 22:31:43.3±0.3, 5556S±006×12878W±010, h10km, (h13km±.5km:pP-P), n576, σ1°15/81, mb5.1/32, MS6.0/247, 20C-14D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTCN	**Pitcairn Islan**	**30.47**	**358**	PFAKE		22 38 10.0	+14
PTCN				LR	LR		
	comp=Z,37μm,22.0s,MS6.0						
SBA	**Scott Base**	**31.12**	**202**	*e*P	**P**	**22 38 01.5**	**+0.2**
	comp=Z,119nm,1.7s,mb5.5						
SBA				LR	LR		
	comp=Z,9μm,22.0s,MS5.4						
SBA	**Scott Base**	**31.12**	**202**	*e*P	**P**	**22 38 01.5**	**+0.2**
SBA				pmax	pmax		
	comp=Z,119nm,1.7s,mb5.5						
SBA				MLR	MLR		
	comp=Z,9μm,22.0s,MS5.4						
RPN	**Rapa Nui**	**31.71**	**34**	PFAKE		22 38 20.0	+13
RPN				LR	LR		
	comp=Z,20μm,21.0s,MS5.8						
PMSA	**Palmer Station**	**32.06**	**133**	LR	LR	22 47 28.2	
	comp=Z,42μm,21.9s,MS6.1,baz=344,slow=29						
PMSA	**Palmer Station**	**32.06**	**133**	*e*P	**P**	**22 38 08.9**	**-0.8**
	comp=Z,86nm,1.1s,mb5.5						
PMSA				LR	LR		
	comp=Z,45μm,22.0s,MS6.1						
RKT	**Rikitea**	**32.72**	**349**	*e*S	**S**	**22 43 28.4**	**-3.8**
	comp=Z,4μm,31.0s						
RKT				*e*LQ		22 45 14.7	
	comp=Z,13μm,32.2s						
RKT				*e*LR	LR	22 46 37.2	
	comp=Z,76μm,28.8s,baz=172						
USHA	**Ushuaia**	**33.50**	**114**	LR	LR	22 48 23.7	
	comp=Z,19μm,19.1s,MS5.8,baz=231,slow=30						
QSPA	**South Pole Qui**	**34.62**	**180**	P	**P**	**22 38 33.1**	**+1.2**
	comp=Z,44nm,1.2s,mb5.3,baz=99,slow=1.8,SNR=19						
QSPA	**South Pole Qui**	**34.62**	**180**	*e*P	**P**	**22 38 32.8**	**+0.9**
	comp=Z,626nm,2.3s,mb6.1						
QSPA				LR	LR		
	comp=Z,52μm,19.0s,MS6.3						
TBI	**Tubuai**	**35.63**	**326**	*e*S	**S**	**22 44 08.8**	**-8.3**
	comp=Z,4μm,30.2s						
TBI				*e*LR	LR	22 47 50.9	
	comp=Z,64μm,29.2s,baz=165						
SNZO	**South Karori**	**38.99**	**267**	PFAKE		22 39 20.0	+11
SNZO				LR	LR		
	comp=Z,18μm,20.0s,MS5.9						
RPZ	**Rata Peaks**	**39.50**	**261**	P	**P**	**22 39 12.0**	**-1.6**
	comp=Z,11nm,0.9s,mb4.6,baz=24,slow=3.5,SNR=4.9						
RPZ				LR	LR	22 51 29.9	
	comp=Z,35μm,21.0s,MS6.2,baz=122,slow=30						
URZ	**Urewera**	**39.68**	**273**	P	**P**	**22 39 14.7**	**-0.5**
	comp=Z,3.2nm,0.6s,mb4.2,baz=146,slow=17,SNR=2.8						
URZ				LR	LR	22 52 19.2	
	comp=Z,24μm,18.5s,MS6.1,baz=137,slow=31						
PLCA	**Paso Flores**	**40.34**	**94**	P	**P**	**22 39 21.5**	**+0.8**
	comp=Z,8.5nm,1.0s,mb4.4,baz=221,slow=7.1,SNR=9.0						
PLCA				LR	LR	22 52 11.0	
	comp=Z,17μm,19.2s,MS5.9,baz=227,slow=30						
PLCA	**Paso Flores**	**40.34**	**94**	*e*P	**P**	**22 39 21.4**	**+0.8**
	comp=Z,220nm,1.9s,mb5.6						
PLCA				LR	LR		
	comp=Z,16μm,19.0s,MS5.9						
PLCA	**Paso Flores**	**40.34**	**94**	*e*P	**P**	**22 39 21.2**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,220nm,1.9s						
EFI	**East Falkland**	**40.47**	**115**	PFAKE		22 39 30.0	+8.4
EFI				LR	LR		
	comp=Z,28μm,19.0s,MS6.1						
PPT	**Papeete**	**41.10**	**329**	*e*S	**S**	**22 45 33.3**	**-6.6**
	comp=Z,7μm,26.0s						
PPT				*e*LQ		22 48 38.6	
	comp=Z,10μm,24.0s						
PPT				*e*LR	LR	22 50 38.3	
	comp=Z,80μm,26.5s,baz=169						
PPT	**Papeete**	**41.10**	**329**	LR	LR	22 51 51.9	
	comp=Z,23μm,20.5s,MS6.0,baz=123,slow=30						
RAR	**Rarotonga**	**41.37**	**313**	LR	LR	22 52 02.1	
	comp=Z,10μm,18.4s,MS5.7,baz=153,slow=30						
RAR	**Rarotonga**	**41.37**	**313**	PFAKE		22 39 40.0	+11
RAR				LR	LR		
	comp=Z,12μm,21.0s,MS5.8						
DRV	**Dumont d'Urvil**	**41.41**	**217**	P	**P**	**22 39 33.0**	**+3.8**
DRV				S	**S**	**22 45 49.0**	**+5.4**
DRV				L		22 49 00.0	
DRV				R		22 51 00.0	
RAO	**Raoul Island**	**43.54**	**286**	LR	LR	22 54 26.0	
	comp=Z,3μm,18.7s,MS5.2,baz=145,slow=32						
RAO	**Raoul Island**	**43.54**	**286**	PFAKE		22 40 00.0	+13
RAO				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
RAO	**Raoul Island**	**43.54**	**286**	*e*P	**P**	**22 39 56.1**	**+9.1**
FCH	**Farellones**	**45.68**	**86**	*e*P	**P**	**22 40 02.7**	**-1.3**
VNA3	**Neumayer Olymp**	**46.43**	**157**	*e*	**P**	**22 40 08.4**	**-1.0**
VNA3				*e*	pP	22 40 11.9	-0.7
VNA3				*e*		22 40 20.6	
VNA2	**Neumayer--Watz**	**47.17**	**157**	*e*	**P**	**22 40 14.7**	**-0.5**
VNA2				*e*	pP	22 40 18.6	+0.3
VNA2				*e*		22 40 26.6	
VNA1	**Neumayer--Stat**	**47.18**	**157**	*e*	**P**	**22 40 14.9**	**-0.4**
VNA1				*e*	pP	22 40 18.9	+0.5
VNA1				*e*		22 40 27.6	
TLL	**Tololo Astrono**	**47.75**	**83**	*e*P	**P**	**22 40 18.0**	**-2.2**
LCO	**Las Campanas**	**48.68**	**82**	*e*P	**P**	**22 40 27.1**	**-0.4**
	comp=Z,209nm,1.8s,mb5.9						
LCO				LR	LR		
	comp=Z,19μm,22.0s,MS6.0						
CASY	**Casey**	**50.56**	**207**	*e*P	**P**	**22 40 42.5**	**+1.3**
	comp=Z,4.5nm,0.4s,mb4.8						
CASY				LR	LR		
	comp=Z,9μm,19.0s,MS5.8						
MAITR	**Maitri**	**50.86**	**164**	*e*P	**P**	**22 40 42.9**	**-0.6**
NVL	**N'lazarevskaya**	**50.88**	**164**	*e i*P	**P**	**22 40 46.6**	**+2.9**
NVL				*e*		22 42 44.6	
NVL				*i* S	**S**	**22 48 06.9**	**+7.5**
NVL				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.3						
NVL				MLR	MLR		
	comp=Z,17μm,17.0s,MS6.1						
NVL				MLR	MLR		
	comp=N,5μm,17.0s,MS6.0						
NVL				MLR	MLR		
	comp=E,11μm,17.0s,MS6.0						
LPA	**La Plata**	**51.54**	**97**	*ce*P	**P**	**22 40 50.0**	**+1.0**
LPA				*es*P	sP	22 40 55.0	+1.6
LPA				*e*S	**S**	**22 48 13.0**	**+3.7**
LPA				*ep*S		22 48 15.0	
LPA				PKIKP	PKiKP	22 48 46.0	+1.4
LPA							
	comp=Z,20μm,20.0s						
TAU	**Tasmania Unive**	**52.95**	**246**	*e*P	**P**	**22 41 00.5**	**+1.1**
	comp=Z,111nm,1.7s,mb5.5						
TAU				LR	LR		
	comp=Z,17μm,19.0s,MS6.1						
AFI	**Afiamalu**	**53.12**	**304**	LR	LR	22 56 56.2	
	comp=Z,6μm,19.3s,MS5.7,baz=145,slow=29						
AFI	**Afiamalu**	**53.12**	**304**	PFAKE		22 41 10.0	+9.0
AFI				LR	LR		
	comp=Z,10μm,22.0s,MS5.8						
MIR	**Mirnyy**	**54.22**	**199**	*e i*P	**P**	**22 41 10.0**	**+1.6**
MIR				*i*		22 43 15.0	
MIR				*i* S	**S**	**22 48 50.0**	**+4.9**
MIR				*i*		22 50 56.0	
MIR				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.5						
MIR				pmax	pmax		
	comp=Z,1μm,4.0s						
MIR				MLR	MLR		
	comp=Z,16μm,20.0s,MS6.1						
LVC	**Limon Verde**	**54.68**	**78**	*e*P	**P**	**22 41 12.0**	**-0.3**
	comp=Z,255nm,2.0s,mb5.9						
LVC				LR	LR		
	comp=Z,5μm,20.0s,MS5.6						
SYO	**Syowa Base**	**55.45**	**175**	*e*P	**P**	**22 41 11.7**	**-5.6**
MAW	**Mawson**	**56.85**	**185**	P	**P**	**22 41 28.9**	**+1.7**
	comp=Z,12nm,1.1s,mb4.9,baz=178,slow=6.8,SNR=13						
MAW				LR	LR	23 04 12.0	
	comp=Z,8μm,19.4s,MS5.8,baz=166,slow=34						
MAW	**Mawson**	**56.85**	**185**	*e*P	**P**	**22 41 29.5**	**+2.2**
	comp=Z,47nm,1.2s,mb5.4						
MAW				LR	LR		
	comp=Z,14μm,21.0s,MS6.0						
MAW	**Mawson**	**56.85**	**185**	P	**P**	**22 41 26.7**	**-0.6**
MAW				pmax	pmax		
	comp=Z,47nm,1.1s						
DZM	**Mont Dzumac**	**57.86**	**278**	*e*P	**P**	**22 41 32.7**	**-2.3**
NNA	**Nana**	**59.16**	**64**	PFAKE		22 42 00.0	+16
NNA				LR	LR		
	comp=Z,5μm,21.0s,MS5.6						
ARMA	**Armidale**	**59.79**	**259**	*e*P	**P**	**22 41 48.8**	**+0.4**
	comp=Z,4.4nm,2.1s,mb4.1						
LPAZ	**La Paz**	**60.21**	**75**	P	**P**	**22 41 49.4**	**-1.9**
	comp=Z,36nm,1.1s,mb5.3,baz=159,slow=2.7,SNR=32						
LPAZ				LR	LR	23 01 42.5	
	comp=Z,5μm,18.9s,MS5.7,baz=29,slow=30						
LPAZ	**La Paz**	**60.21**	**75**	*e*P	**P**	**22 41 49.3**	**-2.0**
	comp=Z,320nm,2.0s,mb6.0						
LPAZ				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
XMAS	**Kiritimati**	**62.03**	**327**	PFAKE		22 42 20.0	+16
XMAS				LR	LR		
	comp=Z,16μm,20.0s,MS6.2						
PAYG	**Puerto Ayora**	**62.98**	**44**	PFAKE		22 42 20.0	+10
PAYG				LR	LR		
	comp=Z,12μm,19.0s,MS6.1						
EIDS	**Eidsvold**	**63.98**	**263**	*e*P	**P**	**22 42 16.0**	**-0.6**
	comp=Z,889nm,2.5s						
STKA	**Stephens Creek**	**64.18**	**251**	P	**P**	**22 42 15.8**	**-2.0**
	comp=Z,4.9nm,0.9s,mb4.6,baz=146,slow=8.7,SNR=7.7						
STKA				LR	LR	23 04 30.2	
	comp=Z,16μm,21.8s,MS6.2,baz=146,slow=31						
STKA	**Stephens Creek**	**64.18**	**251**	*e*P	**P**	**22 42 17.8**	**-0.1**
	comp=Z,99nm,1.9s,mb5.5						
VAO	**Valinhos**	**66.78**	**97**	(P)	**P**	**22 42 34.3**	**-0.4**
VAO				*i*		22 43 03.7	
OTAV	**Otavalo**	**68.94**	**56**	*e*P	**P**	**22 42 47.8**	**-0.7**
OTAV				LR	LR		
	comp=Z,9μm,22.0s,MS6.0						
CAM4	**Nova Friburgo**	**69.76**	**100**	(P)	**P**	**22 42 45.3**	**-8.1**
CTAO	**Charters Tower**	**70.86**	**262**	*e*P	**P**	**22 42 59.1**	**-1.1**
	comp=Z,45nm,1.1s,mb5.3						
CTAO				LR	LR		
	comp=Z,5μm,21.0s,MS5.8						
HNR	**Honiara**	**71.70**	**280**	PFAKE		22 43 20.0	+15
HNR				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
BDFB	**Brasilia**	**72.04**	**92**	P	**P**	**22 43 06.8**	**-0.6**
	comp=Z,5.2nm,1.1s,mb4.4,baz=221,slow=11,SNR=7.4						
BDFB				LR	LR	23 12 24.7	
	comp=Z,8μm,18.2s,MS6.0,baz=19,slow=34						
TRIS	**Tristan da Cun**	**73.06**	**132**	PFAKE		22 43 30.0	+17
TRIS				LR	LR		
	comp=Z,6μm,19.0s,MS5.9						
TARA	**Tarawa**	**73.79**	**298**	PFAKE		22 43 30.0	+12
TARA				LR	LR		
	comp=Z,3μm,22.0s,MS5.5						
ASAR	**Alice Springs**	**74.81**	**250**	P	**P**	**22 43 20.2**	**-3.4**
	comp=Z,15nm,0.8s,mb5.0,baz=141,slow=6.2,SNR=62						
ROSC	**El Rosal**	**74.93**	**57**	P	**P**	**22 43 24.7**	**+0.3**
	comp=Z,6.8nm,0.4s,mb4.9,baz=93,slow=22,SNR=12						
ROSC				LR	LR	23 10 27.0	
	comp=Z,8μm,19.4s,MS6.0,baz=196,slow=31						
ROSC	**El Rosal**	**74.93**	**57**	*e*P	**P**	**22 43 24.8**	**+0.4**
JTS	**JuntasAbangare**	**75.09**	**45**	*e*P	**P**	**22 43 25.4**	**+0.2**
	comp=Z,16nm,1.3s,mb4.8						
JTS				LR	LR		
	comp=Z,6μm,20.0s,MS5.9						
JTS	**JuntasAbangare**	**75.09**	**45**	*e*P	**P**	**22 43 25.4**	**+0.2**
JTS				pmax	pmax		
	comp=Z,16nm,1.3s						
JTS				MLR	MLR		
	comp=Z,6μm,20.0s						
NWAO	**Narrogin (SRO)**	**75.47**	**233**	PFAKE		22 43 40.0	+13
NWAO				LR	LR		
	comp=Z,12μm,22.0s,MS6.1						
BCIP	**Isla Barro Col**	**76.22**	**50**	PFAKE		22 43 40.0	+8.3
BCIP				LR	LR		
	comp=Z,8μm,21.0s,MS6.0						
COEN	**Coen**	**77.53**	**264**	*e*P	**P**	**22 43 40.4**	**+1.3**
	comp=Z,25nm,1.5s,mb4.9						
WB2	**Warramunga Arr**	**77.58**	**253**	*e*P	**P**	**22 43 35.8**	**-3.6**
WB2				*e*PcP	PcP	22 43 48.2	-1.4
WRA	**Warramunga Arr**	**77.59**	**253**	P	**P**	**22 43 35.7**	**-3.8**
	comp=Z,12nm,0.9s,mb4.8,baz=143,slow=5.1,SNR=26						
WRA				LR	LR	23 14 11.8	
	comp=Z,11μm,19.4s,MS6.2,baz=140,slow=33						
WRAB	**Tennant Creek**	**77.59**	**253**	*e*P	**P**	**22 43 37.8**	**-1.7**
WRAB				*e*PcP	PcP	22 43 48.7	-1.0
WRAB				LR	LR		
	comp=Z,12μm,20.0s,MS6.2						
TGUH	**Tegucigalpa,Un**	**77.62**	**41**	PFAKE		22 43 50.0	+10
TGUH				LR	LR		
	comp=Z,4μm,22.0s,MS5.7						
POHA	**Pohakuloa**	**78.39**	**334**	PFAKE		22 44 00.0	+16
POHA				LR	LR		
	comp=Z,12μm,20.0s,MS6.2						
PMG	**Port Moresby**	**78.95**	**270**	PFAKE		22 44 00.0	+13
PMG				LR	LR		
	comp=Z,6μm,19.0s,MS6.0						
KIP	**Kipapa**	**80.61**	**333**	PFAKE		22 44 10.0	+14
KIP				LR	LR		
	comp=Z,10μm,20.0s,MS6.2						
LPIG	**La Paz**	**80.89**	**17**	LR	LR	23 11 40.3	
	comp=Z,5μm,18.5s,MS5.9,baz=194,slow=30						
MBWA	**Marble Bar**	**84.20**	**241**	*e*P	**P**	**22 44 15.4**	**+0.6**
MBWA				LR	LR		
	comp=Z,6μm,19.0s,MS6.0						
RCBR	**Riachuelo**	**86.87**	**96**	PFAKE		22 44 40.0	+12
RCBR				LR	LR		
	comp=Z,7μm,19.0s,MS6.1						
KVTX	**Kingsville**	**86.88**	**27**	PFAKE		22 44 40.0	+12
KVTX				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
TXAR	**Lajitas Array**	**87.24**	**22**	P	**P**	**22 44 25.7**	**-3.7**
	comp=Z,1.5nm,0.7s,mb4.3,baz=190,slow=6.2,SNR=12						
GRGR	**Grenville**	**87.47**	**64**	PFAKE		22 44 40.0	+9.1
GRGR				LR	LR		
	comp=Z,5μm,21.0s,MS5.9						
SUR	**Sutherland**	**88.63**	**155**	PFAKE		22 44 50.0	+14
SUR				LR	LR		
	comp=Z,5μm,19.0s,MS6.0						
SNCC	**San Nicolas Is**	**88.80**	**8**	PFAKE		22 44 50.0	+13
SNCC				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
TUC	**Tucson**	**88.86**	**15**	*e*P	**P**	**22 44 37.0**	**-0.1**
	comp=Z,35nm,1.4s,mb5.5						
TUC				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
TUC	**Tucson**	**88.86**	**15**	P	**P**	**22 44 36.8**	**-0.2**
TUC				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.5						
GLA	**Glamis**	**89.06**	**12**	PFAKE		22 44 50.0	+12
GLA				LR	LR		
	comp=Z,7μm,21.0s,MS6.1						
JCT	**Junction City**	**89.21**	**25**	*e*P	**P**	**22 44 38.4**	**-0.3**
	comp=Z,48nm,1.3s,mb5.7						
JCT				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
JCT	**Junction City**	**89.21**	**25**	*e*P	**P**	**22 44 38.4**	**-0.3**
JCT				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.7						
JCT				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.6						
BBGH	**Gun Hill**	**89.40**	**66**	PFAKE		22 44 50.0	+10
BBGH				LR	LR		
	comp=Z,8μm,22.0s,MS6.1						
PFO	**Pinyon Flat Ob**	**89.43**	**10**	*e*P	**P**	**22 44 39.9**	**+0.2**
	comp=Z,29nm,1.4s,mb5.4						
PFO				LR	LR		
	comp=Z,8μm,21.0s,MS6.1						
PFO	**Pinyon Flat Ob**	**89.43**	**10**	*e*P	**P**	**22 44 39.9**	**+0.2**
PFO				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.4						
PFO				MLR	MLR		
	comp=Z,8μm,21.0s,MS6.1						
HKT	**Hockley**	**89.71**	**28**	*e*P	**P**	**22 44 41.7**	**+0.6**
	comp=Z,38nm,1.5s,mb5.5						
HKT				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
HKT	**Hockley**	**89.71**	**28**	P	**P**	**22 44 41.6**	**+0.5**
HKT				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.5						
MWC	**Mount Wilson**	**89.89**	**9**	*e*P	**P**	**22 44 42.9**	**+1.0**
	comp=Z,5.9nm,0.9s,mb4.9						
MWC				LR	LR		
	comp=Z,8μm,20.0s,MS6.1						
MWC	**Mount Wilson**	**89.89**	**9**	*e*P	**P**	**22 44 42.9**	**+1.1**
MWC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
MWC				MLR	MLR		
	comp=Z,8μm,20.0s,MS6.1						
SJG	**San Juan**	**90.33**	**58**	PFAKE		22 45 00.0	+16
SJG				LR	LR		
	comp=Z,6μm,22.0s,MS6.0						
GSC	**Goldstone**	**91.08**	**10**	*e*P	**P**	**22 44 47.4**	**+0.1**
GSC				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
ISA	**Isabella**	**91.28**	**8**	*e*P	**P**	**22 44 49.2**	**+0.9**
ISA				LR	LR		
	comp=Z,8μm,20.0s,MS6.2						
LENM	**Lemitar**	**91.29**	**18**	*e*P	**P**	**22 44 49.6**	**+1.2**
LAZ	**Ladron**	**91.50**	**18**	*e*P	**P**	**22 44 50.4**	**+1.1**
LPM	**Los Pinos Moun**	**91.50**	**18**	*e*P	**P**	**22 44 49.9**	**+0.6**
NATX	**Nacogdoches**	**91.74**	**29**	PFAKE		22 45 00.0	+10
NATX				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
WUAZ	**Wupatki**	**91.93**	**14**	*e*P	**P**	**22 44 52.2**	**+0.9**
WUAZ				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
DAC	**Darwin (Calif)**	**91.97**	**9**	PFAKE		22 45 00.0	+8.6
DAC				LR	LR		
	comp=Z,7μm,21.0s,MS6.1						
ANMO	**Albuquerque**	**92.15**	**18**	*e*P	**P**	**22 44 52.9**	**+0.6**
	comp=Z,8.7nm,0.9s,mb5.1						
ANMO				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
SAO	**San Andreas Ge**	**92.17**	**6**	PFAKE		22 45 00.0	+7.7
SAO				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
SHPR	**Sheep Range**	**92.44**	**11**	*e*P	**P**	**22 44 54.4**	**+0.8**
DWPF	**Disney**	**92.61**	**41**	PFAKE		22 45 10.0	+15
DWPF				LR	LR		
	comp=Z,4μm,19.0s,MS5.9						
TPNV	**Topopah Spring**	**92.76**	**10**	*e*P	**P**	**22 44 55.6**	**+0.5**
	comp=Z,17nm,1.4s,mb5.3						
TPNV				LR	LR		
	comp=Z,7μm,19.0s,MS6.1						
TPNV	**Topopah Spring**	**92.76**	**10**	P	**P**	**22 44 55.7**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.3						
AMTX	**Amarillo**	**93.02**	**22**	PFAKE		22 45 10.0	+14
AMTX				LR	LR		
	comp=Z,3μm,19.0s,MS5.7						
MIDW	**Midway**	**93.18**	**318**	PFAKE		22 45 10.0	+13
MIDW				LR	LR		
	comp=Z,4μm,20.0s,MS5.9						
BOSA	**Boshof**	**93.27**	**157**	LR	LR	23 24 09.4	
	comp=Z,14μm,19.0s,MS6.5,baz=193,slow=34						
BOSA	**Boshof**	**93.27**	**157**	PFAKE		22 45 10.0	+12
BOSA				LR	LR		
	comp=Z,15μm,19.0s,MS6.5						
BRAL	**Brewton**	**93.31**	**35**	PFAKE		22 45 10.0	+12
BRAL				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
VBMS	**Vicksburg**	**93.35**	**32**	PFAKE		22 45 10.0	+12
VBMS				LR	LR		
	comp=Z,948nm,20.0s,MS5.2						
MCCM	**Marconi Confer**	**93.47**	**5**	PFAKE		22 45 10.0	+12
MCCM				LR	LR		
	comp=Z,8μm,20.0s,MS6.2						
CMB	**Columbia Colle**	**93.50**	**7**	PFAKE		22 45 10.0	+12
CMB				LR	LR		
	comp=Z,7μm,21.0s,MS6.1						
TPH	**Tonopah**	**93.79**	**9**	PFAKE		22 45 10.0	+10
TPH				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
MVCO	**Mesa Verde**	**94.02**	**16**	PFAKE		22 45 10.0	+9.1
MVCO				LR	LR		
	comp=Z,4μm,20.0s,MS5.9						
**NV

comp=Z,10μm,20.0s,MS6.3
MPU Maple Canyon 96.32 13 PFAKE 22 45 20.0 +8.7
MPU LR LR
comp=Z,9μm,20.0s,MS6.2
DUG Dugway 96.35 12 PFAKE 22 45 20.0 +8.6
DUG LR LR
comp=Z,4μm,20.0s,MS5.9
ELK Elko 96.62 10 PFAKE 22 45 20.0 +7.3
ELK LR LR
comp=Z,6μm,21.0s,MS6.0
GOGA Godfrey 96.71 37 PFAKE 22 45 20.0 +6.7
GOGA LR LR
comp=Z,3μm,20.0s,MS5.8
LBTB Lobatse 96.82 157 PFAKE 22 45 30.0 +16
LBTB LR LR
comp=Z,11μm,20.0s,MS6.4
ASCN Ascension 96.88 115 PFAKE 22 45 30.0 +15
ASCN LR LR
comp=Z,2μm,21.0s,MS5.7
ISCO Idaho Springs 97.02 18 PFAKE 22 45 30.0 +15
ISCO LR LR
comp=Z,5μm,19.0s,MS6.0
YBH Yreka Blue Hor 97.05 5 LR LR 23 19 44.6
comp=Z,11μm,19.3s,MS6.3,baz=181,slow=30
YBH Yreka Blue Hor 97.05 5 PFAKE 22 45 30.0 +15
YBH LR LR
comp=Z,10μm,20.0s,MS6.3
CBKS Cedar Bluff 97.22 22 PFAKE 22 45 30.0 +15
CBKS LR LR
comp=Z,3μm,19.0s,MS5.8
MOD Modoc 97.36 6 PFAKE 22 45 30.0 +14
MOD LR LR
comp=Z,5μm,19.0s,MS6.0
WVT Waverly 97.80 32 PFAKE 22 45 30.0 +12
WVT LR LR
comp=Z,2μm,20.0s,MS5.6
KAPI Kappang 97.80 249 PFAKE 22 45 30.0 +11
KAPI LR LR
comp=Z,8μm,20.0s,MS6.2
HWUT Hardware Ranch 97.89 13 PFAKE 22 45 30.0 +12
HWUT LR LR
comp=Z,5μm,20.0s,MS6.0
HUMO Hull Mountain 97.92 4 PFAKE 22 45 30.0 +12
HUMO LR LR
comp=Z,8μm,19.0s,MS6.2
WVOR Wild Horse Val 98.00 8 PFAKE 22 45 30.0 +11
WVOR LR LR
comp=Z,6μm,20.0s,MS6.1
KSU1 Kansas State U 98.20 25 PFAKE 22 45 30.0 +10
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.5
CCM Cathedral Cave 98.59 29 PFAKE 22 45 30.0 +8.3
CCM LR LR
comp=Z,2μm,19.0s,MS5.6
TKL Tuckaleechee C 98.65 36 LR LR 23 23 07.9
comp=Z,2μm,21.8s,MS5.7,baz=265,slow=31
OGNE Ogallala 98.79 20 PFAKE 22 45 30.0 +7.5
OGNE LR LR
comp=Z,4μm,19.0s,MS5.9
GUMO Guam 99.03 281 PFAKE 22 45 40.0 +16
GUMO LR LR
comp=Z,1μm,20.0s,MS5.4
AHID Auburn Hatcher 99.09 13 PFAKE 22 45 40.0 +16
AHID LR LR
comp=Z,5μm,21.0s,MS6.0
BW06 Boulder Array 99.30 14 PFAKE 22 45 40.0 +15
BW06 LR LR
comp=Z,8μm,20.0s,MS6.2
PDAR Pinedale Array 99.30 14 LR LR 23 21 49.4
comp=Z,7μm,19.9s,MS6.1,baz=206,slow=30
HLID Hailey 99.50 11 PFAKE 22 45 40.0 +14
HLID LR LR
comp=Z,4μm,21.0s,MS5.9
TZTN Tazewell 99.53 35 PFAKE 22 45 40.0 +14
TZTN LR LR
comp=Z,2μm,20.0s,MS5.7
COR Corvallis 99.88 4 PFAKE 22 45 40.0 +12
COR LR LR
comp=Z,6μm,20.0s,MS6.1
WCI Wyandotte Cave 100.20 33 PFAKE 22 45 40.0 +10
WCI LR LR
comp=Z,2μm,19.0s,MS5.7
TSUM Tsumeb 100.25 148 PFAKE 22 45 40.0 +10
TSUM LR LR
comp=Z,7μm,20.0s,MS6.2
CNNC Cliffs of the 100.33 40 PFAKE 22 45 40.0 +10
CNNC LR LR
comp=Z,4μm,21.0s,MS6.0
BMO Blue Mountains 100.51 8 PFAKE 22 45 40.0 +9.1
BMO LR LR
comp=Z,4μm,21.0s,MS5.9
LKWY Lake 100.95 13 PFAKE 22 45 40.0 +7.1
LKWY LR LR
comp=Z,4μm,19.0s,MS6.0
YMR Madison River 100.98 13 PFAKE 22 45 40.0 +7.0
YMR LR LR
comp=Z,3μm,21.0s,MS5.8
BLA Blacksburg 101.19 37 PFAKE 22 45 50.0 +16
BLA LR LR
comp=Z,4μm,21.0s,MS5.9
HDIL Hopedale 101.47 30 PFAKE 22 45 50.0 +15
HDIL LR LR
comp=Z,2μm,19.0s,MS5.6
RSSD Black Hills 101.49 18 PFAKE 22 45 50.0 +15
RSSD LR LR
comp=Z,4μm,21.0s,MS5.9
RLMT Red Lodge 101.65 14 PFAKE 22 45 50.0 +14
RLMT LR LR
comp=Z,8μm,20.0s,MS6.2
SCIA State Center 101.69 26 PFAKE 22 45 50.0 +14
SCIA LR LR
comp=Z,1μm,20.0s,MS5.4
BOZ Bozeman (W) 101.87 12 PFAKE 22 45 50.0 +13
BOZ LR LR
comp=Z,4μm,20.0s,MS5.9
HAWA Hanford 101.88 7 PFAKE 22 45 50.0 +13
HAWA LR LR
comp=Z,5μm,19.0s,MS6.0
COCO West Island 102.47 226 PFAKE 22 45 50.0 +10
COCO LR LR
comp=Z,2μm,21.0s,MS5.5
ECSD EROS,Sioux Fal 102.60 23 PFAKE 22 45 50.0 +10
ECSD LR LR
comp=Z,3μm,21.0s,MS5.7
MSO Missoula 102.78 10 PFAKE 22 45 50.0 +9.0
MSO LR LR
comp=Z,7μm,20.0s,MS6.2
ACSO Alum Creek Sta 103.07 34 PFAKE 22 45 50.0 +7.7
ACSO LR LR
comp=Z,2μm,19.0s,MS5.7
CBN Corbin 103.15 39 PFAKE 22 45 50.0 +7.3
CBN LR LR
comp=Z,4μm,20.0s,MS5.9
BBSR BB Station 103.20 51 PFAKE 22 45 50.0 +7.2
BBSR LR LR
comp=Z,2μm,20.0s,MS5.7
JFWS Jewell Farm 103.40 28 PFAKE 22 45 50.0 +6.3
JFWS LR LR
comp=Z,2μm,21.0s,MS5.6
MCWV Mont Chateau 103.59 37 PFAKE 22 46 00.0 +15
MCWV LR LR
comp=Z,3μm,20.0s,MS5.8
LAO LASA Array 103.63 16 PFAKE 22 46 00.0 +15
LAO LR LR
comp=Z,3μm,19.0s,MS5.9
NEW Newport 103.91 8 PFAKE 22 46 00.0 +14
NEW LR LR
comp=Z,5μm,19.0s,MS6.0
EGMT Eagleton 104.44 13 PFAKE 22 46 00.0 +12
EGMT LR LR
comp=Z,4μm,19.0s,MS6.0
DAV Davao City (W) 104.64 261 PFAKE 22 46 00.0 +11
DAV LR LR
comp=Z,4μm,22.0s,MS5.9
AAM Ann Arbor 104.74 33 PFAKE 22 46 00.0 +10
AAM LR LR
comp=Z,3μm,21.0s,MS5.7
SSPA Standing Stone 105.13 38 PFAKE 22 50 20.0 +15
SSPA LR LR
comp=Z,2μm,19.0s,MS5.7
ABPO Ambohimpanom 105.65 176 PFAKE 22 50 20.0 +13
ABPO LR LR
comp=Z,17μm,21.0s,MS6.6
DGMT Dagmar 105.69 17 PFAKE 22 50 20.0 +14
DGMT LR LR
comp=Z,3μm,19.0s,MS5.9
ERPA Erie 105.74 36 PFAKE 22 50 20.0 +14
ERPA LR LR
comp=Z,3μm,22.0s,MS5.8
COWI Conover 106.65 28 PFAKE 22 50 20.0 +12
COWI LR LR
comp=Z,2μm,19.0s,MS5.7
GLMI Grayling 106.74 31 PFAKE 22 50 20.0 +12
GLMI LR LR
comp=Z,3μm,19.0s,MS5.8
LSZ Lusaka 106.81 157 PFAKE 22 50 20.0 +11
LSZ LR LR
comp=Z,9μm,20.0s,MS6.3
AGMN Agassiz Refuge 107.10 22 PFAKE 22 50 20.0 +12
AGMN LR LR
comp=Z,4μm,21.0s,MS5.9
BINY Binghamton 107.18 38 PFAKE 22 50 20.0 +11
BINY LR LR
comp=Z,5μm,19.0s,MS6.0
EYMN Ely 107.77 25 PFAKE 22 50 20.0 +10
EYMN LR LR
comp=Z,2μm,20.0s,MS5.7
ULM Lac du Bonnet 108.95 22 PFAKE 22 50 20.0 +8.3
ULM LR LR
comp=Z,4μm,19.0s,MS6.0
WES Weston 109.04 41 PFAKE 22 50 20.0 +7.8
WES LR LR
comp=Z,2μm,21.0s,MS5.7
HRV Adam Dziewonsk 109.06 41 PFAKE 22 50 20.0 +7.8
HRV LR LR
comp=Z,2μm,20.0s,MS5.7
NCB Newcomb 109.36 39 PFAKE 22 50 30.0 +17
NCB LR LR
comp=Z,4μm,22.0s,MS5.9
LONY Lake Ozonia 109.79 38 PFAKE 22 50 30.0 +17
LONY LR LR
comp=Z,4μm,21.0s,MS6.0
LBNH Lisbon 110.41 40 PFAKE 22 50 30.0 +15
LBNH LR LR
comp=Z,2μm,20.0s,MS5.8
WRAK Wrangell Islan 111.66 358 PFAKE 22 50 30.0 +13
WRAK LR LR
comp=Z,10μm,20.0s,MS6.4
FFC Flin Flon 112.09 16 PFAKE 22 50 30.0 +13
FFC LR LR
comp=Z,6μm,20.0s,MS6.2
PKME Peaks-Kenny Pk 112.26 41 PFAKE 22 50 30.0 +12
PKME LR LR
comp=Z,2μm,19.0s,MS5.7
SIT Sitka 112.38 356 PFAKE 22 50 30.0 +12
SIT LR LR
comp=Z,15μm,19.0s,MS6.6
ADK Adak 114.19 330 PFAKE 22 50 30.0 +8.4
ADK LR LR
comp=Z,9μm,21.0s,MS6.4
KDAK Kodiak Island 114.61 346 PFAKE 22 50 30.0 +7.8
KDAK LR LR
comp=Z,3μm,20.0s,MS5.9
SMY Shemya 117.75 325 PFAKE 22 50 40.0 +12
SMY LR LR
comp=Z,5μm,21.0s,MS6.1
PMR Palmer 117.90 349 PFAKE 22 50 40.0 +12
PMR LR LR
comp=Z,7μm,21.0s,MS6.3
MSEY Mahe Island 119.88 185 PFAKE 22 50 50.0 +16
MSEY LR LR
comp=Z,6μm,22.0s,MS6.2
EGAK Eagle 120.38 354 PFAKE 22 50 50.0 +17
EGAK LR LR
comp=Z,9μm,19.0s,MS6.4
MAJO Matsushiro 120.79 291 PFAKE 22 50 50.0 +15
MAJO LR LR
comp=Z,3μm,22.0s,MS5.8
MAT Matsushiro 120.79 291 SKKS SKKSac 22 59 01.0 -1.6
COLA College 120.99 351 PFAKE 22 50 50.0 +16
COLA LR LR
comp=Z,8μm,21.0s,MS6.3
YHNB Yeheng 121.14 269 PFAKE 22 50 50.0 +14
YHNB LR LR
comp=Z,2μm,20.0s,MS5.8
TATO Taipei 121.31 269 PFAKE 22 50 50.0 +14
TATO LR LR
comp=Z,2μm,20.0s,MS5.8
MBAR Mbarara 121.58 156 PFAKE 22 50 50.0 +13
MBAR LR LR
comp=Z,493nm,22.0s,MS5.1
ERM Erimo 122.31 298 PFAKE 22 50 50.0 +12
ERM LR LR
comp=Z,3μm,20.0s,MS6.0
KMBO Kilima Mbogo 122.36 163 PFAKE 22 50 50.0 +11
KMBO LR LR
comp=Z,5μm,20.0s,MS6.2
QZH Quanzhou 122.93 267 *e*PKP PKPdf 22 50 36.3 -3.0
QZH PP PP 22 52 16.9 -1.5
QZH LR LR
comp=Z,7μm,27.6s,MS6.2
TORD Torodi Ar. Bea 123.04 118 PKP PKPdf 22 50 37.5 -2.3
comp=Z,1.0nm,0.7s,baz=209,slow=1.2,SNR=12
TORD PKKPab PKKPab 23 00 29.9 -1.8
comp=Z,0.8nm,0.9s,baz=86,slow=3.6,SNR=3.8
QIZ Qiongzhong 123.13 255 PKP PKPdf 22 50 37.1 -2.8
QIZ PP PP 22 52 24.2 +4.6
QIZ PP PP
comp=Z,781nm,6.2s
QIZ LR LR
comp=N,947nm,23.9s,MS5.7
QIZ LR LR
comp=E,2μm,22.8s,MS5.7
QIZ LR LR
comp=Z,2μm,28.2s
QIZ Qiongzhong 123.13 255 PFAKE 22 50 50.0 +10
QIZ LR LR
comp=Z,2μm,22.0s,MS5.7
PET Petropavlovsk 123.57 316 PFAKE 22 50 50.0 +10
PET LR LR
comp=Z,5μm,20.0s,MS6.2
INK Inuvik 123.60 358 *e*PKPdf PKPdf 22 50 41.1 +1.9
PETK Petropavlovsk- 124.01 316 PKP PKPdf 22 50 37.4 -3.0
comp=Z,2.8nm,0.7s,baz=121,slow=5.6,SNR=3.8
YSS Yuzh-Sakhalins 126.09 302 PFAKE 22 51 00.0 +15
YSS LR LR
comp=Z,739nm,20.0s,MS5.3
PDA Ponta Delgada 127.14 76 *e*LR LR 23 32 48.0
CMLA Cha da Macela 127.23 76 *e*PS PS 23 03 21.9 +31
CMLA *e*SS SS 23 09 50.1 -6.0
CMLA *e*LQ 23 24 15.4
CMLA *e*LR LR 23 32 07.3
CMLA Cha da Macela 127.23 76 PFAKE 22 51 00.0 +13
CMLA LR LR
comp=Z,3μm,20.0s,MS6.0
INCN Inchon 127.77 283 PFAKE 22 51 00.0 +12
INCN LR LR
comp=Z,1μm,19.0s,MS5.7
NJ2 Nanjing 128.19 272 *e*PKP PKPdf 22 50 46.4 -2.8
NJ2 XPKP 22 51 00.8
NJ2 PP PP 22 52 55.5 +2.1
NJ2 PPP 22 55 40.0
NJ2 SKS SKSdf 22 57 53.5 -7.1
NJ2 SKKS SKKSac 22 59 43.0 -7.2
NJ2 SS SS 23 10 11.0 +3.0
NJ2 PP PP
comp=Z,480nm,5.7s
NJ2 LR LR
comp=N,2μm,27.2s,MS5.8
NJ2 LR LR
comp=E,2μm,28.6s,MS5.8
NJ2 LR LR
comp=Z,2μm,29.6s,MS5.7
CM31 Chiang Mai Arr 128.45 244 PFAKE 22 51 00.0 +10
CM31 LR LR
comp=Z,2μm,20.0s,MS5.8
CMAR Chiang Mai Arr 128.45 244 PKP PKPdf 22 50 49.8 -0.3
comp=Z,0.7nm,0.3s,baz=205,slow=1.2,SNR=5.9
CHTO Chiang Mai 128.75 244 *e*PKPdf PKPdf 22 50 50.8 +0.2
CHTO LR LR
comp=Z,3μm,22.0s,MS5.9
GYA Guiyang 130.81 257 PKP PKPdf 22 50 59.8 +5.5
GYA PP PP 22 53 15.7 +5.2
GYA PKS 22 54 30.6
GYA PPP 22 56 06.9
GYA SKS SKSdf 22 58 05.2 -0.5
GYA SKKS SKKSac 23 00 06.5 -0.2
GYA SSS 23 15 36.9
GYA PP PP
comp=Z,4μm,8.9s
GYA LR LR
comp=N,7μm,25.8s,MS6.4
GYA LR LR
comp=E,8μm,24.4s,MS6.4
GYA LR LR
comp=Z,6μm,25.6s,MS6.2
HABR Khabarovsk 130.91 299 P Pdif 22 47 41.2 -4.9
HABR *e* 22 50 51.0
HABR *e* 22 53 06.4
HABR *e* 22 58 00.3
HABR *e* 23 03 20.7
HABR *e* 23 10 37.2
HABR *e* 23 15 28.2
MDJ Mudanjiang 131.13 292 PKP PKPdf 22 50 55.1 +0.8
MDJ PP PP 22 53 10.9 -1.7
MDJ SS SS 23 10 43.0 -1.2
MDJ PP PP
comp=Z,461nm,9.7s
MDJ LR LR
comp=N,2μm,39.2s,MS5.6
MDJ LR LR
comp=E,2μm,39.2s,MS5.6
MDJ LR LR
comp=Z,2μm,37.9s,MS5.6
MDJ Mudanjiang 131.13 292 PFAKE 22 51 10.0 +16
MDJ LR LR
comp=Z,1μm,20.0s,MS5.7
DL2 Dalian 131.56 281 *e*PKP PKPdf 22 50 55.2 -0.1
DL2 PP PP 22 53 18.2 +2.8
DL2 PKS 22 54 27.6
DL2 *e*PPP 22 56 44.1
DL2 LR LR
comp=N,600nm,23.0s,MS5.4
DL2 LR LR
comp=E,500nm,20.1s,MS5.4
DL2 LR LR
comp=Z,800nm,26.0s
KMI Kunming 131.91 252 PKP PKPdf 22 50 54.5 -1.9
MDRS Chennai 131.99 219 *ex* x 22 52 34.2
BILL Bilibino 132.22 333 PFAKE 22 51 10.0 +14
BILL LR LR
comp=Z,3μm,21.0s,MS6.0
BILL Bilibino 132.22 333↑ *e*PKIKP PKPdf 22 50 53.8 -1.8
BILL *e*PS PS 23 03 33.1 -0.8
BILL pmax pmax
comp=Z,10.0nm,1.7s
CN2 Changchun 132.80 288 *e*PKP PKPdf 22 50 58.8 +1.3
CN2 PP PP 22 53 28.7 +5.4
CN2 PKS 22 54 33.9
CN2 LR LR
comp=N,900nm,18.0s,MS5.7
CN2 LR LR
comp=E,1μm,18.0s,MS5.7
CN2 LR LR
comp=Z,1μm,19.0s,MS5.6
TAM Tamanrasset 133.09 115 *e*PKPdf PKPdf 22 51 00.6 +1.9
XAN Xi'an 135.29 266 PKP PKPdf 22 51 04.0 +1.5
XAN PP PP 22 53 38.1 -1.0
XAN PKS 22 54 38.5
XAN PPP 22 56 33.3
XAN SKS SKSdf 22 58 13.7 +0.4
XAN PP PP
comp=Z,683nm,11.5s
XAN LR LR
comp=N,434nm,30.6s,MS5.4
XAN LR LR
comp=E,948nm,28.7s,MS5.4
XAN LR LR
comp=Z,4μm,26.2s,MS6.0
SFJD Kangerlussuaq 135.30 33 PFAKE 22 51 10.0 +8.5
SFJD LR LR
comp=Z,4μm,20.0s,MS6.1
BJT Baijiatuau 135.39 278 PFAKE 22 51 10.0 +7.5
BJT LR LR
comp=Z,1μm,20.0s,MS5.7
BJI Beijing 135.40 278 PKP PKPdf 22 51 04.3 +1.8
BJI SS SS 23 11 38.2 +2.3
BJI PP PP
comp=Z,746nm,7.0s
BJI LR LR
comp=N,687nm,23.1s,MS5.6
BJI LR LR
comp=E,1μm,21.4s,MS5.6
BJI LR LR
comp=Z,2μm,27.6s
CD2 Chengdu 135.86 258 *e*PKP PKPdf 22 51 04.2 +0.5
CD2 XPKP 22 51 10.0
CD2 PP PP 22 53 44.5 +1.8
CD2 PKS 22 54 39.0
CD2 SKS SKSdf 22 58 09.5 -4.9
CD2 SKKS SKKSac 23 00 34.2 -3.1
CD2 SS SS 23 11 41.8 +0.5
CD2 PP PP
comp=Z,980nm,7.2s
CD2 LR LR
comp=N,1μm,25.2s
CD2 LR LR
comp=E,2μm,19.2s
CD2 LR LR
comp=Z,2μm,22.8s,MS5.8
CAL Calcutta 137.10 235 *ex* x 22 53 53.6
SFS San Fernando 137.18 92 PFAKE 22 51 20.0 +14
SFS LR LR
comp=Z,4μm,20.0s,MS6.2
EVO Evora 137.60 88 *e*PKIKP PKPdf 22 51 04.1 -2.5
comp=Z,106nm,1.8s
EVO *e*MLR MLR
comp=Z,4μm,22.2s,MS5.8
EMIN Mina Concepcio 137.83 90 PKP PKPdf 22 51 10.7 +3.5
SHL Shillong 137.94 241 *e*P PKPdf 22 51 08.5 +0.8
HHC Hu-ho-hao-te 138.54 275 *e*PKP PKPdf 22 51 07.1 -1.2
HHC PP PP 22 54 03.9 +4.4
HHC PKS 22 54 42.0
HHC SKS SKSdf 22 58 12.5 -6.0
HHC SKKS SKKSac 23 00 49.5 -3.3
HHC SS SS 23 12 12.0 -1.3
HHC LR LR
comp=N,1μm,28.5s,MS5.5
HHC LR LR
comp=E,873nm,25.0s,MS5.5
HHC LR LR
comp=Z,2μm,25.0s,MS5.7
ELOJ Sierra Loja 138.83 93 PKP PKPdf 22 51 11.7 +2.7
ERON Agron 138.94 93 PKP PKPdf 22 51 12.1 +3.0
ELUQ Luque 139.05 92 PKP PKPdf 22 51 12.4 +3.0
MTE Manteigas 139.13 86 PFAKE 22 51 20.0 +11
MTE LR LR
comp=Z,3μm,21.0s,MS6.0
POO Poona 139.25 214 *e*P PKPdf 22 51 12.0 +1.7
comp=Z,145nm,0.8s
ECOG Cogollos-Vega 139.25 93 PKP PKPdf 22 51 13.5 +3.8
HIA Hailar 139.29 291 PFAKE 22 51 20.0 +11
HIA LR LR
comp=Z,2μm,19.0s,MS5.9
EADA Adamuz 139.30 91 PKP PKPdf 22 51 12.4 +2.6
LZH Lanzhou 139.64 264 *e*PKP PKPdf 22 51 10.0 -0.5
LZH XPKP 22 51 16.0
LZH PP PP 22 54 07.0 +0.8
LZH SKS SKSdf 22 58 14.0 -6.6
LZH SKKS SKKSac 23 00 57.2 -2.3
LZH SS SS 23 12 28.0 +1.9
LZH PP PP
comp=Z,1μm,5.8s
LZH LR LR
comp=E,2μm,18.8s
LZH LR LR
comp=Z,5μm,20.6s,MS6.2
EPLA Plasencia 139.74 88 PKP PKPdf 22 51 13.2 +2.7
EBAN Banos Encina 139.75 92 PKP PKPdf 22 51 12.2 +1.6
EQES Quesada 139.90 93 PKP PKPdf 22 51 12.9 +2.0
EHUE Huescar 140.18 93 PKP PKPdf 22 51 12.7 +1.3
PAB San Pablo 140.37 90 PFAKE 22 51 20.0 +8.3
PAB LR LR
comp=Z,2μm,21.0s,MS5.8
ESDC Sonseca Array 140.68 90 PKhKP 22 51 05.7
comp=Z,1.2nm,0.9s,baz=318,slow=2.0,SNR=4.9
ESDC PKP PKPdf 22 51 12.3 +0.1
comp=Z,1.5nm,0.8s,baz=272,slow=3.4,SNR=9.5
ESLA Sonseca Array 140.68 90 PFAKE 22 51 20.0 +7.8
ESLA LR LR
comp=Z,15μm,22.0s,MS6.7
YAK Yakutsk 141.20 313 PFAKE 22 51 20.0 +7.6
YAK LR LR
comp=Z,2μm,19.0s,MS5.9

YAK Yakutsk 141.20 313 ePKIKP PKPdf 22 51 17.9 +5.5
YAK e 22 54 22.2
YAK eSS SS 23 12 40.8 -3.0
YAK eSSS 23 17 51.1
YAK pmax pmax
comp=Z,11nm,1.3s
YAK pmax pmax
comp=Z,527nm,4.1s
GUD Guadarrama 141.22 89 PKP PKPdf 22 51 14.5 +1.3
LSA Lhasa 141.70 244 PKP PKPdf 22 51 13.8 -0.6
LSA PP PP 22 54 16.5 -2.2
LSA LR LR
comp=N,1μm,19.0s,MS6.1
LSA LR LR
comp=E,3μm,19.0s,MS6.1
LSA LR LR
comp=Z,2μm,19.7s,MS5.8
LSA Lhasa 141.70 244 ePKIKP PKPdf 22 51 14.1 -0.3
LSA MLR MLR
comp=Z,4μm,20.0s,MS6.1
ELAN Lanestosa 143.31 86 PKP PKPdf 22 51 15.0 -1.8
CIT Chita 144.10 291 ePKIKP PKPdf 22 51 16.2 -1.7
CIT e 22 51 24.8
GTA Gaotai 144.24 264 PKP PKPdf 22 51 14.2 -4.4
GTA APKP 22 51 24.6
GTA XPKP 22 51 28.3
GTA PKS 22 54 48.5
GTA SKKS SKKSac 23 01 25.8 -0.2
GTA PP PP
comp=Z,928nm,9.9s
GTA LR LR
comp=N,1μm,21.0s,MS5.8
GTA LR LR
comp=E,753nm,19.5s,MS5.8
GTA LR LR
comp=Z,1μm,21.3s,MS5.7
ELIZ Elizondo 144.34 88 PKP PKPdf 22 51 16.1 -2.5
EALK Alkurruntz 144.39 88 PKP PKPdf 22 51 16.8 -1.9
SJPF Ste Jean 144.49 88 ePKP1 PKPdf 22 51 16.1 -2.8
comp=Z,144nm,1.3s
OSSF Osses 144.56 88 PKP PKPdf 22 51 14.2 -4.8
LARF Larrau 144.57 88 PKP PKPdf 22 51 15.2 -3.8
EPOB Poblet 144.66 92 PKP PKPdf 22 51 17.0 -2.2
ETSF Etsaut 144.73 89 ePKP1 PKPdf 22 51 15.3 -4.0
comp=Z,104nm,1.3s
ATE Arette 144.77 89 PKP PKPdf 22 51 16.5 -2.9
REYF Montagne du Re 144.93 89 PKP PKPdf 22 51 15.2 -4.4
TIXI Tiksi 144.99 327 ePKPpre 22 51 13.6
TIXI ePKPdf PKPdf 22 51 18.4 -0.4
TIXI LR LR
comp=Z,3μm,20.0s,MS6.1
TIXI Tiksi 144.99 327 ePKHKP 22 51 13.2
TIXI pmax pmax
comp=Z,182nm,1.5s
EBIE Bielsa 144.99 90 PKP PKPdf 22 51 17.3 -2.5
VIEF Viey 145.05 89 PKP PKPdf 22 51 17.8 -2.1
RESF Ens 145.18 90 PKP PKPdf 22 51 17.7 -2.4
LABF Labassere 145.18 89 PKP PKPdf 22 51 15.4 -4.7
EMIR Miracle 145.28 92 PKP PKPdf 22 51 17.3 -2.9
EPF Esparros 145.32 89 ePKP1 PKPdf 22 51 17.2 -3.1
comp=Z,292nm,1.6s
KEST Kesra 145.35 107 PKPbc PKPdf 22 51 17.6 -3.0
comp=Z,7.8nm,1.0s,baz=297,slow=4.2,SNR=4.9
ULN Ulaanbaatar 145.41 281 ePKPbc PKPbc 22 51 18.1 -2.3
ULN LR LR
comp=Z,2μm,21.0s,MS5.8
SALF Salau 145.63 91 PKP PKPdf 22 51 16.7 -4.2
MLS Moulis 145.71 90 PKP PKPdf 22 51 18.5 -2.5
SONM Songino Array 145.76 281 PKPbc PKPdf 22 51 17.5 -3.4
comp=Z,12nm,0.8s,baz=128,slow=2.8,SNR=35
VALF Valcebollere 145.88 92 PKP PKPdf 22 51 19.2 -2.1
QUIF Quistinic 146.25 80 ePKP1 PKPdf 22 51 20.7 -1.0
comp=Z,354nm,1.7s
FILF Fillols 146.28 92 PKP PKPdf 22 51 18.9 -3.1
AJM Ajmer 146.33 220 *i* P PKPdf 22 51 23.0 +0.4
ROSF Rostrenen 146.42 79 ePKP1 PKPdf 22 51 21.1 -0.9
comp=Z,179nm,1.5s
BOD Bodaibo 146.54 300 ePKIKP PKPdf 22 51 19.6 -2.3
BOD pmax pmax
comp=Z,46nm,1.6s
MTLF Montolieu 146.59 91 ePKP1 PKPdf 22 51 21.9 -0.6
LFF La Frestale 146.73 87 ePKP1 PKPdf 22 51 20.9 -1.7
comp=Z,112nm,1.2s
SGMF Saint Gilles 146.77 80 ePKP1 PKPdf 22 51 21.9 -0.7
comp=Z,94nm,1.1s
HTL Hartland 147.15 74 AMS AMS 23 50 44.0
comp=Z,4μm,20.5s,MS6.2
DLF Lyons Farm 147.15 69 eP PKPdf 22 51 23.3 +0.2
DYA Yadsworthy 147.17 75 AMS AMS 23 56 05.5
comp=Z,4μm,18.6s,MS6.3
MFF Saint Martin d 147.20 84 ePKP1 PKPdf 22 51 22.5 -0.9
comp=Z,142nm,1.3s
DSB Dublin 147.21 70 ePKPdf PKPdf 22 51 25.1 +1.9
NDI New Delhi 147.31 225 eP PKPdf 22 51 24.0 -0.2
RJF Les Rejaudoux 147.39 87 ePKP1 PKPdf 22 51 23.2 -0.5
comp=Z,117nm,1.2s
RJF eMLR MLR
comp=Z,4μm,21.0s,MS5.8
RJF Les Rejaudoux 147.39 87 ePKHKP PKPdf 22 51 23.2 -0.5
RJF MLR MLR
comp=Z,4μm,21.0s,MS6.1
CAF Calviac 147.47 88 ePKP1 PKPdf 22 51 23.5 -0.4
comp=Z,156nm,1.5s
JVM Valle D.L. Mar 147.49 78 eP PKPdf 22 51 24.0 +0.3
JSA Saint Aubin 147.49 79 eP PKPdf 22 51 25.0 +1.2
JSA AMb AMB 22 51 29.7
comp=Z,79nm,1.2s
JQE Queens East 147.57 79 eP PKPdf 22 51 25.2 +1.3
DAG Danmarks Havn 147.76 24|| ePKHKP 22 51 13.2
DAG pmax pmax
comp=Z,7.0nm,0.4s
DAG MLR MLR
comp=Z,7μm,19.0s,MS6.5
DAG Danmarks Havn 147.76 24|| *i*P 22 51 13.2
comp=Z,6.8nm,0.4s
DAG
comp=Z,7μm,19.0s
GRR Gorron 147.80 81 ePKP1 PKPbc 22 51 24.9 -2.3
LASF Ste Croix 147.97 91 ePKP1 PKPbc 22 51 25.8 -2.1
FRNF Fournols 148.03 88 PKP PKPbc 22 51 30.3 +2.3
VSL Villasalto 148.08 102 PFAKE PKPab 22 51 40.0 +8.8
VSL LR LR
comp=Z,3μm,20.0s,MS6.1
FLN La Foliniere 148.21 80 ePKP1 PKPdf 22 51 25.5 +0.5
comp=Z,235nm,1.6s
FLN eMLR MLR
comp=Z,4μm,21.8s,MS5.8
FLN La Foliniere 148.21 80 ePKHKP PKPdf 22 51 25.5 +0.5
FLN MLR MLR
comp=Z,4μm,21.8s,MS6.1
WDD Wield Dalam 148.21 113 ePKPbc PKPab 22 51 31.1 -0.7
WDD LR LR
comp=Z,5μm,19.0s,MS6.3
LDF La Druitiere 148.32 81 ePKP1 PKPdf 22 51 26.4 +1.2
comp=Z,259nm,1.8s
LBL Lubilhac 148.33 89 PKP PKPdf 22 51 26.4 +1.1
TCF Toulx Ste Croi 148.35 86 ePKP1 PKPdf 22 51 26.8 +1.5
comp=Z,143nm,1.5s
DDI Dehra Dun 148.40 228 eP PKPdf 22 51 24.5 -1.4
MCH1 Michaelchurch 148.45 73 eP PKPdf 22 51 25.2 0.0
MCH1 AMb AMB 22 51 38.4
comp=Z,130nm,1.5s
MCH1 AMS AMS 23 56 54.0
comp=Z,3μm,18.4s,MS6.1
PYM Petit Puy Mans 148.50 88 PKP PKPdf 22 51 26.2 +0.7
BERF Bertagne 148.54 94 PKP PKPab 22 51 32.1 -0.8
PUYF Puyloubier 148.68 93 PKP PKPab 22 51 29.5 -4.0
AGO Saint Agoulin 148.74 87 PKP PKPdf 22 51 26.9 +1.0
DGI Dorgali Grotta 148.78 102 PKP PKPab 22 51 34.5 +0.6
GAL1 Galloway 148.81 68 AMS AMS 23 51 21.1
comp=Z,2μm,21.2s,MS6.0
ZAK Zakamensk 148.85 283 ePKIKP PKPdf 22 51 27.3 +1.3
ZAK pmax pmax
comp=Z,50nm,1.5s
BGF Bois d'Agland 148.87 86 ePKP1 PKPdf 22 51 28.1 +2.0
comp=Z,93nm,1.2s
SWN1 Swindon 148.87 75 AMS AMS 23 54 21.4
comp=Z,3μm,20.1s,MS6.1
VIVF Saint-Julien-l 148.91 90 ePKP1 PKPdf 22 51 27.0 +0.7
comp=Z,69nm,1.3s
LMR La Mourre 149.02 94 ePKP1 PKPdf 22 51 28.0 +1.5
SSB Saint Sauveur 149.09 90 ePKPdf PKPdf 22 51 28.5 +2.0
SSB ePKPbc PKPbc 22 51 33.5 +2.8
SSB ePKPab PKPab 22 51 37.7 +2.6
STOF St-Etienne Org 149.09 93 PKP PKPbc 22 51 30.3 -0.4

IRK Irkutsk 149.20 286⇑ *i*PKIKP PKPdf 22 51 27.6 +1.1
IRK pmax pmax
comp=Z,149nm,3.1s
FRF La Foret Royal 149.24 94 ePKP1 PKPbc 22 51 29.2 -1.9
comp=Z,348nm,1.9s
TLY Talaya 149.28 285 ePKPdf PKPdf 22 51 27.4 +0.8
TLY ePKPbc PKPbc 22 51 32.4 +1.5
TLY LR LR
comp=Z,3μm,21.0s,MS6.1
TLY Talaya 149.28 285 ePKIKP PKPdf 22 51 28.3 +1.7
TLY e 22 55 00.7
TLY e 23 19 54.3
TLY pmax pmax
comp=Z,68nm,1.7s
TLY MLR MLR
comp=Z,1μm,18.0s,MS5.8
AVF Avril sur Loir 149.29 86 ePKP1 PKPdf 22 51 28.9 +2.1
comp=Z,164nm,1.7s
OSPF L'Ospedale 149.45 99 PKP PKPbc 22 51 32.1 +0.4
SMF Signal de Mont 149.49 87 ePKP1 PKPdf 22 51 29.5 +2.4
comp=Z,182nm,1.4s
CALN Calern 149.49 94 PKP PKPbc 22 51 32.6 +0.9
SKP1 Kophill 149.51 75 eP PKPbc 22 51 30.8 -0.7
SSF Saint Saulge 149.53 86 ePKP1 PKPdf 22 51 29.3 +2.1
KWE Weaver Farm 149.54 72 eP PKPbc 22 51 30.4 -1.1
ORIF Oris-en-Rattie 149.63 91 ePKP1 PKPdf 22 51 29.3 +1.9
comp=Z,70nm,1.2s
ORIF eMLR MLR
comp=Z,5μm,20.5s,MS6.0
BHH Howats Hill 149.69 68 eP PKPbc 22 51 32.6 +0.8
CWF Charnwood Fore 149.71 73 eP PKPdf 22 51 30.4 +3.2
CWF AMb AMB 22 51 38.5
comp=Z,65nm,1.4s
REVF Revere 149.76 94 PKP PKPbc 22 51 34.5 +2.1
ECK Cauldkaine Hil 149.77 68 eP PKPbc 22 51 31.3 -0.8
ESK Eskdalemuir 149.78 68 ePKPdf PKPdf 22 51 30.7 +3.4
ESK ePKPbc PKPbc 22 51 34.9 +2.9
ESK ePKPab PKPab 22 51 40.3 +2.7
ESK LR LR
comp=Z,4μm,20.0s,MS6.2
ESK Eskdalemuir 149.78 68 AMS AMS 23 53 53.5
comp=Z,3μm,20.4s,MS6.1
KBI1 Birley Grange 149.82 72 eP PKPdf 22 51 28.1 +0.7
LUCF Luceram 149.84 94 PKP PKPbc 22 51 32.9 +0.3
LOR Lormes 149.84 86 ePKP1 PKPdf 22 51 30.4 +2.7
comp=Z,85nm,1.2s
LOR eMLR MLR
comp=Z,5μm,21.2s,MS6.0
LOR Lormes 149.84 86 ePKIKP PKPdf 22 51 30.4 +2.7
LOR MLR MLR
comp=Z,5μm,21.3s,MS6.2
TOUF Mont Tournerai 149.86 94 PKP PKPbc 22 51 33.4 +0.8
SBF Sospel 149.87 94 ePKP1 PKPbc 22 51 30.9 -1.8
comp=Z,149nm,1.2s
PGF Pioggiola 149.92 98 ePKP1 PKPdf 22 51 30.8 +2.8
comp=Z,74nm,1.1s
EBH Black Hill 149.99 66 eP PKPbc 22 51 32.0 -0.5
SAOF Saorge 150.02 94 PKP PKPbc 22 51 34.5 +1.5
HPK Haverah Park 150.07 71 AMS AMS 23 57 59.3
comp=Z,3μm,18.2s,MS6.1
XAL Allendale 150.12 69 eP PKPbc 22 51 32.1 -0.8
BNI Bardonecchia 150.17 92 ePKPbc PKPbc 22 51 35.3 +2.0
BNI LR LR
comp=Z,5μm,21.0s,MS6.2
TFO1 Folkestone 150.30 77 P PKPbc 22 51 32.9 -0.5
TFO1 AMb AMB 22 51 40.1
comp=Z,153nm,1.3s
TFO1 Folkestone 150.30 77 eP PKPbc 22 51 32.9 -0.5
TFO1 AMb AMB 22 51 40.1
comp=Z,153nm,1.3s
LPG La Plagne 150.47 91 ePKP1 PKPdf 22 51 31.8 +3.1
comp=Z,264nm,1.7s
LPL La Plagne 150.47 91 ePKP1 PKPdf 22 51 31.5 +2.8
comp=Z,203nm,1.6s
RSL Roselend 150.51 91 PKP PKPbc 22 51 38.9 +4.8
MCD Coleburn Disti 150.59 63 eP PKPdf 22 51 28.6 +0.1
MENF Mencas 150.60 79 PKP PKPdf 22 51 21.5 -7.2
SCLL Scilla 150.64 111 PKP PKPbc 22 51 35.8 +1.1
QLNO Quiliano 150.67 94 PKP PKPbc 22 51 36.5 +1.9
CEL Celeste 150.73 111 PFAKE 22 51 40.0 +11
CEL LR LR
comp=Z,20μm,21.0s,MS6.9
MOY Mondy 150.74 283 ePKIKP PKPbc 22 51 32.6 -1.9
MOY pmax pmax
comp=Z,171nm,3.1s
CABF La Chapelle 150.74 89 ePKP1 PKPbc 22 51 32.8 -1.9
comp=Z,211nm,1.7s
MEZF Maizieres J'vi 151.19 85 ePKP1 PKPbc 22 51 33.9 -1.7
comp=Z,142nm,1.4s
ORO Oropa 151.25 92 PKP PKPbc 22 51 36.4 +0.5
TOLF Tolfa 151.28 101 PKP PKPbc 22 51 37.8 +1.7
BAIF Baives 151.50 81 ePKP1 PKPbc 22 51 34.4 -1.9
comp=Z,106nm,1.3s
PII Pisa 151.53 97 PKP PKPbc 22 51 35.8 -0.8
BOB Bobbio (Coli) 151.57 95 PKP PKPbc 22 51 38.7 +2.1
LOMF Lomont 151.57 88 PKP PKPdf 22 51 29.6 -0.7
EIL Elat 151.64 149 PKP PKPdf 22 51 30.4 -0.6
comp=Z,1.1nm,0.5s,baz=200,slow=21,SNR=5.1
EIL PKPbc PKPbc 22 51 39.1 +1.9
comp=Z,9.0nm,0.8s,baz=9.8,slow=3.5,SNR=11
HAU Haudompre 151.66 86 ePKP1 PKPbc 22 51 34.5 -2.2
comp=Z,59nm,1.3s
HAU eMLR MLR
comp=Z,5μm,23.0s,MS6.0
HAU Haudompre 151.66 86 ePKIKP PKPbc 22 51 34.5 -2.2
HAU MLR MLR
comp=Z,5μm,23.0s,MS6.3
MTCE Montecelio 151.67 102 PKP PKPbc 22 51 37.6 +0.6
VLC Villacollemand 151.72 97 PFAKE 22 51 40.0 +9.3
VLC LR LR
comp=Z,3μm,20.0s,MS6.1
DOU Dourbes 151.74 81 PKPbc PKPbc 22 51 38.2 +1.4
SNF Seneffe 151.76 80 PKPbc PKPbc 22 51 38.4 +1.5
CSNT Castellina Chi 151.80 99 PKP PKPbc 22 51 34.5 -2.7
VAI Varese 151.84 92 PKP PKPbc 22 51 36.6 -0.6
HINF Hinteralfeld 151.84 87 ePKP1 PKPbc 22 51 35.0 -2.2
comp=Z,115nm,1.3s
TIP Timpagrande 151.87 111 ePKPbc PKPbc 22 51 40.0 +2.5
TIP LR LR
comp=Z,3μm,21.0s,MS6.1
GIVF Givet 151.87 82 ePKP1 PKPbc 22 51 35.2 -1.9
comp=Z,185nm,1.6s
ERBM Eremo 151.90 96 PKP PKPbc 22 51 37.7 +0.3
UCC Uccle 151.94 80 E 22 51 36.3
CUC Castrocucco 151.95 109 ePKPbc PKPbc 22 51 38.8 +1.1
CUC LR LR
comp=Z,6μm,21.0s,MS6.4
MOF Molkenrain 152.02 87 PKP PKPdf 22 51 30.7 -0.3
FNVD Fontana Vidola 152.15 97 PKP PKPdf 22 51 31.2 -0.1
ECH Echery 152.23 87 PKP PKPdf 22 51 30.2 -1.1
ECH Echery 152.23 87 ePKIKP PKPdf 22 51 32.2 +0.9
ECH *e* 22 51 38.9
PSB1 Pescosannita 152.27 106 PKP PKPbc 22 51 42.3 +3.9
BCLA Clavier 152.29 81 PKPbc PKPbc 22 51 39.0 +0.9
CDF Champ du Feu 152.40 86 ePKP1 PKPbc 22 51 36.3 -2.1
WLF Walferdange 152.40 83 PKPbc PKPbc 22 51 39.7 +1.4
WLF Walferdange 152.40 83 ePKIKP PKPbc 22 51 40.0 +1.6
WLF MLR MLR
comp=Z,3μm,20.0s,MS6.1
TUE Stuetta 152.51 92 ePKPbc PKPbc 22 51 40.0 +1.2
TUE ePKPab PKPab 22 51 52.5 +3.2
TUE LR LR
comp=Z,3μm,20.0s,MS6.2
MEM Membach 152.78 81 PKPbc PKPbc 22 51 39.5 +0.3
HGN Heimansgroeve 152.81 81 ePKP PKPbc 22 51 39.1 -0.1
MABI Malga Bissina 152.94 93 PKP PKiKP 22 51 43.9 +4.0
BFO Black Forest 152.95 87 ePKPbc PKPbc 22 51 40.5 +0.8
BFO LR LR
comp=Z,3μm,21.0s,MS6.1
BFO Black Forest 152.95 87 ePP PP 22 55 24.7 -0.2
SPAK Spaichingen-Ko 153.09 88 PKP PKPdf 22 51 33.5 +0.9
KBS Kingsbay 153.18 16 PFAKE 22 51 40.0 +8.1
KBS LR LR
comp=Z,6μm,22.0s,MS6.3
CTI Castel Tesino 153.58 94 PKP PKPbc 22 51 47.3 +6.2
FETA Feichten 153.61 92⇑ *i*PKPbc PKPbc 22 51 42.4 +1.3
comp=Z,30nm,1.1s
STU Stuttgart 153.68 87 ePKPbc PKPbc 22 51 42.8 +1.6
WTSB Winterswijk 153.84 79 ePKP PKiKP 22 51 43.9 +2.4
WMQ Urumqi 153.96 259 ePKP PKPdf 22 51 36.0 +2.0
WMQ PP PP 22 55 36.0 +5.4
WMQ SKS SKSdf 22 58 41.0 +0.6
WMQ PP PP
comp=Z,297nm,10.0s
WMQ LR LR
comp=N,2μm,25.0s,MS6.0
WMQ LR LR
comp=E,2μm,24.0s,MS6.0
WMQ LR LR
comp=Z,2μm,24.0s,MS5.8
IBBN Ibbenburen 154.52 79 ePP PP 22 55 33.1 -0.6
ASF Jabal al Asfar 154.54 151 PKP PKPdf 22 51 35.9 +0.7
comp=Z,0.6nm,0.3s,baz=104,slow=1.0,SNR=7.9
ASF PKPbc PKPbc 22 51 44.4 +0.8
comp=Z,3.5nm,1.0s,baz=89,slow=2.0,SNR=9.7
APE Apeiranthos 154.61 126|| P PKPdf 22 51 35.2 +0.1
APE Apeiranthos 154.61 126|| *i*P PKPdf 22 51 35.2 +0.1
PTCC Patocco-Chiusa 154.75 95 PKP PKPdf 22 51 37.9 +2.9
JAVS Javornik 154.85 97 *i* PKPdf PKiKP 22 51 45.9 +2.1
TIR Tirane 155.08 112 PFAKE 22 51 50.0 +14
TIR LR LR
comp=Z,4μm,22.0s,MS6.2
GRA1 Grafenberg Arr 155.29 87 ePKPdf PKPdf 22 51 36.1 +0.5
GRA1 eSS SS 23 15 21.4 -1.3
GRF Grafenberg Arr 155.29 87 ePKP PKPdf 22 51 36.1 +0.5
GRF eSS SS 23 15 21.4 -1.3
GRF LR LR
comp=Z,3μm,21.0s,MS6.1
GRF Grafenberg Arr 155.29 87 ePKPdf PKPdf 22 51 36.1 +0.5
GRF eSS SS 23 15 21.4 -1.3
GRF Grafenberg Arr 155.29 87 eL 00 04 55.5
comp=Z,3μm,21.0s
KBL Kabul 155.64 218 ePKPdf PKPdf 22 51 39.0 +2.4
KBL ePKPdif 22 51 48.0
CLZ Clausthal 155.79 82 ePKPdf PKPdf 22 51 36.8 +0.6
BHL Bhannes 155.80 147 eP PKPdf 22 51 36.2 -0.6
TURN Turunc 155.81 131 *i* P PKPdf 22 51 32.3 -4.4
PERS Pernice 155.88 97 *i* PKPdf PKPdf 22 51 41.3 +4.8
GCAM G?zelcaml? 155.90 128 *i* P PKPdf 22 51 34.1 -2.8
MANZ Manzenberg 155.93 87 ePKPdf PKPdf 22 51 36.6 +0.2
WET Wettzell 155.96 89 ePKPdf PKPdf 22 51 36.7 +0.2
WET ePP PP 22 55 40.8 -1.0
MOX Moxa 155.96 85 ePKP PKPdf 22 51 35.1 -1.4
comp=Z,81nm,2.0s
MOX
comp=Z,2μm,21.0s
MOX Moxa 155.96 85 ePKIKP PKPdf 22 51 35.1 -1.4
MOX pmax pmax
comp=Z,81nm,2.0s
MOX MLR MLR
comp=Z,2μm,21.0s,MS5.9
MOX Moxa 155.96 85 ePKPdf PKPdf 22 51 36.7 +0.2
CSS Prodhromos 156.00 142 PFAKE 22 51 50.0 +13
CSS LR LR
comp=Z,3μm,19.0s,MS6.2
MOA Molln 156.07 93⇑ *i*PKPdf PKPdf 22 51 37.6 +0.9
comp=Z,18nm,1.4s
AYDN Tasoluk 156.16 129 *i* P PKPdf 22 51 39.3 +2.1
HWQ Hawqa 156.23 147 eP PKPdf 22 51 37.6 +0.2
NKC Novy Kostel 156.24 87 ePKP PKPdf 22 51 37.0 +0.2
NKC *e* 22 51 45.0
NKC *e* 22 55 42.9
NKC *e* 23 15 25.0
NKC Novy Kostel 156.24 87 ePKIKP PKPdf 22 51 37.0 +0.2
NKC *e* 22 51 45.0
NKC *e* 22 55 42.9
NKC MLR MLR
comp=Z,2μm,18.6s,MS6.0
NKC MLR MLR
comp=Z,3μm,18.8s
NKC Novy Kostel 156.24 87 ePKP PKPdf 22 51 37.0 +0.2
NKC *ex* x 22 51 45.0
NKC *ex* x 22 55 42.9
NKC *ex* x 23 15 25.0
NKC AMS AMS 00 09 50.0
comp=Z,3μm,18.8s
GEC2 GERESS Array S 156.27 91 ePKPdf PKPdf 22 51 36.8 -0.1
GERES GERESS Array B 156.27 91 PKP PKPdf 22 51 35.6 -1.3
comp=Z,1.7nm,0.8s,baz=241,slow=2.7,SNR=13
TANN Tannenbergstha 156.33 86 ePKPdf PKPdf 22 51 37.2 +0.2
TANN ePP PP 22 55 44.8 +0.9
KHC Kasperske Hory 156.35 90 ePKIKP PKPdf 22 51 37.8 +0.8
KHC *e* 22 51 46.0
KHC MLR MLR
comp=Z,3μm,22.1s,MS6.0
KHC MLR MLR
comp=Z,3μm,21.0s
KHC Kasperske Hory 156.35 90 ePKPDF PKPdf 22 51 37.8 +0.8
KHC *ep*PKP pPKPdf 22 51 46.0 +5.5
KHC *ex* x 22 52 29.5
KHC ePP PP 22 55 43.4 -0.6
KHC *ex* x 23 15 21.7
KHC AMS AMS 00 09 20.0
comp=Z,3μm,21.0s
CONA Conrad Observa 157.02 95|| *i*PKPdf PKPdf 22 51 39.5 +1.5
comp=Z,22nm,1.6s
CLL Collm 157.04 85 ePKP PKPdf 22 51 38.0 +0.2
CLL *i* 22 51 45.2
CLL *e* 22 52 13.0
CLL LR LR
comp=Z,3μm,21.6s,MS6.1
CLL Collm 157.04 85 ePKIKP PKPdf 22 51 38.0 +0.2
CLL *i* 22 51 45.2
CLL *e* 22 52 13.0
CLL pmax pmax
comp=Z,43nm,1.8s
CLL MLR MLR
comp=Z,3μm,21.6s,MS6.1
CLL Collm 157.04 85 ePKPdf PKPdf 22 51 37.6 -0.2
CLL Collm 157.04 85 ePKPdf PKPdf 22 51 38.0 +0.2
comp=Z,43nm,1.8s
CLL *i* sPKPdf 22 51 45.2
comp=Z,58nm,1.6s
CLL *e*(PKPab) PKPab 22 52 13.0 +4.6
comp=Z,71nm,1.8s
CLL *e*SKKSac SKKSac 23 02 41.0 +5.1
CLL *e*PSKS 23 06 14.0
CLL *e*PPS 23 09 06.0
CLL *e*SS SS 23 15 37.0 -4.6
CLL *e*SPS 23 16 34.0
CLL *e*SSS 23 21 37.0
CLL *e*SPSrev 23 24 38.0
CLL LmV 23 57 00.0
comp=Z,3μm,21.6s
BOZC Bozcaada 157.08 123 *i* P PKPdf 22 51 42.8 +4.5
PRU Pruhonice 157.31 89 ePKIKP PKPdf 22 51 40.0 +1.8
PRU *e* 22 51 47.1
PRU *e* 22 55 49.9
PRU MLR MLR
comp=Z,4μm,22.2s,MS6.2
PRU MLR MLR
comp=Z,3μm,19.6s
PRU Pruhonice 157.31 89 ePKPDF PKPdf 22 51 40.0 +1.8
PRU *ep*PKP pPKPdf 22 51 47.1 +5.4
PRU ePP PP 22 55 49.9 +0.6
PRU *ex* x 23 15 40.5
PRU AMS AMS 00 14 20.0
comp=Z,3μm,19.6s
BRG Berggiesshubel 157.38 86 ePKP PKPdf 22 51 37.9 -0.4
BRG *e* 22 51 47.1
BRG PP PP 22 55 48.0 -1.7
BRG SS SS 23 15 44.0 -1.3
BRG Berggiesshubel 157.38 86 ePKIKP PKPdf 22 51 37.9 -0.4
BRG pmax pmax
comp=Z,21nm,1.7s
BRG pmax pmax
comp=Z,35nm,1.7s
BRG Berggiesshubel 157.38 86 ePKPdf PKPdf 22 51 38.7 +0.4
TREC Trest 157.51 91 ePKIKP PKPdf 22 51 37.9 -0.6
TREC MLR MLR
comp=Z,3μm,20.7s,MS6.0
TREC MLR MLR
comp=Z,3μm,18.6s
TREC Trest 157.51 91 ePKPDF PKPdf 22 51 37.9 -0.6
TREC *ep*PKP pPKPdf 22 51 46.5 +4.6
TREC *ex* x 23 15 42.3
TREC AMS AMS 00 14 10.0
comp=Z,3μm,18.6s
TKTP Tekketepe 157.53 133 *i* P PKPdf 22 51 39.3 +0.4
PVCC Panska Ves 157.58 88 ePKIKP PKPdf 22 51 39.8 +1.2
PVCC *e* 22 51 46.5
PVCC MLR MLR
comp=Z,3μm,21.0s,MS6.1
PVCC MLR MLR
comp=Z,2μm,21.1s
PVCC Panska Ves 157.58 88 ePKPDF PKPdf 22 51 39.8 +1.2
PVCC *ep*PKP pPKPdf 22 51 46.5 +4.5

PVCC				*e*SS	SS	23 15 43.9	-3.5		
PVCC				AMS	AMS	00 05 10.0			
	comp=Z,2μm,21.1s								
KONO	**Kongsberg**	**157.60**	**62**	PFAKE		22 51 50.0	+12		
KONO				LR	LR				
	comp=Z,4μm,21.0s,MS6.2								
PKSM	**Moragy**	**157.61**	**101**	⇑*i*P	PKPdf	22 51 41.1	+2.4		
PKSM	**Moragy**	**157.61**	**101**	⇑*i*P	PKPdf	22 51 41.1	+2.4		
DEMI	**Demirci**	**157.67**	**128**	*i* P	PKPdf	22 51 37.6	-1.5		
VTS	**Vitosha**	**157.71**	**114**	⇓P	PKPdf	22 51 42.8	+3.8		
VTS	**Vitosha**	**157.71**	**114**	⇓P	PKPdf	22 51 42.8	+3.8		
ZST	**Bratislava**	**157.86**	**95**	*e*P	PKPdf	22 51 47.0	+8.0		
ZST				*e*		22 52 12.0			
ZST				LR	LR				
	comp=Z,800nm,19.4s,MS5.6								
ZST	**Bratislava**	**157.86**	**95**	*e*PKP	PKPab	22 52 12.0	-0.1		
ZST	**Bratislava**	**157.86**	**95**	*e*	PKPdf	22 51 47.0	+8.0		
GDZ	**Gediz**	**158.04**	**130**	*i* P	PKPdf	22 51 31.5	-8.1		
VRAC	**Vranov**	**158.15**	**92**	⇑P	PKPdf	22 51 41.7	+2.4		
VRAC	**Vranov**	**158.15**	**92**	⇑*i*P	PKPdf	22 51 41.7	+2.4		
BOLV	**Bolvadin**	**158.36**	**133**	*i* P	PKPdf	22 51 35.8	-4.1		
NAO01	**NORSAR Array S**	**158.37**	**59**	PFAKE		22 51 50.0	+11		
NAO01				LR	LR				
	comp=Z,4μm,19.0s,MS6.3								
UPC	**Upice**	**158.39**	**89**	*e*PKPDF	PKPdf	22 51 42.2	+2.7		
UPC				*e*pPKP	pPKPdf	22 51 48.6	+5.6		
UPC				*e*PP	PP	22 55 55.7	+0.5		
DPC	**Dobruska-Polom**	**158.50**	**89**	*e*PKIKP	PKPdf	22 51 42.2	+2.5		
DPC				MLR	MLR				
	comp=Z,3μm,27.9s,MS5.9								
DPC				MLR	MLR				
	comp=Z,2μm,17.6s								
DPC	**Dobruska-Polom**	**158.50**	**89**	*e*PKPDF	PKPdf	22 51 42.2	+2.5		
DPC				*e*PP	PP	22 55 54.5	-1.3		
DPC				*e*SS	SS	23 15 53.3	-3.8		
DPC				AMS	AMS	00 14 00.0			
	comp=Z,2μm,17.6s								
KSP	**Ksiaz**	**158.70**	**88**	*e*PKP	PKPdf	22 51 42.6	+2.7		
KSP	**Ksiaz**	**158.70**	**88**	*e*PKP	PKPdf	22 51 42.7	+2.8		
KSP				*e*pPKP	pPKPdf	22 51 47.1	+3.8		
KSP				*e*SS	SS	23 15 47.0	-12		
KSP				*e*SSS		23 21 32.0			
KSP				LR	LR				
	comp=Z,6μm,35.9s,MS6.2								
KSP	**Ksiaz**	**158.70**	**88**	*e*PKIKP	PKPdf	22 51 42.7	+2.8		
KSP				*e*		22 51 47.1			
KSP				MLR	MLR				
	comp=Z,6μm,35.9s,MS6.2								
ULDT	**Uludag**	**158.75**	**127**	*i* P	PKPdf	22 51 39.5	-0.9		
MKAR	**Makanchi Array**	**158.80**	**259**	PKP	PKPdf	22 51 39.3	-0.9		
	comp=Z,0.2nm,0.6s,baz=113,slow=1.9,SNR=2.5								
MKAR				PKPab	PKPab	22 52 13.9	-2.2		
	comp=Z,3.3nm,0.8s,baz=108,slow=4.9,SNR=7.5								
MKAR				PP	PP	22 55 55.5	-1.9		
	comp=Z,1.3nm,0.9s,baz=126,slow=6.2,SNR=4.1								
KOLL	**Kolacno**	**158.80**	**95**	*e*PKP	PKPdf	22 51 40.7	+0.6		
BZS	**Buzias**	**158.89**	**106**	⇓P	pPKPdf	22 51 45.4	+1.7		
BZS	**Buzias**	**158.89**	**106**	⇓*i*P	pPKPdf	22 51 45.4	+1.6		
MORC	**Moravsky Berou**	**158.92**	**92**	*e*PKPdf	PKPdf	22 51 42.3	+2.1		
MORC	**Moravsky Berou**	**158.92**	**92**	⇓*i*P	PKPdf	22 51 44.0	+3.8		
ESKT	**Eskisehir**	**158.99**	**131**	*i* P	PKPdf	22 51 36.9	-3.7		
VYHS	**Vyhne**	**159.00**	**96**	*e*PKP	PKPdf	22 51 40.2	-0.1		
VYHS	**Vyhne**	**159.00**	**96**	*e*	PKPdf	22 51 40.2	-0.1		
ELBA	**Catalca**	**159.22**	**124**	*i* P	PKPdf	22 51 36.7	-4.2		
PSZ	**Piszkesteto**	**159.29**	**99**	⇑P	pPKPdf	22 51 47.7	+3.6		
PSZ				LR	LR				
	comp=Z,3μm,21.0s,MS6.1								
PSZ	**Piszkesteto**	**159.29**	**99**	⇓*e*pPKP/A	pPKPdf	22 51 47.9	+3.8		
PSZ	**Piszkesteto**	**159.29**	**99**	⇓*i*P	pPKPdf	22 51 47.7	+3.6		
OKC	**Ostrava-Krasne**	**159.29**	**92**	*e*PKP	PKPdf	22 51 41.2	+0.6		
OKC				*e*		23 16 07.0			
OKC	**Ostrava-Krasne**	**159.29**	**92**	*e*PKIKP	PKPdf	22 51 41.2	+0.6		
OKC				*e*		23 16 07.0			
OKC				MLR	MLR				
	comp=Z,2μm,18.5s,MS5.9								
OKC				MLR	MLR				
	comp=Z,2μm,17.6s								
OKC	**Ostrava-Krasne**	**159.29**	**92**	*e*PKPDF	PKPdf	22 51 41.2	+0.6		
OKC				*e*SS	SS	23 16 07.0	+1.4		
OKC				AMS	AMS	00 11 40.0			
	comp=Z,2μm,17.6s								
TKM2	**Tokmak 2**	**159.81**	**241**	*e*PKPdf	PKPdf	22 51 43.0	+1.5		
TKM2				LR	LR				
	comp=Z,3μm,19.0s,MS6.2								
UCH	**Uchtor**	**159.82**	**238**	PFAKE		22 51 50.0	+8.5		
UCH				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
ANTO	**Ankara**	**160.10**	**134**	PFAKE		22 51 50.0	+8.1		
ANTO				LR	LR				
	comp=Z,4μm,20.0s								
ANTO	**Ankara**	**160.10**	**134**	⇑*i*P	PKPab	22 52 22.0	+0.1		
AML	**Almayashu**	**160.14**	**237**	PFAKE		22 51 50.0	+8.1		
AML				LR	LR				
	comp=Z,3μm,19.0s								
DRGR		**160.21**	**104**	⇑P	PKPdf	22 51 44.4	+2.6		
DRGR		**160.21**	**104**	⇑*i*P	PKPdf	22 51 44.4	+2.6		
FRU	**Bishkek**	**160.23**	**240**	*i* PKP2	PKPab	22 52 24.0	+1.6		
FRU				*e*		22 56 04.0			
FRU				pmax	pmax				
	comp=Z,60nm,1.8s								
BR131	**Keskin Array S**	**160.31**	**136**	*e*PKPdf	PKPdf	22 51 45.4	+3.3		
BR131				LR	LR				
	comp=Z,3μm,21.0s								
NIE	**Niedzica**	**160.31**	**95**	*e*PKP	PKPdf	22 51 44.6	+2.8		
OJC	**Ojcow**	**160.41**	**93**	*e*PKP	PKPdf	22 51 42.8	+0.9		
MARD	**Mardin**	**160.42**	**154**	*i* P	PKPdf	22 51 37.6	-4.8		
EKS2	**Erkin-Say**	**160.51**	**238**	PFAKE		22 51 50.0	+7.7		
EKS2				LR	LR				
	comp=Z,3μm,22.0s								
CDAG	**Cicekdag**	**160.51**	**138**	*i* P	PKPdf	22 51 40.2	-2.2		
ZALV	**Zalesovo Beam**	**160.65**	**279**	PKPab	PKPab	22 52 22.3	-1.7		
	comp=Z,5.0nm,0.8s,baz=114,slow=4.3,SNR=10								
STHS	**Stebnicka Huta**	**160.84**	**96**	*e*P	PKPdf	22 51 38.6	-3.8		
STHS				*e*		22 52 21.7			
STHS	**Stebnicka Huta**	**160.84**	**96**	*e*PKP	PKPab	22 52 21.6	-3.4		
STHS	**Stebnicka Huta**	**160.84**	**96**	*e*	PKPdf	22 51 38.6	-3.8		
MLR	**Muntele Rosu**	**161.14**	**112**	PKP	PKPdf	22 51 41.6	-1.2		
	comp=Z,2.1nm,0.4s,baz=125,slow=18,SNR=3.9								
MLR	**Muntele Rosu**	**161.14**	**112**	⇓*i*P	PKPdf	22 51 42.4	-0.4		
KWP	**Kalwaria**	**161.77**	**97**	*e*PKP	PKPdf	22 51 42.7	-0.6		
KWP	**Kalwaria**	**161.77**	**97**	*e*PKP	PKPdf	22 51 42.7	-0.7		
KWP				LR	LR				
	comp=Z,4μm,21.0s								
KWP	**Kalwaria**	**161.77**	**97**	⇑*i*P	PKPdf	22 51 45.5	+2.1		
BURAR	**Bucovina Array**	**162.07**	**105**	⇓*i*P	pPKPdf	22 51 48.3	+1.3		
BUR08	**Bucovina Ar. S**	**162.08**	**105**	*e*PKPdf	PKPdf	22 51 44.3	+0.5		
KEV	**Kevo**	**162.14**	**28**	PFAKE		22 51 50.0	+6.9		
KEV				LR	LR				
	comp=Z,6μm,22.0s								
TUTA	**Tutak**	**162.89**	**157**	*i* P	pPKPdf	22 51 53.5	+5.2		
KOPT	**Kop Dagi**	**162.90**	**151**	*i* P	PKPdf	22 51 45.8	+1.0		
KURK	**Kurchatov**	**162.92**	**265**	PKP	PKPdf	22 51 42.2	-2.3		
	baz=129,slow=0.9								
KURK				PP	PP	22 56 16.8	-2.8		
	baz=132,slow=5.2								
KURK	**Kurchatov**	**162.92**	**265**	*e*PKIKP	PKPdf	22 51 45.1	+0.6		
KURK				MLR	MLR				
	comp=Z,5μm,22.0s								
KIS	**Kishinev**	**163.63**	**112**	*e*PKIKP	PKPdf	22 51 52.0	+6.7		
KIS				*e*		23 00 30.0			
KIS	**Kishinev**	**163.63**	**112**	*e*PKP	pPKPdf	22 51 52.0	+3.3		
KIS				LRM		00 12 56.0			
	comp=Z,4μm,22.0s								
SUW	**Suwalki**	**163.79**	**84**	*e*PKPdf	PKPdf	22 51 47.0	+1.8		
GNI	**Garni**	**163.99**	**162**	PFAKE		22 52 00.0	+14		
GNI				LR	LR				
	comp=Z,6μm,21.0s								
DDEM	**Demirkent**	**164.05**	**153**	*i* P	PKPdf	22 51 44.6	-1.3		
DAGI	**Agillar**	**164.27**	**153**	*i* P	PKPdf	22 51 50.7	+4.6		
SIM	**Simferopol'**	**164.80**	**127**	*i* PKIKP	PKPdf	22 51 50.1	+3.7		
SIM				*e*SS		23 18 13.0			
SIM				pmax	pmax				
	comp=Z,50nm,6.0s								
LVZ	**Lovozero**	**165.42**	**25**	PFAKE		22 52 00.0	+14		
LVZ				LR	LR				
	comp=Z,5μm,20.0s								
SOC	**Sochi**	**165.91**	**143**	*e*PKIKP	PKPdf	22 51 51.2	+3.8		
SOC				*e*		22 56 44.2			
SOC				*e*SSS		23 23 50.6			
KIEV	**Kiev**	**165.94**	**101**	PFAKE		22 52 00.0	+13		
KIEV				LR	LR				
	comp=Z,6μm,21.0s								
AKASG	**Malin Array Be**	**165.95**	**101**	PKP	PKPdf	22 51 46.1	-1.1		
	comp=Z,0.3nm,0.4s,baz=295,slow=1.3,SNR=7.8								
AKASG				PKPab	PKPab	22 52 46.1	-1.3		
	comp=Z,2.1nm,0.7s,baz=253,slow=3.5,SNR=4.6								
KIV	**Kislovodsk**	**167.16**	**151**	PFAKE		22 52 00.0	+12		
KIV				LR	LR				
	comp=Z,5μm,22.0s								
KIV	**Kislovodsk**	**167.16**	**151**	⇑*e*PKIKP	PKPdf	22 51 51.3	+3.0		
KIV				*i* SS	SS	23 17 25.8	+0.1		
KIV				*e*SSS		23 24 10.9			
KIV				pmax	pmax				
	comp=Z,14nm,1.4s								
MAK	**Makhachkala**	**167.16**	**168**	*e*PKIKP	PKPdf	22 51 48.9	+0.5		
MAK				*e*		22 56 40.7			
MAK				*e*SS	SS	23 17 25.3	-0.2		
MAK				*e*SSS		23 24 10.3			
BVAR	**Borovoye Array**	**168.52**	**265**	PKPab	PKPab	22 52 57.1	-1.6		
	comp=Z,1.9nm,0.8s,baz=116,slow=3.4,SNR=7.6								
BRVK	**Borovoye**	**168.59**	**265**	PFAKE		22 52 00.0	+11		
BRVK				LR	LR				
	comp=Z,7μm,20.0s								
OBN	**Obninsk**	**171.63**	**87**	PFAKE		22 52 00.0	+9.3		
OBN				LR	LR				
	comp=Z,6μm,22.0s								
OBN	**Obninsk**	**171.63**	**87**	⇓*e*PKIKP	PKPdf	22 51 50.5	-0.2		
OBN				*e*SS	SS	23 18 12.4	+1.0		
OBN				*e*SSS		23 25 01.0			
OBN				pmax	pmax				
	comp=Z,40nm,1.9s								
ARU	**Arti**	**175.79**	**285**	PFAKE		22 52 00.0	+7.9		
ARU				LR	LR				
	comp=Z,4μm,22.0s								
ARU	**Arti**	**175.79**	**285**	PKP2	PKPab	22 53 29.0	-1.9		

IDC 02 22:55:39.4±4.4,1677S×17739W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.8/16,mbtmp4.1/3,MS5.1/4,Ms1 5.1/4, ms1mx4.1/25,Error ellipse: s-maj=194.8km s-min=47.2km az=139.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**23.23**	**285**	LR		LR		23 08 07.6	
	comp=Z,1μm,21.0s,baz=152,slow=32								
STKA	**Stephens Creek**	**40.03**	**240**	P		P		23 03 16.7	+0.4
	0.7nm,0.3s,baz=87,slow=12,SNR=7.2								
WRA	**Warramunga Arr**	**45.80**	**258**	P		P		23 04 03.1	-0.2
	0.4nm,0.3s,baz=94,slow=7.4,SNR=4.8								
ASAR	**Alice Springs**	**46.04**	**253**	P		P		23 04 04.8	-0.3
	3.3nm,0.4s,baz=90,slow=8.2,SNR=67								
DAV	**Davao City (W)**	**61.16**	**288**	LR		LR		23 30 05.1	
	comp=Z,3μm,21.3s,baz=133,slow=34								
ASAJ	**Asahikawa**	**70.76**	**331**	LR		LR		23 39 07.7	
	comp=Z,1μm,18.7s,baz=152,slow=37								
PETK	**Petropavlovsk-**	**72.84**	**345**	LR		LR		23 32 13.6	
	comp=Z,2μm,21.7s,baz=152,slow=30								
GERES	**GERESS Array B**	**146.75**	**347**	PKPbc	PKPbc			23 15 22.7	-0.6
	0.4nm,0.5s,baz=354,slow=2.7,SNR=5.3								

*ISCJB **02** 22:56:32.4±0.6,553S±0.1×1289W±0.2,h10km,mb4.5/13, MS5.0/11,Error ellipse: s-maj=23.0km s-min=14.2km az=138.1*

*IDC **02** 22:56:32.5±0.7,5525S×12899W,h0km,mb4.4/8, mb1 4.5/8,mb1mx4.4/14,mbtmp4.4/8,MS5.0/11, Ms1 5.0/11,ms1mx4.6/31,Error ellipse: s-maj=30.0km s-min=19.3km az=151.0*

*NEIC **02** 22:56:34.0±0.4,5520S×12894W,h10km,mb4.9/5,Error ellipse: s-maj=21.4km s-min=12.6km az=142.0*

*GCMT **02** 22:56:34.0±0.3,5537S×12857W,h17km±1km,MW5.4/68, Moment Tensor Solution. s15,c19; s68,c104; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09±.07; $M_{\theta\theta}$0.87±.06; $M_{\phi\phi}$-0.78±.05; $M_{r\theta}$-0.26±.14; $M_{\theta\phi}$1.00±.04; $M_{\phi r}$0.21±.14; Best double couple: $M_0$1.34300×10^{17} NP1:ϕ_s200.00000°,δ76.00000°,λ-174.00000°. NP2: ϕ_s109.00000°,δ85.00000°,λ-14.00000°. Principal axes: T 1.3570, Plg6.0000°, Azm156.0000°; N -0.0270, Plg75.0000°, Azm269.0000°; P -1.3290, Plg14.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 22:56:34.3±0.6,552S±01×1290W±02,h10km,n64, σ0^{2}73/15,mb4.5/13,MS5.0/11,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.38**	**201**	P		**P**		**23 02 54.4**	**-0.3**
	14nm,1.4s,mb4.6								
PMSA	**Palmer Station**	**32.38**	**134**	LR		LR		23 14 19.1	
	comp=Z,μm,18.9s,MS4.8,baz=320,slow=33								
USHA	**Ushuaia**	**33.75**	**115**	LR		LR		23 12 50.3	
	comp=Z,3μm,20.5s,MS5.0,baz=341,slow=29								
QSPA	**South Pole Qui**	**34.95**	**180**	P		**P**		**23 03 26.4**	**+0.7**
	3.0nm,0.8s,mb4.3,baz=137,slow=3.7,SNR=8.0								
QSPA				LR		LR		23 15 14.4	
	comp=Z,3μm,19.5s,MS5.1,baz=255,slow=32								
QSPA	**South Pole Qui**	**34.95**	**180**	P		**P**		**23 03 26.4**	**+0.7**
QSPA				LR		LR		23 15 14.4	
RPZ	**Rata Peaks**	**39.43**	**261**	LR		LR		23 15 59.5	
	comp=Z,3μm,20.2s,MS5.1,baz=123,slow=30								
PLCA	**Paso Flores**	**40.48**	**94**	LR		LR		23 17 08.2	
	comp=Z,1μm,19.6s,MS4.8,baz=314,slow=30								
PPT	**Papeete**	**40.76**	**329**	LR		LR		23 16 22.9	
	comp=Z,3μm,18.4s,MS5.1,baz=260,slow=29								
RAR	**Rarotonga**	**41.06**	**313**	LR		LR		23 16 45.8	
	comp=Z,2μm,19.2s,MS4.9,baz=126,slow=30								
CASY	**Casey**	**50.80**	**207**	*e*P		**P**		**23 05 34.9**	**+0.8**
	26nm,1.6s,mb4.9								
MAW	**Mawson**	**57.16**	**185**	P		**P**		**23 06 19.6**	**-0.9**
	3.2nm,1.1s,mb4.3,baz=222,slow=12,SNR=4.4								
LPAZ	**La Paz**	**60.24**	**75**	P		**P**		**23 06 41.8**	**-0.8**
	7.5nm,1.2s,mb4.6,baz=209,slow=3.4,SNR=9.6								
LPAZ				LR		LR		23 25 59.2	
	comp=Z,932nm,19.6s,MS4.9,baz=211,slow=29								
STKA	**Stephens Creek**	**64.17**	**251**	P		**P**		**23 07 09.4**	**+0.5**
	2.1nm,0.8s,mb4.2,baz=166,slow=7.7,SNR=5.2								
OTAV	**Otavalo**	**68.86**	**56**	*e*P		**P**		**23 07 38.2**	**-0.7**
	18nm,1.5s,mb4.8								
CTAO	**Charters Tower**	**70.79**	**262**	*e*P		**P**		**23 07 51.1**	**+0.3**
	9.8nm,1.0s,mb4.7								
ASAR	**Alice Springs**	**74.80**	**251**	P		**P**		**23 08 14.3**	**-0.3**
	7.1nm,0.8s,mb4.6,baz=139,slow=5.7,SNR=58								
ROSC	**El Rosal**	**74.85**	**57**	P		**P**		**23 08 16.9**	**+1.9**
	2.4nm,0.3s,mb4.6,baz=270,slow=20,SNR=3.1								
WB2	**Warramunga Arr**	**77.56**	**253**	*e*P		**P**		**23 08 29.8**	**-0.6**
WRA	**Warramunga Arr**	**77.57**	**253**	P		**P**		**23 08 30.3**	**-0.1**
	3.8nm,1.0s,mb4.3,baz=142,slow=5.2,SNR=16								
WRAB	**Tennant Creek**	**77.57**	**253**	*e*P		**P**		**23 08 30.2**	**-0.2**
	15nm,1.2s,mb4.8								
LPIG	**La Paz**	**80.61**	**17**	LR		LR		23 36 22.9	
	comp=Z,840nm,18.7s,MS5.1,baz=59,slow=30								
TXAR	**Lajitas Array**	**86.98**	**22**	P		**P**		**23 09 19.3**	**+0.1**
	1.1nm,0.9s,mb4.1,baz=189,slow=7.1,SNR=6.1								
BOSA	**Boshof**	**93.62**	**157**	LR		LR		23 48 56.6	
	comp=Z,879nm,18.3s,MS5.2,baz=288,slow=34								
PDAR	**Pinedale Array**	**99.02**	**14**	LR		LR		23 44 55.8	
	comp=Z,733nm,18.3s,MS5.2,baz=96,slow=29								
ESDC	**Sonseca Array**	**140.80**	**90**	PKP	PKPdf			23 16 04.0	+0.4
	0.4nm,0.7s,baz=201,slow=1.7,SNR=3.3								
SJPF	**Ste Jean**	**144.59**	**88**	*e*PKP1	PKPdf			23 16 08.8	-1.3
TIXI	**Tiksi**	**144.65**	**328**	*e*PKPdf	PKPdf			23 16 07.5	-1.9
ETSF	**Etsaut**	**144.84**	**89**	*e*PKP1	PKPdf			23 16 08.7	-1.9
	21nm,1.2s								
ULN	**Ulaanbaatar**	**145.23**	**282**	*e*PKPdf	PKPdf			23 16 10.3	-0.8
EPF	**Esparros**	**145.44**	**89**	*e*PKP1	PKPbc			23 16 10.5	-1.2
	23nm,1.0s								
KEST	**Kesra**	**145.56**	**107**	PKPbc	PKPbc			23 16 11.3	-1.0
	2.3nm,0.8s,baz=311,slow=1.8,SNR=6.1								
SONM	**Songino Array**	**145.58**	**281**	PKPbc	PKPbc			23 16 11.8	-0.1
	5.8nm,0.8s,baz=136,slow=2.7,SNR=26								
MTLF	**Montolieu**	**146.71**	**90**	*e*PKP1	PKPbc			23 16 15.1	-0.4
RJF	**Les Rejaudoux**	**147.49**	**87**	*e*PKP1	PKPbc			23 16 16.5	-1.1
	7.7nm,0.8s								
CAF	**Calviac**	**147.58**	**88**	*e*PKP1	PKPbc			23 16 17.1	-0.8
GRR	**Gorron**	**147.86**	**80**	*e*PKP1	PKPbc			23 16 18.6	+0.1
FLN	**La Foliniere**	**148.27**	**80**	*e*PKP1	PKPbc			23 16 18.6	-1.0
	27nm,1.1s								
LDF	**La Druitiere**	**148.39**	**80**	*e*PKP1	PKPbc			23 16 19.9	0.0
TCF	**Toulx Ste Croi**	**148.45**	**86**	*e*PKP1	PKPbc			23 16 20.1	0.0
	14nm,1.1s								
DDI	**Dehra Dun**	**148.53**	**229**	*ex*	PKPdf			23 16 18.3	+1.1
DDI				*ex*	x			23 16 18.3	
BGF	**Bois d'Agland**	**148.97**	**86**	*e*PKP1	PKPbc			23 16 21.9	+0.5
	13nm,0.9s								
VIVF	**Saint-Julien-l**	**149.03**	**90**	*e*PKP1	PKPbc			23 16 20.3	-1.3
FRF	**La Foret Royal**	**149.38**	**94**	*e*PKP1	PKPbc			23 16 22.7	+0.1
	81nm,1.6s								
AVF	**Avril sur Loir**	**149.39**	**86**	*e*PKP1	PKPbc			23 16 21.1	-1.4
SMF	**Signal de Mont**	**149.59**	**86**	*e*PKP1	PKPbc			23 16 22.0	-1.0
SSF	**Saint Saulge**	**149.63**	**86**	*e*PKP1	PKPbc			23 16 22.7	-0.3
LOR	**Lormes**	**149.94**	**85**	*e*PKP1	PKPbc			23 16 23.8	0.0
	11nm,1.0s								
SBF	**Sospel**	**150.02**	**94**	*e*PKP1	PKPbc			23 16 24.1	0.0
	32nm,1.0s								
PGF	**Puggiola**	**150.09**	**97**	*e*PKP1	PKPbc			23 16 23.8	-0.5
LPG	**La Plagne**	**150.60**	**91**	*e*PKP1	PKPbc			23 16 25.1	-0.3
	17nm,1.1s								
LPL	**La Plagne**	**150.60**	**91**	*e*PKP1	PKPbc			23 16 24.8	-0.6
	16nm,1.2s								
CABF	**La Chapelle**	**150.85**	**88**	*e*PKP1	PKPbc			23 16 26.3	+0.3
	29nm,1.3s								
MEZF	**Maizieres J'vi**	**151.28**	**84**	*e*PKP1	PKPbc			23 16 27.2	+0.3
	9.6nm,0.8s								
BAIF	**Baives**	**151.57**	**81**	*e*PKP1	PKPbc			23 16 27.8	+0.2
	14nm,0.9s								
HAU	**Haudompre**	**151.76**	**86**	*e*PKP1	PKPbc			23 16 27.8	-0.2
	8.4nm,0.8s								
HINF	**Hinteralfeld**	**151.95**	**87**	*e*PKP1	PKPbc			23 16 28.6	+0.1
	10nm,0.9s								
ECH	**Echery**	**152.33**	**86**	*e*PKPbc	PKPbc			23 16 27.5	-1.8
CDF	**Champ du Feu**	**152.50**	**86**	*e*PKP1	PKPbc			23 16 29.7	0.0
TUE	**Stuetta**	**152.64**	**91**	*e*PKPab	PKPab			23 16 38.1	-2.7
GERES	**GERESS Array B**	**156.40**	**90**	PKP	PKPdf			23 16 27.6	-0.6
	0.7nm,0.8s,baz=240,slow=4.5,SNR=4.0								
CLL	**Collm**	**157.13**	**84**	e(PKPdf)	PKPdf			23 16 32.0	+3.0
BRG	**Berggiesshubel**	**157.48**	**86**	*e*P	PKPdf			23 16 38.5	+9.0
MKAR	**Makanchi Array**	**158.74**	**260**	PKPab	PKPab			23 17 06.4	-0.5
	0.8nm,0.7s,baz=109,slow=5.0,SNR=7.0								
ZALV	**Zalesovo Beam**	**160.47**	**280**	PKPab	PKPab			23 17 12.3	-2.1
	2.5nm,0.8s,baz=130,slow=6.0,SNR=7.7								

IDC 02 22:56:42.5±2.2,252N×12679E,h0km,mb3.4/3,mb1 3.6/3, mb1mx3.4/17,mbtmp3.4/3,Error ellipse: s-maj=188.0km s-min=25.3km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.52**	**162**	P		P		23 01 54.1	-0.6
	0.7nm,0.4s,baz=341,slow=11,SNR=5.1								
ASAR	**Alice Springs**	**26.94**	**165**	P		P		23 02 26.4	+0.6
	0.3nm,0.6s,baz=340,slow=8.0,SNR=4.4								
MKAR	**Makanchi Array**	**58.58**	**326**	P		P		23 06 41.0	0.0
	0.4nm,0.5s,baz=118,slow=8.5,SNR=8.9								

*ISK **02** 23:06:17.1,3937N×3243E,h5km,MD3.5*
*DDA **02** 23:06:17.3,3934N×3243E,h18km±2km,Md3.5*
*CSEM **02** 23:06:17.4±0.1,3936N×3243E,h2km,MD3.5,Error ellipse: s-maj=1.7km s-min=1.2km az=159.0*
*ISCJB **02** 23:06:18.7±0.3,3936N±003×3243E±0.003,h10km,Error ellipse: s-maj=4.3km s-min=2.8km az=160.7*

ISC 02 23:06:18.4±0.6,3936N±003×3242E±003,h1km±5km,n40, σ0^{2}89/46,Turkey

| Code | Station Name | Δ° |

MDRS	**Chennai**	**132.16**	**220**	*e*P		Pdif	23 24 18.2	-4.9
MDRS				*e*P			23 25 43.2	
SJPF	**Ste Jean**	**144.54**	**88**	*e*PKP1		PKPdf	23 27 49.0	-1.5
	40nm,1.4s							
TIXI	**Tiksi**	**144.72**	**328**	*e*PKPdf		PKPdf	23 27 48.0	-2.0
ETSF	**Etsaut**	**144.79**	**89**	*e*PKP1		PKPdf	23 27 49.7	-1.3
	18nm,0.9s							
ULN	**Ulaanbaatar**	**145.29**	**282**	*e*PKPbc		PKPbc	23 27 51.9	+0.4
EPF	**Esparros**	**145.39**	**89**	*e*PKP1		PKPbc	23 27 51.4	-0.6
	24nm,0.9s							
KEST	**Kesra**	**145.50**	**107**	PKPbc		PKPbc	23 27 52.8	+0.3
	2.5nm,1.0s,baz=227,slow=5.3,SNR=4.5							
SONM	**Songino Array**	**145.65**	**281**	PKPbc		PKPbc	23 27 52.4	-0.3
	3.9nm,0.8s,baz=136,slow=3.4,SNR=25							
QUIF	**Quistinic**	**146.26**	**80**	*e*PKP1		PKPbc	23 27 53.9	-0.6
	39nm,1.2s							
ROSF	**Rostrenen**	**146.43**	**79**	*e*PKP1		PKPbc	23 27 54.3	-0.7
	50nm,1.4s							
MTLF	**Montolieu**	**146.66**	**90**	*e*PKP1		PKPbc	23 27 54.8	-1.0
LFF	**La Frestale**	**146.78**	**87**	*e*PKP1		PKPbc	23 27 55.3	-0.8
	17nm,0.8s							
SGMF	**Saint Gilles**	**146.79**	**79**	*e*PKP1		PKPbc	23 27 54.2	-1.8
	30nm,1.0s							
MFF	**Saint Martin d**	**147.24**	**84**	*e*PKP1		PKPbc	23 27 56.2	-1.1
	18nm,1.0s							
CAF	**Calviac**	**147.53**	**88**	*e*PKP1		PKPbc	23 27 57.9	-0.3
	19nm,1.1s							
GRR	**Gorron**	**147.82**	**80**	*e*PKP1		PKPbc	23 27 58.1	-0.8
	9.2nm,0.7s							
LASF	**Ste Croix**	**148.04**	**91**	*e*PKP1		PKPbc	23 27 59.6	0.0
FLN	**La Foliniere**	**148.23**	**80**	*e*PKP1		PKPbc	23 27 59.2	-0.7
	29nm,1.1s							
LDF	**La Druitiere**	**148.34**	**80**	*e*PKP1		PKPbc	23 27 58.6	-1.6
	37nm,1.4s							
TCF	**Toulx Ste Croi**	**148.40**	**86**	*e*PKP1		PKPbc	23 27 59.8	-0.7
BGF	**Bois d'Agland**	**148.92**	**86**	*e*PKP1		PKPbc	23 28 01.2	-0.6
	11nm,0.8s							
VIVF	**Saint-Julien-l**	**148.98**	**90**	*e*PKP1		PKPbc	23 28 01.0	-1.0
AVF	**Avril sur Loir**	**149.34**	**86**	*e*PKP1		PKPbc	23 28 01.6	-1.2
SMF	**Signal de Mont**	**149.54**	**86**	*e*PKP1		PKPbc	23 28 02.8	-0.5
SSF	**Saint Saulge**	**149.58**	**86**	*e*PKP1		PKPbc	23 28 03.2	-0.2
ORIF	**Oris-en-Rattie**	**149.71**	**91**	*e*PKP1		PKPbc	23 28 03.1	-0.7
	7.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**149.77**	**67**	PKPbc		PKPbc	23 28 03.0	-0.6
	3.8nm,0.8s,baz=289,slow=2.6,SNR=6.5							
LOR	**Lormes**	**149.89**	**85**	*e*PKP1		PKPbc	23 28 03.0	-1.2
	8.8nm,0.9s							
LPG	**La Plagne**	**150.55**	**91**	*e*PKP1		PKPbc	23 28 06.0	+0.2
	28nm,1.1s							
LPL	**La Plagne**	**150.55**	**91**	*e*PKP1		PKPbc	23 28 05.2	-0.6
	19nm,1.1s							
CABF	**La Chapelle**	**150.80**	**88**	*e*PKP1		PKPbc	23 28 06.3	-0.1
	33nm,1.4s							
MEZF	**Maizieres J'vi**	**151.23**	**84**	*e*PKP1		PKPbc	23 28 08.1	+0.8
BAIF	**Baives**	**151.53**	**81**	*e*PKP1		PKPbc	23 28 06.9	-1.0
	11nm,1.0s							
HAU	**Haudompre**	**151.71**	**86**	*e*PKP1		PKPbc	23 28 07.6	-0.8
HINF	**Hinteralfeld**	**151.90**	**87**	*e*PKP1		PKPbc	23 28 08.2	-0.6
	10nm,1.0s							
GERES	**GERESS Array B**	**156.34**	**90**	PKP		PKPdf	23 28 10.4	+1.8
	0.4nm,0.7s,baz=325,slow=1.6,SNR=4.2							
GERES				PKPab		PKPab	23 28 35.4	-1.6
	1.0nm,0.8s,baz=204,slow=2.9,SNR=7.1							

IDC 02 23:29:05.8±53.0, 1650S×17041W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/17, mbtmp4.3/3, Error ellipse: s-maj=1044.0km s-min=191.4km az=81.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**46.01**	**241**	P	P	23 37 31.2	0.0
	2.4nm,1.0s,baz=82,slow=12,SNR=5.8						
WRA	**Warramunga Arr**	**52.40**	**257**	P	P	23 38 20.1	-0.2
	1.1nm,0.4s,baz=96,slow=6.7,SNR=24						
ASAR	**Alice Springs**	**52.52**	**253**	P	P	23 38 21.2	+0.1
	7.1nm,0.7s,baz=90,slow=7.9,SNR=108						

*IDC **02** 23:30:59.2±0.5, 5505N×16127E, h0km, mb4.2/27, mb1 4.4/29, mb1mx4.4/33, mbtmp4.3/29, ML4.2/2, Error ellipse: s-maj=14.5km s-min=9.9km az=146.0*
*SZGRF **02** 23:31:02.7, 5304N×16057E, h33km, mb4.4, Near east coast of Kamchatka Peninsula, Russia*
*KRSC **02** 23:31:02.6±1.2, 5488N×16161E, h19km±19km, ML5.3*
*MOS **02** 23:31:02.1±1.3, 5487N×16159E, h24km, mb4.6/37, Error ellipse: s-maj=11.8km s-min=5.3km az=83.6*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
*ISCJB **02** 23:31:04.1±0.5, 5490N±002×16154E±006, h42km±4km, mb4.4/65, MS4.7/3, Error ellipse: s-maj=6.6km s-min=3.4km az=25.3*
*NEIC **02** 23:31:05.1±0.4, 5491N×16141E, h35km, mb4.5/25, Error ellipse: s-maj=10.8km s-min=7.2km az=145.0*
*BJI **02** 23:31:05.0, 5490N×16140E, h35km, mB5.0, mb4.5, Ms4.6, Msz4.5*

ISC 02 23:31:05.5±0.5, 5492N±002×16146E±006, h38km±4km, h63km±1.2km: pP-P, n191, σ1831/202, mb4.4/65, MS4.7/3, 2C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.84**	**296**	*e*P	**Pn**	**23 31 20.1**	**-0.7**
KMNR	**Kamenistaya**	**1.09**	**320**	*e*P	**Pn**	**23 31 24.0**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.11**	**337**	*e*P	**Pn**	**23 31 24.0**	**-0.5**
BZMR	**Bezymyannaya**	**1.16**	**332**	*e*P	**Pn**	**23 31 25.0**	**-0.2**
BZWR	**Bezymyannyi-We**	**1.18**	**333**	*e*P	**Pn**	**23 31 25.3**	**-0.2**
KIRR	**Kirishev**	**1.21**	**329**	*e*P	**Pn**	**23 31 25.7**	**-0.3**
KPT	**Kopyto**	**1.26**	**326**	*e*P	**Pn**	**23 31 26.6**	**0.0**
KRSR	**Krestovskiy**	**1.39**	**339**	*i* P	**Pn**	**23 31 27.8**	**-0.6**
KRSR				*i* S	**Sn**	**23 31 46.1**	**+0.5**
KOZR	**Kozyr**	**1.45**	**323**	PN	**Pn**	**23 31 29.8**	**+0.6**
KOZ	**Kozyrevsk**	**1.45**	**322**	*e*P	**Pn**	**23 31 29.8**	**+0.6**
KLY	**Klyuchi**	**1.47**	**342**	*i* P	**Pn**	**23 31 28.5**	**-0.9**
KLY				*i* S	**Sn**	**23 31 47.6**	**+0.2**
KII	**Karymskiy**	**1.47**	**234**	*i* P	**Pn**	**23 31 29.9**	**+0.4**
KBTR	**Krutoberegovo**	**1.50**	**30**	*i* P	**Pn**	**23 31 26.9**	**-3.0**
SRKR	**Sorokina**	**1.74**	**355**	*i* P	**Pn**	**23 31 32.9**	**-0.3**
SPN	**Mys Shipunski**	**2.02**	**206**	*i* P	**Pn**	**23 31 34.9**	**-2.1**
NLC	**Nalytchevo**	**2.15**	**216**	*i* P	**Pn**	**23 31 38.3**	**-0.6**
AVH	**Avacha**	**2.31**	**225**	*e*P	**Pn**	**23 31 40.9**	**-0.1**
GNL	**Ganaly**	**2.40**	**241**	*i* P	**Pn**	**23 31 42.9**	**+0.6**
INSR	**Institute**	**2.51**	**223**	*e*P	**Pn**	**23 31 44.1**	**+0.3**
INSR				*i* S	**Sn**	**23 32 14.2**	**+1.1**
PET	**Petropavlovsk**	**2.52**	**222**	*e*Pn	**Pn**	**23 31 43.7**	**-0.3**
PET				*e*Sn	**Sn**	**23 32 11.1**	**-2.4**
PET	**Petropavlovsk**	**2.52**	**222**	*i*/*e*PN	**Pn**	**23 31 43.7**	**-0.3**
PET				*e*S	**Sn**	**23 32 15.1**	**+1.6**
PET				pmax	pmax		
	comp=Z,2μm,0.7s						
PET				pmax	pmax		
	comp=Z,3μm,0.5s						
PET				smax			
	comp=E,10μm,0.5s						
PET				smax			
	comp=N,7μm,0.4s						
PET	**Petropavlovsk**	**2.52**	**222**	*i* P	**Pn**	**23 31 43.6**	**-0.4**
PET				*i* S	**Sn**	**23 32 13.7**	**+0.2**
PEA0B	**Petropavlovsk-**	**2.87**	**232**	*e*Pn	**Pn**	**23 31 49.0**	**+0.2**
PEA0B				*e*Sn	**Sn**	**23 32 24.0**	**+2.0**
PETK	**Petropavlovsk-**	**2.87**	**232**	Pn	**Pn**	**23 31 47.6**	**-1.1**
	comp=N,81nm,0.3s,baz=66,slow=17,SNR=203						
PETK				Pg	**Pn**	**23 31 52.7**	**+4.0**
	comp=N,208nm,0.3s,baz=75,slow=20,SNR=266						
PETK				Lg		23 32 29.6	
	comp=N,150nm,0.3s,baz=106,slow=21,SNR=5.5						
PETK	**Petropavlovsk-**	**2.87**	**232**	Pn	**Pn**	**23 31 47.6**	**-1.1**
PETK				Lg		23 32 29.6	
RUS	**Russkaya**	**3.05**	**216**	*i* P	**Pn**	**23 31 50.7**	**-0.5**
RUS				*i* S	**Sn**	**23 32 25.5**	**-0.9**
GRL	**Gorelyy**	**3.11**	**222**	*e*P	**Pn**	**23 31 52.9**	**+0.8**
GRL				*i* S	**Sn**	**23 32 30.2**	**+2.2**
MIPR	**Malaya Ipel'ka**	**3.86**	**229**	P	**Pn**	**23 32 05.1**	**+2.8**
SKR	**Severo-Kuril's**	**5.34**	**220**	*e*PN	**Pn**	**23 32 23.2**	**+0.5**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SEY	**Seymchan**	**9.29**	**333**	*e*PN	**Pn**	**23 33 19.8**	**+3.1**
BILL	**Bilibino**	**13.35**	**8**	*e*Pn	**Pn**	**23 34 14.0**	**+1.9**
	comp=Z,23nm,0.9s						
BILL	**Bilibino**	**13.35**	**8**	*i*/*e*PN	**Pn**	**23 34 14.9**	**+2.7**
BILL				pmax	pmax		
	comp=Z,70nm,1.7s						
YSS	**Yuzh-Sakhalins**	**14.21**	**244**	*e*P	**Pn**	**23 34 25.1**	**+1.2**
ASAJ	**Asahikawa**	**16.28**	**236**	Pn	**Pn**	**23 34 51.0**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=79,slow=5.2,SNR=3.4						
ASAJ	**Asahikawa**	**16.28**	**236**	P	**Pn**	**23 34 51.0**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HABR	**Khabarovsk**	**17.53**	**259**	*e*P	**Pn**	**23 35 06.1**	**-0.6**
HABR				*e*S	**S**	**23 38 20.9**	**-6.5**
ERM	**Erimo**	**17.65**	**231**	*e*P	**Pn**	**23 35 06.8**	**-1.4**
YAK	**Yakutsk**	**17.93**	**306**	*e*P	**Pn**	**23 35 17.6**	**+6.2**
YAK				*e*S	**S**	**23 38 37.3**	**+2.1**
YAK				pmax	pmax		
	comp=Z,43nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				smax			
	comp=E,50nm,1.7s						
YAK				smax			
	comp=N,146nm,3.7s						
KLR	**Kul'dur**	**19.04**	**265**	*e*P	**Pn**	**23 35 29.0**	**+4.0**
CLNS	**Chul'man**	**20.45**	**290**	*e*P	**P**	**23 35 42.1**	**+2.8**
CLNS				*e*		23 35 55.8	
CLNS				*e*S	**S**	**23 39 26.4**	**+0.5**
CLNS				*e*		23 39 55.5	
CLNS				*e*SS		23 40 10.3	
CLNS				pmax	pmax		
	comp=Z,20nm,1.2s						
CLNS				pmax	pmax		
	comp=E,19nm,1.1s						
CLNS				pmax	pmax		
	comp=N,15nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,16nm,1.1s						
CLNS				pmax	pmax		
	comp=N,17nm,1.1s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				smax			
	comp=N,88nm,11.7s						
CLNS				smax			
	comp=E,104nm,11.5s						
CLNS				MLR	MLR		
	comp=E,257nm,12.0s,MS4.0						
CLNS				MLR	MLR		
	comp=Z,487nm,14.0s,MS4.0						
CLNS				MLR	MLR		
	comp=N,441nm,17.0s,MS4.0						
TIXI	**Tiksi**	**21.79**	**333**	*e*P	**P**	**23 35 52.3**	**-1.3**
	comp=N,17nm,0.9s,mb4.5						
TIXI	**Tiksi**	**21.79**	**333**	*e*P	**P**	**23 35 53.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.5						
MDJ	**Mudanjiang**	**22.83**	**256**	P	**P**	**23 36 02.5**	**-2.4**
MDJ				AMB	AMB		
	comp=Z,6.0nm,2.1s,mb3.7						
IMA2	**Indian Mountai**	**24.15**	**45**	*e*P	**P**	**23 36 16.0**	**-1.4**
MAJO	**Matsushiro**	**24.33**	**231**	*e*P	**P**	**23 36 18.6**	**-0.7**
	comp=Z,24nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**24.33**	**231**	*e*P	**P**	**23 36 18.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.7						
MAT	**Matsushiro**	**24.33**	**231**	P	**P**	**23 36 18.9**	**-0.5**
MJAR	**Matsushiro Arr**	**24.33**	**231**	P	**P**	**23 36 19.0**	**-0.4**
	comp=Z,4.9nm,0.5s,mb4.2,baz=25,slow=9.1,SNR=12						
MJAR	**Matsushiro Arr**	**24.33**	**231**	P	**P**	**23 36 19.0**	**-0.4**
MJAR	**Matsushiro Arr**	**24.33**	**231**	*e*P	**P**	**23 36 19.6**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CHUM	**Lake Minchumin**	**24.63**	**50**	*e*P	**P**	**23 36 21.4**	**-0.5**
	comp=Z,24nm,1.1s,mb4.6						
KDAK	**Kodiak Island**	**25.24**	**65**	P	**P**	**23 36 26.9**	**-0.6**
	comp=Z,13nm,0.8s,mb4.5,baz=243,slow=2.3,SNR=4.2						
KDAK	**Kodiak Island**	**25.24**	**65**	P	**P**	**23 36 26.9**	**-0.6**
TRF	**Thorofare Moun**	**25.55**	**51**	*e*P	**P**	**23 36 29.0**	**-1.2**
	comp=Z,13nm,0.8s,mb4.5						
BOD	**Bodaibo**	**26.02**	**296**	*e*P	**P**	**23 36 39.0**	**+4.5**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
EGAK	**Eagle**	**29.41**	**47**	*e*P	**P**	**23 37 02.1**	**-2.7**
	comp=Z,6.7nm,0.8s,mb4.4						
INK	**Inuvik**	**31.93**	**40**	*e*P	**P**	**23 37 25.9**	**-1.1**
	comp=Z,2μm,2.3s						
INK	**Inuvik**	**31.93**	**40**	*e*P	**P**	**23 37 25.9**	**-1.1**
INK				pmax	pmax		
	comp=Z,2μm,2.3s						
BJI	**Beijing**	**33.38**	**263**	P	**P**	**23 37 37.7**	**-2.2**
SONM	**Songino Array**	**34.30**	**281**	P	**P**	**23 37 46.8**	**-1.0**
	comp=Z,0.2nm,0.5s,mb3.4,baz=72,slow=6.8,SNR=3.4						
SONM				PcP	PcP	23 40 22.6	-0.6
	comp=Z,1.0nm,0.5s,baz=72,slow=1.8,SNR=9.0						
SONM				ScP	ScP	23 44 07.6	+2.7
	comp=Z,0.8nm,0.7s,baz=64,slow=2.7,SNR=6.3						
SONM	**Songino Array**	**34.30**	**281**	P	**P**	**23 37 46.8**	**-1.0**
SONM						23 40 22.6	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				pmax	pmax		
	comp=N,1.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**35.50**	**268**	*e*P	**P**	**23 37 56.4**	**-1.9**
HHC				AP	pP	23 38 12.1	+3.1
HHC				XP	sP	23 38 18.7	+5.1
HHC				PP	PP	23 39 16.4	-2.7
HHC				PCP	PcP	23 40 27.1	+0.3
HHC				S	**S**	**23 43 24.3**	**-6.5**
HHC				XS	sS	23 43 50.5	+1.8
HHC				PCS	PcS	23 44 11.9	-2.0
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC				LR	LR		
	comp=N,736nm,17.8s,MS4.7						
HHC				LR	LR		
	comp=E,870nm,19.0s,MS4.7						
HHC				LR	LR		
	comp=Z,2μm,19.6s,MS4.9						
DLBC	**Dease Lake**	**36.32**	**56**	P	**P**	**23 38 05.6**	**+0.5**
	comp=Z,4.0nm,0.9s,mb4.4,baz=300,slow=10,SNR=5.0						
NJ2	**Nanjing**	**37.63**	**250**	*e*P	**P**	**23 38 16.1**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
YKA	**Yellowknife Ar**	**41.28**	**44**	P	**P**	**23 38 45.4**	**-1.1**
	comp=Z,3.0nm,0.8s,mb4.0,baz=301,slow=8.2,SNR=3.4						
YKA	**Yellowknife Ar**	**41.28**	**44**	P	**P**	**23 38 45.4**	**-1.1**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**42.49**	**302**	P	**P**	**23 38 54.1**	**-2.4**
	comp=Z,0.4nm,0.3s,mb3.5,baz=62,slow=7.0,SNR=3.1						
ZALV				PcP	PcP	23 40 45.8	-2.7
	comp=Z,2.1nm,0.8s,baz=51,slow=7.6,SNR=5.6						
ZALV	**Zalesovo Beam**	**42.49**	**302**	P	**P**	**23 38 54.1**	**-2.4**
ZALV						23 40 45.8	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
SPITS	**Spitsbergen Ar**	**45.46**	**350**	P	**P**	**23 39 18.0**	**-2.0**
	comp=Z,12nm,0.5s,mb4.9,baz=25,slow=8.3,SNR=33						
SPITS	**Spitsbergen Ar**	**45.46**	**350**	P	**P**	**23 39 18.0**	**-2.0**
SPITS	**Spitsbergen Ar**	**45.46**	**350**	P	**P**	**23 39 18.0**	**-2.1**
SPITS				pmax	pmax		
	comp=Z,12nm,0.5s						
RPW	**Rockport**	**45.93**	**65**	*e*P	**P**	**23 39 24.5**	**+0.5**
WMQ	**Urumqi**	**47.14**	**289**	*e*P	**P**	**23 39 32.0**	**-1.6**
WMQ				AP	pP	23 39 48.0	+3.3
WMQ				PP	PP	23 41 22.0	-2.4
WMQ				S	**S**	**23 46 17.0**	**-6.1**
WMQ				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.9						
WMQ				LR	LR		
	comp=N,2μm,15.0s,MS5.3						
WMQ				LR	LR		
	comp=E,2μm,14.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,2μm,15.0s,MS5.1						
KURK	**Kurchatov**	**47.47**	**301**	P	**P**	**23 39 34.5**	**-1.6**
	baz=54,slow=7.4						
KURK	**Kurchatov**	**47.47**	**301**	*e*P	**P**	**23 39 33.5**	**-2.6**
KURK	**Kurchatov**	**47.47**	**301**	*e*P	**P**	**23 39 35.1**	**-1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
HOOD	**Mount Hood Mea**	**47.85**	**68**	*e*P	**P**	**23 39 40.9**	**+1.8**
	comp=Z,49nm,1.6s,mb5.3						
MKAR	**Makanchi Array**	**48.10**	**295**	P	**P**	**23 39 38.3**	**-2.7**
	comp=Z,0.5nm,0.4s,mb3.9,baz=57,slow=6.8,SNR=14						
MKAR				PcP	PcP	23 41 06.8	-1.3
	comp=Z,0.6nm,0.5s,baz=61,slow=3.5,SNR=2.7						
MKAR	**Makanchi Array**	**48.10**	**295**	P	**P**	**23 39 38.3**	**-2.8**
MKAR						23 41 06.8	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GYA	**Guiyang**	**48.69**	**257**	P	**P**	**23 39 46.0**	**+0.2**
GYA				AP	pP	23 40 01.2	+4.3
GYA				XP	sP	23 40 07.3	+5.9
GYA				PCP	PcP	23 41 11.8	+1.2
GYA				PP	PP	23 41 38.9	0.0
GYA				SCP	ScP	23 44 59.2	-2.9
GYA				PCS	PcS	23 45 06.0	-0.9
GYA				S	**S**	**23 46 41.3**	**-4.1**
GYA				XS	sS	23 47 05.7	+1.9
GYA				SCS	ScS	23 49 30.8	-4.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,4.9s						
YBH	**Yreka Blue Hor**	**49.66**	**72**	P	**P**	**23 39 52.4**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.4,baz=5.4,slow=4.4,SNR=6.0						
YBH	**Yreka Blue Hor**	**49.66**	**72**	P	**P**	**23 39 52.4**	**-0.7**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BSMT	**Bassoo Peak**	**49.77**	**61**	*e*P	**P**	**23 39 54.4**	**+0.6**
BVAR	**Borovoye Array**	**49.89**	**308**	P	**P**	**23 39 52.3**	**-2.4**
	comp=Z,1.9nm,0.6s,mb4.3,baz=59,slow=7.1,SNR=18						
BVAR				PcP	PcP	23 41 13.2	-1.3
	comp=Z,1.2nm,0.5s,baz=88,slow=2.0,SNR=5.8						
BVAR	**Borovoye Array**	**49.89**	**308**	P	**P**	**23 39 52.3**	**-2.4**
BVAR						23 41 13.2	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**49.92**	**308**	*e*P	**P**	**23 39 53.1**	**-1.8**
	comp=Z,5.0nm,0.7s,mb4.7						
BRVK	**Borovoye**	**49.92**	**308**	*e*P	**P**	**23 39 53.1**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
BMO	**Blue Mountains**	**50.47**	**66**	*e*P	**P**	**23 40 00.2**	**+1.1**
	comp=Z,61nm,2.5s,mb5.2						
ARCES	**ARCESS Array B**	**51.80**	**342**	P	**P**	**23 40 08.1**	**-0.7**
	comp=Z,15nm,1.2s,mb4.8,baz=32,slow=8.7,SNR=6.6						
ARCES				PcP	PcP	23 41 22.3	+1.0
	comp=Z,5.3nm,0.9s,baz=15,slow=5.0,SNR=4.2						
ARCES	**ARCESS Array B**	**51.80**	**342**	P	**P**	**23 40 08.1**	**-0.7**
ARCES						23 41 22.3	
ARCES				pmax	pmax		
	comp=Z,15nm,1.2s						
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI	**Kunming**	**51.94**	**260**	P	**P**	**23 40 12.0**	**+1.6**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
SUMG	**Summit**	**52.04**	**7**	*e*P	**P**	**23 40 10.2**	**-0.4**
	comp=Z,6.2nm,0.9s,mb4.5						
ARU	**Arti**	**52.60**	**317**	*e*P	**P**	**23 40 13.3**	**-1.6**
	comp=Z,4.9nm,0.7s,mb4.5						
ARU	**Arti**	**52.60**	**317**	*d*/*i*P	**P**	**23 40 13.6**	**-1.3**
ARU				*e*S	**S**	**23 47 36.0**	**-2.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**54.38**	**72**	P	**P**	**23 40 28.6**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=304,slow=7.4,SNR=15						
RLMT	**Red Lodge**	**54.42**	**61**	*e*P	**P**	**23 40 29.1**	**+0.7**
	comp=Z,151nm,2.8s,mb5.4						
PDAR	**Pinedale Array**	**55.94**	**63**	P	**P**	**23 40 39.1**	**-0.3**
	comp=Z,1.6nm,0.6s,mb4.2,baz=302,slow=1.7,SNR=9.4						
JOF	**Joensuu**	**56.24**	**335**	*e*p	**P**	**23 40 40.1**	**-1.2**
	comp=Z,2.8nm,0.4s,mb4.7						
JOF	**Joensuu**	**56.24**	**335**	*e*P	**P**	**23 40 40.1**	**-1.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
AKTK	**Aktyubinsk**	**57.19**	**312**	P	**P**	**23 40 47.8**	**-0.3**
AKTK				PcP	PcP	23 41 41.1	-1.1
AKTO	**Aktyubinsk**	**57.19**	**312**	P	**P**	**23 40 47.8**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=64,slow=9.3,SNR=3.1						
AKTO				PcP	PcP	23 41 41.1	-1.1
	comp=Z,4.2nm,0.6s,baz=77,slow=6.2,SNR=5.6						
AKTO	**Aktyubinsk**	**57.19**	**312**	P	**P**	**23 40 47.8**	**-0.3**
AKTO						23 41 41.2	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**58.12**	**337**	*e*p	**P**	**23 40 52.1**	**-2.4**
	comp=Z,2.6nm,0.3s,mb4.7,baz=28,slow=6.5						
KAF	**Kangasniemi**	**58.12**	**337**	*e*P	**P**	**23 40 52.1**	**-2.4**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
CMAR	**Chiang Mai Arr**	**59.35**	**258**	P	**P**	**23 41 04.0**	**+0.3**
	comp=Z,1.1nm,0.3s,mb4.3,baz=20,slow=7.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**59.35**	**258**	*e*P	**P**	**23 41 05.2**	**+1.

HINF	**Hinteralfeld**	**75.42**	**343**	*e*P	**P**	**23 42 46.7**	**+1.9**
HINF				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
FLN	**La Foliniere**	**75.58**	**348**	*e*P	**P**	**23 42 47.1**	**+1.4**
LDF	**La Druitiere**	**75.70**	**348**	*e*P	**P**	**23 42 48.0**	**+1.6**
BRTR	**Keskin Array B**	**75.71**	**321**	P	**P**	**23 42 45.0**	**-1.6**
	comp=Z,1.2nm,0.5s,mb4.1,baz=357,slow=12,SNR=13							
BRTR	**Keskin Array B**	**75.71**	**321**	P	**P**	**23 42 45.1**	**-1.6**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
CTA	**Charters Tower**	**75.83**	**195**	P	**P**	**23 42 47.1**	**-0.2**
	comp=Z,1.9nm,0.5s,mb4.3,baz=338,slow=6.6,SNR=4.2							
CTA	**Charters Tower**	**75.83**	**195**	P	**P**	**23 42 47.1**	**-0.3**
CTA				pmax	pmax			
	comp=Z,2.0nm,0.5s							
GRR	**Gorron**	**75.99**	**348**	*e*P	**P**	**23 42 48.8**	**+0.7**
ROSF	**Rostrenen**	**76.31**	**350**	*e*P	**P**	**23 42 51.8**	**+1.9**
SGMF	**Saint Gilles**	**76.32**	**349**	*e*P	**P**	**23 42 52.1**	**+2.1**
LOR	**Lormes**	**76.44**	**345**	*e*P	**P**	**23 42 51.7**	**+1.0**
	comp=Z,2.1nm,0.4s,mb4.1							
SSF	**Saint Saulge**	**76.70**	**345**	*e*P	**P**	**23 42 53.2**	**+1.1**
	comp=Z,1.9nm,0.6s,mb3.9							
SSF	**Saint Saulge**	**76.70**	**345**	*e*P	**P**	**23 42 53.2**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.9							
SSF	**Saint Saulge**	**76.70**	**345**	*e*P	**P**	**23 42 53.2**	**+1.1**
SSF				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.9							
CABF	**La Chapelle**	**76.72**	**343**	*e*P	**P**	**23 42 54.4**	**+2.1**
	comp=Z,7.1nm,0.8s,mb4.4							
CABF	**La Chapelle**	**76.72**	**343**	*e*P	**P**	**23 42 54.4**	**+2.1**
	comp=Z,3.5nm,0.8s,mb4.3							
CABF	**La Chapelle**	**76.72**	**343**	*e*P	**P**	**23 42 54.4**	**+2.1**
CABF				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
AVF	**Avril sur Loir**	**76.98**	**345**	*e*P	**P**	**23 42 54.9**	**+1.1**
SMF	**Signal de Mont**	**77.05**	**344**	*e*P	**P**	**23 42 55.2**	**+1.1**
BGF	**Bois d'Agland**	**77.29**	**345**	*e*P	**P**	**23 42 57.9**	**+2.4**
MFF	**Saint Martin d**	**77.66**	**347**	*e*P	**P**	**23 42 59.5**	**+2.0**
LPL	**La Plagne**	**77.67**	**342**	*e*P	**P**	**23 42 57.0**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.3							
LPL	**La Plagne**	**77.67**	**342**	*e*P	**P**	**23 42 57.0**	**-0.6**
	comp=Z,2.5nm,0.6s,mb4.3							
LPL	**La Plagne**	**77.67**	**342**	*e*P	**P**	**23 42 57.0**	**-0.6**
LPL				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
LPG	**La Plagne**	**77.68**	**342**	*e*P	**P**	**23 42 57.3**	**-0.4**
	comp=Z,10nm,0.8s,mb4.5							
LPG	**La Plagne**	**77.68**	**342**	*e*P	**P**	**23 42 57.3**	**-0.4**
	comp=Z,5.2nm,0.8s,mb4.5							
LPG	**La Plagne**	**77.68**	**342**	*e*P	**P**	**23 42 57.3**	**-0.4**
LPG				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
WRAB	**Tennant Creek**	**78.07**	**206**	*e*P	**P**	**23 42 59.5**	**-0.5**
	comp=Z,4.7nm,0.9s,mb4.4							
WRAB	**Tennant Creek**	**78.07**	**206**	*e*P	**P**	**23 42 59.5**	**-0.5**
WRAB				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
WRA	**Warramunga Arr**	**78.08**	**206**	P	**P**	**23 42 59.4**	**-0.7**
	comp=Z,2.7nm,0.5s,mb4.4,baz=20,slow=6.0,SNR=25							
WRA	**Warramunga Arr**	**78.08**	**206**	P	**P**	**23 42 59.4**	**-0.6**
WRA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
ORIF	**Oris-en-Rattie**	**78.40**	**343**	*e*P	**P**	**23 43 03.0**	**+1.4**
MBDF	**Montbardon**	**78.42**	**342**	*e*P	**P**	**23 43 03.4**	**+1.6**
RJF	**Les Rejaudoux**	**78.71**	**346**	*e*P	**P**	**23 43 04.9**	**+1.5**
LFF	**La Frestale**	**79.17**	**346**	*e*P	**P**	**23 43 10.3**	**+4.4**
	comp=Z,6.5nm,0.5s,mb4.5							
LFF	**La Frestale**	**79.17**	**346**	*e*P	**P**	**23 43 10.3**	**+4.4**
	comp=Z,3.3nm,0.5s,mb4.5							
LFF	**La Frestale**	**79.17**	**346**	*e*P	**P**	**23 43 10.3**	**+4.4**
LFF				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.5							
LMR	**La Mourre**	**79.82**	**342**	*e*P	**P**	**23 43 11.3**	**+1.8**
MTLF	**Montolieu**	**80.53**	**345**	*e*P	**P**	**23 43 15.5**	**+2.2**
MMAI	**Mount Meiron Ar**	**80.95**	**317**	P	**P**	**23 43 14.1**	**-1.6**
	comp=Z,0.9nm,0.4s,mb4.0,baz=2,9,slow=5.8,SNR=4.2							
ETSF	**Etsaut**	**81.35**	**347**	*e*P	**P**	**23 43 18.9**	**+1.2**
	comp=Z,15nm,1.1s,mb4.5							
ETSF	**Etsaut**	**81.35**	**347**	*e*P	**P**	**23 43 18.9**	**+1.2**
	comp=Z,7.7nm,1.1s,mb4.5							
ETSF	**Etsaut**	**81.35**	**347**	*e*P	**P**	**23 43 18.9**	**+1.2**
ETSF				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
ASAR	**Alice Springs**	**81.76**	**205**	P	**P**	**23 43 19.8**	**-0.1**
	comp=Z,3.0nm,0.5s,mb4.5,baz=16,slow=5.1,SNR=48							
ASAR	**Alice Springs**	**81.76**	**205**	*e*P	**P**	**23 43 19.8**	**-0.1**
ASAR				pmax	pmax			
	comp=Z,3.0nm,0.5s							
IDI	**Anoyia**	**82.73**	**325**	P	**P**	**23 43 22.0**	**-3.1**
	comp=Z,1.5nm,0.4s,mb4.3,baz=37,slow=15,SNR=4.2							
ESDC	**Sonseca Array**	**84.95**	**349**	P	**P**	**23 43 35.6**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.3,baz=1.3,slow=4.4,SNR=18							
KEST	**Kesra**	**86.58**	**338**	P	**P**	**23 43 43.1**	**-1.3**
	comp=Z,1.1nm,0.4s,mb4.4,baz=296,slow=13,SNR=19							
CMLA	**Cha da Macela**	**87.49**	**6**	*e*LQ		00 07 37.7		
BOSA	**Boshof**	**139.06**	**292**	PKIP	PKPdf	23 50 29.0	+1.4	
	comp=Z,1.7nm,0.8s,baz=68,slow=2.7,SNR=3.9							
BOSA	**Boshof**	**139.06**	**292**	PKIKP	PKPdf	23 50 29.0	+1.5	
BOSA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
PLCA	**Paso Flores**	**143.20**	**89**	PKP	PKPdf	23 50 34.0	-0.5	
	comp=Z,3.2nm,1.0s,baz=315,slow=4.0,SNR=2.6							
PLCA	**Paso Flores**	**143.20**	**89**	PKIKP	PKPdf	23 50 34.1	-0.5	
PLCA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
QSPA	**South Pole Qui**	**144.67**	**180**	PKP	PKPdf	23 50 34.2	-1.8	
	comp=Z,12nm,0.8s,baz=305,slow=0.9,SNR=9.9							

*ISCJB **02** 23:41:53.8±0.5, 552S±0.1×1288W±0.2, h10km, mb4.5/13, MS4.8/15, Error ellipse: s-maj=18.3km s-min=14.4km az=140.4*
*IDC **02** 23:41:53.9±0.6, 5518S×12888W, h0km, mb4.4/11, mb1 4.6/11, mb1mx4.5/16, mbtmp4.4/11, MS4.8/15, Ms1 4.7/15, ms1mx4.6/22, Error ellipse: s-maj=24.2km s-min=17.2km az=160.0*
*NEIC **02** 23:41:55.5±0.3, 5512S×12885W, h10km, mb5.0/3, Error ellipse: s-maj=14.5km s-min=10.0km az=149.0*
*GCMT **02** 23:41:55.5±0.2, 5537S×12867W, h19km±1km, MW5.4/90, Moment Tensor Solution. s37,c46; s90,c132; Duration: 1s3 Moment tensor: Scale 10^17Nm; Mrr-0.16±.07; Mθθ1.35±.06; Mϕϕ-1.19±.06; Mrθ0.05±.12; Mrϕ1.20±.04; Mθϕ0.14±.13; Best double couple: M0 1.75400×10^17 NP1:ϕs203.00000°,δ85.00000°,λ-1.00000°. NP2: ϕs203.00000°,δ89.00000°,λ-175.00000°. Principal axes: T 1.8320, Plg3.0000°, Azm338.0000°; N -0.1580, Plg85.0000°, Azm216.0000°; P -1.6760, Plg4.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 23:41:55.6±0.5, 552S±01×1289W±02, h10km, n68, σ0s78/16, mb4.5/13, MS4.8/15, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**31.47**	**201**	*e*P	**P**	**23 48 18.5**	**+1.8**
	34nm,1.5s,mb5.0						
SBA				*e*PcP	PcP	23 51 09.9	+0.7
RKT	**Rikitea**	**32.33**	**349**	*e*LQ		23 55 33.1	
	734nm,28.2s						
RKT				*e*LR	LR	23 56 54.1	
	4μm,28.8s,baz=173						
PMSA	**Palmer Station**	**32.36**	**134**	LR	LR	23 57 39.3	
	comp=Z,2μm,21.6s,MS4.8,baz=302,slow=29						
USHA	**Ushuaia**	**33.70**	**115**	LR	LR	23 58 22.9	
	comp=Z,938nm,19.3s,MS4.5,baz=230,slow=29						
QSPA	**South Pole Qui**	**35.01**	**180**	P	**P**	**23 48 48.4**	**+0.9**
	15nm,0.9s,mb4.9,baz=94,slow=3.5,SNR=35						
QSPA				LR	LR	00 01 56.0	
	comp=Z,3μm,18.1s,MS5.0,baz=86,slow=34						
TBI	**Tubuai**	**35.28**	**326**	*e*LQ		23 56 45.0	
	862nm,25.2s						
TBI				*e*LR	LR	23 58 07.6	
	3μm,27.2s,baz=163						
RPZ	**Rata Peaks**	**39.52**	**261**	LR	LR	00 01 43.2	
	comp=Z,2μm,19.2s,MS4.9,baz=113,slow=30						
URZ	**Urewera**	**39.62**	**272**	LR	LR	00 02 02.3	
	comp=Z,1μm,18.7s,MS4.8,baz=139,slow=30						
PLCA	**Paso Flores**	**40.40**	**94**	P	**P**	**23 49 32.6**	**-0.9**
	2.8nm,0.9s,mb4.0,baz=252,slow=6.0,SNR=3.9						
PLCA				PcP	PcP	23 51 37.8	+1.4
	2.4nm,1.1s,baz=202,slow=5.4,SNR=2.9						
PLCA				LR	LR	00 00 46.0	
	comp=Z,721nm,19.2s,MS4.5,baz=224,slow=28						

PPT	**Papeete**	**40.74**	**329**	*e*LQ		23 58 54.3		
	769nm,23.8s							
PPT				*e*LR	LR	00 00 51.2		
	4μm,26.8s,baz=168							
PPT	**Papeete**	**40.74**	**329**	LR	LR	00 01 45.2		
	comp=Z,2μm,18.5s,MS4.9,baz=246,slow=29							
RAR	**Rarotonga**	**41.07**	**313**	LR	LR	00 01 39.9		
	comp=Z,844nm,19.7s,MS4.6,baz=129,slow=29							
MAIT	**Maitri**	**51.25**	**164**	*e*P	**P**	**23 50 57.6**	**-1.1**	
AFI	**Afiamalu**	**52.87**	**304**	LR	LR	00 07 21.0		
	comp=Z,612nm,19.4s,MS4.7,baz=345,slow=29							
MAW	**Mawson**	**57.24**	**185**	P	**P**	**23 51 41.8**	**-0.5**	
	8.4nm,0.9s,mb4.8,baz=211,slow=6.2,SNR=12							
MAW				LR	LR	00 13 52.6		
	comp=Z,702nm,18.4s,MS4.8,baz=161,slow=34							
LPAZ	**La Paz**	**60.14**	**75**	P	**P**	**23 52 03.8**	**+0.6**	
	5.2nm,0.8s,mb4.6,baz=206,slow=4.3,SNR=18							
LPAZ				LR	LR	00 10 54.4		
	comp=Z,357nm,19.6s,MS4.5,baz=18,slow=29							
STKA	**Stephens Creek**	**64.27**	**251**	P	**P**	**23 52 29.4**	**-1.3**	
	2.9nm,0.8s,mb4.3,baz=180,slow=2.0,SNR=2.6							
STKA				LR	LR	00 13 43.9		
	comp=Z,923nm,19.5s,MS5.0,baz=210,slow=30							
CTA	**Charters Tower**	**70.88**	**262**	P	**P**	**23 53 13.2**	**+0.6**	
	5.6nm,1.0s,mb4.5,baz=79,slow=3.7,SNR=5.7							
CTAO	**Charters Tower**	**70.88**	**262**	*e*P	**P**	**23 53 13.0**	**+0.4**	
	21nm,1.4s,mb4.9							
BDFB	**Brasilia**	**72.09**	**92**	LR	LR	00 22 47.2		
	comp=Z,460nm,18.1s,MS4.8,baz=22,slow=34							
ROSC	**El Rosal**	**74.75**	**57**	LR	LR	00 21 49.5		
	comp=Z,401nm,19.3s,MS4.7,baz=282,slow=32							
ASAR	**Alice Springs**	**74.90**	**250**	P	**P**	**23 53 36.2**	**-0.2**	
	5.4nm,0.8s,mb4.5,baz=141,slow=5.6,SNR=25							
WB2	**Warramunga Arr**	**77.66**	**253**	*e*P	**P**	**23 53 52.0**	**-0.2**	
WRA	**Warramunga Arr**	**77.67**	**253**	P	**P**	**23 53 52.1**	**-0.1**	
	2.7nm,0.7s,mb4.3,baz=142,slow=5.2,SNR=16							
WRA				LR	LR	00 24 36.1		
	comp=Z,477nm,18.5s,MS4.8,baz=20,slow=33							
WRAB	**Tennant Creek**	**77.67**	**253**	*e*P	**P**	**23 53 51.9**	**-0.3**	
	14nm,1.1s,mb4.8							
TXAR	**Lajitas Array**	**86.89**	**22**	P	**P**	**23 54 40.3**	**+0.3**	
	0.9nm,0.8s,mb4.0,baz=190,slow=6.4,SNR=6.3							
ANMO	**Albuquerque**	**91.79**	**18**	P	**P**	**23 55 03.7**	**+0.8**	
	1.3nm,0.7s,mb4.4,baz=160,slow=6.4,SNR=4.6							
NVAR	**Mina Array Bea**	**93.66**	**8**	P	**P**	**23 55 11.3**	**-0.1**	
	0.3nm,0.6s,mb3.9,baz=193,slow=6.2,SNR=2.7							
ESDC	**Sonseca Array**	**140.72**	**90**	PKP	PKPdf	00 01 25.6	+1.0	
	0.2nm,0.6s,baz=282,slow=1.2,SNR=4.4							
SJPF	**Ste Jean**	**144.51**	**88**	*e*PKP1	PKPdf	00 01 30.5	-0.7	
	41nm,1.3s							
ETSF	**Etsaut**	**144.76**	**88**	*e*PKP1	PKPdf	00 01 29.7	-2.0	
	32nm,1.2s							
EPF	**Esparros**	**145.36**	**89**	*e*PKP1	PKPbc	00 01 31.3	-1.3	
	17nm,0.8s							
KEST	**Kesra**	**145.50**	**107**	PKPbc	PKPbc	00 01 32.8	-0.6	
	2.7nm,0.9s,baz=0.0,slow=0.0,SNR=5.8							
SONM	**Songino Array**	**145.65**	**281**	PKPbc	PKPbc	00 01 33.4	0.0	
	8.1nm,0.9s,baz=139,slow=3.0,SNR=33							
QUIF	**Quistinic**	**146.21**	**79**	*e*PKP1	PKPbc	00 01 34.0	-1.1	
ROSF	**Rostrenen**	**146.38**	**79**	*e*PKP1	PKPbc	00 01 35.3	-0.3	
MTLF	**Montolieu**	**146.63**	**90**	*e*PKP1	PKPbc	00 01 35.5	-1.0	
SGMF	**Saint Gilles**	**146.74**	**79**	*e*PKP1	PKPbc	00 01 36.6	0.0	
	52nm,1.2s							
LFF	**La Frestale**	**146.75**	**87**	*e*PKP1	PKPbc	00 01 35.4	-1.3	
	87nm,1.6s							
MFF	**Saint Martin d**	**147.20**	**83**	*e*PKP1	PKPbc	00 01 36.8	-1.2	
RJF	**Les Rejaudoux**	**147.40**	**87**	*e*PKP1	PKPbc	00 01 37.7	-0.9	
CAF	**Calviac**	**147.50**	**88**	*e*PKP1	PKPbc	00 01 37.4	-1.4	
	94nm,1.9s							
GRR	**Gorron**	**147.77**	**80**	*e*PKP1	PKPbc	00 01 39.4	-0.1	
	32nm,1.3s							
LASF	**Ste Croix**	**148.02**	**90**	*e*PKP1	PKPbc	00 01 38.9	-1.4	
FLN	**La Foliniere**	**148.18**	**80**	*e*PKP1	PKPbc	00 01 40.5	0.0	
	42nm,1.4s							
LDF	**La Druitiere**	**148.29**	**80**	*e*PKP1	PKPbc	00 01 40.8	-0.1	
TCF	**Toulx Ste Croi**	**148.37**	**86**	*e*PKP1	PKPbc	00 01 40.9	-0.2	
	54nm,1.5s							
BGF	**Bois d'Agland**	**148.88**	**86**	*e*PKP1	PKPbc	00 01 43.8	+1.4	
VIVF	**Saint-Julien-l**	**148.95**	**90**	*e*PKP1	PKPbc	00 01 41.3	-1.4	
LMR	**La Mourre**	**149.08**	**94**	*e*PKP1	PKPbc	00 01 41.9	-1.1	
AVF	**Avril sur Loir**	**149.30**	**86**	*e*PKP1	PKPbc	00 01 43.1	-0.4	
FRF	**La Foret Royal**	**149.30**	**93**	*e*PKP1	PKPbc	00 01 43.6	0.0	
	30nm,1.1s							
SMF	**Signal de Mont**	**149.50**	**86**	*e*PKP1	PKPbc	00 01 43.6	-0.4	
SSF	**Saint Saulge**	**149.54**	**85**	*e*PKP1	PKPbc	00 01 43.8	-0.2	
ORIF	**Oris-en-Rattie**	**149.68**	**91**	*e*PKP1	PKPbc	00 01 43.7	-0.8	
	16nm,1.0s							
LOR	**Lormes**	**149.85**	**85**	*e*PKP1	PKPbc	00 01 44.7	-0.1	
LPG	**La Plagne**	**150.52**	**90**	*e*PKP1	PKPbc	00 01 45.8	-0.4	
LPL	**La Plagne**	**150.52**	**90**	*e*PKP1	PKPbc	00 01 45.8	-0.7	
CABF	**La Chapelle**	**150.77**	**88**	*e*PKP1	PKPbc	00 01 47.0	0.0	
	69nm,1.7s							
MEZF	**Maizieres J'vi**	**151.19**	**84**	*e*PKP1	PKPbc	00 01 48.2	+0.3	
BAIF	**Baives**	**151.48**	**81**	*e*PKP1	PKPbc	00 01 48.6	0.0	
	19nm,1.1s							
HAU	**Haudompre**	**151.67**	**86**	*e*PKP1	PKPbc	00 01 49.0	-0.1	
HINF	**Hinteralfeld**	**151.86**	**86**	*e*PKP1	PKPbc	00 01 49.5	0.0	
CDF	**Champ du Feu**	**152.41**	**86**	*e*PKP1	PKPbc	00 01 50.7	0.0	
GERES	**GERESS Array B**	**156.31**	**90**	PKP	PKPdf	00 01 49.9	+0.6	
	0.6nm,0.7s,baz=229,slow=1.4,SNR=6.8							
MKAR	**Makanchi Array**	**158.83**	**260**	PKPab	PKPab	00 02 28.2	-0.4	
	1.5nm,0.8s,baz=132,slow=4.2,SNR=8.8							
ZALV	**Zalesovo Beam**	**160.54**	**280**	PKPab	PKPab	00 02 34.8	-1.0	
	2.9nm,0.8s,baz=130,slow=4.3,SNR=10							
BRTR	**Keskin Array B**	**160.62**	**136**	PKPab	PKPab	00 02 35.5	-1.0	
	1.0nm,0.8s,baz=131,slow=1.8,SNR=3.1							

*ISCJB **02** 23:42:10.1±0.5, 1187N±007×8638W±009, h91km±5km, mb3.6/2, Error ellipse: s-maj=18.9km s-min=4.4km az=142.5*
*CASC **02** 23:42:10.2±2.3, 1180N×8648W, h82km±7km, MD4.2, ML3.9*
*NEIC **02** 23:42:10.8±0.9, 1191N×8620W, h102km±11km, Error ellipse: s-maj=42.5km s-min=10.1km az=50.0*
*IDC **02** 23:42:10.4±3.7, 1178N×8638W, h94km±60km, mb3.5/2, mb1 4.1/3, mb1mx3.6/19, mbtmp3.7/3, ML4.3/1, Error ellipse: s-maj=155.8km s-min=41.6km az=54.0*

ISC 02 23:42:10.8±0.5, 1186N±007×8640W±009, h86km±5km, n50, σ0s87/48, mb3.6/2, 13C-18D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	**El Crucero**	**0.15**	**38**	⇓*i*P	**Pn**	**23 42 23.2**	**+0.1**
TICN	**Ticuantepe**	**0.24**	**43**	⇑*e*P	**Pn**	**23 42 24.8**	**+1.4**
XAVN	**Gruta Xavier**	**0.29**	**14**	⇑*i*P	**Pn**	**23 42 23.2**	**-0.6**
TISN	**Laguna Tiscapa**	**0.31**	**24**	⇓*i*P	**Pn**	**23 42 23.2**	**-0.6**
TISN				*e*S	**Sn**	**23 42 34.0**	**+0.6**
MGAN	**Managua**	**0.32**	**27**	⇑*i*P	**Pn**	**23 42 23.3**	**-0.6**
MGAN				*e*S	**Sn**	**23 42 34.3**	**+0.7**
MGAN				AML	AML	23 42 35.0	
	comp=N,11μm,0.2s						
CSAN		**0.32**	**356**	⇓*i*P	**Pn**	**23 42 25.2**	**+1.3**
APON	**Apoyo**	**0.33**	**80**	⇑*i*P	**Pn**	**23 42 23.7**	**-0.2**
WILN	**Americas 2**	**0.36**	**34**	⇑*i*P	**Pn**	**23 42 23.8**	**-0.4**
WILN				*e*S	**Sn**	**23 42 34.2**	**+0.1**
WILN				AML	AML	23 42 36.8	
	comp=N,4μm,0.3s						
COPN	**Copaltepe**	**0.37**	**329**	⇓*i*P	**Pn**	**23 42 23.0**	**-1.2**
COPN				*e*S	**Sn**	**23 42 32.3**	**-1.8**
APYN	**Apoyeque**	**0.37**	**7**	⇓*i*P	**Pn**	**23 42 23.6**	**-0.6**
HUEN		**0.52**	**25**	⇑*i*P	**Pn**	**23 42 26.9**	**+1.6**
MOMN	**Momotombo**	**0.56**	**346**	⇑*i*P	**Pn**	**23 42 25.2**	**-0.4**
MIRN	**Miramar**	**0.65**	**332**	⇑*i*P	**Pn**	**23 42 27.6**	**+1.1**
CNGN	**Cerro Negro**	**0.70**	**335**	⇓*e*P	**Pn**	**23 42 26.4**	**-0.6**
CNGN				⇓*i*P		23 42 26.5	
CNGN				*e*S	**Sn**	**23 42 38.0**	**-1.0**
CNGN				*e*S	**Sn**	**23 42 38.4**	**-0.7**
LEON	**Leon**	**0.73**	**319**	*e*P	**Pn**	**23 42 28.2**	**+0.9**
CONN	**Concepcion**	**0.81**	**111**	⇑*i*P	**Pn**	**23 42 28.0**	**-0.1**
TEL3	**Telica 3**	**0.83**	**328**	⇓*i*P	**Pn**	**23 42 29.6**	**+1.3**
CRIN	**San Cristobal**	**1.05**	**323**	⇓*i*P	**Pn**	**23 42 30.3**	**-0.6**
CRIN				*e*S	**Sn**	**23 42 46.0**	**+0.2**
LIM1	**Limonal**	**1.61**	**136**	⇑*e*P	**Pn**	**23 42 37.8**	**+0.1**
CUI	**Cuipilapa**	**1.69**	**135**	⇓*e*P	**Pn**	**23 42 38.8**	**0.0**
CUI				*e*S	**Sn**	**23 42 59.1**	**-0.8**
2RIO	**Dos Rios de Up**	**1.75**	**139**	⇓*e*P	**Pn**	**23 42 35.4**	**-4.2**
2RIO				*e*S	**Sn**	**23 42 53.2**	**-8.2**
VCR	**Vista de Mar**	**1.88**	**156**	⇓*e*P	**Pn**	**23 42 40.7**	**-0.6**
VCR				*e*S	**Sn**	**23 43 06.0**	**+1.5**
CNCH	**Conchagua**	**1.99**	**315**	⇓*e*P	x	23 42 42.0	
JTS	**JuntasAbangare**	**2.11**	**138**	P	**Pn**	**23 42 43.9**	**-0.4**
	comp=N,114nm,0.3s,baz=315,slow=11,SNR=48						
JTS				S	**Sn**	**23 43 08.8**	**-1.1**
	comp=N,46nm,0.3s,baz=298,slow=16,SNR=7.0						
JTS	**JuntasAbangare**	**2.11**	**138**	*e*P	**Pn**	**23 42 43.9**	**-0.4**
FORC	**Fortuna**	**2.19**	**129**	*e*P	**Pn**	**23 42 44.5**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.34**	**339**	⇓*i*P	**Pn**	**23 42 48.1**	**+0.7**
TGUH				⇓*i*P		23 42 48.2	
JCR	**Jicaral**	**2.36**	**148**	*e*P	**Pn**	**23 42 47.5**	**-0.2**
JCR				*e*S	**Sn**	**23 43 16.1**	**+0.1**
BLLM	**Bellamira**	**2.39**	**311**	*e*P	x	23 42 47.6	
VSM	**San Miguel**	**2.41**	**311**	⇑*e*P	x	23 42 48.4	
CAHU	**Cacacuatique**	**2.60**	**317**	⇓*e*P	x	23 42 50.8	
CGA2	**Cerro Gallo 2**	**2.64**	**134**	⇑*e*P	**Pn**	**23 42 51.5**	**+0.1**
PRS1	**Puriscal**	**2.77**	**132**	*e*P	**Pn**	**23 42 53.9**	**+0.8**
SNVI	**San Vicente**	**2.95**	**306**	*e*P	x	23 42 55.5	
SNVI				*e*S	x	23 43 29.0	
LFRS	**El Faro**	**3.13**	**304**	*e*P	x	23 42 57.6	
LFRS				*e*S	x	23 43 33.1	
ICR	**Volcan Irazu**	**3.14**	**126**	*e*P	**Pn**	**23 43 00.1**	**+2.0**
URSC	**Urasca**	**3.27**	**128**	*e*P	**Pn**	**23 43 00.5**	**+0.7**
QCR	**Quepos**	**3.27**	**138**	*e*P	**Pn**	**23 42 59.6**	**-0.2**
BOQS	**Boqueron**	**3.37**	**304**	⇓*e*P	x	23 43 01.5	
BUS	**Buena Vista**	**3.46**	**131**	⇑*e*P	**Pn**	**23 43 03.1**	**+0.6**
SNJE	**San Jose**	**3.71**	**303**	*e*P	x	23 43 06.0	
RTR	**El Retiro**	**3.76**	**303**	*e*P	x	23 43 06.7	
BCIP	**Isla Barro Col**	**6.98**	**112**	Pn	**Pn**	**23 43 48.4**	**-2.1**
CHI2		**14.43**	**119**	⇓*i*P	Px	23 42 29.4	
LAPE	**La Pedrera**	**15.22**	**105**	*e*P	Px	23 42 34.6	
TXAR	**Lajitas Array**	**23.68**	**320**	P	**P**	**23 47 13.9**	**-0.7**
	comp=N,4.7nm,0.6s,mb4.0,baz=138,slow=10,SNR=56						
NVAR	**Mina Array Bea**	**38.82**	**319**	P	**P**	**23 49 27.4**	**0.0**
	comp=N,0.2nm,0.4s,mb3.3,baz=146,slow=6.6,SNR=3.5						
ASAR	**Alice Springs**	**140.00**	**247**	PKhKP		00 01 20.4	
	comp=N,0.4nm,0.6s,baz=113,slow=3.3,SNR=6.2						
ASAR				PKP	PKPdf	00 01 28.0	-1.9
	comp=N,0.6nm,0.6s,baz=112,slow=2.0,SNR=6.7						
ASAR	**Alice Springs**	**140.00**	**247**	PKP	PKPdf	00 01 28.0	-1.9
WRA	**Warramunga Arr**	**140.09**	**253**	PKP	PKPdf	00 01 28.9	-1.3
	comp=N,0.9nm,0.6s,baz=92,slow=2.4,SNR=13						

*ISCJB **03** 00:18:04.4±0.5, 1077N±003×6240W±002, h80km±6km, Error ellipse: s-maj=5.1km s-min=3.6km az=162.1*
*TRN **03** 00:18:06.3, 1079N×6236W, h62km, MD3.1*
TRN Felt Trinidad.
*NEIC **03** 00:18:06.8, 1086N×6234W, h56km, MD3.1(TRN), After TRN.*
*FUNV **03** 00:18:06.5, 1082N×6234W, h67km, MW3.0*

**ISC 03

CAOV	Caicara del Or	5.75	239	*e*P	Pn	00 36 03.9 +0.7
CAOV				*e*S	Sn	00 37 05.7 -3.1
BAUV	El Baul	6.73	259	*e*P	Pn	00 36 16.7 -0.1

*DDA **03** 00:57:18.7, 3638N×3106E, h27km±4km, Md3.5*
*IDC **03** 00:57:19.1±1.3, 3628N×3106E, h57km±18km, mb3.6/5, mb1 3.6/10, mb1mx3.4/26, mbtmp3.5/10, ML3.6/5, MS3.0/1, Ms1 3.0/1, ms1mx2.7/34, Error ellipse: s-maj=12.1km s-min=11.1km az=24.0*
*ISK **03** 00:57:19.8, 3626N×3109E, h50km, MD3.7*
*ISCJB **03** 00:57:19.7±0.2, 3626N±002×3107E±003, h74km±5km, mb3.7/5, Error ellipse: s-maj=4.2km s-min=2.6km az=42.7*
*NEIC **03** 00:57:19.0, 3626N×3107E, h68km, MG3.6(ISK), After ISK.*
*CSEM **03** 00:57:19.5±0.1, 3627N×3110E, h40km, Mw3.6, Error ellipse: s-maj=1.7km s-min=1.0km az=39.0*
*HLW **03** 00:57:20.2, 3626N×3076E, h33km, Mb3.9*
*NIC **03** 00:57:27.1±0.2, 3626N×3164E, h55km, ML3.6, MW3.6*
ISC 03 00:57:21.1±0.2**, 3628N**±002×**3108E**±003**, h67**km±6km**, n91,** σ1**9**05/115**, mb3.7/5, 2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.71**	**331**	*e*PG		**Pn**		**00 57 34.2**	**-1.7**
ANTB				*e*SG		**Sn**		**00 57 44.9**	**-1.8**
ELL	**Elmali**	**1.05**	**297**	*e*PG		**Pn**		**00 57 39.5**	**-0.5**
ELL	**Elmali**	**1.05**	**297**	Pg		**Pn**		**00 57 39.9**	**-0.1**
BCK	**Bucak**	**1.24**	**342**	*e*PN		**Pn**		**00 57 41.9**	**-0.7**
HDMB	**Hadim**	**1.32**	**58**	*e*PN		**Pn**		**00 57 43.0**	**-0.6**
HDMB				*e*SN		**Sn**		**00 58 00.2**	**-0.3**
AKMC	**Akamas**	**1.61**	**140**	P		**Pn**		**00 57 49.8**	**+2.4**
	15nm,0.4s								
ALFC	**Alevga**	**1.67**	**132**	P		**Pn**		**00 57 47.7**	**-0.5**
	24nm,0.3s								
ALFC				S		**Sn**		**00 58 07.2**	**-1.5**
PPCY	**Paphos**	**1.73**	**143**	P		**Pn**		**00 57 51.8**	**+2.8**
	10nm,0.3s								
TKTP	**Tekketepe**	**1.86**	**341**	*i* P		**Pn**		**00 57 51.1**	**+0.4**
TKTP				*i* S		**Sn**		**00 58 15.2**	**+2.0**
LEF	**Lefka**	**1.88**	**128**	*e*PN		**Pn**		**00 57 49.7**	**-1.2**
LEF				*e*SN		**Sn**		**00 58 12.1**	**-1.5**
LEF	**Lefka**	**1.88**	**128**	P		**Pn**		**00 57 50.6**	**-0.7**
KONT	**Konya--Tatoy**	**1.96**	**31**	*e*PN		**Pn**		**00 57 51.9**	**-0.1**
DALT	**Dalyan (Mudla)**	**2.02**	**285**	*e*PN		**Pn**		**00 57 53.4**	**+0.5**
TURN	**Turunc**	**2.08**	**287**	*i* P		**Pn**		**00 57 57.5**	**+3.8**
TURN				*i* S		**Sn**		**00 58 24.6**	**+6.1**
IKL	**Isikli**	**2.11**	**90**	*e*PN		**Pn**		**00 57 54.3**	**+0.2**
IKL	**Isikli**	**2.11**	**90**	Pn		**Pn**		**00 57 55.4**	**+1.3**
SZAC	**Souni-Zanaja**	**2.12**	**135**	P		**Pn**		**00 57 56.2**	**+2.0**
SZAC				S		**Sn**		**00 58 19.4**	**0.0**
LADK	**Ladik-KONYA**	**2.18**	**28**	*e*PN		**Pn**		**00 57 55.5**	**+0.5**
DENT	**Denizli**	**2.20**	**313**	*e*PN		**Pn**		**00 57 56.0**	**+0.7**
LFK	**Lefkose**	**2.23**	**116**	*e*PN		**Pn**		**00 57 55.5**	**-0.2**
CSS	**Prodhromos**	**2.26**	**125**	*e*PN		**Pn**		**00 57 55.2**	**-0.9**
CSS	**Prodhromos**	**2.26**	**125**	⇓*i*Pn		**Pn**		**00 57 54.8**	**-1.3**
CSS				*e*Sn		**Sn**		**00 58 21.5**	**-1.4**
CSS	**Prodhromos**	**2.26**	**125**	⇓*i*Pn		**Pn**		**00 57 54.8**	**-1.3**
CSS				*e*Sn		**Sn**		**00 58 21.5**	**-1.4**
SHUT	**Suhut-Afyon**	**2.31**	**350**	*e*PN		**Pn**		**00 57 56.7**	**-0.1**
ARG	**Arkhangelos**	**2.39**	**269**	*e*P		**Pn**		**00 57 57.4**	**+0.5**
KDHN	**Kadinhani**	**2.39**	**20**	*i* P		**Pn**		**00 57 56.9**	**-1.0**
KHL	**Karahalli**	**2.39**	**329**	*e*PN		**Pn**		**00 57 58.3**	**+0.5**
BOLV	**Bolvadin**	**2.44**	**358**	*i* P		**Pn**		**00 57 58.6**	**+0.1**
KHAL	**Karahalli**	**2.44**	**329**	*i* P		**Pn**		**00 57 58.6**	**+0.1**
EREN	**Erenkoy**	**2.62**	**106**	*e*PN		**Pn**		**00 58 00.8**	**-0.2**
KIZT	**Kizilcal**	**2.67**	**14**	*e*PN		**Pn**		**00 58 01.3**	**-0.4**
PHNC	**Paralimni**	**2.72**	**117**	P		**Pn**		**00 58 03.2**	**+0.8**
	7.1nm,0.5s								
PHNC				S		**Sn**		**00 58 31.2**	**-3.0**
MERS	**Mersin**	**2.83**	**77**	*e*PN		**Pn**		**00 58 04.1**	**+0.2**
MLSB	**Milas**	**2.84**	**292**	*e*PN		**Pn**		**00 58 04.4**	**+0.4**
ALT	**Altintas**	**2.88**	**345**	*e*PN		**Pn**		**00 58 04.8**	**+0.2**
AYDN	**Tasoluk**	**2.91**	**299**	*i* P		**Pn**		**00 58 04.9**	**0.0**
AYDN				*i* S		**Sn**		**00 58 37.7**	**-1.1**
KULA	**Kula-Manisa**	**2.95**	**320**	*e*PN		**Pn**		**00 58 05.9**	**+0.4**
BDRM	**Kayabasi**	**3.02**	**286**	*i* P		**Pn**		**00 58 06.7**	**+0.2**
BDRM				*i* S		**Sn**		**00 58 34.8**	**-6.8**
GDZ	**Gediz**	**3.08**	**336**	*i* P		**Pn**		**00 58 07.3**	**0.0**
GDZ				*i* S		**Sn**		**00 58 42.7**	**-0.2**
BODT	**Bodrum**	**3.13**	**286**	*e*PN		**Pn**		**00 58 08.2**	**+0.3**
KARP	**Karpathos**	**3.26**	**258**	*e*P		**Pn**		**00 58 09.9**	**+0.2**
DEMI	**Demirci**	**3.34**	**327**	*i* P		**Pn**		**00 58 10.6**	**-0.2**
DEMI				*i* S		**Sn**		**00 58 48.2**	**-1.0**
KARA	**Karaisali**	**3.34**	**72**	*e*PN		**Pn**		**00 58 11.1**	**+0.3**
GCAM	**G?zelcaml?**	**3.39**	**296**	*i* P		**Pn**		**00 58 11.1**	**-0.4**
GCAM				*i* S		**Sn**		**00 58 47.8**	**-2.7**
BORA	**Eskisehir**	**3.63**	**352**	*i* P		**Pn**		**00 58 15.1**	**+0.3**
AKHS	**Akhisar**	**3.67**	**316**	*i* P		**Pn**		**00 58 14.6**	**-0.7**
AKS	**Akhisar**	**3.67**	**316**	*e*PN		**Pn**		**00 58 16.2**	**+0.9**
SMG	**Samos**	**3.68**	**294**	*e*P		**Pn**		**00 58 14.7**	**-0.8**
IZM	**Izmir**	**3.70**	**306**	*e*PN		**Pn**		**00 58 16.6**	**+0.8**
KAMT	**Kaman**	**3.73**	**33**	*e*PN		**Pn**		**00 58 17.1**	**+1.0**
CET	**Ceyhan**	**3.80**	**73**	*e*PN		**Pn**		**00 58 17.6**	**+0.1**
BLCB	**Balcova**	**3.84**	**304**	*e*PN		**Pn**		**00 58 18.9**	**+1.2**
DST	**Dursunbey**	**3.84**	**331**	*e*PN		**Pn**		**00 58 19.0**	**+1.3**
BR131	**Keskin Array S**	**3.99**	**30**	*e*Pn		**Pn**		**00 58 18.7**	**-1.0**
BR131				*e*Sn		**Sn**		**00 59 03.3**	**-1.9**
BR131	**Keskin Array S**	**3.99**	**30**	*e*PN		**Pn**		**00 58 18.7**	**-1.0**
BR131				*e*Sn		**Sn**		**00 59 03.3**	**-1.9**
BRTR	**Keskin Array B**	**3.99**	**30**	P		**Pn**		**00 58 19.3**	**-0.4**
	1.4nm,0.3s,baz=198,slow=16,SNR=43								
BRTR				S		**Sn**		**00 59 03.5**	**-1.7**
	4.1nm,0.3s,baz=199,slow=22,SNR=4.2								
HTY	**Hatay**	**4.10**	**91**	*e*PN		**Pn**		**00 58 22.5**	**+1.3**
GULT	**Gulveren**	**4.17**	**354**	*e*PN		**Pn**		**00 58 23.2**	**+1.0**
CDAG	**Cicekdag**	**4.24**	**37**	*i* P		**Pn**		**00 58 24.4**	**+1.3**
APE	**Apeiranthos**	**4.53**	**282**	*e*P		**Pn**		**00 58 27.2**	**+0.2**
NPS	**Neapolis**	**4.56**	**259**	*e*P		**Pn**		**00 58 27.6**	**+0.1**
PRK	**Paraskevi**	**4.82**	**309**	*e*P		**Pn**		**00 58 31.4**	**+0.3**
KMRS	**Kahramanmaras**	**4.83**	**74**	*e*PN		**Pn**		**00 58 31.8**	**+0.7**
MMAI	**Mount Meron Ar**	**4.83**	**131**	P		**Pn**		**00 58 31.2**	**+0.1**
	5.5nm,0.3s,baz=321,slow=12,SNR=35								
MMAI				S		**Sn**		**00 59 24.9**	**-0.8**
	6.5nm,0.3s,baz=326,slow=29,SNR=6.5								
HRSH	**Kfar Ka'horesh**	**4.98**	**135**	P		**Pn**		**00 58 44.6**	**+11**
GAZ	**Gaziantep**	**5.01**	**78**	*e*PN		**Pn**		**00 58 34.6**	**+1.0**
IDI	**Anoyia**	**5.13**	**261**	P		**Pn**		**00 58 34.8**	**-0.5**
	2.5nm,0.3s,baz=88,slow=12,SNR=28								
IDI				S		**Sn**		**00 59 29.8**	**-3.3**
	3.2nm,0.3s,baz=284,slow=17,SNR=8.4								
VAM	**Vamos**	**5.65**	**263**	*e*P		**Pn**		**00 58 45.0**	**+2.6**
RSH		**5.74**	**157**	P		**Pn**		**00 58 44.6**	**+0.9**
GVD	**Gavdhos**	**5.88**	**258**	*e*P		**Pn**		**00 58 47.0**	**+1.5**
AMAG	**Maghara**	**5.89**	**162**	P		**Pn**		**00 58 46.1**	**+0.3**
ASF	**Jabal al Asfar**	**6.33**	**129**	P		**Pn**		**00 58 53.6**	**+2.0**
	0.9nm,0.3s,baz=189,slow=17,SNR=12								
ASF				S		**Sn**		**01 00 04.8**	**+2.4**
	0.2nm,0.3s,baz=25,slow=22,SNR=2.4								
ASF				LR		LR		01 02 35.4	
	comp=Z,109nm,18.1s,baz=14,slow=50								
KOT	**Kottamia**	**6.36**	**174**	P		**Pn**		**00 58 51.7**	**-0.5**
KOT				S		**Sn**		**00 59 58.8**	**-4.7**
HHAG	**Hagoal**	**6.37**	**172**	P		**Pn**		**00 58 53.1**	**+0.9**
HHAG				S		**Sn**		**01 00 00.5**	**-3.0**
SUZ		**6.59**	**167**	P		**Pn**		**00 58 55.4**	**+0.1**
HSAF	**As Saff**	**6.65**	**176**	P		**Pn**		**00 58 56.2**	**0.0**
GLL	**Jalalah**	**6.70**	**175**	P		**Pn**		**00 58 57.1**	**+0.3**
SLUM		**6.82**	**227**	P		**Pn**		**00 58 55.6**	**-2.9**
EIL	**Elat**	**7.35**	**153**	P		**Pn**		**00 59 05.4**	**-0.3**
	0.6nm,0.3s,baz=340,slow=12,SNR=8.2								
EIL				S		**Sn**		**01 00 23.9**	**-3.7**
	0.9nm,0.3s,baz=341,slow=12,SNR=3.8								
HKAT	**Jabal Katrina**	**8.12**	**162**	P		**Pn**		**00 59 17.4**	**+1.2**
AWBH		**8.14**	**194**	P		**Pn**		**00 59 16.0**	**-0.6**
HFRF	**Wahat Farafira**	**9.40**	**195**	P		**Pn**		**00 59 33.3**	**-0.4**
AKASG	**Malin Array Be**	**14.48**	**355**	P		**Pn**		**01 00 45.8**	**+3.5**
	1.0nm,0.3s,baz=179,slow=10.0,SNR=5.4								
GERES	**GERESS Array B**	**17.88**	**320**	P		**Pn**		**01 01 25.0**	**+0.1**
	0.1nm,0.3s,baz=144,slow=10,SNR=3.8								
AKTK	**Aktyubinsk**	**24.00**	**45**	P		**P**		**01 02 28.8**	**-0.4**
AKTK	**Aktyubinsk**	**24.00**	**45**	P		**P**		**01 02 28.8**	**-0.4**
AKTO	**Aktyubinsk**	**24.00**	**45**	P		**P**		**01 02 28.8**	**-0.4**
	1.0nm,0.4s,mb3.5,baz=229,slow=3.9,SNR=5.2								
HFS	**Hagfors**	**26.37**	**340**	P		**P**		**01 02 50.3**	**-0.3**
	2.3nm,0.9s,mb3.6,baz=144,slow=13,SNR=4.4								
ARCES	**ARCESS Array B**	**33.45**	**356**	P		**P**		**01 03 51.4**	**-1.7**
	3.6nm,1.0s,mb4.2,baz=161,slow=8.6,SNR=6.2								
MKAR	**Makanchi Array**	**39.12**	**58**	P		**P**		**01 04 41.0**	**-0.8**
	0.3nm,0.6s,mb3.3,baz=275,slow=7.2,SNR=3.3								

ZALV	**Zalesovo Beam**	**40.74**	**47**	P		**P**		**01 04 54.0**	**-1.1**
	0.7nm,0.4s,mb3.8,baz=280,slow=10,SNR=2.8								

*SOF **03** 01:00:49.7, 4060N×2349E, h2km, MD3.2*
*ATH **03** 01:00:51.5, 4062N×2346E, h23km±1km, MD3.5/10*
*NEIC **03** 01:00:51.5, 4062N×2345E, h21km, MD3.5(ATH), ML3.6(BUC), After ATH.*
*ISCJB **03** 01:00:51.7±0.2, 4068N±001×2343E±002, h10km, Error ellipse: s-maj=2.2km s-min=1.9km az=10.6*
*CSEM **03** 01:00:51.3±0.1, 4066N×2341E, h5km, ML3.7/10, Error ellipse: s-maj=2.5km s-min=2.1km az=75.0*
*THE **03** 01:00:52.0, 4064N×2342E, h0km±1km, ML3.7/10, Error ellipse: s-maj=1.4km s-min=0.6km az=258.0*
*SKO **03** 01:00:53.3, 4066N×2335E, h2km, M3.0, ML2.9*
ISC 03 01:00:51.9±0.4**, 4064N**±001×**2342E**±002**, h0**km±3km**, n77,** σ1**9**00/128**, 10C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.18**	**343**	P		**Pg**		**01 00 56.1**	**+0.7**
SOH				S		**Sg**		**01 00 59.0**	**+1.2**
HORT	**Hortiatis**	**0.25**	**259**	P		**Pg**		**01 00 57.4**	**+0.7**
HORT				S		**Sg**		**01 01 00.6**	**+0.7**
PLG	**Polygyros**	**0.27**	**176**	P		**Pg**		**01 00 57.7**	**+0.7**
PLG				S		**Sg**		**01 01 01.6**	**+1.1**
PLG	**Polygyros**	**0.27**	**176**	⇑*i*PB		**Pg**		**01 00 57.4**	**+0.4**
PLG				*e*SB		**Sg**		**01 01 01.2**	**+0.7**
PLG	**Polygyros**	**0.27**	**176**	P		**Pg**		**01 00 57.7**	**+0.7**
PLG				*e*Sb		**Sg**		**01 01 01.2**	**+0.7**
THE	**Thessaloniki**	**0.35**	**268**	P		**Pg**		**01 00 58.7**	**+0.2**
THE				S		**Sg**		**01 01 03.8**	**+0.7**
OUR	**Ouranopolis**	**0.53**	**126**	P		**Pg**		**01 01 02.2**	**+0.3**
KNT	**Kendrikon**	**0.65**	**323**	P		**Pg**		**01 01 04.4**	**0.0**
KNT				S		**Sg**		**01 01 13.8**	**+1.0**
PAIG	**Paliouri**	**0.74**	**165**	P		**Pg**		**01 01 05.4**	**-0.7**
PAIG				S		**Sg**		**01 01 16.7**	**+1.0**
NVR	**Nevrokopi**	**0.78**	**25**	*e*PN		**Pg**		**01 01 06.6**	**-0.2**
NVR				*e*SN		**Sg**		**01 01 18.1**	**+1.2**
GRG	**Griva**	**0.84**	**292**	P		**Pg**		**01 01 08.2**	**+0.3**
GRG				S		**Sg**		**01 01 19.5**	**+0.9**
LIT	**Litokhoron**	**0.90**	**233**	P		**Pg**		**01 00 58.9**	**-0.1**
LIT				S		**Sg**		**01 01 22.6**	**+2.0**
VAY	**Valandovo**	**0.94**	**317**	P		**Pg**		**01 01 09.3**	**-0.5**
VAY	**Valandovo**	**0.94**	**317**	*e*Sg		**Sg**		**01 01 21.2**	**-0.7**
VAY	**Valandovo**	**0.94**	**317**	*e*Pg		**Pg**		**01 01 09.3**	**-0.5**
VAY				*e*Sg		**Sg**		**01 01 21.3**	**-0.6**
VAY				*e*Lg				01 01 22.0	
	comp=N,885nm,0.3s								
VAY				*e*Lg				01 01 22.1	
	comp=E,478nm,0.4s								
VAY	**Valandovo**	**0.94**	**317**	Pg		**Pg**		**01 01 09.4**	**-0.4**
VAY				Sg		**Sg**		**01 01 21.5**	**-0.4**
MMB	**Musomiste**	**0.97**	**14**	Pg		**Pg**		**01 01 09.7**	**-0.8**
MMB				Sg		**Sg**		**01 01 22.5**	**-0.6**
KKB	**Krupnik**	**1.25**	**348**	P		**Pg**		**01 01 14.9**	**-0.9**
KZN	**Kozani**	**1.30**	**256**	*e*PN		**Pn**		**01 01 16.4**	**-0.9**
KZN				*e*SN		**Sn**		**01 01 34.9**	**-0.5**
NEO	**Neokhori**	**1.34**	**187**	*e*PN		**Pn**		**01 01 16.7**	**-1.1**
STIP	**Stip**	**1.41**	**319**	P		**Pn**		**01 01 18.1**	**-0.6**
STIP				S		**Sg**		**01 01 37.5**	**+0.5**
STIP	**Stip**	**1.41**	**319**	*e*Sg		**Sg**		**01 01 36.6**	**-0.4**
STIP	**Stip**	**1.41**	**319**	*e*Pg		**Pg**		**01 01 17.9**	**-0.9**
STIP				S		**Sg**		**01 01 37.5**	**+0.5**
STIP	**Stip**	**1.41**	**319**	*e*Pg		**Pg**		**01 01 18.0**	**-0.8**
STIP				*e*Sg		**Sg**		**01 01 36.6**	**-0.4**
STIP				*e*Lg				01 01 37.5	
	comp=E,163nm,0.5s								
STIP				*e*Lg				01 01 38.3	
	comp=N,141nm,0.3s								
THL	**Klokotos Trika**	**1.53**	**226**	P		**Pn**		**01 01 19.4**	**-1.0**
THL				S		**Sn**		**01 01 41.4**	**+0.5**
THL	**Klokotos Trika**	**1.53**	**226**	⇑*i*PN		**Pn**		**01 01 19.2**	**-1.2**
THL				*e*SN		**Sn**		**01 01 39.1**	**-1.8**
THL	**Klokotos Trika**	**1.53**	**226**	⇑*i*Pn		**Pn**		**01 01 19.2**	**-1.2**
THL				*e*Sn		**Sn**		**01 01 39.1**	**-1.8**
THL				S		**Sn**		**01 01 41.4**	**+0.5**
LIA	**Limnos Island**	**1.54**	**118**	P		**Pn**		**01 01 18.9**	**-1.6**
LIA				S		**Sn**		**01 01 40.8**	**-0.4**
LIA	**Limnos Island**	**1.54**	**118**	*e*PN		**Pn**		**01 01 18.9**	**-1.6**
LIA				*e*SN		**Sn**		**01 01 38.7**	**-2.5**
LIA	**Limnos Island**	**1.54**	**118**	*e*Pn		**Pn**		**01 01 18.9**	**-1.6**
LIA				*e*Sn		**Sn**		**01 01 38.7**	**-2.5**
LIA				S		**Sn**		**01 01 40.8**	**-0.4**
FNA	**Florina**	**1.56**	**276**	P		**Pn**		**01 01 21.1**	**+0.2**
FNA				S		**Sn**		**01 01 42.4**	**+0.6**
BIA	**Bitola**	**1.64**	**284**	P		**Pn**		**01 01 21.5**	**-0.4**
BIA				S		**Sg**		**01 01 44.5**	**+0.1**
BIA	**Bitola**	**1.64**	**284**	*e*Sg		**Sg**		**01 01 43.6**	**-0.8**
BIA	**Bitola**	**1.64**	**284**	*e*Pg		**Pn**		**01 01 21.2**	**-0.7**
BIA				S		**Sg**		**01 01 44.5**	**+0.1**
BIA	**Bitola**	**1.64**	**284**	*e*Pg		**Pn**		**01 01 21.2**	**-0.6**
BIA				*e*Sg		**Sg**		**01 01 43.6**	**-0.8**
BIA				*e*Lg				01 01 46.8	
	comp=N,30nm,0.4s								
BIA				*e*Lg				01 01 47.4	
	comp=E,42nm,0.3s								
RDO	**Rodhopi**	**1.68**	**72**	*e*Pn		**Pn**		**01 01 21.8**	**-0.7**
RDO				*e*Sn		**Sn**		**01 01 45.7**	**+1.0**
PLD	**Plovdiv**	**1.75**	**33**	P		**Pn**		**01 01 23.5**	**+0.1**
PLD				S		**Sn**		**01 01 47.7**	**+1.3**
PLD	**Plovdiv**	**1.75**	**33**	Pg		**Pg**		**01 01 25.6**	**+0.2**
PLD	**Plovdiv**	**1.75**	**33**	Pg		**Pg**		**01 01 25.6**	**+0.2**
KRUS	**Krusevo**	**1.80**	**294**	*e*Pg		**Pn**		**01 01 24.1**	**0.0**
KRUS				*e*Sg		**Sg**		**01 01 48.7**	**-0.9**
KRUS	**Krusevo**	**1.80**	**294**	*e*Pg		**Pn**		**01 01 24.1**	**0.0**
KRUS				*e*Sg		**Sg**		**01 01 48.7**	**-0.9**
KRUS				*e*Lg				01 01 49.7	
	comp=E,23nm,0.6s								
KRUS				*e*Lg				01 01 50.0	
	comp=N,36nm,0.7s								
KDZ	**Kurdzhali**	**1.81**	**56**	P		**Pn**		**01 01 22.6**	**-1.7**
KDZ				Pg		**Pg**		**01 01 24.1**	**-2.4**
AGG	**Agios Georgios**	**1.83**	**208**	P		**Pn**		**01 01 23.7**	**-0.8**
AGG				S		**Sn**		**01 01 48.6**	**+0.3**
AGG	**Agios Georgios**	**1.83**	**208**	P		**Pn**		**01 01 23.7**	**-0.8**
AGG				S		**Sn**		**01 01 48.6**	**+0.3**
VTS	**Vitosha**	**1.95**	**355**	⇑P		**Pn**		**01 01 27.4**	**+1.2**
VTS	**Vitosha**	**1.95**	**355**	Pg		**Pn**		**01 01 27.2**	**+1.0**
VTS				S		**Sn**		**01 01 51.3**	**-0.1**
VTS	**Vitosha**	**1.95**	**355**	Pg		**Pn**		**01 01 27.2**	**+1.0**
VTS				Sg		**Sn**		**01 01 51.9**	**+0.5**
VTS	**Vitosha**	**1.95**	**355**	⇑*i*P		**Pn**		**01 01 27.4**	**+1.2**
VTS				S		**Sn**		**01 01 51.3**	**-0.1**
PGB	**Panagyurishte**	**1.98**	**16**	Pg		**Pg**		**01 01 28.4**	**-1.5**
PGB				Sg		**Sg**		**01 01 54.5**	**-1.1**
ALN	**Alexandroupoli**	**2.01**	**82**	P		**Pn**		**01 01 25.7**	**-1.3**
ALN				S		**Sn**		**01 01 53.9**	**+1.1**
LKR	**Lokris**	**2.02**	**189**	*e*PN		**Pn**		**01 01 26.0**	**-1.1**
DIM	**Dimitrovgrad**	**2.12**	**48**	Pg		**Pg**		**01 01 32.1**	**-0.4**
DIM				S		**Sg**		**01 02 01.1**	**+1.1**
EVR	**Evrytania**	**2.13**	**216**	*e*PN		**Pn**		**01 01 28.1**	**-0.5**
JAN	**Janina**	**2.21**	**244**	*e*PB		**Pn**		**01 01 30.0**	**+0.3**
JAN	**Janina**	**2.21**	**244**	*e*Pb		**Pn**		**01 01 30.6**	**+0.9**
BARS	**Barje**	**2.48**	**332**	⇑*i*Pn		**Pn**		**01 01 33.1**	**-0.4**
BARS				*e*Sg		**Sg**		**01 02 11.8**	**+0.2**
PRK	**Paraskevi**	**2.60**	**122**	P		**Pn**		**01 01 34.6**	**-0.5**
PRK				S		**Sn**		**01 02 09.2**	**+1.9**
PRK	**Paraskevi**	**2.60**	**122**	*e*Pb		**Pn**		**01 01 35.3**	**+0.2**
PRK				S		**Sn**		**01 02 09.2**	**+1.9**
PVL	**Pavlikeni**	**2.94**	**28**	P		**Pn**		**01 01 38.9**	**-0.9**
PVL				S		**Sg**		**01 02 22.1**	**-4.2**
ZIMR		**3.34**	**25**	S		**Sg**		**01 02 40.1**	**+1.0**
SMG	**Samos**	**3.95**	**137**	*e*PN		**Pn**		**01 01 53.4**	**-0.3**
SVIS	**Svilajnac**	**3.97**	**336**	*e*Sg		**Sg**		**01 02 58.0**	**-1.4**
GZR	**Gura Zlata**	**4.77**	**355**	⇑P		**Pn**		**01 02 06.3**	**+1.4**
GZR				S		**Sg**		**01 03 26.5**	**+1.5**
GZR	**Gura Zlata**	**4.77**	**355**	⇑*i*P		**Pn**		**01 02 06.3**	**+1.4**
GZR	**Gura Zlata**	**4.77**	**355**	S		**Sg**		**01 03 26.5**	**+1.5**
VOIR		**4.94**	**13**	⇑P		**Pn**		**01 02 08.1**	**+0.9**
VOIR				S		**Sg**		**01 03 31.2**	**+0.8**
VOIR		**4.94**	**13**	⇑*i*P		**Pn**		**01 02 08.1**	**+0.9**
VOIR		**4.94**	**13**	S		**Sg**		**01 03 31.2**	**+0.8**
BZS	**Buzias**	**5.14**	**346**	⇓P		**Pn**		**01 02 09.4**	**-0.6**
BZS				S		**Sg**		**01 03 35.1**	**-1.9**
BZS	**Buzias**	**5.14**	**346**	⇓*i*P		**Pn**		**01 02 09.4**	**-0.6**
BZS	**Buzias**	**5.14**	**346**	S		**Sg**		**01 03 35.1**	**-1.9**
MLR	**Muntele Rosu**	**5.18**	**20**	⇓P		**Pn**		**01 02 11.8**	**+1.2**
MLR				S		**Sg**		**01 03 37.0**	**-1.3**
MLR	**Muntele Rosu**	**5.18**	**20**	⇓*i*P		**Pn**		**01 02 11.8**	**+1.2**
MLR	**Muntele Rosu**	**5.18**	**20**	S		**Sg**		**01 03 37.0**	**-1.3**
PLOR	**Plostina**	**5.71**	**23**	⇓*i*P		**Pn**		**01 02 19.6**	**+1.7**
VRI	**Vrincioaia**	**5.75**	**24**	⇓P		**Pn**		**01 02 21.1**	**+2.7**
VRI	**Vrincioaia**	**5.75**	**24**	⇓*i*P		**Pn**		**01 02 21.1**	**+2.7**

MEX 03 01:03:19.6±1.4**, 1425N×9404W, h18**km±94km**, MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**1.65**	**29**	*i* P		**Pn**		**01 03 44.0**	**-3.8**
PCIG				*i* S		**Sn**		**01 04 02.9**	**-5.6**
THIG		**1.84**	**69**	*i* P		**Pn**		**01 03 47.4**	**-2.9**
THIG				*i* S		**Sn**		**01 04 08.7**	**-4.5**
TGIG		**2.67**	**19**	*e*P		**Pn**		**01 04 00.3**	**-1.4**
TGIG				*i* S		**Sn**		**01 04 31.0**	**-2.6**
CMIG	**Matias Romero**	**2.94**	**344**	*e*P		**Pn**		**01 04 02.5**	**-3.1**
CMIG				*i* S		**Sn**		**01 04 36.2**	**-4.2**

*ISCJB **03** 01:15:02.4±1.0, 203S±01×1779W±0.1, h470km±15km, mb3.9/14, Error ellipse: s-maj=23.7km s-min=10.2km az=41.5*
*NEIC **03** 01:15:04.9±1.1, 2046S×17780W, h500km±14km, mb4.1/3, Error ellipse: s-maj=21.5km s-min=11.4km az=140.0*
*IDC **03** 01:15:04.1±1.9, 2034S×17784W, h487km±22km, mb3.6/10, mb1 3.8/12, mb1mx3.7/17, mbtmp3.6/12, Error ellipse: s-maj=27.2km s-min=12.3km az=143.0*
ISC 03 01:15:04.5±1.2**, 204S**±01×**1779W**±01**, h485**km±17km**, n27,** σ0**$**77/21**, mb3.9**/14**, 2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.71**	**43**	P		**P**		**01 17 08.2**	**+0.1**
	4.3n

STKA	**Stephens Creek**	**36.98**	**159**	P	**P**	**01 53 50.8**	**+0.8**
	2.9nm,0.8s,mb4.2,baz=347,slow=10.0,SNR=4.7						
SONM	**Songino Array**	**48.45**	**341**	P	**P**	**01 55 23.3**	**+0.5**
	1.4nm,1.0s,mb4.0,baz=150,slow=6.5,SNR=5.9						
SONM				PcP	PcP	01 56 49.1	+0.4
	0.9nm,0.8s,baz=151,slow=3.3,SNR=4.8						
MK31	**Makanchi Array**	**58.65**	**325**	*e*P	**P**	**01 56 37.8**	**+0.2**
MKAR	**Makanchi Array**	**58.65**	**325**	P	**P**	**01 56 37.5**	**-0.1**
	1.2nm,0.6s,mb4.1,baz=120,slow=8.4,SNR=8.3						
KURK	**Kurchatov**	**62.84**	**328**	*e*P	**P**	**01 57 06.0**	**-0.1**
	2.8nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**91.59**	**340**	P	**P**	**01 59 46.1**	**-0.7**
	2.3nm,0.8s,mb4.6,baz=45,slow=3.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**123.57**	**288**	PKP	PKPdf	02 05 39.7	+1.0
	194nm,0.4s,baz=107,slow=1.5,SNR=2.0						

*ISCJB **03** 02:09:12.9±0.6, 1070N±006×6182W±004, h60km±7km, Error ellipse: s-maj=10.4km s-min=5.6km az=165.8*
*FUNV **03** 02:09:13.8, 1077N×6172W, h43km, MW2.9*
*NEIC **03** 02:09:16.0, 1095N×6167W, h23km, MD2.6(TRN), After TRN.*
*TRN **03** 02:09:15.9, 1097N×6167W, h18km, MD2.6*

ISC 03 02:09:14.1±0.6, 1073N±006×6181W±003, h52km±7km, n22, σ0§84/31, 2C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.07**	**122**		*e*P		**Pn**	**02 09 22.0**	**0.0**
TCE					*e*S		**Sn**	**02 09 27.3**	**-0.3**
TRN	**Trinidad (W)**	**0.41**	**102**	⇑*i*	P		**Pn**	**02 09 24.3**	**-0.1**
TRN					*i* S		**Sn**	**02 09 30.7**	**-1.1**
GUIV	**Guiria**	**0.41**	**258**	⇓*i*	P		**Pn**	**02 09 24.9**	**+0.4**
GUIV					*e*S		**Sn**	**02 09 32.2**	**+0.3**
TPP	**Pointe-a-Pierr**	**0.54**	**139**		*e*P		**Pn**	**02 09 31.6**	**+5.7**
TPP	**Pointe-a-Pierr**	**0.54**	**139**		*e*P		**Pn**	**02 09 29.6**	**+3.7**
TBH	**Brigand Hill**	**0.77**	**109**		*e*P		**Pn**	**02 09 30.9**	**+2.1**
TPR	**Prospect**	**1.11**	**66**		*e*P		**Pn**	**02 09 33.6**	**+0.3**
TPR					*e*S		**Sn**	**02 09 48.9**	**+1.3**
TPR	**Prospect**	**1.11**	**66**		*e*P		**Pn**	**02 09 33.6**	**+0.3**
TPR					*e*S		**Sn**	**02 09 46.4**	**-1.2**
BOT	**Bacolet**	**1.16**	**68**		*e*P		**Pn**	**02 09 34.0**	**+0.1**
GUNV	**Guanoco**	**1.25**	**243**		*e*P		**Pn**	**02 09 36.2**	**+1.0**
GUNV					*e*S		**Sn**	**02 09 53.1**	**+2.2**
GRGR	**Grenville**	**1.40**	**6**		*e*Pn		**Pn**	**02 09 37.0**	**-0.2**
CRUV	**Carupano**	**1.40**	**268**	⇑	*e*P		**Pn**	**02 09 37.3**	**+0.1**
CRUV					*e*S		**Sn**	**02 09 54.4**	**-0.3**
GRW	**Mount Saint Ca**	**1.43**	**6**		*e*P		**Pn**	**02 09 37.8**	**+0.2**
ITEV	**Isla Los Testi**	**1.44**	**296**		*e*P		**Pn**	**02 09 37.9**	**+0.2**
ITEV					*e*S		**Sn**	**02 09 55.1**	**-0.4**
RIOV	**Rio Grande**	**2.65**	**180**		*e*P		**Pn**	**02 09 53.2**	**-1.1**
PCRV	**Puerto La Cruz**	**2.83**	**259**		*e*P		**Pn**	**02 09 57.0**	**+0.1**
PRGV	**PARIAGUAN**	**3.41**	**235**		*e*P		**Pn**	**02 10 04.5**	**-0.3**
CUPV	**Cœpira**	**3.97**	**261**		*e*P		**Pn**	**02 10 13.1**	**+0.6**
BIRV	**Birongo**	**4.39**	**267**		*e*P		**Pn**	**02 10 17.6**	**-0.6**
MERV	**Las Mercedes**	**4.66**	**252**		*e*P		**Pn**	**02 10 21.5**	**-0.4**
MERV					*e*S		**Sn**	**02 11 10.8**	**-3.9**
CAOV	**Caicara del Or**	**5.60**	**233**		*e*P		**Pn**	**02 10 33.5**	**-1.2**
BAUV	**El Baul**	**6.39**	**254**		*e*P		**Pn**	**02 10 44.9**	**-0.9**

*ISCJB **03** 02:40:20.0±0.7, 3718N±003×356E±007, h10km, Error ellipse: s-maj=8.5km s-min=4.5km az=165.8*
*MDD **03** 02:40:21.5±1.2, 3703N×376E, h18km±10km, mb3.9/11, Error ellipse: s-maj=14.0km s-min=8.2km az=71.0, PRIMO*
*CSEM **03** 02:40:21.6±0.2, 3712N×358E, h30km, mb3.9/10, Error ellipse: s-maj=5.9km s-min=3.9km az=77.0*
*NEIC **03** 02:40:23.7, 3730N×358E, h0km, MG3.8(MDD), After MDD.*
*CRAAG **03** 02:40:25.8, 3673N×350E, Ml2.6*

ISC 03 02:40:24.4±1.2, 3735N±005×349E±008, h10km, n28, σ0§81/44, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABMS	**Boumerdes**	**0.60**	**180**	P		P*g*	**Pg**	**02 40 27.8**	**-8.1**
ABA	**Alger-Bouzarea**	**0.65**	**214**	P		P*g*	**Pg**	**02 40 34.1**	**-2.9**
ADJB	**Djebel Djouab**	**1.19**	**182**	P		P*b*	**Pb**	**02 40 37.2**	**-10**
EMHD	**Djebel Mahouad**	**1.22**	**201**	P		P*n*	**Pn**	**02 40 39.4**	**-8.1**
AKET	**Djebel Ketaf**	**1.34**	**166**	P		P*n*	**Pn**	**02 40 40.8**	**-8.3**
EIBI	**Ibiza**	**2.38**	**315**	P		P*n*	**Pn**	**02 41 03.9**	**+0.5**
EIBI	2.1nm,0.2s,SNR=8.4				S		**Sn**	**02 41 33.0**	**+0.4**
	6.2nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**2.38**	**315**	P		P*n*	**Pn**	**02 41 03.9**	**+0.4**
	2.1nm,0.2s,SNR=8.4								
EIBI					S		**Sn**	**02 41 33.0**	**+0.4**
	6.2nm,0.2s,SNR=7.9								
ETOS	**Mallorca**	**2.47**	**348**	P		P*n*	**Pn**	**02 41 04.3**	**-0.4**
	5.5nm,0.2s,SNR=23								
ETOS					S		**Sn**	**02 41 34.5**	**-0.5**
	2.2nm,0.3s,SNR=7.9								
ETOS	**Mallorca**	**2.47**	**348**	P		P*n*	**Pn**	**02 41 04.3**	**-0.4**
	5.5nm,0.2s,SNR=23								
ETOS					S		**Sn**	**02 41 34.5**	**-0.5**
	2.2nm,0.3s,SNR=7.9								
EBEN	**Beniarda**	**3.23**	**296**	P		P*n*	**Pn**	**02 41 14.8**	**-0.3**
	4.7nm,0.6s,SNR=7.9								
EBEN					S		**Sn**	**02 41 53.3**	**-0.3**
	2.4nm,0.3s,SNR=7.9								
EBEN	**Beniarda**	**3.23**	**296**	P		P*n*	**Pn**	**02 41 14.8**	**-0.3**
	4.7nm,0.6s,SNR=7.9								
EBEN					S		**Sn**	**02 41 53.3**	**-0.2**
	2.4nm,0.3s,SNR=7.9								
ECHE	**Chera**	**4.15**	**304**	P		P*n*	**Pn**	**02 41 29.1**	**+1.3**
	5.9nm,0.4s,SNR=5.6								
ETOB	**Tobarra**	**4.18**	**290**	P		P*n*	**Pn**	**02 41 28.6**	**+0.4**
	2.7nm,0.5s,SNR=7.9								
ETOB					S		**Sn**	**02 42 16.7**	**-0.4**
	2.0nm,0.4s,SNR=7.9								
ETOB	**Tobarra**	**4.18**	**290**	P		P*n*	**Pn**	**02 41 28.6**	**+0.4**
	2.7nm,0.5s,SNR=7.9								
ETOB					S		**Sn**	**02 42 16.7**	**-0.3**
	2.0nm,0.4s,SNR=7.9								
EMOS	**Mosqueruela**	**4.31**	**316**	P		P*n*	**Pn**	**02 41 30.7**	**+0.7**
	1.0nm,0.2s,SNR=12								
EMOS					S		**Sn**	**02 42 20.2**	**-0.2**
	1.6nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela**	**4.31**	**316**	P		P*n*	**Pn**	**02 41 30.7**	**+0.7**
	1.0nm,0.2s,SNR=12								
EMOS					S		**Sn**	**02 42 20.2**	**-0.1**
	1.6nm,0.2s,SNR=7.9								
ERTA	**Horta de San J**	**4.36**	**327**	P		P*n*	**Pn**	**02 41 30.8**	**+0.2**
	1.1nm,0.4s,SNR=7.9								
ERTA	**Horta de San J**	**4.36**	**327**	P		P*n*	**Pn**	**02 41 30.8**	**+0.2**
	1.1nm,0.4s,SNR=7.9								
ERTA					S		**Sn**	**02 42 21.1**	**-0.3**
	1.2nm,0.4s,SNR=7.9								
EPOB	**Poblet**	**4.41**	**336**	P		P*n*	**Pn**	**02 41 31.4**	**0.0**
	2.2nm,0.2s,SNR=15								
EPOB	**Poblet**	**4.41**	**336**	P		P*n*	**Pn**	**02 41 31.4**	**0.0**
	2.2nm,0.2s,SNR=15								
EPOB					S		**Sn**	**02 42 22.1**	**-0.7**
	1.6nm,0.4s,SNR=7.9								
EMIR	**Miracle**	**4.81**	**342**	P		P*n*	**Pn**	**02 41 37.9**	**+1.1**
	3.4nm,0.1s,SNR=16								
EMIR	**Miracle**	**4.81**	**342**	P		P*n*	**Pn**	**02 41 37.9**	**+1.2**
	3.4nm,0.1s,SNR=16								
EMIR					S		**Sn**	**02 42 32.1**	**-0.3**
	3.2nm,0.2s,SNR=7.9								
EJON	**La Jonquera**	**5.12**	**355**	P		P*n*	**Pn**	**02 41 41.4**	**+0.4**
	4.4nm,0.1s,SNR=36								
EJON	**La Jonquera**	**5.12**	**355**	P		P*n*	**Pn**	**02 41 41.4**	**+0.4**
	4.4nm,0.1s,SNR=36								
EJON					S		**Sn**	**02 42 38.6**	**-1.5**
	1.8nm,0.4s,SNR=7.9								
EQES	**Quesada**	**5.23**	**277**	P		P*n*	**Pn**	**02 41 43.2**	**+0.6**
	0.7nm,0.3s,SNR=7.9								
EQES					S		**Sn**	**02 42 42.7**	**-0.2**
	2.1nm,0.5s,SNR=7.9								
EQES	**Quesada**	**5.23**	**277**	P		P*n*	**Pn**	**02 41 43.2**	**+0.6**
	0.7nm,0.3s,SNR=7.9								
EQES					S		**Sn**	**02 42 42.7**	**-0.2**
	2.1nm,0.5s,SNR=7.9								
ETOR	**Torete**	**5.53**	**311**	P		P*n*	**Pn**	**02 41 50.1**	**+3.4**
ETOR	**Torete**	**5.53**	**311**	P		P*n*	**Pn**	**02 41 48.4**	**+1.7**
	2.2nm,0.4s,SNR=7.9								

*DJA **03** 02:51:16.3±0.0, 329S×13897E, h47km, mB5.8/3, Mjma4.2/2, MLv5.0/3, Mw(mB)5.5/3, Mwp3.6/1*
*ISCJB **03** 02:51:17.4±1.3, 382S±006×13867E±006, h81km±15km, mb4.2/6, Error ellipse: s-maj=12.5km s-min=7.8km az=41.7*
*IDC **03** 02:51:17.6±4.5, 365S×13898E, h82km±40km, mb4.0/5, mb1 4.2/8, mb1mx3.9/15, mbtmp4.1/8, MS3.1/5, Ms1 3.1/5, ms1mx2.8/21, Error ellipse: s-maj=31.0km s-min=17.2km az=91.0*
*NEIC **03** 02:51:20.2±2.0, 385S×13880E, h96km±17km, mb4.6/5, Error ellipse: s-maj=18.2km s-min=14.2km az=189.0*

ISC 03 02:51:18.5±1.2, 376S±009×13872E±009, h78km±11km, n33, σ1§09/33, mb4.2/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.34**	**58**	P		P	**Pn**	**02 51 44.9**	**-10**
MMPI	**Merauke**	**4.96**	**161**	P		P	**Pn**	**02 52 33.5**	**+3.0**
	2µm,0.6s,7.6nm								
SWI	**Sorong**	**7.99**	**291**	P		P	**Pn**	**02 53 10.5**	**-1.4**
	68nm,0.6s,0.2nm								
PMG	**Port Moresby**	**10.09**	**124**	*e*Pn		P	**Pn**	**02 53 41.1**	**+0.6**
	26nm,0.8s								
PMG	**Port Moresby**	**10.09**	**124**	P		P	**Pn**	**02 53 41.8**	**+1.3**
	45nm,1.0s								
KAKA	**Kakadu**	**10.84**	**215**	*e*Pn		P	**Pn**	**02 53 41.5**	**-9.3**
KAKA				*e*Sn		P	**Sn**	**02 55 41.3**	**-9.2**
COEN	**Coen**	**11.04**	**157**	*e*Pn		P	**Pn**	**02 53 52.8**	**-0.7**
	10nm,0.6s								
COEN				*e*Sn		P	**Sn**	**02 55 54.5**	**-0.8**
COEN	**Coen**	**11.04**	**157**	P		P	**Pn**	**02 53 52.8**	**-0.8**
	20nm,0.7s								
LBMI	**Labuha**	**11.63**	**285**	P		P	**Pn**	**02 54 01.0**	**-0.6**
	116nm,1.1s,886nm								
KDI	**Kendari**	**16.06**	**269**	P		P	**Pn**	**02 55 00.8**	**+1.0**
	10nm,1.5s,3µm								
BATI	**Baumata**	**16.25**	**246**	P		P	**Pn**	**02 55 03.2**	**+1.1**
	3.7nm,0.3s,baz=348,slow=6.5,SNR=6.9								
BATI						S	**S**	**02 57 56.7**	**-13**
	6.4nm,0.3s,baz=18,slow=3.7,SNR=3.4								
BATI	**Baumata**	**16.25**	**246**	P		P	**Pn**	**02 55 05.5**	**+3.4**
	33nm,0.9s								
WRAB	**Tennant Creek**	**16.63**	**194**	*e*Pn		P	**Pn**	**02 55 06.6**	**-0.1**
	26nm,0.6s								
WB2	**Warramunga Arr**	**16.64**	**194**	*e*Pn		P	**Pn**	**02 55 06.6**	**-0.2**
WB2					*e*S	P	**S**	**02 58 07.4**	**-10**
WRA	**Warramunga Arr**	**16.64**	**195**	P		P	**Pn**	**02 55 05.2**	**-1.7**
	2.4nm,0.3s,baz=17,slow=13,SNR=136								
WRA						S	**S**	**02 58 03.8**	**-14**
	0.5nm,0.3s,baz=7.7,slow=23,SNR=4.9								
CTA	**Charters Tower**	**17.81**	**156**	P		P	**Pn**	**02 55 21.2**	**0.0**
	1.5nm,0.3s,baz=333,slow=11,SNR=24								
CTA					LR	LR		03 02 34.0	
	comp=Z,65nm,21.3s,baz=49,slow=38								
CTAO	**Charters Tower**	**17.81**	**156**	*e*P		P	**Pn**	**02 55 23.2**	**+1.9**
	29nm,0.9s								
GUMO	**Guam**	**18.29**	**19**	LR		LR		03 02 03.6	
	comp=Z,28nm,19.9s,baz=229,slow=36								
KAPI	**Kappang**	**18.95**	**266**	P		P	**Pn**	**02 55 35.7**	**+0.7**
	baz=188,slow=18,SNR=3.8								
KAPI	**Kappang**	**18.95**	**266**	*e*P		P	**Pn**	**02 55 35.5**	**+0.5**
	11nm,1.2s								
ASAR	**Alice Springs**	**20.32**	**193**	P		P	**P**	**02 55 49.2**	**+0.8**
	36nm,0.8s,baz=17,slow=11,SNR=156								
ASAR						S	**S**	**02 59 35.4**	**+3.4**
	13nm,0.8s,baz=17,slow=23,SNR=7.4								
HNR	**Honiara**	**21.82**	**106**	LR		LR		03 03 24.7	
	comp=Z,76nm,21.5s,baz=338,slow=34								
EIDS	**Eidsvold**	**24.55**	**152**	*e*P		P	**P**	**02 56 31.4**	**+0.4**
	42nm,0.6s,mb5.0								
MBWA	**Marble Bar**	**25.29**	**225**	*e*P		P	**P**	**02 56 39.2**	**+1.4**
	18nm,0.7s,mb4.6								
STKA	**Stephens Creek**	**28.10**	**175**	P		P	**P**	**02 57 02.4**	**-0.5**
	2.2nm,0.6s,mb3.9,baz=358,slow=11,SNR=9.1								
STKA					LR	LR		03 09 12.7	
	comp=Z,90nm,18.2s,baz=206,slow=38								
JHJ	**Hachijo jima 2**	**36.70**	**1**	LR		LR		03 09 31.3	
	comp=Z,604nm,21.9s,baz=93,slow=30								
KSRS	**Korea Array**	**42.22**	**347**	LR		LR		03 14 51.3	
	comp=Z,18nm,18.2s,baz=150,slow=34								
MKAR	**Makanchi Array**	**70.62**	**323**	P		P	**P**	**03 02 25.7**	**+0.2**
	0.3nm,0.6s,mb3.3,baz=105,slow=7.4,SNR=3.4								
MAW	**Mawson**	**81.16**	**202**	P		P	**P**	**03 03 24.2**	**-1.0**
	2.0nm,0.8s,mb4.0,baz=54,slow=8.7,SNR=5.4								
QSPA	**South Pole Qui**	**86.19**	**180**	P		P	**P**	**03 03 49.3**	**-1.4**
	1.9nm,0.6s,mb4.2,baz=331,slow=5.2,SNR=7.8								
QSPA	**South Pole Qui**	**86.19**	**180**	P		P	**P**	**03 03 49.3**	**-1.4**
LPAZ	**La Paz**	**146.81**	**128**	PKPbc		PKPbc		03 10 51.8	-0.9
	1.4nm,0.7s,baz=228,slow=1.0,SNR=5.8								
SIV	**San Ignacio**	**152.28**	**136**	PKPbc		PKPbc		03 11 04.2	-2.2
	1.0nm,0.7s,baz=270,slow=1.0,SNR=5.5								

*CSEM **03** 03:43:03.9±0.0, 3670N×3115E, h80km, Mw3.9, Error ellipse: s-maj=1.6km s-min=1.1km az=70.0*
*DDA **03** 03:43:04.2, 3682N×3136E, h22km±4km, Md3.7*
*ISCJB **03** 03:43:05.5±0.2, 3668N±002×3113E±002, h95km±3km, mb3.6/7, Error ellipse: s-maj=3.4km s-min=2.1km az=140.4*
*NEIC **03** 03:43:06.0, 3681N×3111E, h88km, mb3.7/3, MD3.9(ISK), After ISK.*
*IDC **03** 03:43:06.0±1.5, 3678N×3118E, h72km±17km, mb3.5/5, mb1 3.7/14, mb1mx3.6/27, mbtmp3.6/14, Error ellipse: s-maj=17.1km s-min=12.0km az=129.0*
*ISK **03** 03:43:06.4, 3681N×3111E, h87km, MD3.9, ML4.2*
*NIC **03** 03:43:07.9±0.4, 3659N×3105E, h51km, mb4.2, ML4.0, MW3.9*
*GII **03** 03:43:10.9±0.0, 3611N×3134E, h0km, ML3.6/4*
*HLW **03** 03:43:11.3, 3621N×3103E, h33km, Mb4.5*

ISC 03 03:43:06.8±0.2, 3669N±002×3113E±002, h87km±3km, n157, σ1§07/187, mb3.6/7, 5C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.43**	**299**			PG	**Pn**	**03 43 19.8**	**-0.9**
ANTB						SG	**Sn**	**03 43 30.4**	**-0.6**
BCK	**Bucak**	**0.88**	**331**			PG	**Pn**	**03 43 23.8**	**-1.1**
BCK						SG	**Sn**	**03 43 37.8**	**-0.7**
ELL	**Elmali**	**0.98**	**274**			PG	**Pn**	**03 43 26.9**	**+0.9**
HDMB	**Hadim**	**1.12**	**76**			PN	**Pn**	**03 43 28.7**	**+1.0**
HDMB						SN	**Sn**	**03 43 44.2**	**+0.9**
KSL	**Kastellorizon**	**1.36**	**247**		*e*P	P	**Pn**	**03 43 31.5**	**+0.9**
GOLH	**Golhisar**	**1.37**	**294**		*i* P	P	**Pn**	**03 43 32.2**	**+1.5**
GOLH					*i* S	S	**Sn**	**03 43 53.5**	**+4.8**
TKTP	**Tekketepe**	**1.49**	**335**		*i* P	P	**Pn**	**03 43 31.5**	**-0.8**
TKTP					*i* S	S	**Sn**	**03 43 52.4**	**+0.9**
KONT	**Konya--Tatoy**	**1.59**	**38**		PN	PN	**Pn**	**03 43 33.5**	**0.0**
KONT					SN	SN	**Sn**	**03 43 52.0**	**-1.7**
LADK	**Ladik-KONYA**	**1.80**	**33**		PN	PN	**Pn**	**03 43 36.2**	**0.0**
SHUT	**Suhut-Afyon**	**1.91**	**346**		PN	PN	**Pn**	**03 43 37.1**	**-0.6**
AKMC	**Akamas**	**1.93**	**149**	⇑	P	P	**Pn**	**03 43 38.0**	**+0.1**
	27nm,0.4s								
AKMC						S	**Sn**	**03 44 03.1**	**+1.5**
ALFC	**Alevga**	**1.94**	**142**		P	P	**Pn**	**03 43 37.9**	**-0.2**
	50nm,0.3s								
ALFC						S	**Sn**	**03 44 01.3**	**-0.6**
DENT	**Denizli**	**1.98**	**303**		PN	PN	**Pn**	**03 43 38.4**	**-0.2**
KDHN	**Kadinhani**	**1.99**	**23**		*i* P	P	**Pn**	**03 43 37.7**	**-0.9**
KDHN					*i* S	S	**Sn**	**03 44 01.3**	**-1.7**
DALT	**Dalyan (Mudla)**	**2.00**	**273**		PN	PN	**Pn**	**03 43 39.7**	**+0.8**
BOLV	**Bolvadin**	**2.03**	**356**		*i* P	P	**Pn**	**03 43 38.5**	**-0.8**
BOLV					*i* S	S	**Sn**	**03 43 57.6**	**-6.4**
TURN	**Turunc**	**2.04**	**276**		*i* P	P	**Pn**	**03 43 43.6**	**+4.3**
PPCY	**Paphos**	**2.06**	**151**		P	P	**Pn**	**03 43 40.1**	**+0.5**
	34nm,0.4s								
KHL	**Karahalli**	**2.07**	**322**		PN	PN	**Pn**	**03 43 39.4**	**-0.4**
IKL	**Isikli**	**2.11**	**102**		PN	PN	**Pn**	**03 43 42.1**	**+1.8**
KHAL	**Karahalli**	**2.12**	**323**		*i* P	P	**Pn**	**03 43 39.7**	**-0.7**
LEF	**Lefka**	**2.12**	**137**		PN	PN	**Pn**	**03 43 42.3**	**+1.8**
KIZT	**Kizilcal**	**2.26**	**15**		PN	PN	**Pn**	**03 43 41.5**	**-0.8**
MAMC	**Mammari**	**2.27**	**131**		P	P	**Pn**	**03 43 43.3**	**+0.8**
	39nm,0.3s								
MAMC						S	**Sn**	**03 44 12.9**	**+3.1**
SZAC	**Souni-Zanaja**	**2.40**	**143**		P	P	**Pn**	**03 43 45.2**	**+1.0**
	20nm,0.5s								
SZAC						S	**Sn**	**03 44 13.5**	**+0.7**
LFK	**Lefkose**	**2.41**	**125**		PN	PN	**Pn**	**03 43 46.0**	**+1.8**
ARG	**Arkhangelos**	**2.47**	**260**		*e*P	P	**Pn**	**03 43 45.1**	**0.0**
CSS	**Prodhromos**	**2.48**	**133**		*e*Pn	P	**Pn**	**03 43 45.7**	**+0.4**
CSS					*e*Sn		**Sn**	**03 44 15.3**	**+0.5**
CSS	**Prodhromos**	**2.48**	**133**		*e*Pn	P	**Pn**	**03 43 45.7**	**+0.4**
CSS					*e*Sn		**Sn**	**03 44 15.3**	**+0.5**
ALT	**Altintas**	**2.49**	**341**		PN	PN	**Pn**	**03 43 44.6**	**-0.8**
KULA	**Kula-Manisa**	**2.67**	**314**		PN	PN	**Pn**	**03 43 47.8**	**0.0**
MANT	**Manisa**	**2.72**	**312**		*i* P	P	**Pn**	**03 43 48.3**	**-0.1**
EREN	**Erenkoy**	**2.72**	**114**		PN	PN	**Pn**	**03 43 50.3**	**+1.8**

GDZ	**Gediz**	**2.73**	**332**	*i* P		**Pn**	**03 43 47.9**	**-0.6**
MERS	**Mersin**	**2.73**	**85**	PN		**Pn**	**03 43 50.6**	**+2.1**
MLSB	**Milas**	**2.75**	**284**	PN		**Pn**	**03 43 49.7**	**+0.8**
AYDN	**Tasoluk**	**2.77**	**291**	*i* P		**Pn**	**03 43 49.4**	**+0.3**
PHNC	**Paralimni**	**2.90**	**125**	P		**Pn**	**03 43 52.0**	**+1.2**
PHNC				S		**Sn**	**03 44 27.1**	**+2.4**
BDRM	**Kayabasi**	**2.98**	**278**	*i* P		**Pn**	**03 43 52.1**	**+0.2**
BODT	**Bodrum**	**3.08**	**278**	PN		**Pn**	**03 43 53.6**	**+0.3**
NIG	**Nigde**	**3.11**	**62**	*e*PN		**Pn**	**03 43 55.0**	**+1.3**
KARA	**Karaisali**	**3.19**	**79**	*e*PN		**Pn**	**03 43 56.8**	**+2.0**
NISR	**Nisiros**	**3.22**	**270**	*e*P		**Pn**	**03 43 55.0**	**-0.2**
GCAM	**G?zelcaml?**	**3.27**	**289**	*i* P		**Pn**	**03 43 55.5**	**-0.4**
KAMT	**Kaman**	**3.36**	**37**	*e*PN		**Pn**	**03 43 56.8**	**-0.3**
KARP	**Karpathos**	**3.41**	**252**	*e*P		**Pn**	**03 43 58.1**	**+0.4**
AKS	**Akhisar**	**3.42**	**311**	*e*PN		**Pn**	**03 43 58.1**	**+0.3**
ANTO	**Ankara**	**3.43**	**22**	*e*PN		**Pn**	**03 43 57.5**	**-0.5**
ANTO	**Ankara**	**3.43**	**22**	*e*PN		**Pn**	**03 43 57.7**	**-0.3**
ANTO				*e*Sn		**Sn**	**03 44 36.9**	**-0.7**
ANTO	**Ankara**	**3.43**	**22**	*e*PN		**Pn**	**03 43 57.7**	**-0.3**
ANTO				*e*Sn		**Sn**	**03 44 36.9**	**-0.7**
IZM	**Izmir**	**3.51**	**300**	*e*PN		**Pn**	**03 43 59.1**	**-0.1**
SMG	**Samos**	**3.58**	**288**	*e*P		**Pn**	**03 43 59.4**	**-0.5**
BR131	**Keskin Array S**	**3.62**	**32**	*e*Pn		**Pn**	**03 44 00.0**	**-0.5**
BR131				*e*Sn		**Sn**	**03 44 40.2**	**-1.9**
BR131	**Keskin Array S**	**3.62**	**32**	*e*Pn		**Pn**	**03 44 00.0**	**-0.5**
BR131				*e*Sn		**Sn**	**03 44 40.2**	**-1.9**
BRTR	**Keskin Array B**	**3.62**	**32**	P		**Pn**	**03 43 59.5**	**-0.9**
	4.9nm,0.3s,baz=201,slow=16,SNR=182							
BRTR				S		**Sn**	**03 44 39.4**	**-2.7**
	19nm,0.3s,baz=213,slow=28,SNR=45							
BRTR	**Keskin Array B**	**3.62**	**32**	P		**Pn**	**03 43 59.5**	**-1.0**
BRTR				S		**Sn**	**03 44 39.4**	**-2.7**
CAVI	**Cavuskoy**	**3.65**	**344**	*e*PN		**Pn**	**03 44 00.0**	**-0.9**
BLCB	**Balcova**	**3.66**	**299**	*e*PN		**Pn**	**03 44 01.5**	**+0.3**
CEYT	**Ceyhan**	**3.72**	**84**	*e*PN		**Pn**	**03 44 02.8**	**+0.9**
GULT	**Gulveren**	**3.77**	**353**	*e*PN		**Pn**	**03 44 02.1**	**-0.5**
HTY	**Hatay**	**4.08**	**97**	*e*PN		**Pn**	**03 44 07.8**	**+1.0**
APE	**Apeiranthos**	**4.50**	**276**	*e*P		**Pn**	**03 44 12.6**	**0.0**
PRK	**Paraskevi**	**4.61**	**305**	*e*P		**Pn**	**03 44 14.1**	**+0.1**
PRK	**Paraskevi**	**4.61**	**305**	*e*P		**Pn**	**03 44 14.6**	**+0.6**
HWQ	**Hawqa**	**4.61**	**120**	*e*P		**Pn**	**03 44 14.8**	**+0.8**
BHL	**Bhannes**	**4.63**	**126**	*e*P		**Pn**	**03 44 14.5**	**+0.2**
KMRS	**Kahramanmaras**	**4.68**	**78**	*e*PN		**Pn**	**03 44 15.1**	**+0.1**
NPS	**Neapolis**	**4.70**	**254**	*e*P		**Pn**	**03 44 14.7**	**-0.5**
SARI	**SarD1z-Kayseri**	**4.84**	**64**	*e*PN		**Pn**	**03 44 14.2**	**-2.9**
TOS	**Tosya**	**4.89**	**27**	*e*PN		**Pn**	**03 44 17.3**	**-0.5**
GAZ	**Gaziantep**	**4.89**	**83**	*e*PN		**Pn**

199nm,0.5s,baz=27,slow=9.0,SNR=1.7
MKAR Makanchi Array 38.87 59 P P 03 50 23.2 -0.2
0.3nm,0.4s,mb3.5,baz=282,slow=7.0,SNR=2.9
MKAR Makanchi Array 38.87 59 P P 03 50 23.2 -0.2
ZALV Zalesovo Beam 40.43 47 P P 03 50 36.3 +0.1
0.3nm,0.3s,mb3.6,baz=254,slow=8.3,SNR=2.6

CASC 03 04:14:45.7±2.6, 949N×8452W, h6km±9km, MD4.2, ML3.3, 8C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CGA2	**Cerro Gallo 2**	**0.53**	**6**	⇓*iP*		Pg	04 14 56.0	+0.1
PRS1	**Puriscal**	**0.53**	**22**	⇓*iP*		Pg	04 14 54.1	-1.9
SJS	**Escuela Geolog**	**0.64**	**46**	⇓*eP*		Pg	04 14 58.1	+0.2
SJS				*eS*		Sg	04 15 07.7	+1.4
JCR	**Jicaral**	**0.69**	**301**	⇑*iP*		Pg	04 14 57.8	-1.1
JCR				*eS*		Sg	04 15 07.6	-0.3
BUS	**Buena Vista**	**0.75**	**85**	⇑*eP*		Pg	04 15 00.0	-0.1
URSC	**Urasca**	**0.81**	**65**	⇓*iP*		Pg	04 15 01.2	+0.1
FORC	**Fortuna**	**0.98**	**351**	⇑*iP*		Pg	04 15 03.7	-0.9
BAR1		**1.22**	**102**	⇑*eP*		Pg	04 15 07.8	-1.2
BAR1				*eS*		Sg	04 15 25.6	+0.8
VCR	**Vista de Mar**	**1.27**	**300**	⇑*iP*		Pn	04 15 07.2	-2.7
VCR				*eS*		Sg	04 15 26.2	-0.3
LIO	**Limon**	**1.55**	**71**	*eP*		Pn	04 15 13.3	-0.5
ACR	**Cerro Adams**	**1.57**	**122**	⇓*eP*		Pn	04 15 12.7	-1.5
ACR				*eS*		Sn	04 15 35.7	+0.8
CTCR	**Cotoan**	**1.83**	**109**	⇑*eP*		Pn	04 15 17.0	-0.8
CNI	**Changuinola**	**1.98**	**92**	*eP*		Pn	04 15 20.9	+1.1
CONN	**Concepcion**	**2.33**	**332**	⇑*eP*		Pn	04 15 24.7	+0.1
CRUN	**El Crucero**	**3.04**	**325**	*eP*		Pn	04 15 35.9	+1.6
TICN	**Ticuantepe**	**3.04**	**326**	*eP*		Pn	04 15 35.6	+1.3
HUN		**3.26**	**330**	*eP*		Pn	04 15 38.7	+1.2
CSAN		**3.27**	**325**	⇑*eP*		Pn	04 15 39.4	+1.9
APYN	**Apoyeque**	**3.27**	**327**	*eP*		Pn	04 15 37.5	-0.1
COPN	**Copaltepe**	**3.36**	**323**	*eP*		Pn	04 15 39.0	+0.2
CNGN	**Cerro Negro**	**3.68**	**325**	*eP*		Pn	04 15 43.9	+0.7
CRIN	**San Cristobal**	**4.04**	**322**	*eP*		Pn	04 15 49.5	+1.3
BCIP	**Isla Barro Col**	**4.63**	**94**	*eP*		Pn	04 15 56.6	+0.3
CHI2		**11.73**	**114**	*eP*			04 15 48.3	
PTP	**Ponta Puerca**	**20.29**	**63**	⇓*eP*			04 15 20.7	

*NNC **03** 04:16:51.8±1.0, 4285N×7736E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=5.8km s-min=4.6km az=88.0*
*ISCJB **03** 04:16:54.1±1.0, 4297N±006×7742E±007, h10km, Error ellipse: s-maj=8.8km s-min=7.2km az=146.7*
*KNET **03** 04:16:55.0±0.6, 4290N×7715E, h8km±2km, ml2.8, Error ellipse: s-maj=3.2km s-min=2.7km az=67.0*
ISC 03 04:16:55.3±1.1, 4300N±006×7738E±008, h10km, n16, σ1$20/24, 17C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**0.37**	**306**	⇓*P*		**Pg**	**04 17 01.5**	**-1.0**
KNDC				⇓*S*		**Sg**	**04 17 07.7**	**+0.1**
ULHL	**Ulahol**	**1.13**	**228**	⇑*P*		**Pb**	**04 17 13.0**	**-3.8**
	43nm,0.1s,SNR=32							
ULHL				⇑*S*		**Sb**	**04 17 26.9**	**-4.7**
	153nm,0.1s							
TKM2	**Tokmak 2**	**1.31**	**267**	⇑*P*		**Pn**	**04 17 16.8**	**-2.8**
	7.4nm,0.2s							
TKM2				⇓*S*		**Sb**	**04 17 33.8**	**-2.9**
	23nm,0.2s							
TKM2	**Tokmak 2**	**1.31**	**267**	⇑*P*		**Pn**	**04 17 16.8**	**-2.8**
	18nm,0.1s,SNR=42							
TKM2				⇑*S*		**Sb**	**04 17 34.5**	**-2.2**
	137nm,0.1s							
KBK	**Karagaybulak**	**1.82**	**260**	⇑*P*		**Pn**	**04 17 25.9**	**-0.7**
	64nm,0.2s,SNR=39							
KBK				⇑*S*		**Sn**	**04 17 49.8**	**+0.1**
	60nm,0.2s							
KZA	**Kyzart**	**1.82**	**240**	⇑*P*		**Pn**	**04 17 25.6**	**-1.0**
	25nm,0.1s,SNR=63							
KZA				*S*		**Sn**	**04 17 50.0**	**+0.2**
	52nm,0.3s							
CHMS	**Chumysh**	**1.93**	**271**	⇓*P*		**Pn**	**04 17 27.6**	**-0.4**
	27nm,0.1s,SNR=15							
CHMS				⇑*S*		**Sn**	**04 17 52.4**	**+0.1**
	65nm,0.2s							
USP	**Ospenovka**	**2.12**	**278**	⇑*P*		**Pn**	**04 17 31.0**	**+0.2**
	41nm,0.2s,SNR=55							
USP				⇓*S*		**Sn**	**04 17 58.8**	**+1.7**
	83nm,0.2s							
AAK	**Ala-Archa**	**2.15**	**261**	*P*		**Pn**	**04 17 31.5**	**+0.3**
	46nm,0.2s,SNR=67							
AAK				⇑*S*		**Sn**	**04 17 59.3**	**+1.4**
	58nm,0.3s							
UCH	**Uchtor**	**2.25**	**251**	⇑*P*		**Pn**	**04 17 33.2**	**+0.7**
	12nm,0.2s,SNR=10							
UCH				⇓*S*		**Sn**	**04 18 02.9**	**+2.6**
	18nm,0.2s							
EKS2	**Erkin-Say**	**2.67**	**264**	⇑*P*		**Pn**	**04 17 39.4**	**+1.1**
	17nm,0.2s,SNR=22							
KK31	**Karatay Array**	**5.03**	**273**	⇓*Pg*		**Pb**	**04 18 22.7**	**-0.7**
	1.9nm,0.5s,baz=89,slow=15,SNR=26							
KK31				⇓*Lg*			04 19 27.8	
	3.8nm,0.4s,baz=94,slow=26,SNR=15							
MK31	**Makanchi Array**	**5.15**	**41**	⇑*Pn*		**Pn**	**04 18 13.5**	**+1.1**
	0.3nm,0.3s,baz=225,slow=17,SNR=2.7							
MK31				⇓*Lg*			04 19 33.7	
	4.2nm,0.8s,baz=215,slow=28,SNR=5.6							
KURBB	**Kurchatov Arra**	**7.67**	**6**	⇑*Pn*		**Pn**	**04 18 43.2**	**-3.7**
	1.0nm,1.7s							
KURBB				⇑*Lg*			04 20 55.4	
	0.9nm,0.6s							
VOSK	**Vostochnaya**	**10.63**	**338**	⇓*Lg*			04 22 31.1	
	2.6nm,0.9s							
BVA0	**Borovoye Array**	**11.06**	**337**	⇑*Lg*			04 22 44.1	
	0.5nm,0.8s,baz=142,slow=32,SNR=6.5							

*CSEM **03** 04:24:19.8±0.0, 3642N×2655E, h147km, Mw3.5, Error ellipse: s-maj=1.4km s-min=1.1km az=30.0*
*ISCJB **03** 04:24:20.1±0.2, 3640N±002×2651E±002, h148km±2km, mb3.5/3, Error ellipse: s-maj=3.3km s-min=2.4km az=20.4*
*THE **03** 04:24:21.9, 3651N×2689E, h4km±2km, Error ellipse: s-maj=2.3km s-min=1.1km az=299.0*
*IDC **03** 04:24:21.4±1.1, 3638N×2654E, h143km±15km, mb3.1/2, mb1 3.4/9, mb1mx3.3/27, mbtmp3.4/9, Error ellipse: s-maj=20.9km s-min=11.2km az=169.0*
*NEIC **03** 04:24:21.3, 3648N×2648E, h130km, mb3.9/8, After ATH.*
*ATH **03** 04:24:21.3, 3649N×2648E, h130km±2km, ML3.9*
*ISK **03** 04:24:23.2, 3659N×2649E, h122km, MD3.4*
*HLW **03** 04:24:24.0, 3601N×2659E, h33km, Mb4.5*
*GII **03** 04:24:25.3±3.0, 3597N×2682E, h32km±6km, mb4.0/2, ML3.7/6*
*NIC **03** 04:24:25.2±0.4, 3625N×2692E, h55km, ML3.0, MW3.5*
ISC 03 04:24:21.0±0.2, 3639N±002×2651E±002, h142km±2km, n170, σ1$05/213, mb3.5/3, 3C-4D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.55**	**66**	*eP*		**Pn**	**04 24 41.5**	**-0.1**
THR1	**Thera Island**	**0.85**	**269**	*P*		**Pn**	**04 24 43.0**	**-0.7**
THR3	**Thira Island,**	**0.89**	**272**	*P*		**Pn**	**04 24 44.1**	**0.0**
THR6	**Thira Island,**	**0.90**	**268**	*P*		**Pn**	**04 24 44.2**	**+0.1**
THR4	**Thira Island,**	**0.90**	**275**	*P*		**Pn**	**04 24 44.2**	**+0.1**
BODT	**Bodrum**	**0.93**	**44**	*e*PG		**Pn**	**04 24 44.2**	**-0.1**
THR5	**Thira Island,**	**0.94**	**272**	*P*		**Pn**	**04 24 44.5**	**+0.1**
KARP	**Karpathos**	**0.99**	**148**	*eP*		**Pn**	**04 24 45.9**	**+1.0**
KARP				*eS*		**Sn**	**04 25 03.2**	**+0.1**
BDRM	**Kayabasi**	**1.01**	**48**	*iP*		**Pn**	**04 24 45.1**	**+0.1**
BDRM	**Kayabasi**	**1.01**	**48**	*iP*		**Pn**	**04 24 45.1**	**0.0**
BDRM				*iS*		**Sn**	**04 25 02.3**	**-1.1**
APE	**Apeiranthos**	**1.04**	**311**	*P*		**Pn**	**04 24 44.5**	**-0.8**
APE				*S*		**Sn**	**04 25 01.3**	**-2.5**
APE	**Apeiranthos**	**1.04**	**311**	⇓*iP*		**Pn**	**04 24 44.8**	**-0.5**
APE				*eS*		**Sn**	**04 25 01.4**	**-2.4**
APE	**Apeiranthos**	**1.04**	**311**	⇓*iP*		**Pn**	**04 24 44.8**	**-0.5**
APE				*S*		**Sn**	**04 25 01.3**	**-2.5**
ZKR	**Zakros**	**1.29**	**191**	*P*		**Pn**	**04 24 49.0**	**+1.2**
ZKR				*S*		**Sn**	**04 25 08.9**	**+0.8**
ARG	**Arkhangelos**	**1.32**	**97**	⇑*iP*		**Pn**	**04 24 49.0**	**+1.0**
ARG				*eS*		**Sn**	**04 25 08.5**	**-0.1**
NPS	**Neapolis**	**1.34**	**213**	⇓*iP*		**Pn**	**04 24 49.0**	**+0.8**
SMG	**Samos**	**1.34**	**11**	⇓*iP*		**Pn**	**04 24 47.5**	**-0.8**
MLSB	**Milas**	**1.36**	**48**	*e*PN		**Pn**	**04 24 48.7**	**+0.3**
MLSB				*e*SN		**Sn**	**04 25 07.1**	**-2.3**
GCAM	**G?zelcaml?**	**1.43**	**24**	*iP*		**Pn**	**04 24 48.8**	**-0.4**
LAST	**Lasithi**	**1.48**	**215**	*P*		**Pn**	**04 24 50.6**	**+0.8**
LAST				*S*		**Sn**	**04 25 15.2**	**+3.5**
LAST	**Lasithi**	**1.48**	**215**	*P*		**Pn**	**04 24 50.8**	**+1.0**
AYDN	**Tasoluk**	**1.68**	**40**	*i*P		**Pn**	**04 24 52.5**	**+0.6**
AYDN	**Tasoluk**	**1.68**	**40**	*i*P		**Pn**	**04 24 52.5**	**+0.6**
AYDN				*i*S		**Sn**	**04 25 14.4**	**-1.2**
IDI	**Anoyia**	**1.71**	**231**	*P*		**Pn**	**04 24 52.7**	**+0.4**
	27nm,0.3s,baz=14,slow=7.1,SNR=1264							
IDI				*S*		**Sn**	**04 25 14.8**	**-1.4**
	170nm,0.3s,baz=287,slow=22,SNR=51							
TURN	**Turunc**	**1.75**	**73**	*iP*		**Pn**	**04 24 50.0**	**-2.8**
DALT	**Dalyan (Mudla)**	**1.76**	**77**	*e*PN		**Pn**	**04 24 54.6**	**+1.8**
DALT				*e*SN		**Sn**	**04 25 17.2**	**+0.1**
SIVA	**Sivas**	**1.94**	**226**	*P*		**Pn**	**04 24 56.2**	**+1.2**
SIVA				*S*		**Sn**	**04 25 27.7**	**+6.7**
URLA	**Izmir**	**1.97**	**2**	*iP*		**Pn**	**04 24 54.3**	**-0.9**
CHOS	**Chios island**	**2.03**	**350**	*P*		**Pn**	**04 24 55.2**	**-0.7**
CHOS				*S*		**Sn**	**04 25 20.7**	**-2.1**
BLCB	**Balcova**	**2.04**	**12**	*e*PN		**Pn**	**04 24 55.5**	**-0.6**
IZM	**Izmir**	**2.10**	**16**	*e*PN		**Pn**	**04 24 56.5**	**-0.2**
KDAG	**Bornova**	**2.10**	**16**	*iP*		**Pn**	**04 24 56.5**	**-0.4**
VAM	**Vamos**	**2.11**	**243**	*eP*		**Pn**	**04 24 59.0**	**+2.0**
VAM				*eS*		**Sn**	**04 25 24.2**	**-0.4**
DENT	**Denizli**	**2.44**	**55**	*e*PN		**Pn**	**04 25 01.3**	**+0.4**
KSL	**Kastellorizon**	**2.50**	**95**	*eP*		**Pn**	**04 25 02.5**	**+0.8**
GVD	**Gavdhos**	**2.50**	**233**	*eP*		**Pn**	**04 25 04.0**	**+2.2**
GOLH	**Golhisar**	**2.59**	**70**	*iP*		**Pn**	**04 25 04.3**	**+1.5**
GOLH	**Golhisar**	**2.59**	**70**	*iP*		**Pn**	**04 25 04.3**	**+1.4**
GOLH				*iS*		**Sn**	**04 25 35.4**	**+0.3**
MANT	**Manisa**	**2.66**	**37**	*iP*		**Pn**	**04 25 03.9**	**+0.2**
PTL	**Penteli**	**2.68**	**309**	*P*		**Pn**	**04 25 04.3**	**+0.3**
AKHS	**Akhisar**	**2.69**	**22**	*iP*		**Pn**	**04 25 03.9**	**-0.2**
KULA	**Kula-Manisa**	**2.73**	**38**	*e*PN		**Pn**	**04 25 04.8**	**+0.2**
ATH	**Athens Observa**	**2.73**	**306**	*eP*		**Pn**	**04 25 04.8**	**+0.2**
ELL	**Elmali**	**2.76**	**81**	*e*PN		**Pn**	**04 25 06.7**	**+1.7**
NAIG	**Nisos Aigina**	**2.77**	**300**	*eP*		**Pn**	**04 25 04.6**	**-0.6**
KYTH	**Kithira**	**2.81**	**269**	*eP*		**Pn**	**04 25 06.0**	**+0.5**
PRK	**Paraskevi**	**2.86**	**356**	*P*		**Pn**	**04 25 06.0**	**-0.2**
VLI	**Veliai**	**2.89**	**278**	*eP*		**Pn**	**04 25 06.0**	**-0.7**
AYVA	**Ayvalik**	**2.92**	**3**	*iP*		**Pn**	**04 25 05.8**	**-1.2**
KHAL	**Karahalli**	**3.09**	**49**	*iP*		**Pn**	**04 25 10.0**	**+0.8**
KHAL	**Karahalli**	**3.09**	**49**	*iP*		**Pn**	**04 25 10.0**	**+0.8**
KHAL				*iS*		**Sn**	**04 25 47.5**	**+1.0**
ANTB	**Antalya**	**3.37**	**80**	*e*PN		**Pn**	**04 25 15.7**	**+2.9**
BCK	**Bucak**	**3.44**	**71**	*e*PN		**Pn**	**04 25 15.3**	**+1.6**
BALY	**Balya**	**3.46**	**14**	*iP*		**Pn**	**04 25 13.7**	**-0.2**
TKTP	**Tekketepe**	**3.46**	**60**	*iP*		**Pn**	**04 25 14.8**	**+0.9**
LKR	**Lokris**	**3.59**	**310**	*eP*		**Pn**	**04 25 15.8**	**+0.2**
LIA	**Limnos Island**	**3.66**	**344**	*eP*		**Pn**	**04 25 16.2**	**-0.3**
ITM	**Ithomi**	**3.76**	**283**	⇑*iP*		**Pn**	**04 25 18.3**	**+0.4**
ITM				*eS*		**Sn**	**04 26 00.2**	**-1.8**
ITM	**Ithomi**	**3.76**	**283**	⇑*iP*		**Pn**	**04 25 18.3**	**+0.4**
ITM				*eS*		**Sn**	**04 26 00.2**	**-1.8**
SHUT	**Suhut-Afyon**	**3.88**	**55**	*e*PN		**Pn**	**04 25 20.8**	**+1.4**
BOLV	**Bolvadin**	**4.23**	**55**	*iP*		**Pn**	**04 25 25.5**	**+1.5**
ULDT	**Uludag**	**4.28**	**28**	*iP*		**Pn**	**04 25 24.9**	**+0.2**
RLS	**Riolos of Patr**	**4.36**	**294**	*eP*		**Pn**	**04 25 27.0**	**+1.3**
EVR	**Evrytania**	**4.50**	**306**	*eP*		**Pn**	**04 25 28.6**	**+1.0**
ESKT	**Eskisehir**	**4.64**	**46**	*iP*		**Pn**	**04 25 31.1**	**+1.6**
SEYT	**Eskypehyr**	**4.64**	**46**	*iP*		**Pn**	**04 25 31.1**	**+1.6**
THL	**Klokotos Trika**	**4.76**	**313**	*eP*		**Pn**	**04 25 31.5**	**+0.5**
HDMB	**Hadim**	**4.84**	**81**	*e*PN		**Pn**	**04 25 34.8**	**+2.7**
KONT	**Konya--Tatoy**	**4.93**	**70**	*e*PN		**Pn**	**04 25 34.6**	**+1.4**
AKMC	**Akamas**	**4.93**	**104**	⇑*P*		**Pn**	**04 25 32.7**	**-0.6**
	8.8nm,0.1s							
AKMC				*S*		**Sn**	**04 26 26.1**	**-3.5**
KIZT	**Kizilcal**	**4.94**	**58**	*e*PN		**Pn**	**04 25 35.5**	**+2.1**
KDHN	**Kadinhani**	**4.94**	**63**	*iP*		**Pn**	**04 25 34.5**	**+1.0**
KDHN	**Kadinhani**	**4.94**	**63**	*iP*		**Pn**	**04 25 34.5**	**+1.0**
PPCY	**Paphos**	**4.99**	**106**	*P*		**Pn**	**04 25 33.1**	**-1.0**
	6.5nm,0.1s							
LADK	**Ladik-KONYA**	**5.01**	**67**	*e*PN		**Pn**	**04 25 35.5**	**+1.2**
VLS	**Valsamata**	**5.05**	**292**	*P*		**Pn**	**04 25 34.0**	**-0.9**
ALFC	**Alevga**	**5.10**	**102**	⇑*P*		**Pn**	**04 25 35.3**	**-0.3**
	6.4nm,0.3s							
ALFC				*S*		**Sn**	**04 26 30.4**	**-3.4**
ERMK	**Ermenek**	**5.17**	**85**	*iS*		**Sn**	**04 26 37.1**	**+1.9**
KZN	**Kozani**	**5.40**	**318**	*eP*		**Pn**	**04 25 40.5**	**+0.9**
SZAC	**Souni-Zanaja**	**5.45**	**106**	*P*		**Pn**	**04 25 40.7**	**+0.5**
SZAC				*S*		**Sn**	**04 26 38.5**	**-3.5**
JAN	**Janina**	**5.53**	**308**	*P*		**Pn**	**04 25 44.4**	**+3.1**
MAMC	**Mammari**	**5.59**	**101**	*P*		**Pn**	**04 25 41.7**	**-0.4**
CSS	**Prodhromos**	**5.73**	**102**	*P*		**Pn**	**04 25 43.8**	**-0.3**
CSS				*S*		**Sn**	**04 26 46.7**	**-2.1**
CSS	**Prodhromos**	**5.73**	**102**	*e*Pn		**Pn**	**04 25 43.9**	**-0.2**
	13nm,0.4s							
CSS				*e*Sn		**Sn**	**04 26 47.0**	**-1.9**
CSS	**Prodhromos**	**5.73**	**102**	*e*Pn		**Pn**	**04 25 43.9**	**-0.2**
	13nm,0.4s							
CSS				*S*		**Sn**	**04 26 46.7**	**-2.1**
KEK	**Kerkira**	**6.25**	**304**	*eP*		**Pn**	**04 25 50.1**	**-0.8**
PHNC	**Paralimni**	**6.28**	**100**	*P*		**Pn**	**04 25 52.0**	**+0.7**
BR131	**Keskin Array S**	**6.54**	**57**	*e*Pn		**Pn**	**04 25 56.5**	**+1.7**
	4.7nm,0.7s							
BR131	**Keskin Array S**	**6.54**	**57**	*e*Pn		**Pn**	**04 25 56.5**	**+1.7**
	4.7nm,0.7s							
BRTR	**Keskin Array B**	**6.54**	**57**	*P*		**Pn**	**04 25 56.5**	**+1.7**
	0.7nm,0.3s,baz=220,slow=15,SNR=26							
BRTR				*S*		**Sn**	**04 27 09.8**	**+1.6**
	0.1nm,0.3s,baz=220,slow=24,SNR=3.1							
BRTR	**Keskin Array B**	**6.54**	**57**	*P*		**Pn**	**04 25 56.5**	**+1.7**
BRTR				*S*		**Sn**	**04 27 09.8**	**+1.6**
TIR	**Tirane**	**7.17**	**316**	*P*		**Pn**	**04 26 02.9**	**-0.3**
HMYD	**Mayadein**	**7.49**	**150**	*P*		**Pn**	**04 26 07.0**	**-0.8**
HMYD	**Mayadein**	**7.49**	**150**	*P*		**Pn**	**04 26 06.9**	**-0.8**
KOT	**Kottamia**	**7.83**	**144**	*P*		**Pn**	**04 26 11.7**	**-0.6**
KOT				*S*		**Sn**	**04 27 30.1**	**-9.4**
HNTI	**Hanita**	**7.86**	**112**	*P*		**Pn**	**04 26 11.5**	**-1.0**
BHL	**Bhannes**	**7.89**	**106**	*eP*		**Pn**	**04 26 10.9**	**-2.1**
OFRI	**'Ofer**	**7.94**	**116**	*P*		**Pn**	**04 26 13.1**	**-0.6**
HHAG	**Hagoal**	**7.94**	**142**	*P*		**Pn**	**04 26 13.6**	**-0.1**
HHAG	**Hagoal**	**7.94**	**142**	*P*		**Pn**	**04 26 13.6**	**-0.1**
	4µm,0.2s							
HSAF	**As Saff**	**7.97**	**146**	*P*		**Pn**	**04 26 14.0**	**-0.1**
AMAG	**Maghara**	**8.01**	**134**	*P*		**Pn**	**04 26 14.0**	**-0.6**
MMCT	**Mount Meron ar**	**8.05**	**112**	*P*n		**Pn**	**04 26 14.5**	**-0.6**
MMA0B	**Mount Meron ar**	**8.06**	**112**	*P*n		**Pn**	**04 26 14.4**	**-1.1**
MMA0B				*S*n		**Sn**	**04 27 41.4**	**-3.5**
MMAI	**Mount Meron Ar**	**8.06**	**112**	*P*		**Pn**	**04 26 14.2**	**-1.0**
	11nm,0.3s,baz=308,slow=12,SNR=64							
MMAI				*S*		**Sn**	**04 27 41.9**	**-3.0**
	13nm,0.3s,baz=311,slow=22,SNR=11							
GLL	**Jalalah**	**8.07**	**146**	*P*		**Pn**	**04 26 15.6**	**+0.1**
GLL				*S*		**Sn**	**04 27 35.8**	**-9.5**
RSH		**8.09**	**130**	*P*		**Pn**	**04 26 15.5**	**-0.1**
HRSH	**Kfar Ka'horesh**	**8.12**	**114**	*P*		**Pn**	**04 26 15.5**	**-0.5**
KSDI	**Kefar Szold**	**8.17**	**110**	*P*n		**Pn**	**04 26 16.2**	**-0.6**
KSDI				*S*n		**Sn**	**04 27 44.0**	**-3.6**
RCY	**Rachaya**	**8.18**	**108**	*eP*		**Pn**	**04 26 16.5**	**-0.3**
SLTI	**Sal'it**	**8.18**	**118**	*P*n		**Pn**	**04 26 16.5**	**-0.9**
SLTI				*S*n		**Sn**	**04 27 43.3**	**-4.4**
HRI	**Mount Hermon**	**8.20**	**110**	*P*n		**Pn**	**04 26 17.1**	**0.0**
TIP	**Timpagrande**	**8.21**	**293**	*e*Pn		**Pn**	**04 26 14.6**	**-2.6**
	33nm,0.6s							
AWBH		**8.29**	**165**	*P*		**Pn**	**04 26 17.2**	**-1.2**
MMLI	**Mount Malkishu**	**8.35**	**116**	*P*n		**Pn**	**04 26 18.9**	**-0.3**
MMLI				*S*n		**Sn**	**04 27 48.1**	**-3.8**
SUZ		**8.41**	**139**	*P*		**Pn**	**04 26 20.6**	**+0.6**
HMDT	**Nahal Hemdat**	**8.52**	**116**	*P*n		**Pn**	**04 26 21.4**	**-0.1**
HMDT				*S*n		**Sn**	**04 27 52.0**	**-4.0**
YTIR	**Yattir**	**8.73**	**123**	*P*n		**Pn**	**04 26 24.1**	**-0.2**
DSI	**Dead Sea**	**8.79**	**121**	*P*n		**Pn**	**04 26 24.7**	**-0.3**
MZDA	**Masada**	**8.94**	**122**	*P*n		**Pn**	**04 26 26.7**	**-0.3**
MZDA				*S*n		**Sn**	**04 28 02.5**	**-3.6**
RMNI	**Mount Ramon**	**8.99**	**128**	*P*n		**Pn**	**04 26 27.8**	**0.0**
CUC	**Castrocucco**	**9.15**	**296**	*e*Pn		**Pn**	**04 26 27.8**	**-2.1**
	87nm,0.6s							
PRNI	**Paran**	**9.31**	**128**	*P*n		**Pn**	**04 26 31.7**	**-0.3**
PRNI				*S*n		**Sn**	**04 28 10.1**	**-5.0**
HFRF	**Wahat Farafira**	**9.34**	**170**	*P*		**Pn**	**04 26 31.9**	**-0.5**
HRFI	**Mount Harif**	**9.54**	**129**	*P*n		**Pn**	**04 26 34.7**	**-0.4**
HRFI				*S*n		**Sn**	**04 28 15.9**	**-4.9**
ASF	**Jabal al Asfar**	**9.57**	**113**	*P*		**Pn**	**04 26 37.0**	**+1.6**
	0.5nm,0.3s,baz=173,slow=12,SNR=3.7							
ASF				*S*		**Sn**	**04 28 21.4**	**+0.1**
	0.4nm,0.3s,baz=203,slow=23,SNR=2.9							
WDD	**Wield Dalam**	**9.71**	**270**	*e*Pn		**Pn**	**04 26 36.9**	**-0.4**
	115nm,0.3s							
WDD	**Wield Dalam**	**9.71**	**270**	*e*Pn		**Pn**	**04 26 36.8**	**-0.5**
	115nm,0.3s							
VAE	**Valguarnera**	**9.75**	**280**	*P*		**Pn**	**04 26 37.6**	**-0.1**
	2.1nm,0.3s,baz=88,slow=20,SNR=8.5							
VAE				*S*		**Sn**	**04 28 17.0**	**-8.5**
	1.0nm,0.3s,baz=275,slow=20,SNR=3.3							
EIL	**Elat**	**9.75**	**131**	*P*		**Pn**	**04 26 36.8**	**-1.0**
	0.9nm,0.3s,baz=328,slow=9.4,SNR=22							
EIL				*S*		**Sn**	**04 28 16.2**	**-9.4**
	1.1nm,0.3s,baz=299,slow=8.9,SNR=3.1							
EIL	**Elat**	**9.75**	**131**	*Pn*		**Pn**	**04 26 37.1**	**-0.7**
ASUT		**9.94**	**153**	*P*		**Pn**	**04 26 40.5**	**+0.1**
TR2		**10.04**	**141**	*P*		**Pn**	**04 26 41.7**	**0.0**
HKAT	**Jabal Katrina**	**10.07**	**139**	*P*		**Pn**	**04 26 42.9**	**+0.8**
HQLS		**10.08**	**132**	*S*		**Sn**	**04 28 27.3**	**-6.4**
HQLS		**10.08**	**132**	*P*		**Pn**	**04 26 41.8**	**-0.5**
TR1		**10.46**	**141**	*P*		**Pn**	**04 26 47.9**	**+0.5**
RSHS		**10.68**	**137**	*P*		**Pn**	**04 26 50.8**	**+0.6**
JLOS		**10.75**	**133**	*S*		**Sn**	**04 28 43.0**	**-6.9**
JLOS		**10.75**	**133**	*P*		**Pn**	**04 26 51.4**	**+0.3**
HHRG	**Al Ghardaqah**	**10.93**	**145**	*P*		**Pn**	**04 26 54.9**	**+1.3**
HHRG				*S*		**Sn**	**04 28 45.1**	**-9.1**
AKRG	**Al Kharijah**	**11.38**	**161**	*P*		**Pn**	**04 26 59.5**	**+0.1**
HSFG		**11.65**	**145**	*P*		**Pn**	**04 27 04.3**	**+1.3**
KEST	**Kesra**	**13.90**	**272**	*P*		**Pn**	**04 27 33.7**	**+1.7**
	0.1nm,0.3s,baz=153,slow=2.0,SNR=14							
KEST				*S*		**Sn**	**04 29 57.4**	**-8.3**
	0.1nm,0.3s,baz=231,slow=22,SNR=4.3							
GERES	**GERESS Array B**	**15.59**	**327**	*P*		**Pn**	**04 27 53.8**	**+0.9**
	0.1nm,0.3s,baz=152,slow=12,SNR=6.6							
LPG	**La Plagne**	**17.45**	**308**	*eP*		**Pn**	**04 28 15.4**	**-0.1**
	2.8nm,0.4s							
LPG	**La Plagne**	**17.45**	**308**	*eP*		**Pn**	**04 28 15.4**	**-0.1**
	2.0nm,0.4s							
LPL	**La Plagne**	**17.46**	**308**	*eP*		**Pn**	**04 28 15.7**	**-0.1**
	3.2nm,0.3s							
LPL	**La Plagne**	**17.46**	**308**	*eP*		**Pn**	**04 28 15.7**	**-0.1**
	3.0nm,0.3s							
CABF	**La

NVAR	**Mina Array Bea**	**83.34**	**51**	P	**P**		**05 04 09.0**	**+0.7**
	0.8nm,0.7s,mb3.7,baz=270,slow=4.9,SNR=6.8							
PLCA	**Paso Flores**	**145.89**	**132**	PKPbc	PKPbc		05 11 19.1	+0.2
	1.2nm,0.5s,baz=264,slow=1.8,SNR=6.7							
LPAZ	**La Paz**	**150.16**	**85**	PKPbc	PKPbc		05 11 31.6	+0.8
	1.2nm,0.5s,baz=243,slow=3.3,SNR=12							
LPAZ				PKPab	PKPab		05 11 38.9	+0.9
	0.8nm,0.5s,baz=262,slow=6.7,SNR=7.3							

IDC 03 04:53:05.9±13.0, **1877S**×**17810W, h474**km±161km, **mb3.1**/6, **mb1 3.4**/7, **mb1mx3.2**/17, **mbtmp3.1**/7, **Error ellipse: s-maj=70.1km s-min=25.6km az=5.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.86**	**191**	P	P	04 57 03.7	-0.8
	0.6nm,0.3s,baz=72,slow=6.6,SNR=4.1						
STKA	**Stephens Creek**	**38.48**	**242**	P	P	04 59 47.5	+1.2
	1.9nm,0.5s,baz=68,slow=10.0,SNR=8.8						
WRA	**Warramunga Arr**	**44.77**	**260**	P	P	05 00 35.7	-0.8
	0.8nm,0.6s,baz=96,slow=6.8,SNR=19						
ASAR	**Alice Springs**	**44.85**	**255**	P	P	05 00 37.0	0.0
	5.0nm,0.5s,baz=90,slow=8.4,SNR=116						
NVAR	**Mina Array Bea**	**79.84**	**44**	P	P	05 04 24.3	-0.1
	0.2nm,0.5s,baz=225,slow=9.9,SNR=2.7						
TXAR	**Lajitas Array**	**86.20**	**57**	P	P	05 04 58.4	+1.8
	0.5nm,0.7s,baz=207,slow=8.1,SNR=4.6						
PDAR	**Pinedale Array**	**87.77**	**43**	P	P	05 05 03.8	+0.1
	0.3nm,0.7s,baz=233,slow=4.2,SNR=2.5						
GERES	**GERESS Array B**	**148.52**	**345**	PKPbc	PKPbc	05 11 57.4	-1.1
	0.3nm,0.6s,baz=2.2,slow=5.2,SNR=3.5						

IDC ***03*** *05:04:43.2*±*1.3, 256N*×*9836E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, Error ellipse: s-maj=70.5km s-min=16.7km az=50.0*

ISCJB ***03*** *05:04:46.6*±*1.2, 27N*±*03*×*984E*±*03, h33km, mb4.0/8, Error ellipse: s-maj=60.0km s-min=13.4km az=139.7*

NEIC ***03*** *05:04:48.8*±*0.8, 265N*×*9846E, h35km, mb4.0/1, Error ellipse: s-maj=43.4km s-min=10.0km az=49.0*

ISC 03 05:04:48.9±1.2, **27N**±03×**985E**±03, **h35km, n10,** σ0**49**/10, **mb4.0**/8, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**22.57**	**110**	P	**P**	**05 09 47.2**	**+0.8**
	8.5nm,0.5s,mb4.4,baz=283,slow=13,SNR=6.4						
WRA	**Warramunga Arr**	**41.75**	**124**	P	**P**	**05 12 34.8**	**-0.3**
	1.7nm,0.5s,mb3.9,baz=303,slow=9.2,SNR=26						
WRA				PcP	PcP	05 14 29.4	-1.8
	0.2nm,0.9s,baz=314,slow=4.3,SNR=4.9						
WRAB	**Tennant Creek**	**41.76**	**124**	*eP*	**P**	**05 12 34.6**	**-0.5**
	2.1nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**43.28**	**129**	P	**P**	**05 12 47.4**	**-0.1**
	0.7nm,0.7s,mb3.5,baz=301,slow=7.9,SNR=7.7						
MKAR	**Makanchi Array**	**46.16**	**345**	P	**P**	**05 13 10.5**	**+0.5**
	0.9nm,0.6s,mb3.9,baz=156,slow=8.0,SNR=7.4						
KURK	**Kurchatov**	**50.73**	**344**	P	**P**	**05 13 44.6**	**-0.6**
	baz=168,slow=6.7						
ZALV	**Zalesovo Beam**	**52.34**	**350**	P	**P**	**05 13 56.7**	**-0.4**
	0.8nm,0.4s,mb4.0,baz=163,slow=5.8,SNR=5.5						
STKA	**Stephens Creek**	**53.40**	**134**	P	**P**	**05 14 05.5**	**+0.1**
	1.0nm,0.4s,mb4.1,baz=324,slow=8.7,SNR=3.3						
STKA	**Stephens Creek**	**53.40**	**134**	P	**P**	**05 14 05.5**	**+0.1**
BRTR	**Keskin Array B**	**69.09**	**312**	P	**P**	**05 15 52.2**	**+0.6**
	1.0nm,0.7s,mb3.9,baz=108,slow=8.2,SNR=4.0						

ISCJB ***03*** *05:20:17.0*±*0.7, 410S*±*0.1*×*435E*±*02, h10km, mb4.1/9, MS3.6/14, Error ellipse: s-maj=22.2km s-min=12.4km az=139.7*

IDC ***03*** *05:20:17.0*±*0.8, 4091S*×*4356E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/22, mbtmp4.0/9, ML3.6/1, MS3.6/16, Ms1 3.6/16, ms1mx3.5/29, Error ellipse: s-maj=34.9km s-min=17.0km az=45.0*

NEIC ***03*** *05:20:18.6*±*0.5, 4094S*×*4349E, h10km, mb4.6/1, Error ellipse: s-maj=16.0km s-min=9.7km az=53.0*

ISC 03 05:20:18.8±0.7, **409S**±01×**435E**±02, **h10km, n25,** σ0**66**/13, **mb4.1**/9, **MS3.6**/14, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.32**	**304**	P	**Pn**	**05 24 45.0**	**0.0**
	0.1nm,0.3s,baz=117,slow=13,SNR=2.2						
BOSA				LR	LR	05 30 28.7	
	comp=Z,146nm,18.1s,baz=126,slow=32						
SUR	**Sutherland**	**20.04**	**288**	LR	LR	05 31 08.2	
	comp=Z,83nm,19.2s,MS3.1,baz=119,slow=32						
LBTB	**Lobatse**	**21.77**	**311**	P	**P**	**05 25 09.7**	**-0.9**
	5.4nm,1.1s,mb3.9,baz=259,slow=22,SNR=4.1						
LBTB				LR	LR	05 32 40.4	
	comp=Z,87nm,20.2s,MS3.2,baz=129,slow=34						
ABPO	**Ambohimpanom**	**22.08**	**9**	P	**P**	**05 25 14.0**	**+0.1**
	25nm,1.1s,mb4.6						
OPO	**Ambohidratompo**	**22.51**	**9**	P	**P**	**05 25 19.3**	**+0.7**
	3.0nm,0.9s,mb3.7,baz=305,slow=7.6,SNR=3.4						
MATP	**Matopo**	**24.09**	**324**	P	**P**	**05 25 33.6**	**-0.8**
	6.6nm,0.8s,mb4.1,baz=149,slow=9.7,SNR=6.2						
MATP				LR	LR	05 33 37.6	
	comp=Z,123nm,19.8s,MS3.4,baz=147,slow=33						
MAW	**Mawson**	**28.76**	**165**	LR	LR	05 34 54.6	
	comp=Z,98nm,18.3s,MS3.5,baz=254,slow=30						
LSZ	**Lusaka**	**28.81**	**328**	P	**P**	**05 26 17.2**	**+0.2**
	3.5nm,0.7s,mb4.2,baz=182,slow=11,SNR=3.2						
LSZ				LR	LR	05 36 53.7	
	comp=Z,205nm,18.8s,MS3.8,baz=150,slow=35						
KMBO	**Kilima Mbogo**	**40.02**	**350**	LR	LR	05 42 40.2	
	comp=Z,63nm,19.7s,MS3.5,baz=290,slow=34						
QSPA	**South Pole Qui**	**49.27**	**180**	P	**P**	**05 29 07.8**	**+0.8**
	2.3nm,0.9s,mb4.2,baz=239,slow=1.7,SNR=4.7						
QSPA	**South Pole Qui**	**49.27**	**180**	P	**P**	**05 29 07.8**	**+0.8**
DBIC	**Dimbokro**	**64.84**	**305**	LR	LR	05 55 12.8	
	comp=Z,45nm,21.2s,MS3.6,baz=127,slow=32						
TORD	**Torodi Ar. Bea**	**66.24**	**315**	P	**P**	**05 31 08.2**	**+1.2**
	291nm,0.5s,baz=139,slow=5.7,SNR=2.2						
TORD				LR	LR	06 00 17.2	
	comp=Z,48nm,19.1s,baz=160,slow=36						
ASAR	**Alice Springs**	**75.21**	**109**	P	**P**	**05 32 00.9**	**-0.8**
	0.5nm,0.6s,mb3.6,baz=224,slow=5.5,SNR=8.8						
STKA	**Stephens Creek**	**75.41**	**120**	P	**P**	**05 32 02.5**	**-0.3**
	3.3nm,0.8s,mb4.3,baz=303,slow=13,SNR=3.7						
STKA				LR	LR	05 57 04.6	
	comp=Z,68nm,18.8s,MS4.0,baz=218,slow=29						
STKA	**Stephens Creek**	**75.41**	**120**	P	**P**	**05 32 02.5**	**-0.3**
STKA				LR	LR	05 57 04.6	
WRA	**Warramunga Arr**	**77.85**	**106**	P	**P**	**05 32 16.5**	**-0.2**
	1.9nm,0.9s,mb4.0,baz=223,slow=4.4,SNR=16						
CMAR	**Chiang Mai Arr**	**78.33**	**53**	LR	LR	06 01 51.0	
	comp=Z,22nm,21.6s,MS3.5,baz=36,slow=32						
BRTR	**Keskin Array B**	**80.77**	**352**	LR	LR	06 09 46.8	
	comp=Z,28nm,18.2s,MS3.6,baz=280,slow=37						
KEST	**Kesra**	**82.48**	**333**	LR	LR	06 09 01.6	
	comp=Z,31nm,18.5s,MS3.7,baz=224,slow=36						
AKTO	**Aktyubinsk**	**91.88**	**9**	LR	LR	06 11 34.4	
	comp=Z,59nm,18.6s,MS4.1,baz=108,slow=34						
DAVOX	**Davos/Dischmat**	**92.31**	**338**	LR	LR	06 20 35.4	
	comp=Z,56nm,18.5s,MS4.0,baz=269,slow=39						
MKAR	**Makanchi Array**	**93.93**	**26**	LR	LR	06 13 11.5	
	comp=Z,37nm,18.4s,MS3.9,baz=356,slow=34						
ULM	**Lac du Bonnet**	**150.39**	**302**	PKPbc	PKPbc	05 40 09.1	-0.6
	3.7nm,0.6s,baz=11,slow=2.1,SNR=3.3						
TXAR	**Lajitas Array**	**150.91**	**257**	PKPbc	PKPbc	05 40 11.7	+0.1
	2.0nm,0.8s,baz=133,slow=5.4,SNR=16						

NEIC 03 06:12:11.9, 3812S×**17647E, h144**km, **MG3.9**(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAZ	**Tarawera**	**0.12**	**165**	P	Pn	06 12 31.9	+0.6
URZ	**Urewera**	**0.52**	**106**	P	Pn	06 12 32.4	-0.2
MWZ	**Matawai**	**0.86**	**105**	P	Pn	06 12 34.8	-0.1
MWZ				S	Sn	06 12 52.8	+0.4
BKZ	**Black Stump Fm**	**1.05**	**179**	P	Pn	06 12 36.4	-0.1
WTVZ	**West Tongariro**	**1.21**	**214**	P	Pn	06 12 38.1	+0.1
TWVZ	**Taurewa**	**1.25**	**220**	P	Pn	06 12 38.6	+0.2
NGZ	**Ngauruhoe**	**1.26**	**213**	P	Pn	06 12 38.9	+0.5
KNZ	**Kokohu**	**1.30**	**134**	P	Pn	06 12 39.0	+0.1
FWVZ	**Far West T-bar**	**1.34**	**212**	P	Pn	06 12 39.4	+0.1
WNVZ	**Wahianoa**	**1.39**	**209**	P	Pn	06 12 39.9	+0.2
MOVZ	**Moawhango**	**1.40**	**203**	P	Pn	06 12 39.5	-0.4
PUZ	**Puketiti**	**1.41**	**89**	P	Pn	06 12 39.6	-0.4
MKAZ	**Moumakai**	**1.44**	**314**	P	Pn	06 12 40.5	+0.1
MXZ	**Matakaoa Point**	**1.56**	**70**	P	Pn	06 12 41.3	-0.3
TSZ	**Takapari Road**	**1.98**	**191**	P	Pn	06 12 45.5	-0.8
WAZ	**Wanganui**	**2.00**	**215**	P	Pn	06 12 46.2	-0.4
BFZ	**Birch Farm**	**2.56**	**184**	P	Pn	06 12 51.9	-1.5
MRZ	**Mangatainoka R**	**2.63**	**195**	P	Pn	06 12 52.4	-1.9
KIW	**Kapiti Island**	**2.99**	**203**	P	Pn	06 12 56.4	-2.5
MTW	**Mount Morrison**	**3.13**	**194**	P	Pn	06 12 57.8	-2.8
CAW	**Cannon Point**	**3.17**	**199**	P	Pn	06 12 58.6	-2.6
MRW	**Makara Radio**	**3.39**	**203**	P	Pn	06 13 01.1	-2.9
MSWZ	**Moikau Station**	**3.42**	**196**	P	Pn	06 13 01.4	-3.0
SNZO	**South Karori**	**3.46**	**203**	P	Pn	06 13 01.8	-3.1
TCW	**Tory Channel**	**3.52**	**208**	P	Pn	06 13 02.6	-3.1
NNZ	**Nelson**	**3.91**	**217**	P	Pn	06 13 07.4	-3.3
QRZ	**Quartz Range**	**4.08**	**227**	P	Pn	06 13 09.6	-3.3
THZ	**Tophouse**	**4.56**	**216**	P	Pn	06 13 16.1	-3.1
KHZ	**Kahutara**	**4.84**	**207**	P	Pn	06 13 19.0	-4.0
LTZ	**Lake Taylor**	**5.65**	**213**	P	Pn	06 13 29.1	-4.7
MQZ	**McQueen's Vall**	**6.29**	**206**	P	Pn	06 13 36.5	-5.7
ODZ	**Otahua Downs**	**8.18**	**210**	P	Pn	06 14 02.4	-5.2

IDC ***03*** *06:13:02.2*±*1.3, 2402N*×*9271E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.5/5, Error ellipse: s-maj=55.5km s-min=21.3km az=62.0*

ISCJB ***03*** *06:13:04.8*±*1.0, 2392N*±*008*×*9255E*±*009, h33km, mb3.5/5, Error ellipse: s-maj=12.7km s-min=10.3km az=41.7*

ISC 03 06:13:07.1±1.0, **2401N**±009×**9260E**±009, **h35**km, **n7,** σ0**82**/9, **mb3.5**/5, **1C, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.44**	**57**	*i* P	**Pn**	**06 13 30.0**	**-0.8**
IMP				*i* S	**Sn**	**06 13 49.0**	**+0.5**
SHL	**Shillong**	**1.68**	**337**	*i* PN	**Pn**	**06 13 32.0**	**-2.1**
SHL				*i* SN	**Sn**	**06 13 55.0**	**+0.6**
MKAR	**Makanchi Array**	**24.20**	**343**	P	**P**	**06 18 20.9**	**+0.7**
	0.5nm,0.7s,mb3.1,baz=171,slow=10,SNR=3.2						
SONM	**Songino Array**	**26.19**	**21**	P	**P**	**06 18 38.1**	**-0.2**
	0.2nm,0.4s,mb3.0,baz=214,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**59.68**	**133**	P	**P**	**06 23 08.1**	**-0.2**
	0.8nm,0.7s,mb3.9,baz=322,slow=7.2,SNR=9.6						
ASAR	**Alice Springs**	**62.07**	**137**	P	**P**	**06 23 24.8**	**+0.3**
	0.6nm,0.5s,mb4.0,baz=321,slow=6.9,SNR=15						
GERES	**GERESS Array B**	**65.16**	**314**	P	**P**	**06 23 45.4**	**+0.8**
	0.6nm,0.8s,mb3.7,baz=72,slow=6.3,SNR=3.8						

ISCJB ***03*** *06:23:24.2*±*1.2, 1894N*±*006*×*1452E*±*02, h228km*±*12km, mb3.3/4, Error ellipse: s-maj=37.1km s-min=8.7km az=171.1*

IDC ***03*** *06:23:24.6*±*1.9, 1892N*×*1453.4E, h220km*±*17km, mb3.1/4, mb1 3.5/8, mb1mx3.3/24, mbtmp3.5/8, Error ellipse: s-maj=35.9km s-min=11.4km az=81.0*

ISC 03 06:23:24.2±1.2, **1897N**±006×**1453E**±02, **h212**km±11km, **n9,** σ0**66**/11, **mb3.3**/4, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.37**	**185**	P	**Pn**	**06 24 44.8**	**+1.2**
	4.1nm,0.3s,baz=344,slow=15,SNR=3.6						
GUMO				S	**S**	**06 25 46.2**	**-0.4**
	17nm,0.3s,baz=26,slow=23,SNR=5.0						
CBIJ	**Chichi jima**	**8.58**	**341**	P	**Pn**	**06 25 24.9**	**0.0**
	3.5nm,0.3s,baz=107,slow=19,SNR=3.5						
CBIJ				S	**S**	**06 27 00.7**	**-0.9**
	8.7nm,0.3s,baz=108,slow=19,SNR=5.5						
JOW	**Kunigami**	**17.52**	**300**	P	**P**	**06 27 14.3**	**+0.3**
	1.4nm,0.3s,baz=115,slow=19,SNR=3.0						
MJAR	**Matsushiro Arr**	**18.58**	**342**	P	**P**	**06 27 26.2**	**+0.8**
	0.5nm,0.3s,baz=168,slow=9.9,SNR=5.2						
WRA	**Warramunga Arr**	**40.14**	**196**	P	**P**	**06 30 38.8**	**-0.8**
	1.1nm,0.4s,mb3.7,baz=20,slow=10,SNR=26						
SONM	**Songino Array**	**42.70**	**321**	P	**P**	**06 31 00.7**	**+0.6**
	0.5nm,0.7s,mb3.0,baz=134,slow=7.7,SNR=3.0						
ASAR	**Alice Springs**	**43.81**	**195**	P	**P**	**06 31 08.4**	**-0.8**
	0.4nm,0.5s,mb3.0,baz=13,slow=6.2,SNR=11						
KURK	**Kurchatov**	**60.82**	**318**	P	**P**	**06 33 14.1**	**+0.2**
	baz=92,slow=7.4						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**06 35 27.1**	**-0.1**
	0.3nm,0.5s,mb3.3,baz=268,slow=6.4,SNR=3.7						

IDC 03 06:34:46.9±3.1, **192N**×**9651E, h0**km, **mb3.5**/5, **mb1 3.7**/6, **mb1mx3.6**/21, **mbtmp3.6**/6, **ML4.2**/1, **Error ellipse: s-maj=118.7km s-min=21.6km az=61.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.60**	**8**	Pn	Pn	06 38 42.2	+1.0
	0.3nm,0.3s,baz=194,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**43.00**	**122**	P	P	06 42 48.2	-0.2
	0.6nm,0.6s,baz=301,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**44.38**	**127**	P	P	06 42 59.6	+0.1
	0.2nm,0.7s,baz=296,slow=7.1,SNR=3.5						
MKAR	**Makanchi Array**	**46.38**	**347**	P	P	06 43 15.0	+0.1
	0.7nm,0.5s,baz=351,slow=7.7,SNR=6.6						
SONM	**Songino Array**	**46.53**	**9**	P	P	06 43 15.8	-0.3
	0.2nm,0.3s,baz=171,slow=9.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**52.74**	**351**	P	P	06 44 03.4	0.0
	0.9nm,0.6s,baz=190,slow=6.8,SNR=4.7						

IDC ***03*** *06:46:54.9*±*1.0, 5805S*×*2551W, h0km, mb4.1/5, mb1 4.1/5, mb1mx4.0/13, mbtmp4.1/5, MS3.3/1, Ms1 3.2/1, ms1mx2.8/19, Error ellipse: s-maj=37.4km s-min=28.7km az=53.0*

ISCJB ***03*** *06:46:55.4*±*0.9, 5789S*±*0.10*×*254W*±*04, h10km, mb4.1/5, Error ellipse: s-maj=29.5km s-min=12.6km az=164.8*

ISC 03 06:46:57.3±0.9, **5791S**±010×**254W**±04, **h10km, n12,** σ0**77**/9, **mb4.1**/5, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.70**	**157**	*eP*	**Pn**	**06 50 25.7**	**+0.8**
VNA3	**Neumayer Olymp**	**14.91**	**160**	*eP*	**Pn**	**06 50 27.7**	**0.0**
VNA2	**Neumayer--Watz**	**15.10**	**157**	*eP*	**Pn**	**06 50 30.9**	**+0.6**
	baz=319,slow=14						
MAW	**Mawson**	**38.07**	**142**	P	**P**	**06 54 14.7**	**-0.7**
	1.0nm,0.6s,mb3.7,baz=269,slow=10,SNR=3.0						
BOSA	**Boshof**	**45.53**	**72**	P	**P**	**06 55 16.5**	**-0.3**
	5.9nm,1.2s,mb4.4,baz=222,slow=6.8,SNR=3.1						
BOSA				LR	LR	07 10 13.1	
	comp=Z,34nm,20.9s,baz=320,slow=31						
LPAZ	**La Paz**	**52.25**	**304**	P	**P**	**06 56 08.7**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=192,slow=5.5,SNR=4.9						
DBIC	**Dimbokro**	**66.48**	**22**	P	**P**	**06 57 47.1**	**+0.3**
	2.8nm,0.6s,mb4.5,baz=163,slow=11,SNR=6.3						
TORD	**Torodi Ar. Bea**	**74.22**	**27**	P	**P**	**06 58 34.8**	**+0.7**
	267nm,0.5s,baz=199,slow=6.6,SNR=1.9						
ASAR	**Alice Springs**	**96.92**	**161**	P	**P**	**07 00 26.9**	**-1.8**
	0.3nm,0.7s,mb3.9,baz=183,slow=3.7,SNR=5.5						
NVAR	**Mina Array Bea**	**123.00**	**291**	PKP	PKPdf	07 05 52.1	-0.8
	0.1nm,0.4s,baz=123,slow=3.3,SNR=3.6						
YKA	**Yellowknife Ar**	**138.20**	**316**	PKP	PKPdf	07 06 20.1	-0.8
	1.4nm,0.6s,baz=119,slow=2.1,SNR=4.0						
SONM	**Songino Array**	**149.83**	**88**	PKPbc	PKPbc	07 06 45.5	-0.9
	2.1nm,0.6s,baz=223,slow=2.3,SNR=12						

IDC 03 06:59:21.5±5.3, **485S**×**14555E, h0**km, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.6**/14, **mbtmp3.6**/4, **ML3.6**/1, **Error ellipse: s-maj=142.3km s-min=30.7km az=95.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.55**	**215**	P	Pn	07 03 39.7	-0.4
	0.2nm,0.3s,baz=36,slow=12,SNR=17						
ASAR	**Alice Springs**	**21.82**	**210**	P	P	07 04 15.7	+0.1
	0.6nm,0.4s,baz=33,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	**51.43**	**298**	P	P	07 08 28.7	-0.2
	1.0nm,0.4s,baz=122,slow=5.3,SNR=4.6						
MKAR	**Makanchi Array**	**75.69**	**321**	P	P	07 11 09.1	+0.3
	0.2nm,0.4s,baz=97,slow=7.7,SNR=4.5						

NEIC ***03*** *07:51:47.8, 1759N*×*9928W, h64km, MD3.6(MEX), After MEX.*

MEX 03 07:51:47.7±0.8, **1759N**×**9929W, h66**km±24km, **MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.46**	**316**	*i* S	Sn	07 51 58.6	-10
MEIG				*i* P		07 51 58.6	
PLIG	**Platanillo**	**0.82**	**345**	*eP*	Pn	07 52 03.1	-0.7
PLIG				*i* S	Sn	07 52 14.3	-1.4
ACX	**Acapulco**	**0.94**	**220**	*i* P	Pn	07 52 03.0	-2.3
ACX				*i* S	Sn	07 52 15.7	-2.5
CAIG	**El Cayaco**	**1.08**	**240**	*eP*	Pn	07 52 05.6	-1.4
CAIG				*i* S	Sn	07 52 20.2	-1.2
UTMO	**Huajuapan**	**1.43**	**80**	*eP*	Pn	07 52 10.7	-0.9
UTMO				*i* S	Sn	07 52 27.3	-2.3
PPM	**Popocatepetl**	**1.59**	**23**	*i* P	Pn	07 52 14.7	+0.9
PPM				*i* S	Sn	07 52 31.0	-2.5
PNIG	**Pinotepa**	**1.63**	**137**	*eP*	Pn	07 52 12.8	-1.4
PNIG				*i* S	Sn	07 52 33.5	-0.8

IDC ***03*** *08:15:53.3*±*1.4, 094N*×*12558E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/17, mbtmp3.8/5, Error ellipse: s-maj=161.8km s-min=20.0km az=65.0*

ISCJB ***03*** *08:15:57.8*±*1.3, 13N*±*02*×*1264E*±*01, h56km*±*13km, mb3.8/5, Error ellipse: s-maj=29.3km s-min=12.3km az=26.8*

DJA ***03*** *08:15:57, 131N*×*12637E, h60km, MLv3.8/3*

ISC 03 08:15:58.5±1.5, **13N**±02×**12638E**±010, **h42km**±16km, **n8,** σ0**33**/8, **mb3.8**/5, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**117**	P	**Pn**	**08 16 17.6**	**+0.1**
MNI	**Manado**	**1.55**	**276**	P	**Pn**	**08 16 23.5**	**-0.2**
MNI	**Manado**	**1.55**	**276**	S	**Sn**	**08 16 42.8**	**+0.2**
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**08 20 53.9**	**-0.5**
	1.4nm,0.5s,mb3.7,baz=336,slow=11,SNR=13						
ASAR	**Alice Springs**	**25.84**	**164**	P	**P**	**08 21 26.5**	**+0.3**
	0.4nm,0.3s,mb3.4,baz=341,slow=8.0,SNR=13						
STKA	**Stephens Creek**	**35.98**	**158**	P	**P**	**08 22 55.8**	**+0.2**
	2.7nm,1.0s,mb4.1,baz=324,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**59.38**	**326**	P	**P**	**08 25 56.7**	**0.0**
	0.4nm,0.3s,mb3.9,baz=122,slow=8.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**62.62**	**334**	P	**P**	**08 26 18.4**	**-0.1**
	0.4nm,0.4s,mb4.0,baz=139,slow=7.5,SNR=2.9						

IDC 03 08:51:15.1±1.2, **843S**×**15682E, h0**km, **mb3.7**/6, **mb1 3.8**/7, **mb1mx3.7**/16, **mbtmp3.8**/7, **ML3.8**/1, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.3**/24, **Error ellipse: s-maj=28.6km s-min=26.5km az=173.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.25**	**108**	P	Pn	08 52 07.1	-0.2
	10nm,0.3s,baz=12,slow=9.1,SNR=2.9						
HNR				S	Sn	08 52 47.1	+0.3
	16nm,0.3s,baz=297,slow=20,SNR=5.8						
CTA	**Charters Tower**	**15.45**	**220**	LR	LR	08 59 57.9	
	comp=Z,48nm,20.8s,baz=233,slow=34						
WRA	**Warramunga Arr**	**24.57**	**240**	P	P	08 56 36.6	-0.4
	1.2nm,0.7s,baz=66,slow=9.2,SNR=6.8						
ASAR	**Alice Springs**	**26.66**	**233**	P	P	08 56 55.3	-0.6
	0.4nm,0.8s,baz=65,slow=7.3,SNR=3.9						
STKA	**Stephens Creek**	**27.29**	**209**	P	P	08 57 02.7	+1.3
	1.4nm,0.7s,baz=52,slow=16,SNR=4.0						
SONM	**Songino Array**	**71.52**	**327**	P	P	09 02 39.4	+1.6
	0.6nm,0.7s,baz=140,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**85.67**	**318**	P	P	09 03 54.2	-1.7
	0.5nm,0.6s,baz=93,slow=5.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**86.38**	**326**	P	P	09 03 59.6	+0.5
	0.4nm,0.5s,baz=69,slow=7.9,SNR=2.8						

PRE 03 09:03:53.6±1.0, **3279S**×**2202E, h5**km, **ML4.4, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**1.10**	**292**	*eP*	Pg	09 04 14.7	-0.1
SUR				*eS*	Sg	09 04 29.6	+0.5
CVNA	**Calvinia**	**2.32**	**304**	*eP*	Pn	09 04 33.5	+1.0
CVNA				*eS*	Sn	09 05 02.5	+1.2
CVNA				AML	AML	09 05 10.9	
	comp=Z,1μm,0.5s						
CER	**Ceres**	**2.36**	**255**	*eP*	Pn	09 04 33.7	+0.7
CER				*eS*	Sn	09 05 02.3	-0.1
CER				A

DLH Dalhousie 5.74 131 *e*P **Pn 09 20 30.0 +1.5**
DLH *ex* **Sn 09 21 36.0 +2.0**
AML Almayashu 6.08 20 ⇓ *i*Pn **Pn 09 20 33.4 +0.6**
193nm,0.4s
AML *e*Sn **Sn 09 21 37.8 -4.0**
AML Almayashu 6.08 20 P **Pn 09 20 33.5 +0.7**
SNR=95
UCH Uchtor 6.42 25 *e*Pn **Pn 09 20 38.1 +0.8**
11nm,0.6s
UCH *e*Sn **Sn 09 21 46.8 -3.2**
UCH Uchtor 6.42 25 P **Pn 09 20 38.4 +1.0**
SNR=7.4
KZA Kyzart 6.56 30 P **Pn 09 20 38.8 -0.4**
SNR=16
EKS2 Erkin-Say 6.59 19 *e*Pn **Pn 09 20 39.9 +0.3**
35nm,0.3s
EKS2 *e*Sn **Sn 09 21 50.8 -3.2**
EKS2 Erkin-Say 6.59 19 P **Pn 09 20 40.1 +0.5**
SNR=36
KK31 Karatay Array 6.64 358 P **Pn 09 20 40.6 +0.3**
12nm,0.3s,baz=185,slow=14,SNR=402
KK31 ⇑S **Sn 09 21 49.9 -5.4**
82nm,0.5s,baz=187,slow=24,SNR=30
AAK Ala-Archa 6.77 23 P **Pn 09 20 42.7 +0.6**
SNR=34
BHK Bhakra 6.82 136 *ex* **Sn 09 21 58.8 -0.8**
KBK Karagaybulak 6.95 26 P **Pn 09 20 45.3 +1.0**
SNR=12
SDNR Sundarnagar 7.08 133 *e*P **Pn 09 20 47.0 +0.8**
SDNR *e*S **Sn 09 22 03.6 -2.2**
ULHL Ulahol 7.12 34 P **Pn 09 20 46.8 +0.1**
SNR=5.8
CHMS Chumysh 7.18 23 P **Pn 09 20 47.7 +0.2**
SNR=8.2
USP Ospenovka 7.35 21 P **Pn 09 20 49.7 0.0**
SNR=22
TKM2 Tokmak 2 7.41 28 ⇓P **Pn 09 20 50.8 +0.3**
31nm,0.6s
TKM2 ⇑S **Sn 09 22 09.1 -4.6**
21nm,1.1s
TKM2 Tokmak 2 7.41 28 ⇓ *i*Pn **Pn 09 20 50.8 +0.2**
38nm,0.6s
TKM2 Tokmak 2 7.41 28 ⇓ *i*PN **Pn 09 20 50.8 +0.3**
TKM2 pmax pmax
comp=Z,38nm,0.6s
TKM2 Tokmak 2 7.41 28 P **Pn 09 20 50.8 +0.3**
SNR=65
SMLA Simla 7.46 134 ⇑ *i*P **Pn 09 20 52.8 +1.5**
SMLA *i* S **Sn 09 22 13.4 -1.6**
SMLA *ex* x 09 22 15.3
comp=N,2μm,0.3s
SMLA *ex* x 09 22 16.0
comp=E,2μm,0.3s
KLP Kalpa 7.85 127 *e*P **Pn 09 20 57.9 +1.4**
KLP *e*S **Sn 09 22 21.3 -3.0**
KLP AML AML 09 22 23.7
comp=E,797nm,0.7s
KLP AML AML 09 22 26.9
comp=N,1μm,0.6s
DDI Dehra Dun 8.57 133 *ex* **Pn 09 21 01.4 -4.6**
DDI *ex* **Sn 09 22 39.2 -2.4**
JOSI Joshimath 9.34 127 *e*P **Pn 09 21 17.5 +1.4**
JOSI *e*S **Sn 09 22 54.0 -6.0**
JOSI AML AML 09 22 58.0
comp=E,402nm,0.6s
JOSI AML AML 09 22 59.5
comp=N,443nm,0.7s
KHET Khetri 9.34 152 *e*P **Pn 09 21 15.3 -0.9**
KHET *e*S **Sn 09 22 52.9 -7.2**
NDI New Delhi 9.42 144 *e*P **Pn 09 21 15.5 -1.7**
NDI *e*S **Sn 09 22 53.5 -8.4**
AYAN Aya Nagar 9.54 145 *e*S **Sn 09 22 56.2 -8.8**
KUDL Kundal 9.55 149 *e*P **Pn 09 21 17.9 -1.1**
KUDL *e*S **Sn 09 22 58.3 -6.9**
KALG Kalgarh 9.58 134 *ex* x 09 22 54.6
AJM Ajmer 10.45 161 *e*P **Pn 09 21 30.6 -0.2**
AJM *e*S **Sn 09 23 14.9 -12**
LGTI Lohaghat 10.52 129 *e*P **Pn 09 21 30.7 -1.0**
LGTI *e*S **Sn 09 23 20.8 -7.7**
MK31 Makanchi Array 13.39 36 ⇑P **Pn 09 22 07.9 -0.5**
comp=N,0.6nm,0.5s,baz=209,slow=11,SNR=8.8
MK31 Makanchi Array 13.39 36 *e*P **Pn 09 22 09.6 +1.2**
MKAR Makanchi Array 13.39 36 P **Pn 09 22 08.1 -0.3**
comp=N,0.3nm,0.3s,baz=212,slow=10,SNR=6.2
DANN Dangsing 13.55 123 *e*P **Pn 09 22 10.4 -0.3**
comp=N,53nm,0.3s
KOLN Koldanda 13.82 125 *e*P **Pn 09 22 13.7 -0.4**
comp=N,20nm,0.3s
BHPL Bhopal 14.34 155 *ex* **Pn 09 22 23.8 +3.2**
GKN Gorkha 14.37 122 *e*P **Pn 09 22 21.2 +0.3**
comp=N,70nm,0.3s
GKN *e*S **Sn 09 24 48.4 -12**
DMN Daman 14.94 122 *e*P **Pn 09 22 29.1 +1.1**
comp=N,64nm,0.5s
KKN Kakani 14.94 121 *e*P **Pn 09 22 28.8 +0.8**
comp=N,68nm,0.4s
KKN Kakani 14.94 121 *e*P **Pn 09 22 28.8 +0.8**
KKN pmax pmax
comp=Z,68nm,0.4s
AB09 Akbulak array 15.09 331 ⇑P **Pn 09 22 28.4 -1.1**
comp=Z,11nm,0.8s
AB09 ⇑S **S 09 25 08.9 -8.6**
comp=Z,8.6nm,0.7s
PKI Pulchoki 15.17 122 *e*P **Pn 09 22 31.8 +1.0**
comp=Z,107nm,0.6s
PKI Pulchoki 15.17 122 *e*P **Pn 09 22 31.8 +1.0**
PKI pmax pmax
comp=Z,107nm,0.6s
KURBB Kurchatov Arra 15.20 19 ⇓P **Pn 09 22 30.6 -0.3**
comp=Z,0.5nm,0.7s
GUN Gumba 15.29 120 *e*P **Pn 09 22 33.1 +0.9**
comp=Z,44nm,0.3s
KURK Kurchatov 15.30 19 P **Pn 09 22 30.9 -1.3**
baz=211,slow=10
JIRN Jiri 15.66 120 *e*P **Pn 09 22 37.2 +0.4**
comp=Z,79nm,0.3s
VOSK Vostochnaya 16.27 0 ⇑P **Pn 09 22 42.9 -1.1**
comp=Z,5.7nm,1.1s
VOSK ⇑S **S 09 25 36.6 -7.8**
comp=Z,6.8nm,1.2s
RAMN Ramite 16.38 121 *e*P **Pn 09 22 47.3 +1.7**
comp=Z,25nm,0.2s
BVA0 Borovoye Array 16.57 359 ⇑P **Pn 09 22 47.4 -0.2**
comp=Z,0.6nm,0.7s,baz=182,slow=14,SNR=19
BVA0 ⇑S **S 09 25 40.2 -11**
comp=Z,1.1nm,1.1s,baz=166,slow=23,SNR=3.9
BVAR Borovoye Array 16.57 359 P **Pn 09 22 47.1 -0.5**
comp=Z,1.4nm,0.3s,baz=172,slow=12,SNR=18
BVAR Borovoye Array 16.57 359 P **Pn 09 22 47.1 -0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 16.61 359 *e*P **Pn 09 22 47.2 -0.8**
comp=Z,6.8nm,0.5s
BRVK Borovoye 16.61 359 *e*P **Pn 09 22 47.3 -0.7**
BRVK pmax pmax
comp=Z,7.0nm,0.5s
AKTK Aktyubinsk 16.77 330 P **Pn 09 22 50.3 +0.3**
AKTK S **S 09 25 55.9 +0.2**
AKTO Aktyubinsk 16.77 330 ⇓P **Pn 09 22 50.2 +0.2**
comp=Z,4.1nm,0.6s
AKTO Aktyubinsk 16.77 330 P **Pn 09 22 50.3 +0.3**
comp=Z,5.4nm,0.3s,baz=137,slow=11,SNR=78
AKTO S **S 09 25 55.9 +0.2**
comp=Z,0.7nm,0.3s,baz=66,slow=22,SNR=4.7
AKTO Aktyubinsk 16.77 330 P **Pn 09 22 50.3 +0.3**
AKTO S **S 09 25 55.9 +0.3**
AKTO pmax pmax
comp=Z,5.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
TAPN Taplejung 16.92 118 *e*P **Pn 09 22 53.5 +1.5**
comp=N,47nm,0.4s
ODAN Odare 16.99 120 *e*P **Pn 09 22 54.2 +1.3**
comp=N,42nm,0.6s
LSA Lhasa 18.27 106 P **P 09 23 09.4 +3.4**
LSA Lhasa 18.27 106 *e*P **P 09 23 09.7 +3.7**
comp=N,6.9nm,0.6s
LSA Lhasa 18.27 106 *e*P **P 09 23 09.7 +3.7**
LSA pmax pmax
comp=Z,7.0nm,0.6s
ZAA0 Zalesovo Array 20.00 25 *e*P **P 09 23 23.9 -0.6**
ZALV Zalesovo Beam 20.00 25 P **P 09 23 24.0 -0.5**
comp=Z,3.6nm,0.4s,baz=221,slow=11,SNR=18
ZALV Zalesovo Beam 20.00 25 P **P 09 23 24.0 -0.4**
ZALV pmax pmax
comp=Z,4.0nm,0.4s

ARU Arti 21.64 341 *e*P **P 09 23 42.1 +0.2**
comp=Z,13nm,0.9s,mb4.4
ARU Arti 21.64 341 *e*P **P 09 23 42.1 +0.3**
ARU pmax pmax
comp=Z,13nm,0.9s,mb4.4
SONM Songino Array 28.45 55 P **P 09 24 44.3 +0.3**
comp=Z,0.5nm,0.7s,mb3.4,baz=253,slow=10,SNR=3.4
CMAR Chiang Mai Arr 30.52 118 P **P 09 25 03.0 +0.3**
comp=Z,1.4nm,0.7s,mb3.8,baz=301,slow=8.5,SNR=5.4
CMAR Chiang Mai Arr 30.52 118 P **P 09 25 03.0 +0.3**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 32.89 309 P **P 09 25 23.2 +0.2**
comp=Z,4.2nm,0.6s,mb4.3,baz=81,slow=7.3,SNR=15
AKASG Malin Array Be 32.89 309 P **P 09 25 23.2 +0.2**
AKASG Malin Array Be 32.89 309 P **P 09 25 23.2 +0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
MLR Muntele Rosu 34.71 299 P **P 09 25 42.1 +3.4**
comp=Z,4.9nm,1.1s,mb4.0,baz=135,slow=11,SNR=4.3
MLR Muntele Rosu 34.71 299 P **P 09 25 42.2 +3.4**
MLR pmax pmax
comp=Z,5.0nm,1.1s
JOF Joensuu 35.85 330 *ep* **P 09 25 48.6 +0.3**
KAF Kangasniemi 37.61 327 *ep* **P 09 26 02.6 -0.5**
KEV Kevo 40.80 338 *ep* **P 09 26 29.4 -0.1**
comp=Z,5.3nm,0.8s,mb4.2
KEV Kevo 40.80 338 *e*P **P 09 26 29.4 -0.1**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
ARCES ARCESS Array B 41.15 338 P **P 09 26 32.6 +0.3**
comp=Z,7.4nm,0.8s,mb4.4,baz=115,slow=8.3,SNR=31
ARCES ARCESS Array B 41.15 338 P **P 09 26 32.6 +0.3**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
NB2 NORSAR Subarra 44.35 323 P **P 09 26 57.7 -0.5**
comp=Z,5.0nm,0.6s,mb4.3,baz=96,slow=7.9
NB2 NORSAR Subarra 44.35 323 P pP 09 27 40.7 +5.6
comp=Z,1.5nm,0.7s,baz=94,slow=8.6
NOA NORSAR Array B 44.35 323 P **P 09 26 58.0 -0.2**
comp=Z,5.4nm,0.7s,mb4.3,baz=96,slow=7.7,SNR=15
NOA pP pP 09 27 40.6 +5.5
comp=Z,2.3nm,0.8s,baz=96,slow=8.1,SNR=3.7
NOA NORSAR Array B 44.35 323 P **P 09 26 58.0 -0.2**
NOA pP pP 09 27 40.6 +5.5
NOA NORSAR Array B 44.35 323 P **P 09 26 58.0 -0.2**
NOA *PP pP 09 27 40.7 +5.6
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.8s
SPITS Spitsbergen Ar 47.51 347 P **P 09 27 23.4 +0.7**
comp=Z,5.8nm,0.8s,mb4.2,baz=316,slow=9.4,SNR=5.2
SPITS Spitsbergen Ar 47.51 347 P **P 09 27 23.5 +0.8**
SPITS pmax pmax
comp=Z,6.0nm,0.9s
TORD Torodi Ar. Bea 65.61 269 P **P 09 29 29.4 -1.9**
comp=Z,1.1nm,0.5s,mb4.0,baz=48,slow=5.8,SNR=15
YKA Yellowknife Ar 81.29 3 P **P 09 31 01.9 -0.2**
comp=Z,0.9nm,0.5s,mb3.7,baz=350,slow=5.4,SNR=5.0
YKA Yellowknife Ar 81.29 3 P **P 09 31 01.9 -0.2**
YKA Yellowknife Ar 81.29 3 P **P 09 31 01.9 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 82.06 122 P **P 09 31 04.9 -1.8**
comp=Z,2.1nm,0.5s,mb4.0,baz=324,slow=5.0,SNR=15
WRA Warramunga Arr 82.06 122 P **P 09 31 04.9 -1.8**
WRA pmax pmax
comp=Z,2.0nm,0.5s
ASAR Alice Springs 84.31 125 P **P 09 31 16.6 -1.6**
comp=Z,7.7nm,0.6s,mb4.2,baz=309,slow=4.8,SNR=15
ASAR Alice Springs 84.31 125 P **P 09 31 16.7 -1.5**
ASAR pmax pmax
comp=Z,3.0nm,0.6s

PLV 03 09:19:20.9±0.9, **2252N**×**10530E**, **h14**km±5km, **MD3.8, Vietnam**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTZV	**Met**	**1.37**	**135**	*e*Pn	Pn	09 19 45.4	-0.3
MTZV				*e*Pg	Pg	09 19 47.8	+0.5
MTZV				*e*Sg	Sg	09 20 06.3	+1.2
BGV	**Bac-Giang**	**1.50**	**145**	*e*Pg	Pg	09 19 49.6	-0.1
BGV				*e*Sg	Sg	09 20 09.2	0.0
HNV	**Hanoi**	**1.54**	**162**	*e*Pn	Pn	09 19 49.1	+1.1
HNV				*e*Pg	Pg	09 19 52.3	+1.8
HNV				*e*Sg	Sg	09 20 13.2	+2.6
YTV	**Yen Tu**	**1.89**	**136**	*e*Pn	Pn	09 19 52.5	-0.3
YTV				*e*Pg	Pg	09 19 57.4	+0.1
YTV				*e*Sg	Sg	09 20 22.3	+0.4
DSV	**Doi Son**	**2.03**	**162**	*e*Pn	Pn	09 19 54.6	-0.1
DSV				*e*Pg	Pg	09 19 59.5	-0.3
DSV				*e*Sg	Sg	09 20 26.8	+0.6
PLV	**Phu-Lien**	**2.11**	**144**	*e*Pn	Pn	09 19 55.5	-0.3
PLV				*e*Sg	Sg	09 20 28.4	-0.4

IDC 03 09:21:57.7±4.6, **371S**×**10029E**, **h0**km, **mb3.5**/4, **mb1 3.6**/4, **mb1mx3.4**/20, **mbtmp3.5**/4, **Error ellipse: s-maj=185.3km s-min=24.2km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.91**	**119**	P	P	09 29 08.4	-0.1
	0.2nm,0.3s,baz=305,slow=8.4,SNR=6.3						
ASAR	**Alice Springs**	**38.04**	**125**	P	P	09 29 18.1	+0.1
	0.3nm,0.3s,baz=296,slow=7.7,SNR=2.9						
SONM	**Songino Array**	**51.60**	**5**	P	P	09 31 06.0	+0.2
	0.6nm,0.6s,baz=183,slow=9.9,SNR=4.5						
MKAR	**Makanchi Array**	**52.74**	**345**	P	P	09 31 14.2	-0.1
	0.3nm,0.5s,baz=170,slow=10,SNR=3.2						

*ISCJB **03** 09:22:53.8±1.5, 176S±0.1×1790W±0.1, h487km±22km, mb4.0/10, Error ellipse: s-maj=23.9km s-min=17.8km az=145.7*
*IDC **03** 09:22:55.6±1.9, 1757S×17884W, h504km±20km, mb3.6/10, mb1 3.7/11, mb1mx3.6/20, mbtmp3.6/11, Error ellipse: s-maj=17.5km s-min=14.2km az=141.0*
*NEIC **03** 09:22:55.0±1.2, 1757S×17890W, h494km±19km, mb3.9/1, Error ellipse: s-maj=19.8km s-min=14.0km az=146.0*
ISC 03 09:22:55.0±1.4, **176S**±01×**1789W**±01, **h489**km±21km, **n42**, σ0**62**/14, **mb4.0**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.79**	**63**	P	**P**	**09 24 49.2**	**+0.2**
	8.7nm,0.3s,baz=59,slow=6.0,SNR=12						
URZ	**Urewera**	**20.89**	**189**	P	**P**	**09 27 01.3**	**-0.8**
	3.4nm,0.5s,baz=72,slow=3.8,SNR=5.6						
CTA	**Charters Tower**	**33.02**	**260**	P	**P**	**09 28 49.4**	**+0.3**
	6.1nm,0.7s,mb4.1,baz=89,slow=9.3,SNR=11						
STKA	**Stephens Creek**	**38.36**	**241**	P	**P**	**09 29 34.8**	**+1.4**
	9.7nm,0.4s,mb4.5,baz=92,slow=9.8,SNR=53						
WB2	**Warramunga Arr**	**44.20**	**259**	*e*P	**P**	**09 30 19.5**	**-0.5**
WRAB	**Tennant Creek**	**44.20**	**259**	*e*P	**P**	**09 30 19.5**	**-0.5**
	1.8nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**44.21**	**259**	P	**P**	**09 30 19.4**	**-0.7**
	1.7nm,0.3s,mb3.9,baz=93,slow=7.8,SNR=73						
WRA				PcP	PcP	09 31 53.2	-1.2
	1.2nm,0.7s,baz=93,slow=3.6,SNR=6.5						
ASAR	**Alice Springs**	**44.41**	**254**	P	**P**	**09 30 21.9**	**+0.2**
	38nm,0.8s,mb4.9,baz=88,slow=8.1,SNR=639						
ASAR				PcP	PcP	09 31 54.0	-1.1
	1.5nm,0.4s,baz=104,slow=3.9,SNR=7.3						
MJAR	**Matsushiro Arr**	**67.36**	**324**	P	**P**	**09 33 00.4**	**-0.5**
	0.7nm,0.5s,mb3.6,baz=156,slow=6.2,SNR=5.7						
QSPA	**South Pole Qui**	**72.46**	**180**	P	**P**	**09 33 31.2**	**+0.6**
	3.9nm,0.9s,mb3.9,baz=98,slow=0.6,SNR=18						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**09 34 10.3**	**-0.1**
	0.6nm,0.6s,mb3.3,baz=223,slow=8.1,SNR=5.8						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**09 34 10.3**	**-0.1**
MAW	**Mawson**	**83.99**	**200**	P	**P**	**09 34 32.6**	**-0.2**
	1.7nm,0.7s,mb3.7,baz=220,slow=6.6,SNR=4.3						
CMAR	**Chiang Mai Arr**	**88.32**	**290**	P	**P**	**09 34 55.1**	**+0.7**
	1.2nm,0.5s,mb3.9,baz=132,slow=2.8,SNR=7.2						
MKAR	**Makanchi Array**	**108.56**	**314**	PKiKP	PKiKP	09 40 25.3	-2.3
	0.4nm,0.5s,baz=215,slow=1.0,SNR=4.3						
BRTR	**Keskin Array B**	**144.21**	**315**	PKP	PKPdf	09 41 32.5	-2.4
	1.2nm,0.5s,baz=125,slow=2.7,SNR=6.9						
ASF	**Jabal al Asfar**	**144.59**	**301**	PKP	PKPdf	09 41 33.5	-2.3
	1.4nm,0.6s,baz=132,slow=3.1,SNR=4.1						

CLL Collm 145.04 347 *i* PKPbc PKPbc 09 41 35.5 -1.0
comp=Z,7.0nm,0.6s
MLR Muntele Rosu 145.31 329 PKPbc PKPbc 09 41 36.1 -1.4
comp=Z,1.6nm,0.5s,baz=310,slow=11,SNR=4.0
MMAI Mount Meron Ar 145.56 303 PKPbc PKPbc 09 41 38.3 -0.4
comp=Z,5.5nm,0.6s,baz=69,slow=4.6,SNR=8.6
GERES GERESS Array B 147.18 345 PKPbc PKPbc 09 41 41.5 -1.2
comp=Z,1.5nm,0.5s,baz=21,slow=2.8,SNR=16
GIVF Givet 147.43 356 *e*PKP1 PKPbc 09 41 41.9 -1.3
comp=Z,8.1nm,0.6s
BAIF Baives 147.51 356 *e*PKP1 PKPbc 09 41 42.2 -1.3
comp=Z,3.1nm,0.5s
CDF Champ du Feu 148.84 352 *e*PKP1 PKPbc 09 41 45.6 -1.3
comp=Z,5.1nm,0.4s
FLN La Foliniere 148.88 2 *e*PKP1 PKPbc 09 41 45.3 -1.6
comp=Z,7.4nm,0.5s
MEZF Maizieres J'vi 149.00 355 *e*PKP1 PKPbc 09 41 47.3 +0.1
LDF La Druitiere 149.06 2 *e*PKP1 PKPbc 09 41 45.6 -1.8
comp=Z,3.4nm,0.4s
GRR Gorron 149.24 3 *e*PKP1 PKPbc 09 41 46.3 -1.5
comp=Z,4.8nm,0.4s
HAU Haudompre 149.36 353 *e*PKP1 PKPbc 09 41 46.8 -1.3
comp=Z,3.7nm,0.4s
LOR Lormes 150.31 356 *e*PKP1 PKPbc 09 41 49.1 -1.3
comp=Z,6.5nm,0.4s
SSF Saint Saulge 150.54 357 *e*PKP1 PKPbc 09 41 49.7 -1.2
comp=Z,7.0nm,0.5s
CABF La Chapelle 150.76 353 *e*PKP1 PKPbc 09 41 50.7 -0.8
AVF Avril sur Loir 150.82 357 *e*PKP1 PKPbc 09 41 49.9 -1.7
comp=Z,2.8nm,0.6s
MFF Saint Martin d 151.05 2 *e*PKP1 PKPbc 09 41 50.5 -1.6
comp=Z,6.4nm,0.5s
BGF Bois d'Agland 151.07 357 *e*PKP1 PKPbc 09 41 50.6 -1.6
TCF Toulx Ste Croi 151.37 358 *e*PKP1 PKPbc 09 41 51.3 -1.6
comp=Z,2.7nm,0.5s
LPL La Plagne 151.76 352 *e*PKP1 PKPbc 09 41 52.9 -0.9
comp=Z,3.7nm,0.7s
RJF Les Rejaudoux 152.36 359 *e*PKP1 PKPbc 09 41 53.6 -1.5
ORIF Oris-en-Rattie 152.46 353 *e*PKP1 PKPbc 09 41 54.2 -1.1
MBDF Montbardon 152.52 351 *e*PKP1 PKPbc 09 41 54.3 -1.2
comp=Z,6.3nm,0.7s
CAF Calviac 152.73 358 *e*PKP1 PKPbc 09 41 54.2 -1.7
TORD Torodi Ar. Bea 175.54 188 PKP PKPdf 09 42 06.4 -2.8
comp=Z,0.7nm,0.7s,baz=44,slow=0.7,SNR=4.0
TORD PKPab PKPab 09 43 48.7 -1.0
comp=Z,0.2nm,0.8s,baz=153,slow=3.2,SNR=2.4

IDC 03 09:28:16.4±1.8, **809S**×**15691E**, **h0**km, **mb3.7**/4, **mb1 3.8**/5, **mb1mx3.7**/16, **mbtmp3.8**/5, **ML4.1**/1, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.5**/18, **Error ellipse: s-maj=40.7km s-min=26.8km az=9.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.29**	**114**	Pn	Pn	09 29 08.0	-1.2
	20nm,0.3s,baz=157,slow=22,SNR=5.0						
HNR				Sn	Sn	09 29 51.1	+2.1
	29nm,0.3s,baz=313,slow=23,SNR=5.5						
WRA	**Warramunga Arr**	**24.83**	**239**	P	P	09 33 39.2	-1.3
	1.4nm,0.9s,baz=65,slow=9.4,SNR=5.6						
ASAR	**Alice Springs**	**26.94**	**232**	P	P	09 34 00.2	+0.6
	0.5nm,0.9s,baz=56,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**27.63**	**209**	P	P	09 34 06.5	+0.8
	2.1nm,0.7s,baz=32,slow=15,SNR=3.2						
RPZ	**Rata Peaks**	**37.59**	**163**	LR	LR	09 47 38.0	
	comp=Z,46nm,18.2s,baz=309,slow=31						
MKAR	**Makanchi Array**	**85.47**	**318**	P	P	09 40 56.7	+0.6
	0.4nm,0.5s,baz=109,slow=5.3,SNR=3.8						

*NEIC **03** 10:03:35.8, 3682N×1248W, h0km, MG4.2(MDD), After MDD.*
*MDD **03** 10:03:36.2±2.9, 3683N×1245W, h0km, mb4.2/4, Error ellipse: s-maj=26.0km s-min=18.0km az=61.0, PRIMO*
ISC 03 10:03:39.5±1.6, **3706N**±006×**1221W**±010, **h10**km, **n24**, σ0**78**/41, **Azores-Cape St. Vincent Ridge**
INMG 03 10:03:39.0±0.7, **3668N**×**1270W**, **h0**km, **ML2.5, Error ellipse: s-maj=3.8km s-min=2.8km az=76.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**2.86**	**84**	P	**Pn**	**10 04 25.4**	**+0.3**
MORF				S	**Sn**	**10 05 00.4**	**+0.8**
	0.0nm,0.5s						
EGRO	**El Granado**	**3.80**	**81**	P	**Pn**	**10 04 38.2**	**+0.1**
	0.3nm,0.1s,SNR=12						
EGRO				S	**Sn**	**10 05 23.5**	**+0.6**
	0.8nm,0.1s,SNR=6.1						
EGRO	**El Granado**	**3.80**	**81**	P	**Pn**	**10 04 38.2**	**+0.1**
	0.3nm,0.1s,SNR=12						
EGRO				S	**Sn**	**10 05 23.5**	**+0.6**
	0.8nm,0.1s,SNR=6.1						
EBAD	**Badajoz**	**4.45**	**66**	P	**Pn**	**10 04 47.8**	**+0.8**
	0.9nm,0.1s,SNR=7.6						
EBAD				S	**Sn**	**10 05 39.6**	**+0.8**
	1.0nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.45**	**66**	P	**Pn**	**10 04 47.8**	**+0.8**
	0.9nm,0.1s,SNR=7.6						
EBAD				S	**Sn**	**10 05 39.6**	**+0.8**
	1.0nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.47**	**79**	P	**Pn**	**10 04 46.6**	**-0.7**
	1.1nm,0.1s,SNR=11						
EMIN				S	**Sn**	**10 05 39.5**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.47**	**79**	P	**Pn**	**10 04 46.6**	**-0.7**
	1.1nm,0.1s,SNR=11						
EMIN				S	**Sn**	**10 05 39.5**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
ESPR	**Espera**	**5.09**	**90**	P	**Pn**	**10 04 54.8**	**-1.1**
	1.7nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**10 05 53.5**	**-1.2**
	5.6nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.09**	**90**	P	**Pn**	**10 04 54.8**	**-1.0**
	1.7nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**10 05 53.5**	**-1.2**
	5.6nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.49**	**77**	P	**Pn**	**10 05 01.0**	**-0.3**
	0.5nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**10 06 03.8**	**-0.8**
	2.5nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.49**	**77**	P	**Pn**	**10 05 01.0**	**-0.3**
	0.5nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**10 06 03.8**	**-0.8**
	2.5nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.77**	**27**	S	**Sn**	**10 06 11.6**	**+0.3**
	1.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.78**	**32**	P	**Pn**	**10 05 06.8**	**+1.5**
	SNR=7.9						
ELOB				S	**Sn**	**10 06 11.9**	**+0.3**
	1.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.78**	**32**	P	**Pn**	**10 05 06.8**	**+1.6**
	0.0nm,0.0s,SNR=7.9						
ELOB				S	**Sn**	**10 06 11.9**	**+0.3**
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.16**	**77**	P	**Pn**	**10 05 10.2**	**-0.3**
	0.7nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**10 06 21.0**	**-0.1**
	0.1nm,0.0s,SNR=7.9						
EADA	**Adamuz**	**6.16**	**77**	P	**Pn**	**10 05 10.2**	**-0.4**
	0.7nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**10 06 21.0**	**-0.1**
	0.1nm,0.0s,SNR=7.9						
EMAZ	**Mazaricos**	**6.39**	**22**	S	**Sn**	**10 06 24.7**	**-1.9**
	3.4nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.39**	**22**	S	**Sn**	**10 06 24.7**	**-1.9**
	3.4nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.46**	**39**	P	**Pn**	**10 05 14.7**	**+0.1**
	3.0nm,0.4s,SNR=7.9						
ECAL				S	**Sn**	**10 06 28.8**	**+0.5**
	1.2nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.46**	**39**	P	**Pn**	**10 05 14.7**	**+0.2**
	3.0nm,0.4s,SNR=7.9						
ECAL				S	**Sn**	**10 06 28.8**	**+0.5**
	1.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.99**	**66**	P	**Pn**	**10 05 22.4**	**+0.5**
	2.4nm,0.2s,baz=250,slow=13,SNR=7.9						
ESDC	**Sonseca Array**	**6.99**	**66**	P	**Pn**	**10 05 22.4**	**+0.6**
	2.4nm,0.2s,baz=250,slow=13,SNR=7.9						
EPON	**Pontenova**	**7.37**	**30**	S	**Sn**	**10 06 49.8**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.37**	**30**	S	**Sn**	**10 06 49.8**	**-0.8**
	0.2nm,0.1s,SNR=7.9						

*IDC **03** 10:19:31.3±1.1, 46.19N×154.39E, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.7/22, mbtmp3.7/6, ML3.4/2, MS3.2/2, Ms1 3.2/2, ms1mx2.3/34, Error ellipse: s-maj=51.2km s-min=22.7km az=131.0*

*ISCJB **03** 10:19:32.4±0.7, 46.7N±0.1×153.0E±0.2, h33km, mb3.8/6, MS3.1/2, Error ellipse: s-maj=20.2km s-min=11.4km az=139.3*

*MOS **03** 10:19:33.5±2.0, 46.56N×152.84E, h35km, mb4.4/2, Error ellipse: s-maj=33.2km s-min=21.1km az=64.4*

ISC 03 10:19:36.2±3.2, 46.6N±0.2×153.4E±0.3, h41km±30km, n18, σ0§97/15, mb3.8/6, MS3.1/2, 2C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.47**	**23**	*e*PN	Px	10 20 56.0	
PETK	**Petropavlovsk-**	**7.08**	**22**	Pn	**Pn**	**10 21 16.9**	**-0.2**
	0.4nm,0.3s,baz=202,slow=14,SNR=13						
YSS	**Yuzh-Sakhalins**	**7.32**	**277**	⇑*i*	PN	**Pn**	**10 21 15.3**	**-5.1**
ASAJ	**Asahikawa**	**8.00**	**256**	Pn	**Pn**	**10 21 37.9**	**+8.1**
	0.6nm,0.3s,baz=94,slow=13,SNR=4.9						
ASAJ	**Asahikawa**	**8.00**	**256**	PN	**Pn**	**10 21 37.9**	**+8.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**8.65**	**242**	⇓*i*	PN	**Pn**	**10 21 33.0**	**-5.7**
KSRS	**Korea Array**	**20.94**	**253**	LR	LR	10 31 35.8	
	comp=Z,14nm,20.5s,MS2.3,baz=320,slow=34						
BILL	**Bilibino**	**22.50**	**13**	⇑*i*	P	**P**	**10 24 34.7**	**+3.0**
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
TIXI	**Tiksi**	**27.67**	**344**	⇓*i*	P	**P**	**10 25 18.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.0						
COLA	**College**	**36.13**	**38**	⇓*i*	P	**P**	**10 26 34.7**	**+0.8**
NVAR	**Mina Array Bea**	**62.33**	**62**	P		**P**	**10 29 53.4**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.8,baz=306,slow=11,SNR=3.6						
ULM	**Lac du Bonnet**	**66.51**	**41**	LR	LR	11 02 03.9	
	comp=Z,80nm,18.2s,MS4.0,baz=30,slow=38						
WRA	**Warramunga Arr**	**68.43**	**199**	P		**P**	**10 30 33.1**	**-0.6**
	comp=Z,0.5nm,1.0s,mb3.5,baz=23,slow=7.1,SNR=4.7						
WRA	**Warramunga Arr**	**68.43**	**199**	*e*P		**P**	**10 30 34.1**	**+0.4**
ASAR	**Alice Springs**	**72.13**	**199**	P		**P**	**10 30 57.0**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=8.1,slow=5.5,SNR=8.3						
ASAR	**Alice Springs**	**72.13**	**199**	*e*P		**P**	**10 30 56.9**	**+0.7**
TXAR	**Lajitas Array**	**77.40**	**61**	P		**P**	**10 31 26.2**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.6,baz=310,slow=4.1,SNR=7.5						
TXAR	**Lajitas Array**	**77.40**	**61**	*e*P		**P**	**10 31 26.2**	**-0.7**

*ISCJB **03** 10:20:03.6±0.9, 50.38N±0.006×158.72E±0.005, h0km, Error ellipse: s-maj=8.3km s-min=4.2km az=6.9*

*WAR **03** 10:20:05.2, 50.27N×158.83E, ML2.5, Mining Induced*

*PRU **03** 10:20:05.8, 50.34N×158.70E, h0km*

ISC 03 10:20:04.5±0.8, 50.36N±0.006×158.73E±0.004, h0km, n9, σ1§07/15, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.64**	**216**	*e*PG	**Pg**	**10 20 17.1**	**+0.3**
OKC				*e*SG	**Sg**	**10 20 25.9**	**+0.8**
	comp=Z,16nm,0.6s						
OJC	**Ojcow**	**0.70**	**101**	*e*Pg	**Pg**	**10 20 17.4**	**-0.6**
OJC				*e*Sg	**Sg**	**10 20 26.6**	**-0.4**
DPC	**Dobruska-Polom**	**1.54**	**271**	*e*PG	**Pg**	**10 20 33.8**	**-0.2**
DPC				*e*SG	**Sg**	**10 20 55.2**	**+1.2**
	comp=Z,24nm,0.8s						
UPC	**Upice**	**1.74**	**276**	*e*SG	**Sg**	**10 21 02.2**	**+1.7**
KOLL	**Kolacno**	**1.79**	**187**	*e*SN	**Sn**	**10 21 00.4**	**+0.3**
VYHS	**Vyhne**	**1.87**	**178**	*e*PN	**Pn**	**10 20 36.4**	**-1.3**
VYHS				*e*SN	**Sn**	**10 21 01.8**	**-0.1**
STHS	**Stebnicka Huta**	**1.88**	**119**	*e*PN	**Pn**	**10 20 39.0**	**+1.1**
STHS				*e*SN	**Sn**	**10 21 05.6**	**+3.3**
PRU	**Pruhonice**	**2.72**	**264**	*e*SG	**Sg**	**10 21 29.9**	**-1.8**
KHC	**Kasperske Hory**	**3.56**	**252**	*e*PG	**Pg**	**10 21 11.5**	**-1.2**
KHC				*e*SG	**Sg**	**10 21 58.0**	**-0.8**
	comp=Z,6.7nm,0.6s						

*ISCJB **03** 10:24:27.3±0.5, 47.52N±0.002×134.2E±0.006, h10km, Error ellipse: s-maj=5.6km s-min=2.9km az=173.0*

*PRU **03** 10:24:28.9, 47.44N×134.4E, h0km*

*VIE **03** 10:24:30.7±0.5, 47.38N×133.0E, h8km, mb1.3/1, ML2.0/3, Error ellipse: s-maj=3.9km s-min=1.5km az=35.0 5 km N of Wagrain*

*BGR **03** 10:24:32.4±1.2, 47.52N×132.7E, h10km, ML2.1/2, Error ellipse: s-maj=12.2km s-min=7.8km az=144.0*

ISC 03 10:24:29.7±0.5, 47.46N±0.002×133.6E±0.005, h10km, n14, σ1§17/21, 6C-2D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBA	**Koelnbreinsper**	**0.39**	**182**	⇑*i*	Pg	**Pg**	**10 24 36.8**	**-0.4**
	4.4nm,0.1s						
KBA				⇑*i*	Sg	**Sg**	**10 24 41.8**	**-0.5**
	49nm,0.2s						
KBA	**Koelnbreinsper**	**0.39**	**182**			**Sg**	**10 24 41.9**	**-0.5**
MYKA	**Terra Mystica**	**0.86**	**167**	⇑*i*	Pg	**Pg**	**10 24 45.6**	**-0.5**
	7.2nm,0.0s						
MYKA				⇓*i*	Sg	**Sg**	**10 24 56.5**	**-0.8**
	6.2nm,0.2s						
WTTA	**Wattenberg**	**1.19**	**261**	⇑*i*	Pg	**Pg**	**10 24 52.5**	**0.0**
	2.2nm,0.1s						
WTTA				⇓*i*	Sg	**Sg**	**10 25 08.8**	**+0.9**
	4.2nm,0.2s						
OBKA	**Obir**	**1.25**	**139**	⇑*i*	Pg	**Pg**	**10 24 54.5**	**+0.8**
	1.1nm,0.2s						
OBKA				⇑*i*	Sg	**Sg**	**10 25 10.0**	**0.0**
	5.1nm,0.3s						
GEC2	**GERESS Array S**	**1.40**	**9**	*e*Pn		**Pn**	**10 24 56.2**	**+0.9**
GEC2				*e*Sg		**Sn**	**10 25 15.0**	**+1.2**
KHC	**Kasperske Hory**	**1.68**	**5**	*e*PG		**Pn**	**10 25 00.8**	**+1.8**
KHC				*e*SG		**Sn**	**10 25 23.6**	**+3.1**
	comp=Z,8.8nm,0.5s						
WET	**Wettzell**	**1.71**	**349**	*e*Pn		**Pn**	**10 25 01.5**	**+2.0**
WET				*e*Sg		**Sg**	**10 25 24.9**	**+0.2**
PRU	**Pruhonice**	**2.65**	**17**	*e*SG		**Sg**	**10 25 53.6**	**-1.0**
	comp=Z,7.6nm,0.4s						
NKC	**Novy Kostel**	**2.84**	**348**	*e*SG		**Sg**	**10 25 59.2**	**-1.5**
	comp=Z,4.7nm,0.4s						
TANN	**Tannenbergstha**	**3.01**	**349**	*e*Sg		**Sg**	**10 26 05.1**	**-1.3**
MOX	**Moxa**	**3.38**	**341**	*e*Sg		**Sg**	**10 26 18.4**	**+0.1**
DPC	**Dobruska-Polom**	**3.49**	**33**	*e*SG		**Sg**	**10 26 19.2**	**-2.4**
BFO	**Black Forest**	**3.49**	**286**	*e*Sg		**Sg**	**10 26 20.4**	**-1.4**

*ISCJB **03** 10:28:04.4±0.8, 42.42N±0.003×143.41E±0.006, h10km±7km, Error ellipse: s-maj=7.6km s-min=4.0km az=157.9*

*CSEM **03** 10:28:04.8, 42.39N×143.29E, h14km, mb3.8, After OBN*

*MOS **03** 10:28:04.8±2.0, 42.39N×143.29E, h14km, mb3.8/1, Error ellipse: s-maj=9.2km s-min=6.6km az=72.8*

*TIF **03** 10:28:08.7, 42.49N×143.90E, h17km±1km*

ISC 03 10:28:09.8±0.5, 42.46N±0.002×143.86E±0.005, h17km±7km, n27, σ0§96/39, 1C, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZEI	**Tsey**	**0.31**	**5**	*i* Pg		**Pg**	**10 28 15.3**	**-1.1**
ONI	**Oni**	**0.33**	**292**	P		**Pg**	**10 28 16.5**	**-0.1**
ONI				S		**Sg**	**10 28 21.9**	**+0.7**
LACR	**Lac**	**0.49**	**41**	*i* Pg		**Pg**	**10 28 18.7**	**-0.9**
GOR	**Gori**	**0.51**	**158**	*e*Pg		**Pg**	**10 28 19.7**	**-0.2**
GOR	**Gori**	**0.51**	**158**	P		**Pg**	**10 28 19.7**	**-0.2**
GOR				S		**Sg**	**10 28 27.9**	**+1.2**
KORR	**Kora**	**0.65**	**14**	*i* Pg		**Pg**	**10 28 22.5**	**0.0**
KORR				*e*Sg		**Sg**	**10 28 32.2**	**+1.1**
ARNR	**Ardon**	**0.79**	**23**	*e*Pg		**Pg**	**10 28 25.7**	**+0.4**
ARNR				*e*Sg		**Sg**	**10 28 36.7**	**+0.9**
LSNR	**Lesken**	**0.82**	**358**	*i* Pg		**Pg**	**10 28 25.8**	**+0.1**
LSNR				*i* Sg		**Sg**	**10 28 38.1**	**+1.6**
VLKR	**Vladikavkaz**	**0.84**	**45**	*e*Pg		**Pg**	**10 28 24.6**	**-1.6**
SNJR	**Sundja**	**0.93**	**49**	*e*Pg		**Pg**	**10 28 26.3**	**-1.5**
KMSR	**Komsomolskaya**	**0.97**	**19**	*e*Pg		**Pg**	**10 28 28.1**	**-0.4**
KMSR				*e*Sg		**Sg**	**10 28 41.8**	**+0.6**
TBLG	**Delisi**	**0.98**	**138**	*e*Pg		**Pg**	**10 28 27.8**	**-0.9**
TBLG	**Delisi**	**0.98**	**138**	P		**Pb**	**10 28 27.8**	**-0.4**
TBLG				S		**Sb**	**10 28 41.9**	**+1.0**
MTA	**Mtatsminda**	**1.03**	**137**	*e*PG		**Pg**	**10 28 28.6**	**-1.2**
MTA	**Mtatsminda**	**1.03**	**137**	P		**Pb**	**10 28 28.7**	**-0.5**
MTA				S		**Sb**	**10 28 43.4**	**+0.9**
BTKR	**Batakoyurt**	**1.04**	**29**	*e*Pg		**Pg**	**10 28 33.7**	**+3.7**
BTKR				*e*Sg		**Sg**	**10 28 48.1**	**+4.5**
PRTR	**Priterechnaya**	**1.33**	**13**	*e*Pg		**Pg**	**10 28 34.4**	**-1.0**
PRTR				*e*Sg		**Sg**	**10 28 52.8**	**+0.1**
KUBR	**Kubataba**	**1.38**	**346**	*i* Pg		**Pn**	**10 28 27.8**	**-6.5**
DGRG	**David-gareji**	**1.51**	**131**	*e*Pn		**Pg**	**10 28 38.2**	**-0.7**
DGRG	**David-gareji**	**1.51**	**131**	P		**Pg**	**10 28 38.2**	**-0.7**
DGRG				S		**Sg**	**10 29 00.9**	**+2.3**
KIV	**Kislovodsk**	**1.72**	**331**	⇑*i*	PN	**Pn**	**10 28 34.3**	**-4.7**
KIV							10 29 05.3	
KIV				pmax	pmax		
	comp=Z,25nm,1.5s						
KIV				pmax	pmax		
	comp=N,52nm,1.1s						
KIV	**Kislovodsk**	**1.72**	**331**	*i* Pn		**Pn**	**10 28 34.3**	**-4.7**
	comp=N,25nm,1.5s						
KIV				Sg		**Sg**	**10 29 05.3**	**0.0**
	comp=N,52nm,1.1s						
GNI	**Garni**	**2.40**	**164**	*i* Pn		**Pn**	**10 28 48.0**	**-0.3**
SOC	**Sochi**	**3.24**	**292**	*e*PN		**Pn**	**10 28 51.5**	**-8.3**
SOC				*e*			10 29 26.6	
SOC				MLR	MLR			
	comp=Z,138nm,5.0s							
SOC	**Sochi**	**3.24**	**292**	*e*Pn		**Pn**	**10 28 51.5**	**-8.3**
	comp=N,52nm,1.1s							
SOC				*e*Sn		Sx	10 29 26.6	
ANN	**Anapa**	**5.22**	**299**	*e*PN		**Pn**	**10 29 19.5**	**-7.5**
APE	**Apeiranthos**	**15.08**	**255**	*i* P		**Pn**	**10 31 33.8**	**-8.2**

*NIED **03** 10:42:00, 44.20N×147.40E, h74km, Mw4.2 Best double couple: M0 2.08000×10^15 NP1:φ=187.00000°, δ70.00000°, λ28.00000°, NP2:φ=87.00000°, δ63.00000°, λ157.00000°.*

*MOS **03** 10:42:07.9±1.0, 44.49N×147.12E, h72km, mb4.3/16, Error ellipse: s-maj=12.3km s-min=8.4km az=75.3*

*ISCJB **03** 10:42:09.4±0.4, 44.42N±0.004×147.34E±0.004, h87km±3km, mb4.5/36, Error ellipse: s-maj=7.1km s-min=3.7km az=141.6*

*BJI **03** 10:42:09.3, 44.37N×147.20E, h65km, mB4.9, mb4.7, Ms4.6, Msz4.5*

*JMA **03** 10:42:10.2±0.3, 44.24N×147.44E, h70km, M4.6*

*IDC **03** 10:42:10.4±0.7, 44.43N×147.14E, h78km±6km, mb3.8/14, mb1 4.0/17, mb1mx3.9/25, mbtmp3.8/17, MS2.8/2, Ms1 2.8/2, ms1mx2.0/33, Error ellipse: s-maj=17.2km s-min=13.0km az=151.0*

*SKHL **03** 10:42:10.3±2.8, 44.50N×147.40E, h73km±16km, mb5.2/5*

*NEIC **03** 10:42:11.3±0.6, 44.43N×147.20E, h86km±5km, mb5.0/8, Error ellipse: s-maj=9.3km s-min=4.8km az=146.0*

ISC 03 10:42:10.7±0.4, 44.41N±0.004×147.33E±0.005, h80km±3km, h68km±5.8km: pP-P, n115, σ1§25/139, mb4.5/36, 7C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.91**	**25**	*e*P		**Pn**	**10 42 26.5**	**-2.2**
KUR				AMB	AMB	10 42 27.0	
	152nm,0.5s						
KUR				AMB	AMB	10 42 27.0	
	760nm,0.5s						
KUR				*i* S		**Sn**	**10 42 41.0**	**-1.0**
KUR				A			10 42 41.4	
	15μm,1.6s						
KUR				A			10 42 41.4	
	8μm,1.6s						
KUR				A			10 42 42.4	
	6μm,0.5s						
KUR				A			10 42 42.4	
	7μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.12**	**251**	α *i*	PN	**Pn**	**10 42 30.9**	**-0.3**
YUK				*i* S		**Sn**	**10 42 45.5**	**-1.1**
YUK				pmax	pmax			
	comp=N,4μm,0.4s							
YUK				pmax	pmax			
	comp=E,3μm,0.4s							
YUK				pmax	pmax			
	comp=Z,10μm,0.4s							
YUK				pmax	pmax			
	comp=Z,11μm,0.4s							
YUK				pmax	pmax			
	comp=N,3μm,0.2s							
YUK				smax				
	comp=N,8μm,0.4s							
YUK				smax				
	comp=N,9μm,0.5s							
YUK				smax				
	comp=N,15μm,0.5s							
YUK				smax				
	comp=E,12μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**1.12**	**251**	⇑*i*	P	**Pn**	**10 42 30.9**	**-0.3**
YUK				AMB	AMB		10 42 31.0	
	comp=E,10μm,0.4s							
YUK				AMB	AMB		10 42 31.0	
	comp=E,4μm,0.4s							
YUK				AMB	AMB		10 42 31.0	
	comp=E,3μm,0.4s							
YUK				AMB	AMB		10 42 31.5	
	comp=E,11μm,0.3s							
YUK				AMB	AMB		10 42 31.5	
	comp=E,3μm,0.2s							
YUK				AMB	AMB		10 42 31.5	
	comp=E,4μm,0.2s							
YUK				*i* S		**Sn**	**10 42 45.5**	**-1.1**
YUK				A			10 42 50.9	
	comp=E,9μm,0.5s							
YUK				A			10 42 50.9	
	comp=E,8μm,0.4s							
YUK				A			10 42 51.4	
	comp=E,12μm,0.6s							
YUK				A			10 42 51.4	
	comp=E,15μm,0.5s							
NEM2	**Nemuro 2**	**1.55**	**228**	P		**Pn**	**10 42 35.6**	**-1.1**
NEM2				*e*S		**Sn**	**10 42 54.6**	**-1.8**
JRA	**Rausu**	**1.66**	**254**	P		**Pn**	**10 42 38.2**	**+0.1**
JRA				*e*S		**Sn**	**10 42 59.0**	**+0.2**
JNK	**Nakash**	**2.06**	**247**	P		**Pn**	**10 42 43.4**	**+0.1**
JNK				*e*S		**Sn**	**10 43 08.0**	**-0.2**
JAK	**Akkeshi**	**2.38**	**234**	P		**Pn**	**10 42 46.7**	**-0.9**
JAK				*e*S		**Sn**	**10 43 14.4**	**-1.5**
JTKR	**Abashiri--Toko**	**2.50**	**261**	P		**Pn**	**10 42 49.7**	**+0.4**
JTKR				*e*S		**Sn**	**10 43 19.9**	**+1.1**
JAR	**Ashorobuto**	**2.81**	**248**	P		**Pn**	**10 42 54.2**	**+0.8**
JAR				*e*S		**Sn**	**10 43 26.9**	**+0.7**
JMP	**Maruseppu**	**2.88**	**263**	P		**Pn**	**10 42 55.5**	**+1.1**
JOB	**Onbets**	**2.95**	**240**	P		**Pn**	**10 42 55.4**	**0.0**
JOB				*e*S		**Sn**	**10 43 29.8**	**+0.1**
JKK2	**Kamakawa 2**	**3.34**	**262**	P		**Pn**	**10 43 01.9**	**+1.3**
JCH	**Churui**	**3.40**	**239**	P		**Pn**	**10 43 01.0**	**-0.4**
JCH				*e*S		**Sn**	**10 43 37.6**	**-3.0**
ASAJ	**Asahikawa**	**3.41**	**267**	P		**Pn**	**10 43 02.1**	**+0.6**
	comp=E,19nm,0.3s,baz=85,slow=18,SNR=61							
ASAJ				S		**Sn**	**10 43 43.6**	**+2.7**
	comp=E,13nm,0.3s,baz=304,slow=24,SNR=4.7							
JSE	**Soyaes**	**3.43**	**281**	P		**Pn**	**10 43 02.8**	**+1.0**
JFR	**Furan**	**3.65**	**252**	P		**Pn**	**10 43 06.1**	**+1.3**
ERM	**Erimo**	**3.88**	**233**	Pn		**Pn**	**10 43 09.3**	**+1.4**
	comp=E,6μm,0.3s,SNR=56							
ERM	**Erimo**	**3.88**	**233**	*e*Pn		**Pn**	**10 43 09.3**	**+1.4**
ERM				*e*Sn		**Sn**	**10 44 00.3**	**+8.0**
JNBK	**Urakawa-nobuka**	**3.96**	**239**	P		**Pn**	**10 43 08.4**	**-0.7**
JWK2	**Keihoku**	**3.96**	**285**	P		**Pn**	**10 43 11.3**	**+2.2**
YSS	**Yuzh-Sakhalins**	**4.09**	**310**	*e*Pn		**Pn**	**10 43 12.1**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.09**	**310**	⇓*e*P		**Pn**	**10 43 12.0**	**+1.2**
YSS				*e*S		**Sn**	**10 43 56.7**	**-0.7**
YSS				A			10 44 03.2	
	comp=E,100nm,0.9s							
JHR	**Hokuryu**	**4.09**	**263**	P		**Pn**	**10 43 12.8**	**+2.0**
JEW	**Eniwo**	**4.55**	**252**	P		**Pn**	**10 43 20.0**	**+3.0**
TYV	**Tymovskoe**	**7.18**	**336**	AMB	AMB		10 43 47.0	
	comp=E,60nm,0.9s							
TYV				*e*P			10 43 56.0	
SKR	**Severo-Kuril's**	**8.64**	**40**	*e*PN		**Pn**	**10 44 13.1**	**+0.3**
SKR				*e*			10 45 55.5	
SKR				pmax	pmax			
	comp=N,80nm,0.5s							
SKR				pmax	pmax			
	comp=E,80nm,0.5s							
SKR				pmax	pmax			
	comp=Z,110nm,0.5s							
HABR	**Khabarovsk**	**9.40**	**300**	*e*PN		**Pn**	**10 44 25.9**	**+2.8**
HABR				*e*S		**Sn**	**10 46 14.0**	**+7.0**
MAJO	**Matsushiro**	**10.48**	**225**	*e*Pn		**Pn**	**10 44 37.2**	**-0.9**
	comp=Z,7.9nm,0.6s							
MAJO	**Matsushiro**	**10.48**	**225**	*e*PN		**Pn**	**10 44 37.2**	**-0.8**
MAJO				pmax	pmax			
	comp=Z,8.0nm,0.6s							
MAT	**Matsushiro**	**10.48**	**225**	P		**Pn**	**10 44 35.2**	**-2.8**
MAT				*e*S		**Sn**	**10 46 36.2**	**+2.5**
MJAR	**Matsushiro Arr**	**10.48**	**225**	P		**Pn**	**10 44 36.1**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=29,slow=13,SNR=18							
MJAR				S		**Sn**	**10 46 35.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=312,slow=15,SNR=2.9							
MJAR				LR	LR		10 48 33.4	
	comp=Z,61nm,20.4s,baz=210,slow=37							
MJAR	**Matsushiro Arr**	**10.48**	**225**	PN		**Pn**	**10 44 36.1**	**-1.9**
MJAR				S		**Sn**	**10 46 35.3**	**+1.6**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MJAR				MLR	MLR			
	comp=Z,61nm,20.4s							
PEA0B	**Petropavlovsk-**	**11.06**	**34**	*e*Pn		**Pn**	**10 44 47.2**	**+1.4**
PETK	**Petropavlovsk-**	**11.06**	**34**	P		**Pn**	**10 44 46.6**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=181,slow=11,SNR=89							
PET	**Petropavlovsk**	**11.40**	**37**	*e*Pn		**Pn**	**10 44 49.6**	**-0.7**
MDJ	**Mudanjiang**	**12.66**	**277**	P		**Pn**	**10 45 07.3**	**-0.3**
MDJ				AMB	AMB			
	comp=Z,16nm,0.7s							
MDJ				AMB	AMB			
	comp=Z,105nm,5.8s							
MDJ	**Mudanjiang**	**12.66**	**277**	*e*Pn		**Pn**	**10 45 07.2**	**-0.4**
	comp=Z,13nm,0.8s							
CN2	**Changchun**	**15.73**	**275**	*e*P		**Pn**	**10 45 46.1**	**-1.2**
CN2				*e*S		**S**	**10 48 39.3**	**-11**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.7s							
ZEA	**Zeya**	**16.08**	**313**	*e*P		**Pn**	**10 45 48.6**	**-3.0**
ZEA				AMB	AMB		10 45 49.2	
	comp=Z,20nm,0.8s							
KSRS	**Korea Array**	**16.21**	**251**	P		**Pn**	**10 45 51.0**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=59,slow=13,SNR=8.6							
KSRS				LR	LR		10 51 57.5	
	comp=Z,24nm,20.5s,baz=174,slow=36							
SNY	**Shenyang**	**17.52**	**270**	⇓P		**Pn**	**10 46 09.1**	**-0.4**
SNY				AMB	AMB			
	comp=Z,14nm,0.7s							
YAK	**Yakutsk**	**20.44**	**336**	*e*P		**P**	**10 46 40.1**	**-1.1**
YAK				*e*PP			10 46 58.6	
YAK				*e*S		**S**	**10 50 20.3**	**-5.1**
YAK				*e*SS		sS	10 50 50.2	-1.7
YAK				*e*			10 58 00.6	
YAK				pmax	pmax			
	comp=E,8.0nm,1.4s							
YAK				pmax	pmax			
	comp=Z,6.0nm,0.7s							
YAK				smax				
	comp=N,134nm,4.6s							
YAK				smax				
	comp=E,111nm,3.5s							
BJI	**Beijing**	**23.40**	**270**	P		**P**	**10 47 11.0**	**-1.3**
BJI				S		**S**	**10 51 24.4**	**+5.2**
BJI				AMB	AMB			
	comp=Z,26nm,0.7s,mb4.7							
BJI				AMB	AMB			
	comp=Z,60nm,4.7s							
BJI				LR	LR			
	comp=N,155nm,24.9s							
BJI				LR	LR			
	comp=E,143nm,25.8s							
BOD	**Bodaibo**	**24.55**	**315**	*e*P		**P**	**10 47 18.0**	**-4.5**
BOD				pmax	pmax			
	comp=Z,3.0nm,1.8s,mb3.4							
NJ2	**Nanjing**	**25.41**	**251**	*e*P		**P**	**10 47 35.0**	**+4.4**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.3							
HHC	**Hu-ho-hao-te**	**26.42**	**275**	*e*P		**P**	**10 47 42.3**	**+2.6**
HHC				AP	pP		10 47 56.1	-2.1
HHC				XP	sP		10 48 04.4	-3.2
HHC				PP			10 48 28.2	
HHC				S		**S**	**10 52 10.6**	**+3.3**
HHC				XS	sS		10 52 35.6	-3.7
HHC				SS			10 53 25.5	
HHC				PCS	PcS		10 54 45.2	+1.1
HHC				AMB	AMB			
	comp=Z,11nm,0.6s,mb4.5							
HHC				AMB	AMB			
	comp=Z,112nm,5.6s							
ULN	**Ulaanbaatar**	**27.90**	**292**	*d i*	P	**P**	**10 47 51.7**	**-1.1**
SONM	**Songino Array**	**28.34**	**292**	P		**P**	**10 47 55.4**	**-1.4**
	comp=Z,2.2nm,0.7s,mb3.8,baz=79,slow=8.4,SNR=16							
SONM	**Songino Array**	**28.34**	**292**	P		**P**	**10 47 55.4**	**-1.4**
SONM				pmax	pmax			
	comp=Z,2.0nm,0.7s							
TIXI	**Tiksi**	**28.74**	**348**	⇑*i*	P	**P**	**10 47 59.1**	**-0.9**
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.7							
LZH	**Lanzhou**	**33.88**	**271**	*e*P		**P**	**10 48 45.5**	**-0.1**
LZH				AP	pP		10 48 58.5	-5.9
LZH				XP	sP		10 49 06.6	-7.2
LZH				PP	PP		10 50 00.5	-3.1
LZH				*e*S	**S**		**10 54 05.1**	**+1.0**
LZH				XS	sS		10 54 30.0	-6.5
LZH				SS	SS		10 56 15.9	-17
LZH				AMB	AMB			
	comp=Z,21nm,1.0s,mb4.9							
LZH				AMB	AMB			
	comp=Z,120nm,4.6s							
LZH				LR	LR			
	comp=E,490nm,13.5s							
LZH				LR	LR			
	comp=Z,917nm,17.0s							
CD2	**Chengdu**	**36.60**	**263**	*e*P		**P**	**10 49 11.8**	**+2.8**
CD2				AP	pP		10 49 26.9	-1.1
CD2				XP	sP		10 49 34.2	-3.1
CD2				PP	PP		10 50 38.6	+4.9
CD2				S	**S**		**10 54 50.9**	**+5.0**
CD2				XS	sS		10 55 16.8	-1.8
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB	AMB			
	comp=Z,30nm,5.2s							
CD2				LR	LR			
	comp=N,160nm,10.8s							
CD2		

HYT	Haines Junctio	45.74	41	*e*P	P	10 50 25.6	+2.1
INK	Inuvik	45.77	31	*e*P	P	10 50 23.4	-0.2
	comp=Z,3µm,2.6s						
INK	Inuvik	45.77	31	*e*P	P	10 50 23.4	-0.2
INK				pmax	pmax		
	comp=Z,3µm,2.6s						
CMAR	Chiang Mai Arr	47.84	253	P	P	10 50 40.0	-0.4
	comp=Z,0.8nm,0.3s,mb4.0,baz=44,slow=7.3,SNR=6.8						
CMAR	Chiang Mai Arr	47.84	253	P	P	10 50 40.0	-0.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	Borovoye Array	49.18	309	P	P	10 50 50.9	+0.6
	comp=Z,0.7nm,0.4s,mb3.9,baz=48,slow=8.6,SNR=4.2						
BVAR	Borovoye Array	49.18	309	P	P	10 50 50.9	+0.6
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	Taplejung	50.12	271	*e*P	P	10 50 57.3	-0.5
	comp=Z,5.6nm,0.4s,mb4.8						
TKM2	Tokmak 2	50.34	295	*e*P	P	10 50 59.5	+0.3
	comp=Z,6.8nm,1.3s,mb4.4						
TKM2	Tokmak 2	50.34	295	*e*P	P	10 50 59.5	+0.3
TKM2				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
JIRN	Jiri	51.03	272	*e*P	P	10 51 04.2	-0.4
	comp=Z,5.9nm,0.3s,mb5.1						
GUN	Gumba	51.11	273	*e*P	P	10 51 04.9	-0.2
	comp=Z,8.7nm,0.3s,mb5.3						
RAMN	Ramite	51.16	271	*e*P	P	10 51 04.8	-0.7
	comp=Z,14nm,0.3s,mb5.5						
KKN	Kakani	51.61	273	*e*P	P	10 51 09.5	+0.6
DMN	Daman	51.84	273	*e*P	P	10 51 10.2	-0.4
GKN	Gorkha	51.94	274	*e*P	P	10 51 10.6	-0.8
	comp=Z,8.6nm,0.5s,mb5.0						
DANN	Dangsing	52.37	275	*e*P	P	10 51 14.6	+0.1
KOLN	Koldanda	52.82	274	*e*P	P	10 51 17.3	-0.6
	comp=Z,9.4nm,0.5s,mb5.0						
ARU	Arti	53.95	317	*d i*P	P	10 51 24.0	-1.7
ARU				*e*S	S	10 58 55.8	+0.9
ARU				*e*SS	SS	11 02 30.6	-5.8
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
YKA	Yellowknife Ar	55.18	34	P	P	10 51 34.5	0.0
	comp=Z,1.6nm,0.4s,mb4.4,baz=301,slow=7.3,SNR=10						
YKA	Yellowknife Ar	55.18	34	P	P	10 51 34.5	0.0
YKA	Yellowknife Ar	55.18	34	P	P	10 51 34.5	0.0
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKTK	Aktyubinsk	57.20	310	P	P	10 51 48.9	-0.2
AKTO	Aktyubinsk	57.20	310	P	P	10 51 48.9	-0.2
	comp=Z,1.3nm,0.6s,mb4.2,baz=83,slow=4.1,SNR=4.3						
AKTO	Aktyubinsk	57.20	310	P	P	10 51 48.9	-0.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
KEV	Kevo	58.14	339	*e*P	P	10 51 53.9	-1.5
ARCES	ARCESS Array B	58.67	340	P	P	10 51 58.2	-0.8
	comp=Z,3.4nm,0.9s,mb4.4,baz=39,slow=7.9,SNR=4.5						
ARCES	ARCESS Array B	58.67	340	P	P	10 51 58.3	-0.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EDM	Edmonton	60.83	43	*e*P	P	10 52 14.7	+0.6
KAF	Kangasniemi	63.78	333	*e*P	P	10 52 32.1	-1.6
	comp=Z,1.5nm,0.6s,mb4.0						
KAF	Kangasniemi	63.78	333	*e*P	P	10 52 32.1	-1.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
MSO	Missoula	64.38	49	*e*P	P	10 52 38.9	+1.0
	comp=Z,71nm,2.9s,mb5.0						
WRAB	Tennant Creek	65.12	193	⇑ *i*P	P	10 52 40.5	-2.4
WRA	Warramunga Arr	65.13	193	P	P	10 52 42.2	-0.7
	comp=Z,0.6nm,0.6s,mb3.6,baz=11,slow=6.6,SNR=7.4						
WRA				pP	pP	10 53 03.1	-0.5
	comp=Z,0.5nm,0.6s,baz=11,slow=6.7,SNR=2.9						
WRA				sP	sP	10 53 11.2	-1.2
	comp=Z,1.2nm,0.8s,baz=8.9,slow=6.6,SNR=5.7						
WRA	Warramunga Arr	65.13	193	P	P	10 52 42.2	-0.7
WRA				*PP	pP	10 53 03.1	-0.5
WRA				*SP	sP	10 53 11.2	-1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOZ	Bozeman (W)	66.38	49	*e*P	P	10 52 51.9	+1.2
NVAR	Mina Array Bea	67.12	58	P	P	10 52 57.0	+1.3
	comp=Z,1.9nm,0.7s,mb4.0,baz=294,slow=6.3,SNR=19						
MTUM	Tungsten Hills	67.64	59	*e*P	P	10 53 06.5	+7.5
IMW	Indian Meadow	67.88	50	*e*P	P	10 53 02.0	+1.7
	comp=Z,66nm,2.9s,mb5.0						
MOOW	Moose Ponds	68.08	50	*e*P	P	10 53 03.5	+1.9
	comp=Z,70nm,2.6s,mb5.0						
ASAR	Alice Springs	68.85	193	P	P	10 53 07.1	+0.7
	comp=Z,0.3nm,0.6s,baz=4.0,slow=5.1,SNR=5.9						
NB2	NORSAR Subarra	69.03	339	P	P	10 53 05.0	-2.2
	comp=Z,1.4nm,0.6s,mb4.0,baz=38,slow=6.2						
NOA	NORSAR Array B	69.03	339	P	P	10 53 06.0	-1.2
	comp=Z,1.2nm,0.8s,mb3.8,baz=12,slow=2.8,SNR=5.1						
NOA	NORSAR Array B	69.03	339	P	P	10 53 06.0	-1.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	69.39	50	P	P	10 53 10.3	+0.6
	comp=Z,1.5nm,0.8s,mb3.9,baz=260,slow=1.8,SNR=11						
AKASG	Malin Array Be	71.12	324	P	P	10 53 19.2	-0.9
	comp=Z,0.9nm,0.4s,mb4.0,baz=39,slow=6.3,SNR=4.2						
AKASG	Malin Array Be	71.12	324	P	P	10 53 19.2	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SRU	San Rafael	71.29	53	*e*P	P	10 53 22.5	+1.1
ANMO	Albuquerque	76.50	54	⇑ *i*P	P	10 53 50.3	-1.6
TXAR	Lajitas Array	82.18	56	P	P	10 54 23.6	+0.7
	comp=Z,2.1nm,0.6s,mb4.2,baz=298,slow=3.9,SNR=26						
TXAR				pP	pP	10 54 45.6	+1.4
	comp=Z,0.5nm,0.5s,baz=296,slow=3.7,SNR=2.9						
TXAR	Lajitas Array	82.18	56	P	P	10 54 23.6	+0.8
TXAR				*PP	pP	10 54 45.6	+1.3
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VNA2	Neumayer--Watz	150.66	197	*e*PKPdf	PKPbc	11 01 52.7	+0.7
	baz=80,slow=0.8						
VNA2				*e*		11 02 15.6	
VNA3	Neumayer Olymp	150.85	195	*e*PKPdf	PKPbc	11 01 52.3	-0.1
VNA3				*e*		11 01 56.6	
VNA3				*e*		11 02 15.5	

NIED ***03*** *11:22:00,4680N×15280E,h8km,Mw4.3 Best double couple: M₀3.13000×10¹⁵ NP1:φ₀±106.00000°,δ78.00000°, λ126.00000°. NP2:φ₀±212.00000°,δ37.00000°,λ20.00000°.*
JMA ***03*** *11:22:09.3±0.9,4681N×15284E,h30km,M4.6*
IDC ***03*** *11:22:11.6±0.6,4673N×15256E,h49km±6km,mb3.6/8, mb1 4.0/9,mb1mx3.7/21,mbtmp3.7/9,MS3.1/4,Ms1 3.1/4, ms1mx2.8/34,Error ellipse: s-maj=29.4km s-min=14.8km az=127.0*
MOS ***03*** *11:22:11.1±2.0,4654N×15279E,h68km,mb4.2/4,Error ellipse: s-maj=16.7km s-min=10.5km az=53.0*
ISCJB ***03*** *11:22:13.1±1.2,4640N±009×1526E±01,h91km±12km, mb3.7/8,Error ellipse: s-maj=18.7km s-min=8.3km az=136.1*

ISC 03 11:22:14.4±1.0,4644N±009×1526E±01,h81km±10km, h51km±2.0km:pP-P,n50,σ1§36/54,mb3.7/8,5C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	4.85	27	*e*PN	Pn	11 23 18.5	-6.3
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,170nm,0.5s						
YUK	Yuzh-Kuril'sk	5.33	246	*e*PN	Pn	11 23 31.5	+0.1
NEM2	Nemuro 2	5.76	240	P	Pn	11 23 36.3	-1.0
NEM2				*e*S	Sn	11 24 41.5	-0.4
JRA	Rausu	5.85	247	P	Pn	11 23 40.2	+1.7
JNK	Nakash	6.27	246	P	Pn	11 23 45.1	+0.8
JAK	Akkeshi	6.60	241	P	Pn	11 23 47.7	-1.0
JAK				*e*S	Sn	11 25 00.9	-1.5
JTKR	Abashiri--Toko	6.62	251	P	Pn	11 23 50.7	+1.7
YSS	Yuzh-Sakhalins	6.80	278	⇑ *i*PN	Pn	11 23 53.8	+2.4
JAR	Ashorobuto	7.02	247	P	Pn	11 23 55.5	+1.1
JAR				*e*S	Sn	11 25 12.5	-0.2
JKK2	Kamakawa 2	7.42	253	P	Pn	11 24 02.1	+2.1
ASAJ	Asahikawa	7.43	255	P	Pn	11 24 02.6	+2.5
	comp=Z,1.3nm,0.3s,baz=78,slow=14,SNR=11						
ASAJ	Asahikawa	7.43	255	P	Pn	11 24 02.8	+2.7
ASAJ	Asahikawa	7.43	255	PN	Pn	11 24 02.6	+2.5
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	7.45	24	P	Pn	11 23 54.5	-5.7
	comp=Z,1.6nm,0.3s,baz=182,slow=10.0,SNR=31						
PETK				LR	LR	11 27 21.9	
	comp=Z,72nm,18.1s,baz=69,slow=43						
JCH	Churui	7.63	243	P	Pn	11 24 02.5	-0.3
JCH				*e*S	Sn	11 25 26.9	-0.7
PET	Petropavlovsk	7.67	28	*e*PN	Pn	11 24 03.2	0.0
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
JFR	Furan	7.83	249	P	Pn	11 24 06.7	+1.1
JAB	Ashibetsu	7.92	252	P	Pn	11 24 09.3	+2.5
ERM	Erimo	8.10	240	*c i*PN	Pn	11 24 09.5	+0.4
JEM	Erimo	8.10	240	P	Pn	11 24 08.6	-0.5
JBT2	Biratori 2	8.17	247	P	Pn	11 24 10.4	+0.3
JNBK	Urakawa-nobuka	8.19	243	P	Pn	11 24 09.4	-1.0
JNB	Nobribetsu	9.17	249	P	Pn	11 24 24.7	+0.9
JKB	Kayabe	9.48	245	P	Pn	11 24 25.8	-2.1
JYM2	Yakumo 2	9.78	248	P	Pn	11 24 31.9	-0.2
JANG	Nango	10.09	237	P	Pn	11 24 33.1	-3.2
JANG				*e*S	Sn	11 26 20.3	-7.3
JTM	Tenmabayashi	10.09	240	P	Pn	11 24 34.6	-1.7
JRG	Rokugo	11.24	236	P	Pn	11 24 49.8	-2.2
HABR	Khabarovsk	12.06	286	*e*PN	Pn	11 25 02.6	-0.5
MJAR	Matsushiro Arr	14.61	233	P	Pn	11 25 34.3	-2.6
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=7.1						
MJAR				LR	LR	11 32 14.2	
	comp=Z,68nm,18.1s,baz=75,slow=41						
KSRS	Korea Array	20.37	253	P	P	11 26 47.2	+2.9
	comp=Z,2.4nm,0.8s,baz=58,slow=1.3,SNR=8.7						
KSRS				LR	LR	11 33 27.9	
	comp=Z,58nm,20.0s,baz=136,slow=33						
KSRS	Korea Array	20.37	253	*e*P	P	11 26 48.8	+4.5
YAK	Yakutsk	20.40	328	⇑ *i*P	P	11 26 43.4	-1.0
YAK				pmax	pmax		
	comp=Z,29nm,2.5s						
GUMO	Guam	33.38	194	LR	LR	11 39 31.8	
	comp=Z,59nm,19.8s,baz=270,slow=31						
COLA	College	36.60	38	⇑ *i*P	P	11 29 10.7	-1.5
CMAR	Chiang Mai Arr	51.95	256	P	P	11 31 17.4	+2.2
	comp=Z,1.6nm,1.0s,mb4.0,baz=28,slow=7.7,SNR=4.8						
CMAR	Chiang Mai Arr	51.95	256	*e*P	P	11 31 17.8	+2.6
NVAR	Mina Array Bea	62.89	62	P	P	11 32 32.4	+0.6
	comp=Z,0.9nm,0.8s,mb3.8,baz=294,slow=7.6,SNR=6.1						
NVAR				pP	pP	11 32 46.3	-6.2
	comp=Z,1.0nm,0.7s,baz=298,slow=7.1,SNR=6.3						
PDAR	Pinedale Array	65.22	53	P	P	11 32 46.9	-0.1
	comp=Z,0.8nm,0.9s,mb3.6,baz=252,slow=2.3,SNR=5.8						
PDAR				pP	pP	11 33 00.8	-7.0
	comp=Z,1.2nm,0.9s,baz=282,slow=3.1,SNR=5.2						
WRAB	Tennant Creek	68.09	199	⇑ *i*P	P	11 33 04.9	-0.4
WRA	Warramunga Arr	68.10	199	P	P	11 33 06.5	+1.1
	comp=Z,0.4nm,0.6s,mb3.4,baz=17,slow=6.7,SNR=6.2						
WRA				pP	pP	11 33 21.6	-4.8
	comp=Z,1.0nm,0.9s,baz=17,slow=6.8,SNR=5.8						
WRA	Warramunga Arr	68.10	199	P	P	11 33 06.5	+1.1
WRA				*PP	pP	11 33 21.6	-4.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	68.41	341	P	P	11 33 05.1	-1.9
	comp=Z,1.7nm,0.9s,mb3.9,baz=27,slow=6.1,SNR=3.5						
NOA	NORSAR Array B	68.41	341	*e*P	P	11 33 05.4	-1.5
AKASG	Malin Array Be	71.61	326	P	P	11 33 25.5	-1.2
	comp=Z,1.2nm,0.5s,mb4.0,baz=30,slow=6.3,SNR=6.5						
AKASG	Malin Array Be	71.61	326	P	P	11 33 25.5	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	71.80	198	P	P	11 33 31.1	+3.2
	comp=Z,1.3nm,0.6s,mb3.9,baz=12,slow=5.0,SNR=17						
ASAR				pP	pP	11 33 44.2	-4.9
	comp=Z,0.9nm,0.8s,baz=15,slow=4.1,SNR=5.2						
ASAR	Alice Springs	71.80	198	P	P	11 33 31.2	+3.2
ASAR				*PP	pP	11 33 44.2	-4.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	77.95	60	P	P	11 34 03.9	+0.2
	comp=Z,0.5nm,0.7s,mb3.4,baz=297,slow=4.4,SNR=4.2						
TXAR				pP	pP	11 34 18.1	-7.0
	comp=Z,1.6nm,0.6s,baz=300,slow=4.8,SNR=12						
TXAR	Lajitas Array	77.95	60	P	P	11 34 03.9	+0.2
TXAR				*PP	pP	11 34 18.1	-7.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						

IDC ***03*** *11:23:58.4±1.6,4045N×10097E,h0km,mb4.1/10, mb1 4.2/10,mb1mx4.0/22,mbtmp4.1/10,MS3.4/3, Ms1 3.5/3,ms1mx2.8/30,Error ellipse: s-maj=57.5km s-min=16.1km az=54.0*
BJI ***03*** *11:24:00.6,4005N×10100E,h15km,mB4.6,mb4.6*
ISCJB ***03*** *11:24:01.2±1.2,4058±02×1010E±02,h33km,mb4.2/15, MS3.4/3,Error ellipse: s-maj=40.3km s-min=10.3km az=144.0*
NEIC ***03*** *11:24:03.7±0.9,4025N±101E,h35km,mb4.2/3,Error ellipse: s-maj=34.0km s-min=7.3km az=53.0*

ISC 03 11:24:06.7±6.7,40S±02×101E±03,h61km±60km,n23, σ0§54/20,mb4.2/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	22.38	355	P	P	11 28 59.9	-0.1
	3.3nm,0.7s,mb3.9,baz=180,slow=8.3,SNR=27						
CMAR				LR	LR	11 39 13.2	
	comp=Z,56nm,18.7s,baz=195,slow=41						
CHTO	Chiang Mai	22.73	355	*e*P	P	11 29 03.5	-0.2
	2.9nm,0.8s,mb3.8						
WRA	Warramunga Arr	36.08	119	P	P	11 31 02.7	-0.2
	1.1nm,0.5s,mb4.0,baz=302,slow=9.1,SNR=21						
WRAB	Tennant Creek	36.08	119	*e*P	P	11 31 03.8	+0.9
	1.8nm,0.5s,mb4.3						
WB2	Warramunga Arr	36.09	119	*e*P	P	11 31 02.5	-0.4
ASAR	Alice Springs	37.23	125	P	P	11 31 12.4	-0.2
	0.8nm,0.6s,mb3.7,baz=295,slow=7.8,SNR=15						
XAN	Xi'an	38.51	10	P	P	11 31 23.0	-0.2
XAN				AP	pP	11 31 30.0	-8.5
XAN				XP	sP	11 31 33.1	-12
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
XAN				AMB	AMB		
	comp=Z,86nm,6.9s						
GTA	Gaotai	43.17	359	*e*P	P	11 32 05.7	+4.2
GTA				AP	pP	11 32 10.2	-6.8
GTA				XP	sP	11 32 12.7	-11
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0						
CTA	Charters Tower	46.79	114	P	P	11 32 30.6	0.0
	comp=Z,3.1nm,0.9s,mb4.2,baz=297,slow=2.3,SNR=3.3						
KSRS	Korea Array	48.16	29	P	P	11 32 41.0	0.0
	comp=Z,1.8nm,0.9s,mb4.1,baz=220,slow=7.5,SNR=5.9						
SONM	Songino Array	51.78	5	P	P	11 33 09.6	+1.4
	comp=Z,4.5nm,0.8s,mb4.4,baz=184,slow=9.2,SNR=34						
SONM				PcP	PcP	11 34 21.1	+0.5
	comp=Z,0.7nm,0.9s,baz=184,slow=4.3,SNR=4.0						
TKM2	Tokmak 2	52.05	336	*e*P	P	11 33 11.0	+0.7
	comp=Z,2.7nm,0.7s,mb4.3						
MJAR	Matsushiro Arr	53.12	37	P	P	11 33 17.9	-0.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=217,slow=6.8,SNR=3.9						
MK31	Makanchi Array	53.20	344	*e*P	P	11 33 19.0	+0.3
MKAR	Makanchi Array	53.20	344	P	P	11 33 18.7	0.0
	comp=Z,3.5nm,0.8s,mb4.5,baz=151,slow=8.1,SNR=25						
MKAR	Makanchi Array	53.20	344	P	P	11 33 18.7	0.0
KURK	Kurchatov	57.78	343	P	P	11 33 51.1	-0.4
	baz=160,slow=7.1						
ZAA0	Zalesovo Array	59.28	349	*e*P	P	11 34 01.6	-0.4
ZALV	Zalesovo Beam	59.28	349	P	P	11 34 01.6	-0.3
	comp=Z,4.8nm,0.7s,mb4.6,baz=175,slow=5.1,SNR=22						
BVAR	Borovoye Array	62.39	340	P	P	11 34 22.3	-0.7
	comp=Z,1.4nm,0.6s,mb4.3,baz=120,slow=8.8,SNR=5.5						
IDI	Anoyia	81.08	306	LR	LR	12 12 57.8	
	comp=Z,23nm,21.9s,baz=91,slow=36						
TSUM	Tsumeb	82.59	251	LR	LR	12 07 49.9	
	comp=Z,35nm,19.1s,baz=333,slow=32						
TXAR	Lajitas Array	145.53	40	PKPbc	PKPbc	11 43 40.0	+1.1
	comp=Z,1.9nm,0.8s,baz=277,slow=1.7,SNR=16						

ISCJB ***03*** *12:01:53.0±0.5,2541N±008×12465E±005,h123km±6km, mb3.5/3,Error ellipse: s-maj=13.5km s-min=5.2km az=155.6*
NEIC ***03*** *12:01:53.9±0.9,2544N×12471E,h118km±12km, MG3.3(JMA),Error ellipse: s-maj=23.0km s-min=12.7km az=159.0*
IDC ***03*** *12:01:54.0±7.9,2556N×12476E,h122km±92km,mb3.2/3, mb1 3.4/4,mb1mx3.1/22,mbtmp3.2/4,ML3.6/1,Error ellipse: s-maj=80.1km s-min=23.2km az=57.0*
JMA ***03*** *12:01:54.2±0.2,2548N×12459E,h110km±5km,M3.3*

ISC 03 12:01:53.9±0.5,2543N±007×12465E±005,h117km±6km, n20,σ0§86/32,mb3.5/3,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTJ	Tarama	0.79	177	P	Pn	12 02 14.0	+0.3
JTJ				S	Sn	12 02 28.6	0.0
JMJ	Miyako jima 2	0.84	136	P	Pn	12 02 14.7	+0.5
JMJ				S	Sn	12 02 29.4	-0.1
JOGS	Gusukube	0.96	134	P	Pn	12 02 16.0	+0.8
JOGS				S	Sn	12 02 32.0	+0.6
JIJ	Ishigaki jima	1.16	204	P	Pn	12 02 17.1	-0.2
JIJ				S	Sn	12 02 34.4	-0.7
JKRS	Kuro-shima	1.32	206	P	Pn	12 02 19.2	+0.1
JKRS				S	Sn	12 02 38.0	-0.3
IRIF	Iriomote-Funau	1.38	218	P	Pn	12 02 19.7	0.0
IRIF				S	Sn	12 02 39.2	-0.1
HATJ	Hateruma jima	1.57	210	P	Pn	12 02 22.2	+0.2
HATJ				S	Sn	12 02 43.4	+0.1
YOJ	Yonaguni jima	1.77	237	P	Pn	12 02 24.4	0.0
YOJ				S	Sn	12 02 47.6	-0.1
JKE	Kume jima 2	2.12	65	P	Pn	12 02 28.7	0.0
JKE				S	Sn	12 02 55.8	+0.5
JJT2	Tamagusuku 2	2.88	75	P	Pn	12 02 38.6	+0.1
TATO	Taipei	2.90	262	*e*Pn	Pn	12 02 41.1	+2.3
NAOB	Ninganchiao	3.05	246	*e*Pn	Pn	12 02 40.7	0.0
YHNB	Yeheng	3.07	256	*e*Pn	Pn	12 02 43.3	+2.3
JOW	Kunigami	3.54	66	P	Pn	12 02 46.5	-0.8
	10nm,0.3s,baz=79,slow=17,SNR=16						
JOW				S	Sn	12 03 26.0	-2.6
	4.0nm,0.3s,baz=345,slow=7.1,SNR=2.3						
JOW	Kunigami	3.54	66	P	Pn	12 02 46.4	-0.9
SSLB	Suanglung	3.74	245	*e*Pn	Pn	12 02 50.3	+0.4
SSLB				*e*Sn	Sn	12 03 32.4	-0.9
TWG	Pinlang	4.18	232	*e*Pn	Pn	12 02 54.7	-1.1
TWG				*e*Sn	Sn	12 03 40.6	-3.1
MKAR	Makanchi Array	39.70	314	P	P	12 09 14.0	-0.6
	0.3nm,0.5s,mb3.4,baz=102,slow=9.5,SNR=5.8						
WRA	Warramunga Arr	46.07	167	P	P	12 10 06.2	+0.1
	0.6nm,0.4s,mb3.6,baz=348,slow=8.8,SNR=11						
ASAR	Alice Springs	49.62	169	P	P	12 10 34.2	+0.8
	0.3nm,0.4s,mb3.6,baz=353,slow=8.7,SNR=7.5						

OTT 03 12:11:09.8±1.5,8062N×11640W,h18km,ML3.5/3,Artic Ocean. 330km northwest from Isachsen, Nu,Arctic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RES	Resolute Bay	7.46	131	PN	Pn	12 12 57.2	-0.3
RES				SN	Sn	12 14 16.1	-5.3
RES				Trac		12 14 21.1	
	comp=Z,1.5nm,0.3s						
INK	Inuvik	13.08	209	PN	Pn	12 14 13.2	-1.1
INK				SN	Sn	12 16 29.7	-9.5
GIFN	Gifford Fjord,	13.45	122	PN	Pn	12 14 15.3	-4.0
GIFN				SN	Sn	12 16 34.3	-14
GIFN				Trac		12 16 41.8	
	comp=Z,2.2nm,0.7s						
ILON	Igloolik, Nuna	14.00	124	PN	Pn	12 14 23.0	-3.8
ILON				SN	Sn	12 16 49.4	-12
ILON				Trac		12 16 56.7	
	comp=Z,0.7nm,0.3s						
KUGN	Kugaaruk Camp,	14.18	137	PN	Pn	12 14 28.5	-0.9
SRLN	Sarcpa Lake, N	14.56	127	PN	Pn	12 14 32.1	-2.5
SRLN				SN	Sn	12 17 04.7	-11
CTLN	Castor Lake	16.28	179	PN	Pn	12 14 59.1	+2.1
CTLN				SN	Sn	12 17 51.2	-5.6
ROMN	Roman Lake	16.40	182	PN	Pn	12 14 54.0	-4.6
ROMN				SN	Sn	12 17 54.7	-5.1
DAWY	Dawson	17.75	214	PN	Pn	12 15 16.1	+0.5
DAWY				SN	Sn	12 18 22.5	-10
YKW3	Yellowknife Ar	18.16	177	PN	Pn	12 15 20.3	-0.3
YKW3				SN	Sn	12 18 32.5	-10

SGS ***03*** *12:16:53.5,30.14N×3623E,h2km*
GII ***03*** *12:16:53.6±0.0,2976N×3633E,h0km,ML2.0/2, EXPLOSION*
CSEM ***03*** *12:16:53.5,30.14N×3623E,h2km,ML2.6,After SNSN*
ISCJB ***03*** *12:16:54.8±0.9,2987N±005×3624E±006,h0km,Error ellipse: s-maj=9.0km s-min=6.0km az=142.4*

ISC 03 12:16:54.9±1.0,2987N±005×3628E±006,h0km,n13, σ1§05/15,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	Aqaba	1.08	263	Pg	Pg	12 17 15.3	-0.3
HRFI	Mount Harif	1.09	279	Pg	Pg	12 17 14.7	-1

ANTB	**Antalya**	**1.14**	**95**	*e*PN	**Pn**	**12 33 16.1**	**-0.5**
BCK	**Bucak**	**1.16**	**67**	*e*PN	**Pn**	**12 33 16.4**	**-0.6**
ARG	**Arkhangelos**	**1.20**	**229**	*e*PB	**Pb**	**12 33 15.4**	**-1.9**
ARG				*e*SB	**Sb**	**12 33 35.4**	**+2.4**
MLSB	**Milas**	**1.21**	**284**	*e*PN	**Pn**	**12 33 16.2**	**-1.4**
MLSB				*e*SN	**Sn**	**12 33 32.7**	**-1.5**
AYDN	**Tasoluk**	**1.27**	**301**	*i* P	**Pn**	**12 33 18.7**	**+0.3**
AYDN				*i* S	**Sg**	**12 33 35.3**	**+0.3**
KHL	**Karahalli**	**1.33**	**10**	*e*PN	**Pn**	**12 33 18.5**	**-0.8**
TKTP	**Tekketepe**	**1.34**	**39**	*i* P	**Pn**	**12 33 20.5**	**+1.1**
TKTP				*i* S	**Sb**	**12 33 40.9**	**+3.9**
KHAL	**Karahalli**	**1.37**	**8**	*i* P	**Pn**	**12 33 20.4**	**+0.5**
KHAL				*i* S	**Sb**	**12 33 36.5**	**-1.5**
BDRM	**Kayabasi**	**1.44**	**273**	*i* P	**Pn**	**12 33 22.0**	**+1.2**
BDRM				*i* S	**Sn**	**12 33 41.5**	**+1.5**
BODT	**Bodrum**	**1.55**	**273**	*e*PN	**Pn**	**12 33 21.4**	**-0.9**
KULA	**Kula-Manisa**	**1.57**	**343**	*e*PN	**Pn**	**12 33 21.6**	**-1.0**
NISR	**Nisiros**	**1.74**	**257**	*e*PN	**Pn**	**12 33 27.1**	**+2.1**
SHUT	**Suhut-Afyon**	**1.86**	**34**	*e*PN	**Pn**	**12 33 26.1**	**-0.4**
SMG	**Samos**	**2.04**	**291**	*e*PN	**Pn**	**12 33 29.3**	**+0.2**
ALT	**Altintas**	**2.15**	**18**	*e*PN	**Pn**	**12 33 30.8**	**+0.2**
KARP	**Karpathos**	**2.23**	**230**	*e*Pg	**Pg**	**12 33 32.9**	**-4.1**
KARP				*e*Sn	**Sn**	**12 34 00.1**	**+0.7**

*ISCJB **03** 12:35:57.2±0.9,2987N×004×3628E×006,h0km, Error ellipse: s-maj=8.1km s-min=6.0km az=171.6*
*SGS **03** 12:35:58.7,3002N×3623E,h8km*
*CSEM **03** 12:35:58.9±0.3,2974N×3619E,h5km,ML3.3, Error ellipse: s-maj=7.4km s-min=3.7km az=75.0*
*GII **03** 12:35:58.0±0.0,2991N×3627E,h0km,ML1.5/1, EXPLOSION*
*HLW **03** 12:35:59.7,2971N×3639E,h15km,Mb3.3*

ISC 03 12:35:57.4±0.9,2986N±004×3631E±006,h0km,n22, σ0§83/27,1C,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.11**	**263**	Pg	**Pg**	**12 36 18.4**	**-0.2**
HRFI	**Mount Harif**	**1.12**	**279**	Pg	**Pg**	**12 36 18.4**	**-0.5**
EIL	**Elat**	**1.20**	**261**	Pg	**Pg**	**12 36 20.0**	**-0.4**
EIL				Sg	**Sg**	**12 36 38.1**	**+2.1**
HQLS		**1.23**	**243**	P	**Pg**	**12 36 20.3**	**-0.6**
HQLS		**1.23**	**243**	P	**Pg**	**12 36 20.3**	**-0.6**
HQLS				S	**Sg**	**12 36 36.7**	**-0.1**
PRNI	**Paran**	**1.23**	**294**	Pg	**Pg**	**12 36 20.1**	**-0.9**
JLOS		**1.33**	**213**	P	**Pg**	**12 36 23.1**	**+0.1**
JLOS		**1.33**	**213**	P	**Pg**	**12 36 23.1**	**+0.1**
JLOS				S	**Sg**	**12 36 41.1**	**+0.8**
KRMI	**Paran Flat**	**1.40**	**281**	Pn	**Pn**	**12 36 23.2**	**-1.0**
KRMI				Sn	**Sn**	**12 36 42.2**	**-1.1**
HBST	**Basata**	**1.52**	**245**↑	*e*P	**Pn**	**12 36 25.6**	**-0.2**
RMNI	**Mount Ramon**	**1.53**	**299**	Pn	**Pn**	**12 36 25.7**	**-0.2**
TBKS	**Tabuk**	**1.65**	**173**	P	**Pn**	**12 36 28.2**	**+0.6**
MZDA	**Masada**	**1.66**	**331**	Pn	**Pn**	**12 36 27.9**	**+0.2**
BDAS	**Al Bad'**	**1.78**	**217**	P	**Pn**	**12 36 29.2**	**-0.2**
DSI	**Dead Sea**	**1.88**	**335**	Pn	**Pn**	**12 36 31.7**	**+0.9**
RSHS		**2.05**	**221**	P	**Pn**	**12 36 32.2**	**-0.8**
HKAT	**Jabal Katrina**	**2.43**	**237**	P	**Pn**	**12 36 38.1**	**-0.3**
RSH		**2.49**	**297**	P	**Pn**	**12 36 40.5**	**+1.3**
TR2		**2.70**	**238**	P	**Pn**	**12 36 41.5**	**-0.6**
TR1		**2.78**	**229**	P	**Pn**	**12 36 42.7**	**-0.4**
AMAG	**Maghara**	**2.80**	**287**	P	**Pn**	**12 36 45.5**	**+2.1**
AMAG				S	**Sn**	**12 37 18.0**	**+0.2**
HRSH	**Kfar Ka'horesh**	**2.96**	**343**	P	**Pn**	**12 36 40.5**	**-5.1**

*ISCJB **03** 12:43:14.9±0.5,3631N±004×7067E±009,h145km±12km, Error ellipse: s-maj=11.7km s-min=6.3km az=178.9*
*NEIC **03** 12:43:16.0±0.8,3626N×7094E,h100km,mb4.4/8, Error ellipse: s-maj=14.4km s-min=7.3km az=81.0*
*NNC **03** 12:43:20.6±7.6,3678N×7034E,h147km±86km,mb3.0, mpv3.7, Error ellipse: s-maj=62.9km s-min=38.3km az=18.0*

ISC 03 12:43:15.9±0.5,3631N±004×7068E±008,h140km±11km, n29,σ1§06/36,6C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.21**	**218**	*e*Pn	**Pn**	**12 43 53.3**	**+0.4**
KBL				*e*Sn	**Sn**	**12 44 21.5**	**+0.2**
AML	**Almayashu** 44nm,0.4s	**6.27**	**21**	*e*Pn	**Pn**	**12 44 46.1**	**+0.1**
AML				*e*Sn	**Sn**	**12 45 54.0**	**-2.5**
AML	**Almayashu** SNR=50	**6.27**	**21**	P	**Pn**	**12 44 46.2**	**+0.2**
UCH	**Uchtor**	**6.62**	**26**	*e*Pn	**Pn**	**12 44 51.9**	**+1.3**
KZA	**Kyzart** SNR=8.0	**6.77**	**30**	P	**Pn**	**12 44 53.0**	**+0.3**
EKS2	**Erkin-Say**	**6.79**	**20**	*e*Pn	**Pn**	**12 44 53.7**	**+0.9**
EKS2				*e*Sn	**Sn**	**12 46 05.7**	**-3.1**
EKS2	**Erkin-Say** SNR=9.3	**6.79**	**20**	P	**Pn**	**12 44 53.5**	**+0.7**
KK31	**Karatay Array** 2.3nm,0.3s,baz=178,slow=12,SNR=78	**6.79**	**359**	P	**Pn**	**12 44 52.0**	**-0.9**
KK31				⇑S	**Sn**	**12 46 03.6**	**-5.4**
AAK	**Ala-Archa** SNR=11	**6.97**	**24**	P	**Pn**	**12 44 55.9**	**+0.5**
USP	**Ospenovka** SNR=8.4	**7.55**	**22**	P	**Pn**	**12 45 03.7**	**+0.6**
TKM2	**Tokmak 2** 2.0nm,0.4s	**7.62**	**28**	⇓P	**Pn**	**12 45 04.1**	**0.0**
TKM2				⇑S	**Sn**	**12 46 28.6**	**-0.3**
TKM2	**Tokmak 2** 5.5nm,0.8s	**7.62**	**28**	*e*Pn	**Pn**	**12 45 03.7**	**-0.3**
TKM2				*e*Sn	**Sn**	**12 46 30.6**	**+1.7**
TKM2	**Tokmak 2** 3.4nm,0.4s	**7.62**	**28**	P	**Pn**	**12 45 04.1**	**+0.1**
DANN	**Dangsing** 8.7nm,0.4s	**13.60**	**122**	*e*P	**Pn**	**12 46 21.7**	**-1.4**
MK31	**Makanchi Array** 1.5nm,0.7s,baz=212,slow=11,SNR=13	**13.60**	**36**	⇓P	**Pn**	**12 46 22.5**	**-0.4**
MK31	**Makanchi Array**	**13.60**	**36**	*e*Pn	**Pn**	**12 46 24.3**	**+1.4**
MKAR	**Makanchi Array**	**13.60**	**36**	*e*Pn	**Pn**	**12 46 23.9**	**+1.0**
KOLN	**Koldanda** 4.5nm,0.4s	**13.86**	**124**	*e*P	**Pn**	**12 46 24.7**	**-1.7**
GKN	**Gorkha** 10nm,0.3s	**14.42**	**121**	*e*P	**Pn**	**12 46 32.6**	**-0.9**
AB09	**Akbulak array** 3.2nm,0.4s	**15.15**	**332**	⇑P	**Pn**	**12 46 41.5**	**-0.9**
AB09				⇑S	**Sn**	**12 49 16.7**	**-14**
GUN	**Gumba** 1.5nm,0.6s	**15.35**	**119**	*e*P	**Pn**	**12 46 45.3**	**+0.3**
KURBB	**Kurchatov Arra** 0.4nm,0.7s	**15.39**	**19**	⇑P	**Pn**	**12 46 47.3**	**+1.9**
KURK	**Kurchatov** 2.2nm,0.8s	**15.50**	**19**	*e*Pn	**Pn**	**12 46 46.9**	**+0.2**
JIRN	**Jiri** 8.6nm,0.3s	**15.72**	**119**	*e*P	**Pn**	**12 46 49.9**	**+0.3**
VOSK	**Vostochnaya** 1.8nm,1.0s	**16.42**	**1**	⇓P	**Pn**	**12 46 56.7**	**-1.3**
RAMN	**Ramite** 4.8nm,0.3s	**16.44**	**120**	*e*P	**Pn**	**12 46 57.8**	**-0.6**
AKTO	**Aktyubinsk** 0.5nm,0.6s	**16.82**	**331**	⇑P	**Pn**	**12 47 02.6**	**-0.3**
TAPN	**Taplejung**	**16.99**	**117**	*e*P	**Pn**	**12 47 06.9**	**+1.8**
ZAA0	**Zalesovo Array**	**20.20**	**25**	*e*P	**P**	**12 47 39.9**	**+0.5**

NEIC 03 12:47:06.7,3613S×17838E,h167km,MG4.0(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.43**	**182**	P	Pn	12 47 36.8	-0.1
PUZ	**Puketiti**	**1.94**	**183**	P	Pn	12 47 42.6	+0.4
PUZ				S	Sn	12 48 07.7	-2.0
KUZ	**Kuaotunu**	**2.23**	**253**	P	Pn	12 47 44.6	-0.8
MWZ	**Matawai**	**2.30**	**197**	P	Pn	12 47 47.2	+0.9
URZ	**Urewera**	**2.35**	**205**	P	Pn	12 47 46.4	-0.5
KNZ	**Kokohu**	**2.94**	**191**	P	Pn	12 47 53.3	-0.6
BKZ	**Black Stump Fm**	**3.38**	**206**	P	Pn	12 47 58.9	-0.5
TSZ	**Takapari Road**	**4.36**	**205**	P	Pn	12 48 10.2	-1.8
BFZ	**Birch Farm**	**4.84**	**200**	P	Pn	12 48 16.9	-1.3
MRZ	**Mangatainoka R**	**5.03**	**205**	P	Pn	12 48 18.0	-2.7
KIW	**Kapiti Island**	**5.45**	**209**	P	Pn	12 48 22.9	-3.3
MTW	**Mount Morrison**	**5.50**	**203**	P	Pn	12 48 23.8	-3.1
CAW	**Cannon Point**	**5.60**	**207**	P	Pn	12 48 24.8	-3.4
MSWZ	**Moikau Station**	**5.81**	**204**	P	Pn	12 48 27.5	-3.5
TCW	**Tory Channel**	**6.00**	**211**	P	Pn	12 48 29.7	-3.8
NNZ	**Nelson**	**6.41**	**216**	P	Pn	12 48 36.2	-2.6
THZ	**Tophouse**	**7.05**	**216**	P	Pn	12 48 44.5	-2.9
KHZ	**Kahutara**	**7.31**	**209**	P	Pn	12 48 48.4	-2.4
LTZ	**Lake Taylor**	**8.15**	**214**	P	Pn	12 48 57.3	-4.5

*IDC **03** 12:53:50.2±1.6,2147N×12173E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.5/20,mbtmp3.5/5,MS3.4/2,Ms1 3.4/2, ms1mx2.6/29,Error ellipse: s-maj=143.9km s-min=18.8km az=65.0*
*NEIC **03** 12:53:52.3±0.8,2126N×12124E,h10km, Error ellipse: s-maj=27.9km s-min=9.7km az=84.0*
*ISCJB **03** 12:53:55.4±0.9,2140N±006×12130E±006,h43km±9km, mb3.4/5,MS3.4/2, Error ellipse: s-maj=9.9km s-min=9.2km az=38.4*
*TAP **03** 12:53:56.4,2157N×12125E,h53km,ML3.8,D*

ISC 03 12:53:56.6±1.0,2143N±006×12127E±006,h36km±11km, n48,σ1§10/59,mb3.4/5,MS3.4/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin** baz=307	**0.58**	**324**	*e*P	**Pn**	**12 54 08.1**	**-0.3**
TSEB				*e*S	**Sn**	**12 54 17.4**	**+0.6**
LAY	**Lan-yu** baz=31	**0.66**	**23**	P	**Pn**	**12 54 08.5**	**-1.0**
LAY				S	**Sn**	**12 54 17.6**	**-1.1**
TWK1	**Hengchun** baz=309	**0.67**	**320**	*e*P	**Pn**	**12 54 08.8**	**-0.9**
TWK1				*e*S	**Sn**	**12 54 18.3**	**-0.7**
HEN	**Hengchun** baz=312	**0.76**	**319**	P	**Pn**	**12 54 10.9**	**0.0**
HEN				*e*S	**Sn**	**12 54 21.4**	**+0.3**
TAW	**Tawu** baz=344	**0.99**	**339**	P	**Pn**	**12 54 12.5**	**-1.5**
TAW				S	**Sn**	**12 54 24.6**	**-2.2**
EAST	**Anshuo** baz=344	**1.03**	**338**	P	**Pn**	**12 54 13.1**	**-1.4**
EAST				*e*S	**Sn**	**12 54 25.8**	**-2.0**
SCZT	**Fangliau** baz=316	**1.12**	**327**	P	**Pn**	**12 54 15.7**	**-0.1**
ECL	**Taimali** baz=353	**1.20**	**346**	*i* P	**Pn**	**12 54 14.9**	**-2.1**
ECL				S	**Sn**	**12 54 28.1**	**-3.9**
TTN	**Taitung** baz=3.0	**1.32**	**355**	*e*P	**Pn**	**12 54 17.8**	**-0.9**
TWG	**Pinlang**	**1.40**	**352**	*e*Pn	**Pn**	**12 54 17.6**	**-2.0**
TWG	**Pinlang** baz=352	**1.40**	**352**	P	**Pn**	**12 54 17.5**	**-2.1**
SSD	**Sandimen** baz=341	**1.44**	**336**	*e*P	**Pn**	**12 54 19.6**	**-0.6**
TWM1	**Shoushan** baz=314	**1.60**	**331**	*e*P	**Pn**	**12 54 23.6**	**+1.2**
CHKT	**Chengkung** baz=354	**1.67**	**3**	*e*P	**Pn**	**12 54 23.3**	**-0.1**
CHKT				*e*S	**Sn**	**12 54 42.0**	**-1.4**
SGST	**Jiashian** baz=338	**1.77**	**339**	*e*P	**Pn**	**12 54 25.7**	**+1.0**
SGST				*e*S	**Sn**	**12 54 46.6**	**+0.7**
ELDTW	**Lidau** baz=357	**1.77**	**352**	P	**Pn**	**12 54 23.2**	**-1.6**
CHN1	**Nanshi** baz=338	**1.88**	**339**	P	**Pn**	**12 54 26.8**	**+0.5**
WTP	**Ta-pu** baz=341	**1.91**	**342**	P	**Pn**	**12 54 27.1**	**+0.4**
TWF1	**Yuli** baz=355	**1.92**	**1**	*e*P	**Pn**	**12 54 26.5**	**-0.3**
YULB	**Yu-li**	**1.96**	**1**	*e*Pn	**Pn**	**12 54 28.2**	**+0.9**
YULB				*e*Sn	**Sn**	**12 54 53.8**	**+3.1**
TPUB	**Ta-pu**	**1.96**	**342**	*e*Pn	**Pn**	**12 54 28.0**	**+0.7**
TWK	**Hsinying** baz=337	**1.97**	**339**	*e*P	**Pn**	**12 54 27.5**	**0.0**
CHN4	**Tsaushan** baz=341	**2.02**	**342**	*e*P	**Pn**	**12 54 29.5**	**+1.3**
EHY	**Hungye** baz=357	**2.07**	**1**	*e*P	**Pn**	**12 54 28.8**	**-0.1**
YUS	**Yu-Shan** baz=357	**2.07**	**352**	*e*P	**Pn**	**12 54 29.9**	**+1.0**
ALS	**Alishan** baz=348	**2.12**	**348**	P	**Pn**	**12 54 30.8**	**+1.3**
CHN5	**Tsauling** baz=345	**2.23**	**346**	P	**Pn**	**12 54 32.1**	**+1.1**
SSLB	**Suanglung**	**2.37**	**353**	*e*Pn	**Pn**	**12 54 34.2**	**+1.2**
ESL	**Shilin** baz=358	**2.38**	**4**	*e*P	**Pn**	**12 54 34.1**	**+0.9**
SMLT	**Sun Moon Lake** baz=352	**2.47**	**352**	P	**Pn**	**12 54 35.4**	**+1.0**
TYC	**Yuchr** baz=351	**2.49**	**351**	P	**Pn**	**12 54 35.3**	**+0.6**
WHF	**Hehuan Shan** baz=348	**2.71**	**360**	*e*P	**Pn**	**12 54 37.8**	**+0.1**
WHF				*e*S	**Sn**	**12 55 08.2**	**-0.9**
NACB	**Ninganchiao**	**2.75**	**6**	*e*Pn	**Pn**	**12 54 38.5**	**+0.3**
NACB				*e*Sn	**Sn**	**12 55 09.7**	**-0.6**
TWQ1	**Liyutan** baz=351	**2.94**	**351**	*e*P	**Pn**	**12 54 40.2**	**-0.7**
NNS	**Nan Shan** baz=11	**3.00**	**2**	*e*P	**Pn**	**12 54 44.2**	**+2.5**
ENA	**Nanau**	**3.02**	**8**	*e*P	**Pn**	**12 54 42.4**	**+0.5**
YHNB	**Yeheng**	**3.23**	**2**	*e*Pn	**Pn**	**12 54 45.5**	**+0.7**
YHNB				*e*Sn	**Sn**	**12 55 26.2**	**+4.2**
NSK	**Sanguang** baz=350	**3.23**	**1**	*e*P	**Pn**	**12 54 45.7**	**+0.8**
TWE	**Neicheng** baz=7.0	**3.30**	**6**	*e*P	**Pn**	**12 54 46.4**	**+0.6**
TATO	**Taipei**	**3.54**	**3**	Pn	**Pn**	**12 54 51.1**	**+2.0**
ASAJ	**Asahikawa** comp=Z,44nm,19.2s,MS3.1,baz=124,slow=35	**28.71**	**33**	LR	LR	13 10 19.0	
SONM	**Songino Array** 0.5nm,0.5s,mb3.5,baz=143,slow=8.5,SNR=6.1	**28.95**	**339**	P	**P**	**12 59 52.5**	**+0.1**
MKAR	**Makanchi Array** 0.6nm,0.7s,mb3.4,baz=111,slow=8.5,SNR=4.7	**40.40**	**318**	P	**P**	**13 01 31.5**	**+0.3**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,mb3.7,baz=110,slow=8.4,SNR=5.1	**42.61**	**329**	P	**P**	**13 01 49.5**	**+0.3**
WRA	**Warramunga Arr** 0.2nm,0.5s,mb3.1,baz=344,slow=9.0,SNR=6.3	**43.06**	**162**	P	**P**	**13 01 50.7**	**-2.4**
KURK	**Kurchatov** baz=119,slow=7.6	**44.27**	**322**	P	**P**	**13 02 03.7**	**+1.0**
ASAR	**Alice Springs** 0.1nm,0.3s,mb3.2,baz=346,slow=7.6,SNR=7.6	**46.48**	**164**	P	**P**	**13 02 19.1**	**-1.2**
GNI	**Garni** comp=Z,37nm,18.3s,MS3.6,baz=282,slow=39	**66.45**	**306**	LR	LR	13 36 59.8	

*NEIC **03** 13:01:28.8±1.0,852S×12470E,h35km, Error ellipse: s-maj=46.6km s-min=11.0km az=55.0*
*ISCJB **03** 13:01:29.7±1.5,891S±010×12476E±008,h83km±16km, Error ellipse: s-maj=18.7km s-min=9.5km az=36.4*
*IDC **03** 13:01:32.2±5.5,884S×12442E,h75km±67km,mb3.2/2, mb1 3.6/4,mb1mx3.3/15,mbtmp3.4/4,ML4.0/2, Error ellipse: s-maj=57.4km s-min=33.6km az=28.0*

ISC 03 13:01:32.5±1.3,91S±01×12467E±008,h99km±17km,n8, σ0§73/13,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata** 88nm,0.3s,baz=39,slow=3.7,SNR=110	**1.47**	**222**	P	**Pn**	**13 01 59.5**	**+1.2**
BATI				S	**Sn**	**13 02 17.1**	**-0.7**
KAKA	**Kakadu** 12nm,0.4s	**8.42**	**116**	*e*Pn	**Pn**	**13 03 30.9**	**-0.9**
KAKA				*e*Sn	**Sn**	**13 05 05.6**	**+0.5**
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=316,slow=15,SNR=57	**14.25**	**140**	P	**Pn**	**13 04 54.3**	**+4.6**
WRA				S	**Sn**	**13 07 26.6**	**-0.2**
WRAB	**Tennant Creek** 3.4nm,0.7s	**14.25**	**140**	*e*Pn	**Pn**	**13 04 54.6**	**+4.8**
WRAB				*e*Sn	**Sn**	**13 07 26.6**	**-0.3**
WB2	**Warramunga Arr**	**14.26**	**140**	*e*Pn	**Pn**	**13 04 54.9**	**+5.0**
ASAR	**Alice Springs** 0.4nm,0.3s,baz=322,slow=12,SNR=29	**16.95**	**150**	P	**Pn**	**13 05 29.6**	**+6.0**
ASAR				S	**Sn**	**13 08 32.4**	**+0.5**
	0.2nm,0.3s,baz=317,slow=22,SNR=6.2						
SONM	**Songino Array** 0.2nm,0.4s,baz=156,slow=7.0,SNR=3.2	**58.97**	**346**	P	**P**	**13 11 22.2**	**+0.7**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=140,slow=5.4,SNR=4.9	**67.24**	**330**	P	**P**	**13 12 15.4**	**-0.8**

*ISCJB **03** 13:07:13.7±0.5,3326S±007×17839W±008,h46km, mb4.6/20,MS3.7/6,Error ellipse: s-maj=10.0km s-min=9.3km az=23.7*
*IDC **03** 13:07:14.8±0.6,3311S×17831W,h47km±4km,mb4.3/14, mb1 4.5/14,mb1mx4.4/16,mbtmp4.3/14,MS3.7/6, Ms1 3.7/6,ms1mx3.3/22,Error ellipse: s-maj=17.1km s-min=12.3km az=10.0*
*NEIC **03** 13:07:14.4±0.4,3328S×17825W,mb4.9/9,Error ellipse: s-maj=12.9km s-min=11.2km az=181.0*

ISC 03 13:07:15.5±0.5,3321S±007×17835W±008,h48km, h48km±.9km:pP-P,n65,σ1§03/40,mb4.6/20,MS3.7/6,1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.96**	**5**	Pn	**Pn**	**13 07 60.0**	**-14**
URZ	**Urewera** 5.6nm,0.3s,baz=32,slow=9.0,SNR=34	**6.25**	**215**	P	**Pn**	**13 08 41.3**	**-3.7**
URZ				S	**Sn**	**13 09 54.6**	**-0.5**
SNZO	**South Karori**	**9.80**	**212**	*e*P	**Sn**	**13 11 11.2**	**-11**
RPZ	**Rata Peaks** 1.3nm,0.3s,baz=93,slow=5.0,SNR=9.6	**13.37**	**215**	P	**Pn**	**13 10 16.7**	**-5.6**
RPZ				S	**Sn**	**13 12 36.9**	**-13**
DZM	**Mont Dzumac**	**17.43**	**306**	*e*Pn	**Pn**	**13 11 17.9**	**+2.7**
AFI	**Afiamalu** 33nm,0.9s,baz=189,slow=19,SNR=2.6	**20.12**	**19**	P	**P**	**13 11 41.2**	**-4.2**
RAR	**Rarotonga** comp=Z,12nm,19.4s,baz=258,slow=28	**20.35**	**59**	LR	LR	13 16 47.9	
EIDS	**Eidsvold** 20nm,0.7s,mb4.9	**27.71**	**278**	*e*P	**P**	**13 13 00.2**	**+0.9**
TAU	**Tasmania Unive** 6.6nm,0.7s,mb4.5	**28.55**	**240**	*e*P	**P**	**13 13 07.4**	**+0.9**
PPT	**Papeete** comp=Z,86nm,20.9s,MS3.4,baz=232,slow=31	**30.17**	**66**	LR	LR	13 22 44.2	
STKA	**Stephens Creek** 1.0nm,0.5s,mb4.0,baz=69,slow=6.4,SNR=4.8	**33.65**	**261**	P	**P**	**13 13 52.9**	**+1.3**
STKA				LR	LR	13 27 38.1	
	comp=Z,256nm,18.1s,MS4.0,baz=30,slow=36						
STKA	**Stephens Creek** 3.1nm,0.8s,mb4.3	**33.65**	**261**	*e*P	**P**	**13 13 51.7**	**+0.1**
CTA	**Charters Tower** 27nm,0.6s,mb5.4,baz=113,slow=10,SNR=69	**34.06**	**284**	P	**P**	**13 13 56.6**	**+1.3**
CTA				pP	pP	13 14 08.8	+0.8
	17nm,0.6s,baz=110,slow=12,SNR=7.6						
CTA				LR	LR	13 25 40.1	
	comp=Z,92nm,21.8s,MS3.5,baz=50,slow=32						
CTAO	**Charters Tower** 25nm,0.6s,mb5.3	**34.06**	**284**	*e*P	**P**	**13 13 56.1**	**+0.9**
CTAO				*e*	pP	13 14 08.4	+0.4
COEN	**Coen** 20nm,1.2s,mb4.7	**39.84**	**289**	*e*P	**P**	**13 14 45.1**	**+0.7**
COEN				*e*	pP	13 14 57.2	-0.1
ASAR	**Alice Springs** 6.9nm,0.6s,mb4.6,baz=108,slow=7.4,SNR=130	**42.74**	**270**	P	**P**	**13 15 07.6**	**-0.5**
ASAR				pP	pP	13 15 20.3	-0.8
	13nm,0.8s,baz=112,slow=7.5,SNR=17						
ASAR				S	**S**	**13 21 28.6**	**0.0**
	1.1nm,1.0s,baz=117,slow=16,SNR=5.3						
WB2	**Warramunga Arr**	**43.97**	**275**	*e*P	**P**	**13 15 16.0**	**-2.0**
WB2				*e*	pP	13 15 30.0	-1.1
WRAB	**Tennant Creek** 19nm,0.8s,mb4.9	**43.98**	**275**	*e*P	**P**	**13 15 17.2**	**-0.9**
WRAB				*e*	pP	13 15 30.0	-1.2
WRA	**Warramunga Arr** 17nm,0.6s,mb4.9,baz=116,slow=7.6,SNR=141	**43.98**	**275**	P	**P**	**13 15 17.5**	**-0.7**
WRA				pP	pP	13 15 30.2	-1.0
	18nm,0.8s,baz=116,slow=7.6,SNR=15						
WRA				S	**S**	**13 21 45.5**	**-1.3**
	0.6nm,1.0s,baz=123,slow=12,SNR=2.9						
SBA	**Scott Base** 17nm,1.3s,mb4.7	**45.22**	**184**	*e*P	**P**	**13 15 29.8**	**+2.5**
SBA				*e*	pP	13 15 42.6	+2.2
KAKA	**Kakadu**	**49.19**	**283**	*e*P	Px	13 15 48.4	
CASY	**Casey** 14nm,0.8s,mb4.9	**52.53**	**209**	*e*P	**P**	**13 16 23.6**	**+0.1**
QSPA	**South Pole Qui** 7.7nm,1.0s,mb4.7,baz=71,slow=1.4,SNR=25	**56.91**	**180**	P	**P**	**13 16 56.0**	**+1.0**
QSPA				pP	pP	13 17 08.7	+0.3
	14nm,0.8s,baz=49,slow=1.6,SNR=15						
GUMO	**Guam** comp=Z,44nm,19.6s,MS3.6,baz=87,slow=31	**58.29**	**317**	LR	LR	13 37 39.0	
KAPI	**Kappang** 2.3nm,0.3s,mb4.7,baz=97,slow=11,SNR=4.0	**63.85**	**282**	P	**P**	**13 17 42.1**	**-1.2**
MAW	**Mawson** 4.6nm,0.8s,mb4.5,baz=110,slow=8.7,SNR=8.2	**69.58**	**201**	P	**P**	**13 18 19.3**	**+0.3**
MAW	**Mawson** 44nm,1.6s,mb5.1	**69.58**	**201**	*e*P	**P**	**13 18 18.3**	**-0.7**
MAW				*e*pP	pP	13 18 33.1	+0.3
SYO	**Syowa Base**	**74.32**	**193**↑	*e*P	**P**	**13 18 46.6**	**-0.7**
VNA3	**Neumayer Olymp**	**75.53**	**176**	*e*	**P**	**13 18 53.8**	**-0.5**
VNA3				*e*	pP	13 19 07.3	-0.9
VNA3				*e*		13 19 20.2	
VNA2	**Neumayer--Watz** baz=176,slow=6.0	**75.96**	**177**	*e*	**P**	**13 18 56.8**	**+0.1**
VNA2				*e*	pP	13 19 10.7	0.0
VNA2				*e*		13 19 23.0	
VNA1	**Neumayer--Stat**	**76.19**	**177**	*e*	**P**	**13 18 59.0**	**+1.0**
VNA1				*e*	pP	13 19 12.4	+0.4
VNA1				*e*		13 19 24.4	
MJAR	**Matsushiro Arr** 1.8nm,1.1s,mb3.9,baz=164,slow=6.6,SNR=4.3	**80.38**	**326**	P	**P**	**13 19 20.9**	**-0.6**
PLCA	**Paso Flores** 7.0nm,0.9s,mb4.6,baz=239,slow=7.8,SNR=7.9	**80.82**	**133**	P	**P**	**13 19 23.7**	**-0.3**
KSRS	**Korea Array** 1.3nm,0.7s,mb4.3,baz=138,slow=5.3,SNR=4.6	**86.30**	**320**	P	**P**	**13 19 52.8**	**+0.8**
KSRS				LR	LR	13 56 09.8	
	comp=Z,29nm,18.8s,MS3.7,baz=116,slow=34						
PETK	**Petropavlovsk-** 5.9nm,1.0s,mb4.8,baz=141,slow=2.5,SNR=4.4	**88.45**	**346**	P	**P**	**13 20 01.9**	**0.0**
PETK				pP	pP	13 20 14.7	-1.4
	16nm,1.1s,baz=213,slow=5.1,SNR=4.1						
PETK	**Petropavlovsk-**	**88.45**	**346**	P	**P**	**13 20 01.9**	**0.0**
PETK				pP	pP	13 20 14.7	-1.4
NVAR	**Mina Array Bea** 1.8nm,0.8s,mb4.4,baz=221,slow=8.1,SNR=11	**90.49**	**43**	P	**P**	**13 20 11.9**	**0.0**
NVAR				pP	pP	13 20 24.9	-1.2
	1.9nm,0.9s,baz=218

comp=Z,1.1nm,0.7s,baz=140,slow=2.6,SNR=5.4
DPC Dobruska-Polom 159.74 332 *e*PKP PKPab 13 27 47.8 +0.4
TORD Torodi Ar. Bea 160.03 180 PKP PKPdf 13 27 10.1 +0.3
comp=Z,0.7nm,0.9s,baz=228,slow=1.8,SNR=3.8
TORD PKPab PKPab 13 27 48.9 -0.5
comp=Z,2.8nm,0.9s,baz=180,slow=2.9,SNR=8.6
CLL Collm 160.10 339 *i* PKPab PKPab 13 27 48.4 -0.5
comp=Z,33nm,1.7s
CLL *i* pPKPab pPKPab 13 28 01.2 -2.1
NKC Novy Kostel 161.21 338 *e*PKP PKPab 13 27 54.0 +0.2
KHC Kasperske Hory 161.77 334 *e*PKP PKPab 13 27 56.2 -0.1
GERES GERESS Array B 161.96 334 PKPab PKPab 13 27 56.1 -1.0
comp=Z,1.0nm,0.7s,baz=44,slow=4.1,SNR=6.7
GRF Grafenberg Arr 162.06 339 *e*P PKPab 13 27 57.9 +0.4
comp=Z,23nm,1.4s
GRF *e*pP pPKPab 13 28 09.6 -2.3
DAVOX Davos/Dischmat 165.06 338 PKPab PKPab 13 28 09.9 -0.9
comp=Z,3.2nm,0.9s,baz=300,slow=4.2,SNR=3.3

ISCJB ***03*** *13:07:43.9±1.3, 54N±0.1×1262E±0.1, h92km±24km, mb3.6/3, Error ellipse: s-maj=23.7km s-min=17.2km az=44.5*
IDC ***03*** *13:07:43.2±7.1, 566N×12683E, h71km±132km, mb3.5/3, mb1 3.7/3, mb1mx3.2/18, mbtmp3.5/3, Error ellipse: s-maj=168.7km s-min=73.6km az=41.0*
MAN ***03*** *13:07:44, 559N×12634E, h115km, mb4.3, ML3.1, MS2.9*
ISC 03 13:07:44.6±1.6, 54N±01×1263E±01, h77km±30km, n9, σ0s56/13, mb3.6/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.46**	**298**	*e*P	**Pn**	**13 08 09.1**	**-0.2**
GSPH				*e*S	**Sn**	**13 08 28.1**	**0.0**
MATI	**Mati**	**1.54**	**0**	*e*P	**Pn**	**13 08 09.3**	**-1.0**
MATI				*e*S	**Sn**	**13 08 30.6**	**+0.8**
DAV	**Davao City (W)**	**1.79**	**338**	P	**Pn**	**13 08 13.6**	**-0.1**
	10nm,0.3s,baz=210,slow=14,SNR=3.2						
DAV				S	**Sn**	**13 08 36.3**	**+0.6**
	50nm,0.3s,baz=352,slow=23,SNR=3.8						
BUKP	**Musuan**	**2.73**	**334**	*e*P	**Pn**	**13 08 26.1**	**-0.2**
BUKP				*e*S	**Sn**	**13 08 57.4**	**-1.0**
CGP	**Cagayan de Oro**	**3.41**	**333**	*e*P	**Pn**	**13 08 35.6**	**+0.1**
PAGZ	**Pagadian**	**3.75**	**311**	*e*P	**Pn**	**13 08 41.0**	**+0.9**
WRA	**Warramunga Arr**	**26.41**	**163**	P	**P**	**13 13 13.9**	**-0.2**
	0.4nm,0.3s,mb3.3,baz=345,slow=11,SNR=13						
ASAR	**Alice Springs**	**29.84**	**166**	P	**P**	**13 13 44.8**	**+0.2**
	0.7nm,0.6s,mb3.5,baz=344,slow=6.9,SNR=14						
STKA	**Stephens Creek**	**39.85**	**159**	P	**P**	**13 15 10.9**	**+0.2**
	0.9nm,0.4s,mb4.0,baz=344,slow=8.4,SNR=4.1						

ISCJB ***03*** *13:33:52.6±0.8, 3832N±005×3072E±005, h6km±7km, Error ellipse: s-maj=9.6km s-min=5.3km az=158.5*
ISK ***03*** *13:33:52.6, 3836N×3071E, h16km, MD2.7*
CSEM ***03*** *13:33:52.2±0.1, 3834N×3069E, h15km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.4km az=4.0*
DDA ***03*** *13:33:53.5, 3834N×3065E, h7km±2km, Md2.5*
ISC 03 13:33:53.7±0.6, 3838N±005×3066E±005, h19km±5km, n10, σ0s85/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHUT	**Suhut-Afyon**	**0.20**	**334**	*e*PG	**Pg**	**13 33 58.4**	**-0.3**
SHUT				*e*SG	**Sg**	**13 34 01.9**	**-0.2**
BOLV	**Bolvadin**	**0.41**	**33**	*i* P	**Pg**	**13 34 02.5**	**+0.3**
BOLV				*i* S	**Sg**	**13 34 09.1**	**+1.2**
TKTP	**Tekketepe**	**0.43**	**219**	*i* P	**Pg**	**13 34 02.0**	**-0.5**
TKTP				*i* S	**Sg**	**13 34 09.5**	**+1.0**
ALT	**Altintas**	**0.81**	**328**	*e*PG	**Pg**	**13 34 08.9**	**-0.6**
KHL	**Karahalli**	**0.90**	**267**	*e*PG	**Pg**	**13 34 10.8**	**-0.4**
KHAL	**Karahalli**	**0.92**	**270**	*i* P	**Pb**	**13 34 10.8**	**-0.3**
KHAL				*i* S	**Sb**	**13 34 23.9**	**+1.0**
KIZT	**Kizilcal**	**1.08**	**62**	*e*PG	**Pg**	**13 34 13.3**	**-1.3**
KDHN	**Kadinhani**	**1.15**	**82**	*i* P	**Pn**	**13 34 15.1**	**+0.4**
KDHN				*i* S	**Sb**	**13 34 32.4**	**+2.9**
LADK	**Ladik-KONYA**	**1.35**	**97**	*e*PN	**Pn**	**13 34 16.9**	**-0.6**
LADK				*e*SN	**Sn**	**13 34 34.3**	**-0.6**
KONT	**Konya--Tatoy**	**1.40**	**107**	*e*PN	**Pn**	**13 34 17.9**	**-0.4**

ISCJB ***03*** *13:52:03.3±0.4, 5524S±006×2941W±0.1, h10km, mb4.6/18, MS4.3/14, Error ellipse: s-maj=9.9km s-min=8.2km az=41.4*
IDC ***03*** *13:52:03.5±0.6, 5530S×2939W, h0km, mb4.4/12, mb1 4.4/12, mb1mx4.3/18, mbtmp4.4/12, MS4.3/15, Ms1 4.3/15, ms1mx4.2/21, Error ellipse: s-maj=19.8km s-min=15.9km az=0.0*
GCMT ***03*** *13:52:11.4±0.2, 5540S×2964W, h28km±1km, MW5.2/78, Moment Tensor Solution. s43,c57; s78,c126; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr=0.02±.02; Mθθ=0.63±.02; Mφφ=0.65±.02; Mrθ=0.14±.04; Mrφ=0.35±.02; Mθφ=0.38±.04; Best double couple: M=0.82000×10^17 NP1:φs=327.00000°, δ71.00000°, λ166.00000°. NP2: φs=61.00000°, δ77.00000°, λ19.00000°. Principal axes: T 0.9140, Plg23.0000°, Azm285.0000°; N -0.1860, Plg67.0000°, Azm95.0000°; P -0.7270, Plg4.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***03*** *13:52:11.4±2.7, 5528S×2944W, h63km±24km, mb4.8/10 Error ellipse: s-maj=13.4km s-min=9.3km az=185.0*
ISC 03 13:52:05.2±0.4, 5526S±006×294W±01, h10km, n66, σ0s95/30, mb4.6/18, MS4.3/14, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFI	**East Falkland**	**17.37**	**270**	*e*Pn	**Pn**	**13 56 05.1**	**-2.4**
	74nm,0.8s						
VNA1	**Neumayer--Stat**	**18.01**	**157**	*e*P	**Pn**	**13 56 15.7**	**+0.5**
VNA1				*e*		13 56 18.6	
VNA1				*e*		13 56 23.1	
VNA3	**Neumayer Olymp**	**18.17**	**159**	*e*P	**Pn**	**13 56 17.5**	**+0.4**
VNA3				*e*		13 56 19.8	
VNA3				*e*		13 56 25.3	
VNA2	**Neumayer--Watz**	**18.41**	**157**	*e*P	**Pn**	**13 56 20.0**	**-0.1**
	baz=309,slow=12						
VNA2				*e*		13 56 22.4	
VNA2				*e*		13 56 27.0	
PMSA	**Palmer Station**	**19.49**	**227**	P	**Pn**	**13 56 36.3**	**+3.1**
	1.7nm,0.3s,baz=90,slow=9.3,SNR=4.5						
PMSA				LR	LR	14 03 05.4	
	comp=Z,722nm,18.2s,baz=250,slow=34						
USHA	**Ushuaia**	**22.17**	**255**	P	**P**	**13 57 01.6**	**+0.6**
	71nm,0.8s,mb5.1,baz=66,slow=9.6,SNR=18						
MAIT	**Maitri**	**23.59**	**147**	*e*P	**P**	**13 57 13.6**	**-2.2**
PLCA	**Paso Flores**	**30.62**	**281**	P	**P**	**13 58 18.1**	**-1.1**
	2.9nm,0.8s,mb4.2,baz=147,slow=7.9,SNR=3.8						
PLCA				LR	LR	14 09 30.7	
	comp=Z,253nm,22.0s,MS3.8,baz=126,slow=34						
PLCA	**Paso Flores**	**30.62**	**281**	*e*P	**P**	**13 58 17.8**	**-1.4**
	11nm,1.1s,mb4.6						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**13 58 57.1**	**+0.1**
	3.7nm,0.6s,mb4.5,baz=192,slow=4.4,SNR=34						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**13 58 57.1**	**+0.1**
LCO	**Las Campanas**	**39.43**	**295**	*e*P	**P**	**13 59 34.9**	**-0.3**
	34nm,0.8s,mb5.1						
MAW	**Mawson**	**41.53**	**145**	P	**P**	**13 59 50.9**	**-1.2**
	1.7nm,0.4s,mb4.0,baz=211,slow=5.0,SNR=6.6						
MAW				LR	LR	14 13 53.0	
	comp=Z,484nm,21.9s,MS4.3,baz=250,slow=32						
SUR	**Sutherland**	**41.68**	**78**	P	**P**	**13 59 54.7**	**+0.9**
	6.9nm,0.7s,mb4.4						
BDFB	**Brasilia**	**42.06**	**333**	P	**P**	**13 59 56.8**	**-0.2**
	3.6nm,0.8s,mb4.0,baz=151,slow=18,SNR=7.0						
LVC	**Limon Verde**	**43.81**	**302**	*e*P	**P**	**14 00 12.0**	**+0.9**
	37nm,0.6s,mb5.3						
SBA	**Scott Base**	**46.77**	**185**	*e*P	**P**	**14 00 34.6**	**+0.6**
	37nm,1.8s,mb5.0						
BOSA	**Boshof**	**47.02**	**79**	P	**P**	**14 00 36.3**	**-0.2**
	1.9nm,0.5s,mb4.3,baz=210,slow=7.7,SNR=9.4						
BOSA				LR	LR	14 16 15.8	
	comp=Z,583nm,18.6s,MS4.6,baz=222,slow=31						
LPAZ	**La Paz**	**48.89**	**307**	P	**P**	**14 00 52.5**	**+1.4**
	43nm,0.6s,mb5.7,baz=140,slow=6.0,SNR=167						
LPAZ				LR	LR	14 23 05.1	
	comp=Z,139nm,18.7s,MS4.0,baz=301,slow=38						
LPAZ	**La Paz**	**48.89**	**307**	*i* P	**P**	**14 00 52.4**	**+1.3**
	54nm,0.7s,mb5.7						
LBTB	**Lobatse**	**50.01**	**76**	P	**P**	**14 00 59.9**	**+0.2**
	4.4nm,0.6s,mb4.7,baz=234,slow=7.9,SNR=8.3						
LBTB				LR	LR	14 18 28.5	
	comp=Z,318nm,18.6s,MS4.3,baz=223,slow=32						
TSUM	**Tsumeb**	**50.43**	**64**	P	**P**	**14 01 04.5**	**+1.7**
	2.2nm,0.7s,mb4.3,baz=197,slow=4.4,SNR=5.9						
TSUM				LR	LR	14 18 49.2	
	comp=Z,252nm,18.4s,MS4.3,baz=321,slow=32						
TSUM	**Tsumeb**	**50.43**	**64**	*e*P	**P**	**14 01 03.2**	**+0.4**
	2.3nm,0.7s,mb4.3						
MATP	**Matopo**	**55.27**	**75**	P	**P**	**14 01 38.8**	**+0.2**
	3.4nm,0.5s,mb4.6,baz=215,slow=7.1,SNR=11						
MATP				LR	LR	14 20 23.4	
	comp=Z,181nm,18.6s,MS4.2,baz=215,slow=31						
LSZ	**Lusaka**	**59.29**	**71**	P	**P**	**14 02 06.5**	**-0.5**
	0.8nm,0.4s,mb4.1,baz=266,slow=5.5,SNR=2.0						
LSZ	**Lusaka**	**59.29**	**71**	*e*P	**P**	**14 02 06.7**	**-0.3**
	5.5nm,1.0s,mb4.5						
DBIC	**Dimbokro**	**65.00**	**27**	P	**P**	**14 02 45.1**	**-0.2**
	3.4nm,0.9s,mb4.4,baz=159,slow=8.8,SNR=2.2						
DBIC				LR	LR	14 25 42.4	
	comp=Z,145nm,18.2s,MS4.2,baz=195,slow=31						
OTAV	**Otavalo**	**68.17**	**306**	*e*P	**P**	**14 03 05.9**	**+0.3**
	5.7nm,0.7s,mb4.7						
ROSC	**El Rosal**	**70.43**	**312**	LR	LR	14 33 48.2	
	comp=Z,165nm,18.4s,MS4.3,baz=5.7,slow=36						
TOA0	**Torodi Ar. Sit**	**73.02**	**32**	*e*P	**P**	**14 03 34.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**73.02**	**32**	P	**P**	**14 03 34.3**	**-0.7**
	2.1nm,0.6s,mb4.2,baz=199,slow=6.6,SNR=20						
TORD				LR	LR	14 30 19.4	
	comp=Z,322nm,18.3s,MS4.6,baz=210,slow=31						
KMBO	**Kilima Mbogo**	**75.95**	**71**	LR	LR	14 34 18.6	
	comp=Z,371nm,18.7s,MS4.7,baz=129,slow=33						
RKT	**Rikitea**	**79.70**	**244**	*e*LR	LR	14 28 55.5	
	200nm,31.5s						
TBI	**Tubuai**	**86.58**	**233**	*e*LR	LR	14 32 26.8	
	182nm,24.5s						
CMIG	**Matias Romero**	**90.70**	**300**	LR	LR	14 41 05.3	
	comp=Z,108nm,19.7s,MS4.3,baz=314,slow=32						
PPT	**Papeete**	**91.63**	**236**	*e*LR	LR	14 34 41.8	
	232nm,28.2s						
STKA	**Stephens Creek**	**92.87**	**172**	LR	LR	14 44 54.7	
	comp=Z,233nm,18.8s,MS4.7,baz=197,slow=34						
KEST	**Kesra**	**96.52**	**31**	LR	LR	14 45 38.0	
	comp=Z,136nm,18.4s,MS4.5,baz=193,slow=33						
ASAR	**Alice Springs**	**100.11**	**164**	P	Pdif	14 05 49.0	-2.1
	0.2nm,0.7s,baz=190,slow=4.7,SNR=3.9						
ASAR				PKKPbc	PKKPbc	14 22 07.5	+1.0
	0.3nm,0.8s,baz=36,slow=2.7,SNR=5.2						
WRA	**Warramunga Arr**	**103.83**	**164**	PKKPbc	PKKPbc	14 21 56.4	+0.7
	0.3nm,0.8s,baz=359,slow=2.8,SNR=6.9						
WUAZ	**Wupatki**	**114.14**	**298**	*e*Pdif	Pdif	14 06 52.9	-0.6
TMUT	**Trail Mountain**	**116.99**	**300**	*e*PKPdf	PKPdf	14 10 46.6	-2.8
NVAR	**Mina Array Bea**	**119.92**	**295**	PKP	PKPdf	14 10 56.1	+1.0
	0.7nm,0.7s,baz=144,slow=3.3,SNR=4.9						
WVOR	**Wild Horse Val**	**123.06**	**298**	*e*PKPdf	PKPdf	14 11 00.4	-0.5
BMO	**Blue Mountains**	**124.15**	**301**	*e*PKPdf	PKPdf	14 11 02.4	-0.6
CMAR	**Chiang Mai Arr**	**126.53**	**112**	PKP	PKPdf	14 11 08.6	+0.2
	2.1nm,1.1s,baz=228,slow=3.6,SNR=7.3						
AML	**Almayashu**	**130.13**	**71**	*e*PKPdf	PKPdf	14 11 14.8	+0.3
ARCES	**ARCESS Array B**	**130.68**	**22**	PKP	PKPdf	14 11 15.2	+0.5
	8.2nm,1.1s,baz=259,slow=0.9,SNR=4.7						
YKA	**Yellowknife Ar**	**134.74**	**319**	PKP	PKPdf	14 11 22.1	-0.4
	1.8nm,0.7s,baz=132,slow=2.2,SNR=6.4						
ZAA0	**Zalesovo Array**	**143.15**	**64**	*e*PKPdf		14 11 34.6	
ZALV	**Zalesovo Beam**	**143.15**	**64**	PKhKP		14 11 34.7	
	2.3nm,0.7s,baz=224,slow=4.1,SNR=8.6						
HYT	**Haines Junctio**	**143.31**	**309**	*e*PKPdf	PKPdf	14 11 35.4	-2.7
INK	**Inuvik**	**144.40**	**322**	*e*PKPdf	PKPdf	14 11 37.5	-2.3
DAWY	**Dawson**	**145.33**	**313**	*e*PKPdf	PKPdf	14 11 40.6	-1.0
EGAK	**Eagle**	**146.28**	**314**	*e*PKPbc	PKPbc	14 11 43.2	-1.3
SLKM	**Skilak Lake**	**149.05**	**304**	*e*PKPbc	PKPbc	14 11 52.1	0.0
COLA	**College**	**149.07**	**313**	*e*PKPbc	PKPbc	14 11 50.6	-1.4
MCK	**McKinley**	**149.30**	**311**	*e*PKPbc	PKPbc	14 11 50.4	-2.1
TRF	**Thorofare Moun**	**149.82**	**310**	*e*PKPbc	PKPbc	14 11 53.4	-0.5
KTH	**Kantishna Hill**	**150.12**	**310**	*e*PKPbc	PKPbc	14 11 54.2	-0.4
BPAW	**Bear Paw Mtn.**	**150.26**	**311**	*e*PKPbc	PKPbc	14 11 54.0	-0.9
COLD	**Coldfoot**	**150.38**	**317**	*e*PKPbc	PKPbc	14 11 55.0	-0.1
PPLA	**Purkeypile**	**150.55**	**308**	*e*PKPbc	PKPbc	14 11 55.2	-0.4
CHUM	**Lake Minchumin**	**150.80**	**310**	*e*PKPbc	PKPbc	14 11 55.3	-0.9
IMA2	**Indian Mountai**	**151.66**	**315**	*e*PKPbc	PKPbc	14 11 58.0	-0.2
SONM	**Songino Array**	**151.94**	**87**	PKPbc	PKPbc	14 11 58.8	-0.5
	2.3nm,0.5s,baz=223,slow=3.6,SNR=14						

MOS ***03*** *14:00:28.6±0.8, 5671N×15697W, h10km, mb4.9/7, Error ellipse: s-maj=16.5km s-min=7.0km az=85.2*
ISCJB ***03*** *14:00:37.3±0.4, 5681N±003×15682W±004, h74km±3km, mb4.4/63, Error ellipse: s-maj=4.6km s-min=3.2km az=18.2*
BJI ***03*** *14:00:37.0, 5660N×15660W, h63km, mB5.1, mb4.8, Ms4.6, Msz4.2*
IDC ***03*** *14:00:40.0±0.6, 5686N×15671W, h87km±4km, mb4.1/21, mb1 4.3/23, mb1mx4.1/29, mbtmp4.1/23, MS4.3/3, Ms1 4.3/3, ms1mx3.1/38, Error ellipse: s-maj=15.3km s-min=8.0km az=172.0*
NEIC ***03*** *14:00:40.0, 5659N×15658W, h73km, mb4.7/6, After AEIC.*
ISC 03 14:00:38.7±0.3, 5679N±003×15686W±004, h72km±3km, h82km±4.0km:pP-P, n277, σ0s92/287, mb4.4/63, 67C-68D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGN	**Chignik**	**0.99**	**241**	P	**Pn**	**14 00 58.1**	**+0.9**
SII	**Sitkinak Islan**	**1.49**	**98**	P	**Pn**	**14 01 02.2**	**-1.4**
SII				S	**Sn**	**14 01 20.2**	**-2.2**
OHAK	**Old Harbor**	**2.00**	**76**	P	**Pn**	**14 01 09.3**	**-1.0**
OHAK				S	**Sn**	**14 01 31.4**	**-3.1**
SDPT	**Sand Point**	**2.49**	**236**	P	**Pn**	**14 01 17.5**	**+0.6**
SDPT				S	**Sn**	**14 01 47.5**	**+1.3**
KDAK	**Kodiak Island**	**2.53**	**65**	P	**Pn**	**14 01 16.8**	**-0.7**
	33nm,0.3s,baz=226,slow=5.1,SNR=2234						
KDAK				S	**Sn**	**14 01 44.5**	**-2.7**
	758nm,0.3s,baz=129,slow=19,SNR=100						
KDAK	**Kodiak Island**	**2.53**	**65**	P	**Pn**	**14 01 17.0**	**-0.5**
KDAK				S	**Sn**	**14 01 45.3**	**-1.9**
AUL	**Augustine Lava**	**3.18**	**33**	P	**Pn**	**14 01 27.7**	**+1.5**
SVW2	**Sparrevohn**	**4.38**	**8**	P	**Pn**	**14 01 45.0**	**+2.4**
SLKM	**Skilak Lake**	**5.09**	**40**	P	**Pn**	**14 01 52.6**	**+0.2**
SEW	**Seward**	**5.12**	**46**	P	**Pn**	**14 01 52.0**	**-0.7**
RC01	**Rabbit Creek A**	**5.67**	**38**	P	**Pn**	**14 02 00.3**	**0.0**
SKT	**Skwentna**	**5.88**	**25**	P	**Pn**	**14 02 04.5**	**+1.4**
TT01	**Tatalina**	**6.16**	**4**	P	**Pn**	**14 02 09.0**	**+2.2**
PMR	**Palmer**	**6.24**	**36**	P	**Pn**	**14 02 08.4**	**+0.4**
PPLA	**Purkeypile**	**6.57**	**19**	P	**Pn**	**14 02 14.8**	**+2.3**
SML	**Sawmill**	**6.66**	**37**	P	**Pn**	**14 02 13.7**	**-0.1**
KTH	**Kantishna Hill**	**7.40**	**21**	P	**Pn**	**14 02 25.2**	**+1.3**
TRF	**Thorofare Moun**	**7.45**	**23**	P	**Pn**	**14 02 24.8**	**+0.3**
CHUM	**Lake Minchumin**	**7.47**	**16**	*e*Pn	**Pn**	**14 02 26.8**	**+2.0**
	27um,1.2s						
BPAW	**Bear Paw Mtn.**	**7.89**	**19**	P	**Pn**	**14 02 31.4**	**+0.9**
NIKO	**Nikolski**	**7.90**	**246**	*e*Pn	**Pn**	**14 02 30.0**	**-0.7**
	17nm,0.4s						
NIKO				*e*Sn	**Sn**	**14 03 54.5**	**-3.9**
GCSA	**Galena City Sc**	**7.99**	**360**	P	**Pn**	**14 02 34.5**	**+2.6**
MCK	**McKinley**	**8.00**	**26**	P	**Pn**	**14 02 32.2**	**+0.2**
PAX	**Paxson**	**8.43**	**38**	P	**Pn**	**14 02 38.0**	**+0.1**
MENT	**Mentasta**	**9.03**	**41**	*e*P	**Pn**	**14 02 46.6**	**+0.5**
COLA	**College**	**9.22**	**25**	P	**Pn**	**14 02 47.4**	**-1.3**
IM3	**Indian Mountai**	**9.35**	**8**	P	**Pn**	**14 02 52.0**	**+1.6**
IL1	**Eielson Array**	**9.37**	**27**	P	**Pn**	**14 02 49.0**	**-1.6**
ILB	**Eielson Array**	**9.37**	**27**	P	**Pn**	**14 02 49.0**	**-1.6**
IMA2	**Indian Mountai**	**9.44**	**8**	*e*P	**Pn**	**14 02 54.2**	**+2.6**
PNL	**Peninsula**	**9.65**	**65**	*e*Pn	**Pn**	**14 02 53.6**	**-0.9**
	159nm,0.4s						
BCA3	**Beaver Creek A**	**9.82**	**44**	P	**Pn**	**14 02 56.7**	**-0.2**
TNA	**Tin City**	**10.28**	**333**	*e*Pn	**Pn**	**14 03 02.1**	**-1.0**
	11nm,0.8s						
HYT	**Haines Junctio**	**10.81**	**60**	*e*P	**Pn**	**14 03 09.5**	**-0.8**
HYT				*e*Sn	**Sn**	**14 04 52.4**	**-17**
COLD	**Coldfoot**	**10.93**	**14**	*e*Pn	**Pn**	**14 03 10.6**	**-1.3**
	5.2nm,0.6s						
EGAK	**Eagle**	**11.06**	**37**	*e*Pn	**Pn**	**14 03 13.6**	**-0.2**
	15nm,0.6s						
DAWY	**Dawson**	**11.27**	**42**	*e*Pn	**Pn**	**14 03 16.8**	**+0.3**
SKAG	**Skagway**	**11.68**	**68**	*e*P	**Pn**	**14 03 22.8**	**+0.6**
	35nm,0.9s						
ADK	**Adak**	**12.55**	**255**	*e*Pn	**Pn**	**14 03 34.2**	**+0.1**
	7.4nm,0.3s						
ADK				*e*Sn	**Sn**	**14 05 50.1**	**-1.8**
ADK	**Adak**	**12.55**	**255**	*e*P	**Pn**	**14 03 34.2**	**+0.1**
ADK				*e*		14 05 50.1	
ADK				pmax	pmax		
	comp=Z,7.0nm,0.3s						

DLBC Dease Lake 14.44 72 P **Pn 14 03 58.8 -0.3**
comp=Z,1.2nm,0.3s,baz=227,slow=9.1,SNR=18
DLBC S **Sn 14 06 33.8 -3.8**
comp=Z,0.7nm,0.3s,baz=234,slow=23,SNR=6.8
DLBC Dease Lake 14.44 72 *e*Pn **Pn 14 03 58.1 -0.9**
DLBC *e*Sn **Sn 14 06 34.1 -3.5**
INK Inuvik 15.64 33 *e*Pn **Pn 14 04 12.8 -1.7**
comp=Z,2μm,0.5s
INK Inuvik 15.64 33 *e*P **Pn 14 04 12.8 -1.7**
INK pmax pmax
comp=Z,2μm,0.5s
BILL Bilibino 20.08 319 *e*P **P 14 05 08.2 +2.4**
BILL *i* 14 05 33.3
BILL pmax pmax
comp=Z,12nm,1.7s
YKA Yellowknife Ar 21.78 57 P **P 14 05 22.9 -1.2**
comp=Z,8.6nm,0.4s,mb4.5,baz=273,slow=10,SNR=89
YKA LR LR 14 13 39.6
comp=Z,29nm,20.9s,baz=95,slow=36
YKA Yellowknife Ar 21.78 57 P **P 14 05 22.9 -1.2**
YKA LR LR 14 13 39.6
B05A Bryant 22.59 97 ⇓P **P 14 05 32.6 -0.2**
baz=22
A07A Ashnola River, 23.08 94 ⇑P **P 14 05 37.8 -0.2**
baz=23
B07A Winthrop 23.56 95 ⇓P **P 14 05 42.8 +0.5**
baz=23,SNR=5.5
A08A Turner Farm, O 23.75 93 ⇑P **P 14 05 44.3 +0.3**
baz=23
B08A Colville Reser 24.05 94 ⇑P **P 14 05 46.0 -0.7**
baz=24,SNR=8.6
A09A Danville 24.11 93 ⇓P **P 14 05 46.6 -0.8**
baz=24
C08A Higginbotham F 24.54 95 ⇓P **P 14 05 50.6 -0.6**
baz=24,SNR=5.0
B09A Rice 24.66 93 ⇓P **P 14 05 51.8 -0.5**
baz=24
EDM Edmonton 24.89 80 *e*P **P 14 05 53.3 -1.0**
OD2 Odessa Site #2 24.95 96 *e*P **P 14 05 54.3 -0.7**
D08A Wolliman Farm, 25.03 97 ⇓P **P 14 05 55.3 -0.5**
baz=25
A11A Hall Mountain, 25.34 91 ⇑P **P 14 05 59.2 +0.7**
baz=25
D09A Jones Farm, Ri 25.37 96 ⇓P **P 14 05 57.0 -1.7**
baz=25
PET Petropavlovsk 25.50 281 *e*P **P 14 05 59.6 -0.3**
comp=Z,56nm,1.0s,mb5.0
PET Petropavlovsk 25.50 281 *e*P **P 14 05 59.6 -0.3**
PET pmax pmax
comp=Z,56nm,1.0s,mb5.0
B11A Sandpoint 25.63 92 ⇑P **P 14 06 01.4 +0.3**
baz=25
H06A Lindquist Farm 25.73 102 ⇑P **P 14 06 02.8 +0.8**
baz=25
G07A Ruggs Ranch, H 25.74 101 ⇑P **P 14 06 03.5 +1.3**
baz=25
A12A Yaak River Ran 25.75 90 ⇑P **P 14 06 02.9 +0.7**
baz=25
E09A Wood Farm, Sta 25.79 97 ⇑P **P 14 06 02.7 +0.2**
baz=26
D10A Wagner Farm, O 25.94 95 P **P 14 06 03.6 -0.3**
baz=26,SNR=7.7
PEA0B Petropavlovsk- 25.98 281 *e*P **P 14 06 03.8 -0.5**
PETK Petropavlovsk- 25.98 281 P **P 14 06 03.7 -0.5**
comp=Z,5.9nm,0.4s,mb4.3,baz=71,slow=13,SNR=49
G08A Pilot Rock 26.11 100 ⇑P **P 14 06 05.7 +0.2**
baz=26
H07A Lands Inn, Kim 26.24 102 ⇑P **P 14 06 07.4 +0.8**
baz=26
I06A Prineville 26.32 103 ⇑P **P 14 06 08.8 +1.5**
baz=26
E10A Myers Farm, Un 26.37 96 ⇓P **P 14 06 06.8 -1.0**
baz=26,SNR=5.0
D11A Klaveano Farm, 26.46 94 P **P 14 06 08.1 -0.5**
baz=26,SNR=6.4
I07A Izee 26.61 102 ⇓P **P 14 06 11.1 +1.2**
baz=26
F10A Beach Ranch, E 26.62 97 ⇓P **P 14 06 08.4 -1.7**
baz=26
F10A ⇑P 14 06 10.4
baz=26
B13A Whitefish 26.71 90 ⇑P **P 14 06 11.3 +0.4**
baz=26
G09A Cove 26.76 99 ⇓P **P 14 06 12.2 +0.9**
baz=26
E11A Bogner Ranch, 26.94 95 ⇓P **P 14 06 12.1 -0.9**
baz=27
A14A Double T Ranch 26.95 88 ⇑P **P 14 06 12.3 -0.8**
baz=27
G10A Bishop Farm, J 27.11 98 P **P 14 06 14.7 +0.2**
baz=27,SNR=7.5
E12A Beaver Dam Sad 27.26 95 P **P 14 06 15.9 +0.1**
baz=27,SNR=9.1
F11A Grangeville 27.26 96 P **P 14 06 15.4 -0.4**
baz=27,SNR=5.2
A15A Johnson Ranch, 27.33 88 ⇑P **P 14 06 16.1 -0.3**
baz=27
C14A Swan Lake 27.46 91 ⇑P **P 14 06 16.5 -1.0**
baz=27
G11A Walters Elk Ra 27.51 97 ⇓P **P 14 06 17.8 -0.2**
baz=27,SNR=6.5
K07A Rock Creek Ran 27.69 104 ⇑P **P 14 06 21.0 +1.3**
baz=27
H10A Noah's Angus R 27.76 99 ⇑P **P 14 06 20.7 +0.4**
baz=27,SNR=9.1
B15A Bradely Ranch, 27.80 89 ⇑P **P 14 06 19.6 -1.0**
baz=28
F12A Elk City 27.84 95 ⇑P **P 14 06 20.7 -0.2**
baz=28
A16A West Butte Ran 27.97 87 ⇓P **P 14 06 20.8 -1.3**
baz=28
D14A Greenough 27.99 92 ⇓P **P 14 06 21.4 -0.9**
baz=28
E13A Victor 28.00 93 ⇑P **P 14 06 20.6

F16A **Kennard Place,** 29.81 92 ⇑P P 14 06 35.1 -3.4
baz=30
L11A **Cat Creek Ranc** 29.92 102 ⇑P P 14 06 40.0 +0.5
baz=30
J13A **Cove Ranch, Pi** 29.95 98 ⇑P P 14 06 38.3 -1.4
baz=30
M10A **I.L. Ranch, Tu** 29.95 103 ⇓P P 14 06 39.2 -0.5
baz=30
D18A **Linhart Farms,** 29.96 88 ⇓P P 14 06 39.1 -0.7
baz=30
H15A **Lima** 29.99 95 ⇓P P 14 06 38.8 -1.2
baz=30
I14A **Mackay** 29.99 97 ⇑P P 14 06 40.7 +0.6
baz=30
G16A **Moss Hill, Enn** 30.06 93 ⇓P P 14 06 40.3 -0.4
baz=30
F17A **Fitzpatrick Pl** 30.27 91 ⇓P P 14 06 43.7 +1.2
baz=30
E18A **Harlowton** 30.28 89 ⇑P P 14 06 43.3 +0.7
baz=30
J14A **Carey** 30.35 98 P P 14 06 44.4 +1.1
baz=30,SNR=5.3
H16A **Russell Place,** 30.70 93 ⇑P P 14 06 45.7 -0.6
baz=30
M12A **Wells** 30.89 102 ⇓P P 14 06 49.0 +0.9
baz=30
J15A **Blackfoot** 30.89 96 ⇓P P 14 06 49.2 +1.1
baz=31,SNR=7.3
N12A **Clover Valley,** 31.22 103 ⇓P P 14 06 52.0 +1.0
baz=31
NVAR **Mina Array Bea** 31.26 109 P P 14 06 52.1 +0.8
comp=Z,1.7nm,0.6s,mb4.0,baz=313,slow=8.8,SNR=12
NVAR pP pP 14 07 12.1 +3.6
comp=Z,1.3nm,0.7s,baz=302,slow=9.2,SNR=4.3
NVAR **Mina Array Bea** 31.26 109 P P 14 06 52.1 +0.8
NVAR pP pP 14 07 12.1 +3.6
K15A **Arbon** 31.32 98 ⇓P P 14 06 52.4 +0.6
baz=31
O11A **Cowboy Ranch,** 31.40 104 ⇑P P 14 06 53.3 +0.7
baz=31
J16A **Bone** 31.43 96 ⇑P P 14 06 53.4 +0.7
baz=31
RLMT **Red Lodge** 31.52 91 ⇓P P 14 06 54.6 +1.0
baz=31
I17A **Pilgram Creek** 31.57 94 ⇓P P 14 06 55.3 +1.3
baz=31
M14A **Sheep Mountain** 31.68 100 ⇓P P 14 06 55.7 +0.7
baz=31
O12A **Currie** 31.79 103 ⇓P P 14 06 57.3 +1.3
baz=31
L15A **Malad City** 31.86 98 ⇓P P 14 06 57.4 +0.9
baz=32
M15A **Larsen Ranch,** 32.20 99 ⇑P P 14 06 59.9 +0.4
baz=32
Q11A **Duckwater** 32.34 106 ⇑P P 14 07 01.7 +0.9
baz=32
S09A **Goldfield** 32.35 109 ⇓P P 14 07 01.6 +0.7
baz=32
L16A **Fish Haven** 32.37 97 ⇓P P 14 07 02.4 +1.3
baz=32
R10A **Warm Springs** 32.41 107 ⇑P P 14 07 02.3 +0.9
baz=32
S10A **Tonopah Range,** 32.53 108 ⇑P P 14 07 02.6 +0.1
baz=32
R11A **Troy Canyon, C** 32.74 106 ⇓P P 14 07 04.8 +0.4
baz=32
P13A **Bates Ranch, G** 32.77 103 ⇓P P 14 07 05.2 +0.6
baz=32
BW06 **Boulder Array** 32.89 95 ⇓P P 14 07 05.4 -0.2
baz=33
PDAR **Pinedale Array** 32.89 95 P P 14 07 05.2 -0.3
comp=Z,1.9nm,0.6s,mb4.1,baz=314,slow=5.0,SNR=18
PDAR pP pP 14 07 25.9 +3.1
comp=Z,1.7nm,0.7s,baz=318,slow=4.2,SNR=5.2
TIXI **Tiksi** 32.95 326 ⇑*i*P P 14 07 04.8 -1.0
TIXI pmax pmax
comp=Z,6.0nm,2.1s,mb4.1
M17A **Scullys Gap (B** 33.16 97 ⇓P P 14 07 07.9 -0.1
baz=33
P14A **Drum Mountains** 33.18 102 ⇓P P 14 07 08.3 +0.2
baz=33,SNR=5.1
TPNV **Topopah Spring** 33.44 109 ⇑P P 14 07 11.1 +0.6
baz=33
MPMC **Manual Prospec** 33.48 111 ⇓P P 14 07 11.5 +0.7
baz=33
Q14A **Sevier Lake (B** 33.50 103 ⇑P P 14 07 11.4 +0.5
baz=33
T11A **Corn Creek, Al** 33.76 107 ⇓P P 14 07 13.5 +0.4
baz=33
S13A **Holt Ranch, En** 34.22 106 ⇓P P 14 07 18.0 +0.8
baz=34
GSC **Goldstone** 34.42 111 ⇑P P 14 07 20.3 +1.4
baz=34
T13A **Saint George** 34.62 106 ⇓P P 14 07 21.3 +0.7
baz=34
Q16A **Castle Valley** 34.69 101 ⇑P P 14 07 21.8 +0.7
baz=34
O19A **Miners Draw (B** 34.82 98 ⇓P P 14 07 22.4 +0.2
baz=34
SRU **San Rafael** 34.90 100 *e*P P 14 07 22.9 -0.1
comp=Z,10nm,1.0s,mb4.6
SRU **San Rafael** 34.90 100 *e*P P 14 07 22.9 -0.1
SRU pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
SRU **San Rafael** 34.90 100 ⇑P P 14 07 23.3 +0.3
baz=34,SNR=13
S15A **Panguitch** 34.95 104 ⇑P P 14 07 24.7 +1.2
baz=35
R16A **Teasdale** 34.98 102 ⇓P P 14 07 24.7 +1.0
baz=35,SNR=5.7
Q18A **Rafter H Ranch** 35.11 100 ⇑P P 14 07 25.1 +0.3
baz=35
R17A **Hanksville Air** 35.29 101 ⇓P P 14 07 26.5 +0.1
baz=35
S16A **Weppner Ranch,** 35.33 103 ⇑P P 14 07 27.5 +0.8
baz=35
P19A **Cripple Cowboy** 35.36 98 ⇑P P 14 07 27.3 +0.3
baz=35
U14A **Mt Trumbull** 35.45 106 ⇓P P 14 07 27.9 +0.1
baz=35
Q19A **Hogan Spring (** 35.69 99 ⇑P P 14 07 29.1 -0.7
baz=35
ULM **Lac du Bonnet** 35.75 74 P P 14 07 29.8 -0.4
comp=Z,4.3nm,0.5s,mb4.6,baz=299,slow=4.3,SNR=5.8
S17A **Black Ridge (B** 35.82 102 ⇑P P 14 07 30.1 -0.8
baz=36
YAK **Yakutsk** 35.89 310 *d i*P P 14 07 30.6 -0.6
YAK pmax pmax
comp=Z,41nm,2.5s,mb4.9
S18A **Hurst Farm, Bl** 36.21 102 ⇓P P 14 07 33.8 -0.5
baz=36
T17A **Navajo Res., N** 36.29 103 ⇑P P 14 07 34.3 -0.6
baz=36
PV01 **Paradox Valley** 36.66 100 *e*P P 14 07 37.6 -0.5
T18A **Mexican Hat** 36.68 102 ⇓P P 14 07 37.8 -0.5
baz=36,SNR=5.4
U16A **Tuba City** 36.75 104 ⇓P P 14 07 38.3 -0.6
baz=36
X14A **Yava** 37.09 108 ⇓P P 14 07 42.6 +0.8
baz=37,SNR=5.4
T19A **Beclabito** 37.37 102 P P 14 07 44.4 +0.3
baz=37,SNR=7.0
Y15A **Casa Rosa Ranc** 37.78 108 ⇓P P 14 07 48.2 +0.6
baz=37
X16A **Lo Mia Camp, P** 37.90 107 ⇓P P 14 07 49.6 +1.0
baz=38
Z16A **Peralta Trail,** 38.73 108 ⇓P P 14 07 55.9 +0.2
baz=38
115A **Sonoran Desert** 38.82 109 ⇑P P 14 07 56.7 +0.4
baz=38
214A **Organ Pipe Nat** 39.10 110 ⇓P P 14 07 58.9 +0.2
baz=39
ASAJ **Asahikawa** 39.27 278 P P 14 07 58.5 -1.5
comp=Z,12nm,0.7s,mb4.8,baz=270,slow=21,SNR=7.4
117A **Oracle** 39.70 108 ⇓P P 14 08 04.4 +0.8
baz=39
118A **Homack Ranch,** 40.05 107 ⇓P P 14 08 07.1 +0.6
baz=40
119A **Ashpeak Ranch,** 40.30 106 ⇑P P 14 08 09.3 +0.6
baz=40
ERM **Erimo** 40.37 275 ⇑*i*P P 14 08 06.6 -2.5
219A **White Tail Can** 40.92 107 ⇑P P 14 08 14.4 +0.7
baz=41
318A **Bisbee** 40.98 108 ⇑P P 14 08 14.5 +0.3
baz=41
319A **Douglas** 41.40 107 ⇓P P 14 08 18.0 +0.3
baz=41
SFJD **Kangerlussuaq** 44.99 32 P P 14 08 45.1 -1.0
comp=Z,11nm,0.7s,mb4.7,baz=279,slow=7.8,SNR=4.6
SPB4 **Spitsbergen Ar** 45.23 2 *e*P P 14 08 47.2 -0.8
TXAR **Lajitas Array** 45.98 104 P P 14 08 54.4 -0.1
comp=Z,1.6nm,0.7s,mb3.9,baz=316,slow=5.6,SNR=10
TXAR pP pP 14 09 15.1 +2.7
comp=Z,1.4nm,0.6s,baz=316,slow=6.3,SNR=4.9
MAJO **Matsushiro** 46.94 273 *e*P P 14 09 01.4 -0.5
comp=Z,8.0nm,0.8s,mb4.5
MAJO **Matsushiro** 46.94 273 *e*P P 14 09 01.4 -0.5
MAJO pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
MAT **Matsushiro** 46.94 273 P P 14 09 01.1 -0.8
MJAR **Matsushiro Arr** 46.94 273 P P 14 09 01.4 -0.5
comp=Z,1.5nm,0.5s,mb4.0,baz=38,slow=5.8,SNR=8.8
JCT **Junction City** 47.17 99 *e*P P 14 09 02.8 -1.0
comp=Z,7.5nm,0.9s,mb4.4
JCT **Junction City** 47.17 99 *e*P P 14 09 02.8 -1.0
JCT pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
HIA **Hailar** 47.76 298 ⇑*i*P P 14 09 05.2 -2.8
CN2 **Changchun** 48.64 290 *e*P P 14 09 13.9 -1.0
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
KSRS **Korea Array** 51.88 282 P P 14 09 39.2 -0.2
comp=Z,3.2nm,0.6s,mb4.5,baz=43,slow=7.0,SNR=17
KEV **Kevo** 53.73 358 *e*p P 14 09 51.7 -1.0
comp=Z,4.9nm,0.5s,mb4.8
KEV **Kevo** 53.73 358 *e*P P 14 09 51.7 -1.0
KEV pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
ARCES **ARCESS Array B** 53.97 359 P P 14 09 53.2 -1.2
comp=Z,2.8nm,0.6s,mb4.4,baz=18,slow=7.5,SNR=17
ULN **Ulaanbaatar** 54.69 305 ⇑*i*P P 14 09 59.8 -0.1
SONM **Songino Array** 55.01 305 P P 14 10 02.5 +0.3
comp=Z,1.6nm,0.7s,mb4.2,baz=46,slow=5.8,SNR=9.0
BJI **Beijing** 56.13 293 P P 14 10 13.6 +3.3
BJI S S 14 17 56.8 +3.2
BJI SS SS 14 21 47.7 +7.4
BJI AMB AMB
comp=Z,5.0nm,0.7s,mb4.7
BJI AMB AMB
comp=Z,136nm,4.6s
BJI LR LR
comp=N,170nm,11.6s
BJI LR LR
comp=E,144nm,16.5s
BJI LR LR
comp=Z,60nm,20.1s
HHC **Hu-ho-hao-te** 57.83 296 *e*P P 14 10 28.9 +6.6
HHC AP pP 14 10 39.7 -1.2
HHC PCP PcP 14 11 21.3 +7.2
HHC PP PP 14 12 37.4 +6.6
HHC PCS PcS 14 15 20.3 +4.9
HHC S S 14 18 24.7 +8.7
HHC AMB AMB
comp=Z,14nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,133nm,5.6s
HHC LR LR
comp=N,211nm,25.0s
HHC LR LR
comp=E,150nm,20.2s
HHC LR LR
comp=Z,135nm,23.8s
JOF **Joensuu** 60.46 356 *e*p P 14 10 40.0 -0.2
KAF **Kangasniemi** 61.41 358 *e*p P 14 10 45.6 -1.0
comp=Z,2.4nm,0.6s,mb4.4
KAF **Kangasniemi** 61.41 358 *e*P P 14 10 45.6 -1.0
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
NB2 **NORSAR Subarra** 62.14 7 P P 14 10 51.3 -0.3
comp=Z,1.6nm,0.5s,mb4.3,baz=353,slow=6.9
NOA **NORSAR Array B** 62.14 7 P P 14 10 51.5 0.0
comp=Z,4.8nm,0.9s,mb4.5,baz=352,slow=6.8,SNR=7.7
NOA pP pP 14 11 13.9 +3.6
comp=Z,1.0nm,0.7s,baz=351,slow=6.7,SNR=1.7
ARU **Arti** 63.57 339 *c i*P P 14 11 03.0 +1.9
ARU *e* 14 13 18.3
ARU *e*S S 14 19 40.5 +12
ARU *e*SS SS 14 23 47.6 +12
ARU pmax pmax
comp=Z,7.0nm,1.7s,mb4.2
GTA **Gaotai** 64.56 303 *e*P P 14 11 07.7 -0.1
GTA AP pP 14 11 23.9 -2.8
GTA XP sP 14 11 31.0 -3.7
GTA S S 14 19 39.0 -2.4
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.1
GTA AMB AMB
comp=Z,70nm,5.1s
GTA LR LR
comp=N,175nm,15.9s
GTA LR LR
comp=E,130nm,15.6s
GTA LR LR
comp=Z,151nm,17.4s
VSU **Vasula** 65.07 358 ⇓*i*P P 14 11 08.7 -2.1
LZH **Lanzhou** 65.32 298 *e*P P 14 11 19.0 +6.2
LZH AP pP 14 11 29.5 -2.2
LZH AMB AMB
comp=Z,16nm,1.0s,mb4.8
WMQ **Urumqi** 66.11 314 *e*P P 14 11 25.0 +7.2
WMQ AMB AMB
comp=Z,14nm,1.0s,mb4.8
EKA **Eskdalemuir Ar** 66.22 16 P P 14 11 18.6 +0.3
comp=Z,6.7nm,0.6s,mb4.7,baz=333,slow=4.8,SNR=41
EKA pP pP 14 11 40.4 +3.2
comp=Z,3.0nm,0.8s,baz=352,slow=5.1,SNR=4.1
CD2 **Chengdu** 69.53 295 *e*P P 14 11 44.5 +5.0
CD2 AP pP 14 11 54.8 -3.8
CD2 PP PP 14 14 20.5 +6.9
CD2 S S 14 20 49.2 +7.7
CD2 SS SS 14 25 18.7 +9.1
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,160nm,14.4s
CD2 LR LR
comp=Z,140nm,15.2s
GYA **Guiyang** 71.68 290 P P 14 11 56.4 +3.8
GYA AP pP 14 12 13.8 +2.0
GYA XP sP 14 12 20.3 +0.6
GYA PP PP 14 14 38.6 +6.5
GYA S S 14 21 11.3 +4.7
GYA SKS 14 21 50.4
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
GYA AMB AMB
comp=Z,60nm,5.2s
BAIF **Baives** 72.37 13 *e*P P 14 11 56.7 +0.3
comp=Z,7.9nm,0.5s,mb4.5
GIVF **Givet** 72.40 12 *e*P P 14 11 56.5 -0.1
AKASG **Malin Array Be** 72.76 356 P P 14 11 57.5 -1.2
comp=Z,1.5nm,0.3s,mb4.2,baz=6.7,slow=5.5,SNR=8.4
AKASG pP pP 14 12 21.2 +3.4
comp=Z,0.8nm,0.4s,baz=7.3,slow=5.8,SNR=2.7
AKASG **Malin Array Be** 72.76 356 P P 14 11 57.5 -1.2
AKASG pP pP 14 12 21.2 +3.4
ROSF **Rostrenen** 72.96 18 *e*P P 14 12 00.1 +0.2
comp=Z,10.0nm,0.8s,mb4.4
FLN **La Foliniere** 73.00 16 *e*P P 14 11 59.8 -0.3
comp=Z,5.8nm,0.6s,mb4.3
SGMF **Saint Gilles** 73.17 18 *e*P P 14 12 01.2 +0.1
comp=Z,4.0nm,0.5s,mb4.2
LDF **La Druitiere** 73.22 16 *e*P P 14 12 01.1 -0.3
comp=Z,7.3nm,0.7s,mb4.3
GRR **Gorron** 73.31 16 *e*P P 14 12 01.9 0.0
comp=Z,4.4nm,0.5s,mb4.3
KHC **Kasperske Hory** 74.15 7 ⇓*i*P P 14 12 07.0 +0.1
PPT **Papeete** 74.32 173 LR LR 14 38 37.8
comp=Z,429nm,19.9s,baz=170,slow=31
CDF **Champ du Feu** 74.34 11 *e*P P 14 12 08.1 +0.1
comp=Z,3.9nm,0.5s,mb4.1
GERES **GERESS Array B** 74.45 6 P P 14 12 09.1 +0.5
comp=Z,2.3nm,0.6s,mb4.1,baz=356,slow=4.7,SNR=15
HAU **Haudompre** 74.64 12 *e*P P 14 12 09.9 +0.2
comp=Z,7.2nm,0.7s,mb4.2
KMI **Kunming** 74.78 292 P P 14 12 14.8 +3.9
KMI AP pP 14 12 31.2 +1.0
KMI XP sP 14 12 38.5 +0.4
KMI PP PP 14 15 05.1 +6.6
KMI PPP 14 16 49.7
KMI S S 14 21 45.8 +4.1
KMI XS sS 14 22 14.0 -0.5
KMI SS SS 14 26 37.1 +7.1
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.2
KMI AMB AMB
comp=Z,102nm,4.9s
KMI LR LR
comp=Z,34nm,26.9s
HINF **Hinteralfeld** 74.89 11 *e*P P 14 12 11.0 -0.1
comp=Z,9.9nm,0.5s,mb4.0
LOR **Lormes** 75.07 13 *e*P P 14 12 12.2 0.0
comp=Z,7.7nm,0.7s,mb4.2
MFF **Saint Martin d** 75.16 16 *e*P P 14 12 13.0 +0.3
comp=Z,10nm,0.7s,mb4.3
SSF **Saint Saulge** 75.23 14 *e*P P 14 12 13.3 +0.2
comp=Z,8.2nm,0.5s,mb4.4
AVF **Avril sur Loir** 75.48 14 *e*P P 14 12 14.4 -0.1
comp=Z,8.8nm,0.5s,mb4.4
BGF **Bois d'Agland** 75.64 14 *e*P P 14 12 15.5 0.0
comp=Z,19nm,0.8s,mb4.6
SMF **Signal de Mont** 75.68 14 *e*P P 14 12 15.5 -0.2
comp=Z,5.9nm,0.5s,mb4.3
TCF **Toulx Ste Croi** 75.81 15 *e*P P 14 12 16.3 -0.2
comp=Z,9.1nm,0.9s,mb4.2
CABF **La Chapelle** 75.99 12 *e*P P 14 12 18.0 +0.5
comp=Z,5.0nm,0.5s,mb4.2
DAVOS **Davos** 76.14 9 P P 14 12 19.1 +0.8
DAVOX **Davos/Dischmat** 76.21 9 P P 14 12 19.1 +0.4
comp=Z,1.0nm,0.4s,mb3.9,baz=350,slow=17,SNR=6.8
RJF **Les Rejaudoux** 76.68 16 *e*P P 14 12 21.9 +0.5
LFF **La Frestale** 76.92 16 *e*P P 14 12 22.9 +0.2
comp=Z,24nm,0.7s,mb4.7
CAF **Calviac** 77.13 15 *e*P P 14 12 24.1 +0.2
comp=Z,9.4nm,0.8s,mb4.3
LPL **La Plagne** 77.14 12 *e*P P 14 12 24.5 +0.5
LPG **La Plagne** 77.17 12 *e*P P 14 12 24.5 +0.4
VIVF **Saint-Julien-l** 77.55 13 *e*P P 14 12 26.5 +0.2
comp=Z,5.7nm,0.7s,mb4.1
MBDF **Montbardon** 77.93 12 *e*P P 14 12 29.4 +1.0
comp=Z,9.0nm,0.8s,mb4.3
ETSF **Etsaut** 78.70 18 *e*P P 14 12 33.4 +0.7
comp=Z,8.7nm,0.7s,mb4.4
MTLF **Montolieu** 78.70 15 *e*P P 14 12 32.9 +0.2
comp=Z,5.0nm,0.6s,mb4.2
ESDC **Sonseca Array** 81.21 21 P P 14 12 46.5 +0.2
comp=Z,0.5nm,0.5s,mb3.6,baz=340,slow=5.0,SNR=5.4
ESDC pP pP 14 13 07.5 +1.7
comp=Z,0.5nm,0.4s,baz=348,slow=6.5,SNR=2.8
CMAR **Chiang Mai Arr** 82.27 292 P P 14 12 51.5 -0.6
comp=Z,3.4nm,0.7s,mb4.3,baz=11,slow=5.3,SNR=26
CMAR pP pP 14 13 15.0 +3.3
comp=Z,1.9nm,0.8s,baz=6.5,slow=5.9,SNR=4.6
KAPI **Kappang** 90.54 262 LR LR 14 50 19.8
comp=Z,64nm,20.3s,baz=63,slow=33
BATI **Baumata** 92.75 256 LR LR 14 50 28.5
comp=Z,129nm,19.3s,baz=105,slow=32
WRAB **Tennant Creek** 95.49 242 ⇑*i*P P 14 13 49.9 -5.3
WRA **Warramunga Arr** 95.50 242 P P 14 13 53.3 -2.0
comp=Z,0.6nm,0.7s,mb4.1,baz=34,slow=5.8,SNR=6.0
ASAR **Alice Springs** 98.88 240 P P 14 14 09.7 -0.8
comp=Z,0.2nm,0.8s,mb3.7,baz=26,slow=6.7,SNR=3.1
QSPA **South Pole Qui** 146.57 180 PKPbc PKPbc 14 20 08.3 -1.6
comp=Z,8.3nm,0.9s,baz=34,slow=0.6,SNR=67

NNC ***03*** *14:18:02.7±6.3, 3875N×7261E, h0km, mb4.4, mpv4.6, Error ellipse: s-maj=54.5km s-min=31.1km az=18.0*
IDC ***03*** *14:18:09.7±0.8, 3924N×7346E, h0km, mb4.0/12, mb1 4.1/16, mb1mx4.0/27, mbtmp4.0/16, ML3.5/4, MS3.4/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=15.7km s-min=13.8km az=144.0*
BJI ***03*** *14:18:10.9, 3943N×7324E, h15km, mB4.9, mb4.1, ML3.9, Ms3.6*
MOS ***03*** *14:18:13.9±2.5, 3946N×7351E, h33km, mb4.4/13, Error ellipse: s-maj=11.1km s-min=5.9km az=92.4*
ISCJB ***03*** *14:18:14.6±0.6, 3926N±003×7352E±007, h55km±7km, mb4.0/17, Error ellipse: s-maj=8.8km s-min=3.6km az=163.9*
NEIC ***03*** *14:18:15.9±0.8, 3928N×7366E, h50km±9km, mb4.3/8, Error ellipse: s-maj=10.0km s-min=6.3km az=68.0*

ISC 03 14:18:16.6±0.5, 3929N±003×7352E±007, h53km±6km, n101, σ1$37/122, mb4.0/17, 9C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	
KSH	**Kashi**	1.92	82	P	Pn	14 18 47.7	+1.0
KSH				S	Sn	14 19 15.5	+5.8
KSH				Smax			
	comp=N,298nm,0.7s						
KSH				Smax			
	comp=E,330nm,0.8s						
AML	**Almayashu**	2.84	3	*e*Pn	Pn	14 18 58.4	-1.0
AML				*e*Sn	Sn	14 19 33.0	+0.6
AML	**Almayashu**	2.84	3	P	Pn	14 18 58.8	-0.6
	SNR=310						
UCH	**Uchtor**	3.03	14	*e*Pn	Pn	14 19 01.9	-0.1
UCH				*e*Sn	Sn	14 19 38.2	+1.2
UCH	**Uchtor**	3.03	14	P	Pn	14 19 02.0	0.0
	SNR=11						
KZA	**Kyzart**	3.08	25	P	Pn	14 19 03.2	+0.5
	SNR=105						
EKS2	**Erkin-Say**	3.37	3	*e*Pn	Pn	14 19 05.9	-0.8
EKS2				*e*Sn	Sn	14 19 42.6	-2.8
EKS2	**Erkin-Say**	3.37	3	P	Pn	14 19 06.4	-0.3
	SNR=43						
AAK	**Ala-Archa**	3.42	12	P	Pn	14 19 07.5	+0.1
	SNR=187						
KBK	**Karagaybulak**	3.53	17	P	Pn	14 19 09.4	+0.5
	SNR=47						
ULHL	**Ulahol**	3.60	34	P	Pn	14 19 10.6	+0.7
	SNR=70						
FRU	**Bishkek**	3.64	13	*e*PN	Pn	14 19 12.0	+1.7
FRU				*i* S	Sn	14 20 02.0	+10
FRU				pmax	pmax		
	comp=Z,280nm,1.8s						
FRU				smax			
	comp=E,2μm,1.8s						
CHMS	**Chumysh**	3.82	14	P	Pn	14 19 12.9	+0.1
	SNR=26						
TKM2	**Tokmak 2**	3.95	23	⇑Pn	Pn	14 19 14.7	+0.1
	comp=E,54nm,0.8s						
TKM2				⇓Sn	Sn	14 20 13.5	+14
	comp=E,307nm,0.9s						
TKM2	**Tokmak 2**	3.95	23	*e*Pn	Pn	14 19 14.3	-0.3
TKM2	**Tokmak 2**	3.95	23	PN	Pn	14 19 14.7	+0.1
TKM2						14 20 13.5	
TKM2				pmax	pmax		
	comp=Z,75nm,0.9s						
TKM2				smax			
	comp=N,307nm,1.0s						
TKM2	**Tokmak 2**	3.95	23	P	Pn	14 19 14.8	+0.2
	SNR=36						
USP	**Ospenovka**	4.04	10	P	Pn	14 19 15.6	-0.2
	SNR=21						
KK31	**Karatay Array**	4.43	330	Pn	Pn	14 19 19.9	-1.3
	comp=N,40nm,0.6s,baz=138,slow=12,SNR=461						
KK31				⇓Sn	Sn	14 20 13.1	+1.7
	comp=N,72nm,0.6s,baz=154,slow=23,SNR=5.4						
KK31				⇓Lg		14 20 26.7	
	comp=N,153nm,0.6s,baz=152,slow=30,SNR=4.2						
KK31	**Karatay Array**	4.43	330	*e*PN	Pn	14 19 19.9	-1.3
KK31						14 20 13.1	
KK31				pmax	pmax		
	comp=Z,16nm,0.2s						
KK31				smax			
	comp=N,49nm,0.3s						
KNDC	**Almaty**	4.71	32	⇓Pn	Pn	14 19 28.4	+3.5
	comp=N,91nm,0.7s						
KNDC				⇑Sn	Sn	14 20 37.1	+19
	comp=N,719nm,1.2s						
KBL	**Kabul**	5.94	218	*e*Pn	Pn	14 19 45.6	+3.7
	comp=N,23nm,0.6s						
KBL				*e*Sn	Sn	14 20 52.5	+3.9
KBL	**Kabul**	5.94	218	*e*PN	Pn	14 19 45.6	+3.7
KBL				pmax	pmax		
	comp=Z,23nm,0.6s						
DLH	**Dalhousie**	7.02	163	*e*P	Pn	14 20 00.0	+3.3
DLH				*ex*	Sn	14 21 25.0	+10
THN	**Thein Dam**	7.07	165	*e*P	Pn	14 20 00.4	+3.0
THN				*ex*	Sn	14 21 24.2	+7.8
SDNR	**Sundarnagar**	8.27	159	*e*P	Pn	14 20 16.0	+2.2
SDNR				*e*S	Sn	14 21 46.0	+0.2
KLP	**Kalpa**	8.65	152	*e*P	Pn	14 20 19.3	+0.3

KLP					*e*S		**Sn**	**14 21 54.2**	**-0.9**
KLP					AML		AML	14 22 04.6	
	comp=E,186nm,0.7s								
KLP					AML		AML	14 22 06.4	
	comp=N,233nm,0.9s								
SMLA	**Simla**	**8.67**	**159**	*e*P			**Pn**	**14 20 22.8**	**+3.5**
SMLA				*e*S			**Sn**	**14 21 56.1**	**+0.4**
SMLA				*ex*			x	14 22 01.4	
	comp=E,408nm,0.5s								
SMLA				*ex*			x	14 22 02.6	
	comp=N,476nm,0.5s								
DDI	**Dehra Dun**	**9.69**	**156**	*ex*			**Pn**	**14 20 29.8**	**-3.5**
DDI				*e*S			**Sn**	**14 22 16.7**	**-4.0**
DDI				*e*S			**Sn**	**14 22 16.7**	**-4.0**
MK31	**Makanchi Array**	**9.87**	**38**	Pn			**Pn**	**14 20 36.8**	**+1.2**
	comp=N,4.1nm,0.8s,baz=217,slow=15,SNR=5.6								
MK31				⇑Lg				14 23 40.4	
	comp=N,18nm,1.1s,baz=221,slow=25,SNR=4.6								
MK31	**Makanchi Array**	**9.87**	**38**	*e*P			**Pn**	**14 20 36.0**	**+0.4**
MKAR	**Makanchi Array**	**9.87**	**38**	Pn			**Pn**	**14 20 35.0**	**-0.6**
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=7.6								
MKAR				Lg				14 23 24.3	
	comp=N,0.3nm,0.3s,baz=217,slow=28,SNR=4.3								
MKAR	**Makanchi Array**	**9.87**	**38**	Pn			**Pn**	**14 20 35.0**	**-0.6**
MKAR				Lg				14 23 24.4	
JOSI	**Joshimath**	**10.02**	**149**	*e*P			**Pn**	**14 20 40.5**	**+2.7**
JOSI				*ex*			**Sn**	**14 22 23.5**	**-5.3**
JOSI				AML			AML	14 22 45.9	
	comp=E,340nm,0.7s								
JOSI				AML			AML	14 22 49.6	
	comp=N,186nm,0.8s								
NDI	**New Delhi**	**11.02**	**163**	*ex*			**Pn**	**14 20 57.0**	**+5.6**
NDI				*e*S			**Sn**	**14 22 49.0**	**-4.1**
KHET	**Khetri**	**11.35**	**170**	*ex*			**Pn**	**14 20 55.3**	**-0.6**
KHET				*e*S			**Sn**	**14 22 55.5**	**-5.8**
KHET				AML			AML	14 23 11.8	
	comp=E,13nm,0.4s								
KHET				AML			AML	14 23 16.6	
	comp=N,12nm,0.5s								
KUDL	**Kundal**	**11.39**	**167**	*e*P			**Pn**	**14 20 57.1**	**+0.6**
KUDL				*e*S			**Sn**	**14 22 56.4**	**-5.9**
KUDL				AML			AML	14 23 08.2	
	comp=N,16nm,0.6s								
KURBB	**Kurchatov Arra**	**11.87**	**16**	⇑Pn			**Pn**	**14 21 01.3**	**-1.6**
	comp=N,0.3nm,0.8s								
KURBB				⇑Lg				14 24 39.3	
	comp=N,17nm,1.6s								
KURK	**Kurchatov**	**11.98**	**16**	Pn			**Pn**	**14 20 59.9**	**-4.5**
	baz=207,slow=10.0								
KURK				Lg				14 24 20.1	
	baz=204,slow=28								
VOSK	**Vostochnaya**	**13.55**	**353**	⇑Pn			**Pn**	**14 21 20.9**	**-4.8**
	comp=N,5.9nm,1.1s								
VOSK				⇓Lg				14 25 22.3	
	comp=N,46nm,1.2s								
DANN	**Dangsing**	**13.83**	**139**	*e*P			**Pn**	**14 21 27.5**	**-2.3**
	comp=N,9.1nm,0.4s								
AB31	**Akbulak array**	**13.90**	**320**	P			**Pn**	**14 21 25.8**	**-4.8**
AB31				pmax			pmax		
	comp=Z,3.0nm,0.3s								
BVA0	**Borovoye Array**	**13.90**	**352**	⇑Pn			**Pn**	**14 21 24.4**	**-6.3**
	comp=Z,1.1nm,0.7s,baz=162,slow=12,SNR=15								
BVA0				⇓Lg				14 25 40.0	
	comp=Z,1.6nm,0.8s,baz=150,slow=20,SNR=3.6								
BVA0	**Borovoye Array**	**13.90**	**352**	*i* P			**Pn**	**14 21 24.3**	**-6.3**
BVA0				pmax			pmax		
	comp=Z,1.0nm,0.8s								
BVAR	**Borovoye Array**	**13.90**	**352**	Pn			**Pn**	**14 21 25.7**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=166,slow=13,SNR=14								
BVAR				Lg				14 25 26.5	
	comp=Z,0.3nm,0.3s,baz=163,slow=25,SNR=4.0								
BVAR				LR			LR	14 26 54.5	
	comp=Z,156nm,18.6s,baz=166,slow=38								
BVAR	**Borovoye Array**	**13.90**	**352**	Pn			**Pn**	**14 21 25.7**	**-5.0**
BVAR				Lg				14 25 26.5	
BVAR				LR			LR	14 26 54.5	
AB09	**Akbulak array**	**13.92**	**320**	⇑Pn			**Pn**	**14 21 25.8**	**-5.0**
	comp=Z,8.4nm,0.8s								
AB09				⇑Sn			**Sn**	**14 23 56.5**	**-7.1**
	comp=Z,4.7nm,0.5s								
BRVK	**Borovoye**	**13.95**	**352**	*e*Pn			**Pn**	**14 21 25.3**	**-5.9**
	comp=Z,17nm,0.9s								
BRVK				*e*Sn			**Sn**	**14 23 58.1**	**-6.2**
BRVK	**Borovoye**	**13.95**	**352**	*e*P			**Pn**	**14 21 25.3**	**-5.9**
BRVK				*e*				14 23 58.1	
BRVK				pmax			pmax		
	comp=Z,17nm,0.9s								
KOLN	**Koldanda**	**14.22**	**141**	*e*P			**Pn**	**14 21 32.4**	**-2.7**
	comp=Z,15nm,0.5s								
GKN	**Gorkha**	**14.56**	**137**	*e*P			**Pn**	**14 21 37.5**	**-2.0**
	comp=Z,6.5nm,0.3s								
KKN	**Kakani**	**15.07**	**136**	*e*P			**Pn**	**14 21 43.4**	**-2.8**
AKTK	**Aktyubinsk**	**15.61**	**321**	Pn			**Pn**	**14 21 49.4**	**-3.6**
AKTO	**Aktyubinsk**	**15.61**	**321**	Pn			**Pn**	**14 21 49.4**	**-3.6**
	comp=Z,0.4nm,0.3s,baz=115,slow=12,SNR=15								
JIRN	**Jiri**	**15.68**	**134**	*e*P			**Pn**	**14 21 51.4**	**-2.6**
	comp=Z,18nm,0.5s								
RAMN	**Ramite**	**16.46**	**134**	*e*P			**Pn**	**14 22 02.1**	**-1.7**
	comp=Z,25nm,0.8s								
ZAA0	**Zalesovo Array**	**16.56**	**24**	*e*Pn			**Pn**	**14 22 02.9**	**-2.0**
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn			**Pn**	**14 22 03.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=188,slow=9.0,SNR=10								
ZALV				LR			LR	14 29 07.0	
	comp=Z,40nm,20.0s,baz=250,slow=40								
NVS	**Novosibirsk**	**16.88**	**20**	*e*P			**Pn**	**14 22 09.3**	**+0.4**
NVS				pmax			pmax		
	comp=Z,20nm,1.2s								
NVS				pmax			pmax		
	comp=N,31nm,1.6s								
NVS				pmax			pmax		
	comp=E,6.0nm,1.2s								
ARU	**Arti**	**19.79**	**335**	*e*P			**Pn**	**14 22 41.5**	**-2.7**
	comp=E,8.4nm,0.8s								
ARU	**Arti**	**19.79**	**335**	*e*P			**Pn**	**14 22 42.2**	**-1.9**
GTA	**Gaotai**	**20.32**	**81**	*e*P			**P**	**14 22 50.6**	**+2.5**
GTA				AP				14 22 55.4	
GTA				XP			sP	14 22 57.7	-8.9
GTA				AMB			AMB		
	comp=Z,4.0nm,0.7s								
GNI	**Garni**	**22.11**	**281**	*e*P			**P**	**14 23 11.8**	**+4.4**
	comp=Z,18nm,1.0s,mb4.5								
GNI	**Garni**	**22.11**	**281**	*e*P			**P**	**14 23 11.8**	**+4.4**
GNI				pmax			pmax		
	comp=Z,18nm,1.0s								
HYB	**Hyderabad**	**22.23**	**167**	*e*P			**P**	**14 23 13.0**	**+4.2**
HYB	**Hyderabad**	**22.23**	**167**	*i* P			**P**	**14 23 13.0**	**+4.2**
KIV	**Kislovodsk**	**23.44**	**291**	*e*P			**P**	**14 23 24.0**	**+3.0**
	comp=Z,16nm,0.9s,mb4.4								
KIV	**Kislovodsk**	**23.44**	**291**	*e*P			**P**	**14 23 24.0**	**+3.0**
KIV				pmax			pmax		
	comp=Z,16nm,0.9s,mb4.5								
ZAK	**Zakamensk**	**23.68**	**52**	*e*P			**P**	**14 23 19.2**	**-4.0**
ZAK				pmax			pmax		
	comp=Z,2.0nm,1.2s,mb3.4								
SONM	**Songino Array**	**25.16**	**59**	P			**P**	**14 23 37.4**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.4,baz=266,slow=10,SNR=8.6								
SONM				LR			LR	14 34 10.8	
	comp=Z,125nm,18.4s,baz=208,slow=38								
SONM	**Songino Array**	**25.16**	**59**	P			**P**	**14 23 37.4**	**+0.8**
SONM				pmax			pmax		
	comp=Z,1.0nm,0.8s								
SONM				MLR			MLR		
	comp=Z,125nm,18.5s								
BR131	**Keskin Array S**	**30.60**	**284**	*e*P			**P**	**14 24 24.1**	**-1.3**
	comp=Z,1.6nm,0.6s,mb4.0								
BRTR	**Keskin Array B**	**30.60**	**284**	P			**P**	**14 24 26.3**	**+1.0**
	comp=Z,2.7nm,0.8s,mb4.1,baz=90,slow=8.2,SNR=8.1								
BRTR	**Keskin Array B**	**30.60**	**284**	P			**P**	**14 24 26.3**	**+1.0**
BRTR				pmax			pmax		
	comp=Z,3.0nm,0.8s								
AKASG	**Malin Array Be**	**32.86**	**305**	P			**P**	**14 24 44.9**	**-0.3**
	comp=Z,1.0nm,0.4s,mb4.1,baz=79,slow=8.2,SNR=6.1								
AKASG	**Malin Array Be**	**32.86**	**305**	P			**P**	**14 24 44.9**	**-0.2**
AKASG				pmax			pmax		
	comp=Z,1.0nm,0.4s								
KAF	**Kangasniemi**	**36.44**	**324**	*ep*			**P**	**14 25 15.4**	**-0.4**
ARCES	**ARCESS Array B**	**39.38**	**336**	P			**P**	**14 25 41.0**	**+0.5**
	comp=Z,2.3nm,0.6s,mb4.1,baz=105,slow=9.2,SNR=8.4								
ARCES	**ARCESS Array B**	**39.38**	**336**	P			**P**	**14 25 41.0**	**+0.5**
ARCES				pmax			pmax		
	comp=Z,2.0nm,0.6s								
MORC	**Moravsky Berou**	**40.38**	**304**	P			**P**	**14 25 48.8**	**-0.3**
	comp=Z,0.8nm,0.4s,mb3.8								
MORC	**Moravsky Berou**	**40.38**	**304**	P			**P**	**14 25 48.8**	**-0.3**
MORC				pmax			pmax		
	comp=Z,1.0nm,0.4s,mb3.9								

TIXI	**Tiksi**	**42.44**	**23**	*e*P			**P**	**14 26 05.1**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.1								
TIXI	**Tiksi**	**42.44**	**23**	*e*P			**P**	**14 26 07.9**	**+2.2**
TIXI				pmax			pmax		
	comp=Z,6.0nm,0.9s,mb4.2								
GERES	**GERESS Array B**	**43.01**	**303**	P			**P**	**14 26 10.4**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=64,slow=6.1,SNR=6.3								
GERES	**GERESS Array B**	**43.01**	**303**	P			**P**	**14 26 10.4**	**-0.2**
GERES				pmax			pmax		
	comp=Z,1.0nm,0.7s								
NB2	**NORSAR Subarra**	**43.41**	**321**	P			**P**	**14 26 13.5**	**-0.1**
	comp=Z,1.2nm,0.6s,mb3.8,baz=89,slow=7.9								
NOA	**NORSAR Array B**	**43.41**	**321**	P			**P**	**14 26 12.6**	**-1.0**
	comp=Z,2.2nm,0.8s,mb3.9,baz=90,slow=8.0,SNR=5.0								
NOA	**NORSAR Array B**	**43.41**	**321**	P			**P**	**14 26 12.6**	**-1.0**
NOA	**NORSAR Array B**	**43.41**	**321**	P			**P**	**14 26 12.6**	**-1.0**
NOA				pmax			pmax		
	comp=Z,2.0nm,0.8s								
EKA	**Eskdalemuir Ar**	**51.70**	**315**	P			**P**	**14 27 18.9**	**+0.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=74,slow=8.3,SNR=6.0								
EKA	**Eskdalemuir Ar**	**51.70**	**315**	P			**P**	**14 27 18.9**	**+0.9**
EKA				pmax			pmax		
	comp=Z,2.0nm,0.6s								
ESDC	**Sonseca Array**	**57.94**	**297**	P			**P**	**14 28 03.7**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=52,slow=7.8,SNR=3.4								
TORD	**Torodi Ar. Bea**	**67.77**	**269**	P			**P**	**14 29 08.4**	**-0.6**
	comp=Z,0.8nm,0.5s,mb4.0,baz=51,slow=5.2,SNR=8.6								
YKA	**Yellowknife Ar**	**78.35**	**4**	LR			LR	15 09 36.2	
	comp=Z,35nm,18.2s,baz=120,slow=39								
BOSA	**Boshof**	**81.16**	**222**	P			**P**	**14 30 27.1**	**+0.8**
	comp=Z,3.1nm,0.8s,mb4.3,baz=342,slow=3.2,SNR=3.9								
BOSA	**Boshof**	**81.16**	**222**	P			**P**	**14 30 27.1**	**+0.8**
BOSA				pmax			pmax		
	comp=Z,3.0nm,0.8s,mb4.3								
WRA	**Warramunga Arr**	**81.83**	**124**	P			**P**	**14 30 31.1**	**+1.0**
	comp=Z,1.4nm,0.8s,mb4.0,baz=324,slow=5.0,SNR=14								
WRA	**Warramunga Arr**	**81.83**	**124**	P			**P**	**14 30 31.1**	**+1.0**
WRA				pmax			pmax		
	comp=Z,1.0nm,0.8s								
WB2	**Warramunga Arr**	**81.84**	**124**	*e*P			**P**	**14 30 30.1**	**0.0**
ASAR	**Alice Springs**	**84.27**	**127**	P			**P**	**14 30 43.4**	**+0.8**
	comp=Z,0.8nm,0.8s,mb3.9,baz=305,slow=6.1,SNR=7.8								
ASAR	**Alice Springs**	**84.27**	**127**	P			**P**	**14 30 43.4**	**+0.8**
ASAR				pmax			pmax		
	comp=Z,1.0nm,0.8s								

NEIC ***03*** *15:29:17.6±0.4, 706S×12834E, h35km, mb4.9/7, Error ellipse: s-maj=20.5km s-min=5.7km az=62.0*
IDC ***03*** *15:29:30.2±3.6, 760S×12829E, h174km±35km, mb3.7/7, mb1 3.8/10, mb1mx3.7/17, mbtmp3.8/10, MS3.9/1, Ms1 3.9/1, ms1mx2.9/23, Error ellipse: s-maj=35.4km s-min=15.9km az=54.0*
ISCJB ***03*** *15:29:31.3±2.1, 78S±0.1×1283E±0.1, h213km±22km, mb4.0/14, Error ellipse: s-maj=25.8km s-min=7.1km az=43.9*

ISC 03 15:29:31.3±1.7, 771S±009×1283E±01, h191km±16km, n28, σ0967/29, mb4.2/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
BATI	**Baumata**	**5.20**	**241**	P		**Pn**	**15 30 48.9**	**+0.8**
	50nm,0.3s,baz=98,slow=1.3,SNR=169							
BATI				S		**Sn**	**15 31 47.5**	**-1.0**
	46nm,0.3s,baz=62,slow=6.5,SNR=13							
KAKA	**Kakadu**	**6.43**	**141**	*e*Pn		Px	15 30 55.5	
KAKA				*e*Sn		Sx	15 32 05.0	
WRAB	**Tennant Creek**	**13.49**	**155**	*e*Pn		**Pn**	**15 32 34.8**	**-0.5**
	10nm,0.6s							
WRAB				*e*Sn		**Sn**	**15 34 58.8**	**-7.0**
WRA	**Warramunga Arr**	**13.50**	**155**	P		**Pn**	**15 32 34.7**	**-0.7**
	1.3nm,0.3s,baz=326,slow=13,SNR=62							
WRA				S		**Sn**	**15 34 57.8**	**-8.1**
	4.6nm,0.3s,baz=334,slow=22,SNR=7.9							
WB2	**Warramunga Arr**	**13.50**	**155**	*e*Pn		**Pn**	**15 32 34.8**	**-0.6**
WB2				*e*Sn		**Sn**	**15 34 58.2**	**-7.8**
MBWA	**Marble Bar**	**15.72**	**211**	*e*Pn		**Pn**	**15 33 03.8**	**+1.1**
ASAR	**Alice Springs**	**16.75**	**162**	P		**Pn**	**15 33 17.4**	**+2.2**
	2.8nm,0.3s,baz=342,slow=11,SNR=313							
ASAR				S		**S**	**15 36 18.7**	**-0.6**
	1.4nm,0.3s,baz=342,slow=25,SNR=7.5							
STKA	**Stephens Creek**	**27.05**	**154**	P		**P**	**15 34 56.5**	**+0.6**
	0.8nm,0.5s,mb3.6,baz=318,slow=16,SNR=3.1							
CMAR	**Chiang Mai Arr**	**38.92**	**312**	P		**P**	**15 36 39.2**	**+0.4**
	0.8nm,0.6s,mb3.5,baz=146,slow=6.8,SNR=9.2							
KSRS	**Korea Array**	**44.93**	**360**	P		**P**	**15 37 26.5**	**-0.6**
	0.6nm,0.8s,mb3.3,baz=176,slow=9.0,SNR=4.2							
ODAN	**Odare**	**52.46**	**312**	*e*P		**P**	**15 38 24.7**	**0.0**
	7.4nm,0.5s,mb4.6							
TAPN	**Taplejung**	**52.51**	**313**	*e*P		**P**	**15 38 25.1**	**0.0**
	5.9nm,0.4s,mb4.6							
JIRN	**Jiri**	**53.79**	**313**	*e*P		**P**	**15 38 34.6**	**+0.2**
GUN	**Gumba**	**54.16**	**313**	*e*P		**P**	**15 38 37.2**	**+0.1**
	13nm,0.6s,mb4.9							
KKN	**Kakani**	**54.53**	**312**	*e*P		**P**	**15 38 39.5**	**-0.3**
	7.5nm,0.6s,mb4.6							
RAO	**Raoul Island**	**54.80**	**120**	LR		LR	15 59 51.3	
	comp=Z,105nm,18.3s,baz=126,slow=33							
GKN	**Gorkha**	**55.12**	**312**	*e*P		**P**	**15 38 43.8**	**-0.2**
	9.1nm,0.4s,mb4.8							
KOLN	**Koldanda**	**55.77**	**311**	*e*P		**P**	**15 38 48.6**	**0.0**
	8.2nm,0.6s,mb4.7							
DANN	**Dangsing**	**55.96**	**312**	*e*P		**P**	**15 38 49.7**	**-0.3**
	4.3nm,0.5s,mb4.5							
SONM	**Songino Array**	**58.60**	**343**	P		**P**	**15 39 09.1**	**+1.1**
	0.6nm,0.6s,mb3.6,baz=168,slow=7.6,SNR=6.0							
MK31	**Makanchi Array**	**67.90**	**328**	*e*P		**P**	**15 40 08.7**	**-0.5**
MKAR	**Makanchi Array**	**67.90**	**328**	P		**P**	**15 40 09.3**	**+0.1**
	1.3nm,0.4s,mb4.0,baz=120,slow=8.1,SNR=38							
MKAR	**Makanchi Array**	**67.90**	**328**	P		**P**	**15 40 09.3**	**+0.1**
ZALV	**Zalesovo Beam**	**71.48**	**335**	P		**P**	**15 40 30.3**	**-0.6**
	2.2nm,0.4s,mb4.2,baz=128,slow=5.8,SNR=11							
KURK	**Kurchatov**	**72.25**	**329**	P		**P**	**15 40 35.4**	**-0.2**
	baz=130,slow=5.3							
BVAR	**Borovoye Array**	**77.77**	**328**	P		**P**	**15 41 07.2**	**+0.1**
	1.3nm,0.6s,mb3.7,baz=123,slow=5.5,SNR=7.5							
TORD	**Torodi Ar. Bea**	**127.28**	**281**	PKP		PKPdf	15 48 15.1	+1.0
	0.4nm,0.7s,baz=48,slow=1.8,SNR=3.5							
LPAZ	**La Paz**	**151.14**	**146**	PKPbc		PKPbc	15 49 05.7	+2.9
	0.8nm,0.4s,baz=162,slow=7.6,SNR=3.8							

LDG ***03*** *15:31:46.5±0.2, 1568S×16704E, h10km, Mb4.9/2, Ms4.5/10, Error ellipse: s-maj=30.8km s-min=7.2km az=88.0*
BJI ***03*** *15:31:46.4, 1598S×16784E, h35km, mB5.3, mb4.8, Ms4.9, Msz4.6*
ISCJB ***03*** *15:31:48.5±0.3, 1598S±003×16746E±007, h37km, mb5.0/53, MS4.5/41, Error ellipse: s-maj=9.5km s-min=5.0km az=0.1*
MOS ***03*** *15:31:49.5±1.6, 1594S×16727E, h33km, mb5.3/27, MS4.7/4, Error ellipse: s-maj=11.5km s-min=9.1km az=29.6*
IDC ***03*** *15:31:50.7±0.6, 1590S×16739E, h40km±3km, mb4.4/18, mb1 4.4/18, mb1mx4.4/22, mbtmp4.4/18, MS4.3/25, Ms1 4.3/25, ms1mx4.2/32, Error ellipse: s-maj=17.4km s-min=13.0km az=114.0*
NEIC ***03*** *15:31:50.2±0.3, 1589S×16750E, h35km, mb5.2/25, Error ellipse: s-maj=10.9km s-min=9.1km az=129.0*
NEIC Felt at Luganville.
GCMT ***03*** *15:31:50.2±0.2, 1594S×16735E, h43km, MW5.2/78, Moment Tensor Solution. s78,c123; s77,c128; Duration: 1s0 Moment tensor: Scale 1017Nm; Mrr0.78±.02; Mθθ-0.11±.01; Mϕϕ-0.67±.01; Mrθ-0.23±.01; Mθϕ0.42±.01; Mϕr0.04±.01; Best double couple: M0 0.87600×1017 NP1:ϕ1166.00000°, δ42.00000°, λ111.00000°. NP2:ϕ2319.00000°, δ51.00000°, λ72.00000°. Principal axes: T 0.8410, Plg75.0000°, Azm170.0000°; N 0.0700, Plg14.0000°, Azm330.0000°; P -0.9110, Plg5.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***03*** *15:32:25.5±0.0, 1827S×16588E, h186km, mB5.6/6, Mw(mB)5.3/6, Mwp5.0/8*

ISC 03 15:31:50.6±0.3, 1595S±003×16749E±007, h39km, h39km±1.1km: pP-P, n258, σ1907/107, mb5.0/53, MS4.5/41, 12C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
DZM	**Mont Dzumac**	**6.17**	**189**	*e*Pn		**Pn**	**15 33 18.9**	**-0.3**
DZM				*e*Sn		**Sn**	**15 34 27.5**	**-1.0**
NOUC	**Port Laguerre**	**6.22**	**190**	*e*P		**Pn**	**15 33 19.6**	**-0.3**
NOUC				*e*S		**Sn**	**15 34 28.3**	**-1.5**
HNR	**Honiara**	**9.80**	**310**	Pn		**Pn**	**15 34 11.9**	**+2.9**
	48nm,0.3s,baz=123,slow=3.7,SNR=5.7							
EIDS	**Eidsvold**	**17.97**	**236**	*e*P		**Pn**	**15 36 00.0**	**+2.5**
	509nm,1.2s							
RAO	**Raoul Island**	**18.86**	**137**	LR		LR	15 40 54.0	
	comp=Z,308nm,19.8s,baz=47,slow=29							
AFI	**Afiamalu**	**20.14**	**87**	LR		LR	15 42 16.7	
	comp=Z,909nm,18.4s,MS4.2,baz=276,slow=31							
AFI	**Afiamalu**	**20.14**	**87**	P		**P**	**15 36 23.7**	**+2.2**
	54nm,1.1s							
AFI	**Afiamalu**	**20.14**	**87**	P		**P**	**15 36 23.7**	**+2.2**
AFI				pmax		pmax		
	comp=Z,54nm,1.1s							
ARMA	**Armidale**	**20.46**	**222**	*e*P		**P**	**15 36 27.5**	**+2.6**
	comp=Z,1.5nm,1.1s							
CTA	**Charters Tower**	**20.61**	**255**	P		**P**	**15 36 27.5**	**+0.9**
	comp=Z,20nm,0.9s,baz=80,slow=12,SNR=19							
CTA				LR		LR	15 43 13.2	
	comp=Z,1μm,20.9s,MS4.2,baz=101,slow=33							
CTAO	**Charters Tower**	**20.61**	**255**	*e*P		**P**	**15 36 28.0**	**+1.5**
	comp=Z,66nm,0.9s							
CTAO	**Charters Tower**	**20.61**	**255**	*e*P		**P**	**15 36 28.0**	**+1.4**
CTAO				pmax		pmax		
	comp=Z,66nm,0.9s							
CTAO	**Charters Tower**	**20.61**	**255**	P		**P**	**15 36 29.2**	**+2.6**
	comp=Z,98nm,1.0s,comp=Z,831nm							
PMG	**Port Moresby**	**20.86**	**286**	*e*P		**P**	**15 36 30.7**	**+1.3**
	comp=Z,62nm,1.2s							
PMG	**Port Moresby**	**20.86**	**286**	*e*P		**P**	**15 36 30.7**	**+1.3**
PMG				pmax		pmax		
	comp=Z,62nm,1.2s							
PMG	**Port Moresby**	**20.86**	**286**	P		pP	15 36 44.9	+5.7
	comp=Z,50nm,1.0s							
COEN	**Coen**	**23.57**	**272**	P		pP	15 37 11.4	+3.2
	comp=Z,15nm,1.3s,comp=Z,433nm							
URZ	**Urewera**	**23.79**	**161**	P		**P**	**15 37 00.6**	**+0.9**
	comp=Z,12nm,1.0s,mb4.3,baz=18,slow=12,SNR=7.2							
URZ				LR		LR	15 45 11.8	
	comp=Z,2μm,20.7s,MS4.5,baz=166,slow=34							
RPZ	**Rata Peaks**	**27.84**	**174**	P		**P**	**15 37 36.7**	**+0.4**
	comp=Z,5.9nm,0.7s,mb4.4,baz=20,slow=11,SNR=3.5							
RPZ				LR		LR	15 47 25.9	
	comp=Z,1μm,21.7s,MS4.5,baz=344,slow=34							
RPZ	**Rata Peaks**	**27.84**	**174**	P		**P**	**15 37 36.6**	**+0.4**
RPZ				LR		LR	15 47 25.9	
STKA	**Stephens Creek**	**28.38**	**231**	P		**P**	**15 37 40.9**	**-0.4**
	comp=Z,8.3nm,0.8s,mb4.4,baz=49,slow=8.8,SNR=6.0							
STKA				LR		LR	15 48 08.7	
	comp=Z,1μm,20.9s,MS4.5,baz=264,slow=34							
STKA	**Stephens Creek**	**28.38**	**231**	*e*P		**P**	**15 37 42.7**	**+1.4**
	comp=Z,171nm,2.0s,mb5.3							
RAR	**Rarotonga**	**31.43**	**105**	LR		LR	15 47 46.3	
	comp=Z,617nm,19.2s,MS4.3,baz=300,slow=30							
WRAB	**Tennant Creek**	**31.75**	**258**	*e*P		**P**	**15 38 11.3**	**+0.2**
	comp=Z,34nm,1.6s,mb4.9							
WRAB	**Tennant Creek**	**31.75**	**258**	*e*P		**P**	**15 38 11.3**	**+0.1**
WRAB				pmax		pmax		
	comp=Z,34nm,1.6s,mb4.9							
WRA	**Warramunga Arr**	**31.75**	**258**	P		**P**	**15 38 09.6**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.1,baz=90,slow=9.2,SNR=4.7							
WRA				pP		pP	15 38 20.4	-1.7
	comp=Z,10.0nm,1.0s,baz=88,slow=8.7,SNR=5.7							
WRA				ScP		ScP	15 44 44.2	+1.6
	comp=Z,3.1nm,1.1s,baz=91,slow=3.2,SNR=8.3							
WRA				LR		LR	15 50 07.4	
	comp=Z,795nm,19.2s,MS4.4,baz=95,slow=35							
WRA	**Warramunga Arr**	**31.75**	**258**	P		**P**	**15 38 09.6**	**-1.7**
WRA				*PP		pP	15 38 20.4	-1.7
TAU	**Tasmania Unive**	**31.93**	**209**	*e*P		**P**	**15 38 11.8**	**-0.7**
	comp=Z,86nm,1.7s,mb5.3							
TAU	**Tasmania Unive**	**31.93**	**209**	*e*P		**P**	**15 38 11.8**	**-0.7**
TAU				pmax		pmax		
	comp=Z,86nm,

CASY Casey 62.49 202 *e*P P **15 42 08.8 -0.9**
comp=Z,65nm,1.5s,mb5.5
ASAJ Asahikawa 63.95 340 P P **15 42 20.4 +0.7**
comp=Z,11nm,0.7s,mb5.0,baz=246,slow=10,SNR=6.8
KSRS Korea Array 64.86 326 P P **15 42 24.9 -0.8**
comp=Z,1.2nm,0.7s,mb4.0,baz=133,slow=7.0,SNR=6.9
KSRS pP pP 15 42 37.9 +0.5
comp=Z,2.8nm,1.0s,baz=137,slow=6.2,SNR=5.1
KSRS LR LR 16 07 47.5
comp=Z,123nm,20.1s,MS4.1,baz=123,slow=33
RGRI Rengat 66.06 277 P P **15 42 40.3 +6.3**
comp=Z,160nm,0.3s
YSS Yuzh-Sakhalins 66.44 342⇑ *i*P pP 15 42 47.4 0.0
YSS pmax pmax
comp=Z,38nm,1.3s,mb5.3
QIZ Qiongzhong 66.51 299 P P **15 42 36.6 -0.2**
QIZ AP pP 15 42 48.3 -0.1
QIZ S S 15 51 26.5 +1.4
QIZ XS sS 15 51 43.1 -1.3
QIZ SS SS 15 55 43.1 +0.1
QIZ LR LR
comp=E,161nm,26.7s
QIZ LR LR
comp=Z,246nm,28.0s,MS4.3
NJ2 Nanjing 66.69 316 *e*P P **15 42 38.7 +1.0**
NJ2 AP pP 15 42 49.6 +0.3
NJ2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
PETK Petropavlovsk- 69.29 354 P P **15 42 52.7 -0.8**
comp=Z,10nm,0.8s,mb4.8,baz=147,slow=4.4,SNR=10
PETK pP pP 15 43 04.3 -0.9
comp=Z,7.7nm,0.8s,baz=129,slow=6.6,SNR=3.4
PETK LR LR 16 08 26.6
comp=Z,140nm,19.5s,MS4.2,baz=170,slow=32
PETK Petropavlovsk- 69.29 354 P P **15 42 52.7 -0.8**
PETK pP pP 15 43 04.3 -0.9
PETK LR LR 16 08 26.6
MIR Mirnyy 69.31 204⇓ *i*P P **15 42 54.0 +0.4**
MIR *i* pP 15 43 05.0 -0.3
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.5
MDJ Mudanjiang 69.45 332 P P **15 42 55.7 +1.0**
MDJ AP pP 15 43 04.9 -1.5
MDJ XP sP 15 43 09.0 -1.9
MDJ PCP PcP 15 43 18.6 +0.8
MDJ PP PP 15 45 29.3 +0.5
MDJ S S 15 52 01.4 +2.2
MDJ XS sS 15 52 13.2 -5.5
MDJ SCS ScS 15 52 54.0 +1.1
MDJ SS SS 15 56 29.8 +2.2
MDJ AMB AMB
comp=Z,15nm,1.1s,mb4.8
MDJ AMB AMB
comp=Z,71nm,3.5s
MDJ LR LR
comp=N,130nm,16.9s,MS4.4
MDJ LR LR
comp=E,145nm,17.7s,MS4.4
MDJ LR LR
comp=Z,248nm,20.2s,MS4.5
MDJ Mudanjiang 69.45 332 *e*P P **15 42 54.3 -0.4**
comp=Z,7.6nm,0.8s,mb4.7
MDJ *e* pP 15 43 05.3 -1.1
CN2 Changchun 70.79 329 *e*P P **15 43 03.5 +0.5**
CN2 *e*AP pP 15 43 13.7 -1.0
CN2 *e*XP sP 15 43 17.7 -1.5
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CN2 AMB AMB
comp=Z,200nm,4.0s
KLR Kul'dur 72.20 336 *e*P P **15 43 07.4 -3.9**
KLR pmax pmax
comp=Z,57nm,1.6s,mb5.2
GYA Guiyang 72.58 305 P P **15 43 14.3 +0.2**
GYA AP pP 15 43 26.2 +0.3
GYA PCP PcP 15 43 31.6 0.0
GYA PP PP 15 45 58.9 +2.8
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,240nm,3.9s
GYA LR LR
comp=N,860nm,19.8s,MS5.2
GYA LR LR
comp=E,780nm,20.4s,MS5.2
GYA LR LR
comp=Z,840nm,19.6s,MS5.0
BJI Beijing 73.34 321 P P **15 43 18.4 +0.1**
BJI AMB AMB
comp=Z,21nm,0.8s,mb5.1
BJI AMB AMB
comp=Z,181nm,4.1s
BJI LR LR
comp=N,246nm,16.1s,MS4.8
BJI LR LR
comp=E,269nm,16.1s,MS4.8
BJI LR LR
comp=Z,398nm,28.0s
XAN Xi'an 74.67 313 P P **15 43 25.5 -0.7**
XAN AP pP 15 43 32.1 -5.9
XAN AMB AMB
comp=Z,11nm,1.7s,mb4.5
KMI Kunming 75.12 302 P P **15 43 29.8 +0.7**
KMI AP pP 15 43 41.2 +0.3
KMI XP sP 15 43 45.4 +0.1
KMI PP PP 15 46 20.5 +2.7
KMI AMB AMB
comp=Z,23nm,1.2s,mb5.0
KMI AMB AMB
comp=Z,189nm,3.3s
KMI LR LR
comp=N,197nm,15.1s,MS4.7
KMI LR LR
comp=E,166nm,12.6s,MS4.7
KMI LR LR
comp=Z,318nm,20.9s
CHRT Chiangrai 75.45 296 P P **15 43 31.0 0.0**
comp=Z,105nm,0.9s,mb5.8
CMAR Chiang Mai Arr 75.64 294 P P **15 43 31.9 -0.2**
comp=Z,3.1nm,0.8s,mb4.3,baz=130,slow=4.6,SNR=30
CMAR pP pP 15 43 43.8 -0.2
comp=Z,2.7nm,1.0s,baz=132,slow=4.1,SNR=19
CMAR LR LR 16 13 03.8
comp=Z,106nm,20.1s,MS4.1,baz=123,slow=33
CMAR Chiang Mai Arr 75.64 294 P P **15 43 32.0 -0.1**
CMAR *PP pP 15 43 43.8 -0.1
CHG Chiang Mai 75.77 295⇑P P **15 43 33.6 +0.7**
comp=Z,16nm,1.2s,mb4.8
CHTO Chiang Mai 75.77 295 *e*P P **15 43 33.3 +0.4**
comp=Z,15nm,1.0s,mb4.9
CHTO Chiang Mai 75.77 295 *e*P P **15 43 33.3 +0.4**
CHTO pmax pmax
comp=Z,15nm,1.0s,mb4.9
HHC Hu-ho-hao-te 76.64 320 *e*P P **15 43 39.2 +1.8**
HHC AP pP 15 43 50.0 +0.8
HHC XP sP 15 43 53.6 -0.1
HHC AMB AMB
comp=Z,22nm,1.2s,mb5.0
HHC AMB AMB
comp=Z,162nm,6.0s
HHC LR LR
comp=N,167nm,22.6s,MS4.5
HHC LR LR
comp=E,235nm,21.4s,MS4.5
HHC LR LR
comp=Z,288nm,27.4s
CD2 Chengdu 76.92 308⇓ *i*P P **15 43 39.4 +0.3**
CD2 AP pP 15 43 49.7 -1.3
CD2 XP sP 15 43 53.8 -1.6
CD2 AMB AMB
comp=Z,20nm,1.3s,mb4.9
CD2 AMB AMB
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,240nm,14.4s
CD2 LR LR
comp=E,290nm,20.4s
CD2 LR LR
comp=Z,420nm,18.0s,MS4.8
HIA Hailar 77.44 330 *e*P P **15 43 41.1 -0.6**
comp=Z,13nm,1.0s,mb4.8
HIA Hailar 77.44 330 *e*P P **15 43 41.1 -0.5**
HIA pmax pmax
comp=Z,13nm,1.0s
LZH Lanzhou 79.29 312 *e*P P **15 43 53.5 +1.3**
LZH AP pP 15 44 03.5 -0.6
LZH XP sP 15 44 07.4 -1.1
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,170nm,4.7s
LZH LR LR
comp=E,280nm,16.8s
LZH LR LR
comp=Z,560nm,18.8s,MS4.9
KDAK Kodiak Island 80.53 20 LR LR 16 18 19.6
comp=Z,190nm,18.4s,MS4.5,baz=124,slow=35
CLNS Chul'man 80.73 338 *e*P P **15 44 00.1 +0.7**
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=Z,15nm,1.2s,mb4.8
CLNS pmax pmax
comp=E,6.0nm,1.0s
MAW Mawson 80.84 202 P P **15 44 00.3 +0.3**
comp=E,4.4nm,0.9s,mb4.4,baz=92,slow=7.1,SNR=6.8
MAW LR LR 16 15 17.5
comp=E,285nm,19.1s,MS4.6,baz=87,slow=32
MAW Mawson 80.84 202 *e*P P **15 43 59.5 -0.5**
comp=E,23nm,1.5s,mb4.9
MAW *e* pP 15 44 10.8 -1.2
MAW Mawson 80.84 202 *e*P P **15 43 59.5 -0.6**
MAW *e* pP 15 44 10.8 -1.2
MAW pmax pmax
comp=Z,23nm,1.5s
ULN Ulaanbaatar 83.24 324 *e*P P **15 44 12.7 -0.2**
comp=Z,53nm,1.4s,mb5.4
ULN Ulaanbaatar 83.24 324 *e*P P **15 44 12.7 -0.1**
ULN pmax pmax
comp=Z,53nm,1.4s,mb5.4
YAK Yakutsk 83.25 343 *e*P P **15 44 12.0 -0.6**
comp=Z,31nm,0.8s,mb5.4
YAK Yakutsk 83.25 343 *e*P P **15 44 10.8 -1.8**
YAK *e* pP 15 44 24.0 -0.5
YAK pmax pmax
comp=Z,21nm,0.7s,mb5.3
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=N,14nm,1.4s
SONM Songino Array 83.60 324 P P **15 44 14.6 -0.1**
comp=N,10.0nm,0.9s,mb5.0,baz=139,slow=3.5,SNR=48
SONM pP pP 15 44 27.3 +0.6
comp=N,5.3nm,1.0s,baz=152,slow=5.5,SNR=5.7
GTA Gaotai 83.66 314 P P **15 44 15.4 +0.2**
GTA AP pP 15 44 25.8 -1.4
GTA XP sP 15 44 29.8 -1.8
GTA AMB AMB
comp=Z,10.0nm,1.5s,mb4.7
GTA AMB AMB
comp=Z,144nm,4.8s
GTA LR LR
comp=N,174nm,17.4s,MS4.6
GTA LR LR
comp=E,175nm,18.3s,MS4.6
GTA LR LR
comp=Z,261nm,18.0s,MS4.7
YBH Yreka Blue Hor 86.13 45 LR LR 16 14 18.5
comp=Z,197nm,20.1s,MS4.5,baz=205,slow=30
CMB Columbia Colle 86.24 49 *e*P P **15 44 25.8 -2.4**
comp=Z,8.6nm,1.2s,mb4.9
CMB Columbia Colle 86.24 49 *e*P P **15 44 25.8 -2.4**
CMB pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
LSA Lhasa 86.38 302 P P **15 44 28.2 -0.9**
LSA Lhasa 86.38 302 *e*P P **15 44 28.7 -0.4**
comp=Z,8.8nm,1.0s,mb4.9
LSA Lhasa 86.38 302 *e*P P **15 44 28.7 -0.4**
LSA pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ZAK Zakamensk 86.66 325⇑ *i*P P **15 44 28.8 -1.2**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
ISA Isabella 86.73 52 *e*P pP 15 44 45.2 +2.5
WAKR Walker 87.11 49 *e*P pP 15 44 47.2 +2.7
TLY Talaya 87.11 326 *e*P P **15 44 32.1 0.0**
TLY Talaya 87.11 326 *e*P P **15 44 32.1 -0.1**
TLY *e* 15 56 16.6
TLY pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,131nm,18.0s,MS4.4
MTUM Tungsten Hills 87.31 50 *e*P pP 15 44 43.9 -1.6
BBB Bella Bella 87.66 34 LR LR 16 14 53.0
comp=Z,272nm,20.1s,MS4.7,baz=257,slow=30
NVAR Mina Array Bea 87.90 49 P P **15 44 36.9 +0.6**
comp=Z,0.4nm,0.7s,baz=289,slow=2.8,SNR=2.9
NVAR pP pP 15 44 49.9 +1.6
comp=Z,4.2nm,1.0s,baz=226,slow=7.2,SNR=8.8
NVAR Mina Array Bea 87.90 49 P P **15 44 36.9 +0.6**
NVAR pP pP 15 44 49.9 +1.6
TPNV Topopah Spring 88.88 51 *e*P P **15 44 44.9 +3.9**
comp=Z,112nm,2.8s,mb5.7
TPNV Topopah Spring 88.88 51 *e*P P **15 44 44.9 +4.0**
TPNV pmax pmax
comp=Z,112nm,2.8s,mb5.7
SHPR Sheep Range 89.54 52 *e*P P **15 44 45.5 +1.4**
DLBC Dease Lake 89.91 28 LR LR 16 17 26.2
comp=Z,186nm,19.5s,MS4.5,baz=136,slow=30
ELK Elko 90.94 48 LR LR 16 16 17.7
comp=Z,195nm,21.9s,MS4.5,baz=309,slow=29
TIXI Tiksi 91.20 349 *e*P P **15 44 49.8 -1.2**
comp=Z,14nm,1.1s,mb5.2
TIXI Tiksi 91.20 349 *e*P pP 15 45 01.7 -1.3
TIXI pmax pmax
comp=Z,16nm,1.3s,mb5.2
WMQ Urumqi 93.73 314 *e*P P **15 45 04.0 +0.7**
WMQ XP sP 15 45 19.0 -0.8
WMQ AMB AMB
comp=Z,21nm,1.2s,mb5.4
WMQ LR LR
comp=N,124nm,22.0s,MS4.6
WMQ LR LR
comp=E,221nm,22.0s,MS4.6
WMQ LR LR
comp=Z,201nm,20.0s,MS4.6
PDAR Pinedale Array 95.61 47 LR LR 16 21 08.1
comp=Z,135nm,18.5s,MS4.5,baz=263,slow=31
TXAR Lajitas Array 96.67 62 LR LR 16 20 33.2
comp=Z,169nm,19.5s,MS4.5,baz=245,slow=30
MKAR Makanchi Array 98.22 316 P P **15 45 23.7 +0.1**
comp=Z,0.5nm,0.5s,mb4.3,baz=93,slow=7.5,SNR=5.3
MKAR LR LR 16 26 40.5
comp=Z,98nm,19.3s,MS4.3,baz=272,slow=34
ZALV Zalesovo Beam 98.49 324 P P **15 45 23.2 -1.5**
comp=Z,3.1nm,0.8s,mb4.9,baz=88,slow=3.5,SNR=9.5
ZALV LR LR 16 29 34.6
comp=Z,70nm,18.0s,MS4.2,baz=236,slow=35
ZALV Zalesovo Beam 98.49 324 P P **15 45 23.2 -1.5**
ZALV LR LR 16 29 34.6
YKA Yellowknife Ar 98.53 27 LR LR 16 29 26.7
comp=Z,62nm,19.3s,MS4.1,baz=150,slow=35
FFC Flin Flon 103.16 37 *e*P Pdif 15 45 48.6 +3.0
comp=Z,62nm,1.0s
FFC Flin Flon 103.16 37 *e*P Pdif 15 45 48.6 +3.0
FFC pmax pmax
comp=Z,62nm,1.0s
BVAR Borovoye Array 106.82 321 PP PP 15 50 24.0 -4.0
comp=Z,1.8nm,0.9s,baz=85,slow=3.1,SNR=6.5
BLO Bloomington 112.19 54 *e*P PKiKP 15 50 23.2 +0.9
ARU Arti 113.60 325 *i* PKIKP 15 50 36.7
ARU 15 51 24.1
ARU SP SP 16 00 52.8 +4.7
ARU SS SS 16 06 58.3 -3.2
KEV Kevo 120.95 345 *e*pkp PKPdf 15 50 36.5 -1.7
ARCES ARCESS Array B 121.48 345 PKP PKPdf 15 50 37.4 -1.7
comp=Z,1.3nm,0.3s,baz=85,slow=2.5,SNR=51
ARCES pPKP pPKPdf 15 50 51.4 -0.2
comp=Z,11nm,0.7s,baz=69,slow=1.7,SNR=8.7
BOSA Boshof 122.58 220 PKP PKPdf 15 50 41.8 -0.8
comp=Z,1.3nm,0.7s,baz=180,slow=1.0,SNR=3.4
BOSA pPKP pPKPdf 15 50 56.4 +1.3
comp=Z,3.9nm,0.8s,baz=299,slow=2.2,SNR=3.4
JOF Joensuu 124.09 338 *e*pkp PKPdf 15 50 42.3 -2.0
comp=Z,5.3nm,0.8s
JOF Joensuu 124.09 338 *e*PKIKP PKPdf 15 50 42.3 -2.0
JOF pmax pmax
comp=Z,5.0nm,0.8s
VRHR Novokhopersk 124.56 322 *e*PKIKP pPKPdf 15 50 58.1 +0.1
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.8s
GNI Garni 125.05 308⇑ *i*PKIKP pPKPdf 15 51 00.0 +0.7
OBN Obninsk 125.84 328⇑ *i*PKIKP pPKPdf 15 51 00.1 -0.3
OBN pmax pmax
comp=Z,38nm,1.2s
VSR Storozhevoye 125.98 322 *e*PKIKP PKPdf 15 51 00.2 -0.5
VSR pmax pmax
comp=N,5.0nm,1.1s
VSR pmax pmax
comp=E,7.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 125.99 322 *e*PKIKP pPKPdf 15 51 00.2 -0.6
VORD pmax pmax
comp=Z,20nm,1.2s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,1.0s
KAF Kangasniemi 126.40 339 *e*pkp PKPdf 15 50 47.9 -0.9
NB2 NORSAR Subarra131.85 345 PKPdf PKPdf 15 50 57.9 -1.3
comp=Z,8.3nm,1.2s,baz=31,slow=1.9
NB2 NORSAR Subarra131.85 345 PKPdf PKPdf 15 50 57.9 -1.3
baz=31,slow=1.9
NOA NORSAR Array B131.85 345 PKP PKPdf 15 50 58.4 -0.8
comp=Z,1.7nm,0.8s,baz=29,slow=2.0,SNR=2.8
NOA pPKP pPKPdf 15 51 12.7 +1.0
comp=Z,3.3nm,0.7s,baz=36,slow=2.0,SNR=7.2
AKASG Malin Array Be 131.85 325 PKP PKPdf 15 50 58.5 -1.1
comp=Z,0.6nm,0.5s,baz=89,slow=1.2,SNR=9.2
AKASG pPKP pPKPdf 15 51 11.6 -0.4
comp=Z,4.1nm,0.8s,baz=61,slow=2.3,SNR=8.1
AKASG SKPbc SKPbc 15 54 22.4 -0.1
comp=Z,0.6nm,0.6s,baz=53,slow=3.5,SNR=5.2
AKASG Malin Array Be 131.85 325 PKP PKPdf 15 50 58.5 -1.1
AKASG pPKP pPKPdf 15 51 11.6 -0.4
AKASG SKPbc SKPbc 15 54 22.4 -0.1
AKASG Malin Array Be 131.85 325 PKIKP PKPdf 15 50 58.5 -1.0
AKASG 15 51 11.6
BRTR Keskin Array B 133.46 310 PKP PKPdf 15 51 03.2 +0.3
comp=Z,1.7nm,0.9s,baz=64,slow=2.9,SNR=5.3
BRTR pPKP pPKPdf 15 51 17.0 +1.7
comp=Z,3.9nm,1.0s,baz=133,slow=0.4,SNR=8.0
KOLS Kolonicke sedl 136.58 327 *e*PKP PKPdf 15 51 06.8 -1.6
KOLS *e* 15 51 21.0
OKC Ostrava-Krasne 138.07 330 *e*PKP pPKPdf 15 51 24.3 +0.7
OKC Ostrava-Krasne 138.07 330 *ep*PKP pPKPdf 15 51 24.3 +0.7
MORC Moravsky Berou 138.39 331 *e*PKPdf PKPdf 15 51 11.1 -0.7
PSZ Piszkesteto 138.45 327 *e*PKP PKPdf 15 51 12.1 +0.2
DPC Dobruska-Polom 138.55 332 *e*PKP pPKPdf 15 51 23.0 -1.5
DPC Dobruska-Polom 138.55 332 *ep*PKP pPKPdf 15 51 23.0 -1.5
UPC Upice 138.58 333 *e*PKP pPKPdf 15 51 22.4 -2.1
UPC Upice 138.58 333 *ep*PKP pPKPdf 15 51 22.4 -2.1
VYHS Vyhne 138.62 328 *e*PKP pPKPdf 15 51 25.1 +0.4
PVCC Panska Ves 139.19 334 *e*PKP pPKPdf 15 51 25.2 -0.4
PVCC Panska Ves 139.19 334 *ep*PKP pPKPdf 15 51 25.2 -0.4
BRG Berggiesshubel 139.20 334 *e*PKP PKPdf 15 51 13.2 0.0
BRG *e* 15 51 26.3
BRG Berggiesshubel 139.20 334 *e*PKIKP PKPdf 15 51 13.2 0.0
BRG *e* 15 51 26.3
BRG pmax pmax
comp=Z,11nm,1.7s
BRG pmax pmax
comp=Z,11nm,1.1s
CLL Collm 139.25 336 *i* PKP pPKPdf 15 51 28.0 +2.3
CLL *e*PKS 15 55 01.0
CLL Collm 139.25 336 *i* PKIKP pPKPdf 15 51 28.0 +2.3
CLL pmax pmax
comp=Z,11nm,1.0s
CLL Collm 139.25 336 *i* PKPdf PKPdf 15 51 14.0 +0.7
comp=Z,33nm,1.9s
CLL *i* sPKPdf 15 51 28.0
comp=Z,11nm,1.0s
CLL *e*PKSab 15 55 01.0
MODS Modra-Piesok 139.48 329 *e*PKP PKPdf 15 51 15.7 +1.9
MODS *e* 15 51 26.6
PRU Pruhonice 139.60 333 *e*PKP pPKPdf 15 51 26.8 +0.4
PRU Pruhonice 139.60 333 *ep*PKP pPKPdf 15 51 26.8 +0.4
TREC Trest 139.69 332 *e*PKIKP pPKPdf 15 51 26.2 -0.4
TREC Trest 139.69 332 *ep*PKP pPKPdf 15 51 26.2 -0.4
ZST Bratislava 139.69 329 *e*PKP PKPdf 15 51 15.6 +1.4
ZST *e* 15 51 27.2
NKC Novy Kostel 140.30 335 *e*PKP pPKPdf 15 51 27.5 -0.2
NKC Novy Kostel 140.30 335 *ep*PKP pPKPdf 15 51 27.5 -0.2
SOP Sopron 140.30 329 *es*PKP/D pPKPdf 15 51 28.0 +0.3
MOX Moxa 140.31 336 *e*PKP pPKPdf 15 51 28.1 +0.4
comp=Z,30nm,1.9s
MOX Moxa 140.31 336 *e*PKIKP pPKPdf 15 51 28.1 +0.4
MOX pmax pmax
comp=Z,30nm,1.9s
KHC Kasperske Hory 140.66 333 *e*PKPdf PKPdf 15 51 15.5 -0.4
KHC *ep*PKP pPKPdf 15 51 28.5 +0.2
GEC2 GERESS Array S 140.82 332 *e*PKPdf PKPdf 15 51 15.2 -1.1
GERES GERESS Array B 140.82 332 PKP PKPdf 15 51 15.1 -1.1
comp=Z,1.2nm,0.8s,baz=29,slow=3.0,SNR=9.2
GERES pPKP pPKPdf 15 51 29.1 +0.5
comp=Z,4.1nm,0.8s,baz=76,slow=0.6,SNR=13
GRA1 Grafenberg Arr 141.22 335 *e*PKP pPKPdf 15 51 29.2 -0.1
GRF Grafenberg Arr 141.22 335 *e*PKP pPKPdf 15 51 29.2 -0.1
MEM Membach 142.34 341 APKP pPKPdf 15 51 32.4 +1.1
LJU Ljubljana 142.44 329 *e*PKPbc PKPdf 15 51 32.0 +13
VISS Visnje 142.45 328 *i* PKPbc PKPdf 15 51 32.4 +13
WLF Walferdange 143.11 340 PKP PKPdf 15 51 20.1 -0.2
GIVF Givet 143.16 341 *e*PP1 PKPdf 15 51 18.8 -1.5
DOU Dourbes 143.23 342 APKP pPKPdf 15 51 32.4 -0.5
BAIF Baives 143.38 342 *e*PKP1 PKPdf 15 51 20.5 -0.2
SPAK Spaichingen-Ko 143.46 336 PKP PKPdf 15 51 19.8 -1.1
FETA Feichten 143.51 333⇑ *i*PKPdf PKPdf 15 51 19.6 -1.5
comp=Z,18nm,1.2s
DAVA Damuels 143.66 334⇓ *i*PKPdf PKPdf 15 51 20.3 -1.0
comp=Z,14nm,1.3s
CDF Champ du Feu 143.78 338 *e*PKP1 PKPdf 15 51 18.4 -3.1
FELD Feldberg im Sc 143.95 336 PKP PKPdf 15 51 20.8 -1.0
ECH Echery 143.99 337 PKP PKPdf 15 51 20.6 -1.3
THEF They Montfort 144.40 339 PKP PKPdf 15 51 20.0 -2.6
HINF Hinteralfeld 144.43 337 *e*PKP1 PKPdf 15 51 19.4 -3.3
HAU Haudompre 144.46 338 *e*PKP1 PKPdf 15 51 20.0 -2.7
HAU *e*MLR MLR
comp=Z,203nm,22.8s,MS4.5
HAU Haudompre 144.46 338 *e*PKIKP PKPdf 15 51 20.0 -2.7
HAU MLR MLR
comp=Z,200nm,22.8s,MS4.8
MEZF Maizieres J'vi 144.48 340 *e*PKP1 PKPdf 15 51 20.4 -2.3
LOMF Lomont 144.83 337 PKP PKPdf 15 51 22.1 -1.3
TIP Timpagrande 145.49 318 *e*PKPdf PKPdf 15 51 24.4 -0.3
CABF La Chapelle 145.73 337⇑ *i*PKP1 PKPbc 15 51 24.8 -0.5
comp=Z,71nm,1.2s
OG01 Vacheresse 145.73 336 PKP PKPdf 15 51 26.4 +1.5
FLN La Foliniere 145.82 346 *e*PKP1 PKPbc 15 51 24.1 -1.5
FLN *e*MLR MLR
comp=Z,204nm,23.0s,MS4.5
FLN La Foliniere 145.82 346 *e*PKIKP PKPdf 15 51 24.1 -0.9
FLN MLR MLR
comp=Z,200nm,23.0s,MS4.8
LDF La Druitiere 145.89 345 *e*PKP1 PKPbc 15 51 24.2 -1.6
comp=Z,20nm,0.8s
LOR Lormes 145.95 340⇑ *i*PKP1 PKPbc 15 51 25.0 -1.0
comp=Z,108nm,1.5s
LOR *e*MLR MLR
comp=Z,266nm,23.0s,MS4.7
LOR Lormes 145.95 340⇑ *i*PKIKP PKPdf 15 51 25.0 -0.3
LOR MLR MLR
comp=Z,270nm,23.0s,MS5.0
SSF Saint Saulge 146.25 340 *e*PKP1 PKPbc 15 51 26.0 -0.9
comp=Z,16nm,0.5s
GRR Gorron 146.26 346 *e*PKP1 PKPbc 15 51 25.6 -1.3
LPL La Plagne 146.38 335 *e*PKP1 PKPbc 15 51 26.9 -0.5
LPG La Plagne 146.39 335 *e*PKP1 PKPbc 15 51 27.1 -0.3
OG05 Jujurieux 146.44 337 PKP PKPdf 15 51 27.4 +1.2
SMF Signal de Mont 146.50 339 *e*PKP1 PKPbc 15 51 26.4 -1.3
comp=Z,32nm,1.1s
AVF Avril sur Loir 146.53 340 *e*PKP1 PKPbc 15 51 26.5 -1.3
comp=Z,13nm,0.7s
SGMF Saint Gilles 146.76 348 *e*PKP1 PKPbc 15 51 26.9 -1.5
BNI Bardonecchia 146.78 335 *e*PKPdf PKPdf 15 51 26.1 -0.7
ROSF Rostrenen 146.82 349 *e*PKP1 PKPbc 15 51 26.9 -1.6
comp=Z,69nm,1.4s
BGF Bois d'Agland 146.90 340 *e*PKP1 PKPbc 15 51 27.8 -1.0
comp=Z,16nm,0.6s
MBDF Montbardon 147.01 334 *e*PKP1 PKPbc 15 51 28.0 -1.2
PLDF La Plantade 147.16 339 PKP PKPbc 15 51 29.4 -0.2
QUIF Quistinic 147.20 348 *e*PKP1 PKPbc 15 51 28.1 -1.5

ORIF	**Oris-en-Rattie**	**147.22 336**	*e*PKP1	PKPbc	15 51 28.9	-0.9
ORIF			*e*MLR	MLR		
	comp=Z,182nm,23.0s,MS4.5					
AGO	**Saint Agoulin**	**147.26 340**	PKP	PKPbc	15 51 29.6	-0.2
TCF	**Toulx Ste Croi**	**147.35 341**	*e*PKP1	PKPbc	15 51 28.9	-1.2
	comp=Z,73nm,1.3s					
SBF	**Sospel**	**147.42 333**	*e*PKP1	PKPbc	15 51 29.9	-0.5
SSB	**Saint Sauveur**	**147.43 337**	PKP	PKPbc	15 51 30.4	+0.1
PYM	**Petit Puy Mans**	**147.56 340**	PKP	PKPbc	15 51 30.6	-0.1
PGF	**Pioggiola**	**147.71 330**	*e*PKP1	PKPbc	15 51 29.8	-1.4
VERF	**Verneugheol**	**147.74 340**	PKP	PKPbc	15 51 30.8	-0.4
VIVF	**Saint-Julien-l**	**147.74 337**	*e*PKP1	PKPbc	15 51 30.2	+1.0
MFF	**Saint Martin d**	**147.75 344**	⇑*i*PKP1	PKPbc	15 51 29.9	-1.3
	comp=Z,28nm,0.7s					
LBL	**Lubilhac**	**147.93 339**	PKP	PKPbc	15 51 31.9	+0.2
FRF	**La Foret Royal**	**148.01 333**	*e*PKP1	PKPbc	15 51 30.5	-1.5
SMRF	**Simiane la Rot**	**148.12 335**	*e*PKP1	PKPbc	15 51 31.6	-0.7
LMR	**La Mourre**	**148.25 333**	*e*PKP1	PKPbc	15 51 31.2	-1.4
RJF	**Les Rejaudoux**	**148.44 341**	*e*PKP1	PKPbc	15 51 32.0	-1.1
	comp=Z,74nm,1.5s					
RJF			*e*MLR	MLR		
	comp=Z,250nm,20.8s,MS4.7					
CAF	**Calviac**	**148.60 340**	*e*PKP1	PKPbc	15 51 32.7	-0.8
LASF	**Ste Croix**	**148.71 337**	⇑*i*PKP1	PKPbc	15 51 32.9	-0.9
	comp=Z,51nm,1.1s					
LFF	**La Frestale**	**149.01 342**	*e*PKP1	PKPbc	15 51 33.4	-1.1
MTLF	**Montolieu**	**149.94 338**	*e*PKP1	PKPbc	15 51 35.8	-1.1
	comp=Z,54nm,1.2s					
EPF	**Esparros**	**150.86 340**	*e*PKP1	PKPbc	15 51 37.9	-1.2
	comp=Z,77nm,1.5s					
ETSF	**Etsaut**	**151.26 342**	*e*PKP1	PKPbc	15 51 39.4	-0.6
	comp=Z,15nm,0.8s					
SJPF	**Ste Jean**	**151.26 343**	*e*PKP1	PKPbc	15 51 39.1	-0.9
	comp=Z,47nm,1.2s					
KEST	**Kesra**	**152.28 319**	PKPbc	PKPbc	15 51 42.3	-0.3
	comp=Z,3.3nm,0.7s,baz=273,slow=3.2,SNR=7.3					
ESDC	**Sonseca Array**	**155.21 344**	PKPbc	PKPdf	15 51 48.2	+8.3
	comp=Z,0.1nm,0.3s,baz=12,slow=6.6,SNR=4.5					
ESDC			PKPab	PKPab	15 52 02.0	-2.7
	comp=Z,0.6nm,0.5s,baz=3.0,slow=1.8,SNR=8.7					
ESDC			pPKPab	pPKPab	15 52 16.8	-0.1
	comp=Z,3.6nm,0.8s,baz=23,slow=3.8,SNR=7.1					
EVO	**Evora**	**157.16 351**	*e*PKP2	pPKPab	15 52 26.1	+0.9
	comp=Z,52nm,1.2s					
EVO			*e*MLR	MLR		
	comp=Z,156nm,22.5s,MS4.5					
TORD	**Torodi Ar. Bea**	**165.97 260**	PKP	PKPdf	15 51 50.0	-2.3
	comp=Z,1.3nm,0.9s,baz=355,slow=1.2,SNR=6.4					
TORD			pPKP	pPKPdf	15 52 03.3	-1.5
	comp=Z,3.7nm,1.0s,baz=359,slow=1.8,SNR=10					
TORD			PKPab	PKPab	15 52 51.0	-1.5
	comp=Z,1.6nm,1.0s,baz=115,slow=4.2,SNR=2.9					
TORD			pPKPab	pPKPab	15 53 04.1	-0.5
	comp=Z,3.9nm,0.8s,baz=97,slow=3.6,SNR=7.8					
TORD			PP	PP	15 56 47.9	+7.7
	comp=Z,3.2nm,1.1s,baz=94,slow=4.4,SNR=7.1					
TORD	**Torodi Ar. Bea**	**165.97 260**	PKP	PKPdf	15 51 50.0	-2.2
TORD			pPKP	pPKPdf	15 52 03.3	-1.5
TORD			PKPab	PKPab	15 52 51.0	-1.5
TORD			pPKPab	pPKPab	15 53 04.1	-0.5
TORD			PP	PP	15 56 47.9	+7.7
KIC	**Kosan Boka**	**167.80 219**	*e*PKP1	pPKPab	15 53 12.9	+0.4
	comp=Z,106nm,1.3s					
LIC	**Lamto**	**167.87 218**	⇑*i*PKP2	pPKPab	15 53 13.3	+0.6
	comp=Z,54nm,1.1s					
LIC			*e*MLR	MLR		
	comp=Z,174nm,19.5s					
LIC	**Lamto**	**167.87 218**	*e*PKP1	pPKPab	15 53 13.3	+0.6
	comp=Z,68nm,1.1s					
TIC	**Toumodi**	**168.19 219**	*e*PKP1	pPKPab	15 53 13.8	-0.4
	comp=Z,106nm,1.1s					

JMA 03 15:32:29.4±0.1,2777N×14075E,h496km,M3.6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.44**	**117**	P	P	15 33 32.2	+0.5
CBIJ				*e*S	S	15 34 21.7	-0.5
JHHJ	**Haha-jima-NKT**	**1.71**	**131**	*e*S	S	15 34 23.5	-0.7
JIE	**Ise**	**7.46**	**333**	P	P	15 34 21.7	+1.8
JKN2	**Miekihoku**	**7.50**	**330**	P	P	15 34 21.5	+1.1
JOD2	**Odawara 2**	**7.60**	**350**	P	P	15 34 22.9	+1.5
JNY	**Yasuok**	**7.96**	**343**	P	P	15 34 26.6	+1.5
JHU	**Hanno**	**8.15**	**352**	P	P	15 34 27.1	0.0
JRY	**Ryogami san**	**8.37**	**350**	P	P	15 34 31.1	+1.7
JYT	**Yasato**	**8.45**	**357**	P	P	15 34 31.9	+1.8
JAG	**Ashikaga**	**8.70**	**353**	P	P	15 34 33.7	+0.9
JHO	**Hitachi**	**8.82**	**359**	P	P	15 34 36.3	+2.3
JHO				*e*S	S	15 36 16.7	+0.2

*BJI **03** 15:35:28.9, 6630N×13550W, h10km, mB4.9, mb4.7, Ms4.7, Msz4.5*
*IDC **03** 15:35:29.8±0.5, 6642N×13509W, h0km, mb4.0/16, mb1 4.3/18, mb1mx4.2/28, mbtmp4.1/18, ML4.5/2, MS3.9/15, Ms1 3.9/15, ms1mx3.7/37, Error ellipse: s-maj=17.7km s-min=9.1km az=47.0*
*ISCJB **03** 15:35:29.2±0.2, 6631N±002×13560W±005, h10km, mb4.5/48, MS4.0/17, Error ellipse: s-maj=3.1km s-min=2.5km az=32.2*
*NEIC **03** 15:35:32.0, 6633N×13548W, h20km, mb4.6/21, MW4.7(PGC), MW4.6(SLM), After PGC.*
*PGC **03** 15:35:32.0, 6633N×13548W, h20km, ML4.7, Mw4.7, 132km southwest of Fort McPherson, Nt Northern Yukon Territory, Canada*
*MOS **03** 15:35:32.2±1.3, 6633N×13544W, h33km, mb4.9/13, Error ellipse: s-maj=17.8km s-min=7.1km az=96.0*

ISC 03 15:35:31.1±0.2,6632N±002×13552W±005,h10km, (h22km±1.2km:pP-P),n262,σ0≥91/274,mb4.5/48,MS4.0/17, 72C-71D,Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	**2.15**	**20**	*e*Pn	**Pn**	**15 36 05.3**	**-1.5**
INK				*e*Sn	**Sn**	**15 36 33.4**	**-0.1**
INK	**Inuvik**	**2.15**	**20**	⇓Pn	**Pn**	**15 36 05.5**	**-1.3**
INK				⇓Sn	**Sn**	**15 36 31.2**	**-2.3**
INK				⇑Sg	**Sg**	**15 36 38.8**	**-1.1**
DAWY	**Dawson**	**2.79**	**218**	P	**Pn**	**15 36 14.9**	**-0.7**
DAWY				S	**Sn**	**15 36 52.1**	**+2.9**
DAWY	**Dawson**	**2.79**	**218**	⇑Pn	**Pn**	**15 36 14.9**	**-0.7**
DAWY				⇑Sn	**Sn**	**15 36 48.1**	**-1.2**
DAWY				⇑Sg	**Sg**	**15 36 59.1**	**-1.4**
EGAK	**Eagle**	**2.81**	**239**	P	**Pn**	**15 36 14.8**	**-1.2**
EGAK				S	**Sn**	**15 36 48.9**	**-0.8**
BM3	**Burnt Mountain**	**3.75**	**291**	P	**Pn**	**15 36 27.5**	**-1.4**
BCA3	**Beaver Creek A**	**4.23**	**222**	P	**Pn**	**15 36 34.7**	**-0.7**
BCA3				S	**Sn**	**15 37 27.3**	**+2.5**
DOT	**Dot Lake**	**4.51**	**238**	P	**Pn**	**15 36 38.5**	**-0.7**
DOT				S	**Sn**	**15 37 33.9**	**+2.3**
MENT	**Mentasta**	**4.89**	**230**	P	**Pn**	**15 36 43.6**	**-0.9**
IL1	**Eielson Array**	**4.97**	**257**	P	**Pn**	**15 36 44.8**	**-0.9**
ILB	**Eielson Array**	**4.97**	**257**	P	**Pn**	**15 36 44.8**	**-0.8**
COLA	**College**	**5.32**	**260**	P	**Pn**	**15 36 49.6**	**-0.7**
PAX	**Paxson**	**5.43**	**236**	P	**Pn**	**15 36 51.8**	**-0.1**
HYT	**Haines Junctio**	**5.58**	**190**	*e*Pn	**Pn**	**15 36 53.2**	**-0.8**
HYT				*e*Sn	**Sn**	**15 37 56.8**	**-1.3**
HYT	**Haines Junctio**	**5.58**	**190**	⇑Pn	**Pn**	**15 36 53.7**	**-0.3**
HYT				⇓Sg	**Sg**	**15 38 26.4**	**-3.7**
WHY	**Whitehorse**	**5.69**	**177**	P	**Pn**	**15 36 54.8**	**-0.6**
WHY	**Whitehorse**	**5.69**	**177**	⇓Pn	**Pn**	**15 36 53.9**	**-1.5**
WHY				⇑Sn	**Sn**	**15 37 56.6**	**-4.0**
WHY				⇓Sg	**Sg**	**15 38 28.7**	**-4.7**
COLD	**Coldfoot**	**5.88**	**286**	P	**Pn**	**15 36 57.8**	**-0.2**
MCK	**McKinley**	**6.24**	**252**	P	**Pn**	**15 37 02.7**	**-0.4**
BPAW	**Bear Paw Mtn.**	**6.87**	**258**	P	**Pn**	**15 37 10.6**	**-1.1**
SKAG	**Skagway**	**6.88**	**179**	P	**Pn**	**15 37 11.9**	**0.0**
PLBC	**Pleasant Camp**	**6.90**	**184**	⇓Pn	**Pn**	**15 37 11.9**	**-0.1**
PLBC				⇑Sn	**Sn**	**15 38 24.4**	**-6.1**
PLBC				⇑Sg	**Sg**	**15 39 05.7**	**-6.4**
PNL	**Peninsula**	**6.90**	**197**	*e*Pn	**Pn**	**15 37 14.2**	**+2.1**
	88nm,0.5s						
TRF	**Thorofare Moun**	**6.91**	**252**	P	**Pn**	**15 37 11.4**	**-0.8**
KTH	**Kantishna Hill**	**7.10**	**254**	P	**Pn**	**15 37 14.1**	**-0.7**
IMA2	**Indian Mountai**	**7.35**	**276**	*e*P	**Pn**	**15 37 19.2**	**+0.9**
IM3	**Indian Mountai**	**7.39**	**276**	P	**Pn**	**15 37 17.7**	**-1.1**
CHUM	**Lake Minchumin**	**7.49**	**259**	*e*Pn	**Pn**	**15 37 19.9**	**-0.2**
	24nm,0.5s						
PMR	**Palmer**	**7.63**	**238**	*e*P	**Pn**	**15 37 23.5**	**+1.4**

PPLA	**Purkeypile**	**7.93**	**252**	P	**Pn**	**15 37 26.9**	**+0.7**
RC01	**Rabbit Creek A**	**8.19**	**237**	*e*Pn	**Pn**	**15 37 32.7**	**+2.9**
	44nm,0.8s						
DLBC	**Dease Lake**	**8.30**	**160**	Pn	**Pn**	**15 37 29.5**	**-1.8**
	6.2nm,0.3s,baz=357,slow=11,SNR=54						
DLBC				Lg		15 39 49.0	
	15nm,0.3s,baz=241,slow=22,SNR=3.6						
DLBC				LR	LR	15 40 59.7	
	comp=Z,601nm,20.0s,baz=343,slow=40						
DLBC	**Dease Lake**	**8.30**	**160**	*e*Pn	**Pn**	**15 37 29.6**	**-1.7**
DLBC	**Dease Lake**	**8.30**	**160**	⇑Pn	**Pn**	**15 37 29.4**	**-1.9**
DLBC				⇓Sg	Sn	15 39 50.0	+45
SLKM	**Skilak Lake**	**8.78**	**235**	*e*Pn	**Pn**	**15 37 41.6**	**+3.8**
FNBB	**Fort Nelson**	**9.40**	**136**	⇑Pn	**Pn**	**15 37 45.1**	**-1.2**
YKW3	**Yellowknife Ar**	**9.76**	**103**	*e*Pn	**Pn**	**15 37 48.3**	**-2.9**
YKW3	**Yellowknife Ar**	**9.76**	**103**	⇓Pn	**Pn**	**15 37 48.2**	**-3.1**
YKW3				⇓Sn	**Sn**	**15 39 30.8**	**-10**
YKA	**Yellowknife Ar**	**9.80**	**103**	Pn	**Pn**	**15 37 47.7**	**-4.1**
	3.5nm,0.3s,baz=300,slow=12,SNR=69						
YKA				Sn	**Sn**	**15 39 31.0**	**-11**
	8.7nm,0.3s,baz=297,slow=24,SNR=5.0						
YKA				Lg		15 40 35.3	
	3.7nm,0.3s,baz=309,slow=30,SNR=5.9						
YKA				LR	LR	15 41 31.9	
	comp=Z,128nm,18.9s,baz=135,slow=38						
YKA	**Yellowknife Ar**	**9.80**	**103**	Pn	**Pn**	**15 37 47.7**	**-4.1**
YKA				Sn	**Sn**	**15 39 31.1**	**-11**
YKA				Lg		15 40 35.3	
YKA				LR	LR	15 41 31.9	
WRAK	**Wrangell Islan**	**10.04**	**170**	*e*Pn	**Pn**	**15 37 54.7**	**-0.5**
	30nm,0.3s						
SVW2	**Sparrevohn**	**10.29**	**249**	*e*P	**Pn**	**15 37 59.3**	**+0.8**
BBB	**Bella Bella**	**14.65**	**162**	LR	LR	15 44 43.2	
	comp=Z,735nm,18.2s,baz=155,slow=38						
RES	**Resolute Bay**	**15.56**	**40**	*e*Pn	**Pn**	**15 39 05.2**	**-4.8**
	634nm,0.9s						
RES	**Resolute Bay**	**15.56**	**40**	*e*P	**Pn**	**15 39 05.2**	**-4.8**
RES				pmax	pmax		
	comp=Z,634nm,0.9s						
EDM	**Edmonton**	**17.08**	**129**	*e*Pn	**Pn**	**15 39 26.5**	**-3.2**
A04A	**Legoe Bay, Lum**	**18.86**	**153**	⇓P	**Pn**	**15 39 52.2**	**+0.7**
	baz=19						
A07A	**Ashnola River,**	**19.01**	**148**	⇓P	**Pn**	**15 39 53.4**	**+0.1**
	baz=19						
A08A	**Turner Farm, O**	**19.34**	**146**	⇑P	**Pn**	**15 39 57.8**	**+0.5**
	baz=19						
RPW	**Rockport**	**19.35**	**151**	*e*P	**Pn**	**15 39 57.2**	**-0.1**
A09A	**Danville**	**19.48**	**145**	⇓P	**Pn**	**15 39 58.4**	**-0.5**
	baz=19						
JCW	**Jim Creek**	**19.51**	**152**	*e*P	**Pn**	**15 39 57.7**	**-1.6**
A10A	**Northport**	**19.72**	**143**	⇑P	**Pn**	**15 40 01.3**	**-0.5**
	baz=20						
FFC	**Flin Flon**	**19.87**	**109**	*e*P	**Pn**	**15 39 59.7**	**-3.9**
	comp=Z,24nm,0.8s						
FFC	**Flin Flon**	**19.87**	**109**	*e*P	**Pn**	**15 39 59.7**	**-3.9**
FFC				pmax	pmax		
	comp=Z,24nm,0.8s						
B08A	**Colville Reser**	**19.89**	**147**	⇓P	**Pn**	**15 40 01.8**	**-2.0**
	baz=20						
A11A	**Hall Mountain,**	**20.04**	**141**	⇑P	**P**	**15 40 03.0**	**-0.8**
	baz=20,SNR=9.8						
B09A	**Rice**	**20.10**	**145**	⇓P	**P**	**15 40 03.9**	**-0.6**
	baz=20						
D03A	**Wishkah Elem.**	**20.23**	**156**	⇓P	**P**	**15 40 06.4**	**+0.5**
	baz=20						
A12A	**Yaak River Ran**	**20.24**	**140**	⇑P	**P**	**15 40 05.6**	**-0.4**
	baz=20						
C07A	**Waterville**	**20.37**	**149**	⇑P	**P**	**15 40 08.0**	**+0.6**
	baz=20,SNR=13						
ETW	**Entiat**	**20.39**	**149**	*e*P	**P**	**15 40 08.5**	**+0.8**
D05A	**Enumclaw**	**20.47**	**153**	⇓P	**P**	**15 40 08.6**	**+0.1**
	baz=20						
NEW	**Newport**	**20.49**	**143**	*e*Pn	**P**	**15 40 09.7**	**+0.9**
	comp=Z,22nm,1.3s						
NEW	**Newport**	**20.49**	**143**	*e*P	**P**	**15 40 09.7**	**+0.9**
NEW				pmax	pmax		
	comp=Z,22nm,1.3s						
C08A	**Higginbotham F**	**20.50**	**147**	⇓P	**P**	**15 40 09.4**	**+0.6**
	baz=20,SNR=7.4						
A13A	**Flathead Natio**	**20.58**	**137**	⇓P	**P**	**15 40 09.8**	**+0.1**
	baz=20						
D06A	**Ole Elum**	**20.68**	**151**	⇓P	**P**	**15 40 10.9**	**+0.1**
	baz=21						
EPH	**Ephrata**	**20.79**	**148**	P	**P**	**15 40 12.5**	**+0.6**
A14A	**Double T Ranch**	**20.82**	**136**	⇓P	**P**	**15 40 11.8**	**-0.5**
	baz=21						
D07A	**Quincy**	**20.86**	**149**	⇓P	**P**	**15 40 12.2**	**-0.5**
	baz=21						
LON	**Longmire**	**20.92**	**153**	*e*P	**P**	**15 40 14.6**	**+1.2**
	comp=Z,64nm,1.6s						
LON	**Longmire**	**20.92**	**153**	*e*P	**P**	**15 40 14.6**	**+1.2**
LON				pmax	pmax		
	comp=Z,64nm,1.6s						
OD2	**Odessa Site #2**	**20.94**	**147**	P	**P**	**15 40 14.1**	**+0.5**
A15A	**Johnson Ranch,**	**21.01**	**135**	⇑P	**P**	**15 40 13.4**	**-0.9**
	baz=21,SNR=8.7						
B13A	**Whitefish**	**21.07**	**138**	⇓P	**P**	**15 40 15.1**	**0.0**
	baz=21						
C11A	**Tepee Creek (N**	**21.10**	**142**	⇑P	**P**	**15 40 15.5**	**+0.2**
	baz=21						
E05A	**Randle**	**21.12**	**153**	⇑P	**P**	**15 40 16.4**	**+0.9**
	baz=21						
D08A	**Wollman Farm,**	**21.21**	**147**	⇓P	**P**	**15 40 17.0**	**+0.4**
	baz=21,SNR=7.0						
E06A	**Yakima**	**21.28**	**151**	⇓P	**P**	**15 40 17.5**	**+0.2**
	baz=21						
D09A	**Jones Farm, Ri**	**21.34**	**146**	⇑P	**P**	**15 40 17.6**	**-0.3**
	baz=21						
A16A	**West Butte Ran**	**21.36**	**133**	⇑P	**P**	**15 40 17.7**	**-0.4**
	baz=21						
B14A	**Marquette Ranc**	**21.41**	**136**	⇑P	**P**	**15 40 18.3**	**-0.4**
	baz=21						
BSMT	**Bassoo Peak**	**21.47**	**139**	P	**P**	**15 40 23.4**	**+4.2**
E07A	**Sunnyside**	**21.49**	**149**	⇑P	**P**	**15 40 19.5**	**0.0**
	baz=21						
GBL	**Gable Mountain**	**21.53**	**149**	P	**P**	**15 40 20.5**	**+0.5**
D10A	**Wagner Farm, O**	**21.59**	**144**	⇓P	**P**	**15 40 20.5**	**-0.1**
	baz=22						
B15A	**Bradely Ranch,**	**21.66**	**135**	⇑P	**P**	**15 40 20.7**	**-0.6**
	baz=22						
C13A	**Hot Springs**	**21.68**	**139**	⇑P	**P**	**15 40 21.0**	**-0.5**
	baz=22						
RSW	**Rattlesnake Hi**	**21.70**	**149**	*e*P	**P**	**15 40 21.9**	**+0.1**
HAWA	**Hanford**	**21.71**	**149**	*e*P	**P**	**15 40 22.4**	**+0.4**
	comp=Z,23nm,1.2s,mb4.5						
E08A	**Dider Farm, El**	**21.72**	**148**	⇓P	**P**	**15 40 21.7**	**-0.3**
	baz=22,SNR=6.7						
D11A	**Klaveano Farm,**	**21.82**	**143**	⇓P	**P**	**15 40 22.7**	**-0.4**
	baz=22,SNR=6.9						
C14A	**Swan Lake**	**21.82**	**138**	⇓P	**P**	**15 40 22.6**	**-0.5**
	baz=22						
E09A	**Wood Farm, Sta**	**21.90**	**146**	⇑P	**P**	**15 40 23.7**	**-0.2**
	baz=22						
BILL	**Bilibino**	**21.93**	**301**	*e*P	**P**	**15 40 23.7**	**-0.4**
	comp=Z,78nm,1.9s,mb4.8						
BILL	**Bilibino**	**21.93**	**301**	⇓*i*P *e*	**P**	**15 40 22.3**	**-1.8**
BILL						15 40 40.2	
BILL				pmax	pmax		
	comp=Z,33nm,1.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.0						
D12A	**Red Ives Fores**	**22.06**	**141**	⇑P	**P**	**15 40 25.2**	**-0.4**
	baz=22						
G03A	**Yamhill**	**22.06**	**157**	⇑P	**P**	**15 40 25.8**	**+0.2**
	baz=22						
F06A	**Goldendale**	**22.06**	**152**	⇑P	**P**	**15 40 25.8**	**+0.1**
	baz=22						
C15A	**Salmond Ranch,**	**22.13**	**136**	⇓P	**P**	**15 40 26.6**	**+0.2**
	baz=22						
E10A	**Myers Farm, Un**	**22.16**	**145**	⇑P	**P**	**15 40 26.7**	**0.0**
	baz=22						
D13A	**Huson**	**22.25**	**140**	⇓P	**P**	**15 40 27.5**	**-0.1**
	baz=22,SNR=8.7						
C16A	**Fuhringer Ranc**	**22.35**	**134**	⇓P	**P**	**15 40 28.0**	**-0.7**
	baz=22,SNR=7.2						
E11A	**Bogner Ranch,**	**22.50**	**143**	⇓P	**P**	**15 40 29.6**	**-0.7**
	baz=22,SNR=7.3						
D14A	**Greenough**	**22.52**	**138**	⇓P	**P**	**15 40 30.5**	**0.0**
	baz=22						
E12A	**Beaver Dam Sad**	**22.60**	**142**	⇓P	**P**	**15 40 30.4**	**-1.0**
	baz=22,SNR=7.8						
G06A	**Carlson Farm,**	**22.60**	**152**	⇑P	**P**	**15 40 31.5**	**+0.1**
	baz=22						
F10A	**Beach Ranch, E**	**22.62**	**145**	⇑P	**P**	**15 40 31.2**	**-0.4**
	baz=22						
MSO	**Missoula**	**22.63**	**139**	*e*P	**P**	**15 40 37.0**	**+5.3**
	comp=Z,21nm,1.4s,mb4.4						

H03A	**Soap Creek Ran**	**22.68**	**157**	⇑P	**P**	**15 40 31.8**	**-0.4**
	baz=23						
CHMT	**Chamberlain Mo**	**22.74**	**138**	*e*P	**P**	**15 40 37.6**	**+4.8**
EGMT	**Eagleton**	**22.74**	**131**	*e*P	**P**	**15 40 32.7**	**-0.2**
	comp=Z,41nm,1.0s,mb4.8						
EGMT	**Eagleton**	**22.74**	**131**	⇑P	**P**	**15 40 31.8**	**-1.1**
	baz=23						
G07A	**Ruggs Ranch, H**	**22.76**	**150**	⇑P	**P**	**15 40 31.9**	**-1.2**
	baz=23						
C17A	**Wharram Farm,**	**22.79**	**133**	⇑P	**P**	**15 40 31.9**	**-1.5**
	baz=23						
D15A	**Lincoln**	**22.82**	**136**	⇑P	**P**	**15 40 32.2**	**-1.5**
	baz=23						
H04A	**Detroit Lake**	**22.86**	**155**	⇓P	**P**	**15 40 33.6**	**-0.5**
	baz=23						
G08A	**Pilot Rock**	**22.89**	**149**	⇑P	**P**	**15 40 33.8**	**-0.6**
	baz=23						
E13A	**Victor**	**22.93**	**140**	⇓P	**P**	**15 40 34.7**	**-0.1**
	baz=23,SNR=8.2						
F11A	**Grangeville**	**22.95**	**144**	⇑P	**P**	**15 40 34.3**	**-0.8**
	baz=23						
H05A	**Madras**	**23.06**	**153**	⇑P	**P**	**15 40 36.5**	**+0.2**
	baz=23						
D16A	**Dana Ranch, Ca**	**23.11**	**135**	⇓P	**P**	**15 40 36.6**	**-0.1**
	baz=23						
H06A	**Lindquist Farm**	**23.14**	**152**	⇑P	**P**	**15 40 36.7**	**-0.5**
	baz=23						
G09A	**Cove**	**23.15**	**147**	⇑P	**P**	**15 40 37.2**	**0.0**
	baz=23						
D17A	**Six Diamond Ra**	**23.25**	**133**	⇑P	**P**	**15 40 38.5**	**+0.3**
	baz=23,SNR=7.9						
G10A	**Bishop Farm, J**	**23.29**	**146**	⇓P	**P**	**15 40 38.2**	**-0.4**
	baz=23						
F12A	**Elk City**	**23.29**	**142**	⇓P	**P**	**15 40 38.2**	**-0.5**
	baz=23						
HRY	**Holter Researc**	**23.32**	**136**	*e*P	**P**	**15 40 39.7**	**+0.7**
E15A	**Deer Lodge**	**23.36**	**137**	⇓P	**P**	**15 40 39.1**	**-0.3**
	baz=23						
I03A	**Eugene**	**23.37**	**157**	⇓P	**P**	**15 40 39.4**	**-0.1**
	baz=23						
G11A	**Walters Elk Ra**	**23.38**	**144**	⇓P	**P**	**15 40 38.9**	**-0.8**
	baz=23						
H07A	**Lands Inn, Kim**	**23.43**	**150**	⇓P	**P**	**15 40 39.7**	**-0.5**
	baz=23						
D18A	**Linhart Farms,**	**23.47**	**132**	⇑P	**P**	**15 40 39.3**	**-1.2**
	baz=23						
F13A	**Darby**	**23.49**	**141**	⇓P	**P**	**15 40 39.7**	**-1.1**
	baz=23						
E16A	**East Helena**	**23.52**	**136**	⇑P	**P**	**15 40 40.6**	**-0.5**
	baz=23						
BMO	**Blue Mountains**	**23.66**	**146**	*e*P	**P**	**15 40 42.8**	**+0.4**
	comp=Z,15nm,1.1s,mb4.3						
E17A	**Martinsdale**	**23.82**	**134**	⇓P	**P**	**15 40 43.8**	**-0.1**
	baz=24						
G12A	**Big Creek, Yel**	**23.86**	**143**	⇓P	**P**	**15 40 44.0**	**-0.3**
	baz=24						
I07A	**Izee**	**23.93**	**151**	⇑P	**P**	**15 40 45.3**	**+0.4**
	baz=24						
E18A	**Harlowton**	**24.00**	**133**	⇑P	**P**	**15 40 45.6**	**+0.1**
	baz=24						
H10A	**Noah's Angus R**	**24.04**	**146**	P	**P**	**15 40 46.5**	**+0.7**
	baz=24,SNR=12						
G13A	**Cobalt**	**24.17**	**141**	⇓P	**P**	**15 40 47.0**	**0.0**
	baz=24						
DLMT	**Dillon**	**24.35**	**138**	*e*P	**P**	**15 40 49.1**	**+0.5**
	comp=Z,26nm,1.3s,mb4.5						
G15A	**Dillon**	**24.56**	**138**	⇓P	**P**	**15 40 50.1**	**-0.5**
	baz=24						
J06A	**Christmas Vall**	**24.61**	**152**	⇑P	**P**	**15 40 50.1**	**-0.9**
	baz=24						
F18A	**Big Timber**	**24.66**	**133**	⇑P	**P**	**15 40 50.4**	**-1.1**
	baz=25						
MCMT	**McKenzie Canyo**	**24.77**	**139**	*e*P	**P**	**15 40 53.1**	**+0.6**
I11A	**Placerville**	**24.86**	**145**	⇓P	**P**	**15 40 53.1**	**-0.2**
	baz=25						
K05A	**Summer Lake**	**24.98**	**154**	⇓P	**P**	**15 40 54.5**	**+0.1**
	baz=25						
I12A	**Atlanta**	**25.17**	**144**	⇓P	**P**	**15 40 56.7**	**+0.5**
	baz=25						
I13A	**Wildhorse Cree**	**25.30**	**142**	⇓P	**P**	**15 40 57.4**	**0.0**
	baz=25						
K07A	**Rock Creek Ran**	**25.32**	**151**	⇑P	**P**	**15 40 57.7**	**+0.1**
	baz

baz=31
SRU San Rafael 30.73 140 *e*P **P 15 41 47.2 +1.3**
comp=Z,3.7nm,0.7s,mb4.3
SRU San Rafael 30.73 140 *e*P **P 15 41 47.3 +1.4**
SRU pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
SRU San Rafael 30.73 140 ⇑P **P 15 41 46.2 +0.3**
baz=31
TIXI Tiksi 31.23 323 *e*P **P 15 41 52.1 +2.2**
comp=Z,3.7nm,0.8s,mb4.3
TIXI Tiksi 31.23 323 *e*P **P 15 41 52.8 +2.8**
TIXI pmax pmax
comp=Z,8.0nm,1.4s,mb4.4
ARUT Antelope Range 31.27 145 *e*P **P 15 41 51.8 +1.1**
T11A Corn Creek, AI 31.39 148 ⇓P **P 15 41 51.3 -0.5**
baz=31
TPNV Topopah Spring 31.46 150 *e*P **P 15 41 52.2 -0.1**
comp=Z,95nm,2.6s,mb5.2
TPNV Topopah Spring 31.46 150 *e*P **P 15 41 52.2 -0.2**
TPNV pmax pmax
comp=Z,95nm,2.6s,mb5.2
TPNV Topopah Spring 31.46 150 ⇑P **P 15 41 52.5 +0.2**
baz=31
T15A Red Dirt Ranch 32.25 144 ⇓P **P 15 41 59.8 +0.6**
baz=32
GSC Goldstone 32.94 151 ⇑P **P 15 42 06.9 +1.5**
baz=33
U17A Shonto 33.07 142 ⇓P **P 15 42 07.9 +1.5**
baz=33
U18A Rough Rock, Ch 33.44 141 ⇓P **P 15 42 09.7 0.0**
baz=33
BFSC Mount Baldy St 33.81 153 ⇓P **P 15 42 12.9 0.0**
baz=34
WUAZ Wupatki 33.92 143 *e*P **P 15 42 15.3 +1.4**
comp=Z,11nm,0.9s,mb4.8
PET Petropavlovsk 34.01 280 ⇑*i*P **P 15 42 12.7 -1.8**
PET pmax pmax
comp=Z,58nm,1.7s,mb5.2
PETK Petropavlovsk- 34.33 281 P **P 15 42 18.4 +1.1**
comp=Z,5.4nm,0.9s,mb4.5,baz=74,slow=11,SNR=5.3
IRM Iron Mountain 34.38 149 ⇑P **P 15 42 18.3 +0.5**
baz=34
X15A Humboldt 34.70 145 ⇑P **P 15 42 20.9 +0.3**
baz=35
BC3 Big Chuckw Mtn 34.80 150 ⇓P **P 15 42 22.0 +0.4**
baz=35
Y15A Casa Rosa Ranc 35.19 145 ⇓P **P 15 42 25.0 +0.1**
baz=35
MONP Monument Peak 35.35 152 ⇑P **P 15 42 27.1 +0.8**
baz=35
Y16A Circle Bar Ran 35.46 144 ⇓P **P 15 42 27.8 +0.5**
baz=35
ANMO Albuquerque 35.73 137 P **P 15 42 29.9 +0.3**
comp=Z,2.7nm,0.7s,mb4.3,baz=336,slow=10,SNR=6.8
ANMO Albuquerque 35.73 137 ⇑*i*P **P 15 42 30.7 +1.2**
Y17A Roosevelt 35.79 143 ⇑P **P 15 42 30.9 +0.9**
baz=36
SADO Sadowa 36.74 97 LR LR 15 58 02.6
comp=Z,304nm,18.2s,MS4.1,baz=332,slow=37
214A Organ Pipe Nat 37.00 147 ⇑P **P 15 42 41.0 +0.6**
baz=37
119A Ashpeak Ranch, 37.05 142 ⇑P **P 15 42 41.7 +0.9**
baz=37
YAK Yakutsk 37.74 310 ⇑*i*P **P 15 42 47.2 +0.8**
YAK pmax pmax
comp=Z,15nm,1.7s,mb4.5
318A Bisbee 38.15 143 ⇓P **P 15 42 50.1 0.0**
baz=38
TXAR Lajitas Array 41.80 136 P **P 15 43 20.3 -0.1**
comp=Z,0.5nm,0.5s,mb3.4,baz=354,slow=10,SNR=5.1
TXAR LR LR 16 01 16.9
comp=Z,267nm,19.4s,MS4.1,baz=0.0,slow=37
TKL Tuckaleechee C 42.73 110 LR LR 15 59 58.7
comp=Z,96nm,18.9s,MS3.7,baz=243,slow=34
ARCES ARCESS Array B 43.78 10 P **P 15 43 36.4 +0.3**
comp=Z,5.9nm,1.0s,mb4.3,baz=343,slow=6.3,SNR=3.7
ARCES LR LR 16 01 46.5
comp=Z,146nm,21.0s,MS3.9,baz=145,slow=36
ARCES ARCESS Array B 43.78 10 P **P 15 43 36.4 +0.3**
ARCES LR LR 16 01 46.5
YSS Yuzh-Sakhalins 45.07 287 ⇑*i*P **P 15 43 46.4 -0.2**
YSS pmax pmax
comp=Z,63nm,2.5s,mb5.0
BOD Bodaibo 45.80 316 *e*P **P 15 43 50.7 -1.6**
BOD pmax pmax
comp=Z,15nm,1.1s,mb4.8
NOA NORSAR Array B 50.60 20 LR LR 16 07 31.4
comp=Z,119nm,19.4s,MS3.9,baz=345,slow=38
HIA Hailar 51.40 306 ⇑*i*P **P 15 44 36.2 +0.7**
CN2 Changchun 54.20 298 *e*P **P 15 44 55.3 -0.9**
ZALV Zalesovo Beam 56.23 333 P **P 15 45 10.0 -0.7**
comp=Z,2.1nm,0.7s,mb4.3,baz=19,slow=9.4,SNR=10
SVE Sverdlovsk 56.58 349 *e*P **P 15 45 13.4 +0.3**
SONM Songino Array 56.78 315 P **P 15 45 16.9 +2.2**
comp=Z,2.9nm,0.9s,mb4.3,baz=33,slow=5.5,SNR=2.8
ARU Arti 57.12 351 *d*iP **P 15 45 16.5 -0.5**
ARU *e* 15 47 21.6
ARU eSS **S 15 53 12.6 +1.2**
ARU eSS SS 15 56 55.5 -3.7
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.9
OBN Obninsk 58.75 5 *e*P **P 15 45 28.9 +0.5**
OBN pmax pmax
comp=Z,29nm,2.5s,mb4.9
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.0
KSRS Korea Array 58.85 293 P **P 15 45 32.2 +2.8**
comp=Z,2.0nm,0.9s,mb4.2,baz=22,slow=6.8,SNR=6.3
BVAR Borovoye Array 59.37 342 P **P 15 45 32.7 -0.1**
comp=Z,0.8nm,0.5s,mb4.0,baz=18,slow=6.2,SNR=4.7
KURK Kurchatov 60.43 336 P **P 15 45 40.4 +0.3**
baz=11,slow=6.1
BJI Beijing 60.74 303 P **P 15 45 41.6 -0.8**
BJI AMB AMB
comp=Z,9.0nm,0.6s,mb5.1
BJI AMB AMB
comp=Z,96nm,5.2s
BJI LR LR
comp=N,261nm,19.2s,MS4.5
BJI LR LR
comp=E,266nm,19.9s,MS4.5
BJI LR LR
comp=Z,399nm,28.9s
HHC Hu-ho-hao-te 61.53 307 *e*P **P 15 45 47.2 -0.5**
HHC AP pP 15 45 55.2 +4.3
HHC XP sP 15 45 57.5 +5.4
HHC PCP PcP 15 46 28.5 -0.9
HHC PP PP 15 48 04.8 +2.1
HHC SCP ScP 15 50 31.1 +0.4
HHC S **S 15 54 04.0 -4.9**
HHC SCS ScS 15 55 33.2 -5.6
HHC SS SS 15 58 06.9 -2.2
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,94nm,8.8s
HHC LR LR
comp=N,175nm,19.0s,MS4.4
HHC LR LR
comp=E,235nm,20.2s,MS4.4
HHC LR LR
comp=Z,279nm,26.2s
DPC Dobruska-Polom 61.69 20 *e*P **P 15 45 46.9 -1.7**
KHC Kasperske Hory 62.48 22 ⇑*i*P **P 15 45 54.4 +0.5**
KHC Kasperske Hory 62.48 22 *e*P **P 15 45 54.5 +0.6**
AKASG Malin Array Be 62.73 11 P **P 15 45 54.7 -0.9**
comp=Z,1.1nm,0.5s,mb4.3,baz=358,slow=7.3,SNR=7.1
AKASG Malin Array Be 62.73 11 P **P 15 45 54.7 -0.9**
GERES GERESS Array B 62.78 22 P **P 15 45 55.3 -0.6**
comp=Z,0.2nm,0.3s,mb3.8,baz=12,slow=7.2,SNR=4.8
GERES LR LR 16 15 59.8
comp=Z,66nm,20.3s,MS3.8,baz=124,slow=39
MKAR Makanchi Array 63.55 332 P **P 15 46 00.6 -0.5**
comp=Z,1.0nm,0.6s,mb4.0,baz=22,slow=5.2,SNR=6.0
WMQ Urumqi 65.29 327 *e*P **P 15 46 14.0 +1.5**
WMQ AMB AMB
comp=Z,14nm,1.0s,mb5.0
GTA Gaotai 66.40 316 *e*P **P 15 46 21.4 +1.7**
GTA AP pP 15 46 27.5 +4.5
GTA XP sP 15 46 30.4 +6.2
GTA S S 15 55 10.8 +1.5
GTA XS sS 15 55 21.6 +6.9
GTA SS SS 15 59 30.9 +6.0
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.5
GTA AMB AMB
comp=Z,39nm,4.8s
GTA LR LR
comp=N,174nm,17.7s,MS4.5
GTA LR LR
comp=E,175nm,18.3s,MS4.5
GTA LR LR
comp=Z,261nm,18.3s,MS4.5
LZH Lanzhou 68.31 311 *e*P **P 15 46 31.7 -0.2**
LZH AP pP 15 46 38.1 +3.0
LZH XP sP 15 46 40.9 +4.6
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,115nm,4.5s
CD2 Chengdu 73.13 309 *e*P **P 15 47 01.4 +0.1**
CD2 AP pP 15 47 07.6 +3.0
CD2 XP sP 15 47 10.4 +4.6
CD2 S S 15 56 26.0 -2.7
CD2 XS sS 15 56 36.2 +2.1
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA Guiyang 76.33 305 P **P 15 47 20.8 +0.9**
GYA AP pP 15 47 26.8 +3.6
GYA XP sP 15 47 29.6 +5.2
GYA PCP PcP 15 47 32.2 +0.4
GYA PP PP 15 50 13.6 +2.8
GYA S S 15 57 00.9 -3.6
GYA SKS 15 57 23.8
GYA AMB AMB
GYA AMB AMB
comp=Z,60nm,5.0s
KMI Kunming 78.84 308 P **P 15 47 36.8 +2.9**
KMI AMB AMB
comp=Z,4.0nm,1.9s,mb4.0
PPT Papeete 84.30 193 LR LR 16 20 47.6
comp=Z,46nm,20.6s,MS3.9,baz=4.5,slow=32
CMAR Chiang Mai Arr 86.28 309 P **P 15 48 13.2 +0.4**
comp=Z,1.6nm,0.8s,mb4.3,baz=359,slow=5.8,SNR=14
TORD Torodi Ar. Bea 94.71 42 P **P 15 48 51.6 -0.7**
comp=Z,0.4nm,0.7s,mb3.9,baz=341,slow=2.8,SNR=2.4
LPAZ La Paz 96.07 117 LR LR 16 33 39.9
comp=Z,60nm,18.4s,MS4.1,baz=136,slow=36

CSEM ***03*** *16:31:13.9±0.1, 4039N×2595E, h15km, MD3.0, Error ellipse: s-maj=2.3km s-min=2.1km az=166.0*
ATH ***03*** *16:31:13.8, 4041N×2600E, h33km±3km, MD3.0/4*
NEIC ***03*** *16:31:14.0, 4041N×2597E, h14km, MD3.0(ISK), MD3.0(ATH), After ISK.*
DDA ***03*** *16:31:14.7, 4035N×2611E, h6km±1km, Md2.5*
ISK ***03*** *16:31:14.3, 4040N×2602E, h11km, MD3.0*
ISCJB ***03*** *16:31:14.2±0.5, 4039N±002×2597E±003, h13km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=19.0*
THE ***03*** *16:31:15.4, 4034N×2595E, h13km±2km, ML3.4/5, Error ellipse: s-maj=2.1km s-min=1.1km az=96.0*

ISC 03 16:31:14.8±0.4, 4037N±002×2598E±003, h16km±3km, n52, σ0.99/91, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.19**	**199**	*e*PG	**Pg**	**16 31 19.5**	**+0.1**
GADA				*e*SG	**Sg**	**16 31 23.4**	**+0.9**
ENEZ	**Enez**	**0.39**	**20**	*e*PG	**Pg**	**16 31 21.8**	**-0.9**
ENEZ				*e*SG	**Sg**	**16 31 27.1**	**-0.9**
ALN	**Alexandroupoli**	**0.53**	**5**	P	**Pg**	**16 31 26.3**	**+1.1**
ALN				S	**Sg**	**16 31 33.9**	**+1.6**
BOZC	**Bozcaada**	**0.53**	**174**	*i* P	**Pg**	**16 31 24.8**	**-0.5**
BOZC				*i* S	**Sg**	**16 31 32.4**	**0.0**
LIA	**Limnos Island**	**0.77**	**233**	P	**Pb**	**16 31 29.2**	**-0.6**
LIA				S	**Sg**	**16 31 40.8**	**+0.7**
LIA	**Limnos Island**	**0.77**	**233**	*e*Pn	**Pn**	**16 31 29.7**	**-1.3**
LIA				S	**Sg**	**16 31 40.8**	**+0.7**
LIA				*e*Sn	**Sn**	**16 31 41.2**	**-1.1**
RDO	**Rodhopi**	**0.84**	**337**	*e*PN	**Pn**	**16 31 29.9**	**-2.1**
RDO				*e*SN	**Sn**	**16 31 41.3**	**-2.7**
RKY	**Sarkoy-Tekirda**	**0.96**	**71**	*e*PG	**Pg**	**16 31 32.7**	**-0.8**
RKY				*e*SG	**Sg**	**16 31 45.8**	**-0.3**
SART	**Tekirdag**	**0.97**	**70**	*i* P	**Pb**	**16 31 31.5**	**-1.6**
SART				*i* S	**Sb**	**16 31 44.4**	**-1.2**
PRK	**Paraskevi**	**1.15**	**169**	P	**Pn**	**16 31 35.8**	**-0.3**
PRK				S	**Sb**	**16 31 51.8**	**+1.0**
PRK	**Paraskevi**	**1.15**	**169**	*e*PN	**Pn**	**16 31 35.9**	**-0.2**
PRK				*e*SN	**Sn**	**16 31 51.4**	**-0.1**
AYVA	**Ayvalik**	**1.19**	**153**	*i* P	**Pn**	**16 31 36.8**	**0.0**
AYVA				*i* S	**Sb**	**16 31 52.5**	**+0.3**
MRMT	**Marmara Adasi**	**1.25**	**79**	*e*PN	**Pn**	**16 31 37.5**	**-0.1**
BALY	**Balya**	**1.41**	**116**	*i* P	**Pn**	**16 31 39.7**	**0.0**
BALY				*i* S	**Sn**	**16 31 56.8**	**-1.1**
EDC	**Edincik**	**1.44**	**90**	*e*PN	**Pn**	**16 31 40.1**	**-0.1**
BNT	**Bandirma**	**1.48**	**90**	*e*PN	**Pn**	**16 31 40.6**	**-0.1**
BNT				*e*SN	**Sn**	**16 32 00.3**	**+0.6**
OUR	**Ouranopolis**	**1.53**	**269**	P	**Pn**	**16 31 40.2**	**-1.2**
EDRB	**Edirne**	**1.58**	**21**	*e*PN	**Pn**	**16 31 42.1**	**-0.1**
KCT	**Karacabey**	**1.82**	**93**	*e*PN	**Pn**	**16 31 46.3**	**+0.9**
PAIG	**Paliouri**	**1.82**	**257**	P	**Pn**	**16 31 44.2**	**-1.2**
PAIG				S	**Sn**	**16 32 09.2**	**+1.1**
NVR	**Nevrokopi**	**1.88**	**302**	*e*PN	**Pn**	**16 31 45.8**	**-0.4**
SLVT	**Silivri**	**1.90**	**62**	*e*PN	**Pn**	**16 31 47.6**	**+1.1**
PLG	**Polygyros**	**1.94**	**271**	P	**Pn**	**16 31 46.1**	**-0.9**
PLG				S	**Sn**	**16 32 10.3**	**-0.7**
PLD	**Plovdiv**	**1.98**	**331**	P	**Pn**	**16 31 48.4**	**+0.8**
PLD				S	**Sn**	**16 32 13.8**	**+1.7**
CHOS	**Chios island**	**1.98**	**178**	P	**Pn**	**16 31 47.4**	**-0.2**
CHOS				S	**Sn**	**16 32 13.2**	**+1.1**
SOH	**Sokhos**	**2.05**	**284**	P	**Pn**	**16 31 48.1**	**-0.5**
SOH				S	**Sn**	**16 32 15.6**	**+1.8**
JMB	**Yambol**	**2.14**	**12**	P	**Pn**	**16 31 51.4**	**+1.6**
JMB				S	**Sn**	**16 32 17.2**	**+1.2**
DST	**Dursunbey**	**2.17**	**110**	*e*PN	**Pn**	**16 31 51.5**	**+1.2**
BGKT	**Bogazkoy**	**2.27**	**68**	*e*PN	**Pn**	**16 31 52.8**	**+1.2**
KNT	**Kendrikon**	**2.47**	**290**	P	**Pn**	**16 31 54.2**	**-0.1**

IGQ 03 16:41:52.1, 172S×7765W, h194km±4km, Mb4.0, Ms3.8, 5C-4D, Error ellipse: s-maj=5.9km s-min=2.4km az=19.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	**0.81**	**290**	⇑P	Pn	16 42 20.7	+0.7
PATA	**Patacocha**	**0.82**	**286**	⇑P	Pn	16 42 20.9	+0.9
RUN5	**Runtun**	**0.83**	**292**	⇑P	Pn	16 42 20.8	+0.7
RUN5	**Runtun**	**0.83**	**292**	⇑S	Sn	16 42 41.3	-0.4
ARRY	**Arrayan**	**0.84**	**285**	⇑P	Pn	16 42 20.6	+0.5
JUI6	**Juive**	**0.87**	**290**	P	Pn	16 42 20.8	+0.4
BIL2	**Estacion Bilba**	**0.90**	**287**	P	Pn	16 42 21.7	+1.1
PISA	**Pisayambo**	**0.99**	**312**	P	Pn	16 42 22.1	+1.0
IGUA	**Igualata**	**1.02**	**283**	P	Pn	16 42 22.3	+1.0
TAMB	**Tambo**	**1.25**	**325**	P	Pn	16 42 24.4	+1.2
VC1	**Cotopaxi 1**	**1.31**	**325**	P	Pn	16 42 24.7	+1.1
CAMI	**Rancho Maria**	**1.35**	**320**	P	Pn	16 42 25.3	+1.4
ANTI	**Antisana**	**1.37**	**338**	P	Pn	16 42 25.3	+1.2
ANTI	**Antisana**	**1.37**	**338**	S	Sn	16 42 48.0	-1.0
QIL2	**Quilotoa**	**1.53**	**304**	P	Pn	16 42 26.5	+1.0
LAV3	**Lava3-Reventad**	**1.62**	**1**	⇓P	Pn	16 42 27.0	+0.7
CONE	**Cono NE Rev Vo**	**1.64**	**0**	⇓P	Pn	16 42 27.4	+0.8
JUA2	**San Juan 2**	**1.78**	**327**	P	Pn	16 42 28.9	+1.0
GGP	**Refugio Guagua**	**1.81**	**328**	P	Pn	16 42 29.5	+1.3
TERV	**Terraza Guagua**	**1.81**	**328**	P	Pn	16 42 30.3	+2.1
CAYA	**Cayambe**	**1.82**	**349**	⇓P	Pn	16 42 29.7	+1.4
CAYA	**Cayambe**	**1.82**	**349**	⇓S	Sn	16 42 58.4	+1.9
PINO	**Pino**	**1.83**	**328**	P	Pn	16 42 29.7	+1.3
COTA	**Cotacachi**	**2.16**	**341**	P	Pn	16 42 33.1	+1.2

ISCJB ***03*** *16:43:23.9±0.8, 3351N±004×14073E±007, h55km±8km, mb3.4/3, Error ellipse: s-maj=10.1km s-min=5.8km az=13.8*
IDC ***03*** *16:43:24.0±1.1, 3288N×139.10E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.3/21, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=18.0km s-min=14.9km az=141.0*
JMA ***03*** *16:43:24.5±0.1, 3356N×140.73E, h44km, M2.9*

ISC 03 16:43:24.7±0.9, 3351N±004×14073E±007, h44km±12km, n15, σ0.94/27, mb3.4/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.86**	**243**	P	**Pn**	**16 43 40.8**	**+0.4**
JHJ2				S	**Sn**	**16 43 51.9**	**0.0**
JHJ	**Hachijo jima 2**	**0.89**	**244**	Pn	**Pn**	**16 43 41.0**	**+0.3**
	205nm,0.3s,baz=248,slow=22,SNR=104						
JHJ				Sn	**Sn**	**16 43 51.5**	**-0.8**
	411nm,0.3s,baz=232,slow=23,SNR=49						
BSO1	**Boso 1**	**1.16**	**10**	P	**Pn**	**16 43 43.9**	**-0.5**
BSO1				*e*S	**Sn**	**16 43 58.6**	**-0.5**
BSO3	**Boso 3**	**1.30**	**352**	P	**Pn**	**16 43 45.6**	**-0.8**
BSO3				*e*S	**Sn**	**16 44 02.3**	**-0.3**
JKO	**Kozu shima**	**1.49**	**297**	P	**Pn**	**16 43 49.5**	**+0.5**
JKO				*e*S	**Sn**	**16 44 07.0**	**-0.2**
BSO4	**Boso 4**	**1.51**	**348**	P	**Pn**	**16 43 49.1**	**-0.2**
BSO4				*e*S	**Sn**	**16 44 07.3**	**-0.4**
JIM2	**Oshima 3**	**1.62**	**318**	P	**Pn**	**16 43 50.8**	**+0.1**
JIM2				*e*S	**Sn**	**16 44 09.2**	**-1.1**
JIZS	**Izushimoda**	**1.95**	**309**	P	**Pn**	**16 43 55.5**	**+0.2**
JIZS				*e*S	**Sn**	**16 44 18.2**	**-0.4**
KTJJ	**Kamata 2**	**1.98**	**316**	P	**Pn**	**16 43 55.9**	**+0.3**
KTJJ				*e*S	**Sn**	**16 44 17.9**	**-1.3**
JOD2	**Odawara 2**	**2.21**	**323**	P	**Pn**	**16 43 59.3**	**+0.4**
JOD2				*e*S	**Sn**	**16 44 23.6**	**-1.5**
MJAR	**Matsushiro Arr**	**3.67**	**326**	Pn	**Pn**	**16 44 20.8**	**+2.0**
	1.1nm,0.3s,baz=169,slow=14,SNR=16						
MJAR				Sn	**Sn**	**16 45 03.2**	**+2.4**
	0.7nm,0.3s,baz=123,slow=25,SNR=6.9						
MAT	**Matsushiro**	**3.67**	**326**	P	**Pn**	**16 44 21.6**	**+2.8**
MAT				S	**Sn**	**16 45 02.5**	**+1.7**
MKAR	**Makanchi Array**	**45.60**	**305**	P	**P**	**16 51 40.3**	**-0.1**
	0.2nm,0.6s,mb3.2,baz=90,slow=9.3,SNR=3.2						
WRA	**Warramunga Arr**	**53.50**	**187**	P	**P**	**16 52 40.1**	**-0.6**
	0.3nm,0.4s,mb3.6,baz=5.2,slow=7.6,SNR=10						
WRA				pP	pP	16 52 53.3	+0.2
	0.2nm,0.4s,baz=4.4,slow=7.4,SNR=2.5						
ASAR	**Alice Springs**	**57.23**	**187**	P	**P**	**16 53 07.3**	**-0.2**
	0.2nm,0.6s,mb3.3,baz=4.9,slow=7.2,SNR=3.2						
ASAR				pP	pP	16 53 20.4	+0.5
	0.2nm,0.5s,baz=3.8,slow=6.8,SNR=2.6						

MAN 03 16:43:42, 1071N×12493E, h11km, mb4.2, ML3.1, MS2.8, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.45**	**6**	⇑*e*P	Pg	16 43 52.2	+1.3
PLP				*e*S	Sg	16 43 59.7	+2.7
OCLP	**Ormoc**	**0.46**	**317**	*e*P	Pg	16 43 52.7	+1.6
OCLP				*e*S	Sg	16 44 01.1	+3.9
MSLP	**Maasin**	**0.58**	**187**	*e*P	Pg	16 43 54.4	+1.1
MSLP				*e*S	Sg	16 44 04.5	+3.6
BESP	**Borongan**	**1.01**	**29**	*e*P	Pg	16 44 02.2	+0.7
BESP				*e*S	Sg	16 44 16.8	+2.0
SCPH	**Surigao**	**1.08**	**149**	⇓*e*P	Pb	16 44 03.1	+0.4

NIED ***03*** *16:58:00, 4320N×146.60E, h50km, Mw3.9 Best double couple: M0 6.77000×10^14 NP1:φs 51.00000°, δ 77.00000°, λ 93.00000°. NP2:φs 217.00000°, δ 13.00000°, λ 77.00000°.*
MOS ***03*** *16:58:23.8±0.9, 4338N×146.57E, h61km, mb4.3/5, Error ellipse: s-maj=14.2km s-min=10.7km az=109.7*
JMA ***03*** *16:58:24.2±0.1, 4317N×146.56E, h55km±1km, M4.4*
JMA Felt I J1.
ISCJB ***03*** *16:58:24.5±0.8, 4326N±005×146.51E±007, h66km±5km, mb3.8/15, Error ellipse: s-maj=9.7km s-min=7.1km az=38.3*
IDC ***03*** *16:58:27.7±3.1, 4329N×146.49E, h80km±28km, mb3.6/12, mb1 3.8/14, mb1mx3.7/22, mbtmp3.6/14, MS2.4/1, Ms1 2.4/1, ms1mx1.7/35, Error ellipse: s-maj=22.1km s-min=18.2km az=71.0*
NEIC ***03*** *16:58:27.4±0.7, 4329N×146.46E, h78km±7km, mb4.3/1, Error ellipse: s-maj=10.4km s-min=6.6km az=138.0*

ISC 03 16:58:26.0±0.7, 4330N±005×14647E±007, h61km±5km, n53, σ0.94/63, mb3.9/15, 3C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.54**	**277**	P	**Pn**	**16 58 37.3**	**-1.1**
NEM2				*e*S	**Sn**	**16 58 46.8**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**0.86**	**329**	⇓*i*PN	**Pn**	**16 58 41.3**	**-0.9**
YUK				*i* S	**Sn**	**16 58 54.5**	**+0.3**
YUK				pmax	pmax		
	comp=Z,4μm,0.4s						
YUK				pmax	pmax		
	comp=N,960nm,0.3s						
YUK				pmax	pmax		
	comp=E,870nm,0.3s						
YUK				pmax	pmax		
	comp=Z,4μm,0.4s						
YUK				smax			
	comp=N,8μm,0.8s						
YUK				smax			
	comp=E,10μm,0.6s						
YUK				smax			
	comp=N,9μm,0.5s						
YUK				smax			
	comp=E,6μm,0.4s						
JRA	**Rausu**	**1.17**	**304**	P	**Pn**	**16 58 46.3**	**0.0**
JRA				*e*S	**Sn**	**16 59 02.7**	**+1.3**
JNK	**Nakash**	**1.31**	**283**	P	**Pn**	**16 58 47.4**	**-0.7**
JNK				*e*S	**Sn**	**16 59 04.7**	**0.0**
JAK	**Akkeshi**	**1.33**	**258**	P	**Pn**	**16 58 47.3**	**-1.1**
JAK				*e*S	**Sn**	**16 59 04.6**	**-0.7**
JOB	**Onbets**	**1.97**	**259**	P	**Pn**	**16 58 56.3**	**-0.7**
JOB				*e*S	**Sn**	**16 59 20.2**	**-0.4**
JAR	**Ashorobuto**	**1.97**	**271**	P	**Pn**	**16 58 56.8**	**-0.2**
JAR				*e*S	**Sn**	**16 59 21.6**	**+0.9**
JTKR	**Abashiri--Toko**	**1.98**	**291**	P	**Pn**	**16 58 57.9**	**+0.8**
JTKR				*e*S	**Sn**	**16 59 23.0**	**+2.2**
JMP	**Maruseppu**	**2.37**	**288**	P	**Pn**	**16 59 03.4**	**+1.0**
JCH	**Churui**	**2.38**	**254**	P	**Pn**	**16 59 01.4**	**-1.2**
JCH				*e*S	**Sn**	**16 59 29.4**	**-1.3**
ERM	**Erimo**	**2.76**	**243**	*e*Pn	**Pn**	**16 59 08.2**	**+0.4**
ERM	**Erimo**	**2.76**	**243**	*d*iPN	**Pn**	**16 59 08.4**	**+0.6**
ASAJ	**Asahikawa**	**2.93**	**288**	P	**Pn**	**16 59 11.6**	**+1.6**
	comp=E,15nm,0.3s,baz=125,slow=13,SNR=25						
ASAJ				S	**Sn**	**16 59 51.1**	**+7.1**
	comp=E,12nm,0.3s,baz=55,slow=29,SNR=6.8						
YSS	**Yuzh-Sakhalins**	**4.50**	**326**	*e*PN	**Pn**	**16 59 30.0**	**-1.6**
YSS				*e*		17 00 22.7	
MAJO	**Matsushiro**	**9.26**	**226**	*e*Pn	**Pn**	**17 00 37.7**	**+1.0**
	comp=E,1.7nm,0.4s						
MAJO	**Matsushiro**	**9.26**	**226**	*e*PN	**Pn**	**17 00 37.7**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MJAR	**Matsushiro Arr**	**9.26**	**226**	P	**Pn**	**17 00 39.1**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=34,slow=14,SNR=5.5						
PET	**Petropavlovsk**	**12.66**	**36**	*e*Pn	**Pn**	**17 01 24.6**	**+1.7**
	comp=Z,61nm,1.3s						
PET	**Petropavlovsk**	**12.66**	**36**	*c*iPN	**Pn**	**17 01 25.7**	**+2.7**
KSRS	**Korea Array**	**15.28**	**254**	LR	LR	17 08 29.2	
	comp=Z,15nm,19.7s,baz=295,slow=39						
YAK	**Yakutsk**	**21.22**	**338**	⇑*i*P	**P**	**17 03 04.4**	**-2.0**
YAK				pmax	pmax		
	comp=Z,18nm,2.5s,mb4.0						
ULN	**Ulaanbaatar**	**27.75**	**293**	⇑*i*P	**P**	**17 04 09.0**	**+0.5**
SONM	**Songino Array**	**28.19**	**293**	P	**P**	**17 04 13.4**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.7,baz=82,slow=8.3,SNR=10						
SONM	**Songino Array**	**28.19**	**293**	P	**P**	**17 04 13.4**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.88**	**307**	P	**P**	**17 06 01.6**	**0.0**
	comp=Z,0.6nm,0.3s,mb3.7,baz=74,slow=6.2,SNR=4.4						
ZALV	**Zalesovo Beam**	**40.88**	**307**	P	**P**	**17 06 01.6**	**0.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
SEW	**Seward**	**41.30**	**43**	P	**P**	**17 06 05.0**	**0.0**
MK31	**Makanchi Array**	**44.36**	**298**	*e*P	**P**	**17 06 29.7**	**-0.2**
MKAR	**Makanchi Array**	**44.36**	**298**	P	**P**	**17 06 30.3**	**+0.4**
	comp=Z,2.3nm,0.6s,mb4.1,baz=82,slow=9.3,SNR=20						
MKAR	**Makanchi Array**	**44.36**	**298**	*e*P	**P**	**17 06 30.1**	**+0.2**
KURK	**Kurchatov**	**45.38**	**304**	*e*P	**P**	**17 06 37.6**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.2						
KURK	**Kurchatov**	**45.38**	**304**	*e*P	**P**	**17 06 37.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ARU	**Arti**	**54.34**	**317**	*d*iP	**P**	**17 07 45.4**	**-0.4**
ARU	

ARCES	**ARCESS Array B**	**59.50**	**340**	P	**P**	**17 08 21.3**	**-0.8**
ARCES	**ARCESS Array B**	**59.50**	**340**	P	**P**	**17 08 21.3**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	**63.90**	**193** ⇓*i*P		**P**	**17 08 53.7**	**+1.5**
WRA	**Warramunga Arr**	**63.91**	**193**	P	**P**	**17 08 51.5**	**-0.8**
	comp=Z,0.4nm,1.0s,mb3.4,baz=6.6,slow=6.5,SNR=3.2						
ASAR	**Alice Springs**	**67.63**	**192**	P	**P**	**17 09 15.9**	**-0.2**
	comp=Z,0.3nm,0.8s,mb3.4,baz=6.9,slow=5.5,SNR=4.4						
ASAR	**Alice Springs**	**67.63**	**192**	*e*P	**P**	**17 09 16.5**	**+0.4**
NVAR	**Mina Array Bea**	**68.24**	**57**	P	**P**	**17 09 20.4**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.8,baz=294,slow=7.3,SNR=5.0						
NB2	**NORSAR Subarra**	**69.84**	**339**	P	**P**	**17 09 29.1**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.2,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.84**	**339**	P	**P**	**17 09 29.3**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.3,baz=33,slow=6.3,SNR=9.2						
NOA	**NORSAR Array B**	**69.84**	**339**	P	**P**	**17 09 29.3**	**-0.3**
NOA	**NORSAR Array B**	**69.84**	**339**	*e*P	**P**	**17 09 29.2**	**-0.4**
PDAR	**Pinedale Array**	**70.58**	**49**	P	**P**	**17 09 34.4**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.3,baz=282,slow=4.5,SNR=2.6						
AKASG	**Malin Array Be**	**71.65**	**323**	P	**P**	**17 09 40.2**	**-0.5**
	comp=Z,0.6nm,0.3s,mb4.0,baz=39,slow=4.5,SNR=5.7						
AKASG	**Malin Array Be**	**71.65**	**323**	P	**P**	**17 09 40.2**	**-0.5**
AKASG	**Malin Array Be**	**71.65**	**323**	*e*P	**P**	**17 09 41.3**	**+0.6**
CLL	**Collm**	**77.49**	**332**	*e*P	**P**	**17 10 14.0**	**-0.5**
TXAR	**Lajitas Array**	**83.31**	**56**	P	**P**	**17 10 46.0**	**-0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=304,slow=4.9,SNR=6.9						
TXAR	**Lajitas Array**	**83.31**	**56**	*e*P	**P**	**17 10 46.5**	**+0.3**
ESDC	**Sonseca Array**	**93.19**	**338**	P	**P**	**17 11 33.1**	**-0.3**
	comp=Z,0.1nm,0.3s,mb3.7,baz=14,slow=6.3,SNR=2.6						

*ISCJB **03** 17:02:16.6±0.3, 4272N±001×1969E±002, h3km±3km, Error ellipse: s-maj=2.6km s-min=2.5km az=145.4*
*CSEM **03** 17:02:16.8±0.1, 4270N×1969E, h12km, ML3.2/5, Error ellipse: s-maj=2.3km s-min=1.7km az=143.0*
*TIR **03** 17:02:16.0±1.1, 4269N×1964E, h6km±35km, ML2.5*
*PDG **03** 17:02:17.6±0.2, 4270N×1965E, h0km±11km, MD2.5/4, ML2.5/9, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*BEO **03** 17:02:18.5±0.4, 4273N×1968E, h11km±2km, ML2.8/10*
ISC 03 17:02:17.6±0.3**, 4271N**±002×**1968E**±002**, h3**km±3km**, n49,**
σ0§92/97**, 18C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BEY	**Berane**	**0.23**	**45**	*i* PG	**Pg**	**17 02 22.2**	**+0.3**
BEY				*i* SG	**Sg**	**17 02 26.1**	**+1.2**
BEY	**Berane**	**0.23**	**45**	⇓*i*Pg	**Pg**	**17 02 22.0**	**+0.1**
BEY				*e*Sg	**Sg**	**17 02 26.0**	**+1.1**
	388nm,0.7s						
IVA	**Berane**	**0.23**	**45**	⇓*i*Pg	**Pg**	**17 02 22.2**	**+0.3**
IVA				*e*Sg	**Sg**	**17 02 26.1**	**+1.2**
PVY	**Plav**	**0.24**	**119**	⇑*i*Pg	**Pg**	**17 02 22.2**	**-0.1**
PVY				*e*Sg	**Sg**	**17 02 26.5**	**+1.0**
PVY	**Plav**	**0.24**	**119**	*i* PG	**Pg**	**17 02 22.2**	**-0.1**
PVY				*i* SG	**Sg**	**17 02 26.5**	**+1.0**
PVY	**Plav**	**0.24**	**119**	⇑*i*Pg	**Pg**	**17 02 22.0**	**-0.3**
PVY				*e*Sg	**Sg**	**17 02 26.0**	**+0.5**
	826nm,0.2s						
PDG	**Podgorica**	**0.42**	**228**	*i* PG	**Pg**	**17 02 23.9**	**-1.7**
PDG				*i* SG	**Sg**	**17 02 30.7**	**-0.4**
PDG	**Podgorica**	**0.42**	**228**	⇑*i*Pg	**Pg**	**17 02 23.0**	**-2.6**
PDG				*e*Sg	**Sg**	**17 02 30.0**	**-1.1**
TTG	**Podgorica**	**0.42**	**228**	⇑*i*Pg	**Pg**	**17 02 23.9**	**-1.7**
TTG				*e*Sg	**Sg**	**17 02 30.7**	**-0.4**
BCI	**Bajram Curri**	**0.45**	**140**	*e*PG	**Pg**	**17 02 25.5**	**-0.7**
BCI				*i* SG	**Sg**	**17 02 33.1**	**+1.1**
NKY	**Niksic**	**0.51**	**281**	⇓*i*Pg	**Pg**	**17 02 26.3**	**-1.1**
NKY				*e*Sg	**Sg**	**17 02 34.8**	**+0.7**
NKY	**Niksic**	**0.51**	**281**	*i* PG	**Pg**	**17 02 26.3**	**-1.1**
NKY				*i* SG	**Sg**	**17 02 34.8**	**+0.7**
NKY	**Niksic**	**0.51**	**281**	⇓*i*Pg	**Pg**	**17 02 26.0**	**-1.4**
NKY				*e*Sg	**Sg**	**17 02 34.0**	**-0.1**
	236nm,0.9s						
SJES	**Sjenica**	**0.59**	**21**	⇑*e*Pg	**Pg**	**17 02 29.2**	**+0.3**
SJES				*e*Sg	**Sg**	**17 02 37.8**	**+1.3**
PLE	**Pljevlja**	**0.65**	**341**	⇑*i*Pg	**Pg**	**17 02 29.9**	**-0.2**
PLE				*e*Sg	**Sg**	**17 02 39.8**	**+1.3**
PLE	**Pljevlja**	**0.65**	**341**	⇑*i*Pg	**Pg**	**17 02 29.0**	**-1.1**
PLE				*e*Sg	**Sg**	**17 02 39.0**	**+0.5**
	117nm,0.6s						
PUK	**Puka**	**0.69**	**167**	*i* PG	**Pg**	**17 02 29.9**	**-0.8**
PUK				*i* SG	**Sg**	**17 02 39.9**	**+0.3**
BUM	**Brajici-Budva**	**0.71**	**235**	⇑*i*Pg	**Pg**	**17 02 30.1**	**-1.1**
BUM				*e*Sg	**Sg**	**17 02 41.0**	**+0.6**
BUM	**Brajici-Budva**	**0.71**	**235**	*i* PG	**Pg**	**17 02 30.1**	**-1.1**
BUM				*i* SG	**Sg**	**17 02 41.0**	**+0.6**
BUM	**Brajici-Budva**	**0.71**	**235**	⇑*i*Pg	**Pg**	**17 02 30.0**	**-1.2**
BUM				*e*Sg	**Sg**	**17 02 41.0**	**+0.6**
	172nm,0.8s						
UPM	**Unac-Piva**	**0.75**	**311**	⇑*i*Pg	**Pg**	**17 02 31.3**	**-0.6**
UPM				*e*Sg	**Sg**	**17 02 42.7**	**+1.0**
UPM	**Unac-Piva**	**0.75**	**311**	⇑*i*Pg	**Pg**	**17 02 31.0**	**-0.9**
UPM				*e*Sg	**Sg**	**17 02 42.0**	**+0.3**
	158nm,0.3s						
ULC	**Ulcinj**	**0.81**	**203**	⇑*i*Pg	**Pg**	**17 02 32.3**	**-0.9**
ULC				*e*Sg	**Sg**	**17 02 44.8**	**+1.1**
ULC	**Ulcinj**	**0.81**	**203**	*i* PG	**Pg**	**17 02 32.3**	**-0.9**
ULC				*i* SG	**Sg**	**17 02 44.8**	**+1.1**
ULC	**Ulcinj**	**0.81**	**203**	⇑*i*Pg	**Pg**	**17 02 32.0**	**-1.2**
ULC				*e*Sg	**Sg**	**17 02 44.0**	**+0.3**
	65nm,0.3s						
BRY	**Bratogost**	**0.86**	**283**	⇑*i*Pg	**Pg**	**17 02 33.1**	**-0.9**
BRY				*e*Sg	**Sg**	**17 02 46.4**	**+1.3**
BRY	**Bratogost**	**0.86**	**283**	*i* PG	**Pg**	**17 02 33.1**	**-0.9**
BRY				*i* SG	**Sg**	**17 02 46.4**	**+1.3**
BRY	**Bratogost**	**0.86**	**283**	⇑*i*Pg	**Pg**	**17 02 33.0**	**-1.0**
BRY				*e*Sg	**Sg**	**17 02 46.0**	**+0.9**
	151nm,0.9s						
HCY	**Herceg Novi**	**0.91**	**254**	⇓*i*Pg	**Pg**	**17 02 34.0**	**-1.1**
HCY				*e*Sg	**Sg**	**17 02 48.1**	**+1.2**
HCY	**Herceg Novi**	**0.91**	**254**	*i* PG	**Pg**	**17 02 34.0**	**-1.1**
HCY				*i* SG	**Sg**	**17 02 48.1**	**+1.2**
HCY	**Herceg Novi**	**0.91**	**254**	⇓*i*Pg	**Pg**	**17 02 34.0**	**-1.1**
HCY				*e*Sg	**Sg**	**17 02 48.0**	**+1.1**
	70nm,0.5s						
TREB	**Trebinje**	**0.98**	**271**	⇑*e*Pg	**Pg**	**17 02 35.4**	**-1.0**
TREB				*e*Sg	**Sg**	**17 02 50.6**	**+1.5**
BBLS	**Lazići**	**1.17**	**350**	⇑*i*Pg	**Pg**	**17 02 39.0**	**-1.0**
BBLS				*e*Sg	**Sg**	**17 02 54.7**	**-0.5**
QSH	**Qafa e Shtames**	**1.20**	**172**	*e*PN	**Pn**	**17 02 40.0**	**-1.2**
GRUS	**Gruza**	**1.40**	**32**	*e*Pg	**Pg**	**17 02 43.3**	**-1.0**
GRUS				*e*Sg	**Sg**	**17 03 02.4**	**0.0**
STON	**Ston**	**1.47**	**277**	*e*Pn	**Pn**	**17 02 44.5**	**-0.3**
STON				Sn	**Sn**	**17 03 07.1**	**+2.5**
STON	**Ston**	**1.47**	**277**	*e*Pn	**Pn**	**17 02 44.5**	**-0.4**
STON				Sn	**Sn**	**17 03 07.0**	**+2.5**
BARS	**Barje**	**1.57**	**86**	⇑*i*Pg	**Pg**	**17 02 46.7**	**-1.0**
BARS				*e*Sg	**Sg**	**17 03 08.4**	**+0.3**
KRUS	**Krusevo**	**1.78**	**138**	*e*Pn	**Pn**	**17 02 50.4**	**+1.3**
KRUS				*e*Sg	**Sg**	**17 03 14.9**	**+0.2**
KRUS	**Krusevo**	**1.78**	**138**	*e*Pn	**Pn**	**17 02 50.5**	**+1.3**
KRUS				*e*Sg	**Sg**	**17 03 15.0**	**+0.3**
OHR	**Ohrid**	**1.80**	**152**	*e*Pn	**Pn**	**17 02 50.3**	**+0.8**
OHR				*e*Sg	**Sg**	**17 03 16.5**	**+1.0**
SVIS	**Svilajnac**	**1.91**	**35**	*e*Pn	**Pn**	**17 02 50.9**	**-0.1**
SVIS				*e*Sg	**Sg**	**17 03 20.0**	**+1.0**
ZAPS	**Zavoj**	**2.24**	**74**	*e*Pn	**Pn**	**17 02 55.8**	**+0.4**
ZAPS				*e*Sn	**Sn**	**17 03 22.8**	**-0.7**
FGSL	**Fruska Gora**	**2.45**	**2**	*e*Pn	**Pn**	**17 02 57.3**	**-1.0**
FGSL				*e*Sg	**Sg**	**17 03 35.3**	**-0.8**
FGSL	**Fruska Gora**	**2.45**	**2**	*e*Pn	**Pn**	**17 02 57.5**	**-0.8**
FGSL				*e*Sn	**Sn**	**17 03 29.5**	**+0.8**
FGSL				*e*Sg	**Sg**	**17 03 35.3**	**-0.8**
BLY	**Banja Luka**	**2.72**	**319**	*e*Pn	**Pn**	**17 03 02.1**	**0.0**
BLY				*e*Sn	**Sn**	**17 03 35.7**	**+0.2**
BLY				*e*Sg	**Sg**	**17 03 45.9**	**+0.8**
BZS	**Buzias**	**3.22**	**25**	*e*Pn	**Pn**	**17 03 08.1**	**-0.8**
BZS				*e*Sn	**Sn**	**17 03 46.9**	**-0.9**
PKSM	**Moragy**	**3.58**	**348**	*e*Pn	**Pn**	**17 03 12.9**	**-1.0**
CRES	**Cresnjev**	**4.35**	**317**	*e*Pn	**Pn**	**17 03 25.4**	**+1.0**

IDC 03 17:23:24.4±1.0**, 4453S×3773E, h0km, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/18**, mbtmp3.9**/4**, MS3.4**/5**, Ms1 3.4**/5**, ms1mx3.2**/25**, Error ellipse: s-maj=44.0km s-min=27.9km az=46.0, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**17.92**	**307**		LR	LR	17 32 38.2
	comp=Z,78nm,20.8s,baz=137,slow=31						
BOSA	**Boshof**		**18.74**	**324**	LR	LR	17 33 29.0
	comp=Z,120nm,20.4s,baz=181,slow=32						
LBTB	**Lobatse**		**21.83**	**329**	LR	LR	17 35 41.6
	comp=Z,76nm,18.8s,baz=267,slow=34						
MATP	**Matopo**		**25.23**	**339**	LR	LR	17 37 02.8
	comp=Z,133nm,18.6s,baz=231,slow=32						
KMBO	**Kilima Mbogo**		**43.22**	**359**	LR	LR	17 47 47.0
	comp=Z,63nm,20.0s,baz=223,slow=34						
QSPA	**South Pole Qui**		**45.68**	**180**	P	P	17 31 46.1	-0.2
	1.5nm,0.7s,baz=259,slow=3.4,SNR=15						
TORD	**Torodi Ar. Bea**		**66.08**	**321**	P	P	17 34 12.8	-0.3
	0.5nm,0.9s,baz=150,slow=6.1,SNR=3.1						
ASAR	**Alice Springs**		**77.97**	**111**	P	P	17 35 24.9	+0.3
	1.4nm,0.8s,baz=230,slow=5.1,SNR=24						
WRA	**Warramunga Arr**		**80.82**	**109**	P	P	17 35 40.2	+0.1
	1.4nm,1.1s,baz=220,slow=4.4,SNR=9.4						
TXAR	**Lajitas Array**		**145.96**	**257**	PKPbc	PKPbc	17 43 06.0	+0.2
	1.7nm,0.9s,baz=130,slow=3.9,SNR=10.0						

IDC 03 17:36:38.3±1.3**, 1222S×16624E, h28**km±5km**, mb3.7**/6**, mb1 4.0**/6**, mb1mx3.7**/17**, mbtmp3.7**/6**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.5**/31**, Error ellipse: s-maj=52.7km s-min=19.4km az=144.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**		**20.72**	**245**	P	P	17 41 16.4	-0.4
	6.8nm,0.9s,baz=67,slow=10,SNR=7.7						
CTA					LR	LR	17 47 36.9	
	comp=Z,49nm,18.3s,baz=140,slow=32						
STKA	**Stephens Creek**		**29.95**	**225**	LR	LR	17 53 03.2	
	comp=Z,35nm,19.3s,baz=24,slow=33						
WRA	**Warramunga Arr**		**31.56**	**252**	P	P	17 42 57.9	-0.7
	3.3nm,1.0s,baz=79,slow=9.5,SNR=18						
WRA					pP	pP	17 43 06.8	+0.1
	2.0nm,0.9s,baz=79,slow=9.1,SNR=6.9						
ASAR	**Alice Springs**		**32.72**	**245**	P	P	17 43 08.3	-0.5
	1.5nm,0.7s,baz=72,slow=9.6,SNR=20						
ASAR					pP	pP	17 43 17.6	+0.7
	0.9nm,0.7s,baz=72,slow=9.6,SNR=6.1						
MJAR	**Matsushiro Arr**		**55.23**	**333**	P	P	17 46 08.4	-0.5
	0.8nm,1.0s,baz=175,slow=8.1,SNR=4.7						
NVAR	**Mina Array Bea**		**86.41**	**50**	P	P	17 49 18.6	+0.2
	0.1nm,0.4s,baz=265,slow=6.9,SNR=2.3						
NVAR					pP	pP	17 49 26.4	-0.9
	1.1nm,0.8s,baz=233,slow=6.7,SNR=5.6						
MKAR	**Makanchi Array**		**94.70**	**317**	P	P	17 49 58.9	+1.8
	0.5nm,0.8s,baz=90,slow=6.2,SNR=3.2						
MKAR					pP	pP	17 50 07.5	+1.5
	0.6nm,1.0s,baz=84,slow=5.5,SNR=1.5						

*NIED **03** 17:56:00, 3220N×13830E, h5km, Mw3.9 Best double couple: M₀8.72000×10¹⁴ NP1:φ₁=254.00000°, δ67.00000°, λ91.00000°. NP2:φ₂=71.00000°, δ23.00000°, λ88.00000°.*
*JMA **03** 17:56:14.9±0.1, 3216N×13828E, h37km, M4.4*
*ISCJB **03** 17:56:15.9±1.4, 3227N±003×13823E±003, h21km±11km, mb3.9/14, Error ellipse: s-maj=5.2km s-min=4.9km az=176.3*
*IDC **03** 17:56:18.7±0.8, 3220N×13848E, h26km±5km, mb3.8/11, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, ML3.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.2/31, Error ellipse: s-maj=15.9km s-min=13.9km az=101.0*
*NEIC **03** 17:56:19.7±0.5, 3222N×13840E, h35km, mb4.4/3, Error ellipse: s-maj=12.9km s-min=9.0km az=92.0*
ISC 03 17:56:17.4±1.5**, 3228N**±003×**13823E**±004**, h20**km±10**km, h29**km±1.2**km: pP-P, n41, σ1§15/61, mb3.9**/14**, 3D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**		**1.55**	**57**	Pn	**Pn**	**17 56 41.6**	**-2.2**
	86nm,0.3s,baz=220,slow=19,SNR=15						
JHJ					Sn	**Sn**	**17 57 01.6**	**-1.9**
	180nm,0.3s,baz=208,slow=23,SNR=7.8						
TK01	**Tokai 1**		**1.57**	**340**	P	**Pn**	**17 56 43.2**	**-1.0**
TK01					*e*S	**Sn**	**17 57 04.2**	**+0.3**
JHJ2	**Mitsune**		**1.57**	**58**	P	**Pn**	**17 56 41.6**	**-2.6**
JHJ2					*e*S	**Sn**	**17 57 01.5**	**-2.5**
TK02	**Tokai 2**		**1.71**	**347**	⇓P	**Pn**	**17 56 45.2**	**-0.8**
TK02					*e*S	**Sn**	**17 57 07.8**	**+0.6**
TK03	**Tokai 3**		**1.89**	**353**	P	**Pn**	**17 56 47.8**	**-0.7**
TK03					*e*S	**Sn**	**17 57 12.0**	**+0.2**
JKO	**Kozu shima**		**2.05**	**22**	P	**Pn**	**17 56 50.1**	**-0.6**
JMY	**Miyakejima3**		**2.08**	**31**	*e*S	**Sn**	**17 57 15.1**	**-1.5**
TK04	**Tokai 4**		**2.12**	**352**	P	**Pn**	**17 56 51.1**	**-0.6**
TK04					*e*S	**Sn**	**17 57 17.6**	**+0.2**
JWZ	**Kozaga**		**2.45**	**301**	P	**Pn**	**17 56 55.4**	**-0.9**
JWZ					*e*S	**Sn**	**17 57 23.7**	**-2.0**
JIE	**Ise**		**2.46**	**329**	⇓P	**Pn**	**17 56 55.7**	**-0.6**
JIE					*e*S	**Sn**	**17 57 25.4**	**-0.4**
JWY	**Kouya**		**2.93**	**312**	P	**Pn**	**17 57 02.9**	**0.0**
JWY					*e*S	**Sn**	**17 57 35.9**	**-1.6**
JOD2	**Odawara 2**		**3.06**	**13**	P	**Pn**	**17 57 04.7**	**+0.1**
JOD2					*e*S	**Sn**	**17 57 41.7**	**+1.1**
JYN	**Shimob**		**3.22**	**5**	P	**Pn**	**17 57 06.4**	**-0.4**
JYN					*e*S	**Sn**	**17 57 44.1**	**-0.4**
JAI	**Aioi**		**3.51**	**296**	P	**Pn**	**17 57 10.9**	**+0.1**
JAI					*e*S	**Sn**	**17 57 50.1**	**-1.7**
JGM	**Miyama**		**3.63**	**340**	P	**Pn**	**17 57 12.5**	**0.0**
JGM					*e*S	**Sn**	**17 57 53.6**	**-1.1**
JRY	**Ryogami san**		**3.77**	**8**	P	**Pn**	**17 57 15.5**	**+1.2**
JRY					*e*S	**Sn**	**17 57 59.9**	**+1.8**
JWT	**Wachi**		**3.81**	**323**	⇓P	**Pn**	**17 57 14.9**	**0.0**
JWT					*e*S	**Sn**	**17 57 58.7**	**-0.4**
JMN	**Monobe**		**3.93**	**293**	P	**Pn**	**17 57 16.7**	**+0.2**
JMN					*e*S	**Sn**	**17 58 00.3**	**-1.8**
MJAR	**Matsushiro Arr**		**4.25**	**360**	Pn	**Pn**	**17 57 21.6**	**+0.7**
	2.4nm,0.3s,baz=163,slow=20,SNR=30						
MJAR					Sn	**Sn**	**17 58 11.5**	**+1.6**
	8.7nm,0.3s,baz=213,slow=25,SNR=10						
MAJO	**Matsushiro**		**4.25**	**360**	*e*Pn	**Pn**	**17 57 21.8**	**+0.9**
MAT	**Matsushiro**		**4.25**	**360**	P	**Pn**	**17 57 22.1**	**+1.1**
MAT					S	**Sn**	**17 58 10.9**	**+0.9**
MAT	**Matsushiro**		**4.25**	**360**	P	**Pn**	**17 57 22.0**	**+1.0**
MAT					*e*S	**Sn**	**17 58 11.5**	**+1.5**
JKG	**Kaga**		**4.28**	**339**	P	**Pn**	**17 57 21.6**	**+0.2**
JKG					*e*S	**Sn**	**17 58 11.0**	**+0.2**
KSRS	**Korea Array**		**9.91**	**304**	Pn	**Pn**	**17 58 42.5**	**+3.9**
	0.1nm,0.3s,baz=108,slow=15,SNR=2.7						
SONM	**Songino Array**		**28.64**	**312**	P	**P**	**18 02 15.6**	**+3.1**
	1.0nm,0.8s,mb3.6,baz=106,slow=8.0,SNR=5.6						
SONM					pP	pP	18 02 23.7	+5.1
	1.9nm,0.9s,baz=102,slow=8.3,SNR=6.4						
SONM					LR	LR	18 13 56.8	
	comp=Z,41nm,18.9s,baz=177,slow=37						
CMAR	**Chiang Mai Ar**		**37.85**	**258**	P	**P**	**18 03 35.2**	**+2.2**
	1.2nm,0.6s,mb3.8,baz=52,slow=7.5,SNR=13						
ZALV	**Zalesovo Beam**		**43.35**	**316**	P	**P**	**18 04 19.5**	**+1.6**
	0.3nm,0.5s,mb3.3,baz=95,slow=6.1,SNR=2.9						
ZALV					pP	pP	18 04 27.4	+3.2
	0.4nm,0.4s,baz=31,slow=15,SNR=2.7						
ZALV					PcP	PcP	18 06 07.1	+0.7
	0.7nm,0.6s,baz=57,slow=5.3,SNR=4.1						
ZALV	**Zalesovo Beam**		**43.35**	**316**	P	**P**	**18 04 19.5**	**+1.6**
ZALV					pP	pP	18 04 27.4	+3.2
ZALV					PcP	PcP	18 06 07.1	+0.7
MKAR	**Makanchi Array**		**44.59**	**306**	P	**P**	**18 04 30.1**	**+2.1**
	0.8nm,0.6s,mb3.7,baz=87,slow=10,SNR=11						
MKAR					pP	pP	18 04 38.0	+3.8
	0.7nm,0.6s,baz=82,slow=11,SNR=4.0						
KURK	**Kurchatov**		**46.94**	**311**	*e*P	**P**	**18 04 47.5**	**+1.0**
	4.5nm,0.9s,mb4.4						
BRVK	**Borovoye**		**51.99**	**315**	P	**P**	**18 05 26.4**	**+1.3**
	3.4nm,0.8s,mb4.3						
WRAB	**Tennant Creek**		**52.05**	**185**	*e*P	**P**	**18 05 24.5**	**-1.2**
	3.7nm,1.0s,mb4.3						
WRA	**Warramunga Arr**		**52.06**	**185**	P	**P**	**18 05 24.9**	**-0.9**
	1.1nm,0.6s,mb4.0,baz=1.2,slow=7.8,SNR=24						
WRA					pP	pP	18 05 34.7	+2.6
	0.3nm,0.5s,baz=0.4,slow=7.9,SNR=1.9						
KDAK	**Kodiak Island**		**52.41**	**39**	P	**P**	**18 05 28.4**	**+0.3**
	5.8nm,0.7s,mb4.6,baz=274,slow=13,SNR=3.4						
ASAR	**Alice Springs**		**55.79**	**185**	P	**P**	**18 05 52.8**	**-0.2**
	0.4nm,0.7s,mb3.5,baz=9.1,slow=8.0,SNR=8.1						
ASAR					pP	pP	18 06 00.8	+1.5
	0.5nm,1.0s,baz=16,slow=12,SNR=2.9						
INK	**Inuvik**		**59.80**	**25**	*e*P	**P**	**18 06 21.1**	**+0.4**
	50nm,0.6s						
NVAR	**Mina Array Bea**		**79.98**	**51**	P	**P**	**18 08 26.5**	**+1.3**
	0.7nm,0.7s,mb3.7,baz=277,slow=4.2,SNR=5.6						
NVAR	**Mina Array Bea**		**79.98**	**51**	P	**P**	**18 08 26.5**	**+1.2**
BRTR	**Keskin Array B**		**79.99**	**311**	P	**P**	**18 08 26.7**	**+1.4**
	0.9nm,0.8s,mb3.7,baz=64,slow=6.2,SNR=4.4						
ELK	**Elko**		**80.65**	**48**	P	**P**	**18 08 29.6**	**+0.7**
	0.6nm,0.5s,mb3.8,baz=200,slow=6.1,SNR=3.9						
TXAR	**Lajitas Array**		**95.13**	**51**	P	**P**	**18 09 40.0**	**+0.6**
	0.4nm,0.4s,mb4.2,baz=276,slow=3.1,SNR=5.9						

*GCMT **03** 18:06:20.9±0.2, 2263S×171.1E, h20km, MW5.2/83, Moment Tensor Solution. s53,c76; s83,c139; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.24±.20; Mθθ-4.24±.14; Mφφ 7.48±.17; Mrθ 1.57±.30; Mθφ -0.83±.12; Mφr 3.10±.29; Best double couple: M₀7.10900×10¹⁶ NP1:φ₁315.00000°, δ50.00000°, λ-158.00000°. NP2: φ₂211.00000°, δ73.00000°, λ-42.00000°. Principal axes: T 8.3240, Plg15.0000°, Azm268.0000°; N -2.4300, Plg45.0000°, Azm13.0000°; P -5.8940, Plg41.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **03** 18:06:20.9±3.9, 2247S×171.1E, h10km±23km, mb5.1/26 Error ellipse: s-maj=10.7km s-min=8.6km az=198.0*
*SZGRF **03** 18:06:21.8, 2299S×17191E, h33km, Southeast of Loyalty Islands*
*NOU **03** 18:06:22.0±0.5, 2014S×17061E, h10km, MD2.9, ML4.1*
*BJI **03** 18:06:22.8, 2270S×17160E, h48km, mB5.1, mb4.9, Ms5.1, Ms2.6*
*LDG **03** 18:06:22.6±0.2, 2144S×171.13E, h10km, Mb5.3/3, Ms4.5/9, Error ellipse: s-maj=25.5km s-min=3.8km az=162.0*
*ISCJB **03** 18:06:23.1±2.2, 2259S±006×171.04E±004, h33km±15km, mb5.3/65, MS4.3/32, Error ellipse: s-maj=9.5km s-min=6.2km az=16.2*
*IDC **03** 18:06:23.9±2.9, 2256S×171.16E, h30km±19km, mb4.8/18, mb1 4.9/21, mb1mx4.8/25, mbtmp4.9/21, ML4.1/1, MS4.2/20, Ms1 4.2/20, ms1mx4.0/27, Error ellipse: s-maj=16.3km s-min=15.1km az=107.0*
*BGS **03** 18:06:23.6±6.0, 2247S×171.12E, h10km, mb5.1(NEIC)*
*MOS **03** 18:06:24.7±1.9, 2252S×17088E, h33km, mb5.2/18, Error ellipse: s-maj=15.0km s-min=10.5km az=34.6*
*DJA **03** 18:07:39, 22.17S×16535E, h419km, Mw5.3/18*
ISC 03 18:06:24.8±2.2**, 2258S**±006×**17107E**±004**, h35**km±15km**, h48**km±2.4km**: pP-P, n323**, σ1§02/135**, mb5.3**/65**, MS4.3**/32**, 18C-24D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LASL	**Noumea**		**4.21**	**274**	*e*P	**Pn**	**18 07 26.1**	**-0.4**
LASL					*e*S	**Sn**	**18 08 13.0**	**-1.4**
LASL					AMP		18 08 21.7	
	comp=Z,1μm,0.5s						
NORM	**Noumea**		**4.26**	**274**	*e*P	**Pn**	**18 07 26.6**	**-0.6**
NORM					AMP		18 07 28.1	
	comp=Z,986nm,0.0s						
NORM					*e*S	**Sn**	**18 08 14.6**	**-1.1**
DZM	**Mont Dzumac**		**4.31**	**276**	*e*Pn	**Pn**	**18 07 27.4**	**-0.6**
DZM					*e*Sn	**Sn**	**18 08 16.2**	**-0.9**
NOUC	**Port Laguerre**		**4.44**	**275**	*e*P	**Pn**	**18 07 28.9**	**-0.8**
NOUC					*e*S	**Sn**	**18 08 18.8**

MBWA Marble Bar 47.48 261 *e*P **P** **18 14 56.5 -0.2**
comp=Z,73nm,0.8s,mb5.7
MBWA Marble Bar 47.48 261 P **P** **18 14 56.5 -0.1**
comp=Z,137nm,1.0s,comp=Z,935nm,mb5.8
LBMI Labuha 47.64 291 P **P** **18 14 59.2 +1.3**
comp=Z,108nm,1.3s,comp=Z,953nm,mb5.7
DRV Dumont d'Urvil 48.27 196 P **P** **18 15 08.0 +5.9**
DRV S **S** **18 22 07.0 +7.8**
DRV R 18 29 00.0
NWAO Narrogin (SRO) 48.30 245 P **P** **18 15 02.7 -0.1**
comp=Z,65nm,0.8s,mb5.7,baz=100,slow=7.1,SNR=22
NWAO Narrogin (SRO) 48.30 245 *e*P **P** **18 15 01.7 -1.2**
comp=Z,66nm,1.0s,mb5.6
NWAO Narrogin (SRO) 48.30 245 *e*P **P** **18 15 01.7 -1.2**
NWAO pmax pmax
comp=Z,66nm,1.0s
RKT Rikitea 49.48 102 *e*S **S** **18 22 22.2 +4.8**
comp=Z,290nm,27.0s
RKT *e*LQ 18 26 39.5
comp=Z,603nm,28.8s
RKT *e*LR LR 18 28 50.7
comp=Z,331nm,37.2s
KDI Kendari 50.38 284 P **P** **18 15 19.1 +0.1**
comp=Z,52nm,1.0s,mb5.5
MNI Manado 50.98 292 P **P** **18 15 23.4 -0.1**
comp=Z,302nm,0.8s,mb6.2
KAPI Kappang 52.51 281 P **P** **18 15 34.2 -0.7**
comp=Z,600nm,0.9s,SNR=24
KAPI Kappang 52.51 281 P **P** **18 15 34.1 -0.8**
comp=Z,1µm,1.1s,SNR=24
KAPI Kappang 52.51 281 P **P** **18 15 34.7 -0.2**
comp=Z,88nm,0.9s,mb5.7,baz=155,slow=4.3,SNR=63
KAPI LR LR 18 37 47.8
comp=Z,155nm,19.6s,MS4.0,baz=307,slow=36
KAPI Kappang 52.51 281 *e*P **P** **18 15 34.3 -0.6**
comp=Z,91nm,0.9s,mb5.7
KAPI Kappang 52.51 281 P **P** **18 15 34.3 -0.6**
comp=Z,142nm,1.1s,comp=Z,888nm,mb5.8
DAV Davao City (W) 53.39 298 P **P** **18 15 42.0 +0.6**
comp=Z,78nm,0.4s,mb6.0,baz=55,slow=18,SNR=5.2
DAV LR LR 18 36 40.1
comp=Z,159nm,19.1s,MS4.1,baz=131,slow=34
KHKI Kahang-Kahang 54.99 276 P **P** **18 15 52.9 -0.2**
SBA Scott Base 55.37 181 *e*P **P** **18 15 55.2 +0.4**
comp=Z,9.3nm,0.8s,mb4.9
SBA Scott Base 55.37 181 *e*P **P** **18 15 55.2 +0.3**
SBA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MSLP Maasin 55.74 301 *e*P **P** **18 15 57.6 -0.8**
OCLP Ormoc 56.48 301 *e*P **P** **18 16 03.8 +0.1**
CBIJ Chichi jima 56.74 329 LR LR 18 37 22.1
comp=Z,222nm,19.8s,MS4.3,baz=139,slow=33
KMMI Kalianget 56.99 276 P **P** **18 16 09.0 +1.6**
comp=Z,85nm,1.0s,mb5.7
BBKI Banjar Baru 57.61 281 P **P** **18 16 12.7 +0.9**
comp=Z,147nm,0.9s,comp=Z,3µm,mb6.0
CASY Casey 57.79 205 *e*P **P** **18 16 05.2 -7.0**
comp=Z,7.2nm,1.1s,mb4.6
KRKI Karangkates 57.97 274 P **P** **18 16 17.2 +2.9**
SJI Sawahan 58.76 275 P **P** **18 16 20.6 +0.8**
PLKI Palangkaraya 58.93 282 P **P** **18 16 21.6 +0.6**
comp=Z,383nm,1.0s,comp=Z,2µm,mb6.4
BUSP Coron 60.54 299 *e*P **P** **18 16 31.8 -0.2**
PBKI Pangkalan Bun 60.80 280 P **P** **18 16 35.9 +2.0**
comp=Z,260nm,1.0s,comp=Z,2µm,mb6.3
STKI Sintang 62.14 283 P **P** **18 16 44.0 +1.1**
comp=Z,113nm,1.0s,comp=Z,5µm,mb6.0
CAUP Cauayan 62.17 305 *e*P **P** **18 16 48.3 +5.3**
LEM Lembang 62.92 274 P **P** **18 16 49.2 +1.1**
comp=Z,251nm,0.9s,comp=Z,2µm,mb6.3
CBJI Citeko 63.78 274 P **P** **18 16 53.1 -0.7**
comp=Z,316nm,1.0s,mb6.3
DBJI Dramaga 63.82 274 P **P** **18 16 54.3 +0.2**
comp=Z,256nm,1.0s,comp=Z,2µm,mb6.2
SKJI Sukabumi 63.83 273 P **P** **18 16 55.4 +1.2**
comp=Z,146nm,1.8s,comp=Z,3µm,mb5.7
JOW Kunigami 64.24 318 LR LR 18 40 43.9
comp=Z,193nm,20.1s,MS4.3,baz=78,slow=32
SBJI Serang 64.55 274 P **P** **18 16 59.9 +1.0**
comp=Z,223nm,1.2s,comp=Z,3µm,mb6.1
PPBI Pangkal Pinang 66.07 278 P **P** **18 17 09.4 +0.6**
comp=Z,36nm,1.1s,mb5.3
MJAR Matsushiro Arr 66.49 332 P **P** **18 17 10.1 -0.8**
comp=Z,1.2nm,0.8s,baz=282,slow=28,SNR=20
MAJO Matsushiro 66.49 332 *e*P **P** **18 17 09.8 -1.0**
comp=Z,14nm,1.2s,mb4.8
MAJO Matsushiro 66.49 332 *e*P **P** **18 17 09.9 -1.0**
MAJO pmax pmax
comp=Z,14nm,1.2s,mb4.9
MAT Matsushiro 66.49 332 P **P** **18 17 10.9 0.0**
QSPA South Pole Qui 67.49 180 P **P** **18 17 16.7 0.0**
comp=Z,32nm,0.9s,mb5.3,baz=24,slow=1.9,SNR=78
QSPA South Pole Qui 67.49 180 *e*P **P** **18 17 16.1 -0.6**
comp=Z,40nm,1.0s,mb5.4
KSI Kapahiang 68.74 275 P **P** **18 17 25.3 -0.4**
comp=Z,172nm,0.9s,mb6.0
RGRI Rengat 70.28 278 P **P** **18 17 36.9 +1.8**
comp=Z,125nm,1.1s,mb5.8
SSE Sheshan 71.66 316 P **P** **18 17 48.9 +5.8**
SSE S S 18 26 58.2 -2.2
SSE AMB AMB
comp=Z,34nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,80nm,5.4s
SSE LR LR
comp=N,70nm,22.4s,MS4.1
SSE LR LR
comp=E,96nm,22.2s,MS4.1
SSE LR LR
comp=Z,107nm,21.4s,MS4.1
PPI Padang Panjang 72.01 277 P **P** **18 17 46.2 +0.6**
comp=Z,19nm,1.0s,comp=Z,930nm,mb5.0
KSRS Korea Array 72.21 325 P **P** **18 17 46.8 +0.5**
comp=Z,2.0nm,0.8s,baz=141,slow=6.3,SNR=8.8
KSRS LR LR 18 44 02.4
comp=Z,105nm,21.0s,MS4.1,baz=316,slow=31
QIZ Qiongzhong 72.72 300 P **P** **18 17 51.0 +1.3**
QIZ S S 18 27 10.1 -2.9
QIZ LR LR
comp=Z,123nm,31.9s,MS4.0
YSS Yuzh-Sakhalins 73.78 340 P **P** **18 17 53.3 -2.0**
comp=Z,43nm,1.2s,mb5.3
YSS Yuzh-Sakhalins 73.78 340⇑ *e*P **P** **18 17 55.7 +0.4**
YSS pmax pmax
comp=Z,56nm,1.6s,mb5.2
MAW Mawson 76.00 202 P **P** **18 18 08.1 +0.1**
comp=Z,6.3nm,0.8s,mb4.6,baz=124,slow=9.6,SNR=11
MAW Mawson 76.00 202 *e*P **P** **18 18 07.7 -0.3**
comp=Z,8.9nm,0.9s,mb4.7
MAW Mawson 76.00 202 *e*P **P** **18 18 07.7 -0.3**
MAW pmax pmax
comp=Z,9.0nm,0.9s
PETK Petropavlovsk- 76.26 352 P **P** **18 18 08.8 -0.7**
comp=Z,4.9nm,0.8s,mb4.5,baz=127,slow=7.8,SNR=11
PETK LR LR 18 49 01.9
comp=Z,141nm,19.0s,MS4.3,baz=347,slow=34
PETK Petropavlovsk- 76.26 352 P **P** **18 18 08.8 -0.7**
PETK LR LR 18 49 01.9
MDJ Mudanjiang 76.86 331 P **P** **18 18 13.9 +0.8**
MDJ AP pP 18 18 28.2 +4.2
MDJ XP sP 18 18 34.1 +6.1
MDJ S S 18 28 00.1 +1.9
MDJ AMB AMB
comp=Z,6.0nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,42nm,5.0s
MDJ LR LR
comp=N,88nm,24.4s,MS4.1
MDJ LR LR
comp=E,76nm,22.7s,MS4.1
MDJ LR LR
comp=Z,100nm,26.9s,MS4.0
KKTK Khon Kaen 77.17 294 ⇓P **P** **18 18 16.5 +1.1**
comp=Z,309nm,1.0s,mb6.2
CN2 Changchun 78.19 328 ⇑P **P** **18 18 20.9 +0.4**
CN2 *e*S S 18 28 09.9 -2.7
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
GYA Guiyang 79.12 305 P **P** **18 18 25.4 -0.7**
GYA AP pP 18 18 42.6 +5.6
GYA XP sP 18 18 48.3 +7.3
GYA PP PP 18 21 30.2 +4.2
GYA S S 18 28 23.4 0.0
GYA SKS 18 28 34.9
GYA XS sS 18 28 48.6 +7.2
GYA SS SS 18 33 34.2 +3.8
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,340nm,4.4s
GYA LR LR
comp=N,560nm,22.8s,MS5.0
GYA LR LR
comp=E,480nm,21.4s,MS5.0
GYA LR LR
comp=Z,540nm,20.6s,MS4.9
BJI Beijing 80.59 320 P **P** **18 18 33.9 +0.2**
BJI S S 18 28 40.1 +1.8
BJI SS SS 18 33 54.7 +2.7
BJI AMB AMB
comp=Z,17nm,0.8s,mb5.0
BJI AMB AMB
comp=Z,196nm,4.0s
BJI LR LR
comp=N,202nm,14.4s,MS4.7
BJI LR LR
comp=E,199nm,18.0s,MS4.7
BJI LR LR
comp=Z,141nm,26.1s
CMAR Chiang Mai Arr 81.42 294 P **P** **18 18 40.4 +1.7**
comp=Z,20nm,0.8s,mb5.1,baz=137,slow=4.1,SNR=118
CMAR LR LR 18 53 56.2
comp=Z,56nm,18.1s,MS4.0,baz=155,slow=35
KMI Kunming 81.48 302 P **P** **18 18 40.2 +1.4**
KMI AP pP 18 18 56.0 +6.2
KMI XP sP 18 19 01.5 +7.8
KMI PP PP 18 21 48.2 +2.6
KMI S S 18 28 45.1 -3.1
KMI SS SS 18 34 07.5 +1.7
KMI SSS 18 37 33.0
KMI AMB AMB
comp=Z,12nm,1.1s,mb4.7
KMI AMB AMB
comp=Z,70nm,3.1s
KMI LR LR
comp=N,251nm,12.7s,MS4.9
KMI LR LR
comp=E,165nm,11.5s,MS4.9
KMI LR LR
comp=Z,152nm,22.2s
CHG Chiang Mai 81.59 294 ⇑P **P** **18 18 40.8 +1.3**
comp=Z,33nm,0.9s,mb5.3
CHTO Chiang Mai 81.59 294 *e*P **P** **18 18 40.6 +1.1**
comp=Z,32nm,0.9s,mb5.2
CHTO Chiang Mai 81.59 294 *e*P **P** **18 18 40.6 +1.1**
CHTO pmax pmax
comp=Z,32nm,0.9s,mb5.2
XAN Xi'an 81.61 312 P **P** **18 18 39.5 +0.2**
XAN AP pP 18 18 49.8 -0.5
XAN AMB AMB
comp=Z,17nm,1.0s,mb4.9
XAN AMB AMB
comp=Z,96nm,6.0s
SYO Syowa Base 82.21 196⇑ *e*P **P** **18 18 39.0 -3.0**
CD2 Chengdu 83.61 307 *e*P **P** **18 18 49.8 0.0**
CD2 AP pP 18 19 04.2 +3.4
CD2 XP sP 18 19 10.2 +5.4
CD2 PP PP 18 22 02.2 -0.8
CD2 S S 18 29 03.0 -6.8
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.9
CD2 AMB AMB
comp=Z,80nm,5.2s
CD2 LR LR
comp=N,220nm,15.6s,MS4.7
CD2 LR LR
comp=E,150nm,15.6s,MS4.7
CD2 LR LR
comp=Z,210nm,15.6s,MS4.6
HHC Hu-ho-hao-te 83.86 319 *e*P **P** **18 18 51.6 +0.8**
HHC AP pP 18 19 06.4 +4.6
HHC XP sP 18 19 11.2 +5.4
HHC PP PP 18 22 07.2 +2.4
HHC S S 18 29 10.6 -1.2
HHC XS sS 18 29 33.1 +3.2
HHC PS 18 30 12.3
HHC SS SS 18 34 42.3 +1.8
HHC AMB AMB
comp=Z,18nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,75nm,7.1s
HHC LR LR
comp=N,155nm,25.0s,MS4.4
HHC LR LR
comp=E,161nm,25.0s,MS4.4
HHC LR LR
comp=Z,166nm,24.4s,MS4.3
MAIT Maitri 85.77 187 *e*P **P** **18 18 58.5 -1.6**
LZH Lanzhou 86.22 312 *e*P **P** **18 19 04.0 +1.2**
LZH AP pP 18 19 17.8 +4.0
LZH XP sP 18 19 21.6 +3.8
LZH PP PP 18 22 28.0 +3.9
LZH SKS 18 29 24.1
LZH *e*S S 18 29 35.2 -0.2
LZH XS sS 18 30 02.2 +8.5
LZH SS SS 18 35 19.2 +3.7
LZH AMB AMB
comp=Z,28nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,95nm,4.0s
LZH LR LR
comp=E,315nm,14.6s
LZH LR LR
comp=Z,449nm,16.0s,MS5.0
VNA3 Neumayer Olymp 86.43 180 *e*P **P** **18 19 02.0 -1.3**
VNA2 Neumayer--Watz 86.75 181 *e*P **P** **18 19 04.1 -0.8**
CMB Columbia Colle 88.12 47 *e*P **P** **18 19 10.8 -1.2**
comp=Z,5.2nm,1.2s,mb4.6
CMB Columbia Colle 88.12 47 *e*P **P** **18 19 10.8 -1.2**
CMB pmax pmax
comp=Z,5.0nm,1.2s,mb4.6
ISA Isabella 88.27 50 *e*P **P** **18 19 11.7 -1.0**
comp=Z,6.0nm,1.0s,mb4.8
ISA Isabella 88.27 50 *e*P **P** **18 19 11.7 -1.0**
ISA pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
YBH Yreka Blue Hor 88.52 43 P **P** **18 19 13.1 -0.7**
comp=Z,1.6nm,0.7s,mb4.5,baz=96,slow=4.8,SNR=4.2
NVAR Mina Array Bea 89.74 48 P **P** **18 19 19.3 -0.2**
comp=Z,2.5nm,0.7s,mb4.6,baz=228,slow=6.9,SNR=18
SHL Shillong 90.42 297 *e*P **P** **18 19 22.0 -1.0**
BILL Bilibino 90.42 358⇑ *e*P **P** **18 19 20.5 -1.5**
BILL pmax pmax
comp=Z,12nm,1.6s,mb5.0
ULN Ulaanbaatar 90.55 323 *e*P **P** **18 19 23.3 +0.3**
comp=Z,13nm,0.9s,mb5.3
YAK Yakutsk 90.56 342 *e*P **P** **18 19 20.4 -2.4**
comp=Z,17nm,1.1s,mb5.3
YAK Yakutsk 90.56 342 *e*P **P** **18 19 21.9 -0.9**
YAK pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
GTA Gaotai 90.65 313 *e*P **P** **18 19 24.0 +0.2**
GTA AP pP 18 19 37.8 +3.0
GTA XP sP 18 19 42.6 +3.8
GTA S S 18 30 16.3 -0.9
GTA XS sS 18 30 39.4 +3.9
GTA SS SS 18 36 23.7 +3.8
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.8
GTA AMB AMB
comp=Z,48nm,6.3s
GTA LR LR
comp=N,114nm,16.5s,MS4.5
GTA LR LR
comp=E,121nm,18.9s,MS4.5
GTA LR LR
comp=Z,196nm,18.9s,MS4.6
SONM Songino Array 90.90 322 P **P** **18 19 24.7 0.0**
comp=Z,8.8nm,0.9s,mb5.1,baz=136,slow=3.8,SNR=42
SONM PKKPbc PKKPbc 18 36 48.6 -2.6
comp=Z,0.4nm,0.8s,baz=149,slow=3.1,SNR=3.6
SONM LR LR 19 00 50.8
comp=Z,114nm,19.5s,MS4.3,baz=120,slow=36
LSA Lhasa 92.72 301 P **P** **18 19 33.8 +0.2**
LSA Lhasa 92.72 301 *e*P **P** **18 19 34.0 +0.4**
comp=Z,2.4nm,0.6s,mb4.8
LSA Lhasa 92.72 301 *e*P **P** **18 19 34.0 +0.4**
LSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
ZAK Zakamensk 93.99 324⇑ *i*P **P** **18 19 38.3 -0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
TLY Talaya 94.47 325⇑ *i*P **P** **18 19 39.5 -1.6**
TLY pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
PLCA Paso Flores 94.92 138 LR LR 18 54 54.9
comp=Z,144nm,18.7s,MS4.5,baz=13,slow=31
TXAR Lajitas Array 96.86 61 LR LR 18 54 55.1
comp=Z,140nm,19.0s,MS4.5,baz=250,slow=30
PDAR Pinedale Array 97.63 47 LR LR 18 56 19.8
comp=Z,111nm,19.4s,MS4.4,baz=250,slow=31
WMQ Urumqi 100.73 313 *e*P Pdif 18 20 08.5 -1.1
WMQ PP PP 18 24 19.5 +1.8
WMQ SKS 18 30 40.5
WMQ SS SS 18 38 40.5 -2.3
WMQ PP PP
comp=Z,42nm,8.0s
WMQ LR LR
comp=N,98nm,18.0s,MS4.5
WMQ LR LR
comp=E,87nm,18.0s,MS4.5
WMQ LR LR
comp=Z,99nm,18.0s,MS4.4
MKAR Makanchi Array 105.30 315 PKiKP PKiKP 18 24 44.4 +0.7
comp=Z,0.7nm,0.8s,baz=109,slow=2.4,SNR=4.2
ZALV Zalesovo Beam 105.80 322 PKiKP PKiKP 18 24 46.3 +2.0
comp=Z,0.4nm,0.4s,baz=48,slow=2.1,SNR=3.1
BVAR Borovoye Array 114.06 319 PKP PKiKP 18 24 59.0 -1.0
comp=Z,0.8nm,0.5s,baz=104,slow=2.8,SNR=6.8
ARU Arti 120.93 323 *i* PKiKP PKPdf 18 25 11.6 -1.5
ARU 18 32 01.7
AKTK Aktyubinsk 121.67 316 PKP PKPdf 18 25 13.7 -1.0
AKTO Aktyubinsk 121.67 316 PKP PKPdf 18 25 13.7 -1.0
comp=Z,1.4nm,0.5s,baz=99,slow=3.7,SNR=7.8
ARCES ARCESS Array B 128.72 345 PKP PKPdf 18 25 26.4 -1.3
comp=Z,2.4nm,0.6s,baz=101,slow=1.4,SNR=13
KIV Kislovodsk 132.73 310 *i* PKiKP PKPdf 18 25 37.0 +1.0
KIV pmax pmax
comp=Z,21nm,1.3s
OBN Obninsk 133.21 326 *i* PKiKP PKPdf 18 25 36.5 0.0
OBN pmax pmax
comp=Z,18nm,1.6s
AKASG Malin Array Be 139.18 323 PKP PKPdf 18 25 45.8 -2.0
comp=Z,0.5nm,0.4s,baz=60,slow=2.1,SNR=5.5
AKASG SKPbc SKPbc 18 29 20.2 -0.2
comp=Z,0.2nm,0.3s,baz=51,slow=3.0,SNR=9.2
AKASG Malin Array Be 139.18 323 PKP PKPdf 18 25 45.8 -2.0
AKASG SKPbc SKPbc 18 29 20.2 -0.2
BRTR Keskin Array B 140.17 305 PKP PKPdf 18 25 51.0 +1.1
comp=Z,1.1nm,0.8s,baz=113,slow=2.8,SNR=4.1
LVV L'vov 142.48 325 *e*PKiKP PKPdf 18 25 53.7 -0.1
BURAR Bucovina Array 143.00 321 ⇓P PKPdf 18 25 53.0 -1.7
BURAR Bucovina Array 143.00 321 ⇓ *i*P PKPdf 18 25 53.0 -1.8
NEF NEVSHA 143.66 313 *i* P PKPdf 18 25 54.0 -2.1
KOLS Kolonicke sedl 143.93 325 *e*PKP PKPdf 18 25 53.9 -2.5
VOIR 144.17 318 ⇓P PKPdf 18 25 55.4 -1.5
VOIR 144.17 318 ⇓ *i*P PKPdf 18 25 55.4 -1.5
STHS Stebnicka Huta 144.19 326 *e*PKP PKPdf 18 25 55.0 -1.8
SZH Strazhica 144.56 314 *i* P PKPdf 18 25 55.9 -1.7
MCD Coleburn Disti 144.79 355 *e*P PKPdf 18 25 55.4 -2.1
DRGR 144.89 321 ⇓P PKPdf 18 25 57.8 -0.3
DRGR 144.89 321 *i* P PKPdf 18 25 57.6 -0.5
DRGR 144.89 321 ⇓ *i*P PKPdf 18 25 57.8 -0.3
KPL Plockton 145.20 357 *e*P PKPbc 18 25 55.9 -2.0
KPL AMb AMB 18 25 57.2
comp=Z,126nm,1.8s
DIM Dimitrovgrad 145.32 312 *i* P PKPbc 18 25 59.1 +0.3
RUE Ruedersdorf 145.44 335 *e*PKPdf PKPdf 18 25 58.8 -0.1
OKC Ostrava-Krasne 145.47 329 *e*PKP PKPdf 18 25 58.9 -0.1
BSEG Bad Segeberg 145.47 340 *e*PKPbc PKPbc 18 25 58.8 -0.1
KDZ Kurdzhali 145.55 312 *i* P PKPdf 18 25 55.1 -4.3
GZR Gura Zlata 145.58 319 ⇓P PKPdf 18 26 00.7 +1.4
GZR Gura Zlata 145.58 319 ⇓ *i*P PKPdf 18 26 00.7 +1.4
KSP Ksiaz 145.62 331 *e*PKP PKPdf 18 25 59.3 +0.1
KSP Ksiaz 145.62 331 *e*PKP2 PKPab 18 25 59.0 -0.8
MORC Moravsky Berou 145.80 329 *e*PKPdf PKPdf 18 25 59.1 -0.4
MORC Moravsky Berou 145.80 329 ⇓ *i*P PKPdf 18 26 00.0 +0.5
PSZ Piszkesteto 145.81 325 *e*PKPdf PKPdf 18 26 00.1 +0.4
PSZ Piszkesteto 145.81 325⇓ *e*PKP PKPdf 18 26 00.4 +0.8
PSZ Piszkesteto 145.81 325⇑ *i*P PKPdf 18 26 00.6 +1.0
DPC Dobruska-Polom 145.96 331 *e*PKP PKPdf 18 26 00.5 +0.7
DPC *ex* x 18 26 11.2
UPC Upice 145.99 331 *e*PKP PKPdf 18 26 00.4 +0.5
VYHS Vyhne 146.00 326 *e*PKP PKPdf 18 26 00.6 +0.7
RZN Rozhen 146.02 312 *i* P PKPdf 18 25 57.6 -2.6
PGB Panagyurishte 146.04 314 *i* P PKPdf 18 26 00.0 -0.2
EBH Black Hill 146.13 355 *e*P PKPdf 18 25 59.4 -0.6
BZS Buzias 146.16 320 ⇓P PKPdf 18 26 00.3 0.0
BZS Buzias 146.16 320 ⇓ *i*P PKPdf 18 26 00.3 0.0
KOLL Kolacno 146.17 327 *e*PKP PKPdf 18 26 01.2 +1.0
EAU Auchinoon 146.53 354 *e*P PKPdf 18 25 59.8 -0.8
BUD Budapest 146.54 325⇓ *e*PKP PKPdf 18 26 02.4 +1.5
EBL Broad Law 146.56 354 *e*P PKPdf 18 26 01.3 +0.6
VRAC Vranov 146.57 329 ⇓P PKPdf 18 26 02.5 +1.7
VRAC Vranov 146.57 329 ⇓ *i*P PKPdf 18 26 02.5 +1.6
PVCC Panska Ves 146.60 332 *e*PKP PKPdf 18 26 02.1 +1.2
BRG Berggiesshubel 146.61 333 *e*PKP PKPdf 18 26 02.0 +1.1
BRG *e* 18 26 13.6
BRG Berggiesshubel 146.61 333 *e*PKP2 PKPbc 18 26 02.0 -0.5
BRG pmax pmax
comp=Z,19nm,0.9s
BRG pmax pmax
comp=Z,16nm,1.4s
BRG pmax pmax
comp=Z,5.0nm,1.5s
BRG Berggiesshubel 146.61 333 *e*PKPbc PKPbc 18 26 02.1 -0.4
CLL Collm 146.65 335 ⇓ *i*PKP PKPdf 18 26 02.2 +1.2
CLL *e* 18 26 14.0
CLL *e*PKS 18 29 40.0
CLL Collm 146.65 335 ⇓ *i*PKP2 PKPbc 18 26 02.2 -0.4
CLL pmax pmax
comp=Z,29nm,0.8s
CLL Collm 146.65 335 *e*PKPbc PKPbc 18 26 02.1 -0.5
CLL Collm 146.65 335 ⇓ *i*PKPbc PKPbc 18 26 02.2 -0.4
comp=Z,29nm,0.8s
CLL *ex* x 18 26 14.0
VTS Vitosha 146.66 314 *i* P PKPbc 18 26 02.9 0.0
MMB Musomiste 146.74 312 *i* P PKPdf 18 26 02.5 +1.1
MODS Modra-Piesok 146.87 327 *e*PKP PKPbc 18 26 04.3 +1.0
PRU Pruhonice 147.01 332 *e*PKP PKPdf 18 26 02.8 +1.2
PRU *ep*PKP pPKPdf 18 26 13.1 +0.1
ESK Eskdalemuir 147.03 354 *e*P PKPdf 18 26 01.8 +0.3
ESK AMb AMB 18 26 02.6
comp=Z,78nm,2.1s
KKB Krupnik 147.06 313 *i* P PKPdf 18 26 03.4 +1.5
ZST Bratislava 147.08 327 *e*PKP PKPbc 18 26 03.5 -0.4
TREC Trest 147.09 330 *e*PKP PKPbc 18 26 03.5 -0.4
TREC *ex* x 18 26 13.6
CLZ Clausthal 147.20 338 *e*PKPbc PKPbc 18 26 04.2 +0.1
BWH Wardlaw 147.21 354 *e*P PKPdf 18 26 02.6 +0.9
XAL Allendale 147.37 353 *e*P PKPdf 18 26 03.7 +1.6
PKSM Moragy 147.53 323 ⇓P PKPbc 18 26 04.8 -0.4
PKSM Moragy 147.53 323 ⇓ *i*P PKPbc 18 26 04.8 -0.4
TANN Tannenbergstha 147.56 334 *e*PKPbc PKPbc 18 26 05.0 -0.2
GAL1 Galloway 147.60 355 P PKPbc 18 26 04.7 -0.4
GAL1 AMb AMB 18 26 05.8
comp=Z,67nm,1.5s
GAL1 Galloway 147.60 355 *e*P PKPbc 18 26 04.3 -0.9
GAL1 *e*P 18 26 04.7
GAL1 AMb AMB 18 26 05.8
comp=Z,67nm,1.5s
VAY Valandovo 147.64 313 *i* P PKPdf 18 26 03.9 +1.0
IBBN Ibbenburen 147.66 341 *e*PKPbc PKPbc 18 26 05.0 -0.4
SOP Sopron 147.69 327⇓ *e*PKP PKPbc 18 26 05.6 0.0
NKC Novy Kostel 147.71 334 *e*PKP PKPbc 18 26 05.4 -0.2
NKC *ex* x 18 26 15.8
MOX Moxa 147.72 335 *e*PKP PKPbc 18 26 05.3 -0.3
comp=Z,18nm,1.1s
MOX Moxa 147.72 335 *e*PKP2 PKPbc 18 26 05.3 -0.3
MOX pmax pmax
comp=Z,18nm,1.1s
MOX Moxa 147.72 335 *e*PKPbc PKPbc 18 26 05.1 -0.5
CONA Conrad Observa 147.87 328⇑ *r*pPKPdf PKPbc 18 26 05.9 -0.2
comp=Z,16nm,1.2s,SNR=7.0
CSNA Conrad Observa 147.87 328 ⇓ *j*pPKPdf PKPbc 18 26 05.9 -0.2
comp=Z,15nm,1.2s
KHC Kasperske Hory 148.07 332 *e*PKP PKPbc 18 26 06.1 -0.5
KHC *ep*PKP pPKPdf 18 26 16.0 +1.2
KHC *ex* x 18 26 26.5
SKO Skopje 148.10 314 *i* P PKPbc 18 26 06.6 -0.3
ROTZ Rotzenmuhle 148.17 334 *e*PKPbc PKPbc 18 26 06.6 -0.2
UBBA Unterbreizbach 148.18 337 *e*PKPbc PKPbc 18 26 06.1 -0.7

GEC2	GERESS Array S	148.23 331	ePKPbc	PKPbc	18 26 06.6	-0.4	
GERES	GERESS Array B	148.23 331	PKPbc	PKPbc	18 26 06.8	-0.2	
	comp=Z,17nm,0.9s,baz=48,slow=2.0,SNR=48						
WET	Wettzell	148.37 332	ePKPbc	PKPbc	18 26 07.0	-0.3	
KRUS	Krusevo	148.51 314	ePKP	PKPdf	18 26 06.0	+1.6	
BUG	Bochum--Univer	148.57 340	ePKPbc	PKPbc	18 26 07.6	-0.2	
GRF	Grafenberg Arr	148.63 335	ePKPbc	PKPbc	18 26 07.4	-0.6	
KOGS	Kog	148.67 326	*i* PKPdf	PKPbc	18 26 07.4	-0.8	
DMUB	Kingscourt	148.69 358	*e*P	PKPdf	18 26 04.0	-0.2	
MOA	Molln	148.69 329	⇑*i* PKPbc	PKPbc	18 26 07.6	-0.6	
	comp=Z,6.0nm,0.5s,SNR=12						
KBI1	Birley Grange	148.86 351	*e*P	PKPbc	18 26 07.5	-0.9	
GROS	Grobnik	149.04 326	*i* PKPdf	PKPbc	18 26 08.5	-0.7	
PERS	Pernice	149.12 327	*i* PKPdf	PKPbc	18 26 08.4	-1.0	
KWE	Weaver Farm	149.13 352	*e*P	PKPbc	18 26 08.2	-1.0	
SOKA	Soboth	149.14 327	⇑*i* PKPbc	PKPbc	18 26 08.5	-0.9	
	comp=Z,22nm,1.3s						
TNS	Taunus Mts	149.23 338	ePKPbc	PKPbc	18 26 09.1	-0.4	
DLF	Lyons Farm	149.28 357	*e*P	PKPbc	18 26 07.9	-1.6	
CWF	Charnwood Fore	149.33 351	*e*P	PKPbc	18 26 09.2	-0.5	
CWF			AMb	AMB	18 26 10.0		
	comp=Z,29nm,1.4s						
RJOB	Jochberg	149.46 331	ePKPbc	PKPbc	18 26 09.3	-0.9	
CRES	Cresnjev	149.49 325	ePKPdf	PKPbc	18 26 09.2	-0.5	
PDKS	Podkum	149.57 326	*i* PKPdf	PKPbc	18 26 10.2	-0.3	
MEM	Membach	149.68 341	PKPbc	PKPbc	18 26 10.2	-0.4	
MEM			APKPab		18 26 34.4		
FUR	Furstenfeldbru	149.80 333	ePKPbc	PKPbc	18 26 10.6	-0.4	
BOJS	Bojanci	149.81 325	ePKPdf	PKPbc	18 26 10.9	-0.2	
LJU	Ljubljana	149.83 327	*i* PKPdf	PKPbc	18 26 10.6	-0.5	
GORS	Gorjuse	149.91 327	*i* PKPdf	PKPbc	18 26 10.5	-0.8	
VOY	Vojsko	150.16 327	ePKPdf	PKPbc	18 26 10.9	-1.0	
VOY			*e*		18 26 22.0		
SSW	Stow on the Wo	150.16 351	*e*P	PKPbc	18 26 09.7	-2.1	
STU	Stuttgart	150.16 336	ePKPbc	PKPbc	18 26 11.8	-0.1	
STU	Stuttgart	150.16 336	ePKPbc	PKPbc	18 26 11.7	-0.1	
PTCC	Patocco-Chiusa	150.16 328	PKP	PKPbc	18 26 10.5	-1.4	
SKP1	Kophill	150.24 350	*e*P	PKPbc	18 26 10.9	-1.1	
SNF	Seneffe	150.27 343	PKPab	PKPbc	18 26 11.7	-0.4	
SNF			E		18 26 36.1		
MCH1	Michaelchurch	150.28 353	*e*P	PKPbc	18 26 10.5	-1.5	
MCH1			AMb	AMB	18 26 19.9		
	comp=Z,35nm,1.2s						
WATA	Walderalm	150.31 331	⇑*i* PKPbc	PKPbc	18 26 11.4	-0.9	
	comp=Z,12nm,0.5s,SNR=7.4						
GMNA	Gemona	150.31 328	PKP	PKPbc	18 26 11.2	-1.1	
ABTA	Abfaltersbach	150.31 329	⇑*i* PKPbc	PKPbc	18 26 10.7	-1.5	
	comp=Z,32nm,1.3s,SNR=20						
WTTA	Wattenberg	150.33 331	*i* PKPbc	PKPbc	18 26 11.7	-0.6	
	comp=Z,35nm,0.9s,SNR=18						
SEST	Monte Rota	150.45 330	PKP	PKPbc	18 26 11.8	-0.8	
WLF	Walferdange	150.47 340	ePKPbc	PKPbc	18 26 12.7	+0.2	
GIVF	Givet	150.48 342	*e*PKP1	PKPbc	18 26 12.0	-0.6	
	comp=Z,30nm,0.7s						
LANF	Langenberg	150.50 337	PKP	PKPbc	18 26 12.4	-0.2	
MOTA	Moosalm	150.51 332	⇑*i* PKPbc	PKPbc	18 26 11.9	-0.8	
	comp=Z,32nm,1.0s,SNR=16						
RETA	Reutte	150.54 332	⇓*i* PKPbc	PKPbc	18 26 11.9	-0.9	
	comp=Z,11nm,1.0s,SNR=11						
DOU	Dourbes	150.55 342	PKPbc	PKPbc	18 26 12.2	-0.5	
DOU			APKP		18 26 22.9		
DOU			APKPab		18 26 31.6		
SWN1	Swindon	150.59 351	*e*P	PKPbc	18 26 11.4	-1.4	
SWN1			AMb	AMB	18 26 14.8		
	comp=Z,99nm,0.7s						
BAIF	Baives	150.69 343	ePKP1	PKPbc	18 26 12.4	-0.7	
WOL	Wolverton	150.70 350	P	PKPbc	18 26 12.1	-1.0	
WOL	Wolverton	150.70 350	*e*P	PKPbc	18 26 12.1	-1.0	
BFO	Black Forest	150.85 336	ePKPbc	PKPbc	18 26 12.8	-0.7	
FETA	Feichten	150.92 332	⇑*i* PKPbc	PKPbc	18 26 13.1	-0.6	
	comp=Z,31nm,0.9s,SNR=24						
APPI	Appiano	151.11 330	PKP	PKPbc	18 26 12.6	-1.6	
CDF	Champ du Feu	151.17 337	*e*PKP1	PKPbc	18 26 13.5	-0.7	
	comp=Z,39nm,1.1s						
CTI	Castel Tesino	151.23 329	PKP	PKPbc	18 26 13.7	-0.8	
HEX	Exmoor	151.28 353	*e*P	PKPbc	18 26 12.9	-1.5	
ECH	Echery	151.37 337	PKP	PKPbc	18 26 14.6	-0.1	
ECH	Echery	151.37 337	ePKIKP	PKPbc	18 26 13.5	-1.2	
THEF	They Montfort	151.77 339	PKP	PKPbc	18 26 15.4	-0.2	
HINF	Hinteralfeld	151.82 337	*e*PKP1	PKPbc	18 26 14.8	-1.0	
	comp=Z,9.5nm,0.6s						
MEZF	Maizieres J'vi	151.84 340	*e*PKP1	PKPbc	18 26 15.4	-0.4	
	comp=Z,22nm,0.8s						
HAU	Haudompre	151.84 338	*e*PKP1	PKPbc	18 26 15.0	-0.8	
	comp=Z,26nm,0.8s						
HAU			*e*MLR	MLR			
	comp=Z,174nm,17.5s,MS4.6						
DYA	Yadsworthy	151.92 353	P	PKPbc	18 26 14.4	-1.5	
DYA			AMb	AMB	18 26 16.5		
	comp=Z,19nm,1.2s						
DYA	Yadsworthy	151.92 353	*e*P	PKPbc	18 26 14.4	-1.5	
DYA			AMb	AMB	18 26 16.5		
	comp=Z,19nm,1.2s						
RGNG	Rignano Grg	151.99 319	PKP	PKPbc	18 26 15.7	-0.7	
LOMF	Lomont	152.22 337	PKP	PKPbc	18 26 16.5	-0.2	
VAI	Varese	152.67 332	PKP	PKPbc	18 26 16.4	-1.3	
NRCA	Norcia	152.72 323	PKP	PKPbc	18 26 16.9	-1.1	
CSSN	Cassano Irpino	152.81 318	PKP	PKPbc	18 26 17.1	-1.1	
GSCL	Gusciola	152.99 328	PKP	PKPbc	18 26 16.1	-2.4	
FLN	La Foliniere	153.02 348	*e*PKP1	PKPbc	18 26 17.3	-1.1	
	comp=Z,8.3nm,0.6s						
FLN			*e*MLR	MLR			
	comp=Z,168nm,22.2s,MS4.5						
PTQR	Pietraquaria	153.08 321	PKP	PKPdf	18 26 12.7	+1.3	
LDF	La Druitiere	153.11 347	*e*PKP1	PKPbc	18 26 18.3	-0.3	
	comp=Z,7.9nm,0.8s						
CABF	La Chapelle	153.12 337	*e*PKP1	PKPbc	18 26 18.4	-0.3	
	comp=Z,6.4nm,0.6s						
LOR	Lormes	153.30 340	*e*PKP1	PKPbc	18 26 18.1	-1.0	
	comp=Z,6.6nm,0.8s						
LOR			*e*MLR	MLR			
	comp=Z,147nm,19.5s,MS4.5						
GRR	Gorron	153.45 348	*e*PKP1	PKPbc	18 26 19.3	-0.1	
	comp=Z,5.3nm,0.6s						
SSF	Saint Saulge	153.59 341	*e*PKP1	PKPbc	18 26 18.9	-0.8	
	comp=Z,4.4nm,0.7s						
LPL	La Plagne	153.79 335	*e*PKP1	PKPbc	18 26 19.9	-0.3	
LPG	La Plagne	153.80 334	*e*PKP1	PKPbc	18 26 20.1	-0.1	
SMF	Signal de Mont	153.86 340	*e*PKP1	PKPbc	18 26 19.8	-0.5	
SGMF	Saint Gilles	153.88 350	*e*PKP1	PKPbc	18 26 19.9	-0.4	
AVF	Avril sur Loir	153.88 341	*e*PKP1	PKPbc	18 26 20.1	-0.3	
ROSF	Rostrenen	153.90 351	*e*PKP1	PKPbc	18 26 20.1	-0.2	
	comp=Z,37nm,1.2s						
BGF	Bois d'Agland	154.25 341	*e*PKP1	PKPbc	18 26 20.7	-0.4	
QUIF	Quistinic	154.30 351	*e*PKP1	PKPbc	18 26 21.5	+0.3	
MBDF	Montbardon	154.42 333	*e*PKP1	PKPbc	18 26 21.8	+0.2	
ORIF	Oris-en-Rattie	154.62 335	*e*PKP1	PKPbc	18 26 21.3	-0.7	
	comp=Z,16nm,1.0s						
ORIF			*e*MLR	MLR			
	comp=Z,162nm,17.5s,MS4.6						
TCF	Toulx Ste Croi	154.68 342	*e*PKP1	PKPbc	18 26 22.1	0.0	
SBF	Sospel	154.83 331	*e*PKP1	PKPbc	18 26 21.6	-0.9	
SMRF	Simiane la Rot	155.53 334	*e*PKP1	PKPdf	18 26 23.7	+8.9	
KEST	Kesra	159.39 314	PKPab	PKPab	18 26 57.5	-0.1	
	comp=Z,1.2nm,0.8s,baz=329,slow=6.9,SNR=3.9						
ESDC	Sonseca Array	162.44 347	PKPab	PKPab	18 27 09.7	-0.9	
	comp=Z,0.1nm,0.3s,baz=8.8,slow=2.9,SNR=5.3						
TORD	Torodi Ar. Bea	166.22 229	PKP	PKPdf	18 26 26.9	-0.2	
	comp=Z,1.4nm,0.9s,baz=324,slow=1.4,SNR=6.0						
TORD			PKPab	PKPab	18 27 27.5	-0.5	
	comp=Z,2.9nm,1.0s,baz=114,slow=4.0,SNR=6.0						
TORD	Torodi Ar. Bea	166.22 229	PKP	PKPdf	18 26 26.9	-0.2	
TORD			PKPab	PKPab	18 27 27.5	-0.5	

*ISCJB **03** 18:07:09.4±0.4, 4377N±003×105.18W±004, h0km, Error ellipse: s-maj=4.3km s-min=3.7km az=11.6*
*NEIC **03** 18:07:11.9±0.4, 4379N×105.19W, h0km, ML3.1, Error ellipse: s-maj=6.5km s-min=5.7km az=151.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
*IDC **03** 18:07:12.2±1.6, 4388N×10561W, h0km, mb4.2/1, mb1 4.0/4, mb1mx3.6/23, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=53.8km s-min=9.2km az=149.0*

ISC 03 18:07:11.3±0.3, 4377N±003×10520W±004, h0km, n84, σ1$07/91, 27C-24D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	67	*e*Pg	Pg	18 07 29.1	+0.4
RSSD				*e*Pn	Pn	18 07 31.8	+0.5
L21A	Rawlins	2.41	222	⇓Pn	Pn	18 07 51.1	-0.8
	baz=2.5						
L21A				⇓Sn	Sn	18 08 22.7	+0.7
	baz=2.5						
PHWY	Pilot Hill	2.47	185	*e*Pn	Pn	18 07 52.1	-0.6
RWWY	Rawlins	2.55	216	*e*Pn	Pn	18 07 54.3	+0.5
LAO	LASA Array	3.01	346	*e*Pn	Pn	18 08 01.6	+1.5
RLMT	Red Lodge	3.22	296	*e*Pn	Pn	18 08 02.2	-0.8
RLMT	Red Lodge	3.22	296	⇓Pn	Pn	18 08 02.5	-0.5
	baz=3.4						
BW06	Boulder Array	3.34	254	*e*Pn	Pn	18 08 03.7	-1.0
BW06	Boulder Array	3.34	254	⇑Pn	Pn	18 08 04.1	-0.6
	baz=3.5						
BW06				⇓Sn	Sn	18 08 47.0	+2.0
	baz=3.5						
PDAR	Pinedale Array	3.34	254	Pn	Pn	18 08 04.7	0.0
	6.3nm,0.3s,baz=75,slow=16,SNR=43						
PDAR				Lg		18 08 49.4	
	12nm,0.3s,baz=71,slow=31,SNR=10						
PDAR	Pinedale Array	3.34	254	Pn	Pn	18 08 04.7	0.0
PDAR				Lg		18 08 49.4	
I18A	Diamond G Ranc	3.35	270	⇑Pn	Pn	18 08 05.2	+0.4
	baz=3.5,SNR=7.3						
L19A	Farson	3.48	243	⇑Pn	Pn	18 08 06.3	-0.3
	baz=3.6						
G18A	Lazy EL Ranch,	3.49	298	⇑Pn	Pn	18 08 06.1	-0.5
	baz=3.6,SNR=22						
OGNE	Ogallala	3.67	139	*e*Pn	Pn	18 08 09.7	+0.6
GCMT	Greycliff	3.77	304	*e*Pn	Pn	18 08 11.1	+0.4
LKWY	Lake	3.83	284	*e*Pn	Pn	18 08 15.3	+3.9
F18A	Big Timber	3.86	305	⇓Pn	Pn	18 08 11.3	-0.5
	baz=4.0,SNR=24						
LOHW	Long Hollow	3.93	270	*e*Pn	Pn	18 08 14.8	+2.1
ISCO	Idaho Springs	3.98	185	*e*Pn	Pn	18 08 13.6	+0.2
MOOW	Moose Ponds	4.02	272	*e*Pn	Pn	18 08 16.2	+2.2
SNOW	Snow King Moun	4.05	268	*e*Pn	Pn	18 08 19.7	+5.2
N19A	John Jarvie Ra	4.12	227	⇑Pn	Pn	18 08 14.5	-0.8
	baz=4.2,SNR=6.8						
REDW	Red Top Meadow	4.13	266	*e*Pn	Pn	18 08 17.9	+2.3
IMW	Indian Meadow	4.16	274	*e*Pn	Pn	18 08 17.1	+1.2
TPAW	Teton Pass	4.19	268	*e*Pn	Pn	18 08 18.3	+1.9
G17A	Pierce Place,	4.26	293	⇓Pn	Pn	18 08 17.0	-0.3
	baz=4.4						
G17A				⇓Pb	Pb	18 08 27.5	+0.5
	baz=4.4,SNR=6.5						
N18A	Larsen Ranch,	4.33	231	⇓Pn	Pn	18 08 17.8	-0.5
	baz=4.4,SNR=11						
E18A	Harlowton	4.36	312	⇑Pn	Pn	18 08 18.1	-0.5
	baz=4.5,SNR=7.1						
AHID	Auburn Hatcher	4.43	259	*e*Pn	Pn	18 08 22.4	+2.8
F17A	Fitzpatrick Pl	4.44	301	⇑Pn	Pn	18 08 19.5	-0.2
	baz=4.6,SNR=6.5						
H16A	Russell Place,	4.45	284	⇓Pb	Pb	18 08 30.9	+0.7
	baz=4.6						
RRI2	Red Ridge	4.47	267	*e*Pn	Pn	18 08 20.7	+0.5
O19A	Miners Draw (B	4.54	222	⇓Pn	Pn	18 08 20.3	-0.8
	baz=4.8,SNR=8.1						
I16A	Newdale	4.55	274	⇑Pb	Pb	18 08 32.7	+0.7
	baz=4.7						
QLMT	Earthquake Lak	4.60	286	*e*Pn	Pn	18 08 25.0	+3.0
J16A	Bone	4.69	266	⇓Pb	Pb	18 08 35.2	+0.8
	baz=4.8,SNR=9.8						
J16A				⇑Sn	Sn	18 09 20.4	+2.0
	baz=4.8						
J16A				⇑Sb	Sb	18 09 37.5	+6.1
	baz=4.8						
DGMT	Dagmar	4.76	8	*e*Pn	Pn	18 08 25.6	+1.5
SMCO	Snowmass	4.78	197	Pn	Pn	18 08 27.4	+3.0
E17A	Martinsdale	4.83	306	⇓Pn	Pn	18 08 24.8	-0.3
	baz=5.0,SNR=18						
L16A	Fish Haven	4.91	251	⇑Pn	Pn	18 08 26.0	-0.2
	baz=5.0						
G16A	Moss Hill, Enn	4.95	289	⇑Sb	Sb	18 09 44.7	+5.9
	baz=5.1						
BOZ	Bozeman (W)	4.96	295	*e*Pn	Pn	18 08 25.5	-1.4
O18A	Roosevelt	5.01	227	⇑Pn	Pn	18 08 27.1	-0.5
	baz=5.1,SNR=5.7						
P19A	Cripple Cowboy	5.01	216	⇓Pn	Pn	18 08 26.7	-0.9
	baz=5.1,SNR=6.7						
D17A	Six Diamond Ra	5.14	313	⇓Pn	Pn	18 08 28.8	-0.6
	baz=5.3,SNR=9.2						
HWUT	Hardware Ranch	5.17	247	*e*Pn	Pn	18 08 28.9	-0.9
	8.9nm,0.5s						
EGMT	Eagleton	5.32	325	Pn	Pn	18 08 31.4	-0.4
	21nm,0.5s						
EGMT	Eagleton	5.32	325	⇑Pn	Pn	18 08 30.5	-1.3
	baz=5.4						
E16A	East Helena	5.35	303	⇓Pn	Pn	18 08 31.5	-0.9
	baz=5.5						
HRY	Holter Researc	5.53	304	*e*Pn	Pn	18 08 34.6	-0.3
D16A	Dana Ranch, Ca	5.54	308	⇑Pn	Pn	18 08 33.9	-0.9
	baz=5.7						
L15A	Malad City	5.57	254	⇑Pn	Pn	18 08 34.8	-0.5
	baz=5.7						
L15A				⇑Sb	Sb	18 10 02.5	+5.9
	baz=5.7						
P18A	Preston Nutter	5.60	224	⇑Pn	Pn	18 08 34.8	-1.0
	baz=5.7,SNR=6.5						
E15A	Deer Lodge	5.90	299	⇓Pn	Pn	18 08 39.0	-0.8
	baz=6.0						
P17A	Butcher Ranch,	5.97	226	⇑Pn	Pn	18 08 40.2	-0.7
	baz=6.1,SNR=13						
C16A	Fuhringer Ranc	6.10	314	⇑Pn	Pn	18 08 41.5	-1.1
	baz=6.2						
SRU	San Rafael	6.14	223	⇑Pn	Pn	18 08 41.9	-1.2
	baz=6.2						
PV01	Paradox Valley	6.18	206	*e*P	Pn	18 08 45.4	+1.7
ECSD	EROS,Sioux Fal	6.22	87	*e*Pn	Pn	18 08 44.3	+0.1
	5.9nm,0.4s						
M14A	Sheep Mountain	6.42	252	⇑Pn	Pn	18 08 46.5	-0.5
	baz=6.6						
R18A	Canyonlands Na	6.44	215	⇓Pn	Pn	18 08 45.6	-1.6
	baz=6.5,SNR=16						
B16A	M & M Farms, S	6.49	318	⇓Pn	Pn	18 08 46.8	-1.1
	baz=6.6,SNR=7.8						
CHMT	Chamberlain Mo	6.49	302	*e*P	Pn	18 08 46.9	-1.1
Q16A	Castle Valley	6.61	225	⇑Pn	Pn	18 08 49.0	-0.6
	baz=6.7,SNR=10						
D14A	Greenough	6.72	302	⇑Pn	Pn	18 08 50.1	-1.1
	baz=6.8,SNR=7.9						
R17A	Hanksville Air	6.77	220	⇓Pn	Pn	18 08 49.8	-2.1
	baz=6.9,SNR=6.2						
F13A	Darby	6.81	290	⇓Pb	Pb	18 09 10.8	+0.4
	baz=6.9						
B15A	Bradely Ranch,	6.85	314	⇑Pn	Pn	18 08 51.8	-1.1
	baz=7.0,SNR=8.8						
MVCO	Mesa Verde	7.01	202	*e*Pn	Pn	18 08 58.1	+2.9
	3.8nm,0.4s						
S18A	Hurst Farm, BI	7.08	213	⇓Pn	Pn	18 08 55.1	-0.9
	baz=7.2,SNR=10						
C14A	Swan Lake	7.19	307	⇑Pn	Pn	18 08 57.0	-0.6
	baz=7.3						
R16A	Teasdale	7.25	223	⇓Pn	Pn	18 08 57.9	-0.5
	baz=7.3,SNR=8.4						
D13A	Huson	7.32	300	⇓Pn	Pn	18 08 58.7	-0.6
	baz=7.4						
F12A	Elk City	7.43	289	⇑Pn	Pn	18 09 00.6	-0.3
	baz=7.6						
S17A	Black Ridge (B	7.46	217	⇓Pn	Pn	18 09 00.4	-0.9
	baz=7.5,SNR=5.2						
AGMN	Agassiz Refuge	7.92	52	Pn	Pn	18 09 07.9	+0.4
	14nm,0.5s						
ULM	Lac du Bonnet	9.08	41	Pn	Pn	18 09 24.6	+1.0
	1.7nm,0.3s,baz=230,slow=11,SNR=7.4						
ULM	Lac du Bonnet	9.08	41	Pn	Pn	18 09 24.6	+1.0
WUAZ	Wupatki	9.51	212	*e*Pn	Pn	18 09 29.9	+0.4
	4.7nm,0.5s						
NVAR	Mina Array Bea	11.23	246	Pn	Pn	18 09 55.0	+2.0
	0.1nm,0.3s,baz=62,slow=12,SNR=3.9						
NVAR	Mina Array Bea	11.23	246	Pn	Pn	18 09 55.0	+2.0
ARCES	ARCESS Array B	61.38	18	P	P	18 17 28.4	0.0
	3.6nm,0.9s,baz=333,slow=7.1,SNR=4.8						
ARCES	ARCESS Array B	61.38	18	P	P	18 17 28.4	0.0

*IDC **03** 18:10:48.0±1.9, 4.18S×101.19E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.0/9, MS3.9/1, Ms1 3.9/1, ms1mx2.8/31, Error ellipse: s-maj=61.3km s-min=20.2km az=55.0*
*ISCJB **03** 18:10:49.2±3.3, 447S±008×101.1E±01, h32km±24km, mb4.3/17, Error ellipse: s-maj=22.3km s-min=12.2km az=169.0*
*NEIC **03** 18:10:49.9±6.4, 442S×10107E, h20km±42km, mb4.5/8, Error ellipse: s-maj=18.7km s-min=9.1km az=65.0*
*DJA **03** 18:10:57.5±0.0, 394S×10049E, h127km, mb4.4/5, MLv4.5/6*

ISC 03 18:10:49.6±5.0, 441S±008×1011E±01, h17km±32km, n34, σ1$04/27, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	Padang	3.54	349	P	Pn	18 11 43.1	-0.7
PPI	Padang Panjang	4.00	350	P	Pn	18 11 51.4	+1.3
PPBI	Pangkal Pinang	5.49	66	P	Px	18 12 22.3	
	17nm,1.0s,0.1nm						
DBJI	Dramaga	6.00	111	P	Px	18 12 31.5	
CBJI	Citeko	6.05	110	P	Px	18 12 38.1	
	234nm,1.0s,0.7nm						
LEM	Lembang	6.90	111	P	Px	18 12 43.7	
COCO	West Island	8.81	208	*e*Pn	Pn	18 12 55.1	-1.1
CM31	Chiang Mai Arr	22.83	355	*e*Pn	P	18 15 52.1	+0.2
	6.2nm,0.9s,mb4.0						
CMAR	Chiang Mai Arr	22.83	355	P	P	18 15 49.0	-2.8
	4.5nm,0.9s,mb3.9,baz=182,slow=8.6,SNR=35						
CHTO	Chiang Mai	23.18	355	*e*P	P	18 15 54.8	-0.8
	4.4nm,1.0s,mb3.8						
QIZ	Qiongzhong	24.83	20	P	P	18 16 07.7	-3.4
ODAN	Odare	33.80	338	*e*P	P	18 17 32.1	+1.2
	18nm,0.9s,mb5.0						
TAPN	Taplejung	34.13	338	*e*P	P	18 17 35.1	+1.4
	22nm,0.9s,mb5.1						
JIRN	Jiri	34.99	337	*e*P	P	18 17 42.6	+1.4
LSA	Lhasa	35.24	345	P	P	18 17 44.1	+0.8
GUN	Gumba	35.34	336	*e*P	P	18 17 45.1	+1.0
KKN	Kakani	35.47	335	*e*P	P	18 17 46.2	+0.9
	12nm,0.8s,mb4.9						
WRA	Warramunga Arr	35.84	118	P	P	18 17 49.6	+0.9
	0.7nm,0.5s,mb3.8,baz=304,slow=8.9,SNR=4.8						
ASAR	Alice Springs	36.96	124	P	P	18 17 59.8	+1.6
	0.7nm,0.8s,mb3.5,baz=296,slow=7.7,SNR=4.3						
KSRS	Korea Array	48.55	29	P	P	18 19 31.8	-0.2
	2.7nm,0.9s,mb4.3,baz=210,slow=8.1,SNR=8.1						
SONM	Songino Array	52.23	4	P	P	18 20 00.2	+0.6
	4.5nm,0.8s,mb4.4,baz=181,slow=9.3,SNR=7.5						
JHJ	Hachijo jima 2	52.28	42	LR	LR	18 38 27.6	
	comp=Z,139nm,21.9s,baz=187,slow=32						
TKM2	Tokmak 2	52.47	336	*e*P	P	18 20 01.7	+0.2
	3.0nm,0.8s,mb4.3						
EKS2	Erkin-Say	53.01	335	*e*P	P	18 20 05.2	-0.3
	4.1nm,0.8s,mb4.4						
EKS2				*e*		18 20 13.8	
MJAR	Matsushiro Arr	53.47	37	P	P	18 20 07.7	-1.4
	1.4nm,0.8s,mb3.9,baz=214,slow=7.6,SNR=5.0						
MK31	Makanchi Array	53.64	344	*e*P	P	18 20 09.4	-0.7
MKAR	Makanchi Array	53.64	344	P	P	18 20 10.2	+0.1
	3.0nm,0.7s,mb4.3,baz=150,slow=8.4,SNR=23						
KURK	Kurchatov	58.22	343	*e*P	P	18 20 41.8	-1.0
	4.6nm,1.1s,mb4.4						
ZAA0	Zalesovo Array	59.73	349	*e*P	P	18 20 52.8	-0.4
ZALV	Zalesovo Beam	59.73	349	P	P	18 20 52.8	-0.4
	2.5nm,0.7s,mb4.4,baz=178,slow=4.2,SNR=13						
BVAR	Borovoye Array	62.82	340	P	P	18 21 13.3	-0.8
	0.7nm,0.5s,mb4.0,baz=134,slow=8.3,SNR=3.2						
YAK	Yakutsk	69.79	14	P	P	18 21 57.3	-1.4
TXAR	Lajitas Array	145.86	41	PKPbc	PKPbc	18 30 29.2	+0.5
	2.6nm,1.0s,baz=298,slow=2.7,SNR=16						
JCT	Junction City	147.42	35	*e*PKPbc	PKPbc	18 30 33.5	+0.3

*ATH **03** 18:30:15.8, 4024N×2557E, h10km, MD2.9/3*
*ISCJB **03** 18:30:15.8±0.5, 4026N±003×2570E±003, h10km±4km, Error ellipse: s-maj=4.7km s-min=4.1km az=147.8*
*CSEM **03** 18:30:15.0±0.1, 4026N×2571E, h10km, MD2.9, Error ellipse: s-maj=2.4km s-min=2.2km az=167.0*
*DDA **03** 18:30:15.5, 4028N×2569E, h20km, Md3.0*
*THE **03** 18:30:16.7, 4022N×2573E, h11km±2km, ML3.0/4, Error ellipse: s-maj=2.1km s-min=0.9km az=343.0*
*ISK **03** 18:30:17.1, 4026N×2601E, h5km, MD2.9*

ISC 03 18:30:16.0±0.5, 4026N±003×2571E±004, h12km±4km, n30, σ0$92/51, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.16	115	*e*PG	Pg	18 30 19.6	0.0
GADA				*e*SG

176nm,1.1s,mb5.6
HNR Honiara 22.58 303 *e*P **P** **18 57 21.0 -0.6**
HNR pmax pmax
comp=Z,176nm,1.1s,mb5.6
EIDS Eidsvold 25.72 258 *e*P **P** **18 57 50.3 +1.1**
comp=Z,18nm,0.4s,mb5.0
CTA Charters Tower 30.66 269 S **S** **19 02 54.6 -0.5**
comp=Z,1.7nm,0.7s,baz=196,slow=20,SNR=8.5
CTA ScP ScP 19 03 60.0 -0.8
comp=Z,9.4nm,0.8s,baz=142,slow=5.3,SNR=10
CTAO Charters Tower 30.66 269 *e*P **P** **18 58 33.6 +1.4**
comp=Z,79nm,0.5s,mb5.6
CTAO Charters Tower 30.66 269 *e*P **P** **18 58 33.6 +1.4**
CTAO pmax pmax
comp=Z,79nm,0.5s,mb5.6
CTAO Charters Tower 30.66 269 P **P** **18 58 33.4 +1.2**
comp=Z,152nm,1.1s,comp=Z,1µm,mb5.5
TAU Tasmania Unive 33.20 225 *e*P **P** **18 58 54.4 +1.0**
comp=Z,8.2nm,0.6s,mb4.5
TAU Tasmania Unive 33.20 225 *e*P **P** **18 58 54.4 +1.0**
TAU pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
PMG Port Moresby 33.31 288 *e*P **P** **18 58 55.5 +0.7**
comp=Z,144nm,0.7s,mb5.7
PMG Port Moresby 33.31 288 *e*P **P** **18 58 55.5 +0.7**
PMG pmax pmax
comp=Z,144nm,0.7s
STKA Stephens Creek 34.44 246 P **P** **18 59 05.5 +1.5**
comp=Z,6.8nm,0.4s,mb4.6,baz=92,slow=11,SNR=24
STKA ScP ScP 19 04 12.2 -1.5
comp=Z,4.0nm,0.8s,baz=76,slow=7.5,SNR=3.6
STKA Stephens Creek 34.44 246 *e*P **P** **18 59 05.2 +1.2**
comp=Z,12nm,0.8s,mb4.6
COEN Coen 35.11 278 *e*P **P** **18 59 10.6 +0.8**
comp=Z,12nm,0.9s,mb4.5
COEN Coen 35.11 278 P **P** **18 59 12.4 +2.6**
comp=Z,12nm,1.1s,mb4.4
ASAR Alice Springs 41.44 259 P **P** **19 00 01.4 +0.5**
comp=Z,29nm,0.8s,mb4.9,baz=89,slow=8.8,SNR=398
ASAR PcP PcP 19 01 44.5 -0.4
comp=Z,4.3nm,0.9s,baz=102,slow=4.4,SNR=7.6
ASAR ScP ScP 19 04 39.6 -1.0
comp=Z,4.9nm,0.8s,baz=110,slow=4.2,SNR=15
ASAR S **S** **19 05 32.2 -3.1**
comp=Z,2.6nm,0.6s,baz=91,slow=16,SNR=11
ASAR ScS ScS 19 08 57.0 -2.6
comp=Z,3.3nm,1.1s,baz=97,slow=6.5,SNR=9.1
ASAR Alice Springs 41.44 259 P **P** **19 00 01.4 +0.5**
ASAR pP 19 01 44.5 +3.2
ASAR S **S** **19 05 32.2 -3.1**
ASAR 19 08 57.1
WB2 Warramunga Arr 41.67 265 *e*P **P** **19 00 02.6 -0.2**
WB2 *e*ScP ScP 19 04 39.7 -1.9
WB2 *e*S **S** **19 05 32.7 -6.0**
WRAB Tennant Creek 41.67 265 *e*P **P** **19 00 02.3 -0.4**
comp=Z,34nm,0.8s,mb4.9
WRAB *e*ScP ScP 19 04 38.2 -3.4
WRAB *e*S **S** **19 05 33.0 -5.8**
WRAB Tennant Creek 41.67 265 *e*P **P** **19 00 02.3 -0.4**
WRAB *e*S **S** **19 05 33.0 -5.8**
WRAB pmax pmax
comp=Z,35nm,0.8s,mb4.9
WRAB Tennant Creek 41.67 265 P **P** **19 00 02.3 -0.4**
comp=Z,48nm,1.1s,mb5.0
WRA Warramunga Arr 41.68 265 P **P** **19 00 02.7 -0.1**
comp=Z,19nm,0.3s,mb5.1,baz=96,slow=8.0,SNR=463
WRA ScP ScP 19 04 40.5 -1.2
comp=Z,7.4nm,0.8s,baz=95,slow=3.9,SNR=21
WRA S **S** **19 05 33.1 -5.8**
comp=Z,3.6nm,0.7s,baz=101,slow=14,SNR=8.8
WRA P3KPbc 19 29 17.7
comp=Z,0.4nm,0.9s,baz=295,slow=2.8,SNR=5.1
WRA Warramunga Arr 41.68 265 P **P** **19 00 02.7 -0.1**
WRA ScP ScP 19 04 40.5 -1.2
WRA S **S** **19 05 33.1 -5.8**
WRA *e* 19 29 17.7
WRA Warramunga Arr 41.68 265 P **P** **19 00 02.7 -0.1**
WRA S **S** **19 05 33.1 -5.8**
KAKA Kakadu 45.38 274 *e*P Px 19 00 22.2
comp=Z,122nm,0.4s
KAKA *e*ScP ScP 19 04 45.4 -12
KAKA *e*S **S** **19 06 17.7 -14**
AAI Ambon 52.72 283 P **P** **19 01 25.5 -0.1**
comp=Z,63nm,0.5s,comp=Z,804nm,mb5.2
BATI Baumata 54.32 274 P **P** **19 01 38.5 +1.5**
baz=167,slow=3.1
BATI Baumata 54.32 274 P **P** **19 01 38.4 +1.5**
comp=Z,26nm,0.6s,mb4.7
LBMI Labuha 54.69 286 P **P** **19 01 40.4 +0.8**
comp=Z,58nm,0.9s,mb4.9
MBWA Marble Bar 54.78 259 *e*P **P** **19 01 38.5 -1.6**
comp=Z,9.3nm,0.7s,mb4.4
SBA Scott Base 55.57 183 *e*P **P** **19 01 46.1 +1.5**
comp=Z,35nm,1.0s,mb4.5
SBA *e*PcP PcP 19 02 34.7 -1.0
SBA Scott Base 55.57 183 *e*P **P** **19 01 46.1 +1.5**
SBA *e* 19 02 34.7
SBA pmax pmax
comp=Z,35nm,1.0s,mb4.5
KAPI Kappang 59.84 278 P **P** **19 02 13.3 -1.3**
comp=Z,3.9nm,0.4s,mb4.0,baz=191,slow=9.1,SNR=4.6
CASY Casey 60.87 206 *e*P **P** **19 02 19.5 -1.0**
comp=Z,20nm,0.9s,mb4.4
PCI Palu 61.44 282 P **P** **19 02 27.2 +2.1**
comp=Z,32nm,1.1s,mb4.5
QSPA South Pole Qui 67.42 180 P **P** **19 03 02.5 +0.8**
comp=Z,42nm,0.6s,mb5.0,baz=20,slow=1.2,SNR=344
QSPA South Pole Qui 67.42 180 *e*P **P** **19 03 02.4 +0.7**
comp=Z,66nm,0.9s,mb5.1
MIR Mirnyy 67.90 206⇑ *i*P **P** **19 03 04.0 -0.8**
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.2
MJAR Matsushiro Arr 70.41 326 P **P** **19 03 19.8 -0.5**
comp=Z,6.0nm,0.8s,mb4.0,baz=160,slow=5.1,SNR=20
MAJO Matsushiro 70.41 326 *e*P **P** **19 03 19.1 -1.2**
comp=Z,10nm,0.8s,mb4.3
MAJO Matsushiro 70.41 326 *e*P **P** **19 03 19.1 -1.2**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.3
MAT Matsushiro 70.41 326 P **P** **19 03 19.6 -0.7**
MAT *e*S S 19 11 34.0 -14
YSS Yuzh-Sakhalins 76.66 335 *e*P **P** **19 03 56.1 +0.6**
comp=Z,14nm,0.5s,mb4.6
YSS Yuzh-Sakhalins 76.66 335⇑ *i*P **P** **19 03 53.4 -2.1**
YSS pmax pmax
comp=Z,33nm,1.3s,mb4.6
KSRS Korea Array 76.77 320 P **P** **19 03 56.6 +0.3**
comp=Z,2.7nm,0.8s,mb3.8,baz=137,slow=5.7,SNR=13
UNV Unalaska Valle 77.19 9 *e*P **P** **19 03 56.8 -1.5**
comp=Z,18nm,0.5s,mb4.8
PEA0B Petropavlovsk- 77.70 347 *e*P **P** **19 04 00.5 -0.5**
PETK Petropavlovsk- 77.70 347 P **P** **19 04 00.8 -0.3**
comp=Z,11nm,0.6s,mb4.4,baz=110,slow=7.8,SNR=38
MAW Mawson 78.62 201 P **P** **19 04 05.7 -0.2**
comp=Z,12nm,0.7s,mb4.3,baz=123,slow=7.9,SNR=23
MAW Mawson 78.62 201 *e*P **P** **19 04 05.5 -0.4**
comp=Z,29nm,1.1s,mb4.5
MAW Mawson 78.62 201 *e*P **P** **19 04 05.5 -0.4**
MAW pmax pmax
comp=Z,29nm,1.1s
PMSA Palmer Station 80.37 157 *e*P **P** **19 04 14.7 -0.5**
MDJ Mudanjiang 80.78 327 P **P** **19 04 16.9 -0.6**
comp=Z,9.8nm,0.9s,mb4.2
HABR Khabarovsk 81.03 332 *e*P **P** **19 04 16.1 -2.5**
HABR *e*S S 19 13 39.6 -1.3
PKD Parkfield 81.55 45⇑P **P** **19 04 22.1 +0.4**
baz=82
U04C Hernandez Rese 81.64 45⇑P **P** **19 04 22.8 +0.7**
baz=82
PACP Pacheco Peak 81.69 44⇓P **P** **19 04 22.9 +0.6**
baz=82
CVS Carmenet Viney 81.75 43⇑P **P** **19 04 23.1 +0.6**
baz=82
O01C Eel River Cons 82.01 41⇑P **P** **19 04 24.7 +0.8**
baz=82
MNRC McLaughlin Nat 82.08 42⇓P **P** **19 04 25.2 +0.9**
baz=82
GASB Alder Springs 82.38 41⇓P **P** **19 04 26.7 +1.0**
baz=83,SNR=7.1
CN2 Changchun 82.40 324 *e*P **P** **19 04 25.8 +0.1**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
VES Vestal, Richgr 82.46 46⇓P **P** **19 04 26.0 -0.2**
baz=83
S05C Merced 82.51 44⇓P **P** **19 04 26.1 -0.3**
baz=83
BFSC Mount Baldy St 82.53 48⇑P **P** **19 04 26.2 -0.4**
baz=83
MONP Monument Peak 82.65 50⇑P **P** **19 04 27.4 +0.1**
baz=83,SNR=9.7
EDW2 Edwards Air Fo 82.65 48⇑P **P** **19 04 26.9 -0.3**
baz=83,SNR=8.6
T06C Milleton Lake 82.71 45⇑P **P** **19 04 27.5 0.0**
baz=83,SNR=11
N02C Big Bar 82.74 40⇑P **P** **19 04 27.5 0.0**
baz=83
DVTC Desert V Tower 82.75 50 P **P** **19 04 28.5 +0.7**
baz=83,SNR=5.5
ISA Isabella 82.77 47 *e*P **P** **19 04 27.9 +0.1**
comp=Z,15nm,0.8s,mb4.6
ISA Isabella 82.77 47 *e*P **P** **19 04 27.9 +0.1**
ISA pmax pmax
comp=Z,15nm,0.8s,mb4.6
ISA Isabella 82.77 47⇓P **P** **19 04 27.9 +0.1**
baz=83,SNR=16
CMB Columbia Colle 82.87 44 *e*P **P** **19 04 28.3 0.0**
comp=Z,14nm,0.9s,mb4.5
CMB Columbia Colle 82.87 44 *e*P **P** **19 04 28.3 0.0**
CMB pmax pmax
comp=Z,14nm,0.9s,mb4.5
CMB Columbia Colle 82.87 44⇑P **P** **19 04 28.5 +0.2**
baz=83,SNR=12
PFO Pinyon Flat Ob 83.02 49⇑P **P** **19 04 28.7 -0.4**
baz=83
WDC Whiskeytown Da 83.05 41⇓P **P** **19 04 29.1 0.0**
baz=83
ORV Oroville 83.07 42⇓P **P** **19 04 29.2 0.0**
baz=83,SNR=6.2
LAVA Lava Cap Winer 83.07 43⇓P **P** **19 04 29.0 -0.2**
baz=83,SNR=5.3
KCC Kaiser Creek 83.15 45⇓P **P** **19 04 29.7 0.0**
baz=84,SNR=15
M02C Callan 83.36 40⇑P **P** **19 04 31.2 +0.6**
baz=84,SNR=6.1
BELC Belle Mtn. 83.55 49⇑P **P** **19 04 32.1 +0.4**
baz=84,SNR=8.8
MPMC Manual Prospec 83.65 47⇓P **P** **19 04 32.1 0.0**
baz=84,SNR=8.5
MTUM Tungsten Hills 83.66 45 *e*P **P** **19 04 32.0 -0.2**
GSC Goldstone 83.70 48⇓P **P** **19 04 32.2 -0.2**
baz=84,SNR=6.5
HEC Hector,Ludlow 83.77 48⇓P **P** **19 04 32.4 -0.3**
baz=84,SNR=11
O04C Chester 83.78 42⇓P **P** **19 04 33.0 +0.2**
baz=84,SNR=5.9
GLA Glamis 83.87 51 *e*P **P** **19 04 34.0 +0.6**
comp=Z,54nm,1.4s,mb4.9
GLA Glamis 83.87 51 *e*P **P** **19 04 34.0 +0.7**
GLA pmax pmax
comp=Z,54nm,1.4s,mb4.9
GLA Glamis 83.87 51⇑P **P** **19 04 33.9 +0.5**
baz=84,SNR=5.9
LBCM Butte Creek Ri 83.93 41 P **P** **19 04 33.9 +0.5**
BEKR Beckwourth 83.96 42⇑P **P** **19 04 33.4 -0.2**
baz=84,SNR=5.2
HUMO Hull Mountain 84.05 39 *e*P **P** **19 04 34.8 +0.8**
comp=Z,16nm,1.1s,mb4.5
HUMO Hull Mountain 84.05 39⇑P **P** **19 04 34.8 +0.8**
baz=84,SNR=6.1
GMRC Granite Mounta 84.20 49⇑P **P** **19 04 35.2 +0.2**
baz=84,SNR=6.1
IRM Iron Mountain 84.23 49 P **P** **19 04 35.5 +0.4**
baz=84,SNR=10
NVAR Mina Array Bea 84.44 44 P **P** **19 04 36.3 +0.3**
comp=Z,4.4nm,0.7s,mb4.1,baz=223,slow=8.0,SNR=34
NVAR pP pP 19 06 47.1 +7.8
comp=Z,0.6nm,0.8s,baz=250,slow=4.7,SNR=2.9
Y12C Blythe 84.45 50⇓P **P** **19 04 36.4 +0.2**
baz=85
O06A Flanigan 84.47 42⇓P **P** **19 04 36.0 -0.1**
baz=85
113A Mohawk Valley, 84.48 51⇑P **P** **19 04 36.1 -0.2**
baz=85
I03A Eugene 84.71 38⇓P **P** **19 04 37.5 +0.4**
baz=85
S09A Goldfield 84.75 46⇑P **P** **19 04 37.3 -0.2**
baz=85
214A Organ Pipe Nat 84.76 52⇓P **P** **19 04 37.6 -0.1**
baz=85,SNR=6.1
N06A Buffalo Meadow 84.81 42⇑P **P** **19 04 37.7 -0.1**
baz=85,SNR=5.2
Q08A Gabbs 84.92 44⇑P **P** **19 04 38.2 -0.1**
baz=85,SNR=5.7
TPH Tonopah 84.95 45 *e*P **P** **19 04 38.5 0.0**
comp=Z,9.9nm,0.8s,mb4.5
TPH Tonopah 84.95 45 *e*P **P** **19 04 38.5 0.0**
TPH pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
TPNV Topopah Spring 84.97 47 *e*P **P** **19 04 38.3 -0.3**
comp=Z,7.5nm,0.8s,mb4.4
TPNV Topopah Spring 84.97 47 *e*P **P** **19 04 38.3 -0.3**
TPNV pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
TPNV Topopah Spring 84.97 47⇑P **P** **19 04 38.4 -0.2**
baz=85,SNR=6.1
Y13A Salome 84.98 50⇑P **P** **19 04 39.2 +0.5**
baz=85,SNR=6.8
PDMCI Parker Dam,Lak 85.01 50⇑P **P** **19 04 39.6 +0.7**
baz=85
O07A Toulon 85.06 43⇑P **P** **19 04 38.6 -0.3**
baz=85,SNR=7.8
R09A Tonopah 85.14 45 P **P** **19 04 39.5 +0.1**
baz=86,SNR=9.4
H03A Soap Creek Ran 85.14 37⇑P **P** **19 04 39.5 +0.3**
baz=86
K05A Summer Lake 85.33 40⇑P **P** **19 04 40.9 +0.6**
baz=86,SNR=5.5
N07B Gerlach 85.36 42⇑P **P** **19 04 40.6 +0.2**
baz=86
X13A Yucca 85.38 50⇑P **P** **19 04 41.0 +0.3**
baz=86,SNR=10
GYA Guiyang 85.40 301 P **P** **19 04 40.8 -0.2**
GYA AP pP 19 06 56.2 +12
GYA XP sP 19 07 58.0 +15
GYA PP PP 19 08 14.9 +4.6
GYA SKS 19 14 05.2
GYA XS sS 19 18 18.5 +13
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
G03A Yamhill 85.54 37⇑P **P** **19 04 41.0 -0.1**
baz=86
115A Sonoran Desert 85.56 52⇓P **P** **19 04 41.5 -0.1**
baz=86
BJI Beijing 85.56 317 P **P** **19 04 41.7 +0.3**
BJI AP pP 19 06 55.1 +10
BJI XP sP 19 07 58.3 +15
BJI S S 19 14 23.0 -2.7
BJI AMB AMB
comp=Z,17nm,0.4s,mb5.0
BJI AMB AMB
comp=Z,193nm,4.8s
O08A Rochester Mine 85.59 43⇑P **P** **19 04 41.4 -0.1**
baz=86
W13A Hualapai Mount 85.61 49⇓P **P** **19 04 41.8 0.0**
baz=86,SNR=6.3
Y14A Wickenburg 85.63 51⇑P **P** **19 04 42.0 +0.1**
baz=86
R10A Warm Springs 85.67 45⇓P **P** **19 04 42.3 +0.3**
baz=86,SNR=5.2
T11A Corn Creek, Al 85.82 47⇓P **P** **19 04 42.8 +0.1**
baz=86,SNR=9.4
L07A Adell 85.85 41⇑P **P** **19 04 43.0 +0.3**
baz=86,SNR=9.3
U12A Valley of Fire 85.86 48⇑P **P** **19 04 43.3 +0.5**
baz=86
Q10A Clear Creek Ra 85.90 45⇓P **P** **19 04 42.9 -0.1**
baz=86,SNR=6.1
V13A Grand Canyon W 85.93 49 P **P** **19 04 43.5 +0.3**
baz=86,SNR=7.6
X14A Yava 85.98 50⇓P **P** **19 04 43.8 +0.3**
baz=86,SNR=7.4
J06A Christmas Vall 86.08 40⇓P **P** **19 04 43.9 +0.1**
baz=86,SNR=10
Y15A Casa Rosa Ranc 86.12 51⇓P **P** **19 04 44.3 +0.1**
baz=86,SNR=6.5
217A Green Valley 86.14 53⇑P **P** **19 04 44.8 +0.4**
baz=86,SNR=7.2
VNA3 Neumayer Olymp 86.16 177 *e*P **P** **19 04 42.0 -1.7**
R11A Troy Canyon, C 86.17 46⇑P **P** **19 04 44.0 -0.3**
baz=86
W14A Seligman 86.23 49⇓P **P** **19 04 45.3 +0.7**
baz=86,SNR=8.2
S12A Delamar Landin 86.27 47⇓P **P** **19 04 44.7 -0.1**
baz=87
K07A Rock Creek Ran 86.29 41⇑P **P** **19 04 45.0 +0.2**
baz=87,SNR=12
Q11A Duckwater 86.40 45⇑P **P** **19 04 45.2 -0.2**
baz=87,SNR=5.2
V14A Boquillas Ranc 86.43 49⇑P **P** **19 04 45.6 0.0**
baz=87,SNR=14
I06A Prineville 86.45 39⇓P **P** **19 04 45.7 +0.2**
baz=87,SNR=15
X15A Humboldt 86.46 50⇓P **P** **19 04 45.9 +0.1**
baz=87,SNR=5.8
WVOR Wild Horse Val 86.51 41 *e*P **P** **19 04 45.6 -0.2**
comp=Z,11nm,1.0s,mb4.5
WVOR Wild Horse Val 86.51 41 *e*P **P** **19 04 45.6 -0.2**
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.5
L08A Fields 86.55 41⇓P **P** **19 04 46.2 +0.2**
baz=87,SNR=17
VIPM Ingram Point 86.55 38 P **P** **19 04 46.4 +0.4**
VNA2 Neumayer--Watz 86.56 178 *e*P **P** **19 04 44.5 -1.2**
117A Oracle 86.59 53⇓P **P** **19 04 46.6 +0.2**
baz=87,SNR=5.7
318A Bisbee 86.59 54⇑P **P** **19 04 47.2 +0.7**
baz=87,SNR=14
J07A Hines 86.65 40⇓P **P** **19 04 46.7 +0.2**
baz=87,SNR=9.8
M09A Marrel Ranch, 86.67 42⇓P **P** **19 04 46.8 +0.2**
baz=87,SNR=5.3
Y16A Circle Bar Ran 86.70 51⇓P **P** **19 04 47.0 +0.1**
baz=87,SNR=8.8
K08A Mann Creek Ran 86.77 41⇓P **P** **19 04 47.1 +0.1**
baz=87,SNR=18
U14A Mt Trumbull 86.78 48⇑P **P** **19 04 47.8 +0.5**
baz=87,SNR=10.0
218A Dragoon 86.81 54⇓P **P** **19 04 48.2 +0.7**
baz=87,SNR=9.5
R12A Pony Springs, 86.81 46⇑P **P** **19 04 47.5 +0.1**
baz=87,SNR=5.2
H06A Lindquist Farm 86.85 38⇓P **P** **19 04 47.5 +0.2**
baz=87,SNR=15
S13A Holt Ranch, En 86.92 47⇓P **P** **19 04 47.7 -0.1**
baz=87
I07A Izee 86.95 39⇑P **P** **19 04 48.4 +0.6**
baz=87,SNR=13
G06A Carlson Farm, 86.98 38⇓P **P** **19 04 47.8 -0.2**
baz=87,SNR=7.2
Y17A Roosevelt 87.06 52⇑P **P** **19 04 49.4 +0.7**
baz=87
319A Douglas 87.09 54⇓P **P** **19 04 49.7 +0.8**
baz=87,SNR=8.3
O11A Cowboy Ranch, 87.09 44⇓P **P** **19 04 49.1 +0.4**
baz=87,SNR=9.4
B04A Port Angeles 87.14 34⇓P **P** **19 04 48.8 +0.2**
baz=88
E05A Randle 87.15 36⇑P **P** **19 04 48.7 0.0**
baz=88,SNR=9.9
R13A O'Grain Ranch, 87.16 47⇑P **P** **19 04 49.3 +0.3**
baz=88
V15A Kaibab Nationa 87.18 49⇑P **P** **19 04 49.7 +0.5**
baz=88,SNR=5.0
T14A Hurricane 87.18 48⇓P **P** **19 04 49.3 +0.2**
baz=88
118A Homack Ranch, 87.19 53⇑P **P** **19 04 49.9 +0.7**
baz=88,SNR=9.6
C04A Brinnon 87.20 35⇓P **P** **19 04 49.5 +0.5**
baz=88
F06A Goldendale 87.21 37⇑P **P** **19 04 49.2 +0.2**
baz=88,SNR=6.5
H07A Lands Inn, Kim 87.21 39 P **P** **19 04 49.5 +0.5**
baz=88,SNR=9.5
K09A Rome 87.22 41⇑P **P** **19 04 49.6 +0.4**
baz=88,SNR=26
M10A I.L. Ranch, Tu 87.29 43⇓P **P** **19 04 50.1 +0.6**
baz=88,SNR=13
WPW White Pass 87.35 36 P **P** **19 04 50.1 +0.5**
I08A Drewsey 87.40 40⇑P **P** **19 04 49.7 -0.2**
baz=88,SNR=9.7
U15A North Rim 87.40 49⇓P **P** **19 04 50.7 +0.6**
baz=88,SNR=18
219A White Tail Can 87.41 54⇓P **P** **19 04 51.0 +0.7**
baz=88,SNR=6.8
D05A Enumclaw 87.41 36⇑P **P** **19 04 50.4 +0.5**
baz=88,SNR=5.0
S14A Cedar City 87.48 47⇓P **P** **19 04 50.9 +0.4**
baz=88
G07A Ruggs Ranch, H 87.55 38⇑P **P** **19 04 50.7 +0.1**
baz=88,SNR=6.3
J09A Fry Pan Ranch, 87.56 41⇓P **P** **19 04 51.0 +0.3**
baz=88,SNR=16
E06A Yakima 87.57 37⇓P **P** **19 04 50.5 -0.2**
baz=88,SNR=8.7
T15A Red Dirt Ranch 87.64 48⇓P **P** **19 04 51.7 +0.4**
baz=88,SNR=6.2
L10A Juniper Basin 87.64 42⇑P **P** **19 04 51.5 +0.3**
baz=88,SNR=22
H08A Prairie City 87.69 39⇓P **P** **19 04 50.9 -0.4**
baz=88
Y18A Canyon Day Jun 87.69 52⇑P **P** **19 04 52.2 +0.7**
baz=88,SNR=13
119A Ashpeak Ranch, 87.74 53⇓P **P** **19 04 51.9 +0.1**
baz=88
PMR Palmer 87.75 15 P **P** **19 04 55.6 +4.5**
O12A Currie 87.75 44⇑P **P** **19 04 51.6 -0.1**
baz=88,SNR=5.5
K10A MacKenzie Ranc 87.78 41⇑P **P** **19 04 52.0 +0.2**
baz=88,SNR=5.1
P13A Bates Ranch, G 87.80 45⇑P **P** **19 04 52.0 0.0**
baz=88,SNR=12
C05A Tolt Reservoir 87.88 36⇑P **P** **19 04 52.0 -0.1**
baz=88,SNR=6.7
N12A Clover Valley, 87.88 44⇓P **P** **19 04 52.3 0.0**
baz=88,SNR=13
I09A Lost Marbles R 87.93 40⇑P **P** **19 04 52.0 -0.5**
baz=88,SNR=6.5
KMI Kunming 87.95 298 P **P** **19 04 53.6 +0.6**
KMI AMB AMB
comp=Z,4.0nm,2.0s,mb3.8
G08A Pilot Rock 87.97 39⇑P **P** **19 04 52.8 +0.2**
baz=88,SNR=14
S15A Panguitch 87.99 48⇓P **P** **19 04 52.4 -0.5**
baz=88
D06A Cle Elum 88.03 36⇑P **P** **19 04 52.7 -0.1**
baz=88
Q14A Sevier Lake (B 88.05 46⇓P **P** **19 04 53.2 +0.1**
baz=88,SNR=12
U16A Tuba City 88.07 49⇑P **P** **19 04 52.6 -0.6**
baz=88,SNR=7.3
X18A Snowflake 88.12 51⇓P **P** **19 04 53.4 -0.2**
baz=88
L11A Cat Creek Ranc 88.14 42⇑P **P** **19 04 53.8 +0.4**
baz=88,SNR=12
TBM Table Mountain 88.15 36 P **P** **19 04 53.9 +0.6**
J10A Berg Farm, Mel 88.21 41⇓P **P** **19 04 53.7 -0.1**
baz=88
RSW Rattlesnake Hi 88.25 37 *e*P **P** **19 04 53.8 0.0**
M12A Wells 88.26 43⇓P **P** **19 04 53.7 -0.4**
baz=89,SNR=12
HAWA Hanford 88.28 37 *e*P **P** **19 04 54.1 +0.1**
comp=Z,17nm,1.0s,mb4.7
K11A Parker Ranch, 88.29 42⇓P **P** **19 04 53.6 -0.6**
baz=89,SNR=9.2
CMAR Chiang Mai Arr 88.32 291 P **P** **19 04 55.7 +0.9**
comp=Z,0.7nm,0.8s,mb3.5,baz=136,slow=3.7,SNR=6.0
CMAR pP pP 19 07 05.0 +5.4
comp=Z,0.5nm,0.7s,baz=119,slow=1.9,SNR=4.0
CMAR PKKPbc PKKPbc 19 22 33.5 -0.6
comp=Z,1.0nm,0.8s,baz=281,slow=4.5,SNR=7.3
CMAR Chiang Mai Arr 88.32 291 P **P** **19 04 55.7 +0.9**
CMAR *PP pP 19 07 05.1 +5.5
Y19A Nutrioso 88.35 52⇑P **P** **19 04 54.3 -0.4**
baz=89
F08A Pendleton 88.36 38⇓P **P** **19 04 54.1 -0.3**
baz=89
H09A Durkee 88.36 40⇓P **P** **19 04 54.4 -0.1**
baz=89
N13A Wendover, West 88.42 44⇓P **P** **19 04 54.1 -0.6**
baz=89
RPW Rockport 88.43 35 *e*P **P** **19 04 54.0 -0.6**
A05A Maple Falls 88.46 34⇑P **P** **19 04 54.4 -0.3**
baz=89
P14A Drum Mountains 88.50 46⇑P **P** **19 04 55.0 -0.2**
baz=89
D07A Quincy 88.51 37⇑P **P** **19 04 54.7 -0.3**
baz=89
S16A Weppner Ranch, 88.53 48⇑P **P** **19 04 55.2 -0.2**
baz=89
X19A St. Johns 88.55 52⇑P **P** **19 04 55.4 -0.2**
baz=89

ETW	Entiat	88.56	36	*e*P		P		19 04 55.2	0.0	
W18A	Petrified Fore	88.56	51	⇓P		P		19 04 55.6	+0.1	
	baz=89									
L12A	House Creek Ra	88.59	43	⇑P		P		19 04 55.8	+0.2	
	baz=89,SNR=9.6									
E08A	Dider Farm, El	88.61	38	⇓P		P		19 04 55.1	-0.4	
	baz=89									
U17A	Shonto	88.62	49	⇑P		P		19 04 56.1	+0.2	
	baz=89									
G09A	Cove	88.64	39	⇓P		P		19 04 55.8	+0.1	
	baz=89,SNR=5.9									
Q15A	Fillmore	88.65	46	⇓P		P		19 04 56.8	+0.9	
	baz=89									
BMO	Blue Mountains	88.68	40	*e*P		P		19 04 55.4	-0.5	
	comp=Z,1.3nm,0.8s,mb3.8									
BMO	Blue Mountains	88.68	40	*e*P		P		19 04 55.4	-0.5	
BMO					pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.7									
V18A	Ganado	88.70	50	⇓P		P		19 04 56.4	+0.2	
	baz=89									
T17A	Navajo Res., N	88.72	49	⇑P		P		19 04 57.1	+0.8	
	baz=89,SNR=5.3									
C07A	Waterville	88.75	36	⇑P		P		19 04 55.5	-0.7	
	baz=89,SNR=5.6									
MFID	Camas Ranch	88.77	41	⇑P		P		19 04 56.7	+0.4	
	baz=89,SNR=6.8									
EPH	Ephrata	88.81	37	P		P		19 04 56.4	0.0	
WTV	Waterville	88.82	36	P		P		19 04 56.4	-0.1	
H10A	Noah's Angus R	88.86	40	⇓P		P		19 04 56.0	-0.7	
	baz=89,SNR=5.7									
HHC	Hu-ho-hao-te	88.96	315	*e*P		P		19 04 59.2	+1.9	
HHC					AP	pP		19 07 13.8	+12	
HHC					PP	PP		19 08 43.0	+4.9	
HHC					SKS			19 14 31.2		
HHC					S	S		19 14 55.3	-2.0	
HHC					XS	sS		19 18 54.0	+14	
HHC					AMB	AMB				
	comp=Z,15nm,0.7s,mb4.9									
HHC					AMB	AMB				
	comp=Z,129nm,6.0s									
D08A	Wollman Farm,	89.01	37	⇓P		P		19 04 57.2	-0.2	
	baz=89,SNR=6.1									
G10A	Bishop Farm, J	89.03	39	⇓P		P		19 04 57.1	-0.4	
	baz=89									
S17A	Black Ridge (B	89.04	48	⇓P		P		19 04 57.3	-0.5	
	baz=89									
N14A	Grayback Hills	89.07	45	⇑P		P		19 04 57.5	-0.3	
	baz=89									
U18A	Rough Rock, Ch	89.09	50	⇓P		P		19 04 58.3	+0.3	
	baz=89									
J12A	Stokes Ranch,	89.13	42	⇑P		P		19 04 58.0	-0.1	
	baz=90,SNR=9.3									
E09A	Wood Farm, Sta	89.14	38	⇓P		P		19 04 57.9	-0.1	
	baz=90									
B07A	Winthrop	89.18	36	⇓P		P		19 04 58.1	0.0	
	baz=90,SNR=7.9									
L13A	Double Diamond	89.23	43	⇑P		P		19 04 59.2	+0.7	
	baz=90									
M14A	Sheep Mountain	89.31	44	⇑P		P		19 04 59.0	+0.1	
	baz=90,SNR=11									
OD2	Odessa Site #2	89.32	37	*e*P		P		19 04 58.3	-0.5	
F10A	Beach Ranch, E	89.36	39	⇑P		P		19 04 58.5	-0.5	
	baz=90,SNR=7.4									
H11A	Donnelly	89.36	40	⇓P		P		19 04 59.0	-0.1	
	baz=90,SNR=7.7									
I12A	Atlanta	89.40	41	⇓P		P		19 04 59.4	+0.1	
	baz=90									
T18A	Mexican Hat	89.44	49	⇓P		P		19 04 59.9	+0.2	
	baz=90,SNR=8.1									
B08A	Colville Reser	89.54	36	⇓P		P		19 04 59.3	-0.5	
	baz=90,SNR=6.1									
G11A	Walters Elk Ra	89.59	40	⇓P		P		19 04 59.6	-0.5	
	baz=90,SNR=9.8									
MCK	McKinley	89.67	14	*e*P		P		19 05 00.3	+0.3	
	comp=Z,4.8nm,0.7s,mb4.4									
MCK	McKinley	89.67	14	*e*P		P		19 05 00.4	+0.4	
MCK					pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.5									
CD2	Chengdu	89.70	304	*e*P		P		19 05 01.5	+0.5	
CD2					AP	pP		19 07 17.0	+11	
CD2					XP	sP		19 08 17.4	+14	
CD2					PP	PP		19 08 47.5	+3.4	
CD2					SKS			19 14 31.5		
CD2					S	S		19 15 02.0	-2.5	
CD2					XS	sS		19 18 58.5	+11	
CD2					SS	SS		19 21 21.5	+1.8	
CD2					AMB	AMB				
	comp=Z,10.0nm,0.8s,mb4.7									
CD2					AMB	AMB				
	comp=Z,40nm,5.8s									
HLID	Hailey	89.72	42	⇑P		P		19 05 00.8	+0.1	
	baz=90									
PLCA	Paso Flores	89.72	135	P		P		19 05 01.2	+0.2	
	comp=Z,7.6nm,0.8s,mb4.6,baz=195,slow=5.0,SNR=12									
PLCA	Paso Flores	89.72	135	*e*P		P		19 05 00.8	-0.2	
	comp=Z,9.0nm,0.8s,mb4.7									
PLCA	Paso Flores	89.72	135	*e*P		P		19 05 00.8	-0.2	
PLCA					pmax	pmax				
	comp=Z,9.0nm,0.8s									
J13A	Cove Ranch, Pi	89.78	42	⇓P		P		19 05 01.0	0.0	
	baz=90,SNR=5.2									
C09A	Chrisman Ranch	89.80	37	⇑P		P		19 05 01.0	0.0	
	baz=90									
O16A	Springville	89.84	46	⇓P		P		19 05 01.5	+0.1	
	baz=90,SNR=7.1									
M15A	Larsen Ranch,	89.86	44	⇑P		P		19 05 01.4	0.0	
	baz=90,SNR=5.8									
A08A	Turner Farm, O	89.92	35	⇓P		P		19 05 01.4	-0.2	
	baz=90									
D10A	Wagner Farm, O	89.93	38	⇓P		P		19 05 01.0	-0.7	
	baz=90									
SRU	San Rafael	89.96	47	⇓P		P		19 05 01.9	-0.1	
	baz=90									
H12A	Diamond D Ranc	89.97	41	⇓P		P		19 05 01.4	-0.5	
	baz=90,SNR=6.9									
LAZ	Ladron	90.10	53	*e*P		P		19 05 02.9	+0.1	
J14A	Carey	90.15	42	⇓P		P		19 05 03.3	+0.5	
	baz=90,SNR=5.4									
L15A	Malad City	90.18	44	⇓P		P		19 05 02.9	-0.1	
	baz=90									
Q18A	Rafter H Ranch	90.22	47	⇓P		P		19 05 03.0	-0.1	
	baz=90									
A09A	Danville	90.30	36	⇑P		P		19 05 03.1	-0.3	
	baz=91									
O17A	Robinson Place	90.35	46	⇑P		P		19 05 03.7	-0.1	
	baz=91,SNR=20									
F12A	Elk City	90.39	40	⇓P		P		19 05 03.8	0.0	
	baz=91									
LPM	Los Pinos Moun	90.43	53	*e*P		P		19 05 04.0	-0.2	
K15A	Arbon	90.44	43	⇑P		P		19 05 03.8	-0.3	
	baz=91									
TXAR	Lajitas Array	90.48	58	P		P		19 05 05.0	+0.4	
	comp=Z,5.6nm,0.8s,mb4.4,baz=212,slow=6.5,SNR=39									
TXAR					PKKPbc	PKKPbc		19 22 28.8	-0.4	
	comp=Z,0.3nm,0.6s,baz=61,slow=4.2,SNR=3.8									
TXAR	Lajitas Array	90.48	58	P		P		19 05 05.0	+0.4	
TXAR					PKKPbc	PKKPbc		19 22 28.8	-0.4	
I14A	Mackay	90.50	42	⇓P		P		19 05 04.0	-0.4	
	baz=91									
G13A	Cobalt	90.64	41	⇓P		P		19 05 05.0	0.0	
	baz=91									
N17A	Moffit Pass	90.65	45	⇑P		P		19 05 05.0	-0.2	
	baz=91									
NEW	Newport	90.70	37	P		P		19 05 03.9	-1.2	
	comp=Z,1.9nm,0.6s,mb4.2									
NEW	Newport	90.70	37	P		P		19 05 03.9	-1.3	
NEW					pmax	pmax				
	comp=Z,2.0nm,0.6s									
Q19A	Hogan Spring (	90.74	48	⇑P		P		19 05 05.5	-0.1	
	baz=91									
L16A	Fish Haven	90.80	44	⇑P		P		19 05 05.4	-0.4	
	baz=91,SNR=5.2									
PV01	Paradox Valley	90.82	49	P		P		19 05 05.7	-0.3	
ANMO	Albuquerque	90.85	52	*e*P		P		19 05 05.5	-0.7	
	comp=Z,4.9nm,0.9s,mb4.4									
ANMO	Albuquerque	90.85	52	⇑*i*P		P		19 05 06.1	-0.1	
O18A	Roosevelt	90.87	46	⇑P		P		19 05 05.9	-0.2	
	baz=91									
COLA	College	90.90	13	P		P		19 05 04.0	-1.7	
H14A	Leadore	90.91	41	⇑P		P		19 05 05.5	-0.7	
	baz=91									
BILL	Bilibino	90.92	355	P		P		19 05 05.2	-0.5	
BILL	Bilibino	90.92	355	*e*P		P		19 05 04.4	-1.3	
BILL					pmax	pmax				
	comp=Z,19nm,2.5s,mb4.6									
C11A	Tepee Creek (N	90.95	38	⇓P		P		19 05 05.9	-0.5	
	baz=91,SNR=6.5									
F13A	Darby	90.95	40	⇑P		P		19 05 05.8	-0.6	
	baz=91									
M17A	Scullys Gap (B	91.03	45	⇓P		P		19 05 06.5	-0.4	
	baz=91									
D12A	Red Ives Fores	91.03	39	⇑P		P		19 05 06.4	-0.3	
	baz=91									
P19A	Cripple Cowboy	91.25	47	⇑P		P		19 05 08.2	+0.2	
	baz=92									
C12B	Naegeli Ranch,	91.32	38	⇑P		P		19 05 07.4	-0.6	
	baz=92									
LZH	Lanzhou	91.96	308	*e*P		P		19 05 10.1	-1.2	
LZH					AP	pP		19 07 25.8	+9.1	
LZH					XP	sP		19 08 25.2	+11	
LZH					AMB	AMB				
	comp=Z,13nm,1.0s,mb4.9									
H16A	Russell Place,	92.26	42	⇑P		P		19 05 12.7	+0.3	
	baz=93									
PDAR	Pinedale Array	92.38	44	P		P		19 05 12.8	-0.2	
	comp=Z,2.5nm,0.7s,mb4.4,baz=192,slow=3.6,SNR=5.0									
SDCO	Great Sand Dun	92.80	50	*e*P		P		19 05 14.8	-0.3	
	comp=Z,3.0nm,0.8s,mb4.4									
RWWY	Rawlins	93.41	46	P		P		19 05 15.9	-1.9	
	comp=Z,32nm,0.8s,mb5.4									
SONM	Songino Array	95.62	320	P		P		19 05 27.1	-0.6	
	comp=Z,0.1nm,0.5s,baz=3.6,slow=27,SNR=3.3									
SONM					PP	PP		19 09 25.5	-3.8	
	comp=Z,0.8nm,1.0s,baz=124,slow=6.5,SNR=5.4									
SONM					PKKPbc	PKKPbc		19 22 14.2	-2.4	
	comp=Z,1.1nm,0.8s,baz=277,slow=2.0,SNR=7.1									
SONM	Songino Array	95.62	320	P		P		19 05 27.1	-0.6	
SONM								19 09 25.5		
INK	Inuvik	97.06	16	*e*P		P		19 05 31.9	-1.8	
	comp=Z,47nm,0.8s									
INK	Inuvik	97.06	16	*e*P		P		19 05 31.9	-1.7	
INK					pmax	pmax				
	comp=Z,47nm,0.8s									
TIXI	Tiksi	100.14	346	⇑*i*P		Pdif		19 05 46.3	-1.7	
ZALV	Zalesovo Beam	110.47	321	PKiKP		PKiKP		19 10 28.2	-2.3	
	comp=Z,1.0nm,0.6s,baz=111,slow=3.3,SNR=4.9									
MKAR	Makanchi Array	110.70	313	Pdiff		Pdif		19 06 36.5	+1.6	
	comp=Z,0.2nm,0.5s,baz=74,slow=6.5,SNR=5.2									
MKAR					PKiKP	PKiKP		19 10 29.2	-2.0	
	comp=Z,0.8nm,0.6s,baz=278,slow=0.9,SNR=7.2									
MKAR					PKKPbc	PKKPbc		19 21 30.3	-2.0	
	comp=Z,1.3nm,0.8s,baz=271,slow=3.3,SNR=8.8									
MKAR					PKKPab	PKKPab		19 21 42.5	-0.4	
	comp=Z,1.0nm,0.6s,baz=264,slow=3.6,SNR=7.4									
MKAR	Makanchi Array	110.70	313	P		Pdif		19 06 36.6	+1.7	
MKAR								19 10 29.2		
KURK	Kurchatov	113.73	317	PKiKP		PKiKP		19 10 34.8	-2.1	
BVAR	Borovoye Array	118.96	319	PKP		PKPdf		19 10 45.1	-1.7	
	comp=Z,3.0nm,0.5s,baz=154,slow=2.3,SNR=10									
BDFB	Brasilia	120.20	125	PKP		PKPdf		19 10 48.4	-2.0	
	comp=Z,2.2nm,0.7s,baz=110,slow=18,SNR=6.7									
BOSA	Boshof	123.13	208	PKP		PKPdf		19 10 54.5	-1.3	
	comp=Z,1.5nm,0.5s,baz=61,slow=5.0,SNR=4.2									
ARU	Arti	125.39	324	*i* PKiKP		PKPdf		19 10 57.5	-1.6	
AKTK	Aktyubinsk	126.83	317	PKP		PKPdf		19 11 01.0	-1.0	
AKTK					PKKPbc			19 20 32.1		
AKTO	Aktyubinsk	126.83	317	PKP		PKPdf		19 11 01.0	-1.0	
	comp=Z,2.8nm,0.6s,baz=106,slow=3.1,SNR=10									
AKTO					PKKPbc			19 20 32.1		
	comp=Z,1.1nm,0.6s,baz=244,slow=2.7,SNR=4.3									
KEV	Kevo	130.03	348	*ep*		PKPdf		19 11 05.9	-1.6	
ARCES	ARCESS Array B	130.50	348	PKP		PKPdf		19 11 06.7	-1.7	
	comp=Z,6.4nm,0.6s,baz=334,slow=1.2,SNR=23									
ARCES					SKPbc	SKPbc		19 13 35.7	-3.2	
	comp=Z,15nm,1.0s,baz=62,slow=4.2,SNR=8.9									
JOF	Joensuu	134.29	340	*ep*		PKPdf		19 11 13.2	-2.5	
	comp=Z,7.8nm,0.6s									
KMBO	Kilima Mbogo	135.96	243	PKP		PKPdf		19 11 20.3	-0.1	
	comp=Z,2.5nm,0.8s,baz=51,slow=4.4,SNR=4.8									
KMBO					SKPbc	SKPbc		19 13 56.6	-2.2	
	comp=Z,2.5nm,0.7s,baz=36,slow=3.1,SNR=4.8									
KMBO	Kilima Mbogo	135.96	243	PKP		PKPdf		19 11 20.3	-0.1	
KMBO					SKPbc	SKPbc		19 13 56.6	-2.2	
KAF	Kangasniemi	136.41	342	*ep*		PKPdf		19 11 16.9	-2.8	
VSR	Storozhevoye	137.94	323	*e*PKiKP		PKPdf		19 11 23.0	+0.2	
VSR					pmax	pmax				
	comp=Z,5.0nm,1.3s									
VSR					pmax	pmax				
	comp=N,4.0nm,1.2s									
VSR					pmax	pmax				
	comp=E,4.0nm,1.2s									
NB2	NORSAR Subarra	140.73	351	PKP		PKPdf		19 11 20.2	-7.4	
	comp=Z,1.5nm,0.6s,baz=16,slow=3.2									
NOA	NORSAR Array B	140.73	351	PKhKP				19 11 20.5		
	comp=Z,1.8nm,0.5s,baz=16,slow=4.7,SNR=18									
NOA					PKP	PKPdf		19 11 28.5	+0.9	
	comp=Z,2.7nm,0.7s,baz=13,slow=4.0,SNR=5.7									
NOA					SKPbc	SKPbc		19 14 06.1	-4.3	
	comp=Z,2.6nm,0.9s,baz=14,slow=4.3,SNR=4.1									
NOA	NORSAR Array B	140.73	351	PKP				19 11 20.5		
NOA					PKP	PKPdf		19 11 28.5	+0.9	
NOA					SKPbc	SKPbc		19 14 06.2	-4.3	
NOA	NORSAR Array B	140.73	351	PKHKP				19 11 20.5		
NOA								19 11 28.5		
AKASG	Malin Array Be	143.48	328	PKP		PKPdf		19 11 29.9	-2.9	
	comp=Z,8.8nm,0.4s,baz=44,slow=3.9,SNR=60									
AKASG					SKPbc	SKPbc		19 14 13.2	-4.3	
	comp=Z,4.5nm,0.9s,baz=49,slow=2.2,SNR=13									
AKBB	Malin Array Si	143.48	328	*e*PKPdf		PKPdf		19 11 29.8	-3.0	
KIEV	Kiev	143.49	328	*e*PKPdf		PKPdf		19 11 29.2	-3.6	
SUW	Suwalki	143.80	336	*e*PKP		PKPdf		19 11 31.8	-1.4	
BR131	Keskin Array S	146.17	308	*e*PKPdf		PKPdf		19 11 38.3	+0.5	
BRTR	Keskin Array B	146.17	308	PKP		PKPdf		19 11 36.0	-1.8	
	comp=Z,2.8nm,0.8s,baz=217,slow=0.6,SNR=12									
BRTR					PKPbc	PKPbc		19 11 38.7	-1.3	
	comp=Z,2.9nm,0.5s,baz=113,slow=4.1,SNR=13									
TLCR		146.94	320	⇑P		PKPbc		19 11 41.0	-0.9	
TLCR		146.94	320	⇑*i*P		PKPbc		19 11 41.0	-0.9	
KWP	Kalwaria	147.28	331	*e*PKP		PKPbc		19 11 42.0	-0.6	
KWP	Kalwaria	147.28	331	*e*PKP		PKPbc		19 11 42.0	-0.6	
KWP	Kalwaria	147.28	331	⇓*i*P		PKPbc		19 11 42.2	-0.4	
BURB	Bucovina Ar. S	147.47	326	*e*PKPdf		PKPbc		19 11 42.6	-0.5	
BURAR	Bucovina Array	147.48	326	⇓*i*P		PKPbc		19 11 43.1	-0.1	
BSEG	Bad Segeberg	147.63	348	*e*PKPbc		PKPbc		19 11 42.4	-1.0	
VRI	Vrincioaia	147.76	323	⇑P		PKPbc		19 11 43.5	-0.5	
VRI	Vrincioaia	147.76	323	⇑*i*P		PKPbc		19 11 43.5	-0.5	
KOLS	Kolonicke sedl	147.99	331	*e*PKP		PKPbc		19 11 43.9	-0.5	
OJC	Ojcow	148.06	335	*e*PKP		PKPbc		19 11 43.8	-0.8	
STHS	Stebnicka Huta	148.08	332	*e*PKP		PKPbc		19 11 44.2	-0.4	
MLR	Muntele Rosu	148.43	323	⇑*i*P		PKPbc		19 11 45.2	-0.4	
DMUB	Kingscourt	148.47	7	⇑*i*P		PKPbc		19 11 44.2	-1.3	
NIE	Niedzica	148.48	333	*e*PKP		PKPbc		19 11 45.5	-0.1	
KSP	Ksiaz	148.83	339	*e*PKP		PKPbc		19 11 45.9	-0.5	
KSP	Ksiaz	148.83	339	⇑*i*PKHKP		PKPbc		19 11 46.0	-0.4	
VOIR		148.96	323	⇑P		PKPbc		19 11 45.1	-1.8	
VOIR		148.96	323	⇑*i*P		PKPbc		19 11 45.1	-1.8	
OKC	Ostrava-Krasne	149.01	336	*e*PKPbc		PKPbc		19 11 46.0	-0.9	
DLF	Lyons Farm	149.11	7	⇑*i*P		PKPbc		19 11 45.5	-1.5	
UPC	Upice	149.21	339	*e*PKPbc		PKPbc		19 11 46.8	-0.6	
DPC	Dobruska-Polom	149.24	338	*e*PKPbc		PKPbc		19 11 47.1	-0.3	
DPC					*e*PKPab	PKPab		19 11 54.6	+0.2	
MORC	Moravsky Berou	149.28	336	*e*PKPdf		PKPbc		19 11 46.2	-1.3	
MORC	Moravsky Berou	149.28	336	⇑PKHKP		PKPbc		19 11 47.3	-0.3	
MORC	Moravsky Berou	149.28	336	⇑*i*P		PKPbc		19 11 47.3	-0.3	
DRGR		149.30	327	⇑P		PKPbc		19 11 47.0	-0.7	
DRGR		149.30	327	⇑*i*P		PKPbc		19 11 47.0	-0.7	
CLL	Collm	149.43	343	⇑*i*PKHKP		PKPbc		19 11 47.0	-0.9	
CLL				*e*				19 11 54.0		
CLL	Collm	149.43	343	*e*PKPbc		PKPbc		19 11 47.0	-0.9	
CLL	Collm	149.43	343	⇑*i*PKPbc		PKPbc		19 11 47.0	-0.9	
	comp=Z,37nm,0.8s									
CLL				*e*PKPab		PKPab		19 11 54.0	-1.1	
CLL				*i* pPKPbc		pPKPbc		19 14 10.5	+10	
BRG	Berggiesshubel	149.55	341	*i* PKP		PKPbc		19 11 47.5	-0.7	
BRG				*e*PKP		pPKPbc		19 14 13.8	+13	
BRG	Berggiesshubel	149.55	341	*e*PKPbc		PKPbc		19 11 47.3	-0.9	
CLZ	Clausthal	149.59	346	*e*PKPbc		PKPbc		19 11 47.7	-0.5	
IBBN	Ibbenburen	149.66	349	*e*PKPbc		PKPbc		19 11 47.5	-0.9	
PVCC	Panska Ves	149.66	340	*e*PKPbc		PKPbc		19 11 48.1	-0.3	
VYHS	Vyhne	149.81	333	*e*PKP		PKPbc		19 11 47.8	-1.1	
ZIMR		149.85	320	⇑*i*P		PKPbc		19 11 48.2	-0.9	
KOLL	Kolacno	149.92	334	*e*PKP		PKPbc		19 11 47.8	-1.3	
VRAC	Vranov	150.02	337	⇓P		PKPbc		19 11 48.7	-0.6	
VRAC	Vranov	150.02	337	⇓*i*P		PKPbc		19 11 48.7	-0.6	
PRU	Pruhonice	150.14	340	*e*PKPbc		PKPbc		19 11 48.6	-1.0	
PRU				*e*PKPab		PKPab		19 11 54.0	-4.2	
GZR	Gura Zlata	150.21	325	⇓P		PKPbc		19 11 48.9	-1.0	
GZR	Gura Zlata	150.21	325	⇓*i*P		PKPbc		19 11 48.9	-1.0	
TANN	Tannenbergstha	150.38	343	*e*PKPbc		PKPbc		19 11 49.4	-0.7	
MOX	Moxa	150.40	344	*e*PKP		PKPbc		19 11 49.2	-1.0	
	comp=Z,20nm,1.1s									
MOX	Moxa	150.40	344	*e*PKPbc		PKPbc		19 11 49.0	-1.2	
TREC	Trest	150.42	338	*e*PKPbc		PKPbc		19 11 49.3	-1.0	
MODS	Modra-Piesok	150.53	335	*e*PKP		PKPbc		19 11 49.9	-0.6	
NKC	Novy Kostel	150.55	342	*e*PKPbc		PKPbc		19 11 49.7	-0.8	
NKC				*e*PKPab		PKPab		19 11 58.9	-1.0	
BUG	Bochum--Univer	150.57	350	*e*PKPbc		PKPbc		19 11 49.4	-1.1	
UBBA	Unterbreizbach	150.63	346	*e*PKPbc		PKPbc		19 11 49.3	-1.4	
BZS	Buzias	150.66	327	⇓P		PKPbc		19 11 50.0	-0.9	
BZS	Buzias	150.66	327	⇓*i*P		PKPbc		19 11 50.0	-0.9	
ROTZ	Rotzenmuhle	151.04	342	*e*PKPbc		PKPbc		19 11 50.8	-0.8	
KHC	Kasperske Hory	151.20	340	*e*PKPbc		PKPbc		19 11 51.1	-0.9	
GRF	Grafenberg Arr	151.37	343	*e*PKPbc		PKPbc		19 11 51.2	-1.2	
GEC2	GERESS Array S	151.41	340	*e*PKPbc		PKPbc		19 11 51.3	-1.2	
GEC2				*e*SKP				19 14 11.2		
GEC2	GERESS Array S	151.41	340	*e*PKPbc		PKPbc		19 11 51.2	-1.3	
GERES	GERESS Array B	151.41	340	PKP		PKPdf		19 11 44.2	-1.6	
	comp=Z,0.2nm,0.5s,baz=31,slow=3.1,SNR=3.5									
GERES					PKPbc	PKPbc		19 11 51.5	-1.0	
	comp=Z,5.2nm,0.7s,baz=39,slow=1.9,SNR=35									
GERES					PKPab	PKPab		19 12 03.4	-0.2	
	comp=Z,0.9nm,0.5s,baz=37,slow=4.2,SNR=4.6									
GERES					pPKPbc	pPKPab		19 14 10.0	-0.9	
	comp=Z,0.3nm,0.6s,baz=40,slow=9.3,SNR=2.5									
GERES	GERESS Array B	151.41	340	PKIKP		PKPdf		19 11 44.2	-1.6	
GERES								19 11 51.6		
GERES								19 12 03.4		
CONA	Conrad Observa	151.44	336	⇑*i*PKiKP		PKiKP		19 11 51.9	-1.0	
	comp=Z,8.1nm,0.6s									
CSNA	Conrad Observa	151.44	336	⇑*i*PKiKP		PKiKP		19 11 51.8	-1.0	
	comp=Z,7.9nm,0.6s									
TNS	Taunus Mts	151.52	347	*e*PKPbc		PKPbc		19 11 51.6	-1.1	
MEM	Membach	151.58	351	PKPbc		PKPbc		19 11 51.9	-0.9	
PKSM	Moragy	151.66	331	⇓P		PKPbc		19 11 52.2	-1.0	
PKSM	Moragy	151.66	331	⇓*i*P		PKPbc		19 11 52.2	-1.0	
VTS	Vitosha	151.75	320	⇑P		PKPbc		19 11 53.0	-0.5	
VTS	Vitosha	151.75	320	⇑*i*P		PKPbc		19 11 53.0	-0.5	
GIVF	Givet	152.24	352	*e*PKP1		PKPbc		19 11 53.0	-1.3	
	comp=Z,18nm,0.7s									
DOU	Dourbes	152.27	352	PKPbc		PKPbc		19 11 53.2	-1.2	
BAIF	Baives	152.36	353	*e*PKP1		PKPbc		19 11 53.4	-1.2	
	comp=Z,13nm,1.0s									
WLF	Walferdange	152.48	350	PKPbc		PKPbc		19 11

3.2nm,0.6s,mb4.4,baz=348,slow=9.0,SNR=4.1
STKA Stephens Creek 35.97 158 *e*P **P 19 11 13.5 +0.5**
4.4nm,0.7s,mb4.5
KSRS Korea Array 36.04 2 P **P 19 11 14.6 +1.1**
1.1nm,0.7s,mb3.9,baz=181,slow=10.0,SNR=6.0
MAJO Matsushiro 36.76 16 *e*P **P 19 11 18.7 -1.0**
5.7nm,0.8s,mb4.5
MAJO Matsushiro 36.76 16 *e*P **P 19 11 18.7 -1.0**
MAJO pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MAT Matsushiro 36.76 16 P **P 19 11 19.7 0.0**
MJAR Matsushiro Arr 36.76 16 P **P 19 11 20.0 +0.3**
comp=Z,4.4nm,0.9s,mb4.3,baz=182,slow=9.7,SNR=11
MDJ Mudanjiang 43.26 3 P **P 19 12 14.7 +1.3**
comp=Z,6.2nm,0.8s,mb4.4
LSA Lhasa 43.86 314 P **P 19 12 18.6 +0.1**
LSA Lhasa 43.86 314 *e*P **P 19 12 18.9 +0.3**
comp=Z,2.3nm,0.6s,mb4.1
LSA Lhasa 43.86 314 *e*P **P 19 12 18.9 +0.4**
LSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
HIA Hailar 48.16 354 *e*P **P 19 12 52.5 +0.5**
HIA Hailar 48.16 354⇑*i*P **P 19 12 53.3 +1.3**
ULN Ulaanbaatar 49.36 343⇓*i*P **P 19 13 00.2 -1.0**
SONM Songino Array 49.53 342 P **P 19 13 02.3 -0.2**
comp=Z,1.2nm,0.8s,mb4.0,baz=155,slow=7.9,SNR=7.6
SONM PcP PcP 19 14 25.2 +1.6
comp=Z,1.4nm,0.7s,baz=157,slow=3.2,SNR=7.8
SONM LR LR 19 36 30.3
comp=Z,50nm,19.9s,baz=58,slow=39
SONM Songino Array 49.53 342 P **P 19 13 02.3 -0.2**
SONM 19 14 25.2
HYB Hyderabad 49.69 292 *e*P **P 19 13 03.0 -1.3**
PETK Petropavlovsk- 57.82 22 P **P 19 14 04.7 +1.6**
comp=Z,5.0nm,0.7s,mb4.6,baz=190,slow=5.1,SNR=10
MK31 Makanchi Array 59.40 326 *e*P **P 19 14 13.4 -0.7**
MKAR Makanchi Array 59.40 326 P **P 19 14 13.2 -1.0**
comp=Z,1.0nm,0.3s,mb4.3,baz=120,slow=7.7,SNR=21
YAK Yakutsk 60.66 2 *e*P **P 19 14 23.4 +0.9**
comp=Z,9.2nm,0.6s,mb5.1
YAK Yakutsk 60.66 2 *e*P **P 19 14 23.2 +0.7**
YAK pmax pmax
comp=Z,12nm,0.8s,mb5.1
TKM2 Tokmak 2 61.39 320 *e*P **P 19 14 27.5 -0.4**
comp=Z,2.0nm,0.8s,mb4.3
TKM2 Tokmak 2 61.39 320 *e*P **P 19 14 27.5 -0.3**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
ZALV Zalesovo Beam 62.64 334 P **P 19 14 34.1 -1.8**
comp=Z,1.1nm,0.5s,mb4.2,baz=122,slow=4.8,SNR=5.3
KBL Kabul 62.78 309 P **P 19 14 37.0 -0.4**
comp=Z,1.1nm,0.4s,mb4.3
KBL Kabul 62.78 309 P **P 19 14 37.0 -0.4**
KBL pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
KURK Kurchatov 63.65 328 P **P 19 14 42.1 -0.6**
baz=130,slow=6.2
KURK Kurchatov 63.65 328 *e*P **P 19 14 41.6 -1.1**
comp=Z,8.6nm,0.6s,mb5.0
KURK Kurchatov 63.65 328 *e*P **P 19 14 41.6 -1.1**
KURK pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BVAR Borovoye Array 69.21 328 P **P 19 15 20.0 +1.8**
comp=Z,0.9nm,0.4s,mb4.0,baz=120,slow=8.8,SNR=6.5
TIXI Tiksi 70.29 1 *e*P **P 19 15 24.8 +0.2**
TIXI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
AKTK Aktyubinsk 75.39 322 P **P 19 15 55.5 +0.3**
AKTO Aktyubinsk 75.39 322 P **P 19 15 55.5 +0.3**
comp=Z,3.2nm,0.6s,mb4.4,baz=107,slow=9.2,SNR=8.2
ARU Arti 76.84 328*e*/*i*P **P 19 16 04.2 +0.9**
ARU *e*S S 19 25 48.3 +2.3
ARU *e*SS SS 19 30 39.3 -4.1
ARU pmax pmax
comp=Z,28nm,2.5s,mb4.8
VRHR Novokhopersk 85.74 321 *e*P **P 19 16 49.9 -0.6**
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.7s
VSR Storozhevoye 87.29 321 *e*P **P 19 16 57.8 -0.3**
VSR pmax pmax
comp=Z,1.0nm,0.4s,mb4.4
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,0.7s
ANN Anapa 88.39 315 *e*P **P 19 17 12.0 +8.5**
ANN pmax pmax
comp=Z,100nm,1.1s,mb6.0
QSPA South Pole Qui 91.19 180 P **P 19 17 17.1 +1.3**
comp=Z,0.7nm,0.9s,mb4.0,baz=25,slow=2.6,SNR=2.8
BRTR Keskin Array B 91.34 310 P **P 19 17 17.0 -0.4**
comp=Z,0.7nm,0.8s,mb4.0,baz=110,slow=8.3,SNR=2.6
ARCES ARCESS Array B 92.64 340 P **P 19 17 22.8 0.0**
comp=Z,3.0nm,0.8s,mb4.8,baz=74,slow=5.3,SNR=5.6
TXAR Lajitas Array 123.33 53 PKP PKPdf 19 23 11.2 +2.4
comp=Z,0.3nm,0.7s,baz=251,slow=5.6,SNR=2.8
TORD Torodi Ar. Bea 123.35 287 PKP PKPdf 19 23 09.8 +0.6
comp=Z,1.3nm,0.7s,baz=66,slow=0.9,SNR=8.7

*ISCJB **03** 19:12:03.8±0.8, 3223S×010×1799E±0.2, h446km±13km, mb3.9/6, Error ellipse: s-maj=24.3km s-min=11.7km az=27.4*
*NEIC **03** 19:12:03.6±1.1, 3206S×17983E, h416km±12km, mb3.7/2, Error ellipse: s-maj=15.4km s-min=13.2km az=147.0*
*IDC **03** 19:12:05.4±1.5, 3178S×17964E, h422km±15km, mb3.6/7, mb1 3.8/8, mb1mx3.5/17, mbtmp3.7/8, Error ellipse: s-maj=16.8km s-min=12.1km az=165.0*
ISC 03 19:12:04.8±1.0, 321S±01×1797E±02, h423km±17km, n66, σ1°09/50, mb3.8/6, 4C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.54**	**192**	P	**P**	**19 13 33.5**	**+0.3**
MXZ				S	**S**	**19 14 45.2**	**-0.2**
PUZ	**Puketiti**	**6.05**	**191**	P	**P**	**19 13 38.2**	**-0.3**
PUZ				S	**S**	**19 14 54.2**	**-0.9**
MWZ	**Matawai**	**6.45**	**196**	P	**P**	**19 13 43.2**	**+0.5**
URZ	**Urewera**	**6.48**	**198**	P	**P**	**19 13 45.7**	**+2.6**
	103nm,0.3s,baz=7.2,slow=3.7,SNR=125						
URZ				S	**S**	**19 15 03.6**	**+0.1**
	32nm,0.3s,baz=206,slow=22,SNR=14						
URZ	**Urewera**	**6.48**	**198**	P	**P**	**19 13 42.1**	**-1.0**
URZ				P		19 13 45.7	
URZ				S	**S**	**19 15 03.6**	**+0.1**
TAZ	**Tarawera**	**6.63**	**202**	P	**P**	**19 13 48.3**	**+3.6**
KNZ	**Kokohu**	**7.08**	**193**	P	**P**	**19 13 49.1**	**-0.4**
BKZ	**Black Stump Fm**	**7.50**	**200**	P	**P**	**19 13 52.3**	**-1.9**
HIZ	**Hauiti**	**7.51**	**211**	P	**P**	**19 13 56.9**	**+2.6**
FWVZ	**Far West T-bar**	**7.88**	**204**	P	**P**	**19 14 00.2**	**+1.9**
WNVZ	**Wahianoa**	**7.93**	**204**	P	**P**	**19 13 59.9**	**+1.0**
MOVZ	**Moawhango**	**7.95**	**203**	P	**P**	**19 13 59.0**	**-0.1**
TSZ	**Takapari Road**	**8.48**	**200**	P	**P**	**19 14 02.8**	**-2.1**
WAZ	**Wanganui**	**8.52**	**205**	P	**P**	**19 14 06.8**	**+1.4**
BFZ	**Birch Farm**	**8.98**	**197**	P	**P**	**19 14 11.1**	**+0.6**
MRZ	**Mangatainoka R**	**9.14**	**200**	P	**P**	**19 14 10.6**	**-1.7**
KIW	**Kapiti Island**	**9.54**	**203**	P	**P**	**19 14 17.0**	**+0.4**
MTW	**Mount Morrison**	**9.63**	**199**	P	**P**	**19 14 18.4**	**+0.8**
CAW	**Cannon Point**	**9.71**	**201**	P	**P**	**19 14 17.1**	**-1.4**
MRW	**Makara Radio**	**9.93**	**202**	P	**P**	**19 14 19.7**	**-1.3**
MSWZ	**Moikau Station**	**9.94**	**200**	P	**P**	**19 14 21.7**	**+0.7**
BHW	**Baring Head**	**10.04**	**201**	P	**P**	**19 14 21.4**	**-0.8**
TCW	**Tory Channel**	**10.06**	**204**	P	**P**	**19 14 22.3**	**-0.1**
NNZ	**Nelson**	**10.40**	**207**	P	**P**	**19 14 25.3**	**-0.8**
QRZ	**Quartz Range**	**10.43**	**212**	P	**P**	**19 14 26.2**	**-0.3**
BSWZ	**Blackbirch Sta**	**10.64**	**204**	P	**P**	**19 14 29.1**	**+0.3**
THZ	**Tophouse**	**11.05**	**208**	P	**P**	**19 14 33.4**	**+0.1**
KHZ	**Kahutara**	**11.38**	**204**	P	**P**	**19 14 37.3**	**+0.3**
LTZ	**Lake Taylor**	**12.16**	**207**	P	**P**	**19 14 46.4**	**+0.9**
MQZ	**McQueen's Vall**	**12.83**	**204**	P	**P**	**19 14 53.9**	**+1.1**
RPZ	**Rata Peaks**	**13.43**	**208**	P	**P**	**19 14 59.9**	**+0.6**
	1.4nm,0.3s,baz=359,slow=7.4,SNR=5.6						
RPZ				S	**S**	**19 17 22.1**	**-1.4**
	2.4nm,0.3s,baz=333,slow=20,SNR=12						
ODZ	**Otahua Downs**	**14.71**	**206**	P	**P**	**19 15 18.9**	**+5.8**
AFI	**Afiamalu**	**19.73**	**25**	P	**P**	**19 16 03.2**	**-2.3**
	3.6nm,0.3s,baz=81,slow=8.3,SNR=5.9						
STKA	**Stephens Creek**	**32.22**	**260**	P	**P**	**19 17 58.1**	**+2.0**
	3.2nm,0.9s,mb3.6,baz=203,slow=23,SNR=4.4						
CTA	**Charters Tower**	**32.22**	**284**	P	**P**	**19 17 56.8**	**+0.5**
	4.9nm,0.5s,mb4.1,baz=114,slow=9.5,SNR=15						
CTAO	**Charters Tower**	**32.22**	**284**	*e*P	**P**	**19 17 56.4**	**+0.1**
	5.2nm,0.5s,mb4.1						
ASAR	**Alice Springs**	**41.11**	**270**	P	**P**	**19 19 09.9**	**-0.1**
	2.7nm,0.6s,mb3.8,baz=107,slow=7.1,SNR=64						
ASAR				S	**S**	**19 24 51.0**	**-0.3**
	1.3nm,1.1s,baz=105,slow=15,SNR=5.1						
WB2	**Warramunga Arr**	**42.25**	**275**	*e*P	**P**	**19 19 18.4**	**-0.8**
WRA	**Warramunga Arr**	**42.26**	**275**	P	**P**	**19 19 18.8**	**-0.5**
	5.9nm,0.4s,mb4.3,baz=112,slow=7.9,SNR=92						
WRA				ScP	ScP	19 24 15.2	+1.6
	0.4nm,0.9s,baz=109,slow=3.7,SNR=8.2						
WRA				S	**S**	**19 25 07.2**	**-0.8**
	0.6nm,0.8s,baz=114,slow=13,SNR=3.7						
QSPA	**South Pole Qui**	**57.99**	**180**	P	**P**	**19 21 18.6**	**+4.0**
	0.5nm,0.4s,mb3.2,baz=147,slow=4.1,SNR=11						
QSPA	**South Pole Qui**	**57.99**	**180**	*e*P	**P**	**19 21 18.2**	**+3.6**
	1.2nm,0.9s,mb3.2						
PETK	**Petropavlovsk-**	**87.02**	**347**	P	**P**	**19 24 03.0**	**-0.3**
	5.8nm,0.7s,baz=122,slow=6.6,SNR=12						
NVAR	**Mina Array Bea**	**90.83**	**44**	P	**P**	**19 24 22.6**	**+1.1**
	0.9nm,0.8s,mb3.7,baz=217,slow=8.0,SNR=7.9						
MKAR	**Makanchi Array**	**117.38**	**310**	PKP	PKPdf	19 29 59.9	-0.8
	0.6nm,0.6s,baz=183,slow=2.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**118.02**	**318**	PKP	PKPdf	19 30 00.3	-1.4
	0.4nm,0.6s,baz=188,slow=7.5,SNR=3.6						
KURK	**Kurchatov**	**120.82**	**313**	PKP	PKPdf	19 30 06.6	-0.6
	baz=113,slow=2.0						
BVAR	**Borovoye Array**	**126.26**	**315**	PKP	PKPdf	19 30 17.5	0.0
	2.2nm,0.7s,baz=90,slow=3.0,SNR=10						
AKTK	**Aktyubinsk**	**133.79**	**311**	PKP	PKPdf	19 30 32.8	+0.9
AKTO	**Aktyubinsk**	**133.79**	**311**	PKP	PKPdf	19 30 32.8	+0.9
	2.1nm,0.9s,baz=56,slow=2.4,SNR=5.0						
ARCES	**ARCESS Array B**	**139.83**	**346**	PKhKP		19 30 35.6	
	2.3nm,0.8s,baz=74,slow=1.9,SNR=6.1						
ARCES				PKP	PKPdf	19 30 44.1	+1.6
	2.3nm,0.9s,baz=76,slow=5.1,SNR=4.0						
JOF	**Joensuu**	**143.26**	**336**	*e*pkp	PKPdf	19 30 42.2	-6.6
	2.6nm,0.6s						
KAF	**Kangasniemi**	**145.47**	**338**	*e*pkp	PKPdf	19 30 51.1	-1.5
	12nm,0.5s						
NB2	**NORSAR Subarra**	**150.11**	**349**	PKP	PKPbc	19 31 04.6	-1.2
	comp=Z,2.5nm,0.6s,baz=18,slow=2.6						
NOA	**NORSAR Array B**	**150.11**	**349**	PKPbc	PKPbc	19 31 05.1	-0.7
	comp=Z,4.1nm,0.7s,baz=15,slow=4.1,SNR=11						
NOA				PKPab	PKPab	19 31 12.3	-1.2
	comp=Z,5.1nm,0.8s,baz=23,slow=3.1,SNR=40						
AKASG	**Malin Array Be**	**151.41**	**319**	PKPbc	PKPbc	19 31 08.6	-0.5
	comp=Z,3.5nm,0.6s,baz=55,slow=2.6,SNR=12						
BRTR	**Keskin Array B**	**151.63**	**295**	PKPbc	PKPbc	19 31 09.7	-0.2
	comp=Z,1.4nm,0.5s,baz=72,slow=4.7,SNR=8.3						
CLL	**Collm**	**158.49**	**337**⇑*i*PKPab		PKPab	19 31 48.6	-1.0
	comp=Z,5.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**161.02**	**186**	PKP	PKPdf	19 31 16.1	+0.1
	comp=Z,0.2nm,0.6s,baz=211,slow=1.5,SNR=3.7						
TORD				PKPab	PKPab	19 32 02.8	+1.4
	comp=Z,0.2nm,0.4s,baz=192,slow=3.1,SNR=5.5						
CDF	**Champ du Feu**	**162.76**	**343**⇑*i*PKP2		PKPab	19 32 07.3	-1.0
	comp=Z,4.0nm,0.6s						
HAU	**Haudompre**	**163.36**	**344**⇑*i*PKP2		PKPab	19 32 09.7	-1.3
	comp=Z,5.1nm,0.7s						
SSF	**Saint Saulge**	**164.81**	**350**	*e*PKP2	PKPab	19 32 16.2	-1.2
	comp=Z,15nm,1.2s						
AVF	**Avril sur Loir**	**165.09**	**350**	*e*PKP2	PKPab	19 32 17.4	-1.2
SMF	**Signal de Mont**	**165.16**	**349**⇑*i*PKP2		PKPab	19 32 17.8	-1.1
	comp=Z,11nm,0.8s						
LPG	**La Plagne**	**165.58**	**340**	*e*PKP2	PKPab	19 32 22.2	+1.4
TCF	**Toulx Ste Croi**	**165.73**	**353**	*e*PKP2	PKPab	19 32 19.9	-1.5
	comp=Z,9.4nm,1.1s						
ORIF	**Oris-en-Rattie**	**166.36**	**341**	*e*PKP2	PKPab	19 32 23.9	-0.4
	comp=Z,7.5nm,0.9s						

SKHL 03 19:13:13.0±0.8, 5296N×13166E, h10km±1km, mb3.8/5, 1C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKMR	**Ekimchan**	**0.79**	**81**	⇓*i*Pg	Pg	19 13 27.0	-1.2
EKMR				AMB	AMB	19 13 28.4	
	68nm,0.4s						
EKMR				pPg		19 13 29.9	
EKMR				*e*Sg	Sg	19 13 37.2	-1.2
EKMR				A		19 13 38.0	
	350nm,0.5s						
EKMR				A		19 13 38.0	
	220nm,0.5s						
YASR	**Yasnyy**	**2.24**	**280**⇑	*e*Pn	Pn	19 13 49.0	-1.1
YASR				*e*Pg	Pg	19 13 53.0	-2.9
YASR				AMB	AMB	19 13 53.7	
	11nm,0.3s						
YASR				*e*Sn	Sn	19 14 19.6	+1.8
YASR				*e*Sg	Sg	19 14 22.4	-2.6
YASR				A		19 14 29.0	
	150nm,0.5s						
BMKR	**Bomnak**	**2.42**	**318**	*e*Pn	Pn	19 13 52.4	-0.2
BMKR				*e*Pg	Pg	19 13 56.1	-3.3
BMKR				AMB	AMB	19 13 56.5	
	11nm,0.4s						
BMKR				*e*Sg	Sg	19 14 27.8	-2.9
BMKR				A		19 14 29.3	
	110nm,0.4s						
BMKR				A		19 14 29.3	
	186nm,0.4s						
BMKR				A		19 14 29.3	
	35nm,0.4s						
ZEA	**Zeya**	**2.76**	**288**	*e*Pg	Pg	19 14 03.2	-2.6
ZEA				AMB	AMB	19 14 04.2	
	20nm,0.3s						
ZEA				pPg		19 14 07.1	
ZEA				*e*Sg	Sg	19 14 39.0	-2.4
ZEA				A		19 14 39.8	
	140nm,0.5s						
ZEA				A		19 14 39.8	
	53nm,0.5s						
KROS	**Kirovskiy**	**3.15**	**300**	*e*Pn	Pn	19 14 02.1	-0.5
KROS				*e*Pg	Pg	19 14 09.3	-4.1
KROS				AMB	AMB	19 14 12.8	
	12nm,0.5s						
KROS				AMB	AMB	19 14 12.8	
	11nm,0.5s						
KROS				*e*Sn	Sn	19 14 39.9	-0.4
KROS				*e*Sg	Sg	19 14 51.2	-3.0
KROS				A		19 14 55.1	
	54nm,0.5s						
KROS				A		19 14 55.1	
	35nm,0.5s						
KROS				A		19 14 55.1	
	8.0nm,0.5s						
GRNR	**Gornyy**	**3.68**	**125**	*e*Pg	Pg	19 14 20.0	-3.4
GRNR				pPg		19 14 23.0	
GRNR				*e*Sg	Sg	19 15 08.5	-2.5
GRNR				A		19 15 11.1	
	38nm,0.4s						
KLR	**Kul'dur**	**3.74**	**179**	*e*rx	rx	19 14 15.8	
KLR				*e*Pg	Pg	19 14 22.0	-2.5
KLR				*e*Sg	Sg	19 15 08.1	-4.8
TUP	**Tupik**	**7.11**	**287**	*e*Pn	Pn	19 15 00.6	+3.7
TUP				*e*rx	rx	19 15 24.2	
TUP				*e*Sg	Sg	19 16 58.0	-2.9

JSN 03 19:44:50.9±0.6, 1987N×7625W, h29km±498km, MD3.5, 1C-3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**1.85**	**194**	⇓*i*P	Pn	19 45 19.7	-1.0
STH	**Stony Hill**	**1.86**	**197**⇓	*e*P	Pn	19 45 19.9	-1.0
STH				*e*S	Sn	19 45 41.7	-1.7
CVJ	**Coleyville**	**2.04**	**217**⇑	*e*P	Pn	19 45 22.4	-0.9
PCJ	**Portland Cotta**	**2.29**	**202**	⇓*i*P	Pn	19 45 26.3	-0.4
PCJ				*e*S	Sn	19 45 52.9	-1.1
MCJ	**Malvern**	**2.37**	**215**	*i* P	Pn	19 45 27.7	-0.1
MCJ				*e*S	Sn	19 45 54.4	-1.5

*BJI **03** 19:55:02.7, 6600N×142.30W, h10km, mB4.9, mb4.8, Ms4.9, Msz4.3*
*ISCJB **03** 19:55:03.5±0.4, 6605N±004×142.16W±008, h10km, mb3.9/9, MS4.6/3, Error ellipse: s-maj=5.1km s-min=4.6km az=171.8*
*IDC **03** 19:55:05.6±0.9, 6617N×142.07W, h0km, mb3.5/6, mb1 4.0/9, mb1mx3.7/25, mbtmp3.7/9, ML4.0/3, Error ellipse: s-maj=22.1km s-min=13.4km az=28.0*
*NEIC **03** 19:55:06.8, 6603N×142.34W, h28km, ML4.0(AEIC), MW3.9(PGC), MW3.9(SLM), After AEIC.*
*PGC **03** 19:55:08.5, 6595N×141.39W, h5km, ML4.0, Mw3.9, 229km northwest of Dawson, Yt Alaska*
ISC 03 19:55:05.4±0.4, 6603N±003×14215W±008, h10km, (h14km±2.0km:pP-P), n51, σ1°10/63, mb3.9/9, MS4.6/3, 4D, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGAK	**Eagle**	**1.32**	**161**	P	**Pn**	**19 55 29.1**	**-0.7**
EGAK				S	**Sb**	**19 55 47.2**	**0.0**
BM3	**Burnt Mountain**	**1.70**	**326**	P	**Pn**	**19 55 36.6**	**+1.5**
DAWY	**Dawson**	**2.29**	**148**	P	**Pn**	**19 55 43.1**	**-0.1**
DAWY				S	**Sn**	**19 56 12.9**	**+1.5**
DAWY	**Dawson**	**2.29**	**148**	⇑Pn	**Pn**	**19 55 43.4**	**+0.2**
DAWY				⇑Sg	**Sg**	**19 56 12.2**	**-6.8**
IL1	**Eielson Array**	**2.35**	**240**	P	**Pn**	**19 55 42.9**	**-1.1**
IL1				S	**Sn**	**19 56 11.0**	**-1.8**
ILB	**Eielson Array**	**2.35**	**240**	P	**Pn**	**19 55 42.8**	**-1.2**
DOT	**Dot Lake**	**2.53**	**200**	P	**Pn**	**19 55 46.2**	**-0.2**
COLA	**College**	**2.65**	**247**	P	**Pn**	**19 55 47.5**	**-0.5**
BCA3	**Beaver Creek A**	**2.98**	**177**	P	**Pn**	**19 55 52.4**	**-0.2**
MENT	**Mentasta**	**3.18**	**193**	*e*P	**Pn**	**19 55 55.4**	**+0.1**
PAX	**Paxson**	**3.39**	**207**	P	**Pn**	**19 55 58.3**	**+0.1**
COLD	**Coldfoot**	**3.43**	**294**	P	**Pn**	**19 55 58.5**	**-0.2**
MCK	**McKinley**	**3.70**	**235**	P	**Pn**	**19 56 02.2**	**-0.3**
INK	**Inuvik**	**4.07**	**52**	*e*Pn	**Pn**	**19 56 07.1**	**-0.4**
INK	**Inuvik**	**4.07**	**52**	⇓Pn	**Pn**	**19 56 07.4**	**-0.1**
INK				⇑Sn	**Sn**	**19 56 52.6**	**-2.5**
INK				⇑Sg	**Sg**	**19 57 09.0**	**-6.8**
BPAW	**Bear Paw Mtn.**	**4.21**	**247**	P	**Pn**	**19 56 07.8**	**-1.7**
TRF	**Thorofare Moun**	**4.34**	**237**	P	**Pn**	**19 56 11.2**	**-0.1**
KTH	**Kantishna Hill**	**4.50**	**241**	P	**Pn**	**19 56 12.9**	**-0.5**
IMA2	**Indian Mountai**	**4.70**	**276**	*e*P	**Pn**	**19 56 15.9**	**-0.3**
CHUM	**Lake Minchumin**	**4.83**	**248**	*e*Pn	**Pn**	**19 56 16.4**	**-1.6**
SML	**Sawmill**	**5.04**	**216**	P	**Pn**	**19 56 21.8**	**+0.9**
PPLA	**Purkeypile**	**5.36**	**239**	P	**Pn**	**19 56 25.6**	**+0.3**
PMR	**Palmer**	**5.42**	**218**	*e*P	**Pn**	**19 56 29.1**	**+3.0**
HYT	**Haines Junctio**	**5.62**	**156**	*e*Pn	**Pn**	**19 56 29.5**	**+0.5**
HYT	**Haines Junctio**	**5.62**	**156**	⇑Pn	**Pn**	**19 56 29.7**	**+0.8**
HYT				⇑Sg	**Sg**	**19 57 57.8**	**-7.9**
SKT	**Skwentna**	**5.79**	**230**	P	**Pn**	**19 56 31.8**	**+0.6**
RC01	**Rabbit Creek A**	**6.00**	**218**	P	**Pn**	**19 56 33.9**	**-0.2**
WHY	**Whitehorse**	**6.30**	**145**	⇑Pn	**Pn**	**19 56 38.2**	**0.0**
WHY				⇑Sn	**Sn**	**19 57 43.3**	**-6.9**
WHY				⇓Sg	**Sg**	**19 58 17.1**	**-10**
SLKM	**Skilak Lake**	**6.63**	**217**	*e*Pn	**Pn**	**19 56 43.2**	**+0.5**
TT01	**Tatalina**	**6.76**	**249**	P	**Pn**	**19 56 43.6**	**-0.8**
PLBC	**Pleasant Camp**	**7.11**	**155**	⇓Pn	**Pn**	**19 56 49.1**	**-0.2**
SVW2	**Sparrevohn**	**7.76**	**237**	P	**Pn**	**19 56 58.9**	**+0.7**
DLBC	**Dease Lake**	**9.47**	**138**	Pn	**Pn**	**19 57 22.7**	**+1.1**
	1.5nm,0.3s,baz=337,slow=12,SNR=15						
DLBC				Lg		19 59 59.1	
	0.7nm,0.3s,baz=225,slow=24,SNR=4.8						
DLBC	**Dease Lake**	**9.47**	**138**	*e*Pn	**Pn**	**19 57 21.6**	**-0.1**
DLBC	**Dease Lake**	**9.47**	**138**	⇑Sn	**Sn**	**19 58 58.5**	**-9.5**
KDAK	**Kodiak Island**	**9.61**	**216**	Pn	**Pn**	**19 57 22.9**	**-0.6**
	0.3nm,0.3s,baz=28,slow=15,SNR=2.7						
KDAK	**Kodiak Island**	**9.61**	**216**	Pn	**Pn**	**19 57 22.9**	**-0.6**
YKW3	**Yellowknife Ar**	**12.39**	**93**	⇑Pn	**Pn**	**19 57 59.2**	**-2.3**
YKW3				⇓Sn	**Sn**	**20 00 04.8**	**-15**
YKA	**Yellowknife Ar**	**12.43**	**94**	Pn	**Pn**	**19 57 58.9**	**-3.1**
	0.9nm,0.3s,baz=296,slow=13,SNR=18						
YKA				Sn	**Sn**	**20 00 11.6**	**-8.7**
	0.5nm,0.3s,baz=301,slow=22,SNR=4.7						
PDAR	**Pinedale Array**	**29.43**	**126**	P	**P**	**20 01 10.7**	**+2.0**
	0.4nm,0.8s,mb3.2,baz=317,slow=3.8,SNR=2.8						
NVAR	**Mina Array Bea**	**30.86**	**142**	P	**P**	**20 01 24.4**	**+3.1**
	0.6nm,0.8s,mb3.5,baz=327,slow=6.9,SNR=4.4						
NVAR	**Mina Array Bea**	**30.86**	**142**	P	**P**	**20 01 24.4**	**+3.1**
TXAR	**Lajitas Array**	**43.61**	**128**	P	**P**	**20 03 13.6**	**+4.2**
	0.2nm,0.2s,mb3.4,baz=352,slow=5.8,SNR=4.4						
SONM	**Songino Array**	**54.98**	**310**	P	**P**	**20 04 38.0**	**+1.9**
	0.4nm,0.7s,mb3.5,baz=35,slow=8.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**55.15**	**328**	P	**P**	**20 04 38.1**	**+0.8**
	0.6nm,0.5s,mb3.9,baz=29,slow=9.1,SNR=3.1						
HHC	**Hu-ho-hao-te**	**59.48**	**302**	*e*P	**P**	**20 05 07.9**	**-0.2**
HHC				XP	sP	20 05 13.6	+1.1
HHC				PCP	PcP	20 05 56.4	+0.9
HHC				PP	PP	20 07 20.8	+1.9
HHC				PCS	PcS	20 09 56.6	-0.9
HHC				S	**S**	**20 13 12.9**	**-4.2**
HHC				SCS	ScS	20 14 54.0	-3.9
HHC				SS	SS	20 17 08.4	-3.0
HHC				AMB	AMB		
	comp=Z,20nm,0.8s						
HHC				AMB	AMB		
	comp=Z,117nm,6.8s						
HHC				LR	LR		
	comp=N,565nm,21.4s,MS4.7						
HHC				LR	LR		
	comp=E,247nm,22.6s,MS4.7						
WMQ	**Urumqi**	**63.95**	**322**	*e*P	**P**	**20 05 40.0**	**+1.8**
LZH	**Lanzhou**	**66.38**	**306**	*e*P	**P**	**20 05 54.6**	**+0.6**
LZH				AP	pP	20 05 57.5	+0.2
LZH				XP	sP	20 05 59.2	+0.7
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
CD2	**Chengdu**	**71.14**	**304**	*e*P	**P**	**20 06 24.3**	**+0.5**
CD2				AP	pP	20 06 29.5	+2.5
CD2				XP	sP	20 06 31.9	+3.7
CD2

ISCO	**Idaho Springs**	**3.98**	**185**	*e*Pn	**Pn**	**20 09 35.5**	**+0.1**
MOOW	**Moose Ponds**	**4.01**	**272**	*e*Pn	**Pn**	**20 09 36.2**	**+0.3**
SNOW	**Snow King Moun**	**4.04**	**268**	*e*Pn	**Pn**	**20 09 36.8**	**+0.5**
REDW	**Red Top Meadow**	**4.12**	**266**	*e*Pn	**Pn**	**20 09 37.2**	**-0.2**
IMW	**Indian Meadow**	**4.15**	**274**	*e*Pn	**Pn**	**20 09 38.1**	**+0.3**
TPAW	**Teton Pass**	**4.18**	**268**	*e*Pn	**Pn**	**20 09 38.4**	**+0.2**
AHID	**Auburn Hatcher**	**4.42**	**259**	Pn	**Pn**	**20 09 41.4**	**-0.1**
RRI2	**Red Ridge**	**4.46**	**267**	*e*Pn	**Pn**	**20 09 41.6**	**-0.5**
QLMT	**Earthquake Lak**	**4.59**	**285**	*e*Pg	**Pg**	**20 09 55.6**	**-5.6**
SMCO	**Snowmass**	**4.78**	**197**	*e*Pg	**Pg**	**20 09 58.5**	**-6.2**
BOZ	**Bozeman (W)** 4.1nm,0.3s	**4.95**	**294**	*e*Pn	**Pn**	**20 09 47.8**	**-0.9**
HWUT	**Hardware Ranch** 9.2nm,0.3s	**5.16**	**247**	*e*Pn	**Pn**	**20 09 49.9**	**-1.8**
EGMT	**Eagleton** 92nm,1.0s	**5.31**	**325**	Pn	**Pn**	**20 10 00.1**	**+6.5**
HRY	**Holter Researc**	**5.53**	**304**	*e*Pn	**Pn**	**20 09 56.8**	**+0.2**
MCMT	**McKenzie Canyo**	**5.59**	**284**	*e*Pn	**Pn**	**20 09 59.9**	**+2.4**
PV10	**Paradox Valley**	**6.12**	**210**	*e*Pn	**Pn**	**20 10 04.8**	**0.0**
AGMN	**Agassiz Refuge** 4.3nm,0.3s	**7.92**	**52**	*e*Pn	**Pn**	**20 10 28.1**	**-1.5**
ELK	**Elko** 0.3nm,0.3s,baz=63,slow=11,SNR=5.1	**8.03**	**251**	Pn	**Pn**	**20 10 32.2**	**+1.1**
ELK	**Elko**	**8.03**	**251**	Pn	**Pn**	**20 10 32.2**	**+1.1**
ULM	**Lac du Bonnet** 3.4nm,0.3s,baz=231,slow=11,SNR=16	**9.08**	**41**	Pn	**Pn**	**20 10 44.9**	**-0.6**
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**Pn**	**20 10 44.9**	**-0.6**
ARCES	**ARCESS Array B** 2.0nm,0.8s,baz=321,slow=7.1,SNR=4.5	**61.37**	**18**	P	**P**	**20 18 49.6**	**-0.7**
ARCES	**ARCESS Array B**	**61.37**	**18**	P	**P**	**20 18 49.6**	**-0.7**

KRSC 03 20:31:38.1±0.2, 5521N×16437E, h40km±40km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.33**	**319**	*e*P	Pn	20 32 00.1	0.0
KBTR				*i* S	Sn	20 32 15.8	-0.8
MKZ	**Mys Kozlova**	**1.66**	**248**	*e*P	Pn	20 32 05.2	+0.6
MKZ				*i* S	Sn	20 32 24.1	-0.6
BZGR	**Bezymyannyi-Gr**	**2.21**	**291**	*e*P	Pn	20 32 14.8	+2.6
BZGR				*i* S	Sn	20 32 41.4	+3.1
SRKR	**Sorokina**	**2.31**	**310**	P	Pn	20 32 15.5	+1.9
BZMR	**Bezymyannaya**	**2.32**	**290**	*e*P	Pn	20 32 16.4	+2.7
BZMR				*i* S	Sn	20 32 45.0	+4.0
BZWR	**Bezymyannyi-We**	**2.33**	**291**	*e*P	Pn	20 32 16.4	+2.6
BZWR				*i* S	Sn	20 32 44.8	+3.7
KLY	**Klyuchi**	**2.37**	**299**	*e*P	Pn	20 32 15.7	+1.2
KLY				*i* S	Sn	20 32 44.0	+1.7
KRSR	**Krestovskiy**	**2.38**	**297**	*e*P	Pn	20 32 16.5	+2.0
KRSR				*i* S	Sn	20 32 45.2	+2.8
KIRR	**Kirishev**	**2.41**	**290**	*e*P	Pn	20 32 17.7	+2.8
KIRR				*i* S	Sn	20 32 47.0	+4.0
KMNR	**Kamenistaya**	**2.42**	**285**	*e*P	Pn	20 32 18.0	+3.0
KMNR				*i* S	Sn	20 32 46.8	+3.5
TUMR	**Tumrok**	**2.42**	**273**	*e*P	Pn	20 32 17.5	+2.4
TUMR				*i* S	Sn	20 32 46.2	+2.8
KPT	**Kopyto**	**2.47**	**290**	*e*P	Pn	20 32 19.3	+3.5
KPT				*i* S	Sn	20 32 50.2	+5.5
KOZ	**Kozyrevsk**	**2.69**	**290**	*e*P	Pn	20 32 22.5	+3.8
KOZ				*i* S	Sn	20 32 55.1	+5.1
KII	**Karymskiy**	**3.09**	**250**	P	Pn	20 32 26.5	+2.2
KII				*i* S	Sn	20 33 01.0	+1.0
AVH	**Avacha**	**3.84**	**242**	*e*P	Pn	20 32 37.5	+3.0
AVH				*i* S	Sn	20 33 19.4	+1.1
GNL	**Ganaly**	**4.05**	**251**	*e*P	Pn	20 32 40.6	+3.2

*NNC **03** 20:43:47.2±8.4, 3969N×7882E, h0km, mb4.2, mpv4.4, Error ellipse: s-maj=68.7km s-min=34.7km az=159.0*
*IDC **03** 20:43:53.3±1.7, 3997N×7768E, h0km, mb3.8/4, mb1 3.9/8, mb1mx3.7/26, mbtmp3.8/8, ML3.5/2, MS2.8/2, Ms1 2.8/2, ms1mx2.3/33, Error ellipse: s-maj=35.1km s-min=19.5km az=141.0*
*BJI **03** 20:43:54.7, 4013N×7758E, h18km, mb4.4, ML3.9*
*ISCJB **03** 20:43:54.1±0.3, 4007N±002×7785E±004, h10km, mb3.8/5, Error ellipse: s-maj=4.5km s-min=3.4km az=159.0*
*MOS **03** 20:43:57.0±1.6, 4002N×7772E, h33km, mb3.9/6, Error ellipse: s-maj=13.8km s-min=8.0km az=96.9*
*NEIC **03** 20:43:58.1±2.1, 4005N×7777E, h32km±20km, mb3.8/2, Error ellipse: s-maj=9.1km s-min=5.1km az=63.0*

ISC 03 20:43:56.2±0.3, 4006N±003×7781E±004, h10km, n74, σ1§36/91, mb3.8/5, 8C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol** SNR=122	**2.48**	**332**	P	**Pn**	**20 44 36.8**	**+0.2**
KZA	**Kyzart** SNR=316	**2.79**	**317**	P	**Pn**	**20 44 41.2**	**+0.4**
KNDC	**Almaty** 243nm,0.8s	**3.21**	**349**	⇑Pn	**Pn**	**20 44 51.3**	**+4.6**
KNDC	1µm,0.8s			⇓Sn	**Sg**	**20 45 32.7**	**-6.7**
UCH	**Uchtor**	**3.30**	**312**	*e*Pn	**Pn**	**20 44 48.5**	**+0.6**
UCH				*e*Sn	**Sn**	**20 45 26.6**	**-0.5**
UCH	**Uchtor** SNR=21	**3.30**	**312**	P	**Pn**	**20 44 49.2**	**+1.4**
TKM2	**Tokmak 2** 114nm,0.6s	**3.30**	**331**	⇑Pn	**Pn**	**20 44 48.9**	**+1.0**
TKM2	347nm,0.9s			⇑Sn	**Sg**	**20 45 33.7**	**-8.5**
TKM2	**Tokmak 2**	**3.30**	**331**	*e*Pn	**Pn**	**20 44 49.1**	**+1.2**
TKM2				*e*Sn	**Sg**	**20 45 33.2**	**-9.0**
TKM2	**Tokmak 2** SNR=171	**3.30**	**331**	P	**Pn**	**20 44 49.1**	**+1.2**
KBK	**Karagaybulak** SNR=100	**3.37**	**321**	P	**Pn**	**20 44 50.3**	**+1.5**
AAK	**Ala-Archa** SNR=42	**3.58**	**317**	P	**Pn**	**20 44 52.8**	**+1.1**
FRU	**Bishkek**	**3.66**	**320**	*i* PN	**Pn**	**20 44 54.0**	**+1.2**
FRU				*i* S	**Sg**	**20 45 44.0**	**-10**
FRU	comp=Z,200nm,1.6s			pmax	pmax		
FRU	comp=E,780nm,1.6s			smax			
CHMS	**Chumysh** SNR=24	**3.72**	**323**	P	**Pn**	**20 44 54.5**	**+0.9**
AML	**Almayashu**	**3.73**	**305**	*e*Pn	**Pn**	**20 44 54.7**	**+0.9**
AML	**Almayashu** SNR=23	**3.73**	**305**	P	**Pn**	**20 44 55.7**	**+1.9**
EKS2	**Erkin-Say**	**3.99**	**312**	*e*Pn	**Pn**	**20 44 58.2**	**+0.9**
EKS2				*e*Sn	**Sg**	**20 45 53.3**	**-11**
EKS2	**Erkin-Say** SNR=48	**3.99**	**312**	P	**Pn**	**20 44 58.8**	**+1.5**
USP	**Ospenovka** SNR=21	**4.05**	**323**	P	**Pn**	**20 44 59.3**	**+1.2**
KK31	**Karatay Array** baz=131,slow=12,SNR=9.2	**6.26**	**301**	⇓Pn	**Pn**	**20 45 29.9**	**+1.4**
KK31	comp=E,16nm,0.8s,baz=128,slow=16,SNR=22			⇓Pg	**Pg**	**20 45 50.1**	**-5.8**
KK31	comp=E,26nm,0.8s,baz=121,slow=27,SNR=5.3			⇓Sn	**Sg**	**20 47 07.8**	**-9.2**
KK31	**Karatay Array**	**6.26**	**301**	*i* PN	**Pn**	**20 45 29.8**	**+1.3**
KK31						20 45 50.1	
KK31				*e*		20 47 07.8	
KK31	comp=Z,1.0nm,0.4s			pmax	pmax		
KK31	comp=Z,21nm,0.9s			pmax	pmax		
KK31	comp=N,9.0nm,0.5s			pmax	pmax		
MK31	**Makanchi Array** comp=N,2.2nm,0.6s,baz=191,slow=11,SNR=34	**7.47**	**24**	Pn	**Pn**	**20 45 46.2**	**+1.0**
MK31	comp=N,8.4nm,0.7s,baz=200,slow=23,SNR=5.0			⇑Sn	**Sn**	**20 47 10.5**	**+0.5**
MK31	comp=N,8.8nm,0.8s,baz=205,slow=29,SNR=3.5			⇓Lg		20 47 46.4	
MK31	**Makanchi Array**	**7.47**	**24**	*e*Pn	**Pn**	**20 45 46.0**	**+0.8**
MK31	**Makanchi Array**	**7.47**	**24**	P	**Pn**	**20 45 46.2**	**+1.0**
MK31				*e*		20 47 10.4	
MK31	comp=Z,1.0nm,0.3s			pmax	pmax		
MK31	comp=N,10.0nm,0.7s			smax			
MK31	comp=N,69nm,1.7s			pmax	pmax		
MKAR	**Makanchi Array** comp=N,0.8nm,0.3s,baz=196,slow=14,SNR=23	**7.47**	**24**	Pn	**Pn**	**20 45 46.5**	**+1.3**
MKAR	comp=N,0.5nm,0.3s,baz=198,slow=13,SNR=5.0			Sn	**Sn**	**20 47 10.1**	**+0.1**
MKAR	comp=N,0.7nm,0.3s,baz=205,slow=30,SNR=3.4			Lg		20 47 50.1	
MKAR	comp=N,36nm,18.6s,baz=197,slow=42			LR	LR	20 49 16.3	
MKAR	**Makanchi Array**	**7.47**	**24**	P	**Pn**	**20 45 46.5**	**+1.3**
MKAR						20 47 10.1	
MKAR	comp=Z,1.0nm,0.3s			pmax	pmax		
MKAR	comp=N,1.0nm,0.3s			smax			
MKAR	comp=Z,36nm,18.6s			MLR	MLR		
DLH	**Dalhousie**	**7.65**	**192**	*e*P	**Pn**	**20 45 50.0**	**+2.3**
DLH				*ex*	x	20 47 29.0	
THN	**Thein Dam**	**7.80**	**193**	*e*P	**Pn**	**20 45 51.8**	**+2.1**
THN				*ex*	x	20 47 17.9	
CEP	**Cherat**	**7.81**	**219**	P	**Pn**	**20 45 53.5**	**+3.6**
WMQ	**Urumqi**	**8.27**	**60**	*e*P	**Pn**	**20 46 02.1**	**+6.0**
WMQ				S	**Sn**	**20 47 30.6**	**+1.1**
WMQ	comp=N,35nm,0.8s			Smax			
WMQ	comp=E,34nm,0.8s			Smax			
KLP	**Kalpa**	**8.52**	**177**	*e*P	**Pn**	**20 46 02.4**	**+2.9**
KLP				*e*S	**Sn**	**20 47 32.3**	**-3.4**
KLP	comp=E,44nm,0.5s			AML	AML	20 47 50.8	
KLP	comp=N,29nm,0.7s			AML	AML	20 47 53.0	
KBL	**Kabul** comp=N,6.2nm,0.6s	**8.89**	**234**	*e*Pn	**Pn**	**20 46 05.2**	**+0.5**
KBL				*e*Sn	**Sn**	**20 47 37.2**	**-7.7**
KBL	**Kabul**	**8.89**	**234**	*e*P	**Pn**	**20 46 05.2**	**+0.5**
KBL				*e*		20 47 37.2	
KBL	comp=Z,6.0nm,0.6s			pmax	pmax		
SMLA	**Simla**	**8.93**	**184**	*i* P	**Pn**	**20 46 07.7**	**+2.5**
SMLA				*ex*	x	20 47 41.9	
SMLA	comp=E,219nm,0.2s			*ex*	x	20 47 50.7	
SMLA	comp=N,170nm,0.3s			*ex*	x	20 47 54.2	
JOSI	**Joshimath**	**9.59**	**171**	*e*S	**Sn**	**20 47 55.5**	**-6.6**
JOSI				AML	AML	20 48 13.7	
JOSI	comp=E,25nm,0.4s			AML	AML	20 48 16.1	
JOSI	comp=N,32nm,0.7s			AML	AML	20 48 16.1	
KURBB	**Kurchatov Arra** comp=N,0.6nm,0.6s	**10.57**	**3**	⇑Pn	**Pn**	**20 46 24.0**	**-3.7**
KURBB	comp=N,7.1nm,0.9s			⇓Lg		20 49 33.5	
KURK	**Kurchatov** baz=192,slow=12	**10.67**	**3**	Pn	**Pn**	**20 46 22.9**	**-6.0**
KURK	baz=193,slow=28			Lg		20 49 26.1	
KURK	**Kurchatov**	**10.67**	**3**	Pn	**Pn**	**20 46 22.9**	**-6.0**
KURK				*e*Pn	**Pn**	**20 46 23.9**	**-5.0**
KURK				Lg		20 49 26.1	
KUDL	**Kundal**	**11.94**	**186**	*e*P	**Pn**	**20 46 46.3**	**-0.1**
KUDL				*e*S	**Sn**	**20 48 47.3**	**-12**
KHET	**Khetri**	**12.07**	**188**	*e*P	**Pn**	**20 46 48.6**	**+0.3**
KHET				*e*S	**Sn**	**20 48 50.7**	**-12**
KHET	comp=E,4.3nm,0.2s			AML	AML	20 49 14.6	
KHET	comp=N,6.6nm,0.3s			AML	AML	20 49 15.8	
DANN	**Dangsing** comp=N,5.4nm,0.3s	**12.68**	**155**	*e*P	**Pn**	**20 46 56.0**	**-0.5**
KOLN	**Koldanda**	**13.17**	**157**	*e*P	**Pn**	**20 47 02.8**	**-0.4**
GKN	**Gorkha** comp=N,6.9nm,0.3s	**13.29**	**153**	*e*P	**Pn**	**20 47 05.0**	**+0.1**
VOSK	**Vostochnaya** comp=N,3.2nm,1.5s	**13.50**	**342**	⇑Pn	**Pn**	**20 47 04.3**	**-3.4**
VOSK				Lg		20 51 09.9	
KKN	**Kakani** comp=N,4.4nm,0.4s	**13.71**	**151**	*e*P	**Pn**	**20 47 10.1**	**-0.6**
KKN	**Kakani**	**13.71**	**151**	*e*P	**Pn**	**20 47 10.1**	**-0.6**
KKN	comp=Z,4.0nm,0.4s			pmax	pmax		
GUN	**Gumba**	**13.84**	**149**	*e*P	**Pn**	**20 47 12.3**	**-0.1**
BVA0	**Borovoye Array** comp=Z,0.6nm,1.1s,baz=39,slow=23,SNR=5.4	**13.92**	**341**	⇓Pn	**Pn**	**20 47 10.7**	**-2.7**
BVA0	comp=Z,1.2nm,1.2s,baz=160,slow=29,SNR=6.9			Lg		20 51 24.2	
BVAR	**Borovoye Array** comp=Z,0.2nm,0.3s,baz=151,slow=10,SNR=11	**13.92**	**341**	Pn	**Pn**	**20 47 10.3**	**-3.0**
BVAR	comp=Z,0.1nm,0.3s,baz=155,slow=18,SNR=4.3			Lg		20 51 03.9	
BVAR	comp=Z,76nm,18.4s,baz=222,slow=39			LR	LR	20 52 52.8	
BRVK	**Borovoye** comp=Z,4.7nm,0.7s	**13.98**	**341**	Pn	**Pn**	**20 47 11.6**	**-2.6**
BRVK	**Borovoye**	**13.98**	**341**	P	**Pn**	**20 47 11.6**	**-2.5**
BRVK	comp=Z,5.0nm,0.7s			pmax	pmax		
JIRN	**Jiri**	**14.19**	**148**	*e*P	**Pn**	**20 47 17.2**	**+0.1**
ZALV	**Zalesovo Beam** baz=186,slow=12,SNR=3.6	**14.68**	**17**	Pn	**Pn**	**20 47 22.2**	**-1.5**
ZALV	baz=198,slow=27,SNR=2.8			Lg		20 51 36.3	
ZALV	**Zalesovo Beam**	**14.68**	**17**	Pn	**Pn**	**20 47 22.2**	**-1.5**
ZALV				Lg		20 51 36.3	
RAMN	**Ramite**	**14.98**	**148**	*e*P	**Pn**	**20 47 27.0**	**-1.0**
NVS	**Novosibirsk**	**15.22**	**12**	*e*P	**Pn**	**20 47 35.1**	**+4.1**
NVS	comp=N,5.0nm,1.0s			pmax	pmax		
NVS	comp=E,4.0nm,1.0s			pmax	pmax		
NVS	comp=Z,5.0nm,1.0s			pmax	pmax		
ODAN	**Odare**	**15.39**	**146**	*e*P	**Pn**	**20 47 33.1**	**-0.3**
AB31	**Akbulak array**	**15.65**	**312**	P	**Pn**	**20 47 34.1**	**-2.6**
AB31	comp=Z,3.0nm,0.8s			pmax	pmax		
AB09	**Akbulak array** comp=Z,1.7nm,0.7s	**15.67**	**312**	⇑Pn	**Pn**	**20 47 33.9**	**-3.0**
GTA	**Gaotai**	**16.94**	**85**	*e*P	**Pn**	**20 47 52.2**	**-1.0**
GTA				AP	pP	20 47 56.8	-1.2
GTA				XP	sP	20 47 59.3	0.0
GTA				S	**Sn**	**20 51 00.6**	**-0.8**
AKTK	**Aktyubinsk**	**17.32**	**313**	P	**Pn**	**20 47 56.6**	**-1.3**
AKTO	**Aktyubinsk** comp=Z,0.1nm,0.3s,baz=114,slow=15,SNR=5.0	**17.32**	**313**	P	**Pn**	**20 47 56.6**	**-1.3**
ZAK	**Zakamensk**	**20.60**	**51**	*e*P	**P**	**20 48 36.6**	**+1.4**
ZAK	comp=Z,4.0nm,1.1s			pmax	pmax		
ARU	**Arti** comp=Z,5.9nm,1.0s	**20.68**	**329**	*e*Pn	**P**	**20 48 37.9**	**+1.9**
ARU	**Arti**	**20.68**	**329**	*e*P	**P**	**20 48 37.9**	**+1.9**
ARU	comp=Z,6.0nm,1.0s			pmax	pmax		
SONM	**Songino Array** comp=Z,2.0nm,0.9s,mb3.5,baz=264,slow=9.7,SNR=13	**21.91**	**60**	P	**P**	**20 48 50.3**	**+0.9**
SONM	**Songino Array**	**21.91**	**60**	P	**P**	**20 48 50.3**	**+1.0**
SONM	comp=Z,2.0nm,1.0s			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,4.7nm,1.4s,mb3.7	**22.35**	**60**	P	**P**	**20 48 54.3**	**+0.3**
ULN	**Ulaanbaatar**	**22.35**	**60**	P	**P**	**20 48 54.3**	**+0.2**
ULN	comp=Z,5.0nm,1.4s,mb3.8			pmax	pmax		
GERES	**GERESS Array B** comp=Z,0.5nm,0.7s,mb3.5,baz=79,slow=9.7,SNR=5.2	**45.36**	**303**	P	**P**	**20 52 13.4**	**-0.9**
GERES	**GERESS Array B**	**45.36**	**303**	P	**P**	**20 52 13.4**	**-1.0**
GERES	comp=Z,1.0nm,0.7s			pmax	pmax		
TOA0	**Torodi Ar. Sit**	**71.08**	**271**	*e*P	**P**	**20 55 12.7**	**-2.1**
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,0.6s,mb4.1,baz=45,slow=4.9,SNR=13	**71.08**	**271**	P	**P**	**20 55 12.5**	**-2.3**
YKA	**Yellowknife Ar** comp=Z,1.3nm,0.7s,mb4.0,baz=345,slow=5.8,SNR=3.2	**77.30**	**6**	P	**P**	**20 55 49.9**	**-0.4**
YKA	**Yellowknife Ar**	**77.30**	**6**	P	**P**	**20 55 49.9**	**-0.4**
YKA	**Yellowknife Ar**	**77.30**	**6**	P	**P**	**20 55 49.9**	**-0.5**
YKA	comp=Z,1.0nm,0.7s			pmax	pmax		

*IDC **03** 20:48:46.4±13.0, 676S×12977E, h97km±128km, mb3.4/2, mb1 4.1/5, mb1mx3.5/16, mbtmp3.9/5, ML4.4/3, Error ellipse: s-maj=157.7km s-min=26.2km az=51.0*
*NEIC **03** 20:48:47.1±1.3, 701S×12928E, h100km, mb4.3/2, Error ellipse: s-maj=32.4km s-min=16.4km az=62.0*
*ISCJB **03** 20:48:56.5±1.8, 76S±0.1×12913E±008, h204km±20km, Error ellipse: s-maj=17.9km s-min=10.6km az=28.2*

ISC 03 20:48:56.2±2.8, 77S±02×1293E±01, h123km±27km, n11, σ1§30/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**5.83**	**148**	*e*Pn	**Pn**	**20 50 16.2**	**-4.2**
BATI	**Baumata** 42nm,0.3s,baz=95,slow=4.4,SNR=68	**6.11**	**246**	P	**Pn**	**20 50 25.5**	**+1.4**
BATI	10nm,0.3s,baz=357,slow=5.7,SNR=4.0			S	**Sn**	**20 51 32.1**	**-0.6**
WRAB	**Tennant Creek** 18nm,0.6s	**13.08**	**159**	*e*Pn	**Pn**	**20 51 57.4**	**+0.1**
WRAB				*e*Sn	**Sn**	**20 54 20.4**	**-1.1**
WRA	**Warramunga Arr** 0.7nm,0.3s,baz=338,slow=13,SNR=25	**13.08**	**159**	P	**Pn**	**20 51 57.2**	**-0.2**
WRA	1.2nm,0.3s,baz=332,slow=22,SNR=9.4			S	**Sn**	**20 54 22.9**	**+1.2**
WB2	**Warramunga Arr**	**13.09**	**159**	*e*Pn	**Pn**	**20 51 57.5**	**+0.1**
WB2				*e*Sn	**Sn**	**20 54 20.0**	**-1.8**
MBWA	**Marble Bar** 11nm,1.1s	**16.25**	**214**	*e*Pn	**Pn**	**20 52 36.4**	**-1.0**
MBWA				*e*Sn	**Sn**	**20 55 28.0**	**-10**
ASAR	**Alice Springs** 2.5nm,0.3s,baz=341,slow=10.0,SNR=200	**16.45**	**165**	P	**Pn**	**20 52 42.6**	**+2.8**
ASAR	0.3nm,0.3s,baz=355,slow=25,SNR=5.0			S	**S**	**20 55 45.7**	**+2.3**
CTAO	**Charters Tower**	**20.50**	**129**	Pn	**P**	**20 53 16.1**	**-8.4**
STKA	**Stephens Creek** 1.1nm,0.4s,baz=325,slow=9.8,SNR=7.0	**26.61**	**156**	P	**P**	**20 54 22.1**	**-1.0**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=130,slow=6.2,SNR=3.1	**68.46**	**327**	P	**P**	**20 59 34.7**	**-10**
MKAR	**Makanchi Array**	**68.46**	**327**	P	**P**	**20 59 34.7**	**-10**

*IDC **03** 21:01:14.2±2.0, 4705N×15647E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.5/23, mbtmp3.7/5, ML2.8/1, Error ellipse: s-maj=46.1km s-min=32.0km az=177.0*
*ISCJB **03** 21:01:19.8±1.6, 475N±02×1565E±03, h33km, mb3.8/4, Error ellipse: s-maj=31.3km s-min=23.9km az=155.5*
*MOS **03** 21:01:21.8±1.8, 4783N×15667E, h33km, mb4.3/3, Error ellipse: s-maj=41.1km s-min=17.3km az=80.4*

ISC 03 21:01:23.7±1.3, 478N±02×1567E±03, h35km, n11, σ1§50/12, mb3.8/4, 2C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-** 0.2nm,0.3s,baz=196,slow=13,SNR=7.6	**5.36**	**7**	Pn	**Pn**	**21 02 44.5**	**+3.4**
PETK	0.2nm,0.3s,baz=295,slow=34,SNR=3.5			Sn	**Sn**	**21 03 58.7**	**+17**
PET	**Petropavlovsk**	**5.39**	**13**	⇑*i*PN	**Pn**	**21 02 40.5**	**-1.0**
MJAR	**Matsushiro Arr**	**17.66**	**237**	*e*P	**Pn**	**21 05 29.2**	**+2.4**
YAK	**Yakutsk** comp=Z,7.0nm,0.6s	**20.84**	**323**	⇑*i*P	**P**	**21 05 57.5**	**-4.5**
YAK				pmax	pmax		
YKA	**Yellowknife Ar** comp=Z,1.3nm,0.8s,mb4.0,baz=281,slow=10,SNR=2.6	**48.63**	**38**	P	**P**	**21 10 03.9**	**+0.4**
YKA	**Yellowknife Ar**	**48.63**	**38**	P	**P**	**21 10 03.9**	**+0.4**
YKA	comp=Z,1.0nm,0.8s			pmax	pmax		
KURK	**Kurchatov** baz=68,slow=8.5	**48.78**	**304**	P	**P**	**21 10 03.0**	**-1.8**
BVAR	**Borovoye Array** comp=Z,0.4nm,0.5s,mb3.6,baz=64,slow=9.8,SNR=3.5	**52.04**	**310**	P	**P**	**21 10 28.1**	**-1.4**
NOA	**NORSAR Array B** comp=Z,2.3nm,0.9s,mb4.2,baz=21,slow=6.2,SNR=3.6	**67.98**	**343**	P	**P**	**21 12 19.8**	**+1.2**
NOA	**NORSAR Array B**	**67.98**	**343**	P	**P**	**21 12 19.8**	**+1.2**
NOA	comp=Z,2.0nm,0.9s			pmax	pmax		
TXAR	**Lajitas Array** comp=Z,0.3nm,0.5s,mb3.5,baz=306,slow=4.3,SNR=4.8	**74.87**	**63**	P	**P**	**21 12 59.8**	**-0.9**

*ISCJB **03** 21:21:57.2±2.3, 2419S±009×1788E±0.1, h485km±37km, mb3.8/5, Error ellipse: s-maj=21.3km s-min=13.9km az=17.6*
*IDC **03** 21:21:59.3±2.2, 2430S×17894E, h512km±23km, mb3.3/5, mb1 3.6/7, mb1mx3.3/17, mbtmp3.4/7, Error ellipse: s-maj=22.6km s-min=19.8km az=168.0*
*NEIC **03** 21:21:59.7±1.3, 2429S×17913E, h538km±19km, mb4.1/2, Error ellipse: s-maj=23.9km s-min=15.0km az=134.0*

ISC 03 21:21:58.4±1.7, 2429S±010×1789E±02, h491km±30km, n16, σ0§77/11, mb3.8/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu** 3.7nm,0.3s,baz=175,slow=12,SNR=4.2	**13.58**	**42**	P	**P**	**21 24 53.4**	**-0.5**
URZ	**Urewera** 2.2nm,0.3s,baz=360,slow=5.4,SNR=11	**14.01**	**186**	P	**P**	**21 24 59.1**	**+1.0**
URZ	0.4nm,0.3s,baz=105,slow=20,SNR=3.7			S	**S**	**21 27 25.9**	**-0.4**
RPZ	**Rata Peaks** 5.6nm,0.8s,baz=90,slow=1.0,SNR=3.1	**20.41**	**196**	P	**P**	**21 26 00.4**	**-0.6**
CTA	**Charters Tower** baz=98,slow=12	**30.46**	**271**	P	**P**	**21 27 31.3**	**+0.9**
STKA	**Stephens Creek** 2.0nm,0.4s,mb3.9,baz=90,slow=11,SNR=14	**33.63**	**249**	P	**P**	**21 27 58.1**	**+0.8**
STKA	**Stephens Creek** 6.0nm,1.3s,mb3.9	**33.63**	**249**	*e*P	**P**	**21 27 58.8**	**+1.4**
ASAR	**Alice Springs** 1.7nm,0.5s,mb3.7,baz=96,slow=8.7,SNR=21	**40.97**	**261**	P	**P**	**21 28 57.5**	**-0.2**
ASAR	0.4nm,0.7s,baz=108,slow=4.2,SNR=5.4			ScP	ScP	21 33 46.2	-3.1
WRAB	**Tennant Creek** 15nm,1.7s,mb4.2	**41.36**	**267**	*e*P	**P**	**21 29 00.3**	**-0.6**
WRA	**Warramunga Arr** 1.5nm,0.4s,mb3.8,baz=91,slow=5.9,SNR=41	**41.36**	**267**	P	**P**	**21 28 59.9**	**-1.1**
TXAR	**Lajitas Array** 0.2nm,0.4s,mb3.4,baz=210,slow=7.2,SNR=3.9	**91.50**	**58**	P	**P**	**21 34 12.7**	**+0.6**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=5.8,slow=0.3,SNR=2.7	**111.67**	**313**	PKiKP	PKiKP	21 39 34.4	-2.1
NOA	**NORSAR Array B** 0.9nm,0.8s,baz=21,slow=3.8,SNR=3.8	**142.30**	**350**	PKhKP		21 40 28.5	
AKASG	**Malin Array Be** 0.7nm,0.4s,baz=49,slow=3.5,SNR=4.6	**144.74**	**326**	PKP	PKPdf	21 40 35.9	-2.6
BRTR	**Keskin Array B** 0.5nm,0.7s,baz=144,slow=6.0,SNR=3.7	**146.99**	**306**	PKPbc	PKPbc	21 40 44.0	-1.6
CLL	**Collm** comp=Z,4.0nm,0.8s	**150.92**	**342**	*i* PKPbc	PKPbc	21 40 53.7	-1.1
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.4s,baz=160,slow=4.6,SNR=5.3	**168.60**	**194**	PKPab	PKPab	21 42 21.0	-1.1

*IDC **03** 21:30:00.4±1.6, 523S×146.13E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/16, mbtmp4.1/8, ML4.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/20, Error ellipse: s-maj=41.6km s-min=22.0km az=91.0*
*ISCJB **03** 21:30:09.5±2.8, 545S±0.1×1459E±0.1, h81km±31km, mb4.0/6,

STKA LR LR 21 48 06.9
CMAR Chiang Mai Arr 51.97 298 P **P** **21 39 12.3 -0.3**
0.4nm,0.5s,mb3.7,baz=120,slow=5.6,SNR=4.9
SONM Songino Array 63.33 331 P **P** **21 40 31.1 -0.7**
0.3nm,0.5s,mb3.5,baz=142,slow=7.5,SNR=5.3
MKAR Makanchi Array 76.32 321 P **P** **21 41 51.2 -0.3**
0.2nm,0.4s,baz=94,slow=9.6,SNR=6.7
TORD Torodi Ar. Bea 143.85 285 PKP PKPdf 21 49 37.1 -1.2
0.3nm,0.4s,baz=89,slow=2.7,SNR=5.6
DBIC Dimbokro 150.87 274 PKPbc PKPbc 21 49 58.4 +2.6
4.2nm,0.9s,baz=39,slow=22,SNR=4.3

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*IDC **03** 21:47:14.4±0.7,244N×12674E,h0km,mb3.8/10,*
mb1 4.0/10,mb1mx3.9/17,mbtmp3.8/10,MS3.6/2,
Ms1 3.6/2,ms1mx2.7/30,Error ellipse: s-maj=47.2km
s-min=15.2km az=71.0
*ISCJB **03** 21:47:17.6±0.6,25N±0.1×126.7E±0.2,h33km,mb3.8/11,*
MS3.6/2,Error ellipse: s-maj=34.8km s-min=10.3km
az=161.6
*NEIC **03** 21:47:19.9±0.5,237N×12669E,h35km,mb4.1/1,Error*
ellipse: s-maj=28.3km s-min=8.4km az=69.0
ISC 03 21:47:19.6±0.6,24N±01×1268E±02,h35km,n13,σ0≤87/12,
mb3.8/11,MS3.6/2,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRAB	**Tennant Creek**	**23.44**	**162**	*e*P		**P**	**21 52 26.4**	**+0.4**
	2.6nm,0.4s,mb4.0							
WRA	**Warramunga Arr**	**23.44**	**162**	P		**P**	**21 52 25.5**	**-0.6**
	3.6nm,0.7s,mb3.9,baz=344,slow=10,SNR=10							
WRA				PcP		PcP	21 56 12.4	+0.8
	0.4nm,0.5s,baz=334,slow=2.0,SNR=3.5							
WB2	**Warramunga Arr**	**23.45**	**162**	*e*P		**P**	**21 52 26.2**	**+0.2**
ASAR	**Alice Springs**	**26.85**	**165**	P		**P**	**21 52 57.3**	**+0.3**
	0.7nm,0.4s,mb3.5,baz=343,slow=6.9,SNR=18							
ASAR				PcP		PcP	21 56 20.2	+1.0
	0.2nm,0.4s,baz=355,slow=2.6,SNR=4.6							
CMAR	**Chiang Mai Arr**	**31.59**	**302**	P		**P**	**21 53 39.6**	**+0.5**
	0.2nm,0.5s,mb3.2,baz=111,slow=7.8,SNR=4.5							
KSRS	**Korea Array**	**34.87**	**2**	P		**P**	**21 54 06.0**	**-1.6**
	0.7nm,0.7s,mb3.7,baz=181,slow=9.7,SNR=3.3							
HNR	**Honiara**	**35.08**	**110**	LR		LR	22 09 30.4	
	comp=Z,71nm,18.5s,MS3.5,baz=132,slow=38							
MJAR	**Matsushiro Arr**	**35.54**	**16**	P		**P**	**21 54 14.8**	**+1.4**
	0.6nm,0.7s,mb3.6,baz=187,slow=9.9,SNR=3.0							
STKA	**Stephens Creek**	**36.91**	**159**	P		**P**	**21 54 24.9**	**-0.1**
	2.6nm,0.7s,mb4.2,baz=332,slow=16,SNR=5.0							
SONM	**Songino Array**	**48.53**	**342**	P		**P**	**21 56 00.0**	**+0.9**
	0.5nm,0.8s,mb3.6,baz=164,slow=7.3,SNR=4.2							
MKAR	**Makanchi Array**	**58.65**	**326**	P		**P**	**21 57 12.6**	**-0.7**
	0.8nm,0.4s,mb4.1,baz=120,slow=7.7,SNR=22							
MKAR				LR		LR	22 25 48.5	
	comp=Z,71nm,19.0s,MS3.8,baz=178,slow=40							
ZALV	**Zalesovo Beam**	**61.76**	**333**	P		**P**	**21 57 35.3**	**+0.8**
	0.4nm,0.4s,mb3.9,baz=145,slow=5.3,SNR=2.6							
ARCES	**ARCESS Array B**	**91.67**	**340**	P		**P**	**22 00 21.4**	**-1.5**
	1.2nm,0.6s,mb4.4,baz=73,slow=3.7,SNR=6.6							

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*NEIC **03** 21:48:08.8,1742N×10041W,h4km,MD3.6(MEX),After*
MEX.
MEX 03 21:48:09.9±0.5,1729N×10053W,h7km±4km,MD3.5,
Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAIG	**El Cayaco**	**0.34**	**133**	*i* P		Pg	21 48 16.1	-0.5
CAIG				*i* S		Sg	21 48 21.6	+0.5
ACX	**Acapulco**	**0.72**	**125**	*i* P		Pg	21 48 22.6	-1.2
ACX				*i* S		Sg	21 48 31.9	-1.1
ACX	**Acapulco**	**0.72**	**125**	*i* P		Pg	21 48 21.8	-1.9
ACX				*i* P			21 48 22.6	
ACX				*i* S		Sg	21 48 31.9	-1.1
ACX				*i* S		Sg	21 48 32.0	-1.0
ZIIG	**Zihuatanejo**	**0.95**	**290**	*i* P		Pg	21 48 25.6	-2.6
ZIIG				*i* S		Sg	21 48 39.5	-1.1
ZIIG	**Zihuatanejo**	**0.95**	**290**	*i* P		Pg	21 48 25.1	-3.0
ZIIG				*i* S		Sg	21 48 38.8	-1.8
MEIG	**Mezcala**	**1.07**	**53**	*i* P		Pg	21 48 28.0	-2.6
MEIG				*i* S		Sg	21 48 41.4	-3.1
PNIG	**Pinotepa**	**2.46**	**111**	*i* P		Pn	21 48 45.8	-4.7
PNIG				*i* S		Sn	21 49 14.3	-6.6
PNIG	**Pinotepa**	**2.46**	**111**	*i* P		Pn	21 48 46.9	-3.7
PNIG				*i* S		Sn	21 49 16.6	-4.3

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*SZGRF **03** 22:08:39.5,43.11N×1050E,h10km,mb3.6,Central Italy*
*MOS **03** 22:08:39.5±0.9,4329N×1081E,h10km,mb4.2/3,Error*
ellipse: s-maj=5.4km s-min=3.5km az=110.0
*ISCJB **03** 22:08:40.0±0.2,4327N±001×1079E±002,h10km,mb3.8/4,*
Error ellipse: s-maj=2.1km s-min=1.7km az=15.2
*IDC **03** 22:08:40.2±1.2,4333N×1093E,h0km,mb3.8/4,mb1 3.8/8,*
mb1mx3.7/24,mbtmp3.7/8,ML3.8/3,MS2.9/4,Ms1 2.9/4,
ms1mx2.5/39,Error ellipse: s-maj=35.3km s-min=15.0km
az=111.0
*NEIC **03** 22:08:40.7,4328N×1087E,h5km,ML3.2(LDG),*
ML3.1(ROM),ML3.2(STR),After ROM.
*ROM **03** 22:08:40.7±0.3,4328N×1087E,h5km±3km,Ml3.1/47,*
Error ellipse: s-maj=2.2km s-min=1.5km az=43.0
*LDG **03** 22:08:41.0±0.1,4330N×1095E,h5km,Ml3.2/25,Error*
ellipse: s-maj=2.8km s-min=1.7km az=21.0
*GEN **03** 22:08:41.6,4327N×1093E,h7km,ML3.0*
*CSEM **03** 22:08:41.5±0.1,4328N×1098E,h12km,mb4.0/3,ML3.2/16,*
Error ellipse: s-maj=1.2km s-min=0.9km az=8.0
*STR **03** 22:08:43.7±0.8,4322N×1067E,h10km,Ml3.2,Error*
ellipse: s-maj=0.0km s-min=0.0km az=0.0
*PRU **03** 22:08:43.3,4354N×1070E,h0km*
ISC 03 22:08:41.3±0.3,4328N±001×1081E±002,h10km±2km,
n228,σ1≤23/296,mb3.8/4,17C-6D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CSNT	**Castellina Chi**	**0.40**	**62**	⇑*i*	Pg	**Pg**	**22 08 48.5**	**-0.7**
CSNT					Sg	**Sg**	**22 08 53.5**	**-1.1**
	3µm,0.7s							
PII	**Pisa**	**0.48**	**335**	⇑*i*	Pg	**Pg**	**22 08 51.5**	**+0.7**
CASP	**Castiglione de**	**0.49**	**175**		Pg	**Pg**	**22 08 50.6**	**-0.3**
	4µm,1.1s							
CRMI	**Carmignano**	**0.52**	**13**	⇑*i*	Pg	**Pg**	**22 08 51.8**	**+0.3**
CRMI					Sg	**Sg**	**22 08 59.0**	**+0.6**
	2µm,0.3s							
ARCI	**Arcidosso**	**0.65**	**131**		Pg	**Pg**	**22 08 53.1**	**-0.9**
	2µm,1.1s							
MAIM	**Mastiano**	**0.67**	**340**		Pg	**Pg**	**22 08 54.7**	**+0.4**
MAIM					Sg	**Sg**	**22 09 03.8**	**+0.7**
	2µm,0.5s							
GROG	**Isola di Gorgo**	**0.68**	**282**		Pg	**Pg**	**22 08 55.3**	**+0.8**
GROG					Sg	**Sg**	**22 09 05.8**	**+2.4**
	1µm,0.5s							
BDI	**Bagni Di Lucca**	**0.79**	**349**	⇑*i*	Pg	**Pg**	**22 08 56.8**	**+0.1**
BDI					Sg	**Sg**	**22 09 07.2**	**+0.2**
	2µm,0.7s							
CAFI	**Castiglion Fio**	**0.85**	**86**	⇑*i*	Pg	**Pg**	**22 08 56.3**	**-1.4**
	671nm,0.8s							
PZZT	**Monte Pizzetto**	**0.85**	**3**		Pg	**Pg**	**22 08 57.7**	**0.0**
PZZT					Sg	**Sg**	**22 09 09.8**	**+1.0**
	3µm,0.5s							
VMG	**Vicchio**	**0.86**	**38**		Pg	**Pg**	**22 08 57.6**	**-0.4**
	2µm,0.6s							
SEI	**Scarperia**	**0.87**	**27**		Pg	**Pg**	**22 08 57.8**	**-0.3**
	845nm,0.2s							
MAON	**Monte Argentar**	**0.89**	**164**	⇑*i*	Pg	**Pg**	**22 08 58.4**	**0.0**
	809nm,0.7s							
CRE	**Caprese Michel**	**0.90**	**68**	⇑*i*	Pg	**Pg**	**22 08 57.8**	**-0.9**
	685nm,0.8s							
FNVD	**Fontana Vidola**	**0.92**	**14**		Pg	**Pg**	**22 08 58.8**	**-0.2**
SACS	**San Casciano d**	**0.92**	**118**		Pg	**Pg**	**22 08 58.3**	**-0.7**
	499nm,0.9s							
VLC	**Villacollemand**	**0.93**	**341**	*e*	Pg	**Pg**	**22 08 59.6**	**+0.4**
VLC	**Villacollemand**	**0.93**	**341**		Pg	**Pg**	**22 08 59.3**	**+0.1**
	1µm,0.8s							
VLC	**Villacollemand**	**0.93**	**341**	*e*	Pg	**Pg**	**22 08 59.6**	**+0.4**
SARO	**Sassorosso**	**0.95**	**342**	P		**Pg**	**22 08 59.9**	**+0.3**
SFI	**Santa Sofia**	**0.98**	**50**		Pg	**Pg**	**22 08 59.3**	**-0.9**
	1µm,0.9s							
LATE	**Laterza**	**0.99**	**132**		Pg	**Pg**	**22 09 00.2**	**-0.2**
	106nm,1.1s							
CDCA	**Citt' di Caste**	**1.06**	**80**		Pg	**Pg**	**22 09 00.2**	**-1.4**
	1µm,1.0s							
BADI	**Badiali**	**1.07**	**77**		Pg	**Pg**	**22 09 00.7**	**-1.3**
	974nm,1.1s							
ZCCA	**Zocca**	**1.07**	**7**		Pg	**Pg**	**22 09 02.7**	**+0.7**
	1µm,0.4s							
GSCL	**Gusciola**	**1.08**	**352**		Pg	**Pg**	**22 09 01.9**	**-0.2**
BACM	**Baccana**	**1.13**	**332**		P	**Pb**	**22 09 03.1**	**+0.2**
BACM					S	**Sb**	**22 09 18.0**	**+0.4**
VALM	**Valbona**	**1.14**	**339**		P	**Pb**	**22 09 03.3**	**+0.2**
VALM					S	**Sb**	**22 09 18.2**	**+0.2**
ERBM	**Eremo**	**1.17**	**346**		Pg	**Pg**	**22 09 03.9**	**+0.1**
	2µm,1.3s							
MURB	**Monte Urbino**	**1.26**	**90**		Pg	**Pg**	**22 09 03.6**	**-1.9**
	1µm,1.0s							
PIEI	**Pieia**	**1.29**	**78**		Pg	**Pg**	**22 09 03.5**	**-2.5**
	487nm,0.9s							
GRAM	**Graiana**	**1.32**	**336**		P	**Pn**	**22 09 05.9**	**+0.1**
GRAM					S	**Sb**	**22 09 22.6**	**-0.6**
RSM	**Repubblica di**	**1.36**	**61**		Pg	**Pg**	**22 09 06.0**	**-1.4**
	433nm,0.9s							
BRSN	**Barisano**	**1.36**	**42**		Pg	**Pg**	**22 09 07.1**	**-0.4**
	935nm,0.6s							
ASS	**Assisi**	**1.37**	**99**		Pg	**Pg**	**22 09 05.1**	**-2.5**
	260nm,0.9s							
FIU	**Minerbio Fiu**	**1.44**	**20**		Pg	**Pg**	**22 09 09.4**	**+0.3**
	1µm,0.9s							
SC2M	**Scurtabo**	**1.45**	**321**		Pg	**Pg**	**22 09 07.5**	**-1.7**
	615nm,0.8s							
SC2M	**Scurtabo**	**1.45**	**321**		P	**Pn**	**22 09 08.1**	**+0.5**
SC2M					S	**Sn**	**22 09 26.0**	**-0.7**
RAVA	**Ravarino**	**1.49**	**9**		Pg	**Pg**	**22 09 10.8**	**+0.9**
	1µm,0.9s							
FSSB	**Fossombrone**	**1.49**	**73**		Pg	**Pg**	**22 09 07.0**	**-3.0**
	188nm,0.8s							
TOLF	**Tolfa**	**1.50**	**144**		Pg	**Pg**	**22 09 07.4**	**-2.8**
	266nm,0.7s							
PGF	**Pioggiola**	**1.52**	**242**	*e*	Pn	**Pn**	**22 09 07.9**	**-0.6**
	SNR=1.0							
PGF					*e*Sn	**Sn**	**22 09 27.6**	**-0.7**
	175nm,0.4s							
PGF	**Pioggiola**	**1.52**	**242**	*e*	Pn	**Pn**	**22 09 07.9**	**-0.6**
	SNR=1.0							
PGF					*e*Sn	**Sn**	**22 09 27.6**	**-0.7**
	88nm,0.4s							
NOVE	**Novellara**	**1.52**	**358**		Pg	**Pg**	**22 09 11.1**	**+0.7**
	2µm,0.9s							
CESI	**CESI - Serrava**	**1.56**	**100**		Pg	**Pn**	**22 09 08.1**	**-1.0**
	164nm,1.2s							
ARVD	**Arcevia**	**1.57**	**81**		Pg	**Pn**	**22 09 07.9**	**-1.4**
	237nm,1.1s							
MNS	**Montasola**	**1.65**	**122**		Pg	**Pn**	**22 09 09.4**	**-0.9**
	69nm,0.6s							
CING	**Cingoli**	**1.75**	**86**		Pg	**Pn**	**22 09 11.0**	**-0.7**
	182nm,0.9s							
NRCA	**Norcia**	**1.75**	**104**		Pg	**Pn**	**22 09 10.9**	**-0.8**
	193nm,1.2s							
LNSS	**Leonessa**	**1.78**	**112**		Pg	**Pn**	**22 09 12.1**	**0.0**
BOB	**Bobbio (Coli)**	**1.78**	**327**		Pg	**Pn**	**22 09 13.0**	**+0.9**
	499nm,1.0s							
MTCE	**Montecelio**	**1.90**	**131**		Pg	**Pn**	**22 09 13.5**	**-0.3**
	136nm,1.4s							
FIAM	**Fiamignano**	**1.98**	**120**		Pg	**Pn**	**22 09 14.7**	**-0.2**
	110nm,0.9s							
OSPF	**L'Ospedale**	**2.01**	**217**		Pn	**Pn**	**22 09 15.1**	**-0.2**
CAMP	**Campotosto**	**2.05**	**110**		Pg	**Pn**	**22 09 16.0**	**+0.1**
	28nm,1.0s							
AOI	**Ancona**	**2.06**	**82**		Pg	**Pn**	**22 09 17.1**	**+1.2**
	153nm,0.9s							
PCP	**Piancastagn**	**2.06**	**308**		P	**Pn**	**22 09 16.8**	**+0.8**
PCP					S	**Sn**	**22 09 40.5**	**-1.2**
QLNO	**Quiliano**	**2.06**	**301**		Pg	**Pn**	**22 09 15.7**	**-0.3**
	702nm,0.8s							
FIN	**Finale Ligure**	**2.10**	**297**		P	**Pn**	**22 09 16.5**	**0.0**
FIN					S	**Sn**	**22 09 40.4**	**-2.2**
OFFI	**Offida**	**2.14**	**98**		Pg	**Pn**	**22 09 19.5**	**+2.5**
	390nm,0.8s							
TERO	**Teramo**	**2.16**	**107**		Pg	**Pn**	**22 09 18.4**	**+1.1**
	83nm,0.6s							
IMI	**Imperia**	**2.21**	**288**		P	**Pn**	**22 09 17.4**	**-0.6**
IMI					S	**Sn**	**22 09 43.5**	**-1.8**
FAGN	**Fagnano**	**2.28**	**115**		Pg	**Pn**	**22 09 19.9**	**+0.9**
	148nm,0.7s							
PTQR	**Pietraquaria**	**2.29**	**122**		Pg	**Pn**	**22 09 20.1**	**+0.9**
	199nm,1.1s							
SALO	**Salr**	**2.34**	**355**		Pg	**Pg**	**22 09 21.7**	**-4.6**
VCEL	**Villa Celiera**	**2.40**	**111**		Pg	**Pn**	**22 09 22.5**	**+1.8**
	137nm,1.0s							
SAOF	**Saorge**	**2.46**	**288**		Pn	**Pn**	**22 09 21.7**	**+0.2**
MAGA	**Magasa**	**2.50**	**357**		Pg	**Pn**	**22 09 22.6**	**+0.6**
	401nm,0.4s							
VVLD	**Villa Vallelon**	**2.51**	**123**		Pg	**Pg**	**22 09 23.5**	**-6.0**
	79nm,0.8s							
SBF	**Sospel**	**2.52**	**284**	*e*	Pn	**Pn**	**22 09 21.3**	**-0.9**
	SNR=1.0							
SBF					*e*Sn	**Sn**	**22 09 50.9**	**-2.1**
	27nm,0.3s,SNR=1.0							
SBF	**Sospel**	**2.52**	**284**	*e*	Pn	**Pn**	**22 09 21.3**	**-0.9**
	SNR=1.0							
SBF					*e*Sn	**Sn**	**22 09 50.9**	**-2.1**
	14nm,0.3s,SNR=1.0							
REVF	**Revere**	**2.54**	**282**		Pn	**Pn**	**22 09 21.4**	**-1.2**
AUTN	**L'Aution**	**2.55**	**287**		Pn	**Pn**	**22 09 23.1**	**+0.3**
LUCF	**Luceram**	**2.59**	**285**		Pn	**Pn**	**22 09 22.3**	**-0.9**
MDI	**Moti di Nese**	**2.61**	**343**		Pg	**Pn**	**22 09 24.4**	**+0.8**
	106nm,0.6s							
INTR	**Introdacqua**	**2.62**	**118**		Pg	**Pn**	**22 09 24.3**	**+0.7**
	125nm,0.9s							
POFI	**Posta Fibreno**	**2.66**	**125**		Pg	**Pn**	**22 09 24.7**	**+0.5**
	101nm,1.6s							
TOUF	**Mont Tournerai**	**2.68**	**287**		Pn	**Pn**	**22 09 24.6**	**+0.1**
MABI	**Malga Bissina**	**2.78**	**356**		Pg	**Pn**	**22 09 26.7**	**+0.8**
	104nm,0.9s							
CTI	**Castel Tesino**	**2.83**	**12**		Pg	**Pn**	**22 09 26.2**	**-0.4**
	39nm,0.4s							
DOI	**San Damiano**	**2.85**	**297**		Pg	**Pn**	**22 09 26.9**	**+0.1**
	40nm,0.5s							
CALN	**Calern**	**2.89**	**281**		Pn	**Pn**	**22 09 26.9**	**-0.4**
MUGIO	**Muggio**	**2.92**	**335**		Pg	**Pn**	**22 09 29.0**	**+1.2**
VAI	**Varese**	**2.97**	**331**		Pg	**Pn**	**22 09 29.6**	**+1.2**
	181nm,1.3s							
FRF	**La Foret Royal**	**3.04**	**277**	*e*	Pn	**Pn**	**22 09 28.5**	**-1.0**
	SNR=1.0							
FRF					*e*Sn	**Sn**	**22 10 02.9**	**-3.0**
	SNR=1.0							
LMR	**La Mourre**	**3.14**	**272**	*e*	Pn	**Pn**	**22 09 29.6**	**-1.2**
	SNR=1.0							
LMR					*e*Sn	**Sn**	**22 10 04.0**	**-4.2**
	21nm,0.4s,SNR=1.0							
MBDF	**Montbardon**	**3.25**	**298**	*e*	Pn	**Pn**	**22 09 31.9**	**-0.4**
	SNR=1.0							
MBDF					*e*Sn	**Sn**	**22 10 09.4**	**-1.6**
	27nm,0.5s,SNR=1.0							
MBDF	**Montbardon**	**3.25**	**298**	*e*	Pn	**Pn**	**22 09 31.9**	**-0.4**
	SNR=1.0							
MBDF					*e*Sn	**Sn**	**22 10 09.4**	**-1.6**
	13nm,0.5s,SNR=1.0							
BNI	**Bardonecchia**	**3.46**	**302**	*e*	Pn	**Pn**	**22 09 36.5**	**+1.3**
BNI	**Bardonecchia**	**3.46**	**302**	*e*	Pn	**Pn**	**22 09 36.5**	**+1.3**
DAVOX	**Davos/Dischmat**	**3.56**	**350**		Pn	**Pn**	**22 09 38.4**	**+1.8**
	6.4nm,0.3s,baz=157,slow=15,SNR=62							
DAVOX					Sn	**Sn**	**22 10 22.4**	**+3.7**
	2.7nm,0.3s,baz=140,slow=23,SNR=2.0							
DAVOX					LR	LR	22 10 56.0	
	comp=Z,122nm,18.3s,baz=88,slow=38							
DAVOX	**Davos/Dischmat**	**3.56**	**350**		Pn	**Pn**	**22 09 38.4**	**+1.8**
DAVOX					Sn	**Sn**	**22 10 22.4**	**+3.8**
SEST	**Monte Rota**	**3.61**	**16**		Pg	**Pn**	**22 09 38.0**	**+0.8**
	115nm,1.0s							
DAVOS	**Davos**	**3.63**	**349**		P	**Pn**	**22 09 38.4**	**+0.9**
DAVOS					S	**Sn**	**22 10 22.4**	**+2.0**
LPG	**La Plagne**	**3.65**	**309**	*e*	Pn	**Pn**	**22 09 39.1**	**+1.2**
	SNR=1.0							
LPG					*e*Sn	**Sn**	**22 10 16.9**	**-4.1**
	21nm,0.7s,SNR=1.0							
ABTA	**Abfaltersbach**	**3.67**	**19**	*i*	Pn	**Pn**	**22 09 38.3**	**+0.3**
	12nm,0.5s,SNR=12							
ABTA	**Abfaltersbach**	**3.67**	**19**		Pn	**Pn**	**22 09 38.3**	**+0.2**
	12nm,0.5s,SNR=12							
LPL	**La Plagne**	**3.67**	**309**	*e*	Pn	**Pn**	**22 09 39.2**	**+1.0**
	SNR=1.0							
LPL					*e*Sn	**Sn**	**22 10 19.5**	**-2.0**
	28nm,0.9s							
LPL	**La Plagne**	**3.67**	**309**	*e*	Pn	**Pn**	**22 09 39.2**	**+1.0**
	SNR=1.0							
LPL					*e*Sn	**Sn**	**22 10 19.5**	**-2.0**
	14nm,0.9s							
FETA	**Feichten**	**3.74**	**359**	⇑*i*		**Pn**	**22 09 40.8**	**+1.8**
	26nm,0.8s,SNR=40							
SMRF	**Simiane la Rot**	**3.86**	**282**	*e*	Pn	**Pn**	**22 09 41.3**	**+0.6**
	SNR=1.0							
SMRF					*e*Sn	**Sn**	**22 10 24.7**	**-1.4**
	11nm,0.4s							
SMRF	**Simiane la Rot**	**3.86**	**282**	*e*	Pn	**Pn**	**22 09 41.3**	**+0.6**
	SNR=1.0							
SMRF					*e*Sn	**Sn**	**22 10 24.7**	**-1.4**
	5.4nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.91**	**296**	*e*	Pn	**Pn**	**22 09 42.9**	**+1.6**
	SNR=1.0							
ORIF					*e*Sn	**Sn**	**22 10 24.1**	**-3.1**
	35nm,0.6s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.91**	**296**	*e*	Pn	**Pn**	**22 09 42.9**	**+1.6**
	SNR=1.0							
ORIF					*e*Sn	**Sn**	**22 10 24.1**	**-3.1**
	18nm,0.6s,SNR=1.0							
VSL	**Villasalto**	**3.93**	**196**	*e*	Pn	**Pn**	**22 09 42.6**	**+0.9**
VSL	**Villasalto**	**3.93**	**196**	*e*	Pn	**Pn**	**22 09 42.6**	**+0.9**
WTTA	**Wattenberg**	**4.03**	**8**	⇑*i*	P	**Pn**	**22 09 44.3**	**+1.3**
	30nm,0.6s,SNR=30							
DAVA	**Damuels**	**4.06**	**351**	⇑*i*	P	**Pn**	**22 09 45.7**	**+2.2**
	17nm,0.4s,SNR=12							
MOTA	**Moosalm**	**4.07**	**3**	⇑*i*	P	**Pn**	**22 09 45.3**	**+1.7**
	41nm,0.6s,SNR=76							
WATA	**Walderalm**	**4.09**	**7**	⇓*i*	P	**Pn**	**22 09 45.2**	**+1.3**
	37nm,0.5s,SNR=39							
KBA	**Koelnbreinsper**	**4.20**	**24**	⇑*i*	Pn	**Pn**	**22 09 45.4**	**+0.1**
	20nm,0.4s,SNR=18							
RETA	**Reutte**	**4.21**	**360**	⇑*i*	P	**Pn**	**22 09 47.2**	**+1.8**
	21nm,0.4s,SNR=55							
RJOB	**Jochberg**	**4.67**	**17**	*e*	Pn	**Pn**	**22 09 52.6**	**+0.8**
RJOB					*e*Sn	**Sn**	**22 10 49.0**	**+3.0**
VIVF	**Saint-Julien-l**	**4.69**	**292**	*e*	Pn	**Pn**	**22 09 52.1**	**0.0**
	SNR=1.0							
VIVF					*e*Sn	**Sn**	**22 10 44.0**	**-2.5**
	5.0nm,0.5s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.69**	**292**	*e*	Pn	**Pn**	**22 09 52.1**	**0.0**
	SNR=1.0							
VIVF					*e*Sn	**Sn**	**22 10 44.0**	**-2.5**
	2.5nm,0.5s,SNR=1.0							
CABF	**La Chapelle**	**4.72**	**316**	*e*	Pn	**Pn**	**22 09 53.6**	**+1.1**
	SNR=1.0							
CABF					*e*Sn	**Sn**	**22 10 44.2**	**-3.1**
	15nm,0.8s							
CABF	**La Chapelle**	**4.72**	**316**	*e*	Pn	**Pn**	**22 09 53.6**	**+1.1**
	SNR=1.0							
CABF					*e*Sn	**Sn**	**22 10 44.2**	**-3.1**
	7.7nm,0.8s							
BBS	**Basel-Blauen**	**4.78**	**332**		Pn	**Pn**	**22 09 54.2**	**+0.8**
LOMF	**Lomont**	**4.94**	**327**		Pn	**Pn**	**22 09 57.5**	**+1.9**
FELD	**Feldberg im Sc**	**5.00**	**338**		Pn	**Pn**	**22 09 57.4**	**+1.1**
SPAK	**Spaichingen-Ko**	**5.02**	**344**		Pn	**Pn**	**22 09 56.2**	**-0.5**
LASF	**Ste Croix**	**5.10**	**281**	*e*	Pn	**Pn**	**22 09 57.7**	**-0.1**
	SNR=1.0							
LASF					*e*Sn	**Sn**	**22 10 54.3**	**-2.4**
	3.1nm,0.4s							
LASF	**Ste Croix**	**5.10**	**281**	*e*	Pn	**Pn**	**22 09 57.7**	**-0.1**
	SNR=1.0							
LASF					*e*Sn	**Sn**	**22 10 54.3**	**-2.4**
	1.5nm,0.4s							
MOA	**Molln**	**5.17**	**27**	⇑*i*	Pn	**Pn**	**22 09 58.9**	**+0.2**
	4.7nm,0.3s,SNR=13							
ARSA	**Arzberg**	**5.18**	**38**	⇑*i*	Pn	**Pn**	**22 09 57.8**	**-1.1**
	12nm,0.6s,SNR=11							
MOF	**Molkenrain**	**5.25**	**332**		Pn	**Pn**	**22 09 59.6**	**-0.1**
HINF	**Hinteralfeld**	**5.32**	**330**	*e*	Pn	**Pn**	**22 10 00.0**	**-0.7**
	SNR=1.0							
HINF					*e*Sn	**Sn**	**22 10 58.0**	**-3.9**
	14nm,0.4s,SNR=1.0							
HINF	**Hinteralfeld**	**5.32**	**330**	*e*	Pn	**Pn**	**22 10 00.0**	**-0.7**
	SNR=1.0							
HINF					*e*Sn	**Sn**	**22 10 58.0**	**-3.9**
	6.8nm,0.4s,SNR=1.0							
BFO	**Black Forest**	**5.34**	**342**	*e*	Pn	**Pn**	**22 10 01.1**	**+0.1**
BFO					*e*Sn	**Sn**	**22 10 59.6**	**-2.8**
ECH	**Echery**	**5.55**	**334**		Pn	**Pn**	**22 10 05.1**	**+1.1**
HAU	**Haudompre**	**5.66**	**328**	*e*	Pg	**Pg**	**22 10 26.6**	**-3.1**
	SNR=1.0							
HAU					*e*Sn	**Sn**	**22 11 06.7**	**-3.8**
	18nm,0.4s,SNR=1.0							
HAU	**Haudomp

	SNR=1.0							
BGF				*e*Sn		**Sn**	**22 11 28.0**	**-3.8**
	comp=Z,3.7nm,0.4s							
ROTZ	**Rotzenmuhle**	**6.56**	**8**	*e*Pn		**Pn**	**22 10 16.8**	**-0.9**
MEZF	**Maizieres J'vi**	**6.58**	**324**	*e*Pn		**Pn**	**22 10 17.2**	**-0.9**
MEZF				*e*Sn		**Sn**	**22 11 28.3**	**-4.9**
	comp=Z,3.6nm,0.5s							
MEZF	**Maizieres J'vi**	**6.58**	**324**	*e*Pn		**Pn**	**22 10 17.2**	**-0.9**
MEZF				*e*Sn		**Sn**	**22 11 28.3**	**-4.9**
	comp=Z,1.8nm,0.5s							
FGSL	**Fruska Gora**	**6.74**	**71**	*e*Pn		**Pn**	**22 10 20.5**	**+0.3**
MODS	**Modra-Piesok**	**6.81**	**39**	*e*Pn		**Pn**	**22 10 21.9**	**+0.7**
MODS				*e*SN		**Sn**	**22 11 35.7**	**-3.0**
ETOS	**Mallorca**	**6.95**	**242**	P		**Pn**	**22 10 24.5**	**+1.4**
ETOS	**Mallorca**	**6.95**	**242**	P		**Pn**	**22 10 24.5**	**+1.4**
	comp=Z,28nm,0.5s,SNR=14							
EMIR	**Miracle**	**6.98**	**262**	P		**Pn**	**22 10 24.3**	**+0.7**
EMIR	**Miracle**	**6.98**	**262**	P		**Pn**	**22 10 24.3**	**+0.7**
	comp=Z,6.1nm,0.3s,SNR=7.8							
HYF	**Humbligny**	**7.00**	**308**	*e*Pn		**Pn**	**22 10 23.0**	**-0.9**
HYF				*e*Sn		**Sn**	**22 11 39.0**	**-4.5**
NKC	**Novy Kostel**	**7.04**	**9**	*e*Pn		**Pn**	**22 10 23.3**	**-1.1**
TNS	**Taunus Mts**	**7.13**	**348**	*e*Pn		**Pn**	**22 10 24.5**	**-1.1**
PRU	**Pruhonice**	**7.18**	**20**	*e*Pn		**Pn**	**22 10 24.5**	**-1.8**
TANN	**Tannenbergstha**	**7.22**	**8**	*e*Pn		**Pn**	**22 10 26.7**	**-0.2**
VRAC	**Vranov**	**7.24**	**32**	Pn		**Pn**	**22 10 24.9**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=225,slow=13,SNR=2.9							
VRAC				LR		LR	22 13 40.7	
	comp=Z,90nm,19.9s,baz=292,slow=42							
VRAC	**Vranov**	**7.24**	**32**	||*i*P		**Pn**	**22 10 25.6**	**-1.5**
MOX	**Moxa**	**7.39**	**4**	*e*PN		**Pn**	**22 10 30.9**	**+1.8**
MOX	**Moxa**	**7.39**	**4**	*e*Pn		**Pn**	**22 10 30.4**	**+1.3**
LFF	**La Frestale**	**7.43**	**286**	*e*Pn		**Pn**	**22 10 29.0**	**-0.8**
EPOB	**Poblet**	**7.46**	**258**	P		**Pn**	**22 10 27.3**	**-2.9**
EPOB	**Poblet**	**7.46**	**258**	P		**Pn**	**22 10 27.3**	**-2.9**
	comp=Z,1.9nm,0.5s,SNR=7.9							
KOLL	**Kolacno**	**7.49**	**42**	*e*PN		**Pn**	**22 10 35.6**	**+5.1**
KEST	**Kesra**	**7.62**	**189**	Pn		**Pn**	**22 10 36.1**	**+3.6**
	comp=Z,1.0nm,0.3s,baz=302,slow=3.0,SNR=56							
VYHS	**Vyhne**	**7.65**	**44**	*e*PN		**Pn**	**22 10 38.8**	**+6.1**
EPF	**Esparros**	**7.66**	**272**	*e*Pn		**Pn**	**22 10 33.1**	**+0.2**
EPF				*e*Sn		**Sn**	**22 11 55.5**	**-4.1**
	comp=Z,2.1nm,0.6s							
EPF	**Esparros**	**7.66**	**272**	*e*Pn		**Pn**	**22 10 33.1**	**+0.2**
EPF				*e*Sn		**Sn**	**22 11 55.5**	**-4.1**
	comp=Z,1.0nm,0.6s							
EBIE	**Bielsa**	**7.84**	**269**	P		**Pn**	**22 10 38.2**	**+2.8**
EBIE	**Bielsa**	**7.84**	**269**	P		**Pn**	**22 10 38.2**	**+2.8**
	comp=Z,1.8nm,0.4s,SNR=6.9							
BRG	**Berggiesshubel**	**7.89**	**15**	Pg		**Pn**	**22 10 36.1**	**+0.1**
BRG				*e*			22 12 15.9	
BRG				*e*			22 12 38.2	
BRG	**Berggiesshubel**	**7.89**	**15**	P		**Pn**	**22 10 36.1**	**+0.1**
BRG				*e*			22 12 15.9	
BRG				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BRG	**Berggiesshubel**	**7.89**	**15**	*e*Pn		**Pn**	**22 10 35.5**	**-0.5**
BARS	**Barje**	**8.08**	**90**	*e*Pn		**Pn**	**22 10 39.5**	**+0.9**
BZS	**Buzias**	**8.08**	**69**	||*i*P		**Pn**	**22 10 40.3**	**+1.7**
ERTA	**Horta de San J**	**8.12**	**257**	P		**Pn**	**22 10 39.6**	**+0.4**
ERTA	**Horta de San J**	**8.12**	**257**	P		**Pn**	**22 10 39.6**	**+0.3**
	comp=Z,3.5nm,0.4s,SNR=7.9							
CLL	**Collm**	**8.17**	**10**	*e*Pn		**Pn**	**22 10 38.0**	**-1.8**
CLL				*i* x		x	22 10 41.0	
	comp=Z,8.0nm,0.9s							
CLL				*e*Sg		Sn	22 12 53.0	+41
EIBI	**Ibiza**	**8.31**	**242**	P		**Pn**	**22 10 43.9**	**+2.2**
EIBI	**Ibiza**	**8.31**	**242**	P		**Pn**	**22 10 43.9**	**+2.1**
	comp=Z,44nm,0.9s,SNR=5.6							
ETSF	**Etsaut**	**8.33**	**271**	*e*Pn		**Pn**	**22 10 41.9**	**-0.1**
	SNR=1.0							
ESAC	**San Caprasio**	**8.47**	**263**	P		**Pn**	**22 10 46.6**	**+2.5**
ESAC	**San Caprasio**	**8.47**	**263**	P		**Pn**	**22 10 46.6**	**+2.5**
	comp=Z,5.4nm,0.3s,SNR=7.9							
GZR	**Gura Zlata**	**8.84**	**72**	||*i*P		**Pn**	**22 10 50.2**	**+1.2**
EORO	**Oroz-Betelu**	**8.88**	**272**	P		**Pn**	**22 10 54.8**	**+5.2**
	comp=Z,3.7nm,0.6s,SNR=7.9							
EMOS	**Mosqueruela**	**8.91**	**255**	P		**Pn**	**22 10 52.1**	**+2.0**
EMOS	**Mosqueruela**	**8.91**	**255**	P		**Pn**	**22 10 52.1**	**+2.0**
	comp=Z,2.5nm,0.4s,SNR=7.9							
EALK	**Alkurruntz**	**8.99**	**274**	P		**Pn**	**22 10 58.2**	**+7.1**
EALK	**Alkurruntz**	**8.99**	**274**	P		**Pn**	**22 10 58.2**	**+7.1**
	comp=Z,1.9nm,0.5s,SNR=7.9							
DRGR		**9.13**	**63**	||*i*P		**Pn**	**22 10 55.4**	**+2.4**
STHS	**Stebnicka Huta**	**9.47**	**46**	*e*PN		**Pn**	**22 10 55.6**	**-2.0**
EBEN	**Beniarda**	**9.51**	**245**	P		**Pn**	**22 11 01.0**	**+2.8**
EBEN	**Beniarda**	**9.51**	**245**	P		**Pn**	**22 11 01.0**	**+2.7**
	comp=Z,9.9nm,0.6s,SNR=7.5							
ETOR	**Torete**	**9.88**	**260**	P		**Pn**	**22 11 05.8**	**+2.5**
ETOR	**Torete**	**9.88**	**260**	P		**Pn**	**22 11 05.8**	**+2.5**
	comp=Z,2.6nm,0.5s,SNR=7.9							
ETOB	**Tobarra**	**10.43**	**248**	P		**Pn**	**22 11 12.6**	**+1.8**
ETOB	**Tobarra**	**10.43**	**248**	P		**Pn**	**22 11 12.6**	**+1.8**
	comp=Z,6.2nm,0.5s,SNR=6.5							
VOIR		**10.43**	**73**	||*i*P		**Pn**	**22 11 15.5**	**+4.7**
EMUR	**La Murta**	**10.65**	**243**	P		**Pn**	**22 11 16.4**	**+2.6**
EMUR	**La Murta**	**10.65**	**243**	P		**Pn**	**22 11 16.5**	**+2.6**
ESDC	**Sonseca Array**	**11.65**	**257**	Pn		**Pn**	**22 11 26.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=66,slow=14,SNR=7.3							
ARCES	**ARCESS Array B**	**27.39**	**11**	P		**P**	**22 14 26.2**	**-0.2**
	comp=Z,4.2nm,1.1s,mb3.9,baz=211,slow=10,SNR=4.0							
ARCES	**ARCESS Array B**	**27.39**	**11**	P		**P**	**22 14 26.2**	**-0.2**
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.1s							
TORD	**Torodi Ar. Bea**	**31.04**	**197**	P		**P**	**22 15 00.5**	**+1.2**
	comp=Z,0.5nm,0.8s,mb3.4,baz=6.6,slow=8.6,SNR=5.2							
TORD				LR		LR	22 27 54.7	
	comp=Z,72nm,18.1s,baz=345,slow=37							
TORD	**Torodi Ar. Bea**	**31.04**	**197**	P		**P**	**22 15 00.5**	**+1.2**
TORD				LR		LR	22 27 54.7	
MKAR	**Makanchi Array**	**49.03**	**60**	P		**P**	**22 17 27.6**	**-0.5**
	comp=Z,1.1nm,0.6s,mb4.0,baz=284,slow=7.0,SNR=15							
MKAR	**Makanchi Array**	**49.03**	**60**	P		**P**	**22 17 27.6**	**-0.5**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**62.81**	**49**	P		**P**	**22 19 07.8**	**+0.9**
	comp=Z,0.9nm,1.0s,mb3.9,baz=297,slow=5.8,SNR=4.8							
SONM	**Songino Array**	**62.81**	**49**	P		**P**	**22 19 07.8**	**+1.0**
SONM				pmax	pmax			
	comp=Z,1.0nm,1.0s							

*ISCJB **03** 22:09:17.9±1.0,3792N±007×4174E±004,h5km±8km, Error ellipse: s-maj=11.5km s-min=5.5km az=7.4*
*ISK **03** 22:09:17.9,3781N×4170E,h14km,MD3.0*
*DDA **03** 22:09:17.7,3794N×4172E,h6km,Md3.2*
*CSEM **03** 22:09:17.9,3781N×4170E,h14km,MD3.0, After ISK*

ISC 03 22:09:18.5±1.0,3790N±009×4173E±004,h9km±9km,n10, σ0§75/15,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEST	**Besiri**	**0.36**	**269**	*i* P	**Pg**	**22 09 24.8**	**-0.9**
BEST				*i* S	**Sg**	**22 09 31.2**	**+0.7**
SIRT	**Sirnak**	**0.69**	**125**	*e*PG	**Pg**	**22 09 30.9**	**-0.9**
SIRT				*e*SG	**Sg**	**22 09 41.3**	**+0.5**
MARD	**Mardin**	**0.96**	**232**	*i* P	**Pg**	**22 09 36.1**	**-0.8**
MARD				*i* S	**Sg**	**22 09 50.3**	**+1.0**
DIYA	**Diyarbakir**	**1.27**	**271**	*i* P	**Pn**	**22 09 41.4**	**-1.1**
DIYA				*i* S	**Sb**	**22 10 00.1**	**+1.0**
HAKT	**HAKKARI**	**1.60**	**102**	*i* P	**Pn**	**22 09 47.5**	**+0.5**
HAKT				*i* S	**Sn**	**22 10 12.8**	**+4.9**
MSL	**Mosul**	**1.86**	**143**	*ex*	x	22 09 52.5	
MSL				*ex*	x	22 10 16.5	
AGRB	**Hanur-Agry**	**1.94**	**30**	*e*PN	**Pn**	**22 09 52.6**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.97**	**285**	*e*PN	**Pn**	**22 09 51.7**	**-0.3**
SVRC				*e*SN	**Sn**	**22 10 16.4**	**-0.5**
PTK	**Pertek**	**2.09**	**299**	*e*PN	**Pn**	**22 09 54.0**	**+0.3**
URFA	**Urfa**	**2.35**	**260**	*e*PN	**Pn**	**22 09 56.9**	**-0.4**

*ISCJB **03** 22:16:57.8±0.6,5127N±006×1573E±0.1,h101km±4km, mb3.7/10, Error ellipse: s-maj=14.6km s-min=5.6km az=41.9*
*MOS **03** 22:16:57.9±0.8,5142N×15708E,h96km,mb4.1/3, Error ellipse: s-maj=21.5km s-min=11.1km az=70.9*
*KRSC **03** 22:16:58.1±0.7,5122N×15758E,h60km±60km,ML4.5*
*IDC **03** 22:16:59.9±2.1,5138N×157.15E,h107km±17km,mb3.4/10, mb1 3.6/10,mb1mx3.4/23,mbtmp3.4/10, Error ellipse: s-maj=25.1km s-min=14.5km az=152.0*
*NEIC **03** 22:16:59.6±0.9,5139N×157.17E,h104km±8km,mb4.1/2, Error ellipse: s-maj=17.9km s-min=8.3km az=135.0*

2007 NOV

ISC 03 22:16:59.0±0.5,5130N±006×1573E±01,h95km±4km,n42, σ1§23/50,mb3.7/10,3C-2D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.97**	**231**	||*i*PN	**Pn**	**22 17 17.6**	**-1.1**
SKR				*i* S	**Sn**	**22 17 32.5**	**-1.0**
SKR				pmax	pmax		
	comp=Z,1µm,0.4s						
SKR				pmax	pmax		
	comp=N,610nm,0.3s						
SKR				pmax	pmax		
	comp=E,570nm,0.4s						
SKR				smax			
	comp=N,10µm,1.0s						
SKR				smax			
	comp=E,12µm,1.0s						
SKR				smax			
	comp=N,4µm,0.5s						
SKR				smax			
	comp=E,7µm,0.5s						
MIPR	**Malaya Ipel'ka**	**1.03**	**341**	*e*P	**Pn**	**22 17 19.7**	**+0.3**
GRL	**Gorelyy**	**1.34**	**21**	P	**Pn**	**22 17 23.7**	**+0.7**
GRL				*i* S	**Sn**	**22 17 42.0**	**+0.8**
RUS	**Russkaya**	**1.36**	**33**	*e*P	**Pn**	**22 17 22.3**	**-1.0**
RUS				*i* S	**Sn**	**22 17 40.1**	**-1.5**
PEA0B	**Petropavlovsk-**	**1.82**	**8**	*e*Pn	**Pn**	**22 17 29.5**	**+0.4**
PETK	**Petropavlovsk-**	**1.82**	**8**	P	**Pn**	**22 17 29.3**	**+0.2**
	comp=E,19nm,0.3s,baz=202,slow=14,SNR=453						
PETK				S	**Sn**	**22 17 52.9**	**+0.9**
	comp=E,8.7nm,0.3s,baz=158,slow=15,SNR=8.8						
PET	**Petropavlovsk**	**1.92**	**25**	*e*Pn	**Pn**	**22 17 30.4**	**+0.1**
PET	**Petropavlovsk**	**1.92**	**25**	||*i*PN	**Pn**	**22 17 30.3**	**0.0**
PET				*e*S	**Sn**	**22 17 53.7**	**-0.4**
PET				pmax	pmax		
	comp=Z,98nm,0.3s						
PET				smax			
	comp=E,229nm,0.5s						
PET				smax			
	comp=N,436nm,0.6s						
PET	**Petropavlovsk**	**1.92**	**25**	*e*P	**Pn**	**22 17 30.6**	**+0.3**
PET				*i* S	**Sn**	**22 17 54.9**	**+0.8**
AVH	**Avacha**	**2.16**	**24**	*e*P	**Pn**	**22 17 34.8**	**+1.4**
NLC	**Nalytchevo**	**2.26**	**33**	*e*P	**Pn**	**22 17 33.8**	**-0.9**
NLC				*i* S	**Sn**	**22 17 59.7**	**-2.3**
GNL	**Ganaly**	**2.43**	**9**	*e*P	**Pn**	**22 17 37.7**	**+0.7**
SPN	**Mys Shipunski**	**2.46**	**42**	*e*P	**Pn**	**22 17 37.2**	**-0.2**
SPN				*i* S	**Sn**	**22 18 05.9**	**-0.9**
TUMR	**Tumrok**	**4.34**	**22**	P	**Pn**	**22 18 05.8**	**+3.2**
KMNR	**Kamenistaya**	**4.79**	**20**	P	**Pn**	**22 18 11.9**	**+3.1**
SRKR	**Sorokina**	**5.83**	**22**	P	**Pn**	**22 18 24.8**	**+2.0**
ERM	**Erimo**	**13.41**	**232**	Pn	**Pn**	**22 20 05.5**	**+0.1**
	comp=N,4.3nm,0.5s						
ERM	**Erimo**	**13.41**	**232**	||*i*PN	**Pn**	**22 20 08.5**	**+3.1**
HABR	**Khabarovsk**	**14.60**	**268**	*e*P	**Pn**	**22 20 23.0**	**+2.3**
YAK	**Yakutsk**	**18.43**	**316**	*i* P	**Pn**	**22 21 05.7**	**-2.0**
YAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAJO	**Matsushiro**	**20.08**	**230**	*e*P	**P**	**22 21 25.1**	**+0.4**
	comp=Z,3.6nm,0.6s						
MAJO	**Matsushiro**	**20.08**	**230**	*e*P	**P**	**22 21 25.1**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAT	**Matsushiro**	**20.08**	**230**	P	**P**	**22 21 25.7**	**+1.0**
MJAR	**Matsushiro Arr**	**20.08**	**230**	P	**P**	**22 21 24.0**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=28,slow=7.7,SNR=13						
MJAR	**Matsushiro Arr**	**20.08**	**230**	*e*P	**P**	**22 21 25.5**	**+0.8**
HIA	**Hailar**	**23.91**	**280**	||*i*P	**P**	**22 22 02.4**	**-1.3**
HIA				*i* *PP			22 22 25.5	
TIXI	**Tiksi**	**24.05**	**338**	||*i*P	**P**	**22 22 03.0**	**-1.8**
TIXI				pmax	pmax			
	comp=Z,9.0nm,2.7s,mb3.6							
SONM	**Songino Array**	**32.65**	**284**	P	**P**	**22 23 20.5**	**-1.1**
	comp=Z,0.3nm,0.4s,mb3.5,baz=73,slow=7.8,SNR=6.5							
SONM	**Songino Array**	**32.65**	**284**	*e*P	**P**	**22 23 22.2**	**+0.6**
MKAR	**Makanchi Array**	**47.38**	**296**	P	**P**	**22 25 21.1**	**-2.1**
	comp=Z,0.4nm,0.4s,mb3.5,baz=61,slow=7.3,SNR=15							
MKAR	**Makanchi Array**	**47.38**	**296**	*e*P	**P**	**22 25 22.2**	**-1.0**
ARCES	**ARCESS Array B**	**54.44**	**341**	P	**P**	**22 26 16.5**	**+0.7**
	comp=Z,4.4nm,1.1s,mb4.4,baz=50,slow=12,SNR=3.4							
ARCES	**ARCESS Array B**	**54.44**	**341**	P	**P**	**22 26 16.5**	**+0.7**
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**56.11**	**257**	P	**P**	**22 26 28.4**	**0.0**
	comp=Z,0.8nm,0.6s,mb4.0,baz=34,slow=7.2,SNR=8.5							
CMAR	**Chiang Mai Arr**	**56.11**	**257**	*e*P	**P**	**22 26 28.9**	**+0.5**
NVAR	**Mina Array Bea**	**58.00**	**67**	P	**P**	**22 26 41.3**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=308,slow=6.4,SNR=4.9							
PDAR	**Pinedale Array**	**59.92**	**58**	P	**P**	**22 26 55.6**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.6,baz=304,slow=2.1,SNR=3.2							
EKA	**Eskdalemuir Ar**	**72.50**	**348**	P	**P**	**22 28 12.6**	**-2.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=16,slow=5.1,SNR=4.0							
TXAR	**Lajitas Array**	**72.95**	**64**	P	**P**	**22 28 17.5**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.7,baz=303,slow=5.3,SNR=8.1							
TXAR	**Lajitas Array**	**72.95**	**64**	P	**P**	**22 28 18.4**	**+0.5**
ASAR	**Alice Springs**	**77.43**	**202**	P	**P**	**22 28 43.6**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.2,baz=10.0,slow=6.0,SNR=4.3							
ASAR	**Alice Springs**	**77.43**	**202**	*e*P	**P**	**22 28 45.6**	**+2.1**

IDC 03 22:18:28.4±32.0,2309S×17956W,h640km±302km, mb3.2/3,mb1 3.4/3,mb1mx2.9/16,mbtmp3.2/3,Error ellipse: s-maj=300.7km s-min=132.2km az=112.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.89**	**269**	P	P	22 24 04.7	+0.6
	4.4nm,0.3s,baz=99,slow=10,SNR=19						
ASAR	**Alice Springs**	**42.57**	**260**	P	P	22 25 30.6	-0.1
	0.9nm,0.4s,baz=94,slow=7.4,SNR=32						
WRA	**Warramunga Arr**	**42.87**	**265**	P	P	22 25 32.9	-0.2
	2.9nm,0.7s,baz=100,slow=8.3,SNR=12						
HFS	**Hagfors**	**141.83**	**349**	PKhKP		22 36 40.9	
	7.8nm,1.1s,baz=49,slow=2.5,SNR=5.5						
AKASG	**Malin Array Be**	**144.50**	**328**	PKP	PKPdf	22 36 51.7	-1.5
	0.9nm,0.4s,baz=43,slow=4.0,SNR=6.7						
BRTR	**Keskin Array B**	**147.40**	**308**	PKPbc	PKPbc	22 37 02.3	+0.3
	0.5nm,0.7s,baz=114,slow=2.9,SNR=2.9						

IDC 03 22:33:25.6±2.1,563S×13075E,h0km,mb3.5/1,mb1 3.8/3, mb1mx3.5/14,mbtmp3.6/3,ML3.6/2,Error ellipse: s-maj=95.0km s-min=31.6km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.65**	**167**	Pn	Pn	22 36 53.3	-0.9
	0.3nm,0.3s,baz=347,slow=11,SNR=3.0						
WRA				Sn	Sn	22 39 26.0	-11
	0.3nm,0.3s,baz=349,slow=26,SNR=2.6						
ASAR	**Alice Springs**	**18.19**	**171**	P	Pn	22 37 40.1	+0.5
	0.2nm,0.3s,baz=351,slow=8.9,SNR=20						
MKAR	**Makanchi Array**	**67.50**	**326**	P	P	22 44 23.6	+0.1
	0.3nm,0.5s,baz=114,slow=7.8,SNR=5.4						

*NEIC **03** 22:36:13.5,1431N×9342W,h15km,MD4.4(MEX), After MEX.*

MEX 03 22:36:12.6±1.2,1433N×9343W,h6km±31km,MD4.4,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.27**	**63**	*e*P	Pn	22 36 33.2	-3.7
THIG				*i* S	Sg	22 36 48.7	-4.6
PCIG		**1.38**	**9**	*e*P	Pn	22 36 33.5	-4.9
PCIG				*i* S	Sb	22 36 52.1	-4.6
CCIG	**Comitan**	**2.31**	**33**	*e*P	Pn	22 36 49.8	-1.4
CCIG				*i* S	Sn	22 37 15.7	-4.2
TGIG		**2.45**	**7**	*e*P	Pn	22 36 50.9	-2.3
TGIG				*i* S	Sn	22 37 19.6	-3.9
SCX	**San Cristobal**	**2.51**	**18**	*i* P	Pn	22 36 53.3	-0.7
SCX				*i* S	Sn	22 37 22.0	-3.0
SCX	**San Cristobal**	**2.51**	**18**	*i* P	Pn	22 36 52.0	-1.9
SCX				*i* S	Sn	22 37 21.1	-3.8
CMIG	**Matias Romero**	**3.08**	**333**	*e*P	Pn	22 36 59.4	-2.4
CMIG				*i* S	Sn	22 37 34.6	-4.4
VHO	**Vista Hermosa**	**4.19**	**311**	*i* P	Pn	22 37 16.4	-0.6
VHO				*i* S	Sn	22 38 04.2	-2.2
VHO	**Vista Hermosa**	**4.19**	**311**	*i* P	Pn	22 37 15.1	-2.0
VHO				*i* S	Sn	22 38 04.2	-2.2
PNIG	**Pinotepa**	**4.97**	**295**	*i* P	Pn	22 37 25.2	-2.7
PNIG				*i* S	Sn	22 38 18.2	-7.5
PNIG	**Pinotepa**	**4.97**	**295**	*i* P	Pn	22 37 25.2	-2.7
PNIG				*i* S	Sn	22 38 19.6	-6.1
PPM	**Popocatepetl**	**6.85**	**314**	*i* P	Pn	22 37 57.9	+4.2

JMA 03 22:47:22.3±0.2,3211N×13818E,h396km,M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.71**	**54**	P	Pn	22 48 16.8	+0.8
JWZ	**Kozaga**	**2.51**	**305**	P	Pn	22 48 21.1	-0.2
JIE	**Ise**	**2.59**	**332**	P	Pn	22 48 22.4	+0.6
JKN2	**Miekihoku**	**2.66**	**324**	P	Pn	22 48 22.4	+0.1
JWY	**Kouya**	**3.02**	**315**	P	Pn	22 48 25.8	+0.6
JOD2	**Odawara 2**	**3.23**	**13**	P	Pn	22 48 27.7	+0.7
JOD2				S	S	22 49 17.3	-2.2
JNY	**Yasuok**	**3.25**	**355**	P	Pn	22 48 29.3	+2.1
BSO3	**Boso 3**	**3.32**	**35**	P	Pn	22 48 27.4	-0.3
BSO3				S	S	22 49 17.7	-3.1
JEG	**Eigenji**	**3.37**	**334**	P	Pn	22 48 29.1	+0.9
BSO4	**Boso 4**	**3.39**	**32**	P	Pn	22 48 28.7	+0.3
BSO4				S	S	22 49 21.0	-1.0
JYN	**Shimob**	**3.39**	**5**	P	Pn	22 48 30.0	+1.6
BSO1	**Boso 1**	**3.45**	**42**	P	Pn	22 48 28.8	-0.1
BSO1				S	S	22 49 19.3	-3.7
JHU	**Hanno**	**3.84**	**13**	P	Pn	22 48 32.7	+0.2
JHU				S	S	22 49 26.9	-2.6
JRY	**Ryogami san**	**3.94**	**9**	P	Pn	22 48 34.5	+1.1
JRY				S	S	22 49 31.0	-0.2
MAT	**Matsushiro**	**4.42**	**0**	P	Pn	22 48 38.7	+0.6
JAG	**Ashikaga**	**4.43**	**13**	P	Pn	22 48 37.9	-0.3
JAG				S	S	22 49 33.8	-6.0
JYT	**Yasato**	**4.43**	**22**	P	Pn	22 48 37.4	-0.8
JYT				S	S	22 49 33.8	-6.1
JHO	**Hitachi**	**4.91**	**23**	P	Pn	22 48 42.6	-0.4
JHO				S	S	22 49 43.3	-5.3
JFK	**Kawauchi**	**5.69**	**22**	P	Pn	22 48 51.4	+0.1
JFK				S	S	22 50 00.3	-3.5
CBIJ	**Chichi jima**	**6.09**	**144**	P	Pn	22 48 55.8	0.0
JMK	**Ichinoseki**	**7.26**	**19**	P	Pn	22 49 09.2	+0.6
JMK				S	S	22 50 31.4	-4.2

*ISCJB **03** 23:23:14.5±0.8,3870N±003×2249E±005,h10km±6km, Error ellipse: s-maj=6.9km s-min=3.9km az=149.0*
*THE **03** 23:23:14.8,3869N×2250E,h6km±1km,ML2.6/3, Error ellipse: s-maj=1.9km s-min=0.7km az=60.0*
*NEIC **03** 23:23:14.9,3870N×2251E,h15km,MD2.8(ATH), After ATH.*
*ATH **03** 23:23:14.9,3870N×2251E,h16km±6km,MD2.8/5*
*CSEM **03** 23:23:14.1±0.2,3869N×2252E,h10km,ML2.6/3, Error ellipse: s-maj=5.2km s-min=4.0km az=63.0*

ISC 03 23:23:15.0±0.5,3871N±003×2252E±004,h13km±4km,n35, σ0§79/59,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.35**	**335**	P	**Pg**	**23 23 21.8**	**-0.2**
AGG				S	**Sg**	**23 23 26.7**	**0.0**
LKR	**Lokris**	**0.38**	**98**	P	**Pg**	**23 23 22.3**	**-0.2**
LKR				S	**Sg**	**23 23 28.4**	**+0.7**
LKR	**Lokris**	**0.38**	**98**	*e*PB	**Pg**	**23 23 22.3**	**-0.2**
LKR				*e*SB	**Sg**	**23 23 28.6**	**+0.9**
EVR	**Evrytania**	**0.59**	**291**	*e*PN	**Pg**	**23 23 26.1**	**-0.4**
EVR				*e*SN	**Sg**	**23 23 35.0**	**+0.6**
LTK	**Loutraki**	**0.77**	**153**	P	**Pg**	**23 23 28.6**	**-1.2**
LTK				S	**Sg**	**23 23 41.1**	**+1.2**
NEO	**Neokhori**	**0.81**	**42**	*e*PN	**Pn**	**23 23 30.9**	**-1.2**
XOR	**Xorichti**	**0.84**	**38**	P	**Pg**	**23 23 31.1**	**-0.1**
THL	**Klokotos Trika**	**0.94**	**336**	P	**Pg**	**23 23 32.7**	**-0.4**
THL				S	**Sg**	**23 23 45.8**	**+0.4**
THL	**Klokotos Trika**	**0.94**	**336**	*e*Pn	**Pn**	**23 23 32.8**	**-1.1**
THL				S

LSD	**Lago del Serru**	**1.11 355**	P		**Pn**	**23 39 25.1**	**-0.5**
ORIF	**Oris-en-Rattie**	**1.15 300**	*e*Pg		**Pg**	**23 39 27.2**	**0.0**
	SNR=1.0						
ORIF			*e*Sg		**Sg**	**23 39 41.5**	**-0.7**
	30nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.15 300**	*e*Pg		**Pg**	**23 39 27.2**	**0.0**
	SNR=1.0						
ORIF			*e*Sg		**Sg**	**23 39 41.5**	**-0.7**
	15nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**1.17 209**	*e*Pg		**Pg**	**23 39 27.1**	**-0.5**
	SNR=1.0						
LMR			*e*Sg		**Sg**	**23 39 41.8**	**-1.1**
	78nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.17 209**	*e*Pg		**Pg**	**23 39 27.1**	**-0.5**
	SNR=1.0						
LMR			*e*Sg		**Sg**	**23 39 41.8**	**-1.1**
	39nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**1.20 342**	*e*Pn		**Pn**	**23 39 27.7**	**+0.8**
	SNR=1.0						
LPG			*e*Sg		**Sg**	**23 39 44.0**	**0.0**
	13nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**1.20 342**	*e*Pn		**Pn**	**23 39 27.7**	**+0.8**
	SNR=1.0						
LPG			*e*Sg		**Sg**	**23 39 44.0**	**0.0**
	6.6nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**1.22 342**	*e*Pn		**Pn**	**23 39 27.5**	**+0.3**
	SNR=1.0						
LPL			*e*Sg		**Sg**	**23 39 44.5**	**-0.2**
	11nm,0.3s						
LPL	**La Plagne**	**1.22 342**	*e*Pn		**Pn**	**23 39 27.5**	**+0.3**
	SNR=1.0						
LPL			*e*Sg		**Sg**	**23 39 44.5**	**-0.2**
	5.6nm,0.3s						
SMRF	**Simiane la Rot**	**1.28 253**	*e*Pg		**Pg**	**23 39 30.2**	**+0.3**
	SNR=1.0						
SMRF			*e*Sg		**Sg**	**23 39 46.5**	**-0.1**
	47nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.28 253**	*e*Pg		**Pg**	**23 39 30.2**	**+0.3**
	SNR=1.0						
SMRF			*e*Sg		**Sg**	**23 39 46.5**	**-0.1**
	24nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.93 286**	*e*Pn		**Pn**	**23 39 38.3**	**+1.4**
	SNR=1.0						
VIVF			*e*Sn		**Sn**	**23 40 01.3**	**+0.7**
	7.7nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.93 286**	*e*Pn		**Pn**	**23 39 38.3**	**+1.4**
	SNR=1.0						
VIVF			*e*Sn		**Sn**	**23 40 01.3**	**+0.7**
	3.8nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.20 145**	*e*Pn		**Pn**	**23 39 40.5**	**-0.2**
PGF			*e*Sn		**Sn**	**23 40 07.1**	**-0.3**
	4.2nm,0.4s,SNR=1.0						
PGF	**Pioggiola**	**2.20 145**	*e*Pn		**Pn**	**23 39 40.5**	**-0.2**
PGF			*e*Sn		**Sn**	**23 40 07.1**	**-0.3**
	2.1nm,0.4s,SNR=1.0						
CABF	**La Chapelle**	**2.40 340**	*e*Pn		**Pn**	**23 39 44.7**	**+1.2**
CABF			*e*Sn		**Sn**	**23 40 12.6**	**+0.2**
	2.5nm,0.4s						
CABF	**La Chapelle**	**2.40 340**	*e*Pn		**Pn**	**23 39 44.7**	**+1.2**
CABF			*e*Sn		**Sn**	**23 40 12.6**	**+0.2**
	1.2nm,0.4s						
LASF	**Ste Croix**	**2.48 265**	*e*Pn		**Pn**	**23 39 45.1**	**+0.7**
	SNR=1.0						
LASF			*e*Sn		**Sn**	**23 40 14.2**	**0.0**
	6.1nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**2.48 265**	*e*Pn		**Pn**	**23 39 45.1**	**+0.7**
	SNR=1.0						
LASF			*e*Sn		**Sn**	**23 40 14.2**	**0.0**
	3.0nm,0.6s,SNR=1.0						
SMF	**Signal de Mont**	**3.33 315**	*e*Pn		**Pn**	**23 39 57.2**	**+1.1**
	SNR=1.0						
SMF			*e*Sn		**Sn**	**23 40 34.7**	**-0.5**
	2.4nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**3.33 315**	*e*Pn		**Pn**	**23 39 57.2**	**+1.1**
	SNR=1.0						
SMF			*e*Sn		**Sn**	**23 40 34.7**	**-0.5**
	1.2nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.47 355**	*e*Pn		**Pn**	**23 39 58.6**	**+0.5**
HINF			*e*Sn		**Sn**	**23 40 37.9**	**-0.8**
	1.8nm,0.5s,SNR=1.0						
HINF	**Hinteralfeld**	**3.47 355**	*e*Pn		**Pn**	**23 39 58.6**	**+0.5**
HINF			*e*Sn		**Sn**	**23 40 37.9**	**-0.8**
	0.9nm,0.5s,SNR=1.0						
AVF	**Avril sur Loir**	**3.68 313**	*e*Pn		**Pn**	**23 40 01.3**	**+0.4**
	SNR=1.0						
AVF			*e*Sn		**Sn**	**23 40 42.9**	**-0.9**
	3.0nm,0.6s						
AVF	**Avril sur Loir**	**3.68 313**	*e*Pn		**Pn**	**23 40 01.3**	**+0.4**
	SNR=1.0						
AVF			*e*Sn		**Sn**	**23 40 42.9**	**-0.9**
	1.5nm,0.6s						
HAU	**Haudompre**	**3.71 350**	*e*Pn		**Pn**	**23 40 02.0**	**+0.7**
	SNR=1.0						
HAU			*e*Sn		**Sn**	**23 40 43.6**	**-0.9**
	1.8nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**3.71 350**	*e*Pn		**Pn**	**23 40 02.0**	**+0.7**
	SNR=1.0						
HAU			*e*Sn		**Sn**	**23 40 43.6**	**-0.9**
	0.9nm,0.2s,SNR=1.0						
CAF	**Calviac**	**3.77 280**	*e*Pn		**Pn**	**23 40 04.1**	**+1.9**
	SNR=1.0						
CAF			*e*Sn		**Sn**	**23 40 45.2**	**-0.8**
	0.8nm,0.3s						
CAF	**Calviac**	**3.77 280**	*e*Pn		**Pn**	**23 40 04.1**	**+1.9**
	SNR=1.0						
CAF			*e*Sn		**Sn**	**23 40 45.2**	**-0.8**
	0.4nm,0.3s						
LOR	**Lormes**	**3.77 322**	*e*Pn		**Pn**	**23 40 02.6**	**+0.4**
LOR			*e*Sn		**Sn**	**23 40 45.2**	**-0.8**
	1.0nm,0.2s,SNR=1.0						
LOR	**Lormes**	**3.77 322**	*e*Pn		**Pn**	**23 40 02.6**	**+0.4**
LOR			*e*Sn		**Sn**	**23 40 45.2**	**-0.8**
	0.5nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**3.78 317**	*e*Pn		**Pn**	**23 40 02.6**	**+0.2**
SSF			*e*Sn		**Sn**	**23 40 45.5**	**-0.8**
	0.9nm,0.2s						
SSF	**Saint Saulge**	**3.78 317**	*e*Pn		**Pn**	**23 40 02.6**	**+0.2**
SSF			*e*Sn		**Sn**	**23 40 45.5**	**-0.8**
	0.4nm,0.2s						
MTLF	**Montolieu**	**3.80 256**	*e*Pn		**Pn**	**23 40 03.0**	**+0.4**
MTLF			*e*Sn		**Sn**	**23 40 45.9**	**-0.9**
	1.1nm,0.3s						
MTLF	**Montolieu**	**3.80 256**	*e*Pn		**Pn**	**23 40 03.0**	**+0.4**
MTLF			*e*Sn		**Sn**	**23 40 45.9**	**-0.9**
	0.6nm,0.3s						
BGF	**Bois d'Agland**	**3.82 307**	*e*Pn		**Pn**	**23 40 03.7**	**+0.8**
	SNR=1.0						
CDF	**Champ du Feu**	**4.05 360**	*e*Pn		**Pn**	**23 40 06.8**	**+0.7**
	SNR=1.0						
CDF			*e*Sn		**Sn**	**23 40 52.0**	**-1.1**
	1.5nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.05 360**	*e*Pn		**Pn**	**23 40 06.8**	**+0.7**
	SNR=1.0						
CDF			*e*Sn		**Sn**	**23 40 52.0**	**-1.1**
	0.8nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.06 300**	*e*Pn		**Pn**	**23 40 06.9**	**+0.7**
TCF			*e*Sn		**Sn**	**23 40 52.3**	**-1.0**
	1.3nm,0.5s						
TCF	**Toulx Ste Croi**	**4.06 300**	*e*Pn		**Pn**	**23 40 06.9**	**+0.7**
TCF			*e*Sn		**Sn**	**23 40 52.3**	**-1.0**
	0.6nm,0.5s						
HYF	**Humbligny**	**4.36 314**	*e*Pn		**Pn**	**23 40 10.8**	**+0.5**
MEZF	**Maizieres J'vi**	**4.42 340**	*e*Pn		**Pn**	**23 40 11.8**	**+0.6**
MEZF			*e*Sn		**Sn**	**23 41 00.8**	**-1.3**
	1.7nm,0.3s						
MEZF	**Maizieres J'vi**	**4.42 340**	*e*Pn		**Pn**	**23 40 11.8**	**+0.6**
MEZF			*e*Sn		**Sn**	**23 41 00.8**	**-1.3**
	0.9nm,0.3s						

*DDA **03** 23:50:47.1,3686N×2926E,h21km±2km,Md3.3*
*CSEM **03** 23:50:47.8±0.1,3696N×2925E,h2km,MD3.3,Error ellipse: s-maj=2.5km s-min=1.7km az=178.0*
*NEIC **03** 23:50:48.0,3693N×2923E,h10km,MD3.1(ISK), ML3.3(DDA),After ISK.*
*ISCJB **03** 23:50:48.8±0.6,3692N±003×2923E±003,h5km±5km, Error ellipse: s-maj=5.2km s-min=3.7km az=161.1*
*ISK **03** 23:50:48.6,3693N×2923E,h10km,MD3.1,ML3.1*
*ATH **03** 23:50:49.0,3696N×2911E,h11km±1km,MD4.5/5*

ISC 03 23:50:49.1±0.6,3691N±003×2922E±003,h5km±5km,n27, σ1§07/43,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.43**	**40**	*i* P	**Pg**	**23 50 56.1**	**-1.3**
GOLH				*i* S	**Sg**	**23 51 03.6**	**+0.6**
DALT	**Dalyan (Mudla)**	**0.49**	**253**	*e*PG	**Pg**	**23 50 58.2**	**-0.3**
DALT				*e*SG	**Sg**	**23 51 06.3**	**+1.4**
TURN	**Turunc**	**0.49**	**266**	*i* P	**Pg**	**23 51 02.4**	**+3.8**
TURN				*i* S	**Sg**	**23 51 15.6**	**+11**
ELL	**Elmali**	**0.58**	**106**	*e*PG	**Pg**	**23 50 59.6**	**-0.6**
ELL				*e*SG	**Sg**	**23 51 09.1**	**+1.4**
KSL	**Kastellorizon**	**0.81**	**159**	*e*PB	**Pb**	**23 51 06.0**	**+0.3**
DENT	**Denizli**	**0.85**	**350**	*e*PG	**Pg**	**23 51 04.3**	**-1.3**
DENT				*e*SG	**Sg**	**23 51 18.0**	**+1.4**
ARG	**Arkhangelos**	**1.12**	**232**	⇑*i*PB	**Pb**	**23 51 09.5**	**-1.4**
ANTB	**Antalya**	**1.15**	**90**	*e*PN	**Pn**	**23 51 11.6**	**-0.2**
MLSB	**Milas**	**1.22**	**289**	*e*PN	**Pn**	**23 51 12.4**	**-0.3**
BCK	**Bucak**	**1.23**	**63**	*e*PN	**Pn**	**23 51 11.6**	**-1.3**
AYDN	**Tasoluk**	**1.30**	**305**	*i* P	**Pn**	**23 51 13.5**	**-0.5**
AYDN				*e*S	**Sb**	**23 51 32.1**	**+0.9**
AYDN	**Tasoluk**	**1.30**	**305**	*i* P	**Pn**	**23 51 13.5**	**-0.5**
AYDN				*i* S	**Sb**	**23 51 32.1**	**+1.0**
BDRM	**Kayabasi**	**1.43**	**277**	*i* P	**Pn**	**23 51 15.0**	**-0.7**
BDRM				*i* S	**Sb**	**23 51 34.9**	**+0.2**
TKTP	**Tekketepe**	**1.43**	**38**	*i* P	**Pn**	**23 51 14.7**	**-1.0**
TKTP				*i* S	**Sb**	**23 51 38.6**	**+3.9**
KHL	**Karahalli**	**1.43**	**10**	*e*PN	**Pn**	**23 51 14.6**	**-1.1**
KHAL	**Karahalli**	**1.47**	**8**	*i* P	**Pn**	**23 51 14.2**	**-2.1**
KHAL				*i* S	**Sn**	**23 51 37.1**	**+1.1**
BODT	**Bodrum**	**1.54**	**276**	*e*PN	**Pn**	**23 51 17.4**	**+0.3**
KULA	**Kula-Manisa**	**1.66**	**345**	*e*PN	**Pn**	**23 51 18.5**	**-0.4**
SMG	**Samos**	**2.06**	**294**	*e*PN	**Pn**	**23 51 24.3**	**0.0**
KARP	**Karpathos**	**2.15**	**231**	*e*PN	**Pn**	**23 51 26.6**	**+1.0**
KDAG	**Bornova**	**2.15**	**314**	*i* P	**Pn**	**23 51 22.4**	**-3.2**
KDAG				*i* S	**Sn**	**23 51 52.9**	**+0.3**
DEMI	**Demirci**	**2.17**	**350**	*i* P	**Pn**	**23 51 24.6**	**-1.3**
DEMI				*i* S	**Sn**	**23 51 59.7**	**+6.7**
BOLV	**Bolvadin**	**2.27**	**37**	*i* P	**Pn**	**23 51 27.8**	**+0.6**
BOLV				*i* S	**Sn**	**23 51 55.9**	**+0.4**
NPS	**Neapolis**	**3.35**	**242**	*e*PN	**Pn**	**23 51 43.1**	**+1.0**
BR131	**Keskin Array S**	**4.47**	**50**	*e*Pn	**Pn**	**23 51 58.4**	**+0.9**
BR131				*e*Sn	**Sn**	**23 52 52.0**	**+2.2**
BR131	**Keskin Array S**	**4.47**	**50**	*e*Pn	**Pn**	**23 51 58.4**	**+0.9**
BR131				*e*Sn	**Sn**	**23 52 52.0**	**+2.2**

*IDC **04** 00:13:09.7±6.3,3621N×7070E,h190km±58km,mb3.3/10, mb1 3.5/13,mb1mx3.3/24,mbtmp3.3/13,Error ellipse: s-maj=31.2km s-min=15.4km az=11.0*
*ISCJB **04** 00:13:10.9±0.4,3641N±003×7078E±005,h211km±5km, mb3.6/11,Error ellipse: s-maj=7.0km s-min=4.3km az=172.4*
*BJI **04** 00:13:11.5,3653N×7074E,h187km,mb3.9*
*NEIC **04** 00:13:11.7±0.8,3635N×7079E,h207km±7km,mb4.3/4, Error ellipse: s-maj=12.3km s-min=8.6km az=121.0*
*MOS **04** 00:13:11.3±1.0,3639N×7070E,h217km,mb4.0/6,Error ellipse: s-maj=21.6km s-min=9.4km az=80.1*
*NNC **04** 00:13:19.3±3.6,3702N×7071E,h216km±34km,mb3.1, mpv4.6,Error ellipse: s-maj=32.5km s-min=19.1km az=20.0*

ISC 04 00:13:12.1±0.4,3639N±003×7082E±005,h204km±5km, n63,σ1§05/78,mb3.6/11,8C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.34**	**219**	⇑*i*Pn	**Pn**	**00 13 54.7**	**+0.2**
KBL				*e*S	**Sn**	**00 14 26.1**	**-1.5**
CEP	**Cherat**	**2.71**	**160**	P	**Pn**	**00 14 00.1**	**+1.5**
CEP				S	**Sn**	**00 14 36.0**	**+1.0**
SARP	**Sargodha**	**4.71**	**160**	P	**Pn**	**00 14 24.6**	**+1.6**
KSH	**Kashi**	**5.13**	**51**	P	**Pn**	**00 14 28.6**	**+0.4**
KSH				S	**Sn**	**00 15 27.3**	**-1.0**
THN	**Thein Dam**	**5.65**	**133**	*e*P	**Pn**	**00 14 34.6**	**-0.3**
THN				*e*S	**Sn**	**00 15 38.4**	**-2.0**
DLH	**Dalhousie**	**5.73**	**131**	*ex*	**Pn**	**00 14 32.0**	**-3.9**
DLH				*ex*	**Sn**	**00 15 42.0**	**-0.1**
AML	**Almayashu**	**6.15**	**20**	P	**Pn**	**00 14 41.4**	**+0.2**
	SNR=611						
UCH	**Uchtor**	**6.50**	**25**	*e*Pn	**Pn**	**00 14 46.1**	**+0.4**
	25nm,0.6s						
UCH	**Uchtor**	**6.50**	**25**	P	**Pn**	**00 14 46.2**	**+0.5**
	SNR=17						
KZA	**Kyzart**	**6.64**	**30**	P	**Pn**	**00 14 47.5**	**0.0**
	SNR=51						
EKS2	**Erkin-Say**	**6.67**	**19**	*e*Pn	**Pn**	**00 14 47.8**	**-0.1**
	33nm,0.6s						
EKS2				*e*S	**Sn**	**00 16 01.2**	**-2.8**
EKS2	**Erkin-Say**	**6.67**	**19**	P	**Pn**	**00 14 48.1**	**+0.2**
	SNR=50						
KK31	**Karatay Array**	**6.71**	**358**	⇓⇓P	**Pn**	**00 14 47.8**	**-0.7**
	13nm,0.3s,baz=180,slow=12,SNR=587						
KK31				S	**Sn**	**00 15 58.8**	**-6.2**
	18nm,0.4s,baz=186,slow=22,SNR=9.3						
AAK	**Ala-Archa**	**6.85**	**23**	P	**Pn**	**00 14 50.8**	**+0.5**
	SNR=79						
KBK	**Karagaybulak**	**7.03**	**26**	P	**Pn**	**00 14 53.1**	**+0.6**
	SNR=28						
SDNR	**Sundarnagar**	**7.06**	**132**	*e*P	**Pn**	**00 14 55.0**	**+1.9**
SDNR				*e*S	**Sn**	**00 16 08.6**	**-4.8**
ULHL	**Ulahol**	**7.20**	**34**	P	**Pn**	**00 14 54.9**	**+0.1**
	SNR=12						
CHMS	**Chumysh**	**7.26**	**23**	P	**Pn**	**00 14 55.4**	**-0.2**
	SNR=27						
USP	**Ospenovka**	**7.43**	**21**	P	**Pn**	**00 14 57.0**	**-0.8**
	SNR=28						
SMLA	**Simla**	**7.45**	**133**	*i* P	**Pn**	**00 14 58.7**	**+0.6**
SMLA				*e*S		00 16 17.1	
SMLA				*ex*	**Sn**	**00 16 23.9**	**+1.4**
	comp=N,795nm,0.4s						
SMLA				*ex*	x	00 16 26.4	
	comp=E,633nm,0.3s						
TKM2	**Tokmak 2**	**7.49**	**28**	⇑P	**Pn**	**00 14 58.8**	**+0.2**
	comp=E,42nm,0.5s						
TKM2				⇑S	**Sn**	**00 16 20.0**	**-3.4**
	comp=E,7.0nm,0.6s						
TKM2	**Tokmak 2**	**7.49**	**28**	⇓*e*PN	**Pn**	**00 14 58.8**	**+0.2**
TKM2	**Tokmak 2**	**7.49**	**28**	P	**Pn**	**00 14 59.0**	**+0.4**
	SNR=122						
KLP	**Kalpa**	**7.84**	**126**	*e*P	**Pn**	**00 15 02.7**	**-0.6**
KLP				*e*S	**Sn**	**00 16 27.4**	**-4.5**
KLP				AML	AML	00 16 36.8	
	comp=N,120nm,0.7s						
KLP				AML	AML	00 16 38.6	
	comp=E,141nm,0.5s						
JOSI	**Joshimath**	**9.33**	**126**	*e*P	**Pn**	**00 15 23.0**	**+0.4**
JOSI				*e*S	**Sn**	**00 16 59.2**	**-8.0**
JOSI				AML	AML	00 17 09.0	
	comp=E,81nm,0.4s						
JOSI				AML	AML	00 17 09.2	
	comp=N,89nm,0.5s						
NDI	**New Delhi**	**9.39**	**143**	*e*P	**Pn**	**00 15 22.0**	**-1.3**
NDI				*e*S	**Sn**	**00 17 01.0**	**-7.6**
KUDL	**Kundal**	**9.52**	**148**	*e*P	**Pn**	**00 15 23.8**	**-1.2**
KUDL				*e*S	**Sn**	**00 17 03.3**	**-8.3**
MK31	**Makanchi Array**	**13.47**	**36**	⇑P	**Pn**	**00 16 15.8**	**+0.7**
	comp=N,3.8nm,0.8s,baz=215,slow=13,SNR=20						
MK31	**Makanchi Array**	**13.47**	**36**	*e*P	**Pn**	**00 16 15.8**	**+0.8**
MKAR	**Makanchi Array**	**13.47**	**36**	P	**Pn**	**00 16 15.5**	**+0.5**
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=11						
AB02	**Akbulak array**	**15.11**	**332**	⇑P	**Pn**	**00 16 35.8**	**+0.6**
	comp=N,3.0nm,0.7s						
AB02				⇑S	**S**	**00 19 13.5**	**-9.3**
	comp=N,1.2nm,0.6s						
KURK	**Kurchatov**	**15.38**	**19**	P	**Pn**	**00 16 36.2**	**-2.3**
VOSK	**Vostochnaya**	**16.33**	**0**	⇑P	**P**	**00 16 49.1**	**+0.1**
	comp=N,2.1nm,0.5s						
BVA0	**Borovoye Array**	**16.64**	**359**	⇑P	**P**	**00 16 53.7**	**+1.3**
	comp=N,0.8nm,1.1s,baz=157,slow=9.9,SNR=22						
BVAR	**Borovoye Array**	**16.64**	**359**	P	**P**	**00 16 53.6**	**+1.2**
	comp=N,0.9nm,0.3s,baz=159,slow=10.0,SNR=17						
BVAR	**Borovoye Array**	**16.64**	**359**	P	**P**	**00 16 53.6**	**+1.2**
BVAR				pmax	pmax		
	comp=E,1.0nm,0.3s						
BRVK	**Borovoye**	**16.67**	**359**	*e*P	**P**	**00 16 52.6**	**-0.2**
	comp=E,5.3nm,0.8s						
BRVK	**Borovoye**	**16.67**	**359**	*e*P	**P**	**00 16 52.6**	**-0.2**
BRVK				pmax	pmax		
	comp=E,5.0nm,0.8s						
AKTK	**Aktyubinsk**	**16.81**	**331**	P	**P**	**00 16 55.2**	**+0.9**
AKTO	**Aktyubinsk**	**16.81**	**331**	P	**P**	**00 16 55.2**	**+0.9**
	comp=E,1.1nm,0.3s,baz=136,slow=12,SNR=13						
AKTO	**Aktyubinsk**	**16.81**	**331**	P	**P**	**00 16 55.2**	**+0.9**
AKTO				pmax	pmax		
	comp=E,1.0nm,0.3s						
ZAA0	**Zalesovo Array**	**20.08**	**25**	*e*P	**P**	**00 17 29.7**	**+0.1**
ZALV	**Zalesovo Beam**	**20.08**	**25**	P	**P**	**00 17 29.8**	**+0.2**
	comp=Z,5.9nm,0.3s,baz=216,slow=11,SNR=34						
ZALV	**Zalesovo Beam**	**20.08**	**25**	P	**P**	**00 17 29.8**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
GTA	**Gaotai**	**23.04**	**74**	*e*P	**P**	**00 18 02.3**	**+3.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.8						
SONM	**Songino Array**	**28.52**	**55**	P	**P**	**00 18 50.3**	**+2.0**
	comp=Z,0.2nm,0.5s,mb3.0,baz=262,slow=10,SNR=2.8						
JOF	**Joensuu**	**35.89**	**330**	*ep*	**P**	**00 19 52.6**	**+0.4**
	comp=Z,1.9nm,0.3s,mb4.1						
JOF	**Joensuu**	**35.89**	**330**	*e*P	**P**	**00 19 52.6**	**+0.4**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**00 20 35.9**	**-0.3**
	comp=Z,2.1nm,0.6s,mb3.8,baz=104,slow=6.6,SNR=11						
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**00 20 35.9**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**00 21 01.0**	**-0.9**
	comp=Z,1.0nm,0.4s,mb3.5,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**00 21 01.3**	**-0.5**
	comp=Z,1.3nm,0.5s,mb3.6,baz=96,slow=7.7,SNR=6.0						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**00 21 01.3**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KEST	**Kesra**	**48.93**	**289**	P	**P**	**00 21 38.2**	**+0.7**
	comp=Z,0.6nm,0.6s,mb3.1,baz=0.0,slow=7.1,SNR=2.0						
ESDC	**Sonseca Array**	**57.38**	**298**	P	**P**	**00 22 38.4**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=51,slow=6.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**65.57**	**269**	P	**P**	**00 23 32.1**	**-2.0**
	comp=Z,0.8nm,0.5s,mb3.6,baz=47,slow=6.3,SNR=15						
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**00 25 04.6**	**-0.8**
	comp=Z,1.0nm,0.5s,mb3.7,baz=352,slow=5.3,SNR=4.8						
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**00 25 04.6**	**-0.8**
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**00 25 04.6**	**-0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**82.06**	**122**	P	**P**	**00 25 08.7**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.4,baz=325,slow=4.8,SNR=4.0						
WRAB	**Tennant Creek**	**82.06**	**122**	*e*P	**P**	**00 25 08.8**	**-0.9**
	comp=Z,3.5nm,1.1s,mb3.9						
WRAB	**Tennant Creek**	**82.06**	**122**	*e*P	**P**	**00 25 08.8**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**00 25 20.4**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.3,baz=308,slow=4.7,SNR=5.0						

*IDC **04** 00:16:19.6±1.6,6325S×17427E,h0km,mb4.5/5, mb1 4.6/5,mb1mx4.3/12,mbtmp4.5/5,MS3.8/9,Ms1 3.8/9, ms1mx3.7/13,Error ellipse: s-maj=59.0km s-min=21.5km az=66.0*
*ISCJB **04** 00:16:20.7±1.4,637S±02×1728E±07,h10km,mb4.5/6, MS3.8/9,Error ellipse: s-maj=48.1km s-min=13.0km az=157.8*
*NEIC **04** 00:16:23.2±1.0,6372S×17253E,h10km,mb4.6/2,Error ellipse: s-maj=38.2km s-min=12.0km az=70.0*

ISC 04 00:16:22.5±1.3,637S±01×1728E±07,h10km,n19,σ0§66/9, mb4.5/6,MS3.8/9,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**14.39**	**185**	*e*Pn	**Pn**	**00 19 45.3**	**-0.5**
	35nm,1.5s						
RPZ	**Rata Peaks**	**20.01**	**356**	LR	LR	00 26 50.9	
	comp=Z,113nm,20.0s,MS3.2,baz=193,slow=32						
URZ	**Urewera**	**25.56**	**8**	LR	LR	00 29 16.0	
	comp=Z,116nm,19.7s,MS3.4,baz=320,slow=31						
QSPA	**South Pole Qui**	**26.43**	**180**	P	**P**	**00 21 60.0**	**+1.2**
	6.9nm,1.0s,mb4.1,baz=25,slow=5.2,SNR=6.9						
RAO	**Raoul Island**	**34.93**	**14**	LR	LR	00 34 11.9	
	comp=Z,232nm,21.9s,MS3.9,baz=107,slow=31						
STKA	**Stephens Creek**	**37.36**	**313**	LR	LR	00 36 35.9	
	comp=Z,197nm,19.6s,MS3.9,baz=201,slow=32						
MAW	**Mawson**	**39.80**	**214**	P	**P**	**00 24 00.3**	**+5.3**
	5.9nm,0.8s,mb4.3,baz=166,slow=4.2,SNR=12						
MAW				LR	LR	00 41 06.1	
	comp=Z,76nm,19.0s,MS3.6,baz=71,slow=37						
MAW	**Mawson**	**39.80**	**214**	P	**P**	**00 23 54.6**	**-0.4**
	9.5nm,0.9s,mb4.5						
MAW				*e*		00 24 02.7	
PMSA	**Palmer Station**	**45.24**	**150**	P	**P**	**00 24 38.8**	**-0.4**
	28nm,1.0s,mb5.0,baz=97,slow=3.1,SNR=2.2						
ASAR	**Alice Springs**	**47.51**	**309**	P	**P**	**00 24 58.5**	**+1.0**
	3.8nm,0.9s,mb4.5,baz=157,slow=7.9,SNR=28						
AS

3.6nm,1.0s,mb4.3
WRA Warramunga Arr 32.57 266 P **P 01 11 10.9 -1.0**
1.4nm,0.6s,mb4.1,baz=102,slow=8.3,SNR=30
WRA LR LR 01 24 58.5
comp=Z,84nm,18.4s,MS3.5,baz=115,slow=37
ASAR Alice Springs 32.63 259 P **P 01 11 11.8 -0.5**
4.0nm,0.7s,mb4.5,baz=86,slow=9.3,SNR=64
ASAR PcP PcP 01 13 57.5 -0.4
0.9nm,0.9s,baz=87,slow=3.2,SNR=4.9
TBI Tubuai 38.30 101 *e*LR LR 01 22 25.4
108nm,35.5s
PPT Papeete 39.04 92 *e*LR LR 01 22 51.4
122nm,27.0s
BATI Baumata 44.97 277 LR LR 01 30 53.8
comp=Z,107nm,18.9s,MS3.8,baz=107,slow=35
MBWA Marble Bar 45.93 261 *e*P **P 01 13 03.0 -0.3**
11nm,0.8s,mb4.8
SBA Scott Base 56.80 181 *e*P **P 01 14 24.4 +0.5**
5.4nm,0.9s,mb4.6
CASY Casey 58.38 204 *e*P **P 01 14 34.0 -1.1**
MJAR Matsushiro Arr 64.36 333 P **P 01 15 14.8 -1.0**
2.0nm,0.7s,mb4.2,baz=169,slow=8.0,SNR=5.5
MJAR Matsushiro Arr 64.36 333 P **P 01 15 14.8 -1.0**
MAW Mawson 76.67 202 P **P 01 16 30.8 +0.3**
1.6nm,0.8s,mb4.0,baz=119,slow=12,SNR=2.8
CMAR Chiang Mai Arr 79.19 295 P **P 01 16 47.1 +1.8**
2.9nm,0.4s,mb4.5,baz=136,slow=3.9,SNR=17
CMAR PcP PcP 01 16 54.3 +0.7
1.7nm,0.4s,baz=134,slow=3.9,SNR=5.8
CHTO Chiang Mai 79.35 295 *e*P **P 01 16 47.7 +1.5**
4.6nm,0.7s,mb4.5
VNA3 Neumayer Olymp 87.89 180 *e* **P 01 17 28.0 -1.1**
VNA2 Neumayer--Watz 88.18 181 *e* **P 01 17 29.7 -0.8**
baz=181,slow=4.6
ULN Ulaanbaatar 88.31 323 *e*P **P 01 17 31.3 0.0**
1.7nm,0.7s,mb4.4
VNA1 Neumayer--Stat 88.47 181 *e* **P 01 17 31.3 -0.5**
SONM Songino Array 88.66 323 P **P 01 17 33.0 +0.1**
1.1nm,0.8s,mb4.2,baz=118,slow=6.4,SNR=7.1
NVAR Mina Array Bea 90.11 49 P **P 01 17 39.0 -1.0**
1.3nm,0.7s,mb4.4,baz=228,slow=8.0,SNR=13
ARCES ARCESS Array B 126.85 345 PKP PKPdf 01 23 41.0 -1.7
1.3nm,0.7s,baz=28,slow=4.1,SNR=4.7
DPC Dobruska-Polom 143.81 330 *e*PKP PKPdf 01 24 11.7 -3.1
DPC *ex* x 01 24 24.0
UPC Upice 143.84 331 *e*PKP PKPdf 01 24 11.6 -3.2
PVCC Panska Ves 144.48 332 *e*PKP PKPdf 01 24 14.0 -2.0
BRG Berggiesshubel 144.50 333 *e*P PKPdf 01 24 13.6 -2.4
CLL Collm 144.56 334 *i* PKPdf PKPdf 01 24 13.3 -2.8
comp=Z,5.0nm,0.8s
PRU Pruhonice 144.88 331 *e*PKP PKPdf 01 24 12.2 -4.5
EAU Auchinoon 144.88 353 *e*P PKPdf 01 24 13.7 -2.8
EBL Broad Law 144.90 352 *e*P PKPdf 01 24 14.1 -2.4
PGBU Glenifferbraes 145.03 354 P PKPbc 01 24 14.3 -1.9
PGBU AMb AMB 01 24 17.2
comp=Z,65nm,1.8s
PGBU Glenifferbraes 145.03 354 *e*P PKPbc 01 24 14.3 -1.9
PGBU AMb AMB 01 24 17.2
comp=Z,65nm,1.8s
ESK Eskdalemuir 145.37 352 *e*P PKPbc 01 24 15.2 -2.1
ESK AMb AMB 01 24 16.6
comp=Z,19nm,2.0s
ECK Cauldkaine Hil 145.49 352 *e*P PKPdf 01 24 15.8 -1.8
NKC Novy Kostel 145.61 333 *e*PKP PKPdf 01 24 17.5 -0.4
XAL Allendale 145.68 351 *e*P PKPdf 01 24 16.4 -1.5
CONA Conrad Observa 145.68 328⇑ *i* PKPab PKPab 01 24 18.6 -0.2
comp=Z,7.0nm,0.9s
CSNA Conrad Observa 145.68 328⇑ *i* PKPab PKPab 01 24 18.6 -0.2
comp=Z,6.9nm,1.0s
KHC Kasperske Hory 145.93 331 *e*PKP PKPdf 01 24 18.5 0.0
GAL1 Galloway 145.98 354 *e*P PKPdf 01 24 17.4 -1.0
GAL1 AMb AMB 01 24 18.6
comp=Z,46nm,1.4s
GERES GERESS Array B 146.08 331 PKPbc PKPbc 01 24 19.0 -0.7
comp=Z,1.6nm,0.6s,baz=28,slow=2.8,SNR=22
GRA1 Grafenberg Arr 146.53 334 *e*PKP PKPdf 01 24 20.2 +0.7
GRF Grafenberg Arr 146.53 334 *e*PKP PKPdf 01 24 20.2 +0.7
WLF Walferdange 148.47 339 *e*PKPbc PKPbc 01 24 25.6 -0.7
GIVF Givet 148.52 341 *e*PKP1 PKPbc 01 24 25.1 -1.3
FETA Feichten 148.78 331⇑ *i* PKPdf PKPdf 01 24 20.1 -3.2
comp=Z,6.2nm,1.6s
CDF Champ du Feu 149.12 336 *e*PKP1 PKPbc 01 24 27.7 -0.3
DAVOX Davos/Dischmat 149.34 331 PKPbc PKPbc 01 24 28.0 -0.6
comp=Z,2.4nm,0.6s,baz=135,slow=4.3,SNR=12
HINF Hinteralfeld 149.77 336 *e*PKP1 PKPbc 01 24 29.2 -0.4
HAU Haudompre 149.80 337 *e*PKP1 PKPbc 01 24 28.4 -1.3
comp=Z,4.9nm,0.6s
TIP Timpagrande 150.26 313 *e*PKPbc PKPbc 01 24 30.4 -0.7
CABF La Chapelle 151.06 335 *e*PKP1 PKPbc 01 24 31.9 -0.8
comp=Z,6.3nm,0.7s
FLN La Foliniere 151.19 346 *e*PKP1 PKPbc 01 24 31.2 -1.8
LDF La Druitiere 151.26 345 *e*PKP1 PKPbc 01 24 31.3 -1.8
LOR Lormes 151.31 339 *e*PKP1 PKPbc 01 24 32.0 -1.3
comp=Z,3.8nm,0.7s
SSF Saint Saulge 151.61 339 *e*PKP1 PKPbc 01 24 32.6 -1.4
GRR Gorron 151.63 346 *e*PKP1 PKPbc 01 24 32.3 -1.7
LPL La Plagne 151.69 333 *e*PKP1 PKPbc 01 24 33.9 -0.3
LPG La Plagne 151.70 333 *e*PKP1 PKPbc 01 24 34.1 -0.2
ORIF Oris-en-Rattie 152.53 334 *e*PKP1 PKPbc 01 24 34.8 -1.4
comp=Z,11nm,1.0s
TCF Toulx Ste Croi 152.71 340 *e*PKP1 PKPbc 01 24 34.9 -1.6
ESDC Sonseca Array 160.58 344 PKPab PKPab 01 25 18.9 -2.3
comp=Z,0.7nm,0.7s,baz=9.7,slow=4.1,SNR=6.4
TORD Torodi Ar. Bea 165.63 239 PKP PKPdf 01 24 44.3 -1.0
comp=Z,0.2nm,0.6s,baz=12,slow=3.2,SNR=2.3
TORD PKPab PKPab 01 25 43.8 -0.4
comp=Z,0.8nm,1.1s,baz=107,slow=4.5,SNR=3.7

NEIC 04 01:25:57.0, 5365N×16609W, h69km, ML3.5 (AEIC), **After AEIC., Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.31**	**309**	P	Pn	01 26 08.3	+0.2
UNV				S	Sn	01 26 17.4	+1.1
AKLV	**Akutan Long Va**	**0.52**	**9**	P	Pn	01 26 10.1	+0.3
AKLV				S	Sn	01 26 21.0	+1.7
AKUT	**Akutan**	**0.52**	**21**	P	Pn	01 26 10.4	+0.5
AKUT				S	Sn	01 26 20.2	+0.9
AKGG	**Akutan Green G**	**0.55**	**6**	P	Pn	01 26 10.6	+0.4
OKFG	**Magazine Ridge**	**1.12**	**258**	P	Pn	01 26 17.4	+0.6
OKFG				S	Sn	01 26 32.6	+0.9
OKCD	**Okmok Cone D**	**1.23**	**260**	P	Pn	01 26 18.8	+0.5
OKCE	**Okmok Cone E**	**1.26**	**261**	P	Pn	01 26 19.4	+0.7
NIKO	**Nikolski**	**1.79**	**249**	P	Pn	01 26 26.7	+0.9
FALS	**False Pass**	**1.98**	**51**	P	Pn	01 26 29.2	+0.9

*IDC **04** 01:31:09.3±1.0, 5161S×16128E, h0km, mb4.3/7, mb1 4.4/9, mb1mx4.3/15, mbtmp4.3/9, ML3.8/2, MS4.8/13, Ms1 4.8/13, ms1mx4.6/17, Error ellipse: s-maj=33.1km s-min=19.2km az=83.0*

*GCMT **04** 01:31:10.1±0.1, 5170S×16081E, h31km, MW5.6/99, Moment Tensor Solution. s89,c159; s99,c240; Duration: 1⁄6 Moment tensor: Scale 10^17 Nm; Mrr 0.29±.04; Mθθ 2.81±.04; Mϕϕ 3.10±.04; Mrθ -1.08±.07; Mθϕ 1.43±.04; Mϕr 0.46±.07; Best double couple: Mo 3.49400×10^17 NP1: ϕ 211.00000°, δ 70.00000°, λ 175.00000°. NP2: ϕ 303.00000°, δ 85.00000°, λ 20.00000°. Principal axes: T 3.4320, Plg 17.0000°, Azm 169.0000°; N 0.1270, Plg 70.0000°, Azm 316.0000°; P -3.5560, Plg 11.0000°, Azm 76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **04** 01:31:10.1±0.7, 5182S×16136E, h10km, mb4.8/8 Error ellipse: s-maj=15.8km s-min=11.5km az=118.0*

*BJI **04** 01:31:12.1, 5180S×16140E, h10km, mB5.5, mb5.4, Ms5.1, Msz4.8*

*ISCJB **04** 01:31:12.4±0.5, 5187S±006×1603E±0.1, h10km, mb4.8/17, MS4.8/16, Error ellipse: s-maj=12.2km s-min=8.9km az=164.4*

*MOS **04** 01:31:14.9±1.4, 5181S×16035E, h33km, mb5.1/6, Error ellipse: s-maj=33.0km s-min=12.4km az=99.4*

ISC 04 01:31:17.2±1.0, 5184S±009×1605E±04, h35km, n51, σ1§50/35, mb4.8/17, MS4.8/16, 1C-1D, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**2.82**	**199**	*e*Pn	**Pn**	**01 31 57.4**	**-2.3**
RPZ	**Rata Peaks**	**10.79**	**45**	Pn	**Pn**	**01 33 38.9**	**-10**
	0.9nm,0.3s,baz=202,slow=18,SNR=1.7						
RPZ				LR	LR	01 37 11.1	
	comp=Z,3μm,20.1s,baz=203,slow=35						
TAU	**Tasmania Unive**	**12.61**	**310**	*e*Pn	**Pn**	**01 34 13.6**	**-0.3**
	45nm,0.6s						
TAU	**Tasmania Unive**	**12.61**	**310**	*e*P	**Pn**	**01 34 13.6**	**-0.3**
TAU				pmax	pmax		
	comp=Z,45nm,0.6s						
URZ	**Urewera**	**17.89**	**47**	Pn	**Pn**	**01 35 13.8**	**-9.2**
	comp=Z,0.3nm,0.3s,baz=193,slow=15,SNR=2.9						
URZ				LR	LR	01 41 52.4	
	comp=Z,3μm,21.5s,baz=131,slow=37						
URZ	**Urewera**	**17.89**	**47**	Pn	**Pn**	**01 35 13.8**	**-9.2**
URZ				LR	LR	01 41 52.4	
STKA	**Stephens Creek**	**24.28**	**318**	P	**P**	**01 36 31.1**	**+0.2**
	comp=Z,1.4nm,0.4s,mb3.8,baz=149,slow=18,SNR=3.9						
STKA				LR	LR	01 44 32.2	
	comp=Z,4μm,20.9s,MS4.9,baz=146,slow=33						
STKA	**Stephens Creek**	**24.28**	**318**	*e*P	**P**	**01 36 32.5**	**+1.6**
	comp=Z,62nm,1.6s,mb4.8						
SBA	**Scott Base**	**26.22**	**177**	*e*P	**P**	**01 36 48.6**	**+0.5**
	comp=Z,35nm,1.4s,mb4.7						
SBA	**Scott Base**	**26.22**	**177**	*e*P	**P**	**01 36 48.6**	**+0.5**
SBA				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.7						
RAO	**Raoul Island**	**27.70**	**44**	LR	LR	01 48 00.4	
	comp=Z,1μm,19.2s,MS4.5,baz=208,slow=37						
CTA	**Charters Tower**	**33.59**	**335**	P	**P**	**01 37 52.2**	**-1.7**
	comp=Z,4.1nm,1.0s,mb4.3,baz=168,slow=5.0,SNR=3.8						
CTAO	**Charters Tower**	**33.59**	**335**	*e*P	**P**	**01 37 54.5**	**+0.6**
	comp=Z,58nm,1.9s,mb5.2						
CTAO	**Charters Tower**	**33.59**	**335**	*e*P	**P**	**01 37 54.5**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,58nm,1.9s,mb5.2						
ASAR	**Alice Springs**	**34.74**	**314**	P	**P**	**01 38 02.4**	**-1.4**
	comp=Z,4.5nm,0.8s,mb4.4,baz=147,slow=7.2,SNR=18						
MIR	**Mirnyy**	**35.53**	**220**⇑	*i*P	**P**	**01 38 09.0**	**-1.2**
MIR				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.5						
MIR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.0						
WB2	**Warramunga Arr**	**37.83**	**317**	*e*P	**P**	**01 38 32.5**	**+2.3**
WRA	**Warramunga Arr**	**37.83**	**317**	P	**P**	**01 38 28.8**	**-1.5**
	comp=Z,2.1nm,0.9s,mb3.9,baz=12,slow=37,SNR=8.3						
WRA				LR	LR	01 53 12.9	
	comp=Z,2μm,19.4s,MS5.0,baz=155,slow=35						
WRAB	**Tennant Creek**	**37.84**	**317**	*e*P	**P**	**01 38 31.0**	**+0.7**
	comp=Z,2nm,1.3s,mb4.7						
WRAB	**Tennant Creek**	**37.84**	**317**	*e*P	**P**	**01 38 31.0**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,2nm,1.3s,mb4.7						
QSPA	**South Pole Qui**	**38.28**	**180**	P	**P**	**01 38 33.5**	**+0.1**
	comp=Z,8.7nm,0.9s,mb4.5,baz=347,slow=4.0,SNR=12						
COEN	**Coen**	**40.27**	**333**	*e*P	**P**	**01 38 50.2**	**-0.5**
	comp=Z,40nm,1.8s,mb4.8						
PMG	**Port Moresby**	**43.70**	**341**	*e*P	**P**	**01 39 16.3**	**-2.3**
	comp=Z,11nm,0.9s,mb4.6						
PMG	**Port Moresby**	**43.70**	**341**	*e*P	**P**	**01 39 16.3**	**-2.3**
PMG				pmax	pmax		
	comp=Z,11nm,0.9s						
MBWA	**Marble Bar**	**43.94**	**299**	*e*P	**P**	**01 39 21.9**	**+1.4**
	comp=Z,12nm,1.1s,mb4.5						
MAW	**Mawson**	**46.14**	**212**	P	**P**	**01 39 38.7**	**+1.1**
	comp=Z,5.7nm,1.0s,mb4.4,baz=89,slow=4.1,SNR=8.8						
MAW				LR	LR	01 58 18.2	
	comp=Z,4μm,18.1s,MS5.4,baz=114,slow=35						
MAW	**Mawson**	**46.14**	**212**	*e*P	**P**	**01 39 38.3**	**+0.7**
	comp=Z,11nm,1.1s,mb4.7						
MAW	**Mawson**	**46.14**	**212**	*e*P	**P**	**01 39 39.0**	**+1.5**
MAW				pmax	pmax		
	comp=Z,11nm,1.1s						
TBI	**Tubuai**	**47.53**	**73**	*e*S	**S**	**01 46 46.4**	**+5.0**
	comp=Z,926nm,31.0s						
TBI				*e*SS	SS	01 50 16.2	+6.9
	comp=Z,438nm,27.8s						
TBI				*e*LR	LR	01 53 18.4	
	comp=Z,2μm,29.8s						
SYO	**Syowa Base**	**51.92**	**203**‖	*e*P	**P**	**01 40 19.0**	**-2.7**
PPT	**Papeete**	**51.96**	**68**	*e*S	**S**	**01 47 45.8**	**+2.5**
	comp=Z,1μm,30.5s						
PPT				*e*SS	SS	01 51 27.1	+6.7
	comp=Z,438nm,26.2s						
PPT				*e*LR	LR	01 55 30.5	
	comp=Z,2μm,28.2s						
PPT	**Papeete**	**51.96**	**68**	LR	LR	01 56 57.6	
	comp=Z,838nm,18.8s,MS4.8,baz=232,slow=30						
RKT	**Rikitea**	**56.51**	**85**	*e*S	**S**	**01 48 47.7**	**+3.1**
	comp=Z,1μm,35.8s						
RKT				*e*SS	SS	01 52 38.6	+6.6
	comp=Z,445nm,28.2s						
RKT				*e*LQ		01 54 58.4	
	comp=Z,725nm,29.8s						
RKT				*e*LR	LR	01 57 28.9	
	comp=Z,933nm,24.8s						
PLCA	**Paso Flores**	**77.68**	**143**	LR	LR	02 09 43.8	
	comp=Z,796nm,19.9s,MS5.0,baz=208,slow=30						
CMAR	**Chiang Mai Arr**	**88.07**	**303**	P	**P**	**01 44 03.8**	**0.0**
	comp=Z,0.7nm,0.3s,mb4.3,baz=141,slow=3.0,SNR=1.8						
CMAR				LR	LR	02 24 03.0	
	comp=Z,228nm,18.4s,MS4.6,baz=339,slow=36						
MJAR	**Matsushiro Arr**	**90.15**	**342**	LR	LR	02 21 36.6	
	comp=Z,143nm,21.9s,MS4.4,baz=210,slow=34						
BOSA	**Boshof**	**90.78**	**218**	LR	LR	02 19 05.9	
	comp=Z,1μm,18.9s,MS5.3,baz=158,slow=32						
NJ2	**Nanjing**	**91.17**	**326**	*e*P	**P**	**01 44 20.4**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.4						
KMI	**Kunming**	**91.78**	**310**	P	**P**	**01 44 25.7**	**+4.7**
KMI				AP	pP	01 44 29.1	-3.0
KMI				XP	sP	01 44 30.1	-6.0
KMI				SKS		01 54 55.7	
KMI				S	S	01 55 26.7	+7.6
KMI				XS	sS	01 55 31.8	-5.8
KMI				PS	PS	01 56 39.8	+6.7
KMI				SS	SS	02 01 39.7	+12
KMI				SSS		02 05 19.0	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.4						
KMI				LR	LR		
	comp=N,308nm,20.2s,MS4.8						
KMI				LR	LR		
	comp=E,192nm,25.2s,MS4.8						
KMI				LR	LR		
	comp=Z,387nm,31.1s						
KSRS	**Korea Array**	**93.37**	**335**	LR	LR	02 24 06.6	
	comp=Z,222nm,20.2s,MS4.6,baz=166,slow=34						
CD2	**Chengdu**	**96.22**	**314**	*e*P	**P**	**01 44 44.8**	**+3.6**
CD2				AP	pP	01 44 49.6	-2.8
CD2				XP	sP	01 44 52.3	-4.0
CD2				PP	PP	01 48 42.3	+7.1
CD2				SKS		01 55 19.7	
CD2				S	S	01 56 01.5	+3.7
CD2				XS	sS	01 56 10.0	-6.4
CD2				SS	SS	02 02 39.9	+8.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.3						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,330nm,19.2s,MS5.0						
CD2				LR	LR		
	comp=E,350nm,21.6s,MS5.0						
CD2				LR	LR		
	comp=Z,330nm,19.2s,MS4.8						
ASAJ	**Asahikawa**	**96.82**	**347**	LR	LR	02 22 24.3	
	comp=Z,249nm,21.8s,MS4.7,baz=124,slow=32						
MDJ	**Mudanjiang**	**99.72**	**338**	P	Pdif	01 45 00.9	+3.5
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,43nm,4.8s						
HHC	**Hu-ho-hao-te**	**101.64**	**324**	*e*P	Pdif	01 45 09.1	+3.2
HHC				AP		01 45 12.8	
HHC				PP	PP	01 49 22.6	+6.2
HHC				SKS		01 55 46.3	
HHC				S	Sdif	01 56 46.8	+2.4
HHC				XS		01 56 55.3	
HHC				SS	SS	02 03 55.6	+8.6
HHC				AMB	AMB		
	comp=Z,11nm,0.7s						
HHC				AMB	AMB		
	comp=Z,111nm,9.6s						
HHC				LR	LR		
	comp=N,216nm,25.0s,MS4.7						
HHC				LR	LR		
	comp=E,218nm,25.0s,MS4.7						
HHC				LR	LR		
	comp=Z,266nm,21.4s,MS4.7						
KURK	**Kurchatov**	**123.34**	**311**	PKP	PKPdf	01 50 05.4	-3.9
	baz=123,slow=3.4						
TAM	**Tamanrasset**	**145.17**	**223**	*e*PKPbc	PKPbc	01 50 49.1	-1.2
OBN	**Obninsk**	**147.23**	**298**	*i* PKP2	PKPdf	01 50 54.0	+0.9
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,200nm,23.0s,MS4.8						
AKASG	**Malin Array Be**	**149.94**	**287**	PKPbc	PKPdf	01 50 59.9	+2.2
	comp=Z,1.9nm,0.9s,baz=74,slow=2.4,SNR=5.3						
ARCES	**ARCESS Array B**	**152.68**	**327**	PKPab	PKPab	01 51 16.4	-2.9
	comp=Z,2.8nm,0.9s,baz=92,slow=5.4,SNR=4.2						
KEST	**Kesra**	**153.91**	**243**	PKPab	PKPab	01 51 26.3	+0.8
	comp=Z,2.2nm,1.0s,baz=332,slow=1.9,SNR=6.2						
GERES	**GERESS Array B**	**158.70**	**275**	PKPab	PKPab	01 51 44.0	-1.8
	comp=Z,0.2nm,0.6s,baz=155,slow=3.8,SNR=3.7						

IDC 04 02:22:27.4±2.5, 206N×12722E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=201.9km s-min=27.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.96**	**163**	P	P	02 27 31.9	-1.7
	0.6nm,0.4s,baz=341,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**26.39**	**166**	P	P	02 28 07.2	+1.5
	0.2nm,0.4s,baz=348,slow=14,SNR=5.2						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	02 32 30.3	-0.1
	0.6nm,0.5s,baz=119,slow=8.6,SNR=4.4						

JMA 04 02:37:32.4±0.1, 2529N×14038E, h120km, M4.1, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.10**	**50**	P	Pn	02 38 07.4	+0.3
JHHJ				S	Sn	02 38 33.8	+0.2
CBIJ	**Chichi jima**	**2.42**	**42**	P	Pn	02 38 11.6	+0.4
CBIJ				*e*S	Sn	02 38 41.6	+0.7
BSO3	**Boso 3**	**9.48**	**1**	P	Pn	02 39 45.5	-0.4
BSO3				*e*S	Sn	02 41 31.4	+0.9
BSO4	**Boso 4**	**9.67**	**360**	*e*S	Sn	02 41 37.5	+2.5
JFK	**Kawauchi**	**12.05**	**2**	*e*S	Sn	02 42 26.7	-5.9

*CSEM **04** 02:56:14.6±0.3, 3675N×2765E, h10km, MD2.8, Error ellipse: s-maj=8.3km s-min=3.4km az=25.0*

*ISK **04** 02:56:14.7, 3675N×2764E, h6km, MD2.3*

DDA 04 02:56:15.4, 3682N×2782E, h7km±3km, Md2.8, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.39**	**309**	*i* P	Pg	02 56 22.5	-0.5
BDRM				*i* S	Sg	02 56 26.7	-1.4
BODT	**Bodrum**	**0.47**	**300**	*e*PG	Pg	02 56 23.9	-0.7
BODT				*e*SG	Sg	02 56 28.9	-2.0
MLSB	**Milas**	**0.47**	**356**	*e*PG	Pg	02 56 26.2	+1.6
MLSB				*e*SG	Sg	02 56 34.2	+3.4
TURN	**Turunc**	**0.63**	**85**	*i* P	Pg	02 56 27.9	+0.3
TURN				*i* S	Sg	02 56 36.9	+1.2
DALT	**Dalyan (Mudla)**	**0.66**	**94**	*e*PG	Pg	02 56 30.3	+2.3
DALT				*e*SG	Sg	02 56 41.8	+5.2
GCAM	**G?zelcaml?**	**0.99**	**332**	*i* P	Pg	02 56 35.0	+0.5
GCAM				*i* S	Sg	02 56 49.0	+1.6

MAN 04 05:05:01, 1262N×12535E, h15km, mb4.2, ML3.0, MS2.8, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.68**	**261**	*e*P	Pg	05 05 14.6	+0.4
CNP				*e*S	Sg	05 05 27.0	+3.7
BESP	**Borongan**	**1.02**	**175**	*e*P	Pb	05 05 19.0	-1.3
PLP	**Palo**	**1.49**	**194**‖	*e*P	Pn	05 05 25.4	-1.9
PLP				*e*S	Sn	05 05 44.3	-2.2
PVCP	**Virac**	**1.51**	**310**	*e*P	Pn	05 05 27.0	-0.6
PVCP				*e*S	Sn	05 05 55.0	+7.9
OCLP	**Ormoc**	**1.72**	**205**	*e*P	Pn	05 05 30.9	+0.5
MSLP	**Maasin**	**2.52**	**191**	*e*P	Pn	05 05 43.2	+1.8
MSLP				*e*S	Sn	05 06 17.6	+5.7
RCP	**Roxas**	**2.76**	**248**‖	*e*P	Pn	05 05 45.9	+1.3
OTRP	**Odiongan**	**3.26**	**266**	*e*P	Pn	05 05 52.6	+1.0

*THR **04** 05:09:45.7±0.4, 2581N×5874E, h15km, ML3.0*

*ISCJB **04** 05:09:48.5±0.8, 2602N±005×5863E±008, h10km, Error ellipse: s-maj=10.3km s-min=7.3km az=179.0*

*CSEM **04** 05:09:48.5±0.2, 2605N×5868E, h15km, ML3.2/3, Error ellipse: s-maj=6.1km s-min=4.0km az=100.0*

ISC 04 05:09:49.7±0.8, 2602N±005×5860E±008, h10km, n21, σ1§19/22, 3C-4D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**2.07**	**268**	‖P	**Pn**	**05 10 25.0**	**+0.5**
	SNR=82						
BANOM	**Banah**	**2.07**	**268**	Pn	**Pn**	**05 10 23.6**	**-0.9**
	SNR=82						
BIDO	**Bidbid**	**2.52**	**190**	‖P	**Pn**	**05 10 30.0**	**-0.7**
	SNR=160						
HATD	**Hatta, Dubai**	**2.53**	**243**	⇑P	**Pn**	**05 10 31.5**	**+0.7**
	SNR=11						
HATD	**Hatta, Dubai**	**2.53**	**243**	Pn	**Pn**	**05 10 31.0**	**+0.2**
	SNR=11						
HATD	**Hatta, Dubai**	**2.53**	**243**	P	**Pn**	**05 10 31.5**	**+0.7**
	SNR=11						
HATD				Sn	**Sn**	**05 11 00.1**	**-1.5**
BNDS	**Bandar-Abbas**	**2.57**	**303**	*e*Pn	**Pn**	**05 10 31.8**	**+0.4**
BNDS				AML	AML	05 11 07.1	
	comp=N,66nm,0.3s						
BNDS	**Bandar-Abbas**	**2.57**	**303**	*e*Pn	**Pn**	**05 10 32.1**	**+0.7**
	SNR=52						
HOQ	**Hoqain**	**2.69**	**206**	⇑P	**Pn**	**05 10 33.0**	**0.0**
	SNR=37						
SMDO	**Samad**	**2.99**	**190**	‖P	**Pn**	**05 10 37.1**	**0.0**
	SNR=35						
FAQ	**Al Faqa, Dubai**	**3.00**	**246**	Pn	**Pn**	**05 10 39.0**	**+1.7**
	SNR=5.4						
ASUD	**Al Ashush, Dub**	**3.27**	**246**	Pn	**Pn**	**05 10 42.8**	**+1.8**
	SNR=34						
WBK	**Wadi Bani Khal**	**3.41**	**174**	⇑P	**Pn**	**05 10 40.7**	**-2.2**
	SNR=256						
BSY	**Bisya**	**3.50**	**202**	‖P	**Pn**	**05 10 45.9**	**+1.8**
	SNR=47						
JMDO	**Jabal Madar**	**3.66**	**187**	P	**Pn**	**05 10 47.0**	**+0.6**
	SNR=34						
ZHSF	**Zahedan**	**4.07**	**28**	*e*Pn	**Pn**	**05 10 51.4**	**-0.5**
ZHSF				AML	AML	05 11 35.5	
	comp=E,15nm,0.5s						
KRBR	**Kerman**	**4.27**	**338**	*e*Pn	**Pn**	**05 10 56.0**	**+1.2**
GHIR	**Ghir-Karzin**	**5.49**	**296**	*e*Pn	**Pn**	**05 11 12.2**	**+0.7**
RDF	**Al-Radifah**	**

*ISCJB **04** 05:21:09.9±0.5, 5237N×005×1578E±0.1, h137km±3km, mb3.7/7, Error ellipse: s-maj=11.9km s-min=5.6km az=35.0*
*MOS **04** 05:21:09.3±0.9, 5247N×15749E, h132km, mb4.2/1, Error ellipse: s-maj=28.7km s-min=12.7km az=71.3*
*KRSC **04** 05:21:10.6±0.9, 5242N×15792E, h136km±24km, ML4.0*
*NEIC **04** 05:21:10.6±1.1, 5232N×15753E, h130km±8km, mb4.5/2, Error ellipse: s-maj=28.0km s-min=19.2km az=153.0*
*IDC **04** 05:21:11.3±1.1, 5243N×15748E, h130km±7km, mb3.2/5, mb1 3.6/5, mb1mx3.2/22, mbtmp3.2/5, Error ellipse: s-maj=29.0km s-min=24.0km az=167.0*

ISC 04 05:21:11.1±0.5, 5236N±005×15785E±010, h133km±3km, n29, σ1§04/46, mb3.7/7, 1C, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
GRL	**Gorelyy**	**0.23**	**35**	*e*P		**Pn**		**05 21 29.9**	**+0.6**
GRL				*i* S		**Sn**		**05 21 44.8**	**+1.6**
RUS	**Russkaya**	**0.41**	**80**	*e*P		**Pn**		**05 21 29.8**	**-0.2**
RUS				*i* S		**Sn**		**05 21 44.0**	**-0.3**
MIPR	**Malaya Ipel'ka**	**0.68**	**263**	*e*P		**Pn**		**05 21 31.9**	**+0.3**
MIPR				*i* S		**Sn**		**05 21 47.2**	**+0.1**
PEA0B	**Petropavlovsk-**	**0.75**	**353**	*e*Pn		**Pn**		**05 21 32.4**	**+0.2**
PEA0B				*e*Sn		**Sn**		**05 21 48.7**	**+0.6**
PETK	**Petropavlovsk-**	**0.75**	**353**	P		**Pn**		**05 21 32.0**	**-0.1**
	142nm,0.3s,baz=147,slow=8.1,SNR=2740								
PETK				S		**Sn**		**05 21 48.1**	**0.0**
	13nm,0.3s,baz=229,slow=23,SNR=8.0								
PET	**Petropavlovsk**	**0.82**	**36**	*e*Pn		**Pn**		**05 21 32.5**	**-0.2**
PET				*e*Sn		**Sn**		**05 21 49.1**	**0.0**
PET	**Petropavlovsk**	**0.82**	**36**	⇑*i*PN		**Pn**		**05 21 32.6**	**-0.1**
PET				*i* S		**Sn**		**05 21 48.9**	**-0.2**
PET				pmax		pmax			
	comp=Z,70nm,0.4s								
PET				smax					
	comp=E,456nm,0.5s								
PET				smax					
	comp=N,386nm,0.8s								
PET	**Petropavlovsk**	**0.82**	**36**	*e*P		**Pn**		**05 21 32.8**	**+0.1**
PET				*i* S		**Sn**		**05 21 48.7**	**-0.4**
AVH	**Avacha**	**1.05**	**30**	*e*P		**Pn**		**05 21 35.4**	**+0.7**
AVH				*i* S		**Sn**		**05 21 53.7**	**+1.0**
NLC	**Nalytchevo**	**1.22**	**48**	*e*P		**Pn**		**05 21 35.6**	**-0.7**
NLC				*i* S		**Sn**		**05 21 53.9**	**-1.6**
GNL	**Ganaly**	**1.34**	**2**	*e*P		**Pn**		**05 21 37.8**	**+0.3**
GNL				*i* S		**Sn**		**05 21 57.4**	**-0.4**
SPN	**Mys Shipunski**	**1.51**	**60**	*e*P		**Pn**		**05 21 39.0**	**-0.5**
SPN				*i* S		**Sn**		**05 21 59.8**	**-1.3**
KII	**Karymskiy**	**1.93**	**29**	*e*P		**Pn**		**05 21 45.0**	**+0.7**
KII				*i* S		**Sn**		**05 22 15.5**	**+0.7**
SKR	**Severo-Kuril's**	**2.00**	**213**	*e*PN		**Pn**		**05 21 44.7**	**-0.5**
SKR				*e*S		**Sn**		**05 22 10.5**	**-0.8**
SKR				pmax		pmax			
	comp=N,80nm,0.5s								
SKR				pmax		pmax			
	comp=Z,150nm,0.5s								
SKR				smax					
	comp=N,230nm,0.5s								
SKR				smax					
	comp=E,390nm,0.5s								
KMNR	**Kamenistaya**	**3.68**	**22**	*e*P		**Pn**		**05 22 05.8**	**-0.8**
KMNR				*i* S		**Sn**		**05 22 47.0**	**-2.6**
KPT	**Kopyto**	**3.87**	**20**	*e*P		**Pn**		**05 22 08.5**	**-0.6**
KOZ	**Kozyrevsk**	**3.89**	**17**	P		**Pn**		**05 22 09.3**	**0.0**
KOZR	**Kozyr**	**3.90**	**17**	PN		**Pn**		**05 22 09.3**	**-0.2**
BZMR	**Bezymyannaya**	**3.90**	**22**	*e*P		**Pn**		**05 22 11.5**	**+2.0**
BZMR				*i* S		**Sn**		**05 22 55.6**	**+0.8**
KRSR	**Krestovskiy**	**4.18**	**21**	*e*P		**Pn**		**05 22 14.6**	**+1.5**
KBTR	**Krutoberegovo**	**4.83**	**35**	*e*P		**Pn**		**05 22 22.0**	**+0.2**
KBTR				*i* S		**Sn**		**05 23 14.7**	**-2.1**
YAK	**Yakutsk**	**17.92**	**314**	*e*P		**Pn**		**05 25 08.2**	**-3.3**
YAK				pmax		pmax			
	comp=Z,16nm,1.0s								
YAK				pmax		pmax			
	comp=N,4.0nm,1.2s								
EGAK	**Eagle**	**32.74**	**44**	*e*P		**P**		**05 27 30.9**	**+0.3**
	comp=N,6.1nm,1.6s,mb4.1								
MKAR	**Makanchi Array**	**47.24**	**295**	P		**P**		**05 29 28.7**	**-1.6**
	comp=N,0.5nm,0.4s,mb3.5,baz=53,slow=5.0,SNR=7.7								
NVAR	**Mina Array Bea**	**57.28**	**68**	P		**P**		**05 30 46.6**	**+2.1**
	comp=N,0.3nm,0.5s,mb3.4,baz=302,slow=7.8,SNR=4.1								
NOA	**NORSAR Array B**	**63.85**	**343**	P		**P**		**05 31 28.7**	**+0.1**
	comp=N,1.0nm,0.9s,mb3.7,baz=18,slow=8.0,SNR=2.8								
TXAR	**Lajitas Array**	**72.18**	**65**	P		**P**		**05 32 23.0**	**+1.8**
	comp=N,0.4nm,0.5s,mb3.4,baz=296,slow=4.8,SNR=7.3								
WRA	**Warramunga Arr**	**74.86**	**203**	P		**P**		**05 32 37.4**	**+0.7**
	comp=N,0.3nm,0.7s,mb3.0,baz=3.7,slow=6.2,SNR=3.6								
MBWA	**Marble Bar**	**80.39**	**216**	*e*P		**P**		**05 33 04.6**	**-2.8**
	comp=N,12nm,0.6s,mb4.7								

*ISCJB **04** 05:26:44.4±0.4, 3925N±002×2095E±004, h10km, Error ellipse: s-maj=4.4km s-min=2.9km az=13.6*
*CSEM **04** 05:26:44.1±0.1, 3919N×2102E, h2km, MD3.3, Error ellipse: s-maj=2.4km s-min=1.4km az=121.0*
*THE **04** 05:26:44.8, 3921N×2102E, h1km±2km, ML3.5/5, Error ellipse: s-maj=2.7km s-min=0.8km az=240.0*
*ATH **04** 05:26:45.0, 3919N×2104E, h19km±4km, MD3.3/8*
*NEIC **04** 05:26:45.1, 3917N×2107E, h17km, MD3.3(ATH), After ATH.*
*SKO **04** 05:26:45.5, 3922N×2101E, h33km*

ISC 04 05:26:44.6±0.5, 3921N±002×2101E±003, h3km±4km, n58, σ1§04/90, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JAN	**Janina**	**0.46**	**345**	⇓*i*PB		**Pg**		**05 26 54.0**	**+0.5**
JAN				*e*SB		**Sg**		**05 27 02.0**	**+2.5**
JAN	**Janina**	**0.46**	**345**	⇓*i*Pn		**Pg**		**05 26 53.9**	**+0.4**
JAN				*e*Sn		**Sg**		**05 27 01.3**	**+1.8**
LKD	**Levkas**	**0.57**	**209**	P		**Pg**		**05 26 56.0**	**+0.4**
LKD				S		**Sg**		**05 27 04.2**	**+1.2**
MEV	**Metsovon**	**0.60**	**17**	P		**Pg**		**05 26 55.9**	**-0.2**
EVR	**Evrytania**	**0.69**	**115**	*e*PN		**Pg**		**05 26 58.0**	**+0.2**
THL	**Klokotos Trika**	**0.86**	**65**	P		**Pg**		**05 27 00.1**	**-1.0**
THL				S		**Sg**		**05 27 13.5**	**+1.3**
THL	**Klokotos Trika**	**0.86**	**65**	*e*PB		**Pb**		**05 27 00.5**	**-1.6**
THL				*e*SN		**Sn**		**05 27 13.3**	**-3.3**
THL	**Klokotos Trika**	**0.86**	**65**	*e*Pn		**Pg**		**05 27 00.1**	**-1.0**
THL				*e*Sn		**Sn**		**05 27 13.3**	**-3.3**
AGG	**Agios Georgios**	**1.05**	**100**	P		**Pg**		**05 27 04.1**	**-0.6**
AGG				S		**Sg**		**05 27 19.5**	**+1.3**
KEK	**Kerkira**	**1.06**	**299**	*e*Pn		**Pg**		**05 27 03.9**	**-0.5**
KEK				*e*Sn		**Sn**		**05 27 23.3**	**+1.6**
VLS	**Valsamata**	**1.08**	**198**	P		**Pg**		**05 27 04.0**	**-1.3**
VLS				S		**Sg**		**05 27 21.6**	**+2.3**
VLS	**Valsamata**	**1.08**	**198**	*e*PB		**Pg**		**05 27 04.0**	**-1.3**
VLS				*e*SN		**Sn**		**05 27 21.3**	**-0.8**
VLS	**Valsamata**	**1.08**	**198**	*e*Pb		**Pb**		**05 27 03.9**	**-2.1**
VLS				*e*Sn		**Sn**		**05 27 21.3**	**-0.8**
VLS				S		**Sg**		**05 27 21.6**	**+2.3**
KFL	**Anninata**	**1.11**	**189**	P		**Pg**		**05 27 05.1**	**-0.8**
KZN	**Kozani**	**1.24**	**28**	*e*PN		**Pn**		**05 27 09.4**	**+0.5**
LIT	**Litokhoron**	**1.45**	**52**	P		**Pn**		**05 27 11.7**	**0.0**
LIT				S		**Sb**		**05 27 32.1**	**+1.0**
FNA	**Florina**	**1.60**	**10**	P		**Pn**		**05 27 12.9**	**-0.9**
FNA				S		**Sn**		**05 27 35.3**	**+0.4**
XOR	**Xorichti**	**1.70**	**84**	P		**Pn**		**05 27 16.3**	**+1.1**
NEO	**Neokhori**	**1.72**	**86**	*e*PN		**Pn**		**05 27 16.0**	**+0.5**
BIA	**Bitola**	**1.82**	**8**	*e*Pg		**Pg**		**05 27 18.7**	**-0.9**
BIA				*e*Sg		**Sg**		**05 27 43.5**	**+0.3**
BIA	**Bitola**	**1.82**	**8**	*e*Pg		**Pg**		**05 27 18.8**	**-0.8**
BIA				*e*Sg		**Sg**		**05 27 43.5**	**+0.3**
OHR	**Ohrid**	**1.91**	**355**	*e*Pg		**Pg**		**05 27 20.5**	**-0.7**
OHR				*e*Sg		**Sg**		**05 27 45.3**	**-0.6**
LTK	**Loutraki**	**1.94**	**127**	P		**Pn**		**05 27 19.1**	**+0.6**
GRG	**Griva**	**2.05**	**31**	P		**Pn**		**05 27 20.3**	**+0.3**
KRUS	**Krusevo**	**2.17**	**5**	*e*Pg		**Pg**		**05 27 24.0**	**-2.1**
KRUS	**Krusevo**	**2.17**	**5**	*e*Pg		**Pg**		**05 27 24.1**	**-2.1**
PAIG	**Paliouri**	**2.19**	**70**	P		**Pn**		**05 27 20.9**	**-1.0**
PAIG				S		**Sn**		**05 27 49.2**	**-0.2**
PLG	**Polygyros**	**2.21**	**57**	*e*PN		**Pn**		**05 27 22.1**	**-0.1**
SOH	**Sokhos**	**2.42**	**47**	P		**Pn**		**05 27 25.6**	**+0.6**
KNT	**Kendrikon**	**2.43**	**36**	P		**Pn**		**05 27 25.6**	**+0.4**

*NEIC **04** 05:49:53.0, 1462N×9337W, h6km, MD4.3(MEX), After MEX.*

MEX 04 05:49:53.2±1.3, 1462N×9337W, h7km±34km, MD4.3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PCIG		**1.09**	**8**	*i* P		Pg		05 50 10.7	-3.5
PCIG				*i* S		Sg		05 50 24.5	-3.9
THIG		**1.11**	**75**	*i* P		Pg		05 50 10.2	-4.4
THIG				*i* S		Sg		05 50 26.1	-2.8
CCIG	**Comitan**	**2.04**	**36**	*e*P		Pn		05 50 23.8	-4.2
CCIG				*i* P				05 50 25.0	
CCIG				*i* S		Sn		05 50 49.8	-4.0
TGIG		**2.16**	**6**	*i* P		Pn		05 50 28.0	-1.7
TGIG				*i* S		Sn		05 50 51.0	-5.8
SCX	**San Cristobal**	**2.23**	**19**	*i* P		Pn		05 50 29.5	-1.1
CMIG	**Matias Romero**	**2.86**	**330**	*i* P		Pn		05 50 36.8	-2.5
CMIG				*i* S		Sn		05 51 09.2	-4.8
VHO	**Vista Hermosa**	**4.05**	**308**	*i* P		Pn		05 50 53.2	-2.5
VHO				*i* S		Sn		05 51 40.9	-2.5
TGUH	**Tegucigalpa,Un**	**5.94**	**95**	*e*Pn		Pn		05 51 20.8	-0.9
PPM	**Popocatepetl**	**6.70**	**312**	*e*P		Pn		05 51 41.6	+10

IDC 04 05:50:47.6±1.2, 6054S×2690W, h0km, mb4.2/3, mb1 4.3/3, mb1mx4.0/12, mbtmp4.2/3, MS3.8/5, Ms1 3.7/5, ms1mx3.2/14, Error ellipse: s-maj=55.0km s-min=27.1km az=47.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VNA1	**Neumayer--Stat**	**12.66**	**151**	*e*P		Pn		05 53 48.4	-0.2
VNA1				*e*S		Sn		05 55 57.8	-12
VNA3	**Neumayer Olymp**	**12.77**	**154**	*e*P		Pn		05 53 50.0	-0.1
VNA3				*e*S		Sn		05 56 01.0	-12
VNA2	**Neumayer--Watz**	**13.06**	**151**	*e*P		Pn		05 53 54.2	+0.2
	baz=321,slow=17								
VNA2				*e*S		Sn		05 56 07.3	-12
PLCA	**Paso Flores**	**33.19**	**287**	LR		LR		06 09 20.9	
	comp=Z,182nm,18.9s,baz=153,slow=34								
MAW	**Mawson**	**36.52**	**140**	P		P		05 57 53.7	-0.3
	1.1nm,0.5s,baz=283,slow=14,SNR=4.4								
MAW				LR		LR		06 11 20.8	
	comp=Z,105nm,19.1s,baz=64,slow=34								
BDFB	**Brasilia**	**47.38**	**332**	LR		LR		06 17 13.0	
	comp=Z,43nm,19.2s,baz=192,slow=34								
LPAZ	**La Paz**	**53.18**	**308**	P		P		06 00 07.8	+0.6
	3.5nm,0.6s,baz=149,slow=4.7,SNR=22								
TORD	**Torodi Ar. Bea**	**76.92**	**29**	P		P		06 02 41.5	0.0
	0.9nm,0.3s,baz=200,slow=5.9,SNR=19								
STKA	**Stephens Creek**	**87.44**	**170**	LR		LR		06 44 37.3	
	comp=Z,47nm,19.2s,baz=26,slow=37								
WRA	**Warramunga Arr**	**98.37**	**162**	LR		LR		06 45 58.8	
	comp=Z,82nm,20.3s,baz=125,slow=34								
SONM	**Songino Array**	**150.55**	**94**	PKPbc		PKPbc		06 10 40.9	+0.9
	0.5nm,0.3s,baz=197,slow=4.5,SNR=4.0								
SONM				PKPab		PKPab		06 10 46.2	-0.6
	0.8nm,0.5s,baz=247,slow=1.6,SNR=5.9								

*DDA **04** 06:21:33.0, 3979N×3313E, h7km±4km, Md2.9*
*CSEM **04** 06:21:32.8±0.1, 3978N×3303E, h8km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.7km az=33.0*
*ISK **04** 06:21:33.0, 3979N×3306E, h9km, MD2.8*
*ISCJB **04** 06:21:34.1±0.5, 3982N±004×3309E±004, h10km, Error ellipse: s-maj=5.2km s-min=4.0km az=22.6*

ISC 04 06:21:33.8±0.7, 3982N±004×3309E±004, h3km±6km, n14, σ0§82/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
ANTO	**Ankara**	**0.23**	**282**	PG		**Pg**		**06 21 37.6**	**-0.7**
ANTO				SG		**Sg**		**06 21 41.8**	**+0.4**
KAMT	**Kaman**	**0.66**	**133**	PG		**Pg**		**06 21 46.2**	**-0.3**
KAMT				SG		**Sg**		**06 21 56.0**	**+1.0**
CANT	**Cankiri**	**0.88**	**27**	*e*PG		**Pg**		**06 21 51.0**	**+0.3**
SGKT	**Sivrigoynuk**	**1.09**	**314**	*i* P		**Pg**		**06 21 54.0**	**-0.8**
SGKT				*i* S		**Sg**		**06 22 10.0**	**+1.1**
CORM	**Corum**	**1.23**	**73**	*e*PN		**Pn**		**06 21 56.8**	**-1.2**
KIZT	**Kizilcal**	**1.33**	**225**	*e*PN		**Pn**		**06 21 57.5**	**-1.7**
TOS	**Tosya**	**1.41**	**30**	*e*PN		**Pn**		**06 22 00.4**	**+0.1**
SAFT	**Safranbolu**	**1.45**	**348**	*e*PN		**Pn**		**06 22 00.1**	**-0.9**
KDHN	**Kadinhani**	**1.50**	**211**	*i* P		**Pn**		**06 22 01.6**	**0.0**
KDHN				*i* S		**Sn**		**06 22 27.7**	**+1.0**
CTKT	**Corum**	**1.53**	**58**	*i* P		**Pn**		**06 22 02.1**	**+0.1**
CTKT				*i* S		**Sn**		**06 22 23.6**	**+1.2**
AVNT	**Avonos**	**1.72**	**127**	*i* P		**Pn**		**06 22 03.8**	**-0.8**
AVNT				*i* S		**Sn**		**06 22 27.0**	**-0.1**
YOZ	**Yozgat**	**1.73**	**95**	*e*PN		**Pn**		**06 22 04.8**	**0.0**
ESKT	**Eskisehir**	**1.75**	**261**	*i* P		**Pn**		**06 22 06.3**	**+1.2**
ESKT				*i* S		**Sn**		**06 22 34.9**	**+6.9**
SEYT	**Eskypehyr**	**1.75**	**261**	*i* P		**Pn**		**06 22 06.3**	**+1.2**

*NEIC **04** 06:22:08.6, 3265S×7160W, h12km, ML2.9(GUC), After GUC.*

GUC 04 06:22:08.6±0.6, 3265S×7160W, h12km±3km, MD3.6, ML2.9, 12C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
IHA	**Instituto Hidr**	**0.38**	**186**	⇓*i*P		Pg		06 22 16.6	+0.5
IHA				*i* S		Sg		06 22 22.4	+1.2
ROCH	**El Roble**	**0.59**	**123**	*e*P		Pg		06 22 20.6	+0.5
ROCH				*i* S		Sg		06 22 29.6	+1.7
CHNG	**Los Chungos**	**0.77**	**6**	*i* S		Sg		06 22 33.6	+0.1
JACH	**Jahuel**	**0.85**	**92**	⇑*i*P		Pg		06 22 24.4	-0.6
JACH				*i* S		Sg		06 22 36.4	+0.4
PEL	**Peldehue**	**0.91**	**123**	⇑*i*P		Pg		06 22 25.8	-0.4
PEL				*i* S		Sg		06 22 38.6	+0.6
PEL				AML		AML		06 22 39.2	
	comp=E,914nm,0.2s								
RCDM	**Rinconada Maip**	**1.07**	**142**	⇑*i*P		Pb		06 22 27.5	-1.5
RCDM				*i* S		Sb		06 22 42.0	-0.9
RCDM	**Rinconada Maip**	**1.07**	**142**	⇑*i*P		Pb		06 22 27.5	-1.5
RCDM				*i* S		Sb		06 22 42.0	-0.9
RCDM				AML		AML		06 22 44.1	
	comp=E,634nm,0.1s								
TACH	**Talagante**	**1.14**	**151**	⇓*i*P		Pb		06 22 29.0	-1.2
TACH				*i* S		Sb		06 22 43.8	-1.3
CLCH	**Cerro Calan**	**1.16**	**130**	⇓*i*P		Pb		06 22 29.5	-1.1
CLCH				*i* S		Sb		06 22 45.1	-0.4
CLCH				AML		AML		06 22 46.0	
	comp=N,503nm,0.5s								
ANTU	**Antumapu**	**1.22**	**139**	⇑*i*P		Pn		06 22 30.4	-1.1
ANTU				*i* S		Sb		06 22 46.7	-0.6
ANTU	**Antumapu**	**1.22**	**139**	⇑*i*P		Pn		06 22 30.4	-1.1
ANTU				*i* S		Sb		06 22 46.7	-0.6
ANTU				AML		AML		06 22 50.6	
	comp=E,257nm,0.2s								
FCH	**Farellones**	**1.29**	**122**	⇓*i*P		Pn		06 22 31.5	-0.9
FCH				*i* S		Sb		06 22 49.2	0.0
FCH				AML		AML		06 22 49.8	
	comp=E,348nm,0.2s								
LNV	**Longovilo**	**1.31**	**173**	⇓*i*P		Pn		06 22 30.5	-2.2
LNV				*i* S		Sb		06 22 48.3	-1.6
PCH	**Pirque**	**1.33**	**137**	⇑*i*P		Pn		06 22 31.9	-1.0
PCH				*i* S		Sb		06 22 49.9	-0.5
SJCH	**San Jose de Ma**	**1.44**	**134**	⇓*i*P		Pn		06 22 33.1	-1.3
SJCH				*i* S		Sn		06 22 52.4	-0.7
CHCH	**Chadas Angostu**	**1.50**	**149**	⇑*i*P		Pn		06 22 35.0	-0.3
CHCH				*i* S		Sn		06 22 54.4	-0.5
LMEL	**Las Melosas**	**1.67**	**136**	⇑*i*P		Pn		06 22 37.5	-0.1
LMEL				*i* S		Sn		06 22 59.3	+0.4
LMEL	**Las Melosas**	**1.67**	**136**	⇑*i*P		Pn		06 22 37.5	-0.1
LMEL				*i* S		Sn		06 22 59.3	+0.4
LMEL				AML		AML		06 23 02.8	
	comp=N,262nm,0.2s								
CACH	**El Canelo**	**1.68**	**151**	⇑*i*P		Pn		06 22 38.6	+0.9
CACH				*i* S		Sn		06 23 00.9	+1.7
CICH	**Cipreses**	**1.93**	**150**	⇑*i*P		Pn		06 22 41.4	+0.1
CICH				*i* S		Sn		06 23 06.7	+1.3

*IDC **04** 06:31:32.2±12.0, 5618S×2677W, h98km±118km, mb3.7/4, mb1 3.8/4, mb1mx3.6/13, mbtmp3.7/4, Error ellipse: s-maj=49.5km s-min=23.6km az=49.0*
*ISCJB **04** 06:31:41.0±4.9, 5645S×2694W, h202km±51km, mb3.7/6, Error ellipse: s-maj=42.7km s-min=23.9km az=135.0*
*NEIC **04** 06:31:41.2±6.8, 5641S×2699W, h189km±62km, mb4.1/2, Error ellipse: s-maj=34.4km s-min=18.4km az=48.0*

ISC 04 06:31:38.8±4.3, 5635±02×2690W±04, h158km±43km, n14, σ0§96/10, mb3.9/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VNA1	**Neumayer--Stat**	**16.49**	**158**	*e*P		**Pn**		**06 35 20.5**	**-0.1**
VNA3	**Neumayer Olymp**	**16.68**	**160**	*e*P		**Pn**		**06 35 22.9**	**0.0**
VNA2	**Neumayer--Watz**	**16.88**	**158**	*e*P		**Pn**		**06 35 26.0**	**+0.7**
	baz=317,slow=13								
MAW	**Mawson**	**39.84**	**143**	P		**P**		**06 38 55.5**	**-0.6**
	0.6nm,0.3s,mb3.7,baz=226,slow=9.7,SNR=4.1								
LCO	**Las Campanas**	**41.15**	**293**	P		**P**		**06 39 07.5**	**+0.2**
	10nm,0.5s,mb4.7								
SBA	**Scott Base**	**45.82**	**184**	P		**P**		**06 39 42.3**	**-1.7**
	1.3nm,0.6s,mb3.7								
LPAZ	**La Paz**	**50.65**	**305**	P		**P**		**06 40 21.8**	**0.0**
	2.2nm,0.5s,mb4.1,baz=127,slow=5.7,SNR=19								
TORD	**Torodi Ar. Bea**	**73.22**	**29**	P		**P**		**06 42 51.8**	**-0.5**
	0.3nm,0.5s,mb3.3,baz=205,slow=5.9,SNR=7.5								
TORD				pP		pP		06 43 17.7	-13
	1.3nm,0.5s,baz=200,slow=6.4,SNR=6.2								
TORD	**Torodi Ar. Bea**	**73.22**	**29**	P		**P**		**06 42 51.8**	**-0.5**
TORD				pP		pP		06 43 17.7	-13
ASAR	**Alice Springs**	**98.68**	**162**	P		**P**		**06 45 02.4**	**+2.4**
	0.2nm,0.5s,mb3.8,baz=180,slow=4.7,SNR=4.5								
RLMT	**Red Lodge**	**122.27**	**304**	*e*PKPdf		PKPdf		06 50 13.4	-0.5
SONM	**Songino Array**	**150.60**	**87**	PKPbc		PKPbc		06 51 10.3	-0.5
	1.2nm,0.6s,baz=233,slow=2.8,SNR=8.6								
RC01	**Rabbit Creek A**	**150.75**	**303**	*e*PKPdf		PKPdf		06 51 02.0	-3.0
BPAW	**Bear Paw Mtn.**	**152.02**	**309**	*e*PKPbc		PKPbc		06 51 13.3	-0.2
BPAW				*e*PKPab		PKPab		06 51 23.2	-0.6

*NEIC **04** 06:57:17.8±0.5, 7355×12880E, mb4.3/2, Error ellipse: s-maj=22.4km s-min=7.0km az=70.0*
*ISCJB **04** 06:57:18.5±2.7, 74S±0.1×1288E±0.1, h145km±28km, mb3.9/6, Error ellipse: s-maj=27.0km s-min=12.0km az=31.0*
*IDC **04** 06:57:18.3±4.2, 7275×12889E, h125km±36km, mb3.8/6, mb1 3.9/8, mb1mx3.7/15, mbtmp3.8/8, MS2.6/1, Ms1 2.6/1, ms1mx1.8/23, Error ellipse: s-maj=45.8km s-min=14.8km az=66.0*

ISC 04 06:57:19.3±2.6, 74S±01×1288E±01, h136km±27km, n18, σ0§78/16, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
BATI	**Baumata**	**5.76**	**241**	P		**Pn**		**06 58 44.2**	**+1.4**
	159nm,0.3s,baz=123,slow=5.0,SNR=71								
BATI				S		**Sn**		**06 59 47.0**	**-0.9**
	113nm,0.3s,baz=85,slow=20,SNR=14								
BATI				LR		LR		07 01 09.3	
	comp=Z,64nm,22.0s,baz=108,slow=39								
WRAB	**Tennant Creek**	**13.57**	**157**	*e*Pn		**Pn**		**07 00 27.0**	**+0.7**
	8.7nm,0.6s								
WRAB				*e*Sn		Sx		07 02 46.9	
WRA	**Warramunga Arr**	**13.57**	**157**	P		**Pn**		**07 00 25.2**	**-1.3**
	1.1nm,0.3s,baz=343,slow=13,SNR=23								
WRA				S		Sx		07 02 46.5	
	4.3nm,0.3s,baz=329,slow=24,SNR=11								
WB2	**Warramunga Arr**	**13.58**	**157**	*e*Pn		**Pn**		**07 00 25.7**	**-0.8**
WB2				*e*Sn		Sx		07 02 46.7	
MBWA	**Marble Bar**	**16.22**	**212**	*e*Pn		**Pn**		**07 00 59.1**	**-0.5**
	8.6nm,0.6s								
MBWA				*e*Sn		Sx		07 03 48.5	
ASAR	**Alice Springs**	**16.89**	**164**	P		**Pn**		**07 01 08.9**	**+1.2**
	0.9nm,0.3s,baz=339,slow=10,SNR=76								
ASAR				S		Sx		07 04 00.5	
	0.5nm,0.3s,baz=326,slow=16,SNR=4.6								
CMAR	**Chiang Mai Arr**	**39.08**	**311**	P		**P**		**07 04 34.1**	**+0.7**
	1.5nm,0.4s,mb4.0,baz=144,slow=7.3,SNR=16								
SONM	**Songino Array**	**58.45**	**342**	P		**P**		**07 07 00.8**	**-0.1**
	1.4nm,0.9s,mb3.8,baz=169,slow=7.1,SNR=9.9								
MK31	**Makanchi Array**	**67.91**	**327**	*e*P		**P**		**07 08 03.5**	**+0.3**
MK31				*e*pP		pP		07 08 33.2	-3.1
MKAR	**Makanchi Array**	**67.91**	**327**	P		**P**		**07 08 03.3**	**+0.1**
	2.1nm,0.6s,mb4.1,baz=122,slow=7.8,SNR=23								
ZAA0	**Zalesovo Array**	**71.42**	**334**	*e*P		**P**		**07 08 24.1**	**-0.4**
ZAA0				*e*pP		pP		07 08 54.7	-3.3

SONM PKPab PKPab 07 21 21.7 +1.4
1.2nm,0.7s,baz=341,slow=1.5,SNR=6.1

*ISCJB **04** 07:08:45.4±0.4, 5983N×00315165W±008, h55km, Error ellipse: s-maj=6.1km s-min=4.4km az=34.0*
*NEIC **04** 07:08:47.6, 5987N×15181W, h55km, ML3.9(PMR), ML3.5(AEIC), After AEIC.*
NEIC Felt [III] at Homer. Also felt at Anchor Point and Ninilchik.
*IDC **04** 07:08:48.3±1.0, 5909N×150.15W, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=25.3km s-min=17.5km az=138.0*

ISC 04 07:08:46.6±0.4, 5982N±004×15176W±008, h64km±11km, n41, σ0s75/42, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AUL	**Augustine Lava**	**0.96**	**244**	P		**Pn**	**Pn**	**07 09 04.6**	**+0.9**
AUL				S			**Sn**	**07 09 17.5**	**+0.3**
SLKM	**Skilak Lake**	**1.03**	**47**	P		**Pn**	**Pn**	**07 09 04.3**	**-0.5**
SEW	**Seward**	**1.20**	**75**	P		**Pn**	**Pn**	**07 09 07.8**	**+0.9**
SEW				S			**Sn**	**07 09 24.6**	**+1.8**
FIB	**Fire Island**	**1.56**	**29**	P		**Pn**	**Pn**	**07 09 13.0**	**+1.0**
RC01	**Rabbit Creek A**	**1.62**	**37**	P		**Pn**	**Pn**	**07 09 12.6**	**-0.2**
KDAK	**Kodiak Island**	**2.09**	**192**	Pn		**Pn**	**Pn**	**07 09 18.9**	**-0.3**
	7.2nm,0.3s,baz=33,slow=9.1,SNR=157								
KDAK				Sn			**Sn**	**07 09 44.4**	**+0.3**
	57nm,0.3s,baz=52,slow=16,SNR=15								
KDAK	**Kodiak Island**	**2.09**	**192**	P		**Pn**	**Pn**	**07 09 18.8**	**-0.3**
SKT	**Skwentna**	**2.17**	**3**	P		**Pn**	**Pn**	**07 09 20.7**	**+0.4**
PMR	**Palmer**	**2.20**	**35**	P		**Pn**	**Pn**	**07 09 20.1**	**-0.6**
SVW2	**Sparrevohn**	**2.29**	**306**	P		**Pn**	**Pn**	**07 09 24.9**	**-1.0**
SML	**Sawmill**	**2.61**	**39**	P		**Pn**	**Pn**	**07 09 25.9**	**-0.4**
OHAK	**Old Harbor**	**2.72**	**198**	P		**Pn**	**Pn**	**07 09 27.2**	**-0.7**
MID	**Middleton Isla**	**2.78**	**96**	*e*P		**Pn**	**Pn**	**07 09 28.4**	**-0.2**
PPLA	**Purkeypile**	**3.10**	**356**	P		**Pn**	**Pn**	**07 09 33.6**	**+0.7**
TRF	**Thorofare Moun**	**3.71**	**10**	P		**Pn**	**Pn**	**07 09 42.4**	**+1.0**
TT01	**Tatalina**	**3.72**	**328**	P		**Pn**	**Pn**	**07 09 41.1**	**-0.3**
KTH	**Kantishna Hill**	**3.77**	**6**	P		**Pn**	**Pn**	**07 09 43.2**	**+1.0**
CHUM	**Lake Minchumin**	**4.09**	**357**	*e*Pn		**Pn**	**Pn**	**07 09 46.8**	**+0.3**
MCK	**McKinley**	**4.15**	**18**	P		**Pn**	**Pn**	**07 09 48.1**	**+0.7**
BPAW	**Bear Paw Mtn.**	**4.31**	**5**	P		**Pn**	**Pn**	**07 09 50.0**	**+0.4**
PAX	**Paxson**	**4.38**	**41**	P		**Pn**	**Pn**	**07 09 50.3**	**-0.1**
MENT	**Mentasta**	**4.97**	**48**	*e*P		**Pn**	**Pn**	**07 09 58.8**	**+0.2**
DOT	**Dot Lake**	**5.30**	**40**	P		**Pn**	**Pn**	**07 10 03.5**	**+0.4**
COLA	**College**	**5.39**	**18**	P		**Pn**	**Pn**	**07 10 03.9**	**-0.4**
ILB	**Eielson Array**	**5.46**	**22**	P		**Pn**	**Pn**	**07 10 05.0**	**-0.3**
IL1	**Eielson Array**	**5.47**	**22**	P		**Pn**	**Pn**	**07 10 05.0**	**-0.2**
BCA3	**Beaver Creek A**	**5.79**	**51**	P		**Pn**	**Pn**	**07 10 09.2**	**-0.4**
PNL	**Peninsula**	**6.25**	**86**	P		**Pn**	**Pn**	**07 10 15.9**	**-0.2**
IM3	**Indian Mountai**	**6.25**	**353**	P		**Pn**	**Pn**	**07 10 14.9**	**-1.2**
IMA2	**Indian Mountai**	**6.34**	**353**	*e*P		**Pn**	**Pn**	**07 10 17.7**	**+0.5**
EGAK	**Eagle**	**7.01**	**40**	P		**Pn**	**Pn**	**07 10 25.9**	**-0.5**
HYT	**Haines Junctio**	**7.15**	**76**	*e*Pn		**Pn**	**Pn**	**07 10 28.5**	**+0.2**
HYT				*e*Sn			**Sn**	**07 11 44.6**	**-3.4**
DAWY	**Dawson**	**7.22**	**49**	P		**Pn**	**Pn**	**07 10 27.5**	**-1.7**
SKAG	**Skagway**	**8.33**	**85**	P		**Pn**	**Pn**	**07 10 44.3**	**-0.2**
WHY	**Whitehorse**	**8.44**	**77**	P		**Pn**	**Pn**	**07 10 45.8**	**-0.2**
YKA	**Yellowknife Ar**	**17.96**	**65**	Pn		**Pn**	**Pn**	**07 12 51.5**	**+0.1**
	0.2nm,0.3s,baz=276,slow=9.8,SNR=8.5								
EDM	**Edmonton**	**21.94**	**90**	*e*P		**P**		**07 13 28.5**	**-5.9**
TXAR	**Lajitas Array**	**44.33**	**112**	P		**P**		**07 16 51.8**	**+1.7**
	0.1nm,0.6s,baz=320,slow=9.4,SNR=3.5								
ARCES	**ARCESS Array B**	**50.93**	**1**	P		pP		07 17 56.0	-1.0
	3.2nm,1.0s,baz=7.8,slow=9.3,SNR=3.1								
SONM	**Songino Array**	**55.40**	**307**	P		pP		07 18 32.2	+1.7
	0.8nm,0.7s,baz=28,slow=7.7,SNR=5.3								
ZALV	**Zalesovo Beam**	**57.89**	**324**	P		pP		07 18 48.9	+0.8
	0.5nm,0.5s,baz=26,slow=8.2,SNR=2.2								

*ISCJB **04** 07:11:19.7±0.3, 4669N±002×1008E±003, h12km±3km, Error ellipse: s-maj=3.5km s-min=3.0km az=173.8*
*VIE **04** 07:11:19.7±0.2, 4670N×1008E, h11km±2km, mb1.4/6, ML2.5/10, Error ellipse: s-maj=1.0km s-min=0.8km az=2.0 23 km ESE of Davos*
*ROM **04** 07:11:19.8±0.2, 4669N×1010E, h5km, Md2.4/6, Ml1.9/4, Error ellipse: s-maj=4.8km s-min=1.2km az=39.0*
*CSEM **04** 07:11:19.6±0.1, 4666N×1008E, h12km, ML2.8/4, Error ellipse: s-maj=1.5km s-min=1.2km az=71.0*
*ZUR **04** 07:11:20.1, 4668N×1005E, h8km±1km, ML2.1/4*
*BGR **04** 07:11:22.6±0.9, 4666N×1005E, h10km, ML2.3, Error ellipse: s-maj=18.9km s-min=4.4km az=4.0*
*PRU **04** 07:11:24.3, 4687N×1016E, h10km*

ISC 04 07:11:20.5±0.3, 4669N±002×1009E±003, h8km±4km, n33, σ0s86/53, 13C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
FUORN	**Ofenpass-Fuorn**	**0.14**	**119**	↑*i*Pg		**Pg**	**Pg**	**07 11 24.0**	**+0.5**
FUORN				*i*Sg			**Sg**	**07 11 26.5**	**+0.9**
DAVOX	**Davos/Dischmat**	**0.17**	**303**	↓*i*Pg		**Pg**	**Pg**	**07 11 24.0**	**-0.1**
DAVOX				*i*Sg			**Sg**	**07 11 26.4**	**-0.1**
DAVOX	**Davos/Dischmat**	**0.17**	**303**	↓*i*PG		**Pg**	**Pg**	**07 11 24.0**	**-0.1**
DAVOX				Sg			**Sg**	**07 11 26.3**	**-0.2**
BERNI	**Berninapass**	**0.28**	**189**	↓*i*Pg		**Pg**	**Pg**	**07 11 26.1**	**+0.1**
	723nm,0.2s								
BERNI				*i*Sg			**Sg**	**07 11 29.9**	**+0.2**
	723nm,0.2s								
BERNI	**Berninapass**	**0.28**	**189**	↓*i*Pg		**Pg**	**Pg**	**07 11 26.9**	**+0.9**
	723nm,0.2s								
BERNI				*i*Sg			**Sg**	**07 11 29.9**	**+0.2**
	723nm,0.2s								
BRMO	**Bormio**	**0.29**	**137**	Pg		**Pg**	**Pg**	**07 11 26.3**	**+0.1**
BRMO				Sg			**Sg**	**07 11 30.5**	**+0.4**
	39nm,0.3s								
VDL	**Val di Lei**	**0.48**	**245**	↑*i*Pg		**Pg**	**Pg**	**07 11 29.2**	**-0.7**
	424nm,0.2s								
FETA	**Feichten**	**0.55**	**53**	↑*e*Pg		**Pg**	**Pg**	**07 11 31.0**	**-0.3**
	SNR=11								
FETA				↑*i*Sg			**Sg**	**07 11 38.4**	**-0.1**
	51nm,0.1s								
DAVA	**Damuels**	**0.62**	**347**	*e*Pg		**Pg**	**Pg**	**07 11 32.2**	**-0.2**
	SNR=24								
DAVA				↑*i*Sg			**Sg**	**07 11 39.8**	**-0.7**
	31nm,0.2s								
MABI	**Malga Bissina**	**0.70**	**155**	Pg		**Pg**	**Pg**	**07 11 34.0**	**0.0**
	25nm,0.3s								
RETA	**Reutte**	**0.92**	**30**	↑*e*Pg		**Pg**	**Pg**	**07 11 37.4**	**-0.8**
	SNR=5.8								
RETA				↑*i*Sg			**Sg**	**07 11 51.0**	**+0.7**
	8.1nm,0.2s								
MDI	**Monti di Nese**	**0.95**	**196**	Pg		**Pg**	**Pg**	**07 11 38.8**	**+0.1**
	38nm,0.4s								
MOTA	**Moosalm**	**0.96**	**46**	↑*e*Pg		**Pg**	**Pg**	**07 11 38.1**	**-0.8**
	SNR=5.6								
MOTA				↓*i*Sg			**Sg**	**07 11 51.7**	**+0.4**
	7.2nm,0.1s								
MAGA	**Magasa**	**0.99**	**157**	Pg		**Pg**	**Pg**	**07 11 39.1**	**-0.4**
	97nm,0.3s								
FUSIO	**Fusio**	**1.01**	**257**	↓*i*P		**Pg**	**Pg**	**07 11 38.7**	**-1.2**
	67nm,0.3s								
MUGIO	**Muggio**	**1.05**	**224**	↑*i*Pg		**Pg**	**Pg**	**07 11 39.7**	**-1.0**
	71nm,0.2s								
MUGIO	**Muggio**	**1.05**	**224**	Pg		**Pg**	**Pg**	**07 11 39.8**	**-0.9**
WILA	**Wila**	**1.09**	**312**	*e*Sg		**Sg**	**Sg**	**07 11 59.6**	**+4.1**
WATA	**Walderalm**	**1.21**	**57**	↑*e*Pg		**Pg**	**Pg**	**07 11 42.9**	**-0.8**
	SNR=7.1								
WATA				↑*i*Sg			**Sg**	**07 11 59.7**	**+0.3**
	5.9nm,0.1s								
WTTA	**Wattenberg**	**1.21**	**61**	↑*e*Pg		**Pg**	**Pg**	**07 11 42.9**	**-0.8**
	SNR=12								
WTTA				↑*i*Sg			**Sg**	**07 12 00.0**	**+0.7**
	9.7nm,0.2s								
VAI	**Varese**	**1.23**	**229**	Pg		**Pg**	**Pg**	**07 11 43.4**	**-0.7**
	16nm,0.2s								
ZUR	**Degenried**	**1.23**	**304**	*e*Sg		**Sg**	**Sg**	**07 12 03.8**	**+3.6**
CTI	**Castel Tesino**	**1.26**	**120**	Pg		**Pg**	**Pg**	**07 11 44.1**	**-0.5**
	7.0nm,0.4s								
SLE	**Schleitheim**	**1.53**	**315**	*e*Pg		**Pg**	**Pg**	**07 11 50.1**	**+0.2**
SLE				*e*Sg			**Sg**	**07 12 10.4**	**+0.7**
SULZ	**Cheisacher**	**1.59**	**303**	*e*Pg		**Pg**	**Pg**	**07 11 51.4**	**+0.4**
SULZ				*e*Sg			**Sg**	**07 12 12.9**	**+1.3**
FUR	**Furstenfeldbru**	**1.69**	**28**	*e*Pg		**Pg**	**Pg**	**07 11 53.3**	**+0.5**
BOURR	**Bourrignon**	**2.08**	**291**	*e*Sg		**Sg**	**Sg**	**07 12 27.8**	**+0.5**
RJOB	**Jochberg**	**2.12**	**59**	*e*Pn		**Pn**	**Pn**	**07 11 59.8**	**+3.6**
RJOB				*e*Sg			**Sg**	**07 12 30.1**	**+1.4**
WET	**Wettzell**	**3.09**	**36**	*e*Pn		**Pn**	**Pn**	**07 12 09.9**	**+0.3**
WET				*e*Sn			**Sn**	**07 12 46.4**	**-0.3**
GEC2	**GERESS Array S**	**3.26**	**47**	*e*Pn		**Pn**	**Pn**	**07 12 12.5**	**+0.7**
GEC2				*e*Sn			**Sn**	**07 12 51.4**	**+0.7**
KHC	**Kasperske Hory**	**3.39**	**43**	*e*PN		**Pn**	**Pn**	**07 12 14.4**	**+0.7**
KHC				*e*PG			**Pg**	**07 12 21.9**	**-3.5**
KHC				*e*SN			**Sn**	**07 12 53.2**	**-0.8**
KHC				*e*SG			**Sg**	**07 13 05.4**	**-3.9**
	comp=Z,2.9nm,0.4s								
NKC	**Novy Kostel**	**3.88**	**23**	*e*SG		**Sg**	**Sg**	**07 13 22.0**	**-3.1**
PRU	**Pruhonice**	**4.44**	**40**	*e*SG		**Sg**	**Sg**	**07 13 40.1**	**-3.0**

*IDC **04** 07:16:28.7±1.7, 3877S×75.15W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.9/13, mbtmp3.7/5, ML4.2/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/22, Error ellipse: s-maj=53.8km s-min=27.6km az=41.0*
*ISCJB **04** 07:16:33.4±1.0, 3842S±006×747W±0.1, h33km, mb3.7/4, Error ellipse: s-maj=12.4km s-min=8.1km az=165.9*
*NEIC **04** 07:16:34.9±1.2, 3849S×7462W, h35km, mb4.5/1, Error ellipse: s-maj=22.6km s-min=16.2km az=73.0*

ISC 04 07:16:35.1±1.0, 3850S±006×748W±01, h35km, n11, σ1s32/15, mb3.7/4, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PLCA	**Paso Flores**	**3.99**	**125**	Pn		**Pn**	**Pn**	**07 17 32.5**	**-1.2**
	3.3nm,0.3s,baz=301,slow=11,SNR=32								
PLCA				Sn			**Sn**	**07 18 20.6**	**+1.3**
	3.9nm,0.3s,baz=289,slow=23,SNR=6.7								
PLCA				LR		LR		07 19 20.9	
	comp=Z,363nm,20.9s,baz=270,slow=42								
PLCA	**Paso Flores**	**3.99**	**125**	*e*Pn		**Pn**	**Pn**	**07 17 32.0**	**-1.7**
PLCA				Sn			**Sn**	**07 18 20.6**	**+1.4**
PLCA				LR		LR		07 19 20.9	
CFAA	**Coronel Fontan**	**8.75**	**40**	Pn		**Pn**	**Pn**	**07 18 36.6**	**-2.5**
	0.1nm,0.3s,baz=214,slow=12,SNR=12								
CFAA				Sn			**Sn**	**07 20 16.2**	**-0.2**
	0.1nm,0.3s,baz=256,slow=17,SNR=2.3								
CFAA	**Coronel Fontan**	**8.75**	**40**	Pn		**Pn**	**Pn**	**07 18 36.6**	**-2.5**
CFAA				Sn			**Sn**	**07 20 16.2**	**-0.3**
LCO	**Las Campanas**	**10.07**	**21**	*e*Pn		**Pn**	**Pn**	**07 18 54.7**	**-2.4**
LCO				*e*Sn			**Sn**	**07 20 50.2**	**+1.4**
LVC	**Limon Verde**	**16.63**	**19**	*e*Pn		**Pn**	**Pn**	**07 20 25.8**	**+0.3**
	13nm,0.3s								
LPAZ	**La Paz**	**22.90**	**17**	P		**P**		**07 21 37.8**	**+2.0**
	0.6nm,0.5s,mb3.2,baz=227,slow=14,SNR=4.3								
TXAR	**Lajitas Array**	**72.66**	**334**	P		**P**		**07 27 59.1**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=156,slow=8.5,SNR=13								
RAO	**Raoul Island**	**81.60**	**239**	LR		LR		07 56 36.5	
	comp=Z,94nm,20.8s,baz=103,slow=30								
NVAR	**Mina Array Bea**	**86.36**	**327**	P		**P**		**07 29 13.2**	**-0.1**
	0.4nm,0.7s,mb3.7,baz=168,slow=5.5,SNR=4.4								
PDAR	**Pinedale Array**	**86.82**	**335**	P		**P**		**07 29 15.8**	**+0.4**
	0.2nm,0.3s,mb3.8,baz=179,slow=3.6,SNR=5.3								

*ISCJB **04** 07:40:46.6±0.8, 1695S±006×6967W±009, h185km±8km, mb3.8/4, Error ellipse: s-maj=14.0km s-min=9.5km az=3.7*
*NEIC **04** 07:40:47.7±0.9, 1682S×6964W, h173km±9km, Error ellipse: s-maj=15.0km s-min=12.6km az=214.0*
*IDC **04** 07:40:48.9±1.4, 1687S×6954W, h182km±11km, mb3.5/5, mb1 3.6/7, mb1mx3.4/18, mbtmp3.5/7, Error ellipse: s-maj=23.2km s-min=20.5km az=25.0*

ISC 04 07:40:47.8±0.8, 1693S±007×6968W±009, h178km±8km, n13, σ1s20/19, mb3.8/4, 1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
LPAZ	**La Paz**	**1.62**	**67**	P		**Pn**	**Pn**	**07 41 21.8**	**+1.1**
	45nm,0.3s,baz=278,slow=7.2,SNR=1588								
LPAZ				S			**Sn**	**07 41 46.5**	**+0.4**
	12nm,0.3s,baz=83,slow=13,SNR=6.2								
LPAZ	**La Paz**	**1.62**	**67**	↓*i*Pn		**Pn**	**Pn**	**07 41 21.7**	**+0.9**
LPAZ				S			**Sn**	**07 41 46.5**	**+0.4**
LPAZ				*e*Sn			**Sn**	**07 41 46.5**	**+0.4**
LVC	**Limon Verde**	**5.70**	**173**	P		**Pn**	**Pn**	**07 42 13.0**	**+2.2**
	5.9nm,0.3s,baz=334,slow=8.6,SNR=63								
LVC				S			**Sn**	**07 43 14.3**	**-1.7**
	11nm,0.3s,baz=134,slow=21,SNR=22								
SIV	**San Ignacio**	**8.31**	**85**	P		**Pn**	**Pn**	**07 42 43.1**	**-2.1**
	2.3nm,0.3s,baz=275,slow=12,SNR=47								
SIV				S			**Sn**	**07 44 13.3**	**-5.0**
	0.5nm,0.3s,baz=317,slow=16,SNR=6.5								
NNA	**Nana**	**8.50**	**304**	P		**Pn**	**Pn**	**07 42 46.1**	**-1.6**
	1.3nm,0.3s,baz=128,slow=9.8,SNR=4.6								
NNA				S			**Sn**	**07 44 17.7**	**-5.1**
	1.2nm,0.3s,baz=279,slow=18,SNR=5.6								
CFAA	**Coronel Fontan**	**14.66**	**175**	P		**Pn**	**Pn**	**07 44 07.8**	**+1.0**
	0.0nm,0.3s,baz=1.3,slow=9.9,SNR=11								
CFAA				S			**Sn**	**07 46 41.4**	**-8.8**
	0.0nm,0.3s,baz=264,slow=19,SNR=1.9								
BDFB	**Brasilia**	**20.84**	**90**	P		**P**		**07 45 15.9**	**+0.1**
	1.3nm,0.5s,baz=264,slow=21,SNR=6.9								
TXAR	**Lajitas Array**	**56.50**	**324**	P		**P**		**07 50 11.5**	**0.0**
	0.2nm,0.6s,mb3.1,baz=160,slow=8.6,SNR=4.7								
DBIC	**Dimbokro**	**68.22**	**75**	P		**P**		**07 51 29.3**	**-0.3**
	3.8nm,0.6s,mb4.3,baz=194,slow=4.3,SNR=6.9								
PDAR	**Pinedale Array**	**69.81**	**330**	P		**P**		**07 51 40.0**	**+1.2**
	0.4nm,0.6s,mb3.4,baz=116,slow=8.5,SNR=3.9								
TORD	**Torodi Ar. Bea**	**76.57**	**72**	P		**P**		**07 52 18.8**	**-0.2**
	4.1nm,0.6s,mb4.3,baz=269,slow=5.2,SNR=33								
TORD	**Torodi Ar. Bea**	**76.57**	**72**	P		**P**		**07 52 18.8**	**-0.2**
SONM	**Songino Array**	**149.02**	**5**	PKPbc		PKPbc		08 00 17.0	+2.3
	0.6nm,0.6s,baz=328,slow=3.4,SNR=4.3								

IDC 04 07:48:23.0±1.6, 1636S×17857W, h0km, mb4.1/6, mb1 4.5/6, mb1mx4.2/16, mbtmp4.1/6, Error ellipse: s-maj=152.5km s-min=21.1km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
STKA	**Stephens Creek**	**39.26**	**239**	P		P		07 55 53.4	0.0
	2.5nm,0.3s,baz=103,slow=6.3,SNR=9.3								
WRA	**Warramunga Arr**	**44.78**	**258**	P		P		07 56 38.6	-0.1
	1.5nm,0.5s,baz=95,slow=6.9,SNR=53								
ASAR	**Alice Springs**	**45.08**	**253**	P		P		07 56 41.0	0.0
	15nm,0.6s,baz=89,slow=8.2,SNR=326								
NVAR	**Mina Array Bea**	**78.42**	**44**	P		P		08 00 26.8	+1.1
	0.3nm,0.7s,baz=229,slow=8.2,SNR=3.9								
TXAR	**Lajitas Array**	**85.30**	**58**	P		P		08 01 02.3	+0.1
	0.3nm,0.6s,baz=216,slow=6.1,SNR=6.2								
PDAR	**Pinedale Array**	**86.34**	**44**	P		P		08 01 06.6	-0.4
	0.4nm,0.5s,baz=225,slow=5.9,SNR=3.9								

*TEH **04** 08:01:12.9, 3510N×5320E, h6km, ML3.5*
*ISCJB **04** 08:01:47.3±0.5, 3510N±003×5316E±003, h10km, Error ellipse: s-maj=4.1km s-min=4.0km az=11.1*
*CSEM **04** 08:01:47.9±0.1, 3514N×5320E, h20km, ML3.6, Error ellipse: s-maj=2.3km s-min=1.9km az=140.0*
*THR **04** 08:01:50.2±0.4, 3509N×5297E, h17km±5km, ML3.2*

ISC 04 08:01:48.1±0.5, 3512N±003×5317E±003, h10km, n30, σ1s08/41, 5C-4D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ILAS	**Lasjerd**	**0.32**	**327**	*e*Sg		**Sg**	**Sg**	**08 01 59.9**	**+1.2**
ILAS	**Lasjerd**	**0.32**	**327**	*e*Pg		**Pg**	**Pg**	**08 01 54.9**	**+0.5**
ILAS				*e*Sg			**Sg**	**08 02 00.0**	**+1.3**
ILAS				*e*				08 02 03.0	
IFIR	**Firoozkooh**	**0.63**	**327**	↑*e*Pg		**Pg**	**Pg**	**08 02 00.4**	**+0.2**
IFIR				*e*Sg			**Sg**	**08 02 08.9**	**+0.5**
IFIR	**Firoozkooh**	**0.63**	**327**	↑*e*Pg		**Pg**	**Pg**	**08 02 00.4**	**+0.2**
IFIR				*e*Sg			**Sg**	**08 02 08.9**	**+0.5**
IFIR				*e*				08 02 11.5	
ISHM	**Shahmirzad**	**0.70**	**8**	↑*e*Pg		**Pg**	**Pg**	**08 02 01.7**	**+0.1**
ISHM	**Shahmirzad**	**0.70**	**8**	↑*e*Pg		**Pg**	**Pg**	**08 02 01.7**	**+0.1**
ISHM				*e*				08 02 02.7	
IANJ	**Anjilo**	**0.70**	**60**	↓*e*Pg		**Pg**	**Pg**	**08 02 00.5**	**-1.2**
IANJ				*e*Sg			**Sg**	**08 02 10.2**	**-0.7**
IANJ	**Anjilo**	**0.70**	**60**	↓*e*Pg		**Pg**	**Pg**	**08 02 00.5**	**-1.2**
IANJ				*e*Sg			**Sg**	**08 02 10.2**	**-0.7**
IANJ				*e*				08 02 13.6	
IDMV	**Damavand**	**1.04**	**297**	*e*Pg		**Pg**	**Pg**	**08 02 07.9**	**-0.2**
IDMV	**Damavand**	**1.04**	**297**	*e*Pg		**Pg**	**Pg**	**08 02 07.9**	**-0.2**
IDMV				*e*Sg			**Sg**	**08 02 22.8**	**+1.2**
IDMV				*e*				08 02 29.0	
ISFB	**Sefidab**	**1.08**	**225**	*e*Sg		**Sg**	**Sg**	**08 02 22.4**	**-0.5**
ISFB	**Sefidab**	**1.08**	**225**	↑*e*Pg		**Pg**	**Pg**	**08 02 07.9**	**-1.0**
ISFB				*e*				08 02 09.9	
ISFB				*e*Sg			**Sg**	**08 02 22.4**	**-0.5**
DAMV	**Damavand**	**1.11**	**298**	*e*Pg		**Pg**	**Pg**	**08 02 09.0**	**-0.4**
DAMV				AML		AML	AML	08 02 29.4	
	comp=N,704nm,0.2s								
IVRN	**Varamin**	**1.19**	**265**	↓*e*Pg		**Pg**	**Pg**	**08 02 09.9**	**-1.1**
IVRN				*e*Sg			**Sg**	**08 02 26.3**	**-0.1**
IVRN	**Varamin**	**1.19**	**265**	↓*e*Pg		**Pg**	**Pg**	**08 02 09.9**	**-1.1**
IVRN				*e*Sg			**Sg**	**08 02 26.3**	**-0.1**
IVRN				*e*				08 02 27.4	
IAFJ	**Afjeh**	**1.40**	**302**	*e*Pn		**Pn**	**Pn**	**08 02 14.5**	**+0.8**
IAFJ				*e*Sg			**Sg**	**08 02 32.3**	**-0.9**
IAFJ	**Afjeh**	**1.40**	**302**	*e*Pn		**Pn**	**Pn**	**08 02 14.5**	**+0.8**
IAFJ				*e*Sg			**Sg**	**08 02 32.3**	**-0.9**
IAFJ				*e*				08 02 34.8	
GHVR	**GHOM**	**1.67**	**248**	*e*Pg		**Pg**	**Pg**	**08 02 18.6**	**-1.5**
GHVR				AML		AML		08 02 49.2	
	comp=E,370nm,0.3s								
GHVR				AML		AML		08 02 50.5	
	comp=N,529nm,0.4s								
CHTH	**Charan**	**1.85**	**296**	*e*Pg		**Pg**	**Pg**	**08 02 21.6**	**-1.9**
THKV	**Tehran--Karaj**	**2.03**	**294**	*e*Pg		**Pg**	**Pg**	**08 02 24.8**	**-2.3**
IMHD	**Mahdasht**	**2.12**	**286**	*e*Pn		**Pn**	**Pn**	**08 02 25.1**	**+1.5**
IMHD				*e*				08 02 57.3	
IKLH	**Kolahrood**	**2.23**	**217**	*e*Pn		**Pn**	**Pn**	**08 02 26.1**	**+1.1**
IKLH	**Kolahrood**	**2.23**	**217**	*e*Pn		**Pn**	**Pn**	**08 02 26.1**	**+1.1**
IKLH				*e*				08 02 57.8	
IZEF	**Zefreh**	**2.32**	**198**	*e*Pn		**Pn**	**Pn**	**08 02 27.7**	**+1.3**
IZEF	**Zefreh**	**2.32**	**198**	*e*Pn		**Pn**	**Pn**	**08 02 27.7**	**+1.3**
IZEF				*e*				08 03 03.3	
NASN	**Na'in**	**2.33**	**188**	*e*Pn		**Pn**	**Pn**	**08 02 29.4**	**+3.0**
NASN				AML		AML		08 03 01.1	
	comp=N,101nm,0.5s								
NASN				AML		AML		08 03 01.7	
	comp=E,126nm,0.2s								
ASAO	**Ashtian**	**2.65**	**259**	*e*Pn		**Pn**	**Pn**	**08 02 32.1**	**+1.3**
ASAO				AML		AML		08 03 11.1	
	comp=E,87nm,0.7s								
ICHK	**Chekchek**	**3.04**	**160**	*e*Pn		**Pn**	**Pn**	**08 02 36.2**	**-0.1**
ICHK	**Chekchek**	**3.04**	**160**	*e*Pn		**Pn**	**Pn**	**08 02 36.2**	**-0.1**
ICHK				*e*				08 03 27.1	
ISAD	**Sadrabad**	**3.22**	**172**	*e*Pn		**Pn**	**Pn**	**08 02 38.9**	**+0.2**
ISAD				*e*				08 03 42.1	

*ISCJB **04** 08:01:59.0±0.6, 2212S±006×6832W±009, h131km±6km, mb3.6/6, Error ellipse: s-maj=15.2km s-min=8.9km az=22.6*
*IDC **04** 08:01:59.9±0.7, 2190S×6843W, h114km±8km, mb3.6/7, mb1 3.8/10, mb1mx3.6/17, mbtmp3.6/10, Error ellipse: s-maj=21.1km s-min=17.4km az=138.0*
*NEIC **04** 08:02:02.2, 2223S×6876W, h140km, MG4.0(GUC), After GUC.*
*GUC **04** 08:02:02.2±0.5, 2223S×6876W, h140km±6km, ML4.0*

**ISC 04 08:02:00.1±0.6, 2207S±007×6834W±010, h122km±7km, n20

KII	**Karymskiy**	**1.61**	**359**	*e*P		Pn	08 26 59.0	+1.0
KII				*i* S		Sn	08 27 20.8	+1.7
KMNR	**Kamenistaya**	**3.36**	**7**	*e*P		Pn	08 27 24.4	+2.3
KMNR				*i* S		Sn	08 28 04.3	+2.0
KOZ	**Kozyrevsk**	**3.64**	**3**	*e*P		Pn	08 27 27.6	+1.7
KOZ				*i* S		Sn	08 28 10.0	+0.8
KBTR	**Krutoberegovo**	**4.25**	**26**	*e*P		Pn	08 27 35.4	+1.0
KBTR				*i* S		Sn	08 28 25.6	+1.3
SMKR	**Semkarok**	**4.32**	**15**	*e*P		Pn	08 27 37.5	+2.3
SMKR				*i* S		Sn	08 28 28.3	+2.5
SRKR	**Sorokina**	**4.34**	**12**	*e*P		Pn	08 27 38.6	+3.0

SKO ***04*** *08:26:50.4, 4122N×2027E, h15km, M2.3, ML2.5*
PDG ***04*** *08:26:51.7±0.2, 4123N×2012E, h2km, ML2.6/8, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*
THE ***04*** *08:26:51.2, 4125N×2029E, h0km±1km, ML3.0/5, Error ellipse: s-maj=3.1km s-min=0.8km az=17.0*
ISCJB ***04*** *08:26:51.7±0.3, 4131N±002×2034E±002, h10km, Error ellipse: s-maj=3.8km s-min=1.8km az=34.0*
BEO ***04*** *08:26:52.1±0.3, 4126N×2030E, h5km±2km, ML2.6/10*
CSEM ***04*** *08:26:52.3±0.2, 4127N×2044E, h2km, ML3.6/4, Error ellipse: s-maj=5.3km s-min=2.8km az=41.0*
TIR ***04*** *08:26:53.0±4.2, 4130N×2022E, h6km±999km*

ISC 04 08:26:52.4±0.3, 4128N±002×2032E±003, h10km, n53, σ1§30/99, 15C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**281**	P	**Pg**	**08 26 57.5**	**-1.9**
TIR				S	**Sg**	**08 27 02.8**	**-1.3**
TIR	**Tirane**	**0.35**	**281**	*e*PG	**Pg**	**08 26 57.5**	**-1.9**
TIR				*i* SG	**Sg**	**08 27 02.5**	**-1.6**
TIR	**Tirane**	**0.35**	**281**	*e*Pg	**Pg**	**08 26 57.5**	**-1.9**
TIR				*e*Sg	**Sg**	**08 27 03.8**	**-0.3**
QSH	**Qafa e Shtames**	**0.40**	**307**	*e*PG	**Pg**	**08 26 59.0**	**-1.2**
QSH				*i* SG	**Sg**	**08 27 06.0**	**+0.5**
OHR	**Ohrid**	**0.40**	**115**	*e*Pg	**Pg**	**08 26 59.1**	**-1.1**
OHR				*e*Sg	**Sg**	**08 27 06.6**	**+1.1**
OHR	**Ohrid**	**0.40**	**115**	P	**Pg**	**08 26 59.1**	**-1.1**
OHR				S	**Sg**	**08 27 04.8**	**-0.7**
OHR	**Ohrid**	**0.40**	**115**	*e*Pg	**Pg**	**08 26 59.1**	**-1.1**
OHR				*e*Sg	**Sg**	**08 27 06.2**	**+0.7**
OHR	**Ohrid**	**0.40**	**115**	*i*Pg	**Pg**	**08 26 59.1**	**-1.2**
OHR				*e*Sg	**Sg**	**08 27 06.2**	**+0.7**
OHR	comp=N,283nm,0.2s			*e*Lg		08 27 06.5	
OHR	comp=E,805nm,0.5s			*e*Lg		08 27 07.3	
LACI	**Lac**	**0.58**	**308**	*i* PG	**Pg**	**08 27 06.4**	**+2.7**
LACI				*i* SG	**Sg**	**08 27 10.8**	**-0.5**
KRUS	**Krusevo**	**0.70**	**83**	*i* Pg	**Pg**	**08 27 04.9**	**-1.1**
KRUS				*e*Sg	**Sg**	**08 27 15.7**	**+0.5**
KRUS	**Krusevo**	**0.70**	**83**	*i* Pg	**Pg**	**08 27 04.9**	**-1.1**
KRUS				*e*Sg	**Sg**	**08 27 15.7**	**+0.5**
KRUS	comp=N,50nm,0.5s			*e*Lg		08 27 16.1	
KRUS	comp=E,40nm,0.2s			*e*Lg		08 27 16.2	
BIA	**Bitola**	**0.80**	**109**	*e*Pg	**Pg**	**08 27 05.7**	**-2.2**
BIA				*e*Sg	**Sg**	**08 27 18.4**	**+0.1**
BIA	**Bitola**	**0.80**	**109**	P	**Pg**	**08 27 05.8**	**-2.1**
BIA				S	**Sg**	**08 27 18.3**	**0.0**
BIA	**Bitola**	**0.80**	**109**	*e*Pg	**Pg**	**08 27 05.7**	**-2.2**
BIA				*e*Sg	**Sg**	**08 27 18.4**	**+0.1**
BIA	**Bitola**	**0.80**	**109**	*i* Pg	**Pg**	**08 27 05.2**	**-2.7**
BIA				*e*Sg	**Sg**	**08 27 18.3**	**0.0**
BIA	comp=N,58nm,0.3s			*e*Lg		08 27 18.7	
BIA	comp=E,70nm,0.3s			*e*Lg		08 27 19.6	
PUK	**Puka**	**0.82**	**337**	*i* PG	**Pg**	**08 27 06.5**	**-1.8**
PUK				*i* SG	**Sg**	**08 27 18.5**	**-0.6**
FNA	**Florina**	**0.94**	**122**	P	**Pg**	**08 27 09.0**	**-1.5**
FNA				S	**Sg**	**08 27 23.8**	**+1.1**
ULC	**Ulcinj**	**1.05**	**311**	⇑*i*Pg	**Pg**	**08 27 09.7**	**-3.0**
ULC				*e*Sg	**Sg**	**08 27 25.6**	**-0.8**
ULC	**Ulcinj**	**1.05**	**311**	⇑*i*Pg	**Pg**	**08 27 09.0**	**-3.7**
ULC				*e*Sg	**Sg**	**08 27 25.0**	**-1.4**
ULC	comp=E,42nm,0.3s						
SKO	**Skopje**	**1.08**	**50**	*e*Sg	**Sg**	**08 27 27.2**	**-0.2**
BCI	**Bajram Curri**	**1.10**	**350**	*i* PG	**Pg**	**08 27 15.8**	**+2.2**
PVY	**Plav**	**1.34**	**349**	⇓*i*Pg	**Pg**	**08 27 17.1**	**-1.0**
PVY				*e*Sg	**Sg**	**08 27 38.5**	**+3.0**
PVY	**Plav**	**1.34**	**349**	⇓*i*Pg	**Pg**	**08 27 17.0**	**-1.1**
PVY				*e*Sg	**Sg**	**08 27 38.0**	**+2.5**
PVY	comp=E,192nm,0.6s						
PDG	**Podgorica**	**1.39**	**326**	⇑*i*Pg	**Pg**	**08 27 16.0**	**-3.2**
PDG				*e*Sg	**Sg**	**08 27 38.0**	**+0.7**
PDG	comp=E,37nm,0.1s						
TTG	**Podgorica**	**1.39**	**326**	⇑*i*Pg	**Pg**	**08 27 16.0**	**-3.2**
TTG				*e*Sg	**Sg**	**08 27 38.2**	**+0.9**
STIP	**Stip**	**1.46**	**73**	*e*Pg	**Pg**	**08 27 18.8**	**-1.6**
STIP				*e*Sg	**Sg**	**08 27 38.7**	**-0.7**
STIP	**Stip**	**1.46**	**73**	*i* Pg	**Pg**	**08 27 18.7**	**-1.7**
STIP				*e*Sg	**Sg**	**08 27 38.7**	**-0.7**
STIP	**Stip**	**1.46**	**73**	*i* Pg	**Pg**	**08 27 18.7**	**-1.7**
BUM	**Brajici-Budva**	**1.47**	**314**	⇑*i*Pg	**Pg**	**08 27 17.6**	**-3.1**
BUM				*e*Sg	**Sg**	**08 27 40.4**	**+0.6**
BUM	**Brajici-Budva**	**1.47**	**314**	⇑*i*Pg	**Pg**	**08 27 17.0**	**-3.7**
BUM				*e*Sg	**Sg**	**08 27 40.0**	**+0.2**
BUM	comp=E,43nm,0.5s						
GRG	**Griva**	**1.60**	**101**	P	**Pn**	**08 27 20.3**	**-0.5**
GRG				S	**Sn**	**08 27 43.5**	**+2.0**
BEY	**Berane**	**1.62**	**349**	⇑*i*Pn	**Pn**	**08 27 22.0**	**+1.0**
BEY				*e*Sn	**Sn**	**08 27 47.0**	**+5.1**
BEY	comp=E,213nm,0.5s						
IVA	**Berane**	**1.62**	**349**	⇑*i*Pn	**Pn**	**08 27 22.0**	**+1.0**
IVA				*e*Sn	**Sn**	**08 27 47.2**	**+5.3**
MEV	**Metsovon**	**1.65**	**155**	P	**Pn**	**08 27 22.9**	**+1.5**
VAY	**Valandovo**	**1.69**	**88**	*e*Pn	**Pn**	**08 27 21.9**	**-0.1**
VAY				*e*Sg	**Sg**	**08 27 45.8**	**+1.1**
VAY	**Valandovo**	**1.69**	**88**	*i* Pg	**Pg**	**08 27 21.8**	**-3.1**
VAY				*e*Sg	**Sg**	**08 27 45.8**	**-1.1**
VAY	**Valandovo**	**1.69**	**88**	*i* Pg	**Pg**	**08 27 21.8**	**-3.1**
HCY	**Herceg Novi**	**1.79**	**311**	⇓*i*Pn	**Pn**	**08 27 23.6**	**+0.2**
HCY				*e*Sn	**Sn**	**08 27 49.0**	**+2.8**
HCY	**Herceg Novi**	**1.79**	**311**	⇓*i*Pn	**Pn**	**08 27 23.0**	**-0.4**
HCY				*e*Sn	**Sn**	**08 27 49.0**	**+2.8**
HCY	comp=E,29nm,0.4s						
NKY	**Niksic**	**1.82**	**328**	⇑*i*Pn	**Pn**	**08 27 24.3**	**+0.5**
NKY				*e*Sn	**Sn**	**08 27 51.0**	**+4.1**
NKY	**Niksic**	**1.82**	**328**	⇑*i*Pn	**Pn**	**08 27 24.0**	**+0.2**
NKY				*e*Sn	**Sn**	**08 27 51.0**	**+4.1**
NKY	comp=E,70nm,0.5s						
BARS	**Barje**	**1.89**	**35**	*e*Pn	**Pn**	**08 27 27.1**	**+2.3**
BARS				*e*Sg	**Sg**	**08 27 54.3**	**+1.0**
SJES	**Sjenica**	**1.99**	**353**	*e*Pg	**Pg**	**08 27 27.9**	**-2.8**
SJES				*e*Sg	**Sg**	**08 27 55.4**	**-1.1**
LIT	**Litokhoron**	**2.03**	**125**	P	**Pn**	**08 27 26.4**	**-0.2**
LIT				S	**Sn**	**08 27 53.3**	**+1.3**
TREB	**Trebinje**	**2.05**	**315**	*e*Pn	**Pn**	**08 27 27.7**	**+0.7**
TREB				*e*Sg	**Sg**	**08 27 58.6**	**+0.2**
BRY	**Bratogost**	**2.09**	**321**	⇑*i*Pn	**Pn**	**08 27 28.0**	**+0.5**
BRY				*e*Sn	**Sn**	**08 27 57.1**	**+3.6**
BRY	**Bratogost**	**2.09**	**321**	⇑*i*Pn	**Pn**	**08 27 28.0**	**+0.5**
BRY				*e*Sn	**Sn**	**08 27 57.0**	**+3.5**
BRY	comp=E,12nm,0.1s						
THL	**Klokotos Trika**	**2.15**	**142**	P	**Pn**	**08 27 27.9**	**-0.4**
THL				S	**Sn**	**08 27 55.6**	**+0.6**
UPM	**Unac-Piva**	**2.19**	**332**	⇑*i*Pn	**Pn**	**08 27 30.1**	**+1.3**
UPM				*e*Sn	**Sn**	**08 28 00.1**	**+4.2**
UPM	**Unac-Piva**	**2.19**	**332**	⇑*i*Pn	**Pn**	**08 27 30.0**	**+1.2**
UPM				*e*Sn	**Sn**	**08 28 00.0**	**+4.1**
UPM	comp=E,20nm,0.1s						
BBLS	**Lazići**	**2.67**	**346**	*e*Pn	**Pn**	**08 27 36.3**	**+0.9**
AGG	**Agios Georgios**	**2.73**	**145**	P	**Pn**	**08 27 36.8**	**+0.5**
AGG				S	**Sn**	**08 28 09.8**	**+0.4**
BZS	**Buzias**	**4.43**	**12**	*e*Pn	**Pn**	**08 27 59.8**	**+0.1**

ISCJB ***04*** *09:04:08.1±2.0, 235N±009×12865E±009, h39km±18km, mb3.9/6, Error ellipse: s-maj=15.9km s-min=14.8km az=156.1*
DJA ***04*** *09:04:09, 222N×12863E, h20km, MLv3.9/2*
NEIC ***04*** *09:04:16.3±7.3, 209N×12832E, h98km±69km, mb4.0/1, Error ellipse: s-maj=75.9km s-min=9.6km az=60.0*
IDC ***04*** *09:04:19.5±11.0, 198N×128.13E, h128km±110km, mb3.4/5, mb1 3.6/6, mb1mx3.4/16, mbtmp3.5/6, ML4.0/1, Error ellipse: s-maj=92.6km s-min=16.5km az=62.0*

ISC 04 09:04:10.0±1.9, 231N±010×12866E±010, h37km±19km, n14, σ0§75/14, mb3.9/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.00**	**220**	P	**Pn**	**09 04 40.2**	**-1.1**
TNTI	**Ternate**	**2.00**	**220**	S	**Sn**	**09 05 04.1**	**-1.1**
LBMI	**Labuha**	**3.15**	**202**	P	**Pn**	**09 04 58.4**	**+1.3**
LBMI	**Labuha**	**3.15**	**202**	S	**Sn**	**09 05 34.8**	**+1.3**
SWI	**Sorong**	**4.09**	**140**	P	**Pn**	**09 05 09.5**	**-0.5**
KAPI	**Kappang**	**11.50**	**231**	P	**Pn**	**09 06 51.9**	**+0.2**
	1.1nm,0.3s,baz=105,slow=2.7,SNR=5.2						
WRAB	**Tennant Creek**	**22.80**	**166**	*e*P	**P**	**09 09 09.7**	**+0.1**
	3.9nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**22.81**	**166**	P	**P**	**09 09 09.9**	**+0.2**
	3.1nm,0.4s,mb4.1,baz=344,slow=11,SNR=75						
WB2	**Warramunga Arr**	**22.81**	**166**	*e*P	**P**	**09 09 10.0**	**+0.4**
ASAR	**Alice Springs**	**26.32**	**169**	P	**P**	**09 09 41.4**	**-1.0**
	1.3nm,0.6s,mb3.7,baz=352,slow=8.2,SNR=21						
STKA	**Stephens Creek**	**36.15**	**161**	P	**P**	**09 11 08.5**	**-0.3**
	2.7nm,0.7s,mb4.3,baz=337,slow=9.7,SNR=5.1						
SONM	**Songino Array**	**49.26**	**340**	P	**P**	**09 12 55.7**	**+0.8**
	0.2nm,0.4s,mb3.5,baz=114,slow=7.1,SNR=2.9						
MKAR	**Makanchi Array**	**59.81**	**325**	P	**P**	**09 14 11.4**	**-0.1**
	0.4nm,0.6s,mb3.6,baz=132,slow=8.6,SNR=3.9						
KURK	**Kurchatov**	**63.97**	**327**	P	**P**	**09 14 39.2**	**-0.1**
	baz=127,slow=6.2						

IDC 04 09:11:08.2±2.1, 5733S×14748W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.8/12, mbtmp3.9/2, MS3.8/2, Ms1 3.7/2, ms1mx3.1/13, Error ellipse: s-maj=459.2km s-min=40.6km az=3.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**30.00**	**294**	LR	LR	09 26 42.5	
	comp=Z,112nm,20.6s,baz=232,slow=31						
ASAR	**Alice Springs**	**64.31**	**266**	P	P	09 21 45.8	+0.4
	2.0nm,1.1s,baz=146,slow=7.2,SNR=7.6						
WRA	**Warramunga Arr**	**67.09**	**269**	P	P	09 22 03.3	0.0
	0.7nm,1.1s,baz=146,slow=5.9,SNR=5.9						
BOSA	**Boshof**	**94.18**	**174**	LR	LR	10 02 01.7	
	comp=Z,61nm,18.6s,baz=337,slow=32						
MKAR	**Makanchi Array**	**148.34**	**272**	PKPbc	PKPbc	09 30 54.3	-1.0
	2.2nm,0.9s,baz=124,slow=3.5,SNR=12						
ESDC	**Sonseca Array**	**150.55**	**111**	PKP	PKPdf	09 30 56.1	+0.4
	0.1nm,0.3s,baz=252,slow=29,SNR=2.5						
ESDC				PKPbc	PKPbc	09 31 00.5	-0.5
	0.8nm,0.7s,baz=204,slow=1.9,SNR=6.0						

DDA ***04*** *09:14:51.8, 3823N×3079E, h7km±3km, Md2.8*
CSEM ***04*** *09:14:51.7±0.2, 3828N×3083E, h2km, MD2.8, Error ellipse: s-maj=6.8km s-min=3.7km az=13.0*
ISK ***04*** *09:14:52.8, 3837N×3085E, h10km, MD2.8*
ISCJB ***04*** *09:14:53.1±0.5, 3827N±003×3079E±004, h10km, Error ellipse: s-maj=5.0km s-min=3.9km az=161.5*

ISC 04 09:14:53.1±0.6, 3827N±004×3081E±004, h7km±7km, n13, σ1§12/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHUT	**Suhut-Afyon**	**0.34**	**324**	*e*PG	**Pg**	**09 14 59.2**	**-0.7**
SHUT				*e*SG	**Sg**	**09 15 04.2**	**-0.2**
TKTP	**Tekketepe**	**0.45**	**239**	*i* P	**Pg**	**09 14 59.9**	**-1.9**
TKTP				*i* S	**Sg**	**09 15 08.4**	**+0.7**
BOLV	**Bolvadin**	**0.46**	**14**	*i* P	**Pg**	**09 15 02.0**	**0.0**
BOLV				*i* S	**Sg**	**09 15 09.1**	**+1.0**
BCK	**Bucak**	**0.83**	**192**	*e*PG	**Pg**	**09 15 11.2**	**+2.1**
ALT	**Altintas**	**0.95**	**325**	*e*PG	**Pg**	**09 15 09.8**	**-1.6**
KHL	**Karahalli**	**1.01**	**273**	*e*PG	**Pg**	**09 15 13.0**	**+0.5**
KHAL	**Karahalli**	**1.04**	**276**	*i* P	**Pg**	**09 15 11.6**	**-1.5**
KHAL				*i* S	**Sg**	**09 15 28.2**	**+1.7**
KDHN	**Kadinhani**	**1.06**	**76**	*i* P	**Pg**	**09 15 11.7**	**-1.8**
KDHN				*i* S	**Sg**	**09 15 28.7**	**+1.4**
LADK	**Ladik-KONYA**	**1.23**	**93**	*e*PN	**Pn**	**09 15 16.2**	**-0.5**
LADK				*e*SN	**Sn**	**09 15 33.4**	**-0.2**
ESKT	**Eskisehir**	**1.25**	**2**	*i* P	**Pn**	**09 15 16.6**	**-0.3**
ESKT				*i* S	**Sb**	**09 15 34.5**	**+1.3**
SEYT	**Eskypehyr**	**1.25**	**2**	*i* P	**Pn**	**09 15 16.6**	**-0.4**
SEYT				*i* S	**Sb**	**09 15 34.5**	**+1.3**
KONT	**Konya--Tatoy**	**1.27**	**104**	*e*PN	**Pn**	**09 15 17.1**	**-0.2**
KULA	**Kula-Manisa**	**1.70**	**279**	*e*PN	**Pn**	**09 15 23.6**	**+0.3**

NEIC ***04*** *09:22:38.7±1.2, 892S×12496E, h35km, Error ellipse: s-maj=43.5km s-min=13.8km az=52.0*

IDC 04 09:22:33.7±1.8, 881S×12503E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=176.4km s-min=31.6km az=58.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**8.25**	**119**	*e*Pn	Px	09 24 36.0	
KAKA				*e*Sn	Sx	09 26 13.3	
WRAB	**Tennant Creek**	**14.27**	**142**	*e*Pn	Pn	09 25 58.9	+1.8
WRAB				*e*Sn	Sn	09 28 27.3	-8.9
WRA	**Warramunga Arr**	**14.27**	**142**	Pn	Pn	09 25 57.5	+0.4
	0.2nm,0.3s,baz=317,slow=14,SNR=20						
WRA				Sn	Sn	09 28 26.1	-10
	0.4nm,0.3s,baz=305,slow=21,SNR=7.1						
WB2	**Warramunga Arr**	**14.28**	**142**	*e*Pn	Pn	09 25 58.0	+0.8
WB2				*e*Sn	Sn	09 28 29.1	-7.3
ASAR	**Alice Springs**	**17.04**	**151**	P	Pn	09 26 33.2	-0.3
	0.2nm,0.3s,baz=319,slow=14,SNR=21						
ASAR				S	Sn	09 29 30.4	-13
	0.3nm,0.3s,baz=312,slow=21,SNR=9.8						
MKAR	**Makanchi Array**	**67.16**	**330**	P	P	09 33 29.5	+0.1
	0.2nm,0.5s,baz=134,slow=8.0,SNR=3.6						

SKHL 04 09:31:35.5±0.0, 4860N×14490E, h7km, mb3.7/2, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGL	**Uglegorsk**	**1.93**	**285**	*e*Pg	Pg	09 32 14.0	+1.5
UGL				AMB	AMB	09 32 15.0	
	67nm,0.6s						
UGL				*e*Sg	Sg	09 32 41.0	+3.5
UGL				A		09 32 44.0	
	460nm,0.5s						
UGL				A		09 32 44.0	
	390nm,0.5s						
UGL				A		09 32 44.0	
	240nm,0.5s						
YSS	**Yuzh-Sakhalins**	**2.19**	**222**	*e*Pg	Pg	09 32 19.8	+2.3
YSS				*e*Sg	Sg	09 32 48.0	+2.1
YSS				A		09 32 51.3	
	220nm,0.6s						
TYV	**Tymovskoe**	**2.69**	**328**	*e*P	Pn	09 32 20.0	+0.8
TYV				AMB	AMB	09 32 23.0	
	20nm,0.8s						
TYV				*e*Pg	Pg	09 32 27.0	-0.1
TYV				*e*Sg	Sg	09 33 05.5	+3.6
TYV				A		09 33 09.3	
	110nm,0.2s						
OKH	**Okha**	**5.11**	**347**	*e*Pg	Pg	09 33 17.6	+4.3

CSEM ***04*** *09:40:32.6±0.2, 3977N×4156E, h15km, MD2.9, Error ellipse: s-maj=8.1km s-min=3.4km az=27.0*
ISK ***04*** *09:40:33.8, 3999N×4170E, h8km, MD2.9*
DDA ***04*** *09:40:34.0, 3986N×4171E, h5km±3km, Md2.9*
ISCJB ***04*** *09:40:34.7±0.6, 3984N±004×4168E±004, h7km±6km, Error ellipse: s-maj=6.8km s-min=4.7km az=18.9*

ISC 04 09:40:35.0±0.6, 3985N±004×4167E±004, h12km±5km, n10, σ1§18/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERZM	**Erzurum**	**0.24**	**283**	*i* P	**Pg**	**09 40 39.3**	**-0.7**
ERZM				*i* S	**Sg**	**09 40 44.4**	**+0.9**
EZM	**Erzurum**	**0.24**	**282**	*e*PG	**Pg**	**09 40 39.4**	**-0.6**
EZM				*e*SG	**Sg**	**09 40 44.2**	**+0.7**
HOMI	**Horasan**	**0.27**	**44**	*i* P	**Pg**	**09 40 39.5**	**-1.0**
HOMI				*i* S	**Sg**	**09 40 44.7**	**+0.5**
TUTA	**Tutak**	**0.99**	**117**	*i* P	**Pb**	**09 40 52.6**	**-1.6**
TUTA				*i* S	**Sb**	**09 41 08.8**	**+1.6**
DDEM	**Demirkent**	**1.04**	**4**	*i* P	**Pb**	**09 40 53.6**	**-1.4**
DDEM				*i* S	**Sb**	**09 41 10.9**	**+2.4**
AGRB	**Hanur-Agry**	**1.06**	**105**	*e*PG	**Pg**	**09 40 55.1**	**-0.3**
AGRB				*e*SG	**Sg**	**09 41 10.1**	**+0.9**
DBAD	**Bademkaya**	**1.16**	**1**	*i* P	**Pb**	**09 40 56.0**	**-1.1**
DBAD				*i* S	**Sb**	**09 41 13.2**	**+1.1**
DAGI	**Agillar**	**1.24**	**9**	*i* P	**Pn**	**09 40 57.1**	**-1.1**
DAGI				*i* S	**Sb**	**09 41 14.7**	**+0.5**
BCA	**Borcka**	**1.59**	**359**	*e*PN	**Pn**	**09 41 01.1**	**-1.9**
PTK	**Pertek**	**2.01**	**242**	*e*PN	**Pn**	**09 41 10.2**	**+1.5**

IDC 04 09:50:10.1±47.0, 17545×17247W, h0km, mb4.5/3, mb1 4.7/3, mb1mx3.9/18, mbtmp4.5/3, Error ellipse: s-maj=917.9km s-min=179.4km az=81.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.79**	**242**	P	P	09 58 18.3	+0.5
	0.9nm,0.5s,baz=78,slow=7.4,SNR=4.5						
WRA	**Warramunga Arr**	**50.26**	**258**	P	P	09 59 08.2	-0.4
	2.6nm,0.3s,baz=98,slow=6.9,SNR=137						
ASAR	**Alice Springs**	**50.33**	**254**	P	P	09 59 08.9	-0.2
	12nm,0.6s,baz=91,slow=7.9,SNR=253						

SOF ***04*** *09:53:09.7, 4039N×19.15E, h2km, MD2.7*
TIR ***04*** *09:53:24.9±2.6, 4111N×2020E, h30km±16km*
SKO ***04*** *09:53:26.4, 4129N×2030E, h15km, M2.8, ML2.8*
NEIC ***04*** *09:53:27.2, 4135N×2033E, h0km, ML3.4(THE), After THE.*
CSEM ***04*** *09:53:27.0±0.1, 4134N×2032E, h6km, ML4.2/2, Error ellipse: s-maj=1.5km s-min=1.2km az=19.0*
ISCJB ***04*** *09:53:27.6±0.2, 4135N±002×2031E±002, h10km, Error ellipse: s-maj=2.7km s-min=1.6km az=35.4*
PDG ***04*** *09:53:27.8±0.1, 4120N×2006E, h2km, MD3.2/1, ML3.3/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
THE ***04*** *09:53:27.2, 4135N×2033E, h0km±1km, ML3.4/5, Error ellipse: s-maj=2.0km s-min=0.9km az=323.0*
BEO ***04*** *09:53:28.1±0.3, 4126N×2030E, h7km±2km, ML2.8/13*
ATH ***04*** *09:53:28.8, 4131N×2024E, h99km±8km*

ISC 04 09:53:27.5±0.4, 4130N±002×2031E±002, h0km±3km, n112, σ1§06/200, 9C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**278**	⇑*i*Pg	**Pg**	**09 53 33.8**	**-0.2**
TIR				*e*Sg	**Sg**	**09 53 39.8**	**+1.3**
TIR	**Tirane**	**0.34**	**278**	P	**Pg**	**09 53 33.7**	**-0.3**
TIR				S	**Sg**	**09 53 39.4**	**+0.9**
TIR	**Tirane**	**0.34**	**278**	P	**Pg**	**09 53 33.7**	**-0.3**
TIR				*e*Pg	**Pg**	**09 53 33.9**	**-0.2**
TIR				*e*Sg	**Sg**	**09 53 39.2**	**+0.8**
TIR				S	**Sg**	**09 53 39.4**	**+0.9**
TIR	**Tirane**	**0.34**	**278**	*e*PG	**Pg**	**09 53 33.9**	**-0.1**
TIR				*i* SG	**Sg**	**09 53 39.6**	**+1.1**
TIR	**Tirane**	**0.34**	**278**	*e*PG	**Pg**	**09 53 33.9**	**-0.1**
TIR				*i* SG	**Sg**	**09 53 39.6**	**+1.1**
TIR	**Tirane**	**0.34**	**278**	*e*PG	**Pg**	**09 53 33.9**	**-0.1**
TIR				*i* SG	**Sg**	**09 53 39.6**	**+1.1**
TIR	**Tirane**	**0.34**	**278**	*e*Pg	**Pg**	**09 53 33.9**	**-0.1**
TIR				*e*Sg	**Sg**	**09 53 39.8**	**+1.3**
QSH	**Qafa e Shtames**	**0.38**	**306**	*e*PG	**Pg**	**09 53 35.0**	**+0.3**
QSH	**Qafa e Shtames**	**0.38**	**306**	*e*PG	**Pg**	**09 53 35.0**	**+0.3**
QSH	**Qafa e Shtames**	**0.38**	**306**	*e*PG	**Pg**	**09 53 35.0**	**+0.3**
OHR	**Ohrid**	**0.41**	**117**	P	**Pg**	**09 53 35.2**	**-0.2**
OHR				S	**Sg**	**09 53 42.4**	**+1.7**
OHR	**Ohrid**	**0.41**	**117**	P	**Pg**	**09 53 35.2**	**-0.2**
OHR				S	**Sg**	**09 53 42.4**	**+1.7**
OHR	**Ohrid**	**0.41**	**117**	⇑*i*Pg	**Pg**	**09 53 35.3**	**-0.1**
OHR				*e*Sg	**Sg**	**09 53 42.8**	**+2.1**
OHR	**Ohrid**	**0.41**	**117**	⇑*i*Pg	**Pg**	**09 53 35.3**	**-0.1**
OHR				*e*Sg	**Sg**	**09 53 42.0**	**+1.3**
OHR				*e*Lg		09 53 42.5	
OHR	comp=N,1μm,0.8s			*e*Lg		09 53 43.4	
OHR	comp=E,2μm,0.5s						
LACI	**Lac**	**0.56**	**307**	*i* PG	**Pg**	**09 53 37.9**	**-0.4**
LACI				*i* SG	**Sg**	**09 53 46.9**	**+1.3**
LACI	**Lac**	**0.56**	**307**	*i* PG	**Pg**	**09 53 37.9**	**-0.4**
LACI				*i* SG	**Sg**	**09 53 46.9**	**+1.3**
LACI	**Lac**	**0.56**	**307**	*i* PG	**Pg**	**09 53 37.9**	**-0.4**
LACI				*i* SG	**Sg**	**09 53 46.9**	**+1.3**
KRUS	**Krusevo**	**0.71**	**84**	*i* Pg	**Pg**	**09 53 40.8**	**-0.2**
KRUS				*e*Sg	**Sg**	**09 53 51.7**	**+1.5**
KRUS	**Krusevo**	**0.71**	**84**	*i* Pg	**Pg**	**09 53 40.9**	**-0.2**
KRUS				*e*Sg	**Sg**	**09 53 51.8**	**+1.6**
KRUS	

BUM				*i* SG	**Sg**	09 54 15.6	+1.4	
BUM	**Brajici-Budva**	**1.46**	**314**	*i* PG	**Pg**	09 53 53.7	-1.7	
BUM				*i* SG	**Sg**	09 54 15.6	+1.4	
BUM	**Brajici-Budva**	**1.46**	**314**	⇑*i*Pg	**Pg**	09 53 53.0	-2.4	
BUM				*e*Sg	**Sg**	09 54 15.0	+0.8	
	comp=E,198nm,0.2s							
STIP	**Stip**	**1.46**	**74**	*e*Pg	**Pg**	09 53 54.0	-1.5	
STIP				*e*Sg	**Sg**	09 54 14.5	+0.1	
STIP	**Stip**	**1.46**	**74**	P	**Pn**	09 53 54.1	-1.0	
STIP				S	**Sg**	09 54 14.3	-0.1	
STIP	**Stip**	**1.46**	**74**	*e*Pg	**Pg**	09 53 54.0	-1.5	
STIP				*e*Sg	**Sg**	09 54 13.9	-0.5	
STIP				S	**Sg**	09 54 14.3	-0.1	
STIP	**Stip**	**1.46**	**74**	*i* Pg	**Pg**	09 53 53.6	-1.9	
STIP				*e*Sg	**Sg**	09 54 13.9	-0.4	
STIP				*e*Lg		09 54 14.8		
	comp=N,48nm,0.4s							
STIP				*e*Lg		09 54 15.5		
	comp=E,35nm,0.9s							
KZN	**Kozani**	**1.49**	**131**	*e*P	**Pn**	09 53 56.7	+1.3	
KZN				*e*S	**Sg**	09 54 16.6	+1.4	
BEY	**Berane**	**1.60**	**349**	*i* PG	**Pg**	09 53 58.6	+0.5	
BEY	**Berane**	**1.60**	**349**	*i* PG	**Pg**	09 53 58.6	+0.5	
BEY	**Berane**	**1.60**	**349**	*i* PG	**Pg**	09 53 58.6	+0.5	
BEY	**Berane**	**1.60**	**349**	⇓*i*Pn	**Pn**	09 53 58.0	+1.0	
IVA	**Berane**	**1.60**	**349**	⇓*i*Pn	**Pg**	09 53 58.6	+0.5	
IVA				*e*Sn	**Sg**	09 54 14.4	+5.2	
GRG	**Griva**	**1.61**	**102**	P	**Pn**	09 53 56.4	-0.8	
GRG				S	**Sn**	09 54 18.0	-0.7	
KEK	**Kerkira**	**1.64**	**194**	*e*P	**Pn**	09 53 57.4	-0.1	
KEK				*e*S	**Sn**	09 54 18.7	-0.5	
MEV	**Metsovon**	**1.67**	**155**	P	**Pn**	09 53 57.8	-0.1	
VAY	**Valandovo**	**1.70**	**89**	*e*Pn	**Pn**	09 53 58.0	-0.4	
VAY				*e*Sg	**Sg**	09 54 22.2	+0.1	
VAY	**Valandovo**	**1.70**	**89**	P	**Pn**	09 53 56.9	-1.5	
VAY				S	**Sn**	09 54 20.6	-0.2	
VAY	**Valandovo**	**1.70**	**89**	P	**Pn**	09 53 56.9	-1.5	
VAY	**Valandovo**	**1.70**	**89**	*e*Pn	**Pn**	09 53 58.0	-0.4	
VAY				S	**Sn**	09 54 20.6	-0.2	
VAY	**Valandovo**	**1.70**	**89**	*i* Pg	**Pg**	09 53 58.2	-1.8	
VAY	**Valandovo**	**1.70**	**89**	*e*P	**Pn**	09 53 57.4	-1.0	
HCY	**Herceg Novi**	**1.77**	**311**	⇓*i*Pn	**Pn**	09 53 59.5	+0.1	
HCY				*e*Sn	**Sg**	09 54 24.9	+0.4	
HCY	**Herceg Novi**	**1.77**	**311**	*i* PG	**Pg**	09 53 59.5	+0.1	
HCY				*i* SG	**Sg**	09 54 24.9	+0.4	
HCY	**Herceg Novi**	**1.77**	**311**	*i* PG	**Pn**	09 53 59.5	+0.1	
HCY				*i* SG	**Sg**	09 54 24.9	+0.4	
HCY	**Herceg Novi**	**1.77**	**311**	*i* PG	**Pn**	09 53 59.5	+0.1	
HCY				*i* SG	**Sg**	09 54 24.9	+0.4	
HCY	**Herceg Novi**	**1.77**	**311**	⇓*i*Pn	**Pn**	09 53 59.0	-0.4	
HCY				*e*Sn	**Sn**	09 54 24.0	+1.3	
	comp=E,99nm,0.9s							
NKY	**Niksic**	**1.80**	**327**	⇓*i*Pn	**Pg**	09 54 00.1	-1.9	
NKY				*e*Sn	**Sg**	09 54 27.3	+2.0	
NKY	**Niksic**	**1.80**	**327**	*i* PG	**Pg**	09 54 00.1	-1.9	
NKY				*i* SG	**Sg**	09 54 27.3	+2.0	
NKY	**Niksic**	**1.80**	**327**	*i* PG	**Pg**	09 54 00.1	-1.9	
NKY				*i* SG	**Sg**	09 54 27.3	+2.0	
NKY	**Niksic**	**1.80**	**327**	*i* PG	**Pg**	09 54 00.1	-1.9	
NKY				*i* SG	**Sg**	09 54 27.3	+2.0	
NKY	**Niksic**	**1.80**	**327**	⇓*i*Pn	**Pg**	09 54 00.0	-2.0	
NKY				*e*Sn	**Sg**	09 54 27.0	+1.7	
BARS	**Barje**	**1.88**	**36**	*e*Pn	**Pn**	09 54 00.8	-0.1	
BARS				*e*Sg	**Sg**	09 54 29.0	+1.1	
KNT	**Kendrikon**	**1.95**	**93**	P	**Pn**	09 54 00.9	-1.0	
SJES	**Sjenica**	**1.98**	**353**	*e*Pn	**Pn**	09 54 01.7	-0.5	
SJES				*e*Sg	**Sg**	09 54 32.4	+1.5	
TREB	**Trebinje**	**2.04**	**315**	*e*Pn	**Pn**	09 54 03.6	+0.6	
TREB				*e*Sg	**Sg**	09 54 32.9	0.0	
LIT	**Litokhoron**	**2.04**	**125**	P	**Pn**	09 54 02.6	-0.5	
LIT				S	**Sn**	09 54 30.7	+1.4	
BRY	**Bratogost**	**2.07**	**321**	⇓*i*Pn	**Pg**	09 54 04.1	-3.1	
BRY				*e*Sn	**Sg**	09 54 33.0	-1.0	
BRY	**Bratogost**	**2.07**	**321**	*i* PG	**Pg**	09 54 04.1	-3.1	
BRY				*i* SG	**Sg**	09 54 33.0	-1.0	
BRY	**Bratogost**	**2.07**	**321**	*i* PG	**Pg**	09 54 04.1	-3.1	
BRY				*i* SG	**Sg**	09 54 33.0	-1.0	
BRY	**Bratogost**	**2.07**	**321**	*i* PG	**Pg**	09 54 04.1	-3.1	
BRY				*i* SG	**Sg**	09 54 33.0	-1.0	
BRY	**Bratogost**	**2.07**	**321**	⇓*i*Pn	**Pn**	09 54 04.0	+0.5	
PLE	**Pljevlja**	**2.14**	**342**	⇓*i*Pn	**Pg**	09 54 06.3	-2.2	
PLE				*e*Sn	**Sg**	09 54 36.2	0.0	
PLE	**Pljevlja**	**2.14**	**342**	⇓*i*Pn	**Pg**	09 54 06.0	-2.5	
KKB	**Krupnik**	**2.15**	**74**	*e*P	**Pn**	09 54 04.6	0.0	
THL	**Klokotos Trika**	**2.17**	**143**	P	**Pn**	09 54 05.0	+0.2	
THL				S	**Sn**	09 54 33.4	+1.1	
THL	**Klokotos Trika**	**2.17**	**143**	*e*P	**Pn**	09 54 05.2	+0.4	
UPM	**Unac-Piva**	**2.17**	**332**	⇓*i*Pn	**Pg**	09 54 06.0	-3.0	
UPM				*e*Sn	**Sg**	09 54 36.5	-0.6	
STON	**Ston**	**2.50**	**310**	*e*Pn	**Pn**	09 54 08.7	-0.6	
STON				Sn	**Sn**	09 54 40.4	-0.2	
VTS	**Vitosha**	**2.51**	**58**	*e*Pn	**Pn**	09 54 10.2	+0.6	
VTS				*e*Sn	**Sn**	09 54 40.7	-0.2	
VTS	**Vitosha**	**2.51**	**58**	P	**Pn**	09 54 11.0	+1.4	
VTS				S	Sx	09 54 57.0		
PLG	**Polygyros**	**2.55**	**110**	*e*P	**Pn**	09 54 10.3	+0.2	
MMB	**Musomiste**	**2.58**	**82**	P	**Pg**	09 54 15.6	-1.4	
LKD	**Levkas**	**2.60**	**174**	P	**Pn**	09 54 11.1	+0.3	
LKD				S	**Sn**	09 54 43.8	+0.7	
ZAPS	**Zavoj**	**2.62**	**40**	*e*Pn	**Pn**	09 54 12.2	+1.2	
ZAPS				*e*Sg	**Sg**	09 54 52.9	+1.4	
BBLS	**Lazići**	**2.65**	**346**	*e*Pn	**Pn**	09 54 12.6	+1.2	
BBLS				*e*Sn	**Sn**	09 54 44.0	-0.2	
NVR	**Nevrokopi**	**2.67**	**88**	*e*P	**Pn**	09 54 12.1	+0.4	
TIP	**Timpagrande**	**3.45**	**233**	*e*Pn	**Pn**	09 54 20.8	-1.7	
TIP	**Timpagrande**	**3.45**	**233**	*e*Pn	**Pn**	09 54 20.8	-1.6	
FGSL	**Fruska Gora**	**3.87**	**355**	*e*Pn	**Pn**	09 54 28.5	+0.3	
BZS	**Buzias**	**4.42**	**12**	*e*Pn	**Pn**	09 54 36.4	+0.7	
BZS				*e*Sn	**Sn**	09 55 27.0	-0.8	

DJA 04 09:57:25.5±0.0, 734S×10595E, h10km, MLv3.7/2, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.69**	**61**	P	Pg	09 57 38.5	-0.3
SKJI	**Sukabumi**	**0.69**	**61**	S	Sg	09 57 47.8	0.0
DBJI	**Dramaga**	**1.11**	**46**	P	Pb	09 57 45.2	-1.7
DBJI	**Dramaga**	**1.11**	**46**	S	Sg	09 58 01.0	-0.4
SBJI	**Serang**	**1.23**	**8**	P	Pn	09 57 47.4	-1.3
SBJI	**Serang**	**1.23**	**8**	S	Sb	09 58 04.5	-0.1
CBJI	**Citeko**	**1.28**	**44**	P	Pn	09 57 46.0	-3.4
LEM	**Lembang**	**1.73**	**73**	P	Pn	09 57 55.6	-0.1

*TIF **04** 10:46:42.8, 4240N×4374E, h18km±1km*
*ISCJB **04** 10:46:43.4±0.5, 4238N±002×4371E±004, h5km±6km, Error ellipse: s-maj=5.0km s-min=3.7km az=166.6*
*MOS **04** 10:46:46.1±1.3, 4257N×4400E, h16km, mb3.6/1, Error ellipse: s-maj=34.4km s-min=11.7km az=94.3*

ISC 04 10:46:43.8±0.5, 4239N±002×4369E±004, h15km±5km, n17, σ0§96/27, 1C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.26**	**316**	P	**Pg**	**10 46 49.2**	**-0.2**
ONI				S	**Sg**	**10 46 55.2**	**+2.0**
ZEI	**Tsey**	**0.41**	**22**	⇓*i*PG	**Pg**	**10 46 51.4**	**-0.6**
ZEI				*i* S	**Sg**	**10 46 58.4**	**+0.9**
GOR	**Gori**	**0.51**	**143**	S	**Sg**	**10 46 60.0**	**-0.8**
LACR	**Lac**	**0.62**	**46**	⇑*i*PG	**Pg**	**10 46 55.0**	**-1.0**
LACR				*i* S	**Sg**	**10 47 04.3**	**+0.1**
KORR	**Kora**	**0.75**	**22**	*e*PG	**Pg**	**10 46 57.2**	**-1.2**
KORR				*e*S	**Sg**	**10 47 08.4**	**+0.2**
LSNR	**Lesken**	**0.89**	**6**	*e*PG	**Pg**	**10 46 59.6**	**-1.4**
LSNR				*e*S	**Sb**	**10 47 12.5**	**0.0**
ARNR	**Ardon**	**0.91**	**28**	*e*PG	**Pg**	**10 47 00.1**	**-1.3**
ARNR				*e*S	**Sb**	**10 47 13.4**	**+0.3**
TBLG	**Delisi**	**1.02**	**130**	*e*PG	**Pg**	**10 47 04.8**	**+1.2**
TBLG				*e*S	**Sb**	**10 47 16.3**	**-0.1**
TBLG	**Delisi**	**1.02**	**130**	P	**Pb**	**10 47 04.8**	**+1.6**
TBLG				S	**Sb**	**10 47 16.4**	**-0.1**
MTA	**Mtatsminda**	**1.08**	**130**	P	**Pb**	**10 47 04.4**	**+0.3**
MTA				S	**Sb**	**10 47 17.9**	**-0.1**
DGRG	**David-gareji**	**1.57**	**126**	P	**Pg**	**10 47 12.9**	**-1.1**
DGRG				S	**Sg**	**10 47 35.8**	**+1.5**
KIV	**Kislovodsk**	**1.73**	**335**	⇓*e*PN	**Pb**	**10 47 17.2**	**+2.0**
KIV				*e*		10 47 43.1	
KIV				pmax	pmax		
	comp=Z,11nm,0.9s						

ARTV	**Artvin**	**1.79**	**228**	*i* P	**Pb**	**10 47 16.1**	**-0.2**	
DBOC	**Borcka**	**1.84**	**236**	*i* P	**Pb**	**10 47 15.9**	**-1.3**	
DAGI	**Agillar**	**1.87**	**226**	*i* P	**Pb**	**10 47 17.5**	**-0.1**	
DBAD	**Bademkaya**	**2.03**	**228**	*i* P	**Pb**	**10 47 20.3**	**-0.1**	
DDEM	**Demirkent**	**2.09**	**225**	*i* P	**Pb**	**10 47 21.5**	**+0.1**	

IDC 04 11:02:06.7±11.0, 1438S×17754E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=338.2km s-min=56.8km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.57**	**256**	P	P	11 09 56.9	+0.5
	0.2nm,0.4s,baz=90,slow=8.5,SNR=4.5						
ASAR	**Alice Springs**	**42.14**	**251**	P	P	11 10 00.7	-0.4
	1.4nm,0.4s,baz=82,slow=8.8,SNR=41						
SONM	**Songino Array**	**88.36**	**320**	P	P	11 15 00.5	+0.2
	0.2nm,0.3s,baz=123,slow=5.3,SNR=4.0						

*ISCJB **04** 11:08:26.9±1.3, 1640S±009×7459W±0.10, h83km±17km, Error ellipse: s-maj=21.0km s-min=7.5km az=135.3*
*NEIC **04** 11:08:27.1, 1560S×7412W, h64km, MG4.1(LIM), After LIM.*
NEIC Felt [III] at Chala.
*IDC **04** 11:08:29.0±2.1, 1617S×7431W, h68km±18km, mb3.2/2, mb1 3.7/5, mb1mx3.4/18, mbtmp3.6/5, MS2.7/2, Ms1 2.8/2, ms1mx2.5/9, Error ellipse: s-maj=45.5km s-min=13.0km az=50.0*

ISC 04 11:08:29.0±1.1, 1639S±009×746W±01, h84km±15km, n12, σ1§13/14, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.89**	**333**	P	**Pn**	**11 09 39.0**	**-1.1**
	9.5nm,0.3s,baz=169,slow=12,SNR=20						
NNA				S	**Sn**	**11 10 34.7**	**-0.7**
	17nm,0.3s,baz=197,slow=6.1,SNR=4.0						
NNA	**Nana**	**4.89**	**333**	*e*Pn	**Pn**	**11 09 39.1**	**-0.9**
NNA				*e*Sn	**Sn**	**11 10 34.5**	**-0.9**
LPAZ	**La Paz**	**6.20**	**90**	P	**Pn**	**11 09 56.5**	**-1.5**
	0.8nm,0.3s,baz=271,slow=11,SNR=11						
LPAZ				LR	LR	11 12 01.5	
	comp=Z,51nm,18.1s,baz=265,slow=36						
LPAZ	**La Paz**	**6.20**	**90**	*e*Pn	**Pn**	**11 09 59.0**	**+1.0**
	7.6nm,0.6s						
LPAZ				*e*Sn	**Sn**	**11 11 07.8**	**+0.2**
LVC	**Limon Verde**	**8.19**	**140**	P	**Pn**	**11 10 26.3**	**+1.2**
	1.0nm,0.3s,baz=317,slow=13,SNR=3.0						
LVC				S	**Sn**	**11 11 54.8**	**-1.2**
	3.2nm,0.3s,baz=71,slow=22,SNR=12						
LVC				LR	LR	11 13 26.5	
	comp=Z,66nm,21.0s,baz=286,slow=36						
LVC	**Limon Verde**	**8.19**	**140**	*e*Pn	**Pn**	**11 10 26.7**	**+1.7**
LVC				*e*Sn	**Sn**	**11 11 54.8**	**-1.2**
ATAH	**Atahualpa**	**10.04**	**338**	P	**Pn**	**11 10 52.9**	**+2.4**
	1.0nm,0.3s,baz=82,slow=3.2,SNR=4.7						
TXAR	**Lajitas Array**	**53.42**	**328**	P	**P**	**11 17 40.6**	**+0.2**
	0.2nm,0.5s,baz=153,slow=8.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**80.89**	**73**	P	**P**	**11 20 34.2**	**-0.3**
	0.5nm,0.6s,baz=264,slow=6.0,SNR=4.5						
ASAR	**Alice Springs**	**131.42**	**216**	PKP	PKPdf	11 27 35.8	+3.3
	0.2nm,0.6s,baz=125,slow=2.0,SNR=4.6						
WRA	**Warramunga Arr**	**134.05**	**219**	PKP	PKPdf	11 27 41.2	+3.7
	0.4nm,0.5s,baz=141,slow=1.9,SNR=5.4						
SONM	**Songino Array**	**148.63**	**359**	PKPbc	PKPbc	11 28 08.4	+2.0
	0.3nm,0.3s,baz=4.0,slow=0.8,SNR=3.8						

*ISCJB **04** 11:27:04.5±2.0, 97S±02×1596E±03, h28km±25km, mb4.0/9, Error ellipse: s-maj=60.7km s-min=14.6km az=26.6*
*IDC **04** 11:27:04.2±2.1, 983S×15975E, h19km±18km, mb4.0/8, mb1 4.2/9, mb1mx4.0/16, mbtmp4.0/9, MS3.2/3, Ms1 3.2/3, ms1mx2.8/17, Error ellipse: s-maj=77.5km s-min=18.0km az=115.0*
*NEIC **04** 11:27:04.9±2.5, 964S×15958E, h16km±25km, mb4.0/2, Error ellipse: s-maj=46.5km s-min=11.6km az=116.0*

ISC 04 11:27:04.8±2.8, 97S±02×1596E±03, h16km±27km, n15, σ0§86/14, mb4.0/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.42**	**59**	Pg	**Pg**	**11 27 13.2**	**-0.1**
	4µm,0.3s,baz=197,slow=2.5,SNR=1302						
HNR				Lg		11 27 19.8	
	3µm,0.3s,baz=184,slow=22,SNR=85						
CTA	**Charters Tower**	**16.53**	**230**	Pn	**Pn**	**11 30 56.6**	**+0.4**
	baz=49,slow=14,SNR=4.1						
CTA				LR	LR	11 36 22.3	
	comp=Z,69nm,18.9s,baz=215,slow=34						
CTAO	**Charters Tower**	**16.53**	**230**	*e*Pn	**Pn**	**11 31 01.5**	**+5.3**
	23nm,1.4s						
EIDS	**Eidsvold**	**17.60**	**206**	*e*Pn	**Pn**	**11 31 11.6**	**+2.0**
WRAB	**Tennant Creek**	**26.41**	**244**	*e*P	**P**	**11 32 41.0**	**0.0**
	1.4nm,0.6s,mb3.7						
WB2	**Warramunga Arr**	**26.41**	**244**	*e*P	**P**	**11 32 41.3**	**+0.2**
WRA	**Warramunga Arr**	**26.43**	**244**	P	**P**	**11 32 40.7**	**-0.5**
	3.4nm,0.9s,mb3.9,baz=70,slow=9.5,SNR=13						
STKA	**Stephens Creek**	**27.70**	**214**	P	**P**	**11 32 50.8**	**-1.6**
	2.1nm,0.5s,mb4.0,baz=50,slow=10.0,SNR=5.1						
STKA				LR	LR	11 41 55.7	
	comp=Z,51nm,21.6s,baz=205,slow=32						
ASAR	**Alice Springs**	**28.20**	**237**	P	**P**	**11 32 55.9**	**-1.2**
	0.9nm,0.5s,mb3.6,baz=60,slow=10,SNR=27						
MJAR	**Matsushiro Arr**	**50.15**	**338**	P	**P**	**11 35 59.4**	**-0.3**
	0.8nm,0.6s,mb4.0,baz=169,slow=9.2,SNR=6.7						
KSRS	**Korea Array**	**55.45**	**330**	LR	LR	11 57 32.8	
	comp=Z,28nm,18.8s,baz=30,slow=33						
PETK	**Petropavlovsk-**	**62.53**	**359**	P	**P**	**11 37 28.0**	**+0.4**
	2.7nm,0.7s,mb4.5,baz=160,slow=4.6,SNR=3.3						
CMAR	**Chiang Mai Arr**	**66.02**	**295**	P	**P**	**11 37 52.0**	**+0.8**
	0.7nm,0.4s,mb4.0,baz=134,slow=4.9,SNR=6.6						
SONM	**Songino Array**	**74.04**	**326**	P	**P**	**11 38 40.5**	**+0.6**
	0.7nm,0.6s,mb3.8,baz=122,slow=4.1,SNR=5.3						
MKAR	**Makanchi Array**	**88.39**	**318**	P	**P**	**11 39 55.9**	**-0.3**
	1.0nm,0.8s,mb4.1,baz=102,slow=5.1,SNR=9.8						

MAN 04 11:30:11, 884N×12317E, h14km, mb4.3, ML3.1, MS2.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.51**	**8**	*i* P	Pg	11 30 21.5	+0.5
SNPH				*i* S	Sg	11 30 29.0	+1.2
PAGZ	**Pagadian**	**1.00**	**168**	*e*P	Pb	11 30 29.9	-0.3
PAGZ				*e*S	Sb	11 30 44.7	+1.4
TBP	**Tagbilaran**	**1.09**	**39**	*e*P	Pb	11 30 30.9	-0.8
TBP				*e*S	Sb	11 30 43.8	-2.0
LLP	**Lapu-Lapu**	**1.67**	**28**	*e*P	Pn	11 30 39.0	-0.8
LLP				*e*S	Sn	11 31 02.0	+1.0
GUIM	**Jordan**	**1.87**	**342**	*e*P	Pn	11 30 42.6	0.0
GUIM				*e*S	Sn	11 31 07.1	+1.2
CUYO	**Cuyo Island**	**2.91**	**314**	*e*P	Pn	11 30 57.4	+0.4
LUBP	**Lubang**	**5.65**	**330**	*e*P	Pn	11 31 45.5	+11

IDC 04 11:38:10.2±3.8, 2150S×7017W, h0km, mb4.1/1, mb1 3.8/2, mb1mx3.4/15, mbtmp3.8/2, ML3.3/1, Error ellipse: s-maj=123.0km s-min=62.8km az=93.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.53**	**21**	Pn	Pn	11 39 34.5	+0.6
	0.5nm,0.3s,baz=200,slow=7.6,SNR=6.6						
TORD	**Torodi Ar. Bea**	**78.46**	**71**	P	P	11 50 13.7	+0.1
	1.0nm,0.5s,baz=251,slow=5.2,SNR=13						
MKAR	**Makanchi Array**	**146.31**	**35**	PKPbc	PKPbc	11 57 52.1	-0.7
	0.8nm,0.6s,baz=316,slow=3.3,SNR=9.8						

*NNC **04** 11:58:53.7±3.0, 3781N×7179E, h229km±34km, mb2.6, mpv3.8, Error ellipse: s-maj=35.5km s-min=17.9km az=27.0*

ISC 04 11:58:54.7±3.9, 379N±03×719E±04, h240km±40km, n9, σ0§53/11, 4C, Afghanistan-Tajikistan border region

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

AML	**Almayashu**	**4.45**	**17**	P	**Pn**	**12 00 02.8**	**-0.5**	
	SNR=77							
KZA	**Kyzart**	**4.90**	**30**	P	**Pn**	**12 00 07.9**	**-0.9**	
	SNR=8.3							
EKS2	**Erkin-Say**	**4.97**	**16**	P	**Pn**	**12 00 09.9**	**+0.2**	
	SNR=11							
AAK	**Ala-Archa**	**5.13**	**22**	P	**Pn**	**12 00 12.1**	**+0.5**	
	SNR=15							
KK31	**Karatay Array**	**5.32**	**349**	P		**12 00 13.5**	**-0.5**	
	4.3nm,0.3s,baz=169,slow=12,SNR=97							
KK31				⇑S	**S**	**12 01 17.7**	**+0.4**	
	14nm,0.7s,baz=170,slow=23,SNR=4.1							
CHMS	**Chumysh**	**5.54**	**22**	P	**Pn**	**12 00 17.0**	**+0.3**	
	SNR=6.0							
TKM2	**Tokmak 2**	**5.76**	**28**	⇑P	**Pn**	**12 00 19.8**	**+0.3**	
	6.0nm,0.6s							
TKM2	**Tokmak 2**	**5.76**	**28**	P	**Pn**	**12 00 19.8**	**+0.4**	
	SNR=12							
AB01	**Akbulak array**	**14.28**	**327**	⇑P	**Pn**	**12 02 07.0**	**+0.7**	
	0.5nm,0.5s,baz=146,slow=26							
AB01				⇑S	**S**	**12 04 43.8**	**-0.5**	
	0.9nm,0.6s,baz=146,slow=26							

NEIC 04 12:01:33.0, 1930N×15522W, h10km, ML3.8, 2C-1D, After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCH	**Steam Cracks**	**0.12**	**46**	⇓*i*Pg	Pg	12 01 36.6	+0.7
STCH				*e*Sg	Sg	12 01 37.9	-0.1
KHU	**Kahuku**	**0.38**	**262**	*e*Pg	Pg	12 01 41.0	+0.6
KHU				*e*Sg	Sg	12 01 46.2	+0.7
POHA	**Pohakuloa**	**0.54**	**327**	⇑*i*Pg	Pg	12 01 43.6	+0.1
POHA				*e*Sg	Sg	12 01 51.2	+0.6
KKH	**Kailua Kona**	**0.83**	**295**	⇑*i*Pb	Pb	12 01 47.2	-2.3
KKH				*e*Sg	Sg	12 01 58.2	-1.7
HKL	**Haleakala**	**1.71**	**325**	*e*Pn	Pn	12 02 00.1	-2.6
HKL				*e*Sn	Sn	12 02 23.9	-0.8

*TRN **04** 12:02:43.1, 19.10N×6464W, h29km, M3.6(FDF)*
*RSPR **04** 12:02:44.9, 1922N×6459W, h31km±12km, MD3.6/17, MD3.6/17*
*NEIC **04** 12:02:44.9, 1922N×6459W, h30km, MD3.6(RSPR), After RSPR.*

ISC 04 12:02:44.2±1.3, 1916N±007×6463W±004, h28km±8km, n24, σ0§55/42, 19C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.51**	**147**	⇑*e*P	**Pb**	**12 02 54.9**	**+0.2**
TBVI	**Tortola**	**0.74**	**179**	⇑*e*P	**Pb**	**12 02 58.0**	**-0.5**
TBVI	**Tortola**	**0.74**	**179**	⇑*e*P	**Pb**	**12 02 58.3**	**-0.3**
STVI	**Saint Thomas**	**0.86**	**201**	⇑*e*P	**Pn**	**12 02 59.7**	**-0.9**
STVI				*e*S	**Sb**	**12 03 12.2**	**+0.4**
MTP	**Monte Pirata**	**1.38**	**220**	⇑*e*P	**Pn**	**12 03 07.2**	**-0.4**
MTP				*e*S	**Sn**	**12 03 24.5**	**-0.4**
HUMP	**Col San Antoni**	**1.54**	**229**	⇓*e*P	**Pn**	**12 03 09.4**	**-0.5**
HUMP				*e*S	**Sn**	**12 03 28.5**	**-0.5**
HUMP	**Col San Antoni**	**1.54**	**229**	⇓*e*P	**Pn**	**12 03 09.4**	**-0.5**
HUMP				*e*S	**Sn**	**12 03 28.5**	**-0.5**
CPD	**Cerro la Pandu**	**1.66**	**228**	⇑*e*P	**Pn**	**12 03 11.2**	**-0.3**
CPD				*e*S	**Sn**	**12 03 32.4**	**+0.5**
SJG	**San Juan**	**1.78**	**234**	⇑*e*P	**Pn**	**12 03 12.7**	**-0.5**
SJG				*e*S	**Sn**	**12 03 34.5**	**-0.4**
SJG	**San Juan**	**1.78**	**234**	⇑*e*P	**Pn**	**12 03 13.3**	**+0.1**
SJG				*e*S	**Sn**	**12 03 34.7**	**-0.2**
SJG	**San Juan**	**1.78**	**234**	⇑*e*P	**Pn**	**12 03 12.7**	**-0.5**
SJG	**San Juan**	**1.78**	**234**	⇑*e*P	**Pn**	**12 03 13.3**	**+0.1**
SJG				*e*S	**Sn**	**12 03 34.5**	**-0.4**
SJG				*e*S	**Sn**	**12 03 34.7**	**-0.2**
SABA	**Saba**	**2.02**	**139**	⇑*e*P	**Pn**	**12 03 17.7**	**+1.3**
SABA				*e*S	**Sn**	**12 03 40.2**	**-0.6**
CELP	**Cerrillos**	**2.15**	**240**	⇑*e*P	**Pn**	**12 03 17.9**	**-0.3**
CELP				*e*S	**Sn**	**12 03 44.8**	**+0.9**
AOPR	**Arecibo Observ**	**2.17**	**248**	⇑*e*P	**Pn**	**12 03 18.9**	**+0.3**
AOPR				*e*S	**Sn**	**12 03 44.6**	**0.0**
OBIP	**Obispado Ponce**	**2.18**	**240**	⇑*e*P	**Pn**	**12 03 18.4**	**-0.3**
OBIP	

JLOS				S	Sg	12 24 28.1	+1.5	
KRMI	Paran Flat	1.35	281	Pg	Pg	12 24 09.8	-0.5	
KRMI				Sg	Sg	12 24 26.8	-1.0	
HBST	Basata	1.48	244	P	Pn	12 24 11.8	-0.4	
MZDA	Masada	1.62	332	Pn	Pn	12 24 15.4	+1.1	
TBKS	Tabuk	1.67	171	P	Pn	12 24 14.8	0.0	
BDAS	Al Bad'	1.75	215	S	Sn	12 24 40.1	+0.9	
BDAS	Al Bad'	1.75	215	P	Pn	12 24 15.4	-0.7	
DSI	Dead Sea	1.85	336	Pn	Pn	12 24 19.1	+1.6	
KZIT	Kziot	1.91	303	Pn	Pn	12 24 18.7	+0.5	
RSHS		2.02	219	P	Pn	12 24 18.6	-1.2	
HKAT	Jabal Katrina	2.39	236	⇓P	Pn	12 24 24.5	-0.3	
TR2		2.66	237	P	Pn	12 24 27.6	-1.0	
TR2				S	Sn	12 25 05.7	+4.1	
AMAG	Maghara	2.74	287	⇓P	Pn	12 24 29.3	-0.4	

NEIC 04 12:27:03.0, 1932N×15522W, h9km, ML3.5, 1C, After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCH	Steam Cracks	0.11	50⇑	*i*Pg	Pg	12 27 06.6	+0.9
STCH				*e*Sg	Sg	12 27 08.0	+0.4
KHU	Kahuku	0.38	260	*e*Pg	Pg	12 27 11.1	+0.6
KHU				*e*Sg	Sg	12 27 15.8	+0.2
POHA	Pohakuloa	0.53	326	*e*Pg	Pg	12 27 13.7	+0.4
POHA				*e*Sg	Sg	12 27 21.4	+1.2
KKH	Kailua Kona	0.83	294	*e*Pg	Pg	12 27 18.4	-0.6
KKH				*e*Sg	Sg	12 27 28.0	-1.7
HKL	Haleakala	1.70	325	Pn	Pn	12 27 31.5	-1.3
HKL				*e*Sn	Sn	12 27 55.6	+0.9

*ISCJB **04** 13:04:42.0±1.4, 3647N±007×285E±0.1, h4km±13km, Error ellipse: s-maj=20.2km s-min=8.7km az=22.2*
*ATH **04** 13:04:41.2, 3662N×2848E, h14km, MD3.2/3*
*CSEM **04** 13:04:42.5±0.2, 3652N×2854E, h8km, MD2.5, Error ellipse: s-maj=8.3km s-min=2.5km az=123.0*
*ISK **04** 13:04:43.4, 3655N×2857E, h6km, MD2.5*

ISC 04 13:04:42.4±1.5, 3648N±007×286E±01, h10km±7km, n7, σ0§70/10, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALT	Dalyan (Mudla)	0.29	7	*e*PG	Pg	13 04 48.3	0.0
DALT				*e*SG	Sg	13 04 52.1	-0.2
ARG	Arkhangelos	0.46	235	*e*PB	Pg	13 04 50.9	-0.5
ARG				*e*SB	Sg	13 04 58.1	+0.7
MLSB	Milas	1.04	321	*e*PG	Pg	13 05 02.7	+0.2
BODT	Bodrum	1.18	300	*e*PN	Pn	13 05 05.3	+0.3
BODT				*e*SN	Sn	13 05 21.5	+0.4
DENT	Denizli	1.32	15	*e*PN	Pn	13 05 07.9	+1.0
KARP	Karpathos	1.49	232	*e*PB	Pb	13 05 09.8	-0.3
SMG	Samos	1.86	312	*e*PN	Pn	13 05 12.6	-1.8

*ISCJB **04** 13:09:09.0±1.2, 398N±0.1×4061E±004, h3km±12km, Error ellipse: s-maj=19.9km s-min=5.6km az=177.2*
*ISK **04** 13:09:09.2, 3994N×4067E, h5km, MD2.9*
*CSEM **04** 13:09:10.6±0.1, 3997N×4059E, h8km, MD3.0, Error ellipse: s-maj=4.7km s-min=2.6km az=179.0*
*DDA **04** 13:09:12.0, 3983N×4078E, h9km±3km, Md3.0*

ISC 04 13:09:10.2±0.8, 3985N±007×4062E±004, h4km±11km, n8, σ0§84/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.19	331	*i*P	Pg	13 09 14.4	+0.4
KOPT				*i*S	Sg	13 09 22.6	+6.1
EZM	Erzurum	0.57	84	*e*PG	Pg	13 09 20.8	-0.5
EZM				*e*SG	Sg	13 09 29.3	+0.6
ERZM	Erzurum	0.58	84	*i*P	Pg	13 09 21.1	-0.2
ERZM				*i*S	Sg	13 09 28.2	-0.6
EZC	Erzincan	0.63	261	*e*PG	Sg	13 09 29.9	-0.5
GUMT	Gumushane	1.06	305	*e*PG	Pg	13 09 30.3	-0.3
PTK	Pertek	1.35	225	*e*PN	Pn	13 09 37.6	+1.8
DDEM	Demirkent	1.35	39	*i*P	Pn	13 09 34.9	-1.0
DDEM				*i*S	Sg	13 09 55.0	+1.3
BCA	Borcka	1.77	25	*e*PN	Pn	13 09 40.8	-0.7

MAN 04 13:13:49, 1579N×12107E, h13km, mb3.5, ML2.2, MS1.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	Palayan	0.23	173	*i*P	Pn	13 13 55.2	+1.3
PCPH				*i*S	Sg	13 14 00.5	+3.3
BALP	Baler	0.49	95	*e*P	Pg	13 13 59.0	+0.3
BALP				*e*S	Sg	13 14 07.5	+2.2
POLP	Polilio Island	1.35	141	*e*P	Pn	13 14 12.8	-0.7
POLP				*e*S	Sb	13 14 32.0	+0.7
LUBP	Lubang	2.19	201	*e*P	Pn	13 14 26.0	+0.9
LUBP				*e*S	Sn	13 14 52.9	+0.8

*ISCJB **04** 13:24:30.4±0.5, 11.11N±003×6203W±003, h70km±8km, Error ellipse: s-maj=5.4km s-min=3.8km az=39.2*
*NEIC **04** 13:24:32.4, 1121N×6190W, h33km, ML2.9, After TRN.*
*FUNV **04** 13:24:32.2, 1108N×6194W, h53km, MW3.0*
*TRN **04** 13:24:32.4, 1123N×6181W, h15km, MD3.1*

ISC 04 13:24:31.5±0.6, 1112N±003×6202W±003, h61km±9km, n27, σ0§96/47, 4C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	Chacachacare	0.49	148	*e*P	Pn	13 24 43.2	-0.3
TCE				*e*S	Sn	13 24 52.3	+0.1
TCE	Chacachacare	0.49	148	*e*P	Pn	13 24 43.2	-0.3
TCE				*e*S	Sn	13 24 50.9	-1.2
GUIV	Guiria	0.51	204⇑	*e*P	Pn	13 24 43.8	+0.2
GUIV				*e*S	Sn	13 24 52.6	+0.1
TRN	Trinidad (W)	0.76	128⇑	*i*P	Pn	13 24 45.9	-0.6
TRN				*e*S	Sn	13 24 56.5	-1.1
TPP	Pointe-a-Pierr	0.97	145	*e*P	Pn	13 24 50.9	+1.7
TPP				*e*S	Sn	13 25 04.0	+1.8
GRGR	Grenville	1.07	19	*e*Pg	Pn	13 24 49.0	-1.4
GRGR				*e*S	Sn	13 25 03.7	-0.9
GRW	Mount Saint Ca	1.09	19	*e*P	Pn	13 24 49.8	-1.0
ITEV	Isla Los Testi	1.12	282	*e*P	Pn	13 24 52.0	+0.9
ITEV				*e*S	Sn	13 25 07.1	+1.4
TBH	Brigand Hill	1.12	124⇑	*i*P	Pn	13 24 50.6	-0.6
TBH				*e*S	Sn	13 25 07.6	+1.7
TBH	Brigand Hill	1.12	124⇑	*i*P	Pn	13 24 53.2	+2.0
TBH				*e*S	Sn	13 25 07.6	+1.7
GRHS	Sauteurs	1.16	18	*e*P	Pn	13 24 52.0	+0.3
GRHS				*e*S	Sn	13 25 06.7	0.0
TPR	Prospect	1.22	87	*e*P	Pn	13 24 51.9	-0.5
TPR				*e*S	Sn	13 25 05.7	-2.3
GRIC	Isle de Caille	1.23	20	*e*P	Pn	13 24 52.9	+0.2
GRIC				*e*S	Sn	13 25 09.0	+0.5
GRSS	Sisters	1.24	19	*e*P	Pn	13 24 53.3	+0.5
GRSS				*e*S	Sn	13 25 09.3	+0.7
GRSS	Sisters	1.24	19	*e*P	Pn	13 24 53.3	+0.5
GRSS				*e*S	Sn	13 25 07.9	-0.7
BOT	Bacolet	1.27	88	*e*P	Pn	13 24 53.7	+0.5
CRUV	Carupano	1.28	250⇓	*i*P	Pn	13 24 53.5	+0.3
CRUV				*e*S	Sn	13 25 09.5	0.0
GUNV	Guanoco	1.32	224⇓	*i*P	Pn	13 24 54.3	+0.5
GUNV				*e*S	Sn	13 25 10.2	-0.4
GRCU	Cariacou	1.45	22	*e*P	Pn	13 24 55.7	+0.2
GRCU				*e*S	Sn	13 25 13.7	0.0
IBAV	Isla La Blanqu	2.61	286	*e*P	Pn	13 25 11.7	+0.4
PCRV	Puerto La Cruz	2.74	250⇓	*e*P	Pn	13 25 13.9	+0.8
PCRV				*e*S	Sn	13 25 43.9	-1.1
PRGV	PARIAGUAN	3.49	228	*e*P	Pn	13 25 22.9	-0.4
PRGV				*e*S	Sn	13 26 01.3	-2.2
GURV	El Guri	3.50	198	*e*P	Pn	13 25 22.6	-0.9
CUPV	Cœpira	3.86	254	*e*P	Pn	13 25 29.6	+1.2
CUPV				*e*S	Sn	13 26 11.1	-1.3
BIRV	Birongo	4.23	262	*e*P	Pn	13 25 34.6	+1.2
CAOV	Caicara del Or	5.68	229	*e*P	Pn	13 25 53.0	-0.3
BAUV	El Baul	6.32	251	*e*P	Pn	13 26 01.8	-0.2

*ISCJB **04** 13:27:37.4±0.6, 3573N±004×2423E±005, h94km±7km, Error ellipse: s-maj=7.6km s-min=5.0km az=147.3*
*CSEM **04** 13:27:37.2±0.1, 3567N×2424E, h82km±1km, ML3.1/1, Error ellipse: s-maj=2.7km s-min=2.0km az=63.0*
*NEIC **04** 13:27:38.8, 3587N×2429E, h64km, MG3.0(ATH), After ATH.*
*ATH **04** 13:27:38.8, 3587N×2429E, h64km±4km*
*THE **04** 13:27:40.5, 3585N×2421E, h31km±31km, ML3.1/1, Error ellipse: s-maj=31.8km s-min=0.8km az=135.0*
*HLW **04** 13:27:44.3, 3535N×2475E, h33km, Mb3.3*

ISC 04 13:27:38.7±0.6, 3575N±004×2424E±005, h84km±8km, n52, σ0§87/74, 1C-1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.34	185	*e*P	Pn	13 27 51.0	-0.7
VAM				*e*S	Sn	13 28 01.1	-0.1
IDI	Anoyia	0.70	130	P	Pn	13 27 54.2	-0.5
SIVA	Sivas	0.87	147	P	Pn	13 27 57.6	+1.1
SIVA				S	Sn	13 28 09.5	-0.2
KYTH	Kithira	1.11	299	*e*P	Pn	13 27 59.0	-0.3
THR6	Thira Island,	1.12	57	P	Pn	13 27 59.3	-0.1
THR5	Thira Island,	1.12	53	P	Pn	13 27 59.1	-0.4
THR3	Thira Island,	1.15	55	P	Pn	13 27 59.8	0.0
THR1	Thera Island	1.17	58	P	Pn	13 27 59.8	-0.2
LAST	Lasithi	1.17	120	P	Pn	13 28 00.5	+0.4
LAST				S	Sn	13 28 16.8	+0.7
LAST	Lasithi	1.17	120	P	Pn	13 28 01.1	+1.0
NPS	Neapolis	1.22	113	*e*P	Pn	13 28 01.0	+0.3
NPS				*e*S	Sn	13 28 16.5	-0.7
VLI	Veliai	1.43	313	*e*P	Pn	13 28 02.8	-0.5
APE	Apeiranthos	1.68	38	P	Pn	13 28 05.8	-0.8
APE				S	Sn	13 28 25.8	-1.8
APE	Apeiranthos	1.68	38	*e*P	Pn	13 28 06.2	-0.4
APE				*e*S	Sn	13 28 25.1	-2.5
APE	Apeiranthos	1.68	38	*e*P	Pn	13 28 06.2	-0.4
APE				S	Sn	13 28 25.8	-1.8
ZKR	Zakros	1.74	111	P	Pn	13 28 08.6	+1.3
ZKR				S	Sn	13 28 31.0	+2.1
PTL	Penteli	2.32	353	P	Pn	13 28 15.7	+0.8
PYL	PYLOS	2.32	300	P	Pn	13 28 15.3	+0.4
ITM	Ithomi	2.35	308	*e*P	Pn	13 28 16.3	+1.0
KARP	Karpathos	2.39	94	*e*P	Pn	13 28 16.9	+1.0
CHOS	Chios island	3.01	28	P	Pn	13 28 24.2	0.0
CHOS				S	Sn	13 28 59.2	-0.1
AGG	Agios Georgios	3.60	336	P	Pn	13 28 33.0	+0.7
AGG				S	Sn	13 29 12.8	-0.9
NEO	Neokhori	3.64	348	P	Pn	13 28 34.6	+1.8
SLUM		4.32	169	⇓P	Pn	13 28 41.5	-0.6
AWBH		8.40	151	P	Pn	13 29 36.1	-1.5
GLL	Jalalah	8.80	132	P	Pn	13 29 42.9	-0.3
GLL	Jalalah	8.80	132	P	Pn	13 29 42.8	-0.4
AMAG	Maghara	9.08	122	P	Pn	13 29 45.9	-1.1
AMAG	Maghara	9.08	122	P	Pn	13 29 45.8	-1.1
HFRF	Wahat Farafira	9.25	157	⇑P	Pn	13 29 48.5	-0.8

*ISCJB **04** 13:35:20.7±1.1, 513N±02×17946E±007, h46km±5km, mb3.8/12, Error ellipse: s-maj=30.7km s-min=7.1km az=0.1*
*NEIC **04** 13:35:21.9±1.1, 5126N×17948E, h40km±6km, mb4.1/2, ML3.8(PMR), ML3.4(AEIC), Error ellipse: s-maj=24.9km s-min=6.7km az=180.0*
*IDC **04** 13:35:22.9±4.4, 5143N×17948E, h44km±41km, mb3.6/11, mb1 3.8/13, mb1mx3.6/25, mbtmp3.7/13, ML3.8/2, Error ellipse: s-maj=45.6km s-min=15.6km az=7.0*

ISC 04 13:35:22.0±1.2, 512N±02×17945E±007, h39km±5km, n26, σ0§92/29, mb3.8/12, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.17	325	P	Pn	13 35 27.3	-1.6
AMKA				S	Sn	13 35 33.5	-0.3
ADK	Adak	2.50	74	*e*Pn	Pn	13 36 00.1	+0.1
ADK				*e*Sn	Sn	13 36 29.6	+0.4
SMY	Shemya	3.63	296	P	Pn	13 36 16.9	+1.3
SMY				S	Sn	13 37 01.2	+4.1
ATKA	Atka Island	4.06	74	P	Pn	13 36 22.1	+0.5
FX1	Attu Island--F	4.21	295	P	Pn	13 36 24.0	+0.4
PETK	Petropavlovsk-0.1nm,0.3s,baz=93,slow=19,SNR=3.6	13.47	286	P	Pn	13 38 31.6	+1.2
KDAK	Kodiak Island 1.2nm,0.3s,baz=234,slow=7.9,SNR=15	17.42	57	P	Pn	13 39 18.9	-2.7
KDAK	Kodiak Island	17.42	57	P	Pn	13 39 18.9	-2.7
BPAW	Bear Paw Mtn. 40nm,2.0s	20.14	39	*e*P	P	13 39 53.6	+1.3
IMA2	Indian Mountai	20.14	32	*e*P	P	13 39 53.3	+1.0
MCK	McKinley	20.82	41	*e*P	P	13 40 03.8	+4.1
INK	Inuvik	28.20	35	*e*P	P	13 41 09.8	-0.6
NEW	Newport 0.9nm,0.5s,mb3.8	39.96	69	*e*P	P	13 42 52.0	-0.1
NVAR	Mina Array Bea 0.2nm,0.5s,mb3.2,baz=1.4,slow=3.6,SNR=2.8	44.66	81	P	P	13 43 31.9	+1.3
SONM	Songino Array 0.5nm,0.5s,mb3.7,baz=64,slow=7.5,SNR=5.2	45.72	296	P	P	13 43 39.7	+0.8
PDAR	Pinedale Array 1.9nm,0.6s,mb4.2,baz=312,slow=3.0,SNR=13	47.39	71	P	P	13 43 52.0	0.0
ZALV	Zalesovo Beam 0.5nm,0.3s,mb3.9,baz=42,slow=9.2,SNR=3.6	53.32	313	P	P	13 44 36.0	-0.7
ARCES	ARCESS Array B 4.8nm,1.1s,mb4.4,baz=20,slow=8.1,SNR=4.2	58.03	350	P	P	13 45 09.5	-0.7
MK31	Makanchi Array	59.25	308	*e*P	P	13 45 18.2	-0.8
MKAR	Makanchi Array 0.8nm,0.3s,mb4.2,baz=48,slow=6.8,SNR=18	59.25	308	P	P	13 45 18.5	-0.6
TXAR	Lajitas Array 0.1nm,0.4s,mb3.2,baz=299,slow=5.6,SNR=3.0	59.76	80	P	P	13 45 22.5	-0.2
NB2	NORSAR Subarra comp=Z,0.8nm,0.5s,mb4.0,baz=8.7,slow=6.5	67.67	354	P	P	13 46 13.8	-0.6
NOA	NORSAR Array B comp=Z,0.5nm,0.5s,mb3.8,baz=8.0,slow=6.3,SNR=6.3	67.67	354	P	P	13 46 14.1	-0.3
CMAR	Chiang Mai Arr comp=Z,0.3nm,0.7s,mb3.4,baz=24,slow=8.9,SNR=4.1	69.93	275	P	P	13 46 28.6	-0.5
AKASG	Malin Array Be comp=Z,0.5nm,0.3s,mb3.9,baz=23,slow=6.7,SNR=3.6	75.33	341	P	P	13 46 59.6	-1.1
BRTR	Keskin Array B comp=Z,0.8nm,0.8s,mb3.9,baz=39,slow=4.1,SNR=4.1	84.60	334	P	P	13 47 51.5	+0.6

*CSEM **04** 13:58:12.2±0.0, 7935N×294E, h2km, mb4.2/1, Error ellipse: s-maj=1.8km s-min=1.5km az=102.0*
*ISCJB **04** 13:58:13.9±0.5, 7916N±006×44E±02, h10km, mb3.7/13, MS3.4/6, Error ellipse: s-maj=9.4km s-min=5.1km az=14.3*
*MOS **04** 13:58:13.0±1.9, 7913N×331E, h10km, mb4.1/8, Error ellipse: s-maj=49.0km s-min=9.5km az=95.2*
*IDC **04** 13:58:13.9±0.7, 7928N×332E, h0km, mb3.7/11, mb1 4.0/15, mb1mx3.8/26, mbtmp3.8/15, ML3.8/3, MS3.4/11, Ms1 3.4/11, ms1mx3.1/33, Error ellipse: s-maj=20.6km s-min=13.4km az=38.0*
*BER **04** 13:58:15.1±1.9, 7981N×528E, h10km, MD2.8, ML3.2, ML2.9(NAO)*
*NEIC **04** 13:58:15.3±0.6, 7927N×402E, h10km, mb4.4/2, Error ellipse: s-maj=14.4km s-min=9.1km az=215.0*
*NAO **04** 13:58:16.7±3.5, 7921N×513E, ML2.9*

ISC 04 13:58:15.9±0.5, 7920N±007×46E±02, h10km, n61, σ1§40/63, mb3.7/13, MS3.4/6, 2C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.43	98	Pg	Pg	13 58 40.8	-2.5
KBS				Lg		13 58 58.4	
KBS	Kingsbay	1.43	98	*e*Pn	Pn	13 58 40.3	-1.5
KBS				*e*Sn	Sn	13 58 58.2	-2.4
KBS	Kingsbay	1.43	98	*e*P	Pn	13 58 40.4	-1.4
KBS				*e*S	Sn	13 58 58.6	-2.0
KBS	comp=Z,461nm,0.4s			AML	AML	13 59 02.2	
SPB4	Spitsbergen Ar	2.53	108	*e*Pn	Pn	13 58 57.0	+0.1
SPB4				*e*Sn	Sn	13 59 28.2	+0.4
SPA0	Spitsbergen Ar baz=310,slow=12	2.54	108	Pn	Pn	13 58 57.2	+0.2
SPA0				Sn	Sn	13 59 27.4	-0.5
SPITS	Spitsbergen Ar baz=164,slow=10,SNR=4005	2.54	108	Pn	Pn	13 58 57.1	+0.1
SPITS				Sn	Sn	13 59 27.9	0.0
SPITS	baz=155,slow=10,SNR=6.9			LR	LR	14 00 08.8	
HSP	Hornsund	3.16	129	*e*Pn	Pn	13 59 04.5	-1.1
HSP	comp=Z,934nm,19.1s,baz=135,slow=41			*e*Sn	Sn	13 59 40.2	-3.0
DAG	Danmarks Havn	5.40	255⇑	*i*P	Pn	13 59 30.0	-6.3
DAG	comp=Z,13nm,0.3s			pmax	pmax		
DAG	Danmarks Havn	5.40	255⇑	*i*P	Pn	13 59 30.0	-6.3
	comp=Z,13nm,0.3s						
BJO1	Bjornoya	5.73	138	*e*P	Pn	13 59 41.5	+0.7
BJO	Bjornoya	5.75	137	*e*P	Pn	13 59 41.5	+0.4
KEV	Kevo	11.09	136	*e*Pn	Pn	14 00 55.3	+1.1
KEV	Kevo	11.09	136	*e*Pn	Pn	14 00 55.3	+1.1
ARA0	ARCESS Array S baz=347,slow=11	11.11	139	Pn	Pn	14 00 53.8	-0.7
ARA0	baz=351,slow=28			Sn	Sn	14 02 51.6	-6.8
ARCES	ARCESS Array B comp=Z,1.6nm,0.3s,baz=350,slow=12,SNR=53	11.11	139	Pn	Pn	14 00 54.4	-0.1
ARCES				LR	LR	14 05 09.9	
ARCES	comp=Z,132nm,18.8s,baz=8.5,slow=37						
ARCES	ARCESS Array B	11.11	139	P	Pn	14 00 54.4	-0.1
ARCES	comp=Z,2.0nm,0.3s			pmax	pmax		
ARCES	comp=Z,132nm,18.8s			MLR	MLR		
ARE0	ARCESS Array S	11.11	139	*e*Pn	Pn	14 00 53.4	-1.1
SUMG	Summit comp=Z,5.0nm,0.6s	12.05	260	*e*Pn	Pn	14 01 01.1	-6.3
SUMG	Summit comp=Z,5.0nm,0.6s	12.05	260	*e*Pn	Pn	14 01 01.1	-6.2
APA0	Apatity Array baz=332,slow=10	13.91	131	P	Pn	14 01 31.0	-1.7
NB2	NORSAR Subarra comp=Z,0.3nm,0.5s,baz=356,slow=11	18.37	170	P	Pn	14 02 32.3	+2.1
NB2	NORSAR Subarra	18.37	170	P	Pn	14 02 32.6	+2.4
NB2	NORSAR Subarra comp=Z,0.3nm,0.5s,baz=356,slow=11,SNR=4.8	18.37	170	P	Pn	14 02 32.3	+2.1
NOA	NORSAR Array B comp=Z,0.2nm,0.3s,baz=356,slow=12,SNR=3.2	18.37	170	P	Pn	14 02 31.3	+1.1
NOA	comp=Z,106nm,18.9s,baz=355,slow=32			LR	LR	14 08 10.0	
FIA0	FINESS Array S slow=8.6	18.99	147	P	Pn	14 02 37.6	-0.2
SFJD	Kangerlussuaq comp=Z,88nm,20.9s,baz=4.1,slow=35	19.04	262	LR	LR	14 09 04.2	
HFS	Hagfors comp=Z,0.3nm,0.3s,baz=25,slow=7.4,SNR=9.7	19.37	166	P	Pn	14 02 42.7	+0.3
HFS	comp=Z,54nm,18.1s,baz=64,slow=38			LR	LR	14 10 40.1	
HFS	Hagfors slow=10	19.37	166	P	Pn	14 02 42.2	-0.1
RES	Resolute Bay	20.20	311	*e*P	P	14 02 45.2	-5.0
RES	Resolute Bay	20.20	311	*e*P	P	14 02 45.2	-5.0
EKA	Eskdalemuir Ar comp=Z,0.9nm,0.8s,mb3.3,baz=352,slow=8.1,SNR=3.5	24.12	191	P	P	14 03 29.9	-1.3
EKA	Eskdalemuir Ar comp=Z,1.0nm,0.8s	24.12	191	P	P	14 03 30.0	-1.2
EKA				pmax	pmax		
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,mb3.3,baz=344,slow=9.6,SNR=4.4	29.90	148	P	P	14 04 24.0	+0.8
GERES	GERESS Array B comp=Z,0.4nm,0.8s,mb3.3,baz=6.8,slow=9.1,SNR=3.6	30.66	168	P	P	14 04 32.0	+2.1
GERES				LR	LR	14 16 13.4	
YKA	comp=Z,74nm,20.0s,MS3.3,baz=87,slow=35 Yellowknife Ar comp=Z,28nm,20.9s,MS3.0,baz=95,slow=37	34.20	314	LR	LR	14 19 11.1	
ZALV	Zalesovo Beam comp=Z,29nm,20.8s,MS3.0,baz=20,slow=39	35.80	85	LR	LR	14 21 52.7	
KURK	Kurchatov comp=Z,6.7nm,1.3s,mb4.2	37.72	92	*e*P	P	14 05 33.4	+2.3
KURK	Kurchatov comp=Z,7.0nm,1.3s,mb4.2	37.72	92	*e*P	P	14 05 33.4	+2.4
KURK				pmax	pmax		
BRTR	Keskin Array B comp=Z,0.6nm,0.8s,mb3.3,baz=343,slow=6.3,SNR=3.5	41.21	145	P	P	14 06 02.5	+2.3
BRTR	Keskin Array B comp=Z,1.0nm,0.8s	41.21	145	P	P	14 06 02.6	+2.3
BRTR				pmax	pmax		
MK31	Makanchi Array	42.17	91	*e*P	P	14 06 10.0	+2.0
MK31				*e*		14 06 16.3	
MKAR	Makanchi Array comp=Z,0.9nm,0.6s,mb3.6,baz=339,slow=7.3,SNR=9.3	42.17	91	P	P	14 06 10.1	+2.1
MKAR	comp=Z,42nm,18.1s,MS3.4,baz=102,slow=42			LR	LR	14 27 53.5	
MKAR	Makanchi Array comp=Z,1.0nm,0.6s	42.17	91	P	P	14 06 10.1	+2.1
MKAR				pmax	pmax		
MKAR	comp=Z,43nm,18.1s			MLR	MLR		
ULM	Lac du Bonnet comp=Z,147nm,19.9s,MS3.9,baz=357,slow=36	43.03	292	LR	LR	14 23 40.0	
SONM	Songino Array comp=Z,0.5nm,0.7s,mb3.6,baz=338,slow=6.1,SNR=4.2	45.60	67	P	P	14 06 37.6	+2.1
SONM	Songino Array comp=Z,1.0nm,0.7s	45.60	67	P	P	14 06 37.6	+2.1
SONM				pmax	pmax		
ULN	Ulaanbaatar comp=Z,1.5nm,0.8s,mb4.0	45.68	67	*e*P	P	14 06 38.2	+2.1
ULN				*e*		14 06 44.5	
ULN	Ulaanbaatar	45.68	67	*e*P	P	14 06 38.3	+2.1
ULN				*e*		14 06 44.5	
ULN	comp=Z,2.0nm,0.8s,mb4.1			pmax	pmax		
ULN	Ulaanbaatar	45.68	67	*e*P	P	14 06 38.2	+2.0
PDAR	Pinedale Array comp=Z,1.1nm,1.0s,mb3.8,baz=32,slow=3.9,SNR=6.0	52.58	302	P	P	14 07 27.9	-1.1
PDAR	comp=Z,151nm,19.3s,MS4.0,baz=335,slow=37			LR	LR	14 30 48.2	
PV10	Paradox Valley	56.79	301	*e*P	P	14 07 59.4	-0.2
PV10	Paradox Valley	56.79	301	*e*P	P	14 07 59.4	-0.2
PV01	Paradox Valley	56.95	300	*e*P	P	14 07 59.8	-0.9
PV01	Paradox Valley	56.95	300	*e*P	P	14 07 59.8	-0.9
NVAR	Mina Array Bea comp=Z,0.5nm,0.8s,mb3.6,baz=21,slow=5.2,SNR=2.8	58.17	309	P	P	14 08 06.9	-2.4
TXAR	Lajitas Array comp=Z,1.2nm,0.7s,mb4.0,baz=44,slow=5.3,SNR=14	64.72	293	P	P	14 08 52.0	-1.7
TXAR	Lajitas Array comp=Z,1.0nm,0.7s	64.72	293	P	P	14 08 52.0	-1.7
TXAR				pmax	pmax		
TORD	Torodi Ar. Bea comp=Z,0.9nm,0.8s,mb3.9,baz=356,slow=6.6,SNR=5.2	66.08	183	P	P	14 09 02.1	-0.6
CMAR	Chiang Mai Arr comp=Z,1.3nm,1.0s,mb3.8,baz=342,slow=7.1,SNR=8.1	72.82	82	P	P	14 09 44.9	+0.6
CMAR	Chiang Mai Arr comp=Z,1.0nm,1.0s	72.82	82	P	P	14 09 44.9	+0.6
CMAR				pmax	pmax		
ASAR	Alice Springs comp=Z,0.3nm,0.7s,baz=8.7,slow=1.6,SNR=5.7	120.10	55	PKP	PKPdf	14 17 04.8	-1.2

*ISCJB **04** 14:15:19.7±1.1, 77S±0.1×123.1E±02, h269km±9km, mb3.7/3, Error ellipse: s-maj=31.4km s-min=10.9km az=143.4*
*NEIC **04** 14:15

IDC 04 14:51:04.2±1.5,946S×10884W,h0km,mb3.6/4, mb1 4.0/4,mb1mx3.9/11,mbtmp3.6/4,MS3.7/5,Ms1 3.8/5, ms1mx3.4/13,Error ellipse: s-maj=77.9km s-min=29.4km az=74.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**29.77**	**28**	LR	LR	15 06 32.1	
	comp=Z,196nm,21.8s,baz=217,slow=31						
ROSC	**El Rosal**	**37.22**	**69**	LR	LR	15 10 55.4	
	comp=Z,49nm,19.6s,baz=224,slow=32						
TXAR	**Lajitas Array**	**38.89**	**7**	P	P	14 58 31.6	0.0
	0.2nm,0.5s,baz=180,slow=7.1,SNR=2.8						
LPAZ	**La Paz**	**40.20**	**104**	LR	LR	15 12 33.0	
	comp=Z,59nm,18.9s,baz=238,slow=32						
PLCA	**Paso Flores**	**46.00**	**139**	P	P	14 59 29.7	+0.2
	1.7nm,0.9s,baz=216,slow=8.7,SNR=2.8						
PLCA				LR	LR	15 14 16.8	
	comp=Z,159nm,21.2s,baz=4.4,slow=30						
NVAR	**Mina Array Bea**	**48.45**	**350**	P	P	14 59 50.0	+1.5
	0.6nm,0.6s,baz=178,slow=11,SNR=5.8						
PDAR	**Pinedale Array**	**51.98**	**359**	P	P	15 00 14.4	-0.7
	0.6nm,1.0s,baz=181,slow=9.7,SNR=2.9						
PDAR				LR	LR	15 19 17.6	
	comp=Z,182nm,19.4s,baz=355,slow=33						
VNA3	**Neumayer Olymp**	**84.05**	**161**	*e*	P	15 03 41.6	+5.2
VNA3				*e*		15 03 48.0	
VNA1	**Neumayer--Stat**	**84.63**	**161**	*e*	P	15 03 44.7	+5.4
VNA1				*e*		15 03 51.1	
VNA2	**Neumayer--Watz**	**84.84**	**161**	*e*	P	15 03 45.2	+4.8
	baz=265,slow=3.5						
VNA2				*e*		15 03 51.0	
CMAR	**Chiang Mai Arr**	**151.63**	**291**	PKPbc	PKPbc	15 11 01.1	-0.4
	0.5nm,0.4s,baz=30,slow=1.6,SNR=6.9						

*IDC **04** 15:12:46.0±2.2,5314N×16077E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,Error ellipse: s-maj=50.2km s-min=28.9km az=37.0*
*MOS **04** 15:12:48.1±0.7,5346N×16094E,h37km,mb4.1/1,Error ellipse: s-maj=77.0km s-min=42.4km az=152.7*
*ISCJB **04** 15:12:50.8±0.7,5331N±003×16065E±008,h45km±8km, mb3.4/3,Error ellipse: s-maj=9.1km s-min=3.5km az=33.8*
*KRSC **04** 15:12:51.4±0.5,5334N×16057E,h37km±37km,ML3.9*
ISC 04 15:12:51.7±0.7,5329N±004×16063E±008,h37km±10km, n24,σ0°88/44,mb3.4/3,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.41**	**243**	*e*P	**Pn**	**15 13 01.0**	**-0.2**
SPN				*e*S	**Sn**	**15 13 07.6**	**-0.1**
NLC	**Nalytchevo**	**0.78**	**262**	*e*P	**Pn**	**15 13 05.7**	**-0.5**
NLC				*e*S	**Sn**	**15 13 16.3**	**-0.4**
KII	**Karymskiy**	**1.03**	**317**	*e*P	**Pn**	**15 13 08.7**	**-0.8**
KII				*e*S	**Sn**	**15 13 21.2**	**-1.5**
AVH	**Avacha**	**1.14**	**269**	*e*P	**Pn**	**15 13 11.0**	**-0.1**
AVH				*e*S	**Sn**	**15 13 25.8**	**+0.4**
PET	**Petropavlovsk**	**1.22**	**258**	*e*PN	**Pn**	**15 13 11.8**	**-0.4**
PET				*e*S	**Sn**	**15 13 26.0**	**-1.5**
PET				pmax	pmax		
	comp=Z,83nm,0.4s						
PET				smax			
	comp=E,272nm,0.4s						
PET				smax			
	comp=N,297nm,0.6s						
PET	**Petropavlovsk**	**1.22**	**258**	*e*P	**Pn**	**15 13 11.8**	**-0.4**
PET				*e*S	**Sn**	**15 13 26.7**	**-0.8**
MKZ	**Mys Kozlova**	**1.42**	**27**	*e*P	**Pn**	**15 13 13.9**	**-1.1**
MKZ				*e*S	**Sn**	**15 13 30.4**	**-2.1**
RUS	**Russkaya**	**1.55**	**237**	*e*P	**Pn**	**15 13 16.2**	**-0.5**
RUS				*e*S	**Sn**	**15 13 34.7**	**-0.8**
GNL	**Ganaly**	**1.66**	**285**	*e*P	**Pn**	**15 13 18.6**	**+0.4**
GNL				*e*S	**Sn**	**15 13 38.5**	**+0.2**
GRL	**Gorelyy**	**1.72**	**246**	*e*P	**Pn**	**15 13 19.7**	**+0.7**
GRL				*e*S	**Sn**	**15 13 40.7**	**+1.0**
PETK	**Petropavlovsk-**	**1.77**	**265**	Pn	**Pn**	**15 13 20.2**	**+0.4**
	comp=N,26nm,0.3s,baz=91,slow=21,SNR=891						
PETK				Sn	**Sn**	**15 13 42.3**	**+1.2**
	comp=N,9.5nm,0.3s,baz=93,slow=29,SNR=11						
TUMR	**Tumrok**	**2.02**	**352**	*e*P	**Pn**	**15 13 23.8**	**+0.7**
TUMR				*e*S	**Sn**	**15 13 48.1**	**+1.0**
KMNR	**Kamenistaya**	**2.48**	**355**	*e*P	**Pn**	**15 13 31.1**	**+1.6**
KMNR				*e*S	**Sn**	**15 14 00.0**	**+1.5**
BZMR	**Bezymyannaya**	**2.65**	**358**	*e*P	**Pn**	**15 13 32.1**	**+0.2**
BZMR				*e*S	**Sn**	**15 14 01.6**	**-1.1**
KIRR	**Kirishev**	**2.67**	**356**	*e*P	**Pn**	**15 13 32.1**	**-0.1**
KIRR				*e*S	**Sn**	**15 14 02.1**	**-1.2**
KPT	**Kopyto**	**2.69**	**355**	*e*P	**Pn**	**15 13 33.7**	**+1.3**
KPT				*e*S	**Sn**	**15 14 03.6**	**-0.1**
KOZ	**Kozyrevsk**	**2.81**	**351**	*e*P	**Pn**	**15 13 33.5**	**-0.5**
KOZ				*e*S	**Sn**	**15 14 04.8**	**-1.8**
KRSR	**Krestovskiy**	**2.93**	**359**	*e*P	**Pn**	**15 13 37.2**	**+1.5**
KRSR				*e*S	**Sn**	**15 14 09.8**	**+0.1**
KLY	**Klyuchi**	**3.03**	**0**	*e*S	**Sn**	**15 14 12.9**	**+0.9**
KBTR	**Krutoberegovo**	**3.19**	**23**	*e*P	**Pn**	**15 13 39.8**	**+0.6**
KBTR				*e*S	**Sn**	**15 14 15.7**	**-0.2**
SRKR	**Sorokina**	**3.38**	**5**	*e*P	**Pn**	**15 13 42.8**	**+0.9**
SRKR				*e*S	**Sn**	**15 14 21.2**	**+0.4**
MKAR	**Makanchi Array**	**48.36**	**296**	P	**P**	**15 21 29.5**	**+0.2**
	comp=N,0.2nm,0.3s,mb3.5,baz=38,slow=9.5,SNR=3.3						
WRA	**Warramunga Arr**	**76.40**	**205**	P	**P**	**15 24 36.1**	**-0.8**
	comp=N,0.2nm,0.3s,mb3.5,baz=25,slow=6.2,SNR=3.1						
ASAR	**Alice Springs**	**80.07**	**205**	P	**P**	**15 24 57.3**	**+0.1**
	comp=N,0.2nm,0.5s,mb3.3,baz=18,slow=5.3,SNR=5.1						

*NEIC **04** 15:28:47.0,1646N×9613W,h60km,MD4.3(MEX),After MEX.*
MEX 04 15:28:47.0±0.6,1646N×9613W,h60km±25km,MD4.3, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**0.84**	**318**	*i* P	Pn	15 29 02.3	-0.7
OXX				*i* S	Sn	15 29 12.8	-1.9
VHO	**Vista Hermosa**	**0.84**	**317**	*i* P	Pn	15 29 01.9	-1.0
VHO				*i* S	Sn	15 29 12.9	-1.8
CMIG	**Matias Romero**	**1.35**	**62**	*i* P	Pn	15 29 08.1	-1.5
CMIG				*i* S	Sn	15 29 24.6	-2.0
PNIG	**Pinotepa**	**1.92**	**268**	*i* P	Pn	15 29 16.1	-1.2
PNIG				*i* S	Sn	15 29 38.4	-2.0
UTMO	**Huajuapan**	**2.10**	**311**	*e*P	Pn	15 29 19.1	-0.7
UTMO				*i* S	Sn	15 29 42.6	-2.2
SCX	**San Cristobal**	**3.36**	**85**	*e*P	Pn	15 29 31.8	-5.3
PPM	**Popocatepetl**	**3.52**	**318**	*e*P	Pn	15 29 46.5	+7.3
MEIG	**Mezcala**	**3.64**	**294**	*i* P	Pn	15 29 41.4	+0.6
MEIG				*e*S	Sn	15 30 20.1	-2.5
ACX	**Acapulco**	**3.65**	**277**	*e*P	Pn	15 29 34.0	-7.0
CAIG	**El Cayaco**	**4.01**	**279**	*i* P	Pn	15 29 45.2	-0.7
CAIG				*i* S	Sn	15 30 28.9	-2.7

*NEIC **04** 15:50:05.4,1842N×10141W,h56km,MD3.8(MEX),After MEX.*
MEX 04 15:50:05.4±0.7,1842N×10141W,h56km±18km,MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.81**	**184**	*i* P	Pn	15 50 18.8	-2.1
ZIIG				*i* S	Sn	15 50 30.7	-1.4
MOIG	**Morelia**	**1.27**	**9**	*e*P	Pn	15 50 25.8	-1.0
MOIG				*i* S	Sn	15 50 41.0	-1.9
CAIG	**El Cayaco**	**1.75**	**141**	*e*P	Pn	15 50 31.9	-1.5
CAIG				*i* S	Sn	15 50 51.9	-2.6
PLIG	**Platanillo**	**1.81**	**91**	*i* P	Pn	15 50 33.3	-0.9
PLIG				*i* S	Sn	15 50 54.1	-2.0
MMIG	**Aquila**	**1.84**	**266**	*e*P	Pn	15 50 33.3	-1.4
MMIG				*i* S	Sn	15 50 55.8	-1.1
ACX	**Acapulco**	**2.10**	**137**	*i* P	Pn	15 50 39.2	+1.0
ACX				*i* S	Sn	15 51 02.5	-0.7
ACX	**Acapulco**	**2.10**	**137**	*i* P	Pn	15 50 38.2	0.0
ACX				*i* P		15 50 39.2	
ACX				*i* S	Sn	15 51 02.2	-1.0
ACX				*i* S	Sn	15 51 02.5	-0.7
UTMO	**Huajuapan**	**3.48**	**99**	*i* P	Pn	15 50 57.0	-0.1
UTMO				*i* S	Sn	15 51 34.9	-2.1
PNIG	**Pinotepa**	**3.73**	**122**	*i* P	Pn	15 50 59.9	-0.6
PNIG				*i* S	Sn	15 51 41.2	-1.9

JMA 04 15:55:15.1±0.4,4425N×14805E,h0km,M3.5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.89**	**243**	P	Pn	15 55 49.3	+0.7
NEM2				*e*S	Sn	15 56 14.3	+1.2
JRA	**Rausu**	**2.13**	**263**	P	Pn	15 55 52.5	+0.6
JNK	**Nakash**	**2.50**	**256**	P	Pn	15 55 57.9	+1.0
JAK	**Akkeshi**	**2.74**	**244**	P	Pn	15 56 00.8	+0.5
JAK				*e*S	Sn	15 56 34.5	+0.5
JAR	**Ashorobuto**	**3.24**	**254**	P	Pn	15 56 08.6	+1.4
JAR				*e*S	Sn	15 56 48.4	+1.9
JCH	**Churui**	**3.79**	**246**	P	Pn	15 56 15.2	+0.6
JCH				*e*S	Sn	15 57 00.0	+0.1
JKB	**Kayabe**	**5.66**	**248**	P	Pn	15 56 40.2	-0.2
JKB				*e*S	Sn	15 57 43.1	-2.9

IDC 04 16:02:54.7±2.3,1995S×17447W,h0km,mb3.8/3, mb1 4.1/4,mb1mx3.8/18,mbtmp3.9/4,ML2.3/1,Error ellipse: s-maj=91.7km s-min=23.9km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.54**	**24**	Pn	Pn	16 04 33.8	+1.6
	3.8nm,0.3s,baz=54,slow=13,SNR=6.0						
AFI				Sn	Sn	16 05 46.4	-1.0
	1.5nm,0.3s,baz=142,slow=19,SNR=3.0						
ASAR	**Alice Springs**	**47.87**	**256**	P	P	16 11 34.5	-0.3
	1.6nm,0.9s,baz=88,slow=8.2,SNR=14						
WRA	**Warramunga Arr**	**47.96**	**261**	P	P	16 11 35.7	+0.2
	0.5nm,0.7s,baz=98,slow=7.5,SNR=5.9						
NVAR	**Mina Array Bea**	**78.38**	**42**	P	P	16 14 57.2	+0.2
	1.0nm,0.8s,baz=223,slow=9.7,SNR=4.9						

IDC 04 16:20:55.5±1.8,286N×12743E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.5/17,mbtmp3.7/4,Error ellipse: s-maj=130.2km s-min=23.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.65**	**164**	P	P	16 26 08.4	-0.5
	1.5nm,0.5s,baz=344,slow=11,SNR=16						
ASAR	**Alice Springs**	**27.11**	**167**	P	P	16 26 40.0	-0.2
	0.3nm,0.4s,baz=346,slow=7.7,SNR=20						
STKA	**Stephens Creek**	**37.07**	**160**	P	P	16 28 08.1	+0.6
	2.8nm,0.9s,baz=4.1,slow=4.8,SNR=6.0						
MKAR	**Makanchi Array**	**58.66**	**325**	P	P	16 30 54.7	0.0
	0.3nm,0.4s,baz=134,slow=8.2,SNR=3.1						

*ISCJB **04** 16:31:47.6±1.2,2151N±007×143.1E±02,h333km±11km, mb3.7/14,Error ellipse: s-maj=22.5km s-min=10.7km az=176.4*
*NEIC **04** 16:31:48.0±2.0,2149N×14308E,h321km±20km,mb4.0/3, Error ellipse: s-maj=14.5km s-min=8.1km az=88.0*
*IDC **04** 16:31:48.0±1.7,2151N×143.13E,h318km±16km,mb3.4/11, mb1 3.5/13,mb1mx3.4/22,mbtmp3.4/13,Error ellipse: s-maj=19.8km s-min=11.8km az=85.0*
ISC 04 16:31:48.0±1.3,2148N±008×1431E±02,h321km±12km, n26,σ0°66/25,mb3.7/14,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.65**	**352**	P	**Pn**	**16 33 13.4**	**-0.3**
	12nm,0.3s,baz=11,slow=21,SNR=14						
CBIJ				S	**S**	**16 34 23.2**	**+0.3**
	30nm,0.3s,baz=292,slow=23,SNR=13						
MJAR	**Matsushiro Arr**	**15.60**	**345**	P	**P**	**16 35 09.8**	**-0.5**
	0.6nm,0.3s,baz=162,slow=10.0,SNR=8.1						
MJAR				S	**S**	**16 37 54.0**	**-4.4**
	0.2nm,0.3s,baz=131,slow=15,SNR=3.5						
MAJO	**Matsushiro**	**15.60**	**345**	*e*P	**P**	**16 35 10.5**	**+0.1**
KSRS	**Korea Array**	**20.64**	**324**	P	**P**	**16 36 03.6**	**-0.2**
	0.6nm,0.7s,baz=146,slow=8.8,SNR=4.4						
SONM	**Songino Array**	**39.45**	**321**	P	**P**	**16 38 48.5**	**+0.8**
	0.2nm,0.3s,mb2.8,baz=137,slow=6.5,SNR=4.9						
CHTO	**Chiang Mai**	**41.43**	**274**	P	**P**	**16 39 02.4**	**-1.9**
CMAR	**Chiang Mai Arr**	**41.51**	**274**	P	**P**	**16 39 06.0**	**+1.1**
	0.9nm,0.5s,mb3.1,baz=82,slow=6.3,SNR=8.1						
WRAB	**Tennant Creek**	**42.04**	**192**	*e*P	**P**	**16 39 09.1**	**0.0**
	3.1nm,0.3s,mb3.9						
WB2	**Warramunga Arr**	**42.05**	**192**	*e*P	**P**	**16 39 09.2**	**+0.1**
WRA	**Warramunga Arr**	**42.05**	**192**	P	**P**	**16 39 09.3**	**+0.2**
	2.5nm,0.2s,mb3.9,baz=14,slow=9.4,SNR=57						
ASAR	**Alice Springs**	**45.76**	**192**	P	**P**	**16 39 38.1**	**-0.2**
	0.4nm,0.3s,mb3.1,baz=12,slow=7.3,SNR=31						
ZALV	**Zalesovo Beam**	**54.33**	**322**	P	**P**	**16 40 41.8**	**-0.1**
	1.1nm,0.7s,mb3.3,baz=104,slow=9.3,SNR=5.6						
ZALV				PcP	PcP	16 41 40.7	-0.6
	0.8nm,0.4s,baz=111,slow=3.3,SNR=4.7						
MK31	**Makanchi Array**	**54.78**	**313**	*e*P	**P**	**16 40 45.7**	**+0.5**
MKAR	**Makanchi Array**	**54.78**	**313**	P	**P**	**16 40 46.0**	**+0.8**
	1.0nm,0.5s,mb3.4,baz=93,slow=5.7,SNR=8.4						
KURK	**Kurchatov**	**57.58**	**317**	*e*P	**P**	**16 41 04.7**	**0.0**
	1.8nm,0.5s,mb3.7						
BRVK	**Borovoye**	**62.84**	**320**	*e*P	**P**	**16 41 40.6**	**+0.4**
	4.1nm,0.7s,mb4.1						
INK	**Inuvik**	**67.80**	**24**	*e*P	**P**	**16 42 11.1**	**-0.3**
YKA	**Yellowknife Ar**	**76.68**	**28**	P	**P**	**16 43 03.6**	**-0.2**
	1.7nm,0.5s,mb4.0,baz=291,slow=6.0,SNR=6.0						
ARCES	**ARCESS Array B**	**79.10**	**341**	P	**P**	**16 43 17.2**	**+0.3**
	7.3nm,1.0s,mb4.3,baz=81,slow=9.0,SNR=23						
ARCES	**ARCESS Array B**	**79.10**	**341**	P	**P**	**16 43 17.2**	**+0.3**
JOF	**Joensuu**	**80.47**	**334**	*e*p	**P**	**16 43 23.6**	**-0.7**
	3.4nm,0.3s,mb4.5						
NVAR	**Mina Array Bea**	**83.34**	**51**	P	**P**	**16 43 40.6**	**+0.9**
	0.6nm,0.7s,mb3.5,baz=277,slow=5.1,SNR=6.4						
NOA	**NORSAR Array B**	**89.11**	**339**	P	**P**	**16 44 05.9**	**-1.2**
	0.7nm,0.7s,mb3.6,baz=45,slow=4.7,SNR=3.1						
TORD	**Torodi Ar. Bea**	**128.81**	**309**	PKP	PKPdf	16 50 18.1	-0.2
	0.3nm,0.7s,baz=61,slow=0.6,SNR=4.8						
PLCA	**Paso Flores**	**145.68**	**132**	PKPbc	PKPbc	16 50 50.1	+0.7
	1.9nm,0.8s,baz=261,slow=2.8,SNR=11						
LPAZ	**La Paz**	**150.04**	**85**	PKPbc	PKPbc	16 51 02.4	+0.8
	1.7nm,0.5s,baz=301,slow=2.8,SNR=9.6						

*ISCJB **04** 16:34:43.8±0.5,2995S±005×1779W±0.1,h49km,mb4.5/13, MS4.0/13,Error ellipse: s-maj=15.0km s-min=6.7km az=9.7*
*IDC **04** 16:34:45.4±0.7,2969S×17772W,h48km±5km,mb4.2/11, mb1 4.4/11,mb1mx4.3/16,mbtmp4.2/11,MS4.0/14, Ms1 4.0/14,ms1mx3.8/24,Error ellipse: s-maj=16.9km s-min=12.8km az=70.0*
*NEIC **04** 16:34:45.2±0.5,2966S×17763W,mb4.8/3,Error ellipse: s-maj=15.0km s-min=14.0km az=166.0*
ISC 04 16:34:45.6±0.6,2992S±006×1778W±01,h51km, h51km±1.3km:pP-P,n70,σ1°28/34,mb4.5/13,MS4.0/13,2D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.67**	**352**	P	**Pn**	**16 34 56.3**	**-2.7**
	2µm,0.3s,baz=100,slow=8.6,SNR=70						
RAO				S	**Sn**	**16 35 06.3**	**-2.3**
	5µm,0.3s,baz=73,slow=20,SNR=39						
RAO	**Raoul Island**	**0.67**	**352**	P	**Pn**	**16 34 56.3**	**-2.7**
RAO				S	**Sn**	**16 35 06.3**	**-2.3**
URZ	**Urewera**	**9.33**	**206**	P	**Pn**	**16 36 53.6**	**-3.7**
	2.0nm,0.3s,baz=74,slow=18,SNR=8.0						
URZ				S	**Sn**	**16 38 40.2**	**-0.5**
	7.8nm,0.3s,baz=148,slow=22,SNR=18						
SNZO	**South Karori**	**12.89**	**206**	*e*Pn	**Pn**	**16 37 42.6**	**-3.4**
SNZO				*e*Sn	**Sn**	**16 39 58.7**	**-9.2**
DZM	**Mont Dzumac**	**16.16**	**295**	*e*P	**Pn**	**16 38 36.3**	**+7.0**
DZM	**Mont Dzumac**	**16.16**	**295**	*e*P	**Pn**	**16 38 37.3**	**+8.0**
RPZ	**Rata Peaks**	**16.39**	**210**	P	**Pn**	**16 38 29.6**	**-2.4**
	4.2nm,0.3s,baz=358,slow=2.0,SNR=12						
RPZ				S	**Sn**	**16 41 18.5**	**-14**
	0.8nm,0.3s,baz=324,slow=19,SNR=4.4						
RAR	**Rarotonga**	**18.41**	**66**	LR	LR	16 43 45.3	
	comp=Z,616nm,20.4s,baz=279,slow=30						
TBI	**Tubuai**	**26.13**	**82**	*e*LR	LR	16 46 43.8	
	727nm,27.0s,baz=256						
ARMA	**Armidale**	**26.39**	**261**	P	**P**	**16 40 21.9**	**+4.6**
PPT	**Papeete**	**28.53**	**71**	*e*LR	LR	16 47 45.3	
	679nm,26.0s,baz=238						
PPT	**Papeete**	**28.53**	**71**	LR	LR	16 48 51.6	
	comp=Z,315nm,18.5s,MS4.0,baz=239,slow=30						
HNR	**Honiara**	**29.12**	**310**	LR	LR	16 50 20.9	
	comp=Z,134nm,19.9s,MS3.6,baz=116,slow=32						
CTA	**Charters Tower**	**33.89**	**278**	P	**P**	**16 41 25.4**	**+1.8**
	20nm,0.5s,mb5.3,baz=104,slow=11,SNR=42						
CTAO	**Charters Tower**	**33.89**	**278**	*e*P	**P**	**16 41 26.0**	**+2.3**
	18nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**34.75**	**256**	P	**P**	**16 41 33.5**	**+2.5**
	4.3nm,0.5s,mb4.6,baz=93,slow=11,SNR=8.1						
STKA				LR	LR	16 53 59.7	
	comp=Z,263nm,19.4s,MS4.0,baz=291,slow=33						
STKA	**Stephens Creek**	**34.75**	**256**	*e*P	**P**	**16 41 32.5**	**+1.5**
STKA				LR	LR	16 53 59.7	
RKT	**Rikitea**	**38.75**	**90**	*e*LR	LR	16 52 22.6	
	377nm,29.0s,baz=247						
ASAR	**Alice Springs**	**43.31**	**266**	P	**P**	**16 42 43.1**	**+0.6**
	6.8nm,0.5s,mb4.6,baz=101,slow=7.1,SNR=142						
WB2	**Warramunga Arr**	**44.24**	**272**	*e*P	**P**	**16 42 50.1**	**0.0**
WRAB	**Tennant Creek**	**44.24**	**272**	*e*P	**P**	**16 42 50.2**	**+0.1**
	13nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**44.25**	**272**	P	**P**	**16 42 50.4**	**+0.2**
	7.2nm,0.5s,mb4.6,baz=110,slow=7.7,SNR=42						
WRA				pP	pP	16 43 04.0	+0.3
	4.3nm,0.6s,baz=110,slow=7.7,SNR=6.7						
SBA	**Scott Base**	**48.53**	**184**	*e*P	**P**	**16 43 26.2**	**+3.2**
	8.3nm,0.9s,mb4.8						
NWAO	**Narrogin (SRO)**	**54.73**	**249**	LR	LR	17 05 31.8	
	comp=Z,144nm,21.4s,MS4.0,baz=293,slow=34						
GUMO	**Guam**	**56.26**	**315**	LR	LR	17 04 02.5	
	comp=Z,125nm,20.6s,MS4.0,baz=127,slow=31						
QSPA	**South Pole Qui**	**60.19**	**180**	P	**P**	**16 44 49.5**	**+1.9**
	2.4nm,0.6s,mb4.4,baz=34,slow=0.4,SNR=8.6						
MAW	**Mawson**	**72.82**	**200**	P	**P**	**16 46 09.3**	**+1.0**
	7.2nm,0.8s,mb4.7,baz=127,slow=6.3,SNR=15						
MJAR	**Matsushiro Arr**	**77.94**	**325**	P	**P**	**16 46 37.8**	**-0.3**
	1.7nm,0.8s,mb4.1,baz=143,slow=4.8,SNR=5.7						
MJAR				LR	LR	17 15 15.6	
	comp=Z,75nm,21.7s,MS4.0,baz=50,slow=31						
VNA3	**Neumayer Olymp**	**78.78**	**176**	*e*	**P**	**16 46 41.8**	**-0.5**
VNA3				*e*		16 46 49.1	
VNA2	**Neumayer--Watz**	**79.21**	**177**	*e*	**P**	**16 46 44.9**	**+0.2**
	baz=180,slow=4.1						
VNA2				*e*		16 46 52.3	
VNA1	**Neumayer--Stat**	**79.44**	**176**	*e*	**P**	**16 46 46.2**	**+0.3**
VNA1				*e*		16 46 53.6	
PLCA	**Paso Flores**	**82.71**	**133**	LR	LR	17 15 27.7	
	comp=Z,104nm,21.0s,MS4.2,baz=221,slow=30						
KSRS	**Korea Array**	**84.09**	**319**	P	**P**	**16 47 10.6**	**-0.1**
	1.3nm,1.0s,mb4.0,baz=196,slow=31,SNR=4.5						
KSRS				LR	LR	17 22 15.0	
	comp=Z,36nm,19.5s,MS3.8,baz=50,slow=34						
LPIG	**La Paz**	**84.14**	**58**	LR	LR	17 14 46.5	
	comp=Z,118nm,19.3s,MS4.3,baz=140,slow=29						
PETK	**Petropavlovsk-**	**85.39**	**345**	P	**P**	**16 47 16.9**	**0.0**
	5.1nm,0.8s,mb4.7,baz=98,slow=8.6,SNR=7.0						
PETK				pP	pP	16 47 31.0	-0.7
	5.2nm,0.9s,baz=114,slow=9.9,SNR=2.5						
PETK				LR	LR	17 20 02.9	
	comp=Z,52nm,20.5s,MS3.9,baz=323,slow=32						
PETK	**Petropavlovsk-**	**85.39**	**345**	P	**P**	**16 47 16.9**	**0.0**
PETK				pP	pP	16 47 31.0	-0.7
PETK				LR	LR	17 20 02.9	
YBH	**Yreka Blue Hor**	**87.55**	**38**	LR	LR	17 16 48.1	
	comp=Z,112nm,19.9s,MS4.3,baz=245,slow=29						
NVAR	**Mina Array Bea**	**87.77**	**43**	P	**P**	**16 47 29.0**	**+0.1**
	1.8nm,0.8s,mb4.4,baz=220,slow=8.3,SNR=16						
NVAR				pP	pP	16 47 42.8	-1.0
	2.2nm,0.9s,baz=214,slow=8.1,SNR=7.9						
TXAR	**Lajitas Array**	**91.98**	**57**	P	**P**	**16 47 48.7**	**-0.2**
	0.4nm,0.9s,mb3.7,baz=210,slow=6.7,SNR=4.7						
TXAR				pP	pP	16 48 03.8	0.0
	1.7nm,1.0s,baz=202,slow=6.3,SNR=6.8						
TXAR	**Lajitas Array**	**91.98**	**57**	P	**P**	**16 47 48.7**	**-0.2**
TXAR				pP	pP	16 48 03.8	0.0
PDAR	**Pinedale Array**	**95.67**	**43**	LR	LR	17 24 27.3	
	comp=Z,106nm,18.1s,MS4.4,baz=243,slow=31						
LPAZ	**La Paz**	**98.19**	**114**	LR	LR	17 22 20.3	
	comp=Z,33nm,20.4s,MS3.8,baz=67,slow=29						
MKAR	**Makanchi Array**	**117.59**	**310**	PKP	PKPdf	16 53 24.3	-1.2
	0.6nm,0.8s,baz=62,slow=3.6,SNR=4.7						
AML	**Almayashu**	**122.45**	**303**	*e*PKPdf	PKPdf	16 53 34.8	-0.2
ARCES	**ARCESS Array B**	**138.15**	**348**	PKhKP		16 53 55.7	
	3.0nm,0.8s,baz=46,slow=3.5,SNR=4.8						
ARCES				PKP	PKPdf	16 54 04.1	+0.2
	3.3nm,0.8s,baz=17,slow=1.6,SNR=4.7						
JOF	**Joensuu**	**142.03**	**339**	*e*pkp	PKPdf	16 54 04.9	-6.2
	0.8nm,0.4s						
KAF	**Anganasniemi**	**144.15**	**341**	*e*pkp	PKPdf	16 54 11.3	-3.5
	1.5nm,0.4s,baz=39,sl

0.8nm,0.5s,mb3.9,baz=203,slow=6.4,SNR=8.3
ASAR Alice Springs 98.93 163 P **P 17 35 44.1 -3.0**
0.8nm,0.7s,mb4.3,baz=187,slow=3.5,SNR=17
NVAR Mina Array Bea 121.41 293 PKP PKPdf 17 40 57.3 -2.0
0.8nm,1.1s,baz=93,slow=3.8,SNR=3.9
ARCES ARCESS Array B 131.01 22 PKP PKPdf 17 41 13.6 -3.1
3.2nm,0.9s,baz=325,slow=1.5,SNR=5.9
YKA Yellowknife Ar 136.21 318 PKP PKPdf 17 41 23.6 -3.0
0.5nm,0.4s,baz=132,slow=2.0,SNR=4.8
YKA Yellowknife Ar 136.21 318 PKP PKPdf 17 41 23.6 -3.1
ZALV Zalesovo Beam 142.41 64 PKP PKPdf 17 41 36.9 -1.3
0.8nm,0.4s,baz=239,slow=5.2,SNR=5.9
INK Inuvik 145.85 321 *e*PKP PKPdf 17 41 41.2 -2.6
DAWY Dawson 146.83 312 *e*PKPbc PKPbc 17 41 43.8 -3.6
SONM Songino Array 150.74 87 PKPbc PKPbc 17 41 55.4 -2.5
2.1nm,0.6s,baz=220,slow=3.6,SNR=14
SONM PKPab PKPab 17 42 00.5 -4.7
0.4nm,0.4s,baz=227,slow=3.9,SNR=4.2
MCK McKinley 150.80 309 *e*PKPbc PKPbc 17 41 54.1 -3.5
TRF Thorofare Moun 151.34 308 *e*PKPbc PKPbc 17 41 55.6 -3.3
BPAW Bear Paw Mtn. 151.76 309 *e*PKPbc PKPbc 17 41 56.5 -3.3

*IDC **04** 17:45:10.3±1.3,507S×14451E,h0km,mb3.8/7,mb1 3.9/8, mb1mx3.8/15,mbtmp3.8/8,ML3.7/1,Error ellipse: s-maj=48.6km s-min=21.9km az=96.0*
*NEIC **04** 17:45:15.7±0.9,507S×14451E,h35km,mb3.6/1,Error ellipse: s-maj=31.8km s-min=9.6km az=104.0*
*ISCJB **04** 17:45:16.5±7.2,51S±02×1444E±04,h56km±63km, mb3.8/7,Error ellipse: s-maj=60.9km s-min=27.2km az=173.7*

ISC 04 17:45:20.0±6.9,51S±02×1443E±04,h71km±62km,n13, σ0°46/11,mb3.8/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 9.4nm,0.6s	**13.94**	**237**	*e*Pn			Px	17 48 24.6	
WRAB	**Tennant Creek** 5.2nm,0.9s	**17.62**	**213**	*e*P			**Pn**	**17 49 20.9**	**0.0**
WB2	**Warramunga Arr**	**17.63**	**213**	*e*P			**Pn**	**17 49 20.5**	**-0.5**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=35,slow=13,SNR=15	**17.63**	**213**	P			**Pn**	**17 49 21.1**	**0.0**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=35,slow=8.9,SNR=19	**20.98**	**208**	P			**P**	**17 49 57.9**	**+0.3**
CMAR	**Chiang Mai Arr** 0.5nm,0.4s,mb3.8,baz=118,slow=5.8,SNR=5.4	**50.50**	**299**	P			**P**	**17 54 12.2**	**+0.9**
PETK	**Petropavlovsk-** 5.6nm,1.0s,mb4.5,baz=162,slow=7.7,SNR=3.5	**59.12**	**9**	P			**P**	**17 55 13.5**	**+0.5**
SONM	**Songino Array** 0.5nm,0.6s,mb3.7,baz=157,slow=8.1,SNR=3.7	**62.38**	**332**	P			**P**	**17 55 35.0**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.4s,mb3.2,baz=90,slow=10,SNR=6.9	**75.15**	**321**	P			**P**	**17 56 54.2**	**-0.4**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,mb3.7,baz=109,slow=5.5,SNR=4.7	**76.88**	**328**	P			**P**	**17 57 03.6**	**-0.7**
QSPA	**South Pole Qui** 0.5nm,0.6s,mb3.6,baz=6.3,slow=4.4,SNR=4.6	**84.83**	**180**	P			**P**	**17 57 46.3**	**+0.1**
QSPA	**South Pole Qui**			P				**17 57 46.3**	**+0.1**
GERES	**GERESS Array B** 0.3nm,0.6s,baz=45,slow=2.1,SNR=4.3	**119.68**	**325**	PKP			PKPdf	18 04 01.6	-0.4

IDC 04 17:48:05.4±4.7,5974S×14751W,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.8/12,mbtmp3.7/3,MS3.8/6,Ms1 3.7/6, ms1mx3.5/22,Error ellipse: s-maj=139.5km s-min=41.3km az=54.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks** comp=Z,59nm,20.8s,baz=339,slow=28	**29.64**	**284**	LR	LR		LR	18 01 49.5	
QSPA	**South Pole Qui** 4.5nm,1.2s,baz=109,slow=3.9,SNR=4.6	**30.40**	**180**	P	P		P	17 54 19.0	+0.5
QSPA	comp=Z,274nm,20.6s,baz=69,slow=34			LR	LR		LR	18 05 22.2	
MAW	**Mawson** comp=Z,77nm,19.2s,baz=198,slow=35	**51.02**	**194**	LR	LR		LR	18 18 05.5	
STKA	**Stephens Creek** comp=Z,80nm,19.9s,baz=202,slow=34	**54.15**	**268**	LR	LR		LR	18 18 09.1	
ASAR	**Alice Springs** 0.9nm,0.9s,baz=145,slow=6.4,SNR=4.6	**64.15**	**267**	P	P		P	17 58 40.5	-0.8
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=145,slow=5.1,SNR=3.2	**67.03**	**270**	P	P		P	17 59 00.8	+0.8
LPIG	**La Paz** comp=Z,89nm,21.6s,baz=73,slow=29	**88.94**	**34**	LR	LR		LR	18 30 51.6	
BOSA	**Boshof** comp=Z,63nm,19.7s,baz=46,slow=33	**91.78**	**174**	LR	LR		LR	18 37 59.5	
DIB	**Dawson Inlet,**	**113.23**	**10**	T				20 09 12.6	
VIB	**Van Inlet** SNR=6.8	**113.28**	**10**	T				20 09 18.6	
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=106,slow=3.1,SNR=3.9	**148.33**	**268**	PKPbc	PKPbc		PKPbc	18 07 51.9	-0.5

*TRN **04** 18:05:44.9,19.11N×6464W,h27km*
*ISCJB **04** 18:05:45.2±1.2,1923N±006×6464W±004,h29km±6km, Error ellipse: s-maj=10.2km s-min=5.6km az=8.7*
*RSPR **04** 18:05:46.6,19.19N×6464W,h5km±31km,MD3.6/18, MD3.6/18*
*NEIC **04** 18:05:46.6,19.19N×6464W,h5km,MD3.6(RSPR),After RSPR.*

ISC 04 18:05:45.6±1.2,1921N±006×6464W±004,h23km±7km,n52, σ0°57/86,37C-14D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.56**	**148**	*e*S			**Sb**	**18 06 04.8**	**+0.5**
ABV	**Anegada**	**0.56**	**148**	*e*P			**Pb**	**18 05 56.9**	**+0.1**
ABV	**Anegada**	**0.56**	**148**	*e*P			**Pb**	**18 05 56.9**	**+0.1**
ABV	**Anegada**	**0.56**	**148**	*e*P			**Pb**	**18 05 57.0**	**+0.2**
ABV				*e*S			**Sb**	**18 06 04.8**	**+0.5**
ABV				*e*S			**Sb**	**18 06 05.3**	**+0.9**
TBVI	**Tortola**	**0.79**	**178**	*e*S			**Sb**	**18 06 11.0**	**+0.1**
TBVI	**Tortola**	**0.79**	**178**	*e*P			**Pb**	**18 05 59.9**	**-0.7**
TBVI	**Tortola**	**0.79**	**178**	*e*S			**Sb**	**18 06 11.1**	**+0.2**
TBVI	**Tortola**	**0.79**	**178**	*e*P			**Pb**	**18 05 59.8**	**-0.8**
TBVI				*e*S			**Sb**	**18 06 11.0**	**+0.1**
TBVI	**Tortola**	**0.79**	**178**	*e*P			**Pb**	**18 05 59.9**	**-0.7**
TBVI				*e*S			**Sb**	**18 06 11.4**	**+0.5**
TBVI				*e*S			**Sb**	**18 06 11.8**	**+0.9**
STVI	**Saint Thomas**	**0.90**	**199**	*e*P			**Pb**	**18 06 01.7**	**-0.9**
STVI	**Saint Thomas**	**0.90**	**199**	*e*P			**Pb**	**18 06 01.6**	**-1.0**
STVI				*e*S			**Sb**	**18 06 14.2**	**0.0**
STVI				*e*S			**Sb**	**18 06 14.5**	**+0.3**
STVI	**Saint Thomas**	**0.90**	**199**	*e*P			**Pb**	**18 06 01.7**	**-0.9**
STVI				*e*S			**Sb**	**18 06 14.2**	**0.0**
STVI				*e*S			**Sb**	**18 06 14.5**	**+0.3**
MTP	**Monte Pirata**	**1.40**	**218**	*e*P			**Pn**	**18 06 08.9**	**-0.8**
MTP				*e*S			**Sn**	**18 06 26.8**	**-0.7**
CDVI	**St. Croix**	**1.46**	**185**	*e*P			**Pn**	**18 06 10.9**	**+0.4**
CDVI	**St. Croix**	**1.46**	**185**	*e*P			**Pn**	**18 06 10.9**	**+0.4**
CDVI				*e*S			**Sn**	**18 06 29.2**	**+0.4**
CDVI	**St. Croix**	**1.46**	**185**	*e*P			**Pn**	**18 06 11.0**	**+0.5**
CDVI				*e*S			**Sn**	**18 06 29.2**	**+0.4**
HUMP	**Col San Antoni**	**1.56**	**227**	*e*P			**Pn**	**18 06 11.5**	**-0.4**
HUMP	**Col San Antoni**	**1.56**	**227**	*e*P			**Pn**	**18 06 11.3**	**-0.6**
HUMP				*e*P				18 06 11.5	
HUMP				*e*S			**Sn**	**18 06 31.8**	**+0.3**
HUMP	**Col San Antoni**	**1.56**	**227**	*e*P			**Pn**	**18 06 11.5**	**-0.4**
HUMP				*e*S			**Sn**	**18 06 31.8**	**+0.3**
HUMP				*e*S			**Sn**	**18 06 31.8**	**+0.4**
CPD	**Cerro la Pandu**	**1.68**	**226**	*e*P			**Pn**	**18 06 13.5**	**-0.1**
CPD	**Cerro la Pandu**	**1.68**	**226**	*e*P			**Pn**	**18 06 13.5**	**-0.1**
CPD				*e*S			**Sn**	**18 06 33.8**	**-0.6**
CPD				*e*S			**Sn**	**18 06 34.4**	**0.0**
CPD	**Cerro la Pandu**	**1.68**	**226**	*e*P			**Pn**	**18 06 13.5**	**0.0**
CPD				*e*S			**Sn**	**18 06 33.8**	**-0.6**
CPD				*e*S			**Sn**	**18 06 34.4**	**0.0**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.1**	**-0.1**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 14.9**	**-0.3**
SJG				*e*S			**Sn**	**18 06 37.6**	**+0.3**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.1**	**-0.1**
SJG	**San Juan**	**1.80**	**233**	*e*S			**Sn**	**18 06 37.3**	**0.0**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.0**	**-0.2**
SJG				*e*S			**Sn**	**18 06 37.5**	**+0.2**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.1**	**-0.1**
SJG				*e*S			**Sn**	**18 06 37.3**	**0.0**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 14.9**	**-0.3**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.0**	**-0.2**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.1**	**-0.1**
SJG	**San Juan**	**1.80**	**233**	*e*P			**Pn**	**18 06 15.8**	**+0.6**
SJG				*e*S			**Sn**	**18 06 37.3**	**0.0**
SJG				*e*S			**Sn**	**18 06 37.6**	**+0.2**
SJG				*e*S			**Sn**	**18 06 37.6**	**+0.3**
SMRT	**St. Maarten**	**1.88**	**128**	*e*P			**Pn**	**18 06 16.1**	**-0.2**
SMRT				*e*S			**Sn**	**18 06 38.7**	**-0.6**
SMRT				*e*S			**Sn**	**18 06 39.6**	**+0.3**
SABA	**Saba**	**2.06**	**140**	*e*P			**Pn**	**18 06 18.0**	**-0.9**
SABA	**Saba**	**2.06**	**140**	*e*P			**Pn**	**18 06 18.0**	**-0.9**
SABA	**Saba**	**2.06**	**140**	*e*P			**Pn**	**18 06 19.6**	**+0.8**
SABA				*e*S			**Sn**	**18 06 43.7**	**-0.2**
SABA				*e*S			**Sn**	**18 06 44.1**	**+0.2**
CELP	**Cerrillos**	**2.16**	**239**	*e*P			**Pn**	**18 06 20.3**	**+0.2**
CELP				*e*S			**Sn**	**18 06 45.2**	**-0.9**
CELP	**Cerrillos**	**2.16**	**239**	*e*P			**Pn**	**18 06 20.2**	**+0.2**
CELP				*e*S			**Sn**	**18 06 45.2**	**-0.9**
CELP				*e*S			**Sn**	**18 06 47.3**	**+1.2**
CELP	**Cerrillos**	**2.16**	**239**	*e*P			**Pn**	**18 06 20.3**	**+0.2**
CELP				*e*S			**Sn**	**18 06 45.2**	**-0.9**
CELP				*e*S			**Sn**	**18 06 47.3**	**+1.2**
AOPR	**Arecibo Observ**	**2.18**	**247**	*e*P			**Pn**	**18 06 20.3**	**-0.1**
AOPR	**Arecibo Observ**	**2.18**	**247**	*e*P			**Pn**	**18 06 20.4**	**0.0**
AOPR	**Arecibo Observ**	**2.18**	**247**	*e*P			**Pn**	**18 06 20.4**	**0.0**
ICM	**Isla Caja Muer**	**2.21**	**234**	*e*P			**Pn**	**18 06 20.8**	**-0.1**
LRS	**Lares**	**2.28**	**247**	*e*P			**Pn**	**18 06 22.8**	**+1.0**
AGPR	**Aguadilla, PR**	**2.45**	**253**	*e*P			**Pn**	**18 06 23.8**	**-0.4**
LSP	**Las Mesas**	**2.54**	**246**	*e*P			**Pn**	**18 06 26.9**	**+1.6**
LSP	**Las Mesas**	**2.54**	**246**	*e*P			**Pn**	**18 06 26.1**	**+0.8**
LSP	**Las Mesas**	**2.54**	**246**	*e*P			**Pn**	**18 06 26.1**	**+0.8**
LSP				*e*P				18 06 26.9	
LSP	**Las Mesas**	**2.54**	**246**	*e*P			**Pn**	**18 06 26.9**	**+1.6**
CRPR	**Cabo Rojo, PR**	**2.63**	**243**	*e*P			**Pn**	**18 06 27.0**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.63**	**243**	*e*P			**Pn**	**18 06 26.8**	**+0.2**
CRPR				*e*P				18 06 27.0	
CRPR	**Cabo Rojo, PR**	**2.63**	**243**	*e*P			**Pn**	**18 06 27.0**	**+0.4**

IDC 04 18:06:03.8±2.0,291N×12467E,h0km,mb3.1/3,mb1 3.3/3, mb1mx3.1/17,mbtmp3.1/3,Error ellipse: s-maj=203.3km s-min=27.2km az=64.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.4s,baz=334,slow=11,SNR=4.2	**24.62**	**158**	P	P		P	18 11 25.9	0.0
ASAR	**Alice Springs** 0.2nm,0.5s,baz=355,slow=8.5,SNR=7.2	**27.91**	**162**	P	P		P	18 11 56.1	+0.5
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=115,slow=8.1,SNR=4.6	**57.07**	**327**	P	P		P	18 15 51.6	-0.2

*IGQ **04** 18:10:16.9,022N×7927W,h19km±1km,Mb4.8,Ms4.7, Error ellipse: s-maj=1.9km s-min=1.1km az=71.3*
*ISCJB **04** 18:10:18.1±1.4,023N±003×7924W±003,h14km±10km, mb4.4/20,MS4.0/7,Error ellipse: s-maj=5.5km s-min=5.0km az=39.6*
*NEIC **04** 18:10:22.2±0.4,018N×7909W,h35km,mb4.8/9, MD4.8(IGQ),Error ellipse: s-maj=10.8km s-min=7.7km az=49.0*
NEIC Felt at El Carmen, Quininde, Quito and Santo Domingo de los Colorados.
*IDC **04** 18:10:23.9±1.8,0.16N×7909W,h51km±18km,mb3.9/13, mb1 4.1/19,mb1mx4.1/26,mbtmp4.0/19,ML4.1/6,MS3.9/13, Ms1 3.9/13,ms1mx3.7/34,Error ellipse: s-maj=16.4km s-min=10.0km az=70.0*

ISC 04 18:10:18.1±0.7,016N±003×7923W±003,h3km±4km,n74, σ0°96/71,mb4.4/20,MS4.0/7,13C-11D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PINO	**Pino**	**0.70**	**117**	⇓P			**Pg**	**18 10 32.0**	**+0.4**
TERV	**Terraza Guagua**	**0.71**	**118**	⇓P			**Pg**	**18 10 32.2**	**+0.4**
YANA	**Yana**	**0.72**	**113**	⇓P			**Pg**	**18 10 32.2**	**+0.3**
GGP	**Refugio Guagua**	**0.72**	**118**	⇓P			**Pg**	**18 10 32.2**	**+0.3**
JUA2	**San Juan 2**	**0.73**	**121**	⇓P			**Pg**	**18 10 32.6**	**+0.4**
OTAV	**Otavalo**	**0.79**	**85**	*e*P			**Pg**	**18 10 32.3**	**-0.9**
OTAV				*e*S			**Sg**	**18 10 43.2**	**-0.2**
COTA	**Cotacachi**	**0.91**	**79**	⇑P			**Pg**	**18 10 35.1**	**-0.5**
JAMA	**Jama**	**1.06**	**247**	P			**Pg**	**18 10 37.2**	**-1.3**
QIL2	**Quilotoa**	**1.07**	**163**	⇑P			**Pg**	**18 10 38.2**	**-0.5**
PITA	**Cotopaxi Volc**	**1.07**	**132**	⇓P			**Pg**	**18 10 39.0**	**+0.3**
CAMI	**Rancho Maria**	**1.11**	**139**	⇑P			**Pg**	**18 10 39.7**	**+0.4**
NAS2	**Nasa**	**1.11**	**136**	⇑P			**Pg**	**18 10 39.6**	**+0.2**
VC1	**Cotopaxi 1**	**1.15**	**134**	⇑P			**Pg**	**18 10 40.4**	**+0.1**
MOV1	**Cotopaxi Vol s**	**1.18**	**138**	⇑P			**Pg**	**18 10 40.7**	**0.0**
COV1	**Cotopaxi Volc**	**1.21**	**133**	⇑P			**Pg**	**18 10 40.6**	**-0.7**
TAMB	**Tambo**	**1.21**	**135**	⇑P			**Pg**	**18 10 41.5**	**+0.1**
ANTI	**Antisana**	**1.23**	**120**	⇓P			**Pg**	**18 10 41.0**	**-0.7**
CAYA	**Cayambe**	**1.25**	**94**	⇓P			**Pg**	**18 10 41.2**	**-0.8**
PISA	**Pisayambo**	**1.48**	**145**	⇓P			**Pn**	**18 10 45.8**	**+0.2**
CONE	**Cono NE Rev Vo**	**1.61**	**98**	⇓P			**Pn**	**18 10 47.4**	**0.0**
LAV3	**Lava3-Reventad**	**1.62**	**99**	⇓P			**Pn**	**18 10 47.5**	**-0.1**
PORT	**Chimborazo Vol**	**1.68**	**164**	P			**Pn**	**18 10 49.3**	**+0.9**
IGUA	**Igualata**	**1.75**	**160**	⇑P			**Pn**	**18 10 50.1**	**+0.8**
JUI6	**Juive**	**1.75**	**154**	P			**Pn**	**18 10 49.9**	**+0.4**
RUN5	**Runtun**	**1.76**	**153**	⇑P			**Pn**	**18 10 50.1**	**+0.5**
BIL2	**Estacion Bilba**	**1.77**	**156**	P			**Pn**	**18 10 50.4**	**+0.7**
RETU	**Refugio**	**1.79**	**154**	P			**Pn**	**18 10 50.9**	**+1.0**
ULBA	**Ulba**	**1.80**	**153**	⇑P			**Pn**	**18 10 50.6**	**+0.5**
ARRY	**Arrayan**	**1.83**	**155**	⇑P			**Pn**	**18 10 50.9**	**+0.4**
PATA	**Patacocha**	**1.84**	**154**	⇑P			**Pn**	**18 10 51.5**	**+0.9**
CHIS	**Cerro-Chispas-**	**1.92**	**231**	P			**Pn**	**18 10 49.5**	**-2.2**
ROSC	**El Rosal** 31nm,0.3s,baz=85,slow=23,SNR=22	**6.76**	**46**	P			**Pn**	**18 11 58.9**	**+0.5**
ROSC	11nm,0.3s,baz=85,slow=23,SNR=5.1			S			**Sn**	**18 13 17.2**	**+1.3**
ROSC	comp=Z,1μm,18.2s,baz=215,slow=38			LR	LR		LR	18 14 34.1	
ATAH	**Atahualpa** 3.7nm,0.3s,baz=2.8,slow=6.5,SNR=29	**7.16**	**173**	P			**Pn**	**18 12 08.3**	**+4.4**
ATAH	1.5nm,0.3s,baz=35,slow=16,SNR=1.7			S			**Sn**	**18 13 31.1**	**+5.2**
ATAH	comp=Z,144nm,18.5s,baz=352,slow=33			LR	LR		LR	18 14 24.8	
BCIP	**Isla Barro Col**	**8.96**	**356**	*e*Pn			**Pn**	**18 12 30.5**	**+1.9**
PAYG	**Puerto Ayora** 74nm,1.2s	**11.08**	**266**	Pn			**Pn**	**18 12 58.7**	**+1.0**
JTS	**JuntasAbangare** 0.9nm,0.3s,baz=132,slow=15,SNR=4.4	**11.56**	**331**	P			**Pn**	**18 13 05.9**	**+1.7**
JTS	0.3nm,0.3s,baz=345,slow=20,SNR=3.2			S			**Sn**	**18 15 13.4**	**-0.5**
JTS	comp=Z,724nm,19.7s,baz=334,slow=33			LR	LR		LR	18 16 51.3	
NNA	**Nana** 1.4nm,0.3s,baz=326,slow=12,SNR=4.2	**12.30**	**169**	P			**Pn**	**18 13 16.7**	**+2.4**
NNA	2.0nm,0.3s,baz=224,slow=15,SNR=5.0			S			**Sn**	**18 15 23.3**	**-8.8**
NNA	comp=Z,621nm,18.2s,baz=150,slow=38			LR	LR		LR	18 18 15.1	
PCRV	**Puerto La Cruz** 1.4nm,0.3s,baz=314,slow=1.8,SNR=6.9	**17.60**	**55**	P			**Pn**	**18 14 25.1**	**+0.5**
PCRV	comp=Z,698nm,21.4s,baz=219,slow=39			LR	LR		LR	18 21 52.5	
LPAZ	**La Paz** 0.3nm,0.3s,baz=338,slow=14,SNR=15	**19.68**	**147**	P			**Pn**	**18 14 48.4**	**-1.6**
LPAZ	comp=Z,523nm,18.9s,baz=330,slow=41			LR	LR		LR	18 23 55.5	
SJG	**San Juan**	**21.99**	**35**	*e*P			**Pn**	**18 15 10.1**	**-3.5**
SIV	**San Ignacio** 6.8nm,0.9s,mb4.1,baz=314,slow=12,SNR=16	**24.06**	**133**	P			**P**	**18 15 32.4**	**-2.4**
LVC	**Limon Verde** 8.2nm,0.7s,mb4.4,baz=336,slow=8.5,SNR=10	**24.77**	**157**	P			**P**	**18 15 41.1**	**-0.2**
BDFB	**Brasilia** 1.4nm,0.7s,mb4.0,baz=139,slow=20,SNR=2.9	**34.60**	**118**	P			**P**	**18 17 07.2**	**-1.5**
TKL	**Tuckaleechee C** comp=Z,154nm,19.9s,MS3.8,baz=176,slow=39	**35.57**	**354**	LR	LR		LR	18 33 41.4	
TXAR	**Lajitas Array** 0.1nm,0.4s,baz=138,slow=10,SNR=4.4	**37.22**	**323**	P			**P**	**18 17 31.6**	**+0.6**
TXAR	0.5nm,0.7s,baz=168,slow=4.6,SNR=3.5			PcP	PcP			18 19 50.8	-0.3
AMTX	**Amarillo** 16nm,0.8s,mb4.8	**40.41**	**331**	*e*P			**P**	**18 17 57.7**	**-0.1**
PLCA	**Paso Flores** 12nm,0.8s,mb4.6,baz=345,slow=9.1,SNR=24	**41.46**	**170**	P			**P**	**18 18 05.9**	**-0.4**
ANMO	**Albuquerque** 5.2nm,0.8s,mb4.3,baz=150,slow=8.9,SNR=20	**42.94**	**327**	P			**P**	**18 18 19.4**	**+1.0**
ANMO	**Albuquerque** 9.2nm,0.9s,mb4.5	**42.94**	**327**	*e*P			**P**	**18 18 19.0**	**+0.5**
SADO	**Sadowa** comp=Z,116nm,21.8s,MS3.8,baz=18,slow=36	**44.41**	**0**	LR	LR		LR	18 36 55.0	
WUAZ	**Wupatki** 12nm,0.9s,mb4.8	**46.18**	**323**	*e*P			**P**	**18 18 45.4**	**+1.1**
PV10	**Paradox Valley**	**46.86**	**328**	*e*P			**P**	**18 18 49.8**	**+0.2**
ARUT	**Antelope Range**	**48.93**	**324**	*e*P			**P**	**18 19 07.2**	**+1.4**
RSSD	**Black Hills** 7.3nm,0.9s,mb4.7	**49.02**	**336**	*e*P			**P**	**18 19 05.5**	**-0.9**
PDAR	**Pinedale Array** 0.8nm,0.9s,mb3.8,baz=133,slow=8.5,SNR=5.6	**50.39**	**331**	P			**P**	**18 19 16.7**	**-0.1**
PDAR	comp=Z,77nm,20.6s,MS3.7,baz=342,slow=39			LR	LR		LR	18 43 24.8	
NVAR	**Mina Array Bea** 3.2nm,0.8s,mb4.3,baz=130,slow=7.1,SNR=24	**52.30**	**321**	P			**P**	**18 19 32.2**	**+1.1**
HLID	**Hailey** 2.1nm,0.8s,mb4.1	**53.41**	**329**	*e*P			**P**	**18 19 37.0**	**-2.3**
WVOR	**Wild Horse Val** 3.0nm,0.5s,mb4.6	**54.98**	**325**	*e*P			**P**	**18 19 50.5**	**-0.2**
YBH	**Yreka Blue Hor** 1.3nm,0.6s,mb4.1,baz=164,slow=7.4,SNR=3.9	**56.98**	**322**	P			**P**	**18 20 04.2**	**-0.9**
SFJD	**Kangerlussuaq** comp=Z,81nm,19.4s,MS4.0,baz=301,slow=33	**69.66**	**12**	LR	LR		LR	18 49 12.2	
DLBC	**Dease Lake** 3.5nm,0.9s,mb4.3,baz=89,slow=8.5,SNR=5.1	**70.44**	**334**	P			**P**	**18 21 33.4**	**-0.2**
DLBC	comp=Z,119nm,20.6s,MS4.1,baz=105,slow=38			LR	LR		LR	18 54 47.8	
LIC	**Lamto** 60nm,1.7s,mb5.2	**74.28**	**84**	*e*P			**P**	**18 21 58.4**	**+0.9**
TIC	**Toumodi** 61nm,0.2s	**74.30**	**83**	*e*P			**P**	**18 21 57.1**	**-0.6**
DBIC	**Dimbokro** 1.9nm,0.6s,mb4.2,baz=244,slow=4.5,SNR=4.4	**74.46**	**83**	P			**P**	**18 21 58.1**	**-0.5**
KIC	**Kosan Boka** 54nm,1.1s,mb5.4	**74.57**	**83**	*e*P			**P**	**18 21 54.7**	**-4.5**
ESDC	**Sonseca Array** 0.3nm,0.5s,mb3.5,baz=257,slow=3.5,SNR=5.4	**78.58**	**50**	P			**P**	**18 22 20.3**	**-1.1**
TORD	**Torodi Ar. Bea** 0.9nm,0.8s,mb3.7,baz=277,slow=6.0,SNR=5.2	**81.13**	**77**	P			**P**	**18 22 32.8**	**-3.0**
TORD	comp=Z,62nm,18.7s,MS4.0,baz=95,slow=35			LR	LR		LR	18 57 53.2	
TAM	**Tamanrasset**	**85.10**	**67**	*e*P			**P**	**18 22 55.1**	**-1.1**
QSPA	**South Pole Qui** 6.0nm,1.1s,mb4.8	**90.21**	**180**	*e*P			**P**	**18 23 18.8**	**-0.8**
SUR	**Sutherland** comp=Z,96nm,18.4s,MS4.3,baz=260,slow=36	**98.57**	**123**	LR	LR		LR	19 09 32.1	
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=330,slow=5.0,SNR=3.6	**124.48**	**11**	PKP	PKPdf		PKPdf	18 29 17.5	-1.4
ASAR	**Alice Springs** 0.2nm,0.4s,baz=117,slow=3.8,SNR=12	**140.25**	**232**	PKhKP				18 29 40.6	
ASAR	0.4nm,0.5s,baz=128,slow=2.1,SNR=11			PKP	PKPdf		PKPdf	18 29 47.1	-2.3
WRA	**Warramunga Arr** 0.5nm,0.8s,baz=157,slow=2.2,SNR=5.0	**141.70**	**237**	PKhKP				18 29 45.0	
WRA	0.9nm,0.7s,baz=112,slow=2.4,SNR=17			PKP	PKPdf		PKPdf	18 29 52.3	+0.1
CMAR	**Chiang Mai Arr** 0.4nm,0.7s,baz=352,slow=2.7,SNR=3.2	**161.41**	**5**	PKPab	PKPab			18 31 01.3	-3.9

*ISCJB **04** 18:14:38.5±2.9,177S±02×1753W±02,h280km±43km, mb4.0/8,Error ellipse: s-maj=41.9km s-min=31.5km az=141.7*
*IDC **04** 18:14:38.3±2.4,1795S×17538W,h244km±33km,mb4.0/4, mb1 4.1/5,mb1mx3.5/18,mbtmp4.0/5,Error ellipse: s-maj=40.0km s-min=23.4km az=117.0*
*NEIC **04** 18:14:38.2±1.3,1790S×17545W,h247km±18km,mb4.1/6, Error ellipse: s-maj=20.0km s-min=17.5km az=147.0*

ISC 04 18:14:38.5±2.9,177S±03×1753W±03,h263km±51km,n13, σ0°85/12,mb4.0/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 8.6nm,0.3s,baz=32,slow=8.9,SNR=13	**5.09**	**43**	P			**Pn**	**18 15 57.9**	**+2.0**
AFI	20nm,0.3s,baz=38,slow=20,SNR=9.9			S			**S**	**18 16 56.5**	**-1.2**
URZ	**Urewera** 9.3nm,0.5s,mb4.4,baz=90,slow=10,SNR=7.6	**21.52**	**196**	P			**P**	**18 19 05.8**	**-1.2**
CTAO	**Charters Tower** 9.2nm,1.1s,mb4.2	**36.38**	**260**	*e*P			**P**

0.7nm,0.7s,mb3.8,baz=209,slow=4.4,SNR=11
BRTR Keskin Array B 70.29 38 P **P 19 07 17.9 -1.5**
1.5nm,1.1s,mb3.8,baz=218,slow=6.7,SNR=3.9
AKASG Malin Array Be 75.29 28 P **P 19 07 47.7 -1.2**
4.0nm,0.7s,mb4.5,baz=222,slow=6.3,SNR=20
NB2 NORSAR Subarra 77.68 13 P **P 19 08 03.1 +0.9**
comp=Z,1.3nm,0.7s,mb4.0,baz=204,slow=6.5
NOA NORSAR Array B 77.68 13 P **P 19 08 03.4 +1.2**
comp=Z,1.6nm,0.7s,mb4.1,baz=203,slow=6.2,SNR=7.8
NOA NORSAR Array B 77.68 13 P **P 19 08 03.4 +1.2**

*IDC **04** 18:58:29.8±1.3, 1023N×12693E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/19, mbtmp3.9/7, Error ellipse: s-maj=96.8km s-min=16.3km az=72.0*
*ISCJB **04** 18:58:32.1±1.6, 1039N±006×12703E±008, h35km±14km, mb3.8/6, Error ellipse: s-maj=14.4km s-min=9.4km az=156.6*
*MAN **04** 18:58:32, 1041N×12685E, h19km, mb4.2, ML3.0, MS2.7*
*NEIC **04** 18:58:35.5±0.6, 985N×126.16E, h35km, mb3.8/2, Error ellipse: s-maj=23.0km s-min=12.2km az=65.0*

ISC 04 18:58:32.3±3.0, 1038N±006×12697E±006, h19km±20km, n17,σ1§25/20, mb3.8/6, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.57**	**248**	⇑*eP*		**Pn**	**18 58 57.9**	**-1.2**
SCPH				*eS*		**Sn**	**18 59 17.5**	**-1.5**
BUTP	**Butuan**	**1.93**	**224**	*eP*		**Pn**	**18 59 04.2**	**+0.2**
BUTP				*eS*		**Sn**	**18 59 28.3**	**+0.6**
BESP	**Borongan**	**1.93**	**309**	*eP*		**Pn**	**18 59 03.5**	**-0.6**
MSLP	**Maasin**	**2.09**	**264**	*eP*		**Pn**	**18 59 07.2**	**+0.9**
MSLP				*eS*		**Sn**	**18 59 33.4**	**+1.7**
PLP	**Palo**	**2.10**	**292**	⇑*eP*		**Pn**	**18 59 05.0**	**-1.5**
PLP				*i* S		**Sn**	**18 59 31.2**	**-0.9**
BUKP	**Musuan**	**3.12**	**217**	*eP*		**Pn**	**18 59 23.8**	**+3.4**
MATI	**Mati**	**3.48**	**192**	*eP*		**Pn**	**18 59 27.2**	**+1.7**
GUMO	**Guam**	**17.80**	**78**	P		pP	19 02 51.0	+5.8
	4.3nm,0.3s							
BATI	**Baumata**	**20.71**	**189**	P		**P**	**19 03 11.9**	**+0.3**
	14nm,0.7s,baz=344,slow=2.9,SNR=8.4							
WRAB	**Tennant Creek**	**30.98**	**166**	*eP*		**P**	**19 04 45.8**	**-2.8**
	0.6nm,0.7s,mb3.5							
WRA	**Warramunga Arr**	**30.99**	**166**	P		**P**	**19 04 47.3**	**-1.3**
	0.9nm,1.1s,mb3.5,baz=348,slow=9.3,SNR=6.3							
ASAR	**Alice Springs**	**34.51**	**169**	P		**P**	**19 05 18.4**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=353,slow=7.3,SNR=25							
ASAR				PcP		PcP	19 07 54.7	+0.4
	0.5nm,0.6s,baz=343,slow=2.3,SNR=12							
SONM	**Songino Array**	**41.16**	**339**	P		**P**	**19 06 18.8**	**+3.5**
	0.2nm,0.6s,baz=155,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**52.36**	**322**	P		**P**	**19 07 44.2**	**+1.2**
	1.6nm,0.7s,mb4.1,baz=119,slow=8.2,SNR=17							
MKAR				PcP		PcP	19 08 54.6	+0.7
	0.5nm,0.7s,baz=113,slow=2.2,SNR=3.3							
ZALV	**Zalesovo Beam**	**54.86**	**331**	P		**P**	**19 08 01.6**	**+0.3**
	0.6nm,0.3s,mb4.0,baz=98,slow=9.1,SNR=3.5							
KURK	**Kurchatov**	**56.37**	**325**	P		**P**	**19 08 13.3**	**+1.2**
	baz=129,slow=7.2							
BRTR	**Keskin Array B**	**85.99**	**309**	P		**P**	**19 11 11.7**	**0.0**
	0.8nm,0.7s,mb4.1,baz=87,slow=4.9,SNR=5.1							

KRSC 04 19:14:39.7±1.2, 5081N×16037E, h10km±10km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**2.00**	**325**	*eP*		Pn	19 15 13.8	+0.4
RUS				*i* S		Sn	19 15 38.5	+0.1
SPN	**Mys Shipunski**	**2.30**	**355**	*eP*		Pn	19 15 18.5	+0.9
SPN				*i* S		Sn	19 15 47.1	+1.1
AVH	**Avacha**	**2.66**	**338**	*eP*		Pn	19 15 24.7	+2.2
AVH				*i* S		Sn	19 15 57.7	+2.9
GNL	**Ganaly**	**3.25**	**334**	*eP*		Pn	19 15 32.6	+1.9
KBTR	**Krutoberegovo**	**5.60**	**14**	*eP*		Pn	19 16 05.6	+2.7

*IDC **04** 19:18:39.7±1.2, 4895N×15363E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=40.3km s-min=26.2km az=141.0*
*ISCJB **04** 19:18:42.5±1.1, 491N±002×1538E±003, h33km, mb3.4/4, Error ellipse: s-maj=37.1km s-min=13.2km az=137.3*
*MOS **04** 19:18:42.8±1.9, 49.15N×153.52E, h33km, mb3.8/2, Error ellipse: s-maj=85.1km s-min=37.7km az=52.1*

ISC 04 19:18:44.3±1.1, 491N±002×1538E±003, h35km, n8, σ0§88/8, mb3.4/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.20**	**42**	*e*PN		**Pn**	**19 19 17.5**	**-0.7**
PETK	**Petropavlovsk-**	**4.73**	**30**	Pn		**Pn**	**19 19 53.1**	**+0.1**
	0.5nm,0.3s,baz=168,slow=13,SNR=19							
KSRS	**Korea Array**	**22.02**	**248**	P		**P**	**19 23 35.5**	**0.0**
	0.6nm,0.4s,mb3.3,baz=47,slow=10.0,SNR=4.1							
KSRS	**Korea Array**	**22.02**	**248**	P		**P**	**19 23 35.5**	**+0.1**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb3.6							
MKAR	**Makanchi Array**	**46.31**	**296**	P		**P**	**19 27 06.3**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.3,baz=70,slow=8.3,SNR=3.0							
ASAR	**Alice Springs**	**74.56**	**199**	P		**P**	**19 30 18.7**	**-0.5**
	comp=Z,0.9nm,1.2s,mb3.6,baz=12,slow=5.8,SNR=3.7							
ASAR	**Alice Springs**	**74.56**	**199**	P		**P**	**19 30 18.7**	**-0.5**
ASAR				pmax		pmax		
	comp=Z,1.0nm,1.2s							
TXAR	**Lajitas Array**	**75.96**	**61**	P		**P**	**19 30 30.6**	**+3.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=317,slow=7.8,SNR=3.7							

IDC 04 19:37:48.2±2.0, 1396S×17452W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.7/17, mbtmp4.0/3, ML2.5/1, Error ellipse: s-maj=180.0km s-min=27.7km az=172.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.66**	**89**	Pn		Pn	19 38 32.5	0.0
	51nm,0.3s,baz=40,slow=2.4,SNR=50							
AFI				Sn		Sn	19 38 57.9	-7.6
	52nm,0.3s,baz=42,slow=22,SNR=11							
WRA	**Warramunga Arr**	**49.13**	**256**	P		P	19 46 38.5	+0.3
	0.5nm,0.5s,baz=90,slow=7.0,SNR=8.0							
ASAR	**Alice Springs**	**49.54**	**251**	P		P	19 46 40.8	-0.4
	1.5nm,0.5s,baz=84,slow=8.0,SNR=37							
BRTR	**Keskin Array B**	**144.37**	**321**	PKP		PKPdf	19 57 26.6	-0.1
	0.2nm,0.5s,baz=46,slow=4.2,SNR=3.9							

*IDC **04** 20:35:36.2±0.5, 6694S×11158E, h0km, mb5.4/10, mb1 5.4/10, mb1mx5.3/12, mbtmp5.3/10, MS5.4/18, Ms1 5.4/18, ms1mx5.4/20, Error ellipse: s-maj=22.2km s-min=14.5km az=134.0*
*ISCJB **04** 20:35:36.3±0.2, 6714S±004×1117E±0.1, h10km, mb5.7/82, MS5.5/205, Error ellipse: s-maj=6.7km s-min=5.2km az=1.6*
*BJI **04** 20:35:36.5, 6699S×11175E, h9km, mB5.6, mb5.5, Ms5.5, Msz5.3*
*GCMT **04** 20:35:37.3±0.1, 6727S×11153E, h12km, MW5.7/100, Moment Tensor Solution. s91,c160; s100,c248; Duration: 1s7 Moment tensor: Scale 10^17Nm; Mrr-1.14±.05; Mθθ-1.65±.05; Mϕϕ2.79±.05; Mrθ-0.95±.13; Mθϕ-3.42±.04; Mϕr-0.35±.12; Best double couple: Mo4.26400×10^17 NP1:ϕs15.00000°, δ75.00000°, λ-14.00000°. NP2:ϕs108.00000°, δ77.00000°, λ-164.00000°. Principal axes: T 4.6510, Plg1.0000°, Azm241.0000°; N -0.7740, Plg70.0000°, Azm147.0000°; P -3.8770, Plg20.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **04** 20:35:37.3±0.2, 6703S×11120E, h10km, mb5.7/33, MS5.6/168, MW5.6 Error ellipse: s-maj=8.4km s-min=7.1km az=130.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^17Nm; Mrr0.17; Mθθ-1.10; Mϕϕ0.93; Mrθ-0.53; Mθϕ-2.31; Mϕr-1.38; Best double couple: Mo2.90000×10^17 NP1:ϕs103.00000°, δ60.00000°, λ-180.00000°. NP2:ϕs12.00000°, δ90.00000°, λ-30.00000°. Principal axes: T 2.7600, Plg20.0000°, Azm61.0000°; N 0.3100, Plg59.0000°, Azm191.0000°; P -3.0700, Plg21.0000°, Azm323.0000°;*

*MOS **04** 20:35:37.9±1.5, 6677S×11204E, h10km, mb5.5/34, MS5.5/58 Error ellipse: s-maj=25.3km s-min=12.3km az=86.2*
*DJA **04** 20:35:38, 6732S×11233E, h10km, Mw6.0/31*
*BGS **04** 20:35:40.9±5.0, 6703S×11120E, h10km, MS5.6*

ISC 04 20:35:38.2±0.2, 6714S±003×1115E±01, h10km, (h12km±2.6km:pP-P), n895, σ1§41/160, mb5.7/82, MS5.5/205, 183C-146D, Antarctica

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**0.94**	**336**	⇓*iP*		**Pg**	**20 35 54.8**	**-1.5**
CASY				*e*S		**Sg**	**20 36 08.3**	**-0.2**
MIR	**Mirnyy**	**7.31**	**266**	*α iP*		**Pn**	**20 37 22.0**	**-2.8**
MIR				pmax		pmax		
	comp=Z,5μm,0.8s							
MIR				pmax		pmax		
	comp=Z,2μm,1.0s							
MAW	**Mawson**	**18.34**	**246**	P		**Pn**	**20 39 46.9**	**-5.4**
	comp=Z,7.0nm,0.3s,baz=108,slow=14,SNR=61							
MAW				S		**Sn**	**20 42 57.3**	**-19**
	comp=Z,5.1nm,0.3s,baz=329,slow=12,SNR=2.9							
MAW				LR		LR	20 46 02.6	
	comp=Z,11μm,19.9s,baz=99,slow=34							
MAW	**Mawson**	**18.34**	**246**	⇑*eP*		**Pn**	**20 39 46.8**	**-5.5**
	comp=Z,772nm,1.4s							
MAW				*e*S		Sn	20 42 55.8	-21
SBA	**Scott Base**	**18.78**	**147**	⇓*iP*		**Pn**	**20 39 49.7**	**-7.8**
	comp=Z,289nm,0.7s							
SBA	**Scott Base**	**18.78**	**147**	⇓*iP*		**Pn**	**20 39 49.7**	**-7.8**
SBA				pmax		pmax		
	comp=Z,37nm,0.9s							
QSPA	**South Pole Qui**	**22.94**	**180**	P		**P**	**20 40 39.5**	**-2.4**
	comp=Z,832nm,1.4s,mb6.0,baz=316,slow=3.6,SNR=60							
QSPA				S		**S**	**20 44 41.8**	**-10**
	comp=Z,84nm,0.8s,baz=280,slow=11,SNR=3.5							
QSPA				LR		LR	20 50 19.5	
	comp=Z,10μm,19.9s,MS5.2,baz=143,slow=38							
QSPA	**South Pole Qui**	**22.94**	**180**	⇓*eP*		**P**	**20 40 39.5**	**-2.4**
	comp=Z,932nm,1.1s,mb6.1							
QSPA				*e*S		**S**	**20 44 39.7**	**-12**
QSPA				LR		LR		
	comp=Z,3μm,20.0s,MS4.7							
SYO	**Syowa Base**	**25.53**	**233**	⇓*iP*		**P**	**20 41 02.2**	**-4.1**
MCQ	**Macquarie Isla**	**25.61**	**84**	*eP*		**P**	**20 41 08.7**	**+1.5**
TAU	**Tasmania Unive**	**30.99**	**57**	*eP*		**P**	**20 41 54.2**	**-1.1**
	comp=Z,120nm,1.1s,mb5.6							
TAU				LR		LR		
	comp=Z,9μm,20.0s,MS5.5							
NVL	**N'lazarevskaya**	**32.14**	**218**	*d iP*		**P**	**20 42 05.9**	**+0.7**
NVL				*e**PP		pP	20 42 13.3	+5.1
NVL				*e*S		**S**	**20 47 17.8**	**+0.6**
NVL				pmax		pmax		
	comp=Z,247nm,1.7s,mb5.8							
NVL				MLR		MLR		
	comp=N,15μm,15.0s,MS5.9							
NVL				MLR		MLR		
	comp=E,14μm,15.0s,MS5.9							
NVL				MLR		MLR		
	comp=Z,24μm,15.0s,MS6.0							
MAIT	**Maitri**	**32.16**	**218**	*eP*		**P**	**20 42 05.1**	**-0.2**
MAIT				*eE*			20 42 36.3	
MAIT				*e*PP		PP	20 43 10.4	-7.3
MAIT				*e*S		S	20 47 57.6	+40
MAIT				*e*ScP		ScP	20 48 38.9	+2.1
MAIT				*e*SS		SS	20 49 46.1	+11
NWAO	**Narrogin (SRO)**	**34.41**	**9**	*eP*		**P**	**20 42 22.9**	**-2.4**
	comp=Z,54nm,1.2s,mb5.3							
NWAO				LR		LR		
	comp=Z,2μm,20.0s,MS4.9							
NWAO	**Narrogin (SRO)**	**34.41**	**9**	*eP*		**P**	**20 42 22.9**	**-2.4**
NWAO				pmax		pmax		
	comp=Z,54nm,1.2s							
NWAO				MLR		MLR		
	comp=Z,2μm,20.0s							
VNA2	**Neumayer--Watz**	**36.17**	**209**	*eP*		**P**	**20 42 39.3**	**-0.8**
VNA2				*e*		pP	20 42 41.8	-1.4
VNA2				*e*		pP	20 42 43.3	+0.1
VNA2				*e*			20 43 53.0	
VNA2				*e*			20 43 58.4	
VNA2				*e*			20 44 09.0	
VNA2				*e*			20 54 51.3	
VNA2				*e*			20 54 59.8	
VNA3	**Neumayer Olymp**	**36.34**	**208**	*eP*		**P**	**20 42 40.1**	**-1.4**
VNA3				*e*		pP	20 42 41.6	-3.0
VNA3				*e*		pP	20 42 43.5	-1.1
VNA3				*e*			20 43 53.2	
VNA3				*e*			20 43 58.9	
VNA3				*e*			20 44 09.3	
VNA3				*e*			20 54 52.0	
VNA3				*e*			20 54 59.6	
VNA1	**Neumayer--Stat**	**36.57**	**209**	*eP*		**P**	**20 42 42.7**	**-0.7**
VNA1				*e*		pP	20 42 44.7	-1.8
VNA1				*e*		pP	20 42 46.1	-0.4
VNA1				*e*			20 43 55.8	
VNA1				*e*			20 44 02.6	
VNA1				*e*			20 44 13.5	
VNA1				*e*			20 55 01.3	
VNA1				*e*			20 55 10.6	
FORT	**Forrest**	**37.71**	**24**	*eP*		**P**	**20 42 52.3**	**-1.3**
	comp=Z,7.6nm,0.7s,mb4.5							
CAN	**Canberra**	**38.43**	**53**	*eP*		**P**	**20 42 58.9**	**-0.8**
RPZ	**Rata Peaks**	**38.97**	**84**	P		**P**	**20 43 03.8**	**-0.2**
	comp=Z,262nm,1.2s,mb5.8,baz=195,slow=7.8,SNR=21							
RPZ				LR		LR	20 57 33.9	
	comp=Z,5μm,18.4s,MS5.4,baz=202,slow=34							
STKA	**Stephens Creek**	**39.52**	**42**	P		**P**	**20 43 07.6**	**-1.2**
	comp=Z,29nm,0.8s,mb5.0,baz=191,slow=8.1,SNR=30							
STKA				LR		LR	20 57 02.0	
	comp=Z,6μm,19.3s,MS5.4,baz=193,slow=33							
STKA	**Stephens Creek**	**39.52**	**42**	*eP*		**P**	**20 43 07.5**	**-1.2**
	comp=Z,154nm,1.4s,mb5.5							
SNZO	**South Karori**	**42.44**	**85**	*eP*		**P**	**20 43 33.0**	**+0.4**
	comp=Z,323nm,1.2s,mb5.8							
SNZO				LR		LR		
	comp=Z,8μm,19.0s,MS5.6							
ARMA	**Armidale**	**43.80**	**54**	*eP*		**P**	**20 43 42.9**	**-0.8**
ASAR	**Alice Springs**	**45.68**	**29**	P		**P**	**20 43 56.9**	**-1.9**
	comp=Z,50nm,0.8s,mb5.5,baz=193,slow=7.4,SNR=65							
ASAR	**Alice Springs**	**45.68**	**29**	P		**P**	**20 43 56.9**	**-1.9**
ASAR				pmax		pmax		
	comp=Z,50nm,0.9s							
URZ	**Urewera**	**46.00**	**85**	LR		LR	21 02 59.0	
	comp=Z,5μm,18.5s,MS5.5,baz=220,slow=36							
MBWA	**Marble Bar**	**46.27**	**11**	P		**P**	**20 44 02.0**	**-1.5**
	SNR=9.6							
MBWA	**Marble Bar**	**46.27**	**11**	*eP*		**P**	**20 44 01.4**	**-2.1**
	comp=Z,111nm,1.3s,mb5.6							
MBWA				LR		LR		
	comp=Z,3μm,19.0s,MS5.2							
MBWA	**Marble Bar**	**46.27**	**11**	P		**P**	**20 44 00.6**	**-2.9**
PMSA	**Palmer Station**	**48.34**	**183**	PFAKE			20 44 30.0	+11
PMSA				LR		LR		
	comp=Z,7μm,19.0s,MS5.7							
EIDS	**Eidsvold**	**48.34**	**50**	*eP*		**P**	**20 44 18.2**	**-1.4**
	comp=Z,918nm,1.5s,mb6.6							
WRA	**Warramunga Arr**	**49.39**	**29**	P		**P**	**20 44 25.3**	**-2.4**
	comp=Z,42nm,0.9s,mb5.5,baz=195,slow=6.7,SNR=52							
WRA				S		**S**	**20 51 31.7**	**-2.6**
	comp=Z,2.9nm,1.2s,baz=190,slow=13,SNR=5.7							
WRA				LR		LR	21 04 33.9	
	comp=Z,2μm,18.5s,MS5.2,baz=195,slow=35							
WRA	**Warramunga Arr**	**49.39**	**29**	P		**P**	**20 44 25.3**	**-2.4**
WRA				S		**S**	**20 51 31.7**	**-2.6**
WRA				pmax		pmax		
	comp=Z,42nm,0.9s							
WRA				smax				
	comp=N,3.0nm,1.2s							
WRA				MLR		MLR		
	comp=Z,2μm,18.5s							
WB2	**Warramunga Arr**	**49.39**	**29**	*eP*		**P**	**20 44 25.4**	**-2.3**
WRAB	**Tennant Creek**	**49.40**	**29**	*eP*		**P**	**20 44 25.2**	**-2.6**
	comp=Z,59nm,1.0s,mb5.6							
WRAB				LR		LR		
	comp=Z,3μm,19.0s,MS5.3							
WRAB	**Tennant Creek**	**49.40**	**29**	⇑*iP*		**P**	**20 44 25.7**	**-2.1**
WRAB	**Tennant Creek**	**49.40**	**29**	P		**P**	**20 44 25.4**	**-2.4**
	comp=Z,105nm,1.8s,comp=Z,2μm,mb5.6							
CTAO	**Charters Tower**	**51.97**	**43**	*eP*		**P**	**20 44 45.5**	**-1.6**
	comp=Z,151nm,1.3s,mb5.8							
CTAO				LR		LR		
	comp=Z,5μm,20.0s,MS5.6							
CTAO	**Charters Tower**	**51.97**	**43**	P		**P**	**20 44 45.3**	**-1.9**
	comp=Z,125nm,1.4s,comp=Z,1μm,mb5.7							
COCO	**West Island**	**55.75**	**343**	*eP*		**P**	**20 45 16.8**	**+2.0**
	comp=Z,123nm,1.2s,mb5.8							
COCO				LR		LR		
	comp=Z,2μm,20.0s,MS5.1							
COCO	**West Island**	**55.75**	**343**	P		**P**	**20 45 17.6**	**+2.8**
	comp=Z,107nm,1.5s,mb5.7							
RAO	**Raoul Island**	**55.87**	**85**	LR		LR	21 09 12.4	
	comp=Z,3μm,18.0s,MS5.4,baz=194,slow=36							
RAO	**Raoul Island**	**55.87**	**85**	PFAKE			20 45 30.0	+14
RAO				LR		LR		
	comp=Z,3μm,19.0s,MS5.4							
NOUC	**Port Laguerre**	**56.41**	**65**	*eP*		**P**	**20 45 17.3**	**-2.2**
DZM	**Mont Dzumac**	**56.49**	**66**	*eP*		**P**	**20 45 16.9**	**-3.2**
DZM	**Mont Dzumac**	**56.49**	**66**	*eP*		**P**	**20 45 18.9**	**-1.1**
XMIS	**Christmas Isla**	**56.72**	**353**	P		**P**	**20 45 21.0**	**-0.8**
	comp=Z,99nm,1.4s,mb5.7							
COEN	**Coen**	**57.08**	**37**	*eP*		**P**	**20 45 21.3**	**-3.0**
	comp=Z,50nm,1.3s,mb5.4							
COEN	**Coen**	**57.08**	**37**	P		**P**	**20 45 21.6**	**-2.7**
	comp=Z,44nm,2.0s,comp=Z,610nm,mb5.1							
BATI	**Baumata**	**57.45**	**14**	P		**P**	**20 45 28.6**	**+1.7**
	comp=Z,36nm,1.4s,comp=Z,808nm,mb5.2							
NBBI	**Negara**	**58.72**	**4**	P		**P**	**20 45 36.7**	**+0.9**
	comp=Z,240nm,1.3s,mb6.1							
KHKI	**Kahang-Kahang**	**58.75**	**5**	P		**P**	**20 45 36.3**	**+0.2**
KRKI	**Karangkates**	**58.90**	**1**	P		**P**	**20 45 38.1**	**+1.1**
SJI	**Sawahan**	**59.31**	**0**	P		**P**	**20 45 40.0**	**+0.1**
KMMI	**Kalianget**	**60.02**	**3**	P		**P**	**20 45 46.1**	**+1.3**
	comp=Z,190nm,1.3s,comp=Z,2μm,mb6.0							
SKJI	**Sukabumi**	**60.13**	**354**	P		**P**	**20 45 47.0**	**+1.4**
	comp=Z,238nm,1.3s,comp=Z,2μm,mb6.1							
LEM	**Lembang**	**60.27**	**356**	P		**P**	**20 45 47.8**	**+1.3**
	comp=Z,252nm,1.4s,comp=Z,2μm,mb6.1							
DBJI	**Dramaga**	**60.57**	**355**	P		**P**	**20 45 49.5**	**+0.9**
	comp=Z,350nm,1.4s,comp=Z,3μm,mb6.3							
JCJI	**Jatiwangi**	**60.59**	**356**	P		**P**	**20 45 49.1**	**+0.4**
	comp=Z,338nm,1.4s,comp=Z,4μm,mb6.3							
CBJI	**Citeko**	**60.70**	**355**	P		**P**	**20 45 50.0**	**+0.5**
	comp=Z,486nm,1.4s,mb6.5							
SUR	**Sutherland**	**60.88**	**256**	*eP*		**P**	**20 45 50.7**	**+0.2**
	comp=Z,92nm,1.1s,mb5.8							
SUR				LR		LR		
	comp=Z,4μm,20.0s,MS5.6							
SBJI	**Serang**	**61.03**	**354**	P		**P**	**20 45 53.7**	**+2.0**
	comp=Z,390nm,1.4s,comp=Z,3μm,mb6.3							
EFI	**East Falkland**	**61.25**	**187**	PFAKE			20 46 00.0	+7.2
EFI				LR		LR		
	comp=Z,4μm,22.0s,MS5.5							
KAPI	**Kappang**	**62.28**	**9**	⇑*iP*		**P**	**20 46 00.5**	**+0.4**
	SNR=29							
KAPI	**Kappang**	**62.28**	**9**	*eP*		**P**	**20 45 57.4**	**-2.7**
	comp=Z,165nm,1.3s,mb6.0							
KAPI				LR		LR		
	comp=Z,1μm,19.0s,MS5.0							
KAPI	**Kappang**	**62.28**	**9**	P		**P**	**20 45 58.2**	**-1.9**
	comp=Z,132nm,1.3s,comp=Z,994nm,mb5.9							
KLI	**Kotabumi**	**62.34**	**353**	P		**P**	**20 46 02.9**	**+2.4**
	comp=Z,356nm,1.4s,comp=Z,3μm,mb6.3							
PMG	**Port Moresby**	**62.44**	**40**	⇑*eP*		**P**	**20 46 00.4**	**-0.8**
	comp=Z,251nm,1.2s,mb6.2							
PMG				LR		LR		
	comp=Z,4μm,19.0s,MS5.5							
PMG	**Port Moresby**	**62.44**	**40**	⇑*eP*		**P**	**20 46 00.3**	**-0.9**
PMG	**Port Moresby**	**62.44**	**40**	P		**P**	**20 46 01.1**	**-0.1**
	comp=Z,232nm,1.3s,comp=Z,2μm,mb6.2							
BOSA	**Boshof**	**62.55**	**261**	P		**P**	**20 46 01.9**	**0.0**
	comp=Z,34nm,0.9s,mb5.5,baz=158,slow=8.3,SNR=16							
BOSA				LR		LR	21 08 46.7	
	comp=Z,6μm,19.4s,MS5.8,baz=157,slow=32							
BOSA	**Boshof**	**62.55**	**261**	*eP*		**P**	**20 46 00.4**	**-1.4**
	comp=Z,40nm,0.9s,mb5.5							
BOSA				LR		LR		
	comp=Z,6μm,20.0s,MS5.8							
BOSA	**Boshof**	**62.55**	**261**	*eP*		**P**	**20 46 00.4**	**-1.4**
BOSA				pmax		pmax		
	comp=Z,39nm,0.9s,mb5.5							
BOSA				MLR		MLR		
	comp=Z,6μm,20.0s,MS5.8							
KDI	**Kendari**	**63.53**	**12**	P		**P**	**20 46 08.0**	**-0.5**
	comp=Z,85nm,1.2s,comp=Z,2μm,mb5.7							
BBKI	**Banjar Baru**	**63.60**	**4**	P		**P**	**20 46 09.0**	**+0.1**
	comp=Z,95nm,1.5s,comp=Z,2μm,mb5.6							
KSI	**Kapahiang**	**63.67**	**350**	P		**P**	**20 46 12.1**	**+2.7**
	comp=Z,372nm,1.1s,comp=Z,8μm,mb6.3							
PBKI	**Pangkalan Bun**	**64.31**	**0**	P		**P**	**20 46 14.9**	**+1.3**
	comp=Z,365nm,1.2s,comp=Z,2μm,mb6.3							
TPI	**Tanjungpandan**	**64.31**	**356**	P		**P**	**20 46 14.7**	**+1.1**
	comp=Z,68nm,1.5s,comp=Z,849nm,mb5.5							
AAI	**Ambon**	**64.38**	**19**	P		**P**	**20 46 12.9**	**-1.2**
	comp=Z,107nm,1.4s,comp=Z,1μm,mb5.7							
PLKI	**Palangkaraya**	**64.81**	**3**	P		**P**	**20 46 16.6**	**-0.2**
	comp=Z,364nm,1.2s,mb6.3							
PPBI	**Pangkal Pinang**	**64.96**	**354**	P		**P**	**20 46 18.0**	**+0.2**
	comp=Z,92nm,1.5s,comp=Z,944nm,mb5.6							
LBTB	**Lobatse**	**65.64**	**263**	LR		LR	21 11 44.1	
	comp=Z,4μm,18.0s,MS5.6,baz=181,slow=33							
LBTB	**Lobatse**	**65.64**	**263**	*eP*		**P**	**20 46 20.6**	**-1.6**
	comp=Z,88nm,1.4s,mb5.6							
LBTB				LR		LR		
	comp=Z,4μm,21.0s,MS5.6							
HNR	**Honiara**	**66.07**	**54**	P		**P**	**20 46 23.3**	**-1.7**
	comp=Z,373nm,1.0s,mb6.4,baz=197,slow=3.8,SNR=16							
HNR				LR		LR	21 12 27.8	

comp=Z,2µm,18.1s,MS5.5,baz=160,slow=34
LSZ Lusaka 73.44 270 *e*P **P 20 47 10.2 -0.3**
comp=Z,144nm,1.4s,mb5.7
LSZ LR LR
comp=Z,2µm,19.0s,MS5.4
LSZ Lusaka 73.44 270 *e*P **P 20 47 10.2 -0.2**
LSZ pmax pmax
comp=Z,144nm,1.4s,mb5.7
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.4
TSUM Tsumeb 74.00 259 LR LR 21 16 22.5
comp=Z,6µm,19.4s,MS5.9,baz=141,slow=33
TSUM Tsumeb 74.00 259 *e*P **P 20 47 14.1 +0.4**
comp=Z,64nm,1.1s,mb5.5
TSUM LR LR
comp=Z,6µm,20.0s,MS5.9
DAV Davao City (W) 74.71 14 PFAKE 20 47 30.0 +12
DAV LR LR
comp=Z,805nm,20.0s,MS5.0
PAE Paea 77.30 105 *e*P **P 20 47 34.4 +1.8**
comp=Z,632nm,1.5s,mb6.3
PAE Paea 77.30 105 *e*P **P 20 47 34.4 +1.8**
PAE pmax pmax
comp=Z,632nm,1.5s,mb6.3
TVO Taravao 77.32 105 *e*P **P 20 47 34.4 +1.7**
comp=Z,514nm,1.2s,mb6.3
TVO Taravao 77.32 105 *e*P **P 20 47 34.4 +1.7**
TVO pmax pmax
comp=Z,514nm,1.2s,mb6.3
PPT Papeete 77.39 105 *e*P **P 20 47 35.3 +2.2**
comp=Z,66nm,1.6s,mb5.3
PPT *e*S S 20 57 27.3 +4.0
comp=Z,1µm,29.2s
PPT Papeete 77.39 105 *e*LQ 21 08 20.4
comp=Z,5µm,31.5s
PPT *e*LR LR 21 11 32.7
comp=Z,3µm,22.0s,baz=204
PPT Papeete 77.39 105 *e*P **P 20 47 35.3 +2.2**
comp=Z,66nm,1.6s,mb5.3
PPT *e*S S 20 57 27.3 +4.0
PPT *e*LQ 21 08 20.4
PPT Papeete 77.39 105 *e*P **P 20 47 35.3 +2.2**
PPT *e*S S 20 57 27.3 +4.0
PPT pmax pmax
comp=Z,66nm,1.6s
TIAR Tiarei 77.49 105 *e*P **P 20 47 35.7 +2.1**
comp=Z,374nm,1.0s,mb6.3
RKT Rikitea 77.54 120 *e*S S 20 57 28.8 +3.9
comp=Z,614nm,28.8s
RKT Rikitea 77.54 120 *e*LQ 21 08 23.8
comp=Z,4µm,31.5s
RKT *e*LR LR 21 11 43.0
comp=Z,3µm,24.5s,baz=200
TRD Trivandrum 79.45 325 *e*P **P 20 47 44.4 0.0**
TRD AMb AMB 20 47 48.9
comp=Z,93nm,1.8s,mb5.4
FCH Farellones 79.84 178⇓ *i*P **P 20 47 45.8 -0.7**
VAH Vaihoa 80.26 106 *e*P **P 20 47 50.6 +1.7**
comp=Z,82nm,1.2s,mb5.5
PMOR Pomariorio Ree 80.37 106 *e*P **P 20 47 51.1 +1.6**
comp=Z,63nm,1.1s,mb5.5
KOD Kodaikanal 81.01 326 *e*P **P 20 47 52.5 -0.3**
MDRS Chennai 83.18 329 *e*P **P 20 48 01.3 -2.8**
MDRS AMb AMB 20 48 01.9
comp=Z,13nm,0.3s,mb5.4
GUMO Guam 84.12 33 PFAKE 20 48 20.0 +11
GUMO LR LR
comp=Z,1µm,19.0s,MS5.3
LCO Las Campanas 84.14 178 *e*P **P 20 48 08.1 -1.0**
comp=Z,49nm,1.0s,mb5.6
LCO LR LR
comp=Z,2µm,21.0s,MS5.5
SHEL Horse Pasture 85.45 239 PFAKE 20 48 30.0 +14
SHEL LR LR
comp=Z,2µm,20.0s,MS5.4
CM31 Chiang Mai Arr 85.85 348 PFAKE 20 48 30.0 +12
CM31 LR LR
comp=Z,1µm,19.0s,MS5.3
CMAR Chiang Mai Arr 85.85 348 P **P 20 48 16.4 -1.2**
comp=Z,4.5nm,1.0s,mb4.7,baz=200,slow=4.9,SNR=31
CMAR PKKPbc PKKPbc 21 06 18.6 +2.2
comp=Z,0.6nm,0.8s,baz=340,slow=3.3,SNR=4.9
CMAR LR LR 21 24 44.6
comp=Z,1µm,18.6s,MS5.3,baz=341,slow=34
CMAR Chiang Mai Arr 85.85 348 P **P 20 48 16.4 -1.1**
CMAR pmax pmax
comp=Z,5.0nm,1.0s
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,1µm,18.6s
MBAR Mbarara 85.85 278⇓ *i*P **P 20 48 18.5 +0.7**
MBAR LR LR
comp=Z,344nm,20.0s,MS4.8
QIZ Qiongzhong 85.92 358 P **P 20 48 18.3 +0.5**
QIZ S S 20 58 54.1 +3.1
QIZ XS sS 20 58 58.7 +2.2
QIZ SS SS 21 04 30.7 +1.6
QIZ LR LR
comp=N,994nm,19.5s
QIZ LR LR
comp=Z,1µm,17.4s,MS5.4
QIZ Qiongzhong 85.92 358 PFAKE 20 48 30.0 +12
QIZ LR LR
comp=Z,1µm,20.0s,MS5.3
CHTO Chiang Mai 86.20 348⇑ P **P 20 48 21.0 +1.7**
SNR=9.6
CHTO Chiang Mai 86.20 348 *e*P **P 20 48 16.0 -3.2**
comp=Z,113nm,1.9s,mb5.8
CHTO LR LR
comp=Z,1µm,19.0s,MS5.3
CHTO Chiang Mai 86.20 348 *e*P **P 20 48 16.0 -3.3**
CHTO pmax pmax
comp=Z,113nm,1.9s,mb5.8
CHTO MLR MLR
comp=Z,1µm,19.0s,MS5.3
GOA Goa 86.91 324 *e*P **P 20 48 22.3 -0.6**
GOA AMb AMB 20 48 26.3
comp=Z,125nm,1.1s,mb6.1
VIS Vishakhapatnam 87.14 333 *e*P **P 20 48 22.1 -1.8**
VIS AMb AMB 20 48 28.9
comp=Z,73nm,1.2s,mb5.8
HYB Hyderabad 87.75 329 *e*P **P 20 48 26.5 -0.3**
HYB *e*S S 20 59 12.0 +3.2
HYB Hyderabad 87.75 329 *i* P **P 20 48 26.5 -0.3**
HYB *e* 20 58 56.0
HYB *e*S S 20 59 10.0 +1.2
KAD Karad 88.58 325 *i* P **P 20 48 31.1 +0.3**
TAOE Nuku Hiva Isla 88.90 110 *e*LR LR 21 16 56.1
comp=Z,4µm,24.9s
POO Poona 89.84 325 *e*P **P 20 48 34.0 -2.7**
POO *e*P pP 20 48 35.5 -4.5
POO AMb AMB 20 48 40.5
comp=Z,86nm,1.6s,mb5.8
LVC Limon Verde 90.53 180 *e*P **P 20 48 40.3 +0.2**
comp=Z,50nm,1.1s,mb5.8
LVC LR LR
comp=Z,2µm,19.0s,MS5.6
AKL Akola 91.26 328 *e*P **P 20 48 43.8 +0.6**
AKL AMb AMB 20 48 46.4
comp=Z,75nm,1.7s,mb5.7
NGP Nagpur 91.28 330 *e*P **P 20 48 39.1 -4.2**
NGP AMb AMB 20 48 42.9
comp=Z,43nm,1.6s,mb5.5
KMI Kunming 92.21 352 P **P 20 48 50.1 +2.6**
KMI AP pP 20 48 53.1 +2.2
KMI PP PP 20 52 33.4 +5.2
KMI PPP 20 54 35.2
KMI SKS 20 59 22.8
KMI S S 20 59 51.4 +1.6
KMI XS sS 20 59 55.1 -0.3
KMI PS PS 21 01 06.7 +5.3
KMI SSS 21 09 43.5
KMI AMB AMB
comp=Z,9.0nm,1.6s,mb4.8
KMI AMB AMB
comp=Z,138nm,4.4s
KMI LR LR
comp=N,1µm,23.9s,MS5.4
KMI LR LR
comp=E,965nm,19.7s,MS5.4
KMI LR LR
comp=Z,2µm,24.6s,MS5.5
BOK Bokaro 92.67 337 *e*P **P 20 48 48.2 -1.5**
GYA Guiyang 93.37 356⇑ *i*P **P 20 48 55.2 +2.3**
GYA PP PP 20 52 43.8 +6.4
GYA PPP 20 54 45.9
GYA SKS 20 59 30.2
GYA S S 21 00 02.3 +2.2
GYA PS PS 21 01 20.9 +6.6
GYA SSS 21 10 03.8
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,160nm,5.2s
GYA LR LR
comp=N,850nm,23.8s,MS5.3
GYA LR LR
comp=E,930nm,22.4s,MS5.3
GYA LR LR
comp=Z,820nm,23.6s,MS5.1
SHL Shillong 93.59 342 *e*P **P 20 48 52.2 -1.7**
SHL AMb AMB 20 48 53.4
comp=Z,25nm,1.3s,mb5.5
BHPL Bhopal 93.64 329 *e*P **P 20 48 52.0 -2.1**
BHPL AMb AMB 20 48 57.7
comp=Z,43nm,1.4s,mb5.7
BHJ Bhuj 95.37 322 *e*P **P 20 49 00.1 -2.0**
BHJ AMb AMB 20 49 06.9
comp=Z,37nm,1.7s,mb5.5
ASCN Ascension 95.77 234 PFAKE 20 49 10.0 +5.7
ASCN LR LR
comp=Z,2µm,21.0s,MS5.5
BDFB Brasilia 96.09 200 LR LR 21 30 18.0
comp=Z,2µm,18.9s,MS5.6,baz=343,slow=34
BDFB Brasilia 96.09 200 PFAKE 20 49 20.0 +14
BDFB LR LR
comp=Z,3µm,19.0s,MS5.8
LPAZ La Paz 96.82 180 P **P 20 49 09.6 +0.5**
comp=Z,2.7nm,0.8s,mb4.7,baz=138,slow=6.5,SNR=8.6
LPAZ LR LR 21 35 54.9
comp=Z,1µm,20.2s,MS5.3,baz=1.5,slow=37
LPAZ La Paz 96.82 180 *e*P **P 20 49 09.5 +0.4**
comp=Z,19nm,1.6s,mb5.3
LPAZ LR LR
comp=Z,1µm,20.0s,MS5.3
LPAZ La Paz 96.82 180 *e*P **P 20 49 09.5 +0.4**
LPAZ pmax pmax
comp=Z,19nm,1.6s
LPAZ MLR MLR
comp=Z,1µm,20.0s
AJM Ajmer 97.35 327 *e*P **P 20 49 10.5 -0.5**
AJM AMb AMB 20 49 14.3
comp=Z,19nm,1.5s,mb5.3
WHN Wuhan 97.39 2 *e*P **P 20 49 13.5 +2.4**
WBK Wadi Bani Khal 97.59 312 P **P 20 49 12.9 +0.7**
SNR=9.5
JMDO Jabal Madar 97.62 311 P **P 20 49 13.0 +0.7**
SNR=7.5
LSA Lhasa 97.76 342 *e*P **P 20 49 13.4 +0.6**
LSA Lhasa 97.76 342 *e*P **P 20 49 11.1 -1.7**
comp=Z,11nm,1.4s,mb5.2
LSA LR LR
comp=Z,2µm,19.0s,MS5.5
LSA Lhasa 97.76 342 *e*P **P 20 49 11.1 -1.7**
LSA pmax pmax
comp=Z,11nm,1.4s,mb5.2
LSA MLR MLR
comp=Z,2µm,19.0s,MS5.5
CD2 Chengdu 97.91 353 *e*P **P 20 49 14.3 +0.8**
CD2 AP pP 20 49 19.1 +2.3
CD2 XP sP 20 49 22.0 +4.0
CD2 PP PP 20 53 16.2 +3.7
CD2 SKS 20 59 50.4
CD2 S S 21 00 37.7 -1.5
CD2 XS sS 21 00 46.2 +1.4
CD2 SS SS 21 07 24.7 +3.1
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.7
CD2 AMB AMB
comp=Z,60nm,6.8s
CD2 LR LR
comp=N,2µm,22.8s,MS5.6
CD2 LR LR
comp=E,1µm,19.2s,MS5.6
CD2 LR LR
comp=Z,1µm,22.8s,MS5.4
SSE Sheshan 98.20 8 P **P 20 49 16.5 +1.8**
SSE S S 21 00 42.8 +1.1
SSE AMB AMB
comp=Z,34nm,0.7s,mb6.0
SSE AMB AMB
comp=Z,269nm,3.9s
SSE LR LR
comp=N,164nm,39.5s,MS4.8
SSE LR LR
comp=E,674nm,40.1s,MS4.8
SSE LR LR
comp=Z,289nm,24.0s
BSY Bisya 98.24 311 P **P 20 49 15.9 +0.8**
SNR=6.6
SMDO Samad 98.29 312 P **P 20 49 16.7 +1.3**
SNR=8.6
HOQ Hoqain 99.00 311 P **P 20 49 19.9 +1.4**
SNR=6.1
NJ2 Nanjing 99.03 6 *e*P **P 20 49 16.8 -1.7**
NJ2 AMB AMB
comp=Z,10.0nm,1.1s,mb5.3
NNA Nana 100.86 172 PFAKE 20 49 40.0 +13
NNA LR LR
comp=Z,2µm,21.0s,MS5.5
XAN Xi'an 100.88 358 P Pdif 20 49 25.1 -2.4
XAN AP 20 49 29.3
XAN S Sdif 21 00 55.2 -10
XAN PS PS 21 02 41.2 +5.4
XAN AMB AMB
comp=Z,2.0nm,0.8s
XAN AMB AMB
comp=Z,19nm,13.3s
XAN LR LR
comp=E,473nm,35.4s
XAN LR LR
comp=Z,1µm,25.3s
RCBR Riachuelo 103.58 213 PFAKE 20 49 50.0 +11
RCBR LR LR
comp=Z,3µm,20.0s,MS5.8
INCN Inchon 104.93 12 PFAKE 20 49 50.0 +4.5
INCN LR LR
comp=Z,436nm,20.0s,MS5.0
KSRS Korea Array 105.02 13 PP PP 20 54 03.0 -3.1
comp=Z,0.5nm,0.4s,baz=172,slow=8.0,SNR=3.5
MJAR Matsushiro Arr 105.34 22 PP PP 20 54 06.8 -1.6
comp=Z,3.6nm,1.0s,baz=193,slow=8.1,SNR=6.3
MAJO Matsushiro 105.34 22 PFAKE 20 54 10.0 +10
MAJO LR LR
comp=Z,498nm,19.0s,MS5.1
DBIC Dimbokro 106.17 248 PFAKE 20 54 10.0 +7.6
DBIC LR LR
comp=Z,1µm,22.0s,MS5.3
KBL Kabul 106.35 324 PKPdf PKiKP 20 53 59.0 -3.0
KBL *e*PP PP 20 54 13.5 -2.4
BJT Baijiatuau 106.88 4 PFAKE 20 54 10.0 +7.2
BJT LR LR
comp=Z,674nm,20.0s,MS5.2
HHC Hu-ho-hao-te 107.66 0 PDIF Pdif 20 49 59.3 +1.7
HHC PP PP 20 54 31.6 +6.1
HHC PS PS 21 03 49.1 +2.5
HHC SS SS 21 09 36.3 +0.4
HHC PP PP
comp=Z,85nm,8.9s
HHC LR LR
comp=N,356nm,23.8s,MS5.1
HHC LR LR
comp=E,555nm,21.4s,MS5.1
HHC LR LR
comp=Z,418nm,28.5s
MIDW Midway 108.75 62 PFAKE 20 54 20.0 +13
MIDW LR LR
comp=Z,2µm,22.0s,MS5.6
TORD Torodi Ar. Bea 109.70 257 Pdiff Pdif 20 50 14.1 +7.5
comp=Z,1.0nm,0.9s,baz=132,slow=4.4,SNR=4.5
TORD PKiKP PKiKP 20 54 09.0 +0.2
comp=Z,1.1nm,0.9s,baz=162,slow=2.3,SNR=3.8
TORD PP PP 20 54 36.7 -3.5
comp=Z,4.0nm,1.1s,baz=159,slow=4.7,SNR=7.0
TORD PKKPbc PKKPbc 21 05 11.3 +1.7
comp=Z,0.9nm,0.9s,baz=319,slow=3.0,SNR=3.9
TORD Torodi Ar. Bea 109.70 257 PKPdf PKiKP 20 54 09.0 +0.2
TORD PP PP 20 54 36.7 -3.5
TORD PKKPbc PKKPbc 21 05 11.3 +1.7
PAYG Puerto Ayora 110.62 157 PFAKE 20 54 20.0 +9.2
PAYG LR LR
comp=Z,2µm,22.0s,MS5.5
ERM Erimo 111.46 25 PFAKE 20 54 20.0 +8.7
ERM LR LR
comp=Z,469nm,19.0s,MS5.1
MDJ Mudanjiang 112.27 14 PFAKE 20 54 20.0 +7.2
MDJ LR LR
comp=Z,359nm,20.0s,MS5.0
UCH Uchtor 112.61 331 PFAKE 20 54 20.0 +6.5
UCH LR LR
comp=Z,720nm,19.0s,MS5.3
AML Almayashu 112.68 330 PKPdf PKiKP 20 54 14.2 +0.6
AML LR LR
comp=Z,927nm,19.0s,MS5.4
OTAV Otavalo 112.87 169 PFAKE 20 54 30.0 +15
OTAV LR LR
comp=Z,930nm,20.0s,MS5.4
TKM2 Tokmak 2 113.08 332 PFAKE 20 54 30.0 +16
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.6
EKS2 Erkin-Say 113.17 331 PFAKE 20 54 30.0 +15
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.4
SONM Songino Array 114.70 356 PP PP 20 55 11.1 -5.0
comp=Z,3.8nm,1.2s,baz=191,slow=6.0,SNR=8.5
SONM PKKPab PKKPab 21 04 56.5 -1.5
comp=Z,1.8nm,0.9s,baz=326,slow=3.7,SNR=10
ULN Ulaanbaatar 114.72 357 *i* PKP PKiKP 20 54 17.6 +0.2
ULN LR LR
comp=Z,758nm,22.0s,MS5.3
MKAR Makanchi Array 115.75 338 PKP PKPdf 20 54 19.6 +0.2
comp=Z,0.3nm,0.5s,baz=213,slow=3.2,SNR=6.2
MKAR PP PP 20 55 24.4 +1.0
comp=Z,3.1nm,1.1s,baz=176,slow=4.7,SNR=5.9
MKAR Makanchi Array 115.75 338 PKIKP PKPdf 20 54 19.6 +0.2
MKAR 20 55 24.4
MKAR pmax pmax
comp=Z,3.0nm,1.1s
YSS Yuzh-Sakhalins 116.21 23 PFAKE 20 54 30.0 +10
YSS LR LR
comp=Z,162nm,19.0s,MS4.7
HIA Hailar 116.24 6 PFAKE 20 54 30.0 +10
HIA LR LR
comp=Z,627nm,21.0s,MS5.2
HABR Khabarovsk 116.66 17 *e*P Pdif 20 50 34.2 -3.4
HABR *e* 20 54 22.1
HABR *e* 20 57 53.1
HABR *e* 21 05 07.6
HABR *e* 21 11 30.3
HABR *e* 21 15 48.7
TAM Tamanrasset 116.99 265 *e*PKPdf PKPdf 20 54 20.4 -2.2
TAM *e*PP PP 20 55 30.3 -1.9
ZAK Zakamensk 117.35 354 *e*PKIKP PKPdf 20 54 21.6 -0.7
ZAK *e* 20 55 33.2
ZAK pmax pmax
comp=Z,5.0nm,1.5s
GNI Garni 118.23 307⇑ *e*PKP PKPdf 20 54 24.1 -0.3
GNI LR LR
comp=Z,1µm,21.0s,MS5.5
GNI Garni 118.23 307⇑ *i*PKIKP PKPdf 20 54 24.1 -0.3
GNI MLR MLR
comp=Z,1µm,17.0s
TLY Talaya 118.64 354 PFAKE 20 54 40.0 +15
TLY LR LR
comp=Z,899nm,19.0s,MS5.4
KURK Kurchatov 120.12 336 *e*P PKPdf 20 54 27.3 -0.3
BR131 Keskin Array S 121.50 298 *e*PKPdf PKPdf 20 54 30.2 -0.5
BR131 LR LR
comp=Z,614nm,19.0s,MS5.3
BRTR Keskin Array B 121.50 298 PKP PKPdf 20 54 30.5 -0.2
comp=Z,11nm,0.9s,baz=157,slow=4.0,SNR=47
BRTR PKKPab PKKPab 21 04 31.2 +1.4
comp=Z,0.9nm,0.9s,baz=7.6,slow=2.2,SNR=4.3
BRTR Keskin Array B 121.50 298 PKIKP PKPdf 20 54 30.5 -0.2
BRTR pmax pmax
comp=Z,11nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BCIP Isla Barro Col 121.60 167 PFAKE 20 54 40.0 +8.3
BCIP LR LR
comp=Z,1µm,21.0s,MS5.5
ANTO Ankara 121.92 297 PFAKE 20 54 40.0 +8.5
ANTO LR LR
comp=Z,933nm,20.0s,MS5.4
JTS JuntasAbangare 122.16 161 PFAKE 20 54 40.0 +7.2
JTS LR LR
comp=Z,2µm,22.0s,MS5.7
KIV Kislovodsk 122.32 307 P PKPdf 20 54 32.2 +0.1
SNR=5.9
KIV Kislovodsk 122.32 307 *e*PKPdf PKPdf 20 54 29.8 -2.4
KIV ⇑P 20 54 33.1
KIV Kislovodsk 122.32 307K *i*PKIKP PKPdf 20 54 32.7 +0.6
KIV PS PS 21 06 10.0 +7.9
KIV *e*SS SS 21 13 03.2 +15
KIV pmax pmax
comp=Z,44nm,1.0s
KIV MLR MLR
comp=Z,1µm,17.0s,MS5.6
KIV Kislovodsk 122.32 307⇑ *i*P PKPdf 20 54 33.1 +1.0
ZAA0 Zalesovo Array 122.42 342 *e*PKPdf PKPdf 20 54 30.1 -1.8
ZALV Zalesovo Beam 122.42 342 PKP PKPdf 20 54 30.9 -1.0
comp=Z,2.9nm,0.9s,baz=184,slow=2.4,SNR=9.0
ZALV PP PP 20 56 05.8 -3.5
comp=Z,4.5nm,0.9s,baz=176,slow=4.3,SNR=9.2
ZALV Zalesovo Beam 122.42 342 PKP PKPdf 20 54 30.9 -1.0
ZALV PP PP 20 56 05.8 -3.5
ZALV Zalesovo Beam 122.42 342 PKIKP PKPdf 20 54 30.9 -1.0
ZALV 20 56 05.9
ZALV pmax pmax
comp=Z,3.0nm,0.9s
ZALV pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 123.81 331 P PKPdf 20 54 35.1 +0.5
SNR=6.9
BRVK Borovoye 123.81 331⇑ *e*PKIKP PKPdf 20 54 34.7 0.0
BOD Bodaibo 124.66 2 *e*PKIKP PKPdf 20 54 34.6 -1.5
BOD *e* 20 56 20.0
BOD pmax pmax
comp=Z,5.0nm,2.0s
BOD pmax pmax
comp=Z,9.0nm,1.6s
ANN Anapa 124.75 304 *e*P 20 51 07.5
ANN *i* PKPdf 20 54 36.3 -0.5
ANN *e* 21 01 35.5
ANN pmax pmax
comp=Z,145nm,1.8s
ANN MLR MLR
comp=N,742nm,19.0s,MS5.4
ANN MLR MLR
comp=E,318nm,19.0s,MS5.4
ANN MLR MLR
comp=Z,791nm,19.0s,MS5.4
GRGR Grenville 124.87 188 PFAKE 20 54 50.0 +12
GRGR LR LR
comp=Z,1µm,21.0s,MS5.6
PET Petropavlovsk 124.96 33 PFAKE 20 54 50.0 +13
PET LR LR
comp=Z,598nm,20.0s,MS5.3
WDD Wield Dalam 125.13 280 PFAKE 20 54 50.0 +12
WDD LR LR
comp=Z,1µm,19.0s,MS5.7
TGUH Tegucigalpa,Un 125.54 157 PFAKE 20 54 50.0 +11
TGUH LR LR
comp=Z,989nm,20.0s,MS5.5
BBGH Gun Hill 125.73 191 PFAKE 20 54 50.0 +10
BBGH LR LR
comp=Z,3µm,20.0s,MS5.9
SIM Simferopol' 125.98 301 *e*PKIKP PKPdf 20 54 40.7 +1.6
SIM 20 56 38.0
SIM *e*SS SS 21 13 42.0 +7.3
SIM pmax pmax
comp=Z,15nm,1.0s
SIM MLR MLR
comp=Z,650nm,23.0s,MS5.2
VAY Valandovo 126.87 290 *e*PKP PKPdf 20 54 40.5 -0.4
KEST Kesra 127.02 275 PKP PKPdf 20 54 41.9 +0.5
comp=Z,5.0nm,1.0s,baz=93,slow=2.2,SNR=10
TIP Timpagrande 127.18 284 *e*PKPdf PKPdf 20 54 41.5 -0.1
TIP LR LR
comp=Z,876nm,20.0s,MS5.4
OHR Ohrid 127.34 288 *e*PKP PKPdf 20 54 42.2 +0.4
KRUS Krusevo 127.40 289 *e*PKP PKPdf 20 54 42.0 +0.1
TIRR Tirgusor 127.50 296⇑P PKPdf 20 54 42.8 +0.8
TIRR Tirgusor 127.50 296⇑ *i*P PKPdf 20 54 42.8 +0.8
VTS Vitosha 127.74 291⇓P PKPdf 20 54 43.9 +1.4
VTS Vitosha 127.74 291⇓ *i*P PKPdf 20 54 43.9 +1.4

HARR Harsova 127.87 296 ⇓P PKPdf 20 54 44.9 +2.1
HARR Harsova 127.87 296 ⇓*i*P PKPdf 20 54 44.9 +2.2
TIR Tirane 127.89 288 PFAKE 20 54 50.0 +7.1
TIR LR LR
comp=Z,781nm,22.0s,MS5.3
CUC Castrocucco 128.24 283 *e*PKPdf PKPdf 20 54 41.1 -2.5
CUC LR LR
comp=Z,1μm,20.0s,MS5.5
VRHR Novokhopersk 129.02 310 *e*PKIKP PKPdf 20 54 44.8 +0.1
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=Z,5.0nm,0.5s
VRHR pmax pmax
comp=E,7.0nm,0.8s
MLR Muntele Rosu 129.27 295 PKP PKPdf 20 54 44.6 -0.8
comp=E,5.0nm,0.8s,baz=159,slow=1.5,SNR=13
MLR Muntele Rosu 129.27 295 ⇑P PKPdf 20 54 47.4 +2.0
MLR Muntele Rosu 129.27 295 PKIKP PKPdf 20 54 44.6 -0.8
MLR pmax pmax
comp=Z,5.0nm,0.9s
MLR Muntele Rosu 129.27 295 ⇑*i*P PKPdf 20 54 47.3 +1.9
SVE Sverdlovsk 129.29 327 *i* PKIKP PKPdf 20 54 45.3 +0.3
SVE pmax pmax
comp=Z,34nm,1.9s
VRI Vrincioaia 129.32 296 ⇑*i*P PKPdf 20 54 46.8 +1.4
PLOR Plostina 129.33 296 ⇑*i*P PKPdf 20 54 47.2 +1.7
ARU Arti 129.38 325 ⇑*e*PKP PKPdf 20 54 45.8 +0.6
ARU Arti 129.38 325 *i* PKIKP PKPdf 20 54 45.6 +0.4
ARU 20 56 54.4
ARU 21 01 52.2
ARU SS SS 21 14 14.9 -1.9
ARU MLR MLR
comp=Z,1μm,18.0s,MS5.7
CFTV Fuerteventura 129.50 248 PKP PKPdf 20 54 47.9 +1.5
YAK Yakutsk 129.55 11⇑*e*PKP PKPdf 20 54 46.8 +1.5
YAK LR LR
comp=Z,626nm,19.0s,MS5.3
YAK Yakutsk 129.55 11⇑*i*PKIKP PKPdf 20 54 46.7 +1.4
KIS Kishinev 129.57 298 *e*PKIKP PKPdf 20 54 44.0 -1.9
KIS MLR MLR
comp=Z,500nm,17.0s,MS5.3
KIS MLR MLR
comp=Z,700nm,16.0s
VORD Divnogorie 129.61 309 *e*PKIKP PKPdf 20 54 46.1 +0.3
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VSR Storozhevoye 129.87 309 *e*PKIKP PKPdf 20 54 46.1 -0.2
VSR pmax pmax
comp=Z,2.0nm,0.6s
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.7s
VSL Villasalto 130.29 277 PFAKE 20 55 00.0 +12
VSL LR LR
comp=Z,1μm,19.0s,MS5.6
ADK Adak 130.30 51 PFAKE 20 55 00.0 +13
ADK LR LR
comp=Z,1μm,22.0s,MS5.6
EGOM La Gomera 130.38 245 PKP PKPdf 20 54 50.1 +2.0
BZS Buzias 130.93 292 ⇑P PKPdf 20 54 49.0 +0.5
BZS Buzias 130.93 292 ⇑*i*P PKPdf 20 54 49.0 +0.5
SJG San Juan 130.98 183 PFAKE 20 55 00.0 +11
SJG LR LR
comp=Z,1μm,20.0s,MS5.7
BURAR Bucovina Array 131.35 296 ⇑P PKPdf 20 54 50.3 +1.1
BURAR Bucovina Array 131.35 296 ⇑*i*P PKPdf 20 54 50.3 +1.1
BUR08 Bucovina Ar. S 131.38 296 *e*PKPdf PKPdf 20 54 49.8 +0.6
DRGR 131.54 293 ⇑P PKPdf 20 54 50.3 +0.7
DRGR 131.54 293 ⇑*i*P PKPdf 20 54 50.3 +0.7
PKSM Moragy 132.52 290 ⇑P PKPdf 20 54 51.6 +0.1
PKSM Moragy 132.52 290 ⇑*i*P PKPdf 20 54 51.6 +0.1
KIEV Kiev 132.61 301 *e*PKPdf PKPdf 20 54 51.5 0.0
KIEV LR LR
comp=Z,886nm,22.0s,MS5.4
AKASG Malin Array Be 132.61 301 PKhKP 20 54 47.1
comp=Z,6.3nm,0.9s,baz=135,slow=1.1,SNR=5.0
AKASG PKP PKPdf 20 54 51.6 +0.1
comp=Z,9.6nm,0.9s,baz=106,slow=1.5,SNR=21
AKASG SKPbc SKPbc 20 58 16.5 -1.7
comp=Z,0.2nm,0.2s,baz=157,slow=2.8,SNR=2.9
AKASG Malin Array Be 132.61 301 PKP 20 54 47.1
AKASG PKP PKPdf 20 54 51.6 +0.1
AKASG SKPbc SKPbc 20 58 16.5 -1.7
AKASG Malin Array Be 132.61 301 PKIKP 20 54 47.1
AKASG 20 54 51.6
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKASG pmax pmax
comp=Z,10.0nm,0.9s
AKBB Malin Array Si 132.61 301 *e*PKPdf PKPdf 20 54 49.7 -1.8
ENIJ Nijar 132.61 265 PKP PKPdf 20 54 53.4 +1.4
EBER Berja 132.81 264 PKP PKPdf 20 54 54.4 +2.0
EMUR La Murta 133.00 267 PKP PKPdf 20 54 56.4 +3.7
EGUA Guajares 133.02 264 PKP PKPdf 20 54 53.2 +0.5
PGF Pioggiola 133.05 279 *e*PKIKP PKPdf 20 54 51.8 -0.8
comp=Z,32nm,1.1s
EHUE Huescar 133.50 265 PKP PKPdf 20 54 56.7 +3.1
PSZ Piszkesteto 133.51 292 PFAKE 20 55 00.0 +6.7
PSZ LR LR
comp=Z,623nm,19.0s,MS5.3
PSZ Piszkesteto 133.51 292⇑*e*pPKP PKPdf 20 54 54.6 +1.3
KOLS Kolonicke sedl 133.51 295 *e*PKP PKPdf 20 54 56.9 +3.6
KOLS Kolonicke sedl 133.51 295 *e*PKP PKPdf 20 54 56.8 +3.5
ELOJ Sierra Loja 133.52 263 PKP PKPdf 20 54 56.6 +2.9
LVV L'vov 133.64 297 *e*PKIKP PKPdf 20 54 53.2 -0.3
LVV MLR MLR
comp=Z,300nm,21.0s,MS5.0
SFS San Fernando 133.72 261 PFAKE 20 55 00.0 +5.9
SFS LR LR
comp=Z,5μm,20.0s,MS6.2
VLC Villacollemand 133.89 281 PFAKE 20 55 00.0 +5.9
VLC LR LR
comp=Z,1μm,21.0s,MS5.5
ELUQ Luque 133.93 264 PKP PKPdf 20 54 56.2 +1.7
KWP Kalwaria 133.94 295 *e*PKP PKPdf 20 54 55.1 +1.1
KWP Kalwaria 133.94 295 *e*PKP PKPdf 20 54 55.1 +1.0
KWP Kalwaria 133.94 295 ⇓*i*P PKPdf 20 54 55.4 +1.3
OBN Obninsk 134.03 310 ⇓*i*PKP PKPdf 20 54 55.5 +1.5
OBN LR LR
comp=Z,1μm,19.0s,MS5.5
OBN Obninsk 134.03 310 ⇓*i*PKIKP PKPdf 20 54 55.4 +1.4
OBN *e* 21 15 10.8
OBN pmax pmax
comp=Z,19nm,1.1s
OBN MLR MLR
comp=Z,1μm,19.0s,MS5.5
EVIA Vianos 134.18 266 PKP PKPdf 20 54 57.6 +2.7
EBAN Banos Encina 134.27 264 PKP PKPdf 20 54 57.7 +2.7
STHS Stebnicka Huta 134.28 294 *e*PKP PKPdf 20 54 56.4 +1.7
VYHS Vyhne 134.38 292 *e*PKP PKPdf 20 54 55.1 +0.2
ECHE Chera 134.40 268 PKP PKPdf 20 54 58.6 +3.4
SOP Sopron 134.53 289⇑*e*PKP PKPdf 20 54 55.5 +0.3
EADA Adamuz 134.58 264 PKP PKPdf 20 54 56.6 +1.0
KOLL Kolacno 134.60 291 *e*PKP PKPdf 20 54 57.2 +1.9
ZST Bratislava 134.76 290 *e*PKP PKPdf 20 54 57.6 +2.0
ZST LR LR
comp=Z,100nm,18.6s,MS4.6
SBF Sospel 134.77 279 *e*PKIKP PKPdf 20 54 55.3 -0.5
comp=Z,48nm,0.9s
FRF La Foret Royal 134.82 278 *e*PKIKP PKPdf 20 54 55.4 -0.5
comp=Z,22nm,1.1s
MODS Modra-Piesok 134.84 290 *e*PKP PKPdf 20 54 58.5 +2.7
SNCC San Nicolas Is 135.09 113 PFAKE 20 55 10.0 +13
SNCC LR LR
comp=Z,2μm,19.0s,MS5.7
EGRO El Granado 135.15 260 PKP PKPdf 20 54 58.4 +1.7
OJC Ojcow 135.47 294 *e*PKPdf PKPdf 20 54 58.5 +1.6
ESDC Sonseca Array 135.64 265 PKhKP 20 54 50.5
comp=Z,0.1nm,0.3s,baz=151,slow=3.4,SNR=4.2
ESDC PKP PKPdf 20 54 59.0 +1.4
comp=Z,15nm,1.0s,baz=128,slow=0.9,SNR=45
ESDC Sonseca Array 135.64 265 PKP PKPdf 20 54 59.0 +1.4
ESLA Sonseca Array 135.64 265 *e*PKPdf PKPdf 20 54 57.8 +0.2
ESLA LR LR
comp=Z,12μm,20.0s,MS6.6
PAB San Pablo 135.68 265 PFAKE 20 55 10.0 +12
PAB LR LR
comp=Z,2μm,20.0s,MS5.9

OKC Ostrava-Krasne 135.75 292 *e*PKP PKPdf 20 54 59.6 +2.2
OKC *e*PP PP 20 57 38.4 +1.8
OKC Ostrava-Krasne 135.75 292 *e*PKPDF PKPdf 20 54 59.6 +2.2
OKC *e*PP PP 20 57 38.4 +1.8
OKC AMS AMS 21 59 10.0
comp=Z,500nm,18.8s
MBDF Montbardon 135.76 279 *e*PKIKP PKPdf 20 54 57.4 -0.2
comp=Z,36nm,1.2s
VRAC Vranov 135.87 291 PKP PKPdf 20 55 00.1 +2.4
comp=Z,13nm,1.0s,baz=153,slow=3.9,SNR=8.8
VRAC Vranov 135.87 291⇑*i*P PKPdf 20 55 00.2 +2.5
MONP Monument Peak 135.88 116 ⇓P PKPdf 20 54 58.6 +0.4
baz=136
ETOR Torete 135.88 268 PKP PKPdf 20 54 59.2 +1.2
MORC Moravsky Berou 135.92 292 ⇑P PKPdf 20 54 59.4 +1.7
MORC Moravsky Berou 135.92 292⇑*i*P PKPdf 20 54 59.4 +1.7
EBAD Badajoz 136.03 262 PKP PKPdf 20 54 59.8 +1.4
ESAC San Caprasio 136.03 270 PKP PKPdf 20 54 58.9 +0.7
BNI Bardonecchia 136.07 279 *e*PKPdf PKPdf 20 54 58.5 +0.4
BNI LR LR
comp=Z,1μm,22.0s,MS5.6
EVO Evora 136.22 261 *e*PKIKP PKPdf 20 54 59.0 +0.3
comp=Z,66nm,1.1s
EVO *e*MLR MLR
comp=Z,2μm,21.2s,MS5.5
214A Organ Pipe Nat 136.26 121 ⇓P 20 54 52.0
baz=136
ORIF Oris-en-Rattie 136.26 278 *e*PKIKP PKPdf 20 54 57.6 -0.9
comp=Z,14nm,1.2s
ORIF *e*MLR MLR
comp=Z,2μm,19.0s,MS5.6
TREC Trest 136.27 290 *e*PKPDF PKPdf 20 55 00.9 +2.5
TREC AMS AMS 21 59 10.0
comp=Z,1μm,18.6s
DAVOX Davos/Dischmat 136.28 283 PKP PKPdf 20 55 00.7 +2.2
comp=Z,7.4nm,0.9s,baz=96,slow=8.1,SNR=5.5
LASF Ste Croix 136.34 276 *e*PKIKP PKPdf 20 54 58.1 -0.6
comp=Z,73nm,1.4s
DAVOS Davos 136.37 283 PKIKP PKPdf 20 55 00.7 +2.0
LPG La Plagne 136.41 279 *e*PKIKP PKPdf 20 54 58.6 -0.2
comp=Z,31nm,1.3s
LPL La Plagne 136.43 279 *e*PKIKP PKPdf 20 54 58.4 -0.4
comp=Z,25nm,1.1s
PKM Peak Mountain 136.47 111 ⇑P PKPdf 20 54 54.8 -4.5
baz=137
PKM ⇓P 20 55 00.7
baz=137
MWC Mount Wilson 136.50 114 *e*PKPdf PKPdf 20 54 55.6 -3.8
MWC LR LR
comp=Z,1μm,19.0s,MS5.6
PFO Pinyon Flat Ob 136.51 116 PFAKE 20 55 10.0 +11
PFO LR LR
comp=Z,1μm,19.0s,MS5.7
KVTX Kingsville 136.53 141 PFAKE 20 55 10.0 +10
KVTX LR LR
comp=Z,841nm,19.0s,MS5.5
GUD Guadarrama 136.55 266 PKP PKPdf 20 55 01.0 +1.7
GEC2 GERESS Array S 136.56 288 *e*PKPdf PKPdf 20 54 57.3 -1.7
GERES GERESS Array B 136.56 288 PKhKP 20 54 50.2
comp=Z,0.5nm,0.8s,baz=163,slow=4.9,SNR=4.0
GERES PKP PKPdf 20 54 58.7 -0.3
comp=Z,10.0nm,1.0s,baz=132,slow=2.0,SNR=16
GERES GERESS Array B 136.56 288 PKP PKPdf 20 54 58.7 -0.3
GERES GERESS Array B 136.56 288 PKHKP 20 54 50.2
GERES 20 54 58.7
GERES pmax pmax
comp=Z,1.0nm,0.8s
GERES pmax pmax
comp=Z,10.0nm,1.0s
GLA Glamis 136.58 118 ⇓P 20 54 53.5
baz=137
GLA ⇓P PKPdf 20 55 00.9 +1.4
baz=137
VIVF Saint-Julien-l 136.68 277 *e*PKIKP PKPdf 20 54 58.4 -0.9
comp=Z,17nm,1.1s
113A Mohawk Valley, 136.68 119 ⇓P PKPdf 20 55 01.2 +1.5
baz=137
TXAR Lajitas Array 136.68 133 PKhKP 20 54 50.5
comp=Z,1.9nm,0.9s,baz=151,slow=2.9,SNR=3.9
TXAR PKP PKPdf 20 55 00.5 +0.6
comp=Z,1.4nm,0.8s,baz=175,slow=4.5,SNR=8.3
TXAR Lajitas Array 136.68 133 PKP PKPdf 20 55 00.5 +0.6
TXAR Lajitas Array 136.68 133 PKHKP 20 54 50.5
TXAR PKPdf 20 55 00.5 +0.6
TXAR pmax pmax
comp=Z,2.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
318A Bisbee 136.72 124 ⇑P PKPdf 20 55 01.6 +1.7
baz=137
216A Three Points, 136.76 122 ⇓P PKPdf 20 55 02.2 +2.3
baz=137
217A Green Valley 136.76 123 ⇓P PKPdf 20 55 01.4 +1.5
baz=137
EPLA Plasencia 136.80 264 PKP PKPdf 20 55 02.3 +2.6
EPF Esparros 136.83 272 *e*PKIKP PKPdf 20 54 58.0 -1.7
comp=Z,17nm,1.1s
DPC Dobruska-Polom 136.83 291 *e*PKPDF PKPdf 20 55 02.2 +2.8
DPC AMS AMS 22 00 10.0
comp=Z,700nm,17.8s
KHC Kasperske Hory 136.84 288 *e*PKPDF PKPdf 20 55 01.7 +2.2
KHC *ex* x 20 55 29.5
KHC *e*PP PP 20 57 44.2 +0.8
KHC AMS AMS 22 00 20.0
comp=Z,600nm,16.4s
319A Douglas 136.88 125 ⇓P PKPdf 20 55 02.2 +2.0
baz=137
BC3 Big Chuckw Mtn 136.91 117 ⇓P PKPdf 20 55 02.2 +2.0
baz=137
V03C Hunter Liggett 136.95 109 ⇓P PKPdf 20 55 02.2 +2.0
baz=137
ETSF Etsaut 137.07 271 *e*PKIKP PKPdf 20 54 59.7 -0.4
comp=Z,13nm,0.8s
UPC Upice 137.08 291 *e*PKPDF PKPdf 20 55 02.5 +2.6
UPC *e*PP PP 20 57 53.9 +9.0
EDW2 Edwards Air Fo 137.11 113 ⇑P PKPdf 20 55 02.2 +1.7
baz=137
PKD Parkfield 137.14 110 ⇑P PKPdf 20 55 02.4 +1.9
baz=137
115A Sonoran Desert 137.14 121 ⇑P PKPdf 20 55 02.6 +2.0
baz=137
PRU Pruhonice 137.19 289 *e*PKPDF PKPdf 20 55 02.5 +2.4
PRU *e*PP PP 20 57 45.5 -0.1
PRU AMS AMS 21 58 20.0
comp=Z,600nm,20.0s
218A Dragoon 137.19 124 ⇑P PKPdf 20 55 02.5 +1.7
baz=137
KSP Ksiaz 137.25 292 *e*PKP PKPdf 20 55 01.4 +1.3
KSP Ksiaz 137.25 292 *e*PKIKP PKPdf 20 55 01.0 +0.8
KSP MLR MLR
comp=Z,2μm,19.2s,MS5.8
TUC Tucson 137.26 123 *e*PKPdf PKPdf 20 55 00.8 0.0
TUC LR LR
comp=Z,807nm,20.0s,MS5.5
Y12C Blythe 137.31 118 ⇓P PKPdf 20 55 01.0 +0.1
baz=138
SUW Suwalki 137.42 299 *e*PKP 20 54 55.0
IRM Iron Mountain 137.47 117 ⇑P 20 54 53.5
baz=138
IRM ⇑P PKPdf 20 55 00.6 -0.6
baz=138
IRM ⇑P 20 55 03.1
baz=138
Z14A Wintersburg 137.50 120 ⇑P PKPdf 20 55 03.4 +2.1
baz=138
SJPF Ste Jean 137.51 270 *e*PKIKP PKPdf 20 55 00.7 -0.2
comp=Z,33nm,1.0s
117A Oracle 137.51 123 ⇓P 20 54 53.9
baz=138
117A ⇑P PKPdf 20 55 00.8 -0.5
baz=138
117A ⇑P 20 55 03.7
baz=138
SAO San Andreas Ge 137.53 108 PFAKE 20 55 10.0 +8.8
SAO LR LR
comp=Z,1μm,19.0s,MS5.7
VES Vestal, Richgr 137.58 111 ⇓P PKPdf 20 55 03.8 +2.5
baz=138
CABF La Chapelle 137.59 280 *e*PKIKP PKPdf 20 55 00.2 -0.8
comp=Z,27nm,1.0s
PVCC Panska Ves 137.62 290 *e*PKPDF PKPdf 20 55 03.5 +2.6
PVCC AMS AMS 21 59 20.0
comp=Z,600nm,19.0s
ISA Isabella 137.64 112 *e*PKPdf PKPdf 20 54 57.5 -3.9
ISA LR LR
comp=Z,2μm,21.0s,MS5.7

ISA Isabella 137.64 112 ⇑P PKPdf 20 55 03.6 +2.2
baz=138
MTE Manteigas 137.66 262 PFAKE 20 55 10.0 +8.7
MTE LR LR
comp=Z,2μm,20.0s,MS5.8
HEC Hector,Ludlow 137.66 115 ⇑P PKPdf 20 55 03.2 +1.7
baz=138
Z15A Gila River Ind 137.70 121 ⇓P PKPdf 20 55 03.4 +1.8
baz=138
CAF Calviac 137.75 275 *e*PKIKP PKPdf 20 55 00.8 -0.5
comp=Z,21nm,1.2s
LRMC Laurel Mountai 137.76 113 ⇓P PKPdf 20 55 03.5 +1.8
baz=138
118A Homack Ranch, 137.83 124 ⇓P PKPdf 20 55 00.9 -1.0
baz=138
GSC Goldstone 137.91 114 *e*PKPdf PKPdf 20 54 55.4 -6.5
GSC LR LR
comp=Z,1μm,19.0s,MS5.7
Y14A Wickenburg 138.01 119 ⇑P PKPdf 20 55 05.0 +2.9
baz=138
KLMR Klimovskoe 138.03 316 *e*PKIKP PKPdf 20 54 59.1 -2.2
KLMR 20 57 48.3
BRG Berggiesshubel 138.13 290 *e*PKIKP PKPdf 20 55 04.3 +2.5
BRG pmax pmax
comp=Z,4.0nm,1.0s
BFO Black Forest 138.16 283 *e*PKPdf PKPdf 20 54 59.2 -2.8
BFO LR LR
comp=Z,719nm,20.0s,MS5.4
119A Ashpeak Ranch, 138.16 124 ⇑P PKPdf 20 55 04.9 +2.4
baz=138
NKC Novy Kostel 138.16 288 *e*PKP PKPdf 20 55 05.1 +3.2
NKC *e*PP PP 20 58 00.9 +9.2
NKC Novy Kostel 138.16 288 *e*PKPDF PKPdf 20 55 05.1 +3.2
NKC *ex* x 20 58 00.9
NKC AMS AMS 21 58 00.0
comp=Z,1μm,18.8s
GRA1 Grafenberg Arr 138.18 287 *e*PKP PKPdf 20 55 04.5 +2.6
GRF Grafenberg Arr 138.18 287 *e*PKP PKPdf 20 55 04.5 +2.6
MCCM Marconi Confer 138.21 106 PFAKE 20 55 10.0 +7.6
MCCM LR LR
comp=Z,1μm,19.0s,MS5.6
LFF La Frestale 138.28 274 *e*PKIKP PKPdf 20 55 01.6 -0.7
comp=Z,16nm,1.0s
RJF Les Rejaudoux 138.28 275 *e*PKIKP PKPdf 20 55 02.7 +0.4
comp=Z,49nm,1.5s
RJF *e*MLR MLR
comp=Z,1μm,19.8s,MS5.4
RJF Les Rejaudoux 138.28 275 *e*PKIKP PKPdf 20 55 02.7 +0.4
RJF MLR MLR
comp=Z,1μm,19.8s,MS5.7
LDFC Landfair 138.31 116 *e*PKPdf 20 54 56.5
T06C Millerton Lake 138.39 110 ⇑P 20 54 53.9
baz=139
T06C ⇑P PKPdf 20 55 04.8 +2.0
baz=139
ELAN Lanestosa 138.47 269 PKP PKPdf 20 55 05.7 +3.0
SMF Signal de Mont 138.49 278 *e*PKIKP PKPdf 20 55 01.8 -0.8
comp=Z,32nm,1.4s
DAC Darwin (Calif) 138.51 113 PFAKE 20 55 10.0 +7.0
DAC LR LR
comp=Z,1μm,20.0s,MS5.7
ECH Echery 138.51 282 *e*PKPdf PKPdf 20 55 01.2 -1.4
X14A Yava 138.53 119 ⇑P PKPdf 20 55 05.2 +2.1
baz=139
CDF Champ du Feu 138.62 282 *e*PKIKP PKPdf 20 55 02.6 -0.2
comp=Z,15nm,1.1s
NSHM Saint Helena R 138.64 106 *e*PKPdf PKPdf 20 55 03.5 +0.3
HAU Haudompre 138.65 281 *e*PKIKP PKPdf 20 55 02.6 -0.2
HAU *e*MLR MLR
comp=Z,2μm,20.8s,MS5.5
HAU Haudompre 138.65 281 *e*PKIKP PKPdf 20 55 02.6 -0.2
HAU MLR MLR
comp=Z,2μm,20.8s,MS5.8
X15A Humboldt 138.77 120 ⇑P 20 54 54.7
baz=139
AVF Avril sur Loir 138.80 278 *e*PKIKP PKPdf 20 55 02.4 -0.8
comp=Z,21nm,1.2s
BGF Bois d'Agland 138.80 277 *e*PKIKP PKPdf 20 55 02.9 -0.3
comp=Z,26nm,1.1s
MOX Moxa 138.81 288 *e*PKP PKPdf 20 55 05.9 +2.9
comp=Z,19nm,1.4s
MOX 20 55 00.0
comp=Z,500nm,20.0s
MOX Moxa 138.81 288 *e*PKIKP PKPdf 20 55 05.9 +2.9
MOX pmax pmax
comp=Z,19nm,1.4s
MOX MLR MLR
comp=Z,500nm,20.0s,MS5.2
KCC Kaiser Creek 138.81 110 ⇑P 20 54 54.7
baz=139
TCF Toulx Ste Croi 138.83 276 *e*PKIKP PKPdf 20 55 02.6 -0.6
comp=Z,43nm,1.6s
CLL Collm 138.83 289⇑*i*PKP PKPdf 20 55 05.6 +2.5
CLL *e*PP PP 20 58 08.0 +12
CLL LR LR
comp=Z,900nm,21.0s,MS5.5
CLL Collm 138.83 289⇑*i*PKIKP PKPdf 20 55 05.6 +2.5
CLL *e* 20 58 08.0
CLL pmax pmax
comp=Z,18nm,1.2s
CLL MLR MLR
comp=Z,900nm,21.0s,MS5.5
CLL Collm 138.83 289 *e*PKPpre 20 54 58.0
comp=Z,5.0nm,1.3s
CLL ⇑*i*PKiKP PKiKP 20 55 05.6 +0.3
comp=Z,18nm,1.2s
CLL *e*PP PP 20 58 08.0 +12
CLL *ex* x 20 59 58.0
CLL *e*PPS 21 10 18.0
CLL *e*SS SS 21 16 18.0 +7.1
CLL *e*SSS 21 21 17.0
CLL *e*SSSS 21 24 12.0
CLL Lm 21 59 00.0
comp=N,800nm,20.2s
CLL Lm 21 59 00.0
comp=E,200nm,20.5s
CLL Lm 21 59 00.0
comp=Z,900nm,21.0s
HOPS Hopland 138.88 105 PFAKE 20 55 10.0 +6.4
HOPS LR LR
comp=Z,1μm,20.0s,MS5.7
GKP Gorka Klasztor 138.88 294 *e*PKP PKPdf 20 55 05.7 +2.6
SSF Saint Saulge 138.96 278 *e*PKIKP PKPdf 20 55 02.3 -1.2
comp=Z,15nm,1.1s
LOR Lormes 139.00 278 *e*PKIKP PKPdf 20 55 03.0 -0.5
comp=Z,19nm,1.2s
LOR *e*MLR MLR
comp=Z,2μm,20.0s,MS5.6
LOR Lormes 139.00 278 *e*PKIKP PKPdf 20 55 03.0 -0.5
LOR MLR MLR
comp=Z,2μm,20.0s,MS5.9
MNRC McLaughlin Nat 139.02 106 ⇑P PKPdf 20 55 04.7 +0.8
baz=139
CMB Columbia Colle 139.04 109 ⇑P PKPdf 20 55 03.4 -0.5
baz=139
X17A Forest Lakes 139.11 122 ⇑P PKPdf 20 55 07.1 +3.0
baz=139
MTUM Tungsten Hills 139.11 111 *e*PKPdf PKPdf 20 55 01.8 -2.3
ELOB Lobios 139.12 263 PKP PKPdf 20 55 05.9 +2.0
HKT Hockley 139.33 142 PFAKE 20 55 20.0 +15
HKT LR LR
comp=Z,670nm,20.0s,MS5.4
LAVA Lava Cap Winer 139.55 108 ⇓P 20 54 58.6
baz=140
MEZF Maizieres J'vi 139.55 281 *e*PKIKP PKPdf 20 55 03.9 -0.6
S09A Goldfield 139.93 112 ⇓P 20 54 57.1
baz=140
S09A ⇑P PKPdf 20 55 08.5 +3.0
baz=140
WUAZ Wupatki 140.00 120 *e*PKPdf 20 54 56.4
WUAZ LR LR
comp=Z,1μm,19.0s,MS5.7
MFF Saint Martin d 140.00 274 *e*PKIKP PKPdf 20 55 04.2 -1.2
comp=Z,47nm,1.5s
WLF Walferdange 140.07 282 PFAKE 20 55 20.0 +15
WLF LR LR
comp=Z,2μm,21.0s,MS5.8
NVAR Mina Array Bea 140.16 111 PKhKP 20 54 59.6
comp=Z,2.3nm,0.7s,baz=195,slow=6.3,SNR=18
NVAR PKP PKPdf 20 55 06.6 +0.7
comp=Z,4.9nm,0.8s,baz=175,slow=4.3,SNR=13
NVAR Mina Array Bea 140.16 111 PKP PKPdf 20 55 06.6 +0.7
DWPF Disney 140.16 162 PFAKE 20 55 20.0 +14
DWPF LR LR
comp=Z,2μm,21.0s,MS5.8
BILL Bilibino 140.18 29⇑*i*PKIKP PKPdf 20 55 11.0 +6.0

BILL pmax pmax
comp=Z,28nm,1.5s
BILL MLR MLR
comp=Z,500nm,19.0s,MS5.3
TPH Tonopah 140.24 112 PFAKE 20 55 20.0 +14
TPH LR LR
comp=Z,1µm,20.0s,MS5.7
S10A Tonopah Range, 140.33 113 ⇑P PKPdf 20 55 05.6 -0.7
baz=141
WDC Whiskeytown Da 140.46 104 *e*PKPdf 20 54 59.4
WDC LR LR
comp=Z,1µm,20.0s,MS5.6
BEKR Beckwourth 140.66 107 ⇑P PKPdf 20 55 06.9 +0.1
baz=141
GIVF Givet 140.94 282 *e*PKIKP PKPdf 20 55 06.3 -0.6
comp=Z,25nm,1.1s
S13A Holt Ranch, En 141.00 116 ⇑P PKPdf 20 55 01.5 -6.0
baz=141
T15A Red Dirt Ranch 141.01 118 ⇑P 20 55 01.3
baz=141
DOU Dourbes 141.02 282 PKP PKPdf 20 55 05.9 -1.2
DOU APKP 20 55 11.3
R11A Troy Canyon, C 141.07 114 ⇑P 20 55 00.5
baz=141
ANMO Albuquerque 141.08 126 *i* PKIKP PKPdf 20 55 07.5 -0.2
O06A Flanigan 141.12 108 ⇓P 20 55 00.5
baz=141
U18A Rough Rock, Ch 141.32 121 ⇑P PKPdf 20 55 08.2 +0.1
baz=142
ARUT Antelope Range 141.33 116 *e*PKPdf PKPdf 20 55 06.7 -1.4
NATX Nacogdoches 141.35 143 *e*PKPdf 20 54 58.6
NATX LR LR
comp=Z,838nm,21.0s,MS5.5
YBH Yreka Blue Hor 141.40 103 *e*PKPdf 20 55 02.2
YBH LR LR
comp=Z,806nm,20.0s,MS5.5
YBH Yreka Blue Hor 141.40 103 ⇓P 20 55 01.1
baz=142
YBH ⇑P PKPdf 20 55 11.5 +3.5
baz=142
O07A Toulon 141.47 109 ⇓P 20 55 01.1
baz=142
LDF La Druitiere 141.62 276 *e*PKIKP PKPdf 20 55 08.0 -0.2
comp=Z,28nm,1.1s
GRR Gorron 141.74 275 *e*PKIKP PKPdf 20 55 07.4 -1.0
FLN La Foliniere 141.90 276 *e*PKIKP PKPdf 20 55 08.7 0.0
comp=Z,42nm,1.1s
FLN *e*MLR MLR
comp=Z,1µm,19.5s,MS5.4
FLN La Foliniere 141.90 276 *e*PKIKP PKPdf 20 55 08.7 0.0
FLN MLR MLR
comp=Z,1µm,19.5s,MS5.7
Q12A Willow Creek R 141.96 114 ⇓P 20 55 03.6
baz=142
T18A Mexican Hat 141.97 121 ⇑P 20 55 03.3
baz=142
JOF Joensuu 141.99 313 *e*p PKPdf 20 55 05.1 -3.3
comp=Z,4.8nm,0.6s
JOF Joensuu 141.99 313 *e*PKIKP PKPdf 20 55 05.1 -3.3
JOF pmax pmax
comp=Z,5.0nm,0.6s
HUMO Hull Mountain 142.05 102 *e*PKPdf PKPdf 20 55 04.8 -4.5
HUMO LR LR
comp=Z,747nm,21.0s,MS5.4
HUMO Hull Mountain 142.05 102 ⇓P PKPdf 20 55 05.3 -3.9
baz=142
Q13A Wheeler Ranch, 142.17 115 ⇓P 20 55 04.5
baz=142
BRAL Brewton 142.18 154 PFAKE 20 55 20.0 +10
BRAL LR LR
comp=Z,1µm,20.0s,MS5.6
QUIF Quistinic 142.26 273 *e*PKIKP PKPdf 20 55 07.8 -1.6
comp=Z,68nm,1.5s
BMN Battle Mountai 142.32 110 PFAKE 20 55 20.0 +10
BMN LR LR
comp=Z,1µm,19.0s,MS5.7
MVU Marysvale 142.40 117 PFAKE 20 55 20.0 +10
MVU LR LR
comp=Z,977nm,19.0s,MS5.6
MSU Marysvale 142.42 117 *e*PKPdf PKPdf 20 55 06.9 -3.1
S18A Hurst Farm, Bl 142.43 120 ⇓P PKPdf 20 55 09.5 -0.5
baz=143
MOD Modoc 142.45 106 *e*PKPdf 20 55 03.5
MOD LR LR
comp=Z,981nm,20.0s,MS5.6
AMTX Amarillo 142.46 132 *e*PKPdf PKPdf 20 55 07.7 -2.5
MVCO Mesa Verde 142.49 123 *e*PKPdf PKPdf 20 55 04.4 -5.8
MVCO LR LR
comp=Z,1µm,21.0s,MS5.5
COP Copenhagen 142.52 293 *e*PKIKP PKPdf 20 55 13.9 +4.3
COP pmax pmax
comp=Z,19nm,0.9s
COP MLR MLR
comp=Z,290nm,20.0s,MS5.0
COP Copenhagen 142.52 293 *i* P PKPdf 20 55 13.9 +4.3
comp=Z,19nm,0.9s
COP
comp=Z,290nm,20.0s
S19A Harvey Farm, M 142.77 121 ⇓P 20 55 05.5
baz=143
KAF Kangasniemi 142.84 309 *e*p PKPdf 20 55 07.0 -3.0
comp=Z,6.9nm,0.7s
KAF Kangasniemi 142.84 309 *e*PKIKP PKPdf 20 55 07.0 -3.0
KAF pmax pmax
comp=Z,7.0nm,0.7s
KDAK Kodiak Island 143.02 62 PFAKE 20 55 20.0 +10
KDAK LR LR
comp=Z,197nm,19.0s,MS4.9
P14A Drum Mountains 143.07 116 ⇓P 20 55 06.7
baz=143
O12A Currie 143.07 113 ⇑P 20 55 07.4
baz=143
R18A Canyonlands Na 143.09 120 ⇑P PKPdf 20 55 11.3 +0.1
baz=143
M09A Marrel Ranch, 143.10 109 ⇓P PKPdf 20 55 10.1 -1.0
baz=143
Q16A Castle Valley 143.13 118 ⇓P PKPdf 20 55 08.9 -2.3
baz=143
TFO1 Folkestone 143.16 280 AMS AMS 22 00 19.4
comp=Z,975nm,19.9s,MS5.6
PV01 Paradox Valley 143.31 122 *e*PKPdf PKPdf 20 55 07.6 -4.0
ELK Elko 143.32 112 *e*PKPdf PKPdf 20 55 07.1 -4.4
ELK LR LR
comp=Z,2µm,19.0s,MS5.9
HBO Huckleberry Mo 143.35 102 P PKPdf 20 55 10.3 -1.1
PV10 Paradox Valley 143.37 121 *e*PKPdf PKPdf 20 55 09.2 -2.5
L08A Fields 143.43 108 ⇑P PKPdf 20 55 08.1 -3.6
baz=144
L08A ⇓P 20 55 11.2
baz=144
TMUT Trail Mountain 143.46 118 *e*PKPdf PKPdf 20 55 08.9 -2.9
N12A Clover Valley, 143.48 112 ⇑P 20 55 08.9
baz=144
N12A ⇑P PKPdf 20 55 10.8 -1.0
baz=144
M10A I.L. Ranch, Tu 143.52 110 ⇓P 20 55 07.4
baz=144
M10A ⇓P PKPdf 20 55 11.5 -0.3
baz=144
K07A Rock Creek Ran 143.53 106 ⇑P 20 55 08.3
baz=144
K07A ⇓P PKPdf 20 55 11.6 -0.2
baz=144
SRU San Rafael 143.53 119 *e*PKPdf PKPdf 20 55 07.4 -4.5
SRU San Rafael 143.53 119 ⇓P PKPdf 20 55 06.7 -5.3
baz=144,SNR=23
WVOR Wild Horse Val 143.54 107 *e*PKPdf PKPdf 20 55 08.8 -3.0
WVOR LR LR
comp=Z,901nm,20.0s,MS5.5
L09A Wilkinson Ranc 143.54 108 ⇑P 20 55 08.1
baz=144
L09A ⇑P PKPdf 20 55 11.6 -0.3
baz=144
COR Corvallis 143.60 100 PFAKE 20 55 20.0 +8.1
COR LR LR
comp=Z,1µm,22.0s,MS5.6
BROR Big Rock Looko 143.66 101 P PKPdf 20 55 10.4 -1.5
J06A Christmas Vall 143.67 105 ⇑P 20 55 08.4
baz=144
J06A ⇓P PKPdf 20 55 11.3 -0.7
baz=144
H03A Soap Creek Ran 143.68 100 ⇓P 20 55 09.4
baz=144
H03A ⇑P PKPdf 20 55 11.4 -0.6
baz=144
DUG Dugway 143.70 115 *e*PKPdf PKPdf 20 55 07.3 -4.9
DUG LR LR
comp=Z,1µm,20.0s,MS5.6
DUG Dugway 143.70 115 ⇓P 20 55 09.0
baz=144,SNR=14
DUG ⇑P PKPdf 20 55 11.2 -1.0
baz=144
M11A Holland Ranch, 143.72 111 ⇑P PKPdf 20 55 09.6 -2.6
baz=144
NLU North Lily Min 143.75 116 *e*PKPdf PKPdf 20 55 08.7 -3.6
P17A Butcher Ranch, 143.78 118 ⇑P PKPdf 20 55 11.5 -0.8
baz=144
N13A Wendover, West 143.79 113 ⇑P PKPdf 20 55 11.7 -0.6
baz=144
Q19A Hogan Spring (143.82 120 ⇑P PKPdf 20 55 11.2 -1.3
baz=144
K08A Mann Creek Ran 143.85 107 ⇑P PKPdf 20 55 11.9 -0.5
baz=144
O15A The Old Anders 143.90 116 ⇑P PKPdf 20 55 11.9 -0.6
baz=144,SNR=6.4
SDCO Great Sand Dun 143.95 126 *e*PKPdf PKPdf 20 55 08.4 -4.4
SDCO LR LR
comp=Z,1µm,20.0s,MS5.7
MPU Maple Canyon 143.95 117 *e*PKPdf PKPdf 20 55 10.7 -2.0
MPU LR LR
comp=Z,1µm,20.0s,MS5.7
I05A Bend 144.02 103 ⇓P 20 55 10.0
baz=144
I05A ⇑P PKPdf 20 55 12.4 -0.2
baz=144
M12A Wells 144.02 112 ⇑P PKPdf 20 55 12.5 -0.3
baz=144
L10A Juniper Basin 144.03 110 ⇓P PKPdf 20 55 10.3 -2.5
baz=144
P18A Preston Nutter 144.09 119 ⇓P PKPdf 20 55 12.7 -0.2
baz=144
J07A Hines 144.09 105 ⇑P PKPdf 20 55 10.4 -2.4
baz=144
K09A Rome 144.10 108 ⇑P 20 55 10.3
baz=144
K09A ⇑P PKPdf 20 55 13.1 +0.2
baz=144
H04A Detroit Lake 144.11 101 ⇑P PKPdf 20 55 12.0 -0.8
baz=144
LRAL Lakeview Retre 144.17 153 *e*PKPdf PKPdf 20 55 08.9 -4.4
LRAL LR LR
comp=Z,2µm,22.0s,MS5.7
O16A Springville 144.17 117 ⇑P PKPdf 20 55 12.7 -0.3
baz=144,SNR=23
G03A Yamhill 144.22 100 ⇑P PKPdf 20 55 12.7 -0.3
baz=144
WOL Wolverton 144.23 278 AMb AMB 20 55 14.0
comp=Z,123nm,1.4s
WOL Wolverton 144.23 278 AMb AMB 20 55 14.0
comp=Z,123nm,1.4s
I06A Prineville 144.24 104 ⇓P PKPdf 20 55 10.9 -2.1
baz=144
BGU Big Grassy Mou 144.27 115 *e*PKPdf PKPdf 20 55 11.9 -1.3
MIAR Mount Ida 144.27 143 *e*PKPdf PKPdf 20 55 09.7 -3.7
MIAR LR LR
comp=Z,851nm,19.0s,MS5.5
MUD Monsted U'grnd 144.28 292 *e*PKIKP PKPdf 20 55 12.1 -0.6
MUD pmax pmax
comp=Z,18nm,1.1s
MUD MLR MLR
comp=Z,690nm,19.0s,MS5.4
MUD Monsted U'grnd 144.28 292 *i* P PKPdf 20 55 12.1 -0.6
comp=Z,18nm,1.1s
MUD
comp=Z,690nm,19.0s
NOQ North Oquirrh 144.35 116 *e*PKPdf PKPdf 20 55 11.2 -2.1
L11A Cat Creek Ranc 144.37 110 ⇓P PKPdf 20 55 11.3 -2.0
baz=145
J08A Circle Bar Ran 144.39 106 ⇑P PKPdf 20 55 11.3 -2.0
baz=145
N15A Stansbury Isla 144.42 115 ⇓P PKPdf 20 55 11.0 -2.4
baz=145,SNR=13
O17A Robinson Place 144.42 118 ⇓P PKPdf 20 55 11.1 -2.4
baz=145,SNR=21
DAU Daniels Canyon 144.44 117 *e*PKPdf PKPdf 20 55 11.2 -2.3
G04A Mulino 144.44 101 ⇑P PKPdf 20 55 12.0 -1.3
baz=145
H05A Madras 144.45 102 ⇑P PKPdf 20 55 11.5 -1.9
baz=145
K10A MacKenzie Ranc 144.49 109 ⇑P PKPdf 20 55 11.6 -1.9
baz=145
SVW2 Sparrevohn 144.51 57 *e*P PKPdf 20 55 11.9 -1.0
P19A Cripple Cowboy 144.52 120 ⇑P PKPdf 20 55 11.3 -2.4
baz=145
JLU Jordanelle 144.54 117 *e*PKPdf PKPdf 20 55 11.5 -2.2
VIPM Ingram Point 144.56 103 P PKPdf 20 55 11.7 -1.8
DYA Yadsworthy 144.59 275 AMb AMB 20 55 15.0
comp=Z,61nm,1.2s
DYA AMS AMS 21 57 38.8
comp=Z,1µm,20.3s,MS5.6
DYA Yadsworthy 144.59 275 AMb AMB 20 55 15.0
comp=Z,61nm,1.2s
DYA AMS AMS 21 57 38.8
comp=Z,1µm,20.3s
I07A Izee 144.62 105 ⇑P PKPdf 20 55 11.9 -1.8
baz=145
F03A Seaside 144.63 99 ⇑P PKPdf 20 55 12.6 -1.0
baz=145
J09A Fry Pan Ranch, 144.65 107 ⇓P PKPdf 20 55 12.2 -1.5
baz=145
M14A Sheep Mountain 144.66 114 ⇓P PKPdf 20 55 11.9 -1.9
baz=145
O18A Roosevelt 144.74 119 ⇓P PKPdf 20 55 12.4 -1.7
baz=145
CMA1 Manaccan 144.77 273 *e*P PKPdf 20 55 13.1 -0.6
UALR University of 144.77 145 *e*PKPdf PKPdf 20 55 11.3 -2.9
SMCO Snowmass 144.78 123 *e*PKPdf PKPdf 20 55 12.5 -1.7
K11A Parker Ranch, 144.79 110 ⇑P PKPdf 20 55 12.6 -1.4
baz=145,SNR=125
N16A Rees Ranch, Co 144.80 116 ⇓P PKPdf 20 55 12.6 -1.4
baz=145,SNR=18
SPUT South Promonto 144.81 115 *e*PKPdf PKPdf 20 55 11.9 -2.2
I08A Drewsey 144.83 106 ⇑P PKPdf 20 55 12.8 -1.2
baz=145
HOOD Mount Hood Mea 144.85 101 *e*PKPdf PKPdf 20 55 12.1 -1.9
H06A Lindquist Farm 144.86 103 ⇑P PKPdf 20 55 12.4 -1.7
baz=145
CCA1 Carnmenellis 144.89 273 *e*P PKPdf 20 55 13.3 -0.6
CSA1 St Austell 144.89 274 *e*P PKPdf 20 55 12.4 -1.5
G05A Wamic 144.91 102 ⇑P PKPdf 20 55 12.6 -1.5
baz=145
LVZ Lovozero 144.92 320 *i* PKP PKPdf 20 55 13.9 +0.5
LVZ LR LR
comp=Z,970nm,22.0s,MS5.5
LVZ Lovozero 144.92 320 *d* PKIKP PKPdf 20 55 13.8 +0.4
M15A Larsen Ranch, 144.95 115 ⇑P PKPdf 20 55 12.6 -1.8
baz=145
L13A Double Diamond 144.96 113 ⇓P PKPdf 20 55 13.0 -1.3
baz=145
SSW Stow on the Wo 144.98 278 *e*P PKPdf 20 55 13.4 -0.6
APA Apatity 144.99 319 ⇓ *i* PKIKP PKPdf 20 55 11.8 -1.8
APA pmax pmax
comp=Z,160nm,1.0s
APA MLR MLR
comp=Z,2µm,20.0s,MS5.8
H07A Lands Inn, Kim 145.03 104 ⇑P PKPbc 20 55 13.3 -0.5
baz=145
HEX Exmoor 145.03 276 *e*P PKPbc 20 55 12.6 -1.0
F04A Amboy 145.07 100 ⇑P PKPbc 20 55 13.0 -0.9
baz=145
O19A Miners Draw (B 145.07 120 ⇓P PKPbc 20 55 12.7 -1.3
baz=145
J10A Berg Farm, Mel 145.09 108 ⇓P PKPbc 20 55 13.6 -0.4
baz=145
M16A Huntsville 145.11 116 ⇑P PKPbc 20 55 13.2 -1.0
baz=145,SNR=15
GOGA Godfrey 145.11 158 *e*PKPdf PKPdf 20 55 10.8 -4.1
GOGA LR LR
comp=Z,1µm,19.0s,MS5.7
HVU Hansel Valley 145.11 114 *e*PKPdf PKPdf 20 55 13.2 -1.4
OXF Oxford 145.14 149 *e*PKPdf PKPdf 20 55 12.2 -2.7
OXF LR LR
comp=Z,1µm,22.0s,MS5.6
L14A Malta 145.17 113 ⇑P PKPbc 20 55 13.8 -0.6
baz=145
G06A Carlson Farm, 145.17 102 ⇑P PKPbc 20 55 13.2 -1.1
baz=145
I09A Lost Marbles R 145.19 107 ⇑P PKPbc 20 55 13.6 -0.8
baz=146
BMW Boistfort Moun 145.21 99 *e*PKPdf PKPdf 20 55 13.8 -0.8
HTL Hartland 145.24 275 *e*P PKPbc 20 55 14.1 -0.2
HTL AMb AMB 20 55 16.8
comp=Z,81nm,1.2s
HTL AMS AMS 22 02 35.0
comp=Z,874nm,18.0s,MS5.6
NHSC New Hope 145.25 163 *e*PKPdf PKPdf 20 55 12.9 -2.2
NHSC LR LR
comp=Z,1µm,19.0s,MS5.7
H08A Prairie City 145.31 105 ⇑P PKPbc 20 55 13.9 -0.8
baz=146
CWF Charnwood Fore 145.38 279 *e*P PKPbc 20 55 14.2 -0.4
CWF AMb AMB 20 55 17.7
comp=Z,215nm,1.4s
HWUT Hardware Ranch 145.39 116 *e*PKPdf PKPdf 20 55 13.2 -1.8
HWUT LR LR
comp=Z,1µm,20.0s,MS5.6
F05A White Salmon 145.40 101 ⇓P PKPdf 20 55 15.2 +0.3
baz=146
K13A Stover Farm, H 145.40 112 ⇑P PKPbc 20 55 14.7 -0.3
baz=146,SNR=41
MFID Camas Ranch 145.43 109 ⇓P PKPdf 20 55 14.4 -0.7
baz=146
L15A Malad City 145.45 114 ⇑P PKPdf 20 55 13.7 -1.5
baz=146
MCH1 Michaelchurch 145.45 277 *e*P PKPdf 20 55 13.4 -1.4
MCH1 AMb AMB 20 55 18.3
comp=Z,321nm,1.2s
COW Cow Castle Cre 145.46 162 *e*PKPdf PKPdf 20 55 14.2 -1.2
N18A Larsen Ranch, 145.49 118 ⇓P PKPdf 20 55 13.9 -1.4
baz=146
J12A Stokes Ranch, 145.55 110 ⇓P PKPdf 20 55 14.6 -0.7
baz=146
F06A Goldendale 145.56 102 ⇓P PKPdf 20 55 14.8 -0.4
baz=146
G07A Ruggs Ranch, H 145.56 103 ⇑P PKPdf 20 55 14.2 -1.0
baz=146
M17A Scullys Gap (B 145.58 117 ⇓P PKPdf 20 55 12.7 -2.7
baz=146
N19A John Jarvie Ra 145.58 119 ⇓P PKPdf 20 55 14.6 -0.9
baz=146
K14A Jones Ranch, D 145.64 113 ⇓P PKPdf 20 55 14.8 -0.7
baz=146
I10A Payette 145.64 108 ⇓P PKPdf 20 55 15.3 -0.1
baz=146
I10A ⇓P 20 55 18.3
baz=146,SNR=12
M18A Lyman 145.75 118 ⇑P PKPdf 20 55 15.0 -0.7
baz=146
OSR Olympics--Salm 145.77 97 P PKPab 20 55 18.2 +1.7
ISCO Idaho Springs 145.78 124 *e*PKPdf PKPdf 20 55 15.8 -0.1
ISCO LR LR
comp=Z,2µm,20.0s,MS5.8
L16A Fish Haven 145.79 115 ⇑P PKPdf 20 55 15.3 -0.4
baz=146
KWE Weaver Farm 145.80 279 *e*P PKPdf 20 55 17.0 +1.6
I11A Placerville 145.81 109 ⇓P PKPdf 20 55 15.1 -0.6
baz=146,SNR=25
H09A Burkee 145.81 106 ⇓P PKPdf 20 55 15.3 -0.4
baz=146,SNR=51
SEW Seward 145.84 62 *e*PKPbc PKPbc 20 55 15.8 0.0
E05A Randle 145.84 100 ⇑P PKPdf 20 55 15.0 -0.7
baz=146
G08A Pilot Rock 145.85 104 ⇑P PKPdf 20 55 15.4 -0.3
baz=146,SNR=107
KBI1 Birley Grange 145.86 280 *e*P PKPdf 20 55 16.1 +0.6
SLKM Skilak Lake 145.87 61 *e*PKPdf PKPdf 20 55 15.0 -0.3
HBAR Harrisburg 145.89 147 *e*PKPdf PKPdf 20 55 15.5 -0.7
D04A Dobbs Creek Ra 145.90 98 ⇑P PKPab 20 55 19.2 +2.2
baz=146
C03A Quillayute Air 145.90 96 ⇓P PKPab 20 55 19.8 +2.8
baz=146
LON Longmire 145.98 100 P PKPdf 20 55 17.5 +1.5
K15A Arbon 145.99 114 ⇓P PKPdf 20 55 15.6 -0.5
baz=146,SNR=35
F07A Phinny Hill Vi 145.99 103 ⇓P PKPdf 20 55 15.9 -0.1
baz=146,SNR=9.1
STNC Stoke 145.99 279 *e*P PKPbc 20 55 17.9 +1.4
STNC AMb AMB 20 55 20.2
comp=Z,196nm,1.2s
STNC AMS AMS 22 03 30.7
comp=Z,973nm,19.0s,MS5.6
I12A Atlanta 146.01 110 ⇑P PKPdf 20 55 16.2 +0.1
baz=146,SNR=51
J13A Cove Ranch, Pi 146.02 111 ⇓P PKPdf 20 55 16.8 +0.7
baz=146,SNR=92
HLID Hailey 146.07 111 *e*PKPdf PKPdf 20 55 16.2 0.0
HLID LR LR
comp=Z,913nm,19.0s,MS5.6
HLID Hailey 146.07 111 ⇓P PKPdf 20 55 15.9 -0.2
baz=146,SNR=75
H10A Noah's Angus R 146.09 107 ⇓P PKPdf 20 55 15.6 -0.6
baz=146,SNR=110
BMO Blue Mountains 146.10 106 *e*PKPdf PKPdf 20 55 15.4 -0.8
BMO LR LR
comp=Z,897nm,19.0s,MS5.6
E06A Yakima 146.13 101 ⇓P PKPdf 20 55 15.9 -0.2
baz=146,SNR=57
M19A Rock Springs 146.13 119 ⇑P PKPdf 20 55 16.0 -0.4
baz=146
J14A Carey 146.19 112 ⇑P PKPdf 20 55 17.1 +0.7
baz=146,SNR=157
GNW Green Mountain 146.26 98 *e*PKPdf PKPdf 20 55 17.0 +0.6
JSC Jenkinsville 146.27 161 *e*PKPdf PKPdf 20 55 16.1 -0.7
D05A Enumclaw 146.28 99 ⇓P PKPdf 20 55 17.2 +0.8
baz=146,SNR=27
G09A Cove 146.29 105 ⇑P PKPdf 20 55 16.9 +0.4
baz=147,SNR=92
C04A Brinnon 146.33 98 ⇓P PKPdf 20 55 17.5 +1.1
baz=147,SNR=28
F08A Pendleton 146.35 104 ⇓P PKPdf 20 55 17.4 +0.8
baz=147,SNR=37
B04A Port Angeles 146.40 97 ⇓P PKPdf 20 55 18.6 +2.0
baz=147,SNR=12
GNAR Gosnell 146.42 147 *e*PKPbc PKPbc 20 55 19.2 +0.8
HPK Haverah Park 146.43 281 *e*P PKPdf 20 55 18.0 +1.6
HPK AMb AMB 20 55 20.5
comp=Z,212nm,1.3s
HPK AMS AMS 22 05 16.6
comp=Z,934nm,19.3s,MS5.6
RC01 Rabbit Creek A 146.45 60 *e*PKPbc PKPbc 20 55 17.3 -0.4
K16A Soda Springs 146.46 115 ⇑P PKPdf 20 55 18.4 +1.5
baz=147,SNR=45
H11A Donnelly 146.46 108 ⇓P PKPdf 20 55 17.6 +0.8
baz=147,SNR=24
SWET Sewanee 146.48 154 *e*PKPdf PKPdf 20 55 16.4 -0.8
SWET *e*PKPbc PKPbc 20 55 18.6 0.0
I13A Wildhorse Cree 146.48 111 ⇓P PKPdf 20 55 16.7 -0.2
baz=147,SNR=43
KONO Kongsberg 146.50 296 *e*P PKPdf 20 55 16.5 +0.1
KONO *e*SS SS 21 17 34.0 -5.5
KONO AMS AMS 22 06 38.1
comp=Z,767nm,16.9s,MS5.5
KONO Kongsberg 146.50 296 *e*PKIKP PKPdf 20 55 16.5 +0.1
KONO *e* 20 55 17.0
RSW Rattlesnake Hi 146.54 102 *e*PKPdf PKPdf 20 55 17.0 +0.1
G10A Bishop Farm, J 146.55 106 ⇓P PKPdf 20 55 16.8 -0.1
baz=147,SNR=80
HAWA Hanford 146.56 102 *e*PKPdf PKPdf 20 55 16.7 -0.2
HAWA LR LR
comp=Z,967nm,21.0s,MS5.6
AHID Auburn Hatcher 146.57 115 *e*PKPbc PKPbc 20 55 17.6 -1.0
AHID LR LR
comp=Z,1µm,20.0s,MS5.6
E07A Sunnyside 146.57 102 ⇑P PKPdf 20 55 17.8 +0.9
baz=147,SNR=50
L19A Farson 146.59 118 ⇑P PKPdf 20 55 17.3 +0.2
baz=147
LNOR Lincton Mounta 146.60 104 *e*PKPdf PKPdf 20 55 15.3 -1.7
F09A S2 Ranch, Elgi 146.60 105 ⇑P PKPdf 20 55 18.0 +1.0
baz=147,SNR=12
J15A Blackfoot 146.65 113 ⇓P PKPdf 20 55 18.0 +0.8
baz=147,SNR=95
CBKS Cedar Bluff 146.68 132 *e*PKPdf PKPdf 20 55 16.5 -0.9
CBKS LR LR
comp=Z,1µm,22.0s,MS5.7
D06A Cle Elum 146.72 100 ⇓P PKPdf 20 55 17.1 0.0
baz=147,SNR=27
I14A Mackay 146.74 111 ⇓P PKPdf 20 55 17.6 +0.3
baz=147,SNR=71
H12A Diamond D Ranc 146.76 109 ⇑P PKPdf 20 55 18.1 +0.8
baz=147,SNR=68
C05A Tolt Reservoir 146.81 99 ⇑P PKPdf 20 55 17.5 +0.2
baz=147,SNR=29
E08A Dider Farm, El 146.82 103 ⇑P PKPdf 20 55 18.6 +1.2
baz=147,SNR=21
J16A Bone 146.83 114 ⇓P PKPdf 20 55 19.2 +1.7
baz=147
L20A Wamsutter 146.86 119 ⇓P PKPdf 20 55 17.3 -0.3
baz=147
GLAT Glass 146.87 148 *e*PKPbc PKPbc 20 55 19.0 -0.7
PGC Sidney 146.91 96 *e*PKPdf PKPdf 20 55 19.2 +1.8

NAO01	NORSAR Array S	146.91	298	ePKPdf	PKPdf	20 55 16.6	-0.5		
NAO01				ePKPbc	PKPbc	20 55 19.5	+0.5		
PPLA	Purkeypile	146.92	57	ePKPdf	PKPdf	20 55 17.7	+0.7		
NB2	NORSAR Subarra	146.94	299	PKPdf	PKPdf	20 55 17.1	0.0		
	comp=Z,74nm,1.4s,baz=135,slow=1.7								
NB2	NORSAR Subarra	146.94	299	PKPdf	PKPdf	20 55 17.1	0.0		
	baz=135,slow=1.7								
NOA	NORSAR Array B	146.94	299	PKPbc	PKPbc	20 55 17.1	-2.0		
	comp=Z,21nm,0.8s,baz=120,slow=3.6,SNR=42								
NOA	NORSAR Array B	146.94	299	PKIKP	PKPdf	20 55 17.1	0.0		
NOA				pmax	pmax				
	comp=Z,21nm,0.9s								
CPCT	Cooper Cave	146.94	156	ePKPdf	PKPdf	20 55 17.7	-0.3		
G11A	Walters Elk Ra	146.96	107	⇑P	PKPdf	20 55 18.0	+0.4		
	baz=147,SNR=180								
RWWY	Rawlins	146.96	121	ePKPdf	PKPdf	20 55 16.5	-1.3		
RRI2	Red Ridge	147.00	114	ePKPdf	PKPdf	20 55 18.2	+0.4		
PMR	Palmer	147.02	60	eP	PKPdf	20 55 16.6	-0.6		
WVT	Waverly	147.02	151	ePKPdf	PKPdf	20 55 16.1	-1.9		
WVT				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
UTMT	University of	147.02	149	ePKPbc	PKPbc	20 55 19.5	-0.6		
D07A	Quincy	147.06	101	⇑P	PKPdf	20 55 17.6	-0.1		
	baz=147,SNR=20								
G12A	Big Creek, Yel	147.08	108	⇓P	PKPdf	20 55 17.9	+0.1		
	baz=147								
F10A	Beach Ranch, E	147.08	105	⇑P	PKPdf	20 55 19.4	+1.6		
	baz=147,SNR=19								
BW06	Boulder Array	147.11	117	ePKPdf	PKPdf	20 55 17.6	-0.4		
BW06				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
BW06	Boulder Array	147.11	117	⇓P	PKPdf	20 55 18.4	+0.4		
	baz=147								
PDAR	Pinedale Array	147.11	117	PKPbc	PKPbc	20 55 19.0	-1.2		
	comp=Z,53nm,0.9s,baz=166,slow=4.2,SNR=85								
JCW	Jim Creek	147.12	98	ePKPdf	PKPdf	20 55 17.1	-0.7		
L21A	Rawlins	147.15	120	⇑P	PKPdf	20 55 17.0	-1.1		
	baz=147								
REDW	Red Top Meadow	147.18	115	ePKPbc	PKPbc	20 55 18.9	-1.4		
E09A	Wood Farm, Sta	147.19	104	⇓P	PKPdf	20 55 17.5	-0.5		
	baz=148,SNR=27								
J17A	Brown Place, J	147.23	115	⇑P	PKPdf	20 55 18.2	0.0		
	baz=148								
A04A	Legoe Bay, Lum	147.25	97	⇑P	PKPbc	20 55 21.6	+1.2		
	baz=148								
TPAW	Teton Pass	147.26	115	ePKPdf	PKPdf	20 55 18.7	+0.5		
ETW	Entiat	147.26	100	ePKPdf	PKPdf	20 55 17.6	-0.4		
DCID1	Drake Creek	147.26	114	ePKPbc	PKPbc	20 55 20.9	+0.4		
TKL	Tuckaleechee C	147.27	157	ePKPbc	PKPbc	20 55 19.3	-1.5		
C06A	Tall Timber Ra	147.30	99	⇑P	PKPbc	20 55 21.5	+1.0		
	baz=148								
SNOW	Snow King Moun	147.30	115	ePKPbc	PKPbc	20 55 20.7	0.0		
XAL	Allendale	147.34	281	eP	PKPdf	20 55 20.7	+2.8		
D08A	Wollman Farm,	147.35	102	⇑P	PKPdf	20 55 17.2	-1.0		
	baz=148,SNR=36								
H14A	Leadore	147.36	111	⇓P	PKPdf	20 55 18.5	+0.2		
	baz=148,SNR=18								
I16A	Newdale	147.40	114	⇑P	PKPdf	20 55 20.1	+1.7		
	baz=148,SNR=19								
F11A	Grangeville	147.41	107	⇓P	PKPdf	20 55 18.5	+0.2		
	baz=148,SNR=27								
C07A	Waterville	147.43	101	⇑P	PKPdf	20 55 18.3	0.0		
	baz=148,SNR=32								
BLS5	Blasjo	147.45	293	eP	PKPbc	20 55 22.3	+1.7		
BLS5				AMb	AMB	20 55 24.0			
	comp=Z,59nm,0.9s								
G13A	Cobalt	147.45	109	⇓P	PKPdf	20 55 18.3	-0.2		
	baz=148,SNR=65								
LOHW	Long Hollow	147.49	115	ePKPdf	PKPdf	20 55 17.6	-1.0		
RPW	Rockport	147.49	98	ePKPbc	PKPbc	20 55 19.9	-1.1		
MOOW	Moose Ponds	147.56	115	ePKPdf	PKPdf	20 55 18.6	-0.1		
E10A	Myers Farm, Un	147.56	105	⇑P	PKPdf	20 55 18.3	-0.3		
	baz=148,SNR=15								
B06A	Marblemount	147.56	98	⇑P	PKPdf	20 55 18.5	0.0		
	baz=148,SNR=11								
CHUM	Lake Minchumin	147.57	55	ePKPdf	PKPdf	20 55 17.5	-0.5		
D09A	Jones Farm, Ri	147.58	103	⇑P	PKPdf	20 55 18.6	0.0		
	baz=148,SNR=34								
CNNC	Cliffs of the	147.60	166	ePKPbc	PKPbc	20 55 21.1	-0.6		
CNNC				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
IMW	Indian Meadow	147.62	114	ePKPbc	PKPbc	20 55 19.9	-1.6		
H15A	Lima	147.63	112	⇓P	PKPdf	20 55 18.9	+0.2		
	baz=148								
F12A	Elk City	147.64	108	⇓P	PKPbc	20 55 22.8	+1.3		
	baz=148,SNR=25								
OD2	Odessa Site #2	147.70	102	ePKPdf	PKPdf	20 55 19.6	+0.8		
A05A	Maple Falls	147.72	97	⇑P	PKPbc	20 55 22.7	+1.1		
	baz=148,SNR=14								
MCMT	McKenzie Canyo	147.73	111	ePKPdf	PKPdf	20 55 18.8	-0.2		
ODD1	Odda	147.74	294	eP	PKPbc	20 55 21.9	+0.6		
ODD1				AMb	AMB	20 55 26.6			
	comp=Z,91nm,2.1s								
I17A	Pilgram Creek	147.76	115	⇓P	PKPbc	20 55 23.8	+1.8		
	baz=148								
GIM	North Isle of	147.78	279	eP	PKPbc	20 55 22.9	+1.3		
E11A	Bogner Ranch,	147.79	106	⇓P	PKPdf	20 55 16.9	-2.1		
	baz=148,SNR=15								
KTH	Kantishna Hill	147.79	56	ePKPbc	PKPbc	20 55 21.9	+0.5		
KSU1	Kansas State U	147.82	136	ePKPdf	PKPdf	20 55 19.7	+0.4		
KSU1				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
DLF	Lyons Farm	147.83	276	⇑*i*P	PKPbc	20 55 23.0	+1.2		
I18A	Diamond G Ranc	147.84	116	⇓P	PKPbc	20 55 22.1	0.0		
	baz=148								
C08A	Higginbotham F	147.90	101	⇓P	PKPdf	20 55 21.8	+2.7		
	baz=148,SNR=31								
BHH	Howats Hill	147.90	281	eP	PKPdf	20 55 21.0	+2.2		
TRF	Thorofare Moun	147.93	57	ePKPdf	PKPdf	20 55 18.1	-0.5		
ECK	Cauldkaine Hil	147.93	281	eP	PKPbc	20 55 22.4	+0.4		
OGNE	Ogallala	147.96	128	ePKPdf	PKPdf	20 55 20.6	+1.2		
OGNE				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
D10A	Wagner Farm, O	147.97	104	⇑P	PKPdf	20 55 17.5	-1.7		
	baz=148,SNR=26								
GCD	Castle Douglas	148.01	280	eP	PKPbc	20 55 22.1	-0.1		
F13A	Darby	148.01	109	⇑P	PKPdf	20 55 16.8	-2.5		
	baz=148,SNR=40								
A06A	Chilliwack	148.03	98	⇓P	PKPbc	20 55 23.2	+0.7		
	baz=148,SNR=12								
B07A	Winthrop	148.04	100	⇓P	PKPbc	20 55 23.6	+1.1		
	baz=148,SNR=19								
ESK	Eskdalemuir	148.06	281	eP	PKPbc	20 55 22.6	+0.3		
ESK				AMb	AMB	20 55 24.8			
	comp=Z,97nm,1.1s								
ESK				AMS	AMS	22 02 44.3			
	comp=Z,785nm,19.7s,MS5.5								
E12A	Beaver Dam Sad	148.08	107	⇓P	PKPbc	20 55 23.4	+0.8		
	baz=148,SNR=43								
BWH	Wardlaw	148.13	280	eP	PKPbc	20 55 23.1	+0.5		
BPAW	Bear Paw Mtn.	148.15	56	ePKPdf	PKPdf	20 55 18.8	-0.2		
G15A	Dillon	148.15	111	⇓P	PKPbc	20 55 24.2	+1.3		
	baz=148								
CCM	Cathedral Cave	148.16	145	ePKPdf	PKPdf	20 55 19.1	-0.8		
CCM				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
TZTN	Tazewell	148.17	157	ePKPbc	PKPbc	20 55 21.8	-1.4		
TZTN				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
H17A	Grant Village	148.18	114	⇓P	PKPab	20 55 25.8	-0.2		
	baz=148								
KEV	Kevo	148.20	319	*e*p	PKPbc	20 55 22.7	+0.4		
	comp=Z,15nm,0.7s								
KEV	Kevo	148.20	319	*e*PKP2	PKPbc	20 55 22.7	+0.4		
KEV				pmax	pmax				
	comp=Z,15nm,0.7s								
H16A	Russell Place,	148.21	113	⇓P	PKPab	20 55 26.1	0.0		
	baz=148								
C09A	Chrisman Ranch	148.21	102	⇓P	PKPdf	20 55 18.7	-0.9		
	baz=148,SNR=12								
B08A	Colville Reser	148.26	101	⇓P	PKPdf	20 55 19.2	-0.4		
	baz=148								
B08A				⇑P		20 55 24.6			
	baz=148,SNR=29								
SIUC	Southern Illin	148.28	148	ePKPdf	PKPdf	20 55 20.4	+0.4		
FVM	French Village	148.28	146	ePKPdf	PKPdf	20 55 19.4	-0.7		
ESY	Stoneypath	148.28	282	eP	PKPbc	20 55 23.8	+0.9		
DLMT	Dillon	148.28	111	ePKPdf	PKPdf	20 55 18.9	-0.9		
DLMT				ePKPbc	PKPbc	20 55 23.9	+0.7		
GAL1	Galloway	148.31	279	eP	PKPbc	20 55 23.0	+0.1		
GAL1				AMb	AMB	20 55 28.2			
	comp=Z,65nm,1.2s								
GAL1				AMS	AMS	22 04 49.0			
	comp=Z,938nm,18.6s,MS5.6								
GMM	Mts of Mourne	148.32	277	eP	PKPbc	20 55 22.4	-0.6		
D11A	Klaveano Farm,	148.32	105	⇑P	PKPbc	20 55 24.1	+0.8		
	baz=149,SNR=19								
EBL	Broad Law	148.34	282	eP	PKPbc	20 55 23.4	+0.4		
F14A	Wisdom	148.38	110	⇓P	PKPbc	20 55 24.5	+1.0		
	baz=149								
A07A	Ashnola River,	148.42	99	⇓P	PKPbc	20 55 25.1	+1.6		
	baz=149,SNR=37								
DMUB	Kingscourt	148.43	276	⇑*i*P	PKPbc	20 55 24.3	+1.0		
ARCES	ARCESS Array B	148.44	318	PKPbc	PKPbc	20 55 23.5	+0.6		
	comp=Z,25nm,0.8s,baz=150,slow=2.4,SNR=30								
ARCES	ARCESS Array B	148.44	318	PKP2	PKPbc	20 55 23.5	+0.6		
ARCES				pmax	pmax				
	comp=Z,25nm,0.8s								
G16A	Moss Hill, Enn	148.46	112	⇑P	PKPbc	20 55 25.5	+1.8		
	baz=149								
EDI	Edinburgh	148.50	282	eP	PKPbc	20 55 23.7	+0.2		
EDI				AMb	AMB	20 55 26.0			
	comp=Z,86nm,1.3s								
BER	Bergen	148.53	294	eP	PKPbc	20 55 23.6	+0.2		
BER				AMS	AMS	22 05 24.1			
	comp=Z,875nm,18.7s,MS5.6								
RUND	Rundenannen	148.54	294	eP	PKPbc	20 55 26.5	+3.0		
RUND				AMb	AMB	20 55 31.6			
	comp=Z,127nm,1.3s								
EAU	Auchinoon	148.55	281	eP	PKPbc	20 55 24.9	+1.3		
MCK	McKinley	148.56	57	ePKPdf	PKPdf	20 55 19.9	+0.3		
C10A	Spilker Farm,	148.59	103	⇓P	PKPbc	20 55 26.0	+2.1		
	baz=149								
E13A	Victor	148.62	108	⇑P	PKPdf	20 55 20.0	-0.3		
	baz=149								
IMA2	Indian Mountai	148.63	51	eP	PKPdf	20 55 20.4	+0.7		
ASK	Askoy	148.65	294	eP	PKPbc	20 55 24.3	+0.6		
D12A	Red Ives Fores	148.69	106	⇑P	PKPbc	20 55 23.5	-0.7		
	baz=149,SNR=25								
F15A	Butte	148.73	111	⇑P	PKPbc	20 55 26.9	+2.6		
	baz=149								
B09A	Rice	148.77	102	⇓P	PKPdf	20 55 20.4	-0.1		
	baz=149,SNR=28								
A08A	Turner Farm, O	148.77	100	⇑P	PKPdf	20 55 20.4	-0.1		
	baz=149,SNR=30								
USIN	University of	148.83	150	ePKPbc	PKPbc	20 55 24.3	-0.6		
E14A	Clinton	148.85	109	⇑P	PKPbc	20 55 26.4	+1.7		
	baz=149								
EBH	Black Hill	148.87	282	eP	PKPbc	20 55 25.4	+1.1		
BOZ	Bozeman (W)	148.88	112	ePKPdf	PKPdf	20 55 20.5	-0.3		
BOZ				LR	LR				
	comp=Z,1μm,22.0s,MS5.6								
BOZ	Bozeman (W)	148.88	112	⇑P	PKPbc	20 55 26.9	+2.2		
	baz=149								
PGBU	Glenifferbraes	148.92	281	AMS	AMS	21 59 08.5			
	comp=Z,756nm,20.5s,MS5.5								
G17A	Pipe Place,	148.92	113	⇓P	PKPbc	20 55 27.7	+2.8		
	baz=149								
SLM	Saint Louis	148.94	146	ePKPbc	PKPbc	20 55 24.1	-1.0		
F16A	Kennard Place,	149.00	112	⇓P	PKPbc	20 55 27.4	+2.4		
	baz=149								
C11A	Tepee Creek (N	149.01	104	⇑P	PKPbc	20 55 26.2	+1.2		
	baz=149								
B10A	Chitwood Farm,	149.02	103	⇑P	PKPbc	20 55 27.0	+2.0		
	baz=149								
NEW	Newport	149.03	103	ePKPdf	PKPdf	20 55 20.5	-0.5		
NEW				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
MSO	Missoula	149.03	108	ePKPdf	PKPdf	20 55 20.4	-0.6		
MSO				LR	LR				
	comp=Z,868nm,19.0s,MS5.6								
A09A	Danville	149.05	101	⇓P	PKPbc	20 55 26.9	+1.8		
	baz=149,SNR=22								
D13A	Huson	149.06	107	⇑P	PKPbc	20 55 27.4	+2.2		
	baz=149								
NSS	Namsos	149.09	304	eP	PKPbc	20 55 23.6	-1.1		
NSS				AMb	AMB	20 55 29.7			
	comp=Z,142nm,1.9s								
EAB	Aberfoyle	149.14	281	eP	PKPbc	20 55 25.1	0.0		
E15A	Deer Lodge	149.17	110	⇓P	PKPbc	20 55 27.9	+2.5		
	baz=149								
C12B	Naegeli Ranch,	149.19	105	⇓P	PKPdf	20 55 21.2	0.0		
	baz=150								
ELN	Prospectdale	149.24	161	ePKPdf	PKPdf	20 55 21.0	-0.7		
MOL	Molde	149.26	298	eP	PKPbc	20 55 26.5	+1.4		
BLA	Blacksburg	149.27	161	ePKPdf	PKPdf	20 55 22.6	+0.9		
BLA				ePKPbc	PKPbc	20 55 25.8	-0.2		
BLA				LR	LR				
	comp=Z,1μm,19.0s,MS5.8								
RLMT	Red Lodge	149.27	115	⇓P	PKPbc	20 55 27.2	+1.4		
	baz=150								
G18A	Lazy EL Ranch,	149.34	115	⇓P	PKPbc	20 55 27.9	+2.0		
	baz=150								
WCI	Wyandotte Cave	149.35	152	ePKPdf	PKPdf	20 55 20.7	-1.1		
WCI				ePKPbc	PKPbc	20 55 25.6	-0.6		
WCI				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
CHMT	Chamberlain Mo	149.36	109	ePKPbc	PKPbc	20 55 25.5	-0.4		
D14A	Greenough	149.41	108	⇑P	PKPbc	20 55 27.7	+1.7		
	baz=150								
A10A	Northport	149.45	102	⇑P	PKPdf	20 55 21.8	+0.3		
	baz=150								
F17A	Fitzpatrick Pl	149.45	113	⇑P	PKPbc	20 55 27.2	+1.1		
	baz=150								
B11A	Sandpoint	149.46	104	⇓P	PKPbc	20 55 27.4	+1.3		
	baz=150								
OLIL	Olney	149.49	149	ePKPdf	PKPdf	20 55 22.9	+0.9		
C13A	Hot Springs	149.51	106	⇓P	PKPbc	20 55 27.3	+1.1		
	baz=150								
E16A	East Helena	149.62	111	⇑P	PKPbc	20 55 28.4	+1.9		
	baz=150								
COLA	College	149.68	56	ePKPdf	PKPdf	20 55 21.2	-0.2		
COLA				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
COLA	College	149.68	56	*i* PKP2	PKPbc	20 55 25.9	-0.2		
GCMT	Greycliff	149.71	114	ePKPdf	PKPdf	20 55 23.8	+1.7		
MCD	Coleburn Disti	149.73	284	eP	PKPbc	20 55 25.9	-0.6		
D15A	Lincoln	149.74	109	⇓P	PKPbc	20 55 28.3	+1.4		
	baz=150								
B12A	Libby	149.78	104	⇓P	PKPbc	20 55 28.6	+1.7		
	baz=150								
F18A	Big Timber	149.79	114	⇑P	PKPbc	20 55 29.6	+2.6		
	baz=150								
E17A	Martinsdale	149.85	112	⇓P	PKPbc	20 55 29.3	+2.2		
	baz=150								
A11A	Hall Mountain,	149.89	103	⇑P	PKPbc	20 55 29.0	+1.9		
	baz=150								
URVA	University of	149.94	166	ePKPdf	PKPdf	20 55 23.6	+0.8		
MDO	Dochfour	150.05	283	eP	PKPbc	20 55 27.8	+0.6		
D16A	Dana Ranch, Ca	150.09	111	⇑P	PKPbc	20 55 29.4	+1.7		
	baz=150								
B13A	Whitefish	150.12	106	⇓P	PKPbc	20 55 28.5	+0.8		
	baz=150								
A12A	Yaak River Ran	150.14	104	⇑P	PKPdf	20 55 23.0	+0.4		
	baz=150								
RSSD	Black Hills	150.18	123	ePKPdf	PKPdf	20 55 21.7	-1.2		
RSSD				ePKPbc	PKPbc	20 55 26.7	-1.3		
BLO	Bloomington	150.22	151	ePKPdf	PKPdf	20 55 22.9	-0.3		
KAR1	Arisaig	150.24	281	eP	PKPbc	20 55 28.2	+0.5		
E18A	Harlowton	150.28	113	⇑P	PKPdf	20 55 23.4	+0.4		
	baz=150								
KSB	Sheil Bridge	150.29	282	eP	PKPbc	20 55 27.9	+0.1		
C15A	Salmond Ranch,	150.32	109	⇑P	PKPdf	20 55 22.8	-0.2		
	baz=151								
MVH1	Achvaich	150.33	284	eP	PKPbc	20 55 28.0	+0.1		
KAC	Achnashellach	150.45	282	eP	PKPbc	20 55 29.0	+0.8		
KPL	Plockton	150.47	282	eP	PKPbc	20 55 29.1	+0.9		
KPL				AMb	AMB	20 55 30.6			
	comp=Z,139nm,1.0s								
KPL				AMS	AMS	22 06 25.7			
	comp=Z,728nm,18.2s,MS5.5								
D17A	Six Diamond Ra	150.50	111	⇑P	PKPbc	20 55 29.9	+1.3		
	baz=151								
B14A	Marquette Ranc	150.56	107	⇓P	PKPbc	20 55 29.3	+0.6		
	baz=151								
HYT	Haines Junctio	150.58	69	ePKPbc	PKPbc	20 55 28.7	+0.3		
A13A	Flathead Natio	150.60	105	⇑P	PKPbc	20 55 29.4	+0.5		
	baz=151								
C16A	Fuhringer Ranc	150.66	109	⇓P	PKPbc	20 55 30.0	+0.9		
	baz=151								
LRW	Lerwick	150.73	289	eP	PKPbc	20 55 28.3	-0.5		
LRW				AMb	AMB	20 55 30.0			
	comp=Z,132nm,1.3s								
B15A	Bradely Ranch,	150.79	108	⇓P	PKPdf	20 55 23.4	-0.3		
	baz=151								
D18A	Linhart Farms,	150.86	112	⇑P	PKPbc	20 55 29.9	+0.4		
	baz=151								
REB	Eisghbrachaidh	150.88	283	eP	PKPbc	20 55 29.1	-0.1		
C17A	Wharram Farm,	150.88	111	⇓P	PKPbc	20 55 29.5	-0.1		
	baz=151								
RRR	Rubha Reidh	150.90	282	eP	PKPbc	20 55 29.5	+0.2		
HDIL	Hopedale	150.99	146	ePKPdf	PKPdf	20 55 25.0	+0.7		
HDIL				ePKPbc	PKPbc	20 55 29.9	-0.2		
HDIL				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
RSC	Scourie	151.00	284	eP	PKPbc	20 55 29.5	+0.1		
A14A	Double T Ranch	151.01	106	⇑P	PKPbc	20 55 31.1	+1.3		
	baz=151								
B16A	M & M Farms, S	151.19	109	⇓P	PKPdf	20 55 23.8	-0.5		
	baz=151								
A15A	Johnson Ranch,	151.27	107	⇓P	PKPdf	20 55 23.1	-1.3		
	baz=152								
A15A				⇑P		20 55 30.3			
	baz=152								
EGMT	Eagleton	151.58	112	⇑P	PKPbc	20 55 31.6	+0.5		
	baz=152								
A16A	West Butte Ran	151.67	108	⇓P	PKPbc	20 55 31.4	+0.1		
	baz=152								
LAO	LASA Array	151.69	117	ePKPdf	PKPdf	20 55 23.5	-1.7		
LAO				ePKPbc	PKPbc	20 55 32.9	+1.4		
LAO				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
DLBC	Dease Lake	151.75	78	ePKPdf	PKPdf	20 55 21.9	-2.9		
DLBC				ePKPbc	PKPbc	20 55 30.9	-0.3		
SDMD	Soldier's Deli	151.83	166	ePKPdf	PKPdf	20 55 25.9	+0.3		
SDMD				ePKPbc	PKPbc	20 55 31.7	-0.3		
EGAK	Eagle	151.84	60	ePKPbc	PKPbc	20 55 30.6	-0.7		
EGAK				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
DAWY	Dawson	152.00	62	ePKPdf	PKPdf	20 55 25.0	-0.1		
DAWY				ePKPbc	PKPbc	20 55 30.8	-0.8		
ECSD	EROS,Sioux Fal	152.12	133	ePKPbc	PKPbc	20 55 30.9	-1.6		
ECSD				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
SSPA	Standing Stone	152.94	164	ePKPbc	PKPbc	20 55 33.6	-0.9		
SSPA				LR	LR				
	comp=Z,1μm,21.0s,MS5.7								
JFWS	Jewell Farm	153.02	143	ePKPdf	PKPdf	20 55 26.9	-0.3		
JFWS				LR	LR				
	comp=Z,1μm,21.0s,MS5.8								
ALLY	Alegheny Colle	153.67	160	ePKPbc	PKPbc	20 55 36.0	-0.1		
AAM	Ann Arbor	153.77	154	PFAKE		20 55 40.0	+12		
AAM				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
ERPA	Erie	154.15	160	PFAKE		20 55 40.0	+11		
ERPA				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
EDM	Edmonton	154.43	101	ePKPdf	PKPdf	20 55 27.3	-1.6		
EDM				ePKPbc	PKPbc	20 55 37.6	+0.3		
BINY	Binghamton	154.68	167	ePKPdf	PKPdf	20 55 29.6	-0.1		
BINY				ePKPbc	PKPbc	20 55 38.4	+0.2		
BINY				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
WES	Weston	155.15	175	PFAKE		20 55 40.0	+10		
WES				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
HRV	Adam Dziewonsk	155.26	175	PFAKE		20 55 40.0	+10		
HRV				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
GLMI	Grayling	156.04	151	PFAKE		20 55 40.0	+8.6		
GLMI				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
COWI	Conover	156.29	142	ePKPdf	PKPdf	20 55 31.1	-0.5		
COWI				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
KBS	Kingsbay	156.30	332	PFAKE		20 55 40.0	+9.2		
KBS				LR	LR				
	comp=Z,972nm,20.0s,MS5.6								
INK	Inuvik	156.33	57	ePKPdf	PKPdf	20 55 30.1	-0.9		
AGMN	Agassiz Refuge	156.48	130	ePKPbc	PKPdf	20 55 30.4	-1.4		
AGMN				LR	LR				
	comp=Z,1μm,21.0s,MS5.8								
NCB	Newcomb	156.58	170	PFAKE		20 55 40.0	+7.9		
NCB				LR	LR				
	comp=Z,1μm,21.0s,MS5.8								
LBNH	Lisbon	156.98	174	PFAKE		20 55 40.0	+7.4		
LBN

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.91**	**329**	*e*PN	**Pn**	**20 52 01.2**	**-1.9**
SKR				*e*S	**Sg**	**20 52 13.5**	**-0.2**
SKR	comp=N,90nm,0.5s			pmax	pmax		
SKR	comp=E,80nm,0.5s			pmax	pmax		
SKR	comp=Z,90nm,0.5s			pmax	pmax		
SKR	comp=N,770nm,0.5s			smax			
SKR	comp=E,1μm,0.5s			smax			
MIPR	**Malaya Ipel'ka**	**2.38**	**359**	P	**Pn**	**20 52 23.0**	**-0.3**
MIPR				S	**Sn**	**20 52 53.5**	**+1.1**
RUS	**Russkaya**	**2.74**	**22**	P	**Pn**	**20 52 28.0**	**-0.3**
RUS				S	**Sn**	**20 53 00.9**	**-0.5**
PET	**Petropavlovsk**	**3.33**	**19**	*e*PN	**Pn**	**20 52 37.4**	**+1.1**
PET				*e*S	**Sn**	**20 53 20.0**	**+4.2**
PET	comp=Z,12nm,0.6s			pmax	pmax		
PET	comp=N,68nm,0.6s			smax			
PET	comp=E,104nm,0.6s			smax			
PET	**Petropavlovsk**	**3.33**	**19**	S	**Sn**	**20 53 15.2**	**-0.6**
AVH	**Avacha**	**3.57**	**19**	*e*P	**Pn**	**20 52 40.0**	**+0.4**
AVH				S	**Sn**	**20 53 21.8**	**0.0**
NLC	**Nalytchevo**	**3.63**	**25**	P	**Pn**	**20 52 40.1**	**-0.3**
NLC				S	**Sn**	**20 53 22.2**	**-1.0**
SPN	**Mys Shipunski**	**3.77**	**31**	P	**Pn**	**20 52 42.2**	**-0.1**
SPN				S	**Sn**	**20 53 26.0**	**-0.6**
GNL	**Ganaly**	**3.86**	**10**	P	**Pn**	**20 52 44.6**	**+1.0**
GNL				S	**Sn**	**20 53 29.8**	**+0.9**
KII	**Karymskiy**	**4.44**	**20**	P	**Pn**	**20 52 52.7**	**+1.1**
MKZ	**Mys Kozlova**	**5.54**	**31**	*e*P	**Pn**	**20 53 05.5**	**-1.2**
KBTR	**Krutoberegovo**	**7.27**	**27**	P	**Pn**	**20 53 31.3**	**+0.9**

MOS ***04*** *20:56:13.7±1.4, 3509N×2636E, h15km, mb4.3/5, Error ellipse: s-maj=13.6km s-min=10.7km az=71.8*
IDC ***04*** *20:56:16.1±1.8, 3525N×2615E, h35km±17km, mb3.8/6, mb1 3.7/9, mb1mx3.5/23, mbtmp3.7/9, ML3.1/3, Error ellipse: s-maj=25.8km s-min=16.2km az=175.0*
ISCJB ***04*** *20:56:16.5±0.4, 3515N±003×2620E±003, h56km±4km, mb4.0/6, Error ellipse: s-maj=5.3km s-min=3.8km az=171.1*
DDA ***04*** *20:56:17.1, 3551N×2617E, h11km±2km, Md3.5*
CSEM ***04*** *20:56:17.5±0.1, 3528N×2613E, h25km, ML3.9/3, Error ellipse: s-maj=2.4km s-min=2.0km az=179.0*
NEIC ***04*** *20:56:18.3, 3536N×2616E, h31km, mb3.8/1, ML4.2(ATH), After ATH.*
ATH ***04*** *20:56:18.3, 3536N×2616E, h31km±1km, ML4.2*
THE ***04*** *20:56:18.2, 3536N×2606E, h1km, ML3.9/3, Error ellipse: s-maj=1.0km s-min=0.6km az=105.0*

ISC 04 20:56:17.5±0.4, 3511N±003×2621E±003, h46km±4km, n72, σ1§15/104, mb4.0/6, 2C-2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.01**	**89**	P	**Pn**	**20 56 24.0**	**-0.7**
ZKR				S	**Sn**	**20 56 29.0**	**-0.7**
ZKR	**Zakros**	**0.01**	**89**	P	**Pn**	**20 56 23.8**	**-0.9**
NPS	**Neapolis**	**0.51**	**287**	*i*PB	**Pn**	**20 56 27.8**	**-0.8**
NPS				*e*SB	**Sn**	**20 56 35.5**	**-1.0**
LAST	**Lasithi**	**0.60**	**275**	P	**Pn**	**20 56 28.6**	**-1.1**
LAST				S	**Sn**	**20 56 37.8**	**-0.7**
KARP	**Karpathos**	**0.89**	**61**	*e*PN	**Pn**	**20 56 35.2**	**+1.5**
KARP				*e*SN	**Sn**	**20 56 46.6**	**+1.1**
IDI	**Anoyia** 47nm,0.3s,baz=97,slow=16,SNR=226	**1.09**	**280**	Pg	**Pn**	**20 56 36.5**	**+0.2**
IDI				Lg		20 56 50.8	
	127nm,0.3s,baz=309,slow=18,SNR=16						
SIVA	**Sivas**	**1.15**	**266**	P	**Pn**	**20 56 37.9**	**+0.8**
SIVA				S	**Sn**	**20 56 54.0**	**+2.3**
THR1	**Thera Island**	**1.39**	**334**	P	**Pn**	**20 56 39.1**	**-1.4**
THR6	**Thira Island,**	**1.40**	**332**	P	**Pn**	**20 56 39.4**	**-1.2**
THR3	**Thira Island,**	**1.45**	**333**	P	**Pn**	**20 56 40.2**	**-1.0**
THR5	**Thira Island,**	**1.48**	**332**	P	**Pn**	**20 56 40.4**	**-1.2**
THR4	**Thira Island,**	**1.50**	**334**	P	**Pn**	**20 56 41.0**	**-0.9**
VAM	**Vamos**	**1.67**	**281**	*e*PN	**Pn**	**20 56 46.5**	**+2.3**
VAM				*e*SN	**Sn**	**20 57 07.9**	**+3.5**
NISR	**Nisiros**	**1.67**	**26**	*e*PN	**Pn**	**20 56 44.5**	**+0.2**
GVD	**Gavdhos**	**1.76**	**262**	*e*PN	**Pn**	**20 56 48.8**	**+3.3**
ARG	**Arkhangelos**	**1.91**	**54**	*e*PN	**Pn**	**20 56 49.4**	**+1.8**
ARG				*e*SN	**Sn**	**20 57 12.8**	**+2.2**
APE	**Apeiranthos**	**2.02**	**345**	P	**Pn**	**20 56 48.2**	**-0.9**
APE				S	**Sn**	**20 57 12.0**	**-1.2**
APE	**Apeiranthos**	**2.02**	**345**	*e*PB	**Pn**	**20 56 48.4**	**-0.7**
APE				*e*SN	**Sn**	**20 57 11.9**	**-1.3**
BDRM	**Kayabasi**	**2.19**	**27**	*i*P	**Pn**	**20 56 52.0**	**+0.7**
BDRM				*i* S	**Sn**	**20 57 19.0**	**+1.8**
BDRM	**Kayabasi**	**2.19**	**27**	*i* P	**Pn**	**20 56 52.0**	**+0.6**
BDRM				*i* S	**Sn**	**20 57 19.0**	**+1.7**
TURN	**Turunc**	**2.62**	**47**	*i* P	**Pn**	**20 56 54.1**	**-3.2**
TURN				*i* S	**Sn**	**20 57 22.3**	**-5.6**
SMG	**Samos**	**2.64**	**11**	*e*PN	**Pn**	**20 56 57.2**	**-0.3**
SMG				*e*SN	**Sn**	**20 57 26.2**	**-2.1**
GCAM	**G?zelcaml?**	**2.71**	**18**	*e*P	**Pn**	**20 56 57.9**	**-0.6**
GCAM				*i* S	**Sn**	**20 57 29.2**	**-0.9**
AYDN	**Tasoluk**	**2.88**	**28**	⇑*i*P	**Pn**	**20 57 01.8**	**+1.0**
AYDN				*e*S	**Sn**	**20 57 42.4**	**+8.2**
URLA	**Izmir**	**3.25**	**5**	*i* P	**Pn**	**20 57 05.6**	**-0.4**
URLA				*i* S	**Sn**	**20 57 42.6**	**-0.9**
CHOS	**Chios island**	**3.27**	**358**	P	**Pn**	**20 57 05.9**	**-0.3**
CHOS				S	**Sn**	**20 57 43.8**	**0.0**
DID	**Didima**	**3.38**	**316**	P	**Pn**	**20 57 07.6**	**-0.1**
DID				S	**Sn**	**20 57 45.3**	**-1.3**
KDAG	**Bornova**	**3.39**	**14**	*e*P	**Pn**	**20 57 08.0**	**+0.2**
NAIG	**Nisos Aigina**	**3.43**	**321**	*e*PN	**Pn**	**20 57 10.0**	**+1.6**
GOLH	**Golhisar**	**3.44**	**51**	⇑*i*P	**Pn**	**20 57 10.1**	**+1.5**
GOLH				*i* S	**Sn**	**20 57 51.0**	**+2.9**
PTL	**Penteli**	**3.48**	**328**	*e*PN	**Pn**	**20 57 09.5**	**+0.4**
ATH	**Athens Observa**	**3.48**	**326**	*e*PN	**Pn**	**20 57 10.5**	**+1.3**
VLX	**Vlachokerasia**	**3.83**	**307**	P	**Pn**	**20 57 14.4**	**+0.6**
MANT	**Manisa**	**3.86**	**29**	*i* P	**Pn**	**20 57 15.4**	**+1.0**
LTK	**Loutraki**	**3.90**	**319**	P	**Pn**	**20 57 15.6**	**+0.7**
LTK				S	**Sn**	**20 57 58.6**	**-0.8**
ITM	**Ithomi**	**4.03**	**302**	*e*PN	**Pn**	**20 57 17.5**	**+0.9**
PRK	**Paraskevi**	**4.12**	**1**	P	**Pn**	**20 57 17.7**	**-0.2**
PRK				S	**Sn**	**20 58 05.2**	**+0.3**
PRK	**Paraskevi**	**4.12**	**1**	*e*Pn	**Pn**	**20 57 18.2**	**+0.3**
PRK				S	**Sn**	**20 58 05.2**	**+0.3**
KHAL	**Karahalli**	**4.19**	**38**	*i* P	**Pn**	**20 57 19.0**	**+0.3**
KHAL				*i* S	**Sn**	**20 58 06.9**	**+0.5**
LKR	**Lokris**	**4.37**	**325**	P	**Pn**	**20 57 21.7**	**+0.5**
DEMI	**Demirci**	**4.41**	**26**	*i* P	**Pn**	**20 57 22.9**	**+1.1**
DEMI				*i* S	**Sn**	**20 58 11.4**	**-0.3**
DEMI	**Demirci**	**4.41**	**26**	*i* P	**Pn**	**20 57 22.9**	**+1.1**
DEMI				*i* S	**Sn**	**20 58 11.4**	**-0.4**
NEO	**Neokhori**	**4.81**	**331**	*e*PN	**Pn**	**20 57 28.2**	**+0.8**
AGG	**Agios Georgios**	**4.98**	**323**	P	**Pn**	**20 57 29.5**	**-0.2**
AGG				S	**Sn**	**20 58 25.9**	**0.0**
EVR	**Evrytania**	**5.17**	**318**	*e*PN	**Pn**	**20 57 34.3**	**+2.0**
THL	**Klokotos Trika**	**5.56**	**324**	P	**Pn**	**20 57 38.4**	**+0.8**
THL				S	**Sn**	**20 58 40.3**	**+0.2**
THL	**Klokotos Trika**	**5.56**	**324**	*e*PN	**Pn**	**20 57 39.1**	**+1.5**
ERMK	**Ermenek**	**5.66**	**72**	*e*P	**Pn**	**20 57 40.7**	**+1.8**
LIT	**Litokhoron**	**5.79**	**330**	P	**Pn**	**20 57 41.1**	**+0.4**
CSS	**Prodhromos**	**5.85**	**89**	*e*Pn	**Pn**	**20 57 39.7**	**-1.9**
CSS				*e*Sn	**Sn**	**20 58 45.1**	**-2.2**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=209,slow=12,SNR=4.1	**7.49**	**50**	Pn	**Pn**	**20 58 04.2**	**+0.1**
BRTR				Sn	**Sn**	**20 59 27.2**	**-0.6**
	0.1nm,0.3s,baz=196,slow=15,SNR=2.7						
MMAI	**Mount Meron Ar** 1.1nm,0.3s,baz=313,slow=13,SNR=5.6	**7.91**	**103**	Pn	**Pn**	**20 58 08.1**	**-1.8**
MMAI				Sn	**Sn**	**20 59 34.1**	**-4.0**
	2.2nm,0.3s,baz=316,slow=14,SNR=7.1						
EIL	**Elat** 0.3nm,0.3s,baz=345,slow=11,SNR=7.7	**9.17**	**124**	Pn	**Pn**	**20 58 26.1**	**-1.1**
EIL				Sn	**Sn**	**21 00 03.2**	**-5.8**
	0.9nm,0.3s,baz=312,slow=19,SNR=6.0						
EIL	**Elat**	**9.17**	**124**	Pn	**Pn**	**20 58 26.1**	**-1.1**
EIL				Sn	**Sn**	**21 00 03.2**	**-5.8**
KIV	**Kislovodsk** 4.6nm,0.8s	**15.46**	**50**	Pn	**Pn**	**20 59 52.1**	**-0.2**
KIV	**Kislovodsk**	**15.46**	**50**	P	**Pn**	**20 59 52.1**	**-0.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	**Kislovodsk**	**15.46**	**50**	P	**Pn**	**20 59 52.1**	**-0.2**
	comp=Z,5.0nm,0.8s						
AKASG	**Malin Array Be**	**15.73**	**7**	Pn	**Pn**	**20 59 54.7**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=198,slow=10,SNR=3.5						
AKASG	**Malin Array Be**	**15.73**	**7**	P	**Pn**	**20 59 54.7**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EKA	**Eskdalemuir Ar**	**28.57**	**324**	P	**P**	**21 02 06.7**	**-2.2**
	comp=Z,1.4nm,0.9s,mb3.7,baz=118,slow=10,SNR=3.6						
EKA	**Eskdalemuir Ar**	**28.57**	**324**	P	**P**	**21 02 06.7**	**-2.1**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.12**	**231**	P	**P**	**21 02 31.7**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.5,baz=32,slow=8.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**31.12**	**231**	P	**P**	**21 02 31.7**	**-0.1**
ARCES	**ARCESS Array B**	**34.48**	**360**	P	**P**	**21 02 57.1**	**-3.4**
	comp=Z,3.2nm,0.9s,mb4.2,baz=184,slow=8.0,SNR=5.8						
ARCES	**ARCESS Array B**	**34.48**	**360**	P	**P**	**21 02 57.1**	**-3.4**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	**43.09**	**57**	*e*P	**P**	**21 04 12.6**	**-0.2**
MKAR	**Makanchi Array**	**43.09**	**57**	P	**P**	**21 04 13.1**	**+0.3**
	comp=Z,2.3nm,0.5s,mb4.2,baz=272,slow=8.0,SNR=48						
MKAR	**Makanchi Array**	**43.09**	**57**	P	**P**	**21 04 13.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**44.42**	**46**	P	**P**	**21 04 22.5**	**-0.9**
	comp=Z,1.6nm,0.4s,mb4.1,baz=270,slow=8.5,SNR=7.4						
ZALV	**Zalesovo Beam**	**44.42**	**46**	P	**P**	**21 04 22.5**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
SONM	**Songino Array**	**58.85**	**51**	P	**P**	**21 06 11.7**	**+0.4**
	comp=Z,0.7nm,0.4s,mb4.0,baz=281,slow=7.3,SNR=6.7						
SONM	**Songino Array**	**58.85**	**51**	P	**P**	**21 06 11.7**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						

IDC 04 21:02:56.1±43.0, 1625S×17376W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/17, mbtmp4.2/3, MS4.7/6, Ms1 4.7/6, ms1mx3.9/32, Error ellipse: s-maj=833.4km s-min=173.9km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.4nm,0.5s,baz=89,slow=9.4,SNR=4.6	**43.31**	**241**	P	P	21 11 00.7	+0.7
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=97,slow=7.2,SNR=25	**49.31**	**257**	P	P	21 11 46.4	-0.9
ASAR	**Alice Springs** 6.5nm,0.6s,baz=89,slow=8.2,SNR=112	**49.52**	**253**	P	P	21 11 49.0	+0.2
PETK	**Petropavlovsk-** comp=Z,217nm,19.6s,baz=188,slow=35	**73.33**	**343**	LR	LR	21 45 36.2	
LPIG	**La Paz** comp=Z,679nm,20.9s,baz=33,slow=31	**73.78**	**58**	LR	LR	21 41 03.2	
TXAR	**Lajitas Array** comp=Z,428nm,18.2s,baz=135,slow=32	**81.38**	**56**	LR	LR	21 45 56.8	
PMSA	**Palmer Station** comp=Z,562nm,20.2s,baz=51,slow=30	**83.54**	**156**	LR	LR	21 44 07.5	
USHA	**Ushuaia** comp=Z,281nm,19.8s,baz=126,slow=30	**85.41**	**146**	LR	LR	21 45 38.3	
TKL	**Tuckaleechee C** comp=Z,756nm,19.7s,baz=28,slow=34	**99.28**	**56**	LR	LR	21 58 44.7	

DHMR ***04*** *21:06:12.0±2.1, 1356N×3930E, h30km±14km, mb5.1, ML4.6*
CSEM ***04*** *21:06:16.4±0.1, 1340N×3988E, h10km, mb4.6/58, Error ellipse: s-maj=6.0km s-min=2.0km az=9.0*
ISCJB ***04*** *21:06:16.5±0.4, 1338N±006×3981E±002, h10km, mb4.5/79, Error ellipse: s-maj=8.4km s-min=3.3km az=7.6*
IDC ***04*** *21:06:17.3±1.1, 1344N×3987E, h0km, mb4.3/19, mb1 4.3/22, mb1mx4.3/30, mbtmp4.3/22, ML3.7/3, MS4.4/1, Ms1 4.4/1, ms1mx3.2/27, Error ellipse: s-maj=25.1km s-min=15.7km az=178.0*
NEIC ***04*** *21:06:17.8±0.3, 1336N×3989E, h10km, mb4.5/54, Error ellipse: s-maj=7.7km s-min=4.5km az=193.0*
SZGRF ***04*** *21:06:21.5, 13.1N×3881E, h33km, mb4.5, Ethiopia*
BJI ***04*** *21:06:21.3, 1438N×3989E, h10km, mB5.2, mb4.7*

ISC 04 21:06:20.7±1.6, 1340N±006×3986E±004, h26km±11km, n249, σ0§93/253, mb4.5/79, 15C-14D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMRY	**Kamaran Island**	**3.29**	**54**	*i* P	**Pn**	**21 07 12.7**	**+2.1**
KAMRY				AML	AML	21 07 23.9	
	comp=N,2μm,0.6s						
KAMRY				*i* S	**Sn**	**21 08 02.2**	**+13**
UDYN	**Al 'Udayn**	**4.03**	**81**	⇓*e*P	**Pn**	**21 07 22.9**	**+2.0**
UDYN				AMb	AMB	21 07 25.0	
	comp=Z,338nm,2.8s						
UDYN				*i* S	**Sb**	**21 08 18.8**	**-0.6**
UDYN				AML	AML	21 08 30.3	
	comp=N,788nm,0.7s						
TRBA	**At Turbah**	**4.15**	**92**	*i* P	**Pn**	**21 07 23.3**	**+1.0**
TRBA				AML	AML	21 07 36.8	
	comp=E,432nm,0.9s						
TRBA				*i* S	**Sb**	**21 08 21.2**	**-1.5**
HAJJ	**Hajjah**	**4.28**	**57**	⇓*i*P	**Pn**	**21 07 26.0**	**+1.8**
HAJJ				*i* S	**Sb**	**21 08 29.0**	**+2.3**
DHBB	**Dhamar BB**	**4.55**	**75**	*i* P	**Pn**	**21 07 29.1**	**+1.2**
DHBB				*i* S	**Sb**	**21 08 33.3**	**-1.1**
LBOS		**5.26**	**84**	*i* P	**Pn**	**21 07 37.5**	**-0.2**
LBOS				*i* S	**Sb**	**21 08 48.5**	**-6.3**
BDHA	**Al Bayda'**	**5.58**	**83**	⇓*i*P	**Pn**	**21 07 43.1**	**+1.1**
BDHA				AML	AML	21 08 04.9	
	comp=E,541nm,0.7s						
BDHA				*i* S	**Sb**	**21 08 56.1**	**-7.8**
EIL	**Elat**	**16.82**	**345**	Pn	**Pn**	**21 10 12.5**	**-1.9**
	comp=E,0.3nm,0.3s,baz=114,slow=12,SNR=2.0						
EIL	**Elat**	**16.82**	**345**	Pn	**Pn**	**21 10 12.5**	**-1.9**
RDF	**Al-Radifah** baz=23	**17.02**	**24**	*e*P	**Pn**	**21 10 17.0**	**-0.1**
RDF				AMb	AMB	21 10 20.9	
	comp=Z,79nm,1.4s,baz=23						
NAY	**Al-Naaiem** baz=22	**17.20**	**22**	*e*P	**Pn**	**21 10 18.2**	**-1.0**
NAY				AMb	AMB	21 10 33.1	
	comp=Z,22nm,1.6s,baz=22						
UMR	**Umm Al-Rimmam** baz=23	**17.65**	**23**	*e*P	**Pn**	**21 10 24.3**	**-0.5**
UMR				AMb	AMB	21 10 34.6	
	comp=Z,100nm,1.6s,baz=23						
MIB	**Mutribah** baz=22	**17.73**	**22**	*e*P	**Pn**	**21 10 24.8**	**-1.1**
MIB				AMb	AMB	21 10 34.0	
	comp=Z,44nm,1.2s,baz=22						
NAZ	**Nazwa, Dubai** SNR=10	**18.84**	**50**	P	**Pn**	**21 10 39.8**	**+0.4**
ASF	**Jabal al Asfar**	**18.88**	**352**	P	**Pn**	**21 10 39.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=131,slow=0.9,SNR=7.4						
MMAI	**Mount Meron Ar**	**19.95**	**349**	P	**Pn**	**21 10 52.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=176,slow=14,SNR=7.8						
CSS	**Prodhromos** comp=Z,26nm,1.3s,mb4.5	**22.27**	**346**	*e*P	**P**	**21 11 14.4**	**-1.4**
CSS	**Prodhromos** comp=Z,26nm,1.3s,mb4.5	**22.27**	**346**	*e*P	**P**	**21 11 14.4**	**-1.4**
BR131	**Keskin Array S** comp=Z,3.5nm,0.8s,mb3.9	**26.79**	**349**	*e*P	**P**	**21 11 59.8**	**+1.2**
BR131	**Keskin Array S** comp=Z,3.5nm,0.8s,mb3.9	**26.79**	**349**	*e*P	**P**	**21 11 59.8**	**+1.2**
BRTR	**Keskin Array B** comp=Z,4.5nm,0.9s,mb4.0,baz=174,slow=12,SNR=17	**26.79**	**349**	P	**P**	**21 11 59.9**	**+1.3**
BRTR	**Keskin Array B**	**26.79**	**349**	P	**P**	**21 11 59.8**	**+1.2**
GNI	**Garni**	**26.99**	**8**	*e*P	**P**	**21 11 59.7**	**-0.7**
GNI	**Garni**	**26.99**	**8**	P	**P**	**21 11 59.7**	**-0.7**
ANTO	**Ankara** comp=Z,14nm,0.9s,mb4.5	**27.09**	**348**	*e*P	**P**	**21 12 02.3**	**+1.0**
LSZ	**Lusaka**	**30.74**	**202**	*e*P	**P**	**21 12 32.0**	**-2.0**
VTS	**Vitosha**	**32.46**	**337**	⇓P	**P**	**21 12 49.6**	**+0.8**
VTS	**Vitosha**	**32.46**	**337**	⇓*i*P	**P**	**21 12 49.6**	**+0.7**
TIRR	**Tirgusor**	**32.47**	**345**	P	**P**	**21 12 47.5**	**-1.3**
TIRR	**Tirgusor**	**32.47**	**345**	P	**P**	**21 12 47.5**	**-1.4**
TIP	**Timpagrande** comp=Z,4.3nm,1.1s,mb4.3	**32.80**	**326**	*e*P	**P**	**21 12 51.5**	**-0.3**
TIP	**Timpagrande** comp=Z,4.3nm,1.1s,mb4.3	**32.80**	**326**	*e*P	**P**	**21 12 51.5**	**-0.4**
KBL	**Kabul** comp=Z,5.0nm,1.0s,mb4.4	**33.77**	**46**	*e*P	**P**	**21 13 00.6**	**+0.2**
KBL	**Kabul** comp=Z,5.0nm,1.0s,mb4.4	**33.77**	**46**	*e*P	**P**	**21 13 00.6**	**+0.2**
TAM	**Tamanrasset**	**33.88**	**291**	*e*P	**P**	**21 13 01.6**	**+0.1**
TAM	**Tamanrasset**	**33.88**	**291**	*e*P	**P**	**21 13 01.6**	**+0.1**
MLR	**Muntele Rosu**	**34.10**	**342**	⇓P	**P**	**21 13 05.2**	**+2.2**
MLR	**Muntele Rosu**	**34.10**	**342**	⇓P	**P**	**21 13 05.2**	**+2.1**
MLR	**Muntele Rosu**	**34.10**	**342**	⇓*i*P	**P**	**21 13 05.3**	**+2.2**
PLOR	**Plostina**	**34.23**	**344**	⇓*i*P	**P**	**21 13 06.4**	**+2.2**
VOIR		**34.32**	**341**	P	**P**	**21 13 06.7**	**+1.7**
VOIR		**34.32**	**341**	P	**P**	**21 13 06.7**	**+1.7**
VOIR		**34.32**	**341**	⇓*i*P	**P**	**21 13 06.4**	**+1.4**
GZR	**Gura Zlata**	**35.03**	**339**	P	**P**	**21 13 12.4**	**+1.2**
GZR	**Gura Zlata**	**35.03**	**339**	P	**P**	**21 13 12.4**	**+1.2**
GZR	**Gura Zlata**	**35.03**	**339**	⇓*i*P	**P**	**21 13 12.6**	**+1.4**
KEST	**Kesra** comp=Z,3.4nm,1.1s,mb4.2,baz=280,slow=6.4,SNR=5.5	**35.32**	**314**	P	**P**	**21 13 14.2**	**+0.5**
BZS	**Buzias**	**35.64**	**338**	P	**P**	**21 13 16.5**	**+0.1**
BZS	**Buzias**	**35.64**	**338**	P	**P**	**21 13 16.5**	**+0.1**
BZS	**Buzias**	**35.64**	**338**	⇑*i*P	**P**	**21 13 16.2**	**-0.2**
BURAR	**Bucovina Array**	**36.24**	**343**	⇑P	**P**	**21 13 22.9**	**+1.4**
BURAR	**Bucovina Array**	**36.24**	**343**	⇑*i*P	**P**	**21 13 22.9**	**+1.4**
DRGR		**36.27**	**340**	P	**P**	**21 13 23.0**	**+1.2**
DRGR		**36.27**	**340**	⇑*i*P	**P**	**21 13 23.0**	**+1.2**
TOA0	**Torodi Ar. Sit**	**37.12**	**274**	*e*P	**P**	**21 13 29.7**	**+0.2**
TOA0	**Torodi Ar. Sit**	**37.12**	**274**	*e*P	**P**	**21 13 29.7**	**+0.2**
TORD	**Torodi Ar. Bea** comp=Z,4.6nm,1.3s,mb4.1,baz=55,slow=3.6,SNR=7.8	**37.12**	**274**	P	**P**	**21 13 30.6**	**+1.2**
TORD	**Torodi Ar. Bea**	**37.12**	**274**	P	**P**	**21 13 30.6**	**+1.1**
PKSM	**Moragy**	**37.28**	**335**	P	**P**	**21 13 31.1**	**+0.6**
PKSM	**Moragy**	**37.28**	**335**	P	**P**	**21 13 31.1**	**+0.7**
PKSM	**Moragy**	**37.28**	**335**	⇑*i*P	**P**	**21 13 30.8**	**+0.4**
VSL	**Villasalto**	**37.37**	**320**	P	**P**	**21 13 31.1**	**-0.2**
VSL	**Villasalto**	**37.37**	**320**	P	**P**	**21 13 31.1**	**-0.1**
KIEV	**Kiev** comp=Z,10nm,0.9s,mb4.5	**38.19**	**349**	*e*P	**P**	**21 13 37.0**	**-1.0**
KIEV	**Kiev** comp=Z,10nm,0.9s,mb4.5	**38.19**	**349**	*e*P	**P**	**21 13 37.0**	**-1.0**
AKASG	**Malin Array Be** comp=Z,12nm,0.9s,mb4.6,baz=167,slow=7.1,SNR=12	**38.20**	**349**	P	**P**	**21 13 37.5**	**-0.6**
AKBB	**Malin Array Si**	**38.20**	**349**	*e*P	**P**	**21 13 37.6**	**-0.5**
AKBB	**Malin Array Si**	**38.20**	**349**	*e*P	**P**	**21 13 37.6**	**-0.5**
PSZ	**Piszkesteto** comp=Z,10nm,0.8s,mb4.6	**38.22**	**338**	*e*P	**P**	**21 13 38.5**	**+0.2**
PSZ	**Piszkesteto** comp=Z,10nm,0.8s,mb4.6	**38.22**	**338**	*e*P	**P**	**21 13 38.5**	**+0.2**
PSZ	**Piszkesteto**	**38.22**	**338**	⇑*i*P	**P**	**21 13 38.6**	**+0.3**
KOLS	**Kolonicke sedl**	**38.30**	**341**	*e*P	**P**	**21 13 39.1**	**+0.2**
KWP	**Kalwaria** comp=Z,11nm,0.8s,mb4.6	**38.78**	**342**	*e*P	**P**	**21 13 42.1**	**-0.9**
KWP	**Kalwaria**	**38.78**	**342**	⇑*i*P	**P**	**21 13 45.3**	**+2.3**
STHS	**Stebnicka Huta** comp=Z,3.2nm,1.1s,mb4.0	**39.05**	**341**	*e*P	**P**	**21 13 44.5**	**-0.7**
VYHS	**Vyhne**	**39.09**	**338**	*e*P	**P**	**21 13 45.6**	**0.0**
KOLL	**Kolacno**	**39.32**	**337**	*e*P	**P**	**21 13 45.2**	**-2.3**
ARSA	**Arzberg** comp=Z,12nm,1.1s,mb4.5	**39.41**	**334**	⇑*i*P	**P**	**21 13 49.6**	**+1.3**
PGF	**Pioggiola** comp=Z,10nm,1.0s,mb4.2	**39.43**	**323**	*e*P	**P**	**21 13 48.3**	**-0.2**
PGF	**Pioggiola** comp=Z,5.2nm,1.0s,mb4.2	**39.43**	**323**	*e*P	**P**	**21 13 48.3**	**-0.2**
ZST	**Bratislava**	**39.51**	**336**	*e*P	**P**	**21 13 48.3**	**-0.8**
ZST	**Bratislava** comp=Z,23nm,1.7s,mb4.6	**39.51**	**336**	*e*P	**P**	**21 13 48.4**	**-0.7**
MODS	**Modra-Piesok**	**39.58**	**336**	*e*P	**P**	**21 13 50.1**	**+0.4**
MODS	**Modra-Piesok** comp=Z,4.5nm,0.8s,mb4.2	**39.58**	**336**	*e*P	**P**	**21 13 50.1**	**+0.4**
AKTK	**Aktyubinsk**	**39.80**	**18**	P	**P**	**21 13 51.8**	**+0.3**
AKTK	**Aktyubinsk**	**39.80**	**18**	P	**P**	**21 13 51.8**	**+0.3**
AKTO	**Aktyubinsk** comp=Z,8.3nm,0.9s,mb4.5,baz=231,slow=9.4,SNR=8.7	**39.80**	**18**	P	**P**	**21 13 51.8**	**+0.3**
CONA	**Conrad Observa** comp=Z,9.7nm,0.9s,mb4.5	**39.80**	**335**	⇑*i*P	**P**	**21 13 52.6**	**+1.1**
CSNA	**Conrad Observa** comp=Z,8.5nm,0.9s,mb4.5	**39.80**	**335**	⇑*i*P	**P**	**21 13 52.8**	**+1.3**
OJC	**Ojcow**	**40.21**	**340**	*e*P	**P**	**21 13 57.4**	**+2.5**
MOA	**Molln** comp=

BFO	Black Forest	43.53	330	*eP*		**P**	21 14 20.3	-1.8
CABF	La Chapelle	43.58	326	*eP*		**P**	21 14 21.7	-0.8
	comp=Z,21nm,0.9s,mb4.6							
CABF	La Chapelle	43.58	326	*eP*		**P**	21 14 21.7	-0.8
	comp=Z,11nm,0.9s,mb4.6							
CLL	Collm	43.60	336	⇑*iP*		**P**	21 14 22.2	-0.4
	comp=Z,13nm,1.5s,mb4.4							
CLL				*i*			21 14 25.4	
CLL				*e*	PcP	PcP	21 16 13.0	+3.2
CLL	Collm	43.60	336	*eP*		**P**	21 14 21.7	-0.9
	comp=Z,13nm,1.5s,mb4.4							
CLL	Collm	43.60	336	⇑*iP*		**P**	21 14 22.2	-0.4
	comp=Z,13nm,1.5s,mb4.4							
CLL				*i*	pP	pP	21 14 25.4	-5.2
MOX	Moxa	43.67	334	*eP*		**P**	21 14 23.3	+0.2
	comp=Z,7.0nm,1.1s,mb4.3							
MOX	Moxa	43.67	334	*eP*		**P**	21 14 23.1	0.0
	comp=Z,47nm,2.4s,mb4.8							
HINF	Hinteralfeld	43.94	328	*eP*		**P**	21 14 24.8	-0.6
	comp=Z,11nm,1.0s,mb4.2							
HINF	Hinteralfeld	43.94	328	*eP*		**P**	21 14 24.8	-0.6
	comp=Z,5.3nm,1.0s,mb4.2							
GKN	Gorkha	44.08	64	*eP*		**P**	21 14 26.2	-0.7
	comp=Z,30nm,1.2s,mb4.9							
CDF	Champ du Feu	44.11	329	*eP*		**P**	21 14 26.2	-0.5
	comp=Z,13nm,1.1s,mb4.3							
CDF	Champ du Feu	44.11	329	*eP*		**P**	21 14 26.2	-0.5
	comp=Z,6.4nm,1.1s,mb4.3							
HAU	Haudompre	44.32	328	*eP*		**P**	21 14 27.8	-0.6
	comp=Z,13nm,1.0s,mb4.3							
HAU	Haudompre	44.32	328	*eP*		**P**	21 14 27.8	-0.6
	comp=Z,6.5nm,1.0s,mb4.3							
DMN	Daman	44.43	64	*eP*		**P**	21 14 29.5	-0.1
DBIC	Dimbokro	44.48	266	P		**P**	21 14 31.4	+1.1
	comp=Z,2.3nm,1.0s,mb3.9,baz=44,slow=16,SNR=2.7							
DBIC	Dimbokro	44.48	266	*eP*		**P**	21 14 30.7	+0.4
	comp=Z,2.3nm,0.9s,mb3.9							
DBIC	Dimbokro	44.48	266	*eP*		**P**	21 14 30.7	+0.5
	comp=Z,2.3nm,0.9s,mb3.9							
KKN	Kakani	44.61	64	*eP*		**P**	21 14 30.1	-1.0
PKI	Pulchoki	44.69	64	*eP*		**P**	21 14 31.3	-0.4
TNS	Taunus Mts	44.77	332	*eP*		**P**	21 14 31.2	-0.8
SMF	Signal de Mont	44.83	325	*eP*		**P**	21 14 31.6	-1.0
	comp=Z,7.9nm,0.9s,mb4.2							
SMF	Signal de Mont	44.83	325	*eP*		**P**	21 14 31.6	-1.0
	comp=Z,4.0nm,0.9s,mb4.2							
MDT	Midelt	44.85	303	P		**P**	21 14 32.8	-0.2
	comp=Z,2.1nm,1.0s,mb3.9,baz=98,slow=15,SNR=2.6							
CAF	Calviac	44.90	322	*eP*		**P**	21 14 33.5	+0.4
	comp=Z,36nm,1.4s,mb4.7							
CAF	Calviac	44.90	322	*eP*		**P**	21 14 33.5	+0.4
	comp=Z,18nm,1.4s,mb4.7							
GUN	Gumba	45.15	64	*eP*		**P**	21 14 35.4	0.0
LOR	Lormes	45.19	326	*eP*		**P**	21 14 34.6	-0.8
	comp=Z,38nm,1.5s,mb4.7							
LOR	Lormes	45.19	326	*eP*		**P**	21 14 34.6	-0.8
	comp=Z,19nm,1.5s,mb4.7							
AVF	Avril sur Loir	45.19	325	*eP*		**P**	21 14 34.5	-0.9
	comp=Z,10nm,1.0s,mb4.3							
AVF	Avril sur Loir	45.19	325	*eP*		**P**	21 14 34.5	-0.9
	comp=Z,5.1nm,1.0s,mb4.3							
SSF	Saint Saulge	45.26	325	*eP*		**P**	21 14 35.0	-1.0
	comp=Z,8.1nm,0.9s,mb4.3							
SSF	Saint Saulge	45.26	325	*eP*		**P**	21 14 35.0	-1.0
	comp=Z,4.1nm,0.9s,mb4.3							
ARU	Arti	45.29	15	*eP*		**P**	21 14 35.3	-0.7
	comp=Z,20nm,1.0s,mb4.9							
ARU	Arti	45.29	15	*eP*		**P**	21 14 35.3	-0.7
	comp=Z,20nm,1.0s,mb4.9							
MEZF	Maizieres J'vi	45.30	328	*eP*		**P**	21 14 36.1	-0.2
	comp=Z,17nm,0.9s,mb4.6							
MEZF	Maizieres J'vi	45.30	328	*eP*		**P**	21 14 36.1	-0.2
	comp=Z,8.4nm,0.9s,mb4.6							
BGF	Bois d'Agland	45.34	324	*eP*		**P**	21 14 36.4	-0.2
	comp=Z,24nm,1.1s,mb4.7							
BGF	Bois d'Agland	45.34	324	*eP*		**P**	21 14 36.4	-0.2
	comp=Z,12nm,1.1s,mb4.7							
JIRN	Jiri	45.39	64	*eP*		**P**	21 14 36.9	-0.4
RJF	Les Rejaudoux	45.43	322	*eP*		**P**	21 14 37.4	+0.1
	comp=Z,38nm,1.5s,mb4.7							
RJF	Les Rejaudoux	45.43	322	*eP*		**P**	21 14 37.4	+0.1
	comp=Z,19nm,1.5s,mb4.7							
WLF	Walferdange	45.49	330	*eP*		**P**	21 14 37.4	-0.3
	comp=Z,3.1nm,0.6s,mb4.3							
WLF	Walferdange	45.49	330	*eP*		**P**	21 14 37.4	-0.3
	comp=Z,3.0nm,0.6s,mb4.3							
ETSF	Etsaut	45.53	318	*eP*		**P**	21 14 39.1	+1.0
	comp=Z,42nm,1.3s,mb4.9							
ETSF	Etsaut	45.53	318	*eP*		**P**	21 14 39.1	+1.0
	comp=Z,21nm,1.3s,mb4.9							
RAMN	Ramite	45.65	65	*eP*		**P**	21 14 38.0	-1.4
LFF	La Frestale	45.71	321	*eP*		**P**	21 14 40.0	+0.5
	comp=Z,21nm,0.9s,mb4.8							
LFF	La Frestale	45.71	321	*eP*		**P**	21 14 40.0	+0.5
	comp=Z,10nm,0.9s,mb4.8							
SJPF	Ste Jean	46.06	318	*eP*		**P**	21 14 43.3	+1.0
	comp=Z,63nm,1.3s,mb5.1							
SJPF	Ste Jean	46.06	318	*eP*		**P**	21 14 43.3	+1.0
	comp=Z,32nm,1.3s,mb5.1							
ODAN	Odare	46.34	66	*eP*		**P**	21 14 43.5	-1.3
BRVK	Borovoye	46.37	25	*eP*		**P**	21 14 43.1	-1.4
	comp=Z,14nm,1.6s,mb4.6							
BRVK	Borovoye	46.37	25	*eP*		**P**	21 14 43.1	-1.5
	comp=Z,14nm,1.6s,mb4.6							
GIVF	Givet	46.43	329	*eP*		**P**	21 14 44.4	-0.7
	comp=Z,10nm,0.8s,mb4.5							
GIVF	Givet	46.43	329	*eP*		**P**	21 14 44.4	-0.7
	comp=Z,5.2nm,0.8s,mb4.5							
ESDC	Sonseca Array	46.51	313	P		**P**	21 14 47.1	+1.2
	comp=Z,2.8nm,0.9s,mb4.2,baz=112,slow=8.4,SNR=14							
ESLA	Sonseca Array	46.51	313	*eP*		**P**	21 14 46.4	+0.4
	comp=Z,4.7nm,1.4s,mb4.2							
ESLA	Sonseca Array	46.51	313	*eP*		**P**	21 14 46.3	+0.4
	comp=Z,4.7nm,1.4s,mb4.2							
TAPN	Taplejung	46.68	65	*eP*		**P**	21 14 46.4	-1.1
	comp=Z,25nm,1.1s,mb5.1							
SFS	San Fernando	47.11	308	P		**P**	21 14 51.0	+0.3
SFS	San Fernando	47.11	308	P		**P**	21 14 51.0	+0.3
MK31	Makanchi Array	48.64	38	*eP*		**P**	21 15 02.8	+0.4
MK31	Makanchi Array	48.64	38	*eP*		**P**	21 15 02.8	+0.4
MKAR	Makanchi Array	48.64	38	P		**P**	21 15 03.4	+1.0
	comp=Z,8.1nm,0.9s,mb4.7,baz=237,slow=6.2,SNR=24							
MKAR					LR	LR	21 37 52.7	
	comp=Z,442nm,21.1s,baz=164,slow=39							
MKAR	Makanchi Array	48.64	38	P		**P**	21 15 03.4	+1.0
MKAR					LR	LR	21 37 52.7	
KURK	Kurchatov	48.69	32	*eP*		**P**	21 15 02.9	+0.2
	comp=Z,13nm,1.0s,mb4.9							
KURK	Kurchatov	48.69	32	*eP*		**P**	21 15 02.9	+0.2
	comp=Z,13nm,1.0s,mb4.9							
EVO	Evora	49.09	310	*eP*		**P**	21 15 06.8	+0.8
	comp=Z,21nm,1.3s,mb4.7							
EVOP	Sao Brissos	49.18	310	*eP*		**P**	21 15 06.8	+0.2
	comp=Z,10nm,1.3s,mb4.7							
LSA	Lhasa	49.99	62	P		**P**	21 15 15.6	+2.6
LSA	Lhasa	49.99	62	*eP*		**P**	21 15 13.1	+0.2
	comp=Z,6.2nm,1.0s,mb4.6							
LSA	Lhasa	49.99	62	*eP*		**P**	21 15 13.1	+0.1
	comp=Z,6.2nm,1.0s,mb4.6							
HFS	Hagfors	50.47	343	P		**P**	21 15 15.1	-1.0
	comp=Z,2.5nm,0.7s,mb4.3,baz=163,slow=11,SNR=4.7							
KONO	Kongsberg	51.30	341	P		**P**	21 15 20.6	-1.8
KONO	Kongsberg	51.30	341	P		**P**	21 15 20.6	-1.8
NAO01	NORSAR Array S	51.86	342	P		**P**	21 15 26.1	-0.3
NAO01	NORSAR Array S	51.86	342	P		**P**	21 15 26.1	-0.4
NB2	NORSAR Subarra	51.92	343	P		**P**	21 15 26.4	-0.5
	comp=Z,9.8nm,1.0s,mb4.7,baz=142,slow=7.9							
NOA	NORSAR Array B	51.92	343	P		**P**	21 15 26.6	-0.3
	comp=Z,5.8nm,0.9s,mb4.5,baz=142,slow=7.4,SNR=7.8							
EKA	Eskdalemuir Ar	53.45	331	P		**P**	21 15 38.2	-0.2
	comp=Z,1.0nm,0.7s,mb3.9,baz=125,slow=6.2,SNR=3.9							
ESK	Eskdalemuir	53.46	331	*eP*		**P**	21 15 37.6	-0.8
	comp=Z,20nm,1.3s,mb4.9							
ESK	Eskdalemuir	53.46	331	*eP*		**P**	21 15 37.6	-0.9
	comp=Z,20nm,1.3s,mb4.9							
ZAA0	Zalesovo Array	53.65	31	*eP*		**P**	21 15 39.6	-0.2
ZAA0	Zalesovo Array	53.65	31	*eP*		**P**	21 15 39.6	-0.2
ZALV	Zalesovo Beam	53.65	31	P		**P**	21 15 38.9	-0.9
	comp=Z,10.0nm,1.0s,mb4.7,baz=239,slow=8.3,SNR=19							
ZALV	Zalesovo Beam	53.65	31	P		**P**	21 15 38.9	-0.9
CM31	Chiang Mai Arr	56.84	77	*eP*		**P**	21 16 03.7	+0.2
CM31	Chiang Mai Arr	56.84	77	*eP*		**P**	21 16 03.7	+0.2
CMAR	Chiang Mai Arr	56.84	77	P		**P**	21 16 04.0	+0.6
	comp=Z,7.2nm,1.0s,mb4.7,baz=277,slow=7.8,SNR=26							
GTA	Gaotai	58.46	52	*eP*		**P**	21 16 14.8	+0.2
GTA					AP	pP	21 16 18.2	-4.6
GTA					XP	sP	21 16 19.9	-6.0
GTA					AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.2							
SONM	Songino Array	64.46	43	P		**P**	21 16 56.2	+1.3
	comp=Z,4.9nm,1.0s,mb4.5,baz=250,slow=5.6,SNR=19							
SUMG	Summit	73.80	342	*eP*		**P**	21 17 52.8	+0.3
SUMG	Summit	73.80	342	*eP*		**P**	21 17 52.8	+0.4
YAK	Yakutsk	78.20	29	P		**P**	21 18 17.1	-0.6
YAK	Yakutsk	78.20	29	P		**P**	21 18 17.1	-0.6
KSRS	Korea Array	80.47	54	P		**P**	21 18 32.1	+1.6
	comp=Z,27nm,1.1s,mb4.1,baz=254,slow=4.6,SNR=4.7							
MAW	Mawson	82.50	171	*eP*		**P**	21 18 41.0	+0.5
MAW	Mawson	82.50	171	*eP*		**P**	21 18 41.0	+0.5
NVAR	Mina Array Bea	124.54	339	PKP		PKPdf	21 25 16.9	-1.2
	comp=Z,0.2nm,0.3s,baz=354,slow=1.8,SNR=3.1							

SKHL 04 21:16:52.6±0.6, 5290N×14260E, h10km, mb4.7/4, 2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.68**	**17**	⇓*i*	Pg		Pg	21 17 07.9	+2.1
OKH					AMB		AMB	21 17 08.0	
	2μm,0.4s								
OKH				*e*	Sg		Sg	21 17 19.0	+4.3
OKH					A			21 17 19.3	
	7μm,0.4s								
OKH					A			21 17 19.3	
	10μm,0.4s								
NKL	**Nikolayevsk**	**1.19**	**283**	⇓*i*	Pg		Pg	21 17 16.6	+1.2
NKL					AMB		AMB	21 17 18.3	
	540nm,0.2s								
NKL				*e*	Sg		Sg	21 17 33.0	+2.2
NKL					A			21 17 36.0	
	3μm,1.0s								
NKL					A			21 17 36.0	
	3μm,1.5s								
NKL					A			21 17 37.5	
	2μm,0.4s								
TYV	**Tymovskoe**	**2.04**	**179**	*i*	Pg		Pg	21 17 33.0	+1.3
TYV					AMB		AMB	21 17 34.0	
	20nm,0.7s								
TYV				*e*	Sg		Sg	21 18 02.0	+3.9
TYV					A			21 18 11.0	
	90nm,0.2s								
UGL	**Uglegorsk**	**3.84**	**185**	*e*	S		Sn	21 18 36.3	-0.6
UGL					A			21 18 37.0	
	80nm,0.5s								
GRNR	**Gornyy**	**4.39**	**243**	*e*	P		Pn	21 18 00.5	+1.3
GRNR				*e*	Pg		Pg	21 18 18.0	+1.5
GRNR					AMB		AMB	21 18 18.8	
	27nm,0.5s								
GRNR					AMB		AMB	21 18 18.8	
	29nm,0.5s								
GRNR				*e*	S		Sn	21 18 50.0	-0.2
GRNR				*e*	Sg		Sg	21 19 18.8	+5.5
GRNR					A			21 19 19.8	
	78nm,0.8s								
EKMR	**Ekimchan**	**5.83**	**276**	*e*	P		Pn	21 18 21.5	+2.5
EKMR				*e*	Pg		Pg	21 18 47.3	+3.1
EKMR					AMB		AMB	21 18 47.4	
	3.0nm,0.5s								
EKMR					AMB		AMB	21 18 47.4	
	6.0nm,0.5s								
EKMR					AMB		AMB	21 18 47.4	
	8.0nm,0.5s								
EKMR				*e*	S		Sn	21 19 26.3	+0.4
EKMR				*e*	Sg		Sg	21 20 07.4	+7.7
EKMR					A			21 20 11.0	
	39nm,0.6s								
EKMR					A			21 20 11.0	
	57nm,0.6s								
YSS	**Yuzh-Sakhalins**	**5.95**	**179**	*e*	rx		rx	21 24 22.0	
KLR	**Kul'dur**	**7.76**	**246**	*e*	Pg		Pn	21 19 35.0	+50
BMKR	**Bomnak**	**8.35**	**288**	*e*	Pg		Pn	21 19 37.7	+44
BMKR					AMB		AMB	21 19 39.5	
	8.0nm,1.0s								
BMKR				*e*	Sg		Sn	21 21 20.4	+53
BMKR					A			21 21 27.4	
	27nm,1.0s								
YASR	**Yasnyy**	**8.81**	**278**	*e*	P		Pn	21 19 04.2	+4.3
YASR				*e*	Pg		Pn	21 19 41.5	+42
YASR				*e*	Sg		Sn	21 21 39.2	+60
YASR					A			21 21 49.2	
	3.0nm,0.9s								
ZEA	**Zeya**	**9.23**	**281**	*e*	Sg		Sn	21 21 55.2	+66
ZEA					A			21 21 58.3	
	20nm,1.0s								
KROS	**Kirovskiy**	**9.41**	**286**	*e*	Sg		Sn	21 21 54.7	+61
KROS					A			21 22 05.9	
	6.0nm,0.6s								

*ISCJB **04** 21:28:44.8±0.9, 55.1S±02×129.0W±02, h10km, mb4.2/5, MS4.3/3, Error ellipse: s-maj=24.5km s-min=16.5km az=24.9*
*IDC **04** 21:28:45.3±0.9, 5506S×129.01W, h0km, mb4.1/4, mb1 4.3/4, mb1mx4.0/14, mbtmp4.1/4, MS4.3/3, Ms1 4.3/3, ms1mx4.0/19, Error ellipse: s-maj=41.8km s-min=26.3km az=165.0*
*NEIC **04** 21:28:46.9±0.5, 5504S×129.18W, h10km, mb4.5/2, Error ellipse: s-maj=19.0km s-min=15.1km az=139.0*

ISC 04 21:28:46.7±0.9, 551S±02×129.1W±02, h10km, (h16km±1.1km:pP-P), n26, s0°85/15, mb4.2/5, MS4.3/3, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.47**	**201**	*eP*			**P**	**21 35 09.5**	**+1.7**
	12nm,1.6s,mb4.5								
QSPA	**South Pole Qui**	**35.05**	**180**	P			**P**	**21 35 40.3**	**+1.2**
	2.8nm,0.7s,mb4.3,baz=121,slow=1.4,SNR=7.9								
QSPA						LR	LR	21 46 27.7	
	comp=Z,390nm,21.2s,MS4.1,baz=70,slow=30								
QSPA	**South Pole Qui**	**35.05**	**180**	*eP*			**P**	**21 35 39.8**	**+0.8**
	6.0nm,1.0s,mb4.5								
QSPA						LR	LR	21 46 27.7	
PPT	**Papeete**	**40.65**	**329**	LR		LR	LR	21 48 23.6	
	comp=Z,591nm,19.1s,MS4.5,baz=175,slow=29								
VNA3	**Neumayer Olymp**	**46.89**	**157**	*e*			**P**	**21 37 15.3**	**-1.2**
VNA3				*e*			pP	21 37 19.9	+0.3
VNA3				*e*				21 37 29.1	
VNA2	**Neumayer--Watz**	**47.63**	**158**	*e*			**P**	**21 37 21.5**	**-0.7**
	baz=225,slow=9.0								
VNA2				*e*			pP	21 37 26.2	+0.8
VNA2				*e*				21 37 35.9	
VNA1	**Neumayer--Stat**	**47.64**	**157**	*e*			**P**	**21 37 21.8**	**-0.5**
VNA1				*e*			pP	21 37 26.5	+1.0
CASY	**Casey**	**50.88**	**207**	P			**P**	**21 37 47.2**	**+0.1**
TAU	**Tasmania Unive**	**52.98**	**246**	P			**P**	**21 38 02.3**	**-0.8**
LPAZ	**La Paz**	**60.25**	**75**	P			**P**	**21 38 55.8**	**+0.8**
	6.3nm,1.1s,mb4.6,baz=194,slow=3.0,SNR=11								
STKA	**Stephens Creek**	**64.17**	**251**	P			**P**	**21 39 19.8**	**-1.4**
CTAO	**Charters Tower**	**70.77**	**262**	P			**P**	**21 40 03.1**	**0.0**
ASAR	**Alice Springs**	**74.80**	**251**	P			**P**	**21 40 28.0**	**+1.0**
	1.1nm,0.8s,mb3.8,baz=147,slow=5.5,SNR=11								
WRA	**Warramunga Arr**	**77.56**	**253**	P			**P**	**21 40 43.0**	**+0.2**
	0.9nm,0.9s,mb3.7,baz=142,slow=5.1,SNR=11								
PMG	**Port Moresby**	**78.80**	**270**	P			**P**	**21 40 49.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**83.77**	**247**	*eP*			**P**	**21 41 15.9**	**-0.2**
BOSA	**Boshof**	**93.73**	**158**	LR		LR	LR	22 21 33.0	
	comp=Z,136nm,19.2s,MS4.4,baz=155,slow=34								
MCK	**McKinley**	**119.52**	**350**	PKPdf		PKPdf	PKPdf	21 47 34.5	-0.4
MAJO	**Matsushiro**	**120.49**	**291**	PKPdf		PKPdf	PKPdf	21 47 38.5	+0.8
TORD	**Torodi Ar. Bea**	**123.38**	**118**	PKP		PKPdf	PKPdf	21 47 42.2	-1.7
	0.6nm,1.1s,baz=199,slow=3.1,SNR=2.6								
YSS	**Yuzh-Sakhalins**	**125.73**	**302**	PKPdf		PKPdf	PKPdf	21 47 46.8	-0.6
ULN	**Ulaanbaatar**	**145.17**	**282**	*e*PKP		PKPdf	PKPdf	21 48 23.5	+0.1
SONM	**Songino Array**	**145.53**	**281**	PKPbc		PKPbc	PKPbc	21 48 24.7	+0.6
	1.7nm,0.7s,baz=136,slow=3.5,SNR=16								
GERES	**GERESS Array B**	**156.43**	**90**	PKP		PKPdf	PKPdf	21 48 42.7	+2.1
	0.4nm,0.7s,baz=174,slow=3.9,SNR=4.5								
MK31	**Makanchi Array**	**158.72**	**260**	*e*PKPdf		PKPdf	PKPdf	21 48 42.7	-0.8
ZALV	**Zalesovo Beam**	**160.42**	**281**	PKPab		PKPab	PKPab	21 49 25.4	-1.0
	0.4nm,0.4s,baz=122,slow=5.2,SNR=3.6								

*ISCJB **04** 21:36:57.2±0.3, 33.14N±001×109.34W±002, h0km, Error ellipse: s-maj=2.8km s-min=2.1km az=0.6*
*IDC **04** 21:36:59.0±3.1, 3280N×109.69W, h0km, mb1 3.2/2, mb1mx3.1/21, mbtmp2.9/2, ML2.9/2, Error ellipse: s-maj=39.4km s-min=16.4km az=65.0*
*NEIC **04** 21:37:01.8±1.7, 3287N×109.43W, h0km, ML2.9, Error ellipse: s-maj=28.3km s-min=12.6km az=46.0, Suspected Mining explosion.*
NEIC 25 km [15 miles] SSW of Clifton.

ISC 04 21:36:58.3±0.3, 3313N±001×109.38W±002, h0km, n46, s19°19/81, 33C-19D, Eastern Arizona

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
Z19A	**T-Link Ranch,**	**0.19**	**29**	⇑P			Pg	**21 37 03.3**	**+1.4**
	baz=0.2,SNR=163								
Z19A				⇓S			Sg	21 37 06.5	+2.1
	baz=0.2								
119A	**Ashpeak Ranch,**	**0.36**	**170**	⇑P			Pg	**21 37 06.2**	**+1.0**
	baz=0.4,SNR=140								
119A				⇓S			Sg	21 37 11.4	+1.5
	baz=0.4								
Z18A	**Geronimo**	**0.56**	**266**	⇓P			Pg	21 37 10.5	+1.5
	baz=0.6,SNR=21								
Z18A				⇑S			Sg	21 37 18.8	+2.6
	baz=0.6								
118A	**Homack Ranch,**	**0.70**	**226**	⇓P			Pg	21 37 12.5	+0.8
	baz=0.7,SNR=99								
Y19A	**Nutrioso**	**0.84**	**7**	⇑P			Pg	21 37 14.7	+0.3
	baz=0.8,SNR=27								
Y18A	**Canyon Day Jun**	**0.85**	**320**	⇑P			Pg	21 37 15.1	+0.5
	baz=0.9,SNR=36								
Y18A				⇑S			Sg	21 37 26.6	+0.9
	baz=0.9								
Z17A	**San Carlos Hig**	**0.94**	**281**	⇓P			Pg	21 37 16.8	+0.5
	baz=1.0,SNR=7.4								
Z17A				⇓S			Sg	21 37 30.0	+1.6
	baz=1.0								
219A	**White Tail Can**	**1.13**	**175**	⇓P			Pg	21 37 19.2	-0.7
	baz=1.1,SNR=26								
219A				⇑S			Sg	21 37 34.8	+0.3
	baz=1.1								
117A	**Oracle**	**1.27**	**245**	⇑Pb			Pb	21 37 22.7	-0.5
	baz=1.3,SNR=43								
218A	**Dragoon**	**1.28**	**206**	⇑Pb			Pb	21 37 22.1	-1.2
	baz=1.3,SNR=7.2								
218A				⇓S			Sg	21 37 38.8	-0.6
	baz=1.3								
X19A	**St. Johns**	**1.30**	**3**	⇑Pg			Pg	21 37 23.9	+0.7
	baz=1.3,SNR=25								
X19A				⇓S			Sg	21 37 39.3	-0.8
	baz=1.3								
Y17A	**Roosevelt**	**1.35**	**295**	⇑Pg			Pg	21 37 25.0	+0.8
	baz=1.4,SNR=135								
Y17A				⇓S			Sg	21 37 41.4	-0.5
	baz=1.4								
X18A	**Snowflake**	**1.48**	**341**	⇑Pg			Pg	21 37 27.1	+0.4
	baz=1.5,SNR=35								
X18A				⇑Sn			Sn	21 37 44.0	-2.2
	baz=1.5								
X18A				⇓Sb			Sb	21 37 45.5	-0.5
	baz=1.5								
Z16A	**Peralta Trail,**	**1.73**	**278**	⇑Sb			Sb	21 37 53.5	+0.2
	baz=1.8								
319A	**Douglas**	**1.75**	**177**	⇑Pb			Pb	21 37 30.0	-1.2
	baz=1.7,SNR=9.5								
319A				⇑Sb			Sb	21 37 52.9	-0.8
	baz=1.7								
319A				⇑Sg			Sg	21 37 56.3	+1.9
	baz=1.7								
318A	**Bisbee**	**1.76**	**197**	⇑Pb			Pb	21 37 29.8	-1.6
	baz=1.8,SNR=20								
318A				⇑Sn			Sn	21 37 51.0	-2.1
	baz=1.8								
217A	**Green Valley**	**1.82**	**223**	⇑Sb			Sb	21 37 55.6	0.0
	baz=1.8								
Y16A	**Circle Bar Ran**	**1.91**	**294**	⇑Sb			Sb	21 37 58.9	+0.4
	baz=1.9								
W19A	**Sanders**	**1.98**	**360**	⇓Pb			Pb	21 37 34.6	-0.6
	baz=2.0,SNR=9.8								
W19A				⇓Sn			Sn	21 37 56.1	-2.5
	baz=2.0								
W18A	**Petrified Fore**	**2.01**	**352**	⇑Sb			Sb	21 38 01.2	-0.1
	baz=2.0								
116A	**Eloy**	**2.04**	**255**	⇓Sn			Sn	21 37 57.8	-2.2
	baz=2.1								
X16A	**Lo Mia Camp, P**	**2.15**	**307**	⇓Pn			Pn	21 37 33.8	-1.6
	baz=2.2								
X16A				⇓Pb			Pb	21 37 37.0	-1.1
	baz=2.2								
X16A				⇑Pg			Pg	21 37 39.9	+

SKJI	**Sukabumi**	**0.74**	**43**	S		Sg	21 57 06.2	+0.6
DBJI	**Dramaga**	**1.21**	**35**	S		Pg	21 57 03.3	-1.7
DBJI	**Dramaga**	**1.21**	**35**	S		Pn	21 57 03.2	-2.1
DBJI	**Dramaga**	**1.21**	**35**	P		Pg	21 57 03.4	-1.6
CBJI	**Citeko**	**1.38**	**35**	P		Pn	21 57 03.1	-4.4
CBJI	**Citeko**	**1.38**	**35**	S		Pn	21 57 03.0	-4.5
CBJI	**Citeko**	**1.38**	**35**	P		Pn	21 57 03.7	-3.8
SBJI	**Serang**	**1.42**	**3**	P		Pn	21 57 07.1	-1.1
SBJI	**Serang**	**1.42**	**3**	S		Pn	21 57 07.0	-1.2
SBJI	**Serang**	**1.42**	**3**	P		Pn	21 57 07.1	-1.1
SBJI	**Serang**	**1.42**	**3**	S		Sb	21 57 26.5	-0.7
LEM	**Lembang**	**1.71**	**65**	S		Pn	21 57 12.3	+0.1

*ISCJB **04** 22:17:46.2±0.4, 287.5±004.4×14128E±008, h10km, mb4.3/20, MS4.2/5, Error ellipse: s-maj=11.3km s-min=5.3km az=9.9*

*IDC **04** 22:17:46.8±0.9, 289.5×14125E, h0km, mb4.0/7, mb1 4.3/10, mb1mx4.2/16, mbtmp4.2/10, ML4.4/3, MS4.0/7, Ms1 4.0/7, ms1mx3.4/30, Error ellipse: s-maj=27.5km s-min=11.2km az=100.0*

*BJI **04** 22:17:47.5, 290.5×14130E, h7km, mB5.1, mb4.7, Ms4.5, Msz4.3*

*NEIC **04** 22:17:47.5±2.9, 289.5×14128E, h8km±18km, mb4.6/15, Error ellipse: s-maj=7.6km s-min=5.0km az=92.0*

ISC 04 22:17:46.8±3.3, 291.5E±004×14131E±008, h4km±20km, n53, σ0.76/46, mb4.3/20, MS4.2/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**13.11**	**222**			Pn	22 20 44.4	
	35nm,0.6s							
GUMO	**Guam**	**16.76**	**12**	LR		LR	22 27 21.0	
	comp=Z,212nm,20.6s,baz=288,slow=34							
GUMO	**Guam**	**16.76**	**12**	*e*Pn		**Pn**	**22 21 42.5**	**-0.2**
	115nm,1.0s							
CTA	**Charters Tower**	**17.75**	**165**	P		**Pn**	**22 22 00.2**	**+5.2**
	0.2nm,0.3s,baz=302,slow=14,SNR=3.0							
CTA				LR		LR	22 29 18.1	
	comp=Z,524nm,19.2s,baz=29,slow=39							
CTA	**Charters Tower**	**17.75**	**165**	P		**Pn**	**22 22 00.2**	**+5.2**
CTA				LR		LR	22 29 18.1	
CTAO	**Charters Tower**	**17.75**	**165**	*e*Pn		**Pn**	**22 21 55.8**	**+0.8**
	4.8nm,1.0s							
WRAB	**Tennant Creek**	**18.24**	**201**	*e*P		**Pn**	**22 22 01.8**	**+0.7**
	10nm,0.6s							
WRAB				*e*S		**Sn**	**22 25 23.2**	**-1.9**
WB2	**Warramunga Arr**	**18.24**	**201**	*e*P		**Pn**	**22 22 02.2**	**+1.1**
WB2				*e*S		**Sn**	**22 25 25.1**	**-0.2**
WRA	**Warramunga Arr**	**18.25**	**201**	P		**Pn**	**22 22 01.4**	**+0.2**
	0.4nm,0.3s,baz=32,slow=12,SNR=19							
WRA				S		**Sn**	**22 25 27.4**	**+2.0**
	0.1nm,0.3s,baz=20,slow=23,SNR=3.9							
DAV	**Davao City (W)**	**18.56**	**302**	*e*P		**Pn**	**22 22 04.8**	**-0.3**
BATI	**Baumata**	**18.96**	**247**	P		**Pn**	**22 22 09.2**	**-0.7**
	2.5nm,0.3s,baz=80,slow=11,SNR=3.6							
HNR	**Honiara**	**19.63**	**110**	P		**Pn**	**22 22 17.3**	**-0.6**
	9.6nm,0.3s,baz=204,slow=12,SNR=4.9							
HNR	**Honiara**	**19.63**	**110**	*e*P		**Pn**	**22 22 16.8**	**-1.2**
	57nm,0.8s							
FITZ	**Fitzroy Crossi**	**21.54**	**224**	P		**P**	**22 22 36.5**	**-0.8**
ASAR	**Alice Springs**	**21.85**	**199**	P		**P**	**22 22 39.6**	**-1.0**
	2.7nm,0.7s,mb3.8,baz=32,slow=9.4,SNR=23							
MBWA	**Marble Bar**	**27.75**	**227**	*e*P		**P**	**22 23 36.9**	**0.0**
	14nm,1.1s,mb4.5							
STKA	**Stephens Creek**	**28.82**	**179**	LR		LR	22 36 09.2	
	comp=Z,155nm,21.2s,MS3.6,baz=16,slow=38							
STKA	**Stephens Creek**	**28.82**	**179**	P		**P**	**22 23 47.0**	**+0.8**
NACB	**Ninganchiao**	**33.05**	**326**	*e*P		**P**	**22 24 24.0**	**+0.4**
NWAO	**Narrogin (SRO)**	**37.42**	**214**	LR		LR	22 41 42.4	
	comp=Z,417nm,18.8s,MS4.3,baz=174,slow=38							
NWAO	**Narrogin (SRO)**	**37.42**	**214**	*e*P		**P**	**22 25 00.8**	**-0.4**
	15nm,1.0s,mb4.8							
MJAR	**Matsushiro Arr**	**39.35**	**356**	P		**P**	**22 25 17.6**	**+0.2**
	0.3nm,0.3s,mb3.5,baz=195,slow=7.1,SNR=4.2							
MAJO	**Matsushiro**	**39.35**	**356**	P		**P**	**22 25 18.3**	**+0.9**
KSRS	**Korea Array**	**42.03**	**344**	P		**P**	**22 25 39.5**	**-0.1**
	1.3nm,0.7s,mb3.7,baz=156,slow=6.8,SNR=5.9							
CMAR	**Chiang Mai Arr**	**46.79**	**299**	P		**P**	**22 26 17.7**	**-0.3**
	0.6nm,0.3s,mb4.0,baz=116,slow=5.1,SNR=5.3							
CHTO	**Chiang Mai**	**46.93**	**299**	*e*P		**P**	**22 26 18.6**	**-0.4**
	3.5nm,1.2s,mb4.2							
XAN	**Xi'an**	**47.75**	**323**	P		**P**	**22 26 24.6**	**-0.6**
XAN				AMB		AMB		
	comp=Z,4.0nm,1.1s,mb4.4							
XAN				LR		LR		
	comp=N,127nm,24.9s							
XAN				LR		LR		
	comp=Z,298nm,34.3s							
GTA	**Gaotai**	**56.79**	**322**	*e*P		**P**	**22 27 33.5**	**+1.2**
GTA				AP		pP	22 27 37.8	+4.3
GTA				XP		sP	22 27 40.5	+6.6
GTA				AMB		AMB		
	comp=Z,12nm,1.0s,mb4.9							
ULN	**Ulaanbaatar**	**58.76**	**334**	*e*P		**P**	**22 27 46.1**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.2							
SONM	**Songino Array**	**59.03**	**333**	P		**P**	**22 27 49.6**	**+1.7**
	comp=Z,0.5nm,0.7s,mb3.7,baz=154,slow=7.7,SNR=3.1							
YAK	**Yakutsk**	**65.37**	**354**	*e*P		**P**	**22 28 30.4**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.7							
MK31	**Makanchi Array**	**71.54**	**322**	*e*P		**P**	**22 29 09.0**	**-0.1**
MKAR	**Makanchi Array**	**71.54**	**322**	P		**P**	**22 29 09.6**	**+0.5**
	comp=Z,4.8nm,1.0s,mb4.4,baz=103,slow=7.9,SNR=18							
ZAA0	**Zalesovo Array**	**73.42**	**329**	*e*P		**P**	**22 29 19.1**	**-1.0**
ZALV	**Zalesovo Beam**	**73.42**	**329**	P		**P**	**22 29 19.5**	**-0.6**
	comp=Z,3.1nm,0.7s,mb4.4,baz=121,slow=5.9,SNR=17							
ZALV	**Zalesovo Beam**	**73.42**	**329**	P		**P**	**22 29 19.5**	**-0.6**
TKM2	**Tokmak 2**	**74.48**	**316**	*e*P		**P**	**22 29 27.4**	**+0.8**
	comp=Z,1.9nm,0.5s,mb4.3							
KURK	**Kurchatov**	**75.38**	**324**	*e*P		**P**	**22 29 31.7**	**+0.1**
	comp=Z,3.1nm,0.6s,mb4.4							
EKS2	**Erkin-Say**	**75.66**	**315**	*e*P		**P**	**22 29 33.1**	**-0.3**
	comp=Z,2.3nm,0.9s,mb4.1							
KBL	**Kabul**	**77.13**	**306**	*e*P		**P**	**22 29 41.7**	**-0.2**
BRVK	**Borovoye**	**81.03**	**325**	P		**P**	**22 29 58.7**	**-4.2**
CHUM	**Lake Minchumin**	**82.42**	**24**	*e*P		**P**	**22 30 10.1**	**+0.1**
	comp=Z,19nm,1.0s,mb5.0							
IMA2	**Indian Mountai**	**82.75**	**22**	*e*P		**P**	**22 30 11.4**	**-0.3**
MCK	**McKinley**	**83.76**	**25**	*e*P		**P**	**22 30 16.0**	**-1.0**
	comp=Z,14nm,1.2s,mb5.0							
COLA	**College**	**84.58**	**24**	P		**P**	**22 30 21.0**	**-0.1**
QSPA	**South Pole Qui**	**87.04**	**180**	LR		LR	23 09 31.9	
	comp=Z,131nm,20.4s,MS4.3,baz=169,slow=36							
QSPA	**South Pole Qui**	**87.04**	**180**	*e*P		**P**	**22 30 33.9**	**+0.8**
	comp=Z,5.6nm,1.2s,mb4.7							
DAWY	**Dawson**	**87.92**	**26**	*e*P		**P**	**22 30 37.6**	**0.0**
YBH	**Yreka Blue Hor**	**96.39**	**49**	LR		LR	23 06 27.8	
	comp=Z,144nm,21.3s,MS4.4,baz=17,slow=30							
SPITS	**Spitsbergen Ar**	**99.62**	**350**	LR		LR	23 14 18.8	
	comp=Z,74nm,19.3s,MS4.2,baz=45,slow=34							
TORD	**Torodi Ar. Bea**	**139.80**	**287**	PKP		PKPdf	22 37 16.8	+1.3
	comp=Z,0.5nm,0.7s,baz=70,slow=1.6,SNR=4.0							
LPAZ	**La Paz**	**145.22**	**124**	PKPbc		PKPbc	22 37 27.9	+1.4
	comp=Z,1.1nm,0.6s,baz=230,slow=4.2,SNR=5.1							
DBIC	**Dimbokro**	**146.08**	**278**	PKPbc		PKPbc	22 37 29.6	+0.2
	comp=Z,2.4nm,0.7s,baz=45,slow=1.4,SNR=5.8							

MAN 04 22:35:56, 1347N×12149E, h12km, mb3.9, ML2.7, MS2.3, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GQP	**Guinayangan**	**1.02**	**65**	*e*P		Pb	22 36 16.0	+0.3
GQP				*e*S		Sb	22 36 27.0	-2.0
SJMP	**San Jose**	**1.07**	**200**	*e*P		Pb	22 36 17.6	+1.2
AUQP	**San Andres**	**1.16**	**97**	*e*P		Pb	22 36 21.6	+3.6
OTRP	**Odiongan**	**1.22**	**155**	*e*P		Pn	22 36 17.1	-1.7
OTRP				*e*S		Sb	22 36 36.7	+2.0
LUBP	**Lubang**	**1.24**	**282**	*e*P		Pn	22 36 18.5	-0.6
LUBP				*e*S		Sb	22 36 37.0	+1.7
POLP	**Polilio Island**	**1.32**	**19**	*e*P		Pn	22 36 19.5	-0.7
BALP	**Baler**	**2.25**	**2**	*e*P		Pn	22 36 35.1	+2.0

IDC 04 22:36:36.7±0.9, 2031N×11935E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/18, mbtmp3.6/9, ML4.6/1, Error ellipse: s-maj=27.6km s-min=19.1km az=71.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	**Korea Array**	**18.64**	**22**	P		Pn	22 40 49.2	-6.9
	0.3nm,0.3s,baz=200,slow=11,SNR=5.5							
CMAR	**Chiang Mai Arr**	**19.34**	**268**	P		Pn	22 41 02.9	-2.0
	0.7nm,0.3s,baz=91,slow=9.0,SNR=7.3							
MJAR	**Matsushiro Arr**	**23.09**	**42**	P		P	22 41 43.1	-1.0
	0.5nm,0.3s,baz=240,slow=15,SNR=4.8							
SONM	**Songino Array**	**29.39**	**342**	P		P	22 42 40.3	-1.2
	0.3nm,0.7s,baz=153,slow=7.6,SNR=3.5							
MKAR	**Makanchi Array**	**40.06**	**320**	P		P	22 44 14.7	+1.1
	0.3nm,0.6s,baz=113,slow=11,SNR=2.5							
WRA	**Warramunga Arr**	**42.61**	**159**	P		P	22 44 34.3	-0.5
	1.5nm,0.9s,baz=342,slow=8.8,SNR=5.5							
ZALV	**Zalesovo Beam**	**42.66**	**330**	P		P	22 44 35.4	+0.6
	0.5nm,0.4s,baz=111,slow=7.0,SNR=4.9							
PETK	**Petropavlovsk-**	**44.02**	**33**	P		P	22 44 46.7	+0.8
	3.3nm,0.9s,baz=218,slow=9.1,SNR=3.5							
ASAR	**Alice Springs**	**45.96**	**161**	P		P	22 45 02.0	+0.4
	0.1nm,0.3s,baz=348,slow=8.5,SNR=3.0							
GERES	**GERESS Array B**	**84.73**	**320**	P		P	22 49 12.7	0.0
	0.1nm,0.4s,baz=64,slow=4.5,SNR=3.7							

*IDC **04** 22:39:39.5±28.0, 049S×9847E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.8/4, Error ellipse: s-maj=575.8km s-min=73.9km az=5.0*

*DJA **04** 22:39:52.7±0.0, 0.50N×9839E, h79km*

*ISCJB **04** 22:39:53.2±1.2, 05N±02×984E±0.1, h70km±9km, mb3.8/4, Error ellipse: s-maj=34.7km s-min=8.3km az=38.1*

ISC 04 22:39:54.2±1.1, 05N±02×984E±01, h59km±10km, n10, σ0.73/10, mb4.0/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.16**	**312**	P		**Pn**	**22 40 14.0**	**-0.4**
GSI	**Gunungsitoli**	**1.16**	**312**	S		**Sn**	**22 40 29.9**	**+0.5**
TRSI	**Tarutung**	**1.59**	**19**	P		**Pn**	**22 40 19.9**	**-0.2**
PPI	**Padang Panjang**	**2.19**	**116**	P		**Pn**	**22 40 27.0**	**-1.2**
PPI	**Padang Panjang**	**2.19**	**116**	S		**Sn**	**22 40 55.5**	**+1.4**
PDSI	**Padang**	**2.47**	**125**	P		**Pn**	**22 40 31.8**	**-0.3**
KSRS	**Korea Array**	**45.73**	**33**	P		**P**	**22 48 08.7**	**-1.0**
	1.2nm,0.7s,mb4.0,baz=221,slow=9.1,SNR=4.1							
SONM	**Songino Array**	**47.64**	**7**	P		**P**	**22 48 25.1**	**+0.7**
	0.5nm,0.4s,mb3.9,baz=193,slow=8.7,SNR=7.1							
MKAR	**Makanchi Array**	**48.21**	**345**	P		**P**	**22 48 29.3**	**+0.5**
	1.3nm,0.6s,mb4.1,baz=158,slow=8.5,SNR=12							
ZALV	**Zalesovo Beam**	**54.43**	**350**	P		**P**	**22 49 15.4**	**+0.1**
	0.5nm,0.3s,mb3.9,baz=177,slow=5.3,SNR=5.8							

*CSEM **04** 22:50:49.4, 3688N×2928E, h20km, ML3.5, After ERD*

DDA 04 22:50:49.4, 3688N×2928E, h20km±1km, Md3.2, Ml3.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GOLH	**Golhisar**	**0.42**	**32**	*i* P		Pb	22 50 57.3	-0.9
GOLH				*i* S		Sg	22 51 05.5	+1.4
AYDN	**Tasoluk**	**1.36**	**305**	*i* P		Pn	22 51 15.2	+1.9
AYDN				*i* S		Sn	22 51 34.5	+3.7
TKTP	**Tekketepe**	**1.42**	**35**	*i* P		Pn	22 51 17.1	+2.9
BDRM	**Kayabasi**	**1.48**	**278**	*i* P		Pn	22 51 17.6	+2.6
BDRM				*i* S		Sn	22 51 38.9	+5.2
KHAL	**Karahalli**	**1.50**	**6**	*i* P		Pn	22 51 17.2	+2.0
KHAL				*i* S		Sn	22 51 39.3	+5.2
MANT	**Manisa**	**1.71**	**341**	*i* P		Pn	22 51 20.0	+1.9
MANT				*i* S		Sg	22 51 49.7	+5.1
GCAM	**G?zelcaml?**	**1.83**	**297**	*i* P		Pn	22 51 22.5	+2.8
GCAM				*i* S		Sn	22 51 46.0	+3.8
DEMI	**Demirci**	**2.21**	**348**	*i* P		Pn	22 51 27.2	+2.3
DEMI				*i* S		Sn	22 51 58.6	+7.0
KDAG	**Bornova**	**2.21**	**314**	*i* P		Pn	22 51 27.2	+2.3
KDAG				*i* S		Sn	22 51 57.3	+5.7
KDAG	**Bornova**	**2.21**	**314**	*i* P		Pn	22 51 27.2	+2.3
KDAG				*i* S		Sn	22 51 57.3	+5.7
GDZ	**Gediz**	**2.21**	**4**	*i* P		Pn	22 51 27.7	+2.7
GDZ				*i* S		Sn	22 51 57.4	+5.6
KDHN	**Kadinhani**	**2.78**	**53**	*i* P		Pn	22 51 36.4	+3.6
ERMK	**Ermenek**	**2.92**	**94**	*i* P		Pn	22 51 41.5	+6.7
ERMK				*i* S		Sg	22 52 21.9	-1.5

*NOU **04** 22:56:37.2±1.2, 1556S×16856E, h30km, MD3.6, ML4.2*

*MOS **04** 22:56:43.6±1.8, 1599S×16767E, h140km, mb4.8/13, Error ellipse: s-maj=11.8km s-min=9.6km az=32.2*

*NEIC **04** 22:56:43.9±1.7, 1604S×16781E, h142km±14km, mb5.0/17, Error ellipse: s-maj=11.3km s-min=9.7km az=69.0*

*GCMT **04** 22:56:43.9±0.2, 1616S×16773E, h179km±2km, MW5.2/85, Moment Tensor Solution. s49,c67; s85,c137; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.52±.16; Mθθ 1.67±.18; Mϕϕ -3.19±.18; Mre -1.56±.14; Mrθ 3.17±.18; Mrϕ -5.41±.14; Best double couple: Mo 7.02500×10^16 NP1: ϕs 192.00000°, δ 35.00000°, λ 13.00000°. NP2: ϕs 192.00000°, δ 82.00000°, λ 124.00000°. Principal axes: T 6.9140, Plg 43.0000°, Azm 135.0000°; N 0.2230, Plg 33.0000°, Azm 7.0000°; P -7.1360, Plg 29.0000°, Azm 256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **04** 22:56:45.6±0.3, 1610S±003×16783E±005, h176km, mb4.9/56 Error ellipse: s-maj=7.2km s-min=4.6km az=179.7*

*LDG **04** 22:56:45.7±0.2, 1584S×16738E, h150km, Mb4.7/4, Error ellipse: s-maj=23.7km s-min=8.5km az=92.0*

*IDC **04** 22:56:46.8±0.6, 1612S×16782E, h171km±3km, mb4.4/19, mb1 4.5/19, mb1mx4.4/22, mbtmp4.4/19, MS3.9/2, Ms1 3.9/2, ms1mx3.0/26, Error ellipse: s-maj=11.9km s-min=10.6km az=118.0*

*BJI **04** 22:56:56.9, 1547S×16755E, h249km, mB5.0, mb4.6*

*DJA **04** 22:56:57, 1639S×16740E, h249km, Mw5.3/13*

ISC 04 22:56:47.2±0.3, 1614S±003×16788E±005, h178km, h178km±3.1km:pP-P, n271, σ0.97/131, mb4.9/56, 12C-14D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.05**	**193**	*e*P		**Pn**	**22 58 13.0**	**-1.9**
DZM				*e*S		**Sn**	**22 59 24.5**	**+0.6**
DZM				AMP			22 59 25.3	
	comp=Z,1μm,2.6s							
DZM	**Mont Dzumac**	**6.05**	**193**	*e*Pn		**Pn**	**22 58 13.2**	**-1.7**
DZM				*e*S		**Sn**	**22 59 18.4**	**-5.5**
NOUC	**Port Laguerre**	**6.11**	**194**	*e*P		**Pn**	**22 58 14.3**	**-1.3**
NOUC				*e*S		**Sn**	**22 59 26.5**	**+1.2**
NOUC				AMP			22 59 29.8	
	comp=Z,27nm,0.7s							
ONTRN	**Noumea**	**6.28**	**192**	*e*P		**Pn**	**22 58 17.2**	**-0.6**
ONTRN				AMP			22 58 42.5	
	comp=Z,2μm,1.0s							
ONTRN				*e*S		**Sn**	**22 59 30.2**	**+0.9**
HNR	**Honiara**	**10.21**	**310**	P		**Pn**	**22 59 10.9**	**+1.3**
	comp=Z,32nm,0.3s,baz=194,slow=6.6,SNR=8.0							
HNR				S		**Sn**	**23 01 06.3**	**+3.0**
	comp=Z,19nm,0.3s,baz=170,slow=23,SNR=2.9							
HNR				LR		LR	23 02 34.2	
	comp=Z,671nm,21.9s,baz=227,slow=34							
HNR	**Honiara**	**10.21**	**310**	*e*Pn		**Pn**	**22 59 04.7**	**-4.9**
	comp=Z,226nm,0.9s							
HNR				*e*Sn		**Sn**	**23 00 59.1**	**-4.2**
HNR	**Honiara**	**10.21**	**310**	*e*P		**Pn**	**22 59 04.7**	**-4.9**
HNR				*e*			23 00 59.1	
HNR				pmax		pmax		
	comp=Z,226nm,0.9s							
EIDS	**Eidsvold**	**18.18**	**237**	*e*P		**P**	**23 00 47.8**	**+1.3**
	comp=Z,435nm,0.9s							
ARMA	**Armidale**	**20.57**	**223**	*e*P		**P**	**23 01 13.1**	**+0.8**
	comp=Z,1.3nm,1.1s							
CTA	**Charters Tower**	**20.92**	**256**	P		**P**	**23 01 16.1**	**0.0**
	comp=Z,74nm,0.9s,baz=78,slow=12,SNR=52							
CTA				SCP		ScP	23 08 36.9	+0.2
	comp=Z,4.1nm,0.8s,baz=345,slow=2.9,SNR=5.0							
CTAO	**Charters Tower**	**20.92**	**256**	*e*P		**P**	**23 01 16.2**	**+0.1**
	comp=Z,96nm,0.9s							
CTAO	**Charters Tower**	**20.92**	**256**	*e*P		**P**	**23 01 16.2**	**+0.1**
CTAO				pmax		pmax		
	comp=Z,96nm,0.9s							
CTAO	**Charters Tower**	**20.92**	**256**	P		**P**	**23 01 16.2**	**+0.1**
	comp=Z,136nm,1.6s,comp=Z,1μm							
PMG	**Port Moresby**	**21.28**	**286**	*e*P		**P**	**23 01 20.4**	**+0.5**
PMG	**Port Moresby**	**21.28**	**286**	*d* iP		**P**	**23 01 20.2**	**+0.3**
PMG	**Port Moresby**	**21.28**	**286**	P		**P**	**23 01 20.3**	**+0.4**
	comp=Z,234nm,1.0s,comp=Z,2μm,mb5.5							
URZ	**Urewera**	**23.48**	**162**	P		**P**	**23 01 41.0**	**+0.3**
	comp=Z,68nm,1.1s,mb5.0,baz=66,slow=3.3,SNR=8.9							
COEN	**Coen**	**23.95**	**272**	*e*P		**P**	**23 01 44.9**	**-0.5**
	comp=Z,142nm,1.1s,mb5.4							
COEN	**Coen**	**23.95**	**272**	P		**P**	**23 01 45.1**	**-0.2**
	comp=Z,161nm,1.2s,comp=Z,1μm,mb5.4							
SNZO	**South Karori**	**25.77**	**168**	*e*P		**P**	**23 02 02.5**	**+1.1**
RPZ	**Rata Peaks**	**27.62**	**175**	P		**P**	**23 02 18.5**	**+0.5**
	comp=Z,37nm,0.7s,mb5.2,baz=228,slow=2.0,SNR=13							
STKA	**Stephens Creek**	**28.56**	**232**	P		**P**	**23 02 26.9**	**+0.4**
	comp=Z,27nm,0.9s,mb5.0,baz=56,slow=7.2,SNR=29							
STKA				ScP		ScP	23 08 58.7	+0.8
	comp=Z,4.0nm,0.8s,baz=330,slow=9.3,SNR=5.2							
STKA	**Stephens Creek**	**28.56**	**232**	*e*P		**P**	**23 02 26.3**	**-0.2**
	comp=Z,32nm,0.9s,mb5.0							
STKA				*e*		pP	23 03 05.4	+2.2
WB2	**Warramunga Arr**	**32.07**	**258**	*e*P		**P**	**23 02 56.0**	**-1.6**
WB2				*e*S		**S**	**23 07 58.0**	**+1.5**
WRAB	**Tennant Creek**	**32.08**	**258**	P		**P**	**23 02 56.3**	**-1.2**
	comp=Z,247nm,1.0s,mb5.9,SNR=19							
WRAB	**Tennant Creek**	**32.08**	**258**	*e*P		**P**	**23 02 55.7**	**-1.8**
	comp=Z,40nm,0.9s,mb5.1							
WRAB	**Tennant Creek**	**32.08**	**258**	*d* iP		**P**	**23 02 55.8**	**-1.7**
WRAB	**Tennant Creek**	**32.08**	**258**	P		**P**	**23 02 56.4**	**-1.1**
	comp=Z,61nm,1.5s,comp=Z,664nm,mb5.1							
WRA	**Warramunga Arr**	**32.09**	**258**	P		**P**	**23 02 56.0**	**-1.6**
	comp=Z,27nm,0.8s,mb5.0,baz=88,slow=8.4,SNR=105							
WRA				pP		pP	23 03 34.5	-0.3
	comp=Z,5.1nm,0.7s,baz=88,slow=9.2,SNR=2.5							
WRA				S		**S**	**23 07 57.3**	**+0.5**
	comp=Z,4.6nm,1.1s,baz=80,slow=15,SNR=5.5							
WRA				ScP		ScP	23 09 11.5	+1.9
	comp=Z,7.9nm,1.1s,baz=87,slow=3.6,SNR=18							
WRA	**Warramunga Arr**	**32.09**	**258**	P		**P**	**23 02 56.0**	**-1.6**
WRA				S		**S**	**23 07 57.3**	**+0.5**
ASAR	**Alice Springs**	**32.75**	**251**	P		**P**	**23 03 02.6**	**-0.8**
	comp=Z,150nm,0.8s,mb5.8,baz=79,slow=9.1,SNR=786							
ASAR				pP		pP	23 03 39.9	-0.7
	comp=Z,20nm,0.9s,baz=77,slow=10,SNR=2.8							
ASAR				ScP		ScP	23 09 13.7	+1.7
	comp=Z,10.0nm,1.0s,baz=100,slow=3.1,SNR=27							
FORT	**Forrest**	**39.11**	**241**	*e*P		**P**	**23 03 55.5**	**-1.8**
	comp=Z,8.5nm,0.7s,mb4.5							
FITZ	**Fitzroy Crossi**	**40.36**	**261**	*e*P		**P**	**23 04 06.1**	**-1.7**
TBI	**Tubuai**	**40.67**	**107**	*e*LR		LR	23 15 50.5	
	comp=Z,165nm,26.2s							
PPT	**Papeete**	**40.68**	**98**	*e*LR		LR	23 15 58.9	
	comp=Z,215nm,26.5s							
AAI	**Ambon**	**40.91**	**283**	P		**P**	**23 04 13.1**	**+0.7**
	comp=Z,80nm,1.4s,mb5.2							
LBMI	**Labuha**	**42.68**	**287**	P		**P**	**23 04 27.9**	**+1.1**
	comp=Z,100nm,1.2s,comp=Z,1μm,mb5.3							
BATI	**Baumata**	**43.39**	**272**	P		**P**	**23 04 32.6**	**+0.1**
	comp=Z,135nm,0.9s,mb5.6,baz=294,slow=0.2,SNR=27							
BATI	**Baumata**	**43.39**	**272**	P		**P**	**23 04 33.3**	**+0.8**
	comp=Z,117nm,1.1s,comp=Z,906nm,mb5.5							
MBWA	**Marble Bar**	**45.76**	**256**	*e*P		**P**	**23 04 51.2**	**0.0**
	comp=Z,121nm,0.8s,mb5.6							
MBWA	**Marble Bar**	**45.76**	**256**	P		**P**	**23 04 51.1**	**-0.1**
	comp=Z,211nm,1.0s,comp=Z,1μm,mb5.7							
KDI	**Kendari**	**46.07**	**280**	P		**P**	**23 04 53.4**	**-0.2**
	comp=Z,21nm,1.6s,comp=Z,832nm,mb4.5							
KAPI	**Kappang**	**48.47**	**278**	P		**P**	**23 05 11.6**	**-0.6**
	comp=Z,448nm,1.0s,mb6.0,SNR=16							
KAPI	**Kappang**	**48.47**	**278**	P		**P**	**23 05 11.3**	**-0.9**
	comp=Z,59nm,0.9s,mb5.2,baz=113,slow=4.7,SNR=39							
KAPI	**Kappang**	**48.47**	**278**	*e*P		**P**	**23 05 11.0**	**-1.2**
KAPI	**Kappang**	**48.47**	**278**	P		**P**	**23 05 11.1**	**-1.1**
	comp=Z,103nm,1.2s,comp=Z,890nm,mb5.3							
NWAO	**Narrogin (SRO

HHC				AP	pP		23 09 19.4	+16	
HHC				XP	sP		23 09 43.1	+20	
HHC				S	S		23 17 51.9	-2.4	
HHC				SKS			23 18 06.2		
HHC				XS	sS		23 19 28.3	+19	
				AMB	AMB				
	comp=Z,10.0nm,0.7s,mb4.5								
HHC				AMB	AMB				
	comp=Z,150nm,11.9s								
CD2	**Chengdu**	**77.33**	**308**	*e*P	**P**		**23 08 23.9**	**+1.5**	
CD2				AP	pP		23 09 18.9	+13	
CD2				PP	PP		23 11 23.7	+4.3	
CD2				S	S		23 17 53.2	-4.8	
CD2				XS	sS		23 19 26.8	+14	
CD2				AMB	AMB				
	comp=Z,10.0nm,1.2s,mb4.3								
CD2				AMB	AMB				
	comp=Z,50nm,8.2s								
HIA	**Hailar**	**77.80**	**330**	*i* P	**P**		**23 08 25.0**	**+0.5**	
LZH	**Lanzhou**	**79.70**	**312**	*e*P	**P**		**23 08 36.0**	**+0.8**	
LZH				AP	pP		23 09 33.4	+15	
LZH				XP	sP		23 09 57.9	+20	
LZH				PP	PP		23 11 42.1	+3.1	
LZH				*e*S	S		23 18 18.3	-4.6	
LZH				AMB	AMB				
	comp=Z,31nm,1.5s,mb4.7								
LZH				AMB	AMB				
	comp=Z,92nm,4.0s								
MAW	**Mawson**	**80.81**	**202**	P	**P**		**23 08 41.1**	**+0.5**	
	comp=Z,6.7nm,0.9s,mb4.3,baz=100,slow=7.2,SNR=10								
MAW	**Mawson**	**80.81**	**202**	*e*P	**P**		**23 08 40.7**	**+0.1**	
	comp=Z,112nm,2.2s,mb5.1								
MAW	**Mawson**	**80.81**	**202**	*e*P	**P**		**23 08 40.7**	**+0.1**	
MAW				pmax	pmax				
	comp=Z,112nm,2.2s								
YAK	**Yakutsk**	**83.54**	**343**	*e*P	**P**		**23 08 54.6**	**-0.2**	
	comp=Z,15nm,0.5s,mb5.0								
YAK	**Yakutsk**	**83.54**	**343**	*i* P	**P**		**23 08 54.7**	**0.0**	
YAK				pmax	pmax				
	comp=Z,17nm,0.7s,mb4.9								
ULN	**Ulaanbaatar**	**83.62**	**324**	*e*P	**P**		**23 08 56.5**	**+1.1**	
	comp=Z,4.3nm,0.9s,mb4.2								
ULN	**Ulaanbaatar**	**83.62**	**324**	⇑*i*P	**P**		**23 08 55.8**	**+0.4**	
BILL	**Bilibino**	**83.95**	**359**	*e*P	**P**		**23 08 56.3**	**-0.3**	
BILL	**Bilibino**	**83.95**	**359**	⇓*e*P	**P**		**23 08 56.0**	**-0.7**	
BILL				*e*'PP	pP		23 09 44.1	+3.5	
BILL				*e*			23 20 05.2		
BILL				*e*			23 20 54.2		
BILL				SS	SS		23 24 42.0	+4.2	
BILL				pmax	pmax				
	comp=Z,19nm,1.5s,mb4.6								
SONM	**Songino Array**	**83.97**	**323**	P	**P**		**23 08 58.0**	**+0.7**	
	comp=Z,4.0nm,1.1s,mb4.1,baz=129,slow=4.6,SNR=17								
SONM				pP	pP		23 09 39.2	-2.0	
	comp=Z,5.3nm,1.2s,baz=142,slow=4.1,SNR=5.3								
GTA	**Gaotai**	**84.06**	**314**	⇑P	**P**		**23 08 59.4**	**+1.5**	
GTA				S	S		23 19 04.3	-3.1	
GTA				AMB	AMB				
	comp=Z,9.0nm,1.3s,mb4.3								
GTA				AMB	AMB				
	comp=Z,124nm,5.1s								
GTA				LR	LR				
	comp=N,90nm,16.8s								
GTA				LR	LR				
	comp=E,60nm,17.7s								
GTA				LR	LR				
	comp=Z,68nm,16.8s								
PMR	**Palmer**	**84.63**	**19**	P	**P**		**23 09 01.1**	**+0.9**	
SHL	**Shillong**	**84.75**	**298**	⇓*i*P	**P**		**23 09 03.0**	**+1.3**	
SHL				*ex*	x		23 19 10.0		
CMB	**Columbia Colle**	**86.08**	**49**	*e*P	**P**		**23 09 08.0**	**0.0**	
	comp=Z,6.4nm,1.4s,mb4.2								
CMB	**Columbia Colle**	**86.08**	**49**	*e*P	**P**		**23 09 08.0**	**0.0**	
CMB				pmax	pmax				
	comp=Z,6.0nm,1.4s,mb4.1								
MCK	**McKinley**	**86.31**	**18**	*e*P	**P**		**23 09 09.2**	**+0.7**	
ISA	**Isabella**	**86.56**	**52**	*e*P	**P**		**23 09 10.5**	**+0.1**	
	comp=Z,14nm,1.6s,mb4.5								
ISA	**Isabella**	**86.56**	**52**	*e*P	**P**		**23 09 10.5**	**+0.1**	
ISA				pmax	pmax				
	comp=Z,14nm,1.6s,mb4.5								
LSA	**Lhasa**	**86.81**	**302**	P	**P**		**23 09 12.4**	**+0.7**	
LSA	**Lhasa**	**86.81**	**302**	*e*P	**P**		**23 09 11.5**	**-0.2**	
	comp=Z,13nm,1.1s,mb4.7								
LSA	**Lhasa**	**86.81**	**302**	*e*P	**P**		**23 09 11.5**	**-0.2**	
LSA				pmax	pmax				
	comp=Z,13nm,1.1s,mb4.7								
SYO	**Syowa Base**	**87.53**	**196**	⇑*e*P	**P**		**23 09 11.7**	**-2.8**	
SYO	**Syowa Base**	**87.53**	**196**	⇓*e*PcP	PcP		23 09 13.4	-2.9	
NVAR	**Mina Array Bea**	**87.74**	**49**	P	**P**		**23 09 16.2**	**+0.2**	
	comp=Z,0.9nm,0.8s,baz=216,slow=7.3,SNR=7.6								
NVAR				pP	pP		23 10 00.7	+0.4	
	comp=Z,1.5nm,0.8s,baz=224,slow=7.7,SNR=4.2								
TIXI	**Tiksi**	**91.46**	**348**	*i* P	**P**		**23 09 30.9**	**-1.7**	
TIXI				pmax	pmax				
	comp=Z,3.0nm,1.4s,mb4.1								
VNA3	**Neumayer Olymp**	**92.82**	**181**	*e*P	**P**		**23 09 38.1**	**-1.0**	
VNA3				*e*			23 09 43.7		
VNA2	**Neumayer--Watz**	**93.09**	**182**	*e*P	**P**		**23 09 39.8**	**-0.6**	
VNA2				*e*			23 09 45.1		
VNA1	**Neumayer--Stat**	**93.39**	**181**	*e*P	**P**		**23 09 41.7**	**0.0**	
WMQ	**Urumqi**	**94.13**	**314**	*e*P	**P**		**23 09 47.0**	**+1.5**	
PDAR	**Pinedale Array**	**95.47**	**47**	LR	LR		23 47 02.2		
	comp=Z,62nm,18.4s,baz=258,slow=32								
ANMO	**Albuquerque**	**95.61**	**55**	P	**P**		**23 09 52.4**	**-0.2**	
TXAR	**Lajitas Array**	**96.43**	**61**	P	**P**		**23 09 56.5**	**+0.2**	
	comp=Z,0.3nm,0.6s,mb3.8,baz=235,slow=4.4,SNR=4.7								
TXAR				PP	PP		23 13 53.3	+0.4	
	comp=Z,0.5nm,1.0s,baz=198,slow=12,SNR=4.0								
MK31	**Makanchi Array**	**98.62**	**316**	P	**P**		**23 10 05.1**	**-0.7**	
MKAR	**Makanchi Array**	**98.62**	**316**	P	**P**		**23 10 05.3**	**-0.5**	
	comp=Z,0.5nm,0.6s,mb4.1,baz=92,slow=6.6,SNR=5.8								
MKAR				pP	pP		23 10 48.9	-1.6	
	comp=Z,0.7nm,0.9s,baz=92,slow=6.9,SNR=2.2								
MKAR				PKiKP	PKiKP		23 14 36.6	+0.1	
	comp=Z,0.3nm,0.6s,baz=246,slow=1.4,SNR=4.1								
MKAR	**Makanchi Array**	**98.62**	**316**	P	**P**		**23 10 05.3**	**-0.5**	
MKAR				pP	pP		23 10 48.9	-1.6	
ZALV	**Zalesovo Beam**	**98.87**	**324**	P	**P**		**23 10 06.0**	**-0.7**	
	comp=Z,0.2nm,0.3s,mb4.0,baz=129,slow=6.6,SNR=3.9								
ZALV				pP	pP		23 10 48.7	-2.7	
	comp=Z,0.8nm,0.6s,baz=108,slow=4.8,SNR=3.0								
ZALV	**Zalesovo Beam**	**98.87**	**324**	P	**P**		**23 10 06.0**	**-0.7**	
ZALV				pP	pP		23 10 48.7	-2.7	
ARU	**Arti**	**113.98**	**325**	*e*PKiKP	PKiKP		23 15 04.4	-0.3	
ARU	**Arti**	**113.98**	**325**	PKIKP	PKiKP		23 15 04.2	-0.4	
SPITS	**Spitsbergen Ar**	**116.39**	**354**	PKP	PKPdf		23 15 08.6	-0.2	
	comp=Z,6.9nm,0.7s,baz=14,slow=1.7,SNR=4.0								
ARCES	**ARCESS Array B**	**121.76**	**345**	PKP	PKPdf		23 15 18.7	-0.6	
	comp=Z,3.6nm,0.5s,baz=68,slow=1.5,SNR=30								
ARCES				pPKP	pPKPdf		23 16 05.5	-0.4	
	comp=Z,3.0nm,0.6s,baz=82,slow=1.0,SNR=3.6								
BOSA	**Boshof**	**122.68**	**219**	PKP	PKPdf		23 15 22.2	-0.1	
	comp=Z,4.0nm,0.9s,baz=33,slow=2.2,SNR=4.5								
OBN	**Obninsk**	**126.20**	**328**	⇑*e*PKIKP	PKPdf		23 15 28.7	+0.5	
OBN				pmax	pmax				
	comp=Z,7.0nm,0.5s								
VSR	**Storozhevoye**	**126.36**	**322**	*e*PKIKP	PKPdf		23 15 28.1	-0.5	
VSR				pmax	pmax				
	comp=N,3.0nm,0.7s								
VSR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
VSR				pmax	pmax				
	comp=E,5.0nm,0.8s								
NB2	**NORSAR Subarra**	**132.13**	**345**	PKP	PKPdf		23 15 40.1	+0.8	
	comp=Z,8.7nm,1.4s,baz=34,slow=2.9								
NB2	**NORSAR Subarra**	**132.13**	**345**	PKP	pPKPdf		23 16 26.1	+0.2	
	comp=Z,0.7nm,0.6s,baz=44,slow=2.6								
NOA	**NORSAR Array B**	**132.13**	**345**	PKP	PKPdf		23 15 40.0	+0.8	
	comp=Z,0.7nm,0.6s,baz=63,slow=1.9,SNR=3.0								
NOA				pPKP	pPKPdf		23 16 26.1	+0.2	
	comp=Z,0.9nm,0.6s,baz=31,slow=2.0,SNR=3.0								
NOA				SKPbc	SKPbc		23 18 50.6	+1.6	
	comp=Z,3.4nm,1.1s,baz=33,slow=2.8,SNR=3.7								
AKASG	**Malin Array Be**	**132.23**	**325**	PKP	PKPdf		23 15 39.5	-0.3	
	comp=Z,1.6nm,0.7s,baz=57,slow=2.8,SNR=6.9								
AKASG				SKPbc	SKPbc		23 18 51.0	+1.3	
	comp=Z,3.1nm,0.7s,baz=50,slow=3.9,SNR=15								
BDFB	**Brasilia**	**132.54**	**130**	PKP	PKPdf		23 15 41.7	+0.3	
	comp=Z,1.0nm,0.7s,baz=191,slow=1.8,SNR=3.7								
BR131	**Keskin Array S**	**133.87**	**310**	*e*PKPdf	PKPdf		23 15 42.8	-0.5	
BRTR	**Keskin Array B**	**133.87**	**310**	PKP	PKPdf		23 15 44.2	+1.0	
	comp=Z,2.4nm,1.1s,baz=161,slow=4.8,SNR=7.6								
BRTR				SKPbc	SKPbc		23 18 57.1	+1.4	
	comp=Z,1.0nm,0.9s,baz=336,slow=2.7,SNR=5.9								
BUR08	**Bucovina Ar. S**	**136.09**	**324**	*e*PKPdf	PKPdf		23 15 47.4	+0.3	
BURAR	**Bucovina Array**	**136.09**	**324**	⇑P	PKPdf		23 15 48.9	+1.8	
BURAR	**Bucovina Array**	**136.09**	**324**	⇑*i*P	PKPdf		23 15 48.9	+1.8	
KWP	**Kalwaria**	**136.29**	**327**	⇑P	PKPdf		23 15 49.6	+2.2	
KWP	**Kalwaria**	**136.29**	**327**	⇑*i*P	PKPdf		23 15 49.6	+2.2	
MLR	**Muntele Rosu**	**136.77**	**321**	⇓P	PKPdf		23 15 49.2	+0.7	
MLR	**Muntele Rosu**	**136.77**	**321**	⇓*i*P	PKPdf		23 15 49.2	+0.7	
KOLS	**Kolonicke sedl**	**136.94**	**327**	*e*PKP	PKPdf		23 15 48.1	-0.6	
KOLS				*e*SKP			23 19 05.5		
STHS	**Stebnicka Huta**	**137.18**	**328**	*e*PKP	PKPdf		23 15 46.7	-2.4	
STHS				*e*SKP			23 19 08.0		
DRGR		**137.97**	**324**	⇓P	PKPdf		23 15 50.8	+0.2	
DRGR		**137.97**	**324**	⇓*i*P	PKPdf		23 15 50.8	+0.2	
OKC	**Ostrava-Krasne**	**138.42**	**331**	*e*SKP	SKPbc		23 19 10.6	+1.4	
BSEG	**Bad Segeberg**	**138.42**	**340**	*e*PKP	PKPdf		23 15 51.7	+0.5	
DPC	**Dobruska-Polom**	**138.90**	**332**	*e*PKP	PKiKP		23 16 00.4	+6.0	
DPC				*e*SKP			23 19 12.4		
UPC	**Upice**	**138.92**	**333**	*e*PKPDF	PKPdf		23 15 54.9	+2.7	
UPC				*e*SKP			23 19 12.4		
VYHS	**Vyhne**	**138.99**	**329**	*e*PKP	PKPdf		23 15 51.1	-1.3	
VYHS				*e*SKP			23 19 15.3		
BZS	**Buzias**	**139.27**	**323**	⇓P	PKPdf		23 15 52.5	-0.5	
BZS	**Buzias**	**139.27**	**323**	⇓*i*P	PKPdf		23 15 52.5	-0.5	
PVCC	**Panska Ves**	**139.53**	**334**	*e*SKP	SKPbc		23 19 14.0	+1.8	
BRG	**Berggiesshubel**	**139.53**	**335**	*e*PKP	PKPdf		23 15 53.7	+0.4	
BRG				*e*			23 19 13.2		
BRG	**Berggiesshubel**	**139.53**	**335**	*e*PKIKP	PKPdf		23 15 53.7	+0.4	
BRG				pmax	pmax				
	comp=Z,4.0nm,1.3s								
BRG				pmax	pmax				
	comp=Z,6.0nm,1.3s								
CLL	**Collm**	**139.58**	**336**	*i* PKIKP	PKPdf		23 15 56.0	+2.6	
CLL				pmax	pmax				
	comp=Z,6.0nm,1.1s								
CLL	**Collm**	**139.58**	**336**	*i* PKPdf	PKPdf		23 15 56.0	+2.6	
	comp=Z,6.0nm,1.1s								
CLL				*e*SKPdf	SKPdf		23 19 13.0	+1.5	
PRU	**Pruhonice**	**139.94**	**333**	*e*PKP	PKPdf		23 16 05.1	+11	
PRU				*e*SKP			23 19 15.1		
CLZ	**Clausthal**	**140.14**	**338**	*e*PKP	PKPdf		23 15 53.6	-0.8	
PKSM	**Moragy**	**140.56**	**326**	⇓P	PKPdf		23 15 55.4	0.0	
PKSM	**Moragy**	**140.56**	**326**	⇓*i*P	PKPdf		23 15 55.4	0.0	
KHC	**Kasperske Hory**	**141.00**	**333**	*e*PKPDF	PKPdf		23 15 56.1	0.0	
KHC				*e*SKP			23 19 17.8		
GERES	**GERESS Array B**	**141.16**	**333**	PKhKP			23 15 50.2		
	comp=Z,0.9nm,0.6s,baz=64,slow=2.5,SNR=8.0								
GERES				PKP	PKPdf		23 15 56.5	+0.2	
	comp=Z,1.1nm,0.6s,baz=77,slow=2.1,SNR=7.3								
GERES				SKPbc	SKPbc		23 19 16.8	+0.2	
	comp=Z,1.2nm,0.9s,baz=70,slow=1.6,SNR=8.3								
GERES	**GERESS Array B**	**141.16**	**333**	PKHKP			23 15 50.2		
GERES							23 15 56.5		
GRA1	**Grafenberg Arr**	**141.55**	**336**	*e*PKP	PKPdf		23 15 53.8	-3.2	
GRF	**Grafenberg Arr**	**141.55**	**336**	*e*PKP	PKPdf		23 15 53.8	-3.2	
PERS	**Pernice**	**142.10**	**329**	*i* PKPdf	PKPdf		23 16 00.3	+2.2	
VISS	**Visnje**	**142.81**	**328**	*i* PKPdf	PKPdf		23 15 56.8	-2.6	
JAVS	**Javornik**	**143.14**	**329**	*i* PKPdf	PKPdf		23 15 56.8	-3.2	
ABTA	**Abfaltersbach**	**143.26**	**331**	⇑*i*PKPdf	PKPdf		23 15 57.2	-2.9	
	comp=Z,15nm,0.7s								
WTTA	**Wattenberg**	**143.26**	**333**	⇑*i*PKPdf	PKPdf		23 15 59.0	-1.2	
	comp=Z,12nm,1.0s								
WLF	**Walferdange**	**143.42**	**340**	PKP	PKPdf		23 15 58.9	-1.5	
GIVF	**Givet**	**143.46**	**342**	*e*PKP1	PKPdf		23 16 00.3	-0.1	
DOU	**Dourbes**	**143.53**	**342**	PKP	PKPdf		23 15 59.4	-1.2	
BAIF	**Baives**	**143.68**	**342**	*e*PKP1	PKPdf		23 16 00.5	-0.3	
BFO	**Black Forest**	**143.78**	**337**	*e*PKP	PKPdf		23 15 59.5	-1.5	
SPAK	**Spaichingen-Ko**	**143.79**	**336**	PKP	PKPdf		23 16 00.1	-0.9	
FETA	**Feichten**	**143.85**	**333**	⇑*i*PKPdf	PKPdf		23 16 00.6	-0.6	
	comp=Z,17nm,0.7s								
DAVA	**Damuels**	**144.00**	**334**	⇓*i*PKPdf	PKPdf		23 16 00.4	-1.1	
	comp=Z,31nm,1.4s								
APPI	**Appiano**	**144.04**	**332**	PKP	PKPdf		23 16 00.1	-1.4	
CDF	**Champ du Feu**	**144.10**	**338**	*e*PKP1	PKPdf		23 16 00.2	-1.4	
	comp=Z,42nm,0.9s								
CTI	**Castel Tesino**	**144.18**	**331**	PKP	PKPdf		23 16 00.9	-0.9	
FELD	**Feldberg im Sc**	**144.27**	**337**	PKP	PKPdf		23 16 00.9	-1.0	
ECH	**Echery**	**144.31**	**338**	PKP	PKPdf		23 16 00.7	-1.2	
ECH	**Echery**	**144.31**	**338**	*e*PKIKP	PKPdf		23 16 00.7	-1.2	
BRMO	**Bormio**	**144.43**	**333**	PKP	PKPdf		23 16 02.0	-0.2	
MOF	**Molkenrain**	**144.62**	**337**	PKP	PKPdf		23 16 01.4	-1.1	
MABI	**Malga Bissina**	**144.69**	**332**	PKP	PKPdf		23 16 01.7	-1.0	
THEF	**They Montfort**	**144.71**	**339**	PKP	PKPdf		23 16 02.0	-0.6	
HINF	**Hinteralfeld**	**144.75**	**338**	*e*PKP1	PKPdf		23 16 02.2	-0.5	
	comp=Z,57nm,0.9s								
HAU	**Haudompre**	**144.77**	**338**	*e*PKP1	PKPdf		23 16 02.5	-0.3	
	comp=Z,97nm,0.9s								
MEZF	**Maizieres J'vi**	**144.79**	**340**	*e*PKP1	PKPdf		23 16 02.9	+0.1	
	comp=Z,150nm,1.2s								
BBS	**Basel-Blauen**	**144.80**	**337**	PKP	PKPdf		23 16 02.2	-0.6	
LOMF	**Lomont**	**145.15**	**337**	PKP	PKPdf		23 16 04.0	+0.6	
FSSB	**Fossombrone**	**145.34**	**328**	PKP	PKPab		23 16 05.1	+0.7	
SNTG	**Esanatoglia**	**145.56**	**327**	PKP	PKPab		23 16 06.3	+1.0	
PIEI	**Pieia**	**145.57**	**328**	PKP	PKPab		23 16 05.8	+0.5	
VAI	**Varese**	**145.59**	**334**	PKP	PKPdf		23 16 03.8	-0.4	
SFI	**Santa Sofia**	**145.66**	**329**	PKP	PKPab		23 16 06.4	+0.8	
BADI	**Badiali**	**145.74**	**328**	PKP	PKPab		23 16 06.6	+0.7	
NRCA	**Norcia**	**145.76**	**326**	PKP	PKPdf		23 16 05.5	+0.9	
ZCCA	**Zocca**	**145.76**	**330**	PKP	PKPab		23 16 06.7	+0.7	
FNVD	**Fontana Vidola**	**145.83**	**330**	PKP	PKPab		23 16 07.3	+1.1	
TIP	**Timpagrande**	**145.89**	**318**	*e*PKP	PKPab		23 16 07.0	+0.3	
CSSN	**Cassano Irpino**	**145.97**	**322**	PKP	PKPab		23 16 06.4	-0.5	
ERBM	**Eremo**	**145.98**	**331**	PKP	PKPdf		23 16 05.5	+0.6	
SGO	**Sicignano**	**145.98**	**321**	PKP	PKPbc		23 16 06.8	+0.7	
CABF	**La Chapelle**	**146.05**	**337**	*e*PKP1	PKPbc		23 16 07.0	+0.9	
	comp=Z,76nm,1.0s								
FLN	**La Foliniere**	**146.10**	**346**	*e*PKP1	PKPbc		23 16 06.3	+0.1	
	comp=Z,42nm,0.7s								
ORO	**Oropa**	**146.12**	**334**	PKP	PKPbc		23 16 06.6	+0.2	
BOB	**Bobbio (Coli)**	**146.16**	**332**	PKP	PKPbc		23 16 07.0	+0.5	
LDF	**La Druitiere**	**146.17**	**346**	*e*PKP1	PKPbc		23 16 06.3	-0.1	
	comp=Z,45nm,1.0s								
LOR	**Lormes**	**146.26**	**340**	*e*PKP1	PKPbc		23 16 07.1	+0.4	
	comp=Z,53nm,1.0s								
GRI	**Girifalco**	**146.31**	**318**	PKP	PKPbc		23 16 08.5	+1.3	
MAIM	**Mastiano**	**146.32**	**330**	PKP	PKPbc		23 16 06.7	-0.3	
GRR	**Gorron**	**146.54**	**346**	*e*PKP1	PKPbc		23 16 07.7	+0.2	
	comp=Z,85nm,1.1s								
SSF	**Saint Saulge**	**146.55**	**340**	*e*PKP1	PKPbc		23 16 08.0	+0.4	
	comp=Z,71nm,1.0s								
LSD	**Lago del Serru**	**146.60**	**335**	PKP	PKPbc		23 16 08.7	+0.9	
HYF	**Humbligny**	**146.64**	**342**	*e*PKP1	PKPbc		23 16 08.5	+0.7	
LPL	**La Plagne**	**146.72**	**336**	*e*PKP1	PKPbc		23 16 08.9	+0.8	
	comp=Z,29nm,1.0s								
LPG	**La Plagne**	**146.72**	**336**	*e*PKP1	PKPbc		23 16 09.1	+1.0	
	comp=Z,31nm,0.8s								
PCP	**Piancastagn**	**146.74**	**333**	PKP	PKPdf		23 16 07.9	+1.7	
SMF	**Signal de Mont**	**146.81**	**340**	*e*PKP1	PKPbc		23 16 08.5	+0.2	
	comp=Z,48nm,1.2s								
AVF	**Avril sur Loir**	**146.84**	**340**	*e*PKP1	PKPbc		23 16 08.4	0.0	
	comp=Z,26nm,1.1s								
SOI	**Samo**	**146.96**	**317**	PKP	PKPbc		23 16 10.0	+1.0	
SGMF	**Saint Gilles**	**147.02**	**348**	*e*PKP1	PKPbc		23 16 08.8	-0.1	
	comp=Z,83nm,1.2s								
ROSF	**Rostrenen**	**147.08**	**349**	*e*PKP1	PKPbc		23 16 09.1	+0.1	
	comp=Z,64nm,1.4s								
BNI	**Bardonecchia**	**147.12**	**335**	*e*PKPbc	PKPbc		23 16 10.1	+0.8	
BGF	**Bois d'Agland**	**147.21**	**341**	*e*PKP1	PKPbc		23 16 09.6	+0.2	
	comp=Z,54nm,1.0s								
MBDF	**Montbardon**	**147.35**	**335**	*e*PKP1	PKPbc		23 16 10.0	+0.1	
QUIF	**Quistinic**	**147.47**	**349**	*e*PKP1	PKPbc		23 16 09.7	-0.4	
	comp=Z,29nm,1.1s								
PLDF	**La Plantade**	**147.48**	**339**	PKP	PKPbc		23 16 10.8	+0.6	
ORIF	**Oris-en-Rattie**	**147.55**	**336**	*e*PKP1	PKPbc		23 16 10.9	+0.5	
	comp=Z,30nm,1.0s								
AGO	**Saint Agoulin**	**147.57**	**340**	PKP	PKPbc		23 16 10.8	+0.4	
SAOF	**Saorge**	**147.61**	**333**	PKP	PKPbc		23 16 10.5	-0.1	
TCF	**Toulx Ste Croi**	**147.65**	**341**	*e*PKP1	PKPbc		23 16 10.9	+0.3	
	comp=Z,59nm,1.1s								
AUTN	**L'Aution**	**147.66**	**333**	PKP	PKPbc		23 16 10.9	+0.1	
TOUF	**Mont Tournerai**	**147.72**	**333**	PKP	PKPbc		23 16 11.1	+0.2	
SBF	**Sospel**	**147.76**	**333**	*e*PKP1	PKPbc		23 16 10.9	-0.1	
	comp=Z,42nm,0.7s								
PYM	**Petit Puy Mans**	**147.87**	**340**	PKP	PKPbc		23 16 11.8	+0.5	
REVF	**Revere**	**147.89**	**333**	PKP	PKPbc		23 16 11.5	+0.1	
MFF	**Saint Martin d**	**148.03**	**344**	*e*PKP1	PKPbc		23 16 11.8	+0.2	
	comp=Z,31nm,0.7s								
VIVF	**Saint-Julien-l**	**148.06**	**337**	*e*PKP1	PKPbc		23 16 12.2	+0.4	
	comp=Z,22nm,1.0s								
PGF	**Pioggiola**	**148.06**	**330**	*e*PKP1	PKPbc		23 16 12.0	+0.1	
	comp=Z,68nm,0.9s								
LBL	**Lubilhac**	**148.25**	**339**	PKP	PKPbc		23 16 13.2	+1.0	
FRF	**La Foret Royal**	**148.35**	**334**	*e*PKP1	PKPbc		23 16 12.5	-0.1	
	comp=Z,46nm,1.1s								
SMRF	**Simiane la Rot**	**148.45**	**335**	*e*PKP1	PKPbc		23 16 13.3	+0.5	
	comp=Z,78nm,1.3s								
VILF	**Villemus**	**148.50**	**335**	PKP	PKPbc		23 16 14.6	+1.7	
LMR	**La Mourre**	**148.59**	**333**	*e*PKP1	PKPbc		23 16 13.2	0.0	
	comp=Z,48nm,1.1s								
RJF	**Les Rejaudoux**	**148.75**	**341**	*e*PKP1	PKPbc		23 16 13.8	+0.3	
	comp=Z,20nm,0.9s								
CAF	**Calviac**	**148.91**	**340**	*e*PKP1	PKPbc		23 16 14.3	+0.3	
	comp=Z,15nm,0.9s								
BERF	**Bertagne**	**148.95**	**334**	PKP	PKPbc		23 16 15.0	+0.9	
LASF	**Ste Croix**	**149.03**	**337**	*e*PKP1	PKPbc		23 16 14.8	+0.5	
	comp=Z,20nm,0.7s								
LFF	**La Frestale**	**149.31**	**342**	*e*PKP1	PKPbc		23 16 15.2	+0.3	
	comp=Z,40nm,1.1s								
VSL	**Villasalto**	**150.10**	**325**	*e*PKPbc	PKPbc		23 16 17.4	+0.3	
MTLF	**Montolieu**	**150.26**	**339**	*e*PKP1	PKPbc		23 16 17.6	+0.3	
	comp=Z,26nm,0.9s								
EPF	**Esparros**	**151.16**	**341**	*e*PKP1	PKPbc		23 16 19.4	0.0	
	comp=Z,16nm,0.8s								
SJPF	**Ste Jean**	**151.55**	**343**	*e*PKP1	PKPbc		23 16 20.5	+0.2	
	comp=Z,11nm,0.7s								
ETSF	**Etsaut**	**151.56**	**342**	*e*PKP1	PKPbc		23 16 21.0	+0.7	
	comp=Z,14nm,0.6s								
KEST	**Kesra**	**152.67**	**320**	PKPbc	PKPbc		23 16 24.1	+1.0	
	comp=Z,2.3nm,0.8s,baz=265,slow=2.2,SNR=7.6								
KEST				PKPab	PKPab		23 16 36.0	+1.6	
	comp=Z,1.7nm,0.9s,baz=89,slow=2.3,SNR=4.0								

21nm,1.8s,mb4.8
CFAA Coronel Fontan 87.77 127 P **P 23 53 39.9 -0.9**
0.3nm,0.7s,mb3.6,baz=202,slow=5.4,SNR=3.0
NVAR Mina Array Bea 90.48 43 P **P 23 53 52.6 -0.4**
0.2nm,0.5s,mb3.7,baz=210,slow=5.2,SNR=2.8
ENH Enshi 92.97 304 P **P 23 54 05.0 +0.2**
MKAR Makanchi Array 119.36 309 PKP PKPdf 23 59 39.0 -1.2
0.6nm,0.8s,baz=104,slow=0.8,SNR=3.3
JOF Joensuu 144.92 337 *ep* PKPdf 00 00 25.7 -1.8
0.4nm,0.3s
KAF Kangasniemi 147.10 339 *ep* PKPdf 00 00 32.2 +1.0
0.8nm,0.4s
NB2 NORSAR Subarra151.49 350 PKP PKPbc 00 00 43.3 -1.1
comp=Z,2.6nm,1.0s,baz=18,slow=4.3
NOA NORSAR Array B151.49 350 PKPbc PKPbc 00 00 46.4 +1.9
comp=Z,1.0nm,0.8s,baz=13,slow=4.1,SNR=2.7
NOA PKPab PKPab 00 00 53.7 +0.7
comp=Z,1.2nm,0.8s,baz=16,slow=4.1,SNR=3.9
NOA NORSAR Array B151.49 350 PKPbc PKPbc 00 00 46.4 +1.9
NOA PKPab PKPab 00 00 53.7 +0.7
AKASG Malin Array Be 153.32 319 PKPbc PKPbc 00 00 48.1 -0.7
comp=Z,0.2nm,0.3s,baz=118,slow=1.9,SNR=3.4
AKASG PKPab PKPab 00 01 01.6 +0.5
comp=Z,1.0nm,0.7s,baz=89,slow=1.4,SNR=4.8
BRTR Keskin Array B 153.60 293 PKPbc PKPbc 00 00 51.0 +1.2
comp=Z,0.2nm,0.5s,baz=143,slow=5.0,SNR=3.1
BRTR PKPab PKPab 00 01 03.7 +1.1
comp=Z,0.6nm,0.7s,baz=142,slow=3.9,SNR=3.7
TORD Torodi Ar. Bea 160.02 180 PKP PKPdf 00 00 51.9 +0.8
comp=Z,0.7nm,1.2s,baz=305,slow=2.8,SNR=2.6
TORD PKPab PKPab 00 01 31.1 +0.5
comp=Z,0.3nm,0.7s,baz=151,slow=3.3,SNR=3.4

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*ISCJB **04** 23:45:48.7±1.5, 765S±008×1196E±0.1, h85km±15km, mb3.9/9, Error ellipse: s-maj=25.5km s-min=8.8km az=154.1*
*NEIC **04** 23:45:49.7±0.9, 767S×11947E, h74km±9km, mb4.0/4, Error ellipse: s-maj=15.0km s-min=5.4km az=64.0*
*IDC **04** 23:45:50.2±4.2, 760S×11959E, h75km±34km, mb3.6/5, mb1 3.7/7, mb1mx3.6/17, mbtmp3.6/7, Error ellipse: s-maj=72.4km s-min=10.1km az=51.0*
ISC 04 23:45:49.8±1.2, 766S±008×1196E±01, h76km±12km, n24, σ0§64/27, mb3.9/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**2.63**	**4**	P	**Pn**	**23 46 30.2**	**+0.1**
	4.5nm,0.3s,baz=205,slow=8.3,SNR=31						
KAPI				S	**Sn**	**23 47 16.3**	**+15**
	19nm,0.3s,baz=211,slow=20,SNR=4.0						
KAPI	**Kappang**	**2.63**	**4**	P	**Pn**	**23 46 30.2**	**+0.1**
KAPI				S	**Sn**	**23 47 16.2**	**+15**
FITZ	**Fitzroy Crossi**	**11.95**	**151**	Pn	**Pn**	**23 48 37.2**	**-0.1**
MBWA	**Marble Bar**	**13.42**	**179**	P	**Pn**	**23 48 57.2**	**+0.1**
WRA	**Warramunga Arr**	**18.82**	**132**	P	**Pn**	**23 50 04.4**	**-0.5**
	0.2nm,0.3s,baz=303,slow=13,SNR=4.8						
WRA				S	**S**	**23 53 33.6**	**-0.2**
	0.1nm,0.3s,baz=305,slow=25,SNR=6.0						
WRAB	**Tennant Creek**	**18.82**	**132**	P	**Pn**	**23 50 06.0**	**+1.1**
WB2	**Warramunga Arr**	**18.83**	**132**	P	**Pn**	**23 50 03.4**	**-1.6**
ASAR	**Alice Springs**	**21.04**	**141**	P	**P**	**23 50 28.0**	**+0.4**
	1.6nm,0.5s,mb3.6,baz=314,slow=9.2,SNR=12						
ASAR				S	**S**	**23 54 21.8**	**+4.1**
	0.7nm,0.9s,baz=312,slow=21,SNR=4.2						
NWAO	**Narrogin (SRO)**	**25.23**	**185**	*eP*	**P**	**23 51 08.7**	**0.0**
CTAO	**Charters Tower**	**28.65**	**118**	*eP*	**P**	**23 51 39.8**	**+0.2**
	9.3nm,1.7s,mb4.1						
STKA	**Stephens Creek**	**31.65**	**143**	*eP*	**P**	**23 52 06.5**	**+0.6**
	1.2nm,0.7s,mb3.7						
CMAR	**Chiang Mai Arr**	**32.98**	**322**	P	**P**	**23 52 17.2**	**-0.4**
	1.2nm,0.6s,mb3.9,baz=156,slow=6.7,SNR=6.3						
LSA	**Lhasa**	**46.11**	**325**	*eP*	**P**	**23 54 07.2**	**+0.6**
	2.4nm,0.5s,mb4.2						
SONM	**Songino Array**	**56.47**	**349**	P	**P**	**23 55 25.1**	**+1.3**
	1.0nm,0.9s,mb3.9,baz=159,slow=8.5,SNR=7.5						
MK31	**Makanchi Array**	**63.53**	**332**	*eP*	**P**	**23 56 12.2**	**0.0**
MKAR	**Makanchi Array**	**63.53**	**332**	P	**P**	**23 56 12.3**	**+0.2**
	2.6nm,0.7s,mb4.2,baz=138,slow=7.2,SNR=20						
MKAR	**Makanchi Array**	**63.53**	**332**	P	**P**	**23 56 12.3**	**+0.2**
TKM2	**Tokmak 2**	**64.26**	**326**	*eP*	**P**	**23 56 16.8**	**-0.2**
	1.2nm,0.7s,mb3.8						
EKS2	**Erkin-Say**	**65.14**	**324**	*eP*	**P**	**23 56 22.3**	**-0.4**
ZALV	**Zalesovo Beam**	**68.00**	**339**	P	**P**	**23 56 40.5**	**-0.3**
	1.6nm,0.7s,mb4.0,baz=154,slow=8.0,SNR=7.6						
BRVK	**Borovoye**	**73.46**	**331**	P	**P**	**23 57 12.9**	**-0.9**
ARU	**Arti**	**80.97**	**331**	P	**P**	**23 57 55.1**	**-0.8**
KIV	**Kislovodsk**	**85.93**	**315**	P	**P**	**23 58 22.1**	**+0.5**
TOA0	**Torodi Ar. Sit**	**118.77**	**281**	*e*Pdif	Pdif	00 00 50.6	+0.7

MAN 04 23:51:04, 1756N×12261E, h10km, mb3.5, ML2.2, MS1.6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.52**	**200**	*eP*	Pg	23 51 14.4	+0.2
PALP				*eS*	Sg	23 51 23.6	+2.8
CAUP	**Cauayan**	**0.97**	**231**	*eP*	Pg	23 51 23.6	+0.9
ABRA	**Dolores**	**1.81**	**273**	*eP*	Pn	23 51 35.8	+0.5
ABRA				*eS*	Sn	23 51 59.5	+1.2
BALP	**Baler**	**2.06**	**209**	*eP*	Pn	23 51 39.8	+1.1

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*SZGRF **04** 23:56:18.0, 1928S×17794E, h33km, South of Fiji Islands*
*ISCJB **04** 23:57:02.8±1.2, 1773S±009×17825W±008, h436km±15km, mb4.2/19, Error ellipse: s-maj=16.1km s-min=10.1km az=146.8*
*IDC **04** 23:57:03.4±1.9, 1788S×17821W, h427km±20km, mb3.7/11, mb1 3.8/11, mb1mx3.7/19, mbtmp3.7/11, Error ellipse: s-maj=19.7km s-min=11.3km az=148.0*
*NEIC **04** 23:57:03.8±0.9, 1776S×17819W, h436km±12km, mb4.3/11, Error ellipse: s-maj=11.1km s-min=7.1km az=146.0*
ISC 04 23:57:04.0±1.2, 1773S±009×17821W±008, h436km±16km, n75, σ0§78/37, mb4.2/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.26**	**59**	P	**P**	**23 58 51.1**	**-0.2**
RAR	**Rarotonga**	**17.72**	**104**	P	**P**	**00 00 44.2**	**-0.1**
URZ	**Urewera**	**20.86**	**190**	P	**P**	**00 01 11.0**	**-2.9**
	21nm,1.0s,baz=146,slow=4.9,SNR=6.2						
EIDS	**Eidsvold**	**29.50**	**250**	*eP*	**P**	**00 02 31.3**	**+0.2**
	17nm,0.7s,mb4.5						
ARMA	**Armidale**	**30.19**	**240**	*eP*	**P**	**00 02 38.3**	**+1.3**
CTA	**Charters Tower**	**33.66**	**260**	*eP*	**P**	**00 03 07.4**	**+0.4**
	2.1nm,0.3s,mb4.0						
CTA	**Charters Tower**	**33.66**	**260**	P	**P**	**00 03 07.5**	**+0.5**
	2.4nm,0.3s,mb4.0,baz=90,slow=9.6,SNR=7.9						
CTAO	**Charters Tower**	**33.66**	**260**	*eP*	**P**	**00 03 07.3**	**+0.3**
	2.6nm,0.3s,mb4.0						
CNB	**Canberra Magne**	**33.68**	**232**	*eP*	**P**	**00 03 07.8**	**+0.8**
PMG	**Port Moresby**	**34.62**	**279**	P	**P**	**00 03 15.3**	**+0.2**
TOO	**Toolangi**	**37.43**	**231**	*eP*	**P**	**00 03 38.9**	**+0.6**
STKA	**Stephens Creek**	**38.88**	**241**	*eP*	**P**	**00 03 50.9**	**+0.6**
	4.8nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**38.88**	**241**	P	**P**	**00 03 50.9**	**+0.6**
	6.2nm,0.5s,mb4.2,baz=89,slow=9.0,SNR=22						
WB2	**Warramunga Arr**	**44.84**	**259**	*eP*	**P**	**00 04 37.1**	**-0.8**
WRAB	**Tennant Creek**	**44.84**	**259**	*eP*	**P**	**00 04 37.1**	**-0.8**
	2.7nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**44.85**	**259**	P	**P**	**00 04 37.4**	**-0.6**
	2.1nm,0.3s,mb3.9,baz=96,slow=7.2,SNR=76						
WRA				PcP	PcP	00 06 11.2	+0.2
	0.7nm,0.5s,baz=95,slow=3.2,SNR=5.8						
WRA				S	**S**	**00 10 44.6**	**+1.8**
	0.2nm,0.6s,baz=73,slow=15,SNR=2.9						
ASAR	**Alice Springs**	**45.02**	**254**	P	**P**	**00 04 39.4**	**+0.1**
	18nm,0.4s,mb4.7,baz=89,slow=8.3,SNR=354						
ASAR				PcP	PcP	00 06 11.7	+0.1
	1.4nm,0.5s,baz=105,slow=3.4,SNR=7.5						
ASAR				ScP	ScP	00 09 24.2	+2.3
	0.3nm,0.5s,baz=109,slow=4.3,SNR=4.7						
ASAR				S	**S**	**00 10 43.0**	**-2.2**
	0.9nm,0.8s,baz=94,slow=16,SNR=7.1						
MIDW	**Midway**	**45.68**	**1**	*eP*	**P**	**00 04 44.3**	**+0.1**
	41nm,0.5s,mb5.0						
KAKA	**Kakadu**	**47.78**	**269**	*eP*	Px	00 04 51.2	
	7.4nm,0.3s						
FORT	**Forrest**	**50.25**	**244**	*eP*	**P**	**00 05 18.3**	**-0.4**
	22nm,0.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.24**	**260**	*eP*	**P**	**00 05 40.9**	**+0.3**
MBWA	**Marble Bar**	**58.30**	**256**	*eP*	**P**	**00 06 15.9**	**-0.1**
	4.0nm,0.3s,mb4.2						
KLBR	**Kellerberrin**	**59.08**	**243**	*eP*	**P**	**00 06 20.3**	**-0.8**
	10nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**59.46**	**242**	P	**P**	**00 06 23.2**	**-0.4**
	4.1nm,0.6s,mb3.9,baz=104,slow=7.8,SNR=4.3						
SBA	**Scott Base**	**60.60**	**184**	*eP*	**P**	**00 06 31.7**	**+1.2**
	7.5nm,0.8s,mb4.2						
CASY	**Casey**	**66.38**	**205**	P	**P**	**00 07 07.3**	**-0.6**
MJAR	**Matsushiro Arr**	**67.88**	**323**	P	**P**	**00 07 18.0**	**+0.4**
	0.9nm,0.4s,mb3.7,baz=42,slow=5.7,SNR=3.6						
QSPA	**South Pole Qui**	**72.32**	**180**	*eP*	**P**	**00 07 43.5**	**0.0**
	16nm,1.0s,mb4.5						
PETK	**Petropavlovsk-**	**73.56**	**345**	P	**P**	**00 07 50.7**	**-0.2**
	2.8nm,0.8s,mb3.9,baz=134,slow=4.2,SNR=4.8						
PETK	**Petropavlovsk-**	**73.56**	**345**	P	**P**	**00 07 50.7**	**-0.2**
NVAR	**Mina Array Bea**	**79.17**	**44**	P	**P**	**00 08 23.0**	**+0.6**
	1.2nm,0.7s,mb3.6,baz=226,slow=8.4,SNR=12						
NVAR	**Mina Array Bea**	**79.17**	**44**	P	**P**	**00 08 23.0**	**+0.6**
MAW	**Mawson**	**84.09**	**200**	P	**P**	**00 08 47.2**	**-0.1**
	1.3nm,0.5s,mb3.9,baz=135,slow=7.1,SNR=4.2						
MCK	**McKinley**	**84.33**	**13**	*eP*	**P**	**00 08 47.7**	**-0.6**
TXAR	**Lajitas Array**	**85.74**	**58**	P	**P**	**00 08 57.3**	**+1.2**
	0.5nm,0.7s,mb3.4,baz=216,slow=5.0,SNR=9.3						
INK	**Inuvik**	**91.67**	**15**	*eP*	**P**	**00 09 22.0**	**-0.9**
	35nm,0.8s,mb5.3						
MKAR	**Makanchi Array**	**109.15**	**314**	PKiKP	PKiKP	00 14 42.7	-0.4
	0.2nm,0.5s,baz=171,slow=0.4,SNR=8.5						
MKAR	**Makanchi Array**	**109.15**	**314**	PKPdf	PKiKP	00 14 42.7	-0.4
ARCES	**ARCESS Array B**	**126.18**	**350**	PKP	PKPdf	00 15 15.4	+0.3
	4.9nm,0.9s,baz=0.0,slow=4.9,SNR=3.5						
BUR08	**Bucovina Ar. S**	**144.53**	**332**	*e*PKPbc	PKPdf	00 15 50.3	+0.6
BR131	**Keskin Array S**	**144.79**	**315**	*eP*	PKPdf	00 15 51.5	+1.1
BRTR	**Keskin Array B**	**144.79**	**315**	PKP	PKPdf	00 15 51.6	+1.3
	2.3nm,0.9s,baz=131,slow=3.8,SNR=12						
CLL	**Collm**	**145.33**	**348**	*e*PKPbc	PKPbc	00 15 53.0	+1.2
CLL	**Collm**	**145.33**	**348**	*e*PKPdf	PKPdf	00 15 52.0	+1.1
CLL				*i* PKPbc	PKPbc	00 15 53.4	+1.6
	comp=Z,5.0nm,0.7s						
BRG	**Berggiesshubel**	**145.54**	**346**	*e*PKPbc	PKPbc	00 15 54.2	+1.8
FBE	**Freiberg**	**145.63**	**347**	*e*PKPbc	PKPbc	00 15 54.5	+1.8
TANN	**Tannenbergstha**	**146.29**	**348**	*e*PKPbc	PKPab	00 15 56.7	+0.3
WERD	**Werda**	**146.29**	**348**	*e*PKPbc	PKPbc	00 15 56.1	+1.5
WERN	**Wernitzgruen**	**146.43**	**348**	*e*PKPbc	PKPbc	00 15 56.7	+1.7
GRA1	**Grafenberg Arr**	**147.22**	**349**	*e*PKPbc	PKPab	00 15 59.1	-1.1
GRF	**Grafenberg Arr**	**147.22**	**349**	*e*PKP	PKPab	00 15 59.1	-1.1
GRF	**Grafenberg Arr**	**147.22**	**349**	*e*PKPbc	PKPab	00 15 59.1	-1.1
GEC2	**GERESS Array S**	**147.49**	**345**	*e*PKPbc	PKPbc	00 15 59.0	+1.1
GEC2	**GERESS Array S**	**147.49**	**345**	*e*PKPbc	PKPbc	00 15 59.0	+1.1
GERES	**GERESS Array B**	**147.49**	**345**	PKPbc	PKPbc	00 15 59.4	+1.5
	comp=Z,1.8nm,0.5s,baz=20,slow=3.3,SNR=22						
GIVF	**Givet**	**147.62**	**356**	*e*PKP1	PKPbc	00 15 59.5	+1.3
BAIF	**Baives**	**147.69**	**357**	*e*PKP1	PKPbc	00 15 59.8	+1.4
	comp=Z,4.4nm,0.6s						
FLN	**La Foliniere**	**149.00**	**3**	*e*PKP1	PKPbc	00 16 02.6	+0.9
CDF	**Champ du Feu**	**149.07**	**353**	*e*PKP1	PKPbc	00 16 03.1	+1.2
	comp=Z,5.1nm,0.6s						
LDF	**La Druitiere**	**149.18**	**2**	*e*PKP1	PKPbc	00 16 03.0	+0.9
GRR	**Gorron**	**149.35**	**3**	*e*PKP1	PKPbc	00 16 03.5	+1.0
SGMF	**Saint Gilles**	**149.35**	**6**	*e*PKP1	PKPbc	00 16 04.1	+1.5
HAU	**Haudompre**	**149.58**	**354**	*e*PKP1	PKPbc	00 16 04.1	+1.0
	comp=Z,2.5nm,0.5s						
HINF	**Hinteralfeld**	**149.71**	**353**	*e*PKP1	PKPbc	00 16 04.0	+0.6
	comp=Z,2.1nm,0.6s						
LOR	**Lormes**	**150.50**	**357**	*e*PKP1	PKPbc	00 16 06.5	+1.2
	comp=Z,2.9nm,0.5s						
HYF	**Humbligny**	**150.54**	**359**	*e*PKP1	PKPbc	00 16 07.5	+2.1
SSF	**Saint Saulge**	**150.72**	**358**	*e*PKP1	PKPbc	00 16 07.0	+1.2
	comp=Z,2.3nm,0.5s						
AVF	**Avril sur Loir**	**150.99**	**358**	*e*PKP1	PKPbc	00 16 07.2	+0.7
SMF	**Signal de Mont**	**151.12**	**357**	*e*PKP1	PKPbc	00 16 07.7	+0.9
MFF	**Saint Martin d**	**151.17**	**3**	*e*PKP1	PKPbc	00 16 07.8	+0.9
BGF	**Bois d'Agland**	**151.24**	**358**	*e*PKP1	PKPbc	00 16 08.2	+1.2
TCF	**Toulx Ste Croi**	**151.52**	**359**	*e*PKP1	PKPbc	00 16 08.6	+0.9
RJF	**Les Rejaudoux**	**152.51**	**0**	*e*PKP1	PKPbc	00 16 10.6	+0.7
TOA0	**Torodi Ar. Sit**	**175.44**	**179**	*e*PKPdf	PKPdf	00 16 24.5	+0.7
TORD	**Torodi Ar. Bea**	**175.44**	**179**	PKPab	PKPab	00 18 02.5	-0.9
	comp=Z,0.7nm,0.6s,baz=182,slow=3.6,SNR=11						

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*NIED **05** 00:23:00, 4670N×15280E, h35km, Mw4.3 Best double couple: M◎2.95000×10^15 NP1:∅§332.00000°, δ63.00000°, λ41.00000°. NP2:∅§221.00000°, δ54.00000°, λ146.00000°.*
*ISCJB **05** 00:23:26.3±0.6, 4665N±006×15274E±007, h44km±5km, mb4.5/74, MS3.7/16, Error ellipse: s-maj=12.2km s-min=4.6km az=146.0*
*JMA **05** 00:23:26.2±0.7, 4673N×15283E, h30km, M4.8*
*SZGRF **05** 00:23:27.8, 4727N×15451E, h33km, mb4.7, Kuril Islands, Russia*
*MOS **05** 00:23:27.8±0.8, 4684N×15267E, h48km, mb4.8/30, Error ellipse: s-maj=9.6km s-min=6.5km az=101.0*
*BJI **05** 00:23:29.2, 4687N×15280E, h74km, mB4.6, mb4.5, Ms4.0, Msz3.8*
*IDC **05** 00:23:29.8±2.7, 4674N×15263E, h64km±24km, mb3.8/17, mb1 4.1/20, mb1mx4.0/25, mbtmp3.9/20, ML3.7/3, MS3.6/11, Ms1 3.6/11, ms1mx3.2/35, Error ellipse: s-maj=17.7km s-min=13.6km az=143.0*
*NEIC **05** 00:23:30.6±0.8, 4673N×15274E, h67km±6km, mb4.5/39, Error ellipse: s-maj=9.3km s-min=4.4km az=146.0*
ISC 05 00:23:29.1±0.6, 4669N±006×15269E±007, h53km±4km, h73km±2.7km; pP-P, n221, σ0§96/230, mb4.5/74, MS3.7/16, 19C-16D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.60**	**28**	*e*PN	**Pn**	**00 24 32.5**	**-3.5**
SKR				*eS*	**Sn**	**00 25 23.0**	**-5.0**
SKR				pmax	pmax		
	comp=N,60nm,0.6s						
SKR				pmax	pmax		
	comp=Z,80nm,0.6s						
SKR				smax			
	comp=N,100nm,0.6s						
SKR				smax			
	comp=E,240nm,0.6s						
SKR				MLR	MLR		
	comp=Z,3μm,20.0s						
NEM2	**Nemuro 2**	**5.94**	**238**	P	**Pn**	**00 24 52.6**	**-1.8**
NEM2				*eS*	**Sn**	**00 25 56.6**	**-4.4**
JRA	**Rausu**	**6.00**	**245**	P	**Pn**	**00 24 57.0**	**+1.7**
JNK	**Nakash**	**6.43**	**244**	P	**Pn**	**00 25 01.6**	**+0.4**
JTKR	**Abashiri--Toko**	**6.76**	**249**	P	**Pn**	**00 25 07.1**	**+1.5**
JAK	**Akkeshi**	**6.77**	**240**	P	**Pn**	**00 25 04.3**	**-1.5**
JAK				*eS*	**Sn**	**00 26 16.8**	**-4.7**
YSS	**Yuzh-Sakhalins**	**6.82**	**276**	Pn	**Pn**	**00 25 09.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**6.82**	**276**	*e*PN	**Pn**	**00 25 08.7**	**+2.2**
YSS				pmax	pmax		
	comp=E,70nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,900nm,18.0s						
JAR	**Ashorobuto**	**7.17**	**245**	P	**Pn**	**00 25 11.7**	**+0.4**
JAR				*eS*	**Sn**	**00 26 31.3**	**-0.1**
PEA0B	**Petropavlovsk-**	**7.19**	**25**	*e*Pn	**Pn**	**00 25 12.5**	**+0.9**
PETK	**Petropavlovsk-**	**7.19**	**25**	P	**Pn**	**00 25 11.0**	**-0.5**
	comp=E,0.5nm,0.3s,baz=179,slow=11,SNR=11						
JOB	**Onbets**	**7.34**	**242**	*eS*	**Sn**	**00 26 32.7**	**-2.9**
PET	**Petropavlovsk**	**7.42**	**29**	*e*PN	**Pn**	**00 25 15.1**	**+0.5**
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
ASAJ	**Asahikawa**	**7.55**	**254**	P	**Pn**	**00 25 18.3**	**+1.8**
	comp=Z,1.7nm,0.3s,baz=103,slow=17,SNR=13						
ASAJ				LR	LR	00 28 03.3	
	comp=Z,269nm,19.9s,baz=12,slow=36						
ASAJ	**Asahikawa**	**7.55**	**254**	P	**Pn**	**00 25 19.4**	**+2.9**
ASAJ	**Asahikawa**	**7.55**	**254**	PN	**Pn**	**00 25 18.3**	**+1.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,269nm,19.9s						
JKK2	**Kamakawa 2**	**7.55**	**252**	P	**Pn**	**00 25 18.7**	**+2.2**
JCH	**Churui**	**7.79**	**242**	P	**Pn**	**00 25 18.6**	**-1.2**
JCH				*eS*	**Sn**	**00 26 42.3**	**-4.3**
JEM	**Erimo**	**8.27**	**239**	P	**Pn**	**00 25 26.6**	**+0.2**
ERM	**Erimo**	**8.27**	**239**	*i* PN	**Pn**	**00 25 27.1**	**+0.7**
JBT2	**Biratori 2**	**8.32**	**246**	P	**Pn**	**00 25 26.7**	**-0.4**
JNBK	**Urakawa-nobuka**	**8.36**	**242**	P	**Pn**	**00 25 26.0**	**-1.5**
JNB	**Noboribetsu**	**9.32**	**247**	P	**Pn**	**00 25 40.0**	**-0.7**
JNB				*eS*	**Sn**	**00 27 21.3**	**-2.7**
JKB	**Kayabe**	**9.63**	**244**	P	**Pn**	**00 25 43.4**	**-1.6**
JTM	**Tenmabayashi**	**10.27**	**239**	P	**Pn**	**00 25 50.8**	**-2.8**
JANG	**Nango**	**10.27**	**236**	*eS*	**Sn**	**00 27 36.4**	**-11**
HABR	**Khabarovsk**	**12.04**	**285**	*e*PN	**Pn**	**00 26 17.5**	**-0.4**
KLR	**Kul'dur**	**14.25**	**288**	*eP*	**Pn**	**00 26 52.7**	**+4.9**
MJAR	**Matsushiro Arr**	**14.81**	**232**	P	**Pn**	**00 26 55.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=38,slow=9.4,SNR=6.4						
MJAR				LR	LR	00 32 49.8	
	comp=Z,88nm,20.7s,baz=45,slow=38						
MJAR	**Matsushiro Arr**	**14.81**	**232**	*eP*	**Pn**	**00 26 58.6**	**+3.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	**Mudanjiang**	**16.27**	**271**	P	**Pn**	**00 27 15.1**	**+1.2**
MDJ				AP	pP	00 27 31.2	+3.3
MDJ				XP	sP	00 27 40.2	+5.7
MDJ				S	**S**	**00 30 14.1**	**-10**
MDJ				SCP	ScP	00 35 33.9	-1.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.8s						
MDJ				AMB	AMB		
	comp=E,51nm,4.8s						
CN2	**Changchun**	**19.36**	**271**	*eP*	**Pn**	**00 27 50.5**	**-1.2**
CN2				*eXP*	sP	00 28 15.0	+6.4
CN2				*eS*	**S**	**00 31 18.3**	**-7.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				AMB	AMB		
	comp=Z,100nm,4.0s						
YAK	**Yakutsk**	**20.21**	**328**	*eP*	**P**	**00 28 00.4**	**+1.1**
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
KSRS	**Korea Array**	**20.50**	**252**	P	**P**	**00 28 02.3**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=60,slow=11,SNR=15						
KSRS				LR	LR	00 37 29.6	
	comp=Z,49nm,18.3s,MS2.9,baz=3.3,slow=41						
KSRS	**Korea Array**	**20.50**	**252**	*eP*	**P**	**00 28 05.5**	**+2.9**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL	**Bilibino**	**22.52**	**13**	*eP*	**P**	**00 28 24.6**	**+0.7**
BILL				pmax	pmax		
	comp=Z,15nm,2.1s,mb4.0						
HHC	**Hu-ho-hao-te**	**30.00**	**274**	*eP*	**P**	**00 29 35.8**	**+3.2**
HHC				AP	pP	00 29 53.9	+7.9
HHC				XP	sP	00 30 03.4	+11
HHC				PP	PP	00 30 35.5	-5.4
HHC				PCP	PcP	00 32 36.8	+3.2
HHC				S	**S**	**00 34 26.2**	**-0.5**
HHC				XS	sS	00 34 58.3	+8.9
HHC				PCS	PcS	00 36 19.2	+2.3
HHC				SCS	ScS	00 40 04.0	-2.5
HHC				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,140nm,8.9s						
HHC				LR	LR		
	comp=N,257nm,22.6s,MS4.0						
HHC				LR	LR		
	comp=E,229nm,21.4s,MS4.0						
HHC				LR	LR		
	comp=Z,211nm,17.8s,MS3.8						
ULN	**Ulaanbaatar**	**30.64**	**289**	*eP*	**P**	**00 29 42.4**	**+4.3**
	comp=Z,3.2nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**30.64**	**289**	*i* P	**P**	**00 29 39.6**	**+1.5**
SONM	**Songino Array**	**31.08**	**289**	P	**P**	**00 29 38.2**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=296,slow=33,SNR=2.6						
SONM				PcP	PcP	00 32 35.3	-1.0
	comp=Z,0.6nm,0.7s,baz=77,slow=1.3,SNR=4.4						
SONM				LR	LR	00 42 55.5	
	comp=Z,109nm,19.2s,baz=112,slow=38						
SONM	**Songino Array**	**31.08**	**289**	*eP*	**P**	**00 29 43.2**	**+1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
IMA2	**Indian Mountai**	**34.03**	**36**	*eP*	**P**	**00 30 08.1**	**+0.5**
XAN	**Xi'an**	**35.22**	**265**	P	**P**	**00 30 18.1**	**-0.1**
XAN				AP	pP	00 30 36.3	+4.6
XAN				XP	sP	00 30 45.3	+7.4
XAN				S	**S**	**00 35 50.0**	**+2.1**
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.7						
XAN				AMB	AMB		
	comp=Z,125nm,4.0s						
XAN				LR	LR		
	comp=N,96nm,14.6s,MS3.8						
XAN				LR	LR		
	comp=E,75nm,13.2s,MS3.8						
XAN				LR	LR	

comp=Z,56nm,15.0s,MS3.6
KMI Kunming 44.94 259 P **P** **00 31 40.7 +1.9**
KMI AP pP 00 31 57.5 +4.8
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.3
KMI Kunming 44.94 259 P **P** **00 31 40.7 +1.9**
comp=Z,5.0nm,0.9s,mb4.3
KMI pP pP 00 31 57.5 +4.8
DLBC Dease Lake 45.85 46 P **P** **00 31 45.1 -0.4**
comp=Z,1.5nm,0.9s,mb3.9,baz=261,slow=13,SNR=4.4
MKAR Makanchi Array 46.71 297 P **P** **00 31 50.6 -1.8**
comp=Z,1.0nm,0.6s,mb3.9,baz=66,slow=7.2,SNR=20
MKAR PcP PcP 00 33 25.0 -0.2
comp=Z,1.6nm,0.8s,baz=65,slow=4.0,SNR=5.3
MKAR LR LR 00 52 39.6
comp=Z,164nm,18.5s,MS4.0,baz=246,slow=38
MKAR Makanchi Array 46.71 297 P **P** **00 31 50.6 -1.8**
MKAR PcP PcP 00 33 25.0 -0.2
MKAR LR LR 00 52 39.6
MKAR Makanchi Array 46.71 297 P **P** **00 31 50.7 -1.8**
MKAR 00 33 25.0
KURK Kurchatov 47.15 304 P **P** **00 31 55.5 -0.4**
baz=69,slow=8.0
LSA Lhasa 49.98 273 *eP* **P** **00 32 19.9 +2.0**
comp=Z,11nm,0.6s,mb5.1
LSA Lhasa 49.98 273 *eP* **P** **00 32 19.9 +2.0**
LSA pmax pmax
comp=Z,11nm,0.6s,mb5.1
BVAR Borovoye Array 50.67 309 P **P** **00 32 21.5 -1.3**
comp=Z,0.7nm,0.6s,mb3.8,baz=39,slow=9.6,SNR=4.2
BVAR PcP PcP 00 33 38.9 -0.6
comp=Z,1.3nm,0.6s,baz=106,slow=2.2,SNR=5.4
BVAR LR LR 00 55 33.4
comp=Z,106nm,19.8s,MS3.9,baz=246,slow=38
BVAR Borovoye Array 50.67 309 P **P** **00 32 21.5 -1.3**
BVAR 00 33 38.9
CHTO Chiang Mai 51.82 256 *eP* **P** **00 32 32.8 +1.0**
comp=Z,5.5nm,0.8s,mb4.5
CHTO Chiang Mai 51.82 256 *eP* **P** **00 32 32.8 +1.0**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CMAR Chiang Mai Arr 52.07 256 P **P** **00 32 34.1 +0.5**
comp=Z,2.8nm,0.7s,mb4.3,baz=36,slow=7.1,SNR=15
CMAR LR LR 00 57 46.8
comp=Z,27nm,18.4s,MS3.3,baz=45,slow=40
CMAR Chiang Mai Arr 52.07 256 *eP* **P** **00 32 34.9 +1.2**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
TAPN Taplejung 53.81 273 *eP* **P** **00 32 47.4 +1.0**
comp=Z,19nm,0.8s,mb5.1
ODAN Odare 54.34 273 *eP* **P** **00 32 51.4 +1.1**
JIRN Jiri 54.66 274 *eP* **P** **00 32 53.6 +1.0**
comp=Z,40nm,0.7s,mb5.6
GUN Gumba 54.71 275 *eP* **P** **00 32 53.6 +0.6**
RAMN Ramite 54.83 273 *eP* **P** **00 32 54.3 +0.5**
comp=Z,55nm,0.8s,mb5.6
ARU Arti 54.86 317 P **P** **00 32 51.3 -2.3**
KKN Kakani 55.20 275 *eP* **P** **00 32 57.8 +1.3**
comp=Z,35nm,0.7s,mb5.5
KKN Kakani 55.20 275 *eP* **P** **00 32 57.8 +1.3**
KKN pmax pmax
comp=Z,35nm,0.7s,mb5.5
PKI Pulchoki 55.25 275 *eP* **P** **00 32 57.5 +0.6**
DMN Daman 55.43 275 *eP* **P** **00 32 59.1 +0.9**
comp=Z,46nm,0.8s,mb5.6
GKN Gorkha 55.51 276 *eP* **P** **00 32 59.3 +0.6**
comp=Z,57nm,0.9s,mb5.6
DANN Dangsing 55.89 277 *eP* **P** **00 33 02.4 +1.0**
comp=Z,45nm,0.6s
KOLN Koldanda 56.36 276 *eP* **P** **00 33 05.7 +0.9**
comp=Z,28nm,0.7s,mb5.4
ARCES ARCESS Array B 57.81 341 P **P** **00 33 13.9 -0.6**
comp=Z,4.6nm,0.9s,mb4.5,baz=39,slow=7.8,SNR=5.8
AKTO Aktyubinsk 58.55 312 LR LR 01 00 53.4
comp=Z,151nm,18.8s,MS4.1,baz=92,slow=38
SUMG Summit 60.78 4 *eP* **P** **00 33 35.7 +0.8**
comp=Z,3.2nm,1.2s,mb4.3
KBL Kabul 61.82 291 *eP* **P** **00 33 42.5 0.0**
comp=Z,2.9nm,0.8s,mb4.5
KBL Kabul 61.82 291 *eP* **P** **00 33 42.5 0.0**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
NVAR Mina Array Bea 62.72 62 P **P** **00 33 48.4 -0.1**
comp=Z,0.2nm,0.5s,mb3.5,baz=298,slow=6.7,SNR=6.5
RRI2 Red Ridge 63.66 54 *eP* **P** **00 33 55.2 +0.5**
comp=Z,5.1nm,0.8s,mb4.6
RRI2 *e*pP pP 00 34 10.2 +1.0
PDAR Pinedale Array 65.02 54 P **P** **00 34 03.7 +0.2**
comp=Z,0.8nm,0.8s,mb3.8,baz=298,slow=3.2,SNR=4.9
NB2 NORSAR Subarra 68.19 341 P **P** **00 34 22.4 -1.0**
comp=Z,2.9nm,0.6s,mb4.5,baz=28,slow=6.5
NOA NORSAR Array B 68.19 341 P **P** **00 34 22.5 -0.9**
comp=Z,6.6nm,0.8s,mb4.7,baz=28,slow=6.3,SNR=19
WRA Warramunga Arr 68.36 199 P **P** **00 34 23.4 -1.5**
comp=Z,1.2nm,0.8s,mb4.0,baz=18,slow=6.6,SNR=6.0
WRA Warramunga Arr 68.36 199 *eP* **P** **00 34 23.7 -1.2**
WRA pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 71.43 326 P **P** **00 34 42.5 -1.0**
comp=Z,3.6nm,0.5s,mb4.6,baz=33,slow=6.2,SNR=17
ASAR Alice Springs 72.06 198 P **P** **00 34 47.0 -0.4**
comp=Z,1.5nm,0.6s,mb4.1,baz=11,slow=5.4,SNR=27
ASAR Alice Springs 72.06 198 *eP* **P** **00 34 47.7 +0.3**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
KWP Kalwaria 74.72 329⇑ *iP* **P** **00 35 02.8 -0.1**
STHS Stebnicka Huta 75.42 330 *eP* **P** **00 35 06.7 -0.3**
comp=Z,4.2nm,0.9s,mb4.4
STHS Stebnicka Huta 75.42 330 *eP* **P** **00 35 06.7 -0.3**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BUR08 Bucovina Ar. S 75.46 326 *eP* **P** **00 35 07.1 -0.1**
KOLS Kolonicke sedl 75.47 329 *eP* **P** **00 35 06.7 -0.5**
BURAR Bucovina Array 75.48 326⇓ *eP* **P** **00 35 07.0 -0.3**
BURAR Bucovina Array 75.48 326⇓ *iP* **P** **00 35 07.0 -0.3**
TLCR 76.03 323⇑ *eP* **P** **00 35 10.5 0.0**
TLCR 76.03 323⇑ *iP* **P** **00 35 10.5 0.0**
OKC Ostrava-Krasne 76.11 332⇑ *eP* **P** **00 35 10.9 0.0**
DPC Dobruska-Polom 76.25 333⇑ *iP* **P** **00 35 11.4 -0.2**
MORC Moravsky Berou 76.36 332 *eP* **P** **00 35 11.9 -0.4**
comp=Z,6.0nm,1.0s,mb4.5
MORC Moravsky Berou 76.36 332⇑ *iP* **P** **00 35 11.9 -0.4**
CLL Collm 76.40 335⇑ *iP* **P** **00 35 11.5 -1.0**
CLL pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 76.40 335 *eP* **P** **00 35 11.5 -1.0**
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 76.40 335⇑ *iP* **P** **00 35 11.5 -1.0**
comp=Z,10.0nm,0.9s,mb4.8
BRG Berggiesshubel 76.51 335 *eP* **P** **00 35 12.7 -0.4**
comp=Z,8.0nm,1.4s,mb4.5
PVCC Panska Ves 76.63 334⇑ *eP* **P** **00 35 13.4 -0.4**
CLZ Clausthal 76.65 337 *eP* **P** **00 35 13.3 -0.6**
CLZ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CLZ Clausthal 76.65 337 *eP* **P** **00 35 13.3 -0.6**
comp=Z,7.0nm,0.9s,mb4.6
MLR Muntele Rosu 76.95 325⇑ *iP* **P** **00 35 16.2 +0.5**
MLR Muntele Rosu 76.95 325⇑ *iP* **P** **00 35 16.2 +0.5**
VYHS Vyhne 77.04 331 *eP* **P** **00 35 14.8 -1.3**
VRAC Vranov 77.07 332⇑ *iP* **P** **00 35 16.2 -0.1**
DRGR 77.11 327⇓ *iP* **P** **00 35 16.0 -0.6**
DRGR 77.11 327⇓ *iP* **P** **00 35 16.0 -0.6**
KOLL Kolacno 77.11 331 *eP* **P** **00 35 15.2 -1.3**
PRU Pruhonice 77.11 334⇑ *eP* **P** **00 35 16.2 -0.3**
VOIR 77.34 325⇓ *iP* **P** **00 35 18.5 +0.6**
MOX Moxa 77.39 336 *eP* **P** **00 35 17.2 -0.9**
comp=Z,4.0nm,0.9s,mb4.3
TREC Trest 77.43 333⇑ *eP* **P** **00 35 18.1 -0.2**
SMOL Smolenice 77.49 331 *eP* **P** **00 35 19.1 +0.4**
MODS Modra-Piesok 77.66 331 *eP* **P** **00 35 19.5 -0.1**
comp=Z,2.6nm,0.9s,mb4.2
MODS Modra-Piesok 77.66 331 *eP* **P** **00 35 19.5 -0.1**
MODS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
TXAR Lajitas Array 77.78 60 P **P** **00 35 20.7 0.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=306,slow=4.4,SNR=8.3
TXAR Lajitas Array 77.78 60 P **P** **00 35 20.7 0.0**
TXAR Lajitas Array 77.78 60 *eP* **P** **00 35 20.6 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
MANZ Manzenberg 77.84 335 *eP* **P** **00 35 20.3 -0.3**
comp=Z,4.0nm,1.1s,mb4.3
ZST Bratislava 77.87 331 *eP* **P** **00 35 21.0 +0.2**
comp=Z,4.5nm,0.7s,mb4.5
ZST Bratislava 77.87 331 *eP* **P** **00 35 21.0 +0.2**
ZST pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ZST Bratislava 77.87 331 *eP* **P** **00 35 20.9 +0.1**
ROTZ Rotzenmuhle 78.00 335 *eP* **P** **00 35 21.6 +0.1**
comp=Z,5.0nm,1.0s,mb4.4
KHC Kasperske Hory 78.17 334⇓ *eP* **P** **00 35 22.5 +0.1**
KHC Kasperske Hory 78.17 334⇓ *eP* **P** **00 35 22.3 -0.1**
BR131 Keskin Array S 78.23 316 *eP* **P** **00 35 23.3 +0.4**
comp=Z,2.2nm,0.9s,mb4.1
BRTR Keskin Array B 78.23 316 P **P** **00 35 22.9 -0.1**
comp=Z,2.4nm,0.9s,mb4.2,baz=76,slow=4.7,SNR=15
BRTR LR LR 01 17 01.0
comp=Z,22nm,18.1s,MS3.5,baz=96,slow=41
GRA1 Grafenberg Arr 78.36 336 *eP* **P** **00 35 23.2 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 78.36 336 *eP* **P** **00 35 23.2 -0.3**
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 78.36 336 *eP* **P** **00 35 23.2 -0.3**
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 78.36 336 *eP* **P** **00 35 23.2 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
WET Wettzell 78.36 334 *eP* **P** **00 35 23.4 -0.1**
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WET Wettzell 78.36 334 *eP* **P** **00 35 23.4 -0.1**
comp=Z,7.0nm,1.0s,mb4.5
GEC2 GERESS Array S 78.38 334 *eP* **P** **00 35 23.2 -0.4**
GEC2 pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
GEC2 GERESS Array S 78.38 334 *eP* **P** **00 35 23.2 -0.4**
comp=Z,5.0nm,1.2s,mb4.3
GERES GERESS Array B 78.38 334 P **P** **00 35 23.3 -0.4**
comp=Z,2.2nm,0.8s,mb4.1,baz=29,slow=6.1,SNR=15
UMR Umm Al-Rimmam 78.41 301 *eP* **P** **00 35 23.5 -0.6**
baz=301
UMR AMb AMB 00 35 24.6
comp=Z,27nm,0.8s,mb5.2,baz=301
MIB Mutribah 78.44 301 *eP* **P** **00 35 24.1 -0.2**
baz=301
MIB AMb AMB 00 35 25.2
comp=Z,37nm,0.8s,mb5.4,baz=301
BZS Buzias 78.51 327⇓ *eP* **P** **00 35 23.9 -0.5**
BZS Buzias 78.51 327⇓ *iP* **P** **00 35 23.9 -0.5**
CONA Conrad Observa 78.51 332⇑ *iP* **P** **00 35 24.7 +0.3**
comp=Z,4.5nm,0.7s,mb4.5
CSNA Conrad Observa 78.51 332⇑ *iP* **P** **00 35 24.6 +0.3**
comp=Z,4.6nm,0.7s,mb4.5
ANTO Ankara 78.52 317⇓ *eP* **P** **00 35 25.4 +0.9**
ANTO Ankara 78.52 317⇓ *iP* **P** **00 35 25.5 +1.0**
TNS Taunus Mts 78.63 337 *eP* **P** **00 35 24.7 -0.3**
TNS pmax pmax
comp=Z,23nm,1.6s,mb4.9
TNS Taunus Mts 78.63 337 *eP* **P** **00 35 24.7 -0.3**
comp=Z,23nm,1.6s,mb4.9
MEM Membach 78.90 339 P **P** **00 35 26.6 +0.2**
NAY Al-Naaiem 78.91 301 *eP* **P** **00 35 26.5 -0.4**
baz=301
NAY AMb AMB 00 35 27.7
comp=Z,16nm,1.1s,mb4.9,baz=301
PKSM Moragy 79.07 329⇓ *eP* **P** **00 35 26.0 -1.4**
PKSM Moragy 79.07 329⇓ *iP* **P** **00 35 26.0 -1.5**
BCLA Clavier 79.25 339 P **P** **00 35 27.8 -0.6**
STU Stuttgart 79.75 336 *eP* **P** **00 35 31.2 +0.1**
comp=Z,10.0nm,1.1s,mb4.7
RAR Rarotonga 80.06 136 LR LR 01 07 01.2
comp=Z,48nm,19.0s,MS3.9,baz=261,slow=33
WTTA Wattenberg 80.42 334⇑ *iP* **P** **00 35 34.8 0.0**
comp=Z,8.2nm,0.7s,mb4.8
VTS Vitosha 80.45 325⇓ *eP* **P** **00 35 35.1 +0.1**
VTS Vitosha 80.45 325⇓ *iP* **P** **00 35 35.1 +0.1**
MOTA Moosalm 80.50 335⇓ *iP* **P** **00 35 35.5 +0.3**
comp=Z,9.7nm,1.1s,mb4.7
CDF Champ du Feu 80.60 337 *eP* **P** **00 35 35.2 -0.5**
comp=Z,11nm,1.0s,mb4.4
CDF Champ du Feu 80.60 337 *eP* **P** **00 35 35.2 -0.5**
comp=Z,5.6nm,1.0s,mb4.5
CDF Champ du Feu 80.60 337 *eP* **P** **00 35 35.2 -0.5**
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MIV Mineville/With 80.82 32 *eP* **P** **00 35 41.5 +4.5**
MEZF Maizieres J'vi 81.09 339 *eP* **P** **00 35 38.1 -0.2**
comp=Z,18nm,1.1s,mb4.6
MEZF Maizieres J'vi 81.09 339 *eP* **P** **00 35 38.1 -0.2**
comp=Z,18nm,1.1s,mb4.9
HAU Haudompre 81.22 338 *eP* **P** **00 35 38.4 -0.6**
comp=Z,6.2nm,0.8s,mb4.3
HAU *e*MLR MLR
comp=Z,73nm,19.5s,MS3.7
HAU Haudompre 81.22 338 *eP* **P** **00 35 38.4 -0.6**
comp=Z,3.1nm,0.8s,mb4.3
HAU LR LR
comp=Z,70nm,19.5s,MS4.0
HAU Haudompre 81.22 338 *eP* **P** **00 35 38.4 -0.6**
HAU pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HAU MLR MLR
comp=Z,70nm,19.5s,MS4.0
PPT Papeete 82.36 126 *e*LR LR 01 01 50.8
comp=Z,80nm,25.5s
LOR Lormes 82.53 339 *eP* **P** **00 35 46.1 +0.2**
comp=Z,3.7nm,0.7s,mb4.2
LOR *e*MLR MLR
comp=Z,75nm,22.0s,MS3.7
LOR Lormes 82.53 339 *eP* **P** **00 35 46.1 +0.2**
comp=Z,1.9nm,0.6s,mb4.3
LOR Lormes 82.53 339 *eP* **P** **00 35 46.1 +0.2**
LOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
CABF La Chapelle 82.58 337 *eP* **P** **00 35 46.3 +0.2**
SSF Saint Saulge 82.81 339 *eP* **P** **00 35 47.5 +0.1**
comp=Z,6.0nm,0.9s,mb4.3
SSF Saint Saulge 82.81 339 *eP* **P** **00 35 47.5 +0.1**
comp=Z,3.0nm,0.9s,mb4.3
SSF Saint Saulge 82.81 339 *eP* **P** **00 35 47.5 +0.1**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
AVF Avril sur Loir 83.10 339 *eP* **P** **00 35 48.6 -0.3**
comp=Z,10.0nm,1.0s,mb4.5
AVF Avril sur Loir 83.10 339 *eP* **P** **00 35 48.6 -0.3**
comp=Z,5.0nm,1.0s,mb4.5
AVF Avril sur Loir 83.10 339 *eP* **P** **00 35 48.6 -0.3**
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
SMF Signal de Mont 83.12 339 *eP* **P** **00 35 48.6 -0.3**
comp=Z,24nm,1.2s,mb4.8
SMF Signal de Mont 83.12 339 *eP* **P** **00 35 48.6 -0.3**
comp=Z,12nm,1.2s,mb4.8
SMF Signal de Mont 83.12 339 *eP* **P** **00 35 48.6 -0.3**
SMF pmax pmax
comp=Z,12nm,1.2s,mb4.8
LPL La Plagne 83.41 337 *eP* **P** **00 35 50.9 +0.4**
LPG La Plagne 83.42 337 *eP* **P** **00 35 51.1 +0.5**
TCF Toulx Ste Croi 83.85 340 *eP* **P** **00 35 52.3 -0.4**
comp=Z,8.1nm,1.1s,mb4.5
TCF Toulx Ste Croi 83.85 340 *eP* **P** **00 35 52.3 -0.4**
comp=Z,4.1nm,1.1s,mb4.5
TCF Toulx Ste Croi 83.85 340 *eP* **P** **00 35 52.3 -0.4**
TCF pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
MFF Saint Martin d 84.08 342 *eP* **P** **00 35 53.7 -0.2**
comp=Z,5.2nm,0.9s,mb4.4
MFF Saint Martin d 84.08 342 *eP* **P** **00 35 53.7 -0.2**
comp=Z,2.6nm,0.9s,mb4.4
MFF Saint Martin d 84.08 342 *eP* **P** **00 35 53.7 -0.2**
MFF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
MBDF Montbardon 84.13 336 *eP* **P** **00 35 54.9 +0.7**
comp=Z,12nm,1.2s,mb4.6
MBDF Montbardon 84.13 336 *eP* **P** **00 35 54.9 +0.7**
comp=Z,5.9nm,1.2s,mb4.6
MBDF Montbardon 84.13 336 *eP* **P** **00 35 54.9 +0.7**
MBDF pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
ORIF Oris-en-Rattie 84.20 337 *eP* **P** **00 35 54.7 +0.2**
comp=Z,4.6nm,0.7s,mb4.4
ORIF *e*MLR MLR
comp=Z,48nm,20.0s,MS3.6
ORIF Oris-en-Rattie 84.20 337 *eP* **P** **00 35 54.7 +0.2**
comp=Z,2.3nm,0.7s,mb4.4
ORIF Oris-en-Rattie 84.20 337 *eP* **P** **00 35 54.7 +0.2**
ORIF pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
CAF Calviac 85.16 340 *eP* **P** **00 35 58.9 -0.5**
FRF La Foret Royal 85.24 336 *eP* **P** **00 36 00.5 +0.7**
comp=Z,13nm,1.1s,mb4.7
FRF La Foret Royal 85.24 336 *eP* **P** **00 36 00.5 +0.7**
comp=Z,6.6nm,1.0s,mb4.7
FRF La Foret Royal 85.24 336 *eP* **P** **00 36 00.5 +0.7**
FRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LMR La Mourre 85.49 336 *eP* **P** **00 36 00.7 -0.3**
ESDC Sonseca Array 91.52 342 P **P** **00 36 27.2 -2.6**
comp=Z,0.8nm,0.8s,mb4.1,baz=358,slow=4.2,SNR=4.9
TORD Torodi Ar. Bea 114.99 329 PKP PKiKP 00 42 02.5 -1.8
comp=Z,0.2nm,0.6s,baz=289,slow=1.8,SNR=4.4

IDC ***05*** *00:58:49.0±13.0, 5.14S×152.53E, h114km±109km, mb3.7/4, mb1 3.9/5, mb1mx3.5/16, mbtmp3.7/5, ML4.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/20, Error ellipse: s-maj=75.0km s-min=42.9km az=73.0*
NEIC ***05*** *00:58:50.9±4.3, 5.17S×152.58E, h138km±26km, mb4.2/1, Error ellipse: s-maj=47.9km s-min=21.3km az=77.0*
ISC 05 00:58:52.9±7.7, 52.5S×03×152.4E±06, h144km±40km, n13, σ0.9≤22/9, mb4.0/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.67**	**231**	*eP*	n		**Pn**	**01 00 28.7**	**+0.1**
HNR	**Honiara**	**8.54**	**120**	LR			LR	01 03 09.6	
	comp=Z,50nm,18.3s,baz=215,slow=31								
CTA	**Charters Tower**	**15.93**	**202**	P			**Pn**	**01 02 28.9**	**-0.2**
	0.6nm,0.3s,baz=68,slow=19,SNR=4.4								
KAKA	**Kakadu**	**21.08**	**248**	*eP*			Px	01 03 15.4	
	5.1nm,0.4s								
WRAB	**Tennant Creek**	**22.86**	**229**	*eP*			**P**	**01 03 44.0**	**-0.1**
	6.9nm,0.6s,mb4.3								
WB2	**Warramunga Arr**	**22.87**	**229**	*eP*			**P**	**01 03 44.0**	**-0.1**
WB2	**Warramunga Arr**	**22.87**	**229**	*eP*			**P**	**01 03 44.1**	**-0.1**
WRA	**Warramunga Arr**	**22.88**	**229**	P			**P**	**01 03 43.9**	**-0.3**
	1.8nm,0.4s,mb4.3,baz=54,slow=10.0,SNR=42								
ASAR	**Alice Springs**	**25.58**	**222**	P			**P**	**01 04 09.2**	**+0.4**
	2.1nm,0.5s,mb4.0,baz=55,slow=8.9,SNR=18								
STKA	**Stephens Creek**	**28.38**	**200**	P			**P**	**01 04 33.8**	**+0.2**
	1.4nm,0.8s,mb3.7,baz=23,slow=15,SNR=2.9								
CMAR	**Chiang Mai Arr**	**57.73**	**296**	P			**P**	**01 08 29.1**	**0.0**
	0.4nm,0.3s,mb3.8,baz=102,slow=6.0,SNR=5.3								
SONM	**Songino Array**	**66.50**	**328**	LR			LR	01 40 47.5	
	comp=Z,26nm,18.5s,baz=213,slow=38								
TORD	**Torodi Ar. Bea**	**150.09**	**287**	PKPbc			PKPbc	01 18 26.6	-1.1
	0.5nm,0.6s,baz=83,slow=2.1,SNR=9.1								

IDC ***05*** *00:59:57.2±2.5, 2.576N×91.14E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/21, mbtmp3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/25, Error ellipse: s-maj=98.8km s-min=25.1km az=71.0*
ISCJB ***05*** *01:00:02.6±3.6, 2.57N±02×91.0E±04, h61km±25km, mb3.5/4, Error ellipse: s-maj=58.8km s-min=22.2km az=152.6*
ISC 05 01:00:02.9±3.7, 2.58N±02×910E±03, h45km±30km, n7, σ0.9≤35/7, mb3.5/4, 1D, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.86**	**102**⇓	*iP*			**Pn**	**01 00 18.2**	**-0.3**
SHL				*e*SG			**Sn**	**01 00 30.2**	**+0.3**
IMP	**Imphal**	**2.86**	**109**	*i* P			**Pn**	**01 00 46.0**	**0.0**
IMP				*e*S			Sx	01 01 39.0	
MKAR	**Makanchi Array**	**22.10**	**344**	P			**P**	**01 04 54.5**	**+0.3**
	1.2nm,0.6s,mb3.5,baz=161,slow=8.7,SNR=7.8								
SONM	**Songino Array**	**25.18**	**25**	P			**P**	**01 05 23.7**	**-0.3**
	0.3nm,0.3s,mb3.2,baz=193,slow=12,SNR=4.3								
ZALV	**Zalesovo Beam**	**28.53**	**352**	LR			LR	01 18 09.1	
	comp=Z,24nm,18.8s,baz=255,slow=38								
WRA	**Warramunga Arr**	**61.96**	**133**	P			**P**	**01 10 18.7**	**+0.2**
	0.4nm,0.4s,mb3.9,baz=321,slow=7.3,SNR=4.6								
ASAR	**Alice Springs**	**64.36**	**136**	P			**P**	**01 10 34.1**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=315,slow=6.5,SNR=4.1								

KRSC 05 01:09:11.2±0.8, 5357N×16076E, h45km±45km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.65**	**223**	*eP*			Pn	01 09 24.9	+0.9
SPN				*i* S			Sn	01 09 34.5	+1.3
KII	**Karymskiy**	**0.91**	**302**	*eP*			Pn	01 09 27.8	+0.3
KII				*i* S			Sn	01 09 39.5	+0.1
NLC	**Nalytchevo**	**0.94**	**245**	*eP*			Pn	01 09 28.8	+0.9
NLC				*i* S			Sn	01 09 41.2	+1.0
MKZ	**Mys Kozlova**	**1.14**	**30**	*eP*			Pn	01 09 30.7	0.0
MKZ				*i* S			Sn	01 09 44.3	-0.9
AVH	**Avacha**	**1.25**	**257**	*eP*			Pn	01 09 33.6	+1.5
AVH				*i* S			Sn	01 09 50.0	+2.3
PET	**Petropavlovsk**	**1.38**	**247**	*eP*			Pn	01 09 35.2	+1.3
PET				*i* S			Sn	01 09 52.6	+1.7
GNL	**Ganaly**	**1.68**	**275**	*eP*			Pn	01 09 39.6	+1.5
GNL				*i* S			Sn	01 10 00.0	+1.6
TUMR	**Tumrok**	**1.75**	**348**	*eP*			Pn	01 09 40.4	+1.3
TUMR				*i* S			Sn	01 10 01.4	+1.2
RUS	**Russkaya**	**1.77**	**231**	*eP*			Pn	01 09 40.4	+1.1
RUS				*i* S			Sn	01 10 01.4	+0.8
GRL	**Gorelyy**	**1.92**	**239**	*eP*			Pn	01 09 43.4	+2.1
GRL				*i* S			Sn	01 10 06.6	+2.5
KMNR	**Kamenistaya**	**2.21**	**352**	*eP*			Pn	01 09 47.5	+2.2
KMNR				*i* S			Sn	01 10 14.1	+2.7
BZGR	**Bezymyannyi-Gr**	**2.38**	**359**	*eP*			Pn	01 09 49.1	+1.5
BZGR				*i* S			Sn	01 10 17.2	+1.8
KIRR	**Kirishev**	**2.40**	**354**	*eP*			Pn	01 09 50.5	+2.6
KIRR				*i* S			Sn	01 10 19.5	+3.4
KPT	**Kopyto**	**2.42**	**353**	*eP*			Pn	01 09 50.3	+2.1
KOZ	**Kozyrevsk**	**2.55**	**349**	*eP*			Pn	01 09 51.4	+1.5
KOZ				*i* S			Sn	01 10 21.2	+1.6
KRSR	**Krestovskiy**	**2.66**	**358**	*eP*			Pn	01 09 53.7	+2.3
KRSR				*i* S			Sn	01 10 24.2	+1.9
MIPR	**Malaya Ipel'ka**	**2.75**	**243**	P			Pn	01 09 53.4	+0.7
KLY	**Klyuchi**	**2.75**	**359**	*eP*			Pn	01 09 54.9	+2.2
KLY				*i* S			Sn	01 10 26.9	+2.3
KBTR	**Krutoberegovo**	**2.90**	**23**	*eP*			Pn	01 09 56.4	+1.6
KBTR				*i* S			Sn	01 10 28.7	+0.4
SRKR	**Sorokina**	**3.10**	**4**	*eP*			Pn	01 09 59.7	+2.2
SRKR				*i* S			Sn	01 10 35.0	+1.7

IDC ***05*** *01:13:18.8±0.8, 101N×126.25E, h0km, mb4.2/6, mb1 4.4/7, mb1mx4.1/16, mbtmp4.2/7, ML4.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/26, Error ellipse: s-maj=49.6km s-min=15.9km az=69.0*
DJA ***05*** *01:13:22, 133N×126.16E, h100km, MLv4.1/4*
NEIC ***05*** *01:13:23.9±0.5, 0.95N×126.25E, h35km, mb4.0/1, Error ellipse: s-maj=20.2km s-min=9.7km az=71.0*
ISCJB ***05*** *01:13:24.2±0.8, 0.91N±009×126.10E±008, h57km±9km, mb4.1/6, Error ellipse: s-maj=17.1km s-min=8.8km az=38.2*
ISC 05 01:13:25.0±0.9, 092N±009×12613E±008, h45km±11km, n21, σ0.97/17, mb4.1/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**97**	P			**Pn**	**01 13 45.3**	**-0.7**
MNI	**Manado**	**1.39**	**292**	P			**Pn**	**01 13 47.0**	**-0.9**
MNI	**Manado**	**1.39**	**292**	S			**Sn**	**01 14 05.1**	**0.0**
LBMI	**Labuha**	**2.07**	**138**	P			**Pn**	**01 13 59.1**	**+1.8**
LBMI	**Labuha**	**2.07**	**138**	S			**Sn**	**01 14 30.0**	**+8.2**
KAPI	**Kappang**	**8.68**	**227**	Pn			**Pn**	**01 15 28.7**	**+0.7**
	2.5nm,0.3s,baz=243,slow=20,SNR=7.8								
KAKA	**Kakadu**	**14.92**	**155**	*eP*			Px	01 16 41.1	
	5.4nm,0.6s								
WRAB	**Tennant Creek**	**22.24**	**159**	*eP*			**P**	**01 18 17.2**	**-0.8**
	1.9nm,0.3s,mb4.0								
WRA	**Warramunga Arr**	**22.24**	**159**	P			**P**	**01 18 17.0**	**-1.1**
	16nm,0.7s,baz=337,slow=12,SNR=18								
WB2	**Warramunga Arr**	**22.25**	**159**	*eP*			**P**	**01 18 17.1**	**-1.0**
WB2	**Warramunga Arr**	**22.25**	**159**	*eP*	

0.4nm,0.3s,mb4.0,baz=108,slow=3.3,SNR=3.9
ZALV Zalesovo Beam 62.82 334 P **P** **01 23 47.5 +1.6**
KURK Kurchatov 63.79 329 P **P** **01 23 51.9 -0.5**
baz=126,slow=6.0
TORD Torodi Ar. Bea 123.17 286 PKP PKPdf 01 32 17.4 -0.4
0.5nm,0.7s,baz=40,slow=1.2,SNR=6.9
TXAR Lajitas Array 123.77 53 PKP PKPdf 01 32 19.0 +0.3
0.3nm,0.7s,baz=329,slow=1.5,SNR=4.0

*IDC **05** 01:50:17.9±0.7, 3297S×17804W, h0km, mb4.3/6, mb1 4.6/7, mb1mx4.3/17, mbtmp4.3/7, ML4.6/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/27, Error ellipse: s-maj=26.1km s-min=24.7km az=160.0*
*ISCJB **05** 01:50:20.9±0.8, 3308S±009×1782W±02, h33km, mb4.3/6, MS3.6/5, Error ellipse: s-maj=22.3km s-min=9.5km az=28.5*
ISC 05 01:50:22.9±0.9, 3303S±010×1782W±02, h35km, n26, σ1§15/9, mb4.3/6, MS3.6/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAO	**Raoul Island**	**3.77**	**3**	Pn		**Pn**	**01 51 17.6**	**-1.0**
	46nm,0.3s,baz=272,slow=23,SNR=2.6							
RAO				LR		LR	01 52 27.7	
	comp=Z,207nm,18.2s,baz=174,slow=35							
URZ	**Urewera**	**6.49**	**215**	Pn		**Pn**	**01 51 52.3**	**-3.6**
	2.7nm,0.3s,baz=144,slow=6.2,SNR=13							
URZ				Sn		**Sn**	**01 53 07.8**	**-0.8**
	5.5nm,0.3s,baz=176,slow=20,SNR=11							
TBI	**Tubuai**	**26.99**	**76**	eLR		LR	02 02 33.0	
	167nm,28.2s							
PPT	**Papeete**	**29.94**	**66**	eLR		LR	02 03 54.0	
	130nm,25.2s,baz=228							
STKA	**Stephens Creek**	**33.85**	**261**	LR		LR	02 10 09.7	
	comp=Z,174nm,18.2s,MS3.8,baz=25,slow=35							
CTA	**Charters Tower**	**34.18**	**283**	P		**P**	**01 57 06.9**	**+1.9**
	5.0nm,0.5s,mb4.7,baz=115,slow=10,SNR=11							
CTA				LR		LR	02 09 55.9	
	comp=Z,68nm,18.4s,MS3.4,baz=227,slow=34							
RKT	**Rikitea**	**39.12**	**87**	eLR		LR	02 07 58.7	
	179nm,31.2s							
ASAR	**Alice Springs**	**42.91**	**270**	P		**P**	**01 58 18.5**	**+0.2**
	2.4nm,0.5s,mb4.2,baz=119,slow=7.3,SNR=7.6							
WRA	**Warrmunga Arr**	**44.13**	**275**	P		**P**	**01 58 27.9**	**-0.3**
	3.8nm,0.5s,mb4.4,baz=118,slow=7.9,SNR=8.3							
WRA				LR		LR	02 17 44.8	
	comp=Z,76nm,18.2s,MS3.6,baz=130,slow=37							
NWAO	**Narrogin (SRO)**	**53.39**	**251**	LR		LR	02 21 23.2	
	comp=Z,42nm,19.0s,MS3.5,baz=135,slow=35							
QSPA	**South Pole Qui**	**57.09**	**180**	P		**P**	**02 00 07.1**	**+2.0**
	1.6nm,0.7s,mb4.1,baz=40,slow=3.1,SNR=6.9							
KAPI	**Kappang**	**63.98**	**282**	LR		LR	02 29 47.8	
	comp=Z,45nm,18.6s,MS3.7,baz=159,slow=37							
NVAR	**Mina Array Bea**	**90.25**	**43**	P		**P**	**02 03 19.4**	**-0.4**
	1.3nm,0.9s,mb4.3,baz=212,slow=6.7,SNR=7.8							
TXAR	**Lajitas Array**	**93.91**	**57**	P		**P**	**02 03 36.5**	**-0.5**
	0.4nm,0.9s,mb3.9,baz=209,slow=2.3,SNR=3.8							
KURK	**Kurchatov**	**122.75**	**313**	PKP		PKPdf	02 09 15.1	+0.6
	baz=106,slow=1.7							
BVAR	**Borovoye Array**	**128.17**	**314**	PKP		PKPdf	02 09 25.1	+0.3
	1.8nm,0.8s,baz=90,slow=3.0,SNR=8.9							
JOF	**Joensuu**	**144.80**	**337**	*ep*		PKPdf	02 09 54.8	-0.4
	3.6nm,0.9s							
KAF	**Kangasniemi**	**146.97**	**339**	*ep*		PKPdf	02 10 01.3	+2.4
	3.8nm,0.8s							
NB2	**NORSAR Subarra**	**151.32**	**351**	PKP		PKPbc	02 10 12.2	+0.2
	comp=Z,0.7nm,0.6s,baz=16,slow=2.6							
NOA	**NORSAR Array B**	**151.32**	**351**	PKPbc		PKPbc	02 10 11.5	-0.4
	comp=Z,2.0nm,0.9s,baz=14,slow=4.1,SNR=5.1							
HFS	**Hagfors**	**151.78**	**347**	PKPbc		PKPbc	02 10 14.4	+1.3
	comp=Z,2.6nm,0.8s,baz=42,slow=4.5,SNR=3.4							
MMAI	**Mount Meron Ar**	**151.94**	**279**	PKPbc		PKPbc	02 10 13.7	-0.6
	comp=Z,1.3nm,0.7s,baz=57,slow=6.3,SNR=4.1							
AKASG	**Malin Array Be**	**153.26**	**319**	PKPbc		PKPbc	02 10 17.2	+0.5
	comp=Z,3.7nm,1.0s,baz=67,slow=2.1,SNR=6.6							
AKASG				PKPab		PKPab	02 10 30.1	+1.5
	comp=Z,1.3nm,0.6s,baz=85,slow=1.4,SNR=5.0							
BRTR	**Keskin Array B**	**153.64**	**294**	PKPab		PKPab	02 10 31.4	+0.8
	comp=Z,0.8nm,0.9s,baz=160,slow=5.1,SNR=3.7							
TORD	**Torodi Ar. Bea**	**160.21**	**180**	PKPab		PKPab	02 10 60.0	+0.7
	comp=Z,1.8nm,1.1s,baz=188,slow=4.1,SNR=3.8							
GERES	**GERESS Array B**	**161.88**	**334**	PKPab		PKPab	02 11 06.6	+0.8
	comp=Z,0.4nm,0.8s,baz=29,slow=6.1,SNR=4.0							

JMA 05 01:50:27.4±0.3, 4399N×14793E, h0km, M4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NEM2	**Nemuro 2**	**1.71**	**249**	P		Pn	01 50 58.6	+0.2
NEM2					*e*S	Sn	01 51 21.3	+0.5
JRA	**Rausu**	**2.03**	**269**	P		Pn	01 51 03.3	+0.5
JRA					*e*S	Sn	01 51 30.0	+1.2
JNK	**Nakash**	**2.36**	**261**	P		Pn	01 51 08.2	+0.8
JNK					*e*S	Sn	01 51 38.0	+1.0
JAK	**Akkeshi**	**2.55**	**248**	P		Pn	01 51 10.8	+0.8
JAK					*e*S	Sn	01 51 42.4	+0.6
JTKR	**Abashiri--Toko**	**2.90**	**271**	P		Pn	01 51 16.6	+1.8
JAR	**Ashorobuto**	**3.10**	**259**	*e*S		Sn	01 51 57.6	+2.4
JOB	**Onbets**	**3.17**	**251**	P		Pn	01 51 20.2	+1.7
JOB					*e*S	Sn	01 51 59.1	+2.0
JCH	**Churui**	**3.61**	**249**	P		Pn	01 51 26.2	+1.7
JNBK	**Urakawa-nobuka**	**4.16**	**248**	P		Pn	01 51 33.9	+1.9
JKB	**Kayabe**	**5.48**	**250**	P		Pn	01 51 8	+1.5
JKB					*e*S	Sn	01 52 54.3	+0.3

*ISCJB **05** 01:53:03.4±0.7, 9065S×12051E±004, h87km, 9km, mb4.1/11, Error ellipse: s-maj=8.9km s-min=5.9km az=28.9*
*NEIC **05** 01:53:04.6±1.2, 9075S×12056E, h83km, 13km, mb4.4/4, Error ellipse: s-maj=18.4km s-min=8.6km az=64.0*
*DJA **05** 01:53:06.2±0.0, 9205S×12038E, h75km, mB5.7/3, Mjma3.9/6, MLv4.8/6, Mw(mB)5.4/3, Mwp3.7/3*
*IDC **05** 01:53:07.1±1.8, 8905S×12073E, h108km±17km, mb3.9/9, mb1 4.2/13, mb1mx4.0/20, mbtmp4.1/13, Error ellipse: s-maj=31.1km s-min=8.6km az=58.0*
ISC 05 01:53:04.6±0.6, 9105S×12053E±004, h83km±8km, n34, σ1§21/40, mb4.1/11, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BATI	**Baumata**	**3.28**	**110**	P		**Pn**	**01 53 57.2**	**+3.4**
	248nm,0.3s,baz=292,slow=4.2,SNR=101							
BATI				S		**Sn**	**01 54 32.0**	**+0.3**
	151nm,0.3s,baz=297,slow=8.3,SNR=6.3							
BATI	**Baumata**	**3.28**	**110**	P		**Pn**	**01 53 57.4**	**+3.6**
BATI	**Baumata**	**3.28**	**110**	S		**Sn**	**01 54 36.8**	**+5.1**
KAPI	**Kappang**	**4.13**	**349**	P		**Pn**	**01 54 06.9**	**+1.4**
	12nm,0.3s,baz=190,slow=8.7,SNR=90							
KAPI				S		**Sn**	**01 54 51.0**	**-1.7**
	15nm,0.3s,baz=128,slow=22,SNR=13							
KAPI	**Kappang**	**4.13**	**349**	*e*Pn		**Pn**	**01 54 06.7**	**+1.2**
KAPI				*e*Sn		**Sn**	**01 54 52.1**	**-0.6**
KAPI	**Kappang**	**4.13**	**349**	P		**Pn**	**01 54 06.6**	**+1.1**
KHKI	**Kahang-Kahang**	**4.92**	**278**	P		**Pn**	**01 54 15.3**	**-0.9**
KHKI	**Kahang-Kahang**	**4.92**	**278**	S		**Sn**	**01 55 10.8**	**-1.1**
DNP	**Denpasar**	**5.28**	**274**	S		**Sn**	**01 55 22.2**	**+1.6**
IGBI	**Denpasar**	**5.33**	**273**	P		**Pn**	**01 54 22.6**	**+0.8**
	628nm,0.8s,5.4nm							
IGBI	**Denpasar**	**5.33**	**273**	S		**Sn**	**01 55 20.9**	**-1.0**
	628nm,0.8s,5.4nm							
KDI	**Kendari**	**5.51**	**22**	P		**Pn**	**01 54 27.2**	**+2.9**
	101nm,1.1s,2µm0.3nm							
MBWA	**Marble Bar**	**12.01**	**184**	*e*Pn		**Pn**	**01 55 51.7**	**-1.2**
	10nm,0.6s							
MBWA				*e*Sn		**Sn**	**01 57 54.0**	**-11**
KAKA	**Kakadu**	**12.23**	**108**	*e*P		Px	01 55 45.6	
	48nm,0.6s							
KAKA				*e*S		Sx	01 57 53.8	
WRA	**Warramunga Arr**	**17.15**	**130**	P		**Pn**	**01 56 58.2**	**-0.9**
	7.8nm,0.3s,baz=304,slow=15,SNR=148							
WRA				S		**Sn**	**01 59 57.1**	**-12**
	3.7nm,0.3s,baz=307,slow=22,SNR=9.5							
WRAB	**Tennant Creek**	**17.16**	**130**	*e*P		**Pn**	**01 56 58.6**	**-0.5**
	69nm,0.7s							
WRAB				Sn		**Sn**	**01 59 59.6**	**-10**
WB2	**Warramunga Arr**	**17.16**	**130**	*e*P		**Pn**	**01 56 58.3**	**-0.9**
WB2				*e*S		**Sn**	**01 59 57.2**	**-13**
ASAR	**Alice Springs**	**19.32**	**140**	P		**Pn**	**01 57 24.6**	**-0.5**
	8.2nm,0.3s,baz=322,slow=11,SNR=192							
ASAR				S		**S**	**02 00 56.2**	**-1.4**
	1.2nm,0.3s,baz=308,slow=22,SNR=8.4							
KLBR	**Kellerberrin**	**22.53**	**186**	*e*P		**P**	**01 57 58.6**	**+1.0**
	7.2nm,0.5s,mb4.3							
KLBR				*e*S		**S**	**02 01 58.5**	**-0.3**
COEN	**Coen**	**22.70**	**104**	*e*P		**P**	**01 57 55.8**	**-3.8**
	4.9nm,0.6s,mb4.0							
NWAO	**Narrogin (SRO)**	**23.90**	**187**	P		**P**	**01 58 11.8**	**+1.1**
	6.4nm,0.5s,mb4.2,baz=46,slow=8.8,SNR=6.8							
NWAO	**Narrogin (SRO)**	**23.90**	**187**	P		**P**	**01 58 11.8**	**+1.1**
CTA	**Charters Tower**	**27.14**	**117**	P		**P**	**01 58 41.5**	**+1.3**
	3.7nm,0.8s,mb4.0,baz=294,slow=14,SNR=4.1							
STKA	**Stephens Creek**	**29.93**	**142**	*e*P		**P**	**01 59 06.4**	**+1.6**
	2.8nm,0.3s,mb4.4							
STKA	**Stephens Creek**	**29.93**	**142**	P		**P**	**01 59 06.2**	**+1.4**
	3.6nm,0.3s,mb4.4,baz=333,slow=8.1,SNR=12							
CMAR	**Chiang Mai Arr**	**34.70**	**322**	P		**P**	**01 59 47.5**	**+0.9**
	1.2nm,0.4s,mb4.1,baz=146,slow=6.6,SNR=4.1							
SONM	**Songino Array**	**58.06**	**349**	P		**P**	**02 02 47.4**	**-1.5**
	0.4nm,0.5s,mb3.7,baz=160,slow=5.8,SNR=3.7							
MKAR	**Makanchi Array**	**65.25**	**332**	P		**P**	**02 03 36.3**	**-1.0**
	0.4nm,0.5s,mb3.5,baz=146,slow=7.0,SNR=7.4							
ZALV	**Zalesovo Beam**	**69.68**	**338**	P		**P**	**02 04 03.9**	**-1.3**
	1.0nm,0.5s,mb3.9,baz=136,slow=5.4,SNR=6.4							
KURK	**Kurchatov**	**69.76**	**333**	P		**P**	**02 04 05.5**	**-0.2**
	baz=140,slow=5.4							
QSPA	**South Pole Qui**	**80.89**	**180**	P		**P**	**02 05 10.7**	**+1.6**
	2.2nm,0.5s,mb4.2,baz=43,slow=0.8,SNR=8.3							
BOSA	**Boshof**	**90.29**	**241**	P		**P**	**02 05 57.9**	**+1.1**
	2.8nm,0.9s,mb4.4,baz=153,slow=6.8,SNR=5.4							
TORD	**Torodi Ar. Bea**	**119.97**	**280**	PKP		PKPdf	02 11 46.2	-0.3
	0.6nm,0.8s,baz=163,slow=1.9,SNR=2.8							
TORD	**Torodi Ar. Bea**	**119.97**	**280**	PKP		PKPdf	02 11 46.2	-0.3

IDC 05 01:59:59.0±2.8, 2262S×17957W, h0km, mb4.0/4, mb1 4.4/4, mb1mx4.1/15, mbtmp4.0/4, Error ellipse: s-maj=223.8km s-min=25.5km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ASAR	**Alice Springs**	**42.65**	**259**	P		P	02 07 57.0	-0.4
	3.0nm,0.8s,baz=97,slow=7.7,SNR=15							
WRA	**Warramunga Arr**	**42.90**	**265**	P		P	02 07 59.8	+0.3
	4.4nm,0.4s,baz=96,slow=8.3,SNR=34							
NVAR	**Mina Array Bea**	**83.56**	**44**	P		P	02 12 31.0	+2.0
	0.1nm,0.4s,baz=233,slow=4.4,SNR=2.9							
TXAR	**Lajitas Array**	**89.42**	**58**	P		P	02 12 56.3	-1.7
	0.4nm,0.7s,baz=218,slow=6.6,SNR=7.4							

IDC 05 02:04:25.4±1.4, 074N×12585E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, MS3.7/1, Ms1 3.6/1, ms1mx2.4/18, Error ellipse: s-maj=167.5km s-min=18.8km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**22.18**	**158**	P		P	02 09 22.4	-0.8
	4.4nm,0.7s,baz=337,slow=12,SNR=8.5							
ASAR	**Alice Springs**	**25.49**	**163**	P		P	02 09 56.4	+0.9
	1.2nm,0.3s,baz=347,slow=12,SNR=13							
STKA	**Stephens Creek**	**35.70**	**157**	P		P	02 11 25.4	-0.3
	1.4nm,0.7s,baz=0.0,slow=9.1,SNR=2.9							
STKA				LR		LR	02 25 30.2	
	comp=Z,114nm,19.6s,baz=204,slow=35							
MKAR	**Makanchi Array**	**59.52**	**327**	P		P	02 14 28.9	-1.6
	0.5nm,0.5s,baz=134,slow=7.8,SNR=3.5							
KURK	**Kurchatov**	**63.80**	**329**	P		P	02 15 00.7	+1.5
	baz=118,slow=7.5							

*MAN **05** 03:12:21, 745N×12726E, h10km, mb5.3, ML4.3, MS4.6*
*MOS **05** 03:12:22.6±1.1, 741N×12675E, h33km, mb4.9/22, Error ellipse: s-maj=14.7km s-min=6.7km az=109.7*
*DJA **05** 03:12:24.5±0.0, 751N×12725E, h10km, mB5.6/3, Mjma4.7/2, MLv5.2/2, Mw(mB)5.3/3, Mwp4.7/3*
*ISCJB **05** 03:12:25.6±0.5, 737N±003×12696E±005, h61km±4km, mb4.7/68, Error ellipse: s-maj=8.3km s-min=4.5km az=164.5*
*BJI **05** 03:12:27.5, 7.17N×12695E, h96km, mB5.0, mb4.8*
*IDC **05** 03:12:27.3±1.8, 7.40N×12690E, h65km±16km, mb4.2/18, mb1 4.4/21, mb1mx4.4/23, mbtmp4.3/21, MS4.0/13, Ms1 4.0/13, ms1mx3.7/26, Error ellipse: s-maj=20.3km s-min=10.8km az=77.0*
*NEIC **05** 03:12:29.1±1.0, 733N×12676E, h80km±9km, mb4.7/36, Error ellipse: s-maj=8.6km s-min=4.6km az=72.0*
ISC 05 03:12:27.5±0.5, 738N±003×12689E±005, h63km±4km, h81km±1.9km: pP-P, n179, σ1§11/182, mb4.7/68, 13C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MATI	**Mati**	**0.76**	**235**	*e*P		**Pn**	**03 12 39.9**	**-2.7**
MATI					*e*S	**Sn**	**03 12 52.2**	**-1.5**
BIPH	**Bislig**	**0.95**	**327**	*i*P		**Pn**	**03 12 42.5**	**-2.6**
BIPH					*e*S	**Sn**	**03 12 57.1**	**-1.0**
DAV	**Davao City (W)**	**1.33**	**257**	P		**Pn**	**03 12 51.5**	**+1.5**
	1µm,0.3s,baz=214,slow=3.0,SNR=42							
DAV				S		**Sn**	**03 13 15.4**	**+8.5**
	755nm,0.3s,baz=85,slow=24,SNR=9.2							
DAV	**Davao City (W)**	**1.33**	**257**	*e*Pn		**Pn**	**03 12 51.8**	**+1.7**
DAV	**Davao City (W)**	**1.33**	**257**	P		**Pn**	**03 12 52.1**	**+2.1**
DMPH	**Davao City--Mi**	**1.40**	**258**	*i*P		**Pn**	**03 12 52.7**	**+1.8**
KCP	**Kidapawan**	**1.82**	**258**	*e*P		**Pn**	**03 12 58.0**	**+1.4**
KCP				*i* S		**Sn**	**03 13 25.0**	**+6.4**
BUKP	**Musuan**	**1.87**	**285**	*e*P		**Pn**	**03 12 58.5**	**+1.2**
BUKP				*e*S		**Sn**	**03 13 34.5**	**+15**
BUTP	**Butuan**	**2.02**	**322**	*e*P		**Pn**	**03 12 59.7**	**+0.4**
BUTP				*e*S		**Sn**	**03 13 31.6**	**+8.2**
GSPH	**General Santos**	**2.31**	**236**	*i*P		**Pn**	**03 13 02.1**	**-1.1**
CGP	**Cagayan de Oro**	**2.42**	**296**	*e*P		**Pn**	**03 13 06.3**	**+1.6**
CGP				*i* S		**Sn**	**03 13 40.3**	**+7.0**
SCPH	**Surigao**	**2.76**	**330**	*e*P		**Pn**	**03 13 07.7**	**-1.6**
PAGZ	**Pagadian**	**3.50**	**278**	*e*P		**Pn**	**03 13 18.8**	**+1.2**
PAGZ	**Pagadian**	**3.50**	**278**	eS		Px	03 13 37.4	
TBP	**Tagbilaran**	**3.77**	**308**	*e*P		**Pn**	**03 13 23.7**	**+0.5**
TBP				*e*S		**Sn**	**03 14 03.4**	**-3.0**
LLP	**Lapu-Lapu**	**4.10**	**316**	*e*P		**Pn**	**03 13 28.9**	**+1.1**
LLP				*e*S		**Sn**	**03 14 26.8**	**+12**
PLP	**Palo**	**4.21**	**334**	*e*P		**Pn**	**03 13 27.8**	**-1.4**
CNP	**Catarman**	**5.55**	**337**	*e*P		**Pn**	**03 13 44.3**	**-3.3**
RCP	**Roxas**	**5.83**	**316**	*e*P		**Pn**	**03 13 52.7**	**+1.4**
TNTI	**Ternate**	**6.58**	**176**	P		**Pn**	**03 14 01.7**	**0.0**
	228nm,0.8s,4µm0.8nm							
TNTI	**Ternate**	**6.58**	**176**	P		**Pn**	**03 14 01.7**	**0.0**
	228nm,0.8s,4µm0.8nm							
LBMI	**Labuha**	**7.99**	**176**	P		**Pn**	**03 14 19.9**	**-1.1**
LBMI	**Labuha**	**7.99**	**176**	P		**Pn**	**03 14 19.9**	**-1.1**
SWI	**Sorong**	**9.28**	**152**	P		**Pn**	**03 14 34.7**	**-3.9**
	44nm,0.6s,0.2nm							
SWI	**Sorong**	**9.28**	**152**	P		**Pn**	**03 14 34.7**	**-3.9**
	44nm,0.6s							
KAPI	**Kappang**	**14.22**	**210**	P		**Pn**	**03 15 44.3**	**-1.5**
	0.4nm,0.3s,baz=12,slow=5.0,SNR=8.1							
KAPI	**Kappang**	**14.22**	**210**	*e*Pn		**Pn**	**03 15 43.8**	**-2.0**
KAPI	**Kappang**	**14.22**	**210**	P		**Pn**	**03 15 48.8**	**+3.0**
	27nm,1.1s							
BBKI	**Banjar Baru**	**16.14**	**229**	P		**Pn**	**03 16 17.9**	**+7.4**
	12nm,1.5s							
BATI	**Baumata**	**17.76**	**190**	P		**Pn**	**03 16 31.1**	**+0.6**
	12nm,0.3s,baz=272,slow=6.4,SNR=3.6							
GUMO	**Guam**	**18.72**	**69**	LR		LR	03 22 42.0	
	comp=Z,300nm,20.8s,baz=201,slow=33							
JOW	**Kunigami**	**19.39**	**4**	P		**Pn**	**03 16 49.5**	**-0.6**
	4.2nm,0.3s,baz=202,slow=6.3,SNR=16							
JOW				LR		LR	03 23 44.4	
	comp=Z,343nm,18.2s,baz=172,slow=35							
QIZ	**Qiongzhong**	**20.21**	**307**	P		**P**	**03 16 57.4**	**0.0**
QIZ				S		**S**	**03 20 40.7**	**-0.2**
QIZ				XS		sS	03 21 04.1	+1.3
QIZ				AMB		AMB		
	comp=Z,329nm,4.0s							
QIZ				LR		LR		
	comp=E,812nm,10.3s							
QIZ				LR		LR		
	comp=Z,927nm,13.9s							
QIZ	**Qiongzhong**	**20.21**	**307**	*e*P		**P**	**03 16 56.9**	**-0.5**
	comp=Z,22nm,0.7s							
KAKA	**Kakadu**	**20.71**	**165**	*e*P		Px	03 16 51.5	
	comp=Z,30nm,0.5s							
SSE	**Sheshan**	**24.19**	**348**	P		**P**	**03 17 39.3**	**+1.1**
SSE				XP		sP	03 18 07.0	+6.3
SSE				S		**S**	**03 21 49.9**	**-2.2**
SSE				XS		sS	03 22 21.9	+4.0
SSE				AMB		AMB		
	comp=Z,30nm,0.7s,mb4.8							
SSE				AMB		AMB		
	comp=Z,268nm,4.4s							
SSE				LR		LR		
	comp=N,73nm,15.3s							
SSE				LR		LR		
	comp=E,115nm,15.3s							
SSE				LR		LR		
	comp=Z,201nm,13.9s							
NJ2	**Nanjing**	**25.66**	**344**	*e*P		**P**	**03 17 53.8**	**+2.3**
NJ2				AMB		AMB		
	comp=Z,80nm,0.8s,mb5.3							
PMG	**Port Moresby**	**26.19**	**129**	*e*P		**P**	**03 17 56.7**	**+0.2**
	comp=Z,3.2nm,0.5s,mb4.1							
PMG	**Port Moresby**	**26.19**	**129**	*e*P		**P**	**03 17 56.7**	**+0.2**
PMG				pmax		pmax		
	comp=Z,3.0nm,0.5s							
COEN	**Coen**	**26.66**	**143**	*e*P		**P**	**03 18 01.2**	**+0.5**
	comp=Z,24nm,1.4s,mb4.5							
COEN	**Coen**	**26.66**	**143**	P		**P**	**03 18 03.7**	**+3.0**
	comp=Z,16nm,1.1s,mb4.5							
GYA	**Guiyang**	**27.02**	**317**	P		**P**	**03 18 04.6**	**+0.7**
GYA				AP		pP	03 18 24.3	+5.2
GYA				XP		sP	03 18 33.9	+7.4
GYA				PP			03 18 54.0	
GYA				PCP		PcP	03 21 25.4	+1.3
GYA				S		**S**	**03 22 35.7**	**-1.4**
GYA				XS		sS	03 23 08.4	+5.2
GYA				SCP		ScP	03 24 57.0	-2.1
GYA				SCS		ScS	03 28 45.8	-4.6
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.4							
GYA				AMB		AMB		
	comp=Z,80nm,4.2s							
PPI	**Padang Panjang**	**27.54**	**255**	P		**P**	**03 18 11.6**	**+2.9**
	comp=Z,19nm,1.6s,comp=Z,590nm,mb4.5							
WRAB	**Tennant Creek**	**28.12**	**165**	*e*P		**P**	**03 18 14.4**	**+0.8**
	comp=Z,20nm,1.1s,mb4.7							
WRAB	**Tennant Creek**	**28.12**	**165**	*i* P		**P**	**03 18 14.9**	**+1.2**
WRAB	**Tennant Creek**	**28.12**	**165**	P		**P**	**03 18 16.3**	**+2.6**
	comp=Z,19nm,1.5s,mb4.5							
WRA	**Warramunga Arr**	**28.12**	**165**	P		**P**	**03 18 12.1**	**-1.6**
	comp=Z,3.7nm,0.8s,mb4.1,baz=345,slow=9.3,SNR=14							
WB2	**Warramunga Arr**	**28.13**	**165**	*e*P		**P**	**03 18 12.5**	**-1.3**
WB2				*e*S		**S**	**03 23 05.7**	**+11**
KMI	**Kunming**	**29.04**	**310**	P		**P**	**03 18 21.9**	**0.0**
KMI				S		**S**	**03 23 09.6**	**+0.6**
KMI				SS		SS	03 24 43.0	-31
KMI				LR		LR		
	comp=N,242nm,10.9s							
KMI				LR		LR		
	comp=E,396nm,12.4s							
KMI				LR		LR		
	comp=Z,362nm,17.3s							
MBWA	**Marble Bar**	**29.22**	**194**	*e*P		**P**	**03 18 23.0**	**-0.4**
	comp=Z,15nm,1.0s,mb4.7							
CMAR	**Chiang Mai Arr**	**29.33**	**295**	P		**P**	**03 18 23.6**	**-0.9**
	comp=Z,1.3nm,0.5s,mb3.9,baz=130,slow=6.0,SNR=5.7							
CMAR				PcP		PcP	03 21 30.2	+0.3
	comp=Z,1.1nm,0.3s,baz=94,slow=1.1,SNR=7.7							
CMAR				LR		LR	03 31 02.0	
	comp=Z,581nm,18.2s,baz=326,slow=38							
CMAR	**Chiang Mai Arr**	**29.33**	**295**	P		**P**	**03 18 23.7**	**-0.8**
CMAR							03 21 30.3	
KS15	**Wonju Array Si**	**29.94**	**2**	*e*P		**P**	**03 18 30.6**	**+0.9**
KSRS	**Korea Array**	**29.95**	**2**	P		**P**	**03 18 29.5**	**-0.3**
	comp=Z,17nm,0.8s,mb4.8,baz=175,slow=9.7,SNR=62							
KSRS				LR		LR	03 30 54.9	
	comp=Z,181nm,19.1s,baz=184,slow=37							
MJAR	**Matsushiro Arr**	**30.81**	**18**	P		**P**	**03 18 35.6**	**-1.8**
	comp=Z,4.7nm,0.7s,mb4.5,baz=194,slow=9.0,SNR=15							
MAJO	**Matsushiro**	**30.81**	**18**	*e*P		**P**	**03 18 36.7**	**-0.7**
	comp=Z,9.9nm,0.7s,mb4.8							
MAJO	**Matsushiro**	**30.81**	**18**	*e*P		**P**	**03 18 36.7**	**-0.7**
MAJO				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb4.8							
MAT	**Matsushiro**	**30.81**	**18**	P		**P**	**03 18 36.0**	**-1.4**
MAT				*e*S		**S**	**03 23 52.2**	**+16**
ASAR	**Alice Springs**	**31.61**	**168**	P		**P**	**03 18 43.4

	comp=N,86nm,23.9s								
MDJ					LR	LR			
	comp=Z,110nm,21.4s								
MDJ	**Mudanjiang**	**37.17**	**3**	*e*P	**P**		**03 19 33.3**	**+0.9**	
	comp=Z,23nm,0.8s,mb5.1								
SHL	**Shillong**	**37.95**	**303**	*e*P	**P**		**03 19 39.0**	**-0.3**	
FORT	**Forrest**	**37.96**	**178**	*e*P	**P**		**03 19 38.8**	**-0.4**	
	comp=Z,33nm,0.6s,mb5.2								
KLBR	**Kellerberrin**	**39.72**	**192**	*e*P	**P**		**03 19 53.7**	**-0.2**	
	comp=Z,11nm,0.4s,mb4.9								
GTA	**Gaotai**	**40.10**	**327**	*e*P	**P**		**03 19 57.2**	**+0.1**	
GTA				AP	pP		03 20 16.6	+3.8	
GTA				XP	sP		03 20 27.3	+7.2	
GTA				PP	PP		03 21 34.0	+3.6	
GTA				S	**S**		**03 25 57.2**	**-1.7**	
GTA				SS	SS		03 28 49.4	-9.2	
GTA				AMB	AMB				
	comp=Z,3.0nm,0.8s,mb4.1								
GTA				LR	LR				
	comp=N,257nm,13.8s								
GTA				LR	LR				
	comp=E,246nm,14.7s								
GTA				LR	LR				
	comp=Z,363nm,15.0s								
MUN	**Mundaring**	**40.44**	**194**	*e*P	**P**		**03 20 00.3**	**+0.4**	
NWAO	**Narrogin (SRO)**	**41.12**	**192**	*e*P	**P**		**03 20 06.0**	**+0.5**	
	comp=Z,73nm,1.4s,mb5.1								
NWAO	**Narrogin (SRO)**	**41.12**	**192**	*e*P	**P**		**03 20 06.0**	**+0.5**	
NWAO				pmax	pmax				
	comp=Z,73nm,1.4s								
STKA	**Stephens Creek**	**41.49**	**161**	*e*P	**P**		**03 20 08.2**	**-0.3**	
	comp=Z,7.2nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**41.49**	**161**	P	**P**		**03 20 07.8**	**-0.7**	
	comp=Z,9.4nm,1.0s,mb4.4,baz=325,slow=9.7,SNR=8.2								
STKA				LR	LR		03 39 55.0		
	comp=Z,156nm,18.8s,baz=21,slow=40								
YSS	**Yuzh-Sakhalins**	**41.71**	**16**	*e*P	**P**		**03 20 11.3**	**+1.2**	
	comp=Z,24nm,0.9s,mb4.8								
YSS	**Yuzh-Sakhalins**	**41.71**	**16**	⇓ *i*P	**P**		**03 20 10.9**	**+0.7**	
YSS				pmax	pmax				
	comp=Z,15nm,0.8s,mb4.7								
KLR	**Kul'dur**	**41.91**	**5**	*e*P	**P**		**03 20 07.7**	**-4.0**	
KLR				pmax	pmax				
	comp=Z,80nm,2.0s,mb5.0								
HIA	**Hailar**	**42.18**	**353**	*e*P	**P**		**03 20 14.7**	**+0.7**	
	comp=Z,5.8nm,0.7s,mb4.3								
HIA	**Hailar**	**42.18**	**353**	*e*P	**P**		**03 20 14.7**	**+0.8**	
HIA				pmax	pmax				
	comp=Z,6.0nm,0.7s								
ULN	**Ulaanbaatar**	**43.73**	**341**	*e*P	**P**		**03 20 26.1**	**-0.4**	
	comp=Z,6.1nm,1.1s,mb4.2								
ULN	**Ulaanbaatar**	**43.73**	**341**	*e*P	**P**		**03 20 26.1**	**-0.4**	
ULN				pmax	pmax				
	comp=Z,6.0nm,1.1s,mb4.2								
SONM	**Songino Array**	**43.92**	**340**	P	**P**		**03 20 27.1**	**-1.0**	
	comp=Z,2.1nm,0.8s,mb3.9,baz=149,slow=8.3,SNR=13								
SONM				PcP	PcP		03 22 12.3	-0.9	
	comp=Z,1.0nm,0.7s,baz=161,slow=4.3,SNR=3.7								
SONM				LR	LR		03 40 57.6		
	comp=Z,226nm,19.1s,baz=355,slow=39								
SONM	**Songino Array**	**43.92**	**340**	P	**P**		**03 20 27.1**	**-1.0**	
SONM							03 22 12.3		
ZAK	**Zakamensk**	**47.17**	**340**	*e*P	**P**		**03 20 53.5**	**-0.1**	
ZAK				*e*			03 22 24.4		
ZAK				pmax	pmax				
	comp=Z,2.0nm,1.4s,mb3.9								
WMQ	**Urumqi**	**49.88**	**323**	*e*P	**P**		**03 21 16.0**	**+1.4**	
WMQ				AP	pP		03 21 35.0	+4.2	
WMQ				PP	PP		03 23 13.0	+3.1	
WMQ				S	**S**		**03 28 19.0**	**-1.0**	
WMQ				SS	SS		03 31 49.0	-4.5	
WMQ				AMB	AMB				
	comp=Z,16nm,1.0s,mb5.0								
WMQ				LR	LR				
	comp=N,225nm,16.0s								
WMQ				LR	LR				
	comp=E,216nm,15.0s								
WMQ				LR	LR				
	comp=Z,224nm,15.0s								
BOD	**Bodaibo**	**51.30**	**351**	*e*P	**P**		**03 21 24.7**	**-0.4**	
BOD				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.5								
PETK	**Petropavlovsk-**	**52.02**	**23**	P	**P**		**03 21 30.6**	**0.0**	
	comp=Z,5.3nm,0.7s,mb4.6,baz=168,slow=18,SNR=12								
PETK				LR	LR		03 43 24.8		
	comp=Z,79nm,20.1s,baz=137,slow=36								
TAU	**Tasmania Unive**	**53.40**	**161**	*e*P	**P**		**03 21 36.4**	**-4.3**	
	comp=Z,50nm,1.3s,mb5.3								
TAU	**Tasmania Unive**	**53.40**	**161**	*e*P	**P**		**03 21 36.4**	**-4.4**	
TAU				pmax	pmax				
	comp=Z,50nm,1.3s,mb5.3								
YAK	**Yakutsk**	**54.58**	**2**	*e*P	**P**		**03 21 49.5**	**+0.4**	
	comp=Z,45nm,0.7s,mb5.6								
YAK	**Yakutsk**	**54.58**	**2**	*e*P	**P**		**03 21 48.5**	**-0.6**	
YAK				pmax	pmax				
	comp=Z,34nm,0.8s,mb5.4								
MK31	**Makanchi Array**	**54.69**	**324**	*e*P	**P**		**03 21 49.5**	**-0.7**	
MKAR	**Makanchi Array**	**54.69**	**324**	P	**P**		**03 21 49.1**	**-1.1**	
	comp=Z,3.7nm,0.7s,mb4.5,baz=124,slow=8.1,SNR=28								
MKAR				PcP	PcP		03 22 52.1	-0.2	
	comp=Z,4.7nm,0.7s,baz=114,slow=4.0,SNR=7.1								
MKAR				LR	LR		03 47 13.1		
	comp=Z,266nm,18.7s,baz=133,slow=38								
MKAR	**Makanchi Array**	**54.69**	**324**	P	**P**		**03 21 49.1**	**-1.1**	
MKAR							03 22 52.2		
TKM2	**Tokmak 2**	**57.16**	**317**	*e*P	**P**		**03 22 08.1**	**+0.1**	
	comp=Z,3.5nm,0.8s,mb4.4								
TKM2	**Tokmak 2**	**57.16**	**317**	*e*P	**P**		**03 22 08.1**	**+0.1**	
TKM2				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.5								
ZAA0	**Zalesovo Array**	**57.44**	**332**	*e*P	**P**		**03 22 09.1**	**-0.7**	
ZALV	**Zalesovo Beam**	**57.44**	**332**	P	**P**		**03 22 07.8**	**-1.9**	
	comp=Z,1.3nm,0.6s,mb4.2,baz=117,slow=8.5,SNR=6.0								
ZALV				PcP	PcP		03 23 02.0	-0.8	
	comp=Z,1.4nm,0.6s,baz=116,slow=3.4,SNR=2.7								
ZALV				LR	LR		03 48 04.7		
	comp=Z,104nm,19.4s,baz=219,slow=37								
ZALV	**Zalesovo Beam**	**57.44**	**332**	P	**P**		**03 22 07.9**	**-1.8**	
ZALV							03 23 02.0		
AML	**Almayashu**	**58.18**	**315**	*e*P	**P**		**03 22 16.3**	**+1.2**	
	comp=Z,6.7nm,0.7s,mb4.8								
EKS2	**Erkin-Say**	**58.31**	**316**	*e*P	**P**		**03 22 15.9**	**-0.1**	
	comp=Z,5.4nm,0.8s,mb4.6								
KBL	**Kabul**	**59.48**	**306**	*e*P	**P**		**03 22 23.9**	**-0.5**	
	comp=Z,3.3nm,0.4s,mb4.7								
KBL	**Kabul**	**59.48**	**306**	*e*P	**P**		**03 22 23.9**	**-0.4**	
KBL				pmax	pmax				
	comp=Z,3.0nm,0.4s,mb4.7								
TIXI	**Tiksi**	**64.22**	**1**	*e*P	**P**		**03 22 55.5**	**+0.1**	
	comp=Z,16nm,0.7s,mb5.2								
TIXI	**Tiksi**	**64.22**	**1**	*e*P	**P**		**03 22 55.1**	**-0.3**	
TIXI				pmax	pmax				
	comp=Z,21nm,0.9s,mb5.2								
BVAR	**Borovoye Array**	**64.38**	**326**	P	**P**		**03 22 56.0**	**-0.9**	
	comp=Z,0.7nm,0.4s,mb4.1,baz=133,slow=8.7,SNR=5.9								
BVAR				PcP	PcP		03 23 30.4	-0.5	
	comp=Z,2.9nm,0.7s,baz=119,slow=5.2,SNR=6.0								
BRVK	**Borovoye**	**64.45**	**326**	*e*P	**P**		**03 22 57.1**	**-0.2**	
	comp=Z,7.0nm,0.7s,mb4.8								
BRVK	**Borovoye**	**64.45**	**326**	*e*P	**P**		**03 22 57.1**	**-0.2**	
BRVK				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.8								
BILL	**Bilibino**	**66.01**	**15**	⇑ *e*P	**P**		**03 23 09.4**	**+2.3**	
BILL				pmax	pmax				
	comp=Z,3.0nm,1.2s,mb4.2								
BILL				MLR	MLR				
	comp=Z,100nm,18.0s								
UNV	**Unalaska Valle**	**70.36**	**35**	*e*P	**P**		**03 23 35.3**	**+0.7**	
	comp=Z,8.7nm,0.7s,mb4.8								
SVE	**Sverdlovsk**	**70.96**	**328**	*e*P	**P**		**03 23 37.8**	**-0.4**	
ARU	**Arti**	**71.96**	**327**	*e*P	**P**		**03 23 44.1**	**-0.1**	
	comp=Z,1.9nm,0.5s,mb4.3								
ARU	**Arti**	**71.96**	**327**	*c i*P	**P**		**03 23 43.7**	**-0.6**	
ARU				*e*			03 26 18.5		
ARU				*e*PPP			03 28 07.8		
ARU				*e*S	S		03 33 01.3	+0.6	
ARU				*e*SS	SS		03 37 35.7	-2.6	
ARU				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3								
POHA	**Pohakuloa**	**75.89**	**72**	*e*P	**P**		**03 24 10.4**	**+2.5**	
	comp=Z,139nm,1.0s,mb5.8								
BPAW	**Bear Paw Mtn.**	**79.96**	**26**	*e*P	**P**		**03 24 30.3**	**+0.6**	
	comp=Z,10nm,1.2s,mb4.6								
KIV	**Kislovodsk**	**80.75**	**313**	*e*P	**P**		**03 24 34.3**	**0.0**	
	comp=Z,6.1nm,0.8s,mb4.6								
KIV	**Kislovodsk**	**80.75**	**313**	*e*P	**P**		**03 24 34.3**	**0.0**	
KIV				pmax	pmax				
	comp=Z,6.0nm,0.8s,mb4.6								
MCK	**McKinley**	**80.85**	**27**	*e*P	**P**		**03 24 35.3**	**+0.9**	
	comp=Z,29nm,1.4s,mb5.0								
MCK	**McKinley**	**80.85**	**27**	*e*P	**P**		**03 24 35.3**	**+0.9**	
MCK				pmax	pmax				
	comp=Z,29nm,1.4s,mb5.0								
COLA	**College**	**81.35**	**25**	*e*P	**P**		**03 24 37.5**	**+0.5**	
	comp=Z,2.2nm,0.7s,mb4.2								
COLA	**College**	**81.35**	**25**	*e*P	**P**		**03 24 38.9**	**+1.8**	
VORD	**Divnogorie**	**82.81**	**320**	*e*P	**P**		**03 24 44.4**	**-0.6**	
VORD				pmax	pmax				
	comp=Z,4.0nm,0.4s,mb4.8								
VORD				pmax	pmax				
	comp=N,10.0nm,0.5s								
VORD				pmax	pmax				
	comp=E,10.0nm,0.6s								
VSR	**Storozhevoye**	**82.88**	**321**	*e*P	**P**		**03 24 44.4**	**-0.9**	
VSR				*e*PP	pP		03 24 52.7	-10	
VSR				*e*SP	sP		03 24 56.5	-13	
VSR				pmax	pmax				
	comp=N,2.0nm,0.6s								
VSR				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.3								
VSR				pmax	pmax				
	comp=E,2.0nm,0.7s								
OBN	**Obninsk**	**84.19**	**325**	⇑ *i*P	**P**		**03 24 52.4**	**+0.4**	
OBN				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.7								
OBN				MLR	MLR				
	comp=Z,100nm,17.0s								
ANN	**Anapa**	**84.47**	**314**	*e*P	**P**		**03 24 48.8**	**-4.8**	
ANN				pmax	pmax				
	comp=Z,136nm,1.2s								
DAWY	**Dawson**	**85.05**	**26**	*e*P	**P**		**03 24 57.8**	**+1.6**	
PPT	**Papeete**	**86.09**	**108**	*e*S	S		03 35 27.3	-4.9	
	comp=Z,67nm,24.5s								
PPT	**Papeete**	**86.09**	**108**	LR	LR		03 56 16.4		
	comp=Z,193nm,21.1s,baz=284,slow=30								
INK	**Inuvik**	**86.73**	**22**	*e*P	**P**		**03 25 04.7**	**+0.4**	
	comp=Z,48nm,0.7s,mb5.8								
INK	**Inuvik**	**86.73**	**22**	*e*P	**P**		**03 25 04.7**	**+0.3**	
INK				pmax	pmax				
	comp=Z,47nm,0.7s								
SIM	**Simferopol'**	**86.80**	**315**	*e*P	**P**		**03 25 06.0**	**+0.8**	
SIM				pmax	pmax				
	comp=Z,18nm,0.7s,mb5.4								
ARCES	**ARCESS Array B**	**87.10**	**340**	P	**P**		**03 25 05.5**	**-0.6**	
	comp=Z,4.5nm,0.9s,mb4.7,baz=80,slow=6.6,SNR=8.8								
BR131	**Keskin Array S**	**87.83**	**310**	*e*P	**P**		**03 25 10.0**	**-0.3**	
BRTR	**Keskin Array B**	**87.83**	**310**	P	**P**		**03 25 09.3**	**-0.9**	
	comp=Z,3.0nm,0.8s,mb4.6,baz=108,slow=4.4,SNR=21								
BRTR				LR	LR		04 09 42.9		
	comp=Z,40nm,18.7s,baz=277,slow=39								
SBA	**Scott Base**	**87.91**	**172**	*e*P	**P**		**03 25 09.8**	**0.0**	
	comp=Z,5.9nm,1.4s,mb4.6								
SBA	**Scott Base**	**87.91**	**172**	*e*P	**P**		**03 25 09.8**	**0.0**	
SBA				pmax	pmax				
	comp=Z,6.0nm,1.4s,mb4.6								
ANTO	**Ankara**	**88.45**	**310**	*e*P	**P**		**03 25 13.0**	**-0.2**	
	comp=Z,4.0nm,0.7s,mb4.8								
ANTO	**Ankara**	**88.45**	**310**	*e*P	**P**		**03 25 13.0**	**-0.2**	
ANTO				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.8								
ANTO	**Ankara**	**88.45**	**310**	⇑ *i*P	**P**		**03 25 13.2**	**0.0**	
AKASG	**Malin Array Be**	**89.18**	**321**	P	**P**		**03 25 15.2**	**-1.2**	
	comp=Z,6.3nm,0.7s,mb5.0,baz=69,slow=4.8,SNR=17								
TLCR		**90.47**	**316**	⇓ *i*P	**P**		**03 25 22.4**	**-0.2**	
DLBC	**Dease Lake**	**90.55**	**31**	*e*P	**P**		**03 25 23.2**	**+0.6**	
MLR	**Muntele Rosu**	**92.39**	**316**	⇓ *i*P	**P**		**03 25 33.8**	**+2.4**	
BURAR	**Bucovina Array**	**92.39**	**318**	⇑ *i*P	**P**		**03 25 31.1**	**-0.3**	
BUR08	**Bucovina Ar. S**	**92.40**	**318**	*e*P	**P**		**03 25 31.4**	**0.0**	
KWP	**Kalwaria**	**93.50**	**321**	⇑ *i*P	**P**		**03 25 37.0**	**+0.6**	
DRGR		**94.25**	**318**	⇑ *i*P	**P**		**03 25 39.8**	**-0.2**	
OJC	**Ojcow**	**95.13**	**322**	*e*P	**P**		**03 25 42.7**	**-1.2**	
BZS	**Buzias**	**95.30**	**317**	⇑ *i*P	**P**		**03 25 44.4**	**-0.4**	
NOA	**NORSAR Array B**	**95.61**	**334**	P	**P**		**03 25 44.3**	**-1.5**	
	comp=Z,0.9nm,0.8s,mb4.3,baz=65,slow=4.7,SNR=3.3								
NOA				LR	LR		04 12 23.5		
	comp=Z,86nm,21.7s,baz=30,slow=38								
PSZ	**Piszkesteto**	**95.77**	**320**	*e*P	**P**		**03 25 46.4**	**-0.5**	
	comp=Z,3.0nm,0.9s,mb4.7								
PSZ	**Piszkesteto**	**95.77**	**320**	*e*P	**P**		**03 25 46.4**	**-0.5**	
PSZ				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.7								
YKA	**Yellowknife Ar**	**96.13**	**24**	P	**P**		**03 25 47.8**	**-0.4**	
	comp=Z,0.7nm,0.7s,mb4.2,baz=261,slow=7.5,SNR=3.3								
MORC	**Moravsky Berou**	**96.65**	**322**	*e*P	**P**		**03 25 50.2**	**-0.6**	
	comp=Z,1.1nm,0.6s,mb4.5								
MORC	**Moravsky Berou**	**96.65**	**322**	*e*P	**P**		**03 25 50.2**	**-0.6**	
MORC				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.4								
VRAC	**Vranov**	**97.39**	**322**	⇓ *i*P	**P**		**03 25 54.6**	**+0.4**	
KHC	**Kasperske Hory**	**99.30**	**322**	*i* P	**P**		**03 26 02.8**	**+0.1**	
GERES	**GERESS Array B**	**99.33**	**322**	P	**P**		**03 26 02.1**	**-0.8**	
	comp=Z,1.2nm,0.7s,mb4.5,baz=74,slow=5.7,SNR=14								
GERES				LR	LR		04 13 43.1		
	comp=Z,84nm,20.9s,baz=271,slow=37								
FFC	**Flin Flon**	**105.94**	**27**	*e*PKP	PKiKP		03 30 40.3	-4.0	
RSSD	**Black Hills**	**111.21**	**37**	*e*PKP	PKiKP		03 30 55.2	+0.8	
ISCO	**Idaho Springs**	**112.57**	**41**	*e*PKP	PKiKP		03 30 58.9	+1.7	
TXAR	**Lajitas Array**	**119.22**	**51**	PKP	PKPdf		03 31 10.6	+0.3	
	comp=Z,0.5nm,0.6s,baz=198,slow=0.8,SNR=9.8								
JCT	**Junction City**	**121.53**	**47**	*e*PKPdf	PKPdf		03 31 15.5	+0.8	
TORD	**Torodi Ar. Bea**	**121.87**	**290**	PKP	PKPdf		03 31 15.3	-0.4	
	comp=Z,4.5nm,0.7s,baz=60,slow=1.7,SNR=30								
TKL	**Tuckaleechee C**	**128.37**	**32**	PKP	PKPdf		03 31 27.8	+0.2	
	comp=Z,2.6nm,0.9s,baz=180,slow=2.0,SNR=3.7								
KIC	**Kosan Boka**	**129.85**	**285**	*e*PKP1	PKPdf		03 31 31.1	+0.1	
	comp=Z,16nm,0.6s								
DBIC	**Dimbokro**	**129.88**	**285**	PKP	PKPdf		03 31 31.0	0.0	
	comp=Z,3.6nm,0.7s,baz=303,slow=4.9,SNR=6.2								
TIC	**Toumodi**	**130.04**	**285**	*e*PKP1	PKPdf		03 31 32.5	+1.1	
	comp=Z,5.6nm,0.2s								
LIC	**Lamto**	**130.16**	**285**	*e*PKP1	PKPdf		03 31 31.1	-0.5	
	comp=Z,29nm,1.2s								
PLCA	**Paso Flores**	**143.32**	**158**	PKP	PKPdf		03 31 56.1	+1.0	
	comp=Z,1.6nm,0.7s,baz=229,slow=5.3,SNR=4.2								
MTP	**Monte Pirata**	**151.87**	**26**	*e*PKPdf	PKPdf		03 32 08.3	-1.5	
MTP				*e*PKPbc	PKPbc		03 32 16.7	+0.5	

CSEM ***05*** *03:14:34.2±0.1,3824N×3084E,h2km,MD3.0, Error ellipse: s-maj=3.2km s-min=2.4km az=13.0*
ISCJB ***05*** *03:14:35.7±0.5,3824N±003×3083E±004,h10km, Error ellipse: s-maj=4.9km s-min=3.8km az=15.4*
DDA ***05*** *03:14:35.4,3823N×3084E,h7km±5km, Md3.0*
ISK ***05*** *03:14:35.0,3826N×3083E,h4km,MD3.0*

ISC 05 03:14:36.0±0.6,3824N±003×3086E±004,h7km±7km,n15, σ0.92/24,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SHUT	**Suhut-Afyon**	**0.40**	**322**	*e*PG		**Pg**	**03 14 42.6**	**-1.1**
SHUT				*e*SG		**Sg**	**03 14 49.0**	**+0.1**
TKTP	**Tekketepe**	**0.47**	**245**	*i* P		**Pg**	**03 14 43.6**	**-1.4**
TKTP				*i* S		**Sg**	**03 14 52.2**	**+0.9**
BOLV	**Bolvadin**	**0.48**	**8**	*i* P		**Pg**	**03 14 45.4**	**0.0**
BOLV				*i* S		**Sg**	**03 14 53.5**	**+1.8**
BCK	**Bucak**	**0.81**	**195**	*e*PG		**Pg**	**03 14 51.6**	**+0.1**
BCK				*e*SG		**Sg**	**03 15 03.3**	**+1.4**
ALT	**Altintas**	**1.00**	**324**	*e*PG		**Pg**	**03 14 54.4**	**-0.9**
ALT				*e*SG		**Sg**	**03 15 08.1**	**-0.2**
KIZT	**Kizilcal**	**1.02**	**51**	*e*PG		**Pg**	**03 14 55.7**	**+0.1**
KDHN	**Kadinhani**	**1.03**	**74**	*i* P		**Pg**	**03 14 55.4**	**-0.3**
KDHN				*i* S		**Sg**	**03 15 14.6**	**+5.5**
KHL	**Karahalli**	**1.05**	**275**	*e*PG		**Pg**	**03 14 55.2**	**-1.0**
KHAL	**Karahalli**	**1.08**	**277**	*i* P		**Pg**	**03 14 55.1**	**-1.6**
KHAL				*i* S		**Sg**	**03 15 12.9**	**+2.1**
LADK	**Ladik-KONYA**	**1.19**	**91**	*e*PN		**Pn**	**03 14 58.9**	**0.0**
KONT	**Konya--Tatoy**	**1.22**	**103**	*e*PN		**Pn**	**03 14 59.0**	**-0.5**
ESKT	**Eskisehir**	**1.28**	**360**	*i* P		**Pn**	**03 15 00.4**	**+0.2**
ESKT				*i* S		**Sb**	**03 15 17.4**	**+0.4**
SEYT	**Eskypehyr**	**1.28**	**360**	*i* P		**Pn**	**03 15 00.4**	**+0.2**
SEYT				*i* S		**Sb**	**03 15 17.5**	**+0.5**
KULA	**Kula-Manisa**	**1.75**	**280**	*e*PN		**Pn**	**03 15 06.6**	**-0.1**
GULT	**Gulveren**	**2.21**	**353**	*e*PN		**Pn**	**03 15 13.4**	**+0.5**

JMA 05 03:16:06.5±0.6,3344N×14214E,h5km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BSO1	**Boso 1**	**1.55**	**322**	P		Pn	03 16 35.0	+0.3
BSO3	**Boso 3**	**1.92**	**316**	P		Pn	03 16 40.6	+0.8
JHJ2	**Mitsune**	**1.97**	**261**	P		Pn	03 16 41.4	+0.8
JHJ2				*e*S		Sn	03 17 06.9	+1.2
BSO4	**Boso 4**	**2.15**	**316**	P		Pn	03 16 44.5	+1.5
JIM2	**Oshima 3**	**2.58**	**300**	P		Pn	03 16 49.5	+0.5
JIM2				S		Sn	03 17 22.2	+1.4
JOD2	**Odawara 2**	**3.11**	**307**	P		Pn	03 16 57.5	+1.3
JOD2				*e*S		Sn	03 17 35.5	+1.7
JYN	**Shimob**	**3.61**	**306**	P		Pn	03 17 04.5	+1.4
JYN				S		Sn	03 17 48.4	+2.3
JRY	**Ryogami san**	**3.70**	**315**	P		Pn	03 17 05.7	+1.3
JAG	**Ashikaga**	**3.71**	**324**	P		Pn	03 17 05.4	+1.0

BJI ***05*** *04:16:55.1,5257N×16993W,h3km,mB4.8,mb4.7,Ms4.6, Msz4.2*
NEIC ***05*** *04:16:57.2±0.4,5193N×16998W,h10km,mb4.5/29, ML3.9(AEIC),Error ellipse: s-maj=10.1km s-min=4.5km az=162.0*
ISCJB ***05*** *04:16:59.3±0.3,5201N±006×16999W±005,h33km, mb4.3/51,MS3.8/15,Error ellipse: s-maj=8.6km s-min=3.4km az=162.6*
MOS ***05*** *04:17:03.3±1.5,5207N×17001W,h65km,mb4.8/19,Error ellipse: s-maj=15.6km s-min=7.7km az=93.0*
IDC ***05*** *04:17:05.6±5.2,5188N×16998W,h87km±47km,mb3.7/20, mb1 4.0/21,mb1mx3.9/27,mbtmp3.7/21,ML4.6/1,MS3.7/11, Ms1 3.7/11,ms1mx3.3/42,Error ellipse: s-maj=20.1km s-min=12.8km az=177.0*

ISC 05 04:17:01.4±0.3,5205N±006×17000W±005,h35km, (h5km±5.2km;pP-P),n144,σ0.95/146,mb4.3/51,MS3.8/15, 5C-1D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NIKO	**Nikolski**	**1.16**	**37**	P		**Pn**	**04 17 19.0**	**-2.0**
NIKO				S		**Sn**	**04 17 36.0**	**+0.4**
OKCD	**Okmok Cone D**	**1.79**	**39**	P		**Pn**	**04 17 29.9**	**+0.1**
ATKA	**Atka Island**	**2.59**	**275**	P		**Pn**	**04 17 39.9**	**-0.8**
ATKA				S		**Sn**	**04 18 10.6**	**-0.3**
UNV	**Unalaska Valle**	**2.78**	**48**	P		**Pn**	**04 17 42.3**	**-1.0**
UNV				S		**Sn**	**04 18 15.0**	**-0.6**
AKUT	**Akutan**	**3.29**	**49**	*e*Pn		**Pn**	**04 17 51.1**	**+0.7**
AKUT				*e*Pb		**Pn**	**04 17 56.4**	**+6.0**
ADK	**Adak**	**4.14**	**270**	P		**Pn**	**04 18 01.5**	**-0.5**
FALS	**False Pass**	**4.83**	**52**	P		**Pn**	**04 18 13.2**	**+1.7**
FALS				*e*Pb		**Pn**	**04 18 23.3**	**+12**
SDPT	**Sand Point**	**6.55**	**56**	P		**Pn**	**04 18 35.2**	**+0.2**
AMKA	**Amchitka**	**6.68**	**268**	P		**Pn**	**04 18 36.9**	**0.0**
CHGN	**Chignik**	**8.02**	**53**	*e*Pn		**Pn**	**04 18 56.4**	**+1.2**
KDAK	**Kodiak Island**	**11.53**	**53**	P		**Pn**	**04 19 39.9**	**-3.4**
	0.9nm,0.3s,baz=165,slow=4.1,SNR=14							
KDAK				S		**Sn**	**04 21 44.1**	**-6.6**
	baz=302,slow=19,SNR=2.0							
SVW2	**Sparrevohn**	**12.03**	**35**	Pn		**Pn**	**04 19 49.2**	**-0.8**
SLKM	**Skilak Lake**	**13.82**	**45**	*e*Pn		**Pn**	**04 20 13.3**	**-1.2**
RC01	**Rabbit Creek A**	**14.31**	**43**	*e*Pn		**Pn**	**04 20 19.4**	**-1.8**
CHUM	**Lake Minchumin**	**15.05**	**31**	*e*Pn		**Pn**	**04 20 31.2**	**+0.2**
	8.7nm,0.7s							
KTH	**Kantishna Hill**	**15.29**	**34**	*e*Pn		**Pn**	**04 20 35.6**	**+1.5**
	67nm,1.7s							
BPAW	**Bear Paw Mtn.**	**15.62**	**32**	*e*Pn		**Pn**	**04 20 39.3**	**+0.7**
	14nm,0.7s							
COLA	**College**	**17.16**	**33**	*e*Pn		**Pn**	**04 20

HHC				S	**S**	**04 33 36.4**	**-0.5**	
HHC				XS	sS	04 33 44.7	-9.5	
HHC				SCS	ScS	04 35 57.9	-0.7	
HHC				AMB	AMB			
	comp=Z,14nm,0.5s,mb5.2							
HHC				AMB	AMB			
	comp=Z,71nm,4.5s							
HHC				LR	LR			
	comp=N,164nm,21.4s,MS4.2							
HHC				LR	LR			
	comp=E,98nm,16.6s,MS4.2							
HHC				LR	LR			
	comp=Z,119nm,19.0s,MS4.0							
TXAR	**Lajitas Array**	**53.14**	**88**	P	**P**	**04 26 13.7**	**-1.8**	
	comp=Z,1.7nm,0.7s,mb4.1,baz=294,slow=5.4,SNR=27							
TXAR				LR	LR	04 47 27.3		
	comp=Z,81nm,21.2s,MS3.8,baz=105,slow=34							
NATX	**Nacogdoches**	**56.97**	**79**	P	**P**	**04 26 43.7**	**+0.6**	
	comp=Z,16nm,1.6s,mb4.8							
ZALV	**Zalesovo Beam**	**57.40**	**317**	PcP	PcP	04 27 39.3	-0.1	
	comp=Z,0.8nm,0.5s,baz=27,slow=3.5,SNR=4.4							
ZALV				LR	LR	04 54 29.3		
	comp=Z,44nm,19.0s,MS3.6,baz=52,slow=39							
ARCES	**ARCESS Array B**	**58.20**	**354**	P	**P**	**04 26 50.5**	**-0.6**	
	comp=Z,2.8nm,0.9s,mb4.3,baz=18,slow=6.6,SNR=4.3							
ARCES				LR	LR	04 54 29.7		
	comp=Z,97nm,18.2s,MS4.0,baz=8.0,slow=38							
GTA	**Gaotai**	**60.28**	**297**	*e*P	**P**	**04 27 05.4**	**-0.6**	
GTA				AP	pP	04 27 09.2	-7.5	
GTA				XP	sP	04 27 12.2	-8.6	
GTA				PP	PP	04 29 21.8	+3.0	
GTA				S	**S**	**04 35 21.2**	**+3.6**	
GTA				SS	SS	04 39 20.2	+5.6	
GTA				AMB	AMB			
	comp=Z,3.0nm,1.2s,mb4.2							
GTA				LR	LR			
	comp=N,156nm,17.1s,MS4.4							
GTA				LR	LR			
	comp=E,190nm,15.3s,MS4.4							
GTA				LR	LR			
	comp=Z,156nm,17.1s,MS4.2							
LZH	**Lanzhou**	**60.34**	**292**	*e*P	**P**	**04 27 07.5**	**+0.9**	
LZH				AP	pP	04 27 10.0	-7.2	
LZH				XP	sP	04 27 13.6	-7.7	
LZH				AMB	AMB			
	comp=Z,16nm,1.2s,mb4.9							
LZH				AMB	AMB			
	comp=Z,69nm,4.5s							
LZH	**Lanzhou**	**60.34**	**292**	*e*P	**P**	**04 27 07.5**	**+0.9**	
	comp=Z,16nm,1.2s,mb4.9							
LZH				pP	pP	04 27 10.0	-7.2	
LZH				sP	sP	04 27 13.6	-7.7	
WMQ	**Urumqi**	**63.42**	**308**	*e*P	**P**	**04 27 29.0**	**+1.9**	
MKAR	**Makanchi Array**	**63.74**	**313**	P	**P**	**04 27 27.8**	**-1.4**	
	comp=Z,0.4nm,0.5s,mb3.7,baz=39,slow=7.8,SNR=4.0							
MKAR				LR	LR	04 58 23.9		
	comp=Z,84nm,18.5s,MS4.0,baz=183,slow=39							
MKAR	**Makanchi Array**	**63.74**	**313**	P	**P**	**04 27 27.8**	**-1.4**	
MKAR				LR	LR	04 58 23.9		
CD2	**Chengdu**	**64.10**	**288**	*e*P	**P**	**04 27 32.2**	**+0.4**	
CD2				AP	pP	04 27 36.9	-5.6	
CD2				XP	sP	04 27 39.8	-6.8	
CD2				PP	PP	04 29 54.7	+2.1	
CD2				S	**S**	**04 36 06.4**	**+0.5**	
CD2				XS	sS	04 36 14.2	-9.4	
CD2				SS	SS	04 40 16.4	+1.7	
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.9							
CD2				AMB	AMB			
	comp=Z,30nm,5.8s							
CD2				LR	LR			
	comp=N,230nm,10.8s							
CD2				LR	LR			
	comp=Z,130nm,10.8s,MS4.4							
ARU	**Arti**	**64.72**	**333**	*d* i P	**P**	**04 27 35.1**	**-0.3**	
ARU				*e*S	**S**	**04 36 13.5**	**+0.6**	
ARU				*e*SS	SS	04 40 22.1	-1.1	
ARU				pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.5							
GYA	**Guiyang**	**65.62**	**282**	*e*P	**P**	**04 27 41.6**	**-0.1**	
GYA				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.8							
NB2	**NORSAR Subarra**	**67.25**	**359**	P	**P**	**04 27 50.8**	**-0.8**	
	comp=Z,7.4nm,1.4s,mb4.5,baz=357,slow=6.5							
NOA	**NORSAR Array B**	**67.25**	**359**	P	**P**	**04 27 51.6**	**-0.1**	
	comp=Z,2.9nm,1.1s,mb4.2,baz=358,slow=6.1,SNR=3.1							
NOA				LR	LR	04 56 48.4		
	comp=Z,23nm,21.1s,MS3.4,baz=100,slow=35							
HFS	**Hagfors**	**68.13**	**358**	P	**P**	**04 27 56.4**	**-0.7**	
	comp=Z,1.0nm,0.3s,mb4.3,baz=4.0,slow=2.8,SNR=22							
KMI	**Kunming**	**68.97**	**284**	P	**P**	**04 28 05.6**	**+2.6**	
KMI				AP	pP	04 28 08.2	-5.6	
KMI				XP	sP	04 28 09.9	-7.9	
KMI				PP	PP	04 30 38.6	+3.4	
KMI				PPP		04 32 15.5		
KMI				S	S	04 37 08.2	+3.1	
KMI				SS	SS	04 41 33.9	+3.4	
KMI				AMB	AMB			
	comp=Z,6.0nm,0.7s,mb4.6							
KMI				AMB	AMB			
	comp=Z,66nm,4.5s							
KMI				LR	LR			
	comp=Z,32nm,28.6s,MS3.4							
KMI	**Kunming**	**68.97**	**284**	P	**P**	**04 28 05.6**	**+2.6**	
	comp=Z,6.0nm,0.7s,mb4.6							
KMI				pP	pP	04 28 08.2	-5.6	
KMI				sP	sP	04 28 09.9	-7.9	
KMI				PP	PP	04 30 38.6	+3.4	
KMI				PPP		04 32 15.5		
KMI				S	S	04 37 08.2	+3.1	
KMI				SS	SS	04 41 33.9	+3.4	
KMI				LR	LR			
	comp=Z,30nm,28.6s,MS3.4							
KMI	**Kunming**	**68.97**	**284**	P	**P**	**04 28 05.6**	**+2.6**	
KMI						04 30 38.6		
KMI				PPP		04 32 15.5		
KMI				S	S	04 37 08.2	+3.1	
KMI				SS	SS	04 41 33.9	+3.4	
KMI				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.6							
KMI				MLR	MLR			
	comp=Z,30nm,28.6s,MS3.4							
OBN	**Obninsk**	**70.95**	**344**	*e*P	**P**	**04 28 14.4**	**-0.2**	
OBN				*e*		04 28 35.5		
OBN				pmax	pmax			
	comp=Z,17nm,1.3s,mb4.8							
EKA	**Eskdalemuir Ar**	**72.43**	**8**	P	**P**	**04 28 22.1**	**-1.4**	
	comp=Z,1.2nm,0.7s,mb3.9,baz=342,slow=4.4,SNR=3.6							
CMAR	**Chiang Mai Arr**	**76.31**	**282**	P	**P**	**04 28 45.0**	**-1.6**	
	comp=Z,1.0nm,0.3s,mb4.2,baz=34,slow=6.6,SNR=3.6							
CMAR				LR	LR	05 03 47.5		
	comp=Z,42nm,18.1s,MS3.8,baz=10.0,slow=37							
AKASG	**Malin Array Be**	**76.33**	**348**	P	**P**	**04 28 45.4**	**-0.9**	
	comp=Z,0.7nm,0.5s,mb3.9,baz=6.0,slow=4.9,SNR=5.6							
CLL	**Collm**	**76.98**	**358**	*e*P	**P**	**04 28 50.0**	**0.0**	
GIVF	**Givet**	**78.13**	**3**	*e*P	**P**	**04 28 56.8**	**+0.4**	
GRA1	**Grafenberg Arr**	**78.63**	**359**	*e*P	**P**	**04 28 59.8**	**+0.7**	
	comp=Z,9.0nm,1.6s,mb4.5							
GRF	**Grafenberg Arr**	**78.63**	**359**	*e*P	**P**	**04 28 59.8**	**+0.7**	
GRF				pmax	pmax			
	comp=Z,9.0nm,1.6s,mb4.5							
GRF	**Grafenberg Arr**	**78.63**	**359**	*e*P	**P**	**04 28 59.8**	**+0.7**	
GRF				pmax	pmax			
	comp=Z,9.0nm,1.6s,mb4.5							
GRF	**Grafenberg Arr**	**78.63**	**359**	*e*P	**P**	**04 28 59.8**	**+0.7**	
	comp=Z,9.0nm,1.6s,mb4.5							
ROSF	**Rostrenen**	**79.35**	**9**	*e*P	**P**	**04 29 03.8**	**+0.7**	
LDF	**La Druitiere**	**79.36**	**7**	*e*P	**P**	**04 29 03.0**	**-0.2**	
GERES	**GERESS Array B**	**79.43**	**358**	P	**P**	**04 29 03.9**	**+0.4**	
	comp=Z,0.6nm,0.7s,mb3.6,baz=20,slow=4.3,SNR=5.8							
SGMF	**Saint Gilles**	**79.50**	**8**	*e*P	**P**	**04 29 04.5**	**+0.6**	
QUIF	**Quistinic**	**79.78**	**9**	*e*P	**P**	**04 29 06.6**	**+1.2**	
	comp=Z,18nm,1.0s,mb4.7							
QUIF	**Quistinic**	**79.78**	**9**	*e*P	**P**	**04 29 06.6**	**+1.2**	
	comp=Z,9.2nm,1.0s,mb4.7							
QUIF	**Quistinic**	**79.78**	**9**	*e*P	**P**	**04 29 06.6**	**+1.2**	
QUIF				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7							
CONA	**Conrad Observa**	**80.27**	**356**	⇑ *i*pP	pP	04 29 09.7	-9.4	
	comp=Z,5.3nm,1.1s							
HINF	**Hinteralfeld**	**80.47**	**2**	*e*P	**P**	**04 29 09.5**	**+0.3**	
	comp=Z,3.2nm,0.5s,mb4.2							
HINF	**Hinteralfeld**	**80.47**	**2**	*e*P	**P**	**04 29 09.5**	**+0.3**	
	comp=Z,1.6nm,0.5s,mb4.2							
HINF	**Hinteralfeld**	**80.47**	**2**	*e*P	**P**	**04 29 09.5**	**+0.3**	
	comp=Z,2.0nm,0.5s,mb4.3							
LOR	**Lormes**	**80.92**	**4**	*e*P	**P**	**04 29 12.2**	**+0.6**	
	comp=Z,6.2nm,0.8s,mb4.3							
LOR	**Lormes**	**80.92**	**4**	*e*P	**P**	**04 29 12.2**	**+0.6**	
	comp=Z,3.1nm,0.8s,mb4.3							
LOR	**Lormes**	**80.92**	**4**	*e*P	**P**	**04 29 12.2**	**+0.6**	
LOR				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
SSF	**Saint Saulge**	**81.11**	**4**	*e*P	**P**	**04 29 13.2**	**+0.6**	
	comp=Z,5.2nm,0.7s,mb4.2							
SSF	**Saint Saulge**	**81.11**	**4**	*e*P	**P**	**04 29 13.2**	**+0.6**	
	comp=Z,2.6nm,0.7s,mb4.3							
SSF	**Saint Saulge**	**81.11**	**4**	*e*P	**P**	**04 29 13.2**	**+0.6**	
SSF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
FETA	**Feichten**	**81.30**	**359**	⇑ *i*pP	pP	04 29 15.3	-9.3	
	comp=Z,5.9nm,1.3s							
MFF	**Saint Martin d**	**81.34**	**7**	*e*P	**P**	**04 29 14.5**	**+0.7**	
AVF	**Avril sur Loir**	**81.37**	**5**	*e*P	**P**	**04 29 14.4**	**+0.4**	
	comp=Z,3.6nm,0.7s,mb4.1							
AVF	**Avril sur Loir**	**81.37**	**5**	*e*P	**P**	**04 29 14.4**	**+0.4**	
	comp=Z,1.8nm,0.7s,mb4.1							
AVF	**Avril sur Loir**	**81.37**	**5**	*e*P	**P**	**04 29 14.4**	**+0.4**	
AVF				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
DAVOS	**Davos**	**81.49**	**0**	P	**P**	**04 29 15.8**	**+1.2**	
SMF	**Signal de Mont**	**81.54**	**4**	*e*P	**P**	**04 29 15.4**	**+0.5**	
	comp=Z,6.2nm,0.6s,mb4.4							
SMF	**Signal de Mont**	**81.54**	**4**	*e*P	**P**	**04 29 15.4**	**+0.5**	
	comp=Z,3.1nm,0.6s,mb4.4							
SMF	**Signal de Mont**	**81.54**	**4**	*e*P	**P**	**04 29 15.4**	**+0.5**	
SMF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
DAVOX	**Davos/Dischmat**	**81.55**	**0**	P	**P**	**04 29 15.8**	**+0.9**	
	comp=Z,1.9nm,0.6s,mb4.2,baz=356,slow=13,SNR=6.2							
BGF	**Bois d'Agland**	**81.58**	**5**	*e*P	**P**	**04 29 15.7**	**+0.6**	
	comp=Z,6.2nm,0.7s,mb4.3							
BGF	**Bois d'Agland**	**81.58**	**5**	*e*P	**P**	**04 29 15.7**	**+0.6**	
	comp=Z,3.1nm,0.7s,mb4.3							
BGF	**Bois d'Agland**	**81.58**	**5**	*e*P	**P**	**04 29 15.7**	**+0.6**	
BGF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
CABF	**La Chapelle**	**81.66**	**3**	*e*P	**P**	**04 29 16.1**	**+0.6**	
	comp=Z,16nm,1.0s,mb4.6							
CABF	**La Chapelle**	**81.66**	**3**	*e*P	**P**	**04 29 16.1**	**+0.6**	
	comp=Z,7.9nm,1.0s,mb4.6							
CABF	**La Chapelle**	**81.66**	**3**	*e*P	**P**	**04 29 16.1**	**+0.6**	
CABF				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6							
TCF	**Toulx Ste Croi**	**81.81**	**5**	*e*P	**P**	**04 29 16.7**	**+0.4**	
	comp=Z,2.8nm,0.7s,mb4.0							
TCF	**Toulx Ste Croi**	**81.81**	**5**	*e*P	**P**	**04 29 16.7**	**+0.4**	
	comp=Z,1.4nm,0.6s,mb4.1							
TCF	**Toulx Ste Croi**	**81.81**	**5**	*e*P	**P**	**04 29 16.7**	**+0.4**	
TCF				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.9							
CAF	**Calviac**	**83.16**	**6**	*e*P	**P**	**04 29 24.3**	**+0.9**	
BNI	**Bardonecchia**	**83.23**	**2**	*e*P	**P**	**04 29 23.8**	**0.0**	
	comp=Z,8.0nm,1.2s,mb4.6							
BNI	**Bardonecchia**	**83.23**	**2**	*e*P	**P**	**04 29 23.8**	**0.0**	
BNI				pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.6							
VIVF	**Saint-Julien-l**	**83.36**	**4**	*e*P	**P**	**04 29 25.4**	**+1.0**	
MBDF	**Montbardon**	**83.56**	**2**	*e*P	**P**	**04 29 27.5**	**+2.0**	
SJPF	**Ste Jean**	**84.72**	**8**	*e*P	**P**	**04 29 32.5**	**+1.1**	
MTLF	**Montolieu**	**84.75**	**6**	*e*P	**P**	**04 29 32.5**	**+1.0**	
ETSF	**Etsaut**	**84.99**	**8**	*e*P	**P**	**04 29 34.0**	**+1.3**	
	comp=Z,10nm,0.8s,mb4.7							
ETSF	**Etsaut**	**84.99**	**8**	*e*P	**P**	**04 29 34.0**	**+1.3**	
	comp=Z,5.2nm,0.8s,mb4.7							
ETSF	**Etsaut**	**84.99**	**8**	*e*P	**P**	**04 29 34.0**	**+1.3**	
ETSF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.7							
PGF	**Pioggiola**	**85.78**	**1**	*e*P	**P**	**04 29 37.6**	**+0.9**	
	comp=Z,38nm,1.3s,mb5.2							
PGF	**Pioggiola**	**85.78**	**1**	*e*P	**P**	**04 29 37.6**	**+0.9**	
	comp=Z,19nm,1.3s,mb5.2							
PGF	**Pioggiola**	**85.78**	**1**	*e*P	**P**	**04 29 37.6**	**+0.9**	
PGF				pmax	pmax			
	comp=Z,19nm,1.3s,mb5.2							
BRTR	**Keskin Array B**	**86.31**	**342**	P	**P**	**04 29 38.4**	**-1.0**	
	comp=Z,0.2nm,0.6s,mb3.5,baz=32,slow=8.5,SNR=2.9							
WRA	**Warramunga Arr**	**86.50**	**231**	P	**P**	**04 29 38.2**	**-2.2**	
	comp=Z,0.4nm,0.7s,mb3.8,baz=28,slow=6.3,SNR=2.9							
ESDC	**Sonseca Array**	**87.84**	**11**	P	**P**	**04 29 46.8**	**0.0**	
	comp=Z,0.9nm,0.7s,mb4.1,baz=359,slow=5.2,SNR=6.4							
ASAR	**Alice Springs**	**89.89**	**230**	P	**P**	**04 29 54.8**	**-1.6**	
	comp=Z,2.2nm,0.8s,mb4.5,baz=37,slow=4.2,SNR=12							
TORD	**Torodi Ar. Bea**	**114.67**		PKP	PKiKP	04 35 36.6	-1.5	
	comp=Z,0.3nm,0.9s,baz=299,slow=1.0,SNR=2.6							
MAW	**Mawson**	**150.38**	**218**	PKPbc	PKPdf	04 36 43.2	+1.1	
	comp=Z,2.2nm,0.8s,baz=146,slow=3.6,SNR=2.1							
BOSA	**Boshof**	**153.97**	**328**	PKPab	PKPab	04 37 07.7	-2.4	
	comp=Z,4.5nm,1.0s,baz=48,slow=3.2,SNR=4.4							

IDC 05 04:41:28.1±0.9, 263N×12852E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/16, mbtmp4.0/6, MS3.6/1, Ms1 3.6/1, ms1mx2.3/26, Error ellipse: s-maj=62.6km s-min=16.2km az=74.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**15.73**	**166**	*e*P	Px	04 45 09.3	
	2.9nm,0.4s						
WRA	**Warramunga Arr**	**23.14**	**166**	P	P	04 46 36.8	+0.6
	6.3nm,0.6s,baz=344,slow=10,SNR=20						
WB2	**Warramunga Arr**	**23.15**	**166**	*e*P	P	04 46 37.0	+0.7
ASAR	**Alice Springs**	**26.65**	**169**	P	P	04 47 08.7	-0.1
	0.8nm,0.5s,baz=355,slow=8.4,SNR=16						
CBIJ	**Chichi jima**	**27.63**	**27**	LR	LR	04 55 41.7	
	comp=Z,134nm,21.3s,baz=120,slow=31						
MJAR	**Matsushiro Arr**	**34.92**	**14**	P	P	04 48 21.2	-0.4
	0.6nm,0.4s,baz=185,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**36.49**	**161**	P	P	04 48 35.0	-0.2
	2.4nm,0.3s,baz=343,slow=7.7,SNR=4.2						
SONM	**Songino Array**	**48.92**	**340**	P	P	04 50 17.5	+1.6
	0.4nm,0.6s,baz=158,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**59.48**	**325**	P	P	04 51 32.8	-0.2
	0.8nm,0.4s,baz=113,slow=8.5,SNR=12						
KURK	**Kurchatov**	**63.63**	**327**	P	P	04 52 00.3	-0.7
	baz=128,slow=5.9						

*NEIC **05** 04:43:26.5, 3940N×2030E, h44km, MD3.4(ATH), After ATH.*
*CSEM **05** 04:43:26.3±0.3, 3925N×2029E, h1km±2km, MD3.4, Error ellipse: s-maj=4.1km s-min=3.1km az=103.0*
*ATH **05** 04:43:26.5, 3940N×2030E, h44km±4km, MD3.4/4*
*ISCJB **05** 04:43:27.6±0.5, 3929N±003×2028E±005, h10km, Error ellipse: s-maj=5.3km s-min=3.9km az=162.1*
*THE **05** 04:43:27.8, 3929N×2023E, h0km±5km, ML3.4/3, Error ellipse: s-maj=8.0km s-min=1.8km az=266.0*

ISC 05 04:43:27.5±0.7, 3929N±003×2027E±005, h1km±6km, n23, σ1§06/31, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.56**	**320**	*e*P	**Pg**	**04 43 38.0**	**-0.2**
KEK				*e*S	**Sg**	**04 43 46.6**	**+1.2**
JAN	**Janina**	**0.58**	**51**	*e*P	**Pg**	**04 43 37.8**	**-0.9**
JAN				*e*S	**Sg**	**04 43 46.0**	**-0.2**
LKD	**Levkas**	**0.65**	**153**	P	**Pg**	**04 43 39.4**	**-0.6**
LKD				S	**Sg**	**04 43 50.2**	**+1.7**
MEV	**Metsovon**	**0.89**	**56**	P	**Pg**	**04 43 43.5**	**-1.1**
VLS	**Valsamata**	**1.14**	**167**	P	**Pg**	**04 43 49.1**	**-0.2**
VLS				*S*	**Sg**	**04 44 06.6**	**+2.5**
VLS	**Valsamata**	**1.14**	**167**	*e*P	**Pg**	**04 43 48.6**	**-0.7**
VLS				*e*S	**Sg**	**04 44 05.1**	**+1.0**
KFL	**Anninata**	**1.25**	**161**	P	**Pg**	**04 43 51.1**	**-0.3**
EVR	**Evrytania**	**1.25**	**107**	*e*P	**Pg**	**04 43 49.7**	**-1.9**
THL	**Klokotos Trika**	**1.38**	**78**	*e*P	**Pn**	**04 43 49.2**	**-4.6**
AGG	**Agios Georgios**	**1.63**	**99**	P	**Pn**	**04 43 56.4**	**-0.8**
AGG				S	**Sg**	**04 44 21.4**	**+1.7**
AGG	**Agios Georgios**	**1.63**	**99**	P	**Pn**	**04 43 56.4**	**-0.8**
AGG				S	**Sg**	**04 44 21.4**	**+1.7**
FNA	**Florina**	**1.72**	**29**	P	**Pn**	**04 43 58.8**	**+0.3**
FNA				S	**Sn**	**04 44 21.2**	**+0.2**
OHR	**Ohrid**	**1.86**	**12**	P	**Pn**	**04 44 00.1**	**-0.4**
OHR	**Ohrid**	**1.86**	**12**	*e*Pn	**Pn**	**04 43 59.9**	**-0.6**
OHR	**Ohrid**	**1.86**	**12**	*e*Pn	**Pn**	**04 43 60.0**	**-0.6**
LIT	**Litokhoron**	**1.90**	**64**	P	**Pn**	**04 44 02.0**	**+1.1**
BIA	**Bitola**	**1.91**	**25**	P	**Pn**	**04 44 02.9**	**+1.8**
BIA	**Bitola**	**1.91**	**25**	*e*Pn	**Pn**	**04 44 01.9**	**+0.8**
BIA	**Bitola**	**1.91**	**25**	P	**Pn**	**04 44 02.9**	**+1.8**
GRG	**Griva**	**2.33**	**44**	P	**Pn**	**04 44 08.3**	**+1.3**
ITM	**Ithomi**	**2.48**	**148**	*e*P	**Pn**	**04 44 07.7**	**-1.2**
TIP	**Timpagrande**	**2.73**	**269**	*e*Pn	**Pn**	**04 44 11.7**	**-0.7**
VLI	**Veliai**	**3.32**	**140**	*e*P	**Pn**	**04 44 19.6**	**-0.9**

*DJA **05** 04:47:10, 276N×12751E, h57km, MLv4.4/4*
*ISCJB **05** 04:47:11.9±0.9, 259N±005×12731E±009, h109km±9km, mb4.1/11, Error ellipse: s-maj=14.4km s-min=7.6km az=175.0*
*NEIC **05** 04:47:11.7±1.3, 265N×12740E, h92km±12km, mb3.9/2, Error ellipse: s-maj=20.0km s-min=7.0km az=79.0*
*IDC **05** 04:47:13.7±2.1, 257N×12728E, h108km±19km, mb3.9/10, mb1 4.0/12, mb1mx3.8/20, mbtmp3.9/12, MS3.0/4, Ms1 3.0/4, ms1mx2.5/21, Error ellipse: s-maj=28.1km s-min=9.7km az=80.0*

ISC 05 04:47:12.7±0.9, 258N±005×12740E±009, h101km±9km, n30, σ1§13/26, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.79**	**181**	P	**Pn**	**04 47 41.8**	**-0.9**
MNI	**Manado**	**2.80**	**246**	P	**Pn**	**04 47 55.7**	**-0.1**
MNI	**Manado**	**2.80**	**246**	S	**Sn**	**04 48 31.3**	**+2.3**
LBMI	**Labuha**	**3.19**	**178**	P	**Pn**	**04 48 01.4**	**+0.3**
DAV	**Davao City (W)**	**4.82**	**338**	P	**Pn**	**04 48 21.7**	**-1.4**
	19nm,0.3s,baz=150,slow=16,SNR=2.1						
DAV				S	**Sn**	**04 49 20.1**	**+2.3**
	43nm,0.3s,baz=221,slow=19,SNR=4.7						
DAV	**Davao City (W)**	**4.82**	**338**	P	**Pn**	**04 48 21.7**	**-1.4**
DAV				S	**Sn**	**04 49 20.1**	**+2.3**
KAPI	**Kappang**	**10.74**	**225**	P	**Pn**	**04 49 42.5**	**-1.0**
	0.8nm,0.3s,baz=21,slow=12,SNR=2.2						
KAPI				S	**Sn**	**04 51 40.1**	**-1.7**
	0.5nm,0.3s,baz=331,slow=19,SNR=2.3						
KAKA	**Kakadu**	**15.99**	**162**	*e*P	Px	04 50 41.0	
	6.1nm,0.4s						
GUMO	**Guam**	**20.44**	**57**	LR	LR	04 58 21.0	
	comp=Z,45nm,20.5s,baz=175,slow=32						
WRAB	**Tennant Creek**	**23.38**	**163**	*e*P	**P**	**04 52 13.3**	**+0.7**
	8.2nm,1.2s,mb3.9						
WRA	**Warramunga Arr**	**23.39**	**163**	P	**P**	**04 52 12.4**	**-0.3**
	5.9nm,0.6s,mb4.1,baz=345,slow=9.9,SNR=44						
WB2	**Warramunga Arr**	**23.39**	**163**	*e*P	**P**	**04 52 12.7**	**0.0**
WB2	**Warramunga Arr**	**23.39**	**163**	*e*P	**P**	**04 52 12.8**	**+0.1**
JOW	**Kunigami**	**24.13**	**2**	LR	LR	05 01 21.8	
	comp=Z,8.8nm,19.0s,baz=330,slow=35						
MBWA	**Marble Bar**	**24.75**	**197**	*e*P	**P**	**04 52 27.1**	**+2.1**
	5.1nm,1.1s,mb3.9						
ASAR	**Alice Springs**	**26.84**	**167**	P	**P**	**04 52 44.0**	**+0.1**
	0.8nm,0.4s,mb3.6,baz=350,slow=7.8,SNR=15						
ASAR				PcP	PcP	04 56 05.2	+0.9
	0.6nm,0.6s,baz=335,slow=2.5,SNR=5.0						
KSRS	**Korea Array**	**34.71**	**1**	P	**P**	**04 53 54.4**	**+1.4**
	0.7nm,0.4s,mb3.9,baz=181,slow=8.2,SNR=3.2						
KSRS				LR	LR	05 07 06.9	
	comp=Z,26nm,21.6s,baz=2.0,slow=34						
MJAR	**Matsushiro Arr**	**35.24**	**15**	LR	LR	05 05 48.1	
	comp=Z,61nm,19.6s,baz=50,slow=32						
NWAO	**Narrogin (SRO)**	**36.60**	**194**	P	**P**	**04 54 09.9**	**+0.7**
	2.5nm,0.4s,mb4.5,baz=20,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**36.82**	**160**	P	**P**	**04 54 12.2**	**+1.1**
	8.7nm,0.6s,baz=343,slow=7.7,SNR=14						
SONM	**Songino Array**	**48.60**	**341**	P	**P**	**04 55 44.8**	**-1.2**
	0.8nm,0.8s,mb3.7,baz=156,slow=7.2,SNR=5.5						
MKAR	**Makanchi Array**	**58.88**	**325**	P	**P**	**04 57 01.3**	**+0.2**
	2.9nm,0.4s,mb4.7,baz=115,slow=8.0,SNR=52						
ZALV	**Zalesovo Beam**	**61.91**	**333**	P	**P**	**04 57 20.1**	**-1.5**
	0.5nm,0.4s,mb3.9,baz=106,slow=5.1,SNR=2.8						
KURK	**Kurchatov**	**63.07**	**328**	P	**P**	**04 57 28.9**	**-0.4**
	baz=126,slow=5.9						
BVAR	**Borovoye Array**	**68.65**	**327**	P	**P**	**04 58 04.6**	**-0.5**
	3.5nm,1.0s,mb4.1,baz=90,slow=1.5,SNR=6.2						
KDAK	**Kodiak Island**	**82.50**	**32**	P	**P**	**04 59 23.3**	**-0.8**
	6.6nm,0.7s,mb4.6,baz=270,sl

JRY	**Ryogami san**	**6.01 354**	P	**Pn**	**06 30 59.0**	**+0.3**
JRY			S	**S**	**06 32 13.6**	**-0.4**
JWT	**Wachi**	**6.35 327**	P	**Pn**	**06 31 03.3**	**+0.8**
JWT			*e*S	**S**	**06 32 17.9**	**-2.9**
MJAR	**Matsushiro Arr**	**6.61 350**	P	**Pn**	**06 31 04.9**	**-0.5**
	2.6nm,0.3s,baz=170,slow=11,SNR=13					
MAT	**Matsushiro**	**6.62 350**	P	**Pn**	**06 31 05.1**	**-0.3**
MAT			*e*S	**S**	**06 32 24.7**	**-1.5**
JKY	**Yasaka**	**6.77 327**	P	**Pn**	**06 31 06.8**	**-0.4**
KSRS	**Korea Array**	**12.25 310**	P	**P**	**06 32 08.8**	**-0.2**
	0.6nm,0.3s,baz=126,slow=11,SNR=10.0					
SONM	**Songino Array**	**31.07 314**	P	**P**	**06 35 09.1**	**-0.7**
	0.6nm,0.7s,mb3.0,baz=133,slow=8.9,SNR=6.3					
ZALV	**Zalesovo Beam**	**45.83 318**	P	**P**	**06 37 09.5**	**-1.3**
	0.4nm,0.5s,mb3.0,baz=98,slow=7.6,SNR=4.2					
JIRN	**Jiri**	**46.53 281**	*e*P	**P**	**06 37 16.3**	**-0.3**
	11nm,0.4s					
GUN	**Gumba**	**46.73 281**	*e*P	**P**	**06 37 17.6**	**-0.5**
	6.5nm,0.4s,mb4.3					
MKAR	**Makanchi Array**	**46.91 308**	P	**P**	**06 37 18.2**	**-1.0**
	0.4nm,0.3s,mb3.2,baz=86,slow=10,SNR=9.5					
DANN	**Dangsing**	**48.41 283**	*e*P	**P**	**06 37 30.4**	**-0.5**
	5.2nm,0.3s					
KOLN	**Koldanda**	**48.71 282**	*e*P	**P**	**06 37 32.4**	**-0.7**
	4.6nm,0.4s,mb4.1					
WRA	**Warramunga Arr**	**49.94 187**	P	**P**	**06 37 41.9**	**-0.3**
	0.5nm,0.3s,mb3.3,baz=4.1,slow=8.0,SNR=45					
STKA	**Stephens Creek**	**61.59 178**	P	**P**	**06 39 04.8**	**+1.1**
	1.0nm,0.4s,mb3.7,baz=12,slow=5.6,SNR=5.3					
NWAO	**Narrogin (SRO)**	**66.11 201**	P	**P**	**06 39 33.3**	**+0.5**
	6.3nm,0.7s,mb4.3,baz=54,slow=8.7,SNR=2.9					
BRTR	**Keskin Array B**	**82.39 312**	P	**P**	**06 41 06.0**	**+0.1**
	0.7nm,0.6s,mb3.5,baz=81,slow=4.5,SNR=4.2					

*ISCJB **05** 06:36:24.9±0.5,2224S±007×129.39E±004,h10km, Error ellipse: s-maj=10.5km s-min=4.8km az=159.6*
*IDC **05** 06:36:26.1±3.3,2255S×12944E,h0km,mb1 3.7/4, mb1mx3.5/14,mbtmp3.6/4,ML3.1/4,Error ellipse: s-maj=31.5km s-min=27.4km az=149.0*
*NEIC **05** 06:36:28.0,2204S×12950E,h1km,ML3.2(AUST),After AUST.*
*AUST **05** 06:36:28.6,2204S×12950E,h1km,ML3.2*

ISC 05 06:36:26.6±0.5,2227S±006×12949E±004,h10km,n26, σ1°45/38,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**4.30**	**110**	Pn	**Pn**	**06 37 33.6**	**+1.6**
	0.2nm,0.3s,baz=291,slow=13,SNR=11						
ASAR				Pg	**Pg**	**06 37 43.4**	**-5.5**
	0.9nm,0.3s,baz=292,slow=13,SNR=17						
ASAR				Sn	**Sn**	**06 38 30.4**	**+8.2**
	4.1nm,0.3s,baz=295,slow=23,SNR=8.3						
ASAR				Lg		06 38 40.4	
	8.3nm,0.3s,baz=280,slow=28,SNR=15						
ASAR	**Alice Springs**	**4.30**	**110**	Pn	**Pn**	**06 37 33.6**	**+1.6**
ASAR				Pg	**Pg**	**06 37 43.4**	**-5.5**
ASAR				Sn	**Sn**	**06 38 30.4**	**+8.2**
WRA	**Warramunga Arr**	**5.08**	**64**	Pn	**Pn**	**06 37 47.8**	**+4.9**
	1.0nm,0.3s,baz=244,slow=14,SNR=26						
WRA				Pg	**Pg**	**06 38 00.5**	**-3.5**
	1.7nm,0.3s,baz=243,slow=15,SNR=14						
WRA				Sn	**Sn**	**06 38 46.0**	**+4.4**
	2.8nm,0.3s,baz=240,slow=21,SNR=6.6						
WRA				Lg		06 39 00.4	
	3.0nm,0.3s,baz=244,slow=27,SNR=5.7						
WRA	**Warramunga Arr**	**5.08**	**64**	Pn	**Pn**	**06 37 47.8**	**+4.9**
WRA				Pg	**Pg**	**06 38 00.5**	**-3.5**
WRA				Sn	**Sn**	**06 38 46.0**	**+4.4**
WB2	**Warramunga Arr**	**5.09**	**64**	*e*P	**Pn**	**06 37 41.8**	**-1.2**
WB2				*e*S	**Sn**	**06 38 38.1**	**-3.8**
WRAB	**Tennant Creek**	**5.10**	**64**	*e*Pn	**Pn**	**06 37 42.5**	**-0.5**
WRAB				*e*S	**Sb**	**06 38 57.8**	**+0.6**
KNA	**Kununurra**	**6.52**	**354**	*e*P	**Pn**	**06 38 03.4**	**+0.8**
KNA				*e*S	**Sn**	**06 39 07.4**	**-10**
	11nm,0.5s						
KNA	**Kununurra**	**6.52**	**354**	*e*P	**Pn**	**06 38 03.4**	**+0.8**
	11nm,0.5s						
KNA				*e*S	**Sn**	**06 39 07.4**	**-10**
FORT	**Forrest**	**8.57**	**188**	*e*P	**Pn**	**06 38 33.6**	**+2.8**
FORT				*e*S	**Sn**	**06 40 07.0**	**-0.6**
	7.6nm,0.6s						
FORT	**Forrest**	**8.57**	**188**	*e*Pn	**Pn**	**06 38 33.6**	**+2.9**
MBWA	**Marble Bar**	**9.14**	**275**	*e*Pn	**Pn**	**06 38 39.6**	**+1.0**
MBWA				*e*Sn	**Sn**	**06 40 20.8**	**-0.9**
QIS	**Mount Isa**	**9.57**	**82**	*e*P	**Pn**	**06 38 48.5**	**+4.0**
QIS				*e*S	Sx	06 40 23.7	
	3.4nm,0.3s						
QIS	**Mount Isa**	**9.57**	**82**	*e*P	**Pn**	**06 38 48.5**	**+4.0**
	3.4nm,0.3s						
QIS				*e*S	Sx	06 40 23.7	
KAKA	**Kakadu**	**9.91**	**17**	*e*P	Px	06 38 39.4	
KAKA				*e*S	Sx	06 40 23.9	
	3.7nm,0.2s						
KAKA	**Kakadu**	**9.91**	**17**	*e*P	Px	06 38 39.4	
	3.7nm,0.2s						
KAKA				*e*S	Sx	06 40 23.9	
MEEK	**Meekatharra**	**10.82**	**244**	*e*P	**Pn**	**06 39 03.3**	**+1.7**
MEEK				*e*S	Sx	06 40 58.6	
MORW	**Morawa**	**13.88**	**238**	*e*P	**Pn**	**06 39 42.6**	**-0.9**
MORW				*e*S	Sx	06 42 08.5	
	53nm,1.9s						
MORW	**Morawa**	**13.88**	**238**	*e*P	**Pn**	**06 39 42.6**	**-0.9**
	53nm,1.9s						
MORW				*e*S	Sx	06 42 08.5	
BLDU	**Ballidu**	**14.14**	**231**	*e*P	**Pn**	**06 39 46.8**	**-0.2**
BLDU				*e*S	Sx	06 42 12.6	
	1.5nm,0.7s						
BLDU	**Ballidu**	**14.14**	**231**	*e*P	**Pn**	**06 39 46.8**	**-0.2**
	1.5nm,0.7s						
BLDU				*e*S	Sx	06 42 12.6	
STKA	**Stephens Creek**	**14.40**	**134**	*e*P	**Pn**	**06 39 47.5**	**-3.1**
STKA				*e*S	Sx	06 42 19.9	
	2.0nm,0.5s						
STKA	**Stephens Creek**	**14.40**	**134**	Pn	**Pn**	**06 39 47.6**	**-2.9**
	0.2nm,0.3s,baz=313,slow=13,SNR=3.5						
STKA				Sn	Sx	06 42 22.2	
	0.4nm,0.3s,baz=312,slow=15,SNR=5.3						
STKA	**Stephens Creek**	**14.40**	**134**	*e*P	**Pn**	**06 39 47.5**	**-3.1**
	2.0nm,0.5s						
STKA				*e*S	Sx	06 42 19.9	
NWAO	**Narrogin (SRO)**	**15.18**	**223**	*e*P	**Pn**	**06 39 58.4**	**-2.7**
NWAO				*e*S	Sx	06 42 41.0	
	65nm,0.9s						
NWAO	**Narrogin (SRO)**	**15.18**	**223**	Pn	**Pn**	**06 39 58.2**	**-2.9**
	0.6nm,0.3s,baz=53,slow=14,SNR=4.0						
NWAO				Sn	Sx	06 42 41.3	
	0.8nm,0.3s,baz=18,slow=20,SNR=4.1						
NWAO	**Narrogin (SRO)**	**15.18**	**223**	*e*P	**Pn**	**06 39 58.4**	**-2.7**
	65nm,0.9s						
NWAO				*e*S	Sx	06 42 41.0	

*NEIC **05** 07:14:10.5, 1494N×6060W, h36km,MD3.5(TRN),After TRN.*

TRN 05 07:14:09.1,1500N×6055W,h54km,MD3.5,M3.2(FDF), 3C-4D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.55**	**217**	⇑*e*P	Pn	07 14 22.6	+1.3
FDF	**Fort de France**	**0.64**	**245**	*e*Pn	Pn	07 14 23.4	+1.1
FDF				*e*Sn	Sn	07 14 33.5	+1.6
FDF	**Fort de France**	**0.64**	**245**	⇓*i*P	Pn	07 14 23.6	+1.3
FDF				⇓*e*S	Sn	07 14 33.6	+1.7
BIM	**Bigot**	**0.69**	**226**	⇓*i*P	Pn	07 14 24.4	+1.4
BIM				⇓*e*S	Sn	07 14 34.8	+1.7
DBCT	**Belle View Cho**	**0.81**	**289**	*e*P	Pn	07 14 26.6	+2.1
DBCT				*e*S	Sn	07 14 37.5	+1.8
DSHT	**Scott's Head**	**0.82**	**285**	*e*P	Pn	07 14 26.6	+1.9
DSHT				*e*S	Sn	07 14 38.2	+2.3
DPMT	**Pointe Michel**	**0.84**	**288**	*e*P	Pn	07 14 27.3	+2.5
DPMT				*e*S	Sn	07 14 37.2	+0.9
DPMT	**Pointe Michel**	**0.84**	**288**	*e*P	Pn	07 14 27.3	+2.5
DPMT				*e*S	Sn	07 14 39.5	+3.2
MDN	**Morne-Daniel**	**0.87**	**291**	*e*P	Pn	07 14 27.8	+2.5
MDN				*e*S	Sn	07 14 40.4	+3.3
DWS	**Wesley**	**0.93**	**308**	⇑*i*P	Pn	07 14 27.9	+1.9
DWS				*e*S	Sn	07 14 38.9	+0.5
DWS	**Wesley**	**0.93**	**308**	⇑*i*P	Pn	07 14 27.9	+1.9
DWS				*e*S	Sn	07 14 40.0	+1.7
SLW	**Petit Monier**	**1.04**	**201**	*e*P	Pn	07 14 28.4	+0.8
SLW				*e*S	Sn	07 14 42.6	+1.4
TBG	**Guadaloupe-3**	**1.35**	**309**	*e*P	Pn	07 14 32.9	+1.2
TBG				*e*S	Sn	07 14 49.9	+1.3
DEG	**La Desirade**	**1.39**	**340**	*e*P	Pn	07 14 33.0	+0.7
DOG	**Dongo Capester**	**1.45**	**315**	*e*P	Pn	07 14 34.5	+1.5
HMG	**Houelmont**	**1.48**	**312**	*e*P	Pn	07 14 35.0	+1.6
SCG	**Saint Claude**	**1.49**	**313**	*e*P	Pn	07 14 35.1	+1.5
SCG				*e*S	Sn	07 14 53.3	+1.2
LZG	**Guadaloupe-1**	**1.64**	**314**	*e*P	Pn	07 14 37.4	+1.9
GRSS	**Sisters**	**2.88**	**201**	*e*P	Pn	07 14 54.7	+2.2
GRIC	**Isle de Caille**	**2.88**	**201**	*e*P	Pn	07 14 54.9	+2.3
GRW	**Mount Saint Ca**	**3.02**	**201**	*e*P	Pn	07 14 56.7	+2.1
GRW				*e*S	Sn	07 15 35.5	+5.9
GRW	**Mount Saint Ca**	**3.02**	**201**	*e*P	Pn	07 14 56.7	+2.1
GRW				*e*S	Sn	07 15 30.4	+0.8

*NEIC **05** 07:14:28.8,3696S×7234W,h71km,MD3.3(GUC),After GUC.*

GUC 05 07:14:28.8±0.7,3696S×7234W,h71km±12km,MD3.3, ML4.1,10C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNCH	**Linares**	**1.26**	**28**	⇑*i*P	Pn	07 14 48.1	-2.6
LNCH				*i*S	Sn	07 15 01.7	-5.3
LNCH	**Linares**	**1.26**	**28**	⇑*i*P	Pn	07 14 48.1	-2.6
LNCH				*i*S	Sn	07 15 01.7	-5.3
LNCH				AML	AML	07 15 02.6	
	comp=E,4μm,0.4s						
SFDO	**San Fernando**	**2.58**	**25**	⇑*i*P	Pn	07 15 04.2	-4.1
CICH	**Cipreses**	**3.07**	**31**	⇑*i*P	Pn	07 15 11.2	-3.7
CICH				*i*S	Sn	07 15 42.5	-7.9
LNV	**Longovilo**	**3.09**	**15**	*e*P	Pn	07 15 11.9	-3.4
LNV				*i*S	Sn	07 15 43.4	-7.7
CACH	**El Canelo**	**3.17**	**27**	⇑*i*P	Pn	07 15 12.4	-4.0
CACH				*i*S	Sn	07 15 44.8	-8.3
CHCH	**Chadas Angostu**	**3.32**	**25**	*e*P	Pn	07 15 14.1	-4.3
TACH	**Talagante**	**3.50**	**20**	⇑*i*P	Pn	07 15 16.1	-4.6
LMEL	**Las Melosas**	**3.56**	**30**	⇑*i*P	Pn	07 15 17.9	-3.7
LMEL				*i*S	Sn	07 15 54.3	-8.3
PCH	**Pirque**	**3.65**	**25**	⇑*i*P	Pn	07 15 18.2	-4.7
PCH				*i*S	Sn	07 15 56.4	-8.4
ANTU	**Antumapu**	**3.66**	**23**	*i*S	Sn	07 15 56.3	-8.7
ANTU				AML	AML	07 15 57.4	
	comp=E,288nm,0.2s						
RCDM	**Rinconada Maip**	**3.69**	**20**	⇑*i*P	Pn	07 15 18.8	-4.6
RCDM				*i*S	Sn	07 15 56.5	-9.1
CLCH	**Cerro Calan**	**3.85**	**23**	⇓*i*P	Pn	07 15 20.9	-4.7
CLCH				*i*S	Sn	07 16 00.1	-10
FCH	**Farellones**	**4.00**	**25**	*e*P	Pn	07 15 23.1	-4.5
FCH				*i*S	Sn	07 16 04.1	-9.1
PEL	**Peldehue**	**4.04**	**20**	⇑*i*P	Pn	07 15 23.8	-4.4
PEL				*i*S	Sn	07 16 05.0	-9.4
ROCH	**El Roble**	**4.13**	**16**	*i*S	Sn	07 16 07.2	-9.2

IDC 05 07:27:13.8±1.7,2083S×17486W,h0km,mb3.5/3, mb1 3.9/4,mb1mx3.7/18,mbtmp3.7/4,ML2.1/1,Error ellipse: s-maj=88.3km s-min=25.3km az=147.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.48**	**24**	Pn	Pn	07 29 03.2	-1.0
	1.9nm,0.3s,baz=222,slow=11,SNR=5.1						
AFI				Sn	Sn	07 30 21.8	-8.0
	3.3nm,0.3s,baz=232,slow=20,SNR=4.8						
ASAR	**Alice Springs**	**47.31**	**257**	P	P	07 35 49.8	+0.4
	0.3nm,0.9s,baz=103,slow=8.1,SNR=3.8						
WRA	**Warramunga Arr**	**47.47**	**262**	P	P	07 35 50.7	0.0
	0.1nm,0.3s,baz=96,slow=8.6,SNR=8.1						
NVAR	**Mina Array Bea**	**79.27**	**42**	P	P	07 39 22.3	+1.2
	1.2nm,0.7s,baz=221,slow=7.8,SNR=11						
AKASG	**Malin Array Be**	**144.67**	**333**	PKP	PKPdf	07 46 51.5	-0.7
	0.2nm,0.3s,baz=38,slow=4.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**171.69**	**156**	PKP	PKPdf	07 47 22.5	-2.8
	0.3nm,0.7s,baz=228,slow=1.7,SNR=2.8						

IDC 05 07:28:25.0±17.0,2027S×17519W,h82km±99km,mb3.5/2, mb1 3.8/3,mb1mx3.4/18,mbtmp3.6/3,ML2.1/1,Error ellipse: s-maj=372.3km s-min=36.6km az=146.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.12**	**28**	P	Pn	07 30 06.7	+0.1
	1.8nm,0.3s,baz=262,slow=19,SNR=2.3						
ASAR	**Alice Springs**	**47.14**	**256**	P	P	07 36 49.8	+0.4
	1.2nm,0.7s,baz=99,slow=8.1,SNR=13						
WRA	**Warramunga Arr**	**47.25**	**261**	P	P	07 36 49.8	-0.5
	0.6nm,0.3s,baz=99,slow=8.6,SNR=23						
GERES	**GERESS Array B**	**150.61**	**348**	PKPbc	PKPbc	07 48 07.3	-0.1
	0.3nm,0.3s,baz=48,slow=1.5,SNR=3.5						

IDC 05 07:47:41.4±3.9,565S×15166E,h0km,mb3.3/2,mb1 3.6/2, mb1mx3.4/14,mbtmp3.4/2,MS2.8/1,Ms1 2.8/1, ms1mx2.4/8,Error ellipse: s-maj=161.8km s-min=51.5km az=119.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.28**	**200**	LR	LR	07 56 11.3	
	comp=Z,37nm,19.4s,baz=59,slow=33						
WRA	**Warramunga Arr**	**22.04**	**228**	P	P	07 52 37.8	+0.1
	0.5nm,0.3s,baz=53,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**24.76**	**222**	P	P	07 53 05.0	+0.1
	0.8nm,0.9s,baz=53,slow=8.8,SNR=6.6						
TORD	**Torodi Ar. Bea**	**149.47**	**286**	PKPbc	PKPbc	08 07 33.2	-0.5
	0.6nm,0.6s,baz=74,slow=1.7,SNR=4.6						

CASC 05 07:56:53.7±2.1,866N×8312W,h23km±7km,MD4.0,3C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.05**	**258**	⇓*i*P	Pb	07 56 58.9	+1.1
BRU2	**Volcan**	**0.44**	**73**	⇓*e*P	Pb	07 57 02.6	-0.3
BRU2				*e*S	Sb	07 57 10.1	+1.0
TBS2		**0.47**	**74**	*e*P	Pb	07 57 09.2	+5.7
TBS2				*e*S	Sb	07 57 17.3	+7.3
BAR1		**0.61**	**342**	⇓*e*P	Pb	07 57 05.0	-0.6
BAR1				*e*S	Sb	07 57 14.3	+0.6
CNI	**Changuinola**	**0.95**	**38**	⇓*e*P	Pb	07 57 11.2	-0.4
BUS	**Buena Vista**	**1.09**	**324**	⇓*e*P	Pn	07 57 12.4	-1.1
URSC	**Urasca**	**1.33**	**331**	⇓*e*P	Pn	07 57 16.1	-0.8
URSC				*e*S	Sn	07 57 34.8	+0.8
LIO	**Limon**	**1.33**	**3**	*e*P	Pn	07 57 16.3	-0.6
LIO				*e*S	Sn	07 57 35.4	+1.4
PRS1	**Puriscal**	**1.76**	**318**	⇓*e*P	Pn	07 57 21.7	-1.1
CGA2	**Cerro Gallo 2**	**1.89**	**315**	*e*P	Pn	07 57 24.6	0.0
JCR	**Jicaral**	**2.29**	**301**	*e*P	Pn	07 57 31.0	+0.9
FORC	**Fortuna**	**2.36**	**320**	*e*P	Pn	07 57 32.7	+1.6
BCIP	**Isla Barro Col**	**3.28**	**81**	*e*P	Pn	07 57 42.9	-0.8
PTP	**Ponta Puerca**	**19.48**	**59**	⇑*i*P		07 57 04.3	

*ISCJB **05** 08:02:59.0±0.4,3882N±002×10729W±003,h0km,Error ellipse: s-maj=3.6km s-min=2.5km az=20.4*
*NEIC **05** 08:02:59.5±0.5,3881N×10721W,h1km,ML3.2,Error ellipse: s-maj=7.4km s-min=5.4km az=79.0,Suspected Mining induced.*
NEIC Probable coal bump.
*IDC **05** 08:03:00.1±1.3,3909N×107.11W,h0km,mb1 3.2/4, mb1mx3.2/25,mbtmp2.8/4,ML2.7/3,Error ellipse: s-maj=25.3km s-min=9.8km az=69.0*

ISC 05 08:02:59.8±0.3,3880N±001×10729W±003,h0km,n76, σ1°40/130,19C-20D,Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCO	**Snowmass**	**0.45**	**33**	⇓*i*Pg	**Pg**	**08 03 07.8**	**-0.6**
SMCO				*e*Sg	**Sg**	**08 03 14.4**	**+0.1**
PV01	**Paradox Valley**	**1.20**	**237**	*e*P	**Pg**	**08 03 21.5**	**-1.4**
PV01				*e*S	**Sg**	**08 03 37.1**	**-1.3**
PV10	**Paradox Valley**	**1.43**	**253**	*e*Pn	**Pn**	**08 03 25.8**	**-1.2**
PV10				*e*S	**Sg**	**08 03 44.9**	**-0.9**
Q19A	**Hogan Spring (**	**1.54**	**276**	P	**Pn**	**08 03 25.8**	**-2.8**
	baz=1.3,SNR=127						
Q19A				⇓S	**Sn**	**08 03 44.1**	**-5.1**
	baz=1.3						
P19A	**Cripple Cowboy**	**1.55**	**303**	⇑P	**Pn**	**08 03 25.8**	**-2.9**
	baz=1.3,SNR=66						
P19A				⇓S	**Sn**	**08 03 42.8**	**-6.7**
	baz=1.3						
ISCO	**Idaho Springs**	**1.64**	**52**	*e*Pn	**Pn**	**08 03 30.3**	**+0.4**
SDCO	**Great Sand Dun**	**1.76**	**126**	*e*Pn	**Pg**	**08 03 34.3**	**+0.8**
SDCO				*e*Sn	**Sg**	**08 04 03.8**	**+7.5**
S19A	**Harvey Farm, M**	**1.79**	**235**	⇑P	**Pn**	**08 03 32.5**	**+0.5**
	baz=1.7						
S19A				⇑S	**Sn**	**08 03 55.0**	**-0.4**
	baz=1.7						
MVCO	**Mesa Verde**	**1.85**	**211**	*e*Pn	**Pn**	**08 03 34.7**	**+2.0**
MVCO	**Mesa Verde**	**1.85**	**211**	⇓P	**Pn**	**08 03 34.9**	**+2.2**
	baz=1.9						
O19A	**Miners Draw (B**	**2.06**	**317**	⇑Pb	**Pn**	**08 03 34.9**	**-0.7**
	baz=1.8,SNR=24						
O19A				⇑Sb	**Sn**	**08 03 59.9**	**-2.1**
	baz=1.8						
R18A	**Canyonlands Na**	**2.08**	**259**	⇓Pb	**Pn**	**08 03 36.1**	**+0.2**
	baz=1.9						
R18A				⇓Sb	**Sn**	**08 04 01.9**	**-0.6**
	baz=1.9						
Q18A	**Rafter H Ranch**	**2.23**	**279**	⇓Pb	**Pn**	**08 03 37.9**	**-0.1**
	baz=2.0,SNR=32						
Q18A				⇓Sb	**Sn**	**08 04 04.9**	**-1.4**
	baz=2.0						
S18A	**Hurst Farm, BI**	**2.40**	**243**	⇓Pb	**Pn**	**08 03 42.0**	**+1.8**
	baz=2.2						
S18A				⇓Sb	**Sn**	**08 04 13.4**	**+3.0**
	baz=2.2						
T19A	**Beclabito**	**2.40**	**215**	⇑P	**Pn**	**08 03 42.0**	**+1.7**
	baz=2.4						
T19A				⇑Sb	**Sb**	**08 04 17.5**	**+3.6**
	baz=2.4						
P18A	**Preston Nutter**	**2.44**	**291**	⇑Pb	**Pn**	**08 03 40.2**	**-0.6**
	baz=2.1,SNR=22						
SRU	**San Rafael**	**2.54**	**278**	*e*Pn	**Pn**	**08 03 41.7**	**-0.5**
SRU				*e*Sn	**Sn**	**08 04 13.5**	**-0.3**
SRU	**San Rafael**	**2.54**	**278**	Pb	**Pn**	**08 03 42.3**	**+0.1**
	baz=2.3,SNR=96						
SRU				⇑Sb	**Sn**	**08 04 14.0**	**+0.2**
	baz=2.3						
N19A	**John Jarvie Ra**	**2.54**	**326**	⇓Pb	**Pn**	**08 03 43.1**	**+0.8**
	baz=2.3,SNR=83						
N19A				⇑Sb	**Sn**	**08 04 14.6**	**+0.6**
	baz=2.3						
O18A	**Roosevelt**	**2.56**	**306**	⇓Pb	**Pn**	**08 03 42.3**	**-0.2**
	baz=2.3						
T18A	**Mexican Hat**	**2.63**	**232**	⇑Sb	**Sb**	**08 04 20.6**	**0.0**
	baz=2.5						
R17A	**Hanksville Air**	**2.71**	**263**	⇑Pb	**Pn**	**08 03 46.5**	**+2.1**
	baz=2.5,SNR=30						
R17A				⇓Sb	**Sn**	**08 04 20.1**	**+2.2**
	baz=2.5						
P17A	**Butcher Ranch,**	**2.76**	**285**	⇑Sb	**Sn**	**08 04 19.8**	**+0.4**
	baz=2.5						
N18A	**Larsen Ranch,**	**2.84**	**321**	⇓Pb	**Pn**	**08 03 48.0**	**+1.7**
	baz=2.6,SNR=7.1						
N18A				⇑Sb	**Sn**	**08 04 22.8**	**+1.5**
	baz=2.6						
RWWY	**Rawlins**	**2.89**	**1**	Pn	**Pn**	**08 03 45.5**	**-1.5**
RWWY				*e*Pg	**Pg**	**08 03 50.6**	**-4.5**
S17A	**Black Ridge (B**	**3.00**	**248**	⇓P	**Pn**	**08 03 48.5**	**0.0**
	baz=2.8						
S17A				⇓Sb	**Sb**	**08 04 30.5**	**-0.7**
	baz=2.8						
O17A	**Robinson Place**	**3.01**	**299**	⇑P	**Pn**	**08 03 47.3**	**-1.3**
	baz=2.7,SNR=12						
Q16A	**Castle Valley**	**3.03**	**273**	⇑Sb	**Sb**	**08 04 29.1**	**-3.0**
	baz=2.8						
M19A	**Rock Springs**	**3.06**	**333**	⇓Sb	**Sb**	**08 04 29.8**	**-3.1**
	baz=2.8						
TMUT	**Trail Mountain**	**3.09**	**280**	*e*Pn	**Pn**	**08 03 50.0**	**+0.2**
TMUT				*e*Pg	**Pg**	**08 03 56.8**	**-2.1**
TMUT				*e*Sn	**Sn**	**08 04 32.0**	**+4.7**
U18A	**Rough Rock, Ch**	**3.13**	**222**	⇑P	**Pn**	**08 03 52.1**	**+1.7**
	baz=3.1						
L21A	**Rawlins**	**3.16**	**359**	⇓Sb	**Sb**	**08 04 36.4**	**+0.6**
	baz=3.0						
L20A	**Wamsutter**	**3.30**	**346**	⇑Sb	**Sb**	**08 04 39.1**	**-0.8**
	baz=3.1						
T17A	**Navajo Res., N**	**3.31**	**238**	⇓Sb	**Sb**	**08 04 41.3**	**+1.2**
	baz=3.2						
M18A	**Lyman**	**3.38**	**322**	⇑Sb	**Sb**	**08 04 38.9**	**-3.1**
	baz=3.1						
DAU	**Daniels Canyon**	**3.46**	**299**	*e*Pn	**Pn**	**08 03 55.3**	**+0.5**
DAU				*e*S	**Sb**	**08 04 42.5**	**-1.9**
N17A	**Moffit Pass**	**3.46**	**309**	⇓Sb	**Sn**	**08 04 41.3**	**+4.7**
	baz=3.2						
MPU	**Maple Canyon**	**3.57**	**291**	*e*Pn	**Pn**	**08 03 55.7**	**-0.7**
MPU				*e*Pg	**Pg**	**08 04 04.8**	**-3.5**
JLU	**Jordanelle**	**3.68**	**301**	*e*Pn	**Pn**	**08 03 57.6**	**-0.2**
JLU				*e*Pg	**Pg**	**08 04 06.6**	**-3.7**
MSU	**Marysvale**	**3.83**	**267**	*e*Pn	**Pn**	**08 04 02.6**	**+2.6**
MSU				*e*Sn	**Sn**	**08 04 50.5**	**+4.7**
NLU	**North Lily Min**	**3.88**	**289**	*e*Pn	**Pn**	**08 04 02.3**	**+1.7**
ANMO	**Albuquerque**	**3.90**	**170**	Pn	**Pg**	**08 04 14.1**	**-0.

CBKS	**Cedar Bluff** 20nm,0.6s	**5.90**	**88**	*e*Pg		**Pg**	**08 04 51.1**	**-1.8**
AMTX	**Amarillo** 48nm,1.0s	**5.96**	**129**	*e*Pg		**Pg**	**08 04 53.0**	**-1.0**
ELK	**Elko** 0.1nm,0.3s,baz=105,slow=18,SNR=3.2	**6.42**	**290**	Pn		**Pn**	**08 04 40.5**	**+5.0**
TUC	**Tucson** 7.2nm,1.0s	**7.07**	**205**	*e*Pg		**Pg**	**08 05 10.8**	**-4.5**
TUC				*e*Sg		**Sg**	**08 06 43.1**	**-3.8**
TPNV	**Topopah Spring** 0.9nm,0.6s	**7.32**	**258**	*e*Pn		**Pn**	**08 04 48.8**	**+0.9**
TPNV				*e*Pg		**Pg**	**08 05 14.3**	**-5.7**
DLMT	**Dillon** 11nm,0.6s	**7.65**	**331**	*e*Pn		**Pn**	**08 04 53.9**	**+1.5**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=96,slow=15,SNR=4.4	**8.63**	**271**	Pn		**Pn**	**08 05 09.4**	**+3.5**
TXAR	**Lajitas Array** baz=336,slow=8.5,SNR=4.7	**9.91**	**161**	Pn		**Pn**	**08 05 29.7**	**+6.2**
TXAR	0.0nm,0.3s,baz=345,slow=32,SNR=3.5			Lg			08 08 16.6	

NEIC ***05*** *08:07:24.4±2.6,2344N×120.28E,h10km,ML4.1(TAP), Error ellipse: s-maj=27.1km s-min=12.5km az=81.0*
NEIC Recorded [3 TAP] in Yun-lin, [2 TAP] in Chia-i and [1 TAP] in T'ai-nan Counties.
TAP ***05*** *08:07:25.1,2345N×120.35E,h10km,ML3.4,B*
ISCJB ***05*** *08:07:26.0±0.3,2347N±001×12033E±002,h12km±1km, Error ellipse: s-maj=2.8km s-min=2.3km az=11.8*

ISC 05 08:07:26.0±0.3,2347N±001×12033E±002,h16km±2km, n50,σ0§80/87,6C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHY	**Chiayi** baz=57	**0.09**	**73**	⇓*i*P		**Pg**	**08 07 28.3**	**-1.0**
CHY				S		**Sg**	**08 07 30.6**	**-0.9**
CHN2	**Minshiung** baz=56	**0.15**	**66**	⇓*i*P		**Pg**	**08 07 29.4**	**-0.6**
CHN2				S		**Sg**	**08 07 32.6**	**0.0**
CHN8	**Yiju** baz=230	**0.17**	**221**	⇓*i*P		**Pg**	**08 07 29.5**	**-0.7**
CHN8				*i* S		**Sg**	**08 07 33.6**	**+0.5**
WSF	**Szhu** baz=328	**0.19**	**330**	⇑*i*P		**Pg**	**08 07 30.6**	**0.0**
WSF				*i* S		**Sg**	**08 07 35.2**	**+1.4**
TWK	**Hsinying** baz=145	**0.25**	**144**	⇑*i*P		**Pg**	**08 07 31.1**	**-0.4**
TWK				*e*S		**Sg**	**08 07 35.4**	**+0.1**
CHN4	**Tsaushan** baz=114	**0.27**	**116**	⇑*i*P		**Pg**	**08 07 31.3**	**-0.6**
CHN4				S		**Sg**	**08 07 36.6**	**+0.7**
WGK	**Gukeng** baz=40	**0.30**	**45**	*i* P		**Pg**	**08 07 32.7**	**+0.2**
WGK				*i* S		**Sg**	**08 07 38.5**	**+1.7**
SCLT	**Jiali** baz=207	**0.32**	**203**	*e*P		**Pg**	**08 07 32.5**	**-0.3**
SCLT				*e*S		**Sg**	**08 07 37.7**	**+0.5**
TPUB	**Ta-pu**	**0.33**	**121**	*e*Pg		**Pg**	**08 07 31.9**	**-1.0**
TPUB				*e*Sg		**Sg**	**08 07 36.8**	**-0.6**
CHN1	**Nanshi** baz=148	**0.34**	**147**	*i* P		**Pg**	**08 07 32.5**	**-0.6**
CHN1				S		**Sg**	**08 07 37.6**	**-0.2**
CHN5	**Tsauling** baz=64	**0.34**	**69**	⇑*i*P		**Pg**	**08 07 32.8**	**-0.3**
CHN5				S		**Sg**	**08 07 38.0**	**0.0**
WTP	**Ta-pu** baz=130	**0.34**	**130**	⇑*i*P		**Pg**	**08 07 32.7**	**-0.5**
WTP				S		**Sg**	**08 07 38.3**	**+0.3**
WTCT	**Ta-ch'eng** baz=1.0	**0.39**	**354**	*e*P		**Pg**	**08 07 33.9**	**-0.2**
WTCT				*e*S		**Sg**	**08 07 40.8**	**+1.3**
TAI1	**Yung-k'ang** baz=208	**0.44**	**192**	*e*P		**Pg**	**08 07 34.7**	**-0.1**
TAI1				*e*S		**Sg**	**08 07 42.7**	**+1.9**
ALS	**Alishan** baz=82	**0.44**	**85**	⇑*i*P		**Pg**	**08 07 34.8**	**-0.1**
ALS				S		**Sg**	**08 07 41.6**	**+0.7**
SGST	**Jiashian** baz=137	**0.45**	**149**	*e*P		**Pg**	**08 07 34.9**	**-0.2**
SGST				*e*S		**Sg**	**08 07 41.7**	**+0.5**
WNT	**Mingjian** baz=36	**0.52**	**39**	*i* P		**Pg**	**08 07 36.3**	**0.0**
WNT				*e*S		**Sg**	**08 07 44.9**	**+1.6**
YUS	**Yu-Shan** baz=87	**0.57**	**88**	*e*P		**Pg**	**08 07 37.3**	**0.0**
YUS				*e*S		**Sg**	**08 07 46.0**	**+1.0**
TYC	**Yuchr** baz=46	**0.65**	**48**	⇓P		**Pg**	**08 07 38.5**	**-0.3**
TYC				*e*S		**Sg**	**08 07 48.5**	**+1.1**
WDGT	**Dungji** baz=253	**0.65**	**251**	*e*P		**Pg**	**08 07 37.9**	**-0.9**
WDGT				*e*S		**Sg**	**08 07 47.1**	**-0.3**
TWM1	**Shoushan** baz=174	**0.65**	**172**	P		**Pg**	**08 07 40.1**	**+1.3**
TWM1				*e*S		**Sg**	**08 07 52.9**	**+5.4**
SSLB	**Suanglung**	**0.66**	**61**	Pg		**Pg**	**08 07 37.9**	**-1.0**
SSLB				*e*Sg		**Sg**	**08 07 47.4**	**-0.2**
SMLT	**Sun Moon Lake** baz=50	**0.67**	**52**	P		**Pg**	**08 07 38.9**	**-0.2**
SMLT				S		**Sg**	**08 07 48.2**	**+0.2**
ELDTW	**Lidau** baz=113	**0.69**	**114**	P		**Pg**	**08 07 38.9**	**-0.7**
ELDTW				*e*S		**Sg**	**08 07 48.3**	**-0.5**
PNG	**Penghu** baz=279	**0.72**	**278**	*i* P		**Pg**	**08 07 39.1**	**-0.9**
PNG				*e*S		**Sg**	**08 07 49.2**	**-0.3**
TCU	**Taichung** baz=24	**0.74**	**25**	*e*P		**Pg**	**08 07 40.2**	**-0.3**
SSD	**Sandimen** baz=146	**0.77**	**159**	P		**Pb**	**08 07 40.8**	**-0.2**
SSD				*e*S		**Sg**	**08 07 52.2**	**+0.9**
YULB	**Yu-li**	**0.89**	**95**	*e*Pg		**Pg**	**08 07 42.0**	**-1.4**
YULB				*e*S		**Sb**	**08 07 55.0**	**+0.2**
TWF1	**Yuli** baz=107	**0.90**	**97**	*i* P		**Pb**	**08 07 42.7**	**-0.5**
TWF1				*i* S		**Sb**	**08 07 54.7**	**-0.2**
TWG	**Pinlang**	**0.94**	**133**	*e*Pn		**Pn**	**08 07 43.5**	**-1.1**
TWG				*e*Sn		**Sn**	**08 07 56.9**	**-0.8**
TWG	**Pinlang** baz=122	**0.94**	**133**	P		**Pb**	**08 07 43.8**	**-0.2**
TWG				S		**Sb**	**08 07 56.5**	**+0.3**
TWQ1	**Liyutan** baz=23	**0.96**	**25**	*e*P		**Pb**	**08 07 43.9**	**-0.4**
TWQ1				*e*S		**Sb**	**08 07 57.7**	**+0.9**
NSY	**Sanyi** baz=22	**1.02**	**23**	*e*P		**Pb**	**08 07 44.8**	**-0.5**
CHKT	**Chengkung** baz=110	**1.02**	**111**	*e*P		**Pb**	**08 07 45.5**	**+0.2**
TTN	**Taitung** baz=133	**1.04**	**133**	*e*P		**Pb**	**08 07 46.7**	**+1.1**
ECL	**Taimali** baz=147	**1.04**	**146**	P		**Pb**	**08 07 45.4**	**-0.2**
ECL				*e*S		**Sb**	**08 07 59.7**	**+0.6**
ESL	**Shilin** baz=70	**1.07**	**71**	*e*P		**Pb**	**08 07 45.5**	**-0.6**
WHF	**Hehuan Shan** baz=51	**1.09**	**52**	*e*P		**Pb**	**08 07 45.9**	**-0.6**
TWT	**Tachien** baz=43	**1.10**	**45**	*e*P		**Pb**	**08 07 45.9**	**-0.8**
SCZT	**Fangliau** baz=168	**1.13**	**166**	*e*P		**Pb**	**08 07 46.6**	**-0.5**
SCZT				*e*S		**Sb**	**08 08 02.8**	**+1.2**
EAST	**Anshuo** baz=147	**1.18**	**156**	P		**Pn**	**08 07 47.5**	**-0.4**
EAST				*e*S		**Sb**	**08 08 03.8**	**+0.6**
NSTT	**Nanjuang** baz=27	**1.31**	**28**	*e*P		**Pn**	**08 07 49.1**	**-0.5**
TWD	**Chiawan** baz=49	**1.31**	**62**	*e*P		**Pn**	**08 07 50.7**	**+1.1**
NACB	**Ninganchiao**	**1.35**	**59**	*e*Pn		**Pn**	**08 07 50.7**	**+0.5**
NACB				*e*Sn		**Sn**	**08 08 07.1**	**-0.8**
NNS	**Nan Shan** baz=44	**1.36**	**45**	*e*P		**Pn**	**08 07 50.9**	**+0.6**
NSK	**Sanguang** baz=25	**1.52**	**38**	*e*P		**Pn**	**08 07 52.3**	**-0.3**
YHNB	**Yeheng**	**1.53**	**39**	*e*Pn		**Pn**	**08 07 52.4**	**-0.3**
YHNB				*e*Sg		**Sg**	**08 08 12.5**	**-2.9**
ENTT	**Nioudou** baz=28	**1.62**	**44**	*e*P		**Pn**	**08 07 53.2**	**-0.8**
TWC	**Suao** baz=49	**1.79**	**51**	*e*P		**Pn**	**08 07 58.8**	**+2.5**
TWC				*e*S		**Sn**	**08 08 21.8**	**+3.1**
KNM	**Kinmen** baz=298	**1.97**	**299**	*e*P		**Pn**	**08 07 59.7**	**+0.9**

KRSC 05 08:36:36.6±0.9,5527N×16674E,h31km±30km,ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBTR	**Krutoberegovo**	**2.41**	**295**	P		Pn	08 37 13.8	0.0
KBTR				S		Sn	08 37 41.4	-0.8
MKZ	**Mys Kozlova**	**2.98**	**258**	P		Pn	08 37 24.0	+2.4
MKZ				S		Sn	08 37 57.8	+1.5
SRKR	**Sorokina**	**3.42**	**296**	P		Pn	08 37 30.1	+2.3
SRKR				*e*S		Sn	08 38 10.1	+2.9
KLY	**Klyuchi**	**3.59**	**289**	S		Sn	08 38 13.1	+1.7
BZMR	**Bezymyannaya**	**3.61**	**283**	*e*P		Pn	08 37 33.8	+3.5
BZMR				*e*S		Sn	08 38 15.4	+3.7
KRSR	**Krestovskiy**	**3.62**	**288**	*e*P		Pn	08 37 33.1	+2.7
KRSR				S		Sn	08 38 15.0	+3.0
KIRR	**Kirishev**	**3.69**	**283**	P		Pn	08 37 33.7	+2.3
KIRR				S		Sn	08 38 15.9	+2.1
KMNR	**Kamenistaya**	**3.73**	**280**	P		Pn	08 37 34.6	+2.7
KPT	**Kopyto**	**3.76**	**283**	P		Pn	08 37 35.8	+3.4
KPT				S		Sn	08 38 19.2	+3.7
TUMR	**Tumrok**	**3.77**	**273**	P		Pn	08 37 36.2	+3.7
TUMR				S		Sn	08 38 20.6	+4.8
KOZ	**Kozyrevsk**	**3.97**	**284**	P		Pn	08 37 39.3	+4.1
KOZ				S		Sn	08 38 25.3	+4.7
SPN	**Mys Shipunski**	**4.51**	**244**	P		Pn	08 37 44.7	+2.1
SPN				S		Sn	08 38 34.8	+0.9
SDLR	**Sedlovina**	**5.02**	**250**	*e*P		Pn	08 37 53.3	+3.7
SDLR				*e*S		Sn	08 38 48.8	+2.3
GNL	**Ganaly**	**5.37**	**257**	P		Pn	08 37 58.0	+3.6
RUS	**Russkaya**	**5.64**	**243**	P		Pn	08 38 02.4	+4.3
RUS				S		Sn	08 39 03.7	+2.0

NOU ***05*** *09:22:05.2±1.4,1957S×16852E,h10km,MD2.6,ML3.5*
IDC ***05*** *09:22:10.1±3.2,2108S×16907E,h0km,mb4.1/5, mb1 4.3/5,mb1mx4.1/15,mbtmp4.1/5,Error ellipse: s-maj=95.3km s-min=37.0km az=139.0*
NEIC ***05*** *09:22:10.2±4.3,2109S×16921E,h10km,mb4.0/1,Error ellipse: s-maj=68.2km s-min=53.2km az=118.0*

ISC 05 09:22:08.9±1.5,211S±03×1693E±02,h10km,n15, σ1§18/20,mb4.1/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLUM	**Mont Dore**	**2.78**	**244**	*e*P		**Pn**	**09 22 53.6**	**+0.1**
PLUM				*e*S		**Sn**	**09 23 29.6**	**+2.4**
PLUM				AMP			09 23 31.4	
	comp=Z,199nm,1.0s							
LASL	**Noumea**	**2.85**	**246**	*e*P		**Pn**	**09 22 53.5**	**-1.0**
DZM	**Mont Dzumac**	**2.87**	**249**	*e*P		**Pn**	**09 22 53.7**	**-1.1**
DZM				*e*S		**Sn**	**09 23 29.1**	**-0.4**
DZM				AMP			09 23 31.6	
	comp=Z,2μm,0.6s							
DZM	**Mont Dzumac**	**2.87**	**249**	*e*Pn		**Pn**	**09 22 54.0**	**-0.8**
DZM				*e*Sn		**Sn**	**09 23 28.9**	**-0.5**
NORM	**Noumea**	**2.89**	**246**	*e*P		**Pn**	**09 22 54.0**	**-1.1**
NORM				*e*S		**Sn**	**09 23 30.8**	**+0.8**
NORM				AMP			09 23 33.2	
	comp=Z,239nm,3.2s							
ONTRN	**Noumea**	**2.95**	**245**	*e*P		**Pn**	**09 22 55.1**	**-0.8**
ONTRN				*e*S		**Sn**	**09 23 33.3**	**+1.9**
ONTRN				AMP			09 23 36.2	
	comp=Z,311nm,1.8s							
NOUC	**Port Laguerre**	**3.01**	**250**	*e*P		**Pn**	**09 22 56.0**	**-0.7**
NOUC				*e*S		**Sn**	**09 23 31.0**	**-1.7**
NOUC				AMP			09 23 34.9	
	comp=Z,121nm,1.2s							
CTA	**Charters Tower**	**21.64**	**268**	P		**P**	**09 27 01.1**	**+1.5**
	comp=Z,6.8nm,0.8s,mb4.1,baz=94,slow=12,SNR=9.7							
CTAO	**Charters Tower**	**21.64**	**268**	*e*P		**P**	**09 26 59.3**	**-0.3**
	comp=Z,5.2nm,0.8s,mb4.0							
STKA	**Stephens Creek**	**26.99**	**241**	P		**P**	**09 27 52.0**	**+1.0**
	comp=Z,5.4nm,0.9s,mb4.1,baz=86,slow=9.2,SNR=7.1							
WB2	**Warramunga Arr**	**32.76**	**266**	P		**P**	**09 28 41.9**	**-0.4**
WRA	**Warramunga Arr**	**32.77**	**266**	P		**P**	**09 28 41.5**	**-0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=95,slow=8.3,SNR=5.5							
ASAR	**Alice Springs**	**32.82**	**259**	P		**P**	**09 28 43.1**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=86,slow=9.1,SNR=37							
SONM	**Songino Array**	**88.75**	**323**	P		**P**	**09 35 05.5**	**+2.9**
	comp=Z,1.6nm,1.2s,mb4.2,baz=130,slow=4.7,SNR=2.5							
GERES	**GERESS Array B**	**146.15**	**331**	PKPbc		PKPbc	09 41 50.9	+1.6
	comp=Z,0.8nm,0.6s,baz=20,slow=3.1,SNR=4.4							

IDC ***05*** *09:26:32.8±1.3,5544S×12560W,h0km,mb3.7/4, mb1 4.0/4,mb1mx3.9/13,mbtmp3.7/4,MS3.9/13, Ms1 3.9/13,ms1mx3.8/20,Error ellipse: s-maj=113.6km s-min=30.1km az=154.0*
GCMT ***05*** *09:26:40.0±0.2,5556S×12482W,h29km±1km,MW5.1/69, Moment Tensor Solution. s40,c47; s69,c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.28±.22; Mθθ3.27±.22; Mφφ-3.00±.18; Mrθ0.69±.29; Mrφ4.45±.14; Mθφ1.11±.28; Best double couple: Mo5.59300×10¹⁶ NP1:φs108.00000°,δ77.00000°,λ2.00000°. NP2: φs17.00000°,δ88.00000°,λ167.00000°. Principal axes: T 5.7890, Plg11.0000°, Azm332.0000°; N -0.3980, Plg77.0000°, Azm188.0000°; P -5.3970, Plg8.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC 05 09:26:34.4±1.0,5541S×12560W,h10km Error ellipse: s-maj=79.9km s-min=23.4km az=154.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RKT	**Rikitea** 736nm,28.8s,baz=171	**32.99**	**344**	*e*LR		LR	09 41 54.8	
TBI	**Tubuai** 587nm,29.0s,baz=168	**36.58**	**321**	eLR		LR	09 43 28.6	
TBI	**Tubuai** 70nm,0.4s	**36.58**	**321**	*e*T			10 12 48.9	
PLCA	**Paso Flores**	**38.53**	**91**	LR		LR	09 45 40.2	
	comp=Z,169nm,19.1s,baz=227,slow=30							
PPT	**Papeete** 113nm,26.5s	**41.97**	**325**	*e*S		S	09 40 35.1	-8.8
PPT	784nm,27.5s			*e*LQ			09 44 06.1	
PPT	639nm,26.0s,baz=165			eLR		LR	09 46 10.3	
PPT	**Papeete**	**41.97**	**325**	LR		LR	09 47 07.3	
	comp=Z,273nm,20.3s,baz=150,slow=29							
RAR	**Rarotonga**	**42.63**	**309**	LR		LR	09 48 19.7	
	comp=Z,63nm,21.9s,baz=136,slow=31							
VAH	**Vaihoa** 87nm,0.3s	**43.55**	**328**	*e*T			10 21 25.7	
PMOR	**Pomariorio Ree** 5.0nm,0.3s	**43.85**	**328**	*e*T			10 21 51.6	
AFI	**Afiamalu**	**54.57**	**301**	LR		LR	09 53 00.3	
	comp=Z,86nm,20.9s,baz=168,slow=29							
MAW	**Mawson**	**57.14**	**184**	LR		LR	09 58 28.2	
	comp=Z,198nm,20.6s,baz=170,slow=34							

LPAZ	**La Paz** 1.0nm,0.8s,baz=190,slow=6.1,SNR=4.1	**58.43**	**72**	P		P	09 36 31.0	+0.8
LPAZ				LR		LR	09 54 06.8	
	comp=Z,50nm,18.8s,baz=275,slow=28							
LPAZ	**La Paz**	**58.43**	**72**	P		P	09 36 31.0	+0.8
LPAZ				LR		LR	09 54 06.8	
STKA	**Stephens Creek**	**65.92**	**249**	LR		LR	09 59 20.3	
	comp=Z,120nm,21.5s,baz=204,slow=30							
CTA	**Charters Tower**	**72.67**	**260**	LR		LR	10 07 37.6	
	comp=Z,50nm,19.3s,baz=232,slow=34							
ROSC	**El Rosal**	**73.35**	**54**	LR		LR	10 03 35.8	
	comp=Z,75nm,18.4s,baz=194,slow=30							
ASAR	**Alice Springs** 0.5nm,0.7s,baz=150,slow=6.4,SNR=6.9	**76.55**	**248**	P		P	09 38 24.8	0.0
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=144,slow=5.1,SNR=8.5	**79.35**	**250**	P		P	09 38 40.5	+0.1
PCRV	**Puerto La Cruz** comp=Z,106nm,19.6s,baz=217,slow=31	**82.63**	**60**	LR		LR	10 09 33.9	
TXAR	**Lajitas Array** 0.4nm,1.0s,baz=191,slow=5.5,SNR=3.6	**86.47**	**19**	P		P	09 39 17.0	+0.2
BOSA	**Boshof** comp=Z,96nm,18.8s,baz=192,slow=34	**92.67**	**155**	LR		LR	10 19 38.5	
BATI	**Baumata** comp=Z,113nm,22.0s,baz=124,slow=32	**93.11**	**247**	LR		LR	10 16 32.1	
PDAR	**Pinedale Array** comp=Z,66nm,18.5s,baz=336,slow=31	**98.75**	**12**	LR		LR	10 17 00.7	

IDC ***05*** *09:44:31.7±1.4,345N×94.88E,h0km,mb3.8/4,mb1 4.0/5, mb1mx3.7/21,mbtmp3.8/5,ML4.3/1,Error ellipse: s-maj=64.1km s-min=21.6km az=49.0*
NEIC ***05*** *09:44:36.9±0.9,352N×95.00E,h35km,mb4.1/1,Error ellipse: s-maj=30.0km s-min=12.2km az=62.0*
DJA ***05*** *09:44:38,377N×95.77E,h30km,MLv4.5/3*
ISCJB ***05*** *09:44:39.7±2.8,38N±02×958E±02,h45km±23km,mb3.9/5, Error ellipse: s-maj=38.8km s-min=9.6km az=42.0*

ISC 05 09:44:40.7±3.2,38N±02×958E±02,h37km±28km,n12, σ0§94/11,mb3.9/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BSI	**Banda Aceh**	**1.72**	**344**	P		**Pn**	**09 45 07.6**	**-0.6**
BSI	**Banda Aceh**	**1.72**	**344**	S		**Sn**	**09 45 29.0**	**+0.1**
TSI	**Tuntungan**	**2.81**	**97**	P		**Pn**	**09 45 23.2**	**+0.1**
TSI	**Tuntungan**	**2.81**	**97**	S		**Sn**	**09 45 55.0**	**-0.7**
PPI	**Padang Panjang**	**6.28**	**133**	P		Px	09 46 21.5	
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=199,slow=12,SNR=9.0	**14.87**	**12**	Pn		**Pn**	**09 48 10.7**	**+2.4**
MKAR	**Makanchi Array** 0.3nm,0.4s,mb3.4,baz=159,slow=7.8,SNR=4.1	**44.37**	**347**	P		**P**	**09 52 45.6**	**-1.8**
WRA	**Warramunga Arr** 1.6nm,0.5s,mb4.1,baz=301,slow=9.3,SNR=19	**44.65**	**123**	P		**P**	**09 52 50.2**	**+0.2**
WRAB	**Tennant Creek** 1.3nm,0.4s,mb4.1	**44.66**	**123**	*e*P		**P**	**09 52 49.9**	**-0.1**
WB2	**Warramunga Arr**	**44.66**	**123**	*e*P		**P**	**09 52 50.2**	**+0.2**
ASAR	**Alice Springs** 0.5nm,0.5s,mb3.7,baz=303,slow=7.9,SNR=9.9	**46.12**	**128**	P		**P**	**09 53 02.4**	**+0.8**
BRTR	**Keskin Array B** 0.4nm,0.2s,mb4.0,baz=110,slow=7.1,SNR=7.3	**66.30**	**312**	P		**P**	**09 55 19.4**	**-6.1**

IDC 05 09:54:15.8±1.7,271S×14164E,h0km,mb3.7/3,mb1 4.0/4, mb1mx3.7/15,mbtmp3.9/4,ML3.6/1,Error ellipse: s-maj=41.5km s-min=30.7km az=88.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=24,slow=12,SNR=16	**18.55**	**202**	P		Pn	09 58 34.3	-0.1
KAPI	**Kappang** 3.0nm,0.6s,baz=93,slow=17,SNR=2.6	**21.96**	**263**	P		P	09 59 11.0	-0.5
ASAR	**Alice Springs** 1.3nm,0.8s,baz=32,slow=9.1,SNR=13	**22.14**	**199**	P		P	09 59 13.0	-0.2
MKAR	**Makanchi Array** 2.2nm,1.0s,baz=119,slow=6.3,SNR=4.4	**71.59**	**321**	P		P	10 05 39.7	+0.7
LPAZ	**La Paz** 0.4nm,0.3s,baz=256,slow=1.3,SNR=5.0	**145.04**	**124**	PKPbc		PKPbc	10 13 55.4	-0.2

ISCJB ***05*** *10:02:41.5±0.3,4244N±001×4378E±003,h10km,Error ellipse: s-maj=2.7km s-min=2.1km az=12.1*
TIF ***05*** *10:02:42.5,4247N×4390E,h13km±2km*
CSEM ***05*** *10:02:43.8±0.1,4246N×4392E,h2km,mb4.2,Error ellipse: s-maj=1.8km s-min=1.2km az=84.0*
MOS ***05*** *10:02:44.3±1.7,4249N×4401E,h17km,mb4.2/1,Error ellipse: s-maj=14.1km s-min=5.3km az=95.3*

ISC 05 10:02:42.9±0.3,4244N±001×4383E±003,h5km±8km,n35, σ1§12/58,1C-4D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ONI	**Oni**	**0.31**	**296**	P		**Pg**	**10 02 50.2**	**+1.2**
ONI				S		**Sg**	**10 02 55.4**	**+2.4**
ZEI	**Tsey**	**0.33**	**9**	*i* Pg		**Pg**	**10 02 48.8**	**-0.6**
GOR	**Gori**	**0.50**	**155**	*e*Pg		**Pg**	**10 02 53.3**	**+0.7**
GOR	**Gori**	**0.50**	**155**	P		**Pg**	**10 02 53.3**	**+0.7**
GOR				S		**Sg**	**10 03 01.4**	**+2.3**
LACR	**Lac**	**0.52**	**42**	*i* Pg		**Pg**	**10 02 52.2**	**-0.7**
LACR				*i* Sg		**Sg**	**10 02 58.8**	**-0.8**
KORR	**Kora**	**0.67**	**15**	*i* Pg		**Pg**	**10 02 56.1**	**+0.3**
KORR				*i* Sg		**Sg**	**10 03 05.9**	**+1.5**
ARNR	**Ardon**	**0.82**	**24**	*e*Pg		**Pg**	**10 02 58.5**	**-0.1**
ARNR				*e*Sg		**Sg**	**10 03 09.9**	**+0.7**
LSNR	**Lesken**	**0.83**	**359**	⇓*i*PG		**Pg**	**10 02 59.3**	**+0.4**
LSNR				*i* S		**Sg**	**10 03 11.9**	**+2.2**
VLKR	**Vladikavkaz**	**0.87**	**46**	*e*Pg		**Pg**	**10 02 58.4**	**-1.2**
VLKR				*e*Sg		**Sg**	**10 03 09.9**	**-1.0**
SNJR	**Sundja**	**0.96**	**49**	*e*Pg		**Pg**	**10 02 59.7**	**-1.6**
SNJR				*e*Sg		**Sg**	**10 03 12.4**	**-1.3**
TBLG	**Delisi**	**0.98**	**136**	*e*Pg		**Pg**	**10 03 01.5**	**-0.3**
TBLG	**Delisi**	**0.98**	**136**	P		**Pg**	**10 03 01.5**	**-0.3**
TBLG				S		**Sg**	**10 03 15.4**	**+0.9**
KMSR	**Komsomolskaya**	**0.99**	**20**	*e*PG		**Pn**	**10 03 03.5**	**+0.1**
KMSR				*e*S		**Sn**	**10 03 17.2**	**-0.6**
MTA	**Mtatsminda**	**1.04**	**136**	P		**Pg**	**10 03 02.3**	**-0.5**
MTA				S		**Sg**	**10 03 17.4**	**+1.1**
PRTR	**Priterechnaya**	**1.35**	**14**	*e*Pg		**Pg**	**10 03 07.7**	**-1.1**
PRTR				*e*Sg		**Sg**	**10 03 26.0**	**-0.3**
KUBR	**Kubataba**	**1.39**	**347**	*d*iPG		**Pg**	**10 03 10.1**	**+0.5**
KUBR				*i* S		**Sg**	**10 03 30.4**	**+2.8**
KUBR				pmax	pmax			
	comp=Z,93nm,0.5s							
KUBR				smax				
	comp=E,426nm,0.6s							
KUBR	**Kubataba** comp=E,93nm,0.5s	**1.39**	**347**	*i* Pg		**Pg**	**10 03 10.1**	**+0.5**
TRKR	**Terskaya**	**1.44**	**27**	*e*PG		**Pg**	**10 03 12.4**	**+1.8**
TRKR				*e*S		**Sb**	**10 03 32.0**	**+3.1**
DGRG	**David-gareji**	**1.52**	**130**	*e*Pg		**Pg**	**10 03 11.8**	**-0.3**
DGRG	**David-gareji**	**1.52**	**130**	P		**Pg**	**10 03 11.8**	**-0.3**
DGRG				S		**Sg**	**10 03 34.1**	**+2.3**
SHAR	**Shatzhatmas**	**1.55**	**327**	⇓*i*PG		**Pg**	**10 03 12.2**	**-0.5**
SHAR				*e*S		**Sg**	**10 03 33.4**	**+0.6**
KIV0	**Kislovodsk Arr**	**1.72**	**332**	*e*Pn		**Pg**	**10 03 15.1**	**-0.9**
KIV0				*e*Sg		**Sg**	**10 03 38.5**	**+0.2**
KIV	**Kislovodsk**	**1.73**	**332**	*i* PN		**Pg**	**10 03 15.2**	**-0.8**
KIV				*i* S		**Sg**	**10 03 38.3**	**-0.1**
BEYR	**Belyy Ugol+**	**1.73**	**335**	*i* Pn		**Pg**	**10 03 14.7**	**-1.5**
BEYR				*e*Sg		**Sg**	**10 03 38.4**	**-0.2**
ARTV

az=36.4
*IDC **05** 10:03:40.8±1.4,671.N×7305.W,h165km±14km,mb3.1/5, mb1 3.5/7,mb1mx3.4/20,mbtmp3.2/7,Error ellipse: s-maj=19.2km s-min=18.9km az=117.0*
*FUNV **05** 10:03:40.7,681.N×7321.W,h156km,MW3.5*
ISC 05 10:03:40.7±0.5,688N±006×7307W±007,h158km±6km,n24, σ0§83/25,mb3.3/5,5C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.23**	**38**	⇑*i*P	**Pn**	**10 04 09.2**	**+0.9**
CAPV				*e*S	**Sn**	**10 04 30.1**	**+0.6**
ROSC	**El Rosal**	**2.37**	**212**	P	**Pn**	**10 04 21.5**	**+0.8**
ROSC	26nm,0.3s,baz=90,slow=20,SNR=142			S	**Sn**	**10 04 50.6**	**-0.9**
	47nm,0.3s,baz=103,slow=17,SNR=13						
VIGV	**El Vigia**	**2.58**	**41**	⇑*e*P	**Pn**	**10 04 23.7**	**+0.5**
VIGV				*e*S	**Sn**	**10 04 55.5**	**-0.6**
SOCV	**Socops**	**2.60**	**57**	*e*P	**Pn**	**10 04 24.1**	**+0.6**
SOCV				*e*S	**Sn**	**10 04 56.1**	**-0.4**
ELOV	**Elorza**	**3.56**	**88**	*e*P	**Pn**	**10 04 35.7**	**+0.1**
VIRV	**Villa del Rosa**	**3.66**	**10**	⇑*i*P	**Pn**	**10 04 36.0**	**-0.8**
VIRV				*e*S	**Sn**	**10 05 18.2**	**-2.2**
QARV	**Quebrada Arrib**	**4.16**	**37**	⇑*e*P	**Pn**	**10 04 43.6**	**+0.4**
CURV	**Curarigua**	**4.38**	**44**	*e*P	**Pn**	**10 04 46.4**	**+0.3**
TEPV	**Terepaima**	**4.91**	**51**	*e*P	**Pn**	**10 04 53.3**	**+0.2**
SIQV	**Siquisique**	**4.94**	**41**	⇑*e*P	**Pn**	**10 04 53.1**	**-0.4**
TURV	**Turiamo**	**6.27**	**55**	*e*P	**Pn**	**10 05 11.6**	**+0.5**
CAOV	**Caicara del Or**	**6.71**	**86**	*e*P	**Pn**	**10 05 16.2**	**-0.8**
BIRV	**Birongo**	**7.61**	**62**	*e*P	**Pn**	**10 05 29.0**	**0.0**
CUPV	**Cœpira**	**7.87**	**66**	*e*P	**Pn**	**10 05 31.9**	**-0.5**
PCRV	**Puerto La Cruz**	**8.96**	**68**	P	**Pn**	**10 05 48.8**	**+1.9**
	0.2nm,0.3s,baz=0.0,slow=10,SNR=2.7						
LPAZ	**La Paz**	**23.53**	**168**	P	**P**	**10 08 35.8**	**-0.9**
	0.7nm,0.7s,mb3.3,baz=328,slow=9.5,SNR=4.0						
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**10 10 31.4**	**+0.8**
	0.3nm,0.4s,mb3.2,baz=129,slow=8.8,SNR=6.7						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**10 12 05.1**	**+1.0**
	0.3nm,0.5s,mb3.2,baz=122,slow=8.6,SNR=3.5						
YKA	**Yellowknife Ar**	**63.22**	**340**	P	**P**	**10 13 51.7**	**-0.2**
	0.9nm,0.5s,mb3.8,baz=131,slow=6.5,SNR=6.6						
TORD	**Torodi Ar. Bea**	**73.68**	**78**	P	**P**	**10 14 56.5**	**-1.2**
	0.4nm,0.9s,mb3.1,baz=270,slow=5.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**116.60**	**14**	PKhKP		10 21 59.2	
	0.4nm,0.3s,baz=337,slow=1.5,SNR=2.4						
MKAR	**Makanchi Array**	**122.25**	**20**	PKhKP		10 22 06.7	
	0.1nm,0.3s,baz=72,slow=28,SNR=4.3						
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc	PKPbc	10 23 10.7	-0.6
	0.2nm,0.6s,baz=111,slow=3.4,SNR=4.8						
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc	PKPbc	10 23 13.2	-1.2
	0.2nm,0.4s,baz=109,slow=2.5,SNR=11						

*IDC **05** 10:23:02.3±0.8,2016S×17438W,h0km,mb4.0/8, mb1 4.3/11,mb1mx4.1/22,mbtmp4.1/11,ML3.6/3,MS3.7/3, Ms1 3.6/3,ms1mx2.8/28,Error ellipse: s-maj=33.2km s-min=15.9km az=143.0*
*NEIC **05** 10:23:03.3±0.5,2017S×17431W,h10km,mb4.3/1,Error ellipse: s-maj=16.1km s-min=9.4km az=149.0*
*ISCJB **05** 10:23:04.5±0.6,2015S±0.1×1743W±0.1,h33km,mb4.0/8, MS3.8/3,Error ellipse: s-maj=20.2km s-min=11.3km az=151.3*
ISC 05 10:23:06.8±0.6,2015S±01×17431W±010,h35km,n22, σ1§15/17,mb4.0/8,MS3.8/3,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.59**	**22**	Pn	**Pn**	**10 24 40.2**	**-1.1**
	5.8nm,0.3s,baz=247,slow=21,SNR=9.8						
AFI				Sn	**Sn**	**10 25 47.2**	**-8.1**
	4.4nm,0.3s,baz=49,slow=20,SNR=2.4						
RAR	**Rarotonga**	**13.65**	**97**	Pn	**Pn**	**10 26 16.3**	**-1.7**
	1.5nm,0.3s,baz=310,slow=16,SNR=9.4						
URZ	**Urewera**	**19.59**	**201**	P	**Pn**	**10 27 28.9**	**-4.5**
	0.5nm,0.3s,baz=232,slow=12,SNR=3.2						
RPZ	**Rata Peaks**	**26.56**	**204**	P	**P**	**10 28 42.2**	**+0.8**
	12nm,0.7s,mb4.5,baz=58,slow=17,SNR=3.6						
CTA	**Charters Tower**	**36.98**	**263**	P	**P**	**10 30 13.4**	**+0.2**
	2.2nm,0.5s,mb4.3,baz=84,slow=8.6,SNR=8.6						
CTAO	**Charters Tower**	**36.98**	**263**	*e*P	**P**	**10 30 14.0**	**+0.8**
	2.2nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**41.09**	**244**	P	**P**	**10 30 47.5**	**0.0**
	1.5nm,0.5s,mb3.9,baz=104,slow=14,SNR=6.9						
STKA				LR	LR	10 44 51.8	
	comp=Z,36nm,19.7s,MS3.2,baz=202,slow=32						
STKA	**Stephens Creek**	**41.09**	**244**	P	**P**	**10 30 47.5**	**0.0**
STKA				LR	LR	10 44 51.8	
ASAR	**Alice Springs**	**47.99**	**256**	P	**P**	**10 31 42.0**	**-0.6**
	0.6nm,0.6s,mb3.8,baz=91,slow=8.4,SNR=16						
WB2	**Warramunga Ar**	**48.08**	**261**	*e*P	**P**	**10 31 42.6**	**-0.7**
WRAB	**Tennant Creek**	**48.08**	**261**	*e*P	**P**	**10 31 42.8**	**-0.6**
WRA	**Warramunga Ar**	**48.09**	**261**	P	**P**	**10 31 42.8**	**-0.6**
	0.2nm,0.3s,mb3.7,baz=92,slow=6.2,SNR=28						
NVAR	**Mina Array Bea**	**78.37**	**42**	P	**P**	**10 35 06.5**	**+2.8**
	2.2nm,0.7s,mb4.2,baz=223,slow=9.1,SNR=23						
KDAK	**Kodiak Island**	**79.65**	**12**	LR	LR	11 02 34.6	
	comp=Z,124nm,21.7s,MS4.2,baz=155,slow=30						
TXAR	**Lajitas Array**	**83.93**	**56**	P	**P**	**10 35 34.8**	**+1.3**
	0.3nm,0.9s,mb3.4,baz=209,slow=9.6,SNR=3.9						
PDAR	**Pinedale Array**	**86.31**	**42**	P	**P**	**10 35 46.7**	**+1.7**
	0.5nm,0.9s,mb3.8,baz=163,slow=3.8,SNR=3.2						
PDAR	**Pinedale Array**	**86.31**	**42**	P	**P**	**10 35 46.7**	**+1.7**
ULM	**Lac du Bonnet**	**98.08**	**39**	LR	LR	11 19 43.1	
	comp=Z,39nm,18.2s,MS3.9,baz=324,slow=35						
ARCES	**ARCESS Array B**	**129.09**	**351**	PKP	PKPdf	10 42 11.1	+0.7
	4.1nm,1.0s,baz=94,slow=1.6,SNR=3.5						
ARCES	**ARCESS Array B**	**129.09**	**351**	PKP	PKPdf	10 42 11.1	+0.7
CLL	**Collm**	**148.31**	**351**	*e*PKPbc	PKPbc	10 42 51.0	+1.8
GERES	**GERESS Array B**	**150.59**	**349**	PKPbc	PKPbc	10 42 56.6	+1.7
	0.8nm,0.7s,baz=75,slow=1.1,SNR=4.5						

*ATH **05** 10:31:06.3,3715N×2925E,h19km±4km,MD3.2/3*
*CSEM **05** 10:31:08.8±0.1,3701N×2930E,h5km,MD3.3,Error ellipse: s-maj=2.5km s-min=2.0km az=176.0*
*ISCJB **05** 10:31:09.4±0.5,3693N±004×2931E±004,h10km,Error ellipse: s-maj=6.1km s-min=3.7km az=148.7*
*DDA **05** 10:31:09.5,3699N×2925E,h7km±4km,Md3.3*
*ISK **05** 10:31:10.8,3716N×2932E,h23km,MD3.0*
ISC 05 10:31:09.3±0.8,3697N±004×2925E±005,h4km±8km,n13, σ0§90/22,1C-1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.36**	**42**	⇑*i*P	**Pg**	**10 31 15.9**	**-0.4**
GOLH				*i* S	**Sg**	**10 31 22.2**	**+1.0**
TURN	**Turunc**	**0.53**	**260**	⇓*i*P	**Pg**	**10 31 24.4**	**+4.9**
TURN				*e*S	**Sg**	**10 31 36.5**	**+10**
DENT	**Denizli**	**0.80**	**347**	*e*PG	**Pg**	**10 31 24.1**	**-0.7**
DENT				*e*SG	**Sg**	**10 31 33.5**	**-1.8**
KSL	**Kastellorizon**	**0.86**	**162**	*e*PN	**Pg**	**10 31 26.0**	**+0.2**
ANTB	**Antalya**	**1.12**	**93**	*e*PN	**Pg**	**10 31 31.3**	**+0.4**
BCK	**Bucak**	**1.17**	**65**	*e*PG	**Pg**	**10 31 30.8**	**-1.0**
ARG	**Arkhangelos**	**1.18**	**231**	*e*PN	**Pn**	**10 31 30.7**	**-1.9**
ARG				*e*SN	**Sn**	**10 31 49.2**	**+0.1**
MLSB	**Milas**	**1.23**	**286**	*e*PN	**Pn**	**10 31 32.9**	**-0.3**
MLSB				*e*SN	**Sn**	**10 31 49.8**	**-0.5**
AYDN	**Tasoluk**	**1.30**	**303**	*e*P	**Pg**	**10 31 34.2**	**0.0**
AYDN				*e*S	**Sg**	**10 31 52.2**	**+1.2**
TKTP	**Tekketepe**	**1.37**	**38**	*e*P	**Pn**	**10 31 35.7**	**+0.5**
TKTP				*e*S	**Sg**	**10 31 56.6**	**+3.3**
BDRM	**Kayabasi**	**1.45**	**274**	*i* P	**Pn**	**10 31 37.0**	**+0.6**
BDRM				*i* S	**Sb**	**10 31 56.4**	**+0.7**
BODT	**Bodrum**	**1.56**	**274**	*e*PN	**Pn**	**10 31 38.8**	**+1.0**
KARP	**Karpathos**	**2.21**	**231**	*e*PB	**Pn**	**10 31 46.5**	**-0.3**
KARP				*e*SN	**Sn**	**10 32 14.6**	**+0.1**

*CSEM **05** 11:45:55.8±0.5,3655N×4258E,h5km,MD3.1,Error ellipse: s-maj=16.6km s-min=3.8km az=98.0*
DDA 05 11:45:56.0,3655N×4260E,h7km±2km,Md3.1,1D,Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSL	**Mosul**	**0.44**	**110**	*ex*	x	11 46 06.0	
MSL				*i* x	x	11 46 12.0	
HAKT	**HAKKARI**	**1.34**	**41**	⇓*i*P	Pn	11 46 21.6	+0.4
HAKT				*i* S	Sb	11 46 40.5	+1.7
MARD	**Mardin**	**1.65**	**298**	*i* P	Pn	11 46 26.7	+1.3
MARD				*i* S	Sn	11 46 50.8	+4.0
BEST	**Besiri**	**1.71**	**322**	*e*P	Pn	11 46 30.2	+4.0
BEST				*e*S	Sn	11 46 53.0	+4.6
BHD	**Baghdad**	**3.58**	**155**	*ex*	x	11 46 52.0	
BHD				*ex*	x	11 47 35.0	

*IDC **05** 11:51:45.6±0.7,2064S×16940E,h0km,mb4.4/12, mb1 4.6/12,mb1mx4.5/16,mbtmp4.4/12,MS3.8/14, Ms1 3.8/14,ms1mx3.4/28,Error ellipse: s-maj=23.3km s-min=18.7km az=124.0*
*LDG **05** 11:51:47.0±0.2,2044S×16938E,h10km,Md4.5/2,Ms4.0/8, Error ellipse: s-maj=22.5km s-min=3.9km az=139.0*
*BJI **05** 11:51:47.9,2060S×16940E,h25km,mB5.1,mb4.8*
*NEIC **05** 11:51:50.9±0.3,2055S×16935E,h35km,mb4.8/15,Error ellipse: s-maj=11.4km s-min=8.1km az=146.0*
*SZGRF **05** 11:51:50.5,2052S×17044E,h33km,Vanuatu Islands*
*ISCJB **05** 11:51:51.1±1.8,2069S±007×16926E±008,h47km±15km, mb4.6/25,MS3.9/15,Error ellipse: s-maj=12.1km s-min=11.7km az=165.0*
ISC 05 11:51:52.5±1.6,2071S±007×16929E±008,h46km±14km, n120,σ1§09/44,mb4.6/25,MS3.9/15,18C-2D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.98**	**242**	*e*Pn	**Pn**	**11 52 36.0**	**-1.2**
DZM				*e*Sn	**Sn**	**11 53 11.8**	**+0.1**
NOUC	**Port Laguerre**	**3.11**	**243**	*e*P	**Pn**	**11 52 38.4**	**-0.6**
NOUC				*e*S	**Sn**	**11 53 13.1**	**-1.9**
HNR	**Honiara**	**14.38**	**320**	LR	LR	11 59 54.0	
	comp=Z,238nm,19.9s,baz=276,slow=34						
HNR	**Honiara**	**14.38**	**320**	*e*P	**Pn**	**11 55 15.8**	**+2.4**
URZ	**Urewera**	**18.76**	**161**	P	**Pn**	**11 56 09.6**	**+1.2**
	0.9nm,0.3s,baz=343,slow=11,SNR=7.5						
URZ				LR	LR	12 02 14.9	
	comp=Z,299nm,18.7s,baz=171,slow=34						
AFI	**Afiamalu**	**19.29**	**73**	LR	LR	12 01 49.3	
	comp=Z,158nm,18.0s,baz=79,slow=32						
CTA	**Charters Tower**	**21.60**	**268**	P	**P**	**11 56 40.0**	**+1.4**
	4.1nm,0.7s,mb4.0,baz=97,slow=11,SNR=9.1						
CTAO	**Charters Tower**	**21.60**	**268**	*e*P	**P**	**11 56 38.8**	**+0.2**
	14nm,1.0s,mb4.3						
CNB	**Canberra Magne**	**22.77**	**226**	*e*P	**P**	**11 56 53.8**	**+2.9**
RPZ	**Rata Peaks**	**22.99**	**177**	P	**P**	**11 56 53.8**	**+0.6**
	8.5nm,0.5s,mb4.5,baz=18,slow=24,SNR=8.5						
RPZ				LR	LR	12 04 56.6	
	comp=Z,461nm,18.3s,MS4.0,baz=52,slow=34						
CAN	**Canberra**	**23.02**	**226**	*e*P	**P**	**11 56 55.1**	**+1.5**
CAN				*e*pP		11 57 08.2	
PMG	**Port Moresby**	**24.11**	**294**	*e*P	**P**	**11 57 05.5**	**+1.5**
COEN	**Coen**	**25.79**	**281**	*e*P	**P**	**11 57 20.6**	**+1.3**
	12nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**27.13**	**240**	*e*P	**P**	**11 57 32.4**	**+1.1**
	5.7nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**27.13**	**240**	P	**P**	**11 57 32.5**	**+1.1**
	6.9nm,0.6s,mb4.3,baz=89,slow=11,SNR=18						
STKA				LR	LR	12 07 55.5	
	comp=Z,201nm,18.8s,MS3.7,baz=207,slow=36						
WB2	**Warramunga Arr**	**32.73**	**265**	*e*P	**P**	**11 58 20.0**	**-1.0**
WRAB	**Tennant Creek**	**32.74**	**265**	*e*P	**P**	**11 58 20.3**	**-0.7**
	11nm,1.4s,mb4.6						
WRA	**Warramunga Arr**	**32.74**	**265**	P	**P**	**11 58 19.8**	**-1.4**
	1.1nm,0.5s,mb4.1,baz=91,slow=8.4,SNR=39						
WRA				PcP	PcP	12 01 05.9	+0.1
	1.4nm,0.8s,baz=96,slow=2.6,SNR=6.5						
WRA				LR	LR	12 11 51.0	
	comp=Z,237nm,19.0s,MS3.9,baz=85,slow=37						
ASAR	**Alice Springs**	**32.85**	**258**	P	**P**	**11 58 21.8**	**-0.2**
	3.4nm,0.7s,mb4.4,baz=86,slow=9.5,SNR=48						
ASAR				PcP	PcP	12 01 05.8	-0.3
	2.3nm,0.8s,baz=102,slow=3.2,SNR=12						
TBI	**Tubuai**	**38.24**	**102**	*e*LR	LR	12 09 51.5	
	191nm,28.0s						
PPT	**Papeete**	**38.92**	**93**	*e*S	**S**	**12 05 19.5**	**+10**
	51nm,27.5s						
PPT				*e*LR	LR	12 09 54.8	
	245nm,26.8s						
BATI	**Baumata**	**45.06**	**276**	LR	LR	12 19 06.8	
	comp=Z,231nm,18.9s,MS4.1,baz=122,slow=36						
MBWA	**Marble Bar**	**46.13**	**260**	*e*P	**P**	**12 00 13.0**	**+0.4**
	14nm,1.0s,mb4.9						
KLBR	**Kellerberrin**	**47.14**	**246**	*e*P	**P**	**12 00 20.0**	**-0.4**
	15nm,0.7s,mb5.0						
NWAO	**Narrogin (SRO)**	**47.60**	**244**	LR	LR	12 20 35.8	
	comp=Z,234nm,20.2s,MS4.2,baz=110,slow=36						
RKT	**Rikitea**	**51.51**	**104**	*e*LR	LR	12 15 48.6	
	127nm,31.2s						
SBA	**Scott Base**	**57.21**	**181**	*e*P	**P**	**12 01 36.0**	**+1.5**
	20nm,0.9s,mb5.2						
JOW	**Kuganni**	**61.74**	**318**	LR	LR	12 27 19.0	
	comp=Z,3.4nm,19.1s,MS2.5,baz=312,slow=34						
MJAR	**Matsushiro Arr**	**64.06**	**332**	P	**P**	**12 02 21.3**	**-0.3**
	3.6nm,0.7s,mb4.5,baz=170,slow=8.1,SNR=8.0						
ASAJ	**Asahikawa**	**68.98**	**340**	LR	LR	12 27 08.6	
	comp=Z,92nm,21.6s,MS4.0,baz=45,slow=31						
KSRS	**Korea Array**	**69.74**	**326**	LR	LR	12 31 28.7	
	comp=Z,29nm,18.5s,MS3.5,baz=144,slow=34						
PETK	**Petropavlovsk-**	**74.19**	**353**	P	**P**	**12 03 22.7**	**-1.2**
	3.7nm,0.8s,mb4.3,baz=170,slow=6.2,SNR=5.0						
PETK				LR	LR	12 30 53.2	
	comp=Z,65nm,19.4s,MS3.9,baz=236,slow=32						
MDJ	**Mudanjiang**	**74.43**	**332**	P	**P**	**12 03 26.1**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,67nm,5.4s						
MAW	**Mawson**	**77.10**	**202**	P	**P**	**12 03 40.9**	**+0.3**
	comp=Z,8.1nm,0.7s,mb4.7,baz=108,slow=6.8,SNR=15						
CMAR	**Chiang Mai Arr**	**79.15**	**294**	P	**P**	**12 03 55.0**	**+2.2**
	comp=Z,2.1nm,0.7s,mb4.2,baz=138,slow=4.0,SNR=13						
CHTO	**Chiang Mai**	**79.30**	**295**	*e*P	**P**	**12 03 52.7**	**-0.9**
	comp=Z,17nm,1.7s,mb4.7						
SYO	**Syowa Base**	**83.55**	**196**	⇓*e*P	**P**	**12 04 13.0**	**-2.2**
OHAK	**Old Harbor**	**83.71**	**19**	P	**P**	**12 04 15.7**	**-0.4**
ULN	**Ulaanbaatar**	**88.06**	**323**	*e*P	**P**	**12 04 38.6**	**+0.8**
	comp=Z,4.6nm,1.0s,mb4.7						
CMB	**Columbia Colle**	**88.09**	**48**	*e*P	**P**	**12 04 38.2**	**0.0**
	comp=Z,20nm,1.8s,mb5.0						
VNA3	**Neumayer Olymp**	**88.30**	**180**	*e*	**P**	**12 04 37.9**	**-0.8**
ISA	**Isabella**	**88.36**	**51**	*e*P	**P**	**12 04 38.9**	**-0.6**
	comp=Z,2.8nm,0.8s,mb4.5						
SONM	**Songino Array**	**88.41**	**323**	P	**P**	**12 04 39.9**	**+0.5**
	comp=Z,2.3nm,0.9s,mb4.4,baz=131,slow=4.8,SNR=13						
SONM				LR	LR	12 44 26.8	
	comp=Z,45nm,18.3s,MS3.9,baz=57,slow=36						
VNA2	**Neumayer--Watz**	**88.59**	**181**	*e*	**P**	**12 04 39.7**	**-0.3**
	baz=180,slow=5.3						
VNA1	**Neumayer--Stat**	**88.88**	**181**	*e*	**P**	**12 04 41.1**	**-0.3**
NVAR	**Mina Array Bea**	**89.73**	**48**	P	**P**	**12 04 46.1**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.5,baz=225,slow=7.8,SNR=18						
TPNV	**Topopah Spring**	**90.54**	**51**	*e*P	**P**	**12 04 50.0**	**+0.3**
	comp=Z,3.2nm,0.8s,mb4.7						
TUC	**Tucson**	**92.77**	**57**	*e*P	**P**	**12 04 58.5**	**-1.6**
	comp=Z,40nm,3.0s						
WUAZ	**Wupatki**	**93.55**	**53**	*e*P	**P**	**12 05 03.2**	**-0.5**
	comp=Z,11nm,0.8s,mb5.3						
TIXI	**Tiksi**	**96.18**	**348**	*e*P	**P**	**12 05 13.2**	**-1.6**
	comp=Z,41nm,2.4s,mb5.4						
TXAR	**Lajitas Array**	**97.42**	**62**	P	**P**	**12 05 21.5**	**0.0**
	comp=Z,0.3nm,0.8s,mb3.8,baz=230,slow=5.9,SNR=4.0						
PDAR	**Pinedale Array**	**97.57**	**47**	LR	LR	12 40 41.8	
	comp=Z,45nm,19.0s,MS4.0,baz=256,slow=30						
ARCES	**ARCESS Array B**	**126.49**	**345**	PKP	PKPdf	12 10 48.9	-0.8
	comp=Z,3.4nm,0.5s,baz=67,slow=1.2,SNR=20						
ARCES	**ARCESS Array B**	**126.49**	**345**	PKP	PKPdf	12 10 48.9	-0.8
NOA	**NORSAR Array B**	**136.86**	**345**	PKP	PKPdf	12 11 09.1	-0.4
	comp=Z,2.5nm,0.9s,baz=44,slow=1.9,SNR=4.3						
NOA	**NORSAR Array B**	**136.86**	**345**	PKP	PKPdf	12 11 09.1	-0.4
DPC	**Dobruska-Polom**	**143.52**	**331**	*e*PKP	PKPdf	12 11 19.4	-2.5
UPC	**Upice**	**143.56**	**331**	*e*PKP	PKPdf	12 11 19.2	-2.7
PVCC	**Panska Ves**	**144.18**	**332**	*e*PKP	PKPdf	12 11 21.6	-1.4
BRG	**Berggiesshubel**	**144.19**	**333**	*i* PKP	PKPdf	12 11 21.2	-1.8
BRG	**Berggiesshubel**	**144.19**	**333**	*e*PKPbc	PKPdf	12 11 21.1	-2.0
CLL	**Collm**	**144.26**	**334**	*e*PKPbc	PKPdf	12 11 21.0	-2.1
CLL	**Collm**	**144.26**	**334**	*i* PKPdf	PKPdf	12 11 20.9	-2.2
	comp=Z,21nm,0.6s						
PRU	**Pruhonice**	**144.59**	**332**	*e*PKP	PKPdf	12 11 22.4	-1.4
PRU				*ep*PKP	pPKPdf	12 11 32.1	-5.9
CLZ	**Clausthal**	**144.84**	**337**	*e*PKPbc	PKPdf	12 11 23.3	-0.8
TANN	**Tannenbergstha**	**145.16**	**334**	*e*PKPbc	PKPbc	12 11 24.2	-0.2
SOP	**Sopron**	**145.22**	**327**	⇓*e*P	PKPbc	12 11 25.2	+0.5
NKC	**Novy Kostel**	**145.31**	**334**	*e*PKP	PKPdf	12 11 24.7	-0.3
NKC				*ex*	x	12 11 35.3	
MOX	**Moxa**	**145.33**	**335**	*e*P	PKPbc	12 11 25.4	+0.5
	comp=Z,27nm,1.2s						
MOX	**Moxa**	**145.33**	**335**	*e*PKPbc	PKPbc	12 11 25.0	+0.1
IBBN	**Ibbenburen**	**145.35**	**340**	*e*PKPbc	PKPbc	12 11 24.6	-0.3
CONA	**Conrad Observa**	**145.41**	**328**	⇑*i*PKPdf	PKPdf	12 11 25.9	+0.6
	comp=Z,21nm,0.8s						
CSNA	**Conrad Observa**	**145.41**	**328**	⇑*i*PKPdf	PKPdf	12 11 25.8	+0.6
	comp=Z,20nm,0.8s						
MANZ	**Manzenberg**	**145.63**	**334**	*e*PKPbc	PKPbc	12 11 25.9	0.0
KHC	**Kasperske Hory**	**145.64**	**331**	*e*PKP	PKPdf	12 11 25.6	0.0
KHC				*ep*PKP	pPKPdf	12 11 35.8	-4.0
ROTZ	**Rotzenmuhle**	**145.76**	**333**	*e*PKPbc	PKPbc	12 11 26.3	0.0
GEC2	**GERESS Array S**	**145.79**	**331**	*e*PKPbc	PKPbc	12 11 26.1	-0.3
GERES	**GERESS Array B**	**145.79**	**331**	PKPbc	PKPbc	12 11 26.4	0.0
	comp=Z,7.7nm,0.6s,baz=36,slow=2.5,SNR=52						
UBBA	**Unterbreizbach**	**145.81**	**336**	*e*PKPbc	PKPbc	12 11 25.9	-0.5
WET	**Wettzell**	**145.94**	**332**	*e*PKPbc	PKPbc	12 11 26.8	-0.1
GRF	**Grafenberg Arr**	**146.23**	**334**	*e*PKPbc	PKPbc	12 11 27.8	+0.1
GRF				*e*PKPab	PKPab	12 11 29.0	+0.5
BUG	**Bochum--Univer**	**146.25**	**340**	*e*PKPab	PKPab	12 11 29.0	+0.5
TNS	**Taunus Mts**	**146.87**	**337**	*e*PKPbc	PKPbc	12 11 29.6	0.0
TNS				*e*PKPab	PKPab	12 11 31.3	+0.4
STU	**Stuttgart**	**147.77**	**335**	*e*PKPab	PKPab	12 11 35.1	+0.6
ABTA	**Abfaltersbach**	**147.87**	**329**	⇑*i*PKPbc	PKPbc	12 11 31.4	-1.0
	comp=Z,11nm,1.0s						
MOTA	**Moosalm**	**148.08**	**331**	⇑*i*PKPbc	PKPbc	12 11 32.4	-0.5
	comp=Z,12nm,0.8s						
WLF	**Walferdange**	**148.14**	**339**	*e*PKPbc	PKPbc	12 11 33.3	+0.3
WLF				*e*PKPab	PKPab	12 11 36.6	+0.6
GIVF	**Givet**	**148.18**	**341**	⇑*i*PKP1	PKPbc	12 11 32.6	-0.6
	comp=Z,21nm,0.8s						
BAIF	**Baives**	**148.41**	**342**	⇑*i*PKP1	PKPbc	12 11 33.2	-0.5
	comp=Z,5.5nm,0.5s						
BFO	**Black Forest**	**148.47**	**335**	*e*PKPbc	PKPbc	12 11 33.3	-0.6
BFO				*e*PKPab	PKPab	12 11 37.5	+0.2
FETA	**Feichten**	**148.49**	**331**	⇑*i*PKPbc	PKPbc	12 11 33.8	-0.2
	comp=Z,12nm,0.9s						
CDF	**Champ du Feu**	**148.80**	**337**	*e*PKP1	PKPbc	12 11 34.2	-0.6
ECH	**Echery**	**149.01**	**337**	PKP	PKPbc	12 11 34.3	-1.0
ECH	**Echery**	**149.01**	**337**	*e*PKPbc	PKPbc	12 11 34.6	-0.8
HINF	**Hinteralfeld**	**149.45**	**336**	*e*PKP1	PKPbc	12 11 35.6	-0.9
HAU	**Haudompre**	**149.48**	**337**	*e*PKP1	PKPbc	12 11 35.9	-0.6
	comp=Z,10.0nm,0.6s						
HAU				*e*MLR	MLR		
	comp=Z,53nm,22.4s,MS4.0						
MEZF	**Maizieres J'vi**	**149.51**	**339**	*e*PKP1	PKPbc	12 11 36.4	-0.2
LOMF	**Lomont**	**149.85**	**336**	PKP	PKPbc	12 11 36.4	-1.0
CABF	**La Chapelle**	**150.75**	**336**	⇑*i*PKP1	PKPbc	12 11 39.4	-0.2
	comp=Z,13nm,0.6s						
FLN	**La Foliniere**	**150.83**	**346**	⇑*i*PKP1	PKPbc	12 11 38.7	-1.0
	comp=Z,26nm,0.6s						
FLN				*e*MLR	MLR		
	comp=Z,54nm,17.5s,MS4.1						
LDF	**La Druitiere**	**150.90**	**345**	⇑*i*PKP1	PKPbc	12 11 38.8	-1.1
	comp=Z,14nm,0.5s						
LOR	**Lormes

	baz=300							
ENTT	**Nioudou**	**0.90**	**285**	⇑P		**Pn**	**12 46 12.9**	**0.0**
	baz=292							
ENTT				*e*S		**Sn**	**12 46 25.4**	**+0.6**
	baz=292							
TWD	**Chiawan**	**0.91**	**249**	P		**Pn**	**12 46 12.3**	**-0.7**
	baz=238							
TWD				S		**Sn**	**12 46 24.3**	**-0.8**
	baz=238							
NWF	**Wu-fen Shan**	**0.94**	**314**	P		**Pn**	**12 46 13.3**	**-0.2**
	baz=316							
NWF				S		**Sn**	**12 46 25.3**	**-0.6**
	baz=316							
HWA	**Hwalien**	**0.94**	**243**	*e*P		**Pn**	**12 46 13.5**	**0.0**
	baz=233							
TWA	**Mucha**	**1.02**	**304**	P		**Pn**	**12 46 14.4**	**-0.2**
	baz=305							
TWA				*e*S		**Sn**	**12 46 27.6**	**-0.2**
	baz=305							
NNS	**Nan Shan**	**1.04**	**272**	⇑*i*P		**Pn**	**12 46 14.7**	**-0.2**
	baz=272							
NNS				*e*S		**Sn**	**12 46 28.3**	**-0.1**
	baz=272							
NSK	**Sanguang**	**1.09**	**284**	*i* P		**Pn**	**12 46 15.6**	**+0.1**
	baz=275							
NSK				S		**Sn**	**12 46 29.9**	**+0.4**
	baz=275							
IRIF	**Iriomote-Funau**	**1.11**	**94**	P		**Pn**	**12 46 15.3**	**-0.5**
IRIF				S		**Sn**	**12 46 29.9**	**0.0**
ESL	**Shilin**	**1.16**	**239**	P		**Pn**	**12 46 15.3**	**-1.2**
	baz=238							
WHF	**Hehuan Shan**	**1.18**	**257**	⇑*i*P		**Pn**	**12 46 16.4**	**-0.3**
	baz=257							
WHF				*e*S		**Sn**	**12 46 31.5**	**-0.1**
	baz=257							
TWS1	**Kuangyinshan**	**1.21**	**305**	P		**Pn**	**12 46 17.0**	**-0.3**
	baz=306							
TWS1				*e*S		**Sn**	**12 46 32.4**	**-0.1**
	baz=306							
HATJ	**Hateruma jima**	**1.23**	**107**	P		**Pn**	**12 46 17.9**	**+0.5**
HATJ				*e*S		**Sn**	**12 46 34.5**	**+1.6**
TWT	**Tachien**	**1.24**	**263**	*e*P		**Pn**	**12 46 17.8**	**+0.3**
	baz=263							
JKRS	**Kuro-shima**	**1.37**	**97**	P		**Pn**	**12 46 19.4**	**0.0**
JKRS				*e*S		**Sn**	**12 46 37.4**	**+1.0**
NSTT	**Nanjuang**	**1.40**	**279**	*e*P		**Pn**	**12 46 19.6**	**-0.2**
	baz=280							
NSTT				*e*S		**Sn**	**12 46 38.1**	**+1.0**
	baz=280							
EHY	**Hungye**	**1.42**	**231**	*e*P		**Pn**	**12 46 19.0**	**-1.0**
	baz=239							
EHY				*e*S		**Sn**	**12 46 33.5**	**-4.1**
	baz=239							
JIJ	**Ishigaki jima**	**1.48**	**92**	P		**Pn**	**12 46 20.4**	**-0.5**
JIJ				*e*S		**Sn**	**12 46 38.5**	**-0.6**
TWF1	**Yuli**	**1.54**	**227**	P		**Pn**	**12 46 20.6**	**-1.1**
	baz=237							
TWF1				*e*S		**Sn**	**12 46 38.4**	**-2.2**
	baz=237							
SMLT	**Sun Moon Lake**	**1.57**	**251**	*i* P		**Pn**	**12 46 22.1**	**0.0**
	baz=243							
TWQ1	**Liyutan**	**1.59**	**268**	*e*P		**Pn**	**12 46 22.5**	**0.0**
	baz=268							
TWQ1				*e*S		**Sn**	**12 46 43.0**	**+1.2**
	baz=268							
TYC	**Yuchr**	**1.60**	**252**	P		**Pn**	**12 46 22.5**	**-0.1**
	baz=244							
TYC				*e*S		**Sn**	**12 46 41.4**	**-0.6**
	baz=244							
CHKT	**Chengkung**	**1.68**	**219**	*e*P		**Pn**	**12 46 21.6**	**-2.0**
	baz=211							
CHKT				*e*S		**Sn**	**12 46 40.5**	**-3.5**
	baz=211							
YUS	**Yu-Shan**	**1.70**	**238**	*e*P		**Pn**	**12 46 24.5**	**+0.6**
	baz=237							
YUS				*e*S		**Sn**	**12 46 43.5**	**-1.0**
	baz=237							
ALS	**Alishan**	**1.81**	**241**	P		**Pn**	**12 46 26.2**	**+0.8**
	baz=232							
ALS				*e*S		**Sn**	**12 46 47.0**	**-0.2**
	baz=232							
ELDTW	**Lidau**	**1.84**	**229**	P		**Pn**	**12 46 24.7**	**-1.1**
	baz=234							
CHN5	**Tsauling**	**1.87**	**245**	P		**Pn**	**12 46 26.9**	**+0.6**
	baz=234							
CHN5				*e*S		**Sn**	**12 46 49.7**	**+1.0**
	baz=234							
JTJ	**Tarama**	**2.00**	**83**	P		**Pn**	**12 46 28.0**	**0.0**
JTJ				*e*S		**Sn**	**12 46 51.5**	**-0.4**
CHN4	**Tsaushan**	**2.06**	**239**	*e*P		**Pn**	**12 46 30.1**	**+1.4**
	baz=232							
CHN4				*e*S		**Sn**	**12 46 54.2**	**+1.0**
	baz=232							
TWG	**Pinlang**	**2.07**	**220**	*e*P		**Pn**	**12 46 28.3**	**-0.7**
	baz=219							
TWG				*e*S		**Sn**	**12 46 50.9**	**-2.6**
	baz=219							
WTP	**Ta-pu**	**2.10**	**237**	*e*P		**Pn**	**12 46 30.0**	**+0.7**
	baz=236							
WTP				*e*S		**Sn**	**12 46 54.8**	**+0.6**
	baz=236							
TWK	**Hsinying**	**2.18**	**239**	*e*P		**Pn**	**12 46 31.3**	**+0.8**
	baz=238							
TWK				*e*S		**Sn**	**12 46 57.2**	**+0.8**
	baz=238							
CHN1	**Nanshi**	**2.20**	**237**	*e*P		**Pn**	**12 46 32.0**	**+1.3**
	baz=236							
CHN1				*e*S		**Sn**	**12 46 58.5**	**+1.8**
	baz=236							
SGST	**Jiashian**	**2.21**	**234**	*e*P		**Pn**	**12 46 31.0**	**+0.1**
	baz=233							
SGST				*e*S		**Sn**	**12 46 58.8**	**+1.7**
	baz=233							
ECL	**Taimali**	**2.31**	**219**	*e*P		**Pn**	**12 46 31.0**	**-1.3**
	baz=224							
SSD	**Sandimen**	**2.40**	**227**	*e*P		**Pn**	**12 46 34.7**	**+1.2**
	baz=234							

IDC 05 12:58:44.6±3.7, 955S×12433E, h124km±40km, mb3.7/1, mb1 3.5/3, mb1mx3.1/14, mbtmp3.3/3, Error ellipse: s-maj=95.3km s-min=44.7km az=57.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**0.92**	**225**	P		Pn	12 59 05.4	-0.9
	13nm,0.3s,baz=75,slow=2.7,SNR=26							
BATI				S		Sn	12 59 23.6	+0.8
	63nm,0.3s,baz=116,slow=23,SNR=52							
KAKA	**Kakadu**	**8.56**	**112**	*e*P		Px	13 00 36.1	
	1.1nm,0.2s							
KAKA				*e*S		Sx	13 02 09.7	
WRA	**Warramunga Arr**	**14.15**	**138**	P		Pn	13 02 01.0	+1.4
	0.3nm,0.3s,baz=314,slow=15,SNR=10.0							
WRA				S		Sn	13 04 33.7	-2.2
	0.8nm,0.3s,baz=221,slow=30,SNR=10							
WB2	**Warramunga Arr**	**14.16**	**138**	*e*P		Pn	13 02 00.5	+0.8
WB2				*e*S		Sn	13 04 32.7	-3.4
ASAR	**Alice Springs**	**16.76**	**148**	P		Pn	13 02 33.8	+1.8
	0.2nm,0.3s,baz=320,slow=12,SNR=18							
ASAR				S		S	13 05 38.7	-0.2
	0.2nm,0.3s,baz=317,slow=23,SNR=6.8							
STKA	**Stephens Creek**	**27.39**	**147**	P		P	13 04 18.2	-0.2
	2.4nm,1.1s,baz=323,slow=18,SNR=4.3							

IDC 05 13:22:35.6±6.9, 623S×14761E, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=108.2km s-min=71.5km az=174.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**16.28**	**246**	*e*P		Px	13 26 18.2	
	2.3nm,0.4s							
WB2	**Warramunga Arr**	**18.75**	**222**	*e*P		Pn	13 26 56.2	-0.4
WRA	**Warramunga Arr**	**18.76**	**222**	P		Pn	13 26 55.5	-1.2
	0.4nm,0.3s,baz=48,slow=11,SNR=7.0							
ASAR	**Alice Springs**	**21.77**	**216**	P		P	13 27 29.4	+0.3
	2.3nm,0.6s,baz=49,slow=9.4,SNR=88							
STKA	**Stephens Creek**	**26.12**	**192**	*e*P		P	13 28 11.6	+0.2
	1.2nm,0.4s							
STKA	**Stephens Creek**	**26.12**	**192**	P		P	13 28 11.7	+0.2
	1.3nm,0.5s,baz=1.4,slow=11,SNR=10							

*BJI **05** 14:08:33.4, 157N×12656E, h24km, mB5.2, mb5.5, Ms4.7, Msz4.5*

*ISCJB **05** 14:08:36.6±0.1, 192N±002×12649E±003, h21km, mb5.7/161, MS4.5/51, Error ellipse: s-maj=4.2km s-min=2.7km az=172.8*

*IDC **05** 14:08:37.8±2.5, 197N×12648E, h17km±15km, mb5.3/21, mb1 5.3/21, mb1mx5.3/22, mbtmp5.3/21, MS4.3/10, Ms1 4.3/10, ms1mx4.0/20, Error ellipse: s-maj=16.5km s-min=9.2km az=71.0*

*MOS **05** 14:08:38.4±1.0, 201N×12646E, h33km, mb5.8/53, MS4.4/20, Error ellipse: s-maj=10.0km s-min=4.8km az=113.9*

*GCMT **05** 14:08:40.0±0.1, 207N×12670E, h36km, MW5.4/86, Moment Tensor Solution. s86,c140; s82,c170; Duration: 1§2 Moment tensor: Scale 10^17 Nm; Mrr 1.35±.03; Mθθ 0.25±.02; Mφφ -1.10±.02; Mrθ 0.10±.02; Mθφ -0.72±.01; Mφr 0.18±.03; Best double couple: M0 1.44700×10^17 NP1 ϕs 210.00000°, δ41.00000°, λ90.00000°. NP2 ϕs 29.00000°, δ49.00000°, λ90.00000°. Principal axes: T 1.3650, Plg86.0000°, Azm295.0000°; N 0.1680, Plg0.0000°, Azm30.0000°; P -1.5300, Plg4.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **05** 14:08:40.0±0.1, 194N×12644E, h35km, mb5.7/80, MS4.5/14, MW5.3 Error ellipse: s-maj=5.2km s-min=3.5km az=70.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^17 Nm; Mrr 0.56; Mθθ 0.57; Mφφ -1.13; Mrθ 0.06; Mθφ 0.01; Mφr 0.21; Best double couple: M0 1.00000×10^17 NP1 ϕs 143.00000°, δ52.00000°, λ33.00000°. NP2: ϕs 31.00000°, δ64.00000°, λ137.00000°. Principal axes: T 0.6400, Plg47.0000°, Azm351.0000°; N 0.5200, Plg41.0000°, Azm186.0000°; P -1.1600, Plg7.0000°, Azm89.0000°;*

*DJA **05** 14:08:45.7±0.0, 194N×12653E, h66km, mB5.8/36, Mjma5.1/6, MLv5.8/6, Mw(mB)5.5/36, Mwp5.0/32*

ISC 05 14:08:38.4±0.1, 190N±002×12652E±003, h23km, h23km±2.9km: pP-P, n512, σ1§16/459, mb5.7/161, MS4.5/51, 59C-31D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**143**	P		**Pn**	**14 09 03.4**	**+0.8**
MNI	**Manado**	**1.74**	**255**	P		**Pn**	**14 09 11.4**	**+4.2**
MNI	**Manado**	**1.74**	**255**	S		**Sn**	**14 09 35.3**	**+6.6**
SGSI	**Sangihe**	**2.03**	**331**	P		**Sn**	**14 09 38.4**	**+2.4**
LBMI	**Labuha**	**2.70**	**159**	P		**Pn**	**14 09 23.1**	**+2.6**
GSPH	**General Santos**	**4.45**	**339**	⇑*e*P		**Pn**	**14 09 46.0**	**+1.5**
GSPH				*e*S		**Sn**	**14 10 31.6**	**-4.0**
MATI	**Mati**	**5.02**	**357**	*e*P		**Pn**	**14 09 55.2**	**+2.8**
DAV	**Davao City (W)**	**5.22**	**350**	P		**Pn**	**14 09 59.4**	**+4.2**
	SNR=26							
DAV	**Davao City (W)**	**5.22**	**350**	Pn		**Pn**	**14 09 59.8**	**+4.6**
	43nm,0.3s,baz=269,slow=11,SNR=8.0							
DAV				Sn		**Sn**	**14 10 55.4**	**+0.6**
	64nm,0.3s,baz=119,slow=23,SNR=2.8							
DAV				LR		LR	14 11 19.0	
	comp=Z,400nm,20.0s,baz=145,slow=31							
DAV	**Davao City (W)**	**5.22**	**350**	*e*P		**Pn**	**14 09 58.3**	**+3.1**
	910nm,0.5s							
DAV	**Davao City (W)**	**5.22**	**350**	⇑*e*P		Px	14 10 11.7	
DAV	**Davao City (W)**	**5.22**	**350**	P		**Pn**	**14 10 03.9**	**+8.7**
	2µm,0.7s,12nm							
DMPH	**Davao City--Mi**	**5.25**	**349**	*e*P		**Pn**	**14 09 57.9**	**+2.4**
DMPH				*i* S		**Sn**	**14 10 38.3**	**-17**
KCP	**Kidapawan**	**5.27**	**344**	⇑*i*P		**Pn**	**14 09 59.3**	**+3.4**
KCP				*i* S		**Sn**	**14 11 03.7**	**+7.7**
AAI	**Ambon**	**5.79**	**163**	P		**Pn**	**14 10 06.5**	**+3.5**
	529nm,1.2s,6µm2.2nm							
AAI	**Ambon**	**5.79**	**163**	P		**Pn**	**14 10 05.9**	**+2.9**
	529nm,1.2s,6µm2.2nm							
BUKP	**Musuan**	**6.12**	**346**	*e*P		**Pn**	**14 10 10.2**	**+2.8**
BIPH	**Bislig**	**6.25**	**359**	⇑*e*P		**Pn**	**14 10 11.4**	**+2.1**
BIPH				*e*S		**Sn**	**14 11 21.3**	**+1.2**
PAGZ	**Pagadian**	**6.69**	**332**	*e*P		**Pn**	**14 10 17.0**	**+1.7**
CGP	**Cagayan de Oro**	**6.76**	**344**	⇓*e*P		**Pn**	**14 10 19.2**	**+2.8**
KDI	**Kendari**	**7.00**	**214**	P		**Pn**	**14 10 22.9**	**+3.3**
	543nm,0.7s,6µm1.8nm							
BUTP	**Butuan**	**7.08**	**353**	*e*P		**Pn**	**14 10 23.8**	**+3.1**
PCI	**Palu**	**7.24**	**247**	P		**Pn**	**14 10 25.4**	**+2.5**
	2µm,1.0s,6.1nm							
SCPH	**Surigao**	**7.90**	**353**	⇑*e*P		**Pn**	**14 10 35.4**	**+3.5**
TBP	**Tagbilaran**	**8.18**	**341**	*e*P		**Pn**	**14 10 37.9**	**+2.0**
MSLP	**Maasin**	**8.35**	**349**	*e*P		**Pn**	**14 10 40.7**	**+2.6**
LLP	**Lapu-Lapu**	**8.74**	**343**	⇓*e*P		**Pn**	**14 10 46.2**	**+2.6**
OCLP	**Ormoc**	**9.29**	**348**	*e*P		**Pn**	**14 10 53.7**	**+2.6**
PLP	**Palo**	**9.33**	**351**	⇑*e*P		**Pn**	**14 10 54.9**	**+3.2**
GUIM	**Jordan**	**9.51**	**336**	*e*P		**Pn**	**14 10 56.5**	**+2.5**
KAPI	**Kappang**	**9.63**	**225**	Pn		**Pn**	**14 10 59.4**	**+3.6**
	980nm,0.5s,SNR=37							
KAPI	**Kappang**	**9.63**	**225**	P		**Pn**	**14 10 59.3**	**+3.5**
	SNR=35							
KAPI	**Kappang**	**9.63**	**225**	Pn		**Pn**	**14 10 59.3**	**+3.5**
	11nm,0.3s,baz=36,slow=8.2,SNR=59							
KAPI	**Kappang**	**9.63**	**225**	*e*P		**Pn**	**14 10 58.3**	**+2.5**
	92nm,0.6s							
KAPI	**Kappang**	**9.63**	**225**	P		**Pn**	**14 10 59.3**	**+3.5**
	209nm,1.1s,2µm							
RCP	**Roxas**	**10.30**	**339**	⇑*e*P		**Pn**	**14 11 09.8**	**+4.9**
CUYO	**Cuyo Island**	**10.44**	**329**	*e*P		**Pn**	**14 11 08.7**	**+1.9**
KALP	**Kalibo**	**10.56**	**337**	⇑*e*P		**Pn**	**14 11 08.8**	**+0.2**
CNP	**Catarman**	**10.70**	**350**	*e*P		**Pn**	**14 11 13.0**	**+2.6**
BATP	**Bataraza**	**11.06**	**309**	*e*P		**Pn**	**14 11 18.3**	**+3.0**
OTRP	**Odiongan**	**11.31**	**337**	*e*P		**Pn**	**14 11 24.9**	**+6.2**
ENPP	**El Nido**	**11.62**	**323**	*e*P		**Pn**	**14 11 24.9**	**+1.8**
SJMP	**San Jose**	**11.78**	**333**	*e*P		**Pn**	**14 11 28.2**	**+3.1**
BUSP	**Coron**	**11.83**	**328**	*e*P		**Pn**	**14 11 30.1**	**+4.1**
PVCP	**Virac**	**11.86**	**349**	*e*P		**Pn**	**14 11 29.4**	**+3.1**
BATI	**Baumata**	**12.36**	**193**	Pn		**Pn**	**14 11 39.0**	**+5.9**
	1.0nm,0.3s,baz=171,slow=8.9,SNR=5.9							
BATI	**Baumata**	**12.36**	**193**	P		**Pn**	**14 11 44.5**	**+11**
	151nm,1.1s,1µm							
BBKI	**Banjar Baru**	**12.83**	**245**	P		**Pn**	**14 11 45.6**	**+6.0**
	260nm,1.0s							
PLKI	**Palangkaraya**	**13.22**	**252**	P		**Pn**	**14 11 50.4**	**+5.5**
	307nm,1.4s,2µm							
LUBP	**Lubang**	**13.30**	**333**	*e*P		**Pn**	**14 11 42.8**	**-3.1**
BALP	**Baler**	**14.59**	**341**	*e*P		**Pn**	**14 12 04.0**	**+0.4**
JAY	**Jayapura**	**14.84**	**107**	P		**Pn**	**14 12 13.8**	**+6.7**
	178nm,0.9s,2µm							
KHKI	**Kahang-Kahang**	**14.91**	**227**	P		**Pn**	**14 12 16.3**	**+8.4**
STKI	**Sintang**	**15.15**	**263**	P		**Pn**	**14 12 15.9**	**+4.8**
	277nm,1.1s							
KMMI	**Kalianget**	**15.36**	**235**	P		**Pn**	**14 12 22.3**	**+8.4**
	1µm,0.7s,10µm							
DNP	**Denpasar**	**15.41**	**227**	P		**Pn**	**14 12 23.4**	**+8.9**
	2µm,1.3s							
PBKI	**Pangkalan Bun**	**15.53**	**253**	P		**Pn**	**14 12 21.3**	**+5.1**
	296nm,1.1s,2µm							
PALP	**Palanan**	**15.60**	**345**	*e*P		**Pn**	**14 12 15.9**	**-1.1**
NBBI	**Negara**	**15.64**	**229**	P		**Pn**	**14 12 25.0**	**+7.4**
	989nm,0.9s,7µm							
CAUP	**Cauayan**	**15.65**	**343**	*e*P		**Pn**	**14 12 18.2**	**+0.6**
KAKA	**Kakadu**	**15.66**	**158**	*e*P		Px	14 12 07.8	
	31nm,0.5s							
KAKA				*e*			14 12 14.7	
ABRA	**Dolores**	**16.66**	**340**	*e*P		**Pn**	**14 12 31.6**	**+1.0**
KRKI	**Karangkates**	**17.22**	**234**	P		**Pn**	**14 12 41.9**	**+4.2**
MMPI	**Merauke**	**17.24**	**127**	P		**Pn**	**14 12 46.6**	**+8.7**
	552nm,0.7s,5µm							
SJI	**Sawahan**	**17.55**	**237**	P		**Pn**	**14 12 44.3**	**+2.5**
BJII	**Banjamegara**	**19.11**	**241**	P		**Pn**	**14 13 02.2**	**+1.3**
TPI	**Tanjungpandan**	**19.42**	**256**	P		**Pn**	**14 13 05.9**	**+1.3**
	120nm,1.1s,1µm							
LEM	**Lembang**	**20.76**	**245**	P		**P**	**14 13 19.2**	**+1.3**
	221nm,0.8s,2µm							
PPBI	**Pangkal Pinang**	**20.77**	**259**	P		**P**	**14 13 19.3**	**+1.2**
	201nm,1.3s,2µm							
DBJI	**Dramaga**	**21.45**	**247**	P		**P**	**14 13 28.3**	**+3.0**
	150nm,1.2s,2µm,mb5.2							
GUMO	**Guam**	**21.55**	**56**	P		**P**	**14 13 26.4**	**0.0**
	56nm,0.5s,mb5.3,baz=163,slow=4.4,SNR=4.6							
SKJI	**Sukabumi**	**21.80**	**246**	P		**P**	**14 13 30.0**	**+0.9**
	315nm,0.9s,4µm,mb5.8							
SBJI	**Serang**	**21.86**	**248**	P		**P**	**14 13 36.3**	**+6.5**
	342nm,1.3s,5µm,mb5.6							
NACB	**Ninganchiao**	**22.65**	**348**	P		**P**	**14 13 35.8**	**-2.3**
	336nm,1.0s,mb5.7							
KLI	**Kotabumi**	**22.66**	**253**	P		**P**	**14 13 40.8**	**+2.5**
	219nm,1.0s,2µm,mb5.5							
COEN	**Coen**	**22.82**	**134**	*e*P		**P**	**14 13 39.2**	**-0.8**
	589nm,1.6s,mb5.8							
COEN	**Coen**	**22.82**	**134**	P		**P**	**14 13 39.9**	**0.0**
	35nm,1.9s,500nm,mb4.5							
WRAB	**Tennant Creek**	**23.02**	**161**	P		**P**	**14 13 41.0**	**-1.0**
	4µm,0.8s,mb7.0							
WRAB	**Tennant Creek**	**23.02**	**161**	*e*P		**P**	**14 13 41.6**	**-0.4**
	571nm,0.8s,mb6.0							
WRAB				LR		LR		
	comp=Z,1µm,19.0s,MS4.3							
WRAB	**Tennant Creek**	**23.02**	**161**	*c i*P		**P**	**14 13 41.8**	**-0.2**
WRAB	**Tennant Creek**	**23.02**	**161**	P		**P**	**14 13 41.5**	**-0.5**
	comp=Z,958nm,0.9s,comp=Z,6µm,mb6.2							
WRA	**Warramunga Arr**	**23.02**	**161**	P		**P**	**14 13 41.9**	**-0.1**
	comp=Z,509nm,0.8s,mb6.0,baz=340,slow=11,SNR=158							
WRA				PcP		PcP	14 17 31.7	+0.3
	comp=Z,6.0nm,0.6s,baz=329,slow=2.3,SNR=4.7							
WRA				S		**S**	**14 17 51.0**	**-0.6**
	comp=Z,12nm,0.9s,baz=338,slow=17,SNR=5.4							
WB2	**Warramunga Arr**	**23.02**	**161**	⇑*i*P		**P**	**14 13 41.6**	**-0.5**
WB2				*e*S		**S**	**14 17 50.7**	**-0.9**
WB2				*e*SCS		ScS	14 24 49.8	-4.4
YHNB	**Yeheng**	**23.18**	**348**	*e*P		**P**	**14 13 40.8**	**-2.8**
	comp=Z,97nm,0.6s,mb5.4							
PMG	**Port Moresby**	**23.43**	**119**	*e*P		**P**	**14 13 46.1**	**-0.3**
	comp=Z,30nm,0.8s,mb4.8							
PMG	**Port Moresby**	**23.43**	**119**	⇓*e*P		**P**	**14 13 46.0**	**-0.4**
PMG	**Port Moresby**	**23.43**	**119**	P		**P**	**14 13 46.9**	**+0.5**
	comp=Z,59nm,1.7s,comp=Z,877nm,mb4.7							
QIZ	**Qiongzhong**	**23.59**	**317**	P		**P**	**14 13 45.9**	**-2.0**
QIZ				AP			14 13 49.1	
QIZ				S		**S**	**14 17 57.6**	**-3.3**
QIZ				AMB		AMB		
	comp=Z,171nm,1.2s,mb5.3							
QIZ				LR		LR		
	comp=N,1µm,19.9s,MS4.5							
QIZ				LR		LR		
	comp=E,855nm,18.4s,MS4.5							
QIZ				LR		LR		
	comp=Z,2µm,27.1s							
QIZ	**Qiongzhong**	**23.59**	**317**	*e*P		**P**	**14 13 46.7**	**-1.2**
	comp=Z,175nm,1.1s,mb5.4							
MBWA	**Marble Bar**	**23.86**	**196**	P		**P**	**14 13 50.7**	**+0.4**
	SNR=8.1							
MBWA	**Marble Bar**	**23.86**	**196**	*e*P		**P**	**14 13 49.7**	**-0.5**
	comp=Z,36nm,0.6s,mb5.0							
MBWA	**Marble Bar**	**23.86**	**196**	P		**P**	**14 13 50.4**	**+0.1**
	comp=Z,92nm,0.8s,comp=Z,1µm,mb5.2							
XMIS	**Christmas Isla**	**24.14**	**239**	*e*P		**P**	**14 13 51.0**	**-1.9**
XMIS	**Christmas Isla**	**24.14**	**239**	P		**P**	**14 13 52.7**	**-0.2**
	comp=Z,325nm,1.0s,comp=Z,0.0nm,mb5.7							
QZH	**Quanzhou**	**24.16**	**342**	⇑*i*P		**P**	**14 13 52.5**	**-0.5**
QZH				*e*S		**S**	**14 18 04.1**	**-5.8**
QZH				AMB		AMB		
	comp=Z,250nm,0.8s,mb5.7							
QZH				LR		LR		
	comp=Z,7µm,34.8s,MS4.9							
KSI	**Kapahiang**	**24.54**	**257**	P		**P**	**14 13 57.8**	**+1.1**
	comp=Z,374nm,0.8s,mb6.0							
GZH	**Guangzhou**	**24.64**	**330**	P		**P**	**14 13 59.8**	**+2.4**
GZH				S		**S**	**14 18 23.9**	**+6.2**
GZH				LR		LR		
	comp=N,597nm,19.4s,MS4.5							
GZH				LR		LR		
	comp=E,1µm,20.4s,MS4.5							
GZH				LR		LR		
	comp=Z,1µm,17.6s,MS4.5							
JOW	**Kunigami**	**24.85**	**4**	P		**P**	**14 14 00.1**	**+0.8**
	comp=Z,196nm,0.8s,mb5.7,baz=186,slow=9.2,SNR=28							
FRIM	**Kepong**	**24.90**	**274**	⇑P		**P**	**14 14 00.9**	**+0.9**
PDSI	**Padang**	**26.20**	**264**	P		**P**	**14 14 11.7**	**-0.1**
	comp=Z,106nm,0.9s,comp=Z,1µm,mb5.4							
PPI	**Padang Panjang**	**26.22**	**265**	P		**P**	**14 14 12.1**	**+0.2**
	comp=Z,75nm,1.0s,comp=Z,1µm,mb5.2							
ASAR	**Alice Springs**	**26.41**	**165**	P		**P**	**14 14 14.1**	**+0.6**
	comp=Z,101nm,0.9s,mb5.3,baz=344,slow=7.6,SNR=161							
ASAR				PcP		PcP	14 17 39.3	+0.5
	comp=Z,9.1nm,0.6s,baz=346,slow=2.2,SNR=5.2							
ASAR				S		**S**	**14 18 52.8**	**+7.0**
	comp=Z,32nm,1.0s,baz=349,slow=21,SNR=10.0							
KKTK	**Khon Kaen**	**27.39**	**303**	P		**P**	**14 14 22.6**	**+0.2**
	comp=Z,309nm,0.6s,mb6.0							
TSI	**Tuntungan**	**27.97**	**274**	P		**P**	**14 14 32.1**	**+4.5**
	comp=Z,153nm,1.1s,mb5.6							
CTA	**Charters Tower**	**29.19**	**139**	*e*P		**P**	**14 14 39.3**	**+0.9**
	comp=Z,26nm,1.0s,mb4.9							
CTA				*e*		pP	14 14 44.3	-0.9
CTA	**Charters Tower**	**29.19**	**139**	P		**P**	**14 14 38.5**	**+0.1**
	comp=Z,42nm,1.1s,mb5.1,baz=326,slow=11,SNR=19							
CTA	**Charters Tower**	**29.19**	**139**	*e*P		**P**	**14 14 39.3**	**+0.9**
CTA				*e*		pP	14 14 44.3	-0.9
CTA				pmax		pmax		
	comp=Z,26nm,1.0s							
CTAO	**Charters Tower**	**29.19**	**139**	*e*P		**P**	**14 14 39.0**	**+0.6**
	comp=Z,30nm,0.6s,mb5.2							
CTAO				LR		LR		
	comp=Z,1µm,22.0s,MS4.5							
CTAO	**Charters Tower**	**29.19**	**139**	*e*

CHTO Chiang Mai 31.82 304 P **P** **14 15 02.4 +0.7**
SNR=20
CHTO Chiang Mai 31.82 304 *e*P **P** **14 15 00.6 -1.1**
comp=Z,93nm,1.1s,mb5.5
CHTO Chiang Mai 31.82 304 *e*P **P** **14 15 00.6 -1.1**
CHTO pmax pmax
comp=Z,93nm,1.1s,mb5.5
FORT Forrest 32.53 178 *e*P **P** **14 15 08.0 +0.3**
comp=Z,416nm,0.7s,mb6.5
KMI Kunming 32.54 317 P **P** **14 15 08.7 +0.7**
KMI AP pP 14 15 11.6 -3.2
KMI PP PP 14 16 17.5 -4.3
KMI PPP 14 16 33.7
KMI S **S** **14 20 23.9 +1.7**
KMI SS SS 14 22 20.5 -22
KMI SSS 14 22 44.5
KMI AMB AMB
comp=Z,69nm,1.3s,mb5.4
KMI AMB AMB
comp=Z,262nm,3.1s
KMI LR LR
comp=N,656nm,20.8s,MS4.5
KMI LR LR
comp=E,885nm,20.8s,MS4.5
KMI LR LR
comp=Z,1μm,25.2s,MS4.6
KMI Kunming 32.54 317 P **P** **14 15 08.7 +0.7**
comp=Z,69nm,1.3s,mb5.4
KMI pP pP 14 15 11.6 -3.2
KMI sP sP 14 15 12.8 -4.8
KMI PP PP 14 16 17.5 -4.3
KMI PPP 14 16 33.7
KMI S **S** **14 20 23.9 +1.7**
KMI sS sS 14 20 28.7 -4.8
KMI SS SS 14 22 20.5 -22
KMI SSS 14 22 44.5
KMI LR LR
comp=Z,1μm,25.2s,MS4.6
KMI Kunming 32.54 317 P **P** **14 15 08.7 +0.7**
KMI 14 16 17.5
KMI PPP 14 16 33.7
KMI S **S** **14 20 23.9 +1.7**
KMI sS sS 14 20 28.7 -4.8
KMI SS SS 14 22 20.5 -22
KMI SSS 14 22 44.5
KMI pmax pmax
comp=Z,69nm,1.3s,mb5.4
KMI MLR MLR
comp=Z,1μm,25.2s,MS4.6
COCO West Island 32.64 244 *e*P **P** **14 15 06.6 -2.3**
comp=Z,66nm,0.8s,mb5.6
COCO West Island 32.64 244 P **P** **14 15 12.4 +3.5**
comp=Z,112nm,1.1s,mb5.7
KLBR Kellerberrin 34.33 193 *e*P **P** **14 15 24.0 +0.6**
comp=Z,54nm,0.7s,mb5.6
MUN Mundaring 35.08 195 *e*P **P** **14 15 30.7 +0.8**
MUN *e*S **S** **14 21 02.8 +1.5**
HNR Honiara 35.15 109 P **P** **14 15 30.7 -0.1**
comp=Z,34nm,0.6s,mb5.4,baz=200,slow=3.1,SNR=6.1
TIA Tai'an 35.23 347 *e*P **P** **14 15 30.3 -0.9**
KSRS Korea Array 35.41 2 P **P** **14 15 33.2 +0.5**
comp=Z,52nm,0.9s,mb5.4,baz=181,slow=9.9,SNR=100
KSRS PcP PcP 14 18 02.5 +0.1
comp=Z,7.3nm,0.8s,baz=185,slow=3.6,SNR=7.1
KSRS Korea Array 35.41 2 P **P** **14 15 33.2 +0.5**
KSRS 14 18 02.5
KSRS pmax pmax
comp=Z,52nm,0.9s,mb5.5
KSRS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
INCN Inchon 35.41 0 *e*P **P** **14 15 31.8 -0.9**
comp=Z,34nm,0.6s,mb5.5
NWAO Narrogin (SRO) 35.73 193 *e*P **P** **14 15 35.8 +0.3**
comp=Z,119nm,1.4s,mb5.6
NWAO LR LR
comp=Z,326nm,19.0s,MS4.1
NWAO Narrogin (SRO) 35.73 193 *e*P **P** **14 15 35.8 +0.3**
NWAO pmax pmax
comp=Z,119nm,1.4s
NWAO MLR MLR
comp=Z,326nm,19.0s
XAN Xi'an 35.96 335 P **P** **14 15 35.7 -1.8**
XAN AP pP 14 15 40.0 -4.3
XAN PP PP 14 16 56.1 -3.4
XAN S **S** **14 21 10.3 -4.5**
XAN AMB AMB
comp=Z,67nm,1.0s,mb5.5
XAN AMB AMB
comp=Z,167nm,6.6s
XAN LR LR
comp=N,408nm,25.9s,MS4.3
XAN LR LR
comp=E,489nm,25.1s,MS4.3
XAN LR LR
comp=Z,1μm,30.5s
CD2 Chengdu 36.01 326⇑ *i*P **P** **14 15 37.2 -0.7**
CD2 AP pP 14 15 46.8 +2.0
CD2 XP sP 14 15 50.7 +3.1
CD2 PP PP 14 16 59.3 -0.7
CD2 PCP PcP 14 18 03.5 -0.8
CD2 S **S** **14 21 12.8 -2.8**
CD2 XS sS 14 21 28.9 +1.9
CD2 PCS PcS 14 21 49.8 -2.0
CD2 SS SS 14 23 36.3 -17
CD2 SCS ScS 14 25 51.0 -3.9
CD2 AMB AMB
comp=Z,140nm,1.1s,mb5.8
CD2 AMB AMB
comp=Z,310nm,7.2s
CD2 LR LR
comp=N,910nm,15.2s,MS4.8
CD2 LR LR
comp=E,890nm,18.0s,MS4.8
CD2 LR LR
comp=Z,990nm,21.6s,MS4.5
EIDS Eidsvold 36.06 140 *e*P **P** **14 15 37.8 -0.6**
comp=Z,268nm,1.1s,mb6.1
MAJO Matsushiro 36.13 16 *e*P **P** **14 15 37.4 -1.5**
comp=Z,86nm,0.8s,mb5.7
MAJO *e*PcP PcP 14 18 04.4 -0.1
MAJO Matsushiro 36.13 16 *e*P **P** **14 15 37.4 -1.5**
MAJO *e* 14 18 04.4
MAJO pmax pmax
comp=Z,87nm,0.8s,mb5.7
MAT Matsushiro 36.13 16 P **P** **14 15 37.8 -1.1**
MAT S **S** **14 21 08.0 -9.3**
MJAR Matsushiro Arr 36.13 16 P **P** **14 15 37.7 -1.2**
comp=Z,37nm,0.7s,mb5.4,baz=183,slow=10.0,SNR=53
MJAR PcP PcP 14 18 05.4 +0.9
comp=Z,9.1nm,0.8s,baz=173,slow=3.0,SNR=6.9
STKA Stephens Creek 36.51 158 *e*P **P** **14 15 42.0 -0.2**
comp=Z,59nm,0.9s,mb5.4
STKA *e* 14 17 06.8
STKA Stephens Creek 36.51 158 P **P** **14 15 42.7 +0.5**
comp=Z,41nm,0.5s,mb5.5,baz=336,slow=8.2,SNR=84
STKA PcP PcP 14 18 07.0 +1.2
comp=Z,14nm,0.7s,baz=330,slow=5.1,SNR=3.7
DL2 Dalian 37.10 354 P **P** **14 15 47.1 0.0**
DL2 *e*S **S** **14 21 33.5 +1.4**
DL2 AMB AMB
comp=Z,160nm,0.6s,mb6.0
DL2 AMB AMB
comp=Z,150nm,5.5s
DL2 LR LR
comp=N,260nm,22.2s,MS4.1
DL2 LR LR
comp=E,200nm,21.0s,MS4.1
DL2 LR LR
comp=Z,380nm,25.5s,MS4.1
BJT Baijiatuau 39.09 347 *e*P **P** **14 16 03.3 -0.6**
comp=Z,240nm,0.8s,mb6.0
BJT LR LR
comp=Z,595nm,22.0s,MS4.4
BJT Baijiatuau 39.09 347 P **P** **14 16 04.0 +0.1**
BJT pmax pmax
comp=Z,240nm,0.8s
BJI Beijing 39.11 347 P **P** **14 16 03.6 -0.5**
BJI S **S** **14 22 03.9 +1.4**
BJI AMB AMB
comp=Z,220nm,1.1s,mb5.8
BJI LR LR
comp=N,386nm,18.4s,MS4.4
BJI LR LR
comp=E,416nm,22.2s,MS4.4
BJI LR LR
comp=Z,643nm,25.4s,MS4.3
BJI Beijing 39.11 347 P **P** **14 16 03.6 -0.5**
comp=Z,220nm,1.1s,mb5.8
BJI sP sP 14 16 08.7 -5.1
BJI S **S** **14 22 03.9 +1.4**
BJI sS sS 14 22 10.9 -3.0
BJI LR LR
comp=Z,640nm,25.4s,MS4.3
SNY Shenyang 39.84 357⇑ P **P** **14 16 10.3 +0.2**
SNY S **S** **14 22 11.1 -2.3**
SNY AMB AMB
comp=Z,95nm,0.6s,mb5.7
SNY AMB AMB
comp=Z,2μm,5.4s
SNY LR LR
comp=N,475nm,24.1s
SNY LR LR
comp=Z,668nm,24.0s,MS4.4
LZH Lanzhou 39.98 331⇓ P **P** **14 16 11.8 +0.4**
LZH AP pP 14 16 15.0 -3.3
LZH PP PP 14 17 48.2 +4.7
LZH S **S** **14 22 16.0 +0.4**
LZH SS SS 14 25 05.0 -8.1
LZH AMB AMB
comp=Z,81nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,480nm,5.5s
LZH LR LR
comp=N,741nm,16.8s
LZH LR LR
comp=Z,1μm,17.6s,MS4.9
LZH Lanzhou 39.98 331⇓ P **P** **14 16 11.8 +0.4**
comp=Z,81nm,1.3s,mb5.3
LZH pP pP 14 16 15.0 -3.3
LZH sP sP 14 16 16.4 -4.7
LZH PP PP 14 17 48.2 +4.7
LZH S **S** **14 22 16.0 +0.4**
LZH sS sS 14 22 22.0 -5.1
LZH SS SS 14 25 05.0 -8.1
LZH LR LR
comp=Z,1μm,17.6s,MS4.9
LZH Lanzhou 39.98 331⇓ P **P** **14 16 11.8 +0.4**
LZH 14 17 48.2
LZH S **S** **14 22 16.0 +0.4**
LZH SS SS 14 25 05.0 -8.1
LZH pmax pmax
comp=Z,81nm,1.3s,mb5.3
LZH MLR MLR
comp=Z,1μm,17.6s,MS4.9
ARMA Armidale 40.08 145⇓ *i*P **P** **14 16 13.3 +1.1**
SHL Shillong 40.81 308 *e*P **P** **14 16 14.6 -3.8**
SHL AMb AMB 14 16 15.1
comp=Z,255nm,1.4s,mb5.7
SHL *ex* x 14 22 09.0
HHC Hu-ho-hao-te 41.07 343 *e*P **P** **14 16 20.2 -0.1**
HHC PP PP 14 17 57.7 +2.4
HHC PCP PcP 14 18 20.3 +0.5
HHC PCS PcS 14 22 11.1 +0.4
HHC S **S** **14 22 34.8 +3.1**
HHC SS SS 14 25 32.0 -2.6
HHC SCS ScS 14 26 24.4 +0.7
HHC AMB AMB
comp=Z,51nm,1.3s,mb5.0
HHC AMB AMB
comp=Z,189nm,4.9s
HHC LR LR
comp=N,731nm,25.0s,MS4.5
HHC LR LR
comp=E,473nm,23.8s,MS4.5
HHC LR LR
comp=Z,1μm,29.7s
CN2 Changchun 41.73 359⇑ P **P** **14 16 25.5 -0.2**
CN2 *e*XP sP 14 16 32.6 -2.9
CN2 *e*S **S** **14 22 43.0 +1.5**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,300nm,18.0s,MS4.4
CN2 LR LR
comp=E,400nm,18.0s,MS4.4
CN2 LR LR
comp=Z,400nm,18.0s,MS4.3
CAN Canberra 42.58 152 *e*P **P** **14 16 33.9 +1.1**
MDJ Mudanjiang 42.62 3 P **P** **14 16 33.6 +0.6**
MDJ PP PP 14 18 13.8 +1.7
MDJ PCP PcP 14 18 24.9 0.0
MDJ SCP ScP 14 22 14.4 -0.2
MDJ S **S** **14 22 56.3 +1.6**
MDJ AMB AMB
comp=Z,52nm,1.2s,mb5.1
MDJ AMB AMB
comp=Z,176nm,6.5s
MDJ LR LR
comp=N,497nm,29.2s,MS4.3
MDJ LR LR
comp=E,341nm,31.9s,MS4.3
MDJ LR LR
comp=Z,705nm,28.2s,MS4.4
MDJ Mudanjiang 42.62 3 *e*P **P** **14 16 33.2 +0.3**
comp=Z,46nm,0.8s,mb5.2
CNB Canberra Magne 42.75 152 *e*P **P** **14 16 34.9 +0.8**
TOO Toolangi 43.03 158 *e*P **P** **14 16 37.7 +1.4**
TOO *e* 14 18 18.0
LSA Lhasa 43.51 313 *e*P **P** **14 16 41.0 +0.6**
comp=Z,164nm,1.1s,mb5.7
LSA LR LR
comp=Z,378nm,21.0s,MS4.3
LSA Lhasa 43.51 313 *e*P **P** **14 16 41.0 +0.6**
LSA pmax pmax
comp=Z,164nm,1.1s,mb5.7
LSA MLR MLR
comp=Z,378nm,21.0s,MS4.3
GTA Gaotai 44.56 330⇑ P **P** **14 16 48.5 -0.2**
GTA AP pP 14 16 51.9 -3.8
GTA XP sP 14 16 54.8 -3.6
GTA PP PP 14 18 33.7 +0.8
GTA PCS PcS 14 22 24.0 -0.9
GTA S **S** **14 23 24.5 +1.3**
GTA XS sS 14 23 32.9 -1.8
GTA SCS ScS 14 26 44.9 -0.6
GTA AMB AMB
comp=Z,34nm,1.3s,mb5.0
GTA AMB AMB
comp=Z,171nm,4.8s
GTA LR LR
comp=N,546nm,23.7s,MS4.6
GTA LR LR
comp=E,679nm,20.4s,MS4.6
GTA LR LR
comp=Z,1μm,24.9s,MS4.7
BOK Bokaro 44.93 302 *e*P **P** **14 16 50.0 -1.8**
TAPN Taplejung 44.95 308 *e*P **P** **14 16 51.4 -0.5**
comp=Z,290nm,1.1s,mb6.0
ODAN Odare 44.98 307 *e*P **P** **14 16 51.4 -0.8**
comp=Z,313nm,1.0s,mb6.1
VIS Vishakhapatnam 45.21 293 *e*P **P** **14 16 53.9 -0.3**
RAMN Ramite 45.65 307 *e*P **P** **14 16 57.3 -0.2**
comp=Z,511nm,1.2s,mb6.3
JIRN Jiri 46.29 307 *e*P **P** **14 17 02.1 -0.5**
comp=Z,110nm,0.6s,mb6.0
GUN Gumba 46.65 308 *e*P **P** **14 17 04.9 -0.5**
comp=Z,540nm,0.9s,mb6.5
PKI Pulchoki 46.87 307 *e*P **P** **14 17 06.4 -0.8**
comp=Z,236nm,1.2s,mb6.0
PKI Pulchoki 46.87 307 *e*P **P** **14 17 06.4 -0.8**
PKI pmax pmax
comp=Z,236nm,1.2s,mb6.0
HABR Khabarovsk 46.98 8⇑ *i*P **P** **14 17 08.5 +0.9**
HABR *e* pP 14 17 15.2 +0.6
HABR *e* 14 18 37.4
HABR *e* 14 18 55.8
HABR *e*S **S** **14 23 58.1 +0.5**
HABR *e* 14 26 56.5
HABR pmax pmax
comp=Z,150nm,1.0s,mb5.9
YSS Yuzh-Sakhalins 47.05 15 *e*P **P** **14 17 07.6 -0.6**
comp=Z,85nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 47.05 15*e*P **P** **14 17 08.0 -0.2**
YSS *e* pP 14 17 16.0 +0.8
YSS *e* 14 17 21.0
YSS MLR MLR
comp=Z,500nm,22.0s,MS4.4
YSS MLR MLR
comp=N,500nm,21.0s
KKN Kakani 47.07 307 *e*P **P** **14 17 08.0 -0.7**
comp=N,283nm,1.2s,mb6.1
KKN Kakani 47.07 307 *e*P **P** **14 17 08.0 -0.7**
KKN pmax pmax
comp=Z,283nm,1.2s,mb6.1
MDRS Chennai 47.11 286 *ex* x 14 16 27.2
MDRS *ex* x 14 18 22.2
DMN Daman 47.13 307 *e*P **P** **14 17 08.5 -0.7**
comp=Z,289nm,1.1s,mb6.1
KLR Kul'dur 47.37 5⇓ *i*P **P** **14 17 06.8 -3.8**
KLR *e* 14 24 14.0
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,96nm,1.4s,mb5.5
HIA Hailar 47.55 354 *e*P **P** **14 17 12.3 +0.3**
comp=Z,104nm,1.0s,mb5.8
HIA Hailar 47.55 354 *e*P **P** **14 17 12.3 +0.3**
HIA pmax pmax
comp=Z,104nm,1.0s
GKN Gorkha 47.67 307 *e*P **P** **14 17 12.4 -1.0**
comp=Z,283nm,1.2s,mb6.2
KOLN Koldanda 48.41 306 *e*P **P** **14 17 18.6 -0.5**
comp=Z,163nm,0.8s,mb6.1
DANN Dangsing 48.52 307 *e*P **P** **14 17 19.0 -1.0**
comp=Z,216nm,0.7s,mb6.3
ULN Ulaanbaatar 48.79 343 P **P** **14 17 22.1 +0.5**
SNR=25
ULN Ulaanbaatar 48.79 343 *e*P **P** **14 17 21.4 -0.2**
comp=Z,161nm,1.5s,mb5.8
ULN LR LR
comp=Z,437nm,22.0s,MS4.4
ULN Ulaanbaatar 48.79 343⇑ *i*P **P** **14 17 21.9 +0.3**
ULN Ulaanbaatar 48.79 343 P **P** **14 17 21.6 0.0**
comp=Z,80nm,1.2s,comp=Z,664nm,mb5.6
SONM Songino Array 48.96 342 P **P** **14 17 22.9 0.0**
comp=Z,28nm,0.5s,mb5.5,baz=159,slow=8.6,SNR=142
SONM PcP PcP 14 18 47.7 +0.8
comp=Z,7.1nm,0.7s,baz=151,slow=3.3,SNR=2.9
SONM LR LR 14 37 57.1
comp=Z,224nm,19.5s,MS4.2,baz=156,slow=36
SONM Songino Array 48.96 342 P **P** **14 17 22.9 0.0**
SONM 14 18 47.7
KOD Kodaikanal 49.42 282 *e*P **P** **14 17 26.2 -0.8**
KOD AMb AMB 14 17 29.6
comp=Z,66nm,0.5s,mb5.9
HYB Hyderabad 49.56 291 *e*P **P** **14 17 36.5 +8.5**
comp=Z,73nm,0.8s,mb5.8
HYB Hyderabad 49.56 291 *e*P **P** **14 17 36.5 +8.5**
HYB pmax pmax
comp=Z,73nm,0.8s,mb5.8
HYB Hyderabad 49.56 291 *i* P **P** **14 17 26.5 -1.5**
comp=Z,73nm,0.8s,mb5.8
TRD Trivandrum 49.75 279 *e*P **P** **14 17 28.1 -1.5**
TRD AMb AMB 14 17 31.6
comp=Z,111nm,1.2s,mb5.8
TRD *e*S **S** **14 24 34.0 -4.0**
NGP Nagpur 50.02 296 *ex* **P** **14 17 25.7 -5.9**
NGP AMb AMB 14 17 27.6
comp=Z,81nm,1.3s,mb5.6
AKL Akola 51.74 295 *e*P **P** **14 17 43.1 -1.4**
AKL AMb AMB 14 17 45.9
comp=Z,200nm,1.6s,mb5.8
PTH Pithoragarh 51.84 307 *e*P **P** **14 17 44.0 -1.1**
PTH *ex* x 14 18 36.4
BHPL Bhopal 52.06 298 *e*P **P** **14 17 45.3 -1.5**
BHPL AMb AMB 14 17 48.2
comp=Z,105nm,1.3s,mb5.6
ZAK Zakamensk 52.18 341⇑ *i*P **P** **14 17 47.1 -0.1**
ZAK *e* 14 18 59.2
ZAK pmax pmax
comp=Z,12nm,1.3s,mb4.7
TLY Talaya 53.20 342 P **P** **14 17 55.2 +0.5**
comp=Z,274nm,0.9s,mb6.2,SNR=29
TLY Talaya 53.20 342 P **P** **14 17 55.5 +0.8**
SNR=29
TLY Talaya 53.20 342 *e*P **P** **14 17 55.1 +0.4**
comp=Z,35nm,0.8s,mb5.3
TLY Talaya 53.20 342⇑ *i*P **P** **14 17 55.3 +0.6**
TLY *e*S **S** **14 25 28.5 +4.2**
TLY pmax pmax
comp=Z,85nm,1.5s,mb5.5
TLY MLR MLR
comp=Z,930nm,25.0s,MS4.7
IRK Irkutsk 53.51 343⇓ *i*P **P** **14 17 56.9 -0.1**
IRK *e*S **S** **14 25 33.0 +4.5**
IRK pmax pmax
comp=Z,111nm,0.2s,mb6.4
KAD Karad 53.62 290 *e*P **P** **14 17 57.4 -1.1**
GOA Goa 53.65 288 *e*P **P** **14 17 58.3 -0.3**
NDI New Delhi 53.96 305 *e*P **P** **14 17 58.0 -2.8**
MOY Mondy 54.02 341 *e*P **P** **14 18 00.8 0.0**
MOY pmax pmax
comp=Z,100nm,2.5s,mb5.3
WMQ Urumqi 54.10 326 P **P** **14 18 01.0 -0.5**
WMQ AP pP 14 18 11.0 +2.3
WMQ XP sP 14 18 15.0 +3.6
WMQ S **S** **14 25 32.0 -4.9**
WMQ XS sS 14 25 50.0 +1.4
WMQ SCS ScS 14 27 44.0 -5.7
WMQ SS SS 14 29 14.0 -4.8
WMQ AMB AMB
comp=Z,61nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,198nm,4.0s
WMQ LR LR
comp=N,921nm,16.0s,MS5.0
WMQ LR LR
comp=E,758nm,16.0s,MS5.0
WMQ LR LR
comp=Z,946nm,17.0s,MS4.9
POO Poona 54.17 291 *e*P **P** **14 18 00.4 -2.0**
CLNS Chul'man 54.79 359 *e*P **P** **14 18 06.5 +0.2**
CLNS *e* 14 19 07.7
CLNS *e* 14 20 13.0
CLNS *e*S **S** **14 25 45.6 -0.1**
CLNS pmax pmax
comp=Z,53nm,0.9s,mb5.6
CLNS pmax pmax
comp=N,30nm,0.9s
CLNS pmax pmax
comp=E,27nm,1.2s
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,11nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,0.8s
CLNS smax
comp=N,17nm,1.4s
CLNS smax
comp=E,10.0nm,1.5s
SMLA Simla 54.88 307 *i* P **P** **14 18 06.9 -0.6**
SMLA *ex* x 14 18 08.5
comp=Z,397nm,0.7s
SMLA *i* x x 14 25 40.5
AJM Ajmer 55.41 301 *e*P **P** **14 18 09.2 -2.2**
DLH Dalhousie 56.36 308 *e*P **P** **14 18 17.0 -1.0**
THN Thein Dam 56.52 308 *e*P **P** **14 18 16.6 -2.6**
BOD Bodaibo 56.64 352 *e*P **P** **14 18 19.3 -0.2**
BOD pmax pmax
comp=Z,69nm,1.1s,mb5.6
PETK Petropavlovsk- 57.20 22 P **P** **14 18 24.2 +0.6**
comp=Z,27nm,0.7s,mb5.4,baz=181,slow=4.6,SNR=117
PETK PcP PcP 14 19 18.5 +0.6
comp=Z,5.3nm,0.6s,baz=164,slow=1.5,SNR=1.9
PETK Petropavlovsk- 57.20 22 P **P** **14 18 24.2 +0.6**
PETK PcP PcP 14 19 18.5 +0.6
PET Petropavlovsk 57.49 22 *e*P **P** **14 18 25.6 -0.1**
comp=Z,99nm,1.1s,mb5.8
PET Petropavlovsk 57.49 22 *e*P **P** **14 18 24.7 -0.9**
PET *e* 14 20 35.0
PET *e*S **S** **14 26 17.9 -3.8**
PET pmax pmax
comp=Z,92nm,0.9s,mb5.8
PET pmax pmax
comp=Z,300nm,14.4s
PET pmax pmax
comp=Z,300nm,19.2s
PET MLR MLR
comp=Z,400nm,21.0s,MS4.5
MK31 Makanchi Array 58.94 326 *e*P **P** **14 18 35.0 -0.9**
MKAR Makanchi Array 58.94 326 P **P** **14 18 35.5 -0.5**
comp=Z,51nm,0.5s,mb5.8,baz=121,slow=8.5,SNR=241
MKAR PcP PcP 14 19 24.2 -0.8

comp=Z,22nm,0.7s,baz=108,slow=6.5,SNR=4.5
MKAR LR LR 14 45 21.9
comp=Z,690nm,21.6s,MS4.7,baz=117,slow=37
MKAR PKP2bc 14 48 19.1
comp=Z,1.1nm,0.8s,baz=302,slow=2.7,SNR=4.1
MKAR Makanchi Array 58.94 326 P **P** **14 18 35.5 -0.5**
MKAR PcP PcP 14 19 24.2 -0.8
MKAR LR LR 14 45 21.9
MKAR ⇑*e* 14 48 19.1
MKAR Makanchi Array 58.94 326 P **P** **14 18 35.5 -0.4**
MKAR 14 19 24.2
KSH Kashi 59.19 316 P **P** **14 18 39.2 +1.4**
KSH *e*AP pP 14 18 43.7 -1.3
KSH *e*XP sP 14 18 46.2 -1.6
KSH *e*PCP PcP 14 19 26.5 +0.3
KSH *e*PP PP 14 20 52.0 +3.2
KSH *e*PPP 14 22 17.6
KSH *e*SCP ScP 14 23 25.6 -0.1
KSH *e*PCS PcS 14 23 27.5 -0.5
KSH *e*S **S** **14 26 44.4 0.0**
KSH *e*XS sS 14 26 53.4 -2.8
KSH *e*PS 14 27 02.0
KSH *e*SCS ScS 14 28 25.1 -1.7
KSH *e*SS SS 14 30 42.1 +3.0
KSH AMB AMB
comp=Z,534nm,0.8s,mb6.6
KSH LR LR
comp=Z,567nm,4.6s
YAK Yakutsk 60.03 2 *e*P **P** **14 18 42.9 -0.3**
comp=Z,164nm,0.9s,mb6.1
YAK LR LR
comp=Z,270nm,20.0s,MS4.4
YAK Yakutsk 60.03 2*c i*P **P** **14 18 43.0 -0.2**
YAK *e**PP pP 14 18 51.8 +1.4
YAK *e* 14 19 27.2
YAK *e*S **S** **14 26 55.5 +1.1**
YAK *e*SS SS 14 30 49.6 -1.8
YAK pmax pmax
comp=Z,134nm,0.9s,mb6.0
YAK pmax pmax
comp=N,60nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,70nm,2.7s,mb5.2
YAK pmax pmax
comp=N,142nm,2.7s
YAK smax
comp=E,135nm,1.9s
YAK smax
comp=N,120nm,1.5s
YAK MLR MLR
comp=Z,520nm,25.0s,MS4.6
YAK MLR MLR
comp=N,230nm,22.0s,MS4.4
YAK MLR MLR
comp=E,233nm,21.0s,MS4.4
KRAR Krasnoyarsk 60.36 339⇓ *e*P **P** **14 18 45.5 0.0**
KRAR pmax pmax
comp=Z,20nm,0.6s,mb5.3
KRAR MLR MLR
comp=Z,400nm,20.0s,MS4.6
TKM2 Tokmak 2 60.98 319 *e*P **P** **14 18 49.4 -0.6**
comp=Z,97nm,1.1s,mb5.8
TKM2 Tokmak 2 60.98 319 P **P** **14 18 49.6 -0.4**
TKM2 pmax pmax
comp=Z,97nm,1.1s,mb5.8
TKM2 Tokmak 2 60.98 319 P **P** **14 18 49.7 -0.3**
SNR=61
KBK Karagaybulak 61.28 319 P **P** **14 18 52.3 +0.2**
SNR=56
UCH Uchtor 61.38 318 P **P** **14 18 54.0 +1.2**
SNR=20
CHMS Chumysh 61.57 319 P **P** **14 18 53.4 -0.6**
SNR=26
AAK Ala-Archa 61.57 319 P **P** **14 18 54.7 +0.7**
comp=Z,308nm,0.9s,mb6.4,SNR=37
AAK Ala-Archa 61.57 319 P **P** **14 18 54.1 +0.1**
SNR=51
FRU Bishkek 61.58 319 *e*P **P** **14 18 52.0 -2.1**
FRU pmax pmax
comp=Z,80nm,1.2s,mb5.7
USP Ospenovka 61.85 319 P **P** **14 18 55.6 -0.3**
SNR=59
AML Almayashu 61.89 318 *e*P **P** **14 18 56.3 +0.1**
comp=Z,128nm,1.0s,mb6.0
AML Almayashu 61.89 318 P **P** **14 18 56.6 +0.5**
SNR=70
EKS2 Erkin-Say 62.06 318 *e*P **P** **14 18 57.1 -0.2**
comp=Z,108nm,1.1s,mb5.9
EKS2 Erkin-Say 62.06 318 P **P** **14 18 57.4 +0.1**
SNR=105
ZAA0 Zalesovo Array 62.12 334 *e*P **P** **14 18 55.8 -1.7**
ZALV Zalesovo Beam 62.12 334 P **P** **14 18 56.2 -1.2**
comp=Z,18nm,0.5s,mb5.5,baz=133,slow=6.4,SNR=80
ZALV LR LR 14 48 06.7
comp=Z,108nm,21.9s,MS4.0,baz=285,slow=38
ZALV PKP2bc 14 48 12.3
comp=Z,1.2nm,0.6s,baz=322,slow=4.5,SNR=6.9
ZALV Zalesovo Beam 62.12 334 P **P** **14 18 56.2 -1.3**
ZALV LR LR 14 48 06.7
ZALV ⇑*e* 14 48 12.3
KBL Kabul 62.47 308 *e*P **P** **14 18 59.2 -1.0**
comp=Z,96nm,0.8s,mb6.0
KBL Kabul 62.47 308 P **P** **14 18 59.7 -0.6**
KBL pmax pmax
comp=Z,96nm,0.8s,mb6.0
KURK Kurchatov 63.17 328 P **P** **14 19 04.6 +0.1**
comp=Z,1μm,0.6s
NVS Novosibirsk 63.40 334⇑ *i*P **P** **14 19 04.0 -2.0**
NVS *e* 14 19 37.0
NVS *i*S **S** **14 27 30.9 -6.5**
NVS pmax pmax
comp=N,42nm,1.6s
NVS pmax pmax
comp=Z,74nm,1.6s,mb5.6
NVS pmax pmax
comp=E,40nm,1.2s
NVS smax
comp=N,44nm,2.5s
NVS smax
comp=E,18nm,1.3s
SEY Seymchan 63.85 13⇓ *e*P **P** **14 19 10.6 +1.8**
SEY Seymchan 63.85 13⇓ *e*P **P** **14 19 10.5 +1.7**
KK31 Karatay Array 64.43 318 *i*P **P** **14 19 12.0 -1.0**
VOSK Vostochnaya 68.28 327 P **P** **14 19 36.4 -1.1**
VOSK pmax pmax
comp=Z,42nm,0.9s,mb5.5
WBK Wadi Bani Khal 68.58 293⇓ P **P** **14 19 39.9 -0.1**
SNR=13
BVA0 Borovoye Array 68.73 327 *i*P **P** **14 19 39.6 -0.7**
BVA0 pmax pmax
comp=Z,30nm,1.6s,mb5.0
BRVK Borovoye 68.81 327 P **P** **14 19 40.2 -0.6**
comp=Z,459nm,1.1s,mb6.3,SNR=40
BRVK Borovoye 68.81 327 P **P** **14 19 40.5 -0.2**
SNR=38
BRVK Borovoye 68.81 327 *e*P **P** **14 19 40.2 -0.5**
comp=Z,66nm,0.6s,mb5.7
BRVK LR LR
comp=Z,462nm,22.0s,MS4.7
BRVK Borovoye 68.81 327 *e*P **P** **14 19 40.2 -0.6**
BRVK pmax pmax
comp=Z,66nm,0.6s,mb5.7
BRVK MLR MLR
comp=Z,462nm,22.0s,MS4.7
CASY Casey 68.98 187 *e*P **P** **14 19 42.0 +0.4**
DRV Dumont d'Urvil 69.08 174 P **P** **14 19 48.0 +5.8**
DRV S S 14 28 43.0 -2.9
DRV SS SS 14 33 20.0 +7.7
DRV R 14 42 00.0
JMDO Jabal Madar 69.34 293 P **P** **14 19 43.5 -1.2**
SNR=15
BIDO Bidbid 69.46 294 P **P** **14 19 43.9 -1.6**
SNR=9.9
SMDO Samad 69.47 294 P **P** **14 19 44.4 -1.1**
SNR=8.2
TIXI Tiksi 69.67 1 *e*P **P** **14 19 44.4 -1.4**
comp=Z,57nm,1.1s,mb5.4
TIXI Tiksi 69.67 1 *e*P **P** **14 19 44.4 -1.3**
TIXI pmax pmax
comp=Z,74nm,1.4s,mb5.4
TIXI MLR MLR
comp=Z,239nm,19.0s,MS4.5
HOQ Hoqain 70.21 294 P **P** **14 19 49.3 -0.7**
SNR=6.1

BILL Bilibino 71.37 15⇓ *e*P **P** **14 19 56.3 +0.1**
BILL Bilibino 71.37 15 *e*P **P** **14 19 56.2 0.0**
BILL *e* 14 20 10.8
BILL pmax pmax
comp=Z,14nm,0.9s,mb4.9
BILL MLR MLR
comp=Z,100nm,19.0s,MS4.1
ABKT Ailbek 71.88 309 P **P** **14 19 59.0 -0.9**
comp=Z,220nm,0.7s,mb6.2,SNR=11
MIR Mirnyy 72.34 193⇓ *i*P **P** **14 20 04.0 +2.0**
MIR pmax pmax
comp=Z,300nm,1.0s,mb6.2
RBK Rabkut 72.57 288 P **P** **14 20 03.1 -1.3**
SNR=5.3
WHFO Wadi Hawf 73.01 288 P **P** **14 20 05.3 -1.6**
SNR=22
ABTO Aybut 73.42 287 P **P** **14 20 09.3 -0.2**
SNR=6.0
AB31 Akbulak array 73.43 321 P **P** **14 20 08.2 -0.7**
AB31 pmax pmax
comp=Z,32nm,0.8s,mb5.3
UNV Unalaska Valle 75.04 34 P **P** **14 20 18.0 -0.2**
SVE Sverdlovsk 75.40 329⇓ *e*P **P** **14 20 20.0 -0.2**
SVE *e*S S 14 30 01.2 +2.4
SVE *e* 14 30 36.3
SVE *e*SS SS 14 34 47.7 -1.6
SVE pmax pmax
comp=Z,304nm,1.1s,mb6.1
AKUT Akutan 75.54 34 *e*P **P** **14 20 21.1 +0.1**
comp=Z,510nm,1.4s,mb6.3
ARU Arti 76.36 328 P **P** **14 20 24.6 -1.1**
comp=Z,900nm,0.7s,mb6.8,SNR=56
ARU Arti 76.36 328 *e*P **P** **14 20 24.8 -0.9**
comp=Z,191nm,1.0s,mb6.0
ARU LR LR
comp=Z,446nm,21.0s,MS4.8
ARU Arti 76.36 328*c i*P **P** **14 20 24.8 -0.9**
ARU *e* 14 20 35.9
ARU *e* 14 23 13.9
ARU *e*S S 14 30 07.6 -1.8
ARU *e*SS SS 14 35 00.2 -3.6
ARU pmax pmax
comp=Z,172nm,1.0s,mb5.9
POHA Pohakuloa 78.02 70 P **P** **14 20 38.9 +3.1**
SOKR Solikamsk 78.19 331*c i*P **P** **14 20 35.3 -0.6**
SOKR pmax pmax
comp=Z,150nm,1.3s,mb5.8
SOKR MLR MLR
comp=Z,440nm,25.0s,MS4.7
SDPT Sand Point 78.82 34 *e*P **P** **14 20 39.5 +0.1**
comp=Z,191nm,1.1s,mb5.9
QRN Al-Qurain 79.09 299 *e*P **P** **14 20 40.2 -1.3**
baz=299
QRN AMb AMB 14 20 41.8
comp=Z,160nm,0.5s,mb6.2,baz=299
UMR Umm Al-Rimmam 79.32 300 *e*P **P** **14 20 41.5 -1.3**
baz=300
UMR AMb AMB 14 20 43.3
comp=Z,108nm,0.6s,mb6.0,baz=300
RDF Al-Radifah 79.43 299 *e*P **P** **14 20 41.8 -1.6**
baz=299
RDF AMb AMB 14 20 42.8
comp=Z,87nm,1.0s,mb5.6,baz=299
MIB Mutribah 79.67 300 *e*P **P** **14 20 43.4 -1.2**
baz=300
MIB AMb AMB 14 20 44.6
comp=Z,143nm,0.7s,mb6.0,baz=300
NAY Al-Naaiem 79.72 299 *e*P **P** **14 20 43.5 -1.5**
baz=299
NAY AMb AMB 14 20 45.7
comp=Z,69nm,0.7s,mb5.7,baz=299
OPO Ambohidratompo 80.50 251 P **P** **14 20 50.2 +0.9**
comp=Z,31nm,0.8s,mb5.3,baz=76,slow=4.6,SNR=66
MAK Makhachkala 80.67 313 *e*P **P** **14 20 44.1 -5.6**
MAK *e*S S 14 30 50.6 -5.5
MAK pmax pmax
comp=Z,189nm,1.6s,mb5.8
MAK MLR MLR
comp=Z,384nm,25.0s,MS4.7
MAW Mawson 81.97 200 *e*P **P** **14 20 57.1 +1.0**
comp=Z,21nm,0.8s,mb5.1
MAW Mawson 81.97 200 P **P** **14 20 57.3 +1.2**
comp=Z,26nm,0.9s,mb5.1,baz=58,slow=6.3,SNR=29
MAW Mawson 81.97 200 *e*P **P** **14 20 57.1 +1.0**
MAW pmax pmax
comp=Z,21nm,0.8s
DGRG David-gareji 82.11 311 P **P** **14 20 58.3 +0.9**
TRBA At Turbah 82.17 283 *e*P **P** **14 20 59.4 +1.1**
BHD Baghdad 82.39 303 *ex* x 14 20 57.0
BHD *ex* x 14 21 02.0
BHD *ex* x 14 31 12.0
BHD *ex* x 14 31 15.0
GNI Garni 82.49 310 P **P** **14 20 59.5 +0.1**
comp=Z,161nm,1.5s,mb5.7
GNI Garni 82.49 310 *i*P **P** **14 21 01.1 +1.6**
GNI pmax pmax
comp=Z,44nm,1.0s
GNI MLR MLR
comp=Z,100nm,25.0s
SVW2 Sparrevohn 82.50 29 *e*P **P** **14 20 59.9 +0.9**
SBA Scott Base 82.56 172 *e*P **P** **14 21 00.3 +1.2**
comp=Z,23nm,1.0s,mb5.2
SBA LR LR
comp=Z,207nm,20.0s,MS4.5
TBLG Delisi 82.60 312 *e*P **P** **14 21 02.7 +2.7**
TBLG Delisi 82.60 312 P **P** **14 21 02.8 +2.8**
GOR Gori 83.09 312 P **P** **14 21 03.5 +1.0**
OHAK Old Harbor 83.10 33 *e*P **P** **14 21 02.6 +0.4**
comp=Z,37nm,0.7s,mb5.5
HAKT HAKKARI 83.14 307⇑ *i*P **P** **14 21 04.5 +1.6**
KDAK Kodiak Island 83.54 32 P **P** **14 21 05.0 +0.5**
comp=Z,248nm,0.6s,mb6.5,SNR=12
KDAK Kodiak Island 83.54 32 *e*P **P** **14 21 05.2 +0.7**
comp=Z,78nm,1.3s,mb5.7
MSL Mosul 83.57 306 *ex* x 14 21 05.0
MSL *ex* x 14 31 25.0
ONI Oni 83.61 312 P **P** **14 21 05.9 +0.7**
IMA2 Indian Mountai 84.13 24 *e*P **P** **14 21 08.4 +1.1**
KIV Kislovodsk 84.24 314 P **P** **14 21 08.6 +0.2**
comp=Z,288nm,0.8s,mb6.5,SNR=7.7
KIV Kislovodsk 84.24 314 P **P** **14 21 09.4 +1.0**
SNR=8.1
KIV Kislovodsk 84.24 314 *e*P **P** **14 21 08.4 0.0**
comp=Z,41nm,0.8s,mb5.6
KIV LR LR
comp=Z,207nm,22.0s,MS4.5
KIV Kislovodsk 84.24 314 *e*P **P** **14 21 08.4 0.0**
KIV *e* 14 24 21.8
KIV *e* 14 31 27.0
KIV pmax pmax
comp=Z,39nm,0.8s,mb5.6
KIV pmax pmax
comp=Z,120nm,7.0s
KIV Kislovodsk 84.24 314⇑ *i*P **P** **14 21 08.7 +0.3**
PPLA Purkeypile 84.35 27 *e*P **P** **14 21 08.7 +0.2**
comp=Z,62nm,1.3s,mb5.6
CHUM Lake Minchumin 84.41 26 *e*P **P** **14 21 09.6 +0.9**
comp=Z,123nm,1.6s,mb5.8
ARTV Artvin 84.68 311⇑ *i*P **P** **14 21 11.4 +0.7**
DAGI Agillar 84.69 311⇑ *i*P **P** **14 21 11.0 +0.3**
PPT Papeete 84.76 108 *e*S S 14 31 37.9 -0.8
comp=Z,162nm,24.2s
PPT Papeete 84.76 108 *e*LQ 14 44 28.4
comp=Z,274nm,27.2s
PPT *e*LR LR 14 47 59.1
comp=Z,710nm,27.8s,baz=279
PPT Papeete 84.76 108 LR LR 14 51 35.6
comp=Z,394nm,20.6s,MS4.8,baz=268,slow=30
DDEM Demirkent 84.81 311⇑ *i*P **P** **14 21 11.8 +0.5**
DBAD Bademkaya 84.85 311⇑ *i*P **P** **14 21 12.2 +0.7**
DBOC Borcka 84.88 311⇑ *i*P **P** **14 21 12.0 +0.3**
KTH Kantishna Hill 84.99 26 *e*P **P** **14 21 12.0 +0.2**
comp=Z,72nm,1.7s,mb5.5
BPAW Bear Paw Mtn. 85.02 26 *e*P **P** **14 21 11.5 -0.3**
comp=Z,6.3nm,0.6s,mb4.9
SLKM Skilak Lake 85.03 30 *e*P **P** **14 21 11.8 -0.2**
ERZM Erzurum 85.07 310 *i*P **P** **14 21 14.2 +1.5**
BEST Besiri 85.09 308 *i*P **P** **14 21 13.1 +0.3**
TBI Tubuai 85.25 113 *e*S S 14 31 41.8 -1.7
comp=Z,326nm,25.5s
TBI Tubuai 85.25 113 *e*LQ 14 44 40.3
comp=Z,252nm,33.5s
TBI *e*LR LR 14 48 12.5
comp=Z,452nm,31.8s
TRF Thorofare Moun 85.26 27 *e*P **P** **14 21 13.1 0.0**
comp=Z,62nm,1.6s,mb5.5

RC01 Rabbit Creek A 85.32 29 *e*P **P** **14 21 13.3 -0.1**
comp=Z,46nm,0.6s,mb5.8
VRHR Novokhopersk 85.32 321 *e*P **P** **14 21 12.8 -0.8**
VRHR *e**SP sP 14 21 24.7 +0.9
VRHR pmax pmax
comp=Z,190nm,0.6s,mb6.4
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.7s
SEW Seward 85.38 30 *e*P **P** **14 21 14.2 +0.5**
MARD Mardin 85.47 307⇑ *i*P **P** **14 21 15.0 +0.3**
PMR Palmer 85.64 29 *e*P **P** **14 21 14.8 -0.2**
comp=E,69nm,1.0s,mb5.8
PMR Palmer 85.64 29 *e*P **P** **14 21 14.8 -0.2**
PMR pmax pmax
comp=Z,69nm,1.0s,mb5.8
COLD Coldfoot 85.65 23 *e*P **P** **14 21 15.8 +0.8**
comp=Z,17nm,0.6s,mb5.5
KOPT Kop Dagi 85.74 310⇑ *i*P **P** **14 21 16.9 +0.9**
MCK McKinley 85.89 26 *e*P **P** **14 21 15.5 -0.7**
comp=Z,16nm,0.7s,mb5.4
MCK McKinley 85.89 26 *e*P **P** **14 21 15.5 -0.7**
MCK pmax pmax
comp=Z,16nm,0.7s,mb5.4
SOC Sochi 86.38 313 *i* P **P** **14 21 19.9 +0.8**
SOC Sochi 86.38 313*c i*P **P** **14 21 17.6 -1.5**
SOC *e**PP pP 14 21 26.8 +0.2
SOC *e**SP sP 14 21 32.2 +3.0
SOC *e*S S 14 31 40.5 -13
SOC *e*SS SS 14 37 27.3 -6.4
SOC *e*SSS 14 41 01.2
SOC pmax pmax
comp=Z,110nm,1.0s,mb6.0
COLA College 86.43 25 P **P** **14 21 17.1 -1.8**
comp=Z,4.3nm,0.8s,mb4.7
COLA LR LR
comp=Z,208nm,19.0s,MS4.5
COLA College 86.43 25⇑ *e*P **P** **14 21 18.5 -0.4**
VORD Divnogorie 86.79 321 *e*P **P** **14 21 19.4 -1.5**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.5
VOR Voronezh 86.86 322 *e*P **P** **14 21 21.0 -0.2**
VOR pmax pmax
comp=Z,300nm,1.0s,mb6.5
VSR Storozhevoye 86.87 321 *e*P **P** **14 21 20.0 -1.3**
VSR *e**PP pP 14 21 28.2 -0.6
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.6
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,40nm,0.8s
KLMR Klimovskoe 86.89 331⇑ *i*P **P** **14 21 19.8 -1.4**
KLMR S S 14 31 39.8 -18
KLMR pmax pmax
comp=Z,101nm,1.0s,mb6.0
KEMA Kemaliye 87.28 309⇑ *i*P **P** **14 21 24.4 +0.9**
ATAB Bozova 87.44 307⇑ *i*P **P** **14 21 25.1 +0.7**
GRSN GIRESUNGRSN 87.44 311 *i* P **P** **14 21 24.2 -0.2**
ANN Anapa 88.03 315 *e*P **P** **14 21 26.1 -0.9**
ANN Anapa 88.03 315 *e*P **P** **14 21 26.2 -0.8**
ANN pmax pmax
comp=Z,181nm,0.9s,mb6.3
GZT Gaziantep 88.03 307⇑ *i*P **P** **14 21 27.6 +0.4**
MENT Mentasta 88.22 27 *e*P **P** **14 21 27.1 -0.4**
OBN Obninsk 88.43 325 P **P** **14 21 27.5 -1.2**
comp=Z,614nm,0.6s,mb7.0,SNR=6.5
OBN Obninsk 88.43 325 *e*P **P** **14 21 26.2 -2.4**
comp=Z,71nm,0.8s,mb6.0
OBN Obninsk 88.43 325 *e*P **P** **14 21 27.1 -1.6**
OBN pmax pmax
comp=Z,129nm,1.2s,mb6.0
ANDN Andirin 88.99 307⇑ *i*P **P** **14 21 31.9 +0.1**
EGAK Eagle 89.29 25 *e*P **P** **14 21 31.8 -0.7**
comp=Z,4.4nm,0.5s,mb5.0
HWQ Hawqa 89.42 304 *e*P **P** **14 21 34.0 +0.1**
APA Apatity 89.45 337⇓ *i*P **P** **14 21 35.4 +2.2**
APA pmax pmax
comp=Z,16nm,0.8s,mb5.4
APA MLR MLR
comp=Z,2μm,18.0s,MS5.6
BHL Bhannes 89.67 304 *e*P **P** **14 21 35.1 +0.1**
BOYT Boyabat 89.97 311 *i* P **P** **14 21 35.9 -0.3**
DAWY Dawson 90.10 26 *e*P **P** **14 21 36.4 0.0**
SIM Simferopol' 90.38 315*ce*P **P** **14 21 37.2 -0.9**
SIM pmax pmax
comp=Z,28nm,0.8s,mb5.6
SIM MLR MLR
comp=Z,600nm,28.9s,MS4.9
SYO Syowa Base 90.65 201⇓ *i*P **P** **14 21 38.0 -0.8**
SYO Syowa Base 90.65 201⇓ *i*pP PcP 14 21 41.5 +1.6
JOF Joensuu 90.70 333 *e*P **P** **14 21 37.2 -2.0**
comp=Z,14nm,0.7s,mb5.4
JOF Joensuu 90.70 333 *e*P **P** **14 21 37.2 -2.0**
JOF pmax pmax
comp=Z,14nm,0.7s,mb5.4
BRTR Keskin Array B 91.02 310 P **P** **14 21 40.5 -0.6**
comp=Z,9.6nm,0.8s,mb5.2,baz=129,slow=4.9,SNR=32
BRTR PP PP 14 25 18.9 +1.2
comp=Z,2.2nm,0.9s,baz=106,slow=4.4,SNR=5.1
BRTR LR LR 15 10 34.6
comp=Z,100nm,21.2s,MS4.2,baz=81,slow=41
BRTR Keskin Array B 91.02 310 P **P** **14 21 40.6 -0.6**
BRTR 14 25 18.9
HYT Haines Junctio 91.28 29 *e*P **P** **14 21 42.4 +0.5**
CSS Prodhromos 91.54 305 *e*P **P** **14 21 43.1 -0.6**
comp=Z,58nm,0.9s,mb5.9
QSPA South Pole Qui 91.82 180 P **P** **14 21 44.3 +0.3**
comp=Z,7.0nm,0.7s,mb5.1,baz=344,slow=1.2,SNR=10
QSPA PP PP 14 25 25.7 +2.8
comp=Z,7.5nm,1.0s,baz=300,slow=6.4,SNR=3.0
QSPA PKKPbc PKKPbc 14 39 02.4 -3.3
comp=Z,1.3nm,0.6s,baz=251,slow=2.7,SNR=3.5
INK Inuvik 91.93 21 *e*P **P** **14 21 44.0 -0.8**
comp=Z,1μm,1.4s
INK Inuvik 91.93 21 *e*P **P** **14 21 44.0 -0.8**
INK pmax pmax
comp=Z,1μm,1.4s
ARCES ARCESS Array B 92.08 340 P **P** **14 21 44.4 -1.1**
comp=Z,22nm,0.8s,mb5.5,baz=68,slow=6.7,SNR=22
ARCES PKKPbc PKKPbc 14 39 03.4 -1.1
comp=Z,2.6nm,0.9s,baz=197,slow=3.8,SNR=3.8
ARCES LR LR 15 07 01.1
comp=Z,321nm,21.1s,MS4.7,baz=260,slow=38
ARCES ARCESS Array B 92.08 340 P **P** **14 21 44.4 -1.1**
ARCES PKKPbc PKKPbc 14 39 03.4 -1.2
ARCES LR LR 15 07 01.1
ARCES ARCESS Array B 92.08 340 P **P** **14 21 44.4 -1.1**
ARCES 14 39 03.4
SGKT Sivrigoynuk 92.17 311 *i* P **P** **14 21 43.6 -3.0**
SKAG Skagway 92.53 30 *e*P **P** **14 21 48.7 +1.0**
comp=Z,18nm,0.8s,mb5.5
HENT Hendek 93.03 311⇑ *i*P **P** **14 21 50.1 -0.3**
KAF Kangasniemi 93.11 332 *ep* **P** **14 21 48.7 -1.6**
comp=Z,11nm,0.7s,mb5.4
KAF Kangasniemi 93.11 332 *e*P **P** **14 21 48.7 -1.6**
KAF pmax pmax
comp=Z,11nm,0.7s,mb5.4
AKASG Malin Array Be 93.17 321 P **P** **14 21 49.8 -1.1**
comp=Z,5.6nm,0.6s,mb5.2,baz=74,slow=4.0,SNR=20
AKASG LR LR 15 07 50.0
comp=Z,192nm,21.7s,MS4.5,baz=80,slow=38
ESKT Eskisehir 93.18 310 *i* P **P** **14 21 49.5 -1.7**
KIEV Kiev 93.18 321 *e*P **P** **14 21 49.5 -1.4**
comp=Z,14nm,0.9s,mb5.4
KIEV Kiev 93.18 321 *e*P **P** **14 21 49.5 -1.4**
KIEV pmax pmax
comp=Z,14nm,0.9s,mb5.4
ULDT Uludag 94.44 310⇑ *i*P **P** **14 21 56.0 -0.9**
MANT Manisa 95.06 309⇑ *i*P **P** **14 21 58.6 -1.3**
VRI Vrincioaia 95.47 316 ⇓P **P** **14 22 01.8 +0.3**
VRI Vrincioaia 95.47 316⇓ *i*P **P** **14 22 01.8 +0.3**
PLOR Plostina 95.52 316⇑ *i*P **P** **14 22 02.0 +0.2**
BURAR Bucovina Array 96.22 318⇑ *i*P **P** **14 22 04.6 -0.3**
BUR08 Bucovina Ar. S 96.22 318 *e*P **P** **14 22 04.7 -0.2**
LVV L'vov 96.60 320 *e*P **P** **14 22 08.6 +2.0**
KWP Kalwaria 97.48 320 *e*P **P** **14 22 09.5 -1.0**
comp=Z,33nm,1.0s,mb5.7
KWP Kalwaria 97.48 320 *e*P **P** **14 22 09.5 -1.1**
KWP pmax pmax

comp=Z,33nm,1.0s,mb5.7
KWP Kalwaria 97.48 320 ⇓*i*P **P 14 22 10.4 -0.2**
KOLS Kolonicke sedl 97.90 320 *e*P **P 14 22 12.1 -0.4**
DRGR 98.05 318 ⇑P **P 14 22 12.9 -0.3**
DRGR 98.05 318 ⇑*i*P **P 14 22 12.9 -0.3**
STHS Stebnicka Huta 98.46 320 *e*P **P 14 22 14.0 -1.0**
comp=Z,8.3nm,1.0s,mb5.2
STHS *e* 14 22 27.6
STHS Stebnicka Huta 98.46 320 *e*P **P 14 22 14.0 -1.0**
STHS *e* 14 22 27.6
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb5.2
STHS Stebnicka Huta 98.46 320 PDIF **P 14 22 14.0 -1.0**
STHS *e*pP pP 14 22 27.6 +5.1
VTS Vitosha 98.50 313 ⇓P **P 14 22 14.7 -0.6**
VTS Vitosha 98.50 313 ⇓*i*P **P 14 22 14.7 -0.6**
LSZ Lusaka 98.53 255 P **P 14 22 16.1 +0.1**
comp=Z,7.5nm,0.7s,mb5.3,baz=88,slow=3.9,SNR=14
LSZ Lusaka 98.53 255 *e*P **P 14 22 15.6 -0.4**
comp=Z,15nm,1.0s,mb5.5
LSZ Lusaka 98.53 255 *e*P **P 14 22 15.6 -0.4**
LSZ pmax pmax
comp=Z,15nm,1.0s,mb5.5
RKT Rikitea 98.57 113 *e*SS SS 14 40 28.3 -1.5
comp=Z,171nm,28.5s
RKT Rikitea 98.57 113 *e*LR LR 14 54 16.9
comp=Z,473nm,36.8s
DAG Danmarks Havn 99.03 352 ⇓*i*P **P 14 22 15.6 -1.4**
DAG pmax pmax
comp=Z,4.0nm,0.4s,mb5.3
DAG Danmarks Havn 99.03 352 ⇓*i*P **P 14 22 15.6 -1.4**
comp=Z,4.2nm,0.4s,mb5.3
BZS Buzias 99.03 317 ⇓P **P 14 22 16.9 -0.7**
BZS Buzias 99.03 317 ⇓*i*P **P 14 22 16.9 -0.7**
OJC Ojcow 99.18 321 *e*P **P 14 22 17.9 -0.3**
PSZ Piszkesteto 99.67 319 ⇑*i*P Pdif 14 22 20.6 +0.4
NB2 NORSAR Subarra100.32 333 P Pdif 14 22 20.9 -2.2
comp=Z,7.6nm,0.8s,baz=68,slow=4.4
NOA NORSAR Array B 100.32 333 P Pdif 14 22 21.3 -1.8
comp=Z,6.1nm,0.8s,baz=68,slow=4.5,SNR=11
LBTB Lobatse 100.70 245 P Pdif 14 22 25.6 +0.8
comp=Z,2.7nm,0.8s,baz=125,slow=8.2,SNR=3.2
MORC Moravsky Berou 100.70 321 ⇑P Pdif 14 22 24.6 -0.2
MORC Moravsky Berou 100.70 321 ⇑*i*P Pdif 14 22 24.6 -0.2
BOSA Boshof 100.80 241 P Pdif 14 22 26.3 +1.1
comp=Z,3.5nm,0.8s,baz=314,slow=5.4,SNR=4.4
PKSM Moragy 100.92 318 ⇑P Pdif 14 22 25.6 -0.2
PKSM Moragy 100.92 318 ⇑*i*P Pdif 14 22 25.6 -0.2
YKA Yellowknife Ar 101.24 24 P Pdif 14 22 26.3 -0.9
comp=Z,1.6nm,0.7s,baz=300,slow=3.8,SNR=5.6
YKA PP PP 14 26 34.3 -1.5
comp=Z,1.0nm,0.7s,baz=225,slow=8.1,SNR=3.6
MODS Modra-Piesok 101.25 320 *e*P Pdif 14 22 26.0 -1.3
comp=Z,3.2nm,1.0s
MODS *e* 14 22 35.6
MODS Modra-Piesok 101.25 320 *e*P Pdif 14 22 26.0 -1.3
MODS pmax pmax
comp=Z,3.0nm,1.0s
MODS Modra-Piesok 101.25 320 PDIF Pdif 14 22 26.0 -1.3
MODS pPDIF 14 22 35.6
BRG Berggiesshubel 102.57 323 *e*P Pdif 14 22 32.8 -0.3
comp=Z,5.5nm,0.9s
BRG *e* 14 26 48.1
BRG LR LR
comp=Z,120nm,22.2s,MS4.4
BRG Berggiesshubel 102.57 323 *e*P Pdif 14 22 32.8 -0.3
BRG *e* 14 26 48.1
BRG pmax pmax
comp=Z,6.0nm,0.9s
BRG pmax pmax
comp=Z,4.0nm,1.2s
BRG MLR MLR
comp=N,167nm,22.1s
BRG MLR MLR
comp=E,160nm,15.2s
BRG MLR MLR
comp=Z,120nm,22.2s,MS4.4
BRG Berggiesshubel 102.57 323 *e*Pdiff Pdif 14 22 32.6 -0.5
CLL Collm 102.99 324 *e*(PKiKP) PKiKP 14 26 53.0 -2.1
CLL *e*PS PS 14 35 54.0 -4.0
CLL *e*SS SS 14 41 36.0 +6.7
CLL *ex* x 14 50 18.0
GEC2 GERESS Array S 103.38 321 *e*Pdif Pdif 14 22 37.5 +0.8
GERES GERESS Array B 103.38 321 Pdiff Pdif 14 22 35.6 -1.1
comp=Z,2.6nm,0.9s,baz=72,slow=5.7,SNR=10
GERES PP PP 14 26 53.0 +0.7
comp=Z,1.5nm,0.6s,baz=74,slow=6.0,SNR=6.0
MOX Moxa 104.04 323 *e*Pdif Pdif 14 22 39.8 +0.1
GRA1 Grafenberg Arr 104.62 323 *e*Pdif Pdif 14 22 44.6 +2.4
GRA1 LR LR
comp=Z,200nm,20.4s,MS4.6
GRF Grafenberg Arr 104.62 323 *e*Pdiff Pdif 14 22 44.6 +2.4
GRF *e*L 15 14 28.8
comp=Z,218nm,20.4s
NVAR Mina Array Bea 108.28 48 Pdiff Pdif 14 22 59.2 +0.7
comp=Z,0.3nm,0.5s,baz=278,slow=4.9,SNR=3.7
NVAR PP PP 14 27 26.1 -2.8
comp=Z,1.7nm,0.8s,baz=258,slow=4.4,SNR=8.8
NVAR PKKPab PKKPab 14 38 30.9 +0.5
comp=Z,1.2nm,0.9s,baz=123,slow=5.5,SNR=6.3
NVAR Mina Array Bea 108.28 48 Pdif Pdif 14 22 59.2 +0.7
NVAR PP PP 14 27 26.1 -2.8
NVAR PKKPab PKKPab 14 38 30.9 +0.5
PGF Pioggiola 108.61 316 *e*PKIKP PKiKP 14 27 03.3 -2.5
LPG La Plagne 109.00 320 *e*PKIKP PKiKP 14 27 04.4 -2.0
comp=Z,2.7nm,0.4s
ORIF Oris-en-Rattie 109.80 319 *e*PKIKP PKiKP 14 27 05.9 -2.0
comp=Z,2.2nm,0.3s
LMR La Mourre 110.01 318 *e*PKIKP PKiKP 14 27 06.1 -2.3
SMF Signal de Mont 110.36 322 *e*PKIKP PKiKP 14 27 06.8 -2.1
AVF Avril sur Loir 110.60 322 *e*PKIKP PKiKP 14 27 07.3 -2.1
KEST Kesra 110.62 309 PP PP 14 27 44.5 -1.5
comp=Z,3.5nm,0.9s,baz=292,slow=3.9,SNR=6.1
DAU Daniels Canyon 112.69 44 *e*PKIKP PKiKP 14 27 06.0 -7.6
MSU Marysvale 112.77 47 *e*PKIKP PKiKP 14 27 14.4 +0.7
PDAR Pinedale Array 112.86 42 PP PP 14 28 03.2 +1.5
comp=Z,0.9nm,0.8s,baz=259,slow=3.0,SNR=4.3
PDAR PKKPbc PKKPbc 14 38 01.5 -1.1
comp=Z,0.8nm,0.6s,baz=114,slow=4.9,SNR=5.8
WUAZ Wupatki 114.48 49 *e*PKIKP PKiKP 14 27 18.5 +1.4
PV01 Paradox Valley 115.52 46 *e*PKPdif PKPdf 14 27 20.1 +1.0
RSDD Black Hills 115.75 38 *e*PKPdif PKPdf 14 27 19.1 -0.3
ULM Lac du Bonnet 116.66 29 PKP PKPdf 14 27 20.4 -0.5
comp=Z,8.3nm,0.7s,baz=306,slow=3.4,SNR=6.4
ANMO Albuquerque 118.40 48 *i* PKIKP PKPdf 14 27 25.9 +1.2
BNM Barren Site 118.60 49 *e*PKPdif PKPdf 14 27 26.1 +0.9
ESDC Sonseca Array 118.68 318 PP PP 14 28 39.5 -3.0
comp=Z,0.3nm,0.3s,baz=51,slow=10,SNR=4.1
ECSD EROS,Sioux Fal 120.40 35 *e*PKPdf PKPdf 14 27 27.7 -0.5
TXAR Lajitas Array 122.87 53 PKP PKPdf 14 27 34.0 +0.5
comp=Z,2.5nm,0.7s,baz=222,slow=1.1,SNR=32
TXAR PKKPbc PKKPbc 14 37 26.8 +0.6
comp=Z,0.5nm,0.5s,baz=134,slow=6.5,SNR=5.1
KSU1 Kansas State U 123.16 39 *e*PKPdf PKPdf 14 27 34.1 +0.4
TOA0 Torodi Ar. Sit 123.27 287 *e*PKPdf PKPdf 14 27 33.9 -0.6
TORD Torodi Ar. Bea 123.27 287 PKP PKPdf 14 27 34.5 -0.1
comp=Z,7.0nm,0.7s,baz=52,slow=1.7,SNR=36
TORD PP PP 14 29 18.2 +3.2
comp=Z,3.5nm,1.0s,baz=71,slow=5.9,SNR=4.4
TORD PKKPbc PKKPbc 14 37 25.4 +1.0
comp=Z,2.1nm,0.7s,baz=265,slow=3.4,SNR=9.3
JFWS Jewell Farm 124.46 32 *e*PKPdf PKPdf 14 27 35.1 -1.0
JCT Junction City 125.40 50 *e*PKPdf PKPdf 14 27 38.6 +0.3
CCM Cathedral Cave 127.12 37 *e*PKPdf PKPdf 14 27 41.3 -0.1
FVM French Village 127.66 37 *e*PKPdf PKPdf 14 27 42.4 0.0
OLIL Olney 128.52 35 *e*PKPdf PKPdf 14 27 44.6 +0.6
WCI Wyandotte Cave 129.89 34 *e*PKPdf PKPdf 14 27 46.9 +0.3
ACSO Alum Creek Sta 130.15 30 *e*PKPdf PKPdf 14 27 46.8 -0.2
WVT Waverly 130.45 37 *e*PKPdf PKPdf 14 27 47.6 -0.2
WVT Waverly 130.45 37 PKIKP PKPdf 14 27 47.4 -0.3
KIC Kosan Boka 130.65 280 *e*PKIKP PKPdf 14 27 49.5 +0.8
comp=Z,37nm,0.7s
NCB Newcomb 130.70 20 *e*PKPdf PKPdf 14 27 47.8 -0.2
DBIC Dimbokro 130.72 280 PKP PKPdf 14 27 49.9 +1.0
comp=Z,5.7nm,0.6s,baz=39,slow=2.3,SNR=15
DBIC SKPbc SKPbc 14 31 10.1 -1.6
comp=Z,7.3nm,0.9s,baz=354,slow=18,SNR=6.6
TIC Tsumodi 130.89 280 *e*PKIKP PKPdf 14 27 49.8 +0.6
comp=Z,34nm,0.8s
LIC Lamto 130.96 280 *e*PKIKP PKPdf 14 27 49.2 -0.1
comp=Z,22nm,0.8s
LIC Lamto 130.96 280 *e*PKIKP PKPdf 14 27 49.6 +0.3
comp=Z,34nm,0.8s
MDV Middlebury 131.02 19 *e*PKPdf PKPdf 14 27 48.7 +0.1
SSPA Standing Stone 132.17 25 *e*PKPdf PKPdf 14 27 50.5 -0.4
TZTN Tazewell 132.62 33 *e*PKPdf PKPdf 14 27 52.9 +1.1
LRAL Lakeview Retre 133.01 39 *e*PKPdf PKPdf 14 27 52.6 -0.1
TKL Tuckaleechee C 133.13 34 *e*PKPdf PKPdf 14 27 53.2 +0.4
TKL Tuckaleechee C 133.13 34 PKIKP PKPdf 14 27 53.2 +0.4
MVL Millersville 133.34 24 *e*PKPdf PKPdf 14 27 53.4 +0.3
ELN Prospectdale 133.57 30 *e*PKPdf PKPdf 14 27 52.8 -0.8
BLA Blacksburg 133.75 30 *e*PKPdf PKPdf 14 27 53.4 -0.6
GOGA Godfrey 134.92 36 PKIKP PKiKP 14 27 58.6 +0.9
PLCA Paso Flores 138.37 160 PKhKP 14 27 49.3
comp=Z,2.4nm,0.8s,baz=197,slow=7.7,SNR=4.6
PLCA PKP PKPdf 14 28 03.2 +0.8
comp=Z,7.1nm,0.8s,baz=267,slow=1.8,SNR=11
PLCA SKPab 14 31 41.7
comp=Z,2.0nm,0.9s,baz=196,slow=5.1,SNR=2.9
PLCA Paso Flores 138.37 160 PKHKP 14 27 49.3
PLCA 14 28 03.2
FCH Farellones 144.99 155 *e*P PKPdf 14 28 15.2 +0.8
TLL Tololo Astrono 147.43 151 *e*P PKPbc 14 28 21.4 +0.3
LCO Las Campanas 148.44 150 *e*PKPbc PKPbc 14 28 24.6 +0.7
LCO Las Campanas 148.44 150 ⇑*i*P PKPbc 14 28 23.9 0.0
BCIP Isla Barro Col 151.53 67 *e*PKPbc PKPbc 14 28 30.8 -1.0
ROSC El Rosal 158.12 72 PKP PKPdf 14 28 35.3 +0.5
comp=Z,8.1nm,0.7s,baz=130,slow=14,SNR=5.0
ROSC PKPab PKPab 14 29 10.7 +2.3
comp=Z,17nm,0.8s,baz=106,slow=15,SNR=6.0
ROSC El Rosal 158.12 72 *e*PKPdf PKPdf 14 28 35.3 +0.6
LPAZ La Paz 159.69 136 PKP PKPdf 14 28 38.1 +1.7
comp=Z,3.7nm,0.8s,baz=352,slow=1.6,SNR=14
LPAZ PKPab PKPab 14 29 16.1 +1.2
comp=Z,5.9nm,0.9s,baz=318,slow=3.2,SNR=3.9
BDFB Brasilia 165.32 201 PKP PKPdf 14 28 42.2 +0.2
comp=Z,3.4nm,0.9s,baz=102,slow=13,SNR=6.0
BDFB PKPab PKPab 14 29 40.8 +1.3
comp=Z,2.9nm,0.8s,baz=172,slow=12,SNR=4.9

KRSC 05 14:09:50.4±1.5, 5342N×15511E, h425km±84km, ML4.1, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**1.52**	**138**	P		14 10 47.9	+1.8
GNL	**Ganaly**	**1.71**	**80**	*e*P		14 10 48.3	+1.4
RUS	**Russkaya**	**2.29**	**114**	*e*P		14 10 52.3	+2.0
RUS				*e*S		14 11 38.3	-0.6
SPN	**Mys Shipunski**	**2.97**	**94**	*e*P		14 10 56.9	+1.8
SPN				*e*S		14 11 44.7	-3.1
MKZ	**Mys Kozlova**	**4.07**	**71**	*e*P		14 11 06.7	+2.2
MKZ				*e*S		14 12 01.2	-3.6
KBTR	**Krutoberegovo**	**5.26**	**55**	*e*S		14 12 25.4	-0.4

*ISCJB **05** 14:39:11.1±4.7, 65S×03×1299E×02, h198km±47km, mb3.7/2, Error ellipse: s-maj=46.8km s-min=19.8km az=32.3*
*IDC **05** 14:39:11.4±4.6, 651S×12996E, h181km±43km, mb3.5/2, mb1 3.4/5, mb1mx3.1/15, mbtmp3.3/5, Error ellipse: s-maj=42.4km s-min=16.7km az=60.0*

ISC 05 14:39:11.7±2.7, 65S×01×1299E±02, h183km±27km, n5, σ0°29/8, mb3.7/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.20**	**239**	P		**14 40 54.9**	**+0.4**
	1.4nm,0.3s,baz=108,slow=23,SNR=9.5						
BATI				S		**14 42 15.7**	**-0.2**
	2.3nm,0.3s,baz=307,slow=16,SNR=4.9						
WRA	**Warramunga Arr**	**14.00**	**163**	P		**14 42 22.2**	**-0.1**
	0.6nm,0.3s,baz=350,slow=13,SNR=21						
WRA				S		**14 44 48.5**	**-10**
	0.8nm,0.3s,baz=327,slow=23,SNR=16						
ASAR	**Alice Springs**	**17.46**	**168**	P		**14 43 04.1**	**-0.2**
	0.2nm,0.3s,baz=351,slow=11,SNR=33						
ASAR				S		**14 46 14.9**	**+0.1**
	0.2nm,0.3s,baz=350,slow=26,SNR=6.8						
STKA	**Stephens Creek**	**27.47**	**158**	P		**14 44 41.0**	**+0.2**
	3.8nm,1.1s,mb4.0,baz=337,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**67.80**	**327**	P		**14 49 49.6**	**-0.1**
	0.6nm,0.6s,mb3.5,baz=113,slow=7.4,SNR=10						

*ISCJB **05** 16:00:16.8±1.1, 3366N±004×3488E±006, h14km±4km, Error ellipse: s-maj=9.2km s-min=5.1km az=39.6*
*CSEM **05** 16:00:18.2±0.1, 3368N×3509E, h35km, ML2.8, Error ellipse: s-maj=5.9km s-min=1.7km az=133.0*
*GII **05** 16:00:19.6±1.0, 3352N×3498E, h0km, ML2.0/6*
*HLW **05** 16:00:20.8, 3346N×3507E, h15km, Mb2.4*
*GRAL **05** 16:00:20.6±0.3, 3378N×3516E, h44km±3km, MD2.8*

ISC 05 16:00:17.2±1.1, 3369N±004×3490E±007, h13km±6km, n22, σ1°05/32, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matirih**	**0.42**	**119**	*e*P		**16 00 28.9**	**+3.5**
BEYL	**Beyrouth**	**0.53**	**70**	*e*P		**16 00 28.7**	**+1.2**
HNTI	**Hanita**	**0.65**	**159**	Pg		**16 00 29.5**	**-0.4**
BHL	**Bhannes**	**0.67**	**71**	*e*P		**16 00 30.2**	**+0.1**
BHL				*e*S		**16 00 37.3**	**-1.6**
MMC7	**Mount Meron ar**	**0.79**	**148**	Pg		**16 00 33.4**	**+0.9**
MMA1	**Mount Meron ar**	**0.80**	**147**	Pg		**16 00 33.5**	**+0.9**
RCY	**Rachaya**	**0.80**	**105**	*e*P		**16 00 32.8**	**+0.2**
RCY				*e*S		**16 00 41.7**	**-1.4**
MMA0	**Mount Meron ar**	**0.80**	**148**	Pg		**16 00 33.3**	**+0.7**
MMA0B	**Mount Meron ar**	**0.80**	**148**	Pg		**16 00 33.2**	**+0.6**
MMA0B				Sg		**16 00 43.1**	**0.0**
MMB1	**Mount Meron ar**	**0.80**	**147**	Pg		**16 00 33.6**	**+0.9**
KSDI	**Kefar Szold**	**0.81**	**128**	Pg		**16 00 33.4**	**+0.5**
HRI	**Mount Hermon**	**0.82**	**121**	Pg		**16 00 33.3**	**+0.2**
HRI				Sg		**16 00 44.2**	**+0.4**
KSHT	**Keshet**	**1.04**	**133**	Pg		**16 00 37.4**	**+0.1**
HWQ	**Hawqa**	**1.05**	**56**	*e*P		**16 00 35.3**	**-1.9**
HWQ				*e*S		**16 00 46.2**	**-4.7**
OFRI	**'Ofer**	**1.07**	**176**	Pg		**16 00 38.0**	**+0.1**
MMLI	**Mount Malkishu**	**1.33**	**160**	Pg		**16 00 41.7**	**-1.0**
MMLI				Sg		**16 00 59.0**	**-0.9**
SLTI	**Sal'it**	**1.45**	**175**	Pg		**16 00 44.0**	**-1.1**
SLTI				Sg		**16 01 02.6**	**-1.4**
HMDT	**Nahal Hemdat**	**1.53**	**160**	Pn		**16 00 44.8**	**+0.7**
HMDT				Sn		**16 01 04.9**	**+0.9**
MZDA	**Masada**	**2.41**	**170**	Sn		**16 01 26.6**	**+0.9**
RSH		**2.90**	**200**	P		**16 01 03.9**	**+0.9**
	232nm,0.1s						
RSH				S		**16 01 35.2**	**-2.6**
AMAG	**Maghara**	**3.36**	**206**	P		**16 01 10.4**	**+1.0**
AMAG				S		**16 01 46.6**	**-2.5**
HKAT	**Jabal Katrina**	**5.21**	**189**	P		**16 01 35.3**	**+0.5**

IDC 05 16:09:17.5±2.1, 370N×12772E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, MS2.3/1, Ms1 2.3/1, ms1mx1.9/19, Error ellipse: s-maj=152.2km s-min=25.7km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**23.01**	**1**	LR	LR	16 23 27.1	
	comp=Z,7.8nm,18.7s,baz=108,slow=37						
WRA	**Warramunga Arr**	**24.38**	**165**	P	P	16 14 37.3	-0.2
	0.7nm,0.4s,baz=344,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**27.86**	**168**	P	P	16 15 09.3	+0.4
	0.4nm,0.5s,baz=354,slow=8.0,SNR=16						
MKAR	**Makanchi Array**	**58.15**	**325**	P	P	16 19 13.1	0.0
	0.3nm,0.4s,baz=111,slow=8.5,SNR=6.7						

*ISCJB **05** 16:37:38.9±0.9, 3628N±004×5300E±003, h1km±7km, Error ellipse: s-maj=7.2km s-min=4.6km az=179.6*
*CSEM **05** 16:37:39.9±0.1, 3622N×5298E, h14km, ML3.5, Error ellipse: s-maj=1.4km s-min=0.9km az=178.0*
*THR **05** 16:37:39.3±0.6, 3625N×5306E, h14km±6km, ML3.6*

ISC 05 16:37:40.2±0.9, 3625N±004×5299E±003, h1km±7km, n29, σ0°64/33, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IALA	**Alasht**	**0.22**	**220**	*e*Pg	Pg	**16 37 44.9**	**+0.4**
ISHM	**Shahmirzad**	**0.51**	**151**	*e*Pg	Pg	**16 37 49.9**	**-0.1**
ISHM				*e*Sg	Sg	**16 37 57.5**	**+0.9**
DAMV	**Damavand**	**1.03**	**233**	*e*Pg	Pg	**16 37 59.5**	**-0.5**
DAMV				AML	AML	16 38 19.2	
	comp=E,1μm,0.4s						
IANJ	**Anjilo**	**1.09**	**136**	*e*Pg	Pg	**16 38 00.2**	**-0.9**
IAFJ	**Afjeh**	**1.11**	**249**	*e*Pg	Pg	**16 38 01.2**	**-0.3**
CHTH	**Charan**	**1.55**	**258**	*e*Pg	Pn	**16 38 08.6**	**-0.4**
CHTH				*e*Sg	Sg	**16 38 30.2**	**+0.2**
CHTH				AML	AML	16 38 31.5	
	comp=N,252nm,0.4s						
CHTH	**Charan**	**1.55**	**258**	*e*Pg	Pn	**16 38 08.6**	**-0.4**
	SNR=90						
CHTH				*e*Sg	Sg	**16 38 30.2**	**+0.2**
	SNR=90						
IVRN	**Varamin**	**1.62**	**220**	*e*Pg	Pn	**16 38 09.7**	**-0.3**
IVRN				*e*Sn	Sn	**16 38 31.5**	**-0.1**
THKV	**Tehran--Karaj**	**1.74**	**259**	*e*Pg	Pn	**16 38 12.4**	**+0.7**
THKV				AML	AML	16 38 40.7	
	comp=E,752nm,0.4s						
THKV				AML	AML	16 38 43.2	
	comp=N,616nm,0.5s						
ISFB	**Sefidab**	**1.99**	**198**	*e*Pn	Pn	**16 38 14.8**	**-0.3**
GHVR	**GHOM**	**2.25**	**219**	*e*Pg	Pn	**16 38 21.4**	**+2.8**
GHVR				AML	AML	16 38 57.0	
	comp=N,924nm,0.5s						
GHVR				AML	AML	16 38 58.0	
	comp=E,659nm,0.6s						
IRAZ	**Razeghan**	**2.63**	**252**	*e*Pn	Pn	**16 38 23.0**	**-0.8**
MRVT	**Maraveh tapeh**	**2.85**	**60**	*e*Pn	Pn	**16 38 25.7**	**-1.2**
ASAO	**Ashtian**	**2.96**	**236**	*e*Pn	Pn	**16 38 28.8**	**+0.4**
NASN	**Na'in**	**3.45**	**183**	*e*Pn	Pn	**16 38 34.8**	**-0.4**
ZNJK	**Zanjan**	**3.49**	**278**	*e*Pn	Pn	**16 38 36.4**	**+0.7**
ZNJK				AML	AML	16 39 36.2	
	comp=N,84nm,0.6s						
ZNJK				AML	AML	16 39 37.2	
	comp=E,37nm,0.4s						
ISHV	**Shirvan**	**3.99**	**70**	*e*Pn	Pn	**16 38 43.1**	**+0.5**
ISFR	**Sfrayin**	**4.11**	**77**	*e*Pn	Pn	**16 38 44.4**	**+0.2**
ICHK	**Chekchek**	**4.17**	**163**	*e*Pn	Pn	**16 38 44.5**	**-0.5**
ISAD	**Sadrabad**	**4.37**	**172**	*e*Pn	Pn	**16 38 47.7**	**-0.1**
ISRB	**Sarab**	**4.54**	**292**	*e*Pn	Pn	**16 38 50.0**	**-0.1**
IAKL	**Akhelmad**	**4.66**	**84**	*e*Pn	Pn	**16 38 51.7**	**-0.1**
IEMG	**Emamgholi**	**4.69**	**74**	*e*Pn	Pn	**16 38 52.8**	**+0.6**
IPAY	**Payeh**	**4.85**	**86**	*e*Pn	Pn	**16 38 55.4**	**+1.0**
IMEH	**Mehriz**	**5.04**	**164**	*e*Pn	Pn	**16 38 56.5**	**-0.4**
IBST	**Bostanabad**	**5.09**	**288**	*e*Pn	Pn	**16 38 57.7**	**0.0**
IBAF	**Bafgh**	**5.12**	**155**	*e*Pn	Pn	**16 38 57.7**	**-0.4**
IMYA	**Miami**	**5.75**	**87**	*e*Pn	Pn	**16 39 06.6**	**-0.1**
IMRD	**Marand**	**6.29**	**295**	*e*Pn	Pn	**16 39 13.8**	**-0.4**

*IDC **05** 17:12:02.8±0.9, 4505N×8066E, h0km, mb3.6/5, mb1 3.7/9, mb1mx3.6/25, mbtmp3.6/9, ML3.5/4, Error ellipse: s-maj=15.3km s-min=10.8km az=81.0*
*ISCJB **05** 17:12:04.0±0.5, 4505N±007×8078E±009, h10km, mb3.6/4, Error ellipse: s-maj=11.8km s-min=5.9km az=140.9*
*NNC **05** 17:12:05.6±0.7, 4494N×8102E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=8.6km s-min=3.9km az=135.0*
*MOS **05** 17:12:06.1±1.8, 4511N×8050E, h33km, mb3.7/1, Error ellipse: s-maj=19.6km s-min=11.1km az=77.4*
*NEIC **05** 17:12:09.0±0.6, 4517N×8060E, h50km±8km, Error ellipse: s-maj=10.2km s-min=5.8km az=138.0*

ISC 05 17:12:05.9±0.5, 4512N±006×8074E±008, h10km, n33, σ1°41/41, mb3.6/4, 4C-7D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**1.99**	**32**	⇓P	Pn	**17 12 41.1**	**+1.5**
	6.4nm,0.2s,baz=206,slow=15,SNR=1670						
MK31				Sn	Sn	**17 13 09.3**	**+4.7**
	711nm,0.8s,baz=206,slow=30,SNR=64						
MK31	**Makanchi Array**	**1.99**	**32**	*e*P	Pn	**17 12 40.7**	**+1.1**
MK31				*e*S	Sn	**17 13 08.2**	**+3.6**
MK31	**Makanchi Array**	**1.99**	**32**	PN	Pn	**17 12 41.0**	**+1.4**
MK31						17 13 09.3	
MK31				pmax	pmax		
	comp=Z,39nm,0.2s						
MK31				smax			
	comp=N,119nm,0.2s						
MKAR	**Makanchi Array**	**1.99**	**32**	Pn	Pn	**17 12 41.1**	**+1.5**
	comp=N,28nm,0.3s,baz=208,slow=15,SNR=840						
MKAR				Lg		17 13 08.3	
	comp=N,98nm,0.3s,baz=207,slow=27,SNR=106						
KNDC	**Almaty**	**3.32**	**236**	⇑Pn	Pn	**17 13 00.2**	**+2.4**
	comp=N,50nm,0.4s						
KNDC				⇓Sn	Sn	**17 13 41.7**	**+4.4**
	comp=N,140nm,0.8s						
TKM2	**Tokmak 2**	**4.31**	**241**	⇑Pn	Pn	**17 13 13.8**	**+2.3**
	comp=N,15nm,0.5s						
TKM2				⇑Sn	Sn	**17 14 07.3**	**+5.4**
	comp=N,91nm,0.8s						
TKM2	**Tokmak 2**	**4.31**	**241**	*e*P	Pn	**17 13 11.2**	**-0.3**
TKM2	**Tokmak 2**	**4.31**	**241**	PN	Pn	**17 13 11.9**	**+0.4**
TKM2						17 14 13.2	
TKM2				pmax	pmax		
	comp=Z,15nm,0.5s						
TKM2				pmax	pmax		
	comp=N,91nm,0.8s						
TKM2	**Tokmak 2**	**4.31**	**241**	P	Pn	**17 13 12.5**	**+1.0**
	SNR=14						
CHMS	**Chumysh**	**4.81**	**246**	P	Pn	**17 13 18.0**	**-0.4**
	SNR=5.2						
USP	**Ospenovka**	**4.86**	**250**	P	Pn	**17 13 20.3**	**+1.4**
	SNR=7.5						
KBK	**Karagaybulak**	**4.86**	**242**	P	Pn	**17 13 19.4**	**+0.4**
	SNR=42						
KZA	**Kyzart**	**5.02**	**235**	P	Pg	**17 13 36.4**	**-5.6**
	SNR=9.3						
AAK	**Ala-Archa**	**5.16**	**243**	P	Pn	**17 13 23.3**	**+0.2**
	SNR=16						
EKS2	**Erkin-Say**	**5.60**	**246**	*e*P	Pn	**17 13 28.1**	**-1.1**
	comp=N,11nm,0.6s						
KURBB	**Kurchatov Arra**	**5.70**	**346**	⇓Pn	Pn	**17 13 34.8**	**+4.3**
	comp=N,1.1nm,0.5s,baz=170,slow=13						
KURBB				⇑Sn	Sn	**17 14 43.3**	**+7.2**
	comp=N,36nm,0.7s,baz=173,slow=29						
KURK	**Kurchatov**	**5.78**	**346**	⇓Pn	Pn	**17 13 35.6**	**+4.0**
	comp=N,9.3nm,0.7s						
KURK				⇓Sn	Sn	**17 14 45.6**	**+7.7**
	comp=N,67nm,0.7s						
KURK	**Kurchatov**	**5.78**	**346**	Pn	Pn	**17 13 30.2**	**-1.4**
	baz=165,slow=12						
KURK				Sn	Sn	**17 14 34.2**	**-3.6**
	baz=160,slow=20						
KURK				Lg		17 15 02.9	
	baz=167,slow=29						
AML	**Almayashu**	**5.92**	**242**	*e*P	Pn	**17 13 34.9**	**+1.2**
	comp=N,11nm,0.5s						
AML	**Almayashu**	**5.92**	**242**	P	Pn	**17 13 35.3**	**+1.7**
	SNR=11						
KK31	**Karatay Array**	**7.63**	**258**	⇓Pg	Pg	**17 14 27.6**	**-4.4**
	comp=N,2.5nm,0.5s,baz=63,slow=15						
KK31				⇓Lg		17 16 15.0	
	comp=N,13nm,0.7s,baz=63,slow=28						
ZAA0	**Zalesovo Array**	**9.22**	**15**	*e*P	Pn	**17 14 19.0**	**+0.2**
ZALV	**Z

ellipse: s-maj=487.5km s-min=101.8km az=78.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.11**	**269**	*eP*	P	17 27 29.1	+0.2
	4.1nm,0.4s						
CTA	**Charters Tower**	**35.11**	**269**	P	P	17 27 29.1	+0.2
	4.4nm,0.4s,baz=94,slow=11,SNR=15						
STKA	**Stephens Creek**	**38.14**	**248**	*eP*	P	17 27 53.7	-0.4
	3.3nm,1.4s						
STKA	**Stephens Creek**	**38.14**	**248**	P	P	17 27 53.7	-0.4
	1.1nm,0.5s,baz=99,slow=14,SNR=5.7						
ASAR	**Alice Springs**	**45.64**	**260**	P	P	17 28 54.0	-0.1
	0.6nm,0.3s,baz=96,slow=8.9,SNR=36						
WB2	**Warramunga Arr**	**46.03**	**265**	*eP*	P	17 28 57.1	-0.1
WRA	**Warramunga Arr**	**46.04**	**265**	P	P	17 28 57.2	-0.1
	2.5nm,0.5s,baz=102,slow=8.1,SNR=51						
WRA				ScP	ScP	17 33 44.3	-0.5
	0.7nm,0.8s,baz=98,slow=4.0,SNR=6.4						

NDI ***05*** *17:32:19.0±5.3, 2835N×8511E, h5km, ML4.4, mb4.3(NEIC)*
IDC ***05*** *17:32:24.0±1.7, 2816N×8433E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.6/22, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=62.1km s-min=18.4km az=65.0*
ISCJB ***05*** *17:32:25.0±0.5, 2823N±005×8441E±003, h15km±4km, mb4.0/5, Error ellipse: s-maj=8.1km s-min=2.9km az=20.7*
DMN ***05*** *17:32:26.8±0.2, 2820N×8445E, h2km, Ml4.8/5, Error ellipse: s-maj=6.8km s-min=2.3km az=17.0*
NEIC ***05*** *17:32:26.8, 2820N×8445E, h2km, mb4.3/1, ML4.8(DMN), After DMN.*

ISC 05 17:32:26.2±0.5, 2823N±005×8443E±003, h11km±4km, n41, σ0890/58, mb4.0/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.29**	**141**	*ePg*	**Pg**	**17 32 31.8**	**-0.2**
GKN	**Gorkha**	**0.29**	**141**	*ePg*	**Pg**	**17 32 31.8**	**-0.2**
GKN				*eSg*	**Sg**	**17 32 35.7**	**-0.2**
	62μm,0.3s						
DANN	**Dangsing**	**0.61**	**282**	*ePg*	**Pg**	**17 32 38.9**	**+0.9**
DANN	**Dangsing**	**0.61**	**282**	*eSg*	**Sg**	**17 32 38.9**	**+0.9**
DANN				*eSg*	**Sg**	**17 32 46.4**	**+0.4**
	7μm,0.3s						
DANN	**Dangsing**	**0.61**	**282**	*eSg*	**Sg**	**17 32 46.4**	**+0.4**
DMN	**Daman**	**0.86**	**136**	*ePg*	**Pg**	**17 32 42.3**	**-0.4**
DMN				*eSg*	**Sg**	**17 32 53.1**	**-0.8**
	3μm,0.4s						
DMN	**Daman**	**0.86**	**136**	*ePg*	**Pg**	**17 32 42.2**	**-0.5**
DMN				*eSg*	**Sg**	**17 32 53.1**	**-0.8**
KOLN	**Koldanda**	**0.86**	**239**	*ePg*	**Pg**	**17 32 43.7**	**+0.8**
KOLN	**Koldanda**	**0.86**	**239**	*ePg*	**Pg**	**17 32 43.8**	**+0.9**
KOLN				*eSg*	**Sg**	**17 32 54.0**	**-0.2**
	3μm,0.2s						
KKN	**Kakani**	**0.87**	**120**	*ePg*	**Pg**	**17 32 41.8**	**-1.1**
KKN	**Kakani**	**0.87**	**120**	*ePg*	**Pg**	**17 32 41.8**	**-1.1**
KKN				*eSg*	**Sg**	**17 32 53.3**	**-0.9**
	2μm,0.3s						
PKI	**Pulchoki**	**1.08**	**127**	*ePg*	**Pg**	**17 32 46.4**	**-0.6**
PKI				*eSg*	**Sg**	**17 33 01.3**	**+0.2**
	2μm,0.3s						
GUN	**Gumba**	**1.32**	**103**	*ePn*	**Pn**	**17 32 49.9**	**-0.5**
GUN				*eSn*	**Sn**	**17 33 07.5**	**-0.5**
	1μm,0.3s						
JIRN	**Jiri**	**1.65**	**110**	*ePn*	**Pn**	**17 32 56.1**	**+1.0**
JIRN				*eSn*	**Sn**	**17 33 16.7**	**+0.4**
	2μm,0.3s						
RAMN	**Ramite**	**2.31**	**123**	*ePn*	**Pn**	**17 33 04.8**	**+0.8**
RAMN				*eSn*	**Sn**	**17 33 31.9**	**-0.5**
	3μm,0.5s						
ODAN	**Odare**	**2.96**	**117**	*ePn*	**Pn**	**17 33 14.0**	**+1.0**
TAPN	**Taplejung**	**3.03**	**106**	*ePn*	**Pn**	**17 33 15.5**	**+1.5**
ALBI	**Allahabad**	**3.73**	**220**	*eP*	**Pn**	**17 33 25.5**	**+1.8**
LGTI	**Lohaghat**	**3.87**	**289**	*eP*	Px	17 33 14.0	
LGTI				*eS*	**Sn**	**17 34 09.0**	**-2.0**
PTH	**Pithoragarh**	**3.92**	**291**	*ex*	**Pg**	**17 33 42.0**	**+0.6**
PTH				*eS*	**Sn**	**17 34 16.5**	**+4.1**
JOSI	**Joshimath**	**4.85**	**300**	*eP*	**Pn**	**17 33 39.2**	**+0.2**
JOSI				*ex*	**Sn**	**17 34 34.6**	**-0.5**
JOSI				AML	AML	17 35 08.3	
	comp=N,263nm,0.9s						
JOSI				AML	AML	17 35 10.8	
	comp=E,448nm,0.5s						
LSA	**Lhasa**	**6.07**	**74**	*eP*	**Pn**	**17 33 56.4**	**+0.6**
	comp=E,3.9nm,0.3s						
NDI	**New Delhi**	**6.37**	**276**	*ex*	x	17 34 35.0	
SMLA	**Simla**	**6.95**	**296**	*i* P	**Pn**	**17 34 09.7**	**+1.8**
SMLA				*i* S	**Sn**	**17 35 26.1**	**-0.9**
SMLA				*ex*	x	17 35 30.6	
	comp=E,806nm,0.4s						
SMLA				*ex*	x	17 35 30.6	
	comp=N,804nm,0.3s						
KUDL	**Kundal**	**7.01**	**271**	*eP*	**Pg**	**17 34 39.5**	**-0.9**
KUDL				*eS*	**Sg**	**17 36 00.4**	**-11**
SDNR	**Sundarnagar**	**7.25**	**299**	*ex*	**Pn**	**17 34 15.0**	**+2.9**
SDNR				*eS*	**Sn**	**17 35 34.4**	**0.0**
KHET	**Khetri**	**7.62**	**271**	*eP*	**Pn**	**17 34 17.8**	**+0.7**
KHET				*eS*	**Sn**	**17 35 43.3**	**-0.1**
THN	**Thein Dam**	**8.62**	**301**	*eP*	**Pn**	**17 34 30.6**	**-0.2**
THN				*eS*	**Sn**	**17 36 05.7**	**-2.3**
HYB	**Hyderabad**	**12.04**	**208**	*eP*	**Pn**	**17 35 16.5**	**-1.3**
HYB				*eS*	Sn	17 37 53.0	+21
HYB	**Hyderabad**	**12.04**	**208**	*i* P	**Pn**	**17 35 16.5**	**-1.3**
HYB				*eS*	**Sn**	**17 37 39.5**	**+7.4**
CMAR	**Chiang Mai Arr**	**16.48**	**123**	Pn	**Pn**	**17 36 18.5**	**+1.1**
	comp=N,0.2nm,0.3s,baz=312,slow=10,SNR=9.7						
MK31	**Makanchi Array**	**18.61**	**355**	*eP*	**Pn**	**17 36 43.1**	**-0.5**
MKAR	**Makanchi Array**	**18.61**	**355**	P	**Pn**	**17 36 43.2**	**-0.5**
	comp=N,0.3nm,0.3s,baz=182,slow=11,SNR=14						
KURK	**Kurchatov**	**22.89**	**350**	P	**P**	**17 37 28.7**	**-0.9**
	baz=175,slow=9.0						
ZALV	**Zalesovo Beam**	**25.70**	**1**	P	**P**	**17 37 56.2**	**+0.1**
	comp=N,1.2nm,0.4s,mb3.8,baz=186,slow=10,SNR=8.6						
ZALV	**Zalesovo Beam**	**25.70**	**1**	P	**P**	**17 37 56.2**	**+0.1**
SONM	**Songino Array**	**25.97**	**35**	P	**P**	**17 37 59.3**	**+0.8**
	comp=N,0.4nm,0.4s,baz=224,slow=10,SNR=4.6						
ARCES	**ARCESS Array B**	**53.09**	**338**	P	**P**	**17 41 43.2**	**+0.1**
	comp=N,5.2nm,1.1s,mb4.4,baz=92,slow=8.3,SNR=3.0						
WRA	**Warramunga Arr**	**67.97**	**129**	P	**P**	**17 43 25.3**	**-0.1**
	comp=N,0.8nm,0.7s,mb3.9,baz=322,slow=6.5,SNR=9.0						
WRAB	**Tennant Creek**	**67.97**	**129**	*eP*	**P**	**17 43 24.9**	**-0.4**
	comp=N,2.4nm,1.1s,mb4.1						
ASAR	**Alice Springs**	**70.25**	**132**	P	**P**	**17 43 39.3**	**-0.2**
	comp=N,0.6nm,0.6s,mb3.7,baz=315,slow=6.2,SNR=8.7						

IDC 05 18:25:03.8±3.4, 572S×15207E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/14, mbtmp3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx1.9/19, Error ellipse: s-maj=114.9km s-min=29.7km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.36**	**201**	LR	LR	18 34 04.7	
	comp=Z,32nm,18.3s,baz=233,slow=35						
WB2	**Warramunga Arr**	**22.29**	**229**	*eP*	P	18 30 04.4	+1.6
WRA	**Warramunga Arr**	**22.29**	**229**	P	P	18 30 03.2	+0.3
	1.6nm,0.5s,baz=53,slow=9.9,SNR=28						
ASAR	**Alice Springs**	**24.98**	**223**	P	P	18 30 29.2	-0.2
	0.6nm,0.5s,baz=57,slow=8.7,SNR=24						
SONM	**Songino Array**	**66.72**	**328**	P	P	18 35 57.0	+0.3
	0.3nm,0.7s,baz=132,slow=4.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**149.88**	**286**	PKPbc	PKPbc	18 44 56.8	-0.3
	1.5nm,0.7s,baz=80,slow=2.2,SNR=15						

IDC ***05*** *18:33:07.4±1.4, 4441N×14993E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/20, mbtmp3.4/3, Error ellipse: s-maj=42.3km s-min=39.6km az=71.0*
JMA ***05*** *18:33:11.9±0.5, 4458N×14989E, h30km, M4.1*
ISCJB ***05*** *18:33:13.8±1.5, 437N±0.1×1498E±0.1, h76km±17km, mb3.3/2, Error ellipse: s-maj=20.4km s-min=13.3km az=160.5*

ISC 05 18:33:15.4±1.4, 438N±01×1498E±01, h74km±18km, n26, σ0876/30, mb3.3/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.01**	**263**	P	**Pn**	**18 33 59.3**	**-1.4**
NEM2				*eS*	**Sn**	**18 34 34.6**	**-1.1**
JRA	**Rausu**	**3.42**	**274**	P	**Pn**	**18 34 05.1**	**-1.1**
JRA				*eS*	**Sn**	**18 34 46.0**	**+0.4**
JNK	**Nakash**	**3.72**	**268**	P	**Pn**	**18 34 09.4**	**-1.0**
JNK				*eS*	**Sn**	**18 34 53.0**	**0.0**
JAK	**Akkeshi**	**3.84**	**260**	P	**Pn**	**18 34 11.3**	**-0.7**
JAK				*eS*	**Sn**	**18 34 55.6**	**-0.2**
JTKR	**Abashiri--Toko**	**4.29**	**274**	P	**Pn**	**18 34 17.4**	**-0.8**
JAR	**Ashorobuto**	**4.44**	**266**	P	**Pn**	**18 34 20.2**	**0.0**
JAR				*eS*	**Sn**	**18 35 10.6**	**-0.1**
JOB	**Onbets**	**4.47**	**260**	P	**Pn**	**18 34 21.0**	**+0.4**
JOB				*eS*	**Sn**	**18 35 12.1**	**+0.7**
JCH	**Churui**	**4.88**	**258**	P	**Pn**	**18 34 26.2**	**-0.1**
ASAJ	**Asahikawa**	**5.24**	**276**	P	**Pn**	**18 34 32.8**	**+1.7**
JFR	**Furan**	**5.31**	**266**	P	**Pn**	**18 34 32.9**	**+0.8**
JNBK	**Urakawa-nobuka**	**5.42**	**256**	P	**Pn**	**18 34 33.7**	**+0.2**
JBT2	**Biratori 2**	**5.55**	**262**	P	**Pn**	**18 34 35.7**	**+0.3**
JEW	**Eniwo**	**6.20**	**264**	P	**Pn**	**18 34 45.0**	**+0.8**
JNB	**Noboribetsu**	**6.58**	**261**	P	**Pn**	**18 34 49.5**	**+0.1**
JNB				*eS*	Sx	18 36 03.7	
JKB	**Kayabe**	**6.75**	**257**	P	**Pn**	**18 34 51.9**	**+0.1**
JKB				*eS*	Sx	18 36 05.7	
JANG	**Nango**	**7.08**	**244**	P	**Pn**	**18 34 55.9**	**-0.3**
JANG				*eS*	Sx	18 36 14.1	
JTH	**Tanohata**	**7.10**	**240**	*eS*	Sx	18 36 14.2	
JYM2	**Yakumo 2**	**7.15**	**260**	P	**Pn**	**18 34 57.2**	**0.0**
JTM	**Tenmabayashi**	**7.17**	**248**	*eS*	Sx	18 36 16.7	
JSH	**Shimam**	**7.25**	**264**	P	**Pn**	**18 35 01.2**	**+2.6**
JSR	**Shiriuchi**	**7.31**	**255**	P	**Pn**	**18 34 59.9**	**+0.5**
JOSM	**Okushiri--Mats**	**7.80**	**261**	P	**Pn**	**18 35 05.9**	**-0.2**
JIO	**Ouri**	**8.34**	**233**	*eS*	**Sn**	**18 36 46.0**	**-0.1**
MKAR	**Makanchi Array**	**46.28**	**299**	P	**P**	**18 41 32.6**	**-0.7**
	0.7nm,0.6s,mb3.6,baz=74,slow=7.9,SNR=8.4						
WRA	**Warramunga Arr**	**65.01**	**196**	P	**P**	**18 43 53.1**	**+5.6**
	0.1nm,0.6s,baz=14,slow=6.9,SNR=2.9						
TXAR	**Lajitas Array**	**80.98**	**58**	P	**P**	**18 45 22.1**	**+0.1**
	0.1nm,0.4s,mb3.0,baz=324,slow=4.5,SNR=3.9						

IDC 05 18:44:02.8±7.2, 364S×14320E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.4/14, mbtmp3.3/3, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.0/21, Error ellipse: s-maj=255.5km s-min=30.8km az=94.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.62**	**170**	LR	LR	18 53 52.8	
	comp=Z,44nm,18.3s,baz=55,slow=36						
WRA	**Warramunga Arr**	**18.36**	**207**	P	Pn	18 48 19.9	+0.9
	0.1nm,0.3s,baz=32,slow=12,SNR=9.5						
ASAR	**Alice Springs**	**21.84**	**203**	P	P	18 48 56.5	-0.5
	0.8nm,0.7s,baz=32,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**73.28**	**321**	P	P	18 55 36.2	+0.1
	0.4nm,0.8s,baz=114,slow=9.4,SNR=3.3						

NEIC ***05*** *18:52:46.8, 1698N×100.11W, h5km, MD3.7(MEX), After MEX.*

MEX 05 18:52:46.8±0.9, 1698N×10011W, h5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.17**	**295**	*i* P	Pg	18 52 49.2	-0.9
CAIG				*i* S	Sg	18 52 52.1	-0.2
ACX	**Acapulco**	**0.22**	**121**	*i* P	Pg	18 52 51.2	+0.2
ACX				*i* S	Sg	18 52 54.3	+0.4
MEIG	**Mezcala**	**1.05**	**26**	*i* P	Pg	18 53 03.8	-3.2
MEIG				*i* S	Sg	18 53 18.4	-2.4
ZIIG	**Zihuatanejo**	**1.44**	**296**	*eP*	Pn	18 53 09.5	-4.0
ZIIG				*i* S	Sb	18 53 29.0	-3.7
PLIG	**Platanillo**	**1.52**	**22**	*eP*	Pn	18 53 12.2	-2.5
PLIG				*i* S	Sn	18 53 31.1	-3.8
PNIG	**Pinotepa**	**1.99**	**107**	*i* P	Pn	18 53 16.9	-4.2
PNIG				*i* S	Sn	18 53 41.5	-4.9
YAIG	**Yautepec**	**2.12**	**28**	*i* P	Pn	18 53 20.4	-2.6
YAIG				*i* S	Sn	18 53 46.6	-3.1
MOIG	**Morelia**	**2.88**	**339**	*i* P	Pn	18 53 30.0	-3.3
MOIG				*i* S	Sn	18 54 04.8	-3.5
TPIG	**Tehuac#an**	**2.99**	**61**	*i* S	Sn	18 54 07.1	-4.0
VHO	**Vista Hermosa**	**3.23**	**88**	*i* P	Pn	18 53 34.1	-3.7
VHO				*i* S	Sn	18 54 11.6	-5.5
MMIG	**Aquila**	**3.35**	**293**	*i* P	Pn	18 53 34.0	-5.8
MMIG				*i* S	Sn	18 54 15.9	-4.1
DEIG	**Demacu**	**3.46**	**17**	*i* P	Pn	18 53 34.6	-6.8

ISCJB ***05*** *18:52:51.2±1.9, 67S±01×1473E±02, h71km±19km, mb4.0/9, Error ellipse: s-maj=27.8km s-min=13.4km az=24.5*
IDC ***05*** *18:52:53.9±1.1, 681S×14729E, h79km±6km, mb3.7/7, mb1 3.9/9, mb1mx3.8/15, mbtmp3.8/9, MS2.5/1, Ms1 2.4/1, ms1mx1.7/21, Error ellipse: s-maj=27.5km s-min=10.0km az=111.0*
NEIC ***05*** *18:52:54.6±1.9, 675S×14734E, h87km±15km, mb4.4/5, Error ellipse: s-maj=20.8km s-min=15.2km az=87.0*

ISC 05 18:52:53.4±1.7, 670S±010×1473E±02, h73km±16km, n24, σ0991/20, mb4.0/9, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.69**	**183**	*eP*	**Pn**	**18 53 34.6**	**+0.2**
COEN	**Coen**	**8.27**	**209**	*eP*	**Pn**	**18 54 50.0**	**-0.6**
	7.1nm,0.3s						
CTA	**Charters Tower**	**13.35**	**184**	*eP*	**Pn**	**18 56 01.7**	**+2.0**
	2.6nm,0.3s						
CTA	**Charters Tower**	**13.35**	**184**	P	**Pn**	**18 56 00.2**	**+0.5**
	1.7nm,0.3s,baz=354,slow=12,SNR=11						
CTAO	**Charters Tower**	**13.35**	**184**	*eP*	**Pn**	**18 56 01.4**	**+1.7**
KAKA	**Kakadu**	**15.81**	**247**	*eP*	Px	18 56 22.7	
	13nm,0.5s						
WRAB	**Tennant Creek**	**18.19**	**222**	*eP*	**Pn**	**18 57 00.3**	**-0.7**
	9.4nm,0.9s						
WB2	**Warramunga Arr**	**18.20**	**222**	*eP*	**Pn**	**18 57 00.7**	**-0.4**
WRA	**Warramunga Arr**	**18.20**	**222**	P	**Pn**	**18 57 01.0**	**-0.1**
	1.8nm,0.3s,baz=47,slow=12,SNR=10						
WRA				S	**S**	**19 00 20.0**	**-4.8**
	0.2nm,0.3s,baz=43,slow=24,SNR=4.2						
ASAR	**Alice Springs**	**21.21**	**216**	P	**P**	**18 57 33.7**	**+0.5**
	2.8nm,0.3s,mb4.1,baz=54,slow=8.8,SNR=173						
ASAR				S	**S**	**19 01 25.8**	**+0.7**
	2.2nm,0.8s,baz=33,slow=23,SNR=9.2						
STKA	**Stephens Creek**	**25.61**	**191**	*eP*	**P**	**18 58 15.2**	**-0.7**
	3.2nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**25.61**	**191**	P	**P**	**18 58 15.2**	**-0.6**
	4.8nm,0.5s,mb4.2,baz=360,slow=9.5,SNR=25						
STKA				LR	LR	19 09 29.9	
	comp=Z,9.1nm,18.5s,baz=23,slow=39						
KLBR	**Kellerberrin**	**37.07**	**224**	*eP*	**P**	**18 59 56.3**	**-0.3**
	5.5nm,0.6s,mb4.7						
KSRS	**Korea Array**	**47.51**	**339**	P	**P**	**19 01 19.9**	**-1.2**
	0.5nm,0.4s,mb3.7,baz=150,slow=11,SNR=4.7						
CMAR	**Chiang Mai Arr**	**53.84**	**299**	P	**P**	**19 02 11.2**	**+1.9**
	1.4nm,0.6s,mb4.2,baz=121,slow=5.7,SNR=18						
CMAR				pP	pP	19 02 31.1	+3.3
	0.5nm,0.6s,baz=124,slow=5.5,SNR=2.5						
SONM	**Songino Array**	**65.15**	**331**	P	**P**	**19 03 27.9**	**+1.4**
	0.2nm,0.6s,mb3.1,baz=122,slow=5.4,SNR=3.6						
SONM				pP	pP	19 03 47.4	+1.6
	0.4nm,0.7s,baz=122,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**78.22**	**320**	P	**P**	**19 04 45.4**	**+0.3**
	0.4nm,0.5s,mb3.4,baz=97,slow=8.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**79.76**	**328**	P	**P**	**19 04 52.1**	**-1.2**
	1.7nm,0.6s,mb4.0,baz=118,slow=4.7,SNR=6.6						
QSPA	**South Pole Qui**	**83.27**	**180**	*eP*	**P**	**19 05 11.0**	**-0.5**
	5.4nm,0.6s,mb4.5						
GERES	**GERESS Array B**	**122.65**	**325**	PKP	PKPdf	19 11 40.6	-0.1
	0.3nm,0.5s,baz=44,slow=4.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**145.54**	**283**	PKPbc	PKPbc	19 12 24.2	-0.2
	1.5nm,0.3s,baz=78,slow=3.6,SNR=56						
TORD				pPKPbc	pPKPbc	19 12 45.2	+0.1
	1.9nm,0.5s,baz=79,slow=4.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**145.54**	**283**	PKPbc	PKPbc	19 12 24.2	-0.2
TORD				pPKPbc	pPKPbc	19 12 45.2	+0.1
DBIC	**Dimbokro**	**152.34**	**272**	PKPbc	PKPbc	19 12 41.5	-0.6
	1.3nm,0.5s,baz=228,slow=14,SNR=4.3						
BDFB	**Brasilia**	**153.12**	**146**	PKPbc	PKPbc	19 12 42.6	-1.1
	2.6nm,0.8s,baz=48,slow=7.5,SNR=4.7						

MEX 05 18:55:34.6±0.4, 1568N×9429W, h54km±16km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.03**	**88**	*i* P	Pn	18 55 51.1	-1.7
PCIG				*i* S	Sn	18 56 04.4	-1.9
CMIG	**Matias Romero**	**1.52**	**338**	*i* P	Pn	18 55 58.1	-1.3
CMIG				*i* S	Sn	18 56 15.7	-2.4
TGIG		**1.56**	**45**	*eP*	Pn	18 55 58.5	-1.5
TGIG				*i* S	Sn	18 56 17.2	-2.0
THIG		**2.10**	**111**	*i* P	Pn	18 56 06.1	-1.2
THIG				*i* S	Sn	18 56 29.9	-2.3

IDC 05 19:23:53.1±6.5, 820S×12743E, h134km±58km, mb3.8/1, mb1 4.0/4, mb1mx3.4/15, mbtmp3.9/4, Error ellipse: s-maj=66.5km s-min=31.2km az=25.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.22**	**241**	P	Pn	19 24 56.4	+0.4
	75nm,0.3s,baz=102,slow=2.8,SNR=134						
BATI				S	Sn	19 25 45.2	+0.4
	15nm,0.3s,baz=93,slow=22,SNR=13						
KAKA	**Kakadu**	**6.66**	**133**	*eP*	Px	19 25 23.0	
	11nm,0.5s						
KAKA				*eS*	Sx	19 26 37.4	
WRA	**Warramunga Arr**	**13.46**	**151**	P	Pn	19 26 59.0	+0.2
	0.6nm,0.3s,baz=324,slow=14,SNR=26						
WRA				S	Sn	19 29 26.6	-0.9
	0.8nm,0.3s,baz=332,slow=24,SNR=12						
WB2	**Warramunga Arr**	**13.46**	**151**	*eP*	Pn	19 26 59.7	+0.9
WB2				*eS*	Sn	19 29 26.1	-1.5
ASAR	**Alice Springs**	**16.59**	**159**	P	Pn	19 27 39.6	+1.8
	2.2nm,0.3s,baz=339,slow=12,SNR=153						
ASAR				S		19 30 44.2	+1.4
	0.3nm,0.3s,baz=318,slow=16,SNR=6.2						
STKA	**Stephens Creek**	**27.00**	**153**	*eP*	P	19 29 23.2	+0.7
	2.6nm,1.1s						
STKA	**Stephens Creek**	**27.00**	**153**	P	P	19 29 21.9	-0.5
	3.5nm,1.1s,baz=332,slow=9.0,SNR=5.3						

MOS ***05*** *19:40:11.4±0.8, 4767N×15145E, h118km, mb4.7/23, Error ellipse: s-maj=12.2km s-min=7.1km az=109.1*
ISCJB ***05*** *19:40:13.4±0.6, 4743N±006×15158E±008, h147km±5km, mb4.5/91, Error ellipse: s-maj=12.3km s-min=5.3km az=143.1*
IDC ***05*** *19:40:16.1±0.7, 4756N×15165E, h157km±6km, mb3.8/19, mb1 4.0/22, mb1mx3.9/25, mbtmp3.8/22, Error ellipse: s-maj=14.6km s-min=9.9km az=156.0*
NEIC ***05*** *19:40:17.5±0.3, 4758N×15159E, mb4.5/35, Error ellipse: s-maj=9.4km s-min=4.9km az=151.0*
BJI ***05*** *19:40:18.2, 4761N×15145E, h194km, mB4.6, mb4.6*

ISC 05 19:40:14.6±0.6, 4746N±006×15160E±008, h143km±5km, h168km±6.4km: pP-P, n207, σ0998/218, mb4.5/91, 7C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.39**	**41**	*ePN*	**Pn**	**19 41 19.9**	**+0.3**
JRA	**Rausu**	**5.74**	**235**	P	**Pn**	**19 41 38.7**	**+1.0**
NEM2	**Nemuro 2**	**5.81**	**227**	P	**Pn**	**19 41 36.5**	**-2.1**
NEM2				*eS*	**Sn**	**19 42 37.1**	**-7.0**
YSS	**Yuzh-Sakhalins**	**6.05**	**268**	*eP*	**Pn**	**19 41 47.0**	**+5.3**
	26nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.05**	**268**	*ePN*	**Pn**	**19 41 45.0**	**+3.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
JNK	**Nakash**	**6.19**	**234**	P	**Pn**	**19 41 44.7**	**+1.0**
JTKR	**Abashiri--Toko**	**6.41**	**240**	P	**Pn**	**19 41 48.3**	**+1.6**
JAK	**Akkeshi**	**6.61**	**230**	P	**Pn**	**19 41 47.5**	**-1.7**
JAK				*eS*	**Sn**	**19 42 57.6**	**-5.7**
PETK	**Petropavlovsk-**	**6.88**	**32**	P	**Pn**	**19 41 53.6**	**+0.9**
	comp=E,3.3nm,0.3s,baz=207,slow=12,SNR=39						
JAR	**Ashorobuto**	**6.91**	**236**	P	**Pn**	**19 41 54.9**	**+1.7**
ASAJ	**Asahikawa**	**7.12**	**245**	P	**Pn**	**19 41 59.7**	**+3.5**
	comp=E,7.3nm,0.3s,baz=78,slow=14,SNR=50						
ASAJ	**Asahikawa**	**7.12**	**245**	P	**Pn**	**19 41 59.6**	**+3.4**
ASAJ	**Asahikawa**	**7.12**	**245**	PN	**Pn**	**19 41 59.7**	**+3.5**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
JOB	**Onbets**	**7.13**	**233**	P	**Pn**	**19 41 55.7**	**-0.5**
JOB				*eS*	**Sn**	**19 43 11.7**	**-4.1**
JKK2	**Kamakawa 2**	**7.16**	**243**	P	**Pn**	**19 41 59.2**	**+2.5**
JCH	**Churui**	**7.58**	**233**	P	**Pn**	**19 42 00.9**	**-1.4**
JCH				*eS*	**Sn**	**19 43 20.0**	**-6.7**
JFR	**Furan**	**7.66**	**239**	P	**Pn**	**19 42 05.9**	**+2.5**
JBT2	**Biratori 2**	**8.03**	**238**	P	**Pn**	**19 42 08.9**	**+0.6**
JEM	**Erimo**	**8.10**	**231**	P	**Pn**	**19 42 09.2**	**-0.1**
JEM				*eS*	**Sn**	**19 43 33.4**	**-5.9**
ERM	**Erimo**	**8.10**	**231**	*ePN*	**Pn**	**19 42 09.2**	**-0.1**
JNBK	**Urakawa-

ULN Ulaanbaatar 29.70 288 *e*P P 19 46 06.1 -0.6
ULN pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
SONM Songino Array 30.13 288 P P 19 46 10.0 -0.4
comp=Z,1.7nm,0.8s,mb3.8,baz=72,slow=8.7,SNR=14
SONM pP pP 19 46 45.6 +4.6
comp=Z,0.9nm,0.9s,baz=72,slow=5.2,SNR=2.7
SONM PcP PcP 19 49 08.2 +0.1
comp=Z,0.7nm,0.6s,baz=113,slow=2.3,SNR=4.9
ZAK Zakamensk 31.45 294 *e*P P 19 46 22.3 +0.3
ZAK *e* 19 46 58.9
ZAK *e* 19 47 24.8
ZAK *e* 19 49 12.2
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
WHN Wuhan 33.13 253 *e*P P 19 46 37.0 +0.1
IMA2 Indian Mountai 33.85 37 *e*P P 19 46 43.3 +0.5
KDAK Kodiak Island 34.47 52 P P 19 46 47.0 -1.2
comp=Z,6.2nm,0.7s,mb4.4,baz=293,slow=4.0,SNR=6.8
XAN Xi'an 34.56 263 P P 19 46 49.5 +0.2
XAN AMB AMB
comp=Z,13nm,0.8s,mb4.6
COLD Coldfoot 35.34 35 *e*P P 19 46 55.9 +0.4
comp=Z,4.5nm,0.5s,mb4.3
COLA College 36.23 39⇓ *e*P P 19 47 03.9 +0.7
LZH Lanzhou 36.84 270 ⇑P P 19 47 10.9 +2.2
LZH AP pP 19 47 50.4 +11
LZH XP sP 19 48 09.5 +13
LZH AMB AMB
comp=Z,25nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,78nm,4.3s
LZH Lanzhou 36.84 270 ⇑P P 19 47 10.9 +2.2
comp=Z,25nm,1.0s,mb4.8
LZH pP pP 19 47 50.4 +11
LZH sP sP 19 48 09.5 +13
GTA Gaotai 37.85 277 *e*P P 19 47 18.2 +1.1
GTA PCP PcP 19 49 31.7 +1.3
GTA AMB AMB
comp=Z,6.0nm,0.9s,mb4.2
EGAK Eagle 39.09 39 *e*P P 19 47 26.5 -0.7
comp=Z,4.0nm,0.9s,mb4.0
CD2 Chengdu 39.92 263⇑ *i*P P 19 47 35.2 +0.7
CD2 AP pP 19 48 17.5 +11
CD2 XP sP 19 48 39.7 +17
CD2 PP PP 19 49 13.7 +4.6
CD2 S S 19 53 23.3 -5.4
CD2 XS sS 19 54 36.7 +13
CD2 AMB AMB
comp=Z,40nm,0.7s,mb5.2
CD2 AMB AMB
comp=Z,120nm,5.8s
GYA Guiyang 40.88 255 P P 19 47 45.0 +2.6
GYA AP pP 19 48 28.3 +14
GYA XP sP 19 48 50.9 +21
GYA PCP PcP 19 49 44.0 +3.8
GYA SCP ScP 19 53 13.9 -2.3
GYA PCS PcS 19 53 33.0 +1.6
GYA S S 19 53 40.7 -2.2
GYA XS sS 19 54 53.6 +16
GYA SCS ScS 19 57 26.9 -4.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
ZALV Zalesovo Beam 41.36 305 P P 19 47 44.7 -1.3
comp=Z,0.9nm,0.4s,mb3.8,baz=77,slow=6.4,SNR=3.8
ZALV PcP PcP 19 49 41.6 +0.2
comp=Z,2.6nm,0.3s,baz=77,slow=3.2,SNR=15
INK Inuvik 41.61 33 *e*P P 19 47 48.6 +0.7
comp=Z,191nm,0.6s
INK Inuvik 41.61 33 *e*P P 19 47 48.6 +0.7
INK pmax pmax
comp=Z,191nm,0.6s
WMQ Urumqi 43.71 290 *e*P P 19 48 06.0 +0.9
KMI Kunming 44.37 257 P P 19 48 11.4 +0.8
KMI AP pP 19 48 48.4 +5.8
KMI AMB AMB
comp=Z,15nm,1.1s,mb4.5
KMI Kunming 44.37 257 P P 19 48 11.4 +0.8
comp=Z,15nm,1.1s,mb4.5
KMI pP pP 19 48 48.4 +5.8
MK31 Makanchi Array 45.70 296 *e*P P 19 48 19.5 -1.3
MKAR Makanchi Array 45.70 296 P P 19 48 20.1 -0.7
comp=Z,4.1nm,0.7s,mb4.2,baz=66,slow=8.1,SNR=31
MKAR pP pP 19 48 57.3 +4.2
comp=Z,4.3nm,0.9s,baz=68,slow=7.7,SNR=6.3
MKAR PcP PcP 19 49 56.2 0.0
comp=Z,2.3nm,0.6s,baz=76,slow=2.1,SNR=11
MKAR ScP ScP 19 53 33.7 -1.8
comp=Z,0.9nm,0.8s,baz=45,slow=3.6,SNR=5.4
MKAR Makanchi Array 45.70 296 P P 19 48 20.1 -0.7
MKAR pP pP 19 48 57.3 +4.2
MKAR PcP PcP 19 49 56.2 0.0
MKAR ScP ScP 19 53 33.7 -1.8
MKAR Makanchi Array 45.70 296 P P 19 48 20.1 -0.7
MKAR *PP pP 19 48 57.3 +4.3
MKAR 19 49 56.3
KURK Kurchatov 46.11 302 *e*P P 19 48 22.7 -1.2
comp=Z,9.3nm,0.8s,mb4.5
KURK Kurchatov 46.11 302 *e*P P 19 48 22.7 -1.3
KURK pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LSA Lhasa 49.21 271 *e*P P 19 48 49.9 +1.7
comp=Z,11nm,0.6s,mb4.7
LSA Lhasa 49.21 271 *e*P P 19 48 49.9 +1.8
LSA pmax pmax
comp=Z,11nm,0.6s,mb4.7
RES Resolute Bay 50.49 18 *e*P P 19 48 56.8 -0.4
comp=Z,637nm,0.9s
RES Resolute Bay 50.49 18 *e*P P 19 48 56.8 -0.4
RES pmax pmax
comp=Z,637nm,0.9s
YKA Yellowknife Ar 50.98 37 P P 19 49 01.3 +0.3
comp=Z,1.8nm,0.6s,baz=299,slow=7.2,SNR=4.2
SHL Shillong 51.37 267 *ex* P 19 49 01.1 -3.3
SHL AMb AMB 19 49 01.4
comp=Z,20nm,0.6s,mb4.9
CMAR Chiang Mai Arr 51.55 254 P P 19 49 07.0 +1.2
comp=Z,5.3nm,0.8s,mb4.2,baz=34,slow=7.2,SNR=41
CMAR PcP PcP 19 50 18.4 +0.5
comp=Z,0.9nm,0.7s,baz=8.0,slow=2.3,SNR=4.9
CMAR ScP ScP 19 54 00.3 -0.4
comp=Z,0.6nm,0.8s,baz=27,slow=2.2,SNR=5.4
CMAR Chiang Mai Arr 51.55 254 P P 19 49 07.0 +1.2
CMAR 19 50 18.4
SVE Sverdlovsk 52.61 316⇑ *e*P P 19 49 12.5 -0.6
SVE pmax pmax
comp=Z,13nm,1.0s,mb4.6
EKS2 Erkin-Say 53.02 296 *e*P P 19 49 16.4 0.0
comp=Z,4.8nm,0.9s,mb4.2
TAPN Taplejung 53.04 272 *e*P P 19 49 17.8 +1.1
comp=Z,17nm,0.6s,mb5.0
ODAN Odare 53.57 271 *e*P P 19 49 21.8 +1.2
comp=Z,11nm,0.6s,mb4.8
ARU Arti 53.79 317 *d*iP P 19 49 20.7 -1.1
ARU *e**PP pP 19 50 00.6 +5.6
ARU *e* 19 50 25.2
ARU *e*S S 19 56 42.1 -2.8
ARU *e*SS SS 20 00 22.7 -4.3
ARU pmax pmax
comp=Z,23nm,1.7s,mb4.6
JIRN Jiri 53.87 273 *e*P P 19 49 23.6 +0.8
comp=Z,30nm,0.6s,mb5.2
GUN Gumba 53.92 273 *e*P P 19 49 23.6 +0.5
comp=Z,12nm,0.4s,mb5.0
RAMN Ramite 54.05 272 *e*P P 19 49 24.6 +0.5
comp=Z,45nm,0.7s,mb5.3
KKN Kakani 54.40 274 *e*P P 19 49 27.2 +0.6
comp=Z,14nm,0.5s,mb5.0
KKN Kakani 54.40 274 *e*P P 19 49 27.2 +0.6
KKN pmax pmax
comp=Z,14nm,0.5s,mb5.0
DMN Daman 54.63 274 *e*P P 19 49 29.2 +0.9
comp=Z,31nm,0.9s,mb5.0
GKN Gorkha 54.70 274 *e*P P 19 49 29.4 +0.6
comp=Z,16nm,0.4s,mb5.1
DANN Dangsing 55.07 275 *e*P P 19 49 32.5 +1.1
comp=Z,30nm,0.6s,mb5.2
KOLN Koldanda 55.55 275 *e*P P 19 49 35.4 +0.5
comp=Z,17nm,0.8s,mb4.9
ARCES ARCESS Array B 56.84 340 P P 19 49 44.0 +0.6
comp=Z,5.6nm,0.9s,mb4.4,baz=32,slow=7.8,SNR=7.3
ARCES PcP PcP 19 50 37.6 +0.3
comp=Z,2.4nm,0.7s,baz=66,slow=6.0,SNR=4.1
SMLA Simla 57.72 282 *e*P P 19 49 49.8 -0.4
SMLA AMb AMB 19 49 51.3
comp=Z,21nm,1.1s,mb4.9
JOF Joensuu 60.24 333 *ep* P 19 50 06.7 -0.3
comp=Z,0.4nm,0.3s,mb3.7
KBL Kabul 60.85 290 *e*P P 19 50 10.6 -1.0
comp=Z,15nm,1.0s,mb4.8
KBL Kabul 60.85 290 *e*P P 19 50 10.6 -1.0
KBL pmax pmax
comp=Z,15nm,1.0s,mb4.8
KAF Kangasniemi 62.36 334 *ep* P 19 50 20.6 -0.7
comp=Z,0.5nm,0.3s,mb3.8
KAF Kangasniemi 62.36 334 *e*P P 19 50 20.6 -0.7
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
VIS Vishakhapatnam 62.51 267 *e*P P 19 50 23.1 +0.2
VIS AMb AMB 19 50 25.1
comp=Z,12nm,0.9s,mb4.7
BHPL Bhopal 62.72 275 *e*P P 19 50 23.8 -0.4
BHPL AMb AMB 19 50 25.0
comp=Z,19nm,0.6s,mb5.1
FINES FINESS Array B 62.96 334 *e*P P 19 50 23.0 -2.2
NVAR Mina Array Bea 63.02 62 P P 19 50 26.2 +0.2
comp=Z,1.1nm,0.6s,mb3.9,baz=294,slow=7.1,SNR=8.4
NVAR pP pP 19 51 01.7 +1.5
comp=Z,1.0nm,0.8s,baz=296,slow=6.8,SNR=4.2
NVAR Mina Array Bea 63.02 62 P P 19 50 26.2 +0.2
NVAR pP pP 19 51 01.7 +1.5
NGP Nagpur 63.04 272 *ex* x 19 50 20.6
NGP AMb AMB 19 50 20.9
comp=Z,20nm,0.6s,mb5.1
AKL Akola 64.72 274 *e*P P 19 50 37.3 -0.1
AKL AMb AMB 19 50 39.1
comp=Z,19nm,1.1s,mb4.8
PDAR Pinedale Array 65.16 53 P P 19 50 40.5 +0.5
comp=Z,2.2nm,0.7s,mb4.1,baz=306,slow=0.8,SNR=6.4
HYB Hyderabad 65.96 270 *e*P P 19 50 46.0 +0.6
HYB Hyderabad 65.96 270 *i* P P 19 50 46.0 +0.6
NB2 NORSAR Subarra 67.22 340 P P 19 50 51.9 -0.8
comp=Z,2.4nm,0.6s,mb4.2,baz=28,slow=6.5
NOA NORSAR Array B 67.22 340 P P 19 50 52.0 -0.8
comp=Z,3.7nm,0.7s,mb4.4,baz=28,slow=6.3,SNR=12
POO Poona 68.37 274 *e*P P 19 51 00.7 +0.1
POO AMb AMB 19 51 02.5
comp=Z,23nm,0.8s,mb4.9
KAD Karad 69.00 273 *e*P P 19 51 04.2 -0.2
KAD AMb AMB 19 51 06.1
comp=Z,22nm,0.8s,mb5.0
AKASG Malin Array Be 70.38 325 P P 19 51 11.2 -1.3
comp=Z,1.6nm,0.4s,mb4.1,baz=34,slow=6.1,SNR=36
AKASG Malin Array Be 70.38 325 *i* P P 19 51 11.1 -1.4
AKASG pmax pmax
comp=Z,2.0nm,0.4s
GOA Goa 70.52 272 *e*P P 19 51 14.2 +0.4
GOA AMb AMB 19 51 14.7
comp=Z,12nm,0.9s,mb4.6
KOD Kodaikanal 71.80 265 *e*P P 19 51 21.6 0.0
KOD AMb AMB 19 51 25.5
comp=Z,6.7nm,1.6s,mb4.1
ASAR Alice Springs 72.56 197 P P 19 51 26.4 +0.7
comp=Z,0.8nm,0.5s,mb3.7,baz=11,slow=6.1,SNR=14
BUR08 Bucovina Ar. S 74.41 326 *e*P P 19 51 36.0 -0.3
CLL Collm 75.39 335⇓ *i*P P 19 51 42.0 +0.1
comp=Z,6.0nm,0.8s,mb4.3
CLL Collm 75.39 335⇓ *i*P P 19 51 42.0 +0.1
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
CLL Collm 75.39 335⇓ *i*P P 19 51 42.0 +0.1
comp=Z,6.0nm,0.8s,mb4.3
BRTR Keskin Array B 77.17 316 P P 19 51 52.5 +0.3
comp=Z,1.2nm,0.7s,mb3.6,baz=76,slow=5.1,SNR=6.3
BRTR Keskin Array B 77.17 316 *i* P P 19 51 53.2 +1.0
BRTR pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 77.36 333 P P 19 51 52.5 -0.7
comp=Z,0.7nm,0.5s,mb3.5,baz=46,slow=3.9,SNR=6.1
UMR Umm Al-Rimmam 77.38 300 *e*P P 19 51 52.3 -1.2
baz=300
UMR AMb AMB 19 51 55.1
comp=Z,20nm,0.6s,mb4.9,baz=300
MIB Mutribah 77.42 300 *e*P P 19 51 53.0 -0.7
baz=300
MIB AMb AMB 19 51 54.3
comp=Z,16nm,0.6s,mb4.8,baz=300
QRN Al-Qurain 77.85 299 *e*P P 19 51 55.6 -0.5
baz=299
NAY Al-Naaiem 77.88 300 *e*P P 19 51 55.7 -0.6
baz=300
NAY AMb AMB 19 51 57.7
comp=Z,20nm,1.1s,mb4.7,baz=300
TXAR Lajitas Array 78.04 60 P P 19 51 57.2 0.0
comp=Z,2.9nm,0.6s,mb4.1,baz=298,slow=4.2,SNR=49
TXAR pP pP 19 52 34.4 +1.7
comp=Z,0.6nm,0.6s,baz=325,slow=4.6,SNR=2.6
GIVF Givet 78.68 339 *e*P P 19 51 59.6 -0.7
BAIF Baives 78.87 339 *e*P P 19 52 01.4 0.0
KBA Koelnbreinsper 79.04 332⇑ *i*P P 19 52 03.1 +0.7
comp=Z,12nm,0.9s,mb4.5
STKA Stephens Creek 79.48 189 P P 19 52 04.3 -0.4
comp=Z,0.7nm,0.4s,mb3.6,baz=15,slow=7.4,SNR=5.4
MOTA Moosalm 79.49 334⇑ *i*P P 19 52 05.2 +0.4
comp=Z,7.7nm,0.8s,mb4.4
CDF Champ du Feu 79.61 337 *e*P P 19 52 05.0 -0.4
comp=Z,8.4nm,0.8s,mb4.1
HAU Haudompre 80.23 337 *e*P P 19 52 08.2 -0.6
comp=Z,10nm,0.7s,mb4.3
HINF Hinteralfeld 80.27 337 *e*P P 19 52 08.9 -0.1
FLN La Foliniere 81.15 342 *e*P P 19 52 13.2 -0.4
comp=Z,20nm,0.8s,mb4.5
LDF La Druitiere 81.23 341 *e*P P 19 52 13.6 -0.5
LOR Lormes 81.55 338 *e*P P 19 52 15.4 -0.4
CABF La Chapelle 81.58 337 *e*P P 19 52 15.6 -0.4
comp=Z,5.2nm,0.8s,mb3.9
CABF La Chapelle 81.58 337 *e*P P 19 52 15.6 -0.4
comp=Z,2.6nm,0.8s,mb3.9
CABF La Chapelle 81.58 337 *e*P P 19 52 15.6 -0.4
CABF pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
GRR Gorron 81.58 342 *e*P P 19 52 15.7 -0.2
comp=Z,20nm,0.7s,mb4.5
SSF Saint Saulge 81.83 339 *e*P P 19 52 16.9 -0.4
comp=Z,11nm,0.8s,mb4.3
SSF Saint Saulge 81.83 339 *e*P P 19 52 16.9 -0.4
comp=Z,5.6nm,0.8s,mb4.2
SSF Saint Saulge 81.83 339 *e*P P 19 52 16.9 -0.4
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
HYF Humbligny 81.85 339 *e*P P 19 52 16.6 -0.7
SGMF Saint Gilles 82.06 343 *e*P P 19 52 18.4 0.0
comp=Z,12nm,0.5s,mb4.5
AVF Avril sur Loir 82.12 339 *e*P P 19 52 18.6 -0.2
comp=Z,14nm,0.9s,mb4.3
AVF Avril sur Loir 82.12 339 *e*P P 19 52 18.6 -0.2
comp=Z,6.8nm,0.9s,mb4.3
AVF Avril sur Loir 82.12 339 *e*P P 19 52 18.6 -0.2
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
ROSF Rostrenen 82.12 343 *e*P P 19 52 18.7 -0.1
comp=Z,42nm,0.9s,mb4.8
SMF Signal de Mont 82.13 338 *e*P P 19 52 18.7 -0.2
comp=Z,16nm,0.8s,mb4.4
LPL La Plagne 82.41 336 *e*P P 19 52 20.8 +0.5
comp=Z,22nm,1.0s,mb4.4
LPL La Plagne 82.41 336 *e*P P 19 52 20.8 +0.5
comp=Z,11nm,1.0s,mb4.4
LPL La Plagne 82.41 336 *e*P P 19 52 20.8 +0.5
LPL pmax pmax
comp=Z,11nm,1.0s,mb4.4
LPG La Plagne 82.42 336 *e*P P 19 52 21.0 +0.6
comp=Z,22nm,1.0s,mb4.5
LPG La Plagne 82.42 336 *e*P P 19 52 21.0 +0.6
comp=Z,11nm,1.0s,mb4.5
LPG La Plagne 82.42 336 *e*P P 19 52 21.0 +0.6
LPG pmax pmax
comp=Z,11nm,1.0s,mb4.4
BGF Bois d'Agland 82.46 339 *e*P P 19 52 20.7 +0.1
comp=Z,16nm,0.8s,mb4.4
BGF Bois d'Agland 82.46 339 *e*P P 19 52 20.7 +0.1
comp=Z,7.8nm,0.8s,mb4.4
BGF Bois d'Agland 82.46 339 *e*P P 19 52 20.7 +0.1
BGF pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
QUIF Quistinic 82.50 343 *e*P P 19 52 20.3 -0.4
comp=Z,21nm,0.9s,mb4.6
TCF Toulx Ste Croi 82.87 339 *e*P P 19 52 22.7 0.0
comp=Z,18nm,0.9s,mb4.5
TCF Toulx Ste Croi 82.87 339 *e*P P 19 52 22.7 0.0
comp=Z,8.8nm,0.9s,mb4.5
TCF Toulx Ste Croi 82.87 339 *e*P P 19 52 22.7 0.0
TCF pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
MFF Saint Martin d 83.12 341 *e*P P 19 52 24.1 +0.1
comp=Z,26nm,0.8s,mb4.7
MBDF Montbardon 83.13 336 *e*P P 19 52 24.3 +0.3
comp=Z,4.8nm,0.6s,mb4.1
MBDF Montbardon 83.13 336 *e*P P 19 52 24.3 +0.3
comp=Z,2.4nm,0.6s,mb4.1
MBDF Montbardon 83.13 336 *e*P P 19 52 24.3 +0.3
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
ORIF Oris-en-Rattie 83.20 336 *e*P P 19 52 24.6 +0.2
comp=Z,18nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.20 336 *e*P P 19 52 24.6 +0.2
comp=Z,8.9nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.20 336 *e*P P 19 52 24.6 +0.2
ORIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 83.58 337 *e*P P 19 52 26.7 +0.3
comp=Z,30nm,1.2s,mb4.6
SBF Sospel 83.73 335 *e*P P 19 52 26.4 -0.7
comp=Z,21nm,0.8s,mb4.6
SBF Sospel 83.73 335 *e*P P 19 52 26.4 -0.7
comp=Z,10nm,0.8s,mb4.6
SBF Sospel 83.73 335 *e*P P 19 52 26.4 -0.7
SBF pmax pmax
comp=Z,11nm,0.8s,mb4.6
RJF Les Rejaudoux 83.96 339 *e*P P 19 52 28.3 0.0
comp=Z,15nm,0.9s,mb4.4
RJF Les Rejaudoux 83.96 339 *e*P P 19 52 28.3 0.0
comp=Z,7.7nm,0.9s,mb4.4
RJF Les Rejaudoux 83.96 339 *e*P P 19 52 28.3 0.0
RJF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
SMRF Simiane la Rot 84.15 336 *e*P P 19 52 29.8 +0.5
comp=Z,23nm,1.2s,mb4.5
CAF Calviac 84.18 339 *e*P P 19 52 29.9 +0.5
comp=Z,27nm,1.0s,mb4.7
CAF Calviac 84.18 339 *e*P P 19 52 29.9 +0.5
comp=Z,14nm,1.0s,mb4.6
CAF Calviac 84.18 339 *e*P P 19 52 29.9 +0.5
CAF pmax pmax
comp=Z,14nm,1.0s,mb4.7
FRF La Foret Royal 84.23 335 *e*P P 19 52 29.8 +0.1
PGF Pioggiola 84.47 333 *e*P P 19 52 31.0 +0.1
LMR La Mourre 84.48 335 *e*P P 19 52 31.1 +0.2
comp=Z,12nm,0.9s,mb4.3
LMR La Mourre 84.48 335 *e*P P 19 52 31.1 +0.2
comp=Z,6.0nm,0.9s,mb4.3
LMR La Mourre 84.48 335 *e*P P 19 52 31.1 +0.2
LMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
LFF La Frestale 84.49 340 *e*P P 19 52 31.4 +0.5
comp=Z,14nm,0.6s,mb4.5
LASF Ste Croix 84.52 337 *e*P P 19 52 30.8 -0.3
MTLF Montolieu 85.63 338 *e*P P 19 52 37.3 +0.6
comp=Z,10nm,0.8s,mb4.3
EPF Esparros 86.39 339 *e*P P 19 52 41.2 +0.8
SJPF Ste Jean 86.67 340 *e*P P 19 52 42.3 +0.5
ETSF Etsaut 86.72 340 *e*P P 19 52 42.8 +0.8
KEST Kesra 90.55 330 P P 19 53 00.3 +0.1
comp=Z,3.0nm,0.9s,mb4.3,baz=38,slow=2.9,SNR=8.3
ESDC Sonseca Array 90.56 341 P P 19 52 59.5 -0.7
comp=Z,0.2nm,0.4s,mb3.5,baz=358,slow=4.2,SNR=4.9
TORD Torodi Ar. Bea 113.95 328 PKiKP PKiKP 19 58 35.4 -1.3
comp=Z,0.3nm,0.4s,baz=19,slow=2.1,SNR=7.0
DBIC Dimbokro 122.22 332 PKP PKPdf 19 58 51.0 -1.6
comp=Z,1.5nm,0.5s,baz=270,slow=5.1,SNR=3.2
MAW Mawson 132.27 211 PKP PKPdf 19 59 08.9 -1.1
comp=Z,0.9nm,0.4s,baz=135,slow=1.4,SNR=3.1
PLCA Paso Flores 149.29 93 PKPbc PKPbc 19 59 45.6 -0.1
comp=Z,1.6nm,0.6s,baz=258,slow=4.3,SNR=7.2

NIED ***05*** *19:53:00,44.60N×149.90E,h17km,Mw3.8 Best double couple: M₀5.67000×10¹⁴ NP1:φ=250.00000°,δ=69.00000°, λ=96.00000°. NP2:φ=53.00000°,δ=22.00000°,λ=74.00000°.*
ISCJB ***05*** *19:53:37.3±0.7,44.37N±0.10×149.86E±0.08,h33km, mb3.7/9, Error ellipse: s-maj=15.3km s-min=5.5km az=155.8*
JMA ***05*** *19:53:37.9±0.6,44.60N×149.91E,h30km,M4.0*
NEIC ***05*** *19:53:41.5±2.4,44.59N×149.87E,h54km±23km,mb4.1/1, Error ellipse: s-maj=19.3km s-min=16.2km az=53.0*
IDC ***05*** *19:53:41.4±3.4,44.54N×149.94E,h55km±29km,mb3.4/8, mb1 3.7/10,mb1mx3.5/22,mbtmp3.5/10,ML3.7/2,MS2.8/1, Ms1 2.8/1,ms1mx1.8/28, Error ellipse: s-maj=26.4km s-min=21.2km az=100.0*

ISC 05 19:53:41.5±1.2,442N±01×149.8E±01,h63km±12km,n39, σ1°09/47,mb3.7/9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.04**	**256**	P		**Pn**	**19 54 25.7**	**-1.5**
NEM2				*e*S		**Sn**	**19 55 01.6**	**-0.8**
JRA	**Rausu**	**3.38**	**268**	P		**Pn**	**19 54 31.7**	**0.0**
JRA				*e*S		**Sn**	**19 55 12.2**	**+1.6**
JNK	**Nakash**	**3.72**	**263**	P		**Pn**	**19 54 35.6**	**-0.8**
JAK	**Akkeshi**	**3.89**	**254**	P		**Pn**	**19 54 37.7**	**-1.0**
JAK				*e*S		**Sn**	**19 55 21.5**	**-1.5**
JTKR	**Abashiri--Toko**	**4.25**	**269**	P		**Pn**	**19 54 43.8**	**+0.2**
JAR	**Ashorobuto**	**4.46**	**261**	P		**Pn**	**19 54 46.7**	**+0.2**
JAR				*e*S		**Sn**	**19 55 38.2**	**+1.2**
JOB	**Onbets**	**4.52**	**256**	P		**Pn**	**19 54 47.2**	**-0.1**
JOB				*e*S		**Sn**	**19 55 38.6**	**+0.1**
JCH	**Churui**	**4.94**	**254**	P		**Pn**	**19 54 52.7**	**-0.4**
ASAJ	**Asahikawa** 4.9nm,0.3s,baz=88,slow=13,SNR=33	**5.18**	**272**	P		**Pn**	**19 54 57.5**	**+1.0**
ASAJ				LR		LR	19 57 35.3	
	comp=Z,90nm,18.1s,baz=2.4,slow=44							
ASAJ	**Asahikawa**	**5.18**	**272**	P		**Pn**	**19 54 57.8**	**+1.4**
JEM	**Erimo**	**5.32**	**248**	P		**Pn**	**19 55 00.0**	**+1.7**
JNBK	**Urakawa-nobuka**	**5.48**	**252**	P		**Pn**	**19 55 00.0**	**-0.5**
JAB	**Ashibetsu**	**5.52**	**266**	P		**Pn**	**19 55 03.3**	**+2.3**
JBT2	**Biratori 2**	**5.58**	**258**	P		**Pn**	**19 55 01.7**	**-0.2**
JEW	**Eniwo**	**6.21**	**261**	P		**Pn**	**19 55 11.6**	**+1.1**
JNB	**Noboribetsu**	**6.61**	**258**	P		**Pn**	**19 55 15.9**	**-0.1**
JNB				*e*S		**Sn**	**19 56 30.1**	**+0.2**
JKB	**Kayabe**	**6.82**	**253**	P		**Pn**	**19 55 18.3**	**-0.5**
JKB				*e*S		**Sn**	**19 56 32.2**	**-2.7**
JYM2	**Yakumo 2**	**7.19**	**257**	P		**Pn**	**19 55 23.6**	**-0.3**
JYM2				*e*S		**Sn**	**19 56 44.2**	**0.0**
JANG	**Nango**	**7.22**	**241**	*e*S		**Sn**	**19 56 40.8**	**-4.0**
JTH	**Tanohata**	**7.26**	**237**	*e*S		**Sn**	**19 56 40.2**	**-5.6**
JSH	**Shimam**	**7.26**	**261**	P		**Pn**	**19 55 27.7**	**+2.8**
JTM	**Tenmabayashi**	**7.28**	**245**	*e*S		**Sn**	**19 56 43.2**	**-3.2**
JSR	**Shiriuchi**	**7.38**	**252**	P		**Pn**	**19 55 26.2**	**-0.3**
JOSM	**Okushiri--Mats**	**7.83**	**258**	P		**Pn**	**19 55 32.4**	**-0.3**
OFUJ	**Ofunato**	**7.93**	**233**	P		**Pn**	**19 55 33.8**	**-0.2**
JIO	**Ouri**	**8.54**	**231**	*e*S		**Sn**	**19 57 12.0**	**-5.2**
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=208,slow=11,SNR=3.0	**10.36**	**27**	P		**Pn**	**19 56 02.1**	**-5.0**
YAK	**Yakutsk** 9.0nm,0.9s,mb4.1	**21.42**	**334**	*e*P		P	**19 58 19.3**	**-4.6**
SONM	**Songino Array** 0.2nm,0.5s,mb3.1,baz=98,slow=7.4,SNR=2.5	**30.08**	**293**	P		P	**19 59 45.2**	**+0.7**
MK31	**Makanchi Array**	**46.08**	**298**	*e*P		P	**20 01 58.7**	**-0.2**
MKAR	**Makanchi Array** 1.8nm,0.6s,mb4.2,baz=75,slow=8.1,SNR=17	**46.08**	**298**	P		P	**20 01 59.0**	**+0.1**
WRA	**Warramunga Arr** 0.2nm,0.6s,mb3.3,baz=12,slow=6.2,SNR=3.1	**65.35**	**196**	P		P	**20 04 19.8**	**+2.8**
WRA				pP		pP	20 04 36.5	+2.6
	0.7nm,1.1s,baz=14,slow=6.4,SNR=3.5							
WRA	**Warramunga Arr**	**65.35**	**196**	P		P	**20 04 19.8**	**+2.8**
WRA				pP		pP	20 04 36.5	+2.6
ASAR	**Alice Springs** 0.3nm,0.6s,mb3.4,baz=12,slow=7.3,SNR=5.0	**69.06**	**196**	P		P	**20 04 44.4**	**+4.0**
NOA	**NORSAR Array B** 0.5nm,0.5s,mb3.7,baz=28,slow=6.6,SNR=3.4	**69.89**	**340**	P		P	**20 04 43.7**	**-1.4**
AKASG	**Malin Array Be** 1.1nm,0.4s,mb4.1,baz=33,slow=5.6,SNR=4.8	**72.36**	**325**	P		P	**20 04 59.5**	**-0.8**
GERES	**GERESS Array B** 0.4nm,0.4s,mb3.7,baz=35,slow=7.2,SNR=5.6	**79.70**	**332**	P		P	**20 05 42.0**	**-0.1**
TXAR	**Lajitas Array** 0.2nm,0.5s,mb3.4,baz=309,slow=3.4,SNR=3.6	**80.82**	**58**	P		P	**20 05 48.0**	**-0.4**
TXAR				pP		pP	20 06 04.6	-1.3
	0.5nm,0.6s,baz=292,slow=4.0,SNR=6.8							
TXAR	**Lajitas Array**	**80.82**	**58**	P		P	**20 05 48.0**	**-0.4**
TXAR				pP		pP	20 06 04.6	-1.3

KRSC 05 20:02:31.9±1.2,5202N×15881E,h49km±49km,ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.45**	**336**	*e*P	Pn	20 02 43.0	+0.5
RUS				*i* S	Sn	20 02 51.0	+0.9
GRL	**Gorelyy**	**0.70**	**320**	*e*P	Pn	20 02 46.8	+1.3
GRL				*i* S	Sn	20 02 57.6	+2.2
PET	**Petropavlovsk**	**1.01**	**355**	*e*P	Pn	20 02 50.4	+0.7
PET				*i* S	Sn	20 03 03.9	+1.1
NLC	**Nalytchevo**	**1.20**	**16**	*e*P	Pn	20 02 52.0	-0.2
NLC				*i* S	Sn	20 03 06.5	-0.9
AVH	**Avacha**	**1.25**	**358**	*e*P	Pn	20 02 54.2	+1.3
AVH				*i* S	Sn	20 03 11.2	+2.6
MIPR	**Malaya Ipel'ka**	**1.29**	**282**	*e*P	Pn	20 02 54.1	+0.6
MIPR				*i* S	Sn	20 03 09.9	+0.3
SPN	**Mys Shipunski**	**1.31**	**34**	*e*P	Pn	20 02 55.2	+1.5
SPN				*i* S	Sn	20 03 12.4	+2.3
GNL	**Ganaly**	**1.76**	**343**	*e*P	Pn	20 03 01.4	+1.5
GNL				*i* S	Sn	20 03 22.9	+1.9
KII	**Karymskiy**	**2.06**	**11**	*e*P	Pn	20 03 06.5	+2.6
KII				*i* S	Sn	20 03 31.6	+3.3
MKZ	**Mys Kozlova**	**3.09**	**33**	*e*P	Pn	20 03 20.8	+2.8
MKZ				*i* S	Sn	20 03 56.7	+3.1
KBTR	**Krutoberegovo**	**4.81**	**28**	*e*P	Pn	20 03 44.3	+2.6
KBTR				*i* S	Sn	20 04 38.2	+2.1

ISCJB ***05*** *20:07:06.0±0.8, 3835N±002×2179E±002, h7km±6km, mb3.9/7, Error ellipse: s-maj=3.1km s-min=2.6km az=158.2*

NEIC ***05*** *20:07:05.7, 3834N×2182E, h16km±1km, MD3.7(ATH), After ATH.*

ATH ***05*** *20:07:05.7, 3834N×2182E, h16km±1km, MD3.7/17*

THE ***05*** *20:07:06.6, 3837N×2183E, h0km±2km, ML4.0/7, Error ellipse: s-maj=2.7km s-min=1.1km az=244.0*

CSEM ***05*** *20:07:06.7±0.1, 3836N×2176E, h15km, MD3.7, Error ellipse: s-maj=1.7km s-min=1.6km az=60.0*

SOF ***05*** *20:07:07.4, 3845N×2184E, h10km, MD3.4*

IDC ***05*** *20:07:12.2±2.5, 3839N×2173E, h58km±29km, mb3.7/7, mb1 3.8/10, mb1mx3.6/25, mbtmp3.7/10, ML3.7/3, MS3.5/1, Ms1 3.6/1, ms1mx2.2/42, Error ellipse: s-maj=22.6km s-min=15.2km az=79.0*

ISC 05 20:07:06.5±0.4, 3834N±002×2180E±002, h5km±3km, n100, σ1♀18/136, mb3.9/7, 2C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.39**	**223**	*i*PB	**Pg**	**20 07 14.0**	**0.0**
RLS				*e*SB	**Sg**	**20 07 19.8**	**+0.8**
EVR	**Evrytania**	**0.57**	**1**	*i*PN	**Pg**	**20 07 16.3**	**-1.3**
EVR				*e*SN	**Sg**	**20 07 25.5**	**+0.5**
AGG	**Agios Georgios**	**0.80**	**31**	P	**Pg**	**20 07 20.5**	**-1.3**
AGG				S	**Sg**	**20 07 32.3**	**+0.1**
KFL	**Anninata**	**0.83**	**254**	P	**Pg**	**20 07 21.9**	**-0.5**
VLS	**Valsamata**	**0.96**	**261**	P	**Pg**	**20 07 23.6**	**-1.4**
VLS				S	**Sg**	**20 07 39.0**	**+1.5**
VLS	**Valsamata**	**0.96**	**261**	*e*PB	**Pb**	**20 07 23.8**	**-1.9**
VLS				*e*SN	**Sn**	**20 07 38.3**	**-2.4**
VLS	**Valsamata**	**0.96**	**261**	*e*Pb	**Pb**	**20 07 23.8**	**-1.9**
VLS				*e*Sn	**Sn**	**20 07 38.3**	**-2.4**
VLS				S	**Sg**	**20 07 39.0**	**+1.5**
LKD	**Levkas**	**0.97**	**292**	P	**Pg**	**20 07 23.9**	**-1.2**
LKD				S	**Sg**	**20 07 40.0**	**+2.3**
LTK	**Loutraki**	**0.97**	**109**	P	**Pg**	**20 07 24.5**	**-0.7**
LTK				S	**Sg**	**20 07 39.8**	**+1.9**
LKR	**Lokris**	**0.99**	**72**	P	**Pg**	**20 07 24.1**	**-1.4**
LKR				S	**Sg**	**20 07 38.9**	**+0.5**
LKR	**Lokris**	**0.99**	**72**	*e*PN	**Pn**	**20 07 24.0**	**-3.0**
LKR				*e*SN	**Sn**	**20 07 38.4**	**-3.0**
LKR	**Lokris**	**0.99**	**72**	P	**Pg**	**20 07 24.1**	**-1.4**
LKR				S	**Sg**	**20 07 38.9**	**+0.5**
VLX	**Vlachokerasia**	**1.07**	**154**	P	**Pg**	**20 07 26.1**	**-1.0**
VLX				S	**Sg**	**20 07 44.4**	**+3.4**
ITM	**Ithomi**	**1.17**	**175**	*e*PN	**Pn**	**20 07 27.9**	**-1.5**
ITM				*e*SN	**Sn**	**20 07 43.7**	**-1.9**
THL	**Klokotos Trika**	**1.23**	**8**	P	**Pg**	**20 07 28.4**	**-1.7**
THL				S	**Sg**	**20 07 46.4**	**+0.3**
THL	**Klokotos Trika**	**1.23**	**8**	*e*Pn	**Pn**	**20 07 29.0**	**-1.3**
THL				S	**Sg**	**20 07 46.4**	**+0.3**
DID	**Didima**	**1.41**	**126**	P	**Pn**	**20 07 32.5**	**-0.3**
DID				S	**Sb**	**20 07 52.7**	**+1.2**
PYL	**PYLOS**	**1.45**	**182**	P	**Pn**	**20 07 32.6**	**-0.6**
PYL				S	**Sb**	**20 07 55.8**	**+3.3**
NAIG	**Nisos Aigina**	**1.46**	**113**	*e*PN	**Pn**	**20 07 32.5**	**-0.9**
NAIG				*e*SN	**Sn**	**20 07 53.0**	**+0.2**
NEO	**Neokhori**	**1.47**	**49**	*e*PN	**Pn**	**20 07 32.8**	**-0.8**
XOR	**Xorichti**	**1.49**	**46**	P	**Pn**	**20 07 34.7**	**-0.7**
JAN	**Janina**	**1.50**	**331**	*i*PN	**Pn**	**20 07 34.7**	**+0.6**
MEV	**Metsovon**	**1.51**	**343**	P	**Pn**	**20 07 34.8**	**+0.7**
ATH	**Athens Observa**	**1.56**	**103**	*e*PN	**Pn**	**20 07 34.8**	**0.0**
ATH				*e*SN	**Sn**	**20 07 56.0**	**+0.7**
KVR	**Kavouri**	**1.64**	**108**	*e*PN	**Pn**	**20 07 35.5**	**-0.4**
KVR				*e*SN	**Sn**	**20 07 57.0**	**-0.3**
PTL	**Penteli**	**1.66**	**100**	*e*PN	**Pn**	**20 07 35.5**	**-0.6**
PTL				*e*SN	**Sn**	**20 07 58.0**	**+0.3**
AOS	**Alonnisos**	**1.83**	**62**	P	**Pn**	**20 07 37.0**	**-1.5**
LIT	**Litokhoron**	**1.84**	**17**	P	**Pn**	**20 07 38.4**	**-0.2**
LIT				S	**Sn**	**20 08 03.0**	**+0.8**
KZN	**Kozani**	**1.96**	**359**	*i*PN	**Pn**	**20 07 41.0**	**+0.6**
KEK	**Kerkira**	**2.07**	**312**	*e*PN	**Pn**	**20 07 42.2**	**+0.3**
PAIG	**Paliouri**	**2.15**	**42**	P	**Pn**	**20 07 41.9**	**-1.1**
KYTH	**Kithira**	**2.28**	**154**	*e*PN	**Pn**	**20 07 45.0**	**+0.2**
PLG	**Polygyros**	**2.40**	**32**	P	**Pn**	**20 07 45.5**	**-0.8**
PLG				S	**Sn**	**20 08 16.5**	**+0.8**
PLG	**Polygyros**	**2.40**	**32**	*e*Pn	**Pn**	**20 07 45.8**	**-0.5**
PLG				S	**Sn**	**20 08 16.9**	**+0.8**
THE	**Thessaloniki**	**2.46**	**21**	P	**Pn**	**20 07 45.2**	**-2.0**
FNA	**Florina**	**2.46**	**353**	P	**Pn**	**20 07 48.6**	**+1.4**
FNA				S	**Sn**	**20 08 19.2**	**+1.6**
HORT	**Hortiatis**	**2.47**	**24**	P	**Pn**	**20 07 46.5**	**-0.8**
HORT				S	**Sn**	**20 08 19.0**	**+1.2**
OUR	**Ouranopolis**	**2.61**	**40**	P	**Pn**	**20 07 48.6**	**-0.7**
GRG	**Griva**	**2.65**	**10**	P	**Pn**	**20 07 49.8**	**0.0**
BIA	**Bitola**	**2.70**	**352**	P	**Pn**	**20 07 51.2**	**+0.7**
BIA	**Bitola**	**2.70**	**352**	*e*Pn	**Pn**	**20 07 49.5**	**-1.0**
BIA	**Bitola**	**2.70**	**352**	P	**Pn**	**20 07 51.2**	**+0.7**
BIA	**Bitola**	**2.70**	**352**	*e*Pn	**Pn**	**20 07 49.6**	**-0.9**
SOH	**Sokhos**	**2.75**	**25**	P	**Pn**	**20 07 51.5**	**+0.3**
SOH				S	**Sn**	**20 08 25.4**	**+0.6**
OHR	**Ohrid**	**2.87**	**345**	P	**Pn**	**20 07 52.5**	**-0.3**
OHR	**Ohrid**	**2.87**	**345**	*e*Pn	**Pn**	**20 07 53.4**	**+0.6**
KNT	**Kendrikon**	**2.94**	**16**	P	**Pn**	**20 07 53.6**	**-0.2**
KNT				S	**Sn**	**20 08 29.3**	**-0.2**
VAY	**Valandovo**	**3.03**	**11**	*e*Pn	**Pn**	**20 07 55.2**	**+0.1**
VAY	**Valandovo**	**3.03**	**11**	*e*Pn	**Pn**	**20 07 55.3**	**+0.2**
KRUS	**Krusevo**	**3.05**	**352**	*e*Pn	**Pn**	**20 07 57.1**	**+1.8**
KRUS	**Krusevo**	**3.05**	**352**	*e*Pn	**Pn**	**20 07 57.2**	**+1.8**
LIA	**Limnos Island**	**3.06**	**58**	P	**Pn**	**20 07 54.8**	**-0.6**
LIA	**Limnos Island**	**3.06**	**58**	*e*PN	**Pn**	**20 07 55.4**	**0.0**
LIA	**Limnos Island**	**3.06**	**58**	P	**Pn**	**20 07 54.8**	**-0.6**
LIA	**Limnos Island**	**3.06**	**58**	*e*Pn	**Pn**	**20 07 55.4**	**0.0**
APE	**Apeiranthos**	**3.22**	**112**	P	**Pn**	**20 07 57.6**	**-0.1**
APE				S	**Sn**	**20 08 35.0**	**-1.4**
APE	**Apeiranthos**	**3.22**	**112**	*e*Pn	**Pn**	**20 07 57.2**	**-0.5**
APE				S	**Sn**	**20 08 35.0**	**-1.4**
CHOS	**Chios island**	**3.35**	**88**	P	**Pn**	**20 07 59.6**	**+0.2**
TIR	**Tirane**	**3.35**	**334**	P	**Pn**	**20 08 02.5**	**+3.1**
TIR	**Tirane**	**3.35**	**334**	*e*P	**Pn**	**20 08 02.5**	**+3.0**
STIP	**Stip**	**3.36**	**5**	P	**Pn**	**20 08 00.7**	**+1.1**
NVR	**Nevrokopi**	**3.49**	**27**	*e*PN	**Pn**	**20 08 00.4**	**+0.3**
THR5	**Thira Island,**	**3.42**	**123**	P	**Pn**	**20 08 02.2**	**+1.8**
MMB	**Musomiste**	**3.57**	**24**	P	**Pn**	**20 08 02.8**	**+0.4**
MMB				S	**Sn**	**20 08 45.0**	**+0.1**
SKO	**Skopje**	**3.64**	**356**	P	**Pn**	**20 08 04.6**	**+1.2**
KKB	**Krupnik**	**3.66**	**15**	P	**Pn**	**20 08 04.0**	**+0.4**
KKB				S	**Sn**	**20 08 46.0**	**-1.1**
IDI	**Anoyia**	**3.93**	**140**	P	**Pn**	**20 08 09.6**	**+2.1**
	2.1nm,0.3s,baz=309,slow=14,SNR=17						
IDI				S	**Sn**	**20 08 57.8**	**+3.9**
	3.3nm,0.3s,baz=284,slow=22,SNR=5.5						
RDO	**Rodhopi**	**4.02**	**45**	*e*PN	**Pn**	**20 08 09.5**	**+0.9**
RZN	**Rozhen**	**4.02**	**33**	P	**Pn**	**20 08 09.0**	**+0.3**
TIP	**Timpagrande**	**4.03**	**284**	*e*P	**Pn**	**20 08 08.2**	**-0.5**
TIP	**Timpagrande**	**4.03**	**284**	*e*P	**Pn**	**20 08 08.2**	**-0.5**
SMG	**Samos**	**4.03**	**97**	*e*PN	**Pn**	**20 08 08.9**	**+0.1**
SIVA	**Sivas**	**4.11**	**143**	P	**Pn**	**20 08 12.3**	**+2.4**
ALN	**Alexandroupoli**	**4.16**	**51**	P	**Pn**	**20 08 10.3**	**-0.2**
LAST	**Lasithi**	**4.34**	**136**	P	**Pn**	**20 08 14.2**	**+1.2**
LAST				S	**Sn**	**20 09 07.5**	**+3.6**
VTS	**Vitosha**	**4.38**	**14**	P	**Pn**	**20 08 14.5**	**+0.9**
VTS				S	**Sn**	**20 09 04.0**	**-0.9**
BARS	**Barje**	**4.47**	**0**	*e*Pn	**Pn**	**20 08 17.4**	**+2.6**
ZKR	**Zakros**	**4.79**	**131**	P	**Pn**	**20 08 21.3**	**+2.0**
CUC	**Castrocucco**	**4.93**	**291**	*e*P	**Pn**	**20 08 22.4**	**+1.2**
CUC	**Castrocucco**	**4.93**	**291**	*e*P	**Pn**	**20 08 22.4**	**+1.2**
BOLS	**Boljevac**	**5.48**	**1**	*e*Pn	**Pn**	**20 08 27.8**	**-0.9**
GRUS	**Gruza**	**5.60**	**352**	*e*Pn	**Pn**	**20 08 31.4**	**+1.0**
BBLS	**Lazići**	**5.81**	**343**	*e*Pn	**Pn**	**20 08 36.2**	**+3.0**
MLR	**Muntele Rosu**	**7.78**	**22**	P	**Pn**	**20 09 03.9**	**+3.7**
	0.7nm,0.3s,baz=302,slow=18,SNR=10						
BRTR	**Keskin Array B**	**9.32**	**78**	P	**Pn**	**20 09 22.9**	**+1.5**
	0.3nm,0.3s,baz=259,slow=13,SNR=11						
VYHS	**Vyhne**	**10.37**	**349**	*e*PN	**Pn**	**20 09 40.5**	**+4.7**
MODS	**Modra-Piesok**	**10.55**	**343**	*e*PN	**Pn**	**20 09 42.7**	**+4.5**
STHS	**Stebnicka Huta**	**11.08**	**358**	*e*SN	**Sn**	**20 11 33.3**	**-16**
HFS	**Hagfors**	**22.41**	**349**	P	**P**	**20 12 06.0**	**+0.5**
	3.9nm,0.9s,mb3.9,baz=150,slow=12,SNR=7.2						
NB2	**NORSAR Subarra**	**23.67**	**347**	P	**P**	**20 12 17.0**	**-1.7**
	comp=Z,1.1nm,0.7s,mb3.4,baz=153,slow=10						
NOA	**NORSAR Array B**	**23.67**	**347**	P	**P**	**20 12 17.1**	**-1.6**
	comp=Z,1.3nm,0.7s,mb3.5,baz=155,slow=9.3,SNR=3.9						
EKA	**Eskdalemuir Ar**	**23.89**	**323**	P	**P**	**20 12 19.1**	**-1.6**
	comp=Z,2.7nm,0.8s,mb3.7,baz=131,slow=8.9,SNR=3.9						
EKA	**Eskdalemuir Ar**	**23.89**	**323**	P	**P**	**20 12 19.1**	**-1.6**
TORD	**Torodi Ar. Bea**	**30.80**	**221**	P	**P**	**20 13 22.6**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.8,baz=33,slow=8.8,SNR=9.9						
ARCES	**ARCESS Array B**	**31.32**	**3**	P	**P**	**20 13 25.4**	**-1.8**
	comp=Z,4.1nm,1.0s,mb4.2,baz=184,slow=9.0,SNR=4.8						
ARCES				LR	LR	20 27 25.7	
	comp=Z,95nm,20.3s,baz=300,slow=39						
MK31	**Makanchi Array**	**44.36**	**59**	*e*P	**P**	**20 15 16.8**	**-0.7**
MK31	**Makanchi Array**	**44.36**	**59**	*e*P	**P**	**20 15 16.8**	**-0.7**
MKAR	**Makanchi Array**	**44.36**	**59**	P	**P**	**20 15 16.9**	**-0.6**
	comp=Z,2.4nm,0.5s,mb4.2,baz=274,slow=7.5,SNR=46						
ZALV	**Zalesovo Beam**	**44.83**	**48**	P	**P**	**20 15 20.0**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.0,baz=270,slow=5.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**44.83**	**48**	P	**P**	**20 15 20.0**	**-1.2**

IDC 05 20:25:52.6±1.0, 5283S×2754E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/15, mbtmp4.1/6, MS4.3/5, Ms1 4.2/5, ms1mx3.5/24, Error ellipse: s-maj=55.1km s-min=19.9km az=67.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**21.01**	**344**	LR	LR	20 36 15.5	
	comp=Z,162nm,20.8s,baz=196,slow=30						
MAW	**Mawson**	**22.49**	**145**	P	P	20 30 53.5	+0.3
	2.0nm,0.6s,baz=311,slow=12,SNR=3.6						
BOSA	**Boshof**	**24.25**	**355**	P	P	20 31 12.1	+0.9
	6.0nm,1.0s,baz=176,slow=14,SNR=3.5						
BOSA				LR	LR	20 38 51.7	
	comp=Z,101nm,20.1s,baz=161,slow=32						
LBTB	**Lobatse**	**27.82**	**356**	LR	LR	20 40 47.8	
	comp=Z,119nm,20.8s,baz=26,slow=32						
QSPA	**South Pole Qui**	**37.39**	**180**	P	P	20 33 07.0	+0.6
	3.7nm,0.7s,baz=265,slow=12,SNR=12						
DBIC	**Dimbokro**	**65.35**	**324**	P	P	20 36 35.6	-0.9
	5.2nm,0.9s,baz=157,slow=8.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**69.38**	**333**	P	P	20 37 02.5	+0.5
	2.1nm,1.0s,baz=172,slow=6.3,SNR=8.4						
RPZ	**Rata Peaks**	**78.83**	**154**	LR	LR	21 09 47.6	
	comp=Z,2µm,18.6s,baz=134,slow=33						
ASAR	**Alice Springs**	**80.76**	**117**	P	P	20 38 07.7	-0.2
	0.8nm,0.7s,baz=208,slow=5.8,SNR=9.8						
URZ	**Urewera**	**85.51**	**156**	LR	LR	21 12 34.0	
	comp=Z,2µm,21.7s,baz=340,slow=33						

ROM ***05*** *20:45:14.6±1.1, 4388N×1390E, h7km, Md2.5/5, Ml1.8/2, Error ellipse: s-maj=11.0km s-min=7.5km az=44.0*

ISCJB ***05*** *20:45:16.2±1.4, 4383N±006×1381E±010, h2km±11km, Error ellipse: s-maj=13.6km s-min=7.7km az=38.2*

CSEM ***05*** *20:45:16.1±0.2, 4382N×1378E, h12km, ML2.6/3, Error ellipse: s-maj=7.3km s-min=3.8km az=137.0*

ISC 05 20:45:16.5±1.5, 4381N±007×139E±01, h3km±12km, n7, σ0§95/13, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.31**	**214**	Pg	**Pg**	**20 45 22.1**	**-0.5**
AOI				Sg	**Sg**	**20 45 28.8**	**+2.1**
	52nm,0.3s						
FSSB	**Fossombrone**	**0.78**	**262**	Pg	**Pg**	**20 45 30.6**	**-1.0**
FSSB				Sg	**Sg**	**20 45 42.1**	**+0.4**
	9.0nm,0.3s						
PIEI	**Pieia**	**0.99**	**254**	Pg	**Pg**	**20 45 34.7**	**-0.8**
PIEI				Sg	**Sg**	**20 45 49.1**	**+0.8**
	24nm,0.4s						
NVLJ	**Novalja**	**1.05**	**44**	*e*Pg	**Pn**	**20 45 38.4**	**+0.2**
NVLJ				Sg	**Sn**	**20 45 54.2**	**+0.9**
NVLJ	**Novalja**	**1.05**	**44**	*e*Pg	**Pn**	**20 45 38.3**	**+0.2**
NVLJ				Sg	**Sn**	**20 45 54.2**	**+0.9**
NRCA	**Norcia**	**1.11**	**209**	Pg	**Pn**	**20 45 37.3**	**-1.6**
NRCA				Sg	**Sn**	**20 45 54.8**	**+0.1**
	24nm,0.7s						
ASS	**Assisi**	**1.15**	**230**	Pg	**Pg**	**20 45 38.3**	**-0.2**
	7.0nm,0.3s						

IDC 05 20:46:35.8±6.0, 6374S×17130E, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.9/11, mbtmp4.0/3, MS4.0/4, Ms1 4.0/4, ms1mx3.5/22, Error ellipse: s-maj=268.6km s-min=28.3km az=67.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**20.06**	**359**	LR	LR	20 56 59.5	
	comp=Z,380nm,19.4s,baz=334,slow=31						
URZ	**Urewera**	**25.75**	**11**	LR	LR	21 00 13.8	
	comp=Z,256nm,19.6s,baz=328,slow=32						
QSPA	**South Pole Qui**	**26.35**	**180**	P	P	20 52 13.3	+0.5
	3.3nm,0.9s,baz=355,slow=5.3,SNR=5.5						
QSPA				LR	LR	21 00 53.6	
	comp=Z,269nm,21.2s,baz=108,slow=33						
NWAO	**Narrogin (SRO)**	**45.25**	**286**	LR	LR	21 09 28.0	
	comp=Z,474nm,21.4s,baz=310,slow=30						
ASAR	**Alice Springs**	**47.04**	**310**	P	P	20 55 09.7	+1.0
	1.6nm,0.9s,baz=161,slow=8.8,SNR=8.7						
WRA	**Warramunga Arr**	**50.35**	**313**	P	P	20 55 33.0	-1.2
	1.6nm,1.0s,baz=157,slow=6.1,SNR=4.7						
IDI	**Anoyia**	**144.91**	**232**	PKP	PKPdf	21 06 13.7	-0.2
	10nm,0.9s,baz=176,slow=7.2,SNR=3.9						
BRTR	**Keskin Array B**	**145.46**	**246**	PKPbc	PKPbc	21 06 14.0	-0.7
	3.1nm,0.9s,baz=159,slow=4.5,SNR=10						

IDC ***05*** *20:48:23.1±1.4, 3509N×634E, h0km, mb3.4/3, mb1 3.4/6, mb1mx3.3/25, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=35.9km s-min=21.3km az=154.0*

MDD ***05*** *20:48:25.4±3.0, 3525N×644E, h0km, Error ellipse: s-maj=30.6km s-min=25.0km az=96.0*

CRAAG ***05*** *20:48:25.1, 3527N×636E, Ml3.8*

ISCJB ***05*** *20:48:25.9±0.7, 3540N±005×6.19E±004, h10km, mb3.5/3, Error ellipse: s-maj=7.5km s-min=5.2km az=177.7*

NEIC ***05*** *20:48:25.4, 3525N×644E, h0km, MG3.8(MDD), After MDD.*

CSEM ***05*** *20:48:25.9±0.3, 3537N×645E, h2km, ML3.0/7, Error ellipse: s-maj=6.4km s-min=3.6km az=172.0*

ISC 05 20:48:27.9±1.1, 3540N±005×634E±005, h17km±8km, n54, σ1§15/73, mb3.5/3, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTEI	**Djebel Teioual**	**0.66**	**5**	P	**Pg**	**20 48 39.0**	**-1.9**
CASM	**Ain Smara**	**0.86**	**8**	P	**Pb**	**20 48 44.5**	**+0.1**
CKHR	**Kef el Ahmar**	**0.91**	**313**	P	**Pb**	**20 48 43.7**	**-1.4**
CKFL	**Kef-Lekhel**	**1.04**	**17**	P	**Pb**	**20 48 47.5**	**+0.1**
SET	**Setif**	**1.10**	**316**	P	**Pb**	**20 48 48.0**	**-0.4**
DFRA	**Djebel Bou Aff**	**1.20**	**342**	P	**Pn**	**20 48 50.0**	**+0.2**
ABSA	**Djebel Ababsia**	**1.27**	**47**	P	**Pn**	**20 48 49.9**	**-0.9**
ATAF	**Djebel Tarf**	**1.74**	**286**	P	**Pn**	**20 48 57.2**	**-0.1**
AKF	**Akfadou**	**1.89**	**311**	P	**Pn**	**20 49 01.2**	**+1.9**
AKET	**Djebel Ketaf**	**2.10**	**289**	P	**Pn**	**20 49 05.0**	**+2.9**
KEST	**Kesra**	**2.48**	**82**	Pn	**Pn**	**20 49 07.0**	**-0.3**
	0.6nm,0.3s,baz=199,slow=3.6,SNR=32						
EMHD	**Djebel Mahouad**	**2.86**	**287**	P	**Pn**	**20 49 12.6**	**-0.1**
EBNR	**Beni Rached**	**4.00**	**284**	P	**Pn**	**20 49 33.3**	**+5.0**
ETRT	**Tiaret**	**4.11**	**271**	P	**Pn**	**20 49 28.0**	**-1.9**
EANR	**'Ain N'Sour**	**4.30**	**279**	P	**Pn**	**20 49 31.1**	**-1.3**
ETOS	**Mallorca**	**5.18**	**328**	Pn	**Pn**	**20 49 45.1**	**+0.6**
	0.3nm,0.3s,SNR=7.9						
ETOS				Sn	**Sn**	**20 50 44.0**	**+0.3**
	3.2nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**5.18**	**328**	Pn	**Pn**	**20 49 45.1**	**+0.7**
	0.3nm,0.3s,SNR=7.9						
ETOS				Sn	**Sn**	**20 50 44.0**	**+0.2**
	3.2nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**5.38**	**314**	Pn	**Pn**	**20 49 47.9**	**+0.6**
	3.8nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**20 50 47.7**	**-1.1**
EIBI	**Ibiza**	**5.38**	**314**	Pn	**Pn**	**20 49 47.9**	**+0.7**
	3.8nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**20 50 47.6**	**-1.1**
	3.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**6.19**	**304**	Pn	**Pn**	**20 49 58.7**	**+0.3**
	0.7nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**6.19**	**304**	Pn	**Pn**	**20 49 58.7**	**+0.2**
	0.7nm,0.2s,SNR=7.9						
EBEN				Sn	**Sn**	**20 51 03.0**	**-5.8**
	1.9nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**6.56**	**294**	Pn	**Pn**	**20 50 02.9**	**-0.6**
	1.8nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**6.56**	**294**	Pn	**Pn**	**20 50 02.9**	**-0.6**
	1.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.09**	**299**	Pn	**Pn**	**20 50 11.3**	**+0.6**
ETOB				Sn	**Sn**	**20 51 29.4**	**-1.4**
ETOB	**Tobarra**	**7.09**	**299**	Pn	**Pn**	**20 50 11.3**	**+0.6**
	0.7nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**20 51 29.5**	**-1.3**
	0.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.09**	**299**	Pn	**Pn**	**20 50 11.3**	**+0.6**
	0.7nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**20 51 29.5**	**-1.4**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**7.23**	**327**	Pn	**Pn**	**20 50 12.1**	**-0.6**
	0.9nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**7.23**	**327**	Pn	**Pn**	**20 50 12.1**	**-0.6**
	0.9nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**7.28**	**321**	Pn	**Pn**	**20 50 12.5**	**-0.9**
	0.3nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**20 51 35.8**	**+0.2**
	0.6nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**7.28**	**321**	Pn	**Pn**	**20 50 12.5**	**-0.9**
	0.3nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**20 51 35.8**	**+0.2**
	0.6nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**7.31**	**315**	Pn	**Pn**	**20 50 14.7**	**+0.9**
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**20 51 36.5**	**+0.2**
	0.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.31**	**315**	Pn	**Pn**	**20 50 14.7**	**+0.9**
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**20 51 36.5**	**+0.2**
	0.2nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**7.51**	**331**	Pn	**Pn**	**20 50 17.1**	**+0.6**
	0.4nm,0.1s,SNR=7.9						
EMIR				Sn	**Sn**	**20 51 41.1**	**-0.1**
	1.0nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**7.51**	**331**	Pn	**Pn**	**20 50 17.1**	**+0.6**
	0.4nm,0.1s,SNR=7.9						
EMIR				Sn	**Sn**	**20 51 41.1**	**-0.1**
	1.0nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.57**	**291**	Pn	**Pn**	**20 50 19.2**	**+1.9**
EHUE				Sn	**Sn**	**20 51 42.3**	**-0.5

*ISCJB **05** 21:30:52.8±1.0, 3808N±004×2043E±007, h12km±4km, Error ellipse: s-maj=9.0km s-min=5.9km az=159.4*
*CSEM **05** 21:30:52.5±0.2, 3804N×2053E, h5km, ML3.4/6, Error ellipse: s-maj=3.5km s-min=2.5km az=55.0*
*ATH **05** 21:30:52.4, 3803N×2055E, h19km±1km, MD3.4/8*
*THE **05** 21:30:54.1, 38.12N×2047E, h10km±1km, ML3.4/6, Error ellipse: s-maj=3.8km s-min=1.8km az=250.0*
*NEIC **05** 21:30:54.1, 38.12N×2047E, h10km, MD3.8(ATH), ML3.4(THE), After THE.*

ISC 05 21:30:53.1±1.0, 3807N±004×2044E±007, h9km±4km, n64, σ0.86/99, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.16**	**48**	P	**Pg**	**21 30 57.1**	**+0.5**
VLS				S	**Sg**	**21 30 59.9**	**+0.9**
VLS	**Valsamata**	**0.16**	**48**	*e*PB	**Pg**	**21 30 57.3**	**+0.7**
VLS				*e*SB	**Sg**	**21 31 00.2**	**+1.2**
VLS	**Valsamata**	**0.16**	**48**	*e*Pb	**Pg**	**21 30 57.3**	**+0.7**
KFL	**Anninata**	**0.28**	**81**	P	**Pg**	**21 30 57.2**	**-1.4**
LKD	**Levkas**	**0.66**	**15**	P	**Pg**	**21 31 04.9**	**-0.9**
LKD				S	**Sg**	**21 31 14.6**	**+0.1**
RLS	**Riolos of Patr**	**0.81**	**90**	*e*PN	**Pn**	**21 31 06.0**	**-4.6**
RLS				*e*SN	**Sn**	**21 31 16.5**	**-6.2**
EVR	**Evrytania**	**1.37**	**51**	*e*PN	**Pn**	**21 31 17.8**	**-0.5**
EVR				*e*SN	**Sn**	**21 31 36.2**	**-0.3**
ITM	**Ithomi**	**1.48**	**126**	*e*PN	**Pn**	**21 31 18.9**	**-0.9**
PYL	**PYLOS**	**1.56**	**138**	P	**Pn**	**21 31 20.0**	**-1.0**
JAN	**Janina**	**1.62**	**11**	*e*PN	**Pn**	**21 31 21.5**	**-0.2**
VLX	**Vlachokerasia**	**1.69**	**114**	P	**Pn**	**21 31 24.5**	**+1.8**
VLX				S	**Sn**	**21 31 47.4**	**+3.0**
KEK	**Kerkira**	**1.72**	**343**	*e*PN	**Pn**	**21 31 24.1**	**+1.0**
AGG	**Agios Georgios**	**1.76**	**57**	P	**Pn**	**21 31 24.0**	**+0.3**
AGG				S	**Sn**	**21 31 46.4**	**+0.2**
MEV	**Metsovon**	**1.82**	**20**	P	**Pn**	**21 31 25.6**	**+1.1**
THL	**Klokotos Trika**	**1.94**	**39**	P	**Pn**	**21 31 26.4**	**+0.3**
THL				S	**Sn**	**21 31 50.8**	**+0.3**
THL	**Klokotos Trika**	**1.94**	**39**	↑*i*Pn	**Pn**	**21 31 26.6**	**+0.5**
THL				S	**Sn**	**21 31 50.8**	**+0.3**
LTK	**Loutraki**	**2.00**	**91**	P	**Pn**	**21 31 25.8**	**-1.1**
LTK				S	**Sn**	**21 31 51.6**	**-0.4**
LKR	**Lokris**	**2.10**	**73**	P	**Pn**	**21 31 27.5**	**-0.8**
LKR				S	**Sn**	**21 31 54.0**	**-0.4**
LKR	**Lokris**	**2.10**	**73**	*e*Pn	**Pn**	**21 31 27.7**	**-0.6**
LKR	**Lokris**	**2.10**	**73**	P	**Pn**	**21 31 28.2**	**-0.1**
LKR				S	**Sn**	**21 31 54.0**	**-0.4**
DID	**Didima**	**2.29**	**103**	P	**Pn**	**21 31 30.7**	**-0.2**
DID				S	**Sn**	**21 32 00.7**	**+1.5**
XOR	**Xorichti**	**2.51**	**58**	P	**Pn**	**21 31 35.1**	**+1.1**
LIT	**Litokhoron**	**2.58**	**38**	P	**Pn**	**21 31 34.9**	**-0.1**
FNA	**Florina**	**2.81**	**15**	P	**Pn**	**21 31 38.5**	**+0.4**
FNA				S	**Sn**	**21 32 12.1**	**+0.1**
GRG	**Griva**	**3.26**	**27**	P	**Pn**	**21 31 44.0**	**-0.3**
PLG	**Polygyros**	**3.28**	**44**	P	**Pn**	**21 31 43.5**	**-1.1**
SOH	**Sokhos**	**3.56**	**38**	P	**Pn**	**21 31 48.4**	**0.0**
SOH				S	**Sn**	**21 32 29.3**	**-1.2**
KNT	**Kendrikon**	**3.63**	**31**	P	**Pn**	**21 31 49.1**	**-0.2**

DJA 05 21:41:12, 883S×11204E, h15km, MLv3.9/5, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRKI	**Karangkates**	**0.78**	**31**	P	Pg	21 41 23.7	-3.5
KRKI	**Karangkates**	**0.78**	**31**	S	Sg	21 41 39.3	+1.7
SJI	**Sawahan**	**1.12**	**346**	P	Pb	21 41 33.1	0.0
SJI	**Sawahan**	**1.12**	**346**	S	Sb	21 41 59.0	+11
NBBI	**Negara**	**2.59**	**80**	P	Pn	21 41 52.1	-1.3
DNP	**Denpasar**	**3.14**	**87**	P	Pn	21 42 01.1	+0.2

*ISCJB **05** 21:47:59.9±0.1, 39379N±0009×11165W±001, h10km, Error ellipse: s-maj=1.5km s-min=1.3km az=166.8*
*NEIC **05** 21:48:00.0, 3935N×11165W, h6km, ML3.9(SLC), MW3.8(SLM), After SLC.*
NEIC Felt [IV] at Mount Pleasant and [III] at Ephraim, Huntington and Manti. Also felt at Fayette, Ferron, Lehi, Nephi, Orem and Salina.
*IDC **05** 21:48:00.3±0.9, 3937N×11154W, h0km, mb1 3.8/6, mb1mx3.6/27, mbtmp3.6/6, ML3.7/6, Error ellipse: s-maj=10.3km s-min=7.9km az=162.0*

ISC 05 21:48:00.9±0.1, 39367N±0007×11166W±001, h10km, n140, σ1.21/298, 34C-35D, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
P16A	**Fountain Green**	**0.24**	**360**	↑P	**Pg**	**21 48 06.2**	**+0.3**
	baz=0.3,SNR=857						
P16A				↑S	**Sg**	**21 48 10.4**	**+1.2**
	baz=0.3						
TMUT	**Trail Mountain**	**0.35**	**101**	*e*Pg	**Pg**	**21 48 07.5**	**-0.5**
TMUT				*e*Sg	**Sg**	**21 48 12.5**	**-0.2**
P15A	**Leamington**	**0.52**	**293**	↑P	**Pg**	**21 48 11.0**	**-0.1**
	baz=0.5,SNR=1000						
P15A				↓S	**Sg**	**21 48 18.2**	**+0.2**
	baz=0.5						
Q16A	**Castle Valley**	**0.59**	**140**	↑S	**Sg**	**21 48 18.6**	**-1.4**
	baz=0.6						
MPU	**Maple Canyon**	**0.65**	**2**	*e*P	**Pg**	**21 48 13.0**	**-0.5**
MPU				*e*S	**Sg**	**21 48 20.6**	**-1.4**
NLU	**North Lily Min**	**0.67**	**331**	*e*P	**Pg**	**21 48 12.4**	**-1.5**
NLU				*e*S	**Sg**	**21 48 22.1**	**-0.6**
Q15A	**Fillmore**	**0.67**	**237**	↓S	**Sg**	**21 48 21.9**	**-0.8**
	baz=0.7						
P17A	**Butcher Ranch,**	**0.72**	**81**	↓S	**Sg**	**21 48 22.7**	**-1.5**
	baz=0.7						
SRU	**San Rafael**	**0.92**	**106**	*e*P	**Pg**	**21 48 16.9**	**-1.6**
SRU				*e*S	**Sg**	**21 48 28.5**	**-2.0**
MSU	**Marysvale**	**0.94**	**206**	*e*P	**Pg**	**21 48 18.2**	**-0.9**
MSU				*e*S	**Sg**	**21 48 28.8**	**-2.6**
DAU	**Daniels Canyon**	**1.09**	**16**	*e*P	**Pb**	**21 48 21.6**	**-0.2**
DAU				*e*S	**Sg**	**21 48 35.3**	**-0.7**
O17A	**Robinson Place**	**1.09**	**40**	↓P	**Pb**	**21 48 21.5**	**-0.3**
	baz=1.1,SNR=75						
P14A	**Drum Mountains**	**1.11**	**282**	↓S	**Sb**	**21 48 36.4**	**-0.4**
	baz=1.1						
P18A	**Preston Nutter**	**1.12**	**76**	↑S	**Sb**	**21 48 35.7**	**-1.3**
	baz=1.1						
R17A	**Hanksville Air**	**1.20**	**142**	↓S	**Sn**	**21 48 37.5**	**-2.6**
	baz=1.2						
Q18A	**Rafter H Ranch**	**1.21**	**102**	↑S	**Sn**	**21 48 37.7**	**-2.7**
	baz=1.2						
DUG	**Dugway**	**1.22**	**313**	*e*P	**Pn**	**21 48 23.2**	**-0.7**
DUG				*e*S	**Sb**	**21 48 39.2**	**-0.5**
DUG	**Dugway**	**1.22**	**313**	↓S	**Sb**	**21 48 40.0**	**+0.3**
	baz=1.2						
JLU	**Jordanelle**	**1.24**	**7**	*e*P	**Pn**	**21 48 24.3**	**-0.1**
JLU				*e*S	**Sb**	**21 48 40.7**	**+0.2**
R15A	**Junction**	**1.25**	**203**	↓S	**Sb**	**21 48 41.0**	**+0.2**
	baz=1.2						
Q14A	**Sevier Lake (B**	**1.31**	**254**	↑S	**Sb**	**21 48 42.8**	**+0.2**
	baz=1.3						
CTU	**Camp Tracy**	**1.32**	**357**	*e*Pn	**Pn**	**21 48 25.4**	**-0.1**
CTU				*e*S	**Sb**	**21 48 42.2**	**-0.7**
NOQ	**North Oquirrh**	**1.33**	**345**	*e*Pn	**Pn**	**21 48 25.2**	**-0.4**
NOQ				*e*S	**Sb**	**21 48 43.7**	**+0.6**
R14A	**James Farms, M**	**1.51**	**225**	↓S	**Sn**	**21 48 48.7**	**+1.0**
	baz=1.5						
O18A	**Roosevelt**	**1.56**	**54**	P	**Pn**	**21 48 29.9**	**+1.2**
	baz=1.6,SNR=88						
O18A				↑S	**Sn**	**21 48 49.8**	**+0.9**
	baz=1.6						
S16A	**Weppner Ranch,**	**1.64**	**178**	↓S	**Sn**	**21 48 51.2**	**+0.2**
	baz=1.6						
N15A	**Stansbury Isla**	**1.66**	**337**	↓P	**Pn**	**21 48 29.4**	**-0.7**
	baz=1.7						
R18A	**Canyonlands Na**	**1.69**	**125**	↑S	**Sn**	**21 48 51.7**	**-0.4**
	baz=1.7						
S15A	**Panguitch**	**1.78**	**198**	↑P	**Pn**	**21 48 32.2**	**+0.5**
	baz=1.8,SNR=73						
S17A	**Black Ridge (B**	**1.85**	**159**	P	**Pn**	**21 48 33.5**	**+0.7**
	baz=1.8,SNR=1000						
S17A				↓S	**Sn**	**21 48 57.1**	**+0.8**
	baz=1.8						
BGU	**Big Grassy Mou**	**1.88**	**326**	*e*Pn	**Pn**	**21 48 31.7**	**-1.4**
BGU				*e*Pg	**Pg**	**21 48 35.8**	**-1.1**
BGU				*e*Sn	**Sn**	**21 48 57.5**	**+0.7**
BGU				*e*Sg	**Sg**	**21 49 02.5**	**+1.2**
Q13A	**Wheeler Ranch,**	**1.88**	**258**	↓S	**Sn**	**21 48 59.4**	**+2.5**
	baz=1.9						
N14A	**Grayback Hills**	**1.89**	**322**	↓P	**Pn**	**21 48 32.3**	**-0.9**
	baz=1.9						
N14A				↑Sb	**Sb**	**21 49 01.3**	**+2.1**
	baz=1.9						
Q19A	**Hogan Spring (**	**1.91**	**102**	P	**Pn**	**21 48 34.1**	**+0.7**
	baz=1.9,SNR=1000						
Q19A				↑S	**Sn**	**21 48 58.4**	**+0.9**
	baz=1.9						
O13A	**Hicks Ranch, I**	**1.95**	**294**	↓Sb	**Sb**	**21 49 03.1**	**+2.3**
	baz=2.0						
S14A	**Cedar City**	**2.00**	**217**	↑P	**Pn**	**21 48 35.3**	**+0.6**
	baz=2.0,SNR=8.4						
SPUT	**South Promonto**	**2.03**	**343**	*e*Pn	**Pn**	**21 48 34.6**	**-0.6**
SPUT				*e*Pg	**Pg**	**21 48 39.8**	**-0.1**
SPUT				*e*Sn	**Sn**	**21 49 01.4**	**+0.8**
SPUT				*e*Sg	**Sg**	**21 49 06.5**	**+0.3**
P19A	**Cripple Cowboy**	**2.09**	**82**	↓P	**Pn**	**21 48 37.2**	**+1.2**
	baz=2.1,SNR=662						
P19A				↓Sb	**Sb**	**21 49 05.2**	**+0.4**
	baz=2.1						
ARUT	**Antelope Range**	**2.11**	**222**	*e*Pn	**Pn**	**21 48 36.9**	**+0.7**
ARUT				*e*Pg	**Pg**	**21 48 43.7**	**+2.4**
S18A	**Hurst Farm, Bl**	**2.12**	**142**	↑P	**Pn**	**21 48 37.0**	**+0.6**
	baz=2.1,SNR=1000						
S18A				↓S	**Sn**	**21 49 04.4**	**+1.6**
	baz=2.1						
R19A	**Curley Farm, L**	**2.16**	**119**	↓P	**Pn**	**21 48 37.7**	**+0.7**
	baz=2.1,SNR=172						
O19A	**Miners Draw (B**	**2.16**	**64**	↓Sb	**Sb**	**21 49 07.9**	**+1.0**
	baz=2.2						
R13A	**O'Grain Ranch,**	**2.16**	**237**	↓P	**Pn**	**21 48 37.9**	**+0.9**
	baz=2.2,SNR=323						
M15A	**Larsen Ranch,**	**2.18**	**344**	↓Sb	**Sb**	**21 49 09.5**	**+2.0**
	baz=2.2						
N18A	**Larsen Ranch,**	**2.21**	**43**	↑Sb	**Sb**	**21 49 09.4**	**+0.9**
	baz=2.2						
HWUT	**Hardware Ranch**	**2.24**	**2**	*e*Pn	**Pn**	**21 48 38.3**	**+0.3**
HWUT				*e*Pg	**Pg**	**21 48 43.7**	**-0.1**
HWUT				*e*Sn	**Sn**	**21 49 06.0**	**+0.3**
CCUT	**Cedar City**	**2.25**	**217**	*e*Pn	**Pn**	**21 48 39.0**	**+0.8**
CCUT				*e*Pg	**Pg**	**21 48 43.4**	**-0.8**
CCUT				*e*Sn	**Sn**	**21 49 06.9**	**+0.8**
CCUT				*e*Sg	**Sg**	**21 49 12.5**	**-0.9**
PV10	**Paradox Valley**	**2.27**	**115**	*e*Pn	**Pn**	**21 48 39.5**	**+1.0**
PV10				*e*Sn	**Sn**	**21 49 07.0**	**+0.5**
T16A	**Glen Canyon Da**	**2.38**	**177**	↓P	**Pn**	**21 48 40.8**	**+0.7**
	baz=2.4,SNR=364						
T16A				↓S	**Sn**	**21 49 11.0**	**+1.7**
	baz=2.4						
T15A	**Red Dirt Ranch**	**2.41**	**194**	↓P	**Pn**	**21 48 41.3**	**+0.8**
	baz=2.4,SNR=95						
T17A	**Navajo Res., N**	**2.46**	**164**	↓P	**Pn**	**21 48 41.7**	**+0.6**
	baz=2.4,SNR=140						
S13A	**Holt Ranch, En**	**2.48**	**225**	↓P	**Pn**	**21 48 41.9**	**+0.5**
	baz=2.5,SNR=6.9						
Q12A	**Willow Creek R**	**2.49**	**263**	↑P	**Pn**	**21 48 42.1**	**+0.6**
	baz=2.5,SNR=66						
S19A	**Harvey Farm, M**	**2.55**	**129**	↑P	**Pn**	**21 48 42.7**	**+0.3**
	baz=2.5,SNR=539						
HVU	**Hansel Valley**	**2.56**	**341**	*e*Pn	**Pn**	**21 48 42.1**	**-0.3**
HVU				*e*Pg	**Pg**	**21 48 49.2**	**-0.7**
HVU				*e*Sn	**Sn**	**21 49 14.8**	**+1.3**
HVU				*e*Sg	**Sg**	**21 49 24.1**	**+1.1**
T14A	**Hurricane**	**2.56**	**206**	↑P	**Pn**	**21 48 43.3**	**+0.8**
	baz=2.5,SNR=10						
T18A	**Mexican Hat**	**2.63**	**147**	↑P	**Pn**	**21 48 44.1**	**+0.6**
	baz=2.6,SNR=510						
L16A	**Fish Haven**	**2.65**	**4**	↓P	**Pn**	**21 48 44.7**	**+1.1**
	baz=2.7,SNR=50						
PV01	**Paradox Valley**	**2.71**	**116**	*e*P	**Pn**	**21 48 44.6**	**+0.1**
PV01				*e*S	**Sn**	**21 49 09.0**	**-8.4**
U17A	**Shonto**	**2.87**	**164**	↑P	**Pn**	**21 48 47.4**	**+0.7**
	baz=2.9,SNR=15						
U15A	**North Rim**	**2.98**	**190**	↑P	**Pn**	**21 48 49.0**	**+0.8**
	baz=3.0,SNR=185						
ELK	**Elko**	**3.07**	**298**	Pn	**Pn**	**21 48 52.1**	**+2.6**
	2.4nm,0.3s,baz=110,slow=13,SNR=55						
ELK				Lg		21 49 37.1	
	33nm,0.3s,baz=25,slow=22,SNR=20						
ELK	**Elko**	**3.07**	**298**	Pn	**Pn**	**21 48 48.2**	**-1.3**
ELK				Pn	**Pn**	**21 48 52.1**	**+2.6**
ELK				*e*Pg	**Pg**	**21 48 58.3**	**-1.5**
ELK				*e*Sn	**Sn**	**21 49 27.2**	**+0.9**
ELK				Lg		21 49 37.1	
ELK				*e*Sg	**Sg**	**21 49 37.4**	**-2.3**
R11A	**Troy Canyon, C**	**3.23**	**253**	↑P	**Pn**	**21 48 52.9**	**+1.2**
	baz=3.2,SNR=21						
L19A	**Farson**	**3.24**	**32**	↓P	**Pn**	**21 48 52.7**	**+0.9**
	baz=3.3,SNR=14						
U16A	**Tuba City**	**3.25**	**172**	↓P	**Pn**	**21 48 53.2**	**+1.3**
	baz=3.2,SNR=35						
U18A	**Rough Rock, Ch**	**3.26**	**154**	↓P	**Pn**	**21 48 53.4**	**+1.2**
	baz=3.2,SNR=94						
T19A	**Beclabito**	**3.27**	**140**	↓P	**Pn**	**21 48 53.1**	**+0.8**
	baz=3.3,SNR=8.9						
MVCO	**Mesa Verde**	**3.29**	**130**	*e*Pn	**Pn**	**21 48 53.0**	**+0.6**
MVCO				*e*Pg	**Pg**	**21 48 59.5**	**-4.4**
MVCO				*e*Sn	**Sn**	**21 49 31.4**	**-0.2**
MVCO				*e*Sg	**Sg**	**21 49 44.3**	**-2.2**
MVCO	**Mesa Verde**	**3.29**	**130**	↑P	**Pn**	**21 48 52.9**	**+0.5**
	baz=3.3,SNR=151						
AHID	**Auburn Hatcher**	**3.42**	**7**	*e*Pn	**Pn**	**21 48 55.6**	**+1.3**
AHID				*e*Pg	**Pg**	**21 49 06.1**	**-0.4**
AHID				*e*Sn	**Sn**	**21 49 37.3**	**+2.5**
AHID				*e*Sg	**Sg**	**21 49 48.7**	**-2.1**
T11A	**Corn Creek, Al**	**3.52**	**234**	↑P	**Pn**	**21 48 56.5**	**+0.9**
	baz=3.5,SNR=27						
V15A	**Kaibab Nationa**	**3.57**	**187**	↓P	**Pn**	**21 48 57.2**	**+0.9**
	baz=3.6,SNR=29						
SMCO	**Snowmass**	**3.64**	**92**	*e*Pn	**Pn**	**21 48 58.5**	**+1.3**
SMCO				*e*Pg	**Pg**	**21 49 08.3**	**-2.4**
SMCO				Sn	**Sn**	**21 49 42.3**	**+2.1**
SMCO				*e*Sg	**Sg**	**21 49 50.8**	**-7.0**
BW06	**Boulder Array**	**3.75**	**24**	*e*Pn	**Pn**	**21 48 58.8**	**0.0**
PDAR	**Pinedale Array**	**3.75**	**24**	Pn	**Pn**	**21 48 59.2**	**+0.4**
	0.7nm,0.3s,baz=194,slow=15,SNR=6.3						
PDAR				Pg	**Pg**	**21 49 07.7**	**-5.0**
	3.7nm,0.3s,baz=184,slow=12,SNR=23						
PDAR				Lg		21 49 58.1	
	6.9nm,0.3s,baz=202,slow=27,SNR=5.7						
WUAZ	**Wupatki**	**3.85**	**177**	*e*Pn	**Pn**	**21 49 01.5**	**+1.3**
WUAZ				*e*Pg	**Pg**	**21 49 09.3**	**-5.4**
WUAZ				*e*Sn	**Sn**	**21 49 45.8**	**+0.3**
WUAZ				*e*Sg	**Sg**	**21 49 58.0**	**-6.5**
WUAZ	**Wupatki**	**3.85**	**177**	↑P	**Pn**	**21 49 01.2**	**+1.0**
	baz=3.8,SNR=88						
V18A	**Ganado**	**3.90**	**159**	↑P	**Pn**	**21 49 01.6**	**+0.7**
	baz=3.9,SNR=42						
J16A	**Bone**	**3.90**	**0**	↑P	**Pn**	**21 49 01.8**	**+0.9**
	baz=3.9,SNR=6.6						
SHPR	**Sheep Range**	**3.98**	**225**	*e*Pb	**Pn**	**21 49 03.9**	**+1.9**
RRI2	**Red Ridge**	**3.98**	**4**	*e*Pn	**Pn**	**21 49 03.1**	**+1.1**
RRI2				*e*Pg	**Pg**	**21 49 14.9**	**-2.4**
RRI2				*e*Sn	**Sn**	**21 49 48.6**	**-0.2**
RRI2				*e*Sg	**Sg**	**21 50 08.3**	**-0.6**
REDW	**Red Top Meadow**	**4.04**	**8**	*e*Pn	**Pn**	**21 49 02.3**	**-0.4**
REDW				*e*Pg	**Pg**	**21 49 15.6**	**-2.7**
REDW				Sn	**Sn**	**21 49 49.2**	**-0.8**
REDW				*e*Sg	**Sg**	**21 50 10.8**	**+0.3**
J15A	**Blackfoot**	**4.07**	**352**	↓P	**Pn**	**21 49 04.3**	**+1.1**
	baz=4.1,SNR=21						
RWWY	**Rawlins**	**4.11**	**54**	*e*Pn	**Pn**	**21 49 04.9**	**+1.2**
RWWY				*e*Pg	**Pg**	**21 49 14.9**	**-4.6**
RWWY				*e*Sn	**Sn**	**21 49 53.4**	**+1.6**
RWWY				*e*Sg	**Sg**	**21 50 08.2**	**-4.6**
S10A	**Tonopah Range,**	**4.13**	**251**	↑P	**Pn**	**21 49 05.1**	**+1.1**
	baz=4.1,SNR=38						
SNOW	**Snow King Moun**	**4.15**	**9**	*e*Pn	**Pn**	**21 49 04.6**	**+0.4**
SNOW				*e*Pg	**Pg**	**21 49 17.4**	**-3.0**
SNOW				*e*Sn	**Sn**	**21 49 53.2**	**+0.4**
SNOW				*e*Sg	**Sg**	**21 50 11.9**	**-2.2**
TPAW	**Teton Pass**	**4.15**	**7**	*e*Pn	**Pn**	**21 49 04.3**	**-0.1**
TPAW				*e*Pg	**Pg**	**21 49 17.3**	**-3.1**
TPAW				*e*Sn	**Sn**	**21 49 53.2**	**+0.3**
TPAW				*e*Sg	**Sg**	**21 50 10.3**	**-3.9**
V19A	**Window Rock**	**4.20**	**150**	↓P	**Pn**	**21 49 05.7**	**+0.8**
	baz=4.2,SNR=12						
DCID1	**Drake Creek**	**4.24**	**5**	*e*Pn	**Pn**	**21 49 07.1**	**+1.6**
DCID1				*e*Pg	**Pg**	**21 49 23.2**	**+1.1**
DCID1				Sn	**Sn**	**21 49 59.4**	**+4.4**
DCID1				*e*Sg	**Sg**	**21 50 17.3**	**+0.3**
M10A	**I.L. Ranch, Tu**	**4.30**	**302**	↑P	**Pn**	**21 49 07.4**	**+1.0**
	baz=4.3,SNR=11						
LOHW	**Long Hollow**	**4.31**	**10**	*e*Pn	**Pn**	**21 49 06.8**	**+0.2**
LOHW				*e*Pg	**Pg**	**21 49 21.6**	**-2.0**
LOHW				*e*Sn	**Sn**	**21 49 56.6**	**-0.3**
LOHW				*e*Sg	**Sg**	**21 50 19.0**	**-0.5**
W17A	**Winslow**	**4.35**	**170**	↑P	**Pn**	**21 49 07.8**	**+0.8**
	baz=4.3,SNR=15						
TPNV	**Topopah Spring**	**4.35**	**238**	*e*Pn	**Pn**	**21 49 07.7**	**+0.6**
TPNV				*e*Pg	**Pg**	**21 49 22.4**	**-1.9**
TPNV				*e*Sn	**Sn**	**21 49 59.5**	**+1.7**
TPNV				*e*Sg	**Sg**	**21 50 18.1**	**-2.6**
TPNV	**Topopah Spring**	**4.35**	**238**	↑P	**Pn**	**21 49 07.8**	**+0.7**
	baz=4.3,SNR=25						
BMN	**Battle Mountai**	**4.41**	**286**	*e*Pn	**Pn**	**21 49 08.6**	**+0.7**
BMN				*e*Pg	**Pg**	**21 49 24.6**	**-0.8**
BMN				*e*Sg	**Sg**	**21 50 19.4**	**-3.1**
MOOW	**Moose Ponds**	**4.43**	**9**	*e*Pn	**Pn**	**21 49 08.5**	**+0.3**
MOOW				*e*Pg	**Pg**	**21 49 20.9**	**-4.8**
MOOW				*e*Sn	**Sn**	**21 49 59.4**	**-0.4**
MOOW				*e*Sg	**Sg**	**21 50 19.3**	**-3.9**
W18A	**Petrified Fore**	**4.51**	**160**	↑P	**Pn**	**21 49 09.3**	**+0.1**
	baz=4.5,SNR=21						
TPH	**Tonopah**	**4.54**	**255**	*e*Pn	**Pn**	**21 49 11.4**	**+1.7**
TPH				*e*Pg	**Pg**	**21 49 26.8**	**-1.1**
TPH				*e*Sn	**Sn**	**21 50 01.5**	**-0.9**
TPH				*e*Sg	**Sg**	**21 50 22.3**	**-4.3**
L10A	**Juniper Basin**	**4.55**	**308**	↑P	**Pn**	**21 49 10.3**	**+0.5**
	baz=4.6,SNR=15						
IMW	**Indian Meadow**	**4.56**	**7**	*e*Pn	**Pn**	**21 49 11.0**	**+1.1**
IMW				*e*Pg	**Pg**	**21 49 25.1**	**-3.1**
IMW				*e*Sn	**Sn**	**21 50 05.0**	**+2.1**
IMW				*e*Sg	**Sg**	**21 50 25.5**	**-1.8**
HLID	**Hailey**	**4.67**	**335**	*e*Pn	**Pn**	**21 49 11.8**	**+0.3**
HLID				*e*Pg	**Pg**	**21 49 29.7**	**-0.8**
HLID				*e*Sn	**Sn**	**21 50 07.6**	**+1.8**
HLID				*e*Sg	**Sg**	**21 50 30.7**	**-0.3**
ISCO	**Idaho Springs**	**4.69**	**83**	*e*Pn	**Pn**	**21 49 13.3**	**+1.6**
ISCO				*e*Pg	**Pg**	**21 49 27.4**	**-3.4**
ISCO				*e*Sn	**Sn**	**21 50 01.6**	**-4.6**
ISCO				*e*Sg	**Sg**	**21 50 25.9**	**-5.5**
SDCO	**Great Sand Dun**	**5.09**	**107**	*e*Pn	**Pn**	**21 49 17.6**	**+0.4**
SDCO				*e*Pg	**Pb**	**21 49 28.5**	**-1.6**
SDCO				Sn	**Sn**	**21 50 18.4**	**+2.4**
SDCO				*e*Sg	**Sg**	**21 50 44.4**	**+0.1**
LDFC	**Landfair**	**5.09**	**214**	*e*Pg	**Pg**	**21 49 36.8**	**-1.7**
LDFC				*e*Sg	**Sg**	**21 50 42.8**	**-1.6**
PHWY	**Pilot Hill**	**5.12**	**66**	*e*Pn	**Pn**	**21 49 18.7**	**+1.1**
PHWY				*e*Pg	**Pg**	**21 49 35.8**	**-3.1**
PHWY				*e*Sn	**Sn**	**21 50 18.0**	**+1.3**
PHWY				*e*Sg	**Sg**	**21 50 38.5**	**-6.6**
YFT	**Old Faithful**	**5.12**	**7**	*e*Pn	**Pn**	**21 49 18.9**	**+1.4**
YFT				*e*Pg	**Pg**	**21 49 37.1**	**-1.8**
YFT				*e*Sn	**Sn**	**21 50 17.4**	**+0.7**
YFT				*e*Sg	**Sg**	**21 50 44.4**	**-0.8**
TUQ	**Turquoise Moun**	**5.19**	**222**	↑P	**Pn**	**21 49 19.4**	**+0.8**
	baz=5.2,SNR=12						
NVAR	**Mina Array Bea**	**5.27**	**262**	Pn	**Pn**	**21 49 23.6**	**+3.9**
	1.0nm,0.3s,baz=73,slow=13,SNR=9.9						
NVAR				Pg	**Pg**	**21 49 37.9**	**-4.0**
	6.1nm,0.3s,baz=77,slow=16,SNR=29						
NVAR				Lg		21 50 46.2	
	6.2nm,0.3s,baz=76,slow=34,SNR=3.2						
NVAR	**Mina Array Bea**	**5.27**	**262**	Pn	**Pn**	**21 49 23.6**	**+3.9**
NVAR				Pg	**Pg**	**21 49 37.9**	**-4.0**
NVAR				Lg		21 50 46.2	
YNR	**Norris Junctio**	**5.39**	**7**	*e*Pg	**Pg**	**21 49 45.0**	**+0.8**
QLMT	**Earthquake Lak**	**5.46**	**2**	Pn	**Pn**	**21 49 20.6**	**-1.7**
QLMT				*e*Pg	**Pg**	**21 49 43.1**	**-2.4**
MCMT	**McKenzie Canyo**	**5.53**	**351**	*e*Pn	**Pn**	**21 49 24.8**	**+1.6**
MCMT				*e*Sn	**Sn**	**21 50 25.2**	**-1.6**
MCMT				*e*Sg	**Sg**	**21 50 57.8**	**-0.5**
GSC	**Goldstone**	**5.77**	**227**	*e*Pn	**Pn**	**21 49 27.1**	**+0.5**
GSC				*e*Pg	**

TXAR Pg Pn 21 51 40.5 +49
0.2nm,0.3s,baz=342,slow=14,SNR=7.1
TXAR Lg 21 54 20.9
0.2nm,0.3s,baz=335,slow=28,SNR=6.8

BJI ***05*** *21:58:09.6, 4.15S× 101.02E, h27km, mB5.1, mb5.0, Ms4.8, Msz4.6*
IDC ***05*** *21:58:09.6±0.9, 387S× 100.79E, h0km, mb4.5/16, mb1 4.6/17, mb1mx4.5/22, mbtmp4.5/17, ML4.4/1, MS4.2/7, Ms1 4.2/7, ms1mx3.8/21, Error ellipse: s-maj=30.1km s-min=13.5km az=46.0*
ISCJB ***05*** *21:58:12.6±0.3, 382S±005× 100.87E±005, h29km, mb4.9/66, MS4.4/22, Error ellipse: s-maj=8.9km s-min=4.2km az=135.6*
MOS ***05*** *21:58:13.1±1.1, 376S× 100.98E, h33km, mb5.1/24, MS4.5/7, Error ellipse: s-maj=12.9km s-min=6.4km az=104.2*
NEIC ***05*** *21:58:14.1±1.9, 374S× 101.09E, h25km±12km, mb5.0/28, MS4.4/1, Error ellipse: s-maj=13.2km s-min=5.8km az=52.0*
DJA ***05*** *21:58:14.1±0.0, 397S× 100.48E, h29km, mB5.4/9, Mjma4.4/7, MLv5.1/7, Mw(mB)5.2/9, Mwp4.4/10*
ISC 05 21:58:15.2±0.3, 377S±005×10094E±005, h31km, h31km±1.6km:pP-P, n169, σ1§18/167, mb4.9/66, MS4.4/22, 4C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.66**	**86**	P	**Pn**	**21 58 43.0**	**+0.8**
PDSI	**Padang**	**2.88**	**351**	P	**Pn**	**21 58 58.8**	**-0.2**
PPI	**Padang Panjang**	**3.33**	**351**	P	**Pn**	**21 59 05.9**	**+0.6**
RGRI	**Rengat**	**3.67**	**22**	P	**Pn**	**21 59 12.7**	**+2.7**
PMBI	**Palembang**	**3.92**	**78**	P	**Pn**	**21 59 22.3**	**+8.9**
KLI	**Kotabumi**	**4.06**	**106**	P	**Pn**	**21 59 25.1**	**+10**
SBJI	**Serang**	**5.68**	**114**	P	**Pn**	**21 59 39.3**	**+1.8**
	170nm,0.8s,2μm0.7nm						
DBJI	**Dramaga**	**6.42**	**116**	P	**Pn**	**21 59 48.9**	**+1.2**
	141nm,1.1s,3μm0.6nm						
LEM	**Lembang**	**7.31**	**115**	P	**Pn**	**22 00 02.0**	**+2.0**
	134nm,1.2s,1μm0.5nm						
XMIS	**Christmas Isla**	**8.14**	**145**	Pn	**Pn**	**22 00 09.6**	**-1.9**
BJII	**Banjamegara**	**9.42**	**112**	P	**Pn**	**22 00 31.9**	**+2.9**
SMRI	**Semarang**	**10.01**	**109**	P	**Pn**	**22 00 40.0**	**+3.0**
BSI	**Banda Aceh**	**10.79**	**329**	P	**Pn**	**22 00 46.7**	**-1.1**
	76nm,1.1s,657nm						
SJI	**Sawahan**	**11.47**	**111**	P	**Pn**	**22 01 05.7**	**+8.6**
BBKI	**Banjar Baru**	**13.88**	**89**	P	**Pn**	**22 01 39.0**	**+9.0**
	165nm,0.8s,1μm						
KAPI	**Kappang**	**18.80**	**94**	P	**Pn**	**22 02 31.8**	**-1.3**
	1.3nm,0.3s,baz=278,slow=11,SNR=8.3						
KAPI	**Kappang**	**18.80**	**94**	*e*P	**Pn**	**22 02 30.2**	**-2.9**
KAPI	**Kappang**	**18.80**	**94**	P	**Pn**	**22 02 35.4**	**+2.3**
	24nm,1.4s,513nm						
PCI	**Palu**	**19.10**	**82**	P	**Pn**	**22 02 35.9**	**-0.8**
	93nm,1.6s,1μm						
KKTK	**Khon Kaen**	**20.07**	**5**	P	**P**	**22 02 46.3**	**+0.1**
	247nm,0.6s						
KDI	**Kendari**	**21.64**	**91**	P	**P**	**22 03 07.3**	**+4.1**
	35nm,1.4s,2μm,mb4.6						
CM31	**Chiang Mai Arr**	**22.17**	**355**	*e*P	**P**	**22 03 07.5**	**-1.4**
CMAR	**Chiang Mai Arr**	**22.17**	**355**	P	**P**	**22 03 07.8**	**-1.1**
	21nm,0.9s,mb4.6,baz=188,slow=6.4,SNR=33						
CMAR				PcP	PcP	22 07 06.3	+1.0
	0.6nm,0.8s,baz=200,slow=2.9,SNR=4.1						
CMAR				LR	LR	22 13 10.4	
	comp=Z,439nm,18.1s,MS3.9,baz=180,slow=40						
CMAR	**Chiang Mai Arr**	**22.17**	**355**	P	**P**	**22 03 07.8**	**-1.1**
CMAR						22 07 06.3	
CHG	**Chiang Mai**	**22.53**	**355**	⇑P	**P**	**22 03 11.8**	**-0.8**
	18nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**22.53**	**355**	*e*P	**P**	**22 03 09.9**	**-2.7**
	20nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**22.53**	**355**	*e*P	**P**	**22 03 09.9**	**-2.7**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**22.53**	**355**	P	**P**	**22 03 11.3**	**-1.3**
	comp=Z,20nm,1.2s,mb4.4						
BATI	**Baumata**	**23.44**	**107**	P	**P**	**22 03 20.8**	**-1.5**
	comp=Z,7.5nm,0.4s,mb4.5,baz=275,slow=11,SNR=2.7						
BATI	**Baumata**	**23.44**	**107**	P	**P**	**22 03 22.4**	**+0.1**
	comp=Z,20nm,0.7s,mb4.6						
CHRT	**Chiangrai**	**23.52**	**357**	P	**P**	**22 03 23.0**	**0.0**
	comp=Z,105nm,1.1s,mb5.2						
QIZ	**Qiongzhong**	**24.29**	**21**	P	**P**	**22 03 28.5**	**-1.6**
QIZ				S	**S**	**22 07 46.7**	**-0.6**
QIZ				AMB	AMB		
	comp=Z,573nm,5.4s						
QIZ				LR	LR		
	comp=E,845nm,13.2s						
QIZ				LR	LR		
	comp=Z,825nm,17.8s,MS4.3						
KMI	**Kunming**	**28.77**	**3**	P	**P**	**22 04 11.9**	**+1.5**
KMI				AP	pP	22 04 21.5	+2.2
KMI				XP	sP	22 04 25.5	+2.4
KMI				PP	PP	22 05 04.0	-12
KMI				PPP		22 05 17.1	
KMI				S	**S**	**22 08 55.3**	**-2.8**
KMI				SSS		22 10 40.7	
KMI				AMB	AMB		
	comp=Z,9.0nm,1.8s,mb4.2						
KMI				LR	LR		
	comp=N,823nm,15.1s,MS4.6						
KMI				LR	LR		
	comp=E,880nm,13.8s,MS4.6						
KMI				LR	LR		
	comp=Z,899nm,15.1s,MS4.5						
KMI	**Kunming**	**28.77**	**3**	P	**P**	**22 04 11.9**	**+1.5**
	comp=Z,9.0nm,1.8s,mb4.2						
KMI				pP	pP	22 04 21.5	+2.2
KMI				sP	sP	22 04 25.5	+2.4
KMI				PP	PP	22 05 04.0	-12
KMI				PPP		22 05 17.1	
KMI				S	**S**	**22 08 55.3**	**-2.8**
KMI				SSS		22 10 40.7	
KMI				AMB	AMB		
	comp=Z,9.0nm,1.8s,mb4.2						
KMI				LR	LR		
	comp=N,823nm,15.1s,MS4.6						
KMI				LR	LR		
	comp=E,880nm,13.8s,MS4.6						
KMI				LR	LR		
	comp=Z,899nm,15.1s,MS4.5						
KMI	**Kunming**	**28.77**	**3**	P	**P**	**22 04 11.9**	**+1.5**
	comp=Z,9.0nm,1.8s,mb4.2						
KMI				*PP	pP	22 04 21.5	+2.2
KMI				*SP	sP	22 04 25.5	+2.4
KMI						22 05 04.0	
KMI				PPP		22 05 17.1	
KMI				S	**S**	**22 08 55.3**	**-2.8**
KMI				*SS	sS	22 09 12.0	-0.9
KMI				SS	SS	22 10 21.1	-40
KMI				SSS		22 10 40.7	
KMI				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.2						
KMI				MLR	MLR		
	comp=Z,900nm,15.1s,MS4.5						
SHL	**Shillong**	**30.45**	**344**	*e*P	**P**	**22 04 27.0**	**+1.7**
HYB	**Hyderabad**	**30.52**	**314**	*e*P	**P**	**22 04 25.0**	**-1.0**
KAKA	**Kakadu**	**32.38**	**108**	*e*P	Px	22 04 30.5	
	comp=Z,6.0nm,0.6s						
KAKA	**Kakadu**	**32.38**	**108**	P	Px	22 04 30.8	
ODAN	**Odare**	**33.15**	**338**	*e*P	**P**	**22 04 50.4**	**+1.4**
	comp=Z,114nm,0.9s,mb5.8						
TAPN	**Taplejung**	**33.47**	**338**	*e*P	**P**	**22 04 53.2**	**+1.4**
	comp=Z,186nm,0.9s						
RAMN	**Ramite**	**33.53**	**336**	*e*P	**P**	**22 04 53.7**	**+1.4**
	comp=Z,55nm,1.0s,mb5.5						
JIRN	**Jiri**	**34.33**	**336**	*e*P	**P**	**22 05 00.8**	**+1.5**
	comp=Z,111nm,1.0s,mb5.8						
PKI	**Pulchoki**	**34.57**	**335**	*e*P	**P**	**22 05 02.7**	**+1.4**
LSA	**Lhasa**	**34.58**	**345**	*e*P	**P**	**22 05 02.9**	**+1.5**
	comp=Z,16nm,1.1s,mb4.8						
LSA	**Lhasa**	**34.58**	**345**	*e*P	**P**	**22 05 02.9**	**+1.6**
LSA				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
CD2	**Chengdu**	**34.59**	**4**	⇓*i*P	**P**	**22 05 02.4**	**+1.0**
CD2				AP	pP	22 05 12.1	+1.6
CD2				XP	sP	22 05 16.0	+1.8
CD2				PP	PP	22 06 19.3	-1.0
CD2				S	**S**	**22 10 28.5**	**-0.3**
CD2				XS	sS	22 10 44.5	+0.8
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,60nm,4.8s						
CD2				LR	LR		
	comp=N,930nm,15.6s						
GUN	**Gumba**	**34.68**	**336**	*e*P	**P**	**22 05 03.6**	**+1.3**
DMN	**Daman**	**34.73**	**335**	*e*P	**P**	**22 05 03.6**	**+0.9**
KKN	**Kakani**	**34.82**	**335**	*e*P	**P**	**22 05 04.3**	**+0.8**
	comp=N,29nm,0.8s,mb5.2						
KKN	**Kakani**	**34.82**	**335**	*e*P	**P**	**22 05 04.3**	**+0.8**
KKN				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
GKN	**Gorkha**	**35.28**	**335**	*e*P	**P**	**22 05 08.3**	**+0.9**
KOLN	**Kolanda**	**35.53**	**333**	*e*P	**P**	**22 05 10.6**	**+1.0**
	comp=Z,32nm,0.8s,mb5.3						
DANN	**Dangsing**	**35.96**	**334**	*e*P	**P**	**22 05 14.0**	**+0.7**
	comp=Z,29nm,0.6s,mb5.4						
WRA	**Warramunga Arr**	**36.31**	**119**	P	**P**	**22 05 15.5**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.4,baz=296,slow=9.4,SNR=10						
WRAB	**Tennant Creek**	**36.31**	**119**	*e*P	**P**	**22 05 15.7**	**-0.8**
	comp=Z,11nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**36.31**	**119**	*e*P	**P**	**22 05 15.7**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**36.31**	**119**	P	**P**	**22 05 16.3**	**-0.2**
	comp=Z,12nm,1.4s,mb4.7						
WB2	**Warramunga Arr**	**36.32**	**119**	*e*P	**P**	**22 05 15.5**	**-1.0**
WHN	**Wuhan**	**36.45**	**20**	⇓P	**P**	**22 05 18.2**	**+0.8**
WHN				AMB	AMB		
	comp=Z,68nm,1.2s,mb5.5						
WHN				LR	LR		
	comp=N,844nm,13.4s						
WHN				LR	LR		
	comp=E,2μm,24.1s						
WHN				LR	LR		
	comp=Z,1μm,14.2s,MS4.9						
ASAR	**Alice Springs**	**37.47**	**125**	P	**P**	**22 05 25.9**	**-0.4**
	comp=Z,2.1nm,0.7s,mb4.1,baz=300,slow=8.1,SNR=21						
XAN	**Xi'an**	**38.35**	**11**	P	**P**	**22 05 33.4**	**-0.1**
XAN				AP	pP	22 05 43.4	+0.8
XAN				XP	sP	22 05 47.1	+0.8
XAN				PP	PP	22 07 04.0	+2.3
XAN				S	**S**	**22 11 23.1**	**-3.1**
XAN				AMB	AMB		
	comp=Z,39nm,0.9s,mb5.1						
XAN				AMB	AMB		
	comp=Z,95nm,5.4s						
XAN				LR	LR		
	comp=N,431nm,13.7s,MS4.7						
XAN				LR	LR		
	comp=E,740nm,17.0s,MS4.7						
XAN				LR	LR		
	comp=Z,1μm,13.2s,MS4.8						
NJ2	**Nanjing**	**39.49**	**24**	*e*P	**P**	**22 05 41.8**	**-1.3**
NJ2				AMB	AMB		
	comp=Z,190nm,1.0s,mb5.8						
LZH	**Lanzhou**	**39.74**	**4**	⇓P	**P**	**22 05 46.1**	**+1.0**
LZH				AP	pP	22 05 54.8	+0.6
LZH				XP	sP	22 05 57.4	-0.5
LZH				PP	PP	22 07 22.0	+5.2
LZH				*e*S	**S**	**22 11 47.0**	**-0.1**
LZH				XS	sS	22 12 02.3	+0.2
LZH				AMB	AMB		
	comp=Z,98nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,220nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,14.7s						
LZH				LR	LR		
	comp=Z,1μm,13.5s,MS4.9						
LZH	**Lanzhou**	**39.74**	**4**	⇓P	**P**	**22 05 46.1**	**+1.0**
	comp=Z,98nm,1.5s,mb5.3						
LZH				pP	pP	22 05 54.8	+0.6
LZH				sP	sP	22 05 57.4	-0.5
LZH				PP	PP	22 07 22.0	+5.2
LZH				*e*S	**S**	**22 11 47.0**	**-0.1**
LZH				sS	sS	22 12 02.3	+0.2
LZH				SS	SS	22 14 38.0	-5.7
LZH				LR	LR		
	comp=Z,1μm,13.5s,MS4.9						
LZH	**Lanzhou**	**39.74**	**4**	⇓P	**P**	**22 05 46.1**	**+1.0**
LZH				*SP	sP	22 05 57.4	-0.5
LZH						22 07 22.0	
LZH				*e*S	**S**	**22 11 47.0**	**-0.1**
LZH				*SS	sS	22 12 02.3	+0.2
LZH				SS	SS	22 14 38.0	-5.7
LZH				pmax	pmax		
	comp=Z,98nm,1.5s,mb5.3						
LZH				MLR	MLR		
	comp=Z,1μm,13.5s,MS4.9						
GTA	**Gaotai**	**42.98**	**359**	P	**P**	**22 06 12.4**	**+0.8**
GTA				AP	pP	22 06 17.1	-3.7
GTA				XP	sP	22 06 20.1	-4.4
GTA				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.7						
GTA				AMB	AMB		
	comp=Z,188nm,4.5s						
GTA				LR	LR		
	comp=N,529nm,14.7s,MS4.7						
GTA				LR	LR		
	comp=E,324nm,13.8s,MS4.7						
GTA				LR	LR		
	comp=Z,589nm,16.2s,MS4.6						
BTO	**Baotou**	**44.94**	**10**	*e*P	**P**	**22 06 27.8**	**+0.5**
HHC	**Hu-ho-hao-te**	**45.46**	**11**	*e*P	**P**	**22 06 32.8**	**+1.3**
HHC				AP	pP	22 06 42.3	+1.6
HHC				XP	sP	22 06 47.1	+2.7
HHC				PCP	PcP	22 08 12.7	+2.5
HHC				PP	PP	22 08 18.7	+0.4
HHC				S	**S**	**22 13 11.2**	**+0.2**
HHC				XS	sS	22 13 26.7	+0.5
HHC				SCS	ScS	22 16 25.1	-0.7
HHC				AMB	AMB		
	comp=Z,28nm,1.2s,mb5.0						
HHC				AMB	AMB		
	comp=Z,179nm,5.7s						
HHC				LR	LR		
	comp=N,712nm,15.5s,MS4.8						
HHC				LR	LR		
	comp=E,485nm,19.0s,MS4.8						
HHC				LR	LR		
	comp=Z,727nm,14.3s,MS4.8						
BJT	**Baijiatuao**	**45.77**	**16**	*e*P	**P**	**22 06 33.1**	**-0.8**
	comp=Z,28nm,0.9s,mb5.2						
BJT	**Baijiatuao**	**45.77**	**16**	*e*P	**P**	**22 06 33.1**	**-0.8**
BJT				pmax	pmax		
	comp=Z,28nm,0.9s						
BJI	**Beijing**	**45.79**	**16**	P	**P**	**22 06 34.7**	**+0.6**
BJI				AP	pP	22 06 42.8	-0.5
BJI				XP	sP	22 06 47.2	+0.2
BJI				S	**S**	**22 13 10.9**	**-5.0**
BJI				XS	sS	22 13 31.4	+0.3
BJI				SS	SS	22 16 35.7	-5.2
BJI				AMB	AMB		
	comp=Z,29nm,1.1s,mb5.1						
BJI				LR	LR		
	comp=N,380nm,14.9s,MS4.7						
BJI				LR	LR		
	comp=E,458nm,13.9s,MS4.7						
BJI				LR	LR		
	comp=Z,434nm,19.7s						
BJI	**Beijing**	**45.79**	**16**	P	**P**	**22 06 34.7**	**+0.6**
	comp=Z,29nm,1.1s,mb5.1						
BJI				pP	pP	22 06 42.8	-0.5
BJI				sP	sP	22 06 47.2	+0.2
BJI				S	**S**	**22 13 10.9**	**-5.0**
BJI				sS	sS	22 13 31.4	+0.3
BJI				SS	SS	22 16 35.7	-5.2
BJI				LR	LR		
	comp=Z,430nm,19.7s,MS4.4						
BJI	**Beijing**	**45.79**	**16**	P	**P**	**22 06 34.7**	**+0.6**
BJI				*PP	pP	22 06 42.8	-0.5
BJI				*SP	sP	22 06 47.2	+0.2
BJI				S	**S**	**22 13 10.9**	**-5.0**
BJI				*SS	sS	22 13 31.4	+0.3
BJI				SS	SS	22 16 35.7	-5.2
BJI				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
BJI				MLR	MLR		
	comp=Z,430nm,19.7s,MS4.4						
PMG	**Port Moresby**	**46.23**	**99**	*e*P	**P**	**22 06 36.3**	**-1.7**
	comp=Z,4.7nm,0.6s,mb4.6						
PMG	**Port Moresby**	**46.23**	**99**	*e*P	**P**	**22 06 36.3**	**-1.7**
PMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTAO	**Charters Tower**	**47.02**	**114**	*e*P	**P**	**22 06 42.5**	**-1.6**
	comp=Z,1.0nm,0.4s,mb4.1						
CTAO	**Charters Tower**	**47.02**	**114**	*e*P	**P**	**22 06 42.5**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**47.29**	**131**	*e*P	**P**	**22 06 46.0**	**0.0**
	comp=Z,3.3nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**47.29**	**131**	P	**P**	**22 06 45.8**	**-0.3**
	comp=Z,3.5nm,0.7s,mb4.4,baz=312,slow=9.6,SNR=10						
STKA				LR	LR	22 28 13.9	
	comp=Z,485nm,20.6s,MS4.5,baz=13,slow=38						
KSRS	**Korea Array**	**48.08**	**29**	P	**P**	**22 06 52.5**	**+0.5**
	comp=Z,15nm,1.0s,mb5.0,baz=216,slow=7.9,SNR=32						
KBL	**Kabul**	**48.51**	**324**	*e*P	**P**	**22 06 54.8**	**-0.6**
	comp=Z,5.4nm,1.0s,mb4.5						
KBL	**Kabul**	**48.51**	**324**	*e*P	**P**	**22 06 54.8**	**-0.6**
KBL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KSH	**Kashi**	**48.82**	**334**	*e*P	**P**	**22 06 59.0**	**+1.2**
KSH				*e*AP	pP	22 07 09.0	+2.0
KSH				*e*XP	sP	22 07 13.0	+2.3
KSH				*e*PP	PP	22 08 51.6	+0.3
KSH				*e*PPP		22 09 44.4	
KSH				*e*SCP	ScP	22 12 16.3	+1.1
KSH				*e*S	**S**	**22 13 57.4**	**-1.7**
KSH				*e*XS	sS	22 14 13.1	-1.3
KSH				*e*SCS	ScS	22 16 46.1	-2.0
KSH				AMB	AMB		
	comp=Z,262nm,1.5s						
KSH				AMB	AMB		
	comp=Z,729nm,3.5s						
KSH				LR	LR		
	comp=N,815nm,4.9s						
KSH				LR	LR		
	comp=E,559nm,4.6s						
KSH				LR	LR		
	comp=Z,757nm,3.6s						
WMQ	**Urumqi**	**48.85**	**347**	P	**P**	**22 06 59.0**	**+1.1**
WMQ				AP	pP	22 07 09.0	+1.8
WMQ				XP	sP	22 07 13.0	+2.2
WMQ				PP	PP	22 08 52.0	+0.5
WMQ				S	**S**	**22 13 58.0**	**-1.3**
WMQ				XS	sS	22 14 15.0	+0.4
WMQ				SCS	ScS	22 16 46.0	-2.0
WMQ				AMB	AMB		
	comp=Z,32nm,1.1s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,152nm,4.0s						
WMQ				LR	LR		
	comp=N,187nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=E,189nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,186nm,16.0s,MS4.2						
ULHL	**Ulahol**	**50.99**	**336**	P	**P**	**22 07 15.3**	**+1.1**
	SNR=6.4						
KZA	**Kyzart**	**51.25**	**336**	P	**P**	**22 07 17.6**	**+1.5**
	SNR=5.8						
SONM	**Songino Array**	**51.61**	**5**	P	**P**	**22 07 19.9**	**+1.2**
	comp=Z,13nm,0.8s,mb4.9,baz=184,slow=8.0,SNR=98						
ULN	**Ulaanbaatar**	**51.70**	**5**	*e*P	**P**	**22 07 20.5**	**+1.2**
	comp=Z,125nm,2.4s,mb5.4						
ULN	**Ulaanbaatar**	**51.70**	**5**	*e*P	**P**	**22 07 20.5**	**+1.1**
ULN				pmax	pmax		
	comp=Z,125nm,2.4s,mb5.4						
ULN	**Ulaanbaatar**	**51.70**	**5**	P	**P**	**22 07 20.5**	**+1.1**
	comp=Z,18nm,1.8s,comp=Z,354nm,mb4.7						
TKM2	**Tokmak 2**	**51.82**	**336**	*e*P	**P**	**22 07 20.5**	**+0.1**
	comp=Z,18nm,1.0s,mb5.0						
TKM2				*e*PcP	PcP	22 08 33.9	+0.8
TKM2	**Tokmak 2**	**51.82**	**336**	*e*P	**P**	**22 07 20.5**	**+0.1**
TKM2				*e*		22 08 33.9	
TKM2				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
TKM2	**Tokmak 2**	**51.82**	**336**	P	**P**	**22 07 21.1**	**+0.7**
	SNR=6.4						
KBK	**Karagaybulak**	**51.86**	**336**	P	**P**	**22 07 21.9**	**+1.2**
	SNR=8.2						
AML	**Almayashu**	**51.95**	**334**	*e*P	**P**	**22 07 21.8**	**+0.4**
	comp=Z,13nm,1.2s,mb4.7						
AML				*e*PcP	PcP	22 08 33.3	-0.3
AML	**Almayashu**	**51.95**	**334**	P	**P**	**22 07 21.9**	**+0.5**
	SNR=5.5						
CN2	**Changchun**	**52.24**	**22**	⇑P	**P**	**22 07 22.7**	**-0.8**
CN2				*e*XP	sP	22 07 38.0	+1.5
CN2				*e*S	**S**	**22 14 43.0**	**-3.4**
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,14.0s,MS4.8						
CN2				LR	LR		
	comp=E,400nm,14.0s,MS4.8						
CN2				LR	LR		
	comp=Z,700nm,15.0s,MS4.8						
EKS2	**Erkin-Say**	**52.35**	**335**	*e*P	**P**	**22 07 24.9**	**+0.6**
	comp=Z,11nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**52.35**	**335**	P	**P**	**22 07 25.2**	**+0.8**
	SNR=12						
USP	**Ospenovka**	**52.55**	**336**	P	**P**	**22 07 26.0**	**+0.2**
	SNR=10						
MK31	**Makanchi Array**	**52.98**	**344**	*e*P	**P**	**22 07 29.3**	**+0.5**
MK31	**Makanchi Array**	**52.98**	**344**	*i* P	**P**	**22 07 28.8**	**-0.1**
MK31				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MKAR	**Makanchi Array**	**52.98**	**344**	P	**P**	**22 07 28.9**	**+0.1**
	comp=Z,11nm,0.8s,mb4.8,baz=149,slow=8.1,SNR=80						
MKAR				LR	LR	22 34 54.4	
	comp=Z,127nm,18.9s,MS4.0,baz=154,slow=42						
MKAR	**Makanchi Array**	**52.98**	**344**	P	**P**	**22 07 28.9**	**+0.1**
MKAR				LR	LR	22 34 54.4	
MKAR	**Makanchi Array**	**52.98**	**344**	*i* P	**P**	**22 07 28.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MAJO	**Matsushiro**	**53.08**	**38**	*e*P	**P**	**22 07 27.9**	**-1.9**
	comp=Z,15nm,1.0s,mb4.9						
MAJO	**Matsushiro**	**53.08**	**38**	*e*P	**P**	**22 07 27.9**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MAT	**Matsushiro**	**53.08**	**38**	P	**P**	**22 07 28.7**	**-1.1**
MAT				*e*S	**S**	**22 15 03.0**	**+4.9**
MJAR	**Matsushiro Arr**	**53.08**	**38**	P	**P**	**22 07 29.2**	**-0.6**
	comp=Z,6.4nm,0.9s,mb4.6,baz=218,slow=8.0,SNR=17						
MDJ	**Mudanjiang**	**54.57**	**25**	P	**P**	**22 07 37.7**	**-2.9**
TLY	**Talaya**	**55.29**	**2**	*e*P	**P**	**22 07 44.1**	**-1.5**
TLY	**Talaya**	**55.29**	**2**	*e*P	**P**	**22 07 46.6**	**+1.0**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
TLY				MLR	MLR		
	comp=Z,550nm,16.0s,MS4.7						
HIA	**Hailar**	**55.29**	**15**	P	**P**	**22 07 45.6**	**-0.1**
KURK	**Kurchatov**	**57.56**	**343**	*e*P	**P**	**22 08 01.6**	**-0.2**
	comp=Z,21nm,0.9s,mb5.2						
KURK	**Kurchatov**	**57.56**	**343**	*e*P	**P**	**22 08 01.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
ZAA0	**Zalesovo Array**	**59.07**	**349**	*e*P	**P**	**22 08 12.1**	**-0.2**
ZALV	**Zalesovo Beam**	**59.07**	**349**	P	**P**	**22 08 12.1**	**-0.3**
	comp=Z,24nm,0.9s,mb5.2,baz=163,slow=5.4,SNR=87						
ZALV				LR	LR	22 35 48.4	
	comp=Z,127nm,21.1s,MS4.0,baz=131,slow=38						
KLR	**Kul'dur**	**59.17**	**23**	*e*P	**P**	**22 08 09.0**	**-4.1**
KLR				pmax	pmax

BOD				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.9							
YSS	**Yuzh-Sakhalins**	**62.49**	**31**↑	*e*P	**P**	**22 08 36.6**	**+0.8**	
YSS				pmax	pmax			
	comp=Z,61nm,2.0s,mb5.4							
YSS				MLR	MLR			
	comp=Z,100nm,26.0s,MS3.9							
MAK	**Makhachkala**	**66.92**	**320**	P	**P**	**22 09 00.8**	**-3.9**	
MAK				*e*		22 11 35.9		
MAK				*e*S	S	22 17 52.2	-3.6	
MAK				pmax	pmax			
	comp=Z,761nm,2.6s							
SVE	**Sverdlovsk**	**68.66**	**338**↓	*e*P	**P**	**22 09 15.3**	**-0.1**	
SVE				*e*		22 19 14.7		
SVE				pmax	pmax			
	comp=Z,25nm,1.4s,mb5.0							
SVE				MLR	MLR			
	comp=Z,476nm,20.0s,MS4.7							
MAW	**Mawson**	**68.81**	**195**	LR	LR	22 33 09.0		
	comp=Z,213nm,19.5s,MS4.4,baz=170,slow=31							
ARU	**Arti**	**69.19**	**336**	*e*P	**P**	**22 09 18.4**	**-0.4**	
	comp=Z,48nm,2.0s,mb5.1							
ARU	**Arti**	**69.19**	**336**	*d i*P	**P**	**22 09 17.7**	**-1.0**	
ARU				*e*		22 09 39.9		
ARU				*e*S	S	22 18 23.1	+0.6	
ARU				*e*SS	SS	22 22 54.6	+5.2	
ARU				pmax	pmax			
	comp=Z,18nm,1.7s,mb4.7							
KIV	**Kislovodsk**	**70.48**	**319**	*e*P	**P**	**22 09 27.4**	**+0.4**	
	comp=Z,9.8nm,1.0s,mb4.7							
KIV	**Kislovodsk**	**70.48**	**319**	*e*P	**P**	**22 09 27.4**	**+0.4**	
KIV				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
PETK	**Petropavlovsk-**	**73.88**	**32**	P	**P**	**22 09 46.8**	**-0.3**	
	comp=Z,3.2nm,0.8s,mb4.3,baz=266,slow=0.2,SNR=5.8							
VRHR	**Novokhopersk**	**74.31**	**326**	*e*P	**P**	**22 09 48.5**	**-1.1**	
VRHR				*e**PP	pP	22 09 55.0	-4.3	
VRHR				pmax	pmax			
	comp=N,20nm,0.7s							
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.8							
VRHR				pmax	pmax			
	comp=E,8.0nm,0.5s							
LBTB	**Lobatse**	**75.13**	**245**	P	**P**	**22 09 57.1**	**+2.1**	
BR131	**Keskin Array S**	**75.20**	**313**	*e*P	**P**	**22 09 53.6**	**-1.4**	
	comp=E,2.4nm,0.6s,mb4.3							
BRTR	**Keskin Array B**	**75.20**	**313**	P	**P**	**22 09 54.1**	**-0.9**	
	comp=E,3.4nm,0.9s,mb4.3,baz=142,slow=9.0,SNR=14							
VORD	**Divnogorie**	**75.58**	**325**	*e*P	**P**	**22 09 55.4**	**-1.5**	
VORD				*e**PP	pP	22 10 04.1	-2.5	
VORD				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
VORD				pmax	pmax			
	comp=N,10.0nm,0.7s							
VORD				pmax	pmax			
	comp=E,10.0nm,0.6s							
BOSA	**Boshof**	**75.63**	**242**	LR	LR	22 36 12.9		
	comp=E,215nm,20.1s,MS4.5,baz=155,slow=30							
VSR	**Storozhevoye**	**75.75**	**325**	*e*P	**P**	**22 09 56.3**	**-1.6**	
VSR				*e**PP	pP	22 10 03.0	-4.7	
VSR				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
VSR				pmax	pmax			
	comp=N,1.0nm,0.8s							
VSR				pmax	pmax			
	comp=E,5.0nm,0.8s							
SEY	**Seymchan**	**76.91**	**22**↑	*e*P	**P**	**22 10 04.3**	**0.0**	
TIXI	**Tiksi**	**77.45**	**9**	*e*P	**P**	**22 10 05.7**	**-1.4**	
	comp=E,6.4nm,0.7s,mb4.7							
TIXI	**Tiksi**	**77.45**	**9**	*e*P	**P**	**22 10 05.6**	**-1.5**	
TIXI				pmax	pmax			
	comp=Z,17nm,1.7s,mb4.7							
OBN	**Obninsk**	**78.78**	**328**	*e*P	**P**	**22 10 14.8**	**0.0**	
OBN				*i*	pP	22 10 25.5	+0.9	
OBN				*e*		22 13 19.5		
OBN				pmax	pmax			
	comp=Z,19nm,1.1s,mb4.9							
OBN				MLR	MLR			
	comp=Z,100nm,18.0s,MS4.2							
KLMR	**Klimovskoe**	**79.82**	**334**	*e*P	**P**	**22 10 20.3**	**-0.1**	
KLMR				pmax	pmax			
	comp=Z,25nm,1.4s,mb5.0							
AKASG	**Malin Array Be**	**81.45**	**322**	P	**P**	**22 10 27.6**	**-1.7**	
	comp=Z,0.4nm,0.4s,baz=93,slow=4.7,SNR=6.1							
BILL	**Bilibino**	**84.48**	**20**	*e*P	**P**	**22 10 45.7**	**+1.0**	
BILL				pmax	pmax			
	comp=Z,26nm,1.9s,mb5.0							
QSPA	**South Pole Qui**	**86.20**	**180**	*e*P	**P**	**22 10 54.4**	**+1.2**	
ARCES	**ARCESS Array B**	**88.44**	**340**	P	**P**	**22 11 01.8**	**-2.2**	
	comp=Z,4.6nm,0.8s,mb4.7,baz=97,slow=4.6,SNR=3.6							
GERES	**GERESS Array B**	**90.99**	**319**	P	**P**	**22 11 15.6**	**-0.9**	
	comp=Z,1.3nm,1.0s,mb4.2,baz=108,slow=4.3,SNR=8.4							
TORD	**Torodi Ar. Bea**	**99.84**	**283**	LR	LR	22 59 23.2		
	comp=Z,118nm,18.4s,MS4.4,baz=345,slow=37							
MCK	**McKinley**	**102.20**	**25**	Pdif	Pdif	22 12 05.2	-1.9	
ESLA	**Sonseca Array**	**103.86**	**310**	P	Pdif	22 12 15.4	+0.9	
HUMO	**Hull Mountain**	**125.10**	**39**	*e*PKPdf	PKPdf	22 17 12.6	-0.4	
TMUT	**Trail Mountain**	**134.17**	**35**	*e*PKPdf	PKPdf	22 17 29.4	-0.9	
TMUT				*e*SKPbc	SKPdf	22 21 00.9	-2.5	
SSPA	**Standing Stone**	**143.28**	**359**	*e*SKPbc	SKPbc	22 21 19.0	-4.2	
BDFB	**Brasilia**	**143.72**	**237**	*e*SKPbc		22 21 26.9		
SDMD	**Soldier's Deli**	**144.47**	**357**	*e*SKPbc	SKPdf	22 21 18.6	-2.8	
WCI	**Wyandotte Cave**	**145.07**	**10**	*e*PKPdf	PKPdf	22 17 48.8	-1.2	
TXAR	**Lajitas Array**	**145.49**	**40**	PKPbc	PKPbc	22 17 51.8	+0.7	
	comp=Z,17nm,0.9s,baz=275,slow=1.4,SNR=110							
MIAR	**Mount Ida**	**146.54**	**22**	*e*PKPab	PKPab	22 17 54.2	-0.9	
WVT	**Waverly**	**146.80**	**13**	*e*PKPab	PKPbc	22 17 54.5	-0.3	
JCT	**Junction City**	**146.99**	**34**	*e*PKPab	PKPbc	22 17 54.8	-0.7	
TZTN	**Tazewell**	**147.12**	**7**	*e*PKPbc	PKPbc	22 17 55.2	-0.5	
CPCT	**Cooper Cave**	**148.07**	**8**	*e*PKPab	PKPbc	22 17 57.9	-0.4	
CPCT				*e*SKPbc		22 21 39.1		

IDC 05 22:52:26.7±4.3, 379S×15123E, h0km, mb3.5/2, mb1 3.9/2, mb1mx3.4/15, mbtmp3.6/2, Error ellipse: s-maj=201.4km s-min=45.8km az=116.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**20.58**	**243**	*e*P	P	22 57 02.8	-4.7
	3.9nm,0.2s						
WB2	**Warramunga Arr**	**22.99**	**224**	*e*P	P	22 57 33.4	+0.1
WRA	**Warramunga Arr**	**23.00**	**224**	P	P	22 57 33.8	+0.4
	1.4nm,0.3s,baz=49,slow=9.8,SNR=9.0						
ASAR	**Alice Springs**	**25.89**	**219**	P	P	22 58 00.3	-0.2
	0.3nm,0.5s,baz=49,slow=8.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	**148.50**	**289**	PKPbc	PKPbc	23 12 15.9	-0.6
	0.1nm,0.3s,baz=71,slow=2.2,SNR=11						

IDC 05 23:24:19.1±6.5, 2848S×17809W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.8/14, mbtmp3.9/3, Error ellipse: s-maj=132.7km s-min=18.3km az=55.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.78**	**169**	Pn	Pn	23 24 37.1	-0.3
	299nm,0.3s,baz=89,slow=8.3,SNR=12						
RAO				Sn	Sg	23 24 51.9	+7.6
	837nm,0.3s,baz=275,slow=24,SNR=11						
STKA	**Stephens Creek**	**34.88**	**254**	P	P	23 31 11.3	-1.0
	1.1nm,0.5s,baz=101,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**43.17**	**265**	P	P	23 32 21.9	0.0
	0.3nm,0.4s,baz=106,slow=7.1,SNR=6.4						
WB2	**Warramunga Arr**	**43.97**	**270**	*e*P	P	23 32 30.0	+1.7
WRA	**Warramunga Arr**	**43.98**	**270**	P	P	23 32 29.2	+0.8
	1.3nm,0.4s,baz=111,slow=7.9,SNR=5.1						

*ISK **05** 23:43:48.6, 3606N×2847E, h23km, MD3.3*
*HLW **05** 23:43:48.6, 3646N×2858E, h20km, Mb3.7*
*CSEM **05** 23:43:50.4±0.1, 3621N×2855E, h60km, MD3.2, Error ellipse: s-maj=2.4km s-min=1.5km az=77.0*
*ISCJB **05** 23:43:51.1±0.3, 3621N±003×2855E±004, h75km±7km, Error ellipse: s-maj=5.7km s-min=4.4km az=165.0*
*ATH **05** 23:43:54.2, 3635N×2835E, h59km±1km, MD3.2/5*
*NEIC **05** 23:43:54.2, 3635N×2835E, h59km, MD3.2(ATH), After ATH.*
*DDA **05** 23:44:00.6, 3682N×2828E, h36km±4km, Md3.3*
ISC 05 23:43:52.6±0.3, 3625N±003×2854E±004, h67km±8km, n40, σ0s91/53, 2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.34**	**265**	↓*i*P	**Pn**	**23 44 04.4**	**+0.7**
ARG				*e*S	**Sn**	**23 44 11.7**	**-0.1**
TURN	**Turunc**	**0.63**	**4**	*i* P	**Pn**	**23 44 06.6**	**+0.1**
TURN				*i* S	**Sn**	**23 44 15.9**	**-0.7**
KSL	**Kastellorizon**	**0.85**	**96**	*e*P	**Pn**	**23 44 13.3**	**+4.3**
BDRM	**Kayabasi**	**1.20**	**313**	*i* P	**Pn**	**23 44 13.8**	**+0.2**
BDRM				*i* S	**Sn**	**23 44 28.4**	**-0.7**
MLSB	**Milas**	**1.22**	**330**	*e*PN	**Pn**	**23 44 13.2**	**-0.5**
MLSB				*e*SN	**Sn**	**23 44 30.4**	**+0.9**
BODT	**Bodrum**	**1.28**	**310**	*e*PN	**Pn**	**23 44 13.4**	**-1.1**
BODT				*e*SN	**Sn**	**23 44 30.0**	**-1.0**
KARP	**Karpathos**	**1.32**	**239**	*e*P	**Pn**	**23 44 16.6**	**+1.6**
KARP				*e*S	**Sn**	**23 44 33.1**	**+1.2**
AYDN	**Tasoluk**	**1.51**	**340**	*i* P	**Pn**	**23 44 18.4**	**+0.9**
AYDN				*i* S	**Sn**	**23 44 35.8**	**-0.5**
GCAM	**G?zelcaml?**	**1.79**	**325**	*i* P	**Pn**	**23 44 22.2**	**+0.9**
GCAM				*i* S	**Sn**	**23 44 42.5**	**-0.6**
ANTB	**Antalya**	**1.82**	**68**	*e*PN	**Pn**	**23 44 21.4**	**-0.3**
ANTB				*e*SN	**Sn**	**23 44 45.3**	**+1.4**
SMG	**Samos**	**2.00**	**317**	↓*i*P	**Pn**	**23 44 24.7**	**+0.6**
SMG				*e*S	**Sn**	**23 44 46.5**	**-1.6**
BCK	**Bucak**	**2.04**	**53**	*e*PN	**Pn**	**23 44 24.6**	**-0.1**
KHL	**Karahalli**	**2.22**	**20**	*e*PN	**Pn**	**23 44 27.6**	**+0.5**
MANT	**Manisa**	**2.24**	**0**	*i* P	**Pn**	**23 44 27.4**	**0.0**
MANT				*i* S	**Sn**	**23 44 52.5**	**-1.5**
KULA	**Kula-Manisa**	**2.27**	**2**	*e*PN	**Pn**	**23 44 27.9**	**+0.2**
IZM	**Izmir**	**2.38**	**335**	*e*PN	**Pn**	**23 44 29.7**	**+0.5**
KDAG	**Bornova**	**2.38**	**335**	*i* P	**Pn**	**23 44 29.1**	**-0.2**
BLCB	**Balcova**	**2.45**	**331**	*e*PN	**Pn**	**23 44 30.2**	**0.0**
NPS	**Neapolis**	**2.58**	**248**	*e*P	**Pn**	**23 44 33.2**	**+1.3**
DEMI	**Demirci**	**2.80**	**3**	*i* P	**Pn**	**23 44 35.3**	**+0.4**
KONT	**Konya--Tatoy**	**3.49**	**60**	*e*PN	**Pn**	**23 44 45.4**	**+0.9**
LADK	**Ladik-KONYA**	**3.62**	**56**	*e*PN	**Pn**	**23 44 47.4**	**+1.2**
LEF	**Lefka**	**3.71**	**106**	*e*PN	**Pn**	**23 44 45.4**	**-2.0**
KIZT	**Kizilcal**	**3.73**	**44**	*e*PN	**Pn**	**23 44 48.9**	**+1.2**
LFK	**Lefkose**	**4.17**	**102**	*e*PN	**Pn**	**23 44 52.8**	**-0.9**
SLUM		**5.49**	**211**	P	**Pn**	**23 45 11.4**	**-0.4**
HRSH	**Kfar Ka'horesh**	**6.59**	**120**	P	**Pn**	**23 45 29.3**	**+2.5**
AMAG	**Maghara**	**6.81**	**144**	P	**Pn**	**23 45 29.0**	**-0.8**
RSH		**6.81**	**139**	P	**Pn**	**23 45 29.3**	**-0.6**
KOT	**Kottamia**	**6.88**	**155**	P	**Pn**	**23 45 30.3**	**-0.4**
KOT				S	**Sn**	**23 46 45.2**	**-2.3**
HSAF	**As Saff**	**7.08**	**158**	P	**Pn**	**23 45 33.6**	**+0.1**
GLL	**Jalalah**	**7.16**	**157**	P	**Pn**	**23 45 34.4**	**-0.2**
SUZ		**7.33**	**149**	P	**Pn**	**23 45 36.7**	**-0.3**
ZAF		**7.72**	**153**	P	**Pn**	**23 45 42.3**	**0.0**
ZNM		**7.76**	**151**	P	**Pn**	**23 45 42.6**	**-0.2**
ZNM		**7.76**	**151**	P	**Pn**	**23 45 42.2**	**-0.6**
ZNM				S	**Sn**	**23 47 05.6**	**-3.6**
AWBH		**7.91**	**178**	P	**Pn**	**23 45 45.2**	**+0.4**
HKAT	**Jabal Katrina**	**8.97**	**148**	P	**Pn**	**23 45 59.6**	**+0.2**
TR2		**8.98**	**149**	P	**Pn**	**23 45 59.2**	**-0.2**
HFRF	**Wahat Farafira**	**9.07**	**181**	P	**Pn**	**23 46 01.2**	**+0.5**

IDC 05 23:46:15.3±2.3, 491S×10242E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.9/18, mbtmp3.9/8, Error ellipse: s-maj=106.3km s-min=16.8km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.47**	**352**	P	P	23 51 27.4	+0.5
	0.4nm,0.4s,baz=178,slow=9.2,SNR=4.6						
WRA	**Warramunga Arr**	**34.47**	**118**	P	P	23 53 04.8	-0.4
	0.3nm,0.4s,baz=297,slow=11,SNR=3.6						
WB2	**Warramunga Arr**	**34.48**	**118**	*e*P	P	23 53 04.4	-0.9
ASAR	**Alice Springs**	**35.61**	**125**	P	P	23 53 15.3	+0.3
	0.7nm,0.4s,baz=303,slow=7.6,SNR=9.0						
STKA	**Stephens Creek**	**45.43**	**131**	*e*P	P	23 54 38.1	+1.9
	1.5nm,0.9s						
STKA	**Stephens Creek**	**45.43**	**131**	P	P	23 54 36.3	+0.1
	0.9nm,0.5s,baz=332,slow=12,SNR=2.9						
SONM	**Songino Array**	**52.63**	**3**	P	P	23 55 31.0	0.0
	2.2nm,0.6s,baz=182,slow=9.3,SNR=20						
MKAR	**Makanchi Array**	**54.47**	**343**	P	P	23 55 45.1	+0.5
	0.9nm,0.6s,baz=148,slow=8.5,SNR=13						
KURK	**Kurchatov**	**59.07**	**343**	P	P	23 56 16.3	-0.9
	baz=159,slow=6.7						
ZALV	**Zalesovo Beam**	**60.47**	**348**	P	P	23 56 26.4	-0.3
	1.5nm,0.4s,baz=160,slow=4.7,SNR=8.6						
BVAR	**Borovoye Array**	**63.73**	**339**	P	P	23 56 48.8	0.0
	1.2nm,0.5s,baz=152,slow=9.6,SNR=6.0						
TXAR	**Lajitas Array**	**145.37**	**42**	PKPbc	PKPbc	00 05 55.4	-0.4
	0.8nm,0.5s,baz=325,slow=1.2,SNR=15						

*IDC **06** 00:05:40.3±1.4, 5.10S×151.73E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/15, mbtmp3.8/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/21, Error ellipse: s-maj=59.0km s-min=26.1km az=120.0*
*NEIC **06** 00:05:42.3±1.1, 1.557S×152.51E, h35km, mb4.3/1, Error ellipse: s-maj=32.9km s-min=11.6km az=109.0*
*ISCJB **06** 00:05:43.3±4.0, 1.545S±02.0×152.0E±02.0, h33km±33km, mb3.9/6, Error ellipse: s-maj=35.3km s-min=22.1km az=28.1*

ISC 06 00:05:42.7±6.0, 1.54S±02.0×152.1E±02.0, h18km±39km, n16, σ1s30/13, mb3.9/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.28**	**231**	*e*Pn	**Pn**	**00 07 16.1**	**+1.5**
	22nm,0.8s						
PMG				*e*Sn	**Sn**	**00 08 26.1**	**+0.2**
HNR	**Honiara**	**8.74**	**117**	LR	LR	00 10 45.3	
	comp=Z,38nm,19.4s,baz=40,slow=33						
CTA	**Charters Tower**	**15.63**	**201**	LR	LR	00 13 49.7	
	comp=Z,36nm,19.4s,baz=47,slow=31						
CTAO	**Charters Tower**	**15.63**	**201**	Pn	**Pn**	**00 09 20.9**	**-1.3**
WRAB	**Tennant Creek**	**22.48**	**229**	*e*P	**P**	**00 10 41.9**	**+0.7**
	7.6nm,0.6s,mb4.3						
WRAB				*e*		00 10 53.1	
WB2	**Warramunga Arr**	**22.49**	**229**	*e*P	**P**	**00 10 40.5**	**-0.8**
WB2				*e*		00 10 52.9	
WRA	**Warramunga Arr**	**22.50**	**229**	P	**P**	**00 10 40.7**	**-0.7**
	1.8nm,0.5s,mb3.8,baz=52,slow=10.0,SNR=8.7						
ASAR	**Alice Springs**	**25.21**	**222**	P	**P**	**00 11 09.0**	**+1.5**
	2.4nm,0.7s,mb3.8,baz=55,slow=9.3,SNR=19						
STKA	**Stephens Creek**	**28.08**	**199**	P	**P**	**00 11 30.1**	**-3.3**
NWAO	**Narrogin (SRO)**	**42.44**	**225**	P	**P**	**00 13 36.3**	**-0.3**
ULN	**Ulaanbaatar**	**66.16**	**329**	P	**P**	**00 16 30.2**	**+1.1**
SONM	**Songino Array**	**66.49**	**328**	P	**P**	**00 16 29.9**	**-1.2**
	0.5nm,0.6s,mb3.7,baz=147,slow=4.6,SNR=3.6						
MKAR	**Makanchi Array**	**80.34**	**319**	P	**P**	**00 17 50.9**	**-2.0**
	0.5nm,0.9s,mb3.5,baz=117,slow=4.2,SNR=3.9						
NVAR	**Mina Array Bea**	**93.03**	**52**	P	**P**	**00 18 57.5**	**+2.0**
	0.6nm,0.9s,mb4.0,baz=268,slow=6.0,SNR=3.2						
GERES	**GERESS Array B**	**124.22**	**328**	PKP	PKPdf	00 24 38.9	-1.5
	0.2nm,0.5s,baz=5.7,slow=1.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**149.82**	**287**	PKPbc	PKPbc	00 25 30.8	-2.0
	1.2nm,0.6s,baz=96,slow=2.4,SNR=24						

KRSC 06 00:05:52.4±0.4, 5243N×16042E, h5km±5km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.71**	**340**	*e*P	Pg	00 06 07.5	+1.5
SPN				*e*S	Sg	00 06 17.6	+2.3
NLC	**Nalytchevo**	**0.99**	**319**	*e*P	Pg	00 06 11.9	+0.6
NLC				*e*S	Sg	00 06 26.8	+2.6
RUS	**Russkaya**	**1.17**	**271**	*e*P	Pg	00 06 14.7	-0.1
RUS				*e*S	Sg	00 06 30.8	+0.9
PET	**Petropavlovsk**	**1.23**	**300**	*e*P	Pg	00 06 15.6	-0.3
PET				*e*S	Sg	00 06 32.9	+1.1
AVH	**Avacha**	**1.32**	**310**	*e*P	Pn	00 06 17.6	+0.2
AVH				*e*S	Sg	00 06 36.8	+2.0
KII	**Karymskiy**	**1.71**	**340**	*e*P	Pn	00 06 23.3	+0.5
KII				*e*S	Sn	00 06 45.5	+0.4
GNL	**Ganaly**	**1.96**	**311**	*e*P	Pn	00 06 27.5	+1.3
GNL				*e*S	Sn	00 06 53.7	+2.5
MIPR	**Malaya Ipel'ka**	**2.25**	**268**	*e*P	Pn	00 06 32.7	+2.5
MIPR				*e*S	Sn	00 07 01.9	+3.5
MKZ	**Mys Kozlova**	**2.27**	**20**	*e*P	Pn	00 06 30.2	-0.3
MKZ				*e*S	Sn	00 06 57.4	-1.4
TUMR	**Tumrok**	**2.86**	**357**	*e*S	Sn	00 07 16.3	+2.9
KMNR	**Kamenistaya**	**3.33**	**358**	*e*P	Pn	00 06 47.9	+2.8
KMNR				*e*S	Sn	00 07 29.1	+4.0
KBTR	**Krutoberegovo**	**4.04**	**19**	*e*P	Pn	00 06 56.7	+1.9
SRKR	**Sorokina**	**4.26**	**6**	*e*P	Pn	00 07 00.7	+2.9

IDC 06 00:21:29.4±3.0, 079N×9721E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/20, mbtmp3.6/6, ML4.3/1, Error ellipse: s-maj=120.3km s-min=20.9km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.64**	**5**	P	Pn	00 25 37.5	+0.7
	0.4nm,0.3s,baz=195,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**41.81**	**122**	P	P	00 29 21.1	-0.1
	0.2nm,0.5s,baz=304,slow=9.2,SNR=3.1						
ASAR	**Alice Springs**	**43.15**	**127**	P	P	00 29 32.1	+0.1
	0.2nm,0.6s,baz=294,slow=7.8,SNR=2.7						
SONM	**Songino Array**	**47.53**	**8**	P	P	00 30 06.1	-0.3
	0.3nm,0.4s,baz=190,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**47.64**	**346**	P	P	00 30 07.5	+0.2
	1.0nm,0.5s,baz=162,slow=8.7,SNR=23						
ZALV	**Zalesovo Beam**	**53.96**	**351**	P	P	00 30 54.6	-0.2
	1.3nm,0.4s,baz=168,slow=7.9,SNR=5.3						

CASC 06 00:22:34.4±2.0, 996N×8537W, h6km±6km, MD4.4, ML3.4, 3C-9D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCR	**Jicaral**	**0.28**	**113**	↓*i*P	Pg	00 22 40.5	+0.6
JCR				*e*S	Sg	00 22 45.2	+1.7
VCR	**Vista de Mar**	**0.30**	**303**	*e*P	Pg	00 22 40.1	-0.2
VCR				*e*S	Sg	00 22 44.6	+0.3
2RIO	**Dos Rios de Up**	**0.58**	**14**↑	*e*P	Pg	00 22 52.5	+6.8
CUI	**Cuipilapa**	**0.73**	**15**	↓*i*P	Pg	00 22 48.4	0.0
CUI				*i* S	Sg	00 22 59.3	+1.4
LIM1	**Limonal**	**0.74**	**9**	↓*i*P	Pg	00 22 48.7	0.0
FORC	**Fortuna**	**0.86**	**54**	↓*i*P	Pg	00 22 50.9	0.0
FORC				↓*i*P		00 22 51.0	
FORC				*i* S	Sg	00 23 03.6	+1.5
CGA2	**Cerro Gallo 2**	**0.90**	**86**	↓*i*P	Pg	00 22 51.0	-0.6
CGA2				*e*S	Sg	00 23 03.4	+0.2
PRS1	**Puriscal**	**1.04**	**89**	↓*i*P	Pg	00 22 52.6	-1.9
SJS	**Escuela Geolog**	**1.30**	**91**	*i* P	Pn	00 22 56.9	-2.2
SJS				*e*S	Sg	00 23 15.7	-0.5
QCR	**Quepos**	**1.30**	**114**↑	*i*P	Pn	00 22 58.0	-1.1
URSC	**Urasca**	**1.57**	**94**	↓*i*P	Pn	00 23 02.4	-0.5
URSC				*e*S	Sn	00 23 24.5	+0.8
CONN	**Concepcion**	**1.61**	**351**	*e*P	Pn	00 23 02.5	-0.9
BUS	**Buena Vista**	**1.64**	**104**↑	*i*P	Pn	00 23 02.5	-1.3
BAR1		**2.15**	**109**	*e*P	Pn	00 23 12.4	+1.5
CRUN	**El Crucero**	**2.21**	**336**	*e*P	Pn	00 23 12.2	+0.6
LIO	**Limon**	**2.30**	**89**	*e*P	Pn	00 23 11.2	-1.7
LIO				*e*S	Sn	00 23 40.8	-0.8
CSAN		**2.44**	**335**	*e*P	Pn	00 23 15.4	+0.6
HUEN		**2.49**	**342**	*e*P	Pn	00 23 15.9	+0.4
COPN	**Copaltepe**	**2.51**	**332**	*e*P	Pn	00 23 17.9	+2.1
MOMN	**Momotombo**	**2.69**	**335**	*e*P	Pn	00 23 17.8	-0.5
CNGN	**Cerro Negro**	**2.84**	**333**	*e*P	Pn	00 23 21.0	+0.7
TEL3	**Telica 3**	**2.97**	**331**	*e*P	Pn	00 23 22.1	0.0
CRIN	**San Cristobal**	**3.18**	**329**	*e*P	Pn	00 23 26.5	+1.5
CHI2		**12.69**	**114**	*e*P	Px	00 23 26.2	
LAPE	**La Pedrera**	**13.84**	**99**	↓*i*P	Px	00 22 49.4	
LAPE				*i* S	Sx	00 23 00.9	

IDC 06 00:22:59.9±3.5, 5048N×17716W, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/25, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=134.4km s-min=29.9km az=14.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**15.75**	**289**	Pn	Pn	00 26 44.9	+2.0
	0.7nm,0.3s,baz=103,slow=18,SNR=13						
SONM	**Songino Array**	**47.98**	**298**	P	P	00 31 39.5	-0.6
	0.3nm,0.5s,baz=46,slow=10,SNR=3.9						
TXAR	**Lajitas Array**	**57.76**	**82**	P	P	00 32 52.8	+0.2
	0.5nm,0.9s,baz=291,slow=2.7,SNR=4.7						
BVAR	**Borovoye Array**	**62.25**	**321**	P	P	00 33 23.1	+0.1
	1.5nm,0.5s,baz=55,slow=7.3,SNR=9.9						
AKASG	**Malin Array Be**	**76.72**

VJD	**Vijayawada**	**10.55**	**114**	*i* x		x	00 31 54.0	
VJD				*i* x		x	00 32 54.0	
WBK	**Wadi Bani Khal**	**10.91**	**280**	P		**Pn**	**00 30 03.9**	**-3.3**
	SNR=16							
KALG	**Kalgarh**	**11.12**	**40**	*e*P		**Pn**	**00 30 00.6**	**-9.4**
KALG				*e*S		**Sn**	**00 31 58.9**	**-16**
BHK	**Bhakra**	**11.49**	**26**	*ex*		x	00 33 28.2	
SMLA	**Simla**	**11.56**	**29**	*e*P		**Pn**	**00 30 14.9**	**-1.1**
SMLA				*i* x		x	00 32 21.5	
THW	**Thamme Wali**	**11.66**	**5**	P		**Pn**	**00 30 17.4**	**0.0**
JMDO	**Jabal Madar**	**11.69**	**278**	⇓P		**Pn**	**00 30 14.3**	**-3.5**
	SNR=20							
SDNR	**Sundarnagar**	**11.79**	**28**	*e*P		**Pn**	**00 30 19.6**	**+0.4**
SDNR				*ex*		x	00 33 31.0	
BIDO	**Bidbid**	**11.80**	**284**	⇓P		**Pn**	**00 30 13.9**	**-5.4**
	SNR=18							
LGTI	**Lohaghat**	**12.02**	**44**	*ex*		x	00 30 01.0	
LGTI				*ex*		x	00 32 12.0	
PTH	**Pithoragarh**	**12.07**	**44**	*ex*		x	00 30 29.0	
PTH				*e*S		**Sn**	**00 32 27.2**	**-10**
THN	**Thein Dam**	**12.14**	**21**	*e*P		**Pn**	**00 30 22.3**	**-1.7**
THN				*ex*		x	00 32 52.2	
MDRS	**Chennai**	**12.20**	**130**	*ex*		**Sn**	**00 32 41.2**	**+0.2**
MDRS				*ex*		x	00 33 09.2	
DLH	**Dalhousie**	**12.33**	**22**	*ex*		x	00 33 11.0	
VIS	**Vishakhapatnam**	**12.46**	**104**	*e*P		**Pn**	**00 30 26.3**	**-2.1**
VIS				*i* x		x	00 32 41.2	
KOD	**Kodaikanal**	**12.68**	**148**	*e*P		**Pn**	**00 30 31.6**	**+0.2**
KOD				*e*S		**Sn**	**00 32 43.4**	**-9.3**
CEP	**Cherat**	**12.70**	**5**	P		**Pn**	**00 30 28.7**	**-2.9**
CEP				S		**Sn**	**00 32 35.0**	**-18**
CHCP	**Chirah Chowk**	**12.70**	**10**	P		**Pn**	**00 30 29.1**	**-2.5**
KBL	**Kabul**	**13.43**	**354**	*e*Pn		**Pn**	**00 30 39.4**	**-2.2**
	comp=E,61nm,1.0s							
KBL				*e*Sn		**Sn**	**00 33 07.4**	**-3.6**
KBL	**Kabul**	**13.43**	**354**	*e*P		**Pn**	**00 30 39.4**	**-2.2**
KBL				*e*			00 33 07.4	
KBL					pmax	pmax		
	comp=Z,61nm,1.0s							
KOLN	**Koldanda**	**13.54**	**58**	*e*P		**Pn**	**00 30 40.3**	**-2.8**
	comp=Z,63nm,0.4s							
DANN	**Dangsing**	**13.94**	**56**	*e*P		**Pn**	**00 30 45.5**	**-3.0**
	comp=Z,35nm,0.6s							
BWNR	**Bhubaneshwar**	**14.24**	**91**	*e*P		**Pn**	**00 30 52.7**	**0.0**
BWNR				*ex*		x	00 33 35.0	
BOK	**Bokaro**	**14.37**	**77**	*e*P		**Pn**	**00 30 51.8**	**-2.6**
BOK				*i* x		x	00 33 34.7	
GKN	**Gorkha**	**14.47**	**59**	*e*P		**Pn**	**00 30 51.5**	**-4.3**
	comp=Z,25nm,0.3s							
DMN	**Daman**	**14.69**	**61**	*e*P		**Pn**	**00 30 55.3**	**-3.5**
	comp=Z,23nm,0.5s							
KKN	**Kakani**	**14.90**	**61**	*e*P		**Pn**	**00 30 57.8**	**-3.9**
	comp=Z,54nm,0.5s							
KKN	**Kakani**	**14.90**	**61**	*e*P		**Pn**	**00 30 57.8**	**-3.9**
KKN					pmax	pmax		
	comp=Z,54nm,0.5s							
PKI	**Pulchoki**	**14.93**	**62**	*e*P		**Pn**	**00 30 58.4**	**-3.6**
	comp=Z,26nm,0.4s							
PKI	**Pulchoki**	**14.93**	**62**	*e*P		**Pn**	**00 30 58.4**	**-3.6**
PKI					pmax	pmax		
	comp=Z,26nm,0.4s							
GUN	**Gumba**	**15.44**	**61**	*e*P		**Pn**	**00 31 05.7**	**-3.1**
	comp=Z,34nm,0.4s							
JIRN	**Jiri**	**15.60**	**62**	*e*P		**Pn**	**00 31 07.6**	**-3.3**
	comp=Z,22nm,0.4s							
RAMN	**Ramite**	**15.71**	**65**	*e*P		**Pn**	**00 31 08.9**	**-3.4**
	comp=Z,52nm,0.4s							
RBK	**Rabkut**	**15.90**	**260**	P		**Pn**	**00 31 15.6**	**+0.7**
	SNR=13							
WHFO	**Wadi Hawf**	**16.20**	**262**	⇑P		**Pn**	**00 31 19.3**	**+0.7**
	SNR=24							
ODAN	**Odare**	**16.35**	**66**	*e*P		**Pn**	**00 31 17.9**	**-2.7**
	comp=Z,274nm,0.8s							
TAPN	**Taplejung**	**16.77**	**65**	*e*P		**Pn**	**00 31 23.1**	**-2.8**
	comp=Z,92nm,0.8s							
ABTO	**Aybut**	**16.78**	**260**	P		**Pn**	**00 31 26.0**	**-0.1**
	SNR=17							
SHL	**Shillong**	**20.02**	**73**	*e*P		**P**	**00 32 07.9**	**+4.0**
SHL				*ex*		x	00 35 47.0	
LSA	**Lhasa**	**20.40**	**61**	P		**P**	**00 32 08.0**	**0.0**
LSA				S		**S**	**00 35 50.2**	**-6.4**
LSA	**Lhasa**	**20.40**	**61**	*e*P		**P**	**00 32 09.4**	**+1.4**
	comp=Z,33nm,1.1s							
LSA				*e*S		**S**	**00 35 59.0**	**+2.4**
LSA	**Lhasa**	**20.40**	**61**	*e*P		**P**	**00 32 09.4**	**+1.4**
LSA				*e*S		**S**	**00 35 59.0**	**+2.4**
LSA					pmax	pmax		
	comp=Z,33nm,1.1s							
AML	**Almayashu**	**21.10**	**6**	P		**P**	**00 32 16.5**	**+1.0**
	SNR=31							
KZA	**Kyzart**	**21.25**	**10**	P		**P**	**00 32 18.7**	**+1.6**
	SNR=142							
UCH	**Uchtor**	**21.29**	**8**	*e*P		**P**	**00 32 19.3**	**+1.8**
	comp=Z,30nm,1.3s,mb4.5							
ULHL	**Ulahol**	**21.58**	**11**	P		**P**	**00 32 23.8**	**+3.1**
	SNR=14							
EKS2	**Erkin-Say**	**21.64**	**6**	*e*P		**P**	**00 32 21.6**	**+0.4**
	comp=Z,53nm,1.5s,mb4.8							
EKS2				*e*S		**S**	**00 36 21.2**	**+0.5**
EKS2	**Erkin-Say**	**21.64**	**6**	P		**P**	**00 32 23.2**	**+2.0**
	SNR=11							
AAK	**Ala-Archa**	**21.69**	**8**	P		**P**	**00 32 23.7**	**+1.9**
	SNR=16							
KBK	**Karagaybulak**	**21.77**	**9**	P		**P**	**00 32 24.1**	**+1.4**
	SNR=41							
FRU	**Bishkek**	**21.90**	**8**	*e*P		**P**	**00 32 25.0**	**+0.9**
FRU					pmax	pmax		
	comp=Z,100nm,1.6s,mb5.0							
KK31	**Karatay Array**	**21.91**	**360**	*i* P		**P**	**00 32 24.2**	**0.0**
KK31					pmax	pmax		
	comp=Z,52nm,1.1s,mb4.9							
CHMS	**Chumysh**	**22.08**	**8**	P		**P**	**00 32 27.4**	**+1.3**
	SNR=12							
TKM2	**Tokmak 2**	**22.13**	**10**	*e*P		**P**	**00 32 27.4**	**+0.9**
	comp=Z,30nm,1.0s,mb4.7							
TKM2	**Tokmak 2**	**22.13**	**10**	*e*P		**P**	**00 32 27.4**	**+0.9**
TKM2					pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7							
TKM2	**Tokmak 2**	**22.13**	**10**	P		**P**	**00 32 32.6**	**+6.1**
	SNR=5.6							
RDF	**Al-Radifah**	**22.27**	**295**	*e*P		**P**	**00 32 25.6**	**-2.5**
	baz=295							
RDF					AMb	AMB	00 32 29.4	
	comp=Z,219nm,1.2s,mb5.5,baz=295							
UMR	**Umm Al-Rimmam**	**22.30**	**297**	*e*P		**P**	**00 32 26.6**	**-1.9**
	baz=296							
UMR					AMb	AMB	00 32 29.7	
	comp=Z,222nm,1.3s,mb5.4,baz=296							
USP	**Ospenovka**	**22.31**	**7**	P		**P**	**00 32 29.7**	**+1.2**
	SNR=16							
NAY	**Al-Naaiem**	**22.61**	**296**	*e*P		**P**	**00 32 29.2**	**-2.6**
	baz=295							
NAY					AMb	AMB	00 32 32.9	
	comp=Z,86nm,0.9s,mb5.2,baz=295							
MIB	**Mutribah**	**22.69**	**297**	*e*P		**P**	**00 32 30.4**	**-2.2**
	baz=297							
MIB					AMb	AMB	00 32 36.2	
	comp=Z,139nm,1.8s,mb5.1,baz=297							
CHTO	**Chiang Mai**	**26.71**	**90**	P		**P**	**00 33 13.3**	**+2.7**
	SNR=7.8							
CHTO	**Chiang Mai**	**26.71**	**90**	*e*P		**P**	**00 33 12.3**	**+1.7**
	comp=Z,20nm,0.8s,mb4.7							
CHTO	**Chiang Mai**	**26.71**	**90**	*e*P		**P**	**00 33 12.3**	**+1.7**
CHTO					pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8							
WMQ	**Urumqi**	**26.72**	**28**	P		**P**	**00 33 12.2**	**+1.8**
WMQ					AMB	AMB		
	comp=Z,15nm,1.0s,mb4.5							
CM31	**Chiang Mai Arr**	**26.77**	**91**	*e*P		**P**	**00 33 12.1**	**+1.0**
	comp=Z,20nm,0.8s,mb4.7							
CMAR	**Chiang Mai Arr**	**26.77**	**91**	P		**P**	**00 33 13.4**	**+2.3**
	comp=Z,18nm,0.9s,mb4.6,baz=279,slow=10,SNR=89							
CMAR					LR	LR	00 45 54.6	
	comp=Z,167nm,18.6s,MS3.6,baz=105,slow=41							
CMAR	**Chiang Mai Arr**	**26.77**	**91**	*i* P		**P**	**00 33 13.8**	**+2.7**
CMAR					pmax	pmax		
	comp=Z,18nm,0.9s							
MK31	**Makanchi Array**	**27.31**	**18**	*e*P		**P**	**00 33 16.4**	**+0.8**
MK31	**Makanchi Array**	**27.31**	**18**	*i* P		**P**	**00 33 16.2**	**+0.6**
MK31					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3							
MKAR	**Makanchi Array**	**27.31**	**18**	P		**P**	**00 33 16.3**	**+0.6**
	comp=Z,5.9nm,0.8s,mb4.2,baz=213,slow=6.9,SNR=22							
MKAR	**Makanchi Array**	**27.31**	**18**	P		**P**	**00 33 16.3**	**+0.6**
MKAR	**Makanchi Array**	**27.31**	**18**	⇑*e*P		**P**	**00 33 16.2**	**+0.6**

GNI	**Garni**	**29.07**	**316**	LR		LR	00 47 42.1	
	comp=Z,170nm,19.8s,MS3.7,baz=289,slow=42							
AB31	**Akbulak array**	**29.33**	**346**	P		**P**	**00 33 35.0**	**+1.4**
AB31					pmax	pmax		
	comp=Z,21nm,0.8s,mb4.9							
KURK	**Kurchatov**	**30.19**	**10**	*e*P		**P**	**00 33 41.7**	**+0.4**
	comp=Z,17nm,1.0s,mb4.7							
KURK	**Kurchatov**	**30.19**	**10**	*d* iP		**P**	**00 33 41.9**	**+0.6**
KURK					pmax	pmax		
	comp=Z,26nm,1.3s,mb4.8							
KURK					MLR	MLR		
	comp=Z,600nm,15.0s,MS4.4							
GTA	**Gaotai**	**30.91**	**47**	*e*P		**P**	**00 33 49.9**	**+2.1**
GTA					AP	pP	00 33 54.1	+3.2
GTA					XP	sP	00 33 56.6	+4.5
GTA					AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.1							
GTA					AMB	AMB		
	comp=Z,112nm,4.2s							
GTA					LR	LR		
	comp=N,591nm,20.1s							
GTA					LR	LR		
	comp=E,290nm,13.5s							
GTA					LR	LR		
	comp=Z,497nm,14.1s							
VOSK	**Vostochnaya**	**31.54**	**0**	P		**P**	**00 33 53.9**	**+0.8**
VOSK					pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9							
BVAR	**Borovoye Array**	**31.84**	**360**	P		**P**	**00 33 57.4**	**+1.6**
	comp=Z,6.4nm,1.0s,mb4.4,baz=170,slow=9.0,SNR=21							
BRVK	**Borovoye**	**31.88**	**360**	*e*P		**P**	**00 33 56.5**	**+0.4**
	comp=Z,28nm,1.3s,mb4.9							
BRVK	**Borovoye**	**31.88**	**360**	*e*P		**P**	**00 33 56.5**	**+0.4**
BRVK					pmax	pmax		
	comp=Z,28nm,1.3s,mb4.9							
KIV	**Kislovodsk**	**32.48**	**321**	*e*P		**P**	**00 34 01.4**	**-0.1**
KIV				*e*S		**S**	**00 39 16.2**	**-0.1**
KIV					pmax	pmax		
	comp=Z,13nm,1.2s,mb4.6							
GYA	**Guiyang**	**33.34**	**74**	P		**P**	**00 34 11.1**	**+1.9**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
ZAA0	**Zalesovo Array**	**34.51**	**15**	*e*P		**P**	**00 34 19.6**	**+0.6**
ZALV	**Zalesovo Beam**	**34.51**	**15**	P		**P**	**00 34 19.5**	**+0.4**
	comp=Z,12nm,1.1s,mb4.8,baz=210,slow=8.6,SNR=25							
ZALV					LR	LR	00 49 27.0	
	comp=Z,464nm,18.3s,MS4.3,baz=168,slow=38							
NVS	**Novosibirsk**	**34.99**	**13**	*e*P		**P**	**00 34 22.8**	**-0.3**
XAN	**Xi'an**	**36.10**	**61**	P		**P**	**00 34 34.1**	**+1.1**
XAN					AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6							
XAN					AMB	AMB		
	comp=Z,138nm,4.8s							
ARU	**Arti**	**36.37**	**349**	*e*P		**P**	**00 34 36.3**	**+1.3**
	comp=Z,23nm,1.1s,mb5.0							
ARU	**Arti**	**36.37**	**349**	*d* iP		**P**	**00 34 36.4**	**+1.4**
ARU				*e*			00 35 57.8	
ARU				*e*S		**S**	**00 40 16.8**	**+0.7**
ARU				*e*SS		SS	00 42 45.2	-10
ARU					pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1							
ARU					MLR	MLR		
	comp=Z,394nm,17.0s,MS4.3							
SVE	**Sverdlovsk**	**36.41**	**351**	⇑*e*P		**P**	**00 34 36.9**	**+1.6**
SVE				*e*S		**S**	**00 40 08.4**	**-8.2**
SVE					pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1							
SVE					MLR	MLR		
	comp=Z,775nm,16.0s,MS4.6							
BRTR	**Keskin Array B**	**36.55**	**309**	⇑*e*P		**P**	**00 34 40.7**	**+3.9**
QIZ	**Qiongzhong**	**36.84**	**86**	P		**P**	**00 34 37.9**	**-1.6**
QIZ				S		**S**	**00 40 20.3**	**-3.9**
QIZ					LR	LR		
	comp=N,166nm,23.2s							
QIZ					LR	LR		
	comp=Z,153nm,24.9s,MS3.7							
VRHR	**Novokhopersk**	**37.53**	**330**	*e*P		**P**	**00 34 46.0**	**+1.1**
VRHR					pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0							
VRHR					pmax	pmax		
	comp=N,30nm,0.8s							
VRHR					pmax	pmax		
	comp=E,10.0nm,0.4s							
VSR	**Storozhevoye**	**38.78**	**328**	*e*P		**P**	**00 34 55.7**	**+0.2**
VSR					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3							
VSR					pmax	pmax		
	comp=N,3.0nm,0.6s							
VSR					pmax	pmax		
	comp=E,10.0nm,0.7s							
ZAK	**Zakamensk**	**38.88**	**33**	*e*P		**P**	**00 34 48.2**	**-8.2**
ZAK					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0							
SONM	**Songino Array**	**39.19**	**39**	P		**P**	**00 35 01.2**	**+2.2**
	comp=Z,6.3nm,1.0s,mb4.3,baz=237,slow=8.4,SNR=20							
ULN	**Ulaanbaatar**	**39.59**	**39**	*i* P		**P**	**00 35 04.6**	**+2.3**
SOKR	**Solikamsk**	**39.66**	**349**	*e*P		**P**	**00 35 05.5**	**+2.8**
SOKR					pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1							
SOKR					MLR	MLR		
	comp=Z,350nm,19.0s,MS4.2							
OBN	**Obninsk**	**42.46**	**332**	⇓*e*P		**P**	**00 35 26.8**	**+0.9**
OBN				*e*			00 37 03.9	
OBN				*e*S		**S**	**00 41 45.2**	**-2.4**
OBN					pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7							
OBN					MLR	MLR		
	comp=Z,200nm,15.0s,MS4.1							
AKASG	**Malin Array Be**	**43.78**	**323**	P		**P**	**00 35 35.6**	**-1.0**
	comp=Z,3.6nm,0.7s,mb4.2,baz=118,slow=6.7,SNR=8.6							
AKASG	**Malin Array Be**	**43.78**	**323**	*i* P		**P**	**00 35 37.2**	**+0.6**
AKASG					pmax	pmax		
	comp=Z,4.0nm,0.7s							
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.5s							
KIEV	**Kiev**	**43.79**	**323**	*e*P		**P**	**00 35 36.4**	**-0.3**
	comp=Z,5.1nm,0.8s,mb4.3							
KIEV	**Kiev**	**43.79**	**323**	*e*P		**P**	**00 35 36.4**	**-0.3**
KIEV					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3							
KLMR	**Klimovskoe**	**45.27**	**339**	*e*P		**P**	**00 35 46.1**	**-2.2**
KLMR					pmax	pmax		
	comp=Z,28nm,1.2s,mb5.0							
OPO	**Amboihidratompo**	**45.64**	**212**	P		**P**	**00 35 52.7**	**+1.0**
	comp=Z,4.3nm,0.8s,mb4.4,baz=25,slow=5.1,SNR=8.0							
BOD	**Bodaibo**	**48.26**	**30**	*e*P		**P**	**00 36 11.8**	**0.0**
BOD					pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5							
KSRS	**Korea Array**	**51.81**	**58**	P		**P**	**00 36 39.0**	**-0.1**
	comp=Z,1.7nm,0.8s,mb4.0,baz=257,slow=6.3,SNR=5.0							
KSRS					LR	LR	00 58 54.1	
	comp=Z,71nm,20.3s,MS3.7,baz=280,slow=36							
GERES	**GERESS Array B**	**52.72**	**316**	P		**P**	**00 36 44.5**	**-1.2**
	comp=Z,0.8nm,0.9s,mb3.6,baz=129,slow=3.6,SNR=5.6							
GERES					LR	LR	01 01 09.0	
	comp=Z,141nm,18.7s,MS4.0,baz=97,slow=38							
CLL	**Collm**	**53.64**	**319**	*e*P		**P**	**00 36 59.0**	**+6.6**
	comp=Z,10.0nm,1.4s,mb4.5							
CLL	**Collm**	**53.64**	**319**	*e*P		**P**	**00 36 59.0**	**+6.6**
CLL					pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5							
CLL	**Collm**	**53.64**	**319**	*e*(sP)		sP	00 36 59.0	+2.2
	comp=Z,10.0nm,1.4s							
ARCES	**ARCESS Array B**	**55.45**	**342**	P		**P**	**00 37 06.1**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.5,baz=120,slow=4.8,SNR=8.3							
ARCES					LR	LR	01 02 42.1	
	comp=Z,188nm,19.6s,MS4.2,baz=301,slow=38							
NB2	**NORSAR Subarra**	**57.02**	**330**	P		**P**	**00 37 15.8**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.2,baz=105,slow=6.9							
NOA	**NORSAR Array B**	**57.02**	**330**	P		**P**	**00 37 16.7**	**+0.1**
	comp=Z,3.5nm,0.9s,mb4.4,baz=107,slow=7.0,SNR=5.3							
NOA					LR	LR	01 06 40.2	
	comp=Z,170nm,18.4s,MS4.2,baz=330,slow=41							
MJAR	**Matsushiro Arr**	**60.07**	**59**	LR		LR	01 04 21.3	
	comp=Z,110nm,18.7s,MS4.0,baz=280,slow=37							
TIXI	**Tiksi**	**60.30**	**18**	*e*P		**P**	**00 37 37.5**	**-1.8**
TIXI					pmax	pmax		
	comp=Z,9.0nm,2.0s,mb4.5							
TORD	**Torodi Ar. Bea**	**65.92**	**275**	P		**P**	**00 38 15.6**	**-2.0**
	comp=Z,0.9nm,0.7s,mb3.9,baz=78,slow=5.2,SNR=6.7							
BOSA	**Boshof**	**66.04**	**223**	P		**P**	**00 38 17.2**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.5,baz=104,slow=7.6,SNR=3.8							
GUMO	**Guam**	**70.73**	**82**	LR		LR	01 08 05.7	
	comp=Z,73nm,19.6s,MS3.9,baz=93,slow=34							
PETK	**Petropavlovsk-**	**71.67**	**39**	LR		LR	01 14 18.6	
	comp=Z,138nm,18.6s,MS4.2,baz=262,slow=39							

DBIC	**Dimbokro**	**74.10**	**271**	P		**P**	**00 39 09.9**	**+2.1**
	comp=Z,4.0nm,1.1s,mb4.3,baz=72,slow=9.6,SNR=3.1							
WRA	**Warramunga Arr**	**74.50**	**119**	P		**P**	**00 39 11.2**	**+1.3**
	comp=Z,10nm,0.9s,mb4.8,baz=310,slow=5.7,SNR=39							
WRA					LR	LR	01 12 50.8	
	comp=Z,52nm,20.0s,MS3.8,baz=195,slow=36							
WRA	**Warramunga Arr**	**74.50**	**119**	*i* P		**P**	**00 39 11.1**	**+1.1**
WRA					pmax	pmax		
	comp=Z,11nm,0.9s							
WRAB	**Tennant Creek**	**74.50**	**119**	*d* iP		**P**	**00 39 10.9**	**+0.9**
ASAR	**Alice Springs**	**76.01**	**122**	P		**P**	**00 39 19.8**	**+1.1**
	comp=Z,5.8nm,0.9s,mb4.5,baz=304,slow=5.6,SNR=32							
CTA	**Charters Tower**	**84.53**	**114**	LR		LR	01 25 02.9	
	comp=Z,74nm,18.9s,MS4.1,baz=43,slow=41							
STKA	**Stephens Creek**	**85.96**	**126**	LR		LR	01 17 22.2	
	comp=Z,169nm,19.2s,MS4.5,baz=207,slow=35							
IMA2	**Indian Mountai**	**86.87**	**17**	*e*P		**P**	**00 40 15.4**	**0.0**
MAW	**Mawson**	**88.65**	**183**	LR		LR	01 14 44.5	
	comp=Z,102nm,19.3s,MS4.3,baz=73,slow=32							
HNR	**Honiara**	**92.73**	**99**	LR		LR	01 22 28.7	
	comp=Z,60nm,19.2s,MS4.1,baz=85,slow=36							
YKA	**Yellowknife Ar**	**96.56**	**2**	LR		LR	01 30 09.3	
	comp=Z,81nm,18.2s,MS4.2,baz=85,slow=39							

CSEM ***06*** *00:27:28.7±0.1, 3864N×3039E, h2km, MD2.8, Error ellipse: s-maj=2.9km s-min=1.6km az=15.0*
DDA ***06*** *00:27:29.8, 3862N×3035E, h7km±3km, Md2.8*
ISK ***06*** *00:27:29.9, 3861N×3038E, h6km, MD2.8*
ISCJB ***06*** *00:27:30.2±0.5, 3862N±003×3037E±003, h7km±5km, Error ellipse: s-maj=5.1km s-min=4.3km az=173.9*

ISC 06 00:27:30.6±0.5, 3863N±003×3038E±003, h7km±5km, n14, σ0§61/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHUT	**Suhut-Afyon**	**0.15**	**118**	PG		**Pg**	**00 27 32.9**	**-0.9**
SHUT				SG		**Sg**	**00 27 36.0**	**+0.1**
BOLV	**Bolvadin**	**0.46**	**78**	*i* P		**Pg**	**00 27 40.0**	**+0.6**
BOLV				*i* S		**Sg**	**00 27 46.4**	**+0.9**
ALT	**Altintas**	**0.48**	**334**	*e*PG		**Pg**	**00 27 40.0**	**+0.2**
ALT				*e*SG		**Sg**	**00 27 46.9**	**+0.8**
TKTP	**Tekketepe**	**0.59**	**184**	*i* P		**Pg**	**00 27 40.9**	**-1.0**
TKTP				*i* S		**Sg**	**00 27 50.0**	**+0.5**
KHL	**Karahalli**	**0.73**	**246**	*e*PG		**Pg**	**00 27 44.4**	**-0.3**
KHL				*e*SG		**Sg**	**00 27 54.9**	**+0.7**
GDZ	**Gediz**	**0.84**	**304**	*i* P		**Pg**	**00 27 46.3**	**-0.4**
GDZ				*i* S		**Sg**	**00 27 57.5**	**0.0**
ESKT	**Eskisehir**	**0.97**	**22**	*i* P		**Pg**	**00 27 48.4**	**-0.7**
ESKT				*i* S		**Sg**	**00 28 01.1**	**-0.5**
SEYT	**Eskypehyr**	**0.97**	**22**	*i* P		**Pg**	**00 27 48.4**	**-0.7**
SEYT				*i* S		**Sg**	**00 28 01.1**	**-0.6**
BCK	**Bucak**	**1.17**	**172**	*e*PN		**Pn**	**00 27 52.8**	**-0.5**
KIZT	**Kizilcal**	**1.20**	**77**	*e*PN		**Pn**	**00 27 53.2**	**-0.5**
KULA	**Kula-Manisa**	**1.35**	**266**	*e*PN		**Pn**	**00 27 55.7**	**-0.1**
MANT	**Manisa**	**1.43**	**265**	*i* P		**Pn**	**00 27 56.1**	**-0.8**
MANT				*e*S		**Sn**	**00 28 16.6**	**+0.7**
LADK	**Ladik-KONYA**	**1.62**	**105**	*e*PN		**Pn**	**00 27 60.0**	**+0.5**
KONT	**Konya--Tatoy**	**1.70**	**113**	*e*PN		**Pn**	**00 28 01.4**	**+0.7**

MOS 06 00:52:13.0±1.4, 4248N×4375E, h15km, mb3.6/1, 3C, Error ellipse: s-maj=52.1km s-min=10.2km az=63.5, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZEI	**Tsey**	**0.31**	**21**	⇑*i* PG		Pg	00 52 19.4	-0.1
ZEI				*i* S		Sg	00 52 25.4	+1.5
LACR	**Lac**	**0.54**	**49**	⇑*i* PG		Pg	00 52 24.2	+0.6
LACR				*e*S		Sg	00 52 32.9	+2.2
KORR	**Kora**	**0.65**	**21**	⇑*i* PG		Pg	00 52 26.3	+0.5
KORR				*i* S		Sg	00 52 36.3	+1.9
ARNR	**Ardon**	**0.81**	**29**	*e*PG		Pg	00 52 28.5	-0.3
ARNR				*e*S		Sg	00 52 40.6	+1.1
VLKR	**Vladikavkaz**	**0.89**	**50**	*e*PG		Pg	00 52 30.5	+0.2
VLKR				*e*S		Sb	00 52 44.2	+2.4
KMSR	**Komsomolskaya**	**0.98**	**24**	*e*PG		Pg	00 52 33.8	+1.9
KMSR				*e*S		Sb	00 52 48.3	+3.9
SNJR	**Sundja**	**0.98**	**53**	*e*PG		Pg	00 52 32.2	+0.2
SNJR				*e*S		Sb	00 52 47.0	+2.5
BTKR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.18**	**2**	⇑P	**Pg**	**01 02 03.9**	**+0.2**
JHE				S	**Sg**	**01 02 06.7**	**+0.5**
JWY	**Kouya**	**0.27**	**195**	⇑P	**Pg**	**01 02 05.4**	**+0.2**
JWY				S	**Sg**	**01 02 09.1**	**+0.3**
JKN2	**Miekihoku**	**0.55**	**115**	⇓P	**Pg**	**01 02 10.6**	**+0.1**
JKN2				S	**Sg**	**01 02 17.6**	**-0.1**
TSUJ	**Tsu 2**	**0.66**	**69**	⇓P	**Pg**	**01 02 11.9**	**-0.7**
TSUJ				S	**Sg**	**01 02 20.8**	**-0.3**
JAJ2	**Tsuna**	**0.66**	**265**	⇓P	**Pg**	**01 02 12.0**	**-0.6**
JAJ2				S	**Sg**	**01 02 20.9**	**-0.3**
JWM	**Minabe**	**0.68**	**203**	⇑P	**Pg**	**01 02 13.2**	**+0.2**
JWM				S	**Sg**	**01 02 21.8**	**-0.1**
JWT	**Wachi**	**0.84**	**344**	⇑P	**Pg**	**01 02 15.7**	**-0.3**
JWT				S	**Sg**	**01 02 27.0**	**+0.1**
MAT	**Matsushiro**	**2.92**	**44**	P	**Pn**	**01 02 47.0**	**+0.6**
MAT				S	**Sn**	**01 03 21.6**	**0.0**

*LDG **06** 01:18:10.8±0.1, 44.40N×732E, h3km, Md2.5/2, Ml2.4/9, Error ellipse: s-maj=1.2km s-min=0.6km az=64.0*
*ROM **06** 01:18:10.1±0.4, 44.42N×734E, h5km±2km, Md2.0/4, Ml1.8/3, Error ellipse: s-maj=4.1km s-min=2.6km az=137.0*
*GEN **06** 01:18:10.9, 44.38N×730E, h12km, ML1.0*
*ISCJB **06** 01:18:10.1±0.3, 44.39N±002×730E±003, h14km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=151.2*
*CSEM **06** 01:18:10.2±0.1, 44.41N×736E, h10km, ML2.4/11, Error ellipse: s-maj=1.4km s-min=1.3km az=56.0*
*STR **06** 01:18:11.2±0.2, 44.38N×730E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 06 01:18:10.5±0.3, 4440N±002×732E±003, h15km±2km, n46, σ0§50/82, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STV	**Sant Anna di V**	**0.16**	**177**	⇑*i*P	**Pg**	**01 18 14.6**	**+0.1**
STV				Sg	**Sg**	**01 18 16.7**	**-0.4**
	286nm,0.1s						
PZZ	**Stroppo**	**0.18**	**307**	P	**Pg**	**01 18 15.2**	**+0.4**
ENR	**Entracque**	**0.19**	**157**	P	**Pg**	**01 18 15.1**	**+0.1**
SURF	**Saint Ours**	**0.37**	**283**	Pg	**Pg**	**01 18 18.4**	**+0.4**
SURF				Sg	**Sg**	**01 18 23.3**	**+0.2**
TOUF	**Mont Tournerai**	**0.39**	**187**	Pg	**Pg**	**01 18 18.6**	**+0.2**
AUTN	**L'Aution**	**0.41**	**169**	Pg	**Pg**	**01 18 19.0**	**+0.2**
AUTN				Sg	**Sg**	**01 18 24.3**	**-0.1**
ROB	**Robourent**	**0.42**	**104**	P	**Pg**	**01 18 19.4**	**+0.4**
SAOF	**Saorge**	**0.45**	**157**	Pg	**Pg**	**01 18 19.5**	**0.0**
SAOF				Sg	**Sg**	**01 18 25.2**	**-0.3**
MBDF	**Montbardon**	**0.51**	**310**	*e*Pg	**Pg**	**01 18 20.8**	**+0.2**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**01 18 27.7**	**+0.3**
	25nm,0.2s,SNR=1.0						
MBDF	**Montbardon**	**0.51**	**310**	*e*Pg	**Pg**	**01 18 20.8**	**+0.2**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**01 18 27.7**	**+0.3**
	12nm,0.2s,SNR=1.0						
LUCF	**Luceram**	**0.51**	**177**	Pg	**Pg**	**01 18 20.6**	**0.0**
LUCF				Sg	**Sg**	**01 18 27.4**	**0.0**
MVIF	**Mont Vial**	**0.52**	**193**	Pg	**Pg**	**01 18 20.9**	**+0.2**
MVIF				Sg	**Sg**	**01 18 27.7**	**0.0**
SBF	**Sospel**	**0.55**	**171**	*e*Pg	**Pg**	**01 18 21.2**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**01 18 28.3**	**-0.2**
	44nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.55**	**171**	*e*Pg	**Pg**	**01 18 21.2**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**01 18 28.3**	**-0.2**
	22nm,0.2s,SNR=1.0						
RORO	**Rocca Rossa**	**0.61**	**118**	P	**Pg**	**01 18 22.6**	**+0.1**
NEGI	**Seborga**	**0.62**	**153**	P	**Pg**	**01 18 22.5**	**-0.1**
RRL	**Rocca Remolon**	**0.64**	**324**	P	**Pg**	**01 18 23.4**	**+0.4**
IMI	**Imperia**	**0.64**	**140**	P	**Pg**	**01 18 23.1**	**0.0**
REVF	**Revere**	**0.66**	**177**	Pg	**Pg**	**01 18 24.0**	**+0.6**
REVF				Sg	**Sg**	**01 18 32.6**	**+0.4**
FIN	**Finale Ligure**	**0.67**	**106**	P	**Pg**	**01 18 23.8**	**+0.2**
CALN	**Calern**	**0.72**	**205**	Pg	**Pg**	**01 18 24.6**	**+0.1**
CALN				Sg	**Sg**	**01 18 33.9**	**-0.1**
QLNO	**Quiliano**	**0.74**	**96**	Pg	**Pg**	**01 18 25.1**	**+0.1**
QLNO				Sg	**Sg**	**01 18 34.6**	**-0.2**
	32nm,0.2s						
RSP	**Reno Superiore**	**0.75**	**357**	P	**Pg**	**01 18 24.1**	**-1.0**
PCP	**Piancastagn**	**0.89**	**81**	Pg	**Pg**	**01 18 28.0**	**+0.2**
PCP				Sg	**Sg**	**01 18 39.8**	**+0.3**
	20nm,0.4s						
FRF	**La Foret Royal**	**0.97**	**210**	*e*Pg	**Pg**	**01 18 28.6**	**-0.6**
FRF	**La Foret Royal**	**0.97**	**210**	*e*Pn	**Pn**	**01 18 29.3**	**-0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**01 18 41.6**	**-0.3**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**01 18 43.2**	**+0.3**
	53nm,0.2s						
FRF	**La Foret Royal**	**0.97**	**210**	*e*Pn	**Pn**	**01 18 29.3**	**-0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**01 18 41.6**	**-0.3**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**01 18 43.2**	**+0.3**
	26nm,0.2s						
LSD	**Lago del Serru**	**1.07**	**353**	P	**Pb**	**01 18 30.1**	**-0.5**
LSD				S	**Sb**	**01 18 43.7**	**-0.6**
ORIF	**Oris-en-Rattie**	**1.15**	**297**	*e*Pg	**Pg**	**01 18 32.4**	**-0.2**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**01 18 46.7**	**-0.9**
	5.7nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.15**	**297**	*e*Pg	**Pg**	**01 18 32.4**	**-0.2**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**01 18 46.7**	**-0.9**
	2.8nm,0.2s,SNR=1.0						
TRAV	**Traversella**	**1.15**	**15**	P	**Pn**	**01 18 31.6**	**-0.4**
TRAV				S	**Sb**	**01 18 45.5**	**-1.3**
LPG	**La Plagne**	**1.17**	**340**	*e*Pg	**Pg**	**01 18 33.3**	**+0.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**01 18 48.3**	**+0.5**
	5.5nm,0.3s						
LPG	**La Plagne**	**1.17**	**340**	*e*Pg	**Pg**	**01 18 33.3**	**+0.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**01 18 48.3**	**+0.5**
	2.8nm,0.3s						
LPL	**La Plagne**	**1.19**	**340**	*e*Pn	**Pn**	**01 18 33.0**	**+0.5**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**01 18 48.9**	**+0.5**
	4.1nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**1.19**	**340**	*e*Pn	**Pn**	**01 18 33.0**	**+0.5**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**01 18 48.9**	**+0.5**
	2.0nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.22**	**209**	*e*Pn	**Pn**	**01 18 32.9**	**0.0**
	SNR=1.0						
LMR	**La Mourre**	**1.22**	**209**	*e*Pg	**Pg**	**01 18 33.6**	**-0.3**
LMR				*e*Sg	**Sg**	**01 18 49.3**	**-0.5**
	43nm,0.2s						
LMR	**La Mourre**	**1.22**	**209**	*e*Pg	**Pg**	**01 18 33.6**	**-0.3**
LMR				*e*Sg	**Sg**	**01 18 49.3**	**-0.5**
	22nm,0.2s						
SMRF	**Simiane la Rot**	**1.32**	**252**	*e*P	**Pn**	**01 18 36.3**	**+2.0**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**01 18 52.8**	**-0.4**
	10nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.32**	**252**	*e*Pg	**Pg**	**01 18 35.6**	**-0.3**
SMRF				*e*Sg	**Sg**	**01 18 52.8**	**-0.4**
	5.2nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.94**	**284**	*e*Pn	**Pn**	**01 18 44.3**	**+1.5**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**01 19 06.7**	**-0.2**
	1.8nm,0.4s						
VIVF	**Saint-Julien-l**	**1.94**	**284**	*e*Pn	**Pn**	**01 18 44.3**	**+1.5**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**01 19 06.7**	**-0.2**
	0.9nm,0.4s						
PGF	**Pioggiola**	**2.22**	**146**	*e*Pn	**Pn**	**01 18 46.6**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**01 19 13.1**	**-0.7**
	1.1nm,0.2s						
PGF	**Pioggiola**	**2.22**	**146**	*e*Pn	**Pn**	**01 18 46.6**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**01 19 13.1**	**-0.7**
	0.6nm,0.2s						
LASF	**Ste Croix**	**2.51**	**264**	*e*Pn	**Pn**	**01 18 51.1**	**+0.5**
LASF				*e*Sn	**Sn**	**01 19 20.0**	**-0.9**
	1.2nm,0.3s						
LASF	**Ste Croix**	**2.51**	**264**	*e*Pn	**Pn**	**01 18 51.1**	**+0.5**
LASF				*e*Sn	**Sn**	**01 19 20.0**	**-0.9**
	0.6nm,0.3s						

*IDC **06** 01:19:47.5±2.3, 5340N×16361W, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/26, mbtmp3.8/7, Error ellipse: s-maj=88.2km s-min=28.6km az=15.0*
*ISCJB **06** 01:19:49.5±2.4, 5337N±008×16353W±008, h26km±18km, mb3.8/7, Error ellipse: s-maj=13.5km s-min=7.3km az=163.9*
*NEIC **06** 01:19:50.9, 5334N×16348W, h22km, ML3.4(AEIC), After AEIC.*

ISC 06 01:19:50.1±2.7, 5343N±009×16359W±008, h15km±19km, n16, σ0§64/20, mb3.8/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.43**	**4**	P	**Pn**	**01 20 15.3**	**-0.1**
FALS				S	**Sn**	**01 20 34.9**	**+1.0**
AKUT	**Akutan**	**1.47**	**299**	P	**Pn**	**01 20 15.9**	**0.0**
AKUT				S	**Sn**	**01 20 35.0**	**+0.1**
AKLV	**Akutan Long Va**	**1.58**	**298**	P	**Pn**	**01 20 17.1**	**-0.3**
AKGG	**Akutan Green G**	**1.62**	**299**	P	**Pn**	**01 20 17.8**	**-0.1**
UNV	**Unalaska Valle**	**1.78**	**285**	P	**Pn**	**01 20 20.0**	**-0.2**
UNV				*e*S	**Sn**	**01 20 41.7**	**-0.8**
SDPT	**Sand Point**	**2.65**	**42**	P	**Pn**	**01 20 31.9**	**-0.2**
SDPT				S	**Sn**	**01 21 02.0**	**-1.8**
NIKO	**Nikolski**	**3.20**	**264**	P	**Pn**	**01 20 39.6**	**-0.1**
DAWY	**Dawson**	**16.34**	**40**	*e*Pn	**Pn**	**01 23 39.1**	**+0.5**
PETK	**Petropavlovsk-**	**22.96**	**285**	P	**P**	**01 24 53.3**	**-0.2**
	1.5nm,0.6s,mb3.6,baz=78,slow=13,SNR=4.6						
TXAR	**Lajitas Array**	**49.28**	**94**	P	**P**	**01 28 38.0**	**0.0**
	0.4nm,1.0s,mb3.4,baz=319,slow=6.7,SNR=3.4						
SONM	**Songino Array**	**53.70**	**303**	P	**P**	**01 29 11.4**	**+0.6**
	0.3nm,0.4s,mb3.6,baz=46,slow=8.1,SNR=4.8						
BVAR	**Borovoye Array**	**64.79**	**327**	P	**P**	**01 30 27.8**	**+0.4**
	1.4nm,0.7s,mb4.1,baz=54,slow=7.5,SNR=6.3						
MKAR	**Makanchi Array**	**65.53**	**316**	P	**P**	**01 30 31.3**	**-1.1**
	0.3nm,0.6s,mb3.5,baz=60,slow=4.9,SNR=3.7						
AKTK	**Aktyubinsk**	**70.74**	**333**	P	**P**	**01 31 05.7**	**+0.8**
AKTO	**Aktyubinsk**	**70.74**	**333**	P	**P**	**01 31 05.7**	**+0.8**
	2.1nm,0.8s,mb4.1,baz=34,slow=8.0,SNR=4.5						
BRTR	**Keskin Array B**	**86.03**	**347**	P	**P**	**01 32 29.9**	**+0.4**
	1.1nm,0.9s,mb4.1,baz=20,slow=11,SNR=3.0						

*ISCJB **06** 01:23:47.7±0.5, 2943N±007×9223E±005, h10km, mb4.0/9, Error ellipse: s-maj=10.7km s-min=5.7km az=23.8*
*IDC **06** 01:23:48.4±0.8, 2943N×9235E, h0km, mb3.9/8, mb1 4.1/10, mb1mx4.0/22, mbtmp3.9/10, ML4.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.0/32, Error ellipse: s-maj=38.5km s-min=16.1km az=60.0*
*BJI **06** 01:23:49.4, 2947N×9218E, h19km, mB4.8, mb4.3, ML3.8, Ms4.1, Msz4.1*
*NEIC **06** 01:23:53.3±0.5, 2948N×9235E, h35km, mb4.5/2, Error ellipse: s-maj=14.1km s-min=8.0km az=61.0*

ISC 06 01:23:49.5±0.5, 2939N±005×9218E±007, h10km, n20, σ0§97/22, mb4.0/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**0.95**	**289**	PG	**Pg**	**01 24 06.0**	**-1.8**
LSA				SG	**Sg**	**01 24 20.0**	**-0.2**
LSA				Smax			
	comp=N,2μm,0.7s						
LSA				Smax			
	comp=E,4μm,0.5s						
LSA	**Lhasa**	**0.95**	**289**	*e*P	**Pg**	**01 24 06.6**	**-1.3**
LSA				*e*S	**Sg**	**01 24 19.7**	**-0.6**
IMP	**Imphal**	**4.85**	**161**	*i* P	**Pn**	**01 25 03.0**	**+0.4**
IMP				*i* S	**Sg**	**01 26 24.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**12.51**	**149**	Pn	**Pn**	**01 26 48.7**	**+0.9**
	comp=E,1.0nm,0.3s,baz=328,slow=13,SNR=5.4						
MK31	**Makanchi Array**	**19.01**	**339**	*e*P	**Pn**	**01 28 10.0**	**-2.0**
MKAR	**Makanchi Array**	**19.01**	**339**	P	**Pn**	**01 28 12.1**	**0.0**
	comp=E,0.1nm,0.3s,baz=141,slow=12,SNR=8.5						
KBL	**Kabul**	**20.28**	**291**	*e*P	**P**	**01 28 26.8**	**+1.5**
	comp=E,84nm,1.0s						
SONM	**Songino Array**	**21.44**	**27**	P	**P**	**01 28 37.1**	**-0.6**
	comp=E,5.2nm,0.9s,mb3.9,baz=215,slow=11,SNR=32						
ULN	**Ulaanbaatar**	**21.73**	**28**	P	**P**	**01 28 39.8**	**-1.1**
	comp=E,4.9nm,0.8s,mb4.0						
KURK	**Kurchatov**	**23.62**	**338**	P	**P**	**01 29 01.3**	**+0.5**
	baz=148,slow=9.6						
ZALV	**Zalesovo Beam**	**25.12**	**350**	P	**P**	**01 29 14.6**	**+0.2**
	comp=E,1.3nm,0.5s,mb3.7,baz=163,slow=10,SNR=6.1						
ZALV	**Zalesovo Beam**	**25.12**	**350**	P	**P**	**01 29 14.6**	**+0.2**
KSRS	**Korea Array**	**30.75**	**65**	LR	LR	01 42 18.8	
	comp=E,27nm,20.9s,baz=15,slow=36						
ARCES	**ARCESS Array B**	**54.65**	**337**	P	**P**	**01 33 18.5**	**+0.4**
	comp=E,2.5nm,0.8s,mb4.3,baz=90,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**54.65**	**337**	P	**P**	**01 33 18.5**	**+0.4**
NOA	**NORSAR Array B**	**60.45**	**326**	P	**P**	**01 33 59.3**	**+0.2**
	comp=E,2.0nm,0.8s,mb4.2,baz=83,slow=7.0,SNR=4.2						
GERES	**GERESS Array B**	**61.20**	**312**	P	**P**	**01 34 06.2**	**+1.8**
	comp=E,0.8nm,0.9s,mb3.9,baz=74,slow=5.7,SNR=4.5						
WRA	**Warramunga Arr**	**63.70**	**135**	P	**P**	**01 34 21.1**	**-0.3**
	comp=E,1.7nm,0.8s,mb4.2,baz=328,slow=7.0,SNR=7.8						
ASAR	**Alice Springs**	**66.28**	**138**	P	**P**	**01 34 38.3**	**+0.2**
	comp=E,2.0nm,0.8s,mb4.2,baz=325,slow=7.2,SNR=16						
TORD	**Torodi Ar. Bea**	**84.08**	**282**	P	**P**	**01 36 21.9**	**+0.8**
	comp=E,1.2nm,0.9s,mb4.0,baz=49,slow=3.7,SNR=6.0						

CASC 06 01:27:17.9±1.9, 994N×8539W, h7km±7km, MD4.2, ML3.4, 3C-7D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCR	**Jicaral**	**0.29**	**109**	⇓*i*P	Pg	01 27 24.4	+0.8
JCR				*e*S	Sg	01 27 29.2	+1.8
VCR	**Vista de Mar**	**0.30**	**307**	*e*P	Pg	01 27 24.0	+0.2
VCR				*e*S	Sg	01 27 28.6	+0.8
2RIO	**Dos Rios de Up**	**0.60**	**15**	⇑*e*P	Pg	01 27 36.2	+6.6
CUI	**Cuipilapa**	**0.75**	**16**	⇑*e*P	Pg	01 27 32.2	-0.1
CUI				*i* S	Sg	01 27 43.4	+1.3
LIM1	**Limonal**	**0.76**	**10**	⇓*e*P	Pg	01 27 32.5	-0.1
LIM1				*i* S	Sg	01 27 43.4	+0.8
FORC	**Fortuna**	**0.88**	**53**	⇓*i*P	Pg	01 27 34.7	-0.2
FORC				⇓*e*P		01 27 34.8	
FORC				*i* S	Sg	01 27 47.3	+0.9
CGA2	**Cerro Gallo 2**	**0.91**	**85**	⇓*i*P	Pg	01 27 34.7	-0.7
CGA2				*e*S	Sg	01 27 47.7	+0.4
PRS1	**Puriscal**	**1.06**	**88**	⇓*i*P	Pg	01 27 36.4	-1.9
QCR	**Quepos**	**1.31**	**113**	*e*P	Pn	01 27 41.7	-0.9
SJS	**Escuela Geolog**	**1.31**	**90**	*e*P	Pn	01 27 41.7	-0.9
SJS				*e*S	Sb	01 27 58.5	-1.5
URSC	**Urasca**	**1.59**	**94**	⇓*i*P	Pn	01 27 46.3	-0.2
CONN	**Concepcion**	**1.63**	**352**	*e*P	Pn	01 27 46.1	-0.9
BUS	**Buena Vista**	**1.65**	**103**	*e*P	Pn	01 27 46.4	-0.9
APON	**Apoyo**	**2.07**	**341**	*e*P	Pn	01 27 54.0	+0.9
BAR1		**2.16**	**109**	*e*P	Pn	01 27 51.9	-2.4
TICN	**Ticuantepe**	**2.24**	**338**	*e*P	Pn	01 27 55.0	-0.4
LIO	**Limon**	**2.32**	**88**	*e*P	Pn	01 27 56.7	+0.2
CSAN		**2.45**	**336**	*e*P	Pn	01 27 57.5	-0.8
APYN	**Apoyeque**	**2.47**	**338**	*e*P	Pn	01 27 57.0	-1.5
COPN	**Copaltepe**	**2.52**	**332**	*e*P	Pn	01 27 58.9	-0.4
MOMN	**Momotombo**	**2.70**	**335**	*e*P	Pn	01 28 03.5	+1.8
MIRN	**Miramar**	**2.80**	**333**	*e*P	Pn	01 28 02.7	-0.4
CNGN	**Cerro Negro**	**2.85**	**333**	*e*P	Pn	01 28 04.6	+0.8
TEL3	**Telica 3**	**2.98**	**331**	*e*P	Pn	01 28 07.2	+1.6
LAPE	**La Pedrera**	**13.86**	**99**	⇑*e*P		01 27 33.2	
LAPE				*i* S		01 27 45.0	

*ISCJB **06** 01:30:01.7±0.4, 4613N±004×1429E±0.1, h349km±3km, mb3.4/6, Error ellipse: s-maj=11.1km s-min=6.5km az=173.3*
*MOS **06** 01:30:01.3±2.2, 4638N×14276E, h327km, mb4.3/1, Error ellipse: s-maj=25.7km s-min=11.9km az=89.6*
*IDC **06** 01:30:02.8±0.8, 4621N×14289E, h344km±10km, mb3.1/6, mb1 3.5/8, mb1mx3.2/22, mbtmp3.2/8, Error ellipse: s-maj=20.7km s-min=16.1km az=175.0*
*JMA **06** 01:30:02.4±0.2, 4598N×143.13E, h353km, M3.9*
*NEIC **06** 01:30:02.6±0.6, 4615N×14289E, h343km±6km, mb4.4/2, Error ellipse: s-maj=11.4km s-min=9.9km az=101.0*
*SKHL **06** 01:30:02.5±1.3, 4610N×14280E, h335km±2km, mb4.4/4, msha4.2/1*

ISC 06 01:30:02.5±0.4, 4615N±004×1429E±01, h343km±3km, n49, σ1§03/62, mb3.4/6, 2C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.82**	**351**	⇑*e*P	**Pn**	**01 30 47.5**	**+0.9**
YSS	**Yuzh-Sakhalins**	**0.82**	**351**	⇑*i*PN	**Pn**	**01 30 47.3**	**+0.7**
YSS				*i* S	**S**	**01 31 22.0**	**0.0**
YSS				pmax	pmax		
	comp=Z,110nm,0.3s						
YSS				smax			
	comp=N,70nm,0.8s						
YSS				smax			
	comp=E,100nm,0.8s						
YSS	**Yuzh-Sakhalins**	**0.82**	**351**	⇑*i*P	**Pn**	**01 30 47.3**	**+0.7**
YSS				AMB	AMB	01 30 48.7	
	comp=E,110nm,0.3s						
YSS				*i* S	**S**	**01 31 22.0**	**0.0**
YSS				A		01 31 23.0	
	comp=E,70nm,0.8s						
YSS				A		01 31 23.0	
	comp=E,100nm,0.8s						
JWK2	**Keihoku**	**1.10**	**222**	P	**Pn**	**01 30 49.0**	**+1.1**
JWK2				*e*S	**S**	**01 31 25.1**	**+0.9**
JSE	**Soyaes**	**1.21**	**192**	P	**Pn**	**01 30 48.8**	**+0.4**
JSS	**Shosan**	**1.91**	**204**	P	**Pn**	**01 30 53.3**	**+0.8**
JYG	**Yagishiri**	**2.02**	**212**	P	**Pn**	**01 30 54.0**	**+0.7**
ASAJ	**Asahikawa**	**2.04**	**187**	P	**Pn**	**01 30 54.1**	**+0.6**
	comp=E,10nm,0.3s,baz=16,slow=6.3,SNR=36						
ASAJ				S	**S**	**01 31 36.2**	**+1.9**
	comp=E,2.8nm,0.3s,baz=344,slow=32,SNR=3.8						
ASAJ	**Asahikawa**	**2.04**	**187**	PN	**Pn**	**01 30 54.1**	**+0.6**
ASAJ				S	**S**	**01 31 36.2**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
JKK2	**Kamakawa 2**	**2.28**	**183**	P	**Pn**	**01 30 55.7**	**+0.5**
JTKR	**Abashiri--Toko**	**2.28**	**162**	P	**Pn**	**01 30 55.3**	**+0.1**
JTKR				*e*S	**S**	**01 31 37.8**	**+0.2**
JHR	**Hokuryu**	**2.55**	**200**	P	**Pn**	**01 30 57.9**	**+0.5**
JAR	**Ashorobuto**	**2.91**	**168**	P	**Pn**	**01 31 00.6**	**+0.1**
JAR				*e*S	**S**	**01 31 46.0**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**2.96**	**135**	*e*P	**Pn**	**01 31 01.8**	**+0.9**
YUK				AMB	AMB	01 31 02.0	
	comp=N,177nm,0.4s						
JFR	**Furan**	**2.99**	**185**	P	**Pn**	**01 31 01.6**	**+0.3**
JAK	**Akkeshi**	**3.39**	**158**	P	**Pn**	**01 31 03.6**	**-1.4**
JAK				*e*S	**S**	**01 31 51.2**	**-4.1**
NEM2	**Nemuro 2**	**3.43**	**143**	P	**Pn**	**01 31 02.7**	**-2.6**
NEM2				*e*S	**S**	**01 31 49.9**	**-5.9**
JEW	**Eniwo**	**3.47**	**198**	P	**Pn**	**01 31 04.9**	**-0.9**
JCH	**Churui**	**3.55**	**175**	P	**Pn**	**01 31 04.5**	**-2.0**
JCH				*e*S	**S**	**01 31 52.4**	**-5.6**
JNBK	**Urakawa-nobuka**	**3.87**	**182**	P	**Pn**	**01 31 09.0**	**-0.7**
JNBK				*e*S	**S**	**01 31 59.7**	**-4.2**
ERM	**Erimo**	**4.13**	**178**	*e*Pn	**Pn**	**01 31 12.1**	**-0.4**
ERM	**Erimo**	**4.13**	**178**	*d*iPN	**Pn**	**01 31 12.0**	**-0.5**
JKB	**Kayabe**	**4.47**	**199**	P	**Pn**	**01 31 15.2**	**-0.8**
TYV	**Tymovskoe**	**4.72**	**358**	*e*P	**Pn**	**01 31 19.0**	**+0.5**
TYV				AMB	AMB	01 31 19.5	
	comp=N,8.0nm,0.5s						
TYV				*e*S	**S**	**01 32 20.0**	**+0.1**
JOSM	**Okushiri--Mats**	**4.77**	**213**	P	**Pn**	**01 31 18.9**	**-0.3**
JOT	**Ohata**	**4.96**	**197**	P	**Pn**	**01 31 19.9**	**-1.4**
JOT				*e*S	**S**	**01 31 19.2**	**-5.8**
GRNR	**Gornyy**	**6.33**	**319**	*e*P	**Pn**	**01 31 32.0**	**-4.7**
GRNR				AMB	AMB	01 31 32.8	
	comp=N,10.0nm,0.4s						
EKMR	**Ekimchan**	**9.48**	**321**	*e*P	**Pn**	**01 32 11.0**	**-2.9**
EKMR				AMB	AMB	01 32 12.0	
	comp=N,8.0nm,0.6s						
MDJ	**Mudanjiang**	**9.52**	**266**	*e*Pn	**Pn**	**01 32 14.0**	**-0.5**
	comp=N,26nm,0.9s						
MAJO	**Matsushiro**	**10.23**	**202**	*e*P	**Pn**	**01 32 23.1**	**-0.1**
	comp=N,9.9nm,0.4s						
MAJO	**Matsushiro**	**10.23**	**202**	*e*PN	**Pn**	**01 32 23.1**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAT	**Matsushiro**	**10.23**	**202**	P	**Pn**	**01 32 23.4**	**+0.2**
MJAR	**Matsushiro Arr**	**10.23**	**202**	P	**Pn**	**01 32 23.5**	**+0.3**
	comp=Z,2.4nm,0.3s,baz=23,slow=9.8,SNR=17						
MJAR	**Matsushiro Arr**	**10.23**	**202**	*e*PN	**Pn**	**01 32 23.9**	**+0.7**
YASR	**Yasnyy**	**12.02**	**312**	*e*P	**Pn**	**01 32 41.1**	**-3.1**
YASR				AMB	AMB	01 32 44.6	
	comp=Z,4.0nm,0.6s						
BMKR	**Bomnak**	**12.40**	**319**	*e*P	**Pn**	**01 32 45.0**	**-3.7**
BMKR				AMB	AMB	01 32 46.5	
	comp=Z,4.0nm,0.8s						
ZEA	**Zeya**	**12.62**	**313**	*e*P	**Pn**	**01 32 50.2**	**-1.2**
ZEA				AMB	AMB	01 32 50.8	
	comp=Z,20nm,0

BDRM				*i* S	**Sn**	**01 48 43.0**	**+6.3**
KCT	**Karacabey**	**2.19**	**52**	*e*PN	**Pn**	**01 48 10.7**	**+0.8**
ULDT	**Uludag**	**2.64**	**62**	*i* P	**Pn**	**01 48 19.7**	**+3.6**
ULDT				*i* S	**Sn**	**01 48 55.0**	**+6.6**
SLVT	**Silivri**	**2.80**	**35**	*e*PN	**Pn**	**01 48 19.4**	**+1.1**
EDRB	**Edirne**	**2.94**	**10**	*e*PN	**Pn**	**01 48 20.3**	**+0.1**
YLV	**Yalova**	**3.00**	**56**	*e*PN	**Pn**	**01 48 22.2**	**+1.1**
BGKT	**Bogazkoy**	**3.04**	**42**	*e*PN	**Pn**	**01 48 22.6**	**+1.1**
ADVT	**Abdulvahap**	**3.18**	**61**	*e*PN	**Pn**	**01 48 24.4**	**+0.8**

BGS **06** *02:15:40.5±1.9,3706N×7331E,h130km,mb5.2*
SZGRF **06** *02:15:42.0,3802N×7420E,h131km, mb5.2, Tajikistan-Xinjiang border region*
DJA **06** *02:15:44,41.76N×7155E,h10km,Mw5.6/5*
MOS **06** *02:15:45.7±1.0,3834N×7304E,h121km,mb4.9/93, MS4.3/20,Error ellipse: s-maj=5.6km s-min=3.1km az=130.2*
ISCJB **06** *02:15:45.2±0.1,3818N±002×7321E±002,h129km, mb4.8/233,Error ellipse: s-maj=2.4km s-min=2.1km az=32.5*
NEIC **06** *02:15:46.7±0.2,3816N×7326E,mb5.0/145,Error ellipse: s-maj=4.7km s-min=3.3km az=20.0*
NEIC Felt at Dushanbe.
GCMT **06** *02:15:46.7±0.1,3850N×7295E,h126km,MW5.5/97, Moment Tensor Solution. s69,c120; s97,c204; Duration: 1s3 Moment tensor: Scale 1017Nm; Mrr-0.06±.02; Mθθ0.47±.03; Mφφ-0.40±.03; Mrθ-0.15±.02; Mθφ-1.75±.02; Mφr-0.89±.02; Best double couple: M=2.01200×1017 NP1:φs85.00000°,δ65.00000°, λ-174.00000°. NP2:φs352.00000°,δ84.00000°, λ-25.00000°. Principal axes: T 1.9320, Plg13.0000°, Azm41.0000°; N 0.1590, Plg64.0000°, Azm160.0000°; P -2.0910, Plg22.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI **06** *02:15:47.2,3854N×7325E,h121km,mB5.1,mb4.9*
IDC **06** *02:15:48.5±0.5,3838N×7308E,h134km±4km, mb4.4/30, mb1 4.5/32,mb1mx4.4/36,mbtmp4.4/32,MS4.2/17, Ms1 4.3/17,ms1mx4.0/33,Error ellipse: s-maj=13.0km s-min=7.5km az=7.0*
NNC **06** *02:15:51.6±3.0,3881N×7273E,h199km±23km, mb4.4, mpv5.5,Error ellipse: s-maj=27.0km s-min=14.8km az=174.0*

ISC 06 02:15:47.0±0.1,3818N±002×7324E±002,h131km, h131km±1.3km:pP-P,n723,σ1s12/780,mb4.8/233,41C-44D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.52**	**57**	P		**Pn**	**02 16 28.4**	**+1.1**
KSH				XP			02 16 54.0	
KSH				S		**Sn**	**02 16 59.0**	**+0.6**
KSH				AMB	AMB			
	comp=Z,8μm,1.5s							
KSH				LR	LR			
	comp=N,616μm,3.0s							
KSH				LR	LR			
	comp=E,329μm,3.4s							
AML	**Almayashu**	**3.96**	**5**	*e*Pn		**Pn**	**02 16 44.5**	**-1.6**
AML	**Almayashu**	**3.96**	**5**	P		**Pn**	**02 16 44.5**	**-1.7**
	SNR=2628							
UCH	**Uchtor**	**4.16**	**13**	*e*Pn		**Pn**	**02 16 47.9**	**-0.8**
UCH				*e*Sn		**Sn**	**02 17 33.8**	**-3.0**
UCH	**Uchtor**	**4.16**	**13**	P		**Pn**	**02 16 47.9**	**-0.8**
	SNR=87							
KZA	**Kyzart**	**4.19**	**21**	P		**Pn**	**02 16 48.0**	**-1.1**
	SNR=400							
CEP	**Cherat**	**4.48**	**194**	⇓P		**Pn**	**02 16 54.2**	**+1.1**
CEP				S		**Sn**	**02 17 41.0**	**-3.5**
EKS2	**Erkin-Say**	**4.50**	**5**	*e*Pn		**Pn**	**02 16 51.8**	**-1.4**
EKS2	**Erkin-Say**	**4.50**	**5**	P		**Pn**	**02 16 51.7**	**-1.5**
	SNR=711							
CHCP	**Chirah Chowk**	**4.51**	**180**	⇑P		**Pn**	**02 16 55.7**	**+2.2**
AAK	**Ala-Archa**	**4.55**	**12**	Pn		**Pn**	**02 16 53.6**	**-0.4**
	comp=E,10μm,0.8s							
AAK	**Ala-Archa**	**4.55**	**12**	P		**Pn**	**02 16 53.1**	**-0.9**
	SNR=1446							
KBK	**Karagaybulak**	**4.66**	**16**	P		**Pn**	**02 16 54.5**	**-0.8**
	SNR=365							
ULHL	**Ulahol**	**4.67**	**29**	P		**Pn**	**02 16 54.6**	**-0.9**
	SNR=268							
FRU	**Bishkek**	**4.77**	**12α**	*i* PN		**Pn**	**02 16 56.0**	**-0.8**
FRU				*i* S		**Sn**	**02 17 48.0**	**-3.2**
FRU				pmax	pmax			
	comp=Z,5μm,1.9s							
FRU				smax				
	comp=N,25μm,2.0s							
CHMS	**Chumysh**	**4.95**	**13**	P		**Pn**	**02 16 58.1**	**-1.2**
	SNR=410							
KBL	**Kabul**	**4.96**	**224**	*e*Pn		**Pn**	**02 16 58.8**	**-0.8**
TKM2	**Tokmak 2**	**5.07**	**20**	⇑P		**Pn**	**02 16 59.9**	**-0.9**
	comp=N,1μm,1.8s							
TKM2				⇑S		**Sn**	**02 17 58.2**	**-0.2**
	comp=N,2μm,0.9s							
TKM2	**Tokmak 2**	**5.07**	**20**	*e*Pn		**Pn**	**02 16 59.9**	**-0.9**
	comp=N,86nm,0.8s							
TKM2	**Tokmak 2**	**5.07**	**20**	*e*PN		**Pn**	**02 16 59.9**	**-0.9**
TKM2				pmax	pmax			
	comp=Z,86nm,0.8s							
TKM2	**Tokmak 2**	**5.07**	**20**	P		**Pn**	**02 16 60.0**	**-0.9**
	SNR=113							
USP	**Ospenovka**	**5.17**	**10**	P		**Pn**	**02 17 00.6**	**-1.6**
	SNR=468							
KK31	**Karatay Array**	**5.34**	**338**	⇓P		**Pn**	**02 17 01.1**	**-3.4**
	comp=Z,971nm,0.7s,baz=164,slow=13							
KK31				⇑S		**Sn**	**02 17 56.0**	**-8.9**
	comp=Z,3μm,0.5s,baz=158,slow=22							
KK31	**Karatay Array**	**5.34**	**338**	*i* PN		**Pn**	**02 17 01.2**	**-3.3**
JMU	**Jammu**	**5.62**	**166**	*ex*		**Pn**	**02 17 10.0**	**+1.7**
JMU				*e*S		**Sn**	**02 18 06.5**	**-5.2**
AAA	**Alma-Ata**	**5.81**	**28**	*i* P		**Pn**	**02 17 09.2**	**-1.7**
DLH	**Dalhousie**	**6.05**	**158**	*e*P		**Pn**	**02 17 14.0**	**-0.2**
DLH				*ex*		x	02 18 21.0	
THN	**Thein Dam**	**6.08**	**160**	*e*P		**Pn**	**02 17 14.2**	**-0.4**
THN				*e*S		**Sn**	**02 18 16.3**	**-6.6**
SARP	**Sargodha**	**6.26**	**184**	P		**Pn**	**02 17 18.6**	**+1.6**
BHK	**Bhakra**	**7.23**	**158**	*e*P		**Pn**	**02 17 29.4**	**-0.7**
BHK				*ex*		x	02 18 47.8	
SDNR	**Sundarnagar**	**7.33**	**154**	*e*P		**Pn**	**02 17 31.0**	**-0.5**
SDNR				*e*S		**Sn**	**02 18 47.0**	**-6.2**
SMLA	**Simla**	**7.74**	**154**	*i* P		**Pn**	**02 17 36.9**	**0.0**
SMLA				AMb	AMB		02 17 39.9	
	comp=Z,297nm,0.5s							
SMLA				*i* S		**Sn**	**02 18 56.0**	**-7.0**
DDI	**Dehra Dun**	**8.79**	**152**	*ex*		**Pn**	**02 17 46.5**	**-4.6**
DDI				*e*S		**Sn**	**02 19 21.0**	**-7.4**
JOSI	**Joshimath**	**9.22**	**144**	*e*P		**Pn**	**02 17 55.2**	**-1.6**
RTK	**Rohtak**	**9.50**	**163**	*e*P		**Pn**	**02 17 58.5**	**-2.0**
KALG	**Kalgarh**	**9.79**	**150**	*e*P		**Pn**	**02 17 56.8**	**-7.6**
KALG				*e*S		**Sn**	**02 19 37.4**	**-15**
NDI	**New Delhi**	**10.03**	**160**	*e*P		**Pn**	**02 18 05.0**	**-2.7**
NDI				*e*S		**Sn**	**02 19 48.0**	**-11**
KHET	**Khetri**	**10.30**	**167**	*e*P		**Pn**	**02 18 08.8**	**-2.6**
KHET				*e*S		**Sn**	**02 19 56.2**	**-8.9**
KUDL	**Kundal**	**10.37**	**164**	*e*P		**Pn**	**02 18 08.9**	**-3.3**
KUDL				*e*S		**Sn**	**02 19 56.0**	**-11**
PTH	**Pithoragarh**	**10.37**	**144**	*e*P		**Pn**	**02 18 10.0**	**-2.3**
PTH				*e*S		**Sn**	**02 19 57.5**	**-9.2**
LGTI	**Lohaghat**	**10.47**	**144**	*ex*		x	02 17 55.0	
LGTI				*ex*		x	02 19 49.0	
MK31	**Makanchi Array**	**10.89**	**35**	⇑P		**Pn**	**02 18 17.6**	**-1.4**
	comp=Z,406nm,1.6s,baz=215,slow=14,SNR=439							
MK31				⇑S		**Sn**	**02 20 17.5**	**-1.4**
	comp=Z,181nm,1.1s,baz=227,slow=23,SNR=3.5							
MK31	**Makanchi Array**	**10.89**	**35**	*e*P		**Pn**	**02 18 18.2**	**-0.8**
MKAR	**Makanchi Array**	**10.89**	**35**	P		**Pn**	**02 18 18.5**	**-0.5**
	comp=Z,2.6nm,0.3s,baz=217,slow=14,SNR=123							
MKAR	**Makanchi Array**	**10.89**	**35**	*i* P		**Pn**	**02 18 17.7**	**-1.2**
MKAR				pmax	pmax			
	comp=Z,61nm,1.0s							
AGRA	**Agra**	**11.61**	**159**	*e*P		**Pn**	**02 18 26.5**	**-2.2**
AGRA				*e*S		**Sn**	**02 20 25.2**	**-11**
AJM	**Ajmer**	**11.73**	**174**	*e*P		**Pn**	**02 18 27.0**	**-3.2**
AJM				AMb	AMB		02 18 37.9	
	comp=Z,119nm,1.1s							
AJM				*e*S		**Sn**	**02 20 27.9**	**-12**
ABKT	**Ailbek**	**11.93**	**273**	Pn		**Pn**	**02 18 25.9**	**-6.8**
	comp=Z,2μm,0.3s,SNR=50							
VAN	**Vannovskaya**	**11.93**	**274**	*e*P		**Pn**	**02 18 25.6**	**-7.2**
WMQ	**Urumqi**	**12.28**	**58**	P		**Pn**	**02 18 36.0**	**-1.3**
WMQ				XP			02 19 09.0	
WMQ				S		**Sn**	**02 20 50.0**	**-2.6**
WMQ				PCP	PcP		02 24 10.0	+2.0
WMQ				AMB	AMB			
	comp=Z,78nm,1.0s							
WMQ				LR	LR			
	comp=N,2μm,6.0s							
WMQ				LR	LR			
	comp=E,2μm,6.0s							
WMQ				LR	LR			
	comp=Z,3μm,6.0s							
KURBB	**Kurchatov Arra**	**13.00**	**15**	⇑P		**Pn**	**02 18 41.8**	**-4.7**
	comp=Z,23nm,1.6s							
KURBB				⇓S		**Sn**	**02 20 58.5**	**-11**
	comp=Z,26nm,0.9s							
KURK	**Kurchatov**	**13.10**	**15**	Pn		**Pn**	**02 18 43.9**	**-4.0**
	comp=Z,381nm,1.3s,SNR=44							
KURK	**Kurchatov**	**13.10**	**15**	⇓P		**Pn**	**02 18 43.2**	**-4.8**
	comp=Z,102nm,1.2s							
KURK				⇑S		**Sn**	**02 21 05.1**	**-7.2**
	comp=Z,53nm,1.1s							
KURK	**Kurchatov**	**13.10**	**15**	P		**Pn**	**02 18 44.0**	**-3.9**
	SNR=40							
KURK	**Kurchatov**	**13.10**	**15**	P		**Pn**	**02 18 42.1**	**-5.8**
	baz=206,slow=11							
KURK				S		**Sn**	**02 21 02.7**	**-10**
KURK	**Kurchatov**	**13.10**	**15**	*e*Pn		**Pn**	**02 18 43.8**	**-4.1**
DANN	**Dangsing**	**13.16**	**135**	*e*P		**Pn**	**02 18 45.4**	**-3.5**
	comp=Z,226nm,0.4s							
JHNI	**Jhansi**	**13.45**	**159**	*i* P		**Pn**	**02 19 02.0**	**+9.4**
JHNI				*e*S		**Sn**	**02 21 24.0**	**+3.0**
KOLN	**Koldanda**	**13.53**	**137**	*e*P		**Pn**	**02 18 50.5**	**-3.1**
	comp=Z,66nm,0.3s							
GKN	**Gorkha**	**13.92**	**133**	*e*P		**Pn**	**02 18 55.8**	**-2.9**
	comp=Z,238nm,0.4s							
KKN	**Kakani**	**14.46**	**132**	*e*P		**Pn**	**02 19 02.1**	**-3.3**
	comp=Z,486nm,0.9s							
KKN	**Kakani**	**14.46**	**132**	*e*P		**Pn**	**02 19 02.1**	**-3.3**
KKN				pmax	pmax			
	comp=Z,486nm,0.9s							
DMN	**Daman**	**14.49**	**133**	*e*P		**Pn**	**02 19 03.1**	**-2.8**
	comp=Z,203nm,0.6s							
VOSK	**Vostochnaya**	**14.63**	**355**	⇓P		**Pn**	**02 19 03.7**	**-3.7**
	comp=Z,51nm,0.8s							
VOSK				⇑S		**Sn**	**02 21 37.5**	**-12**
	comp=Z,264nm,1.4s							
VOSK	**Vostochnaya**	**14.63**	**355**	P		**Pn**	**02 19 03.6**	**-3.8**
VOSK				S		**Sn**	**02 21 35.0**	**-14**
VOSK				pmax	pmax			
	comp=Z,51nm,0.9s							
VOSK				smax				
	comp=N,323nm,1.1s							
AB08	**Akbulak array**	**14.63**	**323**	⇑P		**Pn**	**02 19 01.5**	**-5.9**
	comp=N,216nm,0.7s							
AB08				⇓S		**Sn**	**02 21 31.1**	**-18**
	comp=N,753nm,0.8s							
PKI	**Pulchoki**	**14.70**	**132**	*e*P		**Pn**	**02 19 05.8**	**-2.6**
GUN	**Gumba**	**14.72**	**130**	*e*P		**Pn**	**02 19 06.0**	**-2.7**
	comp=N,506nm,0.9s							
BVA0	**Borovoye Array**	**14.98**	**353**	⇑P		**Pn**	**02 19 08.4**	**-3.3**
	comp=N,17nm,0.8s,baz=164,slow=12,SNR=403							
BVA0				⇑S		**Sn**	**02 21 42.9**	**-15**
	comp=N,41nm,0.9s,baz=170,slow=23,SNR=14							
BVA0	**Borovoye Array**	**14.98**	**353**	*i* P		**Pn**	**02 19 07.8**	**-3.9**
BVA0				*i* S		**Sn**	**02 21 42.8**	**-15**
BVA0				pmax	pmax			
	comp=Z,17nm,0.8s							
BVA0				smax				
	comp=N,51nm,1.1s							
BVAR	**Borovoye Array**	**14.98**	**353**	P		**Pn**	**02 19 08.0**	**-3.8**
	comp=N,2.1nm,0.3s,baz=162,slow=12,SNR=99							
BVAR				S		**Sn**	**02 21 45.2**	**-12**
	comp=N,5.8nm,0.3s,baz=167,slow=21,SNR=11							
BVAR				LR	LR		02 24 43.7	
	comp=N,336nm,18.2s,baz=1.6,slow=36							
BVAR	**Borovoye Array**	**14.98**	**353**	P		**Pn**	**02 19 08.0**	**-3.8**
BVAR				S		**Sn**	**02 21 45.2**	**-12**
BVAR				LR	LR		02 24 43.7	
BVAR	**Borovoye Array**	**14.98**	**353**	P		**Pn**	**02 19 08.0**	**-3.7**
BVAR				S		**Sn**	**02 21 45.2**	**-12**
BRVK	**Borovoye**	**15.02**	**353**	Pn		**Pn**	**02 19 09.8**	**-2.5**
	comp=N,846nm,0.9s,SNR=23							
BRVK	**Borovoye**	**15.02**	**353**	*e*P		**Pn**	**02 19 09.2**	**-3.1**
JIRN	**Jiri**	**15.09**	**130**	*e*P		**Pn**	**02 19 10.5**	**-2.9**
	comp=N,624nm,0.9s							
BHJ	**Bhuj**	**15.19**	**193**	*e*P		**Pn**	**02 19 13.0**	**-1.6**
BHPL	**Bhopal**	**15.31**	**165**	*e*P		**Pn**	**02 19 13.6**	**-2.6**
BHPL				AMb	AMB		02 19 25.8	
	comp=Z,82nm,0.9s							
BHPL				*ex*	x		02 21 51.2	
RAMN	**Ramite**	**15.86**	**131**	*e*P		**Pn**	**02 19 19.9**	**-3.0**
TAPN	**Taplejung**	**16.25**	**127**	*e*P		**Pn**	**02 19 24.8**	**-2.9**
	comp=Z,426nm,0.9s							
AKTK	**Aktyubinsk**	**16.36**	**323**	P		**Pn**	**02 19 25.1**	**-3.6**
AKTK				S		**S**	**02 22 15.1**	**-16**
AKTK				LR	LR		02 26 28.0	
AKTO	**Aktyubinsk**	**16.36**	**323**	⇓P		**Pn**	**02 19 24.5**	**-4.3**
	comp=Z,100nm,0.8s							
AKTO	**Aktyubinsk**	**16.36**	**323**	P		**Pn**	**02 19 25.1**	**-3.7**
	comp=Z,13nm,0.3s,baz=132,slow=12,SNR=236							
AKTO				S		**S**	**02 22 15.1**	**-16**
	comp=Z,17nm,0.3s,baz=333,slow=24,SNR=13							
AKTO				LR	LR		02 26 28.0	
	comp=Z,727nm,20.1s,baz=19,slow=40							
AKTO	**Aktyubinsk**	**16.36**	**323**	P		**Pn**	**02 19 25.1**	**-3.7**
AKTO				S		**S**	**02 22 15.1**	**-16**
BHV	**Bhavnagar**	**16.40**	**184**	*e*P		**Pn**	**02 19 29.0**	**-0.6**
ODAN	**Odare**	**16.40**	**129**	*e*P		**Pn**	**02 19 27.4**	**-2.2**
	comp=Z,229nm,0.6s							
LSA	**Lhasa**	**17.08**	**114**	*e*P		**Pn**	**02 19 40.3**	**+2.5**
	comp=Z,130nm,0.9s							
LSA	**Lhasa**	**17.08**	**114**	*e*P		**Pn**	**02 19 40.3**	**+2.5**
LSA				pmax	pmax			
	comp=Z,130nm,0.9s							
ZAA0	**Zalesovo Array**	**17.66**	**23**	*e*Pn		**Pn**	**02 19 42.6**	**-1.9**
ZALV	**Zalesovo Beam**	**17.66**	**23**	P		**Pn**	**02 19 42.5**	**-2.0**
	comp=Z,9.4nm,0.3s,baz=213,slow=12,SNR=162							
ZALV				LR	LR		02 26 30.3	
	comp=Z,9.9nm,21.2s,baz=15,slow=37							
NGP	**Nagpur**	**17.70**	**162**	*ex*		**Pn**	**02 19 38.3**	**-7.0**
NGP				*ex*	x		02 19 42.1	
	comp=Z,157nm,1.3s							
NGP				*ex*	x		02 22 40.8	
AKL	**Akola**	**17.72**	**168**	*e*P		**Pn**	**02 19 43.9**	**-1.6**
AKL				AMb	AMB		02 19 51.6	
	comp=Z,206nm,0.8s							
BOK	**Bokaro**	**17.95**	**139**	*e*P		**Pn**	**02 19 43.4**	**-4.8**
BOK				AMb	AMB		02 20 15.4	
	comp=Z,234nm,1.8s							
NVS	**Novosibirsk**	**18.00**	**19**	⇑*i*P		**P**	**02 19 46.8**	**-0.5**
NVS				*i* S		**S**	**02 23 01.7**	**-5.0**
NVS				pmax	pmax			
	comp=N,176nm,1.5s							
NVS				pmax	pmax			
	comp=E,50nm,1.5s							
NVS				pmax	pmax			
	comp=Z,220nm,1.5s							
NVS				smax				
	comp=N,550nm,1.7s							
NVS				smax				
	comp=E,207nm,1.7s							
BOM	**Bombay**	**19.22**	**181**	*ex*		**P**	**02 19 55.0**	**-5.9**
BOM				*ex*	x		02 20 00.8	
	comp=Z,183nm,0.7s							
BOM				*ex*	x		02 23 38.8	
POO	**Poona**	**19.59**	**178**	*e*P		**P**	**02 20 05.7**	**+0.9**
POO				AMb	AMB		02 20 12.0	
	comp=Z,140nm,0.7s							
LATR	**Latur**	**19.90**	**171**	*ex*		x	02 20 14.0	
MAK	**Makhachkala**	**20.09**	**292**	*e*P		**P**	**02 20 11.9**	**+1.8**
MAK				*i* S		**S**	**02 23 49.0**	**+0.4**
MAK				pmax	pmax			
	comp=Z,732nm,1.4s							
MAK				MLR	MLR			
	comp=Z,3μm,14.0s							
SHL	**Shillong**	**20.17**	**123**	*e*P		**P**	**02 20 09.5**	**-1.6**
SHL				AMb	AMB		02 20 11.9	
	comp=Z,158nm,1.5s							
SHL				*e*S		**S**	**02 23 49.6**	**-0.8**
CAL	**Calcutta**	**20.27**	**136**	*e*P		**P**	**02 20 18.5**	**+6.3**
CAL				*e*S		**S**	**02 24 00.4**	**+8.1**
SVE	**Sverdlovsk**	**20.45**	**340**	⇑*e*P		**P**	**02 20 12.5**	**-1.3**
SVE				*e*S		**S**	**02 23 51.9**	**-3.3**
SVE				pmax	pmax			
	comp=Z,133nm,0.9s							
SVE				MLR	MLR			
	comp=Z,946nm,9.0s							
ARU	**Arti**	**20.71**	**337**	P		**P**	**02 20 15.2**	**-1.5**
	comp=Z,1μm,1.0s							
ARU	**Arti**	**20.71**	**337**	*e*P		**P**	**02 20 15.1**	**-1.6**
	comp=Z,287nm,1.1s							
ARU	**Arti**	**20.71**	**337**	*d i*P		**P**	**02 20 15.2**	**-1.5**
ARU				*e*PPP			02 20 48.2	
ARU				*e*S		**S**	**02 23 57.5**	**-3.0**
ARU				*e*SS			02 24 28.1	
ARU				pmax	pmax			
	comp=Z,367nm,1.2s							
ARU				MLR	MLR			
	comp=Z,913nm,18.0s							
GTA	**Gaotai**	**20.73**	**78**	⇑P		**P**	**02 20 19.8**	**+2.8**
GTA				AP			02 20 45.2	
GTA				PP			02 20 48.7	
GTA				XP		sP	02 21 00.5	+3.5
GTA				S		**S**	**02 23 59.9**	**-1.2**
GTA				XS		sS	02 24 36.3	-4.4
GTA				SS			02 24 42.0	
GTA				AMB	AMB			
	comp=Z,46nm,1.4s							
GTA				AMB	AMB			
	comp=Z,971nm,4.4s							
GTA				LR	LR			
	comp=N,1μm,8.4s							
GTA				LR	LR			
	comp=E,895nm,8.0s							
GTA				LR	LR			
	comp=Z,741nm,15.2s							
KAD	**Karad**	**20.81**	**177**	*e*P		**P**	**02 20 18.5**	**+0.5**
KAD				*e*S		**S**	**02 24 02.1**	**-0.9**
BWNR	**Bhubaneshwar**	**20.89**	**145**	*ex*		x	02 20 22.6	
BWNR				*e*S		**S**	**02 24 04.9**	**+0.5**
HYB	**Hyderabad**	**21.20**	**166**	*e*P		**P**	**02 20 24.0**	**+1.8**
	comp=Z,70nm,1.0s,mb5.0							
HYB				*e*S		**S**	**02 24 08.0**	**-2.6**
HYB	**Hyderabad**	**21.20**	**166**	*e*P		**P**	**02 20 24.0**	**+1.8**
HYB				*e*S		**S**	**02 24 08.0**	**-2.6**
HYB				pmax	pmax			
	comp=Z,70nm,1.0s,mb5.0							
HYB	**Hyderabad**	**21.20**	**166**	*i* P		**P**	**02 20 24.0**	**+1.8**
	comp=Z,70nm,1.0s,mb5.0							
HYB				*e*pP			02 20 48.0	
HYB				*e*			02 20 52.5	
HYB				*e*sP		sP	02 21 03.0	+0.7
HYB				*e*S		**S**	**02 24 08.0**	**-2.6**
DGRG	**David-gareji**	**21.62**	**287**	P		**P**	**02 20 26.3**	**-0.1**
MTA	**Mtatsminda**	**22.05**	**288**	P		**P**	**02 20 30.3**	**-0.7**
IMP	**Imphal**	**22.07**	**121**	*ex*		x	02 20 44.0	
IMP				*ex*		x	02 21 03.0	
TBLG	**Delisi**	**22.09**	**288**	*e*P		**P**	**02 20 30.8**	**-0.6**
TBLG	**Delisi**	**22.09**	**288**	P		**P**	**02 20 30.9**	**-0.6**
GNI	**Garni**	**22.15**	**284**	*e*P		**P**	**02 20 33.8**	**+1.7**
GNI	**Garni**	**22.15**	**284**	P		**P**	**02 20 32.5**	**+0.4**
	comp=Z,270nm,0.8s,mb5.7,baz=71,slow=1.4,SNR=40							
GNI	**Garni**	**22.15**	**284**	*e*P		**P**	**02 20 33.3**	**+1.2**
	comp=Z,710nm,1.2s,mb6.0							
GNI	**Garni**	**22.15**	**284**	*e*P		**P**	**02 20 33.3**	**+1.2**
GNI				pmax	pmax			
	comp=Z,710nm,1.2s							
KRAR	**Krasnoyarsk**	**22.15**	**30**	⇑*e*P		**P**	**02 20 33.2**	**+1.3**
KRAR				pmax	pmax			
	comp=Z,115nm,1.4s,mb5.1							
GOR	**Gori**	**22.56**	**289**	P		**P**	**02 20 36.0**	**-0.2**
GOA	**Goa**	**22.61**	**179**	*e*P		**P**	**02 20 35.5**	**-1.4**
GOA				*ex*		x	02 24 41.1	
UMR	**Umm Al-Rimmam**	**22.82**	**255**	*e*P		**P**	**02 20 38.8**	**+0.1**
	baz=255							
UMR				AMb	AMB		02 20 41.5	
	comp=Z,381nm,1.0s,mb5.8,baz=255							
CLDR	**Caldiran**	**22.88**	**282**	*e*P		**P**	**02 20 38.6**	**-0.6**
MIB	**Mutribah**	**22.99**	**256**	*e*P		**P**	**02 20 40.7**	**+0.4**
	baz=256							
MIB				AMb	AMB		02 20 43.5	
	comp=Z,235nm,1.0s,mb5.6,baz=256							
DYDN	**Diyadin**	**23.01**	**283**	*i* P		**P**	**02 20 41.6**	**+1.2**
KBD	**Kabd**	**23.02**	**255**	*e*P		**P**	**02 20 40.7**	**+0.1**
	baz=254							
KBD				AMb	AMB		02 20 42.7	
	comp=Z,146nm,1.1s,mb5.3,baz=254							
QRN	**Al-Qurain**	**23.07**	**253**	*e*P		**P**	**02 20 41.1**	**0.0**
	baz=253							
HKR	**Hakkari**	**23.25**	**278**	*e*P		**P**	**02 20 46.6**	**+4.0**
RDF	**Al-Radifah**	**23.25**	**254**	*e*P		**P**	**02 20 43.1**	**+0.4**
	baz=254							
RDF				AMb	AMB		02 20 44.6	
	comp=Z,216nm,1.0s,mb5.5,baz=254							
HAKT	**HAKKARI**	**23.28**	**278**	*i* P		**P**	**02 20 43.7**	**+0.8**
NAY	**Al-Naaiem**	**23.33**	**255**	*e*P		**P**	**02 20 43.8**	**+0.4**
	baz=255							
NAY				AMb	AMB		02 20 48.1	
	comp=Z,148nm,1.5s,mb5.2,baz=255							
VANB	**Van**	**23.36**	**280**	*e*P		**P**	**02 20 41.5**	**-2.1**
KARS	**Kars**	**23.37**	**285**	*e*P		**P**	**02 20 44.9**	**+1.2**
GOF	**Gofitskoye**	**23.51**	**297**	*e*P		**P**	**02 20 31.7**	**-13**
GOF				*e*S		**S**	**02 24 42.7**	**-6.2**
GOF				smax				
	comp=E,196nm,1.3s							
AGRB	**Hanur-Agry**	**23.54**	**283**	*e*P		**P**	**02 20 47.2**	**+2.0**
MOY	**Mondy**	**23.66**	**46**	*e*P		**P**	**02 20 50.8**	**+4.7**
MOY				pmax	pmax			
	comp=Z,220nm,3.0s							
KIV	**Kislovodsk**	**23.67**	**294**	P		**P**	**02 20 47.1**	**+0.8**
	comp=Z,2

LZH S **S** **02 25 06.0 +2.1**
LZH *SS sS 02 25 51.2 -1.1
LZH 02 31 46.5
ZAK Zakamensk 24.54 50 *eP* **P** **02 20 56.7 +2.5**
ZAK *e* 02 21 26.0
ZAK pmax pmax
comp=Z,33nm,1.6s,mb4.6
ERZM Erzurum 24.75 284 *i* P **P** **02 20 58.2 +2.0**
EZM Erzurum 24.75 284 *eP* **P** **02 20 58.2 +2.0**
BNGL BINGOL 25.04 282 *i* P **P** **02 20 55.5 -3.4**
TLY Talaya 25.19 48 *i* P **P** **02 21 03.0 +2.9**
TLY Talaya 25.19 48 *eP* **P** **02 21 01.9 +1.8**
TLY *e*SS 02 26 27.3
TLY pmax pmax
comp=Z,36nm,1.8s,mb4.6
TLY MLR MLR
comp=Z,266nm,12.0s
MARD Mardin 25.62 278 *i* P **P** **02 21 05.6 +1.5**
VRHR Novokhopersk 25.72 310 *eP* **P** **02 21 03.9 -0.9**
VRHR pmax pmax
comp=Z,120nm,1.1s,mb5.4
VRHR pmax pmax
comp=N,50nm,0.8s
VRHR pmax pmax
comp=E,100nm,1.0s
IRK Irkutsk 25.75 47 *eP* **P** **02 21 07.6 +2.5**
IRK *e* pP 02 21 36.5 +3.6
IRK pmax pmax
comp=Z,55nm,2.1s,mb4.8
SOC Sochi 25.80 293 *eP* **P** **02 21 04.1 -1.6**
SOC *e**PP pP 02 21 25.9 -7.5
SOC *e* 02 21 41.7
SOC *e*S **S** **02 25 27.2 +1.9**
SOC pmax pmax
comp=Z,49nm,0.8s,mb5.2
SOC MLR MLR
comp=Z,397nm,14.0s
SONM Songino Array 25.92 57 P **P** **02 21 09.2 +2.5**
comp=Z,18nm,0.9s,mb4.7,baz=255,slow=7.0,SNR=58
SONM pP pP 02 21 38.0 +3.6
comp=Z,69nm,1.2s,baz=258,slow=9.7,SNR=8.2
SONM LR LR 02 32 42.6
comp=Z,939nm,19.5s,baz=29,slow=39
SONM Songino Array 25.92 57 P **P** **02 21 09.2 +2.5**
SONM *PP pP 02 21 38.0 +3.6
DIYA Diyarbakir 26.01 280 *i* P **P** **02 21 08.4 +0.8**
CD2 Chengdu 26.08 97 *eP* **P** **02 21 11.4 +3.0**
CD2 AP pP 02 21 37.9 +1.8
CD2 XP sP 02 21 52.5 +1.3
CD2 PP 02 21 59.5
CD2 S **S** **02 25 31.8 +1.9**
CD2 XS sS 02 26 18.9 0.0
CD2 SS 02 26 51.0
CD2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.3
CD2 AMB AMB
comp=Z,30nm,3.8s
CD2 LR LR
comp=N,660nm,13.2s
CD2 LR LR
comp=E,610nm,12.0s
CD2 LR LR
comp=Z,420nm,12.0s
GUMT Gumushane 26.13 286 *eP* **P** **02 21 10.7 +2.0**
ULN Ulaanbaatar 26.36 58 *eP* **P** **02 21 13.1 +2.4**
comp=Z,42nm,1.1s,mb5.0
ULN Ulaanbaatar 26.36 58 *d i*P **P** **02 21 13.3 +2.6**
ULN Ulaanbaatar 26.36 58 P **P** **02 21 13.6 +2.9**
comp=Z,27nm,1.2s,comp=Z,607nm,mb4.8
KEMA Kemaliye 27.04 283 *i* P **P** **02 21 18.2 +1.4**
VORD Divnogorie 27.09 309 *eP* **P** **02 21 16.3 -0.9**
VORD *e* 02 22 00.8
VORD pmax pmax
comp=Z,20nm,0.8s,mb4.8
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,40nm,0.8s
VORD pmax pmax
comp=Z,80nm,0.9s,mb5.3
VORD pmax pmax
comp=N,360nm,0.8s
VORD pmax pmax
comp=E,500nm,0.9s
VSR Storozhevoye 27.24 310 *c i*P **P** **02 21 17.4 -1.1**
VSR *e* 02 21 59.8
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,40nm,0.8s
VSR pmax pmax
comp=Z,20nm,1.8s,mb4.5
VSR pmax pmax
comp=N,40nm,1.3s
VSR pmax pmax
comp=E,180nm,1.0s
VOR Voronezh 27.36 311 *eP* **P** **02 21 21.0 +1.5**
VOR pmax pmax
comp=Z,250nm,1.0s,mb5.8
ANN Anapa 27.46 295 *eP* **P** **02 21 20.2 -0.4**
ANN *i* 02 22 08.3
ANN *e*S **S** **02 25 54.1 +2.6**
ANN pmax pmax
comp=Z,142nm,1.4s,mb5.4
AKCD Akcadag 27.64 281 *i* P **P** **02 21 13.4 -8.8**
KOD Kodaikanal 28.08 171 *eP* **P** **02 21 26.3 0.0**
KOD AMb AMB 02 21 30.3
comp=Z,54nm,1.1s,mb5.2
GZT Gaziantep 28.11 279 *i* P **P** **02 21 27.6 +1.2**
KMI Kunming 28.15 109 P **P** **02 21 31.1 +4.2**
KMI AP pP 02 21 56.0 +1.1
KMI XP sP 02 22 09.4 -0.5
KMI PP PP 02 22 26.0 -6.9
KMI S **S** **02 26 07.1 +4.4**
KMI XS sS 02 26 50.3 -1.5
KMI SS SS 02 27 38.6 -28
KMI AMB AMB
comp=Z,279nm,6.1s
KMI LR LR
comp=N,440nm,9.7s
KMI LR LR
comp=E,336nm,10.3s
KMI LR LR
comp=Z,399nm,20.0s
KMI Kunming 28.15 109 P **P** **02 21 31.1 +4.2**
KMI pP pP 02 21 56.0 +1.1
KMI sP sP 02 22 09.4 -0.5
KMI PP PP 02 22 26.0 -6.9
KMI PPP 02 22 40.6
KMI S **S** **02 26 07.1 +4.4**
KMI sS sS 02 26 50.3 -1.5
KMI SS SS 02 27 38.6 -28
KMI SSS 02 28 01.1
KMI Kunming 28.15 109 P **P** **02 21 31.1 +4.2**
KMI *PP pP 02 21 56.0 +1.1
KMI *SP sP 02 22 09.4 -0.5
KMI 02 22 26.0
KMI S **S** **02 26 07.1 +4.4**
KMI *SS sS 02 26 50.3 -1.5
KMI SS SS 02 27 38.6 -28
BTO Baotou 28.40 73 *eP* **P** **02 21 32.6 +3.7**
CHRT Chiangrai 29.36 121 ⇓P **P** **02 21 40.0 +2.4**
comp=Z,105nm,1.4s,mb5.4
HHC Hu-ho-hao-te 29.53 73 *eP* **P** **02 21 42.0 +3.0**
HHC AP pP 02 22 06.1 -0.9
HHC XP sP 02 22 19.1 -3.0
HHC PP PP 02 22 41.7 -6.3
HHC PCP PcP 02 24 43.6 +2.7
HHC XS sS 02 27 10.7 -2.5
HHC PCS PcS 02 28 25.9 +1.9
HHC SCS ScS 02 32 08.6 +3.2
HHC AMB AMB
comp=Z,28nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,121nm,6.5s
CTKT Corum 29.66 287 *i* P **P** **02 21 39.5 -0.5**
CMAR Chiang Mai Arr 29.80 124 P **P** **02 21 46.6 +5.1**
comp=Z,1.8nm,0.4s,mb4.2,baz=301,slow=10,SNR=12
CMAR pP pP 02 22 14.8 +5.1
comp=Z,3.3nm,0.4s,baz=312,slow=10,SNR=3.4
SIM Simferopol' 29.82 296 *deP* **P** **02 21 41.4 -0.1**
SIM *e**PP pP 02 22 10.0 +0.4
SIM *e*S **S** **02 26 22.0 -6.5**
SIM pmax pmax
comp=Z,104nm,0.9s,mb5.6
SIM MLR MLR
comp=Z,300nm,16.0s
OBN Obninsk 29.89 316 *eP* **P** **02 21 41.7 -0.2**
comp=Z,114nm,0.8s,mb5.7
OBN Obninsk 29.89 316 ⇓*eP* **P** **02 21 41.4 -0.5**
OBN *e**PP pP 02 22 11.1 +1.1
OBN *i* 02 22 40.1
OBN *i* S **S** **02 26 29.2 -0.1**
OBN pmax pmax
comp=Z,156nm,1.5s,mb5.5
OBN MLR MLR
comp=Z,500nm,15.0s
ASF Jabal al Asfar 30.17 270 P **P** **02 21 45.2 +0.5**
comp=Z,4.6nm,0.8s,mb4.3,baz=294,slow=3.9,SNR=17
ASF LR LR 02 36 14.7
comp=Z,506nm,18.1s,baz=300,slow=41
GYA Guiyang 30.41 103 ⇑*iP* **P** **02 21 49.8 +2.9**
GYA AP pP 02 22 17.6 +2.6
GYA XP sP 02 22 33.0 +3.0
GYA PP PP 02 22 55.8 -2.1
GYA PCP PcP 02 24 46.3 +2.9
GYA S **S** **02 26 41.0 +3.0**
GYA XS sS 02 27 29.0 +1.7
GYA SCP ScP 02 28 16.4 +2.8
GYA PCS PcS 02 28 29.6 +2.3
GYA SCS ScS 02 32 11.9 +1.9
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,130nm,4.3s
BHL Bhannes 30.55 274 *eP* **P** **02 21 49.2 +1.2**
BR131 Keskin Array S 30.67 285 *eP* **P** **02 21 49.5 +0.5**
BRTR Keskin Array B 30.67 285 P **P** **02 21 49.4 +0.4**
comp=Z,27nm,0.9s,mb5.0,baz=96,slow=5.7,SNR=80
KLMR Klimovskoe 30.95 328 *eP* **P** **02 21 50.4 -0.8**
KLMR pmax pmax
comp=Z,61nm,1.4s,mb5.1
MMAI Mount Meron Ar 31.05 272 P **P** **02 21 53.0 +0.6**
comp=Z,0.5nm,0.4s,baz=86,slow=14,SNR=7.6
MMAI LR LR 02 36 11.4
comp=Z,412nm,18.1s,baz=75,slow=40
ANTO Ankara 31.28 286 *eP* **P** **02 21 54.8 +0.3**
comp=Z,77nm,1.2s,mb5.3
ANTO Ankara 31.28 286 ⇓*iP* **P** **02 21 54.9 +0.5**
NST Nakhon Sawan 32.61 126 P **P** **02 22 02.5 -3.8**
EIL Elat 32.70 267 P **P** **02 22 08.0 +1.1**
comp=Z,16nm,1.0s,mb4.7,baz=34,slow=3.6,SNR=19
EIL LR LR 02 38 06.0
comp=Z,659nm,19.4s,baz=72,slow=41
EIL Elat 32.70 267 P **P** **02 22 08.0 +1.1**
EIL LR LR 02 38 06.0
ESKT Eskisehir 32.82 286 *iP* **P** **02 22 05.2 -2.7**
BOD Bodaibo 32.92 40 *eP* **P** **02 22 09.3 +0.8**
BOD pmax pmax
comp=Z,25nm,1.3s,mb4.8
BJI Beijing 33.13 73 P **P** **02 22 11.3 +0.7**
BJI S **S** **02 27 21.3 +1.1**
BJI XS sS 02 28 05.8 -3.9
BJI LR LR
comp=N,476nm,16.2s
BJI LR LR
comp=E,377nm,19.2s
BJI LR LR
comp=Z,654nm,22.7s
AKASG Malin Array Be 33.34 306 P **P** **02 22 11.1 -1.1**
comp=Z,5.0nm,0.3s,mb4.7,baz=90,slow=8.6,SNR=44
AKASG pP pP 02 22 39.5 -1.0
comp=Z,5.9nm,0.4s,baz=81,slow=7.4,SNR=2.8
AKASG LR LR 02 38 17.6
comp=Z,587nm,19.4s,baz=115,slow=41
AKASG Malin Array Be 33.34 306 P **P** **02 22 11.1 -1.1**
AKASG pP pP 02 22 39.5 -1.0
AKASG LR LR 02 38 17.6
AKASG Malin Array Be 33.34 306 P **P** **02 22 11.1 -1.1**
AKASG *PP pP 02 22 39.5 -1.0
AKBB Malin Array Si 33.34 306 *eP* **P** **02 22 11.7 -0.5**
KIEV Kiev 33.35 306 *eP* **P** **02 22 11.0 -1.3**
comp=Z,138nm,1.5s,mb5.5
KIEV Kiev 33.35 306 *eP* **P** **02 22 11.0 -1.3**
KIEV pmax pmax
comp=Z,138nm,1.5s,mb5.5
KIS Kishinev 33.49 300 *d i*P **P** **02 22 13.0 -0.5**
KIS *e* 02 23 24.0
KIS *e*S **S** **02 27 20.0 -5.5**
KIS pmax pmax
comp=Z,200nm,1.0s,mb5.8
KIS Kishinev 33.49 300 ⇓*iP* **P** **02 22 13.0 -0.5**
comp=Z,200nm,1.0s,mb5.8
KIS Kishinev 33.49 300 *e*PP PP 02 23 24.0 -7.7
KIS Kishinev 33.49 300 *e*PcP PcP 02 25 10.0 +19
KIS *e*S **S** **02 27 20.0 -5.5**
KIS *e*SS SS 02 29 50.0 -5.3
KIS *e*LQ 02 33 08.0
KIS LRM 02 40 16.0
comp=Z,1μm,13.0s
TLCR 33.57 296 P **P** **02 22 15.3 +1.0**
TLCR 33.57 296 ⇓*iP* **P** **02 22 14.5 +0.2**
ULDT Uludag 33.99 287 *iP* **P** **02 22 17.1 -0.9**
HARR Harsova 34.23 296 P **P** **02 22 21.1 +1.1**
HARR Harsova 34.23 296 ⇓*iP* **P** **02 22 21.2 +1.2**
WHN Wuhan 34.56 90 P **P** **02 22 26.5 +3.5**
MNK Minsk 34.64 313 *eP* **P** **02 22 21.0 -2.4**
MNK *e* pP 02 22 46.0 -5.9
ODB Odobesti 34.76 298 ⇓*iP* **P** **02 22 30.1 +5.5**
VRI Vrincioaia 34.98 298 P **P** **02 22 27.8 +1.3**
VRI Vrincioaia 34.98 298 ⇓*iP* **P** **02 22 27.3 +0.8**
PLOR Plostina 35.04 298 ⇓*iP* **P** **02 22 28.0 +1.1**
JOF Joensuu 35.35 328 *ep* **P** **02 22 28.7 -0.7**
comp=Z,9.0nm,0.3s,mb4.9
JOF Joensuu 35.35 328 *eP* **P** **02 22 28.7 -0.7**
JOF pmax pmax
comp=Z,9.0nm,0.3s,mb4.9
JMB Yambol 35.48 292 P **P** **02 22 28.2 -2.6**
MLR Muntele Rosu 35.56 297 P **P** **02 22 32.9 +1.5**
comp=Z,68nm,0.9s,mb5.3,baz=94,slow=3.7,SNR=50
BURAR Bucovina Array 35.91 301 P **P** **02 22 35.3 +0.9**
BURAR Bucovina Array 35.91 301 ⇑*iP* **P** **02 22 34.6 +0.2**
BUR08 Bucovina Ar. S 35.92 301 *eP* **P** **02 22 34.5 0.0**
VSU Vasula 36.02 320 *i* P **P** **02 22 35.4 +0.2**
VOIR 36.19 297 P **P** **02 22 37.7 +0.9**
VOIR 36.19 297 ⇑*iP* **P** **02 22 37.3 +0.5**
LVZ Lovozero 36.59 337 ⇓*eP* **P** **02 22 40.4 +0.5**
LVZ Lovozero 36.59 337 ⇓*eP* **P** **02 22 40.3 +0.4**
LVZ pmax pmax
comp=Z,99nm,1.5s,mb5.2
LVV L'vov 36.63 305 *eP* **P** **02 22 40.3 -0.2**
LVV *e* 02 23 26.5
LVV *e* 02 24 09.3
APA Apatity 36.81 336 ⇓*iP* **P** **02 22 44.0 +2.3**
APA *i* 02 24 03.0
APA *e*S **S** **02 28 13.0 -2.8**
APA *e*SS SS 02 30 49.0 -13
APA pmax pmax
comp=Z,15nm,0.9s,mb4.6
APA MLR MLR
comp=Z,2μm,16.0s
RZN Rozhen 36.99 291 *i* P **P** **02 22 44.4 +0.8**
QIZ Qiongzhong 37.06 111 P **P** **02 22 45.9 +1.5**
QIZ AP pP 02 23 13.3 +0.2
QIZ S **S** **02 28 24.8 +4.1**
QIZ SS SS 02 31 02.4 -5.9
QIZ AMB AMB
comp=Z,441nm,5.7s
QIZ LR LR
comp=N,499nm,32.3s
QIZ LR LR
comp=E,431nm,32.3s
BMR Baia Mare 37.07 301 P **P** **02 22 45.3 +1.1**
BMR Baia Mare 37.07 301 ⇓*iP* **P** **02 22 45.6 +1.4**
KAF Kangasniemi 37.22 325 *ep* **P** **02 22 44.9 -0.4**
comp=E,1.8nm,0.3s,mb4.2,baz=104,slow=8.6
KAF Kangasniemi 37.22 325 *eP* **P** **02 22 44.9 -0.4**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
PGB Panagyurishte 37.23 293 P **P** **02 22 47.4 +1.8**
SUW Suwalki 37.30 312 *eP* **P** **02 22 45.5 -0.5**
APE Apeiranthos 37.48 283 P **P** **02 22 47.7 -0.1**
APE Apeiranthos 37.48 283 ⇑*iP* **P** **02 22 47.9 +0.1**
KWP Kalwaria 37.50 304 *eP* **P** **02 22 48.5 +0.7**
KWP Kalwaria 37.50 304 *eP* **P** **02 22 48.5 +0.7**
KWP Kalwaria 37.50 304 ⇑*iP* **P** **02 22 48.6 +0.8**
DL2 Dalian 37.50 73 P **P** **02 22 51.6 +3.7**
DL2 PP PP 02 24 21.4 +5.4
DL2 S **S** **02 28 33.7 +6.7**
DL2 XS sS 02 29 20.7 +3.6
DL2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
DL2 AMB AMB
comp=Z,180nm,3.5s
DL2 LR LR
comp=E,340nm,14.5s
DL2 LR LR
comp=Z,320nm,21.2s
NJ2 Nanjing 37.51 85 *eP* **P** **02 22 50.8 +2.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
DRGR 37.68 300 P **P** **02 22 50.0 +0.7**
DRGR 37.68 300 ⇓*iP* **P** **02 22 50.0 +0.7**
MMB Musomiste 37.73 291 P **P** **02 22 50.5 +0.6**
GZR Gura Zlata 37.79 298 P **P** **02 22 51.4 +1.1**
GZR Gura Zlata 37.79 298 ⇓*iP* **P** **02 22 50.4 +0.1**
KOLS Kolonicke sedl 37.81 303 *eP* **P** **02 22 50.7 +0.3**
KOLS *e*PP PP 02 24 22.8 +3.5
VTS Vitosha 37.92 293 P **P** **02 22 52.5 +1.1**
VTS Vitosha 37.92 293 *iP* **P** **02 22 52.3 +0.9**
VTS Vitosha 37.92 293 ⇓*iP* **P** **02 22 52.5 +1.1**
KKB Krupnik 38.15 292 *iP* **P** **02 22 54.0 +0.7**
STHS Stebnicka Huta 38.46 304 *eP* **P** **02 22 55.5 -0.3**
comp=Z,7.1nm,0.8s,mb4.3
STHS *e*PP PP 02 24 25.7 -0.6
STHS Stebnicka Huta 38.46 304 *eP* **P** **02 22 55.5 -0.3**
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
IDI Anoyia 38.51 281 P **P** **02 22 58.2 +1.7**
comp=Z,2.5nm,0.3s,mb4.3,baz=220,slow=15,SNR=9.1
BZS Buzias 38.57 298 P **P** **02 22 57.4 +0.6**
BZS Buzias 38.57 298 ⇓*iP* **P** **02 22 57.5 +0.7**
VAY Valandovo 38.64 291 *eP* **P** **02 22 55.6 -1.8**
STIP Stip 38.84 292 *eP* **P** **02 22 58.1 -1.1**
NIE Niedzica 39.07 304 *eP* **P** **02 23 01.5 +0.6**
NIE *e*PP PP 02 24 32.7 -0.2
CN2 Changchun 39.26 65 *eP* **P** **02 23 04.3 +1.7**
CN2 *e*AP pP 02 23 32.6 +1.0
CN2 *e*S **S** **02 28 55.0 +1.6**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CN2 AMB AMB
comp=Z,100nm,4.0s
OJC Ojcow 39.35 306 *eP* **P** **02 23 02.9 -0.3**
OJC *e*PP PP 02 24 33.5 -2.5
OJC *e*S **S** **02 28 57.2 +2.7**
OJC L 02 41 56.3
comp=Z,0.4nm,18.2s
PSZ Piszkesteto 39.47 302 *eP* **P** **02 23 04.5 +0.2**
comp=Z,18nm,1.1s,mb4.6
PSZ Piszkesteto 39.47 302 *eP* **P** **02 23 05.3 +1.0**
PSZ Piszkesteto 39.47 302 ⇓*iP* **P** **02 23 05.3 +1.0**
SSE Sheshan 39.72 85 P **P** **02 23 08.4 +1.8**
SSE XP sP 02 23 52.5 +2.1
SSE PP PP 02 24 40.3 0.0
SSE S **S** **02 29 02.4 +1.9**
SSE XS sS 02 29 53.4 +2.4
SSE AMB AMB
comp=Z,24nm,0.9s,mb4.8
SSE AMB AMB
comp=Z,165nm,4.6s
SSE LR LR
comp=N,194nm,19.0s
SSE LR LR
comp=E,233nm,18.9s
SSE LR LR
comp=Z,179nm,18.1s
KEV Kevo 39.93 337 *ep* **P** **02 23 07.7 -0.1**
comp=Z,2.1nm,0.3s,mb4.2
KEV Kevo 39.93 337 *eP* **P** **02 23 07.7 -0.1**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
BUD Budapest 40.10 301 ⇓*eP* **P** **02 23 09.8 +0.3**
VYHS Vyhne 40.12 303 *eP* **P** **02 23 09.9 +0.3**
VYHS *e*PP PP 02 24 40.6 -3.7
ARCES ARCESS Array B 40.30 336 P **P** **02 23 10.7 -0.2**
comp=Z,31nm,0.8s,mb5.0,baz=111,slow=9.0,SNR=75
ARCES LR LR 02 40 41.8
comp=Z,561nm,18.6s,baz=360,slow=37
KOLL Kolacno 40.39 303 *eP* **P** **02 23 11.9 0.0**
KOLL *e*PP PP 02 24 43.7 -3.6
KOLL Kolacno 40.39 303 *eP* **P** **02 23 11.9 0.0**
KOLL *e*PP PP 02 24 43.6 -3.7
OKC Ostrava-Krasne 40.44 305 *eP* **P** **02 23 11.3 -0.9**
OKC *e**PP pP 02 23 35.9 -5.4
OKC Ostrava-Krasne 40.44 305 *eP* **P** **02 23 11.3 -0.9**
OKC *e*pP pP 02 23 35.9 -5.4
OKC *e*PP PP 02 24 41.4 -6.4
PKSM Moragy 40.54 299 P **P** **02 23 14.0 +0.9**
PKSM Moragy 40.54 299 ⇓*iP* **P** **02 23 13.1 0.0**
GKP Gorka Klasztor 40.82 310 *eP* **P** **02 23 15.0 -0.3**
MORC Moravsky Berou 40.84 305 *eP* **P** **02 23 15.2 -0.3**
comp=Z,50nm,1.4s,mb5.0
MORC Moravsky Berou 40.84 305 P **P** **02 23 16.5 +1.0**
MORC Moravsky Berou 40.84 305 ⇓*iP* **P** **02 23 15.8 +0.3**
MODS Modra-Piesok 41.16 303 *eP* **P** **02 23 18.3 +0.1**
comp=Z,8.5nm,1.2s,mb4.2
MODS *e*PP PP 02 24 51.8 -3.8
MODS Modra-Piesok 41.16 303 *eP* **P** **02 23 18.3 +0.1**
MODS pmax pmax
comp=Z,9.0nm,1.2s,mb4.3
ZST Bratislava 41.30 303 *eP* **P** **02 23 19.9 +0.6**
comp=Z,9.1nm,0.9s,mb4.4
ZST *e*PP PP 02 24 57.0 -0.1
ZST LR LR
comp=Z,200nm,13.6s
ZST Bratislava 41.30 303 *eP* **P** **02 23 19.9 +0.6**
ZST *e*PP PP 02 24 56.9 -0.2
VRAC Vranov 41.50 304 P **P** **02 23 20.5 -0.4**
comp=Z,20nm,0.9s,mb4.7,baz=81,slow=8.8,SNR=20
VRAC pP pP 02 23 51.0 +0.9
comp=Z,34nm,1.0s,baz=75,slow=7.6,SNR=7.4
VRAC Vranov 41.50 304 P **P** **02 23 21.7 +0.8**
VRAC Vranov 41.50 304 P **P** **02 23 20.5 -0.4**
VRAC *PP pP 02 23 51.0 +0.9
VRAC pmax pmax
comp=Z,20nm,0.9s
VRAC pmax pmax
comp=N,34nm,1.0s
VRAC Vranov 41.50 304 ⇑*iP* **P** **02 23 21.7 +0.8**
KSP Ksiaz 41.54 307 *eP* **P** **02 23 21.9 +0.7**
KSP Ksiaz 41.54 307 *eP* **P** **02 23 21.4 +0.2**
KSP *e**PP pP 02 23 51.1 +0.7
KSP *e* 02 24 57.0
YAK Yakutsk 41.56 36 *eP* **P** **02 23 22.0 +0.7**
YAK *e**PP pP 02 23 45.3 -5.2
YAK *e* 02 24 57.8
YAK *e* 02 25 19.2
YAK *e*PPP 02 25 30.2
YAK *e*S **S** **02 29 27.6 +0.5**
YAK *e*SS SS 02 32 31.6 -5.1
YAK *e* 02 33 22.4
YAK pmax pmax
comp=Z,24nm,0.9s,mb4.8
YAK pmax pmax
comp=E,15nm,1.3s
YAK pmax pmax
comp=Z,42nm,0.9s,mb5.1
YAK pmax pmax
comp=N,76nm,1.5s
YAK pmax pmax
comp=E,51nm,1.5s
YAK smax
comp=N,207nm,2.0s
YAK smax
comp=E,32nm,1.6s
DPC Dobruska-Polom 41.56 306 *eP* **P** **02 23 21.6 +0.2**
DPC *e*pP pP 02 23 51.2 +0.5
SOP Sopron 41.73 302 ⇓*eP* **P** **02 23 23.0 +0.1**
UPC Upice 41.74 306 *eP* **P** **02 23 23.0 +0.1**
UPC *e*pP pP 02 23 52.6 +0.4
UPC *e*PP PP 02 24 56.0 -5.9
MDJ Mudanjiang 42.03 63 P **P** **02 23 27.4 +2.0**
MDJ AP pP 02 23 53.9 -0.7
MDJ XP sP 02 24 08.9 -0.5
MDJ PP PP 02 25 07.2 +2.1
MDJ S **S** **02 29 36.0 +1.5**
MDJ XS sS 02 30 25.4 +0.1

MDJ SCS ScS 02 33 16.8 +3.0
MDJ AMB AMB
comp=Z,11nm,1.7s,mb4.2
MDJ AMB AMB
comp=Z,123nm,4.9s
MDJ LR LR
comp=N,686nm,14.5s
MDJ LR LR
comp=Z,561nm,13.6s
CONA Conrad Observa 42.16 302 ⇓ iP P 02 23 26.6 +0.3
comp=Z,61nm,1.8s,mb4.9,SNR=23
CSNA Conrad Observa 42.16 302 ⇓ iP P 02 23 26.6 +0.3
comp=Z,62nm,1.8s,mb4.9
TREC Trest 42.22 305 eP P 02 23 27.2 +0.4
TRO Tromso 42.48 335 e P 02 23 28.7 +0.1
ARSA Arzberg 42.49 302 ⇑ iP P 02 23 29.3 +0.3
comp=Z,14nm,0.9s,mb4.6
PVCC Panska Ves 42.66 306 eP P 02 23 30.7 +0.4
PVCC epP pP 02 24 00.0 +0.3
KSRS Korea Array 42.67 73 P P 02 23 32.5 +2.0
comp=Z,3.3nm,0.8s,mb4.0,baz=287,slow=7.7,SNR=8.6
KSRS pP pP 02 24 02.4 +2.5
comp=Z,2.7nm,0.7s,baz=281,slow=7.7,SNR=3.7
KSRS LR LR 02 43 28.4
comp=Z,412nm,18.8s,baz=285,slow=39
KSRS Korea Array 42.67 73 P P 02 23 32.6 +2.0
KSRS *PP pP 02 24 02.4 +2.5
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KSRS pmax pmax
comp=N,3.0nm,0.7s
KSRS MLR MLR
comp=Z,412nm,18.8s
KLR Kul'dur 42.72 55 eP P 02 23 28.6 -2.2
KLR e 02 24 10.0
KLR eS S 02 29 41.0 -3.4
KLR e 02 33 11.5
KLR pmax pmax
comp=E,60nm,2.2s
KLR pmax pmax
comp=Z,100nm,2.2s,mb5.1
KLR MLR MLR
comp=Z,800nm,13.0s
PRU Pruhonice 42.74 306 eP P 02 23 31.1 +0.1
PRU epP pP 02 24 00.5 +0.1
PRU ePP PP 02 25 06.3 -6.2
PRU Pruhonice 42.74 306 eP P 02 23 31.1 +0.1
PRU epP pP 02 24 00.5 +0.1
PRU ePP PP 02 25 06.3 -6.2
PRU AMS AMS 02 43 10.0
comp=Z,500nm,7.2s
PERS Pernice 42.87 301 i P P 02 23 32.2 +0.1
HFS Hagfors 42.88 321 P P 02 23 31.4 -0.5
comp=Z,28nm,0.6s,mb5.0,baz=98,slow=11,SNR=78
SOKA Soboth 42.92 301 ⇓ iP P 02 23 32.7 +0.2
RUE Ruedersdorf 42.95 309 eP P 02 23 32.4 -0.3
comp=Z,48nm,1.0s,mb5.1
BOJS Bojanci 43.00 299 eP P 02 23 34.0 +0.8
BOJS i 02 23 44.5
BOJS i 02 24 13.8
BRG Berggiesshubel 43.02 307 i P P 02 23 33.2 0.0
comp=Z,23nm,1.0s,mb4.8
BRG pP pP 02 23 59.0 -3.6
BRG sP sP 02 24 15.0 -2.3
BRG PP PP 02 25 23.0 +7.6
BRG e 02 32 37.7
BRG LR LR
comp=Z,170nm,15.7s
BRG Berggiesshubel 43.02 307 i P P 02 23 33.2 0.0
BRG *PP pP 02 23 59.0 -3.6
BRG *SP sP 02 24 15.0 -2.3
BRG 02 25 23.0
BRG pmax pmax
comp=Z,23nm,1.0s,mb4.8
BRG pmax pmax
comp=Z,10.0nm,1.7s,mb4.2
BRG MLR MLR
comp=N,277nm,18.0s
BRG MLR MLR
comp=E,211nm,15.6s
BRG MLR MLR
comp=Z,170nm,15.7s
BRG Berggiesshubel 43.02 307 eP P 02 23 33.1 -0.1
comp=Z,38nm,1.0s,mb5.0
BRG epP pP 02 24 03.0 +0.4
BRG Berggiesshubel 43.02 307 i P P 02 23 33.2 0.0
comp=Z,38nm,1.0s,mb5.0
BRG pP pP 02 23 59.0 -3.6
BRG sP sP 02 24 15.0 -2.3
BRG PP PP 02 25 23.0 +7.6
BRG e 02 32 37.7
comp=Z,16nm,1.7s
BRG
comp=N,463nm,18.0s
BRG
comp=E,352nm,15.6s
BRG
comp=Z,284nm,15.7s
MOA Molln 43.23 303 ⇑ iP P 02 23 34.6 -0.4
comp=Z,42nm,1.6s,mb4.8,SNR=11
MOR8 Moi Rana 43.25 330 eP P 02 23 33.6 -1.3
MOR8 AMb AMB 02 23 35.8
comp=Z,65nm,1.1s,mb5.2
OBKA Obir 43.28 301 ⇓ iP P 02 23 36.0 +0.6
comp=Z,26nm,1.1s,mb4.8,SNR=8.6
FBE Freiberg 43.38 307 eP P 02 23 36.1 0.0
comp=Z,46nm,0.9s,mb5.1
LJU Ljubljana 43.39 300 i P P 02 23 36.7 +0.4
LJU i pP 02 24 05.5 -0.1
GEC2 GERESS Array S 43.45 304 eP P 02 23 36.8 +0.1
GEC2 pmax pmax
comp=Z,43nm,1.5s,mb4.9
GEC2 GERESS Array S 43.45 304 eP P 02 23 36.8 +0.1
comp=Z,43nm,1.5s,mb4.9
GERES GERESS Array B 43.45 304 P P 02 23 36.0 -0.7
comp=Z,4.5nm,0.8s,mb4.2,baz=79,slow=7.2,SNR=32
GERES pP pP 02 24 04.9 -1.2
comp=Z,12nm,1.0s,baz=66,slow=7.8,SNR=7.1
GERES PP PP 02 25 21.5 +1.5
comp=Z,5.7nm,0.8s,baz=72,slow=10.0,SNR=4.2
GERES LR LR 02 43 07.0
comp=Z,264nm,19.1s,baz=88,slow=38
GERES GERESS Array B 43.45 304 P P 02 23 36.0 -0.7
GERES *PP pP 02 24 04.9 -1.2
GERES 02 25 21.5
KHC Kasperske Hory 43.48 305 eP P 02 23 37.0 +0.1
KHC epP pP 02 24 06.6 +0.2
KHC esP sP 02 24 21.8 +0.7
KHC ePP PP 02 25 17.0 -3.4
TIP Timpagrande 43.49 290 eP P 02 23 36.8 -0.3
TIXI Tiksi 43.55 22 eP P 02 23 37.9 +0.7
comp=Z,12nm,0.6s,mb4.7
TIXI Tiksi 43.55 22 eP P 02 23 38.2 +1.0
TIXI pmax pmax
comp=Z,29nm,1.0s,mb4.9
TIXI MLR MLR
comp=Z,702nm,13.0s
CLL Collm 43.55 308 ⇓ iP P 02 23 37.0 -0.5
comp=Z,28nm,1.0s,mb4.8
CLL esP sP 02 24 07.0 -15
CLL eS S 02 30 01.0 +4.5
CLL Collm 43.55 308 ⇓ iP P 02 23 37.0 -0.5
CLL e*SP sP 02 24 07.0 -15
CLL eS S 02 30 01.0 +4.5
CLL pmax pmax
comp=Z,28nm,1.0s,mb4.8
CLL Collm 43.55 308 eP P 02 23 37.0 -0.5
comp=Z,28nm,0.8s,mb4.9
CLL epP pP 02 24 06.8 -0.1
CLL Collm 43.55 308 ⇓ iP P 02 23 37.0 -0.5
comp=Z,28nm,1.0s,mb4.8
CLL epP pP 02 24 07.0 +0.1
CLL ePP PP 02 25 26.0 +4.8
CLL eS S 02 30 01.0 +4.5
CLL eSS SS 02 33 24.0 +8.2
CLL esSS 02 33 54.0
CLL LmV 02 44 00.0
comp=Z,300nm,21.5s
JAVS Javornik 43.73 300 i P P 02 23 38.5 -0.5
VOY Vojsko 43.82 300 eP P 02 23 39.9 +0.2
VOY e pP 02 24 09.7 +0.5
VOY e 02 24 21.7
WET Wettzell 43.93 305 eP P 02 23 40.6 0.0
WET pmax pmax
comp=Z,20nm,1.1s,mb4.7
WET Wettzell 43.93 305 eP P 02 23 40.6 0.0
comp=Z,20nm,1.1s,mb4.7
CUC Castrocucco 43.94 291 eP P 02 23 41.2 +0.4
comp=Z,80nm,0.8s,mb5.4
LOF Lofoten 43.97 332 eP P 02 23 42.9 +2.3
KBA Koelnbreinsper 43.99 302 ⇓ iP P 02 23 41.1 0.0
comp=Z,26nm,1.5s,mb4.7
TANN Tannenbergstha 44.01 307 eP P 02 23 41.2 +0.1
comp=Z,61nm,1.8s,mb4.9
TANN epP pP 02 24 10.7 0.0
NKC Novy Kostel 44.04 306 eP P 02 23 41.5 +0.1
NKC epP pP 02 24 10.5 -0.4
WERN Wernitzgruen 44.08 306 eP P 02 23 41.9 +0.2
comp=Z,65nm,1.9s,mb4.9
GUNZ Gunzen 44.10 306 eP P 02 23 41.8 -0.1
comp=Z,24nm,1.1s,mb4.7
WERD Werda 44.10 307 eP P 02 23 41.8 -0.1
comp=Z,18nm,1.0s,mb4.7
WERD epP pP 02 24 11.6 +0.2
NB2 NORSAR Subarra 44.14 322 P P 02 23 41.0 -1.0
comp=Z,18nm,0.6s,mb4.9,baz=89,slow=7.9
NOA NORSAR Array B 44.14 322 P P 02 23 41.0 -1.0
comp=Z,20nm,0.7s,mb4.8,baz=92,slow=7.8,SNR=48
NOA pP pP 02 24 10.7 -0.9
comp=Z,13nm,0.8s,baz=91,slow=8.0,SNR=3.0
NOA PP PP 02 25 30.0 +2.8
comp=Z,9.8nm,0.9s,baz=96,slow=10.0,SNR=3.8
NOA LR LR 02 42 34.5
comp=Z,361nm,20.0s,baz=85,slow=37
NOA NORSAR Array B 44.14 322 P P 02 23 41.0 -1.0
NOA *PP pP 02 24 10.7 -0.8
NOA 02 25 30.0
RJOB Jochberg 44.23 303 eP P 02 23 42.8 -0.1
comp=Z,18nm,1.0s,mb4.7
ROTZ Rotzenmuhle 44.27 306 eP P 02 23 43.8 +0.6
comp=Z,26nm,1.2s,mb4.7
NAO01 NORSAR Array S 44.29 322 eP P 02 23 43.3 0.0
comp=Z,21nm,0.8s,mb4.8
MANZ Manzenberg 44.30 306 eP P 02 23 43.7 +0.3
comp=Z,18nm,1.1s,mb4.6
MOX Moxa 44.51 307 eP P 02 23 45.5 +0.4
comp=Z,75nm,1.8s,mb5.0
MOX e pP 02 24 15.1 +0.4
MOX
comp=Z,200nm,21.0s
MOX Moxa 44.51 307 eP P 02 23 45.5 +0.4
MOX e pP 02 24 15.1 +0.4
MOX pmax pmax
comp=Z,75nm,1.8s,mb5.0
MOX MLR MLR
comp=Z,200nm,21.0s
MOX Moxa 44.51 307 eP P 02 23 44.8 -0.3
comp=Z,22nm,1.1s,mb4.7
MOX epP pP 02 24 14.9 +0.2
ABTA Abfaltersbach 44.61 301 ⇓ iP P 02 23 45.0 -1.0
comp=Z,12nm,1.0s,mb4.5,SNR=6.5
BSEG Bad Segeberg 44.88 312 eP P 02 23 47.9 -0.2
BSEG pmax pmax
comp=Z,54nm,0.9s,mb5.2
BSEG Bad Segeberg 44.88 312 eP P 02 23 47.9 -0.2
comp=Z,54nm,0.9s,mb5.2
GRA1 Grafenberg Arr 44.91 306 eP P 02 23 49.0 +0.7
comp=Z,49nm,1.1s,mb5.0
GRA1 epP pP 02 24 19.2 +1.3
GRF Grafenberg Arr 44.91 306 eP P 02 23 49.0 +0.7
GRF e*PP pP 02 24 19.2 +1.3
GRF pmax pmax
comp=Z,49nm,1.1s,mb5.0
GRF Grafenberg Arr 44.91 306 eP P 02 23 49.0 +0.7
GRF e*PP pP 02 24 19.2 +1.3
GRF pmax pmax
comp=Z,49nm,1.1s,mb5.0
GRF Grafenberg Arr 44.91 306 eP P 02 23 49.0 +0.7
comp=Z,49nm,1.1s,mb5.0
GRF epP pP 02 24 19.2 +1.3
KONO Kongsberg 44.93 320 eP P 02 23 48.1 -0.2
comp=Z,29nm,0.9s,mb4.9
KONO Kongsberg 44.93 320 ⇑ eP P 02 23 48.4 +0.1
WTTA Wattenberg 45.09 302 ⇓ iP P 02 23 49.1 -0.6
comp=Z,29nm,1.1s,mb4.8
WATA Walderalm 45.12 302 ⇑ iP P 02 23 49.5 -0.4
comp=Z,13nm,1.0s,mb4.5,SNR=6.5
FUR Furstenfeldbru 45.15 304 eP P 02 23 50.4 +0.2
FUR pmax pmax
comp=Z,62nm,1.2s,mb5.1
FUR Furstenfeldbru 45.15 304 eP P 02 23 50.4 +0.2
comp=Z,62nm,1.2s,mb5.1
DOMB Dombas 45.20 323 eP P 02 23 50.2 -0.1
DOMB AMb AMB 02 23 54.8
comp=Z,81nm,2.7s,mb4.9
MOTA Moosalm 45.43 302 ⇑ iP P 02 23 51.8 -0.6
comp=Z,17nm,1.0s,mb4.6,SNR=15
VAE Valguarnera 45.78 288 P P 02 23 56.2 +0.8
comp=Z,24nm,1.0s,mb4.8,baz=42,slow=3.8,SNR=4.3
DAVA Damuels 46.26 303 i P P 02 23 58.4 -0.5
comp=Z,49nm,0.9s,mb5.1,SNR=36
SPITS Spitsbergen Ar 46.28 346 P P 02 23 58.6 -0.1
comp=Z,12nm,0.7s,mb4.7,baz=338,slow=10.0,SNR=9.6
SPB4 Spitsbergen Ar 46.28 346 eP P 02 23 59.7 +0.9
PDSI Padang 46.29 141 P pP 02 24 35.4 +6.1
comp=Z,95nm,1.1s,comp=Z,4um
DAVOX Davos/Dischmat 46.37 302 P P 02 23 58.9 -1.0
comp=Z,20nm,0.7s,mb4.9,baz=110,slow=5.4,SNR=31
STU Stuttgart 46.39 305 eP P 02 23 59.9 0.0
comp=Z,46nm,1.5s,mb4.9
DAVOS Davos 46.41 302 P P 02 23 58.9 -1.3
ODD1 Odda 46.42 320 eP P 02 23 59.8 -0.3
ODD1 AMb AMB 02 24 07.6
comp=Z,128nm,3.2s
TOD Tromm 46.47 306 eP P 02 24 00.1 -0.5
GSCL Gusciola 46.48 299 P P 02 24 02.1 +1.3
comp=Z,16nm,0.8s,mb4.7
BLS5 Blasjo 46.54 320 eP P 02 24 03.5 +2.5
IBBN Ibbenburen 46.63 310 eP P 02 24 01.6 -0.2
comp=Z,50nm,1.0s,mb5.1
VLC Villacollemand 46.67 298 eP P 02 24 03.2 +0.9
comp=Z,25nm,0.7s,mb5.0
PII Pisa 46.70 298 P P 02 24 02.2 -0.2
BFO Black Forest 47.04 304 eP P 02 24 04.6 -0.5
BFO pmax pmax
comp=Z,13nm,1.0s,mb4.5
BFO Black Forest 47.04 304 eP P 02 24 04.6 -0.5
comp=Z,13nm,1.0s,mb4.5
BUG Bochum-Ulver 47.08 309 eP P 02 24 05.2 -0.1
comp=Z,45nm,1.2s,mb5.0
BOB Bobbio (Coli) 47.16 299 P P 02 24 06.9 +0.9
comp=Z,226nm,2.2s,mb5.4
BOB Bobbio (Coli) 47.16 299 P P 02 24 06.9 +0.9
BOB pmax pmax
comp=Z,226nm,2.2s,mb5.4
LANF Langenberg 47.24 305 eP P 02 24 06.6 0.0
VAI Varese 47.34 301 P P 02 24 06.2 -1.2
comp=Z,19nm,0.6s,mb4.9
VAI Varese 47.34 301 P P 02 24 06.2 -1.2
VAI pmax pmax
comp=Z,19nm,0.6s,mb4.9
FELD Feldberg im Sc 47.36 304 eP P 02 24 06.6 -0.9
KBS Kingsbay 47.38 347 eP P 02 24 07.8 +0.5
comp=Z,25nm,0.8s,mb4.9
KBS Kingsbay 47.38 347 eP P 02 24 07.8 +0.5
KBS pmax pmax
comp=Z,25nm,0.8s,mb4.9
RUP Ruppelstein 47.56 306 eP P 02 24 07.9 -1.1
CDF Champ du Feu 47.71 305 eP P 02 24 09.2 -1.0
comp=Z,58nm,1.3s,mb4.8
CDF epP pP 02 24 40.8 +0.7
CDF Champ du Feu 47.71 305 eP P 02 24 09.2 -1.0
comp=Z,29nm,1.3s,mb4.8
CDF epP pP 02 24 40.8 +0.7
CDF Champ du Feu 47.71 305 eP P 02 24 09.2 -1.0
CDF e*PP pP 02 24 40.8 +0.7
CDF pmax pmax
comp=Z,29nm,1.3s,mb4.8
BBS Basel-Blauen 47.78 303 eP P 02 24 10.7 -0.1
ECH Echery 47.83 304 eP P 02 24 10.5 -0.6
ECH Echery 47.83 304 eP P 02 24 11.0 -0.1
ECH e*PP pP 02 24 38.2 -2.9
ORO Oropa 47.93 301 P P 02 24 10.2 -1.8
comp=Z,12nm,0.8s,mb4.6
ORO Oropa 47.93 301 P P 02 24 10.2 -1.8
ORO pmax pmax
comp=Z,12nm,0.8s,mb4.6
MEM Membach 48.03 308 P P 02 24 12.7 +0.1
comp=Z,18nm,1.3s,mb4.5
PGF Pioggiola 48.10 297 eP P 02 24 12.3 -1.0
comp=Z,34nm,0.7s,mb4.8
PGF Pioggiola 48.10 297 eP P 02 24 12.3 -1.0
comp=Z,17nm,0.7s,mb4.8
HINF Hinteralfeld 48.13 304 eP P 02 24 12.3 -1.1
comp=Z,26nm,0.8s,mb4.6
HINF Hinteralfeld 48.13 304 eP P 02 24 12.3 -1.1
comp=Z,13nm,0.8s,mb4.6
HINF Hinteralfeld 48.13 304 eP P 02 24 12.3 -1.1
HINF pmax pmax
comp=Z,13nm,0.8s,mb4.6
WLF Walferdange 48.15 307 P P 02 24 13.5 -0.1
WLF AP pP 02 24 44.2 +0.7
comp=Z,28nm,1.5s
WLF Walferdange 48.15 307 eP P 02 24 14.1 +0.6
comp=Z,62nm,1.3s,mb5.1
WLF epP pP 02 24 41.0 -2.5
WLF Walferdange 48.15 307 eP P 02 24 14.1 +0.6
WLF e*PP pP 02 24 41.0 -2.5
WLF pmax pmax
comp=Z,62nm,1.3s,mb5.1
WLF Walferdange 48.15 307 eP P 02 24 13.7 +0.2
comp=Z,48nm,1.1s,mb5.0
LOMF Lomont 48.26 303 eP P 02 24 14.8 +0.4
HAU Haudompre 48.41 304 eP P 02 24 14.6 -1.0
comp=Z,73nm,1.2s,mb4.9
HAU eMLR MLR
comp=Z,260nm,22.2s
HAU Haudompre 48.41 304 eP P 02 24 14.6 -1.0
comp=Z,36nm,1.2s,mb4.9
HAU LR LR
comp=Z,260nm,22.3s
HAU Haudompre 48.41 304 eP P 02 24 14.6 -1.0
HAU pmax pmax
comp=Z,36nm,1.2s,mb4.9
HAU MLR MLR
comp=Z,260nm,22.3s
BCLA Clavier 48.51 308 P P 02 24 16.2 -0.1
comp=Z,15nm,1.5s,mb4.4
SAOF Saorge 48.68 299 eP P 02 24 17.8 +0.1
AUTN L'Aution 48.77 299 eP P 02 24 18.6 +0.2
LPG La Plagne 48.80 301 eP P 02 24 18.3 -0.3
comp=Z,53nm,0.7s,mb5.0
LPG La Plagne 48.80 301 eP P 02 24 18.3 -0.3
comp=Z,26nm,0.7s,mb5.0
LPG La Plagne 48.80 301 eP P 02 24 18.3 -0.3
LPG pmax pmax
comp=Z,27nm,0.7s,mb5.0
SBF Sospel 48.80 299 eP P 02 24 18.0 -0.7
comp=Z,174nm,1.1s,mb5.3
SBF epP pP 02 24 49.6 +0.9
SBF Sospel 48.80 299 eP P 02 24 18.0 -0.7
comp=Z,87nm,1.1s,mb5.3
SBF epP pP 02 24 49.6 +0.9
SBF Sospel 48.80 299 eP P 02 24 18.0 -0.7
SBF e*PP pP 02 24 49.6 +0.9
SBF pmax pmax
comp=Z,87nm,1.1s,mb5.3
LPL La Plagne 48.81 301 eP P 02 24 18.3 -0.4
comp=Z,38nm,0.7s,mb4.8
LPL La Plagne 48.81 301 eP P 02 24 18.3 -0.4
comp=Z,19nm,0.7s,mb4.8
LPL La Plagne 48.81 301 eP P 02 24 18.3 -0.4
LPL pmax pmax
comp=Z,19nm,0.7s,mb4.8
VSL Villasalto 48.81 293 P P 02 24 14.9 -3.9
comp=Z,38nm,1.3s,mb4.9
RSL Roselend 48.83 301 eP P 02 24 18.7 -0.2
LUCF Luceram 48.85 299 eP P 02 24 19.1 0.0
OG22 Abries 48.86 300 eP P 02 24 18.8 -0.3
GIVF Givet 48.88 307 eP P 02 24 18.8 -0.4
comp=Z,65nm,1.2s,mb4.8
GIVF epP pP 02 24 49.3 +0.1
GIVF Givet 48.88 307 eP P 02 24 18.8 -0.4
comp=Z,32nm,1.2s,mb4.8
GIVF epP pP 02 24 49.3 +0.1
GIVF Givet 48.88 307 eP P 02 24 18.8 -0.4
GIVF e*PP pP 02 24 49.3 +0.1
GIVF pmax pmax
comp=Z,32nm,1.2s,mb4.8
TOUF Mont Tournerai 48.89 299 eP P 02 24 18.8 -0.5
CABF La Chapelle 48.94 303 eP P 02 24 18.9 -0.8
comp=Z,21nm,0.8s,mb4.5
CABF epP pP 02 24 51.5 +1.8
CABF La Chapelle 48.94 303 eP P 02 24 18.9 -0.8
comp=Z,11nm,0.8s,mb4.5
CABF epP pP 02 24 51.5 +1.8
CABF La Chapelle 48.94 303 eP P 02 24 18.9 -0.8
CABF e*PP pP 02 24 51.5 +1.8
CABF pmax pmax
comp=Z,11nm,0.8s,mb4.5
BNI Bardonecchia 48.98 300 eP P 02 24 19.7 -0.3
comp=Z,39nm,1.1s,mb5.0
BNI epP pP 02 24 47.7 -2.3
BNI Bardonecchia 48.98 300 eP P 02 24 19.7 -0.3
BNI e*PP pP 02 24 47.7 -2.3
BNI pmax pmax
comp=Z,39nm,1.1s,mb5.0
MBDF Montbardon 49.01 300 eP P 02 24 19.0 -1.2
comp=Z,26nm,0.7s,mb4.7
MBDF epP pP 02 24 51.8 +1.6
MBDF Montbardon 49.01 300 eP P 02 24 19.0 -1.2
comp=Z,13nm,0.7s,mb4.7
MBDF epP pP 02 24 51.8 +1.6
MBDF Montbardon 49.01 300 eP P 02 24 19.0 -1.2
MBDF e*PP pP 02 24 51.8 +1.6
MBDF pmax pmax
comp=Z,13nm,0.7s,mb4.7
DOU Dourbes 49.03 307 P P 02 24 20.8 +0.5
MEZF Maizieres J'vi 49.12 305 eP P 02 24 20.5 -0.5
comp=Z,112nm,1.1s,mb5.1
MEZF Maizieres J'vi 49.12 305 eP P 02 24 20.5 -0.5
comp=Z,112nm,1.1s,mb5.4
SNF Seneffe 49.12 308 P P 02 24 21.8 +0.8
comp=Z,30nm,2.0s,mb4.6
CALN Calern 49.21 299 eP P 02 24 21.7 -0.1
BAIF Baives 49.28 307 eP P 02 24 21.8 -0.4
comp=Z,139nm,1.2s,mb5.2
BAIF Baives 49.28 307 eP P 02 24 21.8 -0.4
comp=Z,70nm,1.2s,mb5.2
BAIF Baives 49.28 307 eP P 02 24 21.8 -0.4
BAIF pmax pmax
comp=Z,70nm,1.2s,mb5.2
FRF La Foret Royal 49.44 299 eP P 02 24 22.5 -1.0
comp=Z,64nm,0.8s,mb5.0
FRF epP pP 02 24 54.1 +0.5
FRF La Foret Royal 49.44 299 eP P 02 24 22.5 -1.0
comp=Z,32nm,0.8s,mb5.0
FRF epP pP 02 24 54.1 +0.5
FRF La Foret Royal 49.44 299 eP P 02 24 22.5 -1.0
FRF e*PP pP 02 24 54.1 +0.5
FRF pmax pmax
comp=Z,32nm,0.8s,mb5.0
OG05 Jujurieux 49.52 302 eP P 02 24 23.5 -0.6
ORIF Oris-en-Rattie 49.56 300 eP P 02 24 23.0 -1.4
comp=Z,21nm,0.8s,mb4.5
ORIF eMLR MLR
comp=Z,370nm,21.5s
ORIF Oris-en-Rattie 49.56 300 eP P 02 24 23.0 -1.4
comp=Z,10nm,0.8s,mb4.5
ORIF Oris-en-Rattie 49.56 300 eP P 02 24 23.0 -1.4
ORIF pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
LMR La Mourre 49.60 298 eP P 02 24 23.8 -1.0
STOF St-Etienne Org 49.81 299 eP P 02 24 26.0 -0.3
TAVF Tavernes 49.83 299 eP P 02 24 27.8 +1.4
SMRF Simiane la Rot 50.05 299 eP P 02 24 27.4 -0.7
comp=Z,31nm,0.8s,mb4.7
SMRF epP pP 02 24 59.1 +0.8
SMRF Simiane la Rot 50.05 299 eP P 02 24 27.4 -0.7
comp=Z,31nm,0.8s,mb5.0
SMRF epP pP 02 24 59.1 +0.8
PUYF Puyloubier 50.10 299 eP P 02 24 28.0 -0.5
BERF Bertagne 50.18 299 eP P 02 24 30.6 +1.5
KEST Kesra 50.21 288 P P 02 24 29.8 +0.3
comp=Z,9.4nm,0.9s,mb4.4,baz=334,slow=3.0,SNR=20
LOR Lormes 50.23 304 eP P 02 24 27.8 -1.6
comp=Z,21nm,0.9s,mb4.5
LOR epP pP 02 24 59.6 0.0
LOR eMLR MLR
comp=Z,262nm,21.5s
LOR Lormes 50.23 304 eP P 02 24 27.8 -1.6
comp=Z,11nm,0.9s,mb4.5
LOR epP pP 02 24 59.6 0.0

LOR LR LR
comp=Z,260nm,21.5s
LOR Lormes 50.23 304 *e*P **P** **02 24 27.8 -1.6**
LOR *e**PP pP 02 24 59.6 0.0
LOR pmax pmax
comp=Z,11nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,260nm,21.5s
TREF Trevaresse 50.29 299 *e*P **P** **02 24 31.2 +1.3**
GELF Grande-Etoile 50.34 299 *e*P **P** **02 24 31.4 +1.1**
PPBI Pangkal Pinang 50.34 135 P pP 02 25 04.4 +3.5
comp=Z,44nm,1.9s,comp=Z,1µm
SSB Saint Sauveur 50.35 301 *e*P **P** **02 24 29.9 -0.5**
SSB Saint Sauveur 50.35 301 *e*P **P** **02 24 30.4 0.0**
SSB *e**PP pP 02 24 58.9 -1.7
VIVF Saint-Julien-l 50.39 301 *e*P **P** **02 24 30.0 -0.7**
comp=Z,39nm,1.0s,mb4.7
VIVF Saint-Julien-l 50.39 301 *e*P **P** **02 24 30.0 -0.7**
comp=Z,19nm,1.0s,mb4.7
VIVF Saint-Julien-l 50.39 301 *e*P **P** **02 24 30.0 -0.7**
VIVF pmax pmax
comp=Z,19nm,1.0s,mb4.7
YSS Yuzh-Sakhalins 50.40 56⇑ *i*P **P** **02 24 33.1 +2.4**
YSS Yuzh-Sakhalins 50.40 56⇑ *e*P **P** **02 24 33.0 +2.3**
YSS *e* 02 25 47.0
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.0
YSS MLR MLR
comp=Z,500nm,18.0s
SMF Signal de Mont 50.42 303 *e*P **P** **02 24 29.7 -1.1**
comp=Z,34nm,0.8s,mb4.7
SMF Signal de Mont 50.42 303 *e*P **P** **02 24 29.7 -1.1**
comp=Z,17nm,0.8s,mb4.7
SMF Signal de Mont 50.42 303 *e*P **P** **02 24 29.7 -1.1**
SMF pmax pmax
comp=Z,17nm,0.8s,mb4.7
SSF Saint Saulge 50.52 304 *e*P **P** **02 24 30.3 -1.3**
comp=Z,26nm,0.9s,mb4.6
SSF Saint Saulge 50.52 304 *e*P **P** **02 24 30.3 -1.3**
comp=Z,13nm,0.9s,mb4.6
SSF Saint Saulge 50.52 304 *e*P **P** **02 24 30.3 -1.3**
SSF pmax pmax
comp=Z,13nm,0.9s,mb4.6
MAJO Matsushiro 50.69 71 *e*P **P** **02 24 35.3 +2.3**
comp=Z,8.0nm,0.8s,mb4.4
MAJO Matsushiro 50.69 71 *e*P **P** **02 24 35.3 +2.2**
MAJO pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
MAT Matsushiro 50.69 71 P **P** **02 24 35.1 +2.0**
MAT S **S** **02 31 47.0 +8.8**
MJAR Matsushiro Arr 50.70 71 P **P** **02 24 34.2 +1.1**
comp=Z,7.4nm,0.9s,mb4.3,baz=285,slow=9.1,SNR=13
MJAR pP pP 02 25 05.5 +2.2
comp=Z,6.0nm,0.8s,baz=287,slow=10,SNR=3.3
MJAR LR LR 02 47 33.6
comp=Z,121nm,21.4s,baz=290,slow=38
MJAR Matsushiro Arr 50.70 71 P **P** **02 24 34.2 +1.1**
MJAR pP pP 02 25 05.5 +2.2
MJAR LR LR 02 47 33.6
MJAR Matsushiro Arr 50.70 71 P **P** **02 24 34.2 +1.1**
MJAR *PP pP 02 25 05.5 +2.2
AVF Avril sur Loir 50.70 304 *e*P **P** **02 24 31.8 -1.1**
comp=Z,75nm,0.9s,mb5.0
AVF *e*pP pP 02 25 03.5 +0.3
AVF Avril sur Loir 50.70 304 *e*P **P** **02 24 31.8 -1.1**
comp=Z,37nm,0.9s,mb5.0
AVF *e*pP pP 02 25 03.5 +0.3
AVF Avril sur Loir 50.70 304 *e*P **P** **02 24 31.8 -1.1**
AVF *e**PP pP 02 25 03.5 +0.3
AVF pmax pmax
comp=Z,37nm,0.9s,mb5.0
PLDF La Plantade 50.76 302 *e*P **P** **02 24 33.4 0.0**
HYF Humbligny 51.02 304 *e*P **P** **02 24 34.6 -0.8**
AGO Saint Agoulin 51.06 303 *e*P **P** **02 24 35.5 -0.2**
BGF Bois d'Agland 51.10 303 *e*P **P** **02 24 34.7 -1.2**
comp=Z,37nm,0.9s,mb4.7
BGF Bois d'Agland 51.10 303 *e*P **P** **02 24 34.7 -1.2**
comp=Z,16nm,0.9s,mb4.7
BGF Bois d'Agland 51.10 303 *e*P **P** **02 24 34.7 -1.2**
BGF pmax pmax
comp=Z,19nm,0.9s,mb4.7
LASF Ste Croix 51.19 300 *e*P **P** **02 24 36.2 -0.5**
comp=Z,73nm,1.0s,mb5.0
LASF *e*pP pP 02 25 08.0 +1.0
PYM Petit Puy Mans 51.24 302 *e*P **P** **02 24 37.1 +0.1**
LBL Lubilhac 51.24 302 *e*P **P** **02 24 37.1 +0.1**
TCF Toulx Ste Croi 51.60 303 *e*P **P** **02 24 39.0 -0.7**
comp=Z,50nm,0.9s,mb4.8
TCF *e*pP pP 02 25 10.8 +0.8
TCF Toulx Ste Croi 51.60 303 *e*P **P** **02 24 39.0 -0.7**
comp=Z,25nm,0.9s,mb4.8
TCF *e*pP pP 02 25 10.8 +0.8
TCF Toulx Ste Croi 51.60 303 *e*P **P** **02 24 39.0 -0.7**
TCF *e**PP pP 02 25 10.8 +0.8
TCF pmax pmax
comp=Z,25nm,0.9s,mb4.8
STKI Sintang 51.70 128 P pP 02 25 14.6 +3.4
comp=Z,62nm,1.6s
HPK Haverah Park 51.82 313 *e*P **P** **02 24 40.7 -0.4**
HPK AMb AMB 02 24 42.5
comp=Z,122nm,1.3s,mb5.4
MCD Coleburn Disti 51.85 318 *e*P **P** **02 24 40.9 -0.4**
KBI1 Birley Grange 51.94 313 *e*P **P** **02 24 41.5 -0.6**
CAF Calviac 52.13 302 *e*P **P** **02 24 43.1 -0.5**
comp=Z,36nm,0.9s,mb4.7
CAF *e*pP pP 02 25 14.0 0.0
CAF Calviac 52.13 302 *e*P **P** **02 24 43.1 -0.5**
comp=Z,18nm,0.9s,mb4.7
CAF *e*pP pP 02 25 14.0 0.0
CAF Calviac 52.13 302 *e*P **P** **02 24 43.1 -0.5**
CAF *e**PP pP 02 25 14.0 0.0
CAF pmax pmax
comp=Z,18nm,0.9s,mb4.7
EBL Broad Law 52.16 316 *e*P **P** **02 24 43.0 -0.6**
WOL Wolverton 52.29 310 *e*P **P** **02 24 44.1 -0.6**
WOL AMb AMB 02 24 46.2
comp=Z,243nm,1.9s,mb5.5
EBH Black Hill 52.30 317 *e*P **P** **02 24 45.2 +0.5**
EKA Eskdalemuir Ar 52.33 315 P **P** **02 24 43.2 -1.8**
comp=Z,10nm,0.8s,mb4.5,baz=82,slow=6.5,SNR=17
ECK Cauldkaine Hil 52.35 315 *e*P **P** **02 24 44.9 -0.2**
ESK Eskdalemuir 52.36 315 *e*P **P** **02 24 45.0 -0.2**
ESK AMb AMB 02 24 51.7
comp=Z,89nm,1.8s,mb5.1
RJF Les Rejaudoux 52.37 302 *e*P **P** **02 24 45.1 -0.3**
comp=Z,53nm,1.1s,mb4.8
RJF *e*MLR MLR
comp=Z,346nm,18.5s
RJF Les Rejaudoux 52.37 302 *e*P **P** **02 24 45.1 -0.3**
comp=Z,26nm,1.1s,mb4.8
RJF LR LR
comp=Z,350nm,18.5s
RJF Les Rejaudoux 52.37 302 *e*P **P** **02 24 45.1 -0.3**
RJF pmax pmax
comp=Z,26nm,1.1s,mb4.8
RJF MLR MLR
comp=Z,350nm,18.5s
LDF La Druitiere 52.40 307 *e*P **P** **02 24 44.3 -1.3**
comp=Z,42nm,0.7s,mb4.9
LDF *e*pP pP 02 25 16.3 +0.3
LDF La Druitiere 52.40 307 *e*P **P** **02 24 44.3 -1.3**
comp=Z,21nm,0.7s,mb4.9
LDF *e*pP pP 02 25 16.3 +0.3
LDF La Druitiere 52.40 307 *e*P **P** **02 24 44.3 -1.3**
LDF *e**PP pP 02 25 16.3 +0.3
LDF pmax pmax
comp=Z,21nm,0.7s,mb4.9
EJON La Jonquera 52.41 298 P **P** **02 24 44.5 -1.2**
comp=Z,64nm,5.3s
MTLF Montolieu 52.56 300 *e*P **P** **02 24 46.0 -0.8**
comp=Z,24nm,0.9s,mb4.6
MTLF Montolieu 52.56 300 *e*P **P** **02 24 46.0 -0.8**
comp=Z,12nm,0.9s,mb4.6
MTLF Montolieu 52.56 300 *e*P **P** **02 24 46.0 -0.8**
MTLF pmax pmax
comp=Z,12nm,0.9s,mb4.6
FLN La Foliniere 52.58 307 *e*P **P** **02 24 45.5 -1.4**
comp=Z,91nm,1.3s,mb5.0
FLN *e*MLR MLR
comp=Z,392nm,21.5s
FLN La Foliniere 52.58 307 *e*P **P** **02 24 45.5 -1.4**
comp=Z,46nm,1.3s,mb5.0
FLN LR LR
comp=Z,390nm,21.5s
FLN La Foliniere 52.58 307 *e*P **P** **02 24 45.5 -1.4**
FLN pmax pmax
comp=Z,46nm,1.3s,mb5.0
FLN MLR MLR
comp=Z,390nm,21.5s
EAB Aberfoyle 52.76 317 *e*P **P** **02 24 47.6 -0.5**
GRR Gorron 52.93 307 *e*P **P** **02 24 48.1 -1.4**
comp=Z,74nm,0.8s,mb5.1
GRR Gorron 52.93 307 *e*P **P** **02 24 48.1 -1.4**
comp=Z,37nm,0.8s,mb5.2
GRR Gorron 52.93 307 *e*P **P** **02 24 48.1 -1.4**
GRR pmax pmax
comp=Z,37nm,0.8s,mb5.2
KAC Achnashellach 52.94 318 *e*P **P** **02 24 50.0 +0.6**
PGBU Glenifferbraes 52.94 316 *e*P **P** **02 24 49.2 -0.2**
PGBU AMb AMB 02 24 51.9
comp=Z,134nm,1.5s,mb5.5
LFF La Frestale 53.01 302 *e*P **P** **02 24 49.6 -0.5**
comp=Z,32nm,0.7s,mb4.8
LFF La Frestale 53.01 302 *e*P **P** **02 24 49.6 -0.5**
comp=Z,16nm,0.7s,mb4.9
LFF La Frestale 53.01 302 *e*P **P** **02 24 49.6 -0.5**
LFF pmax pmax
comp=Z,16nm,0.7s,mb4.9
MFF Saint Martin d 53.05 304 *e*P **P** **02 24 48.8 -1.5**
comp=Z,54nm,1.1s,mb4.9
MFF Saint Martin d 53.05 304 *e*P **P** **02 24 48.8 -1.5**
comp=Z,27nm,1.1s,mb4.9
MFF Saint Martin d 53.05 304 *e*P **P** **02 24 48.8 -1.5**
MFF pmax pmax
comp=Z,27nm,1.1s,mb4.9
KSB Sheil Bridge 53.08 318 *e*P **P** **02 24 50.7 +0.3**
HGH Gray Hill 53.14 311 *e*P **P** **02 24 50.1 -0.8**
MCH1 Michaelchurch 53.15 311 *e*P **P** **02 24 49.8 -1.3**
MCH1 AMb AMB 02 24 54.5
comp=Z,116nm,1.6s,mb5.4
KPL Plockton 53.16 318 *e*P **P** **02 24 50.6 -0.5**
KPL AMb AMB 02 24 53.9
comp=Z,183nm,1.9s,mb5.5
JHJ Hachijo jima 2 53.27 74 LR LR 02 49 46.9
comp=Z,167nm,20.0s,baz=298,slow=38
HTR Trevern Hill 53.29 312 *e*P **P** **02 24 51.4 -0.6**
GAL1 Galloway 53.32 315 *e*P **P** **02 24 52.4 +0.2**
GAL1 AMb AMB 02 24 53.1
comp=Z,57nm,1.8s,mb5.0
KAR1 Arisaig 53.37 318 *e*P **P** **02 24 51.6 -1.0**
ETOS Mallorca 53.44 295 P **P** **02 24 54.2 +0.9**
comp=Z,28nm,0.8s,mb5.0
EMIR Miracle 53.54 298 P **P** **02 24 55.2 +1.1**
comp=Z,19nm,0.8s,mb4.9
DAG Danmarks Havn 53.63 343⇑ *e*P **P** **02 24 54.1 -0.1**
comp=Z,17nm,0.8s,mb4.8
DAG Danmarks Havn 53.63 343⇑ *e*P **P** **02 24 54.1 -0.1**
DAG pmax pmax
comp=Z,17nm,0.8s,mb4.8
DAG Danmarks Havn 53.63 343⇑ *i*P **P** **02 24 54.1 -0.1**
comp=Z,17nm,0.8s,mb4.8
EPF Esparros 53.95 300 *e*P **P** **02 24 55.3 -1.7**
comp=Z,23nm,1.1s,mb4.5
EPF Esparros 53.95 300 *e*P **P** **02 24 55.3 -1.7**
comp=Z,12nm,1.1s,mb4.5
EPF Esparros 53.95 300 *e*P **P** **02 24 55.3 -1.7**
EPF pmax pmax
comp=Z,12nm,1.1s,mb4.5
SGMF Saint Gilles 54.05 307 *e*P **P** **02 24 56.5 -1.1**
comp=Z,73nm,0.9s,mb5.1
SGMF Saint Gilles 54.05 307 *e*P **P** **02 24 56.5 -1.1**
comp=Z,37nm,0.9s,mb5.1
SGMF Saint Gilles 54.05 307 *e*P **P** **02 24 56.5 -1.1**
SGMF pmax pmax
comp=Z,37nm,0.9s,mb5.1
EPOB Poblet 54.06 298 P **P** **02 24 58.3 +0.5**
comp=Z,13nm,0.9s,mb4.7
EBIE Bielsa 54.21 300 P **P** **02 24 58.7 -0.3**
comp=Z,14nm,0.9s,mb4.7
ROSF Rostrenen 54.47 307 *e*P **P** **02 24 59.4 -1.3**
comp=Z,78nm,1.1s,mb5.1
ROSF Rostrenen 54.47 307 *e*P **P** **02 24 59.4 -1.3**
comp=Z,39nm,1.1s,mb5.0
ROSF Rostrenen 54.47 307 *e*P **P** **02 24 59.4 -1.3**
ROSF pmax pmax
comp=Z,39nm,1.1s,mb5.0
QUIF Quistinic 54.55 307 *e*P **P** **02 24 59.9 -1.3**
comp=Z,123nm,1.3s,mb5.2
QUIF Quistinic 54.55 307 *e*P **P** **02 24 59.9 -1.3**
comp=Z,62nm,1.3s,mb5.2
QUIF Quistinic 54.55 307 *e*P **P** **02 24 59.9 -1.3**
QUIF pmax pmax
comp=Z,61nm,1.3s,mb5.2
ETSF Etsaut 54.62 300 *e*P **P** **02 25 01.2 -0.6**
comp=Z,34nm,1.0s,mb4.8
ETSF *e*pP pP 02 25 33.4 +0.9
ETSF Etsaut 54.62 300 *e*P **P** **02 25 01.2 -0.6**
comp=Z,17nm,1.0s,mb4.7
ETSF *e*pP pP 02 25 33.4 +0.9
ETSF Etsaut 54.62 300 *e*P **P** **02 25 01.2 -0.6**
ETSF *e**PP pP 02 25 33.4 +0.9
ETSF pmax pmax
comp=Z,17nm,1.0s,mb4.7
ERTA Horta de San J 54.73 298 P **P** **02 25 02.8 +0.1**
comp=Z,27nm,1.0s,mb4.9
EMHD Djebel Mahouad 54.76 291 P **P** **02 25 02.3 -0.7**
EIBI Ibiza 54.78 295 P **P** **02 25 04.0 +0.9**
comp=Z,20nm,0.9s,mb4.8
SJPF Ste Jean 54.99 301 *e*P **P** **02 25 03.1 -1.4**
comp=Z,28nm,1.0s,mb4.6
SJPF Ste Jean 54.99 301 *e*P **P** **02 25 03.1 -1.4**
comp=Z,14nm,1.0s,mb4.7
SJPF Ste Jean 54.99 301 *e*P **P** **02 25 03.1 -1.4**
SJPF pmax pmax
comp=Z,14nm,1.0s,mb4.7
ESAC San Caprasio 55.00 299 P **P** **02 25 05.5 +0.9**
comp=Z,20nm,0.7s,mb4.9
EALK Alkurruntz 55.14 301 P **P** **02 25 06.3 +0.7**
comp=Z,12nm,0.8s,mb4.7
ELIZ Elizondo 55.17 301 P **P** **02 25 06.0 +0.1**
comp=Z,12nm,1.0s,mb4.6
ELIZ Elizondo 55.17 301 P **P** **02 25 06.0 +0.2**
ELIZ pmax pmax
comp=Z,12nm,1.0s,mb4.6
EMOS Mosqueruela 55.53 297 P **P** **02 25 09.1 +0.7**
comp=Z,18nm,0.8s,mb5.0
EBNR Beni Rached 55.77 292 P **P** **02 25 10.7 +0.5**
ECHA Ech Chlef 55.95 292 P **P** **02 25 11.5 0.0**
EBEN Beniarda 56.03 295 P **P** **02 25 11.6 -0.4**
comp=Z,19nm,2.6s,mb4.5
ECRI Cripan 56.05 300 P **P** **02 25 12.3 +0.2**
comp=Z,105nm,2.5s,mb5.2
ECRI Cripan 56.05 300 P **P** **02 25 12.3 +0.2**
ECRI pmax pmax
comp=Z,105nm,2.5s,mb5.2
ECHE Chera 56.19 297 P **P** **02 25 13.7 +0.6**
comp=Z,14nm,0.8s,mb4.8
ECHE Chera 56.19 297 P **P** **02 25 13.7 +0.6**
ECHE pmax pmax
comp=Z,14nm,0.8s,mb4.8
EANR 'Ain N'Sour 56.23 292 P **P** **02 25 13.9 +0.4**
BILL Bilibino 56.31 27⇑ *e*P **P** **02 25 15.8 +2.3**
BILL *e**PP pP 02 25 45.9 +1.6
BILL *i* 02 27 20.9
BILL *e*S **S** **02 32 56.4 +3.3**
BILL pmax pmax
comp=Z,14nm,1.4s,mb4.6
BILL MLR MLR
comp=Z,200nm,18.0s
ETRT Tiaret 56.32 291 P **P** **02 25 14.2 0.0**
ELAN Lanestosa 56.44 301 P **P** **02 25 14.8 0.0**
comp=Z,33nm,0.9s,mb5.2
ETOR Torete 56.45 298 P **P** **02 25 14.7 -0.3**
comp=Z,4.5nm,0.8s,mb4.3
ETOR Torete 56.45 298 P **P** **02 25 14.7 -0.3**
ETOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
BBKI Banjar Baru 56.54 127 P pP 02 25 49.7 +3.0
comp=Z,266nm,1.1s,comp=Z,2µm
ETOB Tobarra 56.99 296 P **P** **02 25 20.0 +1.2**
comp=Z,13nm,0.8s,mb4.8
CART Cartagena 57.05 294 *e*P **P** **02 25 19.0 -0.3**
comp=Z,41nm,0.8s,mb5.3
EMUR La Murta 57.11 295 P **P** **02 25 20.1 +0.4**
comp=Z,8.3nm,0.7s,mb4.7
PETK Petropavlovsk- 57.52 45 LR LR 02 50 02.0
comp=Z,186nm,20.0s,baz=167,slow=36
EARI Arriondas 57.60 302 P **P** **02 25 23.4 +0.4**
comp=Z,11nm,0.9s,mb4.7
EVIA Vianos 57.67 296 P **P** **02 25 24.9 +1.3**
comp=Z,12nm,0.8s,mb4.8
EVIA Vianos 57.67 296 P **P** **02 25 24.9 +1.3**
EVIA pmax pmax
comp=Z,12nm,0.8s,mb4.8
GUD Guadarrama 57.98 299 P **P** **02 25 25.1 -0.6**
comp=Z,10nm,1.2s,mb4.5
GUD Guadarrama 57.98 299 P **P** **02 25 25.1 -0.6**
GUD pmax pmax
comp=Z,11nm,1.2s,mb4.6
EHUE Huescar 58.09 295 P **P** **02 25 25.7 -0.9**
comp=Z,167nm,3.1s
EHUE Huescar 58.09 295 P **P** **02 25 25.7 -0.8**
EHUE pmax pmax
comp=Z,167nm,3.1s
ENIJ Nijar 58.18 294 P **P** **02 25 28.0 +0.8**
comp=Z,18nm,0.9s,mb4.9
ENIJ Nijar 58.18 294 P **P** **02 25 28.0 +0.8**
ENIJ pmax pmax
comp=Z,18nm,0.9s,mb4.9
ESDC Sonseca Array 58.26 298 P **P** **02 25 26.5 -1.1**
comp=Z,5.9nm,0.8s,mb4.5,baz=57,slow=7.6,SNR=18
ESDC pP pP 02 26 00.1 +1.4
comp=Z,3.3nm,0.7s,baz=54,slow=7.6,SNR=2.8
ESDC Sonseca Array 58.26 298 P **P** **02 25 27.2 -0.5**
comp=Z,5.9nm,0.8s,mb4.5
ESLA Sonseca Array 58.26 298 *e*P **P** **02 25 28.0 +0.4**
comp=Z,4.5nm,1.0s,mb4.2
EQES Quesada 58.44 295 P **P** **02 25 29.0 0.0**
comp=Z,19nm,0.8s,mb5.0
PAB San Pablo 58.58 298 *e*P **P** **02 25 30.4 +0.4**
comp=Z,22nm,1.4s,mb4.8
PAB San Pablo 58.58 298 *e*P **P** **02 25 30.4 +0.5**
PAB pmax pmax
comp=Z,22nm,1.4s,mb4.8
EBER Berja 58.71 294 P **P** **02 25 31.4 +0.5**
comp=Z,17nm,0.7s,mb5.0
EBAN Banos Encina 58.79 296 P **P** **02 25 31.7 +0.3**
comp=Z,15nm,0.7s,mb4.9
EBAN Banos Encina 58.79 296 P **P** **02 25 31.7 +0.3**
EBAN pmax pmax
comp=Z,15nm,0.7s,mb4.9
EPON Pontenova 58.88 303 P **P** **02 25 31.2 -0.7**
comp=Z,92nm,4.6s
ECOG Cogollos-Vega 59.02 295 P **P** **02 25 33.1 +0.1**
comp=Z,4.9nm,0.6s,mb4.5
ECOG Cogollos-Vega 59.02 295 P **P** **02 25 33.1 +0.1**
ECOG pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
TAM Tamanrasset 59.15 276 *e*P **P** **02 25 34.2 +0.2**
ECAL Calabor 59.19 301 P **P** **02 25 34.8 +0.7**
comp=Z,1.7nm,1.7s,mb3.6
EGUA Guajares 59.22 295 P **P** **02 25 34.3 -0.1**
comp=Z,506nm,4.2s
EGUA Guajares 59.22 295 P **P** **02 25 34.3 -0.1**
EGUA pmax pmax
comp=Z,506nm,4.2s
ERUA La Rua 59.27 302 P **P** **02 25 35.9 +1.3**
comp=Z,12nm,1.8s,mb4.4
ERUA La Rua 59.27 302 P **P** **02 25 35.9 +1.3**
ERUA pmax pmax
comp=Z,12nm,1.8s,mb4.4
ERON Agron 59.31 295 P **P** **02 25 35.6 +0.6**
comp=Z,790nm,4.6s
EADA Adamuz 59.34 296 P **P** **02 25 35.5 +0.3**
comp=Z,12nm,1.0s,mb4.7
ELUQ Luque 59.40 296 P **P** **02 25 35.8 +0.3**
comp=Z,9.0nm,1.4s,mb4.4
ELUQ Luque 59.40 296 P **P** **02 25 35.8 +0.2**
ELUQ pmax pmax
comp=Z,9.0nm,1.4s,mb4.4
ELOJ Sierra Loja 59.50 295 P **P** **02 25 36.1 -0.2**
comp=Z,3.0nm,0.7s,mb4.2
ELOJ Sierra Loja 59.50 295 P **P** **02 25 36.1 -0.2**
ELOJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
EPLA Plasencia 59.55 299 P **P** **02 25 37.5 +0.9**
comp=Z,40nm,1.0s,mb5.2
EPLA Plasencia 59.55 299 P **P** **02 25 37.5 +0.9**
EPLA pmax pmax
comp=Z,40nm,1.0s,mb5.2
ECAB El Cabril 59.98 297 P **P** **02 25 39.5 0.0**
comp=Z,14nm,0.9s,mb4.8
STS Santiago 59.99 303 P **P** **02 25 39.3 -0.3**
comp=Z,25nm,2.2s,mb4.7
STS Santiago 59.99 303 P **P** **02 25 39.3 -0.3**
STS pmax pmax
comp=Z,25nm,2.2s,mb4.7
SUMG Summit 60.05 341 *e*P **P** **02 25 41.0 +1.5**
comp=Z,29nm,1.1s,mb5.0
ELOB Lobios 60.11 302 P **P** **02 25 41.1 +0.7**
comp=Z,22nm,0.9s,mb5.0
EMIJ Mijas 60.21 295 P **P** **02 25 41.0 -0.2**
comp=Z,17nm,3.0s
EJIF Jimena Fronter 60.76 295 P **P** **02 25 44.4 -0.5**
comp=Z,1µm,4.4s
EJIF Jimena Fronter 60.76 295 P **P** **02 25 44.4 -0.5**
EJIF pmax pmax
comp=Z,1µm,4.4s
EBAD Badajoz 60.79 298 P **P** **02 25 45.3 +0.2**
comp=Z,16nm,0.9s,mb4.9
ESPR Espera 60.84 296 P **P** **02 25 45.3 -0.1**
comp=Z,18nm,0.9s,mb4.9
KAPI Kappang 60.86 124 P pP 02 26 17.6 +0.5
EMIN Mina Concepcio 61.00 297 P **P** **02 25 46.6 +0.2**
comp=Z,11nm,0.8s,mb4.7
EVO Evora 61.59 298⇑ *i*P **P** **02 25 50.1 -0.3**
comp=Z,79nm,1.8s,mb4.9
EVO *e*MLR MLR
comp=Z,238nm,20.8s
EGRO El Granado 61.68 297 P **P** **02 25 51.1 0.0**
comp=Z,26nm,3.0s
BATI Baumata 67.30 125 P pP 02 27 00.4 +0.8
comp=Z,43nm,1.4s
TOA0 Torodi Ar. Sit 67.53 269 *e*P **P** **02 26 28.4 -1.0**
TORD Torodi Ar. Bea 67.53 269 P **P** **02 26 28.1 -1.2**
comp=Z,22nm,0.7s,mb5.0,baz=49,slow=5.7,SNR=273
TORD pP pP 02 27 01.0 -0.2
comp=Z,6.8nm,0.8s,baz=51,slow=5.5,SNR=1.9
LSZ Lusaka 67.90 227 *e*P **P** **02 26 31.2 -0.3**
comp=Z,2.5nm,0.6s,mb4.1
LSZ Lusaka 67.90 227 *e*P **P** **02 26 31.2 -0.3**
LSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
COLD Coldfoot 69.87 17 *e*P **P** **02 26 44.3 +1.3**
comp=Z,30nm,1.0s,mb5.0
IMA2 Indian Mountai 69.97 18 *e*P **P** **02 26 44.6 +0.9**
IMA2 *e*pP pP 02 27 16.0 +0.3
INK Inuvik 71.95 10 *e*P **P** **02 26 56.5 +1.0**
comp=Z,2µm,1.2s
INK *e*pP pP 02 27 26.9 -0.9
INK Inuvik 71.95 10 *e*P **P** **02 26 56.5 +0.9**
INK *e**PP pP 02 27 26.9 -0.8
INK pmax pmax
comp=Z,2µm,1.2s
CHUM Lake Minchumin 72.08 19 *e*P **P** **02 26 57.2 +0.8**
comp=Z,16nm,0.9s,mb4.7
CHUM *e*pP pP 02 27 29.0 +0.5
BPAW Bear Paw Mtn. 72.24 19 *e*P **P** **02 26 58.6 +1.2**
comp=Z,19nm,1.1s,mb4.7
BPAW *e*pP pP 02 27 29.6 +0.1
COLA College 72.36 17 *e*P **P** **02 26 59.3 +1.2**
comp=Z,32nm,0.9s,mb5.0
COLA *e*pP pP 02 27 30.8 +0.5
COLA College 72.36 17 *e*P **P** **02 26 59.3 +1.2**
COLA *e**PP pP 02 27 30.8 +0.5
COLA pmax pmax
comp=Z,32nm,0.9s,mb5.0
EOSO Osorio 72.37 292 P **P** **02 26 58.7 -0.1**
comp=Z,72nm,3.1s
KTH Kantishna Hill 72.71 19 *e*P **P** **02 27 01.4 +1.3**
comp=Z,41nm,1.1s,mb5.1
KTH *e*pP pP 02 27 32.7 +0.3
PPLA Purkeypile 72.91 20 *e*P **P** **02 27 02.5 +1.2**
comp=Z,75nm,1.5s,mb5.2
PPLA *e*pP pP 02 27 32.4 -1.2
CCAN Las Canadas 73.06 293 P **P** **02 27 04.9 +2.0**
comp=Z,570nm,3.4s
MCK McKinley 73.06 18 *e*P **P** **02 27 03.6 +1.4**
comp=Z,13nm,1.0s,mb4.6
MCK *e*pP pP 02 27 32.5 -2.0
MCK McKinley 73.06 18 *e*P **P** **02 27 03.6 +1.4**
MCK *e**PP pP 02 27 32.5 -2.0
MCK pmax pmax
comp=Z,13nm,1.0s,mb4.6
MBWA Marble Bar 73.41 135 P pP 02 27 38.7 +1.6
comp=Z,55nm,1.5s
EGOM La Gomera 73.53 293 P **P** **02 27 05.8 +0.2**
comp=Z,19nm,0.8s,mb4.9

EGAK	**Eagle**	**73.89**	**15**	*e*P		**P**	**02 27 07.8**	**+0.8**
	comp=Z,19nm,1.2s,mb4.7								
EGAK				*e*pP		pP	02 27 38.1	-1.2
CHIE	**El Hierro**	**74.32**	**293**	P		**P**	**02 27 10.6**	**+0.3**
	comp=Z,944nm,4.6s								
DAWY	**Dawson**	**74.87**	**14**	*e*P		**P**	**02 27 13.8**	**+1.1**
DAWY				*e*pP		pP	02 27 45.6	+0.4
KAKA	**Kakadu**	**74.98**	**120**	*e*P		**P**	**02 27 09.0**	**-5.0**
	comp=Z,3.7nm,0.6s,mb4.2								
DBIC	**Dimbokro**	**76.56**	**268**	P		**P**	**02 27 23.2**	**+0.1**
	comp=Z,11nm,0.8s,mb4.5,baz=18,slow=7.3,SNR=15								
DBIC				LR		LR	03 03 51.4		
	comp=Z,183nm,20.0s,baz=28,slow=38								
DBIC	**Dimbokro**	**76.56**	**268**	*e*P		**P**	**02 27 23.2**	**0.0**
	comp=Z,17nm,1.0s,mb4.6								
DBIC				*e*PcP		PcP	02 27 34.6	+0.4
DBIC				*e*pP		pP	02 27 55.9	+0.2
DBIC	**Dimbokro**	**76.56**	**268**	*e*P		**P**	**02 27 23.2**	**0.0**
DBIC				*e*			02 27 34.6		
DBIC				*e**PP		pP	02 27 55.9	+0.2
DBIC				pmax		pmax			
	comp=Z,17nm,1.0s								
LIC	**Lamto**	**76.96**	**268**	⇑*i*P		**P**	**02 27 25.5**	**+0.1**
	comp=Z,93nm,1.2s,mb5.0								
LIC				*e*MLR		MLR			
	comp=Z,359nm,17.5s								
LIC	**Lamto**	**76.96**	**268**	⇑*i*P		**P**	**02 27 25.5**	**+0.1**
	comp=Z,47nm,1.2s,mb5.0								
LIC				LR		LR			
	comp=Z,180nm,17.5s								
KDAK	**Kodiak Island**	**76.96**	**23**	P		**P**	**02 27 25.4**	**+0.7**
	comp=Z,4.2nm,0.5s,mb4.3,baz=13,slow=3.7,SNR=5.4								
KDAK				LR		LR	03 04 46.7		
	comp=Z,154nm,18.9s,baz=242,slow=38								
KDAK	**Kodiak Island**	**76.96**	**23**	P		**P**	**02 27 25.4**	**+0.7**
KDAK				LR		LR	03 04 46.6		
HYT	**Haines Junctio**	**78.19**	**15**	*e*P		**P**	**02 27 33.6**	**+2.2**
HYT				*e*pP		pP	02 28 04.9	+0.8
YKA	**Yellowknife Ar**	**79.47**	**4**	P		**P**	**02 27 38.6**	**+0.2**
	comp=Z,3.8nm,0.5s,mb4.3,baz=346,slow=5.7,SNR=20								
YKA				pP		pP	02 28 12.1	+1.0
	comp=Z,8.6nm,0.9s,baz=350,slow=5.6,SNR=2.9								
YKA	**Yellowknife Ar**	**79.47**	**4**	P		**P**	**02 27 38.6**	**+0.2**
YKA				*PP		pP	02 28 12.1	+0.9
YKA				pmax		pmax			
	comp=Z,4.0nm,0.5s								
YKA				pmax		pmax			
	comp=N,9.0nm,0.9s								
BOSA	**Boshof**	**80.18**	**222**	P		**P**	**02 27 44.1**	**+1.5**
	comp=N,4.1nm,0.9s,mb4.0,baz=90,slow=13,SNR=3.6								
WRA	**Warramunga Arr**	**81.39**	**124**	P		**P**	**02 27 50.6**	**+1.4**
	comp=N,4.2nm,0.8s,mb4.1,baz=325,slow=4.9,SNR=16								
WRA				pP		pP	02 28 23.1	+0.9
	comp=N,10.0nm,0.8s,baz=324,slow=4.9,SNR=6.6								
WRAB	**Tennant Creek**	**81.39**	**124**	P		**P**	**02 27 51.3**	**+2.0**
	comp=N,66nm,0.5s,mb5.5,SNR=5.2								
WRAB	**Tennant Creek**	**81.39**	**124**	*e*P		**P**	**02 27 51.3**	**+2.0**
	comp=N,19nm,1.0s,mb4.7								
WRAB				*e*pP		pP	02 28 22.9	+0.8
WRAB	**Tennant Creek**	**81.39**	**124**	*e*P		**P**	**02 27 51.3**	**+2.0**
WRAB				*e**PP		pP	02 28 22.9	+0.7
WRAB				pmax		pmax			
	comp=Z,19nm,1.0s,mb4.7								
WB2	**Warramunga Arr**	**81.40**	**124**	*e*P		**P**	**02 27 50.6**	**+1.3**
DLBC	**Dease Lake**	**81.80**	**12**	P		**P**	**02 27 49.7**	**-1.2**
	comp=Z,4.5nm,1.0s,mb4.1,baz=316,slow=13,SNR=3.0								
DLBC	**Dease Lake**	**81.80**	**12**	P		**P**	**02 27 49.7**	**-1.2**
PMG	**Port Moresby**	**83.37**	**107**	*e*P		**P**	**02 28 01.1**	**+1.4**
	comp=Z,7.2nm,1.0s,mb4.4								
PMG	**Port Moresby**	**83.37**	**107**	*e*P		**P**	**02 28 01.1**	**+1.4**
PMG				pmax		pmax			
	comp=Z,7.0nm,1.0s								
ASAR	**Alice Springs**	**83.78**	**126**	P		**P**	**02 28 02.6**	**+1.1**
	comp=Z,1.6nm,0.7s,mb3.9,baz=316,slow=4.8,SNR=12								
ASAR				pP		pP	02 28 35.1	+0.5
	comp=Z,2.8nm,0.8s,baz=312,slow=4.8,SNR=5.2								
FORT	**Forrest**	**85.56**	**135**	*e*P		**P**	**02 28 13.2**	**+2.9**
	comp=Z,12nm,0.7s,mb4.7								
EDM	**Edmonton**	**88.79**	**4**	*e*P		**P**	**02 28 27.1**	**+1.3**
ULM	**Lac du Bonnet**	**91.43**	**353**	LR		LR	03 13 19.2		
	comp=Z,245nm,19.4s,baz=332,slow=38								
ETW	**Entiat**	**93.74**	**9**	*e*P		**P**	**02 28 49.6**	**+0.9**
ETW				*e*pP		pP	02 29 20.7	-1.5
LPAZ	**La Paz**	**139.72**	**292**	PKP		PKPdf	02 35 01.8	+2.2
	comp=Z,0.5nm,0.3s,baz=48,slow=1.5,SNR=4.2								
LCO	**Las Campanas**	**148.76**	**276**	*e*PKPbc		PKPbc	02 35 20.5	+1.5
PLCA	**Paso Flores**	**152.05**	**253**	PKPbc		PKPbc	02 35 28.1	+1.6
	comp=Z,5.3nm,0.7s,baz=88,slow=2.7,SNR=12								

*ISCJB **06** 02:28:46.9±0.9,3697N±003×2928E±002,h0km±6km, Error ellipse: s-maj=4.9km s-min=3.2km az=163.6*
*DDA **06** 02:28:46.9,3701N×2930E,h19km±1km,Md3.5*
*ATH **06** 02:28:47.7,3694N×2920E,h12km±1km,Md3.6/7*
*ISK **06** 02:28:47.5,3713N×2927E,h2km, MD3.4*
*CSEM **06** 02:28:47.1±0.1,3705N×2928E,h2km,MD3.5,Error ellipse: s-maj=2.2km s-min=1.2km az=166.0*
*NEIC **06** 02:28:48.0,3716N×2928E,h6km,MD3.6(ATH), ML3.4(ISK),After ISK.*

ISC 06 02:28:47.6±0.7,3698N±003×2927E±002,h2km±5km,n43, σ1§15/58,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**42**	*i* P	**Pg**	**02 28 53.7**	**-0.7**
GOLH				*i* S	**Sg**	**02 29 00.9**	**+2.0**
TURN	**Turunc**	**0.54**	**259**	*i* P	**Pg**	**02 29 02.7**	**+4.7**
DENT	**Denizli**	**0.80**	**347**	*e*PG	**Pg**	**02 29 00.9**	**-2.1**
KSL	**Kastellorizon**	**0.86**	**163**	*e*PB	**Pb**	**02 29 03.8**	**-1.5**
ANTB	**Antalya**	**1.11**	**93**	*e*PN	**Pn**	**02 29 10.0**	**-0.1**
ANTB				*e*SN	**Sn**	**02 29 26.6**	**+0.6**
BCK	**Bucak**	**1.16**	**65**	*e*PN	**Pn**	**02 29 09.4**	**-1.4**
BCK				*e*SN	**Sn**	**02 29 25.5**	**-1.7**
ARG	**Arkhangelos**	**1.19**	**231**	*e*PB	**Pb**	**02 29 09.2**	**-1.7**
ARG				*e*SB	**Sb**	**02 29 24.5**	**-2.2**
MLSB	**Milas**	**1.23**	**285**	*e*PN	**Pn**	**02 29 11.7**	**-0.1**
MLSB				*e*SN	**Sn**	**02 29 29.2**	**+0.1**
AYDN	**Tasoluk**	**1.30**	**302**	*i* P	**Pg**	**02 29 12.0**	**-0.6**
AYDN				*i* S	**Sg**	**02 29 31.8**	**+2.4**
TKTP	**Tekketepe**	**1.35**	**38**	*i* P	**Pg**	**02 29 12.7**	**-0.8**
TKTP				*i* S	**Sg**	**02 29 32.6**	**+1.5**
KHL	**Karahalli**	**1.36**	**9**	*e*PN	**Pn**	**02 29 11.3**	**-2.3**
BDRM	**Kayabasi**	**1.46**	**274**	*i* P	**Pn**	**02 29 14.7**	**-0.3**
BDRM				*i* S	**Sg**	**02 29 35.8**	**+1.2**
BODT	**Bodrum**	**1.57**	**274**	*e*PN	**Pn**	**02 29 17.0**	**+0.6**
BODT				*e*SN	**Sn**	**02 29 39.1**	**+1.8**
KULA	**Kula-Manisa**	**1.61**	**343**	*e*PN	**Pn**	**02 29 15.8**	**-1.2**
MANT	**Manisa**	**1.61**	**340**	*i* P	**Pn**	**02 29 16.2**	**-0.8**
MANT				*i* S	**Sn**	**02 29 39.2**	**+0.7**
NISR	**Nisiros**	**1.75**	**259**	*e*PN	**Pn**	**02 29 19.0**	**0.0**
GCAM	**G?zelcaml?**	**1.77**	**295**	*i* P	**Pn**	**02 29 19.5**	**+0.2**
GCAM				*i* S	**Sn**	**02 29 44.1**	**+1.7**
SHUT	**Suhut-Afyon**	**1.87**	**32**	*e*PN	**Pn**	**02 29 20.3**	**-0.4**
SMG	**Samos**	**2.07**	**291**	⇓*i*PN	**Pn**	**02 29 23.6**	**+0.3**
DEMI	**Demirci**	**2.11**	**348**	*i* P	**Pn**	**02 29 23.5**	**-0.4**
GDZ	**Gediz**	**2.12**	**5**	*i* P	**Pn**	**02 29 23.3**	**-0.7**
IZM	**Izmir**	**2.13**	**312**	*e*PN	**Pn**	**02 29 24.1**	**-0.1**
KDAG	**Bornova**	**2.13**	**313**	*i* P	**Pn**	**02 29 25.3**	**+1.1**
ALT	**Altintas**	**2.18**	**18**	*e*PN	**Pn**	**02 29 24.0**	**-0.9**
BOLV	**Bolvadin**	**2.19**	**37**	*i* P	**Pn**	**02 29 25.0**	**0.0**
AKHS	**Akhisar**	**2.22**	**329**	*i* P	**Pn**	**02 29 24.5**	**-0.9**
KARP	**Karpathos**	**2.22**	**231**	*e*PN	**Pn**	**02 29 25.9**	**+0.5**
KARP				*e*SN	**Sn**	**02 29 53.3**	**-0.1**
AKS	**Akhisar**	**2.22**	**329**	*e*PN	**Pn**	**02 29 24.3**	**-1.1**
BLCB	**Balcova**	**2.26**	**309**	*e*PN	**Pn**	**02 29 25.4**	**-0.5**
HDMB	**Hadim**	**2.58**	**89**	*e*PN	**Pn**	**02 29 31.7**	**+1.4**
KONT	**Konya--Tatoy**	**2.64**	**68**	*e*PN	**Pn**	**02 29 31.7**	**+0.5**
DST	**Dursunbey**	**2.67**	**349**	*e*PN	**Pn**	**02 29 30.8**	**-0.8**
LADK	**Ladik-KONYA**	**2.75**	**63**	*e*PN	**Pn**	**02 29 33.1**	**+0.4**
KIZT	**Kizilcal**	**2.81**	**47**	*e*PN	**Pn**	**02 29 33.3**	**-0.2**
APE	**Apeiranthos**	**2.99**	**273**	*e*PB	**Pb**	**02 29 37.0**	**-4.6**
NPS	**Neapolis**	**3.42**	**241**	*e*PN	**Pn**	**02 29 42.6**	**+0.7**
NPS				*e*SN	**Sn**	**02 30 21.8**	**-1.1**
LAST	**Lasithi**	**3.56**	**241**	P	**Pn**	**02 29 45.4**	**+1.5**
IKL	**Isikli**	**3.63**	**100**	*e*PN	**Pn**	**02 29 46.5**	**+1.7**
ANTO	**Ankara**	**4.00**	**43**	*e*PN	**Pn**	**02 29 50.9**	**+1.0**
MERS	**Mersin**	**4.21**	**90**	*e*PN	**Pn**	**02 29 55.0**	**+2.2**
EREN	**Erenkoy**	**4.22**	**109**	*e*PN	**Pn**	**02 29 55.6**	**+2.8**
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn	**Pn**	**02 29 54.7**	**-0.6**
BR131				*e*Sn	**Sn**	**02 30 47.0**	**-0.1**
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn	**Pn**	**02 29 54.7**	**-0.6**
BR131				*e*Sn	**Sn**	**02 30 47.0**	**-0.1**

IDC 06 02:33:15.6±1.5,805S×12408E,h0km,mb3.7/2,mb1 3.8/5, mb1mx3.6/16,mbtmp3.6/5,ML3.5/2,Error ellipse: s-maj=61.3km s-min=23.4km az=68.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.18**	**191**	Pn	Pn	02 33 52.9	-0.2
	14nm,0.3s,baz=344,slow=7.4,SNR=14						
BATI				Sn	Sn	02 34 13.1	-7.7
	72nm,0.3s,baz=167,slow=19,SNR=14						
WRA	**Warramunga Arr**	**15.44**	**141**	Pn	Pn	02 36 54.6	-0.3
	0.1nm,0.3s,baz=316,slow=13,SNR=3.5						
WRA				Sn	Sn	02 39 36.8	-10
	0.4nm,0.3s,baz=316,slow=24,SNR=5.9						
ASAR	**Alice Springs**	**18.16**	**150**	P	Pn	02 37 29.4	+0.1
	0.4nm,0.3s,baz=327,slow=12,SNR=21						
ASAR				S	Sn	02 40 39.5	-13
	0.2nm,0.3s,baz=315,slow=23,SNR=4.7						
STKA	**Stephens Creek**	**28.77**	**148**	P	P	02 39 15.4	+0.3
	1.3nm,0.7s,baz=322,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**66.03**	**330**	P	P	02 44 04.2	+0.1
	0.2nm,0.4s,baz=126,slow=7.4,SNR=2.9						

*ISCJB **06** 02:40:20.2±0.9, 1856S±006×6905W±0.10,h137km±8km, mb3.7/5, Error ellipse: s-maj=15.8km s-min=8.7km az=16.6*
*IDC **06** 02:40:20.6±1.2, 1854S×6908W,h125km±9km,mb3.8/5, mb1 3.9/8,mb1mx3.6/18,mbtmp3.8/8, Error ellipse: s-maj=20.5km s-min=9.5km az=100.0*

ISC 06 02:40:21.3±0.9,1855S±006×6906W±010,h131km±8km, n11,σ0§67/12,mb3.7/5,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.42**	**22**	P	**Pn**	**02 41 00.9**	**+0.3**
	26nm,0.3s,baz=191,slow=4.4,SNR=357						
LPAZ				S	**Sn**	**02 41 30.7**	**0.0**
	3.3nm,0.3s,baz=29,slow=23,SNR=4.1						
LVC	**Limon Verde**	**4.04**	**178**	P	**Pn**	**02 41 22.0**	**+0.3**
	15nm,0.3s,baz=347,slow=8.9,SNR=110						
LVC				S	**Sn**	**02 42 08.2**	**-0.3**
	28nm,0.3s,baz=300,slow=20,SNR=9.4						
SIV	**San Ignacio**	**8.04**	**73**	P	**Pn**	**02 42 14.8**	**-0.6**
	3.0nm,0.3s,baz=270,slow=11,SNR=43						
SIV				S	**Sn**	**02 43 44.4**	**-0.4**
	baz=328,slow=22,SNR=6.3						
BDFB	**Brasilia**	**20.32**	**85**	P	**P**	**02 44 49.1**	**+1.9**
	4.2nm,0.6s,baz=253,slow=17,SNR=18						
TXAR	**Lajitas Array**	**58.15**	**324**	P	**P**	**02 50 01.0**	**-0.4**
	0.1nm,0.4s,mb3.0,baz=140,slow=7.2,SNR=2.3						
DBIC	**Dimbokro**	**68.06**	**75**	P	**P**	**02 51 06.7**	**-0.6**
	3.0nm,0.6s,mb4.2,baz=201,slow=5.6,SNR=9.9						
TORD	**Torodi Ar. Bea**	**76.52**	**71**	P	**P**	**02 51 56.9**	**-0.6**
	1.9nm,0.6s,mb3.9,baz=252,slow=5.2,SNR=40						
ESDC	**Sonseca Array**	**83.84**	**45**	P	**P**	**02 52 36.8**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=241,slow=6.1,SNR=4.7						
YKA	**Yellowknife Ar**	**88.37**	**341**	P	**P**	**02 52 57.7**	**-0.1**
	1.0nm,0.6s,mb3.8,baz=135,slow=4.5,SNR=3.8						
WRA	**Warramunga Arr**	**135.39**	**212**	PKP	PKPdf	02 59 25.8	-0.7
	0.3nm,0.6s,baz=149,slow=2.4,SNR=2.8						
SONM	**Songino Array**	**150.56**	**6**	PKPbc	PKPbc	02 59 58.6	+1.0
	0.8nm,0.7s,baz=287,slow=2.2,SNR=4.3						

*NIED **06** 02:50:00,4280N×14840E,h5km,Mw4.0 Best double couple: M01.29000×10^15 NP1:φ=256.00000°,δ49.00000°, λ-96.00000°. NP2:φ85.00000°,δ42.00000°,λ-83.00000°.*
*IDC **06** 02:50:41.1±0.6,4283N×149.11E,h0km,mb4.2/15, mb1 4.3/19,mb1mx4.2/25,mbtmp4.1/19,ML4.1/2,Error ellipse: s-maj=18.2km s-min=14.2km az=154.0*
*NEIC **06** 02:50:42.8±0.4,4284N×149.11E,h10km,mb4.7/17, MW4.0(NIED),Error ellipse: s-maj=10.1km s-min=6.3km az=146.0*
*MOS **06** 02:50:44.9±0.8,4274N×14896E,h33km,mb4.7/26,Error ellipse: s-maj=13.6km s-min=8.3km az=120.6*
*JMA **06** 02:50:44.9±0.2,4277N×14842E,h0km, M4.9*
*ISCJB **06** 02:50:45.3±0.4,4269N±006×14869E±004,h33km, mb4.4/37,MS4.0/2, Error ellipse: s-maj=8.8km s-min=3.9km az=174.8*
*SZGRF **06** 02:50:49.6,4287N×14845E,h33km,mb4.6,Off southeast coast of Hokkaido, Japan*

ISC 06 02:50:47.2±0.4,4275N±006×14871E±004,h35km,n117, σ0§99/130,mb4.4/37,MS4.0/2,11C-4D,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.26**	**287**	P	**Pn**	**02 51 21.2**	**-0.8**
NEM2				*e*S	**Sn**	**02 51 48.0**	**-0.6**
JRA	**Rausu**	**2.87**	**296**	P	**Pn**	**02 51 30.5**	**+0.1**
JRA				*e*S	**Sn**	**02 52 03.5**	**-0.3**
JAK	**Akkeshi**	**2.96**	**276**	P	**Pn**	**02 51 31.4**	**-0.2**
JAK				*e*S	**Sn**	**02 52 05.5**	**-0.4**
JAR	**Ashorobuto**	**3.66**	**280**	P	**Pn**	**02 51 41.2**	**-0.1**
JAR				*e*S	**Sn**	**02 52 22.7**	**-0.6**
JTKR	**Abashiri--Toko**	**3.71**	**291**	P	**Pn**	**02 51 42.2**	**+0.3**
JTKR				*e*S	**Sn**	**02 52 24.4**	**+0.1**
JCH	**Churui**	**3.94**	**270**	P	**Pn**	**02 51 45.2**	**0.0**
JCH				*e*S	**Sn**	**02 52 29.7**	**-0.5**
ERM	**Erimo**	**4.18**	**262**	*e*Pn	**Pn**	**02 51 49.9**	**+1.5**
ERM				*e*Sn	**Sn**	**02 52 35.5**	**-0.4**
JNBK	**Urakawa-nobuka**	**4.43**	**266**	P	**Pn**	**02 51 51.6**	**-0.2**
JNBK				*e*S	**Sn**	**02 52 41.6**	**-0.5**
JKK2	**Kamakawa 2**	**4.49**	**286**	P	**Pn**	**02 51 54.1**	**+1.4**
JFR	**Furan**	**4.51**	**277**	P	**Pn**	**02 51 53.4**	**+0.5**
JFR				*e*S	**Sn**	**02 52 44.1**	**0.0**
ASAJ	**Asahikawa**	**4.66**	**289**	Pn	**Pn**	**02 51 57.0**	**+2.0**
	11nm,0.3s,baz=115,slow=12,SNR=15						
ASAJ				Sn	**Sn**	**02 52 54.7**	**+7.0**
	2.6nm,0.3s,baz=281,slow=25,SNR=5.7						
ASAJ	**Asahikawa**	**4.66**	**289**	PN	**Pn**	**02 51 57.0**	**+2.1**
ASAJ						02 52 54.7	
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
JWK2	**Keihoku**	**5.54**	**300**	P	**Pn**	**02 52 09.2**	**+2.1**
JKB	**Kayabe**	**5.76**	**264**	*e*S	**Sn**	**02 53 12.7**	**-2.2**
JANG	**Nango**	**5.90**	**249**	P	**Pn**	**02 52 10.2**	**-1.8**
JANG				*e*S	**Sn**	**02 53 13.8**	**-4.5**
JMK	**Ichinoseki**	**6.83**	**239**	P	**Pn**	**02 52 23.7**	**-1.1**
MJAR	**Matsushiro Arr**	**10.19**	**236**	Pn	**Pn**	**02 53 14.2**	**+3.3**
	baz=203,slow=12,SNR=2.9						
MJAR				Sn	**Sn**	**02 55 14.2**	**+10**
	comp=N,0.7nm,0.3s,baz=244,slow=33,SNR=4.7						
HABR	**Khabarovsk**	**11.14**	**306**	PN	**Pn**	**02 53 22.7**	**-1.1**
PETK	**Petropavlovsk-**	**11.98**	**27**	Pn	**Pn**	**02 53 29.9**	**-5.3**
	comp=N,0.3nm,0.3s,baz=195,slow=9.9,SNR=6.9						
KSRS	**Korea Array**	**16.75**	**259**	P	**Pn**	**02 54 42.5**	**+3.5**
	baz=82,slow=11,SNR=3.5						
SEY	**Seymchan**	**20.33**	**5**	*i* P	**P**	**02 55 16.0**	**-4.0**
HIA	**Hailar**	**21.07**	**298**	⇓*e*P	**P**	**02 55 26.9**	**-1.2**
YAK	**Yakutsk**	**22.37**	**336**	*e*P	**P**	**02 55 37.6**	**-4.3**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
BOD	**Bodaibo**	**26.44**	**317**	*e*P	**P**	**02 56 18.4**	**-2.0**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
BILL	**Bilibino**	**27.02**	**14**	⇑*e*P	**P**	**02 56 20.2**	**-5.3**
BILL				*e*S	**S**	**03 01 00.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**29.47**	**295**	*e*P	**P**	**02 56 49.2**	**+1.6**
	comp=Z,10.0nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**29.47**	**295**	*e*P	**P**	**02 56 49.2**	**+1.6**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
SONM	**Songino Array**	**29.92**	**295**	P	**P**	**02 56 53.2**	**+1.7**
	comp=Z,4.0nm,0.8s,mb4.2,baz=83,slow=7.1,SNR=18						
KDAK	**Kodiak Island**	**39.10**	**47**	P	**P**	**02 58 06.8**	**-3.8**
	comp=Z,6.3nm,0.7s,mb4.5,baz=311,slow=4.4,SNR=7.6						
ZALV	**Zalesovo Beam**	**42.51**	**308**	P	**P**	**02 58 38.6**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.9,baz=72,slow=9.5,SNR=6.0						
MKAR	**Makanchi Array**	**46.06**	**299**	P	**P**	**02 59 08.1**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.1,baz=72,slow=8.1,SNR=13						
MKAR	**Makanchi Array**	**46.06**	**299**	*e*P	**P**	**02 59 09.6**	**+2.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HYT	**Haines Junctio**	**46.34**	**41**	*e*P	**P**	**02 59 06.0**	**-3.3**
KURK	**Kurchatov**	**47.04**	**305**	*e*P	**P**	**02 59 15.2**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.5						
KURK	**Kurchatov**	**47.04**	**305**	*c i*P	**P**	**02 59 15.8**	**+0.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
KURK				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.0						
CMAR	**Chiang Mai Arr**	**48.36**	**256**	P	**P**	**02 59 27.8**	**+2.2**
	comp=Z,1.0nm,0.4s,mb4.2,baz=42,slow=7.3,SNR=5.1						
ARU	**Arti**	**55.85**	**318**	*e*P	**P**	**03 00 20.9**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.8						
ARU	**Arti**	**55.85**	**318**	*d i*P	**P**	**03 00 20.7**	**-0.1**
ARU				*e*		03 02 25.6	
ARU				*e*S	**S**	**03 08 10.9**	**+5.5**
ARU				*e*SS	SS	03 11 59.8	+9.1
ARU				pmax	pmax		
	comp=Z,28nm,2.5s,mb4.8						
ARCES	**ARCESS Array B**	**60.58**	**340**	P	**P**	**03 00 51.4**	**-2.2**
	comp=Z,4.1nm,0.9s,mb4.6,baz=36,slow=6.4,SNR=4.5						
JOF	**Joensuu**	**63.50**	**333**	*e*P	**P**	**03 01 12.9**	**-0.4**
	comp=Z,0.9nm,0.3s,mb4.3						
JOF	**Joensuu**	**63.50**	**333**	*e*P	**P**	**03 01 12.9**	**-0.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**63.77**	**195**	P	**P**	**03 01 14.8**	**-0.7**
	comp=Z,2.1nm,0.6s,mb4.4,baz=15,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**63.77**	**195**	*e*P	**P**	**03 01 14.7**	**-0.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAF	**Kangasniemi**	**65.71**	**334**	*e*p	**P**	**03 01 31.3**	**+3.6**
	comp=Z,0.9nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**65.71**	**334**	*e*P	**P**	**03 01 31.3**	**+3.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**66.28**	**334**	*e*P	**P**	**03 01 33.0**	**+1.6**
OBN	**Obninsk**	**66.79**	**325**	⇑*e*P	**P**	**03 01 34.9**	**+0.2**
OBN				*e**PP	PcP	03 02 06.0	+2.6
OBN				*e*		03 04 00.9	
OBN				*e*S	S	03 10 27.7	+3.4
OBN				*e*SS	SS	03 14 40.5	-1.1
OBN				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.0						
NVAR	**Mina Array Bea**	**67.14**	**58**	P	**P**	**03 01 36.0**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=292,slow=6.3,SNR=7.7						
NVAR	**Mina Array Bea**	**67.14**	**58**	P	**P**	**03 01 36.0**	**-1.3**
ASAR	**Alice Springs**	**67.48**	**195**	P	**P**	**03 01 39.3**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.1,baz=10.0,slow=5.9,SNR=13						
VSR	**Storozhevoye**	**68.23**	**320**	*e*P	**P**	**03 01 43.8**	**-0.1**
VSR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.6s						
PDAR	**Pinedale Array**	**69.68**	**50**	P	**P**	**03 01 51.8**	**-1.2**
	comp=E,0.8nm,0.7s,mb3.7,baz=259,slow=2.0,SNR=7.3						
NB2	**NORSAR Subarra**	**70.94**	**340**	P	**P**	**03 02 00.1**	**-0.3**
	comp=Z,3.3nm,0.5s,mb4.5,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**70.94**	**340**	P	**P**	**03 02 00.3**	**-0.1**
	comp=Z,6.3nm,0.7s,mb4.7,baz=32,slow=6.1,SNR=18						
NOA	**NORSAR Array B**	**70.94**	**340**	*e*P	**P**	**03 02 00.3**	**-0.1**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	**Malin Array Be**	**73.06**	**325**	P	**P**	**03 02 13.4**	**+0.1**
	comp=Z,4.0nm,0.6s,mb4.6,baz=38,slow=6.0,SNR=21						
AKASG	**Malin Array Be**	**73.06**	**325**

comp=Z,6.8nm,1.1s,mb4.8
LPG La Plagne 85.83 334 *e*P **P** **03 03 23.5 +0.6**
LPG pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
ORIF Oris-en-Rattie 86.62 335 *e*P **P** **03 03 27.0 +0.2**
comp=Z,12nm,0.9s,mb4.8
ORIF Oris-en-Rattie 86.62 335 *e*P **P** **03 03 27.0 +0.2**
comp=Z,5.8nm,0.9s,mb4.8
ORIF Oris-en-Rattie 86.62 335 *e*P **P** **03 03 27.0 +0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
MFF Saint Martin d 86.84 339 *e*P **P** **03 03 27.9 +0.1**
comp=Z,15nm,1.0s,mb4.9
MFF Saint Martin d 86.84 339 *e*P **P** **03 03 27.9 +0.1**
comp=Z,7.3nm,1.0s,mb4.9
MFF Saint Martin d 86.84 339 *e*P **P** **03 03 27.9 +0.1**
MFF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
TORD Torodi Ar. Bea 116.68 324 PKP PKPdf 03 09 26.6 -1.4
comp=Z,0.1nm,0.5s,baz=35,slow=1.9,SNR=4.1

NEIC ***06*** *02:50:49.0, 1667N×10052W, h4km, MD3.9(MEX), After MEX.*
MEX 06 02:50:49.0±0.7, 1667N×10052W, h4km±5km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.44**	**32**	*i* P	Pg	02 50 57.0	-0.6
CAIG				*i* S	Sg	02 51 03.8	+0.4
ACX	**Acapulco**	**0.61**	**71**	*i* P	Pg	02 51 00.3	-0.4
ACX				*i* S	Sg	02 51 08.7	+0.1
ZIIG	**Zihuatanejo**	**1.30**	**316**	*i* P	Pn	02 51 11.1	-2.8
ZIIG				*i* S	Sg	02 51 26.4	-4.4
MEIG	**Mezcala**	**1.51**	**34**	*i* P	Pn	02 51 13.3	-3.6
MEIG				*i* S	Sn	02 51 32.3	-4.7
PLIG	**Platanillo**	**1.96**	**29**	*i* P	Pn	02 51 20.7	-2.4
PLIG				*i* S	Sn	02 51 45.2	-2.9
PNIG	**Pinotepa**	**2.31**	**97**	*i* P	Pn	02 51 26.1	-1.7
PNIG				*i* S	Sn	02 51 50.8	-5.9

MAN 06 02:55:48, 998N×12625E, h17km, mb4.5, ML3.3, MS3.2, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.77**	**255**	*e*P	Pb	02 56 02.8	-0.2
SCPH				*e*S	Sb	02 56 13.5	+0.3
BUTP	**Butuan**	**1.18**	**212**	*e*P	Pn	02 56 09.3	-0.4
MSLP	**Maasin**	**1.38**	**277**	*e*P	Pn	02 56 12.0	-0.4
MSLP				*e*S	Sn	02 56 31.5	+1.2
PLP	**Palo**	**1.72**	**313**	*e*P	Pn	02 56 18.4	+1.3
PLP				*e*S	Sn	02 56 39.9	+1.2
PLP	**Palo**	**1.72**	**313**	*e*P	Pn	02 56 18.4	+1.3
PLP				*e*S	Sn	02 56 39.9	+1.2
CGP	**Cagayan de Oro**	**2.16**	**225**	*e*P	Pn	02 56 23.9	+0.7
CGP				*e*S	Sn	02 56 50.8	+1.3
LLP	**Lapu-Lapu**	**2.27**	**279**	*e*P	Pn	02 56 26.6	+1.9
LLP				*e*S	Sn	02 56 51.4	-1.0
TBP	**Tagbilaran**	**2.37**	**263**	*e*P	Pn	02 56 27.6	+1.5
TBP				*e*S	Sn	02 56 52.6	-2.2
BUKP	**Musuan**	**2.39**	**209**	*e*P	Pn	02 56 27.8	+1.3
BUKP				*e*S	Sn	02 56 57.6	+2.2
CNP	**Catarman**	**2.96**	**328**	*e*P	Pn	02 56 34.8	+0.6
CNP				*e*S	Sn	02 57 15.4	+6.1
PAGZ	**Pagadian**	**3.54**	**233**	*e*P	Pn	02 56 43.5	+1.3
PAGZ				*e*S	Pg	02 56 53.5	-2.3
GUIM	**Jordan**	**3.66**	**280**	*e*P	Pn	02 56 44.6	+0.8
GUIM				*e*S	Sn	02 57 29.1	+2.5
PVCP	**Virac**	**4.14**	**330**	*e*P	Pn	02 56 58.7	+8.3

TAP ***06*** *03:13:34.6, 2406N×12244E, h37km±1km, ML3.3, D*
ISCJB ***06*** *03:13:35.7±0.3, 2403N±003×12242E±002, h33km, Error ellipse: s-maj=4.2km s-min=2.5km az=169.3*
JMA ***06*** *03:13:35.5±0.3, 2439N×12237E, h47km, M2.5*
ISC 06 03:13:36.1±0.3, 2404N±003×12242E±002, h35km, n30, σ1°03/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.68**	**52**	P	**Pn**	**03 13 47.7**	**-1.6**
YOJ				S	**Sn**	**03 13 56.5**	**-2.2**
ENA	**Nanau**	**0.73**	**302**	P	**Pn**	**03 13 48.9**	**-1.0**
	baz=300						
ENA				S	**Sn**	**03 13 59.9**	**+0.2**
	baz=300						
TWD	**Chiawan**	**0.75**	**273**	*e*P	**Pn**	**03 13 49.8**	**-0.4**
	baz=260						
TWD				*e*S	**Sn**	**03 13 59.1**	**-1.2**
	baz=260						
TWC	**Suao**	**0.77**	**318**	P	**Pn**	**03 13 49.1**	**-1.3**
	baz=315						
TWC				*e*S	**Sn**	**03 13 59.2**	**-1.6**
	baz=315						
ESL	**Shilin**	**0.93**	**256**	*e*P	**Pn**	**03 13 52.0**	**-0.7**
	baz=245						
ESL				*e*S	**Sn**	**03 14 04.4**	**-0.3**
	baz=245						
TWE	**Neicheng**	**0.96**	**315**	P	**Pn**	**03 13 52.5**	**-0.6**
	baz=313						
TWE				S	**Sn**	**03 14 05.8**	**+0.2**
	baz=313						
ENTT	**Nioudou**	**0.98**	**308**	P	**Pn**	**03 13 53.2**	**-0.2**
	baz=306						
ENTT				S	**Sn**	**03 14 06.3**	**+0.3**
	baz=306						
NNS	**Nan Shan**	**1.03**	**293**	P	**Pn**	**03 13 53.7**	**-0.4**
	baz=281						
NNS				S	**Sn**	**03 14 07.8**	**+0.5**
	baz=281						
WHF	**Hehuan Shan**	**1.06**	**276**	P	**Pn**	**03 13 53.6**	**-0.8**
	baz=274						
WHF				S	**Sn**	**03 14 07.8**	**-0.2**
	baz=274						
EHY	**Hungye**	**1.14**	**242**	*e*P	**Pn**	**03 13 54.8**	**-0.7**
	baz=241						
EHY				*e*S	**Sn**	**03 14 09.6**	**-0.3**
	baz=241						
NSK	**Sanguang**	**1.15**	**303**	P	**Pn**	**03 13 55.4**	**-0.3**
	baz=288						
NSK				S	**Sn**	**03 14 11.4**	**+1.1**
	baz=288						
TWT	**Tachien**	**1.15**	**281**	*e*P	**Pn**	**03 13 53.9**	**-1.8**
	baz=268						
TWT				*e*S	**Sn**	**03 14 08.0**	**-2.3**
	baz=268						
NWF	**Wu-fen Shan**	**1.18**	**331**	*e*P	**Pn**	**03 13 55.7**	**-0.4**
	baz=329						
NWF				*e*S	**Sn**	**03 14 11.8**	**+0.9**
	baz=329						
TWA	**Mucha**	**1.20**	**321**	*e*P	**Pn**	**03 13 57.3**	**+0.8**
	baz=335						
TWA				*e*S	**Sn**	**03 14 13.4**	**+1.9**
	baz=335						
IRIF	**Iriomote-Funau**	**1.23**	**76**	P	**Pn**	**03 13 57.1**	**+0.2**
IRIF				*e*S	**Sn**	**03 14 13.2**	**+0.9**
TWF1	**Yuli**	**1.23**	**236**	P	**Pn**	**03 13 56.0**	**-0.8**
	baz=226						
TWF1				S	**Sn**	**03 14 11.5**	**-0.8**
	baz=226						
HATJ	**Hateruma jima**	**1.27**	**89**	*e*S	**Sn**	**03 14 14.7**	**+1.5**
CHKT	**Chengkung**	**1.35**	**226**	*e*S	**Sn**	**03 14 12.6**	**-2.5**
	baz=217						
SMLT	**Sun Moon Lake**	**1.40**	**264**	*e*P	**Pn**	**03 13 59.0**	**-0.1**
	baz=262						
SMLT				*e*S	**Sn**	**03 14 16.4**	**+0.1**
	baz=262						
NSTT	**Nanjuang**	**1.42**	**295**	*e*P	**Pn**	**03 13 59.7**	**+0.3**
	baz=293						
NSTT				*e*S	**Sn**	**03 14 19.1**	**+2.3**
	baz=293						
TYC	**Yuchr**	**1.43**	**265**	*e*P	**Pn**	**03 14 00.1**	**+0.5**
	baz=263						
TYC				*e*S	**Sn**	**03 14 17.6**	**+0.4**
	baz=263						
YUS	**Yu-Shan**	**1.45**	**248**	P	**Pn**	**03 14 00.2**	**+0.3**
	baz=246						
YUS				S	**Sn**	**03 14 17.0**	**-0.6**
	baz=246						
JKRS	**Kuro-shima**	**1.47**	**82**	P	**Pn**	**03 14 00.8**	**+0.7**
JKRS				*e*S	**Sn**	**03 14 18.8**	**+0.7**
ALS	**Alishan**	**1.57**	**251**	*e*P	**Pn**	**03 14 02.1**	**+0.7**
	baz=249						
ALS				*e*S	**Sn**	**03 14 21.1**	**+0.5**
	baz=249						
JIJ	**Ishigaki jima**	**1.61**	**78**	P	**Pn**	**03 14 01.4**	**-0.6**
JIJ				*e*S	**Sn**	**03 14 20.9**	**-0.6**
CHN5	**Tsauling**	**1.65**	**255**	*e*P	**Pn**	**03 14 03.0**	**+0.4**
	baz=253						
CHN5				*e*S	**Sn**	**03 14 23.5**	**+0.8**
	baz=253						
CHN4	**Tsaushan**	**1.81**	**248**	*e*P	**Pn**	**03 14 06.5**	**+1.7**
	baz=247						
CHN4				*e*S	**Sn**	**03 14 28.8**	**+2.4**
	baz=247						
CHN1	**Nanshi**	**1.93**	**244**	*e*P	**Pn**	**03 14 07.6**	**+1.2**
	baz=243						
SGST	**Jiashian**	**1.94**	**241**	*e*P	**Pn**	**03 14 08.1**	**+1.6**
	baz=232						
SSD	**Sandimen**	**2.09**	**232**	*e*P	**Pn**	**03 14 09.3**	**+0.7**
	baz=226						

ISCJB ***06*** *03:16:59.3±3.5, 2005S±02×17834W±0.1, h554km±51km, mb3.9/13, Error ellipse: s-maj=27.7km s-min=15.9km az=155.9*
NEIC ***06*** *03:17:00.3±2.6, 2002S×17829W, h553km±32km, mb4.0/3, Error ellipse: s-maj=22.7km s-min=14.6km az=143.0*
IDC ***06*** *03:17:02.1±4.5, 2007S×17823W, h578km±54km, mb3.3/10, mb1 3.5/11, mb1mx3.4/17, mbtmp3.3/11, Error ellipse: s-maj=29.8km s-min=22.2km az=178.0*
ISC 06 03:17:01.0±3.7, 201S±02×1783W±01, h561km±50km, n32, σ0°56/20, mb3.9/13, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.59**	**192**	P	**P**	**03 20 43.2**	**-0.3**
	1.0nm,0.3s,baz=325,slow=12,SNR=6.0						
RPZ	**Rata Peaks**	**25.24**	**198**	P	**P**	**03 21 42.3**	**-0.7**
	4.0nm,0.5s,mb4.3,baz=236,slow=3.6,SNR=3.4						
RPZ	**Rata Peaks**	**25.24**	**198**	P	**P**	**03 21 42.3**	**-0.7**
CTA	**Charters Tower**	**33.30**	**264**	*e*P	**P**	**03 22 54.0**	**+1.0**
	11nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**37.77**	**244**	*e*P	**P**	**03 23 31.1**	**+1.2**
	2.8nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**37.77**	**244**	P	**P**	**03 23 31.0**	**+1.1**
	3.5nm,0.9s,mb3.9,baz=69,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**44.39**	**256**	P	**P**	**03 24 22.8**	**+0.4**
	11nm,0.8s,mb4.5,baz=88,slow=8.0,SNR=120						
ASAR				PcP	PcP	03 25 53.5	-0.5
	1.1nm,0.6s,baz=104,slow=4.0,SNR=5.6						
WB2	**Warramunga Arr**	**44.41**	**262**	*e*P	**P**	**03 24 22.3**	**-0.4**
WRAB	**Tennant Creek**	**44.42**	**262**	*e*P	**P**	**03 24 22.5**	**-0.2**
	8.9nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**44.42**	**262**	P	**P**	**03 24 22.4**	**-0.3**
	5.2nm,0.5s,mb4.3,baz=97,slow=8.0,SNR=54						
KKH	**Kailua Kona**	**45.08**	**30**	*e*P	**P**	**03 24 28.0**	**+0.4**
HON	**Honolulu**	**45.64**	**27**	P	**P**	**03 24 31.7**	**-0.2**
KAKA	**Kakadu**	**47.72**	**271**	*e*P	Px	03 24 38.1	
	5.4nm,0.6s						
MBWA	**Marble Bar**	**57.72**	**257**	*e*P	**P**	**03 25 58.6**	**-0.4**
	4.3nm,0.6s,mb3.9						
MJAR	**Matsushiro Arr**	**69.70**	**324**	P	**P**	**03 27 14.0**	**-0.9**
	1.4nm,0.4s,mb3.8,baz=160,slow=5.3,SNR=4.2						
MAJO	**Matsushiro**	**69.71**	**324**	P	**P**	**03 27 14.6**	**-0.4**
PETK	**Petropavlovsk-**	**75.78**	**345**	P	**P**	**03 27 48.8**	**-0.5**
	2.3nm,0.7s,mb3.7,baz=111,slow=8.2,SNR=3.4						
NVAR	**Mina Array Bea**	**80.86**	**44**	P	**P**	**03 28 17.5**	**+0.6**
	0.3nm,0.6s,mb2.9,baz=228,slow=6.8,SNR=4.0						
TXAR	**Lajitas Array**	**87.02**	**57**	P	**P**	**03 28 48.0**	**+0.6**
	0.2nm,0.6s,mb2.9,baz=260,slow=3.6,SNR=2.7						
PDAR	**Pinedale Array**	**88.80**	**43**	P	**P**	**03 28 55.3**	**-0.2**
	0.4nm,0.6s,mb3.4,baz=197,slow=2.8,SNR=3.2						
CMAR	**Chiang Mai Arr**	**89.74**	**290**	P	**P**	**03 29 00.8**	**+0.4**
	1.0nm,0.3s,mb4.1,baz=99,slow=2.0,SNR=6.6						
MKAR	**Makanchi Array**	**110.71**	**314**	PKiKP	PKiKP	03 34 28.8	-1.4
	0.1nm,0.4s,baz=191,slow=1.5,SNR=3.6						
ARCES	**ARCESS Array B**	**128.44**	**350**	PKP	PKPdf	03 35 02.2	-1.4
	1.8nm,0.8s,baz=46,slow=3.8,SNR=9.6						
ARCES	**ARCESS Array B**	**128.44**	**350**	PKP	PKPdf	03 35 02.2	-1.4
AKASG	**Malin Array Be**	**142.50**	**331**	PKhKP		03 35 25.2	
	2.4nm,0.4s,baz=46,slow=4.2,SNR=9.3						
AKASG	**Malin Array Be**	**142.50**	**331**	PKP		03 35 25.2	
BRTR	**Keskin Array B**	**146.36**	**313**	PKPbc	PKPbc	03 35 38.6	-1.0
	1.5nm,0.6s,baz=118,slow=2.6,SNR=10						
CLL	**Collm**	**147.57**	**347**	*i* P	PKPbc	03 35 41.4	-0.9
CLL	**Collm**	**147.57**	**347**	*i* PKPbc	PKPbc	03 35 41.4	-0.9
	comp=Z,8.0nm,0.9s						
BRG	**Berggiesshuel**	**147.77**	**345**	*i* P	PKPbc	03 35 42.2	-0.6
	comp=Z,4.3nm,1.0s						
KHC	**Kasperske Hory**	**149.47**	**345**	*e*PKP	PKPbc	03 35 46.5	-0.6
GERES	**GERESS Array B**	**149.71**	**344**	PKPbc	PKPbc	03 35 46.9	-0.8
	comp=Z,1.5nm,0.6s,baz=17,slow=4.1,SNR=6.4						

NEIC ***06*** *03:34:53.2±4.2, 2773S×17638W, h14km±26km, mb4.5/1, Error ellipse: s-maj=14.3km s-min=10.0km az=139.0*
ISCJB ***06*** *03:34:54.7±0.5, 2765S±009×17642W±009, h33km, mb4.2/11, MS3.7/8, Error ellipse: s-maj=13.9km s-min=9.5km az=140.8*
IDC ***06*** *03:34:57.0±0.6, 2772S×17646W, h37km±4km, mb4.0/10, mb1 4.3/11, mb1mx4.2/17, mbtmp4.1/11, MS3.7/9, Ms1 3.7/9, ms1mx3.4/26, Error ellipse: s-maj=20.3km s-min=15.4km az=145.0*
ISC 06 03:34:56.7±0.5, 2764S±008×17641W±009, h35km, (h39km±1.2km: pP-P), n34, σ1°00/24, mb4.2/11, MS3.7/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.09**	**219**	Pn	**Pn**	**03 35 28.8**	**-0.3**
	196nm,0.3s,baz=101,slow=20,SNR=7.1						
RAO				Sn	**Sn**	**03 35 54.7**	**+0.8**
	358nm,0.3s,baz=266,slow=23,SNR=9.8						
RAO				LR	LR	03 36 12.4	
	comp=Z,744nm,20.9s,baz=25,slow=38						
RAO	**Raoul Island**	**2.09**	**219**	Pn	**Pn**	**03 35 28.8**	**-0.3**
RAO				Sn	**Sn**	**03 35 54.7**	**+0.8**
RAO				LR	LR	03 36 12.4	
URZ	**Urewera**	**11.90**	**206**	Pn	**Pn**	**03 37 36.9**	**-6.9**
	0.4nm,0.3s,baz=31,slow=17,SNR=3.2						
URZ				Sn	**Sn**	**03 39 43.3**	**-12**
	0.7nm,0.3s,baz=322,slow=15,SNR=6.1						
AFI	**Afiamalu**	**14.33**	**18**	Pn	**Pn**	**03 38 16.9**	**-0.2**
	22nm,0.3s,baz=81,slow=8.7,SNR=17						
RAR	**Rarotonga**	**16.44**	**71**	Pn	**Pn**	**03 38 42.7**	**-2.0**
	4.4nm,0.3s,baz=164,slow=3.9,SNR=5.9						
RAR				LR	LR	03 44 06.9	
	comp=Z,402nm,19.9s,baz=264,slow=33						
DZM	**Mont Dzumac**	**16.51**	**286**	*e*Pn	**Pn**	**03 38 45.6**	**-0.1**
RPZ	**Rata Peaks**	**18.97**	**209**	P	**Pn**	**03 39 10.9**	**-4.8**
	0.5nm,0.3s,baz=235,slow=6.6,SNR=2.3						
PPT	**Papeete**	**26.67**	**74**	LR	LR	03 48 20.2	
	comp=Z,201nm,21.6s,MS3.6,baz=241,slow=30						
HNR	**Honiara**	**28.72**	**305**	LR	LR	03 50 56.2	
	comp=Z,88nm,18.7s,MS3.4,baz=12,slow=33						
CTA	**Charters Tower**	**34.86**	**274**	P	**P**	**03 41 43.2**	**-1.5**
	2.7nm,0.6s,mb4.4,baz=51,slow=6.5,SNR=3.6						
STKA	**Stephens Creek**	**36.54**	**253**	LR	LR	03 55 37.6	
	comp=Z,106nm,19.0s,MS3.6,baz=185,slow=34						
ASAR	**Alice Springs**	**44.73**	**263**	P	**P**	**03 43 06.3**	**-0.4**
	1.7nm,0.8s,mb4.0,baz=97,slow=7.3,SNR=20						
ASAR				pP	pP	03 43 17.6	+0.5
	2.4nm,0.8s,baz=109,slow=7.8,SNR=12						
WB2	**Warramunga Arr**	**45.46**	**269**	*e*P	**P**	**03 43 12.0**	**-0.6**
WRA	**Warramunga Arr**	**45.47**	**269**	P	**P**	**03 43 11.9**	**-0.8**
	4.2nm,0.9s,mb4.3,baz=106,slow=8.1,SNR=16						
WRA				pP	pP	03 43 22.9	-0.2
	2.8nm,0.8s,baz=108,slow=7.0,SNR=8.0						
SBA	**Scott Base**	**50.89**	**185**	*e*P	**P**	**03 43 53.3**	**-0.4**
	5.1nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	**62.46**	**180**	P	**P**	**03 45 15.2**	**-0.6**
	7.9nm,0.8s,mb4.9,baz=45,slow=3.5,SNR=18						
KAPI	**Kappang**	**64.55**	**278**	LR	LR	04 12 28.4	
	comp=Z,37nm,20.8s,MS3.6,baz=347,slow=35						
DAV	**Davao City (W)**	**65.79**	**293**	LR	LR	04 10 51.8	
	comp=Z,26nm,21.3s,MS3.4,baz=201,slow=33						
MAW	**Mawson**	**75.37**	**200**	P	**P**	**03 46 37.2**	**+1.0**
	4.0nm,1.2s,mb4.2,baz=124,slow=7.3,SNR=3.9						
MAW				pP	pP	03 46 48.3	+1.1
	3.2nm,1.0s,baz=129,slow=6.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**76.80**	**324**	P	**P**	**03 46 46.5**	**+1.8**
	1.3nm,0.6s,mb4.0,baz=155,slow=5.8,SNR=2.9						
KSRS	**Korea Array**	**83.18**	**319**	LR	LR	04 22 53.4	
	comp=Z,16nm,18.4s,MS3.4,baz=10.0,slow=35						
PLCA	**Paso Flores**	**83.36**	**133**	P	**P**	**03 47 19.9**	**-0.4**
	3.5nm,1.1s,mb4.3,baz=228,slow=7.5,SNR=3.0						
NVAR	**Mina Array Bea**	**85.27**	**42**	P	**P**	**03 47 31.2**	**+1.5**
	1.6nm,0.9s,mb4.2,baz=216,slow=7.2,SNR=11						
NVAR				pP	pP	03 47 42.1	+1.3
	0.7nm,0.7s,baz=222,slow=9.4,SNR=4.5						
NVAR				sP	sP	03 47 47.1	+2.4
	0.2nm,0.5s,baz=191,slow=4.4,SNR=2.1						
NVAR	**Mina Array Bea**	**85.27**	**42**	P	**P**	**03 47 31.2**	**+1.5**
NVAR				pP	pP	03 47 42.1	+1.3
NVAR				sP	sP	03 47 47.1	+2.4
TXAR	**Lajitas Array**	**89.72**	**56**	P	**P**	**03 47 52.7**	**+1.3**
	0.6nm,0.9s,mb3.9,baz=222,slow=9.3,SNR=5.4						
TXAR	**Lajitas Array**	**89.72**	**56**	P	**P**	**03 47 52.7**	**+1.3**
PDAR	**Pinedale Array**	**93.17**	**43**	P	**P**	**03 48 07.8**	**+0.7**
	0.7nm,0.9s,mb4.1,baz=204,slow=1.8,SNR=4.4						
PDAR				LR	LR	04 26 07.6	
	comp=Z,126nm,18.9s,MS4.4,baz=155,slow=33						
LPAZ	**La Paz**	**97.97**	**113**	LR	LR	04 25 56.4	
	comp=Z,45nm,18.1s,MS4.0,baz=92,slow=31						
MKAR	**Makanchi Array**	**117.05**	**311**	PKP	PKPdf	03 53 36.6	-1.0
	0.7nm,0.9s,baz=251,slow=4.4,SNR=4.4						
MKAR				pPKP	pPKPdf	03 53 47.9	-1.2
	0.6nm,0.7s,baz=65,slow=3.2,SNR=5.1						
NB2	**NORSAR Subarra**	**146.21**	**353**	PKP	PKPdf	03 54 34.2	+2.6
	comp=Z,18nm,1.7s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**146.21**	**353**	PKPbc	PKPbc	03 54 32.6	-0.1
	comp=Z,4.4nm,0.9s,baz=283,slow=17,SNR=5.5						
NOA				pPKPbc	pPKPbc	03 54 43.9	-0.1
	comp=Z,4.4nm,1.1s,baz=15,slow=4.5,SNR=3.4						
AKASG	**Malin Array Be**	**149.85**	**327**	PKPbc	PKPbc	03 54 41.6	-1.1
	comp=Z,1.9nm,0.6s,baz=41,slow=2.7,SNR=7.2						
AKASG				pPKPbc	pPKPbc	03 54 53.6	-0.5
	comp=Z,1.6nm,0.6s,baz=43,slow=2.9,SNR=3.1						
BRTR	**Keskin Array B**	**152.37**	**304**	PKPab	PKPab	03 55 01.0	+1.8
	comp=Z,1.7nm,0.9s,baz=55,slow=5.1,SNR=5.7						
BRTR				pPKPab	pPKPab	03 55 11.9	+1.6
	comp=Z,1.3nm,0.9s,baz=134,slow=7.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**165.47**	**173**	PKP	PKPdf	03 54 57.0	-1.2
	comp=Z,0.8nm,1.0s,baz=86,slow=0.5,SNR=3.8						
TORD				PKPab	PKPab	03 55 54.9	-1.3
	comp=Z,2.8nm,0.8s,baz=185,slow=4.2,SNR=14						

CASC 06 04:23:59.8±1.5, 1164N×8756W, h26km±14km, MD4.3, ML2.8, 7C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.08**	**60**	*e*P	Pn	04 24 19.0	-0.3
MIRN	**Miramar**	**1.14**	**46**	*e*P	Pn	04 24 20.0	-0.1
TEL3	**Telica 3**	**1.16**	**37**	*e*P	Pn	04 24 20.4	+0.1
CRIN	**San Cristobal**	**1.16**	**25**	*e*P	Pn	04 24 20.6	+0.2
CNGN	**Cerro Negro**	**1.20**	**44**	*e*P	Pn	04 24 20.7	-0.1
CSAN		**1.23**	**64**	*e*P	Pn	04 24 21.2	-0.1
MOMN	**Momotombo**	**1.25**	**52**	*e*P	Pn	04 24 21.4	-0.2
CRUN	**El Crucero**	**1.27**	**74**	*e*P	Pn	04 24 22.0	0.0
XAVN	**Gruta Xavier**	**1.30**	**67**	*e*P	Pn	04 24 21.9	-0.4
APYN	**Apoyeque**	**1.32**	**63**	*e*P	Pn	04 24 22.2	-0.3
TICN	**Ticuantepe**	**1.35**	**73**	*e*P	Pn	04 24 23.5	+0.5
TISN	**Laguna Tiscapa**	**1.35**	**68**	*e*P	Pn	04 24 22.4	-0.6
MGAN	**Managua**	**1.38**	**68**	*e*P	Pn	04 24 22.8	-0.5
MGAN				*e*S	Sn	04 24 42.1	+1.5
WILN	**Americas 2**	**1.43**	**69**	*e*P	Pn	04 24 23.7	-0.4
APON	**Apoyo**	**1.48**	**79**	*e*P	Pn	04 24 24.3	-0.5
HUEN		**1.52**	**63**	*e*P	Pn	04 24 25.0	-0.3
CNCH	**Conchagua**	**1.65**	**351**	*e*P	x	04 24 27.3	
CONN	**Concepcion**	**1.89**	**92**	*e*P	Pn	04 24 29.2	-1.2
TGUH	**Tegucigalpa,Un**	**2.42**	**7**	*e*P	Pn	04 24 37.7	+0.1
JCR	**Jicaral**	**2.99**	**126**	*e*P	Pn	04 24 45.5	0.0
PRS1	**Puriscal**	**3.59**	**117**	*e*P	Pn	04 24 55.9	+2.1
URSC	**Urasca**	**4.12**	**115**	*e*P	Pn	04 25 03.0	+1.9
BUS	**Buena Vista**	**4.27**	**119**	*i* P	Pn	04 25 04.5	+1.3
BUS				*e*S	Sn	04 25 54.8	+2.6
CHI2		**15.34**	**116**	*e*P		04 24 19.9	

ISCJB ***06*** *04:26:30.8±0.7, 4397N±003×17.16E±004, h5km±5km, Error ellipse: s-maj=5.9km s-min=3.7km az=136.6*
BEO ***06*** *04:26:32.0±0.6, 4396N×1714E, h4km±3km, ML2.8/8*
CSEM ***06*** *04:26:33.3±0.2, 4414N×1725E, h10km, mb2.5/2, ML2.4/4, Error ellipse: s-maj=7.4km s-min=3.4km az=35.0*
VIE ***06*** *04:26:34.5±0.4, 4414N×1722E, h10km, mb2.5/2, ML2.4/4, Error ellipse: s-maj=4.0km s-min=3.0km az=50.0 92 km NE of Split*
ISC 06 04:26:32.1±0.7, 4396N±003×1716E±004, h6km±5km, n21, σ0°78/41, 3C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.79**	**1**	*i* Pg	**Pg**	**04 26 47.1**	**-0.3**
BLY				*e*Sg	**Sg**	**04 26 58.7**	**+1.0**
BLY	**Banja Luka**	**0.79**	**1**	*e*Pg	**Pg**	**04 26 47.3**	**-0.1**
BLY				*e*Sg	**Sg**	**04 26 58.7**	**+1.0**
STON	**Ston**	**1.15**	**160**	*e*Pg	**Pg**	**04 26 50.6**	**-3.6**
STON				Sg	**Sg**	**04 27 08.2**	**-1.0**
TREB	**Trebinje**	**1.51**	**144**	*e*Pn	**Pn**	**04 26 59.8**	**+0.1**
TREB				*e*Sg	**Sg**	**04 27 20.3**	**-0

mb1 3.6/5,mb1mx3.5/20,mbtmp3.5/5,ML3.1/1,MS3.0/1, Ms1 3.2/1,ms1mx2.2/24,Error ellipse: s-maj=80.7km s-min=21.5km az=69.0

ISC 06 05:28:54.3±0.6,2389N±003×12266E±002,h7km±4km,n50, σ⇕05/72,mb3.4/4,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.65**	**29**	P	**Pg**	**05 29 06.9**	**0.0**
YOJ				*eS*	**Sg**	**05 29 14.7**	**-0.7**
HWA	**Hwalien**	**0.97**	**275**	*eP*	**Pg**	**05 29 12.8**	**-0.2**
	baz=261						
TWD	**Chiawan**	**0.99**	**281**	P	**Pg**	**05 29 13.0**	**-0.5**
	baz=278						
TWD				S	**Sg**	**05 29 25.7**	**-0.6**
	baz=278						
ENA	**Nanau**	**1.00**	**303**	*i* P	**Pg**	**05 29 13.6**	**+0.1**
	baz=301						
ENA				*eS*	**Sg**	**05 29 27.0**	**+0.6**
	baz=301						
TWC	**Suao**	**1.03**	**314**	*i* P	**Pg**	**05 29 13.9**	**-0.3**
	baz=314						
TWC				S	**Sg**	**05 29 26.8**	**-0.8**
	baz=314						
HATJ	**Hateruma jima**	**1.06**	**81**	P	**Pg**	**05 29 15.1**	**+0.5**
HATJ				*eS*	**Sg**	**05 29 30.5**	**+2.1**
IRIF	**Iriomote-Funau**	**1.07**	**65**	P	**Pg**	**05 29 14.8**	**-0.1**
IRIF				*eS*	**Sg**	**05 29 28.9**	**+0.1**
ESL	**Shilin**	**1.13**	**266**	*eP*	**Pg**	**05 29 14.6**	**-1.4**
	baz=254						
ILA	**Ilan**	**1.21**	**316**	*eP*	**Pg**	**05 29 17.4**	**-0.1**
	baz=305						
ILA				*eS*	**Sg**	**05 29 33.8**	**+0.7**
	baz=305						
TWE	**Neicheng**	**1.23**	**312**	*eP*	**Pg**	**05 29 17.8**	**-0.2**
	baz=312						
TWE				*eS*	**Sg**	**05 29 35.2**	**+1.3**
	baz=312						
ENTT	**Nioudou**	**1.25**	**307**	*eP*	**Pb**	**05 29 17.9**	**-0.3**
	baz=306						
ENTT				*eS*	**Sg**	**05 29 34.7**	**+0.2**
	baz=306						
TWB1	**Santiao Chiao**	**1.27**	**331**	*eP*	**Pn**	**05 29 18.0**	**-0.5**
	baz=345						
TWB1				*eS*	**Sg**	**05 29 34.2**	**-1.0**
	baz=345						
JKRS	**Kuro-shima**	**1.28**	**74**	P	**Pn**	**05 29 18.1**	**-0.5**
NNS	**Nan Shan**	**1.30**	**295**	P	**Pn**	**05 29 18.2**	**-0.7**
	baz=284						
NNS				*eS*	**Sb**	**05 29 34.8**	**-1.2**
	baz=284						
WHF	**Hehuan Shan**	**1.30**	**281**	*i* P	**Pn**	**05 29 18.0**	**-0.9**
	baz=269						
TWF1	**Yuli**	**1.36**	**247**	*eP*	**Pn**	**05 29 18.6**	**-1.1**
	baz=235						
TWF1				*eS*	**Sb**	**05 29 36.3**	**-1.5**
	baz=235						
TWT	**Tachien**	**1.41**	**285**	*eP*	**Pn**	**05 29 20.4**	**0.0**
	baz=283						
NWF	**Wu-fen Shan**	**1.42**	**326**	*eP*	**Pn**	**05 29 20.6**	**0.0**
	baz=326						
NSK	**Sanguang**	**1.42**	**303**	*i* P	**Pn**	**05 29 20.1**	**-0.5**
	baz=290						
CHKT	**Chengkung**	**1.43**	**237**	*eP*	**Pn**	**05 29 18.9**	**-1.7**
	baz=224						
CHKT				*eS*	**Sb**	**05 29 36.1**	**-3.6**
	baz=224						
JIJ	**Ishigaki jima**	**1.43**	**71**	P	**Pn**	**05 29 19.5**	**-1.2**
JIJ				*eS*	**Sb**	**05 29 38.3**	**-1.5**
TWA	**Mucha**	**1.46**	**318**	*eP*	**Pn**	**05 29 22.2**	**+1.1**
	baz=318						
SMLT	**Sun Moon Lake**	**1.61**	**270**	*eP*	**Pn**	**05 29 22.9**	**-0.3**
	baz=259						
YUS	**Yu-Shan**	**1.62**	**256**	*eP*	**Pn**	**05 29 23.3**	**0.0**
	baz=245						
TYC	**Yuchr**	**1.65**	**271**	*eP*	**Pn**	**05 29 23.6**	**-0.2**
	baz=269						
TWS1	**Kuangyinshan**	**1.65**	**317**	*eP*	**Pn**	**05 29 24.6**	**+0.9**
	baz=332						
ELDTW	**Lidau**	**1.67**	**245**	*eP*	**Pn**	**05 29 22.7**	**-1.2**
	baz=234						
NSTT	**Nanjuang**	**1.69**	**296**	P	**Pn**	**05 29 24.7**	**+0.5**
	baz=295						
NSTT				*eS*	**Sn**	**05 29 44.2**	**-1.9**
	baz=295						
ALS	**Alishan**	**1.75**	**258**	⇓*i* P	**Pn**	**05 29 25.4**	**+0.3**
	baz=255						
ALS				*eS*	**Sn**	**05 29 46.7**	**-0.8**
	baz=255						
TWQ1	**Liyutan**	**1.79**	**285**	P	**Pn**	**05 29 26.1**	**+0.6**
	baz=283						
TWQ1				*eS*	**Sn**	**05 29 48.5**	**0.0**
	baz=283						
TWG	**Pinlang**	**1.81**	**234**	P	**Pn**	**05 29 24.7**	**-1.2**
	baz=241						
TWG				*eS*	**Sn**	**05 29 47.2**	**-1.9**
	baz=241						
NSY	**Sanyi**	**1.81**	**287**	*eP*	**Pn**	**05 29 27.6**	**+1.6**
	baz=286						
TCU	**Taichung**	**1.83**	**278**	*eP*	**Pn**	**05 29 27.8**	**+1.5**
	baz=276						
TCU				*eS*	**Sn**	**05 29 50.7**	**+1.0**
	baz=276						
CHN5	**Tsauling**	**1.84**	**261**	*i* P	**Pn**	**05 29 26.8**	**+0.5**
	baz=258						
CHN5				*eS*	**Sn**	**05 29 50.5**	**+0.6**
	baz=258						
CHN4	**Tsaushan**	**1.97**	**255**	P	**Pn**	**05 29 29.6**	**+1.4**
	baz=244						
CHN4				*eS*	**Sn**	**05 29 54.2**	**+1.0**
	baz=244						
WTP	**Ta-pu**	**1.99**	**252**	*eP*	**Pn**	**05 29 29.2**	**+0.9**
	baz=241						
JTJ	**Tarama**	**2.00**	**68**	P	**Pn**	**05 29 28.9**	**+0.3**
JTJ				*eS*	**Sn**	**05 29 52.9**	**-1.0**
ECL	**Taimali**	**2.03**	**231**	*eP*	**Pn**	**05 29 27.6**	**-1.4**
	baz=239						
SGST	**Jiashian**	**2.07**	**248**	*eP*	**Pn**	**05 29 31.5**	**+2.0**
	baz=237						
CHN1	**Nanshi**	**2.08**	**251**	*eP*	**Pn**	**05 29 30.9**	**+1.2**
	baz=240						
TWK	**Hsinying**	**2.09**	**253**	P	**Pn**	**05 29 30.9**	**+1.1**
	baz=250						
TWK				*eS*	**Sn**	**05 29 57.9**	**+1.8**
	baz=250						
SSD	**Sandimen**	**2.19**	**239**	*eP*	**Pn**	**05 29 33.4**	**+2.3**
	baz=231						
EAST	**Anshuo**	**2.25**	**228**	*eP*	**Pn**	**05 29 31.2**	**-0.7**
	baz=226						
SCZT	**Fangliau**	**2.41**	**232**	*eP*	**Pn**	**05 29 36.5**	**+2.3**
	baz=224						
KSRS	**Korea Array**	**14.25**	**17**	Pn	**Pn**	**05 32 17.9**	**+1.4**
	0.1nm,0.3s,baz=195,slow=12,SNR=4.7						
CMAR	**Chiang Mai Arr**	**22.76**	**261**	LR	LR	05 43 56.4	
	comp=Z,36nm,21.3s,baz=45,slow=38						
SONM	**Songino Array**	**27.18**	**336**	P	**P**	**05 34 51.5**	**+13**
	0.8nm,0.9s,mb3.3,baz=146,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**39.49**	**316**	P	**P**	**05 36 38.2**	**+13**
	0.4nm,0.7s,mb3.3,baz=96,slow=10,SNR=3.2						
WRA	**Warramunga Arr**	**45.03**	**164**	P	**P**	**05 37 09.5**	**-1.3**
	0.8nm,1.0s,mb3.5,baz=344,slow=7.8,SNR=4.3						
ASAR	**Alice Springs**	**48.52**	**166**	P	**P**	**05 37 39.0**	**+1.0**
	0.2nm,0.5s,mb3.4,baz=355,slow=14,SNR=4.1						

KRSC 06 05:30:31.3±1.0,5543N×16065E,h199km±29km,ML3.5, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMR	**Tumrok**	**0.32**	**243**	P	Pn	05 30 58.9	+1.2
KMNR	**Kamenistaya**	**0.40**	**325**	*eP*	Pn	05 30 57.5	-0.4
MKZ	**Mys Kozlova**	**1.07**	**144**	*eP*	Pn	05 31 03.1	+1.7
MKZ				*eS*	Sn	05 31 26.2	+1.5
SRKR	**Sorokina**	**1.26**	**13**	P	Pn	05 31 05.0	+2.2
SRKR				*eS*	Sn	05 31 29.3	+1.9
KBTR	**Krutoberegovo**	**1.45**	**57**	*eP*	Pn	05 31 05.1	+0.7
KBTR				*eS*	Sn	05 31 30.0	-0.1
SPN	**Mys Shipunski**	**2.37**	**189**	*eP*	Pn	05 31 14.6	+1.0
SPN				*eS*	Sn	05 31 46.6	+0.1
NLC	**Nalytchevo**	**2.39**	**199**	*eS*	Sn	05 31 48.3	+1.4

*ISCJB **06** 05:31:53.5±1.6, 1040N±007×8631W±008,h15km±13km, mb3.5/5,Error ellipse: s-maj=16.0km s-min=6.2km az=140.7*

*CASC **06** 05:31:54.4±2.1, 1040N×8629W,h19km±8km,MD4.2, ML2.8*

*IDC **06** 05:32:11.5±6.7, 1155N×8650W,h92km±52km,mb3.3/5, mb1 3.6/6,mb1mx3.5/20,mbtmp3.3/6,ML3.0/1,Error ellipse: s-maj=62.1km s-min=38.1km az=18.0*

ISC 06 05:31:54.9±1.3,1047N±006×8621W±006,h15km±10km, n35,σ⇕95/35,mb3.5/5,10C-5D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**0.67**	**121**	⇑*eP*	**Pg**	**05 31 47.1**	**-0.8**
VCR				*eS*	**Sg**	**05 32 17.6**	**+0.8**
2RIO	**Dos Rios de Up**	**0.96**	**87**	⇑*eP*	**Pb**	**05 32 13.3**	**0.0**
2RIO				*eS*	**Sb**	**05 32 26.6**	**+0.7**
LIM1	**Limonal**	**0.97**	**76**	⇑*eP*	**Pb**	**05 32 13.0**	**-0.4**
CUI	**Cuipilapa**	**1.04**	**79**	⇑*eP*	**Pb**	**05 32 14.2**	**-0.4**
CONN	**Concepcion**	**1.23**	**28**	⇑*eP*	**Pn**	**05 32 17.7**	**+0.2**
JCR	**Jicaral**	**1.25**	**120**	*eP*	**Pn**	**05 32 15.9**	**-1.9**
CAO	**Cobano**	**1.33**	**125**	⇓*eP*	**Pn**	**05 32 17.0**	**-2.0**
APON	**Apoyo**	**1.44**	**6**	⇑*eP*	**Pn**	**05 32 22.4**	**+1.9**
CRUN	**El Crucero**	**1.50**	**357**	*eP*	**Pn**	**05 32 21.9**	**+0.6**
FORC	**Fortuna**	**1.52**	**90**	⇓*eP*	**Pn**	**05 32 21.6**	**+0.1**
FORC				⇓*eP*		05 32 21.7	
TICN	**Ticuantepe**	**1.55**	**359**	*eP*	**Pn**	**05 32 21.6**	**-0.3**
TISN	**Laguna Tiscapa**	**1.66**	**358**	⇑*eP*	**Pn**	**05 32 23.2**	**-0.2**
MGAN	**Managua**	**1.67**	**359**	⇓*eP*	**Pn**	**05 32 23.3**	**-0.2**
MGAN				AML	AML	05 32 57.0	
	comp=N,50nm,0.4s						
XAVN	**Gruta Xavier**	**1.67**	**356**	*eP*	**Pn**	**05 32 23.3**	**-0.3**
WILN	**Americas 2**	**1.68**	**1**	*eP*	**Pn**	**05 32 23.2**	**-0.5**
CSAN		**1.71**	**353**	*eP*	**Pn**	**05 32 23.4**	**-0.8**
COPN	**Copaltepe**	**1.74**	**348**	⇑*eP*	**Pn**	**05 32 23.9**	**-0.6**
CGA2	**Cerro Gallo 2**	**1.78**	**105**	*eP*	**Pn**	**05 32 25.1**	**0.0**
HUEN		**1.85**	**1**	*eP*	**Pn**	**05 32 25.7**	**-0.4**
PRS1	**Puriscal**	**1.93**	**104**	*eP*	**Pn**	**05 32 27.3**	**+0.1**
MOMN	**Momotombo**	**1.95**	**351**	*eP*	**Pn**	**05 32 26.7**	**-0.7**
MIRN	**Miramar**	**2.02**	**346**	⇑*eP*	**Pn**	**05 32 27.8**	**-0.5**
CNGN	**Cerro Negro**	**2.07**	**347**	*eP*	**Pn**	**05 32 30.5**	**+1.4**
CRIN	**San Cristobal**	**2.36**	**340**	*eP*	**Pn**	**05 32 33.5**	**+0.4**
URSC	**Urasca**	**2.48**	**105**	⇓*eP*	**Pn**	**05 32 35.5**	**+0.8**
BUS	**Buena Vista**	**2.58**	**110**	*eP*	**Pn**	**05 32 36.5**	**+0.3**
CTCR	**Cotoan**	**3.75**	**114**	*eP*	**Pn**	**05 32 54.5**	**+2.4**
CMIG	**Matias Romero**	**10.69**	**309**	P	**Pn**	**05 34 29.1**	**+1.6**
	comp=N,0.1nm,0.3s,baz=133,slow=15,SNR=6.3						
CHI2		**13.65**	**114**	*eP*	Px	05 32 31.9	
LAPE	**La Pedrera**	**14.74**	**100**	⇑*eP*	Px	05 32 10.7	
TXAR	**Lajitas Array**	**24.87**	**321**	P	**P**	**05 37 17.1**	**+0.1**
	comp=N,0.7nm,0.5s,mb3.5,baz=143,slow=10,SNR=7.8						
TKL	**Tuckaleechee C**	**25.17**	**5**	P	**P**	**05 37 18.4**	**-1.3**
	comp=N,1.8nm,0.5s,mb3.8,baz=145,slow=12,SNR=3.7						
PDAR	**Pinedale Array**	**38.08**	**332**	P	**P**	**05 39 11.8**	**-1.2**
	comp=N,0.4nm,0.7s,mb3.3,baz=141,slow=10,SNR=3.3						
NVAR	**Mina Array Bea**	**39.98**	**320**	P	**P**	**05 39 30.6**	**+1.7**
	comp=N,0.9nm,0.7s,mb3.6,baz=134,slow=7.7,SNR=9.5						
NVAR				PcP	PcP	05 41 35.4	+1.3
	comp=N,0.2nm,0.5s,baz=118,slow=5.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**85.65**	**77**	P	**P**	**05 44 41.9**	**+8.1**
	comp=N,0.2nm,0.8s,mb3.4,baz=272,slow=5.0,SNR=4.4						

*ISCJB **06** 05:35:21.2±1.0, 1158N±005×8752W±008,h46km±9km, mb4.4/25,MS4.2/5,Error ellipse: s-maj=14.5km s-min=5.8km az=151.1*

*NEIC **06** 05:35:21.5±1.6, 1156N×8736W,h39km±14km,mb4.6/19, Error ellipse: s-maj=16.0km s-min=10.9km az=70.0*

NEIC Felt at San Jose and San Vito, Costa Rica.

*BJI **06** 05:35:21.5, 1160N×8740W,h38km,mB5.1,Ms4.9,Msz4.7*

*CASC **06** 05:35:21.2±2.1, 1166N×8750W,h78km±37km,MD4.4, ML3.1,mb4.6(NEIC)*

*IDC **06** 05:35:29.0±5.1, 1215N×8762W,h67km±44km,mb3.7/6, mb1 4.0/7,mb1mx3.7/20,mbtmp3.7/7,ML3.5/1,MS3.4/2, Ms1 3.4/2,ms1mx2.7/31,Error ellipse: s-maj=43.7km s-min=25.1km az=70.0*

ISC 06 05:35:23.1±0.9,1165N±005×8745W±007,h44km±9km,n73, σ⇕89/62,mb4.4/25,MS4.2/5,15C-6D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.98**	**58**	⇓*eP*	**Pn**	**05 35 40.4**	**-0.1**
MIRN	**Miramar**	**1.06**	**42**	⇓*eP*	**Pn**	**05 35 41.4**	**-0.1**
TEL3	**Telica 3**	**1.08**	**33**	⇓*eP*	**Pn**	**05 35 41.6**	**-0.2**
CRIN	**San Cristobal**	**1.11**	**20**	⇓*eP*	**Pn**	**05 35 42.1**	**-0.1**
CNGN	**Cerro Negro**	**1.11**	**41**	⇓*eP*	**Pn**	**05 35 41.9**	**-0.3**
CSAN		**1.13**	**62**	⇓*eP*	**Pn**	**05 35 42.3**	**-0.2**
MOMN	**Momotombo**	**1.16**	**50**	⇑*eP*	**Pn**	**05 35 42.9**	**0.0**
CRUN	**El Crucero**	**1.17**	**74**	⇑*eP*	**Pn**	**05 35 43.6**	**+0.6**
XAVN	**Gruta Xavier**	**1.20**	**66**	⇓*eP*	**Pn**	**05 35 43.4**	**0.0**
APYN	**Apoyeque**	**1.22**	**62**	⇑*eP*	**Pn**	**05 35 43.6**	**0.0**
TICN	**Ticuantepe**	**1.25**	**72**	⇓*eP*	**Pn**	**05 35 44.6**	**+0.6**
TISN	**Laguna Tiscapa**	**1.25**	**67**	⇓*eP*	**Pn**	**05 35 43.8**	**-0.3**
MGAN	**Managua**	**1.27**	**67**	⇓*eP*	**Pn**	**05 35 44.0**	**-0.3**
MGAN				⇓*eP*		05 35 44.0	
WILN	**Americas 2**	**1.33**	**68**	⇑*eP*	**Pn**	**05 35 44.8**	**-0.4**
APON	**Apoyo**	**1.37**	**79**	*eP*	**Pn**	**05 35 45.4**	**-0.4**
HUEN		**1.42**	**61**	⇑*eP*	**Pn**	**05 35 46.2**	**-0.2**
CNCH	**Conchagua**	**1.66**	**347**	⇑*eP*	x	05 35 48.7	
CONN	**Concepcion**	**1.78**	**93**	⇑*eP*	**Pn**	**05 35 50.9**	**-0.6**
VSM	**San Miguel**	**1.94**	**335**	*eP*	x	05 35 52.2	
CAHU	**Cacauatique**	**2.23**	**341**	*eP*	x	05 35 57.0	
TGUH	**Tegucigalpa,Un**	**2.39**	**4**	*ePn*	**Pn**	**05 35 59.8**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.39**	**4**	⇑*eP*	**Pn**	**05 35 59.9**	**0.0**
BOQS	**Boqueron**	**2.74**	**319**	*eP*	x	05 36 03.8	
JCR	**Jicaral**	**2.91**	**128**	*eP*	**Pn**	**05 36 06.9**	**0.0**
FORC	**Fortuna**	**2.97**	**113**	*eP*	**Pn**	**05 36 06.2**	**-1.5**
CAO	**Cobano**	**3.01**	**130**	*eP*	**Pn**	**05 36 07.0**	**-1.3**
SBLS	**San Blas**	**3.04**	**316**	*eP*	x	05 36 07.2	
SBLS				*eS*	x	05 36 40.7	
CGA2	**Cerro Gallo 2**	**3.35**	**119**	*eP*	**Pn**	**05 36 13.5**	**+0.6**
CGA2				*eS*	**Sn**	**05 36 53.6**	**+2.1**
QCR	**Quepos**	**3.91**	**124**	*eP*	**Pn**	**05 36 21.4**	**+0.7**
URSC	**Urasca**	**4.03**	**116**	*eP*	**Pn**	**05 36 22.7**	**+0.4**
BUS	**Buena Vista**	**4.18**	**120**	⇑*eP*	**Pn**	**05 36 25.7**	**+1.4**
BUS				*eS*	**Sn**	**05 37 12.4**	**+0.4**
CMIG	**Matias Romero**	**9.01**	**308**	P	**Pn**	**05 37 30.3**	**-0.3**
	0.6nm,0.3s,baz=106,slow=11,SNR=9.3						
CMIG				S	**Sn**	**05 39 04.8**	**-6.0**
	0.3nm,0.3s,baz=104,slow=4.2,SNR=2.2						
CHI2		**15.24**	**116**	⇑*eP*	Px	05 35 41.1	
LRAL	**Lakeview Retre**	**21.28**	**1**	*eP*	**P**	**05 40 06.7**	**+0.8**
	19nm,0.8s,mb4.5						
GOGA	**Godfrey**	**21.96**	**9**	*eP*	**P**	**05 40 13.4**	**+0.3**
	16nm,0.8s,mb4.5						
JCT	**Junction City**	**21.96**	**330**	*eP*	**P**	**05 40 13.1**	**0.0**
	7.3nm,0.8s,mb4.2						
OXF	**Oxford**	**22.82**	**356**	*eP*	**P**	**05 40 21.2**	**-1.0**
	23nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**23.19**	**322**	P	**P**	**05 40 26.5**	**+0.3**
	3.0nm,0.6s,mb3.9,baz=138,slow=9.5,SNR=36						
TXAR	**Lajitas Array**	**23.19**	**322**	P	**P**	**05 40 26.5**	**+0.3**
MIAR	**Mount Ida**	**23.46**	**347**	*eP*	**P**	**05 40 28.4**	**-0.4**
	12nm,0.8s,mb4.4						
SWET	**Sewanee**	**23.50**	**3**	*eP*	**P**	**05 40 28.9**	**-0.2**
CPCT	**Cooper Cave**	**23.84**	**6**	*eP*	**P**	**05 40 32.6**	**+0.5**
TKL	**Tuckaleechee C**	**24.13**	**7**	P	**P**	**05 40 35.2**	**+0.4**
	10nm,0.8s,mb4.3,baz=190,slow=10,SNR=12						
TKL				LR	LR	05 50 59.0	
	comp=Z,50nm,19.0s,MS3.0,baz=98,slow=39						
TKL	**Tuckaleechee C**	**24.13**	**7**	P	**P**	**05 40 35.2**	**+0.4**
TKL				LR	LR	05 50 59.0	
WVT	**Waverly**	**24.37**	**359**	*eP*	**P**	**05 40 36.1**	**-0.9**
	3.4nm,0.9s,mb3.8						
TZTN	**Tazewell**	**25.03**	**7**	*eP*	**P**	**05 40 43.1**	**+0.1**
	157nm,2.3s,mb5.1						
NNA	**Nana**	**25.74**	**156**	*eP*	**P**	**05 40 47.6**	**-2.0**
	4.5nm,0.7s,mb4.1						
AMTX	**Amarillo**	**26.50**	**333**	*eP*	**P**	**05 40 58.3**	**+1.9**
	15nm,1.0s,mb4.5						
CCM	**Cathedral Cave**	**26.51**	**353**	*eP*	**P**	**05 40 55.1**	**-1.3**
	27nm,1.5s,mb4.6						
PV10	**Paradox Valley**	**32.86**	**328**	*eP*	**P**	**05 41 51.4**	**-1.3**
ECSD	**EROS,Sioux Fal**	**32.93**	**348**	*eP*	**P**	**05 41 51.6**	**-1.6**
	125nm,2.5s,mb5.4						
SADO	**Sadowa**	**33.76**	**11**	LR	LR	05 58 54.3	
	comp=Z,120nm,19.1s,MS3.6,baz=325,slow=42						
DAU	**Daniels Canyon**	**35.52**	**328**	*eP*	**P**	**05 42 18.7**	**+3.0**
PDAR	**Pinedale Array**	**36.47**	**332**	P	**P**	**05 42 23.8**	**-0.1**
	1.0nm,0.8s,mb3.8,baz=127,slow=9.8,SNR=8.2						
HWUT	**Hardware Ranch**	**36.55**	**329**	*eP*	**P**	**05 42 24.4**	**-0.1**
	2.8nm,0.6s,mb4.3						
REDW	**Red Top Meadow**	**37.53**	**332**	*eP*	**P**	**05 42 33.5**	**+0.6**
	8.0nm,1.0s,mb4.4						
SNOW	**Snow King Moun**	**37.56**	**332**	*eP*	**P**	**05 42 33.9**	**+0.8**
	12nm,1.1s,mb4.5						
TPAW	**Teton Pass**	**37.68**	**332**	*eP*	**P**	**05 42 35.0**	**+0.9**
	52nm,2.3s,mb4.8						
RRI2	**Red Ridge**	**37.74**	**331**	*eP*	**P**	**05 42 35.2**	**+0.6**
	58nm,2.5s,mb4.9						
MOOW	**Moose Ponds**	**37.78**	**332**	*eP*	**P**	**05 42 35.8**	**+0.9**
	55nm,2.5s,mb4.8						
NVAR	**Mina Array Bea**	**38.30**	**319**	P	**P**	**05 42 39.9**	**+0.4**
	0.4nm,0.7s,mb3.3,baz=123,slow=9.1,SNR=3.3						
NVAR				PcP	PcP	05 44 54.5	+1.7
	0.4nm,0.7s,baz=136,slow=4.7,SNR=4.1						
ULM	**Lac du Bonnet**	**39.10**	**351**	P	**P**	**05 42 43.4**	**-2.5**
	6.3nm,0.8s,mb4.4,baz=155,slow=4.8,SNR=3.0						
HLID	**Hailey**	**39.42**	**329**	*eP*	**P**	**05 42 49.1**	**+0.4**
	1.0nm,0.8s,mb3.6						
MCMT	**McKenzie Canyo**	**39.58**	**331**	*eP*	**P**	**05 42 51.3**	**+1.3**
LCO	**Las Campanas**	**43.54**	**159**	*eP*	**P**	**05 43 21.0**	**-1.6**
	36nm,1.6s,mb4.8						
PLCA	**Paso Flores**	**54.42**	**164**	P	**P**	**05 44 53.0**	**+7.3**
	1.3nm,0.8s,mb3.9,baz=333,slow=7.7,SNR=3.8						
HHC	**Hu-ho-hao-te**	**124.88**	**342**	*e*PKP	PKPdf	05 54 17.6	-1.0
HHC				PP	PP	05 56 09.7	+4.0
HHC				SKS	SKSdf	06 01 24.8	-2.3
HHC				SS	SS	06 13 00.2	+3.3
HHC				LR	LR		
	comp=N,182nm,20.8s,MS4.9						
HHC				LR	LR		
	comp=E,170nm,19.6s,MS4.9						
HHC				LR	LR		
	comp=Z,146nm,20.8s,MS4.6						
LZH	**Lanzhou**	**131.34**	**348**	*e*PKP	PKPdf	05 54 30.1	-0.9
LZH				LR	LR		
	comp=E,125nm,18.2s						
LZH				LR	LR		
	comp=Z,183nm,20.0s,MS4.8						
CD2	**Chengdu**	**136.33**	**346**	*e*PKP	PKPdf	05 54 38.8	-1.8
CD2				XPKP		05 54 55.0	
CD2				PP	PP	05 57 22.9	+3.1
CD2				PKS		05 58 13.8	
CD2				SKS	SKSdf	06 01 44.4	-3.8
CD2				SKKS	SKKSac	06 04 09.8	-3.0
CD2				SS	SS	06 15 18.5	+1.3
CD2				PP	PP		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,18.4s						
CD2				LR	LR		
	comp=Z,140nm,16.4s,MS4.8						
WRA	**Warramunga Arr**	**139.05**	**253**	PKP	PKPdf	05 54 49.6	+3.8
	comp=Z,0.5nm,0.9s,baz=100,slow=3.2,SNR=3.6						
GYA	**Guiyang**	**139.71**	**340**	*e*PDIF	Pdif	05 51 58.2	-1.8
GYA				PKP	PKPdf	05 54 45.2	-1.7
GYA				XPKP		05 55 01.8	
GYA				PP	PP	05 57 43.8	+2.8
GYA				PP	PP		
	comp=Z,90nm,7.8s						
KMI	**Kunming**	**142.12**	**345**	PKP	PKPdf	05 54 49.3	-2.0
KMI				APKP		05 55 03.2	
CMAR	**Chiang Mai Arr**	**149.42**	**348**	PKPbc	PKPbc	05 55 09.0	+0.7
	comp=Z,4.4nm,0.8s,baz=345,slow=3.7,SNR=18						

KRSC 06 05:36:50.2±1.6,4934N×15815E,h5km±5km,ML4.2,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**3.07**	**344**	*eP*	Pn	05 37 41.9	+2.6
RUS	**Russkaya**	**3.11**	**4**	*eP*	Pn	05 37 40.8	+1.0
RUS				*i* S	Sn	05 38 18.1	+0.9
SPN	**Mys Shipunski**	**3.94**	**17**	*eP*	Pn	05 37 54.1	+2.8
SPN				*i* S	Sn	05 38 40.0	+2.1
AVH	**Avacha**	**3.95**	**5**	*eP*	Pn	05 37 53.1	+1.7
AVH				*i* S	Sn	05 38 39.3	+1.3
GNL	**Ganaly**	**4.36**	**358**	*eP*	Pn	05 37 59.5	+2.4
MKZ	**Mys Kozlova**	**5.67**	**22**	*eP*	Pn	05 38 17.4	+2.4
MKZ				*i* S	Sn	05 39 22.3	+1.8

*IDC **06** 05:39:48.9±8.9, 1200N×8761W,h48km±64km,mb3.4/4, mb1 3.9/5,mb1mx3.6/20,mbtmp3.5/5,ML3.5/1,Error ellipse: s-maj=71.6km s-min=50.2km az=168.0*

ISC 06 05:39:49.4±5.5,121N±05×876W±03,h43km±41km,n6, σ⇕55/6,mb3.6/4,Near coast of Nicaragua

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

2.5nm,0.3s,baz=350,slow=19,SNR=3.6
AFI S **S** **06 02 22.3 -5.8**
1.7nm,0.3s,baz=343,slow=19,SNR=6.1
RPZ **Rata Peaks 20.38 200** P **P** **06 01 20.7 -0.3**
9.4nm,0.5s,baz=4.8,slow=4.0,SNR=10.0
CTA **Charters Tower 31.79 272** P **P** **06 03 03.4 +0.9**
5.1nm,0.3s,mb4.3,baz=102,slow=10,SNR=15
STKA **Stephens Creek 34.69 249** P **P** **06 03 27.6 +0.5**
1.0nm,0.3s,mb3.6,baz=90,slow=8.1,SNR=2.8
ASAR **Alice Springs 42.20 261** P **P** **06 04 28.4 -0.3**
1.2nm,0.3s,mb3.6,baz=91,slow=6.8,SNR=15
ASAR S **S** **06 10 11.8 -4.5**
0.9nm,0.9s,baz=94,slow=18,SNR=4.1
WRA **Warramunga Arr 42.65 267** P **P** **06 04 31.6 -0.7**
2.3nm,0.3s,mb3.9,baz=102,slow=8.2,SNR=18
MAW **Mawson 77.06 200** P **P** **06 08 22.2 +0.1**
1.8nm,0.5s,mb4.0,baz=148,slow=3.8,SNR=8.1
KSRS **Korea Array 79.09 320** P **P** **06 08 33.3 -0.2**
0.9nm,0.4s,mb3.8,baz=127,slow=6.4,SNR=4.6
CMAR **Chiang Mai Arr 90.10 290** P **P** **06 09 28.0 -0.3**
1.4nm,0.3s,mb4.2,baz=108,slow=3.2,SNR=4.7
TXAR **Lajitas Array 90.63 58** P **P** **06 09 30.9 +0.4**
0.3nm,0.7s,mb3.2,baz=188,slow=5.1,SNR=3.9
ARCES **ARCESS Array B 132.78 348** PKP PKPdf 06 15 38.4 -0.7
2.5nm,0.8s,baz=79,slow=1.9,SNR=2.6
AKASG **Malin Array Be 145.85 327** PKPbc PKPbc 06 16 03.0 -1.8
10nm,1.3s,baz=42,slow=3.8,SNR=4.6
BRTR **Keskin Array B 148.32 306** PKPbc PKPbc 06 16 10.2 -1.6
0.4nm,0.5s,baz=72,slow=0.5,SNR=2.5
DBIC **Dimbokro 161.34 164** PKP PKPdf 06 16 26.5 +0.4
3.0nm,0.9s,baz=173,slow=1.8,SNR=3.7
TORD **Torodi Ar. Bea 168.38 187** PKPab PKPab 06 17 42.8 -0.8
0.2nm,0.5s,baz=177,slow=3.7,SNR=7.3

IDC 06 05:59:00.9±3.6, 572S×13155E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.5/13, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=247.3km s-min=31.2km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.40**	**169**	Pn	Pn	06 02 27.4	+1.3
	0.3nm,0.3s,baz=351,slow=11,SNR=21						
WRA				Sn	Sn	06 04 52.6	-14
	1.1nm,0.3s,baz=342,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.99**	**173**	P	Pn	06 03 11.8	-0.7
	0.2nm,0.3s,baz=348,slow=12,SNR=11						
ASAR				S	Sn	06 06 16.3	-18
	0.3nm,0.3s,baz=350,slow=27,SNR=4.4						
MKAR	**Makanchi Array**	**68.02**	**326**	P	P	06 10 02.1	+0.2
	0.5nm,0.5s,baz=108,slow=8.2,SNR=6.8						

IDC 06 06:34:00.7±10.0, 559N×9466E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/21, Error ellipse: s-maj=579.2km s-min=23.7km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**27.18**	**112**	LR	LR	06 49 40.8	
	comp=Z,214nm,20.1s,baz=349,slow=35						
MKAR	**Makanchi Array**	**42.41**	**347**	P	P	06 41 56.6	-0.4
	0.6nm,0.4s,baz=163,slow=7.4,SNR=8.2						
WRA	**Warramunga Arr**	**46.54**	**124**	P	P	06 42 30.3	-0.1
	0.2nm,0.6s,baz=299,slow=7.3,SNR=4.9						
KURK	**Kurchatov**	**46.94**	**346**	P	P	06 42 32.8	-0.3
	baz=168,slow=6.7						
ASAR	**Alice Springs**	**48.08**	**129**	P	P	06 42 42.4	+0.1
	0.2nm,0.6s,baz=300,slow=7.3,SNR=4.7						

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*MEX **06** 06:35:40.9±0.5, 1693N×100.11W, h3km±4km, MD5.6*
*ISCJB **06** 06:35:41.2±0.2, 1706N±003×9998W±002, h27km, mb5.3/189, MS5.0/183, Error ellipse: s-maj=4.4km s-min=2.2km az=21.7*
*MOS **06** 06:35:42.2±0.9, 1717N×9991W, h31km, mb5.7/66, MS4.8/40, Error ellipse: s-maj=7.3km s-min=4.0km az=90.4*
*NEIC **06** 06:35:43.4±0.2, 1711N×9989W, mb5.4/174, MS4.9/158, Error ellipse: s-maj=5.1km s-min=2.9km az=27.0*
NEIC Felt [IV] at Acapulco, [III] at Mexico City and [II] at Cuernavaca. Also felt at Ixtapan, Metepec, Morelia and Naucalpan.
*IDC **06** 06:35:43.7±4.4, 1713N×9991W, h33km±32km, mb4.4/17, mb1 4.6/21, mb1mx4.5/23, mbtmp4.4/21, ML4.1/4, MS4.8/20, Ms1 4.8/20, ms1mx4.6/29, Error ellipse: s-maj=23.7km s-min=13.8km az=51.0*
*BJI **06** 06:35:43.3, 1710N×9990W, h29km, mB5.6, mb5.3, Ms5.4, Msz5.3*
*GCMT **06** 06:35:43.4±0.2, 1714N×9991W, h18km, MW5.4/82, Moment Tensor Solution. s82,c137; s82,c168; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr-0.65±.02; Mθθ 0.67±.02; Mϕϕ -0.01±.02; Mrθ-1.58±.09; Mθϕ-0.50±.01; Mϕr 0.11±.04; Best double couple: M0 1.78300×10^17 NP1:ϕs325.00000°, δ18.00000°, λ-42.00000°. NP2:ϕs96.00000°, δ78.00000°, λ-104.00000°. Principal axes: T 1.8430, Plg32.0000°, Azm197.0000°; N -0.1200, Plg13.0000°, Azm99.0000°; P -1.7240, Plg55.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **06** 06:35:49.0, 1773N×9926W, h33km, mb5.3, MS4.8, Guerrero, Mexico*

ISC 06 06:35:43.0±0.2, 1704N±003×9993W±002, h29km, h29km±1.2km:pP-P, n992, σ0677/883, mb5.3/190, MS5.0/183, 205C-209D, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.32**	**272**	*e*P	**Pb**	**06 35 44.4**	**-6.2**
CAIG				*i* S	**Sb**	**06 35 47.4**	**-8.5**
MEIG	**Mezcala**	**0.93**	**18**	*e*P	**Pn**	**06 35 59.1**	**-1.1**
MEIG				*i* S	**Sn**	**06 36 13.7**	**+1.0**
PLIG	**Platanillo**	**1.41**	**17**	*e*P	**Pn**	**06 36 07.0**	**+0.2**
PLIG				*i* S	**Sn**	**06 36 26.0**	**+1.7**
ZIIG	**Zihuatanejo**	**1.57**	**291**	*e*P	**Pn**	**06 36 04.4**	**-4.6**
ZIIG				*i* S	**Sn**	**06 36 23.2**	**-5.2**
PNIG	**Pinotepa**	**1.84**	**110**	*i* P	**Pn**	**06 36 12.9**	**+0.2**
PNIG				*i* S	**Sn**	**06 36 35.6**	**+0.6**
UTMO	**Huajuapan**	**2.18**	**68**	*e*P	**Pn**	**06 36 18.7**	**+1.4**
UTMO				*i* S	**Sn**	**06 36 47.5**	**+4.2**
MZVM		**2.24**	**17**	*i* P	**Pn**	**06 36 19.2**	**+1.0**
MZVM				*i* S	**Sn**	**06 36 47.5**	**+2.5**
PPM	**Popocatepetl**	**2.37**	**31**	*e*P	**Pn**	**06 36 20.4**	**+0.4**
PPM				*i* S	**Sn**	**06 36 50.2**	**+2.1**
PTVM	**Pico Tres Padr**	**2.66**	**17**	*i* P	**Pn**	**06 36 24.5**	**+0.6**
PTVM				*i* S	**Sn**	**06 36 57.2**	**+2.0**
IIO	**Organos**	**2.79**	**24**	*e*P	**Pn**	**06 36 25.8**	**0.0**
IIO				*i* S	**Sn**	**06 37 00.8**	**+2.4**
VHO	**Vista Hermosa**	**3.06**	**89**	*i* P	**Pn**	**06 36 30.7**	**+1.3**
VHO				*i* S	**Sn**	**06 37 08.6**	**+3.5**
MMIG	**Aquila**	**3.49**	**291**	*e*P	**Pn**	**06 36 32.5**	**-2.8**
MMIG				*i* S	**Sn**	**06 37 10.8**	**-4.9**
LVIG	**Laguna Verde**	**4.27**	**51**	*e*P	**Pn**	**06 36 49.5**	**+3.4**
LVIG				*i* S	**Sn**	**06 37 42.9**	**+7.9**
CMIG	**Matias Romero**	**4.83**	**89**	Pn	**Pn**	**06 36 54.6**	**+0.8**
	3.6nm,0.3s,baz=253,slow=12,SNR=86						
CMIG				Lg		06 38 08.8	
	73nm,0.3s,baz=90,slow=22,SNR=5.7						
CMIG				LR	LR	06 38 47.2	
	comp=Z,3μm,19.9s,baz=264,slow=38						
ANIG	**Ahuacatlan**	**5.90**	**313**	*e*P	**Pn**	**06 37 11.1**	**+2.5**
TGIG		**6.52**	**91**	*e*P	**Pn**	**06 37 19.9**	**+2.8**
PCIG		**6.58**	**101**	*e*P	**Pn**	**06 37 19.6**	**+1.8**
THIG		**7.67**	**105**	*i* P	**Pn**	**06 37 37.0**	**+4.2**
LNIG	**Linares**	**7.83**	**3**	*e*P	**Pn**	**06 37 36.7**	**+1.6**
HPIG		**11.19**	**333**	*e*P	**Pn**	**06 38 20.6**	**-0.5**
LPIG	**La Paz**	**11.99**	**308**	Pn	**Pn**	**06 38 32.0**	**-0.1**
	1.7nm,0.3s,baz=13,slow=4.9,SNR=6.0						
LPIG				LR	LR	06 43 19.1	
	comp=Z,3μm,18.9s,baz=133,slow=38						
TGUH	**Tegucigalpa,Un**	**12.55**	**102**	*e*Pn	**Pn**	**06 38 43.1**	**+3.4**
TXAR	**Lajitas Array**	**12.71**	**345**	Pn	**Pn**	**06 38 43.4**	**+1.5**
	0.2nm,0.3s,baz=165,slow=12,SNR=36						
TXAR				Lg		06 42 25.1	
	0.4nm,0.3s,baz=154,slow=26,SNR=3.5						
TXAR				LR	LR	06 44 28.1	
	comp=Z,15μm,18.4s,baz=95,slow=42						
JCT	**Junction City**	**13.38**	**0**	*e*Pn	**Pn**	**06 38 51.9**	**+0.9**
JCT				Sn	**Sn**	**06 41 35.0**	**+16**
HKT	**Hockley**	**13.39**	**16**	*e*Pn	**Pn**	**06 38 50.6**	**-0.6**
	536nm,1.7s						
HKT	**Hockley**	**13.39**	**16**	*e*P	**Pn**	**06 38 50.6**	**-0.5**
HKT				pmax	pmax		
	comp=Z,536nm,1.7s						
CGIG		**15.17**	**332**	*e*P	**Pn**	**06 39 15.5**	**+0.3**
NATX	**Nacogdoches**	**15.42**	**17**	*e*P	**Pn**	**06 39 22.6**	**+4.1**
	comp=Z,2μm,1.5s						
GDL2	**Guadalupe Moun**	**15.62**	**346**	*e*Pn	**Pn**	**06 39 22.1**	**+0.9**
HSIG		**15.64**	**322**	*i* P	**Pn**	**06 39 20.6**	**-0.9**
JCR	**Jicaral**	**16.08**	**114**	*e*P	**Pn**	**06 39 35.4**	**+8.2**
319A	**Douglas**	**16.61**	**331**	⇓P	**Pn**	**06 39 34.5**	**+0.6**
	baz=16,SNR=63						
318A	**Bisbee**	**17.01**	**329**	⇑P	**Pn**	**06 39 39.0**	**+0.1**
	baz=17,SNR=42						
219A	**White Tail Can**	**17.13**	**332**	⇑P	**Pn**	**06 39 40.5**	**+0.2**
	baz=17,SNR=131						
URSC	**Urasca**	**17.25**	**112**	*e*P	**Pn**	**06 39 49.4**	**+7.3**
VBMS	**Vicksburg**	**17.35**	**28**	*e*P	**Pn**	**06 39 41.4**	**-1.7**
BUS	**Buena Vista**	**17.40**	**113**	*e*P	**Pn**	**06 39 49.2**	**+5.4**
218A	**Dragoon**	**17.47**	**330**	⇓P	**Pn**	**06 39 44.8**	**+0.2**
	baz=17,SNR=58						
217A	**Green Valley**	**17.69**	**328**	⇓P	**Pn**	**06 39 47.6**	**+0.3**
	baz=18,SNR=82						
119A	**Ashpeak Ranch,**	**17.80**	**333**	⇓P	**Pn**	**06 39 49.1**	**+0.4**
	baz=18,SNR=36						
AMTX	**Amarillo**	**17.84**	**355**	*e*P	**Pn**	**06 39 47.5**	**-1.6**
	comp=Z,388nm,1.3s						
118A	**Homack Ranch,**	**17.99**	**332**	⇑P	**Pn**	**06 39 51.9**	**+0.9**
	baz=18,SNR=117						
BNM	**Barren Site**	**18.07**	**342**	*e*P	**Pn**	**06 39 52.7**	**+0.7**
Y22D	**IRIS PASSCAL I**	**18.09**	**341**	⇑P	**Pn**	**06 39 53.1**	**+0.9**
	baz=18,SNR=6.9						
TUC	**Tucson**	**18.11**	**329**	*e*P	**Pn**	**06 39 52.7**	**+0.3**
	comp=Z,110nm,1.1s						
TUC	**Tucson**	**18.11**	**329**	*e*P	**Pn**	**06 39 52.7**	**+0.3**
TUC				pmax	pmax		
	comp=Z,110nm,1.1s						
BRAL	**Brewton**	**18.19**	**38**	*e*P	**Pn**	**06 39 54.4**	**+0.9**
	comp=Z,359nm,1.4s						
LENM	**Lemitar**	**18.19**	**341**	*e*P	**Pn**	**06 39 54.2**	**+0.7**
216A	**Three Points,**	**18.20**	**327**	⇓P	**Pn**	**06 39 53.8**	**+0.2**
	baz=18,SNR=47						
LPM	**Los Pinos Moun**	**18.22**	**342**	*e*P	**Pn**	**06 39 55.1**	**+1.2**
Z19A	**T-Link Ranch,**	**18.24**	**334**	⇓P	**Pn**	**06 39 54.8**	**+0.7**
	baz=18,SNR=27						
117A	**Oracle**	**18.30**	**330**	⇑P	**Pn**	**06 39 55.2**	**+0.5**
	baz=18,SNR=78						
MIAR	**Mount Ida**	**18.34**	**17**	*e*P	**Pn**	**06 39 54.2**	**-1.0**
	comp=Z,547nm,1.6s						
MIAR	**Mount Ida**	**18.34**	**17**	*e*P	**Pn**	**06 39 54.3**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,547nm,1.6s						
Z18A	**Geronimo**	**18.40**	**332**	⇓P	**Pn**	**06 39 56.7**	**+0.7**
	baz=18						
LAZ	**Ladron**	**18.46**	**341**	*e*P	**Pn**	**06 39 57.4**	**+0.7**
116A	**Eloy**	**18.77**	**328**	⇓P	**Pn**	**06 40 00.0**	**-0.5**
	baz=19,SNR=24						
ANMO	**Albuquerque**	**18.77**	**343**	P	**Pn**	**06 40 00.2**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=153,slow=12,SNR=44						
ANMO				Lg		06 45 37.6	
	comp=Z,0.1nm,0.3s,baz=279,slow=15,SNR=7.3						
ANMO				LR	LR	06 47 15.8	
	comp=Z,4μm,20.2s,baz=166,slow=37						
ANMO	**Albuquerque**	**18.77**	**343**	*e*P	**Pn**	**06 40 00.1**	**-0.4**
	comp=Z,239nm,1.4s						
ANMO	**Albuquerque**	**18.77**	**343**	⇑*i*P	**Pn**	**06 39 59.5**	**-1.0**
Z17A	**San Carlos Hig**	**18.77**	**332**	⇑P	**Pn**	**06 40 00.7**	**+0.1**
	baz=19,SNR=11						
Y19A	**Nutrioso**	**18.82**	**335**	⇑P	**Pn**	**06 40 01.7**	**+0.6**
	baz=19,SNR=137						
214A	**Organ Pipe Nat**	**18.89**	**324**	⇓P	**Pn**	**06 40 01.7**	**-0.3**
	baz=19,SNR=83						
UALR	**University of**	**18.92**	**20**	*e*P	**Pn**	**06 40 01.2**	**-1.2**
	comp=Z,1μm,2.3s						
Y18A	**Canyon Day Jun**	**18.98**	**333**	⇑P	**Pn**	**06 40 03.1**	**0.0**
	baz=19,SNR=57						
115A	**Sonoran Desert**	**19.15**	**327**	⇑P	**Pn**	**06 40 04.5**	**-0.6**
	baz=19,SNR=31						
X19A	**St. Johns**	**19.24**	**336**	⇓P	**Pn**	**06 40 06.0**	**-0.2**
	baz=19,SNR=74						
Z16A	**Peralta Trail,**	**19.26**	**330**	⇓P	**Pn**	**06 40 05.3**	**-1.1**
	baz=19,SNR=55						
Y17A	**Roosevelt**	**19.27**	**331**	⇓P	**Pn**	**06 40 05.9**	**-0.6**
	baz=19,SNR=113						
Z15A	**Gila River Ind**	**19.58**	**328**	⇑P	**Pn**	**06 40 08.7**	**-1.5**
	baz=19,SNR=22						
X18A	**Snowflake**	**19.59**	**335**	⇑P	**Pn**	**06 40 09.9**	**-0.5**
	baz=19,SNR=68						
Y16A	**Circle Bar Ran**	**19.72**	**330**	⇑P	**Pn**	**06 40 10.9**	**-1.1**
	baz=20,SNR=80						
LRAL	**Lakeview Retre**	**19.74**	**34**	*e*P	**Pn**	**06 40 10.7**	**-1.5**
OXF	**Oxford**	**19.79**	**26**	*e*P	**Pn**	**06 40 09.9**	**-2.8**
	comp=Z,282nm,1.4s						
OXF	**Oxford**	**19.79**	**26**	*e*P	**Pn**	**06 40 09.9**	**-2.8**
OXF				pmax	pmax		
	comp=Z,282nm,1.4s						
X17A	**Forest Lakes**	**19.80**	**333**	⇓P	**Pn**	**06 40 12.0**	**-0.8**
	baz=20,SNR=46						
W19A	**Sanders**	**19.88**	**337**	⇑P	**Pn**	**06 40 12.8**	**-1.0**
	baz=20,SNR=58						
PAYG	**Puerto Ayora**	**20.00**	**151**	PFAKE			
PAYG				LR	LR	06 40 30.0	+16
	comp=Z,9μm,20.0s,MS5.1						
W18A	**Petrified Fore**	**20.02**	**336**	⇑P	**P**	**06 40 14.2**	**+0.7**
	baz=20,SNR=34						
113A	**Mohawk Valley,**	**20.04**	**324**	⇑P	**P**	**06 40 14.2**	**+0.5**
	baz=20,SNR=116						
Z14A	**Wintersburg**	**20.04**	**327**	⇑P	**P**	**06 40 14.1**	**+0.3**
	baz=20,SNR=26						
X16A	**Lo Mia Camp, P**	**20.15**	**331**	⇑P	**P**	**06 40 15.9**	**+0.9**
	baz=20,SNR=90						
Y15A	**Casa Rosa Ranc**	**20.20**	**329**	⇑P	**P**	**06 40 15.7**	**+0.2**
	baz=20,SNR=103						
V19A	**Window Rock**	**20.30**	**338**	⇑P	**P**	**06 40 17.0**	**+0.5**
	baz=20,SNR=6.2						
DWPF	**Disney**	**20.30**	**54**	PFAKE			
DWPF				LR	LR	06 40 30.0	+13
	comp=Z,2μm,21.0s,MS4.4						
112A	**Yuma**	**20.34**	**322**	⇑P	**P**	**06 40 16.8**	**-0.2**
	baz=20,SNR=11						
W17A	**Winslow**	**20.39**	**334**	⇓P	**P**	**06 40 18.2**	**+0.7**
	baz=20,SNR=11						
Y14A	**Wickenburg**	**20.52**	**328**	⇓P	**P**	**06 40 19.5**	**+0.5**
	baz=20,SNR=88						
X15A	**Humboldt**	**20.58**	**330**	⇑P	**P**	**06 40 20.3**	**+0.7**
	baz=20,SNR=89						
V18A	**Ganado**	**20.62**	**336**	⇓P	**P**	**06 40 20.7**	**+0.7**
	baz=20,SNR=114						
W16A	**Flagstaff**	**20.75**	**332**	⇑P	**P**	**06 40 22.7**	**+1.1**
	baz=21,SNR=30						
GNAR	**Gosnell**	**20.81**	**23**	*e*P	**P**	**06 40 23.6**	**+1.5**
	comp=Z,13μm,1.5s						
GLA	**Glamis**	**20.85**	**323**	*e*P	**P**	**06 40 23.0**	**+0.4**
	comp=Z,808nm,1.4s						
GLA				LR	LR		
	comp=Z,4μm,20.0s,MS4.8						
GLA	**Glamis**	**20.85**	**323**	*e*P	**P**	**06 40 23.0**	**+0.4**
GLA				pmax	pmax		
	comp=Z,808nm,1.4s						
GLA				MLR	MLR		
	comp=Z,4μm,20.0s,MS4.8						
GLA	**Glamis**	**20.85**	**323**	⇑P	**P**	**06 40 23.1**	**+0.5**
	baz=21,SNR=88						
Y13A	**Salome**	**20.86**	**326**	⇓P	**P**	**06 40 23.0**	**+0.3**
	baz=21,SNR=172						
X14A	**Yava**	**20.88**	**329**	⇑P	**P**	**06 40 23.8**	**+0.8**
	baz=21,SNR=85						
HALT	**Halls**	**21.02**	**25**	*e*P	**P**	**06 40 23.0**	**-1.4**
WUAZ	**Wupatki**	**21.04**	**333**	*e*P	**P**	**06 40 25.8**	**+1.1**
	comp=Z,281nm,1.1s,mb5.5						
WUAZ				LR	LR		
	comp=Z,9μm,22.0s,MS5.1						
WUAZ	**Wupatki**	**21.04**	**333**	⇑P	**P**	**06 40 25.7**	**+1.1**
	baz=21,SNR=81						
BCIP	**Isla Barro Col**	**21.06**	**109**	*e*P	**P**	**06 40 29.5**	**+4.5**
	comp=Z,115nm,1.6s,mb5.0						
BCIP				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
W15A	**Williams**	**21.16**	**331**	⇑P	**P**	**06 40 27.2**	**+1.3**
	baz=21,SNR=55						
Y12C	**Blythe**	**21.19**	**324**	⇓P	**P**	**06 40 26.6**	**+0.3**
	baz=21,SNR=109						
SDCO	**Great Sand Dun**	**21.20**	**348**	*e*P	**P**	**06 40 26.0**	**-0.4**
	comp=Z,159nm,1.1s,mb5.3						
SDCO				LR	LR		
	comp=Z,8μm,19.0s,MS5.1						
U18A	**Rough Rock, Ch**	**21.22**	**337**	⇓P	**P**	**06 40 26.6**	**0.0**
	baz=21,SNR=58						
T19A	**Beclabito**	**21.30**	**340**	⇓P	**P**	**06 40 27.1**	**-0.3**
	baz=21,SNR=87						
SWSC	**Sam W. Stewart**	**21.35**	**321**	⇑P	**P**	**06 40 28.2**	**+0.3**
	baz=21,SNR=88						
GLAT	**Glass**	**21.36**	**24**	*e*P	**P**	**06 40 28.1**	**0.0**
PDMCI	**Parker Dam,Lak**	**21.39**	**326**	⇓P	**P**	**06 40 28.8**	**+0.3**
	baz=21,SNR=57						
X13A	**Yucca**	**21.46**	**327**	⇓P	**P**	**06 40 29.5**	**+0.4**
	baz=21,SNR=145						
U16A	**Tuba City**	**21.47**	**335**	⇑P	**P**	**06 40 29.8**	**+0.6**
	baz=21,SNR=70						
MVCO	**Mesa Verde**	**21.47**	**341**	*e*P	**P**	**06 40 28.8**	**-0.4**
	comp=Z,324nm,1.3s,mb5.5						
MVCO				LR	LR		
	comp=Z,1μm,20.0s,MS4.2						
MVCO	**Mesa Verde**	**21.47**	**341**	⇑P	**P**	**06 40 28.9**	**-0.3**
	baz=21,SNR=110						
PARMO	**Parma**	**21.53**	**23**	*e*P	**P**	**06 40 28.7**	**-1.2**
W14A	**Seligman**	**21.57**	**330**	⇓P	**P**	**06 40 31.0**	**+0.7**
	baz=21,SNR=86						
UTMT	**University of**	**21.59**	**25**	*e*P	**P**	**06 40 29.6**	**-0.9**
	comp=Z,876nm,1.3s,mb6.0						
V15A	**Kaibab Nationa**	**21.64**	**332**	⇓P	**P**	**06 40 32.1**	**+1.0**
	baz=22,SNR=61						
BC3	**Big Chuckw Mtn**	**21.65**	**323**	⇑P	**P**	**06 40 31.2**	**0.0**
	baz=22,SNR=124						
U17A	**Shonto**	**21.68**	**336**	⇑P	**P**	**06 40 31.8**	**+0.3**
	baz=22,SNR=91						
MONP	**Monument Peak**	**21.69**	**320**	⇑P	**P**	**06 40 32.0**	**+0.4**
	baz=22,SNR=44						
CBKS	**Cedar Bluff**	**21.70**	**0**	*e*P	**P**	**06 40 29.9**	**-1.7**
	comp=Z,700nm,1.5s,mb5.9						
CBKS	**Cedar Bluff**	**21.70**	**0**	*e*P	**P**	**06 40 29.9**	**-1.7**
CBKS				pmax	pmax		
	comp=Z,700nm,1.5s,mb5.9						
IRM	**Iron Mountain**	**21.84**	**324**	⇓P	**P**	**06 40 33.7**	**+0.4**
	baz=22,SNR=177						
WVT	**Waverly**	**21.84**	**27**	*e*P	**P**	**06 40 30.9**	**-2.4**
	comp=Z,240nm,1.4s,mb5.4						
WVT				LR	LR		
	comp=Z,3μm,22.0s,MS4.6						
WVT	**Waverly**	**21.84**	**27**	*e*P	**P**	**06 40 30.9**	**-2.3**
WVT				pmax	pmax		
	comp=Z,240nm,1.4s,mb5.4						
WVT				MLR	MLR		
	comp=Z,3μm,22.0s,MS4.6						
T18A	**Mexican Hat**	**21.86**	**338**	⇓P	**P**	**06 40 33.2**	**-0.2**
	baz=22,SNR=114						
W13A	**Hualapai Mount**	**21.88**	**328**	⇑P	**P**	**06 40 34.1**	**+0.5**
	baz=22,SNR=120						
V14A	**Boquillas Ranc**	**21.92**	**330**	⇓P	**P**	**06 40 34.7**	**+0.6**
	baz=22,SNR=78						
SWET	**Sewanee**	**21.99**	**32**	*e*P	**P**	**06 40 33.6**	**-1.2**
GOGA	**Godfrey**	**22.03**	**39**	*e*P	**P**	**06 40 34.5**	**-0.8**
	comp=Z,215nm,1.3s,mb5.4						
GOGA				LR	LR		
	comp=Z,2μm,22.0s,MS4.5						
GOGA	**Godfrey**	**22.03**	**39**	*e*P	**P**	**06 40 34.5**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,215nm,1.3s,mb5.4						
GOGA				MLR	MLR		
	comp=Z,2μm,22.0s,MS4.5						
T17A	**Navajo Res., N**	**22.08**	**336**	⇑P	**P**	**06 40 35.7**	**-0.1**
	baz=22,SNR=70						
109C	**Camp Elliot, M**	**22.12**	**319**	⇓P	**P**	**06 40 36.1**	**-0.1**
	baz=22,SNR=16						
S19A	**Harvey Farm, M**	**22.16**	**340**	⇑P	**P**	**06 40 36.1**	**-0.5**
	baz=22,SNR=72						
KSU1	**Kansas State U**	**22.17**	**7**	*e*P	**P**	**06 40 35.4**	**-1.4**
	comp=Z,285nm,1.3s,mb5.5						
KSU1				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**22.21**	**321**	P	**P**	**06 40 37.0**	**-0.1**
	comp=Z,1μm,1.5s,mb6.1,SNR=47						
PFO	**Pinyon Flat Ob**	**22.21**	**321**	*e*P	**P**	**06 40 37.6**	**+0.5**
	comp=Z,654nm,1.6s,mb5.8						
PFO				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**22.21**	**321**	*e*P	**P**	**06 40 37.6**	**+0.5**
PFO				pmax	pmax		
	comp=Z,654nm,1.6s,mb5.8						
PFO				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**22.21**	**321**	⇑P	**P**	**06 40 37.4**	**+0.2**
	baz=22,SNR=61						
U15A	**North Rim**	**22.21**	**333**	⇑P	**P**	**06 40 37.4**	**+0.2**
	baz=22,SNR=132						
BELC	**Belle Mtn.**	**22.21**	**323**	⇓P	**P**	**06 40 37.4**	**+0.2**
	baz=22,SNR=147						
CCM	**Cathedral Cave**	**22.29**	**18**	*e*P	**P**	**06 40 36.3**	**-1.6**
	comp=Z,185nm,1.4s,mb5.3						
CCM				LR	LR		
	comp=Z,3μm,21.0s,MS4.7						
CCM	**Cathedral Cave**	**22.29**	**18**	*e*P	**P**	**06 40 36.3**	**-1.6**
CCM				pmax	pmax		
	comp=Z,185nm,1.4s,mb5.3						
CCM				MLR	MLR		
	comp=Z,3μm,21.0s,MS4.7						
T16A	**Glen Canyon Da**	**22.35**	**335**	⇓P	**P**	**06 40 38.8**	**+0.2**
	baz=22,SNR=31						
S18A	**Hurst Farm, BI**	**22.40

baz=23,SNR=59
R17A Hanksville Air 23.30 338 ⇑P **P** 06 40 47.7 -1.0
baz=23,SNR=40
Q19A Hogan Spring (23.31 341 ⇑P **P** 06 40 47.6 -1.1
baz=23,SNR=20
BFSC Mount Baldy St 23.36 320 ⇓P **P** 06 40 48.9 -0.5
baz=23,SNR=26
FMP Fort Macarthur 23.41 319 ⇓P **P** 06 40 49.1 -0.8
baz=23
RRX Edison Barstow 23.42 323 ⇓P **P** 06 40 49.6 -0.3
baz=23,SNR=9.7
T13A Saint George 23.43 331 ⇓P **P** 06 40 50.0 0.0
baz=23,SNR=111
TKL Tuckaleechee C 23.46 35 P **P** 06 40 48.6 -1.8
comp=Z,30nm,0.9s,mb4.7,baz=213,slow=10.0,SNR=18
TKL Tuckaleechee C 23.46 35 *eP* **P** 06 40 48.3 -2.1
USIN University of 23.47 25 *eP* **P** 06 40 49.5 -0.9
comp=Z,685nm,1.4s,mb5.9
T12A Moapa 23.57 329 ⇑P **P** 06 40 51.2 -0.2
baz=23,SNR=12
MWC Mount Wilson 23.60 320 *eP* **P** 06 40 51.5 -0.1
comp=Z,487nm,1.6s,mb5.7
MWC LR LR
comp=Z,3μm,19.0s,MS4.8
MWC Mount Wilson 23.60 320 *eP* **P** 06 40 51.5 -0.1
MWC pmax pmax
comp=Z,487nm,1.6s,mb5.7
MWC MLR MLR
comp=Z,3μm,19.0s,MS4.8
GSC Goldstone 23.61 324 *eP* **P** 06 40 51.7 0.0
comp=Z,299nm,1.5s,mb5.5
GSC LR LR
comp=Z,4μm,19.0s,MS4.9
GSC Goldstone 23.61 324 *eP* **P** 06 40 51.7 0.0
GSC pmax pmax
comp=Z,299nm,1.5s,mb5.5
GSC MLR MLR
comp=Z,4μm,19.0s,MS4.9
GSC Goldstone 23.61 324 ⇑P **P** 06 40 51.7 0.0
baz=23,SNR=34
CCUT Cedar City 23.61 333 *eP* **P** 06 40 52.3 +0.5
SHPR Sheep Range 23.62 328 *eP* **P** 06 40 51.6 -0.2
U11A Corn Creek 23.67 328 ⇓P **P** 06 40 52.2 0.0
baz=24,SNR=8.4
S14A Cedar City 23.70 333 ⇑P **P** 06 40 53.0 +0.5
baz=24,SNR=68
R15A Junction 23.71 335 ⇓P **P** 06 40 52.5 -0.2
baz=24,SNR=17
Q18A Rafter H Ranch 23.72 340 ⇓P **P** 06 40 51.9 -0.7
baz=24,SNR=20
SHOC Shoshone 23.75 325 ⇓P **P** 06 40 53.0 0.0
baz=24,SNR=7.6
COW Cow Castle Cre 23.76 43 *eP* **P** 06 40 53.4 +0.3
DECC Green Verdugo 23.79 320 ⇑P **P** 06 40 53.4 0.0
baz=24,SNR=5.9
ARUT Antelope Range 23.84 333 *eP* **P** 06 40 54.2 +0.4
P19A Cripple Cowboy 23.85 343 ⇑P **P** 06 40 53.2 -0.7
baz=24
SRU San Rafael 23.86 339 *eP* **P** 06 40 53.4 -0.5
comp=Z,60nm,1.3s,mb4.9
SRU San Rafael 23.86 339 *eP* **P** 06 40 53.4 -0.5
SRU pmax pmax
comp=Z,60nm,1.3s,mb4.9
SRU San Rafael 23.86 339 ⇓P **P** 06 40 53.2 -0.7
baz=24,SNR=28
S13A Holt Ranch, En 23.86 332 ⇓P **P** 06 40 54.5 +0.5
baz=24,SNR=76
OGNE Ogallala 23.89 356 *eP* **P** 06 40 53.4 -0.8
comp=Z,332nm,1.5s,mb5.5
OGNE LR LR
comp=Z,4μm,20.0s,MS4.9
Q16A Castle Valley 23.91 338 ⇑P **P** 06 40 54.5 0.0
baz=24,SNR=26
SNCC San Nicolas Is 23.91 316 *eP* **P** 06 40 54.2 -0.4
comp=Z,176nm,1.4s,mb5.3
SNCC LR LR
comp=Z,3μm,22.0s,MS4.7
SNCC San Nicolas Is 23.91 316 ⇑P **P** 06 40 54.1 -0.4
baz=24
NHSC New Hope 23.93 44 *eP* **P** 06 40 55.4 +0.7
comp=Z,2μm,1.4s,mb6.3
NHSC LR LR
comp=Z,2μm,20.0s,MS4.5
MSU Marysvale 23.94 336 *eP* **P** 06 40 54.8 +0.1
MVU Marysvale 23.94 336 PFAKE 06 41 10.0 +15
MVU LR LR
comp=Z,1μm,19.0s,MS4.4
OLIL Olney 23.97 23 *eP* **P** 06 40 54.2 -0.7
comp=Z,119nm,1.0s,mb5.3
JSC Jenkinsville 23.97 41 *eP* **P** 06 40 54.5 -0.6
EDW2 Edwards Air Fo 24.00 321 ⇑P **P** 06 40 55.2 -0.1
baz=24,SNR=60
R14A James Farms, M 24.09 334 ⇓P **P** 06 40 56.2 +0.1
baz=24,SNR=5.5
BLG Laguna Peak 24.16 318 ⇓P **P** 06 40 56.9 +0.2
baz=24
U10A Ash Meadows, A 24.16 326 ⇓P **P** 06 40 57.4 +0.6
baz=24,SNR=45
T11A Corn Creek, Al 24.23 329 ⇑P **P** 06 40 57.7 +0.3
baz=24,SNR=68
P18A Preston Nutter 24.23 340 ⇓P **P** 06 40 57.6 +0.2
baz=24,SNR=39
LRMC Laurel Mountai 24.24 323 ⇓P **P** 06 40 58.1 +0.7
baz=24,SNR=36
TZTN Tazewell 24.25 34 *eP* **P** 06 40 57.2 -0.3
comp=Z,591nm,1.6s,mb5.8
TZTN LR LR
comp=Z,1μm,20.0s,MS4.4
P17A Butcher Ranch, 24.26 339 ⇑P **P** 06 40 57.1 -0.5
baz=24,SNR=20
TMUT Trail Mountain 24.26 338 *eP* **P** 06 40 58.2 +0.6
WCI Wyandotte Cave 24.27 27 *eP* **P** 06 40 56.3 -1.3
comp=Z,770nm,2.1s,mb5.8
WCI LR LR
comp=Z,2μm,22.0s,MS4.6
WCI Wyandotte Cave 24.27 27 *eP* **P** 06 40 56.3 -1.4
WCI pmax pmax
comp=Z,770nm,2.1s,mb5.8
WCI MLR MLR
comp=Z,2μm,22.0s,MS4.6
S12A Delamar Landin 24.34 330 ⇓P **P** 06 40 59.0 +0.7
baz=24,SNR=25
R13A O'Grain Ranch, 24.40 332 ⇑P **P** 06 40 59.8 +0.9
baz=24,SNR=63
Q15A Fillmore 24.44 336 ⇓P **P** 06 40 59.2 -0.1
baz=24,SNR=19
BSC Santa Cruz Isl 24.45 317 ⇑P **P** 06 40 58.4 -1.0
baz=24
FURC Furnace Creek, 24.49 326 ⇑P **P** 06 40 60.0 +0.2
baz=24,SNR=55
O19A Miners Draw (B 24.51 343 ⇑P **P** 06 40 59.7 -0.2
baz=24,SNR=61
TPNV Topopah Spring 24.52 327 *eP* **P** 06 41 00.8 +0.8
comp=Z,2μm,2.4s,mb6.1
TPNV LR LR
comp=Z,4μm,19.0s,MS5.0
TPNV Topopah Spring 24.52 327 *eP* **P** 06 41 00.8 +0.8
TPNV pmax pmax
comp=Z,2μm,2.4s,mb6.1
TPNV MLR MLR
comp=Z,4μm,19.0s,MS5.0
TPNV Topopah Spring 24.52 327 ⇓P **P** 06 41 01.0 +1.0
baz=24,SNR=105
MPMC Manual Prospec 24.54 324 ⇓P **P** 06 41 00.6 +0.4
baz=24,SNR=111
PHWY Pilot Hill 24.65 350 *eP* **P** 06 41 00.7 -0.4
PHWY *e* 06 41 08.5
ARVC Arvin 24.68 321 ⇑P **P** 06 41 01.6 +0.1
baz=24,SNR=26
P16A Fountain Green 24.70 338 ⇑P **P** 06 41 02.3 +0.7
baz=24,SNR=19
O18A Roosevelt 24.74 341 ⇑P **P** 06 41 01.8 -0.1
baz=25,SNR=17
DAC Darwin (Calif) 24.75 324 PFAKE 06 41 10.0 +7.9
DAC LR LR
comp=Z,4μm,21.0s,MS4.8
SBC Santa Barbara 24.78 318 ⇓P **P** 06 41 02.4 0.0
baz=25
Q14A Sevier Lake (B 24.79 335 ⇑P **P** 06 41 02.7 +0.3
baz=25,SNR=99
S11A Rachel 24.80 329 ⇑P **P** 06 41 03.4 +0.8
baz=25,SNR=37
R12A Pony Springs, 24.81 332 ⇓P **P** 06 41 03.4 +0.8
baz=25,SNR=45
ISA Isabella 24.83 322 *eP* **P** 06 41 03.2 +0.4
comp=Z,937nm,2.4s,mb5.9
ISA LR LR
comp=Z,2μm,20.0s,MS4.7
ISA Isabella 24.83 322 *eP* **P** 06 41 03.3 +0.5
ISA pmax pmax
comp=Z,937nm,2.4s,mb5.9
ISA MLR MLR
comp=Z,2μm,20.0s,MS4.7
ISA Isabella 24.83 322 ⇓P **P** 06 41 03.4 +0.6
baz=25,SNR=40
P15A Leamington 24.89 337 ⇑P **P** 06 41 03.4 +0.1
baz=25,SNR=9.9
O17A Robinson Place 24.91 340 ⇑P **P** 06 41 03.8 +0.3
baz=25,SNR=21
BLO Bloomington 24.96 25 *eP* **P** 06 41 03.1 -1.0
comp=Z,366nm,1.6s,mb5.7
BLO Bloomington 24.96 25 *eP* **P** 06 41 03.1 -0.9
BLO pmax pmax
comp=Z,367nm,1.6s,mb5.7
MPU Maple Canyon 25.05 338 *eP* **P** 06 41 05.5 +0.7
comp=Z,61nm,1.1s,mb5.0
MPU LR LR
comp=Z,2μm,22.0s,MS4.6
Q13A Wheeler Ranch, 25.07 333 ⇓P **P** 06 41 05.5 +0.5
baz=25,SNR=90
N19A John Jarvie Ra 25.08 343 ⇑P **P** 06 41 04.8 -0.3
baz=25,SNR=22
PKM Peak Mountain 25.14 319 ⇑P **P** 06 41 05.6 -0.1
baz=25,SNR=40
CWC Cottonwood Cre 25.14 324 ⇓P **P** 06 41 06.2 +0.5
baz=25,SNR=30
GRAC Grapevine Rang 25.16 326 ⇑P **P** 06 41 06.5 +0.7
baz=25,SNR=52
NLU North Lily Min 25.16 338 *eP* **P** 06 41 05.0 -0.8
O16A Springville 25.18 339 ⇓P **P** 06 41 06.0 0.0
baz=25,SNR=20
HDIL Hopedale 25.18 19 *eP* **P** 06 41 04.7 -1.2
comp=Z,146nm,1.1s,mb5.4
P14A Drum Mountains 25.22 336 ⇓P **P** 06 41 06.9 +0.6
baz=25,SNR=63
DAU Daniels Canyon 25.27 339 *eP* **P** 06 41 07.5 +0.6
R11A Troy Canyon, C 25.28 330 ⇓P **P** 06 41 07.5 +0.5
baz=25,SNR=89
N18A Larsen Ranch, 25.30 343 ⇑P **P** 06 41 06.5 -0.5
baz=25,SNR=11
VES Vestal, Richgr 25.31 321 ⇓P **P** 06 41 07.8 +0.6
baz=25,SNR=202
RWWY Rawlins 25.35 347 *eP* **P** 06 41 07.9 +0.4
comp=Z,210nm,1.1s,mb5.6
S10A Tonopah Range, 25.45 328 ⇑P **P** 06 41 09.2 +0.8
baz=25,SNR=184
SCIA State Center 25.45 12 *eP* **P** 06 41 07.3 -1.0
comp=Z,244nm,1.3s,mb5.6
SCIA LR LR
comp=Z,6μm,21.0s,MS5.1
P13A Bates Ranch, G 25.49 334 ⇓P **P** 06 41 09.5 +0.7
baz=25,SNR=81
Q12A Willow Creek R 25.49 332 ⇓P **P** 06 41 09.3 +0.5
baz=25,SNR=33
JLU Jordanelle 25.51 339 *eP* **P** 06 41 08.6 -0.4
SMMC Simmler 25.52 319 ⇑P **P** 06 41 09.6 +0.5
baz=25,SNR=76
R10A Warm Springs 25.58 329 ⇑P **P** 06 41 10.5 +0.8
baz=25,SNR=62
O15A The Old Anders 25.59 337 ⇑P **P** 06 41 10.1 +0.4
baz=25,SNR=40
N17A Moffit Pass 25.62 341 ⇓P **P** 06 41 10.2 +0.3
baz=25,SNR=13
S09A Garfield 25.62 327 ⇓P **P** 06 41 10.3 +0.4
baz=26,SNR=133
DUG Dugway 25.64 337 *eP* **P** 06 41 10.4 +0.3
comp=Z,130nm,1.3s,mb5.3
DUG LR LR
comp=Z,18μm,22.0s,MS5.5
DUG Dugway 25.64 337 *eP* **P** 06 41 10.4 +0.3
DUG pmax pmax
comp=Z,130nm,1.3s,mb5.3
DUG MLR MLR
comp=Z,18μm,22.0s,MS5.5
DUG Dugway 25.64 337 ⇓P **P** 06 41 10.3 +0.2
baz=26,SNR=98
M19A Rock Springs 25.64 344 ⇓P **P** 06 41 09.4 -0.8
baz=26,SNR=6.4
L21A Rawlins 25.65 347 ⇑P **P** 06 41 09.8 -0.4
baz=26,SNR=20
TIN Tinemaha 25.66 325 ⇓P **P** 06 41 11.6 +1.1
baz=26,SNR=30
CTU Camp Tracy 25.69 339 *eP* **P** 06 41 11.1 +0.4
comp=Z,56nm,1.0s,mb5.0
Q11A Duckwater 25.71 331 ⇓P **P** 06 41 11.6 +0.8
baz=26,SNR=83
RCTC Rector, Farmer 25.72 322 ⇑P **P** 06 41 11.2 +0.3
baz=26,SNR=86
N16A Rees Ranch, Co 25.76 340 ⇑P **P** 06 41 11.4 +0.2
baz=26,SNR=8.6
NOQ North Oquirrh 25.79 338 *eP* **P** 06 41 12.2 +0.7
comp=Z,168nm,1.6s,mb5.3
V05C Boulder Hill, 25.82 320 ⇑P **P** 06 41 12.6 +0.7
baz=26
M18A Lyman 25.83 342 ⇓P **P** 06 41 10.8 -1.0
baz=26,SNR=5.8
PTRM Twissleman Ran 25.87 320 *eP* **P** 06 41 12.7 +0.4
TPH Tonopah 25.88 327 *eP* **P** 06 41 13.3 +0.9
comp=Z,199nm,1.2s,mb5.5
TPH LR LR
comp=Z,4μm,19.0s,MS5.0
TPH Tonopah 25.88 327 *eP* **P** 06 41 13.3 +0.9
TPH pmax pmax
comp=Z,199nm,1.2s,mb5.5
TPH MLR MLR
comp=Z,4μm,19.0s,MS5.0
L20A Wamsutter 25.91 346 ⇓P **P** 06 41 12.4 -0.2
baz=26,SNR=24
R09A Tonopah 25.93 328 ⇑P **P** 06 41 12.9 +0.1
baz=26,SNR=120
O13A Hicks Ranch, I 26.04 335 ⇓P **P** 06 41 14.3 +0.5
baz=26,SNR=18
M17A Scullys Gap (B 26.05 341 ⇓P **P** 06 41 13.2 -0.6
baz=26,SNR=19
Q10A Clear Creek Ra 26.05 330 ⇓P **P** 06 41 14.8 +0.9
baz=26,SNR=90
MTUM Tungsten Hills 26.07 325 *eP* **P** 06 41 14.8 +0.7
N15A Stansbury Isla 26.14 338 ⇑P **P** 06 41 14.6 -0.1
baz=26,SNR=28
M16A Huntsville 26.21 340 ⇓P **P** 06 41 15.1 -0.2
baz=26,SNR=32
L19A Farson 26.25 344 ⇓P **P** 06 41 15.2 -0.5
baz=26,SNR=29
U05C Westside ANR, 26.26 321 ⇑P **P** 06 41 16.1 +0.2
baz=26
PKD Parkfield 26.26 320 ⇑P **P** 06 41 16.0 +0.1
baz=26,SNR=118
ELN Prospectdale 26.28 36 *eP* **P** 06 41 15.8 -0.2
ELN *e* pP 06 41 23.5 -0.8
P11A Circle Ranch, 26.33 332 ⇑P **P** 06 41 16.9 +0.5
baz=26,SNR=11
N14A Grayback Hills 26.35 337 ⇓P **P** 06 41 16.8 +0.2
baz=26,SNR=21
BGU Big Grassy Mou 26.36 337 *eP* **P** 06 41 16.4 -0.2
MLAC Mammoth Lakes 26.41 325 ⇓P **P** 06 41 18.1 +0.9
baz=26,SNR=12
Q09A Carvers 26.44 329 ⇓P **P** 06 41 18.1 +0.7
baz=26
HWUT Hardware Ranch 26.45 340 *eP* **P** 06 41 17.2 -0.2
comp=Z,129nm,1.2s,mb5.3
HWUT LR LR
comp=Z,3μm,20.0s,MS4.9
BLA Blacksburg 26.46 37 *eP* **P** 06 41 17.7 +0.1
comp=Z,264nm,1.3s,mb5.6
BLA LR LR
comp=Z,1μm,22.0s,MS4.4
BLA Blacksburg 26.46 37 *eP* **P** 06 41 17.7 +0.1
BLA pmax pmax
comp=Z,264nm,1.3s,mb5.6
BLA MLR MLR
comp=Z,1μm,22.0s,MS4.4
KCC Kaiser Creek 26.47 324 ⇑P **P** 06 41 18.1 +0.4
baz=26,SNR=201
O12A Currie 26.47 334 ⇑P **P** 06 41 18.3 +0.6
baz=26,SNR=34
T06C Millerton Lake 26.47 323 ⇑P **P** 06 41 17.0 -0.7
baz=26,SNR=49
SPUT South Promonto 26.48 339 *eP* **P** 06 41 18.2 +0.4
R08A Mina 26.55 327 ⇑P **P** 06 41 19.1 +0.7
baz=26,SNR=9.2
M15A Larsen Ranch, 26.62 339 ⇑P **P** 06 41 18.8 -0.2
baz=26,SNR=19
U04C Hernandez Rese 26.68 320 ⇓P **P** 06 41 20.0 +0.4
baz=26,SNR=32
P10A Eureka 26.71 331 ⇓P **P** 06 41 20.4 +0.5
baz=26,SNR=28
NVAR Mina Array Bea 26.71 327 P **P** 06 41 20.9 +1.0
comp=Z,97nm,1.1s,mb5.2,baz=147,slow=9.1,SNR=282
NVAR PcP PcP 06 44 43.9 +0.9
comp=Z,3.1nm,1.0s,baz=180,slow=2.6,SNR=5.0
NVAR Lg 06 49 54.2
comp=Z,0.1nm,0.4s,baz=149,slow=18,SNR=5.1
NVAR Mina Array Bea 26.71 327 P **P** 06 41 20.9 +1.0
NVAR PcP PcP 06 44 43.9 +0.9
NVAR Lg 06 49 54.2
CNNC Cliffs of the 26.73 43 *eP* **P** 06 41 20.6 +0.5
comp=Z,81nm,0.8s,mb5.3
CNNC LR LR
comp=Z,1μm,21.0s,MS4.4
V03C Hunter Liggett 26.74 319 ⇓P **P** 06 41 20.6 +0.4
baz=27,SNR=38
N13A Wendover, West 26.75 335 ⇑P **P** 06 41 20.5 +0.3
baz=27,SNR=14
O11A Cowboy Ranch, 26.75 333 ⇓P **P** 06 41 20.6 +0.4
baz=27,SNR=24
ECSD EROS,Sioux Fal 26.76 5 *eP* **P** 06 41 18.8 -1.4
comp=Z,215nm,1.4s,mb5.5
ECSD *e* pP 06 41 26.1 -2.4
ECSD LR LR
comp=Z,3μm,22.0s,MS4.8
L16A Fish Haven 26.78 341 ⇓P **P** 06 41 20.3 -0.1
baz=27,SNR=9.6
Q08A Gabbs 26.84 328 ⇓P **P** 06 41 21.7 +0.7
baz=27,SNR=163
PDAR Pinedale Array 26.93 344 P **P** 06 41 21.1 -0.6
comp=Z,7.7nm,0.7s,mb4.3,baz=148,slow=8.6,SNR=72
PDAR PcP PcP 06 44 42.4 -1.0
comp=Z,3.6nm,1.1s,baz=158,slow=7.4,SNR=3.4
PDAR LR LR 06 53 12.5
comp=Z,14μm,18.3s,MS5.5,baz=186,slow=39
BW06 Boulder Array 26.93 344 *eP* **P** 06 41 21.2 -0.6
comp=Z,94nm,1.4s,mb5.1
BW06 *e* pP 06 41 27.6 -2.5
BW06 LR LR
comp=Z,4μm,20.0s,MS5.0
BW06 Boulder Array 26.93 344 ⇑P **P** 06 41 21.4 -0.4
baz=27,SNR=49
OTAV Otavalo 26.95 126 *eP* **P** 06 41 25.2 +3.0
OTAV LR LR
comp=Z,3μm,20.0s,MS4.8
P09A Austin 26.98 330 ⇑P **P** 06 41 22.8 +0.6
baz=27
M14A Sheep Mountain 26.98 337 ⇑P **P** 06 41 22.2 -0.1
baz=27,SNR=69
HVU Hansel Valley 27.01 339 *eP* **P** 06 41 22.7 +0.2
comp=Z,63nm,1.2s,mb5.0
HVU Hansel Valley 27.01 339 *eP* **P** 06 41 22.7 +0.2
HVU pmax pmax
comp=Z,63nm,1.2s,mb5.0
S05C Merced 27.07 322 ⇓P **P** 06 41 22.8 -0.3
baz=27
ELK Elko 27.08 334 P **P** 06 41 23.7 +0.5
comp=Z,22nm,1.3s,mb4.5,baz=147,slow=6.9,SNR=36
ELK Lg 06 49 50.9
comp=Z,0.2nm,0.3s,baz=183,slow=9.6,SNR=2.8
ELK LR LR 06 54 17.0
comp=Z,4μm,20.5s,MS5.0,baz=154,slow=41
ELK Elko 27.08 334 P **P** 06 41 23.7 +0.5
ELK Lg 06 49 50.9
ELK LR LR 06 54 17.0
L15A Malad City 27.08 339 ⇓P **P** 06 41 23.0 -0.1
baz=27,SNR=38
JFWS Jewell Farm 27.08 16 PFAKE 06 41 30.0 +6.9
JFWS LR LR
comp=Z,7μm,22.0s,MS5.2
N12A Clover Valley, 27.08 334 ⇑P **P** 06 41 23.5 +0.4
baz=27,SNR=27
RSSD Black Hills 27.22 354 *eP* **P** 06 41 24.0 -0.4
O10A Cortez Mining, 27.26 332 ⇑P **P** 06 41 25.3 +0.5
baz=27,SNR=17
N11A Elko Archery C 27.35 333 ⇓P **P** 06 41 25.8 +0.3
baz=27,SNR=8.6
Q07A Schurz 27.35 327 ⇓P **P** 06 41 25.9 +0.3
baz=27
SAO San Andreas Ge 27.35 320 *eP* **P** 06 41 25.8 +0.2
comp=Z,169nm,1.6s,mb5.3
SAO LR LR
comp=Z,2μm,20.0s,MS4.8
SAO San Andreas Ge 27.35 320 *eP* **P** 06 41 25.8 +0.2
SAO pmax pmax
comp=Z,169nm,1.6s,mb5.3
SAO MLR MLR
comp=Z,2μm,20.0s,MS4.8
AHID Auburn Hatcher 27.36 342 *eP* **P** 06 41 25.7 +0.1
comp=Z,65nm,1.4s,mb5.0
AHID LR LR
comp=Z,1μm,21.0s,MS4.5
WAKR Walker 27.37 325 *eP* **P** 06 41 26.9 +1.1
ACSO Alum Creek Sta 27.39 29 *eP* **P** 06 41 25.3 -0.6
comp=Z,65nm,1.0s,mb5.1
ACSO *e* 06 41 31.1
R06C Coleville 27.39 325 ⇓P **P** 06 41 27.1 +1.1
baz=27,SNR=59
L14A Malta 27.40 338 ⇑P **P** 06 41 26.2 +0.2
baz=27,SNR=38
PACP Pacheco Peak 27.41 321 ⇑P **P** 06 41 26.3 +0.1
baz=27,SNR=32
M12A Wells 27.51 335 ⇑P **P** 06 41 27.2 +0.2
baz=27,SNR=50
P08A Dixie Valley 27.55 329 ⇑P **P** 06 41 27.9 +0.6
baz=27,SNR=9.3
K16A Soda Springs 27.57 341 ⇓P **P** 06 41 27.4 -0.1
baz=27,SNR=6.4
CMB Columbia Colle 27.57 323 *eP* **P** 06 41 27.4 -0.1
comp=Z,89nm,1.3s,mb5.2
CMB LR LR
comp=Z,2μm,19.0s,MS4.8
CMB Columbia Colle 27.57 323 *eP* **P** 06 41 27.5 -0.1
CMB pmax pmax
comp=Z,89nm,1.3s,mb5.2
CMB MLR MLR
comp=Z,2μm,19.0s,MS4.8
CMB Columbia Colle 27.57 323 ⇓P **P** 06 41 27.5 -0.1
baz=27,SNR=35
N10A Dunphy 27.61 332 ⇑P **P** 06 41 28.2 +0.3
baz=27,SNR=11
BMN Battle Mountai 27.70 331 *eP* **P** 06 41 29.1 +0.3
comp=Z,158nm,1.6s,mb5.4
BMN LR LR
comp=Z,3μm,22.0s,MS4.8
BMN Battle Mountai 27.70 331 *eP* **P** 06 41 29.1 +0.3
BMN pmax pmax
comp=Z,158nm,1.6s,mb5.4
BMN MLR MLR
comp=Z,3μm,22.0s,MS4.8
L13A Double Diamond 27.71 337 ⇓P **P** 06 41 29.1 +0.3
baz=28,SNR=43
K15A Arbon 27.73 340 ⇑P **P** 06 41 29.2 +0.2
baz=28,SNR=50
J17A Brown Place, J 27.80 343 ⇓P **P** 06 41 29.2 -0.4
baz=28,SNR=13
K14A Jones Ranch, D 27.83 339 ⇓P **P** 06 41 29.8 -0.1
baz=28,SNR=96
REDW Red Top Meadow 27.83 343 *eP* **P** 06 41 29.5 -0.4
comp=Z,214nm,1.9s,mb5.5
P07A Fallon 27.84 327 ⇑P **P** 06 41 30.9 +0.9
baz=28
ROSC El Rosal 27.85 113 P **P** 06 41 35.7 +5.4
comp=Z,2.7nm,0.8s,mb3.9,baz=88,slow=23,SNR=5.7
ROSC LR LR 06 52 31.8
comp=Z,931nm,19.3s,MS4.4,baz=351,slow=36
ROSC El Rosal 27.85 113 *eP* **P** 06 41 37.6 +7.2
I18A Diamond G Ranc 27.87 345 ⇓P **P** 06 41 29.9 -0.3
baz=28,SNR=7.5
M11A Holland Ranch, 27.88 334 ⇓P **P** 06 41 30.9 +0.6
baz=28,SNR=53
SNOW Snow King Moun 27.90 343 *eP* **P** 06 41 30.3 -0.2
comp=Z,105nm,1.4s,mb5.3
RRI2 Red Ridge 27.95 342 *eP* **P** 06 41 31.2 +0.2
comp=Z,58nm,1.2s,mb5.1
J16A Bone 27.98 342 ⇑P **P** 06 41 31.0 -0.1
baz=28,SNR=28
TPAW Teton Pass 27.98 343 *eP* **P** 06 41 30.8 -0.4
comp=Z,84nm,1.3s,mb5.2
LOHW Long Hollow 28.00 343 *eP* **P** 06 41 30.9 -0.4
comp=Z,92nm,1.6s,mb5.2
R04C Big Horse Ranc 28.04 323 ⇑P **P** 06 41 32.4 +0.7
baz=28,SNR=36
O08A Rochester Mine 28.04 329 ⇓P **P** 06 41 31.9 +0.2
baz=28,SNR=31
WENL Wente Vineyard 28.09 321 ⇓P **P** 06 41 33.2 +1.0
baz=28,SNR=16
WCN Washoe City 28.12 326 ⇑P **P** 06 41 33.5 +1.0

baz=28,SNR=144
DCID1 **Drake Creek** 28.14 343 eP P 06 41 33.0 +0.3
MOOW **Moose Ponds** 28.16 343 eP P 06 41 32.2 -0.6
comp=Z,47nm,1.4s,mb4.9
L12A **House Creek Ra** 28.16 336 ⇑P P 06 41 32.8 0.0
baz=28,SNR=12
N09A **Rock Creek Ran** 28.18 331 ⇓P P 06 41 33.1 +0.2
baz=28,SNR=18
PAHR **Pah Rah Range** 28.22 327 eP P 06 41 34.6 +1.2
comp=Z,169nm,1.4s,mb5.5
K13A **Stover Farm, H** 28.24 338 ⇓P P 06 41 33.6 +0.1
baz=28,SNR=64
JRSC **Jasper Ridge** 28.25 320 ⇑P P 06 41 33.9 +0.2
baz=28,SNR=11
LAVA **Lava Cap Winer** 28.27 324 ⇓P P 06 41 34.1 +0.3
baz=28,SNR=18
I17A **Pilgram Creek** 28.27 344 ⇑P P 06 41 34.0 +0.2
baz=28,SNR=11
M10A **I.L. Ranch, Tu** 28.27 333 ⇑P P 06 41 34.3 +0.5
baz=28,SNR=21
O07A **Toulon** 28.30 328 ⇓P P 06 41 34.3 +0.2
baz=28,SNR=52
J15A **Blackfoot** 28.34 341 ⇓P P 06 41 34.2 -0.2
baz=28,SNR=35
IMW **Indian Meadow** 28.35 343 eP P 06 41 34.5 0.0
comp=Z,58nm,1.4s,mb5.0
BDM **Black Diamond** 28.38 322 ⇓P P 06 41 35.7 +0.9
baz=28
URVA **University of** 28.40 40 eP P 06 41 34.9 -0.1
N08A **GE Springer Mi** 28.41 330 ⇓P P 06 41 35.3 +0.3
baz=28,SNR=34
P06A **Stead Airport,** 28.47 326 ⇓P P 06 41 36.4 +0.9
baz=28,SNR=8.9
L11A **Cat Creek Ranc** 28.48 335 ⇓P P 06 41 36.1 +0.5
baz=28,SNR=57
I16A **Newdale** 28.49 342 ⇑P P 06 41 35.7 0.0
baz=28,SNR=16
MCWV **Mont Chateau** 28.51 34 eP P 06 41 36.5 +0.6
comp=Z,142nm,1.5s,mb5.5
MCWV LR LR
comp=Z,2μm,19.0s,MS4.7
K12A **Draper Farm, C** 28.54 336 ⇑P P 06 41 36.4 +0.2
baz=28,SNR=57
M09A **Marrel Ranch,** 28.60 332 ⇓P P 06 41 37.6 +0.9
baz=28,SNR=30
J14A **Carey** 28.63 339 ⇓P P 06 41 36.9 -0.1
baz=28,SNR=27
L10A **Juniper Basin** 28.70 334 ⇑P P 06 41 38.0 +0.4
baz=28,SNR=79
H17A **Grant Village** 28.71 344 ⇓P P 06 41 37.8 +0.1
baz=28
AAM **Ann Arbor** 28.77 26 eP P 06 41 38.1 -0.2
comp=Z,185nm,1.4s,mb5.6
AAM LR LR
comp=Z,3μm,21.0s,MS4.8
AAM **Ann Arbor** 28.77 26 eP P 06 41 38.1 -0.1
AAM pmax pmax
comp=Z,185nm,1.4s,mb5.6
AAM MLR MLR
comp=Z,3μm,21.0s,MS4.8
O06A **Flanigan** 28.79 327 ⇓P P 06 41 39.3 +0.8
baz=29,SNR=103
N07B **Gerlach** 28.81 329 ⇑P P 06 41 39.0 +0.3
baz=29,SNR=34
LKWY **Lake** 28.83 344 eP P 06 41 40.2 +1.5
comp=Z,47nm,1.5s,mb5.0
LKWY LR LR
comp=Z,13μm,22.0s,MS5.5
LKWY **Lake** 28.83 344 eP P 06 41 40.2 +1.5
LKWY pmax pmax
comp=Z,47nm,1.5s,mb5.0
LKWY MLR MLR
comp=Z,13μm,22.0s,MS5.5
YFT **Old Faithful** 28.84 344 eP P 06 41 41.1 +2.3
BEKR **Beckwourth** 28.85 326 ⇓P P 06 41 39.8 +0.9
baz=29,SNR=61
FARB **Farallon Islan** 28.90 320 ⇑P P 06 41 39.5 +0.1
baz=29
I15A **Monteview** 28.90 341 ⇓P P 06 41 39.5 +0.1
baz=29
CBN **Corbin** 28.91 39 eP P 06 41 40.7 +1.2
comp=Z,288nm,1.8s,mb5.7
CBN LR LR
comp=Z,1μm,19.0s,MS4.6
Q03C **Winters** 28.91 322 ⇓P P 06 41 40.9 +1.3
baz=29,SNR=8.4
J13A **Cove Ranch, Pi** 28.93 338 ⇑P P 06 41 39.6 -0.1
baz=29,SNR=20
CVS **Carmenet Viney** 28.99 322 ⇑P P 06 41 40.3 +0.1
baz=29,SNR=12
YNR **Norris Junctio** 29.04 344 eP P 06 41 41.6 +1.0
M08A **Happy Creek Ra** 29.05 331 ⇓P P 06 41 40.4 -0.3
baz=29,SNR=7.6
YMR **Madison River** 29.07 344 PFAKE 06 41 50.0 +9.1
YMR LR LR
comp=Z,2μm,20.0s,MS4.8
RLMT **Red Lodge** 29.08 346 eP P 06 41 40.2 -0.7
comp=Z,136nm,1.5s,mb5.5
RLMT **Red Lodge** 29.08 346 ⇓P P 06 41 40.6 -0.3
baz=29,SNR=25
OHCM **Honcut** 29.09 324 eP P 06 41 41.6 +0.5
K11A **Parker Ranch,** 29.09 335 ⇑P P 06 41 41.3 +0.2
baz=29,SNR=40
MCCM **Marconi Confer** 29.11 321 eP P 06 41 42.0 +0.7
comp=Z,156nm,1.3s,mb5.6
MCCM LR LR
comp=Z,3μm,20.0s,MS5.0
MCCM **Marconi Confer** 29.11 321 ⇑P P 06 41 41.4 +0.1
baz=29,SNR=6.5
J12A **Stokes Ranch,** 29.14 337 ⇓P P 06 41 41.4 0.0
baz=29,SNR=66
I14A **Mackay** 29.15 340 ⇑P P 06 41 42.2 +0.7
baz=29,SNR=20
HLID **Hailey** 29.16 338 eP P 06 41 41.8 +0.1
comp=Z,67nm,1.4s,mb5.2
HLID LR LR
comp=Z,14μm,19.0s,MS5.6
HLID **Hailey** 29.16 338 ⇓P P 06 41 41.7 +0.1
baz=29,SNR=28
L09A **Wilkinson Ranc** 29.17 332 ⇑P P 06 41 42.0 +0.2
baz=29,SNR=17
H16A **Russell Place,** 29.18 343 ⇓P P 06 41 41.9 +0.1
baz=29
NSHM **Saint Helena R** 29.19 322 eP P 06 41 42.0 0.0
NSHM e 06 41 55.6
O05C **Quincy** 29.22 326 ⇓P P 06 41 43.1 +0.9
baz=29,SNR=14
N06A **Buffalo Meadow** 29.22 328 ⇓P P 06 41 42.9 +0.6
baz=29,SNR=120
ORV **Oroville** 29.25 324 ⇑P P 06 41 43.3 +0.8
baz=29,SNR=62
MNRC **McLaughlin Nat** 29.33 322 ⇑P P 06 41 44.2 +0.9
baz=29,SNR=28
G18A **Lazy EL Ranch,** 29.33 346 ⇑P P 06 41 42.4 -0.8
baz=29,SNR=8.6
QLMT **Earthquake Lak** 29.35 343 eP P 06 41 45.6 +2.3
I13A **Wildhorse Cree** 29.36 339 ⇓P P 06 41 43.6 +0.2
baz=29,SNR=28
K10A **MacKenzie Ranc** 29.44 334 ⇑P P 06 41 44.3 +0.1
baz=29,SNR=28
H15A **Lima** 29.51 341 ⇓P P 06 41 45.1 +0.4
baz=29,SNR=21
MFID **Camas Ranch** 29.56 336 ⇓P P 06 41 45.2 0.0
baz=29,SNR=28
O04C **Chester** 29.56 326 ⇑P P 06 41 46.0 +0.7
baz=29,SNR=74
L08A **Fields** 29.61 332 ⇑P P 06 41 45.6 -0.1
baz=29,SNR=40
I12A **Atlanta** 29.62 337 ⇓P P 06 41 45.9 +0.2
baz=29,SNR=37
G17A **Pierce Place,** 29.62 344 ⇑P P 06 41 46.2 +0.5
baz=29,SNR=10
H14A **Leadore** 29.73 340 ⇑P P 06 41 47.4 +0.7
baz=30,SNR=37
K09A **Rome** 29.74 333 ⇓P P 06 41 47.4 +0.5
baz=30,SNR=152
MCMT **McKenzie Canyo** 29.76 341 eP P 06 41 47.5 +0.6
HOPS **Hopland** 29.77 322 eP P 06 41 48.6 +1.5
comp=Z,190nm,1.4s,mb5.6
HOPS LR LR
comp=Z,4μm,20.0s,MS5.0
HOPS **Hopland** 29.77 322 ⇓P P 06 41 47.9 +0.7
baz=30,SNR=12
GCMT **Greycliff** 29.80 346 eP P 06 41 46.7 -0.6
G16A **Moss Hill, Enn** 29.82 343 ⇑P P 06 41 48.1 +0.6
baz=30,SNR=12
F18A **Big Timber** 29.92 346 ⇑P P 06 41 48.0 -0.3
baz=30

WVOR **Wild Horse Val** 29.94 332 eP P 06 41 48.5 -0.1
comp=Z,108nm,1.4s,mb5.4
WVOR LR LR
comp=Z,4μm,21.0s,MS5.0
WVOR **Wild Horse Val** 29.94 332 eP P 06 41 48.5 -0.1
WVOR pmax pmax
comp=Z,108nm,1.4s,mb5.4
WVOR MLR MLR
comp=Z,4μm,21.0s,MS5.0
J10A **Berg Farm, Mel** 29.94 335 ⇓P P 06 41 48.6 0.0
baz=30
L07A **Adell** 29.94 330 ⇑P P 06 41 49.2 +0.6
baz=30,SNR=48
G15A **Dillon** 29.96 342 ⇓P P 06 41 49.4 +0.7
baz=30,SNR=12
GASB **Alder Springs** 30.00 323 ⇓P P 06 41 50.4 +1.2
baz=30,SNR=33
LAO **LASA Array** 30.02 351 eP P 06 41 48.6 -0.7
comp=Z,401nm,2.2s,mb5.8
LAO LR LR
comp=Z,3μm,19.0s,MS4.9
I11A **Placerville** 30.03 336 ⇑P P 06 41 49.6 +0.2
baz=30,SNR=21
LBCM **Butte Creek Ri** 30.07 326 P P 06 41 50.2 +0.4
K08A **Mann Creek Ran** 30.11 332 ⇑P P 06 41 50.2 +0.2
baz=30,SNR=73
F17A **Fitzpatrick Pl** 30.14 345 ⇑P P 06 41 50.5 +0.1
baz=30,SNR=9.9
BOZ **Bozeman (W)** 30.16 344 eP P 06 41 50.3 -0.2
comp=Z,26nm,1.3s,mb4.8
BOZ LR LR
comp=Z,2μm,21.0s,MS4.7
BOZ **Bozeman (W)** 30.16 344 eP P 06 41 50.3 -0.2
BOZ pmax pmax
comp=Z,26nm,1.3s,mb4.8
BOZ MLR MLR
comp=Z,2μm,21.0s,MS4.7
BOZ **Bozeman (W)** 30.16 344 ⇑P P 06 41 50.2 -0.3
baz=30,SNR=19
DLMT **Dillon** 30.17 342 eP P 06 41 50.7 +0.1
comp=Z,88nm,1.3s,mb5.3
H12A **Diamond D Ranc** 30.17 339 ⇓P P 06 41 51.0 +0.3
baz=30,SNR=50
SSPA **Standing Stone** 30.26 35 eP P 06 41 51.6 +0.1
comp=Z,222nm,1.9s,mb5.6
SSPA LR LR
comp=Z,2μm,19.0s,MS4.7
ERPA **Erie** 30.27 30 PFAKE 06 42 00.0 +8.5
ERPA LR LR
comp=Z,3μm,19.0s,MS4.9
F16A **Kennard Place,** 30.28 344 ⇑P P 06 41 51.7 +0.1
baz=30,SNR=14
J09A **Fry Pan Ranch,** 30.28 334 ⇓P P 06 41 51.7 +0.1
baz=30,SNR=9.7
MOD **Modoc** 30.32 329 eP P 06 41 51.7 -0.2
comp=Z,158nm,1.3s,mb5.6
MOD LR LR
comp=Z,7μm,20.0s,MS5.3
MOD **Modoc** 30.32 329 ⇓P P 06 41 52.2 +0.2
baz=30,SNR=80
COWI **Conover** 30.34 15 PFAKE 06 42 00.0 +7.9
COWI LR LR
comp=Z,4μm,20.0s,MS5.1
LTIM **Timbered Crate** 30.39 327 P P 06 41 53.0 +0.4
K07A **Rock Creek Ran** 30.42 331 ⇑P P 06 41 53.1 +0.3
baz=30,SNR=46
G13A **Cobalt** 30.44 340 ⇓P P 06 41 53.2 +0.2
baz=30,SNR=34
I10A **Payette** 30.50 336 ⇓P P 06 41 53.8 +0.3
baz=30
KCPM **Cahto Peak** 30.52 322 eP P 06 41 55.2 +1.4
WDC **Whiskeytown Da** 30.53 325 eP P 06 41 52.6 -1.3
comp=Z,56nm,1.6s,mb5.1
WDC LR LR
comp=Z,451nm,21.0s,MS4.1
WDC **Whiskeytown Da** 30.53 325 eP P 06 41 52.6 -1.3
WDC pmax pmax
comp=Z,56nm,1.6s,mb5.1
WDC MLR MLR
comp=Z,451nm,21.0s,MS4.1
WDC **Whiskeytown Da** 30.53 325 ⇓P P 06 41 53.7 -0.2
baz=30,SNR=8.8
LRM **Limekiln Ridge** 30.55 343 eP P 06 41 47.3 -6.6
KIPM **Iron Peak** 30.55 323 eP P 06 41 55.3 +1.3
F15A **Butte** 30.57 343 ⇑P P 06 41 54.3 +0.1
baz=30,SNR=12
E18A **Harlowton** 30.59 346 ⇑P P 06 41 53.9 -0.4
baz=30,SNR=10
J08A **Circle Bar Ran** 30.60 333 ⇓P P 06 41 54.7 +0.3
baz=30,SNR=93
E17A **Martinsdale** 30.71 345 ⇓P P 06 41 55.1 -0.3
baz=30,SNR=14
H11A **Donnelly** 30.72 337 ⇓P P 06 41 55.5 0.0
baz=30,SNR=58
I09A **Lost Marbles R** 30.79 334 ⇓P P 06 41 55.9 -0.1
baz=31,SNR=23
M03C **McCloud** 30.79 326 ⇓P P 06 41 55.6 -0.5
baz=31,SNR=9.2
F14A **Wisdom** 30.81 341 ⇑P P 06 41 56.1 -0.1
baz=31,SNR=6.1
H10A **Noah's Angus R** 30.90 336 ⇑P P 06 41 56.8 -0.3
baz=31,SNR=56
O01C **Eel River Cons** 30.96 323 ⇑P P 06 41 58.4 +0.8
baz=31,SNR=8.5
J07A **Hines** 30.98 332 ⇑P P 06 41 57.6 -0.2
baz=31,SNR=13
E16A **East Helena** 30.99 344 ⇓P P 06 41 57.6 -0.2
baz=31,SNR=30
I08A **Drewsey** 31.09 333 ⇑P P 06 41 58.6 -0.1
baz=31,SNR=23
F13A **Darby** 31.09 340 ⇓P P 06 41 58.7 0.0
baz=31,SNR=39
N02C **Big Bar** 31.12 324 ⇑P P 06 41 59.6 +0.5
baz=31,SNR=12
E15A **Deer Lodge** 31.15 343 ⇑P P 06 41 58.9 -0.4
baz=31,SNR=9.7
D18A **Linhart Farms,** 31.16 347 ⇓P P 06 41 59.0 -0.3
baz=31,SNR=27
HRY **Holter Researc** 31.19 344 eP P 06 41 59.9 +0.3
K05A **Summer Lake** 31.23 329 ⇓P P 06 42 00.3 +0.3
baz=31,SNR=19
M02C **Callahan** 31.27 326 ⇑P P 06 41 59.1 -1.3
baz=31,SNR=10
HOG **Hogback Mounta** 31.27 328 P P 06 42 00.7 +0.3
J06A **Christmas Vall** 31.27 331 ⇑P P 06 42 00.0 -0.3
baz=31,SNR=14
D17A **Six Diamond Ra** 31.32 346 ⇓P P 06 42 00.1 -0.6
baz=31,SNR=32
H09A **Durkee** 31.33 335 ⇓P P 06 42 00.3 -0.5
baz=31,SNR=21
BMO **Blue Mountains** 31.34 336 eP P 06 42 00.1 -0.8
comp=Z,125nm,1.4s,mb5.5
BMO LR LR
comp=Z,6μm,22.0s,MS5.2
AGMN **Agassiz Refuge** 31.36 5 eP P 06 42 00.1 -0.9
comp=Z,162nm,1.6s,mb5.6
AGMN LR LR
comp=Z,2μm,22.0s,MS4.8
F12A **Elk City** 31.36 339 ⇓P P 06 42 01.2 +0.1
baz=31
E14A **Clinton** 31.39 342 ⇓P P 06 42 00.7 -0.6
baz=31,SNR=13
KHMM **Horse Mountain** 31.40 324 eP P 06 42 02.5 +1.0
G11A **Walters Elk Ra** 31.41 338 ⇑P P 06 42 01.1 -0.4
baz=31,SNR=79
D16A **Dana Ranch, Ca** 31.42 345 ⇑P P 06 42 00.9 -0.6
baz=31,SNR=12
YBH **Yreka Blue Hor** 31.43 326 eP P 06 42 00.3 -1.5
YBH LR LR
comp=Z,3μm,20.0s,MS4.9
YBH **Yreka Blue Hor** 31.43 326 ⇓P P 06 42 00.4 -1.4
baz=31,SNR=17
JCC **Jacoby Creek** 31.53 324 ⇑P P 06 42 03.3 +0.6
baz=31,SNR=9.0
DGMT **Dagmar** 31.54 355 eP P 06 42 02.6 0.0
comp=Z,121nm,1.1s,mb5.6
DGMT LR LR
comp=Z,4μm,19.0s,MS5.1
DGMT **Dagmar** 31.54 355 ⇓P P 06 42 02.2 -0.5
baz=31,SNR=8.5
EYMN **Ely** 31.59 11 PFAKE 06 42 10.0 +6.9
EYMN LR LR
comp=Z,3μm,22.0s,MS4.9
H08A **Prairie City** 31.62 334 ⇑P P 06 42 03.1 -0.3
baz=31,SNR=69
E13A **Victor** 31.62 341 ⇓P P 06 42 02.9 -0.5
baz=31,SNR=32
I07A **Izee** 31.63 333 ⇓P P 06 42 03.0 -0.5
baz=31,SNR=20
G10A **Bishop Farm, J** 31.64 337 ⇓P P 06 42 02.9 -0.7
baz=32,SNR=72
D15A **Lincoln** 31.68 344 ⇓P P 06 42 03.2 -0.7
baz=32,SNR=5.2
CHMT **Chamberlain Mo** 31.77 343 eP P 06 42 04.1 -0.6
C17A **Wharram Farm,** 31.79 346 ⇑P P 06 42 04.4 -0.4
baz=32,SNR=43
F11A **Grangeville** 31.79 338 ⇑P P 06 42 04.2 -0.7
baz=32,SNR=21
I06A **Prineville** 31.84 332 ⇑P P 06 42 04.8 -0.5
baz=32,SNR=14
G09A **Cove** 31.88 336 ⇓P P 06 42 04.7 -1.0
baz=32,SNR=26
MSO **Missoula** 31.89 342 eP P 06 42 05.4 -0.4
comp=Z,59nm,1.8s,mb5.1
MSO LR LR
comp=Z,12μm,19.0s,MS5.6
KRMB **Red Mountain** 31.93 325 eP P 06 42 07.0 +0.8
KRMB e pP 06 42 14.1 -0.5
EGMT **Eagleton** 31.94 347 eP P 06 42 06.2 0.0
comp=Z,289nm,1.6s,mb5.9
EGMT LR LR
comp=Z,2μm,20.0s,MS4.7
EGMT **Eagleton** 31.94 347 ⇓P P 06 42 05.9 -0.3
baz=32,SNR=37
D14A **Greenough** 31.99 342 ⇓P P 06 42 05.9 -0.7
baz=32,SNR=20
E12A **Beaver Dam Sad** 32.05 339 ⇓P P 06 42 06.4 -0.7
baz=32,SNR=31
H07A **Lands Inn, Kim** 32.06 333 ⇑P P 06 42 06.8 -0.5
baz=32,SNR=55
HUMO **Hull Mountain** 32.18 327 eP P 06 42 07.3 -1.0
comp=Z,27nm,1.2s,mb5.0
HUMO LR LR
comp=Z,2μm,20.0s,MS4.9
HUMO **Hull Mountain** 32.18 327 ⇓P P 06 42 07.5 -0.9
baz=32
C16A **Fuhringer Ranc** 32.18 345 ⇑P P 06 42 07.9 -0.4
baz=32
SJG **San Juan** 32.20 83 PFAKE 06 42 20.0 +11
SJG LR LR
comp=Z,2μm,19.0s,MS4.8
L02A **Cave Junction** 32.20 326 ⇑P P 06 42 07.8 -0.7
baz=32
E11A **Bogner Ranch,** 32.21 339 ⇓P P 06 42 07.4 -1.2
baz=32,SNR=43
F10A **Beach Ranch, E** 32.25 337 ⇑P P 06 42 08.5 -0.4
baz=32,SNR=41
M01C **Crescent City** 32.27 325 ⇑P P 06 42 09.5 +0.3
baz=32,SNR=12
D13A **Huson** 32.29 341 ⇑P P 06 42 08.5 -0.7
baz=32,SNR=23
F09A **S2 Ranch, Elgi** 32.29 336 ⇑P P 06 42 08.7 -0.5
baz=32,SNR=32
G08A **Pilot Rock** 32.37 335 ⇑P P 06 42 09.4 -0.5
baz=32,SNR=78
BINY **Binghamton** 32.38 34 eP P 06 42 10.2 +0.1
comp=Z,342nm,2.2s,mb5.8
BINY LR LR
comp=Z,2μm,19.0s,MS4.8
C15A **Salmond Ranch,** 32.38 344 ⇑P P 06 42 09.4 -0.6
baz=32,SNR=8.9
I05A **Bend** 32.49 331 ⇑P P 06 42 11.1 0.0
baz=32,SNR=15
H06A **Lindquist Farm** 32.51 332 ⇑P P 06 42 10.8 -0.4
baz=32,SNR=38
D12A **Red Ives Fores** 32.53 340 ⇑P P 06 42 10.2 -1.2
baz=32
K02A **Glendale** 32.57 327 ⇑P P 06 42 10.9 -0.8
baz=32,SNR=8.0
LNOR **Lincton Mounta** 32.57 336 eP P 06 42 10.9 -0.8
KBO **Bosley Butte** 32.58 325 eP P 06 42 13.2 +1.3
KBO e 06 42 18.4
G07A **Ruggs Ranch, H** 32.64 334 ⇑P P 06 42 12.1 -0.3
baz=32,SNR=39
E10A **Myers Farm, Un** 32.65 338 ⇓P P 06 42 11.2 -1.2
baz=32,SNR=12
WIFE **Three Sisters-** 32.67 330 P P 06 42 13.0 +0.3
F08A **Pendleton** 32.70 335 ⇓P P 06 42 11.6 -1.3
baz=32,SNR=14
SADO **Sadowa** 32.71 28 P P 06 42 11.2 -1.7
comp=Z,15nm,0.9s,mb4.9,baz=277,slow=11,SNR=3.8
B16A **M & M Farms, S** 32.74 345 ⇑P P 06 42 12.3 -0.9
baz=32
PAL **Palisades** 32.76 38 eP P 06 42 19.2 +5.7
comp=Z,90nm,1.2s,mb5.6
PAL **Palisades** 32.76 38 eP P 06 42 19.2 +5.8
PAL pmax pmax
comp=Z,90nm,1.2s,mb5.6
MTP **Monte Pirata** 32.76 83 eP P 06 42 14.9 +1.1
H05A **Madras** 32.84 331 ⇑P P 06 42 13.5 -0.6
baz=33
C13A **Hot Springs** 32.85 342 ⇑P P 06 42 13.0 -1.1
baz=33,SNR=5.4
D11A **Klaveano Farm,** 32.86 339 ⇓P P 06 42 13.0 -1.3
baz=33,SNR=11
B15A **Bradely Ranch,** 32.86 344 ⇓P P 06 42 13.5 -0.8
baz=33,SNR=14
G06A **Carlson Farm,** 33.03 333 ⇓P P 06 42 15.4 -0.4
baz=33,SNR=19
J02A **Umpqua** 33.03 328 ⇑P P 06 42 15.5 -0.3
baz=33,SNR=12
E09A **Wood Farm, Sta** 33.05 337 ⇑P P 06 42 14.3 -1.7
baz=33,SNR=21
BSMT **Bassoo Peak** 33.07 342 eP P 06 42 15.6 -0.4
KEBM **Edson Butte** 33.09 326 eP P 06 42 17.7 +1.4
KEBM e pP 06 42 24.8 +0.1
B14A **Marquette Ranc** 33.09 344 ⇓P P 06 42 15.6 -0.6
baz=33,SNR=10
K01A **Sixes** 33.12 326 ⇓P P 06 42 17.5 +0.9
baz=33,SNR=8.0
C12B **Naegeli Ranch,** 33.15 341 ⇓P P 06 42 15.8 -1.0
baz=33,SNR=7.0
D10A **Wagner Farm, O** 33.19 338 ⇓P P 06 42 16.3 -0.8
baz=33,SNR=24
A16A **West Butte Ran** 33.22 346 ⇑P P 06 42 16.9 -0.4
baz=33,SNR=8.4
F07A **Phinny Hill Vi** 33.25 334 ⇑P P 06 42 17.2 -0.5
baz=33,SNR=7.9
ULM **Lac du Bonnet** 33.29 5 P P 06 42 16.4 -1.5
comp=Z,11nm,0.6s,mb4.9,baz=194,slow=10.0,SNR=9.0
ULM LR LR 06 56 18.8
comp=Z,2μm,19.7s,MS4.8,baz=307,slow=37
ULM **Lac du Bonnet** 33.29 5 eP P 06 42 15.7 -2.2
comp=Z,40nm,1.1s,mb5.3
H04A **Detroit Lake** 33.31 331 ⇓P P 06 42 18.0 -0.2
baz=33,SNR=19
I03A **Eugene** 33.32 329 ⇑P P 06 42 18.0 -0.3
baz=33,SNR=36
G05A **Wamic** 33.34 332 ⇑P P 06 42 18.5 0.0
baz=33,SNR=7.6
B13A **Whitefish** 33.44 342 ⇑P P 06 42 19.0 -0.3
baz=33,SNR=19
HAWA **Hanford** 33.49 335 eP P 06 42 19.1 -0.7
comp=Z,51nm,1.4s,mb5.3
HAWA LR LR
comp=Z,15μm,22.0s,MS5.7
F06A **Goldendale** 33.51 333 ⇓P P 06 42 19.7 -0.3
baz=33,SNR=23
A15A **Johnson Ranch,** 33.52 345 ⇑P P 06 42 19.2 -0.8
baz=33,SNR=9.9
C11A **Tepee Creek (N** 33.52 340 ⇑P P 06 42 18.9 -1.1
baz=33
RSW **Rattlesnake Hi** 33.52 335 eP P 06 42 19.3 -0.7
HOOD **Mount Hood Mea** 33.55 332 eP P 06 42 20.7 +0.3
comp=Z,183nm,1.1s,mb5.9
D09A **Jones Farm, Ri** 33.57 337 ⇓P P 06 42 19.3 -1.2
baz=33,SNR=18
I02A **Mapleton** 33.62 328 ⇓P P 06 42 20.9 0.0
baz=33,SNR=12
A14A **Double T Ranch** 33.69 344 ⇓P P 06 42 21.0 -0.5
baz=34,SNR=12
E07A **Sunnyside** 33.76 335 ⇓P P 06 42 22.3 +0.2
baz=34,SNR=6.6
COR **Corvallis** 33.78 329 eP P 06 42 22.3 0.0
COR LR LR
comp=Z,3μm,19.0s,MS5.1
D08A **Wollman Farm,** 33.80 336 ⇑P P 06 42 21.3 -1.2
baz=34,SNR=6.7
H03A **Soap Creek Ran** 33.84 329 ⇓P P 06 42 22.8 0.0
baz=34,SNR=19
G04A **Mulino** 33.84 331 ⇓P P 06 42 22.3 -0.5
baz=34,SNR=11
B12A **Libby** 33.86 341 ⇓P P 06 42 22.6 -0.3
baz=34,SNR=5.2
F05A **White Salmon** 33.90 333 ⇑P P 06 42 23.9 +0.6
baz=34,SNR=64

WALA Waterton Lakes 33.90 343 *e*P P 06 42 23.4 0.0
comp=Z,85nm,1.5s,mb5.5
A13A Flathead Natio 33.93 343 ⇓P P 06 42 23.5 -0.1
baz=34
OD2 Odessa Site #2 34.00 337 *e*P P 06 42 23.0 -1.2
B11A Sandpoint 34.08 340 ⇑P P 06 42 24.2 -0.6
baz=34,SNR=11
NEW Newport 34.18 339 *e*P P 06 42 26.0 +0.3
comp=Z,25nm,1.2s,mb5.0
NEW LR LR
comp=Z,7μm,20.0s,MS5.4
NEW Newport 34.18 339 *e*P P 06 42 26.0 +0.3
NEW pmax pmax
comp=Z,25nm,1.2s
NEW MLR MLR
comp=Z,7μm,20.0s
C09A Chrisman Ranch 34.18 338 ⇓P P 06 42 25.4 -0.4
baz=34,SNR=11
H02A Toledo 34.19 329 ⇑P P 06 42 26.5 +0.6
baz=34
E06A Yakima 34.21 334 ⇑P P 06 42 26.6 +0.6
baz=34,SNR=64
A12A Yaak River Ran 34.29 342 ⇑P P 06 42 26.2 -0.5
baz=34,SNR=17
G03A Yamhill 34.30 330 ⇓P P 06 42 26.9 +0.1
baz=34,SNR=15
D07A Quincy 34.32 336 ⇓P P 06 42 26.5 -0.5
baz=34,SNR=9.1
F04A Amboy 34.37 332 ⇑P P 06 42 27.0 -0.4
baz=34,SNR=9.7
C08A Higginbotham F 34.45 337 ⇓P P 06 42 27.7 -0.3
baz=34,SNR=10
HEBO Mount Hebo 34.45 330 *e*P P 06 42 26.5 -1.6
comp=Z,215nm,1.2s,mb6.0
NCB Newcomb 34.53 34 PFAKE 06 42 40.0 +11
NCB LR LR
comp=Z,2μm,21.0s,MS4.8
A11A Hall Mountain, 34.53 341 ⇓P P 06 42 28.3 -0.5
baz=34,SNR=9.4
E05A Randle 34.56 333 ⇑P P 06 42 29.1 +0.1
baz=34,SNR=50
B09A Rice 34.66 339 ⇓P P 06 42 29.6 -0.4
baz=34,SNR=14
D06A Cle Elum 34.67 335 ⇓P P 06 42 30.2 +0.2
baz=34,SNR=16
LON Longmire 34.73 333 P P 06 42 31.1 +0.6
C07A Waterville 34.76 336 ⇑P P 06 42 30.8 0.0
baz=35,SNR=62
LONY Lake Ozonia 34.79 32 PFAKE 06 42 40.0 +8.9
LONY LR LR
comp=Z,1μm,19.0s,MS4.6
ETW Entiat 34.80 336 *e*P P 06 42 30.9 -0.2
F03A Seaside 34.89 331 ⇓P P 06 42 32.3 +0.4
baz=35
A10A Northport 34.94 340 ⇑P P 06 42 31.7 -0.6
baz=35,SNR=8.2
E04A Onalaska 35.01 332 ⇓P P 06 42 33.0 +0.1
baz=35,SNR=11
B08A Colville Reser 35.04 337 ⇓P P 06 42 32.8 -0.4
baz=35,SNR=32
HRV Adam Dziewonsk 35.07 38 PFAKE 06 42 50.0 +17
HRV LR LR
comp=Z,1μm,19.0s,MS4.7
WES Weston 35.13 38 *e*P P 06 42 41.4 +7.4
WES LR LR
comp=Z,1μm,19.0s,MS4.6
BMW Boistfort Moun 35.15 332 *e*P P 06 42 34.5 +0.4
D05A Enumclaw 35.15 334 ⇓P P 06 42 34.0 -0.1
baz=35,SNR=19
BBSR BB Station 35.27 58 PFAKE 06 42 50.0 +15
BBSR LR LR
comp=Z,2μm,19.0s,MS4.8
C06A Tall Timber Ra 35.28 335 ⇑P P 06 42 35.3 0.0
baz=35,SNR=15
A09A Danville 35.29 339 ⇓P P 06 42 34.8 -0.5
baz=35,SNR=16
B07A Winthrop 35.42 337 ⇓P P 06 42 35.7 -0.7
baz=35,SNR=10
C05A Tolt Reservoir 35.42 334 ⇓P P 06 42 35.7 -0.7
baz=35,SNR=24
D04A Dobbs Creek Ra 35.44 333 ⇑P P 06 42 36.8 +0.2
baz=35
A08A Turner Farm, O 35.51 338 ⇑P P 06 42 37.0 -0.2
baz=35,SNR=17
GNW Green Mountain 35.80 333 *e*P P 06 42 39.0 -0.7
comp=Z,117nm,1.2s,mb5.7
D03A Wishkah Elem. 35.87 332 ⇑P P 06 42 40.8 +0.4
baz=36,SNR=12
JCW Jim Creek 35.91 335 *e*P P 06 42 39.9 -0.8
LBNH Lisbon 35.95 35 *e*P P 06 42 42.5 +1.5
comp=Z,238nm,2.1s,mb5.8
LBNH LR LR
comp=Z,2μm,21.0s,MS4.8
LBNH Lisbon 35.95 35 *e*P P 06 42 42.5 +1.5
LBNH pmax pmax
comp=Z,238nm,2.1s,mb5.8
LBNH MLR MLR
comp=Z,2μm,21.0s,MS4.8
RPW Rockport 35.95 335 *e*P P 06 42 40.4 -0.5
C04A Brinnon 35.98 333 ⇓P P 06 42 40.8 -0.5
baz=36,SNR=24
B06A Marblemount 35.99 335 ⇑P P 06 42 40.5 -0.9
baz=36,SNR=6.4
A07A Ashnola River, 36.00 337 ⇑P P 06 42 41.1 -0.3
baz=36,SNR=12
B05A Bryant 36.04 335 ⇓P P 06 42 40.6 -1.1
baz=36,SNR=19
A06A Chilliwack 36.46 336 ⇓P P 06 42 44.6 -0.7
baz=36
B04A Port Angeles 36.47 333 ⇓P P 06 42 45.7 +0.3
baz=36,SNR=40
A05A Maple Falls 36.62 335 ⇓P P 06 42 45.9 -0.7
baz=36
A04A Legoe Bay, Lum 36.65 335 ⇑P P 06 42 46.7 -0.2
baz=36,SNR=6.0
NNA Nana 36.77 140 PFAKE 06 43 00.0 +12
NNA LR LR
comp=Z,3μm,20.0s,MS5.1
C03A Quillayute Air 36.85 332 ⇓P P 06 42 49.2 +0.5
baz=37,SNR=7.4
PGC Sidney 36.90 334 *e*P P 06 42 49.4 +0.3
comp=Z,330nm,1.4s,mb6.0
GRGR Grenville 37.32 92 PFAKE 06 43 00.0 +6.9
GRGR LR LR
comp=Z,993nm,20.0s,MS4.6
EDM Edmonton 37.61 347 *e*P P 06 42 54.0 -1.0
FFC Flin Flon 37.65 358 P P 06 42 54.6 -0.7
comp=Z,322nm,1.5s,mb5.8,SNR=8.8
FFC Flin Flon 37.65 358 *e*P P 06 42 53.8 -1.5
comp=Z,154nm,1.4s,mb5.5
FFC LR LR
comp=Z,2μm,21.0s,MS4.9
FFC Flin Flon 37.65 358 *e*P P 06 42 53.8 -1.5
FFC pmax pmax
comp=Z,154nm,1.4s,mb5.5
FFC MLR MLR
comp=Z,2μm,21.0s,MS4.9
PKME Peaks-Kenny Pk 38.05 36 PFAKE 06 43 10.0 +11
PKME LR LR
comp=Z,2μm,21.0s,MS4.8
BBGH Gun Hill 39.12 90 PFAKE 06 43 20.0 +12
BBGH LR LR
comp=Z,1μm,20.0s,MS4.8
RPN Rapa Nui 44.84 192 PFAKE 06 44 10.0 +15
RPN LR LR
comp=Z,4μm,22.0s,MS5.3
LPAZ La Paz 45.60 135 P P 06 44 02.1 +1.2
comp=Z,18nm,1.2s,mb4.9,baz=338,slow=9.2,SNR=16
LPAZ LR LR 07 01 40.2
comp=Z,2μm,18.2s,MS5.1,baz=308,slow=34
LPAZ La Paz 45.60 135 *e*P P 06 44 06.8 +5.8
comp=Z,12nm,0.9s,mb4.8
LPAZ LR LR 07 01 40.2
LPAZ La Paz 45.60 135 *e*P P 06 44 06.8 +5.9
LPAZ pmax pmax
comp=Z,12nm,0.9s
WRAK Wrangell Islan 46.30 336 PFAKE 06 44 20.0 +14
WRAK LR LR
comp=Z,3μm,20.0s,MS5.3
YKA Yellowknife Ar 46.56 351 P P 06 44 06.1 -1.8
comp=Z,16nm,0.8s,mb5.0,baz=159,slow=7.5,SNR=15
YKA LR LR 07 04 23.7
comp=Z,1μm,21.0s,MS4.8,baz=140,slow=37
YKA Yellowknife Ar 46.56 351 P P 06 44 06.1 -1.8
YKA LR LR 07 04 23.7
DLBC Dease Lake 46.92 339 *e*P P 06 44 11.9 +1.2
DLBC *e* pP 06 44 19.4 -0.1

TAOE Nuku Hiva Isla 47.36 240 *e*S S 06 51 15.3 +8.0
comp=Z,1μm,26.2s
TAOE *e*LQ 06 55 15.8
comp=Z,3μm,25.2s
TAOE *e*LR LR 06 57 34.7
comp=Z,6μm,24.3s,baz=59
SIT Sitka 47.94 335 PFAKE 06 44 30.0 +11
SIT LR LR
comp=Z,7μm,21.0s,MS5.6
SKAG Skagway 49.56 337 *e*P P 06 44 31.2 0.0
comp=Z,126nm,1.1s,mb5.9
SKAG LR LR
comp=Z,9μm,18.0s,MS5.8
LVC Limon Verde 49.74 141 *e*P P 06 44 39.4 +6.4
comp=Z,70nm,1.5s,mb5.5
LVC LR LR
comp=Z,920nm,20.0s,MS4.8
PNL Peninsula 51.27 336 *e*P P 06 44 44.7 +0.6
comp=Z,206nm,1.4s,mb5.9
HYT Haines Junctio 51.29 337 *e*P P 06 44 46.0 +1.8
RKT Rikitea 52.60 222 *e*S S 06 52 28.5 +8.5
comp=Z,495nm,26.5s
RKT *e*LR LR 07 00 12.2
comp=Z,2μm,26.8s,baz=38
LCO Las Campanas 53.79 148 PFAKE 06 45 20.0 +17
LCO LR LR
comp=Z,3μm,22.0s,MS5.3
DAWY Dawson 54.10 340 *e*P P 06 45 04.6 -0.3
EGAK Eagle 55.15 340 *e*P P 06 45 12.3 -0.3
comp=Z,103nm,1.4s,mb5.7
EGAK LR LR
comp=Z,2μm,19.0s,MS5.2
INK Inuvik 55.49 346 *e*P P 06 45 14.5 -0.4
comp=Z,9μm,1.4s
INK *e* 06 45 20.4
INK Inuvik 55.49 346 *e*P P 06 45 14.5 -0.4
INK *e* 06 45 20.4
INK pmax pmax
comp=Z,9μm,1.4s
SEW Seward 55.73 333 *e*P P 06 45 15.9 -0.9
SEW *e* pP 06 45 23.6 -1.9
KDAK Kodiak Island 56.17 329 *e*P P 06 45 19.2 -0.7
comp=Z,66nm,1.4s,mb5.5
KDAK LR LR
comp=Z,390nm,20.0s,MS4.5
SLKM Skilak Lake 56.26 333 *e*P P 06 45 20.5 0.0
OHAK Old Harbor 56.30 328 *e*P P 06 45 21.3 +0.4
comp=Z,203nm,1.5s,mb5.9
OHAK LR LR
comp=Z,1μm,18.0s,MS5.1
PMR Palmer 56.31 334 *e*P P 06 45 20.4 -0.5
comp=Z,58nm,1.2s,mb5.5
PMR LR LR
comp=Z,1μm,17.0s,MS5.1
PMR Palmer 56.31 334 *e*P P 06 45 20.4 -0.5
PMR pmax pmax
comp=Z,58nm,1.2s,mb5.5
PMR MLR MLR
comp=Z,1μm,17.0s,MS5.1
RC01 Rabbit Creek A 56.32 334 *e*P P 06 45 20.7 -0.3
comp=Z,80nm,1.4s,mb5.6
MCK McKinley 57.32 336 *e*P P 06 45 27.6 -0.4
comp=Z,60nm,1.0s,mb5.6
MCK McKinley 57.32 336 *e*P P 06 45 27.6 -0.4
MCK pmax pmax
comp=Z,60nm,1.0s,mb5.6
COLA College 57.52 338 *e*P P 06 45 28.7 -0.7
comp=Z,58nm,1.3s,mb5.5
COLA LR LR
comp=Z,4μm,22.0s,MS5.5
COLA College 57.52 338 ‖*e*P P 06 45 28.8 -0.6
TRF Thorofare Moun 57.70 336 *e*P P 06 45 30.6 -0.1
comp=Z,192nm,1.2s,mb6.0
RES Resolute Bay 57.73 2 *e*P P 06 45 29.6 -1.1
comp=Z,3μm,1.4s
RES *e* 06 45 35.2
RES Resolute Bay 57.73 2 *e*P P 06 45 29.6 -1.1
RES *e* 06 45 35.2
RES pmax pmax
comp=Z,3μm,1.4s
KTH Kantishna Hill 57.99 336 *e*P P 06 45 32.1 -0.7
comp=Z,77nm,1.2s,mb5.6
PPLA Purkeypile 58.19 335 *e*P P 06 45 33.7 -0.5
comp=Z,218nm,1.4s,mb6.0
BPAW Bear Paw Mtn. 58.28 336 *e*P P 06 45 33.9 -0.9
comp=Z,84nm,1.3s,mb5.6
CHUM Lake Minchumin 58.70 336 *e*P P 06 45 36.3 -1.4
comp=Z,72nm,1.4s,mb5.5
SVW2 Sparrevohn 59.89 332 *e*P P 06 45 38.3 -0.7
COLD Coldfoot 59.59 340 *e*P P 06 45 44.0 +0.2
comp=Z,33nm,1.2s,mb5.2
PPT Papeete 59.77 237 *e*S S 06 54 03.0 +7.6
comp=Z,1μm,27.0s
PPT *e*LQ 07 00 51.8
comp=Z,2μm,26.5s
PPT *e*LR LR 07 03 18.8
comp=Z,1μm,24.2s,baz=52
PPT Papeete 59.77 237 LR LR 07 04 39.7
comp=Z,690nm,18.4s,MS4.8,baz=63,slow=29
IMA2 Indian Mountai 60.23 338 *e*P P 06 45 46.7 -1.5
BDFB Brasilia 60.63 120 P P 06 45 52.7 +1.0
comp=Z,1.3nm,0.7s,mb4.2,baz=250,slow=19,SNR=3.5
BDFB LR LR 07 12 18.5
comp=Z,872nm,18.9s,MS4.9,baz=86,slow=36
TBI Tubuai 62.88 232 *e*S S 06 54 42.5 +7.7
comp=Z,691nm,25.8s
TBI *e*LQ 07 02 06.8
comp=Z,731nm,29.2s
TBI *e*LR LR 07 04 44.2
comp=Z,1μm,27.2s,baz=52
PLCA Paso Flores 63.62 155 P P 06 46 12.5 +1.2
comp=Z,13nm,1.2s,mb4.8,baz=314,slow=7.0,SNR=5.6
PLCA LR LR 07 08 06.9
comp=Z,1μm,18.6s,MS5.1,baz=346,slow=30
PLCA Paso Flores 63.62 155 *e*P P 06 46 16.5 +5.1
comp=Z,71nm,1.4s,mb5.5
PLCA LR LR 07 08 06.9
PLCA Paso Flores 63.62 155 *e*P P 06 46 16.5 +5.2
PLCA pmax pmax
comp=Z,71nm,1.4s
SUMG Summit 65.46 17 *e*P P 06 46 23.1 +0.1
comp=Z,33nm,1.1s,mb5.3
SUMG *e* pP 06 46 31.7 -0.2
ALE Alert 67.16 5 P P 06 46 32.6 -1.1
comp=Z,128nm,1.2s,mb5.8,SNR=11
RCBR Riachuelo 67.20 104 PFAKE 06 46 50.0 +15
RCBR LR LR
comp=Z,482nm,22.0s,MS4.7
CMLA Cha da Macela 67.58 56 *e*LQ 07 04 09.8
CMLA *e*LR LR 07 07 08.3
ADK Adak 68.63 320 PFAKE 06 47 00.0 +17
ADK LR LR
comp=Z,466nm,21.0s,MS4.7
BILL Bilibino 75.76 337 *e*P P 06 47 26.1 +0.3
comp=Z,101nm,1.4s,mb5.6
BILL LR LR
comp=Z,2μm,21.0s,MS5.4
BILL Bilibino 75.76 337 ‖*e*P P 06 47 25.1 -0.7
BILL *e*S S 06 56 58.1 -7.4
BILL pmax pmax
comp=Z,82nm,1.7s,mb5.4
BILL MLR MLR
comp=Z,2μm,20.0s,MS5.4
EFI East Falkland 77.54 155 PFAKE 06 47 50.0 +14
EFI LR LR
comp=Z,2μm,20.0s,MS5.3
ESK Eskdalemuir 79.93 35 PFAKE 06 48 00.0 +11
ESK LR LR
comp=Z,860nm,21.0s,MS5.1
MTE Manteigas 80.93 51 *e*P P 06 47 54.9 0.0
comp=Z,39nm,1.4s,mb5.2
MTE LR LR
comp=Z,557nm,19.0s,MS4.9
EVO Evora 81.05 53 *e*P P 06 47 54.6 -1.0
comp=Z,128nm,1.5s,mb5.3
EVO *e*MLR MLR
comp=Z,616nm,22.8s,MS4.6
EGRO El Granado 81.71 53 P P 06 47 59.6 +0.5
comp=Z,13nm,1.0s,mb4.8
EBAD Badajoz 81.75 52 P P 06 47 59.6 +0.3
comp=Z,7,3nm,1.3s,mb4.5
EPLA Plasencia 82.10 51 P P 06 48 01.8 +0.7
comp=Z,17nm,0.9s,mb5.0
EPLA Plasencia 82.10 51 P P 06 48 01.8 +0.7
EPLA pmax pmax
comp=Z,17nm,0.9s,mb5.0
SGMF Saint Gilles 82.27 42 *e*P P 06 48 01.0 -0.8
comp=Z,162nm,1.6s,mb5.4
SGMF Saint Gilles 82.27 42 *e*P P 06 48 01.0 -0.8
comp=Z,81nm,1.6s,mb5.4
SGMF Saint Gilles 82.27 42 *e*P P 06 48 01.0 -0.8
SGMF pmax pmax
comp=Z,81nm,1.6s,mb5.4
EMIN Mina Concepcio 82.27 53 P P 06 48 02.5 +0.5
comp=Z,7,7nm,1.1s,mb4.5
SEY Seymchan 82.77 334 *e*P P 06 48 03.8 -0.3
SEY Seymchan 82.77 334 *e*P P 06 48 03.7 -0.4
SFS San Fernando 82.98 54 PFAKE 06 48 20.0 +14
SFS LR LR
comp=Z,819nm,22.0s,MS5.1
ELAN Lanestosa 83.13 47 P P 06 48 06.5 +0.2
comp=Z,8.3nm,0.9s,mb4.8
ESPR Espera 83.14 54 P P 06 48 07.8 +1.2
comp=Z,12nm,1.1s,mb4.8
ECAB El Cabril 83.14 52 P P 06 48 07.4 +0.8
comp=Z,12nm,0.9s,mb4.9
PET Petropavlovsk 83.24 323 *e*P P 06 48 12.2 +5.4
PET *e* 06 51 21.2
PET *e*S S 06 58 27.4 +2.1
PET *e*PS 06 59 18.8
PET *e*PPS 06 59 39.5
PET *e*SS SS 07 03 51.2 +1.6
PET pmax pmax
comp=Z,400nm,17.6s
PET MLR MLR
comp=Z,700nm,15.0s,MS5.2
GRR Gorron 83.31 42 *e*P P 06 48 07.2 0.0
comp=Z,97nm,1.3s,mb5.4
GRR Gorron 83.31 42 *e*P P 06 48 07.2 0.0
comp=Z,49nm,1.3s,mb5.4
GRR Gorron 83.31 42 *e*P P 06 48 07.2 0.0
GRR pmax pmax
comp=Z,49nm,1.3s,mb5.4
GUD Guadarrama 83.36 50 P P 06 48 09.1 +1.5
comp=Z,6.5nm,0.9s,mb4.7
GUD Guadarrama 83.36 50 P P 06 48 09.1 +1.5
GUD pmax pmax
comp=Z,7,0nm,0.9s,mb4.7
FLN La Foliniere 83.43 41 *e*P P 06 48 08.0 +0.2
comp=Z,203nm,1.6s,mb5.6
FLN *e*MLR MLR
comp=Z,800nm,21.5s,MS4.8
FLN La Foliniere 83.43 41 *e*P P 06 48 08.0 +0.2
comp=Z,102nm,1.6s,mb5.6
FLN LR LR
comp=Z,800nm,21.5s,MS5.1
FLN La Foliniere 83.43 41 *e*P P 06 48 08.0 +0.2
FLN pmax pmax
comp=Z,102nm,1.6s,mb5.6
FLN MLR MLR
comp=Z,800nm,21.5s,MS5.1
PAB San Pablo 83.53 51 *e*P P 06 48 08.9 +0.4
comp=Z,51nm,1.4s,mb5.5
PAB LR LR
comp=Z,502nm,19.0s,MS4.9
PAB San Pablo 83.53 51 *e*P P 06 48 09.0 +0.5
PAB pmax pmax
comp=Z,51nm,1.4s,mb5.5
PAB MLR MLR
comp=Z,502nm,19.0s,MS4.9
LDF La Druitiere 83.71 41 *e*P P 06 48 09.3 0.0
comp=Z,107nm,1.5s,mb5.5
LDF La Druitiere 83.71 41 *e*P P 06 48 09.3 0.0
comp=Z,53nm,1.5s,mb5.5
LDF La Druitiere 83.71 41 *e*P P 06 48 09.3 0.0
LDF pmax pmax
comp=Z,53nm,1.5s,mb5.5
EADA Adamuz 83.75 52 P P 06 48 10.1 +0.4
comp=Z,9.2nm,1.4s,mb4.7
PETK Petropavlovsk- 83.76 324 P P 06 48 09.5 +0.1
comp=Z,20nm,1.0s,mb5.2,baz=86,slow=9.1,SNR=12
ESDC Sonseca Array 83.78 51 P P 06 48 10.5 +0.7
comp=Z,1.0nm,0.6s,mb4.1,baz=301,slow=4.1,SNR=16
ESDC Sonseca Array 83.78 51 P P 06 48 09.9 +0.1
comp=Z,29nm,1.8s,mb5.1
ESLA Sonseca Array 83.78 51 *e*P P 06 48 09.9 +0.1
comp=Z,24nm,1.7s,mb5.0
ESLA LR LR
comp=Z,2μm,20.0s,MS5.5
FUNA Funafuti 83.85 259 PFAKE 06 48 20.0 +9.4
FUNA LR LR
comp=Z,6μm,19.0s,MS6.0
EMIJ Mijas 84.06 54 P P 06 48 12.6 +1.2
comp=Z,13nm,0.9s,mb5.0
MFF Saint Martin d 84.33 43 *e*P P 06 48 12.1 -0.4
comp=Z,124nm,1.5s,mb5.5
MFF Saint Martin d 84.33 43 *e*P P 06 48 12.1 -0.4
comp=Z,62nm,1.5s,mb5.5
MFF Saint Martin d 84.33 43 *e*P P 06 48 12.1 -0.4
MFF pmax pmax
comp=Z,62nm,1.5s,mb5.5
EBAN Banos Encina 84.35 52 P P 06 48 13.9 +1.1
comp=Z,11nm,1.5s,mb4.8
EBAN Banos Encina 84.35 52 P P 06 48 13.9 +1.1
EBAN pmax pmax
comp=Z,11nm,1.5s,mb4.8
ELOJ Sierra Loja 84.37 53 P P 06 48 15.2 +2.3
comp=Z,28nm,1.3s,mb5.2
ELOJ Sierra Loja 84.37 53 P P 06 48 15.2 +2.3
ELOJ pmax pmax
comp=Z,28nm,1.3s,mb5.2
EALK Alkurruntz 84.48 47 P P 06 48 13.5 +0.2
comp=Z,11nm,1.2s,mb4.9
SJPF Ste Jean 84.71 47 *e*P P 06 48 14.4 0.0
comp=Z,110nm,1.6s,mb5.5
SJPF Ste Jean 84.71 47 *e*P P 06 48 14.4 0.0
comp=Z,55nm,1.6s,mb5.4
SJPF Ste Jean 84.71 47 *e*P P 06 48 14.4 0.0
SJPF pmax pmax
comp=Z,55nm,1.6s,mb5.4
ECOG Cogollos-Vega 84.78 53 P P 06 48 16.9 +1.9
comp=Z,12nm,0.9s,mb5.0
ECOG Cogollos-Vega 84.78 53 P P 06 48 16.9 +2.0
ECOG pmax pmax
comp=Z,12nm,0.9s,mb5.0
ETOR Torete 84.83 49 P P 06 48 16.2 +1.1
comp=Z,5.2nm,1.3s,mb4.5
ETOR Torete 84.83 49 P P 06 48 16.3 +1.2
ETOR pmax pmax
comp=Z,5.0nm,1.3s,mb4.5
LARF Larrau 84.89 47 *e*P P 06 48 15.6 +0.2
EQES Quesada 85.00 52 P P 06 48 16.9 +0.9
comp=Z,16nm,1.2s,mb5.0
NOA NORSAR Array B 85.04 27 P P 06 48 17.1 +1.4
comp=Z,1.3nm,0.8s,mb4.1,baz=293,slow=4.8,SNR=3.3
NOA LR LR 07 28 36.6
comp=Z,228nm,20.1s,MS4.6,baz=310,slow=37
EVIA Vianos 85.17 51 P P 06 48 18.7 +1.8
comp=Z,14nm,0.8s,mb5.1
EVIA Vianos 85.17 51 P P 06 48 18.7 +1.8
EVIA pmax pmax
comp=Z,14nm,0.8s,mb5.1
ETSF Etsaut 85.24 47 *e*P P 06 48 17.0 -0.1
comp=Z,142nm,1.6s,mb5.5
ETSF Etsaut 85.24 47 *e*P P 06 48 17.0 -0.1
comp=Z,71nm,1.6s,mb5.5
ETSF Etsaut 85.24 47 *e*P P 06 48 17.0 -0.1
ETSF pmax pmax
comp=Z,71nm,1.6s,mb5.5
EHUE Huescar 85.35 52 P P 06 48 19.2 +1.4
comp=Z,25nm,1.1s,mb5.3
EHUE Huescar 85.35 52 P P 06 48 19.2 +1.4
EHUE pmax pmax
comp=Z,25nm,1.1s,mb5.3
LFF La Frestale 85.46 44 *e*P P 06 48 17.7 -0.5
comp=Z,190nm,1.4s,mb5.7
LFF La Frestale 85.46 44 *e*P P 06 48 17.7 -0.5
comp=Z,95nm,1.4s,mb5.7
LFF La Frestale 85.46 44 *e*P P 06 48 17.7 -0.5
LFF pmax pmax
comp=Z,95nm,1.4s,mb5.7
ARCES ARCESS Array B 85.56 17 P P 06 48 18.5 +0.3
comp=Z,15nm,1.1s,mb5.1,baz=281,slow=8.2,SNR=4.6
ARCES LR LR 07 28 44.8
comp=Z,634nm,18.7s,MS5.0,baz=320,slow=37
TIXI Tiksi 85.61 346 PFAKE 06 48 30.0 +12
TIXI LR LR
comp=Z,682nm,19.0s,MS5.1
VIEF Viey 85.65 47 *e*P P 06 48 20.0 +0.8
EBIE Bielsa 85.80 47 P P 06 48 21.1 +1.2
comp=Z,11nm,1.3s,mb4.9
EPF Esparros 85.82 46 *e*P P 06 48 19.6 -0.4
comp=Z,155nm,1.4s,mb5.7
EPF Esparros 85.82 46 *e*P P 06 48 19.6 -0.4

comp=Z,77nm,1.4s,mb5.7
EPF Esparros 85.82 46 *e*P **P 06 48 19.6 -0.4**
EPF pmax pmax
comp=Z,77nm,1.4s,mb5.7
KEV Kevo 85.82 16 PFAKE 06 48 30.0 +11
KEV LR LR
comp=Z,1μm,22.0s,MS5.2
RJF Les Rejaudoux 85.85 44 *e*P **P 06 48 19.5 -0.6**
comp=Z,194nm,1.5s,mb5.8
RJF *e*MLR MLR
comp=Z,568nm,17.2s,MS4.7
RJF Les Rejaudoux 85.85 44 *e*P **P 06 48 19.5 -0.6**
comp=Z,97nm,1.5s,mb5.8
RJF LR LR
comp=Z,570nm,17.3s,MS5.0
RJF Les Rejaudoux 85.85 44 *e*P **P 06 48 19.5 -0.6**
RJF pmax pmax
comp=Z,97nm,1.5s,mb5.8
RJF MLR MLR
comp=Z,570nm,17.3s,MS5.0
BAIF Baives 85.87 39 *e*P **P 06 48 19.8 -0.3**
comp=Z,63nm,1.2s,mb5.4
BAIF Baives 85.87 39 *e*P **P 06 48 19.8 -0.3**
comp=Z,32nm,1.2s,mb5.4
BAIF Baives 85.87 39 *e*P **P 06 48 19.8 -0.3**
BAIF pmax pmax
comp=Z,31nm,1.2s,mb5.4
ETOB Tobarra 85.88 51 P **P 06 48 21.7 +1.3**
comp=Z,14nm,1.2s,mb5.1
RESF Ens 85.89 47 *e*P **P 06 48 21.1 +0.7**
HYF Humbligny 85.90 42 *e*P **P 06 48 19.8 -0.5**
TCF Toulx Ste Croi 85.97 43 *e*P **P 06 48 19.9 -0.8**
comp=Z,164nm,1.6s,mb5.7
TCF Toulx Ste Croi 85.97 43 *e*P **P 06 48 19.9 -0.8**
comp=Z,82nm,1.6s,mb5.7
TCF Toulx Ste Croi 85.97 43 *e*P **P 06 48 19.9 -0.8**
TCF pmax pmax
comp=Z,82nm,1.6s,mb5.7
ECHE Chera 86.00 50 P **P 06 48 22.3 +1.3**
comp=Z,1.8nm,0.5s,mb4.6
ECHE Chera 86.00 50 P **P 06 48 22.3 +1.3**
ECHE pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
EMOS Mosqueruela 86.12 49 P **P 06 48 22.8 +1.2**
comp=Z,19nm,1.1s,mb5.2
GIVF Givet 86.22 39 *e*P **P 06 48 21.6 -0.2**
BGF Bois d'Agland 86.29 42 *e*P **P 06 48 21.3 -0.9**
comp=Z,112nm,1.6s,mb5.5
BGF Bois d'Agland 86.29 42 *e*P **P 06 48 21.3 -0.9**
comp=Z,56nm,1.6s,mb5.5
BGF Bois d'Agland 86.29 42 *e*P **P 06 48 21.3 -0.9**
BGF pmax pmax
comp=Z,56nm,1.6s,mb5.5
CAF Calviac 86.35 44 *e*P **P 06 48 21.8 -0.8**
comp=Z,117nm,1.8s,mb5.5
CAF Calviac 86.35 44 *e*P **P 06 48 21.8 -0.8**
comp=Z,59nm,1.8s,mb5.5
CAF Calviac 86.35 44 *e*P **P 06 48 21.8 -0.8**
CAF pmax pmax
comp=Z,59nm,1.8s,mb5.5
EMUR La Murta 86.36 52 P **P 06 48 23.4 +0.6**
comp=Z,23nm,1.1s,mb5.3
SALF Salau 86.50 46 *e*P **P 06 48 20.8 -2.6**
AVF Avril sur Loir 86.53 42 *e*P **P 06 48 22.2 -1.2**
SSF Saint Saulge 86.53 42 *e*P **P 06 48 22.3 -1.1**
LOR Lormes 86.68 41 *e*P **P 06 48 23.4 -0.8**
LOR *e*MLR MLR
comp=Z,604nm,18.5s,MS4.7
LOR Lormes 86.68 41 *e*P **P 06 48 23.4 -0.8**
LOR MLR MLR
comp=Z,600nm,18.5s,MS5.0
PYM Petit Puy Mans 86.68 43 *e*P **P 06 48 23.9 -0.3**
EBEN Beniarda 86.84 51 P **P 06 48 26.7 +1.5**
comp=Z,12nm,1.0s,mb5.1
SMF Signal de Mont 86.89 42 *e*P **P 06 48 23.9 -1.3**
EPOB Poblet 86.90 48 P **P 06 48 25.6 +0.3**
comp=Z,10nm,1.1s,mb5.0
MTLF Montolieu 87.00 46 *e*P **P 06 48 25.2 -0.6**
comp=Z,97nm,1.6s,mb5.5
MTLF Montolieu 87.00 46 *e*P **P 06 48 25.2 -0.6**
comp=Z,49nm,1.6s,mb5.5
MTLF Montolieu 87.00 46 *e*P **P 06 48 25.2 -0.6**
MTLF pmax pmax
comp=Z,49nm,1.6s,mb5.5
LBL Lubilhac 87.02 44 *e*P **P 06 48 26.2 +0.3**
BUG Bochum--Univer 87.13 37 *e*P **P 06 48 26.1 -0.2**
comp=Z,12nm,0.7s,mb5.2
WLF Walferdange 87.18 39 PFAKE 06 48 40.0 +13
WLF LR LR
comp=Z,814nm,21.0s,MS5.1
RUP Ruppelstein 87.71 38 *e*P **P 06 48 28.3 -0.8**
BSEG Bad Segeberg 87.76 34 *e*P **P 06 48 29.1 -0.1**
BSEG pmax pmax
comp=Z,97nm,1.8s,mb5.7
BSEG Bad Segeberg 87.76 34 *e*P **P 06 48 29.1 -0.1**
comp=Z,97nm,1.8s,mb5.7
HAU Haudompre 87.95 40 *e*P **P 06 48 29.0 -1.3**
comp=Z,30nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,802nm,21.2s,MS4.8
HAU Haudompre 87.95 40 *e*P **P 06 48 29.0 -1.3**
comp=Z,15nm,1.1s,mb5.1
HAU LR LR
comp=Z,800nm,21.3s,MS5.1
HAU Haudompre 87.95 40 *e*P **P 06 48 29.0 -1.3**
HAU pmax pmax
comp=Z,15nm,1.1s,mb5.1
HAU MLR MLR
comp=Z,800nm,21.3s,MS5.1
RAO Raoul Island 88.14 239 LR LR 07 17 39.8
comp=Z,259nm,19.7s,MS4.7,baz=131,slow=28
TNS Taunus Mts 88.31 38 *e*P **P 06 48 31.3 -0.7**
TNS pmax pmax
comp=Z,35nm,1.4s,mb5.4
TNS Taunus Mts 88.31 38 *e*P **P 06 48 31.3 -0.7**
comp=Z,35nm,1.4s,mb5.4
CABF La Chapelle 88.34 42 *e*P **P 06 48 32.1 -0.1**
HINF Hinteralfeld 88.34 40 *e*P **P 06 48 30.6 -1.5**
CDF Champ du Feu 88.36 40 *e*P **P 06 48 30.8 -1.4**
comp=Z,45nm,1.4s,mb5.2
CDF Champ du Feu 88.36 40 *e*P **P 06 48 30.8 -1.4**
comp=Z,23nm,1.4s,mb5.2
CDF Champ du Feu 88.36 40 *e*P **P 06 48 30.8 -1.4**
CDF pmax pmax
comp=Z,23nm,1.4s,mb5.2
ECH Echery 88.37 40 *e*P **P 06 48 32.1 -0.2**
LOMF Lomont 88.51 41 *e*P **P 06 48 32.8 -0.2**
FELD Feldberg im Sc 89.03 40 *e*P **P 06 48 33.9 -1.5**
BFO Black Forest 89.03 39 *e*P **P 06 48 32.2 -3.2**
comp=Z,33nm,2.2s,mb5.3
BFO LR LR
comp=Z,686nm,19.0s,MS5.1
LVZ Lovozero 89.12 16 PFAKE 06 48 50.0 +15
LVZ LR LR
comp=Z,952nm,21.0s,MS5.2
LPL La Plagne 89.19 42 *e*P **P 06 48 35.7 -0.5**
BNI Bardonecchia 89.34 43 PFAKE 06 48 50.0 +13
BNI LR LR
comp=Z,737nm,20.0s,MS5.1
MBDF Montbardon 89.53 43 *e*P **P 06 48 36.9 -0.9**
comp=Z,18nm,1.0s,mb5.0
MBDF Montbardon 89.53 43 *e*P **P 06 48 36.9 -0.9**
comp=Z,9.0nm,1.0s,mb5.0
MBDF Montbardon 89.53 43 *e*P **P 06 48 36.9 -0.9**
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
GRA1 Grafenberg Arr 90.16 37 *e*P **P 06 48 41.0 +0.4**
comp=Z,18nm,0.7s,mb5.5
GRA1 *e*pP pP 06 48 50.6 +0.7
GRA1 LR LR
comp=Z,400nm,21.7s,MS4.8
GRF Grafenberg Arr 90.16 37 *e*P **P 06 48 41.0 +0.4**
GRF *e**PP pP 06 48 50.6 +0.7
GRF pmax pmax
comp=Z,18nm,0.7s,mb5.5
GRF MLR MLR
comp=Z,400nm,21.7s,MS4.8
GRF Grafenberg Arr 90.16 37 *e*P **P 06 48 41.0 +0.4**
GRF *e**PP pP 06 48 50.6 +0.7
GRF pmax pmax
comp=Z,18nm,0.7s,mb5.5
GRF MLR MLR
comp=Z,400nm,21.7s,MS4.8
GRF Grafenberg Arr 90.16 37 *e*P **P 06 48 41.0 +0.4**
comp=Z,18nm,0.7s,mb5.5
GRF *e*pP pP 06 48 50.6 +0.7
GRF *e*L 07 28 40.6
comp=Z,383nm,21.7s
CLL Collm 90.42 35 *e*P **P 06 48 41.0 -0.8**
CLL *e*S 06 59 48.0
CLL LR LR
comp=Z,700nm,19.6s,MS5.1
CLL Collm 90.42 35 *e*P **P 06 48 41.4 -0.4**
comp=Z,33nm,1.8s,mb5.4
CLL Collm 90.42 35 *e*P **P 06 48 41.0 -0.8**
CLL *e*Plp 06 48 45.0
CLL *e*PP PP 06 52 17.0 +1.1
CLL *e*SKSac SKSac 06 59 11.0 -0.2
CLL *e*PS 06 59 48.0
CLL *e*PPS 07 01 24.0
CLL LmV 07 30 00.0
comp=Z,700nm,19.6s
GUNZ Gunzen 90.49 36 *e*P **P 06 48 41.9 -0.2**
comp=Z,14nm,1.1s,mb5.2
MANZ Manzenberg 90.53 37 *e*P **P 06 48 41.1 -1.3**
comp=Z,45nm,2.2s,mb5.4
WERN Wernitzgruen 90.55 36 *e*P **P 06 48 42.5 +0.1**
comp=Z,27nm,1.7s,mb5.3
NKC Novy Kostel 90.61 36 *e*P **P 06 48 42.0 -0.7**
ROTZ Rotzenmuhle 90.69 37 *e*P **P 06 48 42.9 -0.2**
comp=Z,20nm,1.8s,mb5.2
FBE Freiberg 90.80 36 *e*P **P 06 48 43.5 -0.1**
comp=Z,66nm,2.3s,mb5.6
BRG Berggiesshubel 91.15 35 *i* P **P 06 48 50.3 +5.1**
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
BRG MLR MLR
comp=N,282nm,23.1s,MS4.9
BRG MLR MLR
comp=E,436nm,22.5s,MS4.9
BRG MLR MLR
comp=Z,219nm,23.6s,MS4.5
BRG Berggiesshubel 91.15 35 *e*P **P 06 48 44.4 -0.8**
comp=Z,46nm,2.0s,mb5.5
BRG Berggiesshubel 91.15 35 *i* P **P 06 48 50.3 +5.1**
comp=Z,4.2nm,0.7s,mb4.9
BRG
comp=N,471nm,23.1s
BRG
comp=E,728nm,22.5s
BRG
comp=Z,366nm,23.6s
WET Wettzell 91.37 37 *e*P **P 06 48 46.7 +0.4**
WET pmax pmax
comp=Z,31nm,1.8s,mb5.3
WET Wettzell 91.37 37 *e*P **P 06 48 46.7 +0.4**
comp=Z,31nm,1.8s,mb5.3
KHC Kasperske Hory 91.78 37 *e*P **P 06 48 47.7 -0.5**
KHC *e*pP pP 06 48 59.2 +1.8
KHC *e*x x 06 52 34.0
PRU Pruhonice 91.91 36 *e*P **P 06 48 46.2 -2.6**
PRU *e*pP pP 06 48 55.8 -2.2
GEC2 GERESS Array S 91.99 37 *e*P **P 06 48 49.0 -0.1**
GEC2 pmax pmax
comp=Z,15nm,1.4s,mb5.1
GEC2 GERESS Array S 91.99 37 *e*P **P 06 48 49.0 -0.1**
comp=Z,15nm,1.4s,mb5.1
GERES GERESS Array B 91.99 37 P **P 06 48 49.3 +0.1**
comp=Z,0.3nm,0.3s,mb4.2,baz=298,slow=2.9,SNR=6.4
GERES LR LR 07 32 31.0
comp=Z,503nm,18.5s,MS5.0,baz=130,slow=37
YAK Yakutsk 92.03 339 PFAKE 06 49 00.0 +11
YAK LR LR
comp=Z,947nm,19.0s,MS5.3
YAK Yakutsk 92.03 339 *e*P **P 06 48 47.9 -1.2**
YAK *e* 06 52 28.6
YAK *e*PPP 06 54 27.4
YAK *e*S SKSac 06 59 17.8 -2.2
YAK *e* 06 59 50.1
YAK pmax pmax
comp=Z,20nm,1.1s,mb5.4
YAK pmax pmax
comp=Z,77nm,2.3s,mb5.6
YAK pmax pmax
comp=N,137nm,2.6s
YAK pmax pmax
comp=E,77nm,3.2s
YAK smax
comp=N,53nm,10.1s
YAK smax
comp=E,97nm,11.6s
YAK MLR MLR
comp=Z,488nm,19.0s,MS5.0
YAK MLR MLR
comp=N,474nm,19.0s
VLC Villacollemand 92.12 42 PFAKE 06 49 00.0 +10
VLC LR LR
comp=Z,414nm,21.0s,MS4.9
UPC Upice 92.47 35 *e*P **P 06 48 49.8 -1.5**
UPC *e*PP PP 06 52 31.6 -0.5
DPC Dobruska-Polom 92.72 35 *e*P **P 06 48 52.7 +0.2**
DPC *e*pP pP 06 49 00.6 -1.1
DPC *e*PP PP 06 52 34.2 +0.1
DBIC Dimbokro 92.89 82 P **P 06 48 53.7 -0.3**
comp=Z,5.9nm,1.0s,mb5.0,baz=294,slow=4.0,SNR=4.6
DBIC LR LR 07 25 20.8
comp=Z,314nm,21.9s,MS4.7,baz=272,slow=32
DBIC Dimbokro 92.89 82 *e*P **P 06 48 53.8 -0.3**
comp=Z,56nm,1.9s,mb5.7
DBIC LR LR
comp=Z,421nm,22.0s,MS4.8
DBIC Dimbokro 92.89 82 *e*P **P 06 48 53.8 -0.2**
DBIC pmax pmax
comp=Z,56nm,1.9s
DBIC MLR MLR
comp=Z,421nm,22.0s
VSL Villasalto 93.46 47 PFAKE 06 49 10.0 +14
VSL LR LR
comp=Z,324nm,19.0s,MS4.8
OJC Ojcow 94.68 34 *e*P **P 06 49 01.5 0.0**
KEST Kesra 95.03 50 LR LR 07 34 25.9
comp=Z,158nm,18.1s,MS4.5,baz=216,slow=37
YSS Yuzh-Sakhalins 95.08 322 PFAKE 06 49 10.0 +6.6
YSS LR LR
comp=Z,187nm,20.0s,MS4.5
KLMR Klimovskoe 95.85 19 *e*P **P 06 49 04.3 -2.3**
KLMR pmax pmax
comp=Z,43nm,1.7s,mb5.6
PSZ Piszkesteto 96.00 36 PFAKE 06 49 20.0 +12
PSZ LR LR
comp=Z,726nm,20.0s,MS5.2
KWP Kalwaria 96.56 33 PFAKE 06 49 20.0 +10
KWP LR LR
comp=Z,464nm,20.0s,MS5.0
TORD Torodi Ar. Bea 97.00 74 P **P 06 49 11.8 -1.0**
comp=Z,1.9nm,1.1s,mb4.4,baz=320,slow=3.8,SNR=6.4
TAM Tamanrasset 97.07 64 *e*P **P 06 49 13.8 +0.9**
ERM Erimo 97.39 318 PFAKE 06 49 30.0 +16
ERM LR LR
comp=Z,410nm,20.0s,MS4.9
CUC Castrocucco 97.63 44 PFAKE 06 49 30.0 +15
CUC LR LR
comp=Z,752nm,19.0s,MS5.2
TIP Timpagrande 98.67 45 PFAKE 06 49 30.0 +10
TIP LR LR
comp=Z,447nm,19.0s,MS5.0
WDD Wield Dalam 98.73 48 PFAKE 06 49 30.0 +10
WDD LR LR
comp=Z,246nm,19.0s,MS4.7
KIEV Kiev 99.17 30 PFAKE 06 49 30.0 +8.2
KIEV LR LR
comp=Z,440nm,20.0s,MS5.0
AKASG Malin Array Be 99.17 30 P **P 06 49 20.6 -1.2**
comp=Z,0.2nm,0.2s,mb4.2,baz=302,slow=3.8,SNR=4.4
AKASG LR LR 07 35 56.3
comp=Z,367nm,18.4s,MS4.9,baz=15,slow=36
AKASG Malin Array Be 99.17 30 *i* P **P 06 49 21.1 -0.7**
OBN Obninsk 99.23 24 *e*P **P 06 49 20.0 -1.9**
OBN LR LR
comp=Z,966nm,22.0s,MS5.3
OBN Obninsk 99.23 24 *e*P **P 06 49 20.9 -1.0**
OBN *i* 06 53 22.4
OBN *i* PS PS 07 02 27.7 +6.6
OBN *e*SS SS 07 07 33.4 -5.8
OBN pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
OBN MLR MLR
comp=Z,700nm,20.0s,MS5.2
TIR Tirane 99.57 42 PFAKE 06 49 40.0 +16
TIR LR LR
comp=Z,504nm,19.0s,MS5.0
HNR Honiara 102.32 264 PFAKE 06 49 50.0 +14
HNR LR LR
comp=Z,255nm,20.0s,MS4.7
VSR Storozhevoye 103.20 25 *e*P Pdif 06 49 37.6 -2.1
VSR pmax pmax
comp=Z,2.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.4s
MAJO Matsushiro 103.54 315 PFAKE 06 49 50.0 +8.9
MAJO LR LR
comp=Z,368nm,19.0s,MS4.9
MDJ Mudanjiang 103.87 326 P Pdif 06 49 42.0 -0.6
MDJ PP PP 06 53 58.1 -1.3
MDJ LR LR
comp=Z,726nm,14.7s,MS5.3
MDJ Mudanjiang 103.87 326 PFAKE 06 49 50.0 +7.4
MDJ LR LR
comp=Z,656nm,19.0s,MS5.2
ARU Arti 104.62 12 PFAKE 06 50 00.0 +14
ARU LR LR
comp=Z,603nm,20.0s,MS5.1
HIA Hailar 105.21 334 PFAKE 06 54 10.0 +7.2
HIA LR LR
comp=Z,1μm,20.0s,MS5.5
SBA Scott Base 107.23 193 PFAKE 06 54 20.0 +14
SBA LR LR
comp=Z,535nm,21.0s,MS5.1
ANTO Ankara 108.28 37 PFAKE 06 54 20.0 +11
ANTO LR LR
comp=Z,279nm,19.0s,MS4.8
TLY Talaya 108.55 345 PFAKE 06 54 20.0 +11
TLY LR LR
comp=Z,801nm,20.0s,MS5.3
ZALV Zalesovo Beam 109.19 357 PP PP 06 54 32.1 -5.7
comp=Z,1.2nm,0.6s,baz=2.9,slow=5.8,SNR=5.2
BRVK Borovoye 109.69 6 PFAKE 06 54 20.0 +8.9
BRVK LR LR
comp=Z,2μm,19.0s,MS5.7
INCN Inchon 110.29 322 PFAKE 06 54 20.0 +7.3
INCN LR LR
comp=Z,636nm,19.0s,MS5.2
ULN Ulaanbaatar 111.03 341 PFAKE 06 54 30.0 +16
ULN LR LR
comp=Z,841nm,19.0s,MS5.3
SONM Songino Array 111.26 341 PP PP 06 54 43.4 -10
comp=Z,0.5nm,0.7s,baz=8.7,slow=10,SNR=2.9
CSS Prodhromos 111.86 40 PFAKE 06 54 30.0 +14
CSS LR LR
comp=Z,212nm,19.0s,MS4.8
KURK Kurchatov 112.53 1 PFAKE 06 54 30.0 +13
KURK LR LR
comp=Z,766nm,22.0s,MS5.2
BJI Beijing 114.00 330 Pdif Pdif 06 50 29.3 +1.6
BJI PP PP 06 55 13.3 +0.4
BJI SKS SKSdf 07 01 17.1 -13
BJI SS SS 07 10 47.4 -13
BJI Beijing 114.00 330 P Pdif 06 50 29.3 +1.6
BJI 06 55 13.3
BJT Baijiatuan 114.03 330 PFAKE 06 54 30.0 +10
BJT LR LR
comp=Z,940nm,20.0s,MS5.4
GNI Garni 114.28 29 PFAKE 06 54 30.0 +10
GNI LR LR
comp=Z,278nm,19.0s,MS4.9
PMG Port Moresby 114.50 267 PFAKE 06 54 30.0 +8.7
PMG LR LR
comp=Z,200nm,19.0s,MS4.7
HHC Hu-ho-hao-te 115.41 334 *e*PKP PKPdf 06 54 25.6 +3.2
HHC PP PP 06 55 30.2 +7.5
HHC SKS SKSdf 07 01 33.0 +0.3
HHC SKKS SKKSac 07 02 18.1 -5.2
HHC SS SS 07 11 19.3 +0.6
HHC LR LR
comp=Z,867nm,16.7s,MS5.4
MKAR Makanchi Array 116.44 358 PP PP 06 55 23.8 -5.7
comp=Z,0.6nm,0.7s,baz=5.7,slow=2.9,SNR=3.0
MKAR PKKPbc PKKPbc 07 04 54.4 +0.6
comp=Z,0.5nm,0.8s,baz=256,slow=1.0,SNR=3.8
DRV Dumont d'Urvil 117.26 203 SP SP 07 05 22.0 +6.4
DRV SS SS 07 11 48.0 +4.7
DRV R 07 31 00.0
CTAO Charters Tower 117.55 256 PFAKE 06 54 40.0 +13
CTAO LR LR
comp=Z,277nm,21.0s,MS4.9
NJ2 Nanjing 118.65 323 *e*PKP PKPdf 06 54 32.7 +3.8
WMQ Urumqi 119.04 354 *e*PKP PKPdf 06 54 30.0 +0.7
WMQ PP PP 06 55 54.0 +6.4
WMQ SKS SKSdf 07 01 35.0 -4.5
WMQ SKKS SKKSac 07 02 39.0 -8.3
WMQ SS SS 07 12 04.0 -1.3
WMQ PP PP
comp=Z,89nm,7.0s
WMQ LR LR
comp=Z,798nm,23.0s,MS5.3
TKM2 Tokmak 2 120.20 4 PFAKE 06 54 40.0 +8.5
TKM2 LR LR
comp=Z,766nm,20.0s,MS5.3
EKS2 Erkin-Say 120.32 5 PFAKE 06 54 40.0 +8.2
EKS2 LR LR
comp=Z,577nm,20.0s,MS5.2
UCH Uchtor 120.81 5 PFAKE 06 54 40.0 +7.3
UCH LR LR
comp=Z,137nm,20.0s,MS4.6
AML Almayashu 120.84 6 PFAKE 06 54 40.0 +7.2
AML LR LR
comp=Z,677nm,20.0s,MS5.3
TSUM Tsumeb 120.85 102 PFAKE 06 54 50.0 +17
TSUM LR LR
comp=Z,467nm,20.0s,MS5.1
GTA Gaotai 120.89 342 PKP PKPdf 06 54 33.4 +0.4
GTA SKS SKSdf 07 01 41.7 -1.5
GTA SKKS SKKSac 07 02 53.4 -6.2
GTA SS SS 07 12 27.7 -1.7
GTA PP PP
comp=Z,206nm,8.7s
XAN Xi'an 122.25 332 PKP PKPdf 06 54 37.3 +1.6
XAN XPKP 06 54 46.9
XAN PP PP
comp=Z,157nm,5.9s
WHN Wuhan 122.33 325 PKP PKPdf 06 54 34.8 -1.2
LZH Lanzhou 122.58 337 *e*PKP PKPdf 06 54 35.0 -1.3
LZH PP PP 06 56 14.2 +2.1
LZH SKS SKSdf 07 01 39.7 -6.8
LZH PP PP
comp=Z,323nm,8.7s
LZH Lanzhou 122.58 337 *e*PKP PKPdf 06 54 35.0 -1.3
LZH pPKP pPKPdf 06 54 49.8 +4.0
LZH sPKP 06 54 57.0
LZH PP PP 06 56 14.2 +2.1
LZH SKS SKSdf 07 01 39.7 -6.8
LZH SKKS SKKSac 07 03 00.3 -10
LZH SS SS 07 12 45.6 -5.5
LZH Lanzhou 122.58 337 *e*PKIKP PKPdf 06 54 35.0 -1.3
LZH 06 54 49.8
LZH 06 56 14.2
LZH 07 01 39.7
LZH SS SS 07 12 45.6 -5.5
STKA Stephens Creek 122.76 243 PKP PKPdf 06 54 35.9 -0.7
comp=Z,4.7nm,1.0s,baz=58,slow=5.7,SNR=3.4
CASY Casey 126.86 195 PFAKE 06 55 00.0 +17
CASY LR LR
comp=Z,830nm,21.0s,MS5.4
CD2 Chengdu 127.17 334 *e*PKP PKPdf 06 54 45.2 0.0
CD2 PP PP 06 56 42.3 -0.6
CD2 PKS 06 58 20.4
CD2 SKS SKSdf 07 01 51.9 -3.4
CD2 PP PP
comp=Z,190nm,10.6s
CD2 LR LR
comp=Z,640nm,21.6s,MS5.3
MAW Mawson 128.25 172 PKP PKPdf 06 54 45.6 -0.5
comp=Z,1.0nm,0.5s,baz=234,slow=8.7,SNR=2.5
WB2 Warramunga Arr 128.62 258 *e*P PKPdf 06 54 47.5 -0.7
WRAB Tennant Creek 128.62 258 PFAKE 06 55 00.0 +12
WRAB LR LR
comp=Z,255nm,20.0s,MS4.9
WRAB Tennant Creek 128.62 258 *i* PKIKP PKPdf 06 54 45.7 -2.5
WRA Warramunga Arr 128.63 258 PKP PKPdf 06 54 47.1 -1.1
comp=Z,6.1nm,1.0s,baz=83,slow=1.6,SNR=24
MBAR Mbarara 128.79 77 PFAKE 06 55 00.0 +11
MBAR LR LR
comp=Z,403nm,20.0s,MS5.1
DAV Davao City (W) 129.04 294 PFAKE 06 55 00.0 +11

DAV				LR	LR			
	comp=Z,358nm,19.0s,MS5.1							
ASAR	**Alice Springs**	**129.34**	**253**	PKP	PKPdf	06 54 48.5	-1.0	
	comp=Z,3.8nm,1.0s,baz=92,slow=3.0,SNR=15							
GYA	**Guiyang**	**129.63**	**329**	PDIF	Pdif	06 51 35.2	-1.9	
GYA				PKP	PKPdf	06 54 49.7	-0.3	
GYA				PP	PP	06 57 01.7	+2.4	
GYA				PKS		06 58 24.8		
GYA				SKS	SKSdf	07 01 53.2	-6.8	
GYA				SKKS	SKKSac	07 03 47.9	-7.8	
GYA				PP	PP			
	comp=Z,180nm,8.7s							
GYA				LR	LR			
	comp=N,330nm,21.1s,MS5.1							
GYA				LR	LR			
	comp=E,240nm,20.3s,MS5.1							
GYA				LR	LR			
	comp=Z,220nm,20.9s,MS4.8							
LSZ	**Lusaka**	**130.25**	**96**	PFAKE		06 55 00.0	+8.6	
LSZ				LR	LR			
	comp=Z,136nm,19.0s,MS4.7							
SMLA	**Simla**	**132.03**	**3**	*e*P	PKPdf	06 54 51.4	-3.1	
LSA	**Lhasa**	**132.32**	**347**	PFAKE		06 55 10.0	+15	
LSA				LR	LR			
	comp=Z,557nm,20.0s,MS5.3							
KMI	**Kunming**	**132.63**	**332**	PKP	PKPdf	06 54 54.8	-1.0	
KMI				PP	PP	06 57 21.9	+3.3	
KMI				SKKS	SKKSac	07 04 05.4	-8.8	
KMI				PP	PP			
	comp=Z,291nm,9.3s							
KMI				LR	LR			
	comp=Z,525nm,18.0s,MS5.3							
KMI	**Kunming**	**132.63**	**332**	PKP	PKPdf	06 54 54.8	-1.0	
KMI				pPKP	pPKPdf	06 55 10.4	+5.1	
KMI				sPKP		06 55 18.5		
KMI				PP	PP	06 57 21.9	+3.3	
KMI				SKKS	SKKSac	07 04 05.4	-8.8	
KMI				SS	SS	07 14 50.7	-5.8	
KMI				SSS		07 19 47.6		
KMI	**Kunming**	**132.63**	**332**	PKIKP	PKPdf	06 54 54.8	-1.0	
KMI						06 55 10.4		
KMI						06 57 21.9		
KMI				SS	SS	07 14 50.7	-5.8	
KMI				SSS		07 19 47.6		
SHL	**Shillong**	**136.12**	**345**	*e*P	PKPdf	06 55 00.0	-2.3	
BHJ	**Bhuj**	**138.68**	**15**	*e*P	PKPdf	06 55 06.8	-0.3	
KAPI	**Kappang**	**139.35**	**282**	PFAKE		06 55 20.0	+11	
KAPI				LR	LR			
	comp=Z,143nm,21.0s,MS4.7							
CHTO	**Chiang Mai**	**139.83**	**332**	PFAKE		06 55 20.0	+11	
CHTO				LR	LR			
	comp=Z,535nm,21.0s,MS5.3							
BHPL	**Bhopal**	**139.89**	**4**	*e*P	PKPdf	06 55 06.1	-3.2	
CM31	**Chiang Mai Arr**	**140.14**	**331**	PFAKE		06 55 20.0	+10	
CM31				LR	LR			
	comp=Z,586nm,21.0s,MS5.3							
CMAR	**Chiang Mai Arr**	**140.14**	**331**	PKhKP		06 55 03.4		
	comp=Z,0.7nm,0.3s,baz=1.4,slow=3.6,SNR=4.2							
CMAR				PKP	PKPdf	06 55 08.4	-1.4	
	comp=Z,1.6nm,0.4s,baz=348,slow=2.3,SNR=7.4							
CMAR	**Chiang Mai Arr**	**140.14**	**331**	PKIKP	PKPdf	06 55 08.4	-1.4	
MBWA	**Marble Bar**	**142.37**	**257**	PFAKE		06 55 30.0	+16	
MBWA				LR	LR			
	comp=Z,269nm,20.0s,MS5.0							
POO	**Poona**	**144.13**	**10**	*e*P	PKPdf	06 55 14.2	-2.7	
POO				AMb	AMB	06 55 15.6		
	comp=Z,18nm,1.3s							
VIS	**Vishakhapatnam**	**145.31**	**355**	*e*P	PKPbc	06 55 18.1	-0.7	
VIS				AMb	AMB	06 55 20.0		
	comp=Z,72nm,1.3s							
KAD	**Karad**	**145.38**	**10**	*e*P	PKPbc	06 55 17.8	-1.2	
KAD				AMb	AMB	06 55 20.0		
	comp=Z,93nm,1.1s							
HYB	**Hyderabad**	**145.73**	**3**	*e*P	PKPdf	06 55 18.5	-1.2	
HYB				*e*		06 55 25.5		
HYB	**Hyderabad**	**145.73**	**3**	*i*PKP	PKPdf	06 55 18.5	-1.2	
	comp=Z,200nm,1.4s							
ABPO	**Ambohimpanom**	**148.73**	**99**	*e*PKPbc	PKPbc	06 55 29.2	+0.8	
ABPO				LR	LR			
	comp=Z,352nm,20.0s,MS5.2							
KOD	**Kodaikanal**	**152.78**	**6**	*ex*	x	06 55 34.0		
MSEY	**Mahe Island**	**152.95**	**66**	*e*PKPbc	PKPbc	06 55 38.3	-0.3	
MSEY				LR	LR			
	comp=Z,388nm,20.0s,MS5.2							

*ISCJB **06** 06:41:12.1±1.0,323S±005×13085E±007,h42km±9km, mb4.9/28,MS3.7/3,Error ellipse: s-maj=12.6km s-min=7.8km az=155.7*
*BJI **06** 06:41:14.6,399S×13069E,h97km,mB5.1,mb4.7*
*IDC **06** 06:41:17.9±3.9,328S×13074E,h67km±36km, mb4.1/8, mb1 4.3/10,mb1mx4.2/17,mbtmp4.2/10,ML4.0/2,MS3.7/4, Ms1 3.7/4,ms1mx3.2/25,Error ellipse: s-maj=37.0km s-min=14.8km az=59.0*
*DJA **06** 06:41:20.5±0.0,256S×13056E,h44km,mB5.8/4, Mjma3.8/5,MLv4.3/5,Mw(mB)5.5/4,Mwp4.6/3*
*NEIC **06** 06:41:20.5±1.8,337S×13059E,h97km±17km, mb4.8/23, Error ellipse: s-maj=14.4km s-min=6.6km az=48.0*

ISC 06 06:41:16.4±1.5,331S±008×13078E±009,h61km±13km, n61,σ1°§15/57,mb4.9/28,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**		**1.85**	**269**	P		**Pn**	**06 41 47.9**	**+2.1**
SWI	**Sorong**		**2.48**	**11**	P		**Pn**	**06 41 49.3**	**-5.1**
AAI	**Ambon**		**2.61**	**262**	P		**Pn**	**06 41 55.1**	**-1.0**
LBMI	**Labuha**		**4.21**	**309**	P		**Pn**	**06 42 14.4**	**-3.7**
KDI	**Kendari**		**8.17**	**265**	P		**Pn**	**06 43 11.6**	**-0.7**
	27nm,1.1s,1µm0.1nm								
KAKA	**Kakadu**		**9.49**	**170**	*e*P		Px	06 43 18.1	
	22nm,0.8s								
BATI	**Baumata**		**9.84**	**226**	P		**Pn**	**06 43 37.4**	**+2.2**
	2.0nm,0.3s,baz=92,slow=5.8,SNR=4.8								
BATI					LR	LR		06 47 26.8	
	comp=Z,517nm,21.5s,baz=49,slow=38								
BATI	**Baumata**		**9.84**	**226**	P		Px	06 43 45.9	
	47nm,1.1s,598nm								
KAPI	**Kappang**		**11.13**	**261**	P		**Pn**	**06 43 54.9**	**+2.1**
	0.9nm,0.3s,baz=123,slow=9.8,SNR=9.9								
KAPI	**Kappang**		**11.13**	**261**	P		**Pn**	**06 43 58.8**	**+6.0**
	44nm,1.1s								
BBKI	**Banjar Baru**		**15.91**	**269**	P		**Pn**	**06 45 00.5**	**+3.9**
	96nm,1.2s								
COEN	**Coen**		**16.18**	**132**	*e*P		**Pn**	**06 44 59.4**	**-0.5**
	7.8nm,0.9s								
COEN	**Coen**		**16.18**	**132**	P		Px	06 45 15.3	
	12nm,1.2s								
WRAB	**Tennant Creek**		**16.89**	**168**	*e*P		**Pn**	**06 45 05.8**	**-3.0**
	15nm,0.8s								
WRA	**Warramunga Arr**		**16.89**	**168**	P		**Pn**	**06 45 05.2**	**-3.6**
	0.4nm,0.3s,baz=350,slow=12,SNR=20								
WRA					S		**Sn**	**06 48 06.6**	**-9.3**
	0.3nm,0.3s,baz=351,slow=23,SNR=4.0								
WB2	**Warramunga Arr**		**16.90**	**168**	*e*P		**Pn**	**06 45 05.9**	**-3.0**
WB2					*e*S		**Sn**	**06 48 06.5**	**-9.5**
KMMI	**Kalianget**		**17.15**	**257**	P		**Pn**	**06 45 16.4**	**+4.4**
	75nm,0.9s								
PMG	**Port Moresby**		**17.36**	**111**	*e*P		**Pn**	**06 45 19.1**	**+4.4**
	55nm,1.3s								
PMG	**Port Moresby**		**17.36**	**111**	P		**Pn**	**06 45 23.2**	**+8.5**
	40nm,1.3s								
STKI	**Sintang**		**19.58**	**279**	P		**Pn**	**06 45 40.1**	**-1.3**
ASAR	**Alice Springs**		**20.46**	**172**	P		**P**	**06 45 50.0**	**+1.0**
	39nm,0.7s,baz=350,slow=10,SNR=320								
ASAR					S		**S**	**06 49 38.5**	**+3.6**
	10nm,1.2s,baz=353,slow=19,SNR=8.3								
MBWA	**Marble Bar**		**20.75**	**210**	*e*P		**P**	**06 45 50.7**	**-1.5**
	14nm,1.0s								
BJII	**Banjamegara**		**21.35**	**258**	P		**P**	**06 46 06.3**	**+7.5**
GUMO	**Guam**		**21.85**	**40**	LR		LR	06 52 44.1	
	comp=Z,87nm,21.2s,baz=189,slow=31								
CTA	**Charters Tower**		**22.50**	**139**	*e*P		**P**	**06 46 11.8**	**+0.9**
	5.4nm,0.8s,mb4.0								
CTA	**Charters Tower**		**22.50**	**139**	P		**P**	**06 46 12.3**	**+1.5**
	4.4nm,0.7s,mb4.0,baz=310,slow=11,SNR=8.1								
CTAO	**Charters Tower**		**22.50**	**139**	*e*P		**P**	**06 46 12.4**	**+1.5**
	11nm,0.9s,mb4.3								
CTAO	**Charters Tower**		**22.50**	**139**	P		**P**	**06 46 19.6**	**+8.7**
	16nm,1.1s,mb4.4								
DSRI	**Dabo**		**26.33**	**276**	P		**P**	**06 46 50.0**	**+3.1**
FORT	**Forrest**		**27.44**	**185**	*e*P		**P**	**06 46 57.3**	**+0.7**
	29nm,0.7s,mb4.9								
STKA	**Stephens Creek**		**30.18**	**161**	*e*P		**P**	**06 47 22.4**	**+1.5**
	5.0nm,0.9s,mb4.2								
STKA	**Stephens Creek**		**30.18**	**161**	P		**P**	**06 47 21.9**	**+1.0**
	4.8nm,0.8s,mb4.3,baz=334,slow=9.3,SNR=7.8								
KLBR	**Kellerberrin**		**30.69**	**202**	*e*P		**P**	**06 47 24.9**	**-0.5**
	15nm,0.9s,mb4.8								
CMAR	**Chiang Mai Arr**		**38.09**	**306**	P		**P**	**06 48 29.6**	**+0.1**
	1.7nm,0.4s,mb4.2,baz=132,slow=7.4,SNR=12								
CMAR					PcP		PcP	06 50 46.1	+2.4
	1.5nm,0.7s,baz=159,slow=4.3,SNR=5.8								
CHTO	**Chiang Mai**		**38.27**	**306**	*e*P		**P**	**06 48 31.4**	**+0.3**
	6.1nm,1.0s,mb4.3								
KSRS	**Korea Array**		**40.64**	**357**	P		**P**	**06 48 52.6**	**+2.1**
	2.6nm,0.6s,mb4.1,baz=176,slow=9.7,SNR=9.7								
KSRS					LR		LR	07 03 25.2	
	comp=Z,48nm,19.7s,baz=323,slow=33								
LZH	**Lanzhou**		**46.58**	**330**	*e*P		**P**	**06 49 44.4**	**+6.1**
LZH					AMB		AMB		
	comp=Z,19nm,1.4s,mb4.8								
LZH					AMB		AMB		
	comp=Z,82nm,4.0s								
GTA	**Gaotai**		**51.17**	**329**	*e*P		**P**	**06 50 13.6**	**+0.2**
GTA					AMB		AMB		
	comp=Z,4.0nm,0.8s,mb4.4								
TAPN	**Taplejung**		**51.50**	**309**	*e*P		**P**	**06 50 15.7**	**-0.4**
	comp=Z,12nm,0.5s,mb5.0								
ODAN	**Odare**		**51.51**	**308**	*e*P		**P**	**06 50 15.8**	**-0.4**
	comp=Z,26nm,0.7s,mb5.3								
RAMN	**Ramite**		**52.17**	**308**	*e*P		**P**	**06 50 20.9**	**-0.2**
	comp=Z,49nm,0.6s,mb5.6								
JIRN	**Jiri**		**52.83**	**309**	*e*P		**P**	**06 50 25.7**	**-0.3**
	comp=Z,17nm,0.6s,mb5.1								
GUN	**Gumba**		**53.19**	**309**	*e*P		**P**	**06 50 28.3**	**-0.3**
	comp=Z,28nm,0.7s,mb5.3								
DMN	**Daman**		**53.66**	**308**	*e*P		**P**	**06 50 31.3**	**-0.7**
	comp=Z,22nm,0.7s,mb5.2								
GKN	**Gorkha**		**54.20**	**308**	*e*P		**P**	**06 50 35.3**	**-0.7**
	comp=Z,35nm,0.8s,mb5.3								
KOLN	**Koldanda**		**54.92**	**307**	*e*P		**P**	**06 50 41.0**	**-0.2**
	comp=Z,36nm,0.7s,mb5.5								
ULN	**Ulaanbaatar**		**55.04**	**341**	*e*P		**P**	**06 50 42.4**	**+0.8**
	comp=Z,6.7nm,0.9s,mb4.7								
DANN	**Dangsing**		**55.05**	**308**	*e*P		**P**	**06 50 41.8**	**-0.4**
	comp=Z,35nm,0.7s,mb5.5								
SONM	**Songino Array**		**55.23**	**340**	P		**P**	**06 50 43.5**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=160,slow=7.6,SNR=9.9								
MK31	**Makanchi Array**		**65.61**	**326**	*e*P		**P**	**06 51 54.1**	**+0.2**
MKAR	**Makanchi Array**		**65.61**	**326**	P		**P**	**06 51 54.1**	**+0.2**
	comp=Z,4.9nm,0.7s,mb4.6,baz=121,slow=8.4,SNR=47								
ZALV	**Zalesovo Beam**		**68.65**	**333**	P		**P**	**06 52 12.0**	**-1.1**
	comp=Z,1.6nm,0.6s,mb4.2,baz=102,slow=6.2,SNR=3.8								
EKS2	**Erkin-Say**		**68.75**	**318**	*e*P		**P**	**06 52 14.9**	**+1.0**
	comp=Z,2.3nm,0.7s,mb4.2								
KURK	**Kurchatov**		**69.81**	**328**	*e*P		**P**	**06 52 20.4**	**+0.1**
	comp=Z,16nm,1.0s,mb4.9								
BRVK	**Borovoye**		**75.46**	**327**	*e*P		**P**	**06 52 51.1**	**-2.7**
	comp=Z,10nm,0.9s,mb4.8								
RDF	**Al-Radifah**		**85.66**	**299**	*e*P		**P**	**06 53 49.4**	**+0.4**
	baz=299								
RDF					AMb		AMB	06 53 52.2	
	comp=Z,73nm,1.5s,mb5.7,baz=299								
MIB	**Mutribah**		**85.94**	**300**	*e*P		**P**	**06 53 50.2**	**-0.1**
	baz=300								
MIB					AMb		AMB	06 53 58.8	
	comp=Z,46nm,1.1s,mb5.6,baz=300								
NAY	**Al-Naaiem**		**85.97**	**299**	*e*P		**P**	**06 53 50.6**	**+0.2**
	baz=299								
NAY					AMb		AMB	06 53 51.7	
	comp=Z,27nm,0.7s,mb5.6,baz=299								
BRTR	**Keskin Array B**		**97.59**	**309**	LR		LR	07 43 04.2	
	comp=Z,212nm,21.9s,baz=311,slow=38								
TORD	**Torodi Ar. Bea**		**128.76**	**284**	PKP		PKPdf	07 00 19.1	+1.2
	comp=Z,1.5nm,0.6s,baz=59,slow=1.8,SNR=15								
LPAZ	**La Paz**		**153.01**	**137**	PKPbc		PKPbc	07 01 10.2	+2.2
	comp=Z,1.1nm,0.5s,baz=286,slow=4.7,SNR=8.6								

*ISCJB **06** 06:44:03.8±0.7,380N±02×1348E±0.1,h406km±13km, mb3.0/3,Error ellipse: s-maj=26.4km s-min=15.4km az=1.7*
*IDC **06** 06:44:04.9±1.6,3791N×13474E,h395km±18km,mb2.6/3, mb1 2.8/5,mb1mx2.7/23,mbtmp2.6/5,Error ellipse: s-maj=48.8km s-min=20.3km az=45.0*
*JMA **06** 06:44:05.0±0.3,3800N×13493E,h390km,M3.3*

ISC 06 06:44:04.7±0.7,381N±02×1349E±01,h398km±13km,n10, σ0°85/12,mb3.0/3,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JSD	**Sado**		**2.67**	**90**	P		**Pn**	**06 45 04.7**	**-0.3**
MJAR	**Matsushiro Arr**		**3.08**	**120**	P		**Pn**	**06 45 08.7**	**+0.3**
	0.8nm,0.3s,baz=291,slow=9.9,SNR=6.4								
JRY	**Ryogami san**		**3.83**	**122**	P		**Pn**	**06 45 16.6**	**+1.6**
JAG	**Ashikaga**		**4.01**	**113**	P		**Pn**	**06 45 17.0**	**+0.3**
JMM	**Marumori**		**4.67**	**91**	P		**Pn**	**06 45 23.3**	**+0.1**
JMM					S		**S**	**06 46 26.1**	**-0.9**
JMK	**Ichinoseki**		**5.04**	**78**	P		**Pn**	**06 45 27.4**	**+0.5**
JMK					S		**S**	**06 46 33.3**	**-0.5**
KSRS	**Korea Array**		**5.55**	**265**	P		**Pn**	**06 45 31.4**	**-0.9**
	1.0nm,0.3s,baz=82,slow=11,SNR=23								
SONM	**Songino Array**		**22.89**	**304**	P		**P**	**06 48 37.0**	**+1.7**
	0.3nm,0.4s,mb3.1,baz=105,slow=10,SNR=3.4								
MKAR	**Makanchi Array**		**39.12**	**300**	P		**P**	**06 50 54.5**	**-0.9**
	0.3nm,0.6s,mb2.8,baz=65,slow=8.1,SNR=3.7								
WRA	**Warramunga Arr**		**57.74**	**181**	P		**P**	**06 53 15.0**	**-0.7**
	0.3nm,0.5s,mb2.9,baz=360,slow=7.5,SNR=4.9								

IDC 06 06:45:22.0±1.1,5597S×2729W,h0km,mb4.1/4, mb1 4.2/4,mb1mx3.9/13,mbtmp4.1/4,Error ellipse: s-maj=48.5km s-min=29.0km az=56.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MAW	**Mawson**		**40.25**	**144**	P		P	06 53 01.1	+1.2
	0.9nm,0.4s,baz=236,slow=11,SNR=4.8								
LPAZ	**La Paz**		**50.28**	**305**	P		P	06 54 21.2	+1.1
	0.8nm,0.4s,baz=165,slow=5.5,SNR=8.6								
TORD	**Torodi Ar. Bea**		**73.01**	**30**	P		P	06 56 53.7	+0.3
	1.5nm,0.7s,baz=200,slow=6.3,SNR=19								
ASAR	**Alice Springs**		**99.08**	**163**	P		P	06 59 03.3	-1.6
	0.3nm,0.7s,baz=181,slow=3.7,SNR=4.0								
SONM	**Songino Array**		**150.78**	**86**	PKPbc		PKPbc	07 05 14.1	-1.1
	0.4nm,0.6s,baz=224,slow=4.0,SNR=3.2								

IDC 06 07:40:31.7±4.8,1758S×17504W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.7/16,mbtmp3.8/3,Error ellipse: s-maj=180.0km s-min=94.6km az=153.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**		**41.60**	**242**	P		P	07 48 22.1	+0.5
	1.7nm,0.9s,baz=76,slow=8.3,SNR=2.0								
WRA	**Warramunga Arr**		**47.84**	**259**	P		P	07 49 11.5	-0.2
	0.4nm,0.4s,baz=98,slow=7.6,SNR=23								
WRA					PcP		PcP	07 50 40.2	-0.3
	0.1nm,0.4s,baz=92,slow=3.5,SNR=3.6								
ASAR	**Alice Springs**		**47.97**	**254**	P		P	07 49 12.2	-0.3
	0.5nm,0.4s,baz=86,slow=8.1,SNR=11								

IDC 06 07:42:34.6±1.4,3029N×4187W,h0km,mb3.7/4, mb1 4.1/4,mb1mx3.6/23,mbtmp3.7/4,MS4.0/1,Ms1 4.0/1, ms1mx2.9/38,Error ellipse: s-maj=48.3km s-min=29.8km az=29.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SADO	**Sadowa**		**32.59**	**307**	LR		LR	07 59 47.9	
	comp=Z,268nm,18.8s,baz=305,slow=32								
TORD	**Torodi Ar. Bea**		**43.62**	**103**	P		P	07 50 40.8	-0.1
	0.6nm,0.8s,baz=307,slow=8.5,SNR=3.8								
LPAZ	**La Paz**		**52.77**	**212**	P		P	07 51 52.2	+0.7
	1.5nm,0.8s,baz=21,slow=9.1,SNR=5.0								
PDAR	**Pinedale Array**		**54.45**	**303**	P		P	07 52 04.0	+0.3
	1.2nm,0.8s,baz=87,slow=6.4,SNR=8.9								
NVAR	**Mina Array Bea**		**61.97**	**300**	P		P	07 52 56.6	+0.2
	0.3nm,0.7s,baz=100,slow=5.0,SNR=4.1								

IDC 06 07:48:52.6±1.1,5514S×12892W,h0km,mb4.0/5, mb1 4.2/5,mb1mx4.0/14,mbtmp4.0/5,MS3.9/1,Ms1 3.9/1, ms1mx3.0/28,Error ellipse: s-maj=38.3km s-min=29.8km az=158.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**		**32.30**	**350**	*e*LR		LR	08 03 37.5	
	277nm,29.8s,baz=173								
QSPA	**South Pole Qui**		**35.03**	**180**	P		P	07 55 46.9	+0.7
	2.3nm,0.7s,baz=85,slow=6.7,SNR=8.7								
TBI	**Tubuai**		**35.24**	**326**	*e*LR		LR	08 04 59.1	
	234nm,30.2s,baz=148								
TBI	**Tubuai**		**35.24**	**326**	*e*T			08 32 36.2	
	63nm,0.4s								
TVO	**Taravao**		**40.41**	**329**	*e*T			08 39 07.7	
	15nm,0.3s								
PPT	**Papeete**		**40.70**	**329**	*e*LR		LR	08 07 32.2	
	266nm,26.0s								
PPT	**Papeete**		**40.70**	**329**	LR		LR	08 08 25.5	
	comp=Z,178nm,20.9s,baz=150,slow=29								
VAH	**Vaihoa**		**42.38**	**333**	*e*T			08 41 37.8	
	35nm,0.2s								
PMOR	**Pomariorio Ree**		**42.67**	**332**	*e*T			08 42 01.0	
	3.5nm,0.3s								
MAW	**Mawson**		**57.26**	**185**	P		P	07 58 40.7	-0.4
	1.6nm,0.8s,baz=125,slow=12,SNR=3.7								
LPAZ	**La Paz**		**60.18**	**75**	P		P	07 59 02.7	+0.6
	2.6nm,1.0s,baz=197,slow=6.7,SNR=7.3								
ASAR	**Alice Springs**		**74.87**	**250**	P		P	08 00 34.7	-0.2
	1.1nm,0.9s,baz=142,slow=6.3,SNR=8.2								
WRA	**Warramunga Arr**		**77.63**	**253**	P		P	08 00 50.8	+0.2
	1.3nm,1.1s,baz=145,slow=5.1,SNR=5.6								
SONM	**Songino Array**		**145.60**	**281**	PKPbc		PKPbc	08 08 31.8	-0.1
	0.8nm,0.7s,baz=135,slow=3.2,SNR=6.9								

IDC 06 07:52:11.0±0.8,3026N×4202W,h0km,mb3.9/10, mb1 4.2/10,mb1mx4.0/23,mbtmp3.9/10,MS3.9/18, Ms1 3.9/18,ms1mx3.7/44,Error ellipse: s-maj=29.9km s-min=18.2km az=3.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBTS	**Babate**		**28.11**	**118**	LR		LR	08 06 24.9	
	comp=Z,376nm,20.2s,baz=33,slow=30								
PCRV	**Puerto La Cruz**		**29.04**	**231**	LR		LR	08 07 46.2	
	comp=Z,118nm,21.5s,baz=59,slow=32								
MDT	**Midelt**		**31.88**	**76**	LR		LR	08 08 18.7	
	comp=Z,256nm,21.6s,baz=358,slow=30								
ESDC	**Sonseca Array**		**32.37**	**63**	P		P	07 58 42.2	+0.1
	0.2nm,0.3s,baz=267,slow=9.8,SNR=2.4								
ESDC					LR		LR	08 08 50.9	
	comp=Z,115nm,18.0s,baz=315,slow=31								
SADO	**Sadowa**		**32.51**	**307**	LR		LR	08 08 33.3	
	comp=Z,245nm,21.8s,baz=94,slow=30								
ROSC	**El Rosal**		**39.57**	**237**	LR		LR	08 14 14.5	
	comp=Z,177nm,19.1s,baz=273,slow=33								
DBIC	**Dimbokro**		**42.03**	**116**	P		P	08 00 04.8	+0.3
	3.8nm,0.9s,baz=294,slow=9.8,SNR=3.2								
TORD	**Torodi Ar. Bea**		**43.73**	**103**	P		P	08 00 17.3	-1.0
	2.0nm,1.1s,baz=302,slow=5.0,SNR=5.8								
TORD					LR		LR	08 16 52.7	
	comp=Z,225nm,18.5s,baz=295,slow=34								
ULM	**Lac du Bonnet**		**44.60**	**312**	LR		LR	08 17 35.2	
	comp=Z,142nm,18.4s,baz=185,slow=34								
GERES	**GERESS Array B**		**45.71**	**50**	LR		LR	08 16 44.3	
	comp=Z,106nm,18.6s,baz=317,slow=32								
NOA	**NORSAR Array B**		**46.37**	**33**	LR		LR	08 15 56.6	
	comp=Z,128nm,18.1s,baz=235,slow=31								
LPAZ	**La Paz**		**52.67**	**212**	P		P	08 01 28.2	+1.1
	1.8nm,1.0s,baz=23,slow=9.0,SNR=4.6								
LPAZ					LR		LR	08 21 51.7	
	comp=Z,102nm,19.0s,baz=105,slow=34								
TXAR	**Lajitas Array**		**52.91**	**286**	P		P	08 01 28.9	-0.1
	1.2nm,0.9s,baz=96,slow=8.9,SNR=5.3								
PDAR	**Pinedale Array**		**54.37**	**303**	P		P	08 01 39.8	+0.3
	3.8nm,0.9s,baz=82,slow=8.2,SNR=24								
YKA	**Yellowknife Ar**		**55.65**	**328**	LR		LR	08 25 39.4	
	comp=Z,78nm,18.4s,baz=160,slow=36								
AKASG	**Malin Array Be**		**55.68**	**47**	P		P	08 01 50.0	+1.2
	0.6nm,0.3s,baz=269,slow=7.2,SNR=5.1								
AKASG					LR		LR	08 23 44.1	
	comp=Z,119nm,18.2s,baz=290,slow=34								
ELK	**Elko**		**58.95**	**302**	LR		LR	08 26 27.4	
	comp=Z,220nm,18.1s,baz=88,slow=35								
LPIG	**La Paz**		**60.26**	**282**	LR		LR	08 28 24.0	
	comp=Z,74nm,19.8s,baz=238,slow=36								
BRTR	**Keskin Array B**		**61.02**	**59**	LR		LR	08 28 50.5	
	comp=Z,55nm,18.1s,baz=266,slow=36								
NVAR	**Mina Array Bea**		**61.87**	**300**	P		P	08 02 32.4	+0.2
	1.4nm,0.9s,baz=74,slow=7.2,SNR=8.9								
AKTO	**A

	37nm,1.3s,mb4.5									
QSPA	**South Pole Qui**	**65.68**	**180**	P		**P**		**08 25 56.9**	**+1.6**
	18nm,1.0s,mb4.6,baz=35,slow=1.9,SNR=34									
QSPA	**South Pole Qui**	**65.68**	**180**	P		**P**		**08 25 56.9**	**+1.6**
MAW	**Mawson**	**77.28**	**200**	P		**P**		**08 27 04.0**	**+0.7**
	3.7nm,0.7s,mb3.9,baz=121,slow=8.4,SNR=8.1									
MAW	**Mawson**	**77.28**	**200**	*e*P		**P**		**08 27 03.1**	**-0.2**
	1.8nm,0.5s,mb3.8									
PTRM	**Twissleman Ran**	**82.23**	**45**	*e*P		**P**		**08 27 29.6**	**-0.2**
NSHM	**Saint Helena R**	**82.50**	**42**	*e*P		**P**		**08 27 31.0**	**-0.1**
SYO	**Syowa Base**	**82.52**	**193**	||*e*P		**P**		**08 27 28.7**	**-2.1**
ISA	**Isabella**	**83.37**	**46**	*e*P		**P**		**08 27 35.6**	**0.0**
	7.5nm,0.8s,mb4.3									
CMB	**Columbia Colle**	**83.57**	**43**	*e*P		**P**		**08 27 36.2**	**-0.3**
	7.0nm,0.9s,mb4.2									
OHCM	**Honcut**	**83.69**	**42**	*e*P		**P**		**08 27 36.9**	**-0.1**
WDC	**Whiskeytown Da**	**83.84**	**40**	*e*P		**P**		**08 27 37.8**	**0.0**
	7.5nm,1.1s,mb4.1									
YBH	**Yreka Blue Hor**	**84.48**	**39**	P		**P**		**08 27 41.0**	**+0.1**
	3.2nm,0.8s,mb3.9,baz=168,slow=2.0,SNR=8.0									
HUMO	**Hull Mountain**	**84.89**	**38**	*e*P		**P**		**08 27 43.3**	**+0.4**
	10nm,1.2s,mb4.2									
NVAR	**Mina Array Bea**	**85.12**	**44**	P		**P**		**08 27 43.8**	**-0.3**
	2.4nm,0.8s,mb3.8,baz=221,slow=7.9,SNR=18									
LDFC	**Landfair**	**85.28**	**48**	*e*P		**P**		**08 27 45.9**	**+0.9**
	5.5nm,0.4s,mb4.4									
ARUT	**Antelope Range**	**87.90**	**47**	*e*P		**P**		**08 27 57.7**	**+0.4**
PLCA	**Paso Flores**	**87.91**	**134**	P		**P**		**08 27 57.8**	**+0.3**
	2.8nm,1.0s,mb4.0,baz=266,slow=0.6,SNR=4.5									
RSW	**Rattlesnake Hi**	**89.14**	**37**	*e*P		**P**		**08 28 03.1**	**+0.2**
PMR	**Palmer**	**89.24**	**14**	*e*P		**P**		**08 28 01.6**	**-1.4**
	5.4nm,0.9s,mb4.4									
ETW	**Entiat**	**89.48**	**36**	*e*P		**P**		**08 28 04.5**	**+0.1**
BMO	**Blue Mountains**	**89.50**	**39**	*e*P		**P**		**08 28 04.2**	**-0.3**
	11nm,1.6s,mb4.4									
TMUT	**Trail Mountain**	**90.19**	**46**	*e*P		**P**		**08 28 08.6**	**+0.7**
SRU	**San Rafael**	**90.55**	**47**	*e*P		**P**		**08 28 09.7**	**+0.1**
TXAR	**Lajitas Array**	**90.70**	**58**	P		**P**		**08 28 11.2**	**+0.6**
	5.6nm,0.8s,mb4.6,baz=213,slow=6.4,SNR=30									
HWUT	**Hardware Ranch**	**91.18**	**44**	*e*P		**P**		**08 28 12.0**	**-0.4**
	2.4nm,0.7s,mb4.2									
ANMO	**Albuquerque**	**91.27**	**52**	*e*P		**P**		**08 28 12.9**	**0.0**
	4.9nm,1.3s,mb4.3									
MCMT	**McKenzie Canyo**	**92.11**	**41**	*e*P		**P**		**08 28 16.6**	**0.0**
PDAR	**Pinedale Array**	**93.05**	**44**	P		**P**		**08 28 20.4**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=203,slow=4.1,SNR=15									
SDCO	**Great Sand Dun**	**93.29**	**50**	*e*P		**P**		**08 28 22.0**	**-0.2**
	1.6nm,0.8s,mb4.1									
MKAR	**Makanchi Array**	**112.50**	**313**	PKiKP		PKiKP		08 33 38.6	-1.4
	0.8nm,0.7s,baz=61,slow=1.0,SNR=4.3									
MKAR				PKKPbc		PKKPbc		08 44 30.9	-0.7
	0.5nm,0.8s,baz=274,slow=3.3,SNR=4.2									
MKAR				PKKPab		PKKPab		08 44 40.3	+0.6
	0.7nm,0.7s,baz=298,slow=2.6,SNR=5.8									
BVAR	**Borovoye Array**	**120.82**	**319**	PKP		PKPdf		08 33 54.5	-1.2
	2.4nm,0.7s,baz=50,slow=2.3,SNR=8.8									
AKTK	**Aktyubinsk**	**128.66**	**316**	PKP		PKPdf		08 34 10.6	-0.3
AKTO	**Aktyubinsk**	**128.66**	**316**	PKP		PKPdf		08 34 10.6	-0.3
	2.2nm,0.7s,baz=139,slow=2.7,SNR=6.0									
ARCES	**ARCESS Array B**	**132.38**	**348**	PKP		PKPdf		08 34 16.2	-1.2
	4.4nm,0.8s,baz=327,slow=2.0,SNR=8.1									
ARCES	**ARCESS Array B**	**132.38**	**348**	PKP		PKPdf		08 34 16.2	-1.2
NOA	**NORSAR Array B**	**142.58**	**351**	PKhKP				08 34 30.6	
	4.0nm,1.0s,baz=16,slow=4.6,SNR=4.0									
HFS	**Hagfors**	**143.04**	**349**	PKhKP				08 34 33.3	
	8.3nm,0.4s,baz=67,slow=3.9,SNR=47									
HFS	**Hagfors**	**143.04**	**349**	PKP		PKPdf		08 34 33.3	-3.8
AKASG	**Malin Array Be**	**145.40**	**327**	PKPbc		PKPbc		08 34 40.1	-2.5
	4.0nm,0.6s,baz=47,slow=3.6,SNR=12									
AKASG				SKPbc		SKPbc		08 37 32.6	+0.4
	0.5nm,0.4s,baz=44,slow=1.4,SNR=4.9									
ASF	**Jabal al Asfar**	**146.73**	**292**	PKPbc		PKPbc		08 34 46.9	0.0
	3.0nm,0.6s,baz=2.2,slow=3.7,SNR=4.4									
BRTR	**Keskin Array B**	**147.88**	**307**	PKPbc		PKPbc		08 34 48.9	-0.9
	2.5nm,0.7s,baz=145,slow=4.0,SNR=8.7									
MMAI	**Mount Meron Ar**	**147.91**	**294**	PKPbc		PKPbc		08 34 50.4	+0.4
	7.9nm,0.6s,baz=64,slow=5.7,SNR=13									
EIL	**Elat**	**148.51**	**287**	PKPbc		PKPbc		08 34 51.5	-0.1
	5.1nm,0.7s,baz=283,slow=8.1,SNR=5.1									
EKA	**Eskdalemuir Ar**	**149.02**	**4**	PKPbc		PKPbc		08 34 50.6	-1.4
	4.6nm,0.7s,baz=350,slow=2.7,SNR=8.1									
KWP	**Kalwaria**	**149.21**	**331**	*e*PKPdf		PKPdf		08 34 49.1	+1.3
KWP				*e*PKPbc		PKPbc		08 34 51.9	-0.8
KWP	**Kalwaria**	**149.21**	**331**	||*i*P		PKPbc		08 34 52.5	-0.2
BUR08	**Bucovina Ar. S**	**149.38**	**326**	*e*PKPdf		PKPdf		08 34 48.6	+0.4
BUR08				*e*PKPbc		PKPbc		08 34 53.7	+0.5
BURAR	**Bucovina Array**	**149.39**	**326**	||*i*P		PKPbc		08 34 54.4	+1.2
KOLS	**Kolonicke sedl**	**149.91**	**330**	*e*PKP		PKPbc		08 34 53.0	-1.4
STHS	**Stebnicka Huta**	**150.01**	**332**	*e*PKP		PKPbc		08 34 54.2	-0.4
VOIR		**150.85**	**322**	||*i*P		PKPbc		08 34 56.3	-0.4
DRGR		**151.21**	**327**	||*i*P		PKPbc		08 34 56.6	-0.9
MORC	**Moravsky Berou**	**151.22**	**336**	||*i*P		PKPbc		08 34 57.2	-0.2
CLL	**Collm**	**151.34**	**343**	||*i*P		PKPbc		08 34 57.0	-0.6
CLL	**Collm**	**151.34**	**343**	||*i*PKPbc		PKPbc		08 34 57.0	-0.6
	comp=Z,18nm,0.8s									
BRG	**Berggiesshubel**	**151.47**	**341**	*i* PKP		PKPbc		08 34 57.2	-0.7
	comp=Z,10nm,0.7s									
MODS	**Modra-Piesok**	**152.46**	**335**	*e*PKP		PKPdf		08 34 52.1	-0.7
BZS	**Buzias**	**152.57**	**326**	||*i*P		PKPbc		08 34 59.7	-0.8
GERES	**GERESS Array B**	**153.33**	**340**	PKPbc		PKPbc		08 35 01.3	-0.8
	comp=Z,0.6nm,0.2s,baz=42,slow=4.2,SNR=4.6									
ESDC	**Sonseca Array**	**164.42**	**11**	PKPab		PKPab		08 36 04.4	-0.7
	comp=Z,0.2nm,0.2s,baz=350,slow=4.6,SNR=4.7									
TORD	**Torodi Ar. Bea**	**168.68**	**188**	PKP		PKPdf		08 35 09.6	-1.5
	comp=Z,2.0nm,1.0s,baz=352,slow=0.8,SNR=8.9									
TORD				PKPab		PKPab		08 36 24.1	-0.4
	comp=Z,2.9nm,0.9s,baz=184,slow=3.9,SNR=13									
MDT	**Midelt**	**170.70**	**25**	PKP		PKPdf		08 35 11.9	+0.1
	comp=Z,2.5nm,0.9s,baz=322,slow=3.0,SNR=5.1									
MDT				PKPab		PKPab		08 36 32.8	-0.4
	comp=Z,1.1nm,0.9s,baz=281,slow=4.2,SNR=3.9									

*IDC **06** 08:38:44.1±1.1, 986S×11876E, h0km, mb4.3/7, mb1 4.2/10, mb1mx4.1/18, mbtmp4.2/10, ML3.6/2, Error ellipse: s-maj=49.8km s-min=18.9km az=45.0*
*NEIC **06** 08:38:49.0±0.5, 999S×11877E, h35km, mb4.4/4, Error ellipse: s-maj=21.2km s-min=8.4km az=57.0*
*ISCJB **06** 08:38:50.3±1.0, 990S±006×11904E±005, h71km±10km, mb4.2/10, Error ellipse: s-maj=11.7km s-min=6.4km az=40.1*
*DJA **06** 08:39:11.7±0.0, 806S×12097E, h0km, mb6.1/2, mB6.4/2, Mjma3.8/4, MLv4.9/4, Mw(mB)6.1/2*
ISC 06 08:38:52.1±0.8, 1000S±007×11903E±006, h74km±9km, n31, σ0§69/30, mb4.2/10, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**3.99**	**289**	P	**Sn**	**08 40 36.4**	**0.0**
	3μm,0.4s,14nm						
BATI	**Baumata**	**4.57**	**93**	Pn	**Pn**	**08 39 59.4**	**+0.6**
	14nm,0.3s,baz=160,slow=1.6,SNR=6.1						
BATI				Sn	**Sn**	**08 40 50.2**	**-0.5**
	64nm,0.3s,baz=180,slow=20,SNR=11						
BATI	**Baumata**	**4.57**	**93**	P	**Pn**	**08 40 04.4**	**+5.6**
BATI	**Baumata**	**4.57**	**93**	S	**Sn**	**08 40 50.1**	**-0.6**
KAPI	**Kappang**	**5.00**	**8**	Pn	**Pn**	**08 40 04.8**	**+0.1**
	14nm,0.3s,baz=175,slow=7.5,SNR=45						
KAPI				Sn	**Sn**	**08 40 57.5**	**-3.8**
	40nm,0.3s,baz=30,slow=20,SNR=14						
KAPI	**Kappang**	**5.00**	**8**	P	**Pn**	**08 40 04.1**	**-0.6**
MBWA	**Marble Bar**	**11.12**	**177**	*e*Pn	**Pn**	**08 41 27.4**	**-0.9**
	6.7nm,0.3s						
MBWA				*e*Sn	**Sn**	**08 43 20.0**	**-11**
WRA	**Warramunga Arr**	**17.78**	**126**	P	**Pn**	**08 42 55.3**	**+0.6**
	0.2nm,0.3s,baz=304,slow=14,SNR=8.8						
WRA				S	**S**	**08 46 02.4**	**-13**
	0.3nm,0.3s,baz=303,slow=23,SNR=4.7						
WRAB	**Tennant Creek**	**17.78**	**126**	P	**Pn**	**08 42 55.6**	**+0.8**
	1.6nm,0.4s						
WB2	**Warramunga Arr**	**17.79**	**126**	*e*P	**Pn**	**08 42 55.5**	**+0.6**
ASAR	**Alice Springs**	**19.66**	**136**	P	**Pn**	**08 43 18.1**	**+0.9**
	0.1nm,0.3s,baz=311,slow=10,SNR=12						
ASAR				S	**S**	**08 46 50.0**	**-3.2**
	0.3nm,0.3s,baz=310,slow=24,SNR=5.3						
CMAR	**Chiang Mai Arr**	**34.53**	**325**	P	**P**	**08 45 34.0**	**+0.4**
	3.0nm,0.5s,mb4.4,baz=155,slow=6.5,SNR=8.9						
KSRS	**Korea Array**	**47.93**	**10**	P	**P**	**08 47 23.8**	**+0.6**
	1.1nm,0.5s,mb3.9,baz=196,slow=8.7,SNR=4.8						
SONM	**Songino Array**	**58.66**	**350**	P	**P**	**08 48 41.8**	**+0.2**
	1.5nm,0.6s,mb4.2,baz=165,slow=6.2,SNR=12						
MK31	**Makanchi Array**	**65.35**	**333**	*e*P	**P**	**08 49 26.4**	**-0.1**
MKAR	**Makanchi Array**	**65.35**	**333**	P	**P**	**08 49 26.6**	**+0.1**
	5.5nm,0.6s,mb4.6,baz=147,slow=7.3,SNR=52						
TKM2	**Tokmak 2**	**65.89**	**326**	*e*P	**P**	**08 49 30.2**	**+0.1**
	1.9nm,0.6s,mb4.1						
AML	**Almayashu**	**66.43**	**325**	*e*P	**P**	**08 49 34.1**	**+0.5**
	3.7nm,0.4s,mb4.6						
KURK	**Kurchatov**	**69.90**	**334**	P	**P**	**08 49 54.9**	**-0.2**
	baz=142,slow=5.5						
KURK	**Kurchatov**	**69.90**	**334**	*e*P	**P**	**08 49 54.6**	**-0.5**
	3.4nm,0.8s,mb4.2						
ZAA0	**Zalesovo Array**	**69.97**	**339**	*e*P	**P**	**08 49 54.6**	**-0.9**
ZALV	**Zalesovo Beam**	**69.97**	**339**	P	**P**	**08 49 54.8**	**-0.7**
	1.8nm,0.3s,mb4.4,baz=149,slow=6.0,SNR=9.3						
BVAR	**Borovoye Array**	**75.18**	**332**	P	**P**	**08 50 26.7**	**+0.2**
	0.7nm,0.4s,mb3.8,baz=146,slow=8.8,SNR=4.4						
AKTK	**Aktyubinsk**	**80.05**	**325**	P	**P**	**08 50 53.6**	**0.0**
AKTO	**Aktyubinsk**	**80.05**	**325**	P	**P**	**08 50 53.6**	**0.0**
	1.6nm,0.6s,mb4.1,baz=152,slow=3.2,SNR=7.0						
YKA	**Yellowknife Ar**	**115.08**	**24**	PKP	PKiKP	08 57 26.2	+1.8
	0.7nm,0.4s,baz=290,slow=1.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**118.66**	**280**	PKP	PKPdf	08 57 35.3	+2.6
	0.7nm,0.6s,baz=69,slow=1.3,SNR=5.6						
NVAR	**Mina Array Bea**	**121.62**	**51**	PKP	PKPdf	08 57 41.8	+4.0
	0.2nm,0.4s,baz=266,slow=0.7,SNR=3.7						
HLID	**Hailey**	**123.02**	**44**	*e*PKPdf	PKPdf	08 57 44.1	+3.9
TKL	**Tuckaleechee C**	**147.09**	**36**	PKPbc	PKPbc	08 58 28.5	+1.4
	2.1nm,0.6s,baz=175,slow=2.9,SNR=4.8						
TKL	**Tuckaleechee C**	**147.09**	**36**	PKPbc	PKPbc	08 58 28.5	+1.4

*ISCJB **06** 08:46:19.1±1.7, 130N±0.1×1434E±03, h194km±19km, mb3.5/6, Error ellipse: s-maj=53.3km s-min=22.7km az=7.5*
*IDC **06** 08:46:20.7±1.3, 1303N×14353E, h197km±16km, mb3.3/6, mb1 3.6/6, mb1mx3.3/20, mbtmp3.3/6, Error ellipse: s-maj=39.8km s-min=15.8km az=94.0*
ISC 06 08:46:20.6±1.6, 130N±01×1435E±03, h195km±18km, n7, σ0§58/8, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**66**	P	**Pn**	**08 46 53.9**	**+0.4**
	13nm,0.3s,baz=358,slow=18,SNR=14						
GUMO				S	**Sn**	**08 47 18.7**	**-0.3**
	45nm,0.3s,baz=158,slow=22,SNR=9.2						
WRA	**Warramunga Arr**	**33.96**	**196**	P	**P**	**08 52 45.9**	**+0.3**
	1.5nm,0.7s,mb3.7,baz=16,slow=9.3,SNR=17						
ASAR	**Alice Springs**	**37.63**	**194**	P	**P**	**08 53 17.3**	**+0.4**
	0.6nm,0.5s,mb3.4,baz=17,slow=14,SNR=15						
STKA	**Stephens Creek**	**44.66**	**182**	P	**P**	**08 54 13.2**	**-0.8**
	1.2nm,0.7s,mb3.3,baz=352,slow=7.8,SNR=3.7						
MKAR	**Makanchi Array**	**60.99**	**316**	P	**P**	**08 56 13.3**	**-0.1**
	0.3nm,0.5s,mb3.2,baz=93,slow=8.6,SNR=4.0						
ARCES	**ARCESS Array B**	**87.23**	**342**	P	**P**	**08 58 44.3**	**-0.3**
	1.9nm,0.8s,mb3.9,baz=70,slow=6.0,SNR=2.8						
NVAR	**Mina Array Bea**	**88.32**	**51**	P	**P**	**08 58 50.8**	**+0.4**
	0.5nm,0.6s,mb3.5,baz=264,slow=5.1,SNR=5.0						

*ISCJB **06** 09:07:56.4±0.5, 5974N±002×738E±005, h10km, Error ellipse: s-maj=3.6km s-min=3.3km az=25.5*
*CSEM **06** 09:07:56.8±0.1, 5967N×741E, h15km, ML3.8/6*
*NEIC **06** 09:07:57.6, 5969N×743E, h4km, ML2.5(BER), ML2.4(NAO), After BER.*
*BER **06** 09:07:57.6±2.1, 5969N×743E, h4km±7km, MD2.5, ML2.4, ML2.4(NAO)*
*NAO **06** 09:07:59.9±5.0, 5972N×779E, h3km±20km, ML2.4*
ISC 06 09:07:56.4±0.5, 5970N±003×743E±004, h8km±5km, n41, σ1§10/78, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODD1	**Odda**	**0.46**	**299**	*e*P	**Pg**	**09 08 06.1**	**+0.8**
ODD1				*e*S	**Sg**	**09 08 12.3**	**+1.0**
ODD1	**Odda**	**0.46**	**299**	*e*P	**Pg**	**09 08 06.1**	**+0.8**
ODD1				*e*S	**Sg**	**09 08 12.3**	**+1.0**
ODD1				AML	AML	09 08 14.0	
	comp=Z,364nm,0.2s						
ODD1	**Odda**	**0.46**	**299**	*e*P	**Pg**	**09 08 06.1**	**+0.8**
	SNR=95						
ODD1				*e*S	**Sg**	**09 08 12.3**	**+1.0**
	comp=Z,364nm,0.2s,SNR=95						
BLS5	**Blasjo**	**0.57**	**242**	*e*P	**Pg**	**09 08 09.2**	**+1.9**
BLS5				*e*S	**Sg**	**09 08 15.0**	**+0.4**
BLS5	**Blasjo**	**0.57**	**242**	*e*P	**Pg**	**09 08 09.2**	**+1.9**
BLS5				*e*S	**Sg**	**09 08 15.0**	**+0.4**
BLS5				AML	AML	09 08 17.4	
	comp=Z,158nm,0.4s						
BLS5	**Blasjo**	**0.57**	**242**	*e*P	**Pg**	**09 08 09.2**	**+1.9**
	SNR=94						
BLS5				*e*S	**Sg**	**09 08 15.0**	**+0.3**
	comp=Z,158nm,0.4s,SNR=94						
KONO	**Kongsberg**	**1.10**	**91**	*e*P	**Pg**	**09 08 18.2**	**+0.7**
KONO				*e*S	**Sg**	**09 08 32.8**	**+1.0**
KONO	**Kongsberg**	**1.10**	**91**	*e*P	**Pg**	**09 08 18.2**	**+0.7**
KONO				*e*S	**Sg**	**09 08 32.8**	**+1.0**
KONO				AML	AML	09 08 33.4	
	comp=Z,87nm,0.4s						
KONO	**Kongsberg**	**1.10**	**91**	*e*P	**Pg**	**09 08 18.2**	**+0.7**
	SNR=70						
KONO				*e*S	**Sg**	**09 08 32.8**	**+1.1**
	comp=Z,87nm,0.4s,SNR=70						
STAV	**Stavanger**	**1.17**	**230**	*e*S	**Sg**	**09 08 32.7**	**-1.2**
KMY	**Karmoy**	**1.22**	**247**	*e*P	**Pb**	**09 08 19.5**	**-0.1**
KMY				*e*S	**Sb**	**09 08 34.3**	**-1.1**
KMY	**Karmoy**	**1.22**	**247**	*e*P	**Pb**	**09 08 19.5**	**-0.1**
KMY				*e*S	**Sb**	**09 08 34.3**	**-1.1**
KMY				AML	AML	09 08 36.7	
	comp=Z,190nm,0.2s						
KMY	**Karmoy**	**1.22**	**247**	*e*P	**Pb**	**09 08 19.5**	**-0.1**
	SNR=70						
KMY				*e*S	**Sb**	**09 08 34.3**	**-1.1**
	comp=Z,190nm,0.2s,SNR=70						
EGD	**Espegrend**	**1.25**	**299**	*e*P	**Pn**	**09 08 19.4**	**-0.7**
EGD				*e*Sg	**Sg**	**09 08 35.9**	**-0.7**
EGD	**Espegrend**	**1.25**	**299**	*e*P	**Pn**	**09 08 19.4**	**-0.7**
EGD				*e*Sg	**Sg**	**09 08 35.9**	**-0.7**
EGD				AML	AML	09 08 38.4	
	comp=Z,93nm,0.4s						
EGD	**Espegrend**	**1.25**	**299**	*e*P	**Pn**	**09 08 19.4**	**-0.7**
	SNR=70						
EGD				*e*Sg	**Sg**	**09 08 35.9**	**-0.6**
	comp=Z,93nm,0.4s,SNR=92						
BER	**Bergen**	**1.26**	**304**	*e*P	**Pn**	**09 08 19.6**	**-0.6**
BER				*e*Sg	**Sg**	**09 08 36.7**	**-0.1**
BER	**Bergen**	**1.26**	**304**	*e*P	**Pn**	**09 08 19.6**	**-0.6**
BER				*e*Sg	**Sg**	**09 08 36.7**	**-0.1**
BER				AML	AML	09 08 38.0	
	comp=Z,85nm,0.3s						
BER	**Bergen**	**1.26**	**304**	*e*P	**Pn**	**09 08 19.6**	**-0.6**
	SNR=70						
BER				*e*Sg	**Sg**	**09 08 36.7**	**-0.1**
	comp=Z,85nm,0.3s,SNR=92						
RUND	**Rundenannen**	**1.26**	**306**	*e*P	**Pn**	**09 08 22.8**	**+2.6**
RUND				*e*S	**Sb**	**09 08 39.6**	**+2.9**
RUND	**Rundenannen**	**1.26**	**306**	*e*P	**Pn**	**09 08 22.8**	**+2.6**
RUND				*e*S	**Sb**	**09 08 39.6**	**+2.9**
RUND				AML	AML	09 08 40.4	
	comp=Z,90nm,0.2s						
RUND	**Rundenannen**	**1.26**	**306**	*e*P	**Pn**	**09 08 22.8**	**+2.6**
	SNR=70						
RUND				*e*S	**Sb**	**09 08 39.7**	**+3.0**
	comp=Z,90nm,0.2s						
SNART	**Snartemo**	**1.36**	**185**	*e*P	**Pn**	**09 08 21.1**	**-0.5**
SNART				*e*S	**Sb**	**09 08 39.5**	**-0.2**
SNART				AML	AML	09 08 40.1	
	comp=Z,170nm,0.2s						
ASK	**Askoy**	**1.37**	**306**	*e*P	**Pn**	**09 08 20.9**	**-0.9**
ASK				*e*Sg	**Sg**	**09 08 39.6**	**-0.8**
ASK	**Askoy**	**1.37**	**306**	*e*P	**Pn**	**09 08 20.9**	**-0.9**
ASK				*e*Sg	**Sg**	**09 08 39.6**	**-0.8**
ASK				AML	AML	09 08 41.7	
	comp=Z,65nm,0.2s						
ASK	**Askoy**	**1.37**	**306**	*e*P	**Pn**	**09 08 20.9**	**-0.8**
	SNR=50						
ASK				*e*Sg	**Sg**	**09 08 39.6**	**-0.8**
	comp=Z,65nm,0.2s,SNR=91						
HYA	**Hoyanger**	**1.60**	**338**	*e*P	**Pn**	**09 08 26.2**	**+1.3**
HYA				*e*Pg	**Pg**	**09 08 27.6**	**+0.5**
HYA				*e*Sg	**Sg**	**09 08 48.4**	**+0.6**
HYA	**Hoyanger**	**1.60**	**338**	*e*P	**Pn**	**09 08 26.2**	**+1.3**
HYA				*e*Pg	**Pg**	**09 08 27.6**	**+0.5**
HYA				*e*Sg	**Sg**	**09 08 48.4**	**+0.6**
HYA				AML	AML	09 08 50.4	
	comp=Z,119nm,0.3s						
HYA	**Hoyanger**	**1.60**	**338**	*e*Pg	**Pg**	**09 08 27.6**	**+0.6**
	SNR=91						
HYA				*e*Sg	**Sg**	**09 08 48.4**	**+0.6**
	comp=Z,119nm,0.3s,SNR=91						
SUE	**Sulen**	**1.91**	**317**	*e*P	**Pn**	**09 08 29.3**	**+0.2**
SUE				*e*Sg	**Sg**	**09 08 56.2**	**-1.3**
SUE	**Sulen**	**1.91**	**317**	*e*P	**Pn**	**09 08 29.3**	**+0.2**
SUE				*e*Sg	**Sg**	**09 08 56.2**	**-1.3**
SUE				AML	AML	09 08 57.7	
	comp=Z,45nm,0.3s						
SUE	**Sulen**	**1.91**	**317**	*e*P	**Pn**	**09 08 29.3**	**+0.2**
	SNR=50						
SUE				*e*Sg	**Sg**	**09 08 56.2**	**-1.3**
	comp=Z,45nm,0.3s,SNR=91						
NB2	**NORSAR Subarra**	**2.31**	**53**	Pn	**Pn**	**09 08 35.6**	**+0.9**
	baz=242,slow=16						
NB2				Pg	**Pg**	**09 08 38.7**	**-2.0**
NB2				Lg		09 09 08.9	
	baz=233,slow=37						
DOMB	**Dombas**	**2.49**	**18**	*e*Pg	**Pg**	**09 08 42.4**	**-1.6**
DOMB				*e*Sg	**Sg**	**09 09 15.4**	**-0.8**
DOMB	**Dombas**	**2.49**	**18**	*e*Pg	**Pg**	**09 08 42.4**	**-1.6**
DOMB				*e*Sg	**Sg**	**09 09 15.4**	**-0.8**
DOMB				AML	AML	09 09 16.8	
	comp=Z,80nm,0.3s						
DOMB	**Dombas**	**2.49**	**18**	*e*Pg	**Pg**	**09 08 42.4**	**-1.6**
	SNR=91						
DOMB				*e*Sg	**Sg**	**09 09 15.4**	**-0.8**
	comp=Z,80nm,0.3s,SNR=91						
MOL	**Molde**	**2.89**	**1**	*e*P	**Pn**	**09 08 43.5**	**+0.9**
HFS	**Hagfors**	**3.19**	**79**	Pn	**Pn**	**09 08 46.8**	**+0.1**
	baz=265,slow=16						
HFS				Sn	**Sn**	**09 09 21.5**	**-3.3**
	baz=270,slow=16						
HFS				Lg		09 09 34.6	
	baz=260,slow=37						
HFS	**Hagfors**	**3.19**	**79**	Pn	**Pn**	**09 08 46.8**	**+0.1**
	SNR=50						
HFS				Sn	**Sn**	**09 09 21.5**	**-3.2**
FIA0	**FINESS Array S**	**9.34**	**71**	Lg		09 12 46.1	
	baz=267,slow=28						
FIA0	**FINESS Array S**	**9.34**	**71**	Lg		09 12 46.1	
	baz=267,slow=28						

*ISCJB **06** 09:38:04.3±0.2, 2114N±002×7058E±002, h10km, mb4.9/109, MS4.6/54, Error ellipse: s-maj=3.5km s-min=2.6km az=18.3*
*IDC **06** 09:38:04.3±0.5, 2113N×7055E, h0km, mb4.6/25, mb1 4.7/25, mb1mx4.6/28, mbtmp4.6/25, MS4.4/23, Ms1 4.4/23, ms1mx4.2/35, Error ellipse: s-maj=14.3km s-min=11.9km az=18.0*
*GCMT **06** 09:38:05.8±0.2, 2104N×7049E, h12km, MW5.1/88, Moment Tensor Solution. s35,c42; s88,c145; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.22±.12; Mθθ-4.64±.10; Mφφ4.42±.11; Mrθ1.51±.32; Mrφ1.94±.10; Mθφ2.09±.33; Best double couple: Mo5.54400×10^16 NP1:φs324.00000°, δ65.00000°, λ172.00000°. NP2: φs58.00000°, δ83.00000°, λ25.00000°. Principal axes: T 5.8220, Plg23.0000°, Azm284.0000°; N -0.5610, Plg64.0000°, Azm73.0000°; P -5.2650, Plg12.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **06** 09:38:05.8±0.4, 2118N×7072E, h10km, mb5.0/41 Error ellipse: s-maj=9.4km s-

SDNR	**Sundarnagar**	**11.75**	**28**	*e*P		**Pn**	**09 40 53.6**	**-0.4**
SDNR				*ex*		x	09 43 23.0	
BIDO	**Bidbid**	**11.79**	**284**	⇓P		**Pn**	**09 40 53.2**	**-1.4**
	SNR=34							
SMDO	**Samad**	**11.80**	**281**	⇑P		**Pn**	**09 40 54.2**	**-0.5**
	SNR=27							
LGTI	**Lohaghat**	**11.98**	**45**	*ex*		x	09 40 35.4	
LGTI				*ex*		x	09 42 59.8	
PTH	**Pithoragarh**	**12.03**	**44**	*e*P		**Pn**	**09 40 58.0**	**+0.2**
PTH				*ex*		x	09 43 12.6	
THN	**Thein Dam**	**12.10**	**21**	*e*P		**Pn**	**09 40 56.8**	**-2.0**
THN				*ex*		x	09 43 19.9	
MDRS	**Chennai**	**12.23**	**130**	*ex*		x	09 40 49.2	
MDRS				*ex*		x	09 43 43.2	
DLH	**Dalhousie**	**12.28**	**22**	*ex*		x	09 41 15.0	
DLH				*ex*		x	09 44 07.0	
JOSI	**Joshimath**	**12.32**	**39**	*e*P		**Pn**	**09 41 00.8**	**-1.1**
JOSI				*ex*		x	09 43 33.2	
KLP	**Kalpa**	**12.37**	**32**	*e*P		**Pn**	**09 41 01.4**	**-1.1**
KLP				*ex*		x	09 44 15.6	
VIS	**Vishakhapatnam**	**12.47**	**104**	*e*P		**Pn**	**09 41 02.2**	**-1.7**
VIS				*e*S		**Sn**	**09 43 10.5**	**-13**
HOQ	**Hoqain**	**12.54**	**283**	⇑P		**Pn**	**09 41 05.1**	**+0.2**
	SNR=20							
BSY	**Bisya**	**12.55**	**280**	⇓P		**Pn**	**09 41 05.0**	**+0.1**
	SNR=29							
CEP	**Cherat**	**12.65**	**5**	P		**Pn**	**09 41 05.0**	**-1.3**
CHCP	**Chirah Chowk**	**12.65**	**10**	P		**Pn**	**09 41 03.7**	**-2.6**
KOD	**Kodaikanal**	**12.72**	**148**	*e*P		**Pn**	**09 41 07.0**	**-0.3**
KOD				*e*S		**Sn**	**09 43 21.1**	**-7.9**
PYUN	**Piuthan**	**13.19**	**56**	*e*P		**Pn**	**09 41 11.5**	**-2.2**
	comp=E,204nm,0.7s							
KBL	**Kabul**	**13.39**	**354**	*e*Pn		**Pn**	**09 41 14.3**	**-2.0**
	comp=E,100nm,1.0s							
KBL	**Kabul**	**13.39**	**354**	*e*P		**Pn**	**09 41 14.3**	**-2.1**
KBL					pmax	pmax		
	comp=Z,100nm,1.0s							
KOLN	**Koldanda**	**13.52**	**58**	*e*P		**Pn**	**09 41 15.6**	**-2.6**
	comp=Z,339nm,0.7s							
HATD	**Hatta, Dubai**	**13.82**	**288**	⇑P		**Pn**	**09 41 22.2**	**-0.2**
	SNR=5.8							
DANN	**Dangsing**	**13.91**	**57**	*e*P		**Pn**	**09 41 21.0**	**-2.5**
	comp=Z,158nm,0.8s							
BWNR	**Bhubaneshwar**	**14.24**	**91**	*e*P		**Pn**	**09 41 25.8**	**-2.3**
BWNR				*ex*		x	09 43 56.5	
BOK	**Bokaro**	**14.35**	**77**	*e*P		**Pn**	**09 41 27.4**	**-2.2**
GKN	**Gorkha**	**14.45**	**59**	*e*P		**Pn**	**09 41 27.0**	**-3.8**
DMN	**Daman**	**14.67**	**61**	*e*P		**Pn**	**09 41 30.4**	**-3.5**
	comp=Z,107nm,0.9s							
KKN	**Kakani**	**14.88**	**61**	*e*P		**Pn**	**09 41 33.0**	**-3.8**
	comp=Z,115nm,0.6s							
KKN	**Kakani**	**14.88**	**61**	*e*P		**Pn**	**09 41 33.0**	**-3.8**
KKN					pmax	pmax		
	comp=Z,115nm,0.6s							
PKI	**Pulchoki**	**14.90**	**62**	*e*P		**Pn**	**09 41 33.3**	**-3.8**
	comp=Z,156nm,0.8s							
PKI	**Pulchoki**	**14.90**	**62**	*e*P		**Pn**	**09 41 33.3**	**-3.8**
PKI					pmax	pmax		
	comp=Z,156nm,0.8s							
GUN	**Gumba**	**15.41**	**61**	*e*P		**Pn**	**09 41 40.6**	**-3.3**
	comp=Z,151nm,0.8s							
JIRN	**Jiri**	**15.58**	**62**	*e*P		**Pn**	**09 41 42.3**	**-3.7**
	comp=Z,46nm,0.4s							
RAMN	**Ramite**	**15.68**	**65**	*e*P		**Pn**	**09 41 43.7**	**-3.7**
	comp=Z,476nm,0.9s							
RBK	**Rabkut**	**15.91**	**260**	⇑P		**Pn**	**09 41 50.3**	**-0.1**
	SNR=44							
WHFO	**Wadi Hawf**	**16.20**	**261**	⇓P		**Pn**	**09 41 53.8**	**-0.4**
	SNR=109							
ODAN	**Odare**	**16.33**	**66**	*e*P		**Pn**	**09 41 52.8**	**-3.0**
	comp=Z,472nm,0.8s							
CAL	**Calcutta**	**16.50**	**82**	*ex*		x	09 44 24.6	
CAL				*ex*		x	09 46 12.1	
TAPN	**Taplejung**	**16.75**	**65**	*e*P		**Pn**	**09 41 57.5**	**-3.6**
	comp=Z,137nm,0.9s							
ABTO	**Aybut**	**16.79**	**260**	P		**Pn**	**09 42 01.0**	**-0.6**
	SNR=59							
KSH	**Kashi**	**18.85**	**13**	P		**Pn**	**09 42 28.7**	**+1.8**
KSH				*e*AP		pP	09 42 32.6	+3.4
KSH				*e*XP		sP	09 42 35.9	+5.4
KSH				*e*PP			09 42 45.1	
KSH				S		**Sn**	**09 45 55.5**	**-2.4**
KSH				XS		sS	09 46 00.8	-4.4
KSH				SS			09 46 19.6	
KSH				*e*PCP		PcP	09 46 56.2	+3.1
KSH				*e*SCP		ScP	09 50 29.7	+0.8
KSH				*e*PCS		PcS	09 50 31.4	+1.5
KSH				AMB		AMB		
	comp=Z,106nm,0.4s							
KSH				AMB		AMB		
	comp=Z,1μm,3.0s							
KSH				LR		LR		
	comp=N,5μm,3.5s							
KSH				LR		LR		
	comp=E,9μm,6.0s							
KSH				LR		LR		
	comp=Z,5μm,6.6s							
ABKT	**Ailbek**	**19.89**	**330**	P		**Pn**	**09 42 38.1**	**-1.3**
	comp=Z,198nm,0.9s,SNR=7.5							
VAN	**Vannovskaya**	**19.91**	**330**	P		**Pn**	**09 42 38.2**	**-1.5**
VAN				*e*S		**Sn**	**09 46 12.3**	**-11**
SHL	**Shillong**	**20.00**	**73**	*e*P		**Pn**	**09 42 43.6**	**+2.7**
SHL				*i x*		x	09 46 40.0	
LSA	**Lhasa**	**20.37**	**61**	P		**P**	**09 42 45.6**	**+2.5**
LSA				S		**S**	**09 46 17.0**	**-14**
LSA				LR		LR		
	comp=N,3μm,19.7s,MS4.8							
LSA				LR		LR		
	comp=E,3μm,18.5s,MS4.8							
LSA				LR		LR		
	comp=Z,3μm,16.0s,MS4.7							
LSA	**Lhasa**	**20.37**	**61**	*e*P		**P**	**09 42 46.0**	**+2.9**
	comp=Z,61nm,1.0s							
LSA	**Lhasa**	**20.37**	**61**	*e*P		**P**	**09 42 46.1**	**+3.0**
LSA					pmax	pmax		
	comp=Z,61nm,1.0s							
AML	**Almayashu**	**21.05**	**6**	*e*P		**P**	**09 42 50.8**	**+0.4**
	comp=Z,11nm,0.5s,mb4.4							
AML	**Almayashu**	**21.05**	**6**	P		**P**	**09 42 52.5**	**+2.1**
	SNR=32							
KZA	**Kyzart**	**21.20**	**10**	P		**P**	**09 42 53.6**	**+1.6**
	SNR=166							
UCH	**Uchtor**	**21.25**	**8**	*e*P		**P**	**09 42 55.2**	**+2.8**
	comp=Z,39nm,1.1s,mb4.7							
UCH	**Uchtor**	**21.25**	**8**	P		**P**	**09 42 56.4**	**+4.0**
	SNR=11							
ULHL	**Ulahol**	**21.54**	**11**	P		**P**	**09 42 56.8**	**+1.2**
	SNR=39							
EKS2	**Erkin-Say**	**21.59**	**6**	*e*P		**P**	**09 42 57.1**	**+1.0**
EKS2	**Erkin-Say**	**21.59**	**6**	P		**P**	**09 42 57.1**	**+1.0**
	SNR=26							
AAK	**Ala-Archa**	**21.64**	**8**	P		**P**	**09 42 58.9**	**+2.2**
	comp=Z,348nm,1.5s,mb5.6,SNR=22							
AAK	**Ala-Archa**	**21.64**	**8**	P		**P**	**09 42 58.1**	**+1.4**
	SNR=28							
KBK	**Karagaybulak**	**21.73**	**9**	P		**P**	**09 42 59.5**	**+1.9**
	SNR=42							
IMP	**Imphal**	**21.76**	**76**	*ex*		**P**	**09 43 02.0**	**+3.8**
IMP				*ex*		x	09 46 03.0	
FRU	**Bishkek**	**21.85**	**8**	*i* P		**P**	**09 43 00.0**	**+1.0**
FRU					pmax	pmax		
	comp=Z,280nm,1.8s,mb5.4							
FRU					MLR	MLR		
	comp=N,3μm,13.0s							
FRU					MLR	MLR		
	comp=Z,3μm,13.0s,MS4.8							
KK31	**Karatay Array**	**21.86**	**360**	*i* P		**P**	**09 42 58.6**	**-0.5**
KK31					pmax	pmax		
	comp=Z,104nm,1.1s,mb5.2							
QRN	**Al-Qurain**	**21.89**	**295**	*e*P		**P**	**09 42 58.8**	**-0.8**
	baz=294							
QRN					AMb	AMB	09 43 00.9	
	comp=Z,636nm,1.1s,mb6.0,baz=294							
CHMS	**Chumysh**	**22.03**	**8**	P		**P**	**09 43 03.5**	**+2.6**
	SNR=12							
TKM2	**Tokmak 2**	**22.08**	**10**	*e*P		**P**	**09 43 01.1**	**-0.3**
	comp=Z,11nm,0.5s,mb4.5							
TKM2	**Tokmak 2**	**22.08**	**10**	*e*P		**P**	**09 43 01.1**	**-0.3**
TKM2					pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5							
TKM2	**Tokmak 2**	**22.08**	**10**	P		**P**	**09 43 02.2**	**+0.8**
	SNR=23							
KBD	**Kabd**	**22.20**	**296**	*e*P		**P**	**09 43 02.0**	**-0.9**
	baz=295							
KBD					AMb	AMB	09 43 04.6	
	comp=Z,588nm,1.2s,mb5.9,baz=295							
RDF	**Al-Radifah**	**22.25**	**295**	*e*P		**P**	**09 43 03.0**	**-0.4**
	baz=295							
RDF					AMb	AMB	09 43 05.1	
	comp=Z,847nm,1.2s,mb6.0,baz=295							
USP	**Ospenovka**	**22.27**	**8**	P		**P**	**09 43 05.5**	**+2.1**
	SNR=20							
UMR	**Umm Al-Rimmam**	**22.28**	**297**	*e*P		**P**	**09 43 02.0**	**-1.8**
	baz=296							
UMR					AMb	AMB	09 43 05.3	
	comp=Z,773nm,1.3s,mb6.0,baz=296							
NAY	**Al-Naaiem**	**22.60**	**296**	*e*P		**P**	**09 43 06.0**	**-1.1**
	baz=295							
NAY					AMb	AMB	09 43 08.4	
	comp=Z,324nm,1.0s,mb5.7,baz=295							
MIB	**Mutribah**	**22.67**	**297**	*e*P		**P**	**09 43 06.7**	**-1.1**
	baz=297							
MIB					AMb	AMB	09 43 12.7	
	comp=Z,514nm,1.1s,mb5.9,baz=297							
BHD	**Baghdad**	**26.18**	**303**	*ex*		**P**	**09 43 40.0**	**-1.0**
BHD				*ex*		x	09 43 47.0	
BHD				*ex*		x	09 44 05.0	
BHD				*ex*		x	09 48 28.0	
WMQ	**Urumqi**	**26.68**	**28**	P		**P**	**09 43 48.0**	**+2.6**
WMQ				AP		pP	09 43 58.0	+10
WMQ				XP		sP	09 44 02.0	+12
WMQ				PP			09 44 33.0	
WMQ				S		**S**	**09 48 20.0**	**-0.6**
WMQ				SS			09 49 33.0	
WMQ				AMB		AMB		
	comp=Z,54nm,1.0s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,152nm,5.0s							
WMQ				LR		LR		
	comp=N,2μm,10.0s							
WMQ				LR		LR		
	comp=E,2μm,9.0s							
WMQ				LR		LR		
	comp=Z,1μm,9.0s							
CHG	**Chiang Mai**	**26.71**	**90**	⇓P		**P**	**09 43 46.2**	**+0.2**
	comp=Z,56nm,0.9s,mb5.1							
CHTO	**Chiang Mai**	**26.71**	**90**	P		**P**	**09 43 47.8**	**+1.8**
	SNR=17							
CHTO	**Chiang Mai**	**26.71**	**90**	*e*P		**P**	**09 43 47.0**	**+1.1**
	comp=Z,54nm,1.0s,mb5.0							
CHTO	**Chiang Mai**	**26.71**	**90**	*e*P		**P**	**09 43 47.0**	**+1.0**
CHTO					pmax	pmax		
	comp=Z,54nm,1.0s,mb5.0							
CMAR	**Chiang Mai Arr**	**26.77**	**91**	P		**P**	**09 43 47.5**	**+1.0**
	comp=Z,127nm,1.1s,mb5.3,baz=274,slow=8.7,SNR=135							
CMAR					LR	LR	09 56 06.6	
	comp=Z,442nm,18.2s,MS4.1,baz=111,slow=40							
CMAR	**Chiang Mai Arr**	**26.77**	**91**	⇑*e*P		**P**	**09 43 47.7**	**+1.2**
BDT	**Bhumibol Dam**	**27.07**	**93**	P		**P**	**09 43 51.0**	**+1.8**
MK31	**Makanchi Array**	**27.26**	**18**	*e*P		**P**	**09 43 51.5**	**+0.8**
MK31	**Makanchi Array**	**27.26**	**18**	*i* P		**P**	**09 43 51.9**	**+1.3**
MK31					pmax	pmax		
	comp=Z,22nm,0.9s,mb4.7							
MKAR	**Makanchi Array**	**27.26**	**18**	P		**P**	**09 43 50.1**	**-0.6**
	comp=Z,13nm,1.0s,mb4.4,baz=205,slow=8.0,SNR=30							
MKAR	**Makanchi Array**	**27.26**	**18**	⇓*e*P		**P**	**09 43 52.2**	**+1.6**
BSI	**Banda Aceh**	**28.55**	**120**	P		**P**	**09 44 05.6**	**+3.1**
	comp=Z,54nm,1.1s,mb5.2							
GNI	**Garni**	**29.04**	**316**	LR		LR	09 58 17.8	
	comp=Z,579nm,20.3s,MS4.2,baz=252,slow=42							
GNI	**Garni**	**29.04**	**316**	⇑*i* P		**P**	**09 44 08.0**	**+1.4**
GNI					pmax	pmax		
	comp=Z,57nm,1.7s							
GNI					MLR	MLR		
	comp=Z,700nm,24.0s							
MAK	**Makhachkala**	**29.07**	**324**	*e*P		**P**	**09 44 05.3**	**-1.5**
AB31	**Akbulak array**	**29.28**	**346**	P		**P**	**09 44 09.6**	**+1.0**
AB31					pmax	pmax		
	comp=Z,44nm,0.8s,mb5.2							
MSEY	**Mahe Island**	**29.67**	**212**	*e*P		**P**	**09 44 12.9**	**+0.5**
KMI	**Kunming**	**29.76**	**76**	P		**P**	**09 44 16.7**	**+3.6**
KMI				PP		PP	09 45 13.4	-6.9
KMI				S		**S**	**09 49 11.6**	**+2.0**
KMI				SS		SS	09 50 45.7	-30
KMI				AMB		AMB		
	comp=Z,14nm,0.8s,mb4.7							
KMI				AMB		AMB		
	comp=Z,266nm,5.9s							
KMI				LR		LR		
	comp=N,2μm,19.5s,MS4.7							
KMI				LR		LR		
	comp=E,898nm,23.5s,MS4.7							
KMI				LR		LR		
	comp=Z,1μm,18.4s							
KMI	**Kunming**	**29.76**	**76**	P		**P**	**09 44 16.7**	**+3.6**
	comp=Z,14nm,0.8s,mb4.7							
KMI				PP		PP	09 45 13.4	-6.9
KMI				PPP			09 45 27.3	
KMI				S		**S**	**09 49 11.6**	**+2.0**
KMI				sS		sS	09 49 16.5	+1.9
KMI				SS		SS	09 50 45.7	-30
KMI				SSS			09 51 06.4	
KMI				LR		LR		
	comp=Z,1μm,18.4s,MS4.6							
KMI	**Kunming**	**29.76**	**76**	P		**P**	**09 44 16.7**	**+3.6**
KMI							09 45 13.4	
KMI				PPP			09 45 27.3	
KMI				S		**S**	**09 49 11.6**	**+2.0**
KMI				SS		SS	09 50 45.7	-30
KMI				SSS			09 51 06.4	
KMI				pmax		pmax		
	comp=Z,14nm,0.8s,mb4.7							
KMI				MLR		MLR		
	comp=Z,1μm,18.4s,MS4.6							
KURK	**Kurchatov**	**30.15**	**10**	P		**P**	**09 44 16.4**	**+0.2**
	comp=Z,187nm,0.9s,mb5.8,SNR=12							
KURK	**Kurchatov**	**30.15**	**10**	P		**P**	**09 44 16.9**	**+0.7**
	SNR=14							
KURK	**Kurchatov**	**30.15**	**10**	P		**P**	**09 44 15.2**	**-1.1**
	baz=204,slow=8.8							
KURK	**Kurchatov**	**30.15**	**10**	*e*P		**P**	**09 44 16.4**	**+0.2**
	comp=Z,29nm,0.9s,mb5.0							
KURK	**Kurchatov**	**30.15**	**10**	*c i*P		**P**	**09 44 16.6**	**+0.4**
KURK					pmax	pmax		
	comp=Z,47nm,1.3s,mb5.1							
KURK					MLR	MLR		
	comp=Z,3μm,18.0s,MS4.9							
AKTK	**Aktyubinsk**	**30.85**	**344**	P		**P**	**09 44 23.1**	**+0.6**
AKTK				LR		LR	09 58 45.4	
AKTO	**Aktyubinsk**	**30.85**	**344**	P		**P**	**09 44 23.1**	**+0.6**
	comp=Z,21nm,0.9s,mb5.0,baz=155,slow=9.5,SNR=34							
AKTO					LR	LR	09 58 45.4	
	comp=Z,607nm,21.5s,MS4.2,baz=158,slow=40							
GTA	**Gaotai**	**30.88**	**47**	*e*P		**P**	**09 44 24.3**	**+1.4**
GTA				AP		pP	09 44 28.1	+2.1
GTA				PP		PP	09 45 28.1	-4.5
GTA				S		**S**	**09 49 28.6**	**+1.7**
GTA				XS		sS	09 49 34.6	+2.7
GTA				AMB		AMB		
	comp=Z,8.0nm,0.8s,mb4.6							
GTA				AMB		AMB		
	comp=Z,73nm,5.7s							
GTA				LR		LR		
	comp=N,2μm,19.8s,MS4.8							
GTA				LR		LR		
	comp=E,1μm,16.8s,MS4.8							
GTA				LR		LR		
	comp=Z,1μm,13.8s,MS4.8							
CD2	**Chengdu**	**31.21**	**65**	*e*P		**P**	**09 44 27.2**	**+1.2**
CD2				AP		pP	09 44 31.6	+2.6
CD2				XP		sP	09 44 34.5	+4.2
CD2				PP		PP	09 45 30.1	-6.3
CD2				PCP		PcP	09 47 21.9	+1.2
CD2				S		**S**	**09 49 31.7**	**-0.6**
CD2				PCS		PcS	09 51 04.9	0.0
CD2				SS		SS	09 51 17.2	-29
CD2				AMB		AMB		
	comp=Z,20nm,1.1s,mb4.9							
CD2				AMB		AMB		
	comp=Z,200nm,6.0s							
CD2				LR		LR		
	comp=N,3μm,20.4s,MS5.1							
CD2				LR		LR		
	comp=E,1μm,15.6s,MS5.1							
CD2				LR		LR		
	comp=Z,2μm,16.6s,MS4.8							
BVA0	**Borovoye Array**	**31.79**	**360**	*i* P		**P**	**09 44 32.1**	**+1.4**
BVA0					pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.4							
BVAR	**Borovoye Array**	**31.79**	**360**	P		**P**	**09 44 30.9**	**+0.2**
	comp=Z,22nm,1.1s,mb4.9,baz=168,slow=7.6,SNR=31							
BVAR					LR	LR	09 58 25.7	
	comp=Z,2μm,19.3s,MS4.8,baz=189,slow=38							
BVAR	**Borovoye Array**	**31.79**	**360**	P		**P**	**09 44 30.9**	**+0.2**
BVAR					LR	LR	09 58 25.7	
BRVK	**Borovoye**	**31.83**	**360**	P		**P**	**09 44 32.3**	**+1.3**
	comp=Z,104nm,1.1s,mb5.6,SNR=7.0							
BRVK	**Borovoye**	**31.83**	**360**	P		**P**	**09 44 33.0**	**+1.9**
	SNR=11							
BRVK	**Borovoye**	**31.83**	**360**	*e*P		**P**	**09 44 32.6**	**+1.6**
	comp=Z,44nm,1.2s,mb5.2							
BRVK	**Borovoye**	**31.83**	**360**	*e*P		**P**	**09 44 32.6**	**+1.6**
BRVK					pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2							
ASF	**Jabal al Asfar**	**31.94**	**297**	P		**P**	**09 44 33.0**	**+0.7**
	comp=Z,4.6nm,0.9s,mb4.3,baz=300,slow=3.5,SNR=6.2							
KIV	**Kislovodsk**	**32.45**	**321**	*e*P		**P**	**09 44 38.4**	**+1.8**
	comp=Z,24nm,0.9s,mb5.0							
KIV	**Kislovodsk**	**32.45**	**321**	*e*P		**P**	**09 44 38.1**	**+1.5**
KIV				*e*S		**S**	**09 49 49.4**	**-1.8**
KIV					pmax	pmax		
	comp=Z,31nm,1.2s,mb5.0							
LZH	**Lanzhou**	**32.55**	**56**	*e*P		**P**	**09 44 38.0**	**+0.4**
LZH				AP		pP	09 44 42.7	+2.0
LZH				PP		PP	09 45 47.5	-3.6
LZH				PCP		PcP	09 47 23.6	-0.6
LZH				*e*S		**S**	**09 49 52.1**	**-0.9**
LZH				AMB		AMB		
	comp=Z,31nm,1.5s,mb5.0							
LZH				AMB		AMB		
	comp=Z,134nm,5.3s							
LZH				LR		LR		
	comp=E,785nm,13.2s							
LZH				LR		LR		
	comp=Z,1μm,15.0s,MS4.7							
LZH	**Lanzhou**	**32.55**	**56**	*e*P		**P**	**09 44 38.0**	**+0.4**
LZH				*SP		sP	09 44 45.0	+3.1
LZH							09 45 47.5	
LZH							09 47 23.6	
LZH				*e*S		**S**	**09 49 52.1**	**-0.9**
LZH				pmax		pmax		
	comp=Z,31nm,1.5s,mb5.0							
LZH				MLR		MLR		
	comp=Z,1μm,15.0s,MS4.7							
EIL	**Elat**	**33.20**	**292**	P		**P**	**09 44 44.5**	**+1.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=16,slow=2.9,SNR=3.6							
GYA	**Guiyang**	**33.32**	**74**	⇑*i* P		**P**	**09 44 46.7**	**+2.2**
GYA				PP		PP	09 45 57.8	-2.0
GYA				PCP		PcP	09 47 29.0	+2.5
GYA				S		**S**	**09 50 06.8**	**+1.5**
GYA				SCP		ScP	09 51 12.4	+1.3
GYA				SS		SS	09 52 02.7	-26
GYA				SCS		ScS	09 55 10.8	-1.2
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb5.1							
GYA				AMB		AMB		
	comp=Z,120nm,5.1s							
GYA				LR		LR		
	comp=N,1μm,15.1s,MS4.9							
GYA				LR		LR		
	comp=E,940nm,12.3s,MS4.9							
GYA				LR		LR		
	comp=Z,1μm,11.9s,MS4.8							
ZAA0	**Zalesovo Array**	**34.47**	**15**	*e*P		**P**	**09 44 54.0**	**0.0**
ZALV	**Zalesovo Beam**	**34.47**	**15**	P		**P**	**09 44 53.7**	**-0.3**
	comp=Z,20nm,1.0s,mb5.0,baz=217,slow=7.2,SNR=39							
ZALV					LR	LR	10 00 11.3	
	comp=Z,1μm,18.4s,MS4.7,baz=213,slow=38							
ZALV	**Zalesovo Beam**	**34.47**	**15**	P		**P**	**09 44 53.8**	**-0.3**
ZALV					LR	LR	10 00 11.3	
NVS	**Novosibirsk**	**34.94**	**13**	*i* P		**P**	**09 44 57.8**	**-0.3**
NVS					pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0							
NVS					pmax	pmax		
	comp=N,36nm,1.6s							
NVS					pmax	pmax		
	comp=E,7.0nm,1.4s							
XAN	**Xi'an**	**36.07**	**61**	P		**P**	**09 45 09.3**	**+1.1**
XAN				AP		pP	09 45 16.1	+4.8
XAN				AMB		AMB		
	comp=Z,9.0nm,1.0s,mb4.7							
XAN				AMB		AMB		
	comp=Z,155nm,5.8s							
XAN				LR		LR		
	comp=N,485nm,13.5s							
XAN				LR		LR		
	comp=Z,725nm,14.7s,MS4.6							
PPI	**Padang Panjang**	**36.18**	**123**	P		**P**	**09 45 12.9**	**+3.6**
	comp=Z,30nm,1.2s,comp=Z,2μm,mb5.1							
ARU	**Arti**	**36.33**	**349**	P		**P**	**09 45 12.9**	**+2.9**
	comp=Z,228nm,1.0s,mb6.1,SNR=6.4							
ARU	**Arti**	**36.33**	**349**	*e*P		**P**	**09 45 11.8**	**+1.7**
	comp=Z,64nm,1.2s,mb5.4							
ARU	**Arti**	**36.33**	**349**	*c i*P		**P**	**09 45 11.2**	**+1.2**
ARU							09 46 28.3	
ARU							09 47 31.6	
ARU				*e*S		**S**	**09 50 49.7**	**-1.1**
ARU				SS		SS	09 53 15.4	-14
ARU				pmax		pmax		
	comp=Z,89nm,1.7s,mb5.4							
ARU				MLR		MLR		
	comp=Z,1μm,17.0s,MS4.8							
SVE	**Sverdlovsk**	**36.36**	**351**	⇑*e*P		**P**	**09 45 12.4**	**+2.1**
SVE				*e*S		**S**	**09 50 48.5**	**-2.8**
SVE				pmax		pmax		
	comp=Z,61nm,1.2s,mb5.4							
SVE				MLR		MLR		
	comp=Z,3μm,17.0s,MS5.1							
PDSI	**Padang**	**36.51**	**123**	P		**P**	**09 45 14.8**	**+2.7**
	comp=Z,46nm,1.3s,mb5.2							
BRTR	**Keskin Array B**	**36.52**	**309**	P		**P**	**09 45 11.5**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.0,baz=120,slow=7.4,SNR=6.1							
BRTR					LR	LR	10 02 09.9	
	comp=Z,439nm,18.9s,MS4.3,baz=91,slow=40							
QIZ	**Qiongzhong**	**36.84**	**86**	P		**P**	**09 45 15.9**	**+1.0**
QIZ				S		**S**	**09 50 57.2**	**-2.3**
QIZ				XS		sS	09 51 13.2	+8.6
QIZ				LR		LR		
	comp=N,1μm,20.6s							
QIZ				LR		LR		
	comp=Z,753nm,21.6s,MS4.4							
VRHR	**Novokhopersk**	**37.49**	**330**	*e*P		**P**	**09 45 21.2**	**+1.2**
VRHR					pmax	pmax		
	comp=Z,40nm,0.6s,mb5.4							
VRHR					pmax	pmax		
	comp=N,20nm,0.7s							
VRHR					pmax	pmax		

HHC S **S** **09 51 43.4 +0.2**
HHC SS SS 09 54 33.4 -5.5
HHC AMB AMB
comp=Z,12nm,0.8s,mb4.7
HHC AMB AMB
comp=Z,105nm,6.7s
HHC LR LR
comp=N,3μm,19.0s,MS5.2
HHC LR LR
comp=E,1μm,17.8s,MS5.2
HHC LR LR
comp=Z,2μm,18.4s,MS5.0
TLY Talaya 39.81 32 *e*P **P** **09 45 41.9 +2.4**
comp=Z,17nm,1.0s,mb4.7
TLY Talaya 39.81 32 *e*P **P** **09 45 41.9 +2.4**
TLY *e* 09 47 20.5
TLY *e*PPP 09 47 44.7
TLY *e*S **S** **09 51 48.0 +4.4**
TLY *e*SS SS 09 54 37.5 -2.1
TLY pmax pmax
comp=Z,18nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,615nm,16.0s,MS4.5
WHN Wuhan 40.24 67 *e*P **P** **09 45 44.0 +0.6**
WHN S **S** **09 51 51.1 +0.5**
WHN LR LR
comp=Z,2μm,12.9s,MS5.2
TIRR Tirgusor 41.78 314 ⇓*i*P **P** **09 45 55.2 -0.7**
HARR Harsova 42.18 314 ⇓*i*P **P** **09 46 00.0 +0.9**
IDI Anoyia 42.31 300 P **P** **09 45 59.9 -0.5**
comp=Z,13nm,0.8s,mb4.6,baz=71,slow=15,SNR=3.7
OBN Obninsk 42.42 332 *e*P **P** **09 46 01.9 +1.0**
comp=Z,129nm,1.4s,mb5.4
OBN Obninsk 42.42 332 ⇑*e*P **P** **09 46 01.8 +0.9**
OBN *e*S **S** **09 52 23.2 +0.8**
OBN pmax pmax
comp=Z,132nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,1μm,19.0s,MS4.8
BJI Beijing 42.96 54 P **P** **09 46 05.9 +0.3**
BJI S **S** **09 52 31.4 +0.6**
BJI AMB AMB
comp=Z,9.0nm,0.6s,mb4.7
BJI LR LR
comp=N,3μm,20.0s,MS5.2
BJI LR LR
comp=E,2μm,19.4s,MS5.2
BJI LR LR
comp=Z,1μm,21.3s,MS4.8
BJI Beijing 42.96 54 P **P** **09 46 05.9 +0.3**
comp=Z,9.0nm,0.6s,mb4.7
BJI S **S** **09 52 31.4 +0.6**
BJI SS SS 09 55 45.4 +2.9
BJI LR LR
comp=Z,1μm,21.3s,MS4.8
VRI Vrincioaia 43.38 315 ⇑⇓*i*P **P** **09 46 11.0 +2.2**
PLOR Plostina 43.42 315 ⇓*i*P **P** **09 46 10.9 +1.7**
AKASG Malin Array Be 43.75 323 P **P** **09 46 11.1 -0.6**
comp=Z,16nm,0.8s,mb4.8,baz=117,slow=6.6,SNR=31
AKASG LR LR 10 08 46.5
comp=Z,245nm,20.9s,MS4.1,baz=80,slow=42
AKASG Malin Array Be 43.75 323 *i*P **P** **09 46 11.3 -0.4**
AKASG pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 43.75 323 *e*P **P** **09 46 11.4 -0.3**
KIEV Kiev 43.75 323 *e*P **P** **09 46 11.1 -0.7**
comp=Z,25nm,0.9s,mb4.9
KIEV Kiev 43.75 323 *e*P **P** **09 46 11.1 -0.7**
KIEV pmax pmax
comp=Z,25nm,0.9s,mb4.9
MLR Muntele Rosu 43.77 314 P **P** **09 46 12.8 +0.7**
comp=Z,20nm,1.0s,mb4.8,baz=141,slow=3.6,SNR=9.8
NJ2 Nanjing 44.15 65 *e*P **P** **09 46 17.3 +2.0**
NJ2 AP pP 09 46 26.5 +8.1
NJ2 S **S** **09 52 49.0 +0.6**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 AMB AMB
comp=Z,210nm,5.8s
NJ2 LR LR
comp=N,870nm,14.5s,MS4.9
NJ2 LR LR
comp=E,670nm,17.9s,MS4.9
NJ2 LR LR
comp=Z,750nm,17.0s,MS4.7
VOIR 44.35 314 ⇑*i*P **P** **09 46 16.4 -0.3**
VTS Vitosha 44.88 310 ⇓*i*P **P** **09 46 22.5 +1.5**
BURAR Bucovina Array 44.94 317 ⇓*i*P **P** **09 46 21.8 +0.4**
BUR08 Bucovina Ar. S 44.96 317 *e*P **P** **09 46 22.1 +0.6**
STKI Sintang 45.07 112 P **P** **09 46 26.6 +3.8**
comp=Z,57nm,0.8s,mb5.5
KLMR Klimovskoe 45.22 339 *e*P **P** **09 46 23.8 +0.4**
KLMR pmax pmax
comp=Z,78nm,1.3s,mb5.4
OPO Ambohidratompo 45.68 212 P **P** **09 46 27.3 -0.2**
comp=Z,7.5nm,0.9s,mb4.6,baz=50,slow=6.7,SNR=10
SSE Sheshan 46.13 67 P **P** **09 46 31.4 +0.4**
SSE S **S** **09 53 16.0 -1.1**
SSE AMB AMB
comp=Z,31nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,167nm,5.1s
SSE LR LR
comp=E,81nm,12.9s
SSE LR LR
comp=Z,366nm,11.3s,MS4.6
SSE Sheshan 46.13 67 P **P** **09 46 31.4 +0.4**
comp=Z,31nm,0.8s,mb5.3
SSE sP sP 09 46 35.9 +0.5
SSE S **S** **09 53 16.0 -1.1**
SSE sS sS 09 53 21.3 -0.9
SSE SS SS 09 56 41.7 -0.5
SSE LR LR
comp=Z,370nm,11.3s,MS4.6
DRGR 46.31 315 ⇓*i*P **P** **09 46 32.6 +0.4**
BZS Buzias 46.72 313 ⇓*i*P **P** **09 46 37.1 +1.6**
KWP Kalwaria 47.19 319 *e*P **P** **09 46 39.4 +0.3**
KWP Kalwaria 47.19 319 *e*P **P** **09 46 39.3 +0.3**
KOLS Kolonicke sedl 47.23 318 *e*P **P** **09 46 39.6 +0.2**
STHS Stebnicka Huta 48.02 318 *e*P **P** **09 46 48.2 +2.7**
comp=Z,7.3nm,1.3s,mb4.5
STHS Stebnicka Huta 48.02 318 *e*P **P** **09 46 48.2 +2.7**
STHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BOD Bodaibo 48.22 30 *e*P **P** **09 46 47.6 +0.7**
BOD pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
VSU Vasula 48.77 331 *e*P **P** **09 46 52.9 +1.8**
VSU pmax pmax
comp=Z,39nm,1.3s,mb5.3
VSU MLR MLR
comp=Z,500nm,15.0s,MS4.6
OJC Ojcow 49.16 319 *e*P **P** **09 46 54.3 +0.1**
VYHS Vyhne 49.29 316 *e*P **P** **09 46 54.0 -1.3**
BBKI Banjar Baru 49.75 114 P **P** **09 47 01.6 +2.3**
comp=Z,84nm,1.0s,mb5.7
CUC Castrocucco 49.97 305 *e*P **P** **09 47 02.7 +2.1**
comp=Z,30nm,1.0s,mb5.3
MODS Modra-Piesok 50.27 316 *e*P **P** **09 47 01.0 -1.7**
comp=Z,6.3nm,1.3s,mb4.5
MODS Modra-Piesok 50.27 316 *e*P **P** **09 47 01.0 -1.7**
MODS pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
ZST Bratislava 50.34 316 *e*P **P** **09 47 02.5 -0.8**
comp=Z,5.9nm,0.6s,mb4.8
ZST LR LR
comp=Z,100nm,15.5s,MS3.9
CN2 Changchun 50.44 50 *e*P **P** **09 47 05.3 +1.2**
CN2 *e*S **S** **09 54 18.3 +0.6**
CN2 SS SS 09 57 49.5 -1.9
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,310nm,3.0s
CN2 LR LR
comp=N,460nm,18.0s,MS4.6
CN2 LR LR
comp=E,310nm,18.0s,MS4.6
CN2 LR LR
comp=Z,370nm,21.0s,MS4.4
CONA Conrad Observa 51.10 315 ⇓*i*P **P** **09 47 08.6 -0.4**
comp=Z,5.9nm,0.9s,mb4.5
CSNA Conrad Observa 51.10 315 ⇓*i*P **P** **09 47 08.5 -0.5**
comp=Z,5.1nm,0.9s,mb4.5
ARSA Arzberg 51.19 314 ⇑*i*P **P** **09 47 09.1 -0.7**
comp=Z,9.9nm,1.4s,mb4.6
SOKA Soboth 51.42 313 ⇓*i*P **P** **09 47 09.2 -2.2**
KSP Ksiaz 51.48 319 *e*P **P** **09 47 12.3 +0.5**
KSP LR LR
comp=Z,1μm,18.9s,MS4.9
KSRS Korea Array 51.78 58 P **P** **09 47 13.3 -1.0**
comp=Z,2.2nm,0.9s,mb4.1,baz=253,slow=7.2,SNR=6.9
KSRS LR LR 10 09 29.3
comp=Z,270nm,19.2s,MS4.3,baz=280,slow=36
APA Apatity 51.91 343 ⇓*e*P **P** **09 47 13.6 -1.2**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
APA MLR MLR
comp=Z,2μm,1.5s
GEC2 GERESS Array S 52.69 316 *e*P **P** **09 47 19.5 -1.4**
GEC2 pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
GEC2 GERESS Array S 52.69 316 *e*P **P** **09 47 19.5 -1.4**
comp=Z,9.0nm,1.1s,mb4.6
GERES GERESS Array B 52.69 316 P **P** **09 47 19.9 -1.0**
comp=Z,3.0nm,0.9s,mb4.2,baz=91,slow=5.7,SNR=15
GERES LR LR 10 11 44.1
comp=Z,234nm,20.7s,MS4.2,baz=282,slow=38
KHC Kasperske Hory 52.82 316 *d*P **P** **09 47 22.4 +0.6**
KHC Kasperske Hory 52.82 316 *e*P **P** **09 47 19.5 -2.3**
BRG Berggiesshubel 52.94 318 *e*P **P** **09 47 24.2 +1.6**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,326nm,15.6s,MS4.5
BRG MLR MLR
comp=E,160nm,16.0s,MS4.5
BRG MLR MLR
comp=Z,305nm,16.8s,MS4.4
BRG Berggiesshubel 52.94 318 *e*P **P** **09 47 22.4 -0.2**
comp=Z,11nm,1.0s,mb4.7
BRG Berggiesshubel 52.94 318 *e*P **P** **09 47 24.2 +1.5**
comp=Z,11nm,1.0s,mb4.8
BRG
comp=N,544nm,15.6s
BRG
comp=E,267nm,16.0s
BRG
comp=Z,509nm,16.8s
ABTA Abfaltersbach 53.14 313 ⇑*i*P **P** **09 47 25.1 +0.9**
comp=Z,7.7nm,0.8s,mb4.7
FBE Freiberg 53.31 318 *e*P **P** **09 47 25.2 -0.2**
comp=Z,12nm,0.9s,mb4.8
MDJ Mudanjiang 53.49 50 P **P** **09 47 27.8 +0.9**
MDJ AP pP 09 47 36.8 +6.7
MDJ XP sP 09 47 40.5 +9.2
MDJ PP PP 09 49 33.6 +6.3
MDJ S **S** **09 55 00.5 +0.9**
MDJ SCS ScS 09 57 09.8 -6.8
MDJ SS SS 09 58 34.6 -5.1
MDJ AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,52nm,4.8s
MDJ LR LR
comp=N,1μm,22.5s
MDJ LR LR
comp=Z,880nm,13.3s
CLL Collm 53.61 319 *e*P **P** **09 47 28.0 +0.4**
FETA Feichten 54.39 313 ⇑*i*P **P** **09 47 33.5 +0.1**
comp=Z,12nm,1.3s,mb4.7
GRA1 Grafenberg Arr 54.43 317 *e*P **P** **09 47 33.4 -0.2**
comp=Z,10.0nm,0.8s,mb4.8
GRA1 LR LR
comp=Z,400nm,19.4s,MS4.5
GRF Grafenberg Arr 54.43 317 *e*P **P** **09 47 33.4 -0.2**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF MLR MLR
comp=Z,400nm,19.4s,MS4.5
GRF Grafenberg Arr 54.43 317 *e*P **P** **09 47 33.4 -0.2**
comp=Z,10.0nm,0.8s,mb4.8
GRF *e*L 10 16 25.5
comp=Z,354nm,19.4s
KEST Kesra 54.99 299 P **P** **09 47 36.8 -1.1**
comp=Z,7.8nm,1.2s,mb4.6,baz=161,slow=1.3,SNR=4.5
KEST LR LR 10 12 38.5
comp=Z,81nm,19.5s,MS3.8,baz=248,slow=38
LSZ Lusaka 55.19 232 P **P** **09 47 41.1 +1.5**
comp=Z,3.9nm,1.0s,mb4.4,baz=16,slow=5.3,SNR=5.3
ARCES ARCESS Array B 55.40 342 P **P** **09 47 41.6 +1.3**
comp=Z,8.6nm,1.0s,mb4.7,baz=112,slow=7.2,SNR=7.6
ARCES LR LR 10 13 18.3
comp=Z,605nm,20.4s,MS4.7,baz=36,slow=38
KLR Kul'dur 55.49 44 *e*P **P** **09 47 39.3 -2.0**
MBDF Montbardon 56.97 310 *e*P **P** **09 47 50.5 -1.4**
comp=Z,45nm,1.6s,mb5.0
MBDF Montbardon 56.97 310 *e*P **P** **09 47 50.5 -1.4**
comp=Z,22nm,1.6s,mb5.0
MBDF Montbardon 56.97 310 *e*P **P** **09 47 50.5 -1.4**
MBDF pmax pmax
comp=Z,23nm,1.6s,mb5.0
NB2 NORSAR Subarra 56.98 330 P **P** **09 47 50.0 -1.7**
comp=Z,6.2nm,1.1s,mb4.5,baz=105,slow=6.9
NOA NORSAR Array B 56.98 330 P **P** **09 47 50.0 -1.7**
comp=Z,3.4nm,0.8s,mb4.4,baz=106,slow=7.1,SNR=6.1
NOA LR LR 10 17 07.2
comp=Z,572nm,18.4s,MS4.7,baz=90,slow=41
YAK Yakutsk 57.12 29 *e*P **P** **09 47 53.1 +0.4**
YAK pmax pmax
comp=Z,17nm,1.3s,mb4.9
YAK MLR MLR
comp=Z,800nm,17.0s,MS4.9
CABF La Chapelle 57.53 312 *e*P **P** **09 47 53.5 -2.4**
comp=Z,70nm,1.4s,mb5.2
CABF La Chapelle 57.53 312 *e*P **P** **09 47 53.5 -2.4**
comp=Z,35nm,1.4s,mb5.2
CABF La Chapelle 57.53 312 *e*P **P** **09 47 53.5 -2.4**
CABF pmax pmax
comp=Z,35nm,1.4s,mb5.2
VIVF Saint-Julien-l 58.47 310 *e*P **P** **09 48 01.0 -1.5**
comp=Z,18nm,0.9s,mb4.8
VIVF Saint-Julien-l 58.47 310 *e*P **P** **09 48 01.0 -1.5**
comp=Z,9.3nm,0.9s,mb4.8
VIVF Saint-Julien-l 58.47 310 *e*P **P** **09 48 01.0 -1.5**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
LASF Ste Croix 59.05 309 *e*P **P** **09 48 06.0 -0.5**
SMF Signal de Mont 59.08 312 *e*P **P** **09 48 05.8 -0.9**
LBMI Labuha 59.61 104 P **P** **09 48 14.7 +3.8**
comp=Z,51nm,1.0s,comp=Z,586nm,mb5.5
TAM Tamanrasset 59.93 285 *e*P **P** **09 48 12.4 -0.6**
MJAR Matsushiro Arr 60.04 59 P **P** **09 48 13.4 -0.1**
comp=Z,2.6nm,1.0s,mb4.2,baz=276,slow=7.8,SNR=4.6
MJAR LR LR 10 14 55.6
comp=Z,286nm,21.1s,MS4.4,baz=265,slow=37
TCF Toulx Ste Croi 60.20 312 *e*P **P** **09 48 13.0 -1.5**
TIXI Tiksi 60.25 18 *e*P **P** **09 48 14.3 -0.1**
TIXI Tiksi 60.25 18 *e*P **P** **09 48 14.0 -0.4**
TIXI pmax pmax
comp=Z,16nm,1.4s,mb4.9
TIXI MLR MLR
comp=Z,851nm,16.0s,MS5.0
CAF Calviac 60.32 310 *e*P **P** **09 48 14.9 -0.4**
comp=Z,33nm,1.2s,mb4.9
CAF Calviac 60.32 310 *e*P **P** **09 48 14.9 -0.4**
comp=Z,16nm,1.2s,mb4.9
CAF Calviac 60.32 310 *e*P **P** **09 48 14.9 -0.4**
CAF pmax pmax
comp=Z,16nm,1.2s,mb4.9
ETSF Etsaut 62.30 308 *e*P **P** **09 48 29.4 +0.7**
comp=Z,42nm,1.4s,mb5.1
ETSF Etsaut 62.30 308 *e*P **P** **09 48 29.4 +0.7**
comp=Z,21nm,1.4s,mb5.1
ETSF Etsaut 62.30 308 *e*P **P** **09 48 29.4 +0.7**
ETSF pmax pmax
comp=Z,21nm,1.4s,mb5.1
YSS Yuzh-Sakhalins 62.76 47 *e*P **P** **09 48 33.1 +1.4**
YSS pmax pmax
comp=Z,64nm,2.5s,mb5.3
YSS MLR MLR
comp=Z,200nm,16.0s,MS4.4
SJPF Ste Jean 62.77 309 *e*P **P** **09 48 32.5 +0.6**
comp=Z,26nm,1.3s,mb4.9
SJPF Ste Jean 62.77 309 *e*P **P** **09 48 32.5 +0.6**
comp=Z,13nm,1.3s,mb4.9
SJPF Ste Jean 62.77 309 *e*P **P** **09 48 32.5 +0.6**
SJPF pmax pmax
comp=Z,13nm,1.3s,mb4.9
ESDC Sonseca Array 65.17 305 P **P** **09 48 46.4 -1.4**
comp=Z,0.3nm,0.3s,mb3.8,baz=73,slow=6.0,SNR=6.1
TOA0 Torodi Ar. Sit 65.91 275 *e*P **P** **09 48 51.3 -1.6**
TORD Torodi Ar. Bea 65.91 275 P **P** **09 48 51.4 -1.5**
comp=Z,6.5nm,0.9s,mb4.7,baz=74,slow=4.8,SNR=34
TORD LR LR 10 21 28.9
comp=Z,228nm,18.1s,MS4.4,baz=90,slow=40
BOSA Boshof 66.08 223 P **P** **09 48 52.7 -0.9**
comp=Z,2.7nm,0.8s,mb4.3,baz=48,slow=6.9,SNR=5.6
BOSA LR LR 10 13 50.9
comp=Z,302nm,19.1s,MS4.5,baz=50,slow=32
SEY Seymchan 67.64 29 *e*P **P** **09 49 04.2 +1.1**
KAKA Kakadu 69.42 113 *e*P Px 09 49 04.6
comp=Z,21nm,0.8s
PETK Petropavlovsk- 71.63 39 LR LR 10 25 02.2
comp=Z,322nm,18.1s,MS4.6,baz=95,slow=39
PET Petropavlovsk 72.21 39 *e*P **P** **09 49 37.6 +6.2**
PET *e*S S 09 58 59.4 +5.4
PET pmax pmax
comp=Z,200nm,14.2s
PET MLR MLR
comp=Z,700nm,13.0s,MS5.1
KIC Kosan Boka 74.10 271 *e*P **P** **09 49 43.3 0.0**
comp=Z,138nm,1.5s,mb5.7
DBIC Dimbokro 74.10 271 P **P** **09 49 42.4 -0.9**
comp=Z,5.8nm,0.9s,mb4.5,baz=46,slow=5.6,SNR=5.9
DBIC LR LR 10 22 28.7
comp=Z,187nm,19.4s,MS4.4,baz=52,slow=36
DBIC Dimbokro 74.10 271 P **P** **09 49 42.4 -0.9**
DBIC LR LR 10 22 28.7
TIC Toumodi 74.26 271 *e*P **P** **09 49 44.1 -0.1**
comp=Z,48nm,1.0s,mb5.4
TIC Toumodi 74.26 271 *e*P **P** **09 49 44.1 -0.1**
TIC pmax pmax
comp=Z,48nm,1.0s,mb5.4
LIC Lamto 74.41 271 *e*P **P** **09 49 44.6 -0.5**
comp=Z,21nm,1.1s,mb4.7
LIC Lamto 74.41 271 *e*P **P** **09 49 45.0 -0.1**
comp=Z,49nm,1.6s,mb5.2
LIC Lamto 74.41 271 *e*P **P** **09 49 44.6 -0.5**
comp=Z,11nm,1.0s,mb4.7
WRA Warramunga Arr 74.52 119 P **P** **09 49 45.2 -0.4**
comp=Z,22nm,0.9s,mb5.1,baz=309,slow=5.7,SNR=110
WRA LR LR 10 25 47.8
comp=Z,97nm,18.3s,MS4.1,baz=120,slow=38
WRA Warramunga Arr 74.52 119 *i*P **P** **09 49 45.4 -0.1**
WRA pmax pmax
comp=Z,22nm,0.9s
WRAB Tennant Creek 74.52 119 P **P** **09 49 46.4 +0.9**
comp=Z,189nm,0.9s,mb6.0,SNR=9.2
WRAB Tennant Creek 74.52 119 *e*P **P** **09 49 45.3 -0.2**
comp=Z,30nm,0.9s,mb5.2
WRAB Tennant Creek 74.52 119 ⇑*i*P **P** **09 49 46.3 +0.8**
WRAB Tennant Creek 74.52 119 P **P** **09 49 46.5 +1.0**
comp=Z,43nm,1.1s,mb5.3
WB2 Warramunga Arr 74.53 119 *e*P **P** **09 49 44.7 -0.9**
ASAR Alice Springs 76.03 122 P **P** **09 49 53.9 -0.3**
comp=Z,11nm,0.9s,mb4.8,baz=304,slow=5.4,SNR=78
PMG Port Moresby 81.02 104 *e*P **P** **09 50 21.6 -0.4**
PMG pmax pmax
comp=Z,12nm,1.1s
PMG MLR MLR
comp=Z,100nm,23.0s
CTA Charters Tower 84.55 114 *e*P **P** **09 50 40.9 +0.8**
comp=Z,7.5nm,1.0s,mb4.8
CTA Charters Tower 84.55 114 LR LR 10 35 39.2
comp=Z,282nm,18.6s,MS4.7,baz=133,slow=41
CTA Charters Tower 84.55 114 *e*P **P** **09 50 40.9 +0.8**
CTA pmax pmax
comp=Z,8.0nm,1.0s
STKA Stephens Creek 85.98 126 P **P** **09 50 47.7 +0.6**
comp=Z,4.2nm,0.9s,mb4.7,baz=322,slow=5.8,SNR=4.9
STKA LR LR 10 27 58.7
comp=Z,467nm,21.6s,MS4.8,baz=229,slow=35
COLD Coldfoot 86.80 15 *e*P **P** **09 50 51.9 +1.4**
comp=Z,8.4nm,1.1s,mb4.9
IMA2 Indian Mountai 86.82 17 *e*P **P** **09 50 51.5 +0.9**
MAW Mawson 88.70 183 LR LR 10 25 57.3
comp=Z,201nm,18.1s,MS4.6,baz=63,slow=32
COLA College 89.27 15*c* *i*P **P** **09 51 03.7 +1.4**
YKA Yellowknife Ar 96.52 2 LR LR 10 40 44.7
comp=Z,139nm,20.2s,MS4.4,baz=135,slow=39
PDAR Pinedale Array 116.38 0 PKP PKPdf 09 56 52.6 +2.2
comp=Z,0.2nm,0.6s,baz=38,slow=4.6,SNR=2.3
PPT Papeete 141.98 92 *e*LR LR 10 45 04.3
comp=Z,232nm,28.8s

PRE 06 09:51:26.9±0.3, 2165S×3282E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POGA	**Pongola**	**5.80**	**191**	*e*P	Pn	09 52 54.0	+0.3
POGA				*e*S	Sn	09 53 57.4	-3.3
POGA				AML	AML	09 54 47.3	
	comp=Z,21nm,0.6s						
LBTB	**Lobatse**	**7.44**	**242**	*e*P	Pn	09 53 17.2	+1.1
LBTB				*e*S	Sn	09 54 37.5	-3.4
LBTB				AML	AML	09 55 38.2	
	comp=Z,29nm,0.6s						
BOSA	**Boshof**	**9.75**	**223**	*e*P	Pn	09 53 49.2	+1.4
BOSA				*e*S	Sn	09 55 33.3	-4.4
BOSA				AML	AML	09 56 19.2	
	comp=Z,3.9nm,0.6s						

TIF ***06*** *10:03:48.2, 4134N×4439E, h8km±2km*
CSEM ***06*** *10:03:57.9, 4171N×4475E, h19km, mb3.7, After OBN*
ISC 06 10:03:50.6±1.8, 4133N±008×4445E±009, h7km±11km, n11, σ1§13/21, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTA	**Mtatsminda**	**0.45**	**35**	P	**Pg**	**10 03 58.1**	**-1.2**
MTA				S	**Sg**	**10 04 04.5**	**-0.6**
TBLG	**Delisi**	**0.46**	**28**	*e*Pg	**Pg**	**10 03 58.1**	**-1.3**
TBLG				*e*Sg	**Sg**	**10 04 04.7**	**-0.7**
TBLG	**Delisi**	**0.46**	**28**	P	**Pg**	**10 03 58.2**	**-1.3**
TBLG				S	**Sg**	**10 04 04.8**	**-0.6**
GOR	**Gori**	**0.70**	**339**	S	**Sg**	**10 04 13.5**	**+0.2**
DGRG	**David-gareji**	**0.70**	**80**	P	**Pg**	**10 04 04.2**	**0.0**
DGRG				S	**Sg**	**10 04 15.4**	**+2.1**
ONI	**Oni**	**1.46**	**329**	P	**Pn**	**10 04 15.9**	**-1.4**
ONI				S	**Sn**	**10 04 36.5**	**0.0**
ZEI	**Tsey**	**1.50**	**344**	*e*Pg	**Pg**	**10 04 21.2**	**+1.9**
ZEI				*e*Sg	**Sg**	**10 04 43.1**	**+4.4**
LACR	**Lac**	**1.50**	**356**	*e*Pg	**Pg**	**10 04 19.7**	**+0.3**
LACR				*e*Sg	**Sg**	**10 04 40.4**	**+1.6**
KORR	**Kora**	**1.78**	**351**	*e*Pg	**Pg**	**10 04 24.3**	**-0.4**
KORR				*e*Sg	**Sg**	**10 04 48.5**	**+0.8**
ARNR	**Ardon**	**1.86**	**356**	*e*Pg	**Pg**	**10 04 24.9**	**-1.4**
ARNR				*e*Sg	**Sg**	**10 04 49.7**	**-0.8**
LSNR	**Lesken**	**2.00**	**347**	*e*Pn	**Pn**	**10 04 27.9**	**+3.2**
LSNR				*e*Sg	**Sg**	**10 04 55.0**	**+0.2**

ISCJB ***06*** *10:14:48.5±1.9, 318S±02×179.7E±0.2, h346km±18km, mb3.7/7, Error ellipse: s-maj=26.0km s-min=22.9km az=23.5*
IDC ***06*** *10:14:49.2±3.9, 3158S×17993E, h350km±36km, mb3.7/6, mb1 3.9/7, mb1mx3.6/17, mbtmp3.7/7, Error ellipse: s-maj=36.0km s-min=20.1km az=29.0*
NEIC ***06*** *10:14:49.3±1.7, 3188S×17982E, h353km±17km, mb4.0/3, Error ellipse: s-maj=21.9km s-min=18.2km az=199.0*
ISC 06 10:14:50.9±1.8, 3205S±02×1797E±02, h355km±19km, n41, σ§97/40, mb3.7/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.71**	**191**	P	**Pn**	**10 16 21.5**	**+3.1**
PUZ	**Puketiti**	**6.21**	**190**	P	**Pn**	**10 16 23.9**	**-0.2**
MWZ	**Matawai**	**6.60**	**195**	P	**Pn**	**10 16 28.8**	**+0.2**
MWZ				S	**S**	**10 17 48.4**	**+0.3**
URZ	**Urewera**	**6.63**	**198**	P	**Pn**	**10 16 31.2**	**+2.2**
	13nm,0.3s,baz=348,slow=4.1,SNR=63						
URZ				S	**S**	**10 17 48.4**	**-0.2**
	16nm,0.3s,baz=91,slow=23,SNR=13						
URZ	**Urewera**	**6.63**	**198**	P	**Pn**	**10 16 28.5**	**-0.4**
KNZ	**Kokohu**	**7.24**	**192**	P	**Pn**	**10 16 36.7**	**+0.8**
BKZ	**Black Stump Fm**	**7.65**	**199**	P	**Pn**	**10 16 40.3**	**-0.5**
WNVZ	**Wahianoa**	**8.07**	**203**	P	**Pn**	**10 16 45.9**	**+0.2**
MOVZ	**Moawhango**	**8.09**	**202**	P	**Pn**	**10 16 47.6**	**+1.6**
WAZ	**Wanganui**	**8.66**	**205**	P	**Pn**	**10 16 54.2**	**+1.5**
BFZ	**Birch Farm**	**9.14**	**197**	P	**Pn**	**10 16 59.0**	**+0.6**
MRZ	**Mangatainoka R**	**9.29**	**200**	P	**Pn**	**10 16 58.4**	**-1.8**
KIW	**Kapiti Island**	**9.68**	**202**	P	**Pn**	**10 17 04.9**	**+0.1**
MTW	**Mount Morrison**	**9.78**	**199**	P	**Pn**	**10 17 05.9**	**-0.1**

CAW	Cannon Point	9.86	201	P		Pn	10 17 05.8	-1.1	
MRW	Makara Radio	10.08	202	P		Pn	10 17 09.4	-0.2	
MSWZ	Moikau Station	10.09	199	P		Pn	10 17 09.3	-0.3	
WEL	Wellington	10.11	201	P		Pn	10 17 10.4	+0.5	
SNZO	South Karori	10.15	202	P		Pn	10 17 09.2	-1.2	
TCW	Tory Channel	10.20	204	P		Pn	10 17 10.8	-0.2	
NNZ	Nelson	10.53	207	P		Pn	10 17 13.8	-1.2	
QRZ	Quartz Range	10.55	211	P		Pn	10 17 15.1	-0.1	
THZ	Tophouse	11.18	207	P		Pn	10 17 20.9	-1.8	
KHZ	Kahutara	11.53	203	P		Pn	10 17 25.8	-0.9	
DSZ	Denniston Nort	11.62	211	P		Pn	10 17 27.8	-0.1	
LTZ	Lake Taylor	12.30	206	P		P	10 17 35.0	-0.4	
FOZ	Fox Glacier	14.01	211	P		P	10 17 54.6	+0.4	
ODZ	Otahua Downs	14.84	206	P		P	10 18 07.1	+3.8	
CTA	Charters Tower 6.7nm,0.4s,mb4.2	32.13	283	eP		P	10 20 46.8	+0.2	
CTA	Charters Tower 13nm,0.6s,mb4.3,baz=106,slow=9.9,SNR=26	32.13	283	P		P	10 20 47.7	+1.1	
STKA	Stephens Creek 2.6nm,0.4s,mb3.8	32.20	260	eP		P	10 20 48.8	+1.7	
STKA	Stephens Creek 3.5nm,0.4s,mb3.9,baz=104,slow=9.4,SNR=20	32.20	260	P		P	10 20 49.3	+2.2	
ASAR	Alice Springs 2.5nm,0.5s,mb3.7,baz=107,slow=7.4,SNR=48	41.06	270	P		P	10 22 01.2	0.0	
WB2	Warramunga Arr	42.18	275	eP		P	10 22 09.8	-0.5	
WRAB	Tennant Creek 3.3nm,0.6s,mb3.6	42.19	275	eP		P	10 22 10.0	-0.3	
WRA	Warramunga Arr 2.9nm,0.3s,mb3.9,baz=112,slow=8.0,SNR=77	42.19	275	P		P	10 22 09.9	-0.4	
QSPA	South Pole Qui 1.1nm,0.6s,mb3.4,baz=47,slow=2.4,SNR=6.2	58.16	180	P		P	10 24 09.9	+1.8	
NVAR	Mina Array Bea 0.3nm,0.6s,mb3.4,baz=212,slow=8.1,SNR=3.8	90.74	44	P		P	10 27 13.1	-1.1	
KURK	Kurchatov baz=118,slow=1.6	120.66	313	PKP		PKPdf	10 32 57.8	-2.7	
NOA	NORSAR Array B 1.4nm,0.8s,baz=73,slow=4.4,SNR=3.3	149.93	349	PKPbc		PKPdf	10 33 55.7	+2.1	
NOA	NORSAR Array B	149.93	349	PKPbc		PKPdf	10 33 55.7	+2.1	

*TEH **06** 10:37:21.0,3182N×5025E,h2km,ML3.5*
*IDC **06** 10:38:20.4±2.6,3184N×5022E,h0km,mb3.8/6,mb1 3.9/8, mb1mx3.6/25,mbtmp3.8/8,ML3.8/2,Error ellipse: s-maj=58.3km s-min=23.4km az=154.0*
*ISCJB **06** 10:38:23.3±0.3,3189N±003×5028E±004,h10km,mb3.7/6, Error ellipse: s-maj=5.5km s-min=3.8km az=141.3*
*THR **06** 10:38:23.0±0.8,3177N×5026E,h33km±6km,ML3.3*
*CSEM **06** 10:38:24.0±0.1,3187N×5034E,h16km,ML3.5,Error ellipse: s-maj=2.5km s-min=1.4km az=135.0*

ISC 06 10:38:24.4±0.3,3190N±003×5028E±003,h10km,n58, σ1°29/66,mb3.7/6,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
IPIR	Pirpir	0.94	34	eSg		Sg	10 38 56.3	+1.6
IPIR	Pirpir	0.94	34	ePg		Pg	10 38 39.7	-2.8
IPIR				eSg		Sg	10 38 56.3	+1.6
IPIR				e			10 39 01.4	
SHGR	Shooshtar-Gavs	1.27	280	ePg		Pg	10 38 46.7	-2.1
IGAR	Gharneh	1.58	71	ePn		Pn	10 38 53.4	+1.0
IGAR				eSg		Sg	10 39 13.5	-1.7
IGAR	Gharneh	1.58	71	ePn		Pn	10 38 53.4	+1.0
IGAR				eSg		Sg	10 39 13.5	-1.7
IGAR				e			10 39 22.0	
IKLH	Kolahrood	1.79	38	ePn		Pn	10 38 55.7	+0.3
IKLH				e			10 39 00.6	
IKLH				eSn		Sn	10 39 21.0	+2.8
IZEF	Zefreh	2.00	60	ePn		Pn	10 38 59.0	+0.8
IZEF				e			10 39 03.9	
NASN	Na'in	2.32	67	ePg		Pg	10 39 05.2	-3.7
NASN				eSg		Sg	10 39 36.8	-2.3
ASAO	Ashtian	2.65	356	ePn		Pn	10 39 07.3	+0.2
ASAO				eSg		Sg	10 39 48.0	-1.5
ASAO				AML		AML	10 39 55.5	
	comp=E,105nm,0.5s							
ASAO				AML		AML	10 39 56.9	
	comp=N,122nm,0.6s							
ASAO	Ashtian SNR=54	2.65	356	ePn		Pn	10 39 07.3	+0.2
ASAO				eSg		Sg	10 39 48.0	-1.5
	SNR=94							
ISAD	Sadrabad	2.90	89	ePn		Pn	10 39 11.1	+0.5
ISAD	Sadrabad	2.90	89	ePn		Pn	10 39 11.1	+0.5
ISAD				e			10 40 03.5	
ISFB	Sefidab	2.95	33	ePn		Pn	10 39 12.4	+1.1
ISFB	Sefidab	2.95	33	ePn		Pn	10 39 12.4	+1.1
ISFB				e			10 39 18.6	
IPAR	Pars	3.15	130	ePn		Pn	10 39 13.6	-0.4
IPAR	Pars	3.15	130	ePn		Pn	10 39 13.6	-0.4
IPAR				e			10 40 31.8	
UMR	Umm Al-Rimmam baz=225	3.21	224	eP		Pn	10 39 15.3	+0.4
UMR				AML		AML	10 39 57.1	
	comp=Z,130nm,0.4s,baz=225							
MIB	Mutribah	3.28	231	eP		Pn	10 39 16.5	+0.7
MIB	Mutribah baz=232	3.28	231	eP		Pn	10 39 16.6	+0.8
MIB				AML		AML	10 39 59.2	
	comp=Z,100nm,0.5s,baz=232							
IVRN	Varamin	3.32	21	ePn		Pn	10 39 17.4	+1.1
IVRN	Varamin	3.32	21	ePn		Pn	10 39 17.4	+1.1
IVRN				ePn		Pn	10 39 18.3	+2.0
IVRN				e			10 39 30.6	
IVRN				e			10 40 21.7	
ISRV	Sarvestan	3.50	135	ePn		Pn	10 39 18.4	-0.5
ISRV				e			10 40 40.8	
IRAZ	Razeghan	3.51	355	ePn		Pn	10 39 19.8	+0.9
IRAZ	Razeghan	3.51	355	ePn		Pn	10 39 19.8	+0.9
IRAZ				e			10 40 24.6	
KBD	Kabd baz=221	3.51	220	eP		Pn	10 39 20.1	+1.0
KBD				AML		AML	10 40 06.6	
	comp=Z,77nm,0.4s,baz=221							
ICHK	Chekchek	3.52	83	ePn		Pn	10 39 19.5	+0.3
ICHK	Chekchek	3.52	83	ePn		Pn	10 39 19.5	+0.3
ICHK				e			10 40 32.6	
NAY	Al-Naaiem baz=226	3.72	225	eP		Pn	10 39 22.6	+0.7
NAY				AML		AML	10 40 07.0	
	comp=Z,27nm,0.5s,baz=226							
IMEH	Mehriz	3.73	97	ePn		Pn	10 39 22.1	0.0
IMEH	Mehriz	3.73	97	ePn		Pn	10 39 22.1	0.0
IMEH				e			10 39 46.0	
QRN	Al-Qurain baz=214	3.75	214	eP		Pn	10 39 22.1	-0.2
RDF	Al-Radifah	3.79	219	eP		Pn	10 39 23.2	+0.4
IVIS	Veis	3.89	313	ePn		Pn	10 39 24.4	+0.2
IVIS				e			10 39 48.4	
IGHG	Ghaleghazi	3.94	309	ePn		Pn	10 39 25.2	+0.3
IGHG	Ghaleghazi	3.94	309	ePn		Pn	10 39 25.2	+0.3
IGHG				e			10 40 49.1	
IDMV	Damavand	3.95	21	ePn		Pn	10 39 26.2	+1.2
IDMV	Damavand	3.95	21	ePn		Pn	10 39 26.2	+1.2
IDMV				e			10 40 43.5	
DAMV	Damavand	3.98	20	ePn		Pn	10 39 26.5	+1.1
SNGE	Sanandaj	4.01	323	ePn		Pn	10 39 25.7	-0.2
SNGE				AML		AML	10 40 45.5	
	comp=N,35nm,0.5s							
ILAS	Lasjerd	4.13	32	ePn		Pn	10 39 28.5	+1.0
ILAS	Lasjerd	4.13	32	ePn		Pn	10 39 28.5	+1.0
ILAS				e			10 39 47.7	
IFIR	Firoozkooh	4.26	28	ePn		Pn	10 39 30.2	+0.9
IFIR	Firoozkooh	4.26	28	ePn		Pn	10 39 30.2	+0.9
IBAF	Bafgh	4.52	93	ePn		Pn	10 39 32.7	-0.1
IBAF	Bafgh	4.52	93	ePn		Pn	10 39 32.7	-0.1
IBAF				e			10 39 36.7	
ISHM	Shahmirzad	4.63	32	ePn		Pn	10 39 35.4	+1.0
ISHM	Shahmirzad	4.63	32	ePn		Pn	10 39 35.4	+1.0
ISHM				e			10 40 00.0	
IANJ	Anjilo	4.67	39	ePn		Pn	10 39 35.4	+0.4
IANJ				e			10 39 56.1	
ASF	Jabal al Asfar comp=N,0.9nm,0.3s,baz=112,slow=19,SNR=3.7	11.36	275	Pn		Pn	10 41 03.7	-3.0
BRTR	Keskin Array B comp=N,0.1nm,0.3s,baz=130,slow=13,SNR=5.9	15.58	305	Pn		Pn	10 42 07.0	+3.0
AKTO	Aktyubinsk comp=N,0.2nm,0.3s,baz=193,slow=13,SNR=4.0	19.39	15	P		Pn	10 42 49.5	-2.0
IDI	Anoyia comp=N,4.9nm,0.6s,mb4.0,baz=79,slow=16,SNR=2.9	21.40	286	P		P	10 43 11.2	-1.0
BVAR	Borovoye Array comp=N,0.6nm,0.4s,mb3.4,baz=201,slow=7.7,SNR=2.8	25.64	29	P		P	10 43 52.6	-1.3
MKAR	Makanchi Array	28.64	49	P		P	10 44 19.4	-1.6
	comp=N,0.3nm,0.6s,mb3.2,baz=240,slow=8.0,SNR=2.6							
NB2	NORSAR Subarra comp=Z,1.3nm,0.6s,mb3.8,baz=123,slow=8.6	38.66	331	P		P	10 45 45.0	-2.8
NOA	NORSAR Array B comp=Z,1.6nm,0.6s,mb3.9,baz=123,slow=8.4,SNR=4.3	38.66	331	P		P	10 45 44.7	-3.1
ARCES	ARCESS Array B comp=Z,2.6nm,0.9s,mb4.0,baz=144,slow=7.7,SNR=5.2	40.19	347	P		P	10 45 57.7	-2.7
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.7s,mb3.5,baz=50,slow=7.8,SNR=3.9	48.16	259	P		P	10 47 01.6	-3.4

IDC 06 10:45:54.0±2.5,501N×9379E,h0km,mb3.6/4,mb1 3.8/5, mb1mx3.6/21,mbtmp3.6/5,ML4.4/1,Error ellipse: s-maj=103.8km s-min=21.5km az=59.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.6nm,0.3s,baz=210,slow=14,SNR=3.6	14.28	20	Pn		Pn	10 49 17.8	+0.2
MKAR	Makanchi Array 0.7nm,0.6s,baz=170,slow=7.7,SNR=8.2	42.80	348	P		P	10 53 52.8	-0.7
WRA	Warramunga Arr 0.4nm,0.5s,baz=297,slow=7.8,SNR=11	46.95	123	P		P	10 54 26.5	-0.4
KURK	Kurchatov baz=172,slow=7.0	47.29	347	P		P	10 54 29.3	+0.1
ASAR	Alice Springs 0.2nm,0.4s,baz=296,slow=7.6,SNR=4.5	48.40	128	P		P	10 54 38.7	+0.5
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=191,slow=6.8,SNR=3.1	49.33	353	P		P	10 54 44.6	-0.2

*IDC **06** 10:50:21.7±4.4,3400S×17903E,h258km±32km,mb4.0/6, mb1 4.0/7,mb1mx3.7/16,mbtmp4.0/7,Error ellipse: s-maj=50.1km s-min=18.6km az=44.0*
*NEIC **06** 10:50:27.7±1.7,3518S×17925E,h349km±8km,mb3.9/3, Error ellipse: s-maj=33.2km s-min=14.9km az=87.0*

ISC 06 10:50:28.6±1.6,3525±01×1791E±03,h344km±9km,n64, σ1°10/64,mb4.0/8,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.45	195	P		Pn	10 51 21.8	-0.9
MXZ				S		S	10 52 05.2	-0.9
PUZ	Puketiti	2.95	193	P		Pn	10 51 26.8	-0.2
PUZ				S		S	10 52 08.2	-5.7
MWZ	Matawai	3.38	201	P		Pn	10 51 31.2	+0.3
URZ	Urewera 11nm,0.3s,baz=302,slow=2.5,SNR=208	3.45	207	P		Pn	10 51 31.1	-0.5
URZ				S		S	10 52 20.3	-2.1
	104nm,0.3s,baz=241,slow=23,SNR=34							
URZ	Urewera	3.45	207	P		Pn	10 51 31.1	-0.5
KNZ	Kokohu	3.98	196	P		Pn	10 51 37.8	+0.8
BKZ	Black Stump Fm	4.48	207	P		Pn	10 51 42.6	+0.5
HIZ	Hauiti	4.75	224	P		Pn	10 51 46.6	+1.5
NGZ	Ngauruhoe	4.86	214	P		Pn	10 51 47.2	+1.0
TUVZ	Tukino	4.91	213	P		Pn	10 51 47.4	+0.6
FWVZ	Far West T-bar	4.94	214	P		Pn	10 51 47.6	+0.4
MOVZ	Moawhango	4.98	211	P		Pn	10 51 47.1	-0.5
WNVZ	Wahianoa	4.98	213	P		Pn	10 51 47.7	+0.1
VRZ	Vera Road	5.23	220	P		Pn	10 51 51.5	+1.1
TSZ	Takapari Road	5.46	206	P		Pn	10 51 53.7	+0.8
RAEZ	Rainy Point	5.54	221	P		Pn	10 51 56.1	+2.2
WAZ	Wanganui	5.60	214	P		Pn	10 51 55.0	+0.4
NEZ	North Egmont	5.70	223	P		Pn	10 51 57.8	+2.2
PKE	Pukeiti	5.71	224	P		Pn	10 51 58.2	+2.5
NWEZ	Newall Road	5.83	224	P		Pn	10 51 59.4	+2.3
BFZ	Birch Farm	5.92	201	P		Pn	10 51 59.5	+1.3
MRZ	Mangatainoka R	6.12	206	P		Pn	10 52 00.0	-0.5
KIW	Kapiti Island	6.55	209	P		Pn	10 52 05.0	-0.4
MTW	Mount Morrison	6.59	204	P		Pn	10 52 06.0	+0.1
CAW	Cannon Point	6.70	207	P		Pn	10 52 06.9	-0.3
MSWZ	Moikau Station	6.91	205	P		Pn	10 52 09.7	+0.1
MRW	Makara Radio	6.95	209	P		Pn	10 52 09.5	-0.6
WEL	Wellington	6.97	208	P		Pn	10 52 10.1	-0.2
SNZO	South Karori	7.01	208	P		Pn	10 52 10.3	-0.5
BHW	Baring Head	7.04	207	P		Pn	10 52 10.9	-0.2
TCW	Tory Channel	7.10	211	P		Pn	10 52 11.1	-0.8
NNZ	Nelson	7.51	215	P		Pn	10 52 15.3	-1.4
QRZ	Quartz Range	7.64	221	P		Pn	10 52 16.6	-1.7
BSWZ	Blackbirch Sta	7.69	211	P		Pn	10 52 18.8	0.0
THZ	Tophouse	8.16	215	P		Pn	10 52 23.6	-0.8
KHZ	Kahutara	8.41	209	P		Pn	10 52 25.1	-2.3
DSZ	Denniston Nort	8.69	219	P		Pn	10 52 28.9	-1.8
LTZ	Lake Taylor	9.25	213	P		Pn	10 52 37.5	+0.1
MQZ	McQueen's Vall	9.85	208	P		Pn	10 52 44.6	0.0
WVZ	Waitaha Valley	10.20	217	P		Pn	10 52 47.8	-0.9
RPZ	Rata Peaks 8.9nm,0.3s,baz=60,slow=2.2,SNR=38	10.53	214	P		Pn	10 52 52.2	-0.6
RPZ	Rata Peaks	10.53	214	P		Pn	10 52 52.4	-0.3
FOZ	Fox Glacier	11.07	218	P		Pn	10 52 57.3	-1.9
LBZ	Lake Benmore	11.45	214	P		Pn	10 53 04.4	+0.7
ODZ	Otahua Downs	11.77	211	P		Pn	10 53 09.4	+2.0
JCZ	Jackson Bay	11.91	219	P		Pn	10 53 08.6	-0.6
WKZ	Wanaka	12.33	216	P		Pn	10 53 14.1	0.0
EAZ	Earnscleugh	12.50	214	P		Pn	10 53 16.6	+0.5
MSZ	Milford Sound	12.76	219	P		Pn	10 53 18.4	-0.8
TUZ	Tuapeka	12.92	211	P		Pn	10 53 23.9	+2.8
WHZ	Wether Hill Ro	13.62	215	P		Pn	10 53 30.3	+0.9
STKA	Stephens Creek 2.0nm,0.6s,mb3.5	31.31	265	eP		P	10 56 19.2	+1.3
STKA	Stephens Creek 3.1nm,0.7s,mb3.6,baz=110,slow=14,SNR=6.8	31.31	265	eP		P	10 56 19.3	+1.3
CTA	Charters Tower 5.3nm,0.8s,mb3.8	32.57	289	eP		P	10 56 27.2	-1.8
ASAR	Alice Springs 11nm,0.7s,mb4.2,baz=115,slow=7.7,SNR=107	40.69	274	P		P	10 57 37.0	+0.2
WB2	Warramunga Arr	42.11	279	eP		P	10 57 47.2	-1.1
WRAB	Tennant Creek 15nm,0.8s,mb4.2	42.12	279	eP		P	10 57 47.6	-0.7
WRA	Warramunga Arr 8.8nm,0.6s,mb4.0,baz=119,slow=7.5,SNR=89	42.12	279	P		P	10 57 47.7	-0.7
KAKA	Kakadu 5.2nm,0.6s	47.62	286	eP		Px	10 58 19.7	
NWAO	Narrogin (SO) 4.5nm,0.7s,mb3.8,baz=106,slow=7.4,SNR=5.6	50.56	254	P		P	10 58 54.5	+1.4
QSPA	South Pole Qui 7.1nm,0.6s,mb4.2,baz=357,slow=1.1,SNR=27	54.93	180	P		P	10 59 35.0	+11
MAW	Mawson 1.6nm,0.6s,mb4.0,baz=117,slow=6.2,SNR=3.8	66.97	202	P		P	11 00 52.3	+7.8
KURK	Kurchatov baz=114,slow=1.6	122.52	312	PKP		PKPdf	11 08 43.8	+1.0
BRTR	Keskin Array B 1.1nm,0.5s,baz=95,slow=3.9,SNR=6.2	152.31	290	PKPbc		PKPbc	11 09 45.0	+1.2

*IDC **06** 10:56:57.9±3.1,935S×11753E,h61km±28km,mb4.2/15, mb1 4.2/17,mb1mx4.2/22,mbtmp4.2/17,ML4.4/2,MS3.4/6, Ms1 3.3/6,ms1mx2.9/23,Error ellipse: s-maj=22.6km s-min=9.5km az=69.0*
*DJA **06** 10:56:57,982S×11744E,h10km,MLv5.0/8*
*ISCJB **06** 10:56:58.4±0.7,933S±007×11760E±005,h88km±7km, mb4.5/27,Error ellipse: s-maj=12.2km s-min=6.4km az=31.0*
*BJI **06** 10:56:58.2,930S×11740E,h66km,mB5.2,mb4.6*
*NEIC **06** 10:56:58.2±2.3,935S×11741E,h66km±20km,mb4.7/8, Error ellipse: s-maj=21.2km s-min=8.0km az=57.0*

ISC 06 10:56:59.3±0.7,937S±006×11759E±005,h80km±6km,n61, σ1°24/58,mb4.5/27,1D,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	2.20	297	P		Pn	10 57 34.4	+0.6
DNP	Denpasar	2.45	286	P		Pn	10 57 37.3	+0.1
NBBI	Negara	3.10	288	P		Pn	10 57 46.5	+0.5
KMMI	Kalianget	4.26	302	P		Pn	10 58 05.5	+3.7
KAPI	Kappang	4.83	27	eP		Pn	10 58 11.3	+1.7
KAPI	Kappang 123nm,0.7s,3μm1.1nm	4.83	27	P		Pn	10 58 11.3	+1.7
SJI	Sawahan	5.98	285	P		Pn	10 58 23.9	-1.4
BATI	Baumata 23nm,0.3s,baz=323,slow=2.6,SNR=16	6.04	98	P		Pn	10 58 26.1	0.0
BATI				S		Sn	10 59 32.8	-1.2
	24nm,0.3s,baz=14,slow=21,SNR=7.2							
BATI	Baumata 77nm,0.5s,1μm0.4nm	6.04	98	P		Pn	10 58 27.5	+1.4
BBKI	Banjar Baru 116nm,0.9s,0.6nm	6.47	335	P		Pn	10 58 36.8	+4.8
PCI	Palu 71nm,0.9s	8.70	15	P		Px	10 59 14.3	
MBWA	Marble Bar 68nm,0.3s	11.90	170	eP		Pn	10 59 40.2	-5.8
MBWA				eS		Sn	11 01 37.2	-20
KAKA	Kakadu 8.9nm,0.3s	14.95	104	eP		Px	11 00 16.9	
KAKA				eS		Sx	11 02 51.5	
DAV	Davao City (W) comp=Z,83nm,20.9s,baz=209,slow=40	18.17	26	LR		LR	11 09 01.1	
WRA	Warramunga Arr 0.8nm,0.3s,baz=299,slow=12,SNR=31	19.30	125	P		Pn	11 01 18.2	-1.6
WRA				S		Sn	11 04 40.9	-15
	1.0nm,0.3s,baz=299,slow=23,SNR=6.8							
WRA				LR		LR	11 09 49.5	
	comp=Z,48nm,18.7s,baz=205,slow=40							
WRAB	Tennant Creek	19.30	125	eP		Pn	11 01 18.3	-1.6
WB2	Warramunga Arr	19.30	125	eP		Pn	11 01 18.1	-1.8
WB2				eS		Sn	11 04 39.6	-17
ASAR	Alice Springs 30nm,0.6s,mb4.8,baz=310,slow=9.1,SNR=72	21.10	134	P		P	11 01 38.0	+0.5
ASAR				S		S	11 05 26.5	-1.5
	6.5nm,0.9s,baz=318,slow=25,SNR=10							
KLBR	Kellerberrin 9.8nm,0.3s,mb4.6	22.11	180	eP		P	11 01 57.9	+10
KLBR				eS		S	11 05 35.7	-12
MUN	Mundaring	22.54	183	eP		P	11 02 02.8	+10
MUN				eS		S	11 05 53.8	-0.4
FORT	Forrest 22nm,0.6s,mb4.7	23.43	157	eP		P	11 01 57.4	-4.1
FORT				eS		S	11 06 16.1	+7.3
NWAO	Narrogin (SRO) 15nm,0.9s,mb4.3,baz=43,slow=10,SNR=5.4	23.45	181	P		P	11 02 01.6	0.0
NWAO				S		S	11 06 10.5	+1.5
	30nm,0.4s,baz=294,slow=13,SNR=9.9							
NWAO				LR		LR	11 10 47.3	
	comp=Z,114nm,19.8s,baz=355,slow=35							
COEN	Coen 6.2nm,0.8s,mb4.1	25.46	103	eP		P	11 02 21.9	+1.8
CTA	Charters Tower 5.3nm,0.8s,mb4.2	29.65	114	eP		P	11 03 00.0	+2.5
CTA	Charters Tower 6.1nm,0.8s,mb4.3,baz=279,slow=9.9,SNR=7.5	29.65	114	P		P	11 02 59.6	+2.0
STKA	Stephens Creek 5.9nm,0.4s,mb4.6	31.58	139	↓iP		P	11 03 15.6	+1.2
STKA	Stephens Creek 5.9nm,0.4s,mb4.7,baz=314,slow=8.0,SNR=32	31.58	139	P		P	11 03 15.7	+1.3
STKA				LR		LR	11 16 34.5	
	comp=Z,73nm,18.0s,baz=236,slow=37							
CMAR	Chiang Mai Arr 0.5nm,0.3s,mb3.9,baz=142,slow=7.2,SNR=3.5	33.21	326	P		P	11 03 29.4	+0.6
ARMA	Armidale	38.01	128	eP		P	11 04 13.7	+3.8
KSRS	Korea Array 3.3nm,0.8s,mb4.2,baz=190,slow=8.3,SNR=12	47.57	11	P		P	11 05 28.1	+1.1
JIRN	Jiri 11nm,0.5s,mb5.0	47.74	321	eP		P	11 05 27.9	-0.6
GUN	Gumba 8.5nm,0.5s,mb4.8	48.11	321	eP		P	11 05 29.1	-2.2
GKN	Gorkha 7.0nm,0.3s,mb5.1	48.95	320	eP		P	11 05 36.5	-1.3
KOLN	Koldanda 4.4nm,0.3s,mb4.9	49.45	319	eP		P	11 05 40.9	-0.7
MJAR	Matsshiro Arr 1.5nm,0.8s,mb4.0,baz=262,slow=25,SNR=3.6	49.61	22	P		P	11 05 43.3	+0.7
DANN	Dangsing 13nm,0.6s,mb5.0	49.75	320	eP		P	11 05 41.2	-2.7
PYUN	Piuthan 5.5nm,0.4s,mb4.8	50.07	319	eP		P	11 05 45.8	-0.5
GTA	Gaotai	51.26	342	eP		P	11 05 57.5	+2.5
GTA				AMB		AMB		
	comp=Z,3.0nm,0.8s,mb4.4							
MDJ	Mudanjiang	54.82	10	P		P	11 06 25.7	+4.6
MDJ				AMB		AMB		
	comp=Z,11nm,0.6s,mb5.1							
MDJ				AMB		AMB		
	comp=Z,56nm,3.5s							
SONM	Songino Array comp=Z,1.3nm,0.5s,mb4.2,baz=172,slow=8.2,SNR=14	57.81	351	P		P	11 06 42.7	+0.4
SONM				LR		LR	11 32 50.8	
	comp=Z,20nm,19.9s,baz=16,slow=37							
MKAR	Makanchi Array comp=Z,1.4nm,0.5s,mb4.1,baz=153,slow=6.7,SNR=27	64.16	334	P		P	11 07 25.0	-0.3
MAW	Mawson comp=Z,1.4nm,0.5s,mb4.1,baz=62,slow=9.8,SNR=7.7	68.42	200	P		P	11 07 52.8	+0.5
MAW				LR		LR	11 31 19.6	
	comp=Z,44nm,19.0s,baz=105,slow=30							
KURK	Kurchatov baz=143,slow=5.7	68.72	335	P		P	11 07 54.0	-0.3
ZAA0	Zalesovo Array	68.90	340	P		P	11 07 54.0	-1.4
ZALV	Zalesovo Beam comp=Z,1.9nm,0.5s,mb4.2,baz=140,slow=4.8,SNR=8.0	68.90	340	P		P	11 07 54.3	-1.1
BVAR	Borovoye Array comp=Z,0.7nm,0.3s,mb3.8,baz=140,slow=7.7,SNR=4.6	73.97	333	P		P	11 08 25.6	-0.3
AKTK	Aktyubinsk	78.74	326	P		P	11 08 53.1	+0.1
AKTO	Aktyubinsk comp=Z,1.3nm,0.6s,mb3.9,baz=81,slow=10.0,SNR=5.0	78.74	326	P		P	11 08 53.1	+0.1
QSPA	South Pole Qui comp=Z,12nm,0.9s,mb4.7,baz=322,slow=1.9,SNR=23	80.63	180	P		P	11 09 04.5	+1.7
QSPA	South Pole Qui	80.63	180	P		P	11 09 04.5	+1.7
TIXI	Tiksi comp=Z,2.1nm,0.6s,mb4.1	81.19	4	eP		P	11 09 05.6	-0.2
BOSA	Boshof comp=Z,7.5nm,0.5s,mb5.0,baz=106,slow=6.1,SNR=24	87.61	242	P		P	11 09 41.2	+1.9
YKA	Yellowknife Ar comp=Z

KAKA	**Kakadu**	**47.47 269**	⇑*i*P		Px		11 19 54.9	
	12nm,0.4s							
MBWA	**Marble Bar**	**57.99 256**	*e*P		**P**		**11 21 18.6**	**-0.6**
	4.4nm,0.5s,mb3.9							
MJAR	**Matsushiro Arr**	**67.77 323**	P		**P**		**11 22 21.4**	**-0.3**
	1.3nm,0.7s,mb3.6,baz=171,slow=5.6,SNR=4.1							
NVAR	**Mina Array Bea**	**79.44 44**	P		**P**		**11 23 27.6**	**-0.5**
	0.3nm,0.6s,mb2.8,baz=217,slow=8.8,SNR=3.4							
CMAR	**Chiang Mai Arr**	**88.75 290**	P		**P**		**11 24 14.8**	**+0.3**
	0.7nm,0.4s,mb3.9,baz=104,slow=2.8,SNR=6.2							
SONM	**Songino Array**	**93.41 319**	P		**P**		**11 24 36.3**	**+1.1**
	0.2nm,0.5s,mb3.4,baz=120,slow=1.3,SNR=3.1							
ZALV	**Zalesovo Beam**	**108.10 322**	PKiKP		PKiKP		11 29 41.5	-2.4
	0.3nm,0.3s,baz=191,slow=1.5,SNR=2.5							
MKAR	**Makanchi Array**	**109.00 314**	PKiKP		PKiKP		11 29 43.4	-2.4
	0.3nm,0.5s,baz=186,slow=1.4,SNR=4.3							
BRTR	**Keskin Array B**	**144.64 315**	PKP		PKPdf		11 30 51.4	-1.6
	1.3nm,0.6s,baz=122,slow=2.7,SNR=7.1							
GERES	**GERESS Array B**	**147.50 345**	PKPbc		PKPbc		11 30 59.5	-1.5
	1.1nm,0.5s,baz=24,slow=2.7,SNR=9.3							

IDC 06 11:21:54.7±1.2,**2854S**×**7200W**,**h0**km,**mb3.8**/2,
mb1 3.8/4,**mb1mx3.7**/16,**mbtmpg3.6**/4,**ML3.4**/2,**Error ellipse: s-maj=47.5km s-min=32.6km az=58.0,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CFAA	**Coronel Fontan**	**4.47 134**		Pn		Pn	11 23 02.8	-0.8
	0.7nm,0.3s,baz=316,slow=12,SNR=30							
CFAA				Sn		Sn	11 23 49.0	-7.3
	0.7nm,0.3s,baz=304,slow=7.2,SNR=7.3							
LVC	**Limon Verde**	**6.53 26**		Pn		Pn	11 23 34.1	+2.2
	0.2nm,0.3s,baz=238,slow=9.5,SNR=3.9							
LVC				Sn		Sn	11 25 03.6	+16
	1.2nm,0.3s,baz=111,slow=18,SNR=4.2							
TXAR	**Lajitas Array**	**65.02 330**	P		P		11 32 35.2	-1.4
	0.6nm,0.7s,baz=122,slow=8.6,SNR=3.7							
TORD	**Torodi Ar. Bea**	**82.35 71**	P		P		11 34 17.6	-1.2
	0.5nm,0.6s,baz=221,slow=5.1,SNR=6.0							
WRA	**Warramunga Arr**	**125.50 211**	PKP		PKPdf		11 40 59.1	+0.7
	0.2nm,0.5s,baz=151,slow=1.5,SNR=7.6							
ZALV	**Zalesovo Beam**	**149.48 27**	PKPbc		PKPbc		11 41 46.1	+0.8
	1.1nm,0.5s,baz=329,slow=1.7,SNR=6.7							
MKAR	**Makanchi Array**	**152.88 41**	PKPbc		PKPbc		11 41 54.1	+0.6
	0.3nm,0.7s,baz=221,slow=0.9,SNR=3.2							

*IDC **06** 11:28:37.7±1.3,6381N×15178W,h0km,mb3.8/2,*
mb1 3.8/4,mb1mx3.5/22,mbtmpg3.7/4,ML3.4/2,Error ellipse: s-maj=34.6km s-min=20.5km az=93.0
*ISCJB **06** 11:28:45.9±0.5,6312N±003×1506W±0.1,h127km±5km,*
mb3.8/2,Error ellipse: s-maj=7.7km s-min=5.5km az=167.0
*NEIC **06** 11:28:47.4,6311N×15054W,h118km,MG3.2(AEIC),*
After AEIC.

ISC 06 11:28:47.0±0.5,**6312N**±003×**1506W**±0.1,**h121**km±5km,**n30,**
s0s57/37,mb3.8/2,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KTH	**Kantishna Hill**	**0.46 342**		P		**Pn**	**11 29 05.2**	**+0.4**
KTH				S		**Sn**	**11 29 18.0**	**-0.3**
PPLA	**Purkeypile**	**0.75 254**		P		**Pn**	**11 29 07.4**	**+0.5**
PPLA				S		**Sn**	**11 29 22.2**	**+0.4**
BPAW	**Bear Paw Mtn.**	**1.00 351**		P		**Pn**	**11 29 09.1**	**+0.1**
BPAW				S		**Sn**	**11 29 25.1**	**-0.7**
CHUM	**Lake Minchumin**	**1.08 316**		P		**Pn**	**11 29 10.2**	**+0.2**
CHUM				S		**Sn**	**11 29 26.9**	**-0.4**
SKT	**Skwentna**	**1.22 201**		P		**Pn**	**11 29 11.2**	**-0.1**
SKT				S		**Sn**	**11 29 29.9**	**+0.2**
GHO	**Glory Hole Cre**	**1.56 149**		P		**Pn**	**11 29 15.3**	**+0.1**
PMR	**Palmer**	**1.68 155**		P		**Pn**	**11 29 16.0**	**-0.5**
SML	**Sawmill**	**1.69 140**		P		**Pn**	**11 29 16.3**	**-0.4**
SML				S		**Sn**	**11 29 39.3**	**0.0**
FIB	**Fire Island**	**1.97 174**	*e*P			**Pn**	**11 29 23.1**	**+3.0**
KNK	**Knik Glacier**	**1.98 149**	P			**Pn**	**11 29 20.0**	**-0.2**
RC01	**Rabbit Creek A**	**2.08 168**	P			**Pn**	**11 29 21.3**	**-0.2**
COLA	**College**	**2.14 33**	P			**Pn**	**11 29 22.3**	**+0.1**
ILB	**Eielson Array**	**2.34 43**	P			**Pn**	**11 29 24.5**	**-0.1**
PAX	**Paxson**	**2.35 91**	P			**Pn**	**11 29 25.1**	**+0.4**
SLKM	**Skilak Lake**	**2.63 176**	P			**Pn**	**11 29 28.7**	**+0.3**
DOT	**Dot Lake**	**3.00 77**	P			**Pn**	**11 29 32.8**	**-0.3**
SEW	**Seward**	**3.08 166**	P			**Pn**	**11 29 34.1**	**-0.1**
SVW2	**Sparrevohn**	**3.09 231**	P			**Pn**	**11 29 34.6**	**+0.2**
GCSA	**Galena City Sc**	**3.21 303**	P			**Pn**	**11 29 36.3**	**+0.2**
IMA2	**Indian Mountai**	**3.25 337**	*e*P			**Pn**	**11 29 36.6**	**+0.1**
EYAK	**Cordova Ski Ar**	**3.46 136**	P			**Pn**	**11 29 38.6**	**-0.7**
COLD	**Coldfoot**	**4.13 2**	P			**Pn**	**11 29 48.7**	**+0.5**
EGAK	**Eagle**	**4.49 64**	P			**Pn**	**11 29 53.0**	**+0.1**
DAWY	**Dawson**	**5.10 74**	P			**Pn**	**11 30 01.0**	**-0.2**
KDAK	**Kodiak Island**	**5.44 191**	Pn			**Pn**	**11 30 04.7**	**-1.2**
	1.7nm,0.3s,baz=305,slow=15,SNR=23							
KDAK				Sn		**Sn**	**11 31 01.9**	**-5.2**
	1.9nm,0.3s,baz=144,slow=23,SNR=12							
YKA	**Yellowknife Ar**	**16.34 76**	Pn			**Pn**	**11 32 30.4**	**+1.5**
	0.2nm,0.3s,baz=283,slow=9.4,SNR=5.1							
YKA	**Yellowknife Ar**	**16.34 76**	Pn			**Pn**	**11 32 30.4**	**+1.5**
ARCES	**ARCESS Array B**	**47.60 2**	P			**P**	**11 37 09.3**	**-0.5**
	2.6nm,0.8s,mb4.1,baz=10,slow=7.4,SNR=5.7							
ARCES	**ARCESS Array B**	**47.60 2**	P			**P**	**11 37 09.3**	**-0.5**
MKAR	**Makanchi Array**	**62.69 322**	P			**P**	**11 38 57.9**	**-0.5**
	0.2nm,0.3s,mb3.5,baz=32,slow=6.9,SNR=4.8							

*CSEM **06** 11:36:09.9±0.3,4062N×4429E,h10km,ML3.0,Error ellipse: s-maj=9.2km s-min=5.6km az=48.0*
*ISCJB **06** 11:36:10.9±0.4,4080N±002×4432E±003,h10km±3km,*
Error ellipse: s-maj=4.4km s-min=2.8km az=1.4
*NSSP **06** 11:36:10.2,4083N×4422E,h18km,ML3.0*
*TIF **06** 11:36:10.5,4087N×4425E,h7km±1km*
*MOS **06** 11:36:16.2±1.1,4105N×4446E,h15km,mb4.0/1,Error ellipse: s-maj=70.8km s-min=8.9km az=90.6*

ISC 06 11:36:11.4±0.3,**4084N**±002×**4429E**±003,**h7**km±4km,**n33,**
s1s22/61,6C-6D,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
STE	**Stepanavan**	**0.17 21**		⇑P		**Pg**	**11 36 14.7**	**-0.2**
STE				S		**Sg**	**11 36 15.9**	**-1.4**
HNAZ	**Hnaberd**	**0.24 208**		P		**Pg**	**11 36 17.6**	**+1.5**
HNAZ				S		**Sg**	**11 36 23.5**	**+4.2**
KAMZ	**Kamo**	**0.26 266**		⇑P		**Pg**	**11 36 17.3**	**+0.8**
KAMZ				S		**Sg**	**11 36 21.3**	**+1.3**
HARI	**Harich**	**0.32 223**		⇑P		**Pg**	**11 36 18.6**	**+0.9**
HARI				S		**Sg**	**11 36 22.2**	**+0.2**
GMRZ	**Gyumri**	**0.35 265**		⇓P		**Pg**	**11 36 19.0**	**+0.7**
GMRZ				S		**Sg**	**11 36 23.0**	**+0.1**
GYMZ	**Gyumri**	**0.35 265**		P		**Pg**	**11 36 19.0**	**+0.7**
GYMZ				S		**Sg**	**11 36 23.7**	**+0.8**
AMBZ	**Amberd**	**0.45 183**		⇓P		**Pg**	**11 36 17.6**	**-2.6**
AMBZ				S		**Sg**	**11 36 24.8**	**-1.3**
BAW	**Bavra**	**0.46 307**		P		**Pg**	**11 36 14.0**	**-6.4**
BAW				S		**Sg**	**11 36 21.0**	**-5.5**
ARUZ	**Aruch**	**0.58 195**		⇓P		**Pg**	**11 36 19.2**	**-3.4**
ARUZ				S		**Sg**	**11 36 27.7**	**-2.4**
KAPZ	**Kaputan**	**0.60 149**		⇓P		**Pg**	**11 36 20.1**	**-3.0**
KAPZ				S		**Sg**	**11 36 29.5**	**-1.5**
ERE	**Yerevan**	**0.69 168**		⇓P		**Pg**	**11 36 25.0**	**+0.4**
ERE				S		**Sg**	**11 36 35.6**	**+2.1**
GNI	**Garni**	**0.77 153**		⇑P		**Pg**	**11 36 26.9**	**+0.6**
GNI				S		**Sg**	**11 36 38.9**	**+2.6**
VNNZ	**Vanand**	**0.82 206**		⇑P		**Pg**	**11 36 23.5**	**-3.7**
VNNZ				S		**Sg**	**11 36 35.2**	**-2.6**
MTA	**Mtatsminda**	**0.93 24**		P		**Pg**	**11 36 28.7**	**-0.6**
MTA				S		**Sg**	**11 36 41.7**	**+0.3**
TBLG	**Delisi**	**0.95 21**	*e*PG			**Pg**	**11 36 28.9**	**-0.8**
TBLG			*e*S			**Sg**	**11 36 42.5**	**+0.5**
TBLG	**Delisi**	**0.95 21**	P			**Pg**	**11 36 29.0**	**-0.7**
TBLG			S			**Sg**	**11 36 42.5**	**+0.5**
DGRG	**David-gareji**	**1.02 53**	P			**Pg**	**11 36 32.0**	**+1.0**
DGRG			S			**Sg**	**11 36 48.0**	**+3.7**
GOR	**Gori**	**1.15 353**	P			**Pg**	**11 36 33.7**	**+0.2**
GOR			S			**Sg**	**11 36 48.9**	**+0.4**
VADZ	**Vardenis**	**1.29 121**	P			**Pn**	**11 36 36.0**	**+0.1**
VADZ			S			**Sb**	**11 36 56.0**	**+3.2**
DAGI	**Agillar**	**1.81 278**	*i*P			**Pb**	**11 36 44.3**	**-0.6**
ARTV	**Artvin**	**1.82 282**	*i*P			**Pn**	**11 36 38.6**	**-4.5**
ONI	**Oni**	**1.85 340**	P			**Pb**	**11 36 44.6**	**-0.9**
ONI			S			**Sb**	**11 37 09.4**	**+0.7**
DDEM	**Demirkent**	**1.93 272**	*i*P			**Pb**	**11 36 46.0**	**-0.9**
DDEM	**Demirkent**	**1.93 272**	*i*S			**Sn**	**11 37 09.4**	**+0.4**
ZEI	**Tsey**	**1.95 351**	⇑*i*PN			**Pb**	**11 36 46.8**	**-0.4**
ZEI			*e*S			**Sb**	**11 37 12.9**	**+1.2**
DBAD	**Bademkaya**	**1.98 276**	*i*P			**Pb**	**11 36 47.1**	**-0.5**
LACR	**Lac**	**1.98 0**	⇓*i*PN			**Pb**	**11 36 47.8**	**0.0**
LACR			*i*S			**Sb**	**11 37 14.3**	**+1.7**
VLKR	**Vladikavkaz**	**2.22 7**	*e*PN			**Pb**	**11 36 51.7**	**-0.2**
VLKR			*e*S			**Sb**	**11 37 21.1**	**+1.6**
KORR	**Kora**	**2.25 356**	*e*PN			**Pb**	**11 36 51.1**	**-1.2**
KORR			*e*S			**Sb**	**11 37 20.3**	**0.0**
SNJR	**Sundja**	**2.26 10**	*e*PN			**Pb**	**11 36 52.3**	**-0.2**
SNJR			*e*S			**Sb**	**11 37 22.2**	**+1.6**
ARNR	**Ardon**	**2.35 360**	*e*PN			**Pb**	**11 36 52.8**	**-1.2**
ARNR			*e*S			**Sb**	**11 37 23.1**	**0.0**
LSNR	**Lesken**	**2.46 352**	*e*PN			**Pb**	**11 36 53.8**	**-2.0**
LSNR			*e*S			**Sb**	**11 37 24.6**	**-1.7**
BTKR	**Batakoyurt**	**2.54 4**	*e*PN			**Pb**	**11 36 55.7**	**-1.5**
BTKR			*e*S			**Sb**	**11 37 27.6**	**-1.0**

*JMA **06** 12:08:02.6±0.2,2481N×12237E,h18km,M2.8*
*ISCJB **06** 12:08:05.6±0.7,2456N±004×12246E±002,h15km±6km,*
Error ellipse: s-maj=6.3km s-min=2.9km az=10.1
*TAP **06** 12:08:06.3,2454N×12226E,h5km,ML3.3,D*

ISC 06 12:08:05.4±0.5,**2457N**±004×**12245E**±002,**h15**km±4km,
n31,σ**1s05/46,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.52 101**		P		**Pg**	**12 08 15.4**	**-0.3**
YOJ				*e*S		**Sg**	**12 08 24.6**	**+1.9**
TWC	**Suao**	**0.55 275**		*i*P		**Pg**	**12 08 14.6**	**-1.6**
	baz=280							
TWC				*e*S		**Sg**	**12 08 24.2**	**+0.8**
	baz=280							
TWB1	**Santiao Chiao**	**0.61 317**		*e*P		**Pg**	**12 08 17.5**	**+0.2**
	baz=331							
TWB1				*e*S		**Sg**	**12 08 24.6**	**-0.8**
	baz=331							
ENA	**Nanau**	**0.66 258**		P		**Pg**	**12 08 16.8**	**-1.4**
	baz=256							
ILA	**Ilan**	**0.67 288**		*e*P		**Pg**	**12 08 17.6**	**-0.8**
	baz=295							
ILA				*e*S		**Sg**	**12 08 28.8**	**+1.5**
	baz=295							
TWE	**Neicheng**	**0.73 283**		*e*P		**Pg**	**12 08 18.3**	**-1.2**
	baz=288							
TWE				*e*S		**Sg**	**12 08 29.1**	**0.0**
	baz=288							
NWF	**Wu-fen Shan**	**0.79 310**		P		**Pg**	**12 08 21.3**	**+0.6**
	baz=320							
NWF				*e*S		**Sg**	**12 08 32.1**	**+1.1**
	baz=320							
ENTT	**Nioudou**	**0.81 276**		*e*P		**Pg**	**12 08 20.4**	**-0.6**
	baz=278							
ENTT				*e*S		**Sg**	**12 08 30.8**	**-0.8**
	baz=278							
TWA	**Mucha**	**0.89 298**		*e*P		**Pb**	**12 08 22.6**	**+0.1**
	baz=305							
TWA				*e*S		**Sb**	**12 08 33.5**	**-0.7**
	baz=305							
TWD	**Chiawan**	**0.92 238**		*e*P		**Pb**	**12 08 23.3**	**+0.4**
	baz=233							
HWA	**Hwalien**	**0.97 233**		*e*P		**Pb**	**12 08 24.0**	**+0.2**
	baz=226							
NNS	**Nan Shan**	**0.99 263**		*e*P		**Pb**	**12 08 23.1**	**-1.0**
	baz=262							
NNS				*e*S		**Sb**	**12 08 35.8**	**-1.2**
	baz=262							
NSK	**Sanguang**	**1.00 277**		P		**Pb**	**12 08 23.6**	**-0.8**
	baz=279							
NSK				S		**Sb**	**12 08 36.5**	**-0.8**
	baz=279							
TWY	**Chenhua**	**1.05 313**		*e*P		**Pb**	**12 08 26.1**	**+0.9**
	baz=320							
TWS1	**Kuangyinshan**	**1.08 300**		*e*P		**Pb**	**12 08 26.5**	**+0.8**
	baz=305							
PCYT	**Pengchaiyu**	**1.11 342**		*e*P		**Pb**	**12 08 26.8**	**+0.4**
	baz=350							
WHF	**Hehuan Shan**	**1.16 249**		*e*P		**Pn**	**12 08 26.3**	**-0.7**
	baz=246							
WHF				*e*S		**Sb**	**12 08 41.7**	**-0.2**
	baz=246							
ESL	**Shilin**	**1.19 231**		*e*P		**Pn**	**12 08 26.9**	**-0.6**
	baz=226							
IRIF	**Iriomote-Funau**	**1.19 101**		P		**Pn**	**12 08 26.4**	**-1.1**
IRIF				*e*S		**Sb**	**12 08 43.3**	**+0.4**
TWT	**Tachien**	**1.20 255**		*e*P		**Pn**	**12 08 28.1**	**+0.5**
	baz=254							
TWT				*e*S		**Sb**	**12 08 42.2**	**-0.9**
	baz=254							
NSTT	**Nanjuang**	**1.32 273**		*e*P		**Pn**	**12 08 30.4**	**+1.1**
	baz=274							
HATJ	**Hateruma jima**	**1.34 112**		P		**Pn**	**12 08 28.9**	**-0.6**
JKRS	**Kuro-shima**	**1.46 103**		P		**Pn**	**12 08 30.7**	**-0.5**
JKRS				*e*S		**Sn**	**12 08 49.8**	**-0.3**
TWQ1	**Liyutan**	**1.54 262**		*e*P		**Pn**	**12 08 34.4**	**+2.1**
	baz=261							
JIJ	**Ishigaki jima**	**1.56 97**		P		**Pn**	**12 08 31.5**	**-1.0**
JIJ				*e*S		**Sn**	**12 08 51.0**	**-1.5**
SMLT	**Sun Moon Lake**	**1.57 245**		*e*P		**Pn**	**12 08 34.9**	**+2.2**
	baz=242							
TYC	**Yuchr**	**1.59 246**		*e*P		**Pn**	**12 08 34.6**	**+1.5**
	baz=243							
TWF1	**Yuli**	**1.60 221**		*e*P		**Pn**	**12 08 32.5**	**-0.6**
	baz=216							
YUS	**Yu-Shan**	**1.74 232**		*e*P		**Pn**	**12 08 36.2**	**+1.2**
	baz=228							
ALS	**Alishan**	**1.83 235**		*e*P		**Pn**	**12 08 38.3**	**+1.9**
	baz=232							
CHN5	**Tsauling**	**1.88 240**		*e*P		**Pn**	**12 08 39.5**	**+2.4**
	baz=237							

*NIED **06** 12:18:00,3020N×14250E,h5km,Mw4.2 Best double couple: M0 2.35000×10^15 NP1:φs142.00000°,δ72.00000°, λ-99.00000°. NP2:φs349.00000°,δ20.00000°, λ-64.00000°.*
*IDC **06** 12:18:38.6±0.7,3015N×14276E,h0km,mb4.1/14,*
mb1 4.3/17,mb1mx4.2/23,mbtmp4.1/17,ML3.6/4,MS3.0/4,
Ms1 3.1/4,ms1mx2.6/31,Error ellipse: s-maj=21.7km s-min=15.4km az=83.0
*BJI **06** 12:18:38.6,3014N×14279E,h14km,mB4.7,mb4.3*
*NEIC **06** 12:18:40.7±8.3,3011N×14274E,h13km±51km,mb4.8/9,*
MW4.2(NIED),Error ellipse: s-maj=12.7km s-min=10.0km az=90.0
*JMA **06** 12:18:40.6±0.2,3021N×14248E,h50km,M4.2*
*ISCJB **06** 12:18:41.7±1.9,3049N±005×14267E±009,h20km±13km,*
mb4.3/24,Error ellipse: s-maj=14.0km s-min=6.4km az=158.9

ISC 06 12:18:42.9±1.9,**3040N**±004×**14271E**±009,**h21**km±13km,
n53,σ**1s25/64,mb4.3/24,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.33 188**		Pn		**Pn**	**12 19 28.6**	**-5.1**
	6.4nm,0.3s,baz=263,slow=23,SNR=20							
CBIJ				Sn		**Sn**	**12 20 03.4**	**-9.2**
	32nm,0.3s,baz=86,slow=22,SNR=7.1							
CBIJ	**Chichi jima**	**3.33 188**		P		**Pn**	**12 19 28.6**	**-5.1**
CBIJ				*e*S		**Sn**	**12 20 02.3**	**-10**
JHJ	**Hachijo jima 2**	**3.68 318**		Pn		**Pn**	**12 19 37.5**	**-1.1**
	12nm,0.3s,baz=74,slow=23,SNR=4.3							
JHJ				Sn		**Sn**	**12 20 19.4**	**-1.8**
	24nm,0.3s,baz=269,slow=20,SNR=3.6							
BSO1	**Boso 1**	**4.48 341**		P		**Pn**	**12 19 49.0**	**-0.6**
BSO1				*e*S		**Sn**	**12 20 42.1**	**+1.0**
BSO3	**Boso 3**	**4.76 338**		*e*S		**Sn**	**12 20 48.9**	**+0.9**
BSO4	**Boso 4**	**4.99 337**		*e*S		**Sn**	**12 20 53.3**	**-0.3**
JOD2	**Odawara 2**	**5.72 329**		P		**Pn**	**12 20 06.9**	**+0.3**
JOD2				*e*S		**Sn**	**12 21 10.6**	**-1.1**
JHU	**Hanno**	**6.15 333**		P		**Pn**	**12 20 12.1**	**-0.3**
JHU				*e*S		**Sn**	**12 21 18.9**	**-3.2**
JYT	**Yasato**	**6.18 341**		*e*S		**Sn**	**12 21 20.5**	**-2.4**
JNY	**Yasuok**	**6.41 322**		P		**Pn**	**12 20 18.7**	**+2.7**
JRY	**Ryogami san**	**6.44 331**		P		**Pn**	**12 20 16.9**	**+0.4**
JRY				*e*S		**Sn**	**12 21 29.1**	**-0.3**
JHO	**Hitachi**	**6.44 344**		P		**Pn**	**12 20 15.3**	**-1.2**
JHO				*e*S		**Sn**	**12 21 24.6**	**-4.8**
JAG	**Ashikaga**	**6.59 336**		P		**Pn**	**12 20 18.7**	**+0.1**
JAG				*e*S		**Sn**	**12 21 32.0**	**-1.1**
JFK	**Kawauchi**	**7.11 348**		P		**Pn**	**12 20 23.8**	**-1.9**
MJAR	**Matsushiro Arr**	**7.18 330**		Pn		**Pn**	**12 20 27.3**	**+0.7**
	4.0nm,0.3s,baz=157,slow=11,SNR=76							
MJAR				Sn		**Sn**	**12 21 48.3**	**+0.7**
	1.2nm,0.3s,baz=234,slow=33,SNR=6.2							
MAJO	**Matsushiro**	**7.18 330**	*e*P			**Pn**	**12 20 27.4**	**+0.7**
	32nm,0.6s							
MAT	**Matsushiro**	**7.18 330**	P			**Pn**	**12 20 26.9**	**+0.2**
MAT			S			**Sn**	**12 21 47.3**	**-0.3**
MAT	**Matsushiro**	**7.18 330**	P			**Pn**	**12 20 27.5**	**+0.8**
MAT			*e*S			**Sn**	**12 21 47.3**	**-0.3**
JMK	**Ichinoseki**	**8.62 352**	P			**Pn**	**12 20 44.1**	**-2.2**
JMK			*e*S			**Sn**	**12 22 16.2**	**-6.6**
JOW	**Kunigami**	**13.17 258**	LR		LR		12 26 17.6	
	comp=Z,91nm,21.9s,baz=136,slow=35							
KSRS	**Korea Array**	**14.14 304**	Pn			**Pn**	**12 22 04.0**	**+2.2**
	0.2nm,0.3s,baz=118,slow=13,SNR=14							
KSRS			LR		LR		12 26 56.7	
	comp=Z,35nm,19.7s,baz=120,slow=35							
MDJ	**Mudanjiang**	**17.56 328**	P			**Pn**	**12 22 48.2**	**+1.9**
MDJ			AMB		AMB			
	comp=Z,15nm,0.9s							
MDJ			AMB		AMB			
	comp=Z,83nm,5.9s							
MDJ	**Mudanjiang**	**17.56 328**	*e*P			**Pn**	**12 22 48.0**	**+1.8**
	comp=Z,12nm,0.9s							
CN2	**Changchun**	**19.14 319**	*e*P			**Pn**	**12 23 05.4**	**-0.2**
HIA	**Hailar**	**25.64 324**	*e*P			**P**	**12 24 12.2**	**+1.4**
	comp=Z,12nm,0.7s,mb4.5							
ULN	**Ulaanbaatar**	**32.33 313**	*e*P			**P**	**12 25 12.6**	**+2.1**
	comp=Z,12nm,1.2s,mb4.6							
SONM	**Songino Array**	**32.74 312**	P			**P**	**12 25 16.5**	**+2.5**
	comp=Z,2.3nm,0.8s,mb4.2,baz=119,slow=7.7,SNR=13							
GTA	**Gaotai**	**36.02 296**	*e*P			**P**	**12 25 42.6**	**0.0**
GTA			AP		pP		12 25 47.2	-1.9
GTA			XP		sP		12 25 50.4	-1.3
GTA			AMB		AMB			
	comp=Z,3.0nm,0.9s,mb4.2							
CMAR	**Chiang Mai Arr**	**41.35 264**	P			**P**	**12 26 25.9**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.2,baz=46,slow=10,SNR=4.4							
CMAR			LR		LR		12 44 24.7	
	comp=Z,15nm,19.2s,baz=60,slow=37							
BATI	**Baumata**	**44.33 207**	P			**P**	**12 26 48.5**	**-3.1**
	comp=Z,11nm,0.6s,mb4.8,baz=312,slow=6.9,SNR=3.7							
ZALV	**Zalesovo Beam**	**47.34 317**	P			**P**	**12 27 15.4**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=77,slow=6.5,SNR=6.0							
ZALV			PcP		PcP		12 28 44.8	-0.8
	comp=Z,1.2nm,0.7s,baz=114,slow=1.8,SNR=5.0							
MK31	**Makanchi Array**	**48.78 307**	*e*P			**P**	**12 27 27.1**	**+0.9**
MKAR	**Makanchi Array**	**48.78 307**	P			**P**	**12 27 27.2**	**+1.0**
	comp=Z,2.0nm,0.7s,mb4.2,baz=90,slow=9.8,SNR=18							
RAMN	**Ramite**	**48.93 281**	*e*P			**P**	**12 27 26.8**	**-0.8**
	comp=Z,12nm,0.7s,mb5.1							
JIRN	**Jiri**	**49.06 282**	*e*P			**P**	**12 27 29.5**	**+0.9**
	comp=Z,21nm,0.7s,mb5.3							
GKN	**Gorkha**	**50.27 283**	*e*P			**P**	**12 27 37.6**	**-0.2**
CTA	**Charters Tower**	**50.31 176**	LR		LR		12 47 27.4	
	comp=Z,26nm,18.9s,baz=231,slow=34							
WB2	**Warramunga Arr**	**50.70 190**	*e*P			**P**	**12 27 37.8**	**-3.2**
WRA	**Warramunga Arr**	**50.70 190**	P			**P**	**12 27 37.9**	**-3.0**
	comp=Z,1.5nm,0.6s,mb4.1,baz=8.7,slow=7.8,SNR=14							
DANN	**Dangsing**	**50.90 283**	*e*P			**P**	**12 27 43.1**	**+0.5**
	comp=Z,14nm,0.6s,mb5.0							
KURK	**Kurchatov**	**51.05 313**	*e*P			**P**	**12 27 43.7**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.4							
KOLN	**Koldanda**	**51.21 283**	*e*P			**P**	**12 27 44.5**	**-0.5**
	comp=Z,7.2nm,0.6s,mb4.8							
PYUN	**Piuthan**	**51.62 283**	*e*P			**P**	**12 27 48.4**	**+0.3**
	comp=Z,11nm,0.4s,mb5.1							
ASAR	**Alice Springs**	**54.42 190**	P			**P**	**12 28 06.1**	**-2.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=0.7,slow=5.9,SNR=7.6							
AML	**Almayashu**	**55.48 303**	*e*P			**P**	**12 28 18.4**	**+2.2**
	comp=Z,5.0nm,0.8s,mb4.6							
YKA	**Yellowknife Ar**	**69.03 29**	P			**P**	**12 29 46.5**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=293,slow=6.6,SNR=3.8							
ARCES	**ARCESS Array B**	**70.58 341**	P			**P**	**12 29 56.9**	**+0.8**
	comp=Z,3.0nm,0.8s,mb4.3,baz=64,slow=6.1,SNR=3.7							
NVAR	**Mina Array Bea**	**78.13 52**	P			**P**	**12 30 40.7**	**+0.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=285,slow=4.6,SNR=7.7							
NOA	**N

KSP				*e*Sg		**Sg**	**12 34 23.7**	**+1.7**
KSP	**Ksiaz**	**0.65**	**170**	*e*Pg		**Pg**	**12 34 14.7**	**+1.2**
KSP				*e*Sg		**Sg**	**12 34 24.1**	**+2.1**
KSP	**Ksiaz**	**0.65**	**170**	⇓*i*Pg		**Pg**	**12 34 14.6**	**+1.0**
KSP				*i* Sg		**Sg**	**12 34 23.6**	**+1.6**
KSP				*e*			12 34 27.0	
KSP	**Ksiaz**	**0.65**	**170**	⇓*i*P		**Pg**	**12 34 14.6**	**+1.0**
KSP				*i*			12 34 23.6	
KSP	**Ksiaz**	**0.65**	**170**	Pg		**Pg**	**12 34 14.7**	**+1.1**
KSP				*i* Sg		**Sg**	**12 34 23.6**	**+1.6**
UPC	**Upice**	**0.98**	**184**	*e*PG		**Pg**	**12 34 20.8**	**+1.0**
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*Pn		**Pn**	**12 34 23.6**	**-0.7**
DPC				*e*Sg		**Sg**	**12 34 38.9**	**+1.1**
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*P		**Pg**	**12 34 23.4**	**+0.4**
DPC				*e*			12 34 37.8	
DPC				smax				
	comp=N,337nm,0.9s							
DPC	**Dobruska-Polom**	**1.14**	**173**	Pg		**Pg**	**12 34 23.4**	**+0.4**
DPC				Sg		**Sg**	**12 34 38.9**	**+1.1**
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*PG		**Pg**	**12 34 23.4**	**+0.4**
DPC				*e*SG		**Sg**	**12 34 37.8**	**0.0**
	comp=Z,336nm,0.9s							
PVCC	**Panska Ves**	**1.37**	**226**	Pg		**Pg**	**12 34 27.3**	**+0.1**
PVCC				*e*Sg		**Sg**	**12 34 46.1**	**+1.2**
PVCC	**Panska Ves**	**1.37**	**226**	*e*PG		**Pg**	**12 34 27.3**	**+0.1**
PVCC				*e*SG		**Sg**	**12 34 46.2**	**+1.3**
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn		**Pn**	**12 34 28.7**	**-0.5**
BRG				*e*Sg		**Sg**	**12 34 50.6**	**+1.5**
BRG	**Berggiesshubel**	**1.50**	**247**	P		**Pn**	**12 34 28.6**	**-0.6**
BRG				*e*			12 34 50.5	
BRG				smax				
	comp=N,157nm,0.4s							
BRG	**Berggiesshubel**	**1.50**	**247**	PN		**Pn**	**12 34 28.6**	**-0.6**
BRG				PG		**Pg**	**12 34 30.4**	**+0.7**
BRG				SG		**Sg**	**12 34 50.5**	**+1.4**
	comp=N,262nm,0.4s							
RUE	**Ruedersdorf**	**1.75**	**306**	*e*P		**Pn**	**12 34 30.9**	**-1.8**
RUE	**Ruedersdorf**	**1.75**	**306**	*e*P		**Pn**	**12 34 30.9**	**-1.8**
PRU	**Pruhonice**	**1.80**	**214**	*e*P		**Pn**	**12 34 33.1**	**-0.2**
PRU				*e*			12 34 58.8	
PRU				smax				
	comp=N,178nm,0.5s							
PRU	**Pruhonice**	**1.80**	**214**	Pg		**Pg**	**12 34 34.9**	**-0.7**
PRU				Sg		**Sg**	**12 34 58.8**	**-0.1**
	comp=N,178nm,0.5s							
PRU	**Pruhonice**	**1.80**	**214**	*e*PN		**Pn**	**12 34 33.1**	**-0.2**
PRU				*e*PG		**Pg**	**12 34 34.9**	**-0.7**
PRU				*e*SG		**Sg**	**12 34 58.8**	**-0.1**
	comp=Z,178nm,0.5s							
FBE	**Freiberg**	**1.82**	**253**	*e*Pn		**Pn**	**12 34 33.0**	**-0.7**
FBE				*e*Sg		**Sg**	**12 35 00.2**	**+0.6**
GKP	**Gorka Klasztor**	**1.92**	**21**	*e*Pn		**Pn**	**12 34 42.2**	**+7.2**
GKP				*e*Sn		**Sn**	**12 35 10.6**	**+11**
GKP				*e*Sg		**Sg**	**12 35 15.7**	**+13**
GKP	**Gorka Klasztor**	**1.92**	**21**	*e*Pn		**Pn**	**12 34 42.2**	**+7.3**
GKP				*e*Sn		**Sn**	**12 35 10.5**	**+11**
GKP				*e*Sg		**Sg**	**12 35 15.7**	**+13**
RAC	**Raciborz**	**1.93**	**136**	*e*Pg		**Pg**	**12 34 38.4**	**+0.4**
RAC				*e*Sg		**Sg**	**12 35 03.7**	**+0.7**
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn		**Pn**	**12 34 34.5**	**-0.7**
MORC	**Moravsky Berou**	**1.94**	**151**	Pn		**Pn**	**12 34 34.5**	**-0.7**
MORC	**Moravsky Berou**	**1.94**	**151**	⇓P		**Pn**	**12 34 35.0**	**-0.2**
MORC				*e*Sg		**Sg**	**12 35 01.9**	**-1.4**
	comp=Z,96nm,0.3s							
MORC	**Moravsky Berou**	**1.94**	**151**	⇓*i*P		**Pn**	**12 34 35.0**	**-0.2**
CLL	**Collm**	**1.96**	**266**	*e*Pn		**Pn**	**12 34 34.8**	**-0.7**
CLL				*e*Pg		**Pg**	**12 34 38.0**	**-0.5**
CLL				*e*Sg		**Sg**	**12 35 05.0**	**+1.1**
CLL	**Collm**	**1.96**	**266**	*i* Pn		**Pn**	**12 34 34.7**	**-0.8**
CLL				*e*Pg		**Pg**	**12 34 38.0**	**-0.5**
CLL				*e*Sg		**Sg**	**12 35 05.0**	**+1.1**
CLL	**Collm**	**1.96**	**266**	*i* P		**Pn**	**12 34 34.7**	**-0.8**
CLL				*e*			12 35 05.0	
CLL				pmax	pmax			
	comp=Z,28nm,0.5s							
CLL	**Collm**	**1.96**	**266**	*i* Pn		**Pn**	**12 34 34.7**	**-0.8**
	comp=Z,28nm,0.5s							
CLL				*e*Pg		**Pg**	**12 34 38.0**	**-0.5**
CLL				*ex*		x	12 34 41.0	
CLL				*e*Sg		**Sg**	**12 35 05.0**	**+1.1**
	comp=Z,221nm,0.6s							
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*Pn		**Pn**	**12 34 37.2**	**-0.2**
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*P		**Pg**	**12 34 40.7**	**-0.5**
OKC				*e*			12 35 07.3	
OKC				smax				
	comp=N,371nm,0.9s							
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*PG		**Pg**	**12 34 40.7**	**-0.5**
OKC				*e*SG		**Sg**	**12 35 07.3**	**-1.1**
	comp=Z,371nm,0.9s							
VRAC	**Vranov**	**2.20**	**172**	Pn		**Pn**	**12 34 39.7**	**+0.8**
	comp=Z,14nm,0.3s,baz=350,slow=13,SNR=15							
VRAC				Lg			12 35 10.6	
	comp=Z,23nm,0.3s,baz=80,slow=17,SNR=9.5							
VRAC	**Vranov**	**2.20**	**172**	*e*Pn		**Pn**	**12 34 39.1**	**+0.3**
VRAC				*e*Sg		**Sg**	**12 35 11.4**	**-0.3**
	comp=Z,98nm,0.5s							
VRAC	**Vranov**	**2.20**	**172**	⇓*i*P		**Pn**	**12 34 39.3**	**+0.5**
VRAC				S		**Sg**	**12 35 11.6**	**-0.1**
TREC	**Trest**	**2.23**	**191**	*e*PN		**Pn**	**12 34 40.5**	**+1.3**
TREC				*e*PG		**Pg**	**12 34 43.6**	**-0.2**
KRUC	**Moravsky**	**2.43**	**176**	*e*Pn		**Pn**	**12 34 42.4**	**+0.4**
KRUC				*e*Sg		**Sg**	**12 35 18.6**	**-0.6**
	comp=Z,96nm,0.7s							
TANN	**Tannenbergstha**	**2.54**	**247**	*e*Pn		**Pn**	**12 34 44.0**	**+0.4**
WERD	**Werda**	**2.62**	**248**	*e*Pn		**Pn**	**12 34 44.7**	**+0.1**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg		**Pg**	**12 34 51.5**	**-0.5**
OJC				*e*SN		**Sn**	**12 35 21.5**	**-1.5**
KHC				*e*SG		**Sg**	**12 35 31.1**	**-1.9**
	comp=Z,45nm,0.4s							
MGBB	**Grossbuechelbe**	**2.90**	**240**	⇓*i*Pn		**Pn**	**12 34 48.9**	**+0.4**
MANZ	**Manzenberg**	**2.95**	**241**	*e*Pn		**Pn**	**12 34 50.1**	**+0.9**
MOX	**Moxa**	**2.96**	**255**	*e*Pn		**Pn**	**12 34 49.5**	**+0.2**
MOX				*e*Pg		**Pg**	**12 34 57.8**	**0.0**
MOX				*e*Sg		**Sg**	**12 35 37.4**	**+1.3**
MOX	**Moxa**	**2.96**	**255**	*e*PN		**Pn**	**12 34 50.8**	**+1.6**
MOX				*e*PG		**Pg**	**12 34 57.8**	**0.0**
MOX				*e*SG		**Sg**	**12 35 37.4**	**+1.3**
MOX	**Moxa**	**2.96**	**255**	*e*P		**Pn**	**12 34 50.8**	**+1.6**
ROTZ	**Rotzenmuhle**	**3.02**	**237**	*e*Pn		**Pn**	**12 34 50.5**	**+0.3**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn		**Pn**	**12 34 51.3**	**+0.6**
GERES	**GERESS Array B**	**3.06**	**211**	Pn		**Pn**	**12 34 51.1**	**+0.4**
	comp=Z,4.5nm,0.3s,baz=32,slow=12,SNR=65							
GERES				Pg		**Pg**	**12 34 57.8**	**-2.0**
	comp=Z,7.8nm,0.3s,baz=35,slow=16,SNR=47							
GERES				Lg			12 35 38.1	
	comp=Z,14nm,0.3s,baz=38,slow=27,SNR=8.1							
GERES	**GERESS Array B**	**3.06**	**211**	Pg		**Pg**	**12 34 57.8**	**-2.0**
WET	**Wettzell**	**3.13**	**223**	*e*Pn		**Pn**	**12 34 52.3**	**+0.7**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*Pn		**Pn**	**12 34 55.1**	**+2.5**
MODS				*e*Pg		**Pg**	**12 35 02.5**	**0.0**
MODS				*e*Sg		**Sg**	**12 35 43.5**	**-0.5**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*P		**Pn**	**12 34 55.1**	**+2.5**
MODS				*e*			12 35 43.5	
MODS				pmax	pmax			
	comp=N,21nm,0.6s							
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PN		**Pn**	**12 34 55.1**	**+2.5**
MODS				*e*PG		**Pg**	**12 35 02.5**	**0.0**
MODS				*e*SG		**Sg**	**12 35 43.5**	**-0.5**
KOLL	**Kolacno**	**3.26**	**152**	*e*PG		**Pg**	**12 35 01.7**	**-1.9**
KOLL				*e*SG		**Sg**	**12 35 46.7**	**+0.9**
ZST	**Bratislava**	**3.35**	**169**	*e*SG		**Sg**	**12 35 48.5**	**-0.3**
NIE	**Niedzica**	**3.39**	**126**	*e*P		**Pg**	**12 35 05.0**	**-1.0**
NIE				*e*S		**Sg**	**12 35 48.5**	**-1.4**
VYHS	**Vyhne**	**3.47**	**149**	*e*PN		**Pn**	**12 34 56.0**	**-0.3**
VYHS				*e*PG		**Pg**	**12 35 06.8**	**-0.8**
VYHS				*e*SG		**Sg**	**12 35 54.1**	**+1.6**
CONA	**Conrad Observa**	**3.56**	**183**	⇑*i*Pn		**Pn**	**12 34 58.5**	**+0.9**
	comp=N,5.6nm,0.4s							
CONA				⇓*i*Sg		**Sg**	**12 35 52.1**	**-3.4**
	comp=N,65nm,0.5s							
CSNA	**Conrad Observa**	**3.56**	**183**	⇑*i*Pn		**Pn**	**12 34 58.6**	**+1.0**
	comp=N,2.3nm,0.2s							
CSNA				⇑*i*Sg		**Sg**	**12 35 52.1**	**-3.4**
	comp=N,62nm,0.5s							
GRA1	**Grafenberg Arr**	**3.60**	**242**	Sg		**Sg**	**12 35 57.9**	**+1.4**
GRF	**Grafenberg Arr**	**3.60**	**242**	*e*Sg		**Sg**	**12 35 57.9**	**+1.4**
SOP	**Sopron**	**3.82**	**175**	⇑*e*PB		**Pb**	**12 35 10.1**	**+0.9**
SOP				*e*SB		**Sb**	**12 35 59.2**	**+3.2**
MOA	**Molln**	**3.83**	**199**	⇑*i*Pn		**Pn**	**12 35 02.1**	**+0.8**
	comp=N,14nm,0.4s							
MOA				⇑*i*Sg		**Sg**	**12 35 59.0**	**-5.1**
	comp=N,43nm,0.5s							
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*P		**Pn**	**12 35 02.6**	**+0.7**
STHS				pmax	pmax			
	comp=N,71nm,0.8s							
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PN		**Pn**	**12 35 02.6**	**+0.7**
STHS				*e*PG		**Pg**	**12 35 16.0**	**+0.6**
STHS				*e*SG		**Sg**	**12 36 07.1**	**+1.5**
HROE	**Hohe Rhon--Fla**	**3.88**	**258**	⇓*i*Pn		**Pn**	**12 35 02.0**	**+0.1**
PENC	**Penc**	**4.23**	**150**	⇑*e*Pn		**Pn**	**12 35 07.4**	**+0.6**
ARSA	**Arzberg**	**4.26**	**185**	⇑*e*Pn		**Pn**	**12 35 08.2**	**+1.1**
	comp=N,8.1nm,0.3s							
ARSA				⇓Sg		**Sg**	**12 36 17.0**	**-0.7**
	comp=N,84nm,0.7s							
PSZ	**Piszkesteto**	**4.33**	**144**	*e*P		**Pn**	**12 35 09.0**	**+0.9**
PSZ				⇓P			12 35 25.5	
PSZ	**Piszkesteto**	**4.33**	**144**	⇓*e*Pn		**Pn**	**12 35 09.1**	**+1.0**
PSZ				*e*Sg		**Sg**	**12 36 30.2**	**+10**
PSZ	**Piszkesteto**	**4.33**	**144**	*e*P		**Pn**	**12 35 09.0**	**+0.9**
PSZ	**Piszkesteto**	**4.33**	**144**	⇓*i*P		**Pg**	**12 35 25.5**	**+1.4**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pg		**Pg**	**12 35 26.0**	**-3.1**
KWP				*e*Sg		**Sg**	**12 36 33.9**	**+5.2**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pg		**Pg**	**12 35 26.0**	**-3.1**
KWP				*e*Sg		**Sg**	**12 36 33.9**	**+5.3**
KWP	**Kalwaria**	**4.60**	**111**	⇓*i*P		**Pg**	**12 35 24.8**	**-4.3**
KWP	**Kalwaria**	**4.60**	**111**	S		**Sg**	**12 36 36.3**	**+7.7**
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*PN		**Pn**	**12 35 13.1**	**-0.2**
KBA	**Koelnbreinsper**	**4.77**	**203**	⇑*i*Pn		**Pn**	**12 35 15.4**	**+1.3**
	comp=N,10nm,0.4s							
SOKA	**Soboth**	**4.86**	**189**	⇑*i*Pn		**Pn**	**12 35 17.5**	**+2.1**
SOKA				⇑*e*Sg		**Sg**	**12 36 33.7**	**-3.5**
TOD	**Tromm**	**5.03**	**251**	P		**Pn**	**12 35 15.3**	**-2.3**
TOD				S		**Sn**	**12 36 14.1**	**-2.3**
OBKA	**Obir**	**5.08**	**192**	⇑*i*Pg		**Pg**	**12 35 36.2**	**-2.2**
	comp=N,4.5nm,0.3s							
OBKA				⇓*e*Sg		**Sg**	**12 36 43.0**	**-1.3**
	comp=N,52nm,0.9s							
WATA	**Walderalm**	**5.10**	**217**	⇑*i*Pn		**Pn**	**12 35 18.4**	**-0.2**
	comp=N,14nm,0.6s							
MYKA	**Terra Mystica**	**5.12**	**199**	⇑*i*Pn		**Pn**	**12 35 19.9**	**+0.9**
	comp=N,2.6nm,0.3s							
MYKA				⇑*e*Sg		**Sg**	**12 36 43.6**	**-2.0**
	comp=N,43nm,0.8s							
WTTA	**Wattenberg**	**5.14**	**216**	⇑*i*Pn		**Pn**	**12 35 20.9**	**+1.8**
	comp=N,13nm,0.7s							
WTTA				⇑*i*Sg		**Sg**	**12 36 42.6**	**-3.4**
	comp=N,37nm,0.6s							
WTTA	**Wattenberg**	**5.14**	**216**	Pn		**Pn**	**12 35 20.9**	**+1.7**
	comp=N,13nm,0.7s							
WTTA				Sg		**Sg**	**12 36 42.6**	**-3.4**
	comp=N,37nm,0.6s							
MOTA	**Moosalm**	**5.28**	**220**	⇑*i*Pn		**Pn**	**12 35 21.1**	**+0.1**
	comp=N,4.1nm,0.3s							
MOTA				⇑*e*Sg		**Sg**	**12 36 50.7**	**+0.2**
	comp=N,18nm,0.6s							
MOTA	**Moosalm**	**5.28**	**220**	Pn		**Pn**	**12 35 21.1**	**0.0**
	comp=N,4.1nm,0.3s							
MOTA				Sg		**Sg**	**12 36 50.7**	**+0.2**
	comp=N,18nm,0.6s							
ABTA	**Abfaltersbach**	**5.30**	**208**	⇑*i*Pn		**Pn**	**12 35 23.1**	**+1.7**
	comp=N,5.0nm,0.3s							
RETA	**Reutte**	**5.31**	**223**	⇑*e*Pn		**Pn**	**12 35 21.9**	**+0.4**
RETA				⇑*i*Sg		**Sg**	**12 36 47.5**	**-3.9**
	comp=N,7.1nm,0.2s							
LVV	**L'vov**	**5.31**	**105**	*e*P		**Pn**	**12 35 29.3**	**+7.8**
LVV				*e*			12 36 22.1	
LVV	**L'vov**	**5.31**	**105**	*e*S		**Sn**	**12 36 22.1**	**-1.2**
PKSM	**Moragy**	**5.54**	**161**	⇑P		**Pn**	**12 35 24.8**	**+0.1**
PKSM	**Moragy**	**5.54**	**161**	⇑*e*P		**Pn**	**12 35 26.3**	**+1.7**
PKSM	**Moragy**	**5.54**	**161**	⇑*i*P		**Pn**	**12 35 24.8**	**+0.2**
ABH	**Alteburg**	**5.68**	**257**	P		**Pn**	**12 35 27.2**	**+0.6**
FETA	**Feichten**	**5.69**	**220**	⇑*i*Pn		**Pn**	**12 35 27.6**	**+0.9**
	comp=N,2.4nm,0.4s							
FETA				⇓*e*Sg		**Sg**	**12 36 59.0**	**-4.7**
	comp=N,34nm,1.2s							
DAVA	**Damuels**	**5.85**	**226**	⇑*e*Pn		**Pn**	**12 35 28.8**	**-0.1**
	comp=N,4.8nm,0.4s							
DAVA				⇑*e*Sg		**Sg**	**12 36 56.9**	**-12**
	comp=N,16nm,0.6s							
LANF	**Langenberg**	**5.89**	**248**	P		**Pn**	**12 35 28.5**	**-1.0**
LANF	**Langenberg**	**5.89**	**248**	P		**Pn**	**12 35 30.8**	**+1.3**
RUP	**Ruppelstein**	**6.04**	**256**	P		**Pn**	**12 35 29.1**	**-2.4**
DAVOS	**Davos**	**6.23**	**224**	P		**Pn**	**12 35 34.6**	**+0.5**
DAVOX	**Davos/Dischmat**	**6.24**	**223**	Pn		**Pn**	**12 35 34.6**	**+0.4**
	comp=N,1.4nm,0.3s,baz=39,slow=16,SNR=4.1							
DAVOX				Lg			12 37 19.8	
	comp=N,1.5nm,0.3s,baz=174,slow=22,SNR=3.0							
DAVOX	**Davos/Dischmat**	**6.24**	**223**	Pn		**Pn**	**12 35 34.6**	**+0.4**
DAVOX				Lg			12 37 19.8	
DRGR			**6.39**	**135**	⇓*i*P	**Pn**	**12 35 36.8**	**+0.5**
CDF	**Champ du Feu**	**6.48**	**245**	*e*Pn		**Pn**	**12 35 35.3**	**-2.3**
CDF				*e*Sg		**Sg**	**12 37 19.5**	**-10**
	comp=N,61nm,0.9s							
HINF	**Hinteralfeld**	**7.04**	**242**	*e*Pn		**Pn**	**12 35 42.5**	**-2.8**
HINF				*e*Sg		**Sg**	**12 37 32.7**	**-10**
	comp=N,34nm,0.8s							
BUR08	**Bucovina Ar. S**	**7.05**	**119**	*e*P		**Pn**	**12 35 45.7**	**+0.3**
BURAR	**Bucovina Array**	**7.08**	**120**	⇑P		**Pn**	**12 35 47.0**	**+1.2**
BURAR	**Bucovina Array**	**7.08**	**120**	⇑*i*P		**Pn**	**12 35 47.0**	**+1.2**
HAU	**Haudompre**	**7.22**	**245**	*e*Sg		**Sg**	**12 37 42.2**	**-11**
	comp=N,19nm,0.6s							
GIVF	**Givet**	**7.29**	**263**	*e*Sg		**Sg**	**12 37 46.3**	**-8.7**
	comp=N,67nm,1.1s							
CABF	**La Chapelle**	**8.19**	**237**	*e*Sg		**Sg**	**12 38 12.4**	**-12**
	comp=N,80nm,1.1s							
KIEV	**Kiev**	**8.29**	**90**	*e*P		**Pn**	**12 36 02.0**	**-0.4**
	comp=N,7.3nm,0.6s							
KIEV	**Kiev**	**8.29**	**90**	*e*P		**Pn**	**12 36 02.0**	**-0.4**
KIEV				pmax	pmax			
	comp=Z,7.0nm,0.6s							
AKASG	**Malin Array Be**	**8.29**	**90**	Pn		**Pn**	**12 36 00.6**	**-1.9**
	comp=Z,3.0nm,0.3s,baz=278,slow=12,SNR=11							
AKASG				Sn		**Sn**	**12 37 30.1**	**-6.6**
	comp=Z,1.5nm,0.3s,baz=271,slow=22,SNR=3.1							
AKASG				Lg			12 38 27.3	
	comp=Z,0.6nm,0.3s,baz=278,slow=29,SNR=3.5							
AKASG	**Malin Array Be**	**8.29**	**90**	P		**Pn**	**12 36 00.6**	**-1.9**
AKASG							12 37 30.2	
AKASG	**Malin Array Be**	**8.29**	**90**	Pn		**Pn**	**12 36 00.6**	**-1.9**
AKASG				Sn		**Sn**	**12 37 30.1**	**-6.7**
LPG	**La Plagne**	**8.63**	**230**	*e*Sg		**Sg**	**12 38 25.7**	**-12**
	comp=Z,54nm,1.2s							
HFS	**Hagfors**	**8.78**	**352**	Pn		**Pn**	**12 36 06.9**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=162,slow=15,SNR=4.1							
HFS				Sn		**Sn**	**12 37 42.6**	**-6.0**
	comp=Z,0.2nm,0.3s,baz=165,slow=29,SNR=2.7							
HFS				Lg			12 38 37.9	
	comp=Z,0.2nm,0.3s,baz=138,slow=30,SNR=2.4							
HFS	**Hagfors**	**8.78**	**352**	Pn		**Pn**	**12 36 06.9**	**-2.1**
HFS				Sn		**Sn**	**12 37 42.6**	**-5.9**
LOR	**Lormes**	**9.04**	**247**	*e*Pn		**Pn**	**12 36 09.9**	**-2.8**
baz=67								
MBDF	**Montbardon**	**9.20**	**226**	*e*P		**Pn**	**12 36 17.5**	**+2.6**
SBF	**Sospel**	**9.61**	**221**	*e*Pn		**Pn**	**12 36 17.1**	**-3.4**
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn		**Pn**	**12 36 50.6**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=109,slow=14,SNR=3.1							
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn		**Pn**	**12 38 15.5**	**-4.7**
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=13							
AKTO	**Aktyubinsk**	**26.16**	**76**	P		**P**	**12 39 36.3**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.6,baz=284,slow=11,SNR=4.3							
AKTO	**Aktyubinsk**	**26.16**	**76**	P		**P**	**12 39 36.3**	**-0.5**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.5							
TORD	**Torodi Ar. Bea**	**39.98**	**202**	P		**P**	**12 41 37.4**	**+0.2**
	comp=Z,0.9nm,0.9s,mb3.4,baz=4.9,slow=8.2,SNR=4.2							
ZALV	**Zalesovo Beam**	**40.21**	**59**	P		**P**	**12 41 38.7**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=282,slow=7.4,SNR=2.9							
MKAR	**Makanchi Array**	**42.22**	**69**	P		**P**	**12 41 55.9**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.2,baz=292,slow=7.3,SNR=3.7							
SONM	**Songino Array**	**54.93**	**55**	P		**P**	**12 43 33.5**	**+0.2**
	comp=Z,0.3nm,0.9s,mb3.3,baz=294,slow=7.4,SNR=4.3							
PDAR	**Pinedale Array**	**74.96**	**322**	P		**P**	**12 45 44.2**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.6,baz=46,slow=3.9,SNR=3.2							

*DDA **06** 12:45:17.3, 3871N×3809E, h7km±4km, Md2.8*
*CSEM **06** 12:45:18.9±0.1, 3885N×3836E, h30km, MD2.9, Error ellipse: s-maj=3.4km s-min=2.0km az=11.0*

ISK 06 12:45:17.1, 3875N×3815E, h23km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.33**	**306**	*e*PG	Pb	12 45 29.1	+4.6
DARE				*e*SG	Sb	12 45 37.0	+7.5
AKCD	**Akcadag**	**0.49**	**201**	*e*P	Pb	12 45 25.2	-1.9
AKCD				*e*S	Sb	12 45 33.3	-0.6
KEMA	**Kemaliye**	**0.58**	**27**	*e*P	Pb	12 45 29.8	+1.2
KEMA				*e*S	Sb	12 45 39.5	+3.1
ELZG	**Elazig**	**0.70**	**111**	*e*P	Pb	12 45 29.8	-0.8
ELZG				*e*S	Sb	12 45 42.2	+2.3
PTK	**Pertek**	**0.98**	**82**	*e*PG	Pb	12 45 35.7	+0.4
PTK				*e*SG	Sb	12 45 49.9	+2.0
SVRC	**Sivrice-ELAZID**	**0.98**	**112**	*e*PG	Pb	12 45 35.8	+0.4
SVRC				*e*SG	Sb	12 45 49.5	+1.6
SARI	**SarD1z-Kayseri**	**1.14**	**267**	*e*PN	Pn	12 45 41.9	+4.3
SVSK	**Karacayir**	**1.47**	**323**	*e*PN	Pn	12 45 42.5	+0.4

*NEIC **06** 12:48:49.6, 3381S×6843W, h4km, ML3.5(GUC), After GUC.*

GUC 06 12:48:49.6±0.8, 3381S×6843W, h4km±14km, MD3.8, ML3.5,1C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YECH	**El Yeso**	**1.39**	**276**	⇑*i*P	Pn	12 49 15.7	0.0
YECH				*e*S	Sb	12 49 35.2	+1.1
YECH				AML	AML	12 49 37.4	
	comp=N,3μm,0.4s						
LMEL	**Las Melosas**	**1.48**	**268**	⇓*i*P	Pn	12 49 17.5	+0.6
LMEL				*i* S	Sn	12 49 38.0	+1.3
LMEL	**Las Melosas**	**1.48**	**268**	⇓*i*P	Pn	12 49 17.5	+0.6
LMEL				*i* S	Sn	12 49 38.0	+1.3
LMEL				AML	AML	12 49 38.5	
	comp=N,655nm,0.2s						
FCH	**Farellones**	**1.63**	**287**	AML	AML	12 49 43.9	
	comp=E,447nm,0.2s						
CICH	**Cipreses**	**1.73**	**252**	*i* P	Pn	12 49 21.9	+1.5
CICH				*i* S	Sn	12 49 45.7	+2.8
PCH	**Pirque**	**1.75**	**276**	⇓*i*P	Pn	12 49 21.6	+0.9
PCH				*i* S	Sn	12 49 46.4	+2.9
CLCH	**Cerro Calan**	**1.81**	**283**	*e*P	Pn	12 49 22.1	+0.6
CLCH				*i* S	Sn	12 49 47.9	+3.0
CLCH				AML	AML	12 49 50.7	
	comp=E,787nm,0.8s						
CLCH				AML	AML	12 49 51.3	
	comp=E,919nm,0.8s						
CACH	**El Canelo**	**1.83**	**260**	*e*P	Pn	12 49 23.0	+1.2
CACH				*i* S	Sn	12 49 48.0	+2.6
ANTU	**Antumapu**	**1.85**	**277**	AML	AML	12 49 50.2	
	comp=E,1μm,0.6s						
CHCH	**Chadas Angostu**	**1.85**	**266**	⇓*i*P	Pn	12 49 23.5	+1.3
PEL	**Peldehue**	**2.00**	**289**	*e*P	Pn	12 49 24.5	+0.3
PEL				*i* S	Sn	12 49 52.5	+2.9
PEL				AML	AML	12 50 05.2	
	comp=N,508nm,0.4s						
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.71**	**244**	P	P	13 36 59.4	-0.8
	1.7nm,0.8s,baz=90,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**42.26**	**257**	P	P	13 37 55.0	-0.2
	1.9nm,0.8s,baz=87,slow=8.3,SNR=19						
WRA	**Warramunga Arr**	**42.30**	**263**	P	P	13 37 56.2	+0.6
	0.7nm,0.4s,baz=96,slow=7.8,SNR=62						

MAN 06 13:38:28, 1326N×12178E, h26km, mb4.0, ML2.8, MS2.5, Mindoro

ISK ***06*** *13:42:20.8, 3702N×3886E, h4km, MD3.0*
ISCJB ***06*** *13:42:21.8±1.6, 3703N±006×3882E±006, h1km±8km, Error ellipse: s-maj=10.7km s-min=7.8km az=159.4*
CSEM ***06*** *13:42:21.0±0.3, 3703N×3886E, h5km, MD3.0, Error ellipse: s-maj=6.0km s-min=2.8km az=139.0*
DDA ***06*** *13:42:22.9, 3706N×3881E, h7km±7km, Md3.1*
ISC 06 13:42:22.5±1.5, 3704N±006×3882E±006, h4km±7km, n11, σ0s73/17, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.40**	**1**	*e*PG	**Pg**	**13 42 29.5**	**-0.7**
URFA				*e*SG	**Sg**	**13 42 36.2**	**+0.8**
ATAB	**Bozova**	**0.60**	**316**	*e*P	**Pg**	**13 42 34.4**	**+0.5**
ATAB				*e*S	**Sg**	**13 42 41.2**	**-0.5**
GZT	**Gaziantep**	**1.05**	**288**	*e*P	**Pg**	**13 42 42.9**	**+0.3**
GAZ	**Gaziantep**	**1.29**	**276**	*e*PN	**Pn**	**13 42 47.1**	**-0.1**
GAZ				*e*SN	**Sn**	**13 43 05.6**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.39**	**16**	*e*PN	**Pn**	**13 42 48.0**	**-0.6**
SVRC				*e*SN	**Sn**	**13 43 07.5**	**+0.1**
AKCD	**Akcadag**	**1.44**	**331**	*e*P	**Pn**	**13 42 49.9**	**+0.7**
AKCD				*e*S	**Sb**	**13 43 08.8**	**+0.3**
MARD	**Mardin**	**1.59**	**80**	⇓*i*P	**Pn**	**13 42 52.2**	**+0.9**
MARD				*i* S	**Sn**	**13 43 17.5**	**+5.2**
KMRS	**Kahramanmaras**	**1.60**	**287**	*e*PN	**Pn**	**13 42 50.5**	**-0.9**
PTK	**Pertek**	**1.91**	**14**	*e*PN	**Pn**	**13 42 55.3**	**-0.4**
DARE	**Darende-Malaty**	**2.07**	**338**	*e*PN	**Pn**	**13 42 54.8**	**-3.1**
SARI	**SarD1z-Kayseri**	**2.34**	**315**	*e*PN	**Pn**	**13 43 01.5**	**-0.1**

ISCJB ***06*** *13:47:42.5±1.3, 3661N±010×704E±04, h200km, Error ellipse: s-maj=44.8km s-min=8.2km az=165.7*
NNC ***06*** *13:47:46.0±5.2, 3731N×6889E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=56.6km s-min=39.6km az=111.0*
ISC 06 13:47:43.3±1.2, 3663N±010×705E±04, h200km, n4, σ0s91/6, 4C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.04**	**157**	P	**Pn**	**13 48 32.4**	**-1.0**
CEP				S	**Sn**	**13 49 13.0**	**+0.5**
KK31	**Karatay Array**	**6.47**	**0**	⇑Pn	**Pn**	**13 49 17.3**	**+0.8**
	1.0nm,0.4s,baz=193,slow=14,SNR=72						
KK31				⇑Sn	**Sn**	**13 50 30.0**	**-0.4**
	0.5nm,0.3s,baz=234,slow=25,SNR=3.6						
AB08	**Akbulak array**	**14.76**	**332**	⇑Sn	**Sn**	**13 53 33.6**	**-14**
	0.5nm,0.7s						
AB09	**Akbulak array**	**14.78**	**332**	⇑Pn	**Pn**	**13 51 02.7**	**0.0**
	0.5nm,0.5s						

LDG ***06*** *13:53:25.5±0.2, 1536S×16699E, h100km, Mb5.3/3, Error ellipse: s-maj=23.8km s-min=4.8km az=88.0*
NOU ***06*** *13:53:26.9±1.3, 1547S×16766E, h30km, MD3.3*
ISCJB ***06*** *13:53:27.0±1.0, 1568S±004×16769E±006, h144km±9km, mb5.1/62, Error ellipse: s-maj=10.0km s-min=6.5km az=158.5*
MOS ***06*** *13:53:26.6±1.5, 1543S×16744E, h123km, mb5.1/18, Error ellipse: s-maj=11.6km s-min=8.8km az=129.5*
BJI ***06*** *13:53:27.6, 1496S×16760E, h123km, mB5.0, mb5.2*
DJA ***06*** *13:53:28, 16.13S×16833E, h176km, mb5.2/15*
NEIC ***06*** *13:53:29.8±1.5, 1560S×16763E, h151km±12km, mb5.1/23, Error ellipse: s-maj=9.2km s-min=7.9km az=104.0*
IDC ***06*** *13:53:29.1±2.4, 1563S×16764E, h146km±20km, mb4.6/20, mb1 4.6/22, mb1mx4.6/24, mbtmp4.6/22, MS3.5/5, Ms1 3.5/5, ms1mx2.9/25, Error ellipse: s-maj=13.7km s-min=9.8km az=84.0*
GCMT ***06*** *13:53:29.8±0.3, 1558S×16756E, h133km±3km, MW5.0/68, Moment Tensor Solution. s29,c32; s68,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.25±.13; Mθθ0.80±.16; Mφφ-4.05±.15; Mrθ0.95±.13; Mrφ-0.32±.23; Mθφ-1.29±.14; Best double couple: M=4.03700×10^16 NP1: ϕs166.00000°, δ57.00000°, λ68.00000°. NP2: ϕs23.00000°, δ39.00000°, λ120.00000°. Principal axes: T 3.7990, Plg69.0000°, Azm28.0000°; N 0.4740, Plg18.0000°, Azm179.0000°; P -4.2760, Plg10.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 06 13:53:27.3±0.9, 1566S±004×16775E±006, h133km±7km, h142km±3.6km; pP-P, n322, σ0s99/124, mb5.1/63, 55C-15D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.50**	**191**	*e*P	**Pn**	**13 55 00.4**	**-0.2**
DZM				*e*S	**Sn**	**13 56 12.2**	**-1.2**
NOUC	**Port Laguerre**	**6.55**	**192**	*e*P	**Pn**	**13 55 02.0**	**+0.6**
NOUC				*e*S	**Sn**	**13 56 12.3**	**-2.5**
NORM	**Noumea**	**6.64**	**190**	*e*P	**Pn**	**13 55 04.2**	**+1.6**
NORM				*e*S	**Sn**	**13 56 15.7**	**-1.2**
PLUM	**Mont Dore**	**6.66**	**189**	*e*P	**Pn**	**13 55 04.2**	**+1.3**
PLUM				*e*S	**Sn**	**13 56 14.9**	**-2.6**
ONTRN	**Noumea**	**6.73**	**190**	*e*P	**Pn**	**13 55 05.1**	**+1.4**
HNR	**Honiara**	**9.82**	**308**	P	**Pn**	**13 55 45.1**	**-0.2**
	10nm,0.3s,baz=111,slow=4.3,SNR=9.5						
HNR				S	**Sn**	**13 57 33.5**	**-0.2**
	9.7nm,0.3s,baz=50,slow=17,SNR=3.0						
HNR				LR	LR	13 58 04.2	
	comp=Z,82nm,21.2s,baz=359,slow=28						
HNR	**Honiara**	**9.82**	**308**	*e*P	**Pn**	**13 55 45.5**	**+0.2**
	316nm,1.0s						
HNR	**Honiara**	**9.82**	**308**	*e*P	**Pn**	**13 55 45.5**	**+0.3**
HNR				pmax	pmax		
	comp=Z,316nm,1.0s						
EIDS	**Eidsvold**	**18.35**	**236**	⇓*i*P	**P**	**13 57 33.3**	**+1.7**
	comp=Z,273nm,0.8s						
AFI	**Afiamalu**	**19.87**	**88**	P	**P**	**13 57 51.5**	**+3.3**
	comp=Z,2.2nm,0.3s,baz=74,slow=21,SNR=4.7						
ARMA	**Armidale**	**20.84**	**222**	*e*P	**P**	**13 58 00.7**	**+2.1**
CTA	**Charters Tower**	**20.93**	**255**	*e*P	**P**	**13 58 00.0**	**+0.4**
	comp=Z,22nm,0.7s						
CTA	**Charters Tower**	**20.93**	**255**	P	**P**	**13 58 00.1**	**+0.5**
	comp=Z,24nm,0.8s,baz=81,slow=12,SNR=26						
CTA				PcP	PcP	14 02 02.8	+0.7
	comp=Z,4.4nm,0.8s,baz=55,slow=2.6,SNR=3.6						
CTA	**Charters Tower**	**20.93**	**255**	*e*P	**P**	**13 58 00.0**	**+0.4**
CTA				pmax	pmax		
	comp=Z,22nm,0.7s						
CTAO	**Charters Tower**	**20.93**	**255**	*e*P	**P**	**13 57 59.8**	**+0.3**
	comp=Z,33nm,0.8s						
CTAO	**Charters Tower**	**20.93**	**255**	*e*P	**P**	**13 57 59.8**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,33nm,0.8s						
CTAO	**Charters Tower**	**20.93**	**255**	P	**P**	**13 58 00.3**	**+0.7**
	comp=Z,63nm,1.2s						
PMG	**Port Moresby**	**21.03**	**285**	*e*P	**P**	**13 58 02.1**	**+1.4**
	comp=Z,56nm,1.3s,mb4.7						
PMG	**Port Moresby**	**21.03**	**285**	*e*P	**P**	**13 58 02.1**	**+1.4**
PMG				pmax	pmax		
	comp=Z,56nm,1.3s						
PMG	**Port Moresby**	**21.03**	**285**	P	**P**	**13 58 05.0**	**+4.3**
	comp=Z,42nm,1.6s,comp=Z,432nm,mb4.5						
COEN	**Coen**	**23.82**	**271**	*e*P	**P**	**13 58 28.2**	**0.0**
	comp=Z,20nm,1.3s,mb4.5						
COEN	**Coen**	**23.82**	**271**	P	**P**	**13 58 29.6**	**+1.4**
	comp=Z,17nm,1.6s,mb4.3						
URZ	**Urewera**	**23.98**	**162**	P	**P**	**13 58 30.5**	**+1.1**
	comp=Z,17nm,0.8s,mb4.6,baz=7.6,slow=2.6,SNR=9.2						
URZ				S	**S**	**14 02 37.4**	**+0.8**
	comp=Z,5.7nm,0.9s,baz=169,slow=24,SNR=2.2						
URZ				LR	LR	14 05 55.6	
	comp=Z,147nm,20.9s,baz=120,slow=31						
RPZ	**Rata Peaks**	**28.11**	**175**	P	**P**	**13 59 07.8**	**+1.3**
	comp=Z,14nm,0.6s,mb4.9,baz=332,slow=4.3,SNR=13						
RPZ				LR	LR	14 08 04.9	
	comp=Z,188nm,19.6s,baz=237,slow=31						
RPZ	**Rata Peaks**	**28.11**	**175**	P	**P**	**13 59 07.8**	**+1.3**
RPZ				LR	LR	14 08 04.9	
STKA	**Stephens Creek**	**28.76**	**231**	*e*P	**P**	**13 59 13.3**	**+0.8**
	comp=Z,7.4nm,0.5s,mb4.7						
STKA				*e*PCP	PcP	14 02 19.6	+0.2
STKA	**Stephens Creek**	**28.76**	**231**	P	**P**	**13 59 13.2**	**+0.6**
	comp=Z,9.9nm,0.6s,mb4.7,baz=42,slow=6.4,SNR=32						
STKA				PcP	PcP	14 02 19.3	-0.1
	comp=Z,14nm,0.9s,baz=67,slow=5.5,SNR=5.7						
STKA				LR	LR	14 09 40.7	
	comp=Z,83nm,18.9s,baz=30,slow=34						
WB2	**Warramunga Arr**	**32.06**	**257**	*e*P	**P**	**13 59 40.1**	**-1.6**
WRAB	**Tennant Creek**	**32.06**	**257**	*e*P	**P**	**13 59 40.4**	**-1.3**
	comp=Z,12nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**32.06**	**257**	*e*P	**P**	**13 59 40.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**32.06**	**257**	P	**P**	**13 59 42.3**	**+0.6**
	comp=Z,16nm,1.7s,mb4.5						
WRA	**Warramunga Arr**	**32.07**	**257**	P	**P**	**13 59 40.1**	**-1.6**
	comp=Z,3.2nm,0.6s,mb4.2,baz=81,slow=6.1,SNR=79						
WRA				PcP	PcP	14 02 27.7	-0.6
	comp=Z,5.8nm,0.7s,baz=91,slow=3.0,SNR=7.7						
WRA				LR	LR	14 11 57.1	
	comp=Z,106nm,19.4s,baz=90,slow=35						
WRA	**Warramunga Arr**	**32.07**	**257**	P	**P**	**13 59 40.1**	**-1.7**
WRA						14 02 27.7	
ASAR	**Alice Springs**	**32.79**	**251**	P	**P**	**13 59 47.3**	**-0.8**
	comp=Z,18nm,0.7s,mb4.9,baz=80,slow=8.7,SNR=270						
FORT	**Forrest**	**39.24**	**240**	*e*P	**P**	**14 00 43.0**	**+0.1**
	comp=Z,31nm,0.8s,mb5.0						
PPT	**Papeete**	**40.87**	**99**	*e*LR	LR	14 12 24.1	
	comp=Z,243nm,29.0s						
BATI	**Baumata**	**43.25**	**272**	P	**P**	**14 01 16.6**	**+0.7**
	comp=Z,52nm,0.8s,mb5.2,baz=267,slow=2.2,SNR=2.7						
KLBR	**Kellerberrin**	**48.07**	**241**	*e*P	**P**	**14 01 52.9**	**-0.6**
	comp=Z,54nm,1.4s,mb5.0						
KAPI	**Kappang**	**48.28**	**277**	P	**P**	**14 01 54.4**	**-1.0**
	comp=Z,23nm,0.8s,mb4.8,baz=120,slow=5.7,SNR=13						
NWAO	**Narrogin (SRO)**	**48.68**	**240**	P	**P**	**14 01 57.5**	**-0.7**
	comp=Z,31nm,0.9s,mb4.9,baz=64,slow=4.7,SNR=8.6						
CBIJ	**Chichi jima**	**49.22**	**329**	P	**P**	**14 02 01.1**	**-1.2**
	comp=Z,113nm,0.8s,mb5.6,baz=225,slow=3.6,SNR=5.1						
PCI	**Palu**	**49.48**	**283**	P	**P**	**14 02 05.9**	**+1.4**
	comp=Z,116nm,1.0s,comp=Z,1μm,mb5.5						
SJI	**Sawahan**	**55.26**	**271**	P	**P**	**14 02 48.4**	**+1.2**
BJII	**Banjamegara**	**57.33**	**271**	P	**P**	**14 03 04.9**	**+3.0**
STKI	**Sintang**	**57.69**	**280**	P	**P**	**14 03 05.0**	**+0.6**
	comp=Z,52nm,0.9s,comp=Z,6μm,mb5.3						
MJAR	**Matsshiro Arr**	**58.94**	**332**	P	**P**	**14 03 11.8**	**-0.8**
	comp=Z,22nm,1.0s,mb5.0,baz=168,slow=7.8,SNR=36						
MAJO	**Matsushiro**	**58.94**	**332**	*e*P	**P**	**14 03 11.5**	**-1.1**
	comp=Z,40nm,1.0s,mb5.2						
MAJO	**Matsushiro**	**58.94**	**332**	*e*P	**P**	**14 03 11.5**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
MAT	**Matsushiro**	**58.94**	**332**	P	**P**	**14 03 11.6**	**-1.0**
LEM	**Lembang**	**59.47**	**271**	P	**P**	**14 03 17.1**	**+0.3**
	comp=Z,204nm,0.8s,mb6.0						
CBJI	**Ciko**	**60.31**	**271**	P	**P**	**14 03 21.0**	**-1.5**
	comp=Z,254nm,0.6s,mb6.2						
DBJI	**Dramaga**	**60.37**	**271**	P	**P**	**14 03 22.5**	**-0.4**
	comp=Z,156nm,1.0s,mb5.8						
YHNB	**Yeheng**	**60.44**	**311**	*e*P	**P**	**14 03 22.7**	**-0.5**
	comp=Z,113nm,1.1s,mb5.6						
TPI	**Tanjungpandan**	**60.50**	**276**	P	**P**	**14 03 23.7**	**-0.1**
	comp=Z,65nm,1.1s,mb5.4						
XMIS	**Christmas Isla**	**60.54**	**267**	P	**P**	**14 03 25.2**	**+1.1**
	comp=Z,130nm,1.2s,mb5.7						
SBA	**Scott Base**	**62.22**	**180**	*e*P	**P**	**14 03 35.6**	**+1.4**
	comp=Z,36nm,1.1s,mb5.1						
SBA				*e*	pP	14 04 08.0	+1.7
SBA	**Scott Base**	**62.22**	**180**	*e*P	**P**	**14 03 35.7**	**+1.4**
SBA				*e*	pP	14 04 08.0	+1.7
SBA				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.1						
KSRS	**Korea Array**	**64.77**	**326**	P	**P**	**14 03 51.2**	**-0.3**
	comp=Z,6.4nm,0.8s,mb4.5,baz=141,slow=7.0,SNR=29						
KSI	**Kapahiang**	**65.11**	**273**	P	**P**	**14 03 53.7**	**-0.7**
	comp=Z,105nm,0.8s,mb5.8						
YSS	**Yuzh-Sakhalins**	**66.25**	**342**	*e*P	**P**	**14 04 01.8**	**+0.8**
	comp=Z,63nm,1.0s,mb5.4						
YSS	**Yuzh-Sakhalins**	**66.25**	**342**	⇓*i*P	**P**	**14 04 01.6**	**+0.7**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
NJ2	**Nanjing**	**66.66**	**316**	*e*P	**P**	**14 04 05.0**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,360nm,4.6s						
NJ2				LR	LR		
	comp=N,430nm,23.7s						
NJ2				LR	LR		
	comp=E,300nm,21.8s						
NJ2				LR	LR		
	comp=Z,530nm,29.5s						
WHN	**Wuhan**	**68.91**	**312**	⇑P	**P**	**14 04 17.8**	**-0.2**
WHN				AMB	AMB		
	comp=Z,57nm,0.7s,mb5.4						
PETK	**Petropavlovsk-**	**69.03**	**354**	P	**P**	**14 04 18.1**	**-0.1**
	comp=Z,6.5nm,0.7s,mb4.5,baz=132,slow=4.8,SNR=13						
MDJ	**Mudanjiang**	**69.31**	**332**	P	**P**	**14 04 20.5**	**+0.3**
MDJ				PCP	PcP	14 04 42.9	+0.1
MDJ				AP	pP	14 04 53.9	+1.1
MDJ				PP	PP	14 06 52.2	-3.1
MDJ				S	S	14 13 09.1	-6.9
MDJ				SS	SS	14 17 41.2	-4.8
MDJ				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,129nm,5.0s						
MDJ				LR	LR		
	comp=N,202nm,21.0s						
MDJ				LR	LR		
	comp=E,135nm,22.0s						
MDJ				LR	LR		
	comp=Z,269nm,21.0s						
MDJ	**Mudanjiang**	**69.31**	**332**	*e*P	**P**	**14 04 20.3**	**+0.2**
	comp=Z,77nm,1.0s,mb5.4						
HABR	**Khabarovsk**	**70.17**	**338**	⇓*e*P	**P**	**14 04 25.3**	**0.0**
HABR				*e*		14 04 46.7	
HABR				*e*		14 13 51.0	
HABR				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.3						
CN2	**Changchun**	**70.68**	**329**	*e*P	**P**	**14 04 28.3**	**-0.2**
CN2				*e*AP	pP	14 05 02.9	+1.6
CN2				*e*S	S	14 13 30.5	-1.4
CN2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
KLR	**Kul'dur**	**72.04**	**336**	⇓*i*P	**P**	**14 04 33.2**	**-3.4**
KLR				pmax	pmax		
	comp=E,50nm,1.6s						
KLR				pmax	pmax		
	comp=Z,130nm,1.6s,mb5.4						
GYA	**Guiyang**	**72.62**	**305**	⇑*i*P	**P**	**14 04 40.8**	**+0.2**
GYA				PCP	PcP	14 04 58.9	+1.5
GYA				PP	PP	14 07 26.8	+2.7
GYA				S	S	14 13 53.2	-1.8
GYA				SKS		14 14 27.0	
GYA				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
BJT	**Baijiatuan**	**73.27**	**321**	*e*P	**P**	**14 04 43.9**	**-0.2**
	comp=Z,34nm,0.8s,mb5.1						
BJT	**Baijiatuan**	**73.27**	**321**	*e*P	**P**	**14 04 43.9**	**-0.2**
BJT				pmax	pmax		
	comp=Z,34nm,0.8s						
BJI	**Beijing**	**73.28**	**321**	P	**P**	**14 04 43.9**	**-0.2**
BJI				S	S	14 14 02.4	+0.6
BJI				AMB	AMB		
	comp=Z,71nm,0.9s,mb5.4						
BJI				LR	LR		
	comp=N,181nm,15.7s						
BJI				LR	LR		
	comp=E,269nm,11.7s						
BJI				LR	LR		
	comp=Z,122nm,20.4s						
XAN	**Xi'an**	**74.66**	**313**	P	**P**	**14 04 52.4**	**+0.1**
XAN				AMB	AMB		
	comp=Z,43nm,1.0s,mb5.0						
XAN				AMB	AMB		
	comp=Z,80nm,4.5s						
KMI	**Kunming**	**75.19**	**302**	⇑P	**P**	**14 04 56.6**	**+1.1**
KMI				PCP	PcP	14 05 09.1	+0.7
KMI				AP	pP	14 05 29.7	+1.0
KMI				XP	sP	14 05 43.9	+1.0
KMI				S	S	14 14 23.5	-0.3
KMI				SKS		14 14 48.7	
KMI				AMB	AMB		
	comp=Z,31nm,0.9s,mb4.9						
KMI				LR	LR		
	comp=Z,111nm,20.6s						
KMI	**Kunming**	**75.19**	**302**	⇑P	**P**	**14 04 56.6**	**+1.1**
KMI						14 05 09.1	
KMI				*PP	pP	14 05 29.7	+1.0
KMI				*SP	sP	14 05 43.9	+1.0
KMI				PPP		14 09 33.5	
KMI				S	S	14 14 23.5	-0.3
KMI						14 14 48.7	
KMI				SS	SS	14 19 16.6	+0.1
KMI				SSS		14 22 21.6	
CMAR	**Chiang Mai Arr**	**75.75**	**294**	P	**P**	**14 04 59.7**	**+0.8**
	comp=Z,6.5nm,0.3s,mb4.7,baz=133,slow=4.7,SNR=31						
HHC	**Hu-ho-hao-te**	**76.59**	**320**	*e*P	**P**	**14 05 03.9**	**+0.8**
HHC				AP	pP	14 05 39.1	+2.7
HHC				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,218nm,6.6s						
HHC				LR	LR		
	comp=N,225nm,19.0s						
HHC				LR	LR		
	comp=E,143nm,16.7s						
HHC				LR	LR		
	comp=Z,252nm,20.2s						
CD2	**Chengdu**	**76.94**	**308**	⇑*i*P	**P**	**14 05 05.5**	**+0.1**
CD2				AP	pP	14 05 42.3	+3.7
CD2				PP	PP	14 08 02.0	+1.4
CD2				S	S	14 14 39.0	-3.8
CD2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
HIA	**Hailar**	**77.32**	**330**	*e*P	**P**	**14 05 06.8**	**-0.2**
	comp=Z,71nm,1.4s,mb5.1						
HIA	**Hailar**	**77.32**	**330**	*e*P	**P**	**14 05 06.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,71nm,1.4s						
BTO	**Baotou**	**77.43**	**319**	*e*P	**P**	**14 05 07.7**	**-0.1**
LZH	**Lanzhou**	**79.29**	**312**	⇑P	**P**	**14 05 19.5**	**+1.3**
LZH				PP	PP	14 08 23.1	+3.1
LZH				S	S	14 15 04.9	-2.8
LZH				SKS		14 15 14.5	
LZH				AMB	AMB		
	comp=Z,108nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,307nm,6.7s						
LZH				LR	LR		
	comp=E,273nm,16.0s						
LZH				LR	LR		
	comp=Z,459nm,18.7s						
LZH	**Lanzhou**	**79.29**	**312**	⇑P	**P**	**14 05 19.5**	**+1.3**
LZH				pP	pP	14 05 59.6	+8.0
LZH				sP	sP	14 06 15.7	+10
LZH				PP	PP	14 08 23.1	+3.1
LZH				S	S	14 15 04.9	-2.8
LZH				SKS		14 15 14.5	
LZH				sS	sS	14 16 14.3	+8.9
LZH				SS	SS	14 20 18.7	+0.9
LZH	**Lanzhou**	**79.29**	**312**	⇑P	**P**	**14 05 19.5**	**+1.3**
LZH				*PP	pP	14 05 59.6	+8.0
LZH						14 08 23.1	
LZH				S	S	14 15 04.9	-2.8
LZH						14 15 14.5	
LZH				*SS	sS	14 16 14.3	+8.9
LZH				SS	SS	14 20 18.7	+0.9
CLNS	**Chul'man**	**80.56**	**338**	*e*P	**P**	**14 05 25.1**	**+0.6**
CLNS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.0						
CLNS				pmax	pmax		
	comp=N,25nm,1.1s						
CLNS				pmax	pmax		
	comp=E,12nm,1.1s						
MAW	**Mawson**	**81.20**	**202**	P	**P**	**14 05 28.2**	**+0.3**
	comp=E,11nm,1.1s,mb4.4,baz=110,slow=7.5,SNR=9.4						
SLKM	**Skilak Lake**	**83.05**	**19**	*e*P	**P**	**14 05 37.3**	**-0.2**
YAK	**Yakutsk**	**83.05**	**343**	*e*P	**P**	**14 05 37.0**	**-0.5**
	comp=E,59nm,0.8s,mb5.4						
YAK	**Yakutsk**	**83.05**	**343**	*e*P	**P**	**14 05 36.7**	**-0.7**
YAK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
ULN	**Ulaanbaatar**	**83.16**	**324**	*e*P	**P**	**14 05 38.9**	**+0.5**
	comp=N,76nm,0.9s,mb5.4						
ULN	**Ulaanbaatar**	**83.16**	**324**	⇑*i*P	**P**	**14 05 38.9**	**+0.6**
BILL	**Bilibino**	**83.47**	**359**	*e*P	**P**	**14 05 39.3**	**-0.2**
	comp=N,11nm,1.0s,mb4.5						
BILL	**Bilibino**	**83.47**	**359**	⇑*e*P	**P**	**14 05 39.7**	**+0.2**
BILL				*e*		14 08 57.0	
BILL				*e*S	S	14 15 51.0	+1.5
	comp=Z,21nm,2.0s,mb4.5						
SONM	**Songino Array**	**83.52**	**323**	P	**P**	**14 05 40.4**	**+0.2**
	comp=Z,36nm,0.9s,mb5.1,baz=156,slow=8.4,SNR=149						
GTA	**Gaotai**	**83.64**	**314**	⇑P	**P**	**14 05 42.0**	**+1.0**
GTA				AP	pP	14 06 17.5	+2.7
GTA				PP	PP	14 08 57.0	+1.2
GTA				S	S	14 15 48.9	-3.5
GTA				AMB	AMB		
	comp=Z,45nm,1.1s,mb5.1						
GTA				AMB	AMB		
	comp=Z,97nm,4.8s						
SHL	**Shillong**	**84.42**	**298**	⇑*i*P	**P**	**14 05 46.0**	**+0.7**
BOD	**Bodaibo**	**85.51**	**334**	*e*P	**P**	**14 05 49.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
IMA2	**Indian Mountai**	**86.42**	**15**	*e*P	**P**	**14 05 54.1**	**-0.1**
LSA	**Lhasa**	**86.45**	**302**	*e*P	**P**	**14 05 56.3**	**+1.0**
	comp=Z,6.0nm,0.4s,mb4.7						
LSA	**Lhasa**	**86.45**	**302**	*e*P	**P**	**14 05 56.3**	**+1.0**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
ZAK	**Zakamensk**	**86.58**	**325**	⇑*i*P	**P**	**14 05 55.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.0						
TLY	**Talaya**	**87.02**	**326**	⇓*i*P	**P**	**14 05 57.5**	**0.0**
TLY	**Talaya**	**87.02**	**326**	*e*P	**P**	**14 05 56.8**	**-0.7**
TLY				pmax	pmax		
	com

ZALV	**Zalesovo Beam**	**98.41 324**	P	**P**		14 06 48.8	**-1.2**
	comp=Z,9.0nm,0.8s,mb5.3,baz=108,slow=4.8,SNR=33						
NVS	**Novosibirsk**	**99.53 324**	*e*P	Pdif		14 06 52.7	-2.5
KURK	**Kurchatov**	**101.41 320**	P	Pdif		14 07 02.9	-0.6
	baz=96,slow=4.2						
KURK			PKiKP	PKiKP		14 11 26.8	-0.2
	baz=92,slow=1.6						
BVAR	**Borovoye Array**	**106.76 321**	Pdiff	Pdif		14 07 26.9	-0.4
	comp=Z,0.5nm,0.6s,baz=68,slow=8.0,SNR=4.5						
BVAR			PKiKP	PKiKP		14 11 36.3	-0.4
	comp=Z,2.0nm,0.6s,baz=98,slow=3.1,SNR=7.1						
ARU	**Arti**	**113.51 325**	*e*PKiKP	PKiKP		14 11 48.7	-0.6
ARU	**Arti**	**113.51 325**	*i* PKiKP	PKiKP		14 11 48.7	-0.6
ARU			SS	SS		14 28 18.3	-1.0
AKTK	**Aktyubinsk**	**114.47 319**	PKP	PKiKP		14 11 51.2	-0.1
AKTO	**Aktyubinsk**	**114.47 319**	PKP	PKiKP		14 11 51.2	-0.1
	comp=Z,7.9nm,0.6s,baz=98,slow=4.1,SNR=24						
SPITS	**Spitsbergen Ar**	**115.90 354**	PKP	PKPdf		14 11 53.1	-0.3
	comp=Z,28nm,1.1s,baz=24,slow=6.4,SNR=4.6						
ARCES	**ARCESS Array B**	**121.26 345**	PKP	PKPdf		14 12 03.4	-0.5
	comp=Z,8.2nm,0.5s,baz=71,slow=1.4,SNR=67						
KLMR	**Klimovskoe**	**121.72 333**	*e*PKIKP	PKPdf		14 12 01.9	-3.1
SIV	**San Ignacio**	**122.45 121**	PKP	PKPdf		14 12 06.7	-1.1
	comp=Z,0.4nm,0.5s,baz=186,slow=1.0,SNR=4.4						
BOSA	**Boshof**	**122.97 220**	PKP	PKPdf		14 12 08.5	0.0
	comp=Z,8.5nm,0.8s,baz=74,slow=0.8,SNR=9.3						
QRN	**Al-Qurain**	**123.31 294**	*e*P	PKPdf		14 12 08.8	-0.3
	baz=294						
QRN			AMb	AMB		14 12 10.4	
	comp=Z,111nm,1.2s,baz=294						
UMR	**Umm Al-Rimmam**	**123.49 295**	*e*P	PKPdf		14 12 09.2	-0.1
	baz=295						
UMR			AMb	AMB		14 12 10.7	
	comp=Z,72nm,1.0s,baz=295						
RDF	**Al-Radifah**	**123.64 294**	*e*P	PKPdf		14 12 09.3	-0.3
	baz=295						
RDF			AMb	AMB		14 12 10.6	
	comp=Z,94nm,0.9s,baz=295						
MIB	**Mutribah**	**123.82 296**	*e*P	PKPdf		14 12 09.6	-0.4
	baz=296						
MIB			AMb	AMB		14 12 10.8	
	comp=Z,66nm,0.9s,baz=296						
NAY	**Al-Naaiem**	**123.91 295**	*e*P	PKPdf		14 12 09.5	-0.7
	baz=295						
NAY			AMb	AMB		14 12 10.8	
	comp=Z,31nm,1.1s,baz=295						
JOF	**Joensuu**	**123.92 338**	*e*p	PKPdf		14 12 08.1	-1.1
	comp=Z,11nm,0.6s						
JOF	**Joensuu**	**123.92 338**	*e*PKIKP	PKPdf		14 12 08.1	-1.1
JOF			pmax	pmax			
	comp=Z,11nm,0.6s						
VRHR	**Novokhopersk**	**124.50 322**	*e*PKIKP	PKPdf		14 12 08.0	-2.6
VRHR			pmax	pmax			
	comp=Z,30nm,0.4s						
VRHR			pmax	pmax			
	comp=N,40nm,0.5s						
VRHR			pmax	pmax			
	comp=E,10.0nm,0.3s						
GNI	**Garni**	**125.07 308**	PKP	PKPdf		14 12 12.6	+0.6
	comp=E,14nm,0.7s,baz=3.3,slow=7.5,SNR=7.9						
GNI	**Garni**	**125.07 308**	*e*PKPdf	PKPdf		14 12 12.5	+0.4
GNI	**Garni**	**125.07 308**	*i* PKIKP	PKPdf		14 12 12.6	+0.5
OBN	**Obninsk**	**125.73 328**	*i* PKP	PKPdf		14 12 13.0	+0.1
OBN	**Obninsk**	**125.73 328**	⇑*i*PKIKP	PKPdf		14 12 12.4	-0.5
OBN			*e*			14 14 07.0	
OBN			*e*			14 19 11.3	
OBN			pmax	pmax			
	comp=Z,33nm,0.9s						
KIV	**Kislovodsk**	**125.82 313**	*e*PKPdf	PKPdf		14 12 14.2	+0.9
KIV	**Kislovodsk**	**125.82 313**	*i* PKIKP	PKPdf		14 12 13.4	0.0
KIV			pmax	pmax			
	comp=Z,22nm,1.1s						
VSR	**Storozhevoye**	**125.90 323**	*e*PKIKP	PKPdf		14 12 12.9	-0.4
VSR			pmax	pmax			
	comp=Z,10.0nm,0.7s						
VSR			pmax	pmax			
	comp=N,3.0nm,0.6s						
VSR			pmax	pmax			
	comp=E,10.0nm,0.8s						
VORD	**Divnogorie**	**125.92 322**	*e*PKIKP	PKPdf		14 12 13.1	-0.3
VORD			pmax	pmax			
	comp=N,3.0nm,0.6s						
VORD			pmax	pmax			
	comp=E,6.0nm,0.6s						
VORD			pmax	pmax			
	comp=Z,20nm,0.6s						
KAF	**Kangasniemi**	**126.22 339**	*e*p	PKPdf		14 12 12.7	-0.9
	comp=Z,8.8nm,0.6s						
KAF	**Kangasniemi**	**126.22 339**	*e*PKIKP	PKPdf		14 12 12.7	-0.9
KAF			pmax	pmax			
	comp=Z,9.0nm,0.6s						
NB2	**NORSAR Subarra**	**131.64 345**	PKPdf	PKPdf		14 12 24.1	+0.2
	comp=Z,2.2nm,0.6s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**131.64 345**	PKP	PKPdf		14 12 24.4	+0.5
	comp=Z,3.2nm,0.7s,baz=33,slow=1.9,SNR=9.1						
HFS	**Hagfors**	**131.74 343**	PKP	PKPdf		14 12 24.3	+0.1
	comp=Z,9.0nm,0.9s,baz=73,slow=5.0,SNR=6.0						
AKASG	**Malin Array Be**	**131.76 326**	PKP	PKPdf		14 12 24.2	-0.2
	comp=Z,7.3nm,0.7s,baz=62,slow=2.2,SNR=16						
KIEV	**Kiev**	**131.77 326**	*e*PKPdf	PKPdf		14 12 23.9	-0.6
ASF	**Jabal al Asfar**	**132.58 299**	PKP	PKPdf		14 12 27.1	+0.5
	comp=Z,6.4nm,0.8s,baz=140,slow=1.0,SNR=11						
BRTR	**Keskin Array B**	**133.47 310**	PKP	PKPdf		14 12 29.0	+0.9
	comp=Z,9.3nm,0.9s,baz=127,slow=2.9,SNR=19						
MMAI	**Mount Meron Ar**	**133.69 301**	PKP	PKPdf		14 12 30.6	+1.9
	comp=Z,6.4nm,0.6s,baz=74,slow=6.2,SNR=9.9						
ANTO	**Ankara**	**134.04 311**	*e*PKPdf	PKPdf		14 12 29.5	+0.4
ANTO	**Ankara**	**134.04 311**	⇓*i* P	PKPdf		14 12 30.3	+1.2
EIL	**Elat**	**134.57 296**	PKP	PKPdf		14 12 32.1	+1.7
	comp=Z,10nm,0.7s,baz=352,slow=2.6,SNR=10.0						
HARR	**Harsova**	**135.48 319**	⇓P	PKPdf		14 12 34.1	+2.4
HARR	**Harsova**	**135.48 319**	⇓*i* P	PKPdf		14 12 34.1	+2.4
BUR08	**Bucovina Ar. S**	**135.63 324**	*e*PKPdf	PKPdf		14 12 32.4	+0.6
BURAR	**Bucovina Array**	**135.63 324**	⇑P	PKPdf		14 12 32.9	+1.0
BURAR	**Bucovina Array**	**135.63 324**	⇑*i* P	PKPdf		14 12 32.9	+1.0
KOLS	**Kolonicke sedl**	**136.47 327**	*e*PKP	PKPdf		14 12 34.4	+1.0
STHS	**Stebnicka Huta**	**136.70 328**	*e*PKP	PKPdf		14 12 36.0	+2.2
OJC	**Ojcow**	**136.90 330**	*e*PKP	PKPdf		14 12 34.1	0.0
DRGR		**137.51 324**	⇑P	PKPdf		14 12 34.8	-0.6
DRGR		**137.51 324**	⇑*i* P	PKPdf		14 12 34.8	-0.6
GZR	**Gura Zlata**	**138.26 323**	⇑P	PKPdf		14 12 37.0	+0.2
GZR	**Gura Zlata**	**138.26 323**	⇑*i* P	PKPdf		14 12 37.0	+0.2
MORC	**Moravsky Berou**	**138.27 331**	*e*PKPdf	PKPdf		14 12 36.7	0.0
MORC	**Moravsky Berou**	**138.27 331**	⇑*i* P	PKPdf		14 12 37.6	+0.9
VYHS	**Vyhne**	**138.51 329**	*e*PKP	PKPdf		14 12 39.1	+1.9
KOLL	**Kolacno**	**138.67 329**	*e*PKP	PKPdf		14 12 38.4	+1.0
KOLL	**Kolacno**	**138.67 329**	*e*PKP	PKPdf		14 12 38.3	+0.9
BZS	**Buzias**	**138.81 324**	⇓P	PKPdf		14 12 36.7	-1.1
BZS	**Buzias**	**138.81 324**	⇓*i* P	PKPdf		14 12 36.7	-1.1
BRG	**Berggiesshubel**	**139.05 335**	*e*PKIKP	PKPdf		14 12 37.7	-0.3
BRG			pmax	pmax			
	comp=Z,8.0nm,1.2s						
BRG	**Berggiesshubel**	**139.05 335**	*e*P	PKPdf		14 12 37.7	-0.4
	comp=Z,13nm,1.2s						
CLL	**Collm**	**139.09 336**	*e*PKIKP	PKPdf		14 12 39.0	+0.9
CLL			pmax	pmax			
	comp=Z,20nm,1.3s						
CLL	**Collm**	**139.09 336**	*e*PKPdf	PKPdf		14 12 38.4	+0.3
CLL	**Collm**	**139.09 336**	*e*PKPdf	PKPdf		14 12 39.0	+0.9
	comp=Z,20nm,1.3s						
FBE	**Freiberg**	**139.25 335**	*e*PKPdf	PKPdf		14 12 39.3	+0.9
FBE			*ep*PKPdf	pPKPdf		14 13 21.0	+6.8
MODS	**Modra-Piesok**	**139.36 330**	*e*PKP	PKPdf		14 12 39.2	+0.5
VTS	**Vitosha**	**139.50 319**	⇓P	PKPdf		14 12 39.4	+0.2
VTS	**Vitosha**	**139.50 319**	⇓*i* P	PKPdf		14 12 39.4	+0.3
ZST	**Bratislava**	**139.57 330**	*e*PKP	PKPdf		14 12 39.9	+0.8
GUNZ	**Gunzen**	**140.09 335**	*e*PKPdf	PKPdf		14 12 36.3	-3.7
PKSM	**Moragy**	**140.09 326**	⇑P	PKPdf		14 12 40.6	+0.5
PKSM	**Moragy**	**140.09 326**	⇑*i* P	PKPdf		14 12 40.6	+0.5
WERN	**Wernitzgruen**	**140.13 335**	*e*PKPdf	PKPdf		14 12 37.6	-2.5
MANZ	**Manzenberg**	**140.48 335**	*e*PKPdf	PKPdf		14 12 41.1	+0.4
KHC	**Kasperske Hory**	**140.52 333**	⇑*e*PKP	PKPdf		14 12 41.6	+0.8
VAY	**Valandovo**	**140.55 317**	*e*PKP	PKPdf		14 12 32.8	-8.3
GEC2	**GERESS Array S**	**140.68 333**	*e*PKPdf	PKPdf		14 12 41.0	-0.1
GEC2			*ep*PKPdf	pPKPdf		14 13 19.2	+2.4
GERES	**GERESS Array B**	**140.68 333**	PKhKP			14 12 33.8	
	comp=Z,1.9nm,0.8s,baz=45,slow=2.3,SNR=5.8						
GERES			PKP	PKPdf		14 12 41.7	+0.7
	comp=Z,3.9nm,0.7s,baz=70,slow=1.6,SNR=12						
WET	**Wettzell**	**140.81 334**	*e*PKPdf	PKPdf		14 12 41.5	+0.2
SKO	**Skopje**	**140.94 319**	*e*PKP	PKPdf		14 12 35.3	-6.5
GRA1	**Grafenberg Arr**	**141.06 336**	*e*PKPdf	PKPdf		14 12 42.2	+0.5
GRA1			*ep*PKPdf	pPKPdf		14 13 26.4	+8.9
GRF	**Grafenberg Arr**	**141.06 336**	*e*PKPdf	PKPdf		14 12 42.2	+0.5
GRF			*ep*PKPdf	pPKPdf		14 13 26.4	+8.9
KRUS	**Krusevo**	**141.38 318**	*e*PKP	PKPdf		14 12 34.1	-8.5
IDI	**Anoyia**	**141.49 308**	PKP	PKPdf		14 12 42.6	-0.4
	comp=Z,29nm,1.1s,baz=325,slow=17,SNR=4.0						
PERS	**Pernice**	**141.62 329**	*i* PKPbc	PKPdf		14 12 45.2	+2.3
OHR	**Ohrid**	**141.80 318**	*e*PKP	PKPdf		14 12 36.1	-7.2
BOJS	**Bojanci**	**142.34 328**	*i* PKPdf	PKPdf		14 12 40.4	-3.8
BOJS			*i* PKPbc	PKPdf		14 12 44.4	+0.3
BOJS			*i* PKPab	PKPdf		14 12 47.7	+3.6
VOY	**Vojsko**	**142.65 330**	*e*PKPdf	PKPdf		14 12 40.3	-4.4
JAVS	**Javornik**	**142.66 329**	*i* PKPdf	PKPdf		14 12 40.0	-4.8
JAVS			*i* PKPbc	PKPdf		14 12 44.5	-0.2
ABTA	**Abfaltersbach**	**142.78 332**	⇓*i* PKPdf	PKPdf		14 12 40.5	-4.4
	comp=Z,16nm,0.9s						
WTTA	**Wattenberg**	**142.78 333**	⇑*i* PKPdf	PKPdf		14 12 41.9	-3.0
	comp=Z,22nm,1.2s,SNR=5.3						
WLF	**Walferdange**	**142.93 340**	PKP	PKPdf		14 12 42.7	-2.4
WLF	**Walferdange**	**142.93 340**	*e*PKPdf	PKPdf		14 12 41.9	-3.2
MOTA	**Moosalm**	**142.95 333**	⇓*i* PKPdf	PKPdf		14 12 42.3	-2.9
	comp=Z,21nm,0.9s						
DOU	**Dourbes**	**143.04 342**	PKP	PKPdf		14 12 43.0	-2.2
BFO	**Black Forest**	**143.29 337**	*e*PKPdf	PKPdf		14 12 43.2	-2.6
FETA	**Feichten**	**143.36 333**	⇑*i* PKPdf	PKPdf		14 12 43.6	-2.3
	comp=Z,36nm,1.0s,SNR=21						
DAVA	**Damuels**	**143.51 334**	⇑*i* PKPdf	PKPdf		14 12 44.2	-1.9
	comp=Z,27nm,1.3s						
CDF	**Champ du Feu**	**143.61 338**	*e*PKP1	PKPdf		14 12 43.5	-2.8
	comp=Z,45nm,0.9s						
CTI	**Castel Tesino**	**143.70 332**	PKP	PKPdf		14 12 44.4	-2.1
FELD	**Feldberg im Sc**	**143.78 337**	PKP	PKPdf		14 12 43.9	-2.7
ECH	**Echery**	**143.81 338**	*e*PKPpre			14 12 44.5	
DAVOS	**Davos**	**143.91 334**	PKIKP	PKPdf		14 12 45.6	-1.3
DAVOX	**Davos/Dischmat**	**143.91 334**	PKP	PKPdf		14 12 45.6	-1.3
	comp=Z,24nm,0.6s,baz=66,slow=2.0,SNR=29						
MOF	**Molkenrain**	**144.13 338**	PKP	PKPdf		14 12 45.1	-2.1
THEF	**They Montfort**	**144.22 339**	PKP	PKPdf		14 12 45.3	-2.1
HINF	**Hinterlaelf**	**144.26 338**	⇑*i* PKP1	PKPdf		14 12 45.5	-2.0
	comp=Z,43nm,0.8s						
HAU	**Haudompre**	**144.28 338**	*e*PKP1	PKPdf		14 12 45.9	-1.6
	comp=Z,106nm,0.9s						
MEZF	**Maizieres J'vi**	**144.30 340**	*e*PKP1	PKPdf		14 12 46.2	-1.3
	comp=Z,123nm,1.0s						
LOMF	**Lomont**	**144.66 337**	PKP	PKPdf		14 12 46.7	-1.5
RGNG	**Rignano Grg**	**144.68 323**	PKP	PKPdf		14 12 47.2	-1.2
CING	**Cingoli**	**144.87 327**	PKP	PKPdf		14 12 48.7	0.0
VAI	**Varese**	**145.11 334**	PKP	PKPdf		14 12 48.5	-0.5
BADI	**Badiali**	**145.27 328**	PKP	PKPdf		14 12 49.8	+0.4
FNVD	**Fontana Vidola**	**145.35 330**	PKP	PKPdf		14 12 50.2	+0.7
ASS	**Assisi**	**145.38 327**	PKP	PKPdf		14 12 49.5	-0.1
TIP	**Timpagrande**	**145.45 318**	*e*PKP	PKPdf		14 12 50.0	+0.1
AQU	**L'Aquila**	**145.46 326**	PKP	PKPdf		14 12 50.1	+0.4
CSSN	**Cassano Irpino**	**145.51 322**	PKP	PKPdf		14 12 49.6	-0.3
CABF	**La Chapelle**	**145.56 337**	⇑*i* PKP1	PKPbc		14 12 50.8	+0.6
	comp=Z,404nm,1.1s						
CUC	**Castrocucco**	**145.57 320**	*e*PKP	PKPdf		14 12 49.4	-0.6
OG01	**Vacheresse**	**145.57 337**	PKP	PKPdf		14 12 51.7	+1.9
FLN	**La Foliniere**	**145.60 346**	⇑*i* PKP1	PKPbc		14 12 49.9	-0.3
	comp=Z,185nm,0.9s						
BOB	**Bobbio (Coli)**	**145.68 332**	PKP	PKPdf		14 12 50.8	+0.8
LDF	**La Druitiere**	**145.68 346**	⇑*i* PKP1	PKPbc		14 12 50.1	-0.4
	comp=Z,130nm,0.9s						
BDI	**Bagni Di Lucca**	**145.68 330**	PKP	PKPdf		14 12 49.7	-0.3
PTQR	**Pietraquaria**	**145.69 325**	PKP	PKPdf		14 12 50.7	+0.6
LOR	**Lormes**	**145.76 340**	⇑*i* PKP1	PKPbc		14 12 50.9	+0.1
	comp=Z,186nm,1.1s						
CSNT	**Castellina Chi**	**145.78 329**	PKP	PKPdf		14 12 49.6	-0.6
GRI	**Girifalco**	**145.87 318**	PKP	PKPdf		14 12 51.4	+0.9
PII	**Pisa**	**145.97 330**	PKP	PKPdf		14 12 48.9	-1.7
GRR	**Gorron**	**146.04 346**	⇑*i* PKP1	PKPbc		14 12 51.5	-0.1
	comp=Z,184nm,0.9s						
SSF	**Saint Saulge**	**146.06 341**	⇑*i* PKP1	PKPbc		14 12 51.9	+0.2
	comp=Z,132nm,0.7s						
RSL	**Roselend**	**146.13 336**	PKP	PKPbc		14 12 52.1	+0.2
HYF	**Humbligny**	**146.15 342**	⇑*i* PKP1	PKPbc		14 12 52.4	+0.5
LPL	**La Plagne**	**146.23 336**	⇑*i* PKP1	PKPbc		14 12 52.9	+0.7
	comp=Z,64nm,0.7s						
LPG	**La Plagne**	**146.24 336**	⇑*i* PKP1	PKPbc		14 12 53.0	+0.8
	comp=Z,81nm,0.7s						
SMF	**Signal de Mont**	**146.32 340**	⇑*i* PKP1	PKPbc		14 12 52.4	0.0
	comp=Z,125nm,0.9s						
AVF	**Avril sur Loir**	**146.35 341**	⇑*i* PKP1	PKPbc		14 12 52.3	-0.2
	comp=Z,137nm,1.1s						
SOI	**Samo**	**146.53 317**	PKP	PKPbc		14 12 53.3	0.0
SGMF	**Saint Gilles**	**146.53 348**	⇑*i* PKP1	PKPbc		14 12 52.8	-0.2
	comp=Z,83nm,0.7s						
ROSF	**Rostrenen**	**146.59 349**	⇑*i* PKP1	PKPbc		14 12 52.8	-0.3
	comp=Z,102nm,1.2s						
BNI	**Bardonecchia**	**146.63 335**	*e*PKPdf	PKPdf		14 12 51.9	+0.3
BNI			*e*PKPbc	PKPbc		14 12 53.8	+0.4
FIN	**Finale Ligure**	**146.67 333**	PKP	PKPdf		14 12 52.6	+0.9
BGF	**Bois d'Agland**	**146.72 341**	⇑*i* PKP1	PKPbc		14 12 53.6	0.0
	comp=Z,120nm,0.8s						
MBDF	**Montbardon**	**146.86 335**	*e*PKP1	PKPbc		14 12 54.0	-0.1
	comp=Z,77nm,0.9s						
QUIF	**Quistinic**	**146.97 349**	*e*PKP1	PKPbc		14 12 53.8	-0.4
	comp=Z,166nm,1.4s						
PLDF	**La Plantade**	**146.98 340**	PKP	PKPbc		14 12 54.9	+0.5
ORIF	**Oris-en-Rattie**	**147.06 336**	⇑*i* PKP1	PKPbc		14 12 54.9	+0.3
	comp=Z,99nm,0.9s						
AGO	**Saint Agoulin**	**147.07 340**	PKP	PKPbc		14 12 55.0	+0.4
SAOF	**Saorge**	**147.13 333**	PKP	PKPbc		14 12 54.3	-0.5
TCF	**Toulx Ste Croi**	**147.16 341**	⇑*i* PKP1	PKPbc		14 12 54.9	+0.1
	comp=Z,124nm,1.0s						
AUTN	**L'Aution**	**147.18 333**	PKP	PKPbc		14 12 54.9	-0.1
TOUF	**Mont Tournerai**	**147.24 334**	PKP	PKPbc		14 12 55.0	-0.1
SSB	**Saint Sauveur**	**147.26 338**	PKP	PKPbc		14 12 55.5	+0.4
SSB	**Saint Sauveur**	**147.26 338**	*e*PKP2	PKPab		14 12 55.3	-1.9
SBF	**Sospel**	**147.28 333**	*e*PKP1	PKPbc		14 12 54.8	-0.5
	comp=Z,119nm,0.7s						
LUCF	**Luceram**	**147.29 333**	PKP	PKPbc		14 12 55.3	0.0
MVIF	**Mont Vial**	**147.38 334**	PKP	PKPbc		14 12 55.0	-0.5
PYM	**Petit Puy Mans**	**147.38 340**	PKP	PKPbc		14 12 56.0	+0.5
MFF	**Saint Martin d**	**147.54 344**	⇑*i* PKP1	PKPbc		14 12 55.8	-0.1
	comp=Z,178nm,0.9s						
VERF	**Verneugheol**	**147.55 341**	PKP	PKPbc		14 12 55.9	0.0
OCF	**Saint Nazaire**	**147.57 336**	PKP	PKPbc		14 12 56.5	+0.5
OG26	**St.-Nazaire-De**	**147.57 336**	PKP	PKPbc		14 12 56.5	+0.5
VIVF	**Saint-Julien-l**	**147.57 337**	*e*PKP1	PKPbc		14 12 56.2	+0.2
	comp=Z,77nm,0.9s						
PGF	**Pioggiola**	**147.59 330**	⇑*i* PKP1	PKPbc		14 12 56.0	-0.1
	comp=Z,203nm,0.9s						
CALN	**Calern**	**147.60 334**	PKP	PKPbc		14 12 56.0	-0.1
LBL	**Lubilhac**	**147.76 339**	PKP	PKPbc		14 12 57.2	+0.7
FRNF	**Fournols**	**147.85 340**	PKP	PKPbc		14 12 57.4	+0.7
FRF	**La Foret Royal**	**147.86 334**	⇑*i* PKP1	PKPbc		14 12 56.5	-0.3
	comp=Z,112nm,1.0s						
SMRF	**Simiane la Rot**	**147.97 335**	⇑*i* PKP1	PKPbc		14 12 57.5	+0.4
	comp=Z,86nm,1.0s						
LMR	**La Mourre**	**148.10 334**	⇑*i* PKP1	PKPbc		14 12 57.2	-0.3
	comp=Z,130nm,1.0s						
RJF	**Les Rejaudoux**	**148.25 341**	⇑*i* PKP1	PKPbc		14 12 57.9	+0.1
	comp=Z,144nm,1.2s						
CAF	**Calviac**	**148.42 340**	⇑*i* PKP1	PKPbc		14 12 58.5	+0.3
	comp=Z,81nm,0.9s						
LASF	**Ste Croix**	**148.54 337**	⇑*i* PKP1	PKPbc		14 12 58.9	+0.3
	comp=Z,94nm,0.9s						
LFF	**La Frestale**	**148.82 342**	⇑*i* PKP1	PKPbc		14 12 59.4	+0.1
	comp=Z,104nm,0.9s						
VSL	**Villasalto**	**149.64 326**	*e*PKPbc	PKPbc		14 13 01.2	-0.3
MTLF	**Montolieu**	**149.77 339**	⇑*i* PKP1	PKPbc		14 13 01.8	+0.1
	comp=Z,74nm,0.9s						
FILF	**Fillols**	**150.33 338**	PKP	PKPbc		14 13 03.0	0.0
MLS	**Moulis**	**150.49 340**	PKP	PKPbc		14 13 03.3	-0.1
EPF	**Esparros**	**150.67 341**	*e*PKP1	PKPbc		14 13 03.7	-0.1
	comp=Z,61nm,1.0s						
SJPF	**Ste Jean**	**151.06 343**	*e*PKP1	PKPbc		14 13 05.0	+0.3
	comp=Z,65nm,1.2s						
ETSF	**Etsaut**	**151.06 342**	⇑*i* PKP1	PKPbc		14 13 05.4	+0.6
	comp=Z,50nm,0.7s						
KEST	**Kesra**	**152.22 320**	PKPbc	PKPbc		14 13 08.2	+0.6
	comp=Z,23nm,0.7s,baz=285,slow=0.9,SNR=57						
DFRA	**Djebel Bou Aff**	**153.68 326**	P	PKPbc		14 13 11.0	+0.2
SET	**Setif**	**154.19 326**	P	PKPbc		14 13 08.0	-3.9
ESDC	**Sonseca Array**	**155.00 345**	PKPab	PKPab		14 13 29.8	+0.4
	comp=Z,3.4nm,0.7s,baz=23,slow=3.6,SNR=14						
ESDC			PP	PP		14 17 00.9	-4.0
	comp=Z,0.4nm,0.4s,baz=30,slow=9.1,SNR=4.2						
ESLA	**Sonseca Array**	**155.00 345**	*e*PKPab	PKPab		14 13 29.8	+0.4
CMLA	**Cha da Macela**	**155.05 26**	eLQ			14 57 47.4	
EVO	**Evora**	**156.91 352**	*e*PKP2	PKPab		14 13 38.0	+0.4
	comp=Z,54nm,1.3s						
MDT	**Midelt**	**161.57 339**	PKP	PKPdf		14 13 13.0	+0.2
	comp=Z,1.1nm,0.8s,baz=280,slow=3.2,SNR=3.5						
MDT			PKPab	PKPab		14 13 58.8	+0.8
	comp=Z,4.1nm,0.8s,baz=8.0,slow=6.1,SNR=8.0						
TORD	**Torodi Ar. Bea**	**166.27 261**	PKP	PKPdf		14 13 16.6	-1.0
	comp=Z,2.7nm,0.7s,baz=53,slow=1.0,SNR=15						
TORD			PKPab	PKPab		14 14 18.7	-0.7
	comp=Z,4.6nm,0.9s,baz=97,slow=3.7,SNR=13						
TORD			PP	PP		14 18 04.0	-3.5
	comp=Z,1.5nm,1.2s,baz=131,slow=4.1,SNR=4.4						
KIC	**Kosan Boka**	**168.19 219**	*e*PKIKP	PKPdf		14 13 17.6	-1.4
	comp=Z,57nm,1.2s						
KIC	**Kosan Boka**	**168.19 219**	*e*P	PKPab		14 14 27.3	-0.4
	comp=Z,80nm,1.3s						
LIC	**Lamto**	**168.25 218**	*e*PKIKP	PKPdf		14 13 17.8	-1.3
	comp=Z,35nm,1.3s						
LIC	**Lamto**	**168.25 218**	*e*PKIKP	PKPdf		14 13 17.6	-1.5
	comp=Z,35nm,1.3s						
LIC	**Lamto**	**168.25 218**	*e*P	PKPab		14 14 27.7	-0.3
	comp=Z,57nm,1.0s						
DBIC	**Dimbokro**	**168.50 220**	PKP	PKPdf		14 13 17.8	-1.4
	comp=Z,5.5nm,0.9s,baz=311,slow=0.4,SNR=6.0						
DBIC			PKPab	PKPab		14 14 28.9	-0.2
	comp=Z,2.2nm,0.7s,baz=126,slow=4.8,SNR=5.0						
TIC	**Toumodi**	**168.58 219**	*e*PKIKP	PKPdf		14 13 17.7	-1.6
	comp=Z,65nm,1.1s						
TIC	**Toumodi**	**168.58 219**	*e*P	PKPab		14 14 29.3	-0.2
	comp=Z,44nm,0.9s						

*ISCJB **06** 13:58:10.1±0.4, 572S×005×13102E±008, h33km, mb4.8/21, Error ellipse: s-maj=10.8km s-min=6.4km az=174.4*

*IDC **06** 13:58:19.9±3.5, 568S×13082E, h97km±32km, mb4.0/10, mb1 4.0/10, mb1mx4.0/14, mbtmp4.0/10, Error ellipse: s-maj=27.2km s-min=14.0km az=72.

NEIC Felt [IV] at Poso and [III] at Palu.
ISC 06 14:10:43.7ₛ1.3,104$_E$003ₑ12072E$_L$004,h35$^{km}_D$9km,
h34$^{km}_D$1.5km;pP-P,n179,σ1♦06/179,mb5.0/82,MS4.2/17,
8C-9D,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.89**	**279**	P	**Pn**	**14 10 53.9**	**-5.9**
KDI	**Kendari**	**3.46**	**147**	P	**Pn**	**14 11 36.2**	**+1.0**
SMKI	**Samarinda**	**3.56**	**280**	P	**Pn**	**14 11 37.9**	**+1.3**
KAPI	**Kappang**	**4.06**	**194**	Pn	**Pn**	**14 11 42.9**	**-0.6**
	3μm,0.9s,SNR=69						
KAPI	**Kappang**	**4.06**	**194**	Pn	**Pn**	**14 11 42.2**	**-1.3**
	448nm,1.0s,SNR=69						
KAPI	**Kappang**	**4.06**	**194**	Pn	**Pn**	**14 11 43.3**	**-0.2**
	28nm,0.3s,baz=7.8,slow=7.6,SNR=110						
KAPI				Sn	**Sn**	**14 12 29.2**	**-0.6**
	21nm,0.3s,baz=242,slow=21,SNR=2.9						
KAPI				LR	LR	14 13 30.8	
	comp=Z,7μm,18.9s,baz=348,slow=42						
KAPI	**Kappang**	**4.06**	**194**	*e*P	**Pn**	**14 11 42.6**	**-0.9**
KAPI	**Kappang**	**4.06**	**194**	P	**Pn**	**14 11 42.7**	**-0.8**
MNI	**Manado**	**4.80**	**59**	P	**Pn**	**14 11 58.6**	**+4.9**
BBKI	**Banjar Baru**	**6.35**	**248**	P	**Pn**	**14 12 13.9**	**-1.0**
	658nm,1.0s,9μm2.9nm						
LBMI	**Labuha**	**6.79**	**87**	P	**Pn**	**14 12 23.4**	**+2.4**
	412nm,0.9s,4μm2.4nm						
PLKI	**Palangkaraya**	**6.87**	**260**	P	**Pn**	**14 12 21.4**	**-0.7**
	779nm,0.9s,10μm4.1nm						
AAI	**Ambon**	**7.92**	**110**	P	**Pn**	**14 12 43.9**	**+7.4**
PBKI	**Pangkalan Bun**	**9.19**	**260**	P	**Pn**	**14 12 52.9**	**-1.1**
	359nm,0.9s,3μm						
DAV	**Davao City (W)**	**9.40**	**31**	LR	LR	14 16 44.6	
	comp=Z,2μm,20.0s,baz=215,slow=39						
BATI	**Baumata**	**9.56**	**162**	Pn	**Pn**	**14 13 03.8**	**+4.7**
	2.6nm,0.3s,baz=266,slow=1.0,SNR=17						
PVCP	**Virac**	**14.94**	**13**	⇓*e*P	**Pn**	**14 14 15.0**	**+2.5**
KAKA	**Kakadu**	**16.41**	**135**	*e*P	**Pn**	**14 14 25.7**	**-5.9**
	18nm,0.6s						
MBWA	**Marble Bar**	**20.02**	**183**	*e*P	**P**	**14 15 13.6**	**-0.1**
	53nm,1.3s						
QIZ	**Qiongzhong**	**22.63**	**332**	P	**P**	**14 15 42.5**	**+0.7**
QIZ				S	**S**	**14 19 49.2**	**+1.3**
QIZ				AMB	AMB		
	comp=Z,66nm,1.8s,mb4.8						
QIZ				LR	LR		
	comp=Z,514nm,16.7s,MS4.0						
WRAB	**Tennant Creek**	**23.03**	**145**	P	**P**	**14 15 46.8**	**+0.8**
	comp=Z,190nm,1.0s,mb5.5,SNR=8.4						
WRAB	**Tennant Creek**	**23.03**	**145**	*e*P	**P**	**14 15 46.4**	**+0.3**
	comp=Z,24nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**23.03**	**145**	*e*P	**P**	**14 15 45.8**	**-0.2**
WRA	**Warramunga Arr**	**23.03**	**146**	P	**P**	**14 15 46.0**	**0.0**
	comp=Z,12nm,0.7s,mb4.5,baz=334,slow=9.4,SNR=104						
WRA				PcP	PcP	14 19 35.6	+0.6
	comp=Z,1.7nm,1.0s,baz=327,slow=1.9,SNR=4.9						
WRA				ScP	ScP	14 23 12.3	+1.9
	comp=Z,2.9nm,1.3s,baz=317,slow=2.9,SNR=5.2						
WRA	**Warramunga Arr**	**23.03**	**146**	P	**P**	**14 15 46.0**	**0.0**
WRA						14 19 35.6	
WB2	**Warramunga Arr**	**23.04**	**145**	*e*P	**P**	**14 15 46.1**	**0.0**
WB2				*e*S	**S**	**14 20 00.7**	**+6.1**
KKTK	**Khon Kaen**	**24.70**	**315**	P	**P**	**14 16 00.0**	**-1.8**
YHNB	**Yeheng**	**25.57**	**1**	*e*P	**P**	**14 16 10.0**	**+0.4**
	comp=Z,136nm,1.0s,mb5.4						
COEN	**Coen**	**25.65**	**121**	*e*P	**P**	**14 16 11.9**	**+1.4**
	comp=Z,9.7nm,1.2s,mb4.2						
ASAR	**Alice Springs**	**25.87**	**151**	P	**P**	**14 16 12.6**	**+0.2**
	comp=Z,1.6nm,0.6s,mb3.7,baz=315,slow=7.5,SNR=28						
ASAR				PcP	PcP	14 19 41.6	+0.5
	comp=Z,2.3nm,0.6s,baz=341,slow=2.1,SNR=15						
ASAR				ScP	ScP	14 23 20.6	+2.4
	comp=Z,1.4nm,1.2s,baz=53,slow=0.5,SNR=4.4						
ASAR	**Alice Springs**	**25.87**	**151**	P	**P**	**14 16 12.6**	**+0.2**
ASAR						14 19 41.7	
TATO	**Taipei**	**25.87**	**2**	*e*P	**P**	**14 16 12.3**	**-0.1**
	comp=Z,257nm,1.0s,mb5.7						
PMG	**Port Moresby**	**27.59**	**108**	*e*P	**P**	**14 16 29.1**	**+1.1**
	comp=Z,32nm,1.1s,mb4.9						
PMG	**Port Moresby**	**27.59**	**108**	*e*P	**P**	**14 16 27.7**	**-0.3**
PMG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
JOW	**Kunigami**	**28.65**	**14**	LR	LR	14 27 53.5	
	comp=Z,466nm,19.6s,MS4.1,baz=74,slow=36						
CMAR	**Chiang Mai Arr**	**28.88**	**313**	P	**P**	**14 16 40.5**	**+1.1**
	comp=Z,6.3nm,0.8s,mb4.4,baz=138,slow=7.0,SNR=47						
CHG	**Chiang Mai**	**29.11**	**314**	⇑P	**P**	**14 16 42.0**	**+0.5**
	comp=Z,19nm,1.2s,mb4.7						
CHTO	**Chiang Mai**	**29.11**	**314**	*e*P	**P**	**14 16 40.7**	**-0.8**
	comp=Z,16nm,1.0s,mb5.4						
CHTO	**Chiang Mai**	**29.11**	**314**	*e*P	**P**	**14 16 40.7**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.9						
GYA	**Guiyang**	**30.52**	**335**	⇓*i*P	**P**	**14 16 54.8**	**+0.9**
GYA				AP	pP	14 17 06.4	+2.5
GYA				XP	sP	14 17 11.8	+3.7
GYA				PP	PP	14 17 58.2	-5.0
GYA				S	**S**	**14 21 55.0**	**+1.8**
GYA				XS	sS	14 22 11.9	+2.2
GYA				SCS	ScS	14 27 27.8	-1.1
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,100nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,15.6s,MS4.8						
GYA				LR	LR		
	comp=E,840nm,12.4s,MS4.8						
GYA				LR	LR		
	comp=Z,1μm,11.8s,MS4.8						
KMI	**Kunming**	**31.30**	**327**	P	**P**	**14 17 02.6**	**+1.8**
KMI				AP	pP	14 17 12.5	+1.7
KMI				AMB	AMB		
	comp=Z,16nm,0.9s,mb4.8						
CTA	**Charters Tower**	**31.34**	**129**	*e*P	**P**	**14 17 03.5**	**+2.3**
	comp=Z,4.5nm,1.2s,mb4.2						
CTA	**Charters Tower**	**31.34**	**129**	P	**P**	**14 17 02.7**	**+1.6**
	comp=Z,4.4nm,0.9s,mb4.3,baz=294,slow=12,SNR=3.3						
CTA	**Charters Tower**	**31.34**	**129**	*e*P	**P**	**14 17 03.5**	**+2.3**
CTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NWAO	**Narrogin (SRO)**	**31.89**	**186**	P	**P**	**14 17 05.2**	**-0.6**
	comp=Z,11nm,0.8s,mb4.7,baz=45,slow=6.9,SNR=5.9						
WHN	**Wuhan**	**31.99**	**350**	⇑P	**P**	**14 17 08.4**	**+1.6**
WHN				AP	pP	14 17 14.8	-2.0
WHN				AMB	AMB		
	comp=Z,163nm,1.2s,mb5.7						
NJ2	**Nanjing**	**32.96**	**357**	*e*P	**P**	**14 17 18.0**	**+2.8**
NJ2				AP	pP	14 17 27.6	+2.3
NJ2				XP	sP	14 17 30.8	+1.3
NJ2				S	**S**	**14 22 33.5**	**+2.3**
NJ2				XS	sS	14 22 51.0	+3.2
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,240nm,5.3s						
NJ2				LR	LR		
	comp=N,340nm,29.0s,MS4.1						
NJ2				LR	LR		
	comp=E,430nm,28.1s,MS4.1						
NJ2				LR	LR		
	comp=Z,320nm,20.6s						
CBIJ	**Chichi jima**	**34.78**	**35**	P	**P**	**14 17 30.1**	**-1.1**
CD2	**Chengdu**	**35.63**	**335**	⇓*i*P	**P**	**14 17 38.6**	**+0.1**
CD2				AP	pP	14 17 48.2	-0.3
CD2				XP	sP	14 17 52.4	-0.3
CD2				PP	PP	14 19 00.1	+0.2
CD2				S	**S**	**14 23 13.0**	**+0.4**
CD2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
CD2				AMB	AMB		
	comp=Z,160nm,6.2s						
CD2				LR	LR		
	comp=N,340nm,13.2s,MS4.5						
CD2				LR	LR		
	comp=E,450nm,14.2s,MS4.5						
CD2				LR	LR		
	comp=Z,200nm,13.8s,MS4.0						
STKA	**Stephens Creek**	**36.46**	**149**	*e*P	**P**	**14 17 46.0**	**+0.5**
	comp=Z,23nm,1.8s,mb4.8						
STKA	**Stephens Creek**	**36.46**	**149**	P	**P**	**14 17 46.2**	**+0.7**
	comp=Z,9.9nm,0.7s,mb4.9,baz=317,slow=9.0,SNR=31						
STKA				LR	LR	14 35 23.6	
	comp=Z,259nm,18.1s,MS4.0,baz=212,slow=41						
XAN	**Xi'an**	**36.62**	**343**	P	**P**	**14 17 46.9**	**+0.1**
XAN				AP	pP	14 17 53.9	-3.0
XAN				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.7						
XAN				AMB	AMB		
	comp=Z,161nm,4.8s						
JHS	**Saijyo**	**37.68**	**17**	P	**P**	**14 17 55.5**	**-0.4**
SHL	**Shillong**	**38.43**	**316**	*ex*	x	14 17 49.3	
KSRS	**Korea Array**	**38.88**	**9**	P	**P**	**14 18 06.5**	**+0.6**
	comp=Z,11nm,0.8s,mb4.7,baz=188,slow=9.9,SNR=47						
KSRS				LR	LR	14 33 19.6	
	comp=Z,228nm,20.1s,MS4.0,baz=180,slow=35						
LZH	**Lanzhou**	**40.15**	**339**	⇓P	**P**	**14 18 17.5**	**+1.0**
LZH				AP	pP	14 18 27.4	+0.8
LZH				XP	sP	14 18 31.5	+0.7
LZH				PP	PP	14 19 54.6	+5.3
LZH				*e*S	**S**	**14 24 22.4**	**+1.6**
LZH				AMB	AMB		
	comp=Z,35nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,138nm,5.2s						
LZH				LR	LR		
	comp=E,616nm,13.5s						
LZH				LR	LR		
	comp=Z,927nm,17.6s,MS4.7						
LZH	**Lanzhou**	**40.15**	**339**	⇓P	**P**	**14 18 17.5**	**+1.0**
LZH				*PP	pP	14 18 27.4	+0.8
LZH				*SP	sP	14 18 31.5	+0.7
LZH						14 19 54.6	
LZH				*e*S	**S**	**14 24 22.4**	**+1.6**
LZH				*SS	sS	14 24 38.7	+1.2
LZH				SS	SS	14 27 17.2	-2.3
JRY	**Ryogami san**	**40.58**	**23**	P	**P**	**14 18 18.6**	**-1.4**
MAJO	**Matsushiro**	**40.77**	**22**	*e*P	**P**	**14 18 19.8**	**-1.9**
	comp=Z,35nm,1.4s,mb4.8						
MAJO	**Matsushiro**	**40.77**	**22**	*e*P	**P**	**14 18 19.8**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.8						
MAT	**Matsushiro**	**40.77**	**22**	P	**P**	**14 18 19.6**	**-2.1**
MAT	**Matsushiro**	**40.77**	**22**	P	**P**	**14 18 20.0**	**-1.7**
MJAR	**Matsushiro Arr**	**40.77**	**22**	P	**P**	**14 18 20.1**	**-1.5**
	comp=Z,11nm,1.0s,mb4.5,baz=198,slow=9.1,SNR=19						
MJAR				LR	LR	14 33 25.3	
	comp=Z,209nm,21.1s,MS4.0,baz=210,slow=34						
BJT	**Baijiatuao**	**41.08**	**355**	*e*P	**P**	**14 18 24.2**	**+0.1**
	comp=Z,47nm,0.8s,mb5.2						
BJT	**Baijiatuao**	**41.08**	**355**	*e*P	**P**	**14 18 24.2**	**+0.1**
BJT				pmax	pmax		
	comp=Z,47nm,0.8s						
BJI	**Beijing**	**41.10**	**355**	P	**P**	**14 18 24.3**	**+0.1**
BJI				XP	sP	14 18 38.6	0.0
BJI				S	**S**	**14 24 38.8**	**+4.0**
BJI				XS	sS	14 24 54.9	+3.3
BJI				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
BJI				LR	LR		
	comp=N,169nm,14.7s,MS4.4						
BJI				LR	LR		
	comp=E,269nm,12.0s,MS4.4						
BJI				LR	LR		
	comp=Z,122nm,19.7s						
VIS	**Vishakhapatnam**	**41.26**	**299**	*e*P	**P**	**14 18 26.6**	**+0.7**
LSA	**Lhasa**	**41.61**	**320**	P	**P**	**14 18 30.2**	**+1.6**
LSA	**Lhasa**	**41.61**	**320**	*e*P	**P**	**14 18 30.6**	**+2.0**
	comp=Z,22nm,0.7s,mb4.9						
LSA	**Lhasa**	**41.61**	**320**	*e*P	**P**	**14 18 30.6**	**+2.0**
LSA				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.9						
BOK	**Bokaro**	**41.88**	**308**	*ex*	x	14 19 40.0	
JSD	**Sado**	**42.12**	**21**	P	**P**	**14 18 31.8**	**-0.9**
ODAN	**Odare**	**42.42**	**313**	*e*P	**P**	**14 18 36.0**	**+0.7**
	comp=Z,96nm,1.3s,mb5.2						
TAPN	**Taplejung**	**42.48**	**314**	*e*P	**P**	**14 18 36.7**	**+0.9**
	comp=Z,72nm,1.0s,mb5.3						
HHC	**Hu-ho-hao-te**	**42.52**	**350**	*e*P	**P**	**14 18 37.1**	**+1.2**
HHC				AP	pP	14 18 48.0	+1.9
HHC				XP	sP	14 18 51.6	+1.4
HHC				PP	PP	14 20 19.0	+4.1
HHC				PCS	PcS	14 24 20.4	+0.4
HHC				S	**S**	**14 24 56.1**	**+0.3**
HHC				AMB	AMB		
	comp=Z,32nm,1.1s,mb5.0						
HHC				LR	LR		
	comp=N,225nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=E,143nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=Z,251nm,17.8s,MS4.2						
BTO	**Baotou**	**42.58**	**348**	*e*P	**P**	**14 18 35.6**	**-0.8**
JMM	**Marumori**	**42.93**	**24**	P	**P**	**14 18 39.5**	**+0.3**
RAMN	**Ramite**	**43.05**	**313**	*e*P	**P**	**14 18 41.3**	**+0.9**
	comp=Z,113nm,1.1s,mb5.5						
CAN	**Canberra**	**43.08**	**145**	*e*P	**P**	**14 18 42.4**	**+1.9**
JYA	**Atsumi**	**43.14**	**22**	P	**P**	**14 18 40.9**	**-0.1**
CNB	**Canberra Magne**	**43.28**	**145**	*e*P	**P**	**14 18 44.2**	**+2.1**
JIRN	**Jiri**	**43.76**	**313**	*e*P	**P**	**14 18 47.1**	**+1.0**
	comp=Z,76nm,1.0s,mb5.4						
GUN	**Gumba**	**44.12**	**313**	*e*P	**P**	**14 18 50.1**	**+1.0**
	comp=Z,83nm,0.8s,mb5.5						
KOD	**Kodaikanal**	**44.47**	**286**	*e*P	**P**	**14 18 51.6**	**-0.5**
KKN	**Kakani**	**44.49**	**313**	*e*P	**P**	**14 18 52.5**	**+0.5**
	comp=Z,57nm,1.1s,mb5.2						
KKN	**Kakani**	**44.49**	**313**	*e*P	**P**	**14 18 52.5**	**+0.5**
KKN				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.2						
JOM	**Ohasama**	**44.51**	**23**	P	**P**	**14 18 50.5**	**-1.5**
DMN	**Daman**	**44.52**	**313**	*e*P	**P**	**14 18 53.0**	**+0.8**
	comp=Z,51nm,1.0s,mb5.3						
GTA	**Gaotai**	**44.59**	**337**	⇑P	**P**	**14 18 53.6**	**+1.0**
GTA				AP	pP	14 19 04.0	+1.2
GTA				XP	sP	14 19 08.0	+1.0
GTA				PP	PP	14 20 38.2	+1.1
GTA				S	**S**	**14 25 27.7**	**+1.5**
GTA				XS	sS	14 25 44.8	+1.7
GTA				AMB	AMB		
	comp=Z,21nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,102nm,5.4s						
GTA				LR	LR		
	comp=N,166nm,16.2s,MS4.2						
GTA				LR	LR		
	comp=E,115nm,15.0s,MS4.2						
GTA				LR	LR		
	comp=Z,165nm,13.8s,MS4.1						
CN2	**Changchun**	**44.84**	**5**	*e*P	**P**	**14 18 58.0**	**+3.5**
GKN	**Gorkha**	**45.09**	**313**	*e*P	**P**	**14 18 57.0**	**+0.3**
HYB	**Hyderabad**	**45.40**	**296**	*e*P	**P**	**14 18 59.5**	**+0.1**
HYB	**Hyderabad**	**45.40**	**296**	*i*P	**P**	**14 18 59.5**	**+0.1**
HYB				*e*		14 19 05.0	
JTM	**Tenmabayashi**	**45.57**	**22**	P	**P**	**14 19 00.1**	**-0.2**
KOLN	**Koldanda**	**45.73**	**312**	*e*P	**P**	**14 19 02.4**	**+0.6**
	comp=Z,25nm,0.6s,mb5.3						
DANN	**Dangsing**	**45.92**	**312**	*e*P	**P**	**14 19 03.4**	**0.0**
	comp=Z,77nm,0.7s,mb5.7						
JOT	**Ohata**	**46.08**	**21**	P	**P**	**14 19 03.2**	**-1.2**
MDJ	**Mudanjiang**	**46.14**	**9**	P	**P**	**14 19 04.5**	**-0.3**
MDJ				AP	pP	14 19 13.2	-1.9
MDJ				XP	sP	14 19 17.4	-1.8
MDJ				PP	PP	14 20 54.2	+0.7
MDJ				S	**S**	**14 25 46.7**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,84nm,3.9s						
MDJ				LR	LR		
	comp=N,157nm,20.3s						
MDJ				LR	LR		
	comp=Z,193nm,20.8s,MS4.0						
MDJ	**Mudanjiang**	**46.14**	**9**	*e*P	**P**	**14 19 04.3**	**-0.5**
	comp=Z,59nm,1.2s,mb5.4						
NGP	**Nagpur**	**46.31**	**301**	*ex*	**P**	**14 19 02.0**	**-4.6**
NGP				AMb	AMB	14 19 09.0	
	comp=Z,58nm,1.5s,mb5.3						
PYUN	**Piuthan**	**46.36**	**312**	*e*P	**P**	**14 19 07.6**	**+0.8**
	comp=Z,63nm,0.7s,mb5.7						
JEM	**Erimo**	**47.42**	**23**	P	**P**	**14 19 14.0**	**-0.8**
BHPL	**Bhopal**	**48.53**	**303**	*e*P	**P**	**14 19 24.6**	**+0.8**
BHPL				AMb	AMB	14 19 30.8	
	comp=Z,38nm,1.0s,mb5.4						
ASAJ	**Asahikawa**	**49.02**	**21**	P	**P**	**14 19 25.8**	**-1.4**
JMP	**Maruseppu**	**49.20**	**22**	P	**P**	**14 19 27.8**	**-0.8**
KAD	**Karad**	**49.33**	**294**	*e*P	**P**	**14 19 28.6**	**-1.4**
KAD				AMb	AMB	14 19 36.2	
	comp=Z,32nm,0.9s,mb5.3						
POO	**Poona**	**50.00**	**295**	*e*P	**P**	**14 19 35.3**	**+0.3**
HIA	**Hailar**	**50.12**	**359**	*e*P	**P**	**14 19 36.0**	**+0.6**
	comp=Z,31nm,1.2s,mb5.2						
HIA	**Hailar**	**50.12**	**359**	*d*P	**P**	**14 19 35.0**	**-0.4**
ULN	**Ulaanbaatar**	**50.15**	**348**	*e*P	**P**	**14 19 36.2**	**+0.6**
	comp=Z,41nm,1.3s,mb5.3						
ULN	**Ulaanbaatar**	**50.15**	**348**	*c*P	**P**	**14 19 36.0**	**+0.3**
SONM	**Songino Array**	**50.26**	**347**	P	**P**	**14 19 36.8**	**+0.3**
	comp=Z,4.4nm,0.6s,mb4.7,baz=168,slow=8.0,SNR=34						
HABR	**Khabarovsk**	**50.86**	**12**	*e*P	**P**	**14 19 38.0**	**-3.1**
HABR				*e*	pP	14 19 48.1	-3.4
HABR				*e*		14 20 55.5	
HABR				*e*		14 21 34.4	
HABR				*e*		14 27 08.5	
HABR				*e*		14 29 25.9	
HABR				*e*		14 30 28.0	
YSS	**Yuzh-Sakhalins**	**51.56**	**19**	*e*P	**P**	**14 19 45.3**	**-1.0**
YSS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
SMLA	**Simla**	**52.26**	**312**	*e*P	**P**	**14 19 52.1**	**+0.2**
SMLA				AMb	AMB	14 19 58.5	
	comp=Z,56nm,1.5s,mb5.3						
WMQ	**Urumqi**	**53.53**	**331**	*e*P	**P**	**14 20 03.0**	**+2.0**
WMQ				AP	pP	14 20 13.0	+1.5
WMQ				XP	sP	14 20 17.0	+1.4
WMQ				PP	PP	14 22 05.0	+3.1
WMQ				S	**S**	**14 27 32.0**	**+0.3**
WMQ				SCS	ScS	14 29 46.0	-1.9
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,89nm,5.0s						
WMQ				LR	LR		
	comp=N,87nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=E,78nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,74nm,16.0s,MS3.8						
MK31	**Makanchi Array**	**58.33**	**330**	*e*P	**P**	**14 20 35.4**	**+0.1**
MK31	**Makanchi Array**	**58.33**	**330**	*i*P	**P**	**14 20 35.2**	**-0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
MKAR	**Makanchi Array**	**58.33**	**330**	P	**P**	**14 20 35.4**	**+0.1**
	comp=Z,5.6nm,0.6s,mb4.8,baz=130,slow=7.9,SNR=48						
BOD	**Bodaibo**	**58.92**	**356**	*e*P	**P**	**14 20 38.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2						
TKM2	**Tokmak 2**	**59.60**	**323**	*e*P	**P**	**14 20 44.8**	**+0.5**
	comp=Z,12nm,1.0s,mb4.9						
TKM2	**Tokmak 2**	**59.60**	**323**	*e*P	**P**	**14 20 44.8**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
KBL	**Kabul**	**59.89**	**312**	*e*P	**P**	**14 20 46.7**	**+0.3**
	comp=Z,23nm,0.8s,mb5.2						
KBL	**Kabul**	**59.89**	**312**	*e*P	**P**	**14 20 46.7**	**+0.3**
KBL				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
AML	**Almayashu**	**60.34**	**321**	*e*P	**P**	**14 20 50.4**	**+1.1**
	comp=Z,14nm,0.9s,mb5.0						
EKS2	**Erkin-Say**	**60.57**	**322**	*e*P	**P**	**14 20 50.3**	**-0.5**
	comp=Z,18nm,1.4s,mb5.0						
RPZ	**Rata Peaks**	**61.63**	**141**	P	**P**	**14 20 59.2**	**+1.2**
	comp=Z,10.0nm,0.9s,mb4.9,baz=283,slow=19,SNR=2.5						
PETK	**Petropavlovsk-**	**62.15**	**24**	P	**P**	**14 21 01.8**	**+0.5**
	comp=Z,13nm,0.9s,mb5.0,baz=209,slow=4.3,SNR=8.9						
PETK				LR	LR	14 46 49.7	
	comp=Z,73nm,21.0s,MS3.8,baz=224,slow=35						
ZAA0	**Zalesovo Array**	**62.34**	**337**	*e*P	**P**	**14 21 00.9**	**-1.6**
ZALV	**Zalesovo Beam**	**62.34**	**337**	P	**P**	**14 21 01.5**	**-1.1**
	comp=Z,7.1nm,0.9s,mb4.8,baz=123,slow=5.5,SNR=27						
PET	**Petropavlovsk**	**62.48**	**25**	*e*P	**P**	**14 21 03.5**	**-0.1**
PET				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.2						
KURK	**Kurchatov**	**62.76**	**331**	P	**P**	**14 21 05.5**	**0.0**
	comp=Z,144nm,0.8s,mb6.2,SNR=20						
KURK	**Kurchatov**	**62.76**	**331**	P	**P**	**14 21 05.0**	**-0.5**
KURK	**Kurchatov**	**62.76**	**331**	*e*P	**P**	**14 21 05.1**	**-0.4**
	comp=Z,31nm,1.1s,mb5.3						
KURK	**Kurchatov**	**62.76**	**331**	*c*P	**P**	**14 21 04.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.3						
KK31	**Karatay Array**	**62.85**	**321**	*i*P	**P**	**14 21 05.9**	**-0.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
YAK	**Yakutsk**	**63.27**	**5**	*e*P	**P**	**14 21 07.7**	**-1.0**
	comp=Z,51nm,0.8s,mb5.7						
YAK	**Yakutsk**	**63.27**	**5**	*e*P	**P**	**14 21 07.2**	**-1.4**
YAK				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
NVS	**Novosibirsk**	**63.63**	**337**	*e*P	**P**	**14 21 09.2**	**-1.9**
SEY	**Seymchan**	**68.08**	**15**	*e*P	**P**	**14 21 39.7**	**+0.1**
BVA0	**Borovoye Array**	**68.21**	**330**	P	**P**	**14 21 39.5**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
BVAR	**Borovoye Array**	**68.21**	**330**	P	**P**	**14 21 40.5**	**-0.2**
	comp=Z,5.3nm,0.9s,mb4.6,baz=126,slow=7.5,SNR=20						
BRVK	**Borovoye**	**68.28**	**330**	P	**P**	**14 21 40.8**	**-0.3**
	comp=Z,79nm,1.0s,mb5.7,SNR=5.4						
BRVK	**Borovoye**	**68.28**	**330**	*e*P	**P**	**14 21 40.3**	**-0.8**
	comp=Z,30nm,1.1s,mb5.2						
BRVK	**Borovoye**	**68.28**	**330**	*e*P	**P**	**14 21 40.3**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
AB31	**Akbulak array**	**72.17**

	comp=Z,9.0nm,1.0s,mb5.0,baz=133,slow=10.0,SNR=3.9								
OBN	**Obninsk**		**87.49**	**325**	⇓*e*P		**P**	**14 23 27.1**	**-0.7**
OBN					*e*S		S	14 34 04.6	-1.8
OBN					pmax		pmax		
	comp=Z,6.0nm,0.5s,mb5.1								
BRTR	**Keskin Array B**		**88.41**	**310**	P		**P**	**14 23 31.4**	**-1.1**
	comp=Z,1.5nm,0.8s,mb4.3								
APA	**Apatity**		**89.93**	**337**⇑	*e*P		**P**	**14 23 44.0**	**+5.0**
APA					pmax		pmax		
	comp=Z,43nm,1.4s,mb5.6								
KTH	**Kantishna Hill**		**90.19**	**27**	*e*P		**P**	**14 23 39.8**	**-0.5**
COLD	**Coldfoot**		**90.59**	**23**	P		**P**	**14 23 41.3**	**-0.9**
	comp=Z,4.9nm,1.0s,mb4.8								
SPITS	**Spitsbergen Ar**		**93.94**	**348**	LR		LR	15 08 27.5	
	comp=Z,98nm,18.1s,MS4.3,baz=250,slow=37								
EGAK	**Eagle**		**94.41**	**25**	*e*P		**P**	**14 23 59.8**	**0.0**
DAWY	**Dawson**		**95.26**	**26**	*e*P		**P**	**14 24 03.5**	**-0.3**
VRAC	**Vranov**		**99.98**	**320**	LR		LR	15 19 50.8	
	comp=Z,53nm,18.2s,MS4.1,baz=257,slow=42								
TORD	**Torodi Ar. Bea**		**118.47**	**284**	PKP		PKPdf	14 29 28.4	-0.5
	comp=Z,0.5nm,0.8s,baz=14,slow=3.0,SNR=2.7								
PDAR	**Pinedale Array**		**118.87**	**40**	PKKPbc		PKKPbc	14 39 45.4	+0.2
	comp=Z,0.7nm,0.8s,baz=120,slow=5.3,SNR=4.9								
ULM	**Lac du Bonnet**		**121.95**	**27**	PKhKP			14 29 28.8	
	comp=Z,4.3nm,0.7s,baz=220,slow=3.6,SNR=3.2								
LCO	**Las Campanas**		**148.18**	**161**	*e*PKPbc		PKPbc	14 30 27.8	+1.0
LPAZ	**La Paz**		**160.69**	**153**	PKP		PKPdf	14 30 43.7	+2.6
	comp=Z,3.4nm,0.9s,baz=183,slow=0.4,SNR=4.2								
LPAZ					PKPab		PKPab	14 31 25.6	+2.8
	comp=Z,2.0nm,0.8s,baz=227,slow=9.8,SNR=2.5								
SIV	**San Ignacio**		**162.98**	**174**	PKP		PKPdf	14 30 44.7	+1.2
	comp=Z,1.8nm,0.8s,baz=261,slow=1.4,SNR=6.2								
SIV					PKPab		PKPab	14 31 32.9	+0.2
	comp=Z,1.2nm,0.7s,baz=199,slow=6.7,SNR=5.5								

*NEIC **06** 14:36:45.7±4.1,5179S×16144E,h5km±27km,mb4.4/1, Error ellipse: s-maj=14.8km s-min=9.9km az=153.0*
*GCMT **06** 14:36:45.7±0.3,5163S×16109E,h32km±1km,MW5.1/68, Moment Tensor Solution. s45,c59; s68,c109; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.59±.21; Mθθ5.18±.17; Mϕϕ-5.77±.17; Mrθ-1.81±.25; Mθϕ2.30±.16; Mϕr0.10±.26; Best double couple: Mo6.23000×10^16^ NP1:ϕ1212.00000°,δ75.00000°,λ170.00000°. NP2: ϕ1305.00000°,δ81.00000°,λ15.00000°. Principal axes: T 6.1940, Plg17.0000°, Azm169.0000°; N 0.0700, Plg72.0000°, Azm336.0000°; P -6.2650, Plg4.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **06** 14:36:46.2±0.8,5151S×16141E,h0km,mb4.3/7, mb1 4.4/9,mb1mx4.3/15,mbtmp4.3/9,ML3.8/2,MS4.3/16, Ms1 4.3/16,ms1mx4.2/23 Error ellipse: s-maj=26.9km s-min=17.9km az=42.0*
*ISCJB **06** 14:36:49.5±2.6,5136S±008×1614E±0.1,h30km±19km, mb4.2/8,MS4.3/14,Error ellipse: s-maj=15.3km s-min=9.0km az=151.4*

ISC 06 14:36:51.6±2.2,5143S±008×16138E±010,h31km±16km, n37,σ1§28/30,mb4.2/8,MS4.3/14,North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.41**	**204**	*e*Pn		**Pn**	**14 37 35.3**	**-7.2**
MCQ				*e*Sn		**Sn**	**14 38 10.8**	**-11**
WHZ	**Wether Hill Ro**	**7.04**	**41**	P		**Pn**	**14 38 31.2**	**-1.2**
WHZ				S		**Sn**	**14 39 49.2**	**-2.1**
MLZ	**Mavora Lakes**	**7.58**	**39**	P		**Pn**	**14 38 39.1**	**-0.7**
TUZ	**Tuapeka**	**7.73**	**48**	P		**Pn**	**14 38 40.8**	**-1.1**
MSZ	**Milford Sound**	**8.05**	**36**	P		**Pn**	**14 38 48.3**	**+1.9**
MSZ				S		**Sn**	**14 40 15.8**	**-0.5**
EAZ	**Earnscleugh**	**8.14**	**44**	P		**Pn**	**14 38 48.0**	**+0.4**
JCZ	**Jackson Bay**	**8.88**	**37**	P		**Pn**	**14 38 59.5**	**+1.9**
ODZ	**Otahua Downs**	**8.88**	**48**	P		**Pn**	**14 38 55.9**	**-1.8**
FOZ	**Fox Glacier**	**9.66**	**39**	P		**Pn**	**14 39 09.9**	**+1.5**
RPZ	**Rata Peaks**	**10.11**	**44**	Pn		**Pn**	**14 39 14.5**	**0.0**
	0.7nm,0.3s,baz=173,slow=21,SNR=5.3							
RPZ				Sn		**Sn**	**14 40 59.4**	**-7.2**
	0.5nm,0.3s,baz=32,slow=22,SNR=2.3							
RPZ				LR		LR	14 42 53.0	
	comp=Z,3μm,19.5s,baz=297,slow=36							
KHZ	**Kahutara**	**12.25**	**47**	P		**Pn**	**14 39 45.2**	**+1.5**
TAU	**Tasmania Unive**	**12.79**	**306**	*e*Pn		**Pn**	**14 39 50.5**	**-0.7**
	24nm,0.7s							
TAU				*e*Sn		**Sn**	**14 42 03.4**	**-8.9**
URZ	**Urewera**	**17.21**	**46**	P		**Pn**	**14 40 50.2**	**+0.7**
	0.4nm,0.3s,baz=233,slow=6.9,SNR=8.5							
URZ				LR		LR	14 47 43.1	
	comp=Z,3μm,18.2s,baz=132,slow=38							
STKA	**Stephens Creek**	**24.35**	**316**	P		**P**	**14 42 08.0**	**+1.4**
	3.9nm,1.0s,mb3.8,baz=138,slow=14,SNR=3.4							
STKA				LR		LR	14 50 15.5	
	comp=Z,1μm,19.0s,MS4.4,baz=70,slow=33							
RAO	**Raoul Island**	**27.02**	**43**	LR		LR	14 52 52.4	
	comp=Z,439nm,19.5s,MS4.0,baz=314,slow=36							
CTA	**Charters Tower**	**33.45**	**334**	LR		LR	14 54 45.1	
	comp=Z,572nm,20.2s,MS4.3,baz=157,slow=32							
ASAR	**Alice Springs**	**34.86**	**312**	P		**P**	**14 43 39.7**	**-0.2**
	3.3nm,0.9s,mb4.2,baz=148,slow=7.4,SNR=15							
NWAO	**Narrogin (SRO)**	**36.90**	**283**	P		**P**	**14 43 57.2**	**-0.1**
	21nm,1.2s,mb4.8,baz=288,slow=8.5,SNR=3.1							
NWAO				LR		LR	14 54 51.0	
	comp=Z,98nm,19.7s,MS3.6,baz=151,slow=29							
NWAO	**Narrogin (SRO)**	**36.90**	**283**	P		**P**	**14 43 57.3**	**+0.1**
NWAO				LR		LR	14 54 51.0	
WB2	**Warramunga Arr**	**37.90**	**316**	*e*P		**P**	**14 44 04.9**	**-0.9**
WRA	**Warramunga Arr**	**37.91**	**316**	P		**P**	**14 44 04.7**	**-1.2**
	2.4nm,1.1s,mb3.8,baz=145,slow=6.5,SNR=4.1							
WRA				LR		LR	14 58 46.1	
	comp=Z,718nm,18.0s,MS4.5,baz=110,slow=35							
WRAB	**Tennant Creek**	**37.91**	**316**	*e*P		**P**	**14 44 09.1**	**+3.2**
	11nm,1.3s,mb4.4							
QSPA	**South Pole Qui**	**38.69**	**180**	P		**P**	**14 44 11.2**	**-0.7**
	10nm,0.9s,mb4.5,baz=6.9,slow=4.4,SNR=20							
MAW	**Mawson**	**46.78**	**211**	LR		LR	15 03 56.8	
	comp=Z,437nm,18.2s,MS4.5,baz=111,slow=35							
PPT	**Papeete**	**51.29**	**67**	*e*S		**S**	**14 53 11.6**	**+2.0**
	214nm,30.2s							
PPT				*e*LR		LR	15 00 49.5	
	403nm,23.0s,baz=225							
PPT	**Papeete**	**51.29**	**67**	LR		LR	15 04 29.9	
	comp=Z,287nm,18.7s,MS4.1,baz=244,slow=32							
BATI	**Baumata**	**51.33**	**310**	LR		LR	15 06 50.6	
	comp=Z,615nm,20.9s,MS4.6,baz=348,slow=35							
KAPI	**Kappang**	**57.73**	**308**	LR		LR	15 12 41.7	
	comp=Z,325nm,18.0s,MS4.5,baz=296,slow=37							
RPN	**Rapa Nui**	**68.87**	**107**	P		**P**	**14 47 51.0**	**-2.2**
	72nm,0.9s,baz=126,slow=3.3,SNR=2.8							
PLCA	**Paso Flores**	**77.68**	**142**	P		**P**	**14 48 46.1**	**+1.2**
	2.5nm,1.1s,mb4.1,baz=229,slow=9.3,SNR=2.8							
PLCA				LR		LR	15 15 49.9	
	comp=Z,204nm,20.1s,MS4.4,baz=187,slow=30							
CMAR	**Chiang Mai Arr**	**88.30**	**303**	P		**P**	**14 49 40.0**	**+0.1**
	0.4nm,0.3s,mb4.2,baz=123,slow=6.6,SNR=3.8							
CMAR				LR		LR	15 34 14.2	
	comp=Z,75nm,18.1s,MS4.2,baz=343,slow=39							
MJAR	**Matsushiro Arr**	**89.92**	**342**	LR		LR	15 30 50.7	
	comp=Z,73nm,18.3s,MS4.2,baz=260,slow=36							
BOSA	**Boshof**	**91.45**	**218**	LR		LR	15 25 03.7	
	comp=Z,173nm,19.4s,MS4.5,baz=157,slow=32							
KSRS	**Korea Array**	**93.24**	**334**	LR		LR	15 29 38.9	
	comp=Z,81nm,19.2s,MS4.2,baz=341,slow=34							
TOA0	**Torodi Ar. Sit**	**138.43**	**211**	PKPdf		PKPdf	14 56 11.4	-2.6
TORD	**Torodi Ar. Bea**	**138.43**	**211**	PKP		PKPdf	14 56 11.3	-2.7
	0.4nm,0.7s,baz=207,slow=1.0,SNR=3.3							
AKASG	**Malin Array Be**	**150.34**	**288**	PKPbc		PKPbc	14 56 36.2	-2.5
	0.4nm,0.4s,baz=90,slow=1.7,SNR=3.0							

*CSEM **06** 14:36:59.5,3161N×763W,h8km,MD3.5,After CNRM*

CNRM 06 14:36:59.5,3161N×763W,h8km,MD3.5,Morocco

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TZC	**Tazercounte**	**1.11**	**61**	*e*P		Pg	14 37 19.0	-1.8
TZC				*i* S		Sg	14 37 35.0	-0.2
JHA	**Jbel Lahdid**	**1.56**	**275**	*i* P		Pn	14 37 25.0	-2.5
JHA				*i* S		Sn	14 37 46.0	-1.9
KIB	**El Ksiba**	**1.66**	**54**	*e*P		Pn	14 37 28.0	-0.9
KIB				*i* S		Sn	14 37 46.0	-4.4
CZD	**Col de Zad**	**2.61**	**56**	*e*P		Pn	14 37 40.0	-2.0
CZD				*i* S		Sn	14 38 10.0	-3.8
ZFT	**Errachidia**	**2.82**	**81**	*i* P		Pn	14 37 44.0	-0.9
ZFT				*i* S		Sn	14 38 16.0	-3.1

*KRSC **06** 14:55:14.2±1.7,5111N×15408E,h456km±56km,ML4.6*
*MOS **06** 14:55:18.8±0.5,5185N×15349E,h405km,mb4.2/3,Error ellipse: s-maj=21.7km s-min=12.8km az=51.9*
*ISCJB **06** 14:55:19.0±0.4,5183N±009×1533E±0.1,h392km±6km, mb3.3/13,Error ellipse: s-maj=16.8km s-min=8.2km az=142.1*
*NEIC **06** 14:55:19.9±0.6,5178N×15324E,h388km±7km,mb3.5/2, Error ellipse: s-maj=13.5km s-min=7.6km az=150.0*
*IDC **06** 14:55:20.4±1.4,5180N×15323E,h391km±16km,mb2.9/10, mb1 3.1/13,mb1mx3.0/24,mbtmp2.9/13,Error ellipse: s-maj=18.0km s-min=11.2km az=142.0*

ISC 06 14:55:20.0±0.4,5176N±009×1533E±01,h386km±6km,n37, σ1§03/43,mb3.3/13,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.06**	**120**	*e*PN		**Pn**	**14 56 14.4**	**-0.6**
SKR				*e*			14 57 02.0	
MIPR	**Malaya Ipel'ka**	**2.19**	**75**	*e*P		**Pn**	**14 56 16.2**	**+0.5**
PETK	**Petropavlovsk-**	**3.00**	**61**	P		**Pn**	**14 56 22.2**	**+0.3**
	2.6nm,0.3s,baz=229,slow=8.8,SNR=102							
RUS	**Russkaya**	**3.28**	**76**	*e*P		**Pn**	**14 56 23.9**	**-0.4**
RUS				*i* S		**S**	**14 57 15.0**	**-1.4**
GNL	**Ganaly**	**3.42**	**54**	*e*P		**Pn**	**14 56 26.2**	**+0.7**
PET	**Petropavlovsk**	**3.51**	**67**	*e*Pn		**Pn**	**14 56 26.9**	**+0.6**
PET	**Petropavlovsk**	**3.51**	**67**	*e*PN		**Pn**	**14 56 26.6**	**+0.2**
PET				*e*S		**S**	**14 57 22.8**	**+2.6**
PET				pmax		pmax		
	comp=Z,43nm,0.6s							
PET				smax				
	comp=E,17nm,0.6s							
AVH	**Avacha**	**3.64**	**63**	*e*P		**Pn**	**14 56 28.8**	**+1.2**
NLC	**Nalytchevo**	**3.95**	**67**	*e*P		**Pn**	**14 56 29.6**	**-0.9**
NLC				*i* S		**S**	**14 57 25.6**	**-2.1**
SPN	**Mys Shipunski**	**4.32**	**69**	*e*P		**Pn**	**14 56 33.3**	**-0.8**
SPN				*i* S		**S**	**14 57 29.8**	**-4.5**
TUMR	**Tumrok**	**5.39**	**46**	*e*P		**Pn**	**14 56 47.3**	**+2.1**
KMNR	**Kamenistaya**	**5.74**	**43**	*e*P		**Pn**	**14 56 50.9**	**+2.0**
MKZ	**Mys Kozlova**	**5.79**	**58**	*e*P		**Pn**	**14 56 48.5**	**-1.0**
MKZ				*i* S		**S**	**14 57 56.6**	**-5.8**
KBTR	**Krutoberegovo**	**7.16**	**48**	*e*P		**Pn**	**14 57 04.3**	**-0.5**
KBTR				*i* S		**S**	**14 58 24.6**	**-5.8**
ASAJ	**Asahikawa**	**10.49**	**227**	P		**Pn**	**14 57 44.7**	**+1.1**
	comp=E,0.4nm,0.3s,baz=36,slow=20,SNR=4.1							
AMKA	**Amchitka**	**16.14**	**81**	*e*P		**P**	**14 58 44.3**	**-0.8**
MAJO	**Matsushiro**	**18.62**	**221**	*e*P		**P**	**14 59 11.8**	**+0.2**
MJAR	**Matsushiro Arr**	**18.62**	**221**	P		**P**	**14 59 11.5**	**0.0**
	comp=E,0.2nm,0.3s,baz=13,slow=10,SNR=3.9							
KSRS	**Korea Array**	**22.89**	**241**	P		**P**	**14 59 51.8**	**+0.3**
	comp=E,0.7nm,0.6s,mb3.3,baz=39,slow=10.0,SNR=3.7							
KSRS	**Korea Array**	**22.89**	**241**	P		**P**	**14 59 51.8**	**+0.2**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.6s,mb3.4							
JNU	**Nakatsue**	**24.75**	**230**	P		**P**	**15 00 08.5**	**+0.2**
SONM	**Songino Array**	**30.13**	**281**	P		**P**	**15 00 55.8**	**+0.2**
	comp=Z,0.2nm,0.4s,mb2.8,baz=76,slow=9.6,SNR=3.5							
INK	**Inuvik**	**37.43**	**36**	*e*P		**P**	**15 01 57.5**	**+0.2**
	comp=Z,29nm,0.4s							
INK	**Inuvik**	**37.43**	**36**	*e*P		**P**	**15 01 57.5**	**+0.2**
INK				pmax		pmax		
	comp=Z,29nm,0.4s							
KURK	**Kurchatov**	**44.85**	**300**	*e*P		**P**	**15 02 56.3**	**-0.9**
	comp=Z,1.7nm,0.6s,mb3.5							
KURK	**Kurchatov**	**44.85**	**300**	*e*P		**P**	**15 02 56.3**	**-0.9**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb3.6							
MK31	**Makanchi Array**	**44.93**	**293**	*e*P		**P**	**15 02 56.8**	**-1.0**
MKAR	**Makanchi Array**	**44.93**	**293**	P		**P**	**15 02 57.0**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.3,baz=62,slow=8.0,SNR=9.4							
ARCES	**ARCESS Array B**	**53.18**	**340**	P		**P**	**15 03 57.7**	**-1.6**
	comp=Z,2.7nm,0.9s,mb3.5,baz=36,slow=9.4,SNR=2.5							
CMAR	**Chiang Mai Arr**	**53.83**	**253**	P		**P**	**15 04 05.1**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.1,baz=27,slow=7.6,SNR=6.5							
NVAR	**Mina Array Bea**	**60.09**	**65**	P		**P**	**15 04 49.0**	**+1.3**
	comp=Z,0.5nm,0.7s,mb3.0,baz=300,slow=7.3,SNR=4.4							
BW06	**Boulder Array**	**61.76**	**56**	*e*P		**P**	**15 04 59.2**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.4							
PDAR	**Pinedale Array**	**61.76**	**56**	P		**P**	**15 04 59.4**	**+0.6**
	comp=Z,0.9nm,0.7s,mb3.4,baz=286,slow=1.7,SNR=7.5							
BATI	**Baumata**	**66.81**	**212**	P		**P**	**15 05 32.2**	**+0.8**
	comp=Z,7.9nm,0.7s,mb4.5							
WRA	**Warramunga Arr**	**73.30**	**199**	P		**P**	**15 06 09.1**	**-1.1**
	comp=Z,0.2nm,0.8s,mb2.7,baz=11,slow=6.0,SNR=2.8							
TXAR	**Lajitas Array**	**74.96**	**62**	P		**P**	**15 06 21.0**	**+1.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=276,slow=8.1,SNR=4.2							
ASAR	**Alice Springs**	**77.01**	**198**	P		**P**	**15 06 29.9**	**-1.2**
	comp=Z,0.3nm,0.9s,mb2.9,baz=3.3,slow=5.1,SNR=4.2							

IDC 06 15:23:57.8±4.1,294S×10107E,h0km,mb3.3/4,mb1 3.5/4, mb1mx3.3/19,mbtmp3.3/4,Error ellipse: s-maj=171.5km s-min=23.4km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.60**	**120**	P		P	15 31 05.3	-0.7
	0.1nm,0.3s,baz=306,slow=8.7,SNR=4.1							
ASAR	**Alice Springs**	**37.84**	**126**	P		P	15 31 16.9	+0.3
	0.2nm,0.4s,baz=300,slow=7.8,SNR=15							
SONM	**Songino Array**	**50.78**	**5**	P		P	15 33 01.5	+1.8
	0.1nm,0.4s,baz=186,slow=8.6,SNR=4.2							
MKAR	**Makanchi Array**	**52.22**	**344**	P		P	15 33 09.5	-1.1
	0.3nm,0.6s,baz=143,slow=9.7,SNR=3.0							

*DJA **06** 15:38:45,065S×11920E,h20km,MLv3.7/3*
*ISCJB **06** 15:38:46.2±1.0,10S±0.1×12049E±009,h33km,mb3.3/4, Error ellipse: s-maj=18.5km s-min=10.2km az=27.9*
*IDC **06** 15:38:52.0±7.8,122S×12026E,h75km±86km,mb3.0/4, mb1 3.2/5,mb1mx3.1/17,mbtmp3.1/5,ML3.6/1,MS2.8/1, Ms1 2.8/1,ms1mx1.9/13,Error ellipse: s-maj=122.6km s-min=20.8km az=57.0*

ISC 06 15:38:48.1±0.9,11S±01×1204E±01,h35km,n8,σ0§88/8, mb3.3/4,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.57**	**290**	P		**Pn**	**15 38 58.0**	**-1.8**
PCI	**Palu**	**0.57**	**290**	S		**Sn**	**15 39 08.7**	**+0.6**
KAPI	**Kappang**	**3.94**	**189**	P		**Pn**	**15 39 47.1**	**+0.9**
	5.0nm,0.3s,baz=5.7,slow=10,SNR=21							
KAPI				LR		LR	15 41 33.5	
	comp=Z,120nm,18.9s,baz=303,slow=42							
KAPI	**Kappang**	**3.94**	**189**	P		**Pn**	**15 39 50.3**	**+4.2**
WRA	**Warramunga Arr**	**23.18**	**145**	P		**P**	**15 43 51.2**	**-0.7**
	0.8nm,0.8s,mb3.2,baz=330,slow=9.7,SNR=8.0							
ASAR	**Alice Springs**	**25.98**	**151**	P		**P**	**15 44 18.1**	**+0.3**
	0.3nm,0.8s,mb2.9,baz=341,slow=14,SNR=4.4							
SONM	**Songino Array**	**50.24**	**348**	P		**P**	**15 47 41.2**	**+0.5**
	0.4nm,0.7s,mb3.6,baz=166,slow=7.4,SNR=2.9							
MKAR	**Makanchi Array**	**58.21**	**330**	P		**P**	**15 48 39.1**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=124,slow=7.5,SNR=3.5							

*MOS **06** 15:39:30.5±2.5,4275N×4803E,h22km,mb4.2/1,Error ellipse: s-maj=14.0km s-min=8.0km az=8.4*
*ISCJB **06** 15:39:31.1±0.6,4289N±004×4811E±005,h10km,Error ellipse: s-maj=5.6km s-min=4.7km az=25.2*
*CSEM **06** 15:39:32.9±0.1,4271N×4795E,h2km,mb4.2,Error ellipse: s-maj=2.6km s-min=2.3km az=106.0*

ISC 06 15:39:32.3±0.5,4290N±003×4807E±004,h10km,n32, σ1§54/54,4C-5D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MNSR	**Manas**	**0.33**	**232**⇑	*i*PG		**Pg**	**15 39 32.8**	**-5.9**
MNSR				pmax		pmax		
	comp=Z,1μm,0.2s							
MAK	**Makhachkala**	**0.42**	**278**	*i*PG		**Pg**	**15 39 39.5**	**-0.9**
MAK				*i*			15 39 45.8	
MAK				pmax		pmax		
	comp=Z,271nm,0.2s							
MAK	**Makhachkala**	**0.42**	**278**	*i* Pg		**Pg**	**15 39 39.5**	**-0.9**
	comp=Z,271nm,0.2s							
MAK				*i* Sg		**Sg**	**15 39 45.8**	**-0.2**
BUJR	**Buynaksk**	**0.71**	**264**	*e*PG		**Pg**	**15 39 45.0**	**-0.9**
BUJR				*e*S		**Sg**	**15 39 58.2**	**+3.0**
BUJR				pmax		pmax		
	comp=Z,135nm,0.3s							
BUJR	**Buynaksk**	**0.71**	**264**	*e*Pg		**Pg**	**15 39 45.0**	**-0.9**
	comp=Z,135nm,0.3s							

URKR	**Urkarakh**		**0.80**	**204**	*e*PG		**Pg**	**15 39 41.5**	**-6.2**
URKR					*i* S		**Sg**	**15 39 51.5**	**-6.7**
URKR					pmax		pmax		
	comp=Z,150nm,0.1s								
URKR	**Urkarakh**		**0.80**	**204**	*i* Sg		**Sg**	**15 39 51.5**	**-6.7**
DBC	**Dubki**		**0.92**	**278**	*i* PG		**Pg**	**15 39 44.0**	**-5.9**
DBC					*i* S		**Sg**	**15 39 57.0**	**-4.8**
UNCR	**Uncukul**		**0.95**	**259**	⇓*i* PG		**Pg**	**15 39 44.5**	**-6.1**
UNCR					*e*S		**Sg**	**15 39 56.5**	**-6.6**
UNCR					pmax		pmax		
	comp=Z,67nm,0.2s								
GNBR	**Gunib**		**0.96**	**238**	*e*PG		**Pg**	**15 39 48.0**	**-2.8**
GNBR					*i* S		**Sg**	**15 40 04.2**	**+0.9**
GNBR					pmax		pmax		
	comp=Z,137nm,0.3s								
GNBR	**Gunib**		**0.96**	**238**	*e*Pg		**Pg**	**15 39 48.0**	**-2.8**
	comp=Z,137nm,0.3s								
SEKA	**Sheki**		**1.81**	**201**	P		**Pn**	**15 40 02.9**	**-0.6**
	SNR=15								
SEKA					S		**Sn**	**15 40 24.4**	**-2.1**
SIZA	**Siyzn**		**1.93**	**161**	P		**Pn**	**15 40 06.9**	**+1.8**
	SNR=4.0								
SIZA					S		**Sn**	**15 40 32.1**	**+2.8**
PQL	**Pirkuli**		**2.15**	**169**	P		**Pn**	**15 40 09.6**	**+1.5**
	SNR=20								
SNJR	**Sundja**		**2.39**	**275**	*e*PN		**Pn**	**15 40 11.4**	**-0.1**
SNJR					*e*S		**Sn**	**15 40 45.2**	**+4.3**
VLKR	**Vladikavkaz**		**2.49**	**274**	*e*PN		**Pn**	**15 40 12.6**	**-0.2**
VLKR					*e*S		**Sn**	**15 40 47.0**	**+3.7**
GANJ	**Ganja**		**2.61**	**211**	P		**Pn**	**15 40 13.6**	**-0.8**
	SNR=8.2								
GANJ					S		**Sn**	**15 40 45.1**	**-1.0**
BTKR	**Batakoyurt**		**2.62**	**281**	*e*PN		**Pn**	**15 40 15.4**	**+0.8**
BTKR					*e*S		**Sn**	**15 40 52.0**	**+5.5**
BRDA	**Brd**		**2.72**	**194**	P		**Pn**	**15 40 15.1**	**-0.9**
LACR	**Lac**		**2.77**	**270**	⇓*i* PN		**Pn**	**15 40 15.2**	**-1.5**
LACR					*i* S		**Sn**	**15 40 51.5**	**+1.3**
ARNR	**Ardon**		**2.79**	**277**	*e*PN		**Pn**	**15 40 15.9**	**-1.0**
ARNR					*e*S		**Sn**	**15 40 53.3**	**+2.6**
KORR	**Kora**		**2.94**	**275**	*e*PN		**Pn**	**15 40 18.4**	**-0.6**
KORR					*e*S		**Sn**	**15 40 57.0**	**+2.7**
ZEI	**Tsey**		**3.07**	**269**	*e*PN		**Pn**	**15 40 18.8**	**-2.0**
ZEI					*e*S		**Sn**	**15 40 58.0**	**+0.5**
LSNR	**Lesken**		**3.14**	**278**	*e*PN		**Pn**	**15 40 21.5**	**-0.2**
LSNR					*e*S		**Sn**	**15 41 02.6**	**+3.4**
GLBA	**Clilabad**		**3.67**	**176**	P		**Pn**	**15 40 29.2**	**+0.2**
	SNR=4.6								
GNI	**Garni**		**3.71**	**223**	*e*PN		**Pn**	**15 40 31.7**	**+2.1**
KIV	**Kislovodsk**		**4.06**	**287**	*e*PN		**Pn**	**15 40 33.5**	**-0.9**
AKTO	**Aktyubinsk**		**10.17**	**39**	⇓Pn		**Pn**	**15 42 01.1**	**+3.0**
	comp=Z,1.3nm,1.7s								
AKTO					⇓Sn		**Sn**	**15 43 49.6**	**-2.5**
	comp=Z,0.4nm,0.7s								
AKTO	**Aktyubinsk**		**10.17**	**39**	Pn		**Pn**	**15 42 01.1**	**+3.0**
	comp=Z,1.3nm,1.7s								
AKTO					Sn		**Sn**	**15 43 49.6**	**-2.5**
AB09	**Akbulak array**		**10.40**	**48**	⇓Pn		**Pn**	**15 42 03.2**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=237,slow=14								
AB09					⇑Sn		**Sn**	**15 43 55.5**	**-2.2**
	comp=Z,0.9nm,0.4s,baz=234,slow=25								
AB09	**Akbulak array**		**10.40**	**48**	Pn		**Pn**	**15 42 03.2**	**+1.9**
AB09					Sn		**Sn**	**15 43 55.5**	**-2.2**
OBN	**Obninsk**		**14.34**	**332**⇑	*e*P		**Pn**	**15 42 55.7**	**+0.6**
OBN					*e*S		**Sn**	**15 45 31.1**	**-2.9**
OBN					pmax		pmax	

OKCD **Okmok Cone D** 6.54 58 P Pn 16 49 59.6 -0.8
UNV **Unalaska Valle** 7.58 58 P Pn 16 50 13.2 -1.5
UNV S Sn 16 51 39.6 +0.2
SPIA **Saint Paul Isl** 8.04 29 P Pn 16 50 20.7 -0.3
PET **Petropavlovsk** 15.05 289 eP Pn 16 51 57.4 +0.8
PET eS Sn 16 54 43.1 +1.1
PET pmax pmax
comp=Z,83nm,1.5s
PET MLR MLR
comp=Z,400nm,11.0s
PETK **Petropavlovsk-** 15.62 290 Pn Pn 16 52 03.4 -0.7
comp=Z,1.6nm,0.3s,baz=90,slow=18,SNR=55
OHAK **Old Harbor** 15.78 55 eP Pn 16 52 08.5 +2.4
SVW2 **Sparrevohn** 16.25 40 eP Pn 16 52 11.0 -1.1
KDAK **Kodiak Island** 16.30 53 Pn Pn 16 52 14.4 +1.7
comp=Z,7.9nm,0.3s,baz=255,slow=9.0,SNR=28
KDAK Sn Sn 16 55 13.4 +1.2
comp=Z,0.7nm,0.3s,baz=321,slow=20,SNR=8.3
KDAK **Kodiak Island** 16.30 53 eP Pn 16 52 09.0 -3.8
comp=Z,41nm,0.8s
KDAK Sn Sn 16 55 13.4 +1.2
PPLA **Purkeypile** 18.56 38 eP Pn 16 52 42.0 +1.3
comp=Z,108nm,1.3s
SEW **Seward** 18.56 48 eP Pn 16 52 36.2 -4.6
RC01 **Rabbit Creek A** 18.78 45 eP Pn 16 52 41.4 -2.0
CHUM **Lake Minchumin** 19.04 35 eP Pn 16 52 45.8 -0.7
comp=Z,16nm,0.8s
KTH **Kantishna Hill** 19.39 37 eP Pn 16 52 48.6 -2.1
comp=Z,106nm,1.1s
BILL **Bilibino** 19.47 342 eP Pn 16 52 50.0 -1.7
comp=Z,37nm,0.9s
BILL **Bilibino** 19.47 342 ⇓P Pn 16 52 50.3 -1.3
BILL eS Sn 16 56 17.9 -11
BILL pmax pmax
comp=Z,95nm,1.4s
BILL MLR MLR
comp=Z,100nm,15.0s
TRF **Thorofare Moun** 19.58 38 eP Pn 16 52 51.8 -1.1
comp=Z,38nm,1.1s
BPAW **Bear Paw Mtn.** 19.65 36 eP Pn 16 52 51.9 -1.8
comp=Z,46nm,1.1s
IMA2 **Indian Mountai** 19.90 29 eP Pn 16 52 54.0 -2.7
MCK **McKinley** 20.25 38 eP P 16 52 56.3 -2.4
comp=Z,22nm,0.7s
MCK **McKinley** 20.25 38 eP P 16 52 56.3 -2.4
MCK pmax pmax
comp=Z,22nm,0.7s
SEY **Seymchan** 20.58 319 eP P 16 53 02.3 -0.1
COLA **College** 21.21 36 eP P 16 53 07.7 -1.5
comp=Z,10nm,0.8s,mb4.2
COLA **College** 21.21 36 eP P 16 53 08.9 -0.2
COLD **Coldfoot** 21.71 29 eP P 16 53 16.9 +2.5
comp=Z,18nm,0.9s,mb4.5
PNL **Peninsula** 23.40 52 eP P 16 53 31.5 -0.9
comp=Z,23nm,1.0s,mb4.6
EGAK **Eagle** 23.77 39 eP P 16 53 33.8 -2.0
comp=Z,19nm,0.9s,mb4.5
DAWY **Dawson** 24.28 41 eP P 16 53 40.5 +0.1
HYT **Haines Junctio** 24.48 49 eP P 16 53 42.0 -0.3
SKAG **Skagway** 25.45 53 eP P 16 53 51.2 +0.1
SIT **Sitka** 25.47 58 eP P 16 53 52.9 +1.6
comp=Z,142nm,1.4s,mb5.3
SIT **Sitka** 25.47 58 eP P 16 53 52.9 +1.6
SIT pmax pmax
comp=Z,142nm,1.4s,mb5.3
YSS **Yuzh-Sakhalins** 26.30 278⇑eP P 16 53 59.0 +0.1
ASAJ **Asahikawa** 27.59 273 LR LR 17 02 28.2
comp=Z,80nm,21.6s,MS3.3,baz=172,slow=31
DLBC **Dease Lake** 28.22 55 P P 16 54 17.2 +1.2
comp=Z,3.4nm,0.8s,mb4.0,baz=271,slow=6.4,SNR=5.3
DLBC LR LR 17 06 26.7
comp=Z,185nm,18.7s,MS3.7,baz=242,slow=38
HABR **Khabarovsk** 30.56 285 eP P 16 54 36.1 -0.7
HABR eS S 16 59 37.1 +0.9
HABR e 16 59 50.2
HABR e 17 01 15.7
HABR e 17 05 09.3
YAK **Yakutsk** 30.74 313 eP P 16 54 33.6 -4.7
comp=Z,11nm,0.8s,mb4.7
YAK **Yakutsk** 30.74 313 eP P 16 54 37.1 -1.2
YAK e 16 55 37.5
YAK e 16 57 33.8
YAK eS S 16 59 37.4 -1.4
YAK eSS ScP 17 01 18.7 +3.8
YAK e 17 05 13.2
YAK pmax pmax
comp=Z,14nm,1.1s,mb4.7
YAK pmax pmax
comp=Z,76nm,3.2s
YAK pmax pmax
comp=N,119nm,3.0s
YAK pmax pmax
comp=E,66nm,2.4s
YAK smax
comp=N,87nm,2.1s
YAK smax
comp=E,48nm,1.8s
TIXI **Tiksi** 31.95 331 eP P 16 54 46.0 -2.8
comp=E,2.8nm,0.8s,mb4.1
TIXI **Tiksi** 31.95 331 eP P 16 54 46.7 -2.1
TIXI pmax pmax
comp=Z,9.0nm,1.8s,mb4.3
TIXI MLR MLR
comp=Z,348nm,15.0s,MS4.2
KLR **Kul'dur** 32.30 288 eP P 16 54 48.0 -4.2
KLR pmax pmax
comp=E,30nm,1.6s
KLR pmax pmax
comp=Z,57nm,1.6s,mb5.2
MAT **Matsushiro** 34.51 264 P P 16 55 10.8 -0.7
MJAR **Matsushiro Arr** 34.51 264 P P 16 55 10.6 -0.9
comp=Z,3.8nm,1.1s,mb4.2,baz=48,slow=7.5,SNR=7.3
MJAR PcP PcP 16 57 45.3 -0.6
comp=Z,2.0nm,0.9s,baz=338,slow=1.3,SNR=5.0
YKA **Yellowknife Ar** 35.32 46 P P 16 55 18.2 0.0
comp=Z,6.4nm,0.7s,mb4.7,baz=275,slow=7.2,SNR=17
YKA pP pP 16 55 28.7 +0.8
comp=Z,7.1nm,0.8s,baz=277,slow=8.6,SNR=8.9
YKA LR LR 17 11 24.9
comp=Z,78nm,18.1s,MS3.5,baz=290,slow=39
YKA **Yellowknife Ar** 35.32 46 P P 16 55 18.2 0.0
YKA pP pP 16 55 28.8 +0.8
YKA LR LR 17 11 24.9
YKA **Yellowknife Ar** 35.32 46 P P 16 55 18.2 0.0
YKA *PP pP 16 55 28.8 +0.8
MDJ **Mudanjiang** 35.61 282 P P 16 55 19.5 -1.4
MDJ AP pP 16 55 22.5 -8.2
MDJ PP PP 16 56 44.1 +2.2
MDJ S S 17 00 57.9 +3.3
MDJ SCS ScS 17 05 39.4 +2.6
MDJ AMB AMB
comp=Z,7.0nm,0.9s,mb4.6
MDJ AMB AMB
comp=Z,75nm,3.8s
A07A **Ashnola River,** 36.15 69 ⇓P P 16 55 26.2 +0.8
baz=36
B07A **Winthrop** 36.55 70 ⇓P P 16 55 29.3 +0.4
baz=36
J02A **Umpqua** 36.78 80 ⇑P P 16 55 31.9 +0.9
baz=37
ETW **Entiat** 36.79 72 eP P 16 55 30.0 -1.0
A08A **Turner Farm, O** 36.85 69 ⇓P P 16 55 32.0 +0.5
baz=37
E06A **Yakima** 36.87 73 ⇑P P 16 55 32.0 +0.3
baz=37
H04A **Detroit Lake** 37.00 77 ⇓P P 16 55 33.6 +0.8
baz=37
B08A **Colville Reser** 37.07 70 ⇑P P 16 55 33.4 +0.1
baz=37
L02A **Cave Junction** 37.39 81 ⇑P P 16 55 36.9 +0.8
baz=37
C08A **Higginbotham F** 37.49 71 ⇑P P 16 55 37.1 +0.2
baz=37
HUMO **Hull Mountain** 37.56 80 ⇑P P 16 55 38.5 +1.0
baz=37
G06A **Carlson Farm,** 37.70 75 ⇓P P 16 55 39.5 +0.8
baz=38
B09A **Rice** 37.75 69 ⇓P P 16 55 39.7 +0.6
baz=38
OD2 **Odessa Site #2** 37.87 71 eP P 16 55 38.8 -1.3
H06A **Lindquist Farm** 38.13 76 ⇑P P 16 55 42.3 0.0
baz=38
YBH **Yreka Blue Hor** 38.17 81 LR LR 17 09 31.5
comp=Z,91nm,21.6s,MS3.5,baz=97,slow=33
YBH **Yreka Blue Hor** 38.17 81 ⇓P P 16 55 43.5 +0.8
baz=38,SNR=5.6

M02C **Callahan** 38.27 82 ⇑P P 16 55 44.3 +0.8
baz=38,SNR=6.1
N02C **Big Bar** 38.29 83 ⇓P P 16 55 44.6 +0.9
baz=38
O01C **Eel River Cons** 38.34 84 ⇓P P 16 55 45.4 +1.3
baz=38
NEW **Newport** 38.44 69 eP P 16 55 43.9 -1.0
comp=Z,6.9nm,0.8s,mb4.4
NEW **Newport** 38.44 69 eP P 16 55 43.9 -0.9
NEW pmax pmax
comp=Z,7.0nm,0.8s
CBIJ **Chichi jima** 38.48 248 LR LR 17 07 07.4
comp=Z,59nm,21.6s,MS3.4,baz=82,slow=29
EDM **Edmonton** 38.56 60 eP P 16 55 44.4 -1.5
F08A **Pendleton** 38.57 73 ⇑P P 16 55 46.6 +0.5
baz=38
A11A **Hall Mountain,** 38.58 68 ⇑P P 16 55 46.6 +0.6
baz=38,SNR=5.2
I06A **Prineville** 38.60 77 ⇓P P 16 55 46.4 +0.1
baz=38
CN2 **Changchun** 38.60 283 eP P 16 55 45.7 -0.6
CN2 eXP sP 16 55 52.9 -7.3
CN2 eS S 17 01 40.9 +0.8
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
CN2 AMB AMB
comp=Z,210nm,4.0s
CN2 LR LR
comp=N,270nm,15.0s,MS4.4
CN2 LR LR
comp=E,330nm,15.0s,MS4.4
CN2 LR LR
comp=Z,310nm,17.0s,MS4.2
E09A **Wood Farm, Sta** 38.62 72 ⇑P P 16 55 46.7 +0.3
baz=38
H07A **Lands Inn, Kim** 38.68 76 ⇓P P 16 55 47.2 +0.3
baz=38
G08A **Pilot Rock** 38.71 74 ⇓P P 16 55 47.4 +0.3
baz=38
KCPM **Cahto Peak** 38.74 85 P P 16 55 45.3 -2.2
K05A **Summer Lake** 38.80 79 ⇑P P 16 55 49.0 +1.0
baz=39,SNR=9.4
D10A **Wagner Farm, O** 38.89 71 ⇑P P 16 55 48.8 +0.1
baz=39
WDC **Whiskeytown Da** 38.91 83 ⇑P P 16 55 49.5 +0.6
baz=39
I07A **Izee** 38.97 76 ⇑P P 16 55 49.8 +0.5
baz=39,SNR=6.2
J06A **Christmas Vall** 38.99 78 ⇓P P 16 55 50.3 +0.7
baz=39,SNR=7.1
A12A **Yaak River Ran** 39.01 67 ⇑P P 16 55 49.9 +0.3
baz=39
E10A **Myers Farm, Un** 39.26 72 ⇓P P 16 55 52.5 +0.7
baz=39
H08A **Prairie City** 39.27 75 ⇓P P 16 55 52.7 +0.8
baz=39
BOD **Bodaibo** 39.28 308 eP P 16 55 49.6 -2.2
BOD pmax pmax
comp=Z,12nm,1.3s,mb4.5
GASB **Alder Springs** 39.31 84 ⇑P P 16 55 53.6 +1.4
baz=39
J07A **Hines** 39.45 77 ⇓P P 16 55 54.0 +0.6
baz=39
HIA **Hailar** 39.48 294 eP P 16 55 51.9 -1.7
comp=Z,24nm,1.2s,mb4.8
HIA **Hailar** 39.48 294 eP P 16 55 51.9 -1.7
HIA pmax pmax
comp=Z,24nm,1.2s
MOD **Modoc** 39.60 80 eP P 16 55 54.5 -0.2
comp=Z,7.1nm,0.8s,mb4.5
MOD **Modoc** 39.60 80 ⇓P P 16 55 55.2 +0.5
baz=40,SNR=7.0
I08A **Drewsey** 39.64 76 ⇑P P 16 55 55.5 +0.5
baz=40
G10A **Bishop Farm, J** 39.84 73 ⇓P P 16 55 56.4 -0.2
baz=40
K07A **Rock Creek Nan** 39.85 78 ⇓P P 16 55 57.3 +0.6
baz=40
MNRC **McLaughlin Nat** 39.93 85 ⇑P P 16 55 58.4 +1.0
baz=40
O04C **Chester** 39.97 82 ⇓P P 16 55 58.7 +0.9
baz=40,SNR=5.4
J08A **Circle Bar Ran** 39.98 77 ⇓P P 16 55 57.8 0.0
baz=40
NSHM **Saint Helena R** 40.03 86 eP P 16 55 59.1 +0.9
ORV **Orville** 40.14 83 ⇓P P 16 55 59.4 +0.2
baz=40
L07A **Adell** 40.15 79 ⇓P P 16 55 59.9 +0.7
baz=40,SNR=6.9
C13A **Hot Springs** 40.23 69 ⇑P P 16 56 00.2 +0.4
baz=40
E12A **Beaver Dam Sad** 40.23 71 ⇑P P 16 55 59.8 -0.1
baz=40
OHCM **Honcut** 40.28 84 eP P 16 55 60.0 -0.3
K08A **Mann Creek Ran** 40.30 77 ⇑P P 16 56 01.4 +0.9
baz=40,SNR=5.3
A14A **Double T Ranch** 40.31 66 ⇑P P 16 56 00.4 -0.1
baz=40,SNR=8.4
WVOR **Wild Horse Val** 40.37 78 eP P 16 56 01.0 0.0
comp=Z,9.8nm,0.9s,mb4.5
WVOR **Wild Horse Val** 40.37 78 eP P 16 56 01.0 0.0
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
N06A **Buffalo Meadow** 40.53 81 ⇓P P 16 56 03.1 +0.7
baz=40,SNR=8.4
KSRS **Korea Array** 40.54 273 P P 16 56 03.0 +0.6
comp=Z,6.1nm,0.8s,mb4.3,baz=57,slow=8.2,SNR=24
KSRS PcP PcP 16 58 04.5 +0.2
comp=Z,2.9nm,0.9s,baz=62,slow=3.1,SNR=7.7
KSRS LR LR 17 11 42.8
comp=Z,32nm,21.1s,MS3.1,baz=322,slow=34
KSRS **Korea Array** 40.54 273 P P 16 56 03.1 +0.6
KSRS 16 58 04.5
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,32nm,21.1s,MS3.1
B14A **Marquette Ranc** 40.68 67 ⇑P P 16 56 03.7 +0.2
baz=40,SNR=11
L08A **Fields** 40.68 78 ⇓P P 16 56 04.1 +0.5
baz=40,SNR=9.3
BEKR **Beckwourth** 40.69 82 ⇓P P 16 56 04.2 +0.4
baz=41,SNR=5.0
A15A **Johnson Ranch,** 40.71 66 ⇑P P 16 56 03.6 -0.1
baz=41
F12A **Elk City** 40.74 72 ⇑P P 16 56 04.1 0.0
baz=41
K09A **Rome** 40.80 77 ⇑P P 16 56 05.0 +0.4
baz=41
O06A **Flanigan** 40.86 82 ⇑P P 16 56 05.5 +0.4
baz=41,SNR=5.3
M08A **Happy Creek Ra** 41.06 79 ⇑P P 16 56 07.5 +0.7
baz=41,SNR=8.2
LAVA **Lava Cap Winer** 41.08 84 ⇓P P 16 56 06.9 0.0
baz=41
B15A **Bradely Ranch,** 41.12 67 ⇓P P 16 56 06.9 -0.2
baz=41,SNR=11
D14A **Greenough** 41.15 69 ⇓P P 16 56 07.4 0.0
baz=41
K10A **MacKenzie Ranc** 41.29 76 ⇑P P 16 56 08.7 +0.1
baz=41
F13A **Darby** 41.29 71 ⇑P P 16 56 08.4 -0.2
baz=41
C15A **Salmond Ranch,** 41.35 68 ⇑P P 16 56 08.9 -0.1
baz=41,SNR=6.1
CHMT **Chamberlain Mo** 41.38 69 P P 16 56 08.0 -1.3
A16A **West Butte Ran** 41.38 65 ⇑P P 16 56 09.3 -0.1
baz=41
WCN **Washoe City** 41.39 83 ⇑P P 16 56 09.7 +0.1
baz=41
PAHR **Pah Rah Range** 41.40 82 eP P 16 56 09.7 +0.1
comp=Z,12nm,0.8s,mb4.6
O07A **Toulon** 41.46 81 ⇑P P 16 56 10.8 +0.7
baz=41,SNR=8.2
N08A **GE Springer Mi** 41.58 80 ⇑P P 16 56 11.7 +0.7
baz=42,SNR=5.3
MFID **Camas Ranch** 41.59 75 ⇑P P 16 56 11.1 0.0
baz=42
H12A **Diamond D Ranc** 41.60 73 ⇑P P 16 56 10.9 -0.3
baz=42
CMB **Columbia Colle** 41.73 85 ⇓P P 16 56 12.7 +0.4
baz=42
D15A **Lincoln** 41.76 68 ⇓P P 16 56 12.2 -0.2
baz=42
PACP **Pacheco Peak** 41.77 86 ⇑P P 16 56 13.3 +0.7
baz=42

K11A **Parker Ranch,** 41.81 76 ⇓P P 16 56 12.7 -0.2
baz=42
I12A **Atlanta** 41.82 74 ⇓P P 16 56 12.9 -0.1
baz=42
L10A **Juniper Basin** 41.91 77 ⇓P P 16 56 13.9 +0.2
baz=42,SNR=6.8
E15A **Deer Lodge** 41.99 69 ⇓P P 16 56 14.2 -0.1
baz=42
R06C **Coleville** 42.04 83 ⇓P P 16 56 15.1 +0.2
baz=42
J12A **Stokes Ranch,** 42.13 75 ⇓P P 16 56 15.4 -0.1
baz=42
M10A **I.L. Ranch, Tu** 42.17 78 ⇓P P 16 56 16.3 +0.4
baz=42,SNR=5.3
S05C **Merced** 42.17 85 ⇓P P 16 56 16.9 +1.0
baz=42
L11A **Cat Creek Ranc** 42.31 76 ⇓P P 16 56 17.4 +0.4
baz=42,SNR=10
D16A **Dana Ranch, Ca** 42.34 68 ⇓P P 16 56 17.1 0.0
baz=42
I13A **Wildhorse Cree** 42.38 73 ⇓P P 16 56 17.4 -0.1
baz=42
HLID **Hailey** 42.39 74 eP P 16 56 17.1 -0.5
comp=Z,5.0nm,1.1s,mb4.1
HLID **Hailey** 42.39 74 ⇑P P 16 56 17.1 -0.5
baz=42
V03C **Hunter Liggett** 42.40 88 ⇑P P 16 56 18.4 +0.7
baz=42
H14A **Leadore** 42.47 72 ⇓P P 16 56 17.6 -0.7
baz=42
U04C **Hernandez Rese** 42.48 87 ⇓P P 16 56 19.1 +0.7
baz=42,SNR=5.5
E16A **East Helena** 42.51 69 ⇓P P 16 56 18.1 -0.4
baz=42
J13A **Cove Ranch, Pi** 42.62 74 ⇓P P 16 56 19.1 -0.4
baz=42
M11A **Holland Ranch,** 42.69 77 ⇓P P 16 56 20.1 0.0
baz=43
G15A **Dillon** 42.72 71 ⇑P P 16 56 19.7 -0.5
baz=43
T06C **Millerton Lake** 42.77 85 ⇑P P 16 56 21.1 +0.3
baz=43
D17A **Six Diamond Ra** 42.79 67 ⇑P P 16 56 20.1 -0.6
baz=43
Q08A **Gabbs** 42.81 82 ⇑P P 16 56 21.2 +0.1
baz=43
NVAR **Mina Array Bea** 42.82 83 P P 16 56 21.3 +0.1
comp=Z,3.2nm,0.8s,mb4.1,baz=293,slow=7.5,SNR=19
NVAR pP pP 16 56 31.0 -0.1
comp=Z,4.8nm,0.9s,baz=298,slow=7.2,SNR=12
NVAR PcP PcP 16 58 12.2 +0.3
comp=Z,3.6nm,1.1s,baz=276,slow=2.9,SNR=5.4
NVAR **Mina Array Bea** 42.82 83 P P 16 56 21.3 +0.1
NVAR pP pP 16 56 31.0 -0.1
NVAR PcP PcP 16 58 12.2 +0.3
KCC **Kaiser Creek** 42.83 85 ⇓P P 16 56 21.7 +0.4
baz=43
PKD **Parkfield** 42.89 87 ⇓P P 16 56 22.2 +0.4
baz=43
O10A **Cortez Mining,** 42.89 79 ⇑P P 16 56 21.7 0.0
baz=43
EGMT **Eagleton** 42.91 66 eP P 16 56 20.8 -1.0
comp=Z,9.8nm,0.7s,mb4.7
EGMT **Eagleton** 42.91 66 ⇑P P 16 56 21.3 -0.4
baz=43
H15A **Lima** 42.91 72 ⇓P P 16 56 21.5 -0.3
baz=43
F16A **Kennard Place,** 42.92 70 ⇓P P 16 56 21.6 -0.3
baz=43
BOZ **Bozeman (W)** 42.99 70 ⇓P P 16 56 21.7 -0.8
baz=43
E17A **Martinsdale** 43.04 68 ⇑P P 16 56 22.4 -0.4
baz=43
J14A **Carey** 43.07 74 ⇓P P 16 56 22.8 -0.4
baz=43
G16A **Moss Hill, Enn** 43.10 70 ⇓P P 16 56 22.9 -0.5
baz=43
M12A **Wells** 43.25 77 ⇑P P 16 56 24.8 +0.2
baz=43,SNR=9.0
D18A **Linhart Farms,** 43.29 67 ⇑P P 16 56 25.0 +0.2
baz=43,SNR=9.3
MTUM **Tungsten Hills** 43.30 84 eP P 16 56 25.2 +0.2
Q09A **Carvers** 43.30 81 ⇓P P 16 56 25.3 +0.3
baz=43
F17A **Fitzpatrick Pl** 43.44 69 ⇑P P 16 56 25.9 -0.2
baz=43
L13A **Double Diamond** 43.48 75 ⇑P P 16 56 26.3 -0.1
baz=43
N12A **Clover Valley,** 43.49 78 ⇑P P 16 56 26.7 +0.2
baz=43,SNR=7.8
O11A **Cowboy Ranch,** 43.51 79 ⇑P P 16 56 26.9 +0.2
baz=43
E18A **Harlowton** 43.54 68 ⇓P P 16 56 27.0 +0.1
baz=43
R09A **Tonopah** 43.72 82 ⇓P P 16 56 28.6 +0.1
baz=44
P11A **Circle Ranch,** 43.78 80 ⇑P P 16 56 29.1 +0.2
baz=44
Q10A **Clear Creek Ra** 43.80 81 ⇑P P 16 56 29.9 +0.9
baz=44,SNR=15
S09A **Goldfield** 43.93 83 ⇓P P 16 56 30.3 +0.2
baz=44
PKM **Peak Mountain** 44.00 88 ⇓P P 16 56 32.2 +1.4
baz=44
F18A **Big Timber** 44.00 68 ⇓P P 16 56 30.4 -0.2
baz=44
O12A **Currie** 44.00 78 ⇓P P 16 56 31.1 +0.4
baz=44,SNR=12
K15A **Arbon** 44.02 74 ⇓P P 16 56 30.8 0.0
baz=44
GCMT **Greycliff** 44.09 69 eP P 16 56 31.4 +0.1
CWC **Cottonwood Cre** 44.16 85 ⇓P P 16 56 32.1 +0.1
baz=44,SNR=7.5
M14A **Sheep Mountain** 44.18 76 ⇑P P 16 56 32.2 +0.2
baz=44
R10A **Warm Springs** 44.18 81 ⇑P P 16 56 32.3 +0.2
baz=44
S10A **Tonopah Range,** 44.21 82 ⇑P P 16 56 32.7 +0.3
baz=44
Q11A **Duckwater** 44.26 80 ⇓P P 16 56 32.8 +0.1
baz=44
J16A **Bone** 44.26 73 ⇑P P 16 56 33.0 +0.2
baz=44
H17A **Grant Village** 44.29 71 ⇑P P 16 56 33.8 +0.9
baz=44,SNR=5.7
ISA **Isabella** 44.38 86 eP P 16 56 32.7 -1.1
comp=Z,7.6nm,1.0s,mb4.4
ISA **Isabella** 44.38 86 eP P 16 56 32.7 -1.1
ISA pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
ISA **Isabella** 44.38 86 ⇓P P 16 56 34.0 +0.2
baz=44
K16A **Soda Springs** 44.52 73 ⇓P P 16 56 35.5 +0.7
baz=44,SNR=5.5
I17A **Pilgram Creek** 44.54 71 ⇑P P 16 56 34.8 -0.1
baz=44
R11A **Troy Canyon, C** 44.59 81 ⇑P P 16 56 35.4 -0.1
baz=44
N14A **Grayback Hills** 44.64 76 ⇓P P 16 56 35.4 -0.3
baz=44
Q12A **Willow Creek R** 44.66 80 ⇓P P 16 56 35.7 -0.3
baz=44
RLMT **Red Lodge** 44.68 69 eP P 16 56 35.6 -0.4
comp=Z,12nm,1.1s,mb4.7
RLMT **Red Lodge** 44.68 69 ⇓P P 16 56 35.7 -0.4
baz=44,SNR=6.2
M15A **Larsen Ranch,** 44.76 75 ⇓P P 16 56 36.6 -0.1
baz=45,SNR=7.1
MPMC **Manual Prospec** 44.77 85 ⇑P P 16 56 37.1 +0.2
baz=45
P13A **Bates Ranch, G** 44.93 79 ⇑P P 16 56 37.8 -0.3
baz=45,SNR=8.6
LRMC **Laurel Mountai** 45.00 86 ⇓P P 16 56 38.8 +0.1
baz=45
TPNV **Topopah Spring** 45.01 83 eP P 16 56 38.2 -0.5
comp=Z,16nm,0.8s,mb4.9
TPNV **Topopah Spring** 45.01 83 eP P 16 56 38.2 -0.6
TPNV pmax pmax
comp=Z,17nm,0.8s,mb4.9
TPNV **Topopah Spring** 45.01 83 ⇓P P 16 56 39.1 +0.3
baz=45
N15A **Stansbury Isla** 45.04 76 ⇓P P 16 56 39.0 +0.1
baz=45
L16A **Fish Haven** 45.07 74 ⇓P P 16 56 39.0 -0.2
baz=45
EDW2 **Edwards Air Fo** 45.18 86 ⇓P P 16 56 39.8 -0.3
baz=45,SNR=5.9
Q13A **Wheeler Ranch,** 45.22 79 ⇓P P 16 56 40.0 -0.4

baz=45
R12A Pony Springs, 45.22 80 ⇑P P 16 56 40.5 +0.1
baz=45,SNR=5.0
DUG Dugway 45.26 77 eP P 16 56 40.5 -0.2
comp=Z,16nm,1.1s,mb4.8
DUG Dugway 45.26 77 eP P 16 56 40.5 -0.2
DUG pmax pmax
comp=Z,16nm,1.1s,mb4.8
DUG Dugway 45.26 77 ⇓P P 16 56 40.4 -0.3
baz=45
U10A Ash Meadows, A 45.29 84 ⇓P P 16 56 41.0 0.0
baz=45
M16A Huntsville 45.35 75 ⇑P P 16 56 41.0 -0.3
baz=45
P14A Drum Mountains 45.45 78 ⇓P P 16 56 41.8 -0.4
baz=45,SNR=6.5
T11A Corn Creek, Al 45.49 82 ⇑P P 16 56 42.9 +0.3
baz=45,SNR=20
S12A Delamar Landin 45.50 81 ⇑P P 16 56 42.7 0.0
baz=45
SHOC Shoshone 45.64 84 ⇑P P 16 56 43.9 +0.2
baz=46
Q14A Sevier Lake (B 45.67 79 ⇑P P 16 56 44.1 +0.2
baz=46
GSC Goldstone 45.67 85 eP P 16 56 43.3 -0.7
comp=Z,13nm,0.8s,mb4.9
GSC Goldstone 45.67 85 eP P 16 56 43.3 -0.7
GSC pmax pmax
comp=Z,13nm,0.8s,mb4.9
GSC Goldstone 45.67 85 ⇓P P 16 56 44.2 +0.1
baz=46,SNR=11
R13A O'Grain Ranch, 45.72 80 ⇑P P 16 56 44.4 0.0
baz=46,SNR=7.1
BFSC Mount Baldy St 45.80 87 ⇓P P 16 56 44.8 -0.2
baz=46
BW06 Boulder Array 45.80 72 ⇓P P 16 56 44.6 -0.3
baz=46,SNR=8.1
PDAR Pinedale Array 45.80 72 P P 16 56 44.2 -0.7
comp=Z,5.0nm,1.1s,mb4.4,baz=299,slow=6.1,SNR=20
M17A Scullys Gap (B 45.85 74 ⇓P P 16 56 45.1 -0.3
baz=46
P15A Leamington 45.95 77 ⇓P P 16 56 45.9 -0.3
baz=46
O16A Springville 46.06 76 ⇓P P 16 56 46.8 -0.3
baz=46
DAU Daniels Canyon 46.10 76 eP P 16 56 47.4 +0.1
S13A Holt Ranch, En 46.15 81 ⇑P P 16 56 47.7 0.0
baz=46
HEC Hector,Ludlow 46.27 85 ⇓P P 16 56 48.6 -0.1
baz=46
ARUT Antelope Range 46.28 80 eP P 16 56 48.1 -0.7
BJI Beijing 46.45 284 P P 16 56 50.1 0.0
BJI S **S 17 03 35.8 +0.2**
BJI AMB AMB
comp=Z,23nm,0.9s,mb5.1
BJI LR LR
comp=N,193nm,11.4s,MS4.4
BJI LR LR
comp=E,155nm,12.1s,MS4.4
BJI LR LR
comp=Z,69nm,21.6s
T13A Saint George 46.46 81 ⇓P P 16 56 50.2 0.0
baz=46
O17A Robinson Place 46.55 76 ⇑P P 16 56 50.9 0.0
baz=46
MSU Marysvale 46.64 78 eP P 16 56 51.2 -0.4
GMRC Granite Mounta 46.73 85 ⇑P P 16 56 52.3 -0.1
baz=47,SNR=5.7
LDFC Landfair 46.90 84 eP P 16 56 52.7 -0.9
comp=Z,8.6nm,0.4s,mb5.0
PFO Pinyon Flat Ob 46.97 87 ⇑P P 16 56 54.1 -0.1
baz=47
BELC Belle Mtn. 47.01 86 ⇑P P 16 56 54.6 0.0
baz=47
Q16A Castle Valley 47.03 77 ⇓P P 16 56 54.7 +0.1
baz=47
V13A Grand Canyon W 47.13 83 ⇓P P 16 56 55.4 0.0
baz=47,SNR=9.5
P18A Preston Nutter 47.19 76 ⇓P P 16 56 56.0 +0.2
baz=47,SNR=5.4
U14A Mt Trumbull 47.29 81 ⇑P P 16 56 56.5 -0.2
baz=47
SRU San Rafael 47.32 77 ⇑P P 16 56 56.5 -0.4
baz=47
TLY Talaya 47.34 304 eP P 16 56 57.9 +1.0
TLY e 16 59 31.2
TLY eSS ScS 17 06 53.4 +5.7
TLY pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,99nm,17.0s,MS3.9
T15A Red Dirt Ranch 47.42 80 ⇑P P 16 56 57.6 -0.1
baz=47,SNR=7.2
IRM Iron Mountain 47.45 85 ⇓P P 16 56 57.5 -0.5
baz=47
O19A Miners Draw (B 47.48 75 ⇓P P 16 56 57.3 -0.8
baz=47
S16A Weppner Ranch, 47.49 79 ⇑P P 16 56 58.2 0.0
baz=47,SNR=7.1
ULN Ulaanbaatar 47.49 298 eP P 16 56 58.3 +0.1
comp=Z,10nm,1.1s,mb4.7
ULN Ulaanbaatar 47.49 298 c iP P 16 56 57.7 -0.4
Q18A Rafter H Ranch 47.57 77 ⇑P P 16 56 58.1 -0.8
baz=47
BC3 Big Chuckw Mtn 47.58 86 ⇓P P 16 56 58.7 -0.3
baz=48
L21A Rawlins 47.59 72 ⇑P P 16 56 58.4 -0.5
baz=47,SNR=6.7
R17A Hanksville Air 47.62 78 ⇑P P 16 56 58.6 -0.6
baz=48
W13A Hualapai Mount 47.66 83 ⇑P P 16 56 59.5 -0.1
baz=48,SNR=5.8
DVTC Desert V Tower 47.81 87 ⇓P P 16 57 01.7 +0.9
baz=48
V14A Boquillas Ranc 47.82 82 ⇑P P 16 57 00.9 0.0
baz=48,SNR=7.6
U15A North Rim 47.84 81 ⇓P P 16 57 01.2 +0.2
baz=48,SNR=14
SONM Songino Array 47.88 298 P P 16 57 01.2 +0.1
comp=Z,5.2nm,0.9s,mb4.6,baz=47,slow=9.7,SNR=21
P19A Cripple Cowboy 47.97 75 ⇑P P 16 57 01.9 0.0
baz=48
PDMCI Parker Dam,Lak 48.01 84 ⇓P P 16 57 02.0 -0.3
baz=48
X13A Yucca 48.02 84 ⇓P P 16 57 02.1 -0.2
baz=48
S17A Black Ridge (B 48.04 79 ⇓P P 16 57 02.4 -0.1
baz=48,SNR=15
W14A Seligman 48.10 83 ⇓P P 16 57 02.8 -0.2
baz=48
Y12C Blythe 48.11 85 ⇑P P 16 57 03.0 -0.1
baz=48
R18A Canyonlands Na 48.15 77 ⇓P P 16 57 02.5 -0.8
baz=48
ZAK Zakamensk 48.23 302 eP P 16 57 03.2 -0.6
ZAK pmax pmax
comp=Z,12nm,1.3s,mb4.8
V15A Kaibab Nationa 48.30 81 ⇑P P 16 57 04.8 +0.3
baz=48,SNR=9.3
GLA Glamis 48.37 86 ⇑P P 16 57 05.0 -0.1
baz=48
T17A Navajo Res., N 48.43 79 ⇓P P 16 57 05.1 -0.4
baz=48
S18A Hurst Farm, Bl 48.51 78 ⇓P P 16 57 05.6 -0.5
baz=48,SNR=11
R19A Curley Farm, L 48.60 77 ⇑P P 16 57 06.4 -0.5
baz=48
W15A Williams 48.64 82 ⇑P P 16 57 07.2 0.0
baz=48
X14A Yava 48.69 83 ⇓P P 16 57 07.7 +0.2
baz=49
U17A Shonto 48.76 80 ⇓P P 16 57 07.4 -0.7
baz=49
HHC Hu-ho-hao-te 48.81 288 eP P 16 57 09.0 +0.6
HHC AP pP 16 57 13.2 -5.2
HHC XP sP 16 57 15.6 -6.8
HHC SCS ScS 17 06 54.9 -2.9
HHC AMB AMB
comp=Z,108nm,5.5s
HHC LR LR
comp=N,221nm,13.1s,MS4.4
HHC LR LR
comp=E,175nm,13.7s,MS4.4
HHC LR LR
comp=Z,157nm,13.7s,MS4.2
T18A Mexican Hat 48.93 78 ⇑P P 16 57 08.6 -0.8
baz=49
Y14A Wickenburg 48.96 84 ⇑P P 16 57 09.5 -0.2
baz=49
WUAZ Wupatki 48.99 81 eP P 16 57 09.1 -0.8
comp=Z,9.6nm,1.0s,mb4.8
WUAZ Wupatki 48.99 81 ⇓P P 16 57 09.9 0.0
baz=49,SNR=5.7
S19A Harvey Farm, M 49.01 77 ⇓P P 16 57 09.3 -0.7
baz=49
X15A Humboldt 49.10 83 ⇓P P 16 57 10.3 -0.4
baz=49
W16A Flagstaff 49.16 82 ⇑P P 16 57 11.2 +0.1
baz=49
113A Mohawk Valley, 49.23 86 ⇑P P 16 57 11.0 -0.7
baz=49
U18A Rough Rock, Ch 49.38 79 ⇑P P 16 57 12.4 -0.4
baz=49
Y15A Casa Rosa Ranc 49.38 83 ⇓P P 16 57 12.2 -0.6
baz=49
ULM Lac du Bonnet 49.52 57 LR LR 17 18 25.4
comp=Z,179nm,18.1s,MS4.1,baz=18,slow=36
X16A Lo Mia Camp, P 49.65 82 ⇑P P 16 57 14.6 -0.3
baz=50
T19A Beclabito 49.65 78 ⇓P P 16 57 14.5 -0.3
baz=50,SNR=8.4
MVCO Mesa Verde 49.74 77 eP P 16 57 15.1 -0.5
comp=Z,17nm,1.3s,mb4.9
MVCO Mesa Verde 49.74 77 ⇑P P 16 57 14.8 -0.8
baz=50
V18A Ganado 49.78 80 ⇑P P 16 57 15.8 -0.1
baz=50,SNR=5.5
BTO Baotou 49.90 288 eP P 16 57 16.2 -0.5
Y16A Circle Bar Ran 49.97 83 ⇑P P 16 57 17.3 0.0
baz=50
115A Sonoran Desert 50.26 85 ⇓P P 16 57 19.2 -0.3
baz=50
214A Organ Pipe Nat 50.37 86 ⇑P P 16 57 20.1 -0.2
baz=50,SNR=9.7
KRAR Krasnoyarsk 50.41 313 eP P 16 57 19.6 -0.7
KRAR pmax pmax
comp=Z,33nm,1.2s,mb5.2
Y17A Roosevelt 50.49 83 ⇑P P 16 57 21.1 -0.2
baz=50
W19A Sanders 50.50 80 ⇓P P 16 57 21.0 -0.4
baz=50
AGMN Agassiz Refuge 50.63 59 eP P 16 57 20.4 -1.7
comp=Z,22nm,1.2s,mb5.0
AGMN e pP 16 57 31.4 -0.8
X19A St. Johns 51.00 81 ⇓P P 16 57 24.8 -0.4
baz=51
216A Three Points, 51.20 85 ⇑P P 16 57 26.4 -0.2
baz=51
117A Oracle 51.29 84 ⇑P P 16 57 26.7 -0.6
baz=51
Y19A Nutrioso 51.33 81 ⇓P P 16 57 27.5 -0.1
baz=51
TUC Tucson 51.43 84 eP P 16 57 27.2 -1.1
comp=Z,7.1nm,1.3s,mb4.4
TUC e pP 16 57 37.6 -0.9
TUC Tucson 51.43 84 eP P 16 57 27.2 -1.2
TUC e pP 16 57 37.6 -0.9
TUC pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
118A Homack Ranch, 51.73 83 ⇓P P 16 57 30.6 0.0
baz=52,SNR=6.8
119A Ashpeak Ranch, 52.07 82 ⇓P P 16 57 32.7 -0.4
baz=52
218A Dragoon 52.12 84 ⇑P P 16 57 32.8 -0.8
baz=52
LAZ Ladron 52.38 79 eP P 16 57 35.5 +0.1
ANMO Albuquerque 52.45 78 LR LR 17 19 15.1
comp=Z,28nm,21.4s,MS3.3,baz=311,slow=35
ANMO Albuquerque 52.45 78 eP P 16 57 34.2 -1.7
318A Bisbee 52.51 84 ⇑P P 16 57 35.4 -1.0
baz=52
219A White Tail Can 52.61 83 ⇓P P 16 57 36.8 -0.3
baz=52,SNR=5.8
BNM Barren Site 52.86 79 P P 16 57 38.6 -0.4
WHN Wuhan 53.60 276 ⇑P P 16 57 43.5 -1.0
WHN AMB AMB
comp=Z,95nm,1.5s,mb5.5
SUMG Summit 54.08 14 P P 16 57 46.2 -1.2
comp=Z,6.7nm,1.0s,mb4.5
XAN Xi'an 54.71 283 P P 16 57 51.8 -0.7
XAN AP pP 16 57 59.3 -3.4
XAN AMB AMB
comp=Z,10.0nm,1.5s,mb4.6
XAN AMB AMB
comp=Z,239nm,5.9s
ZALV Zalesovo Beam 55.36 315 P P 16 57 56.1 -0.8
comp=Z,1.1nm,0.5s,mb4.1,baz=46,slow=8.5,SNR=7.5
ZALV PcP PcP 16 58 57.0 -0.1
comp=Z,1.1nm,0.7s,baz=45,slow=5.2,SNR=3.6
ZALV LR LR 17 22 22.2
comp=Z,64nm,18.3s,MS3.7,baz=64,slow=37
ZALV Zalesovo Beam 55.36 315 P P 16 57 56.1 -0.8
ZALV 16 58 57.0
NVS Novosibirsk 55.50 316 eP P 16 57 55.6 -2.3
LH Lanzhou 56.51 288 ⇓P P 16 58 05.7 +0.3
LZH AP pP 16 58 10.5 -5.1
LZH XP sP 16 58 12.8 -6.7
LZH PP PP 17 00 12.8 +1.8
LZH eS **S 17 05 52.5 -1.8**
LZH XS sS 17 06 05.6 -5.5
LZH eSS SS 17 09 39.7 -1.7
LZH AMB AMB
comp=Z,43nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,173nm,7.6s
LZH LR LR
comp=E,321nm,15.8s
LZH LR LR
comp=Z,604nm,18.3s,MS4.7
LZH Lanzhou 56.51 288 ⇓P P 16 58 05.7 +0.3
LZH pP pP 16 58 10.5 -5.1
LZH sP sP 16 58 12.8 -6.7
LZH PP PP 17 00 12.8 +1.8
LZH eS **S 17 05 52.5 -1.8**
LZH sS sS 17 06 05.6 -5.5
LZH eSS SS 17 09 39.7 -1.7
GTA Gaotai 56.76 293 eP P 16 58 06.6 -0.5
GTA AP pP 16 58 09.9 -7.4
GTA XP sP 16 58 13.3 -8.0
GTA PP PP 17 00 15.0 +1.9
GTA S **S 17 05 58.0 +0.5**
GTA XS sS 17 06 06.4 -7.9
GTA AMB AMB
comp=Z,13nm,1.3s,mb4.8
GTA AMB AMB
comp=Z,81nm,6.6s
GTA LR LR
comp=N,163nm,16.8s,MS4.3
GTA LR LR
comp=E,102nm,16.2s,MS4.3
GTA LR LR
comp=Z,91nm,15.9s,MS4.0
TXAR Lajitas Array 57.95 82 P P 16 58 14.3 -1.4
comp=Z,6.9nm,1.1s,mb4.6,baz=305,slow=4.4,SNR=14
TXAR pP pP 16 58 24.6 -1.2
comp=Z,3.4nm,0.9s,baz=301,slow=3.4,SNR=8.5
ARCES ARCESS Array B 59.24 351 P P 16 58 22.2 -1.8
comp=Z,4.2nm,0.7s,mb4.6,baz=24,slow=7.6,SNR=18
ARCES LR LR 17 24 38.7
comp=Z,134nm,20.2s,MS4.1,baz=153,slow=37
LVZ Lovozero 59.64 347 eP P 16 58 26.0 -0.8
LVZ pmax pmax
comp=Z,129nm,2.2s,mb5.6
CD2 Chengdu 60.04 283 eP P 16 58 30.2 +0.1
CD2 AP pP 16 58 34.8 -5.6
CD2 XP sP 16 58 37.2 -7.1
CD2 PP PP 17 00 44.0 +1.5
CD2 S **S 17 06 39.3 -1.2**
CD2 XS sS 17 06 46.9 -10
CD2 SS SS 17 10 36.4 -0.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,60nm,4.8s
CD2 LR LR
comp=N,380nm,13.2s
CD2 LR LR
comp=Z,200nm,12.0s,MS4.5
KURK Kurchatov 60.35 315 P P 16 58 32.0 0.0
baz=23,slow=6.0
KURK Kurchatov 60.35 315 eP P 16 58 31.1 -0.8
KURK pmax pmax
comp=Z,40nm,1.7s,mb5.2
WMQ Urumqi 60.63 304 eP P 16 58 35.0 +1.1
WMQ XP sP 16 58 42.0 -6.1
WMQ PP PP 17 00 51.0 +3.7
WMQ S **S 17 06 49.0 +1.4**
WMQ SCS ScS 17 08 22.0 +0.1
WMQ SS SS 17 10 49.0 +3.4
WMQ AMB AMB
comp=Z,14nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,75nm,5.0s
WMQ LR LR
comp=N,224nm,20.0s,MS4.5
WMQ LR LR
comp=E,201nm,18.0s,MS4.5
WMQ LR LR
comp=Z,104nm,18.0s,MS4.0
GYA Guiyang 61.30 278 ⇑i P P 16 58 38.4 -0.4
GYA PCP PcP 16 59 22.0 +1.0
GYA PP PP 17 00 55.7 +2.0
GYA SCP ScP 17 03 23.2 +3.4
GYA S **S 17 06 58.9 +2.2**
GYA SS SS 17 10 57.6 +0.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,530nm,19.6s,MS4.8
GYA LR LR
comp=E,440nm,18.4s,MS4.8
GYA LR LR
comp=Z,420nm,18.8s,MS4.6
MK31 Makanchi Array 61.35 310 eP P 16 58 38.5 -0.3
MKAR Makanchi Array 61.35 310 P P 16 58 38.1 -0.6
comp=Z,3.4nm,0.8s,mb4.5,baz=57,slow=6.3,SNR=19
MKAR pP pP 16 58 48.2 -0.9
comp=Z,2.2nm,0.8s,baz=48,slow=6.2,SNR=5.5
MKAR LR LR 17 27 16.3
comp=Z,85nm,19.5s,MS3.9,baz=172,slow=38
MKAR Makanchi Array 61.35 310 P P 16 58 38.1 -0.6
MKAR pP pP 16 58 48.2 -0.9
MKAR LR LR 17 27 16.3
MKAR Makanchi Array 61.35 310 P P 16 58 38.2 -0.6
MKAR *PP pP 16 58 48.2 -0.9
VOSK Vostochnaya 62.21 320 P P 16 58 43.5 -1.0
VOSK pmax pmax
comp=Z,19nm,1.0s,mb5.2
BVAR Borovoye Array 62.23 321 P P 16 58 44.1 -0.5
comp=Z,9.1nm,0.6s,mb5.1,baz=53,slow=7.6,SNR=52
BVAR pP pP 16 58 55.4 +0.5
comp=Z,3.4nm,0.5s,baz=48,slow=6.1,SNR=6.6
BRVK Borovoye 62.24 321 eP P 16 58 44.6 -0.1
comp=Z,21nm,0.8s,mb5.3
BRVK e pP 16 58 55.7 +0.7
BRVK Borovoye 62.24 321 eP P 16 58 44.6 -0.1
BRVK e pP 16 58 55.7 +0.7
BRVK pmax pmax
comp=Z,21nm,0.8s,mb5.3
SVE Sverdlovsk 62.92 328 ⇓eP P 16 58 50.0 +0.9
SVE pmax pmax
comp=Z,25nm,1.0s,mb5.3
ARU Arti 63.92 329 eP P 16 58 55.6 -0.1
comp=Z,18nm,0.8s,mb5.2
ARU Arti 63.92 329 c iP P 16 58 55.9 +0.1
ARU e 17 01 14.0
ARU eS **S 17 07 33.3 +4.5**
ARU eSS SS 17 11 43.7 +7.2
ARU pmax pmax
comp=Z,50nm,1.7s,mb5.3
KMI Kunming 64.73 279 P P 16 59 01.3 -0.3
KMI AMB AMB
comp=Z,11nm,1.0s,mb4.8
JOF Joensuu 64.80 346 ep P 16 59 01.4 0.0
comp=Z,8.3nm,0.6s,mb4.9
JOF Joensuu 64.80 346 eP P 16 59 01.4 0.0
JOF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KLMR Klimovskoe 65.22 341 eP P 16 59 02.8 -1.4
KLMR pmax pmax
comp=Z,35nm,1.6s,mb5.1
SSPA Standing Stone 65.33 56 eP P 16 59 04.6 -0.6
comp=Z,23nm,1.3s,mb5.0
KAF Kangasniemi 66.29 348 ep P 16 59 10.8 -0.2
comp=Z,5.9nm,0.6s,mb4.8
KAF Kangasniemi 66.29 348 eP P 16 59 10.8 -0.2
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
PMG Port Moresby 67.02 218 eP P 16 59 14.6 -1.6
PMG pmax pmax
comp=Z,4.0nm,0.6s
TKM2 Tokmak 2 67.43 310 eP P 16 59 18.9 +0.2
comp=Z,26nm,1.4s,mb5.1
TKM2 Tokmak 2 67.43 310 eP P 16 59 18.9 +0.3
TKM2 pmax pmax
comp=Z,26nm,1.4s,mb5.1
TKM2 Tokmak 2 67.43 310 P P 16 59 18.8 +0.1
SNR=10
ULHL Ulahol 67.62 310 P P 16 59 20.9 +1.1
SNR=9.2
USP Ospenovka 67.70 311 P P 16 59 20.4 +0.1
SNR=22
KBK Karagaybulak 67.95 311 P P 16 59 22.8 +0.9
SNR=11
AAK Ala-Archa 68.18 311 P P 16 59 24.5 +1.1
SNR=17
KZA Kyzart 68.23 310 P P 16 59 25.3 +1.6
SNR=8.2
EKS2 Erkin-Say 68.51 311 eP P 16 59 25.7 +0.3
comp=Z,11nm,0.7s,mb4.9
EKS2 Erkin-Say 68.51 311 P P 16 59 25.9 +0.5
SNR=12
LSA Lhasa 68.61 291 P P 16 59 28.0 +1.8
LSA Lhasa 68.61 291 eP P 16 59 27.3 +1.1
comp=Z,6.9nm,0.8s,mb4.6
LSA Lhasa 68.61 291 eP P 16 59 27.3 +1.1
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
NB2 NORSAR Subarra 68.73 355 P P 16 59 26.1 -0.4
comp=Z,13nm,1.0s,mb4.8,baz=8.0,slow=6.5
NOA NORSAR Array B 68.73 355 P P 16 59 26.5 0.0
comp=Z,4.6nm,0.7s,mb4.5,baz=7.5,slow=6.5,SNR=10
NOA pP pP 16 59 36.5 -0.4
comp=Z,3.6nm,0.8s,baz=5.6,slow=6.3,SNR=4.6
NOA LR LR 17 27 16.6
comp=Z,85nm,20.0s,MS4.0,baz=10.0,slow=34
NOA NORSAR Array B 68.73 355 P P 16 59 26.5 0.0
NOA pP pP 16 59 36.5 -0.4
NOA LR LR 17 27 16.6
NOA NORSAR Array B 68.73 355 P P 16 59 26.5 0.0
NOA *PP pP 16 59 36.5 -0.4
AML Almayashu 68.95 311 P P 16 59 27.0 -1.2
SNR=5.4
AKTO Aktyubinsk 69.02 326 i P P 16 59 28.4 0.0
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
AB31 Akbulak array 69.27 324 P P 16 59 29.9 -0.1
AB31 pmax pmax
comp=Z,38nm,1.2s,mb5.2
KK31 Karatay Array 69.71 314 i P P 16 59 32.6 -0.3
KK31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
OBN Obninsk 71.13 340 ⇑eP P 16 59 41.6 +0.3
OBN e 17 02 15.5
OBN eS S 17 08 57.0 +1.8
OBN eSS SS 17 13 26.0 -1.7
OBN pmax pmax
comp=Z,45nm,1.1s,mb5.3
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
SHL Shillong 71.17 287 eP P 16 59 43.0 +1.0
CHTO Chiang Mai 71.72 278 eP P 16 59 44.3 -1.1
comp=Z,4.0nm,0.9s,mb4.3
CHTO Chiang Mai 71.72 278 eP P 16 59 44.3 -1.1
CHTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
PPT Papeete 71.95 152 eLR LR 17 21 04.8
comp=Z,226nm,28.8s
PPT Papeete 71.95 152 LR LR 17 28 11.9
comp=Z,127nm,18.1s,MS4.2,baz=66,slow=33
CMAR Chiang Mai Arr 71.99 277 P P 16 59 46.5 -0.6
comp=Z,6.3nm,1.0s,mb4.5,baz=27,slow=6.9,SNR=31
CMAR pP pP 16 59 56.4 -1.1
comp=Z,2.3nm,0.7s,baz=23,slow=6.3,SNR=6.1
TAPN Taplejung 72.38 292 eP P 16 59 49.4 +0.1
comp=Z,100nm,1.1s,mb5.6
ODAN Odare 72.93 291 eP P 16 59 52.4 -0.2
GUN Gumba 73.05 293 eP P 16 59 53.5 +0.3

JIRN Jiri 73.05 293 eP P 16 59 53.7 +0.5
RAMN Ramite 73.33 292 eP P 16 59 54.9 0.0
comp=Z,96nm,1.0s,mb5.7
KKN Kakani 73.49 294 eP P 16 59 56.0 +0.2
PKI Pulchoki 73.58 293 eP P 16 59 56.2 -0.2
VRHR Novokhopersk 73.60 336 eP P 16 59 56.3 +0.2
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.5s
GKN Gorkha 73.71 294 eP P 16 59 56.6 -0.5
comp=E,89nm,1.3s,mb5.5
DMN Daman 73.73 294 eP P 16 59 57.4 +0.2
DANN Dangsing 73.96 295 eP P 16 59 58.7 +0.1
comp=E,54nm,0.9s,mb5.5
VSR Storozhevoye 74.12 337 eP P 16 59 59.0 -0.1
VSR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VORD Divnogorie 74.32 337 eP P 17 00 00.3 0.0
VORD pmax pmax
comp=Z,20nm,0.9s,mb5.0
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.9s
KOLN Koldanda 74.49 295 eP P 17 00 01.4 -0.3
comp=E,37nm,1.2s,mb5.2
SUW Suwalki 74.57 348 eP P 17 00 01.4 -0.3
PYUN Piuthan 74.59 295 eP P 17 00 01.9 -0.4
comp=E,52nm,0.9s,mb5.5
BSEG Bad Segeberg 75.87 355 eP P 17 00 10.1 +0.9
BSEG pmax pmax
comp=Z,36nm,0.9s,mb5.3
BSEG Bad Segeberg 75.87 355 eP P 17 00 10.1 +0.9
comp=Z,36nm,0.9s,mb5.3
KAKA Kakadu 76.54 230 eP Px 17 00 02.1
comp=Z,14nm,0.9s
AKASG Malin Array Be 76.78 343 P P 17 00 13.9 -0.5
comp=Z,20nm,0.7s,mb5.1,baz=17,slow=5.9,SNR=37
AKASG pP pP 17 00 24.4 -0.6
comp=Z,8.8nm,0.7s,baz=18,slow=5.6,SNR=7.2
AKASG LR LR 17 35 22.1
comp=Z,111nm,18.8s,MS4.2,baz=355,slow=37
AKASG Malin Array Be 76.78 343 P P 17 00 13.9 -0.5
AKASG *PP pP 17 00 24.4 -0.5
AKBB Malin Array Si 76.78 343 eP P 17 00 13.8 -0.6
KIEV Kiev 76.79 343 eP P 17 00 13.9 -0.6
comp=Z,25nm,0.8s,mb5.2
KIEV e pP 17 00 24.0 -1.0
KIEV Kiev 76.79 343 eP P 17 00 13.9 -0.6
KIEV e pP 17 00 24.0 -1.0
KIEV pmax pmax
comp=Z,25nm,0.8s,mb5.2
CTA Charters Tower 77.12 215 eP P 17 00 15.9 -0.7
comp=Z,7.0nm,1.0s,mb4.5
CTA Charters Tower 77.12 215 eP P 17 00 15.9 -0.7
CTA pmax pmax
comp=Z,7.0nm,1.0s
KBL Kabul 77.15 309 eP P 17 00 16.4 -0.4
comp=Z,8.0nm,0.8s,mb4.7
KBL Kabul 77.15 309 eP P 17 00 16.4 -0.4
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
IBBN Ibbenburen 77.61 357 eP P 17 00 20.3 +1.3
comp=Z,58nm,1.2s,mb5.4
CLL Collm 78.32 353 eP P 17 00 22.8 -0.2
comp=Z,14nm,1.2s,mb4.8
CLL Collm 78.32 353 i P P 17 00 23.2 +0.2
comp=Z,11nm,1.2s,mb4.7
CLL LmV 17 31 00.0
comp=Z,100nm,21.7s
BUG Bochum--Univer 78.50 357 eP P 17 00 24.7 +0.7
comp=Z,15nm,0.8s,mb5.0
KSP Ksiaz 78.50 351 eP P 17 00 24.6 +0.6
KSP Ksiaz 78.50 351 eP P 17 00 24.0 0.0
BRG Berggiesshubel 78.68 353 eP P 17 00 25.3 +0.3
BRG pmax pmax
comp=Z,13nm,1.4s,mb4.7
BRG Berggiesshubel 78.68 353 eP P 17 00 25.3 +0.3
comp=Z,22nm,1.4s,mb4.9
UPC Upice 78.86 351 eP P 17 00 26.1 +0.1
KWP Kalwaria 78.91 347 eP P 17 00 27.2 +0.9
KWP Kalwaria 78.91 347 eP P 17 00 27.2 +1.0
KWP Kalwaria 78.91 347 ⇑i P P 17 00 27.0 +0.8
DPC Dobruska-Polom 78.98 351 eP P 17 00 26.8 +0.2
UBBA Unterbreizbach 79.00 355 eP P 17 00 27.0 +0.3
comp=Z,28nm,1.8s,mb4.9
MOX Moxa 79.08 354 eP P 17 00 28.1 +0.9
MOX Moxa 79.08 354 eP P 17 00 27.1 -0.1
comp=Z,22nm,1.3s,mb4.9
TANN Tannenbergstha 79.25 354 eP P 17 00 28.2 +0.1
comp=Z,11nm,0.6s,mb5.0
OKC Ostrava-Krasne 79.29 350 eP P 17 00 25.5 -2.9
STHS Stebnicka Huta 79.32 348 eP P 17 00 29.7 +1.2
comp=Z,9.5nm,1.0s,mb4.7
STHS e pP 17 00 39.6 +0.5
STHS Stebnicka Huta 79.32 348 eP P 17 00 29.7 +1.2
STHS e pP 17 00 39.6 +0.5
STHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MEM Membach 79.37 358 P P 17 00 29.7 +1.0
comp=Z,10nm,1.4s,mb4.6
MORC Moravsky Berou 79.42 350 ⇑P P 17 00 30.2 +1.1
MORC Moravsky Berou 79.42 350 ⇑i P P 17 00 30.2 +1.1
NKC Novy Kostel 79.43 354 eP P 17 00 29.4 +0.3
PRU Pruhonice 79.51 352 eP P 17 00 29.9 +0.4
BCLA Clavier 79.57 358 P pP 17 00 41.1 +0.7
KOLS Kolonicke sedl 79.65 347 eP P 17 00 31.0 +0.7
TNS Taunus Mts 79.67 356 eP P 17 00 30.2 -0.2
TNS pmax pmax
comp=Z,57nm,1.9s,mb5.2
TNS Taunus Mts 79.67 356 eP P 17 00 30.2 -0.2
comp=Z,57nm,1.9s,mb5.2
MANZ Manzenberg 79.70 354 eP P 17 00 30.7 +0.1
comp=Z,14nm,1.3s,mb4.7
KIV Kislovodsk 79.78 332 eP P 17 00 30.9 -0.2
KIV pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,76nm,18.0s,MS4.1
GIVF Givet 79.90 359 eP P 17 00 32.4 +0.8
DOU Dourbes 79.91 359 P P 17 00 32.6 +0.9
ROTZ Rotzenmuhle 79.91 354 eP P 17 00 32.2 +0.5
comp=Z,15nm,1.3s,mb4.8
BAIF Baives 79.95 359 eP P 17 00 33.0 +1.1
comp=Z,23nm,0.8s,mb4.9
BAIF Baives 79.95 359 eP P 17 00 33.0 +1.1
comp=Z,11nm,0.8s,mb4.8
BAIF Baives 79.95 359 eP P 17 00 33.0 +1.1
BAIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
VRAC Vranov 79.98 351 ⇓P P 17 00 33.5 +1.4
VRAC Vranov 79.98 351 ⇓i P P 17 00 33.5 +1.4
GRA1 Grafenberg Arr 80.05 354 eP P 17 00 33.1 +0.6
comp=Z,64nm,1.6s,mb5.3
GRF Grafenberg Arr 80.05 354 eP P 17 00 33.1 +0.6
comp=Z,64nm,1.6s,mb5.3
GRF Grafenberg Arr 80.05 354 eP P 17 00 33.1 +0.6
GRF pmax pmax
comp=Z,64nm,1.6s,mb5.3
GRF Grafenberg Arr 80.05 354 eP P 17 00 33.1 +0.6
GRF pmax pmax
comp=Z,64nm,1.6s,mb5.3
KIS Kishinev 80.41 342 eUNK 17 00 35.0
KHC Kasperske Hory 80.44 353 eP P 17 00 35.0 +0.4
BUR08 Bucovina Ar. S 80.44 345 eP P 17 00 35.2 +0.6
BURAR Bucovina Array 80.47 345 ⇓P P 17 00 34.6 -0.1
BURAR Bucovina Array 80.47 345 ⇓i P P 17 00 34.6 -0.2
WET Wettzell 80.48 353 eP P 17 00 35.1 +0.3
WET pmax pmax
comp=Z,8.0nm,0.3s,mb5.1
WET Wettzell 80.48 353 eP P 17 00 35.1 +0.3
comp=Z,8.0nm,0.3s,mb5.1
ANN Anapa 80.49 336 eP Px 17 00 50.7
ANN pmax pmax
comp=Z,75nm,1.5s,mb5.4
KOLL Kolacno 80.50 349 eP P 17 00 36.3 +1.4
KOLL epP pP 17 00 46.4 +0.9
VYHS Vyhne 80.54 349 eP P 17 00 35.6 +0.5
VYHS Vyhne 80.54 349 eP P 17 00 35.5 +0.4
GEC2 GERESS Array S 80.71 353 eP P 17 00 34.8 -1.2
GEC2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
GEC2 GERESS Array S 80.71 353 eP P 17 00 34.8 -1.2
comp=Z,10.0nm,1.2s,mb4.6
GERES GERESS Array B 80.71 353 P P 17 00 35.9 -0.1
comp=Z,2.3nm,0.8s,mb4.2,baz=20,slow=4.3,SNR=8.9
GERES LR LR 17 39 41.5
comp=Z,83nm,18.3s,MS4.1,baz=308,slow=38
MODS Modra-Piesok 80.83 350 eP P 17 00 37.1 +0.4
comp=Z,6.0nm,1.0s,mb4.5
MODS Modra-Piesok 80.83 350 eP P 17 00 37.1 +0.4
MODS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MODS Modra-Piesok 80.83 350 eP P 17 00 37.0 +0.3
PSZ Piszkesteto 80.97 348 ⇓P P 17 00 39.2 +1.8
PSZ Piszkesteto 80.97 348 ⇓i P P 17 00 39.2 +1.8
ZST Bratislava 81.03 350 eP P 17 00 38.6 +0.9
comp=Z,11nm,1.0s,mb4.8
ZST Bratislava 81.03 350 eP P 17 00 38.6 +0.9
ZST pmax pmax
comp=Z,11nm,1.0s,mb4.7
FLN La Foliniere 81.22 2 eP P 17 00 39.4 +0.6
comp=Z,25nm,1.0s,mb4.8
FLN eMLR MLR
comp=Z,96nm,18.5s,MS3.9
FLN La Foliniere 81.22 2 eP P 17 00 39.4 +0.6
comp=Z,13nm,1.0s,mb4.8
FLN LR LR
comp=Z,100nm,18.5s,MS4.2
FLN La Foliniere 81.22 2 eP P 17 00 39.4 +0.6
FLN pmax pmax
comp=Z,13nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,100nm,18.5s,MS4.2
LDF La Druitiere 81.40 2 eP P 17 00 40.1 +0.4
comp=Z,39nm,1.0s,mb5.0
LDF La Druitiere 81.40 2 eP P 17 00 40.1 +0.4
comp=Z,20nm,1.0s,mb5.0
LDF La Druitiere 81.40 2 eP P 17 00 40.1 +0.4
LDF pmax pmax
comp=Z,20nm,1.0s,mb5.0
CONA Conrad Observa 81.42 351 ⇑i P P 17 00 40.7 +0.9
comp=Z,13nm,1.0s,mb4.8
CSNA Conrad Observa 81.42 351 ⇑i P P 17 00 40.7 +0.9
comp=Z,12nm,1.0s,mb4.8
MEZF Maizieres J'vi 81.50 358 eP P 17 00 41.4 +1.2
CDF Champ du Feu 81.53 357 eP P 17 00 41.2 +0.8
ROSF Rostrenen 81.56 4 eP P 17 00 41.5 +1.0
GRR Gorron 81.59 2 eP P 17 00 41.4 +0.7
comp=Z,35nm,0.9s,mb5.0
GRR Gorron 81.59 2 eP P 17 00 41.4 +0.7
comp=Z,18nm,0.9s,mb5.0
GRR Gorron 81.59 2 eP P 17 00 41.4 +0.7
GRR pmax pmax
comp=Z,18nm,0.9s,mb5.0
SGMF Saint Gilles 81.67 3 eP P 17 00 42.0 +0.9
comp=Z,21nm,0.8s,mb4.8
SGMF Saint Gilles 81.67 3 eP P 17 00 42.0 +0.9
comp=Z,20nm,0.8s,mb4.8
SGMF Saint Gilles 81.67 3 eP P 17 00 42.0 +0.9
SGMF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DRGR 81.67 346 ⇓P P 17 00 42.2 +1.1
DRGR 81.67 346 ⇓i P P 17 00 42.3 +1.1
WRAB Tennant Creek 81.88 225 eP P 17 00 40.7 -1.8
WB2 Warramunga Arr 81.89 225 eP P 17 00 35.1 -7.4
WB2 Warramunga Arr 81.89 225 eP P 17 00 40.9 -1.6
VRI Vrincioaia 81.89 343 ⇓P P 17 00 46.1 +3.8
VRI Vrincioaia 81.89 343 ⇓i P P 17 00 46.1 +3.7
WRA Warramunga Arr 81.89 225 P P 17 00 41.0 -1.5
comp=Z,2.6nm,0.8s,mb4.2,baz=33,slow=6.1,SNR=20
WRA pP pP 17 00 51.3 -1.9
comp=Z,2.2nm,0.8s,baz=33,slow=5.9,SNR=8.3
HAU Haudompre 81.96 357 eP P 17 00 43.2 +0.5
HAU eMLR MLR
comp=Z,100nm,18.5s,MS3.9
HAU Haudompre 81.96 357 eP P 17 00 43.2 +0.5
HAU MLR MLR
comp=Z,100nm,18.5s,MS4.2
QUIF Quistinic 81.98 4 eP P 17 00 43.6 +0.8
RKT Rikitea 82.23 141 eLR LR 17 25 42.7
comp=Z,154nm,35.2s
MOTA Moosalm 82.40 354 ⇑i P P 17 00 45.5 +0.5
comp=Z,8.5nm,1.0s,mb4.7
WTTA Wattenberg 82.44 354 ⇑i PcP PcP 17 00 46.3 -4.1
comp=Z,14nm,1.0s
VOIR 82.61 344 ⇑P P 17 00 48.2 +2.1
VOIR 82.61 344 ⇑i P P 17 00 48.3 +2.2
SOKA Soboth 82.74 351 ⇑i P P 17 00 47.2 +0.4
comp=Z,19nm,1.0s,mb5.1
FETA Feichten 82.74 354 ⇓i PcP PcP 17 00 48.3 -3.4
comp=Z,9.8nm,1.1s
LOR Lormes 82.75 359 eP P 17 00 47.5 +0.7
LOR eMLR MLR
comp=Z,104nm,17.5s,MS4.0
LOR Lormes 82.75 359 eP P 17 00 47.5 +0.7
LOR MLR MLR
comp=Z,100nm,17.5s,MS4.2
PERS Pernice 82.78 351 i P P 17 00 47.1 +0.2
SSF Saint Saulge 82.96 359 eP P 17 00 48.7 +0.8
BZS Buzias 82.99 347 ⇓P P 17 00 47.2 -0.9
BZS Buzias 82.99 347 ⇓i P P 17 00 47.2 -0.9
GZR Gura Zlata 83.03 346 ⇑P P 17 00 48.5 +0.2
GZR Gura Zlata 83.03 346 ⇑i P P 17 00 48.5 +0.2
AVF Avril sur Loir 83.23 359 eP P 17 00 50.1 +0.8
comp=Z,27nm,1.1s,mb4.9
AVF Avril sur Loir 83.23 359 eP P 17 00 50.1 +0.8
comp=Z,13nm,1.1s,mb4.9
AVF Avril sur Loir 83.23 359 eP P 17 00 50.1 +0.8
AVF pmax pmax
comp=Z,13nm,1.1s,mb4.9
CABF La Chapelle 83.36 358 eP P 17 00 51.1 +1.1
comp=Z,56nm,1.5s,mb5.1
CABF La Chapelle 83.36 358 eP P 17 00 51.1 +1.1
comp=Z,28nm,1.5s,mb5.1
CABF La Chapelle 83.36 358 eP P 17 00 51.1 +1.1
CABF pmax pmax
comp=Z,28nm,1.5s,mb5.1
SMF Signal de Mont 83.37 359 eP P 17 00 50.8 +0.8
comp=Z,48nm,1.2s,mb5.1
SMF Signal de Mont 83.37 359 eP P 17 00 50.8 +0.8
comp=Z,24nm,1.2s,mb5.1
SMF Signal de Mont 83.37 359 eP P 17 00 50.8 +0.8
SMF pmax pmax
comp=Z,24nm,1.2s,mb5.1
MFF Saint Martin d 83.39 2 eP P 17 00 51.1 +1.0
comp=Z,18nm,0.8s,mb4.9
MFF Saint Martin d 83.39 2 eP P 17 00 51.1 +1.0
comp=Z,9.3nm,0.8s,mb4.9
MFF Saint Martin d 83.39 2 eP P 17 00 51.1 +1.0
MFF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BGF Bois d'Agland 83.46 360 eP P 17 00 51.4 +0.9
TCF Toulx Ste Croi 83.73 0 eP P 17 00 52.8 +0.9
BOJS Bojanci 83.89 351 i P P 17 00 52.9 +0.2
LPL La Plagne 84.44 357 eP P 17 00 56.2 +0.7
LPG La Plagne 84.45 357 eP P 17 00 56.5 +0.9
comp=Z,29nm,1.2s,mb5.0
LPG La Plagne 84.45 357 eP P 17 00 56.5 +0.9
comp=Z,14nm,1.2s,mb5.0
LPG La Plagne 84.45 357 eP P 17 00 56.5 +0.9
LPG pmax pmax
comp=Z,14nm,1.2s,mb5.0
RJF Les Rejaudoux 84.71 1 eP P 17 00 57.5 +0.6
RJF eMLR MLR
comp=Z,76nm,20.2s,MS3.8
RJF Les Rejaudoux 84.71 1 eP P 17 00 57.5 +0.6
RJF MLR MLR
comp=Z,80nm,20.3s,MS4.1
BNI Bardonecchia 84.90 357 eP P 17 00 59.8 +1.9
comp=Z,13nm,1.0s,mb5.0
BNI Bardonecchia 84.90 357 eP P 17 00 59.8 +1.9
BNI pmax pmax
comp=Z,13nm,1.0s,mb5.0
ORIF Oris-en-Rattie 85.06 358 eP P 17 00 59.0 +0.4
comp=Z,54nm,1.4s,mb5.2
ORIF eMLR MLR
comp=Z,115nm,22.0s,MS3.9
ORIF Oris-en-Rattie 85.06 358 eP P 17 00 59.0 +0.4
comp=Z,27nm,1.4s,mb5.2
ORIF Oris-en-Rattie 85.06 358 eP P 17 00 59.0 +0.4
ORIF pmax pmax
comp=Z,27nm,1.4s,mb5.2
LFF La Frestale 85.07 1 eP P 17 00 59.4 +0.7
CAF Calviac 85.09 0 eP P 17 00 59.7 +0.9
VIVF Saint-Julien-l 85.15 358 eP P 17 01 00.1 +1.0
comp=Z,62nm,1.4s,mb5.2
VIVF Saint-Julien-l 85.15 358 eP P 17 01 00.1 +1.0
comp=Z,31nm,1.4s,mb5.2
VIVF Saint-Julien-l 85.15 358 eP P 17 01 00.1 +1.0
VIVF pmax pmax
comp=Z,31nm,1.4s,mb5.2
MBDF Montbardon 85.22 357 eP P 17 01 00.7 +1.2
comp=Z,17nm,0.9s,mb4.9
MBDF Montbardon 85.22 357 eP P 17 01 00.7 +1.2
comp=Z,8.4nm,0.9s,mb4.9
MBDF Montbardon 85.22 357 eP P 17 01 00.7 +1.2
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ASAR Alice Springs 85.33 224 P P 17 00 58.9 -1.2
comp=Z,2.4nm,0.9s,mb4.3,baz=33,slow=4.7,SNR=20
ASAR pP pP 17 01 09.2 -1.6
comp=Z,2.3nm,0.8s,baz=27,slow=4.9,SNR=11
HYB Hyderabad 85.39 292 eP P 17 00 59.5 -1.2
HYB Hyderabad 85.39 292 i P P 17 00 59.5 -1.2
BRTR Keskin Array B 86.23 336 P P 17 01 02.7 -1.9
comp=Z,3.7nm,1.1s,mb4.5,baz=335,slow=9.7,SNR=9.2
MTLF Montolieu 86.68 0 eP P 17 01 07.1 +0.4
SJPF Ste Jean 86.85 3 eP P 17 01 08.1 +0.6
comp=Z,17nm,1.1s,mb4.9
SJPF Ste Jean 86.85 3 eP P 17 01 08.1 +0.6
comp=Z,8.4nm,1.0s,mb4.9
SJPF Ste Jean 86.85 3 eP P 17 01 08.1 +0.6
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
ETSF Etsaut 87.08 2 eP P 17 01 09.1 +0.4
POO Poona 87.27 296 ⇑i P P 17 01 08.0 -2.0
comp=Z,50nm,1.0s,mb5.7
STKA Stephens Creek 89.55 214 eP P 17 01 19.9 -0.3
comp=Z,7.0nm,0.8s,mb5.0
STKA e pP 17 01 30.3 -0.6
STKA e 17 01 38.6
STKA Stephens Creek 89.55 214 P P 17 01 20.1 -0.1
comp=Z,10.0nm,0.9s,mb5.1,baz=22,slow=6.2,SNR=11
STKA pP pP 17 01 30.1 -0.8
comp=Z,7.2nm,0.8s,baz=346,slow=6.7,SNR=7.1
STKA LR LR 17 37 06.0
comp=Z,73nm,19.7s,MS4.1,baz=25,slow=33
TORD Torodi Ar. Bea 116.76 1 PKP PKPdf 17 07 06.1 -1.6
comp=Z,0.4nm,0.6s,baz=322,slow=2.4,SNR=3.1
TORD PKKPbc PKKPbc 17 17 33.1 +0.9
comp=Z,0.8nm,0.8s,baz=182,slow=3.6,SNR=4.3
PLCA Paso Flores 129.83 109 PKP PKPdf 17 07 32.0 +0.2
comp=Z,1.5nm,0.8s,baz=329,slow=1.0,SNR=3.3
MAW Mawson 146.19 217 PKPbc PKPbc 17 08 01.0 -1.0
comp=Z,9.3nm,0.9s,baz=76,slow=4.2,SNR=8.3
BOSA Boshof 152.30 313 PKPbc PKPbc 17 08 17.8 -0.9
comp=Z,6.0nm,0.6s,baz=322,slow=4.5,SNR=10
BOSA pPKPbc pPKPbc 17 08 28.3 -1.4
comp=Z,3.4nm,0.6s,baz=314,slow=0.1,SNR=2.8

IDC 06 16:55:03.6±53.0, 1828S×17664W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/16, mbtmp4.2/3, Error ellipse: s-maj=987.7km s-min=162.4km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.93	242	P	P	17 02 40.2	+0.5
	2.3nm,0.9s,baz=75,slow=8.4,SNR=5.3						
WRA	Warramunga Arr	46.22	260	P	P	17 03 30.5	-0.3
	3.1nm,0.4s,baz=97,slow=7.6,SNR=3.9						
ASAR	Alice Springs	46.31	254	P	P	17 03 31.2	-0.3
	6.6nm,0.6s,baz=95,slow=7.3,SNR=161						

ISCJB ***06*** *17:03:19.9±0.7, 2402N±002×12291E±002, h5km±5km, Error ellipse: s-maj=4.1km s-min=2.6km az=173.2*
TAP ***06*** *17:03:20.6, 2406N×12279E, h2km±1km, ML3.4, D*
JMA ***06*** *17:03:20.9±0.1, 2406N×12291E, h12km±4km, M3.4*
ISC 06 17:03:20.3±0.5, 2405N±003×12290E±002, h5km±3km, n44, s0°79/87, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.43	14	P	Pg	17 03 29.0	+0.5
YOJ				S	Sg	17 03 34.6	+0.5
IRIF	Iriomote-Funau	0.81	69	P	Pg	17 03 36.0	+0.1
IRIF				eS	Sg	17 03 47.4	+1.0
HATJ	Hateruma jima	0.83	89	P	Pg	17 03 36.3	+0.1
HATJ				eS	Sg	17 03 47.8	+0.9
JKRS	Kuro-shima	1.03	79	P	Pg	17 03 40.1	0.0
JKRS				eS	Sg	17 03 52.8	-0.7
TWC	Suao	1.11	301	P	Pg	17 03 41.0	-0.7
	baz=302						
ENA	Nanau	1.12	290	i P	Pg	17 03 41.1	-0.8
	baz=291						
ENA				i S	Sg	17 03 56.3	-0.2
	baz=291						
JIJ	Ishigaki jima	1.18	74	P	Pg	17 03 42.2	-0.7
JIJ				eS	Sg	17 03 57.6	-0.6
TWD	Chiawan	1.19	272	i P	Pg	17 03 42.8	-0.3
	baz=271						
TWD				i S	Sg	17 03 59.2	+0.5
	baz=271						
TWB1	Santiao Chiao	1.27	319	P	Pg	17 03 44.6	0.0
	baz=322						
TWB1				eS	Sg	17 04 00.8	-0.3
	baz=322						
ILA	Ilan	1.27	305	P	Pg	17 03 44.8	+0.2
	baz=306						
ILA				S	Sg	17 04 01.9	+0.7
	baz=306						
TWE	Neicheng	1.31	301	P	Pn	17 03 44.7	-0.6
	baz=302						
TWE				S	Sg	17 04 03.0	+0.6
	baz=302						
ENTT	Nioudou	1.35	296	P	Pn	17 03 45.6	-0.3
	baz=297						
ENTT				S	Sg	17 04 03.6	-0.2
	baz=297						
ESL	Shilin	1.36	261	eP	Pn	17 03 44.0	-2.0
	baz=259						
ESL				eS	Sb	17 04 03.7	-0.3
	baz=259						
NWF	Wu-fen Shan	1.44	315	eP	Pn	17 03 46.7	-0.4
	baz=317						
NWF				eS	Sb	17 04 06.7	+0.3
	baz=317						
NNS	Nan Shan	1.45	286	i P	Pn	17 03 47.0	-0.2
	baz=286						
NNS				S	Sb	17 04 06.0	-0.6
	baz=286						
WHF	Hehuan Shan	1.50	274	eP	Pn	17 03 47.3	-0.6
	baz=273						
WHF				eS	Sn	17 04 07.3	-0.5
	baz=273						
TWA	Mucha	1.52	308	eP	Pn	17 03 48.3	+0.2
	baz=309						
TWA				eS	Sn	17 04 08.4	+0.1
	baz=309						
NSK	Sanguang	1.54	294	eP	Pn	17 03 48.9	+0.5
	baz=295						
NSK				eS	Sn	17 04 08.3	-0.5
	baz=295						
EHY	Hungye	1.54	250	eP	Pn	17 03 47.0	-1.5
	baz=247						
EHY				eS	Sn	17 04 07.8	-1.1
	baz=247						
TWT	Tachien	1.59	278	eP	Pn	17 03 49.2	+0.1
	baz=277						
TWT				eS	Sn	17 04 10.0	-0.1
	baz=277						
TWF1	Yuli	1.62	245	eP	Pn	17 03 48.1	-1.5
	baz=242						
TWF1				eS	Sn	17 04 10.1	-0.8
	baz=242						
CHKT	Chengkung	1.69	237	eP	Pn	17 03 50.7	+0.1
	baz=233						
CHKT				eS	Sn	17 04 08.7	-3.9
	baz=233						
TWS1	Kuangyinshan	1.71	308	eP	Pn	17 03 51.7	+0.9
	baz=309						
TWS1				eS	Sn	17 04 13.5	+0.5
	baz=309						
JTJ	Tarama	1.75	70	P	Pn	17 03 51.3	0.0
JTJ				eS	Sn	17 04 13.6	-0.4
NSTT	Nanjuang	1.83	289	eP	Pn	17 03 52.2	-0.2
	baz=289						

NSTT				*e*S		**Sn**	17 04 15.5 -0.4
	baz=289						
SMLT	**Sun Moon Lake**	**1.84**	**265**	*e*P		**Pn**	17 03 52.2 -0.3
	baz=264						
SMLT				*e*S		**Sn**	17 04 15.4 -0.8
	baz=264						
YUS	**Yu-Shan**	**1.87**	**253**	*e*P		**Pn**	17 03 52.6 -0.4
	baz=251						
YUS				*e*S		**Sn**	17 04 16.0 -0.9
	baz=251						
TYC	**Yuchr**	**1.87**	**266**	*e*P		**Pn**	17 03 52.7 -0.3
	baz=265						
TYC				*e*S		**Sn**	17 04 16.9 -0.2
	baz=265						
ELDTW	**Lidau**	**1.93**	**244**	*e*P		**Pn**	17 03 51.9 -1.9
	baz=242						
ELDTW				*e*S		**Sn**	17 04 15.5 -2.9
	baz=242						
TWQ1	**Liyutan**	**1.96**	**279**	*e*P		**Pn**	17 03 54.7 +0.4
	baz=278						
TWQ1				*e*S		**Sn**	17 04 19.0 -0.4
	baz=278						
ALS	**Alishan**	**1.99**	**255**	*e*P		**Pn**	17 03 54.7 0.0
	baz=253						
ALS				*e*S		**Sn**	17 04 20.6 +0.5
	baz=253						
WNT	**Mingjian**	**2.03**	**266**	*e*P		**Pn**	17 03 56.0 +0.8
	baz=264						
WNT				*e*S		**Sn**	17 04 21.5 +0.5
	baz=264						
TWG	**Pinlang**	**2.07**	**234**	*e*P		**Pn**	17 03 54.3 -1.5
	baz=232						
TWG				*e*S		**Sn**	17 04 19.6 -2.5
	baz=232						
CHN5	**Tsauling**	**2.08**	**258**	P		**Pn**	17 03 56.5 +0.6
	baz=256						
CHN5				*e*S		**Sn**	17 04 23.3 +1.0
	baz=256						
WGK	**Gukeng**	**2.17**	**261**	*e*P		**Pn**	17 03 57.5 +0.4
	baz=259						
WGK				*e*S		**Sn**	17 04 25.2 +0.8
	baz=259						
CHN4	**Tsaushan**	**2.22**	**252**	*e*P		**Pn**	17 03 59.1 +1.3
	baz=250						
CHN4				*e*S		**Sn**	17 04 27.2 +1.4
	baz=250						
WTP	**Ta-pu**	**2.24**	**250**	*e*P		**Pn**	17 03 58.2 +0.1
	baz=248						
WTP				*e*S		**Sn**	17 04 26.5 +0.3
	baz=248						
ECL	**Taimali**	**2.30**	**232**	*e*P		**Pn**	17 03 59.6 +0.7
	baz=229						
ECL				*e*S		**Sn**	17 04 27.4 -0.2
	baz=229						
SGST	**Jiashian**	**2.33**	**246**	*e*P		**Pn**	17 03 59.7 +0.3
	baz=244						
SGST				*e*S		**Sn**	17 04 29.3 +0.9
	baz=244						
CHN1	**Nanshi**	**2.34**	**249**	P		**Pn**	17 03 59.7 +0.3
	baz=247						
CHN1				*e*S		**Sn**	17 04 29.1 +0.6
	baz=247						
TWK	**Hsinying**	**2.34**	**251**	*e*P		**Pn**	17 03 59.9 +0.4
	baz=249						
TWK				*e*S		**Sn**	17 04 30.1 +1.4
	baz=249						
SSD	**Sandimen**	**2.45**	**239**	*e*P		**Pn**	17 04 01.5 +0.5
	baz=236						
SSD				*e*S		**Sn**	17 04 33.3 +1.9
	baz=236						
EAST	**Anshuo**	**2.51**	**229**	*e*P		**Pn**	17 04 02.3 +0.5
	baz=227						
EAST				*e*S		**Sn**	17 04 33.2 +0.4
	baz=227						
SCZT	**Fangliau**	**2.68**	**232**	*e*P		**Pn**	17 04 05.5 +1.4
	baz=229						
SCZT				*e*S		**Sn**	17 04 38.0 +1.1
	baz=229						

JMA 06 17:09:33.0±0.4, 4395N×14817E, h0km, M4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.86**	**252**	P	Pn	17 10 06.5	+0.5
NEM2				*e*S	Sn	17 10 30.9	+0.7
JRA	**Rausu**	**2.20**	**271**	P	Pn	17 10 11.3	+0.5
JNK	**Nakash**	**2.53**	**263**	P	Pn	17 10 16.0	+0.8
JNK				*e*S	Sn	17 10 47.6	+0.9
JAK	**Akkeshi**	**2.70**	**251**	P	Pn	17 10 18.7	+1.0
JTKR	**Abashiri--Toko**	**3.08**	**272**	P	Pn	17 10 24.7	+1.9
JAR	**Ashorobuto**	**3.26**	**260**	P	Pn	17 10 27.0	+1.7
JCH	**Churui**	**3.76**	**251**	P	Pn	17 10 34.1	+2.0
JCH				*e*S	Sn	17 11 19.3	+2.3
JKK2	**Kamakawa 2**	**3.92**	**271**	P	Pn	17 10 37.0	+2.6
JNBK	**Urakawa-nobuka**	**4.30**	**249**	P	Pn	17 10 41.3	+1.6
JKB	**Kayabe**	**5.63**	**251**	P	Pn	17 10 59.8	+1.9
JKB				*e*S	Sn	17 12 04.3	+1.0
JOT	**Ohata**	**5.84**	**246**	P	Pn	17 11 02.4	+1.6
JOT				*e*S	Sn	17 12 08.8	+0.3
JANG	**Nango**	**6.10**	**236**	*e*S	Sn	17 12 15.0	+0.2

IDC 06 17:15:48.8±2.1, 124N×12668E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=183.5km s-min=25.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.35**	**161**	P	P	17 20 48.9	+0.4
	0.4nm,0.4s,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**25.73**	**165**	P	P	17 21 20.8	-0.3
	0.1nm,0.5s,baz=347,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**59.57**	**326**	P	P	17 25 54.4	+0.1
	0.5nm,1.0s,baz=126,slow=7.4,SNR=3.6						

*DJA **06** 17:27:45.9±0.0, 2590S×17743W, h231km, mb5.1/12*
*ISCJB **06** 17:28:15.3±0.7, 2538S±004×17982W±007, h406km±9km, mb4.6/48, Error ellipse: s-maj=9.8km s-min=6.6km az=18.9*
*IDC **06** 17:28:21.8±1.4, 2547S×17982W, h470km±14km, mb4.1/16, mb1 4.2/19, mb1mx4.1/22, mbtmp4.1/19, Error ellipse: s-maj=14.7km s-min=12.4km az=65.0*
*NEIC **06** 17:28:21.6±0.4, 2556S×17985W, mb4.5/22, Error ellipse: s-maj=10.7km s-min=7.7km az=105.0*
*BJI **06** 17:28:21.6, 2560S×17990W, h474km, mB5.1, mb4.6*
ISC 06 17:28:16.6±0.7, 2542S±004×17977W±007, h408km±8km, h474km±2.1km:pP-P,n128,σ1s04/100, mb4.6/48, 14C-10D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.16**	**157**	P	**Pn**	**17 29 39.9**	**+9.3**
	72nm,0.3s,baz=190,slow=23,SNR=6.8						
RAO	**Raoul Island**	**4.16**	**157**	*e*P	**Pn**	**17 29 28.6**	**-2.0**
RAO				*e*S	**S**	**17 30 29.9**	**-0.8**
PUZ	**Puketiti**	**12.72**	**187**	P	**P**	**17 31 06.2**	**+2.4**
DZM	**Mont Dzumac**	**13.05**	**282**	*e*P	**P**	**17 31 12.9**	**+5.2**
DZM	**Mont Dzumac**	**13.05**	**282**	*e*P	**P**	**17 31 13.8**	**+6.1**
URZ	**Urewera**	**13.07**	**191**	P	**P**	**17 31 09.8**	**+2.2**
	13nm,0.3s,baz=8.6,slow=4.2,SNR=52						
URZ				S	**S**	**17 33 26.5**	**-2.6**
	1.3nm,0.3s,baz=288,slow=20,SNR=7.1						
URZ	**Urewera**	**13.07**	**191**	P	**P**	**17 31 08.8**	**+1.2**
NOUC	**Port Laguerre**	**13.17**	**282**	*e*P	**P**	**17 31 14.5**	**+5.5**
AFI	**Afiamalu**	**13.70**	**35**	P	**P**	**17 31 15.4**	**+0.6**
	21nm,0.3s,baz=48,slow=6.1,SNR=16						
AFI				S	**S**	**17 33 39.7**	**-2.5**
	12nm,0.3s,baz=63,slow=21,SNR=6.0						
AFI	**Afiamalu**	**13.70**	**35**	*e*P	**P**	**17 31 15.2**	**+0.4**
	454nm,1.1s						
AFI				*e*S	**S**	**17 33 36.4**	**-5.8**
MRZ	**Mangatainoka R**	**15.69**	**193**	P	**P**	**17 31 35.0**	**-1.0**
SNZO	**South Karori**	**16.50**	**195**	*e*P	**P**	**17 31 46.5**	**+1.8**
	38nm,0.7s						
SNZO				*e*S	**S**	**17 34 34.7**	**-2.1**
QRZ	**Quartz Range**	**16.65**	**201**	P	**P**	**17 31 48.1**	**+1.8**
NNZ	**Nelson**	**16.75**	**198**	P	**P**	**17 31 47.9**	**+0.5**
FUNA	**Funafuti**	**16.83**	**356**	P	**P**	**17 31 47.4**	**-1.1**
	77nm,0.8s						
THZ	**Tophouse**	**17.39**	**199**	P	**P**	**17 31 55.5**	**+1.3**
LTZ	**Lake Taylor**	**18.51**	**199**	P	**P**	**17 32 05.2**	**-0.8**
RPZ	**Rata Peaks**	**19.73**	**200**	P	**P**	**17 32 17.8**	**0.0**
	3.1nm,0.3s,baz=80,slow=1.3,SNR=16						
FOZ	**Fox Glacier**	**20.05**	**203**	P	**P**	**17 32 19.0**	**-1.7**
JCZ	**Jackson Bay**	**20.82**	**204**	P	**P**	**17 32 27.3**	**-0.5**
HNR	**Honiara**	**24.98**	**306**	P	**P**	**17 33 05.9**	**+0.2**
	166nm,0.9s,mb5.5,baz=130,slow=2.9,SNR=4.9						
HNR	**Honiara**	**24.98**	**306**	*e*P	**P**	**17 33 02.7**	**-3.0**
	152nm,0.8s,mb5.5						
ARMA	**Armidale**	**25.72**	**252**	*e*P	**P**	**17 33 14.7**	**+2.6**
EIDS	**Eidsvold**	**26.31**	**264**	*e*P	**P**	**17 33 18.7**	**+1.3**
	152nm,0.7s,mb5.5						
CNB	**Canberra Magne**	**28.30**	**242**	*e*P	**P**	**17 33 36.2**	**+1.4**
CTA	**Charters Tower**	**31.72**	**273**	*j*P	**P**	**17 34 06.0**	**+1.1**
	46nm,0.7s,mb4.9						
CTA	**Charters Tower**	**31.72**	**273**	P	**P**	**17 34 06.2**	**+1.3**
	63nm,0.6s,mb5.1,baz=99,slow=10.0,SNR=116						
CTAO	**Charters Tower**	**31.72**	**273**	*j*P	**P**	**17 34 06.0**	**+1.1**
	60nm,0.7s,mb5.0						
TOO	**Toolangi**	**31.82**	**239**	*e*P	**P**	**17 34 06.8**	**+1.3**
TAU	**Tasmania Unive**	**32.07**	**229**	*e*P	**P**	**17 34 07.8**	**+0.3**
	8.5nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**34.38**	**250**	*e*P	**P**	**17 34 28.0**	**+0.6**
	13nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**34.38**	**250**	P	**P**	**17 34 28.1**	**+0.7**
	12nm,0.5s,mb4.5,baz=93,slow=9.9,SNR=72						
STKA	**Stephens Creek**	**34.38**	**250**	*e*P	**P**	**17 34 28.2**	**+0.8**
	18nm,0.6s,mb4.6						
PMG	**Port Moresby**	**35.21**	**291**	*e*P	**P**	**17 34 34.9**	**+0.3**
COEN	**Coen**	**36.58**	**281**	*e*P	**P**	**17 34 46.6**	**+0.5**
	14nm,1.5s,mb4.1						
ASAR	**Alice Springs**	**42.01**	**262**	P	**P**	**17 35 30.2**	**-0.1**
	37nm,0.7s,mb4.9,baz=90,slow=7.0,SNR=527						
ASAR				S	**S**	**17 41 06.5**	**-12**
	1.5nm,0.8s,baz=109,slow=14,SNR=5.4						
WB2	**Warramunga Arr**	**42.52**	**268**	*j*P	**P**	**17 35 33.7**	**-0.7**
WB2				*e*S	**S**	**17 41 17.4**	**-8.5**
WB2	**Warramunga Arr**	**42.52**	**268**	*j*P	**P**	**17 35 33.7**	**-0.7**
WB2				*e*S	**S**	**17 41 17.7**	**-8.2**
WRAB	**Tennant Creek**	**42.52**	**268**	*j*P	**P**	**17 35 33.7**	**-0.8**
	41nm,0.6s,mb4.9						
WRAB				*e*S	**S**	**17 41 18.3**	**-7.6**
WRA	**Warramunga Arr**	**42.53**	**268**	P	**P**	**17 35 33.8**	**-0.7**
	36nm,0.4s,mb5.0,baz=101,slow=8.0,SNR=324						
WRA				PcP	PcP	17 37 17.3	-1.1
	2.1nm,1.0s,baz=95,slow=4.3,SNR=4.6						
WRA				ScP	ScP	17 40 23.5	-6.2
	1.6nm,0.9s,baz=98,slow=4.3,SNR=4.3						
WRA				S	**S**	**17 41 17.8**	**-8.2**
	7.7nm,1.1s,baz=101,slow=15,SNR=12						
FORT	**Forrest**	**45.99**	**251**	*e*P	**P**	**17 36 00.1**	**-1.3**
	61nm,0.7s,mb5.0						
FORT	**Forrest**	**45.99**	**251**	*e*P	**P**	**17 36 00.3**	**-1.1**
	8.3nm,0.6s,mb4.2						
KAKA	**Kakadu**	**46.67**	**276**	*e*P	Px	17 35 55.6	
	21nm,0.6s						
SBA	**Scott Base**	**52.88**	**184**	*e*P	**P**	**17 36 53.8**	**+1.8**
	3.9nm,0.9s,mb3.6						
AAI	**Ambon**	**54.38**	**285**	P	**P**	**17 37 05.0**	**+1.4**
	44nm,1.2s,mb4.6						
KLBR	**Kellerberrin**	**54.60**	**248**	*e*P	**P**	**17 37 03.8**	**-1.2**
	31nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**55.33**	**261**	*e*P	**P**	**17 37 09.2**	**-1.1**
	24nm,0.9s,mb4.4						
BATI	**Baumata**	**55.55**	**275**	P	**P**	**17 37 12.6**	**+0.7**
	27nm,0.6s,mb4.8,baz=205,slow=4.1,SNR=16						
BATI	**Baumata**	**55.55**	**275**	P	**P**	**17 37 13.0**	**+1.0**
	28nm,0.8s,mb4.7						
LBMI	**Labuha**	**56.47**	**287**	P	**P**	**17 37 18.6**	**+0.2**
	60nm,1.0s,mb4.9						
CASY	**Casey**	**58.84**	**206**	*e*P	**P**	**17 37 32.1**	**-1.7**
	8.3nm,0.9s,mb4.1						
KDI	**Kendari**	**59.16**	**281**	P	**P**	**17 37 36.1**	**-0.8**
	25nm,1.2s,mb4.4						
KAPI	**Kappang**	**61.25**	**279**	P	**P**	**17 37 49.2**	**-1.7**
	4.3nm,0.6s,mb4.1,baz=101,slow=9.7,SNR=4.1						
KAPI	**Kappang**	**61.25**	**279**	*e*P	**P**	**17 37 48.0**	**-2.8**
	11nm,0.9s,mb4.3						
PCI	**Palu**	**63.03**	**283**	P	**P**	**17 38 02.8**	**+0.3**
	41nm,1.4s,mb4.8						
KHKI	**Kahang-Kahang**	**63.56**	**273**	P	**P**	**17 38 04.9**	**-1.0**
QSPA	**South Pole Qui**	**64.67**	**180**	P	**P**	**17 38 12.6**	**+0.6**
	6.5nm,0.8s,mb4.3,baz=36,slow=1.3,SNR=39						
QSPA	**South Pole Qui**	**64.67**	**180**	*e*P	**P**	**17 38 12.4**	**+0.4**
	6.0nm,0.8s,mb4.3						
QSPA				*e*pP	pP	17 39 52.0	+13
KMMI	**Kalianget**	**65.58**	**274**	P	**P**	**17 38 18.7**	**-0.2**
	68nm,1.3s,mb5.1						
BBKI	**Banjar Baru**	**66.32**	**278**	P	**P**	**17 38 27.9**	**+4.4**
SJI	**Sanahan**	**67.29**	**272**	P	**P**	**17 38 29.3**	**-0.2**
PLKI	**Palangkaraya**	**67.67**	**278**	P	**P**	**17 38 32.3**	**+0.4**
	211nm,0.9s,mb5.8						
PBKI	**Pangkalan Bun**	**69.50**	**277**	P	**P**	**17 38 42.7**	**-0.4**
	150nm,1.0s,mb5.6						
STKI	**Sintang**	**70.90**	**279**	P	**P**	**17 38 51.1**	**-0.3**
	51nm,1.2s,mb4.9						
MJAR	**Matsushiro Arr**	**73.26**	**326**	P	**P**	**17 39 04.1**	**-0.6**
	5.9nm,0.7s,mb4.2,baz=163,slow=5.8,SNR=16						
MAJO	**Matsushiro**	**73.26**	**326**	*e*P	**P**	**17 39 03.3**	**-1.4**
	8.0nm,0.8s,mb4.3						
MAT	**Matsushiro**	**73.26**	**326**	P	**P**	**17 39 03.9**	**-0.8**
MAW	**Mawson**	**76.40**	**200**	P	**P**	**17 39 21.8**	**-0.3**
	4.1nm,0.8s,mb4.1,baz=126,slow=7.4,SNR=6.0						
MAW	**Mawson**	**76.40**	**200**	*e*P	**P**	**17 39 21.6**	**-0.5**
ASAJ	**Asahikawa**	**77.31**	**333**	P	**P**	**17 39 27.4**	**+0.1**
	8.7nm,0.8s,mb4.4,baz=20,slow=20,SNR=4.4						
KSRS	**Korea Array**	**79.54**	**320**	P	**P**	**17 39 39.8**	**+0.2**
	3.2nm,0.7s,mb4.0,baz=131,slow=5.5,SNR=16						
PETK	**Petropavlovsk-**	**80.62**	**346**	P	**P**	**17 39 44.0**	**-0.8**
	2.7nm,0.8s,mb4.2,baz=114,slow=7.1,SNR=6.0						
SYO	**Syowa Base**	**81.59**	**193**	*j*eX	**P**	**17 39 45.8**	**-4.0**
MDJ	**Mudanjiang**	**83.64**	**326**	P	**P**	**17 40 01.0**	**+0.5**
MDJ				S	S	17 49 49.3	+1.5
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,74nm,6.7s						
MDJ	**Mudanjiang**	**83.64**	**326**	*e*P	**P**	**17 39 58.9**	**-1.6**
	comp=Z,9.4nm,0.9s,mb4.5						
ISA	**Isabella**	**83.92**	**46**	*e*P	**P**	**17 40 03.0**	**+0.8**
	comp=Z,7.0nm,0.9s,mb4.4						
CMB	**Columbia Colle**	**84.16**	**43**	*e*P	**P**	**17 40 04.1**	**+0.8**
	comp=Z,11nm,1.3s,mb4.4						
GSC	**Goldstone**	**84.80**	**47**	*e*P	**P**	**17 40 06.8**	**+0.3**
	comp=Z,8.3nm,1.1s,mb4.4						
CN2	**Changchun**	**85.23**	**324**	*e*P	**P**	**17 40 08.3**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CN2				AMB	AMB		
	comp=Z,130nm,3.0s						
NVAR	**Mina Array Bea**	**85.70**	**44**	P	**P**	**17 40 11.6**	**+0.7**
	comp=Z,2.0nm,0.8s,mb3.9,baz=220,slow=8.4,SNR=12						
NVAR				pP	pP	17 41 57.5	+14
	comp=Z,0.5nm,0.7s,baz=219,slow=6.3,SNR=2.8						
TUC	**Tucson**	**87.28**	**52**	*e*P	**P**	**17 40 18.9**	**+0.4**
	comp=Z,4.6nm,0.9s,mb4.2						
GYA	**Guiyang**	**87.69**	**301**	*e*P	**P**	**17 40 20.2**	**-0.4**
GYA				PP	PP	17 43 56.0	+2.6
GYA				S	S	17 50 27.6	0.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
EFI	**East Falkland**	**87.82**	**148**	P	**P**	**17 40 21.2**	**+0.4**
	comp=Z,50nm,1.2s,mb5.1						
XAN	**Xi'an**	**89.84**	**308**	P	**P**	**17 40 30.5**	**+0.1**
XAN				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.6						
XAN				AMB	AMB		
	comp=Z,262nm,6.0s						
KMI	**Kunming**	**90.15**	**298**	P	**P**	**17 40 32.5**	**+0.4**
KMI				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.7						
CMAR	**Chiang Mai Arr**	**90.24**	**290**	P	**P**	**17 40 33.2**	**+0.6**
	comp=Z,5.5nm,0.9s,mb4.4,baz=138,slow=3.4,SNR=33						
CHTO	**Chiang Mai**	**90.40**	**291**	*e*P	**P**	**17 40 33.8**	**+0.4**
	comp=Z,11nm,0.9s,mb4.7						
TXAR	**Lajitas Array**	**91.06**	**58**	P	**P**	**17 40 36.6**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.7,baz=210,slow=7.2,SNR=6.1						
TXAR				pP	pP	17 42 24.9	+15
	comp=Z,0.8nm,0.8s,baz=188,slow=3.8,SNR=5.1						
HHC	**Hu-ho-hao-te**	**91.64**	**315**	*e*P	**P**	**17 40 38.5**	**-0.1**
HHC				PP	PP	17 44 22.7	-1.4
HHC				S	S	17 51 03.5	+0.6
HHC				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.3						
CD2	**Chengdu**	**92.08**	**303**	*e*P	**P**	**17 40 41.2**	**+0.3**
CD2				S	S	17 51 06.9	-0.4
CD2				SS	SS	17 57 29.8	+1.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,60nm,8.2s						
PDAR	**Pinedale Array**	**93.64**	**44**	pP	pP	17 42 36.8	+15
	comp=Z,1.1nm,1.1s,baz=224,slow=4.1,SNR=4.5						
LZH	**Lanzhou**	**94.47**	**308**	*j*P	**P**	**17 40 52.0**	**+0.3**
LZH				PP	PP	17 44 49.2	+3.0
LZH				AMB	AMB		
	comp=Z,19nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,103nm,5.2s						
MKAR	**Makanchi Array**	**113.33**	**312**	PKiKP	PKiKP	17 46 04.0	-2.5
	comp=Z,0.6nm,0.8s,baz=112,slow=1.2,SNR=3.8						
MKAR	**Makanchi Array**	**113.33**	**312**	PKPdf	PKiKP	17 46 04.0	-2.5
KURK	**Kurchatov**	**116.44**	**316**	PKP	PKPdf	17 46 09.6	-2.7
	baz=94,slow=1.8						
BVAR	**Borovoye Array**	**121.71**	**318**	PKP	PKPdf	17 46 20.3	-2.1
	comp=Z,1.7nm,0.6s,baz=112,slow=1.6,SNR=10						
AKTK	**Aktyubinsk**	**129.53**	**315**	PKP	PKPdf	17 46 35.9	-1.6
AKTO	**Aktyubinsk**	**129.53**	**315**	PKP	PKPdf	17 46 35.9	-1.6
	comp=Z,1.9nm,0.8s,baz=116,slow=1.0,SNR=4.6						
ARCES	**ARCESS Array B**	**133.41**	**348**	PKP	PKPdf	17 46 42.6	-1.7
	comp=Z,2.1nm,0.6s,baz=88,slow=2.7,SNR=9.9						
ARCES				SKPbc	SKPbc	17 49 25.5	-8.1
	comp=Z,2.9nm,0.8s,baz=20,slow=3.9,SNR=5.5						
NB2	**NORSAR Subarra**	**143.61**	**351**	PKP	PKPdf	17 46 59.4	-3.7
	comp=Z,15nm,0.8s,baz=15,slow=3.2						
NOA	**NORSAR Array B**	**143.61**	**351**	PKP	PKPdf	17 46 59.1	-4.0
	comp=Z,9.1nm,0.8s,baz=15,slow=4.9,SNR=20						
AKASG	**Malin Array Be**	**146.35**	**326**	PKPbc	PKPdf	17 47 08.0	-0.1
	comp=Z,2.2nm,0.4s,baz=40,slow=3.2,SNR=9.7						
AKASG	**Malin Array Be**	**146.35**	**326**	PKPbc	PKPdf	17 47 08.0	-0.1
BRTR	**Keskin Array B**	**148.64**	**305**	PKPbc	PKPbc	17 47 14.6	-1.9
	comp=Z,3.0nm,0.7s,baz=128,slow=3.4,SNR=9.0						
BRTR				PKPab	PKPab	17 47 20.6	-1.0
	comp=Z,3.2nm,0.8s,baz=95,slow=2.5,SNR=7.7						
TLCR		**149.70**	**318**	⇑P	PKPbc	17 47 16.8	-2.1
TLCR		**149.70**	**318**	⇑P	PKPbc	17 47 16.8	-2.1
KWP	**Kalwaria**	**150.19**	**330**	⇑P	PKPbc	17 47 19.2	-0.6
KWP	**Kalwaria**	**150.19**	**330**	⇑*j*P	PKPbc	17 47 19.3	-0.6
TIRR	**Tirgusor**	**150.31**	**317**	⇑P	PKPbc	17 47 19.2	-1.2
TIRR	**Tirgusor**	**150.31**	**317**	⇑*j*P	PKPbc	17 47 19.2	-1.2
BURAR	**Bucovina Array**	**150.33**	**325**	⇓P	PKPbc	17 47 19.8	-0.5
BURAR	**Bucovina Array**	**150.33**	**325**	⇓*j*P	PKPbc	17 47 19.8	-0.5
HARR	**Harsova**	**150.49**	**318**	⇑*j*P	PKPbc	17 47 19.9	-0.9
PLOR	**Plostina**	**150.61**	**321**	⇓*j*P	PKPbc	17 47 18.9	-2.1
TRPA	**Tarpa**	**151.33**	**328**	⇑*j*P	PKPbc	17 47 21.0	-1.6
KSP	**Ksiaz**	**151.77**	**338**	*e*PKP	PKPbc	17 47 22.4	-1.1
DRGR		**152.16**	**326**	⇑P	PKPbc	17 47 23.0	-1.5
DRGR		**152.16**	**326**	⇑*j*P	PKPbc	17 47 23.0	-1.5
CLL	**Collm**	**152.36**	**343**	⇑*j*P	PKPbc	17 47 23.6	-1.2
CLL	**Collm**	**152.36**	**343**	⇑*j*PKPbc	PKPbc	17 47 23.6	-1.2
	comp=Z,9.0nm,0.9s						
BRG	**Berggiesshubel**	**152.49**	**341**	*j* PKP	PKPbc	17 47 23.6	-1.4
	comp=Z,5.8nm,0.8s						
BZS	**Buzias**	**153.52**	**325**	⇑P	PKPbc	17 47 25.3	-2.2
BZS	**Buzias**	**153.52**	**325**	⇑*j*P	PKPbc	17 47 25.3	-2.2
GERES	**GERESS Array B**	**154.35**	**339**	PKPbc	PKPbc	17 47 27.5	-1.6
	comp=Z,0.4nm,0.3s,baz=32,slow=5.8,SNR=3.6						
GERES				PKPab	PKPab	17 47 43.8	-1.4
	comp=Z,0.8nm,0.7s,baz=67,slow=5.4,SNR=4.1						
LIC	**Lamto**	**160.26**	**164**	*e*P	PKPdf	17 47 39.4	+10
	comp=Z,36nm,1.3s						
KIC	**Kosan Boka**	**160.46**	**165**	*e*P	PKPdf	17 47 39.8	+11
	comp=Z,102nm,1.7s						
TIC	**Toumodi**	**160.67**	**164**	*e*P	PKPdf	17 47 41.6	+12
	comp=Z,21nm,0.2s						
TORD	**Torodi Ar. Bea**	**167.71**	**187**	PKP	PKPdf	17 47 32.5	-3.0
	comp=Z,1.1nm,0.9s,baz=275,slow=0.7,SNR=6.1						
TORD				PKPab	PKPab	17 48 42.2	-2.1
	comp=Z,1.3nm,0.8s,baz=177,slow=3.7,SNR=7.0						

*IDC **06** 17:55:36.4±1.0, 1185N×8650W, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.1/20, mbtmp4.1/8, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/27, Error ellipse: s-maj=47.8km s-min=20.6km az=50.0*
*ISCJB **06** 17:55:41.9±0.8, 1152N±005×8706W±008, h56km±9km, mb4.2/15, Error ellipse: s-maj=14.1km s-min=6.7km az=152.3*
*CASC **06** 17:55:41.8±1.9, 1153N×8708W, h25km±7km, MD4.2, ML4.1, mb4.3(NEIC)*
*NEIC **06** 17:55:42.5±1.9, 1165N×8670W, h48km±14km, mb4.3/8, Error ellipse: s-maj=21.1km s-min=14.4km az=50.0*
**ISC 06 17:55:43.6±0.8, 1159N±006×8696W±008, h53km±8km, n58, σ1s03/49, mb4.2/15, 8C-12D, Near

MCMT	**McKenzie Canyo**	**39.86 331**	*e*P	**P**	**18 03 13.8**	**+1.8**
BDFB	**Brasilia**	**47.10 124**	P	**P**	**18 04 09.3**	**-1.3**
	comp=E,2.0nm,0.5s,mb4.3,baz=286,slow=16,SNR=7.1					
YKA	**Yellowknife Ar**	**54.56 345**	P	**P**	**18 05 05.0**	**-1.1**
	comp=E,1.8nm,0.7s,mb4.2,baz=140,slow=7.2,SNR=5.9					
YKA	**Yellowknife Ar**	**54.56 345**	P	**P**	**18 05 05.0**	**-1.1**
SONM	**Songino Array**	**119.66 350**	PKP	PKPdf	18 14 27.9	+0.1
	comp=E,0.5nm,0.6s,baz=328,slow=1.3,SNR=5.0					
MKAR	**Makanchi Array**	**121.09 9**	PKP	PKPdf	18 14 29.4	-1.1
	comp=E,0.3nm,0.8s,baz=335,slow=2.1,SNR=2.8					
KSRS	**Korea Array**	**121.25 328**	PKP	PKPdf	18 14 31.7	+0.6
	comp=E,0.9nm,0.7s,baz=359,slow=2.3,SNR=5.5					
ASAR	**Alice Springs**	**139.38 247**	PKP	PKPdf	18 15 05.0	-0.7
	comp=E,0.3nm,0.5s,baz=95,slow=2.2,SNR=6.7					
WRA	**Warramunga Arr**	**139.48 253**	PKhKP		18 15 01.1	
	comp=E,0.3nm,0.7s,baz=93,slow=2.8,SNR=4.1					
WRA			PKP	PKPdf	18 15 06.9	+1.0
	comp=E,0.6nm,0.6s,baz=90,slow=2.5,SNR=13					
CMAR	**Chiang Mai Arr**	**149.58 349**	PKP	PKPdf	18 15 23.4	0.0
	comp=E,1.3nm,0.6s,baz=296,slow=3.1,SNR=6.1					
CMAR			PKPbc	PKPbc	18 15 28.1	+0.1
	comp=E,1.2nm,0.6s,baz=350,slow=4.6,SNR=12					

*IDC **06** 18:03:11.5±1.6, 1466S×17322W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/18, mbtmp4.1/3, MS3.4/2, Ms1 3.4/2, ms1mx2.5/31, Error ellipse: s-maj=183.5km s-min=22.5km az=155.0*

*ISCJB **06** 18:03:15.9±3.4, 146S±04×173.1W±02, h53km±47km, mb4.3/5, MS3.3/2, Error ellipse: s-maj=75.4km s-min=29.2km az=171.9*

*NEIC **06** 18:03:17.2±2.5, 1463S×17302W, h54km±39km, mb4.5/3, Error ellipse: s-maj=60.1km s-min=24.2km az=176.0*

ISC 06 18:03:17.3±3.0, 146S±04×1731W±02, h51km±42km, n12, σ0s57/11, mb4.3/5, MS3.3/2, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.45**	**60**	Pn	**Pn**	**18 03 40.9**	**-0.2**
	36nm,0.3s,baz=35,slow=7.6,SNR=27						
AFI				Sn	**Sn**	**18 03 59.2**	**+0.2**
	282nm,0.3s,baz=58,slow=22,SNR=24						
AFI	**Afiamalu**	**1.45**	**60**	*e*Pn	**Pn**	**18 03 40.6**	**-0.5**
AFI				Sn	**Sn**	**18 03 59.2**	**+0.2**
DZM	**Mont Dzumac**	**20.79**	**246**	*e*P	**P**	**18 07 55.1**	**+0.7**
PPT	**Papeete**	**22.75**	**101**	*e*LR	LR	18 13 38.2	
	132nm,25.8s						
HNR	**Honiara**	**26.88**	**278**	LR	LR	18 18 16.7	
	comp=Z,67nm,18.4s,MS3.2,baz=177,slow=34						
CTA	**Charters Tower**	**39.13**	**256**	LR	LR	18 24 03.6	
	comp=Z,47nm,18.9s,MS3.3,baz=227,slow=32						
STKA	**Stephens Creek**	**44.70**	**239**	P	**P**	**18 11 24.4**	**-1.1**
	3.0nm,0.9s,mb4.1,baz=90,slow=8.1,SNR=3.5						
STKA	**Stephens Creek**	**44.70**	**239**	*e*P	**P**	**18 11 24.1**	**-1.4**
	12nm,1.2s,mb4.6						
WRAB	**Tennant Creek**	**50.32**	**256**	P	**P**	**18 12 09.4**	**0.0**
	1.1nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**50.33**	**256**	P	**P**	**18 12 10.0**	**+0.5**
	0.8nm,0.6s,mb3.9,baz=90,slow=6.8,SNR=22						
ASAR	**Alice Springs**	**50.65**	**251**	P	**P**	**18 12 11.7**	**-0.1**
	3.2nm,0.6s,mb4.4,baz=85,slow=7.8,SNR=52						
QSPA	**South Pole Qui**	**75.40**	**180**	*e*P	**P**	**18 14 55.5**	**+0.3**
	9.6nm,1.3s,mb4.6						

NEIC 06 18:20:17.8, 3708S×17700E, h223km, MG4.2(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.15**	**115**	P	Pn	18 20 50.5	-0.3
MXZ				S	S	18 21 15.9	-0.8
URZ	**Urewera**	**1.18**	**176**	P	Pn	18 20 51.1	0.0
MWZ	**Matawai**	**1.32**	**162**	P	Pn	18 20 52.6	+0.5
PUZ	**Puketiti**	**1.41**	**135**	P	Pn	18 20 53.1	+0.4
KNZ	**Kokohu**	**2.01**	**165**	P	Pn	18 20 58.3	+0.2
BKZ	**Black Stump Fm**	**2.12**	**191**	P	Pn	18 20 59.1	-0.1
NGZ	**Ngauruhoe**	**2.37**	**207**	P	Pn	18 21 02.7	+1.0
TUVZ	**Tukino**	**2.43**	**205**	P	Pn	18 21 02.8	+0.5
FWVZ	**Far West T-bar**	**2.45**	**207**	P	Pn	18 21 03.2	+0.6
WNVZ	**Wahianoa**	**2.50**	**206**	P	Pn	18 21 03.5	+0.4
MOVZ	**Moawhango**	**2.52**	**203**	P	Pn	18 21 03.0	-0.3
TSZ	**Takapari Road**	**3.08**	**195**	P	Pn	18 21 08.7	-0.8
WAZ	**Wanganui**	**3.10**	**210**	P	Pn	18 21 09.8	0.0
PKE	**Pukeiti**	**3.18**	**227**	P	Pn	18 21 12.7	+2.1
BFZ	**Birch Farm**	**3.64**	**189**	P	Pn	18 21 15.0	-1.1
MRZ	**Mangatainoka R**	**3.75**	**197**	P	Pn	18 21 15.6	-1.7
KIW	**Kapiti Island**	**4.11**	**203**	P	Pn	18 21 19.8	-1.9
MTW	**Mount Morrison**	**4.24**	**195**	P	Pn	18 21 21.2	-2.0
CAW	**Cannon Point**	**4.29**	**200**	P	Pn	18 21 21.8	-2.1
MRW	**Makara Radio**	**4.51**	**203**	P	Pn	18 21 24.5	-2.1
MSWZ	**Moikau Station**	**4.54**	**197**	P	Pn	18 21 24.5	-2.4
SNZO	**South Karori**	**4.58**	**202**	P	Pn	18 21 25.0	-2.5
BHW	**Baring Head**	**4.63**	**200**	P	Pn	18 21 25.4	-2.6
TCW	**Tory Channel**	**4.64**	**206**	P	Pn	18 21 25.9	-2.3
NNZ	**Nelson**	**5.00**	**213**	P	Pn	18 21 30.0	-2.7
QRZ	**Quartz Range**	**5.11**	**209**	P	Pn	18 21 31.6	-2.5
BSWZ	**Blackbirch Sta**	**5.22**	**207**	P	Pn	18 21 33.4	-2.1
THZ	**Tophouse**	**5.65**	**213**	P	Pn	18 21 38.5	-2.4
KHZ	**Kahutara**	**5.96**	**205**	P	Pn	18 21 42.3	-2.5
DSZ	**Denniston Nort**	**6.16**	**219**	P	Pn	18 21 45.0	-2.3
LTZ	**Lake Taylor**	**6.76**	**211**	P	Pn	18 21 51.9	-3.0
MQZ	**McQueen's Vall**	**7.40**	**205**	P	Pn	18 21 59.2	-4.0
WVZ	**Waitaha Valley**	**7.67**	**217**	P	Pn	18 22 04.2	-2.5
RPZ	**Rata Peaks**	**8.03**	**213**	P	Pn	18 22 08.4	-2.9
LBZ	**Lake Benmore**	**8.94**	**213**	P	Pn	18 22 19.7	-3.3
ODZ	**Otahua Downs**	**9.29**	**209**	P	Pn	18 22 23.0	-4.4
JCZ	**Jackson Bay**	**9.38**	**219**	P	Pn	18 22 24.6	-4.1

CASC 06 18:26:33.2±2.5, 948N×8364W, h1km±5km, MD4.0, 9C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUS	**Buena Vista**	**0.14**	**305**	⇑*i*P	Pg	18 26 36.5	+0.7
URSC	**Urasca**	**0.38**	**340**	⇓*i*P	Pg	18 26 40.9	+0.3
BAR1		**0.40**	**125**	⇓*i*P	Pg	18 26 41.8	+0.9
BAR1				*e*S	Sg	18 26 47.2	+1.1
QCR	**Quepos**	**0.52**	**264**	*e*P	Pg	18 26 43.6	+0.4
SJS	**Escuela Geolog**	**0.61**	**319**	⇑*e*P	Pg	18 26 45.2	+0.3
SJS				*e*S	Sg	18 26 57.9	+4.9
LIO	**Limon**	**0.80**	**49**	⇑*i*P	Pg	18 26 48.8	+0.3
LIO				*e*S	Sg	18 27 00.1	+1.2
ACR	**Cerro Adams**	**0.94**	**150**	⇓*i*P	Pg	18 26 51.3	+0.1
ACR				*e*S	Sg	18 27 04.8	+1.3
CGA2	**Cerro Gallo 2**	**0.97**	**304**	⇓*e*P	Pg	18 26 51.1	-0.7
CGA2				*e*S	Sg	18 27 04.5	0.0
CTCR	**Cotoan**	**1.05**	**123**	*e*P	Pg	18 26 52.8	-0.4
CNI	**Changuinola**	**1.11**	**93**	⇑*e*P	Pg	18 26 54.5	0.0
FORC	**Fortuna**	**1.41**	**315**	*e*P	Pn	18 26 59.3	-0.8
FORC				*e*P		18 26 59.5	
FORC				*e*S	Sg	18 27 17.7	-1.0
CAO	**Cobano**	**1.46**	**279**	*e*P	Pn	18 26 59.7	-0.9
CAO				*e*S	Sg	18 27 20.6	+0.6
JCR	**Jicaral**	**1.49**	**285**	⇑*e*P	Pn	18 26 59.9	-1.3
CUI	**Cuipilapa**	**1.92**	**308**	⇑*e*P	Pn	18 27 07.0	0.0
LIM1	**Limonal**	**2.00**	**308**	⇑*e*P	Pn	18 27 08.8	+0.7
LIM1				*e*S	Sn	18 27 35.1	+1.3
VCR	**Vista de Mar**	**2.06**	**288**	*e*P	Pn	18 27 09.3	+0.3
LAPE	**La Pedrera**	**12.09**	**98**	⇑*e*P		18 27 11.5	
LAPE				*e*S		18 27 40.0	
PTP	**Ponta Puerca**	**19.53**	**62**	⇑*e*P		18 27 00.6	

*NIED **06** 18:27:00, 2020N×12200E, h80km, Mw4.4 Best double couple: M₀4.56000×10¹⁵ NP1:φ₁24.00000°, δ63.00000°, λ70.00000°. NP2:φ₂243.00000°, δ33.00000°, λ124.00000°.*

*ISCJB **06** 18:27:14.4±0.6, 2004N±003×12169E±005, h66km±6km, mb4.3/34, Error ellipse: s-maj=8.3km s-min=4.8km az=176.0*

*NEIC **06** 18:27:15.3±0.7, 2000N×12171E, h59km±7km, mb4.6/21, Error ellipse: s-maj=6.2km s-min=5.2km az=58.0*

*IDC **06** 18:27:16.1±3.6, 1999N×12171E, h65km±35km, mb3.9/14, mb1 4.1/16, mb1mx4.0/23, mbtmp3.9/16, ML4.2/2, MS3.5/5, Ms1 3.5/5, ms1mx2.8/29, Error ellipse: s-maj=21.3km s-min=11.3km az=72.0*

*MAN **06** 18:27:18, 1981N×12147E, h101km, mb4.7, ML3.6, MS3.6*

*BJI **06** 18:27:22.1, 2078N×12128E, h58km, mB4.8, mb4.1, ML4.0*

ISC 06 18:27:16.0±0.5, 2004N±003×12168E±005, h63km±5km, n69, σ1s08/77, mb4.4/34, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**1.98**	**211**	⇑*i*P	**Pn**	**18 27 46.7**	**-0.5**
PIP				*e*S	**Sn**	**18 28 09.7**	**-1.3**
CVP	**Callao Caves**	**2.33**	**177**	*e*P	**Pn**	**18 27 52.9**	**+0.9**
CVP				*e*S	**Sn**	**18 28 21.4**	**+1.9**
ABRA	**Dolores**	**2.55**	**201**	*e*P	**Pn**	**18 27 52.5**	**-2.4**
ABRA				*e*S	**Sn**	**18 28 21.8**	**-3.1**
PALP	**Palanan**	**3.04**	**166**	*e*P	**Pn**	**18 28 04.4**	**+2.6**
PALP				*e*S	**Sn**	**18 28 43.4**	**+6.4**
CAUP	**Cauayan**	**3.08**	**177**	*e*P	**Pn**	**18 28 04.1**	**+1.8**
CAUP				*e*S	**Sn**	**18 28 38.0**	**0.0**
NACB	**Ninganchiao**	**4.11**	**359**	*e*Pn	**Pn**	**18 28 15.1**	**-1.3**
NACB				*e*Sn	**Sn**	**18 28 56.8**	**-6.4**
BALP	**Baler**	**4.28**	**181**	*e*P	**Pn**	**18 28 20.4**	**+1.7**
BALP				*e*S	**Sn**	**18 29 01.1**	**-6.2**
SCZP	**Santa Cruz**	**4.56**	**202**	*e*P	**Pn**	**18 28 22.0**	**-0.5**
YHNB	**Yeheng**	**4.62**	**357**	*e*Pn	**Pn**	**18 28 23.9**	**+0.6**
TATO	**Taipei**	**4.92**	**358**	*e*Pn	**Pn**	**18 28 27.9**	**+0.5**
POLP	**Polillo Island**	**5.29**	**177**	*e*P	**Pn**	**18 28 30.1**	**-2.4**
POLP				*e*S	**Sn**	**18 29 31.7**	**-0.4**
QZH	**Quanzhou**	**5.65**	**330**	⇑*i*P	**Pn**	**18 28 34.6**	**-2.8**
QZH				S	**Sn**	**18 29 32.3**	**-8.7**
QZH				Smax			
	comp=N,180nm,0.3s						
QZH				Smax			
	comp=E,210nm,0.7s						
LUBP	**Lubang**	**6.42**	**193**	*e*P	**Pn**	**18 28 50.8**	**+2.8**
PVCP	**Virac**	**6.83**	**159**	*e*P	**Pn**	**18 28 54.5**	**+0.6**
BUSP	**Coron**	**8.12**	**190**	*e*P	**Pn**	**18 29 11.9**	**+0.6**
JOW	**Kunigami**	**9.07**	**41**	P	**Pn**	**18 29 24.8**	**+0.5**
	comp=E,9.3nm,0.3s,baz=212,slow=12,SNR=10						
QIZ	**Qiongzhong**	**11.21**	**267**	*e*Pn	**Pn**	**18 29 51.6**	**-1.8**
QIZ				*e*Sn	Sn	18 31 36.3	-21
KSRS	**Korea Array**	**18.18**	**16**	P	**Pn**	**18 31 23.6**	**-0.5**
	comp=E,0.3nm,0.3s,baz=198,slow=11,SNR=10						
CHTO	**Chiang Mai**	**21.48**	**271**	*e*P	**P**	**18 32 00.2**	**+0.6**
	comp=E,11nm,0.9s,mb4.2						
CM31	**Chiang Mai Arr**	**21.52**	**270**	*e*P	**P**	**18 32 00.9**	**+0.9**
	comp=E,6.7nm,0.7s,mb4.2						
CMAR	**Chiang Mai Arr**	**21.52**	**270**	P	**P**	**18 32 00.6**	**+0.5**
	comp=E,4.7nm,0.7s,mb4.0,baz=78,slow=8.0,SNR=29						
CMAR				LR	LR	18 40 25.0	
	comp=E,78nm,18.4s,baz=85,slow=37						
KAPI	**Kappang**	**24.97**	**185**	P	**P**	**18 32 33.4**	**-0.5**
	comp=E,9.5nm,0.7s,mb4.5,baz=17,slow=8.2,SNR=10						
LSA	**Lhasa**	**29.24**	**295**	*e*P	**P**	**18 33 13.3**	**+1.2**
	comp=E,2.2nm,0.6s,mb4.1						
ULN	**Ulaanbaatar**	**30.18**	**340**	P	**P**	**18 33 19.2**	**-1.0**
	comp=E,4.2nm,1.1s,mb4.1						
SONM	**Songino Array**	**30.37**	**339**	P	**P**	**18 33 22.1**	**+0.2**
	comp=E,0.6nm,0.6s,mb3.5,baz=152,slow=9.6						
SONM				LR	LR	18 46 41.5	
	comp=E,94nm,18.3s,baz=161,slow=38						
ODAN	**Odare**	**32.11**	**289**	*e*P	**P**	**18 33 37.9**	**+0.4**
	comp=E,5.8nm,0.5s,mb4.6						
RAMN	**Ramite**	**32.82**	**289**	*e*P	**P**	**18 33 43.8**	**+0.1**
JIRN	**Jiri**	**33.24**	**290**	*e*P	**P**	**18 33 48.1**	**+0.7**
GUN	**Gumba**	**33.54**	**290**	*e*P	**P**	**18 33 50.5**	**+0.5**
KKN	**Kakani**	**34.06**	**290**	*e*P	**P**	**18 33 54.5**	**0.0**
DMN	**Daman**	**34.20**	**290**	*e*P	**P**	**18 33 55.8**	**+0.1**
	comp=E,10nm,0.9s,mb4.8						
KAKA	**Kakadu**	**34.23**	**161**	*e*P	Px	18 33 42.9	
	comp=E,5.0nm,0.5s						
GKN	**Gorkha**	**34.65**	**290**	*e*P	**P**	**18 33 59.1**	**-0.4**
	comp=E,5.2nm,0.6s,mb4.6						
DANN	**Dangsing**	**35.45**	**291**	*e*P	**P**	**18 34 06.4**	**0.0**
KOLN	**Koldanda**	**35.54**	**290**	*e*P	**P**	**18 34 07.5**	**+0.2**
	comp=E,9.0nm,0.8s,mb4.8						
PYUN	**Piuthan**	**36.10**	**290**	*e*P	**P**	**18 34 12.3**	**+0.2**
	comp=E,7nm,0.7s,mb4.7						
MBWA	**Marble Bar**	**40.99**	**183**	*e*P	**P**	**18 34 51.8**	**-1.2**
	comp=E,10nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**41.62**	**162**	*e*P	**P**	**18 34 56.7**	**-1.4**
	comp=E,29nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**41.63**	**162**	P	**P**	**18 34 56.6**	**-1.6**
	comp=E,24nm,0.5s,mb5.1,baz=343,slow=9.1,SNR=305						
WB2	**Warramunga Arr**	**41.63**	**162**	*e*P	**P**	**18 34 56.8**	**-1.4**
WB2	**Warramunga Arr**	**41.63**	**162**	*e*P	**P**	**18 34 56.6**	**-1.6**
MKAR	**Makanchi Array**	**41.69**	**319**	P	**P**	**18 34 59.1**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.8,baz=112,slow=8.9,SNR=9.8						
PETK	**Petropavlovsk-**	**43.09**	**31**	P	**P**	**18 35 10.3**	**+0.6**
	comp=E,1.9nm,0.8s,mb3.9,baz=205,slow=3.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**43.99**	**329**	P	**P**	**18 35 16.3**	**-0.7**
	comp=E,1.8nm,0.6s,mb4.0,baz=120,slow=8.5,SNR=7.1						
ZALV				LR	LR	18 55 22.5	
	comp=E,30nm,18.3s,baz=348,slow=38						
ZALV	**Zalesovo Beam**	**43.99**	**329**	P	**P**	**18 35 16.3**	**-0.7**
ZALV				LR	LR	18 55 22.5	
TKM2	**Tokmak 2**	**44.75**	**311**	P	**P**	**18 35 24.5**	**+1.3**
	comp=E,2.8nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**45.05**	**164**	P	**P**	**18 35 25.2**	**-0.5**
	comp=E,17nm,0.6s,mb5.1,baz=348,slow=7.3,SNR=511						
KURK	**Kurchatov**	**45.60**	**323**	P	**P**	**18 35 30.2**	**+0.4**
	baz=116,slow=8.3						
CTA	**Charters Tower**	**46.58**	**147**	P	**P**	**18 35 37.7**	**-0.2**
	comp=E,2.8nm,0.5s,mb4.4,baz=338,slow=13,SNR=3.9						
CTA				LR	LR	18 53 53.0	
	comp=E,35nm,19.3s,baz=44,slow=34						
CTAO	**Charters Tower**	**46.58**	**147**	*e*P	**P**	**18 35 38.0**	**+0.1**
	comp=E,3.6nm,0.6s,mb4.5						
KBL	**Kabul**	**48.45**	**299**	*e*P	**P**	**18 35 53.5**	**+1.2**
	comp=E,7.0nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**51.20**	**323**	P	**P**	**18 36 13.3**	**+0.4**
	comp=E,0.5nm,0.5s,mb3.7,baz=110,slow=11,SNR=5.0						
BRVK	**Borovoye**	**51.27**	**323**	*e*P	**P**	**18 36 12.8**	**-0.6**
	comp=E,4.2nm,0.9s,mb4.4						
BRVK				*e*	pP	18 36 30.7	+1.1
NWAO	**Narrogin (SRO)**	**52.84**	**185**	P	**P**	**18 36 26.5**	**+1.3**
	comp=E,14nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**55.04**	**159**	*e*P	**P**	**18 36 40.9**	**-0.4**
	comp=E,2.4nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**55.04**	**159**	P	**P**	**18 36 41.1**	**-0.2**
	comp=E,5.3nm,0.7s,mb4.7,baz=333,slow=20,SNR=7.8						
STKA	**Stephens Creek**	**55.04**	**159**	*e*P	**P**	**18 36 40.2**	**-1.1**
	comp=E,4.0nm,0.5s,mb4.7						
BILL	**Bilibino**	**55.43**	**19**	*e*P	**P**	**18 36 42.9**	**-0.8**
	comp=E,3.1nm,0.6s,mb4.5						
ARU	**Arti**	**58.71**	**325**	P	**P**	**18 37 07.4**	**+0.4**
	comp=E,2.9nm,0.6s,mb4.5						
TOO	**Toolangi**	**61.53**	**159**	*e*P	**P**	**18 37 27.1**	**+0.6**
KIV	**Kislovodsk**	**68.58**	**310**	*e*P	**P**	**18 38 13.0**	**+0.7**
	comp=E,11nm,0.9s,mb4.8						
MCK	**McKinley**	**71.97**	**28**	P	**P**	**18 38 31.6**	**-1.0**
	comp=E,10.0nm,1.1s,mb4.7						
ARCES	**ARCESS Array B**	**73.54**	**339**	P	**P**	**18 38 43.8**	**+2.0**
	comp=E,2.1nm,0.8s,mb4.1,baz=84,slow=11,SNR=3.2						
INK	**Inuvik**	**76.88**	**22**	*e*P	**P**	**18 38 60.0**	**-1.1**
	comp=E,56nm,0.6s						
NOA	**NORSAR Array B**	**82.09**	**333**	P	**P**	**18 39 28.2**	**-1.3**
	comp=E,1.9nm,0.9s,mb4.0,baz=65,slow=5.4,SNR=3.2						
NOA				LR	LR	19 17 40.5	
	comp=E,46nm,18.7s,baz=15,slow=37						
NOA	**NORSAR Array B**	**82.09**	**333**	P	**P**	**18 39 28.2**	**-1.3**
NOA				LR	LR	19 17 40.5	
YKA	**Yellowknife Ar**	**86.59**	**23**	P	**P**	**18 39 51.4**	**-0.8**
	comp=E,1.9nm,0.6s,mb4.5,baz=308,slow=4.7,SNR=8.6						
YKA	**Yellowknife Ar**	**86.59**	**23**	P	**P**	**18 39 51.4**	**-0.8**
NVAR	**Mina Array Bea**	**99.12**	**44**	P	**P**	**18 40 51.2**	**+0.6**
	comp=E,0.6nm,0.7s,mb4.3,baz=334,slow=3.7,SNR=4.4						

IDC 06 18:34:21.2±2.6, 1432N×14541E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.4/3, MS3.1/2, Ms1 3.2/2, ms1mx2.8/14, Error ellipse: s-maj=50.2km s-min=28.6km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.90**	**216**	Pn	Pn	18 34 42.4	+1.4
	225nm,0.3s,baz=159,slow=5.1,SNR=182						
GUMO				Sn	Sn	18 34 53.8	-0.9
	814nm,0.3s,baz=348,slow=22,SNR=42						
DAV	**Davao City (W)**	**20.76**	**252**	LR	LR	18 45 30.9	
	comp=Z,58nm,20.3s,baz=121,slow=32						
WRA	**Warramunga Arr**	**35.75**	**198**	P	P	18 41 21.5	-0.5
	0.6nm,0.7s,baz=19,slow=9.7,SNR=6.1						
ASAR	**Alice Springs**	**39.39**	**197**	P	P	18 41 52.4	-0.5
	0.2nm,0.5s,baz=15,slow=12,SNR=4.2						
CMAR	**Chiang Mai Arr**	**44.67**	**282**	P	P	18 42 35.9	-0.2
	0.4nm,0.5s,baz=81,slow=7.3,SNR=3.9						
CMAR				LR	LR	19 00 07.0	
	comp=Z,17nm,19.6s,baz=120,slow=35						

*ISCJB **06** 18:44:35.1±0.8, 2400N±003×12289E±002, h11km±6km, Error ellipse: s-maj=5.2km s-min=2.9km az=176.0*

*JMA **06** 18:44:35.4±0.3, 2405N×12292E, h6km, M3.0*

*TAP **06** 18:44:36.4, 2398N×12281E, h5km±2km, ML3.1, D*

ISC 06 18:44:34.8±0.5, 2402N±003×12288E±002, h5km±4km, n32, σ0s69/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.46**	**15**	P	**Pg**	**18 44 43.9**	**+0.2**
YOJ				S	**Sg**	**18 44 49.5**	**-0.2**
IRIF	**Iriomote-Funau**	**0.84**	**68**	P	**Pg**	**18 44 50.8**	**-0.1**
HATJ	**Hateruma jima**	**0.85**	**87**	P	**Pg**	**18 44 50.3**	**-0.8**
HATJ				S	**Sg**	**18 45 02.3**	**+0.2**
JKRS	**Kuro-shima**	**1.06**	**78**	P	**Pg**	**18 44 54.9**	**-0.2**
JKRS				S	**Sg**	**18 45 09.6**	**+0.8**
TWC	**Suao**	**1.11**	**302**	P	**Pg**	**18 44 55.9**	**-0.1**
	baz=305						
TWC				*e*S	**Sg**	**18 45 10.8**	**+0.4**
	baz=305						
ENA	**Nanau**	**1.11**	**292**	P	**Pg**	**18 44 56.0**	**-0.2**
	baz=294						
ENA				*i* S	**Sg**	**18 45 10.8**	**+0.2**
	baz=294						
TWD	**Chiawan**	**1.17**	**273**	*e*P	**Pg**	**18 44 56.8**	**-0.4**
	baz=274						
TWD				*e*S	**Sg**	**18 45 11.9**	**-0.5**
	baz=274						
JIJ	**Ishigaki jima**	**1.21**	**73**	P	**Pg**	**18 44 57.1**	**-0.8**
JIJ				S	**Sg**	**18 45 12.4**	**-1.2**
TWE	**Neicheng**	**1.31**	**303**	P	**Pn**	**18 44 59.6**	**-0.1**
	baz=305						
TWE				S	**Sg**	**18 45 17.0**	**+0.2**
	baz=305						
ESL	**Shilin**	**1.34**	**262**	*e*P	**Pn**	**18 44 59.4**	**-0.7**
	baz=262						
ESL				*e*S	**Sg**	**18 45 16.7**	**-1.0**
	baz=262						
ENTT	**Nioudou**	**1.35**	**298**	P	**Pn**	**18 45 00.4**	**+0.1**
	baz=300						
ENTT				S	**Sb**	**18 45 17.9**	**-0.2**
	baz=300						
NNS	**Nan Shan**	**1.44**	**287**	P	**Pn**	**18 45 01.8**	**+0.4**
	baz=289						
NNS				*e*S	**Sb**	**18 45 20.9**	**+0.3**
	baz=289						
NWF	**Wu-fen Shan**	**1.45**	**317**	*e*P	**Pn**	**18 45 02.5**	**+0.9**
	baz=319						
NWF				*e*S	**Sb**	**18 45 21.0**	**0.0**
	baz=319						
WHF	**Hehuan Shan**	**1.48**	**275**	P	**Pn**	**18 45 02.1**	**0.0**
	baz=276						
WHF				*e*S	**Sn**	**18 45 20.2**	**-1.6**
	baz=276						
EHY	**Hungye**	**1.51**	**251**	*e*P	**Pn**	**18 45 02.2**	**-0.3**
	baz=250						
EHY				*e*S	**Sn**	**18 45 22.4**	**-0.1**
	baz=250						
TWA	**Mucha**	**1.52**	**309**	P	**Pn**	**18 45 04.3**	**+1.7**
	baz=311						
TWA				*e*S	**Sn**	**18 45 23.1**	**+0.3**
	baz=311						
NSK	**Sanguang**	**1.53**	**296**	P	**Pn**	**18 45 03.9**	**+1.1**
	baz=297						
NSK				*e*S	**Sn**	**18 45 23.0**	**-0.1**
	baz=297						
TWF1	**Yuli**	**1.59**	**246**	P	**Pn**	**18 45 03.0**	**-0.6**
	baz=245						
TWF1				*e*S	**Sn**	**18 45 24.3**	**-0.2**
	baz=245						
JTJ	**Tarama**	**1.78**	**69**	P	**Pn**	**18 45 06.1**	**-0.1**
JTJ				S	**Sn**	**18 45 28.5**	**-0.7**
SMLT	**Sun Moon Lake**	**1.81**	**266**	*e*P	**Pn**	**18 45 06.5**	**-0.2**
	baz=266						
SMLT

HATJ				S		Sg	18 58 20.3	+0.2
JKRS	**Kuro-shima**	**1.06**	**77**	P		Pg	18 58 12.6	-0.4
JKRS				S		Sg	18 58 27.0	+0.2
TWC	**Suao**	**1.11**	**303**	*i* P		Pg	18 58 13.5	-0.4
	baz=304							
TWC				*e*S		Sg	18 58 28.2	-0.2
	baz=304							
ENA	**Nanau**	**1.12**	**292**	P		Pg	18 58 13.6	-0.5
	baz=292							
ENA				S		Sg	18 58 28.8	+0.3
	baz=292							
HWA	**Hwalien**	**1.16**	**269**	*e*P		Pg	18 58 14.3	-0.6
	baz=267							
HWA				*e*S		Sg	18 58 28.8	-1.2
	baz=267							
TWD	**Chiawan**	**1.17**	**274**	*e*P		Pg	18 58 14.5	-0.5
	baz=272							
TWD				*e*S		Sg	18 58 30.6	+0.4
	baz=272							
JIJ	**Ishigaki jima**	**1.21**	**73**	P		Pb	18 58 14.6	-1.2
JIJ				S		Sg	18 58 30.1	-1.5
ILA	**Ilan**	**1.27**	**307**	P		Pn	18 58 16.5	-0.2
	baz=307							
ILA				S		Sb	18 58 33.4	-0.1
	baz=307							
TWB1	**Santiao Chiao**	**1.28**	**321**	*e*P		Pn	18 58 17.5	+0.7
	baz=323							
TWB1				*e*S		Sb	18 58 33.1	-0.6
	baz=323							
TWE	**Neicheng**	**1.31**	**303**	*i* P		Pn	18 58 17.2	0.0
	baz=304							
TWE				S		Sb	18 58 34.7	+0.2
	baz=304							
ESL	**Shilin**	**1.33**	**262**	P		Pn	18 58 17.0	-0.6
	baz=260							
ESL				S		Sb	18 58 34.5	-0.6
	baz=260							
ENTT	**Nioudou**	**1.35**	**298**	P		Pn	18 58 18.0	+0.2
	baz=298							
ENTT				S		Sb	18 58 35.3	-0.3
	baz=298							
NNS	**Nan Shan**	**1.44**	**288**	P		Pn	18 58 19.5	+0.5
	baz=287							
NNS				*e*S		Sn	18 58 37.3	-0.8
	baz=287							
NWF	**Wu-fen Shan**	**1.45**	**317**	P		Pn	18 58 19.1	-0.2
	baz=318							
NWF				S		Sn	18 58 37.9	-0.6
	baz=318							
WHF	**Hehuan Shan**	**1.48**	**276**	⇓ *i* P		Pn	18 58 19.8	+0.2
	baz=274							
WHF				*e*S		Sn	18 58 38.5	-0.6
	baz=274							
EHY	**Hungye**	**1.51**	**251**	P		Pn	18 58 19.7	-0.2
	baz=248							
EHY				S		Sn	18 58 39.4	-0.4
	baz=248							
TWA	**Mucha**	**1.52**	**310**	*e*P		Pn	18 58 21.8	+1.6
	baz=310							
TWA				S		Sn	18 58 39.8	-0.5
	baz=310							
NSK	**Sanguang**	**1.54**	**296**	*e*P		Pn	18 58 21.6	+1.3
	baz=296							
NSK				*e*S		Sn	18 58 40.5	0.0
	baz=296							
TWT	**Tachien**	**1.57**	**279**	*e*P		Pn	18 58 21.1	+0.3
	baz=278							
TWT				*e*S		Sn	18 58 41.4	0.0
	baz=278							
TWF1	**Yuli**	**1.59**	**246**	*i* P		Pn	18 58 20.5	-0.5
	baz=243							
TWF1				*e*S		Sn	18 58 41.3	-0.5
	baz=243							
CHKT	**Chengkung**	**1.65**	**237**	*e*P		Pn	18 58 22.3	+0.4
	baz=234							
CHKT				*e*S		Sn	18 58 41.4	-2.0
	baz=234							
TWS1	**Kuangyinshan**	**1.72**	**310**	*e*P		Pn	18 58 25.8	+2.9
	baz=310							
TWS1				*e*S		Sn	18 58 45.2	+0.2
	baz=310							
JTJ	**Tarama**	**1.78**	**69**	P		Pn	18 58 23.7	-0.1
JTJ				S		Sn	18 58 46.0	-0.6
SMLT	**Sun Moon Lake**	**1.81**	**266**	P		Pn	18 58 24.8	+0.7
	baz=265							
SMLT				*e*S		Sn	18 58 47.2	-0.1
	baz=265							
NSTT	**Nanjuang**	**1.82**	**290**	*e*P		Pn	18 58 25.6	+1.3
	baz=290							
NSTT				*e*S		Sn	18 58 46.8	-0.7
	baz=290							
YUS	**Yu-Shan**	**1.83**	**254**	*e*P		Pn	18 58 24.9	+0.4
	baz=252							
YUS				*e*S		Sn	18 58 48.0	0.0
	baz=252							
TYC	**Yuchr**	**1.85**	**267**	P		Pn	18 58 24.9	+0.2
	baz=265							
TYC				*e*S		Sn	18 58 47.8	-0.5
	baz=265							
ELDTW	**Lidau**	**1.89**	**245**	P		Pn	18 58 24.4	-0.8
	baz=242							
ELDTW				*e*S		Sn	18 58 47.9	-1.4
	baz=242							
TWQ1	**Liyutan**	**1.95**	**280**	*e*P		Pn	18 58 27.6	+1.5
	baz=279							
ALS	**Alishan**	**1.96**	**256**	P		Pn	18 58 27.4	+1.2
	baz=254							
ALS				*e*S		Sn	18 58 50.3	-0.7
	baz=254							
TWG	**Pinlang**	**2.03**	**235**	*e*P		Pn	18 58 26.5	-0.7
	baz=232							
TWG				*e*S		Sn	18 58 51.4	-1.4
	baz=232							
CHN5	**Tsauling**	**2.05**	**259**	P		Pn	18 58 28.8	+1.4
	baz=257							
CHN5				*e*S		Sn	18 58 52.8	-0.5
	baz=257							
WGK	**Gukeng**	**2.14**	**262**	*e*P		Pn	18 58 30.6	+2.0
	baz=260							
CHN4	**Tsaushan**	**2.19**	**253**	*e*P		Pn	18 58 31.1	+1.8
	baz=251							
CHN4				*e*S		Sn	18 58 56.7	0.0
	baz=251							
WTP	**Ta-pu**	**2.21**	**250**	P		Pn	18 58 30.9	+1.3
	baz=248							
WTP				*e*S		Sn	18 58 57.1	0.0
	baz=248							
ECL	**Taimali**	**2.25**	**232**	*e*P		Pn	18 58 30.7	+0.5
	baz=229							
ECL				*e*S		Sn	18 58 55.8	-2.5
	baz=229							
SGST	**Jiashian**	**2.29**	**247**	*e*P		Pn	18 58 32.2	+1.4
	baz=244							
SGST				*e*S		Sn	18 58 58.6	-0.6
	baz=244							
CHN1	**Nanshi**	**2.30**	**250**	P		Pn	18 58 32.6	+1.7
	baz=247							
CHN1				*e*S		Sn	18 58 59.3	-0.2
	baz=247							
TWK	**Hsinying**	**2.31**	**252**	*e*P		Pn	18 58 32.2	+1.2
	baz=250							
TWK				*e*S		Sn	18 58 59.7	+0.1
	baz=250							
SSD	**Sandimen**	**2.41**	**239**	*e*P		Pn	18 58 33.9	+1.4
	baz=237							
SSD				*e*S		Sn	18 59 01.9	-0.3
	baz=237							
TWM1	**Shoushan**	**2.54**	**243**	*e*P		Pn	18 58 34.5	+0.3
	baz=241							
TWM1				*e*S		Sn	18 59 06.7	+1.3
	baz=241							

IDC 06 19:18:59.8±2.4, 464N×12345E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=320.9km s-min=26.4km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.67**	**157**	P	P	19 24 40.9	+0.2
	0.3nm,0.3s,baz=336,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**29.93**	**161**	P	P	19 25 09.7	0.0
	0.2nm,0.4s,baz=336,slow=7.6,SNR=7.4						
MKAR	**Makanchi Array**	**54.97**	**326**	P	P	19 28 32.8	0.0
	2.0nm,0.3s,baz=123,slow=8.8,SNR=5.2						

*IDC **06** 19:45:08.0±1.4, 5036N×17750W, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.9/26, mbtmp3.9/13, ML4.6/1, Error ellipse: s-maj=42.1km s-min=16.4km az=177.0*

*ISCJB **06** 19:45:10.4±3.1, 5037N×17739W±0.10, h30km±21km, mb4.0/16, Error ellipse: s-maj=17.1km s-min=9.4km az=160.2*

*NEIC **06** 19:45:12.9±4.3, 5040N×17741W, h34km±27km, mb4.4/6, Error ellipse: s-maj=28.0km s-min=9.3km az=174.0*

ISC 06 19:45:11.5±3.1, 5045N×17741W±0.10, h21km±22km, n29, σ1§00/30, mb4.0/16, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.51**	**17**	P	Pn	19 45 36.3	-1.0
ADK				S	Sn	19 45 56.9	+0.5
AMKA	**Amchitka**	**2.28**	**295**	P	Pn	19 45 46.6	-1.3
UNV	**Unalaska Valle**	**7.53**	**59**	*e*Pn	Pn	19 46 59.4	-0.5
GAMB	**Gambell**	**13.71**	**11**	Pn	Pn	19 48 28.1	+3.6
PETK	**Petropavlovsk-**	**15.61**	**289**	Pn	Pn	19 48 51.7	+1.7
	0.3nm,0.3s,baz=84,slow=18,SNR=8.5						
KDAK	**Kodiak Island**	**16.23**	**54**	Pn	Pn	19 49 00.5	+2.5
	2.1nm,0.3s,baz=326,slow=10,SNR=10						
KDAK	**Kodiak Island**	**16.23**	**54**	Pn	Pn	19 49 00.5	+2.5
PPLA	**Purkeypile**	**18.48**	**38**	*e*P	Pn	19 49 26.9	+1.0
	18nm,1.2s						
KTH	**Kantishna Hill**	**19.31**	**37**	*e*P	Pn	19 49 34.4	-1.5
	88nm,1.9s						
EGAK	**Eagle**	**23.70**	**39**	*e*P	P	19 50 20.1	-1.5
	9.3nm,1.1s,mb4.1						
INK	**Inuvik**	**27.74**	**34**	P	P	19 50 56.3	-1.8
	26nm,0.7s,mb5.0						
YKA	**Yellowknife Ar**	**35.25**	**46**	P	P	19 52 04.6	+0.5
	2.2nm,0.8s,mb4.1,baz=276,slow=8.9,SNR=4.8						
YKA	**Yellowknife Ar**	**35.25**	**46**	P	P	19 52 04.6	+0.5
KSRS	**Korea Array**	**40.55**	**273**	P	P	19 52 49.1	+0.1
	0.4nm,0.3s,mb3.5,baz=34,slow=8.8,SNR=3.4						
NVAR	**Mina Array Bea**	**42.80**	**83**	P	P	19 53 08.3	+0.8
	0.2nm,0.4s,mb3.2,baz=301,slow=9.4,SNR=2.5						
PDAR	**Pinedale Array**	**45.76**	**72**	P	P	19 53 31.2	+0.1
	0.2nm,0.4s,mb3.4,baz=347,slow=3.7,SNR=2.9						
ULN	**Ulaanbaatar**	**47.47**	**298**	*e*P	P	19 53 44.4	-0.1
	1.4nm,0.8s,mb3.9						
SONM	**Songino Array**	**47.85**	**298**	P	P	19 53 48.0	+0.5
	0.7nm,0.8s,mb3.8,baz=37,slow=9.8,SNR=3.0						
ARCES	**ARCESS Array B**	**59.16**	**351**	P	P	19 55 09.5	-0.5
	2.4nm,0.8s,mb4.3,baz=19,slow=7.7,SNR=5.9						
ARCES	**ARCESS Array B**	**59.16**	**351**	P	P	19 55 09.5	-0.5
KURK	**Kurchatov**	**60.30**	**315**	P	P	19 55 19.4	+1.2
	baz=42,slow=7.0						
MKAR	**Makanchi Array**	**61.30**	**310**	P	P	19 55 24.9	-0.2
	0.3nm,0.4s,mb3.8,baz=51,slow=6.1,SNR=12						
BVAR	**Borovoye Array**	**62.17**	**321**	P	P	19 55 31.2	+0.4
	1.7nm,0.5s,mb4.5,baz=52,slow=6.5,SNR=16						
BRVK	**Borovoye**	**62.19**	**321**	P	P	19 55 30.0	-0.9
	2.3nm,0.5s,mb4.6						
NOA	**NORSAR Array B**	**68.65**	**356**	P	P	19 56 12.9	+0.3
	1.2nm,1.0s,mb3.8,baz=6.0,slow=6.5,SNR=2.5						
AKTK	**Aktyubinsk**	**68.95**	**326**	P	P	19 56 15.1	+0.5
AKTO	**Aktyubinsk**	**68.95**	**326**	P	P	19 56 15.1	+0.5
	3.6nm,0.6s,mb4.5,baz=58,slow=7.4,SNR=14						
CMAR	**Chiang Mai Arr**	**71.99**	**277**	P	P	19 56 32.5	-1.2
	0.2nm,0.6s,mb3.3,baz=30,slow=7.6,SNR=4.4						
AKASG	**Malin Array Be**	**76.70**	**343**	P	P	19 57 00.4	-0.2
	2.9nm,0.6s,mb4.4,baz=18,slow=5.6,SNR=7.8						

*CSEM **06** 20:26:43.0±0.1, 4320N×1104E, h12km, ML2.7/4, Error ellipse: s-maj=1.6km s-min=1.2km az=73.0*

*LDG **06** 20:26:44.3±0.1, 4324N×1103E, h10km, Ml2.4/3, Error ellipse: s-maj=4.0km s-min=1.8km az=157.0*

ROM 06 20:26:42.7±0.1, 4319N×1104E, h2km, Md2.5/14, Ml2.1/13, 2C, Error ellipse: s-maj=2.2km s-min=1.3km az=94.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSNT	**Castellina Chi**	**0.34**	**33**	⇑ *i* Pg	Pg	20 26 50.2	+1.1
CSNT				Sg	Sg	20 26 55.0	+1.5
	340nm,0.4s						
CASP	**Castiglione de**	**0.42**	**198**	Pg	Pg	20 26 52.2	+1.5
CASP				Sg	Sg	20 26 57.7	+1.5
	411nm,0.3s						
ARCI	**Arcidosso**	**0.46**	**137**	Pg	Pg	20 26 52.7	+1.1
ARCI				Sg	Sg	20 26 59.8	+2.2
	186nm,0.3s						
CRMI	**Carmignano**	**0.60**	**355**	Pg	Pg	20 26 55.0	+0.8
CRMI				Sg	Sg	20 27 03.7	+1.6
	84nm,0.6s						
CAFI	**Castiglion Fio**	**0.69**	**78**	Pg	Pg	20 26 56.9	+1.0
	34nm,0.5s						
MAON	**Monte Argentar**	**0.76**	**175**	⇑ *i* Pg	Pg	20 26 58.8	+1.5
MAON				Sg	Sg	20 27 09.8	+2.6
	231nm,0.4s						
CRE	**Caprese Michel**	**0.79**	**57**	Pg	Pg	20 26 58.9	+1.1
CRE				Sg	Sg	20 27 09.7	+1.6
	53nm,0.5s						
LATE	**Laterza**	**0.80**	**136**	Pg	Pg	20 26 59.7	+1.6
MAIM	**Mastiano**	**0.83**	**331**	Pg	Pg	20 26 58.9	+0.3
	46nm,0.7s						
VMG	**Vicchio**	**0.85**	**25**	Pg	Pg	20 27 00.5	+1.4
	36nm,0.2s						
SEI	**Scarperia**	**0.89**	**15**	Pg	Pg	20 27 01.0	+1.2
	273nm,0.6s						
SFI	**Santa Sofia**	**0.92**	**39**	Pg	Pg	20 27 01.1	+0.7
	57nm,0.8s						
BDI	**Bagni Di Lucca**	**0.93**	**340**	Pg	Pg	20 27 01.2	+0.7
	38nm,0.5s						
BADI	**Badiali**	**0.93**	**70**	Pg	Pg	20 27 01.6	+1.0
	40nm,0.8s						
PZZT	**Monte Pizzetto**	**0.95**	**352**	Pg	Pg	20 27 02.0	+1.1
FNVD	**Fontana Vidola**	**0.98**	**3**	Pg	Pg	20 27 02.4	+0.9
MURB	**Monte Urbino**	**1.09**	**86**	Pg	Pg	20 27 04.4	+0.9
	56nm,0.3s						
PIEI	**Pieia**	**1.14**	**72**	Pg	Pg	20 27 05.4	+0.8
	106nm,2.0s						
GSCL	**Gusciola**	**1.21**	**344**	Pg	Pg	20 27 06.4	+0.6
	7.0nm,0.3s						
FSSB	**Fossombrone**	**1.36**	**68**	Pg	Pg	20 27 08.9	+0.1
	8.0nm,0.5s						
PGF	**Pioggiola**	**1.63**	**248**	*e*Pn	Pn	20 27 11.6	-0.8
PGF				*e*Sn	Sn	20 27 32.4	-1.6
	8.9nm,0.4s						
PGF	**Pioggiola**	**1.63**	**248**	*e*Pn	Pn	20 27 11.6	-0.8
PGF				*e*Sn	Sn	20 27 32.4	-1.6
	4.4nm,0.4s						
SBF	**Sospel**	**2.71**	**286**	*e*P	Pn	20 27 28.5	+1.3
SBF				*e*Sn	Sn	20 27 57.0	-3.5
	2.9nm,0.2s						
SBF	**Sospel**	**2.71**	**286**	*e*P	Pn	20 27 28.5	+1.3
SBF				*e*Sn	Sn	20 27 57.0	-3.5
	1.5nm,0.2s						
FRF	**La Foret Royal**	**3.23**	**278**	*e*Pn	Pn	20 27 32.8	-1.5
LMR	**La Mourre**	**3.31**	**274**	*e*Pn	Pn	20 27 34.4	-1.1
MBDF	**Montbardon**	**3.44**	**298**	*e*P	Pn	20 27 39.1	+1.8
LPG	**La Plagne**	**3.85**	**308**	*e*Pn	Pn	20 27 40.7	-2.1
LPL	**La Plagne**	**3.87**	**308**	*e*Pn	Pn	20 27 41.3	-1.8
LPL				*e*Sn	Sn	20 28 24.1	-5.0
	1.0nm,0.3s						
LPL	**La Plagne**	**3.87**	**308**	*e*Pn	Pn	20 27 41.3	-1.8
LPL				*e*Sn	Sn	20 28 24.1	-5.0
	0.5nm,0.3s						
SMRF	**Simiane la Rot**	**4.05**	**283**	*e*Pn	Pn	20 27 43.3	-2.3

*IDC **06** 20:33:22.5±0.5, 778S×10793E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.3/21, mbtmp4.3/15, ML4.7/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/35, Error ellipse: s-maj=23.6km s-min=14.3km az=57.0*

*NEIC **06** 20:33:23.5±0.3, 785S×10796E, h10km, mb4.6/23, Error ellipse: s-maj=10.9km s-min=6.3km az=57.0*

NEIC Felt [II] at Tasikmalaya.

*MOS **06** 20:33:25.6±0.9, 771S×10807E, h33km, mb4.9/16, Error ellipse: s-maj=19.9km s-min=9.2km az=117.8*

*ISCJB **06** 20:33:30.6±0.6, 796S×10793E±0.04, h84km±5km, mb4.4/42, Error ellipse: s-maj=10.3km s-min=6.3km az=28.5*

*DJA **06** 20:33:30.7±0.0, 803S×10780E, h10km, mB5.4/5, Mjma4.3/13, MLv5.0/14, Mw(mB)5.2/5, Mwp3.9/6*

ISC 06 20:33:32.0±0.6, 794S±006×10791E±005, h79km±5km, n107, σ1§15/90, mb4.4/42, 1C-6D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.14**	**345**	P	Pn	20 33 53.0	+0.3
JCJI	**Jatiwangi**	**1.48**	**14**	P	Pn	20 33 54.5	-2.5
SKJI	**Sukabumi**	**1.63**	**304**	P	Pn	20 33 57.9	-1.1
DBJI	**Dramaga**	**1.79**	**320**	P	Pn	20 34 01.7	+0.5
CBJI	**Citeko**	**1.84**	**325**	P	Pn	20 33 58.8	-2.9
BJII	**Banjamegara**	**1.88**	**72**	P	Pn	20 34 01.1	-1.1
SBJI	**Serang**	**2.53**	**315**	P	Pn	20 34 12.2	+1.2
XMIS	**Christmas Isla**	**3.37**	**221**	⇓ *i* P	Pn	20 34 17.5	-4.9
XMIS				*e*S	Sn	20 34 50.1	-11
SJI	**Sawahan**	**3.82**	**87**	P	Pn	20 34 28.6	+0.1
KRKI	**Karangkates**	**4.50**	**93**	P	Pn	20 34 38.4	+0.6
TPI	**Tanjungpandan**	**5.15**	**357**	P	Pn	20 34 50.5	+3.8
	72nm,0.8s,810nm0.3nm						
KMMI	**Kalianget**	**6.07**	**82**	P	Pn	20 35 07.5	+8.4
PBKI	**Pangkalan Bun**	**6.40**	**36**	P	Pn	20 35 06.5	+2.8
	296nm,0.9s,2μm0.7nm						
KSI	**Kapahiang**	**6.79**	**308**	P	Pn	20 35 10.6	+1.5
	139nm,0.7s,2μm0.6nm						
KHKI	**Kahang-Kahang**	**7.63**	**94**	P	Pn	20 35 25.5	+5.0
BBKI	**Banjar Baru**	**8.20**	**58**	P	Pn	20 35 34.3	+6.0
	51nm,0.9s,0.2nm						
STKI	**Sintang**	**8.71**	**24**	P	Pn	20 35 39.2	+4.0
	30nm,0.3s,4μm0.3nm						
COCO	**West Island**	**11.70**	**248**	*e*Pn	Pn	20 36 15.3	-0.7
COCO				*e*Sn	Sn	20 38 14.5	-10
KAPI	**Kappang**	**12.11**	**77**	Pn	Pn	20 36 21.3	-0.4
	0.6nm,0.3s,baz=258,slow=11,SNR=9.2						
KAPI				LR	LR	20 41 22.3	
	comp=Z,208nm,21.9s,baz=265,slow=40						
BATI	**Baumata**	**15.71**	**99**	Pn	Pn	20 37 06.0	-2.8
	3.2nm,0.3s,baz=299,slow=5.1,SNR=6.7						
BATI				LR	LR	20 45 16.9	
	comp=Z,117nm,20.6s,baz=282,slow=45						
MBWA	**Marble Bar**	**17.41**	**140**	*e*Pn	Pn	20 37 25.0	-4.8
	35nm,1.3s						
MBWA				*e*Sn	Sn	20 40 20.2	-23
KAKA	**Kakadu**	**24.58**	**103**	*e*P	Px	20 38 33.9	
	11nm,0.5s						
NWAO	**Narrogin (SRO)**	**26.33**	**162**	LR	LR	20 47 59.0	
	comp=Z,166nm,20.1s,baz=208,slow=33						
CMAR	**Chiang Mai Arr**	**27.68**	**341**	P	P	20 39 12.3	-0.4
	0.5nm,0.5s,mb3.4,baz=180,slow=8.7,SNR=6.1						
CMAR				PcP	PcP	20 42 30.4	+2.2
	1.7nm,0.6s,baz=206,slow=3.2,SNR=12						
CMAR				LR	LR	20 49 50.0	
	comp=Z,73nm,21.9s,baz=150,slow=36						
CMAR	**Chiang Mai Arr**	**27.68**	**341**	P	P	20 39 12.4	-0.3
CMAR						20 42 30.4	
CHTO	**Chiang Mai**	**28.01**	**342**	*e*P	P	20 39 14.6	-1.1
	2.9nm,1.0s,mb3.8						
CHTO	**Chiang Mai**	**28.01**	**342**	*e*P	P	20 39 14.6	-1.1
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
WRA	**Warramunga Arr**	**28.23**	**118**	P	P	20 39 18.0	+0.2
	comp=Z,3.4nm,0.4s,mb4.2,baz=287,slow=12,SNR=42						
WRAB	**Tennant Creek**	**28.24**	**118**	*e*P	P	20 39 18.0	+0.2
	comp=Z,17nm,1.2s,mb4.5						
WRAB	**Tennant Creek**	**28.24**	**118**	*e*P	P	20 39 18.0	+0.2
WRAB				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
WB2	**Warramunga Arr**	**28.25**	**118**	*e*P	P	20 39 17.8	-0.1
ASAR	**Alice Springs**	**29.41**	**125**	P	P	20 39 28.4	+0.3
	comp=Z,1.2nm,0.6s,mb3.7,baz=300,slow=8.3,SNR=19						
ASAR				PcP	PcP	20 42 33.8	+1.2
	comp=Z,0.9nm,0.5s,baz=298,slow=2.1,SNR=6.9						
CTAO	**Charters Tower**	**39.01**	**112**	*e*P	P	20 40 48.3	-2.8
	comp=Z,9.1nm,1.0s,mb4.6						
CTAO	**Charters Tower**	**39.01**	**112**	*e*P	P	20 40 48.3	-2.8
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**39.34**	**132**	⇑ *i* P	P	20 40 54.6	+0.8
	comp=Z,9.0nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**39.34**	**132**	P	P	20 40 54.8	+1.0
	comp=Z,12nm,0.5s,mb5.0,baz=308,slow=7.7,SNR=63						
ODAN	**Odare**	**39.91**	**331**	*e*P	P	20 40 58.6	+0.2
	comp=Z,4.2nm,0.5s,mb4.5						
TAPN	**Taplejung**	**40.17**	**332**	*e*P	P	20 41 00.1	-0.5
	comp=Z,4.2nm,0.5s,mb4.5						
LSA	**Lhasa**	**40.75**	**337**	P	P	20 41 03.7	-1.6
	comp=Z,1.9nm,0.5s,mb4.2						
LSA	**Lhasa**	**40.75**	**337**	P	P	20 41 03.7	-1.6
LSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
JIRN	**Jiri**	**41.16**	**330**	*e*P	P	20 41 08.2	-0.6
	comp=Z,6.3nm,0.5s,mb4.7						
GUN	**Gumba**	**41.52**	**330**	*e*P	P	20 41 12.0	+0.3
GKN	**Gorkha**	**42.22**	**329**	*e*P	P	20 41 17.8	+0.4
	comp=Z,4.0nm,0.3s,mb4.6						
KOLN	**Koldanda**	**42.58**	**327**	*e*P	P	20 41 20.4	0.0
	comp=Z,5.6nm,0.4s,mb4.6						
PYUN	**Piuthan**	**43.17**	**327**	*e*P	P	20 41 25.5	+0.4
	comp=Z,5.8nm,0.3s,mb4.7						
MJAR	**Matsushiro Arr**	**52.59**	**31**	LR	LR	21 06 20.1	
	comp=Z,56nm,21.2s,baz=200,slow=38						
SONM	**Songino Array**	**55.54**	**359**	P	P	20 42 59.5	+0.5
	comp=Z,1.7nm,0.8s,mb4.2,baz=167,slow=8.5,SNR=7.9						
SONM				PcP	PcP	20 43 58.9	+0.9
	comp=Z,3.9nm,0.6s,baz=176,slow=3.5,SNR=12						
ULN	**Ulaanbaatar**	**55.56**	**359**	*e*P	P	20 42 58.8	-0.3
	comp=Z,1.3nm,0.6s,mb4.1						
ULN				*e*PcP	PcP	20 43 58.4	+0.4
ULN	**Ulaanbaatar**	**55.56**	**359**	*e*P	P	20 42 58.8	-0.3
ULN				*e*		20 43 58.4	
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
KBL	**Kabul**	**56.00**	**321**	*e*P	P	20 43 01.6	-1.0
	comp=Z,2.7nm,0.6s,mb4.5						
KBL	**Kabul**	**56.00**	**321**	*e*P	P	20 43 01.6	-1.0
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
TKM2	**Tokmak 2**	**58.54**	**333**	*e*P	P	20 43 20.1	-0.2
	comp=Z,5.6nm,0.6s,mb4.8						
TKM2	**Tokmak 2**	**58.54**	**333**	*e*P	P	20 43 20.1	-0.2
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
MK31	**Makanchi Array**	**59.07**	**340**	*e*P	P	20 43 21.0	-2.9
MKAR	**Makanchi Array**	**59.07**	**340**	P	P	20 43 22.9	-0.9
	comp=Z,3.4nm,0.7s,mb4.5,baz=151,slow=7.3,SNR=23

comp=Z,2.6nm,0.6s,mb4.2
TIXI Tiksi 80.62 7 *e*P **P 20 45 33.0 -2.6**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
VRHR Novokhopersk 81.68 324 *e*P **P 20 45 41.7 +0.1**
VRHR pmax pmax
comp=N,8.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRHR pmax pmax
comp=E,9.0nm,0.8s
QSPA South Pole Qui 82.06 180 P **P 20 45 44.9 +1.8**
comp=E,2.2nm,0.6s,mb4.2,baz=254,slow=0.4,SNR=3.9
QSPA South Pole Qui 82.06 180 *e*P **P 20 45 44.4 +1.3**
comp=E,6.7nm,1.1s,mb4.4
BRTR Keskin Array B 83.12 312 P **P 20 45 50.0 +0.6**
comp=E,1.7nm,0.8s,mb3.9,baz=146,slow=6.3,SNR=6.2
VSR Storozhevoye 83.15 324 *e*P **P 20 45 48.8 -0.5**
VSR pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,6.0nm,0.8s
OBN Obninsk 86.00 327 ⇓ *i*P **P 20 46 04.1 +0.6**
OBN *i* S 20 56 18.5 -12
OBN pmax pmax
comp=Z,60nm,1.9s,mb5.2
BILL Bilibino 86.08 19 *e*P **P 20 46 06.2 +2.5**
BILL Bilibino 86.08 19 ⇓ *e*P **P 20 46 06.5 +2.9**
BILL *e*S S 20 56 25.5 -5.8
BILL pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ARG Arkhangelos 86.48 307 P **P 20 46 10.5 +4.1**
ARG Arkhangelos 86.48 307 P **P 20 46 11.3 +4.9**
KLMR Klimovskoe 86.62 333 *e*P **P 20 46 06.6 +0.2**
KLMR pmax pmax
comp=Z,23nm,1.4s,mb4.9
TSUM Tsumeb 87.74 251 *e*P **P 20 46 10.9 -1.9**
comp=Z,6.5nm,1.1s,mb4.6
MLR Muntele Rosu 90.01 316 P **P 20 46 23.9 +1.0**
comp=Z,1.2nm,0.6s,mb4.2,baz=101,slow=5.2,SNR=4.1
BUR08 Bucovina Ar. S 90.92 318 *e*P **P 20 46 27.9 +0.8**
ARCES ARCESS Array B 94.72 340 P **P 20 46 44.2 +0.1**
comp=Z,3.2nm,1.0s,mb4.7,baz=112,slow=4.3,SNR=6.1
TOA0 Torodi Ar. Sit 107.49 281 *e*PKPdf PKiKP 20 51 48.0 -2.7
YKA Yellowknife Ar 117.42 21 PKP PKPdf 20 52 08.7 +0.6
comp=Z,1.2nm,0.6s,baz=339,slow=1.9,SNR=6.5
YKA Yellowknife Ar 117.42 21 PKIKP PKPdf 20 52 08.7 +0.5
PDAR Pinedale Array 132.20 37 PKP PKPdf 20 52 39.2 +2.2
comp=Z,0.6nm,0.7s,baz=164,slow=0.7,SNR=5.7
TXAR Lajitas Array 143.48 50 PKP PKPdf 20 52 58.0 -0.3
comp=Z,0.8nm,0.7s,baz=234,slow=0.4,SNR=6.7
CCM Cathedral Cave 145.37 27 *e*PKPdf PKPdf 20 53 01.3 +0.1
JCT Junction City 145.72 45 *e*PKPdf PKPdf 20 53 04.0 +1.9
OLIL Olney 146.11 23 *e*PKPdf PKPdf 20 53 03.8 +1.3
MIAR Mount Ida 146.96 34 *e*PKPdf PKPbc 20 53 06.6 +0.5
WCI Wyandotte Cave 147.22 21 *e*PKPdf PKPbc 20 53 06.7 0.0
MCWV Mont Chateau 147.66 11 *e*PKPbc PKPbc 20 53 08.8 +1.0
WVT Waverly 148.47 25 *e*PKPbc PKPbc 20 53 10.9 +0.8
SWET Sewanee 150.02 23 *e*PKPbc PKPbc 20 53 14.2 +0.2
CPCT Cooper Cave 150.34 21 *e*PKPbc PKPbc 20 53 14.7 -0.1
TKL Tuckaleechee C 150.41 20 *e*PKPbc PKPbc 20 53 15.6 +0.7

*ISCJB **06** 20:45:49.6±0.7, 3695N±003×29.18E±003, h1km±7km, Error ellipse: s-maj=5.6km s-min=4.2km az=161.5*
*DDA **06** 20:45:50.0, 3697N×2922E, h6km±5km, Md3.6*
*CSEM **06** 20:45:49.2±0.1, 3694N×2915E, h5km, MD3.4, Error ellipse: s-maj=2.0km s-min=1.7km az=18.0*
*ISK **06** 20:45:49.2, 3694N×2916E, h5km, MD3.4, ML3.4*
ISC 06 20:45:50.4±0.6, 3694N±003×2916E±003, h5km±5km, n32, σ0§95/40, 3C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.31**	**192**	PG		**Pg**		**20 45 55.6**	**-0.8**
FETY				*e*SG		**Sg**		**20 46 01.1**	**+0.6**
GOLH	**Golhisar**	**0.43**	**47**	⇑ *i*P		**Pg**		**20 45 57.3**	**-1.5**
GOLH				*i* S		**Sg**		**20 46 03.6**	**-0.9**
TURN	**Turunc**	**0.45**	**262**	⇑ *i*P		**Pg**		**20 46 03.8**	**+4.6**
TURN				*i* S		**Sg**		**20 46 16.8**	**+12**
ELL	**Elmali**	**0.63**	**108**	*e*PG		**Pg**		**20 46 01.4**	**-1.1**
ELL				*e*SG		**Sg**		**20 46 11.0**	**+0.4**
DENT	**Denizli**	**0.82**	**353**	*e*PG		**Pg**		**20 46 05.4**	**-0.7**
KSL	**Kastellorizon**	**0.86**	**157**	P		**Pg**		**20 46 07.5**	**+0.6**
MLSB	**Milas**	**1.16**	**288**	*e*PN		**Pn**		**20 46 12.7**	**-0.7**
MLSB				*e*SN		**Sn**		**20 46 28.6**	**-1.0**
ANTB	**Antalya**	**1.20**	**91**	*e*PN		**Pn**		**20 46 13.2**	**-0.6**
AYDN	**Tasoluk**	**1.25**	**305**	*i* P		**Pg**		**20 46 14.7**	**+0.3**
AYDN				*i* S		**Sg**		**20 46 31.9**	**+1.3**
BCK	**Bucak**	**1.25**	**65**	*e*PN		**Pn**		**20 46 13.8**	**-0.8**
BDRM	**Kayabasi**	**1.38**	**276**	*e*P		**Pn**		**20 46 16.8**	**+0.5**
BDRM				*e*S		**Sg**		**20 46 36.8**	**+2.0**
KHL	**Karahalli**	**1.41**	**12**	*e*PN		**Pn**		**20 46 16.5**	**-0.3**
TKTP	**Tekketepe**	**1.43**	**40**	⇑ *i*P		**Pn**		**20 46 16.9**	**-0.1**
TKTP				*i* S		**Sb**		**20 46 38.6**	**+2.5**
BODT	**Bodrum**	**1.49**	**275**	*e*PN		**Pn**		**20 46 17.7**	**-0.1**
KULA	**Kula-Manisa**	**1.62**	**346**	*e*PN		**Pn**		**20 46 19.2**	**-0.5**
SHUT	**Suhut-Afyon**	**1.95**	**34**	*e*PN		**Pn**		**20 46 24.1**	**-0.1**
SMG	**Samos**	**2.00**	**293**	P		**Pn**		**20 46 26.0**	**+1.1**
IZM	**Izmir**	**2.09**	**315**	*e*PN		**Pn**		**20 46 25.7**	**-0.4**
KARP	**Karpathos**	**2.13**	**230**	P		**Pn**		**20 46 24.0**	**-2.7**
AKS	**Akhisar**	**2.21**	**332**	*e*PN		**Pn**		**20 46 26.9**	**-0.8**
BLCB	**Balcova**	**2.22**	**311**	*e*PN		**Pn**		**20 46 27.2**	**-0.6**
ALT	**Altintas**	**2.24**	**19**	*e*PN		**Pn**		**20 46 27.6**	**-0.6**
HDMB	**Hadim**	**2.66**	**88**	*e*PN		**Pn**		**20 46 34.5**	**+0.5**
DST	**Dursunbey**	**2.69**	**351**	*e*PN		**Pn**		**20 46 34.0**	**-0.4**
KONT	**Konya--Tatoy**	**2.74**	**68**	*e*PN		**Pn**		**20 46 35.2**	**+0.2**
LADK	**Ladik-KONYA**	**2.84**	**63**	*e*PN		**Pn**		**20 46 37.2**	**+0.8**
KIZT	**Kizilcal**	**2.89**	**47**	*e*PN		**Pn**		**20 46 37.5**	**+0.4**
NPS	**Neapolis**	**3.33**	**241**	P		**Pn**		**20 46 42.0**	**-1.1**
YLV	**Yalova**	**3.62**	**3**	*e*PN		**Pn**		**20 46 48.2**	**+1.0**
IKL	**Isikli**	**3.71**	**100**	*e*PN		**Pn**		**20 46 49.3**	**+1.0**
MERS	**Mersin**	**4.30**	**89**	*e*PN		**Pn**		**20 46 57.9**	**+1.5**
KAMT	**Kaman**	**4.33**	**55**	*e*PN		**Pn**		**20 46 57.7**	**+0.8**

*IDC **06** 20:46:03.8±0.7, 257N×12690E, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.2/16, mbtmp4.2/9, MS3.5/2, Ms1 3.6/2, ms1mx2.6/34, Error ellipse: s-maj=56.7km s-min=14.8km az=68.0*
*ISCJB **06** 20:46:06.8±0.5, 261N±009×1270E±02, h33km, mb4.5/23, MS3.4/2, Error ellipse: s-maj=24.4km s-min=8.4km az=152.2*
*NEIC **06** 20:46:10.4±4.9, 252N×12687E, h52km±47km, mb4.7/16, Error ellipse: s-maj=24.3km s-min=6.8km az=55.0*
ISC 06 20:46:08.8±0.5, 255N±010×1269E±02, h35km, n34, σ0§68/31, mb4.5/23, MS3.4/2, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 7.5nm,0.7s	**16.12**	**160**	*e*P		Px		20 49 46.7	
KAKA	**Kakadu** 14nm,0.7s	**16.12**	**160**	*e*P		Px		20 49 46.9	
WRAB	**Tennant Creek** 9.0nm,0.6s,mb4.4	**23.50**	**162**	*e*P		**P**		**20 51 15.1**	**-0.6**
WRA	**Warramunga Arr** 8.0nm,0.6s,mb4.3,baz=343,slow=11,SNR=11	**23.50**	**162**	P		**P**		**20 51 16.0**	**+0.1**
WB2	**Warramunga Arr**	**23.51**	**162**	*e*P		**P**		**20 51 15.6**	**-0.3**
WB2	**Warramunga Arr**	**23.51**	**162**	*e*P		**P**		**20 51 15.5**	**-0.4**
ASAR	**Alice Springs** 1.6nm,0.6s,mb3.7,baz=334,slow=5.9,SNR=14	**26.93**	**166**	P		**P**		**20 51 47.4**	**+0.5**
ASAR				PcP		PcP		20 55 10.0	+1.4
CMAR	**Chiang Mai Arr** 1.1nm,0.7s,mb3.8,baz=125,slow=7.5,SNR=7.4	**31.66**	**302**	P		**P**		**20 52 29.4**	**+0.4**
CMAR				LR		LR		21 04 29.5	
CHTO	**Chiang Mai** comp=Z,43nm,19.2s,MS3.1,baz=110,slow=35	**31.82**	**302**	*e*P		**P**		**20 52 27.8**	**-2.7**
KSRS	**Korea Array** 1.3nm,0.7s,mb4.0,baz=176,slow=9.4,SNR=4.4	**34.74**	**1**	P		**P**		**20 52 56.1**	**+0.4**
STKA	**Stephens Creek** 5.0nm,0.7s,mb4.5	**36.96**	**159**	*e*P		**P**		**20 53 15.5**	**+0.7**
STKA	**Stephens Creek** 6.2nm,0.7s,mb4.6,baz=345,slow=6.0,SNR=12	**36.96**	**159**	P		**P**		**20 53 15.6**	**+0.8**
STKA				PcP		PcP		20 55 34.9	-0.7
	2.8nm,0.7s,baz=8.2,slow=8.7,SNR=5.6								
STKA				LR		LR		21 08 35.1	
	comp=Z,128nm,18.5s,MS3.7,baz=72,slow=36								
STKA	**Stephens Creek**	**36.96**	**159**	*e*P		**P**		**20 53 15.3**	**+0.6**
	8.2nm,0.8s,mb4.6								
STKA				PcP		PcP		20 55 34.9	-0.7
STKA				LR		LR		21 08 35.1	
LSA	**Lhasa** 4.3nm,0.7s,mb4.3	**43.38**	**312**	*e*P		**P**		**20 54 08.9**	**+0.8**
TAPN	**Taplejung**	**44.88**	**307**	*e*P		**P**		**20 54 20.2**	**0.0**
ODAN	**Odare** 8.5nm,0.6s,mb4.7	**44.93**	**306**	*e*P		**P**		**20 54 20.8**	**+0.3**
RAMN	**Ramite** 12nm,0.7s,mb4.9	**45.60**	**306**	*e*P		**P**		**20 54 26.5**	**+0.6**
JIRN	**Jiri** 9.9nm,0.7s,mb4.8	**46.23**	**307**	*e*P		**P**		**20 54 31.2**	**+0.3**
GUN	**Gumba** 15nm,0.7s,mb5.0	**46.59**	**307**	*e*P		**P**		**20 54 33.8**	**+0.2**
GKN	**Gorkha**	**47.62**	**306**	*e*P		**P**		**20 54 41.1**	**-0.6**
ULN	**Ulaanbaatar** 4.8nm,1.1s,mb4.4	**48.30**	**342**	*e*P		**P**		**20 54 47.3**	**+0.8**
KOLN	**Koldanda** 10nm,0.6s,mb5.0	**48.37**	**306**	*e*P		**P**		**20 54 47.8**	**+0.3**
DANN	**Dangsing** 16nm,0.6s,mb5.2	**48.47**	**306**	*e*P		**P**		**20 54 48.5**	**+0.2**
SONM	**Songino Array** 1.1nm,0.7s,mb4.0,baz=161,slow=9.4,SNR=4.9	**48.47**	**342**	P		**P**		**20 54 49.2**	**+1.3**
SONM				PcP		PcP		20 56 14.6	+0.9
	0.4nm,0.5s,baz=176,slow=3.8,SNR=4.1								
PYUN	**Piuthan** 13nm,0.8s,mb5.0	**49.00**	**306**	*e*P		**P**		**20 54 52.5**	**+0.2**
MK31	**Makanchi Array**	**58.64**	**326**	*e*P		**P**		**20 56 02.2**	**-0.3**
MKAR	**Makanchi Array** 2.6nm,0.5s,mb4.5,baz=120,slow=8.6,SNR=33	**58.64**	**326**	P		**P**		**20 56 02.5**	**+0.1**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,mb4.1,baz=116,slow=5.4,SNR=4.8	**61.73**	**333**	P		**P**		**20 56 22.3**	**-1.2**
KURK	**Kurchatov** 4.3nm,0.6s,mb4.8	**62.84**	**328**	*e*P		**P**		**20 56 30.5**	**-0.5**
BRVK	**Borovoye** 6.9nm,0.9s,mb4.7	**68.49**	**327**	*e*P		**P**		**20 57 06.8**	**-0.6**
TIXI	**Tiksi** 3.9nm,0.7s,mb4.5	**69.01**	**1**	*e*P		**P**		**20 57 09.7**	**-0.7**
ARU	**Arti** 6.1nm,0.8s,mb4.6	**76.04**	**328**	*e*P		**P**		**20 57 52.1**	**-0.3**
ARCES	**ARCESS Array B** 2.4nm,0.7s,mb4.7,baz=79,slow=6.4,SNR=7.7	**91.62**	**340**	P		**P**		**20 59 11.5**	**-0.4**
TORD	**Torodi Ar. Bea** 0.6nm,0.9s,baz=49,slow=0.9,SNR=3.5	**123.48**	**287**	PKP		PKPdf		21 05 03.5	+0.1

*ISCJB **06** 21:13:03.2±1.1, 1083S±005×11708E±005, h49km±10km, mb4.0/12, Error ellipse: s-maj=10.3km s-min=5.9km az=36.9*
*IDC **06** 21:13:07.8±3.9, 1083S×11718E, h70km±38km, mb3.5/7, mb1 3.7/10, mb1mx3.6/19, mbtmp3.6/10, ML4.0/3, MS2.7/1, Ms1 2.7/1, ms1mx1.8/25, Error ellipse: s-maj=31.6km s-min=14.5km az=74.0*
*NEIC **06** 21:13:08.4±1.3, 1084S×11714E, h79km±12km, mb4.1/9, Error ellipse: s-maj=10.9km s-min=4.9km az=68.0*
ISC 06 21:13:05.1±0.9, 1085S±005×11704E±005, h46km±9km, n38, σ0§85/44, mb4.0/12, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DNP	**Denpasar** 6µm,0.4s	**2.81**	**320**	P		**Sn**		**21 14 19.5**	**-0.8**
KHKI	**Kahang-Kahang**	**2.85**	**330**	P		**Pn**		**21 13 52.7**	**+4.7**
NBBI	**Negara** 1µm,0.8s	**3.43**	**316**	P		**Sn**		**21 14 35.1**	**-0.4**
KRKI	**Karangkates**	**5.26**	**300**	P		**Pn**		**21 14 20.5**	**-0.7**
KAPI	**Kappang** 4.5nm,0.3s,baz=219,slow=6.7,SNR=29	**6.39**	**25**	P		**Pn**		**21 14 39.2**	**+2.5**
KAPI				S		**Sn**		**21 15 47.8**	**-0.5**
	6.8nm,0.3s,baz=163,slow=22,SNR=9.4								
KAPI				LR		LR		21 17 48.7	
	comp=Z,55nm,18.2s,baz=193,slow=44								
BATI	**Baumata** 8.4nm,0.3s,baz=270,slow=12,SNR=8.7	**6.54**	**85**	P		**Pn**		**21 14 40.7**	**+1.9**
BATI				S		**Sn**		**21 15 52.0**	**-0.2**
	17nm,0.3s,baz=16,slow=21,SNR=17								
MBWA	**Marble Bar**	**10.57**	**166**	*e*Pn		**Pn**		**21 15 26.2**	**-7.8**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=297,slow=12,SNR=6.3	**18.95**	**121**	P		**Pn**		**21 17 22.2**	**-1.3**
WRA				S		**S**		**21 20 39.9**	**-16**
	0.5nm,0.3s,baz=285,slow=25,SNR=5.5								
WRAB	**Tennant Creek** 1.9nm,0.5s	**18.96**	**121**	*e*P		**Pn**		**21 17 22.5**	**-1.1**
WB2	**Warramunga Arr**	**18.96**	**121**	*e*P		**Pn**		**21 17 23.1**	**-0.5**
WB2				*e*S		**S**		**21 20 39.2**	**-16**
DAV	**Davao City (W)**	**19.73**	**26**	P		**Pn**		**21 17 31.4**	**-1.3**
ASAR	**Alice Springs** 3.2nm,0.9s,baz=300,slow=9.4,SNR=18	**20.50**	**131**	P		**P**		**21 17 40.5**	**+1.1**
ASAR				S		**S**		**21 21 18.4**	**-8.0**
	1.8nm,0.7s,baz=302,slow=22,SNR=7.7								
KLBR	**Kellerberrin** 14nm,0.6s	**20.65**	**178**	*e*P		**P**		**21 17 40.8**	**-0.1**
KLBR				*e*S		**S**		**21 21 08.3**	**-21**
MUN	**Mundaring**	**21.04**	**182**	*e*P		**P**		**21 17 40.3**	**-4.8**
MUN				*e*S		**S**		**21 21 19.0**	**-18**
NWAO	**Narrogin (SRO)** 7.2nm,0.3s,mb4.5,baz=10,slow=9.1,SNR=13	**21.97**	**180**	P		**P**		**21 17 55.1**	**+0.1**
NWAO	**Narrogin (SRO)** 10nm,0.6s,mb4.4	**21.97**	**180**	*e*P		**P**		**21 17 56.5**	**+1.4**
CTAO	**Charters Tower**	**29.57**	**112**	P		**P**		**21 19 05.5**	**-0.3**
STKA	**Stephens Creek**	**30.85**	**136**	*e*P		**P**		**21 19 15.8**	**-1.1**
CMAR	**Chiang Mai Arr** 0.3nm,0.9s,mb3.2,baz=156,slow=6.2,SNR=2.9	**34.16**	**328**	P		**P**		**21 19 47.7**	**+1.7**
CHTO	**Chiang Mai**	**34.46**	**329**	P		**P**		**21 19 48.6**	**0.0**
NACB	**Ninganchiao** 51nm,0.6s	**35.09**	**7**	*e*P		**P**		**21 19 53.8**	**-0.2**
MAJO	**Matsushiro**	**51.18**	**22**	P		**P**		**21 22 03.2**	**-0.5**
ULN	**Ulaanbaatar** 0.6nm,0.7s,mb3.7	**59.12**	**352**	*e*P		**P**		**21 23 01.0**	**+0.3**
SONM	**Songino Array** 0.4nm,0.5s,mb3.7,baz=158,slow=8.7,SNR=2.1	**59.19**	**352**	P		**P**		**21 23 01.9**	**+0.7**
TLY	**Talaya**	**63.34**	**351**	P		**P**		**21 23 28.4**	**-0.8**
KBL	**Kabul** 1.8nm,0.5s,mb4.4	**64.08**	**317**	*e*P		**P**		**21 23 34.1**	**-0.4**
MKAR	**Makanchi Array** 0.4nm,0.5s,mb3.8,baz=148,slow=7.1,SNR=11	**65.25**	**334**	P		**P**		**21 23 42.4**	**+0.6**
MK31	**Makanchi Array**	**65.25**	**334**	*e*P		**P**		**21 23 42.0**	**+0.1**
TKM2	**Tokmak 2** 1.9nm,1.4s,mb3.9	**65.54**	**328**	*e*P		**P**		**21 23 43.7**	**-0.1**
EKS2	**Erkin-Say** 1.8nm,0.7s,mb4.2	**66.33**	**326**	*e*P		**P**		**21 23 49.4**	**+0.5**
KURK	**Kurchatov** baz=143,slow=6.4	**69.82**	**335**	P		**P**		**21 24 11.2**	**+0.6**
KURK	**Kurchatov** 3.9nm,1.4s,mb4.1	**69.82**	**335**	*e*P		**P**		**21 24 10.8**	**+0.2**
ZALV	**Zalesovo Beam** 0.6nm,0.5s,mb3.8,baz=163,slow=4.4,SNR=4.0	**70.10**	**340**	P		**P**		**21 24 11.9**	**-0.3**
AKTK	**Aktyubinsk**	**79.66**	**326**	P		**P**		**21 25 07.3**	**-0.3**
AKTO	**Aktyubinsk** 1.6nm,0.4s,mb3.9,baz=90,slow=3.0,SNR=2.9	**79.66**	**326**	P		**P**		**21 25 07.3**	**-0.3**
ARU	**Arti**	**82.54**	**331**	*e*P		**P**		**21 25 22.6**	**-0.1**
LSZ	**Lusaka** 1.8nm,0.7s,mb4.4	**86.11**	**255**	*e*P		**P**		**21 25 42.9**	**+1.1**
DBIC	**Dimbokro**	**122.49**	**271**	*e*PKPdf		PKPdf		21 31 55.4	-1.1

KRSC 06 21:15:12.8±0.0, 5335N×16055E, h46km±35km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.41**	**232**	*e*P		Pn		21 15 23.1	+0.5
SPN				*e*S		Sn		21 15 29.6	0.0
NLC	**Nalytchevo**	**0.75**	**257**	*e*P		Pn		21 15 27.7	+0.8
NLC				*e*S		Sn		21 15 38.4	+1.2
KII	**Karymskiy**	**0.95**	**317**	*e*P		Pn		21 15 30.4	+0.7
KII				*e*S		Sn		21 15 43.2	+1.1
AVH	**Avacha**	**1.09**	**266**	*e*P		Pn		21 15 33.3	+1.7
AVH				*e*S		Sn		21 15 48.3	+2.8
MKZ	**Mys Kozlova**	**1.40**	**30**	*e*P		Pn		21 15 35.6	-0.2
MKZ				*e*S		Sn		21 15 52.0	-1.0
RUS	**Russkaya**	**1.54**	**234**	*e*P		Pn		21 15 38.2	+0.5
RUS				*e*S		Sn		21 15 56.9	+0.4
GNL	**Ganaly**	**1.59**	**284**	*e*P		Pn		21 15 40.2	+1.7
GNL				*e*S		Sn		21 16 00.7	+2.8
GRL	**Gorelyy**	**1.70**	**243**	*e*P		Pn		21 15 41.3	+1.4
GRL				*e*S		Sn		21 16 02.7	+2.3
TUMR	**Tumrok**	**1.95**	**353**	*e*P		Pn		21 15 45.1	+1.7
TUMR				*e*S		Sn		21 16 09.6	+3.0
KMNR	**Kamenistaya**	**2.42**	**356**	*e*P		Pn		21 15 50.5	+0.7
KMNR				*e*S		Sn		21 16 18.7	+0.6
KIRR	**Kirishev**	**2.61**	**357**	*e*S		Sn		21 16 25.7	+2.9
KBTR	**Krutoberegovo**	**3.15**	**24**	*e*P		Pn		21 16 01.4	+1.6
KBTR				*e*S		Sn		21 16 37.5	+1.4
SRKR	**Sorokina**	**3.33**	**6**	*e*P		Pn		21 16 05.7	+3.4
SRKR				*e*S		Sn		21 16 44.3	+3.8

*ISCJB **06** 21:20:11.5±0.4, 6285N±002×13562W±006, h10km, mb4.3/4, Error ellipse: s-maj=4.4km s-min=3.0km az=154.5*
*IDC **06** 21:20:12.8±1.5, 6257N×13624W, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.6/24, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=20.3km s-min=18.0km az=19.0*
*NEIC **06** 21:20:13.0, 6291N×13546W, h15km, ML4.1(AEIC), MW3.7(PGC), After PGC.*
*PGC **06** 21:20:13.8, 6291N×13546W, h15km, ML4.3, Mw3.7, 234km Ese of Dawson, Yt Southern Yukon Territory, Canada*
*BJI **06** 21:20:15.0, 6290N×13550W, h15km, mB4.8, mb4.6, Ms4.3, Msz4.3*
ISC 06 21:20:12.9±0.4, 6287N±002×13557W±006, h10km, n33, σ1§37/70, mb4.3/4, 7D, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAWY	**Dawson**	**2.09**	**307**	P		**Pn**		**21 20 47.8**	**-0.3**
DAWY				S		**Sn**		**21 21 16.6**	**+2.5**
DAWY	**Dawson**	**2.09**	**307**	⇑ Pn		**Pn**		**21 20 47.8**	**-0.2**
DAWY				⇓ Sg		**Sg**		**21 21 19.5**	**-0.6**
WHY	**Whitehorse**	**2.24**	**171**	P		**Pn**		**21 20 50.4**	**+0.3**
WHY				S		**Sn**		**21 21 23.1**	**+5.4**
WHY	**Whitehorse**	**2.24**	**171**	⇓ Pn		**Pn**		**21 20 50.6**	**+0.6**
WHY				⇓ Pg		**Pg**		**21 20 54.6**	**-1.2**
WHY				⇓ Sg		**Sg**		**21 21 24.3**	**-0.5**
HYT	**Haines Junctio**	**2.25**	**205**	*e*Pn		**Pn**		**21 20 51.1**	**+1.1**
HYT				*e*Pg		**Pg**		**21 20 55.9**	**0.0**
HYT				*e*Sn		**Sn**		**21 21 18.1**	**+0.4**
HYT				*e*Sg		**Sg**		**21 21 24.8**	**-0.2**
HYT	**Haines Junctio**	**2.25**	**205**	⇑ Pn		**Pn**		**21 20 51.6**	**+1.6**
HYT				⇑ Pg		**Pg**		**21 20 55.9**	**-0.1**
HYT				⇓ Sg		**Sg**		**21 21 25.3**	**+0.3**
BCA3	**Beaver Creek A**	**2.84**	**277**	P		**Pn**		**21 20 59.2**	**+0.9**
EGAK	**Eagle**	**3.13**	**310**	P		**Pn**		**21 21 02.0**	**-0.3**
SKAG	**Skagway**	**3.42**	**178**	*e*Pn		**Pn**		**21 21 06.7**	**+0.5**
SKAG				*e*Pg		**Pg**		**21 21 18.0**	**-0.4**
SKAG				*e*Sn		**Sn**		**21 21 47.1**	**+0.3**
SKAG				*e*Sg		**Sg**		**21 22 00.7**	**-2.0**
PLBC	**Pleasant Camp**	**3.44**	**187**	⇓ Pn		**Pn**		**21 21 07.8**	**+1.3**
PLBC				⇑ Sg		**Sg**		**21 22 01.3**	**-2.1**
PNL	**Peninsula**	**3.70**	**212**	*e*Pn		**Pn**		**21 21 12.9**	**+2.8**
PNL				*e*Pg		**Pg**		**21 21 24.2**	**+0.4**
PNL				*e*Sn		**Sn**		**21 21 51.4**	**-2.3**
PNL				*e*Sg		**Sg**		**21 22 11.9**	**+0.2**
MENT	**Mentasta**	**3.73**	**275**	*e*P		**Pn**		**21 21 11.0**	**+0.6**
DOT	**Dot Lake**	**3.92**	**285**	P		**Pn**		**21 21 14.0**	**+1.0**
PAX	**Paxson**	**4.53**	**276**	P		**Pn**		**21 21 23.3**	**+1.9**
DLBC	**Dease Lake** 1.9nm,0.3s,baz=333,slow=7.3,SNR=14	**5.21**	**146**	Pn		**Pn**		**21 21 30.9**	**+0.1**
DLBC				Pg		**Pg**		**21 21 49.3**	**-3.4**
	20nm,0.3s,baz=355,slow=12,SNR=36								
DLBC				Lg				21 22 55.3	
	36nm,0.3s,baz=113,slow=20,SNR=14								
DLBC	**Dease Lake**	**5.21**	**146**	*e*Pn		**Pn**		**21 21 30.3**	**-0.6**
DLBC				*e*Pg		**Pg**		**21 21 50.2**	**-2.5**
DLBC				*e*Sn		**Sn**		**21 22 32.4**	**+1.4**
DLBC				*e*Sg		**Sg**		**21 22 57.0**	**-3.1**
DLBC	**Dease Lake**	**5.21**	**146**	⇑ Pn		**Pn**		**21 21 30.9**	**0.0**
DLBC				⇓ Sg		**Sg**		**21 22 55.7**	**-4.4**
IL1	**Eielson Array**	**5.36**	**296**	P		**Pn**		**21 21 32.7**	**-0.2**
ILB	**Eielson Array**	**5.36**	**296**	P		**Pn**		**21 21 32.9**	**0.0**
INK	**Inuvik** 610nm,0.6s	**5.53**	**8**	*e*Pn		**Pn**		**21 21 34.8**	**-0.4**
INK				*e*Pg		**Pg**		**21 21 54.6**	**-4.1**
INK				Sn		**Sn**		**21 22 37.5**	**-1.2**
INK				*e*Sg		**Sg**		**21 23 08.4**	**-1.8**
COLA	**College** 20nm,0.6s	**5.79**	**296**	Pn		**Pn**		**21 21 35.8**	**-2.9**
COLA				*e*Pg		**Pg**		**21 22 01.6**	**-2.0**
COLA				*e*Sn		**Sn**		**21 22 47.6**	**+2.6**
COLA				*e*Sg		**Sg**		**21 23 14.7**	**-3.7**
BM3	**Burnt Mountain**	**5.95**	**324**	P		**Pn**		**21 21 40.1**	**-0.8**
MCK	**McKinley**	**6.09**	**284**	*e*Pn		**Pn**		**21 21 44.0**	**+1.1**
MCK				*e*Pg		**Pg**		**21 22 07.8**	**-1.6**
MCK				*e*Sn		**Sn**		**21 22 53.4**	**+1.0**
MCK				*e*Sg		**Sg**		**21 23 27.3**	**-0.8**
TRF	**Thorofare Moun** 12nm,0.7s	**6.69**	**282**	*e*Pn		**Pn**		**21

SNR=6.4

GANJ					S	Sn	21 31 10.8	+1.1
NAX	**Nakhchivan**	**2.80**	**257**	P	**Pn**	**Pn**	**21 30 52.1**	**+1.5**
SNR=11								
ZNJK	**Zanjan**	**3.18**	**185**	*e*Pn	**Pn**	**Pn**	**21 30 56.0**	**+0.2**
DGRG	**David-gareji**	**3.20**	**301**	P	**Pn**	**Pn**	**21 30 57.3**	**+1.2**
DGRG				S	**Sn**	**Sn**	**21 31 38.5**	**+4.3**
GNI	**Garni**	**3.30**	**277**	Pn	**Pn**	**Pn**	**21 30 59.5**	**+2.1**
comp=N,5.1nm,0.3s,baz=326,slow=3.4,SNR=29								
GNI				Sn	**Sn**		**21 31 43.6**	**+7.1**
comp=N,4.4nm,0.3s,baz=332,slow=20,SNR=7.7								
GNI	**Garni**	**3.30**	**277**	⇑P	**Pn**	**Pn**	**21 30 59.5**	**+2.1**
GNI				S	**Sn**	**Sn**	**21 31 43.2**	**+6.8**
GNI				Sn	**Sn**	**Sn**	**21 31 43.6**	**+7.2**
MTA	**Mtatsminda**	**3.70**	**301**	P	**Pn**	**Pn**	**21 31 03.6**	**+0.6**
MTA				S	**Sg**	**Sg**	**21 32 00.4**	**-4.6**
TBLG	**Delisi**	**3.75**	**302**	*e*PN	**Pn**	**Pn**	**21 31 03.4**	**-0.3**
TBLG				*e*S	**Sg**	**Sg**	**21 32 00.7**	**-5.9**
TBLG	**Delisi**	**3.75**	**302**	P	**Pn**	**Pn**	**21 31 03.4**	**-0.3**
TBLG				S	**Sg**	**Sg**	**21 32 00.7**	**-5.9**
CHTH	**Charan**	**4.27**	**156**	*e*Pn	**Pn**	**Pn**	**21 31 11.3**	**+0.6**
GOR	**Gori**	**4.29**	**302**	P	**Pn**	**Pn**	**21 31 04.2**	**-6.9**
GOR				S	**Sn**	**Sn**	**21 32 02.5**	**+1.6**
DAMV	**Damavand**	**4.81**	**150**	*e*Pn	**Pn**	**Pn**	**21 31 18.7**	**+0.4**
DAMV				AML	AML	AML	21 32 18.8	
comp=N,16nm,0.3s								
ONI	**Oni**	**5.01**	**305**	P	**Pn**	**Pn**	**21 31 22.0**	**+1.0**
KIV	**Kislovodsk**	**6.26**	**313**	*e*Pn	**Pn**	**Pn**	**21 31 35.5**	**-2.6**
KIV	**Kislovodsk**	**6.26**	**313**	*e*P	**Pn**	**Pn**	**21 31 35.5**	**-2.6**
AKTK	**Aktyubinsk**	**12.34**	**28**	Pn	**Pn**	**Pn**	**21 32 59.1**	**-2.3**
AKTK	**Aktyubinsk**	**12.34**	**28**	Pn	**Pn**	**Pn**	**21 32 59.1**	**-2.3**
AKTO	**Aktyubinsk**	**12.34**	**28**	Pn	**Pn**	**Pn**	**21 32 59.1**	**-2.3**
comp=N,0.8nm,0.3s,baz=214,slow=11,SNR=12								
KBL	**Kabul**	**16.80**	**102**	Pn	**Pn**	**Pn**	**21 34 03.6**	**+2.5**
KBL	**Kabul**	**16.80**	**102**	P	**Pn**	**Pn**	**21 34 03.6**	**+2.5**
AKASG	**Malin Array Be**	**17.60**	**315**	P	**Pn**	**Pn**	**21 34 08.2**	**-2.8**
comp=N,0.9nm,0.3s,baz=129,slow=11,SNR=4.2								
AML	**Almayashu**	**18.76**	**75**	P	**Pn**	**Pn**	**21 34 24.6**	**-0.6**
AML	**Almayashu**	**18.76**	**75**	P	**Pn**	**Pn**	**21 34 24.6**	**-0.6**
EKS2	**Erkin-Say**	**18.82**	**73**	*e*P	**Pn**	**Pn**	**21 34 25.9**	**0.0**
comp=N,0.6nm,0.4s								
EKS2	**Erkin-Say**	**18.82**	**73**	*e*P	**Pn**	**Pn**	**21 34 25.9**	**0.0**
comp=N,0.6nm,0.4s								
BUR08	**Bucovina Ar. S**	**18.84**	**302**	*e*P	**Pn**	**Pn**	**21 34 24.1**	**-2.0**
UCH	**Uchtor**	**19.36**	**75**	P	**Pn**	**Pn**	**21 34 32.5**	**0.0**
UCH	**Uchtor**	**19.36**	**75**	P	**Pn**	**Pn**	**21 34 32.5**	**0.0**
BRVK	**Borovoye**	**19.64**	**41**	*e*P	**Pn**	**Pn**	**21 34 34.3**	**-1.3**
comp=N,1.9nm,0.4s								
BRVK	**Borovoye**	**19.64**	**41**	*e*P	**Pn**	**Pn**	**21 34 34.3**	**-1.4**
BRVK				pmax	pmax			
comp=Z,2.0nm,0.4s								
BRVK	**Borovoye**	**19.64**	**41**	*e*P	**Pn**	**Pn**	**21 34 34.3**	**-1.4**
comp=Z,1.9nm,0.4s								
TKM2	**Tokmak 2**	**20.16**	**73**	*e*P	**P**	**P**	**21 34 41.1**	**+1.1**
comp=Z,7.0nm,1.9s								
TKM2	**Tokmak 2**	**20.16**	**73**	*e*P	**P**	**P**	**21 34 41.1**	**+1.1**
TKM2				pmax	pmax			
comp=Z,7.0nm,1.9s								
TKM2	**Tokmak 2**	**20.16**	**73**	*e*P	**P**	**P**	**21 34 41.1**	**+1.1**
comp=Z,7.0nm,1.9s								
PSZ	**Piszkesteto**	**22.39**	**301**	*e*P	**P**	**P**	**21 35 03.3**	**-0.6**
comp=Z,2.2nm,0.6s,mb3.8								
PSZ	**Piszkesteto**	**22.39**	**301**	*e*P	**P**	**P**	**21 35 03.3**	**-0.7**
PSZ				pmax	pmax			
comp=Z,2.0nm,0.6s,mb3.7								
PSZ	**Piszkesteto**	**22.39**	**301**	*e*P	**P**	**P**	**21 35 03.3**	**-0.7**
KURK	**Kurchatov**	**23.35**	**52**	P	**P**	**P**	**21 35 14.1**	**0.0**
baz=258,slow=8.8								
KURK	**Kurchatov**	**23.35**	**52**	P	**P**	**P**	**21 35 13.6**	**-0.5**
MK31	**Makanchi Array**	**25.05**	**63**	P	**P**	**P**	**21 35 30.4**	**+0.5**
MK31	**Makanchi Array**	**25.05**	**63**	P	**P**	**P**	**21 35 30.4**	**+0.4**
MKAR	**Makanchi Array**	**25.05**	**63**	P	**P**	**P**	**21 35 30.2**	**+0.3**
comp=Z,0.2nm,0.4s,mb3.0,baz=261,slow=11,SNR=5.7								
GERES	**GERESS Array B**	**26.61**	**302**	P	**P**	**P**	**21 35 45.0**	**+1.0**
comp=Z,0.5nm,0.6s,mb3.2,baz=112,slow=11,SNR=3.2								
HFS	**Hagfors**	**29.90**	**325**	P	**P**	**P**	**21 36 11.7**	**-1.6**
comp=Z,1.5nm,0.3s,mb4.2,baz=122,slow=11,SNR=15								
NB2	**NORSAR Subarra**	**31.40**	**325**	P	**P**	**P**	**21 36 24.5**	**-2.0**
comp=Z,0.7nm,0.5s,mb3.8,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**31.40**	**325**	P	**P**	**P**	**21 36 24.6**	**-1.9**
comp=Z,0.8nm,0.4s,mb3.9,baz=118,slow=8.5,SNR=5.1								
WLF	**Walferdange**	**31.60**	**302**	*e*P	**P**	**P**	**21 36 27.2**	**-1.1**
LSA	**Lhasa**	**35.78**	**93**	P	**P**	**P**	**21 37 06.3**	**+1.4**
LSA	**Lhasa**	**35.78**	**93**	P	**P**	**P**	**21 37 06.3**	**+1.4**
ULN	**Ulaanbaatar**	**41.74**	**59**	*e*P	**P**	**P**	**21 37 54.9**	**+0.2**
comp=Z,0.5nm,0.6s,mb3.3								
ULN	**Ulaanbaatar**	**41.74**	**59**	*e*P	**P**	**P**	**21 37 54.9**	**+0.2**

IDC 06 21:40:06.8±2.2, 346N×9521E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/21, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=103.7km s-min=21.7km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.34**	**14**	Pn	Pn	21 43 46.3	+1.5
0.2nm,0.3s,baz=199,slow=12,SNR=10							
MKAR	**Makanchi Array**	**44.59**	**347**	P	P	21 48 20.4	-0.2
0.4nm,0.3s,baz=158,slow=8.7,SNR=14							
WRA	**Warramunga Arr**	**44.92**	**123**	P	P	21 48 22.7	-1.0
0.2nm,0.5s,baz=301,slow=9.4,SNR=2.5							
ASAR	**Alice Springs**	**46.34**	**128**	P	P	21 48 35.9	+1.0
0.3nm,0.4s,baz=300,slow=8.0,SNR=6.7							
ZALV	**Zalesovo Beam**	**51.04**	**352**	P	P	21 49 09.9	-0.6
0.6nm,0.4s,baz=166,slow=7.3,SNR=4.1							
ARCES	**ARCESS Array B**	**79.75**	**340**	P	P	21 52 16.9	+0.6
4.1nm,1.0s,baz=98,slow=4.6,SNR=6.1							

IDC 06 22:05:18.0±0.5, 2931S×17836W, h129km±6km, mb3.6/5, mb1 3.8/6, mb1mx3.7/16, mbtmp3.7/6, MS3.2/1, Ms1 3.2/1, ms1mx2.0/30, Error ellipse: s-maj=28.2km s-min=17.5km az=138.0

ISC 06 22:05:19.0±1.0, 293S±02×1785W±02, h133km±14km, n15, σ0§89/8, mb3.8/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.46**	**89**	P	**Pn**	**22 05 38.1**	**-0.1**
300nm,0.3s,baz=210,slow=20,SNR=11							
RAO				S	Sx	22 05 51.7	
2µm,0.3s,baz=270,slow=20,SNR=45							
URZ	**Urewera**	**9.70**	**201**	P	**Pn**	**22 07 35.5**	**+0.2**
0.6nm,0.3s,baz=30,slow=9.3,SNR=8.3							
URZ				S	Sx	22 09 21.5	
2.8nm,0.3s,baz=0.0,slow=20,SNR=9.4							
DZM	**Mont Dzumac**	**15.38**	**294**	*e*P	**Pn**	**22 09 02.2**	**+13**
AFI	**Afiamalu**	**16.48**	**23**	LR	LR	22 13 20.8	
comp=Z,86nm,18.5s,baz=42,slow=29							
CTA	**Charters Tower**	**33.25**	**278**	P	**P**	**22 11 44.9**	**+1.2**
1.0nm,0.3s,mb4.1,baz=97,slow=8.1,SNR=3.0							
ASAR	**Alice Springs**	**42.79**	**266**	P	**P**	**22 13 03.0**	**-0.7**
0.9nm,0.6s,mb3.6,baz=98,slow=6.6,SNR=15							
WRA	**Warramunga Arr**	**43.68**	**271**	P	**P**	**22 13 10.0**	**-0.8**
1.3nm,0.6s,mb3.8,baz=111,slow=7.7,SNR=5.4							
PETK	**Petropavlovsk-**	**84.62**	**346**	P	**P**	**22 17 37.4**	**+0.3**
1.9nm,0.6s,mb4.0,baz=141,slow=7.3,SNR=4.9							
NVAR	**Mina Array Bea**	**87.67**	**43**	P	**P**	**22 17 52.3**	**-0.1**
0.2nm,0.3s,mb3.4,baz=241,slow=8.8,SNR=2.7							
KURK	**Kurchatov**	**119.98**	**314**	PKP	PKPdf	22 23 51.9	-1.4
baz=113,slow=2.4							
NB2	**NORSAR Subarra**	**147.57**	**351**	PKP	PKPdf	22 24 44.8	+0.8
comp=Z,32nm,2.0s,baz=16,slow=3.2							
NOA	**NORSAR Array B**	**147.57**	**351**	PKPbc	PKPbc	22 24 46.3	-0.5
comp=Z,0.8nm,0.5s,baz=14,slow=4.4,SNR=3.0							
HFS	**Hagfors**	**148.06**	**349**	PKPbc	PKPbc	22 24 47.2	-1.0
comp=Z,3.9nm,0.9s,baz=38,slow=2.6,SNR=6.1							
MMAI	**Mount Meron Ar**	**150.86**	**286**	PKPbc	PKPbc	22 24 55.3	-0.7
comp=Z,1.5nm,0.4s,baz=71,slow=6.2,SNR=12							
TORD	**Torodi Ar. Bea**	**163.96**	**180**	PKPab	PKPab	22 25 58.9	-1.4
comp=Z,0.6nm,1.0s,baz=176,slow=3.2,SNR=3.7							

CASC 06 22:14:44.2±2.4, 946N×8367W, h6km±11km, MD4.0, MW4.5,2C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUS	**Buena Vista**	**0.13**	**316**	⇑*i*P	Pg	22 14 47.3	+0.3
URSC	**Urasca**	**0.39**	**343**	⇓*i*P	Pg	22 14 51.4	-0.4
BAR1		**0.41**	**122**	⇓*e*P	Pg	22 14 52.1	0.0
BAR1				*e*S	Sg	22 14 58.0	+0.5
QCR	**Quepos**	**0.49**	**266**	*e*P	Pg	22 14 54.2	+0.4
QCR				*e*S	Sg	22 15 01.9	+1.7
PRS1	**Puriscal**	**0.82**	**309**	*e*P	Pg	22 14 58.9	-1.2
ACR	**Cerro Adams**	**0.94**	**148**	⇓*e*P	Pg	22 15 01.7	-0.6
ACR				*e*S	Sg	22 15 14.5	+0.1
CGA2	**Cerro Gallo 2**	**0.96**	**305**	*e*P	Pg	22 15 01.6	-1.1
CGA2				*e*S	Sg	22 15 14.5	-0.8
CTCR	**Cotoan**	**1.05**	**122**	⇑*e*P	Pg	22 15 03.3	-1.2
CNI	**Changuinola**	**1.13**	**92**	⇓*e*P	Pg	22 15 04.7	-1.3
CNI				*e*S	Sg	22 15 21.0	+0.3
BRU2	**Volcan**	**1.17**	**124**	*e*P	Pg	22 15 05.5	-1.1
BRU2				*e*S	Sg	22 15 21.4	-0.4
JCR	**Jicaral**	**1.48**	**285**	*e*P	Pn	22 15 10.8	-0.5
PTP	**Ponta Puerca**	**19.56**	**62**	*e*P	Px	22 15 09.8	

ISCJB 06 22:17:36.6±0.2, 4216S±003×17287E±005, h58km, mb4.5/11, MS3.9/11, Error ellipse: s-maj=5.8km s-min=2.6km az=39.1
IDC 06 22:17:36.9±0.5, 4211S×17304E, h55km±3km, mb4.2/8, mb1 4.4/10, mb1mx4.3/14, mbtmp4.3/10, MS3.9/13, Ms1 3.9/13, ms1mx3.9/16, Error ellipse: s-maj=16.2km s-min=8.0km az=126.0
NEIC 06 22:17:38.7, 4210S×17289E, h57km, mb4.8/3, ML5.4(WEL), After WEL.
NEIC Felt [IV] at Blenheim, Christchurch, Greymouth, Lower Hutt, Murchison, Nelson, Wellington and Westport. Felt in the northern half of the South Island.

ISC 06 22:17:37.7±0.2, 4221S±003×17294E±005, h60km, h60km±2.8km: pP-P, n131, σ1§08/101, mb4.5/11, 1C, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.45**	**357**	P	**Pn**	**22 17 48.3**	**-0.7**
KHZ	**Kahutara**	**0.49**	**115**	P	**Pn**	**22 17 51.1**	**+1.6**
LTZ	**Lake Taylor**	**0.76**	**220**	P	**Pn**	**22 17 54.1**	**+1.5**
BSWZ	**Blackbirch Sta**	**0.86**	**55**	P	**Pn**	**22 17 54.4**	**+0.6**
DSZ	**Dennistone Nort**	**0.96**	**298**	P	**Pn**	**22 17 54.6**	**-0.6**
NNZ	**Nelson**	**1.04**	**19**	P	**Pn**	**22 17 55.9**	**-0.3**
CMWZ	**Cape Campbell**	**1.06**	**65**	P	**Pn**	**22 17 57.6**	**+1.2**
CRLZ	**Canterbury Las**	**1.39**	**190**	P	**Pn**	**22 18 01.3**	**+0.5**
TCW	**Tory Channel**	**1.41**	**46**	P	**Pn**	**22 18 01.3**	**+0.2**
QRZ	**Quartz Range**	**1.41**	**347**	P	**Pn**	**22 18 00.7**	**-0.4**
MQZ	**McQueen's Vall**	**1.51**	**188**	P	**Pn**	**22 18 02.6**	**+0.1**
SNZO	**South Karori**	**1.60**	**56**	P	**Pn**	**22 18 03.6**	**0.0**
MRW	**Makara Radio**	**1.64**	**54**	P	**Pn**	**22 18 04.1**	**-0.1**
BHW	**Baring Head**	**1.65**	**62**	P	**Pn**	**22 18 04.1**	**-0.3**
WEL	**Wellington**	**1.65**	**57**	P	**Pn**	**22 18 04.3**	**-0.1**
WVZ	**Waitaha Valley**	**1.84**	**241**	P	**Pn**	**22 18 07.4**	**+0.5**
MSWZ	**Moikau Station**	**1.90**	**66**	P	**Pn**	**22 18 07.1**	**-0.6**
CAW	**Cannon Point**	**1.94**	**56**	P	**Pn**	**22 18 07.9**	**-0.3**
PAWZ	**Paruwai Farm**	**2.04**	**67**	P	**Pn**	**22 18 08.8**	**-0.8**
RPZ	**Rata Peaks**	**2.04**	**222**	P	**Pn**	**22 18 09.8**	**+0.1**
154nm,0.3s,baz=18,slow=0.7,SNR=188							
RPZ				S	**Sn**	**22 18 35.3**	**+1.2**
1µm,0.3s,baz=311,slow=20,SNR=7.8							
RPZ				LR	LR	22 19 16.3	
comp=Z,3µm,21.4s,baz=82,slow=46							
MTW	**Mount Morrison**	**2.19**	**62**	P	**Pn**	**22 18 10.5**	**-1.1**
MRZ	**Mangatainoka R**	**2.52**	**53**	P	**Pn**	**22 18 14.3**	**-1.3**
FOZ	**Fox Glacier**	**2.75**	**239**	P	**Pn**	**22 18 14.1**	**-1.1**
WAZ	**Wanganui**	**2.90**	**33**	P	**Pn**	**22 18 22.2**	**+0.9**
BFZ	**Birch Farm**	**2.92**	**60**	P	**Pn**	**22 18 19.6**	**-2.0**
LBZ	**Lake Benmore**	**2.96**	**222**	P	**Pn**	**22 18 21.9**	**-0.3**
NRZ	**Ngariki Road**	**2.97**	**15**	P	**Pn**	**22 18 23.8**	**+1.5**
DFE	**Dawson Falls**	**3.01**	**18**	P	**Pn**	**22 18 24.1**	**+1.2**
NWEZ	**Newall Road**	**3.01**	**14**	P	**Pn**	**22 18 23.9**	**+1.0**
NEZ	**North Egmont**	**3.06**	**17**	P	**Pn**	**22 18 24.4**	**+0.8**
PKE	**Pukeiti**	**3.11**	**15**	P	**Pn**	**22 18 25.3**	**+1.0**
RAEZ	**Rainy Point**	**3.12**	**21**	P	**Pn**	**22 18 25.8**	**+1.4**
TSZ	**Takapari Road**	**3.13**	**48**	P	**Pn**	**22 18 23.0**	**-1.6**
ODZ	**Otahua Downs**	**3.29**	**210**	P	**Pn**	**22 18 26.5**	**-0.1**
VRZ	**Vera Road**	**3.38**	**25**	P	**Pn**	**22 18 28.8**	**+0.9**
WNVZ	**Wahianoa**	**3.52**	**36**	P	**Pn**	**22 18 29.8**	**0.0**
MOVZ	**Moawhango**	**3.52**	**38**	P	**Pn**	**22 18 29.2**	**-0.6**
FWVZ	**Far West T-bar**	**3.56**	**35**	P	**Pn**	**22 18 30.6**	**+0.3**
JCZ	**Jackson Bay**	**3.58**	**237**	P	**Pn**	**22 18 29.6**	**-1.0**
TUVZ	**Tukino**	**3.59**	**36**	P	**Pn**	**22 18 30.9**	**+0.1**
WPVZ	**Whakapapa**	**3.60**	**34**	P	**Pn**	**22 18 30.9**	**0.0**
NGZ	**Ngauruhoe**	**3.64**	**35**	P	**Pn**	**22 18 31.6**	**+0.1**
TWVZ	**Taurewa**	**3.67**	**32**	P	**Pn**	**22 18 31.5**	**-0.3**
WTVZ	**West Tongariro**	**3.69**	**34**	P	**Pn**	**22 18 32.0**	**-0.1**
KATZ	**Kakaramea**	**3.85**	**34**	P	**Pn**	**22 18 33.9**	**-0.5**
WKZ	**Wanaka**	**3.87**	**226**	P	**Pn**	**22 18 33.1**	**-1.5**
RITZ	**Rihia Road**	**3.92**	**36**	P	**Pn**	**22 18 36.4**	**+1.1**
HIZ	**Hauiti**	**3.97**	**22**	P	**Pn**	**22 18 36.1**	**+0.1**
RATZ	**Rangitukua**	**3.97**	**34**	P	**Pn**	**22 18 35.9**	**-0.1**
EAZ	**Earnscleugh**	**4.01**	**220**	P	**Pn**	**22 18 35.4**	**-1.1**
BKZ	**Black Stump Fm**	**4.07**	**43**	P	**Pn**	**22 18 35.3**	**-2.0**
HATZ	**Hinemaiaia**	**4.09**	**37**	P	**Pn**	**22 18 36.3**	**-1.4**
WATZ	**Wairara**	**4.09**	**32**	P	**Pn**	**22 18 37.4**	**-0.3**
MSZ	**Milford Sound**	**4.40**	**234**	P	**Pn**	**22 18 40.1**	**-1.8**
TUZ	**Tuapeka**	**4.44**	**211**	P	**Pn**	**22 18 42.4**	**0.0**
MLZ	**Mavora Lakes**	**4.66**	**226**	P	**Pn**	**22 18 44.2**	**-1.2**
UTU	**Utuhina**	**4.74**	**33**	P	**Pn**	**22 18 47.5**	**+1.0**
KNZ	**Kokohu**	**4.81**	**50**	P	**Pn**	**22 18 46.1**	**-3.4**
TAZ	**Tarawera**	**4.82**	**36**	P	**Pn**	**22 18 46.0**	**-1.6**
TOZ	**Tahuroa Road**	**4.89**	**25**	P	**Pn**	**22 18 48.7**	**+0.1**
URZ	**Urewera**	**5.07**	**40**	P	**Pn**	**22 18 47.7**	**-3.4**
38nm,0.3s,baz=232,slow=7.4,SNR=90							
URZ				S	**Sn**	**22 19 41.6**	**-6.8**
193nm,0.3s,baz=100,slow=19,SNR=10							
URZ	**Urewera**	**5.07**	**40**	P	**Pn**	**22 18 47.7**	**-3.4**
WHZ	**Wether Hill Ro**	**5.15**	**223**	P	**Pn**	**22 18 49.9**	**-2.2**
TGRZ	**Tauranga**	**5.15**	**31**	P	**Pn**	**22 18 51.2**	**-0.9**
MWZ	**Matawai**	**5.22**	**44**	P	**Pn**	**22 18 49.6**	**-3.6**
DCZ	**Deep Cove**	**5.31**	**230**	P	**Pn**	**22 18 52.0**	**-2.3**
MKAZ	**Moumakai**	**5.37**	**19**	P	**Pn**	**22 18 55.2**	**0.0**
WTAZ	**Waiatarua**	**5.42**	**14**	P	**Pn**	**22 18 56.1**	**+0.3**
OTAZ	**Otara**	**5.47**	**17**	P	**Pn**	**22 18 57.2**	**+0.7**
KAAZ	**Kauri Point**	**5.55**	**15**	P	**Pn**	**22 18 58.3**	**+0.7**
MTAZ	**Motutapu**	**5.62**	**16**	P	**Pn**	**22 18 58.8**	**+0.1**
PUZ	**Puketiti**	**5.80**	**46**	P	**Pn**	**22 18 57.5**	**-3.6**
KUZ	**Kuaotunu**	**5.86**	**22**	P	**Pn**	**22 19 01.6**	**-0.3**
MXZ	**Matakaoa Point**	**6.21**	**43**	P	**Pn**	**22 19 02.9**	**-3.8**
WCZ	**Waipu Caves**	**6.35**	**10**	P	**Pn**	**22 19 08.7**	**+0.1**
OUZ	**Omahuta**	**7.00**	**4**	P	**Pn**	**22 19 17.0**	**-0.4**
RAO	**Raoul Island**	**14.90**	**33**	LR	LR	22 26 33.9	
comp=Z,441nm,21.0s,baz=204,slow=36							
MOO	**Moorlands**	**19.02**	**261**	*e*P	**Pn**	**22 22 00.8**	**+5.0**
CAN	**Canberra**	**19.86**	**282**	*e*P	**Pn**	**22 22 04.0**	**-1.7**
DZM	**Mont Dzumac**	**20.80**	**343**	*e*P	**P**	**22 22 15.4**	**+1.4**
STKA	**Stephens Creek**	**26.92**	**282**	P	**P**	**22 23 13.6**	**+0.5**
2.5nm,1.0s,mb3.7,baz=101,slow=17,SNR=2.9							
STKA				pP	pP	22 23 27.9	+0.1
4.9nm,1.0s,baz=132,slow=11,SNR=3.6							
STKA				LR	LR	22 32 15.4	
comp=Z,245nm,21.8s,baz=294,slow=33							
STKA	**Stephens Creek**	**26.92**	**282**	*e*P	**P**	**22 23 13.2**	**+0.1**
STKA				pP	pP	22 23 27.9	+0.1
STKA				LR	LR	22 32 15.4	
CTA	**Charters Tower**	**31.52**	**306**	*e*P	**P**	**22 23 55.4**	**+1.4**
6.0nm,0.8s,mb4.5							
CTA	**Charters Tower**	**31.52**	**306**	P	**P**	**22 23 54.1**	**+0.1**
8.1nm,0.8s,mb4.6,baz=158,slow=11,SNR=8.3							
CTA				pP	pP	22 24 08.4	-0.4
5.5nm,0.8s,baz=172,slow=8.7,SNR=2.7							
CTA				LR	LR	22 36 19.7	
comp=Z,142nm,18.3s,baz=308,slow=36							
HNR	**Honiara**	**34.59**	**337**	LR	LR	22 35 51.5	
comp=Z,105nm,21.8s,baz=151,slow=32							
ASAR	**Alice Springs**	**37.22**	**287**	P	**P**	**22 24 43.0**	**-0.2**
1.4nm,0.5s,mb4.1,baz=128,slow=7.2,SNR=37							
ASAR				pP	pP	22 24 56.6	-1.7
3.3nm,0.8s,baz=125,slow=7.5,SNR=8.5							
ASAR				PcP	PcP	22 27 01.2	-0.7
1.2nm,0.6s,baz=122,slow=3.9,SNR=5.0							
WB2	**Warramunga Arr**	**39.35**	**292**	*e*P	**P**	**22 25 01.2**	**0.0**
WRAB	**Tennant Creek**	**39.36**	**292**	*e*P	**P**	**22 25 01.6**	**+0.3**
9.8nm,0.7s,mb4.7							
WRAB				*e*	pP	22 25 16.7	+0.3
WRA	**Warramunga Arr**	**39.36**	**292**	P	**P**	**22 25 01.2**	**0.0**
6.2nm,0.7s,mb4.5,baz=129,slow=7.6,SNR=24							
WRA				pP	pP	22 25 16.1	-0.3
4.0nm,0.7s,baz=130,slow=8.2,SNR=5.8							
WRA				sP	sP	22 25 23.0	-0.4
3.7nm,0.7s,baz=131,slow=7.6,SNR=3.2							
WRA				LR	LR	22 40 04.2	
comp=Z,184nm,21.2s,baz=120,slow=34							
PMG	**Port Moresby**	**39.75**	**318**	*e*P	**P**	**22 25 05.5**	**+0.9**
24nm,0.9s,mb4.9							
PMG				*e*	pP	22 25 20.1	+0.4
PPT	**Papeete**	**40.26**	**64**	*e*LR	LR	22 36 13.1	
614nm,31.2s,baz=227							
PPT	**Papeete**	**40.26**	**64**	LR	LR	22 37 58.9	
comp=Z,225nm,21.9s,baz=218,slow=30							
KAKA	**Kakadu**	**45.76**	**298**	*e*P	Px	22 25 43.6	
8.3nm,0.7s							
RKT	**Rikitea**	**47.03**	**83**	*e*LR	LR	22 39 29.2	
322nm,28.0s							
QSPA	**South Pole Qui**	**47.92**	**180**	P	**P**	**22 26 11.8**	**+2.5**
2.6nm,0.4s,mb4.6,baz=352,slow=2.2,SNR=13							
TAOE	**Nuku Hiva Isla**	**52.85**	**65**	*e*LR	LR	22 42 06.4	
1µm,27.7s							
MAW	**Mawson**	**58.63**	**205**	P	**P**	**22 27 30.2**	**+2.2**
3.0nm,0.7s,mb4.5,baz=173,slow=8.7,SNR=4.2							
MAW				LR	LR	22 51 34.8	
comp=Z,170nm,18.3s,baz=272,slow=35							
SYO	**Syowa Base**	**63.86**	**197**	⇑*e*P	**P**	**22 28 03.4**	**+0.1**
PMSA	**Palmer Station**	**64.45**	**157**	*e*P	**P**	**22 28 09.3**	**+2.1**
VNA3	**Neumayer Olymp**	**66.84**	**179**	*e*	**P**	**22 28 26.3**	**+3.8**
VNA3				*e*	pP	22 28 41.6	+2.8
VNA3				*e*	pP	22 28 45.3	+6.5
VNA2	**Neumayer--Watz**	**67.18**	**180**	*e*	**P**	**22 28 27.7**	**+3.0**
baz=181,slow=4.7							
VNA2				*e*	pP	22 28 43.2	+2.2
VNA2				*e*	pP	22 28 46.9	+5.9
VNA1	**Neumayer--Stat**	**67.45**	**180**	*e*	**P**	**22 28 29.6**	**+3.2**
VNA1				*e*	pP	22 28 44.8	+2.1
VNA1				*e*	pP	22 28 48.8	+6.1
PLCA	**Paso Flores**	**79.45**	**136**	P	**P**	**22 29 40.9**	**+3.4**
4.0nm,1.1s,mb4.3,baz=196,slow=6.5,SNR=3.5							
PLCA				sP	sP	22 29 59.5	-1.3
2.4nm,0.7s,baz=208,slow=5.6,SNR=3.6							
PLCA				LR	LR	22 56 31.4	
comp=Z,141nm,18.6s,baz=183,slow=29							
PLCA	**Paso Flores**	**79.45**	**136**	P	**P**	**22 29 40.9**	**+3.4**
PLCA				sP	sP	22 29 59.5	-1.3
PLCA				LR	LR	22 56 31.4	
KSRS	**Korea Array**	**89.27**	**326**	P	**P**	**22 30 27.7**	**+0.9**
5.6nm,0.8s,mb5.0,baz=147,slow=5.7,SNR=16							
KSRS				sP	sP	22 30 48.8	-1.5
2.7nm,1.0s,baz=147,slow=5.4,SNR=2.9							

*ISCJB **06** 22:40:36.7±0.5, 4086N×002×3476E×004, h8km±5km, Error ellipse: s-maj=4.7km s-min=4.1km az=19.6*
*ISK **06** 22:40:36.1, 4083N×3475E, h7km, MD2.9*
*DDA **06** 22:40:36.8, 4087N×3480E, h7km±2km, Md2.8*
*CSEM **06** 22:40:36.0±0.1, 4083N×3474E, h8km, MD2.8, Error ellipse: s-maj=1.5km s-min=1.3km az=137.0*

ISC 06 22:40:37.3±0.4, 4086N±003×3474E±004, h10km±4km, n19, σ0§77/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.24**	**171**	*i* P	**Pg**	**22 40 41.9**	**-0.3**
CTKT				*i* S	**Sg**	**22 40 45.7**	**+0.2**
TOS	**Tosya**	**0.57**	**288**	*e*PG	**Pg**	**22 40 47.7**	**-0.7**
BOYT	**Boyabat**	**0.57**	**12**	*i* P	**Pg**	**22 40 47.8**	**-0.7**
BOYT				*i* S	**Sg**	**22 40 56.1**	**0.0**
BYBT	**Boyabat**	**0.61**	**2**	*e*PG	**Pg**	**22 40 58.0**	**+0.9**
BYBT				*e*SG	**Sg**	**22 40 58.0**	**+0.9**
ILGA	**Ilgaz**	**0.80**	**284**	*i* P	**Pg**	**22 40 52.8**	**+0.1**
ILGA				*i* S	**Sg**	**22 40 59.8**	**-3.3**
DIKM	**Dikmen**	**0.88**	**26**	*e*PG	**Pg**	**22 40 54.2**	**-0.1**
DIKM				*e*SG	**Sg**	**22 41 07.4**	**+1.6**
CANT	**Cankiri**	**0.89**	**254**	*e*PG	**Pg**	**22 40 53.3**	**-1.1**
CANT				*e*SG	**Sg**	**22 41 06.5**	**+0.5**
KVT	**Kavak**	**1.01**	**77**	*e*PG	**Pg**	**22 40 55.8**	**-0.9**
KVT				*e*SG	**Sg**	**22 41 10.1**	**+0.1**
ELDT	**Eldivan**	**1.06**	**250**	*i* P	**Pb**	**22 40 58.1**	**+0.4**
ELDT				*i* S	**Sg**	**22 41 12.8**	**+1.1**
BZK	**Bozkurt**	**1.23**	**334**	*e*PN	**Pn**	**22 41 00.7**	**+0.2**
CDAG	**Cicekdag**	**1.27**	**193**	*i* P	**Pn**	**22 41 01.9**	**+0.9**
CDAG				*i* S	**Sb**	**22 41 18.9**	**+1.5**
YOZ	**Yozgat**	**1.29**	**160**	*e*PN	**Pn**	**22 41 00.6**	**-0.7**
YOZ				*e*SN	**Sn**	**22 41 19.1**	**+0.4**
SAFT	**Safranbolu**	**1.60**	**284**	*e*PN	**Pn**	**22 41 05.5**	**-0.1**
KAMT	**Kaman**	**1.68**	**208**	*e*PN	**Pn**	**22 41 06.2**	**-0.5**
ANTO	**Ankara**	**1.79**	**237**	*e*PN	**Pn**	**22 41 08.2**	**+0.1**
LOD	**Lodumlu**	**1.79**	**238**	*e*PN	**Pn**	**22 41 07.1**	**-1.1**
SVSK	**Karacayir**	**1.96**	**118**	*e*PN	**Pn**	**22 41 10.5**	**0.0**
AVNT	**Avonos**	**2.08**	**178**	*i* P	**Pn**	**22 41 12.6**	**+0.5**
AVNT				*i* S	**Sn**	**22 41 37.6**	**-0.4**
BNN	**Bunyan**	**2.18**	**157**	*e*PN	**Pn**	**22 41 12.7**	**-0.8**

*NEIC **06** 22:46:03.3, 1504N×6071W, h150km, MD4.1(TRN), After TRN.*

TRN 06 22:46:02.9, 1498N×6095W, h189km, MD4.1, M3.1(FDF), **1C-7D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.32**	**219**	*e*Pn	Pn	22 46 28.5	+0.4
FDF				*e*Sn	Sn	22 46 46.1	-1.5
FDF	**Fort de France**	**0.32**	**219**	⇓*e*P	Pn	22 46 28.7	+0.6
FDF				⇓*e*S	Sn	22 46 46.3	-1.2
MVM	**Montagne Vaucl**	**0.43**	**173**	*e*P	Pn	22 46 29.6	+1.1
MVM				*e*S	Sn	22 46 48.6	+0.4
BIM	**Bigot**	**0.48**	**195**	⇓*e*P	Pn	22 46 29.2	+0.6
SLW	**Petit Monier**	**0.95**	**180**	⇓*e*P	Pn	22 46 31.9	+0.6
HMG	**Houelmont**	**1.23**	**324**	*e*P	Pn	22 46 34.0	+0.7
DEG	**La Desirade**	**1.33**	**355**	*e*P	Pn	22 46 35.8	+1.7
DEG				*e*S	Sn	22 46 59.4	+1.9
LZG	**Guadaloupe-1**	**1.40**	**325**	⇑*e*P	Pn	22 46 35.2	+0.5
SVB	**Belmont**	**1.72**	**190**	⇓*i*P	Pn	22 46 37.8	0.0
SVB				*e*S	Sn	22 47 02.1	-2.8
GRSS	**Sisters**	**2.74**	**194**	*e*P	Pn	22 46 45.6	-3.4
GRSS				*e*S	Sn	22 47 25.0	+0.1
GRSS	**Sisters**	**2.74**	**194**	*e*P	Pn	22 46 49.8	+0.8
GRSS				*e*S	Sn	22 47 25.0	+0.1
GRIC	**Isle de Caille**	**2.75**	**193**	*e*P	Pn	22 46 50.6	+1.5
GRIC				*e*S	Sn	22 47 25.7	+0.6
ANWB	**Willy Bob**	**2.79**	**343**	*e*Pn	Pn	22 46 49.6	+0.1
ANWB				*e*Sn	Sn	22 47 19.6	-6.3
GRHS	**Sauteurs**	**2.82**	**194**	*e*P	Pn	22 46 49.2	-0.7
GRHS				*e*S	Sn	22 47 26.0	-0.5
GRHS	**Sauteurs**	**2.82**	**194**	*e*P	Pn	22 46 51.2	+1.3
GRHS				*e*S	Sn	22 47 26.0	-0.5
GRW	**Mount Saint Ca**	**2.89**	**194**	*e*P	Pn	22 46 52.6	+1.9
GRW				*e*S	Sn	22 47 27.9	-0.1
SKI	**Saint Kitts**	**2.90**	**324**	⇓*i*P	Pn	22 46 51.2	+0.3
SKI				*e*S	Sn	22 47 27.7	-0.6
TOSP	**Speyside**	**3.68**	**174**	⇓*i*P	Pn	22 47 01.8	+1.4
TOSP				*e*S	Sn	22 47 43.5	-1.9
TPR	**Prospect**	**3.78**	**177**	*e*P	Pn	22 47 02.7	+1.1
TPR				*e*S	Sn	22 47 43.1	-4.3
TPR	**Prospect**	**3.78**	**177**	*e*P	Pn	22 47 02.7	+1.1
TPR				*e*S	Sn	22 47 44.7	-2.8
TCE	**Chacachacare**	**4.33**	**191**	*e*S	Sn	22 47 57.5	-2.5
TRN	**Trinidad (W)**	**4.33**	**186**	*e*P	Pn	22 47 09.1	+0.5
TRN				*e*S	Sn	22 47 56.3	-3.7
TBH	**Brigand Hill**	**4.47**	**182**	*e*S	Sn	22 48 00.1	-3.2
TPP	**Pointe-a-Pierr**	**4.66**	**186**	*e*	Sn	22 48 04.8	-2.9
TPP				*e*S	Sn	22 48 06.0	-1.7

*ISCJB **06** 22:54:15.6±0.2, 4097N±001×11639W±002, h0km, Error ellipse: s-maj=2.1km s-min=1.8km az=154.4*
*IDC **06** 22:54:15.7±1.3, 4109N×11639W, h0km, mb1 3.5/3, mb1mx3.3/22, mbtmp3.0/3, ML3.3/3, Error ellipse: s-maj=13.4km s-min=5.8km az=160.0*
*NEIC **06** 22:54:16.8±0.4, 4089N×11644W, h0km, ML2.8, Error ellipse: s-maj=6.6km s-min=4.9km az=145.0, Suspected Mining explosion.*
NEIC 50 km [30 miles] NE of Battle Mountain.

ISC 06 22:54:16.6±0.2, 4096N±001×11641W±002, h0km, n71, σ1§19/137, 25C-21D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N10A	**Dunphy**	**0.25**	**198**	⇑P	**Pg**	**22 54 21.6**	**+0.3**
	baz=0.3						
N10A				⇓S	**Sg**	**22 54 26.2**	**+1.6**
	baz=0.3						
M10A	**I.L. Ranch, Tu**	**0.57**	**350**	⇓P	**Pg**	**22 54 27.4**	**-0.1**
	baz=0.6						
M11A	**Holland Ranch,**	**0.66**	**44**	⇓P	**Pg**	**22 54 28.6**	**-0.7**
	baz=0.6						
O10A	**Cortez Mining,**	**0.67**	**186**	⇑P	**Pg**	**22 54 29.3**	**-0.1**
	baz=0.7						
O10A				⇑S	**Sg**	**22 54 39.6**	**+1.6**
	baz=0.7						
BMN	**Battle Mountai**	**0.81**	**230**	*e*P	**Pg**	**22 54 32.3**	**+0.1**
BMN				*e*S	**Sg**	**22 54 48.0**	**+5.3**
N09A	**Rock Creek Ran**	**0.85**	**263**	⇑P	**Pg**	**22 54 33.6**	**+0.7**
	baz=0.9						
ELK	**Elko**	**0.91**	**103**	Pg	**Pg**	**22 54 33.7**	**-0.3**
	22nm,0.3s,baz=286,slow=17,SNR=193						
ELK				Lg		22 54 45.5	
	19nm,0.3s,baz=17,slow=20,SNR=11						
ELK	**Elko**	**0.91**	**103**	Pg	**Pg**	**22 54 33.7**	**-0.3**
ELK				Lg		22 54 45.5	
M09A	**Marrel Ranch,**	**0.91**	**301**	⇓P	**Pg**	**22 54 34.3**	**+0.3**
	baz=0.9						
O11A	**Cowboy Ranch,**	**1.00**	**145**	⇑P	**Pg**	**22 54 35.4**	**-0.5**
	baz=1.0						
O11A				⇑S	**Sg**	**22 54 49.4**	**+0.5**
	baz=1.0						
N12A	**Clover Valley,**	**1.04**	**95**	⇓P	**Pg**	**22 54 35.5**	**-1.0**
	baz=1.0						
N12A				⇑S	**Sg**	**22 54 50.6**	**+0.5**
	baz=1.0						
L10A	**Juniper Basin**	**1.12**	**358**	⇑P	**Pg**	**22 54 37.4**	**-0.6**
	baz=1.1						
L10A				⇑S	**Sg**	**22 54 53.5**	**+0.9**
	baz=1.1						
M12A	**Wells**	**1.22**	**67**	⇑P	**Pg**	**22 54 38.9**	**-1.0**
	baz=1.2						
L11A	**Cat Creek Ranc**	**1.30**	**22**	⇑P	**Pg**	**22 54 40.5**	**-1.0**
	baz=1.3						
L11A				⇑S	**Sg**	**22 54 58.9**	**+0.4**
	baz=1.3						
N08A	**GE Springer Mi**	**1.32**	**263**	⇓P	**Pg**	**22 54 41.0**	**-0.8**
	baz=1.4						
N08A				⇓S	**Sg**	**22 55 00.3**	**+1.3**
	baz=1.4						
P10A	**Eureka**	**1.34**	**182**	⇑P	**Pg**	**22 54 41.4**	**-0.8**
	baz=1.4						
O12A	**Currie**	**1.44**	**118**	⇑P	**Pn**	**22 54 42.3**	**-1.6**
	baz=1.4						
O08A	**Rochester Mine**	**1.49**	**244**	⇓P	**Pn**	**22 54 43.6**	**-1.0**
	baz=1.5						
O08A				⇓S	**Sg**	**22 55 04.4**	**0.0**
	baz=1.5						
P11A	**Circle Ranch,**	**1.49**	**160**	⇓P	**Pn**	**22 54 43.5**	**-1.0**
	baz=1.5						
P11A				⇑S	**Sg**	**22 55 04.1**	**-0.3**
	baz=1.5						
M08A	**Happy Creek Ra**	**1.57**	**289**	⇑P	**Pn**	**22 54 44.7**	**-1.0**
	baz=1.6						
L12A	**House Creek Ra**	**1.58**	**41**	⇑Pb	**Pb**	**22 54 45.5**	**-1.2**
	baz=1.5						
N13A	**Wendover, West**	**1.67**	**93**	⇓P	**Pn**	**22 54 45.5**	**-1.6**
	baz=1.6						
N13A				⇓Sb	**Sb**	**22 55 09.8**	**0.0**
	baz=1.6						
P08A	**Dixie Valley**	**1.80**	**226**	⇓P	**Pn**	**22 54 47.9**	**-0.9**
	baz=1.8						
P08A				⇓Sb	**Sb**	**22 55 14.0**	**+0.7**
	baz=1.8						
K11A	**Parker Ranch,**	**1.83**	**9**	⇑Pb	**Pb**	**22 54 49.3**	**-1.6**
	baz=1.8						
K10A	**MacKenzie Ranc**	**1.85**	**349**	⇑P	**Pn**	**22 54 48.2**	**-1.3**
	baz=1.8						
L08A	**Fields**	**1.91**	**311**	⇑Pb	**Pb**	**22 54 51.3**	**-0.9**
	baz=1.9						
L08A				⇓Sb	**Sb**	**22 55 16.9**	**+0.4**
	baz=1.9						
N07B	**Gerlach**	**1.95**	**266**	⇓P	**Pn**	**22 54 49.9**	**-1.0**
	baz=2.0						
N07B				⇓Sb	**Sb**	**22 55 19.5**	**+1.7**
	baz=2.0						
K12A	**Draper Farm, C**	**2.02**	**33**	⇓Pb	**Pb**	**22 54 52.3**	**-1.9**
	baz=2.0						
K12A				⇑Sb	**Sb**	**22 55 20.0**	**+0.2**
	baz=2.0						
O07A	**Toulon**	**2.04**	**248**	⇑P	**Pn**	**22 54 51.0**	**-1.2**
	baz=2.1						
Q10A	**Clear Creek Ra**	**2.13**	**180**	⇑P	**Pn**	**22 54 52.7**	**-0.7**
	baz=2.2						
L13A	**Double Diamond**	**2.17**	**58**	⇑P	**Pn**	**22 54 52.6**	**-1.3**
	baz=2.1						
Q11A	**Duckwater**	**2.19**	**164**	⇓P	**Pn**	**22 54 53.3**	**-0.9**
	baz=2.2						
Q09A	**Carvers**	**2.20**	**196**	⇓P	**Pn**	**22 54 53.7**	**-0.7**
	baz=2.2						
WVOR	**Wild Horse Val**	**2.23**	**312**	*e*Pn	**Pn**	**22 54 54.6**	**-0.1**
WVOR				*e*Pg	**Pg**	**22 55 01.5**	**+2.2**
WVOR				*e*Sn	**Sn**	**22 55 21.4**	**-1.6**
WVOR				*e*Sg	**Sg**	**22 55 28.1**	**0.0**
K08A	**Mann Creek Ran**	**2.36**	**319**	⇓Pb	**Pb**	**22 54 58.9**	**-1.0**
	baz=2.4						
M14A	**Sheep Mountain**	**2.37**	**76**	⇑P	**Pn**	**22 54 55.0**	**-1.7**
	baz=2.3						
BGU	**Big Grassy Mou**	**2.56**	**90**	*e*Pn	**Pn**	**22 54 58.4**	**-0.9**
BGU				*e*Pg	**Pg**	**22 55 04.5**	**-1.1**
BGU				Sn	**Sn**	**22 55 36.6**	**+5.5**
BGU				*e*Sg	**Sg**	**22 55 45.1**	**+6.3**
PAHR	**Pah Rah Range**	**2.60**	**242**	*e*Pn	**Pn**	**22 54 57.2**	**-2.5**
PAHR				*e*Pg	**Pg**	**22 55 05.4**	**-0.9**
PAHR				*e*Sg	**Sg**	**22 55 41.7**	**+1.8**
DUG	**Dugway**	**2.84**	**104**	*e*Pn	**Pn**	**22 55 02.4**	**-0.8**
DUG				*e*Pg	**Pg**	**22 55 13.6**	**+2.6**
DUG				*e*Sn	**Sn**	**22 55 42.9**	**+4.8**
DUG				*e*Sg	**Sg**	**22 55 56.3**	**+8.4**
HVU	**Hansel Valley**	**2.85**	**72**	*e*Pn	**Pn**	**22 55 03.2**	**-0.1**
HVU				*e*Pg	**Pg**	**22 55 09.8**	**-1.5**
HVU				*e*Sn	**Sn**	**22 55 44.5**	**+6.1**
NVAR	**Mina Array Bea**	**2.92**	**211**	Pn	**Pn**	**22 55 03.4**	**-0.8**
	2.0nm,0.3s,baz=29,slow=13,SNR=81						
NVAR				Pg	**Pg**	**22 55 11.1**	**-1.4**
	7.3nm,0.3s,baz=29,slow=13,SNR=40						
NVAR				Lg		22 55 52.5	
	6.5nm,0.3s,baz=29,slow=35,SNR=12						
NVAR	**Mina Array Bea**	**2.92**	**211**	Pn	**Pn**	**22 55 03.4**	**-0.8**
NVAR				Pg	**Pg**	**22 55 11.1**	**-1.4**
NVAR				Lg		22 55 52.5	
TPH	**Tonopah**	**2.95**	**193**	Pn	**Pn**	**22 55 11.9**	**+7.3**
HLID	**Hailey**	**2.99**	**29**	*e*Pn	**Pn**	**22 55 05.5**	**+0.2**
HLID				*e*Pg	**Pg**	**22 55 13.4**	**-0.5**
HLID				*e*Sg	**Sg**	**22 55 51.8**	**-1.0**
SPUT	**South Promonto**	**3.01**	**82**	*e*Pn	**Pn**	**22 55 04.5**	**-0.9**
MOD	**Modoc**	**3.08**	**289**	*e*Pn	**Pn**	**22 55 07.3**	**+0.9**
MOD				*e*Pg	**Pg**	**22 55 16.9**	**+1.4**
MOD				*e*Sn	**Sn**	**22 55 44.5**	**+0.6**
MOD				*e*Sg	**Sg**	**22 55 56.4**	**+1.0**
HWUT	**Hardware Ranch**	**3.71**	**78**	*e*Pn	**Pn**	**22 55 17.4**	**+2.4**
HWUT				*e*Pg	**Pg**	**22 55 30.4**	**+2.8**
HWUT				*e*Sg	**Sg**	**22 56 16.8**	**+1.2**
ARUT	**Antelope Range**	**3.91**	**143**	*e*Pn	**Pn**	**22 55 18.4**	**+0.5**
ARUT				*e*Pg	**Pg**	**22 55 31.8**	**+0.2**
ARUT				*e*Sn	**Sg**	**22 56 32.9**	**+11**
BMO	**Blue Mountains**	**3.95**	**351**	*e*Pn	**Pn**	**22 55 20.1**	**+1.7**
BMO				*e*Pg	**Pg**	**22 55 28.8**	**-3.4**
BMO				*e*Sn	**Sn**	**22 56 04.8**	**-0.5**
BMO				*e*Sg	**Sg**	**22 56 22.1**	**-1.3**
DAU	**Daniels Canyon**	**3.96**	**96**	*e*Pn	**Pn**	**22 55 22.8**	**+4.4**
DAU				*e*Pg	**Pg**	**22 55 33.5**	**+1.1**
DAU				*e*Sn	**Sn**	**22 56 10.7**	**+5.2**
DAU				*e*Sg	**Sg**	**22 56 25.2**	**+1.6**
MTUM	**Tungsten Hills**	**3.97**	**206**	*e*Pn	**Pn**	**22 55 23.9**	**+5.2**
MTUM				*e*Pg	**Pg**	**22 55 37.9**	**+5.2**
MTUM				*e*Sn	**Sn**	**22 56 10.2**	**+4.3**
TPNV	**Topopah Spring**	**4.00**	**178**	*e*Pn	**Pn**	**22 55 18.4**	**-0.7**
TPNV				*e*Pg	**Pg**	**22 55 35.4**	**+2.1**
TPNV				*e*Sn	**Sn**	**22 56 16.4**	**+10**
MSU	**Marysvale**	**4.07**	**125**	*e*Pn	**Pn**	**22 55 20.9**	**+0.8**
CCUT	**Cedar City**	**4.14**	**144**	*e*Pn	**Pn**	**22 55 21.7**	**+0.7**
CCUT				*e*Pg	**Pg**	**22 55 34.7**	**-1.2**
CCUT				*e*Sg	**Sg**	**22 56 28.8**	**-0.8**
CMB	**Columbia Colle**	**4.24**	**228**	*e*Pn	**Pn**	**22 55 21.8**	**-0.6**
CMB				*e*Pg	**Pg**	**22 55 38.0**	**+0.2**
TMUT	**Trail Mountain**	**4.32**	**111**	*e*Pn	**Pn**	**22 55 24.4**	**+1.0**
TMUT				*e*Pg	**Pg**	**22 55 37.0**	**-2.3**
TMUT				*e*Sn	**Sn**	**22 56 20.3**	**+5.9**
RRI2	**Red Ridge**	**4.47**	**56**	*e*Pn	**Pn**	**22 55 25.4**	**-0.1**
RRI2				*e*Pg	**Pg**	**22 55 44.1**	**+1.8**
RRI2				*e*Sn	**Sn**	**22 56 22.0**	**+3.7**
RRI2				*e*Sg	**Sg**	**22 56 50.8**	**+11**
MCMT	**McKenzie Canyo**	**4.67**	**33**	*e*Pn	**Pn**	**22 55 29.9**	**+1.7**
MCMT				*e*Pg	**Pg**	**22 55 39.8**	**-6.2**
REDW	**Red Top Meadow**	**4.78**	**58**	*e*Pn	**Pn**	**22 55 30.7**	**+1.0**
REDW				Pg	**Pg**	**22 55 37.2**	**-11**
TPAW	**Teton Pass**	**4.78**	**56**	*e*Pn	**Pn**	**22 55 33.4**	**+3.6**
YBH	**Yreka Blue Hor**	**4.81**	**281**	Lg		22 56 51.2	
	0.3nm,0.3s,baz=90,slow=20,SNR=2.5						
IMW	**Indian Meadow**	**5.00**	**52**	*e*Pn	**Pn**	**22 55 32.5**	**-0.3**
	11nm,0.6s						
IMW				*e*Pg	**Pg**	**22 55 41.9**	**-11**
MOOW	**Moose Ponds**	**5.04**	**55**	*e*Pn	**Pn**	**22 55 35.1**	**+1.8**
	5.6nm,0.7s						
MOOW				*e*Sn	**Sn**	**22 56 35.4**	**+3.2**
LOHW	**Long Hollow**	**5.06**	**56**	*e*Pn	**Pn**	**22 55 34.7**	**+1.1**
	5.9nm,0.6s						
DLMT	**Dillon**	**5.21**	**31**	*e*Pn	**Pn**	**22 55 37.6**	**+1.9**
	8.9nm,0.8s						
DLMT				*e*Pg	**Pg**	**22 55 52.8**	**-3.6**
DLMT				*e*Sn	**Sn**	**22 56 36.9**	**+0.4**
DLMT				*e*Sg	**Sg**	**22 57 04.9**	**+1.1**
QLMT	**Earthquake Lak**	**5.32**	**42**	Pn	**Pn**	**22 55 40.0**	**+2.8**
PDAR	**Pinedale Array**	**5.42**	**68**	Pn	**Pn**	**22 55 40.8**	**+2.2**
	0.1nm,0.3s,baz=239,slow=13,SNR=5.2						
PDAR				Pg	**Pg**	**22 55 48.8**	**-12**
	0.2nm,0.3s,baz=255,slow=14,SNR=5.7						
PDAR	**Pinedale Array**	**5.42**	**68**	Pn	**Pn**	**22 55 40.8**	**+2.2**
PDAR				Pg	**Pg**	**22 55 48.8**	**-12**
BOZ	**Bozeman (W)**	**5.84**	**35**	*e*Pn	**Pn**	**22 55 45.2**	**+0.8**
	2.8nm,0.8s						
BOZ				*e*Pg	**Pg**	**22 56 01.3**	**-7.1**
TXAR	**Lajitas Array**	**15.57**	**134**	Pn	**Pn**	**22 58 03.3**	**+5.9**
	0.1nm,0.3s,baz=319,slow=9.5,SNR=3.5						
TXAR	**Lajitas Array**	**15.57**	**134**	Pn	**Pn**	**22 58 03.3**	**+5.9**

*ISCJB **06** 22:59:25.7±1.3, 2415S±0.1×17917W±0.1, h474km±17km, mb4.3/8, Error ellipse: s-maj=18.2km s-min=14.8km az=167.4*
*NEIC **06** 22:59:26.7±0.9, 2411S×17963W, h475km±11km, mb4.5/6, Error ellipse: s-maj=11.6km s-min=9.0km az=178.0*
*IDC **06** 22:59:27.2±28.0, 24.16S×17969W, h474km±266km, mb3.7/4, mb1 3.9/4, mb1mx3.4/15, mbtmp3.7/4, Error ellipse: s-maj=180.1km s-min=89.7km az=83.0*

ISC 06 22:59:26.6±1.3, 2415S±01×1796W±01, h474km±17km, n31, σ0§53/25, mb4.3/8, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.35**	**164**	P	**P**	**23 00 55.5**	**+0.1**
SNZO	**South Karori**	**17.80**	**194**	P	**P**	**23 03 06.5**	**+0.2**
RAR	**Rarotonga**	**18.56**	**85**	*e*P	**P**	**23 03 12.8**	**-0.8**
	27nm,0.8s						
EIDS	**Eidsvold**	**26.60**	**261**	*e*P	**P**	**23 04 26.7**	**+0.8**
	9.4nm,0.5s,mb4.5						
CTA	**Charters Tower**	**31.81**	**270**	*e*P	**P**	**23 05 12.1**	**+0.8**
	13nm,0.3s,mb4.8						
CTA	**Charters Tower**	**31.81**	**270**	P	**P**	**23 05 12.2**	**+0.9**
	16nm,0.4s,mb4.8,baz=93,slow=11,SNR=38						
CTAO	**Charters Tower**	**31.81**	**270**	*e*P	**P**	**23 05 12.2**	**+0.8**
	17nm,0.3s,mb5.0						
TAU	**Tasmania Unive**	**33.04**	**227**	P	**P**	**23 05 21.4**	**-0.1**
PMG	**Port Moresby**	**34.87**	**289**	*e*P	**P**	**23 05 37.1**	**-0.2**
	8.7nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**34.95**	**248**	*e*P	**P**	**23 05 38.3**	**+0.4**
	1.6nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**34.95**	**248**	P	**P**	**23 05 38.3**	**+0.5**
	2.1nm,0.5s,mb3.8,baz=90,slow=8.3,SNR=6.8						
ASAR	**Alice Springs**	**42.33**	**261**	P	**P**	**23 06 37.7**	**-0.3**
	1.7nm,0.4s,mb3.8,baz=95,slow=7.4,SNR=29						
WB2	**Warramunga Arr**	**42.71**	**266**	⇓*i*P	**P**	**23 06 40.3**	**-0.8**
WRAB	**Tennant Creek**	**42.71**	**266**	*e*P	**P**	**23 06 40.2**	**-0.9**
	10nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**42.72**	**266**	P	**P**	**23 06 40.4**	**-0.8**
	6.0nm,0.5s,mb4.3,baz=104,slow=8.2,SNR=19						
KAKA	**Kakadu**	**46.66**	**275**	*e*P	Px	23 07 01.1	
	4.1nm,0.3s						
FITZ	**Fitzroy Crossi**	**51.14**	**266**	P	**P**	**23 07 45.5**	**+0.5**
MIDW	**Midway**	**52.06**	**3**	P	**P**	**23 07 52.2**	**+0.8**
NWAO	**Narrogin (SRO)**	**55.45**	**246**	P	**P**	**23 08 15.4**	**-0.3**
MBWA	**Marble Bar**	**55.66**	**260**	*e*P	**P**	**23 08 16.7**	**-0.6**
CASY	**Casey**	**60.07**	**206**	P	**P**	**23 08 47.1**	**+0.5**
MAW	**Mawson**	**77.67**	**200**	P	**P**	**23 10 33.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**78.46**	**335**	P	**P**	**23 10 37.4**	**-0.1**
PMSA	**Palmer Station**	**78.59**	**157**	P	**P**	**23 10 38.1**	**+0.1**
BJT	**Baijiatuau**	**87.40**	**316**	*e*P	**P**	**23 11 22.6**	**0.0**
	9.0nm,0.3s,mb5.0						
HIA	**Hailar**	**90.75**	**325**	P	**P**	**23 11 38.5**	**+0.5**
HALT	**Halls**	**103.95**	**57**	Pdif	Pdif	23 12 39.0	+1.4
HFS	**Hagfors**	**142.81**	**349**	PKP	PKPdf	23 18 03.1	-1.7
	1.3nm,0.3s,baz=46,slow=4.2,SNR=15						
BRTR	**Keskin Array B**	**147.96**	**307**	PKPbc	PKPbc	23 18 19.4	+1.4
	0.8nm,0.6s,baz=91,slow=3.3,SNR=3.2						
BRTR	**Keskin Array B**	**147.96**	**307**	PKPbc	PKPbc	23 18 19.4	+1.4
TOA0	**Torodi Ar. Sit**	**169.03**	**187**	PKPdf	PKPdf	23 18 40.1	+0.6

*IDC **06** 23:09:50.6±1.3, 3628N×892W, h0km, mb3.7/2, mb1 4.2/4, mb1mx3.7/25, mbtmp4.0/4, ML4.6/2, Error ellipse: s-maj=27.5km s-min=24.2km az=103.0*
*MDD **06** 23:09:52.6±0.7, 3621N×897W, h10km, mbLg3.4/16, Error ellipse: s-maj=6.7km s-min=4.1km az=70.0, PRIMO*
*CSEM **06** 23:09:52.1±0.1, 3620N×896W, h10km, ML4.2/36, Error ellipse: s-maj=2.3km s-min=1.8km az=71.0*
*SFS **06** 23:09:52.0, 3619N×903W, h10km, ML3.9*
*NEIC **06** 23:09:53.0, 3620N×890W, h3km, ML3.7(LIS), MN3.8(MDD), After LIS.*
*IGIL **06** 23:09:53.1, 3623N×892W, h3km, ML3.9*
*CNRM **06** 23:09:54.3, 3615N×879W, h9km, MD4.0*
*LDG **06** 23:09:54.0±0.2, 3620N×905W, h20km, Md4.0/1, Ml3.9/8, Error ellipse: s-maj=4.0km s-min=2.7km az=57.0*

INMG 06 23:09:53.5±1.9, 3624N×894W, h6km±3km, MD3.3, ML3.8, Error ellipse: s-maj=4.5km s-min=2.5km az=67.0, West of Gibraltar

ISC 06 23:09:53.1±0.6, 3627N±002×891W±003, h18km±3km, n188, σ0§91/256, mb3.6/2, 4C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.86**	**4**	*e*P	**Pb**	**23 10 09.8**	**+0.2**
PFVI				*e*S	**Sb**	**23 10 21.0**	**+0.2**
PFVI	**Vila Bisbo**	**0.86**	**4**	*e*P	**Pb**	**23 10 09.9**	**+0.3**
MORF	**Marmelete**	**1.06**	**11**	*e*P	**Pb**	**23 10 13.0**	**+0.1**
MORF				*e*S	**Sb**	**23 10 27.1**	**+0.8**
MORF	**Marmelete**	**1.06**	**11**	*e*P	**Pb**	**23 10 13.0**	**+0.1**
MORF	**Marmelete**	**1.06**	**11**	P	**Pb**	**23 10 13.0**	**+0.1**
MORF				S	**Sb**	**23 10 27.1**	**+0.7**
	5.1nm,0.2s	

comp=E,88nm,0.3s,SNR=7.9
ECEU Sn **Sn** 23 11 11.2 -1.1
comp=E,28nm,0.2s,SNR=7.9
ECEU Ceuta 2.88 96 Pn **Pn** **23 10 38.9 +0.8**
comp=E,88nm,0.3s,SNR=7.9
ECEU Sn **Sn** 23 11 11.2 -1.2
comp=E,28nm,0.2s,SNR=7.9
ALMR Almeirim 2.89 5 *e*P **Pn** **23 10 38.3 0.0**
ALMR *e*S **Sn** **23 11 12.4 -0.2**
ALMR *e*S **Sn** **23 11 12.4 -0.2**
ALMR AML AML 23 11 15.2
comp=N,246nm,0.3s
ALMR Almeirim 2.89 5 P **Pn** **23 10 38.3 0.0**
ALMR S **Sn** **23 11 13.4 +0.8**
comp=N,0.1nm,0.3s
EBAD Badajoz 2.90 31 Pn **Pn** **23 10 38.0 -0.4**
comp=N,21nm,0.1s,SNR=7.9
EBAD Badajoz 2.90 31 Pg **Pg** **23 10 47.2 -1.6**
comp=N,24nm,0.1s,SNR=7.9
EBAD Sn **Sn** **23 11 12.5 -0.3**
comp=N,134nm,0.3s,SNR=7.9
EBAD Badajoz 2.90 31 Pn **Pn** **23 10 38.0 -0.4**
comp=N,21nm,0.1s,SNR=7.9
EBAD Pg **Pg** **23 10 47.2 -1.5**
comp=N,24nm,0.1s,SNR=7.9
EBAD Sn **Sn** **23 11 12.5 -0.3**
comp=N,134nm,0.3s,SNR=7.9
EBAD Lg 23 11 23.8
comp=N,564nm,0.2s,SNR=7.9
REAL Reales 2.99 85 *e*P **Pn** **23 10 40.4 +0.8**
REAL *e*S **Sn** **23 11 15.5 +0.5**
REAL Reales 2.99 85 P **Pn** **23 10 40.4 +0.7**
REAL S **Sn** **23 11 15.5 +0.5**
ECAB El Cabril 3.32 56 Pn **Pn** **23 10 44.5 +0.4**
comp=N,33nm,0.2s,SNR=7.9
ECAB Sn **Sn** **23 11 22.9 -0.2**
comp=N,142nm,0.2s,SNR=7.9
ECAB El Cabril 3.32 56 Pn **Pn** **23 10 44.5 +0.4**
comp=N,33nm,0.2s,SNR=7.9
ECAB Sn **Sn** **23 11 22.9 -0.1**
comp=N,142nm,0.2s,SNR=7.9
ECAB Lg 23 11 37.0
comp=N,196nm,0.3s,SNR=7.9
EMIJ Mijas 3.35 84 Pn **Pn** **23 10 44.2 -0.3**
EMIJ Sn **Sn** **23 11 22.5 -1.3**
EMIJ Mijas 3.35 84 Pn **Pn** **23 10 44.2 -0.3**
comp=N,23nm,0.2s,SNR=7.9
EMIJ Sn **Sn** **23 11 22.5 -1.3**
comp=N,50nm,0.3s,SNR=7.9
PTOM Tomar 3.37 7 *e*Pn **Pn** **23 10 45.1 +0.3**
PTOM Tomar 3.37 7 *e*Pn **Pn** **23 10 45.1 +0.3**
PMRV Marv??o 3.38 20 *e*Pn **Pn** **23 10 44.4 -0.5**
PMRV *e*Sn **Sn** **23 11 24.0 -0.5**
PMRV Marv??o 3.38 20 *e*Pn **Pn** **23 10 44.4 -0.5**
PMRV *e*Sn **Sn** **23 11 24.0 -0.5**
EMAL Malaga-Limoner 3.64 81 *i* P **Pn** **23 10 49.1 +0.6**
EMAL Malaga-Limoner 3.64 81 Pn **Pn** **23 10 54.3 +5.8**
comp=N,6.3nm,0.1s,SNR=7.9
EMAL Sn **Sn** **23 11 34.5 +3.5**
SNR=7.9
ELOJ Sierra Loja 3.92 76 Pn **Pn** **23 10 53.0 +0.6**
comp=N,15nm,0.2s,SNR=7.9
ELOJ Sn **Sn** **23 11 37.9 0.0**
comp=N,28nm,0.4s,SNR=7.9
ELUQ Luque 3.94 69 Pn **Pn** **23 10 53.6 +1.0**
comp=N,11nm,0.4s,SNR=7.9
ELUQ Sn **Sn** **23 11 37.7 -0.6**
comp=N,34nm,0.2s,SNR=7.9
EADA Adamuz 3.94 60 Pn **Pn** **23 10 53.0 +0.3**
comp=N,42nm,0.2s,SNR=18
EADA Sn **Sn** **23 11 37.6 -0.8**
comp=N,80nm,0.1s,SNR=7.9
EADA Adamuz 3.94 60 ⇑Pn **Pn** **23 10 53.0 +0.3**
comp=N,42nm,0.2s,SNR=18
EADA Sn **Sn** **23 11 37.6 -0.9**
comp=N,80nm,0.1s,SNR=7.9
MIF Mishlifen 4.16 132 *i* P **Pn** **23 10 56.0 +0.4**
MIF Mishlifen 4.16 132 P **Pn** **23 10 56.0 +0.4**
MIF S **Sn** **23 11 41.0 -2.8**
ERON Agron 4.17 78 Pn **Pn** **23 10 57.0 +1.2**
comp=N,27nm,0.2s,SNR=7.9
ERON Sn **Sn** **23 11 44.9 +0.8**
comp=N,28nm,0.4s,SNR=7.9
MTE Manteigas 4.26 14 *e*Pn **Pn** **23 10 55.8 -1.2**
MTE *e*Sn **Sn** **23 11 45.6 -0.7**
MTE Manteigas 4.26 14 *e*Pn **Pn** **23 10 55.8 -1.3**
MTE *e*Sn **Sn** **23 11 45.7 -0.6**
EGUA Guajares 4.34 81 Pn **Pn** **23 10 57.6 -0.5**
comp=N,36nm,0.2s,SNR=7.9
EGUA Sn **Sn** **23 11 47.8 -0.4**
comp=N,59nm,0.3s,SNR=7.9
KIB El Ksiba 4.38 146 *i* P **Pn** **23 10 58.0 -0.7**
KIB El Ksiba 4.38 146 P **Pn** **23 10 58.0 -0.7**
KIB S Sx 23 11 45.0
EPLA Plasencia 4.40 30 Pn **Pn** **23 10 58.6 -0.3**
comp=N,34nm,0.2s,SNR=7.9
EPLA Sn Sx 23 11 48.2
comp=N,40nm,0.1s,SNR=7.9
EPLA Plasencia 4.40 30 Pn **Pn** **23 10 58.6 -0.3**
comp=N,34nm,0.2s,SNR=7.9
EPLA Sn Sx 23 11 48.2
comp=N,40nm,0.1s,SNR=7.9
EPLA Lg 23 12 13.1
comp=N,101nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 4.40 75 Pn **Pn** **23 11 00.3 +1.3**
comp=N,28nm,0.2s,SNR=7.9
ECOG Sn **Sn** **23 11 50.1 +0.3**
comp=N,35nm,0.2s,SNR=7.9
TZK Tazeka 4.44 118 *i* P **Pn** **23 10 58.0 -1.5**
TZK Tazeka 4.44 118 P **Pn** **23 10 58.0 -1.5**
TZK S Sx 23 11 46.0
EQUE Quentar 4.49 76 Pn **Pn** **23 11 01.4 +1.2**
comp=N,41nm,0.3s,SNR=18
EQUE Sn **Sn** **23 11 51.6 -0.3**
comp=N,39nm,0.2s,SNR=7.9
EBAN Banos Encina 4.50 64 Pn **Pn** **23 11 00.4 0.0**
comp=N,33nm,0.1s,SNR=7.9
EBAN Sn Sx 23 11 50.8
comp=N,62nm,0.2s,SNR=7.9
EBAN Banos Encina 4.50 64 Pn **Pn** **23 11 00.4 -0.1**
comp=N,33nm,0.1s,SNR=7.9
EBAN Sn Sx 23 11 50.8
comp=N,62nm,0.2s,SNR=7.9
EBAN Lg 23 12 16.4
comp=N,49nm,0.4s,SNR=7.9
CZD Col de Zad 4.53 134 *i* P **Pn** **23 11 01.0 +0.2**
CZD Col de Zad 4.53 134 P **Pn** **23 11 01.0 +0.2**
CZD S Sx 23 11 49.0
JHA Jbel Lahdid 4.54 186 *i* P **Pn** **23 11 02.0 +1.0**
JHA Jbel Lahdid 4.54 186 P **Pn** **23 11 02.0 +1.0**
JHA S Sx 23 11 49.5
TZC Tazercounte 4.57 153 *i* P **Pn** **23 11 00.0 -1.3**
TZC Tazercounte 4.57 153 P **Pn** **23 11 00.0 -1.3**
TZC S Sx 23 11 48.0
EALB Alboran 4.77 92 Pn **Pn** **23 11 04.3 +0.3**
EALB Sn Sx 23 11 55.6
EALB Alboran 4.77 92 Pn **Pn** **23 11 04.3 +0.3**
comp=N,14nm,0.3s,SNR=7.9
EALB Sn Sx 23 11 55.6
comp=N,25nm,0.3s,SNR=7.9
EALB Alboran 4.77 92 Pn **Pn** **23 11 04.3 +0.3**
comp=N,14nm,0.3s,SNR=7.9
EALB Sn Sx 23 11 55.6
comp=N,25nm,0.3s,SNR=7.9
PAB San Pablo 4.87 46 *e*Pn **Pn** **23 11 05.5 +0.1**
PAB *e*Pg **Pg** **23 11 24.4 -2.0**
PAB *e*Sn **Sn** **23 12 00.6 -0.7**
PAB *e*Sg **Sg** **23 12 29.9 +0.6**
PAB San Pablo 4.87 46 *e*Pn **Pn** **23 11 05.5 +0.1**
PAB San Pablo 4.87 46 *e*Pg **Pg** **23 11 24.4 -1.9**
EBER Berja 4.88 81 Pn **Pn** **23 11 05.5 -0.1**
comp=N,4.7nm,0.2s,SNR=7.9
EBER Sn **Sn** **23 12 02.3 +0.6**
comp=N,65nm,0.5s,SNR=7.9
EBER Berja 4.88 81 Pn **Pn** **23 11 05.5 -0.2**
comp=N,4.7nm,0.2s,SNR=7.9
EBER Sn **Sn** **23 12 02.3 +0.6**
comp=N,65nm,0.5s,SNR=7.9
EQES Quesada 4.91 70 Pn **Pn** **23 11 06.1 +0.1**
comp=N,8.0nm,0.1s,SNR=7.9
EQES Sn **Sn** **23 12 02.1 -0.3**
comp=N,32nm,0.2s,SNR=7.9
EQES Quesada 4.91 70 Pn **Pn** **23 11 06.1 +0.1**
comp=N,8.0nm,0.1s,SNR=7.9
EQES Sn **Sn** **23 12 02.1 -0.3**
comp=N,32nm,0.2s,SNR=7.9

EMEL Melilla 4.93 100 Pn **Pn** **23 11 05.3 -1.0**
comp=N,15nm,0.2s,SNR=7.9
EMLI Melilla 4.94 100 Pn **Pn** **23 11 05.3 -1.1**
comp=N,15nm,0.2s,SNR=7.9
MDT Midelt 4.94 133 Pn **Pn** **23 11 05.7 -0.7**
comp=N,58nm,0.3s,baz=322,slow=9.5,SNR=1439
MDT Sn Sx 23 11 58.6
comp=N,18nm,0.3s,baz=180,slow=22,SNR=12
MVO Moncorvo 5.11 16 *e*Pn **Pn** **23 11 07.6 -1.0**
MVO Moncorvo 5.11 16 *e*Pn **Pn** **23 11 07.6 -1.0**
ESDC Sonseca Array 5.18 47 Pn **Pn** **23 11 09.7 +0.1**
comp=N,5.7nm,0.3s,baz=232,slow=13,SNR=52
ESDC Sn Sx 23 12 05.6
comp=N,11nm,0.3s,baz=235,slow=17,SNR=4.4
ESDC Lg 23 12 34.8
comp=N,13nm,0.3s,baz=236,slow=25,SNR=6.4
ESDC Sonseca Array 5.18 47 Pn **Pn** **23 11 09.7 0.0**
comp=N,22nm,0.1s,baz=231,slow=13,SNR=7.9
ESDC Sn Sx 23 12 05.7
comp=N,27nm,0.2s,slow=24,SNR=7.9
ESDC Sonseca Array 5.18 47 Pn **Pn** **23 11 09.7 0.0**
comp=N,22nm,0.1s,baz=231,slow=13,SNR=7.9
ESDC Sn Sx 23 12 05.7
comp=N,27nm,0.2s,baz=233,slow=24,SNR=7.9
ESDC Lg 23 12 35.4
comp=N,41nm,0.7s,baz=233,slow=30,SNR=7.9
ESLA Sonseca Array 5.18 47 *e*Pn **Pn** **23 11 09.9 +0.2**
comp=N,1.7nm,0.4s
ESLA *e*Sn **Sn** **23 12 06.2 -2.7**
ESLA *e*Sg **Sg** **23 12 33.9 -5.4**
ESLA Sonseca Array 5.18 47 *e*Pn **Pn** **23 11 09.9 +0.2**
comp=N,1.7nm,0.4s
ESLA *e*Sn Sx 23 12 06.2
ZAI Zaio 5.18 103 *i* P **Pn** **23 11 08.0 -1.7**
ZAI Zaio 5.18 103 P **Pn** **23 11 08.0 -1.7**
ZAI S Sx 23 12 07.0
EHUE Huescar 5.28 71 Pn **Pn** **23 11 10.8 -0.3**
EHUE Sn Sx 23 12 10.2
EHUE Huescar 5.28 71 Pn **Pn** **23 11 10.8 -0.3**
comp=N,8.2nm,0.2s,SNR=7.9
EHUE Sn Sx 23 12 10.2
comp=N,18nm,0.2s,SNR=7.9
ENIJ Nijar 5.43 81 Pn **Pn** **23 11 13.3 +0.1**
comp=N,8.2nm,0.2s,SNR=7.9
ENIJ Sn Sx 23 12 12.9
comp=N,9.1nm,0.4s,SNR=7.9
EVIA Vianos 5.62 63 Pn **Pn** **23 11 15.7 0.0**
comp=N,23nm,0.3s,SNR=7.9
EVIA Sn Sx 23 12 17.1
SNR=7.9
EVIA Vianos 5.62 63 Pn **Pn** **23 11 15.7 0.0**
comp=N,23nm,0.3s,SNR=7.9
EVIA Sn Sx 23 12 17.1
SNR=7.9
EVIA Lg 23 12 56.9
comp=N,60nm,0.6s,SNR=7.9
ELOB Lobios 5.63 6 Pn **Pn** **23 11 15.4 -0.5**
comp=N,14nm,0.2s,SNR=7.9
ELOB Lobios 5.63 6 Pn **Pn** **23 11 15.4 -0.4**
comp=N,14nm,0.2s,SNR=7.9
ELOB Sn Sx 23 12 16.8
comp=N,26nm,0.3s,SNR=7.9
ELOB Lg 23 12 53.4
comp=N,75nm,0.6s,SNR=7.9
ZFT Errachidia 5.66 137 *i* P **Pn** **23 11 16.0 -0.4**
ZFT Errachidia 5.66 137 P **Pn** **23 11 16.0 -0.4**
ZFT S Sx 23 12 17.0
GUD Guadarrama 5.74 39 Pn **Pn** **23 11 17.4 0.0**
GUD Sn Sx 23 12 20.6
GUD Lg 23 12 55.8
GUD Guadarrama 5.74 39 Pn **Pn** **23 11 17.5 +0.1**
comp=N,5.7nm,0.2s,SNR=7.9
GUD Sn Sx 23 12 20.6
comp=N,9.9nm,0.3s,SNR=7.9
GUD Guadarrama 5.74 39 Pn **Pn** **23 11 17.5 0.0**
comp=N,5.7nm,0.2s,SNR=7.9
GUD Sn Sx 23 12 20.6
comp=N,9.9nm,0.3s,SNR=7.9
GUD Lg 23 12 55.8
comp=N,59nm,0.5s,SNR=7.9
EZAM Zamans 5.88 2 Pn **Pn** **23 11 19.5 +0.3**
EZAM Sn Sx 23 12 22.8
EZAM Zamans 5.88 2 Pn **Pn** **23 11 19.5 +0.3**
comp=N,7.7nm,0.2s,SNR=7.9
EZAM Sn Sx 23 12 22.8
comp=N,5.5nm,0.2s,SNR=7.9
ECAL Calabor 5.91 16 Pn **Pn** **23 11 20.0 +0.3**
comp=N,21nm,0.2s,SNR=18
ECAL Sn **Sn** **23 12 26.8 -0.2**
comp=N,33nm,0.6s,SNR=7.9
ECAL Calabor 5.91 16 ⇑Pn **Pn** **23 11 20.0 +0.3**
comp=N,21nm,0.2s,SNR=18
ECAL Sn **Sn** **23 12 26.8 -0.2**
comp=N,33nm,0.6s,SNR=7.9
ECAL Lg 23 13 03.1
comp=N,188nm,0.6s,SNR=7.9
ERUA La Rua 6.27 12 Pn **Pn** **23 11 24.6 0.0**
comp=N,9.1nm,0.2s,SNR=7.9
ERUA Sn Sx 23 12 33.3
comp=N,8.3nm,0.2s,SNR=7.9
ERUA La Rua 6.27 12 Pn **Pn** **23 11 24.6 0.0**
comp=N,9.1nm,0.2s,SNR=7.9
ERUA Sn Sx 23 12 33.3
comp=N,8.3nm,0.2s,SNR=7.9
ERUA Lg 23 13 12.7
comp=N,40nm,0.4s,SNR=7.9
ETOB Tobarra 6.32 66 Pn **Pn** **23 11 25.0 -0.3**
comp=N,7.7nm,0.1s,SNR=7.9
ETOB Sn Sx 23 12 33.9
comp=N,18nm,0.2s,SNR=7.9
ETOB Tobarra 6.32 66 Pn **Pn** **23 11 25.0 -0.3**
comp=N,7.7nm,0.1s,SNR=7.9
ETOB Sn Sx 23 12 33.9
comp=N,18nm,0.2s,SNR=7.9
EMUR La Murta 6.33 73 Pn **Pn** **23 11 26.2 +0.7**
comp=N,10nm,0.3s,SNR=7.9
EMUR Sn Sx 23 12 34.2
comp=N,19nm,0.3s,SNR=7.9
EMUR La Murta 6.33 73 Pn **Pn** **23 11 26.2 +0.7**
comp=N,10nm,0.3s,SNR=7.9
EMUR Sn Sx 23 12 34.2
comp=N,19nm,0.3s,SNR=7.9
CART Cartagena 6.47 76 *e*Pn **Pn** **23 11 26.7 -0.7**
comp=N,22nm,0.3s
CART *e*Sn Sx 23 12 36.4
STS Santiago 6.62 2 Pn **Pn** **23 11 28.8 -0.6**
comp=N,7.8nm,0.2s,SNR=7.9
STS Sn Sx 23 12 40.5
SNR=7.9
EMAZ Mazaricos 6.67 360 Pn **Pn** **23 11 29.9 -0.3**
comp=N,10nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.67 360 Pn **Pn** **23 11 29.9 -0.3**
comp=N,10nm,0.2s,SNR=7.9
EMAZ Sn Sx 23 12 40.9
comp=N,14nm,0.3s,SNR=7.9
ETOR Torete 7.03 48 Pn **Pn** **23 11 35.8 +0.7**
comp=N,21nm,0.2s,SNR=7.9
ETOR Sn Sx 23 12 51.1
comp=N,56nm,0.3s,SNR=7.9
ETOR Torete 7.03 48 Pn **Pn** **23 11 35.8 +0.6**
comp=N,21nm,0.2s,SNR=7.9
ETOR Sn Sx 23 12 51.1
comp=N,56nm,0.3s,SNR=7.9
ETOR Lg 23 13 38.9
comp=N,44nm,0.8s,SNR=7.9
ECHE Chera 7.10 60 Pn **Pn** **23 11 36.6 +0.6**
comp=N,2.7nm,0.2s,SNR=7.9
ECHE Sn Sx 23 12 55.8
comp=N,2.6nm,0.2s,SNR=7.9
ECHE Chera 7.10 60 Pn **Pn** **23 11 36.6 +0.6**
comp=N,2.7nm,0.2s,SNR=7.9
ECHE Sn Sx 23 12 55.8
comp=N,2.6nm,0.2s,SNR=7.9
ECHE Lg 23 13 40.6
comp=N,25nm,0.8s,SNR=7.9
EPON Pontenova 7.18 10 Pn **Pn** **23 11 37.2 +0.1**
EPON Sn Sx 23 12 56.4
EPON Pontenova 7.18 10 Pn **Pn** **23 11 37.2 +0.1**
comp=N,1.2nm,0.1s,SNR=7.9
EPON Sn Sx 23 12 56.4
comp=N,3.6nm,0.2s,SNR=7.9
EPON Pontenova 7.18 10 Pn **Pn** **23 11 37.2 +0.1**
comp=N,1.2nm,0.1s,SNR=7.9
EPON Sn Sx 23 12 56.4
comp=N,3.6nm,0.2s,SNR=7.9
EBEN Beniarda 7.32 68 Pn **Pn** **23 11 39.2 +0.2**
comp=N,5.6nm,0.2s,SNR=25
EBEN Sn Sx 23 12 57.7
EBEN Beniarda 7.32 68 Pn **Pn** **23 11 39.2 +0.1**
comp=N,5.6nm,0.2s,SNR=25
EBEN Sn Sx 23 12 57.6
comp=N,14nm,0.4s,SNR=7.9
EARI Arriondas 7.58 21 Pn **Pn** **23 11 43.7 +1.1**
comp=N,2.3nm,0.2s,SNR=23
EARI Sn Sx 23 13 04.3
comp=N,1.2nm,0.3s,SNR=7.9
EARI Arriondas 7.58 21 Pn **Pn** **23 11 43.7 +1.1**
comp=N,2.3nm,0.2s,SNR=23
EARI Sn Sx 23 13 04.3
comp=N,1.2nm,0.3s,SNR=7.9
EMOS Mosqueruela 7.79 56 Pn **Pn** **23 11 47.3 +1.8**
comp=N,2.8nm,0.2s,SNR=21
EMOS Sn Sx 23 13 11.2
comp=N,14nm,0.2s,SNR=7.9
EMOS Mosqueruela 7.79 56 Pn **Pn** **23 11 47.3 +1.8**
comp=N,2.8nm,0.2s,SNR=21
EMOS Sn Sx 23 13 11.2
comp=N,14nm,0.2s,SNR=7.9
ECRI Cripan 8.03 36 Pn **Pn** **23 11 49.9 +1.0**
ECRI Sn Sx 23 13 13.3
ECRI Lg 23 14 10.3
ECRI Cripan 8.03 36 Pn **Pn** **23 11 49.9 +1.0**
comp=N,4.7nm,0.2s,SNR=7.9
ECRI Sn Sx 23 13 13.3
comp=N,3.3nm,0.2s,SNR=7.9
ECRI Lg 23 14 10.4
comp=N,12nm,0.4s,SNR=7.9
ELAN Lanestosa 8.13 30 Pn **Pn** **23 11 50.9 +0.7**
comp=N,0.8nm,0.2s,SNR=11
ELAN Lanestosa 8.13 30 Pn **Pn** **23 11 50.9 +0.7**
comp=N,0.8nm,0.2s,SNR=11
ELAN Lg 23 14 13.6
comp=N,24nm,0.7s,SNR=7.9
ESAC San Caprasio 8.53 48 Pn **Pn** **23 11 57.8 +2.1**
comp=N,5.1nm,0.2s,SNR=7.9
ESAC Sn Sx 23 13 29.5
ESAC San Caprasio 8.53 48 Pn **Pn** **23 11 57.8 +2.2**
comp=N,5.1nm,0.2s,SNR=7.9
ESAC Sn Sx 23 13 29.4
comp=N,25nm,0.4s,SNR=7.9
EIBI Ibiza 8.58 68 Pn **Pn** **23 11 56.5 +0.1**
EIBI Sn Sx 23 13 26.6
EIBI Ibiza 8.58 68 Pn **Pn** **23 11 56.5 +0.1**
comp=N,5.0nm,0.3s,SNR=12
EIBI Ibiza 8.58 68 Pn **Pn** **23 11 56.5 +0.1**
comp=N,5.0nm,0.3s,SNR=12
EIBI Sn Sx 23 13 26.6
comp=N,7.2nm,0.3s,SNR=7.9
ERTA Horta de San J 8.61 54 Pn **Pn** **23 11 59.2 +2.4**
comp=N,1.9nm,0.2s,SNR=6.3
ERTA Horta de San J 8.61 54 Pn **Pn** **23 11 59.2 +2.4**
comp=N,1.9nm,0.2s,SNR=6.3
ERTA Sn **Sn** **23 13 34.4 +0.9**
comp=N,8.5nm,0.4s,SNR=7.9
ELIZ Elizondo 8.93 37 Pn **Pn** **23 12 02.3 +1.2**
comp=N,12nm,0.3s,SNR=37
EALK Alkurruntz 8.98 37 Pn **Pn** **23 12 02.3 +0.5**
comp=N,5.8nm,0.3s,SNR=23
EALK Sn Sx 23 13 37.3
comp=N,16nm,0.4s,SNR=7.9
SJPF Ste Jean 9.04 39 *e*Pn **Pn** **23 12 03.5 +0.9**
SJPF *e*Sn Sx 23 13 36.6
comp=N,7.8nm,0.4s
SJPF Ste Jean 9.04 39 Pn **Pn** **23 12 03.5 +0.9**
SJPF Sn Sx 23 13 36.6
comp=N,3.9nm,0.4s
ETSF Etsaut 9.23 42 *e*Pn **Pn** **23 12 06.0 +0.7**
ETSF *e*Sn Sx 23 13 40.9
comp=N,7.7nm,0.4s
ETSF Etsaut 9.23 42 Pn **Pn** **23 12 06.0 +0.7**
ETSF Sn Sx 23 13 40.9
comp=N,3.8nm,0.4s
EPOB Poblet 9.30 54 P **Pn** **23 12 06.8 +0.6**
comp=N,0.4nm,0.1s,SNR=7.9
EPOB S Sx 23 13 44.3
comp=N,0.4nm,0.3s,SNR=7.9
EBIE Bielsa 9.48 45 Pn **Pn** **23 12 10.0 +1.2**
comp=N,3.3nm,0.3s,SNR=16
EBIE Sn Sx 23 13 48.2
comp=N,5.6nm,0.4s,SNR=7.9
EPF Esparros 9.82 44 *e*Pn **Pn** **23 12 13.7 +0.4**
EPF *e*Sn Sx 23 13 57.4
comp=N,18nm,0.6s
EPF Esparros 9.82 44 Pn **Pn** **23 12 13.7 +0.4**
EPF Sn Sx 23 13 57.4
comp=N,9.0nm,0.6s
ETOS Mallorca 9.88 66 Pn **Pn** **23 12 15.3 +1.1**
comp=N,23nm,1.1s,SNR=5.8
ETOS Mallorca 9.88 66 Pn **Pn** **23 12 15.3 +1.0**
comp=N,23nm,1.1s,SNR=5.8
ETOS Sn Sx 23 13 59.6
comp=N,0.8nm,0.2s,SNR=7.9
MTLF Montolieu 11.09 47 *e*Pn **Pn** **23 12 29.4 -1.3**
MTLF *e*Sn Sx 23 14 27.7
comp=N,1.1nm,0.3s
MTLF Montolieu 11.09 47 *e*Pn **Pn** **23 12 29.4 -1.3**
MTLF *e*Sn Sx 23 14 27.7
comp=N,0.6nm,0.3s
LFF La Frestale 11.34 37 *e*Pn **Pn** **23 12 33.6 -0.5**
LFF *e*Sn Sx 23 14 32.9
comp=N,4.1nm,0.5s
LFF La Frestale 11.34 37 *e*Pn **Pn** **23 12 33.6 -0.5**
LFF *e*Sn Sx 23 14 32.9
comp=N,2.0nm,0.5s
RJF Les Rejaudoux 11.98 38 *e*Pn **Pn** **23 12 41.5 -1.4**
CAF Calviac 12.00 41 *e*Pn **Pn** **23 12 42.3 -0.9**
CAF *e*Sn Sx 23 14 48.6
comp=N,1.6nm,0.3s
CAF Calviac 12.00 41 *e*Pn **Pn** **23 12 42.3 -0.9**
CAF *e*Sn Sx 23 14 48.6
comp=N,0.8nm,0.3s
MFF Saint Martin d 12.23 30 *e*Pn **Pn** **23 12 45.1 -1.2**
MFF *e*Sn Sx 23 14 55.0
comp=N,1.6nm,0.4s
MFF Saint Martin d 12.23 30 *e*Pn **Pn** **23 12 45.1 -1.2**
MFF *e*Sn Sx 23 14 55.0
comp=N,0.8nm,0.4s
QUIF Quistinic 12.39 18 *e*Pn **Pn** **23 12 47.7 -0.8**
LASF Ste Croix 12.48 47 *e*Pn **Pn** **23 12 49.6 -0.2**
ROSF Rostrenen 12.76 17 *e*Pn **Pn** **23 12 53.0 -0.4**
SGMF Saint Gilles 12.86 19 *e*Pn **Pn** **23 12 53.4 -1.5**
TCF Toulx Ste Croi 13.03 36 *e*Pn **Pn** **23 12 56.2 -1.0**
GRR Gorron 13.48 24 *e*Pn **Pn** **23 13 01.7 -1.7**
BGF Bois d'Agland 13.53 37 *e*Pn **Pn** **23 13 02.6 -1.4**
LDF La Druitiere 13.91 25 *e*Pn **Pn** **23 13 08.4 -0.8**
FLN La Foliniere 13.93 24 *e*Pn **Pn** **23 13 08.5 -1.0**
baz=210
AVF Avril sur Loir 13.94 37 *e*Pn **Pn** **23 13 09.5 -0.1**
TAM Tamanrasset 18.35 133 *e*Pn **Pn** **23 14 08.7 +2.0**
TAM Tamanrasset 18.35 133 *e*Pn **Pn** **23 14 08.7 +2.0**
TOA0 Torodi Ar. Sit 24.92 155 *e*P **P** **23 15 17.3 +2.1**
TOA0 Torodi Ar. Sit 24.92 155 *e*P **P** **23 15 17.3 +2.1**
TORD Torodi Ar. Bea 24.92 155 P **P** **23 15 15.4 +0.2**
comp=N,0.8nm,0.6s,mb3.4,baz=325,slow=11,SNR=9.9
PDAR Pinedale Array 73.23 311 P **P** **23 21 23.9 +0.9**
comp=N,0.6nm,0.5s,mb3.8,baz=64,slow=6.7,SNR=6.4
ASAR Alice Springs 145.63 79 PKPbc PKPbc 23 29 31.1 +0.2
comp=N,0.9nm,0.7s,baz=315,slow=3.0,SNR=8.1
ASAR Alice Springs 145.63 79 PKPbc PKPbc 23 29 31.0 +0.1

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*NEIC **06** 23:16:03.3, 3185S×6937W, h5km, ML3.8(GUC), After GUC.*

GUC 06 23:16:03.3±0.9, 3185S×6937W, h5km±4km, MD3.8, ML3.8, 4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**1.67**	**208**	*i* P	Pn	23 16 33.7	+0.6
FCH				*i* S	Sn	23 16 55.8	+0.9
FCH				AML	AML	23 16 58.1	
	comp=E,1μm,0.2s						
PEL	**Peldehue**	**1.70**	**220**	*e*P	Pn	23 16 33.5	-0.2
PEL				*i* S	Sn	23 16 56.5	+0.6
PEL				AML	AML	23 17 03.8	
	comp=E,5μm,0.3s						
CHNG	**Los Chungos**	**1.81**	**268**	⇓*i* P	Pn	23 16 35.1	0.0
CHNG				*i* S	Sn	23 16 58.8	+0.3
CHNG				AML	AML	23 17 03.8	
	comp=N,796nm,0.9s						
CLCH	**Cerro Calan**	**1.83**	**212**	⇓*i* P	Pn	23 16 36.9	+1.5
CLCH				*i* S	Sn	23 17 01.8	+2.8
CLCH				AML	AML	23 17 06.5	

	comp=N,3μm,0.4s									
CLCH					AML	AML	23 17 07.0			
	comp=N,3μm,0.6s									
YECH	**El Yeso**	**1.91**	**198**	*e*P	Pn	23 16 36.9	+0.4			
YECH				*i* S	Sn	23 17 03.3	+2.4			
YECH				AML	AML	23 17 15.0				
	comp=N,530nm,0.5s									
OVCH	**Ovalle**	**2.00**	**308**	*e*P	Pn	23 16 38.2	+0.5			
OVCH				*e*S	Sn	23 17 04.2	+1.2			
OVCH	**Ovalle**	**2.00**	**308**	*e*P	Pn	23 16 38.2	+0.5			
OVCH				*e*S	Sn	23 17 04.2	+1.2			
OVCH				AML	AML	23 17 10.6				
	comp=N,3μm,0.8s									
PCH	**Pirque**	**2.01**	**208**	*e*P	Pn	23 16 39.8	+1.8			
PCH				*i* S	Sn	23 17 06.1	+2.6			
ANTU	**Antumapu**	**2.02**	**211**	*e*P	Pn	23 16 39.9	+1.9			
ANTU				*i* S	Sn	23 17 07.0	+3.4			
ANTU	**Antumapu**	**2.02**	**211**	*e*P	Pn	23 16 39.9	+1.9			
ANTU				*i* S	Sn	23 17 07.0	+3.4			
ANTU				AML	AML	23 17 13.7				
	comp=N,1μm,0.5s									
RCDM	**Rinconada Maip**	**2.04**	**216**	*e*P	Pn	23 16 39.8	+1.6			
RCDM				*i* S	Sn	23 17 06.9	+2.9			
RCDM	**Rinconada Maip**	**2.04**	**216**	*e*P	Pn	23 16 39.8	+1.6			
RCDM				*i* S	Sn	23 17 06.9	+2.9			
RCDM				AML	AML	23 17 12.1				
	comp=N,1μm,0.2s									
LMEL	**Las Melosas**	**2.11**	**199**	*e*P	Pn	23 16 41.3	+2.0			
LMEL				*i* S	Sn	23 17 09.3	+3.4			
LMEL	**Las Melosas**	**2.11**	**199**	*e*P	Pn	23 16 41.3	+2.0			
LMEL				*i* S	Sn	23 17 09.3	+3.4			
LMEL				AML	AML	23 17 22.1				
	comp=N,480nm,0.0s									
IHA	**Instituto Hidr**	**2.25**	**238**	*e*P	Pn	23 16 41.7	+0.6			
LSCH	**La Serena**	**2.52**	**320**	*e*P	Pn	23 16 46.0	+1.1			
LSCH				*i* S	Sn	23 17 18.1	+2.2			
LSCH	**La Serena**	**2.52**	**320**	*e*P	Pn	23 16 46.0	+1.1			
LSCH				*i* S	Sn	23 17 18.1	+2.2			
LSCH				AML	AML	23 17 24.6				
	comp=N,186nm,0.2s									
LCO	**Las Campanas**	**3.05**	**338**⇓	*i*P	Pn	23 16 54.1	+1.9			
LCO				*i* S	Sn	23 17 32.4	+3.2			

IDC ***06*** *23:26:51.1±6.3, 1266N×8706W, h119km±52km, mb3.2/4, mb1 3.5/5, mb1mx3.3/20, mbtmp3.2/5, Error ellipse: s-maj=53.0km s-min=40.1km az=30.0*

ISCJB ***06*** *23:26:58.4±0.6, 1294N±009×876W±01, h162km±6km, mb3.4/4, Error ellipse: s-maj=24.0km s-min=7.6km az=148.0*

CASC ***06*** *23:26:58.8±1.3, 1292N×8748W, h163km±4km, MD4.0, ML3.2*

ISC 06 23:26:59.1±0.6**, 1295N**±009×**876W**±01**, h160**km±6km**, n45,**
σ0§69/36**, mb3.4/4, 13C-10D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.43**	**320**⇑	*e*P	x	23 27 21.9	+1.6
CRIN	**San Cristobal**	**0.54**	**117**⇑	*e*P	**Pn**	**23 27 22.2**	**+0.5**
CRIN				*e*S	**Sn**	**23 27 39.7**	**+0.7**
TEL3	**Telica 3**	**0.78**	**119**⇓	*e*P	**Pn**	**23 27 23.0**	**-0.1**
BLLM	**Bellamira**	**0.83**	**306**	*e*P	x	23 27 24.6	
VSM	**San Miguel**	**0.85**	**304**⇑	*e*P	x	23 27 25.1	
VSM				*e*S	x	23 27 46.1	
CNGN	**Cerro Negro**	**0.94**	**118**	*e*P	**Pn**	**23 27 22.2**	**-2.1**
CNGN				⇓*e*P		23 27 23.9	
CNGN				*e*S	**Sn**	**23 27 43.7**	**+0.2**
MIRN	**Miramar**	**0.96**	**122**⇑	*e*P	**Pn**	**23 27 24.3**	**-0.1**
CAHU	**Cacacuatique**	**1.04**	**322**⇑	*e*P	x	23 27 26.6	
MOMN	**Momotombo**	**1.12**	**118**⇑	*e*P	**Pn**	**23 27 25.8**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.13**	**14**⇓	*e*P	**Pn**	**23 27 26.5**	**+0.6**
TGUH				*e*S	**Sn**	**23 27 46.9**	**+0.3**
TGUH				*e*S	**Sn**	**23 27 47.8**	**+1.2**
COPN	**Copaltepe**	**1.21**	**129**⇓	*e*P	**Pn**	**23 27 26.1**	**-0.4**
COPN				*e*S	**Sn**	**23 27 46.5**	**-1.1**
COPN				AML	AML	23 27 49.2	
	comp=Z,1μm,0.3s						
CSAN		**1.33**	**125**⇓	*e*P	**Pn**	**23 27 27.8**	**0.0**
APYN	**Apoyeque**	**1.37**	**121**⇓	*e*P	**Pn**	**23 27 27.6**	**-0.4**
SNVI	**San Vicente**	**1.42**	**298**⇑	*e*P	x	23 27 30.0	
XAVN	**Gruta Xavier**	**1.43**	**124**⇑	*e*P	**Pn**	**23 27 28.4**	**-0.3**
HUEN		**1.47**	**114**⇓	*e*P	**Pn**	**23 27 28.9**	**-0.3**
MGAN	**Managua**	**1.50**	**122**⇓	*e*P	**Pn**	**23 27 29.2**	**-0.2**
MGAN				*e*S	**Sn**	**23 27 52.1**	**-0.5**
MGAN				AML	AML	23 27 55.0	
	comp=N,49nm,0.3s						
WILN	**Americas 2**	**1.54**	**120**	*e*P	**Pn**	**23 27 29.5**	**-0.3**
CRUN	**El Crucero**	**1.55**	**128**⇓	*e*P	**Pn**	**23 27 30.2**	**+0.3**
TICN	**Ticuantepe**	**1.57**	**125**⇓	*e*P	**Pn**	**23 27 29.9**	**-0.2**
LFRS	**El Faro**	**1.62**	**295**⇑	*i*P	x	23 27 31.9	
LFRS				*e*S	x	23 27 57.7	
LBRS	**Las Brisas**	**1.66**	**299**	*e*P	x	23 27 32.6	
APON	**Apoyo**	**1.77**	**125**	*e*P	**Pn**	**23 27 32.8**	**+0.5**
BOQS	**Boqueron**	**1.86**	**295**⇑	*e*P	x	23 27 34.8	
SNJE	**San Jose**	**2.20**	**295**	*e*P	x	23 27 38.8	
SBLS	**San Blas**	**2.21**	**294**⇑	*e*P	x	23 27 38.8	
RTR	**El Retiro**	**2.25**	**295**	*e*P	x	23 27 39.3	
CONN	**Concepcion**	**2.33**	**126**⇓	*e*P	**Pn**	**23 27 38.2**	**-0.4**
LIM1	**Limonal**	**3.17**	**135**	*e*P	**Pn**	**23 27 48.7**	**-0.3**
CUI	**Cuipilapa**	**3.25**	**134**	*e*P	**Pn**	**23 27 50.1**	**+0.1**
JCR	**Jicaral**	**3.90**	**142**	*e*P	**Pn**	**23 27 58.1**	**-0.2**
CGA2	**Cerro Gallo 2**	**4.20**	**134**	*e*P	**Pn**	**23 28 02.6**	**+0.5**
PRS1	**Puriscal**	**4.33**	**133**	*e*P	**Pn**	**23 28 04.6**	**+0.8**
URSC	**Urasca**	**4.82**	**130**	*e*P	**Pn**	**23 28 12.3**	**+2.0**
BUS	**Buena Vista**	**5.02**	**132**	*e*P	**Pn**	**23 28 14.2**	**+1.3**
CMIG	**Matias Romero**	**8.20**	**301**	P	**Pn**	**23 28 55.0**	**0.0**
	comp=N,0.7nm,0.3s,baz=134,slow=10,SNR=7.0						
CMIG				S	**Sn**	**23 30 20.9**	**-5.7**
	comp=N,0.8nm,0.3s,baz=358,slow=17,SNR=6.7						
CHI2		**15.94**	**120**⇑	*e*P	Px	23 27 21.9	
LAPE	**La Pedrera**	**16.60**	**107**	*e*P	Px	23 27 46.3	
TXAR	**Lajitas Array**	**22.13**	**320**	P	**P**	**23 31 42.2**	**+0.2**
	comp=N,0.3nm,0.4s,mb3.0,baz=147,slow=10,SNR=7.2						
TKL	**Tuckaleechee C**	**22.87**	**8**	P	**P**	**23 31 47.3**	**-1.3**
	comp=N,6.7nm,0.8s,mb4.1,baz=177,slow=7.4,SNR=6.2						
PDAR	**Pinedale Array**	**35.29**	**331**	P	**P**	**23 33 38.5**	**-0.1**
	comp=N,0.3nm,0.5s,mb3.2,baz=131,slow=9.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**86.39**	**77**	P	**P**	**23 39 18.5**	**-5.6**
	comp=N,0.4nm,1.0s,mb3.1,baz=296,slow=5.1,SNR=3.2						
WRA	**Warramunga Arr**	**139.31**	**254**	PKP	PKPdf	23 46 06.7	-1.3
	comp=N,1.1nm,0.4s,baz=87,slow=1.7,SNR=7.9						
ASAR	**Alice Springs**	**139.36**	**249**	PKP	PKPdf	23 46 06.8	-1.3
	comp=N,0.8nm,0.6s,baz=100,slow=1.8,SNR=12						
CMAR	**Chiang Mai Arr**	**148.15**	**348**	PKPbc	PKPbc	23 46 24.6	-2.3
	comp=N,0.9nm,0.3s,baz=120,slow=6.6,SNR=2.6						

IDC ***06*** *23:28:36.3±1.2, 3177S×17770W, h0km, mb4.2/3, mb1 4.4/5, mb1mx4.1/16, mbtmp4.2/5, ML4.1/2, MS3.5/2, Ms1 3.5/2, ms1mx2.5/22, Error ellipse: s-maj=34.0km s-min=26.7km az=108.0*

NEIC ***06*** *23:28:37.8±3.4, 3178S×17765W, h12km±20km, mb4.7/5, Error ellipse: s-maj=12.3km s-min=8.1km az=107.0*

ISCJB ***06*** *23:28:39.0±0.7, 3178S±005×1777W±01, h33km, mb4.4/6, MS3.4/2, Error ellipse: s-maj=16.2km s-min=7.4km az=9.5*

ISC 06 23:28:41.1±0.7**, 3174S**±005×**1777W**±01**, h35**km**, n29,**
σ0§70/21**, mb4.4/6, MS3.4/2, 1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.49**	**355**	Pn	**Pn**	**23 29 19.0**	**-0.1**
	83nm,0.3s,baz=122,slow=21,SNR=5.7						
RAO				Sn	**Sn**	**23 29 47.8**	**-0.5**
	161nm,0.3s,baz=280,slow=23,SNR=5.6						
URZ	**Urewera**	**7.78**	**212**	Pn	**Pn**	**23 30 30.2**	**-1.6**
	1.5nm,0.3s,baz=314,slow=20,SNR=8.9						
URZ				Sn	**Sn**	**23 31 54.2**	**-4.3**
	3.2nm,0.3s,baz=188,slow=15,SNR=10						
SNZO	**South Karori**	**11.34**	**211**	Pn	**Pn**	**23 31 19.8**	**-0.7**
AFI	**Afiamalu**	**18.56**	**18**	P	**Pn**	**23 32 54.8**	**-0.5**
EIDS	**Eidsvold**	**28.10**	**275**	*e*P	**P**	**23 34 29.5**	**-0.1**
PPT	**Papeete**	**29.08**	**68**	LR	LR	23 43 06.9	
	comp=Z,90nm,21.6s,MS3.4,baz=320,slow=30						
TAU	**Tasmania Unive**	**29.78**	**238**	P	**P**	**23 34 44.1**	**-0.2**
HNR	**Honiara**	**30.39**	**312**	P	**P**	**23 34 50.3**	**+0.4**
	49nm,0.3s,baz=188,slow=7.1,SNR=3.1						
CTA	**Charters Tower**	**34.30**	**281**	*e*P	**P**	**23 35 25.7**	**+1.5**
	4.7nm,0.7s,mb4.5						
CTAO	**Charters Tower**	**34.30**	**281**	*e*P	**P**	**23 35 25.7**	**+1.4**
	15nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**34.46**	**259**	P	**P**	**23 35 26.8**	**+1.2**
	1.4nm,0.6s,mb4.1,baz=109,slow=12,SNR=4.0						
STKA				LR	LR	23 48 37.1	
	comp=Z,75nm,18.1s,MS3.5,baz=198,slow=35						
STKA	**Stephens Creek**	**34.46**	**259**	*e*P	**P**	**23 35 26.4**	**+0.8**
	1.4nm,0.5s,mb4.2						
STKA				LR	LR	23 48 37.1	
PMG	**Port Moresby**	**39.44**	**297**	P	**P**	**23 36 08.1**	**+0.1**
ASAR	**Alice Springs**	**43.33**	**268**	P	**P**	**23 36 39.5**	**-0.4**
	1.7nm,0.5s,mb4.1,baz=107,slow=7.6,SNR=23						
WB2	**Warramunga Arr**	**44.42**	**273**	*e*P	**P**	**23 36 48.3**	**-0.4**
WRAB	**Tennant Creek**	**44.43**	**273**	*e*P	**P**	**23 36 48.7**	**0.0**
	8.4nm,0.6s,mb4.7						
WRAB				*e*		23 37 02.4	
WRA	**Warramunga Arr**	**44.43**	**273**	P	**P**	**23 36 48.8**	**0.0**
	2.3nm,0.4s,mb4.3,baz=114,slow=7.6,SNR=12						
KAKA	**Kakadu**	**49.44**	**281**	*e*P	Px	23 37 18.0	
	3.0nm,0.6s						
QSPA	**South Pole Qui**	**58.37**	**180**	*e*P	**P**	**23 38 33.4**	**+1.2**
	7.1nm,0.8s,mb4.8						
QSPA				*e*	pP	23 38 45.5	+2.6
SYO	**Syowa Base**	**75.87**	**193**⇑	*e*P	**P**	**23 40 24.0**	**+0.6**
PLCA	**Paso Flores**	**81.40**	**133**	P	**P**	**23 40 54.2**	**-0.1**
MKAR	**Makanchi Array**	**118.84**	**309**	PKP	PKPdf	23 47 25.9	+0.6
	0.5nm,1.0s,baz=166,slow=0.4,SNR=4.5						
BVAR	**Borovoye Array**	**127.55**	**315**	PKP	PKPdf	23 47 43.4	+1.6
	0.5nm,0.4s,baz=128,slow=3.4,SNR=6.2						
JOF	**Joensuu**	**143.76**	**338**	*e*p	PKPdf	23 48 10.3	-1.3
	0.5nm,0.4s						
KAF	**Kangasniemi**	**145.90**	**340**	*e*p	PKPdf	23 48 17.1	+1.8
	0.9nm,0.4s						
NOA	**NORSAR Array B**	**150.12**	**351**	PKPbc	PKPbc	23 48 26.7	-0.6
	1.3nm,0.8s,baz=16,slow=6.5,SNR=3.4						
ASF	**Jabal al Asfar**	**150.73**	**280**	PKPbc	PKPbc	23 48 31.2	+1.5
	2.5nm,0.8s,baz=131,slow=5.8,SNR=5.1						
BRTR	**Keskin Array B**	**153.46**	**296**	PKPbc	PKPbc	23 48 36.9	+1.3
	0.8nm,0.5s,baz=122,slow=4.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**161.48**	**178**	PKPab	PKPab	23 49 23.3	+0.3
	0.6nm,0.8s,baz=186,slow=3.3,SNR=5.2						

NEIC 06 23:38:18.7, 4212S×17288E, h59km**, ML4.5**(WEL)**, After WEL., South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.36**	**3**	P	Pn	23 38 28.7	-0.5
THZ				S	Sn	23 38 35.1	-1.6
KHZ	**Kahutara**	**0.57**	**122**	P	Pn	23 38 31.3	-0.1
LTZ	**Lake Taylor**	**0.80**	**214**	P	Pn	23 38 34.5	+0.4
BSWZ	**Blackbirch Sta**	**0.85**	**62**	P	Pn	23 38 34.9	+0.2
DSZ	**Denniston Nort**	**0.89**	**295**	P	Pn	23 38 35.0	-0.2
NNZ	**Nelson**	**0.97**	**23**	P	Pn	23 38 36.0	-0.3
CMWZ	**Cape Campbell**	**1.06**	**70**	P	Pn	23 38 38.2	+0.7
QRZ	**Quartz Range**	**1.32**	**348**	P	Pn	23 38 40.3	-0.6
TCW	**Tory Channel**	**1.38**	**50**	P	Pn	23 38 41.8	0.0
CRLZ	**Canterbury Las**	**1.47**	**187**	P	Pn	23 38 41.9	-1.0
SNZO	**South Karori**	**1.59**	**60**	P	Pn	23 38 44.1	-0.4
MQZ	**McQueen's Vall**	**1.60**	**186**	P	Pn	23 38 43.3	-1.3
MRW	**Makara Radio**	**1.63**	**57**	P	Pn	23 38 44.7	-0.3
WEL	**Wellington**	**1.64**	**60**	P	Pn	23 38 44.9	-0.3
BHW	**Baring Head**	**1.65**	**65**	P	Pn	23 38 44.6	-0.8
WVZ	**Waitaha Valley**	**1.85**	**238**	P	Pn	23 38 48.0	0.0
MSWZ	**Moikau Station**	**1.91**	**69**	P	Pn	23 38 47.6	-1.2
CAW	**Cannon Point**	**1.93**	**59**	P	Pn	23 38 48.3	-0.8
PAWZ	**Paruwai Farm**	**2.04**	**70**	P	Pn	23 38 49.4	-1.3
MTW	**Mount Morrison**	**2.19**	**65**	P	Pn	23 38 51.0	-1.6
MRZ	**Mangatainoka R**	**2.50**	**55**	P	Pn	23 38 55.6	-1.3
FOZ	**Fox Glacier**	**2.76**	**237**	P	Pn	23 38 58.7	-1.7
WAZ	**Wanganui**	**2.85**	**35**	P	Pn	23 39 04.1	+2.4
BFZ	**Birch Farm**	**2.91**	**62**	P	Pn	23 39 01.1	-1.4
NWEZ	**Newall Road**	**2.94**	**15**	P	Pn	23 39 04.4	+1.5
DFE	**Dawson Falls**	**2.94**	**19**	P	Pn	23 39 04.5	+1.6
NEZ	**North Egmont**	**2.99**	**18**	P	Pn	23 39 04.8	+1.2
LBZ	**Lake Benmore**	**3.00**	**220**	P	Pn	23 39 02.6	-1.2
PKE	**Pukeiti**	**3.04**	**16**	P	Pn	23 39 05.7	+1.4
RAEZ	**Rainy Point**	**3.05**	**23**	P	Pn	23 39 05.9	+1.4
TSZ	**Takapari Road**	**3.11**	**50**	P	Pn	23 39 03.7	-1.5
VRZ	**Vera Road**	**3.31**	**26**	P	Pn	23 39 09.3	+1.2
ODZ	**Otahua Downs**	**3.34**	**208**	P	Pn	23 39 07.0	-1.5
WNVZ	**Wahianoa**	**3.47**	**37**	P	Pn	23 39 10.4	+0.2
MOVZ	**Moawhango**	**3.48**	**40**	P	Pn	23 39 09.7	-0.6
FWVZ	**Far West T-bar**	**3.51**	**36**	P	Pn	23 39 11.2	+0.5
TUVZ	**Tukino**	**3.54**	**37**	P	Pn	23 39 11.5	+0.3
WPVZ	**Whakapapa**	**3.55**	**36**	P	Pn	23 39 11.5	+0.3
NGZ	**Ngauruhoe**	**3.59**	**36**	P	Pn	23 39 11.9	0.0
JCZ	**Jackson Bay**	**3.60**	**236**	P	Pn	23 39 10.1	-1.8
TWVZ	**Taurewa**	**3.61**	**33**	P	Pn	23 39 12.3	+0.1
WTVZ	**West Tongariro**	**3.64**	**35**	P	Pn	23 39 12.3	-0.2
KATZ	**Kakaramea**	**3.80**	**35**	P	Pn	23 39 16.4	+1.7
WKZ	**Wanaka**	**3.90**	**225**	P	Pn	23 39 13.5	-2.6
HIZ	**Hauiti**	**3.91**	**23**	P	Pn	23 39 16.7	+0.6
RATZ	**Rangitukua**	**3.92**	**35**	P	Pn	23 39 18.6	+2.2
BKZ	**Black Stump Fm**	**4.03**	**44**	P	Pn	23 39 15.8	-2.1
WATZ	**Wairara**	**4.04**	**34**	P	Pn	23 39 20.9	+2.9
TUZ	**Tuapeka**	**4.49**	**210**	P	Pn	23 39 23.0	-1.2
MLZ	**Mavora Lakes**	**4.70**	**225**	P	Pn	23 39 25.8	-1.1
KNZ	**Kokohu**	**4.79**	**51**	P	Pn	23 39 26.5	-1.7
TOZ	**Tahuroa Road**	**4.83**	**26**	P	Pn	23 39 29.4	+0.7
MWZ	**Matawai**	**5.19**	**45**	P	Pn	23 39 31.3	-2.4
MKAZ	**Moumakai**	**5.30**	**20**	P	Pn	23 39 35.8	+0.5
WTAZ	**Waiatarua**	**5.34**	**15**	P	Pn	23 39 37.1	+1.3
OTAZ	**Otara**	**5.40**	**18**	P	Pn	23 39 37.5	+0.9
MTAZ	**Motutapu**	**5.55**	**17**	P	Pn	23 39 39.2	+0.5
PUZ	**Puketiti**	**5.77**	**47**	P	Pn	23 39 38.9	-2.8
KUZ	**Kuaotunu**	**5.80**	**23**	P	Pn	23 39 42.2	+0.1
MXZ	**Matakaoa Point**	**6.17**	**44**	P	Pn	23 39 45.6	-1.6
WCZ	**Waipu Caves**	**6.27**	**11**	P	Pn	23 39 49.1	+0.5
OUZ	**Omahuta**	**6.91**	**5**	P	Pn	23 39 57.9	+0.6

DHMR ***06*** *23:44:00.9±1.1, 1308N×3938E, h70km±427km, ML4.5*

CSEM ***06*** *23:44:03.8±0.1, 1367N×3989E, h2km, mb4.3/10, Error ellipse: s-maj=3.6km s-min=2.7km az=11.0*

ISCJB ***06*** *23:44:04.7±0.3, 1359N±005×3983E±003, h10km, mb4.1/25, Error ellipse: s-maj=7.6km s-min=4.3km az=5.8*

IDC ***06*** *23:44:04.9±1.4, 1356N×3992E, h0km, mb3.9/14, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, ML4.4/1, Error ellipse: s-maj=32.8km s-min=18.4km az=167.0*

NEIC ***06*** *23:44:06.1±0.2, 1357N×3993E, h10km, mb4.4/10, Error ellipse: s-maj=6.0km s-min=5.1km az=116.0*

ISC 06 23:44:06.5±0.3**, 1358N**±005×**3983E**±003**, h10**km**, n94,**
σ0§97/101**, mb4.1/25, 2D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMRY	**Kamaran Island**	**3.21**	**57**	*i* P	**Pn**	**23 44 58.2**	**+1.2**
KAMRY				AML	AML	23 45 10.8	
	comp=N,2μm,0.6s						
KAMRY				*i* S	**Sn**	**23 45 41.9**	**+6.5**
UDYN	**Al 'Udayn**	**4.04**	**84**⇓	*i*P	**Pn**	**23 45 07.3**	**-1.1**
UDYN				*i* S	**Sn**	**23 45 60.0**	**+4.2**
TRBA	**At Turbah**	**4.19**	**94**	*i* P	**Pn**	**23 45 08.4**	**-2.1**
TRBA				*i* S	**Sn**	**23 46 01.0**	**+1.5**
HAJJ	**Hajjah**	**4.21**	**60**	*i* P	**Pn**	**23 45 11.0**	**+0.2**
HAJJ				*i* S	**Sn**	**23 46 07.4**	**+7.3**
DHBB	**Dhamar BB**	**4.54**	**77**	*i* P	**Pn**	**23 45 15.6**	**+0.4**
DHBB				*i* S	**Sn**	**23 46 12.9**	**+4.8**
LBOS		**5.28**	**86**⇓	*i*P	**Pn**	**23 45 24.5**	**-0.9**
LBOS				*i* S	**Sn**	**23 46 29.1**	**+2.8**
BDHA	**Al Bayda'**	**5.59**	**85**	*i* P	**Pn**	**23 45 28.3**	**-1.4**
BDHA				*i* S	**Sn**	**23 46 36.1**	**+2.0**
MBAR	**Mbarara**	**16.73**	**213**	Pn	**Pn**	**23 48 00.8**	**-0.2**
MBAR	**Mbarara**	**16.73**	**213**	Pn	**Pn**	**23 48 00.9**	**-0.2**
MMAI	**Mount Meron Ar**	**19.76**	**349**	P	**Pn**	**23 48 35.5**	**-2.7**
	comp=N,1.0nm,0.3s,baz=73,slow=6.2,SNR=9.1						
CSS	**Prodhromos**	**22.08**	**346**	*e*P	**P**	**23 49 00.8**	**-0.9**
CSS	**Prodhromos**	**22.08**	**346**	*e*P	**P**	**23 49 00.8**	**-0.9**
BRTR	**Keskin Array B**	**26.60**	**349**	P	**P**	**23 49 46.4**	**+1.4**
	comp=N,1.1nm,0.7s,mb3.5,baz=157,slow=9.9,SNR=4.4						
BRTR	**Keskin Array B**	**26.60**	**349**	P	**P**	**23 49 46.3**	**+1.3**
ANTO	**Ankara**	**26.91**	**348**	*e*P	**P**	**23 49 47.4**	**-0.3**
ANTO	**Ankara**	**26.91**	**348**	*e*P	**P**	**23 49 47.4**	**-0.3**
LSZ	**Lusaka**	**30.90**	**202**	*e*P	**P**	**23 50 23.7**	**+0.3**
LSZ	**Lusaka**	**30.90**	**202**	*e*P	**P**	**23 50 23.7**	**+0.3**
TIP	**Timpagrande**	**32.63**	**326**	*e*P	**P**	**23 50 38.9**	**+0.4**
	comp=N,3.1nm,0.9s,mb4.2						
TIP	**Timpagrande**	**32.63**	**326**	*e*P	**P**	**23 50 38.8**	**+0.3**
	comp=N,3.1nm,0.9s,mb4.2						
KBL	**Kabul**	**33.66**	**47**	P	**P**	**23 50 45.7**	**-1.9**
KBL	**Kabul**	**33.66**	**47**	P	**P**	**23 50 45.7**	**-1.9**
TAM	**Tamanrasset**	**33.78**	**291**	*e*P	**P**	**23 50 49.5**	**+0.7**
TAM	**Tamanrasset**	**33.78**	**291**	*e*P	**P**	**23 50 49.5**	**+0.7**
KEST	**Kesra**	**35.16**	**314**	P	**P**	**23 51 02.8**	**+2.2**
	comp=N,1.6nm,1.0s,mb3.9,baz=279,slow=23,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**37.08**	**274**	*e*P	**P**	**23 51 17.3**	**+0.1**
TOA0	**Torodi Ar. Sit**	**37.08**	**274**	*e*P	**P**	**23 51 17.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**37.08**	**274**	P	**P**	**23 51 17.8**	**+0.6**
	comp=N,0.9nm,0.9s,mb3.6,baz=79,slow=6.9,SNR=6.1						
TORD	**Torodi Ar. Bea**	**37.08**	**274**	P	**P**	**23 51 17.8**	**+0.6**
VSL	**Villasalto**	**37.21**	**320**	*e*P	**P**	**23 51 18.0**	**0.0**
	comp=N,14nm,0.8s,mb4.9						
VSL	**Villasalto**	**37.21**	**320**	*e*P	**P**	**23 51 18.0**	**0.0**
	comp=N,14nm,0.8s,mb4.9						
AKASG	**Malin Array Be**	**38.01**	**349**	P	**P**	**23 51 24.1**	**-0.5**
	comp=N,0.4nm,0.4s,mb3.5,baz=167,slow=7.2,SNR=5.0						
AKASG	**Malin Array Be**	**38.01**	**349**	P	**P**	**23 51 24.1**	**-0.5**
PSZ	**Piszkesteto**	**38.04**	**338**	*e*P	**P**	**23 51 25.0**	**+0.1**
	comp=N,2.3nm,0.6s,mb4.1						
PSZ	**Piszkesteto**	**38.04**	**338**	*e*P	**P**	**23 51 25.0**	**+0.1**
	comp=N,2.3nm,0.6s,mb4.1						
TSUM	**Tsumeb**	**39.26**	**214**	*e*P	**P**	**23 51 35.0**	**-0.4**
	comp=N,1.1nm,0.8s,mb3.6						
TSUM	**Tsumeb**	**39.26**	**214**	*e*P	**P**	**23 51 35.0**	**-0.5**
	comp=N,1.1nm,0.8s,mb3.6						
AKTK	**Aktyubinsk**	**39.63**	**18**	P	**P**	**23 51 38.9**	**+0.7**
AKTK	**Aktyubinsk**	**39.63**	**18**	P	**P**	**23 51 38.9**	**+0.7**
AKTO	**Aktyubinsk**	**39.63**	**18**	P	**P**	**23 51 38.9**	**+0.7**
	comp=N,1.3nm,0.8s,mb3.7,baz=226,slow=12,SNR=5.5						
MORC	**Moravsky Berou**	**40.45**	**338**	*e*P	**P**	**23 51 44.9**	**-0.2**
MORC	**Moravsky Berou**	**40.45**	**338**	*e*P	**P**	**23 51 44.8**	**-0.2**
EKS2	**Erkin-Say**	**41.19**	**39**	*e*P	**P**	**23 51 51.2**	**0.0**
EKS2	**Erkin-Say**	**41.19**	**39**	*e*P	**P**	**23 51 51.2**	**0.0**
GERES	**GERESS Array B**	**41.24**	**334**	P	**P**	**23 51 52.2**	**+0.7**
	comp=N,1.3nm,0.6s,mb3.7,baz=130,slow=7.2,SNR=11						
BNI	**Bardonecchia**	**42.12**	**325**	*e*P	**P**	**23 51 59.0**	**+0.2**
BNI	**Bardonecchia**	**42.12**	**325**	*e*P	**P**	**23 51 59.0**	**+0.1**
SUW	**Suwalki**	**42.42**	**345**	P	**P**	**23 52 01.2**	**+0.1**
SUW	**Suwalki**	**42.42**	**345**	P	**P**	**23 52 01.2**	**+0.1**
TKM2	**Tokmak 2**	**42.45**	**40**	*e*P	**P**	**23 51 59.6**	**-1.9**
	comp=N,4.5nm,1.7s,mb3.8						
TKM2	**Tokmak 2

DAGI	**Agillar**	**5.15**	**135**	*i* P	**Pn**	**00 21 38.6**	**+0.7**
DAGI				*i* S	**Sn**	**00 22 34.1**	**-2.0**
DDEM	**Demirkent**	**5.21**	**137**	*i* P	**Pn**	**00 21 40.2**	**+1.5**
DDEM				*i* S	**Sn**	**00 22 37.8**	**+0.3**
CDAG	**Cicekdag**	**5.55**	**202**	*i* P	**Pn**	**00 21 45.1**	**+1.8**
CDAG				*i* S	**Sn**	**00 22 42.6**	**-3.2**
GULT	**Gulveren**	**6.51**	**230**	*eP*	**Pn**	**00 21 58.2**	**+1.6**

ATH ***07*** *00:24:29.9, 36°38′N×27°43′E, h78km*
ISCJB ***07*** *00:24:30.7±1.1, 3648N±004×27.1E±0.1, h10km, Error ellipse: s-maj=14.4km s-min=5.3km az=11.5*
DDA ***07*** *00:24:40.1, 3663N×2742E, h4km, Md2.9*
ISC 07 00:24:30.9±1.2, 3646N±004×270E±02, h2km±14km, n6, σ0°84/10, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.69**	**29**	*i* P	**Pg**	**00 24 42.9**	**-1.2**
BDRM				*i* S	**Sg**	**00 24 53.3**	**+0.1**
KARP	**Karpathos**	**0.92**	**173**	P	**Pg**	**00 24 48.2**	**-0.2**
KARP				*e*S	**Sg**	**00 25 01.0**	**+0.8**
ARG	**Arkhangelos**	**0.92**	**105**	P	**Pg**	**00 24 45.0**	**-3.5**
SMG	**Samos**	**1.26**	**353**	P	**Pg**	**00 24 55.0**	**0.0**
GOLH	**Golhisar**	**2.17**	**68**	*i* P	**Pn**	**00 25 07.3**	**-0.8**
GOLH				*i* S	**Sn**	**00 25 36.1**	**+0.5**
MANT	**Manisa**	**2.37**	**30**	*i* P	**Pg**	**00 25 17.2**	**+0.9**
MANT				*i* S	**Sg**	**00 25 47.5**	**+0.6**

ISCJB ***07*** *00:43:15.3±0.7, 2391S±005×6672W±007, h193km±6km, mb3.6/10, Error ellipse: s-maj=10.7km s-min=7.8km az=9.1*
IDC ***07*** *00:43:16.5±1.2, 2386S×6670W, h183km±12km, mb3.3/4, mb1 3.5/9, mb1mx3.4/18, mbtmp3.3/9, Error ellipse: s-maj=17.7km s-min=15.0km az=142.0*
NEIC ***07*** *00:43:16.1±0.7, 2393S×6672W, h186km±6km, mb4.0/9, Error ellipse: s-maj=9.9km s-min=7.1km az=88.0*
ISC 07 00:43:16.0±0.7, 2391S±005×6667W±007, h183km±6km, n40, σ0°92/40, mb3.7/10, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.43**	**302**	P	**Pn**	**00 43 59.4**	**+1.3**
	36nm,0.3s,baz=128,slow=6.0,SNR=232						
LVC				S	**Sn**	**00 44 30.9**	**+0.2**
	39nm,0.3s,baz=265,slow=18,SNR=9.0						
LCO	**Las Campanas**	**6.24**	**215**	*e*Pn	**Pn**	**00 44 44.0**	**-2.1**
	15nm,0.3s						
LPAZ	**La Paz**	**7.70**	**349**	P	**Pn**	**00 45 07.3**	**+1.9**
	0.4nm,0.3s,baz=163,slow=7.4,SNR=7.0						
LPAZ				S	**Sn**	**00 46 31.3**	**-0.8**
	0.1nm,0.3s,baz=58,slow=20,SNR=2.0						
LPAZ	**La Paz**	**7.70**	**349**	P	**Pn**	**00 45 07.3**	**+1.9**
LPAZ				S	**Sn**	**00 46 31.3**	**-0.8**
CFAA	**Coronel Fontan**	**7.79**	**190**	P	**Pn**	**00 45 06.0**	**-0.6**
	0.0nm,0.3s,baz=45,slow=16,SNR=1.7						
CFAA				S	**Sn**	**00 46 28.7**	**-5.4**
	0.5nm,0.3s,baz=167,slow=15,SNR=7.4						
SIV	**San Ignacio**	**9.47**	**35**	P	**Pn**	**00 45 28.9**	**+0.3**
	1.3nm,0.3s,baz=243,slow=12,SNR=43						
SIV				S	**Sn**	**00 47 13.2**	**-1.1**
	0.2nm,0.3s,baz=126,slow=19,SNR=2.4						
PLCA	**Paso Flores**	**17.09**	**190**	P	**Pn**	**00 47 05.2**	**+1.1**
	0.2nm,0.3s,baz=270,slow=6.1,SNR=4.1						
PLCA	**Paso Flores**	**17.09**	**190**	*eP*	**Pn**	**00 47 03.6**	**-0.5**
	16nm,1.7s						
BDFB	**Brasilia**	**19.37**	**68**	P	**P**	**00 47 29.6**	**+1.7**
	0.3nm,0.3s,baz=225,slow=19,SNR=14						
BDFB	**Brasilia**	**19.37**	**68**	*eP*	**P**	**00 47 29.3**	**+1.3**
	4.9nm,0.6s						
OTAV	**Otavalo**	**26.59**	**333**	*eP*	**P**	**00 48 37.4**	**0.0**
	1.8nm,0.9s,mb3.7						
ROSC	**El Rosal**	**29.55**	**344**	*eP*	**P**	**00 49 03.8**	**+0.2**
RCBR	**Riachuelo**	**34.61**	**64**	*eP*	**P**	**00 49 47.4**	**-0.4**
MTP	**Monte Pirata**	**41.76**	**2**	P	**P**	**00 50 47.9**	**+0.5**
TGUH	**Tegucigalpa,Un**	**42.77**	**330**	*eP*	**P**	**00 50 54.9**	**-0.7**
DWPF	**Disney**	**53.64**	**344**	*eP*	**P**	**00 52 17.6**	**-1.0**
OXF	**Oxford**	**61.98**	**339**	P	**P**	**00 53 13.4**	**-3.1**
WVT	**Waverly**	**62.97**	**341**	*eP*	**P**	**00 53 21.6**	**-1.5**
	2.2nm,0.6s,mb4.2						
MIAR	**Mount Ida**	**63.50**	**335**	*eP*	**P**	**00 53 27.2**	**+0.6**
	16nm,1.7s,mb4.6						
TXAR	**Lajitas Array**	**63.78**	**324**	P	**P**	**00 53 28.9**	**+0.3**
	0.1nm,0.4s,mb3.0,baz=156,slow=12,SNR=3.5						
BRNJ	**Basking Ridge**	**64.67**	**353**	*eP*	**P**	**00 53 33.9**	**-0.2**
DBIC	**Dimbokro**	**67.48**	**71**	P	**P**	**00 53 52.5**	**-0.2**
	1.9nm,0.6s,mb4.1,baz=200,slow=12,SNR=3.9						
KSU1	**Kansas State U**	**68.65**	**335**	P	**P**	**00 53 59.5**	**+0.2**
SDCO	**Great Sand Dun**	**71.36**	**328**	*eP*	**P**	**00 54 16.8**	**+0.9**
	0.3nm,0.6s,mb3.2						
TORD	**Torodi Ar. Bea**	**76.25**	**69**	P	**P**	**00 54 44.9**	**+0.1**
	0.7nm,0.5s,mb3.6,baz=257,slow=5.7,SNR=42						
ISA	**Isabella**	**76.88**	**319**	*eP*	**P**	**00 54 48.6**	**+0.7**
	0.7nm,0.5s,mb3.5						
PDAR	**Pinedale Array**	**77.22**	**329**	P	**P**	**00 54 49.1**	**-0.5**
	0.2nm,0.4s,mb3.1,baz=118,slow=7.2,SNR=2.7						
CMB	**Columbia Colle**	**79.60**	**320**	*eP*	**P**	**00 55 03.2**	**+0.4**
	0.7nm,0.4s,mb3.6						
HLID	**Hailey**	**80.17**	**327**	*eP*	**P**	**00 55 05.6**	**-0.1**
MAW	**Mawson**	**81.44**	**163**	*eP*	**P**	**00 55 13.0**	**+0.9**
LBTB	**Lobatse**	**82.15**	**114**	*eP*	**P**	**00 55 17.3**	**+0.6**
WALA	**Waterton Lakes**	**83.96**	**331**	*eP*	**P**	**00 55 25.5**	**+0.2**
ESLA	**Sonseca Array**	**86.12**	**43**	P	**P**	**00 55 34.4**	**-1.9**
LSZ	**Lusaka**	**88.24**	**106**	*eP*	**P**	**00 55 47.8**	**+0.8**
ESK	**Eskdalemuir**	**95.56**	**31**	P	**P**	**00 56 20.0**	**+0.1**
ASAR	**Alice Springs**	**128.67**	**204**	PKP	PKPdf	01 02 01.9	-0.1
	0.7nm,0.8s,baz=140,slow=2.5,SNR=5.7						
WRA	**Warramunga Arr**	**131.85**	**207**	PKP	PKPdf	01 02 08.4	+0.3
	0.4nm,0.3s,baz=161,slow=1.8,SNR=4.2						
WRAB	**Tennant Creek**	**131.85**	**207**	PKPdf	PKPdf	01 02 08.0	-0.1
MKAR	**Makanchi Array**	**146.26**	**40**	PKP	PKPdf	01 02 34.2	+0.8
	1.1nm,0.8s,baz=311,slow=2.5,SNR=8.4						
MKAR				PKPbc	PKPbc	01 02 36.0	+1.2
	1.1nm,0.8s,baz=287,slow=3.8,SNR=8.7						
MKAR	**Makanchi Array**	**146.26**	**40**	PKP	PKPdf	01 02 34.2	+0.8
MKAR				PKPbc	PKPbc	01 02 36.0	+1.2

MAN 07 00:47:52, 1329N×12186E, h22km, mb4.0, ML2.8, MS2.5, Mindoro

ISCJB ***07*** *01:02:06.7±0.5, 5130N±006×1568E±01, h135km±4km, mb3.7/10, Error ellipse: s-maj=13.8km s-min=5.8km az=42.9*
MOS ***07*** *01:02:06.6±1.0, 5146N×15653E, h124km, mb3.7/6, Error ellipse: s-maj=18.0km s-min=9.0km az=62.5*
KRSC ***07*** *01:02:07.6±0.5, 5119N×15736E, h101km±101km, ML4.3*
NEIC ***07*** *01:02:08.4±1.1, 5141N×15691E, h148km±22km, mb3.9/1, Error ellipse: s-maj=53.1km s-min=13.4km az=104.0*
IDC ***07*** *01:02:09.3±1.5, 5140N×15659E, h137km±13km, mb3.4/8, mb1 3.7/10, mb1mx3.5/23, mbtmp3.5/10, Error ellipse: s-maj=24.1km s-min=12.1km az=151.0*
ISC 07 01:02:08.0±0.5, 5132N±006×1568E±01, h130km±4km, n46, σ1°30/57, mb3.7/10, 1D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.77**	**214**	*i* PN	**Pn**	**01 02 28.0**	**-0.8**
SKR				*i* S	**Sn**	**01 02 43.8**	**-0.8**
SKR				pmax	pmax		
	comp=E,410nm,0.4s						
SKR				pmax	pmax		
	comp=Z,1μm,0.4s						
SKR				pmax	pmax		
	comp=N,460nm,0.3s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=E,3μm,0.5s						
MIPR	**Malaya Ipel'ka**	**0.96**	**359**	*eP*	**Pn**	**01 02 30.5**	**0.0**
MIPR				*i* S	**Sn**	**01 02 47.9**	**+0.3**
RUS	**Russkaya**	**1.54**	**43**	*eP*	**Pn**	**01 02 36.1**	**-0.4**
RUS				*i* S	**Sn**	**01 02 56.4**	**-1.9**
PEA0B	**Petropavlovsk-**	**1.88**	**17**	*e*Pn	**Pn**	**01 02 40.6**	**+0.2**
PEA0B				*e*Sn	**Sn**	**01 03 07.1**	**+1.8**
PETK	**Petropavlovsk-**	**1.88**	**17**	P	**Pn**	**01 02 40.9**	**+0.4**
	comp=E,8.5nm,0.3s,baz=171,slow=11,SNR=84						
PETK				S	**Sn**	**01 03 06.9**	**+1.6**
	comp=E,6.0nm,0.3s,baz=170,slow=13,SNR=5.4						
PET	**Petropavlovsk**	**2.06**	**33**	*e*Pn	**Pn**	**01 02 42.3**	**-0.3**
PET				*e*Sn	**Sn**	**01 03 07.5**	**-1.6**
PET	**Petropavlovsk**	**2.06**	**33**	*e*PN	**Pn**	**01 02 42.6**	**0.0**
PET				*e*S	**Sn**	**01 03 09.3**	**+0.2**
PET				pmax	pmax		
	comp=Z,51nm,0.5s						
PET				smax			
	comp=N,297nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
AVH	**Avacha**	**2.29**	**31**	*e*P	**Pn**	**01 02 47.2**	**+1.8**
AVH				*i* S	**Sn**	**01 03 16.5**	**+2.3**
NLC	**Nalytchevo**	**2.43**	**39**	*e*P	**Pn**	**01 02 46.5**	**-0.7**
NLC				*i* S	**Sn**	**01 03 15.1**	**-2.3**
GNL	**Ganaly**	**2.48**	**16**	*e*P	**Pn**	**01 02 48.7**	**+0.8**
SPN	**Mys Shipunski**	**2.67**	**47**	*e*P	**Pn**	**01 02 50.1**	**-0.1**
SPN				*i* S	**Sn**	**01 03 21.1**	**-1.7**
KII	**Karymskiy**	**3.17**	**30**	*e*P	**Pn**	**01 02 56.5**	**-0.2**
MKZ	**Mys Kozlova**	**4.41**	**41**	*e*P	**Pn**	**01 03 12.3**	**-0.8**
MKZ				*i* S	**Sn**	**01 04 00.6**	**-3.0**
TUMR	**Tumrok**	**4.45**	**25**	*e*P	**Pn**	**01 03 15.6**	**+2.0**
KMNR	**Kamenistaya**	**4.90**	**23**	*e*P	**Pn**	**01 03 21.9**	**+2.3**
ZLN	**Zelenaya**	**5.28**	**25**	*e*P	**Pn**	**01 03 26.7**	**+2.0**
KBTR	**Krutoberegovo**	**6.06**	**34**	*e*P	**Pn**	**01 03 34.9**	**-0.3**
KBTR				*i* S	**Sn**	**01 04 40.8**	**-2.5**
ASAJ	**Asahikawa**	**11.96**	**239**	P	**Pn**	**01 04 55.2**	**+1.1**
	comp=Z,2.6nm,0.3s,baz=72,slow=13,SNR=22						
ASAJ	**Asahikawa**	**11.96**	**239**	PN	**Pn**	**01 04 55.2**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
YAK	**Yakutsk**	**18.20**	**317**	*e*P	**P**	**01 06 08.8**	**-1.7**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,1.2s						
MAJO	**Matsushiro**	**19.85**	**229**	*e*P	**P**	**01 06 29.0**	**+0.5**
	comp=E,12nm,0.6s						
MAJO	**Matsushiro**	**19.85**	**229**	*e*P	**P**	**01 06 29.0**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s						
MAT	**Matsushiro**	**19.85**	**229**	P	**P**	**01 06 28.7**	**+0.1**
MJAR	**Matsushiro Arr**	**19.85**	**229**	P	**P**	**01 06 29.1**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=17,slow=12,SNR=12						
MJAR	**Matsushiro Arr**	**19.85**	**229**	P	**P**	**01 06 29.1**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
HIA	**Hailar**	**23.60**	**280**	*e*P	**P**	**01 07 05.3**	**-1.4**
	comp=Z,12nm,0.8s,mb4.5						
HIA	**Hailar**	**23.60**	**280**	*e*P	**P**	**01 07 05.3**	**-1.4**
HIA				pmax	pmax		
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**24.66**	**247**	P	**P**	**01 07 18.0**	**+1.6**
	comp=Z,0.8nm,0.3s,mb3.7,baz=42,slow=8.6,SNR=3.6						
KSRS	**Korea Array**	**24.66**	**247**	P	**P**	**01 07 18.0**	**+1.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
SONM	**Songino Array**	**32.35**	**284**	P	**P**	**01 08 24.4**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.7,baz=69,slow=7.3,SNR=5.1						
SONM	**Songino Array**	**32.35**	**284**	*eP*	**P**	**01 08 25.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**42.03**	**303**	P	**P**	**01 09 44.8**	**-1.3**
	comp=Z,1.0nm,0.5s,mb3.7,baz=64,slow=6.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**42.03**	**303**	P	**P**	**01 09 44.8**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
KURK	**Kurchatov**	**46.94**	**302**	*eP*	**P**	**01 10 23.9**	**-1.3**
	comp=Z,1.8nm,0.6s,mb3.9						
KURK	**Kurchatov**	**46.94**	**302**	*eP*	**P**	**01 10 23.9**	**-1.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
MK31	**Makanchi Array**	**47.09**	**295**	*eP*	**P**	**01 10 25.4**	**-0.9**
MKAR	**Makanchi Array**	**47.09**	**295**	P	**P**	**01 10 25.4**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.4,baz=66,slow=7.3,SNR=9.9						
MKAR	**Makanchi Array**	**47.09**	**295**	P	**P**	**01 10 25.4**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**58.28**	**67**	P	**P**	**01 11 50.5**	**+1.7**
	comp=Z,0.8nm,0.6s,mb3.7,baz=296,slow=6.9,SNR=8.5						
PDAR	**Pinedale Array**	**60.18**	**58**	P	**P**	**01 12 03.5**	**+1.8**
	comp=Z,0.6nm,0.7s,mb3.5,baz=336,slow=3.3,SNR=6.1						
PDAR				pP	pP	01 12 32.9	+0.1
	comp=Z,0.6nm,0.6s,baz=357,slow=3.0,SNR=4.9						
TXAR	**Lajitas Array**	**73.22**	**64**	P	**P**	**01 13 25.8**	**+1.2**
	comp=Z,0.6nm,0.5s,mb3.5,baz=299,slow=5.2,SNR=10						
TXAR				pP	pP	01 13 56.1	-0.6
	comp=Z,0.3nm,0.5s,baz=269,slow=4.2,SNR=5.0						
TXAR	**Lajitas Array**	**73.22**	**64**	P	**P**	**01 13 25.8**	**+1.1**
TXAR				*PP	pP	01 13 56.2	-0.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CLL	**Collm**	**73.25**	**337**	*eP*	**P**	**01 13 23.0**	**-1.4**
WRA	**Warramunga Arr**	**73.64**	**202**	P	**P**	**01 13 26.6**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.3,baz=13,slow=6.0,SNR=2.8						
WRA	**Warramunga Arr**	**73.64**	**202**	P	**P**	**01 13 26.6**	**-0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VAH	**Vaihoa**	**82.00**	**126**	*e*T		01 14 06.5	
	comp=Z,10nm,0.2s						

BJI ***07*** *01:30:21.5, 2794N×8713E, h69km, mB4.7, mb4.1, ML3.5*
NDI ***07*** *01:30:23.4±3.3, 2807N×8699E, h76km, ML3.9, mb3.7(NEIC)*
MOS ***07*** *01:30:24.9±0.8, 2805N×8705E, h84km, mb4.0/8, Error ellipse: s-maj=11.9km s-min=10.8km az=94.8*
DMN ***07*** *01:30:24.7±0.0, 2811N×8710E, h60km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB ***07*** *01:30:24.9±0.3, 2790N±004×8688E±003, h103km±4km, mb3.9/11, Error ellipse: s-maj=6.5km s-min=4.5km az=30.8*
NEIC ***07*** *01:30:25.7±0.4, 2802N×8704E, h76km±6km, mb3.7/5, Error ellipse: s-maj=8.6km s-min=5.6km az=209.0*
IDC ***07*** *01:30:26.1±0.7, 2805N×8698E, h80km±5km, mb3.8/9, mb1 3.9/11, mb1mx3.7/23, mbtmp3.8/11, Error ellipse: s-maj=26.8km s-min=12.1km az=59.0*
ISC 07 01:30:25.5±0.3, 2795N±004×8693E±003, h87km±4km, h81km±2.3km: pP-P, n95, σ1°54/119, mb3.9/11, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**0.72**	**246**	*e*Pg	**Pn**	**01 30 43.3**	**+1.4**
JIRN	**Jiri**	**0.72**	**246**	*e*Pg	**Pn**	**01 30 43.3**	**+1.4**
JIRN				*e*Sg	**Sn**	**01 30 56.4**	**+2.3**
	12μm,0.4s						
TAPN	**Taplejung**	**0.92**	**131**	*e*Pg	**Pn**	**01 30 43.3**	**-0.7**
TAPN				*e*Sg	**Sn**	**01 30 57.0**	**-0.9**
	21μm,0.6s						
TAPN	**Taplejung**	**0.92**	**131**	*e*Pg	**Pn**	**01 30 43.2**	**-0.8**
TAPN				*e*Sg	**Sn**	**01 30 57.0**	**-0.9**
GUN	**Gumba**	**0.93**	**268**	*e*Pg	**Pn**	**01 30 45.6**	**+1.4**
GUN	**Gumba**	**0.93**	**268**	*e*Pg	**Pn**	**01 30 45.6**	**+1.4**
GUN				*e*Sg	**Sn**	**01 31 00.9**	**+2.7**
	5μm,0.3s						
RAMN	**Ramite**	**1.04**	**196**	*e*Pg	**Pn**	**01 30 46.6**	**+1.1**
RAMN				*e*Sg	**Sn**	**01 31 02.7**	**+2.3**
	20μm,0.4s						
RAMN	**Ramite**	**1.04**	**196**	*e*Pg	**Pn**	**01 30 46.5**	**+1.0**
RAMN				*e*Sg	**Sn**	**01 31 02.7**	**+2.3**
ODAN	**Odare**	**1.16**	**159**	*e*Pg	**Pn**	**01 30 47.6**	**+0.7**
ODAN	**Odare**	**1.16**	**159**	*e*Pg	**Pn**	**01 30 47.7**	**+0.8**
ODAN				*e*Sg	**Sn**	**01 31 04.5**	**+1.5**
	13μm,0.4s						
ODAN	**Odare**	**1.16**	**159**	*e*Pg	**Pn**	**01 30 47.7**	**+0.8**
ODAN				*e*Sg	**Sn**	**01 31 04.5**	**+1.5**
PKI	**Pulchoki**	**1.40**	**255**	*e*Pg	**Pn**	**01 30 51.8**	**+2.0**
PKI	**Pulchoki**	**1.40**	**255**	*e*Pg	**Pn**	**01 30 51.9**	**+2.1**
PKI	**Pulchoki**	**1.40**	**255**	*e*P	**Pn**	**01 30 51.9**	**+2.1**
KKN	**Kakani**	**1.47**	**264**	*e*Pn	**Pn**	**01 30 52.3**	**+1.6**
KKN	**Kakani**	**1.47**	**264**	*e*Pn	**Pn**	**01 30 52.4**	**+1.7**
KKN	**Kakani**	**1.47**	**264**	*e*P	**Pn**	**01 30 52.4**	**+1.7**
DMN	**Daman**	**1.65**	**258**	*e*Pn	**Pn**	**01 30 54.8**	**+1.8**
DMN	**Daman**	**1.65**	**258**	*e*Pn	**Pn**	**01 30 54.9**	**+1.9**
DMN	**Daman**	**1.65**	**258**	*e*Pn	**Pn**	**01 30 54.9**	**+1.9**
SLGI	**Shiliguri**	**1.82**	**133**	*i* P	**Pn**	**01 30 54.2**	**-1.0**
SLGI				*i* S	**Sn**	**01 31 13.7**	**-4.1**
GKN	**Gorkha**	**2.03**	**272**	*e*Pn	**Pn**	**01 30 58.9**	**+1.0**
GKN				*e*Sn	**Sn**	**01 31 24.9**	**+2.2**
DANN	**Dangsing**	**2.83**	**279**	*e*Pn	**Pn**	**01 31 08.8**	**+0.2**
DANN				*e*Sn	**Sn**	**01 31 42.2**	**+0.4**
	2μm,0.3s						
KOLN	**Koldanda**	**2.96**	**267**	*e*Pn	**Pn**	**01 31 11.2**	**+0.9**
KOLN				*e*Sn	**Sn**	**01 31 46.1**	**+1.2**
	937nm,0.3s						
LSA	**Lhasa**	**4.09**	**64**	P	**Pn**	**01 31 24.0**	**-1.7**
LSA				Smax			
	comp=N,70nm,0.9s						
LSA				Smax			
	comp=E,130nm,1.1s						
LSA	**Lhasa**	**4.09**	**64**	*e*P	**Pn**	**01 31 24.0**	**-1.7**
BOK	**Bokaro**	**4.25**	**193**	*e*P	**Pn**	**01 31 29.2**	**+1.3**
BOK				*e*S	**Sn**	**01 32 15.6**	**-0.6**
SHL	**Shillong**	**5.03**	**117**	*e*P	**Pn**	**01 31 36.3**	**-2.1**
SHL				*e*S	**Sn**	**01 32 29.6**	**-5.6**
SHL				AML	AML	01 32 29.9	
	comp=E,282nm,0.4s						
SHL				AML	AML	01 32 31.2	
	comp=N,262nm,0.3s						
ALBI	**Allahabad**	**5.29**	**241**	*e*P	**Pn**	**01 31 40.0**	**-2.0**
ALBI				*e*x	x	01 32 40.0	
LGTI	**Lohaghat**	**6.06**	**286**	*e*x	x	01 31 36.7	
LGTI				*e*x	x	01 32 42.5	
PTH	**Pithoragarh**	**6.11**	**287**	*e*P	**Pn**	**01 31 53.0**	**-0.1**
PTH				*e*x	x	01 33 01.5	
JOSI	**Joshimath**	**6.94**	**294**	*e*P	**Pn**	**01 32 03.0**	**-1.6**
JOSI				*e*x	x	01 32 43.7	
IMP	**Imphal**	**7.03**	**115**	*e*P	**Pn**	**01 32 04.0**	**-1.7**
IMP				*i* S	**Sn**	**01 33 14.0**	**-10**
KALG	**Kalgarh**	**7.34**	**284**	*e*S	**Sn**	**01 33 23.1**	**-8.7**
BWNR	**Bhubaneshwar**	**7.69**	**188**	*e*x	**Pn**	**01 32 16.7**	**+1.9**
BWNR				*e*x	x	01 33 39.3	
AGRA	**Agra**	**8.01**	**267**	*e*P	**Pn**	**01 32 18.2**	**-0.9**
AGRA				*e*x	x	01 33 46.3	
DDI	**Dehra Dun**	**8.11**	**289**	*e*P	**Pn**	**01 32 17.6**	**-2.9**
DDI				*e*S	**Sn**	**01 33 43.4**	**-7.2**
KLP	**Kalpa**	**8.35**	**297**	*e*P	**Pn**	**01 32 22.1**	**-1.6**
KLP				*e*S	**Sn**	**01 33 46.9**	**-9.3**
NDI	**New Delhi**	**8.59**	**277**	*e*P	**Pn**	**01 32 24.5**	**-2.5**
NDI				*e*S	**Sn**	**01 33 53.0**	**-9.3**
SMLA	**Simla**	**9.07**	**293**	*i* P	**Pn**	**01 32 31.8**	**-1.8**
SMLA				*i* x	x	01 34 08.9	
KUDL	**Kundal**	**9.23**	**274**	*e*P	**Pn**	**01 32 34.3**	**-1.4**
KUDL				*e*S	**Sn**	**01 34 07.0**	**-11**
SDNR	**Sundarnagar**	**9.35**	**295**	*e*P	**Pn**	**01 32 36.0**	**-1.4**
SDNR				*e*x	x	01 34 14.6	
BHPL	**Bhopal**	**9.78**	**243**	*e*P	**Pn**	**01 32 42.0**	**-1.3**
BHPL				*e*S	**Sn**	**01 34 23.5**	**-7.8**
KHET	**Khetri**	**9.83**	**273**	*e*P	**Pn**	**01 32 42.2**	**-1.8**
KHET				*e*S	**Sn**	**01 34 23.1**	**-9.5**
NGP	**Nagpur**	**9.86**	**228**	*e*x	x	01 32 39.3	
NGP				*e*S	**Sn**	**01 34 24.2**	**-9.2**
DLH	**Dalhousie**	**10.52**	**298**	*e*P	**Pn**	**01 32 50.0**	**-3.3**
DLH				*e*x	x	01 34 45.0	
THN	**Thein Dam**	**10.68**	**297**	*e*P	**Pn**	**01 32 51.5**	**-3.9**
VIS	**Vishakhapatnam**	**10.71**	**199**	*e*P	**Pn**	**01 32 55.5**	**-0.5**
VIS				*e*x	x	01 34 48.2	
AJM	**Ajmer**	**11.04**	**265**	*i* P	**Pn**	**01 32 57.0**	**-3.3**
AJM				*i* x	x	01 34 55.0	
AKL	**Akola**	**11.56**	**234**	*e*P	**Pn**	**01 33 05.3**	**-2.3**
AKL				*e*S	**Sn**	**01 35 05.0**	**-10**
HYB	**Hyderabad**	**13.02**	**218**	*e*P	**Pn**	**01 33 25.5**	**-1.6**
HYB				*e*S	**Sn**	**01 35 34.5**	**-16**
HYB	**Hyderabad**	**13.02**	**218**	*i* P	**Pn**	**01 33 25.5**	**-1.6**
HYB				*e*		01 35 34.5	
HYB				*e*S	**Sn**	**01 35 54.0**	**+3.7**
CHCP	**Chirah Chowk**	**13.05**	**299**	P	**Pn**	**01 33 23.8**	**-3.5**
LATR	**Latur**	**13.45**	**227**	*e*P	**Pn**	**01 33 31.0**	**-1.7**
CEP	**Cherat**	**14.16**	**298**	P	**Pn**	**01 33 38.0**	**-3.9**
CEP				S	**Sn**	**01 36 10.0**	**-7.6**
CHTO	**Chiang Mai**	**14.29**	**127**	*e*P	**Pn**	**01 33 48.1**	**+4.5**
	comp=N,5.1nm,0.9s						
CHTO	**Chiang Mai**	**14.29**	**127**	*e*P	**Pn**	**01 33 48.2**	**+4.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.53**	**128**	P	**Pn**	**01 33 47.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=304,slow=12,SNR=14						
POO	**Poona**	**15.24**	**235**	*e*P	**Pn**	**01 33 54.1**	**-1.8**
POO				*e*x	x	01 36 34.6	
GTA	**Gaotai**	**15.65**	**40**	*e*P	**Pn**	**01 33 55.7**	**-5.2**
GTA				AMB	AMB		

NOA pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 66.10 131 P **P 01 41 05.3 +1.7**
comp=Z,5.8nm,0.5s,mb4.7,baz=325,slow=6.6,SNR=40
WRA pP pP 01 41 26.3 +0.5
comp=Z,0.9nm,0.5s,baz=325,slow=6.5,SNR=2.9
WRA Warramunga Arr 66.10 131 P **P 01 41 05.3 +1.7**
WRA *PP pP 01 41 26.3 +0.5
WRA pmax pmax
comp=Z,6.0nm,0.5s
WRA pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 68.45 134 P **P 01 41 20.1 +1.8**
comp=Z,3.5nm,0.7s,mb4.3,baz=315,slow=6.2,SNR=45
ASAR pP pP 01 41 41.9 +1.2
comp=Z,0.8nm,0.6s,baz=318,slow=5.8,SNR=3.2
ASAR Alice Springs 68.45 134 P **P 01 41 20.2 +1.9**
ASAR *PP pP 01 41 41.9 +1.2
ASAR pmax pmax
comp=Z,4.0nm,0.7s
ASAR pmax pmax
comp=Z,1.0nm,0.6s
STKA Stephens Creek 79.03 135 P **P 01 42 20.8 +0.7**
comp=Z,1.0nm,0.7s,mb3.7,baz=323,slow=4.7,SNR=3.1
STKA Stephens Creek 79.03 135 P **P 01 42 20.8 +0.7**
TORD Torodi Ar. Bea 79.81 279 P **P 01 42 26.4 +1.6**
comp=Z,0.5nm,0.7s,mb3.5,baz=66,slow=4.2,SNR=7.6
TORD pP pP 01 42 47.1 -0.5
comp=Z,1.0nm,0.8s,baz=52,slow=4.3,SNR=4.9

*MDD **07** 01:56:12.4±1.8,3254N×355W,h0km,mb3.5/3,Error ellipse: s-maj=17.6km s-min=7.3km az=113.0,PRIMO*
*CSEM **07** 01:56:13.1,3235N×337W,h30km,MD3.5,After CNRM*
CNRM 07 01:56:13.1,3235N×337W,h30km,MD3.5,Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFT	**Errachidia**	**0.89**	**250**	*i* P	Pn	01 56 28.0	-1.6
ZFT				*i* S	Sn	01 56 40.0	-1.4
CZD	**Col de Zad**	**1.57**	**296**	*i* P	Pn	01 56 37.5	-1.4
CZD				*i* S	Sn	01 56 56.0	-2.1
TZK	**Tazeka**	**1.86**	**339**	*i* P	Pn	01 56 42.0	-1.0
TZK				*i* S	Sn	01 57 03.0	-2.5
MIF	**Mishlifen**	**1.89**	**305**	*i* P	Pn	01 56 41.5	-1.8
MIF				*i* S	Sn	01 57 03.0	-3.1
KIB	**El Ksiba**	**2.27**	**276**	*i* P	Pn	01 56 48.0	-0.5
KIB				*i* S	Sn	01 57 13.0	-2.4
TZC	**Tazercounte**	**2.65**	**266**	*e*P	Pn	01 56 52.0	-1.8
TZC				*i* S	Sn	01 57 21.0	-3.9
EMIN	**Mina Concepcio** 0.2nm,0.1s,SNR=7.9	**6.04**	**334**	P	Pn	01 57 38.8	-1.6
EGRO	**El Granado** 0.2nm,0.1s,SNR=7.9	**6.18**	**328**	P	Pn	01 57 39.3	-2.9
EBAD	**Badajoz** 0.1nm,0.1s,SNR=7.9	**7.05**	**336**	P	Pn	01 57 50.6	-3.6

NNC 07 02:12:31.8±43.0,3672N×7087E,h157km±800km,mb2.9, mpv3.7,1C-2D,Error ellipse: s-maj=579.1km s-min=268.3km az=38.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 7.1nm,0.3s,baz=180,slow=13,SNR=318	**6.38**	**358**	P	Pn	02 14 04.0	+0.6
KK31				⇓S	Sn	02 15 15.9	+0.6
TKM2	**Tokmak 2** 1.8nm,0.3s,baz=185,slow=23,SNR=9.8	**7.18**	**29**	⇓P	Pn	02 14 13.8	-0.2
AB02	**Akbulak array** 0.5nm,0.3s	**14.84**	**331**	⇑P	Pn	02 15 53.8	+0.1

*ISCJB **07** 02:27:03.6±0.9,232N±0.1×9441E±0.10,h105km±11km, mb3.6/4,Error ellipse: s-maj=21.7km s-min=10.3km az=35.1*
*NEIC **07** 02:27:05.6±0.8,2303N×9422E,h112km±12km,mb3.5/1, Error ellipse: s-maj=30.6km s-min=6.6km az=223.0*
*IDC **07** 02:27:07.6±3.8,2386N×9568E,h108km±40km,mb3.3/3, mb1 3.3/4,mb1mx3.0/22,mbtmp3.1/4,Error ellipse: s-maj=154.3km s-min=21.5km az=60.0*
ISC 07 02:27:05.0±0.8,232N±01×9442E±010,h100km±11km,n20, σ0s82/22,mb3.6/4,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.61**	**344**	*e*P	**Pn**	**02 27 34.0**	**+1.4**
IMP				*e*S	**Sn**	**02 27 52.0**	**-1.5**
SHL	**Shillong**	**3.28**	**316**	*e*PN	**Pn**	**02 27 55.0**	**+0.5**
SHL				*e*SN	**Sn**	**02 28 29.0**	**-3.7**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=324,slow=13,SNR=5.9	**6.36**	**137**	P	**Pn**	**02 28 36.4**	**+0.2**
ODAN	**Odare** 43nm,0.3s	**7.33**	**301**	*e*P	**Pn**	**02 28 49.8**	**+0.5**
TAPN	**Taplejung** 18nm,0.3s	**7.33**	**305**	*e*P	**Pn**	**02 28 49.6**	**+0.3**
RAMN	**Ramite** 26nm,0.3s	**8.00**	**299**	*e*P	**Pn**	**02 28 59.3**	**+0.8**
JIRN	**Jiri** 19nm,0.3s	**8.64**	**302**	*e*P	**Pn**	**02 29 07.7**	**+0.4**
GUN	**Gumba** 14nm,0.2s	**9.01**	**303**	*e*P	**Pn**	**02 29 12.0**	**-0.2**
PKI	**Pulchoki** 11nm,0.2s	**9.22**	**300**	*e*P	**Pn**	**02 29 15.9**	**+0.8**
KKN	**Kakani** 10nm,0.2s	**9.42**	**301**	*e*P	**Pn**	**02 29 17.5**	**-0.3**
DMN	**Daman** 6.7nm,0.2s	**9.48**	**299**	*e*P	**Pn**	**02 29 19.3**	**+0.7**
GKN	**Gorkha** 20nm,0.3s	**10.02**	**300**	*e*P	**Pn**	**02 29 25.7**	**-0.3**
KOLN	**Koldanda** 12nm,0.2s	**10.77**	**297**	*e*P	**Pn**	**02 29 35.6**	**-0.5**
DANN	**Dangsing** 9.9nm,0.2s	**10.87**	**300**	*e*P	**Pn**	**02 29 36.2**	**-1.4**
PYUN	**Piuthan** 6.2nm,0.3s	**11.39**	**298**	*e*P	**Pn**	**02 29 43.5**	**-1.1**
MK31	**Makanchi Array**	**25.46**	**340**	*e*P	**P**	**02 32 24.4**	**+0.9**
MKAR	**Makanchi Array** 0.8nm,0.5s,mb3.4,baz=144,slow=12,SNR=9.8	**25.46**	**340**	P	**P**	**02 32 23.9**	**+0.3**
KURK	**Kurchatov** 0.4nm,0.4s,mb3.4	**30.07**	**340**	P	**P**	**02 32 59.0**	**-5.6**
WRA	**Warramunga Arr** 0.3nm,0.3s,mb3.8,baz=322,slow=7.4,SNR=2.6	**57.95**	**135**	P	**P**	**02 36 46.1**	**-1.1**
ASAR	**Alice Springs** 0.5nm,0.5s,mb3.8,baz=322,slow=7.0,SNR=6.3	**60.37**	**138**	P	**P**	**02 37 03.7**	**-0.2**

*ISK **07** 02:36:53.6,3844N×3908E,h5km,MD2.9*
*DDA **07** 02:36:54.2,3842N×3909E,h7km±4km,Md2.9*
*CSEM **07** 02:36:54.2±0.1,3843N×3912E,h8km,MD2.9,Error ellipse: s-maj=2.5km s-min=2.3km az=17.0*
*ISCJB **07** 02:36:55.0±0.5,3843N±003×3910E±003,h9km±4km, Error ellipse: s-maj=5.2km s-min=4.4km az=5.9*
ISC 07 02:36:55.3±0.5,3843N±003×3909E±003,h7km±4km,n15, σ0s80/24,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.11**	**308**	*i* P	**Pg**	**02 36 57.8**	**+0.2**
ELZG				*i* S	**Sg**	**02 37 00.1**	**+0.8**
SVRC	**Sivrice-ELAZID**	**0.17**	**107**	PG	**Pg**	**02 36 58.2**	**-0.6**
SVRC				SG	**Sg**	**02 37 01.8**	**+0.6**
PTK	**Pertek**	**0.52**	**27**	*e*PG	**Pg**	**02 37 04.1**	**-1.1**
PTK				*e*SG	**Sg**	**02 37 12.8**	**+0.9**
AKCD	**Akcadag**	**0.93**	**262**	*i* P	**Pg**	**02 37 11.9**	**-1.2**
AKCD				*i* S	**Sg**	**02 37 24.3**	**-0.9**
DIYA	**Diyarbakir**	**0.95**	**122**	*i* P	**Pg**	**02 37 13.3**	**-0.3**
DIYA				*i* S	**Sg**	**02 37 26.1**	**+0.1**
URFA	**Urfa**	**1.01**	**192**	*e*PG	**Pg**	**02 37 14.3**	**-0.4**
URFA				*e*SG	**Sg**	**02 37 29.3**	**+1.5**
DARE	**Darende-Malaty**	**1.13**	**298**	*e*PN	**Pn**	**02 37 18.7**	**+1.1**
ATAB	**Bozova**	**1.15**	**214**	*i* P	**Pg**	**02 37 16.9**	**-0.4**
ATAB				*i* S	**Sg**	**02 37 31.9**	**-0.3**
EZC	**Erzincan**	**1.43**	**23**	*e*PN	**Pn**	**02 37 20.5**	**-1.2**
GZT	**Gaziantep**	**1.62**	**229**	*i* P	**Pn**	**02 37 24.0**	**-0.2**
GZT				*i* S	**Sn**	**02 37 45.2**	**-0.1**
MARD	**Mardin**	**1.74**	**129**	*i* P	**Pn**	**02 37 25.4**	**-0.4**
MARD				*i* S	**Sn**	**02 37 48.5**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.90**	**278**	*e*PN	**Pn**	**02 37 31.2**	**+3.1**
GAZ	**Gaziantep**	**1.95**	**230**	*e*PN	**Pn**	**02 37 29.3**	**+0.5**
KMRS	**Kahramanmaras**	**1.96**	**243**	*e*PN	**Pn**	**02 37 28.9**	**-0.1**
SVSK	**Karacayir**	**2.20**	**313**	*e*PN	**Pn**	**02 37 32.5**	**+0.2**

*ISCJB **07** 02:41:50.1±0.5,1607N±009×47.36W±008,h10km, mb4.3/32,MS3.4/10,Error ellipse: s-maj=12.7km s-min=11.6km az=9.4*
*IDC **07** 02:41:50.1±0.7,1603N×4740W,h0km,mb4.0/10, mb1 4.3/11,mb1mx4.1/22,mbtmp4.1/11,ML4.1/1,MS3.4/10, Ms1 3.4/10,ms1mx3.1/32,Error ellipse: s-maj=21.9km s-min=18.1km az=113.0*
*NEIC **07** 02:41:51.9±0.4,1604N×4735W,h10km,mb4.4/24,Error ellipse: s-maj=8.8km s-min=8.1km az=190.0*
ISC 07 02:41:52.2±0.5,1606N±009×4735W±008,h10km,n48, σ0s72/40,mb4.3/32,MS3.4/10,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz** 0.6nm,0.3s,baz=28,slow=17,SNR=3.5	**17.81**	**253**	P	**Pn**	**02 46 00.5**	**+0.1**
BBTS	**Babate** comp=Z,101nm,19.4s,MS3.5,baz=232,slow=30	**29.74**	**88**	LR	LR	02 56 31.8	
BDFB	**Brasilia** comp=Z,33nm,21.0s,MS3.0,baz=187,slow=35	**31.50**	**181**	LR	LR	03 00 16.7	
OTAV	**Otavalo** 11nm,1.3s,mb4.6	**34.47**	**246**	*e*P	**P**	**02 48 41.0**	**+0.4**
SIV	**San Ignacio** 3.1nm,0.9s,mb4.2,baz=45,slow=9.7,SNR=17	**34.60**	**204**	P	**P**	**02 48 40.6**	**-0.9**
TKL	**Tuckaleechee C** comp=Z,60nm,21.4s,MS3.4,baz=21,slow=30	**37.85**	**308**	LR	LR	03 01 04.0	
LPAZ	**La Paz** 4.6nm,0.8s,mb4.3,baz=24,slow=8.7,SNR=18	**38.12**	**213**	P	**P**	**02 49 12.1**	**+0.5**
LPAZ				LR	LR	03 04 33.8	
LPAZ	**La Paz** 5.4nm,0.8s,mb4.3	**38.12**	**213**	*e*P	**P**	**02 49 11.8**	**+0.2**
LPAZ				LR	LR	03 04 33.8	
ATAH	**Atahualpa** comp=Z,80nm,19.6s,MS3.5,baz=12,slow=36	**38.33**	**236**	LR	LR	03 04 42.1	
WVT	**Waverly** 2.7nm,0.6s,mb4.0	**41.11**	**307**	*e*P	**P**	**02 49 37.0**	**+0.6**
TOA0	**Torodi Ar. Sit**	**47.47**	**87**	*e*P	**P**	**02 50 27.8**	**+0.1**
TORD	**Torodi Ar. Bea** 2.3nm,1.0s,mb4.1,baz=282,slow=6.6,SNR=10.0	**47.47**	**87**	P	**P**	**02 50 28.1**	**+0.4**
TORD				LR	LR	03 07 50.4	
JCT	**Junction City** 2.3nm,0.4s,mb4.6	**49.87**	**296**	*e*P	**P**	**02 50 45.4**	**-0.5**
ULM	**Lac du Bonnet** 3.2nm,0.6s,mb4.4	**51.72**	**322**	*e*P	**P**	**02 50 58.5**	**-1.0**
AMTX	**Amarillo** 9.3nm,1.0s,mb4.7	**51.87**	**302**	*e*P	**P**	**02 51 00.7**	**-0.2**
TXAR	**Lajitas Array** 2.9nm,0.9s,mb4.2,baz=110,slow=7.7,SNR=21	**53.16**	**295**	P	**P**	**02 51 10.4**	**-0.2**
TXAR				LR	LR	03 14 08.5	
SDCO	**Great Sand Dun** 1.2nm,0.8s,mb4.0	**55.27**	**305**	*e*P	**P**	**02 51 26.6**	**+0.7**
ANMO	**Albuquerque** 0.6nm,0.6s,mb3.8	**55.79**	**302**	*e*P	**P**	**02 51 30.1**	**+0.5**
LAZ	**Ladron**	**56.31**	**301**	*e*P	**P**	**02 51 34.5**	**+1.1**
BW06	**Boulder Array** 2.4nm,1.0s,mb4.2	**58.93**	**310**	*e*P	**P**	**02 51 51.7**	**+0.1**
PDAR	**Pinedale Array** 1.1nm,1.0s,mb3.9,baz=108,slow=9.5,SNR=6.4	**58.93**	**310**	P	**P**	**02 51 51.6**	**-0.1**
TUC	**Tucson** 7.6nm,0.9s,mb4.7	**59.31**	**298**	*e*P	**P**	**02 51 54.9**	**+0.4**
LOHW	**Long Hollow** 2.0nm,1.0s,mb4.1	**59.79**	**311**	*e*P	**P**	**02 51 57.3**	**-0.3**
WUAZ	**Wupatki** 2.7nm,0.8s,mb4.3	**59.83**	**302**	*e*P	**P**	**02 51 59.2**	**+1.2**
MOOW	**Moose Ponds** 3.4nm,1.3s,mb4.2	**59.90**	**312**	*e*P	**P**	**02 51 58.0**	**-0.4**
DAU	**Daniels Canyon**	**59.97**	**308**	*e*P	**P**	**02 51 59.6**	**+0.7**
TPAW	**Teton Pass** 1.8nm,0.8s,mb4.2	**60.02**	**311**	*e*P	**P**	**02 51 59.3**	**+0.1**
IMW	**Indian Meadow** 6.8nm,1.1s,mb4.6	**60.06**	**312**	*e*P	**P**	**02 51 59.7**	**+0.2**
RRI2	**Red Ridge** 7.1nm,1.0s,mb4.7	**60.27**	**311**	*e*P	**P**	**02 52 00.8**	**-0.2**
HWUT	**Hardware Ranch** 4.5nm,0.9s,mb4.5	**60.30**	**309**	*e*P	**P**	**02 52 00.7**	**-0.5**
PLCA	**Paso Flores** 1.6nm,0.8s,mb4.1,baz=21,slow=9.1,SNR=4.4	**60.47**	**200**	P	**P**	**02 52 01.3**	**-0.8**
PLCA	**Paso Flores** 2.0nm,0.8s,mb4.2	**60.47**	**200**	*e*P	**P**	**02 52 01.2**	**-0.9**
DUG	**Dugway** 1.7nm,0.7s,mb4.3	**61.15**	**307**	*e*P	**P**	**02 52 06.6**	**-0.3**
HLID	**Hailey** 1.2nm,0.5s,mb4.3	**62.54**	**311**	*e*P	**P**	**02 52 16.0**	**-0.2**
ELK	**Elko** 8.7nm,1.3s,mb4.7	**63.02**	**308**	*e*P	**P**	**02 52 19.9**	**+0.3**
GSC	**Goldstone** 2.3nm,0.6s,mb4.4	**64.27**	**302**	*e*P	**P**	**02 52 28.6**	**+0.8**
NEW	**Newport** 3.6nm,1.2s,mb4.3	**64.75**	**316**	*e*P	**P**	**02 52 29.1**	**-1.6**
NVAR	**Mina Array Bea** 0.7nm,0.7s,mb3.8,baz=80,slow=6.6,SNR=6.4	**65.38**	**305**	P	**P**	**02 52 35.0**	**0.0**
YKA	**Yellowknife Ar** 1.5nm,0.8s,mb4.1,baz=105,slow=7.2,SNR=4.1	**65.41**	**332**	P	**P**	**02 52 33.0**	**-1.8**
YKA				LR	LR	03 21 03.4	
ISA	**Isabella** 7.9nm,1.1s,mb4.7	**65.61**	**302**	*e*P	**P**	**02 52 38.0**	**+1.3**
OD2	**Odessa Site #2**	**65.76**	**315**	*e*P	**P**	**02 52 37.0**	**-0.4**
ARCES	**ARCESS Array B** 2.7nm,0.8s,mb4.2,baz=278,slow=6.3,SNR=5.6	**69.08**	**21**	P	**P**	**02 52 57.4**	**-0.6**
BRTR	**Keskin Array B** 0.6nm,0.7s,mb3.6,baz=248,slow=7.6,SNR=3.5	**73.08**	**53**	P	**P**	**02 53 24.3**	**+1.5**
INK	**Inuvik**	**73.80**	**337**	*e*P	**P**	**02 53 25.7**	**-0.8**
BOSA	**Boshof** comp=Z,23nm,19.8s,MS3.5,baz=165,slow=29	**83.01**	**122**	LR	LR	03 21 39.1	
AKTO	**Aktyubinsk** comp=Z,22nm,19.7s,MS3.6,baz=120,slow=36	**87.23**	**38**	LR	LR	03 33 28.7	
ASAR	**Alice Springs** 0.4nm,0.7s,baz=183,slow=3.6,SNR=4.8	**172.34**	**189**	PKPab	PKPab	03 03 23.6	-2.4
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=156,slow=3.8,SNR=6.0	**175.81**	**202**	PKPab	PKPab	03 03 39.6	-2.0

*ISCJB **07** 03:08:19.9±0.6,684N±006×7295W±005,h174km±6km, mb3.3/4,Error ellipse: s-maj=10.7km s-min=6.3km az=137.7*
*FUNV **07** 03:08:19.7,672N×7322W,h165km,MW3.5*
*IDC **07** 03:08:20.2±2.7,672N×7292W,h167km±29km,mb3.0/4, mb1 3.4/5,mb1mx3.2/19,mbtmp3.1/5,Error ellipse: s-maj=39.5km s-min=25.1km az=36.0*
ISC 07 03:08:21.0±0.6,682N±006×7293W±005,h167km±6km,n21, σ0s93/30,mb3.3/4,6C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**30**	⇑*i*P	**Pn**	**03 08 49.9**	**+0.8**
CAPV				*e*S	**Sn**	**03 09 11.3**	**+0.6**
ROSC	**El Rosal** 17nm,0.3s,baz=322,slow=2.5,SNR=88	**2.40**	**216**	P	**Pn**	**03 09 01.5**	**-0.3**
ROSC				S	**Sn**	**03 09 31.9**	**-1.4**
SOCV	**Socops** 30nm,0.3s,baz=112,slow=14,SNR=16	**2.52**	**55**	⇑*i*P	**Pn**	**03 09 04.7**	**+1.6**
VIGV	**El Vigia**	**2.53**	**38**	*e*P	**Pn**	**03 09 04.3**	**+1.0**
ELDV	**Elorza**	**3.43**	**87**	*e*P	**Pn**	**03 09 15.7**	**+1.4**
VIRV	**Villa del Rosa**	**3.69**	**8**	⇑*i*P	**Pn**	**03 09 16.6**	**-1.1**
VIRV				*e*S	**Sn**	**03 09 59.4**	**-2.6**
QARV	**Quebrada Arrib**	**4.12**	**35**	⇑*i*P	**Pn**	**03 09 24.2**	**+1.0**
QARV				*e*S	**Sn**	**03 10 11.3**	**-0.5**
SANV	**Sanarito**	**4.28**	**51**	*e*P	**Pn**	**03 09 26.2**	**+0.9**
SANV				*e*S	**Sn**	**03 10 14.9**	**-0.7**
CURV	**Curarigua**	**4.32**	**43**	⇑*e*P	**Pn**	**03 09 26.5**	**+0.6**
CURV				*e*S	**Sn**	**03 10 15.8**	**-0.6**
DABV	**Dabajuro**	**4.66**	**29**	*e*P	**Pn**	**03 09 30.7**	**+0.5**
TEPV	**Terepaima**	**4.84**	**50**	*e*P	**Pn**	**03 09 33.6**	**+1.0**
TEPV				*e*S	**Sn**	**03 10 27.8**	**-0.7**
SIQV	**Siquisique**	**4.89**	**39**	⇑*i*P	**Pn**	**03 09 33.6**	**+0.3**
SIQV				*e*S	**Sn**	**03 10 29.5**	**-0.4**
BAUV	**El Baul**	**5.28**	**66**	*e*P	**Pn**	**03 09 38.4**	**+0.1**
BAUV				*e*S	**Sn**	**03 10 38.2**	**-0.7**
CAOV	**Caicara del Or**	**6.58**	**85**	*e*P	**Pn**	**03 09 55.3**	**-0.2**
CAOV				*e*S	**Sn**	**03 11 07.7**	**-2.1**
BIRV	**Birongo**	**7.52**	**61**	*e*P	**Pn**	**03 10 08.5**	**+0.6**
CUPV	**Cœpira**	**7.76**	**65**	*e*P	**Pn**	**03 10 12.0**	**+0.9**
TXAR	**Lajitas Array** 0.3nm,0.5s,mb3.2,baz=124,slow=9.4,SNR=5.5	**36.60**	**312**	P	**P**	**03 15 10.8**	**-0.4**
PDAR	**Pinedale Array** 0.3nm,0.7s,mb3.1,baz=114,slow=9.0,SNR=3.5	**48.19**	**324**	P	**P**	**03 16 45.0**	**+0.6**
YKA	**Yellowknife Ar** 0.9nm,0.6s,mb3.8,baz=133,slow=7.3,SNR=5.5	**63.33**	**340**	P	**P**	**03 18 31.7**	**-0.2**
TORD	**Torodi Ar. Bea** 0.1nm,0.3s,mb3.0,baz=287,slow=6.4,SNR=4.1	**73.55**	**78**	P	**P**	**03 19 35.5**	**-0.8**
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=99,slow=2.7,SNR=6.9	**150.50**	**241**	PKPbc	PKPbc	03 27 52.9	-0.9

MDD 07 03:31:59.0±2.7,3468N×1464W,h0km,mb3.9/10,Error ellipse: s-maj=36.9km s-min=13.3km az=115.0,PRIMO, Madeira Islands region
INMG 07 03:32:04.7±2.4,3487N×1482W,h11km±9km,ML2.5, Error ellipse: s-maj=17.0km s-min=3.9km az=122.0, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFUE	**Fuerteventura** 3.3nm,0.1s,SNR=7.9	**6.05**	**174**	S	Sn	03 34 35.0	-4.6
CFTV	**Fuerteventura** 0.1nm,0.2s,SNR=7.9	**6.27**	**176**	P	Pn	03 33 34.2	+1.6
CFTV				S	Sn	03 34 38.6	-6.4
EGRO	**El Granado** 0.6nm,0.1s,SNR=7.9	**6.45**	**62**	P	Pn	03 33 34.6	-0.6
EGRO				S	Sn	03 34 40.1	-9.4
EGRO	**El Granado** 0.6nm,0.1s,SNR=7.9	**6.45**	**62**	P	Pn	03 33 34.6	-0.5
EGRO				S	Sn	03 34 40.1	-9.3
EOSO	**Osorio** 1.1nm,0.2s,SNR=7.9	**6.64**	**187**	S	Sn	03 34 47.7	-6.4
EGOM	**La Gomera** 1.9nm,0.2s,SNR=7.9	**6.87**	**199**	S	Sn	03 34 50.3	-9.4
EMIN	**Mina Concepcio** 1.1nm,0.1s,SNR=16	**7.13**	**62**	P	Pn	03 33 43.4	-1.1
EMIN				S	Sn	03 34 56.3	-10
EMIN	**Mina Concepcio** 1.1nm,0.1s,SNR=16	**7.13**	**62**	P	Pn	03 33 43.4	-1.2
EMIN				S	Sn	03 34 56.3	-10
EBAD	**Badajoz** 0.4nm,0.1s,SNR=7.9	**7.35**	**54**	P	Pn	03 33 46.0	-1.4
EBAD				S	Sn	03 35 01.0	-11
EBAD	**Badajoz** 0.4nm,0.1s,SNR=7.9	**7.35**	**54**	P	Pn	03 33 46.0	-1.4
EBAD				S	Sn	03 35 01.0	-10
ESPR	**Espera** 2.6nm,0.3s,SNR=8.6	**7.46**	**70**	P	Pn	03 33 48.0	-1.0
ESPR				S	Sn	03 35 06.8	-7.6
ESPR	**Espera** 2.6nm,0.3s,SNR=8.6	**7.46**	**70**	P	Pn	03 33 48.0	-1.1
ESPR				S	Sn	03 35 06.8	-7.6
ECAB	**El Cabril** 0.7nm,0.1s,SNR=7.9	**8.17**	**63**	P	Pn	03 33 58.0	-0.7
ECAB				S	Sn	03 35 22.0	-10
ECAB	**El Cabril** 0.7nm,0.1s,SNR=7.9	**8.17**	**63**	P	Pn	03 33 58.0	-0.7
ECAB				S	Sn	03 35 22.0	-10
EMIJ	**Mijas** 0.1nm,0.1s,SNR=7.9	**8.25**	**74**	P	Pn	03 33 59.0	-0.8
EMIJ				S	Sn	03 35 25.5	-8.2
EADA	**Adamuz** 0.7nm,0.2s,SNR=7.9	**8.82**	**64**	P	Pn	03 34 07.0	-0.7
EADA				S	Sn	03 35 39.5	-8.3
EADA	**Adamuz** 0.7nm,0.2s,SNR=7.9	**8.82**	**64**	P	Pn	03 34 07.0	-0.7
EADA				S	Sn	03 35 39.5	-8.3
ELOB	**Lobios** 0.4nm,0.2s,SNR=7.9	**8.84**	**34**	P	Pn	03 34 05.7	-2.2
ELOB	**Lobios** 0.4nm,0.2s,SNR=7.9	**8.84**	**34**	P	Pn	03 34 05.7	-2.2
ELOB				S	Sn	03 35 32.8	-15
EBAN	**Banos Encina** 0.5nm,0.1s,SNR=7.9	**9.41**	**65**	P	Pn	03 34 14.6	-1.2
EBAN				S	Sn	03 35 55.6	-6.6
EQES	**Quesada** 0.1nm,0.2s,SNR=7.9	**9.85**	**68**	P	Pn	03 34 20.7	-1.1
EQES				S	Sn	03 36 03.7	-9.2
ESDC	**Sonseca Array** 3.1nm,0.2s,baz=244,slow=13,SNR=8.8	**9.86**	**57**	P	Pn	03 34 21.1	-0.9
ESDC				S	Sn	03 36 02.5	-11
ETOB	**Tobarra** 0.1nm,0.2s,baz=242,slow=23,SNR=7.9	**11.23**	**66**	P	Pn	03 34 39.2	-1.4
ETOB				S	Sn	03 36 36.4	-11
	0.1nm,0.1s,SNR=7.9						

*CSEM **07** 03:32:07.8±0.3,3337N×4658E,h32km±3km,ML3.1,Error ellipse: s-maj=9.6km s-min=4.1km az=91.0*
*ISCJB **07** 03:32:08.8±0.9,3319N±004×473E±0.1,h10km,Error ellipse: s-maj=13.4km s-min=4.9km az=17.7*
*KISR **07** 03:32:09.8,3286N×4791E,h33km,ML3.0*
*THR **07** 03:32:10.7±0.3,3348N×4697E,h14km±3km,ML3.1*
ISC 07 03:32:09.8±0.9,3322N±004×472E±01,h10km,n14, σ0s84/23,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.77**	**128**	*e*Pg	**Pg**	**03 32 48.1**	**+4.3**
SHGR				AML	AML	03 33 26.1	
	comp=E,126nm,0.4s						
SHGR				AML	AML	03 33 37.3	
	comp=N,152nm,0.1s						
SNGE	**Sanandaj**	**1.88**	**5**	*e*Pg	**Pn**	**03 32 40.9**	**-1.0**
SNGE				AML	AML	03 33 09.2	
	comp=E,290nm,0.1s						
SNGE				AML	AML	03 33 11.8	
	comp=N,299nm,1.6s						
BHD	**Baghdad**	**2.33**	**272**	*ex*	x	03 32 47.0	
BHD				*ex*	x	03 33 10.0	
BHD				*i* x	x	03 33 13.0	
ASAO	**Ashtian**	**2.73**	**60**	*e*Pn	**Pn**	**03 32 56.7**	**+3.1**
ASAO				*e*Sg	**Sg**	**03 33 37.0**	**-0.4**
ASAO				AML	AML	03 33 54.2	
	comp=N,57nm,0.6s						
ASAO	**Ashtian** SNR=52	**2.73**	**60**	*e*Pn	**Pn**	**03 32 56.7**	**+3.1**
ASAO				*e*Sg	**Sg**	**03 33 37.0**	**-0.4**
	comp=N,57nm,0.6s,SNR=90						
MIB	**Mutribah**	**3.41**	**177**	*e*P	**Pn**	**03 33 03.3**	**+0.3**
MIB				*e*S	**Sn**	**03 33 44.5**	**+1.0**
	comp=N,31nm,0.4s						
MIB	**Mutribah** baz=189	**3.41**	**177**	*e*P	**Pn**	**03 33 03.4**	**+0.3**
MIB				*e*S	**Sn**	**03 33 44.5**	**+1.0**
	baz=189						
MIB				AML	AML	03 33 48.0	
	comp=Z,31nm,0.4s,baz=189						
ZNJK	**Zanjan**	**3.66**	**20**	*e*Pn	**Pn**	**03 33 06.7**	**+0.2**
UMR	**Umm Al-Rimmam**	**3.69**	**172**	*e*P	**Pn**	**03 33 07.2**	**+0.4**
UMR				*e*S	**Sn**	**03 33 49.7**	**-0.7**
UMR	**Umm Al-Rimmam** baz=183	**3.69**	**172**	*e*P	**Pn**	**03 33 07.2**	**+0.4**
UMR				*e*S	**Sn**	**03 33 49.7**	**-0.7**
	baz=183						
UMR				AML	AML	03 33 55.4	
	comp=Z,37nm,0.3s,baz=183						
KBD	**Kabd**	**4.06**	**173**	*e*P	**Pn**	**03 33 12.1**	**+0.2**
KBD				*e*S	**Sn**	**03 33 58.8**	**-0.7**
KBD	**Kabd** baz=183

comp=Z,40nm,0.4s,baz=185

CSEM ***07*** *03:53:25.8±0.4, 3943N×2977W, h0km, MD3.5, Error ellipse: s-maj=10.0km s-min=4.1km az=47.0, After PDA*

PDA 07 03:53:25.8±0.4, 3943N×2977W, h0km, MD3.5, Error ellipse: s-maj=10.0km s-min=4.1km az=47.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**1.19**	**135**	*e*P	Pg	03 53 44.7	-3.8
CALA				*e*S	Sg	03 53 58.9	-5.0
HOR	**Horta**	**1.27**	**135**	*e*P	Pg	03 53 45.9	-4.1
ROSA	**Rosais**	**1.39**	**120**	*e*P	Pg	03 53 47.3	-5.1
ROSA				*e*S	Sg	03 54 03.7	-6.6
PICO	**Pico**	**1.40**	**131**	*e*P	Pn	03 53 47.9	-4.7
PICO				*e*S	Sg	03 54 04.4	-6.4
PMAN	**Manadas**	**1.53**	**121**	*e*P	Pn	03 54 05.4	+11

MOS ***07*** *04:12:33.3±1.3, 982N×12471E, h37km, mb5.3/40, MS4.7/13, Error ellipse: s-maj=12.9km s-min=5.8km az=117.1*

MAN ***07*** *04:12:34, 971N×12449E, h22km, mb5.5, ML4.5, MS4.8*

MAN INTENSITY V - ANDA, JAGNA, GUINDULMAN, DUERO, BOHOL: INTENSITY IV - TAGBILARAN CITY, TALIBON, UBAY, BOHOL, BGY, BANILAD, MANDAUE CITY; INTENSITY III - LOBOC, TUBIGON, BOHOL, LAPU-LAPU CITY, CAGAYAN DE ORO, MAASIN; INTENSITY II - BUTUAN, DIPOLOG, SURIGAO; INTENSITY I - DUMAGUETE CITY, MASBATE.

ISCJB ***07*** *04:12:35.3±0.3, 977N×1002×12462E±002, h51km±2km, mb5.0/100, MS4.6/53, Error ellipse: s-maj=4.0km s-min=3.0km az=156.3*

IDC ***07*** *04:12:37.3±2.5, 981N×12460E, h58km±24km, mb4.4/17, mb1 4.5/21, mb1mx4.5/23, mbtmp4.5/21, ML4.7/4, MS4.5/32, Ms1 4.5/32, ms1mx4.3/41, Error ellipse: s-maj=21.0km s-min=11.3km az=80.0*

BJI ***07*** *04:12:37.0, 962N×12480E, h86km, mB5.1, mb4.9, Ms4.8, Msz4.7*

GCMT ***07*** *04:12:38.7±0.2, 977N×12458E, h27km, MW5.3/95, Moment Tensor Solution. s76,c109; s95,c165; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr 0.44±.02; Mθθ 0.36±.01; Mϕϕ -0.79±.02; Mrθ 0.56±.04; Mθϕ 0.41±.01; Mϕr 0.58±.04; Best double couple: M0 1.12700×10^17 NP1:ϕs128.00000°, δ44.00000°, λ24.00000°. NP2:ϕs21.00000°, δ74.00000°, λ132.00000°. Principal axes: T 1.2030, Plg45.0000°, Azm332.0000°; N -0.1530, Plg40.0000°, Azm186.0000°; P -1.0500, Plg18.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***07*** *04:12:38.7±0.8, 972N×12465E, h72km±7km, mb5.1/46 Error ellipse: s-maj=6.4km s-min=4.1km az=70.0*

NEIC One person died at Mabini. Felt [V PIVS] at Jagna and [IV PIVS] at at Tagbilaran. Felt [V PIVS] at Hibok-Hibok, Camiguin. Felt [IV PIVS] at Mandaue City and [III PIVS] at Lapu-Lapu City, Cebu. Felt [III PIVS] at Cagayan de Oro and [II PIVS] at Butuan, Dipolog, Manucan and Surigao, Mindanao. Felt [III PIVS] at Maasin, Leyte and at Dumaguete, Negros. Also felt at Sagay and Talisay, Luzon.

DJA ***07*** *04:13:20.5±0.0, 835N×12393E, h459km, mB5.4/15, Mw(mB)5.2/15, Mwp5.1/14*

ISC 07 04:12:36.6±0.3, 977N±002×12461E±002, h47km±2km, h63km±4.5km:pP-P, n282, σ1§22/286, mb5.0/100, MS4.6/53, 16C-13D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.44**	**34**	*e*P	**Pn**	**04 12 45.9**	**-1.1**
MSLP				*e*S	**Sn**	**04 12 56.3**	**+1.9**
TBP	**Tagbilaran**	**0.74**	**264**	⇓*e*P	**Pn**	**04 12 47.6**	**-3.2**
TBP				*e*S	**Sn**	**04 12 56.2**	**-4.9**
LLP	**Lapu-Lapu**	**0.84**	**311**	⇓*i*P	**Pn**	**04 12 49.5**	**-2.5**
LLP				*e*S	**Sn**	**04 13 01.3**	**-2.1**
SCPH	**Surigao**	**0.87**	**89**	⇓*e*P	**Pn**	**04 12 50.1**	**-2.3**
SCPH				*e*S	**Sn**	**04 13 01.0**	**-3.0**
BUTP	**Butuan**	**1.27**	**128**	*e*P	**Pn**	**04 12 56.7**	**-1.2**
BUTP				*e*S	**Sn**	**04 13 15.3**	**+1.4**
OCLP	**Ormoc**	**1.28**	**360**	*e*P	**Pn**	**04 12 58.2**	**+0.2**
OCLP				*e*S	**Sn**	**04 13 15.8**	**+1.8**
CGP	**Cagayan de Oro**	**1.30**	**176**	⇑*i*P	**Pn**	**04 12 55.7**	**-2.7**
CGP				*i* S	**Sn**	**04 13 13.8**	**-0.9**
SNPH	**Sibulan**	**1.42**	**253**	*e*P	**Pn**	**04 12 58.0**	**-1.9**
PLP	**Palo**	**1.44**	**15**	⇓*i*P	**Pn**	**04 13 01.6**	**+1.4**
PLP				*i* S	**Sn**	**04 13 18.0**	**+0.1**
BUKP	**Musuan**	**1.93**	**167**	*e*P	**Pn**	**04 13 07.1**	**+0.2**
BUKP				*e*S	**Sn**	**04 13 35.1**	**+5.1**
BESP	**Borongan**	**2.00**	**24**	*e*P	**Pn**	**04 13 09.4**	**+1.5**
GUIM	**Jordan**	**2.17**	**293**	*e*P	**Pn**	**04 13 08.8**	**-1.4**
GUIM				*e*S	**Sn**	**04 13 35.9**	**+0.1**
PAGZ	**Pagadian**	**2.26**	**213**	*e*P	**Pn**	**04 13 10.8**	**-0.7**
PAGZ				*e*S	**Sn**	**04 13 29.6**	**-8.6**
BIPH	**Bislig**	**2.34**	**132**	⇓*e*P	**Pn**	**04 13 11.6**	**-1.0**
BIPH				*e*S	**Sn**	**04 13 40.1**	**+0.1**
RCP	**Roxas**	**2.56**	**314**	⇓*e*P	**Pn**	**04 13 14.8**	**-0.8**
RCP				*e*S	**Sn**	**04 13 45.1**	**-0.4**
CNP	**Catarman**	**2.73**	**1**	*e*P	**Pn**	**04 13 18.2**	**+0.3**
KCP	**Kidapawan**	**2.78**	**170**	⇑*e*P	**Pn**	**04 13 18.7**	**0.0**
KCP				*i* S	**Sn**	**04 13 56.5**	**+5.5**
DAV	**Davao City (W)** SNR=68	**2.84**	**160**	P	**Pn**	**04 13 21.5**	**+2.0**
DAV	**Davao City (W)** 164nm,0.3s,baz=66,slow=4.5,SNR=9.8	**2.84**	**160**	P	**Pn**	**04 13 21.2**	**+1.6**
DAV	comp=Z,15μm,19.3s,baz=62,slow=41			LR	LR	04 14 36.4	
DAV	**Davao City (W)**	**2.84**	**160**	*e*Pn	**Pn**	**04 13 21.0**	**+1.5**
KALP	**Kalibo**	**2.93**	**311**	⇑*e*P	**Pn**	**04 13 22.2**	**+1.5**
MATI	**Mati**	**3.24**	**150**	*e*P	**Pn**	**04 13 27.4**	**+2.5**
MATI				*e*S	**Sn**	**04 14 12.2**	**+10**
OTRP	**Odiongan**	**3.62**	**316**	*e*P	**Pn**	**04 13 29.0**	**-1.2**
OTRP				*e*S	**Sn**	**04 14 09.0**	**-2.7**
GSPH	**General Santos**	**3.67**	**175**	⇓*e*P	**Pn**	**04 13 37.7**	**+6.8**
CUYO	**Cuyo Island**	**3.69**	**287**	*e*P	**Pn**	**04 13 30.1**	**-1.1**
PVCP	**Virac**	**3.83**	**353**	*e*P	**Pn**	**04 13 33.2**	**+0.1**
SJMP	**San Jose**	**4.35**	**308**	*e*P	**Pn**	**04 13 40.7**	**+0.5**
BUSP	**Coron**	**4.87**	**298**	*e*P	**Pn**	**04 13 46.6**	**-0.7**
BUSP				*e*S	**Sn**	**04 14 39.9**	**-2.6**
ENPP	**El Nido**	**5.30**	**286**	*e*P	**Pn**	**04 13 52.0**	**-1.2**
LUBP	**Lubang**	**5.81**	**313**	*e*P	**Pn**	**04 14 01.1**	**+0.8**
BALP	**Baler**	**6.63**	**334**	*e*P	**Pn**	**04 14 14.6**	**+3.1**
BATP	**Bataraza**	**6.79**	**262**	*e*P	**Pn**	**04 14 13.6**	**-0.1**
CAUP	**Cauayan**	**7.63**	**339**	*e*P	**Pn**	**04 14 27.2**	**+1.9**
BCPH	**Baguio City Da**	**7.66**	**330**	⇓*i*P	**Pn**	**04 14 26.1**	**+0.5**
YHNB	**Yeheng** 47nm,0.7s	**15.14**	**349**	*e*Pn	**Pn**	**04 16 09.8**	**+2.4**
YHNB				*e*P		04 16 12.5	
KAPI	**Kappang** 357nm,0.8s,SNR=9.7	**15.46**	**198**	P	**Pn**	**04 16 15.3**	**+3.7**
KAPI	**Kappang** SNR=13	**15.46**	**198**	⇑P	**Pn**	**04 16 16.1**	**+4.5**
KAPI	**Kappang** 0.9nm,0.3s,baz=28,slow=8.9,SNR=19	**15.46**	**198**	P	**Pn**	**04 16 13.1**	**+1.5**
KAPI	comp=Z,825nm,21.2s,baz=30,slow=37			LR	LR	04 22 11.5	
KAPI	**Kappang** 48nm,0.8s	**15.46**	**198**	*e*Pn	**Pn**	**04 16 13.2**	**+1.6**
KAPI				*e*P		04 16 15.6	
KAPI	**Kappang** 76nm,1.0s,622nm	**15.46**	**198**	P	**Pn**	**04 16 15.7**	**+4.1**
QZH	**Quanzhou**	**16.14**	**340**	P	**Pn**	**04 16 20.1**	**-0.2**
QZH				S	**Sn**	**04 19 14.0**	**-4.4**
QZH	comp=N,6μm,21.0s			LR	LR		
QZH	comp=E,9μm,18.8s			LR	LR		
QZH	comp=Z,9μm,21.8s			LR	LR		
STKI	**Sintang** comp=Z,260nm,1.2s	**16.24**	**234**	P	**Pn**	**04 16 27.0**	**+5.4**
BBKI	**Banjar Baru** comp=Z,120nm,1.0s,comp=Z,2μm	**16.35**	**217**	P	**Pn**	**04 16 26.7**	**+3.7**
QIZ	**Qiongzhong**	**17.00**	**304**	P	**Pn**	**04 16 31.6**	**+0.5**
QIZ				AP	pP	04 16 47.8	+4.4
QIZ				S	**S**	**04 19 44.2**	**-3.0**
QIZ	comp=Z,868nm,9.4s			AMB	AMB		
QIZ	comp=E,2μm,16.4s			LR	LR		
QIZ	comp=Z,3μm,18.1s			LR	LR		
GZH	**Guangzhou**	**17.08**	**322**	P	**Pn**	**04 16 38.1**	**+6.1**
GZH	comp=N,2μm,18.8s			LR	LR		
GZH	comp=E,2μm,19.1s			LR	LR		
GZH	comp=Z,4μm,19.1s			LR	LR		
JOW	**Kunigami** comp=Z,4.5nm,0.3s,baz=213,slow=12,SNR=8.7	**17.32**	**11**	P	**Pn**	**04 16 36.5**	**+1.4**
JOW	comp=Z,2μm,20.7s,baz=200,slow=35			LR	LR	04 22 35.2	
PBKI	**Pangkalan Bun** comp=Z,178nm,1.0s,comp=Z,4μm	**17.88**	**227**	P	**Pn**	**04 16 43.7**	**+1.7**
KMMI	**Kalianget** comp=Z,273nm,1.0s,comp=Z,3μm	**19.79**	**213**	P	**Pn**	**04 17 05.7**	**+0.8**
BATI	**Baumata** comp=Z,8.0nm,0.3s,baz=237,slow=1.8,SNR=9.2	**19.86**	**183**	P	**Pn**	**04 17 05.5**	**-0.3**
BATI	comp=Z,1μm,20.7s,baz=190,slow=38			LR	LR	04 25 21.4	
BATI	**Baumata** comp=Z,149nm,1.1s,comp=Z,1μm	**19.86**	**183**	P	**Pn**	**04 17 05.7**	**-0.1**
KHKI	**Kahang-Kahang**	**20.12**	**207**	P	**P**	**04 17 06.8**	**+0.1**
GUMO	**Guam** comp=Z,1μm,19.5s,MS4.2,baz=124,slow=33	**20.20**	**77**	LR	LR	04 23 45.4	
TPI	**Tanjungpandan** comp=Z,124nm,1.2s,comp=Z,1μm	**20.98**	**234**	P	**P**	**04 17 17.6**	**+1.6**
SSE	**Sheshan**	**21.46**	**352**	P	**P**	**04 17 22.2**	**+1.2**
SSE				XP	sP	04 17 46.0	+7.8
SSE				S	**S**	**04 21 18.4**	**+1.9**
SSE				XS	sS	04 21 43.6	+8.9
SSE	comp=Z,64nm,0.7s,mb5.1			AMB	AMB		
SSE	comp=Z,344nm,9.2s			AMB	AMB		
SSE	comp=N,794nm,19.7s,MS4.4			LR	LR		
SSE	comp=E,1μm,19.7s,MS4.4			LR	LR		
SSE	comp=Z,2μm,19.7s,MS4.5			LR	LR		
SSE	**Sheshan** comp=Z,64nm,0.7s,mb5.1	**21.46**	**352**	P	**P**	**04 17 22.2**	**+1.2**
SSE				sP	sP	04 17 46.0	+7.8
SSE				S	**S**	**04 21 18.4**	**+1.9**
SSE				sS	sS	04 21 43.6	+8.9
SSE				LR	LR		
KRKI	**Karangkates**	**21.53**	**215**	P	**P**	**04 17 23.8**	**+1.9**
SJI	**Sawahan**	**21.58**	**217**	P	**P**	**04 17 23.9**	**+1.4**
PPBI	**Pangkal Pinang** comp=Z,100nm,1.2s,mb5.1	**21.89**	**238**	P	**P**	**04 17 26.3**	**+0.6**
KKTK	**Khon Kaen** comp=Z,401nm,0.7s,mb6.0	**22.20**	**289**	P	**P**	**04 17 31.0**	**+2.0**
BJII	**Banjamegara**	**22.56**	**222**	P	**P**	**04 17 35.2**	**+2.3**
NJ2	**Nanjing**	**22.81**	**347**	*e*P	**P**	**04 17 36.6**	**+1.2**
NJ2				AP		04 17 53.6	
NJ2				XP	sP	04 18 02.6	+10
NJ2				PP		04 18 09.6	
NJ2				S	**S**	**04 21 36.0**	**-5.3**
NJ2	comp=Z,30nm,1.1s,mb4.6			AMB	AMB		
NJ2	comp=Z,480nm,5.5s			AMB	AMB		
NJ2	comp=N,2μm,18.3s,MS4.7			LR	LR		
NJ2	comp=E,2μm,19.1s,MS4.7			LR	LR		
NJ2	comp=Z,2μm,19.0s,MS4.5			LR	LR		
LEM	**Lembang** comp=Z,230nm,1.0s,comp=Z,2μm,mb5.6	**23.63**	**226**	P	**P**	**04 17 43.7**	**0.0**
GYA	**Guiyang**	**23.75**	**317**	⇓*i*P	**P**	**04 17 46.4**	**+1.7**
GYA				XP	sP	04 18 12.9	+10
GYA				PP		04 18 23.4	
GYA				PCP	PcP	04 21 29.0	+1.4
GYA				S	**S**	**04 21 54.0**	**-2.8**
GYA				XS	sS	04 22 23.5	+6.1
GYA				SS		04 22 50.6	
GYA				SCP	ScP	04 24 59.3	-2.9
GYA				PCS	PcS	04 25 07.9	+0.6
GYA	comp=Z,20nm,0.8s,mb4.6			AMB	AMB		
GYA	comp=Z,130nm,4.2s			AMB	AMB		
GYA	comp=N,3μm,12.6s,MS5.0			LR	LR		
GYA	comp=E,2μm,11.4s,MS5.0			LR	LR		
GYA	comp=Z,2μm,14.8s,MS4.8			LR	LR		
SNG	**Songkhla** comp=Z,100nm,1.0s,mb5.2	**23.87**	**266**	P	**P**	**04 17 46.0**	**+0.1**
CBJI	**Citeko** comp=Z,718nm,1.1s,mb6.0	**23.91**	**228**	P	**P**	**04 17 48.6**	**+2.4**
CBIJ	**Chichi jima** comp=Z,74nm,0.5s,mb5.4,baz=292,slow=16,SNR=5.7	**23.93**	**42**	P	**P**	**04 17 45.5**	**-0.7**
CBIJ	comp=Z,1μm,19.1s,MS4.3,baz=214,slow=33			LR	LR	04 25 54.8	
DBJI	**Dramaga** comp=Z,170nm,1.5s,comp=Z,3μm,mb5.2	**24.07**	**228**	P	**P**	**04 17 49.0**	**+1.3**
SBJI	**Serang** comp=Z,565nm,1.1s,comp=Z,5μm,mb5.9	**24.25**	**230**	P	**P**	**04 17 49.8**	**+0.4**
KSI	**Kapahiang** comp=Z,318nm,0.9s,mb5.8	**25.67**	**240**	P	**P**	**04 18 04.6**	**+2.3**
KMI	**Kunming**	**25.79**	**309**	P	**P**	**04 18 05.2**	**+1.9**
KMI				XP	sP	04 18 30.0	+8.7
KMI				PP		04 18 48.4	
KMI				S	**S**	**04 22 29.4**	**-0.1**
KMI				XS	sS	04 22 56.5	+6.2
KMI				SS		04 23 39.6	
KMI	comp=Z,11nm,1.3s,mb4.2			AMB	AMB		
KMI	comp=Z,166nm,8.0s			AMB	AMB		
KMI	comp=N,1μm,15.6s			LR	LR		
KMI	comp=E,995nm,23.3s			LR	LR		
KMI	comp=Z,1μm,20.2s,MS4.5			LR	LR		
KMI	**Kunming** comp=Z,11nm,1.3s,mb4.2	**25.79**	**309**	P	**P**	**04 18 05.2**	**+1.9**
KMI				pP	pP	04 18 18.4	+2.8
KMI				sP	sP	04 18 30.0	+8.7
KMI				PP		04 18 48.4	
KMI				PPP		04 19 01.3	
KMI				S	**S**	**04 22 29.4**	**-0.1**
KMI				sS	sS	04 22 56.5	+6.2
KMI				SS		04 23 39.6	
KMI				SSS		04 23 57.7	
KMI	comp=Z,1μm,20.2s,MS4.5			LR	LR		
KMI	**Kunming**	**25.79**	**309**	P	**P**	**04 18 05.2**	**+1.9**
KMI				*PP	pP	04 18 18.4	+2.8
KMI						04 18 48.4	
KMI				PPP		04 19 01.3	
KMI				S	**S**	**04 22 29.4**	**-0.1**
KMI				SS		04 23 39.6	
KMI				SSS		04 23 57.7	
KMI	comp=Z,11nm,1.3s,mb4.2			pmax	pmax		
KMI	comp=Z,1μm,20.2s,MS4.5			MLR	MLR		
BDT	**Bhumibol Dam**	**25.96**	**289**	⇓P	**P**	**04 18 06.0**	**+1.1**
PPI	**Padang Panjang** comp=Z,71nm,1.6s,comp=Z,1μm,mb5.0	**26.15**	**249**	P	**P**	**04 18 06.1**	**-0.6**
PDSI	**Padang** comp=Z,173nm,1.0s,mb5.5	**26.28**	**248**	P	**P**	**04 18 10.8**	**+3.0**
CMAR	**Chiang Mai Arr** comp=Z,16nm,1.1s,mb4.5,baz=108,slow=7.0,SNR=25	**26.32**	**292**	P	**P**	**04 18 08.2**	**+0.1**
CMAR	comp=Z,1μm,18.9s,MS4.5,baz=292,slow=36			LR	LR	04 28 36.6	
CHG	**Chiang Mai** comp=Z,16nm,0.8s,mb4.6	**26.42**	**293**	P	**P**	**04 18 09.3**	**+0.3**
CHTO	**Chiang Mai** comp=Z,23nm,1.3s,mb4.5	**26.42**	**293**	*e*P	**P**	**04 18 09.6**	**+0.6**
CHTO	**Chiang Mai** comp=Z,23nm,1.3s,mb4.5	**26.42**	**293**	*e*P	**P**	**04 18 09.6**	**+0.6**
CHTO				pmax	pmax		
JHJ	**Hachijo jima 2** comp=Z,764nm,18.1s,MS4.3,baz=296,slow=33	**27.12**	**29**	LR	LR	04 27 21.5	
KSRS	**Korea Array** comp=Z,11nm,0.7s,mb4.6,baz=186,slow=9.7,SNR=49	**27.73**	**6**	P	**P**	**04 18 20.3**	**-0.3**
KSRS	comp=Z,1μm,19.9s,MS4.4,baz=192,slow=35			LR	LR	04 28 54.6	
XAN	**Xi'an**	**28.12**	**332**	P	**P**	**04 18 23.6**	**-0.6**
XAN				XS	sS	04 23 34.5	+7.5
XAN	comp=Z,12nm,1.0s,mb4.5			AMB	AMB		
XAN	comp=Z,266nm,9.5s			AMB	AMB		
XAN	comp=E,802nm,16.3s			LR	LR		
XAN	comp=Z,1μm,16.9s,MS4.6			LR	LR		
CD2	**Chengdu**	**28.62**	**320**	P	**P**	**04 18 29.5**	**+0.9**
CD2				AP	pP	04 18 45.0	+4.0
CD2				PP	PP	04 19 24.5	-9.3
CD2				PCP	PcP	04 21 37.7	-1.1
CD2				S	**S**	**04 23 13.5**	**-0.4**
CD2				SS	SS	04 24 44.5	-32
CD2				PCS	PcS	04 25 19.7	-1.7
CD2	comp=Z,20nm,0.8s,mb4.9			AMB	AMB		
CD2	comp=Z,340nm,8.4s			AMB	AMB		
CD2	comp=N,2μm,19.2s,MS4.8			LR	LR		
CD2	comp=E,2μm,22.8s,MS4.8			LR	LR		
CD2	comp=Z,2μm,22.7s,MS4.7			LR	LR		
MAT	**Matsushiro**	**29.37**	**23**	P	**P**	**04 18 33.9**	**-1.3**
MAT				S	**S**	**04 23 21.0**	**-4.6**
MJAR	**Matsushiro Arr** comp=Z,3.7nm,0.8s,mb4.2,baz=195,slow=9.4,SNR=10	**29.37**	**23**	P	**P**	**04 18 33.1**	**-2.1**
MJAR	comp=Z,984nm,19.4s,MS4.4,baz=215,slow=34			LR	LR	04 29 07.8	
PMG	**Port Moresby** comp=Z,13nm,0.8s,mb4.7	**29.44**	**130**	*e*P	**P**	**04 18 34.8**	**-1.2**
PMG				*e*pP	pP	04 18 52.2	+3.8
PMG	**Port Moresby**	**29.44**	**130**	*e*P	**P**	**04 18 34.8**	**-1.2**
PMG				*e**PP	pP	04 18 52.2	+3.8
PMG	comp=Z,13nm,0.8s			pmax	pmax		
TIY	**Taiyuan**	**29.91**	**340**	P	**P**	**04 18 45.5**	**+5.5**
TIY	comp=N,1μm,16.1s			LR	LR		
TIY	comp=E,344nm,8.1s			LR	LR		
TIY	comp=Z,2μm,21.3s			LR	LR		
WRAB	**Tennant Creek** comp=Z,100nm,1.5s,mb5.4,SNR=6.5	**31.03**	**162**	P	**P**	**04 18 49.0**	**-1.0**
WRAB	**Tennant Creek** comp=Z,40nm,1.4s,mb5.1	**31.03**	**162**	*e*P	**P**	**04 18 48.9**	**-1.1**
WRAB	**Tennant Creek**	**31.03**	**162**	*e*P	**P**	**04 18 48.9**	**-1.1**
WRAB	comp=Z,40nm,1.4s,mb5.1			pmax	pmax		
WRA	**Warramunga Arr** comp=Z,2.2nm,0.5s,mb4.2,baz=345,slow=9.1,SNR=32	**31.04**	**162**	P	**P**	**04 18 48.7**	**-1.4**
WRA	**Warramunga Arr**	**31.04**	**162**	*i* P	**P**	**04 18 48.9**	**-1.1**
WRA	comp=Z,2.0nm,0.5s			pmax	pmax		
WB2	**Warramunga Arr**	**31.04**	**162**	*e*P	**P**	**04 18 48.9**	**-1.2**
BJT	**Baijiatuau** comp=Z,49nm,0.9s,mb5.3	**31.05**	**347**	*e*P	**P**	**04 18 50.2**	**+0.2**
BJT	**Baijiatuau** comp=Z,49nm,0.9s	**31.05**	**347**	*e*P	**P**	**04 18 50.2**	**+0.2**
BJT				pmax	pmax		
BJI	**Beijing**	**31.07**	**347**	P	**P**	**04 18 50.3**	**+0.1**
BJI				S	**S**	**04 23 52.4**	**+0.2**
BJI	comp=Z,17nm,0.4s,mb5.2			AMB	AMB		
BJI	comp=Z,234nm,3.9s			AMB	AMB		
BJI	comp=N,655nm,18.5s,MS4.4			LR	LR		
BJI	comp=E,667nm,23.4s,MS4.4			LR	LR		
BJI	comp=Z,951nm,20.4s,MS4.5			LR	LR		
MBWA	**Marble Bar** comp=Z,8.3nm,0.5s,mb4.8	**31.10**	**189**	*e*P	**P**	**04 18 49.2**	**-1.4**
SNY	**Shenyang**	**31.95**	**359**	⇑P	**P**	**04 18 58.4**	**+0.6**
SNY				PP	PP	04 20 11.0	+0.3
SNY				S	**S**	**04 24 08.2**	**+2.4**
SNY	comp=Z,17nm,1.7s,mb4.6			AMB	AMB		
SNY	comp=Z,250nm,7.1s			AMB	AMB		
SNY	comp=N,1μm,19.6s,MS4.7			LR	LR		
SNY	comp=E,832nm,17.6s,MS4.7			LR	LR		
SNY	comp=Z,1μm,19.6s,MS4.6			LR	LR		
LZH	**Lanzhou**	**32.29**	**327**	⇑P	**P**	**04 19 03.0**	**+2.1**
LZH				PP	PP	04 20 11.4	-3.2
LZH				PCP	PcP	04 21 50.0	+1.7
LZH				S	**S**	**04 24 15.0**	**+3.7**
LZH				SS	SS	04 26 12.0	-19
LZH	comp=Z,47nm,1.1s,mb5.2			AMB	AMB		
LZH	comp=Z,312nm,6.2s			AMB	AMB		
LZH	comp=N,2μm,13.8s			LR	LR		
LZH	comp=Z,3μm,17.3s,MS5.1			LR	LR		
LZH	**Lanzhou** comp=Z,47nm,1.1s,mb5.2	**32.29**	**327**	⇑P	**P**	**04 19 03.0**	**+2.1**
LZH				pP	pP	04 19 12.5	-0.9
LZH				sP	sP	04 19 16.3	-2.8
LZH				PP	PP	04 20 11.4	-3.2
LZH				PcP	PcP	04 21 50.0	+1.7
LZH				S	**S**	**04 24 15.0**	**+3.7**
LZH				sS	sS	04 24 30.2	-2.1
LZH				SS	SS	04 26 12.0	-19
LZH	comp=Z,3μm,17.3s,MS5.1			LR	LR		
LZH	**Lanzhou**	**32.29**	**327**	⇑P	**P**	**04 19 03.0**	**+2.1**
LZH				*PP	pP	04 19 12.5	-0.9
LZH				*SP	sP	04 19 16.3	-2.8
LZH						04 20 11.4	
LZH						04 21 50.0	
LZH				S	**S**	**04 24 15.0**	**+3.7**
LZH				*SS	sS	04 24 30.2	-2.1
LZH				SS	SS	04 26 12.0	-19
LZH				pmax	pmax		
LZH	comp=Z,47nm,1.1s,mb5.2			MLR	MLR		
LZH	comp=Z,3μm,17.3s,MS5.1						
HHC	**Hu-ho-hao-te**	**33.04**	**342**	*e*P	**P**	**04 19 08.8**	**+1.3**
HHC				AP	pP	04 19 24.9	+4.9
HHC				PP	PP	04 20 21.9	-1.0
HHC				S	**S**	**04 24 23.4**	**+0.5**
HHC				SS	SS	04 26 27.1	-20
HHC				AMB	AMB		
HHC	comp=Z,24nm,1.0s,mb5.1			LR	LR		
HHC	comp=N,2μm,22.6s,MS4.7			LR	LR		
HHC	comp=E,751nm,23.8s,MS4.7			LR	LR		
HHC	comp=Z,2μm,26.2s,MS4.7			LR	LR		
ASAR	**Alice Springs** comp=Z,7.0nm,0.5s,mb4.8,baz=344,slow=7.2,SNR=101	**34.45**	**165**	P	**P**	**04 19 19.2**	**-0.6**
ASAR	comp=Z,1.0nm,0.5s,baz=338,slow=2.1,SNR=2.6			PcP	PcP	04 21 55.9	+1.3
SHL	**Shillong**	**34.79**	**301**	*e*P	**P**	**04 19 22.5**	**-0.3**
SHL				*e*S	**S**	**04 24 50.5**	**+0.2**
MDJ	**Mudanjiang**	**34.99**	**6**	P	**P**	**04 19 25.0**	**+0.7**
MDJ				AP	pP	04 19 41.7	+4.9
MDJ				XP	sP	04 19 50.3	+7.8
MDJ				PP	PP	04 20 45.5	+1.2
MDJ				S	**S**	**04 24 52.0**	**-0.9**
MDJ				XS	sS	04 25 22.4	+8.4
MDJ				SCP	ScP	04 25 34.5	-3.1
MDJ				PCS	PcS	04 25 42.2	-0.2
MDJ				AMB	AMB		
MDJ	comp=Z,27nm,1.8s,mb4.9			AMB	AMB		
MDJ	comp=Z,156nm,7.5s			LR	LR		
MDJ	comp=N,181nm,27.0s						

MDJ LR LR
comp=E,668nm,33.4s
MDJ LR LR
comp=Z,538nm,25.2s,MS4.2
MDJ Mudanjiang 34.99 6 eP **P 04 19 24.0 -0.3**
comp=Z,26nm,1.0s,mb5.1
CTAO Charters Tower 36.52 144 eP **P 04 19 37.9 +0.1**
comp=Z,24nm,1.0s,mb5.0
CTAO Charters Tower 36.52 144 eP **P 04 19 37.9 +0.2**
CTAO pmax pmax
comp=Z,24nm,1.0s,mb5.0
GTA Gaotai 36.89 327 ⇑P **P 04 19 41.3 +0.6**
GTA AP pP 04 19 59.6 +6.3
GTA XP sP 04 20 08.5 +10
GTA PP PP 04 21 10.4 +5.0
GTA S **S 04 25 21.8 -0.4**
GTA XS sS 04 25 53.4 +10
GTA SS SS 04 27 56.6 -8.5
GTA AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
GTA AMB AMB
comp=Z,325nm,4.8s
GTA LR LR
comp=N,2μm,18.0s,MS5.0
GTA LR LR
comp=E,1μm,18.6s,MS5.0
GTA LR LR
comp=Z,2μm,19.2s,MS5.0
LSA Lhasa 37.01 307 eP **P 04 19 44.5 +2.7**
comp=Z,23nm,1.0s,mb5.0
LSA Lhasa 37.01 307 eP **P 04 19 44.5 +2.7**
LSA pmax pmax
comp=Z,23nm,1.0s,mb5.0
ASAJ Asahikawa 37.61 21 LR LR 04 34 49.7
comp=Z,528nm,18.3s,MS4.4,baz=158,slow=36
TAPN Taplejung 38.91 302 eP **P 04 19 58.5 +0.6**
comp=Z,39nm,0.9s,mb5.1
ODAN Odare 39.02 301 eP **P 04 19 59.4 +0.6**
comp=Z,49nm,0.8s,mb5.3
HABR Khabarovsk 39.57 11 eP **P 04 20 00.0 -3.0**
HABR e pP 04 20 13.9 -1.8
HABR e 04 21 55.0
HABR e 04 22 06.2
HABR eS **S 04 26 01.6 -0.7**
HABR e 04 26 18.1
HABR e 04 29 20.1
HABR e 04 30 05.0
HIA Hailar 39.58 355 eP **P 04 20 03.5 +0.4**
comp=Z,9.9nm,0.3s,mb5.0
HIA Hailar 39.58 355 eP **P 04 20 03.5 +0.3**
HIA pmax pmax
comp=Z,10.0nm,0.3s
RAMN Ramite 39.72 301 eP **P 04 20 04.8 +0.2**
KLR Kul'dur 39.79 7 eP **P 04 20 00.0 -4.9**
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.0
KLR MLR MLR
comp=Z,1μm,12.5s,MS4.9
YSS Yuzh-Sakhalins 40.14 19 eP **P 04 20 06.8 -1.0**
YSS Yuzh-Sakhalins 40.14 19 ⇑iP **P 04 20 07.7 -0.1**
YSS eS **S 04 26 10.0 -1.0**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.1
YSS MLR MLR
comp=Z,600nm,18.0s,MS4.5
YSS MLR MLR
comp=N,500nm,19.0s,MS4.5
YSS MLR MLR
comp=E,500nm,18.0s,MS4.5
JIRN Jiri 40.29 302 eP **P 04 20 09.7 +0.3**
comp=E,29nm,0.5s,mb5.2
FORT Forrest 40.45 175 eP **P 04 20 10.2 -0.3**
comp=E,5.6nm,0.6s,mb4.5
GUN Gumba 40.63 302 eP **P 04 20 12.9 +0.7**
comp=E,47nm,0.8s,mb5.2
ULN Ulaanbaatar 40.77 342 eP **P 04 20 13.2 +0.2**
comp=E,9.9nm,0.8s,mb4.5
ULN Ulaanbaatar 40.77 342 eP **P 04 20 13.2 +0.2**
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
PKI Pulchoki 40.92 301 eP **P 04 20 14.7 +0.1**
SONM Songino Array 40.94 341 P **P 04 20 14.5 +0.1**
comp=Z,2.2nm,0.6s,mb4.0,baz=158,slow=9.1,SNR=5.0
SONM LR LR 04 37 58.6
comp=Z,2μm,22.0s,MS4.9,baz=176,slow=37
DMN Daman 41.18 301 eP **P 04 20 16.7 -0.1**
KOLN Koldanda 42.51 301 eP **P 04 20 26.9 -0.7**
comp=Z,20nm,0.7s,mb5.0
DANN Dangsing 42.54 301 eP **P 04 20 27.6 -0.2**
NWAO Narrogin (SRO) 43.03 189 eP **P 04 20 30.9 -0.7**
comp=Z,79nm,1.6s,mb5.2
NWAO Narrogin (SRO) 43.03 189 eP **P 04 20 30.9 -0.7**
NWAO pmax pmax
comp=Z,79nm,1.6s
PYUN Piuthan 43.12 301 eP **P 04 20 32.2 -0.3**
comp=Z,46nm,0.9s,mb5.2
ZAK Zakamensk 44.17 340 eP **P 04 20 38.2 -2.4**
ZAK e 04 22 26.3
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
STKA Stephens Creek 44.48 159 P **P 04 20 43.5 +0.2**
comp=Z,17nm,0.7s,mb4.9,baz=333,slow=7.4,SNR=29
STKA LR LR 04 41 07.4
comp=Z,87nm,20.9s,MS3.7,baz=238,slow=38
STKA Stephens Creek 44.48 159 eP **P 04 20 43.8 +0.4**
comp=Z,27nm,0.8s,mb5.0
TLY Talaya 45.17 342 eP **P 04 20 58.3 +10**
TLY eS **S 04 27 34.7 +10**
TLY pmax pmax
comp=Z,14nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,1μm,22.0s,MS4.8
HYB Hyderabad 45.32 285 eP **P 04 20 50.5 +0.2**
HYB Hyderabad 45.32 285 iP **P 04 20 50.5 +0.2**
MOY Mondy 46.03 340 eP **P 04 20 56.0 +0.7**
MOY pmax pmax
comp=Z,33nm,4.0s
WMQ Urumqi 46.63 323 eP **P 04 21 01.0 +0.8**
WMQ AP pP 04 21 17.0 +3.9
WMQ PP PP 04 22 51.0 +0.6
WMQ S **S 04 27 43.0 -3.0**
WMQ SCS ScS 04 30 47.0 -4.0
WMQ SS SS 04 31 03.0 -10
WMQ AMB AMB
comp=Z,16nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,329nm,5.0s
WMQ LR LR
comp=N,1μm,16.0s,MS5.1
WMQ LR LR
comp=E,1μm,16.0s,MS5.1
WMQ LR LR
comp=Z,1μm,16.0s,MS5.0
CLNS Chul'man 46.96 0 eP **P 04 21 02.0 -0.5**
CLNS e*PP pP 04 21 12.1 -3.4
CLNS e 04 22 34.6
CLNS e 04 22 50.6
CLNS ePPP 04 23 35.1
CLNS eS **S 04 27 51.4 +1.1**
CLNS eSSS 04 32 25.8
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CLNS pmax pmax
comp=E,8.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS smax
comp=E,67nm,11.5s
CLNS smax
comp=N,96nm,14.7s
CLNS MLR MLR
comp=Z,407nm,19.0s,MS4.4
CLNS MLR MLR
comp=E,132nm,17.0s,MS4.3
CLNS MLR MLR
comp=N,252nm,16.0s,MS4.3
BOD Bodaibo 48.63 352 eP **P 04 21 12.7 -2.8**
BOD pmax pmax
comp=Z,7.0nm,2.1s,mb4.3
BOD pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
PETK Petropavlovsk- 50.78 25 P **P 04 21 31.6 -0.3**
comp=Z,8.8nm,0.7s,mb4.8,baz=213,slow=2.8,SNR=8.8
PET Petropavlovsk 51.12 26 eP **P 04 21 34.3 -0.2**
PET Petropavlovsk 51.12 26 eP **P 04 21 41.6 +7.1**
PET eS **S 04 28 57.3 +8.4**
PET pmax pmax
comp=Z,200nm,8.5s
PET pmax pmax
comp=Z,100nm,10.0s
MK31 Makanchi Array 51.45 324 eP **P 04 21 37.1 +0.1**
MKAR Makanchi Array 51.45 324 P **P 04 21 36.6 -0.4**
comp=Z,12nm,0.8s,mb4.9,baz=123,slow=7.5,SNR=58
MKAR LR LR 04 45 12.2
comp=Z,771nm,19.2s,MS4.8,baz=119,slow=38
MKAR Makanchi Array 51.45 324 iP **P 04 21 37.2 +0.2**
MKAR pmax pmax
comp=Z,12nm,0.8s
YAK Yakutsk 52.30 3 eP **P 04 21 43.3 +0.2**
comp=Z,26nm,0.7s,mb5.3
YAK Yakutsk 52.30 3 eP **P 04 21 41.5 -1.6**
YAK e*PP pP 04 21 52.1 -4.1
YAK e 04 22 50.4
YAK eS **S 04 29 01.2 -3.6**
YAK e 04 31 27.7
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,27nm,0.9s,mb5.2
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=Z,22nm,0.4s,mb5.4
YAK pmax pmax
comp=N,4.0nm,0.6s
YAK smax
comp=N,62nm,2.3s
YAK smax
comp=E,40nm,2.2s
YAK MLR MLR
comp=Z,535nm,21.0s,MS4.6
YAK MLR MLR
comp=N,263nm,18.0s,MS4.5
YAK MLR MLR
comp=E,280nm,16.0s,MS4.5
KZA Kyzart 53.81 316 P **P 04 21 56.5 +1.9**
SNR=9.2
TKM2 Tokmak 2 53.90 317 eP **P 04 21 55.7 +0.5**
comp=E,9.5nm,0.8s,mb4.8
TKM2 Tokmak 2 53.90 317 eP **P 04 21 55.7 +0.5**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TKM2 Tokmak 2 53.90 317 P **P 04 21 56.0 +0.8**
SNR=16
KBK Karagaybulak 54.24 316 P **P 04 21 58.8 +1.1**
SNR=8.4
ZAA0 Zalesovo Array 54.29 332 eP **P 04 21 57.0 -0.9**
ZALV Zalesovo Beam 54.29 332 P **P 04 21 56.7 -1.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=115,slow=6.7,SNR=22
ZALV LR LR 04 46 38.5
comp=Z,379nm,18.3s,MS4.5,baz=330,slow=38
UCH Uchtor 54.38 315 eP **P 04 22 00.1 +1.4**
comp=Z,7.2nm,0.9s,mb4.6
USP Ospenovka 54.77 317 P **P 04 22 02.0 +0.4**
SNR=21
AML Almayashu 54.91 315 eP **P 04 22 03.5 +1.0**
comp=Z,25nm,1.1s,mb5.2
EKS2 Erkin-Say 55.04 316 eP **P 04 22 04.1 +0.6**
comp=Z,15nm,0.9s,mb5.0
EKS2 Erkin-Say 55.04 316 P **P 04 22 04.6 +1.0**
SNR=15
KURK Kurchatov 55.57 326 P **P 04 22 07.8 +0.7**
comp=Z,422nm,0.9s,SNR=30
KURK Kurchatov 55.57 326 P **P 04 22 07.4 +0.3**
SNR=36
KURK Kurchatov 55.57 326 eP **P 04 22 07.0 -0.2**
comp=Z,56nm,0.8s,mb5.6
KURK Kurchatov 55.57 326 ⇑iP **P 04 22 06.8 -0.3**
KURK pmax pmax
comp=Z,73nm,0.8s,mb5.8
NVS Novosibirsk 55.58 332 eP **P 04 22 06.2 -0.9**
NVS pmax pmax
comp=Z,55nm,1.7s,mb5.3
NVS pmax pmax
comp=N,34nm,1.8s
NVS pmax pmax
comp=E,41nm,1.8s
KBL Kabul 56.27 305 eP **P 04 22 14.3 +1.8**
comp=E,15nm,0.9s,mb5.0
KBL Kabul 56.27 305 eP **P 04 22 14.3 +1.8**
KBL pmax pmax
comp=Z,15nm,0.9s,mb5.0
KK31 Karatay Array 57.45 315 iP **P 04 22 20.1 -0.6**
VOSK Vostochnaya 60.71 326 P **P 04 22 41.5 -1.5**
VOSK pmax pmax
comp=Z,54nm,1.1s,mb5.6
BVA0 Borovoye Array 61.16 326 P **P 04 22 45.7 -0.4**
BVA0 pmax pmax
comp=Z,26nm,2.2s,mb5.0
BVAR Borovoye Array 61.16 326 LR LR 04 51 01.8
comp=Z,661nm,19.3s,MS4.8,baz=115,slow=38
BRVK Borovoye 61.23 326 P **P 04 22 46.3 -0.3**
comp=Z,236nm,0.8s,SNR=15
BRVK Borovoye 61.23 326 P **P 04 22 46.8 +0.2**
SNR=18
BRVK Borovoye 61.23 326 eP **P 04 22 46.2 -0.4**
comp=Z,55nm,0.8s,mb5.7
BRVK Borovoye 61.23 326 eP **P 04 22 46.2 -0.4**
BRVK pmax pmax
comp=Z,55nm,0.8s,mb5.7
TIXI Tiksi 61.89 2 eP **P 04 22 49.2 -1.5**
comp=Z,8.3nm,0.8s,mb4.9
TIXI Tiksi 61.89 2 eP **P 04 22 48.4 -2.3**
TIXI pmax pmax
comp=Z,14nm,1.4s,mb4.9
BILL Bilibino 64.33 16 eP **P 04 23 06.2 -0.7**
comp=Z,21nm,1.3s,mb5.0
BILL Bilibino 64.33 16 eP **P 04 23 07.1 +0.1**
BILL e 04 23 40.5
BILL pmax pmax
comp=Z,35nm,2.2s,mb5.0
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.3
RAO Raoul Island 67.59 127 LR LR 04 53 17.3
comp=Z,115nm,18.8s,MS4.1,baz=339,slow=36
AKTO Aktyubinsk 67.67 321 LR LR 04 55 33.3
comp=Z,960nm,18.1s,MS5.1,baz=344,slow=38
SVE Sverdlovsk 67.76 328 ⇓eP **P 04 23 29.2 0.0**
SVE eSS SS 04 36 45.2 0.0
SVE pmax pmax
comp=Z,49nm,1.0s,mb5.5
SVE MLR MLR
comp=Z,1μm,20.0s,MS5.0
RPZ Rata Peaks 67.89 145 LR LR 04 55 12.9
comp=Z,274nm,19.6s,MS4.5,baz=302,slow=38
URZ Urewera 68.38 138 LR LR 04 53 25.4
comp=Z,233nm,19.3s,MS4.4,baz=310,slow=36
RBK Rabkut 68.54 285 ⇑P **P 04 23 35.2 +0.4**
SNR=5.1
ARU Arti 68.75 327 eP **P 04 23 34.2 -1.2**
comp=Z,29nm,0.8s,mb5.3
ARU Arti 68.75 327 *d* iP **P 04 23 34.3 -1.1**
ARU eS S 04 32 34.2 -1.0
ARU SS SS 04 36 54.4 -6.1
ARU pmax pmax
comp=Z,24nm,0.7s,mb5.2
ARU MLR MLR
comp=Z,545nm,19.0s,MS4.8
ABTO Aybut 69.42 285 P **P 04 23 40.5 +0.3**
SNR=7.7
MSEY Mahe Island 70.34 261 eP **P 04 23 44.8 -1.3**
comp=Z,31nm,1.4s,mb5.0
RDF Al-Radifah 74.06 297 eP **P 04 24 06.5 -1.6**
baz=297
RDF AMb AMB 04 24 21.5
comp=Z,47nm,1.3s,mb5.3,baz=297
MIB Mutribah 74.21 298 eP **P 04 24 07.7 -1.2**
baz=298
MIB AMb AMB 04 24 08.6
comp=Z,38nm,0.7s,mb5.4,baz=298
NAY Al-Naaiem 74.32 298 eP **P 04 24 07.8 -1.7**
baz=298
NAY AMb AMB 04 24 18.2
comp=Z,31nm,1.3s,mb5.1,baz=298
GNI Garni 76.05 309 eP **P 04 24 20.3 +1.1**
comp=Z,17nm,1.0s,mb4.9
GNI Garni 76.05 309 eP **P 04 24 18.8 -0.4**
GNI pmax pmax
comp=Z,45nm,1.7s
DRV Dumont d'Urvil 77.06 174 PP PP 04 27 06.0 -12
DRV S S 04 34 15.0 +5.9
DRV SS SS 04 39 07.0 -0.3
DRV R 04 50 00.0
KIV Kislovodsk 77.49 313 eP **P 04 24 28.0 +0.7**
comp=Z,19nm,0.7s,mb5.1
KIV Kislovodsk 77.49 313 eP **P 04 24 27.4 +0.1**
KIV pmax pmax
comp=Z,21nm,0.7s,mb5.2
KIV Kislovodsk 77.49 313 ⇑iP **P 04 24 28.1 +0.8**
IMA2 Indian Mountai 77.77 24 eP **P 04 24 28.9 +0.5**
VRHR Novokhopersk 78.07 320 eP **P 04 24 28.7 -1.7**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VRHR pmax pmax
comp=E,10.0nm,0.8s
BPAW Bear Paw Mtn. 78.84 26 eP **P 04 24 34.5 +0.2**
comp=E,60nm,1.5s,mb5.3
KLMR Klimovskoe 79.15 330 eP **P 04 24 34.3 -1.8**
KLMR pmax pmax
comp=Z,55nm,1.4s,mb5.3
VORD Divnogorie 79.55 320 eP **P 04 24 36.5 -2.0**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR Storozhevoye 79.61 320 eP **P 04 24 37.1 -1.7**
VSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.6s
MCK McKinley 79.75 27 eP **P 04 24 38.8 -0.5**
comp=E,26nm,1.1s,mb5.1
MCK McKinley 79.75 27 eP **P 04 24 38.8 -0.5**
MCK pmax pmax
comp=Z,26nm,1.1s,mb5.1
COLA College 80.19 26 eP **P 04 24 41.1 -0.5**
OBN Obninsk 80.95 324 eP **P 04 24 46.5 +0.6**
OBN Obninsk 80.95 324 eP **P 04 24 46.4 +0.5**
OBN *i* 04 24 53.8
OBN *i* 04 27 51.3
OBN pmax pmax
comp=Z,76nm,1.9s,mb5.3
OBN MLR MLR
comp=Z,700nm,19.0s,MS5.0
APA Apatity 81.51 337 ⇓iP **P 04 24 48.0 -0.6**
APA *i* *PP pP 04 25 07.0 +4.5
APA pmax pmax
comp=Z,16nm,1.0s,mb4.9
APA MLR MLR
comp=Z,2μm,22.0s,MS5.5
JOF Joensuu 82.88 333 ep **P 04 24 55.2 -0.7**
comp=Z,1.4nm,0.4s,mb4.3
JOF Joensuu 82.88 333 eP **P 04 24 55.2 -0.7**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
EGAK Eagle 83.05 25 eP **P 04 24 56.9 +0.1**
comp=Z,7.3nm,0.9s,mb4.7
DAWY Dawson 83.91 26 eP **P 04 25 01.8 +0.6**
ARCES ARCESS Array B 84.09 340 P **P 04 25 01.8 -0.2**
comp=Z,4.8nm,0.7s,mb4.7,baz=82,slow=5.2,SNR=24
ARCES LR LR 05 07 41.3
comp=Z,454nm,18.6s,MS4.9,baz=301,slow=39
BRTR Keskin Array B 84.58 309 P **P 04 25 03.8 -1.4**
comp=Z,3.7nm,0.8s,mb4.6,baz=109,slow=4.4,SNR=18
BRTR LR LR 05 10 04.3
comp=Z,161nm,19.2s,MS4.4,baz=269,slow=41
KAF Kangasniemi 85.31 332 ep **P 04 25 07.5 -0.8**
comp=Z,5.7nm,0.9s,mb4.7
KAF Kangasniemi 85.31 332 eP **P 04 25 07.5 -0.8**
KAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
INK Inuvik 85.35 21 eP **P 04 25 07.3 -1.1**
comp=Z,940nm,1.3s
INK Inuvik 85.35 21 eP **P 04 25 07.3 -1.1**
INK pmax pmax
comp=Z,940nm,1.3s
HYT Haines Junctio 85.38 29 eP **P 04 25 09.5 +0.9**
CSS Prodhromos 85.52 305 eP **P 04 25 10.0 0.0**
comp=Z,18nm,0.7s,mb5.4
AKASG Malin Array Be 85.92 321 P **P 04 25 09.6 -2.0**
comp=Z,5.3nm,0.7s,mb4.9,baz=67,slow=4.6,SNR=25
AKASG LR LR 05 08 39.8
comp=Z,260nm,19.6s,MS4.6,baz=45,slow=39
AKASG Malin Array Be 85.92 321 P **P 04 25 09.6 -2.0**
AKASG LR LR 05 08 39.8
AKASG Malin Array Be 85.92 321 iP **P 04 25 10.3 -1.2**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 85.92 321 eP **P 04 25 10.5 -1.0**
KIEV Kiev 85.93 321 eP **P 04 25 10.6 -1.0**
comp=Z,40nm,1.3s,mb5.5
KIEV Kiev 85.93 321 eP **P 04 25 10.6 -1.0**
KIEV pmax pmax
comp=Z,40nm,1.3s,mb5.5
VRI Vrincioaia 86.50 316 ⇓iP **P 04 25 26.5 +2.3**
MAW Mawson 88.67 200 LR LR 05 03 03.0
comp=Z,112nm,21.1s,MS4.3,baz=243,slow=34
SUW Suwalki 88.81 325 eP **P 04 25 27.5 +2.1**
comp=Z,27nm,1.0s,mb5.5
SUW Suwalki 88.81 325 eP **P 04 25 27.5 +2.1**
SUW pmax pmax
comp=Z,27nm,1.0s,mb5.5
PPT Papeete 88.96 108 eS S 04 36 12.0 +0.1
comp=Z,112nm,27.8s
PPT Papeete 88.96 108 eLR LR 04 53 37.1
comp=Z,303nm,25.0s
PPT Papeete 88.96 108 LR LR 04 58 16.9
comp=Z,250nm,21.2s,MS4.6,baz=45,slow=31
MLR Muntele Rosu 89.12 316 ⇑iP **P 04 25 28.8 +1.7**
BURAR Bucovina Array 89.13 318 ⇑iP **P 04 25 29.6 +2.6**
BUR08 Bucovina Ar. S 89.13 318 eP **P 04 25 27.3 +0.2**
TBI Tubuai 90.12 114 eLR LR 04 54 25.9
comp=Z,371nm,28.0s
RES Resolute Bay 92.27 10 eP **P 04 25 41.0 -0.1**
comp=Z,488nm,1.4s
RES Resolute Bay 92.27 10 eP **P 04 25 41.0 -0.1**
RES pmax pmax
comp=Z,488nm,1.4s
NB2 NORSAR Subarra 92.48 333 P **P 04 25 40.7 -1.6**
comp=Z,5.7nm,1.1s,mb4.8,baz=63,slow=5.1
NOA NORSAR Array B 92.48 333 P **P 04 25 40.4 -1.9**
comp=Z,1.4nm,0.8s,mb4.4,baz=63,slow=4.6,SNR=4.8
NOA LR LR 05 10 28.4
comp=Z,612nm,18.3s,MS5.1,baz=65,slow=38
NOA NORSAR Array B 92.48 333 P **P 04 25 40.4 -1.9**
NOA LR LR 05 10 28.4
JMIC Jan Mayen 93.53 346 LR LR 05 14 23.9
comp=Z,142nm,19.1s,MS4.5,baz=55,slow=40
MBAR Mbarara 93.92 270 eP **P 04 25 49.0 -1.0**
comp=Z,0.6nm,0.9s,mb4.0
MBAR Mbarara 93.92 270 eP **P 04 25 49.0 -1.0**
MBAR pmax pmax
comp=Z,1.0nm,0.9s,mb4.2
VRAC Vranov 94.14 321 LR LR 05 09 08.0
comp=Z,235nm,19.5s,MS4.7,baz=187,slow=36
YKA Yellowknife Ar 94.88 24 P **P 04 25 54.3 +1.0**
comp=Z,1.1nm,0.8s,mb4.3,baz=299,slow=4.2,SNR=2.6
YKA LR LR 05 10 57.9
comp=Z,64nm,19.4s,MS4.1,baz=110,slow=37
YKA Yellowknife Ar 94.88 24 P **P 04 25 54.3 +1.0**
YKA LR LR 05 10 57.9
BRG Berggiesshubel 95.17 323 eP pP 04 26 04.4 -4.6
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
BRG MLR MLR
comp=N,287nm,18.6s,MS4.9
BRG MLR MLR
comp=E,216nm,16.4s,MS4.9
BRG MLR MLR
comp=Z,377nm,17.2s,MS4.9
BRG Berggiesshubel 95.17 323 eP pP 04 26 04.4 -4.6
comp=Z,12nm,1.3s
BRG
comp=N,479nm,18.6s
BRG
comp=E,361nm,16.4s
BRG

	comp=Z,630nm,17.2s								
CLL	**Collm**	**95.55**	**324**	*e*P		**P**		**04 25 58.0**	**+1.4**
CLL				MLR		MLR			
	comp=Z,600nm,22.1s,MS5.0								
KHC	**Kasperske Hory**	**96.05**	**322**	*e*P		**P**		**04 25 57.5**	**-1.5**
GERES	**GERESS Array B**	**96.08**	**322**	P		**P**		**04 25 59.0**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.4,baz=63,slow=6.1,SNR=6.2								
GERES				LR		LR		05 13 31.4	
	comp=Z,278nm,19.0s,MS4.8,baz=288,slow=38								
TAOE	**Nuku Hiva Isla**	**96.59**	**98**	*e*PS		PS		04 38 48.8	+2.3
	comp=Z,1µm,27.8s								
TAOE	**Nuku Hiva Isla**	**96.59**	**98**	*e*LR		LR		04 57 10.2	
	comp=Z,2µm,31.3s								
DAVOX	**Davos/Dischmat**	**99.26**	**321**	LR		LR		05 16 30.7	
	comp=Z,397nm,19.9s,MS4.9,baz=268,slow=39								
QSPA	**South Pole Qui**	**99.63**	**180**	LR		LR		05 10 36.9	
	comp=Z,118nm,21.7s,MS4.3,baz=38,slow=35								
RKT	**Rikitea**	**103.29**	**112**	*e*LR		LR		05 00 14.8	
	comp=Z,222nm,28.8s								
NVAR	**Mina Array Bea**	**104.37**	**46**	PKKPbc	PKKPdf			04 42 35.5	+2.5
	comp=Z,0.3nm,0.6s,baz=125,slow=4.7,SNR=3.6								
PDAR	**Pinedale Array**	**108.11**	**39**	PKKPbc	PKKPdf			04 42 33.0	+6.9
	comp=Z,0.7nm,0.8s,baz=134,slow=6.4,SNR=5.2								
TORD	**Torodi Ar. Bea**	**118.93**	**291**	PKP	PKPdf			04 31 19.6	-1.4
	comp=Z,2.2nm,0.7s,baz=73,slow=2.3,SNR=36								
TXAR	**Lajitas Array**	**119.39**	**48**	PKP	PKPdf			04 31 21.7	+0.2
	comp=Z,1.0nm,0.7s,baz=242,slow=0.4,SNR=15								
TXAR				PKKPbc	PKKPbc			04 41 45.7	+12
	comp=Z,0.6nm,0.9s,baz=123,slow=4.6,SNR=5.0								
TXAR	**Lajitas Array**	**119.39**	**48**	PKP	PKPdf			04 31 21.7	+0.2
TXAR				PKKPbc	PKKPbc			04 41 45.7	+12
JCT	**Junction City**	**121.52**	**45**	*e*PKPdf	PKPdf			04 31 25.1	-0.4
WVT	**Waverly**	**125.07**	**32**	*e*PKPdf	PKPdf			04 31 31.5	-0.7
KIC	**Kosan Boka**	**127.06**	**286**	*e*PKIKP	PKPdf			04 31 36.5	-0.1
	comp=Z,51nm,1.3s								
DBIC	**Dimbokro**	**127.08**	**286**	PKP	PKPdf			04 31 36.1	-0.6
	comp=Z,1.7nm,0.6s,baz=2.3,slow=7.9,SNR=4.5								
DBIC	**Dimbokro**	**127.08**	**286**	*e*PKIKP	PKPdf			04 31 35.9	-0.7
TIC	**Toumodi**	**127.24**	**286**	*e*PKIKP	PKPdf			04 31 36.7	-0.2
	comp=Z,12nm,0.5s								
LIC	**Lamto**	**127.37**	**286**	*e*PKIKP	PKPdf			04 31 36.2	-1.0
	comp=Z,33nm,1.3s								
MTP	**Monte Pirata**	**150.55**	**20**	*e*PKPbc	PKPbc			04 32 23.8	-0.3
OTAV	**Otavalo**	**154.99**	**68**	*e*PKPdf	PKPdf			04 32 24.7	-0.7
LPAZ	**La Paz**	**166.00**	**119**	PKP	PKPdf			04 32 37.7	+0.4
	comp=Z,1.3nm,0.8s,baz=233,slow=5.1,SNR=5.4								
LPAZ	**La Paz**	**166.00**	**119**	*e*PKIKP	PKPdf			04 32 37.1	-0.2
BDFB	**Brasilia**	**170.73**	**230**	PKP	PKPdf			04 32 40.1	-0.4
	comp=Z,1.6nm,1.0s,baz=180,slow=19,SNR=3.1								

*IPEC **07** 04:36:31.2±0.2,5032N×1882E,h4km±1km,ML2.6/3,Error ellipse: s-maj=2.4km s-min=0.9km az=171.0*
*NEIC **07** 04:36:31.4±0.5,5031N×1876E,h5km,ML2.5(BRA), ML2.4(BUC),Error ellipse: s-maj=7.6km s-min=3.3km az=193.0*
*PRU **07** 04:36:32.1,5029N×1876E,h0km*
*CSEM **07** 04:36:32.0±0.1,5022N×1879E,h0km,ML3.2/6,Error ellipse: s-maj=3.4km s-min=1.8km az=9.0*
*VIE **07** 04:36:33.4±0.6,4976N×1895E,h0km,mb2.4/4,ML2.6/5, Error ellipse: s-maj=3.6km s-min=3.3km az=77.0, Suspected Mining induced.*

WAR 07 04:36:31.6,5026N×1885E,ML2.9,15C-7D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.46**	**247**	*e*Pg	Pg	04 36 40.1	-0.3
RAC				*e*Sg	Sg	04 36 45.8	-0.5
OJC	**Ojcow**	**0.61**	**94**	*i* Pg	Pg	04 36 43.8	+0.5
OJC				*e*Sg	Sg	04 36 52.3	+1.1
OKC	**Ostrava-Krasne**	**0.62**	**227**	*e*Pg	Pg	04 36 43.9	+0.4
OKC				Sg	Sg	04 36 50.1	-1.5
	69nm,0.8s						
OKC	**Ostrava-Krasne**	**0.62**	**227**	*e*PG	Pg	04 36 44.0	+0.5
OKC				*e*SG	Sg	04 36 50.1	-1.5
	comp=Z,69nm,0.8s						
MORC	**Moravsky Berou**	**0.97**	**240**	⇓P	Pg	04 36 50.0	-0.2
MORC				S	Sg	04 37 03.3	+0.4
MORC	**Moravsky Berou**	**0.97**	**240**	*e*Pg	Pg	04 36 49.9	-0.4
MORC				*e*Sg	Sg	04 37 02.4	-0.5
	comp=Z,87nm,0.5s						
MORC				S	Sg	04 37 03.3	+0.4
MORC	**Moravsky Berou**	**0.97**	**240**	⇓*i*P	Pg	04 36 50.0	-0.3
NIE	**Niedzica**	**1.27**	**131**	*e*Pg	Pg	04 36 55.9	0.0
NIE				*e*Sg	Sg	04 37 14.3	+2.0
JAVC	**Velka Javorina**	**1.60**	**209**	*e*Pg	Pg	04 37 00.9	-1.4
DPC	**Dobruska-Polom**	**1.62**	**274**	*e*PG	Pg	04 37 00.5	-2.2
DPC				*e*SG	Sg	04 37 21.8	-1.9
	comp=Z,34nm,0.4s						
KOLL	**Kolacno**	**1.71**	**190**	*e*PN	Pn	04 37 03.7	+1.1
KOLL				*e*SN	Sn	04 37 25.9	+0.7
KSP	**Ksiaz**	**1.73**	**291**	*e*Pn	Pn	04 37 02.6	-0.3
KSP				*e*Pg	Pg	04 37 04.2	-0.6
KSP				*e*Sg	Sg	04 37 27.3	+0.1
KSP	**Ksiaz**	**1.73**	**291**	*e*Pn	Pn	04 37 02.5	-0.4
KSP				*i* Pg	Pg	04 37 04.1	-0.7
KSP				*e*Sg	Sg	04 37 26.6	-0.6
KSP	**Ksiaz**	**1.73**	**291**	*i* Pg	Pg	04 37 04.1	-0.7
KSP				*e*Sg	Sg	04 37 26.6	-0.6
VRAC	**Vranov**	**1.75**	**238**	⇑P	Pn	04 37 02.6	-0.5
VRAC				S	Sn	04 37 25.4	-0.7
VRAC	**Vranov**	**1.75**	**238**	*e*Pn	Pn	04 37 02.5	-0.6
VRAC				S	Sn	04 37 25.4	-0.7
VRAC				*e*Sg	Sg	04 37 26.5	-1.2
	comp=Z,42nm,0.4s						
VRAC	**Vranov**	**1.75**	**238**	⇑*i*P	Pn	04 37 02.6	-0.5
STHS	**Stebnicka Huta**	**1.77**	**118**	*e*PN	Pn	04 37 03.6	+0.2
STHS				*e*SN	Sg	04 37 29.8	+1.5
VYHS	**Vyhne**	**1.77**	**180**	*e*PN	Pn	04 37 02.7	-0.7
UPC	**Upice**	**1.83**	**279**	*e*PG	Pn	04 37 03.9	-0.4
UPC				*e*SG	Sn	04 37 29.1	+0.9
KRUC	**Moravsky**	**2.00**	**234**	*e*Sn	Sn	04 37 32.9	+0.7
	comp=Z,42nm,0.6s						
MODS	**Modra-Piesok**	**2.15**	**209**	*e*PN	Pn	04 37 08.8	+0.1
TREC	**Trest**	**2.39**	**247**	*e*PN	Pn	04 37 11.4	-0.5
PSZ	**Piszkesteto**	**2.45**	**163**	*e*Pg	Pg	04 37 18.8	+0.3
PSZ	**Piszkesteto**	**2.45**	**163**	*e*PB	Pg	04 37 18.8	+0.4
PSZ	**Piszkesteto**	**2.45**	**163**	*e*Pg	Pg	04 37 18.8	+0.4
PSZ	**Piszkesteto**	**2.45**	**163**	⇑*i*P	Pn	04 37 12.7	0.0
KWP	**Kalwaria**	**2.57**	**103**	*e*Pn	Pn	04 37 15.8	+1.3
KWP				*e*		04 37 19.6	
KWP				*e*Pg	Pg	04 37 21.8	+1.0
KWP				*e*Sn	Sn	04 37 53.6	+7.3
KWP				*e*Sg	Sg	04 38 03.1	+9.0
KWP	**Kalwaria**	**2.57**	**103**	⇑*i*P	Pn	04 37 15.7	+1.3
KWP				*e*		04 37 19.6	
KWP				*e*Pg	Pg	04 37 21.8	+1.0
KWP				*e*Sn	Sn	04 37 53.7	+7.3
KWP				*e*Sg	Sg	04 38 03.1	+9.0
KWP	**Kalwaria**	**2.57**	**103**	⇑*i*P	Pn	04 37 17.2	+2.8
KWP	**Kalwaria**	**2.57**	**103**	*e*Pg	Pg	04 37 21.8	+1.0
KWP				S	Sn	04 37 49.7	+3.3
KWP	**Kalwaria**	**2.57**	**103**	⇑*i*P	Pn	04 37 17.2	+2.8
PVCC	**Panska Ves**	**2.75**	**277**	*e*PN	Pn	04 37 15.6	-1.3
PVCC				*e*PG	Pg	04 37 21.0	-3.3
PVCC				*e*SG	Sg	04 37 57.3	-2.7
PRU	**Pruhonice**	**2.79**	**266**	*e*PN	Pn	04 37 15.8	-1.6
PRU				*e*PG	Pg	04 37 21.0	-4.0
PRU				*e*SG	Sg	04 37 57.3	-3.8
	comp=Z,9.0nm,0.4s						
SOP	**Sopron**	**2.99**	**211**	⇑*e*Pg	Pg	04 37 34.4	+5.5
CONA	**Conrad Observa**	**3.05**	**221**	⇑*i*Pn	Pn	04 37 18.7	-2.4
CONA				⇓*i*Sg	Sg	04 38 04.4	-5.2
	comp=Z,11nm,0.6s						
BRG	**Berggiesshubel**	**3.19**	**283**	PG	Pg	04 37 31.2	-1.5
BRG				SG	Sg	04 38 11.5	-2.5
	comp=Z,12nm,0.7s						
KHC	**Kasperske Hory**	**3.61**	**254**	*e*PN	Pn	04 37 27.1	-1.6
KHC				*e*PG	Pg	04 37 39.5	-1.2
KHC				*e*SG	Sg	04 38 23.4	-4.0
	comp=Z,14nm,0.5s						
GEC2	**GERESS Array S**	**3.64**	**249**	*e*Pg	Pg	04 37 38.9	-2.4
GEC2				*e*Sg	Sg	04 38 25.3	-3.2
GEC2	**GERESS Array S**	**3.64**	**249**	*e*Pg	Pg	04 37 38.9	-2.4
GEC2				*e*Sg	Sg	04 38 25.3	-3.2
ARSA	**Arzberg**	**3.73**	**217**	⇑*i*Pn	Pn	04 37 27.5	-2.9
ARSA				⇑*i*Sg	Sg	04 38 25.0	-6.4
	comp=Z,4.4nm,0.7s						
ARSA	**Arzberg**	**3.73**	**217**	Pn	Pn	04 37 27.5	-2.9
ARSA				Sg	Sg	04 38 25.0	-6.5
	comp=Z,4.4nm,0.7s						
CLL	**Collm**	**3.86**	**288**	*e*Pg	Pg	04 37 44.0	-1.4
CLL				*e*Sg	Sg	04 38 35.0	-0.4
	comp=Z,8.0nm,0.8s						
MOA	**Molln**	**3.86**	**233**	⇑*i*Pn	Pn	04 37 31.2	-1.0
MOA				⇑*i*Sg	Sg	04 38 33.7	-1.9
	comp=Z,9.4nm,0.6s						
DRGR		**4.32**	**142**	⇓P	Pn	04 37 38.6	+0.2
DRGR				S	Sn	04 38 29.3	-0.2
DRGR		**4.32**	**142**	⇓P	Pn	04 37 38.6	+0.1
DRGR				S	Sn	04 38 29.3	-0.2
DRGR		**4.32**	**142**	⇓*i*P	Pn	04 37 38.6	+0.1
MOX	**Moxa**	**4.64**	**277**	(SG)	Sg	04 39 00.5	0.0
BUR08	**Bucovina Ar. S**	**4.94**	**120**	*e*Pn	Pn	04 37 47.3	+0.3
BURAR	**Bucovina Array**	**4.96**	**120**	⇑*i*P	Pn	04 37 47.8	+0.5
BZS	**Buzias**	**5.01**	**157**	⇓*i*P	Pn	04 37 47.5	-0.4
GZR	**Gura Zlata**	**5.54**	**150**	⇑P	Pn	04 37 56.0	+0.7
GZR	**Gura Zlata**	**5.54**	**150**	⇑*i*P	Pn	04 37 56.0	+0.7

*IDC **07** 05:29:44.7±0.7,3469N×2732E,h0km,mb4.2/14, mb1 4.3/23,mb1mx4.2/32,mbtmp4.2/23,ML4.1/8,MS3.4/10, Ms1 3.4/10,ms1mx3.2/41,Error ellipse: s-maj=15.1km s-min=12.3km az=166.0*
*MOS **07** 05:29:45.9±1.1,3463N×2737E,h29km,mb4.3/30,Error ellipse: s-maj=7.9km s-min=4.0km az=122.4*
*ISCJB **07** 05:29:47.1±0.2,3452N±002×2738E±002,h48km±3km, mb4.3/45,MS3.3/9,Error ellipse: s-maj=3.3km s-min=2.0km az=33.9*
*HLW **07** 05:29:48.9,3458N×2755E,h52km,Mb4.5*
*CSEM **07** 05:29:49.8±0.1,3475N×2732E,h60km,mb4.2/19,Ms3.1, Mw4.0,Error ellipse: s-maj=3.2km s-min=1.6km az=160.0*
*THE **07** 05:29:52.8,3474N×2728E,h52km±3km,ML5.0/2,Error ellipse: s-maj=3.1km s-min=1.1km az=181.0*
*ATH **07** 05:29:53.5,3501N×2722E,h74km±2km,ML4.3*
*NEIC **07** 05:29:53.7,3503N×2722E,h74km,mb4.2/25,After ATH.*
*GII **07** 05:29:54.5±0.4,3421N×2799E,h33km±1km,mb4.4/7, ML4.2/7,Mw3.6/6*
*NIC **07** 05:29:56.5±0.3,3449N×2813E,h25km,mb4.3,ML3.9, MW4.0,Eastern Mediterranean 230 km E Heraklion Crete, 104 km S Karpathos.*

ISC 07 05:29:48.9±0.2,3455N±002×2733E±002,h39km±3km, n347,σ1°24/404,mb4.3/45,MS3.3/9,54C-4D,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.01**	**352**	*e*P	**Pn**	**05 30 07.5**	**+1.0**
ZKR	**Zakros**	**1.07**	**302**	P	**Pn**	**05 30 09.2**	**+1.8**
ZKR				S	**Sn**	**05 30 22.7**	**+1.6**
NPS	**Neapolis**	**1.58**	**297**	*e*P	**Pn**	**05 30 17.1**	**+2.7**
ARG	**Arkhangelos**	**1.79**	**21**	*e*P	**Pn**	**05 30 18.5**	**+1.2**
SIVA	**Sivas**	**2.12**	**284**	P	**Pn**	**05 30 24.8**	**+2.9**
SIVA				S	**Sn**	**05 30 48.4**	**+1.4**
IDI	**Anoyia**	**2.13**	**291**	Pn	**Pn**	**05 30 25.1**	**+3.1**
	31nm,0.3s,baz=114,slow=15,SNR=95						
IDI				Sn	**Sn**	**05 30 49.6**	**+2.3**
	50nm,0.3s,baz=287,slow=14,SNR=6.3						
THR1	**Thera Island**	**2.37**	**321**	P	**Pn**	**05 30 26.3**	**+1.0**
THR6	**Thira Island,**	**2.40**	**319**	P	**Pn**	**05 30 26.6**	**+1.0**
THR3	**Thira Island,**	**2.43**	**320**	P	**Pn**	**05 30 27.2**	**+1.1**
THR5	**Thira Island,**	**2.47**	**320**	P	**Pn**	**05 30 27.6**	**+1.0**
THR4	**Thira Island,**	**2.48**	**321**	P	**Pn**	**05 30 27.6**	**+0.9**
BODT	**Bodrum**	**2.51**	**360**	*e*PN	**Pn**	**05 30 25.6**	**-1.5**
BDRM	**Kayabasi**	**2.52**	**2**	*i* P	**Pn**	**05 30 27.1**	**-0.1**
FETY	**Fethiye**	**2.53**	**34**	*e*PN	**Pn**	**05 30 27.9**	**+0.4**
TURN	**Turunc**	**2.54**	**24**	*i* P	**Pn**	**05 30 25.4**	**-2.3**
VAM	**Vamos**	**2.71**	**289**	*e*P	**Pn**	**05 30 34.5**	**+4.6**
VAM	**Vamos**	**2.71**	**289**	*e*P	**Pn**	**05 30 35.0**	**+5.1**
MLSB	**Milas**	**2.77**	**7**	*e*PN	**Pn**	**05 30 29.4**	**-1.3**
APE	**Apeiranthos**	**2.91**	**330**	P	**Pn**	**05 30 33.2**	**+0.5**
APE				S	**Sn**	**05 31 05.1**	**-1.3**
ELL	**Elmali**	**3.04**	**43**	*e*PN	**Pn**	**05 30 35.9**	**+1.4**
AYDN	**Tasoluk**	**3.14**	**8**	*i* P	**Pn**	**05 30 36.2**	**+0.3**
GCAM	**G?zelcaml?**	**3.15**	**359**	*i* P	**Pn**	**05 30 36.2**	**+0.2**
SMG	**Samos**	**3.18**	**353**	*e*P	**Pn**	**05 30 36.5**	**+0.1**
GOLH	**Golhisar**	**3.24**	**33**	*i* P	**Pn**	**05 30 38.9**	**+1.7**
DENT	**Denizli**	**3.49**	**23**	*e*PN	**Pn**	**05 30 40.5**	**-0.1**
SLUM		**3.52**	**211**	P	**Pn**	**05 30 43.3**	**+2.2**
SLUM				S	**Sn**	**05 31 22.4**	**+0.8**
ANTB	**Antalya**	**3.58**	**48**	*e*PN	**Pn**	**05 30 42.8**	**+0.9**
LTBQ	**Tobruq**	**3.78**	**230**	*i* P	**Pn**	**05 30 48.1**	**+3.5**
	SNR=46						
BLCB	**Balcova**	**3.84**	**357**	*e*PN	**Pn**	**05 30 44.5**	**-1.0**
IZM	**Izmir**	**3.84**	**359**	*e*PN	**Pn**	**05 30 44.2**	**-1.3**
BCK	**Bucak**	**3.93**	**41**	*e*PN	**Pn**	**05 30 47.9**	**+1.1**
CHOS	**Chios island**	**3.97**	**345**	P	**Pn**	**05 30 47.4**	**+0.2**
CHOS				S	**Sn**	**05 31 30.5**	**-2.0**
KULA	**Kula-Manisa**	**4.10**	**15**	*e*PN	**Pn**	**05 30 48.9**	**-0.2**
AKMC	**Akamas**	**4.15**	**82**	⇑P	**Pn**	**05 30 49.1**	**-0.6**
	28nm,0.2s						
AKMC				S	**Sn**	**05 31 30.7**	**-6.2**
PPCY	**Paphos**	**4.15**	**84**	P	**Pn**	**05 30 49.6**	**-0.1**
	12nm,0.3s						
PPCY				S	**Sn**	**05 31 30.2**	**-6.7**
KHL	**Karahalli**	**4.17**	**25**	*e*PN	**Pn**	**05 30 50.7**	**+0.8**
VLI	**Veliai**	**4.18**	**302**	*e*P	**Pn**	**05 30 52.0**	**+1.9**
VLI	**Veliai**	**4.18**	**302**	*e*P	**Pn**	**05 30 51.2**	**+1.1**
AKHS	**Akhisar**	**4.34**	**5**	*i* P	**Pn**	**05 30 52.2**	**-0.2**
AKS	**Akhisar**	**4.34**	**5**	*e*PN	**Pn**	**05 30 51.9**	**-0.5**
ALFC	**Alevga**	**4.38**	**80**	P	**Pn**	**05 30 52.7**	**-0.2**
	60nm,0.2s						
ALFC				S	**Sn**	**05 31 36.6**	**-6.0**
DID	**Didima**	**4.44**	**313**	P	**Pn**	**05 30 55.1**	**+1.4**
DID				S	**Sn**	**05 31 43.2**	**-0.9**
ATH	**Athens Observa**	**4.49**	**321**	*e*P	**Pn**	**05 30 55.5**	**+1.1**
SZAC	**Souni-Zanaja**	**4.59**	**86**	P	**Pn**	**05 30 55.2**	**-0.5**
	18nm,0.2s						
SZAC				S	**Sn**	**05 31 41.8**	**-5.9**
LEF	**Lefka**	**4.61**	**81**	*e*PN	**Pn**	**05 30 55.2**	**-0.8**
DEMI	**Demirci**	**4.62**	**14**	*i* P	**Pn**	**05 30 56.0**	**-0.2**
SHUT	**Suhut-Afyon**	**4.77**	**32**	*e*PN	**Pn**	**05 30 59.8**	**+1.7**
HDMB	**Hadim**	**4.84**	**59**	*e*PN	**Pn**	**05 31 00.3**	**+1.1**
GDZ	**Gediz**	**4.85**	**20**	*i* P	**Pn**	**05 30 59.0**	**-0.3**
MAMC	**Mammari**	**4.88**	**81**	⇑P	**Pn**	**05 31 00.1**	**+0.3**
MAMC				S	**Sn**	**05 31 49.6**	**-5.5**
VLX	**Vlachokerasia**	**4.90**	**307**	P	**Pn**	**05 31 01.1**	**+1.1**
VLX				S	**Sn**	**05 31 54.3**	**-1.2**
LTK	**Loutraki**	**4.94**	**316**	P	**Pn**	**05 31 02.6**	**+2.0**
CSS	**Prodhromos**	**4.96**	**83**	P	**Pn**	**05 31 00.3**	**-0.5**
	9.1nm,0.3s						
CSS				S	**Sn**	**05 31 51.6**	**-5.4**
CSS	**Prodhromos**	**4.96**	**83**	*e*Pn	**Pn**	**05 30 59.7**	**-1.1**
	361nm,1.0s						
CSS				*e*Sn	**Sn**	**05 31 53.6**	**-3.3**
CSS	**Prodhromos**	**4.96**	**83**	*e*Pn	**Pn**	**05 30 59.7**	**-1.1**
	361nm,1.0s						
CSS	**Prodhromos**	**4.96**	**83**	P	**Pn**	**05 31 00.3**	**-0.5**
	9.1nm,0.3s						
CSS				*e*Sn	**Sn**	**05 31 53.6**	**-3.4**
ALT	**Altintas**	**5.03**	**26**	*e*PN	**Pn**	**05 31 03.1**	**+1.4**
ITM	**Ithomi**	**5.11**	**302**	*e*P	**Pn**	**05 31 05.5**	**+2.6**
ITM	**Ithomi**	**5.11**	**302**	*e*P	**Pn**	**05 31 04.2**	**+1.3**
PYL	**PYLOS**	**5.11**	**299**	P	**Pn**	**05 31 03.2**	**+0.3**
PYL				S	**Sn**	**05 31 59.3**	**-1.4**
LFK	**Lefkose**	**5.15**	**80**	*e*PN	**Pn**	**05 31 04.0**	**+0.5**
DST	**Dursunbey**	**5.16**	**11**	*e*PN	**Pn**	**05 31 03.9**	**+0.3**
KONT	**Konya--Tatoy**	**5.30**	**49**	*e*PN	**Pn**	**05 31 06.9**	**+1.4**
LKR	**Lokris**	**5.38**	**321**	P	**Pn**	**05 31 08.2**	**+1.7**
LKR	**Lokris**	**5.38**	**321**	*e*P	**Pn**	**05 31 08.1**	**+1.6**
LADK	**Ladik-KONYA**	**5.46**	**47**	*e*PN	**Pn**	**05 31 09.3**	**+1.6**
IKL	**Isikli**	**5.46**	**70**	*e*PN	**Pn**	**05 31 07.6**	**-0.1**
AANS		**5.46**	**140**	P	**Pn**	**05 31 06.8**	**-1.0**
AANS				S	**Sn**	**05 32 04.3**	**-5.1**
PHNC	**Paralimni**	**5.54**	**83**	P	**Pn**	**05 31 08.8**	**0.0**
	5.6nm,0.4s						
HMYD	**Mayadein**	**5.58**	**147**	P	**Pn**	**05 31 09.0**	**-0.3**
KIZT	**Kizilcal**	**5.67**	**39**	*e*PN	**Pn**	**05 31 11.5**	**+1.0**
SQR		**5.69**	**144**	P	**Pn**	**05 31 11.0**	**+0.1**
EREN	**Erenkoy**	**5.70**	**78**	*e*PN	**Pn**	**05 31 10.9**	**-0.1**
GADA	**Gvkgeada**	**5.75**	**349**	*e*PN	**Pn**	**05 31 10.9**	**-0.7**
AYT	**Al 'Ayyat**	**5.82**	**145**	P	**Pn**	**05 31 13.1**	**+0.5**
XOR	**Xorichti**	**5.84**	**327**	P	**Pn**	**05 31 14.5**	**+1.6**
RLS	**Riolos of Patr**	**5.89**	**308**	*e*P	**Pn**	**05 31 15.4**	**+1.8**
KOT	**Kottamia**	**5.98**	**139**	P	**Pn**	**05 31 14.3**	**-0.5**
KOT				S	**Sn**	**05 32 17.8**	**-4.3**
CAVI	**Cavuskoy**	**5.99**	**19**	*e*PN	**Pn**	**05 31 16.9**	**+1.9**
AGG	**Agios Georgios**	**6.00**	**320**	P	**Pn**	**05 31 17.2**	**+2.1**
AGG				S	**Sn**	**05 32 21.3**	**-1.3**
AGG	**Agios Georgios**	**6.00**	**320**	P	**Pn**	**05 31 17.2**	**+2.1**
AGG				S	**Sn**	**05 32 21.3**	**-1.3**
AGG	**Agios Georgios**	**6.00**	**320**	P	**Pn**	**05 31 17.2**	**+2.1**
AGG				S	**Sn**	**05 32 21.3**	**-1.3**
HSAF	**As Saff**	**6.08**	**143**	P	**Pn**	**05 31 15.7**	**-0.6**
HSAF				S	**Sn**	**05 32 18.8**	**-5.8**
HHAG	**Hagoal**	**6.11**	**137**	P	**Pn**	**05 31 16.6**	**0.0**
HHAG				S	**Sn**	**05 32 19.4**	**-5.8**
GLL	**Jalalah**	**6.19**	**142**	P	**Pn**	**05 31 17.5**	**-0.3**
GLL				S	**Sn**	**05 32 22.3**	**-5.0**
EVR	**Evrytania**	**6.22**	**316**	*e*P	**Pn**	**05 31 19.8**	**+1.7**
YLV	**Yalova**	**6.23**	**15**	*e*PN	**Pn**	**05 31 19.7**	**+1.5**
ENEZ	**Enez**	**6.25**	**352**	*e*PN	**Pn**	**05 31 18.3**	**-0.2**
MERS	**Mersin**	**6.30**	**66**	*e*PN	**Pn**	**05 31 20.1**	**+0.9**
AMAG	**Maghara**	**6.31**	**126**	P	**Pn**	**05 31 17.8**	**-1.5**
AWBH		**6.35**	**167**	P	**Pn**	**05 31 20.4**	**+0.4**
GULT	**Gulveren**	**6.40**	**22**	*e*PN	**Pn**	**05 31 20.8**	**+0.2**
RSH		**6.47**	**122**	P	**Pn**	**05 31 19.5**	**-2.0**
VLS	**Valsamata**	**6.53**	**306**	P	**Pn**	**05 31 22.8**	**+0.4**
VLS				S	**Sn**	**05 32 33.4**	**-2.2**
VLS	**Valsamata**	**6.53**	**306**	*e*P	**Pn**	**05 31 23.7**	**+1.3**
VLS				S	**Sn**	**05 32 33.4**	**-2.2**
THL	**Klokotos Trika**	**6.57**	**321**	*e*P	**Pn**	**05 31 25.3**	**+2.4**
SUZ		**6.62**	**134**	P	**Pn**	**05 31 23.7**	**+0.1**
MDU	**Mudurnu**	**6.67**	**26**	*e*PN	**Pn**	**05 31 26.6**	**+2.3**
OFRI	**'Ofer**	**6.67**	**105**	Pn	**Pn**	**05 31 22.8**	**-1.5**
HNTI	**Hanita**	**6.69**	**100**	Sn	**Sn**	**05 32 33.9**	**-5.7**
RDO	**Rodhopi**	**6.74**	**348**	P	**Pn**	**05 31 27.8**	**+2.6**
LKD	**Levkas**	**6.79**	**310**	P	**Pn**	**05 31 26.3**	**+0.4**
LKD				S	**Sn**	**05 32 39.5**	**-2.3**
SLTI	**Sal'it**	**6.85**	**107**	Pn	**Pn**	**05 31 25.8**	**-1.0**
SLTI				Sn	**Sn**	**05 32 37.5**	**-6.0**
NIG	**Nigde**	**6.87**	**57**	*e*PN	**Pn**	**05 31 26.2**	**-0.9**
ANTO	**Ankara**	**6.87**	**38**	*e*P	**Pn**	**05 31 29.1**	**+2.0**
HRSH	**Kfar Ka'horesh**	**6.88**	**103**	P	**Pn**	**05 31 19.5**	**-7.8**
HRSH				S	**Sn**	**05 32 26.6**	**-18**
MMA0B	**Mount Meron ar**	**6.90**	**101**	Pn	**Pn**	**05 31 27.6**	**+0.2**
MMA0B				Sn	**Sn**	**05 32 39.4**	**-5.2**
MMAI	**Mount Meron Ar**	**6.90**	**101**	Pn	**Pn**	**05 31 26.9**	**-0.5**
	10nm,0.3s,baz=286,slow=10,SNR=13						
MMAI				Sn	**Sn**	**05 32 40.0**	**-4.6**
	26nm,0.3s,baz=304,slow=20,SNR=6.9						
MMAI				LR	LR	05 34 32.4	
	comp=Z,115nm,19.4s,baz=265,slow=42						
LJBD	**Adjabya**	**7.01**	**241**	*i* P	**Pn**	**05 31 27.8**	**-1.2**
	SNR=45						
KAMT	**Kaman**	**7.02**	**45**	*e*P	**Pn**	**05 31 29.3**	**+0.2**
KSDI	**Kefar Szold**	**7.06**	**99**	Pn	**Pn**	**05 31 28.8**

VAE Valguarnera 10.86 289 Pn **Pn** 05 32 22.4 +0.7
comp=Z,3.8nm,0.3s,baz=88,slow=14,SNR=6.1
VAE Sn **Sn** 05 34 17.3 -4.6
comp=Z,13nm,0.3s,baz=312,slow=18,SNR=5.2
VAE Valguarnera 10.86 289 Pn **Pn** 05 32 22.4 +0.7
VAE Sn **Sn** 05 34 17.3 -4.6
VAE Valguarnera 10.86 289 Pn **Pn** 05 32 22.4 +0.7
VAE Sn **Sn** 05 34 17.3 -4.6
MGR Morigerati 10.90 304 Pn **Pn** 05 32 19.6 -2.7
comp=Z,26nm,0.6s
MLR Muntele Rosu 10.98 355 Pn **Pn** 05 32 23.1 -0.2
comp=Z,0.1nm,0.3s,baz=146,slow=18,SNR=2.4
MLR LR LR 05 37 08.8
comp=Z,274nm,21.0s,baz=125,slow=41
MLR Muntele Rosu 10.98 355 Pn **Pn** 05 32 23.1 -0.3
LJFR Jufra 11.19 244 *i* P **Pn** 05 32 24.1 -2.2
SNR=43
STON Ston 11.20 321 Sn **Sn** 05 34 19.4 -11
MRLC Muro Lucano 11.24 307 Pn **Pn** 05 32 24.2 -2.7
comp=Z,16nm,0.6s
SGO Sicignano 11.27 306 P **Pn** 05 32 25.5 -1.8
SGO pmax pmax
comp=Z,44nm,0.7s
SGO Sicignano 11.27 306 Pn **Pn** 05 32 25.5 -1.8
comp=Z,44nm,0.7s
SOC Sochi 13.18 43 *e*P **Pn** 05 32 50.4 -3.0
SOC *e* 05 35 14.4
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC MLR MLR
comp=Z,37nm,5.0s
NVLJ Novalja 13.86 320 Sn **Sn** 05 35 24.3 -11
KEST Kesra 14.76 280 Pn **Pn** 05 33 15.9 +0.9
comp=Z,0.0nm,0.3s,baz=62,slow=17,SNR=3.0
KEST Sn **Sn** 05 35 49.6 -7.7
comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=4.1
KEST LR LR 05 40 39.7
comp=Z,40nm,19.4s,baz=152,slow=44
GNI Garni 14.93 63 LR LR 05 40 33.4
comp=Z,86nm,20.9s,baz=317,slow=44
KIV Kislovodsk 15.14 47 ⇓P **Pn** 05 33 27.2 +7.3
KIV Kislovodsk 15.14 47 *e*P **Pn** 05 33 18.6 -1.3
KIV *e*S **S** 05 36 02.7 -20
KIV pmax pmax
comp=Z,28nm,1.2s
KIV MLR MLR
comp=Z,64nm,13.0s
KIV Kislovodsk 15.14 47 *e*P **Pn** 05 33 18.6 -1.3
comp=Z,64nm,13.0s
GOF Gofitskoye 15.97 44 *e*P pP 05 33 45.5 +2.2
AKASG Malin Array Be 16.21 4 Pn **Pn** 05 33 32.5 -1.1
comp=Z,4.1nm,0.3s,baz=194,slow=12,SNR=6.2
AKASG Malin Array Be 16.21 4 P **Pn** 05 33 32.5 -1.0
AKASG pmax pmax
comp=Z,4.0nm,0.3s
PGF Pioggiola 16.39 305⇑ *i*P **Pn** 05 33 35.0 -1.0
comp=Z,56nm,1.1s
PGF Pioggiola 16.39 305⇑ *i*P **Pn** 05 33 35.0 -1.0
PGF pmax pmax
comp=Z,28nm,1.1s
PGF Pioggiola 16.39 305⇑ *i*P **Pn** 05 33 35.0 -1.0
comp=Z,28nm,1.1s
VRAC Vranov 16.75 335 LR LR 05 40 02.5
comp=Z,139nm,20.1s,baz=148,slow=37
GEC2 GERESS Array S 17.50 329 *e*Pn **Pn** 05 33 48.3 -1.5
GEC2 GERESS Array S 17.50 329 *e*P **Pn** 05 33 48.3 -1.4
GERES GERESS Array B 17.50 329 P **Pn** 05 33 48.8 -0.9
comp=Z,0.4nm,0.3s,baz=139,slow=12,SNR=7.5
MIB Mutribah 17.58 100 *e*P **Pn** 05 33 52.8 +1.8
baz=100
MIB AMb AMB 05 33 54.0
comp=Z,22nm,0.4s,baz=100
FETA Feichten 17.65 320⇓ *i*P **Pn** 05 33 51.4 -0.3
MOTA Moosalm 17.66 321⇓ *i*P **Pn** 05 33 50.7 -1.1
NAY Al-Naaiem 17.71 102 *e*P **Pn** 05 33 54.4 +1.9
baz=102
NAY AMb AMB 05 33 56.0
comp=Z,18nm,1.5s,baz=102
DPC Dobruska-Polom 17.73 336 *e*P **Pn** 05 33 51.9 -0.6
KHC Kasperske Hory 17.77 329 *e*P **Pn** 05 33 52.2 -0.9
KHC *e* 05 34 11.0
KHC Kasperske Hory 17.77 329 *e*P **Pn** 05 33 52.2 -0.9
KHC *e*pP pP 05 34 04.4 +1.1
KHC *e*x x 05 34 11.0
KHC *e*x x 05 34 24.5
DAVOX Davos/Dischmat 17.97 318 LR LR 05 41 27.0
comp=Z,100nm,21.4s,baz=6.8,slow=39
SBF Sospel 17.97 307⇑ *i*P **Pn** 05 33 54.4 -1.2
comp=Z,129nm,1.2s
SBF Sospel 17.97 307⇑ *i*P **Pn** 05 33 54.4 -1.2
SBF pmax pmax
comp=Z,65nm,1.2s
SBF Sospel 17.97 307⇑ *i*P **Pn** 05 33 54.4 -1.2
comp=Z,64nm,1.2s
PRU Pruhonice 18.06 333 *e*P **Pn** 05 33 55.2 -1.4
RDF Al-Radifah 18.08 102 *e*P **Pn** 05 33 58.6 +1.5
comp=Z,53nm,1.4s
RDF Al-Radifah 18.08 102 *e*P **Pn** 05 33 58.6 +1.6
baz=103
RDF AMb AMB 05 34 04.5
comp=Z,53nm,1.4s,baz=103
DAVA Damuels 18.27 319⇑ *i*Pn **Pn** 05 33 58.9 -0.3
FRF La Foret Royal 18.37 305⇑ *i*P **Pn** 05 34 00.0 -0.5
comp=Z,119nm,1.5s
FRF La Foret Royal 18.37 305⇑ *i*P **Pn** 05 34 00.0 -0.5
FRF pmax pmax
comp=Z,60nm,1.5s
FRF La Foret Royal 18.37 305⇑ *i*P **Pn** 05 34 00.0 -0.5
comp=Z,60nm,1.5s
VSR Storozhevoye 18.74 24 *e*P **Pn** 05 34 04.1 -0.8
VSR pmax pmax
comp=Z,3.0nm,0.6s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.6s
MBDF Montbardon 18.77 309⇑ *i*P **Pn** 05 34 04.3 -1.0
comp=E,22nm,0.8s
MBDF Montbardon 18.77 309⇑ *i*P **Pn** 05 34 04.3 -1.0
MBDF pmax pmax
comp=Z,11nm,0.8s
MBDF Montbardon 18.77 309⇑ *i*P **Pn** 05 34 04.3 -1.0
comp=Z,11nm,0.8s
LPG La Plagne 19.13 311 *e*P **Pn** 05 34 09.3 -0.3
comp=Z,5.9nm,0.4s
LPG La Plagne 19.13 311 *e*P **Pn** 05 34 09.3 -0.3
comp=Z,3.0nm,0.4s
LPL La Plagne 19.15 311⇑ *i*P **Pn** 05 34 08.8 -1.0
comp=Z,13nm,0.6s
LPL La Plagne 19.15 311⇑ *i*P **Pn** 05 34 08.8 -1.0
LPL pmax pmax
comp=Z,6.0nm,0.6s
LPL La Plagne 19.15 311⇑ *i*P **Pn** 05 34 08.8 -1.0
comp=Z,6.3nm,0.6s
ORIF Oris-en-Rattie 19.42 309⇑ *i*P **Pn** 05 34 11.7 -1.4
ORIF *e*MLR MLR
comp=Z,174nm,20.5s
CLL Collm 19.70 333 *e*P **Pn** 05 34 13.0 -3.4
comp=Z,9.0nm,0.9s
CLL *e*pP pP 05 34 27.0 +2.5
CLL *e*ScP ScP 05 42 00.0 -5.3
CABF La Chapelle 20.07 313 *e*P **P** 05 34 18.5 -0.2
comp=Z,16nm,0.7s
CABF La Chapelle 20.07 313 *e*P **P** 05 34 18.5 -0.2
CABF pmax pmax
comp=Z,8.0nm,0.7s
CABF La Chapelle 20.07 313 *e*P **P** 05 34 18.5 -0.2
comp=Z,7.9nm,0.7s
VIVF Saint-Julien-l 20.18 307 *e*P **P** 05 34 19.8 -0.2
comp=Z,7.4nm,0.7s
VIVF Saint-Julien-l 20.18 307 *e*P **P** 05 34 19.8 -0.2
VIVF pmax pmax
comp=Z,4.0nm,0.7s
VIVF Saint-Julien-l 20.18 307 *e*P **P** 05 34 19.8 -0.2
comp=Z,3.7nm,0.7s
HINF Hinteralfeld 20.25 317⇑ *i*P **P** 05 34 21.0 +0.3
comp=Z,6.0nm,0.5s
HINF Hinteralfeld 20.25 317⇑ *i*P **P** 05 34 21.0 +0.3
HINF pmax pmax
comp=Z,3.0nm,0.4s
HINF Hinteralfeld 20.25 317⇑ *i*P **P** 05 34 21.0 +0.3
comp=Z,3.0nm,0.5s
CDF Champ du Feu 20.35 319 *e*P **P** 05 34 21.2 -0.6
HAU Haudompre 20.64 317 *e*P **P** 05 34 23.6 -1.3
comp=Z,7.4nm,0.5s
HAU *e*MLR MLR
comp=Z,130nm,18.2s,MS3.0
HAU Haudompre 20.64 317 *e*P **P** 05 34 23.6 -1.3
comp=Z,3.7nm,0.5s
HAU LR LR
comp=Z,130nm,18.3s,MS3.3
HAU Haudompre 20.64 317 *e*P **P** 05 34 23.6 -1.3
HAU pmax pmax
comp=Z,4.0nm,0.5s
HAU MLR MLR
comp=Z,130nm,18.3s,MS3.3
MTLF Montolieu 21.35 302⇑ *i*P **P** 05 34 32.0 -0.6
SMF Signal de Mont 21.45 311⇑ *i*P **P** 05 34 33.6 -0.1
comp=Z,11nm,0.6s,mb4.0
SMF Signal de Mont 21.45 311⇑ *i*P **P** 05 34 33.6 -0.1
SMF pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
SMF Signal de Mont 21.45 311⇑ *i*P **P** 05 34 33.6 -0.1
comp=Z,5.4nm,0.6s,mb4.0
OBN Obninsk 21.55 15 *i* P **P** 05 34 31.6 -3.0
OBN pmax pmax
comp=Z,56nm,1.4s,mb4.8
OBN MLR MLR
comp=Z,100nm,19.0s,MS3.2
LOR Lormes 21.72 313⇑ *i*P **P** 05 34 35.6 -1.0
LOR *e*MLR MLR
comp=Z,123nm,18.5s,MS3.0
LOR Lormes 21.72 313⇑ *i*P **P** 05 34 35.6 -1.0
LOR MLR MLR
comp=Z,120nm,18.5s,MS3.3
AVF Avril sur Loir 21.82 311⇑ *i*P **P** 05 34 37.3 -0.3
comp=Z,12nm,0.8s,mb4.1
AVF Avril sur Loir 21.82 311⇑ *i*P **P** 05 34 37.3 -0.3
AVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
AVF Avril sur Loir 21.82 311⇑ *i*P **P** 05 34 37.3 -0.3
comp=Z,5.8nm,0.8s,mb4.1
SSF Saint Saulge 21.84 312⇑ *i*P **P** 05 34 37.1 -0.8
comp=Z,23nm,0.8s,mb4.4
SSF Saint Saulge 21.84 312⇑ *i*P **P** 05 34 37.1 -0.8
SSF pmax pmax
comp=Z,11nm,0.8s,mb4.3
SSF Saint Saulge 21.84 312⇑ *i*P **P** 05 34 37.1 -0.8
comp=Z,11nm,0.8s,mb4.4
CAF Calviac 21.94 306⇑ *i*P **P** 05 34 39.0 +0.1
BGF Bois d'Agland 22.04 310 *e*P **P** 05 34 39.3 -0.6
comp=Z,7.0nm,0.6s,mb4.0
BGF Bois d'Agland 22.04 310 *e*P **P** 05 34 39.3 -0.6
BGF pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
BGF Bois d'Agland 22.04 310 *e*P **P** 05 34 39.3 -0.6
comp=Z,3.5nm,0.6s,mb4.0
TCF Toulx Ste Croi 22.33 309 *e*P **P** 05 34 41.9 -1.2
comp=Z,6.4nm,0.7s,mb3.9
TCF Toulx Ste Croi 22.33 309 *e*P **P** 05 34 41.9 -1.2
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
TCF Toulx Ste Croi 22.33 309 *e*P **P** 05 34 41.9 -1.2
comp=Z,3.2nm,0.7s,mb3.9
TAM Tamanrasset 22.38 244 *e*P **P** 05 34 47.2 +3.4
RJF Les Rejaudoux 22.43 306⇑ *i*P **P** 05 34 44.0 -0.1
comp=Z,17nm,0.8s,mb4.2
RJF *e*MLR MLR
comp=Z,136nm,18.5s,MS3.1
RJF Les Rejaudoux 22.43 306⇑ *i*P **P** 05 34 44.0 -0.1
comp=Z,8.6nm,0.8s,mb4.2
RJF LR LR
comp=Z,140nm,18.5s,MS3.4
RJF Les Rejaudoux 22.43 306⇑ *i*P **P** 05 34 44.0 -0.1
RJF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
RJF MLR MLR
comp=Z,140nm,18.5s,MS3.4
EPF Esparros 22.60 300 *e*P **P** 05 34 45.0 -1.0
GIVF Givet 22.64 320 *e*P **P** 05 34 45.4 -0.9
LFF La Frestale 22.83 305⇑ *i*P **P** 05 34 47.4 -1.0
comp=Z,5.2nm,0.4s,mb4.0
LFF La Frestale 22.83 305⇑ *i*P **P** 05 34 47.4 -1.0
comp=Z,2.6nm,0.4s,mb4.0
BAIF Baives 22.94 320 *e*P **P** 05 34 49.1 -0.4
ETSF Etsaut 23.22 299 *e*P **P** 05 34 51.5 -1.0
comp=Z,7.6nm,0.7s,mb3.9
ETSF Etsaut 23.22 299 *e*P **P** 05 34 51.5 -1.0
ETSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
ETSF Etsaut 23.22 299 *e*P **P** 05 34 51.5 -1.0
comp=Z,3.8nm,0.7s,mb3.9
SJPF Ste Jean 23.74 300 *e*P **P** 05 34 56.4 -1.1
comp=Z,20nm,0.8s,mb4.3
SJPF Ste Jean 23.74 300 *e*P **P** 05 34 56.4 -1.1
SJPF pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
SJPF Ste Jean 23.74 300 *e*P **P** 05 34 56.4 -1.1
comp=Z,10nm,0.8s,mb4.3
MFF Saint Martin d 23.96 308 *e*P **P** 05 34 58.3 -1.1
LDF La Druitiere 24.71 313 *e*P **P** 05 35 05.6 -0.6
comp=Z,10nm,0.4s,mb4.4
LDF La Druitiere 24.71 313 *e*P **P** 05 35 05.6 -0.6
comp=Z,5.2nm,0.4s,mb4.4
FLN La Foliniere 25.00 313⇑ *i*P **P** 05 35 08.7 -0.1
comp=Z,16nm,0.4s,mb4.6
FLN *e*MLR MLR
comp=Z,101nm,20.5s,MS3.0
FLN La Foliniere 25.00 313⇑ *i*P **P** 05 35 08.7 -0.1
comp=Z,8.2nm,0.4s,mb4.6
GRR Gorron 25.07 312⇑ *i*P **P** 05 35 09.4 -0.1
comp=Z,12nm,0.6s,mb4.3
GRR Gorron 25.07 312⇑ *i*P **P** 05 35 09.4 -0.1
GRR pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
GRR Gorron 25.07 312⇑ *i*P **P** 05 35 09.4 -0.1
comp=Z,6.2nm,0.6s,mb4.3
ESDC Sonseca Array 25.40 291 P **P** 05 35 13.3 +0.8
comp=Z,6.0nm,0.7s,mb4.3,baz=81,slow=9.7,SNR=20
PAB San Pablo 25.69 291 *e*P **P** 05 35 14.8 -0.5
comp=Z,2.8nm,0.7s,mb3.9
PAB San Pablo 25.69 291 *e*P **P** 05 35 14.8 -0.5
PAB pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
PAB San Pablo 25.69 291 *e*P **P** 05 35 14.8 -0.5
comp=Z,2.8nm,0.7s,mb3.9
SGMF Saint Gilles 26.08 311⇑ *i*P **P** 05 35 18.4 -0.2
comp=Z,9.7nm,0.7s,mb4.2
SGMF Saint Gilles 26.08 311⇑ *i*P **P** 05 35 18.4 -0.2
SGMF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
SGMF Saint Gilles 26.08 311⇑ *i*P **P** 05 35 18.4 -0.2
comp=Z,4.8nm,0.7s,mb4.2
QUIF Quistinic 26.34 310⇑ *i*P **P** 05 35 21.0 0.0
comp=Z,9.9nm,0.5s,mb4.3
QUIF Quistinic 26.34 310⇑ *i*P **P** 05 35 21.0 0.0
QUIF pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
QUIF Quistinic 26.34 310⇑ *i*P **P** 05 35 21.0 0.0
comp=Z,4.9nm,0.5s,mb4.3
ROSF Rostrenen 26.55 311⇑ *i*P **P** 05 35 22.5 -0.4
comp=Z,24nm,0.5s,mb4.7
ROSF Rostrenen 26.55 311⇑ *i*P **P** 05 35 22.5 -0.4
ROSF pmax pmax
comp=Z,12nm,0.5s,mb4.7
ROSF Rostrenen 26.55 311⇑ *i*P **P** 05 35 22.5 -0.4
comp=Z,12nm,0.5s,mb4.7
MDT Midelt 26.58 275 P **P** 05 35 25.5 +2.2
comp=Z,4.5nm,0.8s,mb4.1,baz=81,slow=7.3,SNR=9.1
HFS Hagfors 27.10 345 P **P** 05 35 26.2 -1.6
comp=Z,1.5nm,0.4s,mb3.9,baz=123,slow=11,SNR=12
HFS LR LR 05 46 16.7
comp=Z,152nm,18.3s,MS3.6,baz=65,slow=37
HFS Hagfors 27.10 345 P **P** 05 35 26.2 -1.5
HFS pmax pmax
comp=Z,2.0nm,0.4s
HFS MLR MLR
comp=Z,152nm,18.3s
AKTK Aktyubinsk 27.39 45 P **P** 05 35 31.1 +0.7
AKTK Aktyubinsk 27.39 45 P **P** 05 35 31.1 +0.7
AKTO Aktyubinsk 27.39 45 P **P** 05 35 31.1 +0.7
comp=Z,1.0nm,0.4s,mb3.7,baz=242,slow=12,SNR=4.3
AKTO Aktyubinsk 27.39 45 P **P** 05 35 31.2 +0.8
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
KAF Kangasniemi 27.59 359 *e*p **P** 05 35 30.8 -1.3
comp=Z,1.4nm,0.4s,mb3.9,baz=176,slow=9.4
KAF Kangasniemi 27.59 359 *e*P **P** 05 35 30.8 -1.3
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
NOA NORSAR Array B 28.47 344 P **P** 05 35 38.4 -1.5
comp=Z,1.7nm,0.9s,mb3.7,baz=147,slow=11,SNR=3.1
NOA LR LR 05 48 27.0
comp=Z,115nm,18.1s,MS3.5,baz=165,slow=40
NOA NORSAR Array B 28.47 344 P **P** 05 35 38.4 -1.5
NOA LR LR 05 48 27.0
NOA NORSAR Array B 28.47 344 P **P** 05 35 38.4 -1.5
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA MLR MLR
comp=Z,115nm,18.1s
JOF Joensuu 28.51 4 *e*p **P** 05 35 38.9 -1.3
comp=Z,2.7nm,0.4s,mb4.3
JOF Joensuu 28.51 4 *e*P **P** 05 35 38.9 -1.3
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
EKA Eskdalemuir Ar 29.58 324 P **P** 05 35 49.9 +0.1
comp=Z,1.7nm,0.3s,mb4.2,baz=124,slow=10,SNR=17
EKA Eskdalemuir Ar 29.58 324 P **P** 05 35 49.9 +0.1
EKA pmax pmax
comp=Z,2.0nm,0.4s
TOA0 Torodi Ar. Sit 31.51 234 *e*P **P** 05 36 09.7 +2.4
TOA0 Torodi Ar. Sit 31.51 234 *e*P **P** 05 36 09.6 +2.3
TORD Torodi Ar. Bea 31.51 234 P **P** 05 36 09.7 +2.4
comp=Z,6.7nm,0.8s,mb4.5,baz=33,slow=9.8,SNR=48
ARCES ARCESS Array B 35.06 359 P **P** 05 36 36.5 -1.2
comp=Z,7.4nm,1.0s,mb4.6,baz=166,slow=8.1,SNR=48
ARCES ARCESS Array B 35.06 359 P **P** 05 36 36.5 -1.1
ARCES pmax pmax
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 35.50 45 P **P** 05 36 43.1 +1.5
comp=Z,0.4nm,0.5s,mb3.6,baz=242,slow=3.1,SNR=2.3
KURK Kurchatov 40.19 50 P **P** 05 37 22.0 +0.7
baz=278,slow=8.9
KURK Kurchatov 40.19 50⇓ *i*P **P** 05 37 19.0 -2.3
KURK pmax pmax
comp=Z,6.0nm,1.4s,mb4.1
DBIC Dimbokro 40.62 234 P **P** 05 37 26.9 +1.8
comp=Z,2.6nm,0.5s,mb4.1,baz=44,slow=8.4,SNR=9.0
DBIC LR LR 05 54 58.0
comp=Z,96nm,19.9s,MS3.6,baz=120,slow=37
DBIC Dimbokro 40.62 234 P **P** 05 37 26.9 +1.8
DBIC LR LR 05 54 58.0
DBIC Dimbokro 40.62 234 P **P** 05 37 26.9 +1.8
DBIC pmax pmax
comp=Z,3.0nm,0.5s
DBIC MLR MLR
comp=Z,96nm,19.9s
TIC Toumodi 40.74 235 *e*PKIKP **P** 05 37 28.2 +2.0
comp=Z,10nm,0.2s,mb5.1
KIC Kosan Boka 40.77 234 *e*PKIKP **P** 05 37 27.5 +1.1
comp=Z,53nm,1.1s,mb5.1
LIC Lamto 41.06 234 *e*PKIKP **P** 05 37 27.9 -0.9
comp=Z,29nm,1.2s,mb4.8
LIC Lamto 41.06 234 *e*P **P** 05 37 30.2 +1.4
MK31 Makanchi Array 42.63 56 *e*P **P** 05 37 42.7 +1.4
MK31 Makanchi Array 42.63 56 *e*P **P** 05 37 42.7 +1.4
MKAR Makanchi Array 42.63 56 P **P** 05 37 42.9 +1.5
comp=Z,1.0nm,0.4s,mb3.9,baz=268,slow=8.4,SNR=19
MKAR Makanchi Array 42.63 56 P **P** 05 37 42.9 +1.6
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 42.63 56 P **P** 05 37 42.8 +1.5
ZALV Zalesovo Beam 44.15 46 P **P** 05 37 53.3 -0.1
comp=Z,1.4nm,0.5s,mb4.0,baz=261,slow=9.2,SNR=4.8
ZALV LR LR 06 01 05.0
comp=Z,34nm,18.6s,MS3.3,baz=282,slow=43
PYUN Piuthan 47.48 82 *e*P **P** 05 38 21.9 +1.8
comp=Z,12nm,0.5s,mb5.1
DANN Dangsing 48.02 81 *e*P **P** 05 38 26.8 +2.5
comp=Z,28nm,0.6s
KOLN Koldanda 48.11 82 *e*P **P** 05 38 26.9 +1.9
comp=Z,6.6nm,0.5s,mb4.9
GKN Gorkha 48.87 81 *e*P **P** 05 38 32.4 +1.6
comp=Z,8.7nm,0.4s,mb5.2
DMN Daman 49.40 81 *e*P **P** 05 38 36.8 +1.9
comp=Z,13nm,0.6s,mb5.1
JIRN Jiri 50.27 81 *e*P **P** 05 38 43.0 +1.5
comp=Z,4.3nm,0.4s,mb4.8
TAPN Taplejung 51.63 81 *e*P **P** 05 38 53.1 +1.4
comp=Z,4.6nm,0.3s,mb4.8
ZAK Zakamensk 55.81 49 *e*P pP 05 39 32.0 -1.4
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
BOD Bodaibo 59.84 38 *e*P **P** 05 39 50.4 +0.3
BOD pmax pmax
comp=Z,6.0nm,1.6s,mb4.4
BOD Bodaibo 59.84 38 *e*P **P** 05 39 50.4 +0.3
comp=Z,6.0nm,1.6s,mb4.4
BOSA Boshof 62.85 182 P **P** 05 40 13.2 +2.5
comp=Z,1.8nm,0.5s,mb4.5,baz=0.0,slow=6.1,SNR=3.9
BOSA Boshof 62.85 182 P **P** 05 40 13.2 +2.5
BOSA pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
CMAR Chiang Mai Arr 64.87 84 P **P** 05 40 25.9 +1.5
comp=Z,0.7nm,0.3s,mb4.1,baz=300,slow=7.7,SNR=5.7
CMAR Chiang Mai Arr 64.87 84 P **P** 05 40 25.9 +1.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s

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*IDC **07** 05:30:14.1±1.1,2095S×16972E,h0km,mb4.5/6, mb1 4.7/7,mb1mx4.4/16,mbtmp4.5/7,ML3.9/1,MS3.9/15, Ms1 3.9/15,ms1mx3.8/22,Error ellipse: s-maj=30.6km s-min=26.9km az=170.0*

*ISCJB **07** 05:30:15.3±0.9,209S±0.1×170.0±1.0,h33km,mb4.5/10, MS3.9/11,Error ellipse: s-maj=17.2km s-min=10.0km az=171.8*

*NEIC **07** 05:30:21.0±3.2,21.12S×16974E,h46km±26km,mb4.7/4, Error ellipse: s-maj=30.1km s-min=15.8km az=211.0*

*GCMT **07** 05:30:21.0±0.4,21.24S×17026E,h25km±1km,MW4.9/66, Moment Tensor Solution. s20,c24; s66,c86; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.28±.14; Mθθ-1.70±.12; Mφφ 1.99±.13; Mrθ 0.43±.24; Mθφ-2.09±.11; Mrφ 0.39±.23; Best double couple: Mo2.85500×10^16^ NP1:φs291.00000°,δ79.00000°,λ-173.00000°. NP2: φs200.00000°,δ83.00000°,λ-11.00000°. Principal axes: T 2.9430, Plg3.0000°, Azm246.0000°; N -0.1670, Plg77.0000°, Azm350.0000°; P -2.7670, Plg13.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 05:30:19.1±1.0,210S±01×169.8E±01,h35km,n43, σ1s04/20,mb4.4/10,MS3.9/11,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.33**	**251**	*e*P	**Pn**	**05 31 08.2**	**-0.5**
DZM				*e*S	**Sn**	**05 31 51.2**	**+4.1**
DZM	**Mont Dzumac**	**3.33**	**251**	*e*Pn	**Pn**	**05 31 08.4**	**-0.4**
NOUC	**Port Laguerre**	**3.47**	**251**	*e*P	**Pn**	**05 31 10.5**	**-0.1**
NOUC				*e*S	**Sn**	**05 31 55.1**	**+4.6**
RAO	**Raoul Island**	**13.79**	**129**	LR	LR	05 37 17.4	
	comp=Z,471nm,19.9s,baz=314,slow=30						
HNR	**Honiara**	**14.94**	**319**	LR	LR	05 38 48.6	
	comp=Z,302nm,20.0s,baz=311,slow=35						
EIDS	**Eidsvold**	**17.78**	**252**	*e*Pn	**Pn**	**05 34 24.9**	**+1.0**
	45nm,0.8s						
URZ	**Urewera**	**18.31**	**162**	P	**Pn**	**05 34 29.6**	**-0.8**
	0.4nm,0.3s,baz=338,slow=7.6,SNR=4.4						
URZ				LR	LR	05 39 57.7	
	comp=Z,539nm,18.9s,baz=348,slow=32						
AFI	**Afiamalu**	**18.89**	**71**	LR	LR	05 40 23.0	
	comp=Z,335nm,21.3s,baz=238,slow=32						
CTA	**Charters Tower**	**22.10**	**268**	P	**P**	**05 35 14.2**	**+2.7**
	6.5nm,0.9s,mb4.0,baz=102,slow=12,SNR=5.4						
CTAO	**Charters Tower**	**22.10**	**268**	*e*P	**P**	**05 35 12.1**	**+0.6**
RPZ	**Rata Peaks**	**22.67**	**178**	LR	LR	05 43 22.6	
	comp=Z,384nm,19.1s,MS3.9,baz=176,slow=35						
PMG	**Port Moresby**	**24.69**	**294**	*e*P	**P**	**05 35 36.9**	**-0.2**
	19nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**27.43**	**241**	P	**P**	**05 36 01.2**	**-0.5**
	6.1nm,0.9s,mb4.2,baz=57,slow=9.6,SNR=8.7						
STKA				LR	LR	05 46 19.3	
	comp=Z,442nm,19.9s,MS4.0,baz=34,slow=35						
RAR	**Rarotonga**	**28.33**	**96**	LR	LR	05 44 02.4	
	comp=Z,208nm,19.7s,MS3.7,baz=268,slow=29						
WB2	**Warramunga Arr**	**33.22**	**265**	*e*P	**P**	**05 36 51.3**	**-1.8**
WRAB	**Tennant Creek**	**33.22**	**265**	*e*P	**P**	**05 36 52.0**	**-1.0**
	14nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**33.23**	**265**	P	**P**	**05 36 52.5**	**-0.6**
	6.0nm,0.8s,mb4.6,baz=96,slow=8.0,SNR=34						
WRA				LR	LR	05 49 37.4	
	comp=Z,479nm,22.0s,MS4.2,baz=105,slow=35						
ASAR	**Alice Springs**	**33.29**	**259**	P	**P**	**05 36 53.2**	**-0.4**
	11nm,0.9s,mb4.8,baz=84,slow=8.9,SNR=56						

TBI	**Tubuai**	**37.68**	**101**	*e*LQ			05 45 44.4	
	524nm,29.8s							
PPT	**Papeete**	**38.39**	**92**	*e*LQ			05 46 08.1	
	821nm,28.5s							
PPT				*e*LR	LR		05 47 46.2	
	268nm,25.5s							
GUMO	**Guam**	**42.23**	**322**	LR	LR		05 55 05.2	
	comp=Z,63nm,18.2s,MS3.5,baz=139,slow=35							
MBWA	**Marble Bar**	**46.59**	**260**	*e*P	**P**		**05 38 44.4**	**+0.4**
	14nm,0.8s,mb4.9							
MJAR	**Matsushiro Arr**	**64.56**	**332**	LR	LR		06 03 23.7	
	comp=Z,80nm,20.9s,MS3.9,baz=210,slow=31							
QSPA	**South Pole Qui**	**69.06**	**180**	P	**P**		**05 41 22.1**	**+1.3**
	4.6nm,1.1s,mb4.3,baz=8.7,slow=3.5,SNR=6.4							
KSRS	**Korea Array**	**70.27**	**326**	LR	LR		06 11 12.8	
	comp=Z,38nm,19.3s,MS3.7,baz=205,slow=35							
PETK	**Petropavlovsk-**	**74.55**	**352**	LR	LR		06 06 56.1	
	comp=Z,46nm,21.9s,MS3.7,baz=343,slow=30							
MAW	**Mawson**	**77.02**	**202**	LR	LR		06 11 42.7	
	comp=Z,94nm,18.3s,MS4.1,baz=79,slow=32							
CMAR	**Chiang Mai Arr**	**79.73**	**294**	P	**P**		**05 42 23.6**	**-0.3**
	0.6nm,0.3s,mb4.0,baz=139,slow=4.1,SNR=3.8							
NVAR	**Mina Array Bea**	**89.55**	**48**	P	**P**		**05 43 15.4**	**+2.5**
	0.8nm,0.8s,mb4.1,baz=227,slow=7.8,SNR=5.2							
NVAR	**Mina Array Bea**	**89.55**	**48**	P	**P**		**05 43 15.4**	**+2.5**
ANMO	**Albuquerque**	**96.83**	**55**	LR	LR		06 21 23.2	
	comp=Z,65nm,20.3s,MS4.1,baz=345,slow=32							
TXAR	**Lajitas Array**	**97.11**	**61**	LR	LR		06 19 51.9	
	comp=Z,121nm,18.6s,MS4.4,baz=35,slow=31							
EKA	**Eskdalemuir Ar**	**145.32**	**353**	PKPbc	PKPbc		05 49 51.5	**-1.3**
	3.3nm,0.9s,baz=330,slow=2.4,SNR=3.4							
KHC	**Kasperske Hory**	**146.15**	**332**	*e*PKP	PKPdf		05 49 53.0	-1.5
GERES	**GERESS Array B**	**146.30**	**331**	PKPbc	PKPbc		05 49 54.1	-1.8
	1.6nm,1.0s,baz=63,slow=0.3,SNR=4.0							
CDF	**Champ du Feu**	**149.27**	**337**	*e*PKP1	PKPab		05 50 11.2	+2.6
	23nm,1.2s							
HINF	**Hinteralfeld**	**149.93**	**337**	*e*PKP1	PKPab		05 50 12.6	+1.3
	31nm,1.4s							
HAU	**Haudompre**	**149.95**	**338**	*e*PKP1	PKPab		05 50 12.7	+1.4
	19nm,1.0s							
MEZF	**Maizieres J'vi**	**149.97**	**340**	*e*PKP1	PKPab		05 50 13.3	+1.9
CABF	**La Chapelle**	**151.22**	**336**	*e*PKP1	PKPab		05 50 15.2	-1.5
	65nm,1.5s							
LOR	**Lormes**	**151.43**	**340**	*e*PKP1	PKPab		05 50 16.2	-1.3
	16nm,1.0s							
SSF	**Saint Saulge**	**151.73**	**340**	*e*PKP1	PKPab		05 50 16.8	-1.9
	10nm,1.0s							
TCF	**Toulx Ste Croi**	**152.82**	**341**	*e*PKP1	PKPab		05 50 20.1	-3.2

*ISCJB **07** 05:33:58.6±0.7,3131S×008×1795W×0.1,h208km±10km, mb4.3/5,Error ellipse: s-maj=21.8km s-min=9.7km az=23.4*
*NEIC **07** 05:34:01.9±1.3,3094S×17944W,h228km±15km,mb4.2/1, Error ellipse: s-maj=25.6km s-min=15.0km az=182.0*
*IDC **07** 05:34:02.3±1.0,3092S×17934W,h237km±11km,mb4.2/5, mb1 4.3/6,mb1mx3.8/17,mbtmp4.2/6,Error ellipse: s-maj=19.9km s-min=16.4km az=9.0*

ISC 07 05:33:59.2±0.7,3139S×008×1794W×02,h207km±11km, n17,σ0§97/13,mb4.3/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.48**	**31**	P		**Pn**	**05 34 43.9**	**+0.5**
	68nm,0.3s,baz=90,slow=18,SNR=2.0							
RAO				S		**Sn**	**05 35 17.8**	**-0.1**
	165nm,0.3s,baz=90,slow=19,SNR=5.6							
URZ	**Urewera**	**7.43**	**202**	P		**Pn**	**05 35 45.5**	**+0.5**
	0.8nm,0.3s,baz=294,slow=13,SNR=10							
URZ				S		**Sn**	**05 37 08.5**	**-0.8**
	4.7nm,0.3s,baz=80,slow=23,SNR=16							
RAR	**Rarotonga**	**20.27**	**65**	P		**P**	**05 38 18.8**	**-0.3**
HNR	**Honiara**	**29.09**	**314**	P		**P**	**05 39 38.6**	**-2.0**
	112nm,0.4s,baz=199,slow=5.8,SNR=4.3							
CTA	**Charters Tower**	**32.80**	**282**	P		**P**	**05 40 14.3**	**+1.1**
	2.8nm,0.3s,mb4.3,baz=112,slow=9.7,SNR=6.2							
STKA	**Stephens Creek**	**33.10**	**259**	P		**P**	**05 40 17.9**	**+2.2**
	6.3nm,0.5s,mb4.4,baz=100,slow=11,SNR=13							
ASAR	**Alice Springs**	**41.88**	**269**	P		**P**	**05 41 29.4**	**+0.1**
	5.2nm,0.4s,mb4.3,baz=105,slow=7.5,SNR=62							
WB2	**Warramunga Arr**	**42.95**	**274**	*e*P		**P**	**05 41 37.4**	**-0.5**
WRAB	**Tennant Creek**	**42.95**	**274**	*e*P		**P**	**05 41 37.5**	**-0.5**
	6.2nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**42.96**	**274**	P		**P**	**05 41 37.8**	**-0.3**
	7.7nm,0.3s,mb4.6,baz=111,slow=8.1,SNR=176							
QSPA	**South Pole Qui**	**58.72**	**180**	P		**P**	**05 43 38.7**	**+4.1**
	15nm,0.8s,baz=19,slow=0.5,SNR=71							
NB2	**NORSAR Subarra**	**149.53**	**350**	PKP		PKPdf	05 53 21.6	+3.2
	comp=Z,1.3nm,0.5s,baz=19,slow=4.1							
NOA	**NORSAR Array B**	**149.53**	**350**	PKPbc		PKPbc	05 53 21.9	-1.3
	comp=Z,0.7nm,0.7s,baz=19,slow=4.6,SNR=5.4							
HFS	**Hagfors**	**149.96**	**347**	PKPbc		PKPbc	05 53 22.4	-1.8
	comp=Z,0.9nm,0.4s,baz=116,slow=3.4,SNR=11							
AKASG	**Malin Array Be**	**151.33**	**321**	PKPbc		PKPbc	05 53 26.0	-1.8
	comp=Z,1.0nm,0.5s,baz=44,slow=3.1,SNR=4.7							
BRTR	**Keskin Array B**	**151.99**	**296**	PKPbc		PKPbc	05 53 28.8	-0.9
	comp=Z,0.4nm,0.5s,baz=120,slow=4.4,SNR=3.6							
TORD	**Torodi Ar. Bea**	**161.82**	**183**	PKP		PKPdf	05 53 28.8	-0.2
	comp=Z,0.2nm,0.7s,baz=313,slow=1.0,SNR=3.6							
TORD				PKPab		PKPab	05 54 22.9	+0.4
	comp=Z,0.9nm,0.6s,baz=170,slow=4.0,SNR=8.1							

*IDC **07** 06:25:14.1±1.3,3468N×2724E,h0km,mb3.8/5,mb1 3.7/9, mb1mx3.6/24,mbtmp3.7/9,ML4.0/3,Error ellipse: s-maj=25.8km s-min=23.8km az=40.0*
*ISCJB **07** 06:25:17.8±0.4,3457N§003×2769E±004,h65km±9km, mb3.7/4,Error ellipse: s-maj=6.5km s-min=3.6km az=37.7*
*ATH **07** 06:25:22.7,35.1N×27.1E,h88km±5km*
*HLW **07** 06:25:23.2,3425N×2752E,h33km,Mb4.4*
*GII **07** 06:25:24.0±1.6,3425N×2779E,h32km±4km,mb4.1/3, ML3.9/3,Mw3.6/4*

ISC 07 06:25:19.3±0.4,3460N±003×2762E±004,h55km±9km,n42, σ1§39/58,mb3.7/4,4C,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.02**	**338**	*e*P		**Pn**	**06 25 37.0**	**-0.4**
KARP				*e*S		**Sn**	**06 25 48.0**	**-2.8**
ARG	**Arkhangelos**	**1.67**	**14**	*e*P		**Pn**	**06 25 47.6**	**+1.5**
NPS	**Neapolis**	**1.78**	**292**	*e*P		**Pn**	**06 25 46.8**	**-0.8**
IDI	**Anoyia**	**2.35**	**288**	Pn		**Pn**	**06 25 54.5**	**-0.8**
	9.1nm,0.3s,baz=112,slow=15,SNR=31							
IDI				Sn		**Sn**	**06 26 19.3**	**-3.7**
	15nm,0.3s,baz=151,slow=23,SNR=8.3							
TURN	**Turunc**	**2.47**	**19**	↑*e*P		**Pn**	**06 25 54.8**	**-1.4**
BDRM	**Kayabasi**	**2.47**	**357**	*e*P		**Pn**	**06 25 56.8**	**-0.3**
GVD	**Gavdhos**	**2.92**	**276**	*e*P		**Pn**	**06 26 03.0**	**-0.2**
VAM	**Vamos**	**2.92**	**287**	*e*P		**Pn**	**06 26 03.0**	**-0.3**
AYDN	**Tasoluk**	**3.06**	**4**	↑*i*P		**Pn**	**06 26 05.4**	**+0.2**
GOLH	**Golhisar**	**3.07**	**30**	↑*i*P		**Pn**	**06 26 08.0**	**+2.7**
SLUM		**3.70**	**214**	↑↑P		**Pn**	**06 26 13.4**	**-0.5**
SLUM				S		**Sn**	**06 26 50.2**	**-6.0**
VLI	**Veliai**	**4.36**	**300**	*e*P		**Pn**	**06 26 20.0**	**-3.0**
KOT	**Kottamia**	**5.86**	**141**	P		**Pn**	**06 26 45.9**	**+2.4**
KOT				S		**Sn**	**06 27 44.1**	**-5.2**
HSAF	**As Saff**	**5.98**	**145**	P		**Pn**	**06 26 46.5**	**+1.4**
HHAG	**Hagoal**	**5.98**	**139**	P		**Pn**	**06 26 48.0**	**+2.8**
HHAG				S		**Sn**	**06 27 49.3**	**-3.0**
GLL	**Jalalah**	**6.09**	**144**	P		**Pn**	**06 26 47.4**	**+0.8**
AWBH		**6.35**	**170**	P		**Pn**	**06 26 50.6**	**+0.4**
SUZ		**6.48**	**136**	P		**Pn**	**06 26 53.4**	**+1.4**
SLTI	**Sal'it**	**6.63**	**109**	Sn		**Sn**	**06 28 06.9**	**-1.4**
MMAI	**Mount Meron Ar**	**6.66**	**102**	Pn		**Pn**	**06 26 57.6**	**+3.1**
	1.6nm,0.3s,baz=299,slow=11,SNR=3.6							
MMAI				Sn		**Sn**	**06 28 09.9**	**+0.8**
	3.7nm,0.3s,baz=313,slow=25,SNR=3.4							
MMA0B	**Mount Meron ar**	**6.67**	**102**	Sn		**Sn**	**06 28 09.8**	**+0.8**
KZIT	**Kziot**	**6.79**	**121**	Sn		**Sn**	**06 28 10.2**	**-1.9**
RTMI	**Retamim**	**6.92**	**119**	Sn		**Sn**	**06 28 12.8**	**-2.5**
HMDT	**Nahal Hemdat**	**7.01**	**107**	Pn		**Pn**	**06 27 01.0**	**+1.8**
HMDT				Sn		**Sn**	**06 28 17.8**	**+0.3**
BRTR	**Keskin Array B**	**7.02**	**41**	Pn		**Pn**	**06 27 01.9**	**+2.5**
	0.1nm,0.3s,baz=226,slow=14,SNR=3.0							
BRTR				Sn		**Sn**	**06 28 17.5**	**-0.2**
	0.4nm,0.3s,baz=213,slow=26,SNR=6.6							
YTIR	**Yattir**	**7.07**	**115**	Pn		**Pn**	**06 27 02.0**	**+1.9**
YTIR				Sn		**Sn**	**06 28 17.8**	**-1.3**
DSI	**Dead Sea**	**7.17**	**113**	Pn		**Pn**	**06 27 02.4**	**+0.9**
DSI				Sn		**Sn**	**06 28 21.1**	**-0.5**
MZDA	**Masada**	**7.28**	**115**	Pn		**Pn**	**06 27 04.0**	**+1.0**
MZDA				Sn		**Sn**	**06 28 23.6**	**-0.6**
HFRF	**Wahat Farafira**	**7.45**	**175**	P		**Pn**	**06 27 06.0**	**+0.7**
KRMI	**Paran Flat**	**7.48**	**125**	Pn		**Pn**	**06 27 06.4**	**+0.6**
PRNI	**Paran**	**7.54**	**122**	Pn		**Pn**	**06 27 07.2**	**+0.7**
PRNI				Sn		**Sn**	**06 28 28.2**	**-2.2**
ZFRI	**Zfri**	**7.54**	**120**	Sn		**Sn**	**06 28 28.8**	**-1.8**
HRFI	**Mount Harif**	**7.75**	**124**	Pn		**Pn**	**06 27 10.9**	**+1.5**
HRFI				Sn		**Sn**	**06 28 34.1**	**-1.6**
MBRI	**Mt Berech**	**7.81**	**126**	Pn		**Pn**	**06 27 11.4**	**+1.1**
MBRI				Sn		**Sn**	**06 28 35.1**	**-2.2**
EIL	**Elat**	**7.92**	**126**	Pn		**Pn**	**06 27 13.2**	**+1.5**
	0.9nm,0.3s,baz=346,slow=22,SNR=9.4							
EIL				Sn		**Sn**	**06 28 37.9**	**-2.0**
	4.0nm,0.3s,baz=312,slow=24,SNR=9.2							
EIL	**Elat**	**7.92**	**126**	Pn		**Pn**	**06 27 13.1**	**+1.4**
EIL				Sn		**Sn**	**06 28 37.9**	**-2.0**
AKASG	**Malin Array Be**	**16.14**	**4**	Pn		**Pn**	**06 29 02.0**	**-0.3**
	1.5nm,0.3s,baz=194,slow=12,SNR=7.1							
HFS	**Hagfors**	**27.12**	**345**	P		**P**	**06 30 56.0**	**-0.6**
	4.8nm,1.0s,mb4.0,baz=213,slow=11,SNR=3.4							
EKA	**Eskdalemuir Ar**	**29.68**	**324**	P		**P**	**06 31 19.1**	**-0.4**
	2.1nm,1.0s,mb3.8,baz=120,slow=11,SNR=3.6							
TORD	**Torodi Ar. Bea**	**31.74**	**234**	P		**P**	**06 31 38.8**	**+0.7**
	0.4nm,0.8s,mb3.3,baz=40,slow=7.6,SNR=3.8							
ARCES	**ARCESS Array B**	**35.01**	**359**	P		**P**	**06 32 06.0**	**0.0**
	0.8nm,0.6s,mb3.8,baz=173,slow=8.0,SNR=7.6							
MKAR	**Makanchi Array**	**42.40**	**56**	P		**P**	**06 33 12.7**	**+4.5**
	0.2nm,0.5s,baz=270,slow=8.7,SNR=2.8							

IDC 07 06:30:32.8±3.8,416S×13081E,h0km,mb3.6/1,mb1 3.7/3, mb1mx3.6/14,mbtmp3.5/3,ML3.3/2,Error ellipse: s-maj=274.5km s-min=30.6km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.06**	**168**	Pn		Pn	06 34 20.0	-0.1
	0.1nm,0.3s,baz=348,slow=11,SNR=7.3							
WRA				Sn		Sn	06 37 14.1	-4.9
	0.1nm,0.3s,baz=353,slow=24,SNR=3.1							
ASAR	**Alice Springs**	**19.62**	**172**	P		Pn	06 35 03.1	-1.1
	0.3nm,0.3s,baz=351,slow=10,SNR=24							
MKAR	**Makanchi Array**	**66.32**	**326**	P		P	06 41 23.3	+0.1
	0.6nm,0.8s,baz=108,slow=7.4,SNR=4.1							

*TRN **07** 06:30:31.8,1500N×6050W,h48km,MD4.3,M4.1(FDF) TRN Felt IV Saint Lucia;III Martinique.*
*ISCJB **07** 06:30:32.9±0.4,1498N§002×6059W§005,h70km±2km, mb4.5/45,Error ellipse: s-maj=7.8km s-min=2.5km az=164.8*
*IDC **07** 06:30:33.1±0.8,1495N×6066W,h52km±7km,mb4.0/17, mb1 4.2/17,mb1mx4.0/24,mbtmp4.0/17,MS3.5/5, Ms1 3.5/5,ms1mx3.1/19,Error ellipse: s-maj=16.7km s-min=10.7km az=85.0*
*NEIC **07** 06:30:34.2±0.4,1497N×6061W,h63km±2km,mb4.8/31, Error ellipse: s-maj=6.5km s-min=2.8km az=69.0*
NEIC Felt [III] on Martinique and Saint Lucia.
*BJI **07** 06:30:34.2,1500N×6060W,h63km,mB5.2,Ms4.9,Msz4.8*

ISC 07 06:30:33.7±0.4,1499N§002×6055W§004,h58km±2km, n431,σ0§52/446,mb4.5/45,MS4.2/6,157C-166D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.55**	**217**	↑*i*P		**Pn**	**06 30 45.6**	**-0.5**
FDF	**Fort de France**	**0.63**	**246**	*e*Pn		**Pn**	**06 30 46.5**	**-0.5**
FDF				*e*Sn		**Sn**	**06 30 56.3**	**-0.5**
FDF	**Fort de France**	**0.63**	**246**	↓*i*P		**Pn**	**06 30 46.5**	**-0.6**
BIM	**Bigot**	**0.69**	**227**	↓*i*P		**Pn**	**06 30 47.4**	**-0.4**
DSTT	**Stowe**	**0.77**	**289**	↑*i*P		**Pn**	**06 30 49.0**	**+0.3**
DSTT				*e*S		**Sn**	**06 31 00.1**	**+0.4**
DBCT	**Belle View Cho**	**0.82**	**290**	↑*i*P		**Pn**	**06 30 49.6**	**+0.3**
DBCT				*e*S		**Sn**	**06 31 00.8**	**0.0**
DSHT	**Scott's Head**	**0.82**	**286**	↓*i*P		**Pn**	**06 30 49.8**	**+0.4**
DSHT				*e*S		**Sn**	**06 30 59.8**	**-1.1**
DPMT	**Pointe Michel**	**0.84**	**289**	↓*i*P		**Pn**	**06 30 49.9**	**+0.3**
DPMT				*e*S		**Sn**	**06 31 01.7**	**+0.4**
MDN	**Morne-Daniel**	**0.88**	**292**	*e*P		**Pn**	**06 30 50.6**	**+0.5**
MDN				*e*S		**Sn**	**06 31 03.8**	**+1.7**
DWS	**Wesley**	**0.93**	**308**	↑*i*P		**Pn**	**06 30 50.9**	**+0.1**
DWS				*e*S		**Sn**	**06 31 02.0**	**-1.4**
DWS	**Wesley**	**0.93**	**308**	↑*i*P		**Pn**	**06 30 50.9**	**+0.1**
DWS				*e*S		**Sn**	**06 31 03.5**	**+0.1**
SLW	**Petit Monier**	**1.04**	**201**	↓*i*P		**Pn**	**06 30 51.4**	**-0.8**
DOG	**Dongo Capester**	**1.46**	**315**	↓*e*P		**Pn**	**06 30 57.5**	**-0.4**
PHG	**Guadaloupe-2**	**1.46**	**314**	*e*P		**Pn**	**06 30 58.0**	**+0.1**
HMG	**Houelmont**	**1.48**	**312**	*e*P		**Pn**	**06 30 57.9**	**-0.3**
BCG	**Bois Riant Cap**	**1.50**	**317**	*e*P		**Pn**	**06 30 57.9**	**-0.4**
BCG				*e*S		**Sn**	**06 31 16.2**	**-0.7**
SCG	**Saint Claude**	**1.50**	**314**	↓*e*P		**Pn**	**06 30 58.1**	**-0.3**
LZG	**Guadaloupe-1**	**1.64**	**314**	↓*e*P		**Pn**	**06 30 60.0**	**-0.4**
LZG				↓*e*S		**Sn**	**06 31 20.0**	**-0.4**
SVB	**Belmont**	**1.84**	**202**	↓*e*P		**Pn**	**06 31 02.8**	**-0.2**
SVB				*e*S		**Sn**	**06 31 26.1**	**+0.8**
BBGH	**Gun Hill**	**2.08**	**152**	*e*Pn		**Pn**	**06 31 07.6**	**+1.4**
GRSS	**Sisters**	**2.87**	**201**	↑*e*P		**Pn**	**06 31 16.7**	**-0.4**
GRSS				*e*S		**Sn**	**06 31 51.1**	**+0.7**
GRIC	**Isle de Caille**	**2.87**	**201**	*e*P		**Pn**	**06 31 17.2**	**+0.1**
GRIC				*e*S		**Sn**	**06 31 50.3**	**-0.2**
ANWB	**Willy Bob**	**2.91**	**336**	*e*Pn		**Pn**	**06 31 16.0**	**-1.6**
ANWB				*e*Sn		**Sn**	**06 31 52.5**	**+1.0**
GRHS	**Sauteurs**	**2.95**	**201**	↑*i*P		**Pn**	**06 31 18.0**	**-0.2**
GRHS				*e*S		**Sn**	**06 31 52.7**	**+0.3**
GRW	**Mount Saint Ca**	**3.02**	**201**	↓*i*P		**Pn**	**06 31 19.1**	**+0.1**
GRW				*e*S		**Sn**	**06 31 54.0**	**0.0**
GRGR	**Grenville**	**3.04**	**201**	*e*Pn		**Pn**	**06 31 19.3**	**-0.1**
GRGR				*e*Sn		**Sn**	**06 31 56.4**	**+1.9**
SKI	**Saint Kitts**	**3.14**	**318**	↓*e*P		**Pn**	**06 31 21.4**	**+0.7**
SKI				*e*S		**Sn**	**06 31 57.2**	**+0.2**
TOSP	**Speyside**	**3.67**	**180**	*e*P		**Pn**	**06 31 28.7**	**+0.6**
TOSP				*e*S		**Sn**	**06 32 09.6**	**-0.5**
TPR	**Prospect**	**3.79**	**183**	*e*P		**Pn**	**06 31 29.3**	**-0.3**
TPR				*e*S		**Sn**	**06 32 12.3**	**-0.7**
BOT	**Bacolet**	**3.81**	**182**	*e*P		**Pn**	**06 31 29.4**	**-0.4**
BOT				*e*S		**Sn**	**06 32 11.4**	**-2.0**
BOT	**Bacolet**	**3.81**	**182**	*e*P		**Pn**	**06 31 29.4**	**-0.4**
BOT				*e*S		**Sn**	**06 32 15.0**	**+1.6**
TRN	**Trinidad (W)**	**4.40**	**191**	*e*P		**Pn**	**06 31 38.1**	**+0.1**
TRN				*e*S		**Sn**	**06 32 27.3**	**-0.7**
TCE	**Chacachacare**	**4.43**	**195**	*e*P		**Pn**	**06 31 39.3**	**+0.9**
TCE				*e*S		**Sn**	**06 32 28.4**	**-0.3**
TBH	**Brigand Hill**	**4.51**	**186**	*e*P		**Pn**	**06 31 39.8**	**+0.3**
TBH				*e*S		**Sn**	**06 32 27.9**	**-2.8**
TPP	**Pointe-a-Pierr**	**4.73**	**191**	*e*P		**Pn**	**06 31 43.7**	**+1.1**
TPP				*e*S		**Sn**	**06 32 33.6**	**-2.6**
MTP	**Monte Pirata**	**5.70**	**303**	*e*Pn		**Pn**	**06 31 56.3**	**+0.5**
SJG	**San Juan**	**6.20**	**301**	*e*Pn		**Pn**	**06 32 02.9**	**+0.2**
PCRV	**Puerto La Cruz**	**6.23**	**220**	P		**Pn**	**06 32 03.4**	**+0.3**
	12nm,0.3s,baz=65,slow=2.7,SNR=49							
PCRV				S		**Sn**	**06 33 08.7**	**-4.3**
	3.2nm,0.3s,baz=342,slow=19,SNR=3.0							
PCRV				LR		LR	06 34 54.8	
	comp=Z,419nm,19.3s,baz=63,slow=43							
AGPR	**Aguadilla, PR**	**7.17**	**300**	*e*Pn		**Pn**	**06 32 16.6**	**+0.6**
AGPR				*e*Sn		**Sn**	**06 33 36.7**	**+0.5**
ROSC	**El Rosal**	**16.89**	**235**	P		**Pn**	**06 34 28.7**	**+2.4**
	7.3nm,0.3s,baz=357,slow=3.4,SNR=23							
ROSC				S		**S**	**06 37 42.5**	**+1.6**
	0.9nm,0.3s,baz=264,slow=19,SNR=5.2							
ROSC				LR		LR	06 41 19.7	
	comp=Z,168nm,19.2s,baz=17,slow=38							
ROSC	**El Rosal**	**16.89**	**235**	*e*P		**Pn**	**06 34 29.1**	**+2.8**
OTAV	**Otavalo**	**22.98**	**232**	*e*P		**P**	**06 35 31.9**	**-1.7**
ATAH	**Atahualpa**	**28.11**	**220**	LR		LR	06 48 12.8	
	comp=Z,150nm,20.5s,MS3.6,baz=34,slow=38							
SIV	**San Ignacio**	**30.79**	**181**	P		**P**	**06 36 44.5**	**+0.5**
	1.9nm,0.4s,mb4.3,baz=8.4,slow=9.4,SNR=24							
LPAZ	**La Paz**	**31.97**	**194**	P		**P**	**06 36 55.2**	**+0.8**
	5.1nm,0.8s,mb4.4,baz=12,slow=9.6,SNR=20							
LPAZ				LR		LR	06 50 38.9	
	comp=Z,72nm,18.1s,MS3.4,baz=344,slow=38							
LPAZ	**La Paz**	**31.97**	**194**	*e*P		**P**	**06 36 54.9**	**+0.6**
	6.5nm,0.8s,mb4.5							
BDFB	**Brasilia**	**32.86**	**157**	P		**P**	**06 37 03.5**	**+1.2**
	0.3nm,0.3s,mb3.7,baz=169,slow=24,SNR=3.1							
CCM	**Cathedral Cave**	**35.53**	**316**	*e*P		**P**	**06 37 24.7**	**-0.4**
	8.1nm,1.0s,mb4.6							
LVC	**Limon Verde**	**38.26**	**193**	P		**P**	**06 37 47.3**	**-1.2**
	6.2nm,0.4s,mb4.7,baz=19,slow=6.9,SNR=23							
LVC	**Limon Verde**	**38.26**	**193**	*e*P		**P**	**06 37 47.1**	**-1.4**
	19nm,1.2s,mb4.7							
JCT	**Junction City**	**39.12**	**300**	*e*P		**P**	**06 37 54.6**	**-1.1**
	12nm,0.8s,mb4.7							
ECSD	**EROS,Sioux Fal**	**41.98**	**320**	*e*P		**P**	**06 38 18.6**	**-0.5**
	97nm,2.5s,mb5.0							
TXAR	**Lajitas Array**	**42.16**	**297**	P		**P**	**06 38 19.9**	**-0.9**
	0.4nm,0.3s,mb3.5,baz=130,slow=7.8,SNR=24							
TXAR				PcP		PcP	06 40 15.1	+0.7
	1.6nm,0.9s,baz=121,slow=6.4,SNR=8.8							
TXAR	**Lajitas Array**	**42.16**	**297**	P		**P**	**06 38 19.9**	**-0.9**
TXAR				PcP		PcP	06 40 15.1	+0.7
AGMN	**Agassiz Refuge**	**44.11**	**326**	*e*P		**P**	**06 38 35.5**	**-0.8**
	54nm,2.2s,mb4.9							
BNM	**Barren Site**	**45.60**	**303**	*e*P		**P**	**06 38 48.2**	**-0.1**
LPM	**Los Pinos Moun**	**45.65**	**304**	*e*P		**P**	**06 38 48.9**	**+0.2**
ANMO	**Albuquerque**	**45.66**	**304**	P		**P**	**06 38 48.2**	**-0.5**
	2.4nm,1.0s,mb4.1,baz=122,slow=8.7,SNR=3.6							
SDCO	**Great Sand Dun**	**45.66**	**308**	*e*P		**P**	**06 38 48.3**	**-0.4**
	4.4nm,1.0s,mb4.3							
319A	**Douglas**	**47.28**	**299**	↑↑P		**P**	**06 39 01.9**	**+0.4**
	baz=47,SNR=5.6							
219A	**White Tail Can**	**47.36**	**300**	↓↓P		**P**	**06 39 02.4**	**+0.3**
	baz=47,SNR=6.0							
119A	**Ashpeak Ranch,**	**47.52**	**301**	↓↓P		**P**	**06 39 03.7**	**+0.3**
	baz=48							
Y19A	**Nutrioso**	**47.70**	**302**	↓↓P		**P**	**06 39 05.8**	**+1.1**
	baz=48,SNR=16							
X19A	**St. Johns**	**47.82**	**303**	↑↑P		**P**	**06 39 06.2**	**+0.6**
	baz=48							
318A	**Bisbee**	**47.89**	**299**	↓↓P		**P**	**06 39 06.5**	**+0.3**
	baz=48,SNR=10.0							
218A	**Dragoon**	**48.02**	**300**	↑↑P		**P**	**06 39 07.7**	**+0.5**
	baz=48							
118A	**Homack Ranch,**	**48.06**	**301**	↓↓P		**P**	**06 39 07.9**	**+0.4**
	baz=48,SNR=8.8							
T19A	**Beclabito**	**48.13**	**306**	↑↑P		**P**	**06 39 07.9**	**-0.1**
	baz=48,SNR=7.9							
Y18A	**Canyon Day Jun**	**48.30**	**302**	↓↓P		**P**	**06 39 09.8**	**+0.4**
	baz=48,SNR=6.1							
L21A	**Rawlins**	**48.36**	**313**	↓↓P		**P**	**06 39 10.2**	**+0.5**
	baz=48,SNR=6.0							
X18A	**Snowflake**	**48.37**	**303**	↓↓P		**P**	**06 39 10.3**	**+0.3**
	baz=48,SNR=11							
S19A	**Harvey Farm, M**	**48.44**	**307**	↓↓P		**P**	**06 39 10.2**	**-0.2**
	baz=48,SNR=7.0							
Z17A	**San Carlos Hig**	**48.58**	**301**	↓↓P		**P**	**06 39 11.8**	**+0.3**
	baz=48							
217A	**Green Valley**	**48

	baz=51						
W14A	Seligman	51.03 303	⇑P	P	06 39 30.8	+0.7	
	baz=51						
V14A	Boquillas Ranc	51.12 304	⇓P	P	06 39 31.3	+0.5	
	baz=51						
J17A	Brown Place, J	51.14 314	⇑P	P	06 39 31.3	+0.5	
	baz=51,SNR=12						
LOHW	Long Hollow	51.14 314	eP	P	06 39 30.5	-0.3	
	5.5nm,1.0s,mb4.4						
Q15A	Fillmore	51.21 308	⇓P	P	06 39 31.4	0.0	
	baz=51						
M16A	Huntsville	51.21 311	⇑P	P	06 39 31.2	-0.2	
	baz=51,SNR=13						
I17A	Pilgram Creek	51.22 315	⇓P	P	06 39 31.5	+0.1	
	baz=51						
AHID	Auburn Hatcher	51.24 313	eP	P	06 39 31.6	0.0	
	13nm,0.9s,mb4.9						
REDW	Red Top Meadow	51.24 314	eP	P	06 39 31.4	-0.1	
	31nm,1.8s,mb4.9						
HWUT	Hardware Ranch	51.24 312	eP	P	06 39 31.5	-0.1	
	8.5nm,1.0s,mb4.6						
L16A	Fish Haven	51.26 312	⇓P	P	06 39 31.6	-0.2	
	baz=51,SNR=9.3						
P15A	Leamington	51.26 309	⇓P	P	06 39 31.7	-0.1	
	baz=51						
MOOW	Moose Ponds	51.28 314	eP	P	06 39 31.6	-0.2	
	50nm,2.8s,mb5.0						
F18A	Big Timber	51.30 317	⇑P	P	06 39 32.1	+0.2	
	baz=51,SNR=7.1						
U14A	Mt Trumbull	51.31 305	⇓P	P	06 39 32.7	+0.4	
	baz=51,SNR=7.8						
TPAW	Teton Pass	51.35 314	eP	P	06 39 32.8	+0.4	
	7.9nm,0.9s,mb4.6						
T14A	Hurricane	51.35 306	⇑P	P	06 39 32.7	+0.2	
	baz=51						
IMW	Indian Meadow	51.46 315	eP	P	06 39 33.3	+0.1	
	2.6nm,0.8s,mb4.2						
DCID1	Drake Creek	51.54 314	eP	P	06 39 34.4	+0.6	
	12nm,0.9s,mb4.8						
X13A	Yucca	51.54 302	⇓P	P	06 39 34.2	+0.3	
	baz=52						
S14A	Cedar City	51.55 306	⇑P	P	06 39 34.2	+0.2	
	baz=52						
RRI2	Red Ridge	51.56 314	eP	P	06 39 34.0	0.0	
	9.0nm,0.9s,mb4.7						
K16A	Soda Springs	51.60 313	⇑P	P	06 39 34.2	0.0	
	baz=52,SNR=5.9						
E18A	Harlowton	51.66 318	⇓P	P	06 39 35.2	+0.6	
	baz=52						
W13A	Hualapai Mount	51.66 303	⇑P	P	06 39 35.4	+0.5	
	baz=52						
YMR	Madison River	51.72 316	eP	P	06 39 35.9	+0.8	
	7.7nm,0.8s,mb4.7						
J16A	Bone	51.74 314	⇓P	P	06 39 35.3	0.0	
	baz=52,SNR=8.2						
N15A	Stansbury Isla	51.76 311	⇑P	P	06 39 35.6	+0.2	
	baz=52						
ARUT	Antelope Range	51.77 306	eP	P	06 39 35.8	+0.2	
DUG	Dugway	51.81 310	eP	P	06 39 36.0	+0.1	
	9.6nm,0.9s,mb4.7						
DUG	Dugway	51.81 310	⇑P	P	06 39 35.7	-0.1	
	baz=52,SNR=13						
SPUT	South Promonto	51.81 311	eP	P	06 39 35.4	-0.4	
D18A	Linhart Farms,	51.81 319	⇑P	P	06 39 36.4	+0.6	
	baz=52,SNR=11						
I16A	Newdale	51.83 314	⇓P	P	06 39 36.1	+0.1	
	baz=52,SNR=10.0						
M15A	Larsen Ranch,	51.85 311	⇑P	P	06 39 35.5	-0.6	
	baz=52,SNR=12						
V13A	Grand Canyon W	51.86 304	⇓P	P	06 39 36.6	+0.3	
	baz=52,SNR=11						
P14A	Drum Mountains	51.86 309	⇓P	P	06 39 36.6	+0.4	
	baz=52,SNR=7.1						
Q14A	Sevier Lake (B	51.89 308	⇑P	P	06 39 37.0	+0.5	
	baz=52,SNR=13						
F17A	Fitzpatrick Pl	51.92 317	⇓P	P	06 39 37.0	+0.4	
	baz=52,SNR=5.9						
H16A	Russell Place,	51.92 315	⇓P	P	06 39 37.2	+0.6	
	baz=52,SNR=8.9						
L15A	Malad City	51.94 312	⇑P	P	06 39 36.6	-0.2	
	baz=52,SNR=18						
T13A	Saint George	51.99 305	⇑P	P	06 39 37.7	+0.4	
	baz=52,SNR=6.2						
S13A	Holt Ranch, En	52.06 306	⇑P	P	06 39 38.3	+0.6	
	baz=52,SNR=12						
EGMT	Eagleton	52.09 320	⇓P	P	06 39 38.3	+0.5	
	baz=52,SNR=7.0						
BGU	Big Grassy Mou	52.14 310	eP	P	06 39 38.1	-0.2	
HVU	Hansel Valley	52.16 312	eP	P	06 39 38.5	0.0	
	10nm,0.9s,mb4.8						
K15A	Arbon	52.23 313	⇑P	P	06 39 38.9	-0.1	
	baz=52						
E17A	Martinsdale	52.23 318	⇓P	P	06 39 38.6	-0.3	
	baz=52						
N14A	Grayback Hills	52.24 310	⇑P	P	06 39 38.9	-0.1	
	baz=52,SNR=19						
R13A	O'Grain Ranch,	52.26 307	⇑P	P	06 39 39.9	+0.7	
	baz=52,SNR=5.3						
J15A	Blackfoot	52.35 314	⇑P	P	06 39 40.1	+0.2	
	baz=52,SNR=8.8						
D17A	Six Diamond Ra	52.36 319	⇓P	P	06 39 40.0	+0.2	
	baz=52						
Q13A	Wheeler Ranch,	52.45 308	⇓P	P	06 39 41.1	+0.5	
	baz=52,SNR=16						
G16A	Moss Hill, Enn	52.46 316	⇓P	P	06 39 40.7	+0.1	
	baz=52						
BOZ	Bozeman (W)	52.48 317	⇓P	P	06 39 40.6	-0.1	
	baz=52,SNR=6.4						
M14A	Sheep Mountain	52.51 311	⇓P	P	06 39 40.8	-0.2	
	baz=52,SNR=7.0						
F16A	Kennard Place,	52.52 317	⇓P	P	06 39 41.0	0.0	
	baz=52						
P13A	Bates Ranch, G	52.55 308	⇓P	P	06 39 41.6	+0.2	
	baz=52,SNR=19						
IRM	Iron Mountain	52.56 302	⇓P	P	06 39 41.8	+0.2	
	baz=52,SNR=8.4						
L14A	Malta	52.56 312	⇓P	P	06 39 41.2	-0.2	
	baz=52,SNR=5.2						
C17A	Wharram Farm,	52.58 319	⇑P	P	06 39 41.6	+0.2	
	baz=53,SNR=8.4						
K14A	Jones Ranch, D	52.65 312	⇑P	P	06 39 41.9	-0.2	
	baz=53,SNR=18						
BC3	Big Chuckw Mtn	52.75 301	⇑P	P	06 39 42.9	0.0	
	baz=53,SNR=5.5						
R12A	Pony Springs,	52.78 307	⇑P	P	06 39 43.3	+0.2	
	baz=53,SNR=12						
E16A	East Helena	52.79 318	⇓P	P	06 39 42.9	-0.1	
	baz=53						
S12A	Delamar Landin	52.84 306	⇑P	P	06 39 44.0	+0.4	
	baz=53						
H15A	Lima	52.84 315	⇓P	P	06 39 43.9	+0.5	
	baz=53						
D16A	Dana Ranch, Ca	52.88 318	⇓P	P	06 39 43.7	0.0	
	baz=53,SNR=5.3						
G15A	Dillon	52.90 316	⇑P	P	06 39 44.0	+0.1	
	baz=53,SNR=13						
SWSC	Sam W. Stewart	52.96 300	⇓P	P	06 39 44.3	-0.2	
	baz=53						
N13A	Wendover, West	52.99 310	⇓P	P	06 39 44.9	+0.2	
	baz=53						
V11A	Goodsprings	53.02 304	⇑P	P	06 39 45.4	+0.5	
	baz=53						
DLMT	Dillon	53.03 316	eP	P	06 39 44.9	0.0	
	4.7nm,0.8s,mb4.5						
GMRC	Granite Mounta	53.06 302	⇑P	P	06 39 45.2	0.0	
	baz=53						
T11A	Corn Creek, Al	53.06 305	⇓P	P	06 39 45.4	+0.2	
	baz=53						
Q12A	Willow Creek R	53.08 308	⇑P	P	06 39 45.5	+0.2	
	baz=53						
L13A	Double Diamond	53.09 312	⇑P	P	06 39 45.3	0.0	
	baz=53,SNR=7.4						
J14A	Carey	53.09 313	⇑P	P	06 39 45.8	+0.4	
	baz=53,SNR=9.5						
F15A	Butte	53.11 317	⇑P	P	06 39 45.6	+0.2	
	baz=53,SNR=5.5						
I14A	Mackay	53.21 314	⇑P	P	06 39 46.4	+0.2	
	baz=53,SNR=7.7						
BELC	Belle Mtn.	53.24 301	⇓P	P	06 39 46.4	-0.2	
	baz=53						
C16A	Fuhringer Ranc	53.26 319	⇓P	P	06 39 46.9	+0.4	
	baz=53						
O12A	Currie	53.27 309	⇑P	P	06 39 46.6	0.0	
	baz=53						
K13A	Stover Farm, H	53.32 312	⇓P	P	06 39 46.9	-0.1	
	baz=53,SNR=9.4						
H14A	Leadore	53.34 315	⇓P	P	06 39 47.3	+0.2	
	baz=53,SNR=9.9						
TUQ	Turquoise Moun	53.36 303	⇑P	P	06 39 47.3	-0.1	
	baz=53						
E15A	Deer Lodge	53.39 317	⇑P	P	06 39 47.7	+0.3	
	baz=53						
B16A	M & M Farms, S	53.45 320	⇓P	P	06 39 48.0	+0.2	
	baz=53						
MONP	Monument Peak	53.48 300	⇑P	P	06 39 48.6	+0.3	
	baz=53						
D15A	Lincoln	53.51 318	⇑P	P	06 39 48.5	+0.3	
	baz=54,SNR=10						
R11A	Troy Canyon, C	53.54 307	⇑P	P	06 39 48.7	+0.1	
	baz=54,SNR=6.0						
S11A	Rachel	53.55 306	⇓P	P	06 39 49.4	+0.7	
	baz=54						
A16A	West Butte Ran	53.57 320	⇑P	P	06 39 48.9	+0.2	
	baz=54,SNR=8.0						
J13A	Cove Ranch, Pi	53.58 313	⇓P	P	06 39 48.8	-0.1	
	baz=54,SNR=9.4						
PFO	Pinyon Flat Ob	53.58 301	⇑P	P	06 39 49.6	+0.6	
	baz=54						
N12A	Clover Valley,	53.61 310	⇑P	P	06 39 48.9	-0.3	
	baz=54,SNR=6.6						
HEC	Hector,Ludlow	53.61 302	⇑P	P	06 39 49.7	+0.4	
	baz=54						
M12A	Wells	53.64 311	⇓P	P	06 39 49.5	+0.1	
	baz=54,SNR=10						
I13A	Wildhorse Cree	53.67 314	⇓P	P	06 39 49.7	+0.2	
	baz=54,SNR=15						
Q11A	Duckwater	53.68 307	⇓P	P	06 39 49.5	-0.2	
	baz=54,SNR=6.2						
F14A	Wisdom	53.69 316	⇑P	P	06 39 50.0	+0.4	
	baz=54						
ELK	Elko	53.73 310	eP	P	06 39 50.2	+0.2	
	4.3nm,0.9s,mb4.4						
HLID	Hailey	53.78 313	eP	P	06 39 50.6	+0.2	
	5.7nm,0.9s,mb4.5						
HLID	Hailey	53.78 313	⇑P	P	06 39 50.4	0.0	
	baz=54,SNR=12						
C15A	Salmond Ranch,	53.80 319	⇓P	P	06 39 50.7	+0.3	
	baz=54,SNR=14						
U10A	Ash Meadows, A	53.82 304	⇑P	P	06 39 51.3	+0.5	
	baz=54						
TPNV	Topopah Spring	53.83 305	eP	P	06 39 51.3	+0.5	
	6.1nm,0.8s,mb4.6						
TPNV	Topopah Spring	53.83 305	⇓P	P	06 39 51.0	+0.1	
	baz=54,SNR=13						
L12A	House Creek Ra	53.87 311	⇓P	P	06 39 51.1	0.0	
	baz=54						
K12A	Draper Farm, C	53.91 312	⇑P	P	06 39 51.3	0.0	
	baz=54,SNR=11						
O11A	Cowboy Ranch,	53.92 309	⇑P	P	06 39 51.7	+0.2	
	baz=54,SNR=25						
E14A	Clinton	53.95 317	⇓P	P	06 39 51.5	0.0	
	baz=54						
B15A	Bradely Ranch,	53.95 319	⇓P	P	06 39 51.4	-0.1	
	baz=54						
GSC	Goldstone	54.06 303	⇑P	P	06 39 52.5	0.0	
	baz=54						
G13A	Cobalt	54.06 315	⇓P	P	06 39 52.5	+0.1	
	baz=54						
R10A	Warm Springs	54.08 307	⇓P	P	06 39 52.9	+0.3	
	baz=54						
N11A	Elk Archery C	54.12 310	⇑P	P	06 39 53.0	+0.1	
	baz=54						
D14A	Greenough	54.16 318	⇑P	P	06 39 52.9	-0.1	
	baz=54,SNR=5.6						
J12A	Stokes Ranch,	54.19 313	⇑P	P	06 39 53.3	-0.1	
	baz=54,SNR=8.0						
MURC	Murrieta	54.20 301	⇓P	P	06 39 53.5	-0.1	
	baz=54						
Q10A	Clear Creek Ra	54.25 307	⇓P	P	06 39 53.9	0.0	
	baz=54,SNR=6.4						
FURC	Furnace Creek,	54.25 304	⇓P	P	06 39 53.9	0.0	
	baz=54						
S10A	Tonopah Range,	54.25 306	⇑P	P	06 39 54.2	+0.3	
	baz=54,SNR=14						
A15A	Johnson Ranch,	54.28 320	⇓P	P	06 39 54.1	+0.2	
	baz=54,SNR=12						
M11A	Holland Ranch,	54.28 310	⇑P	P	06 39 54.3	+0.2	
	baz=54,SNR=9.0						
F13A	Darby	54.32 316	⇓P	P	06 39 54.4	+0.1	
	baz=54						
H12A	Diamond D Ranc	54.35 314	⇓P	P	06 39 54.3	-0.2	
	baz=54						
I12A	Atlanta	54.35 313	⇑P	P	06 39 54.3	-0.2	
	baz=54,SNR=5.6						
L11A	Cat Creek Ranc	54.41 311	⇑P	P	06 39 54.9	-0.1	
	baz=54,SNR=10						
E13A	Victor	54.41 317	⇑P	P	06 39 54.9	0.0	
	baz=54,SNR=14						
P10A	Eureka	54.44 308	⇑P	P	06 39 55.3	+0.1	
	baz=54						
O10A	Cortez Mining,	54.59 309	⇑P	P	06 39 56.6	+0.3	
	baz=54						
BFSC	Mount Baldy St	54.64 301	⇑P	P	06 39 56.6	-0.2	
	baz=55						
N10A	Dunphy	54.67 309	⇓P	P	06 39 57.0	+0.1	
	baz=55						
R09A	Tonopah	54.67 306	⇓P	P	06 39 57.1	+0.1	
	baz=55,SNR=5.8						
MPMC	Manual Prospec	54.70 304	⇓P	P	06 39 57.0	-0.2	
	baz=55						
A14A	Double T Ranch	54.71 320	⇓P	P	06 39 56.8	-0.2	
	baz=55						
S09A	Goldfield	54.72 306	⇓P	P	06 39 57.2	-0.1	
	baz=55,SNR=8.7						
K11A	Parker Ranch,	54.75 312	⇓P	P	06 39 57.3	-0.1	
	baz=55						
MFID	Camas Ranch	54.75 313	⇑P	P	06 39 57.2	-0.2	
	baz=55						
D13A	Huson	54.78 317	⇓P	P	06 39 57.2	-0.4	
	baz=55,SNR=5.1						
LRMC	Laurel Mountai	54.79 303	⇓P	P	06 39 57.7	-0.2	
	baz=55						
M10A	I.L. Ranch, Tu	54.85 310	⇓P	P	06 39 57.9	-0.3	
	baz=55						
L10A	Juniper Basin	54.92 311	⇓P	P	06 39 58.4	-0.3	
	baz=55,SNR=18						
F12A	Elk City	54.94 316	⇓P	P	06 39 58.7	-0.1	
	baz=55						
I11A	Placerville	54.96 313	⇓P	P	06 39 58.5	-0.3	
	baz=55,SNR=16						
EDW2	Edwards Air Fo	54.97 302	⇓P	P	06 39 58.8	-0.4	
	baz=55						
C13A	Hot Springs	55.03 318	⇓P	P	06 39 59.3	0.0	
	baz=55						
BMN	Battle Mountai	55.15 309	eP	P	06 40 00.4	+0.1	
	14nm,1.0s,mb4.9						
B13A	Whitefish	55.17 319	⇑P	P	06 40 00.3	-0.1	
	baz=55						
H11A	Donnelly	55.19 314	⇑P	P	06 40 00.2	-0.3	
	baz=55						
A13A	Flathead Natio	55.31 320	⇓P	P	06 40 01.3	-0.1	
	baz=55						
E12A	Beaver Dam Sad	55.33 316	⇓P	P	06 40 01.2	-0.3	
	baz=55						
K10A	MacKenzie Ranc	55.35 312	⇑P	P	06 40 01.6	-0.1	
	baz=55,SNR=8.8						
D12A	Red Ives Fores	55.36 317	⇑P	P	06 40 01.3	-0.4	
	baz=55						
Q08A	Gabbs	55.44 307	⇓P	P	06 40 02.5	0.0	
	baz=55						
ISA	Isabella	55.45 303	⇓P	P	06 40 02.6	-0.1	
	baz=55						
N09A	Rock Creek Ran	55.45 309	⇓P	P	06 40 02.2	-0.3	
	baz=55,SNR=5.6						
M09A	Marrel Ranch,	55.51 310	⇑P	P	06 40 02.8	0.0	
	baz=55,SNR=5.5						
G11A	Walters Elk Ra	55.53 315	⇑P	P	06 40 02.3	-0.7	
	baz=56,SNR=5.1						
F11A	Grangeville	55.58 316	⇑P	P	06 40 02.6	-0.7	
	baz=56,SNR=6.0						
C12B	Naegeli Ranch,	55.62 318	⇑P	P	06 40 03.6	0.0	
	baz=56						
NVAR	Mina Array Bea	55.66 306	P	P	06 40 04.5	+0.4	
	5.0nm,0.8s,mb4.6,baz=104,slow=6.6,SNR=39						
NVAR	Mina Array Bea	55.66 306	P	P	06 40 04.5	+0.4	
H10A	Noah's Angus R	55.67 314	⇓P	P	06 40 02.9	-1.1	
	baz=56,SNR=11						
ARVC	Arvin	55.68 302	⇓P	P	06 40 04.0	-0.3	
	baz=56						
E11A	Bogner Ranch,	55.73 316	⇑P	P	06 40 04.1	-0.3	
	baz=56,SNR=18						
L09A	Wilkinson Ranc	55.78 311	⇓P	P	06 40 04.5	-0.3	
	baz=56,SNR=9.0						
O08A	Rochester Mine	55.83 309	⇑P	P	06 40 05.2	-0.1	
	baz=56						
K09A	Rome	55.95 312	⇑P	P	06 40 05.9	-0.2	
	baz=56,SNR=7.8						
VES	Vestal, Richgr	55.96 303	⇑P	P	06 40 06.0	-0.3	
	baz=56						
D11A	Klaveano Farm,	56.00 317	⇑P	P	06 40 05.9	-0.4	
	baz=56,SNR=14						
G10A	Bishop Farm, J	56.09 315	⇑P	P	06 40 06.0	-1.0	
	baz=56						
A12A	Yaak River Ran	56.09 319	⇓P	P	06 40 07.1	+0.1	
	baz=56,SNR=9.1						
BMO	Blue Mountains	56.12 314	eP	P	06 40 06.3	-0.9	
	4.1nm,1.0s,mb4.4						
C11A	Tepee Creek (N	56.16 318	⇑P	P	06 40 07.2	-0.3	
	baz=56,SNR=7.5						
M08A	Happy Creek Ra	56.20 310	⇑P	P	06 40 07.7	-0.2	
	baz=56,SNR=11						
PLCA	Paso Flores	56.21 189	P	P	06 40 07.5	-0.3	
	3.7nm,0.4s,mb4.8,baz=6.1,slow=8.0,SNR=28						
PLCA	Paso Flores	56.21 189	eP	P	06 40 07.1	-0.7	
	6.3nm,0.8s,mb4.7						
L08A	Fields	56.30 311	⇓P	P	06 40 09.0	+0.5	
	baz=56,SNR=16						
KCC	Kaiser Creek	56.31 305	⇓P	P	06 40 08.6	-0.2	
	baz=56,SNR=7.1						
H09A	Durkee	56.32 314	⇑P	P	06 40 08.2	-0.5	
	baz=56						
F10A	Beach Ranch, E	56.33 316	⇓P	P	06 40 08.0	-0.7	
	baz=56						
O07A	Toulon	56.36 308	⇓P	P	06 40 08.5	-0.5	
	baz=56,SNR=7.9						
E10A	Myers Farm, Un	56.37 316	⇓P	P	06 40 08.8	-0.2	
	baz=56						
B11A	Sandpoint	56.40 319	⇑P	P	06 40 09.1	0.0	
	baz=56						
PKM	Peak Mountain	56.47 302	⇓P	P	06 40 10.2	+0.3	
	baz=56						
K08A	Mann Creek Ran	56.51 312	⇓P	P	06 40 10.7	+0.7	
	baz=56						
G09A	Cove	56.54 315	⇓P	P	06 40 10.0	-0.2	
	baz=56,SNR=8.4						
A11A	Hall Mountain,	56.55 319	⇑P	P	06 40 10.3	+0.1	
	baz=56						
R06C	Coleville	56.56 306	⇓P	P	06 40 10.9	+0.4	
	baz=56,SNR=8.9						
T06C	Millerton Lake	56.59 305	⇑P	P	06 40 09.9	-0.8	
	baz=56						
J08A	Circle Bar Ran	56.62 312	⇓P	P	06 40 10.4	-0.4	
	baz=57						
D10A	Wagner Farm, O	56.62 317	⇑P	P	06 40 10.2	-0.6	
	baz=57,SNR=5.3						
SMMC	Simmler	56.66 303	⇓P	P	06 40 11.5	+0.3	
	baz=57						
H08A	Prairie City	56.99 314	⇑P	P	06 40 13.3	-0.1	
	baz=57,SNR=18						
L07A	Adell	57.00 311	⇑P	P	06 40 13.5	-0.1	
	baz=57,SNR=5.9						
LNOR	Lincton Mounta	57.02 315	P	P	06 40 13.3	-0.3	
K07A	Rock Creek Ran	57.05 311	⇑P	P	06 40 13.8	-0.1	
	baz=57						
E09A	Wood Farm, Sta	57.07 316	⇓P	P	06 40 13.4	-0.6	
	baz=57						
O06A	Flanigan	57.08 308	⇓P	P	06 40 13.8	-0.4	
	baz=57						
N06A	Buffalo Meadow	57.17 309	⇑P	P	06 40 14.4	-0.3	
	baz=57,SNR=13						
CMB	Columbia Colle	57.24 306	⇑P	P	06 40 14.9	-0.4	
	baz=57						
A10A	Northport	57.31 319	⇓P	P	06 40 15.3	-0.3	
	baz=57						
D09A	Jones Farm, Ri	57.31 317	⇑P	P	06 40 15.3	-0.3	
	baz=57						
F08A	Pendleton	57.34 315	⇑P	P	06 40 15.2	-0.6	
	baz=57,SNR=6.0						
G08A	Pilot Rock	57.35 314	⇓P	P	06 40 15.6	-0.4	
	baz=57						
BEKR	Beckwourth	57.44 308	⇑P	P	06 40 16.2	-0.5	
	baz=57,SNR=5.8						
C09A	Chrisman Ranch	57.47 317	⇑P	P	06 40 16.3	-0.4	
	baz=57						
I07A	Izee	57.49 313	⇓P	P	06 40 16.6	-0.4	
	baz=57,SNR=12						
B09A	Rice	57.54 318	⇓P	P	06 40 16.6	-0.7	
	baz=58,SNR=7.9						
LAVA	Lava Cap Winer	57.59 307	⇑P	P	06 40 17.5	-0.3	
	baz=58						
H07A	Lands Inn, Kim	57.63 314	⇓P	P	06 40 17.6	-0.4	
	baz=58						
OD2	Odessa Site #2	57.66 317	P	P	06 40 17.6	-0.5	
R04C	Big Horse Ranc	57.69 306	⇓P	P	06 40 19.1	+0.6	
	baz=58						
MOD	Modoc	57.69 310	⇑P	P	06 40 17.8	-0.6	
	baz=58						
D08A	Wollman Farm,	57.72 316	⇑P	P	06 40 18.0	-0.5	
	baz=58						
J06A	Christmas Vall	57.80 312	⇑P	P	06 40 18.6	-0.6	
	baz=58,SNR=7.2						
G07A	Ruggs Ranch, H	57.84 314	⇑P	P	06 40 18.9	-0.5	
	baz=58,SNR=6.0						
PACP	Pacheco Peak	57.84 304	⇑P	P	06 40 19.1	-0.4	
	baz=58						
A09A	Danville	57.96 319	⇑P	P	06 40 19.7	-0.4	
	baz=58,SNR=6.5						
C08A	Higginbotham F	57.97 317	⇓P	P	06 40 19.5	-0.7	
	baz=58,SNR=9.2						
I06A	Prineville	57.97 313	⇓P	P	06 40 20.3	0.0	
	baz=58						
O04C	Chester	58.05 308	⇑P	P	06 40 21.3	+0.4	
	baz=58						
MDW	Midway	58.18 316	P	P	06 40 21.7	-0.1	
H06A	Lindquist Farm	58.20 314	⇓P	P	06 40 22.0	+0.1	
	baz=58						
K05A	Summer Lake	58.25 311	⇑P	P	06 40 22.6	+0.3	
	baz=58,SNR=14						
ORV	Oroville	58.27 307	⇓P	P	06 40 22.4	-0.1	
	baz=58,SNR=9.3						
B08A	Colville Reser	58.29 318	⇑P	P	06 40 22.7	+0.2	
	baz=58						
LBCM	Butte Creek Ri	58.32 309	P	P	06 40 23.3	+0.5	
A08A	Turner Farm, O	58.40 319	⇓P	P	06 40 22.8	-0.4	
	baz=58,SNR=5.4						
D07A	Quincy	58.45 316	⇓P	P	06 40 23.5	-0.1	
	baz=58						
G06A	Carlson Farm,	58.50 314	⇑P	P	06 40 24.6	+0.6	
	baz=58						
B07A	Winthrop	58.83 318	⇓P	P	06 40 25.9	-0.3	
	baz=59,SNR=12						
CVS	Carmenet Viney	58.89 306	⇓P	P	06 40 26.9	+0.1	
	baz=59						
MNRC	McLaughlin Nat	58.93 307	⇑P	P	06 40 27.2	+0.1	
	baz=59						
M03C	McCloud	58.95 309	⇓P	P	06 40 26.9	-0.4	
	baz=59						
E06A	Yakima	58.99 316	⇓P	P	06 40 27.2	-0.1	
	baz=59						
D06A	Cle Elum	59.03 316	⇓P	P	06 40 27.4	-0.2	
	baz=59						
A07A	Ashnola River,	59.13 318	⇓P	P	06 40 28.3	0.0	
	baz=59,SNR=7.3						
WPW	White Pass	59.40 316	P	P	06 40 30.5	+0.3	
YBH	Yreka Blue Hor	59.45 310	⇑P	P	06 40 29.4	-1.2	
	baz=59,SNR=5.8						
H04A	Detroit Lake	59.49 313	⇑P	P	06 40 29.9	-0.9	
	baz=59						
M02C	Callahan	59.52 309	⇓P	P	06 40 30.0	-1.1	
	baz=59

J02A	**Umpqua**	**60.29**	**312**	⇑P		**P**	**06 40 35.8**	**-0.6**
	baz=60								
KRMB	**Red Mountain**	**60.32**	**309**	*e*P		**P**	**06 40 36.5**	**-0.1**
JCC	**Jacoby Creek**	**60.34**	**309**	⇑P		**P**	**06 40 37.0**	**+0.2**
	baz=60,SNR=6.7								
G03A	**Yamhill**	**60.36**	**314**	⇑P		**P**	**06 40 36.6**	**-0.2**
	baz=60								
M01C	**Crescent City**	**60.51**	**310**	⇑P		**P**	**06 40 38.2**	**+0.2**
	baz=60								
C04A	**Brinnon**	**60.55**	**317**	⇓P		**P**	**06 40 37.9**	**-0.1**
	baz=60								
I02A	**Mapleton**	**60.56**	**312**	⇓P		**P**	**06 40 38.0**	**-0.2**
	baz=60								
A04A	**Legoe Bay, Lum**	**60.56**	**318**	⇑P		**P**	**06 40 37.5**	**-0.6**
	baz=60								
YKA	**Yellowknife Ar**	**60.59**	**334**	P		**P**	**06 40 37.0**	**-1.0**
	1.7nm,0.4s,mb4.6,baz=103,slow=7.4,SNR=18								
YKA	**Yellowknife Ar**	**60.59**	**334**	P		**P**	**06 40 37.0**	**-1.0**
F03A	**Seaside**	**60.65**	**314**	⇓P		**P**	**06 40 38.7**	**-0.1**
	baz=61								
E03A	**Lebam**	**60.74**	**315**	⇑P		**P**	**06 40 39.2**	**-0.2**
	baz=61,SNR=5.2								
KEBM	**Edson Butte**	**60.78**	**311**	*e*P		**P**	**06 40 40.4**	**+0.6**
B04A	**Port Angeles**	**60.96**	**317**	⇑P		**P**	**06 40 40.7**	**-0.1**
	baz=61,SNR=5.8								
PGC	**Sidney**	**61.03**	**318**	*e*P		**P**	**06 40 40.2**	**-1.1**
	15nm,0.8s,mb5.2								
KEST	**Kesra**	**65.18**	**57**	P		**P**	**06 41 10.9**	**+1.8**
	1.9nm,1.0s,mb4.1,baz=36,slow=13,SNR=4.5								
DAVOX	**Davos/Dischmat**	**65.85**	**45**	P		**P**	**06 41 15.2**	**+2.0**
	2.5nm,0.6s,mb4.4,baz=182,slow=20,SNR=3.6								
DLBC	**Dease Lake**	**66.62**	**328**	P		**P**	**06 41 18.3**	**+0.4**
	6.5nm,0.8s,mb4.7,baz=106,slow=7.0,SNR=11								
GERES	**GERESS Array B**	**68.52**	**43**	P		**P**	**06 41 30.9**	**+0.8**
	0.3nm,0.3s,mb3.7,baz=307,slow=9.7,SNR=2.4								
ARCES	**ARCESS Array B**	**74.69**	**21**	P		**P**	**06 42 07.0**	**+0.2**
	3.4nm,0.9s,mb4.3,baz=223,slow=2.7,SNR=3.9								
MCK	**McKinley**	**75.97**	**333**	*e*P		**P**	**06 42 13.6**	**-0.6**
BUR08	**Bucovina Ar. S**	**76.24**	**44**	*e*P		**P**	**06 42 17.9**	**+1.8**
TRF	**Thorofare Moun**	**76.61**	**332**	*e*P		**P**	**06 42 17.9**	**+0.1**
	18nm,0.9s,mb5.0								
BRTR	**Keskin Array B**	**83.73**	**51**	P		**P**	**06 42 57.0**	**+0.3**
	0.7nm,0.7s,mb3.9,baz=275,slow=5.1,SNR=3.2								
BRTR	**Keskin Array B**	**83.73**	**51**	P		**P**	**06 42 57.0**	**+0.3**
MDJ	**Mudanjiang**	**119.97**	**352**	PKP		PKPdf	06 49 16.5	-1.4
CN2	**Changchun**	**121.24**	**355**	*e*PKP		PKPdf	06 49 21.3	+0.9
HHC	**Hu-ho-hao-te**	**123.97**	**7**	*e*PKP		PKPdf	06 49 24.6	-1.1
HHC				XPKP			06 49 49.4	
HHC				PP		PP	06 51 09.1	+0.6
HHC				SKKS		SKKSac	06 58 00.6	-2.9
HHC				SS		SS	07 07 55.6	+2.6
HHC				PP		PP		
	comp=Z,114nm,6.1s								
HHC				LR		LR			
	comp=N,292nm,21.4s,MS5.0								
HHC				LR		LR			
	comp=E,206nm,23.8s,MS5.0								
HHC				LR		LR			
	comp=Z,256nm,21.4s,MS4.8								
BJI	**Beijing**	**125.17**	**3**	PKP		PKPdf	06 49 26.2	-1.9
LZH	**Lanzhou**	**127.10**	**16**	*e*PKP		PKPdf	06 49 31.6	-0.3
LZH				XPKP			06 49 52.3	
LZH				LR		LR			
	comp=N,152nm,18.0s								
LZH				LR		LR			
	comp=Z,209nm,20.3s,MS4.8								
CD2	**Chengdu**	**131.93**	**18**	*e*PKP		PKPdf	06 49 38.2	-3.0
CD2				XPKP			06 50 10.2	
CD2				PP		PP	06 52 02.8	+1.7
CD2				PKS			06 53 13.1	
CD2				SKS		SKSdf	06 56 41.3	-6.7
CD2				SKKS		SKKSac	06 58 44.5	-9.3
CD2				PP		PP		
	comp=Z,120nm,10.2s								
CD2				LR		LR			
	comp=N,120nm,18.4s								
CD2				LR		LR			
	comp=Z,150nm,14.4s,MS4.8								
NJ2	**Nanjing**	**133.22**	**1**	*e*PKP		PKPdf	06 49 44.9	+1.3
KMI	**Kunming**	**136.93**	**22**	P		PKPdf	06 49 47.6	-3.1
KMI				sP			06 50 09.8	
GYA	**Guiyang**	**136.96**	**17**	PKP		PKPdf	06 49 48.2	-2.5
GYA				PP		PP	06 52 34.6	+1.6
GYA				PP		PP		
	comp=Z,120nm,7.9s								
ASAR	**Alice Springs**	**163.87**	**235**	PKP		PKPdf	06 50 29.6	-1.5
	comp=Z,0.9nm,0.8s,baz=175,slow=2.7,SNR=6.0								
ASAR				PKPab		PKPab	06 51 23.1	-0.7
	comp=Z,0.3nm,0.4s,baz=122,slow=3.5,SNR=4.4								
ASAR	**Alice Springs**	**163.87**	**235**	PKPab		PKPab	06 51 23.1	-0.7
WRA	**Warramunga Arr**	**164.97**	**249**	PKP		PKPdf	06 50 31.3	-0.8
	comp=Z,0.2nm,0.6s,baz=48,slow=0.3,SNR=6.2								
WRA				PKPab		PKPab	06 51 28.0	-0.8
	comp=Z,2.8nm,0.8s,baz=107,slow=4.3,SNR=14								
WRA	**Warramunga Arr**	**164.97**	**249**	PKPab		PKPab	06 51 28.0	-0.8

*ISCJB **07** 06:41:15.8±0.7, 80N±02×381W±0.1, h10km, mb4.0/7, MS3.6/3, Error ellipse: s-maj=24.4km s-min=14.4km az=159.5*

*IDC **07** 06:41:16.0±0.9, 804N×38.10W, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/19, mbtmp3.9/6, MS3.6/3, Ms1 3.6/3, ms1mx3.1/18, Error ellipse: s-maj=30.1km s-min=21.4km az=162.0*

*NEIC **07** 06:41:17.4±0.5, 800N×3807W, h10km, mb4.7/1, Error ellipse: s-maj=17.6km s-min=10.4km az=160.0*

ISC 07 06:41:17.6±0.7, 80N±02×381W±01, h10km, n11, σ0§34/10, mb4.0/7, MS3.6/3, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**25.48**	**203**			P	**P**	**06 46 46.4**	**+0.2**
	3.6nm,1.0s,mb3.9,baz=19,slow=18,SNR=5.8								
BDFB				LR		LR	LR	06 56 36.9	
	comp=Z,74nm,19.7s,MS3.2,baz=14,slow=36								
DBIC	**Dimbokro**	**32.96**	**90**	P		P	**P**	**06 47 53.0**	**+0.1**
	3.2nm,0.9s,mb4.3,baz=254,slow=14,SNR=3.5								
LPAZ	**La Paz**	**38.32**	**231**	P		P	**P**	**06 48 39.3**	**+0.4**
	3.4nm,0.8s,mb4.1,baz=43,slow=6.4,SNR=12								
LPAZ				LR		LR	LR	07 03 48.0	
	comp=Z,72nm,20.6s,MS3.5,baz=71,slow=35								
TOA0	**Torodi Ar. Sit**	**39.38**	**79**	*e*P			**P**	**06 48 47.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**39.38**	**79**	P			**P**	**06 48 48.1**	**+0.3**
	3.1nm,0.8s,mb4.1,baz=275,slow=9.9,SNR=20								
LVC	**Limon Verde**	**42.88**	**224**	P			**P**	**06 49 16.0**	**-0.5**
TSUM	**Tsumeb**	**61.13**	**117**	*e*P			**P**	**06 51 32.2**	**-0.5**
	11nm,1.7s,mb4.7								
TXAR	**Lajitas Array**	**64.87**	**299**	P			**P**	**06 51 57.7**	**+0.3**
	0.4nm,0.6s,mb3.7,baz=104,slow=6.2,SNR=8.2								
TXAR	**Lajitas Array**	**64.87**	**299**	P			**P**	**06 51 57.7**	**+0.3**
PDAR	**Pinedale Array**	**71.02**	**312**	LR		LR	LR	07 19 06.3	
	comp=Z,102nm,21.4s,MS4.0,baz=103,slow=32								
YKA	**Yellowknife Ar**	**76.72**	**332**	P			**P**	**06 53 08.4**	**-0.4**
	0.4nm,0.6s,mb3.5,baz=110,slow=7.1,SNR=3.2								

*IDC **07** 06:49:14.5±1.0, 21.19S×169.35E, h0km, mb4.4/8, mb1 4.6/9, mb1mx4.4/17, mbtmp4.4/9, MS3.9/7, Ms1 3.9/7, ms1mx3.5/22, Error ellipse: s-maj=34.4km s-min=22.6km az=153.0*

*NEIC **07** 06:49:16.2±0.4, 21.19S×169.32E, h10km, mb4.6/7, Error ellipse: s-maj=14.8km s-min=8.8km az=162.0*

*NOU **07** 06:49:17.3±2.1, 21.53S×169.43E, h10km, ML3.9, MS2.0*

*ISCJB **07** 06:49:18.2±1.6, 21.3S±0.1×169.26E±0.07, h35km±13km, mb4.5/14, MS3.9/5, Error ellipse: s-maj=18.4km s-min=11.1km az=169.5*

ISC 07 06:49:19.1±2.9, 213S±01×16927E±006, h30km±20km, n43, σ0§97/33, mb4.5/14, MS3.9/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLUM	**Mont Dore**	**2.63**	**248**	*e*P			**Pn**	**06 49 59.4**	**-0.1**
PLUM				*e*S			**Sn**	**06 50 28.5**	**-1.9**
PLUM				AMP				06 50 34.6	
	comp=Z,610nm,0.0s								
DZM	**Mont Dzumac**	**2.74**	**253**	*e*P			**Pn**	**06 50 00.4**	**-0.6**
DZM				AMP				06 50 39.9	
	comp=Z,3μm,0.2s								
DZM	**Mont Dzumac**	**2.74**	**253**	*e*Pn			**Pn**	**06 50 00.6**	**-0.4**
DZM				*e*Sn			**Sn**	**06 50 35.3**	**+2.3**
NORM	**Noumea**	**2.75**	**250**	*e*P			**Pn**	**06 50 01.0**	**-0.1**
NORM				*e*S			**Sn**	**06 50 32.9**	**-0.4**
NORM				AMP				06 50 42.0	
	comp=Z,572nm,3.0s								
ONTRN	**Noumea**	**2.80**	**249**	*e*P			**Pn**	**06 50 01.6**	**-0.2**
ONTRN				*e*S			**Sn**	**06 50 33.1**	**-1.6**
ONTRN				AMP				06 50 44.9	
	comp=Z,1μm,2.7s								
NOUC	**Port Laguerre**	**2.87**	**253**	*e*P			**Pn**	**06 50 02.4**	**-0.5**
NOUC				*e*S			**Sn**	**06 50 39.0**	**+2.6**
NOUC				AMP				06 50 47.6	
	comp=Z,135nm,19.1s								
URZ	**Urewera**	**18.20**	**160**	P			**Pn**	**06 53 30.4**	**+0.9**
	baz=342,slow=10,SNR=3.3								
URZ				LR			LR	06 59 37.5	
	comp=Z,236nm,18.7s,baz=80,slow=34								
URZ	**Urewera**	**18.20**	**160**	P			**Pn**	**06 53 30.4**	**+0.9**
URZ				LR			LR	06 59 37.5	
AFI	**Afiamalu**	**19.49**	**71**	LR			LR	07 00 00.0	
	comp=Z,213nm,19.4s,baz=190,slow=33								
CTA	**Charters Tower**	**21.57**	**269**	P			**P**	**06 54 08.0**	**+1.7**
	comp=Z,8.9nm,0.8s,mb4.2,baz=94,slow=11,SNR=9.6								
CTAO	**Charters Tower**	**21.57**	**269**	*e*P			**P**	**06 54 07.5**	**+1.2**
	comp=Z,11nm,0.9s,mb4.3								
RPZ	**Rata Peaks**	**22.40**	**177**	LR			LR	07 02 17.1	
	comp=Z,444nm,18.9s,MS3.9,baz=339,slow=35								
STKA	**Stephens Creek**	**26.83**	**241**	P			**P**	**06 54 58.4**	**+1.5**
	comp=Z,5.4nm,0.8s,mb4.2,baz=80,slow=9.4,SNR=9.0								
STKA				LR			LR	07 05 43.9	
	comp=Z,276nm,18.2s,MS3.9,baz=25,slow=37								
WRA	**Warramunga Arr**	**32.68**	**266**	P			**P**	**06 55 48.3**	**-0.6**
	comp=Z,2.8nm,0.9s,mb4.2,baz=97,slow=8.4,SNR=16								
WRA				LR			LR	07 09 23.4	
	comp=Z,271nm,18.5s,MS4.0,baz=85,slow=37								
WRA	**Warramunga Arr**	**32.68**	**266**	P			**P**	**06 55 48.3**	**-0.6**
WRA				LR			LR	07 09 23.4	
ASAR	**Alice Springs**	**32.71**	**259**	P			**P**	**06 55 49.3**	**+0.1**
	comp=Z,6.7nm,0.8s,mb4.7,baz=82,slow=9.0,SNR=54								
ASAR				PcP			PcP	06 58 34.1	-0.3
	comp=Z,0.2nm,0.5s,baz=74,slow=3.3,SNR=4.3								
PPT	**Papeete**	**38.91**	**92**	*e*LR			LR	07 07 17.0	
	comp=Z,92nm,25.5s								
PPT	**Papeete**	**38.91**	**92**	LR			LR	07 08 48.6	
	comp=Z,76nm,18.6s,MS3.5,baz=204,slow=30								
MBWA	**Marble Bar**	**46.02**	**261**	*e*P			**P**	**06 57 40.0**	**-0.1**
	comp=Z,6.6nm,0.7s,mb4.7								
NWAO	**Narrogin (SRO)**	**47.33**	**244**	P			**P**	**06 57 49.9**	**-0.3**
	comp=Z,9.3nm,1.0s,mb4.7,baz=59,slow=12,SNR=3.0								
NWAO				LR			LR	07 17 25.1	
	comp=Z,291nm,18.2s,MS4.3,baz=59,slow=36								
MJAR	**Matsushiro Arr**	**64.58**	**333**	P			**P**	**06 59 52.2**	**-1.3**
	comp=Z,0.8nm,0.4s,mb4.1,baz=150,slow=7.2,SNR=3.2								
CMAR	**Chiang Mai Arr**	**79.38**	**295**	P			**P**	**07 01 24.6**	**+1.9**
	comp=Z,1.8nm,0.3s,mb4.5,baz=138,slow=4.1,SNR=13								
CHTO	**Chiang Mai**	**79.54**	**295**	*e*P			**P**	**07 01 23.7**	**+0.3**
	comp=Z,7.6nm,0.9s,mb4.6								
PTRM	**Twissleman Ran**	**87.50**	**50**	*e*P			**P**	**07 02 04.5**	**+0.5**
VNA3	**Neumayer Olymp**	**87.70**	**180**	*e*			**P**	**07 02 04.1**	**-0.4**
VNA3				*e*				07 02 09.2	
VNA3				*e*				07 02 21.0	
VNA2	**Neumayer--Watz**	**87.99**	**181**	*e*			**P**	**07 02 05.2**	**-0.7**
	baz=184,slow=3.3								
VNA2				*e*				07 02 11.0	
VNA1	**Neumayer--Stat**	**88.28**	**181**	*e*			**P**	**07 02 07.1**	**-0.1**
VNA1				*e*				07 02 12.4	
VNA1				*e*				07 02 23.2	
CMB	**Columbia Colle**	**88.50**	**48**	*e*P			**P**	**07 02 08.1**	**-0.7**
	comp=Z,1.8nm,0.7s,mb4.5								
HUMO	**Hull Mountain**	**89.04**	**43**	*e*P			**P**	**07 02 11.0**	**-0.1**
	comp=Z,2.4nm,0.7s,mb4.6								
NVAR	**Mina Array Bea**	**90.14**	**48**	P			**P**	**07 02 16.3**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.7,baz=223,slow=8.3,SNR=26								
MOD	**Modoc**	**90.41**	**45**	*e*P			**P**	**07 02 17.6**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.5								
TPNV	**Topopah Spring**	**90.93**	**51**	*e*P			**P**	**07 02 19.9**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.7								
ARCES	**ARCESS Array B**	**127.06**	**345**	PKP		PKPdf		07 08 18.8	-0.7
	comp=Z,9.6nm,1.2s,baz=90,slow=1.5,SNR=8.0								
BRG	**Berggiesshubel**	**144.72**	**333**	*e*P		PKPdf		07 09 00.2	+7.6
	comp=Z,7.2nm,0.8s								
CLL	**Collm**	**144.78**	**334**	*e*PKiKP		PKiKP		07 08 56.0	-0.5
GERES	**GERESS Array B**	**146.31**	**330**	PKPbc		PKPbc		07 08 56.9	+0.2
	comp=Z,1.7nm,0.6s,baz=28,slow=3.8,SNR=8.4								
CDF	**Champ du Feu**	**149.34**	**336**	*e*PKIKP		PKiKP		07 09 07.8	+1.8
HAU	**Haudompre**	**150.02**	**337**	*e*PKIKP		PKiKP		07 09 09.2	+1.8
CABF	**La Chapelle**	**151.28**	**335**	*e*PKIKP		PKiKP		07 09 09.9	-0.2
	comp=Z,11nm,0.7s								
LOR	**Lormes**	**151.53**	**339**	*e*PKIKP		PKiKP		07 09 11.3	+0.7
	comp=Z,8.8nm,0.8s								
LPG	**La Plagne**	**151.92**	**333**	*e*PKIKP		PKiKP		07 09 12.3	+0.9
	comp=Z,14nm,0.9s								
ORIF	**Oris-en-Rattie**	**152.75**	**334**	*e*PKIKP		PKiKP		07 09 12.9	-0.3
	comp=Z,12nm,0.8s								
TCF	**Toulx Ste Croi**	**152.93**	**340**	*e*PKIKP		PKiKP		07 09 13.0	-0.5

*IDC **07** 07:10:17.3±0.5, 22.17N×92.43E, h0km, mb4.8/22, mb1 4.9/23, mb1mx4.9/24, mbtmp4.8/23, ML4.9/1, MS4.7/19, Ms1 4.7/19, ms1mx4.6/26, Error ellipse: s-maj=17.9km s-min=11.3km az=44.0*

*BJI **07** 07:10:18.9, 22.31N×92.43E, h18km, mB5.2, mb5.1, Ms5.3, Msz4.9*

*LDG **07** 07:10:18.9±0.2, 22.25N×92.04E, h10km, Mb5.1/25, Ms4.7/10, Error ellipse: s-maj=9.9km s-min=7.3km az=62.0*

*ISCJB **07** 07:10:20.2±0.2, 22.16N±002×92.37E±002, h30km, mb5.0/140, MS4.9/48, Error ellipse: s-maj=3.4km s-min=2.4km az=4.0*

*MOS **07** 07:10:20.9±0.8, 22.17N×92.45E, h35km, mb5.3/67, MS4.9/19, Error ellipse: s-maj=7.5km s-min=3.8km az=123.1*

*NEIC **07** 07:10:22.0±0.1, 22.15N×92.39E, mb5.1/69, MS5.1/7, Error ellipse: s-maj=5.1km s-min=2.8km az=32.0*

NEIC Ten people injured in Chittagong Hill Tracts and minor damage occurred at Bandarban, Chittagong and Rangamati, Bangladesh. Felt at Chattagam, Comilla, Cox's Bazar, Feni, Khagrachari and Teknaf. Also felt at Agartala, Aizawl and Guwahati, India.

*SZGRF **07** 07:10:22.7, 22.06N×92.45E, h39km, mb5.7, MS5.2, India-Bangladesh border region*

*GCMT **07** 07:10:22.0±0.1, 22.15N×92.50E, h25km, MW5.5/105, Moment Tensor Solution. s61,c90; s105,c203; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr 0.02±.03; Mθθ -1.15±.03; Mϕϕ 1.12±.03; Mrθ 0.36±.07; Mθϕ 1.56±.03; Mϕr -0.23±.06; Best double couple: M0 1.97400×10^17 NP1 ϕs 251.00000°, δ 81.00000°, λ -7.00000°. NP2 ϕs 343.00000°, δ 83.00000°, λ -171.00000°. Principal axes: T 1.9150, Plg 1.0000°, Azm 117.0000°; N 0.1100, Plg 78.0000°, Azm 20.0000°; P -2.0330, Plg 12.0000°, Azm 207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **07** 07:10:23, 22.17N×91.47E, h81km, Mw5.6/6*

ISC 07 07:10:22.4±0.1, 2213N±002×9237E±002, h31km, h31km±1.3km: pP-P, n422, σ1§09/465, mb5.0/140, MS4.9/48, 25C-29D, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**2.03**	**330**	*i*	x		**Pn**	**07 10 56.0**	**+1.6**
AGT				*i*	x		x	07 13 30.0	
IMP	**Imphal**	**3.01**	**28**	*i*	P		**Pn**	**07 11 07.0**	**-0.9**
IMP				*i*	x		x	07 12 02.0	
SHL	**Shillong**	**3.45**	**353**	*e*P			**Pn**	**07 11 12.1**	**-1.9**
SHL				*e*S			**Sn**	**07 11 49.0**	**-4.8**
CAL	**Calcutta**	**3.76**	**277**	*e*P			**Pn**	**07 11 19.2**	**+1.0**
CAL				*e*S			**Sn**	**07 12 00.4**	**-1.0**
SHBG	**Sahibganj**	**5.29**	**306**	*e*P			**Pn**	**07 11 32.0**	**-7.3**
SHBG				*e*S			**Sn**	**07 12 30.5**	**-8.7**
BOK	**Bokaro**	**6.20**	**287**	*e*P			**Pn**	**07 11 51.9**	**+0.2**
BOK				*e*S			**Sn**	**07 12 56.9**	**-4.7**
BOK				AML		AML		07 13 05.0	
	comp=N,6μm,0.6s								
BOK				AML		AML		07 13 05.9	
	comp=E,4μm,0.7s								
BWNR	**Bhubaneshwar**	**6.39**	**255**	*ex*			**Pn**	**07 11 56.0**	**+1.6**
BWNR				*e*S			**Sn**	**07 13 03.1**	**-3.1**
ODAN	**Odare**	**6.54**	**317**	*e*Pn			**Pn**	**07 11 55.9**	**-0.5**
TAPN	**Taplejung**	**6.70**	**322**	*e*Pn			**Pn**	**07 11 58.7**	**0.0**
TAPN				*e*Sn			**Sn**	**07 13 12.0**	**-1.9**
	comp=E,6μm,0.7s								
CHG	**Chiang Mai**	**6.99**	**117**	⇑P			**Pn**	**07 12 01.9**	**-0.8**
	comp=E,143nm,0.7s								
CHTO	**Chiang Mai**	**6.99**	**117**	P			**Pn**	**07 12 02.1**	**-0.6**
	SNR=48								
CHTO	**Chiang Mai**	**6.99**	**117**	*e*P			**Pn**	**07 12 02.3**	**-0.4**
RAMN	**Ramite**	**7.11**	**314**	*e*Pn			**Pn**	**07 12 04.0**	**-0.3**
CM31	**Chiang Mai Arr**	**7.17**	**119**	*e*Pn			**Pn**	**07 12 04.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**7.17**	**119**	Pn			**Pn**	**07 12 05.2**	**0.0**
	comp=E,4.8nm,0.3s,baz=299,slow=13,SNR=126								
CMAR				Lg				07 14 04.8	
	comp=E,1.0nm,0.3s,baz=281,slow=29,SNR=3.5								
CMAR				LR			LR	07 15 30.0	
	comp=E,8μm,19.1s,baz=291,slow=44								
LSA	**Lhasa**	**7.62**	**352**	P			**Pn**	**07 12 11.0**	**-0.2**
LSA				LR			LR		
	comp=E,25μm,14.0s								
LSA				LR			LR		
	comp=Z,7μm,9.2s								
LSA	**Lhasa**	**7.62**	**352**	*e*Pn			**Pn**	**07 12 12.0**	**+0.7**
	comp=Z,258nm,0.6s								
LSA				*e*Sn			**Sn**	**07 13 34.7**	**-1.8**
LSA	**Lhasa**	**7.62**	**352**	*e*P			**Pn**	**07 12 12.0**	**+0.8**
LSA				*e*				07 13 34.7	
LSA				pmax			pmax		
	comp=Z,258nm,0.6s								
JIRN	**Jiri**	**7.86**	**316**	*e*Pn			**Pn**	**07 12 14.2**	**-0.3**
JIRN				*e*Sn			**Sn**	**07 13 37.7**	**-4.7**
	comp=Z,4μm,0.5s								
GUN	**Gumba**	**8.23**	**316**	*e*Pn			**Pn**	**07 12 19.0**	**-0.6**
GUN				*e*Sn			**Sn**	**07 13 46.0**	**-5.5**
	comp=Z,5μm,0.7s								
PKI	**Pulchoki**	**8.32**	**312**	*e*Pn			**Pn**	**07 12 20.2**	**-0.7**
PKI				*e*Sn			**Sn**	**07 13 47.6**	**-6.2**
	comp=Z,3μm,0.5s								
PKI	**Pulchoki**	**8.32**	**312**	*e*P			**Pn**	**07 12 20.3**	**-0.6**
PKIN	**Phulchoki**	**8.33**	**312**	*e*Pn			**Pn**	**07 12 20.3**	**-0.8**
KKN	**Kakani**	**8.55**	**313**	*e*Pn			**Pn**	**07 12 22.6**	**-1.4**
DMN	**Daman**	**8.55**	**311**	*e*Pn			**Pn**	**07 12 23.1**	**-1.0**
GKN	**Gorkha**	**9.12**	**311**	*e*Pn			**Pn**	**07 12 30.5**	**-1.4**
GKN				*e*Sn			**Sn**	**07 14 06.8**	**-6.7**
	comp=Z,4μm,0.4s								
VIS	**Vishakhapatnam**	**9.56**	**244**	*i* P			**Pn**	**07 12 37.0**	**-1.0**
VIS				*i* S			**Sn**	**07 14 16.8**	**-7.6**
VIS				*ex*			x	07 14 18.6	
	comp=N,428nm,0.7s								
VIS				*ex*			x	07 14 23.4	
	comp=E,380nm,0.4s								
KOLN	**Koldanda**	**9.73**	**307**	*e*Pn			**Pn**	**07 12 38.5**	**-1.8**
KOLN				*e*Sn			**Sn**	**07 14 20.7**	**-7.8**
	comp=E,5μm,0.5s								
DANN	**Dangsing**	**9.95**	**310**	*e*Pn			**Pn**	**07 12 41.1**	**-2.1**
DANN				*e*Sn			**Sn**	**07 14 26.5**	**-7.3**
	comp=E,3μm,0.5s								
KMI	**Kunming**	**9.97**	**71**	P			**Pn**	**07 12 46.0**	**+2.5**
KMI				AP				07 12 50.9	
KMI				XP				07 12 55.2	
KMI				S			**Sn**	**07 14 37.3**	**+3.0**
KMI				XS				07 14 46.7	
KMI				SS				07 14 50.5	
KMI				AMB			AMB		
	comp=Z,12nm,1.3s								
KMI				AMB			AMB		
	comp=Z,247nm,3.9s								
KMI				LR			LR		
	comp=N,15μm,12.0s								
KMI				LR			LR		
	comp=E,5μm,8.3s								
KMI				LR			LR		
	comp=E,8μm,17.6s								
ALBI	**Allahabad**	**10.18**	**290**	*e*P			**Pn**	**07 12 43.0**	**-3.3**
ALBI				*e*S			**Sn**	**07 14 32.0**	**-7.4**
PYUN	**Piuthan**	**10.37**	**307**	*e*Pn			**Pn**	**07 12 46.4**	**-2.5**
PYUN				*e*Sn			**Sn**	**07 14 35.0**	**-9.0**
	comp=Z,4μm,0.7s								
NGP	**Nagpur**	**12.42**	**268**	*e*P			**Pn**	**07 13 10.3**	**-6.8**
NGP				*ex*			x	07 13 13.4	
	comp=Z,130nm,0.7s								
NGP				*e*S			**Sn**	**07 15 19.7**	**-15**
PTH	**Pithoragarh**	**13.20**	**307**	*e*P			**Pn**	**07 13 25.1**	**-2.5**
PTH				*ex*			x	07 15 44.0	
CD2	**Chengdu**	**13.43**	**47**	*e*P			**Pn**	**07 13 31.5**	**+0.8**
CD2				AP				07 13 37.0	
CD2				XP				07 13 41.2	
CD2				PP				07 13 43.0	
CD2				S			**Sn**	**07 16 00.8**	**+1.9**
CD2				XS				07 16 09.8	
CD2				SS				07 16 16.8	
CD2		

LZH Lanzhou 17.12 33 ⇓P **Pn** **07 14 15.2 -4.2**
LZH pP pP 07 14 24.2 -4.9
LZH sP sP 07 14 28.7 -4.5
LZH PP 07 14 29.8
LZH S **Sn** **07 17 31.4 +2.6**
LZH sS sS 07 17 44.0 -6.7
LZH SS 07 17 54.1
POO Poona 17.73 262 *e*P **Pn** **07 14 26.1 -0.9**
POO *i* PP 07 14 37.0
KAD Karad 17.77 258 *ex* **Pn** **07 14 35.2 +7.7**
KAD *e*S **Sn** **07 17 45.2 +0.4**
DLH Dalhousie 17.86 309 *ex* **Pn** **07 14 25.0 -3.5**
DLH *ex* x 07 17 39.0
THN Thein Dam 17.99 308 *ex* **Pn** **07 14 25.8 -4.3**
THN *ex* x 07 17 34.9
GTA Gaotai 18.36 19 P **Pn** **07 14 30.5 -4.1**
GTA AP pP 07 14 36.6 -6.2
GTA XP sP 07 14 40.5 -6.3
GTA S **Sn** **07 17 49.9 -8.8**
GTA XS sS 07 18 00.1 -16
GTA SS 07 18 13.7
GTA PCP PcP 07 19 04.0 -0.9
GTA SCP ScP 07 22 39.2 +1.1
GTA PCS PcS 07 22 42.2 +0.8
GTA SCS ScS 07 26 18.8 -0.1
GTA AMB AMB
comp=Z,495nm,4.5s
GTA LR LR
comp=N,3μm,21.9s
GTA LR LR
comp=E,6μm,20.1s
GTA LR LR
comp=Z,4μm,22.2s
KOD Kodaikanal 18.54 233 *e*P **Pn** **07 14 38.0 +1.0**
BOM Bombay 18.59 264 *ex* x 07 14 28.7
BOM *e*S **Sn** **07 18 04.8 +0.2**
GOA Goa 18.74 253 *e*P **Pn** **07 14 39.6 +0.2**
GOA *e*S **Sn** **07 18 09.8 +1.5**
XAN Xi'an 18.79 47 P **Pn** **07 14 36.9 -2.9**
XAN AP pP 07 14 45.4 -2.1
XAN XP sP 07 14 49.6 -1.9
XAN S **Sn** **07 17 57.8 -11**
XAN XS sS 07 18 09.8 -15
XAN AMB AMB
comp=Z,34nm,1.1s
XAN AMB AMB
comp=Z,548nm,7.3s
XAN LR LR
comp=N,6μm,19.9s
XAN LR LR
comp=E,6μm,21.4s
XAN LR LR
comp=Z,4μm,21.1s
MNGI Mangalore 19.05 244 *e*P **Pn** **07 14 43.1 +0.1**
MNGI *e*S **Sn** **07 18 15.8 +0.2**
GZH Guangzhou 19.39 83 P **Pn** **07 14 47.6 +0.5**
GZH S **Sn** **07 18 24.8 +0.9**
GZH LR LR
comp=N,2μm,8.3s
GZH LR LR
comp=E,4μm,10.5s
GZH LR LR
comp=Z,6μm,13.9s
TSI Tuntungan 19.47 161 P **Pn** **07 14 47.9 -0.2**
comp=Z,417nm,1.5s
TRD Trivandrum 20.08 230 *e*P **P** **07 14 52.8 -0.5**
BHJ Bhuj 20.98 277 *e*P **P** **07 15 02.1 -1.0**
WHN Wuhan 21.38 62 ⇑P **P** **07 15 06.7 -0.7**
WHN S **S** **07 18 53.5 -10**
WHN LR LR
comp=N,11μm,12.6s
WHN LR LR
comp=E,6μm,9.4s
WHN LR LR
comp=Z,6μm,19.2s
WMQ Urumqi 21.98 351 P **P** **07 15 14.0 +0.4**
WMQ AP 07 15 21.0
WMQ XP sP 07 15 25.0 -1.1
WMQ PP 07 15 40.0
WMQ S **S** **07 19 09.0 -5.4**
WMQ SS 07 19 48.0
WMQ AMB AMB
comp=Z,89nm,0.8s,mb5.2
WMQ AMB AMB
comp=Z,124nm,3.0s
WMQ LR LR
comp=N,2μm,6.0s
WMQ LR LR
comp=E,7μm,7.0s
WMQ LR LR
comp=Z,1μm,6.0s
KSH Kashi 22.27 325 P **P** **07 15 17.0 +0.3**
KSH *e*AP 07 15 23.9
KSH *e*XP sP 07 15 27.4 -1.8
KSH *e*PP 07 15 43.1
KSH S **S** **07 19 13.7 -6.4**
KSH *e*PCP PcP 07 19 15.5 +3.4
KSH XS sS 07 19 24.6 -9.2
KSH SS 07 19 52.5
KSH *e*SCP ScP 07 22 50.3 +2.9
KSH *e*PCS PcS 07 22 53.9 +3.2
KSH AMB AMB
comp=Z,138nm,0.5s,mb5.6
KSH AMB AMB
comp=Z,1μm,4.7s
KSH LR LR
comp=N,6μm,6.8s
KSH LR LR
comp=E,7μm,6.2s
KSH LR LR
comp=Z,8μm,7.7s
TIY Taiyuan 23.24 44 *e*P **P** **07 15 24.7 -2.4**
TIY XP sP 07 15 37.7 -1.9
TIY S **S** **07 19 31.2 -5.7**
TIY AMB AMB
comp=Z,551nm,9.0s
TIY LR LR
comp=N,6μm,18.7s
TIY LR LR
comp=E,935nm,8.4s
TIY LR LR
comp=Z,3μm,16.7s,MS4.8
BTO Baotou 23.72 35 *e*P **P** **07 15 28.2 -3.5**
BTO AMB AMB
comp=Z,15nm,1.2s,mb4.3
BTO LR LR
comp=N,2μm,10.2s
BTO LR LR
comp=E,1μm,17.6s
PPI Padang Panjang 23.78 160 P **P** **07 15 30.6 -1.8**
comp=E,39nm,0.8s,comp=E,1μm,mb4.9
KBL Kabul 23.90 306 *e*P **P** **07 15 33.6 +0.3**
comp=E,90nm,0.8s,mb5.2
KBL Kabul 23.90 306 *e*P **P** **07 15 33.6 +0.2**
KBL pmax pmax
comp=Z,90nm,0.8s,mb5.2
ULHL Ulahol 24.18 330 P **P** **07 15 37.9 +2.0**
SNR=51
PDSI Padang 24.23 160 P **P** **07 15 34.7 -1.8**
comp=Z,85nm,1.4s,comp=Z,2μm,mb5.0
KZA Kyzart 24.53 328 P **P** **07 15 40.3 +1.3**
SNR=28
HHC Hu-ho-hao-te 24.73 37 *e*P **P** **07 15 41.0 +0.1**
HHC AP 07 15 47.8
HHC PCP PcP 07 19 18.3 +1.0
HHC S **S** **07 19 59.9 -1.0**
HHC XS sS 07 20 12.4 -3.5
HHC AMB AMB
comp=Z,50nm,1.5s,mb4.8
HHC AMB AMB
comp=Z,831nm,5.2s
HHC LR LR
comp=N,6μm,17.2s,MS5.3
HHC LR LR
comp=E,5μm,14.9s,MS5.3
HHC LR LR
comp=Z,7μm,18.4s,MS5.2
UCH Uchtor 25.00 327 *e*P **P** **07 15 45.8 +2.5**
comp=Z,72nm,1.0s,mb5.2
UCH Uchtor 25.00 327 P **P** **07 15 46.2 +2.8**
SNR=13
TKM2 Tokmak 2 25.00 330 *e*P **P** **07 15 44.5 +1.1**
comp=Z,156nm,1.2s,mb5.4
TKM2 Tokmak 2 25.00 330 *e*P **P** **07 15 44.5 +1.1**
TKM2 pmax pmax
comp=Z,156nm,1.2s,mb5.4
TKM2 Tokmak 2 25.00 330 P **P** **07 15 44.7 +1.4**
SNR=79
KBK Karagaybulak 25.11 329 P **P** **07 15 46.2 +1.9**
SNR=14
AAK Ala-Archa 25.31 328 P **P** **07 15 47.8 +1.6**
comp=Z,388nm,0.9s,mb5.9,SNR=19
AAK Ala-Archa 25.31 328 P **P** **07 15 48.0 +1.8**
SNR=31
AML Almayashu 25.35 326 *e*P **P** **07 15 48.3 +1.8**
comp=Z,110nm,1.1s,mb5.3
AML Almayashu 25.35 326 P **P** **07 15 49.3 +2.8**
SNR=14
FRU Bishkek 25.40 328 ⇑ *i* P **P** **07 15 48.0 +1.0**
FRU pmax pmax
comp=Z,200nm,1.9s,mb5.3
FRU MLR MLR
comp=E,6μm,16.0s
CHMS Chumysh 25.46 329 P **P** **07 15 48.2 +0.7**
SNR=14
NJ2 Nanjing 25.51 62 *e*P **P** **07 15 50.2 +2.1**
NJ2 AP pP 07 15 57.2 +0.1
NJ2 XP sP 07 16 00.7 -0.3
NJ2 PP 07 16 29.6
NJ2 S **S** **07 20 16.0 +2.4**
NJ2 XS sS 07 20 25.0 -3.6
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb4.8
NJ2 AMB AMB
comp=Z,410nm,4.5s
NJ2 LR LR
comp=N,4μm,19.6s
NJ2 LR LR
comp=E,3μm,25.4s
NJ2 LR LR
comp=Z,3μm,25.4s
TIA Tai'an 25.68 51 ⇓P **P** **07 15 48.2 -1.4**
TIA S **S** **07 20 18.0 +1.9**
TIA AMB AMB
comp=Z,132nm,1.2s,mb5.3
TIA LR LR
comp=N,4μm,14.0s
EKS2 Erkin-Say 25.69 327 *e*P **P** **07 15 50.5 +0.9**
comp=N,114nm,1.1s,mb5.3
EKS2 Erkin-Say 25.69 327 P **P** **07 15 50.8 +1.2**
SNR=20
USP Ospenovka 25.79 329 P **P** **07 15 51.2 +0.7**
SNR=68
MK31 Makanchi Array 25.93 344 *e*P **P** **07 15 51.6 0.0**
MKAR Makanchi Array 25.93 344 P **P** **07 15 51.6 0.0**
comp=N,35nm,0.5s,mb5.1,baz=156,slow=9.2,SNR=178
MKAR S **S** **07 20 14.3 -5.4**
comp=N,2.6nm,0.8s,baz=172,slow=12,SNR=2.2
NACB Ninganchiao 26.93 80 *e*P **P** **07 16 00.1 -0.9**
comp=N,187nm,0.8s,mb5.7
BJT Baijiatuau 26.95 43 *e*P **P** **07 16 00.6 -0.4**
comp=N,23nm,0.6s,mb4.9
BJT Baijiatuau 26.95 43 *e*P **P** **07 16 00.6 -0.4**
BJT pmax pmax
comp=Z,23nm,0.6s
BJI Beijing 26.97 43 P **P** **07 16 00.6 -0.6**
BJI S **S** **07 20 32.8 -3.6**
BJI AMB AMB
comp=Z,29nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,217nm,5.0s
BJI LR LR
comp=N,5μm,23.5s,MS5.1
BJI LR LR
comp=E,5μm,24.5s,MS5.1
BJI LR LR
comp=Z,1μm,28.2s,MS4.3
SSE Sheshan 27.21 65 P **P** **07 16 02.5 -0.9**
SSE S **S** **07 20 41.0 +0.6**
SSE XS sS 07 20 55.7 +0.2
SSE PCS PcS 07 23 02.7 -2.1
SSE AMB AMB
comp=Z,76nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,168nm,4.7s
SSE LR LR
comp=N,2μm,18.6s,MS4.8
SSE LR LR
comp=E,2μm,18.6s,MS4.8
SSE LR LR
comp=Z,3μm,16.1s,MS5.0
PPBI Pangkal Pinang 27.64 149 P **P** **07 16 09.5 +2.1**
comp=Z,44nm,0.5s,comp=Z,6μm,mb5.4
KK31 Karatay Array 27.71 324 *i* P **P** **07 16 07.4 -0.4**
KK31 pmax pmax
comp=Z,14nm,0.6s,mb4.8
SONM Songino Array 28.01 20 P **P** **07 16 10.5 +0.1**
comp=Z,22nm,0.8s,mb4.9,baz=203,slow=9.3,SNR=30
ULN Ulaanbaatar 28.25 21 ⇓P **P** **07 16 12.0 -0.6**
SNR=29
ULN Ulaanbaatar 28.25 21 *e*P **P** **07 16 12.1 -0.5**
comp=Z,29nm,0.8s,mb5.0
ULN Ulaanbaatar 28.25 21 *e*P **P** **07 16 12.1 -0.5**
ULN pmax pmax
comp=Z,29nm,0.8s,mb5.0
ULN Ulaanbaatar 28.25 21 P **P** **07 16 11.0 -1.6**
comp=Z,52nm,1.8s,comp=Z,682nm,mb4.9
STKI Sintang 28.77 137 P **P** **07 16 17.1 -0.4**
comp=Z,87nm,1.6s,mb5.2
ZAK Zakamensk 29.47 14 *e*P **P** **07 16 22.9 -0.5**
ZAK *e* 07 23 07.7
ZAK pmax pmax
comp=Z,18nm,1.7s,mb4.5
MOY Mondy 30.23 11 *e*P **P** **07 16 31.0 +0.9**
MOY pmax pmax
comp=Z,36nm,2.5s,mb4.7
KURK Kurchatov 30.49 343 P **P** **07 16 32.6 +0.2**
comp=Z,173nm,0.9s,mb5.8,SNR=18
KURK Kurchatov 30.49 343 P **P** **07 16 32.9 +0.5**
SNR=18
KURK Kurchatov 30.49 343 *e*P **P** **07 16 32.2 -0.1**
comp=Z,26nm,0.9s,mb5.0
KURK *e*pP pP 07 16 38.2 -3.3
KURK Kurchatov 30.49 343 *e*P **P** **07 16 32.3 -0.1**
KURK *e**PP pP 07 16 38.2 -3.3
KURK pmax pmax
comp=Z,26nm,0.9s,mb5.0
TLY Talaya 30.77 14 *e*P **P** **07 16 35.9 +1.1**
TLY *e* 07 17 30.1
TLY *e*S **S** **07 21 37.9 +2.0**
TLY pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
TLY MLR MLR
comp=Z,2μm,16.0s,MS4.8
IRK Irkutsk 31.43 14 *e*P **P** **07 16 45.7 +5.0**
IRK pmax pmax
comp=Z,58nm,1.8s,mb5.1
SMDO Samad 31.66 278 P **P** **07 16 45.6 +2.6**
SNR=6.9
ZAA0 Zalesovo Array 32.28 352 *e*P **P** **07 16 48.0 0.0**
ZAA0 *e*pP pP 07 16 56.5 -0.8
ZALV Zalesovo Beam 32.28 352 P **P** **07 16 47.7 -0.4**
comp=Z,6.6nm,0.5s,mb4.8,baz=169,slow=8.8,SNR=48
ZALV S **S** **07 21 56.6 -2.8**
comp=Z,3.2nm,0.8s,baz=179,slow=17,SNR=3.9
ZALV LR LR 07 29 55.0
comp=Z,635nm,20.4s,MS4.3,baz=341,slow=36
ZALV Zalesovo Beam 32.28 352 P **P** **07 16 47.7 -0.4**
ZALV S **S** **07 21 56.6 -2.9**
BSY Bisya 32.47 278 P **P** **07 16 52.9 +2.7**
SNR=6.4
SNY Shenyang 32.70 46 ⇓P **P** **07 16 50.0 -1.9**
SNY S **S** **07 21 55.4 -11**
SNY AMB AMB
comp=Z,22nm,0.9s,mb5.1
SNY AMB AMB
comp=Z,347nm,5.9s
SNY LR LR
comp=N,4μm,21.6s,MS5.2
SNY LR LR
comp=E,2μm,22.9s,MS5.2
SNY LR LR
comp=Z,2μm,17.7s
ABKT Ailbek 33.35 306 P **P** **07 16 59.4 +1.7**
comp=Z,248nm,1.3s,mb6.0,SNR=14
VAN Vannovskaya 33.36 306 P **P** **07 16 59.1 +1.3**
VAN S **S** **07 22 20.5 +3.8**
NVS Novosibirsk 33.38 350 ⇑ *i* P **P** **07 16 57.0 -0.7**
NVS *e*S **S** **07 22 15.0 -1.5**
NVS *e*SS SS 07 24 26.3 -15
NVS pmax pmax
comp=N,62nm,1.8s
NVS pmax pmax
comp=Z,49nm,1.8s,mb5.1
NVS pmax pmax
comp=E,18nm,1.5s
NVS smax
comp=N,73nm,2.0s
KRAR Krasnoyarsk 33.84 1 *c i* P **P** **07 17 02.2 +0.5**
KRAR pmax pmax
comp=Z,90nm,1.7s,mb5.4
KSRS Korea Array 34.20 55 P **P** **07 17 02.1 -3.0**
comp=Z,2.7nm,0.5s,mb4.4,baz=246,slow=8.5,SNR=8.1
KSRS S **S** **07 22 23.9 -5.8**
comp=Z,6.7nm,1.1s,baz=256,slow=15,SNR=4.3
KSRS ScP ScP 07 23 22.9 -1.4
comp=Z,1.9nm,0.8s,baz=266,slow=4.0,SNR=4.5
KSRS LR LR 07 31 10.9
comp=Z,2μm,18.3s,MS4.9,baz=256,slow=37
HIA Hailar 34.68 32 *e*P **P** **07 17 08.7 -0.4**
comp=Z,7.0nm,0.5s,mb4.8
HIA Hailar 34.68 32 *e*P **P** **07 17 08.7 -0.3**
HIA pmax pmax
comp=Z,7.0nm,0.5s
CN2 Changchun 34.83 44 *e*P **P** **07 17 08.7 -1.7**
CN2 *e*XP sP 07 17 19.0 -4.5
CN2 *e*S **S** **07 22 31.7 -7.5**
CN2 SS SS 07 24 46.4 -25
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,290nm,7.0s
CN2 LR LR
comp=N,3μm,17.0s,MS5.2
CN2 LR LR
comp=E,2μm,17.0s,MS5.2
CN2 LR LR
comp=Z,2μm,17.0s,MS4.9
BVA0 Borovoye Array 35.13 337 *i* P **P** **07 17 12.7 -0.2**
BVA0 pmax pmax
comp=Z,16nm,2.3s,mb4.5
BRVK Borovoye 35.19 337 *e*P **P** **07 17 13.1 -0.4**
comp=Z,43nm,1.2s,mb5.2
BRVK Borovoye 35.19 337 *e*P **P** **07 17 13.1 -0.3**
BRVK pmax pmax
comp=Z,43nm,1.2s,mb5.2
SJI Sawahan 35.25 145 P **P** **07 17 14.1 -0.2**
MDJ Mudanjiang 37.87 45 P **P** **07 17 34.8 -1.5**
MDJ AP pP 07 17 41.0 -4.6
MDJ XP sP 07 17 43.6 -5.8
MDJ PP PP 07 19 00.7 -2.4
MDJ S **S** **07 23 19.6 -6.0**
MDJ XS sS 07 23 34.2 -6.7
MDJ SCP ScP 07 23 38.4 +0.8
MDJ PCS PcS 07 23 40.8 -0.1
MDJ AMB AMB
comp=Z,14nm,1.7s,mb4.4
MDJ AMB AMB
comp=Z,76nm,5.0s
MDJ LR LR
comp=N,3μm,24.1s,MS5.0
MDJ LR LR
comp=E,2μm,23.5s,MS5.0
MDJ LR LR
comp=Z,1μm,18.1s
MDJ Mudanjiang 37.87 45 *e*P **P** **07 17 34.8 -1.6**
comp=Z,38nm,1.2s,mb5.0
KAPI Kappang 38.03 132 ⇑P **P** **07 17 36.4 -1.7**
SNR=11
KAPI Kappang 38.03 132 *e*P **P** **07 17 37.1 -1.0**
comp=Z,96nm,1.5s,mb5.3
BOD Bodaibo 38.96 18 *e*P **P** **07 17 45.1 -0.2**
BOD pmax pmax
comp=Z,48nm,1.2s,mb5.1
AKTK Aktyubinsk 38.97 325 P **P** **07 17 45.2 -0.3**
AKTO Aktyubinsk 38.97 325 P **P** **07 17 45.2 -0.3**
comp=Z,10nm,0.8s,mb4.6,baz=122,slow=7.9,SNR=27
RDF Al-Radifah 40.82 289 *e*P **P** **07 18 01.0 -0.2**
baz=289
RDF AMb AMB 07 18 04.8
comp=Z,94nm,1.0s,mb5.4,baz=289
MIB Mutribah 40.99 290 *e*P **P** **07 18 02.8 +0.2**
baz=290
MIB AMb AMB 07 18 06.3
comp=Z,120nm,1.3s,mb5.4,baz=290
NAY Al-Naaiem 41.08 290 *e*P **P** **07 18 03.5 +0.1**
baz=289
NAY AMb AMB 07 18 13.7
comp=Z,54nm,1.0s,mb5.1,baz=289
KLR Kul'dur 41.18 39 *e*P **P** **07 17 57.8 -6.1**
KLR *e* 07 19 41.5
KLR *e*S **S** **07 24 05.5 -10**
KLR MLR MLR
comp=Z,5μm,12.0s,MS5.6
CLNS Chul'man 42.05 26 *e*P **P** **07 18 10.0 -0.9**
CLNS *e**PP pP 07 18 19.8 -0.4
CLNS *e* 07 19 47.7
CLNS *e* 07 20 07.7
CLNS *e*S **S** **07 24 24.4 -3.5**
CLNS *e*SSS 07 28 06.6
CLNS pmax pmax
comp=E,26nm,1.1s
CLNS pmax pmax
comp=N,24nm,1.1s
CLNS pmax pmax
comp=Z,34nm,1.3s,mb4.8
CLNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS smax
comp=E,390nm,12.7s
CLNS smax
comp=N,216nm,13.8s
CLNS MLR MLR
comp=Z,858nm,15.0s,MS4.8
CLNS MLR MLR
comp=N,591nm,14.0s,MS4.7
CLNS MLR MLR
comp=E,537nm,15.0s,MS4.7
MAJO Matsushiro 42.08 60 *e*P **P** **07 18 09.7 -1.8**
comp=E,28nm,0.7s,mb5.0
MAJO *e*pP pP 07 18 18.8 -2.0
MAJO Matsushiro 42.08 60 *e*P **P** **07 18 09.7 -1.7**
MAJO *e**PP pP 07 18 18.8 -2.0
MAJO pmax pmax
comp=Z,28nm,0.7s,mb5.0
MAT Matsushiro 42.08 60 P **P** **07 18 09.0 -2.4**
MAT S **S** **07 24 23.0 -5.9**
MJAR Matsushiro Arr 42.08 60 P **P** **07 18 09.8 -1.7**
comp=Z,13nm,0.7s,mb4.7,baz=275,slow=10.0,SNR=21
MJAR ScP ScP 07 23 51.9 -2.3
comp=Z,2.4nm,0.8s,baz=261,slow=3.3,SNR=5.2
MJAR LR LR 07 38 26.4
comp=Z,1μm,18.4s,MS4.8,baz=275,slow=40
MJAR Matsushiro Arr 42.08 60 P **P** **07 18 09.8 -1.7**
MJAR ScP ScP 07 23 51.9 -2.3
MJAR LR LR 07 38 26.4
ARU Arti 42.32 333 *e*P **P** **07 18 13.2 +0.1**
comp=Z,30nm,1.0s,mb4.9
ARU *e*pP pP 07 18 22.1 -0.3
ARU Arti 42.32 333 *c i* P **P** **07 18 13.1 0.0**
ARU *e* 07 19 49.9
ARU *e*S **S** **07 24 36.3 +4.5**
ARU pmax pmax
comp=Z,18nm,0.8s,mb4.8
HABR Khabarovsk 42.85 42 P **P** **07 18 14.4 -3.1**
HABR *e*S **S** **07 24 38.9 -1.0**
HABR *e* 07 28 13.8
HABR *e* 07 28 25.3
BHD Baghdad 43.58 295 *ex* x 07 18 27.0
BHD *ex* x 07 18 37.0
BHD *ex* x 07 24 53.0
BHD *ex* x 07 25 10.0
GNI Garni 43.98 305 *d i* P **P** **07 18 28.2 +1.4**
GNI pmax pmax
comp=Z,31nm,1.7s
MTA Mtatsminda 44.22 308 P **P** **07 18 29.2 +0.5**
MSEY Mahe Island 44.86 238 ⇑P **P** **07 18 36.8 +2.7**
SNR=7.6
MSEY Mahe Island 44.86 238 *e*P **P** **07 18 35.9 +1.8**
comp=Z,38nm,1.3s,mb5.1
SOKR Solikamsk 45.07 335 *e*P **P** **07 18 37.3 +2.2**

SOKR pmax pmax
comp=Z,20nm,0.7s,mb5.1
SOKR MLR MLR
comp=Z,1µm,19.0s,MS4.9
ONI Oni 45.37 309 P **P** **07 18 39.2 +1.4**
KIV Kislovodsk 46.18 310 *e*P **P** **07 18 45.4 +1.2**
comp=Z,33nm,1.3s,mb5.1
KIV *e*pP pP 07 18 51.6 -2.0
KIV Kislovodsk 46.18 310 *e*P **P** **07 18 43.7 -0.5**
KIV *e*S **S** **07 25 30.5 +2.1**
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.0
ERM Erimo 46.64 53 *e*P **P** **07 18 48.7 +0.8**
comp=Z,62nm,1.2s,mb5.4
ERM Erimo 46.64 53⇑*i*P **P** **07 18 47.1 -0.8**
YAK Yakutsk 47.31 23 *e*P **P** **07 18 52.3 -0.5**
YAK *e**PP pP 07 19 00.6 -1.6
YAK *e* 07 20 41.4
YAK *e*S **S** **07 25 42.6 -1.5**
YAK *e* 07 28 40.5
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.1
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=Z,11nm,0.4s,mb5.1
YAK pmax pmax
comp=N,11nm,0.9s
YAK pmax pmax
comp=E,8.0nm,0.5s
YAK smax
comp=E,180nm,2.2s
YAK smax
comp=N,191nm,2.3s
YAK MLR MLR
comp=N,654nm,13.0s
YAK MLR MLR
comp=N,395nm,10.0s
YAK MLR MLR
comp=Z,1µm,14.0s,MS5.0
YSS Yuzh-Sakhalins 47.33 46 *e*P **P** **07 18 52.0 -1.1**
YSS *i* pP 07 19 02.6 0.0
YSS *e*S **S** **07 25 40.0 -4.7**
YSS MLR MLR
comp=E,1µm,18.0s
YSS MLR MLR
comp=Z,1µm,18.0s,MS4.9
SOC Sochi 48.23 309 *e*P **P** **07 19 00.5 +0.3**
SOC *e* 07 20 23.9
SOC *e* 07 20 56.8
SOC *e*PPP 07 21 37.8
SOC *e*S **S** **07 25 58.4 +0.7**
SOC *e* 07 28 50.8
SOC pmax pmax
comp=Z,28nm,0.8s,mb5.3
SOC MLR MLR
comp=Z,425nm,17.0s,MS4.5
ANN Anapa 50.04 311 *e*P **P** **07 19 16.2 +2.2**
ANN pmax pmax
comp=Z,120nm,1.7s,mb5.7
VSR Storozhevoye 50.17 319 *e*P **P** **07 19 13.6 -1.3**
VSR pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,1.0s
MBWA Marble Bar 50.64 146 *e*P **P** **07 19 18.1 -0.7**
comp=E,121nm,1.9s,mb5.5
KAKA Kakadu 52.38 128 *e*P Px 07 19 19.9
SIM Simferopol' 52.40 310 P pP 07 19 43.8 +2.5
SIM S **S** **07 26 56.7 +1.1**
SIM pmax pmax
comp=Z,19nm,1.3s,mb4.9
SIM MLR MLR
comp=Z,860nm,18.0s,MS4.8
BR131 Keskin Array S 52.44 304 *e*P **P** **07 19 31.9 -0.2**
comp=Z,3.1nm,0.8s,mb4.3
BRTR Keskin Array B 52.44 304 P **P** **07 19 31.0 -1.1**
comp=Z,3.0nm,0.8s,mb4.3,baz=118,slow=11,SNR=12
BRTR LR LR 07 45 16.5
comp=Z,575nm,20.4s,MS4.6,baz=225,slow=40
OBN Obninsk 52.70 323 *e*P **P** **07 19 34.3 +0.5**
OBN Obninsk 52.70 323⇑*i*P **P** **07 19 33.0 -0.8**
OBN *i* pP 07 19 42.7 -0.6
OBN *e* 07 20 43.4
OBN *e* 07 21 35.0
OBN *i*S **S** **07 26 58.8 -0.5**
OBN pmax pmax
comp=Z,41nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,2µm,19.0s,MS5.2
KLMR Klimovskoe 53.08 331 *e*P **P** **07 19 36.6 +0.1**
KLMR pmax pmax
comp=Z,41nm,1.2s,mb5.2
KIS Kishinev 56.24 313 *e*LQ 07 42 31.0
comp=Z,3µm,23.0s
KIS *e*LR LR 07 45 20.0
comp=Z,1µm,18.0s
AKASG Malin Array Be 56.26 317 P **P** **07 19 58.5 -1.2**
comp=Z,7.7nm,0.6s,mb4.9,baz=80,slow=6.3,SNR=13
AKASG LR LR 07 48 31.9
comp=Z,1µm,20.2s,MS5.0,baz=95,slow=41
AKBB Malin Array Si 56.26 317 *e*P **P** **07 19 58.9 -0.8**
KIEV Kiev 56.27 317 *e*P **P** **07 19 58.8 -0.9**
comp=Z,17nm,0.8s,mb5.1
KIEV Kiev 56.27 317 *e*P **P** **07 19 58.8 -1.0**
KIEV pmax pmax
comp=Z,17nm,0.8s,mb5.1
TIRR Tirgusor 56.43 309⇓*i*P pP 07 20 12.5 +1.9
SEY Seymchan 56.97 28⇑*e*P **P** **07 20 03.6 -1.0**
JOF Joensuu 57.43 332 *e*p **P** **07 20 07.1 -0.7**
comp=Z,18nm,0.7s,mb5.2
JOF Joensuu 57.43 332 *e*P **P** **07 20 07.1 -0.7**
JOF pmax pmax
comp=Z,18nm,0.7s,mb5.2
VRI Vrincioaia 57.64 311⇓P **P** **07 20 10.4 +0.8**
VRI Vrincioaia 57.64 311⇓*i*P **P** **07 20 10.4 +0.8**
PLOR Plostina 57.70 311⇓*i*P **P** **07 20 11.3 +1.3**
LVZ Lovozero 57.72 338⇑*e*P **P** **07 20 11.1 +1.4**
LVZ pmax pmax
comp=Z,100nm,2.5s,mb5.4
PETK Petropavlovsk- 57.85 40 P **P** **07 20 11.3 +0.4**
comp=Z,5.5nm,0.9s,mb4.6,baz=294,slow=14,SNR=3.3
PETK LR LR 07 45 21.7
comp=Z,704nm,20.9s,MS4.8,baz=90,slow=36
APA Apatity 58.04 337⇑*i*P **P** **07 20 14.0 +2.0**
APA *e* 07 28 20.0
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
APA MLR MLR
comp=Z,2µm,17.0s,MS5.2
PET Petropavlovsk 58.42 40 *e*P **P** **07 20 16.0 +1.1**
PET *e*S **S** **07 28 12.2 -3.5**
PET pmax pmax
comp=Z,100nm,12.7s
PET MLR MLR
comp=Z,1µm,17.0s,MS5.0
PET MLR MLR
comp=Z,800nm,15.0s
WRA Warramunga Arr 58.56 132 P **P** **07 20 15.7 -0.6**
comp=Z,16nm,0.5s,mb5.3,baz=320,slow=7.5,SNR=369
WRA LR LR 07 49 20.2
comp=Z,432nm,21.7s,MS4.5,baz=290,slow=40
WRAB Tennant Creek 58.57 132 P **P** **07 20 15.9 -0.4**
comp=Z,233nm,0.6s,mb6.4,SNR=23
WRAB Tennant Creek 58.57 132 *e*P **P** **07 20 15.8 -0.5**
comp=Z,97nm,1.5s,mb5.6
WRAB Tennant Creek 58.57 132⇑*i*P **P** **07 20 15.7 -0.6**
WB2 Warramunga Arr 58.57 132 *e*P **P** **07 20 15.9 -0.5**
BURAR Bucovina Array 58.71 313⇓P **P** **07 20 17.5 +0.5**
BURAR Bucovina Array 58.71 313⇓*i*P **P** **07 20 17.5 +0.5**
BUR08 Bucovina Ar. S 58.72 313 *e*P **P** **07 20 17.5 +0.4**
VOIR 58.82 311⇑*i*P **P** **07 20 18.3 +0.5**
KAF Kangasniemi 59.51 330 *e*p **P** **07 20 22.2 -0.1**
comp=Z,6.2nm,0.9s,mb4.6,baz=98,slow=6.6
KAF Kangasniemi 59.51 330 *e*P **P** **07 20 22.2 -0.1**
KAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LVV L'vov 59.53 316 *e*P **P** **07 20 22.1 -0.6**
LVV MLR MLR
comp=Z,600nm,18.0s,MS4.8
LVV MLR MLR
comp=N,100nm,17.0s,MS4.8
LVV MLR MLR
comp=E,600nm,18.0s,MS4.8
NWAO Narrogin (SRO) 59.68 156 P **P** **07 20 23.9 +0.1**
comp=E,14nm,0.9s,mb5.0,baz=288,slow=8.0,SNR=6.0
ABPO Ambohimpanom 60.17 231 *e*P **P** **07 20 28.5 +1.1**
comp=E,12nm,1.1s,mb4.8
SUW Suwalki 60.21 321 *e*P **P** **07 20 26.9 -0.4**
SUW *e*pP pP 07 20 35.9 -1.0
SUW LMZ 07 50 14.2
comp=E,1µm,21.8s
SUW Suwalki 60.21 321 *e*P **P** **07 20 26.9 -0.4**
SUW *e*pP pP 07 20 35.9 -1.1
VTS Vitosha 60.25 307⇓P **P** **07 20 28.4 +0.7**
VTS Vitosha 60.25 307⇓*i*P **P** **07 20 28.4 +0.6**
KWP Kalwaria 60.39 315 *e*P **P** **07 20 28.4 -0.1**
KWP *e*pP pP 07 20 33.0 -5.2
KWP LMZ 07 46 28.2
comp=E,900nm,27.8s
KWP Kalwaria 60.39 315 *e*P **P** **07 20 28.4 -0.2**
KWP *e*pP pP 07 20 33.0 -5.2
KWP Kalwaria 60.39 315⇓*i*P **P** **07 20 29.0 +0.4**
DRGR 60.42 312⇓P **P** **07 20 29.7 +0.8**
DRGR 60.42 312⇓*i*P **P** **07 20 29.7 +0.9**
GZR Gura Zlata 60.42 311⇓*i*P **P** **07 20 34.9 +6.0**
KOLS Kolonicke sedl 60.68 315 *e*P **P** **07 20 30.5 0.0**
VAY Valandovo 60.82 306 *e*P **P** **07 20 30.4 -1.3**
ASAR Alice Springs 60.87 136 P **P** **07 20 32.0 -0.1**
comp=E,13nm,0.6s,mb5.2,baz=313,slow=6.6,SNR=226
STIP Stip 61.08 306 *e*P **P** **07 20 32.5 -0.9**
BZS Buzias 61.23 311⇓P **P** **07 20 34.9 +0.5**
BZS Buzias 61.23 311⇓*i*P **P** **07 20 34.9 +0.6**
STHS Stebnicka Huta 61.34 315 *e*P **P** **07 20 35.3 +0.2**
comp=E,5.3nm,0.6s,mb4.8
STHS *e* pP 07 20 45.8 +1.0
STHS Stebnicka Huta 61.34 315 *e*P **P** **07 20 35.3 +0.2**
STHS *e* pP 07 20 45.8 +1.0
STHS pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
ARCES ARCESS Array B 61.40 338 P **P** **07 20 35.3 +0.2**
comp=Z,8.5nm,0.6s,mb5.0,baz=83,slow=8.0,SNR=30
ARCES LR LR 07 49 59.5
comp=Z,1µm,18.4s,MS5.0,baz=109,slow=39
ARCES ARCESS Array B 61.40 338 P **P** **07 20 35.3 +0.2**
ARCES LR LR 07 49 59.5
WAR Warsaw 61.46 318 *e*P **P** **07 20 32.1 -3.7**
SKO Skopje 61.61 307 *e*P **P** **07 20 36.3 -0.7**
KRUS Krusevo 61.81 306 *e*P **P** **07 20 35.7 -2.6**
OHR Ohrid 62.17 306 *e*P **P** **07 20 38.2 -2.6**
PMG Port Moresby 62.18 114 *e*P **P** **07 20 40.6 -0.6**
comp=Z,36nm,1.1s,mb5.4
PMG Port Moresby 62.18 114 *e*P **P** **07 20 40.6 -0.6**
PMG pmax pmax
comp=Z,36nm,1.1s
PSZ Piszkesteto 62.29 314 *e*P **P** **07 20 41.7 +0.3**
comp=Z,21nm,1.3s,mb5.1
PSZ Piszkesteto 62.29 314 *e*P **P** **07 20 41.7 +0.2**
PSZ pmax pmax
comp=Z,21nm,1.3s,mb5.1
PSZ Piszkesteto 62.29 314⇓*e*P **P** **07 20 42.1 +0.6**
VYHS Vyhne 62.97 314 *e*P **P** **07 20 46.5 +0.5**
OKC Ostrava-Krasne 63.34 316 *e*P **P** **07 20 48.8 +0.4**
OKC *e* pP 07 20 59.7 +1.6
OKC Ostrava-Krasne 63.34 316 *e*P **P** **07 20 48.8 +0.4**
OKC *e*pP pP 07 20 59.7 +1.6
OKC AMS AMS 07 52 20.0
comp=Z,700nm,14.6s
BILL Bilibino 63.66 24 *e*P **P** **07 20 49.8 -0.4**
comp=Z,36nm,1.1s,mb5.3
BILL *e*pP pP 07 20 58.4 -1.5
BILL Bilibino 63.66 24*d*i*P **P** **07 20 49.3 -0.9**
BILL *i* pP 07 21 00.0 +0.1
BILL *e* 07 21 26.2
BILL pmax pmax
comp=Z,23nm,1.0s,mb5.2
BILL MLR MLR
comp=Z,700nm,17.0s,MS4.9
MORC Moravsky Berou 63.73 316 *e*P **P** **07 20 51.1 +0.1**
comp=Z,24nm,1.3s,mb5.1
MORC Moravsky Berou 63.73 316⇓*i*P **P** **07 20 51.5 +0.5**
MODS Modra-Piesok 64.01 314 *e*P **P** **07 20 52.8 -0.1**
comp=Z,9.0nm,1.4s,mb4.6
MODS Modra-Piesok 64.01 314 *e*P **P** **07 20 52.8 -0.1**
MODS pmax pmax
comp=Z,9.0nm,1.4s,mb4.6
ZST Bratislava 64.14 314 *e*P **P** **07 20 53.3 -0.4**
comp=Z,8.6nm,0.7s,mb4.9
ZST LR LR
comp=Z,200nm,16.8s,MS4.4
VRAC Vranov 64.39 315⇓P **P** **07 20 56.2 +0.9**
VRAC Vranov 64.39 315⇓*i*P **P** **07 20 56.2 +0.9**
DPC Dobruska-Polom 64.48 316 *e*P **P** **07 20 56.5 +0.6**
DPC *e*pP pP 07 21 05.5 -0.1
DPC AMS AMS 07 53 10.0
comp=Z,1µm,18.6s
SOP Sopron 64.55 313⇓*e*P **P** **07 20 56.5 +0.1**
UPC Upice 64.67 317 *e*P **P** **07 20 59.5 +2.4**
UPC *e*pP pP 07 21 09.1 +2.2
KOGS Kog 64.89 312 *e*P **P** **07 20 58.7 0.0**
KOGS *e* pP 07 21 09.8 +1.4
CONA Conrad Observa 65.00 314⇑*i*P **P** **07 20 59.2 -0.1**
comp=Z,37nm,1.5s,mb5.2
CSNA Conrad Observa 65.00 314⇑*i*P **P** **07 20 59.0 -0.3**
comp=Z,35nm,1.5s,mb5.2
TREC Trest 65.11 315 *e*P **P** **07 21 02.1 +2.1**
TREC AMS AMS 07 53 20.0
comp=Z,800nm,18.0s
ARSA Arzberg 65.30 313⇑*i*P **P** **07 21 01.2 -0.1**
comp=Z,6.4nm,0.8s,mb4.7
TIP Timpagrande 65.50 304 *e*P **P** **07 21 04.6 +1.8**
comp=Z,50nm,1.4s,mb5.4
CRES Cresnjev 65.51 312 *e*P **P** **07 21 02.9 +0.2**
PVCC Panska Ves 65.58 317 *e*P **P** **07 21 03.2 +0.1**
PVCC *e*pP pP 07 21 12.2 -0.6
PVCC AMS AMS 07 52 30.0
comp=Z,1µm,17.7s
SPITS Spitsbergen Ar 65.62 347 LR LR 07 56 30.8
comp=Z,2µm,18.2s,MS5.2,baz=340,slow=42
PERS Pernice 65.64 312 *i* P **P** **07 21 03.9 +0.4**
PERS *e* pP 07 21 14.7 +1.4
PRU Pruhonice 65.65 316 *e*P **P** **07 21 03.9 +0.4**
PRU *e*pP pP 07 21 11.4 -1.9
PRU AMS AMS 07 53 40.0
comp=Z,1µm,17.4s
BOJS Bojanci 65.69 311 *e*P **P** **07 21 04.0 +0.2**
SOKA Soboth 65.69 313⇑*i*P **P** **07 21 04.0 +0.2**
BRG Berggiesshubel 65.94 317 *i* P **P** **07 21 05.9 +0.5**
comp=Z,8.7nm,1.1s,mb4.7
BRG *i* 07 21 17.5
BRG LR LR
comp=Z,920nm,16.8s,MS5.1
BRG Berggiesshubel 65.94 317 *i* P **P** **07 21 05.9 +0.5**
BRG *i* 07 21 17.5
BRG pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
BRG pmax pmax
comp=Z,12nm,1.0s,mb4.9
BRG MLR MLR
comp=N,478nm,18.9s,MS4.9
BRG MLR MLR
comp=E,589nm,18.1s,MS4.9
BRG MLR MLR
comp=Z,921nm,16.8s,MS5.1
BRG Berggiesshubel 65.94 317 *i* P **P** **07 21 05.9 +0.5**
comp=Z,14nm,1.1s,mb4.9
BRG *i* 07 21 17.5
comp=Z,20nm,1.0s
BRG
comp=N,798nm,18.9s
BRG
comp=E,984nm,18.1s
BRG
comp=Z,2µm,16.8s
MOA Molln 66.07 314⇓*i*P **P** **07 21 06.4 +0.1**
comp=Z,15nm,0.8s,mb5.0
LJU Ljubljana 66.12 312 *e*P **P** **07 21 07.0 +0.3**
GEC2 GERESS Array S 66.32 315 *e*P **P** **07 21 08.3 +0.4**
GERES GERESS Array B 66.32 315 P **P** **07 21 08.1 +0.2**
comp=Z,8.4nm,0.6s,mb4.9,baz=79,slow=6.9,SNR=29
GERES LR LR 07 54 51.3
comp=Z,480nm,18.7s,MS4.7,baz=70,slow=40
KHC Kasperske Hory 66.37 315 *e*P **P** **07 21 08.3 +0.1**
KHC *e* pP 07 21 18.3 +0.4
KHC Kasperske Hory 66.37 315 *e*P **P** **07 21 08.3 +0.1**
KHC *e* pP 07 21 18.3 +0.4
KHC MLR MLR
comp=N,1µm,20.1s
CLL Collm 66.49 318 *e*P **P** **07 21 09.0 +0.1**
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CLL MLR MLR
comp=Z,1µm,19.4s,MS5.2
CLL Collm 66.49 318 *e*P **P** **07 21 09.0 +0.1**
comp=Z,8.0nm,1.0s,mb4.7
CLL *ex* x 07 35 30.0
CLL LmV 07 53 00.0
comp=Z,1µm,19.4s
VOY Vojsko 66.56 312 *e*P **P** **07 21 09.5 +0.1**
VOY *e* pP 07 21 20.6 +1.4
NOA NORSAR Array B 66.64 328 P **P** **07 21 08.4 -1.3**
comp=Z,9.5nm,0.6s,mb5.0,baz=86,slow=6.4,SNR=44
NOA LR LR 07 52 04.3
comp=Z,726nm,19.4s,MS4.9,baz=90,slow=38
CTAO Charters Tower 67.31 125 *e*P **P** **07 21 14.2 -0.3**
comp=Z,70nm,1.6s,mb5.4
CTAO Charters Tower 67.31 125 *e*P **P** **07 21 14.2 -0.3**
CTAO pmax pmax
comp=Z,70nm,1.6s,mb5.4
ABTA Abfaltersbach 67.40 313⇑*i*P **P** **07 21 14.6 -0.2**
comp=Z,8.2nm,0.9s,mb4.8
MOX Moxa 67.44 317 *e*P **P** **07 21 15.8 +0.9**
comp=Z,19nm,1.2s,mb5.0
MOX
comp=Z,1µm,21.0s
MOX Moxa 67.44 317 *e*P **P** **07 21 15.8 +0.9**
MOX pmax pmax
comp=Z,19nm,1.2s,mb5.0
MOX MLR MLR
comp=Z,1µm,21.0s,MS5.1
GRA1 Grafenberg Arr 67.82 316 *e*P **P** **07 21 17.7 +0.3**
comp=Z,122nm,2.3s,mb5.5
GRA1 *e*pP pP 07 21 28.8 +1.6
GRA1 LR LR
comp=Z,1µm,18.9s,MS5.2
GRF Grafenberg Arr 67.82 316 *e*P **P** **07 21 17.7 +0.3**
GRF *e**PP pP 07 21 28.8 +1.6
GRF pmax pmax
comp=Z,122nm,2.3s,mb5.5
GRF MLR MLR
comp=Z,1µm,18.9s,MS5.2
GRF Grafenberg Arr 67.82 316 *e*P **P** **07 21 17.7 +0.3**
GRF *e**PP pP 07 21 28.8 +1.6
GRF pmax pmax
comp=Z,122nm,2.3s,mb5.5
GRF MLR MLR
comp=Z,1µm,18.9s,MS5.2
GRF Grafenberg Arr 67.82 316 *e*P **P** **07 21 17.7 +0.3**
comp=Z,122nm,2.3s,mb5.5
GRF *e*pP pP 07 21 28.8 +1.6
GRF *e*L 07 55 21.1
comp=Z,1µm,18.9s
WTTA Wattenberg 67.92 313⇓*i*P **P** **07 21 17.7 -0.3**
comp=Z,26nm,1.2s,mb5.1
MOTA Moosalm 68.26 314⇑*i*P **P** **07 21 19.8 -0.3**
comp=Z,13nm,0.8s,mb5.0
RETA Reutte 68.47 314⇑*i*P **P** **07 21 21.7 +0.2**
comp=Z,26nm,1.2s,mb5.1
FETA Feichten 68.57 313⇑*i*P **P** **07 21 21.4 -0.7**
comp=Z,20nm,1.5s,mb4.8
DAVA Damuels 69.09 314⇑*i*P **P** **07 21 24.7 -0.7**
comp=Z,27nm,1.1s,mb5.1
STU Stuttgart 69.28 315 *e*P **P** **07 21 27.0 +0.5**
CDF Champ du Feu 70.60 315 *e*P **P** **07 21 34.3 -0.3**
comp=Z,34nm,1.1s,mb4.9
CDF Champ du Feu 70.60 315 *e*P **P** **07 21 34.3 -0.3**
comp=Z,17nm,1.1s,mb4.9
CDF Champ du Feu 70.60 315 *e*P **P** **07 21 34.3 -0.3**
CDF pmax pmax
comp=Z,17nm,1.1s,mb4.9
PGF Pioggiola 70.64 309 *e*P **P** **07 21 34.8 -0.2**
comp=Z,27nm,0.7s,mb5.0
PGF Pioggiola 70.64 309 *e*P **P** **07 21 34.8 -0.2**
comp=Z,14nm,0.7s,mb5.0
PGF Pioggiola 70.64 309 *e*P **P** **07 21 34.8 -0.2**
PGF pmax pmax
comp=Z,14nm,0.7s,mb5.0
HINF Hinteralfeld 71.00 315 *e*P **P** **07 21 36.6 -0.4**
WLF Walferdange 71.07 317 *e*P **P** **07 21 38.1 +0.7**
comp=Z,50nm,1.0s,mb5.4
WLF Walferdange 71.07 317 *e*P **P** **07 21 38.2 +0.8**
WLF pmax pmax
comp=Z,50nm,1.0s,mb5.4
HAU Haudompre 71.29 315 *e*P **P** **07 21 38.3 -0.5**
comp=Z,32nm,1.0s,mb4.9
HAU *e*MLR MLR
comp=Z,959nm,21.0s,MS4.7
HAU Haudompre 71.29 315 *e*P **P** **07 21 38.3 -0.5**
comp=Z,16nm,1.0s,mb4.9
HAU LR LR
comp=Z,960nm,21.0s,MS5.0
HAU Haudompre 71.29 315 *e*P **P** **07 21 38.3 -0.5**
HAU pmax pmax
comp=Z,16nm,1.0s,mb4.9
HAU MLR MLR
comp=Z,960nm,21.0s,MS5.0
STKA Stephens Creek 71.44 137 P **P** **07 21 39.0 -0.8**
comp=Z,3.1nm,0.8s,mb4.3,baz=321,slow=6.9,SNR=5.3
STKA LR LR 07 56 37.3
comp=Z,760nm,21.6s,MS4.9,baz=302,slow=39
SBF Sospel 71.47 311 *e*P **P** **07 21 39.9 0.0**
LPG La Plagne 71.57 312 *e*P **P** **07 21 41.0 +0.4**
comp=Z,30nm,0.9s,mb4.9
LPG La Plagne 71.57 312 *e*P **P** **07 21 41.0 +0.4**
comp=Z,15nm,0.9s,mb4.9
LPG La Plagne 71.57 312 *e*P **P** **07 21 41.0 +0.4**
LPG pmax pmax
comp=Z,15nm,0.9s,mb4.9
LPL La Plagne 71.58 312 *e*P **P** **07 21 41.0 +0.4**
comp=Z,41nm,1.0s,mb5.0
LPL La Plagne 71.58 312 *e*P **P** **07 21 41.0 +0.4**
comp=Z,20nm,1.0s,mb5.0
LPL La Plagne 71.58 312 *e*P **P** **07 21 41.0 +0.4**
LPL pmax pmax
comp=Z,20nm,1.0s,mb5.0
BNI Bardonecchia 71.72 312 *e*P **P** **07 21 42.8 +1.3**
BNI *e*pP pP 07 21 50.7 -0.6
CABF La Chapelle 71.77 314 *e*P **P** **07 21 41.8 +0.1**
comp=Z,25nm,1.1s,mb4.8
CABF La Chapelle 71.77 314 *e*P **P** **07 21 41.8 +0.1**
comp=Z,12nm,1.0s,mb4.8
CABF La Chapelle 71.77 314 *e*P **P** **07 21 41.8 +0.1**
CABF pmax pmax
comp=Z,12nm,1.0s,mb4.8
KEST Kesra 71.97 302 P **P** **07 21 43.7 +0.5**
comp=Z,7.6nm,0.8s,mb4.7,baz=282,slow=2.6,SNR=9.9
MEZF Maizieres J'vi 72.03 316 *e*P **P** **07 21 43.1 -0.1**
FRF La Foret Royal 72.09 310 *e*P **P** **07 21 43.6 -0.1**
BAIF Baives 72.21 317 *e*P **P** **07 21 44.4 +0.1**
comp=Z,36nm,1.1s,mb4.9
BAIF Baives 72.21 317 *e*P **P** **07 21 44.4 +0.1**
comp=Z,18nm,1.1s,mb4.9
BAIF Baives 72.21 317 *e*P **P** **07 21 44.4 +0.1**
BAIF pmax pmax
comp=Z,18nm,1.1s,mb4.9
LMR La Mourre 72.24 310 *e*P **P** **07 21 44.6 0.0**
comp=Z,126nm,1.3s,mb5.4
LMR La Mourre 72.24 310 *e*P **P** **07 21 44.6 0.0**
comp=Z,63nm,1.3s,mb5.4
LMR La Mourre 72.24 310 *e*P **P** **07 21 44.6 0.0**
LMR pmax pmax
comp=Z,63nm,1.3s,mb5.4
ORIF Oris-en-Rattie 72.31 312 *e*P **P** **07 21 45.2 +0.2**
ORIF *e*MLR MLR
comp=Z,1µm,23.0s,MS4.8
LSZ Lusaka 73.04 245 *e*P **P** **07 21 50.4 +0.6**
comp=Z,31nm,1.2s,mb5.1
LSZ Lusaka 73.04 245 *e*P **P** **07 21 50.4 +0.7**
LSZ pmax pmax
comp=Z,31nm,1.2s,mb5.1
LOR Lormes 73.10 315 *e*P **P** **07 21 49.1 -0.5**
LOR *e*MLR MLR
comp=Z,701nm,23.0s,MS4.6
LOR Lormes 73.10 315 *e*P **P** **07 21 49.1 -0.5**
LOR MLR MLR
comp=Z,700nm,23.0s,MS4.9
VIVF Saint-Julien-l 73.15 312 *e*P **P** **07 21 49.8 -0.2**
comp=Z,46nm,1.2s,mb5.0
VIVF Saint-Julien-l 73.15 312 *e*P **P** **07 21 49.8 -0.2**
comp=Z,23nm,1.2s,mb5.0
VIVF Saint-Julien-l 73.15 312 *e*P **P** **07 21 49.8 -0.2**

VIVF pmax pmax
comp=Z,23nm,1.2s,mb5.0
SMF Signal de Mont 73.27 314 *eP* **P 07 21 50.2 -0.4**
comp=Z,28nm,0.8s,mb4.9
SMF Signal de Mont 73.27 314 *eP* **P 07 21 50.2 -0.4**
comp=Z,14nm,0.8s,mb5.0
SMF Signal de Mont 73.27 314 *eP* **P 07 21 50.2 -0.4**
SMF pmax pmax
comp=Z,14nm,0.8s,mb4.9
SSF Saint Saulge 73.39 314 *eP* **P 07 21 51.0 -0.3**
comp=Z,39nm,0.9s,mb5.0
SSF Saint Saulge 73.39 314 *eP* **P 07 21 51.0 -0.3**
comp=Z,19nm,0.9s,mb5.0
SSF Saint Saulge 73.39 314 *eP* **P 07 21 51.0 -0.3**
SSF pmax pmax
comp=Z,19nm,0.9s,mb5.0
AVF Avril sur Loir 73.56 314 *eP* **P 07 21 52.0 -0.3**
comp=Z,11nm,0.5s,mb4.7
AVF Avril sur Loir 73.56 314 *eP* **P 07 21 52.0 -0.3**
comp=Z,5.4nm,0.5s,mb4.7
AVF Avril sur Loir 73.56 314 *eP* **P 07 21 52.0 -0.3**
AVF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
LASF Ste Croix 73.92 311 *eP* **P 07 21 54.9 +0.4**
comp=Z,61nm,1.2s,mb5.1
BGF Bois d'Agland 73.95 314 *eP* **P 07 21 54.5 -0.2**
TCF Toulx Ste Croi 74.45 314 *eP* **P 07 21 57.8 +0.2**
comp=Z,56nm,1.0s,mb5.1
TCF Toulx Ste Croi 74.45 314 *eP* **P 07 21 57.8 +0.2**
comp=Z,28nm,1.0s,mb5.2
TCF Toulx Ste Croi 74.45 314 *eP* **P 07 21 57.8 +0.2**
TCF pmax pmax
comp=Z,28nm,1.0s,mb5.2
ATKA Atka Island 74.87 40 *eP* **P 07 21 54.8 -5.1**
CAF Calviac 74.92 313 *eP* **P 07 22 00.6 +0.3**
comp=Z,12nm,0.8s,mb4.5
CAF Calviac 74.92 313 *eP* **P 07 22 00.6 +0.3**
comp=Z,5.8nm,0.8s,mb4.6
CAF Calviac 74.92 313 *eP* **P 07 22 00.6 +0.3**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
RJF Les Rejaudoux 75.19 313 *eP* **P 07 22 02.4 +0.5**
comp=Z,31nm,1.0s,mb4.9
RJF *e*MLR MLR
comp=Z,690nm,19.0s,MS4.7
RJF Les Rejaudoux 75.19 313 *eP* **P 07 22 02.4 +0.5**
comp=Z,16nm,1.0s,mb4.9
RJF LR LR
comp=Z,690nm,19.0s,MS5.0
RJF Les Rejaudoux 75.19 313 *eP* **P 07 22 02.4 +0.5**
RJF pmax pmax
comp=Z,16nm,1.0s,mb4.9
RJF MLR MLR
comp=Z,690nm,19.0s,MS5.0
MTLF Montolieu 75.26 311 *eP* **P 07 22 02.4 +0.1**
comp=Z,50nm,1.2s,mb5.0
MTLF Montolieu 75.26 311 *eP* **P 07 22 02.4 +0.1**
comp=Z,25nm,1.2s,mb5.2
MTLF Montolieu 75.26 311 *eP* **P 07 22 02.4 +0.1**
MTLF pmax pmax
comp=Z,25nm,1.2s,mb5.0
LDF La Druitiere 75.32 317 *eP* **P 07 22 02.3 -0.3**
comp=Z,78nm,1.3s,mb5.2
LDF La Druitiere 75.32 317 *eP* **P 07 22 02.3 -0.3**
comp=Z,39nm,1.3s,mb5.2
LDF La Druitiere 75.32 317 *eP* **P 07 22 02.3 -0.3**
LDF pmax pmax
comp=Z,39nm,1.3s,mb5.2
LFF La Frestale 75.82 313 *eP* **P 07 22 05.8 +0.3**
GRR Gorron 75.85 317 *eP* **P 07 22 05.3 -0.3**
MFF Saint Martin d 75.92 315 *eP* **P 07 22 05.8 -0.2**
SGMF Saint Gilles 76.97 317 *eP* **P 07 22 11.9 -0.1**
ETSF Etsaut 77.33 311 *eP* **P 07 22 14.5 +0.4**
comp=Z,11nm,0.7s,mb4.6
ETSF Etsaut 77.33 311 *eP* **P 07 22 14.5 +0.4**
comp=Z,5.3nm,0.7s,mb4.6
ETSF Etsaut 77.33 311 *eP* **P 07 22 14.5 +0.4**
ETSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ROSF Rostrenen 77.40 317 *eP* **P 07 22 14.3 -0.1**
SJPF Ste Jean 77.73 312 *eP* **P 07 22 16.9 +0.6**
TAM Tamanrasset 78.97 290 *eP* **P 07 22 24.4 +0.8**
IMA2 Indian Mountai 79.14 22 *eP* **P 07 22 24.0 +0.4**
COLD Coldfoot 79.71 21 *eP* **P 07 22 26.9 +0.2**
comp=Z,10nm,1.0s,mb4.7
SUMG Summit 79.95 347 *eP* **P 07 22 28.3 +0.4**
comp=Z,5.0nm,1.0s,mb4.4
LBTB Lobatse 79.96 238 *eP* **P 07 22 29.6 +0.9**
comp=Z,40nm,1.4s,mb5.2
LBTB Lobatse 79.96 238 *eP* **P 07 22 29.6 +0.8**
LBTB pmax pmax
comp=Z,40nm,1.4s,mb5.2
CHUM Lake Minchumin 80.77 24 *eP* **P 07 22 32.8 +0.3**
comp=Z,12nm,0.8s,mb4.9
ESDC Sonseca Array 80.84 309 P **P 07 22 33.7 +0.4**
comp=Z,5.2nm,0.7s,mb4.6,baz=62,slow=5.8,SNR=13
ESDC LR LR 08 04 41.4
comp=Z,199nm,18.4s,MS4.5,baz=30,slow=40
ESLA Sonseca Array 80.84 309 *eP* **P 07 22 34.9 +1.5**
BPAW Bear Paw Mtn. 81.15 23 *eP* **P 07 22 35.9 +1.4**
comp=Z,12nm,0.7s,mb4.7
PPLA Purkeypile 81.35 25 *eP* **P 07 22 37.2 +1.6**
comp=Z,67nm,1.5s,mb5.3
COLA College 81.83 22 *eP* **P 07 22 37.8 -0.4**
comp=Z,29nm,1.3s,mb5.0
COLA College 81.83 22 *c iP* **P 07 22 38.0 -0.1**
BOSA Boshof 82.03 235 P **P 07 22 40.0 +0.3**
comp=Z,13nm,1.1s,mb4.8,baz=74,slow=6.3,SNR=13
BOSA LR LR 07 57 31.4
comp=Z,595nm,20.0s,MS5.0,baz=59,slow=34
BOSA Boshof 82.03 235 *eP* **P 07 22 39.8 +0.1**
comp=Z,18nm,1.1s,mb4.9
BOSA Boshof 82.03 235 *eP* **P 07 22 39.8 +0.1**
BOSA pmax pmax
comp=Z,18nm,1.1s,mb4.9
MCK McKinley 82.11 23 *eP* **P 07 22 38.8 -0.8**
comp=Z,31nm,1.0s,mb5.2
MCK McKinley 82.11 23 *eP* **P 07 22 38.8 -0.8**
MCK pmax pmax
comp=Z,31nm,1.0s,mb5.2
PMR Palmer 83.26 25 *eP* **P 07 22 44.8 -0.8**
comp=Z,31nm,1.1s,mb5.2
PMR Palmer 83.26 25 *eP* **P 07 22 44.8 -0.8**
PMR pmax pmax
comp=Z,31nm,1.1s,mb5.2
RES Resolute Bay 83.30 2 *eP* **P 07 22 45.6 -0.1**
comp=Z,433nm,1.1s
RES Resolute Bay 83.30 2 *eP* **P 07 22 45.6 0.0**
RES pmax pmax
comp=Z,433nm,1.1s
INK Inuvik 83.82 16 *eP* **P 07 22 48.0 -0.3**
comp=Z,1μm,1.0s
INK Inuvik 83.82 16 *eP* **P 07 22 48.0 -0.3**
INK pmax pmax
comp=Z,1μm,1.0s
EGAK Eagle 84.13 20 *eP* **P 07 22 49.9 -0.1**
EVO Evora 84.18 309 *eP* **P 07 22 52.2 +1.4**
comp=Z,22nm,1.1s,mb4.9
EVO *e*MLR MLR
comp=Z,509nm,21.5s,MS4.6
DAWY Dawson 85.18 20 *eP* **P 07 22 55.7 +0.4**
TOA0 Torodi Ar. Sit 85.75 282 *eP* **P 07 23 00.8 +1.7**
TORD Torodi Ar. Bea 85.75 282 P **P 07 22 59.5 +0.4**
comp=Z,4.1nm,0.8s,mb4.7,baz=68,slow=3.0,SNR=24
TORD LR LR 08 04 27.3
comp=Z,302nm,21.1s,MS4.7,baz=80,slow=38
TORD Torodi Ar. Bea 85.75 282 P **P 07 22 59.5 +0.4**
TORD LR LR 08 04 27.3
HYT Haines Junctio 88.07 22 *eP* **P 07 23 10.4 +0.9**
HYT *e*pP pP 07 23 18.9 -0.7
SKAG Skagway 89.81 22 *eP* **P 07 23 18.8 +1.1**
SKAG *e*pP pP 07 23 28.8 +1.0
MAW Mawson 92.10 191 LR LR 08 01 23.9
comp=Z,391nm,20.8s,MS4.8,baz=163,slow=33
DLBC Dease Lake 92.39 21 *eP* **P 07 23 32.7 +3.0**
YKW3 Yellowknife Ar 92.92 12 *eP* **P 07 23 33.8 +1.8**
YKA Yellowknife Ar 92.98 12 P **P 07 23 31.8 -0.5**
comp=Z,9.3nm,1.1s,mb5.1,baz=331,slow=4.7,SNR=9.4
YKA PP PP 07 27 11.5 -2.9
comp=Z,1.9nm,0.9s,baz=336,slow=7.0,SNR=4.1
YKA LR LR 08 09 45.1
comp=Z,176nm,20.9s,MS4.5,baz=115,slow=38
YKA Yellowknife Ar 92.98 12 P **P 07 23 31.8 -0.5**
YKA PP PP 07 27 11.5 -2.9
YKA LR LR 08 09 45.1
YKA Yellowknife Ar 92.98 12 P **P 07 23 31.8 -0.5**
YKA 07 27 11.5
DBIC Dimbokro 94.16 279 P **P 07 23 40.3 +1.6**
comp=Z,3.7nm,0.9s,mb4.8,baz=57,slow=7.8,SNR=3.8
DBIC LR LR 08 11 57.8
comp=Z,302nm,19.2s,MS4.8,baz=49,slow=39
DRV Dumont d'Urvil 95.43 163 S S 07 35 04.0 +7.1
DRV SS SS 07 41 55.0 +29
DRV R 07 56 00.0
PDAR Pinedale Array 112.34 17 PKiKP PKiKP 07 28 54.8 -0.5
comp=Z,0.8nm,0.7s,baz=61,slow=0.8,SNR=7.0
PDAR PP PP 07 29 40.8 +1.2
comp=Z,0.8nm,1.0s,baz=5.7,slow=4.5,SNR=4.4
NVAR Mina Array Bea 113.24 26 PKiKP PKiKP 07 28 58.0 +0.8
comp=Z,0.8nm,0.7s,baz=106,slow=0.6,SNR=6.7
NVAR PP PP 07 29 42.6 -3.6
comp=Z,0.9nm,0.9s,baz=304,slow=2.7,SNR=4.4
MSU Marysvale 115.43 21 *e*PKPdf PKPdf 07 29 02.2 +0.8
BNM Barren Site 121.19 18 *e*PKPdf PKPdf 07 29 13.1 +0.6
JCT Junction City 126.40 13 *e*PKPdf PKPdf 07 29 23.3 +0.6
TXAR Lajitas Array 126.56 17 PKP PKPdf 07 29 23.1 +0.1
comp=Z,2.0nm,0.8s,baz=203,slow=1.0,SNR=22
PMSA Palmer Station 134.63 194 *e*PKPdf PKPdf 07 29 32.2 -4.8
ROSC El Rosal 150.19 333 PKPbc PKPbc 07 30 12.2 +1.1
comp=Z,17nm,0.7s,baz=108,slow=2.8,SNR=14
ROSC El Rosal 150.19 333 *e*PKPbc PKPbc 07 30 11.8 +0.7
OTAV Otavalo 156.03 337 *e*PKPdf PKPdf 07 30 12.6 -1.9
LPAZ La Paz 160.69 284 PKP PKPdf 07 30 20.7 +0.7
comp=Z,1.1nm,0.8s,baz=207,slow=2.3,SNR=4.7

NEIC ***07*** *07:24:11.5±1.5, 650S×129°78E, h10km, Error ellipse: s-maj=39.3km s-min=11.4km az=50.0*

IDC 07 07:24:23.6±8.5, 703S×129°38E, h122km±86km, mb3.7/1, mb1 3.7/3, mb1mx3.5/14, mbtmp3.6/3, ML4.0/2, Error ellipse: s-maj=148.8km s-min=43.1km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 12nm,0.8s	**6.40**	**152**	*e*Pn	Px	07 25 47.6	
KAPI	**Kappang**	**9.78**	**281**	Pn	Pn	07 26 36.2	-5.0
WRAB	**Tennant Creek** 3.1nm,0.9s	**13.71**	**160**	*e*Pn	Pn	07 27 31.6	-1.5
WRAB				*e*Sn	Sn	07 29 55.0	-9.3
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=342,slow=12,SNR=22	**13.71**	**160**	P	Pn	07 27 31.4	-1.6
WRA				S	Sn	07 29 56.1	-8.3
WB2	**Warramunga Arr** 1.2nm,0.3s,baz=337,slow=22,SNR=9.1	**13.72**	**160**	*e*Pn	Pn	07 27 31.8	-1.3
WB2				*e*Sn	Sn	07 29 55.1	-9.4
ASAR	**Alice Springs** 0.7nm,0.3s,baz=346,slow=11,SNR=49	**17.11**	**166**	P	Pn	07 28 16.7	+1.3
ASAR				S	Sn	07 31 18.9	-7.2
MKAR	**Makanchi Array** 1.1nm,0.5s,baz=117,slow=8.1,SNR=14	**67.91**	**327**	P	P	07 35 09.3	+0.2
MKAR	**Makanchi Array**	**67.91**	**327**	P	P	07 35 09.3	+0.2
TORD	**Torodi Ar. Bea** 0.4nm,0.9s,baz=114,slow=3.5,SNR=2.1	**128.21**	**281**	PKP	PKPdf	07 43 16.3	-0.4

ISCJB ***07*** *07:45:36.5±1.5, 483N±0.1×153.1E±0.2, h164km±13km, mb3.8/14, Error ellipse: s-maj=20.5km s-min=15.7km az=155.9*

MOS ***07*** *07:45:36.8±0.9, 4832N×153.13E, h170km, mb4.0/11, Error ellipse: s-maj=23.2km s-min=16.1km az=98.9*

IDC ***07*** *07:45:37.7±3.1, 4828N×15308E, h161km±28km, mb3.5/15, mb1 3.7/15, mb1mx3.6/22, mbtmp3.5/15, Error ellipse: s-maj=16.6km s-min=14.2km az=148.0*

NEIC ***07*** *07:45:37.4±1.7, 4827N×15306E, h158km±15km, mb4.5/1, Error ellipse: s-maj=14.9km s-min=11.6km az=180.0*

ISC 07 07:45:37.5±1.5, 483N±0.1×1531E±0.1, h156km±13km, n32, σ0.5 60/32, mb3.8/14, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.11**	**39**	*e*Pn	**Pn**	**07 46 26.0**	**-0.3**
SKR				*e*		07 47 01.2	
PETK	**Petropavlovsk-** 0.2nm,0.3s,baz=186,slow=9.7,SNR=4.0	**5.65**	**30**	P	**Pn**	**07 46 59.6**	**+0.3**
KSRS	**Korea Array** 3.4nm,0.7s,mb3.8,baz=49,slow=10,SNR=9.7	**21.28**	**249**	P	**P**	**07 50 11.9**	**+0.5**
KSRS	**Korea Array**	**21.28**	**249**	P	**P**	**07 50 11.9**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.7						
ZALV	**Zalesovo Beam**	**41.69**	**304**	P	**P**	**07 53 09.8**	**-0.5**
	comp=Z,1.5nm,0.4s,mb4.0,baz=57,slow=8.4,SNR=5.3						
ZALV	**Zalesovo Beam**	**41.69**	**304**	P	**P**	**07 53 09.9**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
MKAR	**Makanchi Array**	**46.21**	**296**	P	**P**	**07 53 45.9**	**-0.5**
	comp=Z,2.4nm,0.7s,mb3.9,baz=68,slow=8.1,SNR=13						
MKAR	**Makanchi Array**	**46.21**	**296**	P	**P**	**07 53 45.9**	**-0.5**
MKAR	**Makanchi Array**	**46.21**	**296**	P	**P**	**07 53 45.9**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov** baz=65,slow=8.0	**46.49**	**302**	P	**P**	**07 53 49.1**	**+0.6**
BVAR	**Borovoye Array**	**49.86**	**308**	P	**P**	**07 54 14.4**	**+0.1**
	comp=Z,4.3nm,0.4s,mb4.4,baz=57,slow=7.4,SNR=22						
BVAR	**Borovoye Array**	**49.86**	**308**	P	**P**	**07 54 14.4**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BRVK	**Borovoye**	**49.90**	**308**	*e*P	**P**	**07 54 14.0**	**-0.6**
	comp=Z,6.1nm,0.6s,mb4.4						
BRVK	**Borovoye**	**49.90**	**308**	*e*P	**P**	**07 54 14.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
CMAR	**Chiang Mai Arr**	**52.72**	**255**	P	**P**	**07 54 37.1**	**+1.1**
	comp=Z,0.8nm,0.3s,mb3.9,baz=32,slow=7.6,SNR=5.4						
CMAR	**Chiang Mai Arr**	**52.72**	**255**	P	**P**	**07 54 37.1**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**56.38**	**340**	P	**P**	**07 55 00.9**	**-0.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=22,slow=6.9,SNR=7.1						
ARCES	**ARCESS Array B**	**56.38**	**340**	P	**P**	**07 55 00.9**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**61.76**	**63**	P	**P**	**07 55 39.8**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.4,baz=294,slow=6.8,SNR=3.7						
PDAR	**Pinedale Array**	**63.87**	**54**	P	**P**	**07 55 53.5**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=282,slow=2.9,SNR=4.6						
NOA	**NORSAR Array B**	**66.75**	**341**	P	**P**	**07 56 11.9**	**+0.7**
	comp=Z,1.0nm,0.5s,mb3.9,baz=28,slow=6.6,SNR=5.9						
NOA	**NORSAR Array B**	**66.75**	**341**	P	**P**	**07 56 12.0**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**69.96**	**199**	P	**P**	**07 56 30.4**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=16,slow=6.0,SNR=3.4						
AKASG	**Malin Array Be**	**70.25**	**326**	P	**P**	**07 56 32.2**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.8,baz=36,slow=6.1,SNR=3.6						
AKASG	**Malin Array Be**	**70.25**	**326**	P	**P**	**07 56 32.2**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**73.66**	**198**	P	**P**	**07 56 53.6**	**0.0**
	comp=Z,0.2nm,0.8s,baz=3.0,slow=5.8,SNR=3.1						
CLL	**Collm**	**75.04**	**335**	*i P*	**P**	**07 57 01.7**	**+0.3**
TXAR	**Lajitas Array**	**76.77**	**61**	P	**P**	**07 57 11.3**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=298,slow=3.4,SNR=6.3						
GERES	**GERESS Array B**	**77.05**	**334**	P	**P**	**07 57 13.2**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.6,baz=64,slow=3.1,SNR=4.2						
GERES	**GERESS Array B**	**77.05**	**334**	P	**P**	**07 57 13.2**	**+0.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**77.24**	**316**	P	**P**	**07 57 14.4**	**+0.3**
	comp=Z,2.0nm,1.0s,mb3.7,baz=52,slow=4.8,SNR=3.8						
BRTR	**Keskin Array B**	**77.24**	**316**	P	**P**	**07 57 14.4**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						

ISCJB ***07*** *07:50:26.4±1.6, 215N±0.1×1430E±0.2, h299km±15km, mb3.4/9, Error ellipse: s-maj=34.0km s-min=16.3km az=172.2*

IDC ***07*** *07:50:26.9±1.8, 2155N×143.05E, h290km±17km, mb3.2/10, mb1 3.4/11, mb1mx3.3/22, mbtmp3.3/11, Error ellipse: s-maj=26.4km s-min=11.8km az=81.0*

ISC 07 07:50:27.2±1.6, 215N±0.1×1430E±0.2, h292km±15km, n12, σ0.5 57/13, mb3.4/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.58**	**352**	P	**Pn**	**07 51 52.0**	**+0.9**
CBIJ				S	**S**	**07 52 58.2**	**-0.5**
	18nm,0.3s,baz=268,slow=19,SNR=9.4						
	8.0nm,0.3s,baz=310,slow=19,SNR=3.7						
KSRS	**Korea Array** 1.3nm,0.5s,baz=144,slow=9.0,SNR=7.0	**20.54**	**324**	P	**P**	**07 54 43.5**	**-0.7**
WRA	**Warramunga Arr** 0.7nm,0.3s,mb3.3,baz=12,slow=8.1,SNR=30	**42.09**	**192**	P	**P**	**07 57 51.4**	**+0.2**
ASAR	**Alice Springs** 0.3nm,0.6s,mb2.8,baz=19,slow=11,SNR=6.8	**45.80**	**192**	P	**P**	**07 58 20.3**	**-0.2**
STKA	**Stephens Creek** 0.9nm,0.4s,mb3.5,baz=358,slow=19,SNR=3.7	**53.13**	**182**	P	**P**	**07 59 14.8**	**-0.6**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,mb3.2,baz=121,slow=5.6,SNR=2.6	**54.23**	**322**	P	**P**	**07 59 22.5**	**-0.6**
MKAR	**Makanchi Array** 0.3nm,0.5s,mb3.0,baz=77,slow=8.1,SNR=4.2	**54.69**	**313**	P	**P**	**07 59 27.2**	**+0.7**
KURK	**Kurchatov** baz=91,slow=7.5	**57.48**	**317**	P	**P**	**07 59 46.7**	**+0.6**
BVAR	**Borovoye Array** 2.2nm,0.3s,mb4.2,baz=96,slow=7.8,SNR=10.0	**62.69**	**320**	P	**P**	**08 00 21.5**	**+0.3**
YKA	**Yellowknife Ar** 0.7nm,0.5s,mb3.7,baz=294,slow=6.1,SNR=4.8	**76.67**	**28**	P	**P**	**08 01 45.1**	**-0.7**
ARCES	**ARCESS Array B** 0.8nm,0.4s,mb3.8,baz=76,slow=8.5,SNR=11	**79.02**	**341**	P	**P**	**08 01 58.6**	**-0.1**
NVAR	**Mina Array Bea** 0.4nm,0.7s,mb3.4,baz=298,slow=2.9,SNR=3.0	**83.37**	**51**	P	**P**	**08 02 22.7**	**+0.7**

MAN 07 07:55:52.971N×12449E, h20km, mb4.2, ML3.0, MS2.8, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.56**	**41**	*e*P	Pb	07 56 03.6	+0.5
MSLP				*e*S	Sb	07 56 12.1	+1.5
TBP	**Tagbilaran**	**0.62**	**268**	⇓*e*P	Pb	07 56 05.3	+1.3
TBP				*e*S	Sb	07 56 13.5	+1.2
LLP	**Lapu-Lapu**	**0.79**	**320**	⇑*i*P	Pb	07 56 07.6	+0.6
LLP				*i* S	Sb	07 56 19.0	+1.7
SCPH	**Surigao**	**0.99**	**86**	⇑*e*P	Pb	07 56 08.5	-1.9
SCPH				*e*S	Sb	07 56 20.9	-2.2
CGP	**Cagayan de Oro**	**1.27**	**171**	⇑*i*P	Pn	07 56 14.0	-0.6
CGP				*i* S	Sn	07 56 32.0	+1.0
SNPH	**Sibulan**	**1.29**	**253**	*e*P	Pn	07 56 15.5	+0.7
OCLP	**Ormoc**	**1.33**	**5**	*e*P	Pn	07 56 16.3	+0.8
OCLP				*e*S	Sn	07 56 36.4	+3.7
PLP	**Palo**	**1.52**	**19**	⇓*e*P	Pn	07 56 17.7	-0.4
PLP				*e*S	Sn	07 56 39.5	+2.2
BUKP	**Musuan**	**1.91**	**163**	*e*P	Pn	07 56 25.5	+2.1
BUKP				*e*S	Sn	07 56 52.3	+5.4
PAGZ	**Pagadian**	**2.15**	**211**	*e*P	Pn	07 56 28.0	+1.2
PAGZ				*e*S	Sn	07 56 52.7	-0.2
RCP	**Roxas**	**2.51**	**317**	⇓*e*P	Pn	07 56 32.9	+1.2
RCP				*i* S	Sn	07 57 03.4	+1.7

CSEM ***07*** *08:05:01.1±0.1, 3809N×3860E, h2km, MD2.6, Error ellipse: s-maj=3.9km s-min=2.3km az=130.0*

ISK ***07*** *08:05:01.9, 3809N×3860E, h8km, MD2.6*

DDA 07 08:05:02.2, 3809N×3850E, h7km±1km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.50**	**295**	*i* P	Pg	08 05 12.3	+0.4
AKCD				*i* S	Sg	08 05 19.7	+1.2
URFA	**Urfa**	**0.69**	**159**	*e*PG	Pg	08 05 15.2	-0.3
URFA				*e*SG	Sg	08 05 25.3	+0.8
SVRC	**Sivrice-ELAZID**	**0.69**	**65**	*e*PG	Pg	08 05 14.5	-1.1
GZT	**Gaziantep**	**1.04**	**226**	*i* P	Pg	08 05 23.4	+1.1
GZT				*i* S	Sg	08 05 37.2	+1.4
PTK	**Pertek**	**1.06**	**41**	*e*PG	Pg	08 05 21.7	-0.9
GAZ	**Gaziantep**	**1.37**	**229**	*e*PN	Pn	08 05 29.0	+1.3
GAZ				*e*SN	Sn	08 05 48.5	+2.4
KMRS	**Kahramanmaras**	**1.40**	**246**	*e*PN	Pn	08 05 29.7	+1.7
SARI	**SarD1z-Kayseri**	**1.54**	**293**	*e*PN	Pn	08 05 33.1	+3.1
MARD	**Mardin**	**1.96**	**112**	*i* P	Pn	08 05 36.4	+0.5

IDC 07 08:13:40.5±3.5, 599S×15057E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.4/14, mbtmp3.4/2, Error ellipse: s-maj=137.5km s-min=45.5km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=53,slow=11,SNR=8.7	**21.01**	**227**	P	P	08 18 26.2	+0.5
ASAR	**Alice Springs** 0.7nm,0.6s,baz=55,slow=9.1,SNR=11	**23.80**	**221**	P	P	08 18 54.8	-0.4
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=87,slow=2.4,SNR=2.3	**148.52**	**285**	PKPbc	PKPbc	08 33 29.8	-0.5

ISCJB ***07*** *08:22:30.8±0.7, 2740N±0.04×112.15W±0.06, h10km, Error ellipse: s-maj=7.4km s-min=4.8km az=17.5*

IDC ***07*** *08:22:41.4±2.0, 2792N×111.96W, h0km, mb1 3.8/6, mb1mx3.7/24, mbtmp3.5/6, ML3.3/6, Error ellipse: s-maj=25.6km s-min=14.7km az=33.0*

ISC 07 08:22:33.7±0.7, 2753N±0.04×11209W±0.06, h0km, n48, σ1.9 09/66, 36C-24D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz** 1.4nm,0.3s,baz=343,slow=17,SNR=3.5	**3.77**	**154**	Pn	**Pn**	**08 23 44.6**	**+12**
318A	**Bisbee** baz=4.1,SNR=15	**4.31**	**25**	⇓P	**Pn**	**08 23 39.3**	**-1.2**
318A				⇓Sb	**Sb**	**08 24 41.7**	**-1.2**
217A	**Green Valley** baz=4.1,SNR=7.1	**4.38**	**14**	⇓P	**Pn**	**08 23 40.1**	**-1.3**
217A				⇓Sb	**Sb**	**08 24 42.5**	**-2.4**
214A	**Organ Pipe Nat** baz=4.2,SNR=30	**4.46**	**352**	⇑P	**Pn**	**08 23 41.1**	**-1.5**
214A				⇓Sb	**Sb**	**08 24 44.7**	**-2.5**
216A	**Three Points,** baz=4.2,SNR=11	**4.50**	**7**	⇓P	**Pn**	**08 23 41.9**	**-1.1**
216A				⇑Sb	**Sb**	**08 24 45.8**	**-2.4**
319A	**Douglas** baz=4.3	**4.55**	**32**	⇑P	**Pn**	**08 23 43.2**	**-0.7**
319A				⇓Sb	**Sb**	**08 24 50.8**	**+0.9**
218A	**Dragoon** baz=4.5,SNR=10	**4.78**	**21**	⇓P	**Pn**	**08 23 45.9**	**-1.0**
218A				⇓Sb	**Sb**	**08 24 55.5**	**-0.8**
116A	**Eloy** baz=4.8,SNR=33	**5.03**	**4**	⇓P	**Pn**	**08 23 49.3**	**-1.1**
116A				⇑Sb	**Sb**	**08 25 02.7**	**-0.9**
219A	**White Tail Can** baz=4.9,SNR=6.1	**5.09**	**28**	⇑P	**Pn**	**08 23 50.5**	**-0.7**
219A				⇑Sb	**Sb**	**08 25 05.4**	**0.0**
115A	**Sonoran Desert** baz=4.9,SNR=43	**5.16**	**359**	⇑P	**Pn**	**08 23 51.4**	**-0.7**
115A				⇑Sb	**Sb**	**08 25 06.7**	**-0.7**
117A	**Oracle** baz=4.9,SNR=33	**5.16**	**13**	⇑P	**Pn**	**08 23 51.3**	**-0.9**
117A				⇓Sb	**Sb**	**08 25 07.1**	**-0.4**
118A	**Homack Ranch,** baz=5.2,SNR=17	**5.42**	**19**	⇑P	**Pn**	**08 23 54.6**	**-1.1**
118A				⇓Sb	**Sb**	**08 25 14.4**	**-0.4**
113A	**Mohawk Valley,** baz=5.2,SNR=12	**5.42**	**345**	⇑P	**Pn**	**08 23 54.8**	**-0.9**
113A				⇑Sb	**Sb**	**08 25 15.0**	**+0.1**
Z15A	**Gila River Ind** baz=5.5	**5.75**	**359**	⇑Sb	**Sb**	**08 25 23.2**	**-1.0**
119A	**Ashpeak Ranch,** baz=5.5	**5.75**	**24**	⇑P	**Pn**	**08 23 59.5**	**-0.8**
119A				⇑Sb	**Sb**	**08 25 25.3**	**+0.8**
Z18A	**Geronimo** baz=5.6	**5.82**	**17**	⇑Sb	**Sb**	**08 25 27.0**	**+0.7**
Z16A	**Peralta Trail,** baz=5.6	**5.83**	**6**

Z17A	**San Carlos Hig**	**5.92**	**13**	⇓Sb		**Sb**	**08 25 31.0**	**+1.8**
	baz=5.7								
GLA	**Glamis**	**5.99**	**337**	⇑P		**Pn**	**08 24 02.8**	**-0.8**
	baz=5.8,SNR=7.3								
Y17A	**Roosevelt**	**6.24**	**10**	⇑P		**Pn**	**08 24 06.4**	**-0.6**
	baz=6.0,SNR=7.5								
Y17A				⇓Sb		**Sb**	**08 25 40.2**	**+1.7**
	baz=6.0								
Z19A	**T-Link Ranch,**	**6.24**	**22**	⇓Sb		**Sb**	**08 25 41.5**	**+3.0**
	baz=6.0								
Y16A	**Circle Bar Ran**	**6.36**	**5**	⇑Sb		**Sb**	**08 25 42.8**	**+1.1**
	baz=6.1								
Y15A	**Casa Rosa Ranc**	**6.41**	**358**	⇑P		**Pn**	**08 24 08.8**	**-0.6**
	baz=6.2,SNR=8.1								
Y15A				⇑Sb		**Sb**	**08 25 44.2**	**+0.8**
	baz=6.2								
Y14A	**Wickenburg**	**6.44**	**353**	⇓P		**Pn**	**08 24 09.6**	**-0.2**
	baz=6.2,SNR=13								
Y14A				⇑Sb		**Sb**	**08 25 44.7**	**+0.5**
	baz=6.2								
Y13A	**Salome**	**6.44**	**347**	⇓P		**Pn**	**08 24 09.5**	**-0.3**
	baz=6.2,SNR=6.5								
Y13A				⇓Sb		**Sb**	**08 25 44.8**	**+0.6**
	baz=6.2								
Y18A	**Canyon Day Jun**	**6.48**	**15**	⇓Sb		**Sb**	**08 25 46.5**	**+1.2**
	baz=6.2								
Y19A	**Nutrioso**	**6.86**	**20**	⇑P		**Pn**	**08 24 15.9**	**+0.4**
	baz=6.6,SNR=7.7								
X17A	**Forest Lakes**	**6.88**	**9**	⇑P		**Pn**	**08 24 16.2**	**+0.5**
	baz=6.6								
X16A	**Lo Mia Camp, P**	**6.89**	**4**	⇑P		**Pn**	**08 24 16.2**	**+0.2**
	baz=6.6								
X15A	**Humboldt**	**6.94**	**359**	⇑P		**Pn**	**08 24 17.1**	**+0.5**
	baz=6.7,SNR=18								
X14A	**Yava**	**6.96**	**355**	⇓P		**Pn**	**08 24 17.3**	**+0.5**
	baz=6.7,SNR=18								
X13A	**Yucca**	**7.20**	**348**	⇑P		**Pn**	**08 24 20.2**	**0.0**
	baz=7.0,SNR=5.5								
TXAR	**Lajitas Array**	**7.63**	**74**	Pn		**Pn**	**08 24 31.9**	**+5.7**
	0.7nm,0.3s,baz=254,slow=14,SNR=26								
TXAR				Lg			08 26 34.6		
	0.3nm,0.3s,baz=251,slow=16,SNR=3.6								
W14A	**Seligman**	**7.71**	**354**	⇓P		**Pn**	**08 24 28.4**	**+1.2**
	baz=7.5,SNR=12								
V14A	**Boquillas Ranc**	**8.13**	**354**	⇑P		**Pn**	**08 24 34.3**	**+1.4**
	baz=7.9,SNR=22								
V15A	**Kaibab Nationa**	**8.27**	**360**	⇑P		**Pn**	**08 24 36.0**	**+1.1**
	baz=8.0,SNR=22								
V18A	**Ganado**	**8.37**	**12**	⇓P		**Pn**	**08 24 37.5**	**+1.3**
	baz=8.1								
ANMO	**Albuquerque**	**8.83**	**32**	Pn		**Pn**	**08 24 45.9**	**+3.3**
	0.1nm,0.3s,baz=221,slow=11,SNR=5.2								
ANMO				Lg			08 27 06.7		
	0.3nm,0.3s,baz=313,slow=18,SNR=5.6								
U15A	**North Rim**	**8.88**	**359**	⇑P		**Pn**	**08 24 44.6**	**+1.4**
	baz=8.6,SNR=30								
U14A	**Mt Trumbull**	**8.91**	**354**	⇑P		**Pn**	**08 24 45.2**	**+1.5**
	baz=8.7,SNR=26								
T14A	**Hurricane**	**9.54**	**355**	⇑P		**Pn**	**08 24 54.2**	**+1.9**
	baz=9.3,SNR=8.7								
S13A	**Holt Ranch, En**	**10.14**	**352**	⇓P		**Pn**	**08 25 02.0**	**+1.6**
	baz=9.9								
NVAR	**Mina Array Bea**	**12.05**	**336**	Pn		**Pn**	**08 25 32.1**	**+5.4**
	0.1nm,0.3s,baz=153,slow=13,SNR=6.2								
P18A	**Preston Nutter**	**12.17**	**7**	⇑P		**Pn**	**08 25 28.8**	**+0.5**
	baz=12								
ELK	**Elko**	**13.44**	**350**	Pn		**Pn**	**08 25 49.6**	**+4.0**
	0.1nm,0.3s,baz=168,slow=14,SNR=7.7								
N12A	**Clover Valley,**	**13.51**	**350**	⇑P		**Pn**	**08 25 47.4**	**+0.8**
	baz=13								
PDAR	**Pinedale Array**	**15.35**	**7**	Pn		**Pn**	**08 26 20.0**	**+8.5**
	0.0nm,0.3s,baz=175,slow=12,SNR=8.6								
PDAR				Lg			08 30 33.5		
	0.0nm,0.3s,baz=194,slow=18,SNR=3.0								

*IDC **07** 08:29:31.4±7.9, 3643N×7138E, h82km±72km, mb3.6/4, mb1 3.6/7, mb1mx3.4/23, mbtmp3.5/7, ML3.4/2, Error ellipse: s-maj=63.2km s-min=38.6km az=143.0*
*ISCJB **07** 08:29:33.0±0.6, 3665N×7135E×006, h109km±9km, mb3.8/3, Error ellipse: s-maj=8.3km s-min=5.1km az=165.6*
*NNC **07** 08:29:33.7±21.0, 3685N×7020E, h68km±572km, mb3.7, mpv3.7, Error ellipse: s-maj=200.8km s-min=142.2km az=54.0*
*NEIC **07** 08:29:33.6±0.8, 3661N×7142E, h95km±11km, mb4.4/2, Error ellipse: s-maj=9.8km s-min=6.1km az=63.0*

ISC 07 08:29:34.5±0.5, 3663N±003×7136E±007, h110km±9km, n30, σ1§18/38, mb3.8/3, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
KBL	**Kabul**	**2.82**	**223**	*e*Pn		**Pn**	**08 30 17.5**	**-0.6**
KBL				*e*Sn		**Sn**	**08 30 48.4**	**-3.3**
CEP	**Cherat**	**2.84**	**171**	P		**Pn**	**08 30 20.4**	**+2.0**
CEP				S		**Sn**	**08 30 57.0**	**+4.8**
CHCP	**Chirah Chowk**	**3.35**	**152**	P		**Pn**	**08 30 28.5**	**+3.3**
THW	**Thamme Wali**	**3.84**	**175**	P		**Pn**	**08 30 32.8**	**+1.0**
THN	**Thein Dam**	**5.52**	**138**	*e*P		**Pn**	**08 30 55.2**	**+0.8**
THN				*e*S		**Sn**	**08 31 57.5**	**+0.9**
AML	**Almayashu**	**5.78**	**17**	*e*Pn		**Pn**	**08 30 54.9**	**-2.9**
	22nm,0.3s							
AML				*e*Sn		**Sn**	**08 32 03.9**	**+1.2**
EKS2	**Erkin-Say**	**6.30**	**16**	*e*Pn		**Pn**	**08 31 05.1**	**+0.2**
	4.3nm,0.5s							
EKS2				*e*Sn		**Sn**	**08 32 15.6**	**+0.2**
KK31	**Karatay Array**	**6.50**	**354**	⇑P		**Pn**	**08 31 05.3**	**-2.2**
	2.5nm,0.3s,baz=174,slow=12,SNR=8.6							
KK31				⇑S		**Sn**	**08 32 14.4**	**-5.7**
	8.9nm,0.5s,baz=187,slow=24,SNR=5.0							
TKM2	**Tokmak 2**	**7.07**	**26**	⇑P		**Pn**	**08 31 15.8**	**+0.5**
	2.6nm,0.6s							
TKM2	**Tokmak 2**	**7.07**	**26**	*e*Pn		**Pn**	**08 31 15.9**	**+0.6**
	3.5nm,0.4s							
SMLA	**Simla**	**7.31**	**137**	*i* P		**Pn**	**08 31 19.2**	**+0.6**
SMLA				*i* S		**Sn**	**08 32 38.0**	**-2.0**
SMLA				*ex*		x	08 32 40.7	
	comp=E,81nm,0.0s							
SMLA				*i* S		**Sn**	**08 32 41.9**	**+1.9**
SMLA				*ex*		x	08 32 46.1	
PYUN	**Piuthan**	**12.99**	**128**	*e*P		**Pn**	**08 32 33.9**	**-1.0**
	comp=E,11nm,0.3s							
MKAR	**Makanchi Array**	**13.01**	**35**	P		**Pn**	**08 32 35.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=225,slow=15,SNR=4.1							
DANN	**Dangsing**	**13.32**	**125**	*e*P		**Pn**	**08 32 38.6**	**-0.6**
	comp=E,11nm,0.3s							
KOLN	**Koldanda**	**13.61**	**127**	*e*P		**Pn**	**08 32 43.2**	**+0.2**
	comp=E,6.2nm,0.3s							
GKN	**Gorkha**	**14.13**	**124**	*e*P		**Pn**	**08 32 49.5**	**-0.2**
	comp=E,18nm,0.4s							
KKN	**Kakani**	**14.70**	**123**	*e*P		**Pn**	**08 32 55.7**	**-1.3**
KURK	**Kurchatov**	**15.01**	**18**	P		**Pn**	**08 33 01.0**	**+0.3**
	baz=208,slow=10							
AB01	**Akbulak array**	**15.11**	**330**	⇓P		**Pn**	**08 32 57.1**	**-4.8**
	comp=E,1.3nm,0.5s							
AB01				⇓S		Sx	08 35 30.8	
	comp=E,1.1nm,0.5s							
JIRN	**Jiri**	**15.40**	**121**	*e*P		**Pn**	**08 33 04.8**	**-1.0**
	comp=E,13nm,0.4s							
RAMN	**Ramite**	**16.14**	**122**	*e*P		**Pn**	**08 33 13.7**	**-1.2**
TAPN	**Taplejung**	**16.65**	**119**	*e*P		**Pn**	**08 33 20.0**	**-1.3**
	comp=E,8.5nm,0.4s							
AKTK	**Aktyubinsk**	**16.81**	**329**	P		**Pn**	**08 33 22.1**	**-0.9**
AKTO	**Aktyubinsk**	**16.81**	**329**	P		**Pn**	**08 33 22.1**	**-0.9**
	comp=E,0.4nm,0.3s,baz=125,slow=9.2,SNR=8.1							
ZALV	**Zalesovo Beam**	**19.67**	**24**	P		**P**	**08 33 55.7**	**+1.1**
	comp=E,0.5nm,0.3s,baz=220,slow=11,SNR=6.0							
ZALV	**Zalesovo Beam**	**19.67**	**24**	P		**P**	**08 33 55.7**	**+1.1**
BRTR	**Keskin Array B**	**29.67**	**288**	P		**P**	**08 35 31.4**	**+1.7**
	comp=E,0.8nm,0.6s,baz=102,slow=9.0,SNR=4.2							
ARCES	**ARCESS Array B**	**41.13**	**337**	P		**P**	**08 37 08.7**	**+1.5**
	comp=E,1.8nm,0.8s,mb4.0,baz=117,slow=8.9,SNR=6.1							
NOA	**NORSAR Array B**	**44.45**	**323**	P		**P**	**08 37 34.9**	**+0.8**
	comp=E,1.4nm,0.8s,mb3.8,baz=98,slow=7.8,SNR=2.6							
TORD	**Torodi Ar. Bea**	**66.01**	**269**	P		**P**	**08 40 09.3**	**-0.2**
	comp=E,0.5nm,0.4s,mb3.7,baz=49,slow=5.9,SNR=13							

*ISCJB **07** 08:36:37.0±0.9, 2984N±003×3623E±005, h0km, Error ellipse: s-maj=6.2km s-min=4.1km az=4.2*
*SGS **07** 08:36:37.6, 2998N×3626E, h6km*
*GII **07** 08:36:37.6±0.8, 2989N×3613E, h0km, ML2.7/4, EXPLOSION*

ISC 07 08:36:37.0±0.9, 2983N±003×3628E±005, h0km, n20, σ0§78/29, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.07**	**265**	Pg		**Pg**	**08 36 57.8**	**+0.1**
HRFI	**Mount Harif**	**1.10**	**281**	Pg		**Pg**	**08 36 57.4**	**-0.7**
HRFI				Sg		**Sg**	**08 37 12.1**	**-0.2**
EIL	**Elat**	**1.17**	**262**	Pg		**Pg**	**08 36 59.1**	**-0.3**
EIL				Sg		**Sg**	**08 37 15.5**	**+1.0**
HQLS		**1.19**	**244**	S		**Sg**	**08 37 16.0**	**+0.8**
HQLS		**1.19**	**244**	P		**Pg**	**08 36 59.3**	**-0.5**
MBRI	**Mt Berech**	**1.19**	**268**	Pg		**Pg**	**08 36 59.4**	**-0.4**
MBRI				Sg		**Sg**	**08 37 16.0**	**+0.8**
ZFRI	**Zfri**	**1.19**	**307**	Pg		**Pg**	**08 36 59.0**	**-0.9**
ZFRI				Sg		**Sg**	**08 37 15.1**	**-0.3**
PRNI	**Paran**	**1.22**	**295**	Pg		**Pg**	**08 36 59.4**	**-1.0**
PRNI				Sg		**Sg**	**08 37 15.8**	**-0.4**
JLOS		**1.29**	**212**	S		**Sg**	**08 37 19.9**	**+1.3**
JLOS		**1.29**	**212**	P		**Pg**	**08 37 01.8**	**0.0**
KRMI	**Paran Flat**	**1.38**	**282**	Pg		**Pg**	**08 37 02.4**	**-1.1**
KRMI				Sg		**Sg**	**08 37 21.1**	**-0.3**
RMNI	**Mount Ramon**	**1.52**	**300**	Pn		**Pn**	**08 37 04.0**	**-1.4**
RMNI				Sn		**Sn**	**08 37 25.1**	**-0.8**
MZDA	**Masada**	**1.67**	**332**	Pn		**Pn**	**08 37 07.1**	**-0.4**
MZDA				Sn		**Sn**	**08 37 29.7**	**+0.1**
BDAS	**Al Bad'**	**1.74**	**217**	P		**Pn**	**08 37 08.3**	**-0.1**
YTIR	**Yattir**	**1.82**	**327**	Sn		**Sn**	**08 37 35.0**	**+1.6**
RTMI	**Retamim**	**1.83**	**312**	Sn		**Sn**	**08 37 34.4**	**+0.7**
DSI	**Dead Sea**	**1.90**	**336**	Pn		**Pn**	**08 37 11.1**	**+0.4**
DSI				Sn		**Sn**	**08 37 35.8**	**+0.6**
KZIT	**Kziot**	**1.95**	**304**	Sn		**Sn**	**08 37 36.6**	**+0.2**
RSHS		**2.01**	**221**	P		**Pn**	**08 37 11.7**	**-0.5**
HMDT	**Nahal Hemdat**	**2.50**	**345**	Sn		**Sn**	**08 37 51.9**	**+1.9**

IDC 07 08:36:59.6±1.6, 1573S×17345W, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.9/18, mbtmp3.9/6, ML2.3/1, Error ellipse: s-maj=124.9km s-min=19.3km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.42**	**42**	Pn		Pn	08 37 41.4	+0.9
	37nm,0.3s,baz=143,slow=2.0,SNR=39							
AFI				Sn		Sn	08 38 04.5	-6.3
	170nm,0.3s,baz=46,slow=23,SNR=29							
STKA	**Stephens Creek**	**43.84**	**240**	P		P	08 45 07.5	-0.2
	1.9nm,0.9s,baz=64,slow=23,SNR=4.3							
WRA	**Warramunga Arr**	**49.73**	**257**	P		P	08 45 53.9	-0.1
	0.8nm,0.5s,baz=92,slow=6.8,SNR=11							
ASAR	**Alice Springs**	**49.97**	**252**	P		P	08 45 56.1	+0.3
	2.4nm,0.6s,baz=92,slow=8.2,SNR=9.5							
NVAR	**Mina Array Bea**	**74.60**	**42**	P		P	08 48 40.6	0.0
	0.5nm,0.7s,baz=241,slow=8.0,SNR=5.5							
TXAR	**Lajitas Array**	**80.83**	**56**	P		P	08 49 15.7	+0.1
	0.2nm,0.6s,baz=214,slow=6.4,SNR=3.2							

*BGR **07** 09:07:43.0±0.4, 5021N×1867E, h1km, ML3.3, Error ellipse: s-maj=6.7km s-min=3.3km az=177.0*
*IDC **07** 09:07:43.6±2.8, 5010N×1869E, h0km, mb1 3.4/4, mb1mx3.2/21, mbtmp3.2/4, ML3.0/4, Error ellipse: s-maj=41.5km s-min=11.9km az=129.0*
*IPEC **07** 09:07:43.2±0.1, 5024N×1870E, h6km±1km, ML2.9/4, Error ellipse: s-maj=2.0km s-min=0.8km az=166.0*
*CSEM **07** 09:07:43.2±0.1, 5021N×1870E, h2km, ML3.6/6, Ms3.4, Error ellipse: s-maj=2.4km s-min=1.3km az=11.0*
*MOS **07** 09:07:43.5±1.5, 5026N×1869E, h12km, mb3.8/1, Error ellipse: s-maj=8.7km s-min=6.9km az=86.2*
*NEIC **07** 09:07:43.0, 5021N×1867E, h1km, ML3.3(SZGRF), ML2.9(BUC), After SZGRF.*
*PRU **07** 09:07:44.3, 5025N×1862E, h0km*
*VIE **07** 09:07:46.8±1.5, 4967N×1863E, h0km, mb2.5/3, ML2.8/3, Ms3.4/2, Error ellipse: s-maj=8.7km s-min=5.1km az=104.0, Suspected Mining induced.*

WAR 07 09:07:43.4, 5021N×1873E, ML3.1, 8C-7D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.36**	**250**	*e*Pg		Pg	09 07 51.5	+1.1
RAC				*e*Sg		Sg	09 07 57.1	+2.0
OKC	**Ostrava-Krasne**	**0.53**	**225**	*e*Pg		Pg	09 07 54.0	+0.5
OKC				*e*Sg		Sg	09 08 01.8	+1.5
OKC	**Ostrava-Krasne**	**0.53**	**225**	*e*P		P	09 07 53.9	+0.4
OKC				*e*			09 08 00.5	
OKC				smax				
	comp=N,253nm,0.6s							
OKC	**Ostrava-Krasne**	**0.53**	**225**	*e*Pg		Pg	09 07 53.8	+0.3
OKC				Sg		Sg	09 08 00.5	+0.2
	comp=N,252nm,0.6s							
OKC	**Ostrava-Krasne**	**0.53**	**225**	*e*PG		Pg	09 07 53.9	+0.4
OKC				*e*SG		Sg	09 08 00.5	+0.2
	comp=Z,252nm,0.6s							
OJC	**Ojcow**	**0.69**	**89**	*i* Pg		Pg	09 07 56.9	+0.3
OJC				*e*Sg		Sg	09 08 06.4	+0.9
OJC	**Ojcow**	**0.69**	**89**	*e*Pg		Pg	09 07 57.0	+0.4
OJC				*e*Sg		Sg	09 08 06.8	+1.3
OJC	**Ojcow**	**0.69**	**89**	*i* Pg		Pg	09 07 56.9	+0.3
OJC				*e*Sg		Sg	09 08 06.4	+0.9
OJC	**Ojcow**	**0.69**	**89**	*e*Pg		Pg	09 07 56.8	+0.2
OJC				*e*Sg		Sg	09 08 05.5	0.0
OJC				*e*S		Sg	09 08 06.4	+0.9
MORC	**Moravsky Berou**	**0.88**	**241**	*e*Pg		Pg	09 07 59.5	-0.7
MORC				*e*Sg		Sg	09 08 11.2	-0.4
MORC	**Moravsky Berou**	**0.88**	**241**	*e*Pg		Pg	09 07 59.8	-0.4
MORC				Sg		Sg	09 08 11.2	-0.4
MORC	**Moravsky Berou**	**0.88**	**241**	⇑*i*P		Pg	09 07 59.9	-0.3
MORC				S		Sg	09 08 11.7	+0.1
NIE	**Niedzica**	**1.30**	**127**	*e*Pg		Pg	09 08 08.2	0.0
NIE				*e*Sg		Sg	09 08 26.7	+1.7
JAVC	**Velka Javorina**	**1.52**	**207**	*e*Pg		Pg	09 08 11.3	-1.1
JAVC				*e*Sg		Sg	09 08 34.8	+2.7
	comp=Z,71nm,0.7s							
DPC	**Dobruska-Polom**	**1.55**	**276**	*e*Pg		Pg	09 08 11.6	-1.5
DPC				*e*Sg		Sg	09 08 32.3	-0.8
DPC	**Dobruska-Polom**	**1.55**	**276**	Pg		Pg	09 08 11.6	-1.5
DPC				Sg		Sg	09 08 31.9	-1.2
DPC	**Dobruska-Polom**	**1.55**	**276**	*e*PG		Pg	09 08 11.0	-2.1
DPC				*e*SG		Sg	09 08 31.9	-1.2
KOLL	**Kolacno**	**1.65**	**188**	*e*Pn		Pn	09 08 14.4	+0.9
KOLL				*e*Sn		Sn	09 08 39.0	+3.7
VRAC	**Vranov**	**1.65**	**238**	Pg		Pg	09 08 13.1	-1.9
	comp=Z,5.6nm,0.3s,baz=61,slow=14,SNR=28							
VRAC				Lg			09 08 34.1	
	comp=Z,14nm,0.3s,baz=148,slow=19,SNR=19							
VRAC	**Vranov**	**1.65**	**238**	*e*Pn		Pn	09 08 12.7	-0.9
VRAC	**Vranov**	**1.65**	**238**	⇑P		Pn	09 08 13.7	+0.1
VRAC				*e*Sg		Sg	09 08 35.0	-1.4
	comp=Z,106nm,0.6s							
VRAC	**Vranov**	**1.65**	**238**	⇑*i*P		Pn	09 08 13.7	+0.1
VRAC	**Vranov**	**1.65**	**238**	⇓*i*P		Sg	09 08 36.0	-0.4
KSP	**Ksiaz**	**1.68**	**293**	*e*Pn		Pn	09 08 13.1	-0.9
KSP				*e*Pg		Pg	09 08 14.7	-0.8
KSP				*e*Sg		Sg	09 08 37.0	-0.2
KSP	**Ksiaz**	**1.68**	**293**	*e*Pg		Pg	09 08 14.5	-1.0
KSP				*e*Sg		Sg	09 08 37.0	-0.2
KSP	**Ksiaz**	**1.68**	**293**	*e*Pn		Pn	09 08 12.8	-1.2
KSP				*i* Pg		Pg	09 08 14.8	-0.7
KSP				*e*Sg		Sg	09 08 36.6	-0.7
KSP	**Ksiaz**	**1.68**	**293**	Pg		Pg	09 08 14.5	-1.0
KSP				*e*Sg		Sg	09 08 36.6	-0.7
VYHS	**Vyhne**	**1.72**	**178**	*e*P		Pn	09 08 13.9	-0.6
VYHS				*e*Sn		Sn	09 08 43.7	+6.6
VYHS	**Vyhne**	**1.72**	**178**	*e*		Pn	09 08 13.9	-0.6
UPC	**Upice**	**1.76**	**281**	*e*PG		Pg	09 08 14.8	-2.4
UPC				*e*SG		Sg	09 08 37.5	-2.5
STHS	**Stebnicka Huta**	**1.81**	**115**	*e*P		Pn	09 08 17.8	+2.0
STHS				*e*			09 08 44.2	
STHS				pmax		pmax		
	comp=N,135nm,0.7s							
STHS	**Stebnicka Huta**	**1.81**	**115**	*e*Pn		Pn	09 08 17.8	+2.0
STHS				*e*Sn		Sn	09 08 44.2	+4.7
KRUC	**Moravsky**	**1.90**	**234**	*e*Pn		Pn	09 08 16.3	-0.7
KRUC				*e*Sn		Sn	09 08 41.4	-0.2
	comp=N,106nm,1.2s							
MODS	**Modra-Piesok**	**2.07**	**208**	*e*P		Pn	09 08 21.5	+2.2
MODS				*e*			09 08 50.1	
MODS				pmax		pmax		
	comp=N,15nm,0.7s							
MODS	**Modra-Piesok**	**2.07**	**208**	*e*PN		Pn	09 08 21.5	+2.2
MODS				*e*SN		Sn	09 08 50.1	+4.4
ZST	**Bratislava**	**2.28**	**208**	*e*P		Pn	09 08 26.0	+3.8
ZST				*e*			09 08 55.5	
ZST				pmax		pmax		
	comp=N,16nm,0.6s							
ZST	**Bratislava**	**2.28**	**208**	*e*Pn		Pn	09 08 26.0	+3.8
ZST				*e*SN		Sn	09 08 55.5	+4.5
ZST	**Bratislava**	**2.28**	**208**	*e*S		Sn	09 08 55.5	+4.5
PSZ	**Piszkesteto**	**2.42**	**161**	Pn		Pn	09 08 23.9	-0.3
PSZ				*e*Pg		Pg	09 08 31.0	+1.3
PSZ	**Piszkesteto**	**2.42**	**161**	⇓*e*Pg		Pg	09 08 31.2	+1.5
PSZ				*e*Sg		Sg	09 09 08.6	+7.6
PSZ	**Piszkesteto**	**2.42**	**161**	Pn		Pn	09 08 23.9	-0.2
PSZ	**Piszkesteto**	**2.42**	**161**	*e*Pg		Pg	09 08 31.0	+1.3
KWP	**Kalwaria**	**2.64**	**101**	*e*Pg		Pg	09 08 31.5	-2.4
KWP				*e*Sn		Sn	09 09 06.8	+7.0
KWP				*e*Sg		Sg	09 09 14.4	+6.3
KWP	**Kalwaria**	**2.64**	**101**	*e*Pg		Pg	09 08 31.5	-2.4
KWP				*e*Sn		Sn	09 09 06.8	+7.0
KWP				*e*Sg		Sg	09 09 14.4	+6.3
KWP	**Kalwaria**	**2.64**	**101**	*e*P		Pn	09 08 31.5	+4.3
KWP				*e*			09 09 06.8	
KWP	**Kalwaria**	**2.64**	**101**	*e*Pg		Pg	09 08 31.5	-2.4
KWP	**Kalwaria**	**2.64**	**101**	⇑*i*P		Pn	09 08 29.5	+2.3
KOLS	**Kolonicke sedl**	**2.64**	**118**	*e*PG		Pg	09 08 34.8	+0.9
PVCC	**Panska Ves**	**2.68**	**278**	*e*SG		Sg	09 09 08.0	-1.5
	comp=Z,139nm,0.7s							
PRU	**Pruhonice**	**2.70**	**267**	*e*P		Pn	09 08 31.4	+3.3
PRU				*e*			09 09 06.2	
PRU				smax				
	comp=N,30nm,0.6s							
PRU	**Pruhonice**	**2.70**	**267**	*e*PG		Pg	09 08 31.4	-3.8
PRU				*e*SG		Sg	09 09 06.2	-4.0
	comp=Z,30nm,0.6s							
BRG	**Berggiesshubel**	**3.12**	**284**	PG		Pg	09 08 43.6	+0.4
BRG				SG		Sg	09 09 21.6	-2.1
	comp=Z,26nm,0.5s							
KHC	**Kasperske Hory**	**3.51**	**254**	*e*PN		Pn	09 08 38.1	-1.1
KHC				*e*PG		Pg	09 08 46.2	-4.5
KHC				*e*SG		Sg	09 09 33.1	-3.1
	comp=Z,43nm,0.5s							
GEC2	**GERESS Array S**	**3.55**	**249**	*e*Sg		Sg	09 09 33.2	-4.0
GERES	**GERESS Array B**	**3.55**	**249**	Pn		Pn	09 08 39.7	+0.1
	comp=Z,0.3nm,0.3s,baz=64,slow=14,SNR=2.8							
GERES				Pg		Pg	09 08 46.8	-4.5
	comp=Z,1.1nm,0.3s,baz=84,slow=18,SNR=11							
GERES				Lg			09 09 33.1	
	comp=Z,5.1nm,0.3s,baz=63,slow=24,SNR=15							
MOA	**Molln**	**3.77**	**233**	⇓*i*Sg		Sg	09 09 40.6	-3.8
	comp=Z,22nm,0.6s							
CLL	**Collm**	**3.80**	**289**	*e*Pg		Pg	09 08 56.0	-0.1
CLL				*e*Sg		Sg	09 09 46.0	+0.7
	comp=Z,42nm,1.1s							
WET	**Wettzell**	**3.94**	**257**	*e*Sg		Sg	09 09 45.4	-4.6
WERD	**Werda**	**4.12**	**276**	*e*Sg		Sg	09 09 52.4	-3.3
ROTZ	**Rotzenmuhle**	**4.23**	**266**	*e*Sg		Sg	09 09 55.9	-3.3
DRGR		**4.33**	**141**	⇓P		Pn	09 08 49.4	-1.0
DRGR		**4.33**	**141**	P		Pn	09 08 49.4	-0.9
DRGR		**4.33**	**141**	⇓*i*P		Pn	09 08 49.3	-1.1
GRA1	**Grafenberg Arr**	**4.87**	**267**	Sg		Sg	09 10 17.9	-1.9
GRF	**Grafenberg Arr**	**4.87**	**267**	*e*Sg		Sg	09 10 17.9	-2.0
BUR08	**Bucovina Ar. S**	**4.98**	**119**	*e*Pn		Pn	09 08 59.3	-0.1
BZS	**Buzias**	**4.99**	**156**	⇑*i*P		Pn	09 08 59.5	0.0
BURAR	**Bucovina Array**	**5.00**	**119**	⇑P		Pn	09 09 00.1	+0.4
BURAR	**Bucovina Array**	**5.00**	**119**	⇑*i*P		Pn	09 09 00.1	+0.4
GZR	**Gura Zlata**	**5.54**	**149**	⇓*i*P		Pn	09 09 07.5	+0.5
FETA	**Feichten**	**6.19**	**242**	⇓*i*Sg		Sg	09 11 01.2	-0.8
	comp=Z,7.4nm,0.8s

TCW **Tory Channel** 9.00 212 P Pn 09 11 55.1 -4.4
QRZ **Quartz Range** 9.56 220 P Pn 09 12 02.5 -4.7
BSWZ **Blackbirch Sta** 9.59 212 P Pn 09 12 02.6 -4.9
THZ **Tophouse** 10.07 215 P Pn 09 12 08.7 -5.4
KHZ **Kahutara** 10.30 210 P Pn 09 12 12.2 -5.1
DSZ **Denniston Nort** 10.60 218 P Pn 09 12 16.4 -5.0
LTZ **Lake Taylor** 11.16 213 P Pn 09 12 22.2 -6.8
MQZ **McQueen's Vall** 11.73 209 P Pn 09 12 29.5 -7.3
RPZ **Rata Peaks** 12.44 214 P Pn 09 12 40.5 -6.0
3.5nm,0.3s,baz=7.6,slow=3.6,SNR=9.7
RPZ S Sn 09 14 52.8 -11
3.8nm,0.3s,baz=228,slow=18,SNR=8.9
RPZ **Rata Peaks** 12.44 214 P Pn 09 12 40.5 -6.0
RPZ S Sn 09 14 52.8 -11
FOZ **Fox Glacier** 12.99 218 P Pn 09 12 47.5 -6.5
ODZ **Otahua Downs** 13.66 211 P Pn 09 12 56.1 -7.0
JCZ **Jackson Bay** 13.83 218 P Pn 09 12 58.5 -6.9
TUZ **Tuapeka** 14.82 211 P Pn 09 13 12.5 -6.0
DZM **Mont Dzumac** 17.02 309 eP Pn 09 13 44.4 -2.4
AFI **Afiamalu** 20.91 21 P P 09 14 28.3 -2.2
22nm,0.3s,baz=126,slow=4.7,SNR=7.7
AFI **Afiamalu** 20.91 21 eP P 09 14 28.8 -1.7
33nm,0.3s
AFI **Afiamalu** 20.91 21 eP P 09 14 28.8 -1.7
AFI pmax pmax
comp=Z,33nm,0.3s
RAR **Rarotonga** 21.38 59 LR LR 09 20 36.3
comp=Z,760nm,18.6s,MS4.1,baz=278,slow=30
RAR T 09 36 22.1
comp=Z,27nm,0.3s,baz=89,slow=5.4,SNR=5.2
EIDS **Eidsvold** 26.90 280 eP P 09 15 29.6 +1.1
comp=Z,17nm,0.6s,mb4.7
TAU **Tasmania Unive** 27.51 241 eP P 09 15 35.1 +1.2
comp=Z,11nm,0.8s,mb4.5
TAU **Tasmania Unive** 27.51 241 eP P 09 15 35.1 +1.2
TAU pmax pmax
comp=Z,11nm,0.8s,mb4.5
TBI **Tubuai** 28.19 76 eLR LR 09 22 46.3
comp=Z,2µm,27.5s,baz=238
HNR **Honiara** 30.72 317 LR LR 09 26 28.6
comp=Z,402nm,21.6s,MS4.0,baz=359,slow=33
HNR **Honiara** 30.72 317 P P 09 16 01.2 -1.3
comp=Z,90nm,0.9s,mb5.6
HNR **Honiara** 30.72 317 P P 09 16 01.3 -1.3
HNR pmax pmax
comp=Z,90nm,0.9s,mb5.6
PPT **Papeete** 31.20 66 eLR LR 09 24 04.1
comp=Z,2µm,26.5s,baz=230
PPT **Papeete** 31.20 66 LR LR 09 24 57.6
comp=Z,599nm,21.9s,MS4.2,baz=246,slow=29
PPT T 09 49 12.0
comp=Z,34nm,0.3s,baz=169,slow=11,SNR=4.1
STKA **Stephens Creek** 32.69 262 P P 09 16 19.8 +0.1
comp=Z,1.8nm,0.6s,mb4.2,baz=94,slow=14,SNR=6.8
STKA LR LR 09 28 55.4
comp=Z,1µm,18.2s,MS4.7,baz=125,slow=35
STKA **Stephens Creek** 32.69 262 eP P 09 16 20.8 +1.1
comp=Z,1.7nm,0.5s,mb4.2
CTA **Charters Tower** 33.31 285 P P 09 16 27.1 +1.7
comp=Z,12nm,0.5s,mb5.1,baz=109,slow=10,SNR=26
CTA LR LR 09 29 13.0
comp=Z,389nm,18.5s,MS4.2,baz=92,slow=35
CTAO **Charters Tower** 33.31 285 eP P 09 16 25.4 +0.1
comp=Z,22nm,0.8s,mb5.1
CTAO **Charters Tower** 33.31 285 eP P 09 16 25.4 +0.1
CTAO pmax pmax
comp=Z,22nm,0.8s,mb5.1
PMG **Port Moresby** 39.08 300 eP P 09 17 14.1 -0.5
comp=Z,26nm,1.2s,mb4.8
PMG **Port Moresby** 39.08 300 *c iP* P 09 17 13.9 -0.7
COEN **Coen** 39.17 291 eP P 09 17 16.1 +0.8
comp=Z,4.0nm,0.8s,mb4.2
RKT **Rikitea** 40.23 87 eLR LR 09 28 21.8
comp=Z,2µm,27.2s,baz=247
ASAR **Alice Springs** 41.84 271 P P 09 17 36.9 -0.5
comp=Z,8.5nm,0.6s,mb4.5,baz=110,slow=7.4,SNR=80
ASAR S S 09 23 51.5 -0.3
comp=Z,0.7nm,1.0s,baz=219,slow=32,SNR=4.3
WB2 **Warramunga Arr** 43.13 276 eP P 09 17 47.5 -0.4
WRAB **Tennant Creek** 43.13 276 P P 09 17 47.8 -0.1
comp=Z,122nm,0.5s,mb5.9,SNR=20
WRAB **Tennant Creek** 43.13 276 eP P 09 17 47.2 -0.7
comp=Z,13nm,0.7s,mb4.8
WRAB epP pP 09 18 00.9 -0.4
WRAB **Tennant Creek** 43.13 276 eP P 09 17 47.2 -0.7
WRAB e*PP pP 09 18 00.9 -0.4
WRAB pmax pmax
comp=Z,13nm,0.7s,mb4.8
WRA **Warramunga Arr** 43.14 276 P P 09 17 47.2 -0.7
comp=Z,12nm,0.5s,mb4.8,baz=116,slow=7.8,SNR=178
WRA S S 09 24 08.1 -2.7
comp=Z,0.6nm,0.9s,baz=116,slow=14,SNR=2.8
WRA LR LR 09 34 55.0
comp=Z,456nm,20.7s,MS4.4,baz=100,slow=35
WRA **Warramunga Arr** 43.14 276 P P 09 17 47.2 -0.7
WRA S S 09 24 08.1 -2.7
SBA **Scott Base** 44.65 184 eP P 09 18 02.1 +2.8
comp=Z,42nm,1.2s,mb5.1
SBA epP pP 09 18 15.6 +2.8
SBA **Scott Base** 44.65 184 eP P 09 18 02.2 +2.9
SBA e*PP pP 09 18 15.6 +2.7
SBA pmax pmax
comp=Z,42nm,1.2s,mb5.1
NWAO **Narrogin (SRO)** 52.16 252 LR LR 09 38 05.3
comp=Z,203nm,18.6s,MS4.2,baz=105,slow=32
NWAO **Narrogin (SRO)** 52.16 252 eP P 09 18 56.2 -1.6
comp=Z,52nm,1.6s,mb5.2
NWAO **Narrogin (SRO)** 52.16 252 eP P 09 18 56.2 -1.6
NWAO pmax pmax
comp=Z,52nm,1.6s
MBWA **Marble Bar** 54.74 267 eP P 09 19 15.5 -1.3
comp=Z,5.2nm,0.8s,mb4.6
QSPA **South Pole Qui** 56.41 180 P P 09 19 29.5 +1.6
comp=Z,16nm,0.7s,mb5.2,baz=39,slow=2.0,SNR=57
QSPA pP pP 09 19 43.5 +1.7
comp=Z,46nm,0.9s,baz=55,slow=1.2,SNR=17
QSPA **South Pole Qui** 56.41 180 P P 09 19 29.5 +1.6
QSPA pP pP 09 19 43.5 +1.7
BATI **Baumata** 56.96 280 pP pP 09 19 45.6 -1.1
comp=Z,34nm,0.7s,baz=98,slow=6.6,SNR=5.2
BATI LR LR 09 42 11.9
comp=Z,315nm,21.9s,MS4.4,baz=123,slow=34
MAW **Mawson** 68.79 201 P P 09 20 49.3 -1.2
comp=Z,4.8nm,0.7s,mb4.6,baz=126,slow=6.3,SNR=8.1
MAW LR LR 09 50 02.1
comp=Z,326nm,18.8s,MS4.6,baz=308,slow=35
MAW **Mawson** 68.79 201 eP P 09 20 50.4 -0.2
comp=Z,46nm,1.4s,mb5.2
MAW epP pP 09 21 04.4 -0.5
MAW **Mawson** 68.79 201 eP P 09 20 50.4 -0.2
MAW e*PP pP 09 21 04.4 -0.5
MAW pmax pmax
comp=Z,46nm,1.4s
SYO **Syowa Base** 73.62 194 eX 09 21 17.2
VNA3 **Neumayer Olymp** 75.08 177 eP P 09 21 27.9 -0.3
VNA3 e 09 21 34.4
VNA3 e pP 09 21 42.4 -0.3
MAIT **Maitri** 75.50 184 eP P 09 21 28.9 -1.7
VNA2 **Neumayer--Watz** 75.50 177 eP P 09 21 30.7 +0.1
baz=173,slow=4.7
VNA2 e 09 21 37.3
VNA2 e pP 09 21 45.1 0.0
NVL **N'lazarevskaya** 75.50 184 P P 09 21 31.3 +0.7
NVL e pP 09 21 45.2 +0.1
NVL pmax pmax
comp=Z,24nm,1.4s,mb4.9
VNA1 **Neumayer--Stat** 75.74 177 eP P 09 21 32.3 +0.3
VNA1 e 09 21 38.9
VNA1 e pP 09 21 46.7 +0.2
PLCA **Paso Flores** 81.13 133 P P 09 22 01.7 -0.6
comp=Z,6.2nm,0.8s,mb4.6,baz=224,slow=4.7,SNR=9.8
PLCA pP pP 09 22 17.1 +0.2
comp=Z,6.2nm,1.0s,baz=196,slow=9.6,SNR=5.5
PLCA LR LR 09 49 04.0
comp=Z,123nm,18.5s,MS4.3,baz=221,slow=29
PLCA **Paso Flores** 81.13 133 eP P 09 22 02.2 -0.1
comp=Z,48nm,1.7s,mb5.2
PLCA epP pP 09 22 16.9 +0.1
PLCA **Paso Flores** 81.13 133 eP P 09 22 02.2 -0.1
PLCA e*PP pP 09 22 16.9 0.0
PLCA pmax pmax
comp=Z,48nm,1.7s
ASAJ **Asahikawa** 84.83 334 LR LR 09 53 43.6
comp=Z,235nm,20.9s,MS4.5,baz=334,slow=31
KSRS **Korea Array** 86.11 321 P P 09 22 24.7 -2.8
comp=Z,0.7nm,0.5s,mb4.2,baz=140,slow=6.2,SNR=4.8
KSRS LR LR 09 53 03.1
comp=Z,59nm,20.5s,MS4.0,baz=302,slow=30
YSS **Yuzh-Sakhalins** 87.21 335 *c iP* P 09 22 33.7 +1.0
YSS pmax pmax
comp=Z,36nm,1.2s,mb5.5
NJ2 **Nanjing** 87.50 312 eP P 09 22 35.2 +0.7
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.2
CIS **Catalina Islan** 87.99 47 ⇓P P 09 22 36.6 -0.1
baz=88
V03C **Hunter Liggett** 88.12 44 ⇓P P 09 22 37.7 +0.4
baz=88
PKM **Peak Mountain** 88.17 45 ⇑P P 09 22 38.0 +0.5
baz=88,SNR=5.4
SMMC **Simmler** 88.34 45 ⇑P P 09 22 38.9 +0.5
baz=88
PTRM **Twissleman Ran** 88.46 44 eP P 09 22 39.6 +0.6
PTRM epP pP 09 22 53.4 -0.3
PKD **Parkfield** 88.47 44 ⇓P P 09 22 39.0 0.0
baz=89,SNR=11
SAO **San Andreas Ge** 88.53 43 eP P 09 22 39.6 +0.4
U04C **Hernandez Rese** 88.62 44 ⇓P P 09 22 40.2 +0.5
baz=89,SNR=9.5
PETK **Petropavlovsk-** 88.72 346 P P 09 22 38.0 -1.7
comp=Z,5.7nm,0.8s,mb5.0,baz=115,slow=6.7,SNR=4.3
PETK LR LR 09 56 30.4
comp=Z,68nm,19.1s,MS4.1,baz=147,slow=32
MWC **Mount Wilson** 88.76 47 eP P 09 22 40.4 0.0
comp=Z,32nm,1.4s,mb5.5
MWC epP pP 09 22 54.8 -0.3
MWC **Mount Wilson** 88.76 47 eP P 09 22 40.4 0.0
MWC e*PP pP 09 22 54.8 -0.3
MWC pmax pmax
comp=Z,32nm,1.4s,mb5.5
PACP **Pacheco Peak** 88.79 43 ⇓P P 09 22 40.5 0.0
baz=89
MURC **Murrieta** 88.86 48 ⇓P P 09 22 41.0 +0.1
baz=89,SNR=5.3
MONP **Monument Peak** 88.87 49 ⇑P P 09 22 41.4 +0.5
baz=89,SNR=7.5
ARVC **Arvin** 88.91 46 ⇑P P 09 22 40.9 -0.1
baz=89,SNR=6.0
DVTC **Desert V Tower** 88.91 49 ⇑P P 09 22 41.5 +0.4
baz=89
BFSC **Mount Baldy St** 89.01 47 ⇑P P 09 22 41.5 0.0
baz=89,SNR=12
CVS **Carmenet Viney** 89.08 41 ⇓P P 09 22 42.0 +0.2
baz=89
EDW2 **Edwards Air Fo** 89.25 46 ⇑P P 09 22 42.6 0.0
baz=89,SNR=14
VES **Vestal, Richgr** 89.25 45 ⇑P P 09 22 42.1 -0.5
baz=89,SNR=11
SWSC **Sam W. Stewart** 89.29 49 ⇓P P 09 22 43.2 +0.2
baz=89
PFO **Pinyon Flat Ob** 89.33 48 eP P 09 22 42.8 -0.3
comp=Z,14nm,1.1s,mb5.2
PFO epP pP 09 22 57.8 0.0
PFO **Pinyon Flat Ob** 89.33 48 eP P 09 22 42.8 -0.2
PFO e*PP pP 09 22 57.8 0.0
PFO pmax pmax
comp=Z,14nm,1.1s,mb5.2
PFO **Pinyon Flat Ob** 89.33 48 ⇓P P 09 22 43.3 +0.2
baz=89,SNR=6.6
MNRC **McLaughlin Nat** 89.47 41 ⇑P P 09 22 44.1 +0.5
baz=90
BBRC **Big Bear Sol-O** 89.48 47 ⇑P P 09 22 44.3 +0.5
baz=90
ISA **Isabella** 89.49 45 eP P 09 22 44.0 +0.3
comp=Z,21nm,1.0s,mb5.4
ISA epP pP 09 22 58.1 -0.5
ISA **Isabella** 89.49 45 eP P 09 22 44.0 +0.2
ISA e*PP pP 09 22 58.1 -0.5
ISA pmax pmax
comp=Z,21nm,1.0s,mb5.4
ISA **Isabella** 89.49 45 ⇑P P 09 22 43.8 0.0
baz=90,SNR=15
Q03C **Winters** 89.53 41 ⇑P P 09 22 44.5 +0.6
baz=90
S05C **Merced** 89.57 43 ⇓P P 09 22 44.3 +0.2
baz=90
T06C **Millerton Lake** 89.69 44 ⇓P P 09 22 44.1 -0.5
baz=90,SNR=12
LRMC **Laurel Mountai** 89.83 46 ⇓P P 09 22 45.5 +0.1
baz=90,SNR=9.8
BELC **Belle Mtn.** 89.87 48 ⇑P P 09 22 46.2 +0.6
baz=90,SNR=14
GASB **Alder Springs** 89.88 40 ⇓P P 09 22 46.3 +0.8
baz=90,SNR=10
GLA **Glamis** 89.98 49 eP P 09 22 46.9 +0.8
comp=Z,25nm,1.1s,mb5.5
GLA epP pP 09 23 01.5 +0.6
GLA **Glamis** 89.98 49 eP P 09 22 46.9 +0.8
GLA e*PP pP 09 23 01.5 +0.6
GLA pmax pmax
comp=Z,25nm,1.1s,mb5.5
GLA **Glamis** 89.98 49 ⇓P P 09 22 46.9 +0.8
baz=90,SNR=6.5
BC3 **Big Chuckw Mtn** 89.98 49 ⇑P P 09 22 46.8 +0.7
baz=90,SNR=12
CMB **Columbia Colle** 90.02 43 eP P 09 22 45.7 -0.5
comp=Z,16nm,1.0s,mb5.3
CMB epP pP 09 22 60.0 -1.0
CMB **Columbia Colle** 90.02 43 eP P 09 22 45.7 -0.5
CMB e*PP pP 09 23 00.0 -1.0
CMB pmax pmax
comp=Z,16nm,1.0s,mb5.3
CMB **Columbia Colle** 90.02 43 ⇓P P 09 22 45.6 -0.6
baz=90,SNR=14
KCC **Kaiser Creek** 90.14 44 ⇓P P 09 22 46.6 -0.1
baz=90,SNR=10
HEC **Hector,Ludlow** 90.22 47 ⇑P P 09 22 47.4 +0.2
baz=90,SNR=8.7
KHMM **Horse Mountain** 90.22 39 eP P 09 22 47.2 +0.2
KHMM epP pP 09 23 02.7 +0.9
GSC **Goldstone** 90.25 47 eP P 09 22 47.6 +0.3
comp=Z,19nm,1.1s,mb5.3
GSC epP pP 09 23 01.9 -0.2
GSC **Goldstone** 90.25 47 eP P 09 22 47.6 +0.3
GSC e*PP pP 09 23 01.9 -0.2
GSC pmax pmax
comp=Z,19nm,1.1s,mb5.3
GSC **Goldstone** 90.25 47 ⇑P P 09 22 47.5 +0.2
baz=90,SNR=7.9
CWC **Cottonwood Cre** 90.25 45 ⇑P P 09 22 47.4 +0.1
baz=90
LAVA **Lava Cap Winer** 90.33 42 ⇑P P 09 22 47.3 -0.3
baz=90
MPMC **Manual Prospec** 90.34 46 ⇑P P 09 22 47.8 0.0
baz=90,SNR=9.5
N02C **Big Bar** 90.41 39 ⇓P P 09 22 48.3 +0.4
baz=90
113A **Mohawk Valley,** 90.47 50 ⇓P P 09 22 48.4 0.0
baz=91
ORV **Oroville** 90.47 41 ⇓P P 09 22 47.6 -0.6
baz=91,SNR=6.4
IRM **Iron Mountain** 90.50 48 ⇓P P 09 22 49.1 +0.6
baz=91,SNR=17
214A **Organ Pipe Nat** 90.56 51 ⇑P P 09 22 49.3 +0.5
baz=91,SNR=6.7
MTUM **Tungsten Hills** 90.59 44 eP P 09 22 49.3 +0.5
GMRC **Granite Mounta** 90.60 48 ⇓P P 09 22 49.3 +0.4
baz=91,SNR=5.6
WDC **Whiskeytown Da** 90.64 40 eP P 09 22 48.5 -0.4
comp=Z,25nm,1.4s,mb5.4
WDC epP pP 09 23 02.7 -1.1
WDC **Whiskeytown Da** 90.64 40 eP P 09 22 48.6 -0.4
WDC e*PP pP 09 23 02.7 -1.1
WDC pmax pmax
comp=Z,25nm,1.4s,mb5.3
WDC **Whiskeytown Da** 90.64 40 ⇓P P 09 22 48.6 -0.4
baz=91,SNR=8.5
MDJ **Mudanjiang** 90.68 326 P P 09 22 50.7 +1.6
MDJ AMB AMB
comp=Z,37nm,5.0s
WAKR **Walker** 90.88 43 eP P 09 22 50.1 0.0
WAKR epP pP 09 23 05.0 0.0
R06C **Coleville** 90.89 43 ⇓P P 09 22 50.2 0.0
baz=91,SNR=7.5
KBO **Bosley Butte** 90.94 38 eP P 09 22 50.0 -0.4
SHOC **Shoshone** 90.96 46 ⇑P P 09 22 50.5 -0.1
baz=91,SNR=5.4
FURC **Furnace Creek,** 91.00 46 ⇓P P 09 22 50.7 -0.1
baz=91
GRAC **Grapevine Rang** 91.05 45 ⇓P P 09 22 51.1 +0.1
baz=91,SNR=6.4
M02C **Callahan** 91.05 39 ⇓P P 09 22 51.1 +0.2
baz=91,SNR=6.2
Y13A **Salome** 91.11 49 ⇓P P 09 22 52.1 +0.7
baz=91,SNR=16
LDFC **Landfair** 91.13 48 eP P 09 22 52.3 +0.8
comp=Z,21nm,0.9s,mb5.5
LDFC epP pP 09 23 06.8 +0.5
PDMCI **Parker Dam,Lak** 91.22 49 ⇓P P 09 22 52.3 +0.4
baz=91
O04C **Chester** 91.23 41 ⇓P P 09 22 51.3 -0.5
baz=91,SNR=5.7
WCN **Washoe City** 91.26 42 ⇓P P 09 22 52.2 +0.3
baz=91
U10A **Ash Meadows, A** 91.28 46 ⇓P P 09 22 52.5 +0.5
baz=91,SNR=6.9
BEKR **Beckwourth** 91.31 41 ⇑P P 09 22 51.5 -0.6
baz=91,SNR=5.4
M03C **McCloud** 91.36 39 ⇑P P 09 22 51.8 -0.5
baz=92,SNR=5.1
YBH **Yreka Blue Hor** 91.37 39 LR LR 09 55 22.3
comp=Z,178nm,19.0s,MS4.5,baz=316,slow=30
YBH **Yreka Blue Hor** 91.37 39 eP P 09 22 52.7 +0.3
comp=Z,16nm,1.5s,mb5.1
YBH **Yreka Blue Hor** 91.37 39 eP P 09 22 52.7 +0.3
YBH pmax pmax
comp=Z,16nm,1.5s
YBH **Yreka Blue Hor** 91.37 39 ⇓P P 09 22 52.7 +0.3
baz=92
Z14A **Wintersburg** 91.38 50 ⇓P P 09 22 53.2 +0.6
baz=92,SNR=5.4
115A **Sonoran Desert** 91.41 51 ⇑P P 09 22 53.3 +0.5
baz=92,SNR=6.9
V11A **Goodsprings** 91.44 47 ⇑P P 09 22 53.0 +0.2
baz=92
216A **Three Points,** 91.47 52 ⇑P P 09 22 53.8 +0.7
baz=92
NVAR **Mina Array Bea** 91.48 43 P P 09 22 53.0 +0.1
comp=Z,3.9nm,0.9s,mb4.8,baz=214,slow=7.8,SNR=29
NVAR pP pP 09 23 06.4 -1.3
comp=Z,6.7nm,0.9s,baz=217,slow=7.2,SNR=17
X13A **Yucca** 91.61 49 ⇓P P 09 22 54.1 +0.4
baz=92,SNR=12
116A **Eloy** 91.67 51 ⇓P P 09 22 54.4 +0.4
baz=92,SNR=5.2
TPNV **Topopah Spring** 91.68 46 eP P 09 22 53.9 0.0
comp=Z,8.6nm,0.9s,mb5.1
TPNV epP pP 09 23 08.3 -0.4
TPNV **Topopah Spring** 91.68 46 eP P 09 22 53.9 0.0
TPNV e*PP pP 09 23 08.3 -0.4
TPNV pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
TPNV **Topopah Spring** 91.68 46 ⇑P P 09 22 54.2 +0.3
baz=92,SNR=7.1
Y14A **Wickenburg** 91.71 50 ⇓P P 09 22 54.5 +0.4
baz=92,SNR=9.6
K02A **Glendale** 91.72 38 ⇑P P 09 22 53.8 -0.1
baz=92,SNR=6.4
217A **Green Valley** 91.75 53 ⇓P P 09 22 55.1 +0.7
baz=92,SNR=6.6
O06A **Flanigan** 91.81 41 ⇑P P 09 22 54.4 0.0
baz=92
Z15A **Gila River Ind** 91.83 51 ⇓P P 09 22 55.2 +0.4
baz=92
HUMO **Hull Mountain** 91.87 38 eP P 09 22 54.6 -0.1
comp=Z,33nm,1.6s,mb5.4
HUMO epP pP 09 23 09.0 -0.4
HUMO **Hull Mountain** 91.87 38 ⇑P P 09 22 54.7 +0.1
baz=92,SNR=8.2
W13A **Hualapai Mount** 91.90 48 ⇑P P 09 22 55.4 +0.3
baz=92,SNR=8.9
Q08A **Gabbs** 91.98 43 ⇑P P 09 22 54.7 -0.6
baz=92,SNR=5.8
SHPR **Sheep Range** 92.04 47 eP P 09 22 56.1 +0.5
SHPR epP pP 09 23 10.5 +0.1
CN2 **Changchun** 92.06 324 eP P 09 22 58.2 +2.7
R09A **Tonopah** 92.06 44 ⇑P P 09 22 55.2 -0.4
baz=92,SNR=7.3
318A **Bisbee** 92.09 53 ⇓P P 09 22 56.5 +0.5
baz=92,SNR=11
J02A **Umpqua** 92.11 37 ⇓P P 09 22 55.5 -0.2
baz=92,SNR=5.3
TUC **Tucson** 92.11 52 eP P 09 22 56.7 +0.7
comp=Z,8.8nm,1.0s,mb5.0
TUC epP pP 09 23 11.4 +0.5
TUC **Tucson** 92.11 52 eP P 09 22 56.7 +0.7
TUC e*PP pP 09 23 11.4 +0.6
TUC pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
X14A **Yava** 92.12 49 ⇑P P 09 22 56.6 +0.5
baz=92,SNR=12
S10A **Tonopah Range,** 92.13 45 ⇑P P 09 22 55.7 -0.2
baz=92,SNR=9.8
Y15A **Casa Rosa Ranc** 92.14 50 ⇑P P 09 22 56.5 +0.3
baz=92,SNR=10.0
GYA **Guiyang** 92.16 300 P P 09 22 57.2 +0.8
GYA AP pP 09 23 12.7 +1.5
GYA XP sP 09 23 18.0 +1.2
GYA PP PP 09 26 41.2 +3.8
GYA SKS 09 33 25.7
GYA S S 09 33 54.6 -0.6
GYA XS sS 09 34 17.9 -2.3
GYA SS SS 09 40 07.5 +1.1
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,130nm,5.8s
GYA LR LR
comp=N,530nm,20.6s,MS5.1
GYA LR LR
comp=E,540nm,22.4s,MS5.1
GYA LR LR
comp=Z,620nm,21.8s,MS5.0
N06A **Buffalo Meadow** 92.22 41 ⇓P P 09 22 55.5 -0.8
baz=92,SNR=5.9
117A **Oracle** 92.30 52 ⇓P P 09 22 57.4 +0.5
baz=92,SNR=7.9
V13A **Grand Canyon W** 92.33 48 ⇓P P 09 22 56.8 -0.2
baz=92
O07A **Toulon** 92.34 42 ⇓P P 09 22 56.7 -0.2
baz=92
Z16A **Peralta Trail,** 92.34 51 ⇓P P 09 22 57.4 +0.4
baz=92,SNR=7.6
218A **Dragoon** 92.39 53 ⇓P P 09 22 57.8 +0.5
baz=92
S11A **Rachel** 92.44 45 ⇓P P 09 22 57.7 +0.2
baz=93
W14A **Seligman** 92.48 49 ⇓P P 09 22 58.4 +0.8
baz=93,SNR=9.6
T11A **Corn Creek, Al** 92.49 46 ⇑P P 09 22 58.0 +0.3
baz=93,SNR=9.3
319A **Douglas** 92.53 54 ⇑P P 09 22 58.1 +0.1
baz=93
R10A **Warm Springs** 92.54 45 ⇑P P 09 22 58.1 +0.2
baz=93
X15A **Humboldt** 92.55 50 ⇓P P 09 22 58.8 +0.8
baz=93,SNR=8.0
Y16A **Circle Bar Ran** 92.65 51 ⇑P P 09 22 59.0 +0.5
baz=93,SNR=19
I03A **Eugene** 92.69 37 ⇑P P 09 22 58.5 +0.1
baz=93
N07B **Gerlach** 92.71 41 ⇑P P 09 22 58.7 +0.1
baz=93
V14A **Boquillas Ranc** 92.74 48 ⇓P P 09 22 59.5 +0.7
baz=93,SNR=5.7
MOD **Modoc** 92.77 40 eP P 09 22 58.6 -0.2
comp=Z,8.2nm,1.0s,mb5.1
MOD epP pP 09 23 12.8 -0.8
MOD **Modoc** 92.77 40 ⇓P P 09 22 58.2 -0.6
baz=93,SNR=7.6
O08A **Rochester Mine** 92.83 42 ⇓P P 09 22 58.7 -0.5
baz=93,SNR=5.2
Q10A **Clear Creek Ra** 92.84 44 ⇓P P 09 22 59.4 +0.1
baz=93
118A **Homack Ranch,** 92.85 52 ⇑P P 09 22 59.8 +0.3
baz=93,SNR=8.1
219A **White Tail Can** 92.93 53 ⇓P P 09 22 59.9 +0.1
baz=93
Z17A **San Carlos Hig** 92.93 52 ⇑P P 09 23 00.4 +0.5
baz=93
Y17A **Roosevelt** 92.94 51 ⇓P P 09 23 00.4 +0.6
baz=93,SNR=9.2
S12A **Delamar Landin** 92.95 46 ⇑P P 09 23 00.3 +0.5
baz=93,SNR=6.2
R11A **Troy Canyon, C** 93.00 45 ⇑P P 09 22 59.9 -0.1
baz=93
X16A **Lo Mia Camp, P** 93.01 50 ⇓P P 09 23 00.8 +0.6
baz=93,SNR=9.2
K05A **Summer Lake** 93.03 39 ⇓P P 09 22 59.8 -0.2
baz=93,SNR=8.3

T13A	**Saint George**	**93.14**	**47**	⇓P		**P**	**09 23 01.1**	**+0.4**
	baz=93								
H03A	**Soap Creek Ran**	**93.19**	**36**	⇓P		**P**	**09 23 01.0**	**+0.3**
	baz=93								
U14A	**Mt Trumbull**	**93.19**	**48**	⇓P		**P**	**09 23 01.2**	**+0.3**
	baz=93,SNR=5.7								
Q11A	**Duckwater**	**93.29**	**45**	⇓P		**P**	**09 23 01.2**	**-0.1**
	baz=93								
P10A	**Eureka**	**93.34**	**44**	⇑P		**P**	**09 23 01.4**	**-0.1**
	baz=94								
HEBO	**Mount Hebo**	**93.36**	**36**	*e*P		**P**	**09 22 58.0**	**-3.5**
	comp=Z,42nm,1.3s,mb5.7								
L07A	**Adell**	**93.36**	**40**	⇓P		**P**	**09 23 01.3**	**-0.2**
	baz=94,SNR=6.2								
CMAR	**Chiang Mai Arr**	**93.36**	**290**	P		**P**	**09 23 01.8**	**-0.4**
	comp=Z,0.4nm,0.3s,mb4.4,baz=101,slow=2.8,SNR=3.2								
CMAR				LR		LR	10 04 10.1		
	comp=Z,128nm,18.0s,MS4.4,baz=184,slow=35								
LVC	**Limon Verde**	**93.37**	**120**	*e*P		**P**	**09 23 03.8**	**+1.5**
	comp=Z,96nm,2.5s,mb5.8								
X17A	**Forest Lakes**	**93.37**	**51**	⇑P		**P**	**09 23 02.7**	**+0.9**
	baz=94								
V15A	**Kaibab Nationa**	**93.44**	**49**	⇓P		**P**	**09 23 02.6**	**+0.5**
	baz=94								
M08A	**Happy Creek Ra**	**93.50**	**41**	⇑P		**P**	**09 23 02.4**	**+0.2**
	baz=94								
Y18A	**Canyon Day Jun**	**93.52**	**51**	⇑P		**P**	**09 23 02.9**	**+0.4**
	baz=94,SNR=7.5								
S13A	**Holt Ranch, En**	**93.53**	**46**	⇑P		**P**	**09 23 02.8**	**+0.3**
	baz=94								
N09A	**Rock Creek Ran**	**93.56**	**42**	⇑P		**P**	**09 23 02.5**	**-0.1**
	baz=94								
R12A	**Pony Springs,**	**93.57**	**45**	⇓P		**P**	**09 23 03.1**	**+0.5**
	baz=94								
P11A	**Circle Ranch,**	**93.70**	**44**	⇓P		**P**	**09 23 03.8**	**+0.6**
	baz=94								
WUAZ	**Wupatki**	**93.75**	**49**	*e*P		**P**	**09 23 03.2**	**-0.3**
	comp=Z,8.9nm,1.4s,mb5.0								
WUAZ				*e*pP		pP	09 23 18.3	0.0	
WUAZ	**Wupatki**	**93.75**	**49**	⇑P		**P**	**09 23 03.5**	**0.0**
	baz=94								
U15A	**North Rim**	**93.75**	**48**	⇓P		**P**	**09 23 03.9**	**+0.4**
	baz=94								
J06A	**Christmas Vall**	**93.78**	**39**	⇑P		**P**	**09 23 02.6**	**-0.9**
	baz=94,SNR=8.3								
I05A	**Bend**	**93.84**	**38**	⇑P		**P**	**09 23 03.9**	**+0.2**
	baz=94								
R13A	**O'Grain Ranch,**	**93.85**	**46**	⇓P		**P**	**09 23 04.0**	**+0.1**
	baz=94								
K07A	**Rock Creek Ran**	**93.88**	**40**	⇑P		**P**	**09 23 03.5**	**-0.4**
	baz=94,SNR=5.9								
KDAK	**Kodiak Island**	**93.90**	**14**	LR		LR	09 59 54.7		
	comp=Z,239nm,18.4s,MS4.7,baz=280,slow=32								
Q12A	**Willow Creek R**	**93.90**	**45**	⇑P		**P**	**09 23 04.0**	**-0.2**
	baz=94								
M09A	**Marrel Ranch,**	**93.99**	**42**	⇑P		**P**	**09 23 04.2**	**-0.3**
	baz=94								
L08A	**Fields**	**94.02**	**41**	⇓P		**P**	**09 23 04.2**	**-0.4**
	baz=94,SNR=7.9								
WVOR	**Wild Horse Val**	**94.03**	**40**	*e*P		**P**	**09 23 03.9**	**-0.7**
	comp=Z,6.2nm,1.2s,mb4.9								
WVOR	**Wild Horse Val**	**94.03**	**40**	*e*P		**P**	**09 23 03.9**	**-0.7**
WVOR				pmax		pmax			
	comp=Z,6.0nm,1.2s,mb4.9								
T15A	**Red Dirt Ranch**	**94.07**	**48**	⇑P		**P**	**09 23 05.3**	**+0.4**
	baz=94								
Y19A	**Nutrioso**	**94.14**	**52**	⇓P		**P**	**09 23 05.9**	**+0.5**
	baz=94								
O11A	**Cowboy Ranch,**	**94.14**	**44**	⇑P		**P**	**09 23 05.1**	**-0.1**
	baz=94,SNR=6.3								
H05A	**Madras**	**94.21**	**37**	⇓P		**P**	**09 23 05.2**	**-0.2**
	baz=94								
I06A	**Prineville**	**94.24**	**38**	⇑P		**P**	**09 23 05.4**	**-0.1**
	baz=94,SNR=9.4								
KMI	**Kunming**	**94.25**	**297**	P		**P**	**09 23 07.5**	**+1.4**
KMI				AP		pP	09 23 22.3	+1.4	
KMI				XP		sP	09 23 27.5	+1.0	
KMI				PP		PP	09 26 55.3	+1.5	
KMI				S		S	09 34 12.0	-1.6	
KMI				XS		sS	09 34 39.3	+0.6	
KMI				SS		SS	09 40 35.5	-0.8	
KMI				AMB		AMB			
	comp=Z,7.0nm,0.8s,mb5.1								
KMI				AMB		AMB			
	comp=Z,138nm,5.9s								
KMI				LR		LR			
	comp=N,229nm,12.8s,MS4.9								
KMI				LR		LR			
	comp=E,152nm,12.8s,MS4.9								
KMI				LR		LR			
	comp=Z,196nm,13.4s,MS4.7								
KMI	**Kunming**	**94.25**	**297**	P		**P**	**09 23 07.5**	**+1.4**
	comp=Z,7.0nm,0.8s,mb5.1								
KMI				pP		pP	09 23 22.3	+1.4	
KMI				sP		sP	09 23 27.5	+1.0	
KMI				PP		PP	09 26 55.3	+1.5	
KMI				S		S	09 34 12.0	-1.6	
KMI				sS		sS	09 34 39.3	+0.6	
KMI				PS		PS	09 35 39.4	+4.2	
KMI				SS		SS	09 40 35.5	-0.8	
KMI				SSS			09 44 19.7		
KMI				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb5.1								
KMI				MLR		MLR			
	comp=Z,200nm,13.4s,MS4.8								
L09A	**Wilkinson Ranc**	**94.27**	**41**	⇓P		**P**	**09 23 05.6**	**-0.2**
	baz=94								
U16A	**Tuba City**	**94.30**	**49**	⇑P		**P**	**09 23 05.1**	**-0.9**
	baz=94								
K08A	**Mann Creek Ran**	**94.31**	**40**	⇑P		**P**	**09 23 05.4**	**-0.5**
	baz=94,SNR=9.3								
J07A	**Hines**	**94.31**	**39**	⇓P		**P**	**09 23 05.6**	**-0.3**
	baz=94								
Q13A	**Wheeler Ranch,**	**94.33**	**45**	⇓P		**P**	**09 23 06.0**	**0.0**
	baz=94								
BJI	**Beijing**	**94.44**	**316**	P		**P**	**09 23 08.2**	**+1.6**
BJI				S		S	09 34 15.5	+0.8	
BJI				AMB		AMB			
	comp=Z,7.0nm,0.4s,mb5.4								
BJI				AMB		AMB			
	comp=Z,125nm,8.7s								
BJI				LR		LR			
	comp=N,225nm,15.1s,MS4.8								
BJI				LR		LR			
	comp=E,127nm,18.8s,MS4.8								
BJI				LR		LR			
	comp=Z,93nm,28.6s								
M10A	**I.L. Ranch, Tu**	**94.56**	**42**	⇓P		**P**	**09 23 07.1**	**0.0**
	baz=95								
G05A	**Wamic**	**94.58**	**37**	⇑P		**P**	**09 23 06.6**	**-0.5**
	baz=95								
P13A	**Bates Ranch, G**	**94.65**	**45**	⇑P		**P**	**09 23 07.5**	**0.0**
	baz=95								
I07A	**Izee**	**94.70**	**39**	⇓P		**P**	**09 23 07.2**	**-0.5**
	baz=95,SNR=5.0								
K09A	**Rome**	**94.70**	**41**	⇓P		**P**	**09 23 07.1**	**-0.7**
	baz=95,SNR=7.3								
H06A	**Lindquist Farm**	**94.72**	**38**	⇑P		**P**	**09 23 07.0**	**-0.7**
	baz=95,SNR=8.1								
J08A	**Circle Bar Ran**	**94.75**	**40**	⇓P		**P**	**09 23 07.5**	**-0.4**
	baz=95								
O12A	**Currie**	**94.76**	**44**	⇓P		**P**	**09 23 07.8**	**-0.3**
	baz=95								
M11A	**Holland Ranch,**	**94.92**	**43**	⇓P		**P**	**09 23 08.6**	**-0.1**
	baz=95								
C03A	**Quillayute Air**	**94.96**	**33**	⇑P		**P**	**09 23 09.0**	**+0.2**
	baz=95								
N12A	**Clover Valley,**	**94.97**	**43**	⇓P		**P**	**09 23 08.7**	**-0.3**
	baz=95								
L10A	**Juniper Basin**	**94.97**	**42**	⇑P		**P**	**09 23 08.3**	**-0.6**
	baz=95,SNR=5.8								
H07A	**Lands Inn, Kim**	**95.02**	**38**	⇑P		**P**	**09 23 08.4**	**-0.7**
	baz=95,SNR=6.0								
I08A	**Drewsey**	**95.07**	**39**	⇓P		**P**	**09 23 09.0**	**-0.4**
	baz=95								
J09A	**Fry Pan Ranch,**	**95.12**	**40**	⇓P		**P**	**09 23 09.0**	**-0.6**
	baz=95,SNR=5.3								
TXAR	**Lajitas Array**	**95.18**	**58**	P		**P**	**09 23 10.2**	**-0.1**
	comp=Z,1.6nm,1.1s,mb4.4,baz=205,slow=5.5,SNR=10								
TXAR				pP		pP	09 23 23.1	-1.9	
	comp=Z,2.6nm,1.1s,baz=191,slow=5.7,SNR=10								
TXAR				LR		LR	10 01 47.3		
	comp=Z,154nm,18.5s,MS4.5,baz=275,slow=33								
TXAR	**Lajitas Array**	**95.18**	**58**	P		**P**	**09 23 10.2**	**0.0**
TXAR				*PP		pP	09 23 23.1	-1.9	
K10A	**MacKenzie Ranc**	**95.22**	**41**	⇓P		**P**	**09 23 09.5**	**-0.6**
	baz=95,SNR=6.8								
U18A	**Rough Rock, Ch**	**95.26**	**49**	⇑P		**P**	**09 23 10.5**	**+0.1**
	baz=95								
LON	**Longmire**	**95.40**	**36**	*e*P		**P**	**09 23 09.7**	**-1.1**
L11A	**Cat Creek Ranc**	**95.43**	**42**	⇓P		**P**	**09 23 10.9**	**-0.1**
	baz=96								
G07A	**Ruggs Ranch, H**	**95.43**	**38**	⇓P		**P**	**09 23 10.7**	**-0.2**
	baz=96								
H08A	**Prairie City**	**95.44**	**39**	⇓P		**P**	**09 23 10.9**	**-0.1**
	baz=96								
E06A	**Yakima**	**95.66**	**36**	⇓P		**P**	**09 23 12.1**	**+0.2**
	baz=96								
K11A	**Parker Ranch,**	**95.68**	**41**	⇑P		**P**	**09 23 11.9**	**-0.2**
	baz=96								
G08A	**Pilot Rock**	**95.81**	**38**	⇓P		**P**	**09 23 12.0**	**-0.7**
	baz=96,SNR=5.6								
L12A	**House Creek Ra**	**95.83**	**42**	⇑P		**P**	**09 23 12.7**	**-0.1**
	baz=96								
T19A	**Beclabito**	**96.05**	**49**	⇑P		**P**	**09 23 13.7**	**-0.3**
	baz=96								
H09A	**Durkee**	**96.06**	**39**	⇓P		**P**	**09 23 13.8**	**0.0**
	baz=96								
MFID	**Camas Ranch**	**96.21**	**41**	⇑P		**P**	**09 23 14.2**	**-0.3**
	baz=96								
M14A	**Sheep Mountain**	**96.36**	**44**	⇓P		**P**	**09 23 14.8**	**-0.6**
	baz=96,SNR=6.0								
G09A	**Cove**	**96.41**	**39**	⇑P		**P**	**09 23 14.9**	**-0.5**
	baz=96								
R18A	**Canyonlands Na**	**96.46**	**48**	⇓P		**P**	**09 23 15.1**	**-0.8**
	baz=97								
I11A	**Placerville**	**96.47**	**41**	⇓P		**P**	**09 23 15.1**	**-0.6**
	baz=97								
H10A	**Noah's Angus R**	**96.50**	**40**	⇓P		**P**	**09 23 15.0**	**-0.8**
	baz=97								
J12A	**Stokes Ranch,**	**96.51**	**42**	⇓P		**P**	**09 23 15.2**	**-0.7**
	baz=97								
ANMO	**Albuquerque**	**96.57**	**52**	*e*P		**P**	**09 23 16.4**	**0.0**
	comp=Z,38nm,2.9s,mb5.3								
ANMO	**Albuquerque**	**96.57**	**52**	⇓P		**P**	**09 23 15.0**	**-1.4**
CD2	**Chengdu**	**96.83**	**303**	*e*P		**P**	**09 23 19.3**	**+1.6**
CD2				AP		pP	09 23 32.9	+0.3	
CD2				XP		sP	09 23 38.0	-0.1	
CD2				PP		PP	09 27 17.9	+4.1	
CD2				SKS			09 33 52.1		
CD2				S		S	09 34 34.5	-1.3	
CD2				XS		sS	09 34 58.0	-2.9	
CD2				SS		SS	09 41 16.0	+3.1	
CD2				AMB		AMB			
	comp=Z,10.0nm,0.9s,mb5.2								
CD2				AMB		AMB			
	comp=Z,60nm,8.2s								
CD2				LR		LR			
	comp=N,270nm,12.0s,MS5.1								
CD2				LR		LR			
	comp=E,320nm,13.2s,MS5.1								
CD2				LR		LR			
	comp=Z,150nm,13.0s,MS4.7								
I12A	**Atlanta**	**96.84**	**41**	⇑P		**P**	**09 23 16.8**	**-0.6**
	baz=97								
M15A	**Larsen Ranch,**	**96.86**	**44**	⇓P		**P**	**09 23 16.7**	**-0.8**
	baz=97								
H11A	**Donnelly**	**96.97**	**40**	⇓P		**P**	**09 23 17.1**	**-0.9**
	baz=97,SNR=5.8								
E09A	**Wood Farm, Sta**	**97.06**	**38**	⇑P		**P**	**09 23 17.8**	**-0.5**
	baz=97								
HLID	**Hailey**	**97.09**	**42**	⇓P		**P**	**09 23 18.2**	**-0.4**
	baz=97								
J13A	**Cove Ranch, Pi**	**97.11**	**42**	⇓P		**P**	**09 23 18.1**	**-0.5**
	baz=97								
F10A	**Beach Ranch, E**	**97.17**	**38**	⇑P		**P**	**09 23 18.2**	**-0.7**
	baz=97								
G11A	**Walters Elk Ra**	**97.29**	**39**	⇑P		**P**	**09 23 18.7**	**-0.7**
	baz=97								
J14A	**Carey**	**97.43**	**42**	⇓P		**P**	**09 23 20.1**	**0.0**
	baz=98,SNR=5.2								
I13A	**Wildhorse Cree**	**97.48**	**41**	⇑P		**P**	**09 23 20.0**	**-0.3**
	baz=98								
H12A	**Diamond D Ranc**	**97.49**	**41**	⇓P		**P**	**09 23 19.8**	**-0.5**
	baz=98								
HHC	**Hu-ho-hao-te**	**97.67**	**314**	*e*P		**P**	**09 23 22.6**	**+1.4**
HHC				AP		pP	09 23 35.2	-0.9	
HHC				XP		sP	09 23 41.1	-0.6	
HHC				PP		PP	09 27 23.5	+3.5	
HHC				SKS			09 33 55.5		
HHC				S		S	09 34 42.0	-0.5	
HHC				XS		sS	09 35 08.1	+0.5	
HHC				SS		SS	09 41 26.6	+2.3	
HHC				AMB		AMB			
	comp=Z,11nm,0.7s,mb5.5								
HHC				LR		LR			
	comp=N,136nm,20.8s,MS4.6								
HHC				LR		LR			
	comp=E,158nm,20.8s,MS4.6								
HHC				LR		LR			
	comp=Z,136nm,19.6s,MS4.4								
I14A	**Mackay**	**97.86**	**42**	⇓P		**P**	**09 23 22.2**	**+0.2**
	baz=98								
LPAZ	**La Paz**	**97.86**	**115**	P		**P**	**09 23 22.9**	**+0.1**
	comp=Z,0.8nm,0.6s,mb4.4,baz=215,slow=2.8,SNR=2.8								
LPAZ				LR		LR	09 57 30.3		
	comp=Z,98nm,18.7s,MS4.3,baz=275,slow=29								
LPAZ	**La Paz**	**97.86**	**115**	P		**P**	**09 23 22.9**	**+0.1**
LPAZ				LR		LR	09 57 30.3		
J15A	**Blackfoot**	**98.09**	**43**	⇓P		**P**	**09 23 23.1**	**0.0**
	baz=98								
G13A	**Cobalt**	**98.18**	**41**	⇓P		**P**	**09 23 22.9**	**-0.5**
	baz=98								
H14A	**Leadore**	**98.34**	**41**	⇓P		**P**	**09 23 24.0**	**-0.2**
	baz=98								
PDAR	**Pinedale Array**	**99.35**	**44**	P		**P**	**09 23 28.0**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=180,slow=5.3,SNR=3.5								
PDAR				LR		LR	09 59 14.0		
	comp=Z,169nm,20.4s,baz=275,slow=30								
LZH	**Lanzhou**	**99.73**	**307**	*e*P		Pdif	09 23 33.0	+2.3	
LZH				AP		pP	09 23 46.6	+1.2	
LZH				XP			09 23 52.1		
LZH				SKS			09 34 06.5		
LZH				*e*S		S	09 34 59.7	-0.4	
LZH				XS		sS	09 35 22.8	-2.5	
LZH				AMB		AMB			
	comp=Z,16nm,1.5s,mb5.2								
LZH				AMB		AMB			
	comp=Z,105nm,7.3s								
LZH				LR		LR			
	comp=N,315nm,17.5s								
LZH				LR		LR			
	comp=Z,497nm,19.7s,MS5.0								
LZH	**Lanzhou**	**99.73**	**307**	*e*P		Pdif	09 23 33.0	+2.3	
LZH				*PP		pP	09 23 46.6	+1.2	
LZH							09 27 30.5		
LZH							09 34 06.5		
LZH				*e*S		S	09 34 59.7	-0.4	
LZH				pmax		pmax			
	comp=Z,16nm,1.5s,mb5.2								
LZH				MLR		MLR			
	comp=Z,500nm,19.7s,MS5.0								
WMQ	**Urumqi**	**114.30**	**308**	*e*PDIF		Pdif	09 24 37.0	+1.6	
WMQ				PP		PP	09 29 27.0	+4.4	
WMQ				SKS		SKSdf	09 35 35.0	+1.4	
WMQ				SS		SS	09 45 12.0	+1.1	
WMQ				PP		PP			
	comp=Z,98nm,8.0s								
WMQ				LR		LR			
	comp=N,56nm,24.0s,MS4.4								
WMQ				LR		LR			
	comp=E,89nm,24.0s,MS4.4								
WMQ				LR		LR			
	comp=Z,78nm,22.0s,MS4.3								
MK31	**Makanchi Array**	**118.94**	**309**	*e*PKPdf		PKPdf	09 28 32.5	-2.2	
MKAR	**Makanchi Array**	**118.94**	**309**	PKP		PKPdf	09 28 31.9	-2.9	
	comp=Z,0.6nm,0.4s,baz=160,slow=0.5,SNR=13								
MKAR				PKKPbc		PKKPbc	09 38 48.0	-1.8	
	comp=Z,0.3nm,0.5s,baz=269,slow=4.9,SNR=4.0								
MKAR	**Makanchi Array**	**118.94**	**309**	PKP		PKPdf	09 28 31.9	-2.9	
MKAR				PKKPbc		PKKPbc	09 38 48.0	-1.8	
CPD	**Cerro la Pandu**	**119.10**	**87**	*e*PKPdf		PKPdf	09 28 40.0	+4.1	
ZALV	**Zalesovo Beam**	**119.67**	**317**	PKP		PKPdf	09 28 34.0	-1.8	
	comp=Z,1.2nm,0.4s,baz=132,slow=2.2,SNR=6.0								
TKM2	**Tokmak 2**	**122.21**	**303**	*e*PKPdf		PKPdf	09 28 38.6	-2.5	
KURK	**Kurchatov**	**122.42**	**313**	*e*PKPdf		PKPdf	09 28 39.6	-1.6	
LSZ	**Lusaka**	**124.62**	**213**	*e*PKPdf		PKPdf	09 28 46.1	-0.5	
SPITS	**Spitsbergen Ar**	**134.91**	**355**	PKP		PKPdf	09 29 04.2	-0.1	
	comp=Z,5.0nm,0.5s,baz=3.4,slow=4.2,SNR=9.3								
AKTK	**Aktyubinsk**	**135.36**	**310**	PKP		PKPdf	09 29 04.7	-1.2	
AKTK				pPKP		pPKPdf	09 29 16.7	-4.5	
AKTO	**Aktyubinsk**	**135.36**	**310**	PKP		PKPdf	09 29 04.7	-1.1	
	comp=Z,1.7nm,0.6s,baz=132,slow=3.8,SNR=5.5								
AKTO				pPKP		pPKPdf	09 29 16.7	-4.5	
	comp=Z,2.5nm,0.6s,baz=98,slow=4.9,SNR=5.6								
ARCES	**ARCESS Array B**	**141.54**	**346**	PKhKP			09 29 09.5		
	comp=Z,1.3nm,0.4s,baz=16,slow=2.1,SNR=12								
JOF	**Joensuu**	**145.00**	**336**	*e*p		PKPbc	09 29 20.4	-1.9	
	comp=Z,2.2nm,0.4s								
JOF	**Joensuu**	**145.00**	**336**	*e*PKIKP		PKPdf	09 29 20.4	-2.5	
JOF				pmax		pmax			
	comp=Z,2.0nm,0.4s								
VRHR	**Novokhopersk**	**145.60**	**313**	*e*PKP2		PKPab	09 29 23.3	-1.7	
VRHR				pmax		pmax			
	comp=Z,8.0nm,0.4s								
VRHR				pmax		pmax			
	comp=N,10.0nm,0.6s								
VRHR				pmax		pmax			
	comp=E,9.0nm,0.4s								
KIV	**Kislovodsk**	**145.97**	**300**	*i* PKP2		PKPab	09 29 27.2	+0.6	
KIV				pmax		pmax			
	comp=Z,9.0nm,1.0s								
VORD	**Divnogorie**	**147.06**	**313**	*e*PKIKP		PKPdf	09 29 24.9	-1.9	
VORD				pmax		pmax			
	comp=Z,7.0nm,0.4s								
VORD				pmax		pmax			
	comp=N,20nm,0.5s								
VORD				pmax		pmax			
	comp=E,20nm,0.6s								
VSR	**Storozhevoye**	**147.06**	**314**	*e*PKIKP		PKPdf	09 29 24.9	-1.9	
VSR				pmax		pmax			
	comp=N,2.0nm,0.5s								
VSR				pmax		pmax			
	comp=Z,3.0nm,0.5s								
VSR				pmax		pmax			
	comp=E,2.0nm,0.4s								
OBN	**Obninsk**	**147.10**	**322**	*i* PKHKP			09 29 23.5		
OBN				pmax		pmax			
	comp=Z,37nm,1.8s								
KAF	**Kangasniemi**	**147.21**	**338**	*e*p		PKPdf	09 29 26.0	-0.7	
	comp=Z,3.8nm,0.4s								
KAF	**Kangasniemi**	**147.21**	**338**	*e*PKIKP		PKPdf	09 29 26.0	-0.7	
KAF				pmax		pmax			
	comp=Z,4.0nm,0.4s								
EIL	**Elat**	**150.55**	**272**	PKPbc		PKPbc	09 29 36.3	-2.3	
	comp=Z,3.8nm,0.5s,baz=307,slow=9.4,SNR=3.7								
MMAI	**Mount Meron Ar**	**150.98**	**278**	PKPbc		PKPbc	09 29 38.8	-0.7	
	comp=Z,6.6nm,0.5s,baz=82,slow=6.1,SNR=7.3								
MMAI				pPKPbc		pPKPbc	09 29 52.0	-2.7	
	comp=Z,7.8nm,0.6s,baz=76,slow=3.5,SNR=4.6								
NB2	**NORSAR Subarra**	**151.80**	**349**	PKP		PKPbc	09 29 38.5	-1.9	
	comp=Z,5.8nm,0.6s,baz=16,slow=2.6								
NOA	**NORSAR Array B**	**151.80**	**349**	PKPbc		PKPbc	09 29 38.3	-2.1	
	comp=Z,4.7nm,0.8s,baz=17,slow=4.6,SNR=21								
NOA				PKPab		PKPab	09 29 46.9	-2.7	
	comp=Z,5.1nm,0.9s,baz=15,slow=4.6,SNR=4.5								
LIC	**Lamto**	**152.16**	**168**	*e*PKIKP		PKPbc	09 29 41.7	-1.1	
	comp=Z,66nm,0.8s								
KIC	**Kosan Boka**	**152.34**	**169**	*e*PKIKP		PKPbc	09 29 42.1	-1.1	
	comp=Z,78nm,0.7s								
TIC	**Toumodi**	**152.57**	**168**	*e*PKIKP		PKPbc	09 29 42.5	-1.2	
	comp=Z,126nm,1.2s								
DBIC	**Dimbokro**	**152.62**	**168**	PKPbc		PKPbc	09 29 42.8	-1.0	
	comp=Z,7.8nm,0.8s,baz=160,slow=2.6,SNR=9.3								
DBIC	**Dimbokro**	**152.62**	**168**	*e*PKIKP		PKPbc	09 29 42.9	-0.9	
BRTR	**Keskin Array B**	**152.93**	**292**	PKPbc		PKPbc	09 29 41.3	-2.4	
	comp=Z,1.6nm,0.6s,baz=153,slow=4.2,SNR=9.4								
BRTR				pPKPbc		PKPab	09 29 55.6	+0.5	
	comp=Z,1.4nm,0.6s,baz=48,slow=2.9,SNR=5.7								
AKASG	**Malin Array Be**	**153.06**	**318**	PKP		PKPdf	09 29 35.3	-0.9	
	comp=Z,3.1nm,0.6s,baz=64,slow=2.3,SNR=4.2								
AKASG				PKPbc		PKPbc	09 29 42.1	-1.5	
	comp=Z,4.0nm,0.7s,baz=65,slow=2.2,SNR=11								
AKASG				pPKPbc		PKPab	09 29 55.2	-0.1	
	comp=Z,1.6nm,0.5s,baz=69,slow=2.3,SNR=5.5								
AKASG	**Malin Array Be**	**153.06**	**318**	PKP		PKPdf	09 29 35.3	-0.9	
AKASG				PKPbc		PKPbc	09 29 42.1	-1.5	
AKASG				pPKPbc		PKPab	09 29 55.2	-0.1	
AKASG	**Malin Array Be**	**153.06**	**318**	PKIKP		PKPdf	09 29 35.3	-0.9	
AKASG							09 29 42.1		
KIEV	**Kiev**	**153.08**	**318**	*e*PKPdf		PKPdf	09 29 30.6	-5.6	
TOA0	**Torodi Ar. Sit**	**159.50**	**183**	*e*PKPab		PKPab	09 30 22.9	-0.8	
TORD	**Torodi Ar. Bea**	**159.50**	**183**	PKP		PKPdf	09 29 44.8	-1.0	
	comp=Z,1.5nm,0.9s,baz=2.5,slow=1.3,SNR=6.0								
TORD				PKPab		PKPab	09 30 22.7	-1.0	
	comp=Z,8.2nm,1.0s,baz=176,slow=3.4,SNR=15								
TORD				pPKPab		pPKPab	09 30 36.4	-2.1	
	comp=Z,9.9nm,0.8s,baz=167,slow=3.3,SNR=8.9								
TORD	**Torodi Ar. Bea**	**159.50**	**183**	PKP		PKPdf	09 29 44.8	-1.0	
TORD				PKPab		PKPab	09 30 22.7	-1.0	
TORD				pPKPab		pPKPab	09 30 36.4	-2.1	
GERES	**GERESS Array B**	**161.99**	**331**	PKP		PKPdf	09 29 45.2	-

KK31 ⇑S Sn 09 38 45.5 +1.9
447nm,0.3s,baz=222,slow=26,SNR=23
KK31 Karatay Array 1.33 43 *i* PG Pg 09 38 27.5 -0.5
KK31 *i* S Sn 09 38 46.2 +2.6
KK31 pmax pmax
comp=Z,156nm,0.1s
KK31 smax
comp=Z,2μm,0.2s
AML Almayashu 3.29 89 *e*Pn Pn 09 38 57.3 +4.0
AML *e*Pg Pg 09 39 03.9 -1.6
AML *e*Sg Sg 09 39 47.3 -0.9
AML Almayashu 3.29 89 P Pn 09 38 57.1 +3.8
SNR=11
EKS2 Erkin-Say 3.38 80 *e*Pn Pn 09 38 57.3 +2.8
EKS2 *e*Pg Pg 09 39 06.5 -0.7
EKS2 *e*Sg Sg 09 39 49.0 -2.0
EKS2 Erkin-Say 3.38 80 P Pn 09 38 57.6 +3.2
SNR=22
UCH Uchtor 3.90 87 *e*Pn Pn 09 39 07.1 +5.5
UCH *e*Pg Pg 09 39 15.6 -1.5
UCH *e*Sg Sg 09 40 06.5 -1.2
UCH Uchtor 3.90 87 P Pg 09 39 16.1 -1.0
SNR=12
AAK Ala-Archa 3.91 81 P Pn 09 39 04.8 +3.1
SNR=14
FRU Bishkek 4.02 78⇑ *i*PN Pg 09 39 17.0 -2.4
FRU *i* S Sg 09 40 09.0 -2.4
FRU pmax pmax
comp=Z,250nm,1.7s
FRU smax
comp=E,2μm,1.9s
USP Ospenovka 4.02 72 P Pn 09 39 05.2 +2.0
SNR=42
CHMS Chumysh 4.14 76 P Pn 09 39 07.3 +2.4
SNR=7.9
KBK Karagaybulak 4.24 81 P Pn 09 39 09.4 +3.1
SNR=7.3
KZA Kyzart 4.45 89 P Pn 09 39 12.9 +3.8
SNR=8.2
TKM2 Tokmak 2 4.74 78⇑Pn Pn 09 39 15.1 +1.9
comp=E,6.3nm,0.6s
TKM2 ⇑Pg Pg 09 39 30.7 -2.5
comp=E,134nm,0.9s
TKM2 ⇑Lg 09 40 32.2
comp=E,336nm,0.9s
TKM2 Tokmak 2 4.74 78 *e*Pn Pn 09 39 15.1 +1.9
TKM2 *e*Pg Pg 09 39 29.4 -3.9
TKM2 *e*Sg Sg 09 40 30.5 -4.2
TKM2 Tokmak 2 4.74 78 P Pn 09 39 16.1 +3.0
SNR=5.2
ULHL Ulahol 5.18 87 P Pn 09 39 22.7 +3.5
SNR=7.0
KSH Kashi 5.72 115 P Pn 09 39 29.6 +2.9
KSH S Sn 09 40 36.5 +4.5
KSH Smax
comp=N,160nm,1.6s
KSH Smax
comp=E,50nm,1.0s
AAA Alma-Ata 5.77 76 *i* PN Pg 09 39 46.6 -6.3
AAA *i* S Sg 09 41 02.4 -5.2
AAA pmax pmax
comp=Z,124nm,0.3s
AAA smax
comp=N,437nm,0.6s
KBL Kabul 7.59 181 *e*Pn Pn 09 39 56.9 +4.6
comp=N,14nm,0.5s
KBL Kabul 7.59 181 *e*P Pn 09 39 56.9 +4.6
KBL pmax pmax
comp=Z,14nm,0.5s
AB01 Akbulak array 9.64 321⇓Pn Pn 09 40 18.4 -1.9
comp=Z,15nm,0.6s
AB31 Akbulak array 9.64 321 P Pn 09 40 18.7 -1.7
AB31 09 41 59.0
AB31 pmax pmax
comp=Z,14nm,0.4s
AB31 smax
comp=N,25nm,0.7s
MK31 Makanchi Array 10.40 59⇑Pn Pn 09 40 31.3 +0.5
comp=N,3.5nm,0.5s,baz=179,slow=28,SNR=35
MK31 ⇓Sn Sn 09 42 27.9 +1.0
comp=N,14nm,0.7s
MK31 ⇓Lg 09 43 34.2
comp=N,119nm,1.1s
MK31 Makanchi Array 10.40 59 *e*Pn Pn 09 40 31.2 +0.5
MKAR Makanchi Array 10.40 59 Pn Pn 09 40 31.2 +0.5
comp=N,1.1nm,0.3s,baz=247,slow=16,SNR=22
MKAR Lg 09 43 31.1
comp=N,1.5nm,0.3s,baz=257,slow=21,SNR=4.9
KURBB Kurchatov Arra 10.62 34⇑Pn Pn 09 40 34.4 +0.8
comp=N,1.7nm,0.9s
KURBB ⇓Lg 09 43 38.5
comp=N,22nm,0.9s
VOSK Vostochnaya 10.65 6⇓Pn Pn 09 40 32.6 -1.5
comp=N,9.0nm,0.8s
VOSK ⇓Sn Sn 09 42 32.7 -0.2
VOSK ⇑Lg 09 43 38.5
comp=N,51nm,0.9s
KURK Kurchatov 10.72 34 Pn Pn 09 40 33.3 -1.9
baz=304,slow=26
KURK Lg 09 43 36.0
baz=220,slow=32
KURK Kurchatov 10.72 34 *e*P Pn 09 40 36.9 +1.7
BVA0 Borovoye Array 10.91 4⇓Pn Pn 09 40 36.6 -1.1
comp=N,1.6nm,0.6s,baz=176,slow=11,SNR=17
BVA0 ⇓Sn Sn 09 42 38.5 -0.9
BVA0 ⇓Lg 09 43 46.9
comp=N,19nm,1.1s,baz=193,slow=32,SNR=3.6
BVAR Borovoye Array 10.91 4 Pn Pn 09 40 37.2 -0.5
comp=N,1.5nm,0.3s,baz=164,slow=10,SNR=11
BVAR Sn Sn 09 42 33.2 -6.1
comp=N,3.0nm,0.3s,baz=181,slow=17,SNR=3.6
BVAR Lg 09 43 44.7
baz=166,slow=19,SNR=2.4
BVAR LR LR 09 45 13.6
comp=N,224nm,20.9s,baz=185,slow=40
BVAR Borovoye Array 10.91 4 P Pn 09 40 37.2 -0.5
BVAR 09 42 33.2
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR smax
comp=Z,3.0nm,0.3s
BVAR MLR MLR
comp=Z,224nm,20.9s
BRVK Borovoye 10.94 3 *e*Pn Pn 09 40 37.8 -0.4
BRVK *e*Sn Sn 09 42 35.5 -4.6
DLH Dalhousie 10.96 149 *e*P Pn 09 40 41.0 +2.5
THN Thein Dam 10.97 150 *e*P Pn 09 40 39.5 +1.0
AKTK Aktyubinsk 11.36 321 Pn Pn 09 40 42.1 -1.7
AKTK Sn Sn 09 42 40.9 -9.4
AKTK Lg 09 44 01.6
AKTO Aktyubinsk 11.36 321 Pn Pn 09 40 42.1 -1.7
comp=Z,2.3nm,0.3s,baz=109,slow=12,SNR=22
AKTO Sn Sn 09 42 40.9 -9.4
comp=Z,0.8nm,0.3s,baz=1.7,slow=22,SNR=3.6
AKTO Lg 09 44 01.6
comp=Z,0.5nm,0.3s,baz=52,slow=19,SNR=1.9
AKTO Aktyubinsk 11.36 321 P Pn 09 40 42.2 -1.7
AKTO 09 42 40.9
AKTO pmax pmax
comp=Z,2.0nm,0.3s
AKTO smax
comp=Z,1.0nm,0.3s
SMLA Simla 12.69 148 *i* P Pn 09 41 02.4 +0.4
SMLA *i* S Sn 09 43 11.9 -11
SMLA *i* S Sn 09 43 13.2 -10
DDI Dehra Dun 13.76 146 *ex* x 09 43 40.0
NVS Novosibirsk 15.68 31 *e*P Pn 09 41 42.6 +0.2
NVS *e* 09 44 43.7
ZAA0 Zalesovo Array 15.69 36 *e*P Pn 09 41 43.8 +1.2
ZALV Zalesovo Beam 15.69 36 Pn Pn 09 41 43.7 +1.1
comp=Z,1.3nm,0.3s,baz=230,slow=12,SNR=18
ZALV Lg 09 46 21.6
comp=Z,0.1nm,0.3s,baz=255,slow=28,SNR=1.9
ZALV LR LR 09 48 06.5
comp=Z,90nm,19.1s,baz=196,slow=38
ZALV Zalesovo Beam 15.69 36 Pn Pn 09 41 43.7 +1.1
ZALV Lg 09 46 21.6
ZALV LR LR 09 48 06.5
SVE Sverdlovsk 15.71 342 *e*P Pn 09 41 45.1 +2.4
SVE *e*S Sn 09 44 38.2 +1.9
SVE pmax pmax
comp=Z,13nm,0.8s
ARU Arti 15.88 338 *e*P Pn 09 41 42.4 -2.6
comp=Z,4.9nm,0.6s
ARU Arti 15.88 338 *e*P Pn 09 41 42.9 -2.1

ARU *e*S Sn 09 44 39.8 -0.7
AJM Ajmer 16.24 163 *e*P Pn 09 41 48.9 -0.9
PYUN Piuthan 17.92 137 *e*P Pn 09 42 08.8 -2.0
comp=Z,75nm,0.7s
DANN Dangsing 18.12 135 *e*P Pn 09 42 11.0 -2.3
comp=Z,36nm,0.5s
KOLN Koldanda 18.50 136 *e*P Pn 09 42 17.0 -1.0
comp=Z,18nm,0.3s
GNI Garni 18.56 272 LR LR 09 51 04.4
comp=Z,59nm,18.7s,baz=109,slow=42
GNI Garni 18.56 272 *e*P Pn 09 42 16.8 -1.8
comp=Z,23nm,0.9s
GNI Garni 18.56 272 *e*P Pn 09 42 16.8 -1.8
GNI pmax pmax
comp=Z,23nm,0.9s
BHJ Bhuj 18.84 179 *e*P Pn 09 42 21.9 -0.2
BHJ AMb AMB 09 42 24.3
comp=Z,18nm,0.5s
GKN Gorkha 18.86 134 *e*P Pn 09 42 20.3 -2.0
comp=Z,19nm,0.4s
GOF Gofitskoye 19.19 288 *e*P pP 09 42 37.0 +7.1
GOF pmax pmax
comp=Z,35nm,0.9s
KKN Kakani 19.38 133 *e*P Pn 09 42 27.7 -0.8
DMN Daman 19.43 133 *e*P Pn 09 42 28.4 -0.7
KIV Kislovodsk 19.48 284 *e*P Pn 09 42 30.8 +1.1
comp=Z,16nm,0.6s
KIV Kislovodsk 19.48 284 *e*P Pn 09 42 22.5 -7.2
KIV pmax pmax
comp=Z,10.0nm,1.4s
PKI Pulchoki 19.62 133 *e*P Pn 09 42 30.7 -0.7
JIRN Jiri 19.98 131 *e*P Pn 09 42 35.5 -0.3
BHPL Bhopal 20.04 158 *e*P P 09 42 34.5 -0.2
BHPL AMb AMB 09 42 36.6
comp=Z,14nm,0.6s
RAMN Ramite 20.76 131 *e*P P 09 42 44.7 +2.2
VRHR Novokhopersk 20.89 305 *e*P P 09 42 39.3 -4.3
VRHR *e**SP sP 09 42 47.8 -2.6
VRHR *e*S S 09 46 21.0 -15
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR smax
comp=E,40nm,0.8s
VRHR smax
comp=Z,8.0nm,0.4s
VRHR smax
comp=N,40nm,0.7s
TAPN Taplejung 21.09 129 *e*P P 09 42 48.5 +2.5
VORD Divnogorie 22.29 304 *e*P P 09 42 57.5 -1.2
VORD *e**SP sP 09 43 05.9 +0.4
VORD *e*S S 09 46 45.3 -18
VORD pmax pmax
comp=Z,5.0nm,0.4s,mb4.3
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD smax
comp=N,30nm,0.4s
VORD smax
comp=Z,10.0nm,0.5s
VORD smax
comp=E,20nm,0.6s
VSR Storozhevoye 22.42 304 *e*P P 09 42 58.8 -1.3
VSR *e**SP sP 09 43 06.6 -0.3
VSR *e*S S 09 46 50.3 -15
VSR pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR smax
comp=E,10.0nm,0.6s
VSR smax
comp=Z,2.0nm,0.4s
VSR smax
comp=N,7.0nm,0.8s
ZAK Zakamensk 24.74 59 *e*P P 09 43 23.6 +0.8
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
OBN Obninsk 24.94 313 *e*P P 09 43 21.5 -3.1
OBN *i* 09 43 53.6
OBN pmax pmax
comp=Z,8.0nm,1.2s,mb4.1
OBN MLR MLR
comp=Z,200nm,16.0s,MS3.7
SONM Songino Array 26.69 65 P P 09 43 42.9 +2.4
comp=Z,0.3nm,0.3s,baz=270,slow=9.7,SNR=3.2
BR131 Keskin Array S 26.90 277 *e*P P 09 43 43.4 +0.9
comp=Z,2.9nm,0.8s,mb3.9
BRTR Keskin Array B 26.90 277 P P 09 43 43.5 +0.9
comp=Z,1.9nm,0.8s,mb3.7,baz=90,slow=9.0,SNR=6.8
BRTR pP pP 09 43 47.5 0.0
comp=Z,3.3nm,0.8s,baz=79,slow=8.1,SNR=10
BRTR Keskin Array B 26.90 277 P P 09 43 43.5 +1.0
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 27.13 65 *e*P P 09 43 44.4 0.0
AKASG Malin Array Be 28.60 301 P P 09 43 58.8 +1.2
comp=Z,0.4nm,0.3s,mb3.6,baz=79,slow=8.0,SNR=3.1
HIA Hailar 35.40 61 *e*P P 09 44 57.3 +0.1
ARCES ARCESS Array B 35.44 335 P P 09 44 58.2 +0.9
comp=Z,2.1nm,0.7s,mb4.2,baz=99,slow=7.5,SNR=5.9
ARCES ARCESS Array B 35.44 335 P P 09 44 58.2 +0.9
ARCES ARCESS Array B 35.44 335 P P 09 44 58.2 +0.9
ARCES pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 38.77 300 P P 09 45 27.1 +1.3
comp=Z,1.0nm,0.6s,mb3.7,baz=123,slow=3.6,SNR=2.8
GERES LR LR 10 04 14.4
comp=Z,106nm,19.9s,MS3.7,baz=293,slow=41
GERES GERESS Array B 38.77 300 P P 09 45 27.1 +1.3
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,106nm,19.9s
NB2 NORSAR Subarra 39.15 319 P P 09 45 28.7 -0.1
comp=Z,6.7nm,1.1s,mb4.3,baz=98,slow=7.9
NOA NORSAR Array B 39.15 319 P P 09 45 29.3 +0.5
comp=Z,2.0nm,0.8s,mb3.9,baz=93,slow=8.3,SNR=4.5
NOA LR LR 10 02 07.4
comp=Z,114nm,18.2s,MS3.7,baz=15,slow=37
NOA NORSAR Array B 39.15 319 P P 09 45 29.3 +0.5
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA MLR MLR
comp=Z,114nm,18.2s
YAK Yakutsk 40.30 39 *e*P P 09 45 39.0 +0.6
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.7
YAK pmax pmax
comp=E,7.0nm,1.2s
NJ2 Nanjing 40.32 88 *e*P P 09 45 37.9 -1.0
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
TIXI Tiksi 41.13 25 *e*P P 09 45 44.3 -0.8
TIXI pmax pmax
comp=Z,4.0nm,1.4s,mb3.9
KSRS Korea Array 44.55 76 P P 09 46 14.5 +1.2
comp=Z,1.2nm,0.8s,mb3.8,baz=280,slow=7.5,SNR=4.4
KSRS Korea Array 44.55 76 P P 09 46 14.5 +1.2
KSRS pmax pmax
comp=Z,1.0nm,0.9s,mb3.6
MJAR Matsushiro Arr 52.30 72 P P 09 47 17.0 +3.9
comp=Z,1.7nm,0.8s,mb4.0,baz=290,slow=8.9,SNR=5.3
MJAR Matsushiro Arr 52.30 72 P P 09 47 17.0 +3.9
MJAR pmax pmax
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 53.79 294 P P 09 47 24.3 +0.4
comp=Z,0.3nm,0.3s,mb3.7,baz=55,slow=7.9,SNR=3.4
ESDC pP pP 09 47 28.9 -0.3
comp=Z,1.4nm,0.6s,baz=53,slow=9.1,SNR=2.4
SUMG Summit 55.30 340 *e*P P 09 47 36.6 +2.2
comp=Z,3.6nm,0.8s,mb4.5
SUMG *e*pP pP 09 47 41.9 +2.1
TORD Torodi Ar. Bea 64.69 265 P P 09 48 38.7 -1.1
comp=Z,0.3nm,0.4s,mb3.6,baz=38,slow=6.0,SNR=3.9
TORD pP pP 09 48 44.1 -0.9
comp=Z,0.6nm,0.5s,baz=42,slow=5.1,SNR=5.1

INK Inuvik 68.55 9 *e*P P 09 49 04.3 +0.7
comp=Z,94nm,0.9s
INK *e*pP pP 09 49 08.3 -0.6
INK Inuvik 68.55 9 *e*P P 09 49 04.3 +0.7
INK pmax pmax
comp=Z,94nm,0.9s
YKA Yellowknife Ar 75.67 2 pP pP 09 49 50.5 -1.1
comp=Z,2.0nm,0.8s,baz=356,slow=5.4,SNR=4.9
TSUM Tsumeb 77.45 229 *e*P P 09 49 58.0 +1.1
comp=Z,6.0nm,0.9s,mb4.5
TSUM *e*pP pP 09 50 02.1 -0.2
BOSA Boshof 81.27 218 pP pP 09 50 22.0 -0.9
comp=Z,2.8nm,0.9s,baz=28,slow=2.5,SNR=4.1
WRA Warramunga Arr 86.09 121 P P 09 50 42.4 0.0
comp=Z,0.5nm,0.6s,mb4.0,baz=328,slow=4.7,SNR=10
WRA pP pP 09 50 47.8 0.0
comp=Z,0.8nm,0.6s,baz=326,slow=4.4,SNR=7.5
WRA Warramunga Arr 86.09 121 P P 09 50 42.4 0.0
WRA *PP pP 09 50 47.8 -0.1
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA pmax pmax
comp=Z,1.0nm,0.6s
JCW Jim Creek 89.50 7 *e*P P 09 50 58.8 +0.3
JCW *e*pP pP 09 51 04.3 +0.3
PDAR Pinedale Array 95.47 359 P P 09 51 26.8 +0.6
comp=Z,0.1nm,0.3s,mb3.7,baz=7.1,slow=4.3,SNR=3.2

*ISCJB **07** 09:56:03.5±0.4, 1380N±004×12063E±008, h178km±4km, mb3.6/9, Error ellipse: s-maj=12.1km s-min=6.0km az=174.3*
*MAN **07** 09:56:05, 1385N×12068E, h137km, mb4.2, ML3.0, MS2.8*
*IDC **07** 09:56:06.3±0.9, 1374N×12077E, h195km±9km, mb3.4/9, mb1 3.6/10, mb1mx3.4/20, mbtmp3.4/10, Error ellipse: s-maj=29.1km s-min=10.5km az=66.0*
ISC 07 09:56:04.4±0.4, **1380N**±004×**12064E**±007, **h171**km±4km, **h196**km±3.4km:**pP-P**, **n28**,σ1°**13**/32, **mb3.6**/9, **2D**, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.39**	**261**	*e*P		**Pn**	**09 56 28.0**	**+0.3**
LUBP				*e*S		**Sn**	**09 56 41.0**	**-4.5**
TGY	**Tagaytay City**	**0.42**	**44**⇓	*e*P		**Pn**	**09 56 28.9**	**+1.1**
SJMP	**San Jose**	**1.41**	**161**	*e*P		**Pn**	**09 56 34.2**	**-0.6**
SJMP				*e*S		**Sn**	**09 56 55.5**	**-2.7**
BUSP	**Coron**	**1.84**	**194**	*e*P		**Pn**	**09 56 39.4**	**+0.3**
BUSP				*e*S		**Sn**	**09 57 05.7**	**-0.2**
OTRP	**Odiongan**	**1.96**	**137**	*e*P		**Pn**	**09 56 40.2**	**-0.3**
OTRP				*e*S		**Sn**	**09 57 06.7**	**-1.6**
SCZP	**Santa Cruz**	**2.09**	**340**	*e*P		**Pn**	**09 56 41.1**	**-0.7**
SCZP				*e*S		**Sn**	**09 57 08.2**	**-2.7**
BALP	**Baler**	**2.13**	**25**	*e*P		**Pn**	**09 56 43.1**	**+0.7**
BALP				*e*S		**Sn**	**09 57 13.1**	**+1.4**
BOLP	**Bolinao**	**2.66**	**345**	*e*P		**Pn**	**09 56 48.8**	**+0.2**
ENPP	**El Nido**	**2.84**	**205**	*e*P		**Pn**	**09 56 52.2**	**+1.5**
CUYO	**Cuyo Island**	**2.95**	**173**	*e*P		**Pn**	**09 56 53.0**	**+0.9**
RCP	**Roxas**	**3.03**	**137**⇓	*e*P		**Pn**	**09 56 54.3**	**+1.2**
CAUP	**Cauayan**	**3.33**	**20**	*e*P		**Pn**	**09 56 55.0**	**-1.7**
PVCP	**Virac**	**3.42**	**93**	*e*P		**Pn**	**09 56 59.3**	**+1.4**
GUIM	**Jordan**	**3.68**	**149**	*e*P		**Pn**	**09 57 02.7**	**+1.5**
ABRA	**Dolores**	**3.83**	**1**	*e*P		**Pn**	**09 57 02.9**	**-0.1**
KAPI	**Kappang**	**18.71**	**183**	P		**P**	**10 00 10.6**	**+0.5**
	0.8nm,0.3s,baz=63,slow=16,SNR=2.6							
CMAR	**Chiang Mai Arr**	**21.35**	**285**	P		**P**	**10 00 40.1**	**+1.8**
	1.4nm,0.5s,mb3.5,baz=95,slow=8.2,SNR=10							
KSRS	**Korea Array**	**24.44**	**14**	P		**P**	**10 01 08.0**	**+0.7**
	0.6nm,0.5s,mb3.4,baz=187,slow=9.4,SNR=3.9							
SONM	**Songino Array**	**35.95**	**344**	P		**P**	**10 02 48.4**	**0.0**
	0.9nm,0.6s,mb3.5,baz=161,slow=11,SNR=5.0							
WRA	**Warramunga Arr**	**36.14**	**158**	P		**P**	**10 02 48.3**	**-2.0**
	0.8nm,0.5s,mb3.6,baz=340,slow=9.2,SNR=11							
WRA				pP		pP	10 03 28.4	+1.7
	1.4nm,0.7s,baz=337,slow=9.5,SNR=4.5							
ASAR	**Alice Springs**	**39.43**	**161**	P		**P**	**10 03 16.9**	**-1.0**
	1.3nm,0.5s,mb3.9,baz=338,slow=6.8,SNR=37							
ASAR				pP		pP	10 03 58.2	+3.5
	0.5nm,0.6s,baz=333,slow=6.7,SNR=2.5							
ASAR				PcP		PcP	10 05 21.5	-1.1
	0.6nm,1.0s,baz=12,slow=4.7,SNR=4.2							
MKAR	**Makanchi Array**	**45.92**	**324**	P		**P**	**10 04 10.3**	**+0.4**
	1.3nm,0.8s,mb3.6,baz=129,slow=10.0,SNR=6.8							
MKAR				pP		pP	10 04 54.3	+6.7
	0.8nm,0.8s,baz=124,slow=8.0,SNR=3.0							
ZALV	**Zalesovo Beam**	**48.94**	**333**	P		**P**	**10 04 33.4**	**+0.2**
	0.6nm,0.4s,mb3.6,baz=125,slow=7.6,SNR=2.9							
KURK	**Kurchatov**	**50.08**	**326**	P		**P**	**10 04 41.8**	**0.0**
	baz=130,slow=7.5							
ARCES	**ARCESS Array B**	**78.97**	**339**	P		**P**	**10 07 47.7**	**-1.1**
	2.5nm,0.8s,mb3.9,baz=72,slow=5.2,SNR=7.1							
NOA	**NORSAR Array B**	**87.15**	**333**	P		**P**	**10 08 29.7**	**-1.2**
	1.0nm,0.7s,mb3.8,baz=53,slow=2.1,SNR=2.9							
TXAR	**Lajitas Array**	**119.44**	**44**	PKP	PKPdf		10 14 34.0	-0.3
	0.3nm,0.5s,baz=183,slow=1.7,SNR=7.4							
PLCA	**Paso Flores**	**151.44**	**162**	PKPbc	PKPbc		10 15 38.3	0.0
	2.3nm,0.8s,baz=227,slow=2.9,SNR=4.5							

*CSEM **07** 09:57:18.2, 30.37N×36.45E, h7km, ML2.9, After SNSN*
*SGS **07** 09:57:18.2, 30.37N×36.45E, h7km*
*ISCJB **07** 09:57:22.9±0.9, 2982N±004×36.24E±005, h0km, Error ellipse: s-maj=6.5km s-min=5.4km az=15.3*
*GII **07** 09:57:23.8±0.8, 2989N×36.14E, h0km, ML2.6/4, EXPLOSION*
ISC 07 09:57:22.9±0.9, **2980N**±004×**3628E**±005, **h0**km, **n17**, σ0°**71**/**28**, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.08**	**266**	Pg		**Pg**	**09 57 43.5**	**-0.1**
HRFI	**Mount Harif**	**1.11**	**282**	Pg		**Pg**	**09 57 43.6**	**-0.5**
HRFI				Sg		**Sg**	**09 57 59.4**	**+0.9**
EIL	**Elat**	**1.17**	**264**	Pg		**Pg**	**09 57 45.4**	**+0.2**
HQLS		**1.18**	**245**	P		**Pg**	**09 57 45.2**	**-0.2**
MBRI	**Mt Berech**	**1.19**	**270**	Pg		**Pg**	**09 57 45.5**	**-0.2**
MBRI				Sg		**Sg**	**09 58 03.1**	**+1.9**
ZFRI	**Zfri**	**1.22**	**308**	Pg		**Pg**	**09 57 45.0**	**-1.2**
ZFRI				Sg		**Sg**	**09 58 01.4**	**-0.6**
PRNI	**Paran**	**1.24**	**297**	Pg		**Pg**	**09 57 45.5**	**-1.1**
PRNI				Sg		**Sg**	**09 58 02.4**	**-0.2**
KRMI	**Paran Flat**	**1.39**	**283**	Pg		**Pg**	**09 57 48.6**	**-0.9**
KRMI				Sg		**Sg**	**09 58 07.5**	**0.0**
RMNI	**Mount Ramon**	**1.54**	**301**	Pn		**Pn**	**09 57 51.0**	**-0.6**
MZDA	**Masada**	**1.70**	**332**	Pn		**Pn**	**09 57 53.5**	**-0.3**
MZDA				Sn		**Sn**	**09 58 15.9**	**-0.3**
BDAS	**Al Bad'**	**1.72**	**217**	P		**Pn**	**09 57 54.4**	**+0.4**
YTIR	**Yattir**	**1.85**	**327**	Pn		**Pn**	**09 57 55.7**	**-0.2**
RTMI	**Retamim**	**1.86**	**313**	Pn		**Pn**	**09 57 56.1**	**+0.1**
RTMI				Sn		**Sn**	**09 58 19.7**	**-0.4**
DSI	**Dead Sea**	**1.93**	**336**	Pn		**Pn**	**09 57 57.1**	**+0.2**
DSI				Sn		**Sn**	**09 58 23.4**	**+1.6**
KZIT	**Kziot**	**1.97**	**304**	Pn		**Pn**	**09 57 58.0**	**+0.5**
KZIT				Sn		**Sn**	**09 58 22.6**	**-0.3**
RSHS		**1.98**	**221**	P		**Pn**	**09 57 57.5**	**-0.2**
RSHS				S		**Sn**	**09 58 27.4**	**+4.1**
HMDT	**Nahal Hemdat**	**2.53**	**345**	Pn		**Pn**	**09 58 06.0**	**+0.9**
HMDT				Sn		**Sn**	**09 58 37.4**	**+0.7**

*ISCJB **07** 10:05:05.5±0.6, 3628N±005×13769E±007, h230km±4km, mb3.1/2, Error ellipse: s-maj=9.4km s-min=7.3km az=19.0*
*JMA **07** 10:05:05.8±0.2, 3622N×13772E, h233km±2km, M3.3*
*IDC **07** 10:05:06.0±0.8, 3609N×13731E, h211km±28km, mb2.9/2, mb1 3.1/2, mb1mx2.8/21, mbtmp2.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/15, Error ellipse: s-maj=93.6km s-min=21.7km az=63.0*
ISC 07 10:05:06.5±0.6, **3628N**±005×**13768E**±007, **h225**km±4km, **n20**, σ0°**46**/**29**, **mb3.1**/2, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.50**	**58**	P		**Pn**	**10 05 36.8**	**+0.4**
MAT				S		**S**	**10 06 00.3**	**+0.5**
MJAR	**Matsushiro Arr**	**0.50**	**58**	P		**Pn**	**10 05 36.7**	**+0.3**
	36nm,0.3s,baz=241,slow=4.2,SNR=341							
MJAR				S		**S**	**10 06 00.1**	**+0.3**
	1.9nm,0.3s,baz=256,slow=21,SNR=13							
JGM	**Miyama**	**0.97**	**234**	P		**Pn**	**10 05 38.5**	**-0.2**
JGM				S		**S**	**10 06 03.0**	**-0.8**
JRY	**Ryogami san**	**1.02**	**104**	P		**Pn**	**10 05 39.1**	**+0.2**
JRY				*e*S		**S**	**10 06 04.2**	**0.0**
JYN	**Shimob**	**1.05**	**138**	P		**Pn**	**10 05 38.9**	**-0.2**

JKG	**Kaga**	**1.09**	**270**	P		**Pn**	**10 05 39.5**	**+0.1**
JSZ	**Suzu**	**1.20**	**348**	P		**Pn**	**10 05 40.3**	**+0.3**
JSZ				*eS*		**S**	**10 06 06.5**	**0.0**
JAG	**Ashikaga**	**1.44**	**84**	P		**Pn**	**10 05 41.5**	**-0.4**
JAG				*eS*		**S**	**10 06 09.1**	**-0.4**
JOD2	**Odawara 2**	**1.53**	**131**	P		**Pn**	**10 05 42.9**	**+0.3**
JOD2				*eS*		**S**	**10 06 11.2**	**+0.3**
JSD	**Sado**	**1.81**	**15**	P		**Pn**	**10 05 45.5**	**+0.4**
JSD				*eS*		**S**	**10 06 15.2**	**-0.3**
JNS	**Sasagawa**	**2.02**	**40**	P		**Pn**	**10 05 47.4**	**+0.4**
JIE	**Ise**	**2.04**	**203**	P		**Pn**	**10 05 47.5**	**+0.1**
JIE				*eS*		**S**	**10 06 18.8**	**-0.6**
JWT	**Wachi**	**2.10**	**243**	P		**Pn**	**10 05 47.8**	**-0.1**
JAW	**Awa shima**	**2.51**	**29**	P		**Pn**	**10 05 52.4**	**+0.4**
JMM	**Marumori**	**2.95**	**57**	P		**Pn**	**10 05 57.0**	**+0.2**
JMM				*eS*		**S**	**10 06 34.9**	**-1.6**
JHJ	**Hachijo jima 2**	**3.59**	**151**	S		**S**	**10 06 50.7**	**+0.7**
	13nm,0.3s,baz=288,slow=20,SNR=4.7							
ASAJ	**Asahikawa**	**8.68**	**24**	LR		LR	10 11 46.3	
	comp=Z,68nm,18.3s,baz=339,slow=45							
KURK	**Kurchatov**	**44.04**	**308**	P		**P**	**10 12 52.0**	**+0.3**
	baz=82,slow=7.3							
WRA	**Warramunga Arr**	**56.00**	**184**	P		**P**	**10 14 21.0**	**-0.7**
	0.4nm,0.4s,mb3.3,baz=360,slow=7.6,SNR=17							
ASAR	**Alice Springs**	**59.73**	**184**	P		**P**	**10 14 47.5**	**0.0**
	0.2nm,0.7s,mb2.9,baz=4.4,slow=16,SNR=3.0							

IDC 07 10:08:44.4±1.6, 079N×9732E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/21, mbtmp4.1/9, ML4.4/1, Error ellipse: s-maj=51.9km s-min=18.0km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.63**	**5**	P	Pn	10 12 50.1	-1.4
	0.5nm,0.3s,baz=194,slow=12,SNR=11						
WRA	**Warramunga Arr**	**41.72**	**122**	P	P	10 16 35.1	-0.3
	1.7nm,0.7s,baz=299,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**43.06**	**127**	P	P	10 16 46.5	+0.3
	1.3nm,0.7s,baz=297,slow=7.7,SNR=22						
KSRS	**Korea Array**	**46.12**	**34**	P	P	10 17 10.3	-0.2
	2.0nm,0.7s,baz=220,slow=9.4,SNR=8.2						
SONM	**Songino Array**	**47.52**	**8**	P	P	10 17 21.3	0.0
	1.0nm,0.4s,baz=186,slow=9.1,SNR=9.6						
MKAR	**Makanchi Array**	**47.66**	**346**	P	P	10 17 22.8	+0.3
	2.8nm,0.5s,baz=160,slow=7.9,SNR=26						
MJAR	**Matsushiro Arr**	**51.91**	**42**	P	P	10 17 55.4	+0.4
	1.4nm,0.7s,baz=234,slow=4.9,SNR=3.9						
KURK	**Kurchatov**	**52.22**	**345**	P	P	10 17 56.8	-0.2
	baz=168,slow=7.1						
ZALV	**Zalesovo Beam**	**53.98**	**351**	P	P	10 18 09.9	0.0
	2.7nm,0.4s,baz=182,slow=7.4,SNR=20						
BVAR	**Borovoye Array**	**56.67**	**341**	P	P	10 18 29.2	-0.2
	1.2nm,0.7s,baz=164,slow=7.1,SNR=5.2						
TXAR	**Lajitas Array**	**143.95**	**32**	PKP	PKPdf	10 28 20.4	-2.3
	0.3nm,0.8s,baz=270,slow=0.9,SNR=3.5						

*ISCJB **07** 10:16:59.9±0.6, 3347N±003×3558E±004, h0km, Error ellipse: s-maj=5.7km s-min=3.8km az=25.2*
*GII **07** 10:16:59.1±0.9, 3341N×3563E, h0km, ML2.3/4, EXPLOSION*
*CSEM **07** 10:17:00.6, 3342N×3561E, h7km, ML3.0, After GRAL*
*GRAL **07** 10:17:00.6±0.3, 3342N×3561E, h8km±2km, MD3.0*
ISC 07 10:17:00.3±0.6, 3348N±003×3559E±004, h0km, n16, σ0s92/25, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.19**	**88**	*eP*	**Pg**	**10 17 04.5**	**+0.5**
RCY				*eS*	**Sg**	**10 17 07.5**	**+1.0**
MATL	**Matirih**	**0.22**	**273**	*eP*	**Pg**	**10 17 05.1**	**+0.6**
HRI	**Mount Hermon**	**0.24**	**151**	Pg	**Pg**	**10 17 03.8**	**-1.2**
KSDI	**Kefar Szold**	**0.29**	**169**	Pg	**Pg**	**10 17 05.0**	**-0.9**
KSDI				Sg	**Sg**	**10 17 09.3**	**-0.3**
BHL	**Bhannes**	**0.43**	**7**	*eP*	**Pg**	**10 17 09.5**	**+0.9**
MMA1	**Mount Meron ar**	**0.48**	**199**	Pg	**Pg**	**10 17 08.8**	**-0.9**
MMA1				Sg	**Sg**	**10 17 17.2**	**+1.3**
MMC7	**Mount Meron ar**	**0.48**	**200**	Pg	**Pg**	**10 17 08.9**	**-0.7**
MMC7				Sg	**Sg**	**10 17 17.1**	**+1.1**
MMA2	**Mount Meron ar**	**0.49**	**199**	Pg	**Pg**	**10 17 08.9**	**-0.8**
HNTI	**Hanita**	**0.53**	**222**	Pg	**Pg**	**10 17 10.4**	**0.0**
HNTI				Sg	**Sg**	**10 17 20.5**	**+3.2**
KSHT	**Keshet**	**0.53**	**160**	Pg	**Pg**	**10 17 09.9**	**-0.5**
KSHT				Sg	**Sg**	**10 17 18.3**	**+1.0**
HWQ	**Hawqa**	**0.85**	**20**	*eP*	**Pg**	**10 17 16.7**	**+0.1**
OFRI	**'Ofer**	**1.00**	**211**	Pg	**Pg**	**10 17 19.1**	**-0.3**
MMLI	**Mount Malkishu**	**1.05**	**188**	Pg	**Pg**	**10 17 19.6**	**-0.8**
MMLI				Sg	**Sg**	**10 17 34.9**	**+0.9**
HMDT	**Nahal Hemdat**	**1.22**	**183**	Pg	**Pg**	**10 17 22.6**	**-1.1**
HMDT				Sg	**Sg**	**10 17 40.7**	**+1.1**
SLTI	**Sal'it**	**1.32**	**201**	Pg	**Pg**	**10 17 24.6**	**-1.0**
SLTI				Sg	**Sg**	**10 17 43.1**	**+0.4**
DSI	**Dead Sea**	**1.91**	**185**	Pn	**Pn**	**10 17 33.0**	**-1.2**

IDC 07 10:43:50.8±2.7, 1577S×7421W, h43km±25km, mb3.5/4, mb1 3.8/7, mb1mx3.6/18, mbtmp3.7/7, ML4.4/3, MS2.9/2, Ms1 3.0/2, ms1mx2.4/25, Error ellipse: s-maj=64.2km s-min=21.5km az=37.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.55**	**325**	P	Pn	10 44 57.9	+0.8
	10nm,0.3s,baz=133,slow=11,SNR=11						
NNA				S	Sn	10 45 58.8	+10
	86nm,0.3s,baz=234,slow=16,SNR=8.6						
LPAZ	**La Paz**	**5.86**	**96**	P	Pn	10 45 22.2	+7.1
	3.1nm,0.3s,baz=275,slow=9.8,SNR=62						
LPAZ				LR	LR	10 47 43.3	
	comp=Z,74nm,19.8s,baz=117,slow=40						
LVC	**Limon Verde**	**8.45**	**145**	P	Pn	10 45 50.4	-0.2
	1.7nm,0.3s,baz=316,slow=11,SNR=18						
LVC				S	Sn	10 47 18.5	-6.2
	0.9nm,0.3s,baz=240,slow=20,SNR=3.1						
LVC				Lg		10 48 18.5	
	0.3nm,0.3s,baz=350,slow=23,SNR=7.3						
LVC				LR	LR	10 49 11.2	
	comp=Z,121nm,19.0s,baz=103,slow=38						
ATAH	**Atahualpa**	**9.63**	**334**	P	Pn	10 46 14.0	+7.2
	0.9nm,0.3s,baz=146,slow=7.3,SNR=4.4						
ATAH				S	Sn	10 48 07.1	+13
	0.6nm,0.3s,baz=324,slow=19,SNR=6.0						
SIV	**San Ignacio**	**12.64**	**93**	P	Pn	10 46 47.6	-0.4
	0.6nm,0.3s,baz=274,slow=12,SNR=6.9						
TXAR	**Lajitas Array**	**53.10**	**328**	P	P	10 53 03.6	-0.5
	0.1nm,0.4s,baz=148,slow=11,SNR=3.6						
PDAR	**Pinedale Array**	**66.68**	**32**	P	P	10 54 37.2	0.0
	0.1nm,0.5s,baz=146,slow=9.8,SNR=2.5						
DBIC	**Dimbokro**	**72.17**	**78**	P	P	10 55 11.6	-0.1
	1.6nm,0.4s,baz=227,slow=8.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**80.36**	**73**	P	P	10 55 58.5	+0.4
	2.8nm,0.7s,baz=264,slow=5.4,SNR=19						
SONM	**Songino Array**	**148.02**	**359**	PKPbc	PKPbc	11 03 31.5	-0.1
	0.3nm,0.3s,baz=325,slow=1.8,SNR=3.9						

IDC 07 10:48:51.1±2.7, 8480N×485E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.5/24, mbtmp3.6/7, ML3.7/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/42, Error ellipse: s-maj=52.5km s-min=28.1km az=121.0, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**6.85**	**160**	Pn	Pn	10 50 30.4	-2.2
	baz=82,slow=14,SNR=26						
SPITS				Sn	Sn	10 51 42.2	-8.8
	baz=347,slow=16,SNR=2.5						
ARCES	**ARCESS Array B**	**15.80**	**153**	Pn	Pn	10 52 32.1	-2.3
	0.3nm,0.3s,baz=4.2,slow=14,SNR=12						
ARCES				LR	LR	10 58 18.3	
	comp=Z,124nm,18.8s,baz=180,slow=36						
NOA	**NORSAR Array B**	**23.93**	**172**	LR	LR	11 01 38.5	
	comp=Z,63nm,20.3s,baz=340,slow=32						
HFS	**Hagfors**	**24.87**	**169**	LR	LR	11 03 51.1	
	comp=Z,69nm,21.8s,baz=70,slow=36						
AKASG	**Malin Array Be**	**34.78**	**153**	P	P	10 55 41.5	-1.1
	0.3nm,0.3s,baz=353,slow=8.5,SNR=2.4						
BVAR	**Borovoye Array**	**35.27**	**108**	P	P	10 55 47.0	+0.1
	0.7nm,0.6s,baz=354,slow=8.3,SNR=3.7						
BVAR				LR	LR	11 12 14.2	
	comp=Z,86nm,19.3s,baz=335,slow=40						
ZALV	**Zalesovo Beam**	**35.65**	**93**	LR	LR	11 11 33.6	
	comp=Z,40nm,19.9s,baz=331,slow=38						
GERES	**GERESS Array B**	**36.18**	**170**	LR	LR	11 11 30.4	
	comp=Z,82nm,18.3s,baz=270,slow=38						
AKTO	**Aktyubinsk**	**36.82**	**121**	P	P	10 55 60.0	-0.2
	0.6nm,0.6s,baz=354,slow=10,SNR=4.1						
AKTO				LR	LR	11 13 31.1	
	comp=Z,98nm,20.3s,baz=232,slow=40						
KURK	**Kurchatov**	**38.29**	**100**	P	P	10 56 12.7	+0.2
	baz=350,slow=7.7						
SONM	**Songino Array**	**43.65**	**73**	P	P	10 56 57.3	+0.5
	0.2nm,0.4s,baz=346,slow=11,SNR=2.6						
PDAR	**Pinedale Array**	**49.76**	**299**	LR	LR	11 18 21.3	
	comp=Z,82nm,20.9s,baz=216,slow=36						
ELK	**Elko**	**52.22**	**304**	LR	LR	11 22 01.3	
	comp=Z,85nm,18.7s,baz=3.0,slow=38						
ANMO	**Albuquerque**	**57.27**	**295**	LR	LR	11 23 23.5	
	comp=Z,66nm,20.9s,baz=336,slow=36						
TORD	**Torodi Ar. Bea**	**71.71**	**183**	P	P	11 00 14.8	+0.3
	0.4nm,0.7s,baz=348,slow=6.2,SNR=3.2						

IDC 07 10:52:07.5±27.0, 1847S×17210W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=519.4km s-min=174.3km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**39.27**	**261**	P	P	10 59 38.0	-0.3
	2.6nm,1.1s,baz=85,slow=15,SNR=2.4						
STKA	**Stephens Creek**	**43.67**	**243**	P	P	11 00 14.3	0.0
	1.0nm,0.6s,baz=102,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**50.41**	**254**	P	P	11 01 07.0	-0.1
	0.6nm,0.5s,baz=99,slow=7.7,SNR=13						
WRA	**Warramunga Arr**	**50.42**	**259**	P	P	11 01 07.3	+0.1
	0.1nm,0.3s,baz=96,slow=6.8,SNR=11						

*BJI **07** 11:04:01.8, 4.14S×10070E, h37km, mB5.1, mb5.0, Ms4.7, Msz4.6*
*IDC **07** 11:04:04.4±3.3, 358S×10062E, h12km±20km, mb4.6/20, mb1 4.7/21, mb1mx4.6/24, mbtmp4.6/21, ML4.8/1, MS4.2/6, Ms1 4.1/6, ms1mx3.6/32, Error ellipse: s-maj=19.4km s-min=12.5km az=53.0*
*ISCJB **07** 11:04:05.2±0.3, 362S±005×10069E±005, h31km, mb5.0/65, MS4.4/20, Error ellipse: s-maj=8.3km s-min=5.4km az=137.3*
*MOS **07** 11:04:06.4±1.3, 344S×10081E, h33km, mb5.2/21, MS4.4/4, Error ellipse: s-maj=13.8km s-min=6.9km az=100.5*
*DJA **07** 11:04:07, 349S×10037E, h10km, Mw5.3/4*
*NEIC **07** 11:04:07.0±0.2, 365S×10072E, mb5.1/29, Error ellipse: s-maj=7.5km s-min=5.0km az=57.0*
ISC 07 11:04:07.4±0.3, 364S±004×10069E±005, h33km, h33km±8km: pP-P, n157, σ1s09/142, mb5.0/65, MS4.4/20, 6C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.90**	**90**	P	**Pn**	**11 04 44.7**	**+7.1**
PDSI	**Padang**	**2.72**	**355**	P	**Pn**	**11 04 47.6**	**-1.3**
PPI	**Padang Panjang**	**3.18**	**355**	P	**Pn**	**11 04 54.5**	**-0.6**
RGRI	**Rengat**	**3.66**	**27**	P	**Pn**	**11 05 03.0**	**+1.2**
BLSI	**Bandar Lampung**	**4.86**	**111**	P	**Pn**	**11 05 27.5**	**+9.3**
	272nm,0.7s,1.1nm						
PPBI	**Pangkal Pinang**	**5.64**	**75**	P	**Pn**	**11 05 31.3**	**+2.3**
	37nm,1.0s,1μm0.4nm						
DBJI	**Dramaga**	**6.70**	**116**	P	**Pn**	**11 05 45.6**	**+2.1**
	166nm,1.0s,3μm0.7nm						
CBJI	**Citeko**	**6.73**	**114**	P	**Pn**	**11 05 49.4**	**+5.4**
	721nm,0.7s,2.3nm						
TPI	**Tanjungpandan**	**7.01**	**83**	P	Px	11 05 59.0	
	42nm,0.9s,0.2nm						
LEM	**Lembang**	**7.59**	**115**	P	**Pn**	**11 05 58.6**	**+2.8**
	159nm,1.0s,2μm0.5nm						
COCO	**West Island**	**9.31**	**204**	*e*Pn	**Pn**	**11 06 17.1**	**-2.2**
BJII	**Banjamegara**	**9.70**	**113**	P	Px	11 06 37.0	
BSI	**Banda Aceh**	**10.56**	**329**	P	**Pn**	**11 06 35.4**	**-1.1**
	79nm,1.0s						
SNG	**Songkhla**	**10.75**	**360**	P	**Pn**	**11 06 38.0**	**-1.1**
	100nm,1.0s						
KAPI	**Kapang**	**19.06**	**95**	Pn	**Pn**	**11 08 26.0**	**-2.1**
	234nm,1.1s,SNR=11						
KAPI	**Kapang**	**19.06**	**95**	P	**Pn**	**11 08 27.1**	**-1.0**
	3.0nm,0.3s,baz=267,slow=9.8,SNR=16						
KAPI	**Kapang**	**19.06**	**95**	*e*P	**Pn**	**11 08 26.8**	**-1.3**
	59nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.03**	**356**	P	**P**	**11 08 57.1**	**-2.1**
	25nm,0.8s,mb4.7,baz=185,slow=9.9,SNR=37						
CMAR				PcP	PcP	11 12 58.3	+1.4
	0.7nm,0.3s,baz=213,slow=2.9,SNR=4.6						
CHG	**Chiang Mai**	**22.38**	**356**	⇓P	**P**	**11 09 03.7**	**+0.7**
	20nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**22.38**	**356**	P	**P**	**11 09 01.3**	**-1.7**
	15nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**22.38**	**356**	P	**P**	**11 09 01.3**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.5						
CHRT	**Chiangrai**	**23.38**	**358**	⇑P	**P**	**11 09 10.0**	**-3.6**
	comp=Z,105nm,1.0s,mb5.2						
QIZ	**Qiongzhong**	**24.27**	**21**	P	**P**	**11 09 22.0**	**+0.3**
QIZ				S	**S**	**11 13 41.5**	**+3.0**
QIZ				LR	LR		
	comp=Z,608nm,7.1s						
QIZ	**Qiongzhong**	**24.27**	**21**	*e*P	**P**	**11 09 20.2**	**-1.5**
	comp=Z,364nm,2.3s,mb5.4						
KMI	**Kunming**	**28.66**	**4**	P	**P**	**11 10 01.7**	**+0.4**
KMI				AP	pP	11 10 12.0	+1.2
KMI				XP	sP	11 10 16.5	+1.7
KMI				PP	PP	11 10 57.7	-8.8
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,67nm,5.1s						
KMI				LR	LR		
	comp=N,626nm,13.6s,MS4.4						
KMI				LR	LR		
	comp=E,541nm,18.5s,MS4.4						
KMI				LR	LR		
	comp=Z,643nm,12.3s						
KMI	**Kunming**	**28.66**	**4**	P	**P**	**11 10 01.7**	**+0.4**
KMI				*PP	pP	11 10 12.0	+1.2
KMI				*SP	sP	11 10 16.5	+1.7
KMI						11 10 57.7	
KMI				PPP		11 11 10.2	
KMI				S	**S**	**11 14 51.5**	**+3.4**
KMI				*SS	sS	11 15 07.0	+3.2
SHL	**Shillong**	**30.27**	**344**	*e*P	**P**	**11 10 16.0**	**+0.5**
GYA	**Guiyang**	**30.48**	**11**	⇓*i*P	**P**	**11 10 21.0**	**+3.6**
GYA				AP	pP	11 10 29.2	+2.3
GYA				XP	sP	11 10 34.6	+3.7
GYA				PP	PP	11 11 22.0	-4.6
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,100nm,5.6s						
GYA				LR	LR		
	comp=N,2μm,15.8s,MS4.9						
GYA				LR	LR		
	comp=E,940nm,12.7s,MS4.9						
GYA				LR	LR		
	comp=Z,1μm,11.4s,MS4.8						
ODAN	**Odare**	**32.94**	**338**	*e*P	**P**	**11 10 40.1**	**+1.1**
	comp=Z,97nm,0.9s,mb5.7						
NWAO	**Narrogin (SRO)**	**32.99**	**154**	LR	LR	11 23 51.3	
	comp=Z,372nm,18.1s,MS4.1,baz=196,slow=36						
TAPN	**Taplejung**	**33.26**	**339**	*e*P	**P**	**11 10 43.3**	**+1.5**
	comp=Z,205nm,0.9s,mb6.1						
RAMN	**Ramite**	**33.32**	**337**	*e*P	**P**	**11 10 43.9**	**+1.5**
JIRN	**Jiri**	**34.12**	**337**	*e*P	**P**	**11 10 50.6**	**+1.3**
	comp=Z,87nm,0.9s,mb5.7						
NACB	**Ninganchiao**	**34.33**	**35**	*e*P	**P**	**11 10 50.4**	**-0.8**
	comp=Z,142nm,0.9s,mb5.9						
PKI	**Pulchoki**	**34.35**	**336**	*e*P	**P**	**11 10 52.1**	**+0.8**
LSA	**Lhasa**	**34.39**	**345**	*e*P	**P**	**11 10 52.7**	**+1.1**
	comp=Z,19nm,1.1s,mb4.9						
LSA				*epP	pP	11 11 01.7	+0.6
LSA	**Lhasa**	**34.39**	**345**	*eP	**P**	**11 10 52.7**	**+1.1**
LSA				*e*PP	pP	11 11 01.7	+0.5
LSA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
GUN	**Gumba**	**34.46**	**336**	*e*P	**P**	**11 10 53.6**	**+1.3**
	comp=Z,129nm,0.9s,mb5.9						
CD2	**Chengdu**	**34.48**	**5**	P	**P**	**11 10 51.6**	**-0.8**
CD2				AP	pP	11 11 01.2	-0.8
CD2				XP	sP	11 11 05.8	-0.1
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,110nm,4.8s						
CD2				LR	LR		
	comp=N,630nm,13.0s,MS4.7						
CD2				LR	LR		
	comp=E,910nm,17.4s,MS4.7						
CD2				LR	LR		
	comp=Z,750nm,10.8s						
DMN	**Daman**	**34.51**	**335**	*e*P	**P**	**11 10 53.5**	**+0.8**
YHNB	**Yeheng**	**34.59**	**34**	*e*P	**P**	**11 10 52.9**	**-0.5**
	comp=Z,30nm,1.0s,mb5.2						
KKN	**Kakani**	**34.60**	**336**	*e*P	**P**	**11 10 54.3**	**+0.8**
GKN	**Gorkha**	**35.06**	**335**	*e*P	**P**	**11 10 58.2**	**+0.8**
KOLN	**Koldanda**	**35.31**	**333**	*e*P	**P**	**11 11 00.5**	**+0.9**
	comp=Z,62nm,0.8s,mb5.6						
DANN	**Dangsing**	**35.74**	**334**	*e*P	**P**	**11 11 04.1**	**+0.9**
PYUN	**Piuthan**	**35.87**	**333**	*e*P	**P**	**11 11 05.2**	**+0.8**
WRA	**Warramunga Arr**	**36.59**	**119**	P	**P**	**11 11 10.4**	**-0.3**
	comp=Z,7.7nm,0.5s,mb4.8,baz=285,slow=7.8,SNR=63						
WRAB	**Tennant Creek**	**36.59**	**119**	P	**P**	**11 11 10.0**	**-0.7**
	comp=Z,102nm,0.6s,mb5.8,SNR=29						
WRAB	**Tennant Creek**	**36.59**	**119**	*e*P	**P**	**11 11 10.8**	**+0.1**
	comp=Z,9.7nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**36.59**	**119**	*e*P	**P**	**11 11 10.8**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
WB2	**Warramunga Arr**	**36.60**	**119**	*e*P	**P**	**11 11 10.6**	**-0.2**
WB2				*epP	pP	11 11 20.5	+0.1
ASAR	**Alice Springs**	**37.75**	**125**	P	**P**	**11 11 21.4**	**+0.9**
	comp=Z,9.4nm,0.4s,mb4.9,baz=300,slow=7.7,SNR=62						
ASAR				PcP	PcP	11 13 38.4	+1.2
	comp=Z,1.5nm,0.7s,baz=308,slow=2.2,SNR=3.7						
XAN	**Xi'an**	**38.28**	**11**	P	**P**	**11 11 23.8**	**-0.9**
XAN				AP	pP	11 11 35.0	+0.6
XAN				XP	sP	11 11 38.9	+0.5
XAN				PP	PP	11 12 54.5	+1.7
XAN				S	**S**	**11 17 20.3**	**+3.5**
XAN				XS	sS	11 17 35.5	+2.8
XAN				AMB	AMB		
	comp=Z,53nm,0.8s,mb5.3						
XAN				AMB	AMB		
	comp=Z,40nm,4.3s						
XAN				LR	LR		
	comp=N,224nm,12.9s,MS4.5						
XAN				LR	LR		
	comp=E,486nm,12.9s,MS4.5						
XAN				LR	LR		
	comp=Z,569nm,12.9s,MS4.6						
NJ2	**Nanjing**	**39.48**	**25**	*e*P	**P**	**11 11 36.1**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
LZH	**Lanzhou**	**39.63**	**4**	*e*P	**P**	**11 11 36.0**	**-0.1**
LZH				AMB	AMB		
	comp=Z,84nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,213nm,5.7s						
LZH				LR	LR		
	comp=E,528nm,12.9s						
LZH				LR	LR		
	comp=Z,814nm,15.2s,MS4.7						
LZH	**Lanzhou**	**39.63**	**4**	*e*P	**P**	**11 11 36.0**	**-0.1**
LZH				pP	pP	11 11 45.8	+0.1
LZH				sP	sP	11 11 50.0	+0.3
LZH				PP	PP	11 13 02.6	-5.0
LZH				*eS	**S**	**11 17 38.0**	**+0.9**
LZH				sS	sS	11 17 53.8	+0.7
LZH				*eSS	SS	11 20 27.9	-5.4
SMLA	**Simla**	**41.21**	**329**	*i*P	**P**	**11 11 49.4**	**+0.1**
GTA	**Gaotai**	**42.85**	**359**	⇑P	**P**	**11 12 02.7**	**+0.3**
GTA				AP	pP	11 12 12.7	+0.5
GTA				XP	sP	11 12 16.7	+0.6
GTA				S	**S**	**11 18 25.6**	**+0.8**
GTA				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,86nm,4.2s						
GTA				LR	LR		
	comp=N,261nm,17.1s,MS4.5						
GTA				LR	LR		
	comp=E,424nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=Z,327nm,18.3s,MS4.3						
HHC	**Hu-ho-hao-te**	**45.38**	**12**	*e*P	**P**	**11 12 23.7**	**+1.0**
HHC				AP	pP	11 12 32.5	0.0
HHC				XP	sP	11 12 37.3	+0.8
HHC				PCP	PcP	11 14 01.7	-0.1
HHC				PP	PP	11 14 11.2	+1.8
HHC				S	**S**	**11 19 02.6**	**+0.9**
HHC				XS	sS	11 19 20.5	+2.7
HHC				SCS	ScS	11 22 15.3	-1.7
HHC				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.0						
HHC				AMB	AMB		
	comp=Z,190nm,6.4s						
HHC				LR	LR		
	comp=N,493nm,17.8s,MS4.6						
HHC				LR	LR		
	comp=E,431nm,21.4s,MS4.6						
HHC				LR	LR		
	comp=Z,442nm,17.3s,MS4.5						
BJT	**Baijiatuao**	**45.72**	**17**	*e*P	**P**	**11 12 25.6**	**+0.2**
	comp=Z,15nm,0.6s,mb5.1						
BJT	**Baijiatuao**	**45.72**	**17**	*e*P	**P**	**11 12 25.6**	**+0.2**
BJT				pmax	pmax		
	comp=Z,15nm,0.6s						
GUMO	**Guam**	**47.06**	**68**	*e*P	**P**	**11 12 34.8**	**-1.6**
	comp=Z,135nm,1.0s,mb5.8						
GUMO	**Guam**	**47.06**	**68**	*e*P	**P**	**11 12 34.8**	**-1.6**
GUMO				pmax	pmax		
	comp=Z,135nm,1.0s,mb5.8						
CTA	**Charters Tower**	**47.29**	**114**	P	**P**	**11 12 38.4**	**+0

EKS2 Erkin-Say 52.13 335 *e*P **P** **11 13 15.4 +0.9**
comp=Z,20nm,0.8s,mb5.1
EKS2 Erkin-Say 52.13 335 P **P** **11 13 15.5 +1.0**
SNR=13
CN2 Changchun 52.22 23 ⇑P **P** **11 13 14.0 -1.2**
CN2 *e*S **S** **11 20 36.3 -1.5**
CN2 SS SS 11 24 13.1 -2.7
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.3
CN2 AMB AMB
comp=Z,210nm,4.0s
CN2 LR LR
comp=N,310nm,19.0s,MS4.5
CN2 LR LR
comp=E,270nm,19.0s,MS4.5
CN2 LR LR
comp=Z,210nm,20.0s,MS4.2
USP Ospenovka 52.33 336 P **P** **11 13 16.5 +0.5**
SNR=12
MK31 Makanchi Array 52.79 344 *e*P **P** **11 13 19.4 +0.1**
MK31 *e*pP pP 11 13 30.1 +0.8
MKAR Makanchi Array 52.79 344 P **P** **11 13 19.4 +0.1**
comp=Z,17nm,0.7s,mb5.1,baz=148,slow=8.2,SNR=132
MAJO Matsushiro 53.13 38 *e*P **P** **11 13 21.6 -0.4**
comp=Z,6.7nm,0.6s,mb4.8
MAJO Matsushiro 53.13 38 *e*P **P** **11 13 21.7 -0.4**
MAJO pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
MAT Matsushiro 53.13 38 P **P** **11 13 20.0 -2.1**
MJAR Matsushiro Arr 53.13 38 P **P** **11 13 21.3 -0.7**
comp=Z,9.1nm,0.9s,mb4.7,baz=220,slow=7.7,SNR=15
ZAK Zakamensk 53.86 2 *e*P **P** **11 13 25.2 -1.9**
ZAK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MDJ Mudanjiang 54.56 25 P **P** **11 13 32.3 -0.1**
MDJ AP pP 11 13 41.4 -1.0
MDJ XP sP 11 13 45.3 -1.0
MDJ SCP ScP 11 18 31.0 -0.5
MDJ PCS PcS 11 18 34.8 0.0
MDJ S **S** **11 21 10.3 +0.7**
MDJ XS sS 11 21 26.0 -0.1
MDJ AMB AMB
comp=Z,7.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,34nm,3.5s
MDJ LR LR
comp=N,203nm,16.8s,MS4.5
MDJ LR LR
comp=E,272nm,18.7s,MS4.5
MDJ LR LR
comp=Z,321nm,12.3s
MDJ Mudanjiang 54.56 25 *e*P **P** **11 13 31.9 -0.5**
comp=Z,5.5nm,0.7s,mb4.7
TLY Talaya 55.17 2 *e*P **P** **11 13 36.2 -0.4**
comp=Z,10.0nm,0.8s,mb4.9
TLY Talaya 55.17 2 *e*P **P** **11 13 36.0 -0.6**
TLY *e*S **S** **11 21 05.9 -12**
TLY pmax pmax
comp=Z,13nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,198nm,15.0s,MS4.3
HIA Hailar 55.23 15 *e*P **P** **11 13 36.5 -0.6**
comp=Z,2.4nm,0.3s,mb4.7
HIA Hailar 55.23 15 *e*P **P** **11 13 36.5 -0.6**
HIA pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 58.90 349 P **P** **11 14 02.6 -0.3**
comp=Z,28nm,0.9s,mb5.3,baz=163,slow=5.7,SNR=22
KLR Kul'dur 59.15 23 *e*P **P** **11 14 00.0 -4.9**
HABR Khabarovsk 59.93 26 *e*P **P** **11 14 07.8 -2.4**
HABR *e* pP 11 14 17.1 -3.2
HABR *e* 11 14 53.7
HABR *e* 11 23 54.6
HABR *e* 11 26 14.9
ASAJ Asahikawa 60.58 34 P **P** **11 14 14.9 +0.1**
comp=Z,15nm,0.9s,mb5.1,baz=236,slow=10,SNR=7.2
BVAR Borovoye Array 61.95 340 P **P** **11 14 23.1 -0.8**
comp=Z,10nm,0.6s,mb5.1,baz=142,slow=8.7,SNR=44
BRVK Borovoye 62.02 340 *e*P **P** **11 14 23.4 -0.9**
comp=Z,13nm,0.7s,mb5.2
BRVK Borovoye 62.02 340 *e*P **P** **11 14 23.5 -0.8**
comp=Z,12nm,0.8s,mb5.1
BRVK Borovoye 62.02 340 *e*P **P** **11 14 23.5 -0.8**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb5.1
BRVK Borovoye 62.02 340 *e*P **P** **11 14 23.5 -0.8**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb5.1
BOD Bodaibo 62.20 8 *e*P **P** **11 14 24.2 -1.2**
BOD pmax pmax
comp=Z,14nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 62.51 31 *e*P **P** **11 14 27.2 -0.6**
comp=Z,274nm,0.7s,mb6.5
YSS Yuzh-Sakhalins 62.51 31 ⇑*i*P **P** **11 14 27.0 -0.8**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.5
AKTK Aktyubinsk 65.12 331 P **P** **11 14 43.6 -1.3**
AKTO Aktyubinsk 65.12 331 P **P** **11 14 43.6 -1.3**
comp=Z,4.3nm,0.6s,mb4.7,baz=126,slow=8.7,SNR=8.0
MAW Mawson 68.87 195 P **P** **11 15 08.5 +0.1**
comp=Z,0.7nm,0.3s,mb4.1,baz=306,slow=8.5,SNR=3.5
MAW LR 11 39 08.6
comp=Z,119nm,21.0s,MS4.1,baz=68,slow=30
MAW Mawson 68.87 195 *e*P **P** **11 15 08.6 +0.2**
YAK Yakutsk 69.15 14 *e*P **P** **11 15 09.2 -1.0**
comp=Z,23nm,0.5s,mb5.4
YAK Yakutsk 69.15 14 *e*P **P** **11 15 08.6 -1.6**
YAK *e**PP pP 11 15 16.7 -3.7
YAK *e* 11 15 21.1
YAK *e*S S 11 24 10.1 -3.4
YAK *e* 11 25 08.1
YAK pmax pmax
comp=Z,27nm,0.9s,mb5.2
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=Z,5.0nm,0.2s,mb5.1
YAK pmax pmax
comp=E,3.0nm,0.4s
YAK smax
comp=N,66nm,3.3s
YAK smax
comp=E,32nm,2.8s
YAK MLR MLR
comp=Z,233nm,16.0s,MS4.5
YAK MLR MLR
comp=N,105nm,14.0s,MS4.4
YAK MLR MLR
comp=E,117nm,16.0s,MS4.4
MATP Matopo 72.05 250 P **P** **11 15 29.1 +0.4**
comp=E,2.2nm,0.7s,mb4.2,baz=110,slow=6.4,SNR=5.6
RPZ Rata Peaks 73.34 135 LR LR 11 47 00.5
comp=E,290nm,20.5s,MS4.5,baz=182,slow=35
PETK Petropavlovsk- 73.91 32 P **P** **11 15 38.9 -0.1**
comp=E,3.1nm,0.7s,mb4.3,baz=180,slow=2.9,SNR=3.1
VRHR Novokhopersk 74.06 326 *e*P **P** **11 15 42.5 +2.5**
VRHR pmax pmax
comp=N,20nm,0.3s
VRHR pmax pmax
comp=E,20nm,0.3s
VRHR pmax pmax
comp=Z,20nm,0.3s,mb5.5
BR131 Keskin Array S 74.93 313 *e*P **P** **11 15 44.9 -0.4**
comp=Z,1.3nm,0.5s,mb4.1
BR131 *e*pP pP 11 15 55.2 -0.4
BRTR Keskin Array B 74.93 313 P **P** **11 15 44.8 -0.5**
comp=Z,3.1nm,0.8s,mb4.3,baz=133,slow=6.3,SNR=12
VORD Divnogorie 75.33 325 *e*P **P** **11 15 45.7 -1.7**
VORD pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
VORD pmax pmax
comp=N,5.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.6s
BOSA Boshof 75.47 242 LR LR 11 41 52.8
comp=E,117nm,20.0s,MS4.2,baz=262,slow=30
VSR Storozhevoye 75.51 325 *e*P **P** **11 15 47.3 -1.1**
VSR *e**PP pP 11 15 55.8 -2.9
VSR *e**SP sP 11 16 01.6 -0.9
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.5s
TIXI Tiksi 77.36 9 *e*P **P** **11 15 57.0 -1.5**
comp=E,5.8nm,0.8s,mb4.6
TIXI Tiksi 77.36 9 *e*P **P** **11 15 57.0 -1.5**
TIXI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TIXI MLR MLR
comp=Z,352nm,19.0s,MS4.7
OBN Obninsk 78.54 328 ⇑*i*P **P** **11 16 05.0 -0.4**
OBN *i* pP 11 16 14.4 -1.3
OBN *i* 11 19 06.5
OBN pmax pmax
comp=Z,39nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.2
KLMR Klimovskoe 79.60 334 P **P** **11 16 10.4 -0.6**
KLMR pmax pmax
comp=Z,22nm,1.4s,mb4.9
KLMR Klimovskoe 79.60 334 P **P** **11 16 10.4 -0.6**
KLMR pmax pmax
comp=Z,22nm,1.4s,mb4.9
AKASG Malin Array Be 81.20 322 P **P** **11 16 19.3 -0.5**
comp=Z,0.2nm,0.2s,baz=79,slow=5.7,SNR=7.2
AKASG Malin Array Be 81.20 322 *i* P **P** **11 16 20.6 +0.8**
BUR08 Bucovina Âr. S 82.96 319 *e*P **P** **11 16 29.6 +0.5**
BUR08 *e*pP pP 11 16 39.5 -0.1
JOF Joensuu 83.99 334 *e*p sP 11 16 48.7 +0.4
comp=E,61nm,0.8s
JOF Joensuu 83.99 334 *e*P sP 11 16 48.7 +0.4
JOF pmax pmax
comp=Z,61nm,0.8s,mb5.8
BILL Bilibino 84.45 20 ⇑*i*P **P** **11 16 38.0 +1.6**
BILL *e* 11 19 54.7
BILL pmax pmax
comp=Z,22nm,2.5s,mb4.8
KAF Kangasniemi 85.95 333 *e*p **P** **11 16 44.3 +0.3**
comp=Z,9.1nm,0.6s,mb5.2
KAF Kangasniemi 85.95 333 *e*P **P** **11 16 44.3 +0.3**
comp=Z,9.1nm,0.6s,mb5.2
ARCES ARCESS Array B 88.24 340 P **P** **11 16 54.1 -0.9**
comp=Z,5.7nm,0.8s,mb4.9,baz=99,slow=5.4,SNR=7.6
GERES GERESS Array B 90.73 319 P **P** **11 17 07.2 +0.1**
comp=Z,0.4nm,0.5s,mb4.0,baz=155,slow=4.1,SNR=4.7
CLL Collm 91.37 321 *e*P **P** **11 17 10.0 +0.1**
TORD Torodi Ar. Bea 99.57 283 LR LR 11 59 07.3
comp=Z,92nm,19.4s,MS4.3,baz=185,slow=33
NVAR Mina Array Bea 130.41 40 PKP PKPdf 11 23 15.9 +0.9
comp=Z,0.9nm,0.7s,baz=285,slow=1.7,SNR=7.5
NVAR SKPbc SKPbc 11 26 37.6 +1.6
comp=Z,0.8nm,0.8s,baz=280,slow=3.5,SNR=5.7
ELK Elko 130.93 36 PKP PKPdf 11 23 16.6 +0.7
comp=Z,0.9nm,0.4s,baz=220,slow=4.1,SNR=6.9
HWUT Hardware Ranch 132.43 33 *e*PKPdf PKPdf 11 23 18.8 0.0
PDAR Pinedale Array 132.66 30 PKP PKPdf 11 23 19.5 +0.4
comp=Z,0.3nm,0.7s,baz=5.7,slow=1.5,SNR=4.2
MSU Marysvale 134.17 36 *e*PKPdf PKPdf 11 23 23.9 +1.8
ANMO Albuquerque 139.95 36 *i* PKIKP PKPdf 11 23 34.1 +1.2
SIUC Southern Illin 144.90 14 *e*PKPdf PKPdf 11 23 40.5 -1.1
WCI Wyandotte Cave 144.99 10 *e*PKPdf PKPdf 11 23 40.5 -1.2
TXAR Lajitas Array 145.56 40 PKPbc PKPbc 11 23 44.1 +1.0
comp=Z,20nm,0.7s,baz=292,slow=1.0,SNR=227
MIAR Mount Ida 146.52 22 *e*PKPbc PKPbc 11 23 45.9 0.0
WVT Waverly 146.73 13 *e*PKPbc PKPbc 11 23 46.1 -0.4
JCT Junction City 147.03 34 *e*PKPdf PKPdf 11 23 45.3 -0.1
JCT *e*PKPbc PKPbc 11 23 48.1 +0.7
TKL Tuckaleechee C 147.88 7 PKPbc PKPbc 11 23 49.2 -0.4
comp=Z,10nm,0.8s,baz=105,slow=2.8,SNR=7.8
OXF Oxford 147.88 16 *e*PKPbc PKPbc 11 23 49.3 -0.4
HKT Hockley 149.52 29 *e*PKPbc PKPbc 11 23 55.4 +1.3
SIV San Ignacio 153.43 222 PKPbc PKPbc 11 24 03.7 +0.3
comp=Z,0.4nm,0.6s,baz=193,slow=15,SNR=2.7

NIED ***07*** *11:05:00, 38.30N×141.70E, h62km, Mw4.5 Best double couple: M0 6.64000×10^15 NP1:φs191.00000°, δ90.00000°, λ101.00000°. NP2:φs284.00000°, δ11.00000°, λ2.00000°.*
BJI ***07*** *11:05:39.2, 38.31N×141.82E, h79km, mB4.9, mb4.8, Ms4.3, Msz4.2*
MOS ***07*** *11:05:40.4±1.2, 38.40N×141.66E, h68km, mb4.9/34, Error ellipse: s-maj=8.6km s-min=6.2km az=97.6*
IDC ***07*** *11:05:41.4±0.5, 38.36N×141.56E, h57km±3km, mb4.1/17, mb1 4.2/19, mb1mx4.2/25, mbtmp4.1/19, MS3.6/7, Ms1 3.6/7, ms1mx3.2/36, Error ellipse: s-maj=14.8km s-min=10.5km az=87.0*
NEIC ***07*** *11:05:41.7±0.2, 38.36N×141.61E, mb4.9/38, MW4.5(NIED), Error ellipse: s-maj=6.2km s-min=4.4km az=146.0*
NEIC Felt at Ishinomaki, Kesennuma and Okawara and in Taiwa. Recorded [2 JMA] in Fukushima, Iwate, Miyagi and Yamagata; [1 JMA] in Ibaraki Prefectures.
JMA ***07*** *11:05:41.8, 3833N×141.64E, h61km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs255.00000°, δ29.00000°, λ-44.00000°. NP2:φs26.00000°, δ70.00000°, λ-112.00000°. Principal axes: T Plg22.0000°, Azm132.0000°; N Plg20.0000°, Azm33.0000°; P Plg59.0000°, Azm265.0000°;*
JMA Felt II J1.
ISCJB ***07*** *11:05:41.0±0.1, 3837N±002×14160E±002, h61km, mb4.7/66 Error ellipse: s-maj=3.7km s-min=2.2km az=159.7*

ISC 07 11:05:42.7±0.1, 3837N±002×14154E±002, h63km, h63km±1.5km:pP-P, n390, σ0s74/411, mb4.7/66, 131C-103D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.17**	**300**	⇑P	**Pn**	**11 05 51.9**	**-0.5**
JIO				S	**Sn**	**11 05 58.9**	**-0.5**
JMK	**Ichinoseki**	**0.63**	**337**	⇑P	**Pn**	**11 05 56.4**	**0.0**
JMK				S	**Sn**	**11 06 06.9**	**+0.6**
JOU	**Okura**	**0.69**	**270**	⇑P	**Pn**	**11 05 57.1**	**+0.1**
JOU				*e*S	**Sn**	**11 06 08.6**	**+1.2**
OFUJ	**Ofunato**	**0.72**	**8**	⇑P	**Pn**	**11 05 56.7**	**-0.6**
OFUJ				*e*S	**Sn**	**11 06 07.5**	**-0.6**
JMM	**Marumori**	**0.77**	**230**	⇑P	**Pn**	**11 05 57.2**	**-0.8**
JMM				S	**Sn**	**11 06 08.8**	**-0.5**
JYK	**Kaneyama**	**1.07**	**301**	⇑P	**Pn**	**11 06 02.3**	**+0.5**
JYK				*e*S	**Sn**	**11 06 17.6**	**+1.6**
JOM	**Ohasama**	**1.12**	**350**	⇑P	**Pn**	**11 06 02.3**	**-0.1**
JOM				*e*S	**Sn**	**11 06 17.6**	**+0.6**
JFK	**Kawauchi**	**1.13**	**208**	⇑P	**Pn**	**11 06 01.7**	**-0.9**
JFK				*e*S	**Sn**	**11 06 16.5**	**-0.8**
JYS	**Shirataka**	**1.17**	**263**	⇑P	**Pn**	**11 06 03.5**	**+0.5**
JYS				*e*S	**Sn**	**11 06 20.0**	**+1.8**
JFT	**Otama**	**1.27**	**228**	⇑P	**Pn**	**11 06 04.5**	**+0.1**
JFT				*e*S	**Sn**	**11 06 20.9**	**+0.2**
JYA	**Atsumi**	**1.45**	**279**	⇑P	**Pn**	**11 06 07.4**	**+0.7**
JYA				*e*S	**Sn**	**11 06 26.8**	**+2.0**
MJAR	**Matsushiro Arr**	**3.21**	**236**	P	**Pn**	**11 06 32.3**	**+1.6**
	59nm,0.3s,baz=37,slow=13,SNR=388						
MJAR				S	**Sn**	**11 07 14.0**	**+6.2**
	12nm,0.3s,baz=22,slow=23,SNR=3.8						
MJAR	**Matsushiro Arr**	**3.21**	**236**	P	**Pn**	**11 06 32.3**	**+1.6**
MJAR				S	**Sn**	**11 07 14.0**	**+6.2**
MJAR				pmax	pmax		
	comp=Z,59nm,0.3s						
MJAR				smax			
	comp=Z,12nm,0.3s						
MAJO	**Matsushiro**	**3.22**	**236**	*e*Pn	**Pn**	**11 06 32.7**	**+1.9**
MAT	**Matsushiro**	**3.22**	**236**	P	**Pn**	**11 06 32.9**	**+2.1**
MAT				S	**Sn**	**11 07 11.1**	**+3.2**
ERM	**Erimo**	**3.85**	**18**	*e*Pn	**Pn**	**11 06 38.0**	**-1.4**
ERM				*e*Sn	**Sn**	**11 07 22.1**	**-1.2**
JHJ	**Hachijo jima 2**	**5.43**	**196**	P	**Pn**	**11 06 59.0**	**-2.1**
	comp=Z,49nm,0.3s,baz=258,slow=22,SNR=29						
JHJ				S	**Sn**	**11 07 56.6**	**-5.5**
	comp=Z,92nm,0.3s,baz=82,slow=23,SNR=9.8						
ASAJ	**Asahikawa**	**5.80**	**8**	P	**Pn**	**11 07 04.4**	**-1.6**
	comp=Z,2.9nm,0.3s,baz=225,slow=15,SNR=21						
ASAJ				S	**Sn**	**11 08 09.1**	**-2.0**
	comp=Z,1.3nm,0.3s,baz=75,slow=20,SNR=2.9						
ASAJ				LR	LR	11 10 10.4	
	comp=Z,91nm,18.7s,baz=197,slow=46						
ASAJ	**Asahikawa**	**5.80**	**8**	P	**Pn**	**11 07 04.4**	**-1.6**
ASAJ				S	**Sn**	**11 08 09.1**	**-2.0**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,91nm,18.7s						
YUK	**Yuzh-Kuril'sk**	**6.53**	**29**	*e*P	**Pn**	**11 07 13.6**	**-2.5**
YUK				*e*S	**Sn**	**11 08 21.5**	**-7.6**
YUK				smax			
	comp=N,670nm,0.5s						
YUK				smax			
	comp=E,580nm,0.5s						
YSS	**Yuzh-Sakhalins**	**8.62**	**6**	*e*Pn	**Pn**	**11 07 43.2**	**-1.5**
	comp=E,61nm,1.4s						
YSS	**Yuzh-Sakhalins**	**8.62**	**6**	*e*P	**Pn**	**11 07 43.0**	**-1.7**
KSRS	**Korea Array**	**10.80**	**269**	P	**Pn**	**11 08 17.6**	**+3.2**
	comp=E,0.7nm,0.3s,baz=79,slow=14,SNR=20						
KSRS				S	**Sn**	**11 10 19.7**	**+6.2**
	comp=E,0.2nm,0.3s,baz=76,slow=24,SNR=4.3						
KSRS				LR	LR	11 12 10.1	
	comp=E,204nm,19.8s,baz=133,slow=36						
KSRS	**Korea Array**	**10.80**	**269**	P	**Pn**	**11 08 17.6**	**+3.2**
KSRS				S	**Sn**	**11 10 19.7**	**+6.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,205nm,19.8s						
KS15	**Wonju Array Si**	**10.83**	**269**	*e*Pn	**Pn**	**11 08 18.8**	**+3.9**
MDJ	**Mudanjiang**	**10.91**	**309**	P	**Pn**	**11 08 15.6**	**-0.3**
MDJ				S	**Sn**	**11 10 18.2**	**+1.9**
MDJ				AMB	AMB		
	comp=Z,8.0nm,3.9s						
MDJ	**Mudanjiang**	**10.91**	**309**	*e*Pn	**Pn**	**11 08 20.9**	**+5.0**
	comp=Z,29nm,1.0s						
HABR	**Khabarovsk**	**11.14**	**337**	*e*P	**Pn**	**11 08 24.7**	**+5.7**
HABR				*e*		11 10 29.8	
CBIJ	**Chichi jima**	**11.26**	**177**	P	**Pn**	**11 08 15.1**	**-5.7**
	comp=Z,9.8nm,0.3s,baz=292,slow=5.4,SNR=12						
CBIJ				S	**Sn**	**11 10 11.9**	**-13**
	comp=Z,8.0nm,0.3s,baz=229,slow=20,SNR=4.4						
INCN	**Inchon**	**11.80**	**270**	Pn	**Pn**	**11 08 28.0**	**-0.2**
KLR	**Kul'dur**	**12.94**	**330**	*e*P	**Pn**	**11 08 44.7**	**+1.2**
CN2	**Changchun**	**13.29**	**299**	*e*P	**Pn**	**11 08 53.9**	**+5.6**
CN2				*e*XP		11 09 12.9	
CN2				*e*S	**Sn**	**11 11 21.2**	**+7.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,90nm,3.0s						
DL2	**Dalian**	**15.57**	**278**	P	**Pn**	**11 09 20.2**	**+2.0**
DL2				AMB	AMB		
	comp=Z,30nm,1.2s						
SSE	**Sheshan**	**18.21**	**253**	P	**Pn**	**11 09 49.1**	**-1.9**
SSE				S	**Sn**	**11 13 12.2**	**-2.5**
SSE				XS	sS	11 13 35.9	-1.4
SSE				AMB	AMB		
	comp=Z,70nm,0.8s						
SSE				AMB	AMB		
	comp=Z,219nm,5.8s						
SSE				LR	LR		
	comp=N,405nm,15.9s						
SSE				LR	LR		
	comp=E,410nm,15.9s						
SSE				LR	LR		
	comp=Z,531nm,13.4s						
HIA	**Hailar**	**19.06**	**312**	*e*P	**Pn**	**11 09 59.5**	**-1.5**
	comp=Z,3.5nm,0.4s						
HIA	**Hailar**	**19.06**	**312**	*c i*P	**Pn**	**11 09 59.8**	**-1.2**
NJ2	**Nanjing**	**19.55**	**258**	*e*P	**Pn**	**11 10 07.2**	**+0.2**
NJ2				AP	pP	11 10 19.7	+1.0
NJ2				PP		11 10 27.4	
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,40nm,6.0s						
NJ2				LR	LR		
	comp=N,280nm,20.5s						
NJ2				LR	LR		
	comp=E,330nm,12.6s						
NJ2				LR	LR		
	comp=Z,450nm,20.4s						
BJI	**Beijing**	**19.71**	**283**	P	**Pn**	**11 10 06.3**	**-2.5**
BJI				S	**S**	**11 13 41.3**	**-4.3**
BJI				AMB	AMB		
	comp=Z,39nm,0.6s						
BJI				AMB	AMB		
	comp=Z,89nm,3.5s						
BJI				LR	LR		
	comp=N,162nm,25.3s						
BJI				LR	LR		
	comp=E,137nm,26.9s						
CLNS	**Chul'man**	**21.51**	**335**	*e*P	**P**	**11 10 23.3**	**-2.8**
CLNS				pmax	pmax		
	comp=E,7.0nm,1.3s						
CLNS				pmax	pmax		
	comp=N,14nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.0						
YHNB	**Yeheng**	**21.89**	**237**	P	**P**	**11 10 30.1**	**-0.3**
	comp=Z,12nm,0.5s,mb4.6						
NACB	**Ninganchiao**	**22.09**	**236**	*e*P	**P**	**11 10 31.0**	**-1.5**
	comp=Z,61nm,0.5s,mb5.3						
HHC	**Hu-ho-hao-te**	**23.17**	**286**	*e*P	**P**	**11 10 42.8**	**-1.0**
HHC				AP		11 10 58.3	
HHC				PP		11 11 14.9	
HHC				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.4						
HHC				AMB	AMB		
	comp=Z,107nm,10.2s						
HHC				LR	LR		
	comp=N,335nm,16.1s						
HHC				LR	LR		
	comp=E,431nm,16.7s						
HHC				LR	LR		
	comp=Z,247nm,16.7s						
YAK	**Yakutsk**	**24.79**	**347**	*e*P	**P**	**11 10 57.1**	**-1.2**
	comp=Z,23nm,0.7s,mb4.8						
YAK				*e*pP		11 11 12.8	
YAK	**Yakutsk**	**24.79**	**347**	*e*P	**P**	**11 10 56.6**	**-1.7**
YAK				*e**PP		11 11 10.1	
YAK				*e*		11 11 19.6	
YAK				*e*S	**S**	**11 15 13.7**	**-2.3**
YAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
YAK				pmax	pmax		
	comp=N,7.0nm,0.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.4s						
YAK				smax			
	comp=N,39nm,1.9s						
YAK				smax			
	comp=E,77nm,2.5s						
YAK				MLR	MLR		
	comp=Z,50nm,15.0s						
GUMO	**Guam**	**24.86**	**172**	*e*P	**P**	**11 10 56.5**	**-2.8**
	comp=Z,86nm,1.0s,mb5.2						
GUMO	**Guam**	**24.86**	**172**	*e*P	**P**	**11 10 56.6**	**-2.7**
GUMO				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.2						
BOD	**Bodaibo**	**26.46**	**326**	*e*P	**P**	**11 11 12.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
XAN	**Xi'an**	**26.59**	**271**	P	**P**	**11 11 13.4**	**-1.5**
XAN				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.7						
XAN				AMB	AMB		
	comp=Z,217nm,7.8s						
XAN				LR	LR		
	comp=E,486nm,15.5s						
XAN				LR	LR		
	comp=Z,566nm,15.5s						
ULN	**Ulaanbaatar**	**26.71**	**302**	*e*P	**P**	**11 11 15.4**	**-0.4**
	comp=Z,22nm,1.7s,mb4.4						
ULN	**Ulaanbaatar**	**26.71**	**302**	*e*P	**P**	**11 11 15.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.4						
SONM	**Songino Array**	**27.14**	**302**	P	**P**	**11 11 20.2**	**+0.5**
	comp=Z,5.5nm,0.7s,mb4.2,baz=100,slow=10.0,SNR=15						
SONM				LR	LR	11 21 40.1	
	comp=Z,89nm,18.0s,baz=262,slow=35						
SONM	**Songino Array**	**27.14**	**302**	P	**P**	**11 11 20.2**	**+0.5**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,89nm,18.0s						
ZAK	**Zakamensk**	**29.54**	**306**	*e*P	**P**	**11 11 34.3**	**-6.7**
ZAK				pmax	pmax		

comp=Z,4.0nm,1.0s,mb4.1
LZH Lanzhou 29.96 277 *e*P **P** **11 11 45.1 +0.2**
LZH AP pP 11 12 00.2 -0.2
LZH PP PP 11 12 44.6 -8.8
LZH *e*S **S** **11 16 36.5 -1.6**
LZH *e*SS SS 11 18 17.4 -30
LZH AMB AMB
comp=Z,21nm,1.3s,mb4.7
LZH AMB AMB
comp=Z,102nm,4.8s
LZH LR LR
comp=E,673nm,12.8s
LZH LR LR
comp=Z,989nm,15.7s
LZH Lanzhou 29.96 277 *e*P **P** **11 11 45.1 +0.2**
LZH pP pP 11 12 00.2 -0.2
LZH sP sP 11 12 07.5 -0.3
LZH PP PP 11 12 44.6 -8.8
LZH *e*S **S** **11 16 36.5 -1.6**
LZH sS sS 11 17 02.3 -2.1
LZH *e*SS SS 11 18 17.4 -30
GYA Guiyang 31.56 258 ⇓ *i*P **P** **11 12 00.8 +1.7**
GYA AP pP 11 12 16.9 +2.3
GYA XP sP 11 12 24.8 +2.8
GYA PP PP 11 13 06.2 -5.1
GYA PCP PcP 11 14 51.0 +0.6
GYA S **S** **11 17 02.7 -0.6**
GYA XS sS 11 17 31.8 +2.1
GYA PCS PcS 11 18 35.0 0.0
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,90nm,4.6s
GYA LR LR
comp=N,430nm,15.6s
GYA LR LR
comp=E,340nm,14.7s
GYA LR LR
comp=Z,420nm,15.4s
CD2 Chengdu 31.79 268 *e*P **P** **11 11 59.6 -1.5**
CD2 AP pP 11 12 15.4 -1.2
CD2 PP PP 11 13 06.8 -7.0
CD2 S **S** **11 17 04.4 -2.4**
CD2 SS SS 11 18 58.3 -27
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,90nm,5.8s
CD2 LR LR
comp=N,530nm,13.2s
CD2 LR LR
comp=E,810nm,16.2s
CD2 LR LR
comp=Z,630nm,10.8s
TIXI Tiksi 33.98 353 *c i*P **P** **11 12 18.5 -1.2**
TIXI pmax pmax
comp=Z,7.0nm,2.5s,mb4.2
KMI Kunming 35.28 260 P **P** **11 12 31.0 -0.5**
KMI AP pP 11 12 48.5 +1.4
KMI XP sP 11 12 56.4 +1.9
KMI PP PP 11 13 53.2 +0.7
KMI S **S** **11 18 00.0 -0.9**
KMI SS SS 11 20 19.4 -17
KMI AMB AMB
comp=Z,16nm,1.2s,mb4.8
KMI AMB AMB
comp=Z,277nm,5.3s
KMI LR LR
comp=N,556nm,15.1s
KMI LR LR
comp=E,462nm,12.6s
KMI LR LR
comp=Z,665nm,14.5s
KMI Kunming 35.28 260 P **P** **11 12 31.0 -0.5**
KMI *PP pP 11 12 48.5 +1.4
KMI *SP sP 11 12 56.4 +1.9
KMI 11 13 53.2
KMI PPP 11 14 12.8
KMI S **S** **11 18 00.0 -0.9**
KMI *SS sS 11 18 27.4 0.0
KMI SS SS 11 20 19.4 -17
KMI SSS 11 20 49.6
KRAR Krasnoyarsk 36.58 315 *c i*P **P** **11 12 42.9 +0.7**
KRAR pmax pmax
comp=Z,25nm,0.4s,mb5.4
WMQ Urumqi 40.34 295 *e*P **P** **11 13 14.0 +0.1**
ZAA0 Zalesovo Array 41.10 311 *e*P **P** **11 13 19.7 -0.3**
ZALV Zalesovo Beam 41.10 311 P **P** **11 13 19.8 -0.3**
comp=Z,10.0nm,0.5s,mb4.7,baz=87,slow=7.7,SNR=47
ZALV pP pP 11 13 33.8 -2.1
comp=Z,6.5nm,0.8s,baz=90,slow=10,SNR=5.3
ZALV sP sP 11 13 41.3 -2.0
comp=Z,12nm,0.7s,baz=90,slow=8.9,SNR=9.3
ZALV Zalesovo Beam 41.10 311 P **P** **11 13 19.8 -0.2**
ZALV *PP pP 11 13 33.8 -2.1
ZALV *SP sP 11 13 41.3 -1.9
ZALV pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
ZALV pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
ZALV pmax pmax
comp=Z,12nm,0.7s,mb4.6
CHTO Chiang Mai 41.73 254 *e*P **P** **11 13 24.7 -0.9**
comp=Z,7.2nm,0.7s,mb4.4
CHTO Chiang Mai 41.73 254 *e*P **P** **11 13 24.7 -0.9**
CHTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
CMAR Chiang Mai Arr 41.94 254 P **P** **11 13 27.2 -0.1**
comp=Z,1.4nm,0.5s,mb3.8,baz=46,slow=6.4,SNR=5.2
CMAR LR LR 11 32 12.1
comp=Z,45nm,21.1s,baz=210,slow=38
CMAR Chiang Mai Arr 41.94 254 *i*P **P** **11 13 29.8 +2.5**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
NVS Novosibirsk 42.00 313 *e*P **P** **11 13 26.6 -0.8**
NVS *e* 11 13 47.7
NVS pmax pmax
comp=Z,22nm,1.2s,mb4.7
NVS pmax pmax
comp=E,21nm,1.5s
LSA Lhasa 42.20 274 *e*P **P** **11 13 30.7 +1.4**
comp=E,7.0nm,0.4s,mb4.6
LSA *e*pP pP 11 13 46.3 +1.0
LSA Lhasa 42.20 274 *e*P **P** **11 13 30.7 +1.3**
LSA *e*PP pP 11 13 46.3 +1.0
LSA pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
MKAR Makanchi Array 43.50 301 P **P** **11 13 40.0 +0.3**
comp=Z,12nm,0.8s,mb4.7,baz=87,slow=8.4,SNR=5.8
MKAR Makanchi Array 43.50 301 P **P** **11 13 40.0 +0.3**
MKAR pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 45.20 307 P **P** **11 13 52.8 -0.3**
comp=Z,300nm,0.8s,mb6.2,SNR=17
KURK Kurchatov 45.20 307 P **P** **11 13 52.1 -1.0**
baz=81,slow=8.0
KURK pP pP 11 14 07.9 -1.3
baz=82,slow=8.3
KURK sP sP 11 14 15.1 -1.3
baz=81,slow=8.1
KURK Kurchatov 45.20 307 *e*P **P** **11 13 52.1 -1.0**
comp=Z,28nm,0.7s,mb5.2
KURK *e*pP pP 11 14 08.6 -0.6
KURK *e*sP sP 11 14 14.4 -2.1
KURK Kurchatov 45.20 307 P **P** **11 13 52.1 -1.0**
KURK *PP pP 11 14 07.9 -1.3
TAPN Taplejung 45.96 273 *e*P **P** **11 14 00.0 +0.5**
comp=Z,14nm,0.5s,mb5.2
ODAN Odare 46.44 272 *e*P **P** **11 14 04.1 +0.9**
comp=Z,20nm,0.5s,mb5.3
JIRN Jiri 47.01 274 *e*P **P** **11 14 08.2 +0.5**
RAMN Ramite 47.02 273 *e*P **P** **11 14 07.6 -0.2**
GUN Gumba 47.13 274 *e*P **P** **11 14 08.8 +0.2**
KKN Kakani 47.66 275 *e*P **P** **11 14 12.8 +0.1**
comp=Z,46nm,0.6s,mb5.7
KKN Kakani 47.66 275 *e*P **P** **11 14 12.8 +0.1**
KKN pmax pmax
comp=Z,46nm,0.6s,mb5.7
PKI Pulchoki 47.66 274 *e*P **P** **11 14 12.5 -0.2**
comp=Z,20nm,0.6s,mb5.3
PKI Pulchoki 47.66 274 *e*P **P** **11 14 12.5 -0.2**
PKI pmax pmax
comp=Z,20nm,0.6s,mb5.3
DMN Daman 47.88 275 *e*P **P** **11 14 14.4 0.0**
GKN Gorkha 48.06 275 *e*P **P** **11 14 15.5 -0.4**
comp=Z,46nm,0.6s,mb5.7
DANN Dangsing 48.59 276 *e*P **P** **11 14 20.2 +0.3**
comp=Z,135nm,0.6s
KOLN Koldanda 48.98 276 *e*P **P** **11 14 22.7 -0.2**
comp=Z,45nm,0.9s,mb5.5
TKM2 Tokmak 2 49.09 297 *e*P **P** **11 14 23.1 -0.4**
comp=Z,6.2nm,0.5s,mb4.9
TKM2 *e*pP pP 11 14 39.7 -0.2
TKM2 *e*sP sP 11 14 46.0 -1.0
TKM2 Tokmak 2 49.09 297 *e*P **P** **11 14 23.1 -0.4**
TKM2 *e**PP pP 11 14 39.7 -0.1
TKM2 *e**SP sP 11 14 46.0 -1.1
TKM2 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
PYUN Piuthan 49.31 276 *e*P **P** **11 14 25.2 -0.2**
comp=Z,31nm,0.5s,mb5.5
BVAR Borovoye Array 49.75 312 PcP PcP 11 15 48.1 -0.4
comp=Z,2.0nm,0.5s,baz=90,slow=3.0,SNR=2.7
BVAR LR LR 11 34 43.8
comp=Z,62nm,19.4s,baz=241,slow=35
AML Almayashu 50.68 297 *e*P **P** **11 14 36.1 +0.6**
comp=Z,8.3nm,0.9s,mb4.7
SMLA *ex* x 11 14 53.9
comp=N,51nm,0.6s
SMLA *ex* x 11 14 54.3
comp=E,49nm,0.3s
SMLA Simla 52.44 283 *i* S **P** **11 14 49.7 +0.8**
INK Inuvik 53.16 28 *e*P **P** **11 14 53.2 -0.4**
comp=E,97nm,0.9s,mb5.7
INK Inuvik 53.16 28 *e*P **P** **11 14 53.2 -0.4**
INK pmax pmax
comp=Z,97nm,0.9s
SVE Sverdlovsk 54.22 318 *e*P **P** **11 14 59.2 -2.3**
SVE pmax pmax
comp=Z,19nm,0.9s,mb5.0
SVE Sverdlovsk 54.22 318 *e*P **P** **11 14 59.2 -2.3**
SVE pmax pmax
comp=Z,19nm,0.9s,mb5.0
ARU Arti 55.43 318 *e*P **P** **11 15 08.8 -1.5**
comp=Z,12nm,0.4s,mb5.3
ARU *e*pP pP 11 15 25.3 -1.6
ARU *e*sP sP 11 15 31.9 -2.1
ARU Arti 55.43 318 *e*P **P** **11 15 08.8 -1.5**
ARU *e**PP pP 11 15 25.3 -1.5
ARU *e**SP sP 11 15 31.9 -2.1
ARU pmax pmax
comp=Z,11nm,0.4s,mb5.2
ARU Arti 55.43 318 ⇑ *e*P **P** **11 15 08.5 -1.8**
ARU pmax pmax
comp=Z,29nm,1.4s,mb5.1
KBL Kabul 57.04 290 *e*P **P** **11 15 21.4 -0.7**
comp=Z,7.9nm,0.8s,mb4.8
KBL *e*pP pP 11 15 38.4 -0.3
KBL Kabul 57.04 290 *e*P **P** **11 15 21.5 -0.6**
KBL *e**PP pP 11 15 38.4 -0.3
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CTA Charters Tower 58.31 175 P **P** **11 15 29.7 -1.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=356,slow=8.5,SNR=4.3
CTA Charters Tower 58.31 175 P **P** **11 15 29.7 -1.3**
CTA pmax pmax
comp=Z,2.0nm,0.7s
CTAO Charters Tower 58.31 175 *e*P **P** **11 15 30.2 -0.8**
comp=Z,2.9nm,0.8s,mb4.4
CTAO Charters Tower 58.31 175 *e*P **P** **11 15 30.2 -0.8**
CTAO pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
WRAB Tennant Creek 58.38 188 *e*P **P** **11 15 29.7 -1.8**
comp=Z,5.4nm,0.7s,mb4.7
WRAB *e*pP pP 11 15 46.4 -1.8
WRAB Tennant Creek 58.38 188 *e*P **P** **11 15 29.7 -1.8**
WRAB *e**PP pP 11 15 46.4 -1.8
WRAB pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WRA Warramunga Arr 58.39 188 P **P** **11 15 29.9 -1.6**
comp=Z,5.5nm,0.7s,mb4.7,baz=6.9,slow=7.2,SNR=26
WRA pP pP 11 15 46.8 -1.5
comp=Z,2.6nm,0.5s,baz=3.6,slow=7.3,SNR=6.3
WRA Warramunga Arr 58.39 188 P **P** **11 15 29.9 -1.7**
WRA *PP pP 11 15 46.8 -1.5
WRA pmax pmax
comp=Z,6.0nm,0.7s
WRA pmax pmax
comp=Z,3.0nm,0.5s
RES Resolute Bay 61.29 15 *e*P **P** **11 15 49.6 -1.2**
comp=Z,44nm,0.6s,mb5.8
RES Resolute Bay 61.29 15 *e*P **P** **11 15 49.6 -1.2**
RES pmax pmax
comp=Z,44nm,0.6s,mb5.8
POO Poona 61.42 272 *ex* x 11 16 11.0
ASAR Alice Springs 62.12 188 P **P** **11 15 56.0 -1.0**
comp=Z,3.0nm,0.8s,mb4.5,baz=11,slow=6.8,SNR=17
ASAR pP pP 11 16 12.4 -1.4
comp=Z,1.9nm,0.8s,baz=11,slow=7.3,SNR=4.8
ASAR Alice Springs 62.12 188 P **P** **11 15 56.0 -1.0**
ASAR *PP pP 11 16 12.4 -1.4
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
MBWA Marble Bar 62.65 203 *e*P **P** **11 15 59.7 -0.9**
comp=Z,12nm,1.0s,mb5.0
ARCES ARCESS Array B 62.78 339 P **P** **11 16 00.4 -0.5**
comp=Z,7.5nm,1.0s,mb4.8,baz=28,slow=5.5,SNR=4.5
ARCES ARCESS Array B 62.78 339 P **P** **11 16 00.4 -0.5**
ARCES pmax pmax
comp=Z,8.0nm,1.0s
B04A Port Angeles 65.62 47 ⇑P **P** **11 16 19.8 0.0**
baz=65
A05A Maple Falls 65.94 46 ⇑P **P** **11 16 22.0 +0.1**
baz=66
C04A Brinnon 66.10 47 ⇓P **P** **11 16 23.3 +0.3**
baz=66
B05A Bryant 66.32 46 ⇓P **P** **11 16 24.3 0.0**
baz=66
JCW Jim Creek 66.45 46 *e*P **P** **11 16 25.2 +0.1**
B07A Winthrop 67.33 46 ⇑P **P** **11 16 30.6 -0.2**
baz=67
F04A Amboy 67.36 49 ⇓P **P** **11 16 30.7 -0.3**
baz=67
C07A Waterville 67.78 46 ⇑P **P** **11 16 32.9 -0.7**
baz=68
B08A Colville Reser 67.83 45 ⇑P **P** **11 16 33.5 -0.4**
baz=68
E06A Yakima 67.88 48 ⇑P **P** **11 16 34.5 +0.3**
baz=68
A09A Danville 67.91 44 ⇓P **P** **11 16 34.2 -0.2**
baz=68
J02A Umpqua 68.03 52 ⇓P **P** **11 16 35.2 -0.1**
baz=68
C08A Higginbotham F 68.30 46 ⇑P **P** **11 16 36.1 -0.8**
baz=68
K02A Glendale 68.41 52 ⇑P **P** **11 16 37.7 +0.1**
baz=68
B09A Rice 68.45 45 ⇓P **P** **11 16 37.7 0.0**
baz=68
A10A Northport 68.47 44 ⇑P **P** **11 16 37.7 -0.2**
baz=68
C09A Chrisman Ranch 68.73 45 ⇓P **P** **11 16 39.2 -0.3**
baz=68
H05A Madras 68.76 49 ⇑P **P** **11 16 39.2 -0.5**
baz=68
D08A Wollman Farm, 68.78 46 ⇑P **P** **11 16 39.5 -0.3**
baz=68
F07A Phinny Hill Vi 68.84 48 ⇓P **P** **11 16 40.3 +0.1**
baz=69
NEW Newport 69.11 45 *e*P **P** **11 16 41.6 -0.2**
comp=Z,2.0nm,0.6s,mb4.2
NEW Newport 69.11 45 *e*P **P** **11 16 41.6 -0.3**
NEW pmax pmax
comp=Z,2.0nm,0.6s
A11A Hall Mountain, 69.13 44 ⇑P **P** **11 16 42.1 +0.1**
baz=69
H06A Lindquist Farm 69.25 49 ⇑P **P** **11 16 42.9 +0.1**
baz=69
B11A Sandpoint 69.42 44 ⇑P **P** **11 16 44.1 +0.3**
baz=69
YBH Yreka Blue Hor 69.45 53 ⇑P **P** **11 16 44.5 +0.3**
baz=69
A12A Yaak River Ran 69.53 43 ⇓P **P** **11 16 45.0 +0.6**
baz=69
M02C Callahan 69.55 53 ⇓P **P** **11 16 45.7 +0.9**
baz=69
I06A Prineville 69.76 50 ⇓P **P** **11 16 46.5 +0.6**
baz=70
C11A Tepee Creek (N 69.83 45 ⇑P **P** **11 16 46.1 -0.2**
baz=70,SNR=5.0
K05A Summer Lake 70.03 51 ⇓P **P** **11 16 48.2 +0.6**
baz=70
M03C McCloud 70.08 53 ⇓P **P** **11 16 48.2 +0.2**
baz=70
KIV Kislovodsk 70.11 311 P **P** **11 16 45.4 -2.7**
comp=Z,5.8nm,0.4s,mb4.9
KIV Kislovodsk 70.11 311 ⇑ *i*P **P** **11 16 47.8 -0.3**
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
J06A Christmas Vall 70.18 50 ⇓P **P** **11 16 48.9 +0.3**
baz=70
A13A Flathead Natio 70.19 43 ⇑P **P** **11 16 48.7 +0.2**
baz=70
WDC Whiskeytown Da 70.20 54 ⇓P **P** **11 16 48.8 +0.1**
baz=70
D11A Klaveano Farm, 70.24 45 ⇑P **P** **11 16 48.5 -0.3**
baz=70
H08A Prairie City 70.35 48 ⇓P **P** **11 16 49.6 +0.1**
baz=70
B13A Whitefish 70.49 43 ⇑P **P** **11 16 50.7 +0.3**
baz=70,SNR=5.4
GASB Alder Springs 70.60 55 ⇓P **P** **11 16 51.5 +0.3**
baz=70
J07A Hines 70.62 50 ⇓P **P** **11 16 51.6 +0.3**
baz=70,SNR=5.3
A14A Double T Ranch 70.70 42 ⇑P **P** **11 16 51.8 +0.2**
baz=70
G10A Bishop Farm, J 70.81 47 ⇑P **P** **11 16 52.4 +0.1**
baz=70
C13A Hot Springs 70.84 44 ⇑P **P** **11 16 53.0 +0.4**
baz=71
MOD Modoc 70.85 51 ⇓P **P** **11 16 52.6 -0.1**
baz=71
F11A Grangeville 71.01 46 ⇓P **P** **11 16 53.7 +0.1**
baz=71
E12A Beaver Dam Sad 71.04 45 ⇑P **P** **11 16 53.9 +0.2**
baz=71
K07A Rock Creek Ran 71.05 50 ⇑P **P** **11 16 54.2 +0.3**
baz=71
A15A Johnson Ranch, 71.06 42 ⇑P **P** **11 16 53.5 -0.3**
baz=71
J08A Circle Bar Ran 71.13 49 ⇓P **P** **11 16 54.2 -0.2**
baz=71
B14A Marquette Ranc 71.14 43 ⇓P **P** **11 16 54.8 +0.4**
baz=71
G11A Walters Elk Ra 71.23 47 ⇓P **P** **11 16 54.5 -0.4**
baz=71,SNR=5.4
D13A Huson 71.25 44 ⇓P **P** **11 16 54.9 -0.1**
baz=71
O04C Chester 71.26 53 ⇓P **P** **11 16 55.6 +0.5**
baz=71
L07A Adell 71.38 51 ⇑P **P** **11 16 56.5 +0.7**
baz=71,SNR=6.9
H10A Noah's Angus R 71.43 48 ⇓P **P** **11 16 56.0 -0.2**
baz=71
K08A Mann Creek Ran 71.48 50 ⇓P **P** **11 16 56.9 +0.4**
baz=71
B15A Bradely Ranch, 71.55 43 ⇑P **P** **11 16 56.8 +0.1**
baz=71,SNR=7.3
J09A Fry Pan Ranch, 71.56 49 ⇓P **P** **11 16 57.3 +0.3**
baz=71
F12A Elk City 71.60 46 ⇑P **P** **11 16 57.3 +0.2**
baz=71
A16A West Butte Ran 71.67 42 ⇓P **P** **11 16 57.2 -0.3**
baz=71
D14A Greenough 71.78 44 ⇓P **P** **11 16 58.0 -0.2**
baz=72
H11A Donnelly 71.79 47 ⇓P **P** **11 16 57.7 -0.6**
baz=72
N06A Buffalo Meadow 71.80 52 ⇓P **P** **11 16 58.2 -0.2**
baz=72
C15A Salmond Ranch, 71.85 43 ⇓P **P** **11 16 58.8 +0.2**
baz=72,SNR=5.9
L08A Fields 71.88 50 ⇑P **P** **11 16 58.7 -0.2**
baz=72
B16A M & M Farms, S 71.94 42 ⇑P **P** **11 16 58.9 -0.2**
baz=72
K09A Rome 71.96 50 ⇑P **P** **11 16 59.3 -0.1**
baz=72
BEKR Beckwourth 71.98 53 ⇓P **P** **11 16 59.2 -0.3**
baz=72,SNR=5.5
O06A Flanigan 72.14 53 ⇓P **P** **11 17 00.8 +0.3**
baz=72
I11A Placerville 72.29 48 ⇑P **P** **11 17 01.7 +0.4**
baz=72
M08A Happy Creek Ra 72.29 51 ⇓P **P** **11 17 01.8 +0.4**
baz=72
C16A Fuhringer Ranc 72.30 43 ⇓P **P** **11 17 01.2 -0.1**
baz=72
L09A Wilkinson Ranc 72.39 50 ⇑P **P** **11 17 02.2 +0.3**
baz=72
K10A MacKenzie Ranc 72.42 49 ⇑P **P** **11 17 02.4 +0.3**
baz=72
H12A Diamond D Ranc 72.55 47 ⇑P **P** **11 17 02.7 -0.1**
baz=72
G13A Cobalt 72.58 46 ⇓P **P** **11 17 02.8 -0.2**
baz=72
E15A Deer Lodge 72.65 44 ⇑P **P** **11 17 03.5 +0.1**
baz=72
ANN Anapa 72.68 314 *e*P **P** **11 17 03.8 +0.2**
ANN pmax pmax
comp=Z,117nm,1.2s,mb5.7
WCN Washoe City 72.69 53 ⇑P **P** **11 17 03.3 -0.4**
baz=72
O07A Toulon 72.74 52 ⇑P **P** **11 17 04.1 +0.1**
baz=72
I12A Atlanta 72.84 48 ⇓P **P** **11 17 04.5 -0.1**
baz=73,SNR=5.5
D16A Dana Ranch, Ca 72.88 43 ⇑P **P** **11 17 04.6 -0.1**
baz=73
C17A Wharram Farm, 72.92 42 ⇓P **P** **11 17 04.7 -0.3**
baz=73
K11A Parker Ranch, 72.92 49 ⇓P **P** **11 17 04.9 -0.2**
baz=73
NB2 NORSAR Subarra 73.00 337 P **P** **11 17 04.4 -0.7**
comp=Z,9.7nm,0.8s,mb4.8,baz=40,slow=6.2
NOA NORSAR Array B 73.00 337 P **P** **11 17 04.8 -0.4**
comp=Z,2.8nm,0.8s,mb4.3,baz=39,slow=5.9,SNR=5.3
NOA pP pP 11 17 20.8 -1.6
comp=Z,7.0nm,0.8s,baz=38,slow=5.9,SNR=9.0
NOA LR LR 11 51 11.9
comp=Z,91nm,18.5s,baz=40,slow=37
NOA NORSAR Array B 73.00 337 P **P** **11 17 04.8 -0.4**
NOA pP pP 11 17 20.8 -1.6
NOA LR LR 11 51 11.9
CMB Columbia Colle 73.02 55 *e*P **P** **11 17 05.3 -0.4**
comp=Z,20nm,2.1s,mb4.7
CMB Columbia Colle 73.02 55 *e*P **P** **11 17 05.3 -0.4**
CMB pmax pmax
comp=Z,21nm,2.1s,mb4.7
CMB Columbia Colle 73.02 55 ⇑P **P** **11 17 05.7 0.0**
baz=73
L10A Juniper Basin 73.08 50 ⇑P **P** **11 17 06.3 +0.3**
baz=73
F15A Butte 73.09 45 ⇑P **P** **11 17 06.1 +0.1**
baz=73
O08A Rochester Mine 73.11 52 ⇑P **P** **11 17 06.5 +0.3**
baz=73
EGMT Eagleton 73.21 42 *e*P **P** **11 17 06.4 -0.3**
comp=Z,68nm,2.4s,mb5.2
EGMT Eagleton 73.21 42 ⇓P **P** **11 17 06.5 -0.2**
baz=73
AKASG Malin Array Be 73.30 322 P **P** **11 17 06.1 -1.1**
comp=Z,0.9nm,0.3s,mb4.1,baz=50,slow=6.6,SNR=8.5
AKASG pP pP 11 17 22.2 -2.2
comp=Z,3.1nm,0.5s,baz=47,slow=6.2,SNR=5.5
AKASG sP sP 11 17 28.1 -3.3
comp=Z,4.4nm,0.7s,baz=45,slow=6.4,SNR=5.4
AKASG Malin Array Be 73.30 322 P **P** **11 17 06.1 -1.1**
AKASG pP pP 11 17 22.2 -2.2
AKASG sP sP 11 17 28.1 -3.3
AKASG Malin Array Be 73.30 322 P **P** **11 17 06.1 -1.1**
AKASG *PP pP 11 17 22.2 -2.2
AKASG *SP sP 11 17 28.1 -3.3
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.7s
R06C Coleville 73.33 54 ⇓P **P** **11 17 08.0 +0.5**
baz=73
I13A Wildhorse Cree 73.35 47 ⇑P **P** **11 17 08.0 +0.4**
baz=73
M10A I.L. Ranch, Tu 73.36 50 ⇑P **P** **11 17 08.1 +0.4**
baz=73
HLID Hailey 73.39 47 ⇑P **P** **11 17 08.2 +0.3**
baz=73

L11A	**Cat Creek Ranc** baz=73,SNR=5.7	73.45	49	⇓P		P		11 17 08.5	+0.3
G15A	**Dillon** baz=73	73.51	45	⇓P		P		11 17 08.8	+0.3
E17A	**Martinsdale** baz=73	73.60	43	⇓P		P		11 17 09.2	+0.2
F16A	**Kennard Place,** baz=73	73.61	44	⇑P		P		11 17 09.0	-0.1
J13A	**Cove Ranch, Pi** baz=73	73.63	47	⇓P		P		11 17 09.7	+0.4
K12A	**Draper Farm, C** baz=73	73.67	48	⇓P		P		11 17 09.8	+0.3
D18A	**Linhart Farms,** baz=73	73.70	42	⇓P		P		11 17 09.9	+0.3
I14A	**Mackay** baz=73,SNR=6.3	73.72	47	⇓P		P		11 17 10.1	+0.3
G16A	**Moss Hill, Enn** baz=74	73.85	45	⇓P		P		11 17 10.5	+0.1
M11A	**Holland Ranch,** baz=74	73.87	50	⇑P		P		11 17 10.9	+0.2
L12A	**House Creek Ra** baz=74	73.90	49	⇑P		P		11 17 11.3	+0.4
E18A	**Harlowton** baz=74	74.04	43	⇓P		P		11 17 11.6	+0.1
T06C	**Millerton Lake** baz=74	74.06	55	⇓P		P		11 17 11.6	-0.3
F17A	**Fitzpatrick Pl** baz=74	74.06	44	⇓P		P		11 17 12.1	+0.4
J14A	**Carey** baz=74,SNR=5.4	74.06	47	⇓P		P		11 17 12.3	+0.6
Q08A	**Gabbs** baz=74	74.09	53	⇑P		P		11 17 12.1	+0.1
NVAR	**Mina Array Bea** comp=Z,1.5nm,0.8s,mb4.0,baz=292,slow=5.2,SNR=14	74.11	53	P		P		11 17 12.6	+0.5
KCC	**Kaiser Creek** baz=74	74.12	55	⇓P		P		11 17 12.1	-0.2
PKD	**Parkfield** baz=74	74.14	57	⇑P		P		11 17 12.3	0.0
M12A	**Wells** baz=74	74.40	49	⇓P		P		11 17 14.5	+0.7
H16A	**Russell Place,** baz=74	74.49	45	⇑P		P		11 17 14.8	+0.6
P10A	**Eureka** baz=74	74.55	52	⇓P		P		11 17 15.2	+0.6
L13A	**Double Diamond** baz=74	74.57	48	⇑P		P		11 17 15.3	+0.6
F18A	**Big Timber** baz=74	74.57	43	⇑P		P		11 17 15.1	+0.4
ELK	**Elko** comp=Z,0.9nm,0.7s,mb3.8,baz=294,slow=7.9,SNR=4.5	74.62	50	P		P		11 17 15.0	0.0
ELK	**Elko** comp=Z,1.0nm,0.7s	74.62	50	P	pmax	P	pmax	11 17 15.0	0.0
J15A	**Blackfoot** baz=74	74.63	47	⇓P		P		11 17 15.5	+0.4
N12A	**Clover Valley,** baz=74	74.67	50	⇑P		P		11 17 16.0	+0.7
K14A	**Jones Ranch, D** baz=74	74.73	48	⇑P		P		11 17 16.2	+0.6
O11A	**Cowboy Ranch,** baz=74	74.74	51	⇓P		P		11 17 16.2	+0.5
I16A	**Newdale** baz=75,SNR=8.5	74.87	46	⇑P		P		11 17 17.2	+0.8
R09A	**Tonopah** baz=75	75.00	53	⇓P		P		11 17 17.0	-0.3
K15A	**Arbon** baz=75	75.02	47	⇑P		P		11 17 18.0	+0.7
Q10A	**Clear Creek Ra** baz=75	75.07	52	⇑P		P		11 17 17.8	+0.1
VES	**Vestal, Richgr** baz=75	75.15	56	⇑P		P		11 17 17.2	-1.0
IMW	**Indian Meadow** comp=Z,2.3nm,0.8s,mb4.2	75.17	45	*e*P		P		11 17 19.2	+1.0
N13A	**Wendover, West** baz=75	75.17	50	⇓P		P		11 17 18.8	+0.6
O12A	**Currie** baz=75	75.21	50	⇑P		P		11 17 18.9	+0.5
S09A	**Goldfield** baz=75	75.22	54	⇑P		P		11 17 18.9	+0.3
M14A	**Sheep Mountain** baz=75	75.28	49	⇑P		P		11 17 19.1	+0.3
RLMT	**Red Lodge** comp=Z,14nm,1.3s,mb4.7	75.31	44	*e*P		P		11 17 16.4	-2.6
I17A	**Pilgram Creek** baz=75	75.36	45	⇑P		P		11 17 20.3	+1.1
TPAW	**Teton Pass** comp=Z,22nm,2.1s,mb4.7	75.42	46	*e*P		P		11 17 20.0	+0.5
R10A	**Warm Springs** baz=75	75.46	53	⇓P		P		11 17 20.2	+0.3
K16A	**Soda Springs** baz=75	75.47	47	⇑P		P		11 17 20.7	+0.8
S10A	**Tonopah Range,** baz=75	75.50	53	⇓P		P		11 17 20.5	+0.3
Q11A	**Duckwater** baz=75	75.52	52	⇑P		P		11 17 20.6	+0.3
L15A	**Malad City** baz=75	75.53	48	⇓P		P		11 17 20.6	+0.3
J17A	**Brown Place, J** baz=75	75.63	46	⇓P		P		11 17 21.8	+0.9
ARVC	**Arvin** baz=76	75.75	56	⇓P		P		11 17 21.3	-0.3
O13A	**Hicks Ranch, I** baz=76	75.75	50	⇑P		P		11 17 21.5	0.0
N14A	**Grayback Hills** baz=76	75.78	49	⇓P		P		11 17 22.1	+0.4
M15A	**Larsen Ranch,** baz=76	75.83	48	⇑P		P		11 17 21.9	-0.1
R11A	**Troy Canyon, C** baz=76	75.87	52	⇓P		P		11 17 22.2	0.0
Q12A	**Willow Creek R** baz=76	75.91	51	⇓P		P		11 17 22.4	0.0
I18A	**Diamond G Ranc** baz=76	75.92	45	⇑P		P		11 17 21.9	-0.6
MPMC	**Manual Prospec** baz=76	76.05	55	⇓P		P		11 17 22.8	-0.5
N15A	**Stansbury Isla** baz=76	76.15	49	⇑P		P		11 17 24.2	+0.4
P13A	**Bates Ranch, G** baz=76	76.15	51	⇓P		P		11 17 23.4	-0.4
S11A	**Rachel** baz=76	76.20	53	⇑P		P		11 17 24.6	+0.5
FURC	**Furnace Creek,** baz=76	76.21	54	⇓P		P		11 17 24.2	0.0
TPNV	**Topopah Spring** comp=Z,48nm,2.5s,mb5.0	76.31	54	*e*P		P		11 17 21.9	-2.8
TPNV	**Topopah Spring** comp=Z,48nm,2.5s,mb5.0	76.31	54	*e*P	pmax	P	pmax	11 17 21.9	-2.9
TPNV	**Topopah Spring** baz=76	76.31	54	⇑P		P		11 17 24.6	-0.2
M16A	**Huntsville** baz=76	76.40	48	⇑P		P		11 17 25.3	+0.1
DUG	**Dugway** comp=Z,4.4nm,1.1s,mb4.3	76.41	49	*e*P		P		11 17 25.1	-0.1
DUG	**Dugway** comp=Z,4.0nm,1.1s,mb4.3	76.41	49	*e*P	pmax	P	pmax	11 17 25.2	-0.1
DUG	**Dugway** baz=76	76.41	49	⇑P		P		11 17 25.6	+0.3
SNCC	**San Nicolas Is** baz=76	76.41	58	⇓P		P		11 17 26.3	+0.9
EDW2	**Edwards Air Fo** baz=76	76.44	56	⇓P		P		11 17 25.6	0.0
Q13A	**Wheeler Ranch,** baz=76	76.46	51	⇑P		P		11 17 26.0	+0.5
R12A	**Pony Springs,** baz=76	76.48	52	⇓P		P		11 17 25.8	+0.1
U10A	**Ash Meadows, A** baz=76	76.58	54	⇓P		P		11 17 26.8	+0.5
P14A	**Drum Mountains** baz=76	76.64	50	⇓P		P		11 17 26.8	+0.2
BW06	**Boulder Array** comp=Z,2.7nm,0.7s,mb4.3	76.66	46	*e*P		P		11 17 26.4	-0.3
BW06	**Boulder Array** baz=76	76.66	46	⇓P		P		11 17 26.2	-0.4
PDAR	**Pinedale Array** comp=Z,2.2nm,0.6s,mb4.3,baz=269,slow=1.6,SNR=24	76.66	46	P		P		11 17 26.4	-0.3
T11A	**Corn Creek, Al** baz=76	76.78	53	⇑P		P		11 17 27.8	+0.3
Q14A	**Sevier Lake (B** baz=77,SNR=6.1	76.89	51	⇑P		P		11 17 28.5	+0.5
GSC	**Goldstone** baz=77	76.96	55	⇓P		P		11 17 28.5	0.0
N17A	**Moffit Pass** baz=77,SNR=5.1	77.11	48	⇓P		P		11 17 29.5	+0.3
L19A	**Farson** baz=77	77.21	46	⇑P		P		11 17 29.7	-0.1
S13A	**Holt Ranch, En** baz=77	77.41	52	⇑P		P		11 17 31.2	+0.2
Q15A	**Fillmore** baz=77	77.42	50	⇑P		P		11 17 31.2	+0.2
T13A	**Saint George** baz=78	77.73	52	⇑P		P		11 17 33.5	+0.7
R15A	**Junction** baz=78	77.99	51	⇓P		P		11 17 35.0	+0.8
O18A	**Roosevelt** baz=78	78.02	48	⇑P		P		11 17 35.0	+0.7
BRTR	**Keskin Array B** comp=Z,0.8nm,0.7s,mb3.8,baz=65,slow=3.2,SNR=2.9	78.04	311	P		P		11 17 35.1	+0.7
BRTR	comp=Z,0.9nm,0.6s,baz=75,slow=4.1,SNR=2.8				pP	pP		11 17 50.1	-1.7
BRTR	comp=Z,1.5nm,0.6s,baz=54,slow=4.2,SNR=3.3				sP	sP		11 17 57.2	-1.6
BRTR	**Keskin Array B**	78.04	311	P		P		11 17 35.1	+0.7
BRTR				*PP		pP		11 17 50.1	-1.7
BRTR				*SP		sP		11 17 57.2	-1.6
BRTR	comp=Z,1.0nm,0.7s				pmax	pmax			
BRTR	comp=Z,1.0nm,0.6s				pmax	pmax			
BRTR	comp=Z,2.0nm,0.6s				pmax	pmax			
PFO	**Pinyon Flat Ob** baz=78	78.22	56	⇑P		P		11 17 35.5	0.0
S15A	**Panguitch** baz=78	78.27	51	⇑P		P		11 17 35.8	+0.1
L21A	**Rawlins** baz=78	78.42	45	⇑P		P		11 17 36.2	-0.3
V13A	**Grand Canyon W** baz=78	78.42	53	⇓P		P		11 17 36.6	0.0
SRU	**San Rafael** comp=Z,4.1nm,0.7s,mb4.5	78.46	49	*e*P		P		11 17 36.6	-0.1
SRU	**San Rafael** comp=Z,4.0nm,0.7s,mb4.5	78.46	49	*e*P	pmax	P	pmax	11 17 36.6	-0.2
SRU	**San Rafael** baz=78,SNR=5.7	78.46	49	⇑P		P		11 17 36.5	-0.3
U14A	**Mt Trumbull** baz=78	78.56	53	⇑P		P		11 17 37.6	+0.2
T15A	**Red Dirt Ranch** baz=78	78.68	52	⇑P		P		11 17 38.0	0.0
S16A	**Weppner Ranch,** baz=78	78.71	51	⇓P		P		11 17 38.5	+0.3
IRM	**Iron Mountain** baz=78	78.73	55	⇑P		P		11 17 38.2	-0.1
R17A	**Hanksville Air** baz=78	78.80	50	⇑P		P		11 17 39.0	+0.3
BC3	**Big Chuckw Mtn** baz=79	78.85	56	⇑P		P		11 17 38.9	-0.1
P19A	**Cripple Cowboy** baz=79	79.03	48	⇓P		P		11 17 39.7	-0.2
SWSC	**Sam W. Stewart** baz=79	79.07	57	⇑P		P		11 17 39.7	-0.5
V14A	**Boquillas Ranc** baz=79,SNR=5.8	79.11	53	⇑P		P		11 17 40.7	+0.3
U15A	**North Rim** baz=79	79.11	52	⇑P		P		11 17 40.5	+0.1
S17A	**Black Ridge (B** baz=79	79.25	50	⇑P		P		11 17 41.1	0.0
PDMCI	**Parker Dam,Lak** baz=79	79.30	55	⇓P		P		11 17 41.1	-0.3
R18A	**Canyonlands Na** baz=79	79.31	49	⇑P		P		11 17 41.5	+0.1
X13A	**Yucca** baz=79	79.31	54	⇑P		P		11 17 41.5	0.0
Q19A	**Hogan Spring (** baz=79	79.31	49	⇓P		P		11 17 41.4	-0.1
W14A	**Seligman** baz=79	79.39	53	⇓P		P		11 17 42.0	+0.1
V15A	**Kaibab Nationa** baz=79	79.58	52	⇑P		P		11 17 43.4	+0.5
GLA	**Glamis** baz=79	79.64	56	⇓P		P		11 17 42.9	-0.4
T17A	**Navajo Res., N** baz=79	79.66	51	⇓P		P		11 17 43.3	0.0
S18A	**Hurst Farm, Bl** baz=79	79.70	50	⇑P		P		11 17 43.9	+0.3
R19A	**Curley Farm, L** baz=80	79.75	49	⇑P		P		11 17 44.1	+0.3
PV10	**Paradox Valley**	79.82	49	*e*P		P		11 17 44.8	+0.6
PHWY	**Pilot Hill**	79.92	45	*e*P		P		11 17 47.0	+2.3
X14A	**Yava** baz=80,SNR=5.9	79.99	54	⇓P		P		11 17 45.5	+0.3
CLL	**Collm**	79.99	330	*e*P		P		11 17 44.0	-0.9
CLL				*e*PP		pP		11 18 01.0	-1.3
CLL	comp=Z,6.0nm,0.8s,mb4.6				pmax	pmax			
CLL	**Collm** comp=Z,6.0nm,0.8s,mb4.6	79.99	330	*e*P		P		11 17 44.0	-0.9
CLL	comp=Z,10.0nm,0.8s				*e*pP	pP		11 18 01.0	-1.3
U17A	**Shonto** baz=80	80.00	51	⇑P		P		11 17 45.6	+0.3
U16A	**Tuba City** baz=80,SNR=9.0	80.01	52	⇑P		P		11 17 45.6	+0.3
T18A	**Mexican Hat** baz=80	80.14	50	⇑P		P		11 17 45.6	-0.3
S19A	**Harvey Farm, M** baz=80,SNR=5.5	80.18	49	⇑P		P		11 17 46.2	+0.1
WUAZ	**Wupatki** baz=80	80.27	52	⇑P		P		11 17 46.8	+0.1
X15A	**Humboldt** baz=80,SNR=6.0	80.39	54	⇑P		P		11 17 47.6	+0.2
113A	**Mohawk Valley,** baz=80	80.50	56	⇑P		P		11 17 48.0	0.0
U18A	**Rough Rock, Ch** baz=80	80.61	51	⇓P		P		11 17 48.3	-0.2
Y15A	**Casa Rosa Ranc** baz=80,SNR=5.6	80.67	54	⇓P		P		11 17 49.1	+0.2
T19A	**Beclabito** baz=81	80.85	50	⇓P		P		11 17 49.5	-0.3
X16A	**Lo Mia Camp, P** baz=81,SNR=6.2	80.94	53	⇓P		P		11 17 50.6	+0.3
V18A	**Ganado** baz=81	81.03	51	⇑P		P		11 17 50.7	0.0
Y16A	**Circle Bar Ran** baz=81	81.26	54	⇑P		P		11 17 52.3	+0.3
X17A	**Forest Lakes** baz=81,SNR=5.2	81.39	53	⇓P		P		11 17 53.2	+0.6
W18A	**Petrified Fore** baz=81	81.54	52	⇑P		P		11 17 53.2	-0.3
115A	**Sonoran Desert** baz=81	81.54	55	⇓P		P		11 17 53.4	-0.1
GERES	**GERESS Array B** comp=Z,0.8nm,0.6s,mb3.9,baz=49,slow=4.5,SNR=3.0	81.63	328	P		P		11 17 52.7	-0.9
GERES	comp=Z,1.7nm,0.7s,baz=30,slow=6.1,SNR=2.1				pP	pP		11 18 10.1	-1.1
GERES	comp=Z,1.9nm,0.7s,baz=7.1,slow=4.3,SNR=3.4				sP	sP		11 18 16.3	-1.9
GERES	**GERESS Array B**	81.63	328	P		P		11 17 52.7	-1.0
GERES				*PP		pP		11 18 10.1	-1.1
GERES				*SP		sP		11 18 16.3	-1.8
GERES	comp=Z,1.0nm,0.6s				pmax	pmax			
GERES	comp=Z,2.0nm,0.7s				pmax	pmax			
GERES	comp=Z,2.0nm,0.7s				pmax	pmax			
214A	**Organ Pipe Nat** baz=81	81.64	56	⇑P		P		11 17 53.9	-0.1
Y17A	**Roosevelt** baz=82	81.78	53	⇓P		P		11 17 55.0	+0.2
Y18A	**Canyon Day Jun** baz=82,SNR=5.2	82.24	53	⇓P		P		11 17 57.4	+0.2
X19A	**St. Johns** baz=82,SNR=5.7	82.27	52	⇓P		P		11 17 57.8	+0.5
117A	**Oracle** baz=82	82.58	54	⇓P		P		11 17 58.8	-0.1
URZ	**Urewera** comp=Z,118nm,18.2s,baz=225,slow=36	82.99	153	LR		LR		11 55 02.9	
118A	**Homack Ranch,** baz=83	83.03	54	⇓P		P		11 18 01.5	+0.2
217A	**Green Valley** baz=83	83.05	55	⇑P		P		11 18 01.6	+0.2
ANMO	**Albuquerque** comp=Z,2.2nm,1.0s,mb4.2,baz=295,slow=4.6,SNR=5.2	83.65	50	P		P		11 18 03.9	-0.6
ANMO	**Albuquerque** comp=Z,2.0nm,1.0s	83.65	50	P	pmax	P	pmax	11 18 03.9	-0.5
318A	**Bisbee** baz=84,SNR=6.2	83.80	55	⇑P		P		11 18 05.4	+0.1
219A	**White Tail Can** baz=84,SNR=8.4	83.90	54	⇑P		P		11 18 05.8	+0.1
319A	**Douglas** baz=84	84.30	54	⇑P		P		11 18 07.6	-0.2
PMOR	**Pomariorio Ree**	84.63	114	*e*T				12 51 34.2	
PPT	**Papeete** comp=Z,38nm,0.2s	85.14	117	*e*LR		LR		11 45 15.2	
PPT	**Papeete** comp=Z,72nm,25.2s	85.14	117	*e*T				12 52 12.4	
PPT	**Papeete** comp=Z,5.8nm,0.3s	85.30	117	*e*T				12 52 20.6	
TIAR	**Tiarei** comp=Z,76nm,0.3s	85.30	117	*e*T				12 52 20.6	
MEH	**Mehetia** comp=Z,3μm,0.3s	86.41	116	*e*T				12 53 47.6	
TBI	**Tubuai** comp=Z,59nm,0.3s	89.13	121	*e*T				12 57 09.8	
TXAR	**Lajitas Array** comp=Z,1.8nm,0.6s,mb4.6,baz=298,slow=3.0,SNR=33	89.23	52	P		P		11 18 31.6	-0.2
TXAR	**Lajitas Array** comp=Z,2.0nm,0.6s	89.23	52	P	pmax	P	pmax	11 18 31.6	-0.2
LPAZ	**La Paz** comp=Z,2.0nm,0.5s,baz=7.6,slow=5.0,SNR=11	145.92	58	PKPbc		PKPbc		11 25 15.3	-0.1
LPAZ	**La Paz**	145.92	58	*e*PKPdf		PKPdf		11 25 14.9	+0.2
LPAZ				*e*PKPbc		PKPbc		11 25 15.3	-0.1
SIV	**San Ignacio** comp=Z,1.5nm,0.6s,baz=353,slow=2.1,SNR=6.4	150.13	48	PKPbc		PKPbc		11 25 25.5	-1.2
SIV	comp=Z,0.8nm,0.7s,baz=275,slow=4.5,SNR=5.1			PKPab		PKPab		11 25 31.6	-1.1

IDC 07 11:12:45.5±3.0,352S×10053E,h0km,mb3.6/6,mb1 3.8/6, mb1mx3.7/19,mbtmp3.7/6, Error ellipse: s-maj=127.0km s-min=19.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 1.1nm,0.4s,baz=186,slow=8.2,SNR=4.5	21.90	356	P	P	11 17 42.3	+2.0
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=285,slow=7.8,SNR=9.2	36.78	119	P	P	11 19 53.4	-1.8
ASAR	**Alice Springs** 0.4nm,0.4s,baz=298,slow=7.9,SNR=7.2	37.94	125	P	P	11 20 06.8	+1.8
SONM	**Songino Array** 0.9nm,0.7s,baz=184,slow=9.8,SNR=4.6	51.40	5	P	P	11 21 51.2	-0.8
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=152,slow=8.1,SNR=4.8	52.63	344	P	P	11 22 00.9	-0.3
KURK	**Kurchatov** baz=160,slow=6.9	57.21	344	P	P	11 22 33.7	-0.6
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=157,slow=4.7,SNR=2.4	58.75	349	P	P	11 22 44.7	-0.4
TXAR	**Lajitas Array** 1.0nm,0.7s,baz=271,slow=0.6,SNR=17	145.56	39	PKPbc	PKPbc	11 32 26.4	-0.1

*ISCJB **07** 11:22:58.5±0.6,2477N±004×12200E±003,h87km±5km, Error ellipse: s-maj=7.3km s-min=3.7km az=169.4*
*TAP **07** 11:22:58.4,2477N×12197E,h87km,ML3.6,C*
*JMA **07** 11:22:58.3±0.4,2489N×12199E,h80km,M2.7*
ISC 07 11:22:59.0±0.6,2478N±004×12200E±003,h86km±5km, n48,σ0°76/70,5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=218	0.22	218	*i* P	Pn	11 23 11.4	-0.2
TWC	baz=218			*e*S	Sn	11 23 20.5	-0.3
TWB1	**Santiao Chiao** baz=3.0	0.22	358	⇓*i*P	Pn	11 23 11.3	-0.2
TWB1	baz=3.0			S	Sn	11 23 20.3	-0.6
ILA	**Ilan** baz=276	0.23	266	*e*S	Sn	11 23 21.2	+0.4
TWE	**Neicheng** baz=266	0.31	258	P	Pn	11 23 12.1	+0.2
NWF	**Wu-fen Shan** baz=330	0.35	326	P	Pn	11 23 12.0	-0.2
NWF	baz=330			S	Sn	11 23 21.6	-0.4
ENTT	**Nioudou** baz=252	0.42	250	⇓*i*P	Pn	11 23 13.0	+0.4
ENTT	baz=252			*e*S	Sn	11 23 23.7	+0.9
ENA	**Nanau** baz=206	0.42	213	⇓*i*P	Pn	11 23 12.8	+0.1
ENA	baz=206			*e*S	Sn	11 23 23.4	+0.5
TWA	**Mucha** baz=304	0.42	298	P	Pn	11 23 12.7	0.0
TWA	baz=304			*e*S	Sn	11 23 22.6	-0.3
TAP1	**Taipei** baz=308	0.50	301	*e*S	Sn	11 23 23.3	-0.6
NSK	**Sanguang** baz=261	0.59	260	⇓P	Pn	11 23 13.8	-0.2
NSK	baz=261			*e*S	Sn	11 23 24.8	-0.5
TWY	**Chenhua** baz=326	0.61	324	*e*P	Pn	11 23 13.9	-0.3
TWS1	**Kuangyinshan** baz=309	0.61	301	P	Pn	11 23 14.5	+0.2
TWS1	baz=309			*e*S	Sn	11 23 25.6	-0.1
NNS	**Nan Shan** baz=240	0.66	239	P	Pn	11 23 14.9	+0.2
NNS	baz=240			*e*S	Sn	11 23 27.1	+0.6
NCU	**National Centr** baz=277	0.76	284	*e*P	Pn	11 23 17.5	+1.8
NCU	baz=277			*e*S	Sn	11 23 28.7	+0.5
TWD	**Chiawan** baz=215	0.79	208	P	Pn	11 23 15.3	-0.8
HWA	**Hwalien** baz=214	0.88	204	*e*P	Pn	11 23 16.7	-0.3
TWT	**Tachien** baz=236	0.92	235	P	Pn	11 23 18.1	+0.7
TWT	baz=236			S	Sn	11 23 31.9	+0.7
NSTT	**Nanjuang** baz=262	0.92	261	P	Pn	11 23 17.1	-0.4
NSTT	baz=262			*e*S	Sn	11 23 30.5	-0.8
WHF	**Hehuan Shan** baz=227	0.92	227	⇓P	Pn	11 23 17.7	+0.2
WHF	baz=227			*e*S	Sn	11 23 32.0	+0.7
HSN	**Hsinchu** baz=274	0.93	271	*e*S	Sn	11 23 31.0	-0.6
YOJ	**Yonaguni jima**	0.98	109	P	Pn	11 23 17.7	-0.4
YOJ				*e*S	Sn	11 23 32.4	0.0
ESL	**Shilin** baz=207	1.09	208	*e*P	Pn	11 23 18.0	-1.4
NSY	**Sanyi** baz=252	1.18	252	*e*P	Pn	11 23 20.5	-0.1
TWQ1	**Liyutan** baz=249	1.20	249	P	Pn	11 23 20.6	-0.1
SMLT	**Sun Moon Lake** baz=237	1.34	228	*e*P	Pn	11 23 22.8	+0.3
TYC	**Yuchr** baz=239	1.36	230	*e*P	Pn	11 23 22.9	+0.1
TYC	baz=239			*e*S	Sn	11 23 41.2	+0.5
TCU	**Taichung** baz=242	1.36	243	*e*P	Pn	11 23 22.9	+0.1
EHY	**Hungye** baz=198	1.41	206	*e*P	Pn	11 23 21.5	-1.9
TWF1	**Yuli** baz=197	1.56	204	*e*P	Pn	11 23 23.5	-1.8
YUS	**Yu-Shan** baz=226	1.60	217	*e*P	Pn	11 23 27.0	+1.1
IRIF	**Iriomote-Funau**	1.64	105	P	Pn	11 23 25.9	-0.4
IRIF				*e*S	Sn	11 23 47.1	+0.1
ALS	**Alishan** baz=230	1.67	221	*e*P	Pn	11 23 27.5	+0.8
ALS	baz=230			*e*S	Sn	11 23 50.0	+2.2
CHN5	**Tsauling** baz=234	1.69	226	*e*P	Pn	11 23 27.0	0.0
CHKT	**Chengkung** baz=200	1.77	199	*e*P	Pn	11 23 27.0	-1.1
CHKT	baz=200			*e*S	Sn	11 23 47.4	-2.8
HATJ	**Hateruma jima**	1.80	113	P	Pn	11 23 28.7	+0.3
HATJ				*e*S	Sn	11 23 52.0	+1.2
ELDTW	**Lidau** baz=200	1.82	210	*e*P	Pn	11 23 28.8	+0.1
JKRS	**Kuro-shima**	1.91	106	P	Pn	11 23 30.3	+0.5
JKRS				*e*S	Sn	11 23 53.7	+0.3
CHN4	**Tsaushan**	1.92	222	*e*P	Pn	11 23 30.7	+0.8

	baz=222								
WTP	**Ta-pu**	**1.98**	**220**	P		**Pn**	**11 23 30.9**	**0.0**	
	baz=229								
JIJ	**Ishigaki jima**	**2.00**	**102**	P		**Pn**	**11 23 30.8**	**-0.2**	
JIJ				*e*S		**Sn**	**11 23 54.1**	**-1.3**	
TWK	**Hsinying**	**2.04**	**223**	*e*P		**Pn**	**11 23 31.5**	**-0.2**	
	baz=223								
CHN1	**Nanshi**	**2.08**	**220**	P		**Pn**	**11 23 32.3**	**+0.2**	
	baz=230								
TWG	**Pinlang**	**2.13**	**204**	*e*P		**Pn**	**11 23 31.6**	**-1.2**	
	baz=196								
SGST	**Jiashian**	**2.13**	**218**	*e*P		**Pn**	**11 23 32.8**	**0.0**	
	baz=227								
ECL	**Taimali**	**2.38**	**204**	*e*P		**Pn**	**11 23 34.6**	**-1.4**	
	baz=198								
SSD	**Sandimen**	**2.38**	**212**	*e*P		**Pn**	**11 23 37.1**	**+0.9**	
	baz=212								
JTJ	**Tarama**	**2.46**	**93**	P		**Pn**	**11 23 38.2**	**+1.0**	
JTJ				*e*S		**Sn**	**11 24 07.4**	**+0.9**	
EAST	**Anshuo**	**2.61**	**204**	*e*P		**Pn**	**11 23 39.4**	**+0.2**	
	baz=197								

DDA ***07*** *11:31:57.9, 3827N×2652E, h14km±2km, Md3.2*
NEIC ***07*** *11:31:57.9, 3831N×2651E, h5km, MD3.5(ATH), ML3.1(ISK), After ISK.*
ATH ***07*** *11:31:57.3, 3828N×2661E, h45km, MD3.5/4*
ISCJB ***07*** *11:31:58.5±0.5, 3828N±002×2651E±003, h8km±3km, Error ellipse: s-maj=3.8km s-min=3.1km az=152.9*
CSEM ***07*** *11:31:58.1±0.1, 3831N×2651E, h10km, MD3.2, Error ellipse: s-maj=1.6km s-min=1.3km az=59.0*
ISK ***07*** *11:31:58.3, 3831N×2652E, h6km, MD3.3*
THE ***07*** *11:31:58.8, 3827N×2654E, h5km±1km, ML3.8/3, Error ellipse: s-maj=2.0km s-min=0.8km az=280.0*

ISC 07 11:31:59.0±0.4, 3828N±002×2652E±003, h9km±3km, n51, σ1=90/78, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**36**	*i* P	**Pg**	**11 32 01.4**	**-0.2**
URLA				*i* S	**Sg**	**11 32 03.6**	**+0.2**
CHOS	**Chios island**	**0.38**	**287**	P	**Pg**	**11 32 06.8**	**+0.4**
CHOS				S	**Sg**	**11 32 12.7**	**+1.2**
BLCB	**Balcova**	**0.43**	**75**	Pg	**Pg**	**11 32 06.8**	**-0.5**
BLCB				*e*SG	**Sg**	**11 32 13.2**	**+0.1**
BLCB	**Balcova**	**0.43**	**75**	Pg	**Pg**	**11 32 06.8**	**-0.5**
BLCB				Sg	**Sg**	**11 32 13.8**	**+0.8**
IZM	**Izmir**	**0.60**	**78**	*e*PG	**Pg**	**11 32 10.4**	**-0.2**
IZM				*e*SG	**Sg**	**11 32 19.0**	**+0.5**
IZM	**Izmir**	**0.60**	**78**	Pg	**Pg**	**11 32 10.4**	**-0.2**
IZM				Sg	**Sg**	**11 32 18.4**	**-0.1**
KDAG	**Bornova**	**0.60**	**78**	*i* P	**Pg**	**11 32 09.9**	**-0.8**
KDAG				*i* S	**Sg**	**11 32 19.2**	**+0.6**
SMG	**Samos**	**0.62**	**156**	*e*P	**Pg**	**11 32 10.3**	**-0.7**
SMG				*e*S	**Sg**	**11 32 19.6**	**+0.5**
GCAM	**G?zelcaml?**	**0.81**	**135**	*i* P	**Pg**	**11 32 13.6**	**-1.0**
GCAM				*i* S	**Sg**	**11 32 26.6**	**+1.5**
GCAM	**G?zelcaml?**	**0.81**	**135**	*i* P	**Pg**	**11 32 13.6**	**-0.9**
GCAM				*i* S	**Sg**	**11 32 26.5**	**+1.5**
PRK	**Paraskevi**	**0.99**	**349**	P	**Pg**	**11 32 17.1**	**-0.9**
PRK				S	**Sg**	**11 32 31.9**	**+1.0**
PRK	**Paraskevi**	**0.99**	**349**	*e*P	**Pg**	**11 32 16.5**	**-1.5**
PRK	**Paraskevi**	**0.99**	**349**	*e*Pn	**Pn**	**11 32 17.2**	**-1.8**
PRK				S	**Sg**	**11 32 31.9**	**+1.0**
AYVA	**Ayvalik**	**1.04**	**7**	*i* P	**Pg**	**11 32 18.1**	**-0.9**
AYVA				*i* S	**Sg**	**11 32 34.2**	**+1.7**
AKS	**Akhisar**	**1.18**	**59**	*e*PN	**Pn**	**11 32 20.8**	**-0.8**
AKS				*e*SN	**Sn**	**11 32 37.4**	**-0.4**
AKS	**Akhisar**	**1.18**	**59**	Pn	**Pn**	**11 32 19.1**	**-2.5**
AKS				Sn	**Sn**	**11 32 37.1**	**-0.7**
AKHS	**Akhisar**	**1.18**	**59**	*i* P	**Pb**	**11 32 18.7**	**-2.9**
AKHS				*i* S	**Sb**	**11 32 37.4**	**+0.4**
AKHS	**Akhisar**	**1.18**	**59**	*i* P	**Pb**	**11 32 18.7**	**-2.9**
AKHS				*i* S	**Sb**	**11 32 37.3**	**+0.3**
AYDN	**Tasoluk**	**1.24**	**119**	*i* P	**Pn**	**11 32 21.5**	**-1.0**
AYDN				*i* S	**Sb**	**11 32 37.6**	**-1.0**
BODT	**Bodrum**	**1.36**	**152**	*e*PN	**Pn**	**11 32 24.8**	**+0.6**
MLSB	**Milas**	**1.40**	**134**	*e*PN	**Pn**	**11 32 25.0**	**+0.4**
BDRM	**Kayabasi**	**1.41**	**148**	*i* P	**Pn**	**11 32 24.4**	**-0.4**
BDRM				*i* S	**Sn**	**11 32 44.6**	**+1.0**
APE	**Apeiranthos**	**1.44**	**213**	P	**Pn**	**11 32 24.0**	**-1.1**
APE				S	**Sn**	**11 32 43.5**	**-0.6**
APE	**Apeiranthos**	**1.44**	**213**	*e*Pn	**Pn**	**11 32 23.2**	**-1.9**
APE	**Apeiranthos**	**1.44**	**213**	P	**Pn**	**11 32 24.0**	**-1.1**
APE				S	**Sn**	**11 32 43.5**	**-0.6**
EZN	**Ezine**	**1.56**	**355**	*e*PN	**Pn**	**11 32 25.8**	**-1.0**
BOZC	**Bozcaada**	**1.61**	**347**	*i* P	**Pn**	**11 32 25.8**	**-1.7**
BOZC				*i* S	**Sn**	**11 32 52.2**	**+3.9**
BALY	**Balya**	**1.70**	**30**	*i* P	**Pn**	**11 32 29.1**	**+0.3**
BALY				*i* S	**Sn**	**11 32 54.0**	**+3.5**
KULA	**Kula-Manisa**	**1.70**	**81**	*e*PN	**Pn**	**11 32 29.0**	**+0.1**
LIA	**Limnos Island**	**1.92**	**328**	P	**Pn**	**11 32 31.3**	**-0.6**
LIA				S	**Sn**	**11 32 56.9**	**+0.7**
LIA	**Limnos Island**	**1.92**	**328**	*e*P	**Pn**	**11 32 28.5**	**-3.4**
LIA	**Limnos Island**	**1.92**	**328**	*e*Pn	**Pn**	**11 32 28.1**	**-3.8**
LIA	**Limnos Island**	**1.92**	**328**	P	**Pn**	**11 32 31.3**	**-0.6**
LIA				S	**Sn**	**11 32 56.9**	**+0.7**
GADA	**Gvkgeada**	**1.97**	**346**	*e*PN	**Pn**	**11 32 32.4**	**-0.1**
GADA	**Gvkgeada**	**1.97**	**346**	Pn	**Pn**	**11 32 32.1**	**-0.5**
GADA	**Gvkgeada**	**1.97**	**346**	Pn	**Pn**	**11 32 32.1**	**-0.4**
THR3	**Thira Island,**	**2.06**	**206**	P	**Pn**	**11 32 33.7**	**-0.1**
DST	**Dursunbey**	**2.12**	**50**	*e*PN	**Pn**	**11 32 34.4**	**-0.1**
DALT	**Dalyan (Mudla)**	**2.26**	**131**	*e*PN	**Pn**	**11 32 38.1**	**+1.7**
BNT	**Bandirma**	**2.35**	**27**	*e*PN	**Pn**	**11 32 38.1**	**+0.4**
KHL	**Karahalli**	**2.37**	**88**	*e*PN	**Pn**	**11 32 38.8**	**+0.9**
KCT	**Karacabey**	**2.45**	**35**	*e*PN	**Pn**	**11 32 39.8**	**+0.8**
GDZ	**Gediz**	**2.46**	**70**	*i* P	**Pg**	**11 32 43.2**	**-2.9**
GDZ				*i* S	**Sg**	**11 33 17.0**	**-1.0**
RKY	**Sarkoy-Tekirda**	**2.46**	**12**	*e*PN	**Pn**	**11 32 40.2**	**+0.9**
FETY	**Fethiye**	**2.62**	**128**	*e*PN	**Pn**	**11 32 42.6**	**+1.2**
ALN	**Alexandroupoli**	**2.64**	**352**	P	**Pn**	**11 32 41.2**	**-0.6**
ALN				S	**Sn**	**11 33 14.0**	**+0.1**
ALT	**Altintas**	**2.92**	**73**	*e*PN	**Pn**	**11 32 46.0**	**+0.4**
RDO	**Rodhopi**	**2.96**	**346**	*e*Pb	**Pn**	**11 32 45.9**	**-0.3**
ELL	**Elmali**	**3.10**	**118**	*e*PN	**Pn**	**11 32 49.1**	**+1.1**
CTT	**Catalca**	**3.23**	**27**	*e*PN	**Pn**	**11 32 51.1**	**+1.3**
CTKS	**Kestanelik-??a**	**3.33**	**27**	*e*PN	**Pn**	**11 32 52.0**	**+0.8**

BEO 07 11:33:33.9±0.3, 4256N×2308E, ML1.5/4, 2C, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.10**	**72**	⇑*i* P	Pg	11 33 34.5	-1.3
VTS				*e*Sg	Sg	11 33 37.0	-0.1
ZAPS	**Zavoj**	**0.79**	**335**	*e*Pg	Pg	11 33 48.7	-0.3
ZAPS				*e*Sg	Sg	11 33 58.4	-0.7
BARS	**Barje**	**0.97**	**286**	⇑*i* Pg	Pg	11 33 51.0	-1.4
BARS				*e*Sg	Sg	11 34 04.8	-0.2
PLD	**Plovdiv**	**1.29**	**110**	*e*Pg	Pg	11 33 57.7	-0.8
PLD				*e*Sg	Sg	11 34 15.3	+0.1
VAY	**Valandovo**	**1.29**	**197**	*e*Pg	Pg	11 33 56.4	-2.3
VAY				*e*Sg	Sg	11 34 15.0	-0.5
VAY	**Valandovo**	**1.29**	**197**	*e*Sg	Sg	11 34 15.0	-0.5

IDC 07 11:40:13.0±19.0, 2398S×17956E, h577km±247km, mb3.0/5, mb1 3.2/5, mb1mx3.0/14, mbtmp3.0/5, Error ellipse: s-maj=100.2km s-min=79.8km az=143.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.07**	**271**	P	P	11 45 46.2	+0.9
	3.5nm,0.4s,baz=97,slow=11,SNR=11						
STKA	**Stephens Creek**	**34.32**	**248**	P	P	11 46 10.9	-1.6
	0.9nm,0.5s,baz=102,slow=14,SNR=4.4						
ASAR	**Alice Springs**	**41.63**	**261**	P	P	11 47 12.0	+0.1
	0.4nm,0.4s,baz=91,slow=7.3,SNR=9.7						
WRA	**Warramunga Arr**	**42.00**	**266**	P	P	11 47 14.8	-0.1
	1.4nm,0.4s,baz=98,slow=8.3,SNR=50						
TXAR	**Lajitas Array**	**90.81**	**58**	P	P	11 52 15.8	+0.1
	0.2nm,0.6s,baz=211,slow=7.0,SNR=4.5						

NEIC ***07*** *12:20:06.2, 3503S×7048W, h20km, ML2.5(GUC), After GUC.*

GUC 07 12:20:06.2±0.4, 3503S×7048W, h20km±2km, MD3.7, ML2.5, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**0.60**	**313**	⇓*i* P	Pb	12 20 17.8	-0.2
SFDO				*i* S	Sb	12 20 26.6	+0.5
CICH	**Cipreses**	**0.71**	**4**	⇓*i* P	Pb	12 20 19.8	-0.1
CICH				*i* S	Sb	12 20 29.9	+0.8
CACH	**El Canelo**	**0.91**	**354**	⇑*i* P	Pb	12 20 23.1	-0.3
CACH				*i* S	Sb	12 20 36.0	+1.0
CHCH	**Chadas Angostu**	**1.10**	**352**	*e*P	Pn	12 20 26.1	-0.3
CHCH				*i* S	Sb	12 20 41.4	+1.0
LMEL	**Las Melosas**	**1.20**	**11**	*e*P	Pn	12 20 28.0	+0.3
LMEL				*i* S	Sb	12 20 45.2	+2.0
LMEL	**Las Melosas**	**1.20**	**11**	*e*P	Pn	12 20 28.0	+0.3
LMEL				*i* S	Sb	12 20 45.2	+2.0
LMEL				AML	AML	12 20 48.2	
	comp=N,90nm,0.1s						
LNV	**Longovilo**	**1.32**	**324**	*e*P	Pn	12 20 29.9	+0.5
LNV				*i* S	Sn	12 20 47.8	+1.4
PCH	**Pirque**	**1.40**	**359**	*e*P	Pn	12 20 31.4	+0.9
PCH				*i* S	Sn	12 20 50.8	+2.4
TACH	**Talagante**	**1.42**	**344**	⇓*e*P	Pn	12 20 32.0	+1.1
TACH				*i* S	Sn	12 20 51.1	+2.1
RCDM	**Rinconada Maip**	**1.56**	**350**	*e*P	Pn	12 20 34.2	+1.5
RCDM				*i* S	Sn	12 20 55.0	+2.7
RCDM	**Rinconada Maip**	**1.56**	**350**	*e*P	Pn	12 20 34.2	+1.5
RCDM				*i* S	Sn	12 20 55.0	+2.7
RCDM				AML	AML	12 20 57.4	
	comp=E,144nm,0.3s						
FCH	**Farellones**	**1.70**	**5**	*e*P	Pn	12 20 37.4	+2.6
FCH				*e*S	Sn	12 21 00.7	+4.9
FCH				AML	AML	12 21 02.5	
	comp=N,149nm,0.2s						

ISCJB ***07*** *12:28:14.0±0.7, 2465N±005×12247E±002, h93km±7km, Error ellipse: s-maj=7.5km s-min=3.5km az=175.4*
TAP ***07*** *12:28:13.5, 2469N×12246E, h99km±1km, ML3.5, D*
JMA ***07*** *12:28:13.6±0.2, 2481N×12249E, h94km, M2.2*

ISC 07 12:28:14.3±0.7, 2466N±005×12247E±002, h93km±7km, n33, σ=67/56, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.53**	**112**	P	**Pn**	**12 28 29.5**	**0.0**
YOJ				S	**Sn**	**12 28 41.6**	**+0.7**
TWB1	**Santiao Chiao**	**0.56**	**308**	P	**Pn**	**12 28 29.7**	**-0.1**
	baz=306						
TWC	**Suao**	**0.57**	**265**	P	**Pn**	**12 28 29.6**	**-0.3**
	baz=261						
TWC				*e*S	**Sn**	**12 28 41.3**	**-0.2**
	baz=261						
ILA	**Ilan**	**0.67**	**279**	*e*P	**Pn**	**12 28 30.8**	**0.0**
	baz=276						
ENA	**Nanau**	**0.71**	**251**	*i* P	**Pn**	**12 28 31.1**	**0.0**
	baz=248						
ENA				*e*S	**Sn**	**12 28 44.4**	**+0.8**
	baz=248						
TWE	**Neicheng**	**0.74**	**275**	⇓P	**Pn**	**12 28 31.2**	**-0.2**
	baz=272						
TWE				S	**Sn**	**12 28 44.3**	**+0.1**
	baz=272						
NWF	**Wu-fen Shan**	**0.75**	**303**	*e*P	**Pn**	**12 28 31.4**	**-0.2**
	baz=301						
NWF				*e*S	**Sn**	**12 28 44.5**	**0.0**
	baz=301						
ENTT	**Nioudou**	**0.83**	**269**	P	**Pn**	**12 28 32.5**	**+0.2**
	baz=266						
TWA	**Mucha**	**0.87**	**292**	*e*P	**Pn**	**12 28 31.8**	**-1.0**
	baz=289						
TWD	**Chiawan**	**0.99**	**234**	*e*P	**Pn**	**12 28 33.4**	**-0.7**
	baz=232						
TWD				*e*S	**Sn**	**12 28 49.2**	**+0.4**
	baz=232						
NSK	**Sanguang**	**1.01**	**271**	⇓P	**Pn**	**12 28 34.3**	**-0.1**
	baz=269						
NSK				*e*S	**Sn**	**12 28 49.3**	**-0.2**
	baz=269						
NNS	**Nan Shan**	**1.03**	**258**	P	**Pn**	**12 28 34.5**	**0.0**
	baz=255						
NNS				*e*S	**Sn**	**12 28 49.9**	**+0.3**
	baz=255						
TWS1	**Kuangyinshan**	**1.05**	**295**	*e*P	**Pn**	**12 28 34.3**	**-0.5**
	baz=293						
TWS1				*e*S	**Sn**	**12 28 49.7**	**-0.6**
	baz=293						
IRIF	**Iriomote-Funau**	**1.19**	**106**	P	**Pn**	**12 28 36.1**	**-0.3**
IRIF				S	**Sn**	**12 28 53.4**	**+0.4**
WHF	**Hehuan Shan**	**1.22**	**245**	P	**Pn**	**12 28 36.8**	**+0.1**
	baz=243						
WHF				S	**Sn**	**12 28 53.9**	**+0.3**
	baz=243						
TWT	**Tachien**	**1.25**	**251**	⇑P	**Pn**	**12 28 37.8**	**+0.6**
	baz=249						
TWT				S	**Sn**	**12 28 54.8**	**+0.5**
	baz=249						
ESL	**Shilin**	**1.27**	**229**	*e*P	**Pn**	**12 28 36.4**	**-1.0**
	baz=226						
ESL				*e*S	**Sn**	**12 28 53.5**	**-1.3**
	baz=226						
NSTT	**Nanjuang**	**1.34**	**269**	*e*P	**Pn**	**12 28 38.3**	**+0.1**
	baz=267						
NSTT				*e*S	**Sn**	**12 28 56.2**	**-0.1**
	baz=267						
HATJ	**Hateruma jima**	**1.35**	**116**	P	**Pn**	**12 28 38.9**	**+0.5**
HATJ				*e*S	**Sn**	**12 28 56.8**	**+0.2**
JKRS	**Kuro-shima**	**1.46**	**106**	P	**Pn**	**12 28 40.0**	**+0.3**
JKRS				S	**Sn**	**12 28 59.4**	**+0.5**
JIJ	**Ishigaki jima**	**1.55**	**101**	P	**Pn**	**12 28 40.5**	**-0.3**
JIJ				S	**Sn**	**12 29 00.4**	**-0.5**
EHY	**Hungye**	**1.56**	**223**	*e*P	**Pn**	**12 28 40.2**	**-0.8**
	baz=221						
EHY				*e*S	**Sn**	**12 28 59.9**	**-1.2**
	baz=221						
SMLT	**Sun Moon Lake**	**1.63**	**242**	*e*P	**Pn**	**12 28 43.0**	**+1.1**
	baz=240						
TYC	**Yuchr**	**1.66**	**243**	*e*P	**Pn**	**12 28 43.0**	**+0.8**
	baz=241						
TWF1	**Yuli**	**1.69**	**220**	*e*P	**Pn**	**12 28 41.4**	**-1.2**
	baz=218						
YUS	**Yu-Shan**	**1.81**	**230**	*e*P	**Pn**	**12 28 45.4**	**+1.2**
	baz=228						
YUS				*e*S	**Sn**	**12 29 07.4**	**+0.4**
	baz=228						
ALS	**Alishan**	**1.91**	**233**	*e*P	**Pn**	**12 28 46.3**	**+0.9**
	baz=232						
ALS				*e*S	**Sn**	**12 29 11.3**	**+2.2**
	baz=232						
CHN5	**Tsauling**	**1.95**	**238**	*e*P	**Pn**	**12 28 46.9**	**+0.9**
	baz=236						
ELDTW	**Lidau**	**1.98**	**223**	*e*P	**Pn**	**12 28 46.0**	**-0.4**
	baz=221						
ELDTW				*e*S	**Sn**	**12 29 10.2**	**-0.6**
	baz=221						
JTJ	**Tarama**	**2.03**	**90**	P	**Pn**	**12 28 47.1**	**+0.1**
JTJ				*e*S	**Sn**	**12 29 11.2**	**-0.7**
WTP	**Ta-pu**	**2.21**	**231**	*e*P	**Pn**	**12 28 50.2**	**+0.8**
	baz=229						
TWG	**Pinlang**	**2.24**	**215**	*e*P	**Pn**	**12 28 49.6**	**-0.2**
	baz=214						
TWG				*e*S	**Sn**	**12 29 14.9**	**-1.9**
	baz=214						
CHN1	**Nanshi**	**2.31**	**231**	*e*P	**Pn**	**12 28 51.1**	**+0.4**
	baz=229						

CSEM ***07*** *12:31:15.7±0.1, 3666N×28.14E, h40km, MD2.9, Error ellipse: s-maj=2.5km s-min=1.3km az=71.0*
NEIC ***07*** *12:31:20.0, 3699N×28.14E, h31km, MD3.4(ATH), MD2.9(ISK), After ISK.*
ISCJB ***07*** *12:31:19.1±0.8, 3689N±005×28.12E±005, h56km±8km, Error ellipse: s-maj=9.0km s-min=5.2km az=27.3*
ATH ***07*** *12:31:19.5, 3675N×2761E, h10km, MD3.4/3*
ISK ***07*** *12:31:20.0, 3698N×28.14E, h31km, MD2.9*
HLW ***07*** *12:31:20.9, 3638N×28.12E, h33km, Mb3.7*
DDA ***07*** *12:31:21.1, 37.14N×28.14E, h13km, Md3.1*

ISC 07 12:31:20.0±0.7, 3690N±005×2812E±004, h46km±10km, n42, σ=58/40, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.39**	**94**	*i* P	**Pn**	**12 31 28.5**	**-1.2**
TURN				*i* S	**Sn**	**12 31 35.2**	**-1.4**
DALT	**Dalyan (Mudla)**	**0.44**	**108**	PG	**Pn**	**12 31 31.0**	**+0.7**
DALT				*e*SG	**Sn**	**12 31 38.1**	**+0.6**
DALT	**Dalyan (Mudla)**	**0.44**	**108**	Pg	**Pn**	**12 31 31.0**	**+0.7**
DALT				Sg	**Sn**	**12 31 39.0**	**+1.5**
MLSB	**Milas**	**0.48**	**325**	PG	**Pn**	**12 31 30.8**	**+0.1**
BDRM	**Kayabasi**	**0.56**	**287**	*i* P	**Pn**	**12 31 31.7**	**-0.1**
BDRM				*i* S	**Sn**	**12 31 41.2**	**+0.9**
BODT	**Bodrum**	**0.67**	**284**	PG	**Pn**	**12 31 33.0**	**-0.1**
BODT				*e*SG	**Sn**	**12 31 43.4**	**+0.8**
BODT	**Bodrum**	**0.67**	**284**	Pg	**Pn**	**12 31 33.0**	**-0.1**
BODT				Sg	**Sn**	**12 31 43.0**	**+0.4**
BODT	**Bodrum**	**0.67**	**284**	Pg	**Pn**	**12 31 33.0**	**-0.1**
BODT				Sg	**Sn**	**12 31 43.0**	**+0.4**
ARG	**Arkhangelos**	**0.69**	**180**	*e*PB	**Pn**	**12 31 32.4**	**-1.0**
AYDN	**Tasoluk**	**0.78**	**346**	*i* P	**Pn**	**12 31 35.6**	**+1.0**
FETY	**Fethiye**	**0.82**	**109**	*e*PG	**Pn**	**12 31 35.4**	**+0.2**
GCAM	**G?zelcaml?**	**1.06**	**319**	*i* P	**Pn**	**12 31 38.4**	**-0.1**
GCAM				*i* S	**Sn**	**12 31 51.8**	**-0.4**
DENT	**Denizli**	**1.12**	**40**	*e*PG	**Pn**	**12 31 38.7**	**-0.6**
GOLH	**Golhisar**	**1.20**	**73**	*i* P	**Pn**	**12 31 41.1**	**+0.7**
SMG	**Samos**	**1.30**	**309**	*e*PB	**Pn**	**12 31 41.0**	**-0.7**
ELL	**Elmali**	**1.44**	**96**	*e*PN	**Pn**	**12 31 44.2**	**+0.5**
KARP	**Karpathos**	**1.56**	**210**	*e*PB	Px	12 31 43.0	
MANT	**Manisa**	**1.62**	**12**	*i* P	**Pn**	**12 31 46.2**	**+0.1**
MANT				*i* S	**Sn**	**12 32 06.3**	**+0.4**
IZM	**Izmir**	**1.64**	**336**	*e*PN	**Pn**	**12 31 46.2**	**-0.2**
KDAG	**Bornova**	**1.64**	**336**	*i* P	**Pn**	**12 31 46.0**	**-0.4**
KULA	**Kula-Manisa**	**1.67**	**15**	*e*PN	**Pn**	**12 31 47.0**	**+0.3**
BLCB	**Balcova**	**1.71**	**330**	*e*PN	**Pn**	**12 31 47.1**	**-0.2**
KHL	**Karahalli**	**1.80**	**38**	*e*PN	**Pn**	**12 31 48.5**	**0.0**
KHL	**Karahalli**	**1.80**	**38**	Pn	**Pn**	**12 31 48.5**	**-0.1**
URLA	**Izmir**	**1.89**	**321**	*i* P	Px	12 31 46.9	
URLA	**Izmir**	**1.89**	**321**	*i* P	Px	12 31 46.8	
AKHS	**Akhisar**	**1.99**	**353**	*i* P	**Pn**	**12 31 50.9**	**-0.2**
AKHS				*i* S	**Sn**	**12 32 14.4**	**-0.4**
AKS	**Akhisar**	**1.99**	**353**	*e*PN	**Pn**	**12 31 50.9**	**-0.2**
DEMI	**Demirci**	**2.19**	**12**	*i* P	**Pn**	**12 31 54.3**	**+0.4**
GDZ	**Gediz**	**2.43**	**26**	*i* P	**Pn**	**12 31 57.1**	**-0.1**
BALY	**Balya**	**2.86**	**352**	*i* P	**Pn**	**12 32 03.3**	**+0.2**
BOZC	**Bozcaada**	**3.35**	**332**	*i* P	**Pn**	**12 32 09.7**	**-0.1**
SLUM		**5.91**	**205**	P	Px	12 32 39.8	
HRSH	**Kfar Ka'horesh**	**7.23**	**123**	P	**Pn**	**12 33 03.5**	**+0.4**
RSH		**7.54**	**140**	P	Px	12 33 03.5	
AMAG	**Maghara**	**7.54**	**144**	P	Px	12 33 03.1	
KOT	**Kottamia**	**7.62**	**155**	P	Px	12 33 03.9	
HHAG	**Hagoal**	**7.69**	**153**	P	Px	12 33 04.8	
HSAF	**As Saff**	**7.81**	**157**	P	Px	12 33 06.3	
HSAF	**As Saff**	**7.81**	**157**	P	Px	12 33 06.3	
	569nm,0.2s						
GLL	**Jalalah**	**7.90**	**157**	P	Px	12 33 07.8	
SUZ		**8.07**	**149**	P	Px	12 33 10.5	

ISCJB ***07*** *12:45:57.3±0.7, 099S±006×12063E±006, h10km, mb3.7/6, Error ellipse: s-maj=10.5km s-min=7.2km az=38.3*
IDC ***07*** *12:45:57.2±0.9, 099S×12081E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.8/17, mbtmp3.8/7, ML4.0/1, MS3.3/3, Ms1 3.3/3, ms1mx2.4/27, Error ellipse: s-maj=46.2km s-min=16.6km az=66.0*
DJA ***07*** *12:45:59, 100S×12054E, h9km, MLv3.9/2*

ISC 07 12:45:59.0±0.8, 101S±007×12059E±006, h10km, n14, σ=11/13, mb3.7/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.76**	**278**	P	**Pg**	**12 46 12.4**	**-1.2**
PCI	**Palu**	**0.76**	**278**	S	**Sg**	**12 46 22.7**	**-0.8**
KDI	**Kendari**	**3.57**	**145**	P	**Pn**	**12 46 54.7**	**+0.3**
KAPI	**Kappang**	**4.07**	**192**	Pn	**Pn**	**12 47 01.6**	**+0.3**
	10.0nm,0.3s,baz=349,slow=5.7,SNR=22						
KAPI				Sn	**Sn**	**12 47 49.7**	**+0.7**
	baz=14,slow=22,SNR=3.5						
KAPI				LR	LR	12 48 58.3	
	comp=Z,277nm,19.9s,baz=207,slow=44						
KAPI	**Kappang**	**4.07**	**192**	P	**Pn**	**12 47 01.3**	**0.0**
BBKI	**Banjar Baru**	**6.24**	**247**	P	**Pn**	**12 47 34.2**	**+3.1**
BATI	**Baumata**	**9.64**	**162**	LR	LR	12 52 09.7	
	comp=Z,104nm,21.6s,baz=162,slow=39						
WRA	**Warramunga Arr**	**23.14**	**145**	P	**P**	**12 51 04.2**	**-1.4**
	1.1nm,0.6s,mb3.5,baz=329,slow=9.3,SNR=29						
WRA				PcP	PcP	12 54 52.7	-1.7
	0.4nm,1.1s,baz=325,slow=1.9,SNR=2.7						
ASAR	**Alice Springs**	**25.97**	**151**	P	**P**	**12 51 31.7**	**-0.2**
	0.7nm,0.5s,mb3.5,baz=344,slow=14,SNR=12						
ASAR				PcP	PcP	12 54 59.2	-1.4
	0.2nm,0.5s,baz=338,slow=3.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**28.76**	**313**	P	**P**	**12 51 59.3**	**+2.3**
	0.5nm,0.6s,mb3.4,baz=151,slow=8.5,SNR=4.2						
STKA	**Stephens Creek**	**36.56**	**149**	P	**P**	**12 53 03.8**	**-1.3**
	1.8nm,0.6s,mb4.1,baz=326,slow=8.8,SNR=7.1						
SONM	**Songino Array**	**50.19**	**348**	P	**P**	**12 54 54.9**	**+0.1**
	0.5nm,0.6s,mb3.7,baz=166,slow=9.5,SNR=3.7						
MKAR	**Makanchi Array**	**58.23

ZALV					pP		pP	13 17 21.9	+0.4
	comp=Z,1.9nm,0.5s,baz=177,slow=9.3,SNR=4.2								
AKTO	**Aktyubinsk**	**47.06**	**329**		pP		pP	13 18 10.5	+0.9
	comp=Z,1.1nm,0.6s,baz=116,slow=12,SNR=3.4								
WRA	**Warramunga Arr**	**51.79**	**129**		P		**P**	**13 18 27.1**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=314,slow=8.1,SNR=18								
WRA					PcP		PcP	13 19 39.1	-0.5
	comp=Z,0.4nm,0.7s,baz=319,slow=3.1,SNR=6.8								
WRAB	**Tennant Creek**	**51.79**	**129**	*e*P			**P**	**13 18 27.3**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.0								
WB2	**Warramunga Arr**	**51.80**	**129**	*e*P			**P**	**13 18 27.3**	**-0.1**
ASAR	**Alice Springs**	**53.74**	**133**		P		**P**	**13 18 41.5**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=307,slow=6.8,SNR=31								
ARCES	**ARCESS Array B**	**70.03**	**340**		P		**P**	**13 20 30.3**	**+0.1**
	comp=Z,4.8nm,1.1s,mb4.3,baz=84,slow=9.2,SNR=3.7								

*ISCJB **07** 13:29:42.9±0.7, 3664N±004×7149E±009, h193km±11km, Error ellipse: s-maj=12.5km s-min=4.9km az=162.1*
*NEIC **07** 13:29:43.3±0.8, 3663N×7140E, h189km±15km, mb4.3/8, Error ellipse: s-maj=18.0km s-min=9.5km az=93.0*
*NNC **07** 13:29:49.2±4.1, 37.14N×71.17E, h177km±77km, mb3.0, mpv4.0, Error ellipse: s-maj=44.2km s-min=21.4km az=12.0*

ISC 07 13:29:43.8±0.7, 3664N±004×7149E±009, h183km±10km, n28, σ1$00/37, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.89**	**224**	*e*P	**Pn**	**13 30 30.9**	**-0.4**
THN	**Thein Dam**	**5.46**	**139**	*e*P	**Pn**	**13 31 04.5**	**+0.8**
THN				*e*S	**Sn**	**13 32 06.4**	**-0.2**
DLH	**Dalhousie**	**5.51**	**137**	*e*S	**Sn**	**13 32 08.0**	**+0.2**
AML	**Almayashu**	**5.74**	**17**	*e*P	**Pn**	**13 31 07.6**	**+0.3**
	4μm,0.9s						
AML				S	**Sn**	**13 32 09.0**	**-4.1**
AML	**Almayashu**	**5.74**	**17**	P	**Pn**	**13 31 07.8**	**+0.5**
	SNR=43						
UCH	**Uchtor**	**6.05**	**22**	P	**Sn**	**13 32 19.7**	**-0.7**
	SNR=9.7						
EKS2	**Erkin-Say**	**6.26**	**16**	*e*P	**Pn**	**13 31 14.0**	**-0.2**
	5.3nm,0.4s						
EKS2				*e*S	**Sn**	**13 32 06.9**	**-19**
EKS2	**Erkin-Say**	**6.26**	**16**	P	**Pn**	**13 31 14.4**	**+0.3**
	SNR=11						
AAK	**Ala-Archa**	**6.42**	**20**	P	**Pn**	**13 31 17.0**	**+0.9**
	SNR=17						
KK31	**Karatay Array**	**6.50**	**354**	P	**Pn**	**13 31 16.1**	**-1.0**
	8.2nm,0.3s,baz=171,slow=12,SNR=305						
KK31				⇑S	**Sn**	**13 32 24.2**	**-6.8**
	6.2nm,0.5s,baz=182,slow=17,SNR=13						
KBK	**Karagaybulak**	**6.57**	**23**	P	**Pn**	**13 31 19.8**	**+1.6**
	SNR=6.9						
USP	**Ospenovka**	**7.01**	**18**	P	**Pn**	**13 31 24.5**	**+0.6**
	SNR=9.9						
TKM2	**Tokmak 2**	**7.02**	**25**	⇓P	**Pn**	**13 31 24.9**	**+0.8**
	2.4nm,0.4s						
TKM2				⇑S	**Sn**	**13 32 42.1**	**-1.3**
	3.3nm,0.7s						
TKM2	**Tokmak 2**	**7.02**	**25**	*e*P	**Pn**	**13 31 24.7**	**+0.7**
	12nm,1.0s						
TKM2	**Tokmak 2**	**7.02**	**25**	P	**Pn**	**13 31 25.0**	**+1.0**
	SNR=12						
SMLA	**Simla**	**7.25**	**138**	*i* P	**Pn**	**13 31 28.0**	**+0.9**
SMLA				*i* S	**Sn**	**13 32 46.0**	**-2.9**
SMLA				*i* S	**Sn**	**13 32 46.9**	**-1.9**
SMLA				*ex*	x	13 32 48.8	
	comp=N,320nm,0.4s						
SMLA				*ex*	x	13 32 50.0	
	comp=E,279nm,0.3s						
KLP	**Kalpa**	**7.58**	**130**	*e*P	**Pn**	**13 31 32.0**	**+0.6**
KLP				*e*S	**Sn**	**13 32 55.2**	**-1.5**
JOSI	**Joshimath**	**9.06**	**130**	*e*P	**Pn**	**13 31 52.5**	**+1.6**
JOSI				*e*S	**Sn**	**13 33 28.0**	**-4.1**
PYUN	**Piuthan**	**12.91**	**128**	*e*P	**Pn**	**13 32 39.3**	**-1.4**
	comp=E,4.8nm,0.3s						
DANN	**Dangsing**	**13.24**	**125**	*e*P	**Pn**	**13 32 44.4**	**-0.4**
	comp=E,4.4nm,0.3s						
GKN	**Gorkha**	**14.05**	**124**	*e*P	**Pn**	**13 32 55.4**	**+0.5**
	comp=E,5.5nm,0.3s						
DMN	**Daman**	**14.62**	**124**	*e*P	**Pn**	**13 33 02.3**	**+0.3**
	comp=E,4.8nm,0.4s						
AB01	**Akbulak array**	**15.15**	**330**	⇑P	**Pn**	**13 33 07.2**	**-1.1**
	comp=E,1.1nm,0.5s						
JIRN	**Jiri**	**15.32**	**122**	*e*P	**Pn**	**13 33 11.8**	**+1.2**
	comp=E,5.3nm,0.3s						
RAMN	**Ramite**	**16.06**	**123**	*e*P	**Pn**	**13 33 19.5**	**0.0**
	comp=E,8.7nm,0.6s						
TAPN	**Taplejung**	**16.57**	**119**	*e*P	**Pn**	**13 33 26.8**	**+1.1**
ODAN	**Odare**	**16.65**	**121**	*e*P	**Pn**	**13 33 26.5**	**-0.2**
WB2	**Warramunga Arr**	**81.74**	**122**	P	**P**	**13 41 40.5**	**-1.4**

*NIED **07** 13:37:00, 47.20N×153.70E, h32km, Mw4.4 Best double couple: M₀4.93000×10¹⁵ NP1:φ322.00000°, δ77.00000°, λ22.00000°. NP2:φ226.00000°, δ69.00000°, λ166.00000°.*
*SKHL **07** 13:37:54.6±1.4, 4720N×15350E, h60km±18km, mb5.4/6, ms4.0/2, msh5.3/1*
*MOS **07** 13:37:54.7±0.8, 4733N×15324E, h44km, mb5.0/51, Error ellipse: s-maj=8.5km s-min=5.0km az=98.9*
*ISCJB **07** 13:37:55.9±0.1, 4726N±003×15325E±002, h57km, mb4.7/123, MS3.9/24, Error ellipse: s-maj=4.8km s-min=1.9km az=162.2*
*BJI **07** 13:37:55.5, 4731N×15339E, h61km, mB4.7, mb4.7, Ms4.0, Msz3.8*
*NEIC **07** 13:37:57.9±0.2, 4736N×153.17E, mb4.8/72, Error ellipse: s-maj=5.6km s-min=2.9km az=160.0*
*IDC **07** 13:37:57.8±0.4, 4738N×153.17E, h56km±3km, mb4.2/27, mb1 4.4/28, mb1mx4.4/30, mbtmp4.2/28, MS3.6/14, Ms1 3.6/14, ms1mx3.3/37, Error ellipse: s-maj=12.6km s-min=10.3km az=139.0*
*SZGRF **07** 13:38:05.0, 4864N×15184E, h33km, mb5.1, Kuril Islands, Russia*

ISC 07 13:37:58.3±0.1, 4735N±003×15316E±003, h59km, h59km±.5km: pP-P, n543, σ0$74/562, mb4.7/123, MS3.9/24, 130C-107D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.87**	**29**	*e*PN	**Pn**	**13 38 53.7**	**-1.5**
SKR				*i* S	**Sn**	**13 39 37.0**	**-2.3**
SKR				pmax	pmax		
	comp=N,170nm,0.5s						
SKR				pmax	pmax		
	comp=E,150nm,0.5s						
SKR				pmax	pmax		
	comp=Z,320nm,0.5s						
SKR				smax			
	comp=N,2μm,2.0s						
SKR				smax			
	comp=E,2μm,2.0s						
SKR				smax			
	comp=N,650nm,0.4s						
SKR				smax			
	comp=E,910nm,0.4s						
SKR	**Severo-Kuril's**	**3.87**	**29**	*e*P	**Pn**	**13 38 53.7**	**-1.5**
SKR				AMB	AMB	13 38 58.5	
	comp=E,170nm,0.5s						
SKR				AMB	AMB	13 38 58.5	
	comp=E,150nm,0.5s						
SKR				AMB	AMB	13 38 58.5	
	comp=E,320nm,0.5s						
SKR				*i* S	**Sn**	**13 39 37.0**	**-2.3**
SKR				A		13 39 40.0	
	comp=E,2μm,2.0s						
SKR				A		13 39 40.0	
	comp=E,1μm,2.0s						
SKR				A		13 39 40.9	
	comp=E,650nm,0.4s						
SKR				A		13 39 40.9	
	comp=E,910nm,0.4s						
SKR				A		13 39 40.9	
	comp=E,200nm,0.4s						
KUR	**Kuril'sk**	**4.23**	**242**	⇑*i*PN	**Pn**	**13 38 59.0**	**-1.2**
KUR				*e*S	**Sn**	**13 39 48.0**	**-0.2**
KUR				pmax	pmax		
	comp=N,190nm,0.7s						
KUR				pmax	pmax		
	comp=Z,450nm,0.7s						
KUR				smax			
	comp=N,1μm,0.6s						
KUR				smax			
	comp=N,5μm,1.8s						
KUR				smax			
	comp=E,3μm,1.8s						
KUR	**Kuril'sk**	**4.23**	**242**	⇑*i*P	**Pn**	**13 38 59.0**	**-1.2**
KUR				AMB	AMB	13 39 08.5	
	comp=E,190nm,0.7s						
KUR				AMB	AMB	13 39 08.5	
	comp=E,450nm,0.7s						
KUR				*e*S	**Sn**	**13 39 48.0**	**-0.2**
KUR				A		13 40 04.5	
	comp=E,1μm,0.6s						
KUR				A		13 40 04.5	
	comp=E,1μm,0.6s						
KUR				A		13 40 04.8	
	comp=E,5μm,1.8s						
KUR				A		13 40 04.8	
	comp=E,3μm,1.8s						
YUK	**Yuzh-Kuril'sk**	**6.09**	**240**	⇑*i*PN	**Pn**	**13 39 27.5**	**+1.9**
YUK				*e*S	**Sn**	**13 40 39.4**	**+5.6**
YUK				pmax	pmax		
	comp=Z,370nm,0.5s						
YUK				smax			
	comp=N,2μm,0.8s						
YUK				smax			
	comp=E,1μm,0.8s						
YUK				smax			
	comp=N,3μm,0.9s						
YUK				smax			
	comp=E,3μm,0.9s						
YUK	**Yuzh-Kuril'sk**	**6.09**	**240**	⇑*i*P	**Pn**	**13 39 27.5**	**+1.9**
YUK				AMB	AMB	13 39 32.6	
	comp=E,370nm,0.5s						
YUK				*e*S	**Sn**	**13 40 39.4**	**+5.6**
YUK				A		13 40 58.8	
	comp=E,3μm,0.9s						
YUK				A		13 40 58.8	
	comp=E,2μm,0.8s						
YUK				A		13 40 58.8	
	comp=E,1μm,0.8s						
PEA0B	**Petropavlovsk-**	**6.46**	**25**	*e*P	**Pn**	**13 39 30.5**	**-0.2**
PETK	**Petropavlovsk-**	**6.46**	**25**	P	**Pn**	**13 39 30.9**	**+0.3**
	comp=E,6.3nm,0.3s,baz=175,slow=13,SNR=94						
PETK				S	**Sn**	**13 40 53.5**	**+11**
	comp=E,1.2nm,0.3s,baz=206,slow=16,SNR=2.4						
PETK				LR	LR	13 42 13.1	
	comp=E,149nm,21.7s,baz=204,slow=40						
PETK	**Petropavlovsk-**	**6.46**	**25**	P	**Pn**	**13 39 30.9**	**+0.3**
PETK				S	**Sn**	**13 40 53.5**	**+11**
PETK				LR	LR	13 42 13.1	
NEM2	**Nemuro 2**	**6.56**	**235**	P	**Pn**	**13 39 30.9**	**-1.2**
NEM2				*e*S	**Sn**	**13 40 41.8**	**-3.7**
JRA	**Rausu**	**6.58**	**242**	P	**Pn**	**13 39 34.2**	**+1.9**
PET	**Petropavlovsk**	**6.69**	**30**	*e*P	**Pn**	**13 39 32.0**	**-1.7**
	comp=E,31nm,0.5s						
PET	**Petropavlovsk**	**6.69**	**30**	*e*PN	**Pn**	**13 39 32.4**	**-1.4**
PET				pmax	pmax		
	comp=Z,45nm,0.8s						
JNK	**Nakash**	**7.02**	**241**	P	**Pn**	**13 39 39.4**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.11**	**271**	*e*P	**Pn**	**13 39 43.5**	**+4.0**
	comp=Z,264nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.11**	**271**	⇓*i*PN	**Pn**	**13 39 42.8**	**+3.3**
YSS				*e*S	**Sn**	**13 41 01.6**	**+2.9**
YSS				pmax	pmax		
	comp=N,170nm,0.6s						
YSS				pmax	pmax		
	comp=E,230nm,0.6s						
YSS				pmax	pmax		
	comp=Z,260nm,0.6s						
YSS				smax			
	comp=N,90nm,0.6s						
YSS				smax			
	comp=E,120nm,0.6s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.11**	**271**	⇓*i*P	**Pn**	**13 39 42.8**	**+3.3**
YSS				AMB	AMB	13 39 44.2	
	comp=Z,260nm,0.6s						
YSS				AMB	AMB	13 39 44.2	
	comp=Z,170nm,0.6s						
YSS				AMB	AMB	13 39 44.2	
	comp=Z,230nm,0.6s						
YSS				*e*S	**Sn**	**13 41 01.6**	**+2.9**
YSS				A		13 41 06.0	
	comp=Z,90nm,0.6s						
YSS				A		13 41 06.0	
	comp=Z,120nm,0.6s						
YSS				*e*LQ		13 41 43.0	
YSS				AMS	AMS	13 42 34.0	
	comp=Z,500nm,15.0s						
YSS				AMS	AMS	13 42 34.0	
	comp=Z,500nm,15.0s						
JTKR	**Abashiri--Toko**	**7.30**	**246**	P	**Pn**	**13 39 44.6**	**+2.4**
JAK	**Akkeshi**	**7.39**	**237**	P	**Pn**	**13 39 42.6**	**-0.8**
JAK				*e*S	**Sn**	**13 41 02.8**	**-3.0**
UGL	**Uglegorsk**	**7.61**	**287**	*e*PN	**Pn**	**13 39 51.0**	**+4.6**
UGL				pmax	pmax		
	comp=Z,130nm,0.6s						
UGL				pmax	pmax		
	comp=Z,500nm,1.4s						
UGL				MLR	MLR		
	comp=E,1μm,19.0s						
UGL				MLR	MLR		
	comp=Z,2μm,19.0s						
UGL				MLR	MLR		
	comp=N,750nm,17.0s						
UGL	**Uglegorsk**	**7.61**	**287**	*e*P	**Pn**	**13 39 51.0**	**+4.6**
UGL				AMB	AMB	13 39 52.0	
	comp=N,130nm,0.6s						
UGL				AMB	AMB	13 39 52.0	
	comp=N,500nm,1.4s						
UGL				*e*L		13 41 50.0	
UGL				AMS	AMS	13 42 20.0	
	comp=N,1μm,19.0s						
UGL				AMS	AMS	13 42 20.0	
	comp=N,2μm,19.0s						
UGL				AMS	AMS	13 42 40.0	
	comp=N,750nm,17.0s						
JMP	**Maruseppu**	**7.63**	**248**	P	**Pn**	**13 39 49.8**	**+3.1**
TYV	**Tymovskoe**	**7.74**	**301**	*e*P	**Pn**	**13 39 51.0**	**+2.9**
TYV				AMB	AMB	13 39 52.5	
	comp=N,80nm,0.9s						
TYV				AMB	AMB	13 39 52.5	
	comp=N,20nm,0.8s						
TYV				*e*S	**Sn**	**13 41 19.0**	**+4.8**
JAR	**Ashorobuto**	**7.75**	**242**	P	**Pn**	**13 39 49.5**	**+1.1**
JOB	**Onbets**	**7.95**	**239**	*e*S	**Sn**	**13 41 18.7**	**-0.7**
JWK2	**Keihoku**	**8.05**	**260**	P	**Pn**	**13 39 58.8**	**+6.3**
ASAJ	**Asahikawa**	**8.06**	**250**	P	**Pn**	**13 39 56.7**	**+4.1**
	comp=N,4.7nm,0.3s,baz=64,slow=11,SNR=22						
ASAJ				LR	LR	13 42 47.4	
	comp=N,451nm,20.8s,baz=116,slow=36						
ASAJ	**Asahikawa**	**8.06**	**250**	P	**Pn**	**13 39 56.6**	**+4.0**
ASAJ	**Asahikawa**	**8.06**	**250**	PN	**Pn**	**13 39 56.7**	**+4.1**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,451nm,20.8s						
JKK2	**Kamakawa 2**	**8.08**	**248**	P	**Pn**	**13 39 55.8**	**+3.0**
JCH	**Churui**	**8.40**	**239**	P	**Pn**	**13 39 56.7**	**-0.5**
JCH				*e*S	**Sn**	**13 41 26.7**	**-3.8**
JFR	**Furan**	**8.54**	**245**	P	**Pn**	**13 40 01.1**	**+1.9**
JEM	**Erimo**	**8.89**	**237**	P	**Pn**	**13 40 03.5**	**-0.5**
ERM	**Erimo**	**8.89**	**237**	*e*P	**Pn**	**13 40 03.5**	**-0.5**
	comp=Z,58nm,0.6s						
ERM	**Erimo**	**8.89**	**237**	⇑*i*PN	**Pn**	**13 40 08.4**	**+4.4**
JBT2	**Biratori 2**	**8.90**	**243**	P	**Pn**	**13 40 04.4**	**+0.4**
JNBK	**Urakawa-nobuka**	**8.96**	**239**	P	**Pn**	**13 40 03.2**	**-1.7**
JNBK				*e*S	**Sn**	**13 41 41.7**	**-2.5**
JEW	**Eniwo**	**9.42**	**246**	P	**Pn**	**13 40 12.2**	**+1.0**
JNB	**Noboribetsu**	**9.88**	**245**	P	**Pn**	**13 40 17.1**	**-0.3**
JNB				*e*S	**Sn**	**13 42 04.6**	**-2.1**
JKB	**Kayabe**	**10.22**	**242**	P	**Pn**	**13 40 20.4**	**-1.7**
JKB				*e*S	**Sn**	**13 42 08.9**	**-6.1**
JSH	**Shimam**	**10.40**	**248**	P	**Pn**	**13 40 25.9**	**+1.3**
JYM2	**Yakumo 2**	**10.49**	**245**	P	**Pn**	**13 40 25.3**	**-0.4**
JTM	**Tenmabayashi**	**10.88**	**237**	P	**Pn**	**13 40 28.2**	**-3.0**
JTM				*e*S	**Sn**	**13 42 21.5**	**-10**
JANG	**Nango**	**10.91**	**235**	P	**Pn**	**13 40 27.5**	**-4.0**
JANG				*e*S	**Sn**	**13 42 22.3**	**-10**
JTH	**Tanohata**	**11.03**	**232**	*e*S	**Sn**	**13 42 22.6**	**-12**
JOSM	**Okushiri--Mats**	**11.06**	**247**	P	**Pn**	**13 40 33.0**	**-0.6**
OFUJ	**Ofunato**	**11.76**	**230**	P	**Pn**	**13 40 36.5**	**-6.6**
OFUJ				*e*S	**Sn**	**13 42 40.6**	**-12**
HABR	**Khabarovsk**	**12.21**	**282**	*e*PN	**Pn**	**13 40 54.0**	**+4.9**
HABR				S	**Sn**	**13 43 09.6**	**+6.2**
JIO	**Ouri**	**12.39**	**228**	P	**Pn**	**13 40 47.9**	**-3.9**
JIO				*e*S	**Sn**	**13 42 58.1**	**-10**
KLR	**Kul'dur**	**14.37**	**285**	*e*P	**Pn**	**13 41 19.0**	**+0.7**
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
MAJO	**Matsushiro**	**15.47**	**231**	*e*P	**Pn**	**13 41 28.2**	**-4.5**
	comp=Z,49nm,0.9s						
MAJO	**Matsushiro**	**15.47**	**231**	*e*P	**Pn**	**13 41 28.2**	**-4.5**
MAJO				pmax	pmax		
	comp=Z,49nm,0.9s						
MAT	**Matsushiro**	**15.47**	**231**	P	**Pn**	**13 41 29.9**	**-2.8**
MJAR	**Matsushiro Arr**	**15.47**	**231**	P	**Pn**	**13 41 30.0**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=29,slow=14,SNR=11						
MJAR				LR	LR	13 48 20.0	
	comp=Z,79nm,19.5s,baz=50,slow=40						
MDJ	**Mudanjiang**	**16.59**	**269**	P	**Pn**	**13 41 46.5**	**-0.3**
MDJ				AP	pP	13 41 59.8	-1.2
MDJ				XP	sP	13 42 06.5	-2.0
MDJ				S	**S**	**13 44 50.1**	**-8.5**
MDJ				SCP	ScP	13 50 04.5	+1.3
MDJ				PCS	PcS	13 50 10.6	+1.0
MDJ				AMB	AMB		
	comp=Z,83nm,8.2s						
MDJ				LR	LR		
	comp=N,132nm,19.2s						
MDJ				LR	LR		
	comp=E,121nm,22.1s						
MDJ				LR	LR		
	comp=Z,233nm,16.3s						
MDJ	**Mudanjiang**	**16.59**	**269**	*e*P	**Pn**	**13 41 48.4**	**+1.7**
	comp=Z,29nm,0.9s						
ZEA	**Zeya**	**17.60**	**301**	*e*P	**Pn**	**13 41 58.6**	**-0.6**
ZEA				AMB	AMB	13 42 04.4	
	comp=Z,22nm,0.9s						
CLNS	**Chul'man**	**19.66**	**309**	*e*P	**Pn**	**13 42 24.7**	**+0.8**
CLNS				pmax	pmax		
	comp=Z,20nm,0.8s						
CLNS				pmax	pmax		
	comp=E,15nm,0.9s						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.8s						
CLNS				MLR	MLR		
	comp=N,143nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,219nm,16.0s						
CLNS				MLR	MLR		
	comp=E,195nm,13.0s						
CN2	**Changchun**	**19.67**	**270**	*e*P	**Pn**	**13 42 22.1**	**-2.1**
CN2				*e*AP	pP	13 42 34.7	-0.4
CN2				*e*S	**S**	**13 45 54.7**	**-6.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,110nm,3.0s						
YAK	**Yakutsk**	**19.84**	**326**	*e*P	**Pn**	**13 42 23.4**	**-2.6**
	comp=Z,21nm,0.5s						
YAK	**Yakutsk**	**19.84**	**326**	*e*P	**Pn**	**13 42 25.9**	**0.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,44nm,0.9s						
YAK				pmax	pmax		
	comp=N,92nm,1.5s						
YAK				pmax	pmax		
	comp=E,70nm,1.9s						
YAK				MLR	MLR		
	comp=Z,136nm,16.0s						
KSRS	**Korea Array**	**21.01**	**251**	P	**P**	**13 42 38.2**	**+1.5**
	comp=Z,15nm,0.9s,mb4.3,baz=56,slow=10,SNR=27						
KSRS				PcP	PcP	13 46 42.1	+0.4
	comp=Z,1.0nm,0.7s,baz=216,slow=1.1,SNR=5.1						
KSRS				LR	LR	13 49 37.1	
	comp=Z,97nm,20.6s,MS3.2,baz=352,slow=33						
KSRS	**Korea Array**	**21.01**	**251**	P	**P**	**13 42 38.3**	**+1.5**
KSRS						13 46 42.1	
KSRS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,97nm,20.6s,MS3.2						
SNY	**Shenyang**	**21.70**	**266**	⇓P	**P**	**13 42 45.2**	**+1.1**
SNY				S	**S**	**13 46 39.5**	**-1.3**
SNY				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.4						
SNY				AMB	AMB		
	comp=Z,132nm,8.3s						
SNY				LR	LR		
	comp=E,231nm,18.1s						
SNY				LR	LR		
	comp=Z,267nm,17.2s,MS3.7						
BILL	**Bilibino**	**21.81**	**13**	*e*P	**P**	**13 42 43.4**	**-1.6**
	comp=Z,5.4nm,0.6s,mb4.2						
BILL	**Bilibino**	**21.81**	**13**	⇑*i*P	**P**	**13 42 43.5**	**-1.5**
BILL				pmax	pmax		
	comp=Z,28nm,2.5s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.4						
INCN	**Inchon**	**21.83**	**253**	P	**P**	**13 42 43.8**	**-1.7**
	comp=Z,31nm,0.6s,mb4.9						
BOD	**Bodaibo**	**25.64**	**309**	*e*P	**P**	**13 43 21.6**	**-0.3**
BOD				*e*	pP	13 43 35.7	-0.7
BOD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
TIXI	**Tiksi**	**26.91**	**343**	*e*P	**P**	**13 43 32.7**	**-0.5**
	comp=Z,1.5nm,0.5s,mb3.8						
TIXI	**Tiksi**	**26.91**	**343**	*e*P	**P**	**13 43 31.2**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.7						
TIXI				MLR	MLR		
	comp=Z,185nm,16.0s,MS3.7						
BJI	**Beijing**	**27.52**	**268**	P	**P**	**13 43 38.9**	**-0.2**
BJI				S	**S**	**13 48 16.6**	**+0.8**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.3						
BJI				AMB	AMB		
	comp=Z,104nm,5.1s						
BJI				LR	LR		
	comp=N,177nm,13.4s,MS4.0						
BJI				LR	LR		
	comp=E,143nm,11.5s,MS4.0						
BJI				LR	LR		
	comp=Z,133nm,24.9s						
NJ2	**Nanjing**	**30.20**	**252**	*e*P	**P**	**13 44 04.9**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**30.73**	**288**	⇑*e*P	**P**	**13 44 08.2**	**+0.7**
SONM	**Songino Array**	**31.17**	**288**	P	**P**	**13 44 12.4**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.8,baz=65,slow=8.1,SNR=7.7						
SONM				PcP	PcP	13 47 04.5	-0.4
	comp=Z,1.4nm,0.9s,baz=117,slow=2.3,SNR=4.9						
SONM				LR	LR	13 57 58.1	
	comp=Z,146nm,18.6s,MS3.7,baz=22,slow=38						
SONM	**Songino Array**	**31.17**	**288**	P	**P**	**13 44 12.4**	**+1.1**
SONM						13 47 04.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,146nm,18.6s						
TLY	**Talaya**	**31.94**	**296**	*e*P	**P**	**13 44 22.8**	**+4.8**
TLY				*e*		13 45 38.1	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TLY				MLR	MLR		
	comp=Z,168nm,18.0s,MS3.8						
IMA2	**Indian Mountai**	**33.31**	**36**	*e*P	**P**	**13 44 30.1**	**+0.2**
KDAK	**Kodiak Island**	**33.71**	**52**	pP	pP	13 44 46.3	-1.8
	comp=Z,18nm,0.7s,baz=266,slow=4.0,SNR=3.7						
COLD	**Coldfoot**	**34.83**	**35**	*e*P	**P**	**13 44 43.0**	**0.0**
	comp=Z,9.0nm,0.5s,mb5.0						
COLA	**College**	**35.65**	**39**	*e*	**P**	**13 44 50.1**	**-0.1**
	comp=Z,18nm,0.6s,mb5.2						

LZH AMB AMB
comp=Z,63nm,5.2s
LZH LR LR
comp=N,405nm,13.7s
LZH LR LR
comp=Z,756nm,17.4s,MS4.6
EGAK Eagle 38.52 39 *eP* **P 13 45 13.5 -0.9**
comp=Z,8.0nm,0.8s,mb4.5
GTA Gaotai 38.91 278 *eP* **P 13 45 20.4 +2.4**
GTA AP pP 13 45 35.0 +2.1
GTA XP sP 13 45 41.7 +2.0
GTA AMB AMB
comp=Z,4.0nm,0.9s,mb4.2
HYT Haines Junctio 40.83 45 *eP* **P 13 45 34.5 +0.9**
CD2 Chengdu 40.96 265 *eP* **P 13 45 35.6 +0.5**
CD2 AP pP 13 45 50.9 +0.8
CD2 XP sP 13 45 58.2 +1.3
CD2 PP PP 13 47 14.2 +3.8
CD2 S **S 13 51 43.2 +0.4**
CD2 XS sS 13 52 09.4 +1.3
CD2 SS SS 13 54 42.8 -3.5
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,130nm,12.4s,MS4.2
CD2 LR LR
comp=E,210nm,14.2s,MS4.2
CD2 LR LR
comp=Z,120nm,13.2s,MS3.9
INK Inuvik 41.13 33 *eP* **P 13 45 36.5 +0.4**
comp=Z,192nm,0.4s
GYA Guiyang 41.88 257 P **P 13 45 43.2 +0.6**
GYA AP pP 13 45 58.4 +0.8
GYA XP sP 13 46 04.7 +0.2
GYA PP PP 13 47 23.8 +3.5
GYA PCP PcP 13 47 39.2 +1.8
GYA SCP ScP 13 51 23.0 +0.6
GYA PCS PcS 13 51 28.7 -0.5
GYA S **S 13 51 56.9 +0.5**
GYA SCS ScS 13 55 39.2 -0.6
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,80nm,4.9s
ZALV Zalesovo Beam 42.29 305 P **P 13 45 43.8 -1.8**
comp=Z,1.8nm,0.5s,mb4.0,baz=62,slow=7.7,SNR=8.3
ZALV PcP PcP 13 47 38.1 -0.2
comp=Z,1.4nm,0.4s,baz=77,slow=3.2,SNR=7.3
ZALV LR LR 14 04 43.9
comp=Z,126nm,18.3s,MS3.8,baz=72,slow=38
ZALV Zalesovo Beam 42.29 305 P **P 13 45 43.8 -1.9**
ZALV 13 47 38.1
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
ZALV MLR MLR
comp=Z,126nm,18.3s,MS3.8
NVS Novosibirsk 42.85 307 *eP* **P 13 45 49.0 -1.2**
WMQ Urumqi 44.74 291 *eP* **P 13 46 07.0 +1.5**
DLBC Dease Lake 45.16 46 *eP* **P 13 46 10.1 +1.5**
KMI Kunming 45.38 259 P **P 13 46 11.5 +0.7**
KMI AP pP 13 46 27.1 +1.1
KMI XP sP 13 46 33.7 +0.9
KMI PP PP 13 47 59.1 +1.3
KMI S **S 13 52 47.1 -0.5**
KMI XS sS 13 53 13.6 +0.4
KMI SS ScS 13 56 01.3 -0.6
KMI AMB AMB
comp=Z,16nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,153nm,4.3s
KMI LR LR
comp=N,250nm,12.6s,MS4.5
KMI LR LR
comp=E,230nm,11.9s,MS4.5
KMI LR LR
comp=Z,214nm,7.7s
MK31 Makanchi Array 46.70 297 *eP* **P 13 46 20.1 -0.7**
MKAR Makanchi Array 46.70 297 P **P 13 46 20.3 -0.6**
comp=Z,1.5nm,0.6s,mb4.1,baz=67,slow=7.4,SNR=12
MKAR PcP PcP 13 47 52.9 -0.7
comp=Z,1.8nm,0.7s,baz=61,slow=3.6,SNR=5.1
MKAR LR LR 14 07 09.9
comp=Z,84nm,18.9s,MS3.7,baz=242,slow=38
MKAR Makanchi Array 46.70 297 P **P 13 46 20.3 -0.6**
MKAR 13 47 52.9
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,84nm,18.9s
KURK Kurchatov 47.06 303 P **P 13 46 23.1 -0.5**
baz=70,slow=8.2
KURK Kurchatov 47.06 303 *eP* **P 13 46 22.9 -0.7**
comp=Z,5.6nm,0.8s,mb4.5
KURK Kurchatov 47.06 303 *eP* **P 13 46 23.0 -0.7**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
RES Resolute Bay 50.26 19 *eP* **P 13 46 47.7 -0.2**
comp=Z,233nm,1.0s
LSA Lhasa 50.27 273 *eP* **P 13 46 50.7 +2.1**
comp=Z,9.3nm,0.6s,mb5.0
LSA Lhasa 50.27 273 *eP* **P 13 46 50.7 +2.1**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
YKA Yellowknife Ar 50.43 37 P **P 13 46 49.4 +0.1**
comp=Z,3.3nm,0.4s,mb4.7,baz=298,slow=7.0,SNR=20
YKA pP pP 13 47 03.6 -1.1
comp=Z,2.7nm,0.7s,baz=296,slow=7.1,SNR=4.4
YKA Yellowknife Ar 50.43 37 P **P 13 46 49.4 +0.1**
YKA pP pP 13 47 03.6 -1.1
YKA Yellowknife Ar 50.43 37 P **P 13 46 49.4 +0.1**
YKA *PP pP 13 47 03.6 -1.1
YKA pmax pmax
comp=Z,3.0nm,0.4s
BVAR Borovoye Array 50.51 309 P **P 13 46 48.6 -1.4**
comp=Z,2.0nm,0.5s,mb4.3,baz=54,slow=7.5,SNR=12
BVAR pP pP 13 47 03.2 -2.2
comp=Z,0.8nm,0.4s,baz=48,slow=4.4,SNR=3.2
BVAR sP sP 13 47 11.6 -0.6
comp=Z,2.5nm,0.4s,baz=70,slow=7.3,SNR=6.2
BVAR PcP PcP 13 48 06.8 -0.4
comp=Z,1.8nm,0.5s,baz=82,slow=1.8,SNR=5.7
BVAR LR LR 14 07 31.0
comp=Z,72nm,19.5s,MS3.7,baz=22,slow=35
BVAR Borovoye Array 50.51 309 P **P 13 46 48.6 -1.4**
BVAR *PP pP 13 47 03.2 -2.2
BVAR 13 48 06.8
BVAR pmax pmax
comp=Z,2.0nm,0.5s
SPITS Spitsbergen Ar 52.03 350 P **P 13 47 00.4 -0.8**
comp=Z,11nm,0.8s,mb4.8,baz=116,slow=13,SNR=3.4
SPITS Spitsbergen Ar 52.03 350 P **P 13 47 00.4 -0.7**
SPITS pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 52.29 256 *eP* **P 13 47 04.6 +0.9**
comp=Z,20nm,0.8s,mb5.1
CHTO Chiang Mai 52.29 256 *eP* **P 13 47 04.6 +0.8**
CHTO pmax pmax
comp=Z,20nm,0.8s,mb5.1
CMAR Chiang Mai Arr 52.54 256 P **P 13 47 07.0 +1.3**
comp=Z,9.2nm,0.7s,mb4.8,baz=36,slow=7.4,SNR=79
CMAR PcP PcP 13 48 15.4 +0.1
comp=Z,1.2nm,0.7s,baz=17,slow=3.8,SNR=4.1
CMAR LR LR 14 11 30.7
comp=Z,42nm,21.4s,MS3.5,baz=55,slow=38
CMAR Chiang Mai Arr 52.54 256 P **P 13 47 07.0 +1.3**
CMAR 13 48 15.5
CMAR pmax pmax
comp=Z,9.0nm,0.7s
CMAR MLR MLR
comp=Z,42nm,21.4s
B05A Bryant 54.05 55 ⇑P **P 13 47 15.9 -0.5**
baz=54
TAPN Taplejung 54.10 273 *eP* **P 13 47 18.3 +1.3**
comp=Z,15nm,0.8s,mb5.0
A07A Ashnola River, 54.57 54 ⇑P **P 13 47 20.0 -0.1**
baz=54
ARU Arti 54.59 317 *eP* **P 13 47 18.9 -1.3**
comp=Z,5.7nm,0.5s,mb4.9
ARU Arti 54.59 317 *eP* **P 13 47 18.7 -1.5**
ARU *e* 13 48 20.6
ARU *e* 13 49 19.9
ARU *eS* **S 13 54 51.9 -3.1**
ARU *eSS* SS 13 58 34.0 -3.7

ODAN Odare 54.63 273 *eP* **P 13 47 21.4 +0.5**
C06A Tall Timber Ra 54.91 55 ⇓P **P 13 47 22.6 0.0**
baz=55
JIRN Jiri 54.93 274 *eP* **P 13 47 24.0 +1.0**
comp=Z,14nm,0.4s,mb5.3
GUN Gumba 54.98 275 *eP* **P 13 47 24.1 +0.7**
comp=Z,8.8nm,0.4s,mb5.2
B07A Winthrop 55.04 54 ⇑P **P 13 47 23.5 0.0**
baz=55
RAMN Ramite 55.11 273 *eP* **P 13 47 24.9 +0.6**
A08A Turner Farm, O 55.23 53 ⇑P **P 13 47 24.9 0.0**
baz=55
ETW Entiat 55.41 55 *eP* **P 13 47 26.0 -0.2**
KKN Kakani 55.46 275 *eP* **P 13 47 28.0 +1.1**
comp=Z,8.7nm,0.4s,mb5.1
KKN Kakani 55.46 275 *eP* **P 13 47 28.0 +1.1**
KKN pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
C07A Waterville 55.51 55 ⇓P **P 13 47 26.5 -0.4**
baz=55
PKI Pulchoki 55.52 275 *eP* **P 13 47 28.0 +0.7**
comp=Z,9.5nm,0.5s,mb5.1
PKI Pulchoki 55.52 275 *eP* **P 13 47 28.0 +0.7**
PKI pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
B08A Colville Reser 55.53 54 ⇓P **P 13 47 26.9 -0.1**
baz=55
A09A Danville 55.59 53 ⇓P **P 13 47 27.6 +0.1**
baz=55,SNR=6.0
DMN Daman 55.70 275 *eP* **P 13 47 29.5 +0.9**
comp=Z,34nm,0.8s,mb5.4
GKN Gorkha 55.76 276 *eP* **P 13 47 29.6 +0.6**
comp=Z,24nm,0.6s,mb5.4
I03A Eugene 55.79 60 ⇑P **P 13 47 29.4 +0.5**
baz=56
EDM Edmonton 55.88 46 *eP* **P 13 47 28.7 -0.8**
J02A Umpqua 55.96 61 ⇓P **P 13 47 31.1 +0.8**
baz=56
C08A Higginbotham F 56.02 54 ⇓P **P 13 47 30.4 -0.1**
baz=56
DANN Dangsing 56.13 276 *eP* **P 13 47 32.8 +1.1**
comp=Z,33nm,0.5s,mb5.6
A10A Northport 56.14 52 ⇓P **P 13 47 31.5 +0.1**
baz=56
E07A Sunnyside 56.27 56 ⇓P **P 13 47 32.6 +0.3**
baz=56
D08A Wollman Farm, 56.51 55 ⇑P **P 13 47 33.6 -0.5**
baz=56
H05A Madras 56.59 58 ⇑P **P 13 47 35.4 +0.7**
baz=56
F07A Phinny Hill Vi 56.61 57 ⇑P **P 13 47 34.9 0.0**
baz=56
KOLN Koldanda 56.61 276 *eP* **P 13 47 35.9 +0.8**
comp=Z,18nm,0.7s,mb5.2
E08A Dider Farm, El 56.76 56 ⇓P **P 13 47 36.0 +0.1**
baz=56
A11A Hall Mountain, 56.80 52 ⇓P **P 13 47 36.1 0.0**
baz=56
PYUN Piuthan 56.81 277 *eP* **P 13 47 37.4 +0.9**
HNR Honiara 56.84 172 LR LR 14 07 24.0
comp=Z,40nm,21.1s,MS3.5,baz=321,slow=31
H06A Lindquist Farm 57.06 58 ⇓P **P 13 47 38.2 +0.2**
baz=57
B11A Sandpoint 57.10 52 ⇓P **P 13 47 38.0 -0.3**
baz=57
G07A Ruggs Ranch, H 57.13 57 ⇑P **P 13 47 38.8 +0.3**
baz=57
A12A Yaak River Ran 57.19 52 ⇑P **P 13 47 39.1 +0.2**
baz=57
ARCES ARCESS Array B 57.30 341 P **P 13 47 39.9 +0.5**
comp=Z,3.5nm,0.6s,mb4.6,baz=28,slow=7.6,SNR=16
ARCES ARCESS Array B 57.30 341 P **P 13 47 39.9 +0.6**
ARCES pmax pmax
comp=Z,4.0nm,0.6s
YBH Yreka Blue Hor 57.44 62 ⇓P **P 13 47 40.6 -0.1**
baz=57
C11A Tepee Creek (N 57.51 53 ⇓P **P 13 47 40.9 -0.3**
baz=57,SNR=5.6
G08A Pilot Rock 57.52 57 ⇑P **P 13 47 41.1 -0.1**
baz=57
LNOR Lincton Mounta 57.56 56 *eP* **P 13 47 41.3 -0.2**
K05A Summer Lake 57.93 60 ⇓P **P 13 47 44.8 +0.7**
baz=58
D11A Klaveano Farm, 57.94 54 ⇓P **P 13 47 43.7 -0.5**
baz=58
J06A Christmas Vall 58.05 59 ⇑P **P 13 47 45.2 +0.2**
baz=58
H08A Prairie City 58.14 57 ⇓P **P 13 47 45.8 +0.2**
baz=58
B13A Whitefish 58.16 52 ⇑P **P 13 47 45.5 -0.1**
baz=58,SNR=7.0
G09A Cove 58.20 56 ⇑P **P 13 47 46.2 +0.3**
baz=58
A14A Double T Ranch 58.35 51 ⇓P **P 13 47 47.2 +0.2**
baz=58
AKTK Aktyubinsk 58.35 312 P **P 13 47 48.7 +1.7**
AKTO Aktyubinsk 58.35 312 P **P 13 47 48.7 +1.7**
comp=Z,1.4nm,0.6s,mb4.2,baz=66,slow=9.4,SNR=5.2
AKTO Aktyubinsk 58.35 312 P **P 13 47 48.7 +1.7**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
E11A Bogner Ranch, 58.42 54 ⇓P **P 13 47 47.3 -0.2**
baz=58
J07A Hines 58.46 59 ⇓P **P 13 47 48.1 +0.2**
baz=58
C13A Hot Springs 58.52 52 ⇓P **P 13 47 48.3 +0.1**
baz=58
G10A Bishop Farm, J 58.56 56 ⇓P **P 13 47 48.5 0.0**
baz=58,SNR=7.4
A15A Johnson Ranch, 58.71 50 ⇓P **P 13 47 48.7 -0.8**
baz=58,SNR=6.2
BMO Blue Mountains 58.72 56 *eP* **P 13 47 50.1 +0.5**
comp=Z,4.4nm,0.8s,mb4.5
E12A Beaver Dam Sad 58.74 54 ⇓P **P 13 47 49.5 -0.2**
baz=58,SNR=7.0
MOD Modoc 58.77 61 ⇓P **P 13 47 50.4 +0.4**
baz=58
B14A Marquette Ranc 58.80 51 ⇑P **P 13 47 50.2 +0.1**
baz=58
K07A Rock Creek Ran 58.91 59 ⇑P **P 13 47 51.3 +0.3**
baz=59
D13A Huson 58.94 53 ⇓P **P 13 47 50.8 -0.3**
baz=59
J08A Circle Bar Ran 58.96 58 ⇓P **P 13 47 52.0 +0.7**
baz=59
G11A Walters Elk Ra 58.97 55 ⇓P **P 13 47 52.0 +0.6**
baz=59
H10A Noah's Angus R 59.20 56 ⇑P **P 13 47 53.0 0.0**
baz=59
B15A Bradely Ranch, 59.20 51 ⇓P **P 13 47 52.6 -0.3**
baz=59
L07A Adell 59.27 60 ⇓P **P 13 47 54.1 +0.6**
baz=59
F12A Elk City 59.32 54 ⇓P **P 13 47 53.8 0.0**
baz=59,SNR=5.5
A16A West Butte Ran 59.32 50 ⇑P **P 13 47 53.4 -0.3**
baz=59
K08A Mann Creek Ran 59.33 59 ⇑P **P 13 47 54.2 +0.3**
baz=59
MSO Missoula 59.38 53 *eP* **P 13 47 54.1 0.0**
comp=Z,1.6nm,0.5s,mb4.3
J09A Fry Ran Ranch, 59.38 58 ⇑P **P 13 47 54.3 +0.1**
baz=59
WVOR Wild Horse Val 59.43 59 *eP* **P 13 47 54.3 -0.3**
comp=Z,4.5nm,0.9s,mb4.5
WVOR Wild Horse Val 59.43 59 *eP* **P 13 47 54.3 -0.3**
WVOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
D14A Greenough 59.46 52 ⇑P **P 13 47 54.4 -0.3**
baz=59,SNR=8.8
E13A Victor 59.48 53 ⇓P **P 13 47 54.6 -0.2**
baz=59
C15A Salmond Ranch, 59.51 51 ⇓P **P 13 47 55.6 +0.6**
baz=59,SNR=20
H11A Donnelly 59.54 56 ⇓P **P 13 47 55.3 0.0**
baz=59,SNR=6.9
B16A M & M Farms, S 59.59 50 ⇑P **P 13 47 55.3 -0.3**
baz=59,SNR=5.0
L08A Fields 59.75 59 ⇑P **P 13 47 56.9 +0.1**
baz=60
N06A Buffalo Meadow 59.76 61 ⇑P **P 13 47 56.7 -0.1**
baz=60
K09A Rome 59.80 59 ⇓P **P 13 47 56.9 -0.2**
baz=60
F13A Darby 59.81 54 ⇓P **P 13 47 57.0 -0.1**
baz=60
E14A Clinton 59.88 53 ⇑P **P 13 47 57.5 -0.1**
baz=60

C16A Fuhringer Ranc 59.95 51 ⇓P **P 13 47 57.9 -0.2**
baz=60,SNR=14
BEKR Beckwourth 59.99 63 ⇓P **P 13 47 58.6 +0.1**
baz=60
D15A Lincoln 60.01 52 ⇓P **P 13 47 58.5 0.0**
baz=60
O06A Flanigan 60.12 62 ⇓P **P 13 47 59.5 +0.1**
baz=60
K10A MacKenzie Ranc 60.24 58 ⇓P **P 13 48 00.2 +0.1**
baz=60
L09A Wilkinson Ranc 60.25 59 ⇓P **P 13 48 00.1 -0.2**
baz=60
H12A Diamond D Ranc 60.28 55 ⇑P **P 13 48 00.7 +0.3**
baz=60
G13A Cobalt 60.29 55 ⇓P **P 13 48 00.3 -0.1**
baz=60,SNR=8.2
E15A Deer Lodge 60.33 53 ⇓P **P 13 48 00.4 -0.3**
baz=60
MFID Camas Ranch 60.44 57 ⇓P **P 13 48 01.4 -0.1**
baz=60
D16A Dana Ranch, Ca 60.54 51 ⇓P **P 13 48 02.1 0.0**
baz=60,SNR=6.3
C17A Wharram Farm, 60.57 51 ⇑P **P 13 48 02.4 +0.1**
baz=60,SNR=15
I12A Atlanta 60.60 56 ⇓P **P 13 48 02.6 0.0**
baz=60,SNR=5.3
O07A Toulon 60.69 61 ⇓P **P 13 48 03.6 +0.4**
baz=60
WCN Washoe City 60.70 63 ⇑P **P 13 48 03.5 +0.2**
baz=60
K11A Parker Ranch, 60.73 58 ⇑P **P 13 48 03.6 +0.2**
baz=60
FCC Fort Churchill 60.75 33 *eP* **P 13 48 02.8 -0.5**
F15A Butte 60.78 53 ⇑P **P 13 48 03.8 0.0**
baz=60,SNR=6.7
E16A East Helena 60.78 52 ⇑P **P 13 48 03.9 +0.1**
baz=60
JOF Joensuu 60.81 334 *ep* **P 13 48 04.1 +0.4**
comp=Z,1.6nm,0.3s,mb4.6
JOF Joensuu 60.81 334 *eP* **P 13 48 04.1 +0.4**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
EGMT Eagleton 60.85 50 *eP* **P 13 48 04.1 -0.1**
comp=Z,5.9nm,0.9s,mb4.7
EGMT Eagleton 60.85 50 ⇓P **P 13 48 04.3 +0.1**
baz=61
L10A Juniper Basin 60.91 58 ⇑P **P 13 48 04.7 0.0**
baz=61
D17A Six Diamond Ra 60.92 51 ⇓P **P 13 48 04.5 -0.1**
baz=61,SNR=5.8
J12A Stokes Ranch, 60.96 57 ⇓P **P 13 48 05.2 +0.2**
baz=61
O08A Rochester Mine 61.04 61 ⇑P **P 13 48 06.0 +0.4**
baz=61
N09A Rock Creek Ran 61.06 60 ⇓P **P 13 48 05.9 +0.1**
baz=61
I13A Wildhorse Cree 61.10 56 ⇓P **P 13 48 06.2 +0.3**
baz=61,SNR=5.2
CMB Columbia Colle 61.12 64 ⇑P **P 13 48 06.2 +0.1**
baz=61
HLID Hailey 61.15 56 *eP* **P 13 48 06.1 -0.2**
comp=Z,2.5nm,1.2s,mb4.2
HLID *e* pP 13 48 22.1 -0.1
HLID Hailey 61.15 56 ⇑P **P 13 48 06.6 +0.3**
baz=61
G15A Dillon 61.21 54 ⇓P **P 13 48 06.6 -0.1**
baz=61
M10A I.L. Ranch, Tu 61.22 59 ⇓P **P 13 48 06.8 0.0**
baz=61
E17A Martinsdale 61.27 52 ⇑P **P 13 48 07.5 +0.5**
baz=61,SNR=10
L11A Cat Creek Ranc 61.27 58 ⇓P **P 13 48 07.6 +0.5**
baz=61
F16A Kennard Place, 61.28 53 ⇓P **P 13 48 07.3 +0.1**
baz=61
D18A Linhart Farms, 61.35 50 ⇑P **P 13 48 08.0 +0.3**
baz=61
BOZ Bozeman (W) 61.37 53 *eP* **P 13 48 08.2 +0.5**
comp=Z,7.0nm,0.9s,mb4.8
BOZ *e* pP 13 48 23.8 +0.2
BOZ Bozeman (W) 61.37 53 *eP* **P 13 48 08.2 +0.4**
BOZ *e* pP 13 48 23.8 +0.2
BOZ pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BOZ Bozeman (W) 61.37 53 ⇑P **P 13 48 08.1 +0.4**
baz=61,SNR=6.2
J13A Cove Ranch, Pi 61.39 56 ⇑P **P 13 48 08.4 +0.4**
baz=61
I14A Mackay 61.46 55 ⇑P **P 13 48 08.5 +0.2**
baz=61
K12A Draper Farm, C 61.46 57 ⇓P **P 13 48 08.5 +0.1**
baz=61
H15A Lima 61.47 54 ⇓P **P 13 48 08.5 0.0**
baz=61
G16A Moss Hill, Enn 61.54 53 ⇑P **P 13 48 09.3 +0.4**
baz=61,SNR=12
E18A Harlowton 61.70 51 ⇑P **P 13 48 09.6 -0.4**
baz=61
F17A Fitzpatrick Pl 61.73 52 ⇓P **P 13 48 10.2 0.0**
baz=62
J14A Carey 61.81 56 ⇓P **P 13 48 11.5 +0.8**
baz=62,SNR=6.3
Q08A Gabbs 62.08 62 ⇓P **P 13 48 12.6 -0.1**
baz=62
NVAR Mina Array Bea 62.13 63 P **P 13 48 13.2 +0.2**
comp=Z,1.9nm,0.7s,mb4.4,baz=301,slow=6.8,SNR=17
NVAR pP pP 13 48 28.4 -0.4
comp=Z,1.8nm,0.5s,baz=283,slow=6.8,SNR=10.0
H16A Russell Place, 62.18 53 ⇑P **P 13 48 13.7 +0.5**
baz=62,SNR=5.1
KCC Kaiser Creek 62.22 64 ⇑P **P 13 48 13.6 0.0**
baz=62
F18A Big Timber 62.23 52 ⇓P **P 13 48 14.0 +0.5**
baz=62,SNR=5.6
J15A Blackfoot 62.37 55 ⇑P **P 13 48 14.8 +0.3**
baz=62
P10A Eureka 62.47 61 ⇓P **P 13 48 15.5 +0.3**
baz=62
O11A Cowboy Ranch, 62.62 60 ⇓P **P 13 48 16.6 +0.4**
baz=62
K15A Arbon 62.77 56 ⇑P **P 13 48 17.4 +0.2**
baz=62
L14A Malta 62.79 57 ⇓P **P 13 48 17.8 +0.4**
baz=62
IMW Indian Meadow 62.87 54 *eP* **P 13 48 17.3 -0.6**
comp=Z,2.7nm,1.0s,mb4.3
J16A Bone 62.90 55 ⇓P **P 13 48 18.4 +0.3**
baz=63
KAF Kangasniemi 62.92 335 *ep* **P 13 48 17.1 -0.7**
comp=Z,1.6nm,0.3s,mb4.6,baz=37,slow=6.2
KAF Kangasniemi 62.92 335 *eP* **P 13 48 17.1 -0.7**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
P11A Circle Ranch, 62.94 60 ⇑P **P 13 48 18.7 +0.4**
baz=63
R09A Tonopah 63.00 62 ⇓P **P 13 48 18.6 -0.2**
baz=63,SNR=7.0
RRI2 Red Ridge 63.02 55 *eP* **P 13 48 19.8 +1.0**
comp=Z,9.7nm,0.7s,mb5.0
RRI2 *e* pP 13 48 35.5 +0.8
Q10A Clear Creek Ra 63.02 61 ⇑P **P 13 48 18.8 -0.1**
baz=63
O12A Currie 63.07 59 ⇑P **P 13 48 19.5 +0.4**
baz=63
M14A Sheep Mountain 63.07 57 ⇓P **P 13 48 19.2 0.0**
baz=63
MOOW Moose Ponds 63.08 54 *eP* **P 13 48 19.9 +0.7**
comp=Z,1.8nm,1.0s,mb4.2
TPAW Teton Pass 63.13 54 *eP* **P 13 48 20.8 +1.2**
comp=Z,4.7nm,0.9s,mb4.6
TPAW *e* pP 13 48 36.5 +1.1
LOHW Long Hollow 63.24 54 *eP* **P 13 48 20.4 +0.2**
comp=Z,11nm,1.6s,mb4.8
REDW Red Top Meadow 63.27 54 *eP* **P 13 48 21.5 +1.0**
comp=Z,7.6nm,0.8s,mb4.9
REDW *e* pP 13 48 37.2 +0.8
DGMT Dagmar 63.38 47 *eP* **P 13 48 21.4 +0.3**
comp=Z,11nm,0.9s,mb5.0
DGMT Dagmar 63.38 47 ⇑P **P 13 48 21.2 +0.1**
baz=63
R10A Warm Springs 63.43 62 ⇓P **P 13 48 21.9 +0.3**
baz=63
S10A Tonopah Range, 63.49 62 ⇑P **P 13 48 22.4 +0.4**
baz=63
M15A Larsen Ranch, 63.61 57 ⇓P **P 13 48 23.0 +0.2**
baz=63,SNR=6.2
Q12A Willow Creek R 63.81 60 ⇑P **P 13 48 24.2 0.0**
baz=64

ISA Isabella 63.81 65 ⇓P P 13 48 23.2 -1.0
baz=64
R11A Troy Canyon, C 63.82 61 ⇓P P 13 48 24.0 -0.2
baz=64,SNR=6.4
SBC Santa Barbara 63.84 67 ⇑P P 13 48 24.3 -0.1
baz=64
HWUT Hardware Ranch 64.02 56 *eP* **P 13 48 25.6 +0.2**
comp=Z,2.4nm,0.5s,mb4.5
HWUT *e* pP 13 48 40.9 -0.5
P13A Bates Ranch, G 64.02 59 ⇑P P 13 48 25.6 +0.1
baz=64
MPMC Manual Prospec 64.16 64 ⇓P P 13 48 26.3 -0.1
baz=64
M16A Huntsville 64.17 56 ⇓P P 13 48 26.3 -0.2
baz=64
DUG Dugway 64.23 58 *eP* **P 13 48 26.8 -0.1**
comp=Z,4.5nm,0.8s,mb4.5
DUG *e* pP 13 48 42.6 -0.2
DUG Dugway 64.23 58 *eP* **P 13 48 26.8 -0.1**
DUG *e* pP 13 48 42.6 -0.2
DUG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
DUG Dugway 64.23 58 ⇑P P 13 48 26.9 0.0
baz=64
FURC Furnace Creek, 64.28 63 ⇓P P 13 48 27.3 +0.1
baz=64
TPNV Topopah Spring 64.33 63 ⇑P P 13 48 27.7 +0.1
baz=64
Q13A Wheeler Ranch, 64.35 60 ⇑P P 13 48 27.8 +0.1
baz=64
BW06 Boulder Array 64.37 54 ⇓P P 13 48 27.8 0.0
baz=64
PDAR Pinedale Array 64.37 54 P P 13 48 27.9 +0.1
comp=Z,2.2nm,0.7s,mb4.3,baz=302,slow=1.9,SNR=19
PDAR pP pP 13 48 43.5 -0.2
comp=Z,5.3nm,0.8s,baz=302,slow=1.8,SNR=18
R12A Pony Springs, 64.41 61 ⇓P P 13 48 28.1 0.0
baz=64
P14A Drum Mountains 64.48 59 ⇓P P 13 48 28.6 +0.1
baz=64
EDW2 Edwards Air Fo 64.62 65 ⇑P P 13 48 29.5 0.0
baz=64
S12A Delamar Landin 64.74 61 ⇓P P 13 48 30.4 +0.2
baz=64
Q14A Sevier Lake (B 64.76 59 ⇓P P 13 48 30.3 0.0
baz=64,SNR=6.0
T11A Corn Creek, Al 64.76 62 ⇓P P 13 48 30.2 -0.2
baz=64,SNR=5.5
N17A Moffit Pass 64.87 56 ⇓P P 13 48 31.2 +0.2
baz=65
ARUT Antelope Range 65.46 60 *eP* **P 13 48 35.2 +0.3**
ARUT *e* pP 13 48 50.3 -0.6
N18A Larsen Ranch, 65.50 56 ⇑P P 13 48 34.8 -0.3
baz=65
HEC Hector,Ludlow 65.68 65 ⇓P P 13 48 36.1 -0.3
baz=66
P17A Butcher Ranch, 65.91 57 ⇑P P 13 48 37.7 0.0
baz=66
ULM Lac du Bonnet 66.05 41 P P 13 48 37.1 -1.4
comp=Z,5.4nm,0.7s,mb4.7,baz=321,slow=4.4,SNR=4.0
GMRC Granite Mounta 66.12 64 ⇓P P 13 48 38.9 -0.3
baz=66
SRU San Rafael 66.27 58 *eP* **P 13 48 39.7 -0.4**
comp=Z,6.1nm,0.8s,mb4.7
SRU *e* pP 13 48 55.5 -0.6
SRU San Rafael 66.27 58 *eP* **P 13 48 39.7 -0.4**
SRU *e* pP 13 48 55.5 -0.6
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SRU San Rafael 66.27 58 ⇑P P 13 48 39.5 -0.6
baz=66
RSSD Black Hills 66.42 50 *eP* **P 13 48 40.8 -0.2**
comp=Z,8.7nm,0.7s,mb4.9
RSSD *e* pP 13 48 56.6 -0.4
RSSD Black Hills 66.42 50 *eP* **P 13 48 40.8 -0.1**
RSSD *e* pP 13 48 56.6 -0.3
RSSD pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
V13A Grand Canyon W 66.43 62 ⇓P P 13 48 41.2 +0.1
baz=66
R17A Hanksville Air 66.63 58 ⇓P P 13 48 42.0 -0.4
baz=66
P19A Cripple Cowboy 66.80 56 ⇑P P 13 48 43.2 -0.3
baz=66
IRM Iron Mountain 66.85 64 ⇓P P 13 48 43.4 -0.5
baz=67
HYB Hyderabad 67.02 271 *eP* **P 13 48 44.0 -1.1**
HYB Hyderabad 67.02 271 *i P* **P 13 48 44.0 -1.1**
U15A North Rim 67.05 61 ⇑P P 13 48 44.7 -0.4
baz=67
V14A Boquillas Ranc 67.10 62 ⇑P P 13 48 45.1 -0.3
baz=67
Q19A Hogan Spring (67.10 57 ⇓P P 13 48 45.1 -0.3
baz=67,SNR=5.7
S17A Black Ridge (B 67.11 59 ⇓P P 13 48 45.5 0.0
baz=67,SNR=8.0
R18A Canyonlands Na 67.13 58 ⇑P P 13 48 45.0 -0.5
baz=67
X13A Yucca 67.36 63 ⇓P P 13 48 47.1 0.0
baz=67
W14A Seligman 67.40 62 ⇑P P 13 48 47.3 0.0
baz=67
V15A Kaibab Nationa 67.53 61 ⇓P P 13 48 48.2 +0.1
baz=67
T17A Navajo Res., N 67.54 59 ⇓P P 13 48 47.9 -0.3
baz=67
R19A Curley Farm, L 67.55 58 ⇑P P 13 48 48.1 -0.1
baz=67
PV10 Paradox Valley 67.62 57 *eP* **P 13 48 49.5 +0.8**
PV10 *e* pP 13 49 04.6 -0.1
NB2 NORSAR Subarra 67.67 341 P P 13 48 48.3 -0.3
comp=Z,12nm,0.7s,mb5.0,baz=26,slow=6.5
NOA NORSAR Array B 67.67 341 P P 13 48 48.6 0.0
comp=Z,12nm,0.7s,mb5.0,baz=26,slow=6.3,SNR=31
NOA LR LR 14 22 59.6
comp=Z,75nm,18.6s,MS3.9,baz=180,slow=40
NOA NORSAR Array B 67.67 341 P P 13 48 48.6 0.0
NOA pmax pmax
comp=Z,12nm,0.7s
NOA MLR MLR
comp=Z,75nm,18.6s
GLA Glamis 67.80 65 ⇑P P 13 48 50.0 +0.2
baz=68
U17A Shonto 67.90 60 ⇑P P 13 48 50.8 +0.4
baz=68
HFS Hagfors 67.91 339 P P 13 48 49.8 -0.3
comp=Z,16nm,0.3s,mb5.5,baz=56,slow=5.6,SNR=122
HFS Hagfors 67.91 339 P P 13 48 49.8 -0.3
HFS pmax pmax
comp=Z,16nm,0.4s
NAO01 NORSAR Array S 67.92 341 *eP* **P 13 48 50.0 -0.2**
NAO01 *e* pP 13 49 06.2 0.0
T18A Mexican Hat 67.99 59 ⇑P P 13 48 50.3 -0.7
baz=68
S19A Harvey Farm, M 68.00 58 ⇑P P 13 48 51.1 0.0
baz=68
X14A Yava 68.02 63 ⇑P P 13 48 50.9 -0.4
baz=68
PV01 Paradox Valley 68.06 57 *eP* pP 13 49 07.7 +0.2
BORG Borgarnes 68.17 357 P P 13 48 52.1 +0.5
comp=Z,24nm,0.9s,mb5.2,baz=125,slow=6.5,SNR=3.5
SMCO Snowmass 68.24 56 *eP* **P 13 48 52.7 +0.1**
comp=Z,6.2nm,0.7s,mb4.8
SMCO *e* pP 13 49 08.3 -0.3
X15A Humboldt 68.40 62 ⇑P P 13 48 53.7 +0.1
baz=68
ISCO Idaho Springs 68.57 54 *eP* **P 13 48 54.7 +0.1**
comp=Z,4.8nm,0.7s,mb4.5
ISCO Idaho Springs 68.57 54 *eP* **P 13 48 54.7 +0.1**
ISCO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
Y15A Casa Rosa Ranc 68.71 63 ⇑P P 13 48 55.4 -0.1
baz=68
MVCO Mesa Verde 68.74 58 ⇓P P 13 48 55.3 -0.3
baz=68
X16A Lo Mia Camp, P 68.93 62 ⇓P P 13 48 57.1 +0.2
baz=69
WRA Warramunga Arr 69.08 199 P P 13 48 56.9 -0.9
comp=Z,2.3nm,0.6s,mb4.3,baz=17,slow=6.7,SNR=20
WRA pP pP 13 49 12.9 -1.0
comp=Z,1.8nm,0.6s,baz=19,slow=6.8,SNR=6.1
WRA Warramunga Arr 69.08 199 P P 13 48 56.9 -0.9
WRA *PP pP 13 49 12.9 -1.0
WRA pmax pmax
comp=Z,2.0nm,0.6s
V19A Window Rock 69.45 59 ⇓P P 13 49 00.1 -0.1
baz=69

OGNE Ogallala 69.70 51 *eP* **P 13 49 01.3 -0.2**
comp=Z,14nm,1.0s,mb4.8
OGNE *e* pP 13 49 17.2 -0.5
Y17A Roosevelt 69.78 62 ⇓P P 13 49 02.4 +0.2
baz=70
SDCO Great Sand Dun 70.07 56 P P 13 49 04.0 +0.1
comp=Z,1.3nm,0.6s,mb4.0
SDCO *e* pP 13 49 19.2 -0.8
Y18A Canyon Day Jun 70.21 62 ⇑P P 13 49 05.1 +0.2
baz=70
KIV Kislovodsk 70.41 314 *eP* **P 13 49 07.9 +2.1**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KIV MLR MLR
comp=Z,73nm,17.0s,MS4.0
ECSD EROS,Sioux Fal 70.45 46 *eP* **P 13 49 05.3 -0.9**
comp=Z,15nm,0.9s,mb4.9
ECSD *e* pP 13 49 21.0 -1.2
118A Homack Ranch, 71.04 62 ⇑P P 13 49 09.9 0.0
baz=71
AKASG Malin Array Be 71.07 326 P P 13 49 08.9 -0.8
comp=Z,7.2nm,0.4s,mb5.0,baz=33,slow=6.2,SNR=17
AKASG Malin Array Be 71.07 326 *i P* **P 13 49 08.8 -0.9**
AKASG pmax pmax
comp=Z,7.0nm,0.4s
ANMO Albuquerque 71.49 58 ⇑ *iP* **P 13 49 12.4 -0.2**
318A Bisbee 71.87 63 ⇑P P 13 49 14.7 -0.2
baz=72
219A White Tail Can 71.92 62 ⇑P P 13 49 15.0 -0.2
baz=72
319A Douglas 72.34 63 ⇑P P 13 49 17.8 0.0
baz=72
ASAR Alice Springs 72.78 198 P P 13 49 20.6 +0.4
comp=Z,6.8nm,0.7s,mb4.7,baz=11,slow=5.9,SNR=82
ASAR pP pP 13 49 36.3 -0.1
comp=Z,5.5nm,0.8s,baz=14,slow=5.9,SNR=11
ASAR Alice Springs 72.78 198 P P 13 49 20.6 +0.4
ASAR *PP pP 13 49 36.3 -0.1
ASAR pmax pmax
comp=Z,7.0nm,0.7s
SCIA State Center 73.48 46 *eP* **P 13 49 23.5 -0.7**
comp=Z,20nm,0.6s,mb5.2
SCIA *e* pP 13 49 39.4 -1.1
AMTX Amarillo 74.27 56 *eP* **P 13 49 29.3 +0.3**
comp=Z,13nm,0.8s,mb4.9
BSEG Bad Segeberg 74.29 338 *eP* **P 13 49 28.6 -0.2**
BSEG pmax pmax
comp=Z,15nm,0.9s,mb4.9
BSEG Bad Segeberg 74.29 338 *eP* **P 13 49 28.6 -0.2**
comp=Z,15nm,0.9s,mb4.9
KWP Kalwaria 74.33 329 *eP* **P 13 49 29.5 +0.5**
KWP Kalwaria 74.33 329 *eP* **P 13 49 29.5 +0.4**
KWP Kalwaria 74.33 329 ⇑ *iP* **P 13 49 29.0 -0.1**
STHS Stebnicka Huta 75.02 330 *eP* **P 13 49 33.7 +0.6**
comp=Z,7.4nm,0.8s,mb4.7
STHS *e* 13 49 36.5
STHS Stebnicka Huta 75.02 330 *eP* **P 13 49 33.7 +0.6**
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KOLS Kolonicke sedl 75.07 329 *eP* **P 13 49 33.6 +0.2**
KOLS Kolonicke sedl 75.07 329 *eP* **P 13 49 33.5 +0.1**
BUR08 Bucovina Ar. S 75.09 327 *eP* **P 13 49 33.2 -0.4**
BURAR Bucovina Array 75.11 326 ⇑P P 13 49 33.5 -0.2
BURAR Bucovina Array 75.11 326 ⇑ *iP* **P 13 49 33.5 -0.1**
TLCR 75.70 323 ⇓P P 13 49 37.2 +0.2
TLCR 75.70 323 ⇓ *iP* **P 13 49 37.2 +0.2**
UPC Upice 75.76 333 *eP* **P 13 49 37.9 +0.6**
EKA Eskdalemuir Ar 75.77 346 P P 13 49 36.5 -0.8
comp=Z,3.8nm,0.6s,mb4.5,baz=19,slow=5.5,SNR=12
EKA Eskdalemuir Ar 75.77 346 P P 13 49 36.5 -0.8
EKA pmax pmax
comp=Z,4.0nm,0.6s
DPC Dobruska-Polom 75.81 333 *eP* **P 13 49 37.6 0.0**
MORC Moravsky Berou 75.93 332 *eP* **P 13 49 37.8 -0.5**
comp=Z,7.8nm,0.9s,mb4.6
MORC Moravsky Berou 75.93 332 ⇓ *iP* **P 13 49 37.0 -1.3**
CLL Collm 75.94 336 *i P* **P 13 49 37.7 -0.6**
CLL pmax pmax
comp=Z,23nm,0.8s,mb5.2
CLL Collm 75.94 336 *eP* **P 13 49 37.8 -0.5**
comp=Z,23nm,0.8s,mb5.2
CLL Collm 75.94 336 *i P* **P 13 49 37.7 -0.6**
comp=Z,23nm,0.8s,mb5.2
PLOR Plostina 76.02 325 ⇑ *iP* **P 13 49 39.2 +0.3**
BRG Berggiesshubel 76.06 335 *i P* **P 13 49 38.5 -0.5**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 76.06 335 *eP* **P 13 49 38.7 -0.3**
BRG Berggiesshubel 76.06 335 *i P* **P 13 49 38.5 -0.5**
comp=Z,7.0nm,1.0s,mb4.5
TIRR Tirgusor 76.46 323 ⇑ *iP* **P 13 49 35.0 -6.4**
MLR Muntele Rosu 76.60 325 ⇑P P 13 49 42.1 0.0
MLR Muntele Rosu 76.60 325 ⇑ *iP* **P 13 49 42.1 -0.1**
VYHS Vyhne 76.62 331 *eP* **P 13 49 42.5 +0.3**
VRAC Vranov 76.64 332 P P 13 49 42.5 +0.2
comp=Z,9.6nm,0.8s,mb4.8,baz=50,slow=4.4,SNR=5.5
VRAC Vranov 76.64 332 ⇑ *iP* **P 13 49 39.6 -2.7**
PRU Pruhonice 76.67 334 *eP* **P 13 49 42.2 -0.3**
DRGR 76.73 328 ⇑P P 13 49 42.5 -0.3
DRGR 76.73 328 ⇑ *iP* **P 13 49 42.5 -0.4**
PSZ Piszkesteto 76.76 330 ⇑P P 13 49 42.8 -0.3
PSZ Piszkesteto 76.76 330 ⇑ *iP* **P 13 49 42.8 -0.2**
MOX Moxa 76.92 336 *eP* **P 13 49 43.6 -0.3**
comp=Z,32nm,1.6s,mb5.0
MOX Moxa 76.92 336 *eP* **P 13 49 43.6 -0.3**
MOX pmax pmax
comp=Z,32nm,1.6s,mb5.0
MOX Moxa 76.92 336 *eP* **P 13 49 43.7 -0.2**
comp=Z,14nm,1.1s,mb4.8
VOIR 76.99 325 ⇑ *iP* **P 13 49 44.8 +0.4**
TREC Trest 76.99 333 *eP* **P 13 49 43.9 -0.4**
TXAR Lajitas Array 77.17 61 P P 13 49 45.4 -0.3
comp=Z,2.2nm,0.6s,mb4.2,baz=300,slow=4.0,SNR=40
TXAR pP pP 13 50 01.0 -1.0
comp=Z,5.8nm,0.6s,baz=308,slow=4.3,SNR=21
TXAR Lajitas Array 77.17 61 P P 13 49 45.4 -0.3
TXAR pP pP 13 50 01.0 -1.0
TXAR Lajitas Array 77.17 61 P P 13 49 45.4 -0.3
TXAR *PP pP 13 50 01.0 -1.0
TXAR pmax pmax
comp=Z,2.0nm,0.6s
UBBA Unterbreizbach 77.20 337 *eP* **P 13 49 46.0 +0.6**
MODS Modra-Piesok 77.24 332 *eP* **P 13 49 46.0 +0.3**
comp=Z,7.1nm,1.2s,mb4.5
MODS Modra-Piesok 77.24 332 *eP* **P 13 49 46.0 +0.3**
MODS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BUG Bochum--Univer 77.33 339 *eP* **P 13 49 46.1 0.0**
comp=Z,9.0nm,0.9s,mb4.7
MANZ Manzenberg 77.38 335 *eP* **P 13 49 46.5 +0.1**
ROTZ Rotzenmuhle 77.54 335 *eP* **P 13 49 47.7 +0.3**
comp=Z,12nm,1.0s,mb4.8
KHC Kasperske Hory 77.72 334 ⇑ *eP* **P 13 49 47.8 -0.6**
KHC Kasperske Hory 77.72 334 *eP* **P 13 49 48.4 0.0**
GRA1 Grafenberg Arr 77.89 336 *eP* **P 13 49 49.3 0.0**
comp=Z,41nm,0.9s,mb5.4
GRF Grafenberg Arr 77.89 336 *eP* **P 13 49 49.3 0.0**
GRF pmax pmax
comp=Z,41nm,0.9s,mb5.4
GRF Grafenberg Arr 77.89 336 *eP* **P 13 49 49.3 0.0**
GRF pmax pmax
comp=Z,41nm,0.9s,mb5.4
GRF Grafenberg Arr 77.89 336 *eP* **P 13 49 49.3 0.0**
comp=Z,41nm,0.9s,mb5.4
GZR Gura Zlata 77.89 327 ⇓ *iP* **P 13 49 48.6 -0.8**
WET Wettzell 77.91 335 *eP* **P 13 49 49.6 +0.2**
GEC2 GERESS Array S 77.94 334 *eP* **P 13 49 49.3 -0.3**
GERES GERESS Array B 77.94 334 P P 13 49 49.3 -0.3
comp=Z,1.8nm,0.4s,mb4.3,baz=34,slow=5.5,SNR=9.1
GERES LR LR 14 25 32.1
comp=Z,70nm,18.1s,MS4.0,baz=296,slow=37
GERES GERESS Array B 77.94 334 P P 13 49 49.3 -0.3
GERES pmax pmax
comp=Z,2.0nm,0.4s
GERES MLR MLR
comp=Z,71nm,18.1s
BR131 Keskin Array S 77.98 317 *eP* **P 13 49 50.6 +0.6**
comp=Z,3.6nm,0.8s,mb4.3
BRTR Keskin Array B 77.98 317 P P 13 49 50.4 +0.4
comp=Z,2.1nm,0.6s,mb4.3,baz=63,slow=1.7,SNR=8.4
BRTR Keskin Array B 77.98 317 P P 13 49 50.4 +0.4
BRTR pmax pmax
comp=Z,2.0nm,0.6s
CONA Conrad Observa 78.08 332 ⇑ *iP* **P 13 49 50.9 +0.5**
comp=Z,9.7nm,0.9s,mb4.7

BZS Buzias 78.13 328 ⇑P P 13 49 50.3 -0.5
BZS Buzias 78.13 328 ⇑ *iP* **P 13 49 50.3 -0.4**
TNS Taunus Mts 78.15 338 *eP* **P 13 49 51.0 +0.3**
TNS pmax pmax
comp=Z,23nm,1.3s,mb5.0
TNS Taunus Mts 78.15 338 *eP* **P 13 49 51.0 +0.3**
comp=Z,23nm,1.3s,mb5.0
UMR Umm Al-Rimmam 78.35 301 *eP* **P 13 49 51.9 -0.3**
baz=301
UMR AMb AMB 13 49 53.1
comp=Z,41nm,0.7s,mb5.5,baz=301
MIB Mutribah 78.38 301 *eP* **P 13 49 52.2 -0.2**
baz=301
MIB AMb AMB 13 49 53.3
comp=Z,70nm,0.8s,mb5.6,baz=301
MEM Membach 78.40 339 P P 13 49 52.2 +0.1
comp=Z,16nm,1.2s,mb4.8
JCT Junction City 78.58 57 P P 13 49 52.6 -0.9
comp=Z,6.6nm,0.7s,mb4.7
JCT *e* pP 13 50 08.6 -1.3
JCT Junction City 78.58 57 P P 13 49 52.6 -0.9
JCT *e* pP 13 50 08.6 -1.3
JCT pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
TOD Tromm 78.62 337 *eP* **P 13 49 52.8 -0.6**
PKSM Moragy 78.67 330 ⇓ *iP* **P 13 49 50.8 -2.9**
BCLA Clavier 78.75 340 P P 13 49 54.4 +0.4
comp=Z,10nm,1.3s,mb4.6
ARSA Arzberg 78.79 332 ⇑ *iP* **P 13 49 54.5 +0.2**
comp=Z,7.4nm,1.2s,mb4.5
QRN Al-Qurain 78.83 300 *eP* **P 13 49 53.8 -1.1**
baz=300
QRN AMb AMB 13 50 08.5
comp=Z,56nm,1.5s,mb5.3,baz=300
NAY Al-Naaiem 78.85 301 *eP* **P 13 49 54.6 -0.3**
baz=301
NAY AMb AMB 13 49 56.2
comp=Z,17nm,0.8s,mb5.0,baz=301
RDF Al-Radifah 78.91 301 *eP* **P 13 49 54.8 -0.5**
baz=301
RDF AMb AMB 13 49 56.1
comp=Z,40nm,0.8s,mb5.4,baz=301
MIAR Mount Ida 78.93 51 *eP* **P 13 49 54.4 -0.9**
GIVF Givet 79.15 340 *eP* **P 13 49 55.8 -0.5**
PERS Pernice 79.46 332 *eP* **P 13 49 57.7 -0.3**
GROS Grobnik 79.50 332 *eP* **P 13 49 57.8 -0.4**
STKA Stephens Creek 79.54 190 P P 13 49 58.4 0.0
comp=Z,1.5nm,0.7s,mb4.1,baz=52,slow=8.0,SNR=2.9
STKA pP pP 13 50 14.2 -0.6
comp=Z,2.1nm,0.8s,baz=15,slow=7.4,SNR=3.1
STKA LR LR 14 25 36.4
comp=Z,35nm,19.4s,MS3.7,baz=26,slow=36
BFO Black Forest 79.92 337 *eP* **P 13 50 00.3 -0.1**
WATA Walderalm 79.92 335 ⇑ *iP* **P 13 50 00.8 +0.3**
comp=Z,8.2nm,0.6s,mb4.8
WTTA Wattenberg 79.97 335 ⇑ *iP* **P 13 50 01.1 +0.4**
comp=Z,23nm,1.0s,mb5.1
GCIS Gornji Cirnik 79.98 331 *eP* **P 13 50 00.5 -0.4**
LEGS Legarje 80.01 332 *eP* **P 13 50 00.2 -0.8**
MOTA Moosalm 80.05 335 ⇑ *iP* **P 13 50 01.3 +0.1**
comp=Z,15nm,0.9s,mb4.9
VTS Vitosha 80.10 325 ⇓P P 13 50 01.2 -0.3
VTS Vitosha 80.10 325 ⇓ *iP* **P 13 50 01.2 -0.3**
CDF Champ du Feu 80.12 338 ⇑ *iP* **P 13 50 01.4 -0.1**
comp=Z,37nm,1.0s,mb5.0
CDF Champ du Feu 80.12 338 ⇑ *iP* **P 13 50 01.4 -0.1**
comp=Z,19nm,1.0s,mb5.0
CDF Champ du Feu 80.12 338 ⇑ *iP* **P 13 50 01.4 -0.1**
CDF pmax pmax
comp=Z,19nm,1.0s,mb5.0
RAR Rarotonga 80.30 136 LR LR 14 18 42.1
comp=Z,56nm,21.5s,MS3.9,baz=38,slow=30
ECH Echery 80.33 338 *eP* **P 13 50 02.3 -0.4**
ECH Echery 80.33 338 *eP* **P 13 50 02.1 -0.6**
FELD Feldberg im Sc 80.42 337 *eP* **P 13 50 02.8 -0.4**
BOJS Bojanci 80.42 331 *i P* **P 13 50 02.6 -0.7**
DAVA Damuels 80.45 336 ⇑ *iP* **P 13 50 03.5 +0.2**
comp=Z,12nm,0.9s,mb4.8
FETA Feichten 80.45 335 ⇑ *iP* **P 13 50 03.2 -0.1**
comp=Z,12nm,1.1s,mb4.7
MEZF Maizieres J'vi 80.59 339 *eP* **P 13 50 04.1 0.0**
WVT Waverly 80.60 46 *eP* **P 13 50 03.2 -1.2**
comp=Z,4.6nm,0.8s,mb4.5
WVT Waverly 80.60 46 *eP* **P 13 50 03.2 -1.1**
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MOF Molkenrain 80.67 338 *eP* **P 13 50 02.9 -1.6**
HAU Haudompre 80.73 338 *eP* **P 13 50 04.4 -0.4**
comp=Z,54nm,1.2s,mb5.1
HAU *e* MLR MLR
comp=Z,145nm,20.2s,MS4.0
HAU Haudompre 80.73 338 *eP* **P 13 50 04.4 -0.4**
comp=Z,27nm,1.2s,mb5.0
HAU LR LR
comp=Z,140nm,20.3s,MS4.3
HAU Haudompre 80.73 338 *eP* **P 13 50 04.4 -0.4**
HAU pmax pmax
comp=Z,27nm,1.2s,mb5.0
HAU MLR MLR
comp=Z,140nm,20.3s,MS4.3
HINF Hinteralfeld 80.78 338 *eP* **P 13 50 04.6 -0.5**
DAVOS Davos 80.88 335 P P 13 50 05.9 +0.3
DAVOX Davos/Dischmat 80.91 335 P P 13 50 05.9 +0.1
comp=Z,7.3nm,0.8s,mb4.6,baz=350,slow=6.1,SNR=6.6
PMOR Pomariorio Ree 81.35 123 *eT* 15 19 19.7
comp=Z,15nm,0.2s
FLN La Foliniere 81.58 343 *eP* **P 13 50 08.9 -0.4**
LDF La Druitiere 81.66 342 *eP* **P 13 50 09.5 -0.2**
GRR Gorron 82.01 343 *eP* **P 13 50 11.0 -0.6**
LOR Lormes 82.03 339 ⇑ *iP* **P 13 50 11.3 -0.4**
comp=Z,16nm,0.7s,mb4.8
LOR *e* MLR MLR
comp=Z,117nm,17.2s,MS4.0
LOR Lormes 82.03 339 ⇑ *iP* **P 13 50 11.3 -0.4**
comp=Z,8.1nm,0.7s,mb4.8
LOR LR LR
comp=Z,120nm,17.3s,MS4.3
LOR Lormes 82.03 339 ⇑ *iP* **P 13 50 11.3 -0.4**
LOR pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LOR MLR MLR
comp=Z,120nm,17.3s,MS4.3
CABF La Chapelle 82.09 338 *eP* **P 13 50 12.1 +0.1**
comp=Z,16nm,0.8s,mb4.7
CABF La Chapelle 82.09 338 *eP* **P 13 50 12.1 +0.1**
comp=Z,7.9nm,0.8s,mb4.7
CABF La Chapelle 82.09 338 *eP* **P 13 50 12.1 +0.1**
CABF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SWET Sewanee 82.25 45 *eP* **P 13 50 12.0 -1.1**
SWET *e* pP 13 50 27.6 -2.0
SSF Saint Saulge 82.31 340 *eP* **P 13 50 12.9 -0.3**
comp=Z,14nm,0.8s,mb4.7
SSF Saint Saulge 82.31 340 *eP* **P 13 50 12.9 -0.3**
comp=Z,7.2nm,0.8s,mb4.7
SSF Saint Saulge 82.31 340 *eP* **P 13 50 12.9 -0.3**
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SGMF Saint Gilles 82.47 344 *eP* **P 13 50 13.8 -0.2**
comp=Z,28nm,0.8s,mb4.9
SGMF Saint Gilles 82.47 344 *eP* **P 13 50 13.8 -0.2**
comp=Z,14nm,0.8s,mb5.0
SGMF Saint Gilles 82.47 344 *eP* **P 13 50 13.8 -0.2**
SGMF pmax pmax
comp=Z,14nm,0.8s,mb4.9
PPT Papeete 82.48 126 *eL* LR LR 14 15 58.3
comp=Z,76nm,23.0s
ROSF Rostrenen 82.52 344 *eP* **P 13 50 14.0 -0.2**
comp=Z,23nm,0.8s,mb5.0
ROSF Rostrenen 82.52 344 *eP* **P 13 50 14.0 -0.2**
comp=Z,12nm,0.8s,mb5.0
ROSF Rostrenen 82.52 344 *eP* **P 13 50 14.0 -0.2**
ROSF pmax pmax
comp=Z,12nm,0.8s,mb5.0
AVF Avril sur Loir 82.60 340 ⇑ *iP* **P 13 50 14.6 -0.1**
SMF Signal de Mont 82.62 339 ⇑ *iP* **P 13 50 14.8 0.0**
comp=Z,37nm,1.0s,mb5.0
SMF Signal de Mont 82.62 339 ⇑ *iP* **P 13 50 14.8 0.0**
comp=Z,18nm,1.0s,mb5.1
SMF Signal de Mont 82.62 339 ⇑ *iP* **P 13 50 14.8 0.0**
SMF pmax pmax
comp=Z,18nm,1.0s,mb5.1
LPL La Plagne 82.94 337 *eP* **P 13 50 17.1 +0.6**
LPG La Plagne 82.95 337 ⇑ *iP* **P 13 50 17.3 +0.8**
comp=Z,29nm,0.9s,mb5.0
LPG La Plagne 82.95 337 ⇑ *iP* **P 13 50 17.3 +0.8**

comp=Z,14nm,0.9s,mb5.0
LPG La Plagne 82.95 337 ⇑ *i*P **P** **13 50 17.3 +0.8**
LPG pmax pmax
comp=Z,15nm,0.9s,mb5.0
PLDF La Plantade 83.31 339 *e*P **P** **13 50 18.9 +0.5**
TCF Toulx Ste Croi 83.34 340 ⇑ *i*P **P** **13 50 18.5 0.0**
comp=Z,28nm,1.0s,mb4.9
TCF Toulx Ste Croi 83.34 340 ⇑ *i*P **P** **13 50 18.5 0.0**
comp=Z,14nm,1.0s,mb4.9
TCF Toulx Ste Croi 83.34 340 ⇑ *i*P **P** **13 50 18.5 0.0**
TCF pmax pmax
comp=Z,14nm,1.0s,mb5.0
AGO Saint Agoulin 83.34 339 *e*P **P** **13 50 18.9 +0.3**
MBDF Montbardon 83.66 337 *e*P **P** **13 50 21.6 +1.4**
comp=Z,13nm,1.0s,mb4.7
MBDF Montbardon 83.66 337 *e*P **P** **13 50 21.6 +1.4**
comp=Z,6.3nm,1.0s,mb4.7
MBDF Montbardon 83.66 337 *e*P **P** **13 50 21.6 +1.4**
MBDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 83.72 337 ⇑ *i*P **P** **13 50 21.1 +0.6**
comp=Z,25nm,0.9s,mb5.1
ORIF *e*MLR MLR
comp=Z,112nm,18.0s,MS4.0
ORIF Oris-en-Rattie 83.72 337 ⇑ *i*P **P** **13 50 21.1 +0.6**
comp=Z,13nm,0.9s,mb5.0
ORIF Oris-en-Rattie 83.72 337 ⇑ *i*P **P** **13 50 21.1 +0.6**
ORIF pmax pmax
comp=Z,13nm,0.9s,mb5.1
VIVF Saint-Julien-l 84.09 338 *e*P **P** **13 50 22.7 +0.3**
comp=Z,12nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.09 338 *e*P **P** **13 50 22.7 +0.3**
comp=Z,5.9nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.09 338 *e*P **P** **13 50 22.7 +0.3**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
RJF Les Rejaudoux 84.43 340 *e*P **P** **13 50 25.8 +1.7**
RJF *e*MLR MLR
comp=Z,97nm,18.0s,MS3.9
RJF Les Rejaudoux 84.43 340 *e*P **P** **13 50 25.8 +1.7**
RJF MLR MLR
comp=Z,100nm,18.0s,MS4.2
CAF Calviac 84.66 340 *e*P **P** **13 50 25.1 -0.2**
MTLF Montolieu 86.12 339 *e*P **P** **13 50 32.0 -0.6**
EPF Esparros 86.85 340 *e*P **P** **13 50 36.0 -0.2**
TBI Tubuai 87.25 129 *e*T 15 26 45.1
comp=Z,14nm,0.2s
ESDC Sonseca Array 91.00 343 P **P** **13 50 54.4 -1.4**
comp=Z,0.2nm,0.3s,mb3.9,baz=77,slow=2.7,SNR=5.0
TORD Torodi Ar. Bea 114.60 329 PKP PKiKP 13 56 30.3 -1.7
comp=Z,0.1nm,0.3s,baz=54,slow=1.0,SNR=4.4
VNA2 Neumayer--Watz 154.59 195 *e*PKPdf PKPbc 13 57 50.8 0.0
baz=348,slow=0.7
VNA2 *e* 13 58 03.2
VNA2 *e* 13 58 05.6
VNA2 *e* 13 58 22.0
VNA2 *e* 13 58 28.0
VNA3 Neumayer Olymp 154.68 193 *e*PKPdf PKPbc 13 57 50.5 -0.5
VNA3 *e* 13 58 03.5
VNA3 *e* 13 58 06.1
VNA3 *e* 13 58 21.8
VNA3 *e* 13 58 27.6
VNA1 Neumayer--Stat 154.97 195 *e*PKPdf PKPbc 13 57 51.8 +0.1
VNA1 *e* 13 58 07.8
VNA1 *e* 13 58 23.6
VNA1 *e* 13 58 30.8

NEIC ***07*** *14:28:11.0, 1898N×10295W, h10km, MD4.0(MEX), After MEX.*

MEX 07 14:28:10.6±1.0, 1896N×10301W, h62km±22km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.74**	**206**	*i* P		Pn	14 28 23.4	-2.0
MMIG				*i* S		Sn	14 28 34.9	-1.4
SFJM	**Santa Fe**	**1.52**	**359**	*i* P		Pn	14 28 33.9	-1.7
SFJM				*i* S		Sn	14 28 53.5	-1.0
MOIG	**Morelia**	**1.86**	**67**	*e*P		Pn	14 28 38.3	-2.0
MOIG				*i* S		Sn	14 29 00.9	-1.9
MOIG	**Morelia**	**1.86**	**67**	*e*P		Pn	14 28 38.3	-2.0
MOIG				*i* S		Sn	14 29 00.9	-1.9
ZIIG	**Zihuatanejo**	**1.99**	**132**	*i* P		Pn	14 28 41.3	-0.6
ZIIG				*i* S		Sn	14 29 04.3	-1.6
ANIG	**Ahuacatlan**	**2.52**	**326**	*e*P		Pn	14 28 48.6	-0.6
ANIG				*i* S		Sn	14 29 16.2	-2.6
CAIG	**El Cayaco**	**3.23**	**126**	*i* P		Pn	14 28 58.5	-0.3
CAIG				*i* S		Sn	14 29 37.2	+1.1
CAIG	**El Cayaco**	**3.23**	**126**	*i* P		Pn	14 28 58.5	-0.3
CAIG				*i* S		Sn	14 29 34.3	-1.9
PLIG	**Platanillo**	**3.37**	**99**	*i* P		Pn	14 29 02.4	+1.6
PLIG				*i* S		Sn	14 29 40.0	+0.4
PLIG	**Platanillo**	**3.37**	**99**	*i* P		Pn	14 29 01.2	+0.3
PLIG				*i* S		Sn	14 29 38.3	-1.4
MEIG	**Mezcala**	**3.38**	**107**	*e*P		Pn	14 29 03.1	+2.2
MEIG				*i* S		Sn	14 29 38.6	-1.2
ACX	**Acapulco**	**3.61**	**125**	*i* P		Pn	14 29 09.1	+5.0
ACX				*i* S		Sn	14 29 58.1	+13
ZAIG	**Zacatecas**	**3.81**	**6**	*e*P		Pn	14 29 14.6	+7.8
PPM	**Popocatepetl**	**4.15**	**88**	*e*P		Pn	14 29 19.7	+8.2
UTMO	**Huajuapan**	**5.07**	**102**	*e*P		Pn	14 29 23.8	-0.2
UTMO				*i* S		Sn	14 30 20.9	-0.4

ISCJB ***07*** *14:28:54.0±0.9, 3825N±003×2646E±005, h6km±5km, Error ellipse: s-maj=6.6km s-min=4.7km az=161.9*
NEIC ***07*** *14:28:54.0, 3832N×2655E, h12km, MD3.7(ATH), MD3.0(ISK), After ISK.*
ATH ***07*** *14:28:54.3, 3825N×2638E, h21km±3km, MD3.7/5*
CSEM ***07*** *14:28:54.5±0.1, 3831N×2654E, h9km, MD2.9, Error ellipse: s-maj=2.6km s-min=1.7km az=56.0*
DDA ***07*** *14:28:55.2, 3826N×2655E, h7km±2km, Md2.9*
ISK ***07*** *14:28:55.2, 3832N×2656E, h14km, ML2.9*

ISC 07 14:28:54.9±0.8, 3827N±003×2647E±005, h10km±4km, n23, σ0.87/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.13**	**47**	*i* P		**Pg**	**14 28 57.7**	**-0.2**
URLA				*i* S		**Sg**	**14 29 00.2**	**+0.1**
BLCB	**Balcova**	**0.46**	**76**	PG		**Pg**	**14 29 03.4**	**-0.5**
BLCB				*e*SG		**Sg**	**14 29 09.0**	**-1.0**
SMG	**Samos**	**0.63**	**153**	*e*PB		**Pb**	**14 29 06.6**	**-1.4**
SMG				*e*SN		**Sg**	**14 29 16.7**	**+1.3**
IZM	**Izmir**	**0.63**	**78**	PG		**Pg**	**14 29 06.7**	**-0.5**
IZM				*e*SG		**Sg**	**14 29 15.1**	**-0.4**
KDAG	**Bornova**	**0.64**	**78**	*i* P		**Pg**	**14 29 06.7**	**-0.5**
KDAG				*i* S		**Sg**	**14 29 16.1**	**+0.5**
PRK	**Paraskevi**	**0.99**	**351**	*e*PN		**Pn**	**14 29 13.5**	**-1.3**
PRK				*e*SN		**Sn**	**14 29 27.3**	**-1.5**
AYVA	**Ayvalik**	**1.05**	**9**	*i* P		**Pg**	**14 29 15.0**	**-0.1**
AYVA				*i* S		**Sg**	**14 29 30.7**	**+2.0**
AKHS	**Akhisar**	**1.21**	**60**	*i* P		**Pn**	**14 29 16.9**	**-1.0**
AKHS				*i* S		**Sb**	**14 29 33.7**	**0.0**
AKS	**Akhisar**	**1.21**	**60**	*e*PN		**Pn**	**14 29 17.1**	**-0.8**
AYDN	**Tasoluk**	**1.27**	**118**	*i* P		**Pn**	**14 29 18.8**	**+0.1**
AYDN				*i* S		**Sb**	**14 29 35.1**	**-0.1**
BODT	**Bodrum**	**1.38**	**151**	*e*PN		**Pn**	**14 29 20.9**	**+0.7**
APE	**Apeiranthos**	**1.42**	**212**	*e*PN		**Pn**	**14 29 20.1**	**-0.6**
MLSB	**Milas**	**1.42**	**133**	*e*PN		**Pn**	**14 29 21.0**	**+0.3**
EZN	**Ezine**	**1.56**	**356**	*e*PN		**Pn**	**14 29 22.8**	**+0.1**
BALY	**Balya**	**1.72**	**31**	*i* P		**Pn**	**14 29 27.2**	**+2.4**
BALY				*i* S		**Sn**	**14 29 48.6**	**+1.8**
KULA	**Kula-Manisa**	**1.73**	**81**	*e*PN		**Pn**	**14 29 24.7**	**-0.4**
LIA	**Limnos Island**	**1.91**	**329**	*e*PN		**Pn**	**14 29 27.6**	**+0.1**
GADA	**Gvkgeada**	**1.97**	**347**	*e*PN		**Pn**	**14 29 28.5**	**+0.2**
DST	**Dursunbey**	**2.14**	**51**	*e*PN		**Pn**	**14 29 30.3**	**-0.4**
DALT	**Dalyan (Mudla)**	**2.28**	**130**	*e*PN		**Pn**	**14 29 33.5**	**+0.9**
KHL	**Karahalli**	**2.40**	**88**	*e*PN		**Pn**	**14 29 34.4**	**+0.2**
FETY	**Fethiye**	**2.64**	**127**	*e*PN		**Pn**	**14 29 38.3**	**+0.8**
RDO	**Rodhopi**	**2.96**	**346**	*e*PN		**Pn**	**14 29 42.2**	**+0.3**

MOS ***07*** *15:06:10.7±1.0, 2404S×6957W, h33km, mb5.3/20, Error ellipse: s-maj=19.0km s-min=9.3km az=111.1*
ISCJB ***07*** *15:06:14.3±0.5, 2414S±003×6945W±006, h65km±4km, mb4.8/64, Error ellipse: s-maj=8.6km s-min=4.6km az=164.4*
GUC ***07*** *15:06:16.4±0.8, 2414S×6976W, h82km±11km, ML5.0*

NEIC ***07*** *15:06:16.6±0.2, 2419S×6951W, mb5.0/55, Error ellipse: s-maj=7.1km s-min=4.6km az=72.0*
NEIC Felt [III] at Taltal and [II] at Antofagasta, Mejillones and Sierra Gorda. Felt at Tocopilla.
IDC ***07*** *15:06:17.0±0.4, 2420S×6964W, h76km±3km, mb4.5/11, mb1 4.6/15, mb1mx4.5/19, mbtmp4.4/15, MS3.7/13, Ms1 3.7/13, ms1mx3.4/27, Error ellipse: s-maj=12.8km s-min=7.6km az=100.0*
BJI ***07*** *15:06:17.5, 2420S×6950W, h74km, mB4.9, Ms5.1, Msz5.0*

ISC 07 15:06:15.6±0.5, 2412S±003×6946W±005, h60km±4km, h76km±4km: pP-P, n539, σ0.57/483, mb5.0/64, MS3.8/12, 186C-164D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.98**	**296**	⇑ *i*P		**Pn**	**15 06 32.9**	**-0.4**
ANCH				*i* S		**Sn**	**15 06 45.3**	**-1.1**
ANCH	**Antofagasta**	**0.98**	**296**	⇑ *i*P		**Pn**	**15 06 32.9**	**-0.4**
ANCH				*i* S		**Sn**	**15 06 45.3**	**-1.1**
ANCH				AML		AML	15 06 47.1	
comp=N,86μm,0.5s								
CEN1	**Los Morros**	**1.00**	**317**	⇓ *i*P		**Pn**	**15 06 33.0**	**-0.6**
CEN1				*i* S		**Sn**	**15 06 46.3**	**-0.6**
CEN1				AML		AML	15 06 47.8	
comp=N,73μm,0.7s								
CPN1	**Cerro Paranal**	**1.00**	**240**	⇑ *i*P		**Pn**	**15 06 33.9**	**+0.2**
CPN1				*i* S		**Sn**	**15 06 47.0**	**-0.1**
CPN1				AML		AML	15 06 47.7	
comp=E,75μm,0.1s								
LVC	**Limon Verde**	**1.58**	**19**	P		**Pn**	**15 06 45.3**	**+3.9**
comp=E,827nm,0.3s,baz=204,slow=9.1,SNR=5090								
LVC				S		**Sn**	**15 07 07.3**	**+6.5**
comp=E,3μm,0.3s,baz=32,slow=18,SNR=37								
LVC	**Limon Verde**	**1.58**	**19**	⇑ *e*P		**Pn**	**15 06 45.2**	**+3.9**
LVC				*e*S		**Sn**	**15 07 03.0**	**+2.2**
LVC	**Limon Verde**	**1.58**	**19**	⇑ *i*P		**Pn**	**15 06 45.3**	**+4.0**
SPCH	**San Pedro de A**	**1.67**	**44**	*e*P		**Pn**	**15 06 48.5**	**+6.0**
SPCH				*i* S		**Sn**	**15 07 12.0**	**+9.1**
SPCH	**San Pedro de A**	**1.67**	**44**	*e*P		**Pn**	**15 06 48.5**	**+6.0**
SPCH				*i* S		**Sn**	**15 07 12.0**	**+9.1**
SPCH				AML		AML	15 07 22.3	
comp=E,18μm,0.5s								
LCO	**Las Campanas**	**5.00**	**193**	*e*P		**Pn**	**15 07 26.2**	**-1.8**
LCO				*e*S		**Sn**	**15 08 24.9**	**+0.4**
CFAA	**Coronel Fontan**	**7.54**	**172**	P		**Pn**	**15 08 03.4**	**+0.6**
comp=E,1.0nm,0.3s,baz=346,slow=13,SNR=57								
CFAA				S		**Sn**	**15 09 28.8**	**+2.0**
comp=E,2.6nm,0.3s,baz=197,slow=13,SNR=4.0								
LPAZ	**La Paz**	**7.89**	**9**	P		**Pn**	**15 08 10.3**	**+2.6**
comp=E,20nm,0.3s,baz=188,slow=5.0,SNR=189								
LPAZ				LR		LR	15 11 23.7	
comp=E,464nm,22.0s,baz=221,slow=38								
LPAZ	**La Paz**	**7.89**	**9**	⇑ *e*P		**Pn**	**15 08 09.3**	**+1.6**
comp=E,45nm,0.4s								
LPAZ	**La Paz**	**7.89**	**9**	⇑ *e*P		**Pn**	**15 08 09.4**	**+1.7**
LPAZ				pmax		pmax		
comp=Z,45nm,0.4s								
SIV	**San Ignacio**	**11.28**	**46**	P		**Pn**	**15 08 52.6**	**-1.5**
comp=Z,9.0nm,0.3s,baz=238,slow=11,SNR=128								
SIV				S		**Sn**	**15 11 13.1**	**+14**
baz=180,slow=22,SNR=3.0								
NNA	**Nana**	**13.96**	**329**	P		**Pn**	**15 09 30.7**	**+0.2**
comp=Z,1.6nm,0.3s,baz=153,slow=11,SNR=2.1								
NNA				S		**Sn**	**15 11 57.4**	**-6.5**
comp=Z,1.1nm,0.3s,baz=228,slow=16,SNR=2.8								
NNA				LR		LR	15 14 22.8	
comp=Z,147nm,21.6s,baz=138,slow=35								
PLCA	**Paso Flores**	**16.59**	**183**	P		**Pn**	**15 10 02.5**	**-1.7**
comp=Z,0.1nm,0.3s,baz=8.7,slow=13,SNR=2.7								
BDFB	**Brasilia**	**21.83**	**71**	P		**P**	**15 11 02.3**	**-0.9**
comp=Z,8.5nm,0.6s,mb4.3,baz=250,slow=14,SNR=15								
BDFB				pP			15 11 21.1	
comp=Z,8.7nm,0.7s,baz=224,slow=20,SNR=4.8								
BDFB				sP		sP	15 11 29.5	+5.7
comp=Z,20nm,0.9s,baz=219,slow=12,SNR=5.9								
BDFB				LR		LR	15 21 02.4	
comp=Z,82nm,18.7s,MS3.2,baz=217,slow=40								
BDFB	**Brasilia**	**21.83**	**71**	P		**P**	**15 11 02.3**	**-0.9**
BDFB				*SP		sP	15 11 29.5	+5.7
OTAV	**Otavalo**	**25.74**	**339**	*e*P		**P**	**15 11 42.0**	**+1.4**
comp=Z,6.0nm,0.9s,mb4.1								
OTAV				*e*			15 12 04.6	
EFI	**East Falkland**	**28.87**	**165**	⇑ *i*P		**P**	**15 12 07.1**	**-1.3**
ROSC	**El Rosal**	**29.19**	**350**	LR		LR	15 25 19.9	
comp=Z,55nm,19.5s,MS3.2,baz=18,slow=39								
USHA	**Ushuaia**	**30.68**	**179**	LR		LR	15 25 15.8	
comp=Z,248nm,19.2s,MS3.9,baz=355,slow=37								
PCRV	**Puerto La Cruz**	**34.41**	**8**	LR		LR	15 29 21.8	
comp=Z,90nm,19.8s,MS3.5,baz=184,slow=40								
CMIG	**Matias Romero**	**47.89**	**326**	P		**P**	**15 14 46.8**	**-1.2**
comp=Z,9.4nm,0.8s,mb4.8,baz=121,slow=5.7,SNR=8.1								
VNA3	**Neumayer Olymp**	**57.77**	**161**	*e*P		**P**	**15 16 00.4**	**+0.2**
VNA3				*e*			15 16 28.7	
VNA1	**Neumayer--Stat**	**58.00**	**160**	*e*P		**P**	**15 16 02.4**	**+0.6**
VNA1				*e*			15 16 29.8	
VNA2	**Neumayer--Watz**	**58.37**	**160**	*e*P		**P**	**15 16 04.7**	**+0.4**
baz=294,slow=8.2								
VNA2				*e*			15 16 32.0	
RKT	**Rikitea**	**59.52**	**256**	*e*P		**P**	**15 16 12.9**	**-0.2**
comp=Z,111nm,1.3s,mb5.7								
RKT	**Rikitea**	**59.52**	**256**	*e*P		**P**	**15 16 12.9**	**-0.2**
RKT				pmax		pmax		
comp=Z,111nm,1.3s,mb5.7								
SWET	**Sewanee**	**61.04**	**345**	*e*P		**P**	**15 16 21.5**	**-1.6**
OXF	**Oxford**	**61.31**	**341**	*e*P		**P**	**15 16 22.6**	**-2.3**
comp=Z,33nm,1.0s,mb5.4								
OXF	**Oxford**	**61.31**	**341**	*e*P		**P**	**15 16 22.6**	**-2.3**
OXF				pmax		pmax		
comp=Z,33nm,1.0s,mb5.4								
JCT	**Junction City**	**61.60**	**330**	*e*P		**P**	**15 16 26.1**	**-0.8**
comp=Z,21nm,0.8s,mb5.3								
JCT	**Junction City**	**61.60**	**330**	*e*P		**P**	**15 16 26.1**	**-0.8**
JCT				pmax		pmax		
comp=Z,21nm,0.8s,mb5.3								
WVT	**Waverly**	**62.39**	**343**	*e*P		**P**	**15 16 30.0**	**-2.1**
comp=Z,7.5nm,0.8s,mb4.9								
WVT				*e*pP		pP	15 16 49.3	+1.1
WVT	**Waverly**	**62.39**	**343**	*e*P		**P**	**15 16 30.0**	**-2.1**
WVT				pmax		pmax		
comp=Z,8.0nm,0.8s,mb4.9								
TXAR	**Lajitas Array**	**62.50**	**326**	P		**P**	**15 16 32.2**	**-0.8**
comp=Z,3.7nm,0.8s,mb4.6,baz=144,slow=8.7,SNR=30								
TXAR				pP		pP	15 16 51.7	+2.6
comp=Z,1.9nm,0.9s,baz=152,slow=8.2,SNR=3.0								
TXAR				sP		sP	15 17 00.1	+4.3
comp=Z,1.5nm,0.8s,baz=142,slow=6.2,SNR=3.0								
TXAR	**Lajitas Array**	**62.50**	**326**	P		**P**	**15 16 32.2**	**-0.8**
TXAR				pP		pP	15 16 51.7	+2.6
TXAR				sP		sP	15 17 00.1	+4.3
MIAR	**Mount Ida**	**62.68**	**338**	*e*P		**P**	**15 16 32.6**	**-1.4**
comp=Z,22nm,0.9s,mb5.3								
MIAR	**Mount Ida**	**62.68**	**338**	*e*P		**P**	**15 16 32.7**	**-1.4**
MIAR				pmax		pmax		
comp=Z,22nm,0.9s,mb5.3								
MAIT	**Maitri**	**64.55**	**159**	*e*P		**P**	**15 16 45.5**	**-0.5**
NVL	**N'lazarevskaya**	**64.58**	**159**	P		**P**	**15 16 47.9**	**+1.7**
NVL				pmax		pmax		
comp=Z,30nm,1.3s,mb5.2								
FVM	**French Village**	**64.84**	**342**	*e*P		**P**	**15 16 46.8**	**-1.5**
comp=Z,33nm,0.8s,mb5.4								
FVM				*e*pP		pP	15 17 05.8	+1.3
FVM	**French Village**	**64.84**	**342**	*e*P		**P**	**15 16 46.8**	**-1.4**
FVM				pmax		pmax		
comp=Z,33nm,0.8s,mb5.4								
ACSO	**Alum Creek Sta**	**65.25**	**349**	*e*P		**P**	**15 16 49.2**	**-1.6**
comp=Z,19nm,0.9s,mb5.1								
319A	**Douglas**	**67.06**	**324**	⇑ P		**P**	**15 17 03.0**	**+0.3**
baz=67,SNR=19								
318A	**Bisbee**	**67.50**	**323**	⇑ P		**P**	**15 17 05.9**	**+0.5**
baz=68,SNR=28								
219A	**White Tail Can**	**67.53**	**324**	⇑ P		**P**	**15 17 05.9**	**+0.2**
baz=68,SNR=11								
BNM	**Barren Site**	**67.87**	**327**	*e*P		**P**	**15 17 08.1**	**+0.4**
218A	**Dragoon**	**67.94**	**323**	⇓ P		**P**	**15 17 08.5**	**+0.3**
baz=68,SNR=33								
LPM	**Los Pinos Moun**	**68.00**	**327**	*e*P		**P**	**15 17 08.4**	**-0.1**
119A	**Ashpeak Ranch,**	**68.15**	**324**	⇑ P		**P**	**15 17 09.8**	**+0.3**
baz=68,SNR=6.6								
217A	**Green Valley**	**68.21**	**323**	⇑ P		**P**	**15 17 10.1**	**+0.2**
baz=68,SNR=16								
LAZ	**Ladron**	**68.32**	**327**	*e*P		**P**	**15 17 11.1**	**+0.5**
118A	**Homack Ranch,**	**68.41**	**324**	⇓ P		**P**	**15 17 11.3**	**+0.2**
baz=69,SNR=21								
ANMO	**Albuquerque**	**68.43**	**328**	P		**P**	**15 17 11.3**	**+0.2**
comp=Z,11nm,0.8s,mb4.9,baz=142,slow=8.0,SNR=23								
ANMO				pP		pP	15 17 31.6	+4.2
comp=Z,1.0nm,0.4s,baz=80,slow=2.5,SNR=1.8								
ANMO	**Albuquerque**	**68.43**	**328**	*e*P		**P**	**15 17 10.4**	**-0.7**
comp=Z,38nm,1.5s,mb5.2								
ANMO	**Albuquerque**	**68.43**	**328**	⇑ *e*P		**P**	**15 17 09.6**	**-1.6**
Z19A	**T-Link Ranch,**	**68.54**	**325**	⇑ P		**P**	**15 17 12.6**	**+0.7**
baz=69,SNR=6.7								
FRNY	**Flat Rock**	**68.72**	**357**	*e*P		**P**	**15 17 12.7**	**0.0**
comp=Z,17nm,0.8s,mb5.0								
CBKS	**Cedar Bluff**	**68.73**	**335**	*e*P		**P**	**15 17 12.4**	**-0.6**
comp=Z,60nm,1.1s,mb5.4								
CBKS	**Cedar Bluff**	**68.73**	**335**	*e*P		**P**	**15 17 12.4**	**-0.6**
CBKS				pmax		pmax		
comp=Z,60nm,1.1s,mb5.4								
216A	**Three Points,**	**68.74**	**322**	⇑ P		**P**	**15 17 13.4**	**+0.2**
baz=69,SNR=6.8								
117A	**Oracle**	**68.78**	**323**	⇑ P		**P**	**15 17 13.6**	**+0.2**
baz=69,SNR=16								
Z18A	**Geronimo**	**68.79**	**324**	⇑ P		**P**	**15 17 13.7**	**+0.2**
baz=69								
Y19A	**Nutrioso**	**69.05**	**325**	⇑ P		**P**	**15 17 15.9**	**+0.9**
baz=69,SNR=33								
Z17A	**San Carlos Hig**	**69.18**	**324**	⇓ P		**P**	**15 17 16.1**	**+0.2**
baz=70								
116A	**Eloy**	**69.30**	**323**	⇑ P		**P**	**15 17 16.8**	**+0.2**
baz=70								
Y18A	**Canyon Day Jun**	**69.32**	**325**	⇓ P		**P**	**15 17 17.0**	**+0.2**
baz=70								
X19A	**St. Johns**	**69.43**	**326**	⇑ P		**P**	**15 17 17.8**	**+0.3**
baz=70								
214A	**Organ Pipe Nat**	**69.47**	**321**	⇑ P		**P**	**15 17 18.0**	**+0.3**
baz=70,SNR=17								
Y17A	**Roosevelt**	**69.69**	**324**	⇓ P		**P**	**15 17 19.4**	**+0.4**
baz=70,SNR=23								
Z16A	**Peralta Trail,**	**69.73**	**323**	⇓ P		**P**	**15 17 19.5**	**+0.2**
baz=70								
X18A	**Snowflake**	**69.86**	**325**	⇓ P		**P**	**15 17 20.4**	**+0.3**
baz=70								
DBIC	**Dimbokro**	**69.97**	**73**	P		**P**	**15 17 21.6**	**+0.3**
comp=Z,10.0nm,0.8s,mb4.8,baz=232,slow=6.1,SNR=8.9								
DBIC				pP		pP	15 17 41.6	+4.1
comp=Z,17nm,0.8s,baz=206,slow=6.9,SNR=9.4								
DBIC				LR		LR	15 47 12.4	
comp=Z,81nm,19.1s,MS4.0,baz=218,slow=35								
DBIC	**Dimbokro**	**69.97**	**73**	*e*P		**P**	**15 17 21.6**	**+0.4**
comp=Z,9.5nm,0.8s,mb4.8								
DBIC	**Dimbokro**	**69.97**	**73**	*e*P		**P**	**15 17 21.7**	**+0.5**
DBIC				pmax		pmax		
comp=Z,9.0nm,0.8s								
W19A	**Sanders**	**70.02**	**326**	⇓ P		**P**	**15 17 21.4**	**+0.4**
baz=70,SNR=7.3								
X17A	**Forest Lakes**	**70.16**	**324**	⇑ P		**P**	**15 17 22.6**	**+0.7**
baz=70,SNR=11								
Y16A	**Circle Bar Ran**	**70.17**	**324**	⇓ P		**P**	**15 17 22.3**	**+0.4**
baz=70,SNR=14								
W18A	**Petrified Fore**	**70.20**	**326**	⇑ P		**P**	**15 17 22.5**	**+0.4**
baz=70								
SDCO	**Great Sand Dun**	**70.25**	**330**	*e*P		**P**	**15 17 22.4**	**+0.1**
comp=Z,21nm,1.1s,mb5.0								
V19A	**Window Rock**	**70.31**	**327**	⇓ P		**P**	**15 17 23.2**	**+0.4**
baz=71,SNR=19								
X16A	**Lo Mia Camp, P**	**70.56**	**324**	⇓ P		**P**	**15 17 24.8**	**+0.5**
baz=71,SNR=19								
Z14A	**Wintersburg**	**70.59**	**322**	⇑ P		**P**	**15 17 24.8**	**+0.2**
baz=71								
113A	**Mohawk Valley,**	**70.61**	**321**	⇓ P		**P**	**15 17 24.8**	**+0.1**
baz=71								
W17A	**Winslow**	**70.68**	**325**	⇓ P		**P**	**15 17 25.3**	**+0.3**
baz=71								
Y15A	**Casa Rosa Ranc**	**70.69**	**323**	⇓ P		**P**	**15 17 25.4**	**+0.2**
baz=71,SNR=8.6								
V18A	**Ganado**	**70.76**	**326**	⇓ P		**P**	**15 17 25.5**	**0.0**
baz=71								
X15A	**Humboldt**	**71.04**	**324**	⇑ P		**P**	**15 17 27.7**	**+0.5**
baz=71,SNR=12								
Y14A	**Wickenburg**	**71.05**	**323**	⇓ P		**P**	**15 17 27.5**	**+0.1**
baz=71								
W16A	**Flagstaff**	**71.12**	**324**	⇑ P		**P**	**15 17 28.6**	**+0.9**
baz=71,SNR=14								
T19A	**Beclabito**	**71.18**	**327**	⇑ P		**P**	**15 17 28.1**	**0.0**
baz=72,SNR=15								
MVCO	**Mesa Verde**	**71.22**	**328**	*e*P		**P**	**15 17 28.7**	**+0.4**
comp=Z,20nm,0.4s,mb5.4								
MVCO	**Mesa Verde**	**71.22**	**328**	⇓ P		**P**	**15 17 28.7**	**+0.4**
baz=72								
U18A	**Rough Rock, Ch**	**71.28**	**326**	⇑ P		**P**	**15 17 29.0**	**+0.3**
baz=72,SNR=15								
WUAZ	**Wupatki**	**71.36**	**325**	*e*P		**P**	**15 17 29.3**	**+0.1**
comp=Z,26nm,1.0s,mb5.1								
WUAZ	**Wupatki**	**71.36**	**325**	⇓ P		**P**	**15 17 29.7**	**+0.6**
baz=72,SNR

S16A **Weppner Ranch,** 73.16 326 ⇓P P 15 17 40.2 +0.3
baz=74
MURC **Murrieta** 73.20 320 ⇓P P 15 17 40.4 +0.2
baz=73
R17A **Hanksville Air** 73.25 327 ⇓P P 15 17 40.5 +0.1
baz=74,SNR=24
VAH **Vaihoa** 73.33 260 *e*P P 15 17 41.4 0.0
comp=Z,36nm,1.0s,mb5.2
P19A **Cripple Cowboy** 73.38 329 ⇓P P 15 17 41.6 +0.5
baz=74,SNR=18
T14A **Hurricane** 73.43 325 ⇓P P 15 17 42.1 +0.6
baz=74
Q18A **Rafter H Ranch** 73.50 328 ⇓P P 15 17 41.9 0.0
baz=74,SNR=8.8
BBRC **Big Bear Sol-O** 73.51 320 ⇓P P 15 17 42.5 +0.5
baz=74
S15A **Panguitch** 73.52 326 ⇓P P 15 17 42.4 +0.4
baz=74
HEC **Hector,Ludlow** 73.57 321 ⇓P P 15 17 42.8 +0.4
baz=74
SCI **San Clemente I** 73.57 319 ⇓P P 15 17 42.7 +0.3
baz=74
PMOR **Pomariorio Ree** 73.65 261 *e*P P 15 17 43.4 +0.1
comp=Z,42nm,1.0s,mb5.3
SRU **San Rafael** 73.70 328 *e*P P 15 17 43.1 +0.1
comp=Z,13nm,1.0s,mb4.8
SRU **San Rafael** 73.70 328 *e*P P 15 17 43.1 +0.1
SRU pmax pmax
comp=Z,13nm,1.0s,mb4.8
SRU **San Rafael** 73.70 328 ⇓P P 15 17 43.1 +0.1
baz=74,SNR=13
U12A **Valley of Fire** 73.74 323 ⇓P P 15 17 43.7 +0.4
baz=74,SNR=9.2
TUQ **Turquoise Moun** 73.78 322 ⇓P P 15 17 43.9 +0.4
baz=74
V11A **Goodsprings** 73.79 323 ⇓P P 15 17 43.8 +0.2
baz=74
T13A **Saint George** 73.83 324 ⇑P P 15 17 44.3 +0.5
baz=74
Q16A **Castle Valley** 73.87 327 ⇑P P 15 17 44.2 +0.2
baz=74
R15A **Junction** 73.88 326 ⇓P P 15 17 44.5 +0.4
baz=74
BFSC **Mount Baldy St** 73.92 320 ⇓P P 15 17 44.6 +0.2
baz=74
CCUT **Cedar City** 73.94 325 *e*P P 15 17 45.3 +0.8
O19A **Miners Draw (B** 73.97 329 ⇑P P 15 17 44.5 0.0
baz=74
P18A **Preston Nutter** 73.97 328 ⇑P P 15 17 45.1 +0.5
baz=74,SNR=18
MSU **Marysvale** 74.06 326 *e*P P 15 17 45.7 +0.6
P17A **Butcher Ranch,** 74.09 328 ⇓P P 15 17 45.3 +0.1
baz=74,SNR=7.6
GSC **Goldstone** 74.18 321 *e*P P 15 17 46.3 +0.4
comp=Z,5.1nm,0.9s,mb4.5
GSC **Goldstone** 74.18 321 *e*P P 15 17 46.3 +0.4
GSC pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GSC **Goldstone** 74.18 321 ⇓P P 15 17 46.3 +0.4
baz=74,SNR=6.7
S13A **Holt Ranch, En** 74.23 325 ⇑P P 15 17 47.0 +0.9
baz=74,SNR=10
SYO **Syowa Base** 74.24 159⇑ *e*P P 15 17 44.6 -1.2
SYO **Syowa Base** 74.24 159⇓ *e*PcP PcP 15 17 57.2 -3.3
PPT **Papeete** 74.25 258 *e*LR LR 15 40 38.6
comp=Z,396nm,30.2s
PPT **Papeete** 74.25 258 LR LR 15 40 33.7
comp=Z,66nm,21.4s,MS3.9,baz=98,slow=28
O18A **Roosevelt** 74.36 329 ⇑P P 15 17 47.0 +0.1
baz=75
N19A **John Jarvie Ra** 74.47 330 ⇑P P 15 17 47.2 -0.2
baz=75,SNR=5.5
L21A **Rawlins** 74.52 332 ⇑P P 15 17 47.5 -0.2
baz=75,SNR=11
EDW2 **Edwards Air Fo** 74.57 320 ⇑P P 15 17 47.9 -0.2
baz=75,SNR=7.5
O17A **Robinson Place** 74.65 328 ⇓P P 15 17 49.2 +0.7
baz=75,SNR=18
BLG **Laguna Peak** 74.67 319 ⇑P P 15 17 49.9 +1.1
baz=75
T11A **Corn Creek, Al** 74.70 324 ⇑P P 15 17 49.6 +0.7
baz=75,SNR=31
U10A **Ash Meadows, A** 74.72 322 ⇑P P 15 17 49.6 +0.6
baz=75,SNR=12
R13A **O'Grain Ranch,** 74.73 325 ⇑P P 15 17 49.8 +0.8
baz=75,SNR=13
N18A **Larsen Ranch,** 74.76 330 ⇓P P 15 17 48.9 -0.3
baz=75,SNR=8.0
S12A **Delamar Landin** 74.77 324 ⇓P P 15 17 49.8 +0.5
baz=75
LRMC **Laurel Mountai** 74.81 321 ⇑P P 15 17 49.7 +0.2
baz=75
P15A **Leamington** 74.92 327 ⇑P P 15 17 50.3 +0.2
baz=75
BSC **Santa Cruz Isl** 74.93 319 ⇓P P 15 17 50.8 +0.6
baz=75
RSSD **Black Hills** 74.94 335 *e*P P 15 17 49.5 -0.5
comp=Z,15nm,1.0s,mb4.9
RSSD **Black Hills** 74.94 335 *e*P P 15 17 49.6 -0.5
RSSD pmax pmax
comp=Z,15nm,1.0s,mb4.9
M19A **Rock Springs** 74.94 330 ⇑P P 15 17 50.3 +0.2
baz=75
MPU **Maple Canyon** 74.94 328 *e*P P 15 17 50.4 +0.2
comp=Z,11nm,1.0s,mb4.7
L20A **Wamsutter** 74.98 331 ⇓P P 15 17 50.2 -0.2
baz=75,SNR=5.3
Q14A **Sevier Lake (B** 74.98 326 ⇑P P 15 17 51.1 +0.7
baz=75,SNR=18
O16A **Springville** 75.03 328 ⇑P P 15 17 50.8 +0.1
baz=75
FURC **Furnace Creek,** 75.05 322 ⇑P P 15 17 51.0 +0.1
baz=75,SNR=5.2
TPNV **Topopah Spring** 75.05 323 *e*P P 15 17 51.4 +0.4
comp=Z,22nm,1.1s,mb5.0
TPNV **Topopah Spring** 75.05 323 *e*P P 15 17 51.4 +0.5
TPNV pmax pmax
comp=Z,22nm,1.1s,mb5.0
TPNV **Topopah Spring** 75.05 323 ⇑P P 15 17 51.6 +0.7
baz=75,SNR=26
DAU **Daniels Canyon** 75.07 328 *e*P P 15 17 51.5 +0.6
MPMC **Manual Prospec** 75.11 321 ⇓P P 15 17 51.2 -0.1
baz=75,SNR=8.0
R12A **Pony Springs,** 75.18 325 ⇓P P 15 17 52.3 +0.7
baz=76,SNR=24
N17A **Moffit Pass** 75.28 329 ⇑P P 15 17 52.5 +0.4
baz=76,SNR=29
S11A **Rachel** 75.28 324 ⇓P P 15 17 53.2 +0.9
baz=76,SNR=5.2
M18A **Lyman** 75.30 330 ⇑P P 15 17 51.7 -0.5
baz=76
P14A **Drum Mountains** 75.33 327 ⇑P P 15 17 53.2 +0.7
baz=76,SNR=21
Q13A **Wheeler Ranch,** 75.34 326 ⇑P P 15 17 53.0 +0.5
baz=76,SNR=11
ISA **Isabella** 75.40 321 *e*P P 15 17 52.9 0.0
comp=Z,14nm,1.1s,mb4.8
ISA **Isabella** 75.40 321 *e*P P 15 17 52.9 0.0
ISA pmax pmax
comp=Z,14nm,1.1s,mb4.8
ISA **Isabella** 75.40 321 ⇑P P 15 17 53.3 +0.3
baz=76,SNR=5.9
L19A **Farson** 75.51 330 ⇓P P 15 17 53.5 +0.1
baz=76,SNR=11
N16A **Rees Ranch, Co** 75.52 328 ⇓P P 15 17 53.8 +0.3
baz=76
O15A **The Old Anders** 75.56 327 ⇓P P 15 17 54.1 +0.4
baz=76
M17A **Scullys Gap (B** 75.61 329 ⇑P P 15 17 53.5 -0.5
baz=76,SNR=7.2
PKM **Peak Mountain** 75.66 319 ⇓P P 15 17 54.6 +0.2
baz=76,SNR=12
DUG **Dugway** 75.66 327 *e*P P 15 17 54.3 0.0
comp=Z,14nm,1.0s,mb4.8
DUG **Dugway** 75.66 327 *e*P P 15 17 54.3 0.0
DUG pmax pmax
comp=Z,14nm,1.0s,mb4.8
DUG **Dugway** 75.66 327 ⇓P P 15 17 54.6 +0.3
baz=76
P13A **Bates Ranch, G** 75.71 326 ⇑P P 15 17 55.1 +0.5
baz=76,SNR=13
R11A **Troy Canyon, C** 75.71 324 ⇓P P 15 17 55.2 +0.6
baz=76,SNR=29
GRAC **Grapevine Rang** 75.71 322 ⇑P P 15 17 55.0 +0.3
baz=76
CWC **Cottonwood Cre** 75.72 321 ⇑P P 15 17 55.1 +0.4
baz=76
Q12A **Willow Creek R** 75.82 325 ⇓P P 15 17 55.5 +0.3
baz=76,SNR=8.1
AGMN **Agassiz Refuge** 75.88 342 *e*P P 15 17 54.2 -1.1
comp=Z,11nm,1.1s,mb4.7
VES **Vestal, Richgr** 75.88 320 ⇑P P 15 17 55.8 +0.1
baz=76
M16A **Huntsville** 75.94 329 ⇓P P 15 17 55.7 -0.2
baz=76,SNR=5.5
S10A **Tonopah Range,** 75.95 323 ⇓P P 15 17 56.5 +0.4
baz=76,SNR=20
N15A **Stansbury Isla** 76.05 328 ⇑P P 15 17 56.3 -0.2
baz=76
SMMC **Simmler** 76.05 319 ⇑P P 15 17 57.1 +0.5
baz=76,SNR=7.2
R10A **Warm Springs** 76.05 324 ⇑P P 15 17 57.7 +1.1
baz=76,SNR=26
Q11A **Duckwater** 76.11 325 ⇑P P 15 17 57.3 +0.4
baz=76,SNR=16
BW06 **Boulder Array** 76.13 331 ⇑P P 15 17 56.6 -0.4
baz=76
PDAR **Pinedale Array** 76.13 331 P P 15 17 56.4 -0.6
comp=Z,2.3nm,0.9s,mb4.1,baz=137,slow=8.2,SNR=14
PDAR pP pP 15 18 16.7 +3.2
comp=Z,0.9nm,0.6s,baz=139,slow=9.2,SNR=3.2
PDAR sP sP 15 18 27.4 +7.3
comp=Z,1.1nm,0.6s,baz=168,slow=7.6,SNR=2.4
HWUT **Hardware Ranch** 76.14 329 *e*P P 15 17 56.5 -0.5
comp=Z,14nm,0.8s,mb5.0
S09A **Goldfield** 76.15 323 ⇓P P 15 17 57.3 +0.1
baz=76,SNR=12
O13A **Hicks Ranch, I** 76.20 326 ⇑P P 15 17 57.6 +0.2
baz=76
SPUT **South Promonto** 76.33 328 *e*P P 15 17 58.3 +0.1
N14A **Grayback Hills** 76.34 327 ⇑P P 15 17 58.0 -0.2
baz=77
L16A **Fish Haven** 76.39 329 ⇓P P 15 17 58.8 +0.3
baz=77,SNR=8.3
R09A **Tonopah** 76.44 323 ⇓P P 15 17 59.0 +0.2
baz=77,SNR=14
M15A **Larsen Ranch,** 76.45 328 ⇓P P 15 17 58.3 -0.5
baz=77,SNR=18
Q10A **Clear Creek Ra** 76.49 324 ⇓P P 15 17 59.6 +0.5
baz=77,SNR=12
MTUM **Tungsten Hills** 76.64 322 *e*P P 15 18 00.2 +0.2
P11A **Circle Ranch,** 76.68 325 ⇑P P 15 18 00.6 +0.5
baz=77
O12A **Currie** 76.69 326 ⇑P P 15 18 00.4 +0.2
baz=77,SNR=5.2
PKD **Parkfield** 76.81 320 ⇑P P 15 18 00.8 -0.1
baz=77
AHID **Auburn Hatcher** 76.83 330 *e*P P 15 18 00.9 0.0
comp=Z,24nm,1.0s,mb5.1
L15A **Malad City** 76.84 329 ⇑P P 15 18 00.6 -0.4
baz=77,SNR=13
N13A **Wendover, West** 76.85 327 ⇑P P 15 18 00.8 -0.3
baz=77
M14A **Sheep Mountain** 76.92 328 ⇓P P 15 18 01.2 -0.2
baz=77,SNR=18
Q09A **Carvers** 76.92 324 ⇓P P 15 18 01.9 +0.4
baz=77
MLAC **Mammoth Lakes** 76.98 322 ⇓P P 15 18 02.5 +0.6
baz=77
I18A **Diamond G Ranc** 76.98 331 ⇓P P 15 18 01.9 +0.2
baz=77,SNR=21
KCC **Kaiser Creek** 77.04 321 ⇓P P 15 18 01.7 -0.5
baz=77,SNR=6.1
O11A **Cowboy Ranch,** 77.06 325 ⇑P P 15 18 02.5 +0.2
baz=77
K16A **Soda Springs** 77.10 330 ⇑P P 15 18 02.9 +0.4
baz=77,SNR=24
P10A **Eureka** 77.11 325 ⇑P P 15 18 03.2 +0.6
baz=77,SNR=8.6
J17A **Brown Place, J** 77.12 330 ⇓P P 15 18 02.7 +0.2
baz=77,SNR=6.7
REDW **Red Top Meadow** 77.18 330 *e*P P 15 18 02.7 -0.1
comp=Z,14nm,1.0s,mb4.9
SNOW **Snow King Moun** 77.21 330 *e*P P 15 18 03.4 +0.3
comp=Z,9.4nm,0.6s,mb4.9
U04C **Hernandez Rese** 77.23 320 ⇓P P 15 18 03.5 +0.1
baz=78,SNR=6.4
NVAR **Mina Array Bea** 77.25 323 P P 15 18 03.5 +0.2
comp=Z,4.4nm,0.8s,mb4.4,baz=153,slow=6.3,SNR=31
NVAR pP pP 15 18 23.5 +3.5
comp=Z,1.6nm,0.7s,baz=154,slow=6.4,SNR=3.7
LOHW **Long Hollow** 77.26 331 *e*P P 15 18 03.4 +0.1
comp=Z,13nm,1.1s,mb4.8
V03C **Hunter Liggett** 77.27 319 ⇓P P 15 18 04.0 +0.4
baz=78
N12A **Clover Valley,** 77.27 326 ⇓P P 15 18 03.2 -0.2
baz=78
TPAW **Teton Pass** 77.32 330 *e*P P 15 18 03.3 -0.3
comp=Z,17nm,1.0s,mb4.9
Q08A **Gabbs** 77.35 323 ⇑P P 15 18 03.9 0.0
baz=78
RRI2 **Red Ridge** 77.38 330 *e*P P 15 18 04.2 +0.3
comp=Z,21nm,1.0s,mb5.0
K15A **Arbon** 77.43 329 ⇑P P 15 18 04.1 -0.2
baz=78,SNR=13
MOOW **Moose Ponds** 77.44 331 *e*P P 15 18 04.1 -0.2
comp=Z,4.3nm,0.9s,mb4.4
J16A **Bone** 77.46 330 ⇑P P 15 18 04.4 0.0
baz=78,SNR=6.3
I17A **Pilgram Creek** 77.49 331 ⇓P P 15 18 05.2 +0.6
baz=78,SNR=22
O10A **Cortez Mining,** 77.61 325 ⇓P P 15 18 05.4 +0.1
baz=78
K14A **Jones Ranch, D** 77.63 328 ⇑P P 15 18 05.0 -0.4
baz=78
M12A **Wells** 77.63 327 ⇑P P 15 18 05.2 -0.2
baz=78,SNR=9.8
IMW **Indian Meadow** 77.64 331 *e*P P 15 18 05.3 -0.1
comp=Z,24nm,1.3s,mb5.0
S05C **Merced** 77.64 321 ⇑P P 15 18 05.6 0.0
baz=78
L13A **Double Diamond** 77.65 328 ⇓P P 15 18 05.7 +0.1
baz=78,SNR=7.7
ULM **Lac du Bonnet** 77.66 343 P P 15 18 04.2 -1.1
comp=Z,8.2nm,0.6s,mb4.8,baz=170,slow=5.5,SNR=5.3
RLMT **Red Lodge** 77.88 332 *e*P P 15 18 06.4 -0.3
comp=Z,18nm,1.1s,mb4.9
RLMT **Red Lodge** 77.88 332 ⇑P P 15 18 06.8 +0.1
baz=78,SNR=7.8
LAO **LASA Array** 77.93 335 *e*P P 15 18 06.4 -0.5
comp=Z,28nm,1.1s,mb5.1
N10A **Dunphy** 77.93 325 ⇑P P 15 18 06.8 -0.2
baz=78
J15A **Blackfoot** 77.93 329 ⇑P P 15 18 07.3 +0.3
baz=78,SNR=15
R06C **Celeville** 77.95 322 ⇑P P 15 18 07.9 +0.7
baz=78,SNR=6.2
P08A **Dixie Valley** 78.02 324 ⇓P P 15 18 07.9 +0.2
baz=78
YFT **Old Faithful** 78.03 331 *e*P P 15 18 08.3 +0.7
M11A **Holland Ranch,** 78.08 326 ⇓P P 15 18 08.0 +0.1
baz=78,SNR=12
K13A **Stover Farm, H** 78.14 328 ⇑P P 15 18 08.3 +0.1
baz=78
CMB **Columbia Colle** 78.15 321 ⇑P P 15 18 08.2 -0.1
baz=78
G18A **Lazy EL Ranch,** 78.16 332 ⇑P P 15 18 08.0 -0.2
baz=78,SNR=6.2
L12A **House Creek Ra** 78.22 327 ⇓P P 15 18 08.7 +0.1
baz=78
YMR **Madison River** 78.26 331 *e*P P 15 18 09.8 +1.0
comp=Z,62nm,1.4s,mb5.3
J14A **Carey** 78.38 329 ⇓P P 15 18 10.0 +0.5
baz=79,SNR=14
H16A **Russell Place,** 78.41 331 ⇑P P 15 18 10.1 +0.5
baz=79,SNR=14
I15A **Monteview** 78.42 330 ⇑P P 15 18 10.3 +0.6
baz=79,SNR=6.5
M10A **I.L. Ranch, Tu** 78.53 326 ⇓P P 15 18 10.4 0.0
baz=79
K12A **Draper Farm, C** 78.53 328 ⇑P P 15 18 10.7 +0.3
baz=79,SNR=22
N09A **Rock Creek Ran** 78.56 325 ⇑P P 15 18 11.1 +0.5
baz=79
GCMT **Greycliff** 78.58 333 *e*P P 15 18 10.4 -0.2
QLMT **Earthquake Lak** 78.59 331 *e*P P 15 18 11.6 +1.0
L11A **Cat Creek Ranc** 78.61 327 ⇓P P 15 18 11.0 +0.2
baz=79,SNR=18
R04C **Big Horse Ranc** 78.61 321 ⇓P P 15 18 11.1 +0.1
baz=79
WCN **Washoe City** 78.67 322 ⇑P P 15 18 11.7 +0.5
baz=79
DGMT **Dagmar** 78.67 337 *e*P P 15 18 11.0 0.0
comp=Z,39nm,1.0s,mb5.3
DGMT **Dagmar** 78.67 337 ⇑P P 15 18 10.9 -0.1
baz=79,SNR=6.1
F18A **Big Timber** 78.70 333 ⇓P P 15 18 11.1 -0.1
baz=79,SNR=11
TOA0 **Torodi Ar. Sit** 78.71 70 *e*P P 15 18 12.2 +0.3
TORD **Torodi Ar. Bea** 78.71 70 P P 15 18 12.1 +0.1
comp=Z,10nm,0.5s,mb5.0,baz=258,slow=5.2,SNR=160
TORD pP pP 15 18 32.6 +4.0
comp=Z,12nm,0.6s,baz=253,slow=5.2,SNR=10
TORD LR LR 15 53 11.0
comp=Z,71nm,18.1s,MS4.0,baz=285,slow=36
PAHR **Pah Rah Range** 78.74 323 *e*P P 15 18 11.9 +0.2
comp=Z,38nm,1.0s,mb5.3
J13A **Cove Ranch, Pi** 78.75 328 ⇓P P 15 18 11.8 +0.2
baz=79,SNR=6.6
O07A **Toulon** 78.79 324 ⇓P P 15 18 11.6 -0.2
baz=79,SNR=9.2
I14A **Mackay** 78.81 329 ⇑P P 15 18 12.3 +0.5
baz=79,SNR=18
LAVA **Lava Cap Winer** 78.84 322 ⇑P P 15 18 12.0 -0.2
baz=79
L10A **Juniper Basin** 78.90 326 ⇑P P 15 18 12.6 +0.2
baz=79,SNR=32
M09A **Marrel Ranch,** 78.93 325 ⇓P P 15 18 12.6 0.0
baz=79
BDM **Black Diamond** 78.95 320 ⇑P P 15 18 13.7 +0.9
baz=79
H15A **Lima** 78.97 330 ⇓P P 15 18 13.3 +0.6
baz=79
HLID **Hailey** 78.99 328 *e*P P 15 18 13.4 +0.5
comp=Z,21nm,0.8s,mb5.1
HLID **Hailey** 78.99 328 ⇓P P 15 18 13.4 +0.5
baz=79,SNR=37
G16A **Moss Hill, Enn** 79.06 331 ⇓P P 15 18 13.2 0.0
baz=79
J12A **Stokes Ranch,** 79.09 328 ⇑P P 15 18 13.7 +0.3
baz=79,SNR=24
F17A **Fitzpatrick Pl** 79.10 332 ⇓P P 15 18 13.6 +0.2
baz=79,SNR=12
I13A **Wildhorse Cree** 79.11 329 ⇓P P 15 18 14.1 +0.6
baz=79,SNR=33
K11A **Parker Ranch,** 79.19 327 ⇑P P 15 18 14.0 0.0
baz=80,SNR=14
MCMT **McKenzie Canyo** 79.22 330 *e*P P 15 18 14.8 +0.7
N07B **Gerlach** 79.27 324 ⇑P P 15 18 14.4 -0.1
baz=80
H14A **Leadore** 79.30 330 ⇑P P 15 18 15.1 +0.5
baz=80,SNR=15
E18A **Harlowton** 79.31 333 ⇑P P 15 18 14.3 -0.2
baz=80,SNR=6.9
O06A **Flanigan** 79.31 323 ⇓P P 15 18 14.3 -0.4
baz=80
G15A **Dillon** 79.32 331 ⇓P P 15 18 14.6 0.0
baz=80,SNR=8.0
BEKR **Beckwourth** 79.39 323 ⇓P P 15 18 15.3 +0.1
baz=80,SNR=15
F16A **Kennard Place,** 79.42 331 ⇓P P 15 18 15.0 -0.2
baz=80
M08A **Happy Creek Ra** 79.43 325 ⇑P P 15 18 15.2 -0.2
baz=80,SNR=10
L09A **Wilkinson Ranc** 79.47 326 ⇑P P 15 18 15.3 -0.2
baz=80,SNR=5.9
I12A **Atlanta** 79.51 328 ⇓P P 15 18 16.0 +0.3
baz=80,SNR=16
DLMT **Dillon** 79.52 331 *e*P P 15 18 15.4 -0.3
comp=Z,22nm,1.3s,mb4.9
CVS **Carmenet Viney** 79.55 320 ⇑P P 15 18 15.8 -0.2
baz=80
MFID **Camas Ranch** 79.56 328 ⇑P P 15 18 15.9 -0.1
baz=80,SNR=7.7
K10A **MacKenzie Ranc** 79.61 327 ⇓P P 15 18 16.1 -0.2
baz=80,SNR=8.8
E17A **Martinsdale** 79.62 332 ⇑P P 15 18 16.1 -0.2
baz=80,SNR=11
OHCM **Ronout** 79.66 322 *e*P P 15 18 16.3 -0.3
N06A **Buffalo Meadow** 79.72 324 ⇓P P 15 18 16.8 -0.1
baz=80,SNR=15
NSHM **Saint Helena R** 79.76 320 *e*P P 15 18 17.1 -0.1
D18A **Linhart Farms,** 79.76 333 ⇓P P 15 18 16.6 -0.4
baz=80,SNR=6.8
O05C **Quincy** 79.77 322 ⇓P P 15 18 17.2 0.0
baz=80
TSUM **Tsumeb** 79.78 106 *e*P P 15 18 19.2 +1.3
comp=Z,14nm,1.2s,mb4.8
ORV **Oroville** 79.82 322 ⇓P P 15 18 17.4 -0.1
baz=80,SNR=18
F15A **Butte** 79.84 331 ⇓P P 15 18 17.6 +0.1
baz=80,SNR=12
MNRC **McLaughlin Nat** 79.90 321 ⇓P P 15 18 18.1 +0.1
baz=80
H12A **Diamond D Ranc** 79.94 329 ⇓P P 15 18 18.1 +0.1
baz=80,SNR=11
L08A **Fields** 79.94 325 ⇓P P 15 18 17.7 -0.4
baz=80,SNR=10
K09A **Rome** 79.99 326 ⇑P P 15 18 18.1 -0.3
baz=80,SNR=11
I11A **Placerville** 80.00 328 ⇑P P 15 18 17.8 -0.5
baz=80
E16A **East Helena** 80.03 332 ⇑P P 15 18 18.3 -0.1
baz=80,SNR=5.2
G13A **Cobalt** 80.06 330 ⇓P P 15 18 19.1 +0.5
baz=80,SNR=50
D17A **Six Diamond Ra** 80.09 333 ⇓P P 15 18 18.6 -0.1
baz=80,SNR=14
O04C **Chester** 80.11 323 ⇑P P 15 18 18.8 -0.2
baz=80
F14A **Wisdom** 80.22 331 ⇓P P 15 18 19.9 +0.4
baz=80,SNR=9.3
HRY **Holter Researc** 80.23 332 *e*P P 15 18 19.6 +0.1
WVOR **Wild Horse Val** 80.27 325 *e*P P 15 18 19.1 -0.7
comp=Z,4.7nm,1.1s,mb4.3
WVOR **Wild Horse Val** 80.27 325 *e*P P 15 18 19.1 -0.7
WVOR pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
HOPS **Hopland** 80.34 320 ⇑P P 15 18 20.2 -0.1
baz=81
L07A **Adell** 80.34 325 ⇑P P 15 18 20.7 +0.5
baz=81,SNR=14
E15A **Deer Lodge** 80.36 331 ⇑P P 15 18 20.2 0.0
baz=81,SNR=7.1
D16A **Dana Ranch, Ca** 80.36 332 ⇓P P 15 18 20.4 +0.2
baz=81,SNR=12
K08A **Mann Creek Ran** 80.40 326 ⇓P P 15 18 20.0 -0.5
baz=81
EGMT **Eagleton** 80.41 334 *e*P P 15 18 19.7 -0.8
comp=Z,16nm,1.0s,mb4.9
EGMT **Eagleton** 80.41 334 ⇑P P 15 18 19.6 -0.9
baz=81,SNR=6.5
J09A **Fry Pan Ranch,** 80.47 326 ⇓P P 15 18 20.5 -0.4
baz=81
I10A **Payette** 80.54 327 ⇓P P 15 18 21.0 -0.3
baz=81
GASB **Alder Springs** 80.58 321 ⇓P P 15 18 22.1 +0.5
baz=81,SNR=9.9
F13A **Darby** 80.63 330 ⇑P P 15 18 21.8 +0.1
baz=81,SNR=28
K07A **Rock Creek Ran** 80.77 325 ⇓P P 15 18 22.6 +0.1
baz=81,SNR=16
MOD **Modoc** 80.78 324 *e*P P 15 18 22.4 -0.1
comp=Z,18nm,1.1s,mb4.9
MOD **Modoc** 80.78 324 ⇓P P 15 18 22.3 -0.3
baz=81,SNR=9.7
D15A **Lincoln** 80.79 332 ⇑P P 15 18 22.4 -0.1
baz=81
J08A **Circle Bar Ran** 80.85 326 ⇓P P 15 18 22.8 -0.1
baz=81,SNR=5.9
H10A **Noah's Angus R** 80.88 328 ⇑P P 15 18 22.5 -0.5
baz=81,SNR=8.0
I09A **Lost Marbles R** 80.92 327 ⇑P P 15 18 22.8 -0.5
baz=81
F12A **Elk City** 81.03 329 ⇑P P 15 18 23.5 -0.3
baz=81,SNR=6.6
C16A **Fuhringer Ranc** 81.05 333 ⇑P P 15 18 23.4 -0.4
baz=81,SNR=11
E13A **Victor** 81.06 330 ⇓P P 15 18 24.0 0.0
baz=81,SNR=7.7
WDC **Whiskeytown Da** 81.10 322 *e*P P 15 18 22.6 -1.7
comp=Z,7.1nm,0.8s,mb4.7
WDC **Whiskeytown Da** 81.10 322 *e*P P 15 18 22.6 -1.7
WDC pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
G11A **Walters Elk Ra** 81.25 329 ⇓P P 15 18 24.8 -0.2
baz=82,SNR=26
D14A **Greenough** 81.25 331 ⇓P P 15 18 24.8 -0.2
baz=82,SNR=5.7
J07A **Hines** 81.29 326 ⇑P P 15 18 25.2 0.0
baz=82,SNR=7.5
I08A **Drewsey** 81.29 326 ⇓P P 15 18 25.2 0.0
baz=82
M03C **McCloud** 81.34 323 ⇓P P 15 18 24.7 -0.8

baz=82
BMO Blue Mountains 81.34 328 *e*P P **15 18 24.9 -0.6**
comp=Z,19nm,1.3s,mb4.9
BMO Blue Mountains 81.34 328 *e*P P **15 18 24.9 -0.6**
BMO pmax pmax
comp=Z,19nm,1.3s,mb4.9
H09A Durkee 81.38 327 ⇓P P **15 18 25.3 -0.4**
baz=82
C15A Salmond Ranch, 81.39 332 ⇓P P **15 18 25.7 0.0**
baz=82,SNR=25
B16A M & M Farms, S 81.51 333 ⇓P P **15 18 25.4 -0.9**
baz=82
O01C Eel River Cons 81.54 321 ⇓P P **15 18 27.0 +0.3**
baz=82
F11A Grangeville 81.55 329 ⇓P P **15 18 25.9 -0.7**
baz=82,SNR=6.0
G10A Bishop Farm, J 81.57 328 ⇑P P **15 18 26.7 0.0**
baz=82,SNR=12
J06A Christmas Vall 81.64 325 ⇑P P **15 18 26.8 -0.3**
baz=82,SNR=24
K05A Summer Lake 81.66 324 ⇓P P **15 18 27.6 +0.3**
baz=82,SNR=12
E12A Beaver Dam Sad 81.67 330 ⇑P P **15 18 26.7 -0.5**
baz=82,SNR=7.0
D13A Huson 81.68 331 ⇓P P **15 18 27.1 -0.2**
baz=82,SNR=16
N02C Big Bar 81.69 322 ⇓P P **15 18 27.3 -0.1**
baz=82
H08A Prairie City 81.78 327 ⇓P P **15 18 27.7 -0.1**
baz=82
B15A Bradely Ranch, 81.79 333 ⇓P P **15 18 26.9 -0.9**
baz=82,SNR=18
G09A Cove 81.88 328 ⇑P P **15 18 28.2 -0.1**
baz=82,SNR=24
I07A Izee 81.89 326 ⇓P P **15 18 28.4 0.0**
baz=82,SNR=12
A16A West Butte Ran 81.89 333 ⇑P P **15 18 27.9 -0.4**
baz=82,SNR=31
E11A Bogner Ranch, 81.92 329 ⇓P P **15 18 27.8 -0.7**
baz=82,SNR=5.6
MAW Mawson 81.98 163 P P **15 18 28.6 0.0**
comp=Z,11nm,0.8s,mb4.8,baz=216,slow=6.2,SNR=24
MAW pP pP 15 18 48.7 +3.3
comp=Z,7.8nm,0.8s,baz=216,slow=9.4,SNR=3.9
MAW LR LR 15 54 13.2
comp=Z,45nm,19.8s,MS3.8,baz=242,slow=35
MAW Mawson 81.98 163 *e*P P **15 18 28.4 -0.2**
comp=Z,42nm,1.3s,mb5.2
MAW Mawson 81.98 163 *e*P P **15 18 28.4 -0.3**
MAW pmax pmax
comp=Z,42nm,1.3s
D12A Red Ives Fores 82.05 330 ⇑P P **15 18 28.8 -0.3**
baz=82
JCC Jacoby Creek 82.10 321 ⇑P P **15 18 29.4 -0.2**
baz=82
F10A Beach Ranch, E 82.12 329 ⇑P P **15 18 29.1 -0.5**
baz=82
B14A Marquette Ranc 82.13 332 ⇑P P **15 18 29.1 -0.4**
baz=82,SNR=6.0
I06A Prineville 82.15 326 ⇓P P **15 18 30.1 +0.3**
baz=82,SNR=17
C13A Hot Springs 82.17 331 ⇓P P **15 18 29.7 -0.1**
baz=82,SNR=9.5
F09A S2 Ranch, Elgi 82.26 328 ⇑P P **15 18 29.7 -0.6**
baz=82
H07A Lands Inn, Kim 82.28 326 ⇓P P **15 18 30.2 -0.3**
baz=83
A15A Johnson Ranch, 82.38 333 ⇓P P **15 18 29.6 -1.2**
baz=83,SNR=6.3
E10A Myers Farm, Un 82.44 329 ⇑P P **15 18 30.8 -0.4**
baz=83,SNR=8.5
G08A Pilot Rock 82.47 327 ⇓P P **15 18 30.9 -0.5**
baz=83,SNR=5.3
B13A Whitefish 82.65 332 ⇑P P **15 18 31.9 -0.4**
baz=83,SNR=6.3
A14A Double T Ranch 82.66 333 ⇑P P **15 18 31.5 -0.8**
baz=83,SNR=9.0
BOSA Boshof 82.67 118 P P **15 18 33.3 +0.3**
comp=Z,6.0nm,0.5s,mb4.9,baz=246,slow=4.4,SNR=25
BOSA pP pP 15 18 53.9 +4.1
comp=Z,3.1nm,0.5s,baz=277,slow=6.3,SNR=3.3
BOSA LR LR 15 52 37.9
comp=Z,52nm,21.2s,MS3.9,baz=212,slow=34
BOSA Boshof 82.67 118 *e*P P **15 18 33.4 +0.4**
comp=Z,50nm,1.6s,mb5.3
BOSA Boshof 82.67 118 *e*P P **15 18 33.4 +0.4**
BOSA pmax pmax
comp=Z,51nm,1.6s,mb5.3
L02A Cave Junction 82.75 323 ⇓P P **15 18 32.6 -0.4**
baz=83
H06A Lindquist Farm 82.77 326 ⇑P P **15 18 33.1 +0.1**
baz=83,SNR=11
G07A Ruggs Ranch, H 82.81 327 ⇑P P **15 18 33.3 +0.1**
baz=83,SNR=10
M01C Crescent City 82.83 322 ⇑P P **15 18 32.4 -1.0**
baz=83
D10A Wagner Farm, O 82.94 329 ⇑P P **15 18 32.7 -1.1**
baz=83,SNR=8.1
WALA Waterton Lakes 82.94 332 *e*P P **15 18 33.2 -0.5**
comp=Z,17nm,0.9s,mb5.1
C11A Tepee Creek (N 83.05 330 ⇑P P **15 18 33.7 -0.6**
baz=83,SNR=12
A13A Flathead Natio 83.06 332 ⇓P P **15 18 34.4 +0.1**
baz=83
K02A Glendale 83.09 323 ⇓P P **15 18 34.5 -0.2**
baz=83
H05A Madras 83.17 326 ⇓P P **15 18 34.9 -0.1**
baz=83
B12A Libby 83.22 331 ⇑P P **15 18 35.0 -0.2**
baz=84
G06A Carlson Farm, 83.27 326 ⇑P P **15 18 35.5 -0.1**
baz=84,SNR=6.0
D09A Jones Farm, Ri 83.43 329 ⇑P P **15 18 35.7 -0.6**
baz=84
C10A Spilker Farm, 83.51 330 ⇑P P **15 18 36.1 -0.6**
baz=84
HAWA Hanford 83.54 328 *e*P P **15 18 36.3 -0.6**
comp=Z,24nm,1.4s,mb5.1
J02A Umpqua 83.54 324 ⇑P P **15 18 36.8 -0.2**
baz=84,SNR=6.1
RSW Rattlesnake Hi 83.57 328 *e*P P **15 18 36.8 -0.3**
A12A Yaak River Ran 83.59 331 ⇓P P **15 18 36.7 -0.4**
baz=84,SNR=5.0
G05A Wamic 83.62 326 ⇑P P **15 18 37.3 -0.1**
baz=84
H04A Detroit Lake 83.69 325 ⇑P P **15 18 37.1 -0.6**
baz=84
D08A Wollman Farm, 83.71 328 ⇓P P **15 18 37.4 -0.4**
baz=84
I03A Eugene 83.78 324 ⇑P P **15 18 37.9 -0.4**
baz=84,SNR=5.2
OD2 Odessa Site #2 83.85 329 *e*P P **15 18 38.0 -0.5**
A11A Hall Mountain, 83.92 331 ⇑P P **15 18 38.1 -0.7**
baz=84,SNR=9.8
C09A Chrisman Ranch 83.94 329 ⇓P P **15 18 38.3 -0.6**
baz=84,SNR=6.5
I02A Mapleton 84.10 324 ⇑P P **15 18 39.5 -0.4**
baz=84
F05A White Salmon 84.14 326 ⇑P P **15 18 39.7 -0.3**
baz=84
G04A Mulino 84.19 325 ⇓P P **15 18 39.9 -0.4**
baz=84
H03A Soap Creek Ran 84.26 325 ⇑P P **15 18 40.4 -0.3**
baz=84
C08A Higginbotham F 84.29 329 ⇑P P **15 18 40.1 -0.6**
baz=85
D07A Quincy 84.32 328 ⇓P P **15 18 40.0 -0.8**
baz=85
B09A Rice 84.34 330 ⇑P P **15 18 39.9 -1.0**
baz=85,SNR=5.6
E06A Yakima 84.35 327 ⇓P P **15 18 40.1 -1.0**
baz=85
A10A Northport 84.47 330 ⇑P P **15 18 40.6 -1.0**
baz=85
F04A Amboy 84.66 326 ⇓P P **15 18 41.6 -1.0**
baz=85,SNR=5.2
G03A Yamhill 84.69 325 ⇑P P **15 18 42.6 -0.2**
baz=85
C07A Waterville 84.71 328 ⇓P P **15 18 42.0 -0.8**
baz=85,SNR=5.8
ETW Entiat 84.78 328 *e*P P **15 18 42.4 -0.7**
A08A Turner Farm, O 85.23 330 ⇓P P **15 18 44.7 -0.7**
baz=86,SNR=11
B07A Winthrop 85.28 329 ⇑P P **15 18 44.5 -1.2**
baz=86,SNR=11
A07A Ashnola River, 85.82 329 ⇑P P **15 18 47.8 -0.5**
baz=86,SNR=13
EDM Edmonton 85.91 335 *e*P P **15 18 46.9 -1.8**

B06A Marblemount 85.97 328 ⇑P P **15 18 48.2 -0.9**
baz=86
B05A Bryant 86.09 328 ⇓P P **15 18 48.7 -1.0**
baz=86
C04A Brinnon 86.15 327 ⇑P P **15 18 49.2 -0.8**
baz=86
A05A Maple Falls 86.59 328 ⇑P P **15 18 50.9 -1.3**
baz=87
A04A Legoe Bay, Lum 86.70 328 ⇓P P **15 18 52.0 -0.7**
baz=87
YKA Yellowknife Ar 93.48 341 P P **15 19 22.8 -1.3**
comp=Z,5.4nm,0.7s,mb5.1,baz=140,slow=4.5,SNR=13
YKA pP pP 15 19 43.5 +2.4
comp=Z,1.6nm,0.6s,baz=137,slow=4.5,SNR=3.0
YKA LR LR 16 01 33.8
comp=Z,37nm,18.1s,MS3.9,baz=90,slow=36
YKA Yellowknife Ar 93.48 341 P P **15 19 22.8 -1.3**
YKA pP pP 15 19 43.5 +2.4
YKA LR LR 16 01 33.8
KEST Kesra 95.27 53 LR LR 16 00 37.4
comp=Z,34nm,19.3s,MS3.8,baz=190,slow=34
MBAR Mbarara 99.06 95 ⇑*i*P P **15 19 49.7 -1.0**
BRTR Keskin Array B 114.73 56 PKP PKiKP 15 24 48.3 -1.0
comp=Z,0.7nm,0.6s,baz=240,slow=1.8,SNR=3.4
KIV Kislovodsk 121.99 52 *i* PKIKP PKPdf 15 25 01.9 -1.3
ASAR Alice Springs 127.37 207 PKP PKPdf 15 25 13.0 -1.2
comp=Z,3.3nm,0.7s,baz=133,slow=1.6,SNR=43
ASAR pPKP pPKPdf 15 25 34.3 +2.5
comp=Z,2.6nm,0.6s,baz=129,slow=1.6,SNR=9.3
WRA Warramunga Arr 130.45 210 PKP PKPdf 15 25 19.2 -0.9
comp=Z,2.4nm,0.4s,baz=156,slow=1.8,SNR=62
WRA pPKP pPKPdf 15 25 40.8 +3.0
comp=Z,2.5nm,0.5s,baz=153,slow=1.6,SNR=10
WRAB Tennant Creek 130.45 210 *i* PKIKP PKPdf 15 25 18.2 -2.0
ARU Arti 130.58 35 *i* PKIKP PKPdf 15 25 19.5 +0.3
ARU 15 27 33.8
PMG Port Moresby 131.13 231 *i* PKIKP PKPdf 15 25 17.6 -4.0
TIXI Tiksi 131.31 352 *e*PKPdf PKPdf 15 25 18.7 -1.5
TIXI Tiksi 131.31 352 *i* PKIKP PKPdf 15 25 17.5 -2.7
TIXI pmax pmax
comp=Z,4.0nm,1.0s
PETK Petropavlovsk- 134.33 322 PKP PKPdf 15 25 26.2 -0.1
comp=Z,0.8nm,0.5s,baz=69,slow=3.1,SNR=10
YAK Yakutsk 139.94 346 ⇑*i*PKIKP PKPdf 15 25 35.7 -0.8
NVS Novosibirsk 143.23 26 *e*PKIKP PKPdf 15 25 41.4 -1.2
NVS pmax pmax
comp=Z,22nm,1.6s
NVS pmax pmax
comp=E,5.0nm,1.3s
KURK Kurchatov 143.77 35 *e*PKPdf PKPdf 15 25 41.7 -2.0
KURK Kurchatov 143.77 35 ⇑*i*PKIKP PKPdf 15 25 42.0 -1.7
EKS2 Erkin-Say 144.52 50 *e*PKPdf PKPdf 15 25 44.6 -0.7
EKS2 Erkin-Say 144.52 50 P PKPdf 15 25 45.1 -0.2
SNR=13
ZAA0 Zalesovo Array 144.52 26 *e*PKPdf PKPdf 15 25 43.6 -1.3
ZALV Zalesovo Beam 144.52 26 PKP PKPdf 15 25 43.7 -1.2
comp=E,30nm,0.8s,baz=316,slow=4.1,SNR=124
ZALV pPKP pPKPdf 15 26 04.0 +1.6
comp=E,13nm,0.8s,baz=295,slow=4.2,SNR=5.0
ZALV Zalesovo Beam 144.52 26 PKP PKPdf 15 25 43.7 -1.2
ZALV pPKP pPKPdf 15 26 04.0 +1.6
AML Almayashu 144.63 50 *e*PKP PKPdf 15 25 45.5 0.0
AML Almayashu 144.63 50 P PKPdf 15 25 45.7 +0.2
SNR=22
USP Ospenovka 144.80 48 P PKPdf 15 25 45.4 -0.3
SNR=13
AAK Ala-Archa 145.02 49 P PKPbc 15 25 47.1 +1.5
SNR=31
FRU Bishkek 145.04 49 ⇓*i*PKIKP PKPdf 15 25 46.0 -0.1
FRU pmax pmax
comp=Z,80nm,1.9s
CHMS Chumysh 145.07 49 P PKPbc 15 25 46.7 +0.9
SNR=8.6
KBK Karagabulak 145.33 49 P PKPbc 15 25 47.2 +0.7
SNR=23
YSS Yuzh-Sakhalins 145.65 320 ⇓*e*PKP2 PKPab 15 25 46.0 -1.8
YSS pmax pmax
comp=Z,60nm,1.0s
TKM2 Tokmak 2 145.68 48 *e*PKPbc PKPbc 15 25 48.1 +0.5
TKM2 Tokmak 2 145.68 48 P PKPab 15 25 48.4 +0.4
SNR=18
BOD Bodaibo 146.24 357 *e*PKIKP PKPdf 15 25 46.7 -1.0
BOD pmax pmax
comp=Z,14nm,1.5s
BOD pmax pmax
comp=Z,24nm,1.4s
ULHL Ulahol 146.37 49 P PKPab 15 25 49.9 -0.9
SNR=30
MK31 Makanchi Array 148.02 38 *e*PKPdf PKPdf 15 25 51.0 0.0
MK31 *e*PKPbc PKPbc 15 25 54.4 +0.2
MKAR Makanchi Array 148.02 38 PKPbc PKPbc 15 25 54.5 +0.2
comp=Z,21nm,0.9s,baz=339,slow=2.5,SNR=64
MKAR pPKPbc pPKPab 15 26 15.5 +1.3
comp=Z,16nm,0.8s,baz=322,slow=2.8,SNR=12
MKAR Makanchi Array 148.02 38 PKPbc PKPbc 15 25 54.5 +0.2
MKAR pPKPbc pPKPab 15 26 15.5 +1.3
MKAR Makanchi Array 148.02 38 *i* PKP2 PKPbc 15 25 54.5 +0.3
MKAR pmax pmax
comp=Z,21nm,0.9s
HABR Khabarovsk 148.94 328 ⇓*e*PKP2 PKPbc 15 25 55.2 -1.3
HABR *e* 15 29 21.6
HABR *e* 15 32 43.9
HYB Hyderabad 149.40 96 *e*P PKPbc 15 25 59.0 +0.4
HYB *e*P 15 26 19.0
HYB Hyderabad 149.40 96 *i* PKP PKPbc 15 25 59.0 +0.4
HYB *e* 15 26 19.5
KAPI Kappang 149.69 198 *e*PKPbc PKPbc 15 25 57.8 -1.7
KLR Kul'dur 149.91 332 *e*PKIKP PKPdf 15 25 52.2 -1.8
TLY Talaya 151.98 9 *e*PKIKP PKPbc 15 26 03.8 +0.1
TLY *e* 15 26 10.2
TLY pmax pmax
comp=Z,7.0nm,0.7s
WMQ Urumqi 152.85 38 *e*PKP PKPdf 15 25 57.0 -1.7
WMQ PP PP 15 29 53.0 +2.9
WMQ SKS SKSdf 15 32 55.0 -5.7
WMQ SKKS SKKSac 15 36 34.0 -1.3
WMQ SS SS 15 49 17.0 -0.2
WMQ PP PP
comp=Z,87nm,10.0s
WMQ LR LR
comp=N,87nm,24.0s,MS4.6
WMQ LR LR
comp=E,59nm,24.0s,MS4.6
WMQ LR LR
comp=Z,57nm,23.0s,MS4.3
ZAK Zakamensk 153.18 10 *e*PKIKP PKPdf 15 25 56.5 -2.4
ZAK pmax pmax
comp=Z,4.0nm,1.2s
MJAR Matsushiro Arr 153.21 304 PKPbc PKPbc 15 26 05.7 -1.2
comp=Z,3.3nm,0.8s,baz=99,slow=0.7,SNR=11
MJAR PKPab PKPab 15 26 17.9 -0.9
comp=Z,4.0nm,0.9s,baz=105,slow=2.0,SNR=7.0
MAJO Matsushiro 153.21 304 *e*PKPbc PKPbc 15 26 06.0 -0.9
MAT Matsushiro 153.21 304 PKP PKPbc 15 26 05.8 -1.1
MDJ Mudanjiang 154.32 327 PKP PKPdf 15 25 58.7 -2.1
MDJ PP PP
comp=Z,51nm,4.7s
SONM Songino Array 156.10 7 PKP PKPdf 15 26 02.9 -0.2
comp=Z,1.3nm,0.9s,baz=47,slow=1.1,SNR=11
SONM PKPab PKPab 15 26 30.5 -0.2
comp=Z,2.3nm,0.9s,baz=316,slow=3.8,SNR=8.1
SONM pPKPab pPKPab 15 26 51.9 +4.1
comp=Z,2.6nm,0.8s,baz=326,slow=4.0,SNR=5.7
CN2 Changchun 156.87 332 *e*PKP PKPdf 15 26 07.7 +3.5
KSRS Korea Array 160.06 316 PKP PKPdf 15 26 07.5 -0.7
comp=Z,2.9nm,1.0s,baz=71,slow=0.6,SNR=10
KSRS pPKP pPKPdf 15 26 28.0 +2.1
comp=Z,1.1nm,0.8s,baz=158,slow=1.3,SNR=2.6
KSRS PKPab PKPab 15 26 47.9 -0.3
comp=Z,4.1nm,0.8s,baz=56,slow=4.5,SNR=11
KSRS pPKPab pPKPab 15 27 08.2 +2.9
comp=Z,1.6nm,0.9s,baz=53,slow=3.3,SNR=2.1
GTA Gaotai 162.26 28 *e*PKP PKPdf 15 26 11.2 +0.7
GTA APKP 15 26 33.1
GTA PKP2 PKPab 15 27 01.7 +4.0
HHC Hu-ho-hao-te 163.29 357 *e*PKP PKPdf 15 26 06.2 -5.3
HHC APKP 15 26 29.9
HHC XPKP 15 26 39.4
HHC PP PP
comp=Z,126nm,8.3s
HHC LR LR
comp=N,155nm,23.8s
HHC LR LR
comp=E,233nm,26.2s
BJI Beijing 163.43 345 PKP PKPdf 15 26 09.9 -1.7

LZH Lanzhou 166.74 24 *e*PKP PKPdf 15 26 13.8 -0.8
LZH APKP 15 26 35.0
LZH XPKP 15 26 42.9
LZH PP PP 15 31 08.0 +3.3
LZH SKKS SKKSac 15 37 46.0 -1.7
LZH *e*SS SS 15 51 42.7 -0.1
LZH PP PP
comp=Z,121nm,8.5s
LZH LR LR
comp=N,163nm,18.2s
LZH LR LR
comp=Z,231nm,20.5s
CMAR Chiang Mai Arr 167.81 115 PKP PKPdf 15 26 15.7 -0.2
comp=Z,0.8nm,0.8s,baz=301,slow=2.1,SNR=6.5
CMAR pPKP pPKPdf 15 26 36.6 +3.1
comp=Z,0.7nm,0.9s,baz=326,slow=1.3,SNR=3.0
CMAR PKPab PKPab 15 27 22.2 -0.7
comp=Z,0.2nm,0.4s,baz=234,slow=4.7,SNR=4.2
CMAR pPKPab pPKPab 15 27 42.5 +2.6
comp=Z,1.2nm,1.1s,baz=217,slow=5.6,SNR=3.0
CMAR Chiang Mai Arr 167.81 115 PKIKP PKPdf 15 26 15.7 -0.1
CMAR 15 27 22.2
NJ2 Nanjing 169.22 319 *e*PKP PKPdf 15 26 11.2 -5.2
CD2 Chengdu 170.94 40 *e*PKP PKPdf 15 26 16.0 -1.4
CD2 APKP 15 26 35.8
CD2 XPKP 15 26 44.2
CD2 PKP2 PKPab 15 27 37.5 +1.2
CD2 PP PP 15 31 29.2 +2.7
CD2 SKS SKSdf 15 33 14.3 -1.6
CD2 SKKS SKKSac 15 38 10.5 +1.8
CD2 SS SS 15 52 26.6 +0.9
CD2 PP PP
comp=Z,150nm,10.8s
CD2 LR LR
comp=N,310nm,13.2s
CD2 LR LR
comp=E,330nm,12.0s
CD2 LR LR
comp=Z,250nm,14.4s
KMI Kunming 172.83 80 PKP PKPdf 15 26 16.7 -1.8
KMI APKP 15 26 35.3
KMI XPKP 15 26 43.5
KMI PKP2 PKPab 15 27 45.2 +0.1
KMI PP PP 15 31 37.6 +0.5
KMI SS SS 15 52 41.9 -4.6
KMI PP PP
comp=Z,281nm,4.9s
KMI Kunming 172.83 80 PKP PKPdf 15 26 16.7 -1.8
KMI pPKP pPKPdf 15 26 35.3 -0.8
KMI sPKP 15 26 43.5
GYA Guiyang 175.78 56 PKP PKPdf 15 26 17.6 -1.8
GYA APKP 15 26 37.8
GYA XPKP 15 26 46.2
GYA PKP2 PKPab 15 27 57.8 -0.3
GYA PKS 15 29 48.6
GYA PP PP 15 31 51.4 +0.6
GYA SKKS SKKSac 15 38 29.0 -3.2
GYA SS SS 15 53 11.2 -2.5
GYA PP PP
comp=Z,120nm,7.9s
GYA LR LR
comp=N,130nm,25.6s
GYA LR LR
comp=E,140nm,24.7s
GYA LR LR
comp=Z,120nm,25.4s

IDC 07 15:06:55.1±2.8, 645N×12395E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=308.7km s-min=27.5km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.15**	**159**	P P	15 12 48.5	-0.7
	0.2nm,0.7s,baz=336,slow=9.9,SNR=2.8					
ASAR	**Alice Springs**	**31.47**	**162**	P P	15 13 19.4	+0.9
	0.2nm,0.5s,baz=343,slow=7.2,SNR=7.5					
MKAR	**Makanchi Array**	**53.76**	**326**	P P	15 16 19.2	0.0
	0.3nm,0.7s,baz=121,slow=8.4,SNR=4.4					

*IDC **07** 15:21:45.0±1.1, 784S×15635E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/16, mbtmp3.9/7, ML4.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/18, Error ellipse: s-maj=28.0km s-min=25.3km az=52.0*
*ISCJB **07** 15:21:46.0±6.6, 79S±0.1×15636E±007, h16km±48km, mb3.8/8, Error ellipse: s-maj=23.6km s-min=11.4km az=3.7*
*NEIC **07** 15:21:46.6±0.5, 784S×15635E, h10km, mb4.3/2, Error ellipse: s-maj=12.8km s-min=11.1km az=169.0*

ISC 07 15:21:46.9±6.8, 79S±01×15636E±007, h12km±42km, n15, σ0§59/16, mb3.8/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
HNR	**Honiara**	**3.88**	**114**	Pn **Pn**	**15 22 46.3**	**-0.1**
	22nm,0.3s,baz=228,slow=7.6,SNR=7.4					
HNR				Sn **Sn**	**15 23 31.9**	**-0.1**
	48nm,0.3s,baz=262,slow=23,SNR=5.6					
HNR	**Honiara**	**3.88**	**114**	*e*Pn **Pn**	**15 22 46.3**	**-0.1**
HNR				Sn **Sn**	**15 23 31.9**	**-0.1**
WRAB	**Tennant Creek**	**24.47**	**238**	*e*P **P**	**15 27 06.1**	**0.0**
	5.7nm,0.7s,mb4.1					
WB2	**Warramunga Arr**	**24.47**	**238**	*e*P **P**	**15 27 06.2**	**+0.1**
WRA	**Warramunga Arr**	**24.48**	**238**	P **P**	**15 27 06.2**	**0.0**
	4.4nm,0.6s,mb4.0,baz=63,slow=9.6,SNR=26					
WRA				PcP PcP	15 30 44.4	-0.5
	0.3nm,0.8s,baz=62,slow=2.9,SNR=8.9					
ASAR	**Alice Springs**	**26.66**	**231**	P **P**	**15 27 24.9**	**-1.0**
	0.3nm,0.7s,mb2.9,baz=61,slow=9.8,SNR=3.6					
STKA	**Stephens Creek**	**27.57**	**208**	P **P**	**15 27 35.2**	**+1.1**
	2.3nm,0.8s,mb3.9,baz=27,slow=15,SNR=4.1					
STKA	**Stephens Creek**	**27.57**	**208**	P **P**	**15 27 35.2**	**+1.1**
URZ	**Urewera**	**35.60**	**151**	LR LR	15 39 56.6	
	comp=Z,39nm,18.5s,baz=52,slow=31					
CMAR	**Chiang Mai Arr**	**62.38**	**295**	P **P**	**15 32 09.3**	**-0.8**
	0.2nm,0.4s,mb3.6,baz=90,slow=8.1,SNR=3.6					
ULN	**Ulaanbaatar**	**70.45**	**327**	*e*P **P**	**15 33 02.1**	**+0.8**
	1.8nm,0.8s,mb4.0					
SONM	**Songino Array**	**70.79**	**327**	P **P**	**15 33 04.1**	**+0.8**
	1.7nm,0.7s,mb4.1,baz=136,slow=7.0,SNR=12					
MK31	**Makanchi Array**	**84.94**	**318**	*e*P **P**	**15 34 21.7**	**-0.4**
MKAR	**Makanchi Array**	**84.94**	**318**	P **P**	**15 34 21.7**	**-0.4**
	0.5nm,0.6s,mb3.8,baz=99,slow=7.5,SNR=4.9					
LNOR	**Lincton Mounta**	**92.35**	**44**	*e*P **P**	**15 34 57.3**	**-0.1**

*CSEM **07** 16:20:59.8±0.1, 3825N×2649E, h10km, MD3.2, Error ellipse: s-maj=2.1km s-min=2.0km az=68.0*
*NEIC **07** 16:21:00.3, 3830N×2684E, h32km, MD3.6(ATH), After ATH.*
*ISCJB **07** 16:21:00.5±0.7, 3823N±003×2650E±004, h7km±4km, Error ellipse: s-maj=5.5km s-min=4.1km az=43.8*
*ATH **07** 16:21:00.3, 3830N×2684E, h32km, MD3.6/3*
*THE **07** 16:21:01.0, 3825N×2653E, h10km±5km, ML3.7/1, Error ellipse: s-maj=6.6km s-min=1.7km az=287.0*
*DDA **07** 16:21:01.2, 3826N×2657E, h8km±2km, Md3.2*

ISC 07 16:21:00.9±0.5, 3826N±003×2651E±004, h9km±4km, n23, σ1§07/36, 2C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
URLA	**Izmir**	**0.12**	**31**	⇑*i*P **Pg**	**16 21 03.8**	**0.0**
URLA				*i* S **Sg**	**16 21 05.8**	**0.0**
CHOS	**Chios island**	**0.38**	**290**	P **Pg**	**16 21 08.9**	**+0.4**
CHOS				S **Sg**	**16 21 14.7**	**+1.1**
SMG	**Samos**	**0.60**	**155**	*e*PN **Pg**	**16 21 12.6**	**0.0**
KDAG	**Bornova**	**0.61**	**76**	⇓*i*P **Pg**	**16 21 12.7**	**-0.1**
KDAG				*i* S **Sg**	**16 21 20.9**	**+0.1**
KDAG	**Bornova**	**0.61**	**76**	*i* P **Pg**	**16 21 12.6**	**-0.1**
GCAM	**G?zelcaml?**	**0.79**	**134**	⇑*i*P **Pg**	**16 21 16.2**	**-0.1**
GCAM				*i* S **Sg**	**16 21 27.2**	**+0.7**
GCAM	**G?zelcaml?**	**0.79**	**134**	*i* P **Pg**	**16 21 16.2**	**0.0**
GCAM				*i* S **Sg**	**16 21 27.2**	**+0.6**
PRK	**Paraskevi**	**1.01**	**349**	P **Pg**	**16 21 20.2**	**-0.1**
PRK				S **Sg**	**16 21 34.4**	**+1.0**
PRK	**Paraskevi**	**1.01**	**349**	*e*PN **Pn**	**16 21 20.1**	**-1.1**
PRK				*e*SN **Sn**	**16 21 34.5**	**-1.0**
AYVA	**Ayvalik**	**1.06**	**7**	*i* P **Pg**	**16 21 20.9**	**-0.4**
AYVA				*i* S **Sg**	**16 21 35.7**	**+0.6**

AKHS	**Akhisar**	**1.19**	**58**	*i* P	**Pb**	**16 21 22.9**	**-0.8**
AKHS				*i* S	**Sb**	**16 21 39.8**	**+0.6**
AYDN	**Tasoluk**	**1.23**	**118**	*i* P	**Pn**	**16 21 25.0**	**+0.7**
AYDN				*i* S	**Sb**	**16 21 38.8**	**-1.5**
BDRM	**Kayabasi**	**1.40**	**148**	*e*P	**Pn**	**16 21 25.7**	**-0.9**
APE	**Apeiranthos**	**1.42**	**214**	P	**Pn**	**16 21 25.6**	**-1.2**
APE	**Apeiranthos**	**1.42**	**214**	*e*PN	**Pn**	**16 21 28.5**	**+1.7**
APE	**Apeiranthos**	**1.42**	**214**	P	**Pn**	**16 21 25.6**	**-1.2**
APE	**Apeiranthos**	**1.42**	**214**	*e*Pn	**Pn**	**16 21 28.5**	**+1.7**
MANT	**Manisa**	**1.62**	**81**	*i* P	**Pn**	**16 21 31.2**	**+1.6**
MANT				*i* S	**Sn**	**16 21 51.4**	**+0.8**
BALY	**Balya**	**1.71**	**30**	*i* P	**Pn**	**16 21 33.4**	**+2.5**
BALY				*i* S	**Sn**	**16 21 55.3**	**+2.4**
LIA	**Limnos Island**	**1.94**	**328**	P	**Pn**	**16 21 33.5**	**-0.5**
ALN	**Alexandroupoli**	**2.66**	**352**	P	**Pn**	**16 21 41.9**	**-2.1**
ALN	**Alexandroupoli**	**2.66**	**352**	P	**Pg**	**16 21 50.2**	**-1.8**
ULDT	**Uludag**	**2.77**	**46**	*e*P	**Pn**	**16 21 49.9**	**+4.4**
ULDT				*i* S	**Sg**	**16 22 28.6**	**-1.5**

*ISCJB **07** 16:21:12.6±0.6, 3481N×004×2339E×006, h66km±7km, mb3.7/6, Error ellipse: s-maj=9.0km s-min=5.3km az=138.1*
*CSEM **07** 16:21:13.7±0.1, 3492N×2348E, h60km, MD3.8, Error ellipse: s-maj=3.4km s-min=1.9km az=33.0*
*NEIC **07** 16:21:14.4, 3497N×2353E, h59km, MD3.8(ATH), After ATH.*
*ATH **07** 16:21:14.5, 3498N×2354E, h60km±6km*
*IDC **07** 16:21:16.9±1.5, 3486N×2367E, h72km±15km, mb3.6/6, mb1 3.6/8, mb1mx3.4/23, mbtmp3.6/8, Error ellipse: s-maj=25.1km s-min=16.8km az=128.0*
*THE **07** 16:21:17.3, 3510N×2350E, h31km±34km, Error ellipse: s-maj=34.2km s-min=1.2km az=143.0*
*HLW **07** 16:21:19.1, 3482N×2417E, h33km, Mb3.7*

ISC 07 16:21:14.6±0.5, 3489N±004×2343E±005, h50km±8km, n55, σ1§03/65, mb3.8/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.55**	**95**	*e*P	**Pn**	**16 21 26.6**	**+0.2**
VAM	**Vamos**	**0.82**	**51**	*e*P	**Pn**	**16 21 29.8**	**-0.1**
VAM				*e*S	**Sn**	**16 21 40.2**	**-0.8**
SIVA	**Sivas**	**1.14**	**83**	P	**Pn**	**16 21 35.3**	**+1.1**
SIVA				S	**Sn**	**16 21 50.3**	**+1.5**
IDI	**Anoyia**	**1.26**	**71**	P	**Pn**	**16 21 36.6**	**+0.7**
	12nm,0.3s,baz=261,slow=14,SNR=131						
IDI				S	**Sn**	**16 21 51.8**	**0.0**
	25nm,0.3s,baz=359,slow=23,SNR=9.9						
KYTH	**Kithira**	**1.42**	**347**	*e*P	**Pn**	**16 21 39.0**	**+1.0**
LAST	**Lasithi**	**1.71**	**80**	P	**Pn**	**16 21 43.2**	**+1.3**
LAST	**Lasithi**	**1.71**	**80**	P	**Pn**	**16 21 43.7**	**+1.8**
NPS	**Neapolis**	**1.83**	**78**	*e*P	**Pn**	**16 21 43.4**	**-0.2**
THR6	**Thira Island,**	**2.17**	**47**	P	**Pn**	**16 21 48.4**	**+0.1**
THR5	**Thira Island,**	**2.18**	**45**	P	**Pn**	**16 21 48.0**	**-0.4**
THR5	**Thira Island,**	**2.18**	**45**	P	**Pn**	**16 21 47.8**	**-0.6**
THR3	**Thira Island,**	**2.21**	**46**	P	**Pn**	**16 21 48.3**	**-0.5**
THR1	**Thera Island**	**2.22**	**48**	P	**Pn**	**16 21 48.4**	**-0.5**
THR4	**Thira Island,**	**2.24**	**45**	P	**Pn**	**16 21 49.1**	**-0.1**
THR4	**Thira Island,**	**2.24**	**45**	P	**Pn**	**16 21 48.3**	**-0.9**
ZKR	**Zakros**	**2.30**	**84**	P	**Pn**	**16 21 51.6**	**+1.5**
PYL	**PYLOS**	**2.42**	**326**	P	**Pn**	**16 21 52.0**	**+0.3**
ITM	**Ithomi**	**2.59**	**332**	*e*P	**Pn**	**16 21 54.4**	**+0.4**
DID	**Didima**	**2.61**	**357**	P	**Pn**	**16 21 54.7**	**+0.4**
KARP	**Karpathos**	**3.13**	**77**	*e*P	**Pn**	**16 22 01.5**	**+0.1**
LTK	**Loutraki**	**3.15**	**353**	P	**Pn**	**16 22 02.4**	**+0.8**
SLUM		**3.71**	**156**	P	**Pn**	**16 22 10.2**	**+0.9**
SLUM				S	**Sn**	**16 22 47.7**	**-4.0**
SLUM		**3.71**	**156**	P	**Pn**	**16 22 10.2**	**+0.9**
SLUM				S	**Sn**	**16 22 47.7**	**-4.0**
LKR	**Lokris**	**3.77**	**355**	P	**Pn**	**16 22 10.2**	**0.0**
LKR	**Lokris**	**3.77**	**355**	*e*P	**Pn**	**16 22 10.3**	**+0.1**
VLS	**Valsamata**	**4.00**	**326**	*e*P	**Pn**	**16 22 13.0**	**-0.3**
ARG	**Arkhangelos**	**4.05**	**70**	*e*P	**Pn**	**16 22 14.4**	**+0.3**
AGG	**Agios Georgios**	**4.21**	**348**	P	**Pn**	**16 22 17.2**	**+0.9**
AGG	**Agios Georgios**	**4.21**	**348**	P	**Pn**	**16 22 17.3**	**+1.0**
EVR	**Evrytania**	**4.22**	**343**	*e*P	**Pn**	**16 22 18.1**	**+1.7**
EVR	**Evrytania**	**4.22**	**343**	*e*P	**Pn**	**16 22 19.1**	**+2.7**
AOS	**Alonnisos**	**4.29**	**5**	P	**Pn**	**16 22 16.6**	**-0.7**
OHR	**Ohrid**	**6.55**	**342**	*e*Pn	**Pn**	**16 22 42.8**	**-5.5**
KRUS	**Krusevo**	**6.69**	**346**	*e*Pn	**Pn**	**16 22 47.7**	**-2.6**
KRUS				*e*Sg	**Sn**	**16 23 59.5**	**-5.5**
TIP	**Timpagrande**	**6.84**	**311**	*e*Pn	**Pn**	**16 22 50.9**	**-1.3**
TIP				*e*Sn	**Sn**	**16 23 56.5**	**-12**
TIP	**Timpagrande**	**6.84**	**311**	*e*Pn	**Pn**	**16 22 50.9**	**-1.3**
CUC	**Castrocucco**	**7.91**	**312**	*e*P	**Pn**	**16 23 05.1**	**-1.8**
CUC	**Castrocucco**	**7.91**	**312**	*e*P	**Pn**	**16 23 05.1**	**-1.8**
SG1	**Sgolgore (BA)**	**7.98**	**320**	*e*Sg	**Sn**	**16 24 29.7**	**-7.1**
AWBH		**8.04**	**143**	P	**Pn**	**16 23 08.3**	**-0.5**
AWBH				S	**Sn**	**16 24 28.4**	**-10**
AWBH		**8.04**	**143**	P	**Pn**	**16 23 08.3**	**-0.5**
AWBH				S	**Sn**	**16 24 28.4**	**-10**
HFRF	**Wahat Farafira**	**8.78**	**150**	P	**Pn**	**16 23 19.3**	**+0.4**
GLL	**Jalalah**	**8.79**	**125**	P	**Pn**	**16 23 17.0**	**-2.0**
GLL	**Jalalah**	**8.79**	**125**	P	**Pn**	**16 23 17.0**	**-2.0**
AMAG	**Maghara**	**9.26**	**114**	P	**Pn**	**16 23 23.4**	**-2.1**
AMAG	**Maghara**	**9.26**	**114**	P	**Pn**	**16 23 23.4**	**-2.1**
BRTR	**Keskin Array B**	**9.46**	**56**	P	**Pn**	**16 23 28.0**	**-0.1**
	0.2nm,0.3s,baz=234,slow=16,SNR=4.5						
EIL	**Elat**	**11.05**	**115**	P	**Pn**	**16 23 47.7**	**-2.3**
	0.1nm,0.3s,baz=53,slow=20,SNR=3.7						
EIL				S	**Sn**	**16 25 45.4**	**-6.8**
	0.3nm,0.3s,baz=53,slow=20,SNR=3.1						
GERES	**GERESS Array B**	**15.69**	**336**	P	**Pn**	**16 24 59.5**	**+7.2**
	0.1nm,0.3s,baz=138,slow=13,SNR=2.8						
HFS	**Hagfors**	**26.04**	**349**	P	**P**	**16 26 42.7**	**-0.2**
	3.1nm,0.9s,mb3.8,baz=139,slow=7.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**29.24**	**228**	P	**P**	**16 27 13.8**	**+1.9**
	0.7nm,0.7s,mb3.5,baz=32,slow=8.4,SNR=5.7						
ARCES	**ARCESS Array B**	**34.72**	**1**	P	**P**	**16 27 58.8**	**-0.6**
	2.4nm,1.0s,mb4.1,baz=185,slow=9.1,SNR=3.2						
DBIC	**Dimbokro**	**38.30**	**229**	P	**P**	**16 28 31.7**	**+1.2**
	3.5nm,1.1s,mb4.0,baz=27,slow=9.0,SNR=2.7						
MKAR	**Makanchi Array**	**45.11**	**56**	P	**P**	**16 29 25.4**	**-0.4**
	0.6nm,0.4s,mb3.8,baz=267,slow=7.8,SNR=9.9						
SONM	**Songino Array**	**60.75**	**50**	P	**P**	**16 31 21.0**	**-0.1**
	0.4nm,0.8s,mb3.6,baz=296,slow=9.1,SNR=4.7						

IDC 07 16:49:58.9±4.3, 343S×10075E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.3/19, mbtmp3.3/4, Error ellipse: s-maj=185.7km s-min=24.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.64**	**119**	P	P	16 57 07.2	-0.2
	0.1nm,0.3s,baz=305,slow=8.8,SNR=4.6						
ASAR	**Alice Springs**	**37.82**	**125**	P	P	16 57 17.1	-0.3
	0.2nm,0.5s,baz=300,slow=7.8,SNR=10						
SONM	**Songino Array**	**51.29**	**5**	P	P	16 59 05.0	+0.4
	0.3nm,0.6s,baz=188,slow=9.5,SNR=3.6						
MKAR	**Makanchi Array**	**52.59**	**344**	P	P	16 59 13.7	-0.7
	0.3nm,0.8s,baz=179,slow=7.1,SNR=2.6						
TXAR	**Lajitas Array**	**145.35**	**39**	PKPbc	PKPbc	17 09 39.6	+0.3
	0.2nm,0.6s,baz=217,slow=4.4,SNR=4.1						

IDC 07 17:14:23.6±10.0, 5065S×7233E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.7/12, mbtmp3.8/3, ML3.6/1, MS3.5/3, Ms1 3.4/3, ms1mx3.2/13, Error ellipse: s-maj=250.4km s-min=20.4km az=118.0, Kerguelen Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**17.64**	**192**	P	Pn	17 18 31.2	+0.8
	0.2nm,0.3s,baz=6.0,slow=14,SNR=4.6						
MAW				S	Sn	17 21 48.2	+0.9
	0.3nm,0.3s,baz=337,slow=7.7,SNR=3.9						
MAW				LR	LR	17 24 47.4	
	comp=Z,44nm,19.3s,baz=243,slow=35						
STKA	**Stephens Creek**	**53.34**	**97**	LR	LR	17 42 05.8	
	comp=Z,44nm,19.6s,baz=198,slow=31						
ASAR	**Alice Springs**	**54.15**	**84**	P	P	17 23 51.2	+0.7
	0.3nm,0.8s,baz=224,slow=5.2,SNR=5.1						
WRA	**Warramunga Arr**	**57.14**	**81**	P	P	17 24 11.3	-0.8
	0.9nm,0.9s,baz=221,slow=6.6,SNR=4.6						
URZ	**Urewera**	**69.65**	**126**	LR	LR	17 52 56.7	
	comp=Z,90nm,18.3s,baz=141,slow=33						

IDC 07 17:46:29.2±3.0, 1122S×16484E, h0km, mb4.1/4, mb1 4.1/6, mb1mx3.9/18, mbtmp4.1/6, ML3.7/2, MS3.2/1, Ms1 3.1/1, ms1mx2.4/17, Error ellipse: s-maj=71.6km s-min=33.0km az=121.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.13**	**290**	Pn	Pn	17 47 48.0	+0.7
	7.6nm,0.3s,baz=141,slow=3.0,SNR=8.7						
HNR				Sn	Sn	17 48 43.2	-4.2
	9.4nm,0.3s,baz=209,slow=23,SNR=5.9						
CTA	**Charters Tower**	**19.94**	**241**	P	Pn	17 51 03.1	-1.4
	0.1nm,0.3s,baz=65,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**29.71**	**223**	LR	LR	18 03 49.8	
	comp=Z,42nm,18.2s,baz=201,slow=35						
WRA	**Warramunga Arr**	**30.59**	**250**	P	P	17 52 45.0	-0.1
	2.5nm,0.8s,baz=81,slow=9.2,SNR=15						
ASAR	**Alice Springs**	**31.92**	**243**	P	P	17 52 56.8	0.0
	1.4nm,0.7s,baz=63,slow=9.9,SNR=25						
SONM	**Songino Array**	**78.28**	**324**	P	P	17 58 31.1	+0.1
	0.7nm,0.7s,baz=138,slow=7.0,SNR=7.3						
MKAR	**Makanchi Array**	**93.04**	**317**	P	P	17 59 45.1	+0.3
	0.7nm,0.7s,baz=89,slow=6.2,SNR=7.7						

IDC 07 18:28:58.9±54.0, 1386S×16672E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, Error ellipse: s-maj=918.4km s-min=108.7km az=64.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.16**	**228**	P	P	18 35 01.4	-0.5
	1.1nm,0.4s,baz=43,slow=8.4,SNR=8.7						
WRA	**Warramunga Arr**	**31.53**	**254**	P	P	18 35 23.7	+0.7
	0.3nm,0.6s,baz=86,slow=9.1,SNR=3.9						
ASAR	**Alice Springs**	**32.49**	**248**	P	P	18 35 31.4	0.0
	0.3nm,0.3s,baz=72,slow=9.6,SNR=28						

IDC 07 18:42:42.9±63.0, 2023S×17866E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=1118.0km s-min=149.9km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.10**	**243**	P	P	18 49 37.6	-0.4
	2.1nm,1.1s,baz=66,slow=10.0,SNR=4.7						
ASAR	**Alice Springs**	**41.53**	**257**	P	P	18 50 31.9	-0.4
	1.0nm,0.5s,baz=92,slow=8.0,SNR=24						
WRA	**Warramunga Arr**	**41.53**	**262**	P	P	18 50 32.9	+0.5
	0.5nm,0.3s,baz=96,slow=7.7,SNR=14						

*NNC **07** 18:45:23.6±3.3, 4454N×8325E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=29.5km s-min=16.1km az=144.0*

BJI 07 18:45:24.6, 4456N×8309E, h20km, ML2.8, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.30**	**346**	⇑Pn	Pn	18 46 04.1	+2.8
	2.0nm,0.2s,baz=165,slow=14,SNR=16						
MK31				⇓Sn	Sn	18 46 33.2	+4.1
	12nm,0.2s,baz=161,slow=27,SNR=16						
WMQ	**Urumqi**	**3.39**	**101**	*e*PG	Pn	18 46 26.0	+10
WMQ				S	Sn	18 47 02.5	+6.5
WMQ				Smax			
	comp=N,28nm,0.4s						
WMQ				Smax			
	comp=E,27nm,0.4s						
TKM2	**Tokmak 2**	**5.67**	**256**	⇑Pg	Pn	18 47 07.3	+20
	comp=E,4.2nm,1.4s						
TKM2				⇑Lg		18 48 26.1	
	comp=E,4.7nm,0.5s						
KURBB	**Kurchatov Arra**	**6.80**	**335**	⇓Lg		18 49 01.9	
	comp=E,1.0nm,0.7s						
KURK	**Kurchatov**	**6.86**	**335**	⇑Lg		18 49 03.8	
	comp=E,12nm,1.3s						

*NEIC **07** 18:57:32.6, 1496N×6066W, h52km, MD4.0(TRN), After TRN.*
NEIC Felt [II] on Martinique.

TRN 07 18:57:32.0, 1497N×6061W, h44km, MD4.0, M3.3(FDF), 3C-6D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.50**	**214**	*i* P	Pn	18 57 44.4	+1.5
FDF	**Fort de France**	**0.57**	**246**	*e*P	Pn	18 57 45.0	+1.1
FDF				*e*S	Sn	18 57 54.8	+2.5
FDF	**Fort de France**	**0.57**	**246**	⇓*i*P	Pn	18 57 45.2	+1.4
FDF				⇓*e*S	Sn	18 57 54.9	+2.6
BIM	**Bigot**	**0.64**	**225**	⇓*i*P	Pn	18 57 46.1	+1.5
BIM				⇓*e*S	Sn	18 57 56.4	+2.6
DSTT	**Stowe**	**0.72**	**292**	⇑*i*P	Pn	18 57 47.8	+2.0
DSTT				*e*S	Sn	18 57 58.9	+3.0
DBCT	**Belle View Cho**	**0.77**	**293**	⇑*e*P	Pn	18 57 48.3	+1.9
DBCT				*e*S	Sn	18 57 59.7	+2.7
DSHT	**Scott's Head**	**0.78**	**288**	*e*P	Pn	18 57 48.5	+2.0
DSHT				*e*S	Sn	18 57 59.6	+2.5
DPMT	**Pointe Monier**	**0.80**	**291**	*e*P	Pn	18 57 48.6	+1.8
DPMT				*e*S	Sn	18 57 59.8	+2.2
SLW	**Petit Monier**	**1.00**	**199**	⇓*e*P	Pn	18 57 50.2	+0.6
SLW				⇓*e*S	Sn	18 58 03.8	+1.3
MGG	**Marie-Galante**	**1.16**	**324**	*e*P	Pn	18 57 52.0	+0.2
TBG	**Guadaloupe-3**	**1.33**	**311**	*e*P	Pn	18 57 54.6	+0.5
SCG	**Saint Claude**	**1.47**	**316**	*e*P	Pn	18 57 56.8	+0.8
SVB	**Belmont**	**1.80**	**200**	⇑*i*P	Pn	18 58 01.7	+1.1
SVB				*e*S	Sn	18 58 23.8	+1.6
BPA	**Boggy Peak**	**2.38**	**330**	*e*S	Sn	18 58 38.1	+1.5
GRCU	**Cariacou**	**2.62**	**198**	*e*P	Pn	18 58 12.9	+1.1
GRCU				*e*S	Sn	18 58 44.4	+2.0
GRSS	**Sisters**	**2.83**	**200**	*e*P	Pn	18 58 17.5	+2.7
GRSS				*e*S	Sn	18 58 49.8	+2.2
GRIC	**Isle de Caille**	**2.83**	**200**	*e*P	Pn	18 58 16.7	+1.9
GRIC				*e*S	Sn	18 58 48.8	+1.1
GRW	**Mount Saint Ca**	**2.98**	**200**	*e*P	Pn	18 58 19.6	+2.9
GRW				*e*S	Sn	18 58 52.0	+0.8
SKI	**Saint Kitts**	**3.11**	**319**	*e*P	Pn	18 58 20.3	+1.7
SKI				*e*S	Sn	18 58 56.6	+2.0
TOSP	**Speyside**	**3.65**	**179**	*e*P	Pn	18 58 28.8	+2.8

AUST 07 19:10:45.8, 2383S×11493E, h0km, ML4.4, Western Australia

GUC 07 19:12:09.0±0.9, 3263S×7101W, h31km±19km, MD3.5, ML2.4, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEL	**Peldehue**	**0.58**	**152**	⇑*i*P	Pb	19 12 20.6	-0.2
PEL				*i* S	Sb	19 12 29.8	+1.0
PEL				AML	AML	19 12 37.0	
	comp=N,557nm,0.7s						
CHNG	**Los Chungos**	**0.85**	**331**	⇓*i*P	Pn	19 12 24.9	+0.1
CHNG				*i* S	Sn	19 12 36.6	+0.4
CHNG				AML	AML	19 12 39.7	
	comp=E,382nm,0.6s						
CLCH	**Cerro Calan**	**0.86**	**152**	*i* S	Sn	19 12 37.2	+0.8
CLCH				AML	AML	19 12 51.0	
	comp=N,245nm,0.7s						
FCH	**Farellones**	**0.92**	**139**	⇓*i*P	Pn	19 12 26.9	+1.2
FCH				*i* S	Sn	19 12 40.0	+2.0
FCH				AML	AML	19 12 47.7	
	comp=E,82nm,0.1s						
TACH	**Talagante**	**1.02**	**177**	*i* P	Pn	19 12 27.4	+0.3
TACH				*i* S	Sn	19 12 41.5	+1.1
PCH	**Pirque**	**1.07**	**157**	⇑*i*P	Pn	19 12 29.1	+1.3
PCH				*i* S	Sn	19 12 42.9	+1.3
SFDO	**San Fernando**	**1.98**	**180**	*e*P	Pn	19 12 44.3	+4.0
SFDO				*i* S	Sn	19 13 10.4	+6.4

IDC 07 19:22:17.5±1.5, 488N×12599E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/17, mbtmp3.7/6, 1C, Error ellipse: s-maj=215.7km s-min=18.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.59**	**319**	⇑*e*P	Pn	19 23 00.1	+13

WRA	**Warramunga Arr**	**25.99**	**162**	P	P	19 27 53.0	+0.8
	1.3nm,0.3s,baz=343,slow=10,SNR=24						
ASAR	**Alice Springs**	**29.40**	**165**	P	P	19 28 22.5	-0.3
	0.3nm,0.7s,baz=345,slow=7.3,SNR=4.9						
STKA	**Stephens Creek**	**39.46**	**159**	P	P	19 29 49.0	-0.7
	1.0nm,0.9s,baz=338,slow=12,SNR=2.9						
SONM	**Songino Array**	**45.98**	**342**	P	P	19 30 43.1	+0.6
	0.2nm,0.5s,baz=162,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**56.20**	**325**	P	P	19 31 59.6	+0.3
	0.6nm,0.5s,baz=115,slow=7.7,SNR=14						
ZALV	**Zalesovo Beam**	**59.24**	**333**	P	P	19 32 19.7	-0.9
	0.5nm,0.3s,baz=134,slow=6.2,SNR=2.9						

*IDC **07** 19:40:20.4±3.1, 7395×10976E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, Error ellipse: s-maj=160.6km s-min=19.7km az=54.0*
*ISCJB **07** 19:40:22.7±0.6, 7265×008×10991E±004, h21km±5km, mb3.5/5, Error ellipse: s-maj=12.7km s-min=6.1km az=3.1*
*DJA **07** 19:40:23.9±0.0, 7315×10988E, h20km, MLv3.6/8*

ISC 07 19:40:23.1±0.7, 725S±007×10992E±003, h13km±5km, n18, σ0§80/18, mb3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**0.22**	**249**	P	**Pg**	**19 40 26.8**	**-1.0**
BJII	**Banjamegara**	**0.22**	**249**	S	**Sg**	**19 40 31.8**	**+0.8**
SMRI	**Semarang**	**0.56**	**69**	P	**Pg**	**19 40 33.0**	**-1.0**
SMRI	**Semarang**	**0.56**	**69**	S	**Sg**	**19 40 42.1**	**+0.6**
UGM	**Wanagama**	**0.89**	**137**	P	**Pg**	**19 40 40.3**	**0.0**
JCJI	**Jatiwangi**	**1.80**	**295**	P	**Pn**	**19 40 52.4**	**-1.5**
JCJI	**Jatiwangi**	**1.80**	**295**	S	**Sn**	**19 41 16.4**	**-0.2**
SJI	**Sawahan**	**1.90**	**105**	P	**Pn**	**19 40 56.2**	**+1.0**
LEM	**Lembang**	**2.32**	**280**	P	**Pn**	**19 41 01.5**	**+0.5**
BWJI	**Bawean**	**3.06**	**63**	P	**Pn**	**19 41 17.3**	**+6.1**
CBJI	**Citeko**	**3.15**	**285**	P	**Pn**	**19 41 16.8**	**+4.3**
DBJI	**Dramaga**	**3.22**	**282**	P	**Pn**	**19 41 14.7**	**+1.3**
WRA	**Warramunga Arr**	**26.83**	**120**	P	**P**	**19 46 03.7**	**+0.2**
	0.8nm,0.9s,mb3.2,baz=298,slow=11,SNR=4.5						
CMAR	**Chiang Mai Arr**	**27.75**	**337**	P	**P**	**19 46 12.4**	**+0.8**
	0.5nm,0.8s,mb3.2,baz=176,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	**28.22**	**128**	P	**P**	**19 46 15.5**	**-0.4**
	0.3nm,0.6s,baz=289,slow=6.8,SNR=5.6						
STKA	**Stephens Creek**	**38.35**	**134**	P	**P**	**19 47 43.2**	**-0.8**
	1.1nm,0.9s,mb3.6,baz=312,slow=16,SNR=2.0						
SONM	**Songino Array**	**54.94**	**357**	P	**P**	**19 49 53.8**	**+0.1**
	0.6nm,0.8s,mb3.7,baz=168,slow=7.6,SNR=6.6						
MKAR	**Makanchi Array**	**59.15**	**338**	P	**P**	**19 50 22.8**	**-0.7**
	0.2nm,0.4s,mb3.5,baz=131,slow=5.9,SNR=2.5						

*ISK **07** 20:05:11.9, 3816N×3906E, h5km, MD2.9*
*DDA **07** 20:05:12.4, 3816N×3906E, h5km, Md2.8*
*CSEM **07** 20:05:12.2±0.1, 3816N×3909E, h2km, MD2.9, Error ellipse: s-maj=2.8km s-min=1.6km az=117.0*
*ISCJB **07** 20:05:13.4±0.5, 3816N±003×3905E±003, h2km±6km, Error ellipse: s-maj=4.7km s-min=4.0km az=157.1*

ISC 07 20:05:14.0±0.5, 3817N±003×3906E±003, h3km±5km, n17, σ0§89/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.28**	**43**	PG	**Pg**	**20 05 18.7**	**-0.8**
SVRC				SG	**Sg**	**20 05 24.1**	**+0.9**
ELZG	**Elazig**	**0.33**	**350**	*i* P	**Pg**	**20 05 20.1**	**-0.3**
ELZG				*i* S	**Sg**	**20 05 26.8**	**+1.3**
URFA	**Urfa**	**0.75**	**194**	*e*PG	**Pg**	**20 05 27.6**	**-0.9**
URFA				*e*SG	**Sg**	**20 05 38.8**	**+0.5**
PTK	**Pertek**	**0.77**	**20**	*e*PG	**Pg**	**20 05 28.1**	**-0.6**
DIYA	**Diyarbakir**	**0.88**	**106**	*i* P	**Pg**	**20 05 30.3**	**-0.5**
DIYA				*i* S	**Sg**	**20 05 43.2**	**+1.1**
DIYA	**Diyarbakir**	**0.88**	**106**	*i* S	**Sg**	**20 05 43.2**	**+1.1**
AKCD	**Akcadag**	**0.90**	**278**	*i* P	**Pg**	**20 05 30.0**	**-1.3**
AKCD				*i* S	**Sg**	**20 05 43.9**	**+0.9**
ATAB	**Bozova**	**0.93**	**221**	*i* P	**Pg**	**20 05 31.4**	**-0.4**
ATAB				*i* S	**Sg**	**20 05 43.8**	**+0.1**
DARE	**Darende-Malaty**	**1.25**	**309**	*e*PN	**Pn**	**20 05 37.9**	**-0.5**
GZT	**Gaziantep**	**1.44**	**236**	*i* P	**Pn**	**20 05 39.3**	**-1.6**
GZT				*i* S	**Sb**	**20 06 01.9**	**+1.8**
MARD	**Mardin**	**1.61**	**122**	*i* P	**Pn**	**20 05 42.6**	**-0.7**
MARD				*i* S	**Sn**	**20 06 04.6**	**+0.1**
EZC	**Erzincan**	**1.68**	**20**	*e*PN	**Pn**	**20 05 43.0**	**-1.3**
BEST	**Besiri**	**1.77**	**98**	*i* P	**Pn**	**20 05 46.2**	**+0.7**
BEST				*i* S	**Sn**	**20 06 08.9**	**+0.5**
GAZ	**Gaziantep**	**1.77**	**236**	*e*PN	**Pn**	**20 05 45.4**	**-0.1**
KMRS	**Kahramanmaras**	**1.83**	**249**	*e*PN	**Pn**	**20 05 46.3**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.92**	**286**	*e*PN	**Pn**	**20 05 49.2**	**+1.6**
SVSK

MKAR	**Makanchi Array**	**2.85**	**337**	P	**Pg**	**20 42 39.6**	**-0.9**		
MKAR	comp=Z,26nm,0.3s			pmax	pmax				
KNDC	**Almaty**	**5.11**	**262**	⇑Pg	**Pg**	**20 43 18.6**	**-5.2**		
KNDC	comp=Z,70nm,0.6s			⇑Lg		20 44 26.6			
	comp=Z,102nm,0.6s								
ULHL	**Ulahol**	**5.91**	**254**	P	**Pn**	**20 43 13.6**	**+0.1**		
	SNR=18								
TKM2	**Tokmak 2**	**6.16**	**261**	⇑Pn	**Pn**	**20 43 16.9**	**0.0**		
TKM2	comp=Z,20nm,0.8s			⇓Pg	**Pg**	**20 43 38.3**	**-5.5**		
	comp=Z,40nm,0.7s								
TKM2				⇑Sn	**Sn**	**20 44 26.8**	**-0.5**		
	comp=Z,30nm,0.7s								
TKM2				⇓Lg		20 45 00.1			
	comp=Z,79nm,0.6s								
TKM2	**Tokmak 2**	**6.16**	**261**	*e*P	**Pn**	**20 43 16.8**	**-0.2**		
	comp=Z,34nm,0.5s								
TKM2	**Tokmak 2**	**6.16**	**261**	*e*P	**Pn**	**20 43 16.8**	**-0.1**		
TKM2	comp=Z,34nm,0.5s			pmax	pmax				
TKM2	**Tokmak 2**	**6.16**	**261**	P	**Pn**	**20 43 17.2**	**+0.3**		
	SNR=7.5								
KZA	**Kyzart**	**6.66**	**255**	P	**Pn**	**20 43 24.7**	**+0.9**		
	SNR=15								
KBK	**Karagaybulak**	**6.69**	**260**	P	**Pn**	**20 43 25.2**	**+1.0**		
	SNR=8.8								
USP	**Ospenovka**	**6.86**	**266**	P	**Pn**	**20 43 27.5**	**+0.9**		
	SNR=12								
FRU	**Bishkek**	**6.87**	**262**	*e*P	**Pn**	**20 43 27.0**	**+0.2**		
FRU				*e*S	**Sn**	**20 44 51.0**	**+6.0**		
FRU	comp=E,240nm,1.9s			pmax	pmax				
AAK	**Ala-Archa**	**7.01**	**261**	P	**Pn**	**20 43 29.2**	**+0.5**		
	SNR=7.2								
KURBB	**Kurchatov Arra**	**7.40**	**332**	Lg		20 45 40.0			
KURK	**Kurchatov**	**7.45**	**333**	⇑Lg		20 45 42.1			
	comp=E,272nm,1.1s								
KURK	**Kurchatov**	**7.45**	**333**	Pn	**Pn**	**20 43 33.8**	**-0.8**		
	baz=147,slow=13								
KURK				Sn	**Sn**	**20 44 58.9**	**-0.2**		
	baz=140,slow=26								
KURK				Lg		20 45 43.5			
	baz=142,slow=24								
KURK	**Kurchatov**	**7.45**	**333**	*e*P	**Pn**	**20 43 31.9**	**-2.8**		
	comp=E,7.8nm,0.6s								
KURK				Pn	**Pn**	**20 43 33.8**	**-0.8**		
KURK				Sn	**Sn**	**20 44 58.9**	**-0.2**		
KURK				Lg		20 45 43.5			
KURK	**Kurchatov**	**7.45**	**333**	*e*P	**Pn**	**20 43 31.9**	**-2.8**		
KURK						20 44 58.9			
KURK	comp=Z,8.0nm,0.6s			pmax	pmax				
EKS2	**Erkin-Say**	**7.52**	**262**	*e*P	**Pn**	**20 43 35.0**	**-0.6**		
	comp=Z,12nm,0.6s								
AML	**Almayashu**	**7.73**	**258**	*e*P	**Pn**	**20 43 39.9**	**+1.3**		
	comp=Z,20nm,0.6s								
KK31	**Karatay Array**	**9.76**	**268**	⇑Pn	**Pn**	**20 44 06.8**	**+0.5**		
	comp=Z,1.3nm,0.5s								
KK31				⇓Pg	Pn	20 44 44.0	+38		
	comp=Z,2.5nm,0.5s								
KK31				⇑Lg		20 46 53.5			
	comp=Z,15nm,0.6s								
KK31	**Karatay Array**	**9.76**	**268**	P	**Pn**	**20 44 06.0**	**-0.3**		
KK31	comp=Z,1.0nm,0.5s			pmax	pmax				
KK31				pmax	pmax				
	comp=N,15nm,0.6s								
ZALV	**Zalesovo Beam**	**9.80**	**3**	Pn	**Pn**	**20 44 06.2**	**-0.7**		
	comp=N,2.7nm,0.3s,baz=187,slow=14,SNR=34								
ZALV				Sn	**Sn**	**20 45 55.5**	**-1.3**		
	comp=N,3.7nm,0.3s,baz=176,slow=24,SNR=9.8								
ZALV				Lg		20 46 56.8			
	baz=182,slow=20,SNR=2.7								
ZALV	**Zalesovo Beam**	**9.80**	**3**	P	**Pn**	**20 44 06.2**	**-0.6**		
ZALV						20 45 55.5			
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.3s								
ZALV				smax					
	comp=Z,4.0nm,0.3s								
NVS	**Novosibirsk**	**10.68**	**358**	*e*P	**Pn**	**20 44 20.8**	**+1.9**		
NVS				*e*		20 46 15.5			
VOSK	**Vostochnaya**	**12.09**	**320**	⇓Pn	**Pn**	**20 44 38.7**	**+0.5**		
	comp=Z,2.1nm,0.6s								
VOSK				⇑Sn	**Sn**	**20 46 53.5**	**+0.5**		
	comp=Z,5.9nm,0.8s								
VOSK				⇓Lg		20 48 08.5			
	comp=Z,24nm,0.8s								
BVA0	**Borovoye Array**	**12.56**	**320**	⇓Pn	**Pn**	**20 44 44.2**	**-0.3**		
	comp=Z,0.3nm,0.6s,baz=232,slow=41,SNR=5.4								
BVA0				⇑Sn	**Sn**	**20 47 04.6**	**+0.2**		
	comp=Z,1.0nm,0.8s,baz=129,slow=21,SNR=3.8								
BVA0				⇑Lg		20 48 23.5			
	comp=Z,5.8nm,1.1s								
BVA0	**Borovoye Array**	**12.56**	**320**	P	**Pn**	**20 44 46.6**	**+2.0**		
BVA0				*i*		20 47 01.7			
BVA0				pmax	pmax				
	comp=Z,1.0nm,1.1s								
BVA0				smax					
	comp=N,1.0nm,1.2s								
BVA0				pmax	pmax				
	comp=N,6.0nm,1.1s								
BVAR	**Borovoye Array**	**12.56**	**320**	Pn	**Pn**	**20 44 44.4**	**-0.2**		
	comp=N,0.2nm,0.3s,baz=129,slow=11,SNR=4.0								
BVAR				Sn	**Sn**	**20 47 02.4**	**-2.0**		
	comp=N,0.7nm,0.3s,baz=124,slow=21,SNR=4.2								
BVAR				Lg		20 48 28.3			
	comp=N,0.7nm,0.3s,baz=125,slow=25,SNR=5.3								
BRVK	**Borovoye**	**12.63**	**320**	*e*P	**Pn**	**20 44 45.5**	**0.0**		
LGTI	**Lohaghat**	**14.98**	**192**	*e*P	**Pn**	**20 45 16.5**	**-1.3**		
LSA	**Lhasa**	**15.56**	**156**	*e*P	**Pn**	**20 45 28.6**	**+3.1**		
	comp=N,4.0nm,0.8s								
LSA	**Lhasa**	**15.56**	**156**	*e*P	**Pn**	**20 45 28.6**	**+3.2**		
LSA				pmax	pmax				
	comp=Z,4.0nm,0.8s								
SONM	**Songino Array**	**16.05**	**69**	Pn	**Pn**	**20 45 30.2**	**-1.4**		
	comp=Z,0.1nm,0.3s,baz=260,slow=17,SNR=3.5								
SONM				Lg		20 50 05.8			
	comp=Z,0.1nm,0.3s,baz=271,slow=29,SNR=3.1								
AB31	**Akbulak array**	**17.16**	**296**	P	**Pn**	**20 45 43.4**	**-2.3**		
	comp=Z,0.7nm,0.3s,baz=100,slow=7.6,SNR=16								
AB31	**Akbulak array**	**17.16**	**296**	P	**Pn**	**20 45 43.8**	**-1.9**		
AB31				pmax	pmax				
	comp=Z,2.0nm,0.4s								
AKTK	**Aktyubinsk**	**18.57**	**299**	P	**Pn**	**20 46 03.8**	**+0.7**		
AKTK				S	**Sn**	**20 49 23.0**	**-7.6**		
AKTK				Lg		20 51 38.3			
AKTO	**Aktyubinsk**	**18.57**	**299**	⇑P	**Pn**	**20 46 02.2**	**-0.9**		
	comp=Z,1.0nm,1.2s								
AKTO	**Aktyubinsk**	**18.57**	**299**	P	**Pn**	**20 46 03.8**	**+0.7**		
	comp=Z,0.2nm,0.3s,baz=91,slow=13,SNR=4.1								
AKTO				S	**Sn**	**20 49 23.0**	**-7.6**		
	comp=Z,0.1nm,0.3s,baz=118,slow=18,SNR=3.0								
AKTO				Lg		20 51 38.3			
	comp=Z,0.1nm,0.3s,baz=60,slow=20,SNR=3.8								
AKTO	**Aktyubinsk**	**18.57**	**299**	P	**Pn**	**20 46 03.8**	**+0.7**		
AKTO				S	**Sn**	**20 49 23.0**	**-7.6**		
BOD	**Bodaibo**	**23.11**	**43**	*e*P	**P**	**20 46 54.0**	**+2.2**		
BOD				pmax	pmax				
	comp=Z,4.0nm,1.8s,mb3.5								
CMAR	**Chiang Mai Arr**	**28.59**	**149**	P	**P**	**20 47 39.0**	**-3.2**		
	comp=Z,0.5nm,0.7s,mb3.4,baz=330,slow=8.3,SNR=4.7								
CMAR				pP	pP	20 47 46.3	+1.0		
	comp=Z,1.6nm,0.8s,baz=326,slow=9.1,SNR=9.1								
CMAR	**Chiang Mai Arr**	**28.59**	**149**	P	**P**	**20 47 39.1**	**-3.2**		
CMAR				*PP	pP	20 47 46.3	+1.0		
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.9s								
BRTR	**Keskin Array B**	**37.16**	**281**	P	**P**	**20 48 56.9**	**0.0**		
	comp=Z,0.7nm,0.6s,mb3.6,baz=74,slow=7.9,SNR=3.3								
BRTR	**Keskin Array B**	**37.16**	**281**	P	**P**	**20 48 56.9**	**0.0**		
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.6s								
ARCES	**ARCESS Array B**	**38.48**	**331**	P	**P**	**20 49 07.3**	**-0.4**		
	comp=Z,2.5nm,0.9s,mb3.9,baz=70,slow=10,SNR=3.7								
ARCES				pP	pP	20 49 15.2	+4.4		
	comp=Z,2.2nm,0.8s,baz=97,slow=8.7,SNR=2.0								
ARCES	**ARCESS Array B**	**38.48**	**331**	P	**P**	**20 49 07.4**	**-0.4**		
ARCES				*PP	pP	20 49 15.2	+4.4		
ARCES				pmax	pmax				
	comp=Z,3.0nm,0.9s								
ARCES				pmax	pmax				
	comp=Z,2.0nm,0.8s								
NOA	**NORSAR Array B**	**44.69**	**319**	P	**P**	**20 49 58.1**	**-0.6**		
	comp=Z,0.9nm,0.8s,mb3.7,baz=78,slow=8.2,SNR=3.3								
NOA	**NORSAR Array B**	**44.69**	**319**	P	**P**	**20 49 58.1**	**-0.5**		
NOA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
PETK	**Petropavlovsk-**	**47.55**	**52**	LR	LR	21 10 48.5			
	comp=Z,29nm,18.2s,baz=255,slow=37								
TORD	**Torodi Ar. Bea**	**75.39**	**274**	P	**P**	**20 53 27.7**	**-2.4**		
	comp=Z,0.9nm,0.7s,mb3.8,baz=43,slow=4.9,SNR=19								
TORD				pP	pP	20 53 36.4	+3.1		
	comp=Z,0.6nm,0.5s,baz=58,slow=5.5,SNR=5.9								
TORD	**Torodi Ar. Bea**	**75.39**	**274**	P	**P**	**20 53 27.7**	**-2.4**		
TORD				pP	pP	20 53 36.4	+3.1		
WRA	**Warramunga Arr**	**78.72**	**132**	P	**P**	**20 53 44.8**	**-3.7**		
	comp=Z,0.4nm,0.7s,mb3.5,baz=329,slow=5.2,SNR=3.8								
WRA				pP	pP	20 53 53.6	+1.8		
	comp=Z,0.5nm,0.5s,baz=330,slow=4.6,SNR=3.9								
WRA	**Warramunga Arr**	**78.72**	**132**	P	**P**	**20 53 44.8**	**-3.7**		
WRA				*PP	pP	20 53 53.6	+1.8		
WRA				pmax	pmax				
	comp=Z,1.0nm,0.5s								
ASAR	**Alice Springs**	**81.56**	**135**	P	**P**	**20 54 00.7**	**-3.2**		
	comp=Z,0.3nm,0.6s,mb3.4,baz=320,slow=5.1,SNR=3.1								
ASAR				pP	pP	20 54 08.3	+1.3		
	comp=Z,0.5nm,0.7s,baz=332,slow=4.8,SNR=4.5								
ASAR	**Alice Springs**	**81.56**	**135**	P	**P**	**20 54 00.7**	**-3.1**		
ASAR				*PP	pP	20 54 08.4	+1.4		
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								

IDC 07** 21:22:47.7±3.0, **243N**×**12825E**, **h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/15, **mbtmp3.2**/3, **Error ellipse: s-maj=247.1km s-min=26.1km az=68.0**, **Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.02**	**165**	P	P	21 27 53.7	-0.8
	0.2nm,0.4s,baz=344,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**26.51**	**168**	P	P	21 28 27.7	+0.6
	0.1nm,0.3s,baz=345,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**59.48**	**325**	P	P	21 32 52.8	+0.2
	0.2nm,0.4s,baz=118,slow=7.4,SNR=8.1						

*ISK **07** 21:36:38.9, 3822N×2649E, h5km, MD3.7, ML3.8*
*ISCJB **07** 21:36:39.5±0.5, 3824N±002×2647E±002, h8km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=143.9*
*THE **07** 21:36:39.4, 3823N×2661E, h2km±1km, ML4.2/5, Error ellipse: s-maj=1.5km s-min=0.6km az=210.0*
*CSEM **07** 21:36:39.3±0.0, 3823N×2651E, h8km, MD3.6, Error ellipse: s-maj=1.2km s-min=1.1km az=33.0*
*NEIC **07** 21:36:40.0, 3820N×2663E, h5km, MD4.0(ATH), ML3.6(ISK), ML4.2(THE), After ISK.*
*ATH **07** 21:36:40.2, 3827N×2653E, h30km±2km, MD4.0/14*
*DDA **07** 21:36:40.6, 3826N×2656E, h9km±2km, Md3.6*
*SOF **07** 21:36:43.8, 3876N×2652E, h2km, MD3.8*

ISC 07 21:36:40.4±0.4, 3824N±002×2649E±002, h7km±3km, n126, σ0§99/154, 7C-9D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.15**	**33**	*i* P	**Pg**	**21 36 43.3**	**-0.2**
URLA				*i* S	**Sg**	**21 36 45.7**	**+0.1**
CHOS	**Chios island**	**0.38**	**294**	P	**Pg**	**21 36 48.6**	**+0.9**
CHOS				S	**Sg**	**21 36 55.5**	**+2.8**
BLCB	**Balcova**	**0.46**	**71**	PG	**Pg**	**21 36 48.5**	**-0.7**
BLCB				SG	**Sg**	**21 36 55.0**	**-0.3**
SMG	**Samos**	**0.59**	**153**	*e*PN	**Pg**	**21 36 52.1**	**+0.3**
SMG				*e*SN	**Sg**	**21 37 02.5**	**+3.0**
IZM	**Izmir**	**0.63**	**75**	PG	**Pg**	**21 36 52.2**	**-0.3**
KDAG	**Bornova**	**0.63**	**74**	*i* P	**Pg**	**21 36 52.2**	**-0.4**
KDAG				*i* S	**Sg**	**21 37 01.5**	**+0.7**
GCAM	**G?zelcaml?**	**0.79**	**132**	*i* P	**Pg**	**21 36 55.6**	**0.0**
GCAM				*i* S	**Sg**	**21 37 07.1**	**+1.1**
PRK	**Paraskevi**	**1.02**	**350**	P	**Pg**	**21 36 59.0**	**-1.1**
PRK				S	**Sg**	**21 37 14.0**	**+0.6**
PRK	**Paraskevi**	**1.02**	**350**	*e*Pn	**Pg**	**21 36 59.0**	**-1.1**
PRK				*e*Sn	**Sn**	**21 37 13.8**	**-2.0**
PRK				S	**Sg**	**21 37 14.0**	**+0.6**
PRK	**Paraskevi**	**1.02**	**350**	*e*PN	**Pg**	**21 36 59.0**	**-1.1**
PRK				*e*SN	**Sn**	**21 37 13.8**	**-2.0**
AYVA	**Ayvalik**	**1.08**	**8**	*i* P	**Pg**	**21 37 00.4**	**-0.8**
AYVA				*i* S	**Sg**	**21 37 16.5**	**+1.3**
AKS	**Akhisar**	**1.22**	**58**	PN	**Pg**	**21 37 02.4**	**-1.4**
AKHS	**Akhisar**	**1.22**	**58**	*i* P	**Pg**	**21 37 02.3**	**-1.5**
AKHS				*i* S	**Sg**	**21 37 19.1**	**-0.5**
AKHS	**Akhisar**	**1.22**	**58**	*i* P	**Pg**	**21 37 02.3**	**-1.5**
AKHS				*i* S	**Sg**	**21 37 19.1**	**-0.5**
AYDN	**Tasoluk**	**1.24**	**117**	*i* P	**Pb**	**21 37 03.1**	**-0.9**
AYDN				*i* S	**Sg**	**21 37 19.7**	**-0.4**
BODT	**Bodrum**	**1.34**	**151**	*e*PN	**Pn**	**21 37 04.7**	**-0.8**
MLSB	**Milas**	**1.39**	**132**	*e*PN	**Pn**	**21 37 05.1**	**-1.0**
MLSB				*e*SN	**Sn**	**21 37 25.3**	**+0.6**
BDRM	**Kayabasi**	**1.39**	**147**	*i* P	**Pn**	**21 37 05.6**	**-0.6**
BDRM				*i* S	**Sb**	**21 37 28.1**	**+3.5**
APE	**Apeiranthos**	**1.39**	**214**	P	**Pn**	**21 37 04.7**	**-1.5**
APE	**Apeiranthos**	**1.39**	**214**	*e*PB	**Pn**	**21 37 05.5**	**-0.7**
APE	**Apeiranthos**	**1.39**	**214**	P	**Pn**	**21 37 04.7**	**-1.5**
APE	**Apeiranthos**	**1.39**	**214**	*e*Pb	**Pb**	**21 37 05.1**	**-1.6**
APE	**Apeiranthos**	**1.39**	**214**	*i*P	**Pn**	**21 37 05.5**	**-0.7**
BOZC	**Bozcaada**	**1.64**	**348**	*i* P	**Sn**	**21 37 30.8**	**-1.4**
BOZC				*i* S	**Sn**	**21 37 30.8**	**-0.2**
MANT	**Manisa**	**1.64**	**80**	*i* P	**Pn**	**21 37 10.8**	**+1.1**
MANT				*i* S	**Sn**	**21 37 31.6**	**+0.6**
KULA	**Kula-Manisa**	**1.73**	**80**	*e*PN	**Pn**	**21 37 10.4**	**-0.4**
DAT	**Datca**	**1.73**	**150**	*e*PN	**Pn**	**21 37 10.1**	**-0.8**
BALY	**Balya**	**1.74**	**30**	*i* P	**Pn**	**21 37 12.3**	**+1.3**
BALY				*i* S	**Sn**	**21 37 37.0**	**+3.6**
DEMI	**Demirci**	**1.92**	**64**	*i* P	**Pn**	**21 37 12.3**	**-1.2**
LIA	**Limnos Island**	**1.95**	**329**	P	**Pn**	**21 37 13.1**	**-0.8**
LIA				S	**Sn**	**21 37 39.0**	**+0.4**
LIA	**Limnos Island**	**1.95**	**329**	*e*Pn	**Pn**	**21 37 13.1**	**-0.8**
LIA				S	**Sn**	**21 37 39.0**	**+0.4**
THR4	**Thira Island,**	**1.98**	**207**	P	**Pn**	**21 37 13.4**	**-0.8**
GADA	**Gvkgeada**	**2.01**	**347**	*e*PN	**Pn**	**21 37 13.9**	**-0.8**
THR3	**Thira Island,**	**2.02**	**206**	P	**Pn**	**21 37 14.0**	**-0.9**
THR1	**Thera Island**	**2.04**	**204**	P	**Pn**	**21 37 14.0**	**-1.1**
DENT	**Denizli**	**2.06**	**103**	*e*PN	**Pn**	**21 37 15.2**	**-0.3**
THR6	**Thira Island,**	**2.07**	**205**	P	**Pn**	**21 37 14.8**	**-0.7**
DST	**Dursunbey**	**2.15**	**50**	*e*PN	**Pn**	**21 37 16.6**	**-0.1**
TURN	**Turunc**	**2.16**	**128**	*i* P	**Pn**	**21 37 14.3**	**-2.5**
DALT	**Dalyan (Mudla)**	**2.25**	**130**	*e*PN	**Pn**	**21 37 17.6**	**-0.4**
EDC	**Edincik**	**2.36**	**26**	*e*PN	**Pn**	**21 37 19.8**	**+0.2**
KHL	**Karahalli**	**2.39**	**87**	*e*PN	**Pn**	**21 37 20.2**	**+0.3**
BNT	**Bandirma**	**2.39**	**27**	*e*PN	**Pn**	**21 37 19.9**	**-0.1**
ARG	**Arkhangelos**	**2.40**	**147**	*e*PN	**Pn**	**21 37 20.0**	**-0.1**
GDZ	**Gediz**	**2.49**	**69**	*i* P	**Pn**	**21 37 25.9**	**+4.5**
RKY	**Sarkoy-Tekirda**	**2.50**	**12**	*e*PN	**Pn**	**21 37 22.1**	**+0.6**
ENEZ	**Enez**	**2.51**	**354**	*e*PN	**Pn**	**21 37 21.6**	**-0.1**
MRMT	**Marmara Adasi**	**2.51**	**20**	*e*PN	**Pn**	**21 37 20.9**	**-0.8**
FETY	**Fethiye**	**2.61**	**127**	*e*PN	**Pn**	**21 37 22.0**	**-1.0**
MFT	**Murefte**	**2.62**	**13**	*e*PN	**Pn**	**21 37 22.8**	**-0.3**
GOLH	**Golhisar**	**2.63**	**111**	*i* P	**Pn**	**21 37 23.9**	**+0.7**
DID	**Didima**	**2.68**	**255**	P	**Pn**	**21 37 23.6**	**-0.3**
DID				S	**Sn**	**21 37 59.4**	**+3.3**
ALN	**Alexandroupoli**	**2.68**	**353**	P	**Pn**	**21 37 22.8**	**-1.1**
ALN				S	**Sn**	**21 37 56.4**	**-0.2**
KARP	**Karpathos**	**2.74**	**168**	*e*PN	**Pn**	**21 37 24.0**	**-0.7**
PAIG	**Paliouri**	**2.77**	**309**	P	**Pn**	**21 37 24.8**	**-0.3**
PAIG				S	**Sn**	**21 38 00.7**	**+2.0**
PAIG	**Paliouri**	**2.77**	**309**	P	**Pn**	**21 37 24.8**	**-0.3**
PAIG				S	**Sn**	**21 38 00.0**	**+1.3**
NEO	**Neokhori**	**2.77**	**294**	*e*PN	**Pn**	**21 37 24.9**	**-0.3**
LKR	**Lokris**	**2.77**	**280**	P	**Pn**	**21 37 25.3**	**+0.1**
LKR	**Lokris**	**2.77**	**280**	*e*PN	**Pn**	**21 37 25.3**	**+0.1**
LTK	**Loutraki**	**2.79**	**267**	P	**Pn**	**21 37 25.1**	**-0.3**
ULDT	**Uludag**	**2.80**	**46**	*i* P	**Pn**	**21 37 32.2**	**+6.6**
OUR	**Ouranopolis**	**2.86**	**318**	P	**Pn**	**21 37 26.3**	**-0.1**
TKR	**Tekirdag**	**2.87**	**16**	*e*PN	**Pn**	**21 37 26.1**	**-0.4**
ALT	**Altintas**	**2.95**	**73**	*e*PN	**Pn**	**21 37 27.0**	**-0.6**
RDO	**Rodhopi**	**3.00**	**346**	*e*PN	**Pn**	**21 37 27.5**	**-0.8**
CRLT	**Corlu**	**3.04**	**18**	*e*PN	**Pn**	**21 37 29.3**	**+0.4**
ELL	**Elmali**	**3.10**	**118**	*e*PN	**Pn**	**21 37 30.6**	**+1.1**
PLG	**Polygyros**	**3.19**	**313**	P	**Pn**	**21 37 30.5**	**-0.4**
PLG	**Polygyros**	**3.19**	**313**	*e*PN	**Pn**	**21 37 30.4**	**-0.5**
SHUT	**Suhut-Afyon**	**3.21**	**83**	*e*PN	**Pn**	**21 37 31.3**	**+0.2**
VLI	**Veliai**	**3.21**	**243**	*e*PN	**Pn**	**21 37 32.0**	**+0.8**
YLV	**Yalova**	**3.22**	**43**	*e*PN	**Pn**	**21 37 32.8**	**+1.4**
CAVI	**Cavuskoy**	**3.26**	**52**	*e*PN	**Pn**	**21 37 33.3**	**+1.4**
CTT	**Catalca**	**3.27**	**27**	*e*PN	**Pn**	**21 37 32.6**	**+0.6**
SLVT	**Silivri**	**3.27**	**23**	*e*PN	**Pn**	**21 37 33.3**	**+1.2**
BCK	**Bucak**	**3.33**	**102**	*e*PN	**Pn**	**21 37 33.5**	**+0.6**
ADVT	**Abdulvahap**	**3.34**	**48**	*e*PN	**Pn**	**21 37 34.0**	**+1.0**
AGG	**Agios Georgios**	**3.35**	**285**	P	**Pn**	**21 37 33.9**	**+0.7**
VAM	**Vamos**	**3.37**	**214**	*e*Pb	**Pb**	**21 37 36.6**	**-3.8**
VAM	**Vamos**	**3.37**	**214**	*e*PN	**Pn**	**21 37 34.6**	**+1.2**
VLX	**Vlachokerasia**	**3.37**	**256**	P	**Pn**	**21 37 33.8**	**+0.4**
CTKS	**Kestanelik-??a**	**3.38**	**27**	*e*PN	**Pn**	**21 37 34.6**	**+1.1**
BGKT	**Bogazkoy**	**3.43**	**30**	*e*PN	**Pn**	**21 37 35.2**	**+1.0**
ISK	**Istanbul-Kandi**	**3.45**	**34**	*e*PN	**Pn**	**21 37 35.2**	**+0.7**
KDZ	**Kurdzhali**	**3.51**	**347**	*i* P	**Pn**	**21 37 33.8**	**-1.5**
KDZ				*e*S	**Sn**	**21 38 15.2**	**-1.9**
CTYL	**Yal??k??y-??at**	**3.52**	**23**	*e*PN	**Pn**	**21 37 35.9**	**+0.4**
SOH	**Sokhos**	**3.54**	**318**	P	**Pn**	**21 37 35.9**	**+0.1**
SOH	**Sokhos**	**3.54**	**318**	*e*P	**Pn**	**21 37 39.7**	**+3.9**
KLYT	**Kilyos**	**3.60**	**32**	*e*PN	**Pn**	**21 37 37.9**	**+1.3**
RZN	**Rozhen**	**3.71**	**339**	*i* P	**Pn**	**21 37 37.4**	**-0.7**
RZN				S	**Sn**	**21 38 17.9**	**-4.1**
NVR	**Nevrokopi**	**3.71**	**328**	*e*PN	**Pn**	**21 37 37.8**	**-0.3**
EVR	**Evrytania**	**3.73**	**282**	*e*PN	**Pn**	**21 37 40.0**	**+1.6**
THL	**Klokotos Trika**	**3.74**	**292**	*e*PN	**Pn**	**21 37 39.1**	**+0.6**
ITM	**Ithomi**	**3.77**	**255**	*e*PN	**Pn**	**21 37 40.6**	**+1.7**
SILT	**Sile**	**3.79**	**39**	*e*PN	**Pn**	**21 37 39.8**	**+0.6**
GULT	**Gulveren**	**3.81**	**54**	*e*PN	**Pn**	**21 37 40.9**	**+1.4**
RLS	**Riolos of Patr**	**3.97**	**269**	*e*Pn	**Pn**	**21 37 44.2**	**+2.6**
MMB	**Musomiste**	**3.97**	**328**	*e*P	**Pn**	**21 37 41.6**	**0.0**
PLD	**Plovdiv**	**4.10**	**341**	P	**Pn**	**21 37 43.7**	**+0.2**
JMB	**Yambol**	**4.23**	**1**	*e*P	**Pn**	**21 37 44.9**	**-0.3**
JMB				*e*S	**Sg**	**21 38 52.8**	**-3.3**
KIZT	**Kizilcal**	**4.27**	**80**	*e*PN	**Pn**	**21 37 47.0**	**+1.2**
MDU	**Mudurnu**	**4.28**	**57**	*e*PN	**Pn**	**21 37 47.1**	**+1.2**
VAY	**Valandovo**	**4.32**	**317**	*e*Pn	**Pn**	**21 37 45.6**	**-0.8**
VAY	**Valandovo**	**4.32**	**317**	*e*PN	**Pn**	**21 37 45.7**	**-0.7**
VAY	**Valandovo**	**4.32**	**317**	*e*P	**Pn**	**21 37 42.7**	**-3.7**
KKB	**Krupnik**	**4.47**	**325**	*i* P	**Pn**	**21 37 48.5**	**-0.1**
PGB	**Panagyurishte**	**4.66**	**338**	*e*P	**Pn**	**21 37 51.0**	**-0.2**
BIA	**Bitola**	**4.86**	**306**	*e*Pn	**Pn**	**21 37 48.8**	**-5.1**
PRD	**Provadia**	**5.01**	**8**	*i* P	**Pn**	**21 37 54.7**	**-1.2**
VTS	**Vitosha**	**5.02**	**331**	⇓P	**Pn**	**21 37 57.0**	**+0.9**
VTS	**Vitosha**	**5.02**	**331**	*e*P	**Pn**	**21 37 57.0**	**+0.9**
VTS	**Vitosha**	**5.02**	**331**	⇓*i*P	**Pn**	**21 37 57.0**	**+0.9**
NEF	**NEVSHA**	**5.06**	**6**	*e*P	**Pn**	**21 37 55.3**	**-1.3**
MLR	**Muntele Rosu**	**7.26**	**357**	⇓P	**Pn**	**21 38 27.5**	**+0.7**
MLR	**Muntele Rosu**	**7.26**	**357**	⇓*i*P	**Pn**	**21 38 27.5**	**+0.7**
VOIR		**7.28**	**352**	⇓*i*P	**Pn**	**21 38 25.7**	**-1.4**
VRI	**Vrincioaia**	**7.63**	**1**	⇓P	**Pn**	**21 38 33.1**	**+1.2**

BALY					*i*	S	**Sn**	**21 48 53.8**	**+1.0**
KULA	**Kula-Manisa**	**1.73**	**81**		*e*	PN	**Pn**	**21 48 30.3**	**-0.2**

ATH ***07*** *21:52:01.1, 3806N×2591E, h10km, MD3.6/3*
ISCJB ***07*** *21:52:03.6±1.3, 3826N±004×2645E±007, h1km±10km, Error ellipse: s-maj=10.0km s-min=5.9km az=152.1*
CSEM ***07*** *21:52:04.9±0.2, 3828N×2660E, h10km, MD2.8, Error ellipse: s-maj=5.5km s-min=3.7km az=45.0*
DDA ***07*** *21:52:04.8, 3825N×2651E, h8km±4km, Md2.8*
ISK ***07*** *21:52:07.4, 3861N×2684E, h5km, MD2.6*
ISC 07 21:52:04.0±1.4**, 3824N**±004×**2644E**±009**, h5**km±11km**, n14,** σ0**93**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.17**	**45**	*i* P		**Pg**	**21 52 07.8**	**+0.4**
URLA				*i* S		**Sg**	**21 52 20.7**	**+11**
URLA	**Izmir**	**0.17**	**45**	*i* P		**Pg**	**21 52 07.8**	**+0.4**
BLCB	**Balcova**	**0.50**	**73**	*e* PG		**Sg**	**21 52 13.2**	**-0.3**
BLCB				*e* SG		**Sg**	**21 52 18.9**	**-1.1**
SMG	**Samos**	**0.61**	**149**	*e* PB		**Pb**	**21 52 16.5**	**-0.7**
IZM	**Izmir**	**0.67**	**76**	*e* PG		**Pg**	**21 52 16.3**	**-0.5**
IZM				*e* SG		**Sg**	**21 52 23.1**	**-2.4**
KDAG	**Bornova**	**0.67**	**76**	*i* P		**Pg**	**21 52 16.3**	**-0.6**
KDAG				*i* S		**Sg**	**21 52 27.3**	**+1.7**
GCAM	**G?zelcaml?**	**0.83**	**130**	*i* P		**Pg**	**21 52 20.1**	**+0.3**
GCAM				*i* S		**Sg**	**21 52 31.8**	**+1.3**
PRK	**Paraskevi**	**1.02**	**353**	*e* PB		**Pb**	**21 52 24.0**	**0.0**
AKS	**Akhisar**	**1.25**	**59**	*e* PG		**Pn**	**21 52 23.4**	**-4.7**
AYDN	**Tasoluk**	**1.28**	**116**	*i* P		**Pn**	**21 52 28.5**	**+0.1**
AYDN				*i* S		**Sg**	**21 52 44.8**	**-0.2**
EZN	**Ezine**	**1.59**	**357**	*e* PN		**Pn**	**21 52 33.5**	**+0.8**
BALY	**Balya**	**1.76**	**31**	*i* P		**Pg**	**21 52 38.1**	**+0.4**
BALY				*i* S		**Sg**	**21 53 01.6**	**+1.0**
KULA	**Kula-Manisa**	**1.77**	**80**	*e* PN		**Pn**	**21 52 35.9**	**+0.7**
LIA	**Limnos Island**	**1.93**	**330**	*e* PN		**Pn**	**21 52 36.0**	**-1.3**

SKO ***07*** *21:54:25.6, 4001N×2148E, h12km, M1.9, ML2.0*
CSEM ***07*** *21:54:25.0±0.5, 4008N×2145E, h25km, ML2.6/4, Error ellipse: s-maj=12.2km s-min=5.6km az=59.0*
ISCJB ***07*** *21:54:26.7±1.0, 4008N±005×2149E±008, h17km±12km, Error ellipse: s-maj=11.9km s-min=5.6km az=147.6*
THE ***07*** *21:54:26.4, 4012N×2154E, h0km±2km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=0.5km az=248.0*
ISC 07 21:54:26.3±1.1**, 4010N**±005×**2150E**±008**, h13**km±10km**, n10,** σ0**88**/16**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.66**	**143**	P		**Pg**	**21 54 39.2**	**0.0**
THL				S		**Sg**	**21 54 48.9**	**+1.0**
FNA	**Florina**	**0.69**	**352**	P		**Pg**	**21 54 39.0**	**-0.8**
FNA				S		**Sg**	**21 54 49.4**	**+0.5**
LIT	**Litokhoron**	**0.76**	**89**	P		**Pg**	**21 54 40.4**	**-0.6**
LIT				S		**Sg**	**21 54 51.1**	**+0.2**
BIA	**Bitola**	**0.93**	**352**	*e* Pg		**Pg**	**21 54 42.6**	**-1.7**
BIA				*e* Sg		**Sg**	**21 54 57.1**	**+0.7**
BIA				*e* Lg			21 54 57.8	
	comp=E,21nm,0.2s							
BIA				*e* Lg			21 54 57.9	
	comp=N,23nm,0.4s							
GRG	**Griva**	**1.10**	**38**	P		**Pb**	**21 54 46.0**	**-1.1**
GRG				S		**Sb**	**21 55 02.0**	**+0.7**
OHR	**Ohrid**	**1.15**	**332**	*e* Sg		**Sg**	**21 55 05.0**	**+1.7**
OHR	**Ohrid**	**1.15**	**332**	*e* Pg		**Pg**	**21 54 47.5**	**-0.8**
OHR				*e* Sg		**Sg**	**21 55 05.1**	**+1.8**
OHR				*e* Lg			21 55 05.7	
	comp=N,22nm,0.5s							
OHR				*e* Lg			21 55 06.3	
	comp=E,38nm,0.3s							
VAY	**Valandovo**	**1.47**	**33**	*e* Pg		**Pg**	**21 54 54.1**	**-0.4**
VAY	**Valandovo**	**1.47**	**33**	*e* Pg		**Pg**	**21 54 54.2**	**-0.3**
KNT	**Kendrikon**	**1.50**	**45**	P		**Pn**	**21 54 53.4**	**+0.5**

ATH ***07*** *22:00:37.8, 3822N×2634E, h24km±3km, MD3.5/6*
ISK ***07*** *22:00:37.9, 3828N×2650E, h5km, MD3.2*
CSEM ***07*** *22:00:37.5±0.1, 3828N×2647E, h5km, MD3.2, Error ellipse: s-maj=2.9km s-min=1.5km az=68.0*
ISCJB ***07*** *22:00:37.6±0.6, 3823N±002×2645E±003, h7km±4km, Error ellipse: s-maj=4.1km s-min=3.0km az=161.6*
DDA ***07*** *22:00:39.0, 3828N×2656E, h12km±1km, Md3.2*
THE ***07*** *22:00:39.8, 3822N×2641E, h23km±4km, ML3.8/2, Error ellipse: s-maj=7.1km s-min=1.0km az=271.0*
NEIC ***07*** *22:00:39.8, 3822N×2641E, h23km, MD3.5(ATH), MD3.2(ISK), ML3.8(THE), After THE.*
ISC 07 22:00:38.1±0.5**, 3824N**±002×**2645E**±003**, h5**km±3km**, n48,** σ1**00**/70**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**44**	*i* P		**Pg**	**22 00 41.7**	**+0.3**
URLA				*i* S		**Sg**	**22 00 43.8**	**+0.3**
CHOS	**Chios island**	**0.34**	**295**	P		**Pg**	**22 00 46.9**	**+2.2**
CHOS				S		**Sg**	**22 00 52.4**	**+3.2**
BLCB	**Balcova**	**0.49**	**73**	PG		**Pg**	**22 00 47.0**	**-0.4**
BLCB				*e* SG		**Sg**	**22 00 53.2**	**-0.6**
SMG	**Samos**	**0.61**	**150**	*e* PN		**Pg**	**22 00 50.4**	**+0.5**
SMG				*e* SN		**Sg**	**22 01 00.5**	**+2.6**
IZM	**Izmir**	**0.66**	**76**	PG		**Pg**	**22 00 50.3**	**-0.4**
KDAG	**Bornova**	**0.66**	**76**	*i* P		**Pg**	**22 00 50.5**	**-0.3**
KDAG				*i* S		**Sg**	**22 00 59.2**	**-0.2**
GCAM	**G?zelcaml?**	**0.82**	**131**	*i* P		**Pg**	**22 00 54.1**	**+0.3**
GCAM				*i* S		**Sg**	**22 01 04.9**	**+0.4**
PRK	**Paraskevi**	**1.01**	**352**	P		**Pg**	**22 00 57.4**	**-0.1**
PRK				S		**Sg**	**22 01 10.9**	**+0.3**
PRK	**Paraskevi**	**1.01**	**352**	*e* Pn		**Pn**	**22 00 57.3**	**-1.6**
PRK				S		**Sg**	**22 01 10.9**	**+0.3**
PRK				*e* Sn		**Sn**	**22 01 12.0**	**-1.5**
AYVA	**Ayvalik**	**1.08**	**10**	*i* P		**Pg**	**22 00 58.2**	**-0.5**
AYVA				*i* S		**Sg**	**22 01 13.6**	**+0.8**
AYVA	**Ayvalik**	**1.08**	**10**	*i* P		**Pg**	**22 00 58.2**	**-0.6**
AYVA				*i* S		**Sg**	**22 01 13.6**	**+0.8**
AKS	**Akhisar**	**1.24**	**59**	*e* PN		**Pn**	**22 01 00.7**	**-1.3**
AKHS	**Akhisar**	**1.24**	**59**	*i* P		**Pg**	**22 01 00.4**	**-1.5**
AKHS				*i* S		**Sg**	**22 01 16.8**	**-1.3**
AYDN	**Tasoluk**	**1.27**	**117**	*i* P		**Pg**	**22 01 01.8**	**-0.7**
AYDN				*i* S		**Sg**	**22 01 16.9**	**-2.0**
BODT	**Bodrum**	**1.36**	**150**	*e* PN		**Pn**	**22 01 03.8**	**+0.1**
BODT				*e* SN		**Sn**	**22 01 23.4**	**+1.3**
APE	**Apeiranthos**	**1.38**	**212**	P		**Pn**	**22 01 02.1**	**-1.8**
APE	**Apeiranthos**	**1.38**	**212**	*e* PN		**Pn**	**22 01 02.7**	**-1.2**
MLSB	**Milas**	**1.41**	**132**	*e* PN		**Pn**	**22 01 05.2**	**+0.8**
BDRM	**Kayabasi**	**1.42**	**146**	*i* P		**Pn**	**22 01 03.9**	**-0.6**
BDRM				*i* S		**Sb**	**22 01 22.4**	**-0.9**
EZN	**Ezine**	**1.58**	**357**	*e* PN		**Pn**	**22 01 06.4**	**-0.3**
BOZC	**Bozcaada**	**1.63**	**349**	*i* P		**Pn**	**22 01 06.3**	**-1.0**
BOZC				*i* S		**Sn**	**22 01 28.8**	**+0.2**
MANT	**Manisa**	**1.68**	**81**	*i* P		**Pn**	**22 01 08.6**	**+0.6**
MANT				*i* S		**Sn**	**22 01 30.1**	**+0.3**
BALY	**Balya**	**1.75**	**31**	*i* P		**Pn**	**22 01 11.2**	**+2.2**
BALY				*i* S		**Sn**	**22 01 33.0**	**+1.3**
DAT	**Datca**	**1.76**	**149**	*e* PN		**Pn**	**22 01 10.1**	**+1.0**
KULA	**Kula-Manisa**	**1.76**	**80**	*e* PN		**Pn**	**22 01 09.7**	**+0.5**
LIA	**Limnos Island**	**1.92**	**330**	*e* PN		**Pn**	**22 01 11.3**	**-0.1**
DEMI	**Demirci**	**1.94**	**65**	*i* P		**Pn**	**22 01 13.2**	**+1.5**
DEMI				*i* S		**Sn**	**22 01 36.5**	**+0.1**
DEMI	**Demirci**	**1.94**	**65**	*i* P		**Pn**	**22 01 13.2**	**+1.5**
DEMI				*i* S		**Sn**	**22 01 36.5**	**0.0**
THR4	**Thira Island,**	**1.97**	**206**	P		**Pn**	**22 01 10.8**	**-1.2**
GADA	**Gvkgeada**	**1.99**	**348**	*e* PN		**Pn**	**22 01 12.4**	**+0.1**
THR3	**Thira Island,**	**2.01**	**205**	P		**Pn**	**22 01 11.2**	**-1.4**
THR1	**Thera Island**	**2.03**	**203**	P		**Pn**	**22 01 10.8**	**-2.1**
DST	**Dursunbey**	**2.18**	**51**	*e* PN		**Pn**	**22 01 14.2**	**-0.6**
TURN	**Turunc**	**2.19**	**128**	*i* P		**Pn**	**22 01 10.8**	**-4.2**
DALT	**Dalyan (Mudla)**	**2.28**	**130**	*e* PN		**Pn**	**22 01 17.0**	**+0.7**
BNT	**Bandirma**	**2.40**	**28**	*e* PN		**Pn**	**22 01 16.0**	**+0.1**
KHL	**Karahalli**	**2.42**	**87**	*e* PN		**Pn**	**22 01 18.4**	**+0.1**
ARG	**Arkhangelos**	**2.43**	**146**	*e* PN		**Pn**	**22 01 18.4**	**+0.1**
ENEZ	**Enez**	**2.50**	**355**	*e* PN		**Pn**	**22 01 19.8**	**+0.4**
KCT	**Karacabey**	**2.50**	**36**	*e* PN		**Pn**	**22 01 19.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.50**	**13**	*e* PN		**Pn**	**22 01 19.8**	**+0.3**
FETY	**Fethiye**	**2.64**	**127**	*e* PN		**Pn**	**22 01 22.5**	**+1.3**
ALN	**Alexandroupoli**	**2.67**	**353**	P		**Pn**	**22 01 21.1**	**-0.6**
ALN				S		**Sn**	**22 01 53.3**	**-1.0**
ULDT	**Uludag**	**2.82**	**47**	*i* P		**Pn**	**22 01 30.2**	**+6.5**
ULDT				*i* S		**Sn**	**22 02 06.1**	**+8.1**
RDO	**Rodhopi**	**2.98**	**347**	*e* PN		**Pn**	**22 01 25.8**	**-0.2**
YLV	**Yalova**	**3.24**	**43**	*e* PN		**Pn**	**22 01 30.5**	**+0.9**
EDRB	**Edirne**	**3.61**	**3**	*e* PN		**Pn**	**22 01 35.4**	**+0.8**
GULT	**Gulveren**	**3.83**	**54**	*e* PN		**Pn**	**22 01 39.1**	**+1.4**

ISCJB ***07*** *22:03:27.9±0.6, 3824N±002×2647E±003, h9km±3km, Error ellipse: s-maj=4.9km s-min=3.4km az=144.4*
ISK ***07*** *22:03:27.5, 3823N×2652E, h13km, MD3.0*
NEIC ***07*** *22:03:27.0, 3823N×2650E, h11km, MD3.5(ATH), MD3.1(ISK), ML3.4(THE), After ISK.*
CSEM ***07*** *22:03:27.7±0.1, 3827N×2651E, h10km, MD3.1, Error ellipse: s-maj=2.6km s-min=1.7km az=46.0*
ATH ***07*** *22:03:27.7, 3823N×2643E, h26km±4km, MD3.5/5*
THE ***07*** *22:03:28.4, 3825N×2653E, h7km±2km, ML3.4/2, Error ellipse: s-maj=2.5km s-min=0.9km az=274.0*
DDA ***07*** *22:03:28.3, 3825N×2652E, h12km±1km, Md3.1*
ISC 07 22:03:28.4±0.5**, 3824N**±002×**2648E**±003**, h10**km±3km**, n44,** σ0**90**/68**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.15**	**38**	*i* P		**Pg**	**22 03 31.9**	**0.0**
URLA				*i* S		**Sg**	**22 03 33.9**	**-0.4**
CHOS	**Chios island**	**0.36**	**294**	P		**Pg**	**22 03 36.6**	**+1.0**
CHOS				S		**Sg**	**22 03 42.1**	**+1.7**
BLCB	**Balcova**	**0.47**	**72**	PG		**Pg**	**22 03 36.9**	**-0.7**
BLCB				SG		**Sg**	**22 03 43.0**	**-0.7**
SMG	**Samos**	**0.60**	**152**	*e* PN		**Pg**	**22 03 40.2**	**+0.2**
IZM	**Izmir**	**0.64**	**75**	PG		**Pg**	**22 03 40.1**	**-0.7**
GCAM	**G?zelcaml?**	**0.80**	**132**	*i* P		**Pg**	**22 03 44.1**	**+0.2**
GCAM				*i* S		**Sg**	**22 03 54.9**	**+0.5**
PRK	**Paraskevi**	**1.02**	**351**	P		**Pg**	**22 03 46.9**	**-1.1**
PRK				S		**Sg**	**22 04 01.9**	**+0.6**
PRK	**Paraskevi**	**1.02**	**351**	*e* PN		**Pn**	**22 03 47.5**	**-1.2**
PRK				*e* SN		**Sn**	**22 04 00.8**	**-2.2**
PRK	**Paraskevi**	**1.02**	**351**	*e* Pn		**Pn**	**22 03 47.5**	**-1.2**
PRK				*e* Sn		**Sn**	**22 04 00.8**	**-2.2**
PRK				S		**Sg**	**22 04 01.9**	**+0.6**
AYVA	**Ayvalik**	**1.08**	**9**	*i* P		**Pb**	**22 03 48.9**	**-0.2**
AYVA				*i* S		**Sg**	**22 04 03.9**	**+0.6**
AKHS	**Akhisar**	**1.23**	**58**	*i* P		**Pn**	**22 03 51.2**	**-0.4**
AKHS				*i* S		**Sb**	**22 04 07.7**	**+0.1**
AKS	**Akhisar**	**1.23**	**58**	*e* PN		**Pn**	**22 03 50.4**	**-1.2**
AYDN	**Tasoluk**	**1.25**	**117**	*i* P		**Pn**	**22 03 53.0**	**+1.2**
AYDN				*i* S		**Sb**	**22 04 08.5**	**+0.3**
AYDN	**Tasoluk**	**1.25**	**117**	*i* P		**Pn**	**22 03 53.0**	**+1.2**
AYDN				*i* S		**Sb**	**22 04 08.5**	**+0.4**
BODT	**Bodrum**	**1.35**	**150**	*e* PN		**Pn**	**22 03 51.7**	**-1.5**
APE	**Apeiranthos**	**1.39**	**213**	*e* PN		**Pn**	**22 03 53.1**	**-0.6**
MLSB	**Milas**	**1.40**	**132**	*e* PN		**Pn**	**22 03 53.1**	**-0.7**
BDRM	**Kayabasi**	**1.40**	**146**	*i* P		**Pn**	**22 03 53.8**	**-0.1**
BDRM				*i* S		**Sn**	**22 04 13.4**	**+1.0**
EZN	**Ezine**	**1.59**	**356**	*e* PN		**Pn**	**22 03 55.8**	**-0.7**
BOZC	**Bozcaada**	**1.64**	**349**	*i* P		**Pn**	**22 03 56.1**	**-1.1**
BOZC				*i* S		**Sn**	**22 04 21.3**	**+3.1**
MANT	**Manisa**	**1.66**	**81**	*i* P		**Pn**	**22 03 58.9**	**+1.4**
MANT				*i* S		**Sn**	**22 04 19.8**	**+1.1**
KULA	**Kula-Manisa**	**1.74**	**80**	*e* PN		**Pn**	**22 03 58.2**	**-0.4**
DAT	**Datca**	**1.74**	**149**	*e* PN		**Pn**	**22 03 57.7**	**-0.9**
BALY	**Balya**	**1.75**	**30**	*i* P		**Pn**	**22 03 59.8**	**+1.2**
BALY				*i* S		**Sn**	**22 04 22.9**	**+2.0**
DEMI	**Demirci**	**1.93**	**65**	*i* P		**Pn**	**22 04 02.8**	**+1.6**
DEMI				*i* S		**Sn**	**22 04 25.4**	**-0.1**
LIA	**Limnos Island**	**1.94**	**329**	*e* PN		**Pn**	**22 04 01.1**	**-0.2**
GADA	**Gvkgeada**	**2.00**	**347**	*e* PN		**Pn**	**22 04 02.3**	**+0.1**
DST	**Dursunbey**	**2.16**	**50**	*e* PN		**Pn**	**22 04 04.1**	**-0.3**
BNT	**Bandirma**	**2.39**	**27**	*e* PN		**Pn**	**22 04 07.3**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.50**	**12**	*e* PN		**Pn**	**22 04 09.2**	**+0.1**
ENEZ	**Enez**	**2.51**	**354**	*e* PN		**Pn**	**22 04 09.7**	**+0.5**
MFT	**Murefte**	**2.62**	**14**	*e* PN		**Pn**	**22 04 10.6**	**-0.1**
ALN	**Alexandroupoli**	**2.68**	**353**	P		**Pn**	**22 04 10.9**	**-0.6**
ALN				S		**Sn**	**22 04 43.7**	**-0.2**
RDO	**Rodhopi**	**2.99**	**346**	*e* PN		**Pn**	**22 04 15.6**	**-0.2**

ISCJB ***07*** *22:07:20.5±0.9, 3821N±003×2642E±005, h5km±5km, Error ellipse: s-maj=6.6km s-min=4.2km az=157.0*
NEIC ***07*** *22:07:20.0, 3821N×2653E, h9km, MD3.3(ATH), MD2.9(ISK), After ISK.*
ISK ***07*** *22:07:21.3, 3821N×2655E, h12km, MD2.9*
CSEM ***07*** *22:07:21.3±0.1, 3828N×2652E, h8km, MD2.8, Error ellipse: s-maj=3.6km s-min=2.2km az=39.0*
ATH ***07*** *22:07:21.6, 3824N×2649E, h36km±7km, MD3.3/5*
DDA ***07*** *22:07:22.8, 3825N×2655E, h6km±2km, Md2.8*
ISC 07 22:07:21.8±0.7**, 3825N**±003×**2645E**±005**, h9**km±4km**, n25,** σ0**96**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**46**	*i* P		**Pg**	**22 07 25.6**	**+0.3**
URLA				*i* S		**Sg**	**22 07 27.5**	**-0.1**
BLCB	**Balcova**	**0.49**	**73**	PG		**Pg**	**22 07 30.2**	**-1.1**
BLCB				SG		**Sg**	**22 07 36.4**	**-1.3**
SMG	**Samos**	**0.62**	**150**	*e* PN		**Pg**	**22 07 33.6**	**-0.2**
SMG				*e* SN		**Sg**	**22 07 43.5**	**+1.6**
IZM	**Izmir**	**0.66**	**77**	PG		**Pg**	**22 07 33.5**	**-1.0**
IZM				SG		**Sg**	**22 07 42.2**	**-0.9**
GCAM	**G?zelcaml?**	**0.83**	**131**	*i* P		**Pg**	**22 07 37.9**	**+0.2**
GCAM				*i* S		**Sg**	**22 07 49.2**	**+0.8**
PRK	**Paraskevi**	**1.01**	**352**	*e* PN		**Pn**	**22 07 41.0**	**-1.0**
PRK				*e* SN		**Sn**	**22 07 55.3**	**-1.0**
AYVA	**Ayvalik**	**1.07**	**10**	*i* P		**Pg**	**22 07 43.0**	**+0.5**
AYVA				*i* S		**Sg**	**22 07 59.0**	**+2.6**
AKHS	**Akhisar**	**1.24**	**59**	*i* P		**Pn**	**22 07 45.3**	**+0.1**
AKHS				*i* S		**Sb**	**22 08 02.8**	**+1.3**
AKS	**Akhisar**	**1.24**	**59**	*e* PN		**Pn**	**22 07 44.4**	**-0.9**
AYDN	**Tasoluk**	**1.27**	**117**	*i* P		**Pn**	**22 07 46.9**	**+1.2**
AYDN				*i* S		**Sb**	**22 08 02.0**	**-0.3**
BODT	**Bodrum**	**1.37**	**150**	*e* PN		**Pn**	**22 07 45.7**	**-1.2**
APE	**Apeiranthos**	**1.38**	**212**	*e* PN		**Pn**	**22 07 46.7**	**-0.5**
MLSB	**Milas**	**1.42**	**132**	*e* PN		**Pn**	**22 07 46.2**	**-1.5**
BDRM	**Kayabasi**	**1.42**	**146**	*i* P		**Pn**	**22 07 47.8**	**+0.1**
BDRM				*i* S		**Sn**	**22 08 10.0**	**+3.5**
BOZC	**Bozcaada**	**1.62**	**349**	*i* P		**Pn**	**22 07 50.1**	**-0.4**
BOZC				*i* S		**Sn**	**22 08 12.2**	**+0.8**
MANT	**Manisa**	**1.68**	**81**	*i* P		**Pn**	**22 07 52.8**	**+1.6**
MANT				*i* S		**Sn**	**22 08 13.1**	**+0.3**
MANT	**Manisa**	**1.68**	**81**	*i* P		**Pn**	**22 07 52.8**	**+1.6**
BALY	**Balya**	**1.75**	**31**	*i* P		**Pn**	**22 07 56.0**	**+3.8**
BALY				*i* S		**Sn**	**22 08 20.3**	**+5.7**
KULA	**Kula-Manisa**	**1.76**	**81**	*e* PN		**Pn**	**22 07 51.3**	**-1.1**
LIA	**Limnos Island**	**1.92**	**330**	*e* PN		**Pn**	**22 07 53.9**	**-0.7**
DST	**Dursunbey**	**2.17**	**51**	*e* PN		**Pn**	**22 07 58.1**	**+0.1**
BNT	**Bandirma**	**2.40**	**28**	*e* PN		**Pn**	**22 08 01.4**	**+0.3**
ENEZ	**Enez**	**2.50**	**355**	*e* PN		**Pn**	**22 08 03.2**	**+0.7**
MRMT	**Marmara Adasi**	**2.51**	**20**	*e* PN		**Pn**	**22 08 03.2**	**+0.5**
RDO	**Rodhopi**	**2.98**	**347**	*e* PN		**Pn**	**22 08 09.1**	**0.0**

SZGRF ***07*** *22:28:01.7, 1827S×17504W, h33km, Tonga Islands*
MOS ***07*** *22:28:13.8±1.7, 1780S×17526W, h122km, mb4.9/12, MS4.6/4, Error ellipse: s-maj=9.8km s-min=9.7km az=52.8*
GCMT ***07*** *22:28:18.8±0.4, 1797S×17472W, h236km±3km, MW5.1/65, Moment Tensor Solution. s33,c41; s65,c85; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.58±.21; Mθθ1.77±.25; Mφφ-0.19±.23; Mrθ-1.39±.19; Mθφ2.08±.21; Mφr-4.24±.16; Best double couple: Mo5.20300×10^16 NP1:φ1=273.00000°, δ27.00000°, λ-22.00000°. NP2: φ2=23.00000°, δ80.00000°, λ-115.00000°. Principal axes: T 5.2080, Plg31.0000°, Azm133.0000°; N -0.0170, Plg24.0000°, Azm27.0000°; P -5.1970, Plg49.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***07*** *22:28:18.7, 1800S×17520W, h167km, mB5.0, mb5.0*
ISCJB ***07*** *22:28:23.1±0.2, 1812S±005×175.11W±004, h224km, mb4.8/61, Error ellipse: s-maj=7.5km s-min=5.3km az=157.5*
IDC ***07*** *22:28:24.6±0.6, 1813S×175.16W, h224km±5km, mb4.1/17, mb1 4.2/17, mb1mx4.2/19, mbtmp4.1/17, Error ellipse: s-maj=14.5km s-min=10.2km az=146.0*
NEIC ***07*** *22:28:24.6±0.2, 1811S×17509W, mb4.8/28, Error ellipse: s-maj=9.4km s-min=6.3km az=158.0*
NEIC Felt at Neiafu.

DJA ***07*** *22:28:34, 1837S×17568W, h284km, Mw5.8/7*
ISC 07 22:28:24.7±0.2**, 1816S**±005×**17508W**±004**, h225**km**,**
h225km±1.6km**; pP-P, n245,** σ0**99**/134**, mb4.8**/61**, 19C-17D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.29**	**37**	*e* P		**Pn**	**22 29 36.6**	**-6.8**
	120nm,0.3s,baz=221,slow=1.0,SNR=64							
AFI				*e* S		**S**	**22 30 30.7**	**-15**
	388nm,0.3s,baz=37,slow=22,SNR=15							
AFI	**Afiamalu**	**5.29**	**37**	*e* P		**Pn**	**22 29 36.7**	**-6.7**
	2µm,0.6s							
AFI				*e* S		**S**	**22 30 30.8**	**-15**
AFI	**Afiamalu**	**5.29**	**37**	*e* P		**Pn**	**22 29 36.7**	**-6.7**
AFI				*e* S		**S**	**22 30 30.8**	**-15**
AFI				pmax		pmax		
	comp=Z,2µm,0.6s							
RAO	**Raoul Island**	**11.34**	**193**	S		**S**	**22 32 58.2**	**-9.1**
	comp=Z,31nm,0.3s,baz=105,slow=23,SNR=2.2							
RAO	**Raoul Island**	**11.34**	**193**	*e* Pn		**Pn**	**22 30 58.0**	**-2.5**
RAR	**Rarotonga**	**14.73**	**104**	P		**Pn**	**22 31 40.1**	**-2.5**
	comp=Z,2.9nm,0.3s,baz=248,slow=6.0,SNR=8.7							
RAR	**Rarotonga**	**14.73**	**104**	*e* P		**Pn**	**22 31 40.7**	**-1.9**
	comp=Z,255nm,1.3s							
RAR	**Rarotonga**	**14.73**	**104**	*e* P		**Pn**	**22 31 40.7**	**-1.9**
RAR				pmax		pmax		
	comp=Z,255nm,1.3s							
DZM	**Mont Dzumac**	**17.78**	**254**	*e* P		**P**	**22 32 17.9**	**+1.4**
DZM	**Mont Dzumac**	**17.78**	**254**	*e* P		**P**	**22 32 17.9**	**+1.4**
	comp=Z,112nm,1.0s							
NOUC	**Port Laguerre**	**17.92**	**254**	*e* P		**P**	**22 32 18.6**	**+0.6**
URZ	**Urewera**	**21.16**	**197**	P		**P**	**22 32 51.4**	**-1.0**
	comp=Z,14nm,0.3s,mb5.0,baz=355,slow=4.8,SNR=30							
URZ				S		**S**	**22 36 31.1**	**-2.0**
	comp=Z,10nm,0.8s,baz=281,slow=16,SNR=4.3							
PAE	**Paea**	**24.26**	**93**	*e* P		**P**	**22 33 20.8**	**-0.6**
	comp=Z,230nm,0.9s,mb5.8							
PAE	**Paea**	**24.26**	**93**	*e* P		**P**	**22 33 20.8**	**-0.6**
PAE				pmax		pmax		
	comp=Z,230nm,0.9s,mb5.8							
PPT	**Papeete**	**24.27**	**93**	P		**P**	**22 33 21.2**	**-0.4**
	comp=Z,29nm,0.5s,mb5.2,baz=180,slow=15,SNR=2.0							
TIAR	**Tiarei**	**24.50**	**93**	*e* P		**P**	**22 33 23.4**	**-0.1**
	comp=Z,412nm,0.8s							
SNZO	**South Karori**	**24.68**	**199**	*e* P		**P**	**22 33 24.8**	**-0.1**
	comp=Z,26nm,0.6s,mb5.0							
PMOR	**Pomariorio Ree**	**26.23**	**87**	*e* P		**P**	**22 33 38.7**	**-0.5**
	comp=Z,128nm,1.2s,mb5.4							
VAH	**Vaihoa**	**26.44**	**88**	*e* P		**P**	**22 33 40.2**	**-0.9**
	comp=Z,64nm,0.9s,mb5.2							
EIDS	**Eidsvold**	**32.17**	**251**	*e* P		**P**	**22 34 30.8**	**-0.7**
	comp=Z,41nm,1.2s,mb4.8							
ARMA	**Armidale**	**32.59**	**242**	*e* P		**P**	**22 34 35.3**	**+0.3**
	comp=Z,0.9nm,0.7s							
CTAO	**Charters Tower**	**36.53**	**261**	*e* P		**P**	**22 35 08.0**	**-1.0**
	comp=Z,35nm,0.6s,mb5.1							
CTAO	**Charters Tower**	**36.53**	**261**	*e* P		**P**	**22 35 08.0**	**-1.0**
CTAO				pmax		pmax		
	comp=Z,35nm,0.6s,mb5.1							
CTAO	**Charters Tower**	**36.53**	**261**	P		**P**	**22 35 08.2**	**-0.8**
	comp=Z,64nm,0.8s,comp=Z,633nm,mb5.2							
PMG	**Port Moresby**	**37.63**	**278**	*e* P		**P**	**22 35 18.1**	**-0.2**
PMG	**Port Moresby**	**37.63**	**278**	*e* P

MDJ XP sP 22 41 13.8 -14
MDJ PP PP 22 43 15.3 -1.1
MDJ S S 22 49 58.6 +2.4
MDJ SCS ScS 22 50 19.1 +4.5
MDJ SS SS 22 55 16.9 +3.7
MDJ AMB AMB
comp=Z,13nm,1.4s,mb4.4
MDJ AMB AMB
comp=Z,39nm,3.7s
MDJ LR LR
comp=N,202nm,20.4s
MDJ LR LR
comp=E,385nm,16.6s
MDJ LR LR
comp=Z,146nm,20.4s
NJ2 Nanjing 80.57 308 *e*P **P 22 40 13.3 +1.1**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
ELK Elko 80.70 42 P **P 22 40 13.3 +0.6**
comp=Z,0.9nm,0.6s,baz=236,slow=5.0,SNR=5.2
ELK pP pP 22 41 07.2 +0.4
comp=Z,1.7nm,0.8s,baz=218,slow=6.4,SNR=3.6
KSI Kapahiang 81.59 269 P **P 22 40 17.7 -0.3**
comp=Z,104nm,1.2s,mb5.3
CN2 Changchun 82.18 321 ⇓P **P 22 40 20.5 +0.1**
CN2 *e*AP pP 22 41 07.2 -7.4
CN2 *e*S S 22 50 18.1 +1.9
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.0
CN2 AMB AMB
comp=Z,370nm,4.0s
QIZ Qiongzhong 82.46 293 P **P 22 40 21.4 -1.0**
QIZ S S 22 50 22.6 +2.6
QIZ LR LR
comp=Z,927nm,8.9s
RGRI Rengat 82.85 272 P **P 22 40 26.2 +1.7**
comp=Z,176nm,0.9s,mb5.8
TXAR Lajitas Array 83.47 56 P **P 22 40 28.6 +1.3**
comp=Z,1.5nm,0.9s,baz=207,slow=5.2,SNR=11
TXAR pP pP 22 41 22.4 +0.7
comp=Z,3.4nm,1.1s,baz=250,slow=3.6,SNR=7.2
HWUT Hardware Ranch 83.51 42 *e*P **P 22 40 27.1 -0.1**
CHUM Lake Minchumin 83.67 10 *e*P **P 22 40 26.1 -1.4**
comp=Z,27µm,1.2s
ANMO Albuquerque 83.79 50 P **P 22 40 29.8 +1.0**
comp=Z,2.2nm,1.0s,mb3.9,baz=226,slow=8.1,SNR=4.2
ANMO Albuquerque 83.79 50 *e*P **P 22 40 28.1 -0.8**
comp=Z,2.9nm,0.9s,mb4.0
ANMO *e*pP pP 22 41 21.9 -1.4
ANMO Albuquerque 83.79 50⇑ *e*P **P 22 40 28.4 -0.4**
MCK McKinley 84.12 11 *e*P **P 22 40 28.9 -0.8**
comp=Z,5.1nm,0.7s,mb4.4
MCK *e*pP pP 22 41 25.4 +1.1
MCK McKinley 84.12 11 *e*P **P 22 40 29.0 -0.8**
MCK pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
PDSI Padang 84.45 271 P **P 22 40 32.7 0.0**
comp=Z,53nm,1.3s,mb5.1
MAW Mawson 84.68 199 P **P 22 40 33.7 +1.0**
comp=Z,4.6nm,0.9s,mb4.2,baz=114,slow=8.4,SNR=5.5
SEY Seymchan 84.77 346⇑ *e*P **P 22 40 32.3 -0.7**
COLA College 85.36 11 *e*P **P 22 40 34.7 -1.2**
comp=Z,15nm,0.7s,mb4.8
COLA College 85.36 11 *e*P **P 22 40 34.7 -1.2**
COLA pmax pmax
comp=Z,15nm,0.7s,mb4.8
PDAR Pinedale Array 85.38 42 P **P 22 40 36.6 +0.1**
comp=Z,1.2nm,0.8s,baz=222,slow=2.0,SNR=7.9
PDAR pP pP 22 41 30.9 -0.3
comp=Z,1.6nm,0.9s,baz=202,slow=3.2,SNR=4.8
SDCO Great Sand Dun 85.75 48 *e*P **P 22 40 39.0 +0.5**
comp=Z,1.8nm,0.6s,mb4.0
WALA Waterton Lakes 86.08 35 *e*P **P 22 40 39.5 -0.3**
BJI Beijing 86.21 314 P **P 22 40 41.2 +0.5**
BJI S S 22 51 00.1 +3.8
BJI SS SS 22 56 44.7 +3.3
BJI AMB AMB
comp=Z,15nm,1.0s,mb4.7
BJI AMB AMB
comp=Z,153nm,4.6s
BJI LR LR
comp=N,1µm,11.1s
BJI LR LR
comp=E,734nm,10.7s
BJI LR LR
comp=Z,260nm,29.8s
BJI Beijing 86.21 314 P **P 22 40 41.2 +0.5**
comp=Z,15nm,1.0s,mb4.7
BJI S S 22 51 00.1 +3.8
BJI SS SS 22 56 44.7 +3.3
BJI LR LR
comp=Z,260nm,29.8s
CMIG Matias Romero 86.31 71 P **P 22 40 42.5 +0.8**
comp=Z,2.7nm,0.7s,mb4.1,baz=207,slow=7.3,SNR=2.9
DAWY Dawson 86.48 15 *e*P **P 22 40 41.5 +0.1**
BILL Bilibino 87.03 353 *e*P **P 22 40 42.6 -1.4**
BILL Bilibino 87.03 353⇑ *i*P **P 22 40 43.1 -0.9**
BILL pmax pmax
comp=Z,15nm,1.2s,mb4.6
GYA Guiyang 87.93 299⇑ *i*P **P 22 40 50.2 +0.9**
GYA AP pP 22 41 35.8 -8.4
GYA XP sP 22 41 55.6 -12
GYA PP PP 22 44 21.2 +2.0
GYA SKS 22 50 58.0
GYA S S 22 51 15.7 +2.4
GYA XS sS 22 52 35.9 -14
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,120nm,5.9s
HIA Hailar 88.43 324 *d i*P **P 22 40 50.8 -0.3**
PLCA Paso Flores 88.85 133 P **P 22 40 55.5 +2.1**
comp=Z,1.9nm,0.8s,mb4.0,baz=256,slow=6.7,SNR=3.4
XAN Xi'an 88.95 306 P **P 22 40 54.0 +0.1**
XAN AMB AMB
comp=Z,19nm,1.7s,mb4.7
XAN AMB AMB
comp=Z,99nm,5.2s
HHC Hu-ho-hao-te 89.73 313 *e*P **P 22 40 57.2 -0.1**
HHC AP pP 22 41 45.1 -7.4
HHC XP sP 22 42 00.5 -16
HHC PP PP 22 44 32.8 -0.4
HHC SKS 22 51 07.5
HHC S S 22 51 30.2 +0.8
HHC SS SS 22 57 35.6 +3.1
HHC AMB AMB
comp=Z,26nm,1.2s,mb4.9
HHC AMB AMB
comp=Z,109nm,6.7s
HHC LR LR
comp=N,758nm,13.1s
HHC LR LR
comp=E,684nm,14.3s
HHC LR LR
comp=Z,789nm,14.3s
CLNS Chul'man 89.87 332 *e*P **P 22 40 57.6 0.0**
CLNS pmax pmax
comp=Z,14nm,1.0s,mb4.8
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=N,10.0nm,1.3s
VNA3 Neumayer Olymp 90.26 175 *e*P **P 22 41 00.1 +0.7**
VNA2 Neumayer--Watz 90.74 176 *e*P **P 22 41 02.9 +1.3**
baz=197,slow=2.9
VNA2 *e* 22 41 06.4
KMI Kunming 90.78 296 P **P 22 41 04.9 +2.3**
KMI AP pP 22 41 48.8 -9.0
KMI XP sP 22 42 08.6 -13
KMI PP PP 22 44 43.6 +1.8
KMI S S 22 51 38.6 -1.1
KMI sS sS 22 53 01.6 -15
KMI SS SS 22 57 51.3 +3.1
KMI LR LR
comp=Z,130nm,11.3s
VNA1 Neumayer--Stat 90.95 176 *e*P **P 22 41 03.8 +1.3**
VNA1 *e* 22 41 08.2
INK Inuvik 91.32 14 *e*P **P 22 41 03.3 -0.8**
comp=Z,74nm,0.5s
INK Inuvik 91.32 14 *e*P **P 22 41 03.3 -0.8**
INK pmax pmax
comp=Z,74nm,0.5s
CMAR Chiang Mai Arr 91.96 289 P **P 22 41 09.2 +1.0**
comp=Z,3.4nm,0.6s,mb4.4,baz=108,slow=2.4,SNR=21
CMAR Chiang Mai Arr 91.96 289⇑ *e*P **P 22 41 09.5 +1.3**
CHTO Chiang Mai 92.07 289 *e*P **P 22 41 09.7 +0.9**
comp=Z,5.3nm,0.6s,mb4.7
CHTO Chiang Mai 92.07 289 *e*P **P 22 41 09.7 +1.0**
CHTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LZH Lanzhou 93.57 307 *e*P **P 22 41 16.5 +1.3**
LZH AP pP 22 42 01.3 -9.2
LZH XP sP 22 42 18.2 -16
LZH PP PP 22 45 06.4 +2.9
LZH SKS 22 51 33.0
LZH *e*S S 22 52 06.5 +2.5
LZH XS sS 22 53 23.6 -18
LZH *e*SS SS 22 58 31.7 +4.0
LZH AMB AMB
comp=Z,16nm,1.5s,mb4.8
LZH AMB AMB
comp=Z,97nm,8.9s
LZH LR LR
comp=E,176nm,17.8s
LZH LR LR
comp=Z,209nm,20.0s
LZH Lanzhou 93.57 307 *e*P **P 22 41 16.5 +1.3**
comp=Z,16nm,1.5s,mb4.8
LZH pP pP 22 42 01.3 -9.2
LZH sP sP 22 42 18.2 -16
LZH PP PP 22 45 06.4 +2.9
LZH SKS 22 51 33.0
LZH *e*S S 22 52 06.5 +2.5
LZH sS sS 22 53 23.6 -18
LZH *e*SS SS 22 58 31.7 +4.0
LZH LR LR
comp=Z,210nm,20.0s
LZH Lanzhou 93.57 307 *e*P **P 22 41 16.5 +1.3**
LZH *PP pP 22 42 01.3 -9.2
LZH 22 45 06.4
LZH 22 51 33.0
LZH *e*S S 22 52 06.5 +2.5
LZH *SS sS 22 53 23.6 -18
LZH *e*SS SS 22 58 31.7 +4.0
ULN Ulaanbaatar 95.42 319 *e*P **P 22 41 23.2 -0.2**
comp=Z,3.9nm,1.2s,mb4.4
ULN Ulaanbaatar 95.42 319 *e*P **P 22 41 23.2 -0.2**
ULN pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
SONM Songino Array 95.83 318 P **P 22 41 25.8 +0.6**
comp=Z,0.9nm,0.7s,mb4.1,baz=129,slow=7.1,SNR=7.1
SONM PP PP 22 45 18.2 -2.4
comp=Z,0.4nm,0.8s,baz=93,slow=8.9,SNR=3.9
TIXI Tiksi 97.22 345 *e*P **P 22 41 29.7 -1.3**
comp=Z,2.2nm,0.8s,mb4.4
TIXI Tiksi 97.22 345 *e*P **P 22 41 29.1 -1.9**
TIXI pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
GTA Gaotai 97.65 309 *e*P **P 22 41 36.0 +2.3**
GTA AP pP 22 42 21.5 -7.6
GTA AMB AMB
comp=Z,2.0nm,0.7s,mb4.6
LPAZ La Paz 100.36 111 P Pdif 22 41 49.9 +4.2
comp=Z,0.4nm,0.4s,baz=213,slow=7.3,SNR=3.6
ZALV Zalesovo Beam 110.39 322 PKiKP PKiKP 22 46 28.5 -1.2
comp=Z,0.9nm,0.5s,baz=238,slow=1.8,SNR=4.5
MKAR Makanchi Array 111.59 314 PKiKP PKiKP 22 46 31.3 -0.8
comp=Z,1.0nm,0.5s,baz=151,slow=0.4,SNR=8.5
ARU Arti 124.80 327 *e*P PKPdf 22 46 56.7 -0.5
ARU Arti 124.80 327 *e*PKIKP PKPdf 22 46 56.7 -0.5
ARCES ARCESS Array B 127.09 351 PKP PKPdf 22 47 01.0 -0.2
comp=Z,2.6nm,0.6s,baz=334,slow=3.2,SNR=20
JOF Joensuu 131.70 344 *ep* PKPdf 22 47 09.8 -0.4
comp=Z,1.6nm,0.4s
KAF Kangasniemi 133.61 346 *ep* PKPdf 22 47 13.0 -0.8
comp=Z,1.1nm,0.4s
NOA NORSAR Array B 136.94 356 PKP PKPdf 22 47 21.7 +1.7
comp=Z,1.0nm,0.8s,baz=15,slow=3.8,SNR=2.6
KIV Kislovodsk 139.21 317 *e*PKPdf PKPdf 22 47 23.3 -1.4
KIV Kislovodsk 139.21 317 *e*PKIKP PKPdf 22 47 23.3 -1.4
GNI Garni 139.35 311 *e*PKPdf PKPdf 22 47 26.5 +1.4
AKASG Malin Array Be 142.20 335 PKhKP 22 47 24.7
comp=Z,2.1nm,0.5s,baz=40,slow=4.1,SNR=14
LVV L'vov 144.88 338 *e*PKIKP PKPdf 22 47 33.8 -0.8
KWP Kalwaria 145.49 339 *e*PKP PKPdf 22 47 36.3 +0.6
IBBN Ibbenburen 145.85 357 *e*PKPbc PKPbc 22 47 37.5 +0.3
OJC Ojcow 145.87 343 *e*PKP PKPdf 22 47 36.6 +0.3
STHS Stebnicka Huta 146.15 341 *e*PKP PKPbc 22 47 38.5 +0.3
KSP Ksiaz 146.16 347 *e*PKP PKPbc 22 47 38.7 +0.5
KSP Ksiaz 146.16 347 *e*PKIKP PKPdf 22 47 37.7 +0.9
BURAR Bucovina Array 146.25 335 ⇓*i*P PKPdf 22 47 38.4 +1.4
CLL Collm 146.31 351 *e*PKPbc PKPbc 22 47 38.7 +0.1
CLL Collm 146.31 351 ⇓*i*PKPbc PKPbc 22 47 38.3 -0.3
comp=Z,25nm,0.7s
CLL *ep*PKiKP 22 48 39.0
NIE Niedzica 146.44 342 *e*PKP PKPbc 22 47 39.5 +0.5
TLCR 146.49 329 ⇓*i*P PKPbc 22 47 39.7 +0.4
UPC Upice 146.53 347 *e*PKP PKPbc 22 47 39.6 +0.4
UPC *es*PKP 22 48 41.8
BRG Berggiesshubel 146.58 350 *e*PKPbc PKPbc 22 47 39.6 +0.2
BRG Berggiesshubel 146.58 350 *i* PKP PKPbc 22 47 39.5 +0.1
comp=Z,14nm,0.8s
DPC Dobruska-Polom 146.61 347 *e*PKP PKPbc 22 47 40.2 +0.7
DPC *es*PKP 22 48 42.6
OKC Ostrava-Krasne 146.66 344 *e*PKP PKPbc 22 47 39.8 +0.2
OKC *es*PKP 22 48 42.4
PVCC Panska Ves 146.80 349 *e*PKP PKPbc 22 47 40.5 +0.5
PVCC *es*PKP 22 48 42.1
MORC Moravsky Berou 146.87 345 *e*PKP PKPbc 22 47 40.1 -0.1
MORC Moravsky Berou 146.87 345⇑ *i*P PKPbc 22 47 40.7 +0.5
ODB Odobesti 146.90 331⇑ *i*P PKPbc 22 47 41.8 +1.4
VRI Vrincioaia 146.98 332⇑ *i*P PKPbc 22 47 40.8 +0.1
PLOR Plostina 147.02 332 ⇓*i*P PKPdf 22 47 31.3 -7.1
MOX Moxa 147.15 352 *e*PKPbc PKPbc 22 47 41.0 0.0
MOX *e*PKPab PKPab 22 47 43.8 +0.7
BRTR Keskin Array B 147.17 317 PKPbc PKPbc 22 47 41.4 -0.1
comp=Z,12nm,0.8s,baz=133,slow=3.8,SNR=33
BRTR PKKP 22 56 47.9
comp=Z,1.5nm,1.1s,baz=56,slow=9.2,SNR=3.6
HARR Harsova 147.28 329 ⇓*i*P PKPbc 22 47 42.2 +0.7
PRU Pruhonice 147.32 348 *e*PKP PKPbc 22 47 41.7 +0.2
PRU *es*PKP 22 48 46.1
VRAC Vranov 147.53 346 *e*PKP PKPbc 22 47 42.2 +0.2
VRAC Vranov 147.53 346⇑ *i*P PKPbc 22 47 42.2 +0.2
MEM Membach 147.62 359 PKPbc PKPbc 22 47 42.5 +0.3
MLR Muntele Rosu 147.62 332⇑ *i*P PKPdf 22 47 41.0 +1.6
ANTO Ankara 147.64 318 *e*PKPdf PKPdf 22 47 41.1 +1.5
ANTO Ankara 147.64 318⇑ *i*P PKPdf 22 47 38.5 -1.1
MANZ Manzenberg 147.73 351 *e*PKPbc PKPbc 22 47 43.1 +0.6
KOLL Kolacno 147.74 343 *e*PKP PKPbc 22 47 42.8 +0.2
TREC Trest 147.79 347 *e*PKP PKPbc 22 47 43.1 +0.4
BCLA Clavier 147.81 360 PKPab PKPab 22 47 45.2 -0.6
TNS Taunus Mts 147.89 356 *e*PKPbc PKPbc 22 47 43.4 +0.4
TNS *e*PKPab PKPab 22 47 46.1 0.0
PSZ Piszkesteto 147.90 341 ⇓*i*P PKPdf 22 47 41.7 +1.9
DRGR 147.90 337 ⇓*i*P PKPbc 22 47 43.4 +0.3
ROTZ Rotzenmuhle 147.93 351 *e*PKPbc PKPbc 22 47 43.4 +0.3
ROTZ *e*PKPab PKPab 22 47 47.1 +0.8
VOIR 148.05 333 ⇓*i*P PKPbc 22 47 44.5 +0.9
GIVF Givet 148.13 0 *e*PKP1 PKPbc 22 47 43.5 -0.1
comp=Z,13nm,0.6s
GRA1 Grafenberg Arr 148.14 352 *e*PKPab PKPab 22 47 47.3 +0.2
GRF Grafenberg Arr 148.14 352 *e*PKPab PKPab 22 47 47.3 +0.2
DOU Dourbes 148.14 0 PKPab PKPab 22 47 45.9 -1.2
BAIF Baives 148.17 1 *e*PKP1 PKPbc 22 47 43.7 0.0
comp=Z,17nm,0.8s
MODS Modra-Piesok 148.23 344 *e*PKP PKPbc 22 47 44.3 +0.4
KHC Kasperske Hory 148.32 349 *e*PKP PKPbc 22 47 44.5 +0.4
KHC *ex* PKPab 22 47 47.5 -0.4
KHC *es*PKP 22 48 47.5
ZST Bratislava 148.44 344 *e*PKP PKPab 22 47 49.2 +0.8
WLF Walferdange 148.56 358 PKPbc PKPbc 22 47 45.4 +0.7
WLF Walferdange 148.56 358 *e*PKPbc PKPbc 22 47 45.8 +1.1
WLF *e*PKPab PKPab 22 47 48.9 +0.1
GEC2 GERESS Array S 148.57 349 *e*PKPbc PKPbc 22 47 45.2 +0.4
GERES GERESS Array B 148.57 349 PKPbc PKPbc 22 47 44.8 0.0
comp=Z,3.9nm,0.6s,baz=27,slow=3.4,SNR=21
CONA Conrad Observa 148.99 346 ⇓*i*PKPbc PKPbc 22 47 46.3 +0.5
comp=Z,29nm,1.9s,SNR=6.6
GZR Gura Zlata 149.04 335⇑ *i*P PKPbc 22 47 46.2 +0.1
FLN La Foliniere 149.16 7 *e*PKP1 PKPbc 22 47 45.8 -0.4
comp=Z,15nm,0.8s
FLN *e*MLR MLR
comp=Z,135nm,21.2s
FLN La Foliniere 149.16 7 *e*PKIKP PKPbc 22 47 45.8 -0.4
FLN MLR MLR
comp=Z,130nm,21.3s
ROSF Rostrenen 149.17 11 *e*PKP1 PKPbc 22 47 45.6 -0.7
BZS Buzias 149.30 337⇑ *i*P PKPbc 22 47 46.0 -0.7
LDF La Druitiere 149.37 7 *e*PKP1 PKPbc 22 47 46.5 -0.3
SGMF Saint Gilles 149.37 10 *e*PKP1 PKPbc 22 47 46.2 -0.6
comp=Z,22nm,0.9s
GRR Gorron 149.48 8 *e*PKP1 PKPbc 22 47 46.8 -0.2
MEZF Maizieres J'vi 149.74 360 *e*PKP1 PKPbc 22 47 47.8 +0.1
CDF Champ du Feu 149.76 357 *e*PKP1 PKPbc 22 47 46.9 -0.8
comp=Z,12nm,0.6s
BFO Black Forest 149.78 355 *e*PKPbc PKPbc 22 47 47.9 +0.1
BFO *e*PKPab PKPab 22 47 53.5 -0.3
PKSM Moragy 149.81 341⇑ *i*P PKPbc 22 47 48.0 +0.1
HAU Haudompre 150.21 358 *e*PKP1 PKPbc 22 47 48.7 -0.1
comp=Z,14nm,0.7s
HAU *e*MLR MLR
comp=Z,95nm,19.2s
HAU Haudompre 150.21 358 *e*PKHKP PKPbc 22 47 48.7 -0.1
HAU MLR MLR
comp=Z,90nm,19.3s
KOGS Kog 150.28 344 *e*PKPbc PKPbc 22 47 48.6 -0.4
SOKA Soboth 150.36 346⇑ *i*PKPbc PKPbc 22 47 48.7 -0.5
comp=Z,12nm,1.3s
HINF Hinteralfeld 150.38 357 *e*PKP1 PKPbc 22 47 48.9 -0.3
comp=Z,10nm,0.8s
WATA Walderalm 150.39 351 ⇓*i*PKPbc PKPbc 22 47 49.1 -0.2
comp=Z,6.8nm,0.5s
MOTA Moosalm 150.45 351 ⇓*i*PKPbc PKPbc 22 47 49.0 -0.4
comp=Z,11nm,1.0s
WTTA Wattenberg 150.46 351 ⇓*i*PKPbc PKPbc 22 47 49.6 +0.2
comp=Z,19nm,0.5s
DAVA Damuels 150.67 353⇑ *i*PKPbc PKPbc 22 47 50.2 +0.3
comp=Z,10nm,0.6s
MYKA Terra Mystica 150.71 348 ⇓*i*PKPbc PKPbc 22 47 49.3 -0.8
comp=Z,7.9nm,0.5s
ABTA Abfaltersbach 150.81 349 ⇓*i*PKPbc PKPbc 22 47 49.7 -0.6
comp=Z,14nm,0.6s
FETA Feichten 150.82 352 ⇓*i*PKPbc PKPbc 22 47 50.5 +0.2
comp=Z,9.8nm,0.7s,SNR=8.9
LOR Lormes 150.96 1 *e*PKP1 PKPbc 22 47 50.6 0.0
comp=Z,8.1nm,0.5s
LOR *e*MLR MLR
comp=Z,106nm,17.0s
LOR Lormes 150.96 1 *e*PKIKP PKPbc 22 47 50.6 0.0
LOR MLR MLR
comp=Z,110nm,17.0s
GCIS Gornji Cirnik 150.98 344 *e*PKPbc PKPbc 22 47 50.6 -0.1
VNDS Vrh nad Dolski 150.98 346 *e*PKPbc PKPbc 22 47 50.4 -0.2
LJU Ljubljana 151.08 346 *e*PKPbc PKPbc 22 47 50.7 -0.2
SSF Saint Saulge 151.15 2 *e*PKP1 PKPbc 22 47 51.1 +0.1
comp=Z,11nm,0.7s
MFF Saint Martin d 151.33 7 *e*PKP1 PKPbc 22 47 51.2 -0.3
comp=Z,7.9nm,0.7s
BOJS Bojanci 151.41 345 *e*PKPbc PKPbc 22 47 51.8 +0.1
AVF Avril sur Loir 151.42 2 *e*PKP1 PKPbc 22 47 51.3 -0.4
comp=Z,6.7nm,0.7s
SMF Signal de Mont 151.58 2 *e*PKP1 PKPbc 22 47 51.5 -0.5
CABF La Chapelle 151.61 358 *e*PKP1 PKPbc 22 47 52.6 +0.5
comp=Z,18nm,0.7s
BGF Bois d'Agland 151.63 3 *e*PKP1 PKPbc 22 47 52.1 -0.1
comp=Z,16nm,0.5s
TCF Toulx Ste Croi 151.86 4 *e*PKP1 PKPbc 22 47 52.3 -0.4
comp=Z,11nm,0.7s
LPL La Plagne 152.68 357 *e*PKP1 PKPbc 22 47 54.8 +0.3
comp=Z,3.7nm,0.6s
RJF Les Rejaudoux 152.79 5 *e*PKP1 PKPbc 22 47 55.2 +0.4
comp=Z,5.4nm,0.6s
RJF *e*MLR MLR
comp=Z,118nm,17.2s
RJF Les Rejaudoux 152.79 5 *e*PKIKP PKPbc 22 47 55.2 +0.4
RJF MLR MLR
comp=Z,120nm,17.3s
LFF La Frestale 153.07 7 *e*PKP1 PKPbc 22 47 55.6 +0.2
comp=Z,8.4nm,0.7s
CAF Calviac 153.21 5 *e*PKP1 PKPbc 22 47 55.5 -0.2
ORIF Oris-en-Rattie 153.31 358 *e*PKP1 PKPbc 22 47 56.2 +0.3
comp=Z,7.5nm,0.8s
ORIF *e*MLR MLR
comp=Z,142nm,22.2s
VIVF Saint-Julien-l 153.38 0 *e*PKP1 PKPbc 22 47 55.8 -0.3
comp=Z,4.9nm,0.7s
MBDF Montbardon 153.47 357 *e*PKP1 PKPbc 22 47 56.6 +0.3
comp=Z,6.6nm,0.6s
EPF Esparros 154.91 8 *e*PKP1 PKPbc 22 47 59.0 -0.4
ETSF Etsaut 154.91 10 *e*PKP1 PKPbc 22 47 59.6 +0.2
comp=Z,3.5nm,0.6s
ESDC Sonseca Array 157.22 18 PKPab PKPab 22 48 25.7 +0.1
comp=Z,1.1nm,0.6s,baz=330,slow=3.2,SNR=8.0
TORD Torodi Ar. Bea 174.13 148 PKP PKPdf 22 48 06.8 -1.2
comp=Z,0.5nm,0.7s,baz=310,slow=0.7,SNR=7.0
TORD pPKP pPKPdf 22 49 06.6 +0.1
comp=Z,0.6nm,0.9s,baz=164,slow=2.7,SNR=3.3
TORD PKPab PKPab 22 49 41.3 +0.7
comp=Z,1.7nm,0.8s,baz=218,slow=3.4,SNR=7.9

*ISCJB **07** 22:30:08.7±0.6, 2042S±005×6666W±007, h235km±6km, mb4.2/21, Error ellipse: s-maj=11.2km s-min=7.3km az=4.1*
*NEIC **07** 22:30:09.8±0.6, 2045S×6671W, h233km±6km, mb4.4/13, Error ellipse: s-maj=10.3km s-min=6.9km az=89.0*
*IDC **07** 22:30:11.4±1.5, 2037S×6662W, h242km±13km, mb3.6/9, mb1 3.7/12, mb1mx3.6/19, mbtmp3.5/12, Error ellipse: s-maj=16.1km s-min=14.8km az=76.0*

ISC 07 22:30:09.8±0.6, 2042S±005×6670W±008, h229km±6km, n43/s97/43, mb4.2/21, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
LVC	**Limon Verde**	**3.00**	**223**	P		**Pn**	**22 31 01.3 +0.3**
	12nm,0.3s,baz=36,slow=8.3,SNR=120						
LVC				S		**S**	**22 31 40.6 -0.7**
	30nm,0.3s,baz=155,slow=20,SNR=28						
LVC	**Limon Verde**	**3.00**	**223**	P		**Pn**	**22 31 01.3 +0.3**
LVC				S		**S**	**22 31 40.6 -0.7**
LPAZ	**La Paz**	**4.33**	**341**	P		**Pn**	**22 31 19.2 +2.4**
	2.0nm,0.3s,baz=154,slow=8.2,SNR=25						
LPAZ				S		**S**	**22 32 09.2 -0.6**
	0.8nm,0.3s,baz=22,slow=13,SNR=16						
LPAZ	**La Paz**	**4.33**	**341**	P		**Pn**	**22 31 19.2 +2.4**
LPAZ				S		**S**	**22 32 09.2 -0.6**
SIV	**San Ignacio**	**6.93**	**51**	P		**Pn**	**22 31 49.5 +0.1**
	4.5nm,0.3s,baz=244,slow=9.5,SNR=95						
SIV				S		**S**	**22 33 02.9 -6.1**
	baz=239,slow=15,SNR=5.0						
LCO	**Las Campanas**	**9.29**	**202**	*e*Pn		**Pn**	**22 32 16.5 -3.0**
LCO				*e*Sn		**S**	**22 33 51.3 -13**
CFAA	**Coronel Fontan**	**11.22**	**187**	P		**Pn**	**22 32 42.6 -1.4**
	0.0nm,0.3s,baz=5.3,slow=12,SNR=2.8						
NNA	**Nana**	**12.85**	**309**	*e*Pn		**Pn**	**22 33 05.7 +1.1**
BDFB	**Brasilia**	**18.39**	**78**	P		**P**	**22 34 09.5 +1.5**
	0.5nm,0.3s,baz=233,slow=18,SNR=10						
PLCA	**Paso Flores**	**20.51**	**188**	P		**P**	**22 34 32.0 +1.6**
	6.0nm,0.6s,baz=9.5,slow=11,SNR=25						
OTAV	**Otavalo**	**23.54**	**329**	*e*P		**P**	**22 34 60.0 +0.3**
	1.7nm,0.5s,mb3.9						
EFI	**East Falkland**	**31.91**	**170**	*e*P		**P**	**22 36 14.2 +0.5**
	67nm,1.4s,mb5.1						
RCBR	**Riachuelo**	**33.22**	**68**	*e*P		**P**	**22 36 24.0 -1.6**
	4.3nm,0.6s,mb4.2						
BBGH	**Gun Hill**	**34.09**	**12**	*e*P		**P**	**22 36 32.7 -0.3**
	60nm,0.7s,mb5.2						
SJG	**San Juan**	**38.30**	**1**	*e*P		**P**	**22 37 08.4 -0.1**
PMSA	**Palmer Station**	**44.36**	**178**	*e*P		**P**	**22 37 58.3 +1.2**
	66nm,1.1s,mb4.9						
BBSR	**BB Station**	**52.53**	**2**	P		**P**	**22 38 59.0 -0.7**
MIAR	**Mount Ida**	**60.35**	**335**	*e*P		**P**	**22 39 53.9 -0.8**
TXAR	**Lajitas Array**	**60.97**	**323**	P		**P**	**22 39 59.1 +0.1**
	0.5nm,0.6s,mb3.3,baz=151,slow=9.0,SNR=4.5						

ACSO	**Alum Creek Sta**	**62.22**	**346**	*e*P		**P**	**22 40 06.4**	**-0.7**
	6.1nm,0.5s,mb4.5								
FVM	**French Village**	**62.23**	**339**	P		**P**	**22 40 06.3**	**-0.9**
	17nm,0.3s,mb5.2								
KSU1	**Kansas State U**	**65.50**	**335**	P		**P**	**22 40 28.8**	**+0.3**
DBIC	**Dimbokro**	**66.44**	**73**	P		**P**	**22 40 35.2**	**+0.1**
	1.0nm,0.3s,mb4.0,baz=101,slow=14,SNR=13								
QSPA	**South Pole Qui**	**69.76**	**180**	*e*P		**P**	**22 40 55.2**	**+0.6**
	3.7nm,0.8s,mb4.1								
RSSD	**Black Hills**	**72.76**	**333**	P		**P**	**22 41 11.9**	**-1.0**
	3.3nm,1.2s,mb3.8								
PDAR	**Pinedale Array**	**74.24**	**329**	P		**P**	**22 41 22.5**	**+0.9**
	0.7nm,0.5s,mb3.6,baz=124,slow=9.3,SNR=6.3								
TORD	**Torodi Ar. Bea**	**75.05**	**70**	P		**P**	**22 41 25.6**	**-1.3**
	2.1nm,0.4s,mb4.1,baz=253,slow=5.6,SNR=82								
TORD				pP		pP	22 42 24.6	+3.7	
	0.5nm,0.7s,baz=249,slow=6.1,SNR=4.6								
LOHW	**Long Hollow**	**75.38**	**329**	*e*P		**P**	**22 41 28.7**	**+0.6**
	7.3nm,1.3s,mb4.2								
RRI2	**Red Ridge**	**75.54**	**328**	*e*P		**P**	**22 41 27.5**	**-1.5**
	5.3nm,0.7s,mb4.3								
ELK	**Elko**	**75.74**	**324**	P		**P**	**22 41 31.1**	**+0.8**
	1.9nm,0.8s,mb3.8,baz=195,slow=2.4,SNR=5.1								
IMW	**Indian Meadow**	**75.75**	**329**	*e*P		**P**	**22 41 30.3**	**+0.1**
	10nm,1.3s,mb4.3								
NVAR	**Mina Array Bea**	**75.95**	**321**	P		**P**	**22 41 32.2**	**+0.8**
	0.5nm,0.8s,mb3.2,baz=152,slow=4.1,SNR=3.5								
QLMT	**Earthquake Lak**	**76.68**	**329**	*e*P		**P**	**22 41 31.6**	**-3.8**
NEW	**Newport**	**81.88**	**329**	*e*P		**P**	**22 42 03.2**	**-0.2**
	1.6nm,0.6s,mb3.8								
MAW	**Mawson**	**84.75**	**163**	P		**P**	**22 42 18.7**	**+0.8**
	1.3nm,0.5s,mb3.9,baz=281,slow=5.2,SNR=3.3								
MAW	**Mawson**	**84.75**	**163**	P		**P**	**22 42 17.9**	**+0.1**
YKA	**Yellowknife Ar**	**90.88**	**340**	P		**P**	**22 42 47.0**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=129,slow=4.7,SNR=3.8								
INK	**Inuvik**	**100.65**	**340**	*e*Pdif		Pdif	22 43 31.6	-0.1	
ASAR	**Alice Springs**	**131.80**	**206**	PKP		PKPdf	22 48 56.0	-0.3	
	0.2nm,0.3s,baz=149,slow=1.9,SNR=3.4								
ASAR				SKPbc		SKPbc	22 51 59.2	-1.4	
	0.2nm,0.5s,baz=147,slow=3.7,SNR=4.2								
WRA	**Warramunga Arr**	**134.91**	**208**	PKP		PKPdf	22 49 01.9	-0.4	
	0.3nm,0.3s,baz=147,slow=1.5,SNR=2.5								
ZALV	**Zalesovo Beam**	**140.09**	**26**	PKP		PKPdf	22 49 10.1	-0.6	
	1.0nm,0.4s,baz=270,slow=2.9,SNR=4.8								
MKAR	**Makanchi Array**	**143.55**	**37**	PKP		PKPdf	22 49 15.3	-1.8	
	0.2nm,0.5s,baz=325,slow=1.8,SNR=3.9								
SONM	**Songino Array**	**152.09**	**10**	PKPbc		PKPbc	22 49 38.4	+0.6	
	0.7nm,0.4s,baz=294,slow=1.4,SNR=10								

KRSC 07 22:39:40.5±0.5**, 5056N**×**15696E, h5**km±5km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.72**	**356**	*e*P	Pn	22 40 11.8	+0.7
MIPR				*e*S	Sn	22 40 34.5	+1.0
RUS	**Russkaya**	**2.11**	**27**	*e*P	Pn	22 40 16.8	+0.4
RUS				*e*S	Sn	22 40 43.6	+0.6
PET	**Petropavlovsk**	**2.68**	**22**	S	Sn	22 40 57.2	+0.1
AVH	**Avacha**	**2.92**	**21**	P	Pn	22 40 29.6	+2.0
AVH				*e*S	Sn	22 41 04.2	+1.1
NLC	**Nalytchevo**	**3.00**	**29**	*e*P	Pn	22 40 29.2	+0.5
NLC				*e*S	Sn	22 41 04.6	-0.4
SPN	**Mys Shipunski**	**3.17**	**36**	*e*P	Pn	22 40 31.8	+0.8
SPN				*e*S	Sn	22 41 10.4	+1.2
GNL	**Ganaly**	**3.20**	**11**	P	Pn	22 40 32.3	+1.0
MKZ	**Mys Kozlova**	**4.95**	**34**	P	Pn	22 40 55.5	+0.1

*ISCJB **07** 22:43:41.6±0.6, 3822N±002×2646E±003, h2km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=158.9*
*ISK **07** 22:43:41.5, 3821N×2656E, h5km, MD3.4*
*ATH **07** 22:43:41.7, 3824N×2644E, h26km±1km, MD3.5/5*
*NEIC **07** 22:43:41.0, 3822N×2657E, h5km, MD3.6(ATH), MD3.4(ISK), ML3.9(THE), After ISK.*
*CSEM **07** 22:43:41.0±0.1, 3822N×2650E, h0km, MD3.4, Error ellipse: s-maj=2.4km s-min=1.6km az=91.0*
*THE **07** 22:43:42.1, 3826N×2656E, h6km±2km, ML3.9/3, Error ellipse: s-maj=2.6km s-min=0.7km az=275.0*
*DDA **07** 22:43:43.0, 3827N×2660E, h9km±1km, Md3.4*

ISC 07 22:43:41.9±0.5**, 3822N**±002×**2645E**±003**, h1**km±3km**, n51,** σ1°**04/73, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**39**	*i* P	**Pg**	**22 43 45.2**	**-0.2**
URLA				*i* S	**Sg**	**22 43 47.6**	**-0.2**
CHOS	**Chios island**	**0.35**	**298**	P	**Pg**	**22 43 50.4**	**+1.7**
CHOS				S	**Sg**	**22 43 56.4**	**+3.1**
BLCB	**Balcova**	**0.49**	**70**	PG	**Pg**	**22 43 50.6**	**-0.7**
SMG	**Samos**	**0.59**	**149**	*e*PN	**Pg**	**22 43 54.1**	**+0.8**
IZM	**Izmir**	**0.66**	**74**	PG	**Pg**	**22 43 54.2**	**-0.5**
IZM				SG	**Sg**	**22 44 03.2**	**0.0**
KDAG	**Bornova**	**0.67**	**74**	*i* P	**Pg**	**22 43 54.0**	**-0.7**
KDAG				*i* S	**Sg**	**22 44 03.0**	**-0.4**
GCAM	**G?zelcaml?**	**0.81**	**130**	*i* P	**Pg**	**22 43 57.8**	**+0.4**
GCAM				*i* S	**Sg**	**22 44 08.9**	**+1.1**
PRK	**Paraskevi**	**1.03**	**352**	P	**Pg**	**22 44 01.1**	**-0.7**
PRK				S	**Sg**	**22 44 15.4**	**+0.2**
PRK	**Paraskevi**	**1.03**	**352**	*e*PN	**Pg**	**22 44 01.1**	**-0.7**
PRK				*e*SN	**Sn**	**22 44 15.7**	**-3.1**
PRK	**Paraskevi**	**1.03**	**352**	*e*Pn	**Pg**	**22 44 01.1**	**-0.7**
PRK				S	**Sg**	**22 44 15.4**	**+0.2**
PRK				*e*Sn	**Sn**	**22 44 15.7**	**-3.1**
AYVA	**Ayvalik**	**1.10**	**10**	*i* P	**Pg**	**22 44 02.3**	**-0.8**
AYVA				*i* S	**Sg**	**22 44 17.9**	**+0.5**
AKHS	**Akhisar**	**1.25**	**58**	*i* P	**Pg**	**22 44 04.4**	**-1.6**
AKHS				*i* S	**Sg**	**22 44 21.5**	**-0.8**
AKS	**Akhisar**	**1.25**	**58**	*e*PN	**Pn**	**22 44 04.5**	**-2.1**
AYDN	**Tasoluk**	**1.26**	**116**	*i* P	**Pg**	**22 44 06.3**	**+0.3**
AYDN				*i* S	**Sg**	**22 44 22.0**	**-0.3**
AYDN	**Tasoluk**	**1.26**	**116**	*i* P	**Pg**	**22 44 06.3**	**+0.2**
AYDN				*i* S	**Sg**	**22 44 22.0**	**-0.4**
BODT	**Bodrum**	**1.34**	**149**	*e*PN	**Pn**	**22 44 07.1**	**-0.7**
BODT				*e*SN	**Sn**	**22 44 26.4**	**+0.1**
APE	**Apeiranthos**	**1.36**	**213**	P	**Pg**	**22 44 07.0**	**-1.0**
APE	**Apeiranthos**	**1.36**	**213**	*e*PN	**Pn**	**22 44 07.3**	**-0.8**
BDRM	**Kayabasi**	**1.40**	**145**	*i* P	**Pn**	**22 44 07.0**	**-1.5**
BDRM				*i* S	**Sg**	**22 44 28.5**	**+1.7**
MLSB	**Milas**	**1.40**	**131**	*e*PN	**Pn**	**22 44 08.1**	**-0.5**
BOZC	**Bozcaada**	**1.65**	**349**	*i* P	**Pn**	**22 44 10.2**	**-1.8**
BOZC				*i* S	**Sn**	**22 44 35.1**	**+1.1**
MANT	**Manisa**	**1.68**	**80**	*i* P	**Pn**	**22 44 12.7**	**+0.2**
MANT				*i* S	**Sn**	**22 44 33.3**	**-1.3**
DAT	**Datca**	**1.74**	**149**	*e*PN	**Pn**	**22 44 13.0**	**-0.2**
KULA	**Kula-Manisa**	**1.76**	**80**	*e*PN	**Pn**	**22 44 13.6**	**0.0**
KULA				*e*SN	**Sn**	**22 44 36.6**	**-0.1**
BALY	**Balya**	**1.77**	**31**	*i* P	**Pn**	**22 44 13.0**	**-0.8**
BALY				*i* S	**Sn**	**22 44 38.6**	**+1.7**
LIA	**Limnos Island**	**1.95**	**330**	P	**Pn**	**22 44 14.9**	**-1.3**
LIA	**Limnos Island**	**1.95**	**330**	*e*PN	**Pn**	**22 44 15.0**	**-1.2**
DEMI	**Demirci**	**1.95**	**64**	*i* P	**Pn**	**22 44 17.4**	**+1.1**
DEMI				*i* S	**Sn**	**22 44 42.5**	**+1.1**
DEMI	**Demirci**	**1.95**	**64**	*i* P	**Pn**	**22 44 17.4**	**+1.1**
DEMI				*i* S	**Sn**	**22 44 42.5**	**+1.1**
THR3	**Thira Island,**	**1.99**	**205**	P	**Pn**	**22 44 16.7**	**-0.1**
GADA	**Gvkgeada**	**2.02**	**348**	*e*PN	**Pn**	**22 44 18.4**	**+1.3**
THR6	**Thira Island,**	**2.04**	**205**	P	**Pn**	**22 44 16.5**	**-0.9**
DST	**Dursunbey**	**2.19**	**50**	*e*PN	**Pn**	**22 44 19.8**	**+0.3**
DALT	**Dalyan (Mudla)**	**2.26**	**129**	*e*PN	**Pn**	**22 44 20.7**	**+0.2**
ARG	**Arkhangelos**	**2.41**	**146**	*e*PN	**Pn**	**22 44 22.2**	**-0.2**
BNT	**Bandirma**	**2.42**	**28**	*e*PN	**Pn**	**22 44 22.7**	**+0.1**
KHL	**Karahalli**	**2.42**	**87**	*e*PN	**Pn**	**22 44 22.8**	**+0.2**
KCT	**Karacabey**	**2.52**	**35**	*e*PN	**Pn**	**22 44 24.4**	**+0.3**
ENEZ	**Enez**	**2.52**	**355**	*e*PN	**Pn**	**22 44 25.3**	**+1.2**
RKY	**Sarkoy-Tekirda**	**2.53**	**13**	*e*PN	**Pn**	**22 44 25.2**	**+1.1**
FETY	**Fethiye**	**2.62**	**126**	*e*PN	**Pn**	**22 44 25.7**	**+0.3**
DID	**Didima**	**2.64**	**255**	P	**Pn**	**22 44 25.6**	**-0.1**
ALN	**Alexandroupoli**	**2.69**	**353**	P	**Pn**	**22 44 24.2**	**-2.2**
ALN				S	**Sn**	**22 44 57.6**	**-2.1**
RDO	**Rodhopi**	**3.01**	**347**	*e*Pn	**Pn**	**22 44 29.5**	**-1.2**
ELL	**Elmali**	**3.12**	**117**	*e*PN	**Pn**	**22 44 32.6**	**+0.4**
YLV	**Yalova**	**3.26**	**43**	*e*PN	**Pn**	**22 44 35.5**	**+1.4**
SLVT	**Silivri**	**3.30**	**24**	*e*PN	**Pn**	**22 44 35.7**	**+0.9**
ADVT	**Abdulvahap**	**3.37**	**48**	*e*PN	**Pn**	**22 44 36.8**	**+1.0**
CTKS	**Kestanelik-??a**	**3.40**	**27**	*e*PN	**Pn**	**22 44 37.7**	**+1.5**
EDRB	**Edirne**	**3.63**	**3**	*e*PN	**Pn**	**22 44 40.9**	**+1.6**
GULT	**Gulveren**	**3.85**	**54**	*e*PN	**Pn**	**22 44 43.7**	**+1.4**

*NIED **07** 22:54:00, 2490N×122.20E, h8km, Mw4.6 Best double couple: M0 7.92000×10^15 NP1:φ1=86.00000°, δ1=53.00000°, λ1=-73.00000°. NP2:φ2=240.00000°, δ2=40.00000°, λ2=-111.00000°.*
*ISCJB **07** 22:54:12.9±0.4, 2506N±002×122.41E±002, h15km±3km, mb4.5/42, MS3.7/14, Error ellipse: s-maj=3.1km s-min=2.9km az=142.3*
*JMA **07** 22:54:12.8±0.5, 2490N×122.18E, h45km, M3.9*
*TAP **07** 22:54:13.8, 2497N×122.32E, h17km, ML4.9, D*
*BJI **07** 22:54:14.3, 2508N×122.37E, h16km, mB4.7, mb4.3, ML4.8, Ms4.6, Msz4.4*
*NEIC **07** 22:54:15.9, 2491N×122.17E, h4km, mb4.6/12, ML4.0(TAP), After TAP.*
NEIC Recorded [3 TAP] in I-lan and T'ai-pei; [2 TAP] in Hua-lien Counties.
*MOS **07** 22:54:15.1±1.5, 2498N×122.31E, h33km, mb5.0/14, Error ellipse: s-maj=12.1km s-min=6.7km az=114.7*
*IDC **07** 22:54:19.0±3.4, 2499N×122.36E, h58km±31km, mb3.9/15, mb1 4.1/17, mb1mx4.0/24, mbtmp3.9/17, ML3.5/2, MS3.6/14, Ms1 3.6/14, ms1mx3.3/33, Error ellipse: s-maj=22.7km s-min=12.3km az=60.0*

ISC 07 22:54:13.0±0.4**, 2501N**±002×**12239E**±002**, h6**km±2km**, n163,** σ1°**24/208, mb4.5/42, MS3.7/14, 15C-12D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.36**	**270**	⇓*i* P	**Pg**	**22 54 20.8**	**+0.7**
	baz=278						
NWF	**Wu-fen Shan**	**0.55**	**277**	⇓*i* P	**Pg**	**22 54 24.8**	**+1.1**
	baz=282						
NWF				*e*S	**Sg**	**22 54 31.3**	**+0.4**
	baz=282						
ILA	**Ilan**	**0.63**	**248**	*e*P	**Pg**	**22 54 25.8**	**+0.7**
	baz=249						
ILA				*e*S	**Sg**	**22 54 33.6**	**+0.3**
	baz=249						
TWC	**Suao**	**0.63**	**231**	⇓*i* P	**Pg**	**22 54 25.2**	**0.0**
	baz=230						
TWE	**Neicheng**	**0.71**	**247**	⇓P	**Pg**	**22 54 26.9**	**+0.2**
	baz=248						
TWE				*e*S	**Sg**	**22 54 35.6**	**-0.4**
	baz=248						
TWA	**Mucha**	**0.73**	**268**	⇓*i* P	**Pg**	**22 54 27.9**	**+0.9**
	baz=271						
TWA				*i* S	**Sg**	**22 54 36.6**	**0.0**
	baz=271						
TWY	**Chenhua**	**0.76**	**291**	*i* P	**Pg**	**22 54 28.7**	**+1.0**
	baz=283						
TWY				S	**Sg**	**22 54 38.0**	**+0.5**
	baz=283						
TAP1	**Taipei**	**0.78**	**273**	⇑*i* P	**Pg**	**22 54 29.1**	**+1.0**
	baz=276						
TAP1				*i* S	**Sg**	**22 54 38.4**	**0.0**
	baz=276						
YOJ	**Yonaguni jima**	**0.79**	**134**	P	**Pg**	**22 54 28.7**	**+0.6**
YOJ				*e*S	**Sg**	**22 54 40.5**	**+2.1**
YOJ	**Yonaguni jima**	**0.79**	**134**	⇓*i* P	**Pg**	**22 54 28.9**	**+0.7**
	baz=120						
YOJ				*e*S	**Sg**	**22 54 41.5**	**+3.1**
	baz=120						
TATO	**Taipei**	**0.82**	**268**	*e*P	**Pg**	**22 54 29.2**	**+0.4**
TATO				*e*S	**Sg**	**22 54 36.6**	**-2.7**
ENA	**Nanau**	**0.82**	**226**	*e*P	**Pg**	**22 54 28.6**	**-0.3**
	baz=217						
ENA				*e*S	**Sg**	**22 54 38.2**	**-1.3**
	baz=217						
ENTT	**Nioudou**	**0.83**	**244**	⇑P	**Pg**	**22 54 28.8**	**-0.2**
	baz=245						
ENTT				*e*S	**Sg**	**22 54 39.9**	**+0.1**
	baz=245						
TWS1	**Kuangyinshan**	**0.88**	**276**	P	**Pg**	**22 54 30.6**	**+0.6**
	baz=279						
TWS1				S	**Sg**	**22 54 41.9**	**+0.4**
	baz=279						
EHP	**Heping Village**	**0.91**	**220**	P	**Pg**	**22 54 30.2**	**-0.3**
	baz=220						
EHP				*i* S	**Sg**	**22 54 41.1**	**-1.3**
	baz=220						
YHNB	**Yeheng**	**0.98**	**250**	*e*P	**Pg**	**22 54 31.3**	**-0.6**
YHNB				*e*S	**Sg**	**22 54 40.1**	**-4.5**
NSK	**Sanguang**	**0.99**	**251**	⇑P	**Pg**	**22 54 31.6**	**-0.5**
	baz=265						
NSK				*e*S	**Sg**	**22 54 43.7**	**-1.3**
	baz=265						
NNS	**Nan Shan**	**1.08**	**239**	P	**Pg**	**22 54 33.2**	**-0.6**
	baz=231						
NNS				*e*S	**Sg**	**22 54 47.0**	**-0.9**
	baz=231						
NCU	**National Centr**	**1.09**	**268**	*e*P	**Pg**	**22 54 34.4**	**+0.5**
	baz=259						
NCU				*e*S	**Sg**	**22 54 47.5**	**-0.6**
	baz=259						
NACB	**Ninganchiao**	**1.10**	**221**	*e*P	**Pg**	**22 54 33.0**	**-1.1**
NACB				*e*S	**Sg**	**22 54 45.2**	**-3.2**
TWD	**Chiawan**	**1.17**	**218**	P	**Pg**	**22 54 34.8**	**-0.7**
	baz=218						
TWD				*i* S	**Sg**	**22 54 48.9**	**-1.8**
	baz=218						
HWA	**Hwalien**	**1.25**	**215**	P	**Pb**	**22 54 36.7**	**-0.3**
	baz=221						
HWA				*e*S	**Sg**	**22 54 53.5**	**+0.3**
	baz=221						
HSN	**Hsinchu**	**1.30**	**261**	*e*P	**Pn**	**22 54 35.8**	**-2.0**
	baz=281						
HSN				*e*S	**Sb**	**22 54 52.6**	**-2.3**
	baz=281						
NSTT	**Nanjuang**	**1.31**	**254**	P	**Pn**	**22 54 36.8**	**-1.1**
	baz=255						
NSTT				*e*S	**Sb**	**22 54 53.5**	**-1.7**
	baz=255						
TWT	**Tachien**	**1.33**	**236**	P	**Pn**	**22 54 38.0**	**-0.2**
	baz=231						
TWT				*e*S	**Sb**	**22 54 55.2**	**-0.6**
	baz=231						
WHF	**Hehuan Shan**	**1.33**	**230**	⇑*i* P	**Pn**	**22 54 37.5**	**-0.7**
	baz=231						
WHF				S	**Sb**	**22 54 54.1**	**-1.7**
	baz=231						
ESF	**Shoufeng Towns**	**1.39**	**215**	*e*P	**Pn**	**22 54 38.0**	**-0.9**
	baz=199						
ESF				*e*S	**Sb**	**22 54 59.6**	**+2.3**
	baz=199						
IRIF	**Iriomote-Funau**	**1.39**	**118**	P	**Pn**	**22 54 37.9**	**-1.1**
IRIF				*e*S	**Sb**	**22 54 55.2**	**-2.3**
ESL	**Shilin**	**1.47**	**216**	P	**Pn**	**22 54 39.2**	**-0.9**
	baz=222						
ESL				*e*S	**Sn**	**22 54 58.1**	**-1.6**
	baz=222						
NSY	**Sanyi**	**1.59**	**249**	*e*P	**Pn**	**22 54 41.5**	**-0.3**
	baz=264						
HATJ	**Hateruma jima**	**1.60**	**126**	P	**Pn**	**22 54 41.1**	**-0.8**
TWQ1	**Liyutan**	**1.61**	**246**	*e*P	**Pn**	**22 54 41.2**	**-0.8**
	baz=248						
TWQ1				*e*S	**Sn**	**22 55 02.2**	**-0.8**
	baz=248						
JKRS	**Kuro-shima**	**1.66**	**117**	P	**Pn**	**22 54 42.0**	**-0.7**
JIJ	**Ishigaki jima**	**1.72**	**111**	P	**Pn**	**22 54 43.0**	**-0.5**
SMLT	**Sun Moon Lake**	**1.76**	**231**	⇑*i* P	**Pn**	**22 54 45.1**	**+1.0**
	baz=233						
SMLT				*e*S	**Sn**	**22 55 06.9**	**+0.2**
	baz=233						
TYC	**Yuchr**	**1.77**	**232**	⇑*i* P	**Pn**	**22 54 45.2**	**+0.9**
	baz=234						
TYC				S	**Sn**	**22 55 06.4**	**-0.7**
	baz=234						
TCU	**Taichung**	**1.78**	**242**	*e*P	**Pn**	**22 54 47.0**	**+2.7**
	baz=260						
TCU				*e*S	**Sn**	**22 55 07.4**	**+0.2**
	baz=260						
EHY	**Hungye**	**1.78**	**213**	*e*P	**Pn**	**22 54 43.0**	**-1.4**
	baz=218						
EHY				*e*S	**Sn**	**22 55 07.3**	**0.0**
	baz=218						
WNT	**Mingjian**	**1.92**	**234**	*e*P	**Pn**	**22 54 48.1**	**+1.9**
	baz=227						
WNT				*e*S	**Sn**	**22 55 12.2**	**+1.6**
	baz=227						
TWF1	**Yuli**	**1.92**	**211**	P	**Pn**	**22 54 45.1**	**-1.2**
	baz=211						
YUS	**Yu-Shan**	**2.00**	**221**	⇑P	**Pn**	**22 54 48.3**	**+0.9**
	baz=225						
YUS				*e*S	**Sn**	**22 55 14.9**	**+2.3**
	baz=225						

ALS	**Alishan**	**2.07**	**224**	*e*P		**Pn**	**22 54 49.6**	**+1.2**
	baz=215								
ALS				*e*S		**Sn**	**22 55 16.8**	**+2.2**
	baz=215								
CHN5	**Tsauling**	**2.10**	**228**	*e*P		**Pn**	**22 54 50.1**	**+1.4**
	baz=232								
CHN5				*e*S		**Sn**	**22 55 18.6**	**+3.5**
	baz=232								
CHKT	**Chengkung**	**2.12**	**206**	*e*P		**Pn**	**22 54 47.5**	**-1.5**
	baz=191								
WGK	**Gukeng**	**2.12**	**232**	*e*P		**Pn**	**22 54 51.5**	**+2.5**
	baz=232								
JTJ	**Tarama**	**2.14**	**99**	P		**Pn**	**22 54 50.4**	**+1.2**
ELDTW	**Lidau**	**2.20**	**215**	*e*P		**Pn**	**22 54 49.4**	**-0.7**
	baz=200								
WTCT	**Ta-ch'eng**	**2.23**	**240**	*e*P		**Pn**	**22 54 50.7**	**+0.2**
	baz=255								
CHN2	**Minshiung**	**2.28**	**230**	*e*P		**Pn**	**22 54 53.0**	**+1.8**
	baz=249								
CHN2				*e*S		**Sn**	**22 55 22.6**	**+3.0**
	baz=249								
CHN4	**Tsaushan**	**2.32**	**225**	*e*P		**Pn**	**22 54 53.3**	**+1.5**
	baz=225								
CHY	**Chiayi**	**2.34**	**230**	*e*P		**Pn**	**22 54 53.1**	**+1.0**
	baz=248								
CHY				*e*S		**Sn**	**22 55 22.3**	**+1.2**
	baz=248								
WTP	**Ta-pu**	**2.39**	**223**	⇑P		**Pn**	**22 54 54.1**	**+1.5**
	baz=214								
WTP				*e*S		**Sn**	**22 55 23.7**	**+1.4**
	baz=214								
WSF	**Szhu**	**2.40**	**236**	*e*P		**Pn**	**22 54 54.6**	**+1.8**
	baz=237								
TWK	**Hsinying**	**2.45**	**225**	*e*P		**Pn**	**22 54 54.9**	**+1.3**
	baz=230								
TWK				*e*S		**Sn**	**22 55 26.3**	**+2.5**
	baz=230								
CHN1	**Nanshi**	**2.48**	**223**	*e*P		**Pn**	**22 54 55.2**	**+1.2**
	baz=229								
CHN1				*e*S		**Sn**	**22 55 28.1**	**+3.4**
	baz=229								
TWG	**Pinlang**	**2.49**	**209**	*e*P		**Pn**	**22 54 52.1**	**-2.0**
	baz=196								
TTN	**Taitung**	**2.51**	**207**	*e*P		**Pn**	**22 54 55.0**	**+0.5**
	baz=207								
SGST	**Jiashian**	**2.53**	**221**	*e*P		**Pn**	**22 54 56.4**	**+1.7**
	baz=220								
CHN8	**Yiju**	**2.58**	**231**	*e*P		**Pn**	**22 54 55.8**	**+0.4**
	baz=230								
SCLT	**Jiali**	**2.71**	**228**	*e*P		**Pn**	**22 54 58.6**	**+1.5**
	baz=227								
ECL	**Taimali**	**2.73**	**209**	*e*P		**Pn**	**22 54 55.7**	**-1.8**
	baz=199								
SSD	**Sandimen**	**2.77**	**216**	*e*P		**Pn**	**22 54 58.7**	**+0.8**
	baz=200								
TAI1	**Yung-k'ang**	**2.78**	**226**	*e*P		**Pn**	**22 55 00.6**	**+2.5**
	baz=225								
TWM1	**Shoushan**	**2.82**	**220**	*e*P		**Pn**	**22 55 03.0**	**+4.3**
	baz=219								
PNG	**Penghu**	**2.95**	**242**	*e*P		**Pn**	**22 55 00.0**	**-0.5**
	baz=244								
EAST	**Anshuo**	**2.97**	**209**	*e*P		**Pn**	**22 55 00.1**	**-0.6**
	baz=203								
EAST				*e*S		**Sn**	**22 55 36.0**	**-0.6**
	baz=203								
WDGT	**Dungji**	**3.04**	**236**	*e*P		**Pn**	**22 55 03.6**	**+1.9**
	baz=239								
WDGT				*e*S		**Sn**	**22 55 38.1**	**-0.2**
	baz=239								
SCZT	**Fangliau**	**3.08**	**212**	*e*P		**Pn**	**22 55 03.8**	**+1.6**
	baz=197								
TWP	**Hsiaoliuchiu**	**3.23**	**215**	*e*P		**Pn**	**22 55 06.5**	**+2.2**
	baz=215								
TWK1	**Hengchun**	**3.38**	**206**	*e*P		**Pn**	**22 55 05.2**	**-1.1**
	baz=196								
TSEB	**Hengchuen, Pin**	**3.38**	**204**	*e*P		**Pn**	**22 55 06.0**	**-0.3**
	baz=196								
QZH	**Quanzhou**	**3.44**	**270**	P		**Pn**	**22 55 06.3**	**-0.9**
QZH				S		**Sn**	**22 55 45.1**	**-3.3**
QZH				Smax					
	comp=N,2μm,0.9s								
QZH				Smax					
	comp=E,1μm,0.9s								
QZH				LR		LR			
	comp=N,5μm,12.7s								
QZH				LR		LR			
	comp=E,6μm,11.2s								
QZH				LR		LR			
	comp=Z,6μm,10.8s								
KNM	**Kinmen**	**3.64**	**262**	*e*P		**Pn**	**22 55 09.3**	**-0.7**
	baz=261								
JOW	**Kunigami**	**5.61**	**70**	P		**Pn**	**22 55 41.2**	**+4.3**
	comp=Z,2.3nm,0.3s,baz=204,slow=7.8,SNR=4.4								
JOW				LR		LR	22 57 55.4		
	comp=Z,308nm,18.3s,baz=234,slow=38								
NJ2	**Nanjing**	**7.67**	**337**	*e*P		**Pn**	**22 56 09.5**	**+4.1**
NJ2				S		**Sn**	**22 57 33.7**	**+1.1**
NJ2				AMB		AMB			
	comp=Z,30nm,0.7s								
NJ2				AMB		AMB			
	comp=Z,110nm,3.7s								
NJ2				Smax					
	comp=N,380nm,1.0s								
NJ2				Smax					
	comp=E,370nm,1.0s								
NJ2				L

HHC				LR	LR		
	comp=Z,794nm,13.7s						
LZH	**Lanzhou**	**19.38**	**309**	*e*P	**Pn**	**22 58**	**43.5 +2.8**
LZH				AP	pP	22 58	44.9 +3.6
LZH				PP		22 59	01.3
LZH				*e*S	**Sn**	**23 02**	**16.5 -1.8**
LZH				XS	sS	23 02	22.7 +0.8
LZH				*e*SS		23 02	44.6
LZH				AMB	AMB		
	comp=Z,26nm,1.1s						
LZH				AMB	AMB		
	comp=Z,118nm,4.0s						
LZH				LR	LR		
	comp=N,748nm,11.7s						
LZH				LR	LR		
	comp=Z,837nm,12.5s						
LZH	**Lanzhou**	**19.38**	**309**	*e*P	**Pn**	**22 58**	**43.5 +2.8**
	comp=Z,26nm,1.1s						
LZH				pP	pP	22 58	44.9 +3.6
LZH				sP	sP	22 58	46.0 +3.9
LZH				PP		22 59	01.3
LZH				*e*S	**Sn**	**23 02**	**16.5 -1.8**
LZH				sS	sS	23 02	22.7 +0.8
LZH				*e*SS		23 02	44.6
LZH	**Lanzhou**	**19.38**	**309**	*e*P	**Pn**	**22 58**	**43.5 +2.8**
LZH				*e*S	**Sn**	**23 02**	**16.5 -1.8**
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
CHTO	**Chiang Mai**	**22.59**	**259**	*e*P	**P**	**22 59**	**15.5 +1.1**
	comp=Z,18nm,1.4s,mb4.3						
CHTO	**Chiang Mai**	**22.59**	**259**	*e*P	**P**	**22 59**	**15.5 +1.1**
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**22.71**	**258**	P	**P**	**22 59**	**15.9 +0.2**
	comp=Z,3.5nm,0.9s,mb3.8,baz=62,slow=8.3,SNR=17						
CMAR				LR	LR	23 09	33.2
	comp=Z,162nm,18.8s,MS3.5,baz=75,slow=40						
GTA	**Gaotai**	**23.81**	**313**	⇑P	**P**	**22 59**	**27.2 +0.5**
GTA				AP		22 59	32.5
GTA				XP	sP	22 59	36.1 +6.8
GTA				S	**S**	**23 03**	**39.6 -3.1**
GTA				XS	sS	23 03	50.7 +5.0
GTA				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.0						
GTA				AMB	AMB		
	comp=Z,113nm,4.5s						
GTA				LR	LR		
	comp=N,589nm,15.6s,MS4.3						
GTA				LR	LR		
	comp=E,471nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,413nm,16.5s,MS4.0						
GUMO	**Guam**	**24.03**	**114**	LR	LR	23 08	16.4
	comp=Z,68nm,18.1s,MS3.2,baz=28,slow=35						
ERM	**Erimo**	**24.14**	**40**	⇓P	**P**	**22 59**	**32.4 +2.7**
HIA	**Hailar**	**24.30**	**356**	*e*P	**P**	**22 59**	**31.6 +0.4**
	comp=Z,22nm,1.5s,mb4.4						
HIA	**Hailar**	**24.30**	**356**	*d*P	**P**	**22 59**	**31.4 +0.3**
ASAJ	**Asahikawa**	**25.19**	**36**	LR	LR	23 09	49.2
	comp=Z,95nm,18.9s,MS3.3,baz=185,slow=37						
KLR	**Kul'dur**	**25.27**	**14**	*e*P	**P**	**22 59**	**38.2 -1.7**
KLR				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.6						
ULN	**Ulaanbaatar**	**25.84**	**336**	*e*P	**P**	**22 59**	**45.6 +0.5**
	comp=Z,10nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**25.84**	**336**	*c*P	**P**	**22 59**	**46.6 +1.5**
SONM	**Songino Array**	**26.06**	**335**	P	**P**	**22 59**	**47.3 +0.1**
	comp=Z,1.5nm,0.6s,mb3.7,baz=150,slow=10,SNR=19						
SONM				LR	LR	23 10	27.6
	comp=Z,204nm,21.9s,MS3.6,baz=356,slow=37						
YSS	**Yuzh-Sakhalins**	**27.26**	**31**	*e*P	**P**	**23 00**	**02.3 +4.3**
YSS	**Yuzh-Sakhalins**	**27.26**	**31**	*c*P	**P**	**23 00**	**01.5 +3.6**
YSS				pmax	pmax		
	comp=Z,64nm,1.7s,mb4.9						
LSA	**Lhasa**	**28.09**	**287**	*e*P	**P**	**23 00**	**06.2 +0.6**
KAPI	**Kappang**	**29.95**	**185**	LR	LR	23 12	13.1
	comp=Z,97nm,19.4s,MS3.5,baz=291,slow=36						
TLY	**Talaya**	**30.24**	**337**	*e*P	**P**	**23 00**	**26.6 +2.2**
YAK	**Yakutsk**	**37.34**	**6**	P	**P**	**23 01**	**28.6 +2.6**
MKAR	**Makanchi Array**	**38.52**	**315**	P	**P**	**23 01**	**35.8 -0.4**
	comp=Z,7.6nm,0.9s,mb4.4,baz=103,slow=10,SNR=40						
MKAR				LR	LR	23 17	26.4
	comp=Z,88nm,18.4s,MS3.6,baz=328,slow=36						
MKAR	**Makanchi Array**	**38.52**	**315**	⇑*e*P	**P**	**23 01**	**35.7 -0.5**
PETK	**Petropavlovsk-**	**38.58**	**34**	LR	LR	23 16	08.4
	comp=Z,50nm,20.8s,MS3.3,baz=82,slow=34						
ZALV	**Zelesovo Beam**	**40.16**	**326**	P	**P**	**23 01**	**48.5 -1.2**
	comp=Z,7.1nm,0.9s,mb4.4,baz=120,slow=8.7,SNR=27						
NVS	**Novosibirsk**	**41.41**	**326**	*e*P	**P**	**23 01**	**59.1 -1.0**
NVS				pmax	pmax		
	comp=Z,18nm,2.0s,mb4.3						
NVS				pmax	pmax		
	comp=N,14nm,1.9s						
NVS				pmax	pmax		
	comp=E,20nm,1.9s						
TKM2	**Tokmak 2**	**42.13**	**307**	*e*P	**P**	**23 02**	**06.8 +0.6**
	comp=E,5.8nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**42.13**	**307**	*e*P	**P**	**23 02**	**06.8 +0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**42.18**	**319**	P	**P**	**23 02**	**05.5 -0.9**
	baz=111,slow=8.3						
KURK	**Kurchatov**	**42.18**	**319**	⇓*i*P	**P**	**23 02**	**05.2 -1.2**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.4						
AML	**Almayashu**	**43.41**	**306**	*e*P	**P**	**23 02**	**17.6 +1.1**
	comp=Z,7.2nm,1.1s,mb4.3						
MBWA	**Marble Bar**	**45.96**	**183**	*e*P	**P**	**23 02**	**36.4 -0.6**
WRAB	**Tennant Creek**	**46.16**	**164**	*e*P	**P**	**23 02**	**38.0 -0.5**
	comp=Z,36nm,0.9s,mb5.3						
WRAB	**Tennant Creek**	**46.16**	**164**	⇓*i*P	**P**	**23 02**	**37.5 -1.1**
WRA	**Warramunga Arr**	**46.17**	**164**	P	**P**	**23 02**	**37.5 -1.1**
	comp=Z,7.5nm,0.6s,mb4.8,baz=346,slow=8.5,SNR=30						
WRA				PcP	PcP	23 04	13.0 -1.6
	comp=Z,2.2nm,0.6s,baz=347,slow=3.7,SNR=6.2						
TIXI	**Tiksi**	**46.82**	**3**	*e*P	**P**	**23 02**	**42.8 -0.4**
	comp=Z,9.2nm,1.0s,mb4.7						
TIXI	**Tiksi**	**46.82**	**3**	*e*P	**P**	**23 02**	**42.1 -1.1**
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,480nm,14.0s,MS4.6						
BVAR	**Borovoye Array**	**47.74**	**320**	P	**P**	**23 02**	**50.0 -0.6**
	comp=Z,3.3nm,0.6s,mb4.5,baz=105,slow=7.7,SNR=22						
BRVK	**Borovoye**	**47.81**	**320**	*e*P	**P**	**23 02**	**51.1 -0.1**
ASAR	**Alice Springs**	**49.66**	**166**	P	**P**	**23 03**	**05.1 -0.5**
	comp=Z,2.1nm,0.6s,mb4.4,baz=345,slow=9.9,SNR=33						
ASAR				PcP	PcP	23 04	25.4 -1.6
	comp=Z,1.9nm,0.7s,baz=337,slow=2.8,SNR=8.0						
CTAO	**Charters Tower**	**50.48**	**150**	*e*P	**P**	**23 03**	**12.8 +0.9**
SVE	**Sverdlovsk**	**54.04**	**323**	⇑*e*P	**P**	**23 03**	**37.7 -0.3**
SVE				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
AKTK	**Aktyubinsk**	**54.96**	**315**	P	**P**	**23 03**	**44.1 -0.7**
AKTO	**Aktyubinsk**	**54.96**	**315**	P	**P**	**23 03**	**44.1 -0.7**
	comp=Z,0.7nm,0.4s,mb4.0,baz=89,slow=5.4,SNR=4.2						
ARU	**Arti**	**55.12**	**323**	*e*P	**P**	**23 03**	**44.8 -1.0**
	comp=Z,10nm,1.1s,mb4.8						
ARU	**Arti**	**55.12**	**323**	*c*P	**P**	**23 03**	**45.1 -0.7**
ARU				*e*		23 05	47.6
ARU				*e*PPP		23 06	58.4
ARU				*e*S	**S**	**23 11**	**25.2 -3.7**
ARU				*e*SS	SS	23 15	02.9 -10
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
STKA	**Stephens Creek**	**59.47**	**161**	P	**P**	**23 04**	**15.8 -1.0**
	comp=Z,1.3nm,0.7s,mb4.1,baz=222,slow=4.6,SNR=3.2						
STKA				LR	LR	23 30	29.9
	comp=Z,54nm,19.9s,MS3.7,baz=204,slow=36						
STKA	**Stephens Creek**	**59.47**	**161**	P	**P**	**23 04**	**15.8 -1.0**
STKA				LR	LR	23 30	29.9
VRHR	**Novokhopersk**	**65.28**	**317**	*e*P	**P**	**23 04**	**52.7 -2.9**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
VRHR				pmax	pmax		
	comp=N,20nm,0.5s						
VRHR				pmax	pmax		
	comp=E,70nm,0.7s						
QRN	**Al-Qurain**	**65.51**	**292**	*e*P	**P**	**23 04**	**56.5 -1.1**
	baz=292						
QRN				AMb	AMB	23 04	57.3
	comp=Z,34nm,1.1s,mb5.3,baz=292						
MIB	**Mutribah**	**65.71**	**293**	*e*P	**P**	**23 04**	**57.8 -1.0**
	baz=293						
MIB				AMb	AMB	23 04	58.3
	comp=Z,23nm,0.6s,mb5.4,baz=293						
RDF	**Al-Radifah**	**65.77**	**292**	*e*P	**P**	**23 04**	**58.3 -0.9**
	baz=292						
RDF				AMb	AMB	23 04	59.1
	comp=Z,45nm,1.4s,mb5.3,baz=292						
KIV	**Kislovodsk**	**65.92**	**309**	*e*P	**P**	**23 05**	**00.6 +0.7**
	comp=Z,7.7nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**65.92**	**309**	⇓*i*P	**P**	**23 04**	**59.7 -0.2**
KIV				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
NAY	**Al-Naaiem**	**65.94**	**292**	*e*P	**P**	**23 04**	**59.2 -1.1**
	baz=292						
NAY				AMb	AMB	23 05	00.1
	comp=Z,14nm,0.6s,mb5.2,baz=292						
VORD	**Divnogorie**	**66.75**	**317**	*e*P	**P**	**23 05**	**03.5 -1.6**
VORD				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
VORD				pmax	pmax		
	comp=N,6.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.8s						
VSR	**Storozhevoye**	**66.78**	**317**	*e*P	**P**	**23 05**	**03.8 -1.5**
VSR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
VSR				pmax	pmax		
	comp=N,1.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
OBN	**Obninsk**	**67.54**	**322**	⇓*i*P	**P**	**23 05**	**08.6 -1.4**
OBN				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.1						
JOF	**Joensuu**	**68.53**	**331**	*e*p	**P**	**23 05**	**15.2 -0.9**
	comp=Z,5.1nm,0.6s,mb4.6						
KEV	**Kevo**	**68.62**	**338**	*e*p	**P**	**23 05**	**15.8 -0.8**
	comp=Z,6.5nm,0.6s,mb4.7						
KEV	**Kevo**	**68.62**	**338**	*e*P	**P**	**23 05**	**15.8 -0.8**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**69.19**	**338**	P	**P**	**23 05**	**19.5 -0.6**
	comp=Z,4.3nm,0.8s,mb4.4,baz=67,slow=9.3,SNR=9.5						
ANN	**Anapa**	**69.39**	**311**	*e*P	**P**	**23 05**	**23.1 +1.3**
ANN				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.4						
KAF	**Kangasniemi**	**70.98**	**330**	*e*p	**P**	**23 05**	**30.0 -1.2**
	comp=Z,4.0nm,0.7s,mb4.5						
KAF	**Kangasniemi**	**70.98**	**330**	*e*P	**P**	**23 05**	**30.0 -1.2**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TAU	**Tasmania Unive**	**71.38**	**161**	*e*P	**P**	**23 05**	**36.2 +2.5**
INK	**Inuvik**	**72.06**	**22**	*e*P	**P**	**23 05**	**37.0 -0.6**
AKASG	**Malin Array Be**	**72.99**	**318**	P	**P**	**23 05**	**42.2 -1.2**
	comp=Z,2.3nm,0.7s,mb4.2,baz=59,slow=6.2,SNR=9.5						
AKASG				LR	LR	23 38	20.2
	comp=Z,86nm,19.5s,MS4.0,baz=340,slow=36						
BRTR	**Keskin Array B**	**73.57**	**306**	P	**P**	**23 05**	**46.6 -0.5**
	comp=Z,2.9nm,0.9s,mb4.2,baz=99,slow=5.4,SNR=10.0						
BRTR	**Keskin Array B**	**73.57**	**306**	⇑*e*P	**P**	**23 05**	**46.9 -0.2**
DLBC	**Dease Lake**	**77.68**	**31**	LR	LR	23 45	13.1
	comp=Z,43nm,19.2s,MS3.8,baz=218,slow=39						
NB2	**NORSAR Subarra**	**78.01**	**332**	P	**P**	**23 06**	**10.5 -1.6**
	comp=Z,9.3nm,1.4s,mb4.5,baz=62,slow=5.6						
NOA	**NORSAR Array B**	**78.01**	**332**	P	**P**	**23 06**	**10.0 -2.1**
	comp=Z,0.4nm,0.7s,mb3.4,baz=71,slow=8.8,SNR=2.7						
CLL	**Collm**	**82.06**	**323**	*e*P	**P**	**23 06**	**34.0 -0.2**
GERES	**GERESS Array B**	**82.90**	**321**	P	**P**	**23 06**	**38.2 -0.4**
	comp=Z,1.6nm,1.1s,mb4.0,baz=66,slow=4.5,SNR=4.1						
GERES				LR	LR	23 47	00.1
	comp=Z,70nm,18.5s,MS4.1,baz=286,slow=38						
KEST	**Kesra**	**92.55**	**311**	LR	LR	23 51	52.6
	comp=Z,26nm,18.2s,MS3.7,baz=323,slow=37						
NVAR	**Mina Array Bea**	**95.09**	**43**	P	**P**	**23 07**	**37.0 -0.2**
	comp=Z,0.2nm,0.5s,mb3.8,baz=292,slow=4.8,SNR=2.9						
VNA2	**Neumayer--Watz**	**126.01**	**198**	*e*PKPdf	PKPdf	23 13	14.1 -1.2
	baz=333,slow=0.3						
VNA2				*e*		23 13	20.7
VNA3	**Neumayer Olymp**	**126.47**	**197**	*e*PKPdf	PKPdf	23 13	14.7 -1.4
VNA3				*e*		23 13	21.4

ATH ***07*** *22:56:38.4, 3821N×2666E, h30km±8km, MD3.3/4*
CSEM ***07*** *22:56:38.5±0.1, 3824N×2651E, h8km, MD2.6, Error ellipse: s-maj=3.3km s-min=2.0km az=86.0*
NEIC ***07*** *22:56:38.4, 3821N×2666E, h30km, MD3.3(ATH), After ATH.*
ISCJB ***07*** *22:56:39.2±1.0, 3822N±003×2648E±006, h7km±5km, Error ellipse: s-maj=7.7km s-min=5.6km az=167.3*
DDA ***07*** *22:56:39.8, 3826N×2655E, h12km±1km, Md2.6*
ISC 07 22:56:39.3±0.8, 3823N±003×2647E±006, h9km±5km, n12, σ0§94/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**36**	*i* P		**Pg**	**22 56 42.8**	**0.0**
URLA				*i* S		**Sg**	**22 56 45.1**	**0.0**
SMG	**Samos**	**0.59**	**151**	*e*PN		**Pg**	**22 56 49.4**	**-1.3**
KDAG	**Bornova**	**0.65**	**74**	*i* P		**Pg**	**22 56 51.5**	**-0.3**
KDAG				*i* S		**Sg**	**22 57 00.3**	**0.0**
GCAM	**G?zelcaml?**	**0.80**	**131**	*i* P		**Pg**	**22 56 54.5**	**-0.2**
GCAM				*i* S		**Sg**	**22 57 06.3**	**+1.2**
PRK	**Paraskevi**	**1.03**	**351**	*e*PN		**Pn**	**22 56 59.0**	**-0.9**
PRK				*e*SN		**Sn**	**22 57 13.8**	**-0.7**
AYVA	**Ayvalik**	**1.09**	**9**	*i* P		**Pg**	**22 56 59.8**	**-0.5**
AYVA				*i* S		**Sg**	**22 57 15.3**	**+0.8**
AKHS	**Akhisar**	**1.23**	**58**	*i* P		**Pn**	**22 57 02.2**	**-0.6**
AKHS				*i* S		**Sb**	**22 57 17.2**	**-1.7**
APE	**Apeiranthos**	**1.38**	**213**	*e*PN		**Pn**	**22 57 04.7**	**0.0**
BDRM	**Kayabasi**	**1.39**	**146**	*i* P		**Pn**	**22 57 05.3**	**+0.4**
MANT	**Manisa**	**1.66**	**80**	*i* P		**Pn**	**22 57 09.6**	**+1.0**
MANT				*i* S		**Sn**	**22 57 29.5**	**-0.5**
BALY	**Balya**	**1.75**	**30**	*i* P		**Pn**	**22 57 12.0**	**+2.1**
BALY				*i* S		**Sn**	**22 57 35.5**	**+3.1**
LIA	**Limnos Island**	**1.95**	**329**	*e*PN		**Pn**	**22 57 12.8**	**+0.3**

CSEM ***07*** *23:17:30.1±0.6, 3812N×2620E, h2km, MD2.8, Error ellipse: s-maj=16.2km s-min=8.0km az=62.0*
ATH ***07*** *23:17:31.4, 3804N×2603E, h38km, MD3.4/3*
ISCJB ***07*** *23:17:33.9±1.0, 3818N±003×2645E±008, h10km, Error ellipse: s-maj=8.8km s-min=4.4km az=173.7*
DDA ***07*** *23:17:34.6, 3825N×2652E, h6km±1km, Md2.8*
ISC 07 23:17:33.3±1.2, 3819N±004×2638E±008, h5km±5km, n16, σ1§49/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**44**	*i* P		**Pg**	**23 17 37.6**	**-0.4**
URLA				*i* S		**Sg**	**23 17 39.8**	**-1.4**
SMG	**Samos**	**0.60**	**143**	*e*PN		**Pg**	**23 17 46.4**	**+1.6**
SMG				*e*SN		**Sg**	**23 17 56.3**	**+3.7**
KDAG	**Bornova**	**0.73**	**73**	*i* P		**Pg**	**23 17 46.4**	**-0.9**
KDAG				*i* S		**Sg**	**23 17 55.5**	**-1.4**
GCAM	**G?zelcaml?**	**0.83**	**126**	*i* P		**Pg**	**23 17 49.9**	**+0.6**
GCAM				*i* S		**Sg**	**23 18 03.2**	**+3.1**
PRK	**Paraskevi**	**1.06**	**355**	*e*PN		**Pn**	**23 17 54.0**	**-0.9**
AYVA	**Ayvalik**	**1.15**	**12**	*i* P		**Pg**	**23 17 55.3**	**0.0**
AYVA				*i* S		**Sg**	**23 18 11.0**	**+0.8**
AYDN	**Tasoluk**	**1.30**	**113**	*i* P		**Pn**	**23 17 58.1**	**-0.1**
AKHS	**Akhisar**	**1.32**	**58**	*i* P		**Pn**	**23 17 56.9**	**-1.6**
AKHS				*i* S		**Sb**	**23 18 11.4**	**-4.4**
BDRM	**Kayabasi**	**1.40**	**143**	*i* P		**Pn**	**23 17 56.6**	**-3.0**
BDRM				*i* S		**Sb**	**23 18 16.4**	**-1.8**
MANT	**Manisa**	**1.74**	**79**	*i* P		**Pn**	**23 18 05.2**	**+1.0**
MANT				*i* S		**Sn**	**23 18 25.5**	**-1.3**
MANT	**Manisa**	**1.74**	**79**	*i* P		**Pn**	**23 18 05.2**	**+1.0**
BALY	**Balya**	**1.83**	**32**	*i* P		**Pn**	**23 18 07.3**	**+1.9**
BALY				*i* S		**Sn**	**23 18 31.6**	**+2.6**
BALY	**Balya**	**1.83**	**32**	*i* P		**Pn**	**23 18 07.3**	**+1.8**
BALY				*i* S		**Sn**	**23 18 31.6**	**+2.6**
LIA	**Limnos Island**	**1.95**	**332**	*e*PN		**Pn**	**23 18 03.3**	**-3.8**
DEMI	**Demirci**	**2.02**	**64**	*i* P		**Pn**	**23 18 10.4**	**+2.3**
DEMI				*i* S		**Sn**	**23 18 34.9**	**+1.1**
DEMI	**Demirci**	**2.02**	**64**	*i* P		**Pn**	**23 18 10.4**	**+2.3**
DEMI				*i* S		**Sn**	**23 18 34.8**	**+1.1**

ISCJB ***07*** *23:26:36.4±1.0, 2794S×006×268E±0.1, h10km, mb3.8/2, Error ellipse: s-maj=14.5km s-min=6.5km az=24.0*
IDC ***07*** *23:26:37.6±1.5, 2792S×2672E, h0km, mb3.7/2, mb1 3.6/3, mb1mx3.4/20, mbtmp3.6/3, ML2.7/1, Error ellipse: s-maj=19.8km s-min=12.9km az=102.0*
NEIC ***07*** *23:26:38.0±0.9, 2794S×2669E, h5km, Error ellipse: s-maj=16.9km s-min=8.9km az=110.0*
ISC 07 23:26:38.8±1.0, 2794S±005×267E±01, h10km, n12, σ1§09/18, mb3.7/2, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**1.44**	**242**	Pg		**Pg**	**23 27 05.0**	**-1.5**
	7.2nm,0.3s,baz=64,slow=16,SNR=226							
BOSA				Lg			23 27 24.1	
	19nm,0.3s,baz=159,slow=22,SNR=21							
BOSA				Rg			23 27 32.7	
	20nm,0.5s,baz=169,slow=6.6,SNR=4.7							
BOSA	**Boshof**	**1.44**	**242**	Pg		**Pg**	**23 27 05.0**	**-1.5**
BOSA				*e*Sn		**Sn**	**23 27 23.4**	**-0.5**
BOSA				Lg			23 27 24.1	
BOSA				Rg			23 27 32.7	
LBTB	**Lobatse**	**3.07**	**341**	Pn		**Pn**	**23 27 28.9**	**+1.4**
	0.9nm,0.3s,baz=176,slow=12,SNR=35							
LBTB				Pg		**Pg**	**23 27 34.7**	**-3.0**
	2.1nm,0.3s,baz=171,slow=17,SNR=25							
LBTB				Sn		**Sn**	**23 28 05.8**	**+1.5**
	1.8nm,0.3s,baz=83,slow=23,SNR=5.0							
LBTB				Lg			23 28 13.4	
	3.8nm,0.3s,baz=83,slow=23,SNR=16							
LBTB	**Lobatse**	**3.07**	**341**	Pn		**Pn**	**23 27 28.9**	**+1.4**
LBTB				Pg		**Pg**	**23 27 34.7**	**-3.0**
LBTB				Sn		**Sn**	**23 28 05.8**	**+1.5**
LBTB				Lg			23 28 13.4	
SUR	**Sutherland**	**6.75**	**228**	Pn		**Pn**	**23 28 18.9**	**+0.9**
	baz=18,slow=9.6							
SUR	**Sutherland**	**6.75**	**228**	Pn		**Pn**	**23 28 18.9**	**+0.9**
SUR				Sn		**Sn**	**23 29 36.4**	**+1.5**
TSUM	**Tsumeb**	**12.05**	**314**	*e*Pn		**Pn**	**23 29 30.4**	**-0.3**
LSZ	**Lusaka**	**12.67**	**7**	*e*Pn		**Pn**	**23 29 38.4**	**-0.8**
TRIS	**Tristan da Cun**	**33.94**	**244**	*e*P		**P**	**23 33 21.6**	**-0.7**
	235nm,1.2s							
MAW	**Mawson**	**45.24**	**161**	P		**P**	**23 34 56.1**	**+0.2**
	1.2nm,0.5s,mb4.0,baz=300,slow=14,SNR=4.9							
TOA0	**Torodi Ar. Sit**	**47.48**	**326**	*e*P		**P**	**23 35 14.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**47.48**	**326**	P		**P**	**23 35 13.8**	**-0.4**
	0.3nm,0.6s,mb3.4,baz=144,slow=6.2,SNR=9.7							

ISCJB ***07*** *23:26:48.0±0.7, 3825N±003×2652E±006, h10km, Error ellipse: s-maj=6.5km s-min=3.8km az=169.3*
ATH ***07*** *23:26:47.3, 3822N×2639E, h10km, MD3.2/3*
CSEM ***07*** *23:26:47.6±0.2, 3824N×2650E, h2km, MD2.6, Error ellipse: s-maj=5.0km s-min=3.2km az=88.0*
DDA ***07*** *23:26:48.6, 3825N×2661E, h5km±3km, Md2.6*
ISC 07 23:26:47.3±1.0, 3823N±003×2648E±006, h1km±8km, n13, σ1§05/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**35**	*i* P		**Pg**	**23 26 51.2**	**+0.8**
URLA				*i* S		**Sg**	**23 26 53.0**	**-0.4**
SMG	**Samos**	**0.59**	**151**	*e*PB		**Pg**	**23 26 59.3**	**+0.7**
GCAM	**G?zelcaml?**	**0.80**	**131**	*i* P		**Pg**	**23 27 03.2**	**+0.6**
GCAM				*i* S		**Sg**	**23 27 13.8**	**+0.9**
PRK	**Paraskevi**	**1.03**	**351**	*e*PB		**Pb**	**23 27 06.7**	**-1.3**
AYVA	**Ayvalik**	**1.09**	**9**	*i* P		**Pg**	**23 27 08.4**	**+0.1**
AYVA				*i* S		**Sg**	**23 27 24.3**	**+1.9**
AKHS	**Akhisar**	**1.23**	**58**	*i* P		**Pg**	**23 27 09.8**	**-1.2**
AKHS				*i* S		**Sg**	**23 27 26.8**	**-0.2**
AYDN	**Tasoluk**	**1.25**	**117**	*i* P		**Pg**	**23 27 12.1**	**+0.9**
AYDN				*i* S		**Sg**	**23 27 27.0**	**-0.3**
APE	**Apeiranthos**	**1.38**	**213**	*e*PB		**Pb**	**23 27 12.7**	**-1.2**
BDRM	**Kayabasi**	**1.39**	**146**	*i* P		**Pn**	**23 27 14.7**	**+0.8**
BDRM				*i* S		**Sn**	**23 27 33.8**	**+1.0**
BOZC	**Bozcaada**	**1.65**	**349**	*i* P		**Pn**	**23 27 15.9**	**-1.5**
BOZC				*i* S		**Sn**	**23 27 40.0**	**+0.8**
MANT	**Manisa**	**1.66**	**80**	*i* P		**Pg**	**23 27 17.9**	**-1.2**
MANT				*i* S		**Sg**	**23 27 39.0**	**-1.6**
BALY	**Balya**	**1.75**	**30**	*i* P		**Pg**	**23 27 20.6**	**-0.4**
BALY				*i* S		**Sg**	**23 27 45.2**	**+1.5**
DEMI	**Demirci**	**1.93**	**64**	*i* P		**Pg**	**23 27 22.8**	**-1.6**

ISCJB ***07*** *23:28:17.4±0.6, 3823N±003×2642E±005, h10km, Error ellipse: s-maj=5.6km s-min=3.7km az=160.1*
ATH ***07*** *23:28:17.5, 3824N×2646E, h30km±16km, MD2.9/4*
CSEM ***07*** *23:28:17.1±0.1, 3824N×2634E, h2km, MD2.5, Error ellipse: s-maj=2.5km s-min=1.6km az=72.0*
NEIC ***07*** *23:28:17.5, 3824N×2646E, h30km, MD2.9(ATH), After ATH.*
DDA ***07*** *23:28:18.5, 3823N×2654E, h12km±2km, Md2.5*
ISC 07 23:28:17.9±0.8, 3824N±003×2645E±005, h6km±5km, n15, σ1§01/27, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.

AYDN				*i* S		**Sg**	**23 31 58.5**	**-1.5**
AYDN	**Tasoluk**	**1.27**	**117**	*i* P		**Pn**	**23 31 41.8**	**-1.4**
AYDN				*i* S		**Sg**	**23 31 58.5**	**-1.4**
BODT	**Bodrum**	**1.36**	**150**	*e*PN		**Pn**	**23 31 44.6**	**+0.2**
BODT				*e*SN		**Sn**	**23 32 02.3**	**-0.4**
APE	**Apeiranthos**	**1.38**	**212**	P		**Pn**	**23 31 43.7**	**-1.0**
APE	**Apeiranthos**	**1.38**	**212**	*e*PB		**Pn**	**23 31 43.7**	**-1.0**
APE	**Apeiranthos**	**1.38**	**212**	⇓*i*P		**Pn**	**23 31 43.6**	**-1.1**
MLSB	**Milas**	**1.41**	**131**	*e*PN		**Pn**	**23 31 45.3**	**+0.1**
MLSB				*e*SN		**Sn**	**23 32 03.0**	**-1.0**
BDRM	**Kayabasi**	**1.41**	**146**	*i* P		**Pn**	**23 31 44.2**	**-1.0**
BDRM				*i* S		**Sb**	**23 32 06.3**	**+2.3**
EZN	**Ezine**	**1.59**	**357**	*e*PN		**Pg**	**23 31 52.2**	**+2.6**
BOZC	**Bozcaada**	**1.63**	**349**	*i* P		**Pn**	**23 31 46.8**	**-1.4**
BOZC				*i* S		**Sn**	**23 32 01.6**	**+1.1**
MANT	**Manisa**	**1.68**	**81**	*i* P		**Pn**	**23 31 49.5**	**+0.7**
MANT				*i* S		**Sn**	**23 32 10.7**	**+0.2**
BALY	**Balya**	**1.75**	**31**	*i* P		**Pn**	**23 31 50.1**	**+0.2**
BALY				*i* S		**Sn**	**23 32 12.8**	**+0.4**
DAT	**Datca**	**1.75**	**149**	*e*PN		**Pn**	**23 31 50.9**	**+1.0**
KULA	**Kula-Manisa**	**1.76**	**80**	*e*PN		**Pn**	**23 31 50.8**	**+0.8**
LIA	**Limnos Island**	**1.93**	**330**	P		**Pn**	**23 31 52.0**	**-0.3**
LIA				S		**Sn**	**23 32 14.6**	**-2.2**
LIA	**Limnos Island**	**1.93**	**330**	*e*Pn		**Pn**	**23 31 51.9**	**-0.4**
LIA				S		**Sn**	**23 32 14.6**	**-2.2**
DEMI	**Demirci**	**1.95**	**65**	*i* P		**Pb**	**23 31 53.7**	**-1.2**
DEMI				*i* S		**Sb**	**23 32 19.3**	**-0.1**
THR3	**Thira Island,**	**2.01**	**205**	P		**Pn**	**23 31 52.0**	**-1.4**
THR5	**Thira Island,**	**2.02**	**206**	P		**Pn**	**23 31 52.1**	**-1.5**
THR1	**Thera Island**	**2.03**	**203**	P		**Pn**	**23 31 52.5**	**-1.2**
THR6	**Thira Island,**	**2.06**	**204**	P		**Pn**	**23 31 53.1**	**-1.0**
DENT	**Denizli**	**2.10**	**103**	*e*PN		**Pn**	**23 31 56.3**	**+0.7**
DST	**Dursunbey**	**2.18**	**51**	*e*PN		**Pb**	**23 31 57.3**	**+1.6**
TURN	**Turunc**	**2.19**	**128**	*i* P		**Pn**	**23 31 52.7**	**-3.2**
DALT	**Dalyan (Mudla)**	**2.28**	**130**	*e*PN		**Pn**	**23 31 58.0**	**+0.9**
BNT	**Bandirma**	**2.40**	**28**	*e*PN		**Pb**	**23 32 02.3**	**-0.4**
KHL	**Karahalli**	**2.42**	**87**	*e*PN		**Pn**	**23 31 59.9**	**+0.8**
ARG	**Arkhangelos**	**2.42**	**146**	*e*PN		**Pn**	**23 31 58.8**	**-0.3**
ENEZ	**Enez**	**2.50**	**355**	*e*PN		**Pb**	**23 32 04.9**	**+0.5**
KCT	**Karacabey**	**2.51**	**36**	*e*PN		**Pb**	**23 32 03.1**	**-1.3**
RKY	**Sarkoy-Tekirda**	**2.51**	**13**	*e*PN		**Pb**	**23 32 04.1**	**-0.4**
GDZ	**Gediz**	**2.52**	**69**	*i* P		**Pg**	**23 32 06.5**	**-0.9**
GDZ				*i* S		**Sn**	**23 32 36.0**	**+4.7**
MRMT	**Marmara Adasi**	**2.52**	**20**	*e*PN		**Pb**	**23 32 04.0**	**-0.7**
MFT	**Murefte**	**2.62**	**14**	*e*PN		**Pb**	**23 32 06.2**	**-0.2**
FETY	**Fethiye**	**2.64**	**127**	*e*PN		**Pn**	**23 32 02.8**	**+0.7**
GOLH	**Golhisar**	**2.66**	**111**	*i* P		**Pn**	**23 32 01.2**	**-1.2**
ALN	**Alexandroupoli**	**2.67**	**353**	P		**Pn**	**23 32 01.7**	**-0.9**
ALN				S		**Sn**	**23 32 33.0**	**-2.1**
PAIG	**Paliouri**	**2.74**	**309**	P		**Pn**	**23 32 02.0**	**-1.4**
KARP	**Karpathos**	**2.75**	**168**	*e*PN		**Pn**	**23 32 02.9**	**-0.7**
TKR	**Tekirdag**	**2.87**	**17**	*e*PN		**Pn**	**23 32 09.7**	**+4.4**
ALT	**Altintas**	**2.98**	**73**	*e*PN		**Pn**	**23 32 08.0**	**+1.3**
RDO	**Rodhopi**	**2.99**	**347**	*e*PN		**Pn**	**23 32 06.2**	**-0.7**
TKTP	**Tekketepe**	**3.06**	**93**	*i* P		**Pn**	**23 32 07.7**	**-0.2**
TKTP				*i* S		**Sg**	**23 33 00.1**	**+2.7**
ELL	**Elmali**	**3.13**	**117**	*e*PN		**Pn**	**23 32 10.0**	**+1.2**
VLI	**Veliai**	**3.18**	**243**	*e*PN		**Pn**	**23 32 10.0**	**+0.5**
VLI	**Veliai**	**3.18**	**243**	*e*Pn		**Pn**	**23 32 10.9**	**+1.4**
SHUT	**Suhut-Afyon**	**3.24**	**83**	*e*PN		**Pn**	**23 32 11.6**	**+1.3**
YLV	**Yalova**	**3.24**	**43**	*e*PN		**Pn**	**23 32 14.1**	**+3.7**
YLV	**Yalova**	**3.24**	**43**	*e*Pn		**Pn**	**23 32 14.0**	**+3.6**
SLVT	**Silivri**	**3.28**	**24**	*e*PN		**Pn**	**23 32 15.2**	**+4.3**
ADVT	**Abdulvahap**	**3.36**	**48**	*e*PN		**Pn**	**23 32 14.6**	**+2.6**
CTKS	**Kestanelik-??a**	**3.39**	**27**	*e*PN		**Pn**	**23 32 16.2**	**+3.9**
BGKT	**Bogazkoy**	**3.44**	**31**	*e*PN		**Pn**	**23 32 16.8**	**+3.7**
ISK	**Istanbul-Kandi**	**3.47**	**55**	*e*PN		**Pn**	**23 32 17.5**	**+4.0**
KDZ	**Kurdzhali**	**3.50**	**347**	*i* P		**Pn**	**23 32 13.2**	**+0.7**
CTYL	**Yal??k??y-??at**	**3.53**	**23**	*e*PN		**Pn**	**23 32 18.8**	**+4.5**
EDRB	**Edirne**	**3.61**	**3**	*e*PN		**Pn**	**23 32 20.2**	**+4.8**
KLYT	**Kilyos**	**3.61**	**33**	*e*PN		**Pn**	**23 32 18.8**	**+3.4**
ESKT	**Eskisehir**	**3.66**	**68**	*i* P		**Pb**	**23 32 25.9**	**+1.7**
ESKT				*i* S		**Sb**	**23 33 13.6**	**+4.9**
NVR	**Nevrokopi**	**3.69**	**328**	*e*PN		**Pn**	**23 32 16.7**	**+0.1**
RZN	**Rozhen**	**3.69**	**339**	*i* P		**Pn**	**23 32 16.6**	**0.0**
RZN				*i* S		**Sn**	**23 32 57.6**	**-2.7**
EYL	**Eskiyayla**	**3.69**	**50**	*e*PN		**Pn**	**23 32 19.1**	**+2.5**
THL	**Klokotos Trika**	**3.71**	**292**	*e*PN		**Pn**	**23 32 18.0**	**+1.3**
GULT	**Gulveren**	**3.84**	**54**	*e*PN		**Pn**	**23 32 21.3**	**+2.8**
MMB	**Musomiste**	**3.95**	**329**	*e*P		**Pn**	**23 32 19.2**	**-0.9**
KKB	**Krupnik**	**4.45**	**326**	*i* Sg		**Sg**	**23 33 38.4**	**-3.6**
KKB				*i* P			23 32 27.8	
KKB				*e*S		**Sn**	**23 33 17.1**	**-1.9**
VTS	**Vitosha**	**5.00**	**331**	*i* P		**Pn**	**23 32 35.3**	**+0.7**
BARS	**Barje**	**5.78**	**324**	*e*Pn		**Pn**	**23 32 46.2**	**+1.0**
BOLS	**Boljevac**	**6.54**	**330**	⇓*i*Pn		**Pn**	**23 32 56.1**	**+0.5**
VOIR		**7.27**	**352**	⇓P		**Pn**	**23 33 05.5**	**-0.2**
VOIR		**7.27**	**352**	⇓*i*P		**Pn**	**23 33 05.5**	**-0.2**
GZR	**Gura Zlata**	**7.66**	**340**	⇓P		**Pn**	**23 33 11.5**	**+0.5**
GZR	**Gura Zlata**	**7.66**	**340**	⇓*i*P		**Pn**	**23 33 11.5**	**+0.5**
BEO	**Beograd**	**7.95**	**328**	*e*Pn		**Pn**	**23 33 17.3**	**+2.3**
BZS	**Buzias**	**8.20**	**336**	⇓P		**Pn**	**23 33 20.4**	**+1.9**
BZS	**Buzias**	**8.20**	**336**	⇓*i*P		**Pn**	**23 33 20.4**	**+1.9**

*ISCJB **07** 23:41:45.4±0.4, 16.14N±004×9974W±004, h10km, mb3.9/10, MS3.2/3, Error ellipse: s-maj=5.7km s-min=4.3km az=43.9*
*IDC **07** 23:41:45.3±1.5, 1599N×9972W, h0km, mb3.8/4, mb1 4.0/7, mb1mx3.9/23, mbtmp3.7/7, ML3.4/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/35, Error ellipse: s-maj=39.3km s-min=22.8km az=50.0*
*NEIC **07** 23:41:48.5, 16.10N×9987W, h16km, mb4.2/9, MD4.3(MEX), After MEX.*
*MEX **07** 23:41:48.5±1.2, 16.10N×9987W, h16km±14km, MD4.3*
ISC 07 23:41:47.3±0.5, 1617N±004×9969W±004, h10km, n46, σ1§12/55, mb3.9/10, MS3.2/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.72**	**342**	*i* P			**Pg**	**23 42 00.7**	**-0.6**
ACX				*i* P				23 42 00.7	
ACX				*i* S			**Sg**	**23 42 09.3**	**-1.5**
ACX				*i* S			**Sg**	**23 42 10.2**	**-0.6**
CAIG	**El Cayaco**	**1.03**	**327**	*i* P			**Pg**	**23 42 04.0**	**-3.2**
CAIG				*i* S			**Sg**	**23 42 16.0**	**-4.7**
PNIG	**Pinotepa**	**1.51**	**81**	*i* P			**Pn**	**23 42 13.4**	**-1.0**
PNIG				*i* S			**Sn**	**23 42 32.8**	**-1.4**
MEIG	**Mezcala**	**1.75**	**2**	*i* P			**Pn**	**23 42 16.8**	**-0.9**
MEIG				*i* S			**Sn**	**23 42 36.6**	**-3.4**
PLIG	**Platanillo**	**2.21**	**5**	*i* P			**Pn**	**23 42 23.9**	**-0.2**
PLIG				*i* S			**Sn**	**23 42 50.0**	**-1.6**
ZIIG	**Zihuatanejo**	**2.22**	**310**	*i* P			**Pn**	**23 42 20.4**	**-3.8**
ZIIG				*i* S			**Sn**	**23 42 44.1**	**-7.7**
UTMO	**Huajuapan**	**2.44**	**47**	*i* P			**Pn**	**23 42 27.3**	**0.0**
UTMO				*i* S			**Sn**	**23 42 57.6**	**+0.5**
VHO	**Vista Hermosa**	**2.97**	**72**	*i* P			**Pn**	**23 42 35.5**	**+1.0**
VHO				*i* S			**Sn**	**23 43 11.2**	**+1.0**
PPM	**Popocatepetl**	**3.05**	**19**	*e*P			**Pn**	**23 42 35.8**	**+0.2**
PPM				*i* S			**Sn**	**23 43 14.2**	**+2.0**
CMIG	**Matias Romero**	**4.69**	**78**	Pn			**Pn**	**23 42 58.3**	**+0.1**
	2.0nm,0.3s,baz=258,slow=11,SNR=17								
CMIG						Sn	**Sn**	**23 43 46.8**	**-6.0**
	2.8nm,0.3s,baz=284,slow=10,SNR=4.1								
CMIG						LR	LR	23 44 51.0	
	comp=Z,199nm,21.8s,baz=109,slow=39								
TXAR	**Lajitas Array**	**13.60**	**345**	Pn			**Pn**	**23 45 01.9**	**+1.5**
	0.0nm,0.3s,baz=161,slow=13,SNR=6.2								
TXAR						LR	LR	23 50 48.7	
	comp=Z,115nm,21.5s,baz=180,slow=40								
VBMS	**Vicksburg**	**18.02**	**26**	Pn			**Pn**	**23 45 59.0**	**+1.1**
AMTX	**Amarillo**	**18.72**	**355**	*e*P			**Pn**	**23 46 06.1**	**-0.3**
	5.3nm,0.6s								
BNM	**Barren Site**	**18.96**	**342**	*e*P			**Pn**	**23 46 09.3**	**-0.1**
MIAR	**Mount Ida**	**19.10**	**16**	*e*P			**Pn**	**23 46 10.2**	**-0.9**
	3.8nm,0.6s								
PAYG	**Puerto Ayora**	**19.14**	**150**	*e*P			**Pn**	**23 46 10.4**	**-1.3**
	32nm,0.8s								
LAZ	**Ladron**	**19.35**	**341**	*e*P			**Pn**	**23 46 14.2**	**+0.1**
ANMO	**Albuquerque**	**19.66**	**343**	P			**Pn**	**23 46 17.8**	**0.0**
	0.2nm,0.3s,baz=153,slow=14,SNR=6.7								
ANMO						LR	LR	23 54 11.1	
	comp=Z,65nm,21.5s,baz=337,slow=38								
ANMO	**Albuquerque**	**19.66**	**343**	*e*P			**Pn**	**23 46 17.2**	**-0.6**
WUAZ	**Wupatki**	**21.91**	**334**	*e*P			**P**	**23 46 41.5**	**+0.7**
	20nm,1.2s,mb4.4								
WVT	**Waverly**	**22.51**	**26**	*e*P			**P**	**23 46 45.3**	**-1.8**
	8.0nm,0.8s,mb4.2								
SWET	**Sewanee**	**22.61**	**30**	*e*P			**P**	**23 46 47.8**	**-0.4**
CCM	**Cathedral Cave**	**23.03**	**17**	*e*P			**P**	**23 46 51.7**	**-0.9**
	4.2nm,0.7s,mb4.0								
SIUC	**Southern Illin**	**23.36**	**21**	*e*P			**P**	**23 46 57.1**	**+0.9**
SIUC				*e*				23 47 02.6	
TKL	**Tuckaleechee C**	**24.05**	**33**	P			**P**	**23 47 03.6**	**+1.0**
	3.1nm,0.7s,mb3.8,baz=190,slow=12,SNR=4.9								
TKL						LR	LR	00 00 05.1	
	comp=Z,32nm,18.8s,MS2.8,baz=273,slow=45								
ISCO	**Idaho Springs**	**24.10**	**349**	*e*P			**P**	**23 47 03.6**	**+0.5**
	12nm,1.1s,mb4.2								
ARUT	**Antelope Range**	**24.72**	**333**	*e*P			**P**	**23 47 10.9**	**+2.2**
MSU	**Marysvale**	**24.82**	**336**	P			**P**	**23 47 11.6**	**+1.9**
TPNV	**Topopah Spring**	**25.37**	**328**	*e*P			**P**	**23 47 16.9**	**+2.2**
	6.5nm,1.0s,mb4.1								
ISA	**Isabella**	**25.65**	**323**	P			**P**	**23 47 16.6**	**-0.6**
HWUT	**Hardware Ranch**	**27.34**	**340**	*e*P			**P**	**23 47 33.1**	**+0.6**
NVAR	**Mina Array Bea**	**27.56**	**327**	P			**P**	**23 47 35.0**	**+0.6**
	0.6nm,0.6s,mb3.4,baz=148,slow=6.8,SNR=4.9								
PDAR	**Pinedale Array**	**27.82**	**344**	P			**P**	**23 47 39.9**	**+3.1**
	1.2nm,0.6s,mb3.7,baz=143,slow=10,SNR=3.9								
PDAR						LR	LR	23 59 43.2	
	comp=Z,131nm,21.0s,MS3.5,baz=166,slow=38								
CMB	**Columbia Colle**	**28.40**	**324**	*e*P			**P**	**23 47 42.3**	**+0.3**
ULM	**Lac du Bonnet**	**34.13**	**4**	LR			LR	00 02 55.8	
	comp=Z,58nm,20.3s,MS3.3,baz=276,slow=37								
WALA	**Waterton Lakes**	**34.80**	**344**	*e*P			**P**	**23 48 36.0**	**-2.1**
BBSR	**BB Station**	**35.54**	**57**	*e*P			**P**	**23 48 45.6**	**+0.9**
NNA	**Nana**	**35.97**	**140**	*e*P			**P**	**23 48 47.5**	**-1.0**
LPAZ	**La Paz**	**44.83**	**135**	*e*P			**P**	**23 50 02.3**	**+0.5**
	0.6nm,0.6s,mb3.6								
DLBC	**Dease Lake**	**47.81**	**339**	*e*P			**P**	**23 50 24.8**	**0.0**
LVC	**Limon Verde**	**48.92**	**141**	*e*P			**P**	**23 50 32.7**	**-1.1**
SIV	**San Ignacio**	**49.73**	**128**	P			**P**	**23 50 39.2**	**-1.0**
	0.8nm,0.7s,mb3.8,baz=311,slow=13,SNR=6.7								
INK	**Inuvik**	**56.38**	**346**	*e*P			**P**	**23 51 28.8**	**+0.4**
RCBR	**Riachuelo**	**66.77**	**104**	*e*P			**P**	**23 52 40.5**	**+1.0**
EFI	**East Falkland**	**76.66**	**155**	*e*P			**P**	**23 53 38.1**	**-0.1**
WRA	**Warramunga Arr**	**128.67**	**257**	PKP			PKPdf	00 00 54.3	-1.3
	0.3nm,0.3s,baz=70,slow=2.5,SNR=4.0								

*CSEM **08** 00:03:11.0±0.1, 3505N×383W, h10km, MD3.7, Error ellipse: s-maj=2.4km s-min=1.6km az=112.0*
*NEIC **08** 00:03:12.7, 3507N×391W, h0km, MN2.7(MDD), After MDD.*
*ISCJB **08** 00:03:12.7±0.4, 3506N±002×390W±003, h20km±4km, Error ellipse: s-maj=4.1km s-min=2.3km az=22.4*
*MDD **08** 00:03:13.1±0.3, 3507N×384W, h0km, mbLg2.7/24, Error ellipse: s-maj=3.0km s-min=2.5km az=67.0, PRIMO*
*CNRM **08** 00:03:14.0, 3501N×383W, h1km, MD3.7*
INMG 08 00:03:12.2±1.4, 3486N×378W, h29km±21km, ML2.8, Error ellipse: s-maj=11.7km s-min=5.3km az=171.0, Morocco
ISC 08 00:03:13.0±0.4, 3504N±002×386W±003, h13km±3km, n78, σ1§18/134, 1C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
TOU	**Touzarine**	**0.12**	**134**	*i* P			**Pg**	**00 03 15.0**	**-1.2**
TOU	**Touzarine**	**0.12**	**134**	*i* P			**Pg**	**00 03 15.0**	**-1.2**
TOU				*i* S			**Sg**	**00 03 17.0**	**-1.4**
MPAL	**Palemas**	**0.20**	**339**	*i* P			**Pg**	**00 03 17.5**	**+0.1**
MPAL	**Palemas**	**0.20**	**339**	P			**Pg**	**00 03 17.5**	**+0.1**
MPAL				S			**Sg**	**00 03 21.5**	**+1.1**
EMEL	**Melilla**	**0.78**	**71**	⇑P			**Pg**	**00 03 27.1**	**-1.0**
	1μm,0.2s,SNR=18								
EMEL					S		**Sg**	**00 03 39.2**	**+0.8**
	2μm,0.1s,SNR=7.9								
EMLI	**Melilla**	**0.79**	**71**	P			**Pg**	**00 03 27.1**	**-1.2**
	1μm,0.2s,SNR=18								
EMLI					S		**Sg**	**00 03 39.2**	**+0.6**
	2μm,0.1s,SNR=7.9								
ZAI	**Zaio**	**0.91**	**94**	*i* P			**Pg**	**00 03 30.0**	**-0.7**
ZAI				*i* S			**Sg**	**00 03 43.5**	**+0.9**
TZK	**Tazeka**	**0.99**	**196**	*i* P			**Pb**	**00 03 31.5**	**-0.5**
TZK				*i* S			**Sb**	**00 03 45.0**	**0.0**
EALB	**Alboran**	**1.12**	**37**	P			**Pb**	**00 03 32.1**	**-2.1**
	21nm,0.3s,SNR=19								
EALB					S		**Sb**	**00 03 47.5**	**-1.2**
	138nm,0.2s,SNR=7.9								
EALB	**Alboran**	**1.12**	**37**	P			**Pb**	**00 03 32.1**	**-2.1**
	21nm,0.3s,SNR=19								
EALB					S		**Sb**	**00 03 47.5**	**-1.2**
	138nm,0.2s,SNR=7.9								
DKH	**Dar Kharkhour**	**1.31**	**290**	*i* P			**Pn**	**00 03 38.0**	**+1.0**
DKH				*i* S			**Sb**	**00 03 55.0**	**+0.8**
ECEU	**Ceuta**	**1.51**	**305**	P			**Pn**	**00 03 38.3**	**-1.4**
	15nm,0.2s,SNR=4.0								
ECEU					S		**Sn**	**00 03 55.5**	**-3.7**
	39nm,0.2s,SNR=7.9								
ECEU	**Ceuta**	**1.51**	**305**	P			**Pn**	**00 03 38.3**	**-1.5**
	15nm,0.2s,SNR=4.0								
ECEU					S		**Sn**	**00 03 55.5**	**-3.8**
	39nm,0.2s,SNR=7.9								
RSA	**Sarsar**	**1.63**	**265**	*i* P			**Pn**	**00 03 43.0**	**+1.6**
RSA				*i* S			**Sn**	**00 04 04.0**	**+1.7**
EMIJ	**Mijas**	**1.69**	**334**	P			**Pn**	**00 03 41.2**	**-1.1**
	1.1nm,0.1s,SNR=23								
EMIJ					S		**Sn**	**00 04 00.3**	**-3.5**
	34nm,0.2s,SNR=7.9								
TSY	**Tnine Yamani**	**1.76**	**281**	*i* P			**Pn**	**00 03 45.0**	**+1.7**
TSY				*i* S			**Sn**	**00 04 07.0**	**+1.4**
EGUA	**Guajares**	**1.80**	**7**	P			**Pn**	**00 03 41.5**	**-2.3**
	12nm,0.2s,SNR=7.9								
EGUA					S		**Sn**	**00 04 05.6**	**-1.0**
	69nm,0.3s,SNR=7.9								
IFR	**Ifrane**	**1.85**	**215**	P			**Pn**	**00 03 44.5**	**0.0**
IFR				S			**Sn**	**00 04 03.5**	**-4.2**
EJIF	**Jimena Fronter**	**1.92**	**317**	P			**Pn**	**00 03 44.8**	**-0.7**
	1.2nm,0.2s,SNR=7.9								
EJIF					S		**Sn**	**00 04 08.9**	**-0.6**
	SNR=7.9								
ERON	**Agron**	**1.97**	**1**	P			**Pn**	**00 03 44.4**	**-1.7**
	2.8nm,0.1s,SNR=7.9								
ERON					S		**Sn**	**00 04 09.9**	**-0.8**
	23nm,0.4s,SNR=7.9								
MIF	**Mishlifen**	**1.99**	**215**	*i* P			**Pn**	**00 03 47.5**	**+1.1**
MIF				*i* S			**Sn**	**00 04 10.0**	**-1.1**
EBER	**Berja**	**2.01**	**23**	P			**Pn**	**00 03 44.8**	**-1.9**
	1.9nm,0.2s,SNR=21								
EBER					S		**Sn**	**00 04 11.0**	**-0.7**
	33nm,0.3s,SNR=7.9								
EBER	**Berja**	**2.01**	**23**	P			**Pn**	**00 03 44.8**	**-1.9**
	1.9nm,0.2s,SNR=21								
EBER					S		**Sn**	**00 04 11.0**	**-0.7**
	33nm,0.3s,SNR=7.9								
ELOJ	**Sierra Loja**	**2.11**	**354**	P			**Pn**	**00 03 47.6**	**-0.5**
	1.2nm,0.2s,SNR=7.9								
ELOJ					S		**Sn**	**00 04 14.4**	**+0.2**
	10nm,0.4s,SNR=7.9								
ELOJ	**Sierra Loja**	**2.11**	**354**	P			**Pn**	**00 03 47.6**	**-0.5**
	1.2nm,0.2s,SNR=7.9								
ELOJ					S		**Sn**	**00 04 14.4**	**+0.2**
	10nm,0.4s,SNR=7.9								
EQUE	**Quentar**	**2.18**	**9**	P			**Pn**	**00 03 48.2**	**-0.9**
	1.7nm,0.1s,SNR=25								
EQUE					S		**Sn**	**00 04 16.0**	**0.0**
	25nm,0.4s,SNR=7.9								
CZD	**Col de Zad**	**2.23**	**207**	*i* P			**Pn**	**00 03 51.0**	**+1.2**
CZD				*i* S			**Sn**	**00 04 16.0**	**-1.2**
ECOG	**Cogollos-Vega**	**2.24**	**6**	P			**Pn**	**00 03 49.6**	**-0.3**
	3.1nm,0.3s,SNR=9.7								
ECOG					S		**Sn**	**00 04 17.2**	**-0.2**
	13nm,0.4s,SNR=4.0								
ESPR	**Espera**	**2.44**	**319**	P			**Pn**	**00 03 53.3**	**+0.7**
	1.8nm,0.1s,SNR=21								
ESPR					S		**Sn**	**00 04 23.3**	**+1.0**
	34nm,0.5s,SNR=7.9								
ESPR	**Espera**	**2.44**	**319**	P			**Pn**	**00 03 53.3**	**+0.7**
	1.8nm,0.1s,SNR=21								
ESPR					S		**Sn**	**00 04 23.3**	**+1.1**
	34nm,0.5s,SNR=7.9								
ELUQ	**Luque**	**2.53**	**353**	P			**Pn**	**00 03 55.1**	**+1.2**
	3.2nm,0.2s,SNR=7.9								
ELUQ					S		**Sn**	**00 04 27.2**	**+2.6**
	10.0nm,0.2s,SNR=7.9								
EQES	**Quesada**	**2.83**	**13**	P			**Pn**	**00 03 58.7**	**+0.8**
	4.9nm,0.2s,SNR=34								
EQES					S		**Sn**	**00 04 32.8**	**+1.0**
	30nm,0.3s,SNR=7.9								
EQES	**Quesada**	**2.83**	**13**	P			**Pn**	**00 03 58.7**	**+0.8**
	4.9nm,0.2s,SNR=34								
EQES					S		**Sn**	**00 04 32.8**	**+1.0**
	30nm,0.3s,SNR=7.9								
EHUE	**Huescar**	**2.95**	**20**	P			**Pn**	**00 04 00.4**	**+0.8**
	1.4nm,0.2s,SNR=7.9								
EHUE					S		**Sn**	**00 04 36.7**	**+1.9**
	3.3nm,0.2s,SNR=7.9								
ZFT	**Errachidia**	**3.03**	**188**	*i* P			**Pn**	**00 04 02.0**	**+1.3**
ZFT				*i* S			**Sn**	**00 04 36.0**	**-0.8**
KIB	**El Ksiba**	**3.06**	**217**	*i* P			**Pn**	**00 04 02.0**	**+0.9**
KIB				*i* S			**Sn**	**00 04 38.0**	**+0.4**
EBAN	**Banos Encina**	**3.12**	**1**	P			**Pn**	**00 04 03.1**	**+1.2**
	1.8nm,0.3s,SNR=7.9								
EBAN					S		**Sn**	**00 04 40.7**	**+1.8**
	3.4nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**3.17**	**350**	P			**Pn**	**00 04 03.0**	**+0.4**
	1.0nm,0.1s,SNR=18								
EADA					S		**Sn**	**00 04 39.6**	**-0.7**
	5.5nm,0.3s,SNR=7.9								
EADA	**Adamuz**	**3.17**	**350**	P			**Pn**	**00 04 03.0**	**+0.3**
	1.0nm,0.1s,SNR=18								
EADA					S		**Sn**	**00 04 39.6**	**-0.8**
	5.5nm,0.3s,SNR=7.9								
ECAB	**El Cabril**	**3.28**	**338**	P			**Pn**	**00 04 03.7**	**-0.4**
	0.1nm,0.1s,SNR=12								
ECAB					S		**Sn**	**00 04 40.8**	**-2.1**
	10nm,0.2s,SNR=7.9								
ECAB	**El Cabril**	**3.28**	**338**	P			**Pn**	**00 04 03.7**	**-0.4**
	0.1nm,0.1s,SNR=12								
ECAB					S		**Sn**	**00 04 40.8**	**-2.2**
	10nm,0.2s,SNR=7.9								
EMUR	**La Murta**	**3.50**	**36**	P			**Pn**	**00 04 07.8**	**+0.6**
	1.4nm,0.2s,SNR=7.7								
EMUR					S		**Sn**	**00 04 45.0**	**-3.4**
	8.3nm,0.4s,SNR=7.9								
EMUR	**La Murta**	**3.50**	**36**	P			**Pn**	**00 04 07.8**	**+0.7**
	1.4nm,0.2s,SNR=7.7								
EMUR					S		**Sn**	**00 04 45.0**	**-3.4**
	8.3nm,0.4s,SNR=7.9								
EMIN	**Mina Concepcio**	**3.54**	**321**	P			**Pn**	**00 04 06.3**	**-1.4**
	0.6nm,0.2s,SNR=29								
EMIN					S		**Sn**	**00 04 46.3**	**-3.2**
	2.7nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**3.54**	**321**	P			**Pn**	**00 04 06.3**	**-1.4**
	0.6nm,0.2s,SNR=29								
EMIN					S		**Sn**	**00 04 46.3**	**-3.2**
	2.7nm,0.1s,SNR=7.9				

*IDC **08** 00:22:24.3±3.7, 541S×14681E, h182km±33km, mb3.4/1, mb1 3.7/2, mb1mx3.1/14, mbtmp3.4/2, MS4.3/1, Ms1 4.3/1, ms1mx2.6/16, Error ellipse: s-maj=85.5km s-min=27.6km az=124.0*

ISC 08 00:22:23.1±1.4, 541S±007×1468E±01, h169km±16km, n21, σ0§93/23, mb4.1/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.99**	**175**	*e*Pn	**Pn**	**00 23 21.6**	**-2.2**
PMG				*e*Sn	**Sn**	**00 24 03.3**	**-7.9**
HNR	**Honiara**	**13.63**	**108**	*e*Pn	**Pn**	**00 25 30.5**	**+0.8**
CTAO	**Charters Tower**	**14.60**	**182**	Pn	**Pn**	**00 25 42.5**	**+0.6**
KAKA	**Kakadu**	**15.93**	**242**	*e*P	**P**	**00 25 50.4**	**-7.8**
	9.2nm,0.5s						
WRAB	**Tennant Creek**	**18.85**	**219**	*e*P	**P**	**00 26 31.5**	**+1.1**
	3.9nm,0.6s						
WRAB				*e*S	**S**	**00 29 54.7**	**-1.3**
WB2	**Warramunga Arr**	**18.86**	**219**	*e*P	**P**	**00 26 31.4**	**+0.9**
WRA	**Warramunga Arr**	**18.87**	**219**	P	**P**	**00 26 31.6**	**+1.0**
	1.2nm,0.3s,baz=42,slow=12,SNR=11						
WRA				S	**S**	**00 29 55.0**	**-1.3**
	baz=43,slow=21,SNR=6.5						
GUMO	**Guam**	**18.97**	**354**	P	**P**	**00 26 31.7**	**-0.1**
ASAR	**Alice Springs**	**22.00**	**213**	P	**P**	**00 27 04.5**	**+0.5**
	3.1nm,0.8s,mb3.8,baz=47,slow=8.3,SNR=25						
ASAR				S	**S**	**00 30 56.1**	**+1.2**
	2.3nm,0.9s,baz=30,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**24.22**	**237**	P	**P**	**00 27 26.3**	**+1.8**
STKA	**Stephens Creek**	**26.78**	**190**	*e*P	**P**	**00 27 47.2**	**-0.2**
JOW	**Kunigami**	**36.73**	**332**	LR	LR	00 41 47.3	
	comp=Z,474nm,20.1s,baz=155,slow=32						
NWAO	**Narrogin (SRO)**	**38.84**	**221**	P	**P**	**00 29 31.6**	**-0.3**
MAJO	**Matsushiro**	**42.50**	**350**	P	**P**	**00 30 01.8**	**0.0**
ULN	**Ulaanbaatar**	**63.50**	**331**	P	**P**	**00 32 34.6**	**-0.6**
LSA	**Lhasa**	**63.73**	**307**	*e*P	**P**	**00 32 37.9**	**+0.7**
	1.9nm,0.8s,mb4.0						
TLY	**Talaya**	**67.74**	**333**	P	**P**	**00 33 01.6**	**-0.7**
SBA	**Scott Base**	**73.16**	**176**	*e*P	**P**	**00 33 34.5**	**-0.3**
	28nm,1.8s,mb4.7						
TIXI	**Tiksi**	**77.81**	**354**	*e*P	**P**	**00 34 00.2**	**-1.0**
	2.2nm,0.6s,mb4.0						
BRVK	**Borovoye**	**86.25**	**324**	P	**P**	**00 34 45.4**	**-0.2**
	4.8nm,1.2s,mb4.1						
TORD	**Torodi Ar. Bea**	**144.76**	**285**	PKP	PKPdf	00 41 38.7	-2.2
	0.2nm,0.5s,baz=68,slow=3.3,SNR=5.1						

*DDA **08** 00:26:05.0, 3826N×2656E, h14km±1km, Md3.0*
*NEIC **08** 00:26:04.5, 3823N×2635E, h23km, MD3.4(ATH), After ATH.*
*CSEM **08** 00:26:04.5±0.1, 3828N×2650E, h12km, MD3.0, Error ellipse: s-maj=2.5km s-min=1.8km az=75.0*
*ATH **08** 00:26:04.5, 3823N×2635E, h23km±4km, MD3.4/5*
*THE **08** 00:26:05.5, 3827N×2653E, h9km±1km, ML2.8/1, Error ellipse: s-maj=2.1km s-min=0.5km az=301.0*
*ISCJB **08** 00:26:05.2±0.6, 3826N±002×2651E±003, h11km±4km, Error ellipse: s-maj=4.5km s-min=3.5km az=161.0*

ISC 08 00:26:05.5±0.5, 3827N±002×2651E±003, h11km±3km, n43, σ0§95/68, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**36**	*i* P	**Pg**	**00 26 08.1**	**-0.3**
URLA				*i* S	**Sg**	**00 26 10.3**	**-0.2**
CHOS	**Chios island**	**0.38**	**288**	*i* P	**Pg**	**00 26 13.3**	**+0.3**
CHOS				S	**Sg**	**00 26 19.1**	**+1.1**
KDAG	**Bornova**	**0.61**	**77**	*i* P	**Pg**	**00 26 16.9**	**-0.4**
KDAG				*i* S	**Sg**	**00 26 25.0**	**-0.3**
SMG	**Samos**	**0.61**	**155**	*e*PB	**Pb**	**00 26 16.7**	**-1.5**
SMG				*e*SN	**Sg**	**00 26 27.0**	**+1.5**
GCAM	**G?zelcaml?**	**0.80**	**135**	*i* P	**Pg**	**00 26 20.3**	**-0.7**
GCAM				*i* S	**Sg**	**00 26 31.5**	**0.0**
PRK	**Paraskevi**	**0.99**	**349**	*e*PN	**Pn**	**00 26 23.8**	**-1.5**
PRK				*e*SN	**Sn**	**00 26 38.3**	**-1.0**
PRK	**Paraskevi**	**0.99**	**349**	P	**Pg**	**00 26 24.0**	**-0.6**
PRK				*e*Sn	**Sn**	**00 26 38.3**	**-1.0**
PRK				S	**Sg**	**00 26 38.6**	**+1.0**
AYVA	**Ayvalik**	**1.05**	**8**	*i* P	**Pb**	**00 26 25.2**	**-0.4**
AYVA				*i* S	**Sb**	**00 26 40.2**	**+0.9**
AKHS	**Akhisar**	**1.19**	**59**	*i* P	**Pn**	**00 26 26.9**	**-1.1**
AKHS				*i* S	**Sb**	**00 26 43.3**	**0.0**
AYDN	**Tasoluk**	**1.24**	**119**	*i* P	**Pn**	**00 26 27.8**	**-0.8**
AYDN				*i* S	**Sb**	**00 26 44.3**	**-0.4**
BDRM	**Kayabasi**	**1.41**	**148**	*i* P	**Pn**	**00 26 30.4**	**-0.6**
BDRM				*i* S	**Sn**	**00 26 50.3**	**+0.7**
APE	**Apeiranthos**	**1.43**	**213**	P	**Pn**	**00 26 30.3**	**-1.0**
APE				S	**Sn**	**00 26 50.0**	**0.0**
APE	**Apeiranthos**	**1.43**	**213**	*e*Pn	**Pn**	**00 26 29.8**	**-1.5**
APE	**Apeiranthos**	**1.43**	**213**	P	**Pn**	**00 26 30.3**	**-1.0**
APE				S	**Sn**	**00 26 50.0**	**0.0**
BOZC	**Bozcaada**	**1.61**	**347**	*i* P	**Pn**	**00 26 30.2**	**-3.5**
BOZC				*i* S	**Sn**	**00 26 54.8**	**+0.3**
MANT	**Manisa**	**1.62**	**82**	*i* P	**Pn**	**00 26 35.3**	**+1.4**
MANT				*i* S	**Sn**	**00 26 55.6**	**+0.8**
BALY	**Balya**	**1.70**	**30**	*i* P	**Pn**	**00 26 34.9**	**-0.2**
BALY				*i* S	**Sn**	**00 26 58.5**	**+1.7**
BALY	**Balya**	**1.70**	**30**	*i* P	**Pn**	**00 26 34.9**	**-0.1**
BALY				*i* S	**Sn**	**00 26 58.5**	**+1.7**
DEMI	**Demirci**	**1.89**	**65**	*i* P	**Pn**	**00 26 39.4**	**+1.8**
DEMI				*i* S	**Sn**	**00 27 06.2**	**+4.8**
LIA	**Limnos Island**	**1.93**	**328**	*e*PN	**Pn**	**00 26 37.8**	**-0.3**
LIA	**Limnos Island**	**1.93**	**328**	P	**Pn**	**00 26 37.4**	**-0.7**
LIA	**Limnos Island**	**1.93**	**328**	*e*Pn	**Pn**	**00 26 37.8**	**-0.3**
THR3	**Thira Island,**	**2.06**	**206**	P	**Pn**	**00 26 43.4**	**+3.5**
THR5	**Thira Island,**	**2.07**	**207**	P	**Pn**	**00 26 45.0**	**+5.0**
THR6	**Thira Island,**	**2.11**	**205**	P	**Pn**	**00 26 41.7**	**+1.1**
ALN	**Alexandroupoli**	**2.65**	**352**	P	**Pn**	**00 26 47.1**	**-0.9**
RDO	**Rodhopi**	**2.97**	**346**	*e*PN	**Pn**	**00 26 52.4**	**-0.1**

*NIED **08** 00:40:00, 2640N×12870E, h8km, Mw4.0 Best double couple: M₀1.06000×10¹⁵ NP1:φ₀84.00000°, δ69.00000°, λ23.00000°. NP2:φ₀345.00000°, δ68.00000°, λ158.00000°.*
*ISCJB **08** 00:40:52.8±0.5, 2637N±004×12870E±004, h40km±5km, mb4.0/14, Error ellipse: s-maj=6.7km s-min=4.8km az=143.9*
*JMA **08** 00:40:53.6±0.2, 2641N×12869E, h34km±3km, M4.1*
JMA Felt I J1.
*NEIC **08** 00:40:54.1±1.3, 2644N×12861E, h31km±8km, mb4.1/5, Error ellipse: s-maj=9.2km s-min=6.9km az=106.0*
NEIC Recorded [1 JMA] on Okinawa.
*IDC **08** 00:40:55.3±3.2, 2647N×12857E, h38km±20km, mb3.8/9, mb1 3.8/9, mb1mx3.7/20, mbtmp3.8/9, MS2.9/1, Ms1 2.9/1, ms1mx2.1/30, Error ellipse: s-maj=105.6km s-min=15.9km az=66.0*

ISC 08 00:40:54.0±0.9, 2641N±003×12864E±004, h32km±6km, n45, σ0§82/54, mb4.0/14, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.53**	**322**	Pn	**Pn**	**00 41 05.0**	**-0.4**
	2µm,0.3s,baz=134,slow=18,SNR=3544						
JOW				Sn	**Sn**	**00 41 12.6**	**-0.7**
	3µm,0.3s,baz=129,slow=24,SNR=47						
JOW	**Kunigami**	**0.53**	**322**	P	**Pb**	**00 41 04.9**	**-0.2**
JOW				S	**Sb**	**00 41 12.7**	**0.0**
JJT2	**Tamagusuku 2**	**0.85**	**252**	P	**Pn**	**00 41 09.9**	**+0.2**
JJT2				*e*S	**Sb**	**00 41 21.7**	**+0.4**
JIH	**Iheya**	**0.87**	**316**	P	**Pn**	**00 41 10.2**	**+0.2**
JIH				*e*S	**Sb**	**00 41 22.6**	**+0.7**
NAH1	**Naha**	**0.88**	**257**	P	**Pn**	**00 41 10.2**	**+0.1**
NAH1				*e*S	**Sb**	**00 41 22.3**	**+0.1**
JAGN	**Aguni-jima**	**1.27**	**278**	P	**Pn**	**00 41 16.1**	**+0.6**
JAGN				*e*S	**Sn**	**00 41 32.0**	**+0.6**
JTK	**Tokunoshima**	**1.40**	**11**	P	**Pn**	**00 41 17.5**	**+0.2**
JTK				*e*S	**Sn**	**00 41 34.4**	**-0.3**
JKE	**Kume jima 2**	**1.67**	**268**	P	**Pn**	**00 41 20.7**	**-0.3**
JAM	**Amami Oshima**	**2.17**	**23**	P	**Pn**	**00 41 27.8**	**-0.1**
JAM				*e*S	**Sn**	**00 41 54.0**	**+0.3**
JMZ	**Minamidaito 2**	**2.39**	**104**	P	**Pn**	**00 41 29.4**	**-1.6**
JMZ				*e*S	**Sn**	**00 41 55.0**	**-4.2**
JMJ	**Miyako jima 2**	**3.41**	**243**	*e*S	**Sn**	**00 42 23.7**	**-0.7**
JNN	**Nakanoshima**	**3.59**	**17**	P	**Pn**	**00 41 48.8**	**+1.4**
JTJ	**Tarama**	**3.97**	**245**	P	**Pn**	**00 41 51.9**	**-0.8**
JTJ				*e*S	**Sn**	**00 42 34.5**	**-3.7**
JIJ	**Ishigaki jima**	**4.55**	**244**	*e*S	**Sn**	**00 42 47.0**	**-5.5**
TATO	**Taipei**	**6.61**	**259**	*e*Pn	**Pn**	**00 42 29.2**	**+0.2**
NACB	**Ninganchiao**	**6.75**	**252**	*e*Pn	**Pn**	**00 42 28.6**	**-2.4**
YHNB	**Yeheng**	**6.79**	**257**	*e*Pn	**Pn**	**00 42 32.2**	**+0.8**
INCN	**Inchon**	**11.17**	**352**	Pn	**Pn**	**00 43 29.6**	**-1.8**
MAJO	**Matsushiro**	**12.98**	**37**	*e*Pn	**Pn**	**00 43 55.9**	**-0.3**
BJT	**Baijiatuan**	**17.09**	**326**	*e*Pn	**Pn**	**00 44 49.8**	**-0.7**
QIZ	**Qiongzhong**	**18.82**	**251**	P	**Pn**	**00 45 11.3**	**-0.6**
ASAJ	**Asahikawa**	**20.97**	**29**	LR	LR	00 53 45.5	
	comp=Z,30nm,19.3s,baz=358,slow=37						
ULN	**Ulaanbaatar**	**27.30**	**327**	*e*P	**P**	**00 46 36.3**	**+0.7**
	4.1nm,0.8s,mb4.0						
SONM	**Songino Array**	**27.61**	**327**	P	**P**	**00 46 40.2**	**+1.9**
	3.2nm,0.7s,mb4.0,baz=138,slow=10,SNR=24						
CHTO	**Chiang Mai**	**28.39**	**261**	P	**P**	**00 46 46.0**	**+0.3**
PET	**Petropavlovsk**	**34.75**	**32**	P	**P**	**00 47 42.0**	**+0.9**
MKAR	**Makanchi Array**	**41.69**	**312**	P	**P**	**00 48 39.1**	**-0.5**
	1.1nm,0.6s,mb3.6,baz=96,slow=10,SNR=7.9						
ZALV	**Zalesovo Beam**	**42.33**	**323**	P	**P**	**00 48 43.5**	**-1.2**
	1.0nm,0.5s,mb3.7,baz=101,slow=8.0,SNR=8.1						
FITZ	**Fitzroy Crossi**	**44.34**	**184**	P	**P**	**00 49 01.7**	**+0.4**
KURK	**Kurchatov**	**44.94**	**316**	P	**P**	**00 49 05.5**	**-0.4**
	baz=108,slow=8.9						
KURK	**Kurchatov**	**44.94**	**316**	*e*P	**P**	**00 49 05.9**	**+0.1**
	1.5nm,1.0s,mb3.8						
TKM2	**Tokmak 2**	**45.88**	**305**	P	**P**	**00 49 12.9**	**-0.5**
WRAB	**Tennant Creek**	**46.40**	**173**	*e*P	**P**	**00 49 17.4**	**-0.2**
	1.2nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**46.41**	**173**	P	**P**	**00 49 18.1**	**+0.5**
	0.5nm,0.4s,mb3.8,baz=355,slow=8.4,SNR=3.4						
EKS2	**Erkin-Say**	**47.20**	**305**	P	**P**	**00 49 24.3**	**+0.5**
ASAR	**Alice Springs**	**50.04**	**174**	P	**P**	**00 49 47.4**	**+1.7**
	0.6nm,0.6s,mb3.8,baz=5.2,slow=14,SNR=9.2						
BVAR	**Borovoye Array**	**50.39**	**318**	P	**P**	**00 49 47.6**	**-0.4**
	0.5nm,0.3s,mb4.1,baz=86,slow=8.6,SNR=8.4						
BVAR				PcP	PcP	00 51 10.7	+4.5
	0.7nm,0.5s,baz=87,slow=3.2,SNR=4.8						
BRVK	**Borovoye**	**50.45**	**318**	*e*P	**P**	**00 49 48.3**	**-0.3**
	1.6nm,0.5s,mb4.3						
ARU	**Arti**	**57.48**	**322**	P	**P**	**00 50 38.9**	**-0.9**
INK	**Inuvik**	**68.58**	**23**	*e*P	**P**	**00 51 57.2**	**+3.9**
	20nm,0.5s						
KIV	**Kislovodsk**	**69.41**	**310**	P	**P**	**00 51 59.9**	**+1.0**
TAU	**Tasmania Unive**	**71.09**	**166**	*e*P	**P**	**00 52 09.1**	**+0.1**
	7.8nm,0.9s,mb4.6						
AKASG	**Malin Array Be**	**75.64**	**320**	P	**P**	**00 52 35.6**	**-0.2**
	1.8nm,0.4s,mb4.3,baz=57,slow=7.1,SNR=5.4						
BRTR	**Keskin Array B**	**77.22**	**308**	P	**P**	**00 52 46.1**	**+1.1**
	1.4nm,0.7s,mb4.0,baz=98,slow=4.0,SNR=6.0						
NOA	**NORSAR Array B**	**79.32**	**334**	P	**P**	**00 52 56.1**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=54,slow=7.7,SNR=2.8						

KRSC 08 01:00:05.7±0.6, 5095N×15716E, h194km±73km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.71**	**29**	*e*P	Pn	01 00 41.9	+1.2
RUS				*i* S	Sn	01 01 08.9	+0.9
AVH	**Avacha**	**2.52**	**22**	*e*P	Pn	01 00 51.9	+2.7
AVH				*i* S	Sn	01 01 24.6	+1.3
NLC	**Nalytchevo**	**2.60**	**30**	*e*P	Pn	01 00 52.4	+2.2
SPN	**Mys Shipunski**	**2.79**	**38**	*e*P	Pn	01 00 54.7	+2.3
SPN				*i* S	Sn	01 01 30.2	+1.3
GNL	**Ganaly**	**2.79**	**10**	*e*P	Pn	01 00 53.7	+1.3
MKZ	**Mys Kozlova**	**4.55**	**36**	*e*P	Pn	01 01 15.7	+1.6
MKZ				*i* S	Sn	01 02 06.9	-1.1

*CSEM **08** 01:02:20.1±0.1, 3820N×2652E, h10km, MD2.6, Error ellipse: s-maj=2.0km s-min=1.8km az=59.0*
*ISK **08** 01:02:20.8, 3818N×2655E, h9km, MD3.1*
*ISCJB **08** 01:02:21.4±0.7, 3824N±002×2650E±004, h8km±4km, Error ellipse: s-maj=5.7km s-min=3.6km az=160.3*
*DDA **08** 01:02:21.5, 3825N×2653E, h13km±1km, Md2.6*
*ATH **08** 01:02:21.6, 3819N×2654E, h52km±19km, MD3.4/4*

ISC 08 01:02:21.9±0.6, 3824N±002×2651E±004, h9km±3km, n29, σ1§08/41, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**31**	*i* P	**Pg**	**01 02 24.8**	**-0.2**
URLA				*i* S	**Sg**	**01 02 27.1**	**0.0**
BLCB	**Balcova**	**0.45**	**71**	*e*PG	**Pg**	**01 02 30.0**	**-0.5**
BLCB				*e*SG	**Sg**	**01 02 36.0**	**-0.5**
SMG	**Samos**	**0.59**	**154**	*e*P	**Pg**	**01 02 34.4**	**+1.0**
SMG				*e*S	**Sg**	**01 02 43.0**	**+1.9**
IZM	**Izmir**	**0.61**	**75**	*e*PG	**Pg**	**01 02 33.1**	**-0.7**
IZM				*e*SG	**Sg**	**01 02 42.6**	**+0.8**
KDAG	**Bornova**	**0.62**	**75**	*i* P	**Pg**	**01 02 33.4**	**-0.5**
KDAG				*i* S	**Sg**	**01 02 42.3**	**+0.3**
GCAM	**G?zelcaml?**	**0.79**	**133**	*i* P	**Pg**	**01 02 36.0**	**-1.1**
GCAM				*i* S	**Sg**	**01 02 47.7**	**+0.4**
PRK	**Paraskevi**	**1.02**	**350**	*e*P	**Pg**	**01 02 41.1**	**-0.4**
PRK				*e*S	**Sg**	**01 02 54.7**	**0.0**
AYVA	**Ayvalik**	**1.07**	**8**	*i* P	**Pg**	**01 02 41.9**	**-0.6**
AYVA				*i* S	**Sg**	**01 02 57.0**	**+0.5**
AKHS	**Akhisar**	**1.21**	**58**	*i* P	**Pb**	**01 02 43.1**	**-1.7**
AKHS				*i* S	**Sb**	**01 03 00.1**	**-0.4**
AKS	**Akhisar**	**1.21**	**58**	*e*PN	**Pn**	**01 02 43.7**	**-1.1**
AYDN	**Tasoluk**	**1.23**	**118**	*i* S	**Sb**	**01 02 52.2**	**-2.0**
BODT	**Bodrum**	**1.34**	**151**	*e*PN	**Pn**	**01 02 45.5**	**-1.1**
MLSB	**Milas**	**1.38**	**133**	*e*PN	**Pn**	**01 02 45.5**	**-1.7**
BDRM	**Kayabasi**	**1.39**	**147**	*i* P	**Pn**	**01 02 48.3**	**+0.9**
BDRM				*i* S	**Sb**	**01 03 07.0**	**+1.2**
APE	**Apeiranthos**	**1.40**	**214**	*e*P	**Pn**	**01 02 45.6**	**-2.0**
EZN	**Ezine**	**1.59**	**355**	*e*PN	**Pn**	**01 02 50.6**	**+0.5**
MANT	**Manisa**	**1.63**	**81**	*i* P	**Pn**	**01 02 51.7**	**+1.0**
MANT				*i* S	**Sn**	**01 03 12.1**	**+0.3**
BOZC	**Bozcaada**	**1.64**	**348**	*i* S	**Sn**	**01 03 09.6**	**-2.3**
KULA	**Kula-Manisa**	**1.71**	**80**	*e*PN	**Pn**	**01 02 51.8**	**-0.1**
BALY	**Balya**	**1.73**	**30**	*i* P	**Pn**	**01 02 54.1**	**+2.1**
BALY				*i* S	**Sn**	**01 03 17.2**	**+3.0**
DEMI	**Demirci**	**1.91**	**65**	*i* P	**Pn**	**01 02 54.9**	**+0.4**
LIA	**Limnos Island**	**1.95**	**328**	*e*P	**Pn**	**01 02 54.7**	**-0.4**
GADA	**Gvkgeada**	**2.00**	**347**	*e*PN	**Pn**	**01 02 57.1**	**+1.3**
BNT	**Bandirma**	**2.38**	**27**	*e*PN	**Pn**	**01 03 00.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**2.50**	**12**	*e*PN	**Pn**	**01 03 04.2**	**+1.6**
MRMT	**Marmara Adasi**	**2.50**	**19**	*e*PN	**Pn**	**01 03 02.9**	**+0.2**
ENEZ	**Enez**	**2.51**	**354**	*e*PN	**Pn**	**01 03 04.3**	**+1.6**
ENEZ	**Enez**	**2.51**	**354**	*e*Pn	**Pn**	**01 03 04.3**	**+1.6**
RDO	**Rodhopi**	**3.00**	**346**	*e*P	**Pn**	**01 03 09.3**	**-0.2**

*NEIC **08** 01:03:01.5±4.5, 4855N×15362E, h53km±31km, mb4.1/2, Error ellipse: s-maj=53.5km s-min=18.4km az=94.0*
*IDC **08** 01:03:03.6±12.0, 4845N×15336E, h61km±95km, mb3.6/6, mb1 3.8/7, mb1mx3.6/16, mbtmp3.6/7, ML4.0/1, Error ellipse: s-maj=100.8km s-min=27.8km az=87.0*
*ISCJB **08** 01:03:05.5±4.8, 505S±01×1532E±04, h86km±3km, mb3.8/9, Error ellipse: s-maj=69.0km s-min=16.1km az=8.3*

ISC 08 01:03:02.5±5.3, 49S±01×1535E±04, h55km±35km, n14, σ0§79/13, mb4.0/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.76**	**234**	*e*Pn	**Pn**	**01 04 52.7**	**-0.2**
	34nm,0.6s						
CTA	**Charters Tower**	**16.71**	**204**	P	**Pn**	**01 06 53.3**	**+0.3**
	0.4nm,0.3s,baz=27,slow=16,SNR=3.9						
CTA				S	**S**	**01 09 50.9**	**-15**
	1.1nm,0.3s,baz=82,slow=16,SNR=7.9						
KAKA	**Kakadu**	**22.23**	**248**	*e*P	**P**	**01 07 44.1**	**-11**
	24nm,0.5s,mb4.9						
WRAB	**Tennant Creek**	**23.93**	**230**	*e*P	**P**	**01 08 13.8**	**+2.2**
	4.0nm,0.7s,mb4.0						
WB2	**Warramunga Arr**	**23.94**	**230**	*e*P	**P**	**01 08 10.7**	**-1.0**
WRA	**Warramunga Arr**	**23.95**	**230**	P	**P**	**01 08 11.4**	**-0.4**
	2.0nm,0.5s,mb3.8,baz=53,slow=9.9,SNR=8.7						
WRA				PcP	PcP	01 11 53.5	+0.3
	0.8nm,0.7s,baz=51,slow=2.6,SNR=3.1						
ASAR	**Alice Springs**	**26.59**	**223**	P	**P**	**01 08 35.5**	**-0.3**
	0.5nm,0.6s,mb3.2,baz=55,slow=8.5,SNR=6.0						
ASAR				PcP	PcP	01 11 59.7	+0.7
	0.9nm,0.7s,baz=46,slow=2.7,SNR=7.1						
SONM	**Songino Array**	**66.75**	**327**	P	**P**	**01 13 48.8**	**+0.8**
	0.3nm,0.5s,mb3.6,baz=147,slow=6.7,SNR=4.1						
MKAR	**Makanchi Array**	**80.83**	**319**	P	**P**	**01 15 10.9**	**+0.4**
	0.8nm,0.5s,mb3.9,baz=103,slow=5.5,SNR=5.5						
ZALV	**Zalesovo Beam**	**81.59**	**326**	P	**P**	**01 15 13.5**	**-0.8**
	0.4nm,0.4s,mb3.7,baz=74,slow=7.7,SNR=3.0						
KURK	**Kurchatov**	**84.25**	**322**	*e*P	**P**	**01 15 27.9**	**-0.3**
	1.7nm,1.0s,mb4.1						
MAW	**Mawson**	**85.80**	**203**	P	**P**	**01 15 35.5**	**-0.1**
	1.0nm,0.2s,mb4.6,baz=97,slow=8.1,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**151.00**	**288**	*e*PKPbc	PKPbc	01 22 49.4	-0.9
TORD	**Torodi Ar. Bea**	**151.00**	**288**	PKPbc	PKPbc	01 22 49.4	-0.9
	1.8nm,0.4s,baz=46,slow=2.1,SNR=67						
TORD				PKPab	PKPab	01 22 57.3	-0.6
	0.7nm,0.4s,baz=73,slow=3.4,SNR=6.8						

*ISCJB **08** 01:16:40.2±1.3, 3840N±007×394E±0.1, h10km, Error ellipse: s-maj=14.0km s-min=8.6km az=28.6*
*DDA **08** 01:16:40.2, 3839N×3927E, h7km±3km, Md2.8*
*CSEM **08** 01:16:40.2, 3839N×3927E, h7km, MD2.8, After ERD*

ISC 08 01:16:40.8±1.5, 3840N±007×393E±01, h7km±12km, n6, σ0§43/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.03**	**143**	*e*PG	**Pg**	**01 16 41.5**	**-0.5**
SVRC				*e*SG	**Sg**	**01 16 43.1**	**+0.2**
PTK	**Pertek**	**0.50**	**10**	*e*PG	**Pg**	**01 16 50.8**	**+0.4**
URFA	**Urfa**	**1.03**	**201**	*e*PG	**Pg**	**01 17 00.5**	**0.0**
AKCD	**Akcadag**	**1.08**	**265**	*i* P	**Pg**	**01 17 00.6**	**-0.9**
AKCD				*i* S	**Sg**	**01 17 15.7**	**+0.3**
ATAB	**Bozova**	**1.22**	**220**	*i* P	**Pg**	**01 17 03.9**	**-0.1**
ATAB				*i* S	**Sg**	**01 17 20.2**	**+0.4**
ATAB	**Bozova**	**1.22**	**220**	*i* P	**Pg**	**01 17 03.9**	**-0.2**
ATAB				*i* S	**Sg**	**01 17 20.2**	**+0.4**

*ISCJB **08** 01:23:47.7±0.6, 4552N±003×2638E±004, h110km±6km, Error ellipse: s-maj=4.9km s-min=4.2km az=25.4*
*BUC **08** 01:23:47.4±0.6, 4551N×2636E, h116km±8km, MD3.7/3, Error ellipse: s-maj=4.3km s-min=3.7km az=125.0*
*CSEM **08** 01:23:48.0±0.1, 4552N×2635E, h100km, MD3.8/3, Error ellipse: s-maj=2.1km s-min=1.7km az=146.0*
*SOF **08** 01:23:48.9, 4544N×2634E, h106km, MD2.7*
*NEIC **08** 01:23:49.3, 4547N×2633E, h100km, MG2.9(BUC), After BUC.*

ISC 08 01:23:48.4±0.6, 4552N±003×2638E±004, h109km±6km, n51, σ0§64/78, 10C-16D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.38**	**29**	⇓*i* P	**Pn**	**01 24 04.6**	**+0.2**
PLOR				*i* S	**Sn**	**01 24 17.4**	**+1.0**
VRI	**Vrincioaia**	**0.42**	**35**	P	**Pn**	**01 24 04.8**	**+0.2**
VRI	**Vrincioaia**	**0.42**	**35**	⇓*i* P	**Pn**	**01 24 05.1**	**+0.5**
VRI				*i* S	**Sn**	**01 24 18.0**	**+1.2**
VRI	**Vrincioaia**	**0.42**	**35**	P	**Pn**	**01 24 05.9**	**+1.3**
VRI				S	**Sn**	**01 24 17.7**	**+0.9**
VRI	**Vrincioaia**	**0.42**	**35**	⇓*i* P	**Pn**	**01 24 05.1**	**+0.5**
VRI				*i* S	**Sn**	**01 24 17.2**	**+0.4**
VRI	**Vrincioaia**	**0.42**	**35**	S	**Sn**	**01 24 17.2**	**+0.4**
ODB	**Odobesti**	**0.54**	**61**	P	**Pn**	**01 24 06.7**	**+1.3**
ODB	**Odobesti**	**0.54**	**61**	⇓*i* P	**Pn**	**01 24 06.7**	**+1.3**
GHRR		**0.90**	**53**	*i* S	**Sn**	**01 24 24.1**	**+0.5**
TUDR		**0.91**	**85**	⇓*i* P	**Pn**	**01 24 08.5**	**0.0**
TUDR				*i* S	**Sn**	**01 24 23.9**	**+0.2**
VOIR		**0.94**	**266**	P	**Pn**	**01 24 08.5**	**-0.4**
VOIR		**0.94**	**266**	P	**Pn**	**01 24 08.5**	**-0.4**
VOIR		**0.94**	**266**	⇑*i* P	**Pn**	**01 24 08.8**	**-0.1**
VOIR				*i* S	**Sn**	**01 24 23.5**	**-0.8**
TESR		**1.01**	**10**	⇓*i* P	**Pn**	**01 24 09.5**	**-0.1**
TESR				*i* S	**Sn**	**01 24 24.6**	**-1.0**
VARR		**1.09**	**70**	⇓*i* P	**Pn**	**01 24 11.1**	**+0.6**
VARR				*i* S	**Sn**	**01 24 27.2**	**+0.1**
ONCR	**Oncesti**	**1.13**	**33**	⇓*i* P	**Pn**	**01 24 10.7**	**-0.2**
ONCR				*i* S	**Sn**	**01 24

KDAG	**Bornova**	**0.62**	**77**	*i* P	**Pg**	**01 37 19.8**	**-0.1**
KDAG				*i* S	**Sg**	**01 37 28.9**	**+0.8**
GCAM	**G?zelcaml?**	**0.81**	**134**	*i* P	**Pg**	**01 37 23.4**	**+0.1**
GCAM				*i* S	**Sg**	**01 37 34.2**	**+0.2**
PRK	**Paraskevi**	**1.00**	**350**	*e*PB	**Pb**	**01 37 27.3**	**+0.4**
AYVA	**Ayvalik**	**1.05**	**8**	*i* P	**Pb**	**01 37 26.7**	**-1.2**
AYVA				*i* S	**Sb**	**01 37 42.8**	**+1.2**
AKHS	**Akhisar**	**1.20**	**59**	*i* P	**Pn**	**01 37 27.7**	**-2.6**
AKHS				*i* S	**Sb**	**01 37 47.0**	**+1.1**
AKS	**Akhisar**	**1.20**	**59**	*e*PN	**Pn**	**01 37 30.0**	**-0.3**
AYDN	**Tasoluk**	**1.25**	**118**	*i* P	**Pn**	**01 37 31.9**	**+0.9**
AYDN				*i* S	**Sb**	**01 37 47.4**	**+0.2**
BODT	**Bodrum**	**1.36**	**151**	*e*PN	**Pg**	**01 37 35.6**	**+1.7**
MLSB	**Milas**	**1.40**	**133**	*e*PN	**Pg**	**01 37 36.2**	**+1.6**
APE	**Apeiranthos**	**1.42**	**213**	*e*PB	**Pb**	**01 37 33.4**	**-0.6**
EZN	**Ezine**	**1.56**	**355**	*e*PN	**Pn**	**01 37 36.2**	**+0.9**
MANT	**Manisa**	**1.64**	**81**	*i* P	**Pg**	**01 37 37.9**	**-1.3**
MANT				*i* S	**Sg**	**01 37 58.9**	**-1.6**
MANT	**Manisa**	**1.64**	**81**	*i* P	**Pg**	**01 37 37.8**	**-1.3**
MANT				*i* S	**Sg**	**01 37 58.8**	**-1.6**
BALY	**Balya**	**1.72**	**30**	*i* P	**Pg**	**01 37 38.9**	**-1.8**
BALY				*i* S	**Sg**	**01 38 04.0**	**+1.1**
KULA	**Kula-Manisa**	**1.72**	**81**	*e*PN	**Pg**	**01 37 39.0**	**-1.7**

*ISCJB **08** 01:39:08.9±0.3, 1592S×004×3470E±004, h23km, mb4.5/35, MS3.9/7, Error ellipse: s-maj=6.1km s-min=4.7km az=147.4*
*NEIC **08** 01:39:08.8±2.8, 1592S×3474E, h10km±17km, mb4.8/12, Error ellipse: s-maj=8.7km s-min=6.0km az=168.0*
*PRE **08** 01:39:10.7±2.0, 1595S×3431E, h5km, ML6.1*
*IDC **08** 01:39:12.0±0.4, 1577S×3480E, h22km±2km, mb4.0/18, mb1 4.1/19, mb1mx4.1/23, mbtmp4.0/19, ML4.5/2, MS3.8/11, Ms1 3.8/11, ms1mx3.6/26, Error ellipse: s-maj=13.5km s-min=10.4km az=121.0*

ISC 08 01:39:11.4±0.3, 1592S±004×3468E±004, h25km, h25km±7km: pP-P, n92, σ1§07/82, mb4.5/35, MS3.9/7, Malawi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.29**	**275**	Pn	**Pn**	**01 40 43.4**	**+0.9**
	14nm,0.3s,baz=96,slow=11,SNR=1057						
LSZ				Sn	**Sn**	**01 41 54.0**	**+0.3**
	56nm,0.3s,baz=84,slow=14,SNR=5.0						
LSZ				Lg		01 42 24.3	
	75nm,0.3s,baz=49,slow=8.4,SNR=5.6						
LSZ				LR	LR	01 43 04.5	
	comp=Z,852nm,18.5s,baz=146,slow=36						
MATP	**Matopo**	**7.39**	**232**	Pn	**Pn**	**01 40 57.9**	**+0.2**
	14nm,0.3s,baz=59,slow=13,SNR=153						
MATP				Sn	**Sn**	**01 42 17.7**	**-3.1**
	70nm,0.3s,baz=29,slow=10,SNR=8.9						
MATP				Lg		01 42 55.8	
	235nm,0.3s,baz=332,slow=24,SNR=19						
MSNA	**Messina**	**7.76**	**214**	*e*P	**Pn**	**01 41 04.1**	**+1.3**
MSNA				*e*S	**Sn**	**01 42 25.9**	**-4.0**
MSNA				AML	AML	01 43 17.2	
	comp=Z,980nm,0.6s						
SLR	**Silverton**	**11.45**	**210**	*e*P	**Pn**	**01 41 53.5**	**+0.2**
SLR				*e*S	**Sn**	**01 43 53.4**	**-7.1**
SLR				AML	AML	01 45 14.4	
	comp=Z,397nm,0.7s						
POGA	**Pongola**	**11.75**	**194**	*e*P	**Pn**	**01 41 58.6**	**+1.2**
POGA				*e*S	**Sn**	**01 44 00.9**	**-6.9**
POGA				AML	AML	01 45 34.0	
	comp=Z,95nm,0.6s						
OPO	**Ambohidratompo**	**12.24**	**104**	Pn	**Pn**	**01 42 03.3**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=269,slow=13,SNR=21						
OPO				Sn	**Sn**	**01 44 22.1**	**+2.2**
	comp=Z,3.9nm,0.3s,baz=284,slow=17,SNR=4.2						
ABPO	**Ambohimpanom**	**12.36**	**106**	*e*Pn	**Pn**	**01 42 04.8**	**-1.1**
	comp=Z,21nm,0.6s						
ABPO				*e*Sn	**Sn**	**01 44 15.5**	**-7.5**
LBTB	**Lobatse**	**12.42**	**222**	Pn	**Pn**	**01 42 05.8**	**-0.8**
	comp=Z,5.9nm,0.3s,baz=54,slow=15,SNR=102						
LBTB				Sn	**Sn**	**01 44 17.1**	**-7.2**
	comp=Z,11nm,0.3s,baz=116,slow=20,SNR=7.6						
LBTB				Lg		01 45 31.5	
	comp=Z,25nm,0.3s,baz=152,slow=17,SNR=12						
LBTB				LR	LR	01 47 11.7	
	comp=Z,175nm,18.8s,baz=59,slow=38						
LBTB	**Lobatse**	**12.42**	**222**	Pn	**Pn**	**01 42 05.8**	**-0.8**
LBTB				Sn	**Sn**	**01 44 17.1**	**-7.2**
LBTB				Lg		01 45 31.5	
LBTB				LR	LR	01 47 11.7	
PRYS	**Parys**	**12.89**	**211**	*e*P	**Pn**	**01 42 13.1**	**0.0**
PRYS				*e*S	**Sn**	**01 44 27.0**	**-8.9**
PRYS				AML	AML	01 46 03.3	
	comp=Z,158nm,0.6s						
SEK	**Senekal**	**13.96**	**207**	*e*P	**Pn**	**01 42 28.5**	**+0.8**
SEK				*e*S	**Sn**	**01 44 53.5**	**-8.5**
SEK				AML	AML	01 46 52.1	
	comp=Z,156nm,0.7s						
BOSA	**Boshof**	**15.34**	**213**	Pn	**Pn**	**01 42 44.1**	**-2.2**
	comp=Z,1.2nm,0.3s,baz=39,slow=12,SNR=23						
BOSA				Sn	**Sn**	**01 45 25.0**	**-11**
	comp=Z,3.6nm,0.3s,baz=31,slow=3.9,SNR=7.0						
BOSA				Lg		01 47 04.1	
	comp=Z,6.0nm,0.3s,baz=120,slow=22,SNR=5.3						
BOSA				LR	LR	01 48 45.5	
	comp=Z,447nm,19.1s,baz=36,slow=37						
BOSA	**Boshof**	**15.34**	**213**	Pn	**Pn**	**01 42 44.1**	**-2.2**
BOSA				Sn	**Sn**	**01 45 25.0**	**-11**
BOSA				Lg		01 47 04.1	
BOSA				LR	LR	01 48 45.5	
TSUM	**Tsumeb**	**16.62**	**256**	Pn	**Pn**	**01 43 02.4**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=84,slow=9.1,SNR=38						
TSUM				Sn	**Sn**	**01 45 56.1**	**-11**
	comp=Z,1.0nm,0.3s,baz=210,slow=20,SNR=4.4						
TSUM				Lg		01 47 54.8	
	comp=Z,2.2nm,0.3s,baz=192,slow=18,SNR=3.4						
TSUM				LR	LR	01 49 08.6	
	comp=Z,183nm,19.1s,baz=272,slow=36						
UPI	**Upington**	**17.53**	**223**	*e*P	**Pn**	**01 43 12.9**	**-1.2**
SUR	**Sutherland**	**20.67**	**215**	P	**P**	**01 43 51.6**	**+2.2**
	comp=Z,38nm,0.7s,baz=52,slow=9.8,SNR=38						
SUR				sP	sP	01 44 01.1	+1.7
	comp=Z,140nm,0.8s,baz=51,slow=8.4,SNR=22						
SUR				S	**S**	**01 47 47.4**	**+8.1**
	comp=Z,38nm,0.9s,baz=133,slow=23,SNR=4.0						
SUR				Lg		01 49 50.3	
	comp=Z,103nm,0.7s,baz=133,slow=18,SNR=5.8						
SUR				LR	LR	01 51 40.0	
	comp=Z,525nm,18.5s,MS3.9,baz=47,slow=36						
SUR	**Sutherland**	**20.67**	**215**	*e*P	**P**	**01 43 50.7**	**+1.2**
	comp=Z,156nm,0.8s						
SUR				sP	sP	01 44 01.1	+1.7
SUR				S	**S**	**01 47 47.4**	**+8.1**
SUR				Lg		01 49 50.3	
SUR				LR	LR	01 51 40.0	
SUR	**Sutherland**	**20.67**	**215**	*e*P	**P**	**01 43 49.6**	**+0.1**
SUR				*e*S	**S**	**01 47 39.6**	**+0.3**
TOA0	**Torodi Ar. Sit**	**43.57**	**310**	*e*P	**P**	**01 47 13.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**43.57**	**310**	P	**P**	**01 47 13.6**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.0,baz=126,slow=8.0,SNR=32						
TORD				pP	pP	01 47 21.0	-0.2
	comp=Z,5.7nm,0.7s,baz=125,slow=7.6,SNR=17						
TORD				LR	LR	02 05 24.1	
	comp=Z,87nm,19.1s,MS3.7,baz=135,slow=36						
KIC	**Kosan Boka**	**44.87**	**297**	*e*P	pP	01 47 31.2	-0.5
	comp=Z,45nm,0.6s						
LIC	**Lamto**	**45.05**	**296**	*e*P	**P**	**01 47 29.4**	**+3.8**
	comp=Z,23nm,1.0s,mb5.0						
DBIC	**Dimbokro**	**45.12**	**297**	P	**P**	**01 47 26.2**	**0.0**
	comp=Z,1.3nm,0.6s,mb3.9,baz=104,slow=12,SNR=2.6						
DBIC				pP	pP	01 47 33.2	-0.4
	comp=Z,5.1nm,0.6s,baz=105,slow=9.7,SNR=5.1						
DBIC				LR	LR	02 06 11.1	
	comp=Z,172nm,19.8s,MS4.0,baz=103,slow=36						
DBIC	**Dimbokro**	**45.12**	**297**	*e*P	**P**	**01 47 26.1**	**0.0**
	comp=Z,7.2nm,0.7s,mb4.6						
DBIC				pP	pP	01 47 33.2	-0.4
DBIC				LR	LR	02 06 11.1	
TIC	**Toumodi**	**45.25**	**297**	*e*P	pP	01 47 34.3	-0.4
	comp=Z,63nm,0.8s						
ASF	**Jabal al Asfar**	**47.86**	**3**	sP	sP	01 47 56.5	-1.4
	comp=Z,6.1nm,0.9s,baz=167,slow=4.7,SNR=4.9						
TAM	**Tamanrasset**	**47.90**	**323**	*e*P	**P**	**01 47 48.4**	**+0.7**
CSS	**Prodhromos**	**50.61**	**359**	*e*P	**P**	**01 48 07.9**	**-0.4**
	comp=Z,25nm,1.2s,mb5.0						
MAW	**Mawson**	**54.78**	**167**	P	**P**	**01 48 40.5**	**+1.8**
	comp=Z,4.0nm,0.8s,mb4.5,baz=306,slow=10.0,SNR=6.4						
MAW				pP	pP	01 48 48.2	+1.8
	comp=Z,3.7nm,0.7s,baz=331,slow=9.1,SNR=4.6						
BRTR	**Keskin Array B**	**55.36**	**359**	P	**P**	**01 48 44.0**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=174,slow=11,SNR=4.6						
BRTR				pP	pP	01 48 51.1	+0.2
	comp=Z,2.3nm,0.9s,baz=172,slow=9.0,SNR=8.3						
KEST	**Kesra**	**56.70**	**335**	sP	sP	01 49 02.0	-1.5
	comp=Z,2.4nm,0.9s,baz=180,slow=1.0,SNR=3.4						
KIV	**Kislovodsk**	**60.03**	**7**	*e*P	**P**	**01 49 15.2**	**-0.8**
	comp=Z,7.8nm,0.9s,mb4.7						
VNA2	**Neumayer--Watz**	**60.51**	**195**	*e*	**P**	**01 49 21.7**	**+2.7**
	baz=28,slow=7.4						
VNA2				*e*		01 49 32.2	
VNA1	**Neumayer--Stat**	**60.55**	**195**	*e*	**P**	**01 49 21.8**	**+2.6**
VNA1				*e*		01 49 32.5	
VNA3	**Neumayer Olymp**	**61.28**	**195**	*e*	**P**	**01 49 26.2**	**+1.9**
VNA3				*e*		01 49 36.7	
PYUN	**Piuthan**	**64.05**	**47**	*e*P	**P**	**01 49 43.2**	**-0.2**
	comp=Z,19nm,0.7s,mb5.3						
KOLN	**Koldanda**	**64.28**	**48**	*e*P	**P**	**01 49 44.4**	**-0.5**
	comp=Z,7.8nm,0.5s,mb5.0						
DANN	**Dangsing**	**64.74**	**47**	*e*P	**P**	**01 49 47.1**	**-0.8**
	comp=Z,26nm,1.0s,mb5.2						
PSZ	**Piszkesteto**	**64.91**	**349**	*e*P	**P**	**01 49 47.0**	**-1.5**
	comp=Z,8.8nm,1.1s,mb4.7						
GKN	**Gorkha**	**65.16**	**48**	*e*P	**P**	**01 49 49.8**	**-0.8**
	comp=Z,23nm,0.8s,mb5.3						
BNI	**Bardonecchia**	**65.80**	**339**	*e*P	**P**	**01 49 53.5**	**-0.9**
	comp=Z,15nm,1.3s,mb4.9						
RAMN	**Ramite**	**66.00**	**50**	*e*P	**P**	**01 49 55.3**	**-0.7**
	comp=Z,13nm,0.8s,mb5.0						
ESDC	**Sonseca Array**	**66.00**	**328**	P	**P**	**01 49 58.5**	**+2.7**
	comp=Z,0.4nm,0.7s,mb3.6,baz=109,slow=4.4,SNR=2.7						
ESDC				pP	pP	01 50 04.4	+0.7
	comp=Z,2.3nm,0.8s,baz=141,slow=6.1,SNR=7.2						
GUN	**Gumba**	**66.01**	**49**	*e*P	**P**	**01 49 55.6**	**-0.5**
	comp=Z,15nm,0.6s,mb5.2						
JIRN	**Jiri**	**66.09**	**49**	*e*P	**P**	**01 49 55.9**	**-0.7**
	comp=Z,13nm,0.7s,mb5.1						
LPG	**La Plagne**	**66.16**	**339**	*e*P	sP	01 50 08.2	+0.8
	comp=Z,18nm,1.2s						
LPL	**La Plagne**	**66.18**	**339**	*e*P	sP	01 50 08.2	+0.6
	comp=Z,18nm,1.2s						
AKASG	**Malin Array Be**	**66.50**	**356**	P	**P**	**01 50 00.8**	**+2.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=172,slow=5.4,SNR=3.0						
AKASG				pP	pP	01 50 05.5	-1.0
	comp=Z,0.6nm,0.4s,baz=185,slow=7.0,SNR=3.1						
ETSF	**Etsaut**	**66.88**	**333**	*e*P	sP	01 50 14.2	+2.1
	comp=Z,11nm,0.8s						
GERES	**GERESS Array B**	**67.12**	**345**	P	**P**	**01 50 03.2**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=134,slow=4.2,SNR=6.6						
GERES				pP	pP	01 50 10.0	-0.5
	comp=Z,1.2nm,0.8s,baz=134,slow=3.9,SNR=4.8						
SJPF	**Ste Jean**	**67.35**	**332**	*e*P	sP	01 50 13.4	-1.7
CABF	**La Chapelle**	**67.36**	**339**	*e*P	**P**	**01 50 04.9**	**+0.6**
	comp=Z,19nm,1.1s,mb4.7						
CABF	**La Chapelle**	**67.36**	**339**	*e*P	**P**	**01 50 04.9**	**+0.6**
	comp=Z,9.3nm,1.1s,mb4.7						
AVF	**Avril sur Loir**	**68.49**	**337**	*e*P	pP	01 50 18.4	-0.9
TCF	**Toulx Ste Croi**	**68.50**	**336**	*e*P	sP	01 50 20.8	-1.5
	comp=Z,22nm,1.2s						
CDF	**Champ du Feu**	**68.54**	**341**	*e*P	**P**	**01 50 12.3**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.2						
CDF	**Champ du Feu**	**68.54**	**341**	*e*P	**P**	**01 50 12.3**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**69.18**	**16**	P	**P**	**01 50 15.3**	**-0.3**
AKTK				pP	pP	01 50 22.6	-0.9
AKTO	**Aktyubinsk**	**69.18**	**16**	P	**P**	**01 50 15.3**	**-0.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=243,slow=2.2,SNR=7.6						
AKTO				pP	pP	01 50 22.6	-0.9
	comp=Z,5.9nm,0.6s,baz=196,slow=6.3,SNR=12						
CMAR	**Chiang Mai Arr**	**71.89**	**64**	P	**P**	**01 50 32.7**	**-0.2**
	comp=Z,1.0nm,0.3s,mb4.2,baz=247,slow=6.6,SNR=5.3						
CMAR				pP	pP	01 50 40.5	-0.3
	comp=Z,1.6nm,0.8s,baz=248,slow=6.6,SNR=1.5						
CMAR				LR	LR	02 17 52.9	
	comp=Z,48nm,19.7s,MS3.8,baz=0,slow=32						
CHTO	**Chiang Mai**	**72.04**	**64**	*e*P	**P**	**01 50 33.4**	**-0.4**
	comp=Z,2.0nm,0.4s,mb4.4						
BRVK	**Borovoye**	**75.23**	**21**	*e*P	**P**	**01 50 51.5**	**-0.2**
	comp=Z,5.8nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**75.24**	**21**	P	**P**	**01 50 51.6**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=217,slow=5.1,SNR=8.3						
BVAR				pP	pP	01 50 58.9	-0.8
	comp=Z,4.1nm,0.7s,baz=220,slow=6.1,SNR=16						
MK31	**Makanchi Array**	**75.66**	**32**	*e*P	**P**	**01 50 54.0**	**-0.3**
MKAR	**Makanchi Array**	**75.66**	**32**	P	**P**	**01 50 53.8**	**-0.6**
	comp=Z,2.6nm,0.9s,mb4.1,baz=225,slow=6.7,SNR=8.1						
MKAR				pP	pP	01 51 01.4	-0.9
	comp=Z,2.8nm,0.7s,baz=220,slow=6.3,SNR=11						
MKAR	**Makanchi Array**	**75.66**	**32**	P	**P**	**01 50 53.8**	**-0.6**
MKAR				pP	pP	01 51 01.4	-0.9
KURK	**Kurchatov**	**76.70**	**27**	*e*P	**P**	**01 50 59.6**	**-0.6**
	comp=Z,4.3nm,0.6s,mb4.6						
NOA	**NORSAR Array B**	**78.96**	**349**	P	**P**	**01 51 12.3**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.2,baz=147,slow=5.3,SNR=3.5						
NOA				pP	pP	01 51 20.7	+0.2
	comp=Z,2.6nm,0.8s,baz=147,slow=5.3,SNR=3.9						
NOA	**NORSAR Array B**	**78.96**	**349**	P	**P**	**01 51 12.3**	**-0.3**
NOA				pP	pP	01 51 20.7	+0.2
BDFB	**Brasilia**	**78.99**	**257**	P	**P**	**01 51 16.1**	**+2.3**
	comp=Z,4.4nm,0.9s,mb4.4,baz=124,slow=5.2,SNR=9.2						
BDFB				sP	sP	01 51 24.4	-0.3
	comp=Z,3.0nm,0.9s,baz=171,slow=22,SNR=4.9						
BDFB				LR	LR	02 24 27.9	
	comp=Z,32nm,18.9s,MS3.7,baz=100,slow=34						
ZALV	**Zalesovo Beam**	**81.68**	**27**	P	**P**	**01 51 26.9**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.2,baz=224,slow=4.1,SNR=12						
ZALV				pP	pP	01 51 34.5	-0.8
	comp=Z,2.5nm,0.6s,baz=231,slow=4.1,SNR=8.1						
ARCES	**ARCESS Array B**	**85.47**	**357**	P	**P**	**01 51 46.9**	**+0.4**
	comp=Z,3.0nm,0.8s,mb4.5,baz=337,slow=5.5,SNR=6.1						
ARCES				pP	pP	01 51 55.0	+0.5
	comp=Z,9.1nm,0.9s,baz=170,slow=8.1,SNR=8.3						
SONM	**Songino Array**	**89.89**	**40**	P	**P**	**01 52 09.7**	**+1.5**
	comp=Z,0.2nm,0.5s,mb3.7,baz=264,slow=2.9,SNR=3.1						
SONM				pP	pP	01 52 16.8	+0.6
	comp=Z,0.5nm,0.7s,baz=238,slow=3.0,SNR=3.8						
PLCA	**Paso Flores**	**90.85**	**227**	*e*P	**P**	**01 52 12.3**	**-0.8**
	comp=Z,4.9nm,1.1s,mb4.8						
ASAR	**Alice Springs**	**91.87**	**115**	P	**P**	**01 52 17.8**	**-0.3**
	comp=Z,0.9nm,1.0s,mb4.1,baz=268,slow=4.9,SNR=4.8						
ASAR				pP	pP	01 52 25.6	-0.5
	comp=Z,1.2nm,0.9s,baz=252,slow=5.1,SNR=5.5						
STKA	**Stephens Creek**	**95.45**	**125**	LR	LR	02 29 14.1	
	comp=Z,44nm,19.7s,MS3.9,baz=208,slow=32						
LVC	**Limon Verde**	**96.01**	**245**	LR	LR	02 31 05.3	
	comp=Z,68nm,19.1s,MS4.1,baz=214,slow=32						
INK	**Inuvik**	**127.10**	**355**	*e*PKPdf	PKPdf	01 58 13.0	+0.2
BOZ	**Bozeman (W)**	**139.10**	**324**	*e*PKPdf	PKPdf	01 58 37.0	+0.9
BW06	**Boulder Array**	**139.40**	**319**	*e*PKPdf	PKPdf	01 58 37.5	+0.7
PDAR	**Pinedale Array**	**139.40**	**319**	PKP	PKPdf	01 58 37.1	+0.4
	comp=Z,1.1nm,0.8s,baz=98,slow=2.6,SNR=9.7						
PDAR				pPKP	pPKPdf	01 58 45.0	-0.1
	comp=Z,1.1nm,0.8s,baz=105,slow=3.2,SNR=6.5						
TXAR	**Lajitas Array**	**139.51**	**297**	PKHKP	PKPdf	01 58 33.6	-3.7
	comp=Z,0.5nm,1.0s,baz=93,slow=5.4,SNR=3.3						
TXAR				PKP	PKPdf	01 58 38.3	+1.0
	comp=Z,0.6nm,0.8s,baz=116,slow=2.9,SNR=5.7						
ANMO	**Albuquerque**	**140.43**	**306**	*e*PKPdf	PKPdf	01 58 38.4	-0.4
HWUT	**Hardware Ranch**	**141.28**	**318**	*e*PKPdf	PKPdf	01 58 40.3	+0.1
DUG	**Dugway**	**142.82**	**317**	*e*PKPdf	PKPdf	01 58 41.1	-1.8
ELK	**Elko**	**144.07**	**320**	*e*PKPdf	PKPdf	01 58 44.9	-0.2
TUC	**Tucson**	**144.70**	**304**	*e*PKPdf	PKPdf	01 58 47.0	+0.5
WVOR	**Wild Horse Val**	**145.05**	**325**	*e*PKPbc	PKPab	01 58 47.6	+1.4
MOD	**Modoc**	**146.33**	**325**	*e*PKPbc	PKPab	01 58 51.2	+0.3
HUMO	**Hull Mountain**	**147.22**	**329**	*e*PKPbc	PKPbc	01 58 52.1	-0.6
HUMO				*e*		01 59 00.2	
NVAR	**Mina Array Bea**	**147.34**	**319**	PKPbc	PKPab	01 58 53.9	-1.2
	comp=Z,4.9nm,1.1s,baz=95,slow=2.9,SNR=19						
NVAR				pPKPbc	pPKPbc	01 59 01.4	0.0
	comp=Z,2.3nm,0.8s,baz=71,slow=2.9,SNR=7.9						
ISA	**Isabella**	**149.01**	**314**	*e*PKPbc	PKPbc	01 58 56.9	-0.8
ISA				*e*PKPab	PKPab	01 59 00.1	-1.7

*ISCJB **08** 01:48:34.8±1.5, 3825N±004×2652E±009, h4km±13km, Error ellipse: s-maj=11.6km s-min=6.4km az=9.6*
*CSEM **08** 01:48:34.0±0.2, 3824N×2656E, h2km, MD2.8, Error ellipse: s-maj=6.7km s-min=2.4km az=136.0*
*ISK **08** 01:48:34.8, 3821N, 2660E, h3km, MD2.8*
*ATH **08** 01:48:34.2, 3826N, 2682E, h45km*

ISC 08 01:48:35.2±0.9, 3825N±004×2652E±007, h6km±8km, n10, σ0§60/14, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.44**	**72**	PG	**Pg**	**01 48 43.1**	**-0.5**
BLCB				*e*SG	**Sg**	**01 48 49.4**	**+0.1**
SMG	**Samos**	**0.59**	**155**	*e*P	**Pg**	**01 48 46.6**	**0.0**
SMG				*e*S	**Sg**	**01 48 55.2**	**+0.8**
IZM	**Izmir**	**0.61**	**75**	*e*PG	**Pg**	**01 48 46.5**	**-0.4**
IZM				*e*SG	**Sg**	**01 48 54.9**	**+0.2**
PRK	**Paraskevi**	**1.01**	**349**	*e*P	**Pg**	**01 48 54.0**	**-0.7**
PRK				*e*S	**Sg**	**01 49 08.1**	**+0.3**
AKS	**Akhisar**	**1.20**	**58**	*e*PN	**Pn**	**01 48 57.8**	**-0.6**
BODT	**Bodrum**	**1.34**	**152**	*e*PN	**Pn**	**01 48 60.0**	**-0.4**
MLSB	**Milas**	**1.38**	**133**	*e*PN	**Pn**	**01 49 00.5**	**-0.5**
APE	**Apeiranthos**	**1.41**	**214**	*e*P	**Pn**	**01 49 01.1**	**-0.3**
EZN	**Ezine**	**1.58**	**355**	*e*PN	**Pn**	**01 49 05.3**	**+1.5**
KULA	**Kula-Manisa**	**1.71**	**80**	*e*PN	**Pn**	**01 49 06.1**	**+0.6**

IDC 08 01:52:25.1±2.6, 623S×13098E, h0km, mb3.5/1, mb1 4.1/3, mb1mx3.7/13, mbtmp3.9/3, ML4.3/2, Error ellipse: s-maj=136.7km s-min=32.8km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.01**	**167**	Pn	Pn	01 55 44.7	-0.3
	1.5nm,0.3s,baz=349,slow=13,SNR=22						
WRA				Sn	Sn	01 58 11.8	-10
	1.2nm,0.3s,baz=339,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**17.56**	**171**	P	Pn	01 56 31.9	+0.5
	0.7nm,0.3s,baz=2.0,slow=14,SNR=32						
ASAR				S	Sn	01 59 39.4	-8.3
	0.3nm,0.3s,baz=0.4,slow=27,SNR=5.0						
MKAR	**Makanchi Array**	**68.13**	**326**	P	P	02 03 27.0	+0.1
	0.3nm,0.6s,baz=122,slow=5.7,SNR=3.4						

*IDA **08** 01:51:12.3, 3828N×2632E, h7km±6km, Md2.9*
*ATH **08** 02:51:14.6, 3827N×2692E, h49km*
*CSEM **08** 02:51:14.7±0.2, 3830N×2666E, h10km, MD2.9, Error ellipse: s-maj=5.9km s-min=4.8km az=62.0*
*ISCJB **08** 02:51:15.5±1.0, 3828N±006×2653E±009, h11km±7km, Error ellipse: s-maj=11.4km s-min=9.6km az=8.5*

ISC 08 02:51:15.5±1.0, 3830N±005×2651E±009, h11km±10km, n6, σ1§06/10, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.09**	**47**	*i* P	**Pg**	**02 51 18.0**	**-0.1**
URLA				*i* S	**Sg**	**02 51 20.5**	**+0.4**
KDAG	**Bornova**	**0.60**	**80**	*i* P	**Pg**	**02 51 25.8**	**-1.5**
KDAG				*i* S	**Sg**	**02 51 35.9**	**+0.6**
SMG	**Samos**	**0.64**	**156**	*e*P	**Pg**	**02 51 27.3**	**-0.7**
SMG				*e*S	**Sg**	**02 51 36.5**	**+0.1**
GCAM	**G?zelcaml?**	**0.83**	**136**	*i* P	**Pg**	**02 51 29.2**	**-2.3**
GCAM				*i* S	**Sg**	**02 51 44.0**	**+1.8**
PRK	**Paraskevi**	**0.96**	**349**	*e*P	**Pg**	**02 51 34.6**	**+0.5**
APE	**Apeiranthos**	**1.45**	**213**	*e*P	**Pn**	**02 51 42.3**	**+0.7**

IDC 08 03:10:32.4±29.0, 2372S×17423W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/16, mbtmp4.1/4, Error ellipse: s-maj=530.4km s-min=157.2km az=80.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.76**	**268**	P	P	03 17 43.4	+1.4
	2.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.30**	**307**	P	Pn	03 33 12.5	-2.1
DNP	**Denpasar**	**1.34**	**314**	P	Pn	03 33 16.2	+1.0
DNP	**Denpasar**	**1.34**	**314**	S	Sn	03 33 32.4	+0.1
KHKI	**Kahang-Kahang**	**1.36**	**335**	P	Pn	03 33 14.9	-0.6
KHKI	**Kahang-Kahang**	**1.36**	**335**	S	Sn	03 33 32.8	-0.2

*ISK **08** 03:35:26.6, 3825N×2650E, h6km, MD3.5*
*CSEM **08** 03:35:26.9±0.0, 3822N×2650E, h10km, MD3.2, Error ellipse: s-maj=1.2km s-min=1.1km az=130.0*
*DDA **08** 03:35:27.3, 3827N×2648E, h14km, Md3.2*
*ISCJB **08** 03:35:27.2±0.5, 3823N±002×2649E±002, h9km±3km, Error ellipse: s-maj=3.0km s-min=2.8km az=149.5*
*ATH **08** 03:35:27.4, 3823N×2644E, h29km±2km, MD3.7/9*
*THE **08** 03:35:28.0, 3824N×2652E, h10km±1km, ML3.2/1, Error ellipse: s-maj=1.6km s-min=0.5km az=324.0*
*NEIC **08** 03:35:28.0, 3822N×2662E, h5km, MD3.8(ATH), MD3.4(ISK), After ISK.*
*SOF **08** 03:35:29.7, 3856N×2654E, h6km, MD3.0*

ISC 08 03:35:27.9±0.4, 3824N±002×2650E±002, h8km±3km, n108, σ0°91/142, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**32**	*i* P	**Pg**	**03 35 30.7**	**-0.2**
URLA				*i* S	**Sg**	**03 35 33.1**	**+0.1**
CHOS	**Chios island**	**0.38**	**293**	P	**Pg**	**03 35 36.1**	**+0.9**
CHOS				S	**Sg**	**03 35 41.8**	**+1.6**
BLCB	**Balcova**	**0.45**	**71**	PG	**Pg**	**03 35 36.3**	**-0.3**
BLCB				SG	**Sg**	**03 35 42.3**	**-0.2**
SMG	**Samos**	**0.59**	**153**	*e*PN	**Pg**	**03 35 39.6**	**+0.3**
SMG				*e*SN	**Sg**	**03 35 49.2**	**+2.2**
IZM	**Izmir**	**0.62**	**75**	PG	**Pg**	**03 35 39.7**	**-0.1**
IZM				SG	**Sg**	**03 35 47.9**	**-0.1**
KDAG	**Bornova**	**0.63**	**75**	*i* P	**Pg**	**03 35 39.2**	**-0.7**
KDAG				*i* S	**Sg**	**03 35 47.1**	**-1.0**
GCAM	**G?zelcaml?**	**0.79**	**133**	*i* P	**Pg**	**03 35 43.0**	**-0.1**
GCAM				*i* S	**Sg**	**03 35 54.5**	**+1.2**
PRK	**Paraskevi**	**1.02**	**350**	P	**Pg**	**03 35 46.5**	**-1.0**
PRK				S	**Sg**	**03 36 01.5**	**+0.7**
PRK	**Paraskevi**	**1.02**	**350**	*e*PN	**Pg**	**03 35 46.5**	**-1.0**
PRK				*e*SN	**Sn**	**03 36 01.7**	**-1.4**
AYVA	**Ayvalik**	**1.08**	**8**	*i* P	**Pg**	**03 35 46.7**	**-1.8**
AYVA				*i* S	**Sg**	**03 36 03.2**	**+0.6**
AKHS	**Akhisar**	**1.21**	**58**	*i* P	**Pb**	**03 35 49.3**	**-1.7**
AKHS				*i* S	**Sg**	**03 36 05.4**	**-1.5**
AKS	**Akhisar**	**1.21**	**58**	*e*PN	**Pn**	**03 35 49.7**	**-1.4**
AYDN	**Tasoluk**	**1.23**	**117**	*i* P	**Pn**	**03 35 49.8**	**-1.6**
AYDN				*i* S	**Sb**	**03 36 07.3**	**-0.2**
BODT	**Bodrum**	**1.34**	**151**	*e*PN	**Pn**	**03 35 53.3**	**+0.4**
MLSB	**Milas**	**1.38**	**133**	*e*PN	**Pn**	**03 35 53.3**	**-0.2**
BDRM	**Kayabasi**	**1.39**	**147**	*i* P	**Pn**	**03 35 52.4**	**-1.2**
BDRM				*i* S	**Sb**	**03 36 13.7**	**+1.7**
APE	**Apeiranthos**	**1.40**	**214**	P	**Pn**	**03 35 52.4**	**-1.3**
APE				S	**Sb**	**03 36 11.7**	**-0.5**
APE	**Apeiranthos**	**1.40**	**214**	*e*Pn	**Pn**	**03 35 52.3**	**-1.4**
APE				S	**Sb**	**03 36 11.7**	**-0.5**
EZN	**Ezine**	**1.59**	**355**	*e*PN	**Pn**	**03 35 54.9**	**-1.4**
KULA	**Kula-Manisa**	**1.72**	**80**	*e*PN	**Pn**	**03 35 58.5**	**+0.4**
DAT	**Datca**	**1.73**	**150**	*e*PN	**Pn**	**03 35 57.7**	**-0.6**
BALY	**Balya**	**1.74**	**30**	*i* P	**Pn**	**03 35 59.0**	**+0.7**
BALY				*i* S	**Sn**	**03 36 21.7**	**+1.0**
LIA	**Limnos Island**	**1.95**	**329**	*e*PN	**Pn**	**03 36 00.1**	**-1.1**
LIA	**Limnos Island**	**1.95**	**329**	P	**Pn**	**03 36 00.5**	**-0.7**
THR4	**Thira Island,**	**1.98**	**207**	P	**Pn**	**03 36 00.6**	**-1.1**
GADA	**Gvkgeada**	**2.00**	**347**	*e*PN	**Pn**	**03 36 00.8**	**-1.2**
THR3	**Thira Island,**	**2.02**	**206**	P	**Pn**	**03 36 01.1**	**-1.2**
THR1	**Thera Island**	**2.04**	**204**	P	**Pn**	**03 36 01.3**	**-1.2**
DENT	**Denizli**	**2.06**	**103**	*e*PN	**Pn**	**03 36 02.3**	**-0.4**
THR6	**Thira Island,**	**2.07**	**205**	P	**Pn**	**03 36 01.9**	**-1.1**
DST	**Dursunbey**	**2.15**	**50**	*e*PN	**Pn**	**03 36 04.6**	**+0.6**
DALT	**Dalyan (Mudla)**	**2.25**	**130**	*e*PN	**Pn**	**03 36 05.4**	**+0.1**
AOS	**Alonnisos**	**2.25**	**295**	P	**Pn**	**03 36 05.5**	**+0.1**
KHL	**Karahalli**	**2.38**	**87**	*e*PN	**Pn**	**03 36 07.4**	**+0.2**
BNT	**Bandirma**	**2.38**	**27**	*e*PN	**Pn**	**03 36 08.0**	**+0.7**
ARG	**Arkhangelos**	**2.40**	**147**	*e*PN	**Pn**	**03 36 07.3**	**-0.2**
KCT	**Karacabey**	**2.49**	**35**	*e*PN	**Pn**	**03 36 09.2**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.50**	**12**	*e*PN	**Pn**	**03 36 09.2**	**+0.3**
ENEZ	**Enez**	**2.51**	**354**	*e*PN	**Pn**	**03 36 08.1**	**-0.9**
MRMT	**Marmara Adasi**	**2.51**	**19**	*e*PN	**Pn**	**03 36 09.5**	**+0.5**
FETY	**Fethiye**	**2.61**	**127**	*e*PN	**Pn**	**03 36 10.8**	**+0.5**
MFT	**Murefte**	**2.62**	**13**	*e*PN	**Pn**	**03 36 10.9**	**+0.4**
ALN	**Alexandroupoli**	**2.68**	**353**	P	**Pn**	**03 36 10.3**	**-1.0**
DID	**Didima**	**2.68**	**255**	P	**Pn**	**03 36 11.0**	**-0.3**
DID				S	**Sn**	**03 36 43.7**	**-0.3**
KARP	**Karpathos**	**2.74**	**169**	*e*PN	**Pn**	**03 36 11.7**	**-0.4**
LKR	**Lokris**	**2.78**	**280**	*e*PN	**Pn**	**03 36 12.4**	**-0.3**
LKR	**Lokris**	**2.78**	**280**	P	**Pn**	**03 36 12.6**	**-0.1**
LTK	**Loutraki**	**2.79**	**267**	P	**Pn**	**03 36 13.8**	**+0.9**
LTK				S	**Sn**	**03 36 47.6**	**+0.9**
OUR	**Ouranopolis**	**2.86**	**318**	P	**Pn**	**03 36 13.6**	**-0.2**
ALT	**Altintas**	**2.94**	**73**	*e*PN	**Pn**	**03 36 14.7**	**-0.2**
RDO	**Rodhopi**	**3.00**	**346**	*e*PN	**Pn**	**03 36 15.1**	**-0.6**
ELL	**Elmali**	**3.09**	**118**	*e*PN	**Pn**	**03 36 17.6**	**+0.6**
ZKR	**Zakros**	**3.13**	**184**	P	**Pn**	**03 36 16.9**	**-0.5**
SHUT	**Suhut-Afyon**	**3.20**	**83**	*e*PN	**Pn**	**03 36 18.5**	**+0.1**
YLV	**Yalova**	**3.22**	**43**	*e*PN	**Pn**	**03 36 19.6**	**+0.9**
SLVT	**Silivri**	**3.27**	**23**	*e*PN	**Pn**	**03 36 19.9**	**+0.5**
ADVT	**Abdulvahap**	**3.33**	**48**	*e*PN	**Pn**	**03 36 20.8**	**+0.5**
CTKS	**Kestanelik-??a**	**3.37**	**27**	*e*PN	**Pn**	**03 36 21.4**	**+0.6**
VLX	**Vlachokerasia**	**3.38**	**256**	P	**Pn**	**03 36 22.0**	**+1.1**
BGKT	**Bogazkoy**	**3.42**	**30**	*e*PN	**Pn**	**03 36 22.5**	**+1.0**
ISK	**Istanbul-Kandi**	**3.45**	**34**	*e*PN	**Pn**	**03 36 23.1**	**+1.2**
KDZ	**Kurdzhali**	**3.51**	**347**	*i* P	**Pn**	**03 36 22.4**	**-0.3**
KDZ				*e*S	**Sn**	**03 37 01.4**	**-3.0**
CTYL	**Yal??k??y-??at**	**3.51**	**23**	*e*PN	**Pn**	**03 36 23.5**	**+0.7**
SOH	**Sokhos**	**3.54**	**318**	P	**Pn**	**03 36 22.9**	**-0.3**
KLYT	**Kilyos**	**3.59**	**32**	*e*PN	**Pn**	**03 36 24.6**	**+0.7**
EDRB	**Edirne**	**3.61**	**3**	*e*PN	**Pn**	**03 36 23.7**	**-0.3**
RZN	**Rozhen**	**3.71**	**339**	*i* P	**Pn**	**03 36 25.5**	**+0.1**
NVR	**Nevrokopi**	**3.71**	**328**	*e*PN	**Pn**	**03 36 25.4**	**-0.1**
ITM	**Ithomi**	**3.78**	**255**	*e*Pn	**Pn**	**03 36 27.5**	**+1.1**
GULT	**Gulveren**	**3.81**	**54**	*e*PN	**Pn**	**03 36 28.3**	**+1.5**
MMB	**Musomiste**	**3.97**	**328**	*i* P	**Pn**	**03 36 28.3**	**-0.7**
MMB				*e*S	**Sn**	**03 37 15.9**	**+0.2**
MMB				*e*Sg	**Sg**	**03 37 31.3**	**-3.9**
JMB	**Yambol**	**4.22**	**1**	*e*P	**Pn**	**03 36 34.7**	**+2.2**
JMB				*e*S	**Sn**	**03 37 23.4**	**+1.4**
JMB				*i* Sg	**Sg**	**03 37 39.0**	**-4.5**
KIZT	**Kizilcal**	**4.27**	**80**	*e*PN	**Pn**	**03 36 34.4**	**+1.2**
KKB	**Krupnik**	**4.47**	**325**	*i* P	**Pn**	**03 36 36.8**	**+0.9**
KKB				*e*S	**Sn**	**03 37 23.4**	**-4.7**

KRSC 08 03:54:23.4±0.7, 5289N×15708E, h260km±40km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.65**	**198**	*i* P	Pn	03 54 58.7	+0.8
MIPR				*i* S	Sn	03 55 25.0	-0.1
GNL	**Ganaly**	**0.96**	**32**	*e*P	Pn	03 55 00.5	+1.4
GNL				*i* S	Sn	03 55 27.8	+0.4
PET	**Petropavlovsk**	**0.96**	**81**	*e*P	Pn	03 55 01.1	+1.9
RUS	**Russkaya**	**0.99**	**117**	*i* P	Pn	03 55 00.5	+1.1
RUS				*i* S	S	03 55 27.8	+0.1
SDLR	**Sedlovina**	**1.16**	**70**	*e*P	Pn	03 55 02.5	+2.2
SDLR				*i* S	S	03 55 30.6	+1.2
NLC	**Nalytchevo**	**1.40**	**77**	*e*P	Pn	03 55 03.7	+1.9
NLC				*i* S	S	03 55 32.4	+0.2
SPN	**Mys Shipunski**	**1.79**	**82**	*e*P	Pn	03 55 06.1	+1.3
SPN				*i* S	S	03 55 38.0	+0.5
MKZ	**Mys Kozlova**	**3.23**	**57**	*e*P	Pn	03 55 20.3	+1.5
MKZ				*i* S	S	03 56 02.1	-0.7
KMNR	**Kamenistaya**	**3.42**	**32**	P	Pn	03 55 23.6	+2.8
KBTR	**Krutoberegovo**	**4.71**	**43**	*e*P	Pn	03 55 37.9	+2.1
KBTR				*i* S	S	03 56 32.4	-1.3

*ISCJB **08** 04:25:45.4±0.9, 1873N±009×1452E±02, h250km, mb3.8/11, Error ellipse: s-maj=30.2km s-min=12.8km az=173.3*
*NEIC **08** 04:25:46.8±0.6, 1875N×145.31E, h250km, mb3.8/5, Error ellipse: s-maj=20.2km s-min=9.9km az=85.0*
*IDC **08** 04:25:52.9±15.0, 1869N×145.12E, h309km±151km, mb3.4/7, mb1 3.6/7, mb1mx3.3/20, mbtmp3.4/7, Error ellipse: s-maj=54.3km s-min=14.0km az=71.0*

ISC 08 04:25:46.9±0.9, 1874N±009×1453E±02, h250km, n15, σ0°68/14, mb3.8/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**32.55**	**184**	*e*P	**P**	**04 31 54.2**	**-0.7**
	1.1nm,0.5s,mb3.6						
KAPI	**Kappang**	**34.50**	**229**	P	**P**	**04 32 11.9**	**+0.1**
	3.7nm,0.6s,mb4.1,baz=358,slow=2.7,SNR=3.5						
WRAB	**Tennant Creek**	**39.90**	**196**	*e*P	**P**	**04 32 57.1**	**+0.2**
	16nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**39.91**	**196**	P	**P**	**04 32 57.4**	**+0.4**
	14nm,0.6s,mb4.5,baz=19,slow=9.0,SNR=76						
SONM	**Songino Array**	**42.88**	**322**	P	**P**	**04 33 21.7**	**+0.9**
	0.3nm,0.6s,baz=99,slow=7.4,SNR=3.0						
ASAR	**Alice Springs**	**43.58**	**195**	P	**P**	**04 33 26.7**	**+0.1**
	2.0nm,0.8s,mb3.5,baz=16,slow=7.1,SNR=24						
MBWA	**Marble Bar**	**46.89**	**213**	*e*P	**P**	**04 33 53.1**	**+0.5**
	4.6nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**50.45**	**184**	P	**P**	**04 34 18.1**	**-1.3**
	1.6nm,0.8s,mb3.4,baz=9.5,slow=12,SNR=2.5						
FORT	**Forrest**	**51.94**	**199**	*e*P	**P**	**04 34 31.5**	**+1.0**
	1.2nm,0.7s,mb3.4						
MK31	**Makanchi Array**	**58.16**	**314**	*e*P	**P**	**04 35 14.7**	**-0.1**
MKAR	**Makanchi Array**	**58.16**	**314**	P	**P**	**04 35 13.9**	**-0.9**
	0.5nm,0.6s,mb3.3,baz=86,slow=8.8,SNR=3.4						
KURK	**Kurchatov**	**60.99**	**318**	P	**P**	**04 35 33.4**	**-0.5**
	baz=98,slow=7.5						
KURK	**Kurchatov**	**60.99**	**318**	*e*P	**P**	**04 35 33.2**	**-0.8**
	2.0nm,0.9s,mb3.8						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**	**04 37 47.1**	**+0.5**
	1.2nm,0.7s,mb3.8,baz=266,slow=5.4,SNR=9.4						
LPAZ	**La Paz**	**148.05**	**91**	PKPbc	PKPbc	04 45 04.6	+0.8
	1.2nm,0.7s,baz=238,slow=3.0,SNR=5.6						

*ATH **08** 04:29:56.9, 3823N×2645E, h28km±1km, MD3.4/6*
*DDA **08** 04:29:56.1, 3828N×2650E, h7km±6km, Md3.3*
*CSEM **08** 04:29:56.1±0.1, 3822N×2651E, h2km, MD3.3, Error ellipse: s-maj=2.2km s-min=1.7km az=72.0*
*NEIC **08** 04:29:56.0, 38.19N×2661E, h5km, MD3.4(ATH), MD3.2(ISK), After ISK.*
*ISCJB **08** 04:29:56.4±0.8, 3822N±002×2647E±004, h3km±5km, Error ellipse: s-maj=5.2km s-min=3.8km az=163.7*
*ISK **08** 04:29:57.1, 3823N×2656E, h4km, MD3.3*

ISC 08 04:29:56.6±0.8, 3822N±002×2646E±004, h1km±5km, n36, σ1°06/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.48**	**70**	PG	**Pg**	**04 30 05.8**	**-0.1**
BLCB				*e*SG	**Sg**	**04 30 11.6**	**-0.7**
SMG	**Samos**	**0.59**	**150**	*e*PN	**Pg**	**04 30 09.3**	**+1.3**
IZM	**Izmir**	**0.65**	**74**	PG	**Pg**	**04 30 08.8**	**-0.4**
IZM				*e*SG	**Sg**	**04 30 18.0**	**+0.3**
KDAG	**Bornova**	**0.66**	**74**	*i* P	**Pg**	**04 30 09.2**	**-0.1**
KDAG				*i* S	**Sg**	**04 30 18.0**	**+0.3**
KDAG	**Bornova**	**0.66**	**74**	*i* P	**Pg**	**04 30 09.1**	**-0.2**
KDAG				*i* S	**Sg**	**04 30 18.0**	**+0.2**
GCAM	**G?zelcaml?**	**0.80**	**130**	*i* P	**Pg**	**04 30 12.8**	**+0.8**
GCAM				*i* S	**Sg**	**04 30 23.6**	**+1.2**
PRK	**Paraskevi**	**1.03**	**352**	*e*PN	**Pn**	**04 30 16.6**	**-1.7**
PRK				*e*SN	**Sn**	**04 30 31.2**	**-2.1**
AYVA	**Ayvalik**	**1.10**	**9**	*i* P	**Pg**	**04 30 16.9**	**-0.8**
AYVA				*i* S	**Sg**	**04 30 32.7**	**+0.7**
AKHS	**Akhisar**	**1.25**	**58**	*i* P	**Pg**	**04 30 19.3**	**-1.3**
AKHS				*i* S	**Sg**	**04 30 36.6**	**-0.1**
AKS	**Akhisar**	**1.25**	**58**	*e*PN	**Pn**	**04 30 19.3**	**-1.9**
AYDN	**Tasoluk**	**1.25**	**116**	*i* P	**Pg**	**04 30 20.1**	**-0.6**
AYDN				*i* S	**Sg**	**04 30 34.7**	**-2.2**
BODT	**Bodrum**	**1.34**	**150**	*e*PN	**Pn**	**04 30 23.0**	**+0.5**
APE	**Apeiranthos**	**1.37**	**213**	*e*PN	**Pn**	**04 30 22.2**	**-0.7**
BDRM	**Kayabasi**	**1.39**	**146**	*i* P	**Pn**	**04 30 22.6**	**-0.6**
BDRM				*i* S	**Sg**	**04 30 40.6**	**-0.9**
MLSB	**Milas**	**1.39**	**131**	*e*PN	**Pn**	**04 30 22.9**	**-0.3**
EZN	**Ezine**	**1.60**	**356**	*e*PN	**Pn**	**04 30 26.7**	**+0.6**
BOZC	**Bozcaada**	**1.65**	**349**	*i* P	**Pn**	**04 30 25.3**	**-1.5**
BOZC				*i* S	**Sn**	**04 30 47.2**	**-1.3**
MANT	**Manisa**	**1.67**	**80**	*i* P	**Pn**	**04 30 27.3**	**+0.3**
MANT				*i* S	**Sn**	**04 30 48.2**	**-0.9**
DAT	**Datca**	**1.74**	**149**	*e*PN	**Pn**	**04 30 27.9**	**0.0**
KULA	**Kula-Manisa**	**1.75**	**80**	*e*PN	**Pn**	**04 30 28.2**	**0.0**
BALY	**Balya**	**1.76**	**30**	*i* P	**Pn**	**04 30 27.6**	**-0.7**
BALY				*i* S	**Sn**	**04 30 49.9**	**-1.5**
DEMI	**Demirci**	**1.95**	**64**	*i* P	**Pn**	**04 30 30.4**	**-0.4**
DEMI				*i* S	**Sn**	**04 30 57.7**	**+1.8**
LIA	**Limnos Island**	**1.95**	**330**	*e*PN	**Pn**	**04 30 30.1**	**-0.7**
GADA	**Gvkgeada**	**2.01**	**348**	*e*PN	**Pn**	**04 30 32.6**	**+0.8**
DST	**Dursunbey**	**2.18**	**50**	*e*PN	**Pn**	**04 30 34.9**	**+0.8**
BNT	**Bandirma**	**2.41**	**28**	*e*PN	**Pn**	**04 30 38.1**	**+0.9**
ENEZ	**Enez**	**2.52**	**355**	*e*PN	**Pn**	**04 30 40.3**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.52**	**12**	*e*PN	**Pn**	**04 30 39.9**	**+1.1**
MRMT	**Marmara Adasi**	**2.53**	**20**	*e*PN	**Pn**	**04 30 40.2**	**+1.4**
RDO	**Rodhopi**	**3.00**	**347**	*e*PN	**Pn**	**04 30 44.9**	**-0.5**
NPS	**Neapolis**	**3.03**	**193**	*e*PN	**Pn**	**04 30 45.2**	**-0.5**
ELL	**Elmali**	**3.11**	**117**	*e*PN	**Pn**	**04 30 47.8**	**+0.9**
YLV	**Yalova**	**3.25**	**43**	*e*PN	**Pn**	**04 30 49.8**	**+1.0**
SLVT	**Silivri**	**3.29**	**24**	*e*PN	**Pn**	**04 30 51.0**	**+1.7**
CTKS	**Kestanelik-??a**	**3.40**	**27**	*e*PN	**Pn**	**04 30 52.8**	**+2.1**
EDRB	**Edirne**	**3.63**	**3**	*e*PN	**Pn**	**04 30 55.7**	**+1.8**

*ISCJB **08** 04:42:11.4±0.6, 2937N±002×7870E±002, h10km±4km, mb3.7/6, Error ellipse: s-maj=4.2km s-min=3.2km az=20.0*
*IDC **08** 04:42:11.8±1.4, 2947N×7812E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.5/23, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=32.9km s-min=27.7km az=50.0*
*NEIC **08** 04:42:11.5±0.6, 2928N×7841E, h10km, mb3.7/1, Error ellipse: s-maj=14.5km s-min=5.2km az=31.0*
*NDI **08** 04:42:13.1±3.1, 2944N×7859E, h10km, ML3.7, mb3.7(NEIC)*
*DMN **08** 04:42:16.0±0.3, 2960N×7871E, h10km, Ml4.7/8, Error ellipse: s-maj=34.8km s-min=6.1km az=16.0*

ISC 08 04:42:12.3±0.7, 2941N±002×7865E±002, h7km±4km, n44, σ1°45/71, mb3.7/6, 1C, Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALG	**Kalgarh**	**0.13**	**42**	*i* P	**Pg**	**04 42 12.7**	**-2.4**
KALG				*e*S	**Sg**	**04 42 16.6**	**-0.4**
KALG				AML	AML	04 42 17.3	
	comp=N,15μm,0.2s						
KALG				AML	AML	04 42 17.4	
	comp=E,30μm,0.2s						
DDI	**Dehra Dun**	**1.05**	**330**	⇑*i* P	**Pg**	**04 42 30.6**	**-1.8**
DDI				*ex*	x	04 42 40.3	
PTH	**Pithoragarh**	**1.37**	**84**	*e*P	**Pn**	**04 42 39.9**	**+2.0**
PTH				*e*S	**Sb**	**04 42 58.1**	**+2.1**
JOSI	**Joshimath**	**1.39**	**34**	*e*P	**Pn**	**04 42 38.7**	**+0.6**
JOSI				*ex*	**Sb**	**04 42 54.6**	**-1.9**
JOSI				AML	AML	04 42 58.8	
	comp=E,4μm,0.3s						
JOSI				AML	AML	04 42 59.5	
	comp=N,2μm,0.4s						
LGTI	**Lohaghat**	**1.39**	**88**	*e*P	**Pn**	**04 42 39.5**	**+1.3**
LGTI				*e*S	**Sb**	**04 42 56.5**	**-0.1**
NDI	**New Delhi**	**1.45**	**240**	*e*P	**Pn**	**04 42 39.0**	**0.0**
NDI				*ex*	x	04 42 51.0	
AYAN	**Aya Nagar**	**1.63**	**236**	*e*P	**Pn**	**04 42 43.4**	**+2.0**
AYAN				*e*S	**Sn**	**04 43 03.7**	**+1.1**
AYAN				AML	AML	04 43 06.2	
	comp=Z,1μm,0.5s						
RTK	**Rohtak**	**1.99**	**260**	*e*S	**Sn**	**04 43 10.6**	**-1.1**
RTK				AML	AML	04 43 15.8	
	comp=Z,753nm,0.2s						
SMLA	**Simla**	**2.14**	**323**	*i* P	**Pn**	**04 42 48.0**	**-0.5**
SMLA				*e*S	**Sn**	**04 43 15.4**	**0.0**
KLP	**Kalpa**	**2.15**	**351**	*e*P	**Pn**	**04 42 48.9**	**+0.3**
KLP				*e*S	**Sn**	**04 43 16.4**	**+0.9**
KLP				AML	AML	04 43 21.8	
	comp=N,1μm,0.6s						
AGRA	**Agra**	**2.26**	**196**	*ex*	**Pg**	**04 42 55.0**	**-0.6**
AGRA				*e*S	**Sn**	**04 43 17.4**	**-0.9**
AGRA				AML	AML	04 43 33.7	
	comp=E,431nm,0.4s						
AGRA				AML	AML	04 43 35.2	
	comp=N,456nm,0.2s						
KUDL	**Kundal**	**2.28**	**237**	*e*P	**Pn**	**04 42 50.8**	**+0.4**
KUDL				*e*S	**Sn**	**04 43 18.5**	**-0.2**
KUDL				AML	AML	04 43 25.0	
	comp=N,470nm,0.3s						
SDNR	**Sundarnagar**	**2.54**	**326**	*e*P	**Pn**	**04 42 55.6**	**+1.6**
SDNR				*ex*	**Sb**	**04 43 31.0**	**+1.3**
BHK	**Bhakra**	**2.78**	**317**	*e*P	**Pn**	**04 42 56.6**	**-0.7**
BHK				*ex*	**Sn**	**04 43 33.8**	**+2.7**
KHET	**Khetri**	**2.83**	**243**	*e*P	**Pn**	**04 42 58.4**	**+0.5**
KHET				*e*S	**Sn**	**04 43 31.6**	**-0.8**
KHET				AML	AML	04 43 41.7	
	comp=N,224nm,0.2s						
KHET				AML	AML	04 43 41.8	
	comp=E,166nm,0.2s						
DLH	**Dalhousie**	**3.88**	**324**	*ex*	**Pb**	**04 43 20.0**	**-1.1**
DLH				*ex*	**Sg**	**04 44 15.0**	**-2.0**
THN	**Thein Dam**	**3.93**	**321**	*e*P	**Pn**	**04 43 12.5**	**-0.6**
THN				*ex*	**Sb**	**04 44 12.2**	**+2.4**
PYUN	**Piuthan**	**4.03**	**108**	*e*Pn	**Pn**	**04 43 16.1**	**+1.7**
AJM	**Ajmer**	**4.59**	**232**	*e*P	**Pn**	**04 43 21.0**	**-1.2**
DANN	**Dangsing**	**4.60**	**102**	*e*Pn	**Pn**	**04 43 24.5**	**+2.2**
DANN				*e*Sn	**Sn**	**04 44 14.8**	**-1.2**
KOLN	**Koldanda**	**4.65**	**109**	*e*Pn	**Pn**	**04 43 25.4**	**+2.5**
KOLN				*e*Sn	**Sn**	**04 44 16.1**	**-1.1**
	comp=E,98nm,0.2s						
GKN	**Gorkha**	**5.44**	**103**	*e*Pn	**Pn**	**04 43 35.0**	**+1.2**
GKN				*e*Sn	**Sn**	**04 44 33.9**	**-2.8**
	comp=E,188nm,0.2s						
DMN	**Daman**	**5.95**	**106**	*e*Pn	**Pn**	**04 43 42.7**	**+1.8**
KKN	**Kakani**	**6.04**	**104**	*e*Pn	**Pn**	**04 43 43.7**	**+1.5**
KKN				*e*Sn	**Sn**	**04 44 48.1**	**-3.6**
	comp=E,64nm,0.2s						
PKIN	**Phulchoki**	**6.21**	**105**	*e*Pn	**Pn**	**04 43 45.6**	**+1.2**
PKIN				*e*Sn	**Sn**	**04 44 52.7**	**-3.0**
	comp=E,74nm,0.2s						
PKI	**Pulchoki**	**6.22**	**105**	*e*Pn	**Pn**	**04 43 46.3**	**+1.7**
PKI				*e*Sn	**Sn**	**04 44 53.2**	**-2.8**
	comp=E,90nm,0.4s						
PKI	**Pulchoki**	**6.22**	**105**	*e*Pn	**Pn**	**04 43 45.6**	**+1.0**
PKI				*e*Sn	**Sn**	**04 44 52.7**	**-3.3**
GUN	**Gumba**	**6.52**	**101**	*e*Pn	**Pn**	**04 43 50.0**	**+1.3**
GUN				*e*Sn	**Sn**	**04 45 00.3**	**-3.1**
	comp=E,134nm,0.3s						
JIRN	**Jiri**	**6.86**	**103**	*e*Pn	**Pn**	**04 43 54.9**	**+1.6**
JIRN				*e*Sn	**Sn**	**04 45 08.5**	**-3.1**
	comp=E,94nm,0.2s						
CEP	**Cherat**	**7.24**	**309**	P	**Pn**	**04 43 57.9**	**-0.7**
CEP				S	**Sn**	**04 45 17.0**	**-4.1**
RAMN	**Ramite**	**7.43**	**107**	*e*Pn	**Pn**	**04 44 01.7**	**+0.5**
RAMN				*e*Sn	**Sn**	**04 45 21.6**	**-4.1**
ODAN	**Odare**	**8.12**	**106**	*e*Pn	**Pn**	**04 44 11.6**	**+0.9**
ODAN				*e*Sn	**Sn**	**04 45 38.0**	**-4.8**
TAPN	**Taplejung**	**8.24**	**102**	*e*Pn	**Pn**	**04 44 13.0**	**+0.7**
TAPN				*e*Sn	**Sn**	**04 45 41.4**	**-4.2**
	comp=E,76nm,0.5s						
BOK	**Bokaro**	**8.55**	**129**	*e*S	**Sn**	**04 45 47.2**	**-6.2**
BOK				AML	AML	04 46 59.1	
	comp=N,14nm,0.6s						
BOK				AML	AML	04 46 59.9	
	comp=E,24nm,0.5s						
AKL	**Akola**	**8.79**	**190**	*e*S	**Sn**	**04 45 53.2**	**-6.2**
MKAR	**Makanchi Array**	**17.59**	**8**	P	**Pn**	**04 46 17.5**	**-0.3**
	comp=E,0.2nm,0.3s,baz=184,slow=12,SNR=4.4						
KURK	**Kurchatov**	**21.28**	**360**	P	**P**	**04 46 56.6**	**-2.6**
	baz=188,slow=9.7						
KURK	**Kurchatov**	**21.

ENEZ	Enez	2.49	354	*e*PN		Pn	04 55 27.1	-0.6
MFT	Murefte	2.60	13	*e*PN		Pn	04 55 29.5	+0.4
FETY	Fethiye	2.60	128	*e*PN		Pn	04 55 29.6	+0.4
GOLH	Golhisar	2.62	112	*i* P		Pn	04 55 30.5	+1.2
GOLH				*i* S		Sg	04 56 10.2	-1.2
ALN	Alexandroupoli	2.66	352	P		Pn	04 55 29.5	-0.5
DiD	Didima	2.70	255	P		Pn	04 55 30.3	-0.2
KARP	Karpathos	2.75	169	P		Pn	04 55 31.2	0.0
ALT	Altintas	2.92	73	*e*PN		Pn	04 55 33.8	+0.2
RDO	Rodhopi	2.98	346	*e*PN		Pn	04 55 34.4	0.0
ELL	Elmali	3.09	118	*e*PN		Pn	04 55 36.7	+0.9
ZKR	Zakros	3.14	185	P		Pn	04 55 36.4	-0.2
ZKR	Zakros	3.14	185	P		Pn	04 55 37.5	+0.9
SHUT	Suhut-Afyon	3.18	83	*e*PN		Pn	04 55 37.6	+0.5
YLV	Yalova	3.20	43	*e*PN		Pn	04 55 37.7	+0.4
CAVI	Cavuskoy	3.23	52	*e*PN		Pn	04 55 37.6	-0.2
VLI	Veliai	3.23	243	*e*PN		Pn	04 55 38.4	+0.5
VLI	Veliai	3.23	243	*e*Pn		Pn	04 55 38.5	+0.6
SLVT	Silivri	3.25	23	*e*PN		Pn	04 55 38.7	+0.7
BCK	Bucak	3.32	103	*e*PN		Pn	04 55 39.4	+0.4
CTKS	Kestenalik-??a	3.35	27	*e*PN		Pn	04 55 40.0	+0.5
AGG	Agios Georgios	3.37	284	P		Pn	04 55 40.5	+0.8
BGKT	Bogazkoy	3.40	30	*e*PN		Pn	04 55 40.9	+0.7
ISK	Istanbul-Kandi	3.42	34	*e*PN		Pn	04 55 40.7	+0.2
CTYL	Yal??k??y-??at	3.49	22	*e*PN		Pn	04 55 42.4	+1.0
KDZ	Kurdzhali	3.50	346	P		Pn	04 55 41.3	-0.1
KDZ				*e*S		Sn	04 56 20.7	-2.0
HRT	Hereke	3.54	43	*e*PN		Pn	04 55 43.1	+1.1
KLYT	Kilyos	3.57	32	*e*PN		Pn	04 55 44.0	+1.5
EDRB	Edirne	3.59	3	*e*PN		Pn	04 55 42.6	-0.1
EYL	Eskiyayla	3.64	50	*e*PN		Pn	04 55 44.9	+1.4
RZN	Rozhen	3.70	339	P		Pn	04 55 44.7	+0.5
GULT	Gulveren	3.79	54	*e*PN		Pn	04 55 47.1	+1.6
ITM	Ithomi	3.79	255	P		Pn	04 55 48.6	+3.0
DIM	Dimitrovgrad	3.87	349	P		Pn	04 55 46.5	0.0
MMB	Musomiste	3.96	328	P		Pn	04 55 47.7	-0.1
MDU	Mudurnu	4.26	57	*e*PN		Pn	04 55 52.8	+0.9
VTS	Vitosha	5.01	331	⇓*i*P		Pn	04 56 03.5	+1.2
VTS	Vitosha	5.01	331	*e*P		Pn	04 56 03.4	+1.1
PVL	Pavlikeni	5.04	350	P		Pn	04 56 02.5	-0.1
BOLS	Boljevac	6.55	330	⇓*i*Pn		Pn	04 56 23.4	0.0
VOIR		7.26	352	⇓*i*P		Pn	04 56 40.6	+7.5
PLOR	Plostina	7.59	1	⇓*i*P		Pn	04 56 43.6	+5.9
GZR	Gura Zlata	7.66	340	⇑*i*P		Pn	04 56 38.5	-0.1
BZS	Buzias	8.21	335	⇑*i*P		Pn	04 56 44.6	-1.6

IDC 08 05:00:44.4±34.0, 1149N×12366E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/18, mbtmp3.6/3, Error ellipse: s-maj=595.6km s-min=270.9km az=153.0, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.95	161	P	P	05 07 20.7	-0.2
	0.2nm,0.5s,baz=340,slow=10,SNR=9.2						
ASAR	Alice Springs	36.34	164	P	P	05 07 51.0	+0.8
	0.3nm,0.4s,baz=340,slow=8.2,SNR=8.7						
STKA	Stephens Creek	41.59	159	P	P	05 09 12.0	-0.8
	0.5nm,0.3s,baz=328,slow=15,SNR=3.3						

*CSEM **08** 05:06:21.8±0.1, 3829N×2651E, h15km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.3km az=84.0*
*ISK **08** 05:06:21.5, 3831N×2650E, h11km, MD3.3*
*NEIC **08** 05:06:21.0, 3833N×2647E, h6km, MD3.6(ATH), MD3.2(ISK), After ISK.*
*ISCJB **08** 05:06:21.7±0.6, 3825N±002×2649E±004, h12km±3km, Error ellipse: s-maj=5.1km s-min=3.4km az=160.4*
*DDA **08** 05:06:21.5, 3828N×2654E, h17km±1km, Md3.4*
*ATH **08** 05:06:22.0, 3824N×2646E, h30km±2km, MD3.6/7*
ISC 08 05:06:22.2±0.6, 3827N±002×2649E±004, h11km±3km, n41, σ0§82/57, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.12	44	*i* P	Pg	05 06 25.2	0.0
URLA				*i* S	Sg	05 06 27.5	+0.1
BLCB	Balcova	0.45	75	PG	Pg	05 06 30.8	-0.3
BLCB				SG	Sg	05 06 36.8	-0.2
IZM	Izmir	0.62	78	PG	Pg	05 06 34.0	-0.3
IZM				SG	Sg	05 06 42.9	+0.4
KDAG	Bornova	0.63	78	*i* P	Pg	05 06 34.1	-0.3
KDAG				*i* S	Sg	05 06 42.1	-0.5
SMG	Samos	0.63	154	*e*PN	Pg	05 06 34.0	-0.3
SMG				*e*SN	Sg	05 06 44.1	+1.6
GCAM	G?zelcaml?	0.82	134	*i* P	Pg	05 06 37.4	-0.6
GCAM				*i* S	Sg	05 06 48.5	-0.2
PRK	Paraskevi	0.99	350	*e*PN	Pn	05 06 41.1	-0.9
PRK				*e*SN	Sn	05 06 55.7	-0.2
AYVA	Ayvalik	1.05	9	*i* P	Pb	05 06 41.8	-0.5
AYVA				*i* S	Sg	05 06 56.4	+0.4
AKS	Akhisar	1.20	59	*e*PN	Pn	05 06 44.5	-0.4
AKHS	Akhisar	1.20	59	*i* P	Pn	05 06 44.0	-0.9
AKHS				*i* S	Sb	05 06 59.3	-1.2
AYDN	Tasoluk	1.26	119	*i* P	Pn	05 06 44.9	-0.8
AYDN				*i* S	Sb	05 06 58.2	-3.9
BODT	Bodrum	1.37	151	*e*PN	Pn	05 06 47.5	+0.2
MLSB	Milas	1.41	133	*e*PN	Pn	05 06 48.1	+0.3
APE	Apeiranthos	1.42	213	*e*PN	Pn	05 06 47.3	-0.6
BDRM	Kayabasi	1.42	147	*i* P	Pn	05 06 47.3	-0.6
BDRM				*i* S	Sn	05 07 05.2	-1.5
EZN	Ezine	1.56	355	*e*PN	Pn	05 06 49.0	-0.8
BOZC	Bozcaada	1.60	348	*i* P	Pn	05 06 50.2	-0.3
BOZC				*i* S	Sn	05 07 13.6	+2.5
MANT	Manisa	1.64	82	*i* P	Pn	05 06 52.1	+1.2
MANT				*i* S	Sn	05 07 11.6	-0.5
BALY	Balya	1.71	31	*i* P	Pn	05 06 52.1	+0.2
BALY				*i* S	Sn	05 07 13.4	-0.3
BALY	Balya	1.71	31	*i* P	Pn	05 06 52.1	+0.2
BALY				*i* S	Sn	05 07 13.4	-0.4
KULA	Kula-Manisa	1.73	81	*e*PN	Pn	05 06 52.5	+0.4
DAT	Datca	1.77	150	*e*PN	Pn	05 06 52.8	+0.1
DEMI	Demirci	1.91	66	*i* P	Pn	05 06 57.6	+3.0
DEMI				*i* S	Sn	05 07 18.4	-0.2
LIA	Limnos Island	1.92	328	*e*PB	Pb	05 06 55.0	-2.1
GADA	Gvkgeada	1.97	347	*e*PN	Pn	05 06 55.2	-0.3
DST	Dursunbey	2.13	51	*e*PN	Pn	05 06 57.6	-0.2
DALT	Dalyan (Mudla)	2.27	131	*e*PN	Pn	05 07 00.9	+1.3
BNT	Bandirma	2.36	28	*e*PN	Pn	05 07 00.5	-0.4
KHL	Karahalli	2.39	88	*e*PN	Pn	05 07 01.1	-0.1
ARG	Arkhangelos	2.43	147	*e*PN	Pn	05 07 02.2	+0.4
KCT	Karacabey	2.46	36	*e*PN	Pn	05 07 02.2	-0.1
RKY	Sarkoy-Tekirda	2.47	12	*e*PN	Pn	05 07 03.2	+0.9
ENEZ	Enez	2.47	354	*e*PN	Pn	05 07 02.2	-0.2
FETY	Fethiye	2.63	128	*e*PN	Pn	05 07 06.4	+1.8
KARP	Karpathos	2.77	169	*e*PN	Pn	05 07 06.0	-0.5
RDO	Rodhopi	2.96	346	*e*PN	Pn	05 07 09.4	+0.3
YLV	Yalova	3.20	43	*e*PN	Pn	05 07 13.0	+0.6
CAVI	Cavuskoy	3.24	52	*e*PN	Pn	05 07 13.8	+0.8
CTKS	Kestenalik-??a	3.34	27	*e*PN	Pn	05 07 14.7	+0.3
EDRB	Edirne	3.58	3	*e*PN	Pn	05 07 18.4	+0.8
GULT	Gulveren	3.79	54	*e*PN	Pn	05 07 21.7	+1.2

IDC 08 05:34:59.0±1.1, 5684N×3393W, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, MS3.3/4, Ms1 3.3/4, ms1mx2.8/38, Error ellipse: s-maj=36.6km s-min=21.4km az=176.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	12.81	329	LR	LR	05 42 11.8	
	comp=Z,85nm,19.2s,baz=48,slow=34						
HFS	Hagfors	24.68	62	LR	LR	05 48 53.1	
	comp=Z,80nm,20.2s,baz=70,slow=34						
ARCES	ARCESS Array B	28.32	40	P	P	05 40 52.6	-1.2
	2.7nm,1.1s,baz=290,slow=7.1,SNR=5.3						
DAVOX	Davos/Dischmat	28.43	92	LR	LR	05 50 37.9	
	comp=Z,92nm,18.5s,baz=88,slow=33						
AKASG	Malin Array Be	36.62	72	P	P	05 42 06.2	-0.3
	0.7nm,0.5s,baz=306,slow=8.4,SNR=5.4						
BRTR	Keskin Array B	46.09	82	P	P	05 43 26.2	+1.7
	0.8nm,1.0s,baz=331,slow=8.7,SNR=3.3						
PDAR	Pinedale Array	48.27	287	P	P	05 43 42.1	+0.8
	0.2nm,0.6s,baz=61,slow=7.4,SNR=2.5						
TORD	Torodi Ar. Bea	51.39	133	P	P	05 44 04.5	-0.9
	0.8nm,0.9s,baz=340,slow=6.4,SNR=4.4						
TXAR	Lajitas Array	55.01	271	P	P	05 44 31.7	-0.3
	0.6nm,1.1s,baz=60,slow=12,SNR=2.9						
TXAR				LR	LR	06 09 31.2	
	comp=Z,30nm,18.9s,baz=125,slow=38						
MKAR	Makanchi Array	63.89	43	P	P	05 45 33.2	+0.2
	1.3nm,0.7s,baz=333,slow=5.3,SNR=9.7						
SONM	Songino Array	70.59	27	P	P	05 46 15.8	+0.3
	0.2nm,0.6s,baz=339,slow=3.7,SNR=2.2						
ASAR	Alice Springs	145.70	20	PKPbc	PKPbc	05 54 38.4	-1.0
	0.6nm,0.5s,baz=344,slow=3.0,SNR=8.6						

NNC 08 06:09:52.4±2.7, 4970N×8787E, h0km, mb3.8, mpv3.4, 8C-2D, Error ellipse: s-maj=20.7km s-min=13.4km az=78.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	4.73	234	⇑Pn	Pn	06 11 07.6	+2.8
	5.1nm,0.5s,baz=54,slow=16,SNR=108						
MK31				⇑Pg	Pg	06 11 21.6	-1.3
	6.3nm,0.6s,baz=56,slow=14,SNR=5.1						
MK31				⇑Sn	Sn	06 12 06.4	+6.1
	4.6nm,0.5s,baz=57,slow=26,SNR=4.2						
MK31				⇑Lg		06 12 26.6	
	8.5nm,0.5s,baz=54,slow=27,SNR=6.8						
KURK	Kurchatov	6.02	283	⇑Pn	Pn	06 11 22.3	-0.2
	3.7nm,0.9s						
KURK				⇑Sn	Sn	06 12 33.5	+1.3
	7.4nm,0.7s						
KURK				⇑Lg		06 13 03.7	
	13nm,0.6s						
KURBB	Kurchatov Arra	6.07	282	⇓Pn	Pn	06 11 23.3	0.0
	0.6nm,0.4s						
KURBB				⇓Sn	Sn	06 12 34.5	+1.1
	3.0nm,0.6s						
KURBB				⇑Lg		06 13 04.1	
	6.6nm,0.8s						

*IDC **08** 06:13:30.3±8.6, 3622N×7094E, h148km±79km, mb3.4/5, mb1 3.4/8, mb1mx3.3/24, mbtmp3.4/8, Error ellipse: s-maj=46.2km s-min=26.8km az=178.0*
*NNC **08** 06:13:35.1±11.0, 3717N×7104E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=106.1km s-min=70.3km az=46.0*
*ISCJB **08** 06:13:36.1±0.9, 3663N±005×710E±0.1, h198km±11km, mb3.6/3, Error ellipse: s-maj=14.3km s-min=5.0km az=155.0*
*NEIC **08** 06:13:37.7±1.7, 3668N×7095E, h200km±18km, mb4.5/10, Error ellipse: s-maj=21.6km s-min=6.9km az=61.0*
ISC 08 06:13:36.8±0.9, 3662N±005×710E±01, h184km±11km, n43, σ1§20/51, mb3.8/3, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.73	135	*e*P	Pn	06 15 00.0	-0.3
THN				*ex*	Sn	06 16 03.9	-2.2
DLH	Dalhousie	5.80	133	*e*S	Sn	06 16 05.0	-2.6
AML	Almayashu	5.89	20	*e*Pn	Pn	06 15 03.4	+1.1
	28nm,0.5s						
AML	Almayashu	5.89	20	P	Pn	06 15 03.5	+1.2
	SNR=11						
EKS2	Erkin-Say	6.41	19	*e*Pn	Pn	06 15 09.5	+0.4
	5.2nm,0.5s						
EKS2	Erkin-Say	6.41	19	P	Pn	06 15 10.7	+1.6
	SNR=8.8						
KK31	Karatay Array	6.48	357	Pn	Pn	06 15 10.8	+0.8
	0.9nm,0.3s,baz=174,slow=11,SNR=24						
KK31				⇓Sn	Sn	06 16 18.1	-5.6
	8.2nm,0.6s,baz=188,slow=24,SNR=21						
AAK	Ala-Archa	6.59	23	P	Pn	06 15 12.5	+1.0
	SNR=10						
ULHL	Ulahol	6.94	34	P	Pn	06 15 16.7	+0.6
	SNR=6.5						
TKM2	Tokmak 2	7.23	28	⇑Pn	Pn	06 15 20.1	+0.3
	21nm,1.0s						
TKM2				⇓Sn	Sn	06 16 39.5	-1.9
	3.8nm,0.8s						
TKM2	Tokmak 2	7.23	28	*e*Pn	Pn	06 15 20.2	+0.4
	14nm,0.5s						
TKM2	Tokmak 2	7.23	28	P	Pn	06 15 20.5	+0.7
	SNR=7.0						
SMLA	Simla	7.53	135	⇓*i*P	Pn	06 15 23.7	-0.2
SMLA				*i* S	Sn	06 16 43.1	-5.4
SMLA				*i* S	Sn	06 16 43.7	-4.9
SMLA				*ex*	x	06 16 45.4	
	comp=N,309nm,0.3s						
SMLA				*ex*	x	06 16 48.0	
	comp=E,472nm,0.3s						
KLP	Kalpa	7.89	128	*e*P	Pn	06 15 29.3	+0.7
KLP				*e*S	Sn	06 16 48.7	-8.6
KLP				AML	AML	06 16 54.9	
	comp=E,175nm,0.9s						
KLP				AML	AML	06 16 56.6	
	comp=N,141nm,0.7s						
JOSI	Joshimath	9.38	128	*e*P	Pn	06 15 47.9	-0.3
JOSI				*e*S	Sn	06 17 24.4	-8.4
JOSI				AML	AML	06 17 30.8	
	comp=E,87nm,0.8s						
KHET	Khetri	9.46	153	*e*S	Sn	06 17 26.7	-7.9
KUDL	Kundal	9.66	150	*e*S	Sn	06 17 30.5	-9.0
MK31	Makanchi Array	13.21	36	⇑Pn	Pn	06 16 36.2	-1.0
	comp=E,0.6nm,0.4s,baz=211,slow=12,SNR=4.1						
MKAR	Makanchi Array	13.21	36	P	Pn	06 16 36.7	-0.6
	comp=E,0.4nm,0.3s,baz=215,slow=7.7,SNR=4.4						
MKAR	Makanchi Array	13.21	36	P	Pn	06 16 36.7	-0.6
PYUN	Piuthan	13.24	127	*e*P	Pn	06 16 37.2	-0.6
	comp=E,9.0nm,0.4s						
DANN	Dangsing	13.58	124	*e*P	Pn	06 16 43.6	+1.5
	comp=E,7.5nm,0.4s						
KOLN	Koldanda	13.86	126	*e*P	Pn	06 16 46.4	+0.8
	comp=E,4.4nm,0.3s						
GKN	Gorkha	14.39	123	*e*P	Pn	06 16 54.1	+1.9
DMN	Daman	14.97	123	*e*P	Pn	06 16 59.9	+0.7
	comp=E,10nm,0.4s						
KKN	Kakani	14.97	122	*e*P	Pn	06 17 01.4	+2.1
AB09	Akbulak array	14.98	331	⇓Pn	Pn	06 16 58.6	-0.6
	comp=E,6.6nm,1.4s						
AB09				⇓Sn	Sn	06 19 39.2	-7.0
	comp=E,0.5nm,0.5s						
KURK	Kurchatov	15.12	19	P	Pn	06 16 58.2	-2.7
	baz=209,slow=12						
GUN	Gumba	15.30	120	*e*P	Pn	06 17 05.0	+1.6
	comp=E,10nm,0.4s						
JIRN	Jiri	15.68	120	*e*P	Pn	06 17 09.9	+2.0
	comp=E,14nm,0.3s						
RAMN	Ramite	16.41	122	*e*P	Pn	06 17 16.0	-0.7
BVAR	Borovoye Array	16.41	359	P	Pn	06 17 17.1	+0.6
	comp=E,0.4nm,0.3s,baz=157,slow=12,SNR=4.9						
AKTK	Aktyubinsk	16.66	330	P	Pn	06 17 19.8	+0.3
AKTO	Aktyubinsk	16.66	330	⇑Pn	Pn	06 17 19.6	+0.1
	comp=E,0.3nm,0.5s						
AKTO	Aktyubinsk	16.66	330	P	Pn	06 17 19.8	+0.3
	comp=E,1.0nm,0.3s,baz=137,slow=7.5,SNR=12						
TAPN	Taplejung	16.93	118	*e*P	Pn	06 17 22.1	-0.9
	comp=E,4.7nm,0.4s						
ZALV	Zalesovo Beam	19.82	25	P	P	06 17 52.1	-0.8
	comp=E,1.2nm,0.3s,baz=215,slow=11,SNR=5.3						
SONM	Songino Array	28.29	56	P	P	06 19 12.3	-0.5
	comp=E,0.2nm,0.3s,baz=258,slow=7.2,SNR=3.3						
ARCES	ARCESS Array B	41.02	338	P	P	06 21 01.3	-0.1
	comp=E,0.9nm,0.4s,mb3.8,baz=117,slow=8.7,SNR=14						
NB2	NORSAR Subarra	44.26	323	P	P	06 21 26.6	-1.0
	comp=Z,1.2nm,0.4s,mb3.9,baz=99,slow=7.9						
NOA	NORSAR Array B	44.26	323	P	P	06 21 26.7	-0.8
	comp=Z,1.4nm,0.5s,mb3.9,baz=97,slow=7.7,SNR=5.2						
TORD	Torodi Ar. Bea	65.69	269	P	P	06 23 58.9	-2.8
	comp=Z,0.7nm,0.4s,mb3.9,baz=51,slow=5.9,SNR=19						
TORD	Torodi Ar. Bea	65.69	269	P	P	06 23 58.9	-2.8

*SZGRF **08** 06:16:07.5, 2141S×17873W, h33km, Fiji Islands region*
*ISCJB **08** 06:16:50.9±0.2, 2139S±005×17797W±005, h409km, mb4.5/78, Error ellipse: s-maj=7.4km s-min=4.5km az=142.8*
*MOS **08** 06:16:51.1±1.1, 2128S×17808W, h409km, mb4.5/23, Error ellipse: s-maj=13.9km s-min=9.7km az=143.6*
*BJI **08** 06:16:51.7, 2102S×17828W, h398km, mB4.8, mb4.7*
*NEIC **08** 06:16:52.4±0.2, 2135S×17798W, mb4.5/49, Error ellipse: s-maj=7.9km s-min=4.1km az=145.0*
*IDC **08** 06:16:52.1±0.8, 2141S×17792W, h413km±8km, mb4.1/17, mb1 4.2/18, mb1mx4.2/20, mbtmp4.1/18, Error ellipse: s-maj=12.2km s-min=8.8km az=134.0*
*DJA **08** 06:17:11, 2159S×17965W, h51km, Mw5.6/4*
ISC 08 06:16:52.2±0.2, 2143S±005×17792W±004, h411km, h411km±2.8km:pP-P, n260, σ0§88/162, mb4.5/78, 17C-14D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	7.79	180	S	S	06 20 10.6	-6.5
	187nm,0.3s,baz=61,slow=23,SNR=9.1						
RAO	Raoul Island	7.79	180	*e*P	P	06 18 52.3	+7.5
AFI	Afiamalu	9.49	39	P	P	06 18 56.2	-7.8
	4.1nm,0.3s,baz=226,slow=24,SNR=5.8						
AFI				S	S	06 20 36.9	-15
	11nm,0.3s,baz=206,slow=23,SNR=6.9						
AFI	Afiamalu	9.49	39	P	P	06 18 56.2	-7.8
AFI				*e*S	S	06 20 32.4	-20
AFI				S	S	06 20 36.9	-15
FUNA	Funafuti	13.13	347	*e*P	P	06 19 41.0	-3.1
DZM	Mont Dzumac	14.55	265	*e*P	P	06 20 01.0	+1.6
RAR	Rarotonga	16.91	93	*e*P	P	06 20 23.3	-1.4
	24nm,0.6s						
RAR	Rarotonga	16.91	93	*e*P	P	06 20 23.3	-1.4
RAR				pmax	pmax		
	comp=Z,24nm,0.6s						
URZ	Urewera	17.31	193	P	P	06 20 27.3	-1.5
	comp=Z,8.6nm,0.3s,baz=310,slow=3.5,SNR=39						
URZ				S	S	06 23 26.2	-1.8
	comp=Z,2.7nm,0.3s,baz=74,slow=16,SNR=8.4						
SNZO	South Karori	20.78	196	*e*P	P	06 21 02.4	-0.4
	comp=Z,42nm,0.6s						
RPZ	Rata Peaks	24.04	200	P	P	06 21 33.4	+1.1
	comp=Z,11nm,0.4s,mb4.6,baz=342,slow=4.7,SNR=7.2						
EIDS	Eidsvold	28.69	256	*e*P	P	06 22 13.7	0.0
	comp=Z,15nm,0.6s,mb4.5						
CNB	Canberra Magne	31.78	237	*e*P	P	06 22 41.5	+1.0
CAN	Canberra	32.07	237	*e*P	P	06 22 43.5	+0.5
CTA	Charters Tower	33.49	266	*e*P	P	06 22 55.0	-0.4
	comp=Z,12nm,0.4s,mb4.6						
CTA	Charters Tower	33.49	266	P	P	06 22 55.1	-0.2
	comp=Z,14nm,0.5s,mb4.6,baz=99,slow=10,SNR=19						
CTA	Charters Tower	33.49	266	*e*P	P	06 22 55.0	-0.4
CTA				pmax	pmax		
	comp=Z,12nm,0.4s						
CTAO	Charters Tower	33.49	266	*e*P	P	06 22 53.9	-1.5
	comp=Z,14nm,0.5s,mb4.5						
CTAO	Charters Tower	33.49	266	*e*P	P	06 22 53.9	-1.5
CTAO				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.5						
CTAO	Charters Tower	33.49	266	P	P	06 22 55.6	+0.2
	comp=Z,21nm,0.7s,mb4.6						
TOO	Toolangi	35.42	235	*e*P	P	06 23 11.8	+0.3
PMG	Port Moresby	35.64	284	*e*P	P	06 23 13.1	-0.5
	comp=Z,12nm,0.5s,mb4.5						
PMG	Port Moresby	35.64	284	*e*P	P	06 23 13.1	-0.5
PMG				pmax	pmax		
	comp=Z,12nm,0.5s						
PMG	Port Moresby	35.64	284	P	P	06 23 13.4	-0.2
	comp=Z,32nm,0.9s,mb4.6						
TAU	Tasmania Unive	36.02	225	*e*P	P	06 23 16.4	0.0
	comp=Z,10nm,0.7s,mb4.3						
TAU	Tasmania Unive	36.02	225	*e*P	P	06 23 16.4	-0.1
TAU				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.3						
STKA	Stephens Creek	37.46	245	*e*P	P	06 23 28.9	+0.3
	comp=Z,18nm,0.5s,mb4.7						
STKA	Stephens Creek	37.46	245	P	P	06 23 29.1	+0.5
	comp=Z,40nm,0.7s,mb4.8,baz=89,slow=9.6,SNR=58						
COEN	Coen	37.73	275	*e*P	P	06 23 30.6	-0.4
	comp=Z,6.4nm,0.8s,mb4.0						
COEN	Coen	37.73	275	P	P	06 23 31.4	+0.4
	comp=Z,9.3nm,0.8s,mb4.1						
ASAR	Alice Springs	44.39	258	P	P	06 24 23.6	-0.8
	comp=Z,13nm,0.7s,mb4.4,baz=98,slow=8.1,SNR=158						
ASAR				pP	pP	06 25 45.2	+0.8
	comp=Z,3.9nm,0.9s,baz=84,slow=8.5,SNR=3.4						
ASAR				PcP	PcP	06 25 57.1	-2.8
	comp=Z,5.2nm,0.8s,baz=101,slow=4.4,SNR=8.3						
ASAR				S	S	06 30 27.5	-0.3
	comp=Z,0.6nm,0.8s,baz=92,slow=16,SNR=4.4						
WB2	Warramunga Arr	44.55	263	⇓*i*P	P	06 24 24.2	-1.5
WRAB	Tennant Creek	44.55	263	*e*P	P	06 24 24.4	-1.3
	comp=Z,12nm,0.8s,mb4.3						
WRAB	Tennant Creek	44.55	263	*e*P	P	06 24 24.4	-1.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.3						
WRA	Warramunga Arr	44.56	263	P	P	06 24 24.3	-1.4
	comp=Z,5.2nm,0.3s,mb4.3,baz=96,slow=7.5,SNR=155						
WRA				S	S	06 30 31.3	+1.1
	comp=Z,0.8nm,0.8s,baz=97,slow=14,SNR=2.8						
KAKA	Kakadu	48.08	272	*e*P	Px	06 24 41.4	
	comp=Z,9.3nm,0.4s						
FORT	Forrest	49.01	247	*e*P	P	06 24 58.9	-0.7
	comp=Z,130nm,0.5s,mb5.5						
SWI	Sorong	53.57	286	P	P	06 25 33.2	0.0
	comp=Z,261nm,0.8s,comp=Z,1µm,mb5.5						
SBA	Scott Base	56.95	184	*e*P	P	06 25 58.4	+2.5
	comp=Z,5.6nm,0.6s,mb4.1						
SBA	Scott Base	56.95	184	*e*P	P	06 25 58.4	+2.4
SBA

GSC	**Goldstone**	**80.84**	**47**	*e*P		**P**		**06 28 21.6**	**-0.1**
GSC					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.2								
MTUM	**Tungsten Hills**	**80.85**	**44**	*e*P		**P**		**06 28 22.1**	**+0.3**
YBH	**Yreka Blue Hor**	**80.96**	**38**	*e*P		**P**		**06 28 22.9**	**+0.6**
	comp=Z,9.5nm,0.6s,mb4.7								
YBH	**Yreka Blue Hor**	**80.96**	**38**	*e*P		**P**		**06 28 22.9**	**+0.7**
YBH					pmax	pmax			
	comp=Z,9.0nm,0.6s								
GLA	**Glamis**	**80.97**	**49**	*e*P		**P**		**06 28 23.4**	**+0.9**
	comp=Z,8.9nm,0.9s,mb4.5								
GLA	**Glamis**	**80.97**	**49**	*e*P		**P**		**06 28 23.4**	**+1.0**
GLA					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.5								
WAKR	**Walker**	**80.97**	**43**	*e*P		**P**		**06 28 22.7**	**+0.4**
HABR	**Khabarovsk**	**81.29**	**330**	*e*P		**P**		**06 28 22.6**	**-1.1**
HABR				*e*		pP		06 29 52.5	-3.8
HABR				*e*S		S		06 37 59.5	+0.4
HABR				*e*				06 43 26.2	
HABR				*e*				06 46 56.1	
MDJ	**Mudanjiang**	**81.32**	**325**	P		**P**		**06 28 24.4**	**+0.4**
MDJ					AMB	AMB			
	comp=Z,11nm,1.1s,mb4.5								
MDJ					AMB	AMB			
	comp=Z,52nm,5.0s								
MDJ	**Mudanjiang**	**81.32**	**325**	*e*P		**P**		**06 28 24.3**	**+0.3**
	comp=Z,8.7nm,0.8s,mb4.5								
HUMO	**Hull Mountain**	**81.38**	**38**	*e*P		**P**		**06 28 24.6**	**+0.3**
	comp=Z,6.2nm,0.8s,mb4.4								
NVAR	**Mina Array Bea**	**81.64**	**43**	P		**P**		**06 28 25.7**	**-0.1**
	comp=Z,5.1nm,0.7s,mb4.4,baz=222,slow=8.3,SNR=51								
NVAR					pP	pP		06 29 58.0	-0.5
	comp=Z,0.5nm,0.8s,baz=221,slow=7.9,SNR=4.0								
LDFC	**Landfair**	**81.87**	**47**	*e*P		**P**		**06 28 27.8**	**+0.7**
TPNV	**Topopah Spring**	**82.14**	**45**	*e*P		**P**		**06 28 28.6**	**+0.2**
	comp=Z,4.4nm,0.8s,mb4.2								
TPNV	**Topopah Spring**	**82.14**	**45**	*e*P		**P**		**06 28 28.6**	**+0.2**
TPNV					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.2								
MOD	**Modoc**	**82.48**	**39**	*e*P		**P**		**06 28 29.6**	**-0.4**
	comp=Z,9.6nm,0.9s,mb4.5								
SHPR	**Sheep Range**	**82.62**	**46**	*e*P		**P**		**06 28 31.1**	**+0.3**
CN2	**Changchun**	**83.08**	**322**	*e*P		**P**		**06 28 33.2**	**+0.2**
CN2				*e*S		S		06 38 17.3	-0.1
CN2					AMB	AMB			
	comp=Z,20nm,1.0s,mb4.8								
CN2					AMB	AMB			
	comp=Z,300nm,4.0s								
BMN	**Battle Mountai**	**83.48**	**42**	*e*P		**P**		**06 28 34.9**	**-0.3**
	comp=Z,9.9nm,0.8s,mb4.6								
BMN	**Battle Mountai**	**83.48**	**42**	*e*P		**P**		**06 28 34.9**	**-0.2**
BMN					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.6								
TUC	**Tucson**	**83.49**	**52**	*e*P		**P**		**06 28 36.3**	**+0.9**
	comp=Z,8.2nm,1.1s,mb4.4								
TUC	**Tucson**	**83.49**	**52**	*e*P		**P**		**06 28 36.3**	**+0.9**
TUC					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.4								
WVOR	**Wild Horse Val**	**83.79**	**40**	*e*P		**P**		**06 28 36.6**	**0.0**
	comp=Z,8.2nm,1.1s,mb4.4								
WVOR				*e*pP		pP		06 30 10.9	+1.0
WVOR	**Wild Horse Val**	**83.79**	**40**	*e*P		**P**		**06 28 36.6**	**0.0**
WVOR				*e**PP		pP		06 30 10.9	+1.0
WVOR					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.4								
WUAZ	**Wupatki**	**84.69**	**49**	*e*P		**P**		**06 28 41.5**	**+0.3**
	comp=Z,7.2nm,1.1s,mb4.3								
RSW	**Rattlesnake Hi**	**85.62**	**36**	*e*P		**P**		**06 28 45.6**	**+0.1**
HAWA	**Hanford**	**85.65**	**36**	*e*P		**P**		**06 28 45.7**	**0.0**
	comp=Z,7.9nm,0.9s,mb4.4								
MSU	**Marysvale**	**85.69**	**46**	*e*P		**P**		**06 28 46.3**	**+0.2**
MSU				*e*pP		pP		06 30 14.9	-4.9
SYO	**Syowa Base**	**85.84**	**193**⇑	*e*P		**P**		**06 28 44.4**	**-2.0**
SYO	**Syowa Base**	**85.84**	**193**⇓	*e*PcP		PcP		06 28 48.2	-0.2
ETW	**Entiat**	**85.95**	**35**	*e*P		**P**		**06 28 46.5**	**-0.7**
ETW				*e*pP		pP		06 30 18.5	-2.4
BMO	**Blue Mountains**	**85.99**	**38**	*e*P		**P**		**06 28 47.0**	**-0.4**
	comp=Z,3.2nm,0.7s,mb4.2								
BMO	**Blue Mountains**	**85.99**	**38**	*e*P		**P**		**06 28 47.0**	**-0.4**
BMO					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.1								
BJI	**Beijing**	**86.61**	**315**	P		**P**		**06 28 50.5**	**+0.1**
BJI					AMB	AMB			
	comp=Z,13nm,0.7s,mb4.8								
OD2	**Odessa Site #2**	**86.70**	**36**	*e*P		**P**		**06 28 50.3**	**-0.4**
TMUT	**Trail Mountain**	**86.75**	**46**	*e*P		**P**		**06 28 51.9**	**+0.7**
HLID	**Hailey**	**86.98**	**41**	*e*P		**P**		**06 28 51.8**	**-0.4**
	comp=Z,1.9nm,0.7s,mb3.9								
LAZ	**Ladron**	**87.17**	**51**	*e*P		**P**		**06 28 53.6**	**+0.3**
LAZ				*e*pP		pP		06 30 28.7	+1.4
GYA	**Guiyang**	**87.18**	**300**	P		**P**		**06 28 53.4**	**-0.1**
GYA					AP	pP		06 30 28.6	+1.0
GYA					XP	sP		06 31 09.2	-1.0
GYA					PP	PP		06 32 25.7	+1.1
GYA					SKS			06 38 39.0	
GYA					S	S		06 38 55.8	-2.0
GYA					AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.5								
VNA3	**Neumayer Olymp**	**87.21**	**176**	*e*P		**P**		**06 28 52.5**	**-0.4**
VNA3				*e*				06 28 55.4	
SEY	**Seymchan**	**87.30**	**347**	*e*P		**P**		**06 28 52.0**	**-1.1**
TRF	**Thorofare Moun**	**87.34**	**12**	*e*P		**P**		**06 28 50.9**	**-2.5**
	comp=Z,13nm,0.8s,mb4.7								
TXAR	**Lajitas Array**	**87.49**	**57**	P		**P**		**06 28 55.3**	**+0.4**
	comp=Z,3.3nm,0.8s,mb4.1,baz=219,slow=6.6,SNR=46								
TXAR					pP	pP		06 30 29.5	+0.4
	comp=Z,0.7nm,0.8s,baz=197,slow=3.9,SNR=5.3								
TXAR					PKKPbc	PKKPbc		06 46 41.8	-0.4
	comp=Z,0.4nm,0.8s,baz=120,slow=2.1,SNR=3.8								
VNA2	**Neumayer--Watz**	**87.65**	**177**	*e*P		**P**		**06 28 55.1**	**+0.2**
	baz=204,slow=3.6								
VNA2				*e*				06 28 58.1	
VNA2				*e*				06 29 02.0	
MCK	**McKinley**	**87.86**	**12**	*e*P		**P**		**06 28 54.6**	**-1.2**
	comp=Z,22nm,1.2s,mb4.8								
MCK	**McKinley**	**87.86**	**12**	*e*P		**P**		**06 28 54.6**	**-1.2**
MCK					pmax	pmax			
	comp=Z,22nm,1.2s,mb4.8								
VNA1	**Neumayer--Stat**	**87.88**	**177**	*e*P		**P**		**06 28 56.1**	**+0.1**
VNA1				*e*				06 28 58.9	
VNA1				*e*				06 29 03.4	
ANMO	**Albuquerque**	**87.92**	**51**	*e*P		**P**		**06 28 56.5**	**-0.3**
	comp=Z,3.2nm,0.8s,mb4.1								
ANMO	**Albuquerque**	**87.92**	**51**	*e*P		**P**		**06 28 56.5**	**-0.3**
ANMO					pmax	pmax			
	comp=Z,3.0nm,0.8s								
GDL2	**Guadalupe Moun**	**88.22**	**54**	*e*P		**P**		**06 28 59.0**	**+0.8**
PLCA	**Paso Flores**	**88.58**	**133**	P		**P**		**06 29 00.7**	**+0.8**
	comp=Z,0.5nm,0.5s,mb3.5,baz=214,slow=4.8,SNR=4.0								
RRI2	**Red Ridge**	**88.77**	**42**	*e*P		**P**		**06 29 00.4**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.5								
DLMT	**Dillon**	**89.05**	**40**	*e*P		**P**		**06 29 02.2**	**+0.5**
	comp=Z,5.3nm,0.8s,mb4.3								
REDW	**Red Top Meadow**	**89.07**	**42**	*e*P		**P**		**06 29 02.2**	**+0.3**
	comp=Z,10nm,1.2s,mb4.4								
TPAW	**Teton Pass**	**89.07**	**42**	*e*P		**P**		**06 29 02.0**	**0.0**
	comp=Z,4.5nm,0.8s,mb4.2								
COLA	**College**	**89.09**	**12**	*e*P		**P**		**06 28 59.8**	**-1.7**
SNOW	**Snow King Moun**	**89.18**	**42**	*e*P		**P**		**06 29 02.7**	**+0.2**
	comp=Z,8.6nm,0.8s,mb4.5								
IMW	**Indian Meadow**	**89.29**	**42**	*e*P		**P**		**06 29 03.3**	**+0.4**
	comp=Z,7.6nm,0.8s,mb4.5								
MOOW	**Moose Ponds**	**89.33**	**42**	*e*P		**P**		**06 29 02.9**	**-0.2**
	comp=Z,23nm,2.5s,mb4.5								
LOHW	**Long Hollow**	**89.35**	**42**	*e*P		**P**		**06 29 02.7**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.2								
QLMT	**Earthquake Lak**	**89.47**	**41**	*e*P		**P**		**06 29 04.6**	**+0.8**
HIA	**Hailar**	**89.49**	**325**	*e*P		**P**		**06 29 04.4**	**+0.7**
SMCO	**Snowmass**	**89.55**	**47**	*e*P		**P**		**06 29 03.1**	**-1.2**
	comp=Z,12nm,1.6s,mb4.5								
BW06	**Boulder Array**	**89.58**	**43**	*e*P		**P**		**06 29 04.0**	**-0.4**
PDAR	**Pinedale Array**	**89.58**	**43**	P		**P**		**06 29 04.0**	**-0.3**
	comp=Z,4.0nm,0.8s,mb4.3,baz=212,slow=2.6,SNR=34								
YMR	**Madison River**	**89.67**	**41**	*e*P		**P**		**06 29 04.8**	**+0.1**
	comp=Z,6.2nm,0.7s,mb4.5								
BOZ	**Bozeman (W)**	**89.77**	**40**	*e*P		**P**		**06 29 05.4**	**+0.3**
KMI	**Kunming**	**89.84**	**297**	P		**P**		**06 29 07.4**	**+1.4**
KMI					AMB	AMB			
	comp=Z,9.0nm,0.9s,mb4.6								
KMI					LR	LR			
	comp=Z,31nm,18.5s								
BILL	**Bilibino**	**89.97**	**354**	*e*P		**P**		**06 29 05.3**	**-0.2**
BILL					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
HHC	**Hu-ho-hao-te**	**90.06**	**314**	*e*P		**P**		**06 29 06.9**	**+0.3**
HHC					AP	pP		06 30 43.4	+2.2
HHC					XP	sP		06 31 23.8	+0.2
HHC					PP	PP		06 32 49.4	+2.4
HHC					SKS			06 38 56.2	
HHC					S	S		06 39 21.9	-1.9
HHC					AMB	AMB			
	comp=Z,16nm,0.7s,mb5.0								
HHC					AMB	AMB			
	comp=Z,71nm,8.5s								
HRY	**Holter Researc**	**90.21**	**39**	*e*P		**P**		**06 29 07.2**	**+0.1**
DAWY	**Dawson**	**90.33**	**16**	*e*P		**P**		**06 29 06.2**	**-1.0**
EGAK	**Eagle**	**90.48**	**15**	*e*P		**P**		**06 29 07.5**	**-0.4**
	comp=Z,9.1nm,0.9s,mb4.6								
CMAR	**Chiang Mai Arr**	**90.50**	**290**	P		**P**		**06 29 10.7**	**+1.5**
	comp=Z,7.9nm,1.0s,mb4.5,baz=121,slow=3.0,SNR=28								
CMAR	**Chiang Mai Arr**	**90.50**	**290**⇑	*e*P		**P**		**06 29 10.6**	**+1.5**
CHTO	**Chiang Mai**	**90.63**	**290**	*e*P		**P**		**06 29 10.8**	**+1.0**
RLMT	**Red Lodge**	**90.94**	**41**	*e*P		**P**		**06 29 11.1**	**+0.5**
	comp=Z,28nm,2.0s,mb4.8								
JCT	**Junction City**	**91.01**	**58**	*e*P		**P**		**06 29 10.7**	**-0.5**
CD2	**Chengdu**	**91.36**	**303**	*e*P		**P**		**06 29 12.5**	**-0.3**
CD2					AP	pP		06 30 48.2	+0.6
CD2					XP	sP		06 31 29.8	-0.1
CD2					AMB	AMB			
	comp=Z,20nm,1.0s,mb4.9								
CD2					AMB	AMB			
	comp=Z,30nm,6.8s								
YAK	**Yakutsk**	**93.00**	**338**	*e*P		**P**		**06 29 18.1**	**-1.5**
YAK					pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9								
LZH	**Lanzhou**	**93.39**	**307**	*e*P		**P**		**06 29 25.3**	**+3.2**
LZH					AP	pP		06 30 50.5	-6.4
LZH					AMB	AMB			
	comp=Z,16nm,1.3s,mb4.8								
LZH					AMB	AMB			
	comp=Z,79nm,5.5s								
RSSD	**Black Hills**	**93.77**	**44**	*e*P		**P**		**06 29 23.2**	**-0.4**
SONM	**Songino Array**	**96.50**	**319**	P		**P**		**06 29 38.2**	**+2.2**
	comp=Z,0.3nm,0.5s,mb3.7,baz=139,slow=6.8,SNR=2.5								
TIXI	**Tiksi**	**99.66**	**345**	*e*P		Pdif		06 29 46.9	-3.3
TIXI					pmax	pmax			
	comp=Z,2.0nm,1.4s,mb4.3								
ZALV	**Zalesovo Beam**	**111.26**	**321**	PKiKP		PKiKP		06 34 35.6	-2.0
	comp=Z,1.1nm,0.5s,baz=157,slow=1.2,SNR=6.9								
MKAR	**Makanchi Array**	**111.89**	**313**	PKiKP		PKiKP		06 34 37.2	-1.8
	comp=Z,0.6nm,0.4s,baz=111,slow=0.9,SNR=6.6								
MKAR					PKKPbc	PKKPbc		06 45 32.5	-1.3
	comp=Z,0.9nm,0.8s,baz=298,slow=3.3,SNR=5.2								
KURK	**Kurchatov**	**114.73**	**317**	PKP		PKPdf		06 34 42.6	-1.8
	baz=90,slow=1.7								
KURK	**Kurchatov**	**114.73**	**317**⇑	*i* PKIKP		PKPdf		06 34 42.0	-2.4
BVAR	**Borovoye Array**	**119.84**	**320**	PKP		PKPdf		06 34 52.6	-1.5
	comp=Z,3.2nm,0.5s,baz=95,slow=1.2,SNR=16								
SPITS	**Spitsbergen Ar**	**122.80**	**357**	PKP		PKPdf		06 34 58.1	-1.1
	comp=Z,9.6nm,0.8s,baz=325,slow=7.1,SNR=2.5								
BOSA	**Boshof**	**125.45**	**205**	PKP		PKPdf		06 35 05.5	-0.2
	comp=Z,1.2nm,0.6s,baz=30,slow=18,SNR=3.7								
ARU	**Arti**	**126.01**	**325**	*i* PKIKP		PKPdf		06 35 04.6	-1.2
ARU								06 37 03.2	
AKTO	**Aktyubinsk**	**127.81**	**318**	PKP		PKPdf		06 35 08.9	-0.6
	comp=Z,2.5nm,0.7s,baz=62,slow=3.3,SNR=8.8								
ARCES	**ARCESS Array B**	**129.85**	**350**	PKP		PKPdf		06 35 11.7	-1.1
	comp=Z,3.2nm,0.5s,baz=11,slow=1.0,SNR=32								
OBN	**Obninsk**	**137.61**	**331**⇑	*i* PKIKP		PKPdf		06 35 28.3	+0.6
OBN					pmax	pmax			
	comp=Z,9.0nm,0.5s								
NB2	**NORSAR Subarra**	**139.91**	**353**	PKP				06 35 23.9	
	comp=Z,4.7nm,1.1s,baz=16,slow=4.0								
NOA	**NORSAR Array B**	**139.91**	**353**	PKhKP				06 35 24.0	
	comp=Z,0.9nm,0.6s,baz=16,slow=4.5,SNR=4.0								
NOA					PKP	PKPdf		06 35 32.8	+1.0
	comp=Z,1.3nm,0.6s,baz=15,slow=3.9,SNR=4.0								
HFS	**Hagfors**	**140.47**	**351**	PKhKP				06 35 24.7	
	comp=Z,3.7nm,0.6s,baz=82,slow=3.8,SNR=12								
SUW	**Suwalki**	**143.73**	**339**	*e*PKP		PKPdf		06 35 34.2	-4.6
AKASG	**Malin Array Be**	**143.86**	**331**	PKP		PKPdf		06 35 35.9	-3.3
	comp=Z,23nm,0.5s,baz=42,slow=4.3,SNR=60								
KIEV	**Kiev**	**143.87**	**331**	*e*PKPdf		PKPdf		06 35 35.8	-3.4
EKA	**Eskdalemuir Ar**	**145.92**	**5**	PKPbc		PKPbc		06 35 42.5	-1.5
	comp=Z,5.7nm,0.9s,baz=318,slow=2.9,SNR=10								
ASF	**Jabal al Asfar**	**147.27**	**296**	PKPbc		PKPbc		06 35 49.1	+0.6
	comp=Z,12nm,0.8s,baz=337,slow=3.1,SNR=14								
KWP	**Kalwaria**	**147.46**	**335**	*e*PKP		PKPbc		06 35 47.9	-0.5
KWP	**Kalwaria**	**147.46**	**335**⇓	*i* P		PKPbc		06 35 47.4	-1.0
KWP	**Kalwaria**	**147.46**	**335**⇓	*i* P		PKPab		06 35 54.4	+2.7
BR131	**Keskin Array S**	**147.52**	**311**	*e*PKPbc		PKPbc		06 35 48.0	-0.9
BRTR	**Keskin Array B**	**147.52**	**311**	PKPbc		PKPbc		06 35 47.9	-1.0
	comp=Z,5.8nm,0.7s,baz=141,slow=3.8,SNR=20								
BRTR	**Keskin Array B**	**147.52**	**311**⇑	*i* PKP2		PKPbc		06 35 47.9	-1.0
ANTO	**Ankara**	**148.04**	**312**⇓	*i* P		PKPbc		06 35 50.2	-0.1
STHS	**Stebnicka Huta**	**148.20**	**336**	*e*PKP		PKPbc		06 35 48.5	-1.8
STHS				*e*				06 35 55.9	
MMAI	**Mount Meron Ar**	**148.33**	**298**	PKPbc		PKPbc		06 35 50.5	-0.7
	comp=Z,13nm,0.5s,baz=75,slow=7.0,SNR=16								
TIRR	**Tirgusor**	**148.38**	**323**⇓	*i* P		PKPbc		06 35 50.5	-0.5
VRI	**Vrincioaia**	**148.38**	**326**⇑	*i* P		PKPbc		06 35 52.5	+1.6
PLOR	**Plostina**	**148.44**	**326**⇓	*i* P		PKPbc		06 35 50.4	-0.7
HARR	**Harsova**	**148.50**	**323**⇑	*i* P		PKPbc		06 35 50.5	-0.8
KSP	**Ksiaz**	**148.60**	**343**	*e*PKP		PKPbc		06 35 51.0	-0.3
KSP	**Ksiaz**	**148.60**	**343**	*e*PKP2		PKPbc		06 35 50.8	-0.5
UPC	**Upice**	**148.98**	**343**	*e*PKPbc		PKPbc		06 35 51.7	-0.5
UPC				*e*PKPab		PKPab		06 35 57.7	-0.2
CLL	**Collm**	**148.98**	**347**⇓	*i* PKHKP		PKPdf		06 35 48.0	+0.3
CLL				*i*				06 35 56.9	
CLL					pmax	pmax			
	comp=Z,3.0nm,0.5s								
CLL					pmax	pmax			
	comp=Z,20nm,0.9s								
CLL					pmax	pmax			
	comp=Z,18nm,0.8s								
CLL	**Collm**	**148.98**	**347**	*e*PKPbc		PKPbc		06 35 51.4	-0.8
CLL				*e*PKPab		PKPab		06 35 56.8	-1.0
CLL	**Collm**	**148.98**	**347**	*i* PKPdf		PKPdf		06 35 48.0	+0.3
	comp=Z,3.0nm,0.5s								
CLL				⇓	*i* PKPbc	PKPbc		06 35 51.3	-0.9
	comp=Z,20nm,0.9s								
CLL				*i*	PKiKP	PKiKP		06 35 52.9	-0.4
	comp=Z,23nm,0.7s								
CLL				⇓	*i* PKPab	PKPab		06 35 56.9	-0.9
	comp=Z,18nm,0.8s								
CLL				*e*pPKPbc		pPKPab		06 37 31.0	-3.2
DPC	**Dobruska-Polom**	**149.03**	**342**	*e*PKPbc		PKPbc		06 35 51.9	-0.5
DPC				*e*PKPab		PKPab		06 35 58.5	+0.4
MORC	**Moravsky Berou**	**149.18**	**340**	*e*PKPbc		PKPbc		06 35 51.7	-1.1
MORC				*e*PKPab		PKPab		06 35 58.2	-0.5
MORC	**Moravsky Berou**	**149.18**	**340**⇓	*i* P		PKPbc		06 35 51.8	-1.0
BRG	**Berggiesshubel**	**149.18**	**345**	*e*PKHKP		PKPbc		06 35 50.8	-1.9
BRG				*i*				06 35 58.4	
BRG					pmax	pmax			
	comp=Z,1.0nm,0.5s								
BRG					pmax	pmax			
	comp=Z,7.0nm,0.7s								
BRG					pmax	pmax			
	comp=Z,10.0nm,0.9s								
BRG					pmax	pmax			
	comp=Z,6.0nm,1.6s								
BRG					pmax	pmax			
	comp=Z,5.0nm,0.8s								
BRG	**Berggiesshubel**	**149.18**	**345**	*e*PKPbc		PKPbc		06 35 52.0	-0.7
BRG				*e*PKPab		PKPab		06 35 58.5	-0.2
BRG	**Berggiesshubel**	**149.18**	**345**	*e*PKP		PKPbc		06 35 50.8	-2.0
	comp=Z,2.0nm,0.5s								
BRG	**Berggiesshubel**	**149.18**	**345**	*i* PKP		PKPbc		06 35 52.1	-0.6
	comp=Z,12nm,0.7s								
BRG				*i*				06 35 58.4	
	comp=Z,16nm,0.9s								
BRG					pPKP	pPKPdf		06 37 29.4	+0.9
	comp=Z,10.0nm,1.6s								
EIL	**Elat**	**149.31**	**292**	PKPbc		PKPbc		06 35 53.5	-0.3
	comp=Z,12nm,0.7s,baz=23,slow=4.9,SNR=8.9								
PVCC	**Panska Ves**	**149.34**	**344**	*e*PKPbc		PKPbc		06 35 52.6	-0.5
VOIR		**149.54**	**327**⇑	*i* P		PKPbc		06 35 53.5	-0.3
DRGR		**149.66**	**331**⇑	*i* P		PKPbc		06 35 53.7	-0.3
PRU	**Pruhonice**	**149.85**	**344**	*e*PKPbc		PKPbc		06 35 53.2	-1.2
PRU				*e*PKPab		PKPab		06 36 01.1	-0.4
VYHS	**Vyhne**	**149.85**	**338**	*e*PKP		PKPbc		06 35 53.7	-0.7
VYHS				*e*				06 36 02.0	
VRAC	**Vranov**	**149.88**	**341**	PKPbc		PKPbc		06 35 53.8	-0.7
	comp=Z,4.1nm,0.6s,baz=143,slow=1.4,SNR=4.0								
VRAC					PKPab	PKPab		06 36 02.2	+0.6
	comp=Z,4.5nm,0.5s,baz=54,slow=8.9,SNR=4.6								
VRAC	**Vranov**	**149.88**	**341**⇑	*i* P		PKPbc		06 35 54.0	-0.5
MOX	**Moxa**	**149.90**	**348**	*e*PKPbc		PKPbc		06 35 53.6	-0.9
KOLL	**Kolacno**	**149.93**	**338**	*e*PKP		PKPbc		06 35 54.3	-0.3
KOLL				*e*				06 36 03.0	
PSZ	**Piszkesteto**	**149.94**	**336**⇓	*e*PKP		PKPbc		06 35 54.9	+0.3
PSZ	**Piszkesteto**	**149.94**	**336**⇑	*i* P		PKPdf		06 35 50.1	+0.8
TANN	**Tannenbergstha**	**149.94**	**347**	*e*PKPbc		PKPbc		06 35 53.8	-0.8
GUNZ	**Gunzen**	**150.02**	**347**	*e*PKPab		PKPab		06 36 02.0	-0.1
WERN	**Wernitzgruen**	**150.08**	**347**	*e*PKPab		PKPab		06 36 02.2	-0.2
TREC	**Trest**	**150.22**	**342**	*e*PKPbc		PKPbc		06 35 54.6	-0.7
MANZ	**Manzenberg**	**150.42**	**347**	*e*PKPbc		PKPbc		06 35 55.0	-0.7
MODS	**Modra-Piesok**	**150.49**	**339**	*e*PKP		PKPbc		06 35 55.6	-0.3
MODS				*e*		PKPab		06 36 05.0	+0.8
ROTZ	**Rotzenmuhle**	**150.61**	**347**	*e*PKPbc		PKPbc		06 35 55.3	-0.9
GZR	**Gura Zlata**	**150.68**	**329**⇑	*i* P		PKPbc		06 35 55.4	-1.1
MEM	**Membach**	**150.72**	**355**	PKPbc		PKPbc		06 35 55.4	-1.0
TNS	**Taunus Mts**	**150.83**	**352**	*e*PKPbc		PKPbc		06 35 55.8	-0.9
GRF	**Grafenberg Arr**	**150.88**	**348**	*e*PKPbc		PKPbc		06 35 56.4	-0.4
GRF				*e*PKPab		PKPab		06 36 05.4	-0.4
KHC	**Kasperske Hory**	**150.88**	**344**	*e*PKPbc		PKPbc		06 35 56.3	-0.5
KHC				*e*PKPab		PKPab		06 36 04.9	-0.9
BCLA	**Clavier**	**150.96**	**356**	PKPbc		PKPbc		06 35 57.3	+0.3
WET	**Wettzell**	**151.04**	**345**	*e*PKPab		PKPab		06 36 06.7	+0.2
BZS	**Buzias**	**151.05**	**331**⇑	*i* P		PKPbc		06 35 56.1	-1.2
GEC2	**GERESS Array S**	**151.11**	**344**	*e*PKPbc		PKPbc		06 35 56.5	-0.8
GERES	**GERESS Array B**	**151.11**	**344**	PKP		PKPdf		06 35 49.5	-1.6
	comp=Z,0.6nm,0.3s,baz=316,slow=5.6,SNR=8.2								
GERES					PKPbc	PKPbc		06 35 56.2	-1.2
	comp=Z,4.6nm,0.6s,baz=31,slow=2.3,SNR=18								
GERES					PKPab	PKPab		06 36 06.6	-0.2
	comp=Z,3.1nm,0.8s,baz=20,slow=4.3,SNR=4.9								
GIVF	**Givet**	**151.31**	**356**	*e*PKP1		PKPbc		06 35 56.9	-0.8
	comp=Z,30nm,0.8s								
DOU	**Dourbes**	**151.33**	**357**	PKPbc		PKPbc		06 35 57.4	-0.4
CONA	**Conrad Observa**	**151.33**	**340**⇓	*i* PKPbc		PKPbc		06 35 57.4	-0.5
	comp=Z,10nm,0.8s								
BAIF	**Baives**	**151.38**	**357**	*e*PKP1		PKPbc		06 35 57

3.7nm,0.9s,baz=89,slow=16,SNR=22
KAKA Kakadu 47.44 269 eP P 06 37 06.4 -11
11nm,0.4s,mb4.7
FORT Forrest 49.95 244 eP P 06 37 35.0 -0.7
21nm,0.5s,mb4.8
KLBR Kellerberrin 58.77 243 eP P 06 38 36.6 -1.3
5.7nm,0.5s,mb4.1
SBA Scott Base 60.58 184 eP P 06 38 51.3 +2.2
12nm,1.0s,mb4.2
MJAR Matsushiro Arr 67.68 323 P P 06 39 34.5 -0.4
1.0nm,0.4s,mb3.7,baz=165,slow=6.9,SNR=4.1
ATKA Atka Island 69.75 3 eP P 06 39 39.2 -7.8
QSPA South Pole Qui 72.31 180 P P 06 40 02.4 +0.5
19nm,0.9s,mb4.5,baz=18,slow=1.3,SNR=50
PETK Petropavlovsk- 73.48 345 P P 06 40 08.6 -0.2
2.8nm,0.8s,mb3.8,baz=146,slow=10,SNR=3.4
KSRS Korea Array 74.48 318 P P 06 40 15.4 +0.6
0.6nm,0.3s,mb3.5,baz=125,slow=6.1,SNR=3.7
SAO San Andreas Ge 76.40 44 eP P 06 40 26.2 +0.6
PKD Parkfield 76.55 45 ⇑P P 06 40 26.7 +0.3
baz=77
SMMC Simmler 76.57 46 ⇓P P 06 40 26.9 +0.4
baz=77
U04C Hernandez Rese 76.62 45 ⇓P P 06 40 27.2 +0.4
baz=77
PACP Pacheco Peak 76.65 44 ⇑P P 06 40 27.5 +0.6
baz=77
JCC Jacoby Creek 77.14 39 ⇑P P 06 40 30.0 +0.5
baz=77
ARVC Arvin 77.27 47 ⇓P P 06 40 30.4 0.0
baz=77
VES Vestal, Richgr 77.48 46 ⇑P P 06 40 31.2 -0.3
baz=78
BFSC Mount Baldy St 77.62 48 ⇓P P 06 40 32.1 -0.2
baz=78
T06C Millerton Lake 77.69 45 ⇑P P 06 40 32.7 +0.1
baz=78
EDW2 Edwards Air Fo 77.72 47 ⇓P P 06 40 32.8 0.0
baz=78
ISA Isabella 77.80 46 eP P 06 40 33.2 0.0
6.9nm,0.9s,mb4.0
ISA Isabella 77.80 46 ⇓P P 06 40 33.6 +0.4
baz=78
CMB Columbia Colle 77.81 43 eP P 06 40 32.8 -0.5
4.5nm,0.8s,mb3.9
CMB Columbia Colle 77.81 43 ⇑P P 06 40 33.3 +0.1
baz=78
MONP Monument Peak 77.81 50 ⇓P P 06 40 33.4 0.0
baz=78
DVTC Desert V Tower 77.93 50 ⇑P P 06 40 34.3 +0.3
baz=78
ORV Oroville 77.96 42 ⇑P P 06 40 34.6 +0.6
baz=78
KCC Kaiser Creek 78.13 44 ⇓P P 06 40 35.0 +0.1
baz=78
M02C Callahan 78.20 39 ⇓P P 06 40 35.9 +0.7
baz=78
LRMC Laurel Mountai 78.25 47 ⇓P P 06 40 35.5 -0.1
baz=78
SWSC Sam W. Stewart 78.29 50 ⇓P P 06 40 36.0 0.0
baz=78
YBH Yreka Blue Hor 78.48 39 P P 06 40 36.9 +0.2
3.4nm,0.8s,mb3.7,baz=32,slow=0.3,SNR=11
YBH Yreka Blue Hor 78.48 39 ⇓P P 06 40 37.2 +0.5
baz=79
MTUM Tungsten Hills 78.65 45 eP P 06 40 38.3 +0.5
O04C Chester 78.66 41 ⇑P P 06 40 37.9 +0.2
baz=79
BELC Belle Mtn. 78.68 49 ⇑P P 06 40 38.2 +0.2
baz=79
MPMC Manual Prospec 78.69 46 ⇓P P 06 40 38.1 +0.1
baz=79
WAKR Walker 78.70 43 eP P 06 40 38.5 +0.5
R06C Coleville 78.70 43 ⇑P P 06 40 38.4 +0.4
baz=79
TIN Tinemaha 78.72 45 ⇓P P 06 40 38.4 +0.3
baz=79
GSC Goldstone 78.77 47 ⇑P P 06 40 38.6 +0.1
baz=79
LBCM Butte Creek Ri 78.79 41 P P 06 40 38.3 -0.1
HUMO Hull Mountain 78.86 38 eP P 06 40 38.6 -0.1
67nm,2.8s,mb4.5
HUMO Hull Mountain 78.86 38 ⇓P P 06 40 39.1 +0.4
baz=79
HEC Hector,Ludlow 78.86 48 ⇑P P 06 40 38.9 -0.1
baz=79
BC3 Big Chuckw Mtn 78.90 49 ⇓P P 06 40 39.0 -0.1
baz=79
WCN Washoe City 78.93 43 ⇓P P 06 40 39.4 +0.2
baz=79
GLA Glamis 79.06 50 ⇓P P 06 40 40.4 +0.3
baz=79
GRAC Grapevine Rang 79.27 46 ⇓P P 06 40 41.5 +0.5
baz=79
GMRC Granite Mounta 79.31 48 ⇓P P 06 40 41.1 -0.2
baz=79
FURC Furnace Creek, 79.34 46 ⇑P P 06 40 41.3 -0.2
baz=79
O06A Flanigan 79.37 42 ⇑P P 06 40 41.4 -0.1
baz=80,SNR=10.0
IRM Iron Mountain 79.37 49 ⇑P P 06 40 41.4 -0.3
baz=80
NVAR Mina Array Bea 79.40 44 P P 06 40 41.6 -0.1
4.4nm,0.8s,mb3.9,baz=224,slow=8.6,SNR=39
SHOC Shoshone 79.45 47 ⇓P P 06 40 42.0 0.0
baz=80
TUQ Turquoise Moun 79.46 48 ⇑P P 06 40 42.1 0.0
baz=80
Y12C Blythe 79.62 50 ⇓P P 06 40 43.4 +0.4
baz=80
U10A Ash Meadows, A 79.68 47 ⇓P P 06 40 43.4 +0.2
baz=80
N06A Buffalo Meadow 79.69 41 ⇓P P 06 40 43.0 -0.2
baz=80,SNR=5.9
113A Mohawk Valley, 79.70 51 ⇑P P 06 40 43.5 +0.1
baz=80
S09A Goldfield 79.75 45 ⇑P P 06 40 43.3 -0.3
baz=80
CN2 Changchun 79.80 322 eP P 06 40 45.3 +1.6
LDFC Landfair 79.86 48 eP P 06 40 44.3 +0.1
LDFC ePP PcP 06 40 53.1 +3.3
Q08A Gabbs 79.88 44 ⇓P P 06 40 44.1 -0.1
baz=80
H03A Soap Creek Ran 79.91 37 ⇑P P 06 40 44.7 +0.5
baz=80
O07A Toulon 79.97 42 ⇓P P 06 40 44.6 -0.1
baz=80,SNR=8.2
TPNV Topopah Spring 80.01 46 eP P 06 40 44.8 -0.1
3.1nm,0.8s,mb3.7
TPNV Topopah Spring 80.01 46 ⇓P P 06 40 45.0 +0.1
baz=80
V11A Goodsprings 80.01 47 ⇑P P 06 40 44.9 -0.1
baz=80
214A Organ Pipe Nat 80.02 52 ⇑P P 06 40 45.7 +0.5
baz=80
MOD Modoc 80.05 40 ⇓P P 06 40 45.0 -0.1
baz=80,SNR=5.4
R09A Tonopah 80.12 45 ⇓P P 06 40 45.3 -0.2
baz=80
Y13A Salome 80.16 50 ⇓P P 06 40 46.3 +0.5
baz=80
K05A Summer Lake 80.16 39 ⇓P P 06 40 45.7 +0.1
baz=80,SNR=5.6
PDMCI Parker Dam,Lak 80.17 49 ⇓P P 06 40 46.1 +0.2
baz=80
N07B Gerlach 80.25 42 ⇓P P 06 40 46.1 -0.1
baz=80,SNR=5.3
S10A Tonopah Range, 80.28 45 ⇑P P 06 40 46.0 -0.3
baz=80,SNR=7.8
O08A Rochester Mine 80.50 42 ⇓P P 06 40 47.5 +0.1
baz=81,SNR=5.6
X13A Yucca 80.53 49 ⇑P P 06 40 47.9 +0.1
baz=81
Z14A Wintersburg 80.59 51 ⇓P P 06 40 48.1 +0.1
baz=81
R10A Warm Springs 80.66 45 ⇓P P 06 40 48.6 +0.3
baz=81,SNR=7.5
L07A Adell 80.71 40 ⇑P P 06 40 48.7 +0.2
baz=81,SNR=7.8
S11A Rachel 80.71 46 ⇑P P 06 40 48.8 +0.2
baz=81
W13A Hualapai Mount 80.74 49 ⇓P P 06 40 48.9 +0.1
baz=81
N08A GE Springer Mi 80.78 42 ⇓P P 06 40 48.8 -0.1
baz=81
115A Sonoran Desert 80.81 51 ⇑P P 06 40 49.2 0.0
baz=81
Y14A Wickenburg 80.82 50 ⇓P P 06 40 49.4 +0.2
baz=81
T11A Corn Creek, Al 80.86 46 ⇓P P 06 40 49.6 +0.2
baz=81,SNR=8.3
E03A Lebam 80.90 35 ⇑P P 06 40 49.0 -0.3
baz=81
J06A Christmas Vall 80.91 39 ⇓P P 06 40 49.6 +0.1
baz=81
U12A Valley of Fire 80.93 47 ⇑P P 06 40 50.0 +0.2
baz=81
M08A Happy Creek Ra 80.99 41 ⇑P P 06 40 50.2 +0.3
baz=81
V13A Grand Canyon W 81.04 48 ⇑P P 06 40 50.5 +0.2
baz=81
216A Three Points, 81.06 52 ⇑P P 06 40 51.1 +0.6
baz=81
116A Eloy 81.13 52 ⇓P P 06 40 51.5 +0.6
baz=81
D03A Wishkah Elem. 81.13 34 ⇑P P 06 40 51.2 +0.7
baz=81
K07A Rock Creek Ran 81.14 40 ⇓P P 06 40 51.0 +0.3
baz=81,SNR=7.4
X14A Yava 81.15 50 ⇓P P 06 40 51.4 +0.4
baz=81
R11A Troy Canyon, C 81.18 45 ⇑P P 06 40 50.8 -0.2
baz=81
N09A Rock Creek Ran 81.21 42 ⇓P P 06 40 51.5 +0.4
baz=81
P10A Eureka 81.25 44 ⇑P P 06 40 51.3 0.0
baz=81
I06A Prineville 81.27 38 ⇓P P 06 40 51.5 +0.2
baz=81,SNR=8.3
S12A Delamar Landin 81.30 46 ⇑P P 06 40 52.2 +0.5
baz=81,SNR=8.3
Y15A Casa Rosa Ranc 81.31 50 ⇓P P 06 40 52.1 +0.2
baz=81,SNR=10
W14A Seligman 81.37 49 ⇓P P 06 40 52.5 +0.5
baz=82,SNR=5.3
G05A Wamic 81.37 37 ⇓P P 06 40 51.5 -0.3
baz=82
WVOR Wild Horse Val 81.37 40 eP P 06 40 51.6 -0.3
9.4nm,1.0s,mb4.2
Q11A Duckwater 81.38 45 ⇑P P 06 40 52.1 +0.1
baz=82,SNR=7.4
L08A Fields 81.42 41 ⇑P P 06 40 52.1 0.0
baz=82,SNR=12
217A Green Valley 81.45 53 ⇑P P 06 40 53.1 +0.6
baz=82,SNR=8.5
J07A Hines 81.48 39 ⇓P P 06 40 52.1 -0.3
baz=82,SNR=5.2
V14A Boquillas Ranc 81.55 49 ⇓P P 06 40 53.3 +0.3
baz=82,SNR=6.8
M09A Marrel Ranch, 81.56 42 ⇓P P 06 40 53.3 +0.4
baz=82
K08A Mann Creek Ran 81.63 40 ⇓P P 06 40 53.6 +0.4
baz=82,SNR=12
X15A Humboldt 81.64 50 ⇑P P 06 40 53.9 +0.4
baz=82,SNR=8.1
H06A Lindquist Farm 81.65 38 ⇑P P 06 40 52.8 -0.4
baz=82,SNR=10
T13A Saint George 81.66 47 ⇑P P 06 40 53.6 +0.1
baz=82,SNR=7.1
F05A White Salmon 81.67 36 ⇑P P 06 40 52.8 -0.5
baz=82
P11A Circle Ranch, 81.68 44 ⇑P P 06 40 53.5 0.0
baz=82
TUC Tucson 81.71 52 eP P 06 40 53.8 -0.1
8.2nm,1.2s,mb4.0
L09A Wilkinson Ranc 81.75 41 ⇑P P 06 40 53.8 -0.1
baz=82
G06A Carlson Farm, 81.76 37 ⇑P P 06 40 53.5 -0.3
baz=82
I07A Izee 81.76 39 ⇓P P 06 40 53.8 0.0
baz=82,SNR=9.6
R12A Pony Springs, 81.83 46 ⇑P P 06 40 54.4 +0.1
baz=82,SNR=6.3
117A Oracle 81.86 52 ⇓P P 06 40 55.3 +0.7
baz=82,SNR=7.6
Y16A Circle Bar Ran 81.91 51 ⇓P P 06 40 55.4 +0.6
baz=82,SNR=6.1
318A Bisbee 81.92 53 ⇓P P 06 40 55.5 +0.5
baz=82,SNR=7.0
C04A Brinnon 81.93 34 ⇓P P 06 40 54.7 0.0
baz=82
W15A Williams 81.94 49 ⇑P P 06 40 55.0 0.0
baz=82
S13A Holt Ranch, En 81.97 47 ⇑P P 06 40 55.1 +0.1
baz=82,SNR=6.5
J08A Circle Bar Ran 81.98 40 ⇑P P 06 40 54.8 -0.2
baz=82,SNR=7.5
F06A Goldendale 81.98 37 ⇓P P 06 40 54.7 -0.2
baz=82
H07A Lands Inn, Kim 82.02 38 ⇑P P 06 40 54.9 -0.2
baz=82,SNR=12
Q12A Willow Creek R 82.04 45 ⇑P P 06 40 55.5 +0.1
baz=82
O11A Cowboy Ranch, 82.04 44 ⇑P P 06 40 55.3 -0.1
baz=82,SNR=6.8
K09A Rome 82.08 41 ⇑P P 06 40 55.4 -0.1
baz=82,SNR=16
218A Dragoon 82.12 53 ⇓P P 06 40 56.7 +0.7
baz=82,SNR=7.1
D05A Enumclaw 82.15 35 ⇓P P 06 40 56.2 +0.4
baz=82
X16A Lo Mia Camp, P 82.19 50 ⇓P P 06 40 56.7 +0.5
baz=82,SNR=12
R13A O'Grain Ranch, 82.19 46 ⇓P P 06 40 56.3 +0.2
baz=82
M10A I.L. Ranch, Tu 82.20 42 ⇓P P 06 40 56.3 +0.2
baz=82,SNR=8.1
I08A Drewsey 82.23 39 ⇓P P 06 40 56.4 +0.2
baz=82
T14A Hurricane 82.26 47 ⇓P P 06 40 57.2 +0.6
baz=82
Y17A Roosevelt 82.29 51 ⇑P P 06 40 57.1 +0.3
baz=82
CCUT Cedar City 82.30 47 eP P 06 40 57.0 +0.3
V15A Kaibab Nationa 82.31 49 ⇑P P 06 40 57.3 +0.5
baz=82,SNR=8.3
E06A Yakima 82.33 36 ⇑P P 06 40 56.4 -0.3
baz=82
G07A Ruggs Ranch, H 82.34 38 ⇑P P 06 40 56.6 -0.2
baz=82
ARUT Antelope Range 82.36 46 eP P 06 40 57.0 -0.1
J09A Fry Pan Ranch, 82.41 40 ⇑P P 06 40 57.4 +0.2
baz=82,SNR=9.1
W16A Flagstaff 82.43 50 ⇓P P 06 40 58.0 +0.5
baz=82
319A Douglas 82.44 54 ⇑P P 06 40 58.2 +0.6
baz=82
118A Homack Ranch, 82.47 52 ⇑P P 06 40 58.4 +0.6
baz=83
H08A Prairie City 82.50 39 ⇓P P 06 40 57.2 -0.4
baz=83
U15A North Rim 82.51 48 ⇑P P 06 40 58.4 +0.6
baz=83,SNR=17
L10A Juniper Basin 82.53 42 ⇓P P 06 40 57.6 -0.2
baz=83,SNR=10.0
Q13A Wheeler Ranch, 82.54 45 ⇓P P 06 40 57.7 -0.2
baz=83,SNR=12
F07A Phinny Hill Vi 82.55 37 ⇓P P 06 40 57.5 -0.3
baz=83
C05A Tolt Reservoir 82.61 35 ⇓P P 06 40 57.7 -0.3
baz=83
X17A Forest Lakes 82.61 51 ⇓P P 06 40 59.1 +0.6
baz=83
M11A Holland Ranch, 82.63 42 ⇓P P 06 40 58.7 +0.4
baz=83
ELK Elko 82.63 43 eP P 06 40 58.1 -0.2
4.9nm,0.9s,mb4.0
K10A MacKenzie Ranc 82.65 41 ⇓P P 06 40 58.3 -0.1
baz=83,SNR=7.4
A04A Legoe Bay, Lum 82.68 34 ⇑P P 06 40 58.4 0.0
baz=83,SNR=5.6
O12A Currie 82.71 44 ⇓P P 06 40 58.4 -0.4
baz=83
T15A Red Dirt Ranch 82.73 48 ⇑P P 06 40 59.0 +0.1
baz=83,SNR=7.3
219A White Tail Can 82.73 53 ⇑P P 06 40 59.3 +0.3
baz=83,SNR=5.2
B05A Bryant 82.73 34 ⇓P P 06 40 58.4 -0.2
baz=83
WUAZ Wupatki 82.74 49 eP P 06 40 59.2 +0.2
7.0nm,1.0s,mb4.2
WUAZ Wupatki 82.74 49 ⇓P P 06 40 59.4 +0.3
baz=83
I09A Lost Marbles R 82.76 39 ⇓P P 06 40 58.4 -0.5
baz=83
G08A Pilot Rock 82.77 38 ⇑P P 06 40 58.6 -0.3
baz=83,SNR=8.9
D06A Cle Elum 82.78 36 ⇑P P 06 40 58.7 -0.2
baz=83
P13A Bates Ranch, G 82.79 45 ⇓P P 06 40 59.4 +0.2
baz=83,SNR=9.5
N12A Clover Valley, 82.82 43 ⇑P P 06 40 59.2 -0.1
baz=83,SNR=5.4
R14A James Farms, M 82.90 46 ⇑P P 06 40 60.0 +0.2
baz=83
Y18A Canyon Day Jun 82.93 51 ⇓P P 06 41 00.7 +0.7
baz=83,SNR=7.5
E07A Sunnyside 82.97 36 ⇓P P 06 41 00.0 +0.1
baz=83
RSW Rattlesnake Hi 83.02 37 eP P 06 40 59.7 -0.5
119A Ashpeak Ranch, 83.03 53 ⇓P P 06 41 00.5 -0.1
baz=83
L11A Cat Creek Ranc 83.03 42 ⇓P P 06 41 00.2 -0.1
baz=83,SNR=7.3
HAWA Hanford 83.06 37 eP P 06 40 59.5 -0.8
S15A Panguitch 83.06 47 ⇓P P 06 41 01.4 +0.9
baz=83
Q14A Sevier Lake (B 83.06 45 ⇓P P 06 41 00.7 +0.2
baz=83,SNR=13
J10A Berg Farm, Mel 83.06 40 ⇑P P 06 41 00.3 -0.1
baz=83
O13A Hicks Ranch, I 83.15 44 ⇓P P 06 41 01.1 +0.1
baz=83
F08A Pendleton 83.15 38 ⇓P P 06 41 00.7 -0.2
baz=83
K11A Parker Ranch, 83.17 41 ⇑P P 06 41 00.9 -0.2
baz=83,SNR=5.5
M12A Wells 83.19 43 ⇑P P 06 41 01.1 0.0
baz=83,SNR=6.6
H09A Durkee 83.19 39 ⇓P P 06 41 00.8 -0.2
baz=83
U16A Tuba City 83.21 49 ⇓P P 06 41 01.7 +0.4
baz=83
D07A Quincy 83.26 36 ⇑P P 06 41 01.0 -0.4
baz=83
ETW Entiat 83.30 35 eP P 06 41 00.7 -0.8
T16A Glen Canyon Da 83.33 48 ⇑P P 06 41 02.4 +0.4
baz=83
X18A Snowflake 83.33 51 ⇓P P 06 41 02.5 +0.5
baz=83
R15A Junction 83.37 47 ⇓P P 06 41 02.8 +0.6
baz=84
I10A Payette 83.39 40 ⇑P P 06 41 02.3 +0.2
baz=84
G09A Cove 83.45 38 ⇓P P 06 41 01.8 -0.6
baz=84
L12A House Creek Ra 83.49 42 ⇓P P 06 41 02.9 +0.3
baz=84
P14A Drum Mountains 83.50 45 ⇓P P 06 41 03.0 +0.3
baz=84,SNR=6.4
C07A Waterville 83.50 35 ⇓P P 06 41 01.7 -0.8
baz=84
BMO Blue Mountains 83.50 39 eP P 06 41 01.8 -0.8
1.5nm,0.7s,mb3.6
BJI Beijing 83.56 315 P P 06 41 01.1 -1.9
BJI AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
MSU Marysvale 83.58 46 eP P 06 41 03.4 +0.2
Y19A Nutrioso 83.59 51 ⇓P P 06 41 03.7 +0.3
baz=84,SNR=5.8
S16A Weppner Ranch, 83.61 47 ⇓P P 06 41 03.3 -0.1
baz=84
MFID Camas Ranch 83.64 41 ⇑P P 06 41 03.3 0.0
baz=84
Q15A Fillmore 83.68 46 ⇑P P 06 41 04.0 +0.4
baz=84
H10A Noah's Angus R 83.70 39 ⇑P P 06 41 03.0 -0.6
baz=84,SNR=8.1
U17A Shonto 83.75 49 ⇑P P 06 41 04.8 +0.7
baz=84
D08A Wollman Farm, 83.78 36 ⇑P P 06 41 03.6 -0.3
baz=84
K12A Draper Farm, C 83.82 42 ⇑P P 06 41 04.4 +0.1
baz=84
I11A Placerville 83.82 40 ⇑P P 06 41 03.8 -0.4
baz=84,SNR=5.6
T17A Navajo Res., N 83.83 48 ⇑P P 06 41 05.0 +0.6
baz=84,SNR=5.9
G10A Bishop Farm, J 83.85 39 ⇓P P 06 41 03.6 -0.8
baz=84
B07A Winthrop 83.91 35 ⇓P P 06 41 03.9 -0.7
baz=84
MAW Mawson 83.97 200 P P 06 41 04.0 -0.6
comp=Z,5.4nm,0.8s,mb4.2,baz=136,slow=7.2,SNR=7.2
J12A Stokes Ranch, 84.01 41 ⇑P P 06 41 05.1 -0.1
baz=84
A07A Ashnola River, 84.11 34 ⇑P P 06 41 04.9 -0.6
baz=84
C08A Higginbotham F 84.12 36 ⇑P P 06 41 04.9 -0.7
baz=84
D09A Jones Farm, Ri 84.13 37 ⇑P P 06 41 05.1 -0.6
baz=84,SNR=5.3
S17A Black Ridge (B 84.13 48 ⇑P P 06 41 05.2 -0.7
baz=84
F10A Beach Ranch, E 84.16 38 ⇑P P 06 41 05.3 -0.6
baz=84
H11A Donnelly 84.20 40 ⇓P P 06 41 05.5 -0.5
baz=84,SNR=6.1
U18A Rough Rock, Ch 84.24 49 ⇑P P 06 41 06.4 -0.1
baz=84
M14A Sheep Mountain 84.25 43 ⇓P P 06 41 06.0 -0.4
baz=84,SNR=6.1
I12A Atlanta 84.27 41 ⇓P P 06 41 06.4 0.0
baz=84,SNR=6.4
B08A Colville Reser 84.28 35 ⇑P P 06 41 05.3 -1.0
baz=84
K13A Stover Farm, H 84.34 42 ⇓P P 06 41 06.9 0.0
baz=84
G11A Walters Elk Ra 84.42 39 ⇑P P 06 41 06.4 -0.7
baz=84,SNR=9.4
N15A Stansbury Isla 84.49 44 ⇑P P 06 41 07.7 0.0
baz=85
R17A Hanksville Air 84.56 47 ⇓P P 06 41 08.0 0.0
baz=85
T18A Mexican Hat 84.56 48 ⇓P P 06 41 08.0 -0.1
baz=85,SNR=12
HLID Hailey 84.60 41 eP P 06 41 07.8 -0.3
comp=Z,3.3nm,0.9s,mb3.9
HLID Hailey 84.60 41 ⇑P P 06 41 08.2 +0.2
baz=85,SNR=6.7
A08A Turner Farm, O 84.66 35 ⇑P P 06 41 07.6 -0.6
baz=85
J13A Cove Ranch, Pi 84.66 41 ⇓P P 06 41 08.5 +0.1
baz=85,SNR=7.6
D10A Wagner Farm, O 84.71 37 ⇑P P 06 41 07.3 -1.2
baz=85
S18A Hurst Farm, Bl 84.72 48 ⇓P P 06 41 08.2 -0.6
baz=85
F11A Grangeville 84.74 38 ⇑P P 06 41 07.4 -1.3
baz=85
M15A Larsen Ranch, 84.82 44 ⇑P P 06 41 08.6 -0.5
baz=85
GYA Guiyang 84.83 300 P P 06 41 10.8 +1.2
GYA AP pP 06 43 02.4 0.0
GYA XP sP 06 43 53.7 -1.2
GYA PP PP 06 44 38.5 +2.9
GYA SKS 06 50 44.2
GYA S S 06 50 55.9 +0.9
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
H12A Diamond D Ranc 84.83 40 ⇑P P 06 41 08.8 -0.4
baz=85,SNR=5.6
K14A Jones Ranch, D 84.87 42 ⇑P P 06 41 09.4 -0.1
baz=85
E11A Bogner Ranch, 84.96 38 ⇑P P 06 41 08.5 -1.3
baz=85
I13A Wildhorse Cree 84.96 41 ⇓P P 06 41 09.9 +0.1
baz=85
B09A Rice 84.97 36 ⇑P P 06 41 09.1 -0.7
baz=85
SRU San Rafael 85.00 46 ⇓P P 06 41 09.9 -0.2
baz=85
J14A Carey 85.04 42 ⇓P P 06 41 10.5 +0.3
baz=85,SNR=6.4
A09A Danville 85.04 35 ⇓P P 06 41 09.4 -0.7
baz=85
R18A Canyonlands Na 85.11 47 ⇑P P 06 41 10.5 -0.2
baz=85
L15A Malad City 85.12 43 ⇓P P 06 41 10.0 -0.6
baz=85
H13A Challis 85.20 40 ⇓P P 06 41 11.1 +0.1
baz=85
F12A Elk City 85.21 39 ⇓P P 06 41 10.3 -0.7
baz=85,SNR=11

D11A	Klaveano Farm, baz=85	85.25	37	⇓P		P	06 41 10.3	-0.8
O17A	Robinson Place baz=86,SNR=5.9	85.36	45	⇓P		P	06 41 11.9	+0.1
E12A	Beaver Dam Sad baz=86	85.36	38	⇓P		P	06 41 10.7	-1.0
I14A	Mackay baz=86,SNR=9.3	85.38	41	⇓P		P	06 41 12.4	+0.5
G13A	Cobalt baz=86	85.48	40	⇓P		P	06 41 12.0	-0.3
A10A	Northport baz=86	85.61	35	⇓P		P	06 41 12.2	-0.6
C11A	Tepee Creek (N baz=86,SNR=7.4	85.72	37	⇓P		P	06 41 13.2	-0.2
L16A	Fish Haven baz=86	85.75	44	⇓P		P	06 41 13.1	-0.6
J15A	Blackfoot baz=86,SNR=8.4	85.77	42	⇑P		P	06 41 14.3	+0.6
H14A	Leadore baz=86	85.78	41	⇓P		P	06 41 14.2	+0.4
F13A	Darby baz=86,SNR=5.1	85.78	39	⇓P		P	06 41 13.3	-0.5
Q19A	Hogan Spring (baz=86	85.81	47	⇓P		P	06 41 13.9	-0.1
D12A	Red Ives Fores baz=86	85.83	38	⇓P		P	06 41 13.3	-0.6
TXAR	Lajitas Array comp=Z,4.2nm,0.8s,mb4.1,baz=219,slow=6.3,SNR=65	86.03	58	P		P	06 41 16.0	+0.7
K16A	Soda Springs baz=86	86.04	43	⇓P		P	06 41 15.5	+0.5
C12B	Naegeli Ranch, baz=86	86.10	37	⇑P		P	06 41 15.1	-0.2
ANMO	Albuquerque comp=Z,3.7nm,1.1s,mb3.9	86.11	52	*e*P		P	06 41 15.6	+0.1
H15A	Lima baz=86,SNR=7.6	86.23	41	⇑P		P	06 41 16.3	+0.4
J16A	Bone baz=86,SNR=8.3	86.23	42	⇓P		P	06 41 16.2	+0.2
A11A	Hall Mountain, baz=86	86.26	36	⇑P		P	06 41 16.1	+0.2
F14A	Wisdom baz=86	86.37	40	⇑P		P	06 41 16.5	-0.1
N18A	Larsen Ranch, baz=86	86.44	45	⇓P		P	06 41 17.5	+0.5
RRI2	Red Ridge comp=Z,7.1nm,0.8s,mb4.3	86.45	42	*e*P		P	06 41 17.3	+0.3
G15A	Dillon baz=87,SNR=7.4	86.59	40	⇑P		P	06 41 17.6	0.0
I16A	Newdale baz=87,SNR=9.2	86.60	42	⇑P		P	06 41 18.3	+0.6
E14A	Clinton baz=87	86.60	39	⇓P		P	06 41 17.2	-0.4
DLMT	Dillon comp=Z,4.6nm,0.9s,mb4.1	86.62	40	*e*P		P	06 41 17.9	+0.1
TPAW	Teton Pass comp=Z,6.9nm,1.3s,mb4.1	86.76	42	*e*P		P	06 41 18.8	+0.4
REDW	Red Top Meadow comp=Z,9.3nm,1.1s,mb4.3	86.76	43	*e*P		P	06 41 18.4	0.0
J17A	Brown Place, J baz=87,SNR=5.9	86.85	43	⇓P		P	06 41 18.8	0.0
SNOW	Snow King Moun comp=Z,7.3nm,0.9s,mb4.3	86.87	42	*e*P		P	06 41 19.0	+0.1
F15A	Butte baz=87	86.92	40	⇑P		P	06 41 19.6	+0.5
D14A	Greenough baz=87	86.92	38	⇑P		P	06 41 18.6	-0.6
IMW	Indian Meadow comp=Z,5.2nm,0.8s,mb4.2	86.96	42	*e*P		P	06 41 19.6	+0.3
MOOW	Moose Ponds comp=Z,42nm,2.5s,mb4.6	87.01	42	*e*P		P	06 41 18.8	-0.8
B13A	Whitefish baz=87	87.02	37	⇓P		P	06 41 19.0	-0.5
G16A	Moss Hill, Enn baz=87	87.05	41	⇑P		P	06 41 19.4	-0.3
HHC	Hu-ho-hao-te	87.05	315	*e*P		P	06 41 20.6	+0.7
HHC					AP	pP	06 43 13.2	-0.2
HHC					XP	sP	06 44 05.5	-0.2
HHC					PP	PP	06 44 55.5	+2.5
HHC					SKS		06 50 58.4	
HHC					S	S	06 51 17.2	+1.6
HHC					XS	sS	06 54 36.1	-1.8
HHC					SS	SS	06 57 19.0	+4.5
HHC	comp=Z,19nm,0.8s,mb4.8				AMB	AMB		
HHC	comp=Z,118nm,9.0s				AMB	AMB		
E15A	Deer Lodge baz=87	87.12	39	⇑P		P	06 41 20.6	+0.6
H16A	Russell Place, baz=87,SNR=8.1	87.14	41	⇓P		P	06 41 20.8	+0.6
L19A	Farson baz=87	87.16	44	⇓P		P	06 41 20.4	+0.1
I17A	Pilgram Creek baz=87	87.20	42	⇓P		P	06 41 21.1	+0.6
BW06	Boulder Array baz=87	87.33	43	⇑P		P	06 41 20.6	-0.5
PDAR	Pinedale Array comp=Z,1.7nm,0.7s,mb3.8,baz=196,slow=2.6,SNR=17	87.33	43	P		P	06 41 20.7	-0.3
A13A	Flathead Natio baz=88	87.34	36	⇓P		P	06 41 20.5	-0.7
BOZ	Bozeman (W)	87.36	40	*e*P		P	06 41 20.5	-0.7
BOZ	Bozeman (W) baz=88	87.36	40	⇓P		P	06 41 20.9	-0.3
F16A	Kennard Place, baz=88	87.42	40	⇑P		P	06 41 21.9	+0.4
D15A	Lincoln baz=88	87.49	39	⇑P		P	06 41 21.6	-0.2
KMI	Kunming	87.62	297	P		P	06 41 24.6	+1.6
KMI	comp=Z,8.0nm,0.8s,mb4.5				AMB	AMB		
E16A	East Helena baz=88	87.75	39	⇓P		P	06 41 22.9	-0.1
G17A	Pierce Place, baz=88	87.75	41	⇑P		P	06 41 23.3	+0.3
L20A	Wamsutter baz=88,SNR=7.2	87.80	45	⇑P		P	06 41 23.4	0.0
C15A	Salmond Ranch, baz=88	87.80	38	⇓P		P	06 41 23.0	-0.2
A14A	Double T Ranch baz=88	87.92	37	⇓P		P	06 41 23.6	-0.2
F17A	Fitzpatrick Pl baz=88	88.08	40	⇑P		P	06 41 23.9	-0.6
B15A	Bradely Ranch, baz=88	88.09	38	⇓P		P	06 41 23.6	-1.0
A15A	Johnson Ranch, baz=88	88.32	37	⇓P		P	06 41 24.7	-0.9
C16A	Fuhringer Ranc baz=88	88.32	38	⇓P		P	06 41 25.0	-0.7
RLMT	Red Lodge baz=89	88.58	41	⇑P		P	06 41 27.2	+0.2
B16A	M & M Farms, S baz=89	88.64	38	⇓P		P	06 41 26.3	-0.8
D17A	Six Diamond Ra baz=89	88.64	39	⇑P		P	06 41 27.0	-0.2
F18A	Big Timber baz=89	88.66	41	⇑P		P	06 41 27.5	+0.2
CMAR	Chiang Mai Arr comp=Z,1.0nm,0.3s,mb4.1,baz=116,slow=4.5,SNR=4.5	88.69	290	P		P	06 41 29.1	+1.1
C17A	Wharram Farm, baz=89	88.82	39	⇑P		P	06 41 27.7	-0.3
E18A	Harlowton baz=89	88.84	40	⇓P		P	06 41 29.2	+1.1
CD2	Chengdu	88.86	303	*e*P		P	06 41 28.8	+0.2
CD2					AP	pP	06 43 22.4	-0.2
CD2					XP	sP	06 44 12.9	-1.9
CD2	comp=Z,20nm,4.2s				AMB	AMB		
A16A	West Butte Ran baz=89	88.96	37	⇓P		P	06 41 28.0	-0.5
D18A	Linhart Farms, baz=89	89.20	39	⇓P		P	06 41 29.5	-0.2
SYO	Syowa Base	89.29	193	⇓*e*P		P	06 41 27.0	-2.9
LZH	Lanzhou	90.67	308	*e*P		P	06 41 38.5	+1.6
LZH					AP	pP	06 43 31.6	+0.4
LZH					XP	sP	06 44 22.7	-0.5
LZH	comp=Z,15nm,1.3s,mb4.8				AMB	AMB		
LZH	comp=Z,65nm,4.2s				AMB	AMB		
VNA3	Neumayer Olymp	90.92	176	*e*P		P	06 41 36.7	-0.7
VNA2	Neumayer--Watz baz=167,slow=3.8	91.36	177	*e*P		P	06 41 38.6	-0.8
PLCA	Paso Flores comp=Z,4.1nm,1.0s,mb4.4,baz=286,slow=4.6,SNR=4.9	91.55	134	P		P	06 41 41.8	+0.9
VNA1	Neumayer--Stat	91.58	177	*e*P		P	06 41 40.4	-0.1
DGMT	Dagmar baz=93	93.16	40	⇓P		P	06 41 47.7	-0.2

SONM	Songino Array comp=Z,0.2nm,0.3s,mb3.6,baz=122,slow=5.2,SNR=2.7	93.33	319	P		P	06 41 48.6	-0.2
MKAR	Makanchi Array comp=Z,0.7nm,0.5s,baz=66,slow=0.3,SNR=9.1	108.91	314	PKiKP	PKiKP		06 46 58.1	-1.8
BVAR	Borovoye Array comp=Z,1.8nm,0.6s,baz=85,slow=3.1,SNR=11	116.62	321	PKP	PKPdf		06 47 12.7	-1.7
AKTO	Aktyubinsk comp=Z,1.7nm,0.7s,baz=16,slow=1.2,SNR=6.8	124.65	320	PKP	PKPdf		06 47 28.2	-1.6
ARCES	ARCESS Array B comp=Z,2.7nm,0.9s,baz=6.9,slow=4.0,SNR=4.5	126.12	350	PKP	PKPdf		06 47 29.6	-2.6
BSEG	Bad Segeberg	143.22	351	*e*PKPbc	PKPdf		06 48 01.6	-2.7
KWP	Kalwaria	143.86	336	⇑*i*P	PKPdf		06 48 04.4	-1.2
BURAR	Bucovina Array	144.40	332	⇑*i*P	PKPdf		06 48 06.9	+0.3
BRTR	Keskin Array B comp=Z,5.7nm,0.7s,baz=131,slow=3.4,SNR=23	144.56	315	PKP	PKPdf		06 48 06.1	-1.0
STHS	Stebnicka Huta	144.58	338	*e*PKP	PKPdf		06 48 06.5	-0.3
ASF	Jabal al Asfar comp=Z,2.9nm,0.6s,baz=0.0,slow=4.0,SNR=3.6	144.97	301	PKP	PKPdf		06 48 07.9	-0.1
PLOR	Plostina	145.01	329	⇓*i*P	PKPdf		06 48 08.7	+1.0
TIRR	Tirgusor	145.05	325	⇓*i*P	PKPdf		06 48 07.9	+0.1
OKC	Ostrava-Krasne	145.27	341	*e*PKP	PKPdf		06 48 08.0	0.0
CLL	Collm	145.27	347	*e*PKPbc	PKPbc		06 48 07.7	-1.2
CLL	Collm comp=Z,15nm,0.8s	145.27	347	⇑*i*PKPbc	PKPbc		06 48 07.8	-1.1
CLL	comp=Z,7.0nm,0.7s			⇓*i*PKPab	PKPab		06 48 09.4	-0.6
UPC	Upice	145.29	344	*e*PKP	PKPdf		06 48 08.6	+0.6
DPC	Dobruska-Polom	145.34	343	*e*PKP	PKPdf		06 48 08.6	+0.5
BRG	Berggiesshubel	145.47	346	*e*PKPbc	PKPbc		06 48 08.7	-0.8
BRG	Berggiesshubel comp=Z,8.0nm,0.8s	145.47	346	*i*	PKPdf		06 48 08.6	+0.3
MORC	Moravsky Berou	145.50	341	⇑*i*P	PKPdf		06 48 08.8	+0.4
PVCC	Panska Ves	145.64	345	*e*PKP	PKPdf		06 48 08.6	0.0
MMAI	Mount Meron Ar comp=Z,5.7nm,0.5s,baz=64,slow=5.7,SNR=6.4	145.93	303	PKPbc	PKPbc		06 48 10.9	-0.5
DRGR		146.12	333	⇑*i*P	PKPdf		06 48 10.9	+1.4
PRU	Pruhonice	146.14	345	*e*PKP	PKPdf		06 48 10.8	+1.3
MOX	Moxa	146.18	348	*e*PKPbc	PKPbc		06 48 10.3	-1.2
VRAC	Vranov comp=Z,3.0nm,0.3s,baz=18,slow=1.2,SNR=4.2	146.21	342	PKPbc	PKPbc		06 48 10.9	-0.8
VYHS	Vyhne	146.21	339	*e*PKP	PKPab		06 48 15.2	+1.4
TANN	Tannenbergstha	146.22	347	*e*PKPbc	PKPbc		06 48 10.2	-1.5
KOLL	Kolacno	146.28	340	*e*PKP	PKPbc		06 48 12.1	+0.2
PSZ	Piszkesteto	146.32	337	⇑*i*P	PKPbc		06 48 11.2	-0.8
MANZ	Manzenberg	146.70	347	*e*PKPbc	PKPbc		06 48 12.1	-0.9
MODS	Modra-Piesok	146.83	341	*e*PKP	PKPbc		06 48 13.0	-0.4
ROTZ	Rotzenmuhle	146.89	347	*e*PKPbc	PKPbc		06 48 12.7	-0.8
MEM	Membach	147.00	355	PKPbc	PKPbc		06 48 13.0	-0.8
ZST	Bratislava	147.04	341	*e*PKP	PKPbc		06 48 13.8	-0.2
TNS	Taunus Mts	147.11	352	*e*PKPbc	PKPbc		06 48 12.8	-1.3
GRF	Grafenberg Arr	147.16	348	*e*PKPbc	PKPbc		06 48 13.2	-1.0
KHC	Kasperske Hory	147.18	345	*e*PKP	PKPbc		06 48 13.7	-0.6
GZR	Gura Zlata	147.18	332	⇓*i*P	PKPbc		06 48 13.6	-0.8
GEC2	GERESS Array S	147.41	345	*e*PKPbc	PKPbc		06 48 14.0	-0.9
GERES	GERESS Array B comp=Z,6.2nm,0.7s,baz=29,slow=3.0,SNR=29	147.41	345	PKPbc	PKPbc		06 48 14.2	-0.7
GIVF	Givet comp=Z,35nm,0.9s	147.60	356	*e*PKP1	PKPbc		06 48 14.4	-1.0
DOU	Dourbes	147.62	356	PKPbc	PKPbc		06 48 14.9	-0.5
CONA	Conrad Observa comp=Z,10.0nm,0.8s	147.66	342	⇓*i*PKPbc	PKPbc		06 48 15.2	-0.3
BAIF	Baives comp=Z,21nm,0.8s	147.68	357	⇑*i*PKP1	PKPbc		06 48 14.7	-0.9
WLF	Walferdange	147.93	354	PKPbc	PKPbc		06 48 16.5	+0.3
WLF	Walferdange	147.93	354	*e*PKPbc	PKPbc		06 48 15.9	-0.3
RJOB	Jochberg	148.66	345	*e*PKPbc	PKPbc		06 48 16.9	-1.2
BFO	Black Forest	148.97	351	*e*PKPbc	PKPbc		06 48 17.7	-1.2
FLN	La Foliniere comp=Z,42nm,0.9s	149.02	2	⇑*i*PKP1	PKPbc		06 48 17.6	-1.4
CDF	Champ du Feu comp=Z,22nm,0.9s	149.04	352	⇑*i*PKP1	PKPbc		06 48 18.0	-1.0
MEZF	Maizieres J'vi comp=Z,8.1nm,0.4s	149.18	355	*e*PKP1	PKPbc		06 48 17.9	-1.4
LDF	La Druitiere comp=Z,24nm,1.0s	149.20	2	⇑*i*PKP1	PKPbc		06 48 18.0	-1.4
ROSF	Rostrenen	149.24	6	*e*PKP1	PKPbc		06 48 18.0	-1.5
GRR	Gorron comp=Z,61nm,1.2s	149.37	3	*e*PKP1	PKPbc		06 48 18.5	-1.3
SGMF	Saint Gilles comp=Z,47nm,1.1s	149.39	5	*e*PKP1	PKPbc		06 48 18.4	-1.5
MOTA	Mousalm comp=Z,11nm,0.9s	149.42	347	⇑*i*PKPbc	PKPbc		06 48 18.6	-1.4
HAU	Haudompre comp=Z,9.8nm,0.7s	149.55	353	*e*PKP1	PKPbc		06 48 19.1	-1.2
QUIF	Quistinic	149.67	6	*e*PKP1	PKPbc		06 48 19.0	-1.5
HINF	Hinteralfeld comp=Z,8.5nm,0.7s	149.68	353	*e*PKP1	PKPbc		06 48 19.3	-1.3
FETA	Feichten comp=Z,11nm,1.0s	149.81	347	⇑*i*PKPbc	PKPbc		06 48 20.2	-0.7
DAVOX	Davos/Dischmat comp=Z,15nm,0.7s,baz=350,slow=6.1,SNR=19	150.21	348	PKPbc	PKPbc		06 48 21.3	-0.5
LOR	Lormes comp=Z,23nm,0.8s	150.48	357	⇑*i*PKP1	PKPbc		06 48 21.5	-1.0
HYF	Humbligny	150.53	358	*e*PKP1	PKPbc		06 48 21.9	-0.7
SSF	Saint Saulge comp=Z,30nm,0.9s	150.71	357	⇑*i*PKP1	PKPbc		06 48 22.0	-1.0
CABF	La Chapelle comp=Z,26nm,0.9s	150.95	353	*e*PKP1	PKPbc		06 48 23.1	-0.5
AVF	Avril sur Loir	150.99	357	*e*PKP1	PKPbc		06 48 22.2	-1.4
MFF	Saint Martin d comp=Z,31nm,1.0s	151.19	2	*e*PKP1	PKPbc		06 48 22.8	-1.3
BGF	Bois d'Agland comp=Z,10nm,0.7s	151.24	358	*e*PKP1	PKPbc		06 48 23.1	-1.1
APE	Apeiranthos	151.36	317	⇓*i*P	PKPdf		06 48 19.1	+0.9
TCF	Toulx Ste Croi comp=Z,13nm,0.9s	151.52	359	*e*PKP1	PKPbc		06 48 23.6	-1.3
LPG	La Plagne comp=Z,3.4nm,0.6s	151.97	352	*e*PKP1	PKPbc		06 48 25.7	-0.2
RJF	Les Rejaudoux comp=Z,12nm,0.8s	152.51	360	*e*PKP1	PKPbc		06 48 25.8	-1.3
MBDF	Montbardon comp=Z,9.0nm,0.7s	152.72	352	*e*PKP1	PKPbc		06 48 26.7	-0.9
IDI	Anoyia comp=Z,4.2nm,0.6s,baz=269,slow=5.6,SNR=3.8	152.80	315	PKPbc	PKPbc		06 48 28.1	+0.1
CAF	Calviac comp=Z,7.3nm,0.8s	152.89	359	*e*PKP1	PKPbc		06 48 26.9	-1.0
DBIC	Dimbokro comp=Z,4.5nm,0.9s,baz=131,slow=3.3,SNR=3.6	167.40	150	PKP	PKPdf		06 48 35.3	-1.7
TORD	Torodi Ar. Bea comp=Z,2.2nm,0.8s,baz=302,slow=0.7,SNR=14	175.48	183	PKP	PKPdf		06 48 38.5	-2.2
TORD	comp=Z,0.6nm,1.0s,baz=168,slow=4.3,SNR=4.3			PKPab	PKPab		06 50 19.6	-1.4

*IDC **08** 06:38:53.0±1.7,3192N×13987E,h107km±12km, mb3.4/7, mb1 3.6/8, mb1mx3.4/21, mbtmp3.3/8, MS2.7/1, Ms1 2.7/1, ms1mx2.2/20, Error ellipse: s-maj=28.8km s-min=21.8km az=65.0*

*ISCJB **08** 06:38:53.5±1.2,3211N±009×140.15E±0.10, h125km±6km, mb3.6/9, Error ellipse: s-maj=16.1km s-min=11.8km az=137.8*

*JMA **08** 06:38:54.2±0.2,3210N×140.18E, h116km±2km, M3.5*

ISC 08 06:38:54.1±1.1,3207N±008×14017E±010,h118km±7km, n32,σ0§82/35,mb3.6/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.08	344	P	Pn	06 39 16.6	-0.2
JHJ2				S	Sn	06 39 34.1	+0.2
JHJ	Hachijo jima 2 84nm,0.3s,baz=256,slow=22,SNR=58	1.10	343	P	Pn	06 39 16.9	-0.1
JHJ	82nm,0.3s,baz=239,slow=24,SNR=9.2			S	Sn	06 39 33.3	-0.9
JKO	Kozu shima	2.28	338	P	Pn	06 39 31.3	+0.3
BSO1	Boso 1	2.66	14	P	Pn	06 39 35.7	-0.2
BSO1				*e*S	Sn	06 40 08.1	0.0
BSO3	Boso 3	2.74	6	*e*S	Sn	06 40 10.4	+0.6
TK02	Tokai 2	2.76	313	P	Pn	06 39 37.4	+0.2
JOD2	Odawara 2	3.31	344	P	Pn	06 39 45.3	+0.9
JOD2				*e*S	Sn	06 40 23.1	-0.2
HMMJ	Hamamatsu 2	3.45	324	P	Pn	06 39 46.1	-0.2
JIE	Ise	3.71	309	P	Pn	06 39 49.6	-0.2
JNY	Yasuok	3.80	330	P	Pn	06 39 51.9	+1.0
JHU	Hanno	3.84	349	P	Pn	06 39 51.5	0.0
JAO	Obara	4.01	323	P	Pn	06 39 54.2	+0.5
JRY	Ryogami san	4.08	345	P	Pn	06 39 55.0	+0.4
JRY				S	Sn	06 40 40.4	-1.1
JAG	Ashikaga	4.38	352	P	Pn	06 39 57.3	-1.4
JWY	Kouya	4.40	300	P	Pn	06 39 59.3	+0.4
JHO	Hitachi	4.54	4	P	Pn	06 39 59.5	-1.3
JGM	Miyama	4.62	323	P	Pn	06 40 02.5	+0.6
MJAR	Matsushiro Arr 1.4nm,0.3s,baz=145,slow=10,SNR=5.3	4.75	341	P	Pn	06 40 03.5	0.0
MAT	Matsushiro	4.75	341	P	Pn	06 40 04.0	+0.4
KSRS	Korea Array baz=121,slow=13,SNR=6.0	11.41	301	P	Pn	06 41 35.1	+1.6
JOW	Kunigami comp=Z,42nm,20.6s,baz=178,slow=35	11.61	246	LR	LR	06 45 27.6	
ZALV	Zalesovo Beam 0.7nm,0.5s,mb3.7,baz=128,slow=8.8,SNR=3.1	44.64	316	P	P	06 46 54.5	-0.1
MKAR	Makanchi Array 0.1nm,0.3s,mb3.0,baz=80,slow=11,SNR=4.1	46.05	306	P	P	06 47 04.5	-1.4
KURK	Kurchatov baz=86,slow=8.4	48.32	312	P	P	06 47 22.7	-0.7
WRA	Warramunga Arr 0.2nm,0.3s,mb3.6,baz=2.6,slow=7.8,SNR=8.1	52.02	187	P	P	06 47 49.8	-1.7
ARCES	ARCESS Array B 2.3nm,0.9s,mb4.0,baz=56,slow=8.8,SNR=3.7	68.28	340	P	P	06 49 42.0	+0.2
JOF	Joensuu 0.9nm,0.4s,mb4.0	69.87	333	*e*p	P	06 49 51.2	-0.6
KAF	Kangasniemi 1.1nm,0.4s,mb4.0	72.25	333	*e*p	P	06 50 05.6	-0.6
NOA	NORSAR Array B 1.3nm,0.8s,mb3.7,baz=42,slow=5.7,SNR=3.3	78.36	337	P	P	06 50 41.0	-0.1
NVAR	Mina Array Bea 0.2nm,0.5s,mb3.2,baz=280,slow=5.2,SNR=2.7	78.82	52	P	P	06 50 46.2	+2.1
TXAR	Lajitas Array 0.2nm,0.8s,mb3.5,baz=298,slow=2.7,SNR=3.5	93.97	52	P	P	06 52 00.6	+1.6
TORD	Torodi Ar. Bea 0.5nm,1.0s,baz=18,slow=0.5,SNR=2.7	119.99	312	PKP	PKPdf	06 57 31.5	+0.1

KRSC 08 06:57:04.0±0.1,5305N×16046E,h38km±38km,ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.27	281	*e*P	Pn	06 57 12.0	+0.3
SPN				*i* S	Sn	06 57 17.1	0.0
NLC	Nalytchevo	0.68	281	*e*P	Pn	06 57 17.7	+0.6
NLC				*i* S	Sn	06 57 27.2	+0.7
AVH	Avacha	1.06	282	*e*P	Pn	06 57 23.6	+1.3
AVH				*i* S	Sn	06 57 38.0	+2.2
PET	Petropavlovsk	1.09	269	*e*P	Pn	06 57 23.1	+0.4
PET				*i* S	Sn	06 57 36.1	-0.5
KII	Karymskiy	1.16	329	*e*P	Pn	06 57 24.3	+0.6
KII				*i* S	Sn	06 57 38.9	+0.7
RUS	Russkaya	1.33	243	*e*P	Pn	06 57 27.1	+1.0
RUS				*i* S	Sn	06 57 43.9	+1.3
GRL	Gorelyy	1.53	252	*e*P	Pn	06 57 30.5	+1.7
GRL				*i* S	Sn	06 57 49.1	+1.6
GNL	Ganaly	1.64	294	*e*P	Pn	06 57 32.0	+1.7
GNL				*i* S	Sn	06 57 53.0	+2.9
MKZ	Mys Kozlova	1.69	26	*e*P	Pn	06 57 30.5	-0.4
MKZ				*i* S	Sn	06 57 50.6	-0.7
TUMR	Tumrok	2.25	355	*e*P	Pn	06 57 40.2	+1.6
TUMR				*i* S	Sn	06 58 07.2	+2.2
MIPR	Malaya Ipel'ka	2.38	252	*e*P	Pn	06 57 42.8	+2.3
MIPR				*i* S	Sn	06 58 11.4	+3.0
KMNR	Kamenistaya	2.71	357	*e*P	Pn	06 57 47.3	+2.3
KMNR				*i* S	Sn	06 58 19.7	+3.1
KIRR	Kirishev	2.91	359	*e*P	Pn	06 57 50.5	+2.8
KIRR				*i* S	Sn	06 58 25.2	+3.8
KPT	Kopyto	2.93	357	*e*P	Pn	06 57 50.8	+2.9
KPT				*i* S	Sn	06 58 25.8	+4.0
ZLN	Zelenaya	2.98	4	*e*P	Pn	06 57 51.9	+3.2
ZLN				*i* S	Sn	06 58 27.2	+4.1
KOZ	Kozyrevsk	3.03	354	*e*P	Pn	06 57 51.7	+2.3
KOZ				*i* S	Sn	06 58 27.8	+3.4
KRSR	Krestovskiy	3.17	1	*e*P	Pn	06 57 54.2	+2.9
KRSR				*i* S	Sn	06 58 31.4	+3.5
KLY	Klyuchi	3.27	2	*e*P	Pn	06 57 55.4	+2.7
KLY				*i* S	Sn	06 58 34.3	+4.0
KBTR	Krutoberegovo	3.45	22	*e*P	Pn	06 57 56.5	+1.4
KBTR				*i* S	Sn	06 58 35.6	+0.9
SRKR	Sorokina	3.63	6	*e*P	Pn	06 58 00.8	+3.1
SRKR				*i* S	Sn	06 58 42.8	+3.5

*ISCJB **08** 07:20:52.6±1.4,3819N±004×2645E±008,h4km±7km, Error ellipse: s-maj=11.2km s-min=6.0km az=160.0*
*ATH **08** 07:20:53.3,3830N×2680E,h29km,MD3.1/3*
*CSEM **08** 07:20:53.8±0.5,3825N×2657E,h0km±2km,MD2.5, Error ellipse: s-maj=17.9km s-min=7.6km az=71.0*
*DDA **08** 07:20:54.4,3826N×2658E,h6km±1km,Md2.5*

ISC 08 07:20:53.9±1.1,3824N±004×2649E±008,h4km±7km,n9, σ0§89/15,1C-1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.14	36	⇑*i*P	Pg	07 20 56.8	0.0
URLA				*i* S	Sg	07 20 59.1	+0.3
SMG	Samos	0.60	152	*e*PN	Pg	07 21 05.6	+0.2
SMG				*e*SN	Sg	07 21 14.4	+1.2
KDAG	Bornova	0.63	75	*i* P	Pg	07 21 05.6	-0.5
KDAG				*i* S	Sg	07 21 13.9	-0.4
GCAM	G?zelcaml?	0.80	132	⇓*i*P	Pg	07 21 09.2	0.0
GCAM				*i* S	Sg	07 21 20.0	+0.3
GCAM	G?zelcaml?	0.80	132	*i* P	Pg	07 21 09.2	-0.1
PRK	Paraskevi	1.02	351	*e*PN	Pn	07 21 13.0	-2.0
AYDN	Tasoluk	1.24	117	*i* P	Pb	07 21 17.1	-0.9
AYDN				*i* S	Sg	07 21 32.9	-1.0
BALY	Balya	1.74	30	*e*P	Pn	07 21 25.9	+1.1
BALY				*i* S	Sn	07 21 49.2	+1.7
LIA	Limnos Island	1.94	329	*e*PN	Pn	07 21 27.7	0.0

*IDC **08** 07:27:47.3±1.7,2257S×17601W,h0km,mb3.7/5, mb1 4.1/6,mb1mx4.0/17,mbtmp3.9/6,ML3.1/1,MS3.4/1, Ms1 3.4/1,ms1mx2.3/33,Error ellipse: s-maj=88.8km s-min=22.3km az=150.0*

*ISCJB **08** 07:27:52.9±5.9,222S±03×176.3W±0.3,h46km±49km, mb3.7/5,Error ellipse: s-maj=72.1km s-min=18.1km az=140.8*

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MWZ	**Matawai**	**1.75**	**19**	P	Pn	07 29 41.1	-0.8
URZ	**Urewera**	**1.75**	**7**	P	Pn	07 29 40.8	-1.1
TAZ	**Tarawera**	**1.78**	**352**	P	Pn	07 29 41.8	-0.5
MSWZ	**Moikau Station**	**1.85**	**220**	P	Pn	07 29 42.3	-1.0
RAEZ	**Rainy Point**	**2.00**	**290**	P	Pn	07 29 48.4	+3.0
MRW	**Makara Radio**	**2.03**	**232**	P	Pn	07 29 45.1	-0.6
SNZO	**South Karori**	**2.07**	**230**	P	Pn	07 29 45.2	-1.2
HIZ	**Hauiti**	**2.13**	**314**	P	Pn	07 29 46.9	-0.2
NEZ	**North Egmont**	**2.23**	**288**	P	Pn	07 29 51.3	+2.9
PUZ	**Puketiti**	**2.23**	**31**	P	Pn	07 29 47.1	-1.4
TCW	**Tory Channel**	**2.29**	**237**	P	Pn	07 29 48.2	-1.1
PKE	**Pukeiti**	**2.33**	**289**	P	Pn	07 29 52.5	+2.6
MXZ	**Matakaoa Point**	**2.70**	**26**	P	Pn	07 29 54.5	-0.4
QRZ	**Quartz Range**	**3.38**	**254**	P	Pn	07 30 02.7	-1.6

*ISCJB **08** 07:38:00.6±0.7, 3926N±004×2931E±004, h5km±7km, Error ellipse: s-maj=6.6km s-min=4.4km az=142.7*
*ISK **08** 07:38:00.5, 3924N×2927E, h8km, MD2.8*
*CSEM **08** 07:38:00.4±0.1, 3924N×2930E, h9km±2km, MD2.8, Error ellipse: s-maj=3.7km s-min=2.2km az=138.0*

ISC 08 07:38:01.1±0.5, 3926N±003×2929E±004, h7km±6km, n17, σ0s58/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.50**	**244**	*i* P	**Pg**	**07 38 11.1**	**+0.3**
DEMI				*i* S	**Sg**	**07 38 17.3**	**0.0**
ALT	**Altintas**	**0.67**	**108**	*e*PG	**Pg**	**07 38 13.9**	**-0.1**
ALT				*e*SG	**Sg**	**07 38 23.7**	**+1.0**
ULDT	**Uludag**	**0.89**	**352**	*i* P	**Pg**	**07 38 17.5**	**-0.6**
ULDT	**Uludag**	**0.89**	**352**	*i* P	**Pg**	**07 38 17.5**	**-0.6**
ULDT				*i* S	**Sg**	**07 38 29.0**	**-0.6**
KULA	**Kula-Manisa**	**0.90**	**214**	*e*PG	**Pg**	**07 38 18.1**	**-0.2**
KULA				*e*SG	**Sg**	**07 38 29.7**	**-0.3**
MANT	**Manisa**	**0.96**	**217**	*i* P	**Pg**	**07 38 19.9**	**+0.3**
MANT	**Manisa**	**0.96**	**217**	*i* P	**Pg**	**07 38 19.9**	**+0.3**
MANT				*i* S	**Sg**	**07 38 31.9**	**-0.1**
CAVI	**Cavuskoy**	**1.03**	**24**	*e*PG	**Pg**	**07 38 21.1**	**+0.2**
AKHS	**Akhisar**	**1.21**	**252**	*e*P	**Pb**	**07 38 24.2**	**-0.1**
AKHS				*i* S	**Sb**	**07 38 40.7**	**+0.5**
AKS	**Akhisar**	**1.22**	**252**	*e*PN	**Pn**	**07 38 24.0**	**-0.5**
KCT	**Karacabey**	**1.23**	**324**	*e*PN	**Pn**	**07 38 24.4**	**-0.3**
YLV	**Yalova**	**1.30**	**3**	*e*PN	**Pn**	**07 38 25.9**	**+0.3**
BALY	**Balya**	**1.38**	**291**	*i* P	**Pn**	**07 38 26.8**	**+0.1**
BALY	**Balya**	**1.38**	**291**	*i* P	**Pn**	**07 38 26.8**	**+0.1**
BALY				*i* S	**Sb**	**07 38 45.9**	**+0.9**
EYL	**Eskiyayla**	**1.46**	**27**	*e*PN	**Pn**	**07 38 27.4**	**-0.4**
TKTP	**Tekketepe**	**1.46**	**146**	*i* P	**Pn**	**07 38 26.2**	**-1.6**
GULT	**Gulveren**	**1.50**	**38**	*e*PN	**Pn**	**07 38 29.3**	**+0.9**

*MOS **08** 07:44:23.5±0.9, 5598S×2782W, h33km, mb5.6/8, Error ellipse: s-maj=22.5km s-min=13.1km az=102.3*
*ISCJB **08** 07:44:29.3±1.6, 5597S±005×2792W±0.10, h85km±14km, mb5.2/33, Error ellipse: s-maj=10.3km s-min=6.9km az=142.8*
*NEIC **08** 07:44:31.1±0.1, 5598S×2793W, mb5.4/20, Error ellipse: s-maj=5.9km s-min=4.7km az=204.0*
*BJI **08** 07:44:31.0, 5600S×2790W, h90km, mB5.4, Ms5.7, Msz5.4*
*GCMT **08** 07:44:31.0±0.1, 5606S×2780W, h84km±1km, MW5.4/89, Moment Tensor Solution. s80,c125; s89,c160; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr-0.01±.02; Mθθ-0.10±.03; Mϕϕ0.10±.03; Mrθ-0.33±.02; Mθϕ1.53±.02; Mϕr-0.56±.02; Best double couple: Mo1.65400×10^17 NP1ϕs270.00000°, δ72.00000°, λ10.00000°. NP2ϕs177.00000°, δ80.00000°, λ162.00000°. Principal axes: T 1.7630, Plg20.0000°, Azm132.0000°; N -0.2200, Plg69.0000°, Azm330.0000°; P -1.5440, Plg6.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **08** 07:44:33.5±1.0, 5600S×2800W, h109km±7km, mb4.8/17, mb1 4.8/18, mb1mx4.7/21, mbtmp4.8/18, MS4.2/21, Ms1 4.2/21, ms1mx4.2/24 Error ellipse: s-maj=12.4km s-min=10.2km az=16.0*

ISC 08 07:44:32.2±1.3, 5608S±005×2797W±010, h99km±12km, h92km±2.4km: pP-P, n226, σ0s88/73, mb5.2/33, 6C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.94**	**157**	*e*Pn	**Pn**	**07 48 22.4**	**-0.2**
VNA1				*e*		07 48 24.1	
VNA1				*e*		07 48 27.0	
VNA1				*e*		07 48 38.7	
VNA1				*e*		07 53 01.9	
VNA1				*e*		07 56 27.5	
VNA3	**Neumayer Olymp**	**17.11**	**160**	*e*Pn	**Pn**	**07 48 24.4**	**-0.4**
VNA3				*e*		07 48 25.9	
VNA3				*e*		07 48 28.0	
VNA3				*e*		07 48 40.5	
VNA3				*e*		07 53 03.2	
VNA3				*e*		07 56 26.9	
VNA2	**Neumayer--Watz** baz=313,slow=14	**17.34**	**157**	*e*Pn	**Pn**	**07 48 27.0**	**-0.5**
VNA2				*e*		07 48 28.9	
VNA2				*e*		07 48 30.9	
VNA2				*e*		07 53 03.9	
VNA2				*e*		07 56 27.9	
EFI	**East Falkland** 849nm,0.8s,SNR=15	**18.20**	**271**	Pn	**Pn**	**07 48 38.5**	**+0.4**
EFI	**East Falkland** 169nm,1.0s	**18.20**	**271**	*e*P	**Pn**	**07 48 38.4**	**+0.3**
EFI	**East Falkland** comp=Z,169nm,1.0s	**18.20**	**271**	*e*P pmax	**Pn** pmax	**07 48 38.4**	**+0.3**
PMSA	**Palmer Station** comp=Z,14nm,0.3s,baz=75,slow=9.4,SNR=27	**19.55**	**229**	P	**Pn**	**07 48 53.5**	**-0.4**
PMSA				LR	LR	07 55 22.1	
PMSA	comp=Z,828nm,19.2s,baz=86,slow=33			ScP	ScP	07 56 30.8	-3.2
PMSA	**Palmer Station** comp=Z,1.0nm,0.3s,baz=112,slow=4.2,SNR=4.8	**19.55**	**229**	*e*P	**Pn**	**07 48 54.3**	**+0.3**
PMSA	**Palmer Station** comp=Z,446nm,1.0s	**19.55**	**229**	*e*P	**Pn**	**07 48 54.3**	**+0.3**
MAIT	**Maitri**	**22.46**	**146**	*e*P	**P**	**07 49 21.6**	**-1.0**
MAIT				*e*S	**S**	**07 53 19.9**	**-1.7**
NVL	**N'lazarevskaya**	**22.48**	**146**	*c i*P	**P**	**07 49 23.0**	**+0.1**
NVL				*e*S	**S**	**07 53 22.1**	**+0.1**
NVL	comp=Z,171nm,0.9s,mb5.4			pmax	pmax		
USHA	**Ushuaia** comp=Z,71nm,0.9s,mb5.0,baz=88,slow=9.1,SNR=27	**22.76**	**256**	P	**P**	**07 49 26.1**	**+0.2**
USHA				PcP	PcP	07 53 13.3	-0.4
USHA	comp=Z,5.1nm,0.6s,baz=94,slow=6.1,SNR=5.4			ScP	ScP	07 56 40.9	-1.2
COYC	**Coyhaique**	**29.30**	**272**	*i* P	**P**	**07 50 24.5**	**-0.4**
PLCA	**Paso Flores** comp=Z,6.1nm,0.8s,mb4.4,baz=143,slow=9.8,SNR=22	**31.58**	**281**	P	**P**	**07 50 43.9**	**-1.2**
PLCA				PcP	PcP	07 53 35.1	0.0
PLCA	comp=Z,4.9nm,0.6s,baz=114,slow=3.4,SNR=9.0			ScP	ScP	07 57 07.0	-2.0
PLCA	comp=Z,8.2nm,0.8s,baz=121,slow=4.7,SNR=15			LR	LR	08 02 41.8	
PLCA	**Paso Flores** comp=Z,553nm,21.4s,baz=126,slow=34	**31.58**	**281**	P	**P**	**07 50 43.9**	**-1.2**
PLCA						07 53 35.1	
SYO	**Syowa Base**	**31.84**	**141**	⇓ *i*P	**P**	**07 50 45.4**	**-1.7**
SYO	**Syowa Base**	**31.84**	**141**	⇓ *i*pP	pP	07 51 05.4	-3.9
SYO	**Syowa Base**	**31.84**	**141**	⇑ *e*PKiKP	PKiKP	08 01 02.4	-0.7
QSPA	**South Pole Qui** comp=Z,120nm,0.6s,mb5.9,baz=203,slow=3.6,SNR=427	**34.18**	**180**	P	**P**	**07 51 08.7**	**+1.4**
QSPA				ScP	ScP	07 57 15.2	-2.1
QSPA	comp=Z,13nm,0.6s,baz=192,slow=1.3,SNR=11			LR	LR	08 03 50.9	
SPB	**Sao Paulo** comp=Z,830nm,20.1s,baz=358,slow=34	**35.46**	**328**	*e*P	**P**	**07 51 20.0**	**+1.1**
CFAA	**Coronel Fontan** comp=Z,4.2nm,0.7s,mb4.5,baz=146,slow=8.4,SNR=114	**37.17**	**294**	P	**P**	**07 51 31.6**	**-1.8**
CFAA				PcP	PcP	07 53 50.9	-0.5
CFAA	comp=Z,2.5nm,0.6s,baz=147,slow=3.4,SNR=9.2			ScP	ScP	07 57 26.9	-2.1
CFAA	comp=Z,0.8nm,0.5s,baz=154,slow=4.6,SNR=6.8			LR	LR	08 04 55.1	
MAW	**Mawson** comp=Z,100nm,0.8s,mb5.7	**40.39**	**144**	⇑ *i*P	**P**	**07 52 00.3**	**+0.5**
MAW				*e*PCP	PcP	07 54 02.1	+1.3
MAW				*e*SCP	ScP	07 57 39.6	-1.2
MAW				*e*S	**S**	**07 57 59.0**	**-1.1**

MAW	**Mawson** comp=Z,102nm,0.7s,mb5.8,baz=234,slow=7.9,SNR=175	**40.39**	**144**	P	**P**	**07 52 00.4**	**+0.6**
MAW				ScP	ScP	07 57 40.0	-0.8
MAW	comp=Z,36nm,0.9s,baz=256,slow=6.3,SNR=15			LR	LR	08 06 19.6	
MAW	**Mawson** comp=Z,411nm,21.3s,baz=251,slow=32	**40.39**	**144**	⇑ *i*P	**P**	**07 52 00.3**	**+0.5**
MAW				*e*		07 54 02.1	
MAW	**Mawson**	**40.39**	**144**	*e*S	**S**	**07 57 59.0**	**-1.1**
MAW	comp=Z,100nm,0.8s			pmax	pmax		
LCO	**Las Campanas** comp=Z,32nm,0.8s,mb5.2	**40.52**	**294**	*e*P	**P**	**07 52 00.5**	**-0.9**
LCO				*e*pP	pP	07 52 21.2	-2.9
SUR	**Sutherland** comp=Z,11nm,1.0s,baz=214,slow=5.6,SNR=4.0	**41.07**	**76**	ScP	ScP	07 57 43.5	-0.5
SUR	comp=Z,377nm,18.1s,baz=214,slow=31			LR	LR	08 05 36.2	
BDFB	**Brasilia** comp=Z,4.2nm,0.6s,mb4.4,baz=147,slow=9.1,SNR=13	**43.17**	**331**	P	**P**	**07 52 23.1**	**+0.1**
BDFB				ScP	ScP	07 57 51.5	-1.1
BDFB	comp=Z,0.8nm,0.4s,baz=170,slow=26,SNR=3.0			LR	LR	08 06 50.1	
LVC	**Limon Verde** comp=Z,64nm,0.7s,mb5.5,baz=131,slow=7.9,SNR=11	**44.94**	**301**	P	**P**	**07 52 37.9**	**+0.8**
LVC				PcP	PcP	07 54 17.6	+0.8
LVC	comp=Z,22nm,0.8s,baz=336,slow=1.2,SNR=3.1			ScP	ScP	07 57 59.3	-0.5
LVC	**Limon Verde** comp=Z,13nm,0.6s,baz=298,slow=2.1,SNR=25	**44.94**	**301**	*e*P	**P**	**07 52 37.9**	**+0.8**
LVC	comp=Z,68nm,0.8s,mb5.4			*e*pP	pP	07 52 59.0	-1.3
LVC				*e*PcP	PcP	07 54 17.8	+1.0
SBA	**Scott Base** comp=Z,51nm,0.8s,mb5.3	**46.02**	**184**	*e*P	**P**	**07 52 46.9**	**+1.9**
SBA	**Scott Base** comp=Z,51nm,0.8s,mb5.3	**46.02**	**184**	*e*P	**P**	**07 52 46.9**	**+1.9**
SBA				pmax	pmax		
BOSA	**Boshof** comp=Z,9.0nm,0.8s,mb4.6,baz=219,slow=7.7,SNR=13	**46.40**	**77**	P	**P**	**07 52 48.4**	**-0.1**
BOSA				PcP	PcP	07 54 23.8	+2.0
BOSA	comp=Z,8.2nm,1.0s,baz=256,slow=3.9,SNR=3.0			ScP	ScP	07 58 04.1	-1.7
BOSA	comp=Z,5.5nm,0.9s,baz=267,slow=4.3,SNR=4.6			LR	LR	08 09 08.3	
BOSA	**Boshof** comp=Z,631nm,18.2s,baz=225,slow=32	**46.40**	**77**	P	**P**	**07 52 48.4**	**-0.1**
BOSA				PcP	PcP	07 54 23.8	+2.0
BOSA				ScP	ScP	07 58 04.1	-1.7
BOSA				LR	LR	08 09 08.3	
BOSA	**Boshof**	**46.40**	**77**	P	**P**	**07 52 48.4**	**-0.1**
BOSA						07 54 23.8	
SIV	**San Ignacio** comp=Z,14nm,0.8s,baz=143,slow=6.2,SNR=19	**47.28**	**314**	ScP	ScP	07 58 07.8	-1.8
LBTB	**Lobatse** comp=Z,26nm,0.7s,mb5.2,baz=232,slow=8.6,SNR=36	**49.43**	**74**	P	**P**	**07 53 11.6**	**-0.3**
LBTB				ScP	ScP	07 58 17.5	-1.2
LPAZ	**La Paz** comp=Z,22nm,0.9s,mb5.1,baz=158,slow=6.7,SNR=49	**50.04**	**306**	P	**P**	**07 53 17.8**	**+1.2**
LPAZ				ScP	ScP	07 58 19.9	-1.5
LPAZ	comp=Z,3.3nm,0.5s,baz=108,slow=3.9,SNR=12			LR	LR	08 12 40.2	
LPAZ	**La Paz** comp=Z,146nm,19.0s,baz=103,slow=34	**50.04**	**306**	P	**P**	**07 53 17.8**	**+1.2**
LPAZ				ScP	ScP	07 58 19.9	-1.5
LPAZ				LR	LR	08 12 40.2	
TSUM	**Tsumeb**	**50.08**	**62**	P	**P**	**07 53 16.8**	**0.0**
TSUM	**Tsumeb** comp=Z,5.3nm,0.7s,mb4.6,baz=196,slow=6.7,SNR=11	**50.08**	**62**	*e*P	**P**	**07 53 16.7**	**-0.2**
CASY	**Casey** comp=Z,35nm,1.5s,mb5.1	**54.03**	**161**	*e*P	**P**	**07 53 46.7**	**+1.1**
DRV	**Dumont d'Urvil**	**57.25**	**174**	S	**S**	**08 01 56.0**	**-0.2**
DRV				L		08 08 00.0	
DRV				R		08 12 00.0	
NNA	**Nana** comp=Z,92nm,1.5s,mb5.6	**57.88**	**300**	*e*P	**P**	**07 54 13.0**	**-0.7**
NNA				*e*pP	pP	07 54 34.6	-3.3
LSZ	**Lusaka** comp=Z,21nm,1.1s,mb5.1	**58.79**	**70**	*e*P	**P**	**07 54 19.7**	**-0.3**
LSZ				*e*pP	pP	07 54 44.5	+0.2
LSZ	**Lusaka**	**58.79**	**70**	*e*P	**P**	**07 54 19.7**	**-0.3**
LSZ	comp=Z,21nm,1.1s,mb5.1			pmax	pmax		
LIC	**Lamto** comp=Z,74nm,0.8s,mb5.6	**64.90**	**25**	*e*P	**P**	**07 55 00.3**	**-0.6**
KIC	**Kosan Boka** comp=Z,122nm,0.9s,mb5.7	**65.10**	**26**	*e*P	**P**	**07 55 01.8**	**-0.4**
TIC	**Toumodi** comp=Z,114nm,0.9s,mb5.7	**65.31**	**25**	*e*P	**P**	**07 55 03.1**	**-0.4**
TIC	**Toumodi** comp=Z,114nm,0.9s,mb5.7	**65.31**	**25**	*e*P	**P**	**07 55 03.1**	**-0.4**
TIC				pmax	pmax		
DBIC	**Dimbokro** comp=Z,14nm,0.7s,mb4.9,baz=173,slow=7.3,SNR=22	**65.37**	**25**	P	**P**	**07 55 03.6**	**-0.3**
DBIC	comp=Z,201nm,18.7s,baz=171,slow=30			LR	LR	08 17 44.3	
ABPO	**Ambohimpanom** comp=Z,33nm,1.0s,mb5.1	**66.19**	**89**	*e*P	**P**	**07 55 10.7**	**+1.5**
RER	**Riviere de l'E**	**69.24**	**97**	*e*P	**P**	**07 55 29.9**	**+1.5**
OTAV	**Otavalo** comp=Z,49nm,1.2s,mb5.2	**69.31**	**304**	*e*P	**P**	**07 55 29.8**	**+1.0**
ROSC	**El Rosal** comp=Z,9.6nm,0.8s,mb4.7,baz=234,slow=5.6,SNR=9.5	**71.58**	**311**	P	**P**	**07 55 42.9**	**+0.2**
ROSC				LR	LR	08 27 60.0	
PCRV	**Puerto La Cruz** comp=Z,204nm,18.7s,baz=344,slow=35	**72.70**	**322**	LR	LR	08 27 09.2	
TORD	**Torodi Ar. Bea** comp=Z,38nm,0.6s,mb5.4,baz=200,slow=6.5,SNR=273	**73.29**	**30**	P	**P**	**07 55 52.6**	**0.0**
TORD	comp=Z,190nm,20.6s,baz=175,slow=30			LR	LR	08 20 32.1	
RPZ	**Rata Peaks** comp=Z,16nm,0.9s,mb4.8,baz=139,slow=2.7,SNR=3.9	**79.29**	**194**	P	**P**	**07 56 27.3**	**+0.9**
RPZ				LR	LR	08 25 15.1	
RKT	**Rikitea** comp=Z,424nm,34.8s	**80.08**	**243**	*e*LR	LR	08 21 34.3	
MTP	**Monte Pirata**	**80.39**	**324**	*e*P	**P**	**07 56 30.7**	**-1.8**
SJG	**San Juan** comp=Z,26nm,1.2s,mb4.9	**80.60**	**323**	*e*P	**P**	**07 56 32.3**	**-1.3**
SJG	**San Juan** comp=Z,26nm,1.2s	**80.60**	**323**	*e*P	**P**	**07 56 32.3**	**-1.3**
SJG				pmax	pmax		
MOO	**Moorlands**	**81.77**	**176**	*e*P	**P**	**07 56 39.5**	**-0.1**
TAM	**Tamanrasset**	**83.53**	**31**	*e*P	**P**	**07 56 50.7**	**+1.9**
TAM				*e*pP	pP	07 57 14.9	+0.4
URZ	**Urewera** comp=Z,12nm,1.1s,baz=247,slow=6.9,SNR=3.2	**83.64**	**200**	PP	PP	08 00 04.0	+1.6
URZ				LR	LR	08 26 43.7	
NWAO	**Narrogin (SRO)** comp=Z,277nm,20.9s,baz=172,slow=30	**86.52**	**151**	LR	LR	08 32 36.8	
NWAO	**Narrogin (SRO)** comp=Z,128nm,20.6s,baz=29,slow=33	**86.52**	**151**	*e*P	**P**	**07 57 03.2**	**-0.7**
NWAO	**Narrogin (SRO)** comp=Z,19nm,0.8s,mb5.1	**86.52**	**151**	*e*P	**P**	**07 57 03.2**	**-0.7**
NWAO	comp=Z,19nm,0.8s			pmax	pmax		
TOO	**Toolangi**	**86.55**	**175**	*e*P	**P**	**07 57 03.8**	**-0.2**
TBI	**Tubuai** comp=Z,263nm,26.5s	**86.73**	**232**	*e*S	S	08 07 32.7	-1.5
TBI	**Tubuai** comp=Z,393nm,36.5s	**86.73**	**232**	*e*LQ		08 21 07.4	
TBI	comp=Z,367nm,32.0s			*e*LR	LR	08 24 51.8	
MUN	**Mundaring**	**87.13**	**150**	⇑ *i*P	**P**	**07 57 06.8**	**-0.1**
KLBR	**Kellerberrin** comp=Z,86nm,0.7s,mb5.9	**87.92**	**151**	*e*P	**P**	**07 57 10.4**	**-0.2**
CNB	**Canberra Magne**	**88.94**	**178**	*e*P	**P**	**07 57 16.1**	**+0.7**
FORT	**Forrest** comp=Z,25nm,0.7s,mb5.5	**91.11**	**160**	*e*P	**P**	**07 57 26.1**	**+0.5**
RAO	**Raoul Island** comp=Z,104nm,18.6s,baz=84,slow=31	**91.24**	**206**	LR	LR	08 32 20.4	
PPT	**Papeete** comp=Z,136nm,23.8s	**91.83**	**234**	*e*S	S	08 08 18.5	-3.4
PPT	**Papeete** comp=Z,494nm,28.8s	**91.83**	**234**	*e*LR	LR	08 27 06.0	
PPT	**Papeete** comp=Z,207nm,20.8s,baz=151,slow=28	**91.83**	**234**	LR	LR	08 28 09.4	
STKA	**Stephens Creek** comp=Z,6.4nm,0.7s,mb5.0,baz=148,slow=4.7,SNR=10	**91.95**	**171**	P	**P**	**07 57 29.9**	**+0.5**
STKA				PP	PP	08 01 09.7	+0.7
STKA	comp=Z,4.8nm,0.9s,baz=171,slow=8.0,SNR=4.0			LR	LR	08 37 12.7	
STKA	comp=Z,168nm,18.4s,baz=17,slow=34						

STKA	**Stephens Creek**	**91.95**	**171**	P	**P**	**07 57 29.9**	**+0.5**
STKA				PP	PP	08 01 09.7	+0.7
STKA				LR	LR	08 37 12.7	
RAR	**Rarotonga** comp=Z,123nm,18.4s,baz=232,slow=32	**92.92**	**224**	LR	LR	08 34 57.9	
KEST	**Kesra** comp=Z,48nm,20.3s,baz=183,slow=32	**96.81**	**30**	LR	LR	08 36 13.9	
COCO	**West Island** comp=Z,11nm,0.4s,mb5.7	**98.00**	**126**	*e*P	**P**	**07 57 58.1**	**+0.8**
MBWA	**Marble Bar** comp=Z,6.4nm,0.9s,mb5.2	**98.35**	**150**	*e*P	**P**	**07 57 58.5**	**-0.3**
ASAR	**Alice Springs** comp=Z,5.1nm,0.7s,mb5.2,baz=192,slow=3.9,SNR=16	**99.09**	**163**	P	**P**	**07 58 01.3**	**-0.8**
ASAR				PP	PP	08 02 01.9	-2.5
ASAR	comp=Z,13nm,1.2s,baz=185,slow=7.6,SNR=11			PKKPbc	PKKPbc	08 14 25.7	+1.4
ASAR	**Alice Springs** comp=Z,0.8nm,0.6s,baz=16,slow=2.4,SNR=14	**99.09**	**163**	P	**P**	**07 58 01.3**	**-0.8**
ASAR						08 02 01.9	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.7s,baz=195,slow=4.4,SNR=3.3	**102.81**	**163**	P	Pdif	07 58 18.3	-0.4
WRA	comp=Z,2.9nm,0.8s,baz=191,slow=6.2,SNR=5.0			PP	PP	08 02 27.8	-4.7
WRA	comp=Z,1.0nm,0.5s,baz=357,slow=2.8,SNR=30			PKKPbc	PKKPbc	08 14 15.4	+1.7
WRAB	**Tennant Creek**	**102.83**	**163**	*i* P	Pdif	07 58 17.7	-1.0
TXAR	**Lajitas Array** comp=Z,0.5nm,0.8s,baz=180,slow=3.2,SNR=5.0	**106.42**	**298**	PKiKP	PKiKP	08 02 44.8	0.0
TXAR	comp=Z,0.8nm,0.9s,baz=294,slow=2.3,SNR=6.3			PKKPbc	PKKPbc	08 14 05.7	+2.2
TXAR	comp=Z,1.3nm,0.8s,baz=297,slow=2.6,SNR=12			PKKPab	PKKPab	08 14 21.4	+2.7
KHC	**Kasperske Hory**	**110.41**	**28**	*i* PKiKP	PKiKP	08 02 54.3	+2.7
ANMO	**Albuquerque**	**112.35**	**299**	*i* PKiKP	PKiKP	08 02 55.3	-0.5
ANN	**Anapa** comp=Z,65nm,1.5s	**114.54**	**45**	*i* PKiKP	PKiKP	08 03 02.1	+2.5
ANN				pmax	pmax		
SMCO	**Snowmass**	**115.97**	**302**	*e*Pdif	Pdif	07 59 19.3	+2.2
SRU	**San Rafael**	**117.63**	**299**	*e*PKPdf	PKPdf	08 03 04.9	-0.8
CCUT	**Cedar City**	**117.82**	**296**	*e*PKPdf	PKPdf	08 03 06.9	+0.7
CCUT				*e*SKPdf	SKPdf	08 06 32.1	-0.2
MSU	**Marysvale**	**117.98**	**298**	*e*PKPdf	PKPdf	08 03 06.8	+0.3
RSSD	**Black Hills**	**118.50**	**307**	*e*PKPdf	PKPdf	08 03 06.3	-1.0
RSSD				*e*SKPdf	SKPdf	08 06 32.6	-0.7
TPNV	**Topopah Spring**	**118.83**	**294**	*e*PKPdf	PKPdf	08 03 08.3	+0.2
TPNV				*e*SKPdf	SKPdf	08 06 32.7	-1.5
NLU	**North Lily Min**	**119.04**	**299**	*e*PKPdf	PKPdf	08 03 07.4	-1.0
NLU				*e*SKPdf	SKPdf	08 06 33.9	-0.6
JLU	**Jordanelle**	**119.23**	**300**	*e*PKPdf	PKPdf	08 03 08.9	+0.1
DUG	**Dugway**	**119.59**	**299**	*e*PKPdf	PKPdf	08 03 09.5	0.0
ULM	**Lac du Bonnet** comp=Z,3.4nm,0.5s,baz=61,slow=1.7,SNR=4.3	**119.97**	**317**	PKP	PKPdf	08 03 08.2	-1.7
ULM				PKKPab	PKKPab	08 13 17.9	-0.2
PDAR	**Pinedale Array** comp=Z,1.5nm,0.8s,baz=132,slow=3.8,SNR=12	**119.99**	**303**	PKP	PKPdf	08 03 09.2	-0.9
PDAR				SKP		08 06 33.5	
PDAR	comp=Z,0.9nm,0.5s,baz=136,slow=5.1,SNR=9.0			PKKPbc	PKKPbc	08 13 19.0	+1.0
HWUT	**Hardware Ranch** comp=Z,1.2nm,0.8s,baz=208,slow=0.3,SNR=9.1	**120.06**	**301**	*e*PKPdf	PKPdf	08 03 09.7	-0.7
BGU	**Big Grassy Mou**	**120.25**	**299**	*e*PKPdf	PKPdf	08 03 10.4	-0.3
SPUT	**South Promonto**	**120.26**	**300**	*e*PKPdf	PKPdf	08 03 10.8	0.0
HVU	**Hansel Valley**	**120.78**	**300**	*e*PKPdf	PKPdf	08 03 11.7	-0.1
NB2	**NORSAR Subarra** comp=Z,0.4nm,0.4s,baz=202,slow=1.9	**120.78**	**21**	PKPdf	PKPdf	08 03 10.3	-0.8
NOA	**NORSAR Array B** comp=Z,1.1nm,0.6s,baz=210,slow=2.1,SNR=5.6	**120.78**	**21**	PKP	PKPdf	08 03 11.2	+0.2
NOA	comp=Z,1.4nm,0.7s,baz=190,slow=1.6,SNR=3.8			SKP		08 06 36.4	
NOA	**NORSAR Array B**	**120.78**	**21**	PKP	PKPdf	08 03 11.2	+0.2
NOA				SKP		08 06 36.4	
NVAR	**Mina Array Bea** comp=Z,3.1nm,0.8s,baz=138,slow=3.7,SNR=30	**121.01**	**294**	PKP	PKPdf	08 03 13.1	+0.8
NVAR				SKP		08 06 39.6	
NVAR	comp=Z,0.9nm,0.6s,baz=156,slow=3.9,SNR=5.2			PKKPbc	PKKPbc	08 13 15.0	+0.9
REDW	**Red Top Meadow**	**121.06**	**302**	*e*PKPdf	PKPdf	08 03 12.1	-0.1
REDW				*e*SKPdf	SKPdf	08 06 38.1	-0.2
SNOW	**Snow King Moun**	**121.08**	**302**	*e*PKPdf	PKPdf	08 03 12.4	+0.1
SNOW				*e*SKPdf	SKPdf	08 06 37.4	-0.9
LOHW	**Long Hollow**	**121.13**	**303**	*e*PKPdf	PKPdf	08 03 11.7	-0.6
TPAW	**Teton Pass**	**121.20**	**302**	*e*PKPdf	PKPdf	08 03 12.6	+0.1
ELK	**Elko**	**121.20**	**297**	*e*PKPdf	PKPdf	08 03 12.8	+0.3
ELK				*e*SKPdf	SKPdf	08 06 37.4	-1.3
RRI2	**Red Ridge**	**121.27**	**302**	*e*PKPdf	PKPdf	08 03 12.9	+0.3
MOOW	**Moose Ponds**	**121.30**	**303**	*e*PKPdf	PKPdf	08 03 12.7	0.0
IMW	**Indian Meadow**	**121.50**	**303**	*e*PKPdf	PKPdf	08 03 13.1	+0.1
RLMT	**Red Lodge**	**121.65**	**305**	*e*PKPdf	PKPdf	08 03 12.8	-0.5
RLMT				*e*SKPdf	SKPdf	08 06 37.6	-1.7
CMB	**Columbia Colle**	**121.79**	**292**	*e*PKPdf	PKPdf	08 03 13.8	0.0
CMB				*e*SKPdf	SKPdf	08 06 40.1	+0.2
YFT	**Old Faithful**	**121.87**	**303**	*e*PKPdf	PKPdf

KMI	**Kunming**	**132.93**	**110**	PKP	PKPdf	08 03 35.9	+0.4		
KMI				XPKP		08 04 12.2			
KMI				PP	PP	08 06 07.0	+4.8		
KMI				SKKS	SKKSac	08 12 46.7	-1.6		
KMI				SS	SS	08 23 40.6	+4.4		
KMI				PP	PP				
	comp=Z,161nm,6.5s								
KMI				LR	LR				
	comp=N,497nm,7.3s								
KMI				LR	LR				
	comp=E,628nm,8.9s								
KMI				LR	LR				
	comp=Z,574nm,9.7s								
KMI	**Kunming**	**132.93**	**110**	PKP	PKPdf	08 03 35.9	+0.4		
KMI				pPKP	pPKPdf	08 04 00.9	-1.7		
KMI				sPKP		08 04 12.2			
KMI				PP	PP	08 06 07.0	+4.8		
KMI				PPP		08 08 59.6			
KMI				SKKS	SKKSac	08 12 46.7	-1.6		
KMI				SS	SS	08 23 40.6	+4.4		
KMI				SSS		08 28 38.1			
BVAR	**Borovoye Array**	**135.16**	**58**	SKPbc	SKPbc	08 06 56.9	-3.3		
	comp=Z,2.8nm,0.7s,baz=224,slow=4.2,SNR=6.7								
YKA	**Yellowknife Ar**	**135.90**	**318**	PKhKP		08 03 24.1			
	comp=Z,0.9nm,0.6s,baz=123,slow=3.5,SNR=4.8								
YKA				PKP	PKPdf	08 03 38.4	-1.4		
	comp=Z,7.2nm,0.5s,baz=130,slow=2.4,SNR=42								
YKA				SKPbc	SKPbc	08 06 59.0	-3.1		
	comp=Z,9.6nm,0.7s,baz=129,slow=2.8,SNR=15								
YKA	**Yellowknife Ar**	**135.90**	**318**	PKP	PKPdf	08 03 38.4	-1.4		
YKA				SKPbc	SKPbc	08 06 59.0	-3.1		
GYA	**Guiyang**	**136.06**	**113**	PDIF	Pdif	08 00 45.8	-0.7		
GYA				PKP	PKPdf	08 03 42.2	+0.9		
GYA				XPKP		08 04 17.3			
GYA				PP	PP	08 06 27.8	+5.8		
GYA				PKS		08 07 17.2			
GYA				SKS	SKSdf	08 10 42.0	-1.0		
GYA				SKKS	SKKSac	08 13 08.4	+1.3		
GYA				SS	SS	08 24 17.6	+3.8		
GYA				PP	PP				
	comp=Z,140nm,8.4s								
GYA				LR	LR				
	comp=N,180nm,25.2s								
GYA				LR	LR				
	comp=E,160nm,24.4s								
GYA				LR	LR				
	comp=Z,140nm,25.0s								
MKAR	**Makanchi Array**	**137.31**	**72**	PKhKP		08 03 30.9			
	comp=Z,0.4nm,0.4s,baz=208,slow=24,SNR=2.5								
MKAR				PKP	PKPdf	08 03 42.1	-0.8		
	comp=Z,2.3nm,0.7s,baz=261,slow=2.3,SNR=6.6								
MKAR				SKPbc	SKPbc	08 07 03.4	-3.5		
	comp=Z,2.1nm,0.5s,baz=238,slow=3.5,SNR=16								
MKAR	**Makanchi Array**	**137.31**	**72**	PKP	PKPdf	08 03 42.1	-0.8		
MKAR				SKPbc	SKPbc	08 07 03.4	-3.5		
KURK	**Kurchatov**	**137.81**	**65**	*e*PKPdf	PKPdf	08 03 42.9	-0.8		
KURK	**Kurchatov**	**137.81**	**65**	*i* PKIKP	PKPdf	08 03 46.4	+2.7		
WMQ	**Urumqi**	**138.34**	**79**	*e*PKP	PKPdf	08 03 45.0	+0.1		
LZH	**Lanzhou**	**142.03**	**101**	*e*PKP	PKPdf	08 03 47.0	-4.9		
LZH				APKP		08 04 13.5			
LZH				XPKP		08 04 24.6			
LZH				*e*SS	SS	08 25 21.0	-3.2		
LZH				PP	PP				
	comp=Z,122nm,5.0s								
LZH				LR	LR				
	comp=N,245nm,18.5s								
LZH				LR	LR				
	comp=Z,327nm,20.1s								
LZH	**Lanzhou**	**142.03**	**101**	*e*PKP	PKPdf	08 03 47.0	-4.9		
LZH				pPKP	pPKPdf	08 04 13.5	-5.5		
LZH				sPKP		08 04 24.6			
LZH				PP	PP	08 06 52.3	-6.6		
LZH				SKS	SKSdf	08 10 45.2	-7.2		
LZH				SKKS	SKKSac	08 13 36.5	-5.4		
LZH				*e*SS	SS	08 25 21.0	-3.2		
GTA	**Gaotai**	**142.16**	**94**	PKP	PKPdf	08 03 47.4	-4.6		
GTA				APKP		08 04 13.8			
GTA				XPKP		08 04 25.0			
GTA				PP	PP	08 06 58.5	-1.2		
GTA				SS	SS	08 25 23.7	-2.0		
GTA				PP	PP				
	comp=Z,54nm,5.4s								
GTA				LR	LR				
	comp=N,373nm,14.1s								
GTA				LR	LR				
	comp=E,435nm,13.5s								
GTA				LR	LR				
	comp=Z,401nm,12.3s								
NVS	**Novosibirsk**	**142.44**	**62**	*e*PKIKP	PKPdf	08 03 48.1	-3.9		
NVS				pmax	pmax				
	comp=Z,21nm,1.1s								
NVS				pmax	pmax				
	comp=E,12nm,1.4s								
ZALV	**Zalesovo Beam**	**142.77**	**64**	PKhKP		08 03 48.2			
	comp=E,3.2nm,0.5s,baz=225,slow=4.3,SNR=15								
ZALV				SKPbc	SKPbc	08 07 19.7	-1.6		
	comp=E,6.0nm,0.6s,baz=240,slow=5.0,SNR=9.8								
XAN	**Xi'an**	**143.25**	**108**	PKP	PKPdf	08 03 50.5	-3.6		
XAN				PP	PP				
	comp=Z,111nm,9.3s								
HYT	**Haines Junctio**	**144.46**	**307**	*e*PKPdf	PKPdf	08 03 54.6	-0.7		
PNL	**Peninsula**	**144.83**	**305**	*e*PKPdf	PKPdf	08 03 55.3	-0.7		
INK	**Inuvik**	**145.54**	**321**	*e*PKPbc	PKPbc	08 03 57.0	-0.4		
JOW	**Kunigami**	**146.13**	**140**	PKPbc	PKPbc	08 04 00.8	+0.3		
	comp=Z,142nm,0.9s,baz=209,slow=5.8,SNR=16								
DAWY	**Dawson**	**146.49**	**312**	*e*PKPbc	PKPbc	08 03 59.5	-0.8		
EGAK	**Eagle**	**147.43**	**313**	*e*PKPbc	PKPbc	08 04 01.9	-1.1		
EYAK	**Cordova Ski Ar**	**148.10**	**304**	*e*PKPdf	PKPdf	08 04 00.8	-0.7		
EYAK				*e*PKPbc	PKPbc	08 04 04.3	-0.5		
BTO	**Baotou**	**148.65**	**102**	*e*PKP	PKPdf	08 04 06.7	+3.7		
HHC	**Hu-ho-hao-te**	**149.66**	**103**	*e*PKP	PKPdf	08 04 09.3	+4.6		
HHC				APKP		08 04 34.6			
HHC				XPKP		08 04 44.1			
HHC				PKS		08 07 42.5			
HHC				PP	PP	08 07 46.1	+2.1		
HHC				SKKS	SKKSac	08 14 29.3	+4.4		
HHC				PP	PP				
	comp=Z,142nm,10.7s								
HHC				LR	LR				
	comp=N,141nm,25.0s								
HHC				LR	LR				
	comp=E,320nm,25.0s								
HHC				LR	LR				
	comp=Z,101nm,25.0s								
SEW	**Seward**	**149.69**	**302**	*e*PKPbc	PKPbc	08 04 08.8	-0.1		
SEW				*e*PKPab	PKPab	08 04 14.7	+0.1		
PMR	**Palmer**	**149.99**	**305**	*e*PKPdf	PKPdf	08 04 03.9	-0.6		
PMR				*e*PKPbc	PKPbc	08 04 09.6	0.0		
RC01	**Rabbit Creek A**	**150.13**	**304**	*e*PKPbc	PKPbc	08 04 10.2	+0.4		
MOY	**Mondy**	**150.16**	**77**	*e*PKIKP	PKPbc	08 04 10.8	+0.6		
MOY				pmax	pmax				
	comp=Z,34nm,1.7s								
COLA	**College**	**150.23**	**312**	*e*PKPbc	PKPbc	08 04 09.3	-0.7		
COLA				*e*PKPab	PKPab	08 04 16.5	-0.1		
KDAK	**Kodiak Island**	**150.44**	**297**	*e*PKPbc	PKPbc	08 04 10.4	-0.3		
MCK	**McKinley**	**150.45**	**309**	*e*PKPbc	PKPbc	08 04 10.5	-0.1		
ZAK	**Zakamensk**	**150.78**	**80**	*i* PKIKP	PKPbc	08 04 11.8	0.0		
ZAK				pmax	pmax				
	comp=Z,31nm,1.1s								
TRF	**Thorofare Moun**	**150.98**	**308**	*e*PKPbc	PKPbc	08 04 11.8	-0.1		
SONM	**Songino Array**	**151.16**	**87**	PKP	PKPdf	08 04 05.4	-1.4		
	comp=Z,2.0nm,0.9s,baz=162,slow=1.4,SNR=9.9								
SONM				PKPbc	PKPbc	08 04 12.0	-0.7		
	comp=Z,27nm,0.5s,baz=222,slow=3.0,SNR=163								
KTH	**Kantishna Hill**	**151.28**	**309**	*e*PKPbc	PKPbc	08 04 12.2	-0.3		
BPAW	**Bear Paw Mtn.**	**151.41**	**310**	*e*PKPbc	PKPbc	08 04 12.4	-0.4		
BPAW				*e*PKPab	PKPab	08 04 21.2	-0.4		
COLD	**Coldfoot**	**151.54**	**316**	*e*PKPbc	PKPbc	08 04 13.4	+0.4		
COLD				*e*PKPab	PKPab	08 04 22.1	+0.1		
BJT	**Baijiatuau**	**151.56**	**109**	*e*PKPbc	PKPbc	08 04 13.7	-0.3		
BJI	**Beijing**	**151.58**	**109**	PKP	PKPbc	08 04 12.5	-1.5		
BJI				XPKP		08 04 42.5			
BJI				PP	PP	08 07 54.5	-0.4		
BJI				SS	SS	08 27 14.9	+3.0		
TLY	**Talaya**	**151.61**	**78**	*e*PKPbc	PKPbc	08 04 13.9	+0.2		
TLY	**Talaya**	**151.61**	**78**	*e*PKIKP	PKPbc	08 04 13.1	-0.6		
TLY				pmax	pmax				
	comp=Z,31nm,1.1s								
PPLA	**Purkeypile**	**151.70**	**307**	*e*PKPbc	PKPbc	08 04 13.2	-0.2		
PPLA				*e*PKPab	PKPab	08 04 22.0	-0.9		
CHUM	**Lake Minchumin**	**151.95**	**309**	*e*PKPbc	PKPbc	08 04 13.4	-0.6		
IMA2	**Indian Mountai**	**152.81**	**314**	*e*PKPbc	PKPbc	08 04 15.9	0.0		
IMA2				*e*PKPab	PKPab	08 04 27.1	-0.3		
SVW2	**Sparrevohn**	**152.87**	**302**	*e*PKPbc	PKPbc	08 04 15.2	-1.0		
KSRS	**Korea Array**	**155.32**	**129**	PKP	PKPdf	08 04 12.7	-0.4		
	comp=Z,0.5nm,0.3s,baz=285,slow=4.8,SNR=4.4								
KSRS				PKPab	PKPab	08 04 39.0	+0.2		
	comp=Z,9.5nm,1.0s,baz=219,slow=4.3,SNR=17								
MAT	**Matsushiro**	**158.33**	**149**	PKP2	PKPab	08 04 51.8	0.0		
MJAR	**Matsushiro Arr**	**158.33**	**149**	PKPab	PKPab	08 04 52.3	+0.4		
	comp=Z,8.7nm,0.8s,baz=189,slow=4.4,SNR=13								
CN2	**Changchun**	**159.09**	**115**	*e*PKP	PKPdf	08 04 17.7	0.0		
BOD	**Bodaibo**	**159.36**	**69**	*e*PKIKP	PKPdf	08 04 16.9	-0.6		
BOD				*e*		08 04 55.6			
BOD				pmax	pmax				
	comp=Z,4.0nm,1.1s								
BOD				pmax	pmax				
	comp=Z,10.0nm,0.8s								
MDJ	**Mudanjiang**	**161.75**	**119**	PKP	PKPdf	08 04 20.9	+0.4		
MDJ				PP	PP	08 08 51.6	+0.7		
MDJ				SS	SS	08 29 04.0	+3.3		
MDJ				PP	PP				
	comp=Z,68nm,10.7s								
MDJ				LR	LR				
	comp=N,317nm,12.1s								
MDJ				LR	LR				
	comp=E,301nm,16.9s								
MDJ				LR	LR				
	comp=Z,364nm,11.3s								
BILL	**Bilibino**	**166.32**	**337**	PKIKP	PKPdf	08 04 22.0	-1.9		
BILL				pmax	pmax				
	comp=Z,8.0nm,1.3s								
YSS	**Yuzh-Sakhalins**	**169.20**	**144**	*e*PKP2	PKPab	08 05 39.0	-0.3		
YSS				pmax	pmax				
	comp=Z,40nm,1.1s								
PETK	**Petropavlovsk-**	**175.56**	**230**	PKP	PKPdf	08 04 29.7	+0.5		
	comp=Z,3.1nm,0.7s,baz=117,slow=1.9,SNR=3.5								
PETK				PKPab	PKPab	08 06 06.6	-0.9		
	comp=Z,6.0nm,0.7s,baz=116,slow=5.4,SNR=6.5								
PETK	**Petropavlovsk-**	**175.56**	**230**	PKP	PKPdf	08 04 29.7	+0.5		
PETK				PKPab	PKPab	08 06 06.6	-0.9		

IDC ***08*** *07:49:09.7±1.5,280S×13848E,h0km,mb4.0/6,mb1 4.1/8, mb1mx4.0/14,mbtmp4.1/8,ML4.1/2,MS3.4/4,Ms1 3.4/4, ms1mx2.9/26,Error ellipse: s-maj=88.6km s-min=17.7km az=77.0*

ISCJB ***08*** *07:49:12.3±0.9,284S±008×1386E±02,h33km,mb4.0/6, MS3.5/2,Error ellipse: s-maj=33.8km s-min=10.6km az=169.3*

NEIC ***08*** *07:49:15.9±0.9,290S×13845E,h45km,mb3.9/2,Error ellipse: s-maj=34.8km s-min=11.2km az=78.0*

ISC 08 07:49:14.9±0.9,287S±008×1385E±02,h35km,n16, σ0§94/13,mb4.0/6,MS3.5/2,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**11.47**	**211**	*e*P	Px	07 51 49.1	
	22nm,0.4s						
COEN	**Coen**	**11.95**	**157**	*e*Pn	**Pn**	**07 52 01.9**	**-1.0**
	3.7nm,0.6s						
WRAB	**Tennant Creek**	**17.44**	**193**	*e*Pn	**Pn**	**07 53 14.8**	**-0.6**
	7.9nm,0.6s						
WB2	**Warramunga Arr**	**17.45**	**193**	*e*P	**Pn**	**07 53 15.8**	**+0.2**
WB2				*e*		07 55 09.7	
WRA	**Warramunga Arr**	**17.45**	**193**	P	**Pn**	**07 53 15.3**	**-0.3**
	0.6nm,0.3s,baz=17,slow=13,SNR=26						
GUMO	**Guam**	**17.53**	**21**	LR	LR	07 59 27.6	
	comp=Z,46nm,19.8s,baz=244,slow=35						
CTA	**Charters Tower**	**18.72**	**157**	*e*P	**Pn**	**07 53 33.0**	**+1.8**
	7.2nm,1.3s						
CTA	**Charters Tower**	**18.72**	**157**	P	**Pn**	**07 53 32.4**	**+1.2**
	0.5nm,0.3s,baz=349,slow=8.6,SNR=4.5						
CTA				LR	LR	08 01 09.8	
	comp=Z,218nm,20.9s,baz=48,slow=38						
ASAR	**Alice Springs**	**21.15**	**192**	P	**P**	**07 53 58.1**	**+1.2**
	3.7nm,0.6s,mb3.9,baz=19,slow=11,SNR=37						
STKA	**Stephens Creek**	**29.00**	**175**	P	**P**	**07 55 10.6**	**-0.8**
	0.5nm,0.4s,mb3.6,baz=4.8,slow=12,SNR=2.8						
STKA				LR	LR	08 08 03.4	
	comp=Z,170nm,18.8s,MS3.7,baz=21,slow=39						
JHJ	**Hachijo jima 2**	**35.81**	**2**	LR	LR	08 09 07.2	
	comp=Z,50nm,21.7s,MS3.2,baz=40,slow=34						
SONM	**Songino Array**	**57.77**	**335**	P	**P**	**07 59 03.1**	**+0.7**
	0.8nm,0.6s,mb3.9,baz=156,slow=8.5,SNR=6.1						
MKAR	**Makanchi Array**	**69.78**	**323**	P	**P**	**08 00 22.3**	**+0.7**
	2.4nm,0.6s,mb4.3,baz=113,slow=7.5,SNR=11						
ZALV	**Zalesovo Beam**	**71.96**	**330**	P	**P**	**08 00 33.0**	**-1.7**
	0.6nm,0.4s,mb3.9,baz=104,slow=6.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**71.96**	**330**	P	**P**	**08 00 33.0**	**-1.7**
BVAR	**Borovoye Array**	**79.31**	**325**	P	**P**	**08 01 16.8**	**0.0**
	1.4nm,0.5s,mb4.2,baz=108,slow=8.0,SNR=8.5						

IDC ***08*** *07:50:34.5±0.7,127S×12628E,h0km,mb4.3/10, mb1 4.4/11,mb1mx4.3/20,mbtmp4.3/11,ML4.0/1,MS3.1/1, Ms1 3.1/1,ms1mx2.0/32,Error ellipse: s-maj=37.7km s-min=15.6km az=71.0*

ISCJB ***08*** *07:50:39.1±0.8,137S±005×12631E±006,h51km±8km, mb4.4/12,Error ellipse: s-maj=11.2km s-min=7.9km az=27.0*

DJA ***08*** *07:50:40,139S×12642E,h51km,MLv4.3/7*

NEIC ***08*** *07:50:42.1±3.2,134S×12612E,h57km±31km,mb4.6/3, Error ellipse: s-maj=31.1km s-min=12.0km az=58.0*

ISC 08 07:50:40.2±0.7,138S±005×12631E±006,h42km±8km,n28, σ0§95/27,mb4.4/12,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.40**	**58**	P	**Pn**	**07 51 03.2**	**0.0**
LBMI	**Labuha**	**1.40**	**58**	S	**Sn**	**07 51 19.9**	**-0.6**
TNTI	**Ternate**	**2.38**	**26**	P	**Pn**	**07 51 17.5**	**+0.7**
TNTI	**Ternate**	**2.38**	**26**	S	**Sn**	**07 51 44.2**	**-0.5**
AAI	**Ambon**	**2.97**	**141**	P	**Pn**	**07 51 23.6**	**-1.2**
AAI	**Ambon**	**2.97**	**141**	P	**Pn**	**07 51 23.6**	**-1.2**
MNI	**Manado**	**3.16**	**332**	P	**Pn**	**07 51 29.4**	**+1.8**
KDI	**Kendari**	**4.49**	**235**	P	**Pn**	**07 51 46.8**	**+1.0**
KAPI	**Kappang**	**7.48**	**241**	Pn	**Pn**	**07 52 27.2**	**+0.4**
	2.5nm,0.3s,baz=147,slow=8.7,SNR=6.0						
KAPI				Sn	**Sn**	**07 53 48.2**	**-2.3**
	4.1nm,0.3s,baz=178,slow=23,SNR=8.2						
KAPI				LR	LR	07 55 46.2	
	comp=Z,129nm,18.5s,baz=205,slow=42						
WRA	**Warramunga Arr**	**20.05**	**157**	P	**P**	**07 55 10.0**	**0.0**
	7.1nm,0.6s,baz=338,slow=12,SNR=12						
ASAR	**Alice Springs**	**23.35**	**162**	P	**P**	**07 55 45.4**	**+0.3**
	11nm,0.7s,mb4.4,baz=343,slow=11,SNR=22						
CTA	**Charters Tower**	**26.95**	**135**	P	**P**	**07 56 22.4**	**+4.5**
	7.4nm,0.8s,mb4.3,baz=312,slow=12,SNR=6.9						
CTA	**Charters Tower**	**26.95**	**135**	*e*	**P**	**07 56 22.5**	**+4.6**
STKA	**Stephens Creek**	**33.59**	**156**	*e*P	**P**	**07 57 17.8**	**+1.3**
	3.3nm,0.5s,mb4.5						
STKA				*e*	pP	07 57 29.3	+1.3
STKA	**Stephens Creek**	**33.59**	**156**	P	**P**	**07 57 17.9**	**+1.3**
	3.5nm,0.5s,mb4.6,baz=324,slow=6.5,SNR=10						
SONM	**Songino Array**	**52.00**	**343**	P	**P**	**07 59 45.5**	**+0.2**
	1.3nm,0.8s,mb3.9,baz=155,slow=9.2,SNR=9.1						
PETK	**Petropavlovsk-**	**60.30**	**21**	P	**P**	**08 00 45.0**	**+0.6**
	3.9nm,0.9s,mb4.4,baz=189,slow=7.4,SNR=3.8						
MKAR	**Makanchi Array**	**61.54**	**327**	P	**P**	**08 00 53.5**	**+0.5**
	2.4nm,0.4s,mb4.7,baz=116,slow=8.2,SNR=8.5						
MKAR	**Makanchi Array**	**61.54**	**327**	P	**P**	**08 00 53.5**	**+0.5**
ZALV	**Zalesovo Beam**	**64.95**	**334**	P	**P**	**08 01 13.9**	**-1.5**
	2.0nm,0.9s,mb4.2,baz=100,slow=6.1,SNR=5.6						
KURK	**Kurchatov**	**65.83**	**329**	*e*P	**P**	**08 01 20.7**	**-0.5**
	5.8nm,0.8s,mb4.7						
BVAR	**Borovoye Array**	**71.38**	**328**	P	**P**	**08 01 54.4**	**-1.3**
	1.4nm,0.6s,mb3.9,baz=128,slow=9.6,SNR=4.5						
TIXI	**Tiksi**	**72.92**	**1**	*e*P	**P**	**08 02 04.1**	**-0.5**
	6.6nm,0.7s,mb4.7						
AKTK	**Aktyubinsk**	**77.40**	**322**	P	**P**	**08 02 30.8**	**0.0**
AKTO	**Aktyubinsk**	**77.40**	**322**	P	**P**	**08 02 30.8**	**0.0**
	2.4nm,0.7s,mb4.2,baz=108,slow=8.1,SNR=5.1						
QSPA	**South Pole Qui**	**88.56**	**180**	P	**P**	**08 03 29.3**	**+1.3**
	3.2nm,0.7s,mb4.8,baz=46,slow=0.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**123.96**	**285**	PKP	PKPdf	08 09 35.3	+0.4
	0.9nm,0.6s,baz=80,slow=2.0,SNR=7.6						
TXAR	**Lajitas Array**	**124.96**	**55**	PKP	PKPdf	08 09 38.1	+1.6
	0.1nm,0.5s,baz=256,slow=2.7,SNR=4.0						

IDC 08 07:58:30.8±3.9,1836N×14671E,h0km,mb3.9/3, mb1 4.2/3,mb1mx3.7/19,mbtmp3.9/3,Error ellipse: s-maj=281.2km s-min=29.9km az=121.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.95**	**198**	P	P	08 06 07.1	0.0
	2.1nm,0.5s,baz=21,slow=8.9,SNR=23						
ASAR	**Alice Springs**	**43.59**	**197**	P	P	08 06 36.7	-0.2
	0.4nm,0.5s,baz=17,slow=7.7,SNR=6.3						
NVAR	**Mina Array Bea**	**82.59**	**52**	P	P	08 10 56.5	+0.4
	0.9nm,0.7s,baz=280,slow=5.3,SNR=8.9						

NNC 08 08:10:34.5±2.5,5344N×8788E,h0km,mb3.6,mpv3.2, 9C-2D,Error ellipse: s-maj=19.0km s-min=14.3km az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.33**	**248**	⇑Pn	Pn	08 12 09.7	+0.8
	4.9nm,1.2s						
KURK				⇑Sn	Sn	08 13 22.8	+1.0
	3.5nm,0.8s						
KURK				⇑Lg		08 13 58.4	
	18nm,1.2s						
KURBB	**Kurchatov Arra**	**6.42**	**248**	⇓Pn	Pn	08 12 11.1	+0.9
	0.3nm,0.3s,baz=63,slow=14						
KURBB				⇑Sn	Sn	08 13 24.8	+0.7
	1.3nm,0.7s						
KURBB				⇑Lg		08 14 04.2	
	3.4nm,0.7s						
MK31	**Makanchi Array**	**7.56**	**211**	⇑Pn	Pn	08 12 28.4	+2.6
	0.8nm,0.6s,baz=29,slow=13,SNR=8.3						
MK31				⇑Sn	Sn	08 13 58.6	+6.5
	1.3nm,0.7s,baz=210,slow=75,SNR=6.0						
MK31				⇑Lg		08 14 36.0	
	4.9nm,0.8s						
VOSK	**Vostochnaya**	**10.20**	**273**	⇓Pn	Pn	08 13 02.3	+0.4
	5.7nm,1.9s						
VOSK				⇑Sn	Sn	08 14 55.6	-1.3
	5.0nm,0.8s						

ISCJB ***08*** *08:22:58.1±0.7,2433S×1798W±0.1,h450km,mb4.2/8, Error ellipse: s-maj=15.4km s-min=8.3km az=30.4*

NEIC ***08*** *08:22:58.9±2.2,2443S×17959W,h460km±63km,mb3.4/4, Error ellipse: s-maj=48.5km s-min=15.1km az=104.0*

IDC ***08*** *08:22:59.1±2.1,2439S×17956W,h460km±24km,mb3.6/5, mb1 3.7/7,mb1mx3.4/18,mbtmp3.7/7,Error ellipse: s-maj=26.9km s-min=21.6km az=109.0*

ISC 08 08:22:59.7±2.1,2442S±010×1796W±02,h471km±51km, n16,σ0§82/18,mb4.2/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**12.79**	**37**	P	**P**	**08 25 46.6**	**-0.4**
	2.1nm,0.3s,baz=62,slow=22,SNR=3.4						
AFI				S	**S**	**08 28 05.5**	**+0.5**
	1.1nm,0.3s,baz=159,slow=23,SNR=2.7						
DZM	**Mont Dzumac**	**13.05**	**278**	*e*Pn	**P**	**08 25 53.3**	**+3.6**
URZ	**Urewera**	**14.08**	**191**	P	**P**	**08 25 59.5**	**-0.9**
	2.6nm,0.3s,baz=90,slow=5.1,SNR=14						
URZ				S	**S**	**08 28 30.4**	**+0.6**
	1.5nm,0.3s,baz=235,slow=23,SNR=13						
RPZ	**Rata Peaks**	**20.72**	**199**	P	**P**	**08 27 06.5**	**+0.3**
	8.5nm,0.6s,baz=356,slow=7.6,SNR=8.4						
HNR	**Honiara**	**24.55**	**304**	*e*P	**P**	**08 27 33.2**	**-7.8**
CAN	**Canberra**	**29.21**	**241**	*e*P	**P**	**08 28 20.8**	**-1.1**
CTA	**Charters Tower**	**31.86**	**271**	*e*P	**P**	**08 28 46.0**	**+1.1**
	7.4nm,0.4s,mb4.5						
CTA	**Charters Tower**	**31.86**	**271**	P	**P**	**08 28 46.0**	**+1.1**
	12nm,0.5s,mb4.6,baz=92,slow=12,SNR=23						
STKA	**Stephens Creek**	**34.88**	**249**	P	**P**	**08 29 11.5**	**+1.0**
	1.6nm,0.5s,mb3.7,baz=95,slow=14,SNR=8.6						
PMG	**Port Moresby**	**35.02**	**289**	*e*P	**P**	**08 29 07.9**	**-3.9**
	7.0nm,0.7s,mb4.2						
COEN	**Coen**	**36.57**	**280**	P	**P**	**08 29 15.6**	**-9.2**
	41nm,2.1s,mb4.5						
ASAR	**Alice Springs**	**42.32**	**261**	P	**P**	**08 30 11.4**	**+0.1**
	1.7nm,0.5s,mb3.8,baz=95,slow=6.5,SNR=50						
ASAR				PcP	PcP	08 31 54.8	+0.4
	0.3nm,0.8s,baz=97,slow=4.5,SNR=2.5						
WB2	**Warramunga Arr**	**42.74**	**267**	*e*P	**P**	**08 30 14.1**	**-0.4**
WRAB	**Tennant Creek**	**42.74**	**267**	*e*P	**P**	**08 30 14.2**	**-0.4**
	5.4nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**42.75**	**267**	P	**P**	**08 30 14.3**	**-0.4**
	6.2nm,0.5s,mb4.3,baz=99,slow=8.3,SNR=158						
WRA				PcP	PcP	08 31 56.5	+0.6
	0.3nm,0.6s,baz=98,slow=6.4,SNR=3.5						
WRA				ScP	ScP	08 35 02.8	+1.3
	2.6nm,1.3s,baz=96,slow=3.9,SNR=4.6						
KAKA	**Kakadu**	**46.73**	**275**	*e*P	**P**	**08 30 34.9**	**-11**
	6.4nm,0.7s,mb4.2						

ISCJB ***

*TAP **08** 08:32:23.1,2498N×122.26E,h19km,ML4.4,B*
*NEIC **08** 08:32:24.3±1.2,2491N×122.25E,h24km±9km,mb4.1/1,*
Error ellipse: s-maj=8.8km s-min=7.2km az=104.0
*BJI **08** 08:32:27.2,2503N×121.96E,h10km,mB4.4,mb4.2,ML4.2,*
Ms4.2,Ms24.0
ISC 08 08:32:21.9±0.4,2498N±002×12238E±002,h6km±2km,n92,
σ1§08/132,mb4.0/12,MS3.5/4,17C-8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.36**	**275**	⇑*i*P	**Pg**	**08 32 29.2**	**+0.4**
	baz=276						
TWB1				*i* S	**Sg**	**08 32 33.2**	**-0.3**
	baz=276						
NWF	**Wu-fen Shan**	**0.55**	**280**	⇓*i*P	**Pg**	**08 32 33.3**	**+0.8**
	baz=288						
NWF				S	**Sg**	**08 32 39.8**	**+0.1**
	baz=288						
TWC	**Suao**	**0.61**	**233**	⇓*i*P	**Pg**	**08 32 33.5**	**0.0**
	baz=225						
TWC				*i* S	**Sg**	**08 32 40.9**	**-0.5**
	baz=225						
ILA	**Ilan**	**0.61**	**250**	*e*P	**Pg**	**08 32 34.2**	**+0.6**
	baz=240						
ILA				*e*S	**Sg**	**08 32 43.1**	**+1.5**
	baz=240						
TWE	**Neicheng**	**0.70**	**249**	⇑*i*P	**Pg**	**08 32 35.5**	**+0.3**
	baz=244						
TWE				*e*S	**Sg**	**08 32 44.1**	**-0.2**
	baz=244						
PCYT	**Pengchaiyu**	**0.70**	**337**	⇑P	**Pg**	**08 32 36.5**	**+1.0**
	baz=350						
TWA	**Mucha**	**0.72**	**270**	⇓P	**Pg**	**08 32 36.3**	**+0.5**
	baz=270						
TWA				*i* S	**Sg**	**08 32 44.9**	**-0.3**
	baz=270						
TWY	**Chenhua**	**0.77**	**293**	⇓*i*P	**Pg**	**08 32 37.2**	**+0.6**
	baz=285						
TWY				S	**Sg**	**08 32 46.8**	**+0.3**
	baz=285						
YOJ	**Yonaguni jima**	**0.77**	**132**	P	**Pg**	**08 32 37.2**	**+0.5**
YOJ				*e*S	**Sg**	**08 32 48.7**	**+2.0**
YOJ	**Yonaguni jima**	**0.77**	**132**	*e*P	**Pg**	**08 32 37.2**	**+0.5**
	baz=120						
YOJ				*e*S	**Sg**	**08 32 49.8**	**+3.1**
	baz=120						
TAP1	**Taipei**	**0.78**	**275**	⇓*i*P	**Pg**	**08 32 37.8**	**+1.0**
	baz=275						
TAP1				*i* S	**Sg**	**08 32 46.8**	**-0.2**
	baz=275						
ENA	**Nanau**	**0.80**	**227**	⇓P	**Pg**	**08 32 37.0**	**-0.3**
	baz=214						
ENA				*e*S	**Sg**	**08 32 46.8**	**-0.8**
	baz=214						
TATO	**Taipei**	**0.81**	**270**	⇑*i*Pg	**Pg**	**08 32 37.7**	**+0.3**
TATO				*e*Sg	**Sg**	**08 32 47.5**	**-0.4**
ENTT	**Nioudou**	**0.81**	**246**	⇓P	**Pg**	**08 32 37.0**	**-0.5**
	baz=242						
ENTT				*e*S	**Sg**	**08 32 48.4**	**+0.3**
	baz=242						
TWS1	**Kuangyinshan**	**0.88**	**278**	P	**Pg**	**08 32 39.2**	**+0.5**
	baz=279						
TWS1				S	**Sg**	**08 32 50.7**	**+0.4**
	baz=279						
EHP	**Heping Village**	**0.88**	**221**	*e*P	**Pg**	**08 32 38.9**	**0.0**
	baz=215						
EHP				*e*S	**Sg**	**08 32 50.1**	**-0.2**
	baz=215						
YHNB	**Yeheng**	**0.96**	**252**	*e*Pg	**Pg**	**08 32 39.5**	**-0.8**
NSK	**Sanguang**	**0.97**	**252**	⇑P	**Pg**	**08 32 40.0**	**-0.6**
	baz=260						
NSK				S	**Sg**	**08 32 52.0**	**-1.3**
	baz=260						
NNS	**Nan Shan**	**1.06**	**240**	⇑P	**Pg**	**08 32 41.9**	**-0.3**
	baz=226						
NNS				S	**Sg**	**08 32 55.3**	**-0.7**
	baz=226						
NACB	**Ninganchiao**	**1.07**	**222**	*e*Pn	**Pn**	**08 32 41.9**	**-1.6**
NACB				*e*Sn	**Sn**	**08 32 54.4**	**-4.3**
NCU	**National Centr**	**1.08**	**270**	*e*P	**Pg**	**08 32 42.2**	**-0.5**
	baz=258						
NCU				*e*S	**Sg**	**08 32 56.2**	**-0.5**
	baz=258						
TWD	**Chiawan**	**1.14**	**219**	⇓*i*P	**Pg**	**08 32 43.2**	**-0.7**
	baz=213						
TWD				S	**Sg**	**08 32 57.5**	**-1.2**
	baz=213						
HWA	**Hwalien**	**1.22**	**215**	*e*P	**Pg**	**08 32 44.9**	**-0.4**
	baz=217						
HWA				*e*S	**Sg**	**08 33 01.7**	**+0.6**
	baz=217						
HSN	**Hsinchu**	**1.29**	**262**	*e*P	**Pn**	**08 32 44.4**	**-2.1**
	baz=260						
HSN				*e*S	**Sb**	**08 33 02.1**	**-1.4**
	baz=260						
NSTT	**Nanjuang**	**1.30**	**255**	P	**Pn**	**08 32 45.3**	**-1.3**
	baz=269						
WHF	**Hehuan Shan**	**1.31**	**231**	⇑*i*P	**Pn**	**08 32 46.0**	**-0.8**
	baz=226						
WHF				S	**Sb**	**08 33 02.9**	**-1.1**
	baz=226						
TWT	**Tachien**	**1.31**	**237**	⇑P	**Pn**	**08 32 46.4**	**-0.4**
	baz=227						
TWT				*e*S	**Sb**	**08 33 03.6**	**-0.5**
	baz=227						
IRIF	**Iriomote-Funau**	**1.39**	**117**	P	**Pn**	**08 32 46.4**	**-1.4**
ESL	**Shilin**	**1.45**	**217**	⇑P	**Pn**	**08 32 47.8**	**-0.8**
	baz=218						
ESL				*e*S	**Sb**	**08 33 07.1**	**-0.8**
	baz=218						
NSY	**Sanyi**	**1.57**	**250**	*e*P	**Pn**	**08 32 50.1**	**-0.3**
	baz=245						
NSY				*e*S	**Sn**	**08 33 10.8**	**-0.3**
	baz=245						
HATJ	**Hateruma jima**	**1.59**	**125**	P	**Pn**	**08 32 49.8**	**-0.8**
TWQ1	**Liyutan**	**1.59**	**247**	*e*P	**Pn**	**08 32 50.3**	**-0.3**
	baz=243						
TWQ1				*e*S	**Sn**	**08 33 12.5**	**+1.0**
	baz=243						
JKRS	**Kuro-shima**	**1.66**	**116**	P	**Pn**	**08 32 50.7**	**-0.8**
JIJ	**Ishigaki jima**	**1.72**	**111**	P	**Pn**	**08 32 50.2**	**-2.2**
SMLT	**Sun Moon Lake**	**1.73**	**231**	P	**Pn**	**08 32 53.2**	**+0.7**
	baz=225						
SMLT				*e*S	**Sn**	**08 33 16.1**	**+1.1**
	baz=225						
TYC	**Yuchr**	**1.75**	**233**	⇑*i*P	**Pn**	**08 32 53.8**	**+1.0**
	baz=227						
TYC				*e*S	**Sn**	**08 33 15.6**	**+0.1**
	baz=227						
EHY	**Hungye**	**1.75**	**214**	*e*P	**Pn**	**08 32 51.5**	**-1.4**
	baz=209						
TCU	**Taichung**	**1.76**	**242**	*e*P	**Pn**	**08 32 54.1**	**+1.2**
	baz=254						
TCU				*e*S	**Sn**	**08 33 16.4**	**+0.8**
	baz=254						
SSLB	**Suanglung**	**1.76**	**228**	*e*Pn	**Pn**	**08 32 53.0**	**+0.1**
SSLB				*e*Sn	**Sn**	**08 33 15.1**	**-0.6**
YULB	**Yu-li**	**1.86**	**212**	*e*Pn	**Pn**	**08 32 52.9**	**-1.5**
WNT	**Mingjian**	**1.89**	**235**	*e*P	**Pn**	**08 32 55.3**	**+0.5**
	baz=248						
TWF1	**Yuli**	**1.90**	**212**	⇑P	**Pn**	**08 32 53.5**	**-1.3**
	baz=208						
YUS	**Yu-Shan**	**1.97**	**222**	⇑P	**Pn**	**08 32 56.7**	**+0.9**
	baz=198						
YUS				*e*S	**Sn**	**08 33 21.3**	**+0.4**
	baz=198						
ALS	**Alishan**	**2.05**	**225**	⇑P	**Pn**	**08 32 58.0**	**+1.1**
	baz=208						
CHN5	**Tsauling**	**2.07**	**229**	*e*P	**Pn**	**08 32 58.6**	**+1.3**
	baz=221						
CHN5				*e*S	**Sn**	**08 33 26.7**	**+3.3**
	baz=221						
CHKT	**Chengkung**	**2.09**	**207**	*e*P	**Pn**	**08 32 55.8**	**-1.7**
	baz=188						
WGK	**Gukeng**	**2.10**	**233**	*e*P	**Pn**	**08 32 58.9**	**+1.3**
	baz=230						
ELDTW	**Lidau**	**2.17**	**215**	*e*P	**Pn**	**08 32 57.6**	**-1.0**
	baz=199						
CHN2	**Minshiung**	**2.26**	**231**	*e*P	**Pn**	**08 33 01.4**	**+1.6**
	baz=243						
CHN4	**Tsaushan**	**2.30**	**226**	⇑P	**Pn**	**08 33 01.8**	**+1.5**
	baz=200						
CHN4				*e*S	**Sn**	**08 33 31.8**	**+2.8**
	baz=200						
CHY	**Chiayi**	**2.31**	**231**	*e*P	**Pn**	**08 33 01.4**	**+0.9**
	baz=243						
STYT	**Tauyuan**	**2.34**	**220**	⇑P	**Pn**	**08 33 01.6**	**+0.8**
	baz=198						
STYT				*e*S	**Sn**	**08 33 30.7**	**+0.8**
	baz=198						
WTP	**Ta-pu**	**2.36**	**223**	⇑P	**Pn**	**08 33 02.5**	**+1.3**
	baz=199						
WTP				*e*S	**Sn**	**08 33 32.0**	**+1.5**
	baz=199						
TWK	**Hsinying**	**2.43**	**226**	*e*P	**Pn**	**08 33 03.5**	**+1.4**
	baz=199						
TWK				*e*S	**Sn**	**08 33 33.7**	**+1.6**
	baz=199						
TWG	**Pinlang**	**2.46**	**209**	*e*Pn	**Pn**	**08 33 00.7**	**-1.9**
TWG	**Pinlang**	**2.46**	**209**	*e*P	**Pn**	**08 33 01.3**	**-1.3**
	baz=195						
CHN1	**Nanshi**	**2.46**	**224**	⇑P	**Pn**	**08 33 03.9**	**+1.3**
	baz=198						
CHN1				*e*S	**Sn**	**08 33 35.9**	**+2.9**
	baz=198						
SGST	**Jiashian**	**2.50**	**221**	*e*P	**Pn**	**08 33 04.4**	**+1.3**
	baz=205						
ECL	**Taimali**	**2.71**	**209**	*e*P	**Pn**	**08 33 04.4**	**-1.6**
	baz=197						
SSD	**Sandimen**	**2.74**	**216**	*e*P	**Pn**	**08 33 07.5**	**+1.1**
	baz=215						
TWM1	**Shoushan**	**2.79**	**220**	*e*P	**Pn**	**08 33 08.6**	**+1.4**
	baz=219						
EAST	**Anshuo**	**2.94**	**209**	*e*P	**Pn**	**08 33 07.8**	**-1.4**
	baz=194						
TAW	**Tawu**	**2.94**	**208**	*e*P	**Pn**	**08 33 09.8**	**+0.6**
	baz=194						
SCZT	**Fangliau**	**3.06**	**212**	*e*P	**Pn**	**08 33 11.7**	**+0.9**
	baz=200						
SCZT				*e*S	**Sn**	**08 33 47.6**	**0.0**
	baz=200						
TWK1	**Hengchun**	**3.35**	**206**	*e*P	**Pn**	**08 33 13.0**	**-1.8**
	baz=193						
QZH	**Quanzhou**	**3.44**	**270**	P	**Pn**	**08 33 17.1**	**+1.1**
QZH				S	**Sn**	**08 33 53.5**	**-3.6**
QZH				Smax			
	comp=N,560nm,0.9s						
QZH				Smax			
	comp=E,330nm,1.0s						
QZH				LR	LR		
	comp=N,3μm,11.0s						
QZH				LR	LR		
	comp=E,2μm,7.1s						
QZH				LR	LR		
	comp=Z,3μm,9.4s						
KNM	**Kinmen**	**3.63**	**262**	*e*P	**Pn**	**08 33 18.9**	**+0.2**
	baz=256						
JOW	**Kunigami**	**5.62**	**70**	Pn	**Pn**	**08 33 48.4**	**+2.4**
	comp=Z,1.9nm,0.3s,baz=277,slow=16,SNR=2.0						
KSRS	**Korea Array**	**13.31**	**20**	Pn	**Pn**	**08 35 33.2**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=142,slow=40,SNR=2.0						
KSRS				LR	LR	08 41 21.1	
	comp=Z,113nm,21.0s,baz=180,slow=41						
MJAR	**Matsushiro Arr**	**17.80**	**46**	P	**Pn**	**08 36 33.4**	**+3.0**
	baz=197,slow=16,SNR=1.7						
MJAR	**Matsushiro Arr**	**17.80**	**46**	P	**Pn**	**08 36 33.4**	**+3.0**
LZH	**Lanzhou**	**19.39**	**309**	*e*P	**Pn**	**08 36 53.0**	**+3.3**
LZH				AP	pP	08 36 53.8	+3.6
LZH				XP	sP	08 36 59.9	+8.9
LZH				*e*PP		08 37 11.2	
LZH				*e*S	**Sn**	**08 40 25.7**	**-1.8**
LZH				XS	sS	08 40 31.0	+0.1
LZH				*e*SS		08 40 52.1	
LZH				AMB	AMB		
	comp=Z,21nm,1.2s						
LZH				AMB	AMB		
	comp=Z,76nm,4.1s						
LZH				LR	LR		
	comp=N,443nm,10.6s						
LZH				LR	LR		
	comp=Z,517nm,13.5s						
LZH	**Lanzhou**	**19.39**	**309**	*e*P	**Pn**	**08 36 53.0**	**+3.3**
LZH				pP	pP	08 36 53.8	+3.6
LZH				sP	sP	08 36 59.9	+8.9
LZH				*e*PP		08 37 11.2	
LZH				*e*S	**Sn**	**08 40 25.7**	**-1.8**
LZH				sS	sS	08 40 31.0	+0.1
LZH				*e*SS		08 40 52.1	
CMAR	**Chiang Mai Arr**	**22.70**	**258**	P	**P**	**08 37 24.8**	**+0.3**
	comp=Z,0.7nm,0.3s,mb3.6,baz=60,slow=7.7,SNR=8.0						
CMAR				LR	LR	08 46 32.3	
	comp=Z,66nm,19.0s,MS3.1,baz=225,slow=37						
GTA	**Gaotai**	**23.82**	**313**	P	**P**	**08 37 40.9**	**+5.1**
GTA				AP		08 37 45.4	
GTA				XP	sP	08 37 48.0	+10
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb3.9						
ASAJ	**Asahikawa**	**25.21**	**36**	LR	LR	08 49 24.3	
	comp=Z,109nm,18.6s,MS3.4,baz=140,slow=41						
SONM	**Songino Array**	**26.09**	**335**	P	**P**	**08 37 56.7**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.7,baz=141,slow=8.6,SNR=5.2						
MKAR	**Makanchi Array**	**38.54**	**315**	P	**P**	**08 39 44.7**	**-0.5**
	comp=Z,1.2nm,0.6s,mb3.8,baz=102,slow=11,SNR=9.0						
ZAA0	**Zalesovo Array**	**40.18**	**326**	*e*P	**P**	**08 39 57.7**	**-1.1**
ZALV	**Zalesovo Beam**	**40.18**	**326**	P	**P**	**08 39 57.8**	**-1.1**
	comp=Z,1.1nm,0.6s,mb3.8,baz=101,slow=7.5,SNR=5.6						
TKM2	**Tokmak 2**	**42.14**	**307**	*e*P	**P**	**08 40 14.4**	**-0.7**
	comp=Z,3.2nm,0.8s,mb4.0						
KURK	**Kurchatov**	**42.19**	**319**	P	**P**	**08 40 14.7**	**-0.7**
	baz=111,slow=7.8						
WRA	**Warramunga Arr**	**46.14**	**164**	P	**P**	**08 40 46.3**	**-1.0**
	comp=Z,7.4nm,0.6s,mb4.8,baz=346,slow=8.6,SNR=53						
WRA				PcP	PcP	08 42 21.8	-1.6
	comp=Z,1.4nm,0.6s,baz=345,slow=3.6,SNR=11						
WB2	**Warramunga Arr**	**46.15**	**164**	*e*P	**P**	**08 40 46.2**	**-1.1**
WB2				*e*		08 40 53.0	
BVAR	**Borovoye Array**	**47.76**	**320**	P	**P**	**08 40 58.8**	**-0.8**
	comp=Z,1.4nm,0.5s,mb4.2,baz=98,slow=8.9,SNR=7.5						
BVAR	**Borovoye Array**	**47.76**	**320**	P	**P**	**08 40 58.8**	**-0.8**
ASAR	**Alice Springs**	**49.63**	**166**	P	**P**	**08 41 13.4**	**-0.9**
	comp=Z,2.4nm,0.8s,mb4.3,baz=345,slow=8.2,SNR=18						
ASAR				PcP	PcP	08 42 34.2	-1.6
	comp=Z,1.1nm,0.6s,baz=340,slow=3.1,SNR=8.9						
STKA	**Stephens Creek**	**59.44**	**161**	LR	LR	09 06 40.6	
	comp=Z,36nm,18.5s,MS3.5,baz=218,slow=35						
ARCES	**ARCESS Array B**	**69.21**	**338**	P	**P**	**08 43 27.0**	**-2.1**
	comp=Z,3.3nm,1.0s,mb4.2,baz=66,slow=9.0,SNR=5.9						
ARCES	**ARCESS Array B**	**69.21**	**338**	P	**P**	**08 43 27.0**	**-2.1**
BRTR	**Keskin Array B**	**73.58**	**307**	P	**P**	**08 43 55.7**	**-0.4**
	comp=Z,1.3nm,0.8s,mb3.9,baz=91,slow=10,SNR=5.1						
NOA	**NORSAR Array B**	**78.03**	**332**	P	**P**	**08 44 22.1**	**+1.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=57,slow=6.0,SNR=2.5						
NOA				PcP	PcP	08 44 28.7	-2.1
	comp=Z,1.3nm,0.8s,baz=57,slow=5.9,SNR=3.2						
NOA				LR	LR	09 22 55.1	
	comp=Z,63nm,18.2s,MS4.0,baz=245,slow=39						

IDC 08 09:13:58.4±3.9,327S×10101E,h0km,mb4.0/5,mb1 4.1/5,
mb1mx3.8/19,mbtmp4.0/5,MS2.9/1,Ms1 2.9/1,
ms1mx2.2/32,Error ellipse: s-maj=169.4km
s-min=19.8km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.77**	**96**	LR	LR	09 25 27.9	
	comp=Z,40nm,21.1s,baz=42,slow=37						
WRA	**Warramunga Arr**	**36.49**	**120**	P	P	09 21 05.2	-0.4
	1.1nm,0.4s,baz=302,slow=8.9,SNR=25						
WB2	**Warramunga Arr**	**36.50**	**120**	*e*P	P	09 21 05.8	+0.1
ASAR	**Alice Springs**	**37.70**	**125**	P	P	09 21 16.2	+0.3
	0.6nm,0.7s,baz=309,slow=8.9,SNR=16						
SONM	**Songino Array**	**51.11**	**5**	P	P	09 23 03.1	+0.3
	0.5nm,0.4s,baz=181,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**52.52**	**344**	P	P	09 23 13.6	+0.3
	1.4nm,0.4s,baz=148,slow=7.9,SNR=15						
ZALV	**Zalesovo Beam**	**58.60**	**349**	P	P	09 23 56.4	-0.5
	3.2nm,0.5s,baz=160,slow=4.7,SNR=19						
TXAR	**Lajitas Array**	**145.06**	**40**	PKPbc	PKPbc	09 33 37.6	-0.3
	0.5nm,0.6s,baz=288,slow=1.4,SNR=11						

IDC 08 09:19:08.8±6.7,1508S×7703W,h71km±51km,mb3.0/3,
mb1 3.5/5,mb1mx3.4/16,mbtmp3.3/5,ML3.5/2,Error
ellipse: s-maj=81.8km s-min=26.4km az=35.0,Off coast
of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**8.66**	**99**	P	Pn	09 21 10.3	-1.1
	0.6nm,0.3s,baz=283,slow=14,SNR=17						
LPAZ				S	Sn	09 22 52.7	+5.2
	baz=225,slow=19,SNR=2.6						
ROSC	**El Rosal**	**19.99**	**8**	P	Pn	09 23 35.2	-2.7
	1.1nm,0.3s,baz=269,slow=21,SNR=3.9						
TXAR	**Lajitas Array**	**51.10**	**330**	P	P	09 28 03.8	-0.5
	0.2nm,0.8s,baz=144,slow=8.5,SNR=2.9						
PDAR	**Pinedale Array**	**64.86**	**334**	P	P	09 29 42.2	+1.8
	0.2nm,0.4s,baz=145,slow=4.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**82.79**	**74**	P	P	09 31 25.0	-0.9
	0.3nm,0.7s,baz=238,slow=4.2,SNR=2.7						

*ISCJB **08** 09:26:38.8±0.8,2986N±003×3624E±005,h0km,Error*
ellipse: s-maj=6.1km s-min=4.5km az=2.9
*CSEM **08** 09:26:39.3±0.4,2994N×3619E,h10km,ML2.6,Error*
ellipse: s-maj=11.5km s-min=7.2km az=10.0
*GII **08** 09:26:39.5±0.7,2992N×3613E,h0km,ML2.9/2,*
EXPLOSION
*HLW **08** 09:26:40.0,2953N×3669E,h22km,Mb3.3*
*SGS **08** 09:26:40.0,3002N×3619E,h5km*
ISC 08 09:26:38.8±0.9,2985N±003×3629E±005,h0km,n21,
σ0§63/29,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.08**	**264**	Pg	**Pg**	**09 26 59.4**	**-0.2**
HRFI	**Mount Harif**	**1.10**	**280**	Pg	**Pg**	**09 26 59.2**	**-0.6**
HRFI				Sg	**Sg**	**09 27 14.2**	**0.0**
EIL	**Elat**	**1.18**	**261**	Pg	**Pg**	**09 27 01.3**	**0.0**
EIL				Sg	**Sg**	**09 27 17.3**	**+0.7**
ZFRI	**Zfri**	**1.19**	**306**	Sg	**Sg**	**09 27 16.5**	**-0.6**
MBRI	**Mt Berech**	**1.20**	**268**	Pg	**Pg**	**09 27 01.4**	**-0.3**
MBRI				Sg	**Sg**	**09 27 17.7**	**+0.5**
HQLS		**1.20**	**243**	P	**Pg**	**09 27 01.7**	**-0.1**
HQLS		**1.20**	**243**	P	**Pg**	**09 27 01.7**	**-0.1**
HQLS				S	**Sg**	**09 27 18.0**	**+0.6**
PRNI	**Paran**	**1.22**	**294**	Pg	**Pg**	**09 27 01.3**	**-0.8**
PRNI				Sg	**Sg**	**09 27 18.5**	**+0.5**
JLOS		**1.31**	**212**	P	**Pg**	**09 27 04.5**	**+0.5**
KRMI	**Paran Flat**	**1.38**	**281**	Pg	**Pg**	**09 27 04.4**	**-0.9**
KRMI				Sg	**Sg**	**09 27 23.2**	**0.0**
HBST	**Basata**	**1.50**	**245**	P	**Pn**	**09 27 07.8**	**+0.9**
RMNI	**Mount Ramon**	**1.52**	**300**	Pn	**Pn**	**09 27 06.3**	**-0.8**
MZDA	**Masada**	**1.66**	**331**	Pn	**Pn**	**09 27 09.2**	**+0.1**
MZDA				Sn	**Sn**	**09 27 31.1**	**0.0**
BDAS	**Al Bad'**	**1.76**	**217**	P	**Pn**	**09 27 10.6**	**+0.1**
RTMI	**Retamim**	**1.83**	**311**	Sn	**Sn**	**09 27 34.1**	**-1.2**
DSI	**Dead Sea**	**1.88**	**336**	Pn	**Pn**	**09 27 12.3**	**+0.1**
DSI				Sn	**Sn**	**09 27 37.8**	**+1.2**
KZIT	**Kziot**	**1.94**	**303**	Sn	**Sn**	**09 27 38.1**	**-0.1**
HKJT	**Jabal Katrina**	**2.40**	**237**	P	**Pn**	**09 27 19.4**	**0.0**
HMDT	**Nahal Hemdat**	**2.48**	**345**	Sn	**Sn**	**09 27 52.8**	**+1.3**
TR2		**2.68**	**238**	P	**Pn**	**09 27 23.2**	**0.0**
TR1		**2.75**	**229**	P	**Pn**	**09 27 23.2**	**-1.0**

*TEH **08** 09:39:50.6,3354N×4891E,h2km,ML4.2*
*ISCJB **08** 09:40:36.7±0.2,3356N±002×4880E±003,h10km,*
mb4.3/24,MS3.4/7,Error ellipse: s-maj=3.5km
s-min=3.2km az=4.8
*MOS **08** 09:40:36.8±1.6,3325N×4894E,h33km,mb4.4/13,Error*
ellipse: s-maj=14.9km s-min=6.4km az=126.7
*THR **08** 09:40:37.7±1.8,3366N×4894E,h15km±13km,ML4.1*
*NEIC **08** 09:40:37.4,3367N×4894E,h14km,mb4.7/10,*
ML4.1(THR),MN4.2(TEH),After THR.
*CSEM **08** 09:40:38.1±0.1,3360N×4888E,h15km,mb4.5/4,Error*
ellipse: s-maj=1.7km s-min=1.4km az=138.0
*IDC **08** 09:40:41.0±4.8,3358N×4880E,h33km±36km,mb3.8/10,*
mb1 3.9/15,mb1mx3.8/26,mbtmp3.8/15,ML3.6/4,MS3.3/9,
Ms1 3.4/9,ms1mx3.1/30,Error ellipse: s-maj=26.9km
s-min=15.0km az=142.0
*SGS **08** 09:40:40.7,3362N×4896E,h13km*
ISC 08 09:40:38.4±0.2,3357N±002×4883E±003,h10km,n172,
σ1§31/177,mb4.3/24,MS3.4/7,14C-4D,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.25**	**299**	Pg	**Pn**	**09 41 00.8**	**-1.1**
IKOM	**Komasi**	**1.25**	**299**	*e*Pg	**Pn**	**09 41 00.9**	**-1.0**
IKOM				*e*		09 41 32.4	
ASAO	**Ashtian**	**1.39**	**45**	*e*Pg	**Pn**	**09 41 00.4**	**-3.4**
ASAO	**Ashtian**	**1.39**	**45**	Pg	**Pn**	**09 41 00.0**	**-3.8**
SHGR	**Shooshtar-Gavs**	**1.46**	**181**	*e*Pg	**Pg**	**09 41 06.0**	**-0.4**
SHGR				AML	AML	09 41 37.6	
	comp=E,3μm,0.5s						
IVIS	**Veis**	**1.90**	**301**	*e*Pn	**Pn**	**09 41 12.7**	**+1.9**
IVIS				*e*		09 41 16.1	
IPIR	**Pirpir**	**1.94**	**117**	Pn	**Pn**	**09 41 11.5**	**+0.1**
IPIR	**Pirpir**	**1.94**	**117**	*e*Pn	**Pn**	**09 41 11.6**	**+0.2**
IPIR				*e*		09 41 45.3	
SNGE	**Sanandaj**	**1.95**	**321**	*e*Pg	**Pn**	**09 41 13.3**	**+1.8**
SNGE				AML	AML	09 41 47.5	
	comp=E,2μm,0.6s						
SNGE	**Sanandaj**	**1.95**	**321**	Pn	**Pn**	**09 41 12.0**	**+0.5**
IGHG	**Ghaleghazi**	**2.03**	**292**	*e*Pn	**Pn**	**09 41 14.6**	**+2.0**
IGHG				*e*		09 41 55.5	
IRAZ	**Razeghan**	**2.04**	**26**	Pn	**Pn**	**09 41 12.2**	**-0.5**
IRAZ	**Razeghan**	**2.04**	**26**	*e*Pn	**Pn**	**09 41 12.3**	**-0.4**
IRAZ				*e*		09 41 52.2	
ILIN	**Lien**	**2.05**	**311**	*e*Pn	**Pn**	**09 41 15.4**	**+2.5**
ILIN	**Lien**	**2.05**	**311**	*e*Pn	**Pn**	**09 41 15.6**	**+2.7**
ILIN				*e*		09 41 50.2	
GHVR	**GHOM**	**2.24**	**65**	Pn	**Pn**	**09 41 13.0**	**-2.5**
GHVR	**GHOM**	**2.24**	**65**	*e*Pg	**Pn**	**09 41 15.4**	**0.0**
GHVR				AML	AML	09 41 57.6	
	comp=E,1μm,0.6s						
GHVR	**GHOM**	**2.24**	**65**	*e*Pn	**Pn**	**09 41 13.8**	**-1.7**
	SNR=52						
IKLH	**Kolahrood**	**2.31**	**96**	*e*Pn	**Pn**	**09 41 16.5**	**0.0**
IKLH				*e*		09 41 49.9	
IMHD	**Mahdasht**	**2.59**	**35**	Pn	**Pn**	**09 41 21.4**	**+1.0**
IMHD	**Mahdasht**	**2.59**	**35**	*e*Pn	**Pn**	**09 41 21.5**	**+1.1**
IMHD				*e*		09 41 55.2	
IVRN	**Varamin**	**2.79**	**59**	*e*Pn	**Pn**	**09 41 23.8**	**+0.8**
IVRN				*e*		09 42 16.2	
**ISFB

IBST	**Bostanabad**	**4.41**	**340**	Pn		**Pn**	**09 41 46.8**	**+1.5**
IBST	**Bostanabad**	**4.41**	**340**	*e*Pn		**Pn**	**09 41 46.8**	**+1.5**
IBST				*e*			09 43 11.6	
KBD	**Kabd**	**4.49**	**193**	*e*P		**Pn**	**09 41 48.0**	**+1.6**
	baz=194							
KBD				AML		AML	09 42 45.0	
	comp=Z,103nm,0.4s,baz=194							
NAY	**Al-Naaiem**	**4.52**	**198**	*e*P		**Pn**	**09 41 48.6**	**+1.7**
	baz=199							
NAY				AML		AML	09 42 44.7	
	comp=Z,36nm,0.6s,baz=199							
IANJ	**Anjilo**	**4.60**	**64**	*e*Pn		**Pn**	**09 41 48.1**	**+0.1**
IANJ				*e*			09 43 23.1	
IAZR	**Azarshahr**	**4.71**	**331**	Pn		**Pn**	**09 41 51.3**	**+1.9**
IAZR	**Azarshahr**	**4.71**	**331**	*e*Pn		**Pn**	**09 41 51.4**	**+2.0**
IAZR				*e*			09 42 11.2	
RDF	**Al-Radifah**	**4.76**	**194**	*e*P		**Pn**	**09 41 51.8**	**+1.6**
	baz=195							
RDF				AML		AML	09 42 50.9	
	comp=Z,157nm,0.6s,baz=195							
IHRS	**Heris**	**4.95**	**343**	Pn		**Pn**	**09 41 54.5**	**+1.7**
IHRS	**Heris**	**4.95**	**343**	*e*Pn		**Pn**	**09 41 54.6**	**+1.8**
IHRS				*e*			09 42 40.0	
IGLO	**Ghaloghah**	**5.04**	**53**	Pn		**Pn**	**09 41 54.5**	**+0.6**
IGLO	**Ghaloghah**	**5.04**	**53**	*e*Pn		**Pn**	**09 41 54.6**	**+0.7**
IPAR	**Pars**	**5.17**	**135**	*e*Pn		**Pn**	**09 41 56.3**	**+0.5**
IPAR				*e*			09 43 52.5	
GRMI	**Germi**	**5.28**	**352**	Pn		**Pn**	**09 41 56.0**	**-1.3**
GRMI	**Germi**	**5.28**	**352**	*e*Pn		**Pn**	**09 41 56.9**	**-0.4**
ISHB	**Shabestar**	**5.37**	**332**	Pn		**Pn**	**09 42 02.3**	**+3.7**
ISHB	**Shabestar**	**5.37**	**332**	*e*Pn		**Pn**	**09 42 02.3**	**+3.7**
ISHB				*e*			09 42 27.3	
KFJS		**5.42**	**188**	P		**Pn**	**09 42 00.3**	**+1.0**
KFJS		**5.42**	**188**	P		**Pn**	**09 42 00.3**	**+1.0**
KFJS				S		**Sn**	**09 43 02.2**	**+0.4**
MSL	**Mosul**	**5.48**	**303**	*ex*		x	09 41 58.0	
MSL				*ex*		x	09 42 13.0	
MSL				*ex*		x	09 42 27.0	
MSL				*ex*		x	09 43 03.0	
ISRV	**Sarvestan**	**5.55**	**138**	Pn		**Pn**	**09 42 00.6**	**-0.5**
ISRV	**Sarvestan**	**5.55**	**138**	*e*Pn		**Pn**	**09 42 00.7**	**-0.4**
IMRD	**Marand**	**5.72**	**335**	Pn		**Pn**	**09 42 04.4**	**+1.1**
IMRD	**Marand**	**5.72**	**335**	*e*Pn		**Pn**	**09 42 04.5**	**+1.2**
IMRD				*e*			09 42 33.4	
GHIR	**Ghir-Karzin**	**6.37**	**145**	Pn		**Pn**	**09 42 13.0**	**+0.8**
ASYS		**7.18**	**214**	P		**Pn**	**09 42 21.9**	**-1.5**
GNI	**Garni**	**7.33**	**335**	Pn		**Pn**	**09 42 30.0**	**+4.5**
	comp=Z,0.6nm,0.3s,baz=38,slow=11,SNR=3.7							
GNI				Pg		**Pb**	**09 42 51.7**	**+6.0**
	comp=Z,0.4nm,0.3s,baz=209,slow=18,SNR=3.1							
GNI				Lg			09 44 34.1	
	comp=Z,0.7nm,0.3s,baz=37,slow=20,SNR=2.2							
GNI				LR		LR	09 46 09.0	
	comp=Z,66nm,20.1s,baz=319,slow=45							
GNI	**Garni**	**7.33**	**335**	Pn		**Pn**	**09 42 30.0**	**+4.5**
GNI				Pg		**Pb**	**09 42 51.7**	**+6.0**
GNI				Lg			09 44 34.1	
GNI	**Garni**	**7.33**	**335**	*e*P		**Pn**	**09 42 30.7**	**+5.2**
GNI				pmax		pmax		
	comp=Z,10.0nm,0.9s							
GNI	**Garni**	**7.33**	**335**	*e*P		**Pn**	**09 42 30.7**	**+5.2**
	comp=Z,10.0nm,0.9s							
BQQSS		**7.69**	**176**	P		**Pn**	**09 42 30.5**	**0.0**
BTHS		**9.66**	**169**	S		**Sn**	**09 44 40.6**	**-5.3**
BTHS		**9.66**	**169**	P		**Pn**	**09 42 54.8**	**-2.6**
ASF	**Jabal al Asfar**	**10.13**	**265**	Pn		**Pn**	**09 43 04.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=334,slow=12,SNR=4.3							
ASF				Sn		**Sn**	**09 45 02.5**	**+4.9**
	comp=Z,0.7nm,0.3s,baz=238,slow=13,SNR=3.5							
ASF				Lg			09 46 01.0	
	comp=Z,0.2nm,0.3s,baz=131,slow=19,SNR=3.7							
HRDDS		**10.62**	**177**	P		**Pn**	**09 43 08.2**	**-2.5**
MMAI	**Mount Meron Ar**	**11.25**	**271**	Pn		**Pn**	**09 43 20.2**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=83,slow=12,SNR=2.0							
KIV	**Kislovodsk**	**11.42**	**337**	*e*P		**Pn**	**09 43 26.8**	**+5.4**
KIV				*e*S		**Sn**	**09 45 36.1**	**+7.1**
KIV				pmax		pmax		
	comp=Z,16nm,1.1s							
KIV				MLR		MLR		
	comp=Z,164nm,11.0s							
LYLS		**11.58**	**187**	S		**Sn**	**09 45 26.5**	**-6.6**
EIL	**Elat**	**12.45**	**256**	Pn		**Pn**	**09 43 35.6**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=66,slow=9.7,SNR=4.0							
EIL				LR		LR	09 49 26.0	
	comp=Z,150nm,21.0s,baz=280,slow=42							
BR131	**Keskin Array S**	**13.65**	**301**	*e*Pn		**Pn**	**09 43 53.9**	**+1.9**
	comp=Z,5.5nm,0.9s							
BRTR	**Keskin Array B**	**13.65**	**301**	Pn		**Pn**	**09 43 52.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=121,slow=12,SNR=17							
BRTR	**Keskin Array B**	**13.65**	**301**	*i* P		**Pn**	**09 43 53.9**	**+2.0**
BRTR				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BRTR	**Keskin Array B**	**13.65**	**301**	*i* P		**Pn**	**09 43 53.9**	**+2.0**
	comp=Z,6.0nm,0.9s							
ANN	**Anapa**	**14.26**	**325**	*e*P		**Pn**	**09 44 05.8**	**+5.6**
ANN				*e*S		**Sn**	**09 46 49.3**	**+11**
ANN				pmax		pmax		
	comp=Z,40nm,0.9s							
TIRR	**Tirgusor**	**19.18**	**310**	⇑P		**Pn**	**09 45 04.0**	**+1.0**
TIRR	**Tirgusor**	**19.18**	**310**	⇑*i*P		**Pn**	**09 45 04.0**	**+1.1**
APE	**Apeiranthos**	**19.32**	**287**	*e*P		**Pn**	**09 45 03.7**	**-1.0**
APE				pmax		pmax		
	comp=Z,28nm,1.7s							
APE	**Apeiranthos**	**19.32**	**287**	*e*P		**Pn**	**09 45 03.7**	**-1.0**
	comp=Z,28nm,1.7s							
APE	**Apeiranthos**	**19.32**	**287**	⇑*i*P		**Pn**	**09 45 04.8**	**+0.1**
IDI	**Anoyia**	**19.82**	**282**	P		**Pn**	**09 45 09.6**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=96,slow=9.5,SNR=35							
VAM	**Vamos**	**20.38**	**282**	*e*PB		**P**	**09 45 15.0**	**-0.2**
PLOR	**Plostina**	**20.93**	**312**	⇑*i*P		**P**	**09 45 21.9**	**+0.8**
KYTH	**Kithira**	**21.30**	**285**	*e*PN		**P**	**09 45 22.0**	**-3.2**
VLI	**Veliai**	**21.39**	**286**	*e*PG		**P**	**09 45 25.0**	**-1.1**
VOIR		**21.75**	**310**	⇑P		**P**	**09 45 30.6**	**+0.6**
VOIR		**21.75**	**310**	⇑*i*P		**P**	**09 45 30.6**	**+0.7**
VTS	**Vitosha**	**22.02**	**302**	⇓P		**P**	**09 45 34.6**	**+1.7**
VTS	**Vitosha**	**22.02**	**302**	⇓*i*P		**P**	**09 45 34.6**	**+1.8**
AKASG	**Malin Array Be**	**22.34**	**326**	P		**P**	**09 45 33.9**	**-2.3**
	comp=Z,5.3nm,0.8s,mb4.0,baz=133,slow=10,SNR=10							
AKASG	**Malin Array Be**	**22.34**	**326**	*i* P		**P**	**09 45 36.2**	**0.0**
AKASG				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KIEV	**Kiev**	**22.34**	**326**	*e*P		**P**	**09 45 33.4**	**-2.8**
	comp=Z,6.7nm,0.7s,mb4.2							
KIEV	**Kiev**	**22.34**	**326**	*e*P		**P**	**09 45 33.4**	**-2.8**
KIEV				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.2							
KIEV	**Kiev**	**22.34**	**326**	*e*P		**P**	**09 45 33.4**	**-2.8**
	comp=Z,6.7nm,0.7s,mb4.2							
BURAR	**Bucovina Array**	**22.65**	**315**	⇑P		**P**	**09 45 40.6**	**+1.2**
BURAR	**Bucovina Array**	**22.65**	**315**	⇑*i*P		**P**	**09 45 40.6**	**+1.1**
BUR08	**Bucovina Ar. S**	**22.67**	**315**	*e*P		**P**	**09 45 40.1**	**+0.4**
BUR08	**Bucovina Ar. S**	**22.67**	**315**	*e*P		**P**	**09 45 40.1**	**+0.4**
OBN	**Obninsk**	**23.18**	**342**	*e*P		**P**	**09 45 45.2**	**+0.2**
OBN				pmax		pmax		
	comp=Z,36nm,1.2s,mb4.7							
OBN	**Obninsk**	**23.18**	**342**	*e*P		**P**	**09 45 45.2**	**+0.2**
	comp=Z,36nm,1.2s,mb4.7							
GZR	**Gura Zlata**	**23.21**	**308**	⇑P		**P**	**09 45 46.0**	**+0.6**
GZR	**Gura Zlata**	**23.21**	**308**	⇑*i*P		**P**	**09 45 46.0**	**+0.6**
ARU	**Arti**	**23.82**	**13**	*d*iP		**P**	**09 45 48.3**	**-3.0**
ARU				*e*S		**S**	**09 50 01.4**	**-5.4**
ARU				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb3.8							
ARU	**Arti**	**23.82**	**13**	*i* P		**P**	**09 45 48.3**	**-3.0**
	comp=Z,2.0nm,0.5s,mb3.8							
BZS	**Buzias**	**24.05**	**308**	⇑*i*P		**P**	**09 45 57.4**	**+3.8**
BVAR	**Borovoye Array**	**24.81**	**32**	P		**P**	**09 45 59.6**	**-0.8**
	comp=Z,1.6nm,0.6s,mb3.8,baz=219,slow=8.8,SNR=9.8							
BVAR				LR		LR	09 57 07.8	
	comp=Z,99nm,19.6s,MS3.3,baz=226,slow=40							
BVAR	**Borovoye Array**	**24.81**	**32**	P		**P**	**09 45 59.6**	**-0.8**
BVAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BVAR				MLR		MLR		
	comp=Z,99nm,19.6s							
KOLS	**Kolonicke sedl**	**25.01**	**316**	*e*P		**P**	**09 46 02.2**	**0.0**
KECS	**Kecovo**	**25.87**	**314**	*e*P		**P**	**09 46 08.2**	**-1.9**
	comp=Z,2.6nm,0.7s,mb3.9							
KECS	**Kecovo**	**25.87**	**314**	*e*P		**P**	**09 46 08.2**	**-1.9**
KECS				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb3.9							
PSZ	**Piszkesteto**	**26.00**	**312**	⇑*ep*P		**P**	**09 46 13.5**	**+2.2**
PKSM	**Moragy**	**26.21**	**308**	⇓*i*P		**P**	**09 46 13.5**	**+0.3**
TIP	**Timpagrande**	**26.34**	**292**	*e*P		**P**	**09 46 13.5**	**-0.9**
	comp=Z,10nm,1.0s,mb4.3							
TIP	**Timpagrande**	**26.34**	**292**	*e*P		**P**	**09 46 13.5**	**-0.9**
	comp=Z,10nm,1.0s,mb4.3							
VYHS	**Vyhne**	**26.88**	**313**	*e*P		**P**	**09 46 19.2**	**0.0**
CUC	**Castrocucco**	**27.10**	**293**	*e*P		**P**	**09 46 20.5**	**-0.8**
	comp=Z,14nm,0.8s,mb4.5							
CUC	**Castrocucco**	**27.10**	**293**	*e*P		**P**	**09 46 20.5**	**-0.8**
	comp=Z,14nm,0.8s,mb4.5							
KURK	**Kurchatov**	**27.69**	**43**	*e*P		**P**	**09 46 21.5**	**-4.9**
MODS	**Modra-Piesok**	**27.80**	**312**	*e*P		**P**	**09 46 30.0**	**+2.5**
MKAR	**Makanchi Array**	**28.54**	**52**	P		**P**	**09 46 34.7**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.5,baz=242,slow=6.2,SNR=3.3							
MKAR				LR		LR	09 59 55.1	
	comp=Z,32nm,20.0s,MS2.9,baz=180,slow=40							
MKAR	**Makanchi Array**	**28.54**	**52**	P		**P**	**09 46 34.7**	**+0.6**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
MKAR				MLR		MLR		
	comp=Z,32nm,20.0s							
GERES	**GERESS Array B**	**30.20**	**311**	P		**P**	**09 46 47.6**	**-1.1**
	comp=Z,0.7nm,0.4s,mb3.7,baz=104,slow=8.4,SNR=4.3							
GERES	**GERESS Array B**	**30.20**	**311**	P		**P**	**09 46 47.6**	**-1.2**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.4s							
FETA	**Feichten**	**31.69**	**307**	⇑*i*P		**P**	**09 47 00.8**	**-1.2**
	comp=Z,4.3nm,0.5s,mb4.5							
DAVA	**Damuels**	**32.31**	**307**	⇑*i*P		**P**	**09 47 05.8**	**-1.5**
	comp=Z,7.6nm,0.4s,mb4.8							
ZALV	**Zalesovo Beam**	**32.51**	**40**	P		**P**	**09 47 07.9**	**-1.2**
	comp=Z,0.6nm,0.4s,mb3.8,baz=236,slow=10,SNR=3.1							
ZALV				LR		LR	10 01 30.0	
	comp=Z,42nm,18.5s,MS3.2,baz=56,slow=38							
ZALV	**Zalesovo Beam**	**32.51**	**40**	P		**P**	**09 47 07.9**	**-1.2**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.1							
ZALV				MLR		MLR		
	comp=Z,42nm,18.5s,MS3.2							
SBF	**Sospel**	**33.58**	**300**	*e*P		**P**	**09 47 15.9**	**-2.7**
	comp=Z,40nm,1.0s,mb5.0							
SBF	**Sospel**	**33.58**	**300**	*e*P		**P**	**09 47 15.9**	**-2.7**
SBF				pmax		pmax		
	comp=Z,20nm,1.0s,mb5.0							
SBF	**Sospel**	**33.58**	**300**	*e*P		**P**	**09 47 15.9**	**-2.7**
	comp=Z,40nm,1.0s,mb5.3							
MBDF	**Montbardon**	**34.12**	**302**	*e*P		**P**	**09 47 20.7**	**-2.5**
	comp=Z,22nm,1.0s,mb4.8							
MBDF	**Montbardon**	**34.12**	**302**	*e*P		**P**	**09 47 20.7**	**-2.5**
MBDF				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.7							
MBDF	**Montbardon**	**34.12**	**302**	*e*P		**P**	**09 47 20.7**	**-2.5**
	comp=Z,22nm,1.0s,mb5.0							
LPG	**La Plagne**	**34.20**	**303**	*e*P		**P**	**09 47 22.2**	**-1.7**
	comp=Z,14nm,0.8s,mb4.6							
LPG	**La Plagne**	**34.20**	**303**	*e*P		**P**	**09 47 22.2**	**-1.7**
LPG				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
LPG	**La Plagne**	**34.20**	**303**	*e*P		**P**	**09 47 22.2**	**-1.7**
	comp=Z,13nm,0.8s,mb4.9							
BNI	**Bardonecchia**	**34.21**	**302**	*e*P		**P**	**09 47 22.4**	**-1.6**
	comp=Z,29nm,1.1s,mb5.1							
BNI	**Bardonecchia**	**34.21**	**302**	*e*P		**P**	**09 47 22.4**	**-1.6**
BNI				pmax		pmax		
	comp=Z,29nm,1.1s,mb5.1							
BNI	**Bardonecchia**	**34.21**	**302**	*e*P		**P**	**09 47 22.4**	**-1.6**
	comp=Z,29nm,1.1s,mb5.1							
LPL	**La Plagne**	**34.21**	**303**	*e*P		**P**	**09 47 22.2**	**-1.8**
	comp=Z,26nm,1.1s,mb4.8							
LPL	**La Plagne**	**34.21**	**303**	*e*P		**P**	**09 47 22.2**	**-1.8**
LPL				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.8							
LPL	**La Plagne**	**34.21**	**303**	*e*P		**P**	**09 47 22.2**	**-1.8**
	comp=Z,26nm,1.1s,mb5.1							
SMF	**Signal de Mont**	**36.32**	**305**	*e*P		**P**	**09 47 39.7**	**-2.4**
	comp=Z,39nm,1.2s,mb4.9							
SMF	**Signal de Mont**	**36.32**	**305**	*e*P		**P**	**09 47 39.7**	**-2.4**
SMF				pmax		pmax		
	comp=Z,20nm,1.2s,mb4.9							
SMF	**Signal de Mont**	**36.32**	**305**	*e*P		**P**	**09 47 39.7**	**-2.4**
	comp=Z,39nm,1.2s,mb5.2							
SSF	**Saint Saulge**	**36.58**	**305**	*e*P		**P**	**09 47 42.0**	**-2.4**
NOA	**NORSAR Array B**	**36.61**	**330**	P		**P**	**09 47 42.0**	**-2.4**
	comp=Z,1.6nm,0.8s,mb3.9,baz=121,slow=7.8,SNR=3.6							
NOA				LR		LR	10 03 30.7	
	comp=Z,102nm,18.8s,MS3.6,baz=290,slow=37							
NOA	**NORSAR Array B**	**36.61**	**330**	P		**P**	**09 47 42.0**	**-2.4**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NOA				MLR		MLR		
	comp=Z,102nm,18.8s							
ARCES	**ARCESS Array B**	**38.29**	**347**	P		**P**	**09 47 59.1**	**+0.6**
	comp=Z,1.5nm,0.7s,mb3.8,baz=143,slow=7.6,SNR=3.9							
ARCES	**ARCESS Array B**	**38.29**	**347**	P		**P**	**09 47 59.1**	**+0.6**
ARCES				pmax		pmax		
	comp=Z,2.0nm,0.7s							
ESDC	**Sonseca Array**	**42.30**	**294**	P		**P**	**09 48 31.1**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.5,baz=53,slow=9.4,SNR=5.4							
CMAR	**Chiang Mai Arr**	**47.05**	**96**	LR		LR	10 12 40.1	
	comp=Z,36nm,18.1s,MS3.4,baz=75,slow=41							
TORD	**Torodi Ar. Bea**	**47.34**	**256**	P		**P**	**09 49 11.6**	**-1.0**
	comp=Z,3.3nm,0.9s,mb4.2,baz=61,slow=6.9,SNR=19							
TORD				LR		LR	10 08 42.5	
	comp=Z,54nm,19.7s,MS3.5,baz=5.0,slow=36							
DBIC	**Dimbokro**	**56.31**	**254**	LR		LR	10 17 30.9	
	comp=Z,53nm,19.8s,MS3.6,baz=212,slow=39							
BOSA	**Boshof**	**65.76**	**203**	P		**P**	**09 51 22.3**	**-1.1**
	comp=Z,2.6nm,0.8s,mb4.3,baz=41,slow=17,SNR=3.1							
BOSA	**Boshof**	**65.76**	**203**	P		**P**	**09 51 22.3**	**-1.1**
BOSA				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.4							

*TEH **08** 09:42:22.2, 33.51N×48.85E, h30km, ML3.7*
*IDC **08** 09:45:39.4±2.7, 32.92N×49.15E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/23, mbtmp3.7/5, Error ellipse: s-maj=50.0km s-min=31.9km az=145.0*
*ISCJB **08** 09:45:44.6±0.4, 33.53N±0.04×48.90E±0.05, h10km, mb3.4/3, Error ellipse: s-maj=7.0km s-min=4.9km az=34.0*
*CSEM **08** 09:45:44.8±0.1, 33.55N×48.85E, h15km, mb3.7, Error ellipse: s-maj=3.4km s-min=2.2km az=128.0*
*NEIC **08** 09:45:44.8, 33.65N×48.98E, h15km, ML3.4(THR), MN3.7(TEH), After THR.*
*THR **08** 09:45:44.5±0.6, 33.67N×48.96E, h14km±7km, ML3.4*

ISC 08 09:45:45.8±0.4, 33.56N±0.04×48.87E±0.05, h10km, n41, σ1§09/43, mb3.4/3, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.28**	**299**	Pn		**Pn**	**09 46 03.9**	**-5.9**
IKOM	**Komasi**	**1.28**	**299**	*e*Pn		**Pn**	**09 46 03.9**	**-5.9**
IKOM				*e*			09 46 44.1	
ASAO	**Ashtian**	**1.38**	**44**	Pg		**Pn**	**09 46 07.0**	**-4.1**
ASAO	**Ashtian**	**1.38**	**44**	*e*Pg		**Pn**	**09 46 07.7**	**-3.4**
SHGR	**Shooshtar-Gavs**	**1.45**	**182**	*e*Pg		**Pg**	**09 46 13.0**	**-0.6**
SHGR				AML		AML	09 46 44.0	
	comp=E,732nm,0.6s							
IVIS	**Veis**	**1.93**	**301**	Pn		**Pn**	**09 46 19.8**	**+1.1**
IVIS	**Veis**	**1.93**	**301**	*e*Pn		**Pn**	**09 46 19.9**	**+1.2**
IVIS				*e*			09 46 22.1	
SNGE	**Sanandaj**	**1.98**	**321**	Pn		**Pn**	**09 46 19.0**	**-0.4**
SNGE	**Sanandaj**	**1.98**	**321**	*e*Pg		**Pn**	**09 46 20.1**	**+0.7**
SNGE				AML		AML	09 46 58.6	
	comp=E,506nm,0.5s							
SNGE	**Sanandaj**	**1.98**	**321**	*e*Pn		**Pn**	**09 46 20.0**	**+0.6**
	SNR=42							
IRAZ	**Razeghan**	**2.04**	**25**	Pn		**Pn**	**09 46 17.9**	**-2.3**
IRAZ				Sn		**Sn**	**09 46 45.8**	**+0.1**
IRAZ	**Razeghan**	**2.04**	**25**	*e*Pn		**Pn**	**09 46 18.0**	**-2.2**
IRAZ				*e*Sn		**Sn**	**09 46 45.8**	**+0.1**
IRAZ	**Razeghan**	**2.04**	**25**	*e*Pn		**Pn**	**09 46 18.0**	**-2.2**
IRAZ				*e*Sn		**Sn**	**09 46 45.8**	**+0.1**
IRAZ				*e*			09 47 05.7	
IGHG	**Ghaleghazi**	**2.06**	**293**	*e*Pn		**Pn**	**09 46 20.5**	**0.0**
IGHG				*e*			09 47 06.7	
GHVR	**GHOM**	**2.22**	**65**	*e*Pg		**Pn**	**09 46 21.8**	**-0.8**
GHVR				AML		AML	09 47 01.3	
	comp=E,264nm,0.6s							
GHVR				AML		AML	09 47 01.9	
	comp=N,249nm,0.6s							
GHVR	**GHOM**	**2.22**	**65**	*e*Pn		**Pn**	**09 46 21.3**	**-1.3**
	SNR=42							
IDHR	**Dehrash**	**2.35**	**300**	*e*Lg			09 47 02.5	
IMHD	**Mahdasht**	**2.59**	**34**	Pn		**Pn**	**09 46 28.6**	**+0.8**
IMHD	**Mahdasht**	**2.59**	**34**	*e*Pn		**Pn**	**09 46 28.7**	**+0.9**
IVRN	**Varamin**	**2.77**	**58**	*e*Pn		**Pn**	**09 46 31.1**	**+0.9**
IVRN				*e*			09 47 21.3	
ISFB	**Sefidab**	**2.91**	**73**	Pn		**Pn**	**09 46 32.8**	**+0.6**
ISFB	**Sefidab**	**2.91**	**73**	*e*Pn		**Pn**	**09 46 32.9**	**+0.7**
ISFB				*e*			09 47 15.2	
DAMV	**Damavand**	**3.29**	**50**	Pn		**Pn**	**09 46 36.0**	**-1.4**
DAMV	**Damavand**	**3.29**	**50**	*e*Pn		**Pn**	**09 46 36.3**	**-1.1**
DAMV				AML		AML	09 47 30.9	
	comp=N,63nm,0.6s							
DAMV				AML		AML	09 47 38.1	
	comp=E,76nm,0.6s							
IDMV	**Damavand**	**3.30**	**51**	Pn		**Pn**	**09 46 38.1**	**+0.6**
IDMV	**Damavand**	**3.30**	**51**	*e*Pn		**Pn**	**09 46 38.2**	**+0.7**
IDMV				*e*			09 47 37.8	
MIB	**Mutribah**	**3.96**	**200**	*e*P		**Pn**	**09 46 46.7**	**+0.1**
	baz=200							
MIB				AML		AML	09 47 41.4	
	comp=Z,51nm,0.6s,baz=200							
ISHM	**Shahmirzad**	**4.28**	**57**	*e*Pn		**Pn**	**09 46 51.7**	**+0.7**
ISHM				*e*			09 47 59.5	
ISAD	**Sadrabad**	**4.38**	**111**	*e*Pn		**Pn**	**09 46 52.5**	**+0.1**
ISAD				*e*			09 48 10.7	
NAY	**Al-Naaiem**	**4.51**	**198**	*e*P		**Pn**	**09 46 54.6**	**+0.4**
	baz=199							
NAY				AML		AML	09 47 55.5	
	comp=Z,10.0nm,0.6s,baz=199							
RDF	**Al-Radifah**	**4.75**	**194**	*e*P		**Pn**	**09 46 57.3**	**-0.3**
	baz=195							
RDF				AML		AML	09 47 56.7	
	comp=Z,33nm,0.4s,baz=195							
QRN	**Al-Qurain**	**4.87**	**190**	*e*P		**Pn**	**09 46 59.5**	**+0.4**
	baz=190							
QRN				AML		AML	09 48 04.6	
	comp=Z,33nm,0.6s,baz=190							
IGLO	**Ghaloghah**	**5.02**	**53**	Pn		**Pn**	**09 47 02.0**	**+0.8**
IGLO	**Ghaloghah**	**5.02**	**53**	*e*Pn		**Pn**	**09 47 02.1**	**+0.9**
IGLO				*e*			09 48 40.2	
IMRD	**Marand**	**5.75**	**334**	*e*Pn		**Pg**	**09 47 28.7**	**-7.1**
IMRD				*e*			09 47 38.5	
GNI	**Garni**	**7.36**	**335**	Pg		**Pg**	**09 48 03.1**	**-3.6**
	comp=Z,0.6nm,0.3s,baz=226,slow=9.1,SNR=3.7							
BRTR	**Keskin Array B**	**13.68**	**301**	Pn		**Pn**	**09 49 01.0**	**+1.2**
	baz=117,slow=13,SNR=4.0							
IDI	**Anoyia**	**19.85**	**282**	P		**Pn**	**09 50 15.9**	**-2.6**
	comp=Z,10nm,0.8s,baz=114,slow=10,SNR=7.1							
AKASG	**Malin Array Be**	**22.37**	**326**	P		**P**	**09 50 45.9**	**+1.9**
	comp=Z,0.4nm,0.2s,mb3.4,baz=133,slow=11,SNR=3.6							
BVAR	**Borovoye Array**	**24.81**	**32**	P		**P**	**09 51 06.7**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.4,baz=207,slow=9.2,SNR=3.3							
TORD	**Torodi Ar. Bea**	**47.37**	**256**	P		**P**	**09 54 16.3**	**-3.9**
	comp=Z,0.5nm,0.8s,mb3.5,baz=56,slow=8.2,SNR=4.1							

*DDA **08** 10:01:03.1, 37.13N×27.95E, h7km±4km, Md2.7*
*CSEM **08** 10:01:03.4±0.3, 37.20N×27.81E, h25km, MD2.7, Error ellipse: s-maj=8.7km s-min=8.4km az=115.0*
*ISCJB **08** 10:01:04.0±0.7, 37.17N±0.03×27.93E±0.05, h6km±12km, Error ellipse: s-maj=6.9km s-min=5.7km az=6.5*
*ISK **08** 10:01:04.0, 37.19N×27.87E, h11km, ML2.5*

ISC 08 10:01:04.3±0.7, 3717N±0.03×2795E±0.05, h2km±17km, n10, σ0§83/16, Turkey

| Code | Station Name | Δ° | AZ° | Phase | ID | |

GII 08 11:03:04.3±1.0, 3117N×3527E, h0km, ML2.6/5, EXPLOSION, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MZDA	**Masada**	**0.16**	**28**	T		11 04 01.2	
MZDA	**Masada**	**0.16**	**28**	Pg	Pg	11 03 09.4	+1.9
MZDA				Sg	Sg	11 03 12.6	+3.0
YTIR	**Yattir**	**0.24**	**326**	Pg	Pg	11 03 11.1	+2.2
YTIR				Sg	Sg	11 03 15.7	+3.7
DSI	**Dead Sea**	**0.41**	**13**	Pg	Pg	11 03 13.8	+1.5
DSI				Sg	Sg	11 03 22.4	+4.8
RTMI	**Retamim**	**0.51**	**258**	Pg	Pg	11 03 16.0	+1.9
RTMI				Sg	Sg	11 03 24.8	+4.1
ZFRI	**Zfri**	**0.61**	**188**	Pg	Pg	11 03 17.4	+1.4
ZFRI				Sg	Sg	11 03 28.3	+4.3
PRNI	**Paran**	**0.84**	**196**	Pg	Pg	11 03 22.6	+2.2
PRNI				Sg	Sg	11 03 36.3	+5.0
PRNI				T		11 04 24.5	
HMDT	**Nahal Hemdat**	**1.11**	**11**	Pg	Pg	11 03 27.4	+1.9
HMDT				Sg	Sg	11 03 42.6	+2.8
HRFI	**Mount Harif**	**1.14**	**190**	Pg	Pg	11 03 27.2	+1.0
HRFI				Sg	Sg	11 03 44.7	+3.7
KRMI	**Paran Flat**	**1.15**	**204**	Sg	Sg	11 03 45.1	+4.0
MMLI	**Mount Malkishu**	**1.27**	**6**	Pg	Pg	11 03 29.6	+0.8
MMLI				Sg	Sg	11 03 49.4	+4.1
MBRI	**Mt Berech**	**1.40**	**193**	Pn	Pn	11 03 31.8	+0.7
MBRI				Sn	Sn	11 03 52.6	+2.3
EIL	**Elat**	**1.52**	**191**	Pn	Pn	11 03 33.1	+0.5
EIL				Sn	Sn	11 03 55.6	+2.5

*ISCJB **08** 11:07:35.7±5.1, 145S±0.1×1670E±02, h37km±43km, mb4.2/6, MS3.4/5, Error ellipse: s-maj=29.5km s-min=24.5km az=9.2*

*IDC **08** 11:07:38.3±5.9, 1454S×16705E, h48km±49km, mb3.9/7, mb1 4.2/8, mb1mx3.9/19, mbtmp4.1/8, ML4.9/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/24, Error ellipse: s-maj=44.4km s-min=26.2km az=125.0*

ISC 08 11:07:40.6±4.2, 145S±02×1669E±02, h53km±36km, n16, σ1§60/13, mb4.2/6, MS3.4/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.46**	**305**	P	**Pn**	**11 09 39.7**	**-0.9**
	14nm,0.3s,baz=166,slow=9.0,SNR=6.7						
HNR				S	**Sn**	**11 11 16.7**	**+2.0**
	6.0nm,0.3s,baz=136,slow=20,SNR=2.8						
CTA	**Charters Tower**	**20.51**	**251**	P	**P**	**11 12 15.5**	**+1.0**
	8.4nm,0.9s,baz=90,slow=11,SNR=5.0						
CTA				LR	LR	11 18 59.9	
	comp=Z,129nm,18.6s,MS3.3,baz=53,slow=33						
AFI	**Afiamalu**	**20.65**	**91**	LR	LR	11 18 08.2	
	comp=Z,102nm,18.4s,MS3.2,baz=115,slow=31						
URZ	**Urewera**	**25.36**	**161**	LR	LR	11 20 47.9	
	comp=Z,248nm,18.6s,MS3.8,baz=180,slow=31						
STKA	**Stephens Creek**	**28.92**	**229**	P	**P**	**11 13 34.7**	**0.0**
	1.7nm,0.5s,mb4.1,baz=50,slow=8.4,SNR=4.0						
STKA				LR	LR	11 24 45.8	
	comp=Z,100nm,21.0s,MS3.4,baz=214,slow=36						
WRA	**Warramunga Arr**	**31.57**	**255**	P	**P**	**11 13 56.6**	**-1.7**
	1.7nm,0.6s,mb4.0,baz=84,slow=8.8,SNR=10						
WRA				LR	LR	11 26 04.5	
	comp=Z,67nm,20.4s,MS3.3,baz=60,slow=35						
ASAR	**Alice Springs**	**32.46**	**249**	P	**P**	**11 14 04.3**	**-1.8**
	1.9nm,0.6s,mb4.1,baz=75,slow=9.3,SNR=28						
PPT	**Papeete**	**41.86**	**100**	*e*LR	LR	11 26 59.1	
	41nm,24.0s						
NWAO	**Narrogin (SRO)**	**48.60**	**239**	P	**P**	**11 16 17.0**	**-2.1**
	11nm,1.0s,mb4.9,baz=97,slow=4.5,SNR=5.4						
CMAR	**Chiang Mai Arr**	**74.54**	**294**	P	**P**	**11 19 14.2**	**0.0**
	3.6nm,0.7s,mb4.4,baz=125,slow=4.7,SNR=19						
NVAR	**Mina Array Bea**	**87.35**	**49**	P	**P**	**11 20 20.5**	**-1.6**
	0.3nm,0.6s,mb3.7,baz=230,slow=5.6,SNR=3.4						
SNAA	**Sanae**	**93.80**	**183**	*e*	**P**	**11 20 55.1**	**+3.5**
SNAA				*e*		11 20 59.2	
VNA3	**Neumayer Olymp**	**94.48**	**181**	*e*	**P**	**11 20 58.8**	**+4.1**
VNA3				*e*		11 21 03.9	
VNA2	**Neumayer--Watz**	**94.74**	**182**	*e*	**P**	**11 21 00.6**	**+4.7**
	baz=188,slow=5.1						
VNA2				*e*		11 21 05.7	
VNA1	**Neumayer--Stat**	**95.04**	**182**	*e*	**P**	**11 21 00.4**	**+3.1**
VNA1				*e*		11 21 05.6	
TORD	**Torodi Ar. Bea**	**165.60**	**267**	PKPab	PKPab	11 28 37.1	-2.1
	1.5nm,0.9s,baz=96,slow=3.7,SNR=9.0						

*ISCJB **08** 11:24:21.0±0.5, 3808N±005×7285E±010, h10km, mb3.3/2, Error ellipse: s-maj=11.9km s-min=5.0km az=157.0*

*NEIC **08** 11:24:21.4±1.4, 3778N×7241E, h10km, mb4.2/2, Error ellipse: s-maj=29.1km s-min=8.2km az=68.0*

*NNC **08** 11:24:22.1±4.7, 3824N×7255E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=39.0km s-min=30.3km az=26.0*

*IDC **08** 11:24:25.1±1.4, 3836N×7289E, h0km, mb3.4/2, mb1 3.6/5, mb1mx3.4/24, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=36.4km s-min=20.5km az=60.0*

ISC 08 11:24:21.5±0.8, 3786N±007×725E±01, h10km, n26, σ1§38/33, mb3.3/2, 7C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**4.05**	**187**	P	**Pn**	**11 25 33.4**	**+10**
CEP				S	**Sn**	**11 26 20.0**	**+9.0**
AML	**Almayashu**	**4.37**	**12**	*e*Pn	**Pn**	**11 25 28.1**	**+0.2**
EKS2	**Erkin-Say**	**4.90**	**11**	*e*Pn	**Pn**	**11 25 37.7**	**+2.5**
THW	**Thamme Wali**	**5.09**	**187**	P	**Pn**	**11 25 46.3**	**+8.5**
KK31	**Karatay Array**	**5.45**	**345**	⇑Pn	**Pn**	**11 25 42.2**	**-0.6**
	2.3nm,0.3s,baz=149,slow=12,SNR=4.9						
KK31				⇓Sn	**Sn**	**11 26 46.1**	**+0.6**
	3.2nm,0.4s,baz=160,slow=21						
KK31				⇓Lg		11 27 03.8	
	8.0nm,0.5s,baz=166,slow=24						
TKM2	**Tokmak 2**	**5.58**	**24**	⇑Pn	**Pn**	**11 25 42.9**	**-1.6**
	2.9nm,0.6s						
TKM2				⇑Pg	**Pg**	**11 25 56.7**	**-12**
	7.2nm,0.7s						
TKM2				⇑Lg		11 27 04.0	
	51nm,1.6s						
TKM2	**Tokmak 2**	**5.58**	**24**	*e*Pn	**Pn**	**11 25 45.5**	**+0.9**
	13nm,0.9s						
MKAR	**Makanchi Array**	**11.49**	**36**	Pn	**Pn**	**11 27 07.3**	**+1.7**
	0.2nm,0.3s,baz=230,slow=11,SNR=2.5						
PYUN	**Piuthan**	**13.12**	**135**	*e*P	**Pn**	**11 27 26.4**	**-1.5**
	7.9nm,0.5s						
DANN	**Dangsing**	**13.37**	**132**	*e*P	**Pn**	**11 27 30.8**	**-0.5**
	11nm,0.6s						
KOLN	**Koldanda**	**13.72**	**134**	*e*P	**Pn**	**11 27 33.8**	**-2.2**
GKN	**Gorkha**	**14.15**	**130**	*e*P	**Pn**	**11 27 41.5**	**-0.4**
AB09	**Akbulak array**	**14.57**	**325**	⇓Pn	**Pn**	**11 27 42.8**	**-4.7**
	1.0nm,0.5s						
AB09				⇑Sn	**Sn**	**11 30 22.8**	**-6.2**
	1.6nm,0.7s						
DMN	**Daman**	**14.72**	**130**	*e*P	**Pn**	**11 27 49.4**	**-0.3**
PKI	**Pulchoki**	**14.93**	**130**	*e*P	**Pn**	**11 27 52.5**	**-0.1**
	5.8nm,0.4s						
GUN	**Gumba**	**14.98**	**128**	*e*P	**Pn**	**11 27 55.3**	**+2.0**
	6.1nm,0.4s						
BVAR	**Borovoye Array**	**15.24**	**355**	Pn	**Pn**	**11 27 52.8**	**-3.7**
	0.2nm,0.3s,baz=169,slow=11,SNR=2.8						
JIRN	**Jiri**	**15.35**	**127**	*e*P	**Pn**	**11 28 01.0**	**+2.8**
	8.5nm,0.5s						
RAMN	**Ramite**	**16.11**	**128**	*e*P	**Pn**	**11 28 09.9**	**+1.8**
	6.2nm,0.4s						
AKTK	**Aktyubinsk**	**16.27**	**325**	Pn	**Pn**	**11 28 10.8**	**+0.8**
AKTK				Sn	**Sn**	**11 30 58.5**	**-12**
AKTO	**Aktyubinsk**	**16.27**	**325**	⇑Pn	**Pn**	**11 28 09.8**	**-0.2**
	2.4nm,2.0s						
AKTO				⇑Sn	**Sn**	**11 31 09.9**	**-0.5**
	0.9nm,1.2s						
AKTO	**Aktyubinsk**	**16.27**	**325**	Pn	**Pn**	**11 28 10.8**	**+0.8**
	0.4nm,0.3s,baz=108,slow=14,SNR=5.5						
AKTO				Sn	**Sn**	**11 30 58.5**	**-12**
	0.1nm,0.3s,baz=47,slow=19,SNR=2.4						
ZALV	**Zalesovo Beam**	**18.19**	**24**	P	**Pn**	**11 28 30.5**	**-3.4**
	0.1nm,0.3s,baz=203,slow=11,SNR=5.3						
ZALV	**Zalesovo Beam**	**18.19**	**24**	P	**Pn**	**11 28 30.5**	**-3.4**
TORD	**Torodi Ar. Bea**	**66.94**	**269**	P	**P**	**11 35 21.4**	**+7.0**
	0.2nm,0.5s,mb3.4,baz=48,slow=5.6,SNR=4.3						
WRA	**Warramunga Arr**	**81.71**	**123**	P	**P**	**11 36 45.6**	**+5.3**
	0.4nm,1.0s,mb3.3,baz=330,slow=5.2,SNR=3.2						

IDC 08 11:39:03.6±51.0, 1850S×17698W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=953.8km s-min=160.5km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.55**	**242**	P	P	11 46 36.8	+0.2
	2.7nm,0.9s,baz=107,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**45.86**	**260**	P	P	11 47 27.7	-0.3
	0.5nm,0.4s,baz=98,slow=7.3,SNR=46						
ASAR	**Alice Springs**	**45.94**	**255**	P	P	11 47 28.5	-0.1
	0.8nm,0.4s,baz=87,slow=8.6,SNR=33						

*IDC **08** 11:49:33.5±1.1, 3570S×7282W, h0km, mb4.3/5, mb1 4.4/8, mb1mx4.2/16, mbtmp4.3/8, ML4.6/3, MS3.8/2, Ms1 3.8/2, ms1mx2.8/21, Error ellipse: s-maj=48.9km s-min=18.9km az=93.0*

*NEIC **08** 11:49:38.9, 3583S×7288W, h51km, mb4.7/3, After GUC.*

NEIC Felt [III] at Cauquenes and Chanco; [II] at Constitucion and Talca.

*GUC **08** 11:49:38.9±0.7, 3583S×7288W, h51km±9km, ML5.0*

*ISCJB **08** 11:49:39.2±0.9, 3571S±004×7291W±010, h60km±7km, mb4.4/7, Error ellipse: s-maj=13.7km s-min=6.6km az=14.4*

ISC 08 11:49:39.9±0.9, 3571S±004×7295W±010, h50km±9km, n41, σ0§86/55, mb4.4/7, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCH	**Constitucion**	**0.58**	**49**	*e*P	**Pn**	**11 49 52.1**	**0.0**
CTCH				*i* S	**Sn**	**11 50 01.7**	**+0.8**
CTCH	**Constitucion**	**0.58**	**49**	*e*P	**Pn**	**11 49 52.1**	**0.0**
CTCH				*i* S	**Sn**	**11 50 01.7**	**+0.8**
CTCH				AML	AML	11 50 02.6	
	comp=N,332μm,0.5s						
LNCH	**Linares**	**1.11**	**98**	⇑*i*P	**Pn**	**11 49 58.8**	**-0.2**
LNCH				*i* S	**Sn**	**11 50 13.1**	**-0.1**
SFDO	**San Fernando**	**1.93**	**56**	⇓*i*P	**Pn**	**11 50 10.3**	**0.0**
CICH	**Cipreses**	**2.50**	**57**	⇓*e*P	**Pn**	**11 50 18.3**	**+0.3**
CACH	**El Canelo**	**2.50**	**51**	*e*P	**Pn**	**11 50 18.4**	**+0.3**
CHCH	**Chadas Angostu**	**2.59**	**48**	*e*P	**Pn**	**11 50 19.5**	**+0.2**
TACH	**Talagante**	**2.64**	**40**	⇑*i*P	**Pn**	**11 50 20.2**	**+0.2**
RCDM	**Rinconada Maip**	**2.84**	**39**	*e*P	**Pn**	**11 50 22.8**	**+0.1**
RCDM				*i* S	**Sn**	**11 50 54.7**	**-0.9**
ANTU	**Antumapu**	**2.87**	**42**	⇑*e*P	**Pn**	**11 50 23.6**	**+0.5**
ANTU				S	**Sn**	**11 50 56.6**	**+0.2**
ANTU	**Antumapu**	**2.87**	**42**	⇑*e*P	**Pn**	**11 50 23.6**	**+0.5**
ANTU				*i* S	**Sn**	**11 50 56.6**	**+0.2**
ANTU				AML	AML	11 50 57.9	
	comp=N,4μm,0.5s						
PCH	**Pirque**	**2.90**	**45**	⇓*i*P	**Pn**	**11 50 23.6**	**+0.1**
LMEL	**Las Melosas**	**2.93**	**51**	*e*P	**Pn**	**11 50 24.4**	**+0.5**
LMEL				*i* S	**Sn**	**11 50 58.4**	**+0.6**
LMEL	**Las Melosas**	**2.93**	**51**	*e*P	**Pn**	**11 50 24.4**	**+0.5**
LMEL				*i* S	**Sn**	**11 50 58.4**	**+0.6**
LMEL				AML	AML	11 51 14.3	
	comp=E,2μm,0.6s						
YECH	**El Yeso**	**3.12**	**50**	*e*P	**Pn**	**11 50 27.5**	**+0.9**
YECH				*e*S	**Sn**	**11 51 04.2**	**+1.6**
YECH				AML	AML	11 51 05.8	
	comp=N,2μm,0.2s						
PEL	**Peldehue**	**3.17**	**37**	⇓*e*P	**Pn**	**11 50 27.6**	**+0.3**
PEL				*i* S	**Sn**	**11 51 04.6**	**+0.7**
PEL				AML	AML	11 51 06.6	
	comp=N,5μm,0.6s						
FCH	**Farellones**	**3.24**	**44**	*e*P	**Pn**	**11 50 26.7**	**-1.4**
FCH				*i* S	**Sn**	**11 51 02.7**	**-2.8**
FCH				AML	AML	11 51 06.0	
	comp=N,2μm,0.5s						
PLCA	**Paso Flores**	**5.36**	**160**	Pn	**Pn**	**11 50 56.7**	**-0.6**
	comp=N,5.9nm,0.3s,baz=327,slow=12,SNR=210						
PLCA				LR	LR	11 52 53.0	
	comp=N,175nm,21.3s,baz=320,slow=37						
CFAA	**Coronel Fontan**	**5.67**	**45**	Pn	**Pn**	**11 51 01.7**	**+0.1**
	comp=N,5.4nm,0.3s,baz=212,slow=12,SNR=159						
CFAA				Sn	**Sn**	**11 52 05.0**	**-0.5**
	comp=N,5.8nm,0.3s,baz=89,slow=20,SNR=9.4						
LCO	**Las Campanas**	**6.95**	**17**	*e*Pn	**Pn**	**11 51 18.6**	**-0.5**
	comp=N,26nm,0.4s						
LCO				*e*Sn	**Sn**	**11 52 34.2**	**-2.5**
LVC	**Limon Verde**	**13.52**	**16**	Pn	**Pn**	**11 52 44.9**	**-4.0**
	comp=N,0.4nm,0.3s,baz=196,slow=7.4,SNR=4.7						
LVC				Sn	**Sn**	**11 55 08.8**	**-8.9**
	comp=N,0.5nm,0.3s,baz=225,slow=20,SNR=3.6						
LVC	**Limon Verde**	**13.52**	**16**	Pn	**Pn**	**11 52 44.9**	**-4.0**
LVC				Sn	**Sn**	**11 55 08.8**	**-8.9**
USHA	**Ushuaia**	**19.38**	**172**	P	**Pn**	**11 54 01.1**	**-1.7**
	comp=N,0.8nm,0.3s,baz=0.0,slow=10,SNR=4.2						
LPAZ	**La Paz**	**19.82**	**14**	P	**Pn**	**11 54 09.1**	**+0.8**
	comp=N,0.2nm,0.3s,baz=183,slow=8.1,SNR=15						
SIV	**San Ignacio**	**22.32**	**31**	P	**P**	**11 54 33.0**	**-0.3**
	comp=N,26nm,1.0s,mb4.6,baz=205,slow=7.3,SNR=86						
SPB	**Sao Paulo**	**25.17**	**68**	*e*P	**P**	**11 54 59.4**	**-1.3**
VNA3	**Neumayer Olymp**	**48.07**	**157**	*e*	**P**	**11 58 14.1**	**+0.2**
VNA3				*e*		11 58 16.0	
VNA1	**Neumayer--Stat**	**48.41**	**156**	*e*	**P**	**11 58 17.4**	**+0.9**
VNA1				*e*		11 58 18.9	
VNA2	**Neumayer--Watz**	**48.74**	**157**	*e*	**P**	**11 58 19.4**	**+0.3**
	baz=281,slow=8.9						
VNA2				*e*		11 58 20.9	
SNAA	**Sanae**	**50.30**	**157**	*e*	**P**	**11 58 30.2**	**-0.7**
SNAA				*e*		11 58 32.1	
SNAA	**Sanae**	**50.30**	**157**	*e*P	**P**	**11 58 30.1**	**-0.8**
	comp=N,9.6nm,1.0s,mb4.8						
QSPA	**South Pole Qui**	**54.53**	**180**	P	**P**	**11 59 03.0**	**+0.8**
	comp=N,8.2nm,0.8s,mb4.8,baz=140,slow=2.6,SNR=26						
QSPA	**South Pole Qui**	**54.53**	**180**	P	**P**	**11 59 03.0**	**+0.8**
TXAR	**Lajitas Array**	**70.87**	**332**	P	**P**	**12 00 53.0**	**+1.6**
	comp=N,0.2nm,0.6s,mb3.2,baz=154,slow=9.0,SNR=4.9						
MAW	**Mawson**	**71.76**	**164**	P	**P**	**12 00 56.5**	**+0.1**
	comp=N,6.3nm,0.8s,mb4.6,baz=226,slow=6.2,SNR=10						
MAW	**Mawson**	**71.76**	**164**	*e*P	**P**	**12 00 56.6**	**+0.2**
	comp=N,8.2nm,0.8s,mb4.7						
WVT	**Waverly**	**72.80**	**347**	*e*P	**P**	**12 01 02.5**	**-0.4**
	comp=N,4.3nm,0.7s,mb4.5						
WVT				*e*pP	pP	12 01 16.2	-1.0
NVAR	**Mina Array Bea**	**84.86**	**326**	P	**P**	**12 02 12.9**	**+3.9**
	comp=N,0.2nm,0.6s,baz=165,slow=7.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**85.49**	**70**	P	**P**	**12 02 12.6**	**-0.1**
	comp=N,0.9nm,0.8s,mb4.0,baz=249,slow=4.6,SNR=5.9						
TORD	**Torodi Ar. Bea**	**85.49**	**70**	P	**P**	**12 02 12.6**	**-0.1**
AFI	**Afiamalu**	**88.99**	**254**	LR	LR	12 33 20.4	
	comp=N,306nm,18.3s,baz=16,slow=30						

*BJI **08** 11:59:13.6, 1224N×14367E, h32km, mB5.2, mb5.1, Ms5.0, Msz4.7*

*MOS **08** 11:59:13.5±1.1, 1221N×14340E, h27km, mb5.3/60, MS4.6/10, Error ellipse: s-maj=7.9km s-min=5.2km az=100.2*

*ISCJB **08** 11:59:14.1±0.1, 1221N±003×14345E±002, h28km, mb5.2/170, MS4.8/43, Error ellipse: s-maj=4.1km s-min=2.8km az=174.9*

*DJA **08** 11:59:14, 1223N×14372E, h16km, Mw5.5/10*

*NEIC **08** 11:59:15.4±0.1, 1220N×14346E, mb5.3/107, Error ellipse: s-maj=4.3km s-min=3.9km az=110.0*

NEIC Felt at Barrigada and Santa Rita.

*GCMT **08** 11:59:15.4±0.1, 1209N×14356E, h12km, MW5.3/104, Moment Tensor Solution. s60,c96; s104,c206; Duration: 1§2 Moment tensor: Scale 10^17 Nm; Mrr-1.04±.02; Mθθ-0.43±.02; Mφφ 1.47±.02; Mrθ-0.09±.05; Mθφ-0.46±.01; Mφr-0.09±.04; Best double couple: M0 1.32100×10^17 NP1:φs155.00000°, δ45.00000°, λ-107.00000°. NP2:φs358.00000°, δ48.00000°, λ-74.00000°. Principal axes: T 1.5790, Plg2.0000°, Azm77.0000°; N -0.5180, Plg12.0000°, Azm167.0000°; P -1.0640, Plg78.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **08** 11:59:15.1±0.5, 1221N×14359E, h25km±3km, mb4.8/25, mb1 4.9/26, mb1mx4.8/28, mbtmp4.8/26, ML6.0/1, MS4.7/21, Ms1 4.7/21, ms1mx4.4/33 Error ellipse: s-maj=14.3km s-min=9.8km az=93.0*

ISC 08 11:59:16.0±0.1, 1223N±003×14351E±002, h30km, h30km±3km: pP-P, n756, σ0§70/743, mb5.2/170, MS4.8/43, 173C-203D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.89**	**44**	Pn	**Pn**	**11 59 44.2**	**-2.1**
	362nm,0.3s,baz=199,slow=6.9,SNR=247						
GUMO				Sn	**Sn**	**12 00 06.7**	**-2.4**
	2μm,0.3s,baz=70,slow=22,SNR=35						
GUMO				LR	LR	12 00 14.5	
	comp=Z,4μm,19.6s,baz=232,slow=32						
GUMO	**Guam**	**1.89**	**44**	*e*Pn	**Pn**	**11 59 44.0**	**-2.2**
GUMO				*e*Sn	**Sn**	**12 00 06.5**	**-2.6**
GUMO	**Guam**	**1.89**	**44**	P	**Pn**	**11 59 43.5**	**-2.8**
GUMO	**Guam**	**1.89**	**44**	P	**Pn**	**11 59 43.5**	**-2.8**
SWI	**Sorong**	**17.81**	**224**	P	**Pn**	**12 03 25.0**	**+3.1**
	81nm,1.1s						
SWI	**Sorong**	**17.81**	**224**	P	**Pn**	**12 03 25.0**	**+3.1**
	97nm,1.1s						
DAV	**Davao City (W)**	**18.41**	**255**	P	**Pn**	**12 03 32.3**	**+3.1**
	SNR=26						
DAV	**Davao City (W)**	**18.41**	**255**	P	**Pn**	**12 03 30.8**	**+1.7**
	43nm,0.3s,baz=173,slow=9.5,SNR=9.0						
DAV				LR	LR	12 09 14.0	
	comp=Z,4μm,19.8s,baz=74,slow=32						
DAV	**Davao City (W)**	**18.41**	**255**	⇓*e*P	**Pn**	**12 03 27.9**	**-1.2**
MSLP	**Maasin**	**18.42**	**265**	*e*P	**Pn**	**12 03 30.6**	**+1.3**
BUKP	**Musuan**	**18.67**	**258**	*e*P	**Pn**	**12 03 33.3**	**+0.9**
PVCP	**Virac**	**18.92**	**276**	*e*P	**Pn**	**12 03 34.4**	**-1.0**
TBP	**Tagbilaran**	**19.46**	**264**	*e*P	**Pn**	**12 03 42.0**	**+0.1**
TNTI	**Ternate**	**19.65**	**236**	P	**Pn**	**12 03 42.1**	**-2.1**
	157nm,1.6s,3μm						
TNTI	**Ternate**	**19.65**	**236**	P	**Pn**	**12 03 42.1**	**-2.1**
	157nm,1.6s,3μm						
PAGZ	**Pagadian**	**20.29**	**259**	*e*P	**P**	**12 03 51.0**	**+1.4**
AUQP	**San Andres**	**20.35**	**275**	*e*P	**P**	**12 03 54.3**	**+4.0**
JOW	**Kunigami**	**20.39**	**318**	P	**P**	**12 03 52.8**	**+2.2**
	44nm,0.8s,baz=132,slow=15,SNR=6.0						
JOW				LR	LR	12 10 28.1	
	comp=Z,1μm,19.8s,MS4.3,baz=128,slow=33						
LBMI	**Labuha**	**20.40**	**232**	P	**P**	**12 03 50.3**	**-0.5**
	265nm,1.9s,4μm						
LBMI	**Labuha**	**20.40**	**232**	P	**P**	**12 03 50.3**	**-0.5**
	304nm,1.9s,4μm						
OTRP	**Odiongan**	**21.00**	**273**	*e*P	**P**	**12 03 59.1**	**+1.8**
CAUP	**Cauayan**	**21.50**	**285**	*e*P	**P**	**12 04 04.9**	**+2.3**
PMG	**Port Moresby**	**21.80**	**170**	*e*P	**P**	**12 04 03.7**	**-2.1**
	61nm,1.0s,mb5.0						
PMG	**Port Moresby**	**21.80**	**170**	P	**P**	**12 04 04.3**	**-1.5**
	70nm,1.0s,904nm,mb5.0						
PMG	**Port Moresby**	**21.80**	**170**	P	**P**	**12 04 04.3**	**-1.5**
	82nm,1.4s,904nm,mb5.0						
SJMP	**San Jose**	**21.88**	**273**	*e*P	**P**	**12 04 10.9**	**+4.2**
AAI	**Ambon**	**21.95**	**225**	P	**P**	**12 04 07.5**	**0.0**
	226nm,1.2s,3μm,mb5.5						
AAI	**Ambon**	**21.95**	**225**	P	**P**	**12 04 07.8**	**+0.3**
	226nm,1.2s,3μm,mb5.5						
AAI	**Ambon**	**21.95**	**225**	P	**P**	**12 04 07.5**	**0.0**
	270nm,1.3s,3μm,mb5.5						
AAI	**Ambon**	**21.95**	**225**	P	**P**	**12 04 07.8**	**+0.3**
	270nm,1.3s,3μm,mb5.5						
BCPH	**Baguio City Da**	**22.59**	**283**	⇓*i*P	**P**	**12 04 14.7**	**+0.4**
LUBP	**Lubang**	**22.72**	**276**	*e*P	**P**	**12 04 17.2**	**+1.6**
NACB	**Ninganchiao**	**23.93**	**303**	*e*P	**P**	**12 04 26.2**	**-1.5**
	395nm,1.2s,mb5.7						
YHNB	**Yeheng**	**24.33**	**304**	*e*P	**P**	**12 04 31.0**	**-0.3**
	144nm,1.0s,mb5.4						
MJAR	**Matsushiro Arr**	**24.67**	**350**	P	**P**	**12 04 32.5**	**-1.7**
	7.3nm,0.9s,mb4.2,baz=174,slow=10,SNR=22						
MJAR				PcP	PcP	12 08 11.7	+0.5
	4.9nm,0.7s,baz=184,slow=3.4,SNR=6.7						
MJAR				ScP	ScP	12 11 48.5	+0.4
	1.5nm,0.6s,baz=177,slow=3.3,SNR=6.1						
MJAR				LR	LR	12 13 17.0	
	comp=Z,1μm,18.6s,MS4.4,baz=180,slow=34						
MJAR	**Matsushiro Arr**	**24.67**	**350**	P	**P**	**12 04 32.6**	**-1.7**
MJAR						12 08 11.7	
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR				MLR	MLR		
	comp=Z,1μm,18.6s						
MAJO	**Matsushiro**	**24.67**	**350**	*e*P	**P**	**12 04 32.4**	**-1.9**
	comp=Z,19nm,0.7s,mb4.7						
MAJO				*e*pP		12 04 41.4	
MAJO	**Matsushiro**	**24.67**	**350**	*e*P	**P**	**12 04 32.4**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.7						
MAT	**Matsushiro**	**24.67**	**350**	P	**P**	**12 04 32.2**	**-2.1**
MAT				S	**S**	**12 08 52.0**	**-2.1**
COEN	**Coen**	**26.02**	**181**	*e*P	**P**	**12 04 45.2**	**-1.5**
	comp=Z,17nm,1.0s,mb4.5						
COEN	**Coen**	**26.02**	**181**	P	**P**	**12 04 46.8**	**+0.1**
	comp=Z,21nm,1.5s,comp=Z,302nm,mb4.4						
COEN	**Coen**	**26.02**	**181**	P	**P**	**12 04 44.2**	**-2.5**
	comp=Z,21nm,1.5s,mb4.4						
KDI	**Kendari**	**26.27**	**234**

NJ2 LR LR
comp=Z,2µm,19.2s,MS4.8
ASAJ Asahikawa 31.78 359 P **P** **12 05 37.8 +0.1**
baz=177,slow=8.7
ASAJ LR LR 12 19 55.3
comp=Z,920nm,18.7s,MS4.5,baz=180,slow=39
CTA Charters Tower 32.23 175 *e*P **P** **12 05 41.2 -0.7**
comp=Z,14nm,1.0s,mb4.8
CTA Charters Tower 32.23 175 P **P** **12 05 41.0 -0.9**
comp=Z,16nm,0.9s,mb4.8,baz=345,slow=8.6,SNR=14
CTA Charters Tower 32.23 175 P **P** **12 05 41.0 -0.9**
CTA pmax pmax
comp=Z,16nm,0.9s
CTAO Charters Tower 32.23 175 *e*P **P** **12 05 40.8 -1.1**
comp=Z,29nm,1.0s,mb5.1
CTAO Charters Tower 32.23 175 *e*P **P** **12 05 40.8 -1.1**
CTAO pmax pmax
comp=Z,29nm,1.0s,mb5.1
CTAO Charters Tower 32.23 175 P **P** **12 05 41.9 0.0**
comp=Z,40nm,1.8s,mb5.0
WHN Wuhan 32.55 309 *e*P **P** **12 05 45.0 +0.3**
WHN AP pP 12 05 54.6 +1.3
WHN LR LR
comp=N,3µm,13.6s,MS5.2
WHN LR LR
comp=E,1µm,10.3s,MS5.2
WHN LR LR
comp=Z,4µm,21.0s
QIZ Qiongzhong 33.08 286 P **P** **12 05 49.2 -0.2**
QIZ XP sP 12 05 58.4 -3.3
QIZ S **S** **12 11 08.7 +1.9**
QIZ XS sS 12 11 18.4 -2.7
QIZ AMB AMB
comp=Z,387nm,5.0s
QIZ LR LR
comp=N,2µm,19.6s,MS4.9
QIZ LR LR
comp=E,1µm,18.2s,MS4.9
QIZ LR LR
comp=Z,2µm,24.9s
WRAB Tennant Creek 33.21 196 P **P** **12 05 49.0 -1.5**
comp=Z,230nm,0.8s,SNR=30
WRAB Tennant Creek 33.21 196 *e*P **P** **12 05 49.6 -0.8**
comp=Z,61nm,1.2s,mb5.4
WRAB *e*pP pP 12 05 58.7 -0.4
WRAB Tennant Creek 33.21 196⇓ *i*P **P** **12 05 49.4 -1.1**
WB2 Warramunga Arr 33.22 196 *e*P **P** **12 05 49.6 -0.9**
WRA Warramunga Arr 33.22 196 P **P** **12 05 49.6 -0.9**
comp=Z,24nm,0.9s,mb5.1,baz=21,slow=9.6,SNR=144
WRA ScP ScP 12 12 16.1 +0.8
comp=Z,2.1nm,1.0s,baz=16,slow=3.5,SNR=6.8
WRA LR LR 12 18 32.9
comp=Z,1µm,18.4s,MS4.6,baz=350,slow=35
WRA Warramunga Arr 33.22 196 P **P** **12 05 49.6 -1.0**
WRA pmax pmax
comp=Z,24nm,0.9s
WRA pmax pmax
comp=Z,2.0nm,1.0s
WRA MLR MLR
comp=Z,1µm,18.4s
STKI Sintang 34.01 252 P **P** **12 06 02.9 +5.3**
comp=Z,52nm,1.5s,mb5.2
MDJ Mudanjiang 34.41 342 P **P** **12 06 00.7 +0.1**
MDJ AP pP 12 06 06.9 -2.4
MDJ XP sP 12 06 09.4 -3.5
MDJ PP PP 12 07 18.5 -0.4
MDJ S **S** **12 11 27.9 +1.1**
MDJ XS sS 12 11 37.5 -3.6
MDJ AMB AMB
comp=Z,14nm,1.2s,mb4.8
MDJ AMB AMB
comp=Z,99nm,5.6s
MDJ LR LR
comp=N,607nm,13.8s,MS4.7
MDJ LR LR
comp=E,695nm,14.8s,MS4.7
MDJ LR LR
comp=Z,859nm,18.7s,MS4.5
MDJ Mudanjiang 34.41 342 *e*P **P** **12 06 00.7 0.0**
comp=Z,15nm,1.0s,mb4.9
KHKI Kahang-Kahang 34.47 235 P **P** **12 06 03.1 +1.6**
CN2 Changchun 35.10 337 *e*P **P** **12 06 06.0 -0.6**
CN2 SS SS 12 13 53.5 -17
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,300nm,5.0s
CN2 LR LR
comp=N,800nm,14.0s,MS4.8
CN2 LR LR
comp=E,700nm,14.0s,MS4.8
CN2 LR LR
comp=Z,1µm,17.0s,MS4.6
BJT Baijiatuau 36.71 324 *e*P **P** **12 06 20.6 +0.1**
comp=Z,35nm,0.6s,mb5.4
BJT Baijiatuau 36.71 324 *e*P **P** **12 06 20.6 +0.1**
BJT pmax pmax
comp=Z,35nm,0.6s
BJI Beijing 36.72 324 P **P** **12 06 20.6 0.0**
BJI PP PP 12 07 44.9 +0.4
BJI S **S** **12 12 05.0 +2.6**
BJI AMB AMB
comp=Z,61nm,1.2s,mb5.3
BJI LR LR
comp=N,1µm,20.6s,MS4.8
BJI LR LR
comp=E,1µm,23.4s,MS4.8
BJI LR LR
comp=Z,890nm,19.3s,MS4.6
HABR Khabarovsk 36.81 351 *e*P **P** **12 06 19.1 -2.1**
HABR *e* pP 12 06 28.7 -1.2
HABR *e* 12 06 32.4
HABR *e* 12 07 59.8
HABR *e*S **S** **12 12 02.3 -1.2**
HABR *e* 12 12 18.4
HABR *e* 12 14 37.2
HABR *e* 12 14 54.5
HABR *e* 12 16 30.9
ASAR Alice Springs 36.90 195 P **P** **12 06 21.4 -0.7**
comp=Z,13nm,1.0s,mb4.7,baz=23,slow=11,SNR=58
ASAR Alice Springs 36.90 195 P **P** **12 06 21.5 -0.7**
ASAR pmax pmax
comp=Z,13nm,1.0s
SJI Sawahan 37.28 239 P **P** **12 06 26.3 +0.7**
GYA Guiyang 37.39 298⇑ *i*P **P** **12 06 26.8 +0.4**
GYA AP pP 12 06 35.2 0.0
GYA XP sP 12 06 39.7 +0.9
GYA PP PP 12 07 53.8 +1.8
GYA PCP PcP 12 08 47.0 +1.9
GYA S **S** **12 12 11.9 -1.0**
GYA SCP ScP 12 12 31.4 +1.0
GYA SS SS 12 14 44.6 -13
GYA SCS ScS 12 16 38.3 -0.3
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.3
GYA AMB AMB
comp=Z,220nm,5.6s
GYA LR LR
comp=N,3µm,16.1s,MS5.4
GYA LR LR
comp=E,3µm,15.3s,MS5.4
GYA LR LR
comp=Z,3µm,16.9s,MS5.2
EIDS Eidsvold 38.09 169 *e*P **P** **12 06 31.3 -1.0**
comp=Z,231nm,1.5s,mb5.7
EIDS *e*pP pP 12 06 39.0 -2.0
KLR Kul'dur 38.15 348 *e*P **P** **12 06 28.0 -4.6**
KLR *e* 12 08 42.7
KLR *e* 12 16 36.0
XAN Xi'an 38.23 310 P **P** **12 06 33.2 -0.2**
XAN AP pP 12 06 39.6 -2.6
XAN S **S** **12 12 25.6 +0.1**
XAN AMB AMB
comp=Z,19nm,1.1s,mb4.7
XAN AMB AMB
comp=Z,131nm,6.0s
XAN LR LR
comp=N,950nm,25.2s,MS4.6
XAN LR LR
comp=E,786nm,26.6s,MS4.6
XAN LR LR
comp=Z,1µm,20.1s
TPI Tanjungpandan 38.62 250 P **P** **12 06 38.4 +1.4**
comp=Z,136nm,1.6s,comp=Z,1µm,mb5.4
HHC Hu-ho-hao-te 39.97 321 *e*P **P** **12 06 48.5 +0.6**

HHC AP pP 12 06 55.7 -1.0
HHC XP sP 12 06 59.3 -0.9
HHC PP PP 12 08 24.9 +4.8
HHC PCP PcP 12 08 53.5 +0.6
HHC S **S** **12 12 52.5 +1.1**
HHC XS sS 12 13 05.6 -0.3
HHC SS SS 12 15 43.8 -5.1
HHC AMB AMB
comp=Z,23nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,227nm,4.0s
HHC LR LR
comp=N,840nm,16.7s,MS4.8
HHC LR LR
comp=E,900nm,21.4s,MS4.8
HHC LR LR
comp=Z,1µm,21.4s,MS4.7
KMI Kunming 40.54 294 P **P** **12 06 53.4 +0.5**
KMI AP pP 12 07 01.6 -0.1
KMI XP sP 12 07 05.1 -0.1
KMI PP PP 12 08 28.6 +2.1
KMI S **S** **12 12 59.7 -0.7**
KMI XS sS 12 13 13.5 -1.4
KMI SS SS 12 15 52.5 -8.3
KMI AMB AMB
comp=Z,26nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,158nm,5.7s
KMI LR LR
comp=N,1µm,18.5s,MS4.9
KMI LR LR
comp=E,696nm,16.1s,MS4.9
KMI LR LR
comp=Z,1µm,24.1s
KMI Kunming 40.54 294 P **P** **12 06 53.4 +0.5**
KMI *PP pP 12 07 01.6 -0.1
KMI *SP sP 12 07 05.1 -0.1
KMI 12 08 28.6
KMI PPP 12 08 55.9
KMI S **S** **12 12 59.7 -0.7**
KMI *SS sS 12 13 13.5 -1.4
KMI SS SS 12 15 52.5 -8.3
KMI SSS 12 16 30.5
MBWA Marble Bar 40.58 215 *e*P **P** **12 06 52.6 -0.6**
comp=Z,8.0nm,0.7s,mb4.5
BTO Baotou 40.78 320 *e*P **P** **12 06 54.4 -0.2**
DZM Mont Dzumac 40.84 146 *e*P **P** **12 06 54.4 -0.9**
CD2 Chengdu 41.10 303 P **P** **12 06 57.4 0.0**
CD2 AP pP 12 07 03.1 -3.1
CD2 XP sP 12 07 06.2 -3.6
CD2 PP PP 12 08 35.4 +2.8
CD2 PCP PcP 12 08 57.8 +1.1
CD2 PCS PcS 12 12 47.3 -0.6
CD2 S **S** **12 13 08.2 -0.4**
CD2 SS SS 12 16 05.8 -6.0
CD2 SCS ScS 12 16 58.7 -1.5
CD2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,160nm,4.6s
CD2 LR LR
comp=N,2µm,14.9s,MS5.2
CD2 LR LR
comp=E,2µm,18.2s,MS5.2
CD2 LR LR
comp=Z,1µm,22.6s,MS4.6
HIA Hailar 41.83 337 *e*P **P** **12 07 03.5 +0.3**
comp=Z,28nm,1.1s,mb4.8
HIA Hailar 41.83 337 *e*P **P** **12 07 03.5 +0.4**
HIA pmax pmax
comp=Z,27nm,1.1s
PETK Petropavlovsk- 42.32 13 P **P** **12 07 07.0 -0.1**
comp=Z,2.8nm,0.9s,mb3.9,baz=190,slow=4.6,SNR=3.7
PETK PcP PcP 12 08 60.0 -0.3
comp=Z,5.5nm,0.8s,baz=184,slow=5.8,SNR=4.5
PETK pPcP 12 09 08.2
comp=Z,7.3nm,0.8s,baz=172,slow=6.4,SNR=6.1
PETK LR LR 12 23 41.5
comp=Z,775nm,21.1s,MS4.6,baz=192,slow=35
PETK Petropavlovsk- 42.32 13 P **P** **12 07 07.0 -0.1**
PETK PcP PcP 12 08 60.0 -0.3
PETK pPcP 12 09 08.2
PETK LR LR 12 23 41.5
FRIM Kepong 42.40 261⇓ P **P** **12 07 11.5 +3.2**
LZH Lanzhou 42.86 311⇓ P **P** **12 07 12.0 +0.2**
LZH AP pP 12 07 21.6 +1.0
LZH XP sP 12 07 25.7 +1.5
LZH PP PP 12 08 55.0 +3.5
LZH S **S** **12 13 32.1 -2.5**
LZH XS sS 12 13 50.2 +1.1
LZH SS SS 12 16 39.3 -7.2
LZH AMB AMB
comp=Z,79nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,266nm,6.8s
LZH LR LR
comp=N,1µm,13.4s
LZH LR LR
comp=Z,1µm,14.5s,MS5.0
LZH Lanzhou 42.86 311⇓ P **P** **12 07 12.0 +0.2**
LZH *PP pP 12 07 21.6 +1.0
LZH *SP sP 12 07 25.7 +1.5
LZH 12 08 55.0
LZH S **S** **12 13 32.1 -2.5**
LZH *SS sS 12 13 50.2 +1.1
LZH SS SS 12 16 39.3 -7.2
ARMA Armidale 43.12 170 *e*P **P** **12 07 12.8 -0.9**
CMAR Chiang Mai Arr 43.34 284 P **P** **12 07 16.8 +1.0**
comp=Z,10nm,0.8s,mb4.6,baz=88,slow=6.2,SNR=61
CMAR PcP PcP 12 09 05.8 +1.4
comp=Z,2.9nm,0.6s,baz=83,slow=2.2,SNR=5.0
CMAR pPcP 12 09 13.6
comp=Z,4.7nm,0.9s,baz=86,slow=1.9,SNR=5.4
CMAR ScP ScP 12 12 56.5 +2.7
comp=Z,0.8nm,0.9s,baz=77,slow=1.9,SNR=4.4
CMAR LR LR 12 22 22.8
comp=Z,1µm,21.9s,MS4.8,baz=98,slow=32
CMAR Chiang Mai Arr 43.34 284 P **P** **12 07 16.8 +1.0**
CMAR 12 09 05.8
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR pmax pmax
comp=Z,5.0nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.9s
KSI Kapahiang 43.62 251 P **P** **12 07 18.7 +0.5**
comp=Z,300nm,1.0s,mb6.0
STKA Stephens Creek 43.90 182 *e*P **P** **12 07 18.2 -1.8**
comp=Z,8.8nm,0.7s,mb4.6
STKA Stephens Creek 43.90 182 P **P** **12 07 18.7 -1.3**
comp=Z,18nm,1.0s,mb4.8,baz=350,slow=9.0,SNR=22
STKA LR LR 12 24 20.9
comp=Z,763nm,20.1s,MS4.6,baz=353,slow=34
FORT Forrest 45.27 199 *e*P **P** **12 07 30.9 -0.1**
comp=Z,32nm,0.8s,mb5.2
ULN Ulaanbaatar 46.76 327⇑ P **P** **12 07 44.4 +1.9**
SNR=17
ULN Ulaanbaatar 46.76 327 *e*P **P** **12 07 43.3 +0.7**
comp=Z,20nm,1.0s,mb5.0
ULN *e*ScP ScP 12 13 09.1 +1.7
ULN Ulaanbaatar 46.76 327 *e*P **P** **12 07 43.3 +0.7**
ULN pmax pmax
comp=Z,20nm,1.0s,mb5.0
SONM Songino Array 47.10 326 P **P** **12 07 45.7 +0.4**
comp=Z,7.7nm,0.6s,mb4.8,baz=142,slow=7.3,SNR=42
SONM PcP PcP 12 09 16.7 -0.1
comp=Z,5.8nm,1.0s,baz=150,slow=3.4,SNR=5.6
SONM pPcP 12 09 24.7
comp=Z,2.2nm,0.7s,baz=158,slow=4.5,SNR=3.8
SONM ScP ScP 12 13 10.4 +1.6
comp=Z,0.6nm,0.5s,baz=145,slow=5.3,SNR=3.1
SONM Songino Array 47.10 326 P **P** **12 07 45.7 +0.5**
SONM 12 09 16.7
SONM pmax pmax
comp=Z,8.0nm,0.6s
SONM pmax pmax
comp=Z,6.0nm,1.0s
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.5s
GTA Gaotai 47.10 313⇓ P **P** **12 07 46.2 +0.8**
GTA AP pP 12 07 54.2 -0.2

GTA XP sP 12 07 58.9 +1.0
GTA PCP PcP 12 09 17.8 +0.8
GTA S **S** **12 14 36.8 +0.9**
GTA XS sS 12 14 48.5 -2.1
GTA SS SS 12 17 57.3 -5.9
GTA AMB AMB
comp=Z,35nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,134nm,4.5s
GTA LR LR
comp=N,1µm,20.4s,MS4.9
GTA LR LR
comp=E,671nm,21.6s,MS4.9
GTA LR LR
comp=Z,898nm,21.3s,MS4.7
TOO Toolangi 49.57 178 *e*P **P** **12 08 04.3 -0.1**
ZAK Zakamensk 50.24 327⇑ *i*P **P** **12 08 09.2 -0.2**
ZAK *e* 12 09 22.8
ZAK *e* 12 15 25.0
ZAK pmax pmax
comp=Z,28nm,1.1s,mb5.2
YAK Yakutsk 50.72 352 *e*P **P** **12 08 11.6 -1.1**
comp=Z,35nm,0.8s,mb5.3
YAK Yakutsk 50.72 352 *e*P **P** **12 08 10.6 -2.1**
YAK *e*PP pP 12 08 21.0 -0.7
YAK *e* 12 09 27.1
YAK *e* 12 10 05.0
YAK *e*S **S** **12 15 22.2 -3.7**
YAK *e*SS sS 12 15 37.0 -3.7
YAK *e* 12 17 59.0
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YAK pmax pmax
comp=Z,154nm,5.4s
YAK smax
comp=N,96nm,2.8s
YAK smax
comp=E,119nm,3.0s
YAK MLR MLR
comp=E,193nm,17.0s,MS4.6
YAK MLR MLR
comp=Z,552nm,15.0s,MS4.7
YAK MLR MLR
comp=N,365nm,13.0s,MS4.6
BOD Bodaibo 50.72 340 *e*P **P** **12 08 11.8 -1.0**
BOD *e* pP 12 08 20.4 -1.4
BOD pmax pmax
comp=Z,12nm,1.3s,mb4.7
BOD pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TLY Talaya 50.81 329 *e*P **P** **12 08 14.2 +0.6**
comp=Z,12nm,0.7s,mb4.9
TLY *e*pP pP 12 08 21.2 -1.4
TLY Talaya 50.81 329 *e*P **P** **12 08 14.1 +0.5**
TLY *e* pP 12 08 22.3 -0.3
TLY *e* 12 10 17.6
TLY *e*S sS 12 15 39.3 -3.1
TLY pmax pmax
comp=Z,35nm,1.6s,mb5.0
TLY MLR MLR
comp=Z,917nm,17.0s,MS4.9
SEY Seymchan 51.02 5 *e*P **P** **12 08 14.4 -0.6**
SEY Seymchan 51.02 5 *e*P **P** **12 08 14.3 -0.7**
MUN Mundaring 51.15 210 *e*P **P** **12 08 16.0 -0.4**
NWAO Narrogin (SRO) 51.44 208 P **P** **12 08 17.8 -0.8**
comp=Z,15nm,0.9s,mb4.9,baz=70,slow=4.9,SNR=7.2
NWAO Narrogin (SRO) 51.44 208 P **P** **12 08 17.8 -0.8**
NWAO pmax pmax
comp=Z,15nm,1.0s
LSA Lhasa 51.45 298 *e*P **P** **12 08 20.5 +1.6**
comp=Z,14nm,0.6s,mb5.1
LSA Lhasa 51.45 298 *e*P **P** **12 08 20.5 +1.6**
LSA pmax pmax
comp=Z,14nm,0.6s,mb5.1
MOY Mondy 52.16 328 *e*P **P** **12 08 23.4 -0.3**
MOY pmax pmax
comp=Z,44nm,1.7s,mb5.1
TAPN Taplejung 54.20 295 *e*P **P** **12 08 39.7 +0.5**
comp=Z,108nm,1.2s,mb5.7
ODAN Odare 54.45 294 *e*P **P** **12 08 41.2 +0.2**
comp=Z,214nm,1.5s,mb5.8
TAU Tasmania Unive 54.98 177 *e*P **P** **12 08 43.0 -1.4**
comp=Z,31nm,1.2s,mb5.2
TAU Tasmania Unive 54.98 177 *e*P **P** **12 08 43.0 -1.4**
TAU pmax pmax
comp=Z,31nm,1.2s,mb5.2
RAMN Ramite 55.16 294 *e*P **P** **12 08 46.2 0.0**
comp=Z,207nm,1.3s,mb6.0
JIRN Jiri 55.57 295 *e*P **P** **12 08 49.6 +0.5**
comp=Z,56nm,0.6s,mb5.8
GUN Gumba 55.87 295 *e*P **P** **12 08 51.7 +0.5**
comp=Z,254nm,1.0s
PKI Pulchoki 56.26 295 *e*P **P** **12 08 53.9 -0.1**
comp=Z,94nm,1.1s,mb5.7
PKIN Phulchoki 56.27 295 *e*P **P** **12 08 53.9 -0.2**
KKN Kakani 56.39 295 *e*P **P** **12 08 54.9 -0.1**
comp=Z,58nm,0.9s,mb5.6
KKN Kakani 56.39 295 *e*P **P** **12 08 54.9 -0.1**
KKN pmax pmax
comp=Z,58nm,0.9s,mb5.6
DMN Daman 56.53 295 *e*P **P** **12 08 56.2 +0.2**
comp=Z,180nm,1.3s,mb6.0
GKN Gorkha 56.97 295 *e*P **P** **12 08 59.0 -0.1**
comp=Z,95nm,0.9s,mb5.8
WMQ Urumqi 57.13 315 P **P** **12 09 00.5 +0.6**
WMQ XP sP 12 09 10.0 -2.5
WMQ PP PP 12 11 09.0 +2.1
WMQ SCP ScP 12 13 52.5 +0.2
WMQ S **S** **12 16 52.5 -0.8**
WMQ SCS ScS 12 18 45.5 -1.8
WMQ SS SS 12 20 42.5 +0.2
WMQ AMB AMB
comp=Z,57nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,153nm,4.0s
WMQ LR LR
comp=N,546nm,18.0s,MS4.8
WMQ LR LR
comp=E,559nm,18.0s,MS4.8
WMQ LR LR
comp=Z,678nm,18.0s,MS4.8
BILL Bilibino 57.71 10 *e*P **P** **12 09 03.2 -0.4**
comp=Z,12nm,0.6s,mb5.1
BILL Bilibino 57.71 10⇓ *e*P **P** **12 09 03.3 -0.3**
BILL *e* pP 12 09 11.6 -1.1
BILL 12 09 56.0
BILL pmax pmax
comp=Z,29nm,1.3s,mb5.2
BILL MLR MLR
comp=Z,500nm,19.0s,MS4.6
DANN Dangsing 57.76 296 *e*P **P** **12 09 04.8 +0.1**
comp=Z,132nm,0.6s,mb6.1
KOLN Koldanda 57.87 295 *e*P **P** **12 09 05.4 -0.1**
comp=Z,55nm,0.7s,mb5.7
PYUN Piuthan 58.43 295 *e*P **P** **12 09 09.3 0.0**
comp=Z,108nm,0.7s,mb6.0
TIXI Tiksi 60.05 355 *e*P **P** **12 09 18.7 -1.1**
TIXI Tiksi 60.05 355 *e*P **P** **12 09 18.3 -1.5**
TIXI *e*S **S** **12 17 26.4 -4.0**
TIXI pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
TIXI MLR MLR
comp=Z,431nm,14.0s,MS4.7
RPZ Rata Peaks 61.08 157 P **P** **12 09 25.8 -1.4**
comp=Z,45nm,1.1s,mb5.5,baz=340,slow=4.8,SNR=4.8
MK31 Makanchi Array 61.56 317 *i* P **P** **12 09 30.7 +0.2**
MK31 pmax pmax
comp=Z,70nm,1.4s,mb5.6
MKAR Makanchi Array 61.56 317 P **P** **12 09 30.8 +0.3**
comp=Z,6.6nm,0.6s,mb5.0,baz=94,slow=8.9,SNR=44
MKAR LR LR 12 37 21.7
comp=Z,512nm,19.6s,MS4.7,baz=311,slow=37
MKAR Makanchi Array 61.56 317 P **P** **12 09 30.8 +0.3**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR MLR MLR
comp=Z,512nm,19.6s
ZAA0 Zalesovo Array 61.96 325 *e*P **P** **12 09 32.1 -1.0**
ZAA0 epP pP 12 09 39.9 -2.3
ZALV Zalesovo Beam 61.96 325 P **P** **12 09 32.4 -0.6**
comp=Z,10nm,0.7s,mb5.1,baz=103,slow=6.7,SNR=51
ZALV pP pP 12 09 40.6 -1.6
comp=Z,9.1nm,0.6s,baz=108,slow=6.7,SNR=12
ZALV PcP PcP 12 10 13.3 -0.3
comp=Z,4.8nm,0.5s,baz=140,slow=3.9,SNR=6.6
ZALV pPcP 12 10 20.7

comp=Z,8.1nm,0.6s,baz=121,slow=4.1,SNR=6.2
ZALV LR LR 12 34 57.0
comp=Z,373nm,19.7s,MS4.5,baz=112,slow=34
ZALV Zalesovo Beam 61.96 325 P **P** **12 09 32.4 -0.7**
ZALV pP pP 12 09 40.6 -1.6
ZALV PcP PcP 12 10 13.3 -0.3
ZALV pPcP 12 10 20.7
ZALV LR LR 12 34 57.0
ZALV Zalesovo Beam 61.96 325 P **P** **12 09 32.4 -0.7**
ZALV *PP pP 12 09 40.6 -1.6
ZALV 12 10 13.3
ZALV pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
ZALV pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
ZALV pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
ZALV pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
HYB Hyderabad 62.77 283 *e*P **P** **12 09 38.5 -0.6**
HYB Hyderabad 62.77 283 *i* P **P** **12 09 38.5 -0.6**
NVS Novosibirsk 63.12 326 *i* P **P** **12 09 39.6 -1.2**
NVS pmax pmax
comp=N,27nm,1.7s
NVS pmax pmax
comp=E,63nm,1.7s
NVS pmax pmax
comp=Z,77nm,1.7s,mb5.6
KURK Kurchatov 64.77 320 P **P** **12 09 51.7 0.0**
SNR=39
KURK Kurchatov 64.77 320 *e*P **P** **12 09 51.5 -0.2**
comp=Z,138nm,1.3s,mb5.8
KURK *epP* pP 12 10 00.1 -0.8
KURK Kurchatov 64.77 320 *e*P **P** **12 09 51.5 -0.2**
KURK *e**PP pP 12 10 00.4 -0.6
KURK pmax pmax
comp=Z,140nm,1.3s,mb5.8
KSH Kashi 65.02 308 *e*P **P** **12 09 55.5 +1.9**
KSH *e*AP pP 12 10 03.5 +0.7
KSH *e*XP sP 12 10 06.5 +0.2
KSH *e*PCP PcP 12 10 29.2 +2.8
KSH *e*PP PP 12 12 20.1 +3.3
KSH *e*SCP 12 14 28.5
KSH *e*PCS 12 14 31.8
KSH *e*S S 12 18 34.0 0.0
KSH *e*XS sS 12 18 46.2 -2.9
KSH *e*SCS ScS 12 19 44.9 -1.8
KSH *e*SS SS 12 22 46.5 +0.3
KSH AMB AMB
comp=Z,149nm,0.8s,mb6.1
KSH AMB AMB
comp=Z,1μm,5.3s
KSH LR LR
comp=N,1μm,7.6s
KSH LR LR
comp=E,895nm,6.0s
KSH LR LR
comp=Z,811nm,7.9s
SVW2 Sparrevohn 65.48 28 *e*P **P** **12 09 54.8 -1.4**
TKM2 Tokmak 2 65.62 312 *e*P **P** **12 09 57.5 +0.1**
comp=Z,30nm,1.4s,mb5.1
TKM2 Tokmak 2 65.62 312 *e*P **P** **12 09 57.5 +0.1**
TKM2 pmax pmax
comp=Z,30nm,1.4s,mb5.1
TKM2 Tokmak 2 65.62 312 P **P** **12 09 57.7 +0.3**
SNR=15
KDAK Kodiak Island 65.91 32 P sP 12 10 12.0 +0.3
comp=Z,12nm,0.8s,baz=270,slow=7.3,SNR=7.1
KDAK LR LR 12 34 14.2
comp=Z,463nm,19.2s,MS4.7,baz=253,slow=32
KDAK Kodiak Island 65.91 32 P sP 12 10 12.0 +0.3
KDAK LR LR 12 34 14.2
CHMS Chumysh 66.24 312 P **P** **12 10 01.5 +0.1**
SNR=6.0
FRU Bishkek 66.33 311 *e*P **P** **12 10 01.5 -0.4**
FRU pmax pmax
comp=Z,60nm,1.8s,mb5.3
AAK Ala-Archa 66.40 311 P **P** **12 10 02.4 0.0**
comp=Z,58nm,2.1s,mb5.2,SNR=5.8
AAK Ala-Archa 66.40 311 P **P** **12 10 02.8 +0.4**
SNR=8.1
USP Ospenovka 66.45 312 P **P** **12 10 02.7 0.0**
SNR=9.8
EKS2 Erkin-Say 66.93 311 *e*P **P** **12 10 06.1 +0.3**
comp=Z,38nm,1.6s,mb5.2
EKS2 *epP* pP 12 10 14.6 -0.4
EKS2 Erkin-Say 66.93 311 P **P** **12 10 06.3 +0.5**
SNR=7.2
PPLA Purkeypile 67.58 27 *e*P **P** **12 10 09.1 -0.4**
comp=Z,46nm,1.3s,mb5.3
CHUM Lake Minchumin 67.83 25 *e*P **P** **12 10 10.9 -0.2**
comp=Z,14nm,0.8s,mb5.0
IMA2 Indian Mountai 68.01 23 *e*P **P** **12 10 11.1 -1.1**
RC01 Rabbit Creek A 68.19 29 *e*P **P** **12 10 12.0 -1.4**
comp=Z,60nm,1.2s,mb5.5
KTH Kantishna Hill 68.33 26 *e*P **P** **12 10 13.1 -1.1**
comp=Z,33nm,1.1s,mb5.3
KTH *epP* pP 12 10 21.4 -2.0
BPAW Bear Paw Mtn. 68.46 25 *e*P **P** **12 10 14.3 -0.7**
comp=Z,35nm,1.2s,mb5.3
BPAW *epP* pP 12 10 22.7 -1.6
TRF Thorofare Moun 68.57 26 *e*P **P** **12 10 14.1 -1.6**
comp=Z,12nm,0.8s,mb4.9
PMR Palmer 68.60 28 *e*P **P** **12 10 14.2 -1.7**
comp=Z,41nm,1.3s,mb5.2
PMR Palmer 68.60 28 *e*P **P** **12 10 14.7 -1.2**
PMR pmax pmax
comp=Z,53nm,1.4s,mb5.3
MCK McKinley 69.23 26 *e*P **P** **12 10 18.2 -1.6**
comp=Z,30nm,1.2s,mb5.1
MCK *epP* pP 12 10 26.9 -2.2
MCK McKinley 69.23 26 *e*P **P** **12 10 18.2 -1.6**
MCK *e**PP pP 12 10 26.9 -2.2
MCK pmax pmax
comp=Z,30nm,1.2s,mb5.1
KK31 Karatay Array 69.35 312 *i* P **P** **12 10 20.6 -0.4**
KK31 pmax pmax
comp=Z,30nm,1.0s,mb5.2
COLD Coldfoot 69.70 22 *e*P **P** **12 10 22.5 -0.1**
comp=Z,34nm,1.1s,mb5.2
COLD *epP* pP 12 10 31.4 -0.5
VOSK Vostochnaya 69.78 322 P **P** **12 10 22.3 -1.2**
VOSK pmax pmax
comp=Z,29nm,1.5s,mb5.0
COLA College 69.98 25 *e*P **P** **12 10 22.3 -2.1**
comp=Z,12nm,0.8s,mb4.9
COLA College 69.98 25 *e*P **P** **12 10 22.5 -1.9**
BVAR Borovoye Array 70.17 322 LR LR 12 42 07.9
comp=Z,1μm,19.1s,MS5.1,baz=198,slow=37
BRVK Borovoye 70.24 322 P **P** **12 10 26.5 +0.3**
SNR=18
BRVK Borovoye 70.24 322 *e*P **P** **12 10 26.2 0.0**
comp=Z,266nm,1.8s,mb5.9
BRVK *epP* pP 12 10 34.4 -1.1
BRVK Borovoye 70.24 322 *e*P **P** **12 10 26.3 +0.1**
BRVK pmax pmax
comp=Z,270nm,1.8s,mb5.9
MENT Mentasta 71.36 27 *e*P **P** **12 10 31.7 -1.1**
PPT Papeete 72.39 113 *e*S S 12 19 59.6 -2.4
comp=Z,624nm,26.2s
PPT *e*LQ 12 28 53.8
comp=Z,1μm,34.2s
PPT *e*LR LR 12 31 56.0
comp=Z,1μm,22.2s,baz=295
PPT Papeete 72.39 113 LR LR 12 35 32.3
comp=Z,626nm,21.9s,MS4.8,baz=277,slow=30
EGAK Eagle 72.76 26 *e*P **P** **12 10 40.5 -0.8**
comp=Z,132nm,1.8s,mb5.6
EGAK *epP* pP 12 10 50.0 -0.6
PMOR Pomariorio Ree 73.10 110 *e*P **P** **12 10 45.0 +0.9**
comp=Z,116nm,1.5s,mb5.6
HYT Haines Junctio 74.03 30 *e*P **P** **12 10 49.4 +0.6**
HYT *epP* pP 12 10 57.7 -0.4
TBI Tubuai 74.47 119 *e*S S 12 20 19.5 -5.9
comp=Z,381nm,25.5s
TBI *e*LQ 12 29 59.7
comp=Z,508nm,34.8s
TBI *e*LR LR 12 32 49.1
comp=Z,1μm,35.2s,baz=301
SKAG Skagway 75.06 31 *e*P **P** **12 10 52.9 -1.9**
comp=Z,56nm,1.0s,mb5.5
SVE Sverdlovsk 75.97 326↑ *e*P **P** **12 10 59.9 -0.1**
SVE pmax pmax
comp=Z,54nm,1.5s,mb5.3
INK Inuvik 76.12 22 *e*P **P** **12 10 60.0 -0.7**
comp=Z,2μm,0.8s
INK *epP* pP 12 11 07.4 -2.6
INK Inuvik 76.12 22 *e*P **P** **12 11 00.0 -0.7**
INK pmax pmax
comp=Z,2μm,0.8s
AB31 Akbulak array 76.66 318 P **P** **12 11 03.3 -0.8**
AB31 pmax pmax
comp=Z,15nm,0.7s,mb5.0
WRAK Wrangell Islan 76.67 35 *e*P **P** **12 11 04.1 0.0**
comp=Z,51nm,0.9s,mb5.5
WRAK *epP* pP 12 11 12.8 -0.6
ARU Arti 77.12 325 *e*P **P** **12 11 06.0 -0.6**
comp=Z,48nm,1.3s,mb5.3
ARU *epP* pP 12 11 14.6 -1.3
ARU Arti 77.12 325 *d i*P **P** **12 11 05.9 -0.7**
ARU *e* 12 13 56.6
ARU *e*PPP 12 15 49.3
ARU *e*S S 12 20 55.9 +2.3
ARU *e*SS SS 12 25 45.0 -6.0
ARU pmax pmax
comp=Z,56nm,1.7s,mb5.2
DLBC Dease Lake 77.83 32 P **P** **12 11 10.9 +0.4**
comp=Z,15nm,0.7s,mb5.1,baz=272,slow=5.7,SNR=9.3
DLBC Dease Lake 77.83 32 *e*P **P** **12 11 10.9 +0.4**
DLBC *epP* pP 12 11 19.4 -0.5
SOKR Solikamsk 77.90 329 *d i*P **P** **12 11 11.1 +0.2**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb5.2
SOKR MLR MLR
comp=Z,680nm,26.0s,MS4.9
DRV Dumont d'Urvil 78.72 181 PP PP 12 14 30.0 +16
DRV S 12 21 20.0
DRV L 12 32 00.0
DRV R 12 38 00.0
ABKT Ailbek 78.99 307 P **P** **12 11 18.5 +1.1**
comp=Z,195nm,1.4s,mb5.8,SNR=7.7
WBK Wadi Bani Khal 80.42 291 ⇓P **P** **12 11 25.7 +0.3**
SNR=5.5
BIDO Bidbid 81.04 292 ⇓P **P** **12 11 28.8 0.0**
SNR=14
HOQ Hoqain 81.77 292 ⇓P **P** **12 11 32.8 +0.2**
SNR=16
BSY Bisya 82.01 292 P **P** **12 11 33.9 0.0**
SNR=8.4
HATD Hatta, Dubai 82.62 294 ⇓P **P** **12 11 36.4 -0.6**
SNR=7.4
PGC Sidney 82.92 42 *e*P **P** **12 11 38.5 +0.4**
comp=Z,237nm,1.6s,mb6.0
PGC *epP* pP 12 11 47.0 -0.5
D03A Wishkah Elem. 82.98 43 ⇓P **P** **12 11 38.9 +0.5**
baz=83
B04A Port Angeles 82.99 42 ⇓P **P** **12 11 38.9 +0.5**
baz=83,SNR=7.5
E03A Lebam 83.23 44 ⇓P **P** **12 11 40.0 +0.3**
baz=83,SNR=9.8
H02A Toledo 83.27 46 ⇓P **P** **12 11 40.8 +0.8**
baz=83
K01A Sixes 83.27 48 ⇓P **P** **12 11 40.0 0.0**
baz=83
HEBO Mount Hebo 83.34 45 *e*P **P** **12 11 41.1 +0.8**
comp=Z,66nm,1.2s,mb5.5
HEBO *epP* pP 12 11 49.7 -0.1
KEBM Edson Butte 83.36 48 *e*P **P** **12 11 41.0 +0.6**
KEBM *epP* pP 12 11 50.5 +0.6
A04A Legoe Bay, Lum 83.39 42 ⇑P **P** **12 11 40.6 +0.1**
baz=83
C04A Brinnon 83.41 43 ⇓P **P** **12 11 41.1 +0.5**
baz=83,SNR=12
BMW Boistfort Moun 83.47 44 *e*P **P** **12 11 41.0 0.0**
BMW *epP* pP 12 11 49.9 -0.5
I02A Mapleton 83.51 47 ⇓P **P** **12 11 41.4 +0.2**
baz=84
GNW Green Mountain 83.53 43 *e*P **P** **12 11 42.1 +0.9**
comp=Z,78nm,1.4s,mb5.6
GNW *epP* pP 12 11 50.6 -0.1
MPOR Mary's Peak 83.61 46 P **P** **12 11 42.6 +0.8**
D04A Dobbs Creek Ra 83.64 43 ⇑P **P** **12 11 42.0 +0.2**
baz=84
G03A Yamhill 83.65 45 ⇑P **P** **12 11 42.5 +0.5**
baz=84
A05A Maple Falls 83.74 41 ⇓P **P** **12 11 42.0 -0.3**
baz=84
H03A Soap Creek Ran 83.76 46 ⇓P **P** **12 11 43.3 +0.8**
baz=84,SNR=10
COR Corvallis 83.77 46 *e*P **P** **12 11 43.4 +0.9**
comp=Z,12nm,0.7s,mb5.1
COR *epP* pP 12 11 51.3 -0.7
E04A Onalaska 83.79 44 ⇑P **P** **12 11 42.7 +0.1**
baz=84
J02A Umpqua 83.81 47 ⇑P **P** **12 11 43.2 +0.4**
baz=84
B05A Bryant 83.88 42 ⇑P **P** **12 11 43.2 +0.2**
baz=84,SNR=10
MBW Mount Baker 83.90 42 P **P** **12 11 43.5 +0.4**
I03A Eugene 83.91 46 ⇑P **P** **12 11 43.2 -0.1**
baz=84,SNR=7.1
K02A Glendale 83.98 48 ⇑P **P** **12 11 43.9 +0.3**
baz=84
JCW Jim Creek 84.00 42 P **P** **12 11 44.4 +0.7**
L02A Cave Junction 84.02 48 ⇓P **P** **12 11 44.0 +0.1**
baz=84
A06A Chilliwack 84.11 41 ⇓P **P** **12 11 43.4 -0.8**
baz=84,SNR=5.2
F04A Amboy 84.12 44 ⇓P **P** **12 11 44.2 -0.1**
baz=84,SNR=6.3
D05A Emmclaw 84.17 43 ⇑P **P** **12 11 44.8 +0.3**
baz=84,SNR=9.5
KHMM Horse Mountain 84.17 50 *e*P **P** **12 11 46.3 +1.6**
TDL Tradedollar La 84.18 44 P **P** **12 11 45.3 +0.7**
RPW Rockport 84.22 42 *e*P **P** **12 11 45.0 +0.2**
RPW *epP* pP 12 11 53.5 -0.8
G04A Mulino 84.23 45 ⇑P **P** **12 11 44.8 -0.1**
baz=84,SNR=11
B06A Marblemount 84.23 42 ⇓P **P** **12 11 44.7 -0.1**
baz=84
O01C Eel River Cons 84.24 50 ⇑P **P** **12 11 44.9 -0.2**
baz=84
C05A Tolt Reservoir 84.26 43 ⇑P **P** **12 11 44.9 -0.1**
baz=84
LON Longmire 84.37 44 *e*P **P** **12 11 45.5 0.0**
comp=Z,20nm,1.2s,mb5.1
LON *epP* pP 12 11 54.8 -0.2
LON Longmire 84.37 44 *e*P **P** **12 11 45.5 -0.1**
LON *e**PP pP 12 11 54.8 -0.2
LON pmax pmax
comp=Z,20nm,1.2s,mb5.1
HUMO Hull Mountain 84.40 48 *e*P **P** **12 11 46.6 +0.8**
HUMO *epP* pP 12 11 55.7 +0.4
HUMO Hull Mountain 84.40 48 ⇑P **P** **12 11 46.1 +0.2**
baz=84,SNR=15
N02C Big Bar 84.50 50 ⇓P **P** **12 11 46.7 +0.3**
baz=84
KCPM Cahto Peak 84.51 51 *e*P **P** **12 11 48.1 +1.6**
H04A Detroit Lake 84.53 46 ⇓P **P** **12 11 46.5 0.0**
baz=85
KIPM Iron Peak 84.56 51 *e*P **P** **12 11 46.3 -0.4**
YKW3 Yellowknife Ar 84.64 27 *e*P **P** **12 11 46.0 -0.5**
ALE Alert 84.66 3 P **P** **12 11 46.0 -0.4**
comp=Z,120nm,1.0s,mb6.0,SNR=11
YKA Yellowknife Ar 84.66 27 P **P** **12 11 46.0 -0.7**
comp=Z,22nm,0.7s,mb5.4,baz=286,slow=5.0,SNR=68
YKA *epP* pP 12 11 54.5 -1.6
comp=Z,28nm,0.6s,baz=289,slow=5.1,SNR=21
YKA LR LR 12 47 58.0
comp=Z,332nm,20.6s,MS4.7,baz=140,slow=34
YKA Yellowknife Ar 84.66 27 P **P** **12 11 46.0 -0.7**
YKA pP pP 12 11 54.5 -1.6
YKA LR LR 12 47 58.0
YKA Yellowknife Ar 84.66 27 P **P** **12 11 46.0 -0.7**
YKA *PP pP 12 11 54.5 -1.7
YKA pmax pmax
comp=Z,22nm,0.7s
YKA pmax pmax
comp=Z,28nm,0.6s
M02C Callahan 84.72 49 ⇓P **P** **12 11 47.8 +0.3**
baz=85
C06A Tall Timber Ra 84.74 42 ⇑P **P** **12 11 47.6 +0.2**
baz=85
YBH Yreka Blue Hor 84.75 49 *e*P **P** **12 11 48.1 +0.5**
comp=Z,13nm,0.6s,mb5.2
YBH *epP* pP 12 11 57.6 +0.5
YBH Yreka Blue Hor 84.75 49 *e*P **P** **12 11 48.2 +0.6**
YBH *e**PP pP 12 11 57.6 +0.5
YBH pmax pmax
comp=Z,13nm,0.6s
YBH Yreka Blue Hor 84.75 49 ⇓P **P** **12 11 47.7 +0.1**
baz=85
HOOD Mount Hood Mea 84.78 45 *e*P **P** **12 11 48.2 +0.6**
comp=Z,156nm,2.0s,mb5.8
HOOD *epP* pP 12 11 56.7 -0.4
F05A White Salmon 84.79 44 ⇓P **P** **12 11 47.7 0.0**
baz=85,SNR=8.9
A07A Ashnola River, 84.83 41 ⇑P **P** **12 11 47.9 +0.1**
baz=85,SNR=34
D06A Cle Elum 84.93 43 ⇑P **P** **12 11 48.3 -0.1**
baz=85,SNR=14
E06A Yakima 84.98 44 ⇓P **P** **12 11 48.6 0.0**
baz=85,SNR=9.8
G05A Wamic 85.02 45 ⇓P **P** **12 11 49.3 +0.4**
baz=85,SNR=6.6
HOPS Hopland 85.03 51 ⇓P **P** **12 11 49.3 +0.2**
baz=85
WDC Whiskeytown Da 85.11 50 *e*P **P** **12 11 49.2 -0.3**
comp=Z,12nm,0.8s,mb5.1
WDC Whiskeytown Da 85.11 50 *e*P **P** **12 11 49.2 -0.2**
WDC pmax pmax
comp=Z,12nm,0.8s,mb5.1
WDC Whiskeytown Da 85.11 50 ⇑P **P** **12 11 49.3 -0.2**
baz=85,SNR=9.9
B07A Winthrop 85.13 42 ⇑P **P** **12 11 48.8 -0.6**
baz=85,SNR=21
LHEM Herd Peak 85.14 49 P **P** **12 11 50.1 +0.6**
GASB Alder Springs 85.17 51 ⇓P **P** **12 11 50.1 +0.3**
baz=85
ETW Entiat 85.18 42 *e*P **P** **12 11 49.5 -0.1**
ETW *epP* pP 12 11 58.5 -0.6
H05A Madras 85.21 46 ⇑P **P** **12 11 49.7 -0.1**
baz=85,SNR=6.6
F06A Goldendale 85.28 44 ⇓P **P** **12 11 50.0 -0.1**
baz=85
M03C McCloud 85.28 49 ⇓P **P** **12 11 50.0 -0.3**
baz=85,SNR=13
I05A Bend 85.29 46 ⇓P **P** **12 11 50.2 0.0**
baz=85
C07A Waterville 85.34 42 ⇑P **P** **12 11 49.8 -0.6**
baz=85,SNR=15
NSHM Saint Helena R 85.49 52 *e*P **P** **12 11 52.4 +1.0**
G06A Carlson Farm, 85.50 45 ⇑P **P** **12 11 51.4 +0.1**
baz=86
D07A Quincy 85.51 43 ⇓P **P** **12 11 51.2 -0.1**
baz=86,SNR=5.9
MNRC McLaughlin Nat 85.54 51 ⇓P **P** **12 11 51.8 +0.2**
baz=86,SNR=11
A08A Turner Farm, O 85.56 41 ⇓P **P** **12 11 51.4 -0.1**
baz=86,SNR=32
CVS Carmenet Viney 85.64 52 ⇑P **P** **12 11 52.0 -0.1**
baz=86
B08A Colville Reser 85.66 42 ⇓P **P** **12 11 51.7 -0.3**
baz=86,SNR=41
VIPM Ingram Point 85.67 46 P **P** **12 11 52.7 +0.6**
LVZ Lovozero 85.69 339 *e*P **P** **12 11 50.3 -1.4**
LVZ Lovozero 85.69 339 *e*P **P** **12 11 50.2 -1.5**
LVZ pmax pmax
comp=Z,42nm,1.4s,mb5.5
E07A Sunnyside 85.73 43 ⇑P **P** **12 11 52.5 +0.1**
baz=86,SNR=8.4
RBK Rabkut 85.75 287 ⇑P **P** **12 11 52.9 -0.1**
SNR=8.7
MDW Midway 85.78 43 P **P** **12 11 53.1 +0.4**
H06A Lindquist Farm 85.81 45 ⇓P **P** **12 11 52.9 +0.1**
baz=86,SNR=10
F07A Phinny Hill Vi 85.83 44 ⇑P **P** **12 11 53.0 +0.1**
baz=86
K05A Summer Lake 85.86 47 ⇓P **P** **12 11 53.5 +0.3**
baz=86,SNR=10
RSW Rattlesnake Hi 85.94 44 *e*P **P** **12 11 53.6 +0.2**
RSW *epP* pP 12 12 03.1 +0.2
C08A Higginbotham F 85.98 42 ⇓P **P** **12 11 53.1 -0.5**
baz=86,SNR=44
HAWA Hanford 85.98 44 *e*P **P** **12 11 54.0 +0.4**
comp=Z,25nm,1.0s,mb5.4
HAWA *epP* pP 12 12 02.7 -0.5
A09A Danville 86.00 41 ⇑P **P** **12 11 53.4 -0.2**
baz=86,SNR=26
WHFO Wadi Hawf 86.07 287 ⇓P **P** **12 11 54.0 -0.6**
SNR=5.5
I06A Prineville 86.08 46 ⇑P **P** **12 11 54.3 +0.1**
baz=86,SNR=12
ORV Oroville 86.11 51 ⇑P **P** **12 11 54.1 -0.3**
baz=86,SNR=5.7
KLMR Klimovskoe 86.11 332 *e*P **P** **12 11 51.1 -2.9**
KLMR pmax pmax
comp=Z,76nm,1.8s,mb5.6
G07A Ruggs Ranch, H 86.15 45 ⇓P **P** **12 11 54.4 -0.2**
baz=86,SNR=9.8
RES Resolute Bay 86.17 13 *e*P **P** **12 11 53.4 -0.6**
comp=Z,9μm,1.9s
RES *epP* pP 12 12 02.6 -0.8
RES Resolute Bay 86.17 13 *e*P **P** **12 11 53.4 -0.6**
RES *e**PP pP 12 12 02.6 -0.9
RES pmax pmax
comp=Z,9μm,1.9s
OHCM Honcut 86.17 51 *e*P **P** **12 11 55.1 +0.4**
D08A Wollman Farm, 86.24 43 ⇑P **P** **12 11 54.9 0.0**
baz=86,SNR=11
APA Apatity 86.25 339⇑ *i*P **P** **12 11 53.0 -1.5**
APA *i* pP 12 12 02.3 -1.7
APA pmax pmax
comp=Z,56nm,1.3s,mb5.6
APA MLR MLR
comp=Z,2μm,20.0s,MS5.4
O04C Chester 86.25 50 ⇑P **P** **12 11 55.4 +0.3**
baz=86,SNR=18
J06A Christmas Vall 86.28 47 ⇓P **P** **12 11 55.1 -0.1**
baz=86,SNR=11
E08A Dider Farm, El 86.28 43 ⇑P **P** **12 11 55.0 -0.1**
baz=86
OD2 Odessa Site #2 86.30 42 *e*P **P** **12 11 55.2 0.0**
OD2 *epP* pP 12 12 04.1 -0.6
H07A Lands Inn, Kim 86.38 45 ⇓P **P** **12 11 55.5 -0.2**
baz=86,SNR=13
B09A Rice 86.41 41 ⇑P **P** **12 11 55.5 -0.2**
baz=86,SNR=28
O05C Quincy 86.46 50 ⇓P **P** **12 11 55.8 -0.3**
baz=86
MOD Modoc 86.48 48 *e*P **P** **12 11 56.2 0.0**
comp=Z,6.6nm,0.6s,mb5.0
MOD *epP* pP 12 12 06.1 +0.4
MOD Modoc 86.48 48 ⇑P **P** **12 11 55.9 -0.3**
baz=86,SNR=17
C09A Chrisman Ranch 86.48 42 ⇑P **P** **12 11 56.0 -0.1**
baz=86,SNR=21
I07A Izee 86.54 46 ⇓P **P** **12 11 56.5 +0.1**
baz=87,SNR=12
ABTO Aybut 86.62 287 ⇑P **P** **12 11 57.0 -0.4**
SNR=15
G08A Pilot Rock 86.63 45 ⇓P **P** **12 11 57.1 +0.2**
baz=87,SNR=11
F08A Pendleton 86.64 44 ⇓P **P** **12 11 57.0 +0.1**
baz=87,SNR=16
D09A Jones Farm, Ri 86.64 43 ⇑P **P** **12 11 56.6 -0.3**
baz=87,SNR=12
A10A Northport 86.65 41 ⇑P **P** **12 11 57.1 +0.3**
baz=87,SNR=32
SAO San Andreas Ge 86.76 53 *e*P **P** **12 11 57.7 0.0**
comp=Z,6.5nm,0.9s,mb4.9
PACP Pacheco Peak 86.83 53 ⇑P **P** **12 11 58.0 0.0**
baz=87,SNR=7.4
J07A Hines 86.85 46 ⇓P **P** **12 11 58.1 +0.2**
baz=87,SNR=15
LAVA Lava Cap Winer 86.86 51 ⇓P **P** **12 11 58.2 0.0**
baz=87,SNR=18
BEKR Beckwourth 86.90 50 ⇓P **P** **12 11 58.1 -0.2**
baz=87,SNR=40
LNOR Lincton Mounta 86.95 44 *e*P **P** **12 11 58.7 +0.2**
LNOR *epP* pP 12 12 07.3 -0.6
H08A Prairie City 87.02 45 ⇓P **P** **12 11 58.7 -0.1**
baz=87,SNR=14
B10A Chitwood Farm, 87.04 41 ⇑P **P** **12 11 58.9 +0.1**
baz=87
K07A Rock Creek Ran 87.05 47 ⇑P **P** **12 11 59.5 +0.5**
baz=87,SNR=16
N06A Buffalo Meadow 87.09 49 ⇓P **P** **12 11 58.8 -0.4**
baz=87,SNR=14
V03C Hunter Liggett 87.09 54 ⇑P **P** **12 11 59.4 +0.1**
baz=87,SNR=16
RKT Rikitea 87.10 114 *e*LR LR 12 38 49.0
comp=Z,937nm,34.8s,baz=305
C10A Spilker Farm, 87.11 42 ⇓P **P** **12 11 59.1 0.0**
baz=87,SNR=5.4
NEW Newport 87.11 41 *e*P **P** **12 11 59.0 -0.2**
comp=Z,32nm,0.8s,mb5.6
NEW *epP* pP 12 12 08.0 -0.6
L07A Adell 87.15 48 ⇓P **P** **12 11 59.9 +0.4**

baz=87,SNR=17
O06A **Flanigan** 87.23 50 ⇑P P 12 12 00.0 +0.1
baz=87,SNR=16
I08A **Drewsey** 87.24 46 ⇑P P 12 11 59.8 -0.1
baz=87,SNR=18
F09A **S2 Ranch, Elgi** 87.25 44 ⇓P P 12 11 59.8 -0.1
baz=87,SNR=11
P06A **Stead Airport,** 87.29 50 ⇑P P 12 11 59.9 -0.3
baz=87
CMB **Columbia Colle** 87.30 52 eP P 12 12 00.4 +0.1
comp=Z,7.2nm,0.6s,mb5.1
CMB **Columbia Colle** 87.30 52 eP P 12 12 00.4 +0.1
CMB pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
CMB **Columbia Colle** 87.30 52 ⇑P P 12 12 00.1 -0.1
baz=87,SNR=8.7
D10A **Wagner Farm, O** 87.33 43 ⇑P P 12 11 59.6 -0.7
baz=87,SNR=26
U04C **Hernandez Rese** 87.37 54 ⇓P P 12 12 01.1 +0.5
baz=87,SNR=16
KEV **Kevo** 87.39 342 ep P 12 11 58.2 -1.9
comp=Z,8.5nm,0.7s,mb5.1
KEV **Kevo** 87.39 342 eP P 12 11 58.2 -1.9
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
A11A **Hall Mountain,** 87.42 41 ⇓P P 12 12 01.3 +0.7
baz=87,SNR=35
J08A **Circle Bar Ran** 87.44 46 ⇑P P 12 12 01.0 +0.2
baz=88,SNR=21
G09A **Cove** 87.44 44 ⇓P P 12 12 00.7 -0.1
baz=88,SNR=17
WCN **Washoe City** 87.48 50 ⇑P P 12 12 01.3 +0.1
baz=88,SNR=6.7
WVOR **Wild Horse Val** 87.55 47 eP P 12 12 01.4 0.0
comp=Z,9.6nm,0.7s,mb5.1
WVOR epP pP 12 12 10.7 -0.2
WVOR **Wild Horse Val** 87.55 47 eP P 12 12 01.4 0.0
WVOR e*PP pP 12 12 10.7 -0.2
WVOR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
B11A **Sandpoint** 87.56 41 ⇑P P 12 12 01.5 +0.2
baz=88,SNR=18
E10A **Myers Farm, Un** 87.59 43 ⇑P P 12 12 01.3 -0.2
baz=88,SNR=24
K08A **Mann Creek Ran** 87.59 47 ⇓P P 12 12 01.6 0.0
baz=88,SNR=25
F10A **Beach Ranch, E** 87.64 44 ⇑P P 12 12 01.6 -0.2
baz=88,SNR=19
PKD **Parkfield** 87.66 54 ⇓P P 12 12 01.9 -0.2
baz=88,SNR=33
PAHR **Pah Rah Range** 87.67 50 eP P 12 12 02.4 +0.3
comp=Z,28nm,1.1s,mb5.4
PAHR epP pP 12 12 11.8 +0.3
H09A **Durkee** 87.68 45 ⇓P P 12 12 02.0 0.0
baz=88,SNR=9.6
N07B **Gerlach** 87.72 49 ⇓P P 12 12 02.5 +0.2
baz=88,SNR=29
C11A **Tepee Creek (N** 87.79 42 ⇓P P 12 12 02.1 -0.3
baz=88,SNR=19
I09A **Lost Marbles R** 87.80 46 ⇓P P 12 12 02.1 -0.5
baz=88,SNR=12
L08A **Fields** 87.82 47 ⇓P P 12 12 02.5 -0.2
baz=88,SNR=24
A12A **Yaak River Ran** 87.88 40 ⇓P P 12 12 02.5 -0.3
baz=88,SNR=20
BMO **Blue Mountains** 87.88 45 eP P 12 12 02.7 -0.2
comp=Z,18nm,0.8s,mb5.3
BMO epP pP 12 12 12.4 0.0
G10A **Bishop Farm, J** 87.89 44 ⇓P P 12 12 02.4 -0.6
baz=88,SNR=34
U05C **Westside ANR,** 87.90 53 ⇑P P 12 12 02.8 -0.4
baz=88
R06C **Coleville** 87.90 51 ⇓P P 12 12 03.5 +0.3
baz=88,SNR=17
VRHR **Novokhopersk** 87.92 322 eP P 12 12 01.0 -1.9
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.7s
WAKR **Walker** 87.92 51 eP P 12 12 03.8 +0.5
O07A **Toulon** 87.94 49 ⇑P P 12 12 03.5 +0.2
baz=88,SNR=15
D11A **Klaveano Farm,** 87.95 42 ⇓P P 12 12 02.9 -0.3
baz=88,SNR=18
J09A **Fry Pan Ranch,** 87.95 46 ⇓P P 12 12 03.4 +0.1
baz=88,SNR=18
ARCES **ARCESS Array B** 87.96 342 P P 12 12 01.9 -0.8
comp=E,8.1nm,0.7s,mb5.1,baz=65,slow=6.1,SNR=37
ARCES LR LR 12 57 09.7
comp=E,522nm,19.0s,MS5.0,baz=67,slow=40
M08A **Happy Creek Ra** 87.98 48 ⇓P P 12 12 03.6 +0.1
baz=88
PTRM **Twissleman Ran** 87.99 54 eP P 12 12 04.6 +1.0
EDM **Edmonton** 88.02 36 eP P 12 12 03.5 +0.1
EDM epP pP 12 12 11.8 -1.1
B12A **Libby** 88.04 41 ⇓P P 12 12 03.7 +0.1
baz=88
T06C **Millerton Lake** 88.06 53 ⇑P P 12 12 03.5 -0.4
baz=88,SNR=29
P07A **Fallon** 88.08 50 ⇑P P 12 12 04.1 +0.1
baz=88
K09A **Rome** 88.14 47 ⇓P P 12 12 03.9 -0.2
baz=88,SNR=8.8
V05C **Boulder Hill,** 88.18 54 ⇓P P 12 12 04.6 +0.1
baz=88
E11A **Bogner Ranch,** 88.22 43 ⇑P P 12 12 04.3 -0.2
baz=88,SNR=21
SMMC **Simmler** 88.23 54 ⇑P P 12 12 04.9 +0.1
baz=88,SNR=10.0
KCC **Kaiser Creek** 88.29 52 ⇑P P 12 12 04.3 -0.7
baz=88,SNR=21
C12B **Naegeli Ranch,** 88.33 42 ⇑P P 12 12 04.9 -0.1
baz=88,SNR=9.6
H10A **Noah's Angus R** 88.33 45 ⇑P P 12 12 04.3 -0.7
baz=88,SNR=31
N08A **GE Springer Mi** 88.33 49 ⇑P P 12 12 05.2 +0.1
baz=88,SNR=7.6
L09A **Wilkinson Ranc** 88.36 47 ⇑P P 12 12 05.1 -0.1
baz=88,SNR=20
F11A **Grangeville** 88.39 43 ⇑P P 12 12 04.7 -0.6
baz=88,SNR=13
I10A **Payette** 88.43 45 ⇑P P 12 12 05.4 -0.1
baz=88,SNR=8.2
O08A **Rochester Mine** 88.44 49 ⇓P P 12 12 05.8 +0.1
baz=88,SNR=24
G11A **Walters Elk Ra** 88.44 44 ⇓P P 12 12 04.8 -0.7
baz=88,SNR=62
PKM **Peak Mountain** 88.48 55 ⇑P P 12 12 05.9 -0.1
baz=88,SNR=15
D12A **Red Ives Fores** 88.59 42 ⇑P P 12 12 05.8 -0.5
baz=89
RCTC **Rector, Farmer** 88.59 53 ⇑P P 12 12 06.0 -0.5
baz=89
J10A **Berg Farm, Mel** 88.63 46 ⇑P P 12 12 06.1 -0.4
baz=89,SNR=7.6
E12A **Beaver Dam Sad** 88.63 43 ⇓P P 12 12 06.3 -0.1
baz=89,SNR=32
P08A **Dixie Valley** 88.64 50 ⇓P P 12 12 07.6 +0.9
baz=89
M09A **Marrel Ranch,** 88.67 48 ⇑P P 12 12 06.8 +0.1
baz=89,SNR=9.5
K10A **MacKenzie Ranc** 88.73 47 ⇑P P 12 12 06.6 -0.4
baz=89,SNR=39
BSMT **Bassoo Peak** 88.73 41 eP P 12 12 07.9 +1.0
N09A **Rock Creek Ran** 88.76 49 ⇑P P 12 12 07.3 +0.1
baz=89,SNR=20
B13A **Whitefish** 88.79 41 ⇓P P 12 12 07.5 +0.4
baz=89,SNR=11
NVAR **Mina Array Bea** 88.80 51 P P 12 12 07.9 +0.5
comp=E,16nm,0.7s,mb5.5,baz=265,slow=4.9,SNR=96
NVAR pP pP 12 12 17.0 +0.1
comp=E,17nm,0.6s,baz=268,slow=4.5,SNR=20
GNI **Garni** 88.80 311 LR LR 12 56 09.8
comp=E,183nm,18.2s,MS4.5,baz=280,slow=38
H11A **Donnelly** 88.81 45 ⇑P P 12 12 07.1 -0.2
baz=89,SNR=28
VES **Vestal, Richgr** 88.83 54 ⇓P P 12 12 06.7 -1.0
baz=89,SNR=10
MTUM **Tungsten Hills** 88.86 52 eP P 12 12 08.2 +0.5
C13A **Hot Springs** 88.92 41 ⇓P P 12 12 07.4 -0.3
baz=89,SNR=9.9
WALA **Waterton Lakes** 88.94 40 eP P 12 12 08.9 +1.1
comp=E,53nm,1.3s,mb5.7
WALA epP pP 12 12 17.5 +0.2
JOF **Joensuu** 88.96 335 ep P 12 12 05.0 -2.6
comp=E,15nm,0.7s,mb5.4
JOF **Joensuu** 88.96 335 eP P 12 12 05.0 -2.6
JOF pmax pmax
comp=Z,15nm,0.7s,mb5.4
Q08A **Gabbs** 88.97 51 ⇓P P 12 12 08.3 +0.1
baz=89,SNR=9.4
F12A **Elk City** 89.03 43 ⇓P P 12 12 07.9 -0.4
baz=89,SNR=7.9
I11A **Placerville** 89.06 45 ⇑P P 12 12 08.3 -0.3
baz=89,SNR=23
BMN **Battle Mountai** 89.09 49 eP P 12 12 09.5 +0.7
comp=Z,7.3nm,0.5s,mb5.3
BMN epP pP 12 12 18.7 +0.4
BMN **Battle Mountai** 89.09 49 eP P 12 12 09.5 +0.8
BMN e*PP pP 12 12 18.7 +0.4
BMN pmax pmax
comp=Z,7.0nm,0.5s,mb5.2
D13A **Huson** 89.17 42 ⇓P P 12 12 08.6 -0.3
baz=89
L10A **Juniper Basin** 89.20 47 ⇑P P 12 12 09.3 +0.1
baz=89,SNR=32
ARVC **Arvin** 89.21 54 ⇑P P 12 12 08.9 -0.5
baz=89
KIV **Kislovodsk** 89.26 315 eP P 12 12 12.7 +3.3
KIV pmax pmax
comp=Z,6.0nm,0.5s,mb5.2
A14A **Double T Ranch** 89.27 40 ⇓P P 12 12 09.7 +0.3
baz=89,SNR=12
MIB **Mutribah** 89.27 300 eP P 12 12 08.0 -1.8
MIB AMb AMB 12 12 11.3
comp=Z,68nm,0.8s,mb6.0
MFID **Camas Ranch** 89.29 46 ⇑P P 12 12 09.7 +0.1
baz=89,SNR=28
M10A **I.L. Ranch, Tu** 89.30 48 ⇓P P 12 12 10.1 +0.5
baz=89,SNR=10
K11A **Parker Ranch,** 89.32 46 ⇑P P 12 12 09.9 +0.1
baz=89,SNR=16
VSR **Storozhevoye** 89.35 322 eP P 12 12 07.5 -2.2
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,3.0nm,0.5s
ISA **Isabella** 89.36 54 eP P 12 12 09.6 -0.4
comp=E,7.6nm,0.8s,mb5.1
ISA epP pP 12 12 18.9 -0.7
ISA **Isabella** 89.36 54 eP P 12 12 09.6 -0.5
ISA e*PP pP 12 12 18.9 -0.7
ISA pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
ISA **Isabella** 89.36 54 ⇑P P 12 12 10.0 -0.1
baz=89,SNR=7.7
VORD **Divnogorie** 89.36 322 eP P 12 12 07.6 -2.1
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,40nm,0.8s
P09A **Austin** 89.38 50 ⇑P P 12 12 10.3 +0.2
baz=89,SNR=5.4
CWC **Cottonwood Cre** 89.47 53 ⇑P P 12 12 10.6 0.0
baz=90
OBN **Obninsk** 89.51 327 eP P 12 12 08.6 -1.7
OBN **Obninsk** 89.51 327 eP P 12 12 09.1 -1.2
OBN e*PP pP 12 12 16.6 -3.3
OBN e*SP sP 12 12 24.3 +1.0
OBN 12 15 45.0
OBN pmax pmax
comp=Z,84nm,1.5s,mb5.8
OBN MLR MLR
comp=Z,200nm,13.0s,MS4.7
E13A **Victor** 89.54 43 ⇓P P 12 12 10.4 -0.2
baz=90
N10A **Dunphy** 89.54 48 ⇑P P 12 12 11.0 +0.2
baz=90,SNR=8.9
B14A **Marquette Ranc** 89.55 40 ⇑P P 12 12 11.0 +0.3
baz=90,SNR=9.5
MSO **Missoula** 89.58 42 eP P 12 12 11.1 +0.2
comp=Z,3.6nm,0.9s,mb4.7
MSO epP pP 12 12 19.9 -0.5
F13A **Darby** 89.64 43 ⇓P P 12 12 11.2 0.0
baz=90,SNR=16
H12A **Diamond D Ranc** 89.64 44 ⇓P P 12 12 11.1 -0.1
baz=90,SNR=11
O10A **Cortez Mining,** 89.66 49 ⇓P P 12 12 11.8 +0.4
baz=90,SNR=10
I12A **Atlanta** 89.67 45 ⇑P P 12 12 11.5 +0.1
baz=90,SNR=24
L11A **Cat Creek Ranc** 89.69 47 ⇓P P 12 12 11.6 +0.1
baz=90,SNR=20
A15A **Johnson Ranch,** 89.70 40 ⇓P P 12 12 11.3 -0.1
baz=90,SNR=9.4
TPH **Tonopah** 89.71 51 eP P 12 12 12.7 +1.0
comp=Z,17nm,0.6s,mb5.6
TPH epP pP 12 12 21.1 -0.1
TPH esP sP 12 12 24.5 -0.1
R09A **Tonopah** 89.78 51 ⇓P P 12 12 12.2 +0.2
baz=90,SNR=27
D14A **Greenough** 89.79 42 ⇓P P 12 12 12.5 +0.6
baz=90
S09A **Goldfield** 89.80 52 ⇓P P 12 12 12.1 0.0
baz=90,SNR=33
J12A **Stokes Ranch,** 89.85 46 ⇑P P 12 12 12.5 +0.3
baz=90,SNR=14
M11A **Holland Ranch,** 89.86 48 ⇑P P 12 12 12.4 +0.1
baz=90,SNR=10.0
P10A **Eureka** 89.87 50 ⇓P P 12 12 12.3 -0.1
baz=90,SNR=6.0
GRAC **Grapevine Rang** 89.88 52 ⇓P P 12 12 12.2 -0.3
baz=90
G13A **Cobalt** 89.91 44 ⇑P P 12 12 12.1 -0.4
baz=90,SNR=30
EDW2 **Edwards Air Fo** 89.94 54 ⇑P P 12 12 12.7 -0.1
baz=90,SNR=13
CIS **Catalina Islan** 89.98 56 ⇓P P 12 12 13.0 0.0
baz=90,SNR=6.8
E14A **Clinton** 90.00 42 ⇑P P 12 12 13.2 +0.4
baz=90
CHMT **Chamberlain Mo** 90.01 42 eP P 12 12 13.2 +0.3
B15A **Bradely Ranch,** 90.02 40 ⇑P P 12 12 13.0 +0.1
baz=90,SNR=6.6
LRMC **Laurel Mountai** 90.02 54 ⇓P P 12 12 13.5 +0.3
baz=90,SNR=21
MPMC **Manual Prospec** 90.03 53 ⇑P P 12 12 13.4 +0.1
baz=90,SNR=27
H13A **Challis** 90.05 44 ⇓P P 12 12 13.2 +0.1
baz=90,SNR=15
MWC **Mount Wilson** 90.05 55 eP P 12 12 13.7 +0.3
comp=Z,56nm,1.4s,mb5.7
MWC epP pP 12 12 22.6 -0.3
MWC **Mount Wilson** 90.05 55 eP P 12 12 13.7 +0.3
MWC e*PP pP 12 12 22.6 -0.3
MWC pmax pmax
comp=Z,56nm,1.4s,mb5.7
N11A **Elko Archery C** 90.08 48 ⇑P P 12 12 13.4 +0.1
baz=90
Q10A **Clear Creek Ra** 90.13 50 ⇓P P 12 12 13.6 -0.1
baz=90
C15A **Salmond Ranch,** 90.16 41 ⇑P P 12 12 13.3 -0.2
baz=90,SNR=5.9
K12A **Draper Farm, C** 90.16 46 ⇓P P 12 12 13.8 +0.1
baz=90,SNR=13
L12A **House Creek Ra** 90.22 47 ⇑P P 12 12 14.0 +0.1
baz=90,SNR=20
S10A **Tonopah Range,** 90.23 51 ⇑P P 12 12 14.3 +0.1
baz=90,SNR=34
HLID **Hailey** 90.23 45 eP P 12 12 14.3 +0.3
comp=Z,8.3nm,0.7s,mb5.2
HLID **Hailey** 90.23 45 ⇓P P 12 12 14.1 +0.1
baz=90,SNR=23
F14A **Wisdom** 90.27 43 ⇑P P 12 12 14.2 +0.1
baz=90
O11A **Cowboy Ranch,** 90.33 49 ⇓P P 12 12 14.9 +0.4
baz=90,SNR=11
I13A **Wildhorse Cree** 90.33 45 ⇓P P 12 12 14.8 +0.3
baz=90,SNR=15
R10A **Warm Springs** 90.35 51 ⇑P P 12 12 15.2 +0.5
baz=90,SNR=7.3
BFSC **Mount Baldy St** 90.37 55 ⇑P P 12 12 14.7 -0.1
baz=90,SNR=9.5
FURC **Furnace Creek,** 90.41 53 ⇑P P 12 12 15.0 0.0
baz=90,SNR=22
P11A **Circle Ranch,** 90.42 49 ⇑P P 12 12 14.6 -0.3
baz=90
A16A **West Butte Ran** 90.42 40 ⇑P P 12 12 14.5 -0.2
baz=90,SNR=11
D15A **Lincoln** 90.45 42 ⇓P P 12 12 14.9 0.0
baz=90
J13A **Cove Ranch, Pi** 90.45 45 ⇓P P 12 12 15.2 +0.2
baz=90,SNR=19
ELK **Elko** 90.46 48 eP P 12 12 15.9 +0.8
comp=Z,9.2nm,0.8s,mb5.2
ELK epP pP 12 12 25.9 +1.2
ELK **Elko** 90.46 48 eP P 12 12 15.9 +0.8
ELK e*PP pP 12 12 25.9 +1.3
ELK pmax pmax
comp=Z,9.0nm,0.8s
M12A **Wells** 90.50 47 ⇓P P 12 12 15.5 +0.2
baz=90,SNR=14
E15A **Deer Lodge** 90.56 42 ⇑P P 12 12 15.7 +0.2
baz=91,SNR=13
N12A **Clover Valley,** 90.57 48 ⇓P P 12 12 15.7 0.0
baz=91,SNR=11
H14A **Leadore** 90.64 44 ⇑P P 12 12 16.1 +0.2
baz=91,SNR=16
Q11A **Duckwater** 90.69 50 ⇑P P 12 12 16.6 +0.4
baz=91,SNR=12
C16A **Fuhringer Ranc** 90.70 41 ⇓P P 12 12 16.6 +0.5
baz=91,SNR=6.9
K13A **Stover Farm, H** 90.73 46 ⇑P P 12 12 16.7 +0.3
baz=91
TPNV **Topopah Spring** 90.76 52 eP P 12 12 17.0 +0.4
comp=Z,12nm,0.6s,mb5.4
TPNV epP pP 12 12 26.3 +0.2
TPNV **Topopah Spring** 90.76 52 ⇑P P 12 12 17.0 +0.4
baz=91,SNR=35
GSC **Goldstone** 90.77 54 eP P 12 12 17.2 +0.5
comp=Z,12nm,0.7s,mb5.3
GSC esP sP 12 12 29.7 +0.1
GSC **Goldstone** 90.77 54 ⇑P P 12 12 16.8 +0.1
baz=91,SNR=27
I14A **Mackay** 90.79 45 ⇑P P 12 12 16.9 +0.3
baz=91,SNR=18
U10A **Ash Meadows, A** 90.84 53 ⇓P P 12 12 17.1 +0.1
baz=91,SNR=23
F15A **Butte** 90.84 43 ⇓P P 12 12 16.5 -0.3
baz=91,SNR=11
R11A **Troy Canyon, C** 90.88 51 ⇑P P 12 12 17.1 0.0
baz=91,SNR=16
LRM **Limekiln Ridge** 90.88 43 eP P 12 12 17.3 +0.4
MURC **Murrieta** 90.90 55 ⇑P P 12 12 16.8 -0.5
baz=91
MCMT **McKenzie Canyo** 90.92 44 eP P 12 12 17.7 +0.5
MCMT epP pP 12 12 27.3 +0.6
DLMT **Dillon** 90.93 43 eP P 12 12 18.6 +1.4
comp=Z,22nm,1.3s,mb5.3
DLMT epP pP 12 12 26.8 +0.1
J14A **Carey** 90.93 45 ⇑P P 12 12 17.4 +0.2
baz=91,SNR=16
S11A **Rachel** 90.95 51 ⇑P P 12 12 17.0 -0.5
baz=91
BBRC **Big Bear Sol-O** 90.95 55 ⇑P P 12 12 17.9 +0.3
baz=91,SNR=7.6
O12A **Currie** 90.96 49 ⇑P P 12 12 17.9 +0.4
baz=91,SNR=12
L13A **Double Diamond** 91.00 47 ⇓P P 12 12 18.0 +0.4
baz=91,SNR=6.9
HRY **Holter Researc** 91.00 42 eP P 12 12 17.8 +0.3
HRY epP pP 12 12 27.3 +0.3
SHOC **Shoshone** 91.02 53 ⇑P P 12 12 17.8 0.0
baz=91,SNR=18
G15A **Dillon** 91.06 43 ⇓P P 12 12 17.5 -0.3
baz=91,SNR=13
D16A **Dana Ranch, Ca** 91.08 41 ⇓P P 12 12 17.5 -0.4
baz=91
H15A **Lima** 91.13 44 ⇑P P 12 12 18.1 -0.1
baz=91,SNR=13
E16A **East Helena** 91.16 42 ⇑P P 12 12 18.1 -0.2
baz=91,SNR=11
109C **Camp Elliot, M** 91.16 56 ⇓P P 12 12 18.2 -0.4
baz=91,SNR=5.8
Q12A **Willow Creek R** 91.25 50 ⇓P P 12 12 18.6 -0.2
baz=91
HEC **Hector,Ludlow** 91.27 54 ⇑P P 12 12 18.7 -0.3
baz=91
C17A **Wharram Farm,** 91.38 41 ⇑P P 12 12 18.4 -0.9
baz=91,SNR=9.4
KAF **Kangasniemi** 91.40 335 ep P 12 12 16.2 -2.8
comp=Z,11nm,0.6s,mb5.4,baz=58,slow=4.4
KAF **Kangasniemi** 91.40 335 eP P 12 12 16.2 -2.8
KAF pmax pmax
comp=Z,11nm,0.6s,mb5.4
K14A **Jones Ranch, D** 91.40 46 ⇓P P 12 12 19.4 -0.1
baz=91
TUQ **Turquoise Moun** 91.42 53 ⇓P P 12 12 19.9 +0.2
baz=92,SNR=25
F16A **Kennard Place,** 91.44 43 ⇓P P 12 12 19.2 -0.3
baz=91,SNR=6.8
T11A **Corn Creek, Al** 91.47 52 ⇑P P 12 12 20.1 +0.2
baz=92,SNR=8.1
BOZ **Bozeman (W)** 91.48 43 eP P 12 12 19.9 +0.2
comp=Z,10nm,1.2s,mb5.0
BOZ epP pP 12 12 29.1 -0.2
BOZ **Bozeman (W)** 91.48 43 eP P 12 12 20.0 +0.3
BOZ e*PP pP 12 12 29.1 -0.2
BOZ pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
BOZ **Bozeman (W)** 91.48 43 ⇓P P 12 12 20.1 +0.3
baz=92,SNR=5.4
PFO **Pinyon Flat Ob** 91.50 55 eP P 12 12 20.6 +0.5
comp=Z,32nm,1.3s,mb5.5
PFO epP pP 12 12 29.6 -0.1
PFO **Pinyon Flat Ob** 91.50 55 ⇑P P 12 12 20.3 +0.2
baz=92,SNR=14
G16A **Moss Hill, Enn** 91.50 43 ⇓P P 12 12 19.9 +0.1
baz=92,SNR=22
L14A **Malta** 91.52 47 ⇓P P 12 12 20.3 +0.3
baz=92
U11A **Corn Creek** 91.57 52 ⇓P P 12 12 20.6 +0.2
baz=92
D17A **Six Diamond Ra** 91.59 41 ⇑P P 12 12 20.3 +0.1
baz=92,SNR=7.5
M14A **Sheep Mountain** 91.60 47 ⇓P P 12 12 20.7 +0.3
baz=92,SNR=9.9
R12A **Pony Springs,** 91.62 50 ⇑P P 12 12 20.7 +0.1
baz=92
S12A **Delamar Landin** 91.64 51 ⇓P P 12 12 20.9 +0.2
baz=92
J15A **Blackfoot** 91.66 45 ⇓P P 12 12 21.4 +0.8
baz=92,SNR=21
V11A **Goodsprings** 91.70 53 ⇓P P 12 12 21.2 +0.2
baz=92,SNR=13
E17A **Martinsdale** 91.72 42 ⇓P P 12 12 21.0 +0.2
baz=92,SNR=6.3
MONP **Monument Peak** 91.72 56 ⇓P P 12 12 21.3 +0.2
baz=92,SNR=18
SHPR **Sheep Range** 91.72 52 eP P 12 12 21.9 +0.9
P13A **Bates Ranch, G** 91.73 49 ⇓P P 12 12 20.9 -0.1
baz=92,SNR=15
BELC **Belle Mtn.** 91.76 55 ⇑P P 12 12 21.1 -0.2
baz=92,SNR=17
GMRC **Granite Mounta** 91.81 54 ⇓P P 12 12 21.4 -0.2
baz=92,SNR=15
K15A **Arbon** 91.81 46 ⇓P P 12 12 22.0 +0.7
baz=92,SNR=6.1
Q13A **Wheeler Ranch,** 91.88 50 ⇓P P 12 12 21.7 0.0
baz=92
QLMT **Earthquake Lak** 91.88 43 eP P 12 12 22.6 +0.9
QLMT epP pP 12 12 32.2 +1.1
EGMT **Eagleton** 91.89 40 eP P 12 12 21.7 +0.2
comp=Z,12nm,1.0s,mb5.2
EGMT epP pP 12 12 30.8 -0.3
EGMT **Eagleton** 91.89 40 ⇑P P 12 12 21.4 -0.2
baz=92
N14A **Grayback Hills** 91.92 48 ⇑P P 12 12 21.6 -0.2
baz=92,SNR=5.5
HVU **Hansel Valley** 91.92 47 eP P 12 12 22.6 +0.7
comp=Z,4.5nm,0.7s,mb4.9
HVU **Hansel Valley** 91.92 47 eP P 12 12 23.3 +1.4
T12A **Moapa** 92.00 52 ⇓P P 12 12 22.2 -0.2
baz=92
F17A **Fitzpatrick Pl** 92.03 42 ⇓P P 12 12 22.0 -0.3
baz=92
DVTC **Desert V Tower** 92.04 56 ⇑P P 12 12 22.7 +0.1
baz=92,SNR=7.5
H16A **Russell Place,** 92.04 44 ⇓P P 12 12 22.7 +0.3
baz=92,SNR=20
L15A **Malad City** 92.13 46 ⇓P P 12 12 22.6 -0.2
baz=92,SNR=5.9
R13A **O'Grain Ranch,** 92.14 50 ⇓P P 12 12 22.6 -0.4
baz=92
D18A **Linhart Farms,** 92.14 41 ⇑P P 12 12 22.5 -0.3
baz=92,SNR=5.9

LDFC Landfair 92.16 54 *e*P P 12 12 23.6 +0.4
comp=Z,43nm,0.8s,mb5.8
LDFC *e*pP pP 12 12 33.1 +0.4
G17A Pierce Place, 92.18 43 ⇑P P 12 12 22.7 -0.3
baz=92
U12A Valley of Fire 92.22 52 ⇓P P 12 12 23.0 -0.4
baz=92
YMR Madison River 92.25 43 *e*P P 12 12 24.4 +1.1
comp=Z,27nm,0.8s,mb5.6
M15A Larsen Ranch, 92.26 47 ⇑P P 12 12 23.3 -0.1
baz=92,SNR=6.3
J16A Bone 92.26 45 ⇑P P 12 12 23.8 +0.4
baz=92,SNR=21
BC3 Big Chuckw Mtn 92.29 55 ⇑P P 12 12 24.0 +0.2
baz=92,SNR=19
E18A Harlowton 92.29 41 ⇓P P 12 12 23.4 -0.1
baz=92,SNR=13
SPUT South Promonto 92.30 47 *e*P P 12 12 23.7 0.0
N15A Stansbury Isla 92.38 47 ⇑P P 12 12 23.7 -0.4
baz=92,SNR=6.4
P14A Drum Mountains 92.39 49 ⇑P P 12 12 24.1 0.0
baz=92,SNR=5.3
DUG Dugway 92.39 48 *e*P P 12 12 24.6 +0.5
comp=Z,3.3nm,0.6s,mb4.8
DUG Dugway 92.39 48 ⇑P P 12 12 24.2 +0.1
baz=92,SNR=10.0
IRM Iron Mountain 92.39 54 ⇓P P 12 12 23.9 -0.3
baz=92,SNR=20
S13A Holt Ranch, En 92.40 51 ⇑P P 12 12 23.9 -0.3
baz=92
YFT Old Faithful 92.41 44 *e*P P 12 12 26.9 +2.8
YFT *e*pP pP 12 12 36.2 +2.6
Q14A Sevier Lake (B 92.42 49 ⇓P P 12 12 24.4 +0.1
baz=92,SNR=8.2
YNR Norris Junctio 92.42 43 *e*P P 12 12 26.1 +2.0
YNR *e*pP pP 12 12 36.0 +2.4
K16A Soda Springs 92.42 45 ⇓P P 12 12 24.2 0.0
baz=92,SNR=8.3
RRI2 Red Ridge 92.44 45 *e*P P 12 12 25.4 +1.1
comp=Z,11nm,0.7s,mb5.3
DCID1 Drake Creek 92.45 45 *e*P P 12 12 24.5 +0.2
comp=Z,9.0nm,0.7s,mb5.2
DCID1 *e*pP pP 12 12 33.9 +0.1
IMW Indian Meadow 92.52 44 *e*P P 12 12 25.7 +1.1
comp=Z,11nm,0.7s,mb5.4
T13A Saint George 92.53 51 ⇑P P 12 12 25.3 +0.5
baz=93
H17A Grant Village 92.60 44 ⇓P P 12 12 25.4 +0.4
baz=93,SNR=10
TPAW Teton Pass 92.65 45 *e*P P 12 12 26.3 +1.1
comp=Z,5.4nm,0.6s,mb5.2
F18A Big Timber 92.65 42 ⇑P P 12 12 25.2 0.0
baz=93,SNR=9.3
ARUT Antelope Range 92.66 51 *e*P P 12 12 26.1 +0.7
LKWY Lake 92.66 43 *e*P P 12 12 26.2 +1.0
comp=Z,23nm,1.1s,mb5.5
LKWY Lake 92.66 43 *e*P P 12 12 27.9 +2.7
MOOW Moose Ponds 92.70 44 *e*P P 12 12 25.8 +0.4
comp=Z,4.8nm,0.7s,mb5.0
MOOW *e*pP pP 12 12 35.8 +0.8
REDW Red Top Meadow 92.76 45 *e*P P 12 12 26.5 +0.8
comp=Z,12nm,1.2s,mb5.2
I17A Pilgram Creek 92.76 44 ⇓P P 12 12 26.2 +0.5
baz=93,SNR=7.3
AHID Auburn Hatcher 92.78 45 *e*P P 12 12 26.5 +0.7
CCUT Cedar City 92.79 51 *e*P P 12 12 26.7 +0.7
CCUT *e*pP pP 12 12 35.9 +0.4
SNOW Snow King Moun 92.79 45 *e*P P 12 12 27.0 +1.1
comp=Z,4.6nm,0.7s,mb5.0
SNOW *e*pP pP 12 12 36.2 +0.8
L16A Fish Haven 92.80 46 ⇑P P 12 12 25.7 -0.3
baz=93,SNR=13
V13A Grand Canyon W 92.82 53 ⇓P P 12 12 26.5 +0.3
baz=93
HWUT Hardware Ranch 92.84 47 *e*P P 12 12 26.5 +0.4
comp=Z,9.4nm,0.8s,mb5.3
HWUT *e*pP pP 12 12 36.4 +0.8
LOHW Long Hollow 92.84 44 *e*P P 12 12 26.9 +0.8
comp=Z,3.4nm,0.7s,mb4.9
J17A Brown Place, J 92.85 45 ⇓P P 12 12 26.4 +0.3
baz=93
S14A Cedar City 92.87 51 ⇓P P 12 12 26.5 +0.1
baz=93
M16A Huntsville 92.89 47 ⇓P P 12 12 26.1 -0.3
baz=93
G18A Lazy EL Ranch, 92.96 43 ⇑P P 12 12 26.6 0.0
baz=93
GLA Glamis 92.96 55 *e*P P 12 12 27.8 +0.9
comp=Z,20nm,0.8s,mb5.6
GLA *e*pP pP 12 12 36.9 +0.4
GLA Glamis 92.96 55 ⇑P P 12 12 27.1 +0.2
baz=93,SNR=9.8
P15A Leamington 92.97 49 ⇑P P 12 12 26.8 0.0
baz=93
NLU North Lily Min 93.00 48 *e*P P 12 12 26.1 -0.9
Y12C Blythe 93.00 55 ⇓P P 12 12 27.2 +0.2
baz=93,SNR=11
Q15A Fillmore 93.08 49 ⇓P P 12 12 27.1 -0.2
baz=93
W13A Hualapai Mount 93.12 53 ⇑P P 12 12 28.0 +0.4
baz=93,SNR=6.9
T14A Hurricane 93.15 51 ⇑P P 12 12 27.7 +0.1
baz=93
PDMCI Parker Dam,Lak 93.15 54 ⇑P P 12 12 27.3 -0.5
baz=93,SNR=9.9
RLMT Red Lodge 93.22 43 *e*P P 12 12 29.1 +1.3
comp=Z,10.0nm,0.7s,mb5.3
RLMT *e*pP pP 12 12 37.6 +0.2
RLMT Red Lodge 93.22 43 ⇓P P 12 12 28.0 +0.1
baz=93,SNR=17
JLU Jordanelle 93.25 47 *e*P P 12 12 28.5 +0.5
JLU *e*pP pP 12 12 38.6 +1.0
X13A Yucca 93.31 54 ⇓P P 12 12 28.5 0.0
baz=93,SNR=20
O16A Springville 93.34 48 ⇓P P 12 12 28.2 -0.3
baz=93
I18A Diamond G Ranc 93.35 44 ⇑P P 12 12 28.3 -0.1
baz=93,SNR=7.6
MSU Marysvale 93.38 50 *e*P P 12 12 28.9 +0.2
MSU *e*pP pP 12 12 38.2 -0.1
R15A Junction 93.40 50 ⇑P P 12 12 29.4 +0.6
baz=93
DAU Daniels Canyon 93.45 48 *e*P P 12 12 29.5 +0.6
S15A Panguitch 93.51 50 ⇓P P 12 12 29.6 +0.3
baz=94
M17A Scullys Gap (B 93.52 46 ⇓P P 12 12 29.5 +0.2
baz=94
Y13A Salome 93.54 54 ⇓P P 12 12 29.8 +0.3
baz=94,SNR=7.5
V14A Boquillas Ranc 93.57 53 ⇑P P 12 12 30.2 +0.5
baz=94,SNR=15
N17A Moffit Pass 93.58 47 ⇓P P 12 12 29.8 +0.2
baz=94
FFC Flin Flon 93.66 32 *e*P P 12 12 29.2 -0.4
comp=Z,15nm,0.9s,mb5.4
FFC *e*pP pP 12 12 37.6 -1.5
W14A Seligman 93.71 53 ⇑P P 12 12 30.9 +0.7
baz=94,SNR=7.3
BW06 Boulder Array 93.85 45 *e*P P 12 12 31.1 +0.3
BW06 Boulder Array 93.85 45 ⇓P P 12 12 30.4 -0.4
baz=94
PDAR Pinedale Array 93.85 45 P P 12 12 30.5 -0.3
comp=Z,1.8nm,0.7s,mb4.6,baz=236,slow=2.3,SNR=24
PDAR PP PP 12 16 13.8 -2.5
comp=Z,0.8nm,0.9s,baz=278,slow=6.2,SNR=3.5
PDAR LR LR 12 47 30.3
comp=Z,625nm,21.0s,MS5.0,baz=294,slow=31
O17A Robinson Place 93.89 48 ⇓P P 12 12 30.8 -0.2
baz=94
113A Mohawk Valley, 93.90 55 ⇓P P 12 12 31.5 +0.3
baz=94,SNR=14
U15A North Rim 93.95 52 ⇓P P 12 12 31.4 0.0
baz=94
M18A Lyman 93.96 46 ⇓P P 12 12 30.9 -0.4
baz=94
Q16A Castle Valley 94.00 49 ⇓P P 12 12 31.5 -0.1
baz=94
S16A Weppner Ranch, 94.07 50 ⇑P P 12 12 31.9 0.0
baz=94
X14A Yava 94.09 54 ⇓P P 12 12 32.3 +0.3
baz=94,SNR=14
Y14A Wickenburg 94.16 54 ⇓P P 12 12 32.4 0.0
baz=94,SNR=18
L19A Farson 94.22 45 ⇓P P 12 12 32.6 +0.1
baz=94,SNR=6.9
V15A Kaibab Nationa 94.23 52 ⇓P P 12 12 32.7 0.0
baz=94,SNR=7.4

W15A Williams 94.36 53 ⇑P P 12 12 33.5 +0.3
baz=94
Z14A Wintersburg 94.38 55 ⇑P P 12 12 34.0 +0.6
baz=94
N18A Larsen Ranch, 94.39 47 ⇑P P 12 12 33.4 +0.1
baz=94
SRU San Rafael 94.41 49 *e*P P 12 12 33.2 -0.2
comp=Z,3.7nm,0.9s,mb4.8
SRU San Rafael 94.41 49 *e*P P 12 12 33.2 -0.2
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
SRU San Rafael 94.41 49 ⇓P P 12 12 33.5 0.0
baz=94
R17A Hanksville Air 94.50 49 ⇓P P 12 12 33.4 -0.5
baz=94,SNR=7.6
X15A Humboldt 94.59 53 ⇓P P 12 12 34.2 -0.1
baz=95,SNR=15
LAO LASA Array 94.61 40 *e*P P 12 12 34.2 0.0
comp=Z,62nm,1.0s,mb6.0
LAO *e*pP pP 12 12 43.5 -0.2
Y15A Casa Rosa Ranc 94.68 54 ⇓P P 12 12 34.7 -0.1
baz=95,SNR=13
S17A Black Ridge (B 94.69 50 ⇑P P 12 12 34.6 -0.1
baz=95
Q18A Rafter H Ranch 94.70 49 ⇑P P 12 12 34.9 +0.2
baz=95
T17A Navajo Res., N 94.90 51 ⇓P P 12 12 36.1 +0.4
baz=95
214A Organ Pipe Nat 94.91 56 ⇑P P 12 12 36.3 +0.5
baz=95,SNR=12
U16A Tuba City 94.93 52 ⇑P P 12 12 35.6 -0.3
baz=95
WUAZ Wupatki 94.94 52 *e*P P 12 12 36.9 +0.9
comp=Z,7.1nm,0.9s,mb5.1
WUAZ Wupatki 94.94 52 ⇓P P 12 12 36.3 +0.4
baz=95
L20A Wamsutter 94.97 45 ⇑P P 12 12 36.2 +0.3
baz=95
R18A Canyonlands Na 95.12 49 ⇓P P 12 12 36.6 -0.1
baz=95
U17A Shonto 95.14 51 ⇓P P 12 12 37.1 +0.2
baz=95
DGMT Dagmar 95.14 38 *e*P P 12 12 37.0 +0.4
115A Sonoran Desert 95.15 55 ⇑P P 12 12 37.4 +0.5
baz=95
X16A Lo Mia Camp, P 95.24 53 ⇓P P 12 12 37.9 +0.6
baz=95
S18A Hurst Farm, Bl 95.28 50 ⇓P P 12 12 36.8 -0.6
baz=95
AKASG Malin Array Be 95.35 324 P P 12 12 35.8 -1.7
comp=Z,0.5nm,0.3s,mb4.4,baz=56,slow=4.5,SNR=6.7
AKASG LR LR 13 02 06.0
comp=Z,742nm,19.1s,MS5.2,baz=65,slow=40
P19A Cripple Cowboy 95.36 48 ⇓P P 12 12 37.4 -0.4
baz=95
Y16A Circle Bar Ran 95.38 54 ⇓P P 12 12 38.2 +0.2
baz=95,SNR=24
Q19A Hogan Spring (95.39 48 ⇑P P 12 12 37.8 -0.1
baz=95
T18A Mexican Hat 95.56 50 ⇓P P 12 12 38.7 0.0
baz=96
116A Eloy 95.62 55 ⇑P P 12 12 39.8 +0.7
baz=96
L21A Rawlins 95.66 45 ⇑P P 12 12 39.1 0.0
baz=96
X17A Forest Lakes 95.77 53 ⇓P P 12 12 39.9 +0.2
baz=96,SNR=11
U18A Rough Rock, Ch 95.80 51 ⇑P P 12 12 39.2 -0.7
baz=96
Y17A Roosevelt 95.94 54 ⇓P P 12 12 40.5 -0.1
baz=96,SNR=7.8
V18A Ganado 95.99 52 ⇓P P 12 12 40.8 +0.1
baz=96
216A Three Points, 95.99 56 ⇓P P 12 12 41.1 +0.3
baz=96
PV01 Paradox Valley 96.18 49 *e*P P 12 12 41.4 -0.1
T19A Beclabito 96.30 50 ⇓P P 12 12 42.3 +0.2
baz=96
Z17A San Carlos Hig 96.36 54 ⇓P P 12 12 42.6 +0.2
baz=96
X18A Snowflake 96.37 53 ⇑P P 12 12 42.3 -0.2
baz=96
117A Oracle 96.39 55 ⇑P P 12 12 43.1 +0.5
baz=96,SNR=6.4
TUC Tucson 96.43 55 *e*P P 12 12 43.7 +0.9
comp=Z,5.1nm,1.1s,mb4.9
TUC *e*pP pP 12 12 52.8 +0.4
TUC Tucson 96.43 55 *e*P P 12 12 43.7 +0.9
TUC *e**PP pP 12 12 52.8 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
Y18A Canyon Day Jun 96.55 54 ⇑P P 12 12 43.7 +0.4
baz=97,SNR=10.0
MVCO Mesa Verde 96.56 50 ⇓P P 12 12 43.5 +0.2
baz=97
217A Green Valley 96.58 56 ⇓P P 12 12 43.7 +0.3
baz=97
X19A St. Johns 96.92 53 ⇓P P 12 12 45.5 +0.5
baz=97
SMCO Snowmass 96.97 48 *e*P P 12 12 45.1 0.0
comp=Z,3.2nm,0.8s,mb4.8
118A Homack Ranch, 96.98 55 ⇓P P 12 12 45.6 +0.4
baz=97
BRTR Keskin Array B 97.03 313 P P 12 12 43.5 -1.9
comp=Z,1.2nm,0.6s,mb4.5,baz=72,slow=4.0,SNR=4.9
BRTR Keskin Array B 97.03 313 P P 12 12 43.5 -1.8
BRTR pmax pmax
comp=Z,1.0nm,0.6s
RSSD Black Hills 97.06 42 *e*P P 12 12 45.7 +0.4
comp=Z,3.6nm,0.8s,mb4.8
RSSD *e*pP pP 12 12 54.9 0.0
RSSD Black Hills 97.06 42 *e*P P 12 12 45.7 +0.3
RSSD *e**PP pP 12 12 54.9 0.0
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
Y19A Nutrioso 97.10 53 ⇓P P 12 12 46.2 +0.4
baz=97
218A Dragoon 97.14 55 ⇓P P 12 12 46.2 +0.2
baz=97
318A Bisbee 97.35 56 ⇓P P 12 12 47.3 +0.4
baz=97
119A Ashpeak Ranch, 97.47 54 ⇑P P 12 12 48.1 +0.6
baz=98
MAW Mawson 97.67 202 LR LR 12 56 07.6
comp=Z,241nm,19.9s,MS4.7,baz=75,slow=35
219A White Tail Can 97.76 55 ⇑P P 12 12 49.3 +0.5
baz=98
NB2 NORSAR Subarra 97.83 339 P P 12 12 46.2 -2.3
comp=Z,5.0nm,0.7s,mb5.2,baz=47,slow=5.1
NOA NORSAR Array B 97.83 339 P P 12 12 46.5 -2.0
comp=Z,2.3nm,0.9s,mb4.7,baz=48,slow=5.4,SNR=5.7
NOA pP pP 12 12 55.0 -3.0
comp=Z,3.7nm,0.6s,baz=48,slow=4.7,SNR=7.4
NOA NORSAR Array B 97.83 339 P P 12 12 46.5 -2.0
NOA pP pP 12 12 55.0 -3.0
NOA NORSAR Array B 97.83 339 P P 12 12 46.5 -2.0
NOA *PP pP 12 12 55.1 -2.9
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA pmax pmax
comp=Z,4.0nm,0.6s
319A Douglas 97.95 56 ⇓P P 12 12 50.2 +0.6
baz=98
LVV L'view 98.70 325 *e*P P 12 12 52.6 0.0
ANMO Albuquerque 98.91 51 *e*P P 12 12 52.3 -1.6
ULM Lac du Bonnet 99.10 34 P P 12 12 52.7 -1.7
comp=Z,3.2nm,0.6s,mb5.1,baz=332,slow=4.6,SNR=3.5
ULM LR LR 12 56 24.2
comp=Z,458nm,19.1s,MS5.0,baz=60,slow=35
KSP Ksiaz 102.25 329 *e*Pdif Pdif 12 13 07.7 -0.6
TXAR Lajitas Array 103.21 56 Pdiff Pdif 12 13 13.4 +0.9
comp=Z,0.5nm,0.8s,baz=270,slow=4.4,SNR=5.7
TXAR PP PP 12 17 27.6 -0.6
comp=Z,0.2nm,0.9s,baz=278,slow=6.3,SNR=2.3
TXAR Lajitas Array 103.21 56 P Pdif 12 13 13.5 +1.0
TXAR 12 17 27.6
TXAR pmax pmax
comp=Z,1.0nm,0.8s
QUA2 Belchertown 116.54 29 *e*PKPdf PKPdf 12 17 56.7 -0.7
SNAA Sanae 117.20 191 *e*PKPdf PKPdf 12 17 57.0 -0.7
SNAA *e* 12 18 04.6
SNAA *e* 12 18 06.8
VNA2 Neumayer--Watz 118.66 190 *e*PKPdf PKPdf 12 18 00.7 +0.1
baz=342,slow=0.4
VNA2 *e* 12 18 08.9
VNA2 *e* 12 18 12.7
VNA2 *e* 12 28 16.0
VNA2 *e* 12 28 19.4
VNA2 *e* 12 28 22.7
VNA3 Neumayer Olymp 118.78 190 *e*PKPdf PKPdf 12 18 00.3 -0.5
VNA3 *e* 12 18 08.7
VNA3 *e* 12 18 12.1
VNA3 *e* 12 28 15.6
VNA3 *e* 12 28 18.2
VNA3 *e* 12 28 22.5
VNA1 Neumayer--Stat 119.05 190 *e*PKPdf PKPdf 12 18 01.2 -0.1
VNA1 *e* 12 18 10.4
VNA1 *e* 12 18 13.4
VNA1 *e* 12 28 15.6
VNA1 *e* 12 28 18.6
BOSA Boshof 120.48 244 PKP PKPdf 12 18 05.2 -0.1
comp=Z,3.4nm,0.8s,baz=58,slow=3.8,SNR=3.6
BOSA Boshof 120.48 244 PKIKP PKPdf 12 18 05.2 -0.1
BOSA pmax pmax
comp=Z,3.0nm,0.9s
TAM Tamanrasset 126.10 310 *e*PKPdf PKPdf 12 18 16.7 +0.3
TORD Torodi Ar. Bea 134.51 302 PKhKP 12 18 24.4
comp=Z,0.7nm,0.7s,baz=12,slow=2.2,SNR=5.2
TORD PKP PKPdf 12 18 32.2 -0.2
comp=Z,2.9nm,0.7s,baz=30,slow=2.8,SNR=15
TORD pPKP pPKPdf 12 18 41.5 -0.7
comp=Z,2.5nm,0.6s,baz=34,slow=2.8,SNR=7.1
TORD PP PP 12 20 59.5 -5.2
comp=Z,1.8nm,0.9s,baz=63,slow=5.8,SNR=5.0
TORD SKPbc SKPbc 12 22 00.1 -0.3
comp=Z,0.8nm,0.8s,baz=54,slow=1.9,SNR=2.7
TORD Torodi Ar. Bea 134.51 302 PKP 12 18 24.4
TORD PKP PKPdf 12 18 32.2 -0.2
TORD pPKP pPKPdf 12 18 41.5 -0.7
TORD PP PP 12 20 59.5 -5.2
TORD SKPbc SKPbc 12 22 00.1 -0.3
PLCA Paso Flores 138.79 140 PKP PKPdf 12 18 40.1 +0.5
comp=Z,2.4nm,0.8s,baz=300,slow=5.6,SNR=5.7
PLCA pPKP pPKPdf 12 18 49.3 -0.1
comp=Z,3.7nm,0.6s,baz=200,slow=4.7,SNR=7.0
PLCA Paso Flores 138.79 140 PKIKP PKPdf 12 18 40.1 +0.5
PLCA 12 18 49.3
PLCA pmax pmax
comp=Z,2.0nm,0.8s
PLCA pmax pmax
comp=Z,4.0nm,0.6s
DBIC Dimbokro 143.37 299 PKhKP 12 18 45.3
comp=Z,7.9nm,0.6s,baz=38,slow=4.7,SNR=23
KIC Kosan Boka 143.43 299 *e*PKP1 PKPdf 12 18 45.3 -3.5
comp=Z,237nm,1.4s
TIC Toumodi 143.52 299 *e*PKP1 PKPdf 12 18 45.3 -3.6
comp=Z,61nm,0.7s
LIC Lamto 143.74 299 *e*PKP1 PKPdf 12 18 46.2 -3.1
comp=Z,101nm,0.6s
LCO Las Campanas 144.06 123 *e*PKPdf PKPdf 12 18 48.5 -1.0
LVC Limon Verde 147.46 113 *e*PKPbc PKPbc 12 18 59.4 +1.5
LPAZ La Paz 149.09 101 PKPbc PKPbc 12 19 02.2 -0.1
comp=Z,8.4nm,0.7s,baz=306,slow=2.9,SNR=14
LPAZ La Paz 149.09 101 PKP2 PKPbc 12 19 02.2 -0.1
LPAZ pmax pmax
comp=Z,8.0nm,0.7s

ISCJB ***08*** *12:16:22.4*±*0.8, 2984N*±*003*×*3621E*±*004, h0km, Error ellipse: s-maj=5.8km s-min=4.0km az=157.2*
SGS ***08*** *12:16:22.9, 30.13N*×*36.13E, h18km*
GII ***08*** *12:16:22.5*±*0.7, 2986N*×*36.13E, h0km, ML1.9/3, EXPLOSION*
CSEM ***08*** *12:16:23.0, 30.13N*×*36.13E, h18km, ML2.9, After SNSN*

ISC 08 12:16:22.6±0.8**, 2984N**±003×**3625E**±005**, h0km, n16, σ0°88/26, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.05**	**264**	**Pg**	**Pg**	**12 16 41.8**	**-0.8**
HRFI	**Mount Harif**	**1.07**	**281**	**Pg**	**Pg**	**12 16 42.4**	**-0.7**
HRFI				Sg	Sg	12 16 57.5	+0.5
EIL	**Elat**	**1.14**	**262**	**Pg**	**Pg**	**12 16 44.1**	**-0.3**
EIL				Sg	Sg	12 17 00.3	+1.1
MBRI	**Mt Berech**	**1.16**	**268**	**Pg**	**Pg**	**12 16 44.2**	**-0.6**
MBRI				Sg	Sg	12 17 00.7	+0.8
HQLS		**1.16**	**243**	**P**	**Pg**	**12 16 43.8**	**-1.0**
HQLS		**1.16**	**243**	**P**	**Pg**	**12 16 43.8**	**-1.1**
HQLS				S	Sg	12 16 59.0	-1.0
ZFRI	**Zfri**	**1.17**	**308**	**Pg**	**Pg**	**12 16 44.2**	**-0.8**
ZFRI				Sg	Sg	12 17 00.6	+0.4
PRNI	**Paran**	**1.19**	**296**	**Pg**	**Pg**	**12 16 44.4**	**-1.1**
PRNI				Sg	Sg	12 17 01.7	+0.8
JLOS		**1.28**	**211**	**P**	**Pg**	**12 16 46.9**	**-0.3**
JLOS		**1.28**	**211**	**P**	**Pg**	**12 16 46.9**	**-0.3**
JLOS				S	Sg	12 17 05.4	+1.6
KRMI	**Paran Flat**	**1.35**	**282**	**Pg**	**Pg**	**12 16 47.2**	**-1.3**
KRMI				Sg	Sg	12 17 06.2	+0.2
TBKS	**Tabuk**	**1.63**	**171**	**S**	**Sn**	**12 17 15.9**	**+1.6**
TBKS	**Tabuk**	**1.63**	**171**	**P**	**Pn**	**12 16 52.3**	**-0.2**
MZDA	**Masada**	**1.65**	**333**	**Pn**	**Pn**	**12 16 52.7**	**-0.2**
MZDA				Sn	Sn	12 17 15.3	+0.5
BDAS	**Al Bad'**	**1.72**	**216**	**P**	**Pn**	**12 16 53.0**	**-0.8**
DSI	**Dead Sea**	**1.88**	**337**	**Pn**	**Pn**	**12 16 56.5**	**+0.5**
DSI				Sn	Sn	12 17 22.0	+1.5

CSEM ***08*** *12:18:49.9*±*0.1, 4041N*×*2181E, h15km, ML2.6/3, Error ellipse: s-maj=3.9km s-min=2.5km az=59.0*
SKO ***08*** *12:18:50.2, 4030N*×*2174E, h16km*
ISCJB ***08*** *12:18:51.4*±*0.7, 4037N*±*003*×*2181E*±*005, h23km*±*17km, Error ellipse: s-maj=6.7km s-min=4.7km az=142.3*
THE ***08*** *12:18:51.3, 4040N*×*2187E, h2km*±*32km, ML2.6/3, Error ellipse: s-maj=32.1km s-min=0.7km az=0.0*

ISC 08 12:18:51.3±0.6**, 4038N**±003×**2181E**±005**, h22**km±12km**, n26, σ1°21/44, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.53**	**321**	**P**	**Pb**	**12 19 01.0**	**-0.9**
FNA				S	Sb	12 19 09.4	+0.3
LIT	**Litokhoron**	**0.59**	**118**	**P**	**Pb**	**12 19 01.9**	**-1.0**
LIT				S	Sb	12 19 09.7	-1.1
GRG	**Griva**	**0.73**	**37**	**P**	**Pb**	**12 19 03.7**	**-1.7**
GRG				S	Sb	12 19 14.9	-0.1
MEV	**Metsovon**	**0.74**	**217**	**P**	**Pb**	**12 19 06.0**	**+0.5**
BIA	**Bitola**	**0.74**	**330**	*e*Pg	**Pb**	**12 19 04.1**	**-1.5**
BIA				*e*Sg	Sb	12 19 16.6	+1.3
THL	**Klokotos Trika**	**0.82**	**169**	**P**	**Pb**	**12 19 07.0**	**0.0**
THL				S	Sb	12 19 19.8	+2.2
HORT	**Hortiatis**	**1.01**	**77**	**P**	**Pb**	**12 19 09.5**	**-0.6**
HORT				S	Sb	12 19 24.3	+1.4
OHR	**Ohrid**	**1.06**	**314**	*e*Pg	**Pb**	**12 19 09.3**	**-1.8**
KRUS	**Krusevo**	**1.08**	**337**	*e*Pg	**Pn**	**12 19 10.6**	**-0.5**
KRUS				*e*Sg	Sb	12 19 26.7	+1.7
VAY	**Valandovo**	**1.11**	**31**	*e*Pg	**Pn**	**12 19 11.6**	**+0.1**
VAY	**Valandovo**	**1.11**	**31**	*e*Pg	**Pn**	**12 19 11.7**	**+0.2**
VAY				*e*Sg	Sb	12 19 28.6	+2.9
SOH	**Sokhos**	**1.26**	**69**	**P**	**Pn**	**12 19 14.1**	**+0.6**

IDC ***08*** *12:27:55.2*±*0.7, 1215N*×*14351E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/21, mbtmp4.0/9, Error ellipse: s-maj=27.9km s-min=16.6km az=94.0*
ISCJB ***08*** *12:27:57.0*±*5.9, 122N*±*0.1*×*1436E*±*0.1, h24km*±*42km, mb4.0/9, Error ellipse: s-maj=27.3km s-min=12.0km az=29.2*

ISC 08 12:27:58.5±6.2**, 1216N**±010×**1436E**±01**, h22**km±45km**, n16, σ0°85/12, mb4.0/9, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.86**	**40**	**Pn**	**Pn**	**12 28 29.6**	**+0.5**
	120nm,0.3s,baz=200,slow=2.4,SNR=61						
GUMO				Sn	Sn	12 28 51.1	-0.8
	78nm,0.3s,baz=177,slow=22,SNR=6.1						
WRA	**Warramunga Arr**	**33.19**	**196**	P	**P**	**12 34 33.5**	**-0.3**
	1.7nm,0.6s,mb4.1,baz=20,slow=9.7,SNR=30						
ASAR	**Alice Springs**	**36.86**	**195**	P	**P**	**12 35 05.6**	**+0.2**
	0.6nm,0.6s,mb3.6,baz=18,slow=11,SNR=11						
STKA	**Stephens Creek**	**43.83**	**183**	P	**P**	**12 36 02.1**	**-0.9**
	1.4nm,0.8s,mb3.7,baz=23,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**61.69**	**317**	P	**P**	**12 38 15.2**	**+0.3**
	0.4nm,0.6s,mb3.7,baz=79,slow=7.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**62.09**	**325**	P	**P**	**12 38 15.4**	**-2.1**
	0.4nm,0.5s,mb3.8,baz=93,slow=6.1,SNR=4.1						
KURK	**Kurchatov**	**64.90**	**320**	P	**P**	**12 38 36.8**	**+0.6**
	baz=106,slow=6.9						

BVAR	**Borovoye Array**	**70.30**	**322**	P		**P**		**12 39 10.7**	**+0.5**
	1.2nm,0.5s,mb4.1,baz=110,slow=7.5,SNR=8.6								
YKA	**Yellowknife Ar**	**84.67**	**27**	P		**P**		**12 40 31.0**	**+0.6**
	1.2nm,0.7s,mb4.2,baz=301,slow=5.7,SNR=3.5								
ARCES	**ARCESS Array B**	**88.06**	**342**	P		**P**		**12 40 46.6**	**-0.3**
	9.2nm,1.2s,mb4.9,baz=57,slow=8.8,SNR=5.6								
NVAR	**Mina Array Bea**	**88.75**	**51**	P		**P**		**12 40 52.2**	**+1.4**
	0.8nm,0.6s,mb4.2,baz=270,slow=4.7,SNR=9.9								
DBIC	**Dimbokro**	**143.51**	**299**	PKP		PKPdf		12 47 32.2	-0.4
	1.0nm,0.5s,baz=342,slow=5.4,SNR=2.9								
KIC	**Kosan Boka**	**143.57**	**299**	*e*PKP1		PKPdf		12 47 30.4	-2.3
	50nm,1.4s								
TIC	**Toumodi**	**143.66**	**299**	*e*PKP1		PKPdf		12 47 30.3	-2.6
	17nm,0.2s								
LIC	**Lamto**	**143.88**	**299**	*e*PKP1		PKPdf		12 47 31.3	-2.0
	15nm,0.5s								
LPAZ	**La Paz**	**148.96**	**101**	PKPbc		PKPbc		12 47 47.0	+1.3
	0.9nm,0.7s,baz=213,slow=4.8,SNR=4.0								

MAN 08 12:37:03,963N×12453E,h32km,mb4.3,ML3.1,MS2.9, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MSLP	**Maasin**	**0.59**	**33**	*e*P		Pb	12 37 15.1	0.0
MSLP				*e*S		Sb	12 37 25.0	+1.7
TBP	**Tagbilaran**	**0.66**	**275**	*e*P		Pn	12 37 17.6	+1.5
TBP				*e*S		Sb	12 37 26.5	+1.4
LLP	**Lapu-Lapu**	**0.88**	**321**	*i*P		Pn	12 37 20.0	+0.9
LLP				*i* S		Sn	12 37 31.7	+0.9
SCPH	**Surigao**	**0.96**	**81**	*e*P		Pn	12 37 21.0	+0.7
SNPH	**Sibulan**	**1.31**	**257**	*e*P		Pn	12 37 29.0	+4.0
OCLP	**Ormoc**	**1.41**	**3**	*e*P		Pn	12 37 28.5	+2.0
BUKP	**Musuan**	**1.82**	**163**	*e*P		Pn	12 37 33.1	+1.0
BUKP				*e*S		Sn	12 37 59.7	+5.6

*ISCJB **08** 12:39:43.1±6.9, 188N±0.1×147.4E±0.8, h47km±44km, mb3.7/7, Error ellipse: s-maj=128.1km s-min=15.3km az=171.5*
*IDC **08** 12:39:48.8±7.3, 1869N×14687E, h64km±49km, mb3.5/7, mb1 3.6/9, mb1mx3.5/22, mbtmp3.5/9, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.1/23, Error ellipse: s-maj=121.0km s-min=14.7km az=79.0*

ISC 08 12:39:44.3±5.7, 188N±01×1475E±0.8, h41km±34km, n10, σ0s37/10, mb3.7/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.76**	**206**	P		**Pn**	**12 41 07.3**	**0.0**
	2.6nm,0.3s,baz=203,slow=22,SNR=4.0							
MJAR	**Matsushiro Arr**	**19.48**	**337**	P		**Pn**	**12 44 09.3**	**+0.1**
	0.2nm,0.3s,baz=232,slow=13,SNR=4.8							
MJAR				LR		LR	12 50 41.5	
	comp=Z,98nm,18.9s,baz=125,slow=34							
KSRS	**Korea Array**	**25.28**	**321**	P		**P**	**12 45 06.7**	**-0.1**
	1.9nm,0.5s,mb3.9,baz=150,slow=9.0,SNR=12							
WRA	**Warramunga Arr**	**40.60**	**199**	P		**P**	**12 47 20.4**	**+0.2**
	1.0nm,0.7s,mb3.5,baz=21,slow=8.9,SNR=7.7							
WRA				PcP		PcP	12 49 22.6	+0.8
	0.4nm,0.6s,baz=13,slow=3.4,SNR=3.3							
SONM	**Songino Array**	**44.15**	**321**	P		**P**	**12 47 48.3**	**-0.5**
	0.4nm,0.3s,mb3.6,baz=108,slow=7.9,SNR=3.4							
SONM				PcP		PcP	12 49 34.6	+1.4
	0.6nm,0.6s,baz=82,slow=5.1,SNR=2.8							
ASAR	**Alice Springs**	**44.24**	**198**	P		**P**	**12 47 49.9**	**+0.1**
	0.4nm,0.7s,mb3.2,baz=16,slow=11,SNR=11							
ASAR				PcP		PcP	12 49 34.9	+1.0
	0.4nm,0.7s,baz=26,slow=2.4,SNR=5.3							
STKA	**Stephens Creek**	**50.70**	**186**	P		**P**	**12 48 39.4**	**-0.4**
	0.7nm,0.6s,mb3.8,baz=0.0,slow=2.0,SNR=3.1							
ZALV	**Zalesovo Beam**	**58.98**	**322**	P		**P**	**12 49 40.4**	**+0.8**
	0.8nm,0.6s,mb3.9,baz=107,slow=7.9,SNR=3.9							
ZALV				PcP		PcP	12 50 28.3	0.0
	0.4nm,0.5s,baz=119,slow=5.1,SNR=2.2							
KURK	**Kurchatov**	**62.34**	**318**	P		**P**	**12 50 02.1**	**-0.4**
	baz=92,slow=7.5							
BVAR	**Borovoye Array**	**67.49**	**320**	P		**P**	**12 50 36.0**	**+0.1**
	1.2nm,0.6s,mb4.1,baz=99,slow=7.7,SNR=7.5							

*KRSC **08** 12:46:12.5±1.2, 5006N×15798E, h5km±5km, ML4.2*
*ISCJB **08** 12:46:13.0±2.0, 4996N±005×1577E±0.1, h23km±16km, mb3.5/5, Error ellipse: s-maj=14.6km s-min=6.6km az=16.7*
*MOS **08** 12:46:17.8±1.7, 5131N×15573E, h10km, mb4.3/1, Error ellipse: s-maj=28.4km s-min=11.6km az=62.6*
*IDC **08** 12:46:20.7±3.5, 5019N×157.14E, h75km±32km, mb3.2/5, mb1 3.6/7, mb1mx3.3/23, mbtmp3.3/7, Error ellipse: s-maj=36.1km s-min=18.5km az=138.0*

ISC 08 12:46:14.4±2.0, 4999N±005×1578E±01, h17km±14km, n19, σ0s99/31, mb3.5/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.26**	**304**	*i* PN		**Pn**	**12 46 32.5**	**-4.8**
SKR				*e*			12 46 41.6	
SKR				pmax		pmax		
	comp=Z,690nm,0.3s							
SKR				pmax		pmax		
	comp=N,160nm,0.4s							
SKR				pmax		pmax		
	comp=E,410nm,0.3s							
SKR				smax				
	comp=N,4μm,0.3s							
SKR				smax				
	comp=E,3μm,0.3s							
SKR				smax				
	comp=N,4μm,1.0s							
SKR				smax				
	comp=E,3μm,1.0s							
MIPR	**Malaya Ipel'ka**	**2.38**	**345**	*e*P		**Pn**	**12 46 52.0**	**-0.6**
MIPR				*e*S		**Sn**	**12 47 20.7**	**-0.6**
RUS	**Russkaya**	**2.49**	**11**	*e*P		**Pn**	**12 46 53.5**	**-0.7**
RUS				*e*S		**Sn**	**12 47 23.7**	**-0.5**
GRL	**Gorelyy**	**2.58**	**4**	*e*P		**Pn**	**12 46 55.3**	**0.0**
GRL				*e*S		**Sn**	**12 47 26.4**	**+0.2**
PET	**Petropavlovsk**	**3.09**	**10**	*e*PN		**Pn**	**12 47 02.7**	**+0.3**
PET				*e*S		**Sn**	**12 47 38.7**	**-0.2**
PET				pmax		pmax		
	comp=Z,30nm,0.5s							
PET				smax				
	comp=E,131nm,0.5s							
PET				smax				
	comp=N,212nm,0.6s							
PET	**Petropavlovsk**	**3.09**	**10**	*e*P		**Pn**	**12 47 01.4**	**-1.0**
PET				*e*S		**Sn**	**12 47 37.6**	**-1.3**
PETK	**Petropavlovsk-**	**3.12**	**359**	P		**Pn**	**12 47 03.2**	**+0.4**
	comp=N,2.2nm,0.3s,baz=173,slow=14,SNR=15							
PETK				S		**Sn**	**12 47 40.8**	**+1.0**
	comp=N,1.4nm,0.3s,baz=150,slow=18,SNR=2.9							
AVH	**Avacha**	**3.34**	**10**	P		**Pn**	**12 47 05.7**	**-0.1**
AVH				*i* S		**Sn**	**12 47 45.0**	**0.0**
NLC	**Nalytchevo**	**3.34**	**17**	*e*P		**Pn**	**12 47 04.5**	**-1.3**
NLC				*e*S		**Sn**	**12 47 41.7**	**-3.3**
SPN	**Mys Shipunski**	**3.42**	**24**	*e*P		**Pn**	**12 47 07.1**	**+0.2**
SPN				*i* S		**Sn**	**12 47 46.3**	**-0.7**
GNL	**Ganaly**	**3.71**	**2**	P		**Pn**	**12 47 11.8**	**+0.8**
GNL				*i* S		**Sn**	**12 47 55.9**	**+1.6**
KII	**Karymskiy**	**4.19**	**14**	P		**Pn**	**12 47 18.7**	**+1.3**
KII				*i* S		**Sn**	**12 48 07.1**	**+1.2**
MKZ	**Mys Kozlova**	**5.18**	**27**	P		**Pn**	**12 47 30.0**	**-0.5**
MKZ				*i* S		**Sn**	**12 48 27.0**	**-3.5**
ASAJ	**Asahikawa**	**11.88**	**246**	P		**Pn**	**12 49 03.9**	**+0.9**
	comp=N,0.2nm,0.3s,baz=255,slow=34,SNR=2.7							
MKAR	**Makanchi Array**	**48.22**	**297**	P		**P**	**12 54 48.4**	**-5.4**
	comp=N,0.3nm,0.5s,mb3.6,baz=53,slow=7.1,SNR=4.7							
CMAR	**Chiang Mai Arr**	**56.11**	**258**	P		**P**	**12 55 51.3**	**-1.5**
	comp=N,0.4nm,0.3s,mb3.9,baz=35,slow=6.7,SNR=3.4							
NVAR	**Mina Array Bea**	**58.24**	**67**	P		**P**	**12 56 09.4**	**+1.7**
	comp=N,0.3nm,0.8s,mb3.4,baz=293,slow=4.7,SNR=2.7							
WRA	**Warramunga Arr**	**72.65**	**203**	P		**P**	**12 57 40.0**	**-0.9**
	comp=N,0.2nm,0.6s,mb3.2,baz=18,slow=6.4,SNR=3.4							
TXAR	**Lajitas Array**	**73.25**	**64**	P		**P**	**12 57 45.4**	**+0.8**
	comp=N,0.3nm,0.6s,mb3.4,baz=296,slow=5.1,SNR=6.1							

*IDC **08** 13:21:14.5±2.0, 1342S×16647E, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.1/19, mbtmp4.3/9, ML4.5/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=51.5km s-min=26.6km az=123.0*
*ISCJB **08** 13:21:16.0±3.4, 1334S±006×16628E±008, h18km±25km, mb4.4/11, MS3.6/5, Error ellipse: s-maj=13.8km s-min=9.1km az=151.6*
*NEIC **08** 13:21:17.8±3.1, 1344S×16643E, h22km±23km, mb4.7/5, Error ellipse: s-maj=17.2km s-min=9.4km az=150.0*

ISC 08 13:21:19.2±3.2, 1331S±006×16633E±007, h28km±24km, n28, σ1s05/26, mb4.4/11, MS3.6/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**7.35**	**301**	Pn		**Pn**	**13 23 06.0**	**+1.3**
	8.2nm,0.3s,baz=163,slow=1.4,SNR=16							
HNR				Sn		**Sn**	**13 24 26.5**	**-0.7**
	7.3nm,0.3s,baz=124,slow=21,SNR=3.1							
HNR				LR		LR	13 24 54.0	
	comp=Z,74nm,18.9s,baz=115,slow=29							
HNR	**Honiara**	**7.35**	**301**	Pn		**Pn**	**13 23 06.0**	**+1.4**
HNR				*e*Pn		**Pn**	**13 23 06.2**	**+1.5**
HNR				Sn		**Sn**	**13 24 26.5**	**-0.7**
HNR				LR		LR	13 24 54.0	
DZM	**Mont Dzumac**	**8.71**	**179**	*e*Pn		**Pn**	**13 23 25.4**	**+2.0**
DZM				*e*Sn		**Sn**	**13 25 00.2**	**-0.7**
FUNA	**Funafuti**	**13.50**	**71**	*e*Pn		**Pn**	**13 24 27.4**	**-1.6**
EIDS	**Eidsvold**	**18.71**	**228**	*e*P		**Pn**	**13 25 35.0**	**-1.1**
CTA	**Charters Tower**	**20.36**	**248**	P		**P**	**13 25 54.6**	**+0.9**
	4.6nm,0.8s,baz=83,slow=11,SNR=4.6							
CTA				LR		LR	13 32 41.5	
	comp=Z,343nm,21.5s,MS3.7,baz=50,slow=34							
CTAO	**Charters Tower**	**20.36**	**248**	P		**P**	**13 25 51.9**	**-1.9**
	20nm,1.3s							
AFI	**Afiamalu**	**21.29**	**94**	LR		LR	13 32 57.1	
	comp=Z,101nm,20.6s,MS3.2,baz=89,slow=33							
AFI	**Afiamalu**	**21.29**	**94**	P		**P**	**13 25 55.4**	**-8.5**
	129nm,1.3s,mb5.1							
STKA	**Stephens Creek**	**29.25**	**227**	*e*P		**P**	**13 27 20.1**	**+1.1**
	1.7nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**29.25**	**227**	P		**P**	**13 27 19.5**	**+0.5**
	2.5nm,0.7s,mb4.1,baz=24,slow=6.6,SNR=6.6							
STKA				LR		LR	13 39 00.4	
	comp=Z,163nm,18.9s,MS3.7,baz=26,slow=36							
WB2	**Warramunga Arr**	**31.30**	**254**	*e*P		**P**	**13 27 36.9**	**-0.4**
WRAB	**Tennant Creek**	**31.30**	**254**	*e*P		**P**	**13 27 35.7**	**-1.6**
	4.8nm,1.1s,mb4.2							
WRA	**Warramunga Arr**	**31.32**	**254**	P		**P**	**13 27 37.0**	**-0.4**
	1.3nm,0.6s,mb3.9,baz=86,slow=9.2,SNR=21							
WRA				LR		LR	13 39 37.0	
	comp=Z,194nm,19.5s,MS3.8,baz=80,slow=35							
ASAR	**Alice Springs**	**32.36**	**247**	P		**P**	**13 27 45.8**	**-0.7**
	6.7nm,0.7s,mb4.6,baz=73,slow=9.6,SNR=122							
PPT	**Papeete**	**42.65**	**102**	*e*LR		LR	13 41 16.5	
	144nm,25.8s,baz=269							
KAPI	**Kappang**	**46.65**	**276**	P		**P**	**13 29 46.2**	**+0.5**
	3.9nm,0.4s,mb4.7,baz=107,slow=11,SNR=3.6							
NWAO	**Narrogin (SRO)**	**48.71**	**238**	LR		LR	13 50 16.4	
	comp=Z,118nm,18.8s,MS3.9,baz=108,slow=36							
TAOE	**Nuku Hiva Isla**	**52.64**	**91**	*e*LQ			13 43 56.4	
	695nm,25.8s							
TAOE				*e*LR		LR	13 45 55.0	
	389nm,25.7s							
SBA	**Scott Base**	**64.55**	**180**	*e*P		**P**	**13 31 55.0**	**+1.7**
	16nm,1.4s,mb4.9							
PETK	**Petropavlovsk-**	**66.56**	**354**	P		**P**	**13 32 06.8**	**+0.3**
	1.8nm,0.9s,mb4.1,baz=131,slow=5.9,SNR=4.0							
CMAR	**Chiang Mai Arr**	**73.54**	**294**	P		**P**	**13 32 51.2**	**+1.1**
	0.9nm,0.6s,mb3.9,baz=127,slow=4.7,SNR=6.1							
BILL	**Bilibino**	**81.13**	**360**	P		**P**	**13 33 31.3**	**-0.2**
	13nm,1.3s,mb4.7							
MKAR	**Makanchi Array**	**95.55**	**317**	P		**P**	**13 34 42.7**	**+1.0**
	0.6nm,0.7s,mb4.1,baz=96,slow=6.7,SNR=2.6							
VNA3	**Neumayer Olymp**	**95.61**	**181**	*e*		**P**	**13 34 41.0**	**-0.7**
VNA3							13 34 54.8	
VNA2	**Neumayer--Watz**	**95.86**	**182**	*e*		**P**	**13 34 42.8**	**0.0**
	baz=186,slow=4.5							
VNA2				*e*			13 34 55.7	
TORD	**Torodi Ar. Bea**	**165.04**	**271**	PKP		PKPdf	13 41 21.0	-0.8
	0.6nm,0.8s,baz=118,slow=2.1,SNR=3.8							
TORD	**Torodi Ar. Bea**	**165.04**	**271**	PKP		PKPdf	13 41 21.0	-0.8

*CSEM **08** 13:30:53.8±0.1, 3698N×2808E, h10km, MD3.0, Error ellipse: s-maj=1.5km s-min=1.3km az=156.0*
*ATH **08** 13:30:53.1, 3698N×2815E, h25km, MD3.1/4*
*NEIC **08** 13:30:53.1, 3698N×2815E, h25km, MD3.1(ATH), After ATH.*
*ISK **08** 13:30:53.9, 3697N×2807E, h13km, MD3.0*
*DDA **08** 13:30:54.6, 3702N×2805E, h7km±6km, Md2.8*
*ISCJB **08** 13:30:54.1±0.5, 3695N±003×2806E±003, h13km±4km, Error ellipse: s-maj=5.4km s-min=4.5km az=163.1*

ISC 08 13:30:54.4±0.5, 3696N±003×2805E±003, h14km±4km, n22, σ0s83/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
YER	**Yerkesik**	**0.26**	**46**	PG		**Pg**	**13 30 59.5**	**-0.5**
YER				*e*SG		**Sg**	**13 31 03.4**	**-0.3**
MLSB	**Milas**	**0.40**	**327**	*e*PG		**Pg**	**13 31 02.4**	**-0.1**
MLSB				*e*SG		**Sg**	**13 31 08.6**	**+0.6**
DAT	**Datca**	**0.44**	**239**	*e*PG		**Pg**	**13 31 03.8**	**+0.5**
DAT				*e*SG		**Sg**	**13 31 10.4**	**+1.2**
TURN	**Turunc**	**0.45**	**100**	*i* P		**Pg**	**13 30 58.6**	**-4.8**
TURN				*i* S		**Sg**	**13 31 01.9**	**-7.5**
BDRM	**Kayabasi**	**0.50**	**283**	*i* P		**Pg**	**13 31 03.7**	**-0.6**
BDRM				*i* S		**Sg**	**13 31 12.1**	**+1.2**
DALT	**Dalyan (Mudla)**	**0.51**	**111**	*e*PG		**Pg**	**13 31 03.9**	**-0.5**
BODT	**Bodrum**	**0.60**	**280**	*e*PG		**Pg**	**13 31 06.1**	**-0.1**
AYDN	**Tasoluk**	**0.72**	**349**	*i* P		**Pg**	**13 31 07.9**	**-0.5**
AYDN				*i* S		**Sg**	**13 31 17.6**	**-0.2**
ARG	**Arkhangelos**	**0.74**	**175**	*e*PN		**Pn**	**13 31 08.2**	**-2.2**
NISR	**Nisiros**	**0.82**	**245**	*e*PN		**Pn**	**13 31 10.5**	**-0.9**
FETY	**Fethiye**	**0.89**	**111**	*e*PG		**Pg**	**13 31 11.2**	**-0.4**
GCAM	**G?zelcaml?**	**0.99**	**319**	*i* P		**Pb**	**13 31 12.1**	**-1.2**
SMG	**Samos**	**1.23**	**308**	*e*PN		**Pn**	**13 31 17.1**	**0.0**
GOLH	**Golhisar**	**1.24**	**76**	*i* P		**Pn**	**13 31 18.6**	**+1.4**
GOLH				*i* S		**Sb**	**13 31 35.2**	**+1.9**
ELL	**Elmali**	**1.50**	**97**	*e*PN		**Pn**	**13 31 21.0**	**+0.1**
IZM	**Izmir**	**1.57**	**337**	*e*PN		**Pn**	**13 31 22.3**	**+0.5**
KDAG	**Bornova**	**1.57**	**337**	*i* P		**Pn**	**13 31 20.6**	**-1.3**
KARP	**Karpathos**	**1.58**	**207**	*e*PN		**Pn**	**13 31 22.4**	**+0.5**
MANT	**Manisa**	**1.58**	**15**	*i* P		**Pn**	**13 31 22.5**	**+0.5**
MANT				*i* S		**Sn**	**13 31 42.3**	**+0.1**
KULA	**Kula-Manisa**	**1.63**	**17**	*e*PN		**Pn**	**13 31 22.6**	**0.0**
BLCB	**Balcova**	**1.64**	**331**	*e*PN		**Pn**	**13 31 22.6**	**-0.1**
KHL	**Karahalli**	**1.80**	**40**	*e*PN		**Pn**	**13 31 25.5**	**+0.6**

IDC 08 13:39:16.5±4.3, 5258S×14073E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.7/10, mbtmp3.6/3, Error ellipse: s-maj=202.5km s-min=44.7km az=99.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**20.70**	**2**	P		P	13 43 59.8	+1.8
	1.0nm,0.5s,baz=174,slow=9.2,SNR=3.9							
ASAR	**Alice Springs**	**29.33**	**347**	P		P	13 45 20.4	-0.4
	0.3nm,0.5s,baz=165,slow=10,SNR=11							
WRA	**Warramunga Arr**	**32.95**	**349**	P		P	13 45 52.0	-0.6
	0.9nm,0.8s,baz=170,slow=7.6,SNR=12							
ARCES	**ARCESS Array B**	**146.41**	**325**	PKPbc		PKPbc	13 58 57.3	-0.4
	2.2nm,0.8s,baz=92,slow=3.6,SNR=8.7							
GERES	**GERESS Array B**	**146.88**	**285**	PKPbc		PKPbc	13 58 59.0	-0.7
	0.2nm,0.2s,baz=81,slow=3.1,SNR=3.6							

*ISCJB **08** 13:44:31.5±0.5, 3787S±009×492E±0.1, h10km, mb4.0/12, Error ellipse: s-maj=14.0km s-min=12.2km az=166.5*
*IDC **08** 13:44:31.4±0.8, 3794S×4908E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.9/9, ML3.7/1, Error ellipse: s-maj=32.3km s-min=19.5km az=33.0*
*NEIC **08** 13:44:32.7±0.4, 3795S×4900E, h10km, mb4.3/5, Error ellipse: s-maj=12.9km s-min=10.6km az=50.0*

ISC 08 13:44:33.3±0.5, 3786S±008×491E±01, h10km, (h10km±5km:pP-P), n23, σ0s92/23, mb4.0/12, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OPO	**Ambohidratompo**	**19.29**	**354**	P		**Pn**	**13 49 00.1**	**+0.8**
	0.2nm,0.3s,baz=154,slow=6.5,SNR=4.0							
BOSA	**Boshof**	**21.94**	**288**	*e*P		**P**	**13 49 29.4**	**+2.5**
	3.5nm,0.8s,mb3.8							
LBTB	**Lobatse**	**23.73**	**296**	P		**P**	**13 49 44.9**	**-0.8**
	2.3nm,0.8s,mb3.7,baz=128,slow=5.3,SNR=2.8							
LBTB	**Lobatse**	**23.73**	**296**	P		**P**	**13 49 44.5**	**-1.1**
TSUM	**Tsumeb**	**33.14**	**295**	P		**P**	**13 51 08.5**	**-1.2**
	1.2nm,0.7s,mb3.9,baz=142,slow=11,SNR=4.2							
SNAA	**Sanae**	**42.77**	**202**	*e*		**P**	**13 52 30.4**	**0.0**
SNAA				*e*		pP	13 52 33.2	-0.3
SNAA				*e*			13 52 36.0	
SNAA	**Sanae**	**42.77**	**202**	*e*P		**P**	**13 52 29.3**	**-1.1**
VNA2	**Neumayer--Watz**	**43.88**	**203**	*e*		**P**	**13 52 40.6**	**+1.2**
	baz=56,slow=7.7							
VNA2				*e*		pP	13 52 43.8	+1.3
VNA2				*e*			13 52 46.9	
VNA3	**Neumayer Olymp**	**44.69**	**203**	*e*		**P**	**13 52 46.2**	**+0.4**
VNA3				*e*		pP	13 52 48.8	-0.2
VNA3				*e*			13 52 51.1	
QSPA	**South Pole Qui**	**52.34**	**180**	P		**P**	**13 53 44.5**	**-0.1**
	0.8nm,0.3s,mb4.1,baz=238,slow=7.8,SNR=5.0							
QSPA	**South Pole Qui**	**52.34**	**180**	P		**P**	**13 53 44.5**	**-0.1**
DBIC	**Dimbokro**	**66.93**	**299**	*e*P		**P**	**13 55 24.2**	**-1.9**
	1.4nm,0.8s,mb4.0							
TORD	**Torodi Ar. Bea**	**67.45**	**309**	P		**P**	**13 55 30.2**	**+0.9**
	0.8nm,1.0s,mb3.7,baz=145,slow=4.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**67.45**	**309**	P		**P**	**13 55 30.2**	**+0.9**
ASAR	**Alice Springs**	**71.94**	**106**	P		**P**	**13 55 56.8**	**-0.3**
	0.6nm,0.7s,mb3.6,baz=235,slow=5.7,SNR=9.1							
CMAR	**Chiang Mai Arr**	**73.00**	**49**	P		**P**	**13 56 03.2**	**0.0**
	1.3nm,0.9s,mb3.9,baz=225,slow=6.1,SNR=9.5							
STKA	**Stephens Creek**	**73.02**	**117**	P		**P**	**13 56 03.6**	**+0.3**
	2.0nm,1.0s,mb4.0,baz=302,slow=9.5,SNR=4.1							
STKA	**Stephens Creek**	**73.02**	**117**	P		**P**	**13 56 03.3**	**0.0**
	1.1nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**74.38**	**103**	P		**P**	**13 56 11.1**	**-0.4**
	0.9nm,0.7s,mb3.8,baz=231,slow=5.0,SNR=7.9							
LSA	**Lhasa**	**77.86**	**37**	P		**P**	**13 56 31.6**	**+0.7**
	3.3nm,0.7s,mb4.4							
EKS2	**Erkin-Say**	**83.22**	**18**	*e*P		**P**	**13 56 59.8**	**+0.4**
MK31	**Makanchi Array**	**89.36**	**22**	P		**P**	**13 57 29.0**	**-0.4**
KURK	**Kurchatov**	**91.94**	**18**	P		**P**	**13 57 40.7**	**-0.7**
	1.9nm,0.8s,mb4.5							

*ISCJB **08** 14:02:34.9±0.6, 3722N±008×2822E±006, h11km±8km, Error ellipse: s-maj=14.0km s-min=5.9km az=27.2*
*ISK **08** 14:02:34.5, 3726N×2824E, h7km, MD2.8*
*CSEM **08** 14:02:34.2±0.1, 3727N×2826E, h5km, MD2.8, Error ellipse: s-maj=2.3km s-min=1.9km az=25.0*

ISC 08 14:02:35.2±0.6, 3723N±007×2823E±006, h10km±9km, n12, σ0s48/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
YER	**Yerkesik**	**0.10**	**158**	*e*PG		**Pg**	**14 02 37.8**	**-0.1**
YER				*e*SG		**Sg**	**14 02 40.1**	**+0.3**
MLSB	**Milas**	**0.37**	**280**	*e*PG		**Pg**	**14 02 42.3**	**-0.2**
MLSB				*e*SG		**Sg**	**14 02 48.2**	**+0.8**
TURN	**Turunc**	**0.46**	**140**	*i* P		**Pg**	**14 02 43.7**	**-0.6**
AYDN	**Tasoluk**	**0.51**	**327**	*i* P		**Pg**	**14 02 45.1**	**-0.1**
DALT	**Dalyan (Mudla)**	**0.56**	**145**	*e*PG		**Pg**	**14 02 46.6**	**+0.4**
DAT	**Datca**	**0.73**	**227**	*e*PG		**Pg**	**14 02 48.7**	**-0.5**
BODT	**Bodrum**	**0.76**	**257**	*e*PG		**Pg**	**14 02 49.6**	**-0.2**
FETY	**Fethiye**	**0.90**	**131**	*e*PG		**Pg**	**14 02 52.1**	**-0.5**
GOLH	**Golhisar**	**1.06**	**89**	*i* P		**Pb**	**14 02 55.9**	**+0.3**
KULA	**Kula-Manisa**	**1.32**	**15**	*e*PN		**Pn**	**14 02 59.5**	**-0.2**
ELL	**Elmali**	**1.43**	**109**	*e*PN		**Pn**	**14 03 02.0**	**+1.0**
KHL	**Karahalli**	**1.49**	**43**	*e*PN		**Pn**	**14 03 01.6**	**-0.4**

IDC 08 14:10:31.5±6.2, 860S×15582E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, MS4.6/1, Ms1 4.6/1, ms1mx2.3/29, Error ellipse: s-maj=105.1km s-min=79.8km az=10.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.64**	**239**	P		P	14 15 44.6	-0.2
	1.0nm,0.7s,baz=64,slow=10.0,SNR=12							
ASAR	**Alice Springs**	**25.78**	**232**	P		P	14 16 05.0	+0.7
	1.5nm,0.8s,baz=64,slow=8.9,SNR=21							
STKA	**Stephens Creek**	**26.67**

comp=Z,9.7nm,0.5s,mb4.6,baz=347,slow=6.8,SNR=156
ASAR PcP PcP 14 25 13.5 +1.0
comp=Z,3.3nm,0.7s,baz=355,slow=2.1,SNR=11
CTAO Charters Tower 29.42 141 P P 14 22 06.5 -6.8
GYA Guiyang 30.72 322 P P 14 22 26.9 +2.1
GYA AP pP 14 22 40.8 +3.9
GYA XP sP 14 22 47.3 +5.0
GYA PP PP 14 23 30.7 -4.1
GYA PCP PcP 14 25 24.3 +2.4
GYA S **S 14 27 25.6 +0.9**
GYA XS sS 14 27 48.0 +3.0
GYA SCP ScP 14 29 01.2 +0.2
GYA PCS PcS 14 29 07.3 +1.4
GYA SCS ScS 14 32 56.0 -1.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,110nm,4.6s
GYA LR LR
comp=N,430nm,16.8s,MS4.2
GYA LR LR
comp=E,240nm,15.6s,MS4.2
GYA LR LR
comp=Z,420nm,16.5s,MS4.2
CMAR Chiang Mai Arr 31.69 302 P **P 14 22 32.9 -0.6**
comp=Z,3.3nm,0.9s,mb4.2,baz=118,slow=7.2,SNR=20
CMAR LR LR 14 36 28.5
comp=Z,99nm,20.4s,MS3.5,baz=119,slow=38
CMAR Chiang Mai Arr 31.69 302⇑ *eP* **P 14 22 32.9 -0.6**
CHTO Chiang Mai 31.85 302 *eP* **P 14 22 33.9 -0.9**
comp=Z,4.1nm,0.7s,mb4.4
CHTO Chiang Mai 31.85 302 *eP* **P 14 22 33.9 -0.9**
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
KMI Kunming 32.37 316 P **P 14 22 40.6 +1.3**
KMI AP pP 14 22 55.3 +3.9
KMI XP sP 14 23 00.9 +4.0
KMI PP PP 14 23 50.9 -2.3
KMI S **S 14 27 52.2 +1.6**
KMI XS sS 14 28 14.7 +3.8
KMI SS SS 14 29 49.5 -22
KMI AMB AMB
comp=Z,9.0nm,1.5s,mb4.4
KMI AMB AMB
comp=Z,55nm,6.1s
KMI LR LR
comp=N,157nm,24.9s,MS3.8
KMI LR LR
comp=E,189nm,24.9s,MS3.8
KMI LR LR
comp=Z,234nm,24.9s,MS3.8
KMI Kunming 32.37 316 P **P 14 22 40.6 +1.3**
KMI pP pP 14 22 55.3 +3.9
KMI sP sP 14 23 00.9 +4.0
KMI PP PP 14 23 50.9 -2.3
KMI PPP 14 24 07.6
KMI S **S 14 27 52.2 +1.6**
KMI sS sS 14 28 14.7 +3.8
KMI SS SS 14 29 49.5 -22
FORT Forrest 33.22 178 *eP* **P 14 22 46.7 0.0**
comp=Z,40nm,0.6s,mb5.5
FORT Forrest 33.22 178 *eP* **P 14 22 46.5 -0.2**
comp=Z,5.7nm,0.6s,mb4.7
KSRS Korea Array 34.68 1 P **P 14 22 59.8 +0.5**
comp=Z,7.9nm,0.6s,mb4.8,baz=177,slow=9.6,SNR=45
KSRS PcP PcP 14 25 34.5 +1.9
comp=Z,2.0nm,0.6s,baz=177,slow=2.1,SNR=8.1
KLBR Kellerberrin 35.14 194 *eP* **P 14 23 03.5 +0.2**
comp=Z,14nm,0.9s,mb4.9
MAJO Matsushiro 35.30 16 *eP* **P 14 23 02.6 -2.0**
comp=Z,7.1nm,0.6s,mb4.8
MAJO Matsushiro 35.30 16 *eP* **P 14 23 02.6 -2.0**
MAJO pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
MAT Matsushiro 35.30 16 P **P 14 23 03.4 -1.2**
MAT *eS* **S 14 28 33.0 -2.6**
MJAR Matsushiro Arr 35.30 16 P **P 14 23 03.1 -1.5**
comp=Z,3.8nm,0.6s,mb4.5,baz=180,slow=10,SNR=15
XAN Xi'an 35.54 334 P **P 14 23 05.5 -1.2**
XAN AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
XAN AMB AMB
comp=Z,104nm,6.3s
XAN LR LR
comp=Z,200nm,24.8s,MS3.8
CD2 Chengdu 35.71 324 *eP* **P 14 23 09.9 +1.7**
CD2 AP pP 14 23 23.4 +3.0
CD2 XP sP 14 23 28.9 +3.1
CD2 PP PP 14 24 32.4 +2.4
CD2 S **S 14 28 43.4 +1.4**
CD2 XS sS 14 29 04.9 +2.4
CD2 SS SS 14 31 06.1 -13
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,250nm,12.0s,MS4.3
CD2 LR LR
comp=E,160nm,10.8s,MS4.3
CD2 LR LR
comp=Z,170nm,9.6s
MUN Mundaring 35.91 196 *eP* **P 14 23 09.3 -0.5**
NWAO Narrogin (SRO) 36.55 194 P **P 14 23 15.6 +0.3**
comp=Z,8.6nm,0.7s,mb4.7,baz=28,slow=9.3,SNR=7.3
STKA Stephens Creek 36.99 159 *eP* **P 14 23 18.8 -0.3**
comp=Z,22nm,0.8s,mb5.0
STKA *e* 14 25 40.1
STKA Stephens Creek 36.99 159 P **P 14 23 19.2 +0.1**
comp=Z,29nm,0.8s,mb5.2,baz=331,slow=8.9,SNR=42
STKA PcP PcP 14 25 40.3 +0.8
comp=Z,6.4nm,0.7s,baz=330,slow=6.1,SNR=5.8
BJT Baijiatuan 38.51 347 *eP* **P 14 23 31.9 +0.1**
comp=Z,36nm,0.6s,mb5.3
BJT Baijiatuan 38.51 347 *eP* **P 14 23 31.9 +0.1**
BJT pmax pmax
comp=Z,36nm,0.6s
BJI Beijing 38.53 347 P **P 14 23 32.7 +0.7**
BJI S **S 14 29 26.9 +2.3**
BJI AMB AMB
comp=Z,50nm,0.8s,mb5.3
LZH Lanzhou 39.61 330 *eP* **P 14 23 41.5 +0.4**
LZH AP pP 14 23 55.2 +1.8
LZH XP sP 14 24 00.6 +1.8
LZH PP PP 14 25 17.4 +4.7
LZH *eS* **S 14 29 41.5 +0.5**
LZH XS sS 14 30 02.7 +1.1
LZH *eSS* SS 14 32 32.0 -5.4
LZH AMB AMB
comp=Z,27nm,1.5s,mb4.8
LZH AMB AMB
comp=Z,132nm,6.4s
LZH LR LR
comp=N,247nm,14.6s
LZH LR LR
comp=Z,475nm,16.0s,MS4.4
LZH Lanzhou 39.61 330 *eP* **P 14 23 41.5 +0.4**
LZH pP pP 14 23 55.2 +1.8
LZH sP sP 14 24 00.6 +1.8
LZH PP PP 14 25 17.4 +4.7
LZH *eS* **S 14 29 41.5 +0.5**
LZH sS sS 14 30 02.7 +1.1
LZH *eSS* SS 14 32 32.0 -5.4
LZH Lanzhou 39.61 330 *eP* **P 14 23 41.5 +0.4**
LZH *PP pP 14 23 55.2 +1.8
LZH 14 25 17.4
LZH *eS* **S 14 29 41.5 +0.5**
LZH *eSS* SS 14 32 32.0 -5.4
HHC Hu-ho-hao-te 40.54 342 *eP* **P 14 23 51.6 +2.9**
HHC AP pP 14 24 05.5 +4.4
HHC XP sP 14 24 11.4 +5.0
HHC PP PP 14 25 29.9 +7.1
HHC PCP PcP 14 25 52.5 +2.0
HHC PCS PcS 14 29 39.7 -1.4
HHC S **S 14 29 58.7 +3.9**
HHC XS sS 14 30 20.1 +4.7
HHC SCS ScS 14 33 50.6 0.0
HHC AMB AMB
comp=Z,15nm,0.7s,mb4.7
HHC AMB AMB
comp=Z,122nm,6.7s
HHC LR LR
comp=N,142nm,16.1s,MS4.1
HHC LR LR
comp=E,144nm,14.9s,MS4.1
HHC LR LR
comp=Z,220nm,23.2s
SHL Shillong 40.77 307 *eP* **P 14 23 50.5 -0.4**
CN2 Changchun 41.03 358 *eP* **P 14 23 52.7 0.0**
CN2 *e*XP sP 14 24 10.4 -0.1
CN2 *e*S **S 14 30 02.5 +0.5**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CN2 AMB AMB
comp=Z,200nm,3.0s
MDJ Mudanjiang 41.88 3 P **P 14 24 00.5 +0.8**
MDJ AMB AMB
comp=Z,19nm,0.8s,mb4.8
MDJ AMB AMB
comp=Z,39nm,4.7s
MDJ Mudanjiang 41.88 3 *eP* **P 14 23 59.8 +0.1**
comp=Z,12nm,0.8s,mb4.6
CAN Canberra 42.99 153 *eP* **P 14 24 09.2 +0.4**
LSA Lhasa 43.39 312 *eP* **P 14 24 12.6 +0.4**
comp=Z,13nm,0.8s,mb4.7
LSA Lhasa 43.39 312 *eP* **P 14 24 12.6 +0.4**
LSA pmax pmax
comp=Z,13nm,0.8s,mb4.7
TOO Toolangi 43.50 159 *eP* **P 14 24 14.2 +1.3**
GTA Gaotai 44.20 329‖ *eP* **P 14 24 18.6 +0.1**
GTA AP pP 14 24 32.4 +1.4
GTA XP sP 14 24 36.7 +0.4
GTA S **S 14 30 48.7 0.0**
GTA XS sS 14 31 09.7 +0.2
GTA AMB AMB
comp=Z,4.0nm,0.8s,mb4.2
GTA AMB AMB
comp=Z,121nm,6.0s
GTA LR LR
comp=N,135nm,15.3s,MS4.1
GTA LR LR
comp=E,145nm,16.2s,MS4.1
GTA LR LR
comp=Z,226nm,16.8s,MS4.2
TAPN Taplejung 44.91 307 *eP* **P 14 24 24.3 -0.1**
comp=Z,28nm,1.2s,mb5.0
ODAN Odare 44.95 306 *eP* **P 14 24 24.5 -0.3**
comp=Z,24nm,0.7s,mb5.1
RAMN Ramite 45.63 306 *eP* **P 14 24 30.1 0.0**
comp=Z,38nm,1.0s,mb5.3
HABR Khabarovsk 46.20 7 *eP* **P 14 24 33.8 -0.4**
HABR *e* pP 14 24 43.2 -3.6
HABR *e* pP 14 24 47.1 +0.3
HABR *e* 14 27 04.9
HABR *eS* **S 14 31 19.3 +1.9**
HABR *e* 14 31 35.4
HABR *e* 14 34 25.1
HABR *e* 14 35 40.5
YSS Yuzh-Sakhalins 46.23 15 *eP* **P 14 24 34.3 -0.2**
comp=Z,7.6nm,0.5s,mb4.9
YSS Yuzh-Sakhalins 46.23 15 *eP* **P 14 24 34.3 -0.2**
YSS pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
JIRN Jiri 46.26 307 *eP* **P 14 24 35.0 -0.1**
comp=Z,27nm,0.8s,mb5.2
KLR Kul'dur 46.62 4 *eP* **P 14 24 33.2 -4.3**
GUN Gumba 46.62 307 *eP* **P 14 24 37.8 -0.1**
comp=Z,40nm,0.7s,mb5.5
PKI Pulchoki 46.85 306 *eP* **P 14 24 38.8 -0.9**
PKIN Phulchoki 46.87 306 *eP* **P 14 24 38.4 -1.4**
comp=Z,5.8nm,0.6s,mb4.7
HIA Hailar 46.89 353 *eP* **P 14 24 40.3 +0.7**
comp=Z,11nm,0.9s,mb4.8
HIA Hailar 46.89 353 *eP* **P 14 24 40.3 +0.7**
HIA pmax pmax
comp=Z,11nm,0.9s
KKN Kakani 47.05 306 *eP* **P 14 24 40.5 -0.8**
comp=Z,25nm,0.9s,mb5.2
KKN Kakani 47.05 306 *eP* **P 14 24 40.5 -0.8**
KKN pmax pmax
comp=Z,25nm,0.9s,mb5.1
DMN Daman 47.11 306 *eP* **P 14 24 41.3 -0.5**
GKN Gorkha 47.65 306 *eP* **P 14 24 44.7 -1.3**
comp=Z,19nm,0.8s,mb5.2
ULN Ulaanbaatar 48.26 342 *eP* **P 14 24 50.6 +0.4**
comp=Z,9.9nm,0.9s,mb4.8
ULN Ulaanbaatar 48.26 342*c i P* **P 14 24 50.9 +0.6**
KOLN Koldanda 48.40 305 *eP* **P 14 24 51.4 -0.3**
comp=Z,31nm,0.6s,mb5.5
SONM Songino Array 48.44 342 P **P 14 24 51.8 +0.1**
comp=Z,5.8nm,0.8s,mb4.7,baz=156,slow=8.6,SNR=20
SONM PcP PcP 14 26 18.8 +1.4
comp=Z,2.3nm,0.7s,baz=169,slow=3.2,SNR=5.2
DANN Dangsing 48.50 306 *eP* **P 14 24 51.6 -0.9**
comp=Z,37nm,0.6s,mb5.6
PYUN Piuthan 49.03 306 *eP* **P 14 24 56.0 -0.5**
comp=Z,36nm,0.8s,mb5.4
HYB Hyderabad 49.77 291 *eP* **P 14 25 02.5 +0.1**
HYB Hyderabad 49.77 291 *i P* **P 14 25 02.5 +0.1**
ZAK Zakamensk 51.66 341 *eP* **P 14 25 18.2 +2.1**
ZAK *e* 14 26 30.5
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MOY Mondy 53.52 340 *eP* **P 14 25 31.2 +1.4**
MOY pmax pmax
comp=Z,25nm,1.7s,mb4.9
WMQ Urumqi 53.80 325 *eP* **P 14 25 34.0 +2.0**
WMQ XP sP 14 25 52.0 +2.0
WMQ PP PP 14 27 37.0 +3.6
WMQ S **S 14 33 04.0 +0.5**
WMQ SS SS 14 36 44.0 -1.0
WMQ AMB AMB
comp=Z,20nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,54nm,5.0s
WMQ LR LR
comp=N,357nm,18.0s,MS4.6
WMQ LR LR
comp=E,275nm,17.0s,MS4.6
WMQ LR LR
comp=Z,114nm,16.0s,MS4.0
CLNS Chul'man 54.09 359 *eP* **P 14 25 33.8 0.0**
CLNS pmax pmax
comp=Z,15nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,5.0nm,0.6s
CLNS pmax pmax
comp=E,6.0nm,0.9s
BOD Bodaibo 56.00 352 *eP* **P 14 25 47.6 0.0**
BOD pmax pmax
comp=Z,11nm,1.2s,mb4.8
PETK Petropavlovsk- 56.34 22 P **P 14 25 50.4 +0.2**
comp=Z,7.2nm,0.8s,mb4.8,baz=184,slow=5.0,SNR=15
MKAR Makanchi Array 58.63 326 P **P 14 26 06.0 -0.4**
comp=Z,7.1nm,0.6s,mb4.9,baz=120,slow=8.2,SNR=66
MKAR PcP PcP 14 26 56.6 +0.5
comp=Z,2.8nm,0.6s,baz=130,slow=5.7,SNR=4.3
MKAR LR LR 14 55 52.9
comp=Z,63nm,19.3s,MS3.8,baz=178,slow=41
MKAR Makanchi Array 58.63 326⇑ *eP* **P 14 26 06.2 -0.2**
YAK Yakutsk 59.30 1 *eP* **P 14 26 10.1 -0.7**
comp=Z,32nm,0.6s,mb5.5
YAK Yakutsk 59.30 1 *eP* **P 14 26 11.1 +0.3**
YAK pmax pmax
comp=Z,28nm,0.9s,mb5.3
YAK pmax pmax
comp=N,15nm,1.4s
ULHL Ulahol 60.04 318 P **P 14 26 16.1 -0.2**
SNR=6.0
KZA Kyzart 60.63 318 P **P 14 26 21.5 +1.2**
SNR=6.3
TKM2 Tokmak 2 60.77 319 *eP* **P 14 26 21.1 -0.1**
comp=N,4.9nm,0.7s,mb4.8
TKM2 Tokmak 2 60.77 319 *eP* **P 14 26 21.1 -0.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
TKM2 Tokmak 2 60.77 319 P **P 14 26 21.4 +0.2**
SNR=8.9
USP Osepenovka 61.64 319 P **P 14 26 26.9 -0.2**
SNR=7.6
ZALV Zalesovo Beam 61.71 333 P **P 14 26 26.6 -0.7**
comp=Z,2.9nm,0.6s,mb4.6,baz=101,slow=4.7,SNR=11
EKS2 Erkin-Say 61.87 318 *eP* **P 14 26 28.4 -0.2**
comp=Z,6.2nm,0.8s,mb4.8
EKS2 Erkin-Say 61.87 318 P **P 14 26 29.0 +0.4**
SNR=9.5
KURK Kurchatov 62.83 328 *eP* **P 14 26 34.5 -0.5**
comp=Z,13nm,0.7s,mb5.2
KURK Kurchatov 62.83 328⇑ *iP* **P 14 26 34.6 -0.3**
KURK pmax pmax
comp=Z,17nm,0.8s,mb5.2
NVS Novosibirsk 62.99 333 *i* P **P 14 26 34.8 -1.1**
SEY Seymchan 63.04 13 *eP* **P 14 26 37.6 +1.5**
BRVK Borovoye 68.48 327 *eP* **P 14 27 10.3 -1.0**
comp=Z,11nm,0.8s,mb4.9
BRVK Borovoye 68.48 327 *eP* **P 14 27 10.3 -1.0**
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.9
TIXI Tiksi 68.94 1 *eP* **P 14 27 13.2 -0.7**
comp=Z,12nm,0.7s,mb4.9
TIXI Tiksi 68.94 1 *eP* **P 14 27 13.9 +0.1**
TIXI pmax pmax
comp=Z,13nm,0.7s,mb5.0
CASY Casey 69.75 187 *eP* **P 14 27 19.5 +0.6**
comp=Z,6.2nm,0.7s,mb4.7
SVE Sverdlovsk 75.06 329‖ *eP* **P 14 27 51.0 +0.3**
SVE pmax pmax
comp=Z,36nm,0.9s,mb5.3
ARU Arti 76.03 328 *eP* **P 14 27 50.0 -6.3**
comp=Z,17nm,0.8s,mb5.0
ARU Arti 76.03 328*c iP* **P 14 27 51.6 -4.7**
ARU *eS* S 14 37 30.4 -5.7
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.0
QRN Al-Qurain 79.19 299 *eP* **P 14 28 14.2 -0.3**
baz=299
RDF Al-Radifah 79.53 299 *eP* **P 14 28 15.9 -0.5**
baz=299
RDF AMb AMB 14 28 21.1
comp=Z,27nm,1.2s,mb5.0,baz=299
MIB Mutribah 79.75 300 *eP* **P 14 28 16.5 -1.1**
baz=300
MIB AMb AMB 14 28 23.1
comp=Z,16nm,0.6s,mb5.1,baz=300
GNI Garni 82.42 310 LR LR 15 07 38.9
comp=Z,105nm,18.5s,MS4.2,baz=276,slow=37
MAW Mawson 82.82 200 P **P 14 28 34.2 +1.2**
comp=Z,2.6nm,0.6s,mb4.4,baz=71,slow=10.0,SNR=6.1
IMA2 Indian Mountai 83.27 24 *eP* **P 14 28 36.1 +0.7**
PPT Papeete 84.50 108 LR LR 15 03 06.1
comp=Z,63nm,19.6s,MS4.0,baz=268,slow=33
MCK McKinley 85.02 26 P **P 14 28 44.7 +0.3**
comp=Z,3.3nm,0.8s,mb4.5
MCK McKinley 85.02 26 P **P 14 28 44.7 +0.4**
MCK pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
VRHR Novokhopersk 85.08 321 *eP* **P 14 28 44.9 0.0**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.5
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.5s
KLMR Klimovskoe 86.51 331 *eP* **P 14 28 50.2 -1.6**
KLMR pmax pmax
comp=Z,18nm,1.2s,mb5.2
VORD Divnogorie 86.55 321 *eP* **P 14 28 52.3 +0.1**
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
VORD pmax pmax
comp=N,4.0nm,0.8s
VORD pmax pmax
comp=E,9.0nm,0.6s
VSR Storozhevoye 86.63 321 *eP* **P 14 28 52.9 +0.3**
VSR pmax pmax
comp=Z,1.0nm,0.6s,mb4.2
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
OBN Obninsk 88.13 325 *eP* **P 14 28 59.5 -0.2**
OBN Obninsk 88.13 325‖ *eP* **P 14 28 59.7 0.0**
OBN pmax pmax
comp=Z,31nm,1.5s,mb5.3
BRTR Keskin Array B 90.95 310 P **P 14 29 13.2 -0.1**
comp=Z,1.1nm,0.8s,mb4.2,baz=121,slow=5.9,SNR=4.6
BRTR Keskin Array B 90.95 310⇑ *eP* **P 14 29 13.4 +0.1**
ARCES ARCESS Array B 91.59 340 P **P 14 29 15.2 -0.4**
comp=Z,6.7nm,0.7s,mb5.1,baz=78,slow=5.2,SNR=21
ARCES LR LR 15 17 43.7
comp=Z,113nm,18.1s,MS4.3,baz=247,slow=40
AKASG Malin Array Be 92.94 321 P **P 14 29 21.4 -0.9**
comp=Z,1.4nm,0.6s,mb4.6,baz=68,slow=4.6,SNR=2.6
AKASG Malin Array Be 92.94 321 P **P 14 29 21.4 -0.9**
WRAK Wrangell Islan 93.71 33 *eP* **P 14 29 26.0 +0.4**
comp=Z,5.3nm,0.5s,mb5.2
NB2 NORSAR Subarra 99.91 334 P Pdif 14 29 52.5 -1.2
comp=Z,1.2nm,0.7s,baz=67,slow=4.6
NOA NORSAR Array B 99.91 334 P Pdif 14 29 52.4 -1.3
comp=Z,1.7nm,0.7s,baz=67,slow=4.6,SNR=4.6
TXAR Lajitas Array 122.04 53 PKP PKPdf 14 35 05.4 +1.2
comp=Z,0.2nm,0.5s,baz=248,slow=1.3,SNR=4.4
TORD Torodi Ar. Bea 123.54 288 PKP PKPdf 14 35 07.8 +0.4
comp=Z,1.7nm,0.7s,baz=46,slow=2.0,SNR=14
TORD Torodi Ar. Bea 123.54 288 PKP PKPdf 14 35 07.8 +0.4
LCO Las Campanas 148.80 149 *e*PKPbc PKPbc 14 35 57.2 +0.1

*NEIC **08** 14:24:00.9, 1601N×98.19W, h4km, MD3.7(MEX), After MEX.*
MEX 08 14:24:00.9±0.5, 1602N×9826W, h5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.40**	**19**	*i* P		Pg	14 24 07.8	-0.8
PNIG				*i* S		Sg	14 24 13.9	+0.2
VHO	**Vista Hermosa**	**1.80**	**54**	*i* P		Pn	14 24 29.5	-3.1
VHO				*i* S		Sn	14 24 50.2	-5.7
VHO	**Vista Hermosa**	**1.80**	**54**	*i* P		Pn	14 24 29.5	-3.1
VHO				*i* S		Sn	14 24 52.2	-3.6
ACX	**Acapulco**	**1.80**	**298**	*i* P		Pn	14 24 28.5	-4.1
ACX				*i* P			14 24 28.6	
ACX	**Acapulco**	**1.80**	**298**	*i* P		Pn	14 24 28.6	-4.0
ACX				*i* P			14 24 29.1	
ACX				*i* S		Sn	14 24 50.9	-5.0
UTMO	**Huajupan**	**1.86**	**13**	*e*P		Pn	14 24 29.7	-3.7
UTMO				*i* S		Sn	14 24 53.1	-4.2
CAIG	**El Cayaco**	**2.18**	**298**	*e*P		Pn	14 24 36.3	-1.6
CAIG				*i* S		Sn	14 25 03.0	-2.3
CAIG	**El Cayaco**	**2.18**	**298**	*i* P		Pn	14 24 34.8	-3.1
CAIG				*i* S		Sn	14 25 01.9	-3.5
MEIG	**Mezcala**	**2.30**	**326**	*e*P		Pn	14 24 37.8	-1.7
MEIG				*i* S		Sn	14 25 05.8	-2.5
TPIG	**Tehuac#an**	**2.54**	**20**	*i* P		Pn	14 24 40.8	-2.0
TPIG				*i* S		Sn	14 25 10.8	-3.3
PLIG	**Platanillo**	**2.65**	**333**	*e*P		Pn	14 24 41.3	-3.0
PLIG				*i* S		Sn	14 25 14.2	-2.6
YAIG	**Yautepec**	**2.94**	**345**	*i* P		Pn	14 24 46.2	-2.0
YAIG				*i* S		Sn	14 25 21.7	-2.2
CMIG	**Matias Romero**	**3.41**	**71**	*i* P		Pn	14 24 52.3	-2.5
CMIG				*i* S		Sn	14 25 32.6	-3.0
ZIIG	**Zihuatanejo**	**3.46**	**298**	*i* P		Pn	14 24 53.0	-2.4
ZIIG				*i* S		Sn	14 25 34.9	-1.8

*ISCJB **08** 14:28:31.9±1.0, 1901N×005×1454E×01, h220km±10km, mb3.8/17, Error ellipse: s-maj=20.4km s-min=7.2km az=174.1*
*IDC **08** 14:28:32.7±1.7, 1899N×1454.8E, h214km±17km, mb3.5/12, mb1 3.7/15, mb1mx3.5/24, mbtmp3.5/15, Error ellipse: s-maj=22.0km s-min=10.4km az=86.0*
*NEIC **08** 14:28:34.7±1.3, 1895N×14552E, h235km±13km, mb4.1/5, Error ellipse: s-maj=15.5km s-min=8.4km az=88.0*
ISC 08 14:28:32.2±1.0, 1901N±005×1454E±01, h207km±9km, n29, σ1§01/34, mb3.8/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.41**	**186**	P		**Pn**	**14 29 54.6**	**+2.5**
	15nm,0.3s,baz=75,slow=11,SNR=11							
GUMO				S		**Sn**	**14 30 54.4**	**-0.9**
	6.8nm,0.3s,baz=17,slow=20,SNR=3.0							
GUMO	**Guam**	**5.41**	**186**	P		**Pn**	**14 29 54.6**	**+2.5**
GUMO				Pn		**Pn**	**14 29 55.5**	**+3.5**
GUMO				S		**Sn**	**14 30 54.4**	**-0.9**
GUMO				*e*Sn		**Sn**	**14 30 55.3**	**0.0**
CBIJ	**Chichi jima**	**8.58**	**340**	P		**Pn**	**14 30 32.6**	**-0.3**
	5.3nm,0.3s,baz=279,slow=19,SNR=3.1							
CBIJ				S		**Sn**	**14 32 07.6**	**-2.0**
	3.9nm,0.3s,baz=282,slow=20,SNR=2.2							
JOW	**Kunigami**	**17.60**	**299**	P		**P**	**14 32 26.9**	**+3.8**

3.8nm,0.3s,baz=147,slow=14,SNR=4.7
MJAR Matsushiro Arr 18.58 342 P **P** 14 32 34.7 **+0.9**
0.7nm,0.3s,baz=164,slow=9.7,SNR=7.4
MAJO Matsushiro 18.59 342 P **P** 14 32 34.4 **+0.6**
5.0nm,0.4s
MAT Matsushiro 18.59 342 P **P** 14 32 35.2 **+1.4**
KSRS Korea Array 23.91 324 P **P** 14 33 27.6 **+0.4**
0.4nm,0.4s,mb3.4,baz=143,slow=8.4,SNR=4.1
PETK Petropavlovsk- 35.35 13 P **P** 14 35 07.8 **+0.1**
1.8nm,0.9s,mb3.6,baz=219,slow=8.1,SNR=3.8
WRAB Tennant Creek 40.19 196 *eP* **P** 14 35 48.1 **-0.4**
2.6nm,0.4s,mb4.0
WRAB *e* pP 14 36 35.2 +2.9
WRAB *e* 14 36 57.1
WB2 Warramunga Arr 40.20 196 *eP* **P** 14 35 48.6 **0.0**
WRA Warramunga Arr 40.20 196 P **P** 14 35 48.8 **+0.1**
3.5nm,0.5s,mb4.1,baz=23,slow=8.6,SNR=64
ASAR Alice Springs 43.88 195 P **P** 14 36 18.1 **-0.2**
1.2nm,0.5s,mb3.5,baz=15,slow=6.3,SNR=42
CMAR Chiang Mai Arr 43.92 277 P **P** 14 36 20.9 **+2.1**
0.3nm,0.3s,mb3.0,baz=64,slow=6.1,SNR=5.2
STKA Stephens Creek 50.73 184 P **P** 14 37 08.9 **-2.0**
1.1nm,0.7s,mb3.4,baz=356,slow=13,SNR=2.9
BILL Bilibino 50.76 10 *eP* **P** 14 37 12.0 **+1.3**
5.9nm,0.9s,mb4.0
MKAR Makanchi Array 58.06 314 P **P** 14 38 04.1 **+0.5**
0.7nm,0.6s,mb3.5,baz=93,slow=8.7,SNR=6.5
KURK Kurchatov 60.87 318 P **P** 14 38 23.0 **+0.3**
baz=92,slow=7.6
BVAR Borovoye Array 66.07 320 P **P** 14 38 56.3 **-0.4**
2.1nm,0.6s,mb4.0,baz=96,slow=7.2,SNR=12
INK Inuvik 69.19 23 *eP* **P** 14 39 15.2 **-0.8**
95nm,0.8s
AKTK Aktyubinsk 73.96 318 P **P** 14 39 43.9 **-0.8**
AKTO Aktyubinsk 73.96 318 P **P** 14 39 43.9 **-0.8**
0.6nm,0.5s,mb3.5,baz=74,slow=11,SNR=3.9
YKA Yellowknife Ar 77.84 28 P **P** 14 40 06.3 **-0.1**
1.6nm,0.5s,mb3.9,baz=286,slow=5.7,SNR=6.3
YKA Yellowknife Ar 77.84 28 P **P** 14 40 06.3 **-0.1**
ARCES ARCESS Array B 82.12 342 P **P** 14 40 28.1 **-1.1**
1.6nm,0.8s,mb3.7,baz=81,slow=7.5,SNR=4.5
NVAR Mina Array Bea 83.16 52 P **P** 14 40 36.1 **+0.8**
2.8nm,0.7s,mb4.1,baz=265,slow=5.7,SNR=26
JOF Joensuu 83.63 335 *ep* **P** 14 40 35.6 **-1.5**
1.0nm,0.3s,mb4.0
BOZ Bozeman (W) 85.30 43 *eP* **P** 14 40 46.2 **+0.3**
2.0nm,0.7s,mb4.0
FFC Flin Flon 86.98 32 P **P** 14 40 53.9 **+0.1**
4.7nm,0.8s,mb4.3

IDC 08 14:30:05.2±5.5, 835S×15600E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.9/3, Error ellipse: s-maj=96.0km s-min=73.9km az=4.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.92 239**		P	P	14 35 21.4	+0.4
	1.0nm,0.7s,baz=64,slow=9.7,SNR=11						
ASAR	**Alice Springs**	**26.07 232**		P	P	14 35 40.6	0.0
	1.4nm,0.9s,baz=64,slow=9.6,SNR=17						
STKA	**Stephens Creek**	**26.97 208**	*eP*	P		14 35 48.4	-0.2
	2.8nm,0.9s						
STKA	**Stephens Creek**	**26.97 208**	P	P		14 35 48.4	-0.2
	4.4nm,1.0s,baz=16,slow=8.6,SNR=7.5						

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*NEIC **08** 14:40:23.8, 1654N×9844W, h8km, MD3.9(MEX), After MEX.*
MEX 08 14:40:23.7±0.6, 1655N×9845W, h7km±9km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.35**	**117**	*i* P	Pg	14 40 30.0	-0.4
PNIG				*i* S	Sg	14 40 35.2	+0.1
UTMO	**Huajuapan**	**1.42**	**26**	*i* P	Pn	14 40 46.3	-3.6
UTMO				*i* S	Sb	14 41 03.7	-5.0
ACX	**Acapulco**	**1.44**	**283**	*i* P	Pn	14 40 46.0	-4.2
ACX				*i* P		14 40 46.2	
ACX				*i* S	Sn	14 41 04.8	-4.6
VHO	**Vista Hermosa**	**1.72**	**72**	*eP*	Pn	14 40 51.6	-2.5
VHO				*i* S	Sn	14 41 11.0	-5.4
VHO	**Vista Hermosa**	**1.72**	**72**	*eP*	Pn	14 40 51.6	-2.5
VHO				*i* S	Sn	14 41 11.7	-4.7
OXX	**Oaxaca**	**1.74**	**72**	*i* P	Pn	14 40 48.5	-5.8
MEIG	**Mezcala**	**1.77**	**321**	*eP*	Pn	14 40 52.0	-2.8
MEIG				*i* S	Sn	14 41 13.0	-4.5
CAIG	**El Cayaco**	**1.81**	**286**	*i* P	Pn	14 40 51.2	-4.1
CAIG				*i* S	Sn	14 41 13.7	-4.8
PLIG	**Platanillo**	**2.09**	**331**	*i* P	Pn	14 40 57.2	-2.0
PLIG				*i* S	Sn	14 41 22.3	-3.1
TPIG	**Tehuac#an**	**2.13**	**29**	*eP*	Pn	14 40 56.8	-3.0
TPIG				*i* S	Sn	14 41 23.4	-3.0
YAIG	**Yautepec**	**2.38**	**346**	*eP*	Pn	14 41 05.0	+1.9
YAIG				*i* S	Sn	14 41 31.5	-0.9
YAIG	**Yautepec**	**2.38**	**346**	*eP*	Pn	14 41 00.1	-3.0
YAIG				*i* S	Sn	14 41 28.7	-3.7
ZIIG	**Zihuatanejo**	**3.07**	**290**	*i* P	Pn	14 41 13.9	+1.2
ZIIG				*i* S	Sn	14 41 38.7	-11
ZIIG	**Zihuatanejo**	**3.07**	**290**	*i* P	Pn	14 41 10.7	-1.9
ZIIG				*i* S	Sn	14 41 45.0	-4.6
CMIG	**Matias Romero**	**3.46**	**81**	*i* S	Sn	14 41 55.5	-3.7

DJA 08 14:48:44.9±0.0, 771S×10651E, h50km, MLv3.6/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**1.17**	**12**	P	Pn	14 49 04.4	-0.6
DBJI	**Dramaga**	**1.17**	**12**	S	Sn	14 49 20.2	+0.3
CBJI	**Citeko**	**1.32**	**15**	P	Pn	14 49 03.8	-3.2
LEM	**Lembang**	**1.41**	**51**	P	Pn	14 49 09.9	+1.8
SBJI	**Serang**	**1.62**	**347**	P	Pn	14 49 11.7	+0.6

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*IDC **08** 14:49:05.0±1.3, 1324N×5003E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=52.9km s-min=30.0km az=178.0*
*ISCJB **08** 14:49:07.2±3.0, 1334N±009×4989E±005, h27km±22km, mb3.7/5, Error ellipse: s-maj=15.8km s-min=7.7km az=4.5*
*DHMR **08** 14:49:08.6±1.2, 1338N×4963E, h11km±86km, ML3.5*
ISC 08 14:49:08.0±3.0, 134N±01×4993E±005, h19km±19km, n12, σ0°66/18, mb3.7/5, 1C-1D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUKL	**Al Mukalla**	**1.36**	**320**	*eP*	**Pn**	**14 49 31.0**	**-0.8**
MUKL				*i* S	**Sn**	**14 49 49.1**	**-0.2**
MUKL				AML	AML	14 49 50.5	
	comp=N,456nm,0.6s						
BDHA	**Al Bayda'**	**4.28**	**278**	*eP*	**Pn**	**14 50 12.8**	**+0.7**
BDHA				*i* S	**Sn**	**14 51 02.2**	**+0.7**
	comp=N,128nm,0.5s						
BDHA	**Al Bayda'**	**4.28**	**278**	*eP*	**Pn**	**14 50 12.8**	**+0.7**
BDHA				*i* S	**Sn**	**14 51 02.2**	**+0.7**
BDHA				AML	AML	14 51 02.9	
	comp=N,257nm,0.5s						
LBOS		**4.58**	**276**	*eP*	**Pn**	**14 50 16.7**	**+0.5**
LBOS				*i* S	**Sn**	**14 51 09.3**	**+0.5**
DHBB	**Dhamar BB**	**5.50**	**283**	*i* S	**Sn**	**14 51 31.6**	**0.0**
TRBA	**At Turbah**	**5.67**	**269**	*i* P	**Pn**	**14 50 30.0**	**-1.1**
TRBA				*i* S	**Sn**	**14 51 35.2**	**-0.5**
UDYN	**Al 'Udayn**	**5.82**	**276**	*eP*	**Pn**	**14 50 33.5**	**+0.2**
UDYN				*i* S	**Sn**	**14 51 38.7**	**-0.9**
MKAR	**Makanchi Array**	**42.91**	**33**	P	**P**	**14 57 06.2**	**+0.9**
	comp=N,0.5nm,0.6s,mb3.4,baz=234,slow=4.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**46.89**	**276**	P	**P**	**14 57 38.4**	**+1.0**
	comp=N,0.7nm,0.9s,mb3.6,baz=84,slow=7.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**47.28**	**77**	P	**P**	**14 57 40.4**	**-0.1**
	comp=N,1.0nm,0.9s,mb3.7,baz=280,slow=8.7,SNR=8.0						
WRA	**Warramunga Arr**	**89.37**	**111**	P	**P**	**15 02 03.4**	**-0.4**
	comp=N,0.6nm,0.6s,mb4.1,baz=299,slow=3.8,SNR=8.9						
ASAR	**Alice Springs**	**89.91**	**114**	P	**P**	**15 02 05.8**	**-0.5**
	comp=N,0.6nm,1.0s,mb3.9,baz=292,slow=4.4,SNR=6.5						

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*ISCJB **08** 14:50:37.6±4.5, 1866N±009×1470E±05, h66km±32km, mb3.6/6, Error ellipse: s-maj=77.5km s-min=15.6km az=178.8*
*NEIC **08** 14:50:38.8±5.3, 1866N×147.15E, h66km±27km, Error ellipse: s-maj=117.3km s-min=12.3km az=84.0*

*IDC **08** 14:50:40.1±7.1, 1863N×14694E, h71km±48km, mb3.3/6, mb1 3.5/8, mb1mx3.4/21, mbtmp3.4/8, ML3.9/2, Error ellipse: s-maj=105.3km s-min=16.2km az=84.0*
ISC 08 14:50:37.4±4.1, 1870N±009×1472E±05, h52km±28km, n11, σ0°55/12, mb3.6/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.54**	**204**	P	**Pn**	**14 51 58.2**	**+0.8**
	5.5nm,0.3s,baz=348,slow=19,SNR=5.0						
GUMO				S	**Sn**	**14 52 59.4**	**-0.4**
	4.9nm,0.3s,baz=330,slow=20,SNR=2.0						
MJAR	**Matsushiro Arr**	**19.46**	**338**	P	**Pn**	**14 55 00.4**	**-0.9**
	0.2nm,0.3s,baz=156,slow=12,SNR=3.6						
MJAR	**Matsushiro Arr**	**19.46**	**338**	P	**Pn**	**14 55 00.4**	**-1.0**
KSRS	**Korea Array**	**25.17**	**322**	P	**P**	**14 55 58.2**	**+0.3**
	1.0nm,0.5s,mb3.6,baz=151,slow=9.0,SNR=8.3						
KS15	**Wonju Array Si**	**25.19**	**322**	P	**P**	**14 55 50.5**	**-7.5**
WRA	**Warramunga Arr**	**40.41**	**199**	P	**P**	**14 58 10.7**	**+0.1**
	0.5nm,0.4s,mb3.6,baz=20,slow=8.1,SNR=10						
SONM	**Songino Array**	**44.03**	**321**	P	**P**	**14 58 39.7**	**-0.1**
	0.4nm,0.4s,mb3.5,baz=127,slow=9.6,SNR=3.8						
ASAR	**Alice Springs**	**44.05**	**198**	P	**P**	**14 58 39.5**	**-0.7**
	0.2nm,0.4s,mb3.2,baz=18,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**58.88**	**322**	P	**P**	**15 00 31.6**	**+0.9**
	1.0nm,0.7s,mb4.0,baz=111,slow=6.5,SNR=3.5						
MKAR	**Makanchi Array**	**59.48**	**314**	P	**P**	**15 00 35.2**	**+0.1**
	0.4nm,0.6s,mb3.6,baz=88,slow=9.9,SNR=3.1						
KURK	**Kurchatov**	**62.22**	**318**	P	**P**	**15 00 53.5**	**-0.1**
	baz=91,slow=8.1						

IDC 08 14:58:02.0±9.2, 204N×12681E, h0km, mb3.8/3, Error ellipse: s-maj=156.6km s-min=142.4km az=77.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.06**	**162**	P	P	15 03 09.9	+0.6
	1.9nm,0.5s,baz=340,slow=11,SNR=30						
ASAR	**Alice Springs**	**26.47**	**165**	P	P	15 03 41.6	+0.7
	0.5nm,0.5s,baz=344,slow=8.0,SNR=19						
STKA	**Stephens Creek**	**36.53**	**159**	P	P	15 05 08.1	-1.3
	1.8nm,0.8s,baz=338,slow=8.8,SNR=4.4						

IDC 08 15:21:53.1±4.8, 2828S×6371E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, Error ellipse: s-maj=137.4km s-min=40.5km az=58.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**57.62**	**40**	P	P	15 31 45.2	0.0
	0.6nm,0.7s,baz=223,slow=7.8,SNR=6.6						
ASAR	**Alice Springs**	**62.48**	**103**	P	P	15 32 19.1	+0.5
	0.9nm,0.8s,baz=249,slow=6.4,SNR=15						
WRA	**Warramunga Arr**	**64.21**	**100**	P	P	15 32 29.7	-0.6
	0.6nm,0.8s,baz=245,slow=6.0,SNR=5.4						
ZALV	**Zalesovo Beam**	**83.91**	**12**	P	P	15 34 24.5	+0.1
	0.4nm,0.2s,baz=211,slow=4.2,SNR=2.7						

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*ISCJB **08** 15:47:12.6±0.5, 3792N±003×2260E±004, h10km, Error ellipse: s-maj=5.1km s-min=3.8km az=4.3*
*CSEM **08** 15:47:12.5±0.1, 3789N×2266E, h60km, ML2.7/2, Error ellipse: s-maj=2.6km s-min=2.1km az=68.0*
*THE **08** 15:47:13.2, 3788N×2256E, h10km±3km, ML2.7/2, Error ellipse: s-maj=3.3km s-min=1.1km az=115.0*
*NEIC **08** 15:47:13.1, 3788N×2263E, h5km, MD3.0(ATH), After ATH.*
*ATH **08** 15:47:13.3, 3786N×2263E, h5km, MD3.0/6*
ISC 08 15:47:12.3±0.5, 3789N±003×2256E±004, h10km, n17, σ1°28/25, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.35**	**67**	P	**Pg**	**15 47 24.6**	**+5.4**
LTK				S	**Sg**	**15 47 32.3**	**+8.4**
VLX	**Vlachokerasia**	**0.53**	**195**	P	**Pg**	**15 47 26.8**	**+4.2**
VLX				S	**Sg**	**15 47 34.6**	**+5.0**
DID	**Didima**	**0.66**	**125**	P	**Pg**	**15 47 27.3**	**+2.3**
DID				S	**Sg**	**15 47 38.6**	**+5.0**
NAIG	**Nisos Aigina**	**0.75**	**99**	*e*PB	**Pg**	**15 47 27.0**	**+0.3**
NAIG				*e*SB	**Sg**	**15 47 36.0**	**-0.5**
LKR	**Lokris**	**0.84**	**24**	P	**Pg**	**15 47 29.5**	**+1.0**
LKR				S	**Sg**	**15 47 41.3**	**+1.9**
LKR	**Lokris**	**0.84**	**24**	*e*PB	**Pg**	**15 47 29.5**	**+1.0**
ITM	**Ithomi**	**0.86**	**216**	*e*PB	**Pg**	**15 47 30.7**	**+1.8**
RLS	**Riolos of Patr**	**0.88**	**282**	*e*PB	**Pg**	**15 47 31.4**	**+2.2**
KVR	**Kavouri**	**0.96**	**93**	*e*PB	**Pg**	**15 47 30.5**	**-0.3**
AGG	**Agios Georgios**	**1.15**	**351**	P	**Pb**	**15 47 33.8**	**-0.4**
AGG				S	**Sb**	**15 47 49.8**	**+0.6**
PYL	**PYLOS**	**1.18**	**214**	P	**Pb**	**15 47 33.3**	**-1.5**
PYL				S	**Sb**	**15 47 49.4**	**-0.7**
EVR	**Evrytania**	**1.19**	**330**	*e*Pn	**Pn**	**15 47 35.5**	**+0.6**
VLI	**Velíai**	**1.20**	**165**	*e*PG	**Pn**	**15 47 35.2**	**+0.1**
XOR	**Xorichti**	**1.56**	**18**	P	**Pn**	**15 47 38.6**	**-1.4**
THL	**Klokotos Trika**	**1.73**	**346**	P	**Pn**	**15 47 41.2**	**-1.2**
THL				S	**Sn**	**15 48 03.0**	**-1.5**
LIT	**Litokhoron**	**2.21**	**359**	P	**Pn**	**15 47 47.9**	**-1.1**
APE	**Apeiranthos**	**2.50**	**108**	P	**Pn**	**15 47 51.1**	**-1.9**

MOS 08 15:52:56.1±0.1, 4388N×4301E, h12km, mb3.8/1, 5D, Error ellipse: s-maj=26.1km s-min=8.7km az=131.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSNR	**Lesken**	**0.85**	**136**	*i*PG	Pg	15 53 12.6	+0.2
LSNR				*i* S	Sg	15 53 24.2	+0.7
PRTR	**Priterechnaya**	**0.93**	**98**	*i*PG	Pg	15 53 14.0	-0.1
PRTR				*i* S	Sg	15 53 27.2	+1.0
KMSR	**Komsomolskaya**	**1.06**	**118**	*e*PG	Pg	15 53 16.4	-0.2
KMSR				*e*S	Sb	15 53 30.5	+0.2
DIGR	**Digorskoe uzhe**	**1.07**	**157**	*i*PG	Pg	15 53 16.3	-0.3
DIGR				*i* S	Sb	15 53 30.7	+0.3
KORR	**Kora**	**1.11**	**135**	*e*PG	Pg	15 53 16.9	-0.5
KORR				*i* S	Sb	15 53 32.0	+0.5
ARNR	**Ardon**	**1.16**	**126**	*e*PG	Pg	15 53 17.7	-0.6
ARNR				*e*S	Sb	15 53 33.2	+0.3
BTKR	**Batakoyurt**	**1.23**	**114**	*e*PG	Pg	15 53 18.7	-1.0
BTKR				*e*S	Sb	15 53 35.2	+0.3
TRKR	**Terskaya**	**1.26**	**97**	*i*PG	Pg	15 53 19.4	-0.9
TRKR				*e*S	Sb	15 53 36.2	+0.3
ZEI	**Tsey**	**1.29**	**149**	*i*PG	Pg	15 53 19.5	-1.3
ZEI				*i* S	Sb	15 53 36.0	-0.7
LACR	**Lac**	**1.41**	**138**	*e*PG	Pg	15 53 21.9	-1.3
LACR				*i* S	Sn	15 53 39.9	-0.2
VLKR	**Vladikavkaz**	**1.48**	**124**	*e*PG	Pg	15 53 22.8	-1.6
VLKR				*e*S	Sn	15 53 42.3	+0.7

NEIC 08 15:57:13.6, 3754S×17925E, h16km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.75**	**268**	P	Pg	15 57 27.6	-0.6
MXZ				S	Sg	15 57 37.6	-0.6
PUZ	**Puketiti**	**0.95**	**236**	P	Pb	15 57 31.1	-0.6
PUZ				S	Sb	15 57 44.0	0.0
MWZ	**Matawai**	**1.58**	**239**	P	Pn	15 57 39.9	-1.0
URZ	**Urewera**	**1.84**	**246**	P	Pn	15 57 44.1	-0.4
KNZ	**Kokohu**	**1.93**	**220**	P	Pn	15 57 44.5	-1.2
TAZ	**Tarawera**	**2.28**	**251**	P	Pn	15 57 50.4	-0.1
BKZ	**Black Stump Fm**	**2.71**	**232**	P	Pn	15 57 55.6	-0.9
KUZ	**Kuaotunu**	**2.93**	**285**	P	Pn	15 57 58.0	-1.5
MKAZ	**Moumakai**	**3.28**	**276**	P	Pn	15 58 04.0	-0.3
MOVZ	**Moawhango**	**3.32**	**235**	P	Pn	15 58 03.3	-1.5
WNVZ	**Wahianoa**	**3.38**	**237**	P	Pn	15 58 04.5	-1.2
OTAZ	**Otara**	**3.50**	**278**	P	Pn	15 58 07.6	+0.3
TSZ	**Takapari Road**	**3.60**	**225**	P	Pn	15 58 05.9	-2.7
VRZ	**Vera Road**	**3.87**	**244**	P	Pn	15 58 07.1	-5.3
WAZ	**Wanganui**	**4.00**	**235**	P	Pn	15 58 13.8	-0.5
RAEZ	**Rainy Point**	**4.20**	**244**	P	Pn	15 58 16.8	-0.1
MRZ	**Mangatainoka R**	**4.23**	**221**	P	Pn	15 58 14.2	-3.1
WCZ	**Waipu Caves**	**4.25**	**291**	P	Pn	15 58 17.5	-0.2
NEZ	**North Egmont**	**4.40**	**245**	P	Pn	15 58 20.5	+0.8
PKE	**Pukeiti**	**4.45**	**247**	P	Pn	15 58 21.5	+1.1
MTW	**Mount Morrison**	**4.64**	**218**	P	Pn	15 58 19.1	-3.8
KIW	**Kapiti Island**	**4.73**	**224**	P	Pn	15 58 20.8	-3.4
PAWZ	**Paruwai Farm**	**4.84**	**216**	P	Pn	15 58 21.8	-4.0
TCW	**Tory Channel**	**5.32**	**225**	P	Pn	15 58 28.5	-3.8
QRZ	**Quartz Range**	**6.17**	**236**	P	Pn	15 58 39.6	-4.4
THZ	**Tophouse**	**6.46**	**227**	P	Pn	15 58 43.4	-4.6
KHZ	**Kahutara**	**6.55**	**220**	P	Pn	15 58 46.0	-3.3
LTZ	**Lake Taylor**	**7.48**	**223**	P	Pn	15 58 57.4	-4.6
ODZ	**Otahua Downs**	**9.90**	**218**	P	Pn	15 59 30.5	-4.7

DDA 08 16:35:14.1, 3825N×2670E, h7km±4km, Md2.7, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.69**	**142**	*i* P	Pg	16 35 27.6	+0.3
GCAM				*i* S	Sg	16 35 37.8	+1.4
MANT	**Manisa**	**1.48**	**80**	*i* P	Pn	16 35 43.0	+1.8
MANT				*i* S	Sn	16 36 02.2	+1.4

THE 08 16:35:50.3, 3653N×2541E, h8km±6km, ML1.9/1, Error ellipse: s-maj=6.2km s-min=0.6km az=228.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR4	**Thira Island,**	**0.07**	**186**	P	Pg	16 35 52.1	-0.1
THR3	**Thira Island,**	**0.12**	**183**	P	Pg	16 35 52.9	-0.1
THR3				S	Sg	16 35 55.4	+0.6
THR5	**Thira Island,**	**0.12**	**203**	P	Pg	16 35 52.9	-0.1
THR1	**Thera Island**	**0.17**	**165**	P	Pg	16 35 53.5	-0.2
	225nm,0.1s						
THR1				S	Sg	16 35 56.6	+0.6
THR6	**Thira Island,**	**0.18**	**183**	P	Pg	16 35 54.0	+0.1
THR6				S	Sg	16 35 57.7	+1.4
APE	**Apeiranthos**	**0.55**	**10**	P	Pg	16 36 00.5	-0.3
APE				S	Sg	16 36 09.5	+1.5

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*ISCJB **08** 16:56:36.8±5.3, 2188N±006×1432E±02, h26km±37km, mb4.0/17, Error ellipse: s-maj=24.2km s-min=10.5km az=174.9*
*IDC **08** 16:56:40.5±3.4, 2190N×14325E, h41km±30km, mb3.6/11, mb1 3.8/12, mb1mx3.8/21, mbtmp3.7/12, ML3.8/1, MS2.9/2, Ms1 2.9/2, ms1mx2.2/31, Error ellipse: s-maj=25.5km s-min=14.7km az=86.0*
*NEIC **08** 16:56:42.1±7.7, 2189N×14321E, h57km±70km, mb4.4/8, Error ellipse: s-maj=21.3km s-min=8.4km az=71.0*
ISC 08 16:56:40.2±2.1, 2188N±008×1433E±02, h38km±19km, n25, σ0°72/23, mb4.0/17, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.29**	**350**	P	**Pn**	**16 57 55.6**	**-1.0**
	7.5nm,0.3s,baz=288,slow=20,SNR=4.7						
CBIJ				S	**Sn**	**16 58 57.0**	**+0.6**
	5.6nm,0.3s,baz=90,slow=20,SNR=2.7						
JOW	**Kunigami**	**14.51**	**293**	LR	LR	17 05 16.0	
	comp=Z,40nm,19.5s,baz=151,slow=36						
KSRS	**Korea Array**	**20.41**	**323**	P	**P**	**17 01 15.8**	**+1.9**
	2.6nm,0.8s,baz=140,slow=8.3,SNR=10						
ASAJ	**Asahikawa**	**22.19**	**359**	LR	LR	17 08 42.0	
	comp=Z,30nm,20.2s,baz=60,slow=32						
ULN	**Ulaanbaatar**	**38.87**	**321**	P	**P**	**17 04 01.9**	**+0.1**
	1.9nm,0.8s,mb3.9						
SONM	**Songino Array**	**39.24**	**320**	P	**P**	**17 04 03.8**	**-1.1**
	1.5nm,0.6s,mb3.9,baz=133,slow=7.8,SNR=7.5						
CMAR	**Chiang Mai Arr**	**41.63**	**274**	P	**P**	**17 04 25.8**	**+0.8**
	0.6nm,0.7s,mb3.3,baz=54,slow=8.7,SNR=6.2						
WRAB	**Tennant Creek**	**42.45**	**192**	*eP*	**P**	**17 04 31.7**	**+0.1**
	4.2nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**42.46**	**192**	P	**P**	**17 04 31.7**	**+0.1**
	1.2nm,0.7s,mb3.6,baz=19,slow=8.9,SNR=9.3						
ASAR	**Alice Springs**	**46.17**	**192**	P	**P**	**17 05 01.0**	**-0.3**
	0.9nm,0.6s,mb3.9,baz=17,slow=9.9,SNR=29						
LSA	**Lhasa**	**47.23**	**291**	P	**P**	**17 05 10.6**	**+0.9**
	2.2nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**53.47**	**182**	P	**P**	**17 05 56.8**	**+0.2**
	1.2nm,0.8s,mb3.9,baz=325,slow=16,SNR=2.8						
STKA	**Stephens Creek**	**53.47**	**182**	P	**P**	**17 05 56.4**	**-0.2**
	4.9nm,1.2s,mb4.3						
ZAA0	**Zalesovo Array**	**54.11**	**322**	*eP*	**P**	**17 06 00.2**	**-0.9**
ZALV	**Zalesovo Beam**	**54.11**	**322**	P	**P**	**17 06 00.5**	**-0.7**
	0.7nm,0.3s,mb4.0,baz=102,slow=6.8,SNR=8.7						
MKAR	**Makanchi Array**	**54.62**	**313**	P	**P**	**17 06 05.0**	**0.0**
	1.0nm,0.8s,mb3.9,baz=93,slow=9.7,SNR=4.8						
KURK	**Kurchatov**	**57.39**	**317**	P	**P**	**17 06 24.8**	**+0.1**
	baz=89,slow=7.9						
KURK	**Kurchatov**	**57.39**	**317**	*eP*	**P**	**17 06 24.1**	**-0.6**
	3.3nm,0.9s,mb4.4						
BRVK	**Borovoye**	**62.64**	**319**	*eP*	**P**	**17 07 00.0**	**-0.6**
	4.6nm,0.8s,mb4.7						
ARU	**Arti**	**69.16**	**324**	P	**P**	**17 07 41.9**	**-0.6**
	4.0nm,0.9s,mb4.3						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**17 08 24.6**	**0.0**
	0.8nm,0.5s,mb3.9,baz=295,slow=5.6,SNR=3.6						
NVAR	**Mina Array Bea**	**82.98**	**52**	P	**P**	**17 09 02.6**	**+1.0**
	0.8nm,0.7s,mb3.8,baz=262,slow=6.6,SNR=7.3						
FFC	**Flin Flon**	**85.64**	**32**	P	**P**	**17 09 15.1**	**+0.4**
	5.3nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	**90.27**	**313**	P	**P**	**17 09 36.8**	**-0.3**
	0.7nm,0.9s,mb4.0,baz=20,slow=4.6,SNR=2.6						
LPAZ	**La Paz**	**149.86**	**85**	PKPbc	PKPbc

CHTO	**Chiang Mai**	**6.68**	**51**	*e*P		**Pn**	**17 31 11.1**	**+0.8**
	3.2nm,0.6s								
MKAR	**Makanchi Array**	**33.33**	**346**	P		**P**	**17 36 07.0**	**+0.4**
	0.6nm,0.5s,mb3.8,baz=171,slow=9.6,SNR=9.4								
KURK	**Kurchatov**	**37.87**	**345**	P		**P**	**17 36 45.2**	**-0.3**
	baz=166,slow=9.1								
KURK	**Kurchatov**	**37.87**	**345**	*e*P		**P**	**17 36 45.9**	**+0.3**
	2.4nm,0.9s,mb3.9								
ZALV	**Zalesovo Beam**	**39.74**	**352**	P		**P**	**17 37 01.2**	**0.0**
	0.4nm,0.3s,mb3.6,baz=141,slow=7.1,SNR=3.8								
WRA	**Warramunga Arr**	**52.95**	**129**	P		**P**	**17 38 45.2**	**+0.1**
	1.0nm,0.8s,mb3.8,baz=310,slow=8.0,SNR=10								
ASAR	**Alice Springs**	**54.95**	**133**	P		**P**	**17 38 60.0**	**+0.3**
	0.2nm,0.5s,mb3.4,baz=309,slow=7.0,SNR=12								
BRTR	**Keskin Array B**	**57.59**	**308**	P		**P**	**17 39 18.0**	**-0.4**
	1.0nm,1.0s,mb3.8,baz=79,slow=3.1,SNR=4.0								
GERES	**GERESS Array B**	**72.35**	**317**	P		**P**	**17 40 54.1**	**+0.1**
	1.0nm,0.5s,mb4.0,baz=70,slow=4.4,SNR=5.2								
BOSA	**Boshof**	**78.69**	**236**	P		**P**	**17 41 30.1**	**-0.5**
	2.1nm,0.5s,mb4.3,baz=90,slow=5.1,SNR=6.4								
TORD	**Torodi Ar. Bea**	**88.38**	**283**	P		**P**	**17 42 20.6**	**+0.1**
	1.1nm,0.8s,mb4.1,baz=76,slow=4.7,SNR=6.8								

*ATH **08** 17:39:59.9, 38.32N×26.98E, h30km, MD3.1/3*
*ISCJB **08** 17:40:01.3±1.0, 3827N±005×2656E±007, h5km±8km, Error ellipse: s-maj=9.0km s-min=7.2km az=154.0*
*ISK **08** 17:40:01.0, 3827N×2664E, h5km, MD2.7*
*DDA **08** 17:40:01.2, 3826N×2657E, h7km±1km, Md3.0*
*CSEM **08** 17:40:01.2±0.1, 3829N×2666E, h1km±1km, MD3.0, Error ellipse: s-maj=5.3km s-min=3.2km az=130.0*

ISC 08 17:40:01.4±1.0, 3829N±004×2653E±007, h5km±7km, n12, σ0s74/18, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.09**	**35**	*i* P			**Pg**	**17 40 03.6**	**+0.2**
URLA				*i* S			**Sg**	**17 40 05.8**	**+1.2**
BLCB	**Balcova**	**0.42**	**76**	*e*PG			**Pg**	**17 40 09.2**	**-0.2**
BLCB				*e*SG			**Sg**	**17 40 15.0**	**+0.2**
IZM	**Izmir**	**0.59**	**79**	*e*PG			**Pg**	**17 40 11.7**	**-0.9**
IZM				*e*SG			**Sg**	**17 40 20.1**	**-0.2**
KDAG	**Bornova**	**0.59**	**78**	*i* P			**Pg**	**17 40 11.5**	**-1.3**
KDAG				*i* S			**Sg**	**17 40 21.2**	**+0.8**
SMG	**Samos**	**0.62**	**157**	*e*PN			**Pg**	**17 40 12.6**	**-0.8**
SMG				*e*SN			**Sg**	**17 40 21.9**	**+0.4**
GCAM	**G?zelcaml?**	**0.81**	**136**	*i* P			**Pg**	**17 40 16.1**	**-0.7**
GCAM				*i* S			**Sg**	**17 40 27.2**	**-0.1**
PRK	**Paraskevi**	**0.98**	**348**	*e*PN			**Pn**	**17 40 20.4**	**-1.4**
BODT	**Bodrum**	**1.37**	**153**	*e*PN			**Pn**	**17 40 27.4**	**+0.3**
MLSB	**Milas**	**1.40**	**135**	*e*PN			**Pn**	**17 40 27.8**	**+0.3**
APE	**Apeiranthos**	**1.45**	**213**	*e*PN			**Pn**	**17 40 29.5**	**+1.3**
MANT	**Manisa**	**1.61**	**82**	*i* P			**Pn**	**17 40 31.0**	**+0.7**
KULA	**Kula-Manisa**	**1.69**	**82**	*e*PN			**Pn**	**17 40 31.5**	**0.0**

IDC 08 17:45:36.8±4.1, 406S×10267E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/18, mbtmp3.3/4, MS4.1/1, Ms1 4.1/1, ms1mx2.0/19, Error ellipse: s-maj=172.7km s-min=24.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.66**	**120**	P			P	17 52 29.3	+0.9
	0.1nm,0.3s,baz=300,slow=12,SNR=2.5								
ASAR	**Alice Springs**	**35.90**	**126**	P			P	17 52 37.9	-1.1
	0.2nm,0.7s,baz=296,slow=7.6,SNR=3.5								
CBIJ	**Chichi jima**	**49.14**	**49**	LR			LR	18 16 25.3	
	comp=Z,180nm,18.3s,baz=174,slow=38								
SONM	**Songino Array**	**51.77**	**3**	P			P	17 54 47.8	+1.7
	0.4nm,0.6s,baz=178,slow=8.0,SNR=4.3								
MKAR	**Makanchi Array**	**53.74**	**343**	P			P	17 54 59.5	-1.2
	0.5nm,0.9s,baz=140,slow=9.2,SNR=4.8								

*TAP **08** 17:49:56.8, 2449N×12229E, h31km, ML3.0, D*
*JMA **08** 17:49:56.7±0.2, 2500N×12238E, h34km*
*ISCJB **08** 17:49:57.3±0.4, 2447N±003×12226E±002, h46km±8km, Error ellipse: s-maj=5.0km s-min=3.2km az=164.4*

ISC 08 17:49:57.8±0.5, 2448N±003×12226E±002, h34km±3km, n37, σ0s83/72, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.40**	**290**	*i* P			**Pb**	**17 50 06.8**	**-0.2**
	baz=286								
TWC				*i* S			**Sb**	**17 50 13.4**	**+0.2**
	baz=286								
ENA	**Nanau**	**0.47**	**264**	*i* P			**Pb**	**17 50 07.4**	**-0.6**
	baz=262								
ENA				*i* S			**Sb**	**17 50 16.2**	**+1.1**
	baz=262								
ILA	**Ilan**	**0.55**	**302**	P			**Pb**	**17 50 08.8**	**-0.4**
	baz=298								
ILA				*i* S			**Sb**	**17 50 17.7**	**+0.7**
	baz=298								
TWB1	**Santiao Chiao**	**0.58**	**335**	*i* P			**Pn**	**17 50 09.2**	**-0.5**
	baz=332								
TWB1				S			**Sb**	**17 50 17.6**	**-0.4**
	baz=332								
TWE	**Neicheng**	**0.59**	**294**	P			**Pn**	**17 50 09.4**	**-0.4**
	baz=291								
TWE				S			**Sb**	**17 50 18.5**	**+0.3**
	baz=291								
ENTT	**Nioudou**	**0.65**	**285**	P			**Pn**	**17 50 10.6**	**0.0**
	baz=282								
ENTT				*e*S			**Sn**	**17 50 20.1**	**+0.4**
	baz=282								
YOJ	**Yonaguni jima**	**0.69**	**91**	P			**Pn**	**17 50 11.2**	**+0.1**
YOJ				*e*S			**Sn**	**17 50 21.7**	**+1.1**
TWD	**Chiawan**	**0.72**	**237**	*e*P			**Pn**	**17 50 10.4**	**-1.2**
	baz=236								
TWD				S			**Sn**	**17 50 22.1**	**+0.6**
	baz=236								
NWF	**Wu-fen Shan**	**0.73**	**324**	P			**Pn**	**17 50 11.3**	**-0.4**
	baz=321								
NWF				S			**Sn**	**17 50 21.7**	**-0.1**
	baz=321								
TWA	**Mucha**	**0.79**	**309**	P			**Pn**	**17 50 12.1**	**-0.5**
	baz=307								
TWA				S			**Sn**	**17 50 23.6**	**+0.4**
	baz=307								
NNS	**Nan Shan**	**0.81**	**268**	*e*P			**Pn**	**17 50 13.0**	**+0.2**
	baz=266								
NNS				*e*S			**Sn**	**17 50 24.3**	**+0.7**
	baz=266								
NSK	**Sanguang**	**0.84**	**284**	P			**Pn**	**17 50 13.0**	**-0.3**
	baz=282								
NSK				*e*S			**Sn**	**17 50 24.5**	**0.0**
	baz=282								
WHF	**Hehuan Shan**	**0.96**	**250**	*e*P			**Pn**	**17 50 14.3**	**-0.6**
	baz=249								
WHF				*e*S			**Sn**	**17 50 28.1**	**+0.7**
	baz=249								
TWS1	**Kuangyinshan**	**0.98**	**309**	P			**Pn**	**17 50 14.6**	**-0.6**
	baz=307								
TWS1				*e*S			**Sn**	**17 50 27.4**	**-0.6**
	baz=307								
ESL	**Shilin**	**1.00**	**229**	*e*P			**Pn**	**17 50 13.5**	**-1.9**
	baz=229								
ESL				*e*S			**Sn**	**17 50 26.0**	**-2.4**
	baz=229								
TWT	**Tachien**	**1.01**	**258**	*e*P			**Pn**	**17 50 15.8**	**+0.2**
	baz=256								
TWT				*e*S			**Sn**	**17 50 28.1**	**-0.5**
	baz=256								
NSTT	**Nanjuang**	**1.16**	**278**	*e*P			**Pn**	**17 50 17.7**	**+0.1**
	baz=276								
NSTT				*e*S			**Sn**	**17 50 32.7**	**+0.5**
	baz=276								
EHY	**Hungye**	**1.29**	**222**	*e*P			**Pn**	**17 50 19.4**	**0.0**
	baz=221								
EHY				*e*S			**Sn**	**17 50 35.7**	**+0.2**
	baz=221								
IRIF	**Iriomote-Funau**	**1.35**	**96**	P			**Pn**	**17 50 20.8**	**+0.6**
IRIF				S			**Sn**	**17 50 37.1**	**+0.2**
TWQ1	**Liyutan**	**1.36**	**265**	*e*P			**Pn**	**17 50 20.4**	**0.0**
	baz=264								
TWQ1				*e*S			**Sn**	**17 50 38.2**	**+1.0**
	baz=264								
SMLT	**Sun Moon Lake**	**1.38**	**245**	*e*P			**Pn**	**17 50 21.2**	**+0.6**
	baz=244								
SMLT				*e*S			**Sn**	**17 50 38.2**	**+0.6**
	baz=244								
TYC	**Yuchr**	**1.40**	**246**	*e*P			**Pn**	**17 50 20.9**	**-0.1**
	baz=245								
TYC				*e*S			**Sn**	**17 50 39.2**	**+0.9**
	baz=245								
TWF1	**Yuli**	**1.42**	**218**	*e*P			**Pn**	**17 50 19.4**	**-1.9**
	baz=218								
TWF1				*e*S			**Sn**	**17 50 37.2**	**-1.6**
	baz=218								
YUS	**Yu-Shan**	**1.55**	**231**	*e*P			**Pn**	**17 50 22.2**	**-0.8**
	baz=230								
YUS				*e*S			**Sn**	**17 50 40.9**	**-1.0**
	baz=230								
CHKT	**Chengkung**	**1.60**	**211**	*e*P			**Pn**	**17 50 24.0**	**+0.3**
	baz=211								
JKRS	**Kuro-shima**	**1.61**	**98**	P			**Pn**	**17 50 24.2**	**+0.3**
JKRS				S			**Sn**	**17 50 44.5**	**+1.0**
ALS	**Alishan**	**1.64**	**234**	*e*P			**Pn**	**17 50 24.4**	**+0.1**
	baz=234								
ALS				*e*S			**Sn**	**17 50 45.2**	**+1.1**
	baz=234								
CHN5	**Tsauling**	**1.69**	**239**	*e*P			**Pn**	**17 50 25.2**	**+0.3**
	baz=238								
CHN5				*e*S			**Sn**	**17 50 46.6**	**+1.2**
	baz=238								
ELDTW	**Lidau**	**1.71**	**222**	*e*P			**Pn**	**17 50 23.7**	**-1.5**
	baz=221								
ELDTW				*e*S			**Sn**	**17 50 43.7**	**-2.2**
	baz=221								
JIJ	**Ishigaki jima**	**1.72**	**93**	P			**Pn**	**17 50 25.1**	**-0.2**
JIJ				S			**Sn**	**17 50 45.7**	**-0.4**
CHN4	**Tsaushan**	**1.89**	**234**	*e*P			**Pn**	**17 50 28.3**	**+0.6**
	baz=233								
CHN4				*e*S			**Sn**	**17 50 51.2**	**+0.9**
	baz=233								
STYT	**Tauyuan**	**1.90**	**227**	*e*P			**Pn**	**17 50 27.9**	**+0.2**
	baz=226								
STYT				*e*S			**Sn**	**17 50 51.2**	**+0.7**
	baz=226								
WTP	**Ta-pu**	**1.94**	**231**	*e*P			**Pn**	**17 50 27.5**	**-0.9**
	baz=230								
WTP				*e*S			**Sn**	**17 50 49.3**	**-2.3**
	baz=230								
TWG	**Pinlang**	**1.98**	**214**	*e*P			**Pn**	**17 50 28.2**	**-0.7**
	baz=213								
ECL	**Taimali**	**2.22**	**213**	*e*P			**Pn**	**17 50 32.5**	**+0.3**
	baz=212								
ECL				*e*S			**Sn**	**17 50 59.3**	**+0.8**
	baz=212								
SSD	**Sandimen**	**2.28**	**221**	*e*P			**Pn**	**17 50 33.8**	**+0.8**
	baz=221								
SSD				*e*S			**Sn**	**17 51 00.9**	**+1.0**
	baz=221								
EAST	**Anshuo**	**2.45**	**212**	*e*P			**Pn**	**17 50 36.4**	**+1.0**
	baz=212								
EAST				*e*S			**Sn**	**17 51 05.2**	**+1.0**
	baz=212								

*IDC **08** 17:58:14.2±0.8, 354S×14524E, h0km, mb4.2/12, mb1 4.3/15, mb1mx4.3/19, mbtmp4.3/15, ML4.4/3, MS4.3/14, Ms1 4.3/14, ms1mx4.1/23, Error ellipse: s-maj=25.3km s-min=10.7km az=106.0*
*ISCJB **08** 17:58:15.7±2.1, 357S±005×14520E±007, h20km±15km, mb4.7/36, MS4.3/15, Error ellipse: s-maj=11.4km s-min=7.8km az=169.2*
*MOS **08** 17:58:17.3±1.1, 365S×14520E, h33km, mb5.0/8, Error ellipse: s-maj=14.7km s-min=9.6km az=112.7*
*BJI **08** 17:58:17.5, 364S×14503E, h30km, mB5.1, mb4.8, Ms4.5, Msz4.2*
*DJA **08** 17:58:19.7±0.0, 341S×14578E, h95km, mb4.7/8, mB5.2/9, MLv4.9/1, Mw(mB)5.0/9*
*NEIC **08** 17:58:20.2±1.6, 364S×14528E, h45km±16km, mb5.1/13, Error ellipse: s-maj=10.2km s-min=8.8km az=146.0*
*GCMT **08** 17:58:20.2±0.2, 335S×14530E, h12km, MW5.0/90, Moment Tensor Solution. s42,c49; s90,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_r=0.87±.09; $M_{\theta\theta}$=-0.66±.08; $M_{\phi\phi}$=-0.20±.09; $M_{r\theta}$=0.62±.23; $M_{\theta\phi}$=4.21±.06; $M_{r\phi}$=-0.27±.22; Best double couple: M=4.26100×10^{16} NP1:ϕ_s=359.00000°, δ82.00000°, λ=-179.00000°. NP2: ϕ_s=268.00000°, δ89.00000°, λ=-8.00000°. Principal axes: T 3.8000, Plg5.0000°, Azm314.0000°; N 0.9220, Plg82.0000°, Azm279.0000°; P -4.7230, Plg6.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 17:58:19.5±2.2, 352S±004×14531E±006, h33km±15km, h23km±2.3km: pP-P, n90, σ1s20/83, mb4.7/36, MS4.3/15, 1D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.13**	**163**	*e*P			**Pn**	**17 59 46.5**	**-1.2**
	95nm,1.0s								
PMG	**Port Moresby**	**6.13**	**163**	*e*P			**Pn**	**17 59 46.5**	**-1.2**
PMG					pmax		pmax		
	comp=Z,95nm,1.0s								
PMG	**Port Moresby**	**6.13**	**163**	P			**Pn**	**17 59 48.5**	**+0.8**
	comp=Z,75nm,1.2s,comp=Z,2μmcomp=Z,0.4nm								
PMG	**Port Moresby**	**6.13**	**163**	P			**Pn**	**17 59 47.2**	**-0.5**
	comp=Z,75nm,1.2s,comp=Z,1μmcomp=Z,0.4nm								
KAKA	**Kakadu**	**15.66**	**234**	*e*P			Px	18 01 45.2	
	comp=Z,14nm,0.7s								
KAKA	**Kakadu**	**15.66**	**234**	P			Px	18 01 49.9	
	comp=Z,43nm,0.7s,comp=Z,307nm								
HNR	**Honiara**	**15.68**	**113**	Pn			**Pn**	**18 01 58.7**	**+0.6**
	comp=Z,4.7nm,0.3s,baz=211,slow=2.8,SNR=8.1								
HNR					LR		LR	18 06 54.3	
	comp=Z,1μm,20.8s,baz=277,slow=33								
CTA	**Charters Tower**	**16.49**	**177**	*e*P			**Pn**	**18 02 10.9**	**+2.5**
	comp=Z,12nm,1.5s								
CTA				*e*S			**Sn**	**18 05 12.2**	**+1.7**
CTA	**Charters Tower**	**16.49**	**177**	Pn			**Pn**	**18 02 08.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=24,slow=12,SNR=3.8								
CTA	**Charters Tower**	**16.49**	**177**	*e*P			**Pn**	**18 02 10.9**	**+2.5**
CTA				*e*S			**Sn**	**18 05 12.2**	**+1.7**
CTA					pmax		pmax		
	comp=Z,12nm,1.5s								
AAI	**Ambon**	**17.08**	**269**	P			**Pn**	**18 02 19.5**	**+3.6**
	comp=Z,38nm,1.0s,comp=Z,735nm								
AAI	**Ambon**	**17.08**	**269**	P			**Pn**	**18 02 18.9**	**+3.0**
	comp=Z,38nm,1.0s,comp=Z,735nm								
LBMI	**Labuha**	**18.02**	**279**	P			**Pn**	**18 02 31.5**	**+3.9**
	comp=Z,41nm,2.3s,comp=Z,898nm								
LBMI	**Labuha**	**18.02**	**279**	P			**Pn**	**18 02 24.1**	**-3.5**
	comp=Z,41nm,2.3s,comp=Z,902nm								
TNTI	**Ternate**	**18.43**	**283**	P			**Pn**	**18 02 30.1**	**-2.5**
WRAB	**Tennant Creek**	**19.50**	**212**	∥*i*P			**Pn**	**18 02 41.5**	**-3.9**
WRAB	**Tennant Creek**	**19.50**	**212**	P			**Pn**	**18 02 42.4**	**-3.0**
	comp=Z,50nm,1.1s,comp=Z,808nm								
WB2	**Warramunga Arr**	**19.51**	**212**	*e*P			**Pn**	**18 02 42.2**	**-3.3**
WB2				*e*S			**Sn**	**18 06 24.1**	**+0.5**
WRA	**Warramunga Arr**	**19.52**	**212**	P			**Pn**	**18 02 42.0**	**-3.6**
	comp=Z,2.1nm,0.3s,baz=34,slow=11,SNR=92								
WRA					S		**Sn**	**18 06 25.3**	**+1.5**
	baz=34,slow=17,SNR=6.9								
WRA					LR		LR	18 11 14.3	
	comp=Z,3μm,18.4s,baz=35,slow=40								
BATI	**Baumata**	**22.48**	**252**	P			**P**	**18 03 13.8**	**-2.4**
	comp=Z,24nm,0.7s,mb4.7,baz=176,slow=3.6,SNR=6.2								
BATI	**Baumata**	**22.48**	**252**	P			**P**	**18 03 16.2**	**0.0**
	comp=Z,68nm,0.9s,comp=Z,538nm,mb5.1								
BATI	**Baumata**	**22.48**	**252**	P			**P**	**18 03 13.2**	**-3.0**
	comp=Z,68nm,0.9s,comp=Z,533nm,mb5.1								
ASAR	**Alice Springs**	**22.86**	**208**	P			**P**	**18 03 18.4**	**-1.6**
	comp=Z,4.9nm,0.5s,mb4.2,baz=30,slow=12,SNR=67								
KAPI	**Kappang**	**25.53**	**266**	P			**P**	**18 03 44.4**	**-1.0**
	comp=Z,15nm,0.9s,mb4.5,baz=154,slow=6.1,SNR=6.4								
KAPI	**Kappang**	**25.53**	**266**	P			**P**	**18 03 47.5**	**+2.1**
	comp=Z,31nm,1.6s,comp=Z,449nm,mb4.6								
KAPI	**Kappang**	**25.53**	**266**	P			**P**	**18 03 42.7**	**-2.7**
	comp=Z,31nm,1.6s,comp=Z,448nm,mb4.6								
PCI	**Palu**	**25.58**	**275**	P			**P**	**18 03 48.3**	**+2.4**
	comp=Z,58nm,1.0s,comp=Z,538nm,mb5.1								
STKA	**Stephens Creek**	**28.42**	**187**	*e*P			**P**	**18 04 11.1**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.0								
STKA	**Stephens Creek**	**28.42**	**187**	P			**P**	**18 04 09.7**	**-1.4**
	comp=Z,1.9nm,0.7s,mb3.8,baz=72,slow=6.4,SNR=2.6								
STKA					LR		LR	18 16 33.9	
	comp=Z,947nm,20.2s,MS4.4,baz=7.0,slow=39								
JOW	**Kunigami**	**34.38**	**332**	LR			LR	18 16 14.1	
	comp=Z,958nm,19.8s,MS4.5,baz=113,slow=31								
MJAR	**Matsushiro Arr**	**40.40**	**351**	P			**P**	**18 05 54.9**	**+0.4**
	comp=Z,1.3nm,0.8s,mb3.7,baz=157,slow=6.6,SNR=4.0								
SSE	**Sheshan**	**41.40**	**328**	P			**P**	**18 06 01.6**	**-1.2**
SSE				S			**S**	**18 12 14.3**	**-1.4**
SSE					AMB		AMB		
	comp=Z,32nm,0.7s,mb5.1								
SSE					AMB		AMB		
	comp=Z,119nm,7.0s								
SSE					LR		LR		
	comp=N,453nm,18.9s,MS4.4								
SSE					LR		LR		
	comp=E,291nm,18.9s,MS4.4								
SSE					LR		LR		
	comp=Z,633nm,19.0s,MS4.5								
KSRS	**Korea Array**	**43.85**	**340**	P			**P**	**18 06 21.9**	**-0.7**
	comp=Z,1.5nm,0.6s,mb3.9,baz=153,slow=8.7,SNR=7.4								
KSRS					LR		LR	18 22 05.7	
	comp=Z,400nm,19.3s,MS4.3,baz=158,slow=33								
ASAJ	**Asahikawa**	**47.48**	**357**	P			**P**	**18 06 51.1**	**-0.1**
	comp=Z,2.4nm,0.7s,mb4.3,baz=194,slow=18,SNR=2.0								
KMI	**Kunming**	**50.16**	**307**	P			**P**	**18 07 13.6**	**+1.4**
KMI					AP		pP	18 07 20.7	-1.4
KMI					XP		sP	18 07 23.2	-2.8
KMI					XS		sS	18 14 41.1	+2.7
KMI					AMB		AMB		
	comp=Z,11nm,1.2s,mb4.8								
KMI					AMB		AMB		
	comp=Z,119nm,3.7s								
KMI					LR		LR		
	comp=N,229nm,21.2s,MS4.3								
KMI					LR		LR		
	comp=E,243nm,18.6s,MS4.3								
KMI					LR		LR		
	comp=Z,293nm,22.0s,MS4.2								
KMI	**Kunming**	**50.16**	**307**	P			**P**	**18 07 13.6**	**+1.4**
KMI					pP		pP	18 07 20.7	-1.4
KMI					sP		sP	18 07 23.2	-2.8
KMI					PP		PP	18 09 13.1	+5.4
KMI					PPP			18 10 13.3	
KMI					S		**S**	**18 14 29.6**	**+7.5**
KMI					sS		sS	18 14 41.1	+2.7
KMI					SS		SS	18 18 01.8	+5.9
KMI					SSS			18 19 39.8	
YSS	**Yuzh-Sakhalins**	**50.31**	**358**	*e*P			**P**	**18 07 14.5**	**+1.6**
YSS					pmax		pmax		
	comp=Z,48nm,2.0s,mb5.2								
CMAR	**Chiang Mai Arr**	**50.61**	**297**	P			**P**	**18 07 15.5**	**-0.2**
	comp=Z,2.7nm,0.9s,mb4.2,baz=121,slow=5.5,SNR=17								
CMAR					LR		LR	18 28 46.1	
	comp=Z,79nm,19.7s,MS3.7,baz=268,slow=36								
XAN	**Xi'an**	**50.71**	**320**	P			**P**	**18 07 17.9**	**+1.8**
XAN					AP		pP	18 07 25.7	-0.4
XAN					AMB		AMB		
	comp=Z,23nm,1.1s,mb5.0								
XAN					AMB		AMB		
	comp=Z,120nm,6.2s								
XAN					LR		LR		
	comp=E,172nm,26.0s								
XAN					LR		LR		
	comp=Z,352nm,27.9s,MS4.2								
CHTO	**Chiang Mai**	**50.74**	**298**	*e*P			**P**	**18 07 17.4**	**+0.8**
	comp=Z,6.3nm,1.1s,mb4.5								
CHTO	**Chiang Mai**	**50.74**	**298**	*e*P			**P**	**18 07 17.4**	**+0.8**
CHTO					pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.4								
KLR	**Kul'dur**	**53.84**	**349**	*e*P			**P**	**18 07 35.3**	**-3.8**
LZH	**Lanzhou**	**55.24**	**319**	*e*P			**P**	**18 07 52.0**	**+2.4**
LZH					AP		pP	18 07 57.3	-2.3
LZH					XP		sP	18 07 59.5	-4.0
LZH					AMB		AMB		
	comp=Z,18nm,1.3s,mb4.9								
LZH					AMB		AMB		
	comp=Z,73nm,4.3s								
PETK	**Petropavlovsk-**	**57.38**	**9**	P			**P**	**18 08 06.2**	**+1.8**
	comp=Z,4.8nm,0.9s,mb4.5,baz=203,slow=11,SNR=3.7								
PETK					LR		LR	18 29 14.0	
	comp=Z,127nm,19.3s,MS4.0,baz=189,slow=32								
GTA	**Gaotai**	**59.77**	**320**	*e*P			**P**	**18 08 22.1**	**+0.7**
GTA					AMB		AMB		
	comp=Z,3.0nm,1.4s,mb4.1								
ULN	**Ulaanbaatar**	**61.14**	**332**	*e*P			**P**	**18 08 28.9**	**-1.7**
	comp=Z,7.5nm,1.4s,mb4.6								
ULN	**Ulaanbaatar**	**61.14**	**332**	*e*P			**P**	**18 08 28.9**	**-1.7**
ULN					pmax		pmax		
	comp=Z,8.0nm,1.4s,mb4.7								
SONM	**Songino Array**	**61.43**	**331**	P			**P**	**18 08 32.8**	**+0.3**
	comp=Z,1.1nm,0.9s,mb4.0,baz=119,slow=5.1,SNR=4.7								
SONM					LR		LR	18 34 32.3	
	comp=Z,339nm,18.9s,MS4.5,baz=180,slow=36								
DRV	**Dumont d'Urvil**	**63.13**	**182**	P			**P**	**18 08 42.0**	**-1.6**
DRV				S			**S**	**18 17 11.0**	**-1.3**
DRV				L				18 24 00.0	
DRV				R				18 29 00.0	
TAPN	**Taplejung**	**63.39**	**303**	*e*P			**P**	**18 08 46.6**	**+0.5**
	comp=Z,47nm,1.4s,mb5.4								
ODAN	**Odare**	**63.50**	**302**	*e*P			**P**	**18 08 47.5**	**+0.7**
	comp=Z,19nm,1.1s,mb5.1								
RAMN	**Ramite**	**64.20**	**302**	*e*P			**P**	**18 08 51.6**	**+0.2**
ZAK	**Zakamensk**	**64.67**	**332**	*e*			**P**	**18 08 53.9**	**-0.1**
ZAK					pmax		pmax		
	comp=Z,5.0nm,1.5s,mb4.3								
JIRN	**Jiri**	**64.77**	**303**	*e*P			**P**	**18 08 55.7**	**+0.6**
	comp=Z,19nm,1.3s,mb5.0								
GUN	**Gumba**	**65.11**	**303**	*e*P			**P**	**18 08 57.9**	**+0.6**
PPT	**Papeete**	**65.23**	**108**	*e*S			S	18 17 37.3	-2.6
	comp=Z,234nm,28.0s								
PPT	**Papeete**	**65.23**	**108**	*e*LR			LR	18 28 35.1	
	comp=Z,107nm,22.8s								
PKI	**Pulchoki**	**65.40**	**302**	*e*P			**P**	**18 08 59.4**	**+0.2**
PKI	**Pulchoki**	**65.40**	**302**	*e*P			**P**	**18 08 59.5**	**+0.3**
PKIN	**Phulchoki**	**65.41**	**302**	*e*P			**P**	**18 08 59.5**	**+0.2**
KKN	**Kakani**	**65.58**	**303**

comp=Z,1.1nm,0.8s,baz=236,slow=7.3,SNR=3.5
TORD Torodi Ar. Bea 142.80 287 PKP PKPdf 18 17 49.6 -1.0
comp=Z,0.4nm,0.5s,baz=90,slow=0.3,SNR=3.9
DBIC Dimbokro 150.12 277 PKPbc PKPbc 18 18 06.8 -1.2
comp=Z,2.9nm,1.0s,baz=36,slow=5.3,SNR=2.5
DBIC PKPab PKPab 18 18 12.2 -1.8
comp=Z,6.4nm,1.0s,baz=127,slow=3.3,SNR=5.8

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*ISCJB **08** 18:35:02.4±2.2, 1694S±008×712W±02, h111km±21km, mb3.5/4, Error ellipse: s-maj=27.3km s-min=11.1km az=13.3*
*IDC **08** 18:35:03.6±2.7, 1693S×7109W, h105km±24km, mb3.4/4, mb1 3.7/8, mb1mx3.5/20, mbtmp3.5/8, Error ellipse: s-maj=27.9km s-min=14.5km az=110.0*
*NEIC **08** 18:35:03.6±2.1, 1689S×7106W, h106km±19km, Error ellipse: s-maj=28.4km s-min=14.1km az=107.0*
ISC 08 18:35:03.1±2.1, 1692S±008×712W±02, h99km±19km, n19, σ1§17/16, mb3.5/4, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
LPAZ	**La Paz**	**3.01**	**78**	P		**Pn**		**18 35 50.6**	**+1.6**
	28nm,0.3s,baz=257,slow=10,SNR=338								
LPAZ				S		**Sn**		**18 36 24.9**	**+0.5**
	baz=243,slow=4.5,SNR=2.0								
LVC	**Limon Verde**	**6.06**	**160**	P		**Pn**		**18 36 29.4**	**-0.8**
	6.4nm,0.3s,baz=332,slow=8.9,SNR=58								
LVC				S		**Sn**		**18 37 37.5**	**-0.7**
	16nm,0.3s,baz=182,slow=17,SNR=19								
LVC	**Limon Verde**	**6.06**	**160**	P		**Pn**		**18 36 29.4**	**-0.8**
LVC				S		**Sn**		**18 37 37.5**	**-0.7**
SIV	**San Ignacio**	**9.76**	**86**	P		**Pn**		**18 37 17.8**	**-2.8**
	5.2nm,0.3s,baz=272,slow=11,SNR=56								
CFAA	**Coronel Fontan**	**14.87**	**170**	P		**Pn**		**18 38 28.8**	**+0.6**
	0.0nm,0.3s,baz=321,slow=13,SNR=3.6								
CFAA	**Coronel Fontan**	**14.87**	**170**	P		**Pn**		**18 38 28.8**	**+0.6**
PLCA	**Paso Flores**	**23.74**	**179**	P		**P**		**18 40 07.4**	**+1.2**
	1.7nm,0.5s,mb3.6,baz=347,slow=11,SNR=8.8								
TXAR	**Lajitas Array**	**55.65**	**325**	P		**P**		**18 44 28.1**	**-0.9**
	0.3nm,0.6s,mb3.5,baz=139,slow=6.8,SNR=3.3								
VNA2	**Neumayer--Watz**	**65.67**	**161**	*e*		**P**		**18 45 37.9**	**+1.4**
	baz=303,slow=10								
SNAA	**Sanae**	**67.30**	**161**	*e*		**P**		**18 45 46.8**	**0.0**
NVAR	**Mina Array Bea**	**70.56**	**322**	P		**P**		**18 46 07.9**	**+0.4**
	0.3nm,0.8s,mb3.2,baz=145,slow=6.4,SNR=3.1								
TORD	**Torodi Ar. Bea**	**77.94**	**72**	P		**P**		**18 46 49.2**	**-1.7**
	1.1nm,0.5s,mb3.9,baz=257,slow=5.6,SNR=13								
TORD	**Torodi Ar. Bea**	**77.94**	**72**	P		**P**		**18 46 49.2**	**-1.7**
ASAR	**Alice Springs**	**132.79**	**212**	PKP		PKPdf		18 54 07.3	-0.1
	0.1nm,0.4s,baz=120,slow=1.5,SNR=5.7								
WRA	**Warramunga Arr**	**135.60**	**215**	PKP		PKPdf		18 54 13.0	+0.3
	0.3nm,0.4s,baz=142,slow=1.7,SNR=14								
ZALV	**Zalesovo Beam**	**138.61**	**21**	PKP		PKPdf		18 54 17.4	+0.3
	0.6nm,0.6s,baz=284,slow=2.4,SNR=4.4								
MKAR	**Makanchi Array**	**143.00**	**31**	PKP		PKPdf		18 54 23.7	-1.7
	0.2nm,0.5s,baz=308,slow=3.0,SNR=3.3								
MJAR	**Matsushiro Arr**	**147.46**	**313**	PKPbc		PKPbc		18 54 36.7	+0.7
	1.2nm,0.5s,baz=91,slow=2.2,SNR=3.0								
SONM	**Songino Array**	**149.10**	**3**	PKPbc		PKPbc		18 54 40.4	+0.6
	1.1nm,0.5s,baz=301,slow=1.3,SNR=9.9								

IDC 08 18:37:03.0±16.0, 022S×12493E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/16, mbtmp3.7/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/30, Error ellipse: s-maj=252.9km s-min=184.3km az=163.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
BATI	**Baumata**	**10.00**	**187**	LR		LR		18 44 11.6	
	comp=Z,38nm,21.4s,baz=295,slow=43								
WRA	**Warramunga Arr**	**21.66**	**155**	P		P		18 41 55.5	+0.3
	0.9nm,0.4s,baz=334,slow=10,SNR=15								
ASAR	**Alice Springs**	**24.88**	**160**	P		P		18 42 27.3	-0.3
	0.8nm,0.4s,baz=340,slow=8.6,SNR=34								
STKA	**Stephens Creek**	**35.21**	**155**	P		P		18 43 59.3	+0.2
	0.5nm,0.4s,baz=346,slow=8.3,SNR=5.8								

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*ISCJB **08** 18:58:40.0±0.6, 6378N±004×1497W±0.1, h116km±5km, mb3.9/13, Error ellipse: s-maj=8.8km s-min=6.1km az=145.2*
*NEIC **08** 18:58:42.0, 6369N×1494?W, h123km, mb4.8/3, After AEIC.*
*IDC **08** 18:58:48.9±3.4, 6395N×1493?W, h182km±38km, mb3.4/11, mb1 3.6/13, mb1mx3.5/24, mbtmp3.4/13, Error ellipse: s-maj=29.0km s-min=12.7km az=39.0*
ISC 08 18:58:41.3±0.5, 6377N±004×1497W±01, h111km±4km, n170, σ0§51/172, mb3.9/13, 72C-66D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
COLA	**College**	**1.36**	**35**	*e*P		**Pn**		**18 59 08.0**	**+1.5**
PMR	**Palmer**	**2.20**	**174**	*e*P		**Pn**		**18 59 16.4**	**-0.4**
MENT	**Mentasta**	**2.80**	**105**	*e*P		**Pn**		**18 59 23.5**	**-1.1**
IMA2	**Indian Mountai**	**2.88**	**325**	*e*P		**Pn**		**18 59 27.9**	**+2.3**
SLKM	**Skilak Lake**	**3.29**	**185**	*e*P		**Pn**		**18 59 31.1**	**0.0**
EYAK	**Cordova Ski Ar**	**3.72**	**149**	*e*P		**Pn**		**18 59 35.0**	**-1.8**
EGAK	**Eagle**	**3.84**	**71**	*e*P		**Pn**		**18 59 38.1**	**-0.3**
SVW2	**Sparrevohn**	**3.85**	**228**	*e*P		**Pn**		**18 59 39.2**	**+0.7**
DAWY	**Dawson**	**4.54**	**82**	*e*P		**Pn**		**18 59 46.8**	**-1.1**
KDAK	**Kodiak Island**	**6.18**	**195**	P		**Pn**		**19 00 21.5**	**+12**
	4.2nm,0.3s,baz=49,slow=8.9,SNR=39								
KDAK				S		**Sn**		**19 01 27.1**	**+7.9**
	12nm,0.3s,baz=317,slow=24,SNR=18								
KDAK	**Kodiak Island**	**6.18**	**195**	*e*P		**Pn**		**19 00 07.5**	**-2.5**
	32nm,0.6s								
KDAK				P				19 00 21.6	
KDAK				S		**Sn**		**19 01 27.1**	**+7.9**
HYT	**Haines Junctio**	**6.39**	**112**	*e*P		**Pn**		**19 00 11.6**	**-1.2**
INK	**Inuvik**	**7.97**	**48**	*e*P		**Pn**		**19 00 34.5**	**+0.3**
	3μm,0.8s								
YKA	**Yellowknife Ar**	**15.77**	**79**	P		**Pn**		**19 02 17.7**	**+0.9**
	0.4nm,0.3s,baz=298,slow=10,SNR=14								
A05A	**Maple Falls**	**21.00**	**122**	⇓P		**P**		**19 03 15.9**	**+0.3**
	baz=21								
A06A	**Chilliwack**	**21.15**	**121**	⇓P		**P**		**19 03 17.8**	**+0.6**
	baz=21								
B04A	**Port Angeles**	**21.26**	**125**	⇓P		**P**		**19 03 19.0**	**+0.6**
	baz=21								
RES	**Resolute Bay**	**21.28**	**37**	*e*P		**P**		**19 03 19.4**	**+1.1**
	155nm,0.6s								
B05A	**Bryant**	**21.61**	**123**	⇓P		**P**		**19 03 22.9**	**+0.9**
	baz=21								
A07A	**Ashnola River,**	**21.62**	**119**	⇑P		**P**		**19 03 22.8**	**+0.7**
	baz=21,SNR=6.9								
C04A	**Brinnon**	**21.74**	**125**	⇓P		**P**		**19 03 23.5**	**+0.1**
	baz=22								
A08A	**Turner Farm, O**	**22.13**	**118**	⇓P		**P**		**19 03 27.6**	**+0.1**
	baz=22								
B07A	**Winthrop**	**22.20**	**120**	⇓P		**P**		**19 03 28.5**	**+0.3**
	baz=22								
A09A	**Danville**	**22.38**	**117**	⇓P		**P**		**19 03 30.4**	**+0.2**
	baz=22								
E03A	**Lebam**	**22.53**	**128**	⇓P		**P**		**19 03 31.9**	**+0.2**
	baz=22								
D05A	**Enumclaw**	**22.55**	**124**	⇑P		**P**		**19 03 32.2**	**+0.2**
	baz=22								
B08A	**Colville Reser**	**22.58**	**119**	⇑P		**P**		**19 03 32.3**	**0.0**
	baz=22								
A10A	**Northport**	**22.79**	**115**	⇑P		**P**		**19 03 33.6**	**-0.7**
	baz=23								
ETW	**Entiat**	**22.82**	**121**	*e*P		**P**		**19 03 33.8**	**-0.8**
C07A	**Waterville**	**22.85**	**121**	⇓P		**P**		**19 03 34.1**	**-0.8**
	baz=23								
B09A	**Rice**	**23.00**	**117**	⇑P		**P**		**19 03 35.7**	**-0.5**
	baz=23,SNR=5.3								
C08A	**Higginbotham F**	**23.16**	**119**	⇑P		**P**		**19 03 37.3**	**-0.4**
	baz=23								
D07A	**Quincy**	**23.30**	**121**	⇑P		**P**		**19 03 38.3**	**-0.7**
	baz=23								
F04A	**Amboy**	**23.46**	**127**	⇓P		**P**		**19 03 40.2**	**-0.3**
	baz=23								
E06A	**Yakima**	**23.46**	**124**	⇑P		**P**		**19 03 40.3**	**-0.2**
	baz=23								
D08A	**Wollman Farm,**	**23.81**	**120**	⇑P		**P**		**19 03 43.3**	**-0.4**
	baz=24								
F05A	**White Salmon**	**23.85**	**125**	⇓P		**P**		**19 03 43.8**	**-0.2**
	baz=24								
E07A	**Sunnyside**	**23.87**	**122**	⇑P		**P**		**19 03 43.9**	**-0.2**
	baz=24								
B12A	**Libby**	**23.99**	**114**	⇓P		**P**		**19 03 45.1**	**-0.1**
	baz=24								
A13A	**Flathead Natio**	**24.11**	**111**	⇑P		**P**		**19 03 46.5**	**+0.2**
	baz=24								
F06A	**Goldendale**	**24.20**	**124**	⇓P		**P**		**19 03 47.2**	**+0.1**
	baz=24								
C11A	**Tepee Creek (N**	**24.22**	**115**	⇑P		**P**		**19 03 47.6**	**+0.3**
	baz=24								
F07A	**Phinny Hill Vi**	**24.40**	**123**	⇓P		**P**		**19 03 49.2**	**+0.2**
	baz=24								
D10A	**Wagner Farm, O**	**24.45**	**118**	⇓P		**P**		**19 03 49.3**	**-0.2**
	baz=24								
A14A	**Double T Ranch**	**24.49**	**110**	⇓P		**P**		**19 03 49.8**	**0.0**
	baz=24								
B13A	**Whitefish**	**24.52**	**112**	⇑P		**P**		**19 03 49.7**	**-0.4**
	baz=24								
H04A	**Detroit Lake**	**24.62**	**128**	⇓P		**P**		**19 03 50.8**	**-0.3**
	baz=24								
G06A	**Carlson Farm,**	**24.70**	**125**	⇑P		**P**		**19 03 51.7**	**-0.1**
	baz=24								
A15A	**Johnson Ranch,**	**24.77**	**109**	⇑P		**P**		**19 03 52.2**	**-0.2**
	baz=24								
I03A	**Eugene**	**24.87**	**130**	⇑P		**P**		**19 03 53.5**	**+0.2**
	baz=25								
F08A	**Pendleton**	**24.92**	**122**	⇑P		**P**		**19 03 53.6**	**0.0**
	baz=25								
B14A	**Marquette Ranc**	**25.03**	**111**	⇓P		**P**		**19 03 54.9**	**+0.2**
	baz=25								
C13A	**Hot Springs**	**25.03**	**113**	⇑P		**P**		**19 03 55.5**	**+0.8**
	baz=25								
H06A	**Lindquist Farm**	**25.24**	**125**	⇓P		**P**		**19 03 56.2**	**-0.5**
	baz=25								
A16A	**West Butte Ran**	**25.27**	**108**	⇑P		**P**		**19 03 56.6**	**-0.3**
	baz=25								
B15A	**Bradely Ranch,**	**25.36**	**110**	⇓P		**P**		**19 03 57.7**	**0.0**
	baz=25								
E11A	**Bogner Ranch,**	**25.45**	**117**	⇑P		**P**		**19 03 58.0**	**-0.5**
	baz=25								
H07A	**Lands Inn, Kim**	**25.65**	**124**	⇓P		**P**		**19 03 59.9**	**-0.4**
	baz=25								
E12A	**Beaver Dam Sad**	**25.65**	**116**	⇑P		**P**		**19 04 00.4**	**+0.1**
	baz=25								
C15A	**Salmond Ranch,**	**25.76**	**111**	⇑P		**P**		**19 04 01.5**	**+0.2**
	baz=26								
H08A	**Prairie City**	**26.04**	**123**	⇓P		**P**		**19 04 03.3**	**-0.6**
	baz=26								
C16A	**Fuhringer Ranc**	**26.10**	**110**	⇓P		**P**		**19 04 04.2**	**-0.2**
	baz=26								
I07A	**Izee**	**26.11**	**125**	⇑P		**P**		**19 04 04.7**	**+0.3**
	baz=26								
G11A	**Walters Elk Ra**	**26.21**	**119**	⇑P		**P**		**19 04 05.3**	**-0.1**
	baz=26								
F12A	**Elk City**	**26.32**	**117**	⇑P		**P**		**19 04 06.7**	**+0.4**
	baz=26								
J06A	**Christmas Vall**	**26.59**	**127**	⇑P		**P**		**19 04 09.2**	**+0.4**
	baz=26,SNR=6.7								
C17A	**Wharram Farm,**	**26.65**	**109**	⇑P		**P**		**19 04 08.7**	**-0.6**
	baz=26								
F13A	**Darby**	**26.66**	**116**	⇓P		**P**		**19 04 09.0**	**-0.4**
	baz=26								
H10A	**Noah's Angus R**	**26.71**	**120**	⇓P		**P**		**19 04 09.6**	**-0.3**
	baz=26								
K05A	**Summer Lake**	**26.79**	**128**	⇑P		**P**		**19 04 10.6**	**-0.1**
	baz=27								
D16A	**Dana Ranch, Ca**	**26.79**	**111**	⇑P		**P**		**19 04 10.0**	**-0.6**
	baz=27								
YBH	**Yreka Blue Hor**	**27.05**	**132**	⇓P		**P**		**19 04 13.1**	**+0.2**
	baz=27								
J08A	**Circle Bar Ran**	**27.11**	**124**	⇓P		**P**		**19 04 13.2**	**-0.3**
	baz=27								
G13A	**Cobalt**	**27.27**	**116**	⇑P		**P**		**19 04 15.0**	**+0.1**
	baz=27								
J09A	**Fry Pan Ranch,**	**27.39**	**123**	⇓P		**P**		**19 04 16.0**	**+0.1**
	baz=27								
K07A	**Rock Creek Ran**	**27.41**	**126**	⇑P		**P**		**19 04 16.2**	**+0.1**
	baz=27								
K08A	**Mann Creek Ran**	**27.65**	**125**	⇑P		**P**		**19 04 18.1**	**-0.2**
	baz=27								
H13A	**Challis**	**27.70**	**117**	⇓P		**P**		**19 04 18.7**	**0.0**
	baz=28								
MOD	**Modoc**	**27.72**	**128**	⇑P		**P**		**19 04 19.2**	**+0.3**
	baz=28								
BOZ	**Bozeman (W)**	**27.87**	**112**	⇓P		**P**		**19 04 20.3**	**+0.1**
	baz=28								
G15A	**Dillon**	**27.91**	**114**	⇓P		**P**		**19 04 20.4**	**-0.2**
	baz=28								
K09A	**Rome**	**27.95**	**124**	⇓P		**P**		**19 04 21.4**	**+0.4**
	baz=28								
L07A	**Adell**	**27.96**	**127**	⇓P		**P**		**19 04 21.2**	**+0.2**
	baz=28,SNR=5.1								
MFID	**Camas Ranch**	**28.05**	**120**	⇑P		**P**		**19 04 21.4**	**-0.5**
	baz=28								
L08A	**Fields**	**28.17**	**125**	⇓P		**P**		**19 04 22.8**	**-0.1**
	baz=28,SNR=5.2								
I13A	**Wildhorse Cree**	**28.30**	**118**	⇓P		**P**		**19 04 24.2**	**+0.2**
	baz=28								
HLID	**Hailey**	**28.48**	**118**	⇓P		**P**		**19 04 25.9**	**+0.3**
	baz=28								
K11A	**Parker Ranch,**	**28.53**	**121**	⇑P		**P**		**19 04 26.0**	**0.0**
	baz=28								
I14A	**Mackay**	**28.55**	**117**	⇑P		**P**		**19 04 26.2**	**-0.1**
	baz=28								
N06A	**Buffalo Meadow**	**28.91**	**129**	⇓P		**P**		**19 04 29.5**	**0.0**
	baz=29								
L10A	**Juniper Basin**	**28.96**	**123**	⇓P		**P**		**19 04 29.8**	**-0.1**
	baz=29								
L11A	**Cat Creek Ranc**	**29.15**	**122**	⇑P		**P**		**19 04 31.7**	**+0.1**
	baz=29								
N07B	**Gerlach**	**29.18**	**127**	⇑P		**P**		**19 04 32.2**	**+0.3**
	baz=29								
M10A	**I.L. Ranch, Tu**	**29.41**	**123**	⇑P		**P**		**19 04 33.7**	**-0.2**
	baz=29								
N08A	**GE Springer Mi**	**29.48**	**126**	⇓P		**P**		**19 04 34.4**	**-0.1**
	baz=29,SNR=7.7								
O07A	**Toulon**	**29.76**	**128**	⇓P		**P**		**19 04 37.2**	**+0.2**
	baz=30								
CVS	**Carmenet Viney**	**30.20**	**134**	⇓P		**P**		**19 04 40.8**	**-0.2**
	baz=30								
ELK	**Elko**	**30.57**	**122**	P		**P**		**19 04 44.4**	**+0.2**
	0.9nm,0.7s,mb3.6,baz=335,slow=12,SNR=4.9								
FARB	**Farallon Islan**	**30.62**	**136**	⇑P		**P**		**19 04 45.2**	**+0.6**
	baz=30								
M14A	**Sheep Mountain**	**30.64**	**119**	⇓P		**P**		**19 04 45.1**	**+0.3**
	baz=30								
O11A	**Cowboy Ranch,**	**30.95**	**124**	⇓P		**P**		**19 04 47.6**	**+0.1**
	baz=31								
Q08A	**Gabbs**	**31.25**	**128**	⇓P		**P**		**19 04 50.1**	**-0.1**
	baz=31								
NVAR	**Mina Array Bea**	**31.51**	**129**	P		**P**		**19 04 53.4**	**+0.9**
	2.8nm,0.8s,mb4.1,baz=320,slow=8.0,SNR=15								
Q11A	**Duxwater**	**32.08**	**125**	⇓P		**P**		**19 04 57.7**	**+0.3**
	baz=32								
R09A	**Tonopah**	**32.11**	**127**	⇑P		**P**		**19 04 57.8**	**+0.1**
	baz=32								
R10A	**Warm Springs**	**32.34**	**126**	⇓P		**P**		**19 04 59.9**	**+0.2**
	baz=32								
P14A	**Drum Mountains**	**32.40**	**121**	⇓P		**P**		**19 05 00.3**	**+0.1**
	baz=32								
S09A	**Goldfield**	**32.52**	**128**	⇓P		**P**		**19 05 01.3**	**+0.1**
	baz=32								
R11A	**Troy Canyon, C**	**32.55**	**125**	⇑P		**P**		**19 05 01.5**	**0.0**
	baz=32,SNR=5.8								
S10A	**Tonopah Range,**	**32.56**	**127**	⇑P		**P**		**19 05 01.8**	**+0.1**
	baz=32								
Q14A	**Sevier Lake (B**	**32.84**	**122**	⇑P		**P**		**19 05 04.1**	**0.0**
	baz=33,SNR=5.1								
PKD	**Parkfield**	**33.01**	**134**	⇓P		**P**		**19 05 05.4**	**-0.2**
	baz=33								
S12A	**Delamar Landin**	**33.47**	**125**	⇑P		**P**		**19 05 09.6**	**+0.1**
	baz=33								
TPNV	**Topopah Spring**	**33.56**	**127**	⇓P		**P**		**19 05 09.9**	**-0.4**
	baz=33								
T11A	**Corn Creek, Al**	**33.66**	**126**	⇑P		**P**		**19 05 10.9**	**-0.3**
	baz=33								
S13A	**Holt Ranch, En**	**33.86**	**123**	⇓P		**P**		**19 05 12.7**	**-0.2**
	baz=34								
MPMC	**Manual Prospec**	**33.92**	**129**	⇑P		**P**		**19 05 13.1**	**-0.4**
	baz=34								
ISA	**Isabella**	**33.95**	**131**	⇑P		**P**		**19 05 13.4**	**-0.2**
	baz=34								
PKM	**Peak Mountain**	**34.21**	**133**	⇑P		**P**		**19 05 16.0**	**+0.1**
	baz=34								
T13A	**Saint George**	**34.34**	**124**	⇓P		**P**		**19 05 17.2**	**+0.2**
	baz=34								
S16A	**Weppner Ranch,**	**34.59**	**121**	⇓P		**P**		**19 05 19.3**	**+0.1**
	baz=34								
GSC	**Goldstone**	**34.84**	**129**	*e*P		**P**		**19 05 22.0**	**+0.6**
	3.8nm,0.5s,mb4.5								
GSC	**Goldstone**	**34.84**	**129**	⇑P		**P**		**19 05 21.5**	**+0.1**
	baz=35								
T15A	**Red Dirt Ranch**	**34.91**	**122**	⇑P		**P**		**19 05 22.1**	**+0.2**
	baz=35								
S17A	**Black Ridge (B**	**34.97**	**120**	⇑P		**P**		**19 05 22.7**	**+0.2**
	baz=35								
TUQ	**Turquoise Moun**	**35.03**	**128**	⇓P		**P**		**19 05 23.4**	**+0.4**
	baz=35								
V13A	**Grand Canyon W**	**35.35**	**125**	⇓P		**P**		**19 05 25.8**	**+0.1**
	baz=35								
U15A	**North Rim**	**35.46**	**122**	⇑P		**P**		**19 05 27.0**	**+0.3**
	baz=35								
BFSC	**Mount Baldy St**	**35.52**	**131**	⇓P		**P**		**19 05 27.3**	**+0.1**
	baz=35								
GMRC	**Granite Mounta**	**35.71**	**128**	⇑P		**P**		**19 05 29.0**	**+0.1**
	baz=36								
T18A	**Mexican Hat**	**35.77**	**119**	⇑P		**P**		**19 05 28.9**	**-0.3**
	baz=36								
V14A	**Boquillas Ranc**	**35.87**	**124**	⇑P		**P**		**19 05 30.4**	**+0.2**
	baz=36								
V15A	**Kaibab Nationa**	**36.05**	**123**	⇑P		**P**		**19 05 32.0**	**+0.3**
	baz=36,SNR=8.6								
W13A	**Hualapai Mount**	**36.06**	**125**	⇑P		**P**		**19 05 32.2**	**+0.5**
	baz=36								
U16A	**Tuba City**	**36.15**	**121**	⇓P		**P**		**19 05 32.4**	**-0.2**
	baz=36								
W14A	**Seligman**	**36.25**	**124**	⇑P		**P**		**19 05 33.5**	**+0.1**
	baz=36								
BELC	**Belle Mtn.**	**36.30**	**129**	⇑P		**P**		**19 05 33.9**	**0.0**
	baz=36								
IRM	**Iron Mountain**	**36.45**	**128**	⇑P		**P**		**19 05 35.5**	**+0.3**
	baz=36								
X13A	**Yucca**	**36.53**	**126**	⇑P		**P**		**19 05 36.0**	**+0.2**
	baz=36								
WUAZ	**Wupatki**	**36.61**	**122**	⇑P		**P**		**19 05 37.0**	**+0.5**
	baz=36								
BC3	**Big Chuckw Mtn**	**36.80**	**129**	⇓P		**P**		**19 05 38.1**	**0.0**
	baz=37								
MONP	**Monument Peak**	**37.17**	**130**	⇓P		**P**		**19 05 41.8**	**+0.6**
	baz=37,SNR=6.2								
Y13A	**Salome**	**37.23**	**126**	⇓P		**P**		**19 05 42.0**	**+0.3**
	baz=37								
Y14A	**Wickenburg**	**37.42**	**125**	⇑P		**P**		**19 05 43.5**	**+0.2**
	baz=37								
DVTC	**Desert V Tower**	**37.49**	**130**	⇓P		**P**		**19 05 44.1**	**+0.2**
	baz=37								
X16A	**Lo Mia Camp, P**	**37.56**	**123**	⇑P		**P**		**19 05 44.8**	**+0.2**
	baz=37								
GLA	**Glamis**	**37.57**	**128**	⇑P		**P**		**19 05 44.8**	**+0.2**
	baz=37								
Y15A	**Casa Rosa Ranc**	**37.65**	**124**	⇑P		**P**		**19 05 45.9**	**+0.7**
	baz=37								
X19A	**St. Johns**	**38.37**	**120**	⇓P		**P**		**19 05 51.1**	**-0.2**
	baz=38								
Y17A	**Roosevelt**	**38.43**	**123**	⇑P		**P**		**19 05 52.1**	**+0.3**
	baz=38								
214A	**Organ Pipe Nat**	**39.27**	**126**	⇑P		**P**		**19 05 58.8**	**0.0**
	baz=39								
117A	**Oracle**	**39.47**	**123**	⇑P		**P**		**19 06 01.1**	**+0.6**
	baz=39								
119A	**Ashpeak Ranch,**	**39.84**	**122**	⇓P		**P**		**19 06 03.5**	**0.0**
	baz=40								
217A	**Green Valley**	**40.16**	**124**	⇑P		**P**		**19 06 06.1**	**-0.1**
	baz=40								
218A	**Dragoon**	**40.27**	**123**	⇑P		**P**		**19 06 07.1**	**0.0**
	baz=40								
219A	**White Tail Can**	**40.54**	**122**	⇓P		**P**		**19 06 09.6**	**+0.2**
	baz=40								
318A	**Bisbee**	**40.77**	**123**	⇓P		**P**		**19 06 12.0**	**+0.8**
	baz=41								
TXAR	**Lajitas Array**	**45.07**	**118**	P		**P**		**19 06 46.3**	**+0.4**
	2.5nm,1.0s,mb3.9,baz=331,slow=6.6,SNR=17								
ARCES	**ARCESS Array B**	**46.93**	**2**	P		**P**		**19 06 59.1**	**-0.9**
	1.9nm,0.8s,mb3.9,baz=2.9,slow=7.3,SNR=5.9								
SONM	**Songino Array**	**53.86**	**306**	P		**P**		**19 07 53.2**	**+0.9**
	0.2nm,0.2s,mb3.7,baz=12,slow=8.3,SNR=4.7								
NOA	**NORSAR Array B**	**54.67**	**11**	P		**P**		**19 07 56.5**	**-1.5**
	1.9nm,1.0s,mb4.1,baz=349,slow=7.3,SNR=3.2								
ZALV	**Zalesovo Beam**	**55.25**	**324**	P		**P**		**19 08 01.4**	**-0.9**
	0.3nm,0.3s,mb3.8,baz=19,slow=9.6,SNR=4.3								
BVAR	**Borovoye Array**	**59.44**	**333**	P		**P**		**19 08 30.9**	**-0.8**
	1.2nm,0.3s,mb4.4,baz=43,slow=8.2,SNR=13								
KURK	**Kurchatov**	**59.77**	**327**	P		**P**		**19 08 34.8**	**+0.8**
	baz=27,slow=6.9								
MKAR	**Makanchi Array**	**62.44**	**322**	P		**P**		**19 08 50.8**	**-1.3**
	0.7nm,0.5s,mb3.

LPL	**La Plagne** 7.8nm,0.8s	**146.35**	**335**	*e*PKP1	PKPbc	19	20	15.7 +0.3
LPG	**La Plagne** 8.5nm,0.7s	**146.36**	**335**	*e*PKP1	PKPbc	19	20	16.0 +0.6
SMF	**Signal de Mont**	**146.46**	**340**	*e*PKP1	PKPbc	19	20	15.9 +0.2
AVF	**Avril sur Loir** 3.7nm,0.6s	**146.49**	**340**	*e*PKP1	PKPbc	19	20	16.0 +0.3
SGMF	**Saint Gilles**	**146.70**	**348**	*e*PKP1	PKPbc	19	20	15.7 -0.6
BGF	**Bois d'Agland** 6.8nm,0.5s	**146.86**	**341**	*e*PKP1	PKPbc	19	20	16.5 -0.3
ORIF	**Oris-en-Rattie**	**147.19**	**336**	*e*PKP1	PKPbc	19	20	17.7 -0.1
TCF	**Toulx Ste Croi**	**147.30**	**341**	*e*PKP1	PKPbc	19	20	17.8 -0.2
SBF	**Sospel** 12nm,0.7s	**147.40**	**333**	*e*PKP1	PKPbc	19	20	18.7 +0.3
PGF	**Pioggiola**	**147.69**	**330**	*e*PKP1	PKPbc	19	20	20.4 +1.2
MFF	**Saint Martin d**	**147.69**	**344**	*e*PKP1	PKPbc	19	20	18.8 -0.3
RJF	**Les Rejaudoux**	**148.40**	**341**	*e*PKP1	PKPbc	19	20	20.9 -0.1
MTLF	**Montolieu**	**149.91**	**338**	*e*PKP1	PKPbc	19	20	24.8 0.0
ETSF	**Etsaut** 3.2nm,0.5s	**151.21**	**342**	*e*PKP1	PKPbc	19	20	28.2 +0.3
KEST	**Kesra** 1.3nm,0.5s,baz=184,slow=4.5,SNR=19	**152.28**	**320**	PKPbc	PKPbc	19	20	31.3 +0.7
TORD	**Torodi Ar. Bea** 0.4nm,0.8s,baz=307,slow=1.0,SNR=3.5	**166.09**	**261**	PKP	PKPdf	19	20	39.1 -1.1

IDC 08 19:23:27.3±4.2, 404S×10025E, h0km, mb3.2/5, mb1 3.4/5, mb1mx3.3/19, mbtmp3.3/5, Error ellipse: s-maj=163.0km s-min=23.9km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,baz=180,slow=8.3,SNR=3.3	**22.39**	**357**	P	P	19 28 28.7	+1.3
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=304,slow=8.9,SNR=5.0	**36.78**	**118**	P	P	19 30 36.5	-0.6
ASAR	**Alice Springs** 0.2nm,0.6s,baz=306,slow=7.7,SNR=3.6	**37.88**	**124**	P	P	19 30 46.2	-0.1
SONM	**Songino Array** 0.4nm,0.5s,baz=172,slow=11,SNR=3.1	**51.94**	**5**	P	P	19 32 36.8	-1.0
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=153,slow=7.7,SNR=2.6	**53.05**	**345**	P	P	19 32 45.0	-1.1
TXAR	**Lajitas Array** 0.6nm,0.7s,baz=251,slow=1.3,SNR=7.6	**146.14**	**39**	PKPbc	PKPbc	19 43 11.2	+1.0

IDC 08 19:33:52.0±13.0, 1464S×17560W, h0km, mb4.2/5, mb1 4.2/5, mb1mx3.9/18, mbtmp4.2/5, Error ellipse: s-maj=269.4km s-min=133.6km az=49.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 1.9nm,0.5s,baz=40,slow=7.9,SNR=3.1	**36.75**	**256**	P	P	19 41 02.4	+0.9
STKA	**Stephens Creek** 0.5nm,0.3s,baz=99,slow=13,SNR=3.6	**42.59**	**239**	P	P	19 41 49.8	-0.3
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=91,slow=7.1,SNR=43	**47.95**	**256**	P	P	19 42 32.4	-0.4
ASAR	**Alice Springs** 2.7nm,0.4s,baz=85,slow=8.6,SNR=77	**48.33**	**251**	P	P	19 42 35.4	-0.3
NWAO	**Narrogin (SRO)** 4.3nm,0.8s,baz=108,slow=12,SNR=3.2	**63.14**	**240**	P	P	19 44 22.2	+0.2

DJA 08 19:46:15.9±0.0, 942S×10710E, h30km, MLv3.5/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.77**	**233**	P	Pn	19 46 44.4	-0.1
LEM	**Lembang**	**2.63**	**11**	P	Pn	19 46 53.6	-2.7
CBJI	**Citeko**	**2.99**	**355**	P	Pn	19 47 04.1	+2.8
BJII	**Banjamegara**	**3.31**	**51**	P	Pn	19 47 06.0	+0.3
BJII	**Banjamegara**	**3.31**	**51**	S	Sn	19 47 34.9	-9.2
UGM	**Wanagama**	**3.70**	**66**	P	Pn	19 47 11.2	+0.1
UGM	**Wanagama**	**3.70**	**66**	S	Sn	19 47 42.1	-12

*IDC **08** 19:53:33.8±2.3, 5599S×2999W, h0km, mb4.2/2, Error ellipse: s-maj=78.5km s-min=28.4km az=19.0*
*ISCJB **08** 19:53:36.3±0.7, 554S±01×298W±03, h10km, mb4.3/4, Error ellipse: s-maj=25.3km s-min=11.1km az=153.5*
*NEIC **08** 19:53:40.4±0.6, 5563S×2983W, h35km, mb4.4/3, Error ellipse: s-maj=20.7km s-min=12.3km az=58.0*
ISC 08 19:53:38.1±0.7, 554S±01×299W±03, h10km, n12, σ0°93°/11, mb4.3/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.95**	**157**	*e*P	**Pn**	**19 57 48.3**	**+1.0**
VNA1				*e*		19 57 58.1	
VNA1				*e*		19 58 06.4	
VNA3	**Neumayer Olymp**	**18.09**	**159**	*e*P	**Pn**	**19 57 49.6**	**+0.5**
VNA3				*e*		19 58 00.8	
VNA3				*e*		19 58 09.0	
VNA2	**Neumayer--Watz** baz=320,slow=15	**18.34**	**156**	*e*P	**Pn**	**19 57 52.7**	**+0.5**
VNA2				*e*		19 58 03.1	
VNA2				*e*		19 58 11.6	
SNAA	**Sanae**	**19.93**	**155**	*e*P	**Pn**	**19 58 07.0**	**-4.2**
SNAA				*e*		19 58 18.7	
SNAA	**Sanae** 18nm,1.3s	**19.93**	**155**	*e*P	**Pn**	**19 58 06.6**	**-4.6**
QSPA	**South Pole Qui** 22nm,1.3s,mb4.9	**34.82**	**180**	*e*P	**P**	**20 00 26.4**	**-1.9**
BDFB	**Brasilia** 2.0nm,0.7s,mb3.8,baz=169,slow=18,SNR=5.4	**42.11**	**333**	P	**P**	**20 01 31.0**	**+0.8**
LVC	**Limon Verde** 3.3nm,0.6s,mb4.2	**43.69**	**303**	*e*P	**P**	**20 01 42.6**	**-0.4**
BOSA	**Boshof** baz=157,slow=7.7	**47.30**	**79**	P	**P**	**20 02 10.4**	**-1.3**
LPAZ	**La Paz** 3.1nm,0.8s,mb4.4,baz=163,slow=6.9,SNR=18	**48.80**	**308**	P	**P**	**20 02 23.5**	**+0.2**
TORD	**Torodi Ar. Bea** baz=208,slow=4.5	**73.30**	**32**	P	**P**	**20 05 10.1**	**+0.6**
SONM	**Songino Array** 1.1nm,0.9s,baz=251,slow=1.7,SNR=5.0	**152.20**	**87**	PKPbc	PKPbc	20 13 30.4	-2.4

NOU 08 19:54:07.7±1.9, 2211S×16673E, h10km, MD1.3, ML3.6, New Caledonia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NORM	**Noumea**	**0.26**	**243**	*e*P	Pg	19 54 14.2	+1.2
NORM				*e*S	Sg	19 54 19.0	+2.5
NORM	comp=Z,2μm,0.2s			AMP		19 54 20.2	
ONTRN	**Noumea**	**0.32**	**233**	*e*P	Pg	19 54 14.1	-0.1
ONTRN				*e*S	Sg	19 54 18.8	+0.3
ONTRN	comp=Z,467μm,2.6s			AMP		19 54 20.9	
NOUC	**Port Laguerre**	**0.40**	**271**	*e*P	Pg	19 54 17.9	+2.3
NOUC	comp=Z,218nm,0.8s			AMP		19 54 24.7	
NOUC				*e*S	Sg	19 54 24.8	+4.0

*CSEM **08** 20:01:55.1, 4253N×4195E, h6km, MD3.2, After ERD*
DDA 08 20:01:55.1, 4253N×4195E, h6km±7km, Md3.2, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**1.11**	**87**	P	Pg	20 02 18.5	+2.1
ONI				S	Sg	20 02 36.1	+5.3
DBOC	**Borcka**	**1.21**	**190**	*i* P	Pg	20 02 24.5	+6.3
ARTV	**Artvin**	**1.35**	**181**	*i* P	Pn	20 02 21.4	+1.0
ARTV				*i* S	Sb	20 02 40.9	+2.7
DAGI	**Agillar**	**1.46**	**181**	*i* P	Pn	20 02 21.9	0.0
DAGI				*i* S	Sn	20 02 42.5	+1.3
DBAD	**Bademkaya**	**1.53**	**187**	*i* P	Pn	20 02 25.0	+2.1
DBAD				*i* S	Sn	20 02 45.3	+2.3
DDEM	**Demirkent**	**1.65**	**185**	*i* P	Pn	20 02 25.0	+0.5
DDEM				*i* S	Sn	20 02 46.4	+0.4

*ISCJB **08** 20:12:25.0±0.7, 182N±006×12529E±009, h133km±6km, mb3.9/9, Error ellipse: s-maj=14.9km s-min=8.7km az=161.5*
*DJA **08** 20:12:27.2±0.0, 167N×12528E, h114km, mb4.8/3, mB4.9/2, MLv4.6/6, Mw(mB)4.9/2*

*IDC **08** 20:12:32.1±2.4, 175N×125.15E, h188km±22km, mb3.6/9, mb1 3.8/10, mb1mx3.6/18, mbtmp3.6/10, MS3.4/1, Ms1 3.4/1, ms1mx2.0/25, Error ellipse: s-maj=30.2km s-min=8.8km az=75.0*
*NEIC **08** 20:12:33.0±0.5, 173N×12506E, h200km, Error ellipse: s-maj=33.0km s-min=9.7km az=74.0*
ISC 08 20:12:26.2±0.7, 178N±007×12529E±009, h129km±7km, n26, σ1°07°/29, mb3.9/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.56**	**234**	P	**Pn**	**20 12 45.7**	**+0.1**
TNTI	**Ternate**	**2.30**	**116**	P	**Pn**	**20 13 03.6**	**-0.3**
LBMI	**Labuha**	**3.26**	**137**	P	**Pn**	**20 13 15.9**	**-0.4**
LBMI	**Labuha**	**3.26**	**137**	P	**Pn**	**20 13 15.0**	**-1.3**
PCI	**Palu** 42nm,1.1s,362nm0.1nm	**6.07**	**244**	P	**Pn**	**20 13 53.5**	**-0.3**
PCI	**Palu** 42nm,1.1s,363nm0.1nm	**6.07**	**244**	P	**Pn**	**20 13 55.9**	**+2.1**
AAI	**Ambon** 194nm,0.6s,3μm1.0nm	**6.16**	**152**	P	**Pn**	**20 13 54.3**	**-0.6**
AAI	**Ambon** 194nm,0.6s,3μm1.0nm	**6.16**	**152**	P	**Pn**	**20 13 54.1**	**-0.8**
KDI	**Kendari** 96nm,0.4s,0.4nm	**6.29**	**205**	P	**Pn**	**20 13 56.4**	**-0.4**
BATI	**Baumata** 7.0nm,0.3s,baz=349,slow=1.9,SNR=16	**12.02**	**188**	P	**Pn**	**20 15 16.7**	**+3.3**
BATI	**Baumata** 29nm,0.8s	**12.02**	**188**	P	**Pn**	**20 15 20.5**	**+7.1**
PLKI	**Palangkaraya** 107nm,0.7s	**12.02**	**251**	P	**Pn**	**20 15 06.5**	**-7.0**
WRA	**Warramunga Arr** 3.7nm,0.4s,mb4.2,baz=335,slow=11,SNR=50	**23.34**	**158**	P	**P**	**20 17 23.5**	**+0.5**
WRA				S	**S**	**20 21 22.2**	**-3.9**
WB2	**Warramunga Arr**	**23.34**	**158**	*e*P	**P**	**20 17 23.5**	**+0.4**
WB2				*e*S	**S**	**20 21 22.2**	**-4.0**
JOW	**Kunigami** 35nm,0.6s,baz=195,slow=11,SNR=11	**25.07**	**6**	P	**P**	**20 17 40.3**	**+1.6**
ASAR	**Alice Springs** 1.1nm,0.6s,mb3.7,baz=344,slow=7.3,SNR=19	**26.64**	**162**	P	**P**	**20 17 53.8**	**+0.9**
ASAR	1.2nm,1.0s,baz=352,slow=24,SNR=5.4			S	**S**	**20 22 16.6**	**-2.0**
MAT	**Matsushiro**	**36.59**	**18**	P	**P**	**20 19 19.8**	**0.0**
MJAR	**Matsushiro Arr** 2.5nm,0.7s,mb4.0,baz=197,slow=9.2,SNR=8.2	**36.59**	**18**	P	**P**	**20 19 19.9**	**+0.2**
STKA	**Stephens Creek** 2.0nm,0.5s,mb4.0,baz=331,slow=19,SNR=7.5	**36.87**	**157**	P	**P**	**20 19 23.8**	**+1.6**
SONM	**Songino Array** 0.3nm,0.3s,mb3.4,baz=153,slow=9.7,SNR=3.0	**48.71**	**343**	P	**P**	**20 20 56.6**	**-0.8**
PETK	**Petropavlovsk-** 2.8nm,0.8s,mb4.1,baz=249,slow=4.2,SNR=3.9	**57.77**	**22**	P	**P**	**20 22 05.1**	**+1.5**
PETK	comp=Z,31nm,18.6s,baz=209,slow=39			LR	LR	20 49 46.6	
MKAR	**Makanchi Array** 0.5nm,0.3s,mb3.8,baz=120,slow=7.6,SNR=28	**58.36**	**327**	P	**P**	**20 22 07.7**	**-0.1**
MKAR	0.6nm,0.6s,baz=146,slow=3.3,SNR=3.3			PcP	PcP	20 22 58.0	+0.6
MKAR	**Makanchi Array**	**58.36**	**327**	P	**P**	**20 22 07.7**	**-0.1**
MKAR				PcP	PcP	20 22 58.0	+0.6
ZALV	**Zalesovo Beam** 0.3nm,0.4s,mb3.4,baz=141,slow=4.8,SNR=2.0	**61.69**	**334**	P	**P**	**20 22 28.0**	**-2.3**
KURK	**Kurchatov** baz=130,slow=6.3	**62.62**	**329**	P	**P**	**20 22 35.6**	**-1.1**
ARCES	**ARCESS Array B** 3.7nm,1.1s,mb4.3,baz=90,slow=5.4,SNR=4.0	**91.77**	**340**	P	**P**	**20 25 18.3**	**-0.6**

IDC 08 20:14:50.3±0.9, 2274N×14449E, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.7/21, mbtmp3.7/7, ML3.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/27, Error ellipse: s-maj=32.1km s-min=20.3km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima** 5.3nm,0.3s,baz=347,slow=16,SNR=5.4	**4.81**	**335**	Pn	Pn	20 16 05.0	+0.9
CBIJ	10nm,0.3s,baz=92,slow=21,SNR=7.3			Sn	Sn	20 16 56.0	-4.6
KSRS	**Korea Array** comp=Z,26nm,22.0s,baz=330,slow=35	**20.46**	**320**	LR	LR	20 26 46.7	
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=16,slow=8.9,SNR=19	**43.56**	**194**	P	P	20 22 56.2	+0.1
ASAR	**Alice Springs** 0.6nm,0.6s,baz=15,slow=11,SNR=8.4	**47.26**	**193**	P	P	20 23 25.3	-0.1
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=104,slow=9.1,SNR=3.1	**54.16**	**321**	P	P	20 24 17.1	-0.1
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=80,slow=9.2,SNR=3.0	**54.89**	**312**	P	P	20 24 22.7	+0.1
KURK	**Kurchatov** baz=93,slow=7.9	**57.55**	**317**	P	P	20 24 41.6	+0.1
NVAR	**Mina Array Bea** 1.0nm,0.7s,baz=268,slow=5.6,SNR=9.4	**81.55**	**52**	P	P	20 27 11.1	+1.0
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=272,slow=2.3,SNR=3.5	**85.81**	**45**	P	P	20 27 31.3	-0.4

*CSEM **08** 20:45:00.9±0.1, 3737N×2939E, h17km±1km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.5km az=75.0*
*ISCJB **08** 20:45:01.8±0.5, 3736N±004×2940E±006, h19km±7km, Error ellipse: s-maj=8.2km s-min=6.2km az=154.3*
*ISK **08** 20:45:01.1, 3736N×2938E, h22km, MD2.9*
*DDA **08** 20:45:01.2, 3741N×2943E, h6km±2km, Md3.0*
ISC 08 20:45:01.6±0.5, 3736N±004×2940E±005, h17km±5km, n17, σ0°76°/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.18**	**132**	*i* P	**Pg**	**20 45 05.5**	**-0.6**
GOLH				*i* S	**Sg**	**20 45 09.3**	**+0.2**
DENT	**Denizli**	**0.49**	**324**	*e*PG	**Pg**	**20 45 11.3**	**-0.2**
DENT				*e*SG	**Sg**	**20 45 18.9**	**+0.8**
ELL	**Elmali**	**0.73**	**146**	*e*PG	**Pg**	**20 45 16.2**	**+0.3**
ELL				*e*SG	**Sg**	**20 45 27.1**	**+1.5**
FETY	**Fethiye**	**0.76**	**199**	*e*PG	**Pg**	**20 45 16.7**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.84**	**226**	*e*PG	**Pg**	**20 45 17.7**	**-0.3**
YER	**Yerkesik**	**0.92**	**256**	*e*PG	**Pg**	**20 45 18.8**	**-0.6**
BCK	**Bucak**	**0.96**	**83**	*e*PG	**Pg**	**20 45 19.8**	**-0.4**
KHL	**Karahalli**	**0.97**	**6**	*e*PG	**Pg**	**20 45 20.0**	**-0.5**
MLSB	**Milas**	**1.29**	**268**	*e*PN	**Pn**	**20 45 24.9**	**0.0**
KULA	**Kula-Manisa**	**1.29**	**334**	*e*PN	**Pn**	**20 45 24.9**	**0.0**
MANT	**Manisa**	**1.31**	**330**	*i* P	**Pn**	**20 45 25.1**	**-0.1**
MANT				*i* S	**Sn**	**20 45 43.8**	**+1.5**
SHUT	**Suhut-Afyon**	**1.50**	**37**	*e*PN	**Pn**	**20 45 26.7**	**-1.1**
DAT	**Datca**	**1.58**	**247**	*e*PN	**Pn**	**20 45 28.1**	**-0.8**
BODT	**Bodrum**	**1.69**	**261**	*e*PN	**Pn**	**20 45 29.4**	**-0.9**
GCAM	**G?zelcaml?**	**1.75**	**282**	*i* P	**Pn**	**20 45 31.9**	**+0.6**
GCAM				*i* S	**Sn**	**20 45 57.5**	**+4.3**
IZM	**Izmir**	**1.98**	**302**	*e*PN	**Pn**	**20 45 34.4**	**0.0**
KDAG	**Bornova**	**1.98**	**302**	*i* P	**Pn**	**20 45 38.1**	**+3.7**

*IDC **08** 21:04:17.4±3.9, 2422N×12206E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, ML3.6/2, MS2.6/1, Ms1 2.6/1, ms1mx1.7/34, Error ellipse: s-maj=103.0km s-min=31.7km az=113.0*
*ISCJB **08** 21:04:27.2±0.4, 2489N±003×122.18E±003, h130km±3km, mb3.4/2, Error ellipse: s-maj=5.5km s-min=3.1km az=150.2*
*TAP **08** 21:04:27.6, 2491N×12222E, h128km±1km, ML3.9, D*
*JMA **08** 21:04:27.5±0.4, 2498N×122.14E, h123km, M2.6*
ISC 08 21:04:27.9±0.4, 2491N±003×12217E±003, h128km±3km, n65, σ0°69°/113, mb3.6/2, 10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=296	**0.20**	**302**	*i* P	**Pn**	**21 04 45.3**	**-0.1**
TWB1				S	**Sn**	**21 04 58.2**	**-0.5**
NWF	**Wu-fen Shan** baz=292	**0.39**	**295**	*i* P	**Pn**	**21 04 46.1**	**0.0**
NWF				S	**Sn**	**21 04 59.4**	**-0.5**
ILA	**Ilan** baz=251	**0.41**	**250**	*e*P	**Pn**	**21 04 46.1**	**-0.1**
ILA				*e*S	**Sn**	**21 04 59.8**	**-0.3**
TWC	**Suao** baz=228	**0.42**	**225**	*i* P	**Pn**	**21 04 46.2**	**-0.1**
TWC				S	**Sn**	**21 04 59.1**	**-1.1**
TWE	**Neicheng** baz=249	**0.49**	**248**	*e*P	**Pn**	**21 04 47.1**	**+0.5**
TWE	baz=249			*e*S	**Sn**	**21 05 01.5**	**+0.6**
TWA	**Mucha** baz=277	**0.54**	**278**	P	**Pn**	**21 04 47.2**	**+0.3**
TWA	baz=277			S	**Sn**	**21 05 01.8**	**+0.4**
TAP1	**Taipei** baz=281	**0.60**	**283**	*e*P	**Pn**	**21 04 47.5**	**+0.1**
TAP1	baz=281			*e*S	**Sn**	**21 05 01.4**	**-0.7**
ENTT	**Nioudou** baz=245	**0.61**	**245**	*i* P	**Pn**	**21 04 47.7**	**+0.3**
ENTT	baz=245			S	**Sn**	**21 05 02.3**	**+0.1**
ENA	**Nanau** baz=222	**0.62**	**220**	⇓*i*P	**Pn**	**21 04 47.8**	**+0.4**
ENA	baz=222			S	**Sn**	**21 05 02.7**	**+0.5**
TWY	**Chenhua** baz=303	**0.64**	**306**	*e*P	**Pn**	**21 04 47.3**	**-0.3**
TWY	baz=303			*e*S	**Sn**	**21 05 02.1**	**-0.4**
TWS1	**Kuangyinshan** baz=284	**0.71**	**286**	*e*P	**Pn**	**21 04 48.7**	**+0.6**
TWS1	baz=284			*e*S	**Sn**	**21 05 04.0**	**+0.5**
PCYT	**Pengchaiyu** baz=349	**0.73**	**353**	*e*P	**Pn**	**21 04 48.3**	**0.0**
NSK	**Sanguang** baz=253	**0.77**	**253**	⇓*i*P	**Pn**	**21 04 48.5**	**-0.1**
NSK	baz=253			S	**Sn**	**21 05 03.7**	**-0.6**
NNS	**Nan Shan** baz=238	**0.86**	**238**	⇓*i*P	**Pn**	**21 04 49.7**	**+0.4**
NNS	baz=238			S	**Sn**	**21 05 05.8**	**+0.2**
YOJ	**Yonaguni jima**	**0.88**	**120**	*e*S	**Sn**	**21 05 05.9**	**0.0**
NCU	**National Centr** baz=273	**0.90**	**274**	*e*P	**Pn**	**21 04 49.7**	**0.0**
NCU	baz=273			*e*S	**Sn**	**21 05 06.3**	**+0.1**
TWD	**Chiawan** baz=214	**0.97**	**213**	*i* P	**Pn**	**21 04 50.2**	**-0.2**
TWD	baz=214			*i* S	**Sn**	**21 05 06.9**	**-0.6**
HSN	**Hsinchu** baz=266	**1.10**	**265**	*e*P	**Pn**	**21 04 51.1**	**-0.5**
HSN	baz=266			*e*S	**Sn**	**21 05 08.5**	**-1.0**
NSTT	**Nanjuang** baz=256	**1.10**	**256**	⇓*i*P	**Pn**	**21 04 51.5**	**-0.1**
NSTT	baz=256			S	**Sn**	**21 05 08.6**	**-0.9**
TWT	**Tachien** baz=236	**1.11**	**235**	P	**Pn**	**21 04 52.7**	**+0.9**
TWT	baz=236			S	**Sn**	**21 05 10.6**	**+0.7**
WHF	**Hehuan Shan** baz=228	**1.12**	**228**	⇓*i*P	**Pn**	**21 04 52.5**	**+0.7**
WHF	baz=228			S	**Sn**	**21 05 10.5**	**+0.6**
ESL	**Shilin** baz=213	**1.28**	**212**	P	**Pn**	**21 04 52.5**	**-0.9**
ESL	baz=213			*e*S	**Sn**	**21 05 13.8**	**+1.0**
NSY	**Sanyi** baz=249	**1.37**	**250**	*e*P	**Pn**	**21 04 54.8**	**+0.3**
NSY	baz=249			*e*S	**Sn**	**21 05 14.8**	**+0.2**
TWQ1	**Liyutan** baz=247	**1.39**	**247**	P	**Pn**	**21 04 54.6**	**0.0**
TWQ1	baz=247			S	**Sn**	**21 05 14.4**	**-0.5**
IRIF	**Iriomote-Funau**	**1.53**	**111**	P	**Pn**	**21 04 56.2**	**0.0**
IRIF				*e*S	**Sn**	**21 05 19.0**	**+1.3**
SMLT	**Sun Moon Lake** baz=229	**1.54**	**229**	⇓*i*P	**Pn**	**21 04 57.0**	**+0.7**
SMLT	baz=229			S	**Sn**	**21 05 18.8**	**+0.8**
TCU	**Taichung** baz=241	**1.56**	**241**	*e*P	**Pn**	**21 04 56.7**	**+0.2**
TYC	**Yuchr** baz=231	**1.56**	**231**	⇓*i*P	**Pn**	**21 04 57.0**	**+0.5**
TYC	baz=231			S	**Sn**	**21 05 18.7**	**+0.4**
EHY	**Hungye** baz=210	**1.59**	**209**	*e*P	**Pn**	**21 04 57.4**	**+0.5**
EHY	baz=210			*e*S	**Sn**	**21 05 17.5**	**-1.6**
WNT	**Mingjian** baz=233	**1.70**	**233**	P	**Pn**	**21 04 58.6**	**+0.4**
WNT	baz=233			*e*S	**Sn**	**21 05 21.4**	**+0.2**
TWF1	**Yuli** baz=208	**1.74**	**208**	P	**Pn**	**21 04 57.6**	**-1.1**
TWF1	baz=208			S	**Sn**	**21 05 20.6**	**-1.5**
YUS	**Yu-Shan** baz=219	**1.80**	**219**	P	**Pn**	**21 05 00.8**	**+1.5**
YUS	baz=219			S	**Sn**	**21 05 24.8**	**+1.5**
JKRS	**Kuro-shima**	**1.80**	**111**	P	**Pn**	**21 04 59.8**	**+0.5**
JKRS				*e*S	**Sn**	**21 05 23.6**	**+0.3**
ALS	**Alishan** baz=222	**1.87**	**222**	⇓*i*P	**Pn**	**21 05 01.0**	**+0.8**
ALS	baz=222			S	**Sn**	**21 05 26.0**	**+1.2**
JIJ	**Ishigaki jima**	**1.87**	**106**	P	**Pn**	**21 05 00.3**	**+0.1**
JIJ				*e*S	**Sn**	**21 05 24.4**	**-0.5**
CHN5	**Tsauling** baz=227	**1.89**	**227**	*e*P	**Pn**	**21 05 00.7**	**+0.3**
CHN5	baz=227			*e*S	**Sn**	**21 05 25.4**	**+0.2**
CHKT	**Chengkung** baz=203	**1.94**	**202**	*e*P	**Pn**	**21 05 00.5**	**-0.6**
CHKT	baz=203			*e*S	**Sn**	**21 05 25.1**	**-1.3**
ELDTW	**Lidau** baz=212	**2.01**	**212**	P	**Pn**	**21 05 02.0**	**+0.1**
ELDTW	baz=212			S	**Sn**	**21 05 27.9**	**0.0**
CHN2	**Minshiung** baz=229	**2.07**	**229**	*e*P	**Pn**	**21 05 02.1**	**-0.4**
CHN4	**Tsaushan** baz=223	**2.12**	**223**	*e*P	**Pn**	**21 05 02.9**	**-0.3**
CHN4	baz=223			*e*S	**Sn**	**21 05 29.9**	**-0.3**
CHY	**Chiayi** baz=229	**2.12**	**229**	*e*P	**Pn**	**21 05 03.3**	**0.0**
STYT	**Tauyuan** baz=217	**2.16**	**217**	⇓*e*P	**Pn**	**21 05 04.2**	**+0.4**
STYT	baz=217			*e*S	**Sn**	**21 05 32.2**	**+0.9**
WSF	**Szhu** baz=235	**2.18**	**235**	P	**Pn**	**21 05 03.6**	**-0.4**
WSF	baz=235			*e*S	**Sn**	**21 05 31.1**	**-0.6**
WTP	**Ta-pu** baz=221	**2.18**	**221**	P	**Pn**	**21 05 04.0**	**0.0**
WTP	baz=221			*e*S	**Sn**	**21 05 31.1**	**-0.6**
TWK	**Hsinying** baz=224	**2.24**	**224**	*e*P	**Pn**	**21 05 04.8**	**0.0**
TWK	baz=224			*e*S	**Sn**	**21 05 32.7**	**-0.4**
CHN1	**Nanshi** baz=222	**2.28**	**222**	P	**Pn**	**21 05 05.2**	**-0.1**
CHN1	baz=222			S	**Sn**	**21 05 33.4**	**-0.5**
TWG	**Pinlang** baz=206	**2.31**	**206**	*e*P	**Pn**	**21 05 04.8**	**-0.8**
TWG	baz=206			*e*S	**Sn**	**21 05 32.5**	**-2.0**
JTJ	**Tarama**	**2.31**	**96**	P	**Pn**	**21 05 06.2**	**+0.5**
JTJ				*e*S	**Sn**	**21 05 34.7**	**+0.1**
SGST	**Jiashian** baz=219	**2.33**	**219**	P	**Pn**	**21 05 06.2**	**+0.4**
SGST	baz=219			*e*S	**Sn**	**21 05 34.6**	**-0.3**
ECL	**Taimali** baz=206	**2.55**	**206**	*e*P	**Pn**	**21 05 08.2**	**-0.6**
ECL	baz=206			S	**Sn**	**21 05 37.5**	**-2.5**
SSD	**Sandimen** baz=214	**2.57**	**214**	*e*P	**Pn**	**21 05 10.5**	**+1.6**
SSD	baz=214			*e*S	**Sn**	**21 05 41.0**	**+0.6**
TWM1	**Shoushan**	**2.62**	**218**	*e*P	**Pn**	**21 05 10.8**	**+1.3**

	baz=218							
TWM1					*e*S		**Sn**	**21 05 41.5 -0.1**
	baz=218							
EAST	**Anshuo**	**2.79**	**206**		*e*P		**Pn**	**21 05 12.6 +0.8**
	baz=206							
EAST					S		**Sn**	**21 05 46.3 +0.8**
	baz=206							
SCZT	**Fangliau**	**2.90**	**210**		P		**Pn**	**21 05 13.7 +0.6**
	baz=210							
JOGS	**Gusukube**	**2.94**	**92**		*e*S		**Sn**	**21 05 49.3 +0.3**
JKE	**Kume jima 2**	**4.40**	**70**		P		**Pn**	**21 05 32.9 0.0**
JAGN	**Aguni-jima**	**4.87**	**69**		P		**Pn**	**21 05 39.3 +0.1**
JJT2	**Tamagusuku 2**	**5.19**	**75**		P		**Pn**	**21 05 42.9 -0.5**
JIH	**Iheya**	**5.63**	**67**		P		**Pn**	**21 05 48.8 -0.6**
JOW	**Kunigami**	**5.82**	**69**		Pn		**Pn**	**21 05 50.2 -1.8**
	2.8nm,0.3s,baz=290,slow=30,SNR=10							
JOW					LR		LR	21 07 31.7
	comp=Z,55nm,20.7s,baz=153,slow=31							
JOW	**Kunigami**	**5.82**	**69**		P		**Pn**	**21 05 51.2 -0.8**
JMZ	**Minamidaito 2**	**8.23**	**82**		P		**Pn**	**21 06 20.6 -4.0**
KSRS	**Korea Array**	**13.44**	**20**		Pn		**Pn**	**21 07 38.2 +4.8**
	0.3nm,0.3s,baz=200,slow=12,SNR=5.9							
WRA	**Warramunga Arr**	**46.12**	**164**		P		**P**	**21 12 38.4 -1.1**
	0.9nm,0.7s,mb3.6,baz=346,slow=8.2,SNR=7.0							
ASAR	**Alice Springs**	**49.60**	**166**		P		**P**	**21 13 06.0 -0.2**
	0.5nm,0.6s,mb3.6,baz=345,slow=6.7,SNR=5.3							

IDC 08 21:04:35.4±3.5, 783S×12293E, h205km±44km, mb3.0/1, mb1 3.3/4, mb1mx3.0/17, mbtmp3.1/4, Error ellipse: s-maj=169.8km s-min=24.8km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
BATI	**Baumata**	**2.47**	**163**	P	Pn	21	05	19.9	+0.6
	10nm,0.3s,baz=7.7,slow=2.2,SNR=12								
BATI				S	Sn	21	05	54.0	+0.4
	28nm,0.3s,baz=346,slow=23,SNR=13								
KAKA	**Kakadu**	**10.54**	**118**	*e*P	Pn	21	06	51.8	-10
	1.3nm,0.3s								
WRA	**Warramunga Arr**	**16.34**	**139**	P	P	21	08	12.5	-0.3
	0.4nm,0.3s,baz=318,slow=11,SNR=21								
WB2	**Warramunga Arr**	**16.35**	**139**	*e*P	P	21	08	12.5	-0.4
WB2				*e*S	S	21	11	04.7	-9.1
ASAR	**Alice Springs**	**18.94**	**147**	P	P	21	08	41.2	+0.1
	0.4nm,0.3s,baz=322,slow=11,SNR=38								
MKAR	**Makanchi Array**	**65.28**	**330**	P	P	21	14	55.3	+0.1
	0.4nm,0.6s,baz=131,slow=8.5,SNR=2.8								

*ATH **08** 21:04:55.4, 3846N×2511E, h10km, MD3.4/3*
*ISK **08** 21:04:56.5, 3851N×2506E, h17km, MD3.4*
*CSEM **08** 21:04:57.4±0.1, 3854N×2533E, h5km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.8km az=147.0*
*DDA **08** 21:04:57.1, 3861N×2529E, h7km±6km, Md3.1*
*ISCJB **08** 21:04:58.2±0.5, 3856N±004×2531E±004, h10km, Error ellipse: s-maj=5.2km s-min=4.4km az=152.2*

ISC 08 21:04:57.5±1.0, 3858N±004×2527E±005, h1km±7km, n32, σ0$86/38, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
PRK	**Paraskevi**	**1.03**	**49**	*e*PB	**Pg**	**21**	**05**	**18.0**	**+0.7**
URLA	**Izmir**	**1.07**	**101**	*i* P	**Pg**	**21**	**05**	**18.3**	**+0.3**
URLA				*i* S	**Sg**	**21**	**05**	**32.7**	**+0.9**
PTL	**Penteli**	**1.22**	**245**	*e*PB	**Pn**	**21**	**05**	**21.0**	**-0.7**
LIA	**Limnos Island**	**1.32**	**357**	*e*PB	**Pn**	**21**	**05**	**22.4**	**-0.7**
AYVA	**Ayvalik**	**1.33**	**56**	*i* P	**Pg**	**21**	**05**	**23.7**	**+0.7**
AYVA				*i* S	**Sg**	**21**	**05**	**40.2**	**-0.1**
ATH	**Athens Observa**	**1.36**	**244**	*e*PN	**Pn**	**21**	**05**	**24.5**	**+0.9**
BOZC	**Bozcaada**	**1.40**	**26**	*i* P	**Pn**	**21**	**05**	**23.2**	**-1.1**
BOZC				*i* S	**Sg**	**21**	**05**	**42.0**	**-0.6**
BLCB	**Balcova**	**1.41**	**97**	*e*PN	**Pn**	**21**	**05**	**25.0**	**+0.7**
BLCB				*e*SN	**Sn**	**21**	**05**	**44.3**	**+0.8**
EZN	**Ezine**	**1.49**	**33**	*e*PN	**Pn**	**21**	**05**	**25.4**	**-0.1**
SMG	**Samos**	**1.51**	**125**	*e*PB	**Pn**	**21**	**05**	**24.6**	**-1.1**
IZM	**Izmir**	**1.58**	**96**	*e*PN	**Pn**	**21**	**05**	**26.2**	**-0.4**
KDAG	**Bornova**	**1.58**	**96**	*i* P	**Pn**	**21**	**05**	**25.6**	**-1.1**
NAIG	**Nisos Aigina**	**1.62**	**240**	*e*PN	**Pn**	**21**	**05**	**28.6**	**+1.4**
GADA	**Gvkgeada**	**1.68**	**17**	*e*PN	**Pn**	**21**	**05**	**27.6**	**-0.5**
GCAM	**G?zelcaml?**	**1.78**	**119**	*i* P	**Pn**	**21**	**05**	**27.9**	**-1.5**
AKS	**Akhisar**	**2.02**	**81**	*e*PN	**Pn**	**21**	**05**	**33.3**	**+0.6**
AKHS	**Akhisar**	**2.02**	**81**	*i* P	**Pg**	**21**	**05**	**37.2**	**+1.1**
AKHS				*i* S	**Sg**	**21**	**06**	**01.8**	**-0.5**
BALY	**Balya**	**2.17**	**57**	*i* P	**Pg**	**21**	**05**	**38.5**	**-0.6**
BALY				*i* S	**Sg**	**21**	**06**	**05.4**	**-1.7**
BODT	**Bodrum**	**2.22**	**132**	*e*PN	**Pn**	**21**	**05**	**34.6**	**-0.9**
AYDN	**Tasoluk**	**2.26**	**113**	*i* P	**Pn**	**21**	**05**	**35.4**	**-0.6**
MLSB	**Milas**	**2.36**	**122**	*e*PN	**Pn**	**21**	**05**	**36.9**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.57**	**34**	*e*PN	**Pn**	**21**	**05**	**40.9**	**+0.5**
SART	**Tekirdag**	**2.57**	**34**	*i* P	**Pn**	**21**	**05**	**40.1**	**-0.2**
MANT	**Manisa**	**2.58**	**91**	*i* P	**Pn**	**21**	**05**	**40.2**	**-0.3**
DAT	**Datca**	**2.60**	**134**	*e*PN	**Pn**	**21**	**05**	**40.1**	**-0.6**
VLI	**Veliai**	**2.62**	**226**	*e*PN	**Pn**	**21**	**05**	**40.5**	**-0.5**
KULA	**Kula-Manisa**	**2.66**	**90**	*e*PN	**Pn**	**21**	**05**	**42.3**	**+0.7**
EDC	**Edincik**	**2.68**	**48**	*e*PN	**Pn**	**21**	**05**	**42.1**	**+0.3**
BNT	**Bandirma**	**2.71**	**48**	*e*PN	**Pn**	**21**	**05**	**42.8**	**+0.5**
DST	**Dursunbey**	**2.81**	**68**	*e*PN	**Pn**	**21**	**05**	**44.2**	**+0.6**
ULDT	**Uludag**	**3.38**	**61**	*i* P	**Pn**	**21**	**05**	**53.1**	**+1.6**
YLV	**Yalova**	**3.74**	**57**	*e*PN	**Pn**	**21**	**05**	**58.5**	**+2.0**

ATH 08 21:10:19.8, 3722N×2148E, h10km, MD3.1/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
ITM	**Ithomi**	**0.36**	**96**	*e*PB	Pg	21	10	26.9	0.0
RLS	**Riolos of Patr**	**0.84**	**359**	*e*PB	Pb	21	10	36.0	-0.4
VLS	**Valsamata**	**1.19**	**324**	*e*PB	Pb	21	10	42.2	-0.2
VLI	**Veliai**	**1.27**	**113**	*e*PB	Pb	21	10	43.9	+0.1

*DDA **08** 21:10:48.8, 3737N×2938E, h6km±6km, Md3.0*
*CSEM **08** 21:10:48.6±0.1, 3735N×2935E, h5km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.8km az=65.0*
*ISCJB **08** 21:10:49.1±0.5, 3734N±003×2934E±004, h3km±7km, Error ellipse: s-maj=6.6km s-min=5.0km az=139.6*
*ISK **08** 21:10:49.0, 3734N×2933E, h9km, MD3.1*

ISC 08 21:10:49.5±0.5, 3735N±003×2934E±004, h6km±6km, n20, σ0$76/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
GOLH	**Golhisar**	**0.21**	**122**	*i* P	**Pg**	**21**	**10**	**53.2**	**-0.5**
GOLH				*i* S	**Sg**	**21**	**10**	**56.8**	**+0.4**
DENT	**Denizli**	**0.47**	**329**	*e*PG	**Pg**	**21**	**10**	**58.0**	**-0.7**
DENT				*e*SG	**Sg**	**21**	**11**	**06.4**	**+1.5**
FETY	**Fethiye**	**0.74**	**196**	*e*PG	**Pg**	**21**	**11**	**03.7**	**-0.1**
ELL	**Elmali**	**0.75**	**142**	*e*PG	**Pg**	**21**	**11**	**03.8**	**-0.2**
ELL				*e*SG	**Sg**	**21**	**11**	**14.8**	**+1.1**
TURN	**Turunc**	**0.76**	**231**	*i* P	**Pg**	**21**	**11**	**09.6**	**+5.6**
TURN				*i* S	**Sg**	**21**	**11**	**25.9**	**+12**
DALT	**Dalyan (Mudla)**	**0.81**	**224**	*e*PG	**Pg**	**21**	**11**	**04.9**	**-0.1**
YER	**Yerkesik**	**0.87**	**256**	*e*PG	**Pg**	**21**	**11**	**05.6**	**-0.6**
KHL	**Karahalli**	**0.98**	**8**	*e*PG	**Pg**	**21**	**11**	**08.3**	**-0.2**
BCK	**Bucak**	**1.00**	**83**	*e*PG	**Pg**	**21**	**11**	**09.2**	**+0.4**
TKTP	**Tekketepe**	**1.04**	**48**	*i* P	**Pg**	**21**	**11**	**08.4**	**-1.2**
AYDN	**Tasoluk**	**1.20**	**286**	*i* P	**Pg**	**21**	**11**	**12.4**	**-0.2**
MLSB	**Milas**	**1.25**	**268**	*e*PN	**Pn**	**21**	**11**	**13.4**	**0.0**
KULA	**Kula-Manisa**	**1.28**	**336**	*e*PN	**Pn**	**21**	**11**	**12.9**	**-1.1**
MANT	**Manisa**	**1.30**	**332**	*i* P	**Pn**	**21**	**11**	**13.1**	**-1.1**
MANT				*i* S	**Sb**	**21**	**11**	**32.0**	**+0.8**
DAT	**Datca**	**1.54**	**247**	*e*PN	**Pn**	**21**	**11**	**16.8**	**-0.7**
SHUT	**Suhut-Afyon**	**1.54**	**38**	*e*PN	**Pn**	**21**	**11**	**17.8**	**+0.2**
BODT	**Bodrum**	**1.64**	**261**	*e*PN	**Pn**	**21**	**11**	**19.2**	**+0.3**
GCAM	**G?zelcaml?**	**1.71**	**283**	*i* P	**Pn**	**21**	**11**	**20.4**	**+0.5**
IZM	**Izmir**	**1.95**	**303**	*e*PN	**Pn**	**21**	**11**	**23.1**	**-0.1**
KDAG	**Bornova**	**1.95**	**303**	*i* P	**Pn**	**21**	**11**	**25.0**	**+1.8**

*ISCJB **08** 21:22:48.4±1.6, 517N±02×1755W±02, h63km±13km, mb3.9/9, Error ellipse: s-maj=31.4km s-min=13.2km az=153.0*
*NEIC **08** 21:22:49.5±1.6, 5167N×17555W, h62km±13km, mb4.1/1, ML3.8(AEIC), Error ellipse: s-maj=27.8km s-min=12.0km az=151.0*
*IDC **08** 21:23:06.5±6.1, 5187N×17539W, h216km±58km, mb3.3/8, mb1 3.5/9, mb1mx3.3/24, mbtmp3.3/9, MS3.3/5, Ms1 3.3/5, ms1mx3.1/17, Error ellipse: s-maj=28.1km s-min=15.9km az=180.0*

ISC 08 21:22:49.5±1.7, 517N±02×1755W±02, h58km±14km, n20, σ1$06/16, mb3.9/9, MS3.2/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
ADK	**Adak**	**0.76**	**287**	*e*Pg	**Pn**	**21**	**23**	**03.0**	**-1.3**
ADK				*e*Sg	**Sn**	**21**	**23**	**15.2**	**0.0**
AMKA	**Amchitka**	**3.26**	**267**	*e*Pn	**Pn**	**21**	**23**	**39.1**	**+1.1**
AMKA				*e*Sn	**Sn**	**21**	**24**	**20.3**	**+4.8**
KDAK	**Kodiak Island**	**14.54**	**56**	P	**Pn**	**21**	**26**	**22.0**	**+10**
	0.3nm,0.3s,baz=236,slow=2.7,SNR=5.8								
PETK	**Petropavlovsk-**	**16.39**	**286**	LR	LR	21	32	20.7	
	comp=Z,70nm,21.3s,baz=92,slow=34								
IMA2	**Indian Mountai**	**18.16**	**29**	P	**Pn**	**21**	**26**	**58.6**	**+1.6**
EGAK	**Eagle**	**21.98**	**40**	*e*P	**P**	**21**	**27**	**37.4**	**-0.8**
	5.7nm,0.8s,mb4.0								
DAWY	**Dawson**	**22.49**	**43**	*e*P	**P**	**21**	**27**	**44.0**	**+0.4**
ASAJ	**Asahikawa**	**28.76**	**271**	LR	LR	21	41	42.1	
	comp=Z,31nm,18.1s,MS3.0,baz=155,slow=39								
YKA	**Yellowknife Ar**	**33.53**	**47**	LR	LR	21	44	49.2	
	comp=Z,48nm,18.2s,MS3.2,baz=0.0,slow=39								
KSRS	**Korea Array**	**41.69**	**273**	P	**P**	**21**	**30**	**34.7**	**+2.5**
	2.8nm,0.9s,mb3.9,baz=63,slow=6.8,SNR=6.2								
KSRS				LR	LR	21	50	16.4	
	comp=Z,31nm,18.2s,MS3.2,baz=44,slow=39								
PDAR	**Pinedale Array**	**44.25**	**75**	P	**P**	**21**	**30**	**52.2**	**-0.7**
	1.6nm,0.6s,mb3.9,baz=308,slow=4.3,SNR=8.7								
SONM	**Songino Array**	**48.34**	**298**	LR	LR	21	50	46.4	
	comp=Z,54nm,18.3s,MS3.6,baz=183,slow=34								
TXAR	**Lajitas Array**	**56.57**	**84**	P	**P**	**21**	**32**	**26.8**	**+0.7**
	0.6nm,0.7s,mb3.7,baz=308,slow=3.4,SNR=5.8								
ARCES	**ARCESS Array B**	**58.13**	**351**	P	**P**	**21**	**32**	**35.5**	**-0.9**
	1.7nm,0.8s,mb4.1,baz=21,slow=8.7,SNR=3.1								
MKAR	**Makanchi Array**	**61.44**	**310**	P	**P**	**21**	**32**	**58.1**	**-1.4**
	0.2nm,0.3s,mb3.7,baz=348,slow=6.5,SNR=11								
CMAR	**Chiang Mai Arr**	**73.02**	**278**	P	**P**	**21**	**34**	**13.8**	**+0.7**
	1.1nm,0.8s,mb3.8,baz=26,slow=6.6,SNR=8.6								
WRA	**Warramunga Arr**	**83.68**	**227**	P	**P**	**21**	**35**	**10.7**	**-1.1**
	0.4nm,0.7s,mb3.6,baz=32,slow=5.7,SNR=2.5								
ASAR	**Alice Springs**	**87.12**	**225**	P	**P**	**21**	**35**	**28.6**	**-0.2**
	0.4nm,0.7s,mb3.8,baz=18,slow=4.8,SNR=3.9								
TORD	**Torodi Ar. Bea**	**115.41**	**3**	PKP	PKPdf	21	41	23.4	-1.3
	0.1nm,0.4s,baz=4.8,slow=2.2,SNR=8.8								
TORD	**Torodi Ar. Bea**	**115.41**	**3**	PKP	PKPdf	21	41	23.4	-1.4

IDC 08 21:25:55.6±1.5, 335S×14548E, h0km, mb3.9/7, mb1 4.1/9, mb1mx4.0/16, mbtmp4.0/9, ML4.1/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/21, Error ellipse: s-maj=46.4km s-min=19.8km az=88.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
HNR	**Honiara**	**15.59**	**113**	LR	LR	21	34	38.5	
	comp=Z,39nm,21.5s,baz=177,slow=34								
CTA	**Charters Tower**	**16.65**	**177**	Pn	Pn	21	29	52.0	+1.5
	0.3nm,0.3s,baz=4.8,slow=12,SNR=3.2								
GUMO	**Guam**	**16.84**	**358**	LR	LR	21	35	21.1	
	comp=Z,10nm,20.2s,baz=104,slow=34								
WB2	**Warramunga Arr**	**19.75**	**213**	*e*P	Pn	21	30	26.0	-2.5
WRA	**Warramunga Arr**	**19.75**	**213**	P	Pn	21	30	26.2	-2.4
	0.9nm,0.3s,baz=32,slow=11,SNR=66								
WRA				PcP	PcP	21	34	46.5	+0.3
	0.0nm,0.3s,baz=27,slow=1.5,SNR=2.7								
BATI	**Baumata**	**22.70**	**251**	P	P	21	30	59.1	0.0
	4.8nm,0.4s,baz=111,slow=8.6,SNR=2.7								
ASAR	**Alice Springs**	**23.09**	**208**	P	P	21	31	02.6	-0.4
	2.8nm,0.6s,baz=29,slow=12,SNR=41								
ASAR				PcP	PcP	21	34	52.4	-0.2
	0.4nm,0.9s,baz=34,slow=4.0,SNR=3.4								
STKA	**Stephens Creek**	**28.61**	**187**	P	P	21	31	54.0	+0.3
	0.8nm,0.4s,baz=28,slow=6.8,SNR=3.5								
STKA				LR	LR	21	43	53.4	
	comp=Z,77nm,19.5s,baz=206,slow=38								
KSRS	**Korea Array**	**43.75**	**340**	P	P	21	34	01.9	-1.0
	0.7nm,0.3s,baz=164,slow=9.2,SNR=4.4								
CMAR	**Chiang Mai Arr**	**50.68**	**297**	P	P	21	34	58.3	+1.0
	1.7nm,1.0s,baz=114,slow=6.2,SNR=8.3								
PPT	**Papeete**	**65.12**	**108**	*e*LR	LR	21	56	16.0	
	57nm,24.8s								
MKAR	**Makanchi Array**	**74.50**	**320**	P	P	21	37	36.3	+0.3
	0.4nm,0.7s,baz=107,slow=7.7,SNR=3.0								
ZALV	**Zalesovo Beam**	**75.97**	**328**	P	P	21	37	44.0	-0.3
	0.5nm,0.5s,baz=119,slow=5.3,SNR=3.1								
TORD	**Torodi Ar. Bea**	**142.91**	**287**	PKP	PKPdf	21	45	31.1	-1.2
	0.3nm,0.7s,baz=84,slow=2.4,SNR=2.6								

*ISCJB **08** 22:05:56.5±0.7, 3828N±002×2650E±005, h10km±4km, Error ellipse: s-maj=6.3km s-min=4.0km az=167.2*
*ISK **08** 22:05:56.9, 3826N×2661E, h5km, MD3.1*
*ATH **08** 22:05:56.4, 3824N×2673E, h55km, MD3.1/3*
*CSEM **08** 22:05:57.0±0.1, 3823N×2660E, h5km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.0km az=72.0*
*DDA **08** 22:05:57.3, 3828N×2659E, h13km±1km, Md3.1*

ISC 08 22:05:56.9±0.6, 3828N±003×2651E±005, h14km±4km, n26, σ0$80/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
URLA	**Izmir**	**0.10**	**41**	*i* P	**Pg**	**22**	**06**	**00.1**	**0.0**
URLA				*i* S	**Sg**	**22**	**06**	**02.1**	**-0.2**
BLCB	**Balcova**	**0.43**	**76**	PG	**Pg**	**22**	**06**	**05.2**	**-0.3**
BLCB				SG	**Sg**	**22**	**06**	**11.4**	**+0.1**
IZM	**Izmir**	**0.60**	**79**	*e*PG	**Pg**	**22**	**06**	**08.8**	**+0.1**
IZM				*e*SG	**Sg**	**22**	**06**	**16.9**	**+0.1**
KDAG	**Bornova**	**0.61**	**78**	*i* P	**Pg**	**22**	**06**	**08.5**	**-0.3**
KDAG				*i* S	**Sg**	**22**	**06**	**17.0**	**+0.2**
SMG	**Samos**	**0.63**	**156**	*e*P	**Pg**	**22**	**06**	**09.0**	**-0.2**
SMG				*e*S	**Sg**	**22**	**06**	**18.3**	**+0.8**
GCAM	**G?zelcaml?**	**0.81**	**135**	*i* P	**Pg**	**22**	**06**	**12.5**	**-0.2**
GCAM				*i* S	**Sg**	**22**	**06**	**23.6**	**+0.3**
PRK	**Paraskevi**	**0.98**	**349**	*e*P	**Pg**	**22**	**06**	**16.1**	**+0.3**
AYVA	**Ayvalik**	**1.03**	**8**	*i* P	**Pg**	**22**	**06**	**16.7**	**-0.2**
AYVA				*i* S	**Sg**	**22**	**06**	**31.0**	**+0.6**
AKS	**Akhisar**	**1.18**	**59**	*e*PN	**Pn**	**22**	**06**	**19.4**	**+0.3**
AKHS	**Akhisar**	**1.18**	**59**	*i* P	**Pn**	**22**	**06**	**16.9**	**-2.1**
AKHS				*i* S	**Sb**	**22**	**06**	**34.5**	**+0.9**
AYDN	**Tasoluk**	**1.25**	**119**	*i* P	**Pn**	**22**	**06**	**19.8**	**-0.1**
AYDN				*i* S	**Sb**	**22**	**06**	**36.2**	**+0.1**
BODT	**Bodrum**	**1.37**	**152**	*e*PN	**Pn**	**22**	**06**	**22.5**	**+0.9**
MLSB	**Milas**	**1.41**	**134**	*e*PN	**Pn**	**22**	**06**	**22.9**	**+0.8**
APE	**Apeiranthos**	**1.44**	**213**	*e*P	**Pn**	**22**	**06**	**22.4**	**-0.1**
EZN	**Ezine**	**1.55**	**355**	*e*PN	**Pn**	**22**	**06**	**26.4**	**+2.4**
BALY	**Balya**	**1.69**	**30**	*i* P	**Pn**	**22**	**06**	**26.5**	**+0.4**
KULA	**Kula-Manisa**	**1.71**	**82**	*e*PN	**Pb**	**22**	**06**	**28.5**	**+0.5**
DAT	**Datca**	**1.77**	**151**	*e*PN	**Pb**	**22**	**06**	**29.7**	**+0.6**
YER	**Yerkesik**	**1.81**	**129**	*e*PN	**Pb**	**22**	**06**	**29.9**	**0.0**
DEMI	**Demirci**	**1.89**	**66**	*i* P	**Pb**	**22**	**06**	**32.2**	**+1.0**
DALT	**Dalyan (Mudla)**	**2.27**	**131**	*e*PN	**Pb**	**22**	**06**	**36.3**	**-1.3**
EDC	**Edincik**	**2.31**	**27**	*e*PN	**Pb**	**22**	**06**	**37.6**	**-0.8**
KHL	**Karahalli**	**2.37**	**88**	*e*PN	**Pb**	**22**	**06**	**38.1**	**-1.3**
RKY	**Sarkoy-Tekirda**	**2.46**	**12**	*e*PN	**Pb**	**22**	**06**	**39.8**	**-1.0**
ENEZ	**Enez**	**2.47**	**354**	*e*PN	**Pb**	**22**	**06**	**40.3**	**-0.7**
FETY	**Fethiye**	**2.63**	**128**	*e*PN	**Pb**	**22**	**06**	**41.8**	**-1.9**

*IDC **08** 22:50:38.9±0.7, 292S×12993E, h0km, mb4.0/9, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, ML4.4/2, MS3.6/3, Ms1 3.6/3, ms1mx3.0/19, Error ellipse: s-maj=31.9km s-min=10.4km az=76.0*
*ISCJB **08** 22:50:40.0±2.4, 291S±006×12986E±009, h20km±18km, mb4.1/10, MS3.6/1, Error ellipse: s-maj=16.7km s-min=8.7km az=153.2*
*DJA **08** 22:50:43.2±0.0, 295S×12975E, h10km, mB5.2/2, Mjma3.9/6, MLv4.5/6, Mw(mB)5.1/2, Mwp3.8/3*
*NEIC **08** 22:50:44.4±0.4, 293S×12978E, h35km, mb3.9/1, Error ellipse: s-maj=13.5km s-min=7.5km az=73.0*

ISC 08 22:50:40.1±2.2, 291S±005×12985E±008, h4km±13km, n40, σ0$97/42, mb4.1/10, MS3.6/1, Seram

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
MSAI	**Masohi**	**1.02**	**245**	P	**Pg**	**22**	**50**	**58.8**	**-0.8**
AAI	**Ambon**	**1.82**	**245**	P	**Pn**	**22**	**51**	**12.3**	**+0.1**
AAI	**Ambon**	**1.82**	**245**	P	**Pn**	**22**	**51**	**12.4**	**+0.2**
SWI	**Sorong**	**2.47**	**35**	P	**Pn**	**22**	**51**	**25.1**	**+4.0**
LBMI	**Labuha**	**3.25**	**314**	P	**Pn**	**22**	**51**	**30.5**	**-1.3**
TNTI	**Ternate**	**4.42**	**326**	P	**Pn**	**22**	**51**	**49.1**	**+1.3**
KDI	**Kendari**	**7.29**	**262**	P	**Pn**	**22**	**52**	**27.0**	**-0.4**
	62nm,1.1s,2µm0.2nm								
BATI	**Baumata**	**9.50**	**220**	LR	LR	22	56	44.7	

	comp=Z,753nm,20.2s,baz=56,slow=38							
KAKA	**Kakadu**	**10.07**	**165**	*e*P	**Pn**	**22**	**52**	**56.6 -9.0**
	11nm,0.5s							
KAKA				*e*S	**Sn**	**22**	**54**	**48.5 -11**
KAKA	**Kakadu**	**10.07**	**165**	*e*Pn	**Pn**	**22**	**52**	**56.7 -8.9**
	21nm,0.5s							
KAKA				*e*Sn	**Sn**	**22**	**54**	**51.4 -7.7**
KAKA	**Kakadu**	**10.07**	**165**	P	**Pn**	**22**	**52**	**57.1 -8.5**
PCI	**Palu**	**10.20**	**281**	P	**Pn**	**22**	**53**	**07.6 +0.3**
	66nm,1.1s							
KAPI	**Kappang**	**10.29**	**258**	Pn	**Pn**	**22**	**53**	**09.9 +1.3**
	2.1nm,0.3s,baz=86,slow=7.0,SNR=12							
KAPI				LR	LR	22	56	49.0
	comp=Z,178nm,21.9s,baz=103,slow=36							
KAPI	**Kappang**	**10.29**	**258**	*e*Pn	**Pn**	**22**	**53**	**08.8 +0.2**
KAPI				LR	LR	22	56	49.0
KAPI	**Kappang**	**10.29**	**258**	P	**Pn**	**22**	**53**	**09.6 +1.1**
	41nm,1.2s,420nm							
BBKI	**Banjar Baru**	**14.99**	**267**	P	**Pn**	**22**	**54**	**13.7 +0.8**
	32nm,1.2s							
KMMI	**Kalianget**	**16.34**	**255**	P	**Pn**	**22**	**54**	**35.3 +4.7**
WRAB	**Tennant Creek**	**17.48**	**166**	P	**Pn**	**22**	**54**	**44.1 -0.8**
	16nm,1.1s							
WRA	**Warramunga Arr**	**17.49**	**166**	P	**Pn**	**22**	**54**	**44.5 -0.4**
	1.5nm,0.3s,baz=345,slow=12,SNR=13							
WRA				S	**Sn**	**22**	**58**	**02.6 +2.4**
	0.3nm,0.3s,baz=348,slow=22,SNR=5.2							
WB2	**Warramunga Arr**	**17.49**	**166**	*e*P	**Pn**	**22**	**54**	**43.6 -1.4**
WB2	**Warramunga Arr**	**17.49**	**166**	*e*Pn	**Pn**	**22**	**54**	**45.0 0.0**
SJI	**Sawahan**	**18.63**	**254**	P	**Pn**	**22**	**54**	**59.9 +0.9**
BJII	**Banjamegara**	**20.53**	**257**	P	**P**	**22**	**55**	**26.5 +6.9**
MBWA	**Marble Bar**	**20.64**	**208**	P	**P**	**22**	**55**	**19.7 -1.0**
	6.0nm,1.0s							
ASAR	**Alice Springs**	**21.01**	**170**	P	**P**	**22**	**55**	**25.3 +0.6**
	18nm,0.8s,mb4.5,baz=346,slow=10,SNR=166							
ASAR				S	**S**	**22**	**59**	**17.3 -1.9**
	3.5nm,1.0s,baz=354,slow=20,SNR=7.1							
CTA	**Charters Tower**	**23.41**	**138**	*e*P	**P**	**22**	**55**	**53.1 +2.8**
	9.6nm,0.9s,mb4.2							
CTA	**Charters Tower**	**23.41**	**138**	P	**P**	**22**	**55**	**52.7 +2.3**
	15nm,0.9s,mb4.4,baz=311,slow=12,SNR=11							
CTA	**Charters Tower**	**23.41**	**138**	P	**P**	**22**	**55**	**52.7 +2.3**
STKA	**Stephens Creek**	**30.87**	**160**	*e*P	**P**	**22**	**56**	**58.4 +0.9**
	3.0nm,0.9s,mb4.1							
STKA	**Stephens Creek**	**30.87**	**160**	P

	comp=E,14nm,0.4s							
BVAR	**Borovoye Array**	**16.46**	**358**	P	**P**		**23 06 51.3**	**+3.3**
	comp=E,0.1nm,0.3s,baz=176,slow=12,SNR=3.8							
TAPN	**Taplejung**	**16.67**	**119**	*eP*	**P**		**23 06 52.0**	**+1.3**
	comp=E,14nm,0.6s							
ODAN	**Odare**	**16.75**	**121**	*eP*	**P**		**23 06 53.1**	**+1.5**
	comp=E,14nm,0.6s							
AKTO	**Aktyubinsk**	**16.83**	**330**	⇓Pn	**Pn**		**23 06 54.1**	**+0.5**
	comp=E,0.6nm,1.1s							
AKTO				⇑Sn	**S**		**23 09 56.4**	**0.0**
	comp=E,1.5nm,2.3s							
ZALV	**Zalesovo Beam**	**19.74**	**24**	P	**P**		**23 07 25.4**	**+1.8**
	comp=E,0.6nm,0.3s,baz=226,slow=9.8,SNR=4.3							
EIL	**Elat**	**31.08**	**268**	LR	LR		23 23 38.5	
	comp=E,47nm,19.2s,baz=94,slow=40							
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P	**P**		**23 13 31.8**	**-1.9**
	comp=E,0.7nm,0.6s,mb3.5,baz=48,slow=5.9,SNR=12							
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P	**P**		**23 13 31.8**	**-1.9**
WRA	**Warramunga Arr**	**81.83**	**122**	P	**P**		**23 15 04.1**	**-1.3**
	comp=E,0.2nm,0.4s,mb3.1,baz=327,slow=5.1,SNR=3.2							

ISCJB ***08*** *23:10:26.2*±*0.5, 1341*N*×009*×*4989*E*×004, h10km, mb4.3/17, MS3.0/2, Error ellipse: s-maj=13.5km s-min=5.5km az=3.2*

IDC ***08*** *23:10:26.4*±*1.0, 1329*N*×5007E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/22, mbtmp3.9/10, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=27.5km s-min=24.6km az=111.0*

CSEM ***08*** *23:10:26.2*±*0.1, 1331*N*×4997E, h10km, mb4.8/7, Error ellipse: s-maj=6.7km s-min=3.2km az=179.0*

NEIC ***08*** *23:10:27.9*±*0.5, 1331*N*×4998E, h10km, Error ellipse: s-maj=12.9km s-min=10.0km az=163.0*

DHMR ***08*** *23:10:34.3*±*1.8, 1355*N*×4927E, h2km*±*327km, ML3.5*

ISC 08 23:10:27.9±0.6,**134N**±01×**4988E**±004,**h10**km,**n30,** σ0²**84**/32,**mb4.3**/17,**MS3.0**/2,**3C-2D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.37**	**323**	⇓*eP*	**Pn**	**23 10 52.2**	**-0.9**
MUKL				*i* S	**Sb**	**23 11 05.3**	**-5.8**
BDHA	**Al Bayda'** 103nm,0.6s	**4.24**	**279**	⇑*eP*	**Pn**	**23 11 34.1**	**+1.6**
BDHA				*i* S	**Sn**	**23 12 21.3**	**-0.7**
BDHA	**Al Bayda'**	**4.24**	**279**	⇑*eP*	**Pn**	**23 11 34.1**	**+1.6**
BDHA	baz=110,slow=16			⇓*e*		23 11 35.2	
BDHA	comp=E,206nm,0.6s			AML	AML	23 11 39.4	
BDHA				*i* S	**Sn**	**23 12 21.3**	**-0.8**
LBOS		**4.53**	**277**	⇑*eP*	**Pn**	**23 11 38.0**	**+1.5**
LBOS	comp=N,121nm,0.6s			AML	AML	23 11 44.1	
LBOS				*i* S	**Sn**	**23 12 27.7**	**-1.6**
MMAI	**Mount Meron Ar**	**23.60**	**328**	LR	LR	23 25 38.7	
	comp=N,35nm,18.4s,MS2.9,baz=235,slow=38						
GNI	**Garni**	**27.05**	**351**	LR	LR	23 26 51.8	
	comp=N,59nm,18.7s,MS3.2,baz=124,slow=36						
PYUN	**Piuthan**	**34.12**	**59**	*eP*	**P**	**23 17 13.8**	**+0.7**
	comp=N,15nm,1.1s,mb4.8						
KOLN	**Koldanda**	**34.53**	**60**	*eP*	**P**	**23 17 17.2**	**+0.6**
	comp=N,14nm,1.0s,mb4.8						
DANN	**Dangsing**	**34.84**	**59**	*eP*	**P**	**23 17 19.7**	**+0.4**
	comp=N,18nm,0.9s,mb5.0						
GKN	**Gorkha**	**35.48**	**60**	*eP*	**P**	**23 17 24.7**	**-0.1**
DMN	**Daman**	**35.76**	**61**	*eP*	**P**	**23 17 27.6**	**+0.4**
	comp=N,11nm,0.8s,mb4.9						
KKN	**Kakani**	**35.96**	**61**	*eP*	**P**	**23 17 29.2**	**+0.3**
	comp=N,13nm,0.8s,mb4.9						
PKIN	**Phulchoki**	**36.00**	**61**	*eP*	**P**	**23 17 29.3**	**0.0**
PKI	**Pulchoki**	**36.01**	**61**	*eP*	**P**	**23 17 29.4**	**0.0**
GUN	**Gumba**	**36.50**	**61**	*eP*	**P**	**23 17 33.8**	**+0.2**
	comp=N,14nm,0.8s,mb4.8						
JIRN	**Jiri**	**36.70**	**62**	*eP*	**P**	**23 17 35.2**	**-0.1**
RAMN	**Ramite**	**36.87**	**63**	*eP*	**P**	**23 17 36.6**	**-0.2**
ODAN	**Odare**	**37.54**	**63**	*eP*	**P**	**23 17 41.8**	**-0.6**
TAPN	**Taplejung**	**37.93**	**63**	*eP*	**P**	**23 17 45.1**	**-0.6**
	comp=N,10nm,0.9s,mb4.6						
AKASG	**Malin Array Be**	**40.84**	**340**	P	**P**	**23 18 10.4**	**+0.7**
	comp=N,0.5nm,0.4s,mb3.5,baz=148,slow=7.1,SNR=3.6						
BVAR	**Borovoye Array**	**42.79**	**18**	P	**P**	**23 18 26.4**	**+0.8**
	comp=N,0.5nm,0.7s,mb3.4,baz=198,slow=4.2,SNR=3.5						
MKAR	**Makanchi Array**	**42.98**	**33**	P	**P**	**23 18 27.3**	**0.0**
	comp=N,0.9nm,0.6s,mb3.7,baz=226,slow=7.9,SNR=6.5						
KURK	**Kurchatov** baz=224,slow=7.8	**43.95**	**26**	P	**P**	**23 18 34.8**	**-0.2**
TORD	**Torodi Ar. Bea**	**46.84**	**276**	P	**P**	**23 18 59.6**	**+1.2**
	comp=N,0.5nm,0.7s,mb3.6,baz=86,slow=7.7,SNR=4.6						
CMAR	**Chiang Mai Arr**	**47.34**	**77**	P	**P**	**23 19 00.8**	**-1.6**
	comp=N,1.6nm,0.3s,mb4.4,baz=275,slow=8.1,SNR=9.2						
ZALV	**Zalesovo Beam**	**48.93**	**27**	P	**P**	**23 19 13.5**	**-0.5**
	comp=N,0.4nm,0.4s,mb3.8,baz=258,slow=7.2,SNR=2.8						
SONM	**Songino Array**	**57.88**	**42**	P	**P**	**23 20 20.4**	**+0.4**
	comp=N,0.6nm,0.7s,mb3.7,baz=183,slow=5.9,SNR=4.4						
MAW	**Mawson**	**81.31**	**175**	P	**P**	**23 22 44.9**	**+0.9**
	comp=N,1.0nm,0.2s,mb4.3,baz=310,slow=7.3,SNR=3.6						
WRA	**Warramunga Arr**	**89.40**	**111**	P	**P**	**23 23 24.1**	**-1.4**
	comp=N,1.3nm,0.8s,mb4.3,baz=301,slow=3.6,SNR=3.7						
ASAR	**Alice Springs**	**89.93**	**114**	P	**P**	**23 23 26.6**	**-1.3**
	comp=N,0.8nm,0.8s,mb4.1,baz=285,slow=4.8,SNR=4.0						

MEX 08 23:16:34.8±0.8,**1687N**×**9976W, h15**km±5km,**MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.15**	**270**	*i* P	Pg	23 16 37.5	-1.2
ACX				*i* S	Sg	23 16 41.3	+0.1
CAIG	**El Cayaco**	**0.51**	**291**	*eP*	Pg	23 16 43.9	-1.1
CAIG				*i* S	Sg	23 16 49.6	-2.3
MEIG	**Mezcala**	**1.06**	**7**	*eP*	Pb	23 16 51.5	-3.4
MEIG				*i* S	Sb	23 17 03.7	-4.9
ZIIG	**Zihuatanejo**	**1.78**	**295**	*i* P	Pn	23 17 02.0	-3.1
ZIIG				*i* S	Sn	23 17 23.0	-4.5
UTMO	**Huajuapan**	**2.10**	**63**	*i* P	Pn	23 17 07.4	-2.1
UTMO				*i* S	Sn	23 17 32.0	-3.4

IDC 08 23:24:52.1±42.0,**724S**×**15988E, h0**km,**mb3.9**/3, **mb1 4.1**/3,**mb1mx3.7**/16,**mbtmp3.9**/3,**Error ellipse: s-maj=714.9km s-min=102.8km az=49.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.80**	**240**	P	P	23 30 43.7	+0.6
	0.6nm,0.4s,baz=67,slow=9.1,SNR=3.6						
ASAR	**Alice Springs**	**29.80**	**234**	P	P	23 31 00.8	-0.2
	0.9nm,0.4s,baz=60,slow=9.8,SNR=22						
STKA	**Stephens Creek**	**29.86**	**212**	P	P	23 31 01.2	-0.1
	0.6nm,0.3s,baz=18,slow=13,SNR=4.9						

IDC 08 23:35:47.0±1.4,**1428N**×**12177E, h0**km,**mb3.8**/5, **mb1 4.0**/5,**mb1mx3.7**/19,**mbtmp3.8**/5,**Error ellipse: s-maj=186.6km s-min=19.7km az=65.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.18**	**160**	P	P	23 42 51.3	-0.2
	0.4nm,0.4s,baz=337,slow=9.3,SNR=3.0						
ASAR	**Alice Springs**	**39.53**	**162**	P	P	23 43 19.9	+0.2
	0.5nm,0.3s,baz=337,slow=7.5,SNR=15						
MKAR	**Makanchi Array**	**46.20**	**323**	P	P	23 44 13.6	0.0
	0.1nm,0.3s,baz=117,slow=8.3,SNR=5.0						
ZALV	**Zalesovo Beam**	**49.03**	**332**	P	P	23 44 35.6	0.0
	0.4nm,0.3s,baz=132,slow=7.1,SNR=2.0						
KURK	**Kurchatov** baz=131,slow=7.5	**50.30**	**326**	P	P	23 44 45.6	+0.4
ARCES	**ARCESS Array B** 4.1nm,1.0s,baz=79,slow=6.3,SNR=4.6	**78.92**	**339**	P	P	23 47 51.5	-0.5

IDC 08 23:52:34.8±3.1,**3765S**×**9735W, h0**km,**mb4.0**/5,**Error ellipse: s-maj=84.0km s-min=27.1km az=23.0, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores** baz=315,slow=5.7	**20.97**	**107**	P	P	23 57 18.6	-0.7
CFAA	**Coronel Fontan** 0.4nm,0.8s,baz=260,slow=12,SNR=6.6	**24.65**	**85**	P	P	23 57 58.3	+1.3
LVC	**Limon Verde** 0.9nm,0.4s,baz=253,slow=11,SNR=3.9	**28.66**	**67**	P	P	23 58 34.4	+1.2
LPAZ	**La Paz** 4.7nm,0.9s,baz=201,slow=5.7,SNR=19	**33.40**	**58**	P	P	23 59 15.2	+0.1
SIV	**San Ignacio** 1.0nm,0.7s,baz=225,slow=8.6,SNR=5.7	**38.56**	**66**	P	P	23 59 58.8	-0.5
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=170,slow=7.0,SNR=4.7	**78.13**	**343**	P	P	00 04 36.6	+1.2
PDAR	**Pinedale Array** 0.7nm,0.7s,baz=157,slow=6.1,SNR=7.4	**80.80**	**351**	P	P	00 04 49.5	-0.3

MAN 08 23:52:42, 1040N×**12575E, h6**km,**mb4.3, ML3.1, MS2.9, 1C-2D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.66**	**202**	⇑*eP*	Pg	23 52 55.0	+0.3
SCPH				*eS*	Sg	23 53 05.8	+2.5
MSLP	**Maasin**	**0.91**	**253**	*eP*	Pg	23 53 00.1	+0.6
MSLP				*eS*	Sg	23 53 14.2	+2.9
PLP	**Palo**	**1.07**	**316**	⇓*eP*	Pg	23 53 02.2	-0.4
PLP				*eS*	Sg	23 53 18.7	+2.1
PLP	**Palo**	**1.07**	**316**	⇓*eP*	Pg	23 53 02.2	-0.4
PLP				*eS*	Sg	23 53 18.7	+2.1
BESP	**Borongan**	**1.23**	**346**	*eP*	Pg	23 53 05.1	-0.6
OCLP	**Ormoc**	**1.29**	**300**	*eP*	Pn	23 53 06.3	-0.3
BUTP	**Butuan**	**1.42**	**185**	*eP*	Pn	23 53 08.1	-0.3
LLP	**Lapu-Lapu**	**1.75**	**268**	*eP*	Pn	23 53 13.2	+0.3
LLP				*eS*	Sn	23 53 37.2	+1.6
TBP	**Tagbilaran**	**1.98**	**249**	*eP*	Pn	23 53 16.9	+0.7
TBP				*eS*	Sn	23 53 41.9	+0.7
CNP	**Catarman**	**2.35**	**333**	*eP*	Pn	23 53 18.6	-2.7
CNP				*eS*	Sn	23 53 48.9	-1.5
BUKP	**Musuan**	**2.59**	**195**	*eP*	Pn	23 53 24.2	-0.2
BUKP				*eS*	Sn	23 53 58.2	+2.0
GUIM	**Jordan**	**3.11**	**274**	*eP*	Pn	23 53 32.6	+1.0
PVCP	**Virac**	**3.54**	**334**	*eP*	Pn	23 53 41.0	+3.5
OTRP	**Odiongan**	**4.14**	**299**	*eP*	Pn	23 53 47.3	+1.5

ISCJB ***08*** *23:56:09.9*±*4.0, 238S*±*0.1*×*1799W*±*0.2, h518km*±*47km, mb4.2/11, Error ellipse: s-maj=24.9km s-min=17.7km az=137.8*

IDC ***08*** *23:56:09.7*±*2.8, 2384S*×*17975W, h505km*±*29km, mb3.6/8, mb1 3.8/9, mb1mx3.6/17, mbtmp3.6/9, Error ellipse: s-maj=23.9km s-min=18.5km az=5.0*

NEIC ***08*** *23:56:09.2*±*3.2, 2377S*×*17978W, h501km*±*38km, mb4.3/3, Error ellipse: s-maj=29.0km s-min=16.0km az=187.0*

ISC 08 23:56:10.7±3.6,**240S**±02×**1798W**±01,**h515**km±43km,**n20,** σ0²**95**/19,**mb4.2**/11,**2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 1.4nm,0.3s,baz=244,slow=9.2,SNR=7.0	**14.50**	**190**	P	**P**	**23 59 15.6**	**+0.3**
URZ				S	**S**	**00 01 46.2**	**-1.3**
CNB	**Canberra Magne**	**28.99**	**240**	*eP*	**P**	**00 01 30.1**	**+1.8**
CTA	**Charters Tower** 10.0nm,0.4s,mb4.7	**31.67**	**270**	*eP*	**P**	**00 01 52.1**	**+0.5**
CTA	**Charters Tower** 13nm,0.5s,mb4.8,baz=95,slow=11,SNR=30	**31.67**	**270**	P	**P**	**00 01 52.1**	**+0.4**
TOO	**Toolangi**	**32.58**	**237**	*eP*	**P**	**00 02 00.5**	**+1.3**
STKA	**Stephens Creek** 2.9nm,0.6s,mb4.0	**34.88**	**248**	*eP*	**P**	**00 02 19.3**	**+0.6**
STKA	**Stephens Creek** 3.6nm,0.6s,mb4.1,baz=87,slow=10,SNR=11	**34.88**	**248**	P	**P**	**00 02 19.5**	**+0.9**
STKA	**Stephens Creek** 1.1nm,0.6s,mb3.6	**34.88**	**248**	*eP*	**P**	**00 02 19.5**	**+0.9**
ASAR	**Alice Springs** 5.6nm,0.8s,mb4.2,baz=94,slow=7.9,SNR=54	**42.22**	**261**	P	**P**	**00 03 18.2**	**-0.1**
ASAR	0.4nm,0.8s,baz=101,slow=4.8,SNR=3.5			ScP	ScP	00 08 02.8	+0.7
WB2	**Warramunga Arr**	**42.59**	**266**	⇓*iP*	**P**	**00 03 20.4**	**-0.9**
WRAB	**Tennant Creek** 8.2nm,0.8s,mb4.3	**42.59**	**266**	*eP*	**P**	**00 03 20.5**	**-0.8**
WRA	**Warramunga Arr** 8.9nm,0.5s,mb4.5,baz=103,slow=8.1,SNR=52	**42.60**	**266**	P	**P**	**00 03 20.6**	**-0.8**
FORT	**Forrest** 37nm,0.6s,mb5.1	**46.48**	**250**	*eP*	**P**	**00 03 50.3**	**-0.9**
KAKA	**Kakadu** 5.9nm,0.6s	**46.51**	**275**	⇓*iP*	Px	00 03 40.1	
KLBR	**Kelberrin** 22nm,1.3s,mb4.2	**55.15**	**247**	*eP*	**P**	**00 04 53.2**	**-1.1**
QSPA	**South Pole Qui** 3.4nm,0.8s,mb3.9,baz=22,slow=1.9,SNR=8.5	**66.13**	**180**	P	**P**	**00 06 07.7**	**+1.7**
NVAR	**Mina Array Bea** 0.2nm,0.4s,mb3.0,baz=212,slow=3.2,SNR=2.9	**84.66**	**44**	P	**P**	**00 07 49.3**	**-0.5**
CMAR	**Chiang Mai Arr** 1.4nm,0.3s,mb4.2,baz=106,slow=3.2,SNR=3.6	**89.73**	**290**	P	**P**	**00 08 14.7**	**+0.6**
TXAR	**Lajitas Array** 0.6nm,0.7s,mb3.5,baz=219,slow=6.0,SNR=10	**90.29**	**58**	P	**P**	**00 08 16.2**	**-0.3**
TORD	**Torodi Ar. Bea** 0.7nm,0.8s,baz=182,slow=3.9,SNR=4.4	**169.16**	**188**	PKPab	PKPab	00 16 33.9	-0.7

IDC 09 00:09:12.1±5.9,**778S**×**15691E, h0**km,**mb3.8**/3,**mb1 4.0**/4, **mb1mx3.8**/16,**mbtmp4.0**/4,**ML4.2**/1,**Error ellipse: s-maj=125.3km s-min=26.5km az=8.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 24nm,0.3s,baz=242,slow=3.9,SNR=16	**3.42**	**119**	Pn	Pn	00 10 06.8	0.0
HNR	38nm,0.3s,baz=111,slow=23,SNR=8.5			Sn	Sn	00 10 50.2	+2.0
WRA	**Warramunga Arr** 2.1nm,0.8s,baz=65,slow=9.6,SNR=10.0	**24.98**	**239**	P	P	00 14 39.2	+1.5
ASAR	**Alice Springs** 0.2nm,0.3s,baz=62,slow=9.7,SNR=4.1	**27.13**	**232**	P	P	00 14 55.8	-1.3
STKA	**Stephens Creek** 1.7nm,0.8s,baz=42,slow=14,SNR=6.5	**27.90**	**209**	P	P	00 15 03.8	-0.2

BJI ***09*** *00:26:32.5, 3889N*×*7137E, h25km, mb3.6, ML3.6*

IDC ***09*** *00:26:32.8*±*1.1, 3892N*×*7160E, h0km, mb3.7/4, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.6/4, Error ellipse: s-maj=21.2km s-min=19.8km az=95.0*

NEIC ***09*** *00:26:34.5*±*3.9, 3902N*×*7154E, h10km*±*26km, mb4.0/1, Error ellipse: s-maj=11.8km s-min=8.6km az=140.0*

NNC ***09*** *00:26:34.8*±*4.6, 3901N*×*7168E, h0km, mb4.1, mpv4.1, Error ellipse: s-maj=41.6km s-min=26.1km az=9.0*

ISCJB ***09*** *00:26:35.3*±*1.7, 3904N*±*004*×*7142E*±*005, h31km*±*14km, mb4.0/7, Error ellipse: s-maj=6.9km s-min=6.0km az=41.8*

MOS ***09*** *00:26:35.9*±*1.6, 3910N*×*7150E, h33km, mb4.3/2, Error ellipse: s-maj=17.3km s-min=8.8km az=86.2*

ISC 09 00:26:37.0±1.8,**3903N**±004×**7143E**±005,**h27**km±15km, **n49,** σ1²**02**/59,**mb4.0**/7,**4C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=14	**3.55**	**28**	P	**Pn**	**00 27 30.2**	**0.0**
KSH	**Kashi**	**3.56**	**81**	P	**Pn**	**00 27 29.5**	**-0.9**
KSH				S	**Sn**	**00 28 12.4**	**+0.9**
KSH	comp=N,25nm,0.5s			Smax			
KSH	comp=E,52nm,0.9s			Smax			
UCH	**Uchtor** SNR=7.0	**3.96**	**35**	P	**Pn**	**00 27 36.6**	**+0.7**
EKS2	**Erkin-Say**	**4.04**	**25**	*ePn*	**Pn**	**00 27 37.1**	**+0.1**
EKS2				*ePg*	**Pn**	**00 27 49.3**	**+12**
EKS2				*eSn*	**Sn**	**00 28 23.6**	**+0.2**
EKS2	**Erkin-Say** SNR=36	**4.04**	**25**	P	**Pn**	**00 27 37.3**	**+0.2**
KK31	**Karatay Array** comp=E,22nm,0.4s,baz=173,slow=14,SNR=224	**4.13**	**351**	Pn	**Pn**	**00 27 40.2**	**+2.0**
KK31	comp=E,14nm,0.3s,baz=161,slow=29,SNR=6.0			Sn	**Sn**	**00 28 30.8**	**+5.1**
AAK	**Ala-Archa** SNR=35	**4.29**	**32**	P	**Pn**	**00 27 40.7**	**+0.3**
KBK	**Karagaybulak** SNR=34	**4.50**	**35**	P	**Pn**	**00 27 44.3**	**+0.9**
CHMS	**Chumysh** SNR=39	**4.70**	**31**	P	**Pn**	**00 27 46.4**	**+0.4**
USP	**Ospenovka** SNR=80	**4.83**	**28**	P	**Pn**	**00 27 47.7**	**-0.1**
KBL	**Kabul**	**4.87**	**204**	*ePn*	**Pn**	**00 27 48.0**	**-0.4**
KBL				*eSn*	**Sn**	**00 28 43.5**	**-0.3**
ULHL	**Ulahol**	**4.87**	**47**	P	**Pn**	**00 27 48.2**	**-0.2**
	SNR=6.5						
TKM2	**Tokmak 2** comp=E,13nm,0.5s	**5.01**	**38**	⇑Pn	**Pn**	**00 27 50.1**	**-0.2**
TKM2	comp=E,43nm,0.6s,baz=161,slow=29			⇑Sn	**Sn**	**00 28 48.4**	**+1.2**
TKM2	**Tokmak 2**	**5.01**	**38**	*ePn*	**Pn**	**00 27 49.9**	**-0.4**
TKM2				*eSn*	**Sn**	**00 28 47.1**	**-0.1**
TKM2	**Tokmak 2** SNR=28	**5.01**	**38**	P	**Pn**	**00 27 50.6**	**+0.3**
CEP	**Cherat**	**5.21**	**176**	⇓P	**Pn**	**00 28 00.1**	**+7.1**
CEP				S	**Sn**	**00 29 07.0**	**+15**
CHCP	**Chirah Chowk**	**5.56**	**164**	⇓P	**Pn**	**00 28 04.1**	**+6.2**
MK31	**Makanchi Array** comp=E,4.1nm,1.0s,baz=213,slow=34,SNR=8.1	**11.11**	**42**	P	**Pn**	**00 29 13.7**	**-0.3**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=226,slow=15,SNR=9.1	**11.11**	**42**	Pn	**Pn**	**00 29 14.5**	**+0.5**
KURBB	**Kurchatov Arra** comp=E,0.8nm,0.8s,baz=161,slow=29	**12.63**	**21**	⇑P	**Pn**	**00 29 35.3**	**+0.6**
KURK	**Kurchatov** comp=E,2.9nm,0.8s,baz=161,slow=29	**12.74**	**21**	⇑P	**Pn**	**00 29 37.9**	**+1.6**
KURK	**Kurchatov**	**12.74**	**21**	P	**Pn**	**00 29 35.2**	**-1.0**
AB09	**Akbulak array** comp=E,5.8nm,0.7s	**13.14**	**325**	⇓P	**Pn**	**00 29 40.9**	**-0.7**
BVA0	**Borovoye Array** comp=E,0.5nm,0.8s,baz=161,slow=29,SNR=11	**14.02**	**357**	⇓P	**Pn**	**00 29 54.7**	**+1.1**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=176,slow=14,SNR=8.1	**14.02**	**357**	Pn	**Pn**	**00 29 50.3**	**-3.3**
BRVK	**Borovoye** comp=E,5.3nm,1.0s	**14.06**	**357**	*eP*	**Pn**	**00 29 51.5**	**-2.7**
BRVK	**Borovoye**	**14.06**	**357**	*eP*	**Pn**	**00 29 51.5**	**-2.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTK	**Aktyubinsk**	**14.84**	**325**	Pn	**Pn**	**00 30 04.4**	**-0.4**
AKTK				Sn	**Sn**	**00 32 47.1**	**-1.1**
AKTO	**Aktyubinsk** comp=Z,0.9nm,0.6s,baz=161,slow=29	**14.84**	**325**	⇓P	**Pn**	**00 30 07.7**	**+2.8**
AKTO	**Aktyubinsk** comp=Z,0.3nm,0.3s,baz=132,slow=16,SNR=9.0	**14.84**	**325**	Pn	**Pn**	**00 30 04.4**	**-0.4**
AKTO	comp=Z,0.2nm,0.3s,baz=196,slow=22,SNR=5.6			Sn	**Sn**	**00 32 47.1**	**-1.1**
ZAA0	**Zalesovo Array**	**17.50**	**27**	*ePn*	**Pn**	**00 30 36.9**	**-1.8**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.3s,baz=215,slow=11,SNR=23	**17.50**	**27**	P	**Pn**	**00 30 37.0**	**-1.7**
ZALV	**Zalesovo Beam**	**17.50**	**27**	P	**Pn**	**00 30 37.0**	**-1.8**
ZALV	comp=Z,1.0nm,0.3s			pmax	pmax		
ARU	**Arti**	**19.39**	**338**	P	**Pn**	**00 31 00.8**	**-1.0**
GNI	**Garni**	**20.58**	**282**	*eP*	**P**	**00 31 15.0**	**+1.3**
GTA	**Gaotai**	**21.96**	**80**	*eP*	**P**	**00 31 27.3**	**-1.2**
GTA				AP		00 31 31.6	
GTA				XP	sP	00 31 35.2	-4.2
GTA	comp=Z,3.0nm,0.7s,mb3.8			AMB	AMB		
KIV	**Kislovodsk**	**22.03**	**292**	*eP*	**P**	**00 31 31.0**	**+1.8**
KIV	**Kislovodsk**	**22.03**	**292**	*eP*	**P**	**00 31 31.0**	**+1.8**
PSZ	**Piszkesteto** comp=Z,2.8nm,0.9s,mb4.0	**37.82**	**301**	*eP*	**P**	**00 33 51.7**	**+0.8**
PSZ	**Piszkesteto**	**37.82**	**301**	*eP*	**P**	**00 33 51.7**	**+0.8**
PSZ	comp=Z,3.0nm,0.9s,mb4.0			pmax	pmax		
KEV	**Kevo** comp=Z,95nm,1.9s,mb5.2	**38.60**	**337**	*eP*	**P**	**00 33 58.2**	**+1.0**
ARCES	**ARCESS Array B** comp=Z,2.0nm,0.9s,mb3.9,baz=116,slow=8.2,SNR=4.8	**38.96**	**336**	P	**P**	**00 34 01.2**	**+1.0**
ARCES	**ARCESS Array B**	**38.96**	**336**	P	**P**	**00 34 01.2**	**+0.9**
ARCES	**ARCESS Array B**	**38.96**	**336**	P	**P**	**00 34 01.2**	**+1.0**
ARCES	comp=Z,2.0nm,0.9s			pmax	pmax		
PEA0B	**Petropavlovsk-**	**57.93**	**45**	P	**P**	**00 36 25.9**	**-0.6**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.5s,mb3.6,baz=56,slow=5.7,SNR=8.9	**66.14**	**268**	P	**P**	**00 37 22.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**66.14**	**268**	P	**P**	**00 37 22.7**	**+0.5**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.3s,mb3.6,baz=312,slow=4.9,SNR=3.7	**83.04**	**122**	P	**P**	**00 38 59.0**	**-1.0**
ASAR	**Alice Springs** comp=Z,0.4nm,0.7s,mb3.7,baz=316,slow=4.8,SNR=5.2	**85.42**	**125**	P	**P**	**00 39 12.1**	**0.0**

FUNV 09 00:43:54.5, 681N×**7313W, h153**km,**MW3.5, 11C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.33**	**38**	⇑*iP*	Pn	00 44 22.8	+0.2
CAPV				*eS*	Sn	00 44 41.6	-2.5
VIGV	**El Vigia**	**2.67**	**41**	⇑*iP*	Pn	00 44 37.2	-0.7
VIGV				*eS*	Sn	00 45 08.3	-3.2
SOCV	**Socops**	**2.69**	**57**	⇑*eP*	Pn	00 44 37.5	-0.6
SOCV				*eS*	Sn	00 45 09.1	-2.7
ELOV	**Elorza**	**3.63**	**87**	⇑*iP*	Pn	00 44 49.1	-0.9
ELOV				*eS*	Sn	00 45 29.0	-4.1
VIRV	**Villa del Rosa**	**3.74**	**11**	⇑*iP*	Pn	00 44 49.6	-1.9
VIRV				*eS*	Sn	00 45 31.3	-4.5
QARV	**Quebrada Arrib**	**4.25**	**37**	⇑*iP*	Pn	00 44 57.1	-1.1
SANV	**Sanarito**	**4.45**	**53**	*eP*	Pn	00 44 59.0	-1.8
CURV	**Curarigua**	**4.47**	**44**	*eP*	Pn	00 44 59.4	-1.6
DABV	**Dabajuro**	**4.77**	**31**	*eP*	Pn	00 45 04.3	-0.7
TEPV	**Terepaima**	**5.00**	**51**	⇑*eP*	Pn	00 45 06.4	-1.7
SIQV	**Siquisique**	**5.04**	**40**	⇑

PMR Palmer 19.31 46 eP Pn 01 15 40.4 +2.3
PMR pmax pmax
comp=Z,310nm,2.8s
TRF Thorofare Moun 19.50 41 eP Pn 01 15 39.4 -0.9
comp=Z,91nm,1.1s
BPAW Bear Paw Mtn. 19.51 38 eP Pn 01 15 39.7 -0.7
comp=Z,62nm,0.7s
IMA2 Indian Mountai 19.58 32 eP Pn 01 15 40.1 -1.1
MCK McKinley 20.17 41 eP P 01 15 46.3 +0.3
comp=Z,28nm,0.7s
MCK McKinley 20.17 41 eP P 01 15 46.3 +0.3
MCK pmax pmax
comp=Z,28nm,0.7s
COLA College 21.07 38 eP P 01 15 56.6 +0.9
comp=Z,30nm,0.8s,mb4.7
COLA College 21.07 38 P P 01 15 56.8 +1.1
COLA pmax pmax
comp=Z,30nm,0.9s,mb4.6
COLD Coldfoot 21.38 31 eP P 01 15 60.0 +0.9
comp=Z,21nm,0.8s,mb4.5
PNL Peninsula 23.69 54 eP P 01 16 21.6 -1.5
comp=Z,36nm,1.0s,mb4.8
EGAK Eagle 23.71 41 eP P 01 16 22.5 -0.7
comp=Z,49nm,0.8s,mb5.0
DAWY Dawson 24.28 43 eP P 01 16 27.7 -0.7
HYT Haines Junctio 24.69 51 eP P 01 16 31.2 -1.0
YSS Yuzh-Sakhalins 25.05 275 eP P 01 16 36.7 +1.1
comp=Z,99nm,1.3s,mb5.2
YSS Yuzh-Sakhalins 25.05 275 ⇓iP P 01 16 37.0 +1.4
YSS pmax pmax
comp=E,70nm,1.0s
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.2
ASAJ Asahikawa 26.44 269 P P 01 16 49.1 +1.0
comp=Z,32nm,1.0s,mb4.8,baz=62,slow=9.6,SNR=8.5
ASAJ LR LR 01 27 56.4
comp=Z,103nm,18.5s,MS3.4,baz=20,slow=38
ASAJ Asahikawa 26.44 269 P P 01 16 49.2 +1.0
ASAJ pmax pmax
comp=Z,32nm,1.0s
ASAJ MLR MLR
comp=Z,103nm,18.5s
INK Inuvik 27.60 35 eP P 01 16 58.1 -0.3
comp=Z,302nm,1.0s,mb5.9
INK Inuvik 27.60 35 eP P 01 16 58.1 -0.3
INK pmax pmax
comp=Z,300nm,1.0s
DLBC Dease Lake 28.57 56 P P 01 17 07.2 +0.1
comp=Z,1.1nm,0.5s,mb3.8,baz=230,slow=16,SNR=1.4
TIXI Tiksi 30.50 331 eP P 01 17 25.6 +1.6
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
TIXI MLR MLR
comp=Z,401nm,17.0s,MS4.1
KLR Kul'dur 30.92 286 eP P 01 17 23.7 -4.3
KLR pmax pmax
comp=E,34nm,1.2s
KLR pmax pmax
comp=Z,60nm,1.2s,mb5.3
MJAR Matsushiro Arr 33.52 261 P P 01 17 51.1 +0.2
comp=Z,2.7nm,0.6s,mb4.4,baz=46,slow=7.0,SNR=7.1
MJAR LR LR 01 29 13.3
comp=Z,156nm,21.5s,MS3.7,baz=65,slow=32
MAJO Matsushiro 33.53 261 eP P 01 17 50.5 -0.4
comp=Z,7.6nm,0.6s,mb4.8
MAJO Matsushiro 33.53 261 eP P 01 17 50.5 -0.4
MAJO pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
MDJ Mudanjiang 34.31 279 P P 01 17 57.1 -0.5
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.9
MDJ AMB AMB
comp=Z,47nm,5.2s
MDJ LR LR
comp=Z,106nm,21.2s,MS3.5
MDJ Mudanjiang 34.31 279 eP P 01 17 57.1 -0.5
comp=Z,16nm,0.9s,mb5.0
OOW Octopus West 35.17 74 P P 01 18 06.8 +1.7
YKW3 Yellowknife Ar 35.40 46 eP P 01 18 06.3 -0.5
YKA Yellowknife Ar 35.42 46 P P 01 18 06.4 -0.6
comp=Z,9.1nm,0.7s,mb4.8,baz=285,slow=7.2,SNR=20
YKA PcP PcP 01 20 35.7 0.0
comp=Z,2.4nm,0.7s,baz=292,slow=4.2,SNR=4.4
YKA LR LR 01 34 04.9
comp=Z,67nm,18.3s,MS3.4,baz=150,slow=39
YKA Yellowknife Ar 35.42 46 P P 01 18 06.4 -0.6
YKA PcP PcP 01 20 35.7 0.0
YKA LR LR 01 34 04.9
YKA Yellowknife Ar 35.42 46 P P 01 18 06.4 -0.6
YKA 01 20 35.7
YKA pmax pmax
comp=Z,9.0nm,0.7s
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA MLR MLR
comp=Z,67nm,18.3s
B04A Port Angeles 35.44 73 ⇓P P 01 18 08.0 +0.7
baz=35
A04A Legoe Bay, Lum 35.62 72 ⇓P P 01 18 09.3 +0.4
baz=36
VDB Vedder Mountai 35.84 71 P P 01 18 11.3 +0.5
A05A Maple Falls 35.87 71 ⇑P P 01 18 11.1 +0.2
baz=36,SNR=9.2
C04A Brinnon 35.91 73 ⇓P P 01 18 12.2 +0.8
baz=36,SNR=9.8
MBW Mount Baker 36.07 71 P P 01 18 13.5 +0.8
GNW Green Mountain 36.07 73 eP P 01 18 14.1 +1.4
comp=Z,15nm,0.8s,mb5.0
E03A Lebam 36.11 75 ⇑P P 01 18 13.7 +0.7
baz=36,SNR=5.5
A06A Chilliwack 36.18 70 ⇓P P 01 18 13.9 +0.2
baz=36,SNR=5.1
B05A Bryant 36.19 72 ⇑P P 01 18 14.4 +0.7
baz=36,SNR=12
JCW Jim Creek 36.32 72 eP P 01 18 15.3 +0.5
F03A Seaside 36.41 76 ⇑P P 01 18 16.3 +0.7
baz=36
B06A Marblemount 36.44 71 ⇓P P 01 18 16.0 +0.2
baz=36
RPW Rockport 36.45 71 eP P 01 18 15.8 -0.1
E04A Onalaska 36.59 75 ⇓P P 01 18 18.0 +0.8
baz=36
C05A Tolt Reservoir 36.69 73 ⇓P P 01 18 18.3 +0.3
baz=37
D05A Enumclaw 36.75 73 ⇓P P 01 18 19.6 +1.0
baz=37,SNR=7.9
A07A Ashnola River, 36.85 70 ⇓P P 01 18 19.8 +0.4
baz=37,SNR=28
G03A Yamhill 36.88 77 ⇑P P 01 18 20.5 +0.8
baz=37
C06A Tall Timber Ra 37.06 72 ⇓P P 01 18 21.7 +0.5
baz=37
LON Longmire 37.07 74 eP P 01 18 21.6 +0.3
comp=Z,12nm,0.6s,mb4.9
LON Longmire 37.07 74 eP P 01 18 21.6 +0.4
LON pmax pmax
comp=Z,12nm,0.6s,mb4.9
F04A Amboy 37.10 76 ⇑P P 01 18 22.1 +0.6
baz=37,SNR=14
MTMW Mount Mitchell 37.18 75 P P 01 18 23.6 +1.4
E05A Randle 37.19 74 ⇑P P 01 18 22.5 +0.2
baz=37,SNR=5.3
H03A Soap Creek Ran 37.20 78 ⇑P P 01 18 23.3 +0.9
baz=37
COR Corvallis 37.24 78 eP P 01 18 23.8 +1.1
B07A Winthrop 37.27 71 ⇓P P 01 18 23.3 +0.4
baz=37,SNR=26
CN2 Changchun 37.29 281 eP P 01 18 22.4 -0.7
CN2 eS S 01 24 05.4 -1.8
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CN2 AMB AMB
comp=Z,200nm,3.0s
G04A Mulino 37.43 77 ⇓P P 01 18 24.8 +0.5
baz=37,SNR=5.9
D06A Cle Elum 37.44 73 ⇑P P 01 18 24.9 +0.5
baz=37,SNR=5.8
A08A Turner Farm, O 37.54 69 ⇓P P 01 18 25.4 +0.1
baz=37,SNR=14
ETW Entiat 37.55 72 eP P 01 18 25.6 +0.3
SSOR Sweet Springs 37.62 77 P P 01 18 27.2 +1.3
C07A Waterville 37.67 72 ⇑P P 01 18 26.3 0.0
baz=38,SNR=13
E06A Yakima 37.67 74 ⇑P P 01 18 26.8 +0.5
baz=38,SNR=5.8
J02A Umpqua 37.71 80 ⇑P P 01 18 27.2 +0.5
baz=38

BOD Bodaibo 37.76 307 eP P 01 18 25.4 -1.6
BOD pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
B08A Colville Reser 37.78 70 ⇑P P 01 18 27.5 +0.2
baz=38,SNR=16
HOOD Mount Hood Mea 37.87 76 eP P 01 18 29.1 +1.0
comp=Z,21nm,0.8s,mb4.9
H04A Detroit Lake 37.87 77 ⇓P P 01 18 28.7 +0.6
baz=38
A09A Danville 37.94 69 ⇓P P 01 18 28.8 +0.2
baz=38,SNR=14
D07A Quincy 37.96 72 ⇓P P 01 18 28.9 +0.1
baz=38,SNR=7.0
HIA Hailar 38.04 292 eP P 01 18 28.6 -0.8
G05A Wamic 38.12 76 ⇓P P 01 18 30.7 +0.6
baz=38,SNR=9.3
F06A Goldendale 38.17 75 ⇑P P 01 18 30.9 +0.3
baz=38
C08A Higginbotham F 38.22 71 ⇑P P 01 18 30.8 -0.2
baz=38,SNR=7.4
E07A Sunnyside 38.34 73 ⇓P P 01 18 32.2 +0.2
baz=38,SNR=7.0
L02A Cave Junction 38.35 81 ⇑P P 01 18 32.7 +0.5
baz=38
CROR Criterion Ridg 38.45 76 P P 01 18 33.6 +0.7
B09A Rice 38.45 70 ⇓P P 01 18 33.0 +0.1
baz=38,SNR=13
H05A Madras 38.48 77 ⇓P P 01 18 33.3 +0.1
baz=38
HUMO Hull Mountain 38.50 80 eP P 01 18 34.4 +0.9
comp=Z,9.8nm,1.1s,mb4.5
HUMO Hull Mountain 38.50 80 ⇑P P 01 18 34.7 +1.3
baz=38
G06A Carlson Farm, 38.53 75 ⇓P P 01 18 33.6 0.0
baz=38
A10A Northport 38.53 69 ⇓P P 01 18 33.5 -0.1
baz=38,SNR=9.4
RSW Rattlesnake Hi 38.58 73 eP P 01 18 34.4 +0.5
OD2 Odessa Site #2 38.61 71 eP P 01 18 34.2 -0.1
HAWA Hanford 38.61 73 eP P 01 18 34.7 +0.4
comp=Z,17nm,0.6s,mb5.0
F07A Phinny Hill Vi 38.62 74 ⇑P P 01 18 34.7 +0.3
baz=38,SNR=12
D08A Wollman Farm, 38.65 72 ⇑P P 01 18 34.3 -0.2
baz=38,SNR=10
C09A Chrisman Ranch 38.67 71 ⇑P P 01 18 34.4 -0.3
baz=38,SNR=10.0
I05A Bend 38.71 77 ⇑P P 01 18 35.3 +0.2
baz=39
E08A Dider Farm, El 38.85 73 ⇑P P 01 18 36.4 +0.2
baz=39,SNR=7.8
H06A Lindquist Farm 38.98 76 ⇓P P 01 18 37.5 +0.2
baz=39
D09A Jones Farm, Ri 39.01 72 ⇓P P 01 18 37.3 -0.3
baz=39
EDM Edmonton 39.04 61 eP P 01 18 37.2 -0.5
B10A Chitwood Farm, 39.05 69 ⇓P P 01 18 37.9 0.0
baz=39
G07A Ruggs Ranch, H 39.10 75 ⇓P P 01 18 38.3 -0.1
baz=39,SNR=6.9
NEW Newport 39.13 69 eP P 01 18 38.1 -0.4
comp=Z,34nm,1.0s,mb5.0
NEW Newport 39.13 69 P P 01 18 38.5 -0.1
NEW pmax pmax
comp=Z,33nm,1.0s
YBH Yreka Blue Hor 39.14 81 eP P 01 18 40.4 +1.7
comp=Z,12nm,1.0s,mb4.6
YBH Yreka Blue Hor 39.14 81 eP P 01 18 40.4 +1.6
YBH pmax pmax
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 39.14 81 ⇑P P 01 18 40.0 +1.2
baz=39
C10A Spilker Farm, 39.23 70 ⇓P P 01 18 39.2 -0.3
baz=39
A11A Hall Mountain, 39.24 68 ⇓P P 01 18 39.9 +0.4
baz=39,SNR=17
N02C Big Bar 39.29 83 ⇑P P 01 18 41.1 +1.1
baz=39
F08A Pendleton 39.37 74 ⇑P P 01 18 40.5 -0.1
baz=39,SNR=6.3
KSRS Korea Array 39.37 270 P P 01 18 39.1 -1.6
comp=Z,7.7nm,0.8s,mb4.5,baz=58,slow=9.1,SNR=15
KSRS PcP PcP 01 20 48.6 +0.3
comp=Z,2.0nm,0.6s,baz=36,slow=2.6,SNR=5.6
KSRS LR LR 01 34 16.1
comp=Z,39nm,19.9s,MS3.2,baz=241,slow=35
KSRS Korea Array 39.37 270 P P 01 18 39.2 -1.5
KSRS 01 20 48.6
KSRS pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KSRS MLR MLR
comp=Z,39nm,19.9s,MS3.2
B11A Sandpoint 39.49 69 ⇑P P 01 18 41.5 -0.1
baz=38,SNR=11
H07A Lands Inn, Kim 39.52 76 ⇑P P 01 18 41.7 -0.2
baz=39
G08A Pilot Rock 39.52 74 ⇓P P 01 18 41.6 -0.2
baz=39,SNR=11
LNOR Lincton Mounta 39.62 73 eP P 01 18 42.4 -0.3
LNOR Lincton Mounta 39.62 73 P P 01 18 42.8 +0.1
D10A Wagner Farm, O 39.63 71 ⇑P P 01 18 42.1 -0.6
baz=40,SNR=17
K05A Summer Lake 39.71 79 ⇑P P 01 18 44.4 +0.9
baz=40
I07A Izee 39.83 76 ⇓P P 01 18 45.1 +0.7
baz=40
C11A Tepee Creek (N 39.84 69 ⇑P P 01 18 44.1 -0.4
baz=40,SNR=5.5
RES Resolute Bay 39.84 24 eP P 01 18 43.9 -0.4
J06A Christmas Vall 39.88 78 ⇓P P 01 18 45.4 +0.6
baz=40
WDC Whiskeytown Da 39.90 83 eP P 01 18 45.3 +0.2
comp=Z,4.1nm,0.7s,mb4.3
WDC Whiskeytown Da 39.90 83 eP P 01 18 45.3 +0.2
WDC pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
WDC Whiskeytown Da 39.90 83 ⇓P P 01 18 45.3 +0.2
baz=40
B12A Libby 39.92 68 ⇓P P 01 18 45.5 +0.3
baz=40
F09A S2 Ranch, Elgi 39.93 73 ⇑P P 01 18 45.4 +0.1
baz=40,SNR=8.1
E10A Mys Farm, Un 40.01 72 ⇓P P 01 18 45.6 -0.4
baz=40,SNR=19
H08A Prairie City 40.10 75 ⇓P P 01 18 46.3 -0.3
baz=40
D11A Klaveano Farm, 40.19 71 ⇑P P 01 18 46.5 -0.9
baz=40,SNR=19
F10A Beach Ranch, E 40.21 73 ⇑P P 01 18 47.3 -0.3
baz=40,SNR=9.7
G09A Cove 40.24 74 ⇓P P 01 18 47.6 -0.2
baz=40,SNR=10
J07A Hines 40.33 77 ⇓P P 01 18 49.0 +0.4
baz=40
C12B Naegeli Ranch, 40.37 69 ⇓P P 01 18 48.9 0.0
baz=40
I08A Drewsey 40.49 76 ⇑P P 01 18 50.4 +0.5
baz=40
LBCM Butte Creek Ri 40.49 82 P P 01 18 50.7 +0.7
WALA Waterton Lakes 40.61 67 eP P 01 18 51.0 +0.2
comp=Z,16nm,0.8s,mb4.7
E11A Bognar Ranch, 40.62 71 ⇑P P 01 18 50.2 -0.8
baz=40,SNR=6.8
B13A Whitefish 40.62 68 ⇓P P 01 18 50.7 -0.3
baz=40,SNR=7.9
G10A Bishop Farm, J 40.62 73 ⇓P P 01 18 51.1 +0.1
baz=40,SNR=16
H09A Durkee 40.63 74 ⇑P P 01 18 50.9 -0.2
baz=40
BSMT Bassoo Peak 40.70 69 eP P 01 18 51.7 +0.1
K07A Rock Creek Ran 40.74 78 ⇓P P 01 18 52.8 +0.8
baz=41
BMO Blue Mountains 40.75 74 eP P 01 18 52.0 0.0
comp=Z,7.9nm,0.7s,mb4.5
BMO Blue Mountains 40.75 74 eP P 01 18 52.0 0.0
BMO pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
J08A Circle Bar Ran 40.84 77 ⇓P P 01 18 53.3 +0.4
baz=41
F11A Grangeville 40.89 72 ⇓P P 01 18 52.7 -0.5
baz=41,SNR=7.6
C13A Hot Springs 40.91 69 ⇑P P 01 18 53.1 -0.2
baz=41,SNR=18
A14A Double T Ranch 40.93 67 ⇓P P 01 18 53.2 -0.3
baz=41,SNR=32

I09A Lost Marbles R 40.95 75 ⇑P P 01 18 53.9 +0.2
baz=41
E12A Beaver Dam Sad 40.96 71 ⇑P P 01 18 53.4 -0.4
baz=41,SNR=26
L07A Adell 41.06 79 ⇓P P 01 18 55.3 +0.7
baz=41
G11A Walters Elk Ra 41.08 73 ⇓P P 01 18 54.3 -0.5
baz=41,SNR=11
K08A Mann Creek Ran 41.19 77 ⇓P P 01 18 56.2 +0.5
baz=41
H10A Noah's Angus R 41.22 74 ⇑P P 01 18 56.1 +0.1
baz=41
WVOR Wild Horse Val 41.26 78 eP P 01 18 56.6 +0.3
comp=Z,12nm,0.6s,mb4.7
WVOR Wild Horse Val 41.26 78 eP P 01 18 56.6 +0.3
WVOR pmax pmax
comp=Z,12nm,0.6s,mb4.7
D13A Huson 41.27 70 ⇓P P 01 18 55.5 -0.8
baz=41
OHCM Honcut 41.29 84 eP P 01 18 56.4 -0.2
J09A Fry Pan Ranch, 41.29 76 ⇓P P 01 18 56.6 +0.1
baz=41
B14A Marquette Ranc 41.32 67 ⇓P P 01 18 56.3 -0.4
baz=41,SNR=15
A15A Johnson Ranch, 41.33 66 ⇓P P 01 18 55.7 -1.1
baz=41,SNR=12
FARB Farallon Islan 41.33 87 ⇓P P 01 18 57.1 +0.2
baz=41
I10A Payette 41.46 75 ⇑P P 01 18 57.9 0.0
baz=41
N06A Buffalo Meadow 41.48 81 ⇑P P 01 18 58.2 +0.1
baz=41
F12A Elk City 41.50 72 ⇑P P 01 18 57.8 -0.3
baz=41,SNR=25
L08A Fields 41.58 78 ⇓P P 01 18 59.3 +0.4
baz=41
H11A Donnelly 41.60 73 ⇑P P 01 18 58.6 -0.5
baz=42
K09A Rome 41.67 77 ⇓P P 01 18 59.3 -0.3
baz=42
BEKR Beckwourth 41.67 82 ⇓P P 01 18 59.3 -0.4
baz=42
MSO Missoula 41.71 70 eP P 01 18 59.2 -0.7
comp=Z,26nm,1.2s,mb4.7
B15A Bradely Ranch, 41.76 67 ⇑P P 01 18 59.5 -0.7
baz=42,SNR=23
E13A Victor 41.77 70 ⇓P P 01 18 60.0 -0.4
baz=42,SNR=14
O06A Flanigan 41.83 82 ⇑P P 01 19 01.3 +0.3
baz=42,SNR=5.9
D14A Greenough 41.84 69 ⇑P P 01 19 00.4 -0.5
baz=42,SNR=38
J10A Berg Farm, Mel 41.84 76 ⇑P P 01 19 00.8 -0.2
baz=42
M08A Happy Creek Ra 41.98 79 ⇓P P 01 19 02.9 +0.8
baz=42
A16A West Butte Ran 41.99 66 ⇓P P 01 19 01.0 -1.2
baz=42,SNR=16
N07B Gerlach 42.00 80 ⇓P P 01 19 02.8 +0.4
baz=42
C15A Salmond Ranch, 42.00 68 ⇓P P 01 19 02.2 -0.1
baz=42,SNR=58
F13A Darby 42.03 71 ⇑P P 01 19 02.3 -0.2
baz=42,SNR=11
I11A Placerville 42.07 74 ⇑P P 01 19 02.9 0.0
baz=42
CHMT Chamberlain Mo 42.07 69 eP P 01 19 02.2 -0.6
L09A Wilkinson Ranc 42.09 78 ⇑P P 01 19 03.4 +0.4
baz=42
K10A MacKenzie Ranc 42.14 76 ⇑P P 01 19 03.9 +0.4
baz=42
E14A Clinton 42.19 70 ⇑P P 01 19 03.7 -0.1
baz=42,SNR=22
B16A M & M Farms, S 42.20 66 ⇓P P 01 19 02.7 -1.2
baz=42
PAHR Pah Rah Range 42.37 82 eP P 01 19 05.0 -0.4
comp=Z,10nm,0.9s,mb4.5
H12A Diamond D Ranc 42.38 73 ⇑P P 01 19 05.0 -0.4
baz=42
WCN Washoe City 42.38 82 ⇓P P 01 19 05.2 -0.3
baz=42
O07A Toulon 42.42 81 ⇓P P 01 19 05.0 -0.8
baz=42
MFID Camas Ranch 42.42 75 ⇓P P 01 19 05.5 -0.2
baz=42
D15A Lincoln 42.43 69 ⇓P P 01 19 05.4 -0.4
baz=42,SNR=21
G13A Cobalt 42.46 72 ⇓P P 01 19 05.8 -0.3
baz=42,SNR=28
C16A Fuhringer Ranc 42.49 67 ⇓P P 01 19 05.6 -0.6
baz=42
N08A GE Springer Mi 42.51 80 ⇓P P 01 19 06.9 +0.4
baz=42
M09A Marrel Ranch, 42.56 78 ⇓P P 01 19 07.3 +0.4
baz=42
F14A Wisdom 42.58 71 ⇑P P 01 19 07.0 0.0
baz=42,SNR=12
K11A Parker Ranch, 42.66 76 ⇓P P 01 19 07.8 +0.1
baz=42
E15A Deer Lodge 42.69 69 ⇑P P 01 19 07.4 -0.5
baz=42,SNR=22
H13A Challis 42.73 73 ⇑P P 01 19 08.3 0.0
baz=43
CMB Columbia Colle 42.76 84 eP P 01 19 08.1 -0.4
comp=Z,3.0nm,0.9s,mb4.0
CMB Columbia Colle 42.76 84 eP P 01 19 08.1 -0.5
CMB pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
CMB Columbia Colle 42.76 84 ⇓P P 01 19 09.0 +0.4
baz=43
L10A Juniper Basin 42.78 77 ⇓P P 01 19 09.2 +0.5
baz=43
O08A Rochester Mine 42.79 80 ⇑P P 01 19 09.2 +0.4
baz=43,SNR=12
N09A Rock Creek Ran 42.85 79 ⇑P P 01 19 09.8 +0.5
baz=43
J12A Stokes Ranch, 42.95 75 ⇓P P 01 19 10.6 +0.5
baz=43
D16A Dana Ranch, Ca 43.00 68 ⇑P P 01 19 09.9 -0.5
baz=43,SNR=13
HRY Holter Researc 43.01 69 eP P 01 19 10.2 -0.3
R06C Coleville 43.04 83 ⇓P P 01 19 11.3 +0.4
baz=43
M10A I.L. Ranch, Tu 43.06 78 ⇓P P 01 19 11.4 +0.4
baz=43
F15A Butte 43.09 70 ⇑P P 01 19 10.5 -0.6
baz=43,SNR=12
LRM Limekiln Ridge 43.12 70 eP P 01 19 11.3 -0.1
C17A Wharram Farm, 43.14 67 ⇑P P 01 19 10.8 -0.7
baz=43,SNR=13
L11A Cat Creek Ranc 43.17 76 ⇑P P 01 19 12.1 +0.3
baz=43
I13A Wildhorse Cree 43.17 73 ⇓P P 01 19 12.2 +0.4
baz=43
HLID Hailey 43.19 74 eP P 01 19 11.6 -0.4
comp=Z,16nm,0.8s,mb4.8
HLID Hailey 43.19 74 ⇓P P 01 19 12.1 +0.1
baz=43,SNR=35
E16A East Helena 43.19 69 ⇑P P 01 19 11.6 -0.4
baz=43,SNR=15
H14A Leadore 43.23 72 ⇓P P 01 19 12.3 0.0
baz=43
BMN Battle Mountai 43.28 79 eP P 01 19 12.8 +0.1
comp=Z,9.4nm,0.6s,mb4.7
BMN Battle Mountai 43.28 79 eP P 01 19 12.8 +0.1
BMN pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
DLMT Dillon 43.28 71 eP P 01 19 11.8 -0.9
comp=Z,3.7nm,0.6s,mb4.3
K12A Draper Farm, C 43.42 75 ⇑P P 01 19 14.4 +0.5
baz=43
MCMT McKenzie Canyo 43.43 72 eP P 01 19 13.6 -0.3
J13A Cove Ranch, Pi 43.43 74 ⇑P P 01 19 14.3 +0.4
baz=43
D17A Six Diamond Ra 43.44 67 ⇑P P 01 19 13.4 -0.6
baz=43,SNR=14
G15A Dillon 43.45 71 ⇑P P 01 19 13.4 -0.7
baz=43,SNR=26
EGMT Eagleton 43.52 66 eP P 01 19 13.7 -0.8
comp=Z,27nm,0.9s,mb5.0
EGMT Eagleton 43.52 66 ⇓P P 01 19 13.8 -0.7
baz=43,SNR=15
U04C Hernandez Rese 43.55 87 ⇓P P 01 19 15.1 +0.1
baz=43
N10A Dunphy 43.55 79 ⇓P P 01 19 15.3 +0.4
baz=43
I14A Mackay 43.57 73 ⇑P P 01 19 15.4 +0.4
baz=43

M11A Holland Ranch, 43.57 77 ⇑P P 01 19 15.3 +0.3
baz=43
F16A Kennard Place, 43.63 70 ⇑P P 01 19 14.9 -0.6
baz=44,SNR=14
L12A House Creek Ra 43.63 76 ⇑P P 01 19 15.9 +0.3
baz=44
H15A Lima 43.66 72 ⇓P P 01 19 15.6 -0.1
baz=44
BOZ Bozeman (W) 43.70 70 eP P 01 19 15.7 -0.3
comp=Z,28nm,0.8s,mb5.0
BOZ Bozeman (W) 43.70 70 eP P 01 19 15.7 -0.3
BOZ pmax pmax
comp=Z,28nm,0.8s,mb5.0
BOZ Bozeman (W) 43.70 70 ⇑P P 01 19 15.9 -0.2
baz=44,SNR=42
E17A Martinsdale 43.71 68 ⇑P P 01 19 16.0 -0.1
baz=44,SNR=23
Q08A Gabbs 43.78 82 ⇑P P 01 19 16.8 0.0
baz=44
O10A Cortez Mining, 43.81 79 ⇑P P 01 19 17.1 +0.1
baz=44
NVAR Mina Array Bea 43.81 83 P P 01 19 17.3 +0.2
comp=Z,6.7nm,0.8s,mb4.4,baz=298,slow=6.8,SNR=31
NVAR Mina Array Bea 43.81 83 P P 01 19 17.3 +0.2
T06C Millerton Lake 43.82 85 ⇓P P 01 19 17.1 0.0
baz=44
G16A Moss Hill, Enn 43.83 70 ⇓P P 01 19 16.7 -0.4
baz=44,SNR=22
KCC Kaiser Creek 43.86 84 ⇑P P 01 19 17.3 -0.1
baz=44,SNR=6.8
J14A Carey 43.87 74 ⇓P P 01 19 18.1 +0.6
baz=44
K13A Stover Farm, H 43.91 75 ⇓P P 01 19 17.8 0.0
baz=44
D18A Linhart Farms, 43.93 67 ⇓P P 01 19 17.8 -0.1
baz=44,SNR=11
N11A Elko Archery C 43.97 78 ⇑P P 01 19 18.2 -0.1
baz=44
M12A Wells 44.12 77 ⇓P P 01 19 19.9 +0.4
baz=44
F17A Fitzpatrick Pl 44.13 69 ⇓P P 01 19 19.3 -0.2
baz=44,SNR=24
E18A Harlowton 44.20 68 ⇓P P 01 19 20.2 +0.2
baz=44,SNR=34
P10A Eureka 44.23 80 ⇑P P 01 19 20.8 +0.5
baz=44
QLMT Earthquake Lak 44.27 71 eP P 01 19 20.8 +0.2
ELK Elko 44.31 78 eP P 01 19 21.2 +0.2
comp=Z,16nm,0.8s,mb4.8
ELK Elko 44.31 78 eP P 01 19 21.3 +0.3
ELK pmax pmax
comp=Z,17nm,0.8s
MTUM Tungsten Hills 44.31 84 eP P 01 19 21.5 +0.4
L13A Double Diamond 44.32 75 ⇓P P 01 19 21.5 +0.5
baz=44
N12A Clover Valley, 44.37 78 ⇑P P 01 19 21.7 +0.2
baz=44
G17A Pierce Place, 44.40 70 ⇓P P 01 19 21.8 +0.1
baz=44,SNR=20
O11A Cowboy Ranch, 44.42 79 ⇓P P 01 19 22.0 +0.1
baz=44,SNR=11
H16A Russell Place, 44.45 71 ⇓P P 01 19 22.3 +0.2
baz=44
J15A Blackfoot 44.47 73 ⇓P P 01 19 23.0 +0.8
baz=44
K14A Jones Ranch, D 44.52 74 ⇓P P 01 19 23.1 +0.5
baz=44
YMR Madison River 44.63 71 eP P 01 19 23.4 -0.1
comp=Z,41nm,1.0s,mb5.2
F18A Big Timber 44.68 68 ⇓P P 01 19 23.7 -0.2
baz=44,SNR=20
R09A Tonopah 44.69 82 ⇓P P 01 19 23.9 -0.2
baz=45,SNR=34
TPH Tonopah 44.70 82 eP P 01 19 24.1 -0.1
comp=Z,10nm,0.8s,mb4.7
TPH Tonopah 44.70 82 eP P 01 19 24.1 -0.1
TPH pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
Q10A Clear Creek Ra 44.75 81 ⇓P P 01 19 24.6 +0.1
baz=45,SNR=18
GCMT Greycliff 44.77 69 eP P 01 19 24.3 -0.3
I16A Newdale 44.77 72 ⇓P P 01 19 25.0 +0.4
baz=45
YNR Norris Junctio 44.77 70 eP P 01 19 25.4 +0.8
K15A Arbon 44.83 74 ⇑P P 01 19 25.7 +0.6
baz=45
YFT Old Faithful 44.83 71 eP P 01 19 26.4 +1.3
N13A Wendover, West 44.88 77 ⇑P P 01 19 25.7 +0.2
baz=45
O12A Currie 44.90 78 ⇑P P 01 19 25.8 +0.1
baz=45,SNR=24
S09A Goldfield 44.92 83 ⇑P P 01 19 25.6 -0.3
baz=45,SNR=6.8
H17A Grant Village 45.02 71 ⇑P P 01 19 27.9 +1.3
baz=45
M14A Sheep Mountain 45.02 76 ⇓P P 01 19 27.0 +0.4
baz=45
LKWY Lake 45.02 70 eP P 01 19 28.2 +1.5
comp=Z,25nm,1.1s,mb5.0
LKWY Lake 45.02 70 P P 01 19 23.1 -3.5
LKWY e 01 19 28.4
LKWY pmax pmax
comp=Z,25nm,1.0s,mb5.0
IMW Indian Meadow 45.08 72 eP P 01 19 27.4 +0.3
comp=Z,18nm,1.1s,mb4.8
G18A Lazy EL Ranch, 45.09 69 ⇑P P 01 19 26.5 -0.7
baz=45,SNR=5.5
BJI Beijing 45.11 282 P P 01 19 27.9 +0.5
BJI S S 01 26 02.5 -0.8
BJI AMB AMB
comp=Z,21nm,0.9s,mb5.0
BJI LR LR
comp=N,126nm,18.7s,MS4.0
BJI LR LR
comp=E,130nm,21.0s,MS4.0
BJI LR LR
comp=Z,89nm,26.0s,MS3.6
R10A Warm Springs 45.14 81 ⇓P P 01 19 28.3 +0.7
baz=45
RRI2 Red Ridge 45.17 72 eP P 01 19 28.7 +0.9
comp=Z,22nm,0.7s,mb5.1
S10A Tonopah Range, 45.19 82 ⇓P P 01 19 27.8 -0.2
baz=45,SNR=14
Q11A Duckwater 45.20 80 ⇓P P 01 19 28.2 +0.1
baz=45,SNR=11
HVU Hansel Valley 45.20 75 eP P 01 19 28.3 +0.2
comp=Z,26nm,0.6s,mb5.2
HVU Hansel Valley 45.20 75 eP P 01 19 28.3 +0.2
HVU pmax pmax
comp=Z,26nm,0.6s,mb5.2
GRAC Grapevine Rang 45.28 83 ⇑P P 01 19 29.3 +0.5
baz=45
MOOW Moose Ponds 45.28 72 eP P 01 19 28.6 -0.1
comp=Z,15nm,1.4s,mb4.6
I17A Pilgram Creek 45.28 71 ⇓P P 01 19 29.3 +0.6
baz=45
K16A Soda Springs 45.31 73 ⇓P P 01 19 30.4 +1.5
baz=45
L15A Malad City 45.31 75 ⇑P P 01 19 29.6 +0.6
baz=45
TPAW Teton Pass 45.31 72 eP P 01 19 29.1 +0.2
comp=Z,8.8nm,0.7s,mb4.7
RLMT Red Lodge 45.38 69 eP P 01 19 29.1 -0.3
comp=Z,61nm,0.9s,mb5.4
RLMT Red Lodge 45.38 69 ⇓P P 01 19 29.6 +0.2
baz=45,SNR=70
REDW Red Top Meadow 45.44 72 eP P 01 19 30.0 +0.1
comp=Z,8.6nm,1.0s,mb4.5
SNOW Snow King Moun 45.44 72 eP P 01 19 30.6 +0.6
comp=Z,7.8nm,0.7s,mb4.7
LOHW Long Hollow 45.45 72 eP P 01 19 29.9 0.0
comp=Z,13nm,1.0s,mb4.7
O13A Hicks Ranch, I 45.45 78 ⇑P P 01 19 30.4 +0.3
baz=45
N14A Grayback Hills 45.50 76 ⇓P P 01 19 30.8 +0.3
baz=45
J17A Brown Place, J 45.52 72 ⇑P P 01 19 30.5 -0.1
baz=45
R11A Troy Canyon, C 45.55 81 ⇑P P 01 19 30.7 -0.2
baz=45,SNR=20
BGU Big Grassy Mou 45.55 76 eP P 01 19 30.8 -0.1
M15A Larsen Ranch, 45.59 75 ⇓P P 01 19 31.5 +0.4
baz=45
Q12A Willow Creek R 45.59 79 ⇓P P 01 19 31.6 +0.4
baz=45
SPUT South Promonto 45.68 75 eP P 01 19 31.9 +0.1
MPMC Manual Prospec 45.80 85 ⇑P P 01 19 33.0 +0.1
baz=46

P13A Bates Ranch, G 45.84 78 ⇑P P 01 19 33.1 -0.1
baz=46,SNR=12
L16A Fish Haven 45.88 74 ⇓P P 01 19 33.8 +0.3
baz=46
S11A Rachel 45.88 82 ⇑P P 01 19 33.5 0.0
baz=46
N15A Stansbury Isla 45.89 76 ⇓P P 01 19 33.9 +0.4
baz=46
TPNV Topopah Spring 46.01 83 eP P 01 19 34.2 -0.3
comp=Z,16nm,0.8s,mb5.0
TPNV Topopah Spring 46.01 83 eP P 01 19 34.3 -0.2
TPNV pmax pmax
comp=Z,16nm,0.8s,mb5.0
TPNV Topopah Spring 46.01 83 ⇓P P 01 19 34.2 -0.3
baz=46,SNR=25
ULN Ulaanbaatar 46.02 296 eP P 01 19 35.2 +0.7
comp=Z,8.4nm,0.8s,mb4.7
ULN Ulaanbaatar 46.02 296 P P 01 19 35.4 +0.9
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HWUT Hardware Ranch 46.04 75 eP P 01 19 34.7 0.0
comp=Z,13nm,0.8s,mb4.9
LRMC Laurel Mountai 46.05 85 ⇑P P 01 19 34.5 -0.4
baz=46
DUG Dugway 46.12 77 eP P 01 19 35.5 +0.1
comp=Z,17nm,0.6s,mb5.2
DUG Dugway 46.12 77 P P 01 19 35.6 +0.2
DUG pmax pmax
comp=Z,17nm,0.6s,mb5.2
DUG Dugway 46.12 77 ⇑P P 01 19 35.5 +0.1
baz=46,SNR=44
Q13A Wheeler Ranch, 46.14 79 ⇑P P 01 19 35.5 0.0
baz=46,SNR=14
R12A Pony Springs, 46.16 80 ⇑P P 01 19 36.0 +0.2
baz=46,SNR=11
M16A Huntsville 46.17 75 ⇑P P 01 19 35.9 +0.2
baz=46
P14A Drum Mountains 46.34 78 ⇓P P 01 19 37.1 0.0
baz=46,SNR=29
SONM Songino Array 46.41 296 P P 01 19 38.6 +1.1
comp=Z,8.7nm,0.7s,mb4.8,baz=58,slow=7.7,SNR=46
SONM PcP PcP 01 21 12.2 +0.5
comp=Z,1.3nm,0.6s,baz=97,slow=2.0,SNR=3.0
SONM LR LR 01 40 24.4
comp=Z,260nm,18.4s,MS4.2,baz=178,slow=38
SONM Songino Array 46.41 296 P P 01 19 38.6 +1.1
SONM 01 21 12.2
SONM pmax pmax
comp=Z,9.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,260nm,18.4s
DGMT Dagmar 46.41 63 ⇑P P 01 19 36.8 -0.8
baz=46
S12A Delamar Landin 46.46 81 ⇑P P 01 19 38.4 +0.3
baz=46,SNR=6.1
T11A Corn Creek, Al 46.46 82 ⇓P P 01 19 38.0 -0.1
baz=46,SNR=25
N16A Rees Ranch, Co 46.55 75 ⇓P P 01 19 38.8 +0.1
baz=46
BW06 Boulder Array 46.56 72 eP P 01 19 38.5 -0.2
comp=Z,26nm,0.6s,mb5.3
BW06 Boulder Array 46.56 72 ⇑P P 01 19 38.5 -0.2
baz=46,SNR=56
PDAR Pinedale Array 46.56 72 P P 01 19 38.6 -0.1
comp=Z,32nm,0.6s,mb5.5,baz=302,slow=3.6,SNR=336
PDAR LR LR 01 36 35.8
comp=Z,76nm,20.3s,MS3.6,baz=298,slow=33
Q14A Sevier Lake (B 46.58 78 ⇓P P 01 19 39.0 0.0
baz=46,SNR=28
R13A O'Grain Ranch, 46.65 80 ⇓P P 01 19 39.4 -0.1
baz=46,SNR=11
M17A Scullys Gap (B 46.66 74 ⇑P P 01 19 39.6 0.0
baz=46
JLU Jolenelle 46.71 76 eP P 01 19 39.9 -0.1
GSC Goldstone 46.71 85 eP P 01 19 40.8 +0.8
comp=Z,23nm,1.2s,mb5.0
GSC Goldstone 46.71 85 eP P 01 19 40.8 +0.7
GSC pmax pmax
comp=Z,23nm,1.2s,mb5.0
GSC Goldstone 46.71 85 ⇑P P 01 19 40.0 -0.1
baz=47
NLU North Lily Min 46.72 77 eP P 01 19 38.5 -1.6
ZAK Zakamensk 46.72 301 eP P 01 19 40.7 +0.8
ZAK e 01 21 13.5
ZAK pmax pmax
comp=Z,12nm,1.4s,mb4.6
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
P15A Leamington 46.83 77 ⇑P P 01 19 40.9 -0.1
baz=47
N17A Moffit Pass 46.88 75 ⇓P P 01 19 41.3 0.0
baz=47
O16A Springville 46.92 76 ⇑P P 01 19 42.2 +0.6
baz=47
DAU Daniels Canyon 46.94 76 eP P 01 19 42.1 +0.4
MPU Maple Canyon 46.95 76 eP P 01 19 41.9 0.0
comp=Z,10.0nm,0.7s,mb4.8
M18A Lyman 47.05 74 ⇓P P 01 19 42.6 0.0
baz=47
L19A Farson 47.07 73 ⇑P P 01 19 42.7 0.0
baz=47
S13A Holt Ranch, En 47.09 80 ⇑P P 01 19 43.2 +0.2
baz=47
Q15A Fillmore 47.12 78 ⇓P P 01 19 43.1 -0.1
baz=47
TUQ Turquoise Moun 47.18 84 ⇓P P 01 19 44.3 +0.6
baz=47
ARUT Antelope Range 47.22 80 P P 01 19 43.9 -0.1
V11A Goodsprings 47.22 83 ⇓P P 01 19 44.7 +0.6
baz=47
HEC Hector,Ludlow 47.31 85 ⇓P P 01 19 45.4 +0.7
baz=47
O17A Robinson Place 47.39 76 ⇑P P 01 19 45.8 +0.5
baz=47
U12A Valley of Fire 47.40 82 ⇑P P 01 19 45.7 +0.3
baz=47
S14A Cedar City 47.41 80 ⇑P P 01 19 45.7 +0.3
baz=47
T13A Saint George 47.42 81 ⇑P P 01 19 45.4 -0.1
baz=47
CCUT Cedar City 47.42 80 eP P 01 19 45.9 +0.4
HHC Hu-ho-hao-te 47.43 286 eP P 01 19 46.3 +0.7
HHC AMB AMB
comp=Z,14nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,105nm,8.3s
HHC LR LR
comp=N,154nm,15.5s,MS4.3
HHC LR LR
comp=E,241nm,20.2s,MS4.3
MSU Marysvale 47.55 78 eP P 01 19 46.5 0.0
M19A Rock Springs 47.55 73 ⇑P P 01 19 46.1 -0.4
baz=47
N18A Larsen Ranch, 47.56 74 ⇑P P 01 19 46.4 -0.1
baz=47
MURC Murrieta 47.58 87 ⇑P P 01 19 47.1 +0.3
baz=47
TMUT Trail Mountain 47.65 77 eP P 01 19 47.2 -0.1
R15A Junction 47.67 79 ⇑P P 01 19 47.7 +0.2
baz=48
L20A Wamsutter 47.73 72 ⇑P P 01 19 47.9 0.0
baz=48
GMRC Granite Mounta 47.77 85 ⇓P P 01 19 48.9 +0.6
baz=48
O18A Roosevelt 47.79 75 ⇓P P 01 19 47.7 -0.6
baz=48
P17A Butcher Ranch, 47.83 76 ⇑P P 01 19 48.7 0.0
baz=48
T14A Hurricane 47.90 80 ⇑P P 01 19 49.6 +0.3
baz=48
N19A John Jarvie Ra 47.91 74 ⇓P P 01 19 49.1 -0.2
baz=48
Q16A Castle Valley 47.91 77 ⇑P P 01 19 49.6 +0.3
baz=48
LDFC Landfair 47.91 84 eP P 01 19 51.0 +1.6
comp=E,13nm,0.9s,mb5.0
S15A Panguitch 47.96 79 ⇓P P 01 19 49.3 -0.4
baz=48

P18A Preston Nutter 48.03 76 ⇑P P 01 19 50.4 +0.2
baz=48
BELC Belle Mtn. 48.06 86 ⇑P P 01 19 51.0 +0.4
baz=48
V13A Grand Canyon W 48.11 82 ⇓P P 01 19 50.4 -0.5
baz=48
SRU San Rafael 48.19 77 eP P 01 19 51.6 +0.2
comp=E,19nm,0.6s,mb5.3
SRU San Rafael 48.19 77 eP P 01 19 51.7 +0.2
SRU pmax pmax
comp=Z,19nm,0.6s,mb5.3
SRU San Rafael 48.19 77 ⇑P P 01 19 51.0 -0.5
baz=48,SNR=28
O19A Miners Draw (B 48.30 74 ⇑P P 01 19 52.0 -0.3
baz=48,SNR=12
L21A Rawlins 48.34 72 ⇓P P 01 19 52.3 -0.3
baz=48
T15A Red Dirt Ranch 48.36 80 ⇓P P 01 19 52.9 +0.1
baz=48
S16A Weppner Ranch, 48.40 79 ⇓P P 01 19 53.0 -0.1
baz=48,SNR=20
Q18A Rafter H Ranch 48.43 76 ⇓P P 01 19 53.0 -0.3
baz=48,SNR=24
IRM Iron Mountain 48.49 85 ⇑P P 01 19 53.6 -0.2
baz=48
R17A Hanksville Air 48.50 77 ⇑P P 01 19 53.6 -0.3
baz=48,SNR=22
NJ2 Nanjing 48.55 271 eP P 01 19 57.6 +3.3
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
RWWY Rawlins 48.60 72 eP P 01 19 53.7 -0.9
comp=Z,15nm,0.7s,mb5.1
BC3 Big Chuckw Mtn 48.63 86 ⇓P P 01 19 54.5 -0.5
baz=48
W13A Hualapai Mount 48.66 83 ⇓P P 01 19 54.8 -0.4
baz=48
U15A North Rim 48.79 81 ⇑P P 01 19 55.9 -0.2
baz=49,SNR=25
P19A Cripple Cowboy 48.80 75 ⇓P P 01 19 55.7 -0.5
baz=49,SNR=64
V14A Boquillas Ranc 48.80 82 ⇓P P 01 19 55.9 -0.3
baz=49,SNR=8.6
T16A Glen Canyon Da 48.92 79 ⇓P P 01 19 56.7 -0.4
baz=49
S17A Black Ridge (B 48.94 78 ⇓P P 01 19 56.9 -0.4
baz=49,SNR=53
RSSD Black Hills 49.00 67 eP P 01 19 56.7 -1.0
comp=Z,6.0nm,0.6s,mb4.8
RSSD Black Hills 49.00 67 P P 01 19 56.8 -0.8
RSSD pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
R18A Canyonlands Na 49.02 77 ⇑P P 01 19 57.2 -0.7
baz=49,SNR=24
PDMCI Parker Dam,Lak 49.03 84 ⇓P P 01 19 57.9 -0.1
baz=49
X13A Yucca 49.03 83 ⇑P P 01 19 57.7 -0.2
baz=49
Q19A Hogan Spring (49.05 76 ⇓P P 01 19 57.5 -0.6
baz=49,SNR=35
W14A Seligman 49.09 82 ⇑P P 01 19 58.0 -0.4
baz=49
V15A Kaibab Nationa 49.26 81 ⇓P P 01 19 60.0 +0.2
baz=49,SNR=24
T17A Navajo Res., N 49.35 79 ⇑P P 01 19 59.9 -0.5
baz=49,SNR=14
S18A Hurst Farm, Bl 49.40 78 ⇓P P 01 20 00.5 -0.3
baz=49,SNR=30
GLA Glamis 49.42 86 eP P 01 20 00.5 -0.5
comp=Z,9.6nm,1.0s,mb4.8
GLA Glamis 49.42 86 P P 01 20 00.6 -0.4
GLA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GLA Glamis 49.42 86 ⇑P P 01 20 00.7 -0.3
baz=49
R19A Curley Farm, L 49.47 77 ⇓P P 01 20 01.1 -0.2
baz=49,SNR=23
PV10 Paradox Valley 49.55 76 eP P 01 20 02.0 +0.1
U17A Shonto 49.69 79 ⇑P P 01 20 02.8 -0.2
baz=50
X14A Yava 49.69 83 ⇓P P 01 20 03.1 0.0
baz=50,SNR=6.9
U16A Tuba City 49.69 80 ⇓P P 01 20 03.1 +0.1
baz=50
T18A Mexican Hat 49.83 78 ⇑P P 01 20 03.4 -0.7
baz=50,SNR=27
PHWY Pilot Hill 49.88 71 eP P 01 20 03.5 -0.9
comp=Z,6.6nm,0.6s,mb4.8
S19A Harvey Farm, M 49.89 77 ⇑P P 01 20 03.9 -0.6
baz=50,SNR=39
ULM Lac du Bonnet 49.90 56 LR LR 01 40 47.6
comp=Z,89nm,19.9s,MS3.8,baz=118,slow=36
WUAZ Wupatki 49.95 81 eP P 01 20 05.0 0.0
comp=Z,7.6nm,0.8s,mb4.8
WUAZ Wupatki 49.95 81 ⇓P P 01 20 05.0 0.0
baz=50,SNR=12
Y14A Wickenburg 49.97 83 ⇑P P 01 20 05.1 -0.1
baz=50
PV01 Paradox Valley 49.99 76 eP P 01 20 05.0 -0.3
X15A Humboldt 50.09 82 ⇑P P 01 20 06.1 0.0
baz=50,SNR=5.7
W16A Flagstaff 50.13 81 ⇓P P 01 20 06.3 -0.1
baz=50,SNR=9.5
113A Mohawk Valley, 50.27 85 ⇑P P 01 20 07.1 -0.4
baz=50
U18A Rough Rock, Ch 50.29 79 ⇓P P 01 20 07.3 -0.3
baz=50
SMCO Snowmass 50.30 74 eP P 01 20 07.2 -0.4
comp=Z,7.4nm,0.5s,mb5.0
Y15A Casa Rosa Ranc 50.38 83 ⇓P P 01 20 08.1 -0.1
baz=50
T19A Beclabito 50.55 78 ⇓P P 01 20 09.4 -0.1
baz=50,SNR=55
MVCO Mesa Verde 50.62 77 eP P 01 20 09.5 -0.5
comp=Z,9.9nm,0.6s,mb4.9
MVCO Mesa Verde 50.62 77 ⇓P P 01 20 09.8 -0.2
baz=50,SNR=5.5
X16A Lo Mia Camp, P 50.63 82 ⇓P P 01 20 10.0 -0.2
baz=50,SNR=7.0
V18A Ganado 50.71 80 ⇓P P 01 20 10.7 -0.1
baz=51,SNR=10.0
ISCO Idaho Springs 50.72 73 eP P 01 20 10.8 +0.1
comp=Z,8.9nm,0.8s,mb4.8
ISCO Idaho Springs 50.72 73 P P 01 20 11.5 +0.7
ISCO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
Y16A Circle Bar Ran 50.96 82 ⇑P P 01 20 12.5 -0.2
baz=51,SNR=6.3
W18A Petrified Fore 51.22 80 ⇓P P 01 20 14.2 -0.4
baz=51
V19A Window Rock 51.26 79 ⇓P P 01 20 14.9 +0.1
baz=51
115A Sonoran Desert 51.28 84 ⇓P P 01 20 15.0 -0.1
baz=51
214A Organ Pipe Nat 51.42 85 ⇓P P 01 20 16.2 0.0
baz=51
Y17A Roosevelt 51.48 82 ⇓P P 01 20 16.2 -0.3
baz=51,SNR=8.8
X18A Snowflake 51.48 81 ⇑P P 01 20 16.6 +0.1
baz=51
116A Eloy 51.70 84 ⇓P P 01 20 18.7 +0.5
baz=52
Y18A Canyon Day Jun 51.92 82 ⇑P P 01 20 19.4 -0.4
baz=52,SNR=6.3
X19A St. Johns 51.95 80 ⇓P P 01 20 19.6 -0.4
baz=52,SNR=5.2
SDCO Great Sand Dun 52.10 75 eP P 01 20 21.0 -0.1
comp=Z,15nm,1.0s,mb4.9
Y19A Nutrioso 52.29 81 ⇑P P 01 20 22.9 +0.4
baz=52
117A Oracle 52.29 83 ⇓P P 01 20 23.0 +0.4
baz=52
WHN Wuhan 52.39 273 P P 01 20 23.8 +0.4
TUC Tucson 52.44 83 eP P 01 20 23.0 -0.7
comp=Z,6.8nm,1.2s,mb4.5
TUC Tucson 52.44 83 P P 01 20 23.0 -0.7
TUC pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
118A Homack Ranch, 52.73 83 ⇓P P 01 20 25.6 -0.3
baz=53,SNR=7.0
119A Ashpeak Ranch, 53.05 82 ⇓P P 01 20 28.1 -0.1
baz=53,SNR=7.1
218A Dragoon 53.13 83 ⇑P P 01 20 29.0 +0.2
baz=53
LAZ Ladron 53.30 79 eP P 01 20 30.3 +0.3
ANMO Albuquerque 53.35 78 eP P 01 20 29.9 -0.5
comp=Z,2.9nm,0.8s,mb4.3
ANMO Albuquerque 53.35 78 eP P 01 20 29.9 -0.5
ANMO pmax pmax

comp=Z,3.0nm,0.8s
XAN Xi'an 53.40 281 P **P** **01 20 30.2 -0.5**
XAN AP pP 01 20 37.9 -5.4
XAN AMB AMB
comp=Z,12nm,1.1s,mb4.7
XAN AMB AMB
comp=Z,57nm,4.8s
XAN LR LR
comp=E,144nm,15.1s
XAN LR LR
comp=Z,155nm,14.3s,MS4.2
ECSD EROS,Sioux Fal 53.47 63 *eP* **P** **01 20 29.4 -1.7**
comp=Z,3.5nm,0.6s,mb4.5
318A Bisbee 53.53 84 ⇓P **P** **01 20 31.7 -0.1**
baz=53
LENM Lemitar 53.55 79 *eP* **P** **01 20 30.8 -1.1**
219A White Tail Can 53.60 83 ⇓P **P** **01 20 32.7 +0.4**
baz=54
LPM Los Pinos Moun 53.67 79 *eP* **P** **01 20 32.8 +0.1**
BNM Barren Site 53.78 79 *eP* **P** **01 20 34.0 +0.4**
ZALV Zalesovo Beam 53.83 313 P **P** **01 20 34.6 +1.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=58,slow=5.8,SNR=6.2
ZALV PcP PcP 01 21 39.2 +0.4
comp=Z,9.8nm,0.7s,baz=36,slow=4.0,SNR=25
ZALV Zalesovo Beam 53.83 313 P **P** **01 20 34.6 +1.0**
ZALV 01 21 39.3
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
ZALV pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
319A Douglas 54.01 83 ⇑P **P** **01 20 35.4 +0.1**
baz=54
CBKS Cedar Bluff 54.84 70 *eP* **P** **01 20 40.7 -0.5**
comp=Z,27nm,0.8s,mb5.3
CBKS Cedar Bluff 54.84 70 P **P** **01 20 41.1 -0.1**
CBKS pmax pmax
comp=Z,27nm,0.8s,mb5.3
LZH Lanzhou 55.13 286 *eP* **P** **01 20 43.5 +0.2**
LZH AP pP 01 20 59.0 +3.1
LZH PP PP 01 22 43.0 -3.6
LZH *eS* **S** **01 28 21.1 -1.7**
LZH XS sS 01 28 41.0 -2.9
LZH *eSS* SS 01 32 04.5 -2.2
LZH AMB AMB
comp=Z,39nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,110nm,5.1s
LZH LR LR
comp=N,303nm,10.4s
LZH LR LR
comp=Z,410nm,12.9s,MS4.7
LZH Lanzhou 55.13 286 *eP* **P** **01 20 43.5 +0.2**
LZH pP pP 01 20 59.0 +3.1
LZH sP sP 01 21 04.5 +3.4
LZH PP PP 01 22 43.0 -3.6
LZH *eS* **S** **01 28 21.1 -1.7**
LZH sS sS 01 28 41.0 -2.9
LZH *eSS* SS 01 32 04.5 -2.2
LZH Lanzhou 55.13 286 *eP* **P** **01 20 43.5 +0.2**
LZH *PP pP 01 20 59.0 +3.1
LZH 01 22 43.0
LZH *eS* **S** **01 28 21.1 -1.7**
LZH *SS sS 01 28 41.0 -2.9
LZH *eSS* SS 01 32 04.5 -2.2
GTA Gaotai 55.32 291 P **P** **01 20 45.3 +0.7**
GTA AP pP 01 20 57.4 +0.1
GTA XP sP 01 21 04.0 +1.5
GTA PP PP 01 22 52.0 +3.7
GTA S **S** **01 28 23.4 -1.8**
GTA SS SS 01 32 06.8 -2.7
GTA AMB AMB
comp=Z,32nm,0.7s,mb5.5
GTA AMB AMB
comp=Z,109nm,8.1s
GTA LR LR
comp=N,115nm,13.5s,MS4.2
GTA LR LR
comp=E,109nm,15.0s,MS4.2
GTA LR LR
comp=Z,181nm,17.7s,MS4.2
AMTX Amarillo 56.30 75 *eP* **P** **01 20 51.4 -0.3**
comp=Z,14nm,0.6s,mb5.2
KSU1 Kansas State U 56.48 68 *eP* **P** **01 20 51.7 -1.3**
comp=Z,53nm,0.9s,mb5.6
SCIA State Center 56.55 63 *eP* **P** **01 20 52.4 -1.0**
comp=Z,15nm,0.6s,mb5.2
KEV Kevo 57.66 350 *ep* **P** **01 21 00.7 -0.1**
comp=Z,0.7nm,0.4s,mb4.0
KEV Kevo 57.66 350 *eP* **P** **01 21 00.7 -0.1**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARCES ARCESS Array B 58.04 350 P **P** **01 21 03.2 -0.3**
comp=Z,6.9nm,0.6s,mb4.9,baz=27,slow=7.9,SNR=45
ARCES PcP PcP 01 21 54.3 -0.6
comp=Z,2.3nm,0.6s,baz=23,slow=4.9,SNR=3.8
ARCES ARCESS Array B 58.04 350 P **P** **01 21 03.2 -0.3**
ARCES PcP PcP 01 21 54.3 -0.6
ARCES ARCESS Array B 58.04 350 P **P** **01 21 03.2 -0.3**
ARCES 01 21 54.3
ARCES pmax pmax
comp=Z,7.0nm,0.6s
ARCES pmax pmax
comp=Z,2.0nm,0.6s
CD2 Chengdu 58.71 281 ⇓*i* P **P** **01 21 08.8 +0.1**
CD2 AP pP 01 21 22.1 +0.6
CD2 XP sP 01 21 26.9 +0.2
CD2 PP PP 01 23 21.4 +2.8
CD2 S **S** **01 29 08.9 -1.3**
CD2 XS sS 01 29 28.8 -2.6
CD2 SS SS 01 33 03.9 +0.7
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,60nm,8.2s
CD2 LR LR
comp=N,220nm,10.8s,MS4.7
CD2 LR LR
comp=E,250nm,14.4s,MS4.7
CD2 LR LR
comp=Z,150nm,10.8s,MS4.4
KURK Kurchatov 58.82 313 *eP* **P** **01 21 08.4 -0.8**
comp=Z,12nm,1.0s,mb4.9
KURK Kurchatov 58.82 313 *eP* **P** **01 21 09.0 -0.2**
KURK pmax pmax
comp=Z,13nm,1.1s,mb4.9
TXAR Lajitas Array 58.91 81 P **P** **01 21 09.4 -0.8**
comp=Z,6.3nm,0.7s,mb4.8,baz=305,slow=4.8,SNR=35
TXAR LR LR 01 43 33.1
comp=Z,45nm,18.8s,MS3.6,baz=180,slow=33
WMQ Urumqi 59.11 303 P **P** **01 21 12.0 +0.7**
WMQ XP sP 01 21 30.0 +0.7
WMQ PP PP 01 23 25.0 +3.1
WMQ S **S** **01 29 14.0 -1.0**
WMQ SS SS 01 33 09.0 +0.1
WMQ AMB AMB
comp=Z,14nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,46nm,5.0s
WMQ LR LR
comp=N,124nm,20.0s,MS4.2
WMQ LR LR
comp=E,143nm,20.0s,MS4.2
WMQ LR LR
comp=Z,165nm,20.0s,MS4.2
HDIL Hopedale 59.65 62 *eP* **P** **01 21 13.5 -1.5**
comp=Z,51nm,0.6s,mb5.7
MK31 Makanchi Array 59.82 308 *i* P **P** **01 21 15.2 -1.0**
MK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
MKAR Makanchi Array 59.82 308 P **P** **01 21 15.4 -0.7**
comp=Z,3.3nm,0.4s,mb4.7,baz=51,slow=6.3,SNR=69
MKAR PcP PcP 01 22 02.5 +0.2
comp=Z,2.6nm,0.5s,baz=41,slow=3.9,SNR=6.6
MKAR Makanchi Array 59.82 308 P **P** **01 21 15.5 -0.7**
MKAR 01 22 02.5
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR pmax pmax
comp=Z,3.0nm,0.5s
GYA Guiyang 60.06 276 P **P** **01 21 19.6 +1.5**
GYA AP pP 01 21 32.7 +1.8
GYA XP sP 01 21 37.6 +1.6
GYA PCP PcP 01 22 05.4 +1.8
GYA PP PP 01 23 33.6 +2.9
GYA SCP ScP 01 26 01.5 +0.8
GYA PCS PcS 01 26 06.9 +0.8
GYA S **S** **01 29 25.8 -1.8**
GYA XS sS 01 29 45.3 -3.7
GYA SS SS 01 33 24.2 -0.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,5.2s
GYA LR LR
comp=N,630nm,18.8s,MS4.9
GYA LR LR
comp=E,540nm,19.6s,MS4.9
GYA LR LR
comp=Z,520nm,18.5s,MS4.7
CCM Cathedral Cave 60.27 65 *eP* **P** **01 21 17.3 -2.1**
comp=Z,8.8nm,0.6s,mb5.0
CCM Cathedral Cave 60.27 65 *eP* **P** **01 21 17.3 -2.1**
CCM pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
JCT Junction City 60.48 77 *eP* **P** **01 21 21.6 +0.7**
comp=Z,14nm,0.6s,mb5.2
JCT Junction City 60.48 77 *eP* **P** **01 21 21.6 +0.6**
JCT pmax pmax
comp=Z,13nm,0.6s,mb5.1
BVA0 Borovoye Array 60.71 320 *i* P **P** **01 21 20.4 -1.7**
BVA0 pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
BRVK Borovoye 60.73 320 *eP* **P** **01 21 22.4 +0.1**
comp=Z,9.1nm,0.6s,mb5.1
BRVK *ePcP PcP 01 22 05.6 -0.3
BRVK Borovoye 60.73 320 *eP* **P** **01 21 22.4 +0.1**
BRVK *e* 01 22 05.6
BRVK pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
FVM French Village 60.79 65 *eP* **P** **01 21 21.4 -1.5**
comp=Z,15nm,0.6s,mb5.3
FVM French Village 60.79 65 P **P** **01 21 21.7 -1.2**
FVM pmax pmax
comp=Z,15nm,0.6s,mb5.3
MIAR Mount Ida 61.37 70 *eP* **P** **01 21 25.7 -1.2**
comp=Z,32nm,1.2s,mb5.3
MIAR Mount Ida 61.37 70 P **P** **01 21 26.3 -0.6**
MIAR pmax pmax
comp=Z,32nm,1.2s,mb5.3
OLIL Olney 61.57 63 *eP* **P** **01 21 27.2 -1.0**
comp=Z,85nm,1.0s,mb5.8
USIN University of 62.36 63 *eP* **P** **01 21 32.7 -0.8**
comp=Z,98nm,0.6s,mb6.1
ARU Arti 62.45 328 *eP* **P** **01 21 32.9 -0.9**
comp=Z,6.3nm,0.6s,mb4.9
ARU *ePcP PcP 01 22 12.2 -0.6
ARU Arti 62.45 328 *d* *iP* **P** **01 21 34.4 +0.6**
ARU *e* 01 23 47.4
ARU *eS* **S** **01 30 02.2 +5.0**
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
WCI Wyandotte Cave 62.93 62 *eP* **P** **01 21 36.6 -0.7**
comp=Z,40nm,0.9s,mb5.5
WCI Wyandotte Cave 62.93 62 *eP* **P** **01 21 36.6 -0.7**
WCI pmax pmax
comp=Z,40nm,0.9s,mb5.5
HKT Hockley 63.27 75 *eP* **P** **01 21 39.6 -0.1**
comp=Z,9.2nm,1.2s,mb4.8
HKT Hockley 63.27 75 *eP* **P** **01 21 39.6 -0.1**
HKT pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
KMI Kunming 63.46 278 P **P** **01 21 41.9 +0.9**
KMI AP pP 01 21 54.7 +0.8
KMI S **S** **01 30 07.2 -3.5**
KMI SS SS 01 34 17.7 -0.1
KMI AMB AMB
comp=Z,16nm,0.7s,mb5.3
KMI AMB AMB
comp=Z,70nm,4.2s
KMI LR LR
comp=Z,49nm,25.2s,MS3.6
JOF Joensuu 63.52 345 *ep* **P** **01 21 39.5 -1.3**
comp=Z,3.5nm,0.4s,mb4.7
JOF Joensuu 63.52 345 *eP* **P** **01 21 39.5 -1.3**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
WVT Waverly 63.57 65 *eP* **P** **01 21 40.8 -0.8**
comp=Z,25nm,0.8s,mb5.3
WVT Waverly 63.57 65 *eP* **P** **01 21 40.8 -0.7**
WVT pmax pmax
comp=Z,25nm,0.8s,mb5.3
ALLY Alegheny Colle 63.77 56 *eP* **P** **01 21 42.2 -0.7**
comp=Z,33nm,0.8s,mb5.4
OXF Oxford 63.82 67 *eP* **P** **01 21 42.3 -0.9**
comp=Z,156nm,1.2s,mb5.9
OXF Oxford 63.82 67 *eP* **P** **01 21 42.3 -0.9**
OXF pmax pmax
comp=Z,156nm,1.2s,mb5.9
KLMR Klimovskoe 63.88 340 *eP* **P** **01 21 41.6 -1.6**
KLMR pmax pmax
comp=Z,34nm,1.9s,mb5.0
KAF Kangasniemi 65.04 347 *ep* **P** **01 21 50.0 -0.8**
comp=Z,2.4nm,0.3s,mb4.7
KAF Kangasniemi 65.04 347 *eP* **P** **01 21 50.0 -0.8**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
SWET Sewanee 65.30 64 *eP* **P** **01 21 51.5 -1.3**
BINY Binghamton 65.48 53 *eP* **P** **01 21 52.7 -1.2**
comp=Z,37nm,1.1s,mb5.3
SSPA Standing Stone 65.68 55 *eP* **P** **01 21 54.2 -1.0**
comp=Z,11nm,0.8s,mb4.9
TKM2 Tokmak 2 65.90 309 *eP* **P** **01 21 57.6 +1.0**
comp=Z,12nm,1.0s,mb4.9
TKM2 *ePcP PcP 01 22 27.6 +0.3
TKM2 Tokmak 2 65.90 309 *eP* **P** **01 21 57.6 +0.9**
TKM2 *e* 01 22 27.6
TKM2 pmax pmax
comp=Z,12nm,1.0s,mb4.9
CPCT Cooper Cave 65.92 63 *eP* **P** **01 21 55.6 -1.2**
TKL Tuckaleechee C 66.18 62 *eP* **P** **01 21 57.8 -0.8**
LRAL Lakeview Retre 66.27 66 *eP* **P** **01 21 57.5 -1.7**
comp=Z,9.1nm,0.7s,mb4.9
AAK Ala-Archa 66.65 310 P **P** **01 22 01.4 -0.1**
comp=Z,113nm,0.7s,mb6.0,SNR=9.3
BLA Blacksburg 66.87 59 *eP* **P** **01 22 02.2 -0.7**
comp=Z,11nm,0.6s,mb5.1
BLA Blacksburg 66.87 59 *eP* **P** **01 22 02.2 -0.8**
BLA pmax pmax
comp=Z,11nm,0.6s,mb5.1
EKS2 Erkin-Say 66.98 310 *eP* **P** **01 22 03.8 +0.2**
comp=Z,17nm,0.8s,mb5.1
LSA Lhasa 67.19 289 *eP* **P** **01 22 06.8 +1.8**
comp=Z,18nm,0.6s,mb5.3
LSA Lhasa 67.19 289 *eP* **P** **01 22 06.9 +1.8**
LSA pmax pmax
comp=Z,18nm,0.6s,mb5.3
AML Almayashu 67.42 310 *eP* **P** **01 22 08.0 +1.7**
comp=Z,14nm,0.9s,mb5.0
NB2 NORSAR Subarra 67.61 355 P **P** **01 22 06.8 -0.4**
comp=Z,6.2nm,0.6s,mb4.8,baz=7.4,slow=6.5
NOA NORSAR Array B 67.61 355 P **P** **01 22 07.4 +0.2**
comp=Z,5.3nm,0.6s,mb4.8,baz=7.2,slow=6.3,SNR=18
NOA NORSAR Array B 67.61 355 P **P** **01 22 07.4 +0.2**
NOA pmax pmax
comp=Z,5.0nm,0.6s
AB31 Akbulak array 67.77 323 P **P** **01 22 07.5 -0.9**
AB31 pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
URVA University of 68.14 57 *eP* **P** **01 22 10.0 -0.9**
KK31 Karatay Array 68.18 312 *i* P **P** **01 22 10.8 -0.3**
KK31 pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
KSH Kashi 68.28 306 *eP* **P** **01 22 14.1 +2.3**
KSH *eAP pP 01 22 27.2 +2.4
KSH *ePCP PcP 01 22 40.1 +2.9
KSH *ePP PP 01 24 46.0 +3.7
KSH *eSCP 01 26 38.6
KSH *eS* S 01 31 09.0 0.0
KSH *eSCS ScS 01 32 05.5 -1.8
KSH *eSS* SS 01 35 32.1 +0.2
KSH AMB AMB
comp=Z,53nm,0.8s,mb5.6
KSH AMB AMB
comp=Z,395nm,6.2s
KSH LR LR
comp=N,366nm,5.5s
KSH LR LR
comp=E,543nm,6.6s
KSH LR LR
comp=Z,364nm,4.6s
JSC Jenkinsville 68.59 62 *eP* **P** **01 22 13.1 -0.7**
TAOE Nuku Hiva Isla 68.81 138 *e*LR LR 01 43 01.8
comp=Z,742nm,26.5s
OBN Obninsk 69.77 339 *eP* **P** **01 22 20.8 +0.1**
OBN *e*SS SS 01 35 57.8 +3.9
OBN pmax pmax
comp=Z,63nm,2.7s,mb5.1
CHTO Chiang Mai 70.48 276 *eP* **P** **01 22 25.7 0.0**
comp=Z,2.4nm,0.6s,mb4.3
CHTO Chiang Mai 70.48 276 *eP* **P** **01 22 25.7 0.0**
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CMAR Chiang Mai Arr 70.75 276 P **P** **01 22 27.1 -0.1**
comp=Z,4.1nm,0.6s,mb4.6,baz=27,slow=6.7,SNR=21
CMAR Chiang Mai Arr 70.75 276 P **P** **01 22 27.2 -0.1**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
TAPN Taplejung 70.95 290 *eP* **P** **01 22 29.4 +1.0**
comp=Z,66nm,0.6s,mb5.7
ODAN Odare 71.51 290 *eP* **P** **01 22 32.7 +0.9**
comp=Z,26nm,0.5s,mb5.4
GUN Gumba 71.61 292 *eP* **P** **01 22 33.7 +1.3**
comp=Z,123nm,0.4s,mb6.2
JIRN Jiri 71.61 291 *eP* **P** **01 22 33.7 +1.3**
comp=Z,44nm,0.5s,mb5.7
RAMN Ramite 71.91 291 *eP* **P** **01 22 35.0 +0.8**
comp=Z,100nm,0.5s,mb6.0
KKN Kakani 72.05 292 *eP* **P** **01 22 36.0 +1.0**
comp=Z,64nm,0.5s,mb5.8
KKN Kakani 72.05 292 *eP* **P** **01 22 36.0 +1.0**
KKN pmax pmax
comp=Z,64nm,0.5s,mb5.8
PKI Pulchoki 72.14 292 *eP* **P** **01 22 36.3 +0.7**
comp=Z,35nm,0.5s,mb5.6
PKI Pulchoki 72.14 292 *eP* **P** **01 22 36.3 +0.7**
PKI pmax pmax
comp=Z,35nm,0.5s,mb5.5
PKIN Phulchoki 72.14 292 *eP* **P** **01 22 36.2 +0.6**
comp=Z,39nm,0.4s,mb5.6
VRHR Novokhopersk 72.18 334 *eP* **P** **01 22 32.1 -3.3**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VRHR pmax pmax
comp=E,20nm,0.8s
GKN Gorkha 72.26 293 *eP* **P** **01 22 36.9 +0.6**
comp=E,54nm,0.5s,mb5.8
DMN Daman 72.28 292 *eP* **P** **01 22 37.5 +1.1**
DANN Dangsing 72.50 293 *eP* **P** **01 22 38.8 +1.1**
comp=E,63nm,0.8s,mb5.6
VSR Storozhevoye 72.72 336 *eP* **P** **01 22 38.3 -0.4**
VSR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,1.0nm,0.5s
VORD Divnogorie 72.92 336 *eP* **P** **01 22 39.2 -0.6**
VORD pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,4.0nm,0.8s
VORD pmax pmax
comp=E,8.0nm,0.6s
KOLN Koldanda 73.03 293 *eP* **P** **01 22 41.6 +0.7**
comp=E,20nm,0.6s,mb5.2
PYUN Piuthan 73.13 294 *eP* **P** **01 22 41.5 0.0**
comp=E,27nm,0.6s,mb5.4
PPT Papeete 73.40 151 *e*LR LR 01 45 12.2
comp=E,133nm,28.5s
PPT Papeete 73.40 151 LR LR 01 48 31.1
comp=E,83nm,21.5s,MS4.0,baz=1.7,slow=31
AKASG Malin Array Be 75.46 342 P **P** **01 22 54.0 -0.6**
comp=E,2.6nm,0.3s,mb4.7,baz=19,slow=5.8,SNR=44
AKASG Malin Array Be 75.46 342 P **P** **01 22 54.0 -0.6**
AKASG Malin Array Be 75.46 342 P **P** **01 22 54.0 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
KIEV Kiev 75.47 342 *eP* **P** **01 22 53.1 -1.5**
comp=Z,28nm,1.0s,mb5.2
KIEV Kiev 75.47 342 *eP* **P** **01 22 53.2 -1.5**
KIEV pmax pmax
comp=Z,28nm,1.0s,mb5.2
KBL Kabul 75.62 308 *eP* **P** **01 22 55.4 -0.4**
comp=Z,21nm,0.7s,mb5.2
KBL Kabul 75.62 308 *eP* **P** **01 22 55.4 -0.4**
KBL pmax pmax
comp=Z,21nm,0.7s,mb5.2
RUE Ruedersdorf 75.93 352 *eP* **P** **01 22 57.2 -0.1**
comp=Z,16nm,0.7s,mb5.1
KAKA Kakadu 76.35 229 *eP* Px 01 22 48.4
comp=Z,14nm,0.9s
CLZ Clausthal 76.83 354 *eP* **P** **01 23 02.7 +0.3**
CLZ pmax pmax
comp=Z,21nm,1.1s,mb5.0
CLZ Clausthal 76.83 354 *eP* **P** **01 23 02.7 +0.3**
comp=Z,21nm,1.1s,mb5.0
CLL Collm 77.16 352 *i* P **P** **01 23 03.5 -0.7**
CLL pmax pmax
comp=Z,12nm,1.2s,mb4.7
CLL Collm 77.16 352 *eP* **P** **01 23 03.6 -0.6**
comp=Z,12nm,1.2s,mb4.7
CLL Collm 77.16 352 *i* P **P** **01 23 03.5 -0.7**
comp=Z,12nm,1.2s,mb4.7
NEUB Neuenburg 77.36 353 *eP* **P** **01 23 05.2 -0.1**
BRG Berggiesshubel 77.50 352 *eP* **P** **01 23 05.5 -0.7**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BRG Berggiesshubel 77.50 352 *eP* **P** **01 23 05.6 -0.6**
comp=Z,8.0nm,1.0s,mb4.6
BRG Berggiesshubel 77.50 352 *eP* **P** **01 23 05.5 -0.7**
comp=Z,7.7nm,1.0s,mb4.6
FBE Freiberg 77.51 352 *eP* **P** **01 23 06.4 +0.2**
comp=Z,10.0nm,1.0s,mb4.7
KWP Kalwaria 77.63 346 *eP* **P** **01 23 07.7 +0.8**
KWP Kalwaria 77.63 346 *eP* **P** **01 23 07.7 +0.8**
KWP Kalwaria 77.63 346 ⇓*i* P **P** **01 23 07.7 +0.8**
UPC Upice 77.66 350 *eP* **P** **01 23 06.3 -0.8**
DPC Dobruska-Polom 77.78 350 *eP* **P** **01 23 05.6 -2.1**
PVCC Panska Ves 77.78 351 *eP* **P** **01 23 09.3 +1.5**
MOX Moxa 77.93 353 *eP* **P** **01 23 08.7 +0.2**
MOX Moxa 77.93 353 *eP* **P** **01 23 08.4 -0.1**
comp=Z,16nm,1.4s,mb4.8
STHS Stebnicka Huta 78.06 347 *eP* **P** **01 23 10.1 +0.8**
comp=Z,10nm,1.1s,mb4.7
STHS Stebnicka Huta 78.06 347 *eP* **P** **01 23 10.1 +0.8**
STHS pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
WERD Werda 78.07 352 *eP* **P** **01 23 09.2 -0.1**
comp=Z,5.0nm,1.2s,mb4.3
OKC Ostrava-Krasne 78.07 349 *eP* **P** **01 23 09.1 -0.3**
TANN Tannenbergstha 78.09 352 *eP* **P** **01 23 08.6 -0.8**
comp=Z,14nm,1.4s,mb4.7
MORC Moravsky Berou 78.20 349 *eP* **P** **01 23 09.6 -0.5**
WERN Wernitzgruen 78.22 352 *eP* **P** **01 23 09.6 -0.6**
comp=Z,13nm,1.0s,mb4.8
MEM Membach 78.28 357 P **P** **01 23 10.7 +0.2**
comp=Z,14nm,1.2s,mb4.8
PRU Pruhonice 78.32 351 *eP* **P** **01 23 10.1 -0.6**
KIV Kislovodsk 78.33 330 *eP* **P** **01 23 11.5 +0.6**
comp=Z,7.3nm,0.9s,mb4.6
KIV Kislovodsk 78.33 330 *eP* **P** **01 23 11.6 +0.7**
KIV *e* 01 26 08.5
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KOLS Kolonicke sedl 78.38 346 *eP* **P** **01 23 11.1 0.0**
BCLA Clavier 78.50 357 P **P** **01 23 12.1 +0.4**
TNS Taunus Mts 78.56 355 *eP* **P** **01 23 11.0 -1.0**
TNS pmax pmax
comp=Z,11nm,0.9s,mb4.8
TNS Taunus Mts 78.56 355 *eP* **P** **01 23 11.0 -1.0**
comp=Z,11nm,0.9s,mb4.8
ROTZ Rotzenmuhle 78.75 352 *eP* **P** **01 23 13.8 +0.7**
comp=Z,8.0nm,1.1s,mb4.6
DOU Dourbes 78.84 357 P **P** **01 23 13.4 -0.2**
TBI Tubuai 78.88 152 *e*LR LR 01 47 40.6
comp=Z,132nm,25.8s
BAIF Baives 78.89 358 *eP* **P** **01 23 14.0 +0.1**
comp=Z,58nm,1.1s,mb5.1
BAIF Baives 78.89 358 *eP* **P** **01 23 14.0 +0.1**
comp=Z,29nm,1.1s,mb5.1
BAIF Baives 78.89 358 *eP* **P** **01 23 14.0 +0.1**
BAIF pmax pmax
comp=Z,29nm,1.1s,mb5.1
GRA1 Grafenberg Arr 78.90 353 *eP* **P** **01 23 14.8 +0.8**
comp=Z,44nm,1.3s,mb5.2

GRF Grafenberg Arr 78.90 353 *e*P **P 01 23 14.8 +0.8**
GRF pmax pmax
comp=Z,44nm,1.3s,mb5.2
GRF Grafenberg Arr 78.90 353 *e*P **P 01 23 14.8 +0.8**
GRF pmax pmax
comp=Z,44nm,1.3s,mb5.2
GRF Grafenberg Arr 78.90 353 *e*P **P 01 23 14.8 +0.8**
comp=Z,44nm,1.3s,mb5.2
KECS Kecovo 79.09 347 *e*P **P 01 23 14.6 -0.4**
comp=Z,6.4nm,1.0s,mb4.5
KECS Kecovo 79.09 347 *e*P **P 01 23 14.6 -0.4**
KECS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
IAS Iasi 79.13 342 P **P 01 23 15.7 +0.5**
IAS Iasi 79.13 342 ⇓*i*P **P 01 23 15.7 +0.4**
BUR08 Bucovina Ar. S 79.14 343 *e*P **P 01 23 15.4 +0.1**
BURAR Bucovina Array 79.17 343 ⇑P **P 01 23 15.7 +0.2**
BURAR Bucovina Array 79.17 343 ⇑*i*P **P 01 23 15.7 +0.3**
WLF Walferdange 79.22 356 P **P 01 23 16.3 +0.6**
KHC Kasperske Hory 79.26 351 *e*P **P 01 23 15.8 -0.1**
KHC Kasperske Hory 79.26 351 *e*P **P 01 23 15.6 -0.3**
KOLL Kolacno 79.28 348 *e*P **P 01 23 16.7 +0.7**
VYHS Vyhne 79.30 348 *e*P **P 01 23 16.1 -0.1**
WET Wettzell 79.31 352 *e*P **P 01 23 16.1 -0.1**
WET pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
WET Wettzell 79.31 352 *e*P **P 01 23 16.1 -0.1**
comp=Z,6.0nm,1.3s,mb4.4
GEC2 GERESS Array S 79.53 351 *e*P **P 01 23 17.2 -0.2**
GEC2 pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
GEC2 GERESS Array S 79.53 351 *e*P **P 01 23 17.2 -0.2**
comp=Z,8.0nm,1.4s,mb4.5
GERES GERESS Array B 79.53 351 P **P 01 23 17.4 -0.1**
comp=Z,2.5nm,0.6s,mb4.3,baz=26,slow=6.5,SNR=7.9
GERES GERESS Array B 79.53 351 P **P 01 23 17.4 0.0**
GERES pmax pmax
comp=Z,3.0nm,0.6s
MODS Modra-Piesok 79.62 349 *e*P **P 01 23 18.0 +0.1**
PSZ Piszkesteto 79.72 347 *e*P **P 01 23 18.8 +0.4**
comp=Z,13nm,1.0s,mb4.8
PSZ Piszkesteto 79.72 347 *e*P **P 01 23 18.8 +0.4**
PSZ pmax pmax
comp=Z,13nm,1.0s,mb4.8
ZST Bratislava 79.81 349 *e*P **P 01 23 19.3 +0.4**
comp=Z,8.1nm,0.8s,mb4.7
ZST Bratislava 79.81 349 *e*P **P 01 23 19.3 +0.4**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
STU Stuttgart 79.96 354 *e*P **P 01 23 19.3 -0.4**
comp=Z,13nm,0.8s,mb4.9
STU Stuttgart 79.96 354 *e*P **P 01 23 19.3 -0.4**
STU pmax pmax
comp=Z,13nm,0.8s,mb4.9
STU Stuttgart 79.96 354 *e*P **P 01 23 19.0 -0.7**
comp=Z,11nm,0.8s,mb4.8
CONA Conrad Observa 80.22 350 ⇑*i*P **P 01 23 21.7 +0.5**
comp=Z,12nm,1.3s,mb4.6
CSNA Conrad Observa 80.22 350 ⇑*i*P **P 01 23 21.6 +0.5**
comp=Z,12nm,1.3s,mb4.6
DRGR 80.39 345 P **P 01 23 22.8 +0.7**
DRGR 80.39 345 ⇑*i*P **P 01 23 22.1 0.0**
LDF La Druitiere 80.39 1 *e*P **P 01 23 21.6 -0.5**
comp=Z,15nm,0.6s,mb4.8
LDF La Druitiere 80.39 1 *e*P **P 01 23 21.6 -0.5**
comp=Z,7.3nm,0.6s,mb4.8
LDF La Druitiere 80.39 1 *e*P **P 01 23 21.6 -0.5**
LDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
FUR Furstenfeldbru 80.42 353 *e*P **P 01 23 22.0 -0.2**
FUR pmax pmax
comp=Z,20nm,1.1s,mb5.0
FUR Furstenfeldbru 80.42 353 *e*P **P 01 23 22.0 -0.2**
comp=Z,20nm,1.1s,mb5.0
MEZF Maizieres J'vi 80.42 357 *e*P **P 01 23 22.3 +0.1**
comp=Z,28nm,0.9s,mb4.9
MEZF Maizieres J'vi 80.42 357 *e*P **P 01 23 22.3 +0.1**
comp=Z,28nm,0.9s,mb5.2
CDF Champ du Feu 80.42 356 *e*P **P 01 23 22.0 -0.2**
comp=Z,4.5nm,0.6s,mb4.3
CDF Champ du Feu 80.42 356 *e*P **P 01 23 22.0 -0.2**
comp=Z,2.3nm,0.6s,mb4.3
CDF Champ du Feu 80.42 356 *e*P **P 01 23 22.0 -0.2**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BFO Black Forest 80.45 355 *e*P **P 01 23 22.1 -0.3**
BFO pmax pmax
comp=Z,19nm,1.3s,mb4.9
BFO Black Forest 80.45 355 *e*P **P 01 23 22.1 -0.3**
comp=Z,19nm,1.3s,mb4.9
GRR Gorron 80.59 1 *e*P **P 01 23 22.9 -0.2**
comp=Z,53nm,1.0s,mb5.1
GRR Gorron 80.59 1 *e*P **P 01 23 22.9 -0.2**
comp=Z,27nm,1.0s,mb5.1
GRR Gorron 80.59 1 *e*P **P 01 23 22.9 -0.2**
GRR pmax pmax
comp=Z,27nm,1.0s,mb5.1
ODB Odobesti 80.59 342 ⇑P **P 01 23 24.7 +1.5**
ODB Odobesti 80.59 342 ⇑*i*P **P 01 23 24.7 +1.5**
ROSF Rostrenen 80.59 3 *e*P **P 01 23 23.1 0.0**
PLOR Plostina 80.60 342 ⇓*i*P **P 01 23 23.6 +0.4**
SGMF Saint Gilles 80.69 2 *e*P **P 01 23 23.6 -0.1**
comp=Z,20nm,0.6s,mb4.9
SGMF Saint Gilles 80.69 2 *e*P **P 01 23 23.6 -0.1**
comp=Z,10nm,0.6s,mb4.9
SGMF Saint Gilles 80.69 2 *e*P **P 01 23 23.6 -0.1**
SGMF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
RJOB Jochberg 80.72 352 *e*P **P 01 23 23.7 -0.1**
comp=Z,8.0nm,0.9s,mb4.7
TLCR 80.80 340 ⇓P **P 01 23 24.1 -0.2**
TLCR 80.80 340 ⇓*i*P **P 01 23 24.1 -0.2**
HAU Haudompre 80.87 356 *e*P **P 01 23 24.3 -0.3**
comp=Z,23nm,1.0s,mb4.8
HAU Haudompre 80.87 356 *e*P **P 01 23 24.3 -0.3**
comp=Z,11nm,1.0s,mb4.8
HAU Haudompre 80.87 356 *e*P **P 01 23 24.3 -0.3**
HAU pmax pmax
comp=Z,11nm,1.0s,mb4.7
QUIF Quistinic 81.02 3 *e*P **P 01 23 25.3 -0.1**
GNI Garni 81.09 327 *e*P **P 01 23 26.9 +1.0**
comp=Z,9.8nm,1.1s,mb4.7
GNI Garni 81.09 327 *e*P **P 01 23 26.4 +0.4**
GNI pmax pmax
comp=Z,7.0nm,1.3s
WATA Walderalm 81.22 353 ⇑*i*P **P 01 23 26.5 +0.1**
comp=Z,9.7nm,0.8s,mb4.8
MOTA Moosalm 81.25 353 ⇑*i*P **P 01 23 26.5 -0.2**
comp=Z,22nm,1.4s,mb4.9
WTTA Wattenberg 81.28 353 ⇑*i*P **P 01 23 27.2 +0.3**
comp=Z,11nm,0.7s,mb4.9
VOIR 81.30 343 P **P 01 23 28.1 +1.2**
VOIR 81.30 343 ⇓*i*P **P 01 23 28.1 +1.1**
KBA Koelnbreinsper 81.32 351 ⇑*i*P **P 01 23 27.7 +0.7**
comp=Z,44nm,1.2s,mb5.3
SOKA Soboth 81.55 350 ⇑*i*P **P 01 23 28.2 0.0**
comp=Z,27nm,1.2s,mb5.1
PERS Pernice 81.58 350 *e*P **P 01 23 28.6 +0.2**
TIRR Tirgusor 81.58 340 ⇓*i*P **P 01 23 28.3 -0.1**
FETA Feichten 81.60 353 ⇑*i*P **P 01 23 28.5 0.0**
comp=Z,16nm,1.2s,mb4.8
BZS Buzias 81.71 345 P **P 01 23 29.7 +0.6**
BZS Buzias 81.71 345 ⇓*i*P **P 01 23 29.0 -0.1**
ABTA Abfaltersbach 81.72 352 ⇓*i*P **P 01 23 29.0 -0.2**
comp=Z,11nm,1.0s,mb4.8
GZR Gura Zlata 81.74 345 P **P 01 23 30.0 +0.7**
GZR Gura Zlata 81.74 345 ⇓*i*P **P 01 23 29.7 +0.4**
WRAB Tennant Creek 81.82 224 *e*P **P 01 23 27.7 -2.2**
comp=Z,2.7nm,0.8s,mb4.2
WRAB Tennant Creek 81.82 224 *e*P **P 01 23 27.6 -2.3**
WB2 Warramunga Arr 81.83 224 *e*P **P 01 23 28.1 -1.8**
WRA Warramunga Arr 81.84 224 P **P 01 23 28.3 -1.7**
comp=Z,3.6nm,0.7s,mb4.4,baz=35,slow=6.2,SNR=27
WRA Warramunga Arr 81.84 224 P **P 01 23 28.3 -1.7**
WRA pmax pmax
comp=Z,4.0nm,0.7s
SSF Saint Saulge 81.90 358 *e*P **P 01 23 29.9 -0.2**
comp=Z,9.3nm,0.7s,mb4.5
SSF Saint Saulge 81.90 358 *e*P **P 01 23 29.9 -0.2**
comp=Z,4.7nm,0.7s,mb4.5
SSF Saint Saulge 81.90 358 *e*P **P 01 23 29.9 -0.2**
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
AVF Avril sur Loir 82.18 358 *e*P **P 01 23 31.4 -0.1**
TUE Stuetta 82.24 354 *e*P **P 01 23 32.0 +0.1**
comp=Z,8.0nm,0.8s,mb4.7

CABF La Chapelle 82.27 356 *e*P **P 01 23 32.1 0.0**
comp=Z,21nm,0.9s,mb4.7
CABF La Chapelle 82.27 356 *e*P **P 01 23 32.1 0.0**
comp=Z,10nm,0.9s,mb4.8
CABF La Chapelle 82.27 356 *e*P **P 01 23 32.1 0.0**
CABF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GCIS Gornji Cirnik 82.28 350 *e*P **P 01 23 31.9 -0.2**
SMF Signal de Mont 82.31 358 *e*P **P 01 23 32.0 -0.2**
comp=Z,41nm,0.9s,mb5.0
SMF Signal de Mont 82.31 358 *e*P **P 01 23 32.0 -0.2**
comp=Z,21nm,0.9s,mb5.1
SMF Signal de Mont 82.31 358 *e*P **P 01 23 32.0 -0.2**
SMF pmax pmax
comp=Z,21nm,0.9s,mb5.1
MFF Saint Martin d 82.39 1 *e*P **P 01 23 32.5 -0.1**
comp=Z,44nm,1.1s,mb5.0
MFF Saint Martin d 82.39 1 *e*P **P 01 23 32.5 -0.1**
comp=Z,22nm,1.1s,mb5.0
MFF Saint Martin d 82.39 1 *e*P **P 01 23 32.5 -0.1**
MFF pmax pmax
comp=Z,22nm,1.1s,mb5.0
BGF Bois d'Agland 82.42 359 *e*P **P 01 23 32.6 -0.2**
BOJS Bojanci 82.68 350 *i*P **P 01 23 33.9 -0.3**
TCF Toulx Ste Croi 82.70 359 *e*P **P 01 23 34.1 -0.2**
comp=Z,14nm,0.8s,mb4.7
TCF Toulx Ste Croi 82.70 359 *e*P **P 01 23 34.1 -0.2**
comp=Z,6.9nm,0.8s,mb4.7
TCF Toulx Ste Croi 82.70 359 *e*P **P 01 23 34.1 -0.2**
TCF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LPL La Plagne 83.34 356 *e*P **P 01 23 38.0 +0.4**
comp=Z,3.1nm,0.5s,mb4.3
LPL La Plagne 83.34 356 *e*P **P 01 23 38.0 +0.4**
comp=Z,1.5nm,0.5s,mb4.3
LPL La Plagne 83.34 356 *e*P **P 01 23 38.0 +0.4**
LPL pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
RJF Les Rejaudoux 83.69 359 *e*P **P 01 23 39.1 -0.3**
comp=Z,18nm,1.0s,mb4.9
RJF Les Rejaudoux 83.69 359 *e*P **P 01 23 39.1 -0.3**
comp=Z,9.3nm,1.0s,mb4.9
RJF Les Rejaudoux 83.69 359 *e*P **P 01 23 39.1 -0.3**
RJF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
RKT Rikitea 83.75 140 *e*LR LR 01 50 03.3
comp=Z,118nm,27.8s
BNI Bardonecchia 83.80 356 *e*P **P 01 23 40.3 +0.3**
comp=Z,9.4nm,0.8s,mb5.0
BNI Bardonecchia 83.80 356 *e*P **P 01 23 40.3 +0.3**
BNI pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
HYB Hyderabad 83.96 290 *e*P **P 01 23 41.0 -0.2**
HYB Hyderabad 83.96 290 *i*P **P 01 23 41.0 -0.2**
HYB *e* pP 01 23 50.5 -4.1
ORIF Oris-en-Rattie 83.97 356 *e*P **P 01 23 41.4 +0.5**
comp=Z,9.8nm,0.7s,mb4.7
ORIF Oris-en-Rattie 83.97 356 *e*P **P 01 23 41.4 +0.5**
comp=Z,4.9nm,0.7s,mb4.8
ORIF Oris-en-Rattie 83.97 356 *e*P **P 01 23 41.4 +0.5**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LFF La Frestale 84.05 0 *e*P **P 01 23 41.3 0.0**
comp=Z,34nm,0.7s,mb5.3
LFF La Frestale 84.05 0 *e*P **P 01 23 41.3 0.0**
comp=Z,17nm,0.7s,mb5.3
LFF La Frestale 84.05 0 *e*P **P 01 23 41.3 0.0**
LFF pmax pmax
comp=Z,17nm,0.7s,mb5.3
CAF Calviac 84.06 359 *e*P **P 01 23 41.4 +0.1**
comp=Z,30nm,0.9s,mb5.1
CAF Calviac 84.06 359 *e*P **P 01 23 41.4 +0.1**
comp=Z,15nm,0.9s,mb5.1
CAF Calviac 84.06 359 *e*P **P 01 23 41.4 +0.1**
CAF pmax pmax
comp=Z,15nm,0.9s,mb5.1
VIVF Saint-Julien-l 84.08 357 *e*P **P 01 23 41.6 +0.2**
comp=Z,8.3nm,0.7s,mb4.7
VIVF Saint-Julien-l 84.08 357 *e*P **P 01 23 41.6 +0.2**
comp=Z,4.2nm,0.7s,mb4.7
VIVF Saint-Julien-l 84.08 357 *e*P **P 01 23 41.6 +0.2**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
MBDF Montbardon 84.12 356 *e*P **P 01 23 42.3 +0.7**
comp=Z,21nm,0.7s,mb5.1
MBDF Montbardon 84.12 356 *e*P **P 01 23 42.3 +0.7**
comp=Z,11nm,0.7s,mb5.1
MBDF Montbardon 84.12 356 *e*P **P 01 23 42.3 +0.7**
MBDF pmax pmax
comp=Z,11nm,0.7s,mb5.1
VTS Vitosha 84.39 344 ⇑P **P 01 23 42.8 -0.2**
VTS Vitosha 84.39 344 ⇑*i*P **P 01 23 42.8 -0.2**
BRTR Keskin Array B 84.83 335 P **P 01 23 45.4 +0.1**
comp=Z,7.3nm,0.7s,mb4.9,baz=33,slow=3.0,SNR=35
BRTR Keskin Array B 84.83 335 P **P 01 23 45.4 +0.1**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
SMRF Simiane la Rot 84.92 357 *e*P **P 01 23 46.4 +0.7**
comp=Z,62nm,1.1s,mb5.4
SMRF Simiane la Rot 84.92 357 *e*P **P 01 23 46.4 +0.7**
comp=Z,62nm,1.1s,mb5.7
SBF Sospel 84.95 355 *e*P **P 01 23 45.6 -0.2**
comp=Z,51nm,0.8s,mb5.4
SBF Sospel 84.95 355 *e*P **P 01 23 45.6 -0.2**
comp=Z,25nm,0.8s,mb5.4
SBF Sospel 84.95 355 *e*P **P 01 23 45.6 -0.2**
SBF pmax pmax
comp=Z,25nm,0.8s,mb5.4
SNTG Esanatoglia 85.15 351 P **P 01 23 47.4 +0.6**
FRF La Foret Royal 85.29 356 *e*P **P 01 23 47.1 -0.4**
ASAR Alice Springs 85.32 222 P **P 01 23 46.8 -1.0**
comp=Z,3.7nm,0.7s,mb4.6,baz=27,slow=5.4,SNR=40
ASAR Alice Springs 85.32 222 P **P 01 23 46.8 -0.9**
ASAR pmax pmax
comp=Z,4.0nm,0.7s
ASS Assisi 85.36 351 P **P 01 23 48.1 +0.2**
comp=Z,36nm,0.8s,mb5.5
ASS Assisi 85.36 351 P **P 01 23 48.1 +0.2**
ASS pmax pmax
comp=Z,36nm,0.8s,mb5.5
EPON Pontenova 85.41 6 P **P 01 23 47.9 -0.2**
comp=Z,5.9nm,0.4s,mb5.1
LMR La Mourre 85.53 356 *e*P **P 01 23 48.6 -0.1**
comp=Z,29nm,0.7s,mb5.3
LMR La Mourre 85.53 356 *e*P **P 01 23 48.6 -0.1**
comp=Z,14nm,0.7s,mb5.3
LMR La Mourre 85.53 356 *e*P **P 01 23 48.6 -0.1**
LMR pmax pmax
comp=Z,14nm,0.7s,mb5.3
NRCA Norcia 85.55 351 P **P 01 23 49.4 +0.6**
comp=Z,11nm,0.5s,mb5.3
EARI Arriondas 85.55 4 P **P 01 23 48.0 -0.8**
comp=Z,10nm,0.6s,mb5.2
MTLF Montolieu 85.64 359 *e*P **P 01 23 49.4 +0.1**
comp=Z,10nm,0.6s,mb4.9
MTLF Montolieu 85.64 359 *e*P **P 01 23 49.4 +0.1**
comp=Z,5.3nm,0.6s,mb5.0
MTLF Montolieu 85.64 359 *e*P **P 01 23 49.4 +0.1**
MTLF pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
ELAN Lanestosa 85.69 3 P **P 01 23 48.8 -0.7**
comp=Z,19nm,0.6s,mb5.5
EALK Alkurruntz 85.75 2 P **P 01 23 49.6 -0.2**
comp=Z,21nm,0.7s,mb5.5
SJPF Ste Jean 85.86 1 *e*P **P 01 23 50.3 -0.1**
comp=Z,13nm,0.6s,mb5.0
SJPF Ste Jean 85.86 1 *e*P **P 01 23 50.3 -0.1**
comp=Z,6.5nm,0.6s,mb5.0
SJPF Ste Jean 85.86 1 *e*P **P 01 23 50.3 -0.1**
SJPF pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
EPF Esparros 85.96 0 *e*P **P 01 23 50.3 -0.6**
comp=Z,8.3nm,0.7s,mb4.8
EPF Esparros 85.96 0 *e*P **P 01 23 50.3 -0.6**
comp=Z,4.2nm,0.7s,mb4.8
EPF Esparros 85.96 0 *e*P **P 01 23 50.3 -0.6**
EPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
ETSF Etsaut 86.09 1 *e*P **P 01 23 51.9 +0.4**
comp=Z,17nm,0.6s,mb5.1
ETSF Etsaut 86.09 1 *e*P **P 01 23 51.9 +0.4**
comp=Z,8.4nm,0.6s,mb5.2
ETSF Etsaut 86.09 1 *e*P **P 01 23 51.9 +0.4**
ETSF pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
PGF Pioggiola 86.17 354 *e*P **P 01 23 51.8 -0.1**
comp=Z,48nm,0.8s,mb5.5

PGF Pioggiola 86.17 354 *e*P **P 01 23 51.8 -0.1**
comp=Z,24nm,0.8s,mb5.5
PGF Pioggiola 86.17 354 *e*P **P 01 23 51.8 -0.1**
PGF pmax pmax
comp=Z,24nm,0.8s,mb5.5
EBIE Bielsa 86.30 0 P **P 01 23 52.8 +0.2**
comp=Z,5.9nm,0.5s,mb5.1
PTQR Pietraquaria 86.32 351 P **P 01 23 52.7 0.0**
comp=Z,70nm,1.0s,mb5.8
ECRI Cripan 86.34 2 P **P 01 23 52.8 +0.1**
comp=Z,2.8nm,0.6s,mb4.7
ECRI Cripan 86.34 2 P **P 01 23 52.8 +0.1**
ECRI pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
ETOR Torete 88.14 2 P **P 01 24 00.5 -1.0**
comp=Z,6.8nm,0.9s,mb4.9
ETOR Torete 88.14 2 P **P 01 24 00.5 -1.0**
ETOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
GUD Guadarrama 88.25 4 P **P 01 24 01.0 -0.9**
comp=Z,6.4nm,0.8s,mb4.9
GUD Guadarrama 88.25 4 P **P 01 24 01.0 -1.0**
GUD pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
EPLA Plasencia 88.73 5 P **P 01 24 03.2 -1.0**
comp=Z,15nm,0.6s,mb5.5
EPLA Plasencia 88.73 5 P **P 01 24 03.2 -1.1**
EPLA pmax pmax
comp=Z,15nm,0.6s,mb5.5
TIP Timpagrande 88.73 348 *e*P **P 01 24 03.6 -0.7**
comp=Z,4.6nm,0.7s,mb4.9
ESDC Sonseca Array 89.22 4 P **P 01 24 05.4 -1.1**
comp=Z,3.9nm,0.7s,mb4.9,baz=350,slow=4.3,SNR=21
ESDC Sonseca Array 89.22 4 P **P 01 24 05.3 -1.2**
comp=Z,2.5nm,0.4s,mb4.9
MIB Mutribah 89.37 321 *e*P **P 01 24 06.7 -0.7**
MIB AML AML 01 24 08.4
comp=Z,10.0nm,0.8s
CSS Prodhromos 89.38 334 *e*P **P 01 24 06.3 -1.1**
comp=Z,22nm,1.1s,mb5.4
STKA Stephens Creek 89.79 213 *e*P **P 01 24 08.4 -0.6**
comp=Z,8.8nm,0.7s,mb5.2
STKA Stephens Creek 89.79 213 P **P 01 24 09.0 0.0**
comp=Z,11nm,0.8s,mb5.3,baz=346,slow=6.4,SNR=26
EBAD Badajoz 89.97 6 P **P 01 24 08.5 -1.6**
comp=Z,2.7nm,1.0s,mb4.5
EVIA Vianos 90.30 3 P **P 01 24 11.2 -0.4**
comp=Z,3.3nm,0.5s,mb4.9
EVIA Vianos 90.30 3 P **P 01 24 11.2 -0.5**
EVIA pmax pmax
comp=Z,3.0nm,0.5s,mb4.9
EADA Adamuz 90.70 4 P **P 01 24 12.7 -0.8**
comp=Z,15nm,1.2s,mb5.2
EMIN Mina Concepcio 90.98 6 P **P 01 24 13.9 -0.9**
comp=Z,21nm,1.5s,mb5.2
ELOJ Sierra Loja 91.73 4 P **P 01 24 18.1 -0.3**
comp=Z,3.7nm,0.8s,mb4.8
ELOJ Sierra Loja 91.73 4 P **P 01 24 18.1 -0.2**
ELOJ pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
ESPR Espera 91.92 5 P **P 01 24 18.7 -0.5**
comp=Z,11nm,1.2s,mb5.1
EMIJ Mijas 92.28 4 P **P 01 24 20.6 -0.2**
comp=Z,11nm,0.9s,mb5.2
EJIF Jimena Fronter 92.36 5 P **P 01 24 21.0 -0.3**
comp=Z,5.0nm,0.8s,mb4.9
EJIF Jimena Fronter 92.36 5 P **P 01 24 21.0 -0.2**
EJIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
KEST Kesra 92.92 353 P **P 01 24 22.8 -1.1**
comp=Z,2.2nm,0.9s,mb4.6,baz=10,slow=3.8,SNR=9.8
TORD Torodi Ar. Bea 115.73 359 PKP PKPdf 01 29 52.1 -1.2
comp=Z,0.7nm,0.4s,baz=345,slow=2.4,SNR=16
DBIC Dimbokro 121.97 7 PKP PKPdf 01 30 03.2 -2.1
comp=Z,2.6nm,0.4s,baz=342,slow=3.6,SNR=25
DBIC Dimbokro 121.97 7 PKP PKPdf 01 30 03.2 -2.1
DBIC Dimbokro 121.97 7 PKIKP PKPdf 01 30 03.2 -2.2
DBIC pmax pmax
comp=Z,3.0nm,0.4s
LIC Lamto 122.40 7 *e*PKIKP PKPdf 01 30 05.4 -0.8
comp=Z,4.6nm,0.5s
PLCA Paso Flores 131.22 107 PKP PKPdf 01 30 20.9 -1.1
comp=Z,4.7nm,0.9s,baz=233,slow=4.9,SNR=7.3
PLCA Paso Flores 131.22 107 PKIKP PKPdf 01 30 21.0 -1.1
PLCA pmax pmax
comp=Z,5.0nm,0.9s
TSUM Tsumeb 145.25 331 *e*PKPbc PKPbc 01 30 48.0 -0.2
MAW Mawson 146.33 218 PKPbc PKPbc 01 30 49.6 -0.5
comp=Z,6.6nm,0.7s,baz=79,slow=3.3,SNR=11
MAW Mawson 146.33 218 PKP2 PKPab 01 30 49.6 -1.4
MAW pmax pmax
comp=Z,7.0nm,0.7s
BOSA Boshof 150.77 312 PKPbc PKPbc 01 31 02.6 -0.2
comp=Z,10nm,0.6s,baz=47,slow=1.5,SNR=34
BOSA Boshof 150.77 312 PKIKP PKPbc 01 31 02.6 -0.2
BOSA pmax pmax
comp=Z,10.0nm,0.6s
VNA3 Neumayer Olymp 159.52 170 *e*PKPdf PKPdf 01 31 05.0 -2.7
VNA3 *e* 01 31 19.0
VNA3 *e* 01 31 43.7
SNAA Sanae 159.58 177 *e*PKPdf PKPdf 01 31 16.0 +8.2
SNAA *e* 01 31 43.8
VNA2 Neumayer--Watz 160.04 172 *e*PKPdf PKPdf 01 31 06.7 -1.6
baz=290,slow=1.5
VNA2 *e* 01 31 20.6
VNA2 *e* 01 31 46.5

CSEM ***09*** *01:22:34.4±1.1, 3706N×2489W, h15km, ML2.9, Error ellipse: s-maj=8.1km s-min=3.9km az=90.0, After PDA*

PDA 09 01:22:34.4±1.1, 3706N×2489W, h15km, MD3.7, ML2.9, Error ellipse: s-maj=8.1km s-min=3.9km az=90.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PSMN	**Pico do Norte,**	**0.15**	**248**	*e*P		Pg	01 22 37.4	-0.9
PSMN				*e*S		Sg	01 22 40.6	-0.4
CMLA	**Cha da Macela**	**0.86**	**324**	*e*P		Pb	01 22 47.3	-3.8
CMLA				*e*S		Sb	01 22 57.6	-4.9
CMLA				A			01 22 59.4	
	87nm,0.2s							
CMLA	**Cha da Macela**	**0.86**	**324**	*e*P		Pb	01 22 47.3	-3.8
CMLA				*e*S		Sb	01 22 57.6	-4.9
PDA	**Ponta Delgada**	**0.92**	**318**	*e*P		Pb	01 22 48.2	-3.9
PSET	**Sete Cidades**	**1.01**	**319**	*e*P		Pb	01 22 49.5	-4.1
PSET				*e*S		Sb	01 23 00.9	-5.8
PSET				A			01 23 05.8	
	29nm,0.3s							
PSET	**Sete Cidades**	**1.01**	**319**	*e*P		Pb	01 22 49.5	-4.1
PSET				*e*S		Sb	01 23 00.9	-5.8
PSCM	**Serra do Cume**	**2.41**	**314**	*e*P		Pn	01 23 09.6	-3.6
PSCM				*e*S		Sn	01 23 34.9	-7.5
PSCM				A			01 23 38.0	
	7.7nm,0.2s							
PSCM	**Serra do Cume**	**2.41**	**314**	*e*P		Pn	01 23 09.6	-3.6
PSCM				*e*S		Sn	01 23 34.9	-7.5
PSBA	**Serra de Santa**	**2.57**	**312**	*e*S		Sn	01 23 39.6	-6.9
PSBA				A			01 23 40.4	
	68nm,0.4s							
ROSA	**Rosais**	**3.13**	**303**	*e*P		Pn	01 23 19.6	-3.5
PICO	**Pico**	**3.15**	**298**	*e*P		Pn	01 23 19.8	-3.6
PICO				*e*S		Sn	01 23 52.8	-7.9
CALA	**Caldeira**	**3.38**	**298**	*e*P		Pn	01 23 22.8	-3.8
CALA				*e*S		Sn	01 23 59.0	-7.4
PCED	**Cedros**	**3.40**	**299**	*e*S		Sn	01 23 58.5	-8.4
PCED				A			01 23 59.1	
	38nm,0.2s							

MOS ***09*** *01:38:40.0±1.5, 5525N×11043E, h12km, mb4.2/1, Error ellipse: s-maj=79.4km s-min=24.8km az=48.2*

BYKL 09 01:38:39.2±0.3, 5532N×11033E, h5km±16km, 7C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NIZ	**Nizh Angarsk**	**0.64**	**316**	⇑*i*Pg		Pg	01 38 51.0	-0.5
NIZ				⇓*i*			01 38 51.4	
NIZ				*e*Sg		Sg	01 39 00.4	+0.6
NIZ				max				
	71nm,0.3s							
NIZ				Smax				
	313nm,0.2s							
YLYR	**Ulyunkhan**	**0.65**	**133**	⇑*i*Pg		Pg	01 38 50.3	-1.4

YLYR				⇑*i*			01 38 50.5		
YLYR				*e*Sg	Sg		01 38 59.2	-1.0	
YLYR				max					
	119nm,0.7s								
YLYR				Smax					
	168nm,0.2s								
KMO	**Kumora**	**0.75**	**41**	⇓*i*Pg	Pg		01 38 52.3	-1.3	
KMO				*e*Sg	Sg		01 39 02.9	-0.5	
KMO				Pmax					
	84nm,0.7s								
KMO				Smax					
	290nm,1.0s								
YOA	**Uoyan**	**1.13**	**43**	*e*PG	Pg		01 39 02.6	+1.7	
YOA				*i*			01 39 16.2		
YOA				pmax	pmax				
	comp=Z,324nm,0.2s								
YOA				smax					
	comp=N,548nm,0.4s								
YOA	**Uoyan**	**1.13**	**43**	*e*Sg	Sg		01 39 16.5	+0.9	
YOA				Smax					
	comp=N,539nm,0.3s								
SYVR	**Suvo**	**1.68**	**187**	⇑*i*Pg	Pg		01 39 09.1	-2.2	
SYVR				*e*			01 39 11.5		
SYVR				*e*Sg	Sg		01 39 33.3	+0.3	
SYVR				max					
	comp=N,41nm,0.3s								
SYVR				Smax					
	comp=N,161nm,0.7s								
UKT	**Uakit**	**1.89**	**84**	*e*PN	Pn		01 39 12.2	+0.2	
UKT				*e*			01 39 37.7		
UKT				pmax	pmax				
	comp=Z,76nm,0.2s								
UKT				smax					
	comp=N,232nm,0.2s								
UKT	**Uakit**	**1.89**	**84**	⇑*i*Pn	Pn		01 39 12.2	+0.2	
UKT				⇑*i*Pg	Pg		01 39 13.0	-2.3	
UKT				*e*Sg	Sg		01 39 39.7	-0.1	
UKT				Pmax					
	comp=N,50nm,0.4s								
UKT				Smax					
	comp=N,317nm,0.9s								
SVKR	**Severomuysk**	**1.99**	**65**	*e*PN	Pn		01 39 13.7	+0.2	
SVKR				*e*			01 39 40.8		
SVKR				pmax	pmax				
	comp=Z,69nm,0.8s								
SVKR				smax					
	comp=E,780nm,0.4s								
SVKR	**Severomuysk**	**1.99**	**65**	*e*Pg	Pg		01 39 13.8	-3.6	
SVKR				*e*Sn	Sn		01 39 41.2	+2.4	
SVKR				*e*Sg	Sg		01 39 41.3	-1.9	
SVKR				Pmax					
	comp=E,74nm,0.3s								
SVKR				Smax					
	comp=E,828nm,0.5s								
MXMB	**Maximikha**	**2.26**	**205**	*e*Pg	Pg		01 39 20.5	-2.0	
MXMB				*e*Sg	Sg		01 39 50.5	-1.2	
MXMB				Pmax					
	comp=E,28nm,0.5s								
MXMB				Smax					
	comp=E,249nm,0.7s								
OGRR	**Ongureny**	**2.32**	**225**	*e*PN	Pn		01 39 20.4	+2.5	
OGRR				*e*			01 39 51.7		
OGRR				pmax	pmax				
	comp=Z,40nm,0.4s								
OGRR				smax					
	comp=N,132nm,0.5s								
OGRR	**Ongureny**	**2.32**	**225**	*e*Pn	Pn		01 39 17.6	-0.3	
OGRR				*e*Pg	Pg		01 39 20.4	-3.2	
OGRR				*e*			01 39 22.1		
OGRR				*e*Sg	Sg		01 39 51.1	-2.5	
OGRR				max					
	comp=N,27nm,0.4s								
OGRR				Smax					
	comp=N,132nm,0.5s								
BOD	**Bodaibo**	**3.23**	**38**	*e*Pn	Pn		01 39 30.6	+0.2	
BOD				*e*Sn	Sn		01 40 09.8	+0.6	
BOD				*e*Sg	Sg		01 40 18.1	-4.6	
BOD				max					
	comp=N,8.0nm,0.3s								
BOD				Smax					
	comp=N,51nm,1.0s								
ZRHB	**Zarechye**	**3.35**	**215**	Sg	Sg		01 40 24.8	-1.8	
ZRHB				Smax					
	comp=N,256nm,1.6s								
TRG	**Tyrgan**	**3.48**	**224**	*e*Pn	Pn		01 39 35.0	+1.1	
TRG				*e*Pg	Pg		01 39 41.2	-4.6	
TRG				*e*			01 40 19.1		
TRG				*e*Sg	Sg		01 40 27.3	-3.5	
TRG				Pmax					
	comp=N,8.0nm,1.0s								
TRG				Smax					
	comp=N,60nm,0.9s								
UUDB	**Ulan-Yde**	**3.81**	**206**	*e*Sg	Sg		01 40 37.8	-3.6	
UUDB				Smax					
	comp=N,40nm,0.8s								
FFNB	**Fofonovo**	**3.91**	**214**	*e*Pn	Pn		01 39 40.9	+1.2	
FFNB				Pg	Pg		01 39 48.4	-5.5	
FFNB				*e*Sg	Sg		01 40 39.1	-5.4	
FFNB				Pmax					
	comp=N,21nm,0.3s								
FFNB				Smax					
	comp=N,86nm,0.5s								
HRMR	**Khuramsha**	**4.21**	**210**	⇓*i*Pn	Pn		01 39 45.4	+1.4	
HRMR				*e*Pg	Pg		01 39 54.4	-5.4	
HRMR				*e*			01 40 24.7		
HRMR				*e*Sg	Sg		01 40 49.5	-4.9	
HRMR				Pmax					
	comp=N,14nm,0.6s								
HRMR				Smax					
	comp=N,113nm,0.6s								
CRS	**Chara**	**4.72**	**67**	*e*Pn	Pn		01 39 51.9	+1.0	
CRS				*e*Pg	Pg		01 40 04.1	-5.4	
CRS				*e*Sn	Sn		01 40 44.9	-1.0	
CRS				*e*Sg	Sg		01 41 05.7	-4.9	
CRS				Smax					
	comp=N,42nm,2.5s								
LSTR	**Listvyanka**	**4.76**	**226**	*e*Sg	Sg		01 41 06.7	-5.3	
LSTR				Smax					
	comp=N,68nm,1.6s								
TLY	**Talaya**	**5.40**	**230**	*e*	Sn		01 40 54.5	-8.3	
TLY				*e*Sg	Sg		01 41 25.5	-7.1	
TLY				Smax					
	comp=N,36nm,2.2s								
TUP	**Tupik**	**5.63**	**95**	⇓*i*Pn	Pn		01 40 03.5	+0.1	
TUP				*e*			01 40 11.1		
TUP				*e*Pg	Pg		01 40 19.4	-7.5	
TUP				*e*Sn	Sn		01 41 05.2	-3.2	
TUP				*e*Sg	Sg		01 41 34.0	-5.8	
TUP				Pmax					
	comp=N,6.0nm,1.2s								
TUP				Smax					
	comp=N,25nm,1.5s								
KPC	**Khapcheranga**	**5.76**	**167**	*e*Pn	Pn		01 40 04.3	-1.0	
KPC				*e*			01 40 11.4		
KPC				Pg	Pg		01 40 23.2	-6.3	
KPC				*e*			01 41 10.7		
KPC				*e*Sg	Sg		01 41 36.4	-7.7	
KPC				Pmax					
	comp=N,3.0nm,0.6s								
KPC				Smax					
	comp=N,20nm,1.8s								
ARS	**Arshan**	**5.81**	**237**	*e*Sn	Sn		01 41 11.8	-1.0	
ARS				*e*Sg	Sg		01 41 37.6	-7.9	
ARS				Smax					
	comp=N,80nm,1.0s								
MOY	**Mondy**	**6.66**	**241**	⇑*i*Pn	Pn		01 40 17.8	+0.2	
MOY				*e*Sn	Sn		01 41 33.0	-0.9	
MOY				*e*			01 41 49.8		
MOY				*e*Sg	Sg		01 42 04.8	-8.2	
MOY				max					
	comp=N,5.0nm,0.5s								
MOY				Smax					
	comp=N,28nm,1.8s								
ORL	**Orlik**	**6.81**	**250**	*e*PN	Pn		01 40 21.5	+1.9	
ORL				*e*S	Sg		01 42 10.0	-7.6	
ORL				smax					
	comp=N,30nm,1.8s								
ORL	**Orlik**	**6.81**	**250**	*e*Pn	Pn		01 40 21.5	+1.9	
ORL				*e*Sn	Sn		01 41 36.4	-1.0	
ORL				*e*Sg	Sg		01 42 10.9	-6.7	
ORL				Smax					
	comp=N,30nm,1.0s								

*ISCJB **09** 01:41:05.8±0.5, 1103N±003×12543E±005, h104km±3km, mb4.3/21, Error ellipse: s-maj=9.0km s-min=5.0km az=163.8*

*MAN **09** 01:41:07, 1105N×12534E, h82km, mb4.4, ML3.2, MS3.1*

*IDC **09** 01:41:15.4±5.7, 1089N×12536E, h186km±57km, mb3.7/13, mb1 3.8/13, mb1mx3.7/19, mbtmp3.7/13, Error ellipse: s-maj=27.2km s-min=11.4km az=69.0*

*NEIC **09** 01:41:16.3±3.4, 1085N×12529E, h195km±34km, mb4.2/4, Error ellipse: s-maj=15.1km s-min=6.5km az=57.0*

ISC 09 01:41:06.8±0.5, 1103N±003×12543E±005, h97km±3km, n46, σ0°93/52, mb4.3/21, 2C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.46**	**288**	⇓*i*P			**Pn**	**01 41 21.0**	**-1.0**
PLP				*i*S			**Sn**	**01 41 31.4**	**-2.0**
BESP	**Borongan**	**0.57**	**1**	*e*P			**Pn**	**01 41 22.7**	**-0.2**
OCLP	**Ormoc**	**0.80**	**272**	*e*P			**Pn**	**01 41 25.3**	**+0.3**
MSLP	**Maasin**	**1.05**	**212**	*e*P			**Pn**	**01 41 27.4**	**-0.2**
MSLP				*e*S			**Sn**	**01 41 44.2**	**+1.0**
LLP	**Lapu-Lapu**	**1.60**	**244**	⇑*e*P			**Pn**	**01 41 34.1**	**0.0**
LLP				*e*S			**Sn**	**01 41 53.3**	**-1.6**
CNP	**Catarman**	**1.65**	**333**	*e*P			**Pn**	**01 41 35.3**	**+0.4**
CNP				*e*S			**Sn**	**01 41 56.4**	**+0.2**
TBP	**Tagbilaran**	**2.03**	**229**	*e*P			**Pn**	**01 41 40.9**	**+1.2**
TBP				*e*S			**Sn**	**01 42 05.5**	**+0.7**
BUTP	**Butuan**	**2.05**	**175**	*e*P			**Pn**	**01 41 41.3**	**+1.3**
RCP	**Roxas**	**2.68**	**282**	⇑*e*P			**Pn**	**01 41 49.1**	**+0.8**
GUIM	**Jordan**	**2.81**	**262**	*e*P			**Pn**	**01 41 50.1**	**+0.1**
GUIM				*e*S			**Sn**	**01 42 21.8**	**-1.6**
PVCP	**Virac**	**2.84**	**334**	*e*P			**Pn**	**01 41 50.8**	**+0.4**
BIPH	**Bislig**	**2.97**	**162**	⇓*e*P			**Pn**	**01 41 49.9**	**-2.3**
BIPH				*e*S			**Sn**	**01 42 26.1**	**-1.0**
BUKP	**Musuan**	**3.15**	**187**	*e*P			**Pn**	**01 41 55.8**	**+1.3**
BUKP				*e*S			**Sn**	**01 42 33.4**	**+2.1**
PAGZ	**Pagadian**	**3.75**	**213**	*e*P			**Pn**	**01 42 04.7**	**+1.4**
POLP	**Polillo Island**	**5.01**	**318**	*e*P			**Sn**	**01 43 17.0**	**+0.6**
KAKA	**Kakadu**	**24.59**	**163**	*e*P			Px	01 46 06.5	
KSRS	**Korea Array**	**26.41**	**4**	P			**P**	**01 46 35.2**	**+0.9**
	1.3nm,0.4s,mb3.7,baz=182,slow=10.0,SNR=5.1								
CMAR	**Chiang Mai Arr**	**26.63**	**289**	P			**P**	**01 46 37.0**	**+0.4**
	2.1nm,0.6s,mb3.8,baz=93,slow=7.5,SNR=7.6								
WRAB	**Tennant Creek**	**31.99**	**164**	*e*P			**P**	**01 47 23.2**	**-0.7**
	1.4nm,0.8s,mb3.7								
WRA	**Warramunga Arr**	**32.00**	**164**	P			**P**	**01 47 22.3**	**-1.8**
	0.3nm,0.4s,mb3.4,baz=346,slow=9.7,SNR=2.8								
ASAR	**Alice Springs**	**35.46**	**167**	P			**P**	**01 47 53.6**	**-0.4**
	1.0nm,0.4s,mb4.0,baz=350,slow=8.1,SNR=17								
TAPN	**Taplejung**	**38.95**	**300**	*e*P			**P**	**01 48 23.9**	**+0.3**
	12nm,0.4s,mb5.1								
ODAN	**Odare**	**39.09**	**299**	*e*P			**P**	**01 48 24.8**	**+0.1**
	11nm,0.6s,mb4.9								
RAMN	**Ramite**	**39.79**	**299**	*e*P			**P**	**01 48 30.6**	**0.0**
ULN	**Ulaanbaatar**	**39.84**	**341**	*e*P			**P**	**01 48 31.0**	**+0.4**
	2.8nm,0.6s,mb4.3								
SONM	**Songino Array**	**40.03**	**340**	P			**P**	**01 48 33.0**	**+0.8**
	0.6nm,0.5s,mb3.7,baz=154,slow=8.5,SNR=4.9								
JIRN	**Jiri**	**40.34**	**300**	*e*P			**P**	**01 48 35.4**	**+0.3**
	12nm,0.4s,mb5.1								
GUN	**Gumba**	**40.67**	**300**	*e*P			**P**	**01 48 37.4**	**-0.4**
KOLN	**Koldanda**	**42.58**	**299**	*e*P			**P**	**01 48 52.9**	**-0.5**
DANN	**Dangsing**	**42.59**	**300**	*e*P			**P**	**01 48 53.3**	**-0.2**
	12nm,0.5s,mb4.8								
PYUN	**Piuthan**	**43.18**	**299**	*e*P			**P**	**01 48 57.8**	**-0.5**
STKA	**Stephens Creek**	**45.38**	**161**	P			**P**	**01 49 15.1**	**-0.5**
	3.2nm,0.5s,mb4.3,baz=346,slow=9.5,SNR=6.7								
STKA	**Stephens Creek**	**45.38**	**161**	P			**P**	**01 49 15.4**	**-0.2**
PETK	**Petropavlovsk**	**49.30**	**25**	P			**P**	**01 49 47.2**	**+1.4**
	0.8nm,0.5s,mb3.9,baz=195,slow=4.6,SNR=5.0								
PETK	**Petropavlovsk**	**49.30**	**25**	P			**P**	**01 49 47.2**	**+1.4**
MK31	**Makanchi Array**	**50.93**	**323**	*e*P			**P**	**01 49 58.6**	**+0.4**
MKAR	**Makanchi Array**	**50.93**	**323**	P			**P**	**01 49 58.7**	**+0.5**
	4.1nm,0.3s,mb4.9,baz=119,slow=7.8,SNR=85								
MKAR	**Makanchi Array**	**50.93**	**323**	P			**P**	**01 49 58.7**	**+0.5**
ZALV	**Zalesovo Beam**	**53.57**	**331**	P			**P**	**01 50 17.1**	**-0.5**
	1.6nm,0.3s,mb4.5,baz=121,slow=6.0,SNR=11								
EKS2	**Erkin-Say**	**54.71**	**315**	*e*P			**P**	**01 50 26.5**	**+0.4**
	13nm,1.0s,mb4.9								
BVAR	**Borovoye Array**	**60.58**	**325**	P			**P**	**01 51 07.6**	**+0.5**
	4.7nm,0.8s,mb4.6,baz=117,slow=6.8,SNR=6.4								
BRVK	**Borovoye**	**60.65**	**325**	*e*P			**P**	**01 51 07.6**	**+0.1**
	5.5nm,0.9s,mb4.6								
ARCES	**ARCESS Array B**	**83.20**	**340**	P			**P**	**01 53 20.9**	**-1.1**
	0.7nm,0.3s,mb3.9,baz=83,slow=6.6,SNR=18								
BRTR	**Keskin Array B**	**84.41**	**309**	P			**P**	**01 53 27.6**	**-1.2**
	1.3nm,0.8s,mb3.8,baz=119,slow=3.3,SNR=6.0								
AKASG	**Malin Array Be**	**85.46**	**321**	P			**P**	**01 53 32.4**	**-1.4**
	2.7nm,0.5s,mb4.4,baz=66,slow=5.1,SNR=4.8								
TORD	**Torodi Ar. Bea**	**119.22**	**292**	PKP			PKPdf	01 59 42.4	-3.2
	0.4nm,0.5s,baz=49,slow=1.7,SNR=5.9								

*BGS **09** 01:42:45.3±1.9, 3681N×2698E, h10km, mb5.5*

*SOF **09** 01:42:49.8, 3793N×2596E, h2km, MD4.8*

*PRU **09** 01:42:53.1, 3800N×2559E, h0km, M5.0*

*BJI **09** 01:43:01.8, 3888N×2493E, h28km, mB5.2, mb4.9, Ms5.1, Msz4.8*

*SKO **09** 01:43:02.1, 3861N×2576E, h0km*

*CSEM **09** 01:43:02.7±0.0, 3881N×2570E, h8km, mb5.1/83, Mw5.2, Error ellipse: s-maj=0.9km s-min=0.6km az=12.0*

*IDC **09** 01:43:02.6±0.5, 3885N×2569E, h0km, mb4.5/23, mb1 4.6/33, mb1mx4.6/34, mbtmp4.5/33, ML4.2/10, MS4.5/25, Ms1 4.5/25, ms1mx4.3/35, Error ellipse: s-maj=11.0km s-min=10.3km az=112.0*

*ISCJB **09** 01:43:03.1±0.3, 3880N±001×25685E±0010, h11km±2km, mb4.9/127, MS4.6/33, Error ellipse: s-maj=1.8km s-min=1.2km az=18.7*

*PDG **09** 01:43:03.9±0.4, 3875N×2573E, h18km±1km, ML4.6/10, Error ellipse: s-maj=0.7km s-min=1.3km az=0.0*

*ISK **09** 01:43:03.1, 3882N×2570E, h11km, ML5.3*

*MOS **09** 01:43:03.4±1.0, 3883N×2574E, h15km, mb4.9/61, MS4.5/40, Error ellipse: s-maj=3.2km s-min=2.0km az=118.1*

*SZGRF **09** 01:43:03.1, 3868N×2553E, h33km, mb4.3, MS4.1, Aegean Sea*

*NEIC **09** 01:43:04.2±0.8, 3873N×2572E, h9km±5km, mb5.0/134, ML5.5(THE), ML5.3(ISK), ML5.1(ATH), Error ellipse: s-maj=2.2km s-min=2.1km az=175.0*

NEIC Felt at Athinaion, Chios and Mytilini, Greece. Also felt at Izmir, Turkey.

*GCMT **09** 01:43:04.2±0.2, 3878N×2566E, h15km, MW5.2/94, Moment Tensor Solution. s58,c84; s94,c164; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.92±.15; $M_{\theta\theta}$5.98±.15; $M_{\phi\phi}$-4.06±.13; $M_{r\theta}$-0.48±.40; $M_{\theta\phi}$-4.88±.12; $M_{\phi r}$2.18±.44; Best double couple: M_o7.44000×10^{16} NP1:ϕ_s248.00000°, δ70.00000°, λ-170.00000°. NP2: ϕ_s155.00000°, δ80.00000°, λ-21.00000°. Principal axes: T 8.1240, Plg7.0000°, Azm203.0000°; N -1.3680, Plg67.0000°, Azm311.0000°; P -6.7570, Plg21.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ATH **09** 01:43:04.2, 3877N×2577E, h37km±1km, ML5.1*

*DDA **09** 01:43:05.1, 3880N×2571E, h16km, Ml5.1*

*THE **09** 01:43:05.6, 3876N×2574E, h23km±3km, ML5.5/5, Error ellipse: s-maj=3.4km s-min=0.7km az=104.0*

ISC 09 01:43:05.1±0.3, 3877N±001×25706E±0010, h13km±2km, h16km±4.3km: pP-P, n1019, σ1907/1086, mb4.9/128, MS4.6/33, 45C-37D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.47**	**145**	P			**Pg**	**01 43 14.5**	**0.0**
CHOS				S			**Sg**	**01 43 21.4**	**+0.6**
PRK	**Paraskevi**	**0.65**	**43**	P			**Pg**	**01 43 17.0**	**-0.7**
PRK				S			**Sg**	**01 43 27.1**	**+0.8**
PRK	**Paraskevi**	**0.65**	**43**	*e*Pn			**Pg**	**01 43 17.0**	**-0.7**
PRK				S			**Sg**	**01 43 27.1**	**+0.8**
URLA	**Izmir**	**0.81**	**120**	*i*P			**Pg**	**01 43 20.4**	**-0.4**
URLA				*i*S			**Sg**	**01 43 31.4**	**-0.1**
AYVA	**Ayvalik**	**0.94**	**55**	*i*P			**Pb**	**01 43 22.4**	**-0.8**
BOZC	**Bozcaada**	**1.10**	**14**	*i*P			**Pb**	**01 43 25.3**	**-0.8**
BOZC				*i*S			**Sb**	**01 43 38.8**	**-1.5**
BLCB	**Balcova**	**1.12**	**110**	PN			**Pn**	**01 43 25.4**	**-1.0**
BLCB				SN			**Sn**	**01 43 41.3**	**-0.3**
EZN	**Ezine**	**1.16**	**24**	*e*PN			**Pn**	**01 43 25.5**	**-1.5**
EZN				*e*SN			**Sn**	**01 43 40.8**	**-1.9**
LIA	**Limnos Island**	**1.19**	**340**	P			**Pn**	**01 43 26.5**	**-1.0**
LIA				S			**Sb**	**01 43 42.5**	**-0.5**
LIA	**Limnos Island**	**1.19**	**340**	*e*Pn			**Pn**	**01 43 26.5**	**-1.0**
LIA				S			**Sb**	**01 43 42.5**	**-0.5**
LOS	**Limnos**	**1.26**	**338**	P			**Pn**	**01 43 30.2**	**+1.8**
IZM	**Izmir**	**1.28**	**107**	*e*PN			**Pn**	**01 43 28.0**	**-0.6**
KDAG	**Bornova**	**1.28**	**106**	*i*P			**Pn**	**01 43 27.8**	**-0.8**
SMG	**Samos**	**1.39**	**140**	*e*PN			**Pn**	**01 43 28.5**	**-1.6**
SMG				*e*SN			**Sn**	**01 43 45.7**	**-2.6**
GADA	**Gvkgeada**	**1.42**	**6**	*e*PN			**Pn**	**01 43 28.8**	**-1.9**
AOS	**Alonnisos**	**1.48**	**286**	P			**Pn**	**01 43 30.4**	**-1.0**
GCAM	**G?zelcaml?**	**1.61**	**131**	*i*P			**Pn**	**01 43 32.3**	**-0.9**
GCAM				*i*S			**Sn**	**01 43 55.5**	**+1.7**
PTL	**Penteli**	**1.62**	**244**	*e*PN			**Pn**	**01 43 32.0**	**-1.3**
AKHS	**Akhisar**	**1.65**	**86**	*i*P			**Pn**	**01 43 32.8**	**-1.0**
APE	**Apeiranthos**	**1.71**	**185**	P			**Pn**	**01 43 33.0**	**-1.6**
APE	**Apeiranthos**	**1.71**	**185**	⇓P			**Pn**	**01 43 32.9**	**-1.7**
APE				S			**Sn**	**01 43 52.2**	**-4.0**
APE	**Apeiranthos**	**1.71**	**185**	*e*Pn			**Pn**	**01 43 33.3**	**-1.3**
APE				S			**Sn**	**01 43 52.2**	**-4.0**
APE	**Apeiranthos**	**1.71**	**185**	⇓*i*P			**Pn**	**01 43 32.8**	**-1.8**
APE				S			**Sn**	**01 43 52.2**	**-4.0**
ATH	**Athens Observa**	**1.76**	**244**	*e*PN			**Pn**	**01 43 34.3**	**-0.9**
BALY	**Balya**	**1.77**	**56**	*i*P			**Pn**	**01 43 37.4**	**+1.9**
PAIG	**Paliouri**	**1.95**	**307**	P			**Pn**	**01 43 36.6**	**-1.3**
PAIG				S			**Sn**	**01 44 01.6**	**-0.6**
ENEZ	**Enez**	**1.99**	**10**	*e*PN			**Pn**	**01 43 36.9**	**-1.6**
NEO	**Neokhori**	**2.00**	**286**	*e*PN			**Pn**	**01 43 38.0**	**-0.7**
NAIG	**Nisos Aigina**	**2.02**	**241**	*e*PN			**Pn**	**01 43 38.0**	**-0.8**
AYDN	**Tasoluk**	**2.04**	**122**	*i*P			**Pn**	**01 43 39.7**	**+0.6**
XOR	**Xorichti**	**2.04**	**288**	P			**Pn**	**01 43 37.9**	**-1.3**
OUR	**Ouranopolis**	**2.05**	**320**	P			**Pn**	**01 43 38.4**	**-0.9**
LKR	**Lokris**	**2.12**	**268**	P			**Pn**	**01 43 39.2**	**-1.0**
LKR	**Lokris**	**2.12**	**268**	*e*PN			**Pn**	**01 43 39.6**	**-0.6**
BODT	**Bodrum**	**2.13**	**143**	*e*PN			**Pn**	**01 43 39.9**	**-0.5**
ALN	**Alexandroupoli**	**2.14**	**7**	P			**Pn**	**01 43 39.2**	**-1.3**
ALN				S			**Sn**	**01 44 05.6**	**-1.3**
MLSB	**Milas**	**2.20**	**131**	*e*PN			**Pn**	**01 43 41.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.22**	**30**	*e*PN			**Pn**	**01 43 40.2**	**-1.4**
SART	**Tekirdag**	**2.23**	**30**	*i*P			**Pn**	**01 43 39.8**	**-1.9**
MANT	**Manisa**	**2.25**	**96**	*i*P			**Pn**	**01 43 41.5**	**-0.5**
LTK	**Loutraki**	**2.28**	**252**	P			**Pn**	**01 43 41.5**	**-0.9**
EDC	**Edincik**	**2.29**	**46**	*e*PN			**Pn**	**01 43 41.6**	**-1.0**
DID	**Didima**	**2.32**	**238**	P			**Pn**	**01 43 41.8**	**-1.2**
KULA	**Kula-Manisa**	**2.33**	**95**	*e*PN			**Pn**	**01 43 42.7**	**-0.4**
BNT	**Bandirma**	**2.33**	**47**	*e*PN			**Pn**	**01 43 41.8**	**-1.3**
MFT	**Murefte**	**2.35**	**31**	*e*PN			**Pn**	**01 43 42.5**	**-0.9**
DEMI	**Demirci**	**2.36**	**83**	*i*P			**Pn**	**01 43 43.1**	**-0.5**
PLG	**Polygyros**	**2.37**	**313**	P			**Pn**	**01 43 42.4**	**-1.2**
PLG	**Polygyros**	**2.37**	**313**	*e*PN			**Pn**	**01 43 42.7**	**-0.9**
THR5	**Thira Island,**	**2.37**	**187**	P			**Pn**	**01 43 42.1**	**-1.6**
THR3	**Thira Island,**	**2.37**	**186**	P			**Pn**	**01 43 42.3**	**-1.4**
RDO	**Rodhopi**	**2.37**	**357**	*e*PN			**Pn**	**01 43 42.6**	**-1.1**
THR1	**Thera Island**	**2.41**	**185**	P			**Pn**	**01 43 42.6**	**-1.6**
DST	**Dursunbey**	**2.42**	**69**	*e*PN			**Pn**	**01 43 43.3**	**-1.0**
THR6	**Thira Island,**	**2.42**	**186**	P			**Pn**	**01 43 43.1**	**-1.3**
DAT	**Datca**	**2.52**	**143**	*e*PN			**Pn**	**01 43 45.5**	**-0.3**
KCT	**Karacabey**	**2.54**	**53**	*e*PN			**Pn**	**01 43 45.2**	**-0.8**
YER	**Yerkesik**	**2.61**	**128**	*e*PN			**Pn**	**01 43 46.9**	**-0.1**
TKR	**Tekirdag**	**2.62**	**32**	*e*PN			**Pn**	**01 43 46.2**	**-1.0**
AGG	**Agios Georgios**	**2.65**	**276**	P			**Pn**	**01 43 45.4**	**-2.1**
AGG				S			**Sn**	**01 44 18.2**	**-1.2**
HORT	**Hortiatis**	**2.71**	**313**	P			**Pn**	**01 43 48.0**	**-0.4**
SOH	**Sokhos**	**2.73**	**319**	P			**Pn**	**01 43 48.4**	**-0.3**
DENT	**Denizli**	**2.81**	**110**	*e*PN			**Pn**	**01 43 49.6**	**-0.1**
THE	**Thessaloniki**	**2.81**	**312**	P			**Pn**	**01 43 49.5**	**-0.3**
LIT	**Litokhoron**	**2.82**	**299**	P			**Pn**	**01 43 49.3**	**-0.6**
LIT				S			**Sn**	**01 44 27.8**	**-1.9**
KDZ	**Kurdzhali**	**2.88**	**356**	P			**Pn**	**01 43 49.6**	**-1.1**
NVR	**Nevrokopi**	**2.94**	**332**	P			**Pn**	**01 43 51.1**	**-0.4**
GDZ	**Gediz**	**2.96**	**83**	*i*P			**Pn**	**01 43 51.1**	**-0.7**
VLX	**Vlachokerasia**	**2.98**	**243**	P			**Pn**	**01 43 51.8**	**-0.2**
THL	**Klokotos Trika**	**2.98**	**287**	P			**Pn**	**01 43 51.6**	**-0.4**
THL				S			**Sn**	**01 44 26.6**	**-0.9**
THL	**Klokotos Trika**	**2.98**	**287**	*e*Pn			**Pn**	**01 43 51.6**	**-0.4**
THL				S			**Sn**	**01 44 26.6**	**-0.9**
TURN	**Turunc**	**2.98**	**129**	*i*P			**Pn**	**01 43 49.4**	**-2.6**
ULDT	**Uludag**	**2.99**	**62**	*i*P			**Pn**	**01 43 51.4**	**-0.8**
VLI	**Veliai**	**3.00**	**228**	*e*PN			**Pn**	**01 43 52.3**	**-0.1**
RZN	**Rozhen**	**3.01**	**346**	P			**Pn**	**01 43 52.2**	**-0.2**
KHL	**Karahalli**	**3.03**	**97**	*e*PN			**Pn**	**01 43 52.7**	**0.0**
EVR	**Evrytania**	**3.05**	**274**	*e*PN

SEYT	Eskypehyr	4.07	78	*i*	P		Pn	01 44 07.2	+0.2	TIM	Timisoara	7.71	336	⇓	P		Pn	01 44 56.6	-0.5
KBN	Korca	4.22	298	*e*	PN		Pn	01 44 10.5	+1.4	TIM	Timisoara	7.71	336	⇓	*i*	P	Pn	01 44 56.6	-0.4
IGT	Igoumenitsa	4.25	282		P		Pn	01 44 11.6	+2.1	CUC	Castrocucco	7.76	282	⇓	*i*	Pn	Pn	01 44 58.8	+1.1
VTS	Vitosha	4.26	334		P		Pn	01 44 10.9	+1.3		comp=Z,194nm,0.6s								
VTS	Vitosha	4.26	334		P		Pn	01 44 10.8	+1.1	CUC	Castrocucco	7.76	282	⇓	*i*	Pn	Pn	01 44 58.8	+1.1
VTS					S		Sg	01 45 27.3	+5.4		comp=Z,194nm,0.6s								
VTS	Vitosha	4.26	334	⇑	*i*	P	Pn	01 44 10.6	+0.9	ACER	Acerenza	7.78	288		P		Pn	01 44 57.7	-0.3
ANTB	Antalya	4.34	114		*e*	PN	Pn	01 44 11.6	+0.8	SCLL	Scilla	7.85	269		Pn		Pn	01 44 58.8	-0.2
OHR	Ohrid	4.44	303		P		Pn	01 44 12.6	+0.5		comp=Z,97nm,0.9s								
OHR	Ohrid	4.44	303		*i*	Pn	Pn	01 44 12.5	+0.4	DIKM	Dikmen	7.85	66		*e*	PN	Pn	01 45 00.2	+1.2
PVL	Pavlikeni	4.45	356		P		Pn	01 44 10.8	-1.4	MTTG	Motta San Giov	7.90	268		Pn		Pn	01 44 59.0	-0.7
PVL					S		Sb	01 45 13.3	-3.3		comp=Z,922nm,0.9s								
SZH	Strazhica	4.49	2		P		Pn	01 44 12.0	-0.8	BNN	Bunyan	7.92	86		*e*	PN	Pn	01 45 01.1	+1.2
SRN	Sarande	4.56	286		*e*	PN	Pn	01 44 16.3	+2.5	MGR	Morigerati	7.97	283		Pn		Pn	01 45 01.5	+0.9
SKO	Skopje	4.56	316		P		Pn	01 44 14.8	+1.0		comp=Z,1µm,1.6s								
SKO	Skopje	4.56	316		*i*	Pn	Pn	01 44 14.7	+0.9	MSI	Messina ING	7.98	269		P		Pn	01 45 01.0	+0.2
SKO	Skopje	4.56	316		*i*	Pn	Pn	01 44 14.8	+1.0	MSI					pmax	pmax			
MDU	Mudurnu	4.58	67		*e*	PN	Pn	01 44 14.4	+0.3		comp=Z,544nm,0.8s								
PRD	Provadia	4.60	16		P		Pn	01 44 13.1	-1.3	MSI	Messina ING	7.98	269		Pn		Pn	01 45 01.0	+0.2
KIZT	Kizilcal	4.82	87		*e*	PN	Pn	01 44 18.0	+0.6		comp=Z,544nm,0.8s								
ZIMR		4.89	357		P		Pn	01 44 17.8	-0.5	FGMS	Monte Sant'Ang	8.01	295		Pn		Pn	01 45 00.9	-0.3
ZIMR		4.89	357	⇑	*i*	P	Pn	01 44 17.2	-1.0		comp=Z,40nm,0.4s								
PHP	Peshkopia	4.97	307		*e*	PN	Pn	01 44 20.7	+1.3	MSAG	Monte S. Angel	8.05	294		P		Pn	01 45 01.3	-0.3
BARS	Barje	5.00	325	⇓	*i*	Pn	Pn	01 44 20.0	+0.2	CEYT	Ceyhan	8.13	99		*e*	PN	Pn	01 45 03.5	+0.7
KDZE	Karadeniz Ereo	5.08	58		*e*	PN	Pn	01 44 21.2	+0.3	SGRT	San Giovanni R	8.18	294		P		Pn	01 45 03.0	-0.4
TIR	Tirane	5.17	302		P		Pn	01 44 24.6	+2.5	SGO	Sicignano	8.22	286		P		Pn	01 45 04.8	+0.8
TIR	Tirane	5.17	302		*e*	PN	Pn	01 44 25.0	+2.9	SGO					pmax	pmax			
TIR	Tirane	5.17	302		P		Pn	01 44 24.6	+2.5		comp=Z,194nm,0.8s								
PSN	Preselentsi	5.25	20		P		Pn	01 44 21.3	-1.9	SGO	Sicignano	8.22	286		Pn		Pn	01 45 04.8	+0.8
LADK	Ladik-KONYA	5.26	94		*e*	PN	Pn	01 44 24.4	+1.1		comp=Z,194nm,0.8s								
KONT	Konya--Tatoy	5.29	97		*e*	PN	Pn	01 44 24.9	+1.0	RGNG	Rignano Grg	8.27	294		Pn		Pn	01 45 04.1	-0.5
LOD	Lodumlu	5.58	76		*e*	PN	Pn	01 44 28.7	+0.9	KVT	Kavak	8.27	71		*e*	PN	Pn	01 45 05.6	+0.8
BCI	Bajram Curri	5.59	312		*e*	PN	Pn	01 44 29.8	+1.8	SEV	Sevastopol'	8.29	43	⇑	*i*	P	Pn	01 45 03.2	-1.8
ANTO	Ankara	5.60	77		*e*	PN	Pn	01 44 29.8	+1.6	SEV					*e*	S	Sn	01 46 31.2	-7.2
ANTO	Ankara	5.60	77		P		Pn	01 44 30.0	+1.9	DRGR		8.31	346		P		Pn	01 45 05.3	+0.1
	SNR=14									DRGR		8.31	346		P		Pn	01 45 05.3	+0.1
ANTO	Ankara	5.60	77		*e*	Pn	Pn	01 44 28.9	+0.7	DRGR		8.31	346	⇑	*i*	P	Pn	01 45 03.9	-1.3
	234nm,0.8s									FG5	Orsara di Pugl	8.39	291		P		Pn	01 45 06.8	+0.4
ANTO					*e*	Pg	Pg	01 44 50.5	-1.9	FG5					pmax	pmax			
ANTO					*e*	Sg	Sg	01 46 05.5	+0.6		comp=Z,94nm,0.6s								
ANTO	Ankara	5.60	77		*e*	P	Pn	01 44 28.9	+0.8	FG5	Orsara di Pugl	8.39	291		Pn		Pn	01 45 06.8	+0.4
ANTO					pmax	pmax					comp=Z,94nm,0.6s								
	comp=Z,234nm,0.8s									CSSN	Cassano Irpino	8.48	288		Pn		Pn	01 45 07.7	+0.1
ANTO	Ankara	5.60	77	⇑	*i*	P	Pn	01 44 28.7	+0.6		comp=Z,91nm,0.7s								
HDMB	Hadim	5.66	107		*e*	PN	Pn	01 44 30.4	+1.5	SLNA	Salina	8.51	272		Pn		Pn	01 45 07.9	-0.1
CRAR	CRAIOVA	5.73	346	⇑	*i*	P	Pn	01 44 29.4	-0.4		comp=Z,125nm,0.5s								
BOLS	Boljevac	5.79	332	⇓	*i*	Pn	Pn	01 44 30.1	-0.5	YAL	Yalta	8.52	45	⇑	*e*	P	Pn	01 45 07.1	-1.0
PVY	Plav	5.79	313	⇑	*i*	Pn	Pn	01 44 31.5	+0.8	YAL					*e*	S	Sn	01 46 38.5	-5.5
PVY					*e*	Sn	Sn	01 45 36.9	-0.1	IAS	Iasi	8.53	9		P		Pn	01 45 07.4	-0.8
CVD	Cernavoda	5.80	17		P		Pn	01 44 30.7	-0.2	IAS	Iasi	8.53	9		P		Pn	01 45 07.4	-0.8
CVD	Cernavoda	5.80	17	⇑	*i*	P	Pn	01 44 30.9	0.0	IAS	Iasi	8.53	9	⇓	*i*	P	Pn	01 45 07.1	-1.1
ULC	Ulcinj	5.87	305	⇓	*i*	Pn	Pn	01 44 32.1	+0.3	KIS	Kishinev	8.53	15		P		Pn	01 45 07.8	-0.4
ULC					*e*	Sn	Sn	01 45 38.9	0.0	KIS	Kishinev	8.53	15	*κ*	*i*	P	Pn	01 45 08.0	-0.3
SAFT	Safranbolu	5.90	63		*e*	PN	Pn	01 44 32.6	+0.5	KIS					pmax	pmax			
BEY	Berane	6.01	315	⇓	*i*	Pn	Pn	01 44 34.9	+1.2		comp=Z,400nm,1.0s								
BEY					*e*	Sn	Sn	01 45 41.8	-0.6	KIS					pmax	pmax			
IVA	Berane	6.01	315	⇓	*i*	Pn	Pn	01 44 34.9	+1.2		comp=Z,300nm,1.0s								
IVA					*e*	Sn	Sn	01 45 41.8	-0.6	KIS					MLR	MLR			
TIRR	Tirgusor	6.03	19	⇑	*i*	Pn	Pn	01 44 32.5	-1.5		comp=Z,4µm,8.0s								
	comp=Z,218nm,0.6s									KIS					MLR	MLR			
TIRR	Tirgusor	6.03	19	⇑	*i*	P	Pn	01 44 32.9	-1.1		comp=N,6µm,11.0s								
TIRR	Tirgusor	6.03	19	⇑	*i*	P	Pn	01 44 32.8	-1.2	KIS					MLR	MLR			
PDG	Podgorica	6.12	309	⇑	*i*	Pn	Pn	01 44 36.0	+0.9		comp=E,3µm,7.0s								
PDG					*e*	Sn	Sn	01 45 44.8	-0.1	KIS					MLR	MLR			
TTG	Podgorica	6.12	309	⇑	*i*	Pn	Pn	01 44 36.0	+0.9		comp=Z,4µm,10.0s								
TTG					*e*	Sn	Sn	01 45 44.8	-0.1	KIS	Kishinev	8.53	15	⇓	*i*	P	Pn	01 45 08.0	-0.3
BRTR	Keskin Array B	6.23	79		Pn		Pn	01 44 37.5	+0.8		comp=Z,400nm,1.0s								
	comp=Z,10nm,0.3s,baz=258,slow=13,SNR=176									KIS	Kishinev	8.53	15		*i*	PP		01 45 12.0	
BRTR					Pg		Pg	01 45 02.5	-1.9	KIS					*e*	Li		01 47 44.0	
	comp=Z,7.4nm,0.3s,baz=259,slow=16,SNR=16									KIS					*i*	LQ		01 48 22.0	
BRTR					Lg			01 46 28.8		KIS					LRM			01 49 56.0	
	comp=Z,0.2nm,0.3s,baz=256,slow=20,SNR=3.7										comp=Z,4µm,8.0s								
BRTR					LR		LR	01 47 38.5		KIS	Kishinev	8.53	15		P		Pn	01 45 07.8	-0.5
	comp=Z,2µm,18.4s,baz=255,slow=44									KIS	Kishinev	8.53	15	⇓	*i*	P	Pn	01 45 07.7	-0.6
BRTR	Keskin Array B	6.23	79		Pg		Pg	01 45 02.5	-1.9	SARI	SarD1z-Kayseri	8.59	87		*e*	PN	Pn	01 45 07.5	-1.7
SJES	Sjenica	6.24	318		*e*	PN	Pn	01 44 38.8	+2.0	FG2	Serracapriola	8.61	294		Pn		Pn	01 45 09.0	-0.3
KAMT	Kaman	6.26	82		*e*	PN	Pn	01 44 38.3	+1.2		comp=Z,360nm,1.0s								
BUM	Brajici-Budva	6.27	306	⇓	*i*	Pn	Pn	01 44 37.7	+0.5	MNO	Monte Soro	8.69	268		P		Pn	01 45 11.1	+0.6
BUM					*e*	Sn	Sn	01 45 48.8	+0.1	HTY	Hatay	8.71	104		*e*	PN	Pn	01 45 11.7	+0.9
CANT	Cankiri	6.37	71		*e*	PN	Pn	01 44 39.7	+1.1	PSB1	Pescosannita	8.71	290		P		Pn	01 45 11.3	+0.5
ISR	Istrita	6.37	5	⇑	P		Pn	01 44 36.8	-1.8	CIGN	Sant'Elia a Pi	8.75	293		Pn		Pn	01 45 11.5	+0.2
ISR	Istrita	6.37	5	⇑	*i*	P	Pn	01 44 36.8	-1.8		comp=Z,484nm,1.4s								
AKMC	Akamas	6.49	123		P		Pn	01 44 40.3	0.0	ALU	Alushta	8.78	45	⇑	*e*	P	Pn	01 45 10.6	-1.1
NKY	Niksic	6.49	311		*e*	Pn	Pn	01 44 41.4	+1.1	ALU					*e*	S	Sn	01 46 44.7	-5.7
NKY					*e*	Sn	Sn	01 45 53.2	-1.0	SIM	Simferopol'	8.80	43	*ce*	P		Pn	01 45 11.5	-0.4
PPCY	Paphos	6.59	124		P		Pn	01 44 42.3	+0.7	SIM					*e*	S	Sn	01 46 52.0	+1.1
ALFC	Alevga	6.59	121		P		Pn	01 44 42.2	+0.5	SIM					pmax	pmax			
	comp=Z,3.9nm,0.7s										comp=Z,291nm,0.3s								
PLE	Pljevlja	6.59	316	⇓	*i*	Pn	Pn	01 44 42.6	+0.9	SIM					MLR	MLR			
PLE					*e*	Sn	Sn	01 45 56.0	-0.7		comp=Z,2µm,13.0s								
HCY	Herceg Novi	6.60	306	⇑	*i*	Pn	Pn	01 44 42.6	+0.8	SVSK	Karacayir	8.82	79		*e*	PN	Pn	01 45 12.8	+0.5
HCY					*e*	Sn	Sn	01 45 56.3	-0.5	HVZN	Vizzini	8.82	263		Pn		Pn	01 45 10.2	-2.1
VOIR		6.68	356		P		Pn	01 44 42.9	+0.1		comp=Z,1µm,0.7s								
VOIR		6.68	356		P		Pn	01 44 42.9	+0.1	HMDC	Modica	8.83	262		P		Pn	01 45 11.7	-0.7
VOIR		6.68	356	⇑	*i*	P	Pn	01 44 42.0	-0.8	BURAR	Bucovina Array	8.85	358		P		Pn	01 45 13.6	+1.0
PE1	Pezze di Greco	6.69	290		*e*	P	Pn	01 44 43.4	+0.3	BURAR	Bucovina Array	8.85	358		P		Pn	01 45 13.6	+1.0
TOS	Tosya	6.78	68		*e*	PN	Pn	01 44 45.1	+0.9	BURAR	Bucovina Array	8.85	358	⇓	*i*	P	Pn	01 45 12.5	-0.1
UPM	Unac-Piva	6.78	313	⇓	*i*	Pn	Pn	01 44 44.9	+0.6	BUR08	Bucovina Ar. S	8.88	358		*e*	Pn	Pn	01 45 13.3	+0.3
UPM					*e*	Sn	Sn	01 46 00.5	-0.8	BUR08	Bucovina Ar. S	8.88	358		*e*	Pn	Pn	01 45 13.3	+0.3
CDAG	Cicekdag	6.79	80		*i*	P	Pn	01 44 46.7	+2.4	KMRS	Kahramanmaras	8.91	95		*e*	PN	Pn	01 45 14.2	+0.6
LEF	Lefka	6.81	120		*e*	PN	Pn	01 44 46.1	+1.4	VAE	Valguarnera	8.99	265		Pn		Pn	01 45 14.1	-0.6
TLCR		6.81	19		P		Pn	01 44 43.9	-0.8		comp=Z,2.1nm,0.3s,baz=87,slow=4.7,SNR=17								
TLCR		6.81	19		P		Pn	01 44 43.9	-0.8	VAE					Sn		Sn	01 46 58.9	+3.1
TLCR		6.81	19	⇓	*i*	P	Pn	01 44 43.5	-1.2		comp=Z,3.5nm,0.3s,baz=98,slow=17,SNR=2.5								
BRY	Bratogost	6.82	309		*e*	Pn	Pn	01 44 45.9	+1.1	VAE	Valguarnera	8.99	265		Pn		Pn	01 45 14.1	-0.6
BRY					*e*	Sn	Sn	01 46 00.7	-1.5	VAE					Sn		Sn	01 46 58.9	+3.1
IKL	Isikli	6.83	109		*e*	PN	Pn	01 44 46.4	+1.5	BMR	Baia Mare	9.04	350		P		Pn	01 45 16.0	+0.8
BBLS	Lazići	6.95	319		P		Pn	01 44 48.2	+1.6	BMR	Baia Mare	9.04	350		P		Pn	01 45 16.0	+0.8
GZR	Gura Zlata	6.96	343		P		Pn	01 44 46.6	-0.1	BMR	Baia Mare	9.04	350	⇑	*i*	P	Pn	01 45 15.4	+0.2
GZR	Gura Zlata	6.96	343		P		Pn	01 44 46.7	-0.1	SGG	Gregorio Mates	9.07	290		P		Pn	01 45 16.5	+0.9
GZR	Gura Zlata	6.96	343	⇑	*i*	P	Pn	01 44 46.0	-0.8	PKSM	Moragy	9.08	327		P		Pn	01 45 16.0	+0.2
TIP	Timpagrande	6.98	276	⇓	*i*	Pn	Pn	01 44 47.2	+0.1	PKSM	Moragy	9.08	327		P		Pn	01 45 16.0	+0.2
TIP	Timpagrande	6.98	276	⇓	*i*	Pn	Pn	01 44 47.2	+0.1	PKSM	Moragy	9.08	327	⇑	*i*	P	Pn	01 45 15.0	-0.8
MAMC	Mammari	7.00	119		P		Pn	01 44 49.1	+1.7	RAFF	Raffo Rosso	9.09	264		Pn		Pn	01 45 15.4	-0.5
SZAC	Souni-Zanaja	7.02	123		P		Pn	01 44 48.0	+0.5		comp=Z,199nm,0.7s								
NIG	Nigde	7.02	93		*e*	PN	Pn	01 44 48.9	+1.3	CSLB	Castelbuono	9.19	268		P		Pn	01 45 17.9	+0.6
CORM	Corum	7.04	76		*e*	PN	Pn	01 44 49.2	+1.3	GIB	Gibilmanna	9.21	269		P		Pn	01 45 16.2	-1.4
ODB	Odobesti	7.07	8		P		Pn	01 44 49.2	+1.0	MIDA	Miranda	9.22	292		Pn		Pn	01 45 16.6	-1.1
ODB	Odobesti	7.07	8	⇑	*i*	P	Pn	01 44 49.2	+1.0		comp=Z,182nm,0.8s								
BZK	Bozkurt	7.09	61		*e*	PN	Pn	01 44 49.5	+0.9	GAZ	Gaziantep	9.23	96		*e*	PN	Pn	01 45 18.8	+1.0
LTRZ	Laterza	7.09	288		Pn		Pn	01 44 48.7	+0.1	SUDU	Sudak	9.24	46	⇑	*e*	P	Pn	01 45 17.4	-0.6
	comp=Z,182nm,0.7s									SUDU					*e*	S	Sn	01 46 57.5	-4.3
PLOR	Plostina	7.11	5	⇑	*i*	P	Pn	01 44 49.0	+0.3	RNI2	Rionero Sannit	9.31	292		P		Pn	01 45 19.5	+0.6
VRI	Vrincioaia	7.13	6		P		Pn	01 44 49.3	+0.2	WDD	Wield Dalam	9.37	255		*e*	Pn	Pn	01 45 18.8	-1.0
VRI	Vrincioaia	7.13	6		P		Pn	01 44 49.3	+0.3		comp=Z,199nm,0.6s								
VRI	Vrincioaia	7.13	6	⇓	*i*	P	Pn	01 44 48.8	-0.2	WDD					*e*	Sn	Sn	01 47 02.4	-2.5
LFK	Lefkose	7.17	117		*e*	PN	Pn	01 44 50.9	+1.3	WDD	Wield Dalam	9.37	255		*e*	Pn	Pn	01 45 18.8	-1.0
CSS	Prodhromos	7.20	120		P		Pn	01 44 50.3	+0.3		comp=Z,199nm,0.6s								
MERS	Mersin	7.23	103		*e*	PN	Pn	01 44 51.9	+1.4	WDD					*e*	Sn	Sn	01 47 02.4	-2.6
GRI	Girifalco	7.25	273		P		Pn	01 44 51.1	+0.3	BHL	Bhannes	9.38	118		*e*	P	Pn	01 45 17.4	-2.5
GRI					pmax	pmax				HWQ	Hawqa	9.38	115		*e*	P	Pn	01 45 20.4	+0.4
	comp=Z,246nm,0.6s									FEO	Feodosiya	9.54	46		*e*	P	Pn	01 45 21.3	-0.8
GRI	Girifalco	7.25	273		Pn		Pn	01 44 51.1	+0.3	SDI	San Donato	9.56	292		P		Pn	01 45 23.3	+1.0
	comp=Z,246nm,0.6s									SDI					pmax	pmax			
ORI	Oriolo Calabro	7.28	283		P		Pn	01 44 51.6	+0.4		comp=Z,13nm,0.6s								
ORI					pmax	pmax				SDI	San Donato	9.56	292		Pn		Pn	01 45 23.3	+1.0
	comp=Z,710nm,0.7s										comp=Z,13nm,0.6s								
ORI	Oriolo Calabro	7.28	283		Pn		Pn	01 44 51.6	+0.4	INTR	Introdacqua	9.57	293		P		Pn	01 45 22.9	+0.4
	comp=Z,710nm,0.7s									MPG	Monte Pellegri	9.70	270		P		Pn	01 45 25.5	+1.1
STON	Ston	7.32	307		P		Pn	01 44 51.2	-0.5	RCY	Rachaya	9.73	120		*e*	P	Pn	01 45 23.8	-1.0
MDB	Medias	7.43	353		P		Pn	01 44 54.2	+1.1	VVLD	Villa Vallelon	9.73	292		Pn		Pn	01 45 24.6	-0.2
MDB	Medias	7.43	353		P		Pn	01 44 54.2	+1.1		comp=Z,213nm,0.9s								
MDB	Medias	7.43	353	⇑	*i*	P	Pn	01 44 54.0	+0.9	MMAI	Mount Meron Ar	9.74	123		Pn		Pn	01 45 21.8	-3.1
BZS	Buzias	7.48	337		P		Pn	01 44 54.0	+0.1		comp=Z,29nm,0.3s,baz=310,slow=12,SNR=72								
BZS	Buzias	7.48	337		P		Pn	01 44 54.0	+0.1	MMAI					LR		LR	01 50 14.4	
BZS	Buzias	7.48	337	⇑	*i*	P	Pn	01 44 53.5	-0.4		comp=Z,2µm,19.0s,baz=315,slow=44								
EREN	Erenkoy	7.49	115		*e*	PN	Pn	01 44 54.8	+0.8	USI	Ustica	9.79	274		P		Pn	01 45 24.7	-0.8
YOZ	Yozgat	7.52	80		*e*	PN	Pn	01 44 55.5	+1.2	PTQR	Pietraquaria	9.93	293		Pn		Pn	01 45 28.1	+0.6
KARA	Karaisali	7.53	99		*e*	PN	Pn	01 44 55.8	+1.2		comp=Z,6.6nm,0.6s								
SOI	Samo	7.61	268		P		Pn	01 44 55.4	-0.3	NVLJ	Novalja	9.96	309		P		Pn	01 45 25.1	-2.7
SOI					pmax	pmax				TERO	Teramo	9.96	297		P		Pn	01 45 27.6	-0.3
	comp=Z,120nm,0.8s									BUD	Budapest	9.98	333	⇑	*e*	P	Pn	01 45 28.8	+0.7
SOI	Samo	7.61	268		Pn		Pn	01 44 55.4	-0.3	BUD	Budapest	9.98	333		P		Pn	01 45 29.1	+1.0
	comp=Z,120nm,0.8s									ATAB	Dazova	10.01	94		*i*	P	Pn	01 45 33.9	+5.4
PTRP	Pietrapertosa	7.64	286		Pn		Pn	01 44 57.3	+1.2	OFFI	Offida	10.01	298		P		Pn	01 45 29.0	+0.5
CEL	Celeste	7.71	269		*e*	Pn	Pn	01 44 57.9	+0.9	AQU	L'Aquila	10.02	295		P		Pn	01 45 28.9	+0.2
	comp=Z,211nm,0.9s									AQU					pmax	pmax			
CEL					*e*	Sn	Sn	01 46 25.5	+1.3		comp=Z,183nm,1.0s								
CEL	Celeste	7.71	269		*e*	Pn	Pn	01 44 57.9	+0.9	AQU	L'Aquila	10.02	295		Pn		Pn	01 45 28.9	+0.2
	comp=Z,211nm,0.9s										comp=Z,183nm,1.0s								
CEL					*e*	Sn	Sn	01 46 25.5	+1.3	PSZ	Piszkesteto	10.07	337		*e*	Pn	Pn	01 45 29.2	-0.1
										PSZ	Piszkesteto	10.07	337	⇓	*e*	P	Pn	01 45 29.0	-0.3
										PSZ	Piszkesteto	10.07	337		*e*	Pn	Pn	01 45 29.2	-0.1
										PSZ	Piszkesteto	10.07	337	⇓	*i*	P	Pn	01 45 29.3	0.0
										UZH	Uzhgorod	10.16	347		*e*	P	Pn	01 45 30.0	-0.5
										UZH					*e*	S	Sn	01 47 23.0	-1.2
										UZH					MLR	MLR			
											comp=Z,2µm,14.0s								
										FIAM	Fiamignano	10.20	294		Pn		Pn	01 45 31.4	+0.2
											comp=Z,114nm,0.8s								
										CERT	Cerreto	10.21	292		P		Pn	01 45 32.4	+1.0
										ESPY	Espiye-Giresun	10.24	74		*e*	PN	Pn	01 45 32.1	+0.4
										AOI	Ancona	10.30	301		P		Pn	01 45 32.1	-0.4
										KERU	Kerch	10.32	47		*e*	P	Pn	01 45 33.0	+0.2
										KOGS	Kog	10.36	321		*e*	PN	Pn	01 45 33.4	+0.1
										RDP	Rocca di Papa	10.37	291		P		Pn	01 45 35.4	+2.0
										NRCA	Norcia	10.37	297		Pn		Pn	01 45 33.0	-0.5
											comp=Z,48nm,0.6s								
										KECS	Kecovo	10.41	340		*e*	PN	Pn	01 45 34.0	-0.1
										URFA	Urfa	10.42	93		*e*	PN	Pn	01 45 34.5	+0.3
										KOLS	Kolonicke sedl	10.45	347		*e*	PN	Pn	01 45 36.0	+1.4
										KOLS					*e*	SG		01 48 50.5	
										CING	Cingoli	10.50	300		Pn		Pn	01 45 34.2	-1.1
											comp=Z,89nm,0.9s								
										LEGS	Legarje	10.51	316		*e*	Pn	Pn	01 45 36.8	+1.5
										MNS	Montasola	10.54	294		P		Pn	01 45 37.1	+1.3
										ANN	Anapa	10.62	52		*e*	P	Pn	01 45 36.6	-0.3
										ANN					*e*	S	Sn	01 47 37.5	+1.8
										ANN					pmax	pmax			
											comp=Z,89nm,1.2s								
										SNTG	Esanatoglia	10.63	299		P		Pn	01 45 36.1	-1.0
										ASS	Assisi	10.77	298		P		Pn	01 45 38.5	-0.4
										ASS					pmax	pmax			
											comp=Z,345nm,1.6s								
										ASS	Assisi	10.77	298		Pn		Pn	01 45 38.5	-0.4
											comp=Z,345nm,1.6s								
										FSSB	Fossombrone	10.90	301		Pn		Pn	01 45 39.6	-1.2
											comp=Z,46nm,0.6s								
										VYHS	Vyhne	10.91	335		*e*	PN	Pn	01 45 40.3	-0.6
										VYHS					*e*	SG		01 49 04.2	
										MURB	Monte Urbino	10.92	298		P		Pn	01 45 41.2	+0.2
										LJU	Ljubljana	11.00	315		*e*	Pn	Pn	01 45 42.5	+0.5
										PERS	Pernice	11.06	319		*e*	Pn	Pn	01 45 44.9	+2.0
										KWP	Kalwaria	11.07	350		*e*	P	Pn	01 45 44.6	+1.7
										KWP					LMZ			01 50 11.6	
											comp=Z,5µm,21.6s								
										LVV	L'vov	11.11	354		*e*	P	Pn	01 45 44.2	+0.7

DPC Dobruska-Polom 13.35 333 *e*P Pn 01 46 12.7 -1.5
DPC *e* 01 46 19.2
DPC Dobruska-Polom 13.35 333 *e*P Pn 01 46 12.7 -1.5
DPC *ex* x 01 46 19.2
DPC AMS AMS 01 51 40.0
comp=Z,4µm,12.6s
KEST Kesra 13.38 262 Pn Pn 01 46 15.3 +0.6
comp=Z,0.2nm,0.3s,baz=51,slow=14,SNR=12
WATA Walderalm 13.40 314 ⇓ *i*Pn Pn 01 46 15.2 +0.3
SNR=13
KHC Kasperske Hory 13.53 324 *e*P Pn 01 46 16.8 +0.2
KHC *e* 01 46 25.7
KHC Kasperske Hory 13.53 324 *e*P Pn 01 46 16.8 +0.2
KHC *ex* x 01 46 25.7
KHC AMS AMS 01 52 00.0
comp=Z,6µm,9.7s
UPC Upice 13.60 333 *e*P Pn 01 46 15.8 -1.7
UPC *ex* x 01 46 22.3
MOTA Moosalm 13.67 313 ⇓ *i*Pn Pn 01 46 18.6 0.0
SNR=8.5
FETA Feichten 13.71 312 ⇓ *i*Pn Pn 01 46 19.1 0.0
SNR=12
FETA Feichten 13.71 312 Sn Sn 01 48 57.7 +6.5
PRU Pruhonice 13.74 328 *e*P Pn 01 46 19.2 -0.4
PRU *e* 01 46 24.5
PRU Pruhonice 13.74 328 *e*P Pn 01 46 19.2 -0.4
PRU *ex* x 01 46 24.5
PRU AMS AMS 01 51 30.0
comp=Z,3µm,11.7s
KIV Kislovodsk 13.76 62 *e*Pn Pn 01 46 19.2 -0.5
comp=Z,36nm,0.9s
KIV Kislovodsk 13.76 62 *e*P Pn 01 46 21.7 +1.9
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,1µm,14.0s
KIV Kislovodsk 13.76 62 *e*Pn Pn 01 46 19.2 -0.6
comp=Z,36nm,0.9s
KSP Ksiaz 13.78 334 *e*P Pn 01 46 21.5 +1.5
KSP *e* 01 46 29.4
KSP LMZ 01 51 27.6
comp=Z,7µm,16.0s
KSP Ksiaz 13.78 334 *e*P Pn 01 46 21.0 +1.0
KSP *e*PP 01 46 29.2
WET Wettzell 13.87 323 *e*P Pn 01 46 21.5 +0.3
WET pmax pmax
comp=Z,88nm,1.6s
WET Wettzell 13.87 323 *e*P Pn 01 46 21.5 +0.3
comp=Z,88nm,1.6s
ONI Oni 13.99 69 P Pn 01 46 25.4 +2.4
MSL Mosul 14.01 94 *ex* x 01 46 29.0
MSL *ex* x 01 49 08.0
MSL *ex* x 01 51 31.0
DAVOX Davos/Dischmat 14.09 310 Pn Pn 01 46 24.5 +0.2
comp=Z,1.0nm,0.3s,baz=142,slow=19,SNR=12
DAVOX LR LR 01 51 54.0
comp=Z,3µm,20.7s,baz=114,slow=38
PVCC Panska Ves 14.15 330 *e*P Pn 01 46 24.4 -0.8
PVCC *e* 01 46 31.1
PVCC Panska Ves 14.15 330 *e*P Pn 01 46 24.4 -0.8
PVCC *ex* x 01 46 31.1
PVCC AMS AMS 01 52 00.0
comp=Z,4µm,10.5s
DAVOS Davos 14.17 310 P Pn 01 46 24.5 -0.9
TUE Stuetta 14.28 308 *e*Pn Pn 01 46 27.6 +0.8
comp=Z,33nm,0.9s
TUE Stuetta 14.28 308 *e*Pn Pn 01 46 27.6 +0.8
comp=Z,33nm,0.9s
GOF Gofitskoye 14.34 58 ⇓ *i*P pP 01 46 39.0 +0.6
DAVA Damuels 14.35 311 ⇓ *i*Pn Pn 01 46 27.4 -0.4
SNR=6.7
SAOF Saorge 14.58 297 *e*P Pn 01 46 38.1 +7.1
ROTZ Rotzenmuhle 14.61 323 *e*P Pn 01 46 30.9 -0.5
comp=Z,33nm,1.9s
SBF Sospel 14.63 296 *e*P Pn 01 46 32.8 +1.1
comp=Z,177nm,0.9s
SBF Sospel 14.63 296 *e*P Pn 01 46 32.8 +1.1
SBF pmax pmax
comp=Z,89nm,0.9s
SBF Sospel 14.63 296 *e*P Pn 01 46 32.8 +1.1
comp=Z,89nm,0.9s
CMAH Djebel Manchou 14.64 267 P Pn 01 46 39.5 +7.7
AUTN L'Aution 14.67 297 *e*P Pn 01 46 38.7 +6.5
BRG Berggiesshubel 14.67 329 *i*P Pn 01 46 29.4 -2.8
comp=Z,9.8nm,1.9s
BRG *i* 01 46 36.0
BRG *i* 01 48 40.0
BRG Berggiesshubel 14.67 329 *i*P Pn 01 46 29.4 -2.8
BRG pmax pmax
comp=Z,10.0nm,1.9s
BRG pmax pmax
comp=Z,17nm,1.2s
BRG pmax pmax
comp=Z,23nm,1.9s
BRG MLR MLR
comp=N,1µm,16.3s
BRG MLR MLR
comp=E,3µm,12.1s
BRG MLR MLR
comp=Z,2µm,12.2s
BRG Berggiesshubel 14.67 329 *e*P Pn 01 46 30.3 -1.9
comp=Z,36nm,1.3s
BRG Berggiesshubel 14.67 329 *i*P Pn 01 46 29.4 -2.8
comp=Z,16nm,1.9s
BRG *i* 01 46 36.0
comp=Z,29nm,1.2s
BRG *i* 01 48 40.0
comp=Z,39nm,1.9s
BRG
comp=N,2µm,16.3s
BRG
comp=E,5µm,12.1s
BRG
comp=Z,4µm,12.2s
LUCF Luceram 14.70 296 *e*P Pn 01 46 39.2 +6.5
GNI Garni 14.77 79 Pn Pn 01 46 35.5 +1.9
comp=Z,0.1nm,0.3s,baz=198,slow=11,SNR=6.1
GNI LR LR 01 52 20.1
comp=Z,3µm,19.0s,baz=86,slow=38
GNI Garni 14.77 79 *e*Pn Pn 01 46 35.3 +1.7
GNI Garni 14.77 79 *e*P Pn 01 46 35.0 +1.4
GNI pmax pmax
comp=Z,10.0nm,1.3s
GNI MLR MLR
comp=Z,4µm,23.0s
GNI Garni 14.77 79 *e*Pn Pn 01 46 35.3 +1.7
TOUF Mont Tournerai 14.80 297 *e*P Pn 01 46 40.7 +6.7
MANZ Manzenberg 14.81 324 *e*P Pn 01 46 33.4 -0.7
comp=Z,77nm,1.9s
TBLG Delisi 14.83 72 *e*P Pn 01 46 36.7 +2.3
TBLG Delisi 14.83 72 P Pn 01 46 36.7 +2.3
MVIF Mont Vial 14.84 296 *e*P Pn 01 46 40.9 +6.4
MTA Mtatsminda 14.87 73 P Pn 01 46 38.6 +3.7
TANN Tannenbergstha 14.95 325 *e*P Pn 01 46 37.8 +1.8
comp=Z,87nm,1.9s
CALN Calern 14.99 295 *e*P Pn 01 46 36.5 -0.1
GRA1 Grafenberg Arr 15.04 321 *e*P Pn 01 46 38.3 +1.2
comp=Z,64nm,1.4s
GRF Grafenberg Arr 15.04 321 *e*P Pn 01 46 38.3 +1.2
GRF pmax pmax
comp=Z,64nm,1.4s
GRF MLR MLR
comp=Z,1µm,19.2s
GRF Grafenberg Arr 15.04 321 *e*P Pn 01 46 38.3 +1.2
comp=Z,64nm,1.4s
GRF *e*L 01 52 43.3
comp=Z,1µm,19.2s
CAEH 'Ain El Ouahch 15.05 268 P Pn 01 46 45.0 +7.6
FRF La Foret Royal 15.12 295 *e*P Pn 01 46 38.0 -0.3
comp=Z,321nm,1.1s
FRF La Foret Royal 15.12 295 *e*P Pn 01 46 38.0 -0.3
FRF pmax pmax
comp=Z,161nm,1.1s
FRF La Foret Royal 15.12 295 *e*P Pn 01 46 38.0 -0.3
comp=Z,161nm,1.1s
LMR La Mourre 15.18 294 *e*P Pn 01 46 38.8 -0.2
comp=Z,314nm,1.6s
LMR La Mourre 15.18 294 *e*P Pn 01 46 38.8 -0.2
LMR pmax pmax
comp=Z,157nm,1.6s
LMR La Mourre 15.18 294 *e*P Pn 01 46 38.8 -0.2
comp=Z,157nm,1.6s
CKFL Kef-Lekhel 15.24 267 P Pn 01 46 42.0 +2.1
MBDF Montbardon 15.32 299 *e*P Pn 01 46 41.7 +0.8
comp=Z,111nm,0.9s
MBDF Montbardon 15.32 299 *e*P Pn 01 46 41.7 +0.8
MBDF pmax pmax
comp=Z,56nm,0.9s
MBDF Montbardon 15.32 299 *e*P Pn 01 46 41.7 +0.8
comp=Z,56nm,0.9s
SUW Suwalki 15.34 354 *e*P Pn 01 46 39.9 -1.2
SUW LMZ 01 53 25.0
comp=Z,4µm,18.6s
CLL Collm 15.39 329 *i*P Pn 01 46 40.6 -1.1
CLL pmax pmax
comp=Z,16nm,1.2s
CLL MLR MLR
comp=Z,2µm,17.1s
CLL Collm 15.39 329 *e*P Pn 01 46 41.2 -0.5
comp=Z,27nm,1.2s
CLL Collm 15.39 329 *i*P Pn 01 46 40.6 -1.1
comp=Z,16nm,1.2s
CLL *e*PP 01 46 48.0
CLL *e*(PPP) 01 46 56.0
CASM Ain Smara 15.46 267 P Pn 01 46 44.5 +1.8
BNI Bardonecchia 15.48 300 *e*Pn Pn 01 46 43.6 +0.6
comp=Z,126nm,1.2s
BNI Bardonecchia 15.48 300 *e*P Pn 01 46 43.6 +0.6
BNI pmax pmax
comp=Z,126nm,1.2s
BNI Bardonecchia 15.48 300 *e*Pn Pn 01 46 43.6 +0.6
comp=Z,126nm,1.2s
MOX Moxa 15.50 325 *e*P Pn 01 46 45.5 +2.3
comp=Z,59nm,1.6s
MOX
comp=Z,4µm,12.0s
MOX Moxa 15.50 325 *e*P Pn 01 46 45.5 +2.3
MOX pmax pmax
comp=Z,59nm,1.6s
MOX MLR MLR
comp=Z,4µm,12.0s
MOX Moxa 15.50 325 *e*P Pn 01 46 45.7 +2.5
comp=Z,67nm,1.6s
VORD Divnogorie 15.50 34 *e*P Pn 01 46 40.8 -2.5
VORD pmax pmax
comp=Z,7.0nm,0.6s
VORD pmax pmax
comp=N,2.0nm,0.3s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=Z,1µm,9.0s
VORD MLR MLR
comp=N,2µm,10.0s
VORD MLR MLR
comp=E,1µm,10.0s
STU Stuttgart 15.53 315 *e*Pn Pn 01 46 43.0 -0.6
STU Stuttgart 15.53 315 *e*P Pn 01 46 42.9 -0.7
comp=Z,42nm,1.1s
STU Stuttgart 15.53 315 *e*Pn Pn 01 46 43.0 -0.6
LPG La Plagne 15.57 302 *e*P Pn 01 46 44.5 +0.4
comp=Z,196nm,0.9s
LPG La Plagne 15.57 302 *e*P Pn 01 46 44.5 +0.4
LPG pmax pmax
comp=Z,98nm,0.9s
LPG La Plagne 15.57 302 *e*P Pn 01 46 44.5 +0.4
comp=Z,98nm,0.9s
CTEI Djebel Teioual 15.57 266 P Pn 01 46 45.0 +0.7
LPL La Plagne 15.59 302 *e*P Pn 01 46 44.5 +0.1
comp=Z,304nm,1.4s
LPL La Plagne 15.59 302 *e*P Pn 01 46 44.5 +0.1
LPL pmax pmax
comp=Z,152nm,1.4s
LPL La Plagne 15.59 302 *e*P Pn 01 46 44.5 +0.1
comp=Z,152nm,1.4s
GKP Gorka Klasztor 15.63 341 *e*P Pn 01 46 50.1 +5.2
GKP LMZ 01 52 37.0
comp=Z,2µm,20.4s
VSR Storozhevoye 15.63 33 *e*P Pn 01 46 42.6 -2.4
VSR pmax pmax
comp=Z,5.0nm,0.6s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR MLR MLR
comp=N,400nm,8.0s
VSR MLR MLR
comp=E,590nm,8.0s
VSR MLR MLR
comp=Z,380nm,8.0s
RSL Roselend 15.71 302 *e*P Pn 01 46 46.0 0.0
FELD Feldberg im Sc 15.74 311 *e*P Pn 01 46 45.6 -0.8
BFO Black Forest 15.78 313 *e*P Pn 01 46 45.2 -1.7
BFO pmax pmax
comp=Z,22nm,1.0s
BFO Black Forest 15.78 313 *e*P Pn 01 46 45.2 -1.7
comp=Z,22nm,1.0s
MNK Minsk 15.80 5 *e*P Pn 01 46 40.0 -7.1
BBS Basel-Blauen 15.85 309 *e*P Pn 01 46 47.1 -0.6
DFRA Djebel Bou Aff 15.86 268 P Pn 01 46 49.0 +1.0
OG01 Vacheresse 15.90 304 *e*P Pn 01 46 50.4 +1.9
SMRF Simiane la Rot 15.97 295 ⇑ *i*P Pn 01 46 49.2 -0.2
comp=Z,103nm,1.0s
SMRF Simiane la Rot 15.97 295 ⇑ *i*P Pn 01 46 49.2 -0.2
comp=Z,103nm,1.0s
ORIF Oris-en-Rattie 15.98 299 *e*P Pn 01 46 49.4 -0.1
comp=Z,121nm,1.1s
ORIF *e*MLR MLR
comp=Z,2µm,19.5s
ORIF Oris-en-Rattie 15.98 299 *e*P Pn 01 46 49.4 -0.1
ORIF pmax pmax
comp=Z,60nm,1.1s
ORIF Oris-en-Rattie 15.98 299 *e*P Pn 01 46 49.4 -0.1
comp=Z,60nm,1.1s
VOR Voronezh 16.03 32 P Pn 01 46 50.0 -0.1
VOR pmax pmax
comp=Z,250nm,1.5s
BHD Baghdad 16.07 104 *ex* x 01 46 58.0
BHD *ex* x 01 50 03.0
LOMF Lomont 16.21 308 *e*P Pn 01 46 51.9 -0.6
TOD Tromm 16.21 317 *e*P Pn 01 46 56.6 +4.1
STR Strasbourg 16.23 313 *e*P Pn 01 46 58.3 +5.6
MOF Molkenrain 16.25 310 *e*P Pn 01 46 52.9 0.0
CKHR Kef el Ahmar 16.28 267 P Pn 01 46 59.0 +5.5
SET Setif 16.32 267 P Pn 01 46 57.0 +3.1
CABF La Chapelle 16.39 305 *e*P Pn 01 46 53.9 -0.8
comp=Z,421nm,1.1s
CABF La Chapelle 16.39 305 *e*P Pn 01 46 53.9 -0.8
CABF pmax pmax
comp=Z,211nm,1.1s
CABF La Chapelle 16.39 305 *e*P Pn 01 46 53.9 -0.8
comp=Z,211nm,1.1s
HINF Hinteralfeld 16.40 310 *e*P Pn 01 46 54.8 -0.1
comp=Z,129nm,1.4s
HINF Hinteralfeld 16.40 310 *e*P Pn 01 46 54.8 -0.1
HINF pmax pmax
comp=Z,65nm,1.4s
HINF Hinteralfeld 16.40 310 *e*P Pn 01 46 54.8 -0.1
comp=Z,65nm,1.4s
ECH Echery 16.40 311 *e*P Pn 01 46 54.2 -0.7
ECH Echery 16.40 311 *e*Pn Pn 01 46 54.4 -0.5
LANF Langenberg 16.41 314 *e*P Pn 01 46 59.2 +4.2
CDF Champ du Feu 16.43 312 *e*P Pn 01 46 55.4 +0.2
comp=Z,100nm,1.1s
CDF Champ du Feu 16.43 312 *e*P Pn 01 46 55.4 +0.2
CDF pmax pmax
comp=Z,50nm,1.1s
CDF Champ du Feu 16.43 312 *e*P Pn 01 46 55.4 +0.2
comp=Z,50nm,1.1s
OG05 Jujurieux 16.60 302 *e*P Pn 01 46 57.5 +0.1
VRHR Novokhopersk 16.65 37 *e*P Pn 01 46 57.1 -0.9
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.7s
VRHR MLR MLR
comp=Z,1µm,8.0s
VRHR MLR MLR
comp=N,760nm,11.0s
VRHR MLR MLR
comp=E,640nm,7.0s
TNS Taunus Mts 16.76 319 *e*P Pn 01 47 01.0 +1.5
TNS pmax pmax
comp=Z,97nm,1.5s
TNS Taunus Mts 16.76 319 *e*P Pn 01 47 01.0 +1.5
comp=Z,97nm,1.5s
HAU Haudompre 16.79 310 *e*P Pn 01 46 59.7 -0.1
comp=Z,73nm,1.0s
HAU *e*MLR MLR
comp=Z,2µm,21.0s
HAU Haudompre 16.79 310 *e*P Pn 01 46 59.7 -0.1
HAU pmax pmax
comp=Z,36nm,1.0s
HAU Haudompre 16.79 310 *e*P Pn 01 46 59.7 -0.1
comp=Z,36nm,1.0s
VIVF Saint-Julien-l 16.80 298 *e*P Pn 01 46 58.8 -1.1
comp=Z,135nm,1.2s
VIVF Saint-Julien-l 16.80 298 *e*P Pn 01 46 58.8 -1.1
VIVF pmax pmax
comp=Z,68nm,1.2s
VIVF Saint-Julien-l 16.80 298 *e*P Pn 01 46 58.8 -1.1
comp=Z,68nm,1.2s
AKF Akfadou 16.86 269 P Pn 01 47 01.2 +0.4
CLZ Clausthal 16.90 326 *e*P Pn 01 47 02.8 +1.7
CLZ pmax pmax
comp=Z,82nm,1.5s
CLZ Clausthal 16.90 326 *e*P Pn 01 47 02.8 +1.7
comp=Z,82nm,1.5s
THEF They Montfort 17.10 310 *e*P Pn 01 47 05.7 +2.0
LASF Ste Croix 17.20 295 *e*P Pn 01 47 03.5 -1.5
comp=Z,265nm,1.7s
RUP Ruppelstein 17.21 315 *e*P Pn 01 47 06.8 +1.7
ATAF Djebel Tarf 17.29 267 P Pn 01 47 07.1 +1.0
AKET Djebel Ketaf 17.55 268 P Pn 01 47 07.1 -2.3
WLF Walferdange 17.69 314 P Pn 01 47 12.0 +0.9
comp=Z,46nm,1.7s
WLF Walferdange 17.69 314 *e*P Pn 01 47 11.7 +0.6
WLF pmax pmax
comp=Z,68nm,1.3s
WLF Walferdange 17.69 314 *e*P Pn 01 47 12.1 +1.0
comp=Z,60nm,1.2s
WLF Walferdange 17.69 314 *e*P Pn 01 47 11.7 +0.6
comp=Z,68nm,1.3s
EJON La Jonquera 17.70 289 P Pn 01 47 08.4 -2.8
comp=Z,196nm,2.1s
EJON La Jonquera 17.70 289 P Pn 01 47 08.4 -2.8
comp=Z,196nm,2.1s
MEZF Maizieres J'vi 17.78 310 *e*P Pn 01 47 13.4 +1.2
comp=Z,122nm,1.0s
MEZF Maizieres J'vi 17.78 310 *e*P Pn 01 47 13.4 +1.2
comp=Z,122nm,1.0s
PLDF La Plantade 17.80 301 *e*P Pn 01 47 14.8 +2.4
SMF Signal de Mont 17.85 303 *e*P Pn 01 47 13.4 +0.3
comp=Z,72nm,0.9s
SMF Signal de Mont 17.85 303 *e*P Pn 01 47 13.4 +0.3
SMF pmax pmax
comp=Z,36nm,0.9s
SMF Signal de Mont 17.85 303 *e*P Pn 01 47 13.4 +0.3
comp=Z,36nm,0.9s
ADJB Djebel Djouab 17.86 269 P Pn 01 47 03.7 -10
LBL Lubilhac 17.87 298 *e*P Pn 01 47 16.0 +2.7
OBN Obninsk 17.91 21 *e*P Pn 01 47 12.3 -1.4
comp=Z,56nm,1.1s
OBN Obninsk 17.91 21 *e*P Pn 01 47 12.5 -1.2
OBN pmax pmax
comp=Z,62nm,1.4s
OBN MLR MLR
comp=Z,800nm,20.0s
OBN Obninsk 17.91 21 *e*P Pn 01 47 12.3 -1.4
comp=Z,56nm,1.1s
LRDF Laroque-de-Fa 18.00 291 *e*P Pn 01 47 13.9 -1.0
AGO Saint Agoulin 18.15 301 *e*P Pn 01 47 17.2 +0.5
PYM Petit Puy Mans 18.16 300 *e*P Pn 01 47 19.5 +2.7
SSF Saint Saulge 18.20 304 *e*P Pn 01 47 18.6 +1.2
comp=Z,73nm,0.9s
SSF Saint Saulge 18.20 304 *e*P Pn 01 47 18.6 +1.2
SSF pmax pmax
comp=Z,36nm,0.9s
SSF Saint Saulge 18.20 304 *e*P Pn 01 47 18.6 +1.2
comp=Z,36nm,0.9s
AVF Avril sur Loir 18.22 303 *e*P Pn 01 47 18.0 +0.4
comp=Z,197nm,1.4s
AVF Avril sur Loir 18.22 303 *e*P Pn 01 47 18.0 +0.4
AVF pmax pmax
comp=Z,98nm,1.4s
AVF Avril sur Loir 18.22 303 *e*P Pn 01 47 18.0 +0.4
comp=Z,98nm,1.4s
EMHD Djebel Mahouad 18.23 269 P Pn 01 47 19.4 +1.6
MEM Membach 18.27 317 P Pn 01 47 19.5 +1.4
comp=Z,31nm,1.4s
MTLF Montolieu 18.27 292 *e*P Pn 01 47 18.1 -0.2
comp=Z,100nm,1.2s
MTLF Montolieu 18.27 292 *e*P Pn 01 47 18.1 -0.2
MTLF pmax pmax
comp=Z,50nm,1.2s
MTLF Montolieu 18.27 292 *e*P Pn 01 47 18.1 -0.2
comp=Z,50nm,1.2s
HGN Heimansgroeve 18.39 317 *e*P Pn 01 47 23.1 +3.5
comp=Z,69nm,2.1s
HGN Heimansgroeve 18.39 317 *e*S Sn 01 50 59.1 +14
BSEG Bad Segeberg 18.45 330 *e*P Pn 01 47 22.4 +2.1
BSEG pmax pmax
comp=Z,48nm,1.5s
BSEG Bad Segeberg 18.45 330 *e*P Pn 01 47 22.4 +2.1
comp=Z,48nm,1.5s
BGF Bois d'Agland 18.48 302 *e*P Pn 01 47 20.3 -0.5
comp=Z,252nm,1.3s
BGF Bois d'Agland 18.48 302 *e*P Pn 01 47 20.3 -0.5
BGF pmax pmax
comp=Z,126nm,1.3s
BGF Bois d'Agland 18.48 302 *e*P Pn 01 47 20.3 -0.5
comp=Z,126nm,1.3s
BCLA Clavier 18.55 315 P Pn 01 47 23.2 +1.7
comp=Z,40nm,2.2s
CAF Calviac 18.62 297 *e*P Pn 01 47 23.2 +0.7
comp=Z,76nm,1.2s
CAF Calviac 18.62 297 *e*P Pn 01 47 23.2 +0.7
CAF pmax pmax
comp=Z,38nm,1.2s
CAF Calviac 18.62 297 *e*P Pn 01 47 23.2 +0.7
comp=Z,38nm,1.2s
GIVF Givet 18.66 314 *e*P Pn 01 47 23.6 +0.7
EMIR Miracle 18.68 287 P Pn 01 47 22.1 -1.1
comp=Z,804nm,2.9s
EMIR Miracle 18.68 287 P Pn 01 47 22.1 -1.2
comp=Z,804nm,2.9s
DOU Dourbes 18.78 314 P Pn 01 47 25.1 +0.7
HYF Humbligny 18.83 304 *e*P Pn 01 47 26.1 +1.1
TCF Toulx Ste Croi 18.83 301 *e*P Pn 01 47 26.8 +1.8
comp=Z,133nm,1.3s
TCF Toulx Ste Croi 18.83 301 *e*P Pn 01 47 26.8 +1.8
TCF pmax pmax
comp=Z,66nm,1.3s
TCF Toulx Ste Croi 18.83 301 *e*P Pn 01 47 26.8 +1.8
comp=Z,66nm,1.3s
EIBI Ibiza 18.95 278 P Pn 01 47 24.1 -2.5
comp=Z,272nm,1.8s
BAIF Baives 18.98 313 *e*P Pn 01 47 25.4 -1.4
comp=Z,49nm,0.8s
BAIF Baives 18.98 313 *e*P Pn 01 47 25.4 -1.4
BAIF pmax pmax
comp=Z,24nm,0.8s
BAIF Baives 18.98 313 *e*P Pn 01 47 25.4 -1.4
comp=Z,24nm,0.8s
EPOB Poblet 19.01 286 P Pn 01 47 24.5 -2.8
comp=Z,309nm,2.0s
EPOB Poblet 19.01 286 P Pn 01 47 24.5 -2.7
comp=Z,309nm,2.0s
RJF Les Rejaudoux 19.08 298 *e*P Pn 01 47 28.1 +0.1
comp=Z,300nm,1.8s
RJF *e*MLR MLR
comp=Z,2µm,17.0s
RJF Les Rejaudoux 19.08 298 *e*P Pn 01 47 28.1 +0.1
RJF pmax pmax
comp=Z,150nm,1.8s
RJF Les Rejaudoux 19.08 298 *e*P Pn 01 47 28.1 +0.1
comp=Z,150nm,1.8s
SNF Seneffe 19.16 315 P Pn 01 47 33.2 +4.3
UCC Uccle 19.26 316 P Pn 01 47 32.6 +2.4
comp=Z,102nm,1.7s
EBNR Beni Rached 19.32 270 P Pn 01 47 31.5 +0.5
ECHA Ech Chlef 19.49 270 P Pn 01 47 33.2 +0.2
LFF La Frestale 19.55 296 *e*P Pn 01 47 33.8 +0.1
comp=Z,161nm,1.4s
LFF La Frestale 19.55 296 *e*P Pn 01 47 33.8 +0.1
LFF pmax pmax
comp=Z,81nm,1.4s
LFF La Frestale 19.55 296 *e*P Pn 01 47 33.8 +0.1
comp=Z,81nm,1.4s
ERTA Horta de San J 19.58 284 P Pn 01 47 32.3 -1.8
comp=Z,590nm,2.4s
ERTA Horta de San J 19.58 284 P Pn 01 47 32.3 -1.8
comp=Z,590nm,2.4s
EPF Esparros 19.61 291 *e*P Pn 01 47 35.2 +0.8

comp=Z,35nm,1.0s
EPF Esparros 19.61 291 *e*P **Pn 01 47 35.2 +0.8**
EPF pmax pmax
comp=Z,18nm,1.0s
EPF Esparros 19.61 291 *e*P **Pn 01 47 35.2 +0.8**
comp=Z,18nm,1.0s
VSU Vasula 19.72 2 *e*P **Pn 01 47 33.3 -2.2**
VSU pmax pmax
comp=Z,103nm,1.2s
VSU MLR MLR
comp=Z,2µm,20.0s
EBIE Bielsa 19.74 290 P **Pn 01 47 34.9 -1.1**
comp=Z,659nm,3.3s
EBIE Bielsa 19.74 290 P **Pn 01 47 34.8 -1.1**
comp=Z,659nm,3.3s
EANR 'Ain N'Sour 19.75 269 P **Pn 01 47 35.5 -0.6**
ETRT Tiaret 19.75 268 P **Pn 01 47 36.2 +0.1**
MIB Mutribah 19.95 110 *e*P **Pn 01 47 37.6 -1.0**
baz=110
MIB AMb AMB 01 47 40.7
comp=Z,210nm,1.3s,baz=110
OJGS Djebel Guires 20.14 268 P **P 01 47 39.0 +0.1**
ESAC San Caprasio 20.17 287 P **P 01 47 38.3 -0.9**
comp=Z,627nm,3.0s
ESAC San Caprasio 20.17 287 P **P 01 47 38.3 -0.9**
comp=Z,627nm,3.0s
NAY Al-Naaiem 20.18 112 *e*P **P 01 47 39.8 +0.4**
baz=112
NAY AMb AMB 01 47 45.2
comp=Z,57nm,1.4s,baz=112
EBEN Beniarda 20.21 278 P **P 01 47 39.7 +0.1**
comp=Z,371nm,2.7s
EBEN Beniarda 20.21 278 P **P 01 47 39.7 +0.1**
comp=Z,371nm,2.7s
EMOS Mosqueruela 20.22 283 P **P 01 47 40.1 +0.4**
comp=Z,188nm,1.3s
EMOS Mosqueruela 20.22 283 P **P 01 47 40.1 +0.3**
comp=Z,188nm,1.3s
ETSF Etsaut 20.26 290 *e*P **P 01 47 41.5 +1.3**
comp=Z,85nm,1.1s
ETSF Etsaut 20.26 290 *e*P **P 01 47 41.5 +1.3**
ETSF pmax pmax
comp=Z,43nm,1.1s
ETSF Etsaut 20.26 290 *e*P **P 01 47 41.5 +1.3**
comp=Z,43nm,1.1s
UMR Umm Al-Rimmam 20.36 110 *e*P **P 01 47 42.1 +0.8**
baz=110
UMR AMb AMB 01 47 45.5
comp=Z,289nm,1.4s,baz=110
MFF Saint Martin d 20.49 301 *e*P **P 01 47 43.3 +0.7**
comp=Z,80nm,1.1s
MFF Saint Martin d 20.49 301 *e*P **P 01 47 43.3 +0.7**
MFF pmax pmax
comp=Z,40nm,1.1s
MFF Saint Martin d 20.49 301 *e*P **P 01 47 43.3 +0.7**
comp=Z,40nm,1.1s
ECHE Chera 20.67 281 P **P 01 47 45.5 +0.8**
comp=Z,42nm,1.1s
ECHE Chera 20.67 281 P **P 01 47 45.5 +0.9**
ECHE pmax pmax
comp=Z,42nm,1.1s
ECHE Chera 20.67 281 P **P 01 47 45.5 +0.9**
comp=Z,42nm,1.1s
SJPF Ste Jean 20.76 291 *e*P **P 01 47 46.0 +0.4**
comp=Z,56nm,0.8s
SJPF Ste Jean 20.76 291 *e*P **P 01 47 46.0 +0.4**
SJPF pmax pmax
comp=Z,28nm,0.8s
SJPF Ste Jean 20.76 291 *e*P **P 01 47 46.0 +0.4**
comp=Z,28nm,0.8s
ODJA Bouhanifia 20.90 269 P **P 01 47 47.0 -0.1**
LCHF La Chataignera 20.90 301 *e*P 01 48 04.9
EALK Alkurruntz 20.97 291 P **P 01 47 47.1 -0.8**
comp=Z,207nm,2.4s
EALK Alkurruntz 20.97 291 P **P 01 47 47.1 -0.8**
comp=Z,207nm,2.4s
ELIZ Elizondo 20.99 291 P **P 01 47 48.1 +0.1**
comp=Z,155nm,1.7s
ELIZ Elizondo 20.99 291 P **P 01 47 48.1 +0.1**
ELIZ pmax pmax
comp=Z,155nm,1.7s
ELIZ Elizondo 20.99 291 P **P 01 47 48.1 +0.1**
comp=Z,155nm,1.7s
LDF La Druitiere 21.01 306 *e*P **P 01 47 48.4 +0.2**
comp=Z,123nm,0.8s,mb5.0
LDF La Druitiere 21.01 306 *e*P **P 01 47 48.4 +0.2**
LDF pmax pmax
comp=Z,61nm,0.8s,mb5.0
LDF La Druitiere 21.01 306 *e*P **P 01 47 48.4 +0.2**
comp=Z,61nm,0.8s,mb5.0
USTO Oran 21.09 270 P **P 01 47 54.0 +4.8**
EMUR La Murta 21.14 276 P **P 01 47 48.6 -1.2**
comp=Z,86nm,1.8s,mb4.8
EMUR La Murta 21.14 276 P **P 01 47 48.6 -1.1**
comp=Z,86nm,1.8s,mb4.8
ETOB Tobarra 21.24 278 P **P 01 47 51.2 +0.4**
comp=Z,168nm,2.2s,mb5.0
FLN La Foliniere 21.29 306 *e*P **P 01 47 51.2 0.0**
comp=Z,181nm,1.2s,mb5.0
FLN La Foliniere 21.29 306 *e*P **P 01 47 51.2 0.0**
FLN pmax pmax
comp=Z,90nm,1.2s,mb5.0
FLN La Foliniere 21.29 306 *e*P **P 01 47 51.2 0.0**
comp=Z,90nm,1.2s,mb5.0
ETOR Torete 21.40 284 P **P 01 47 52.3 -0.2**
comp=Z,24nm,1.3s,mb4.4
ETOR Torete 21.40 284 P **P 01 47 52.3 -0.1**
ETOR pmax pmax
comp=Z,25nm,1.3s,mb4.4
ETOR Torete 21.40 284 P **P 01 47 52.3 -0.1**
comp=Z,24nm,1.3s,mb4.4
GRR Gorron 21.42 305 *e*P **P 01 47 52.0 -0.6**
comp=Z,76nm,0.8s,mb4.8
GRR Gorron 21.42 305 *e*P **P 01 47 52.0 -0.6**
GRR pmax pmax
comp=Z,38nm,0.8s,mb4.8
GRR Gorron 21.42 305 *e*P **P 01 47 52.0 -0.6**
comp=Z,38nm,0.8s,mb4.8
ECRI Cripan 21.69 289 P **P 01 47 55.9 +0.3**
comp=Z,82nm,1.6s,mb4.9
ECRI Cripan 21.69 289 P **P 01 47 55.9 +0.3**
ECRI pmax pmax
comp=Z,83nm,1.6s,mb4.9
ECRI Cripan 21.69 289 P **P 01 47 55.9 +0.3**
comp=Z,82nm,1.6s,mb4.9
EVIA Vianos 21.98 279 P **P 01 47 58.2 -0.5**
comp=Z,64nm,0.8s,mb5.1
EVIA Vianos 21.98 279 P **P 01 47 58.2 -0.6**
EVIA pmax pmax
comp=Z,64nm,0.8s,mb5.1
EVIA Vianos 21.98 279 P **P 01 47 58.2 -0.6**
comp=Z,64nm,0.8s,mb5.1
ENIJ Nijar 22.08 274 P **P 01 47 58.0 -1.8**
ENIJ pmax pmax
comp=Z,18nm,1.0s,mb4.5
ENIJ Nijar 22.08 274 P **P 01 47 58.0 -1.8**
comp=Z,18nm,1.0s,mb4.5
EHUE Huescar 22.20 276 P **P 01 47 58.8 -2.3**
comp=Z,47nm,1.3s,mb4.8
EHUE Huescar 22.20 276 P **P 01 47 58.8 -2.3**
EHUE pmax pmax
comp=Z,47nm,1.3s,mb4.8
EHUE Huescar 22.20 276 P **P 01 47 58.8 -2.3**
comp=Z,47nm,1.3s,mb4.8
ELAN Lanestosa 22.38 291 P **P 01 47 60.0 -3.0**
comp=Z,93nm,1.2s,mb5.1
ELAN Lanestosa 22.38 291 P **P 01 48 00.0 -3.0**
comp=Z,93nm,1.2s,mb5.1
JLP Les Platons 22.45 307 *e*P **P 01 48 03.3 -0.4**
SGMF Saint Gilles 22.47 304 *e*P **P 01 48 03.8 -0.1**
comp=Z,424nm,1.7s,mb5.3
SGMF Saint Gilles 22.47 304 *e*P **P 01 48 03.8 -0.1**
SGMF pmax pmax
comp=Z,212nm,1.7s,mb5.3
SGMF Saint Gilles 22.47 304 *e*P **P 01 48 03.8 -0.1**
comp=Z,212nm,1.7s,mb5.3
EQES Quesada 22.57 277 P **P 01 48 03.0 -2.1**
comp=Z,94nm,1.6s,mb5.0
EQES Quesada 22.57 277 P **P 01 48 03.0 -2.1**
comp=Z,94nm,1.6s,mb5.0
EBER Berja 22.63 274 P **P 01 48 02.1 -3.5**
comp=Z,140nm,1.3s,mb5.2
EBER Berja 22.63 274 P **P 01 48 02.1 -3.5**
comp=Z,140nm,1.3s,mb5.2
HFS Hagfors 22.69 344 P **P 01 48 04.3 -1.8**
comp=Z,16nm,0.9s,mb4.4,baz=148,slow=12,SNR=16
HFS LR LR 01 58 01.9
comp=Z,3µm,18.4s,MS4.8,baz=158,slow=40
HFS Hagfors 22.69 344 P **P 01 48 04.3 -1.8**
HFS pmax pmax
comp=Z,16nm,0.9s
HFS MLR MLR
comp=Z,3µm,18.4s
HFA0 Hagfors New Ar 22.70 344 P **P 01 48 04.0 -2.2**
QUIF Quistinic 22.79 303 *e*P **P 01 48 05.2 -2.0**
comp=Z,486nm,1.4s,mb5.4
QUIF Quistinic 22.79 303 *e*P **P 01 48 05.2 -2.0**
QUIF pmax pmax
comp=Z,243nm,1.4s,mb5.4
QUIF Quistinic 22.79 303 *e*P **P 01 48 05.2 -2.0**
comp=Z,243nm,1.4s,mb5.4
ROSF Rostrenen 22.96 304 *e*P **P 01 48 08.2 -0.8**
comp=Z,279nm,1.4s,mb5.2
ROSF Rostrenen 22.96 304 *e*P **P 01 48 08.2 -0.8**
ROSF pmax pmax
comp=Z,139nm,1.4s,mb5.2
ROSF Rostrenen 22.96 304 *e*P **P 01 48 08.2 -0.8**
comp=Z,139nm,1.4s,mb5.2
ESDC Sonseca Array 22.96 282 P **P 01 48 08.1 -1.0**
comp=Z,8.9nm,0.7s,mb4.3,baz=73,slow=11,SNR=33
ESDC LR LR 01 58 40.3
comp=Z,624nm,18.1s,MS4.1,baz=55,slow=41
ESDC Sonseca Array 22.96 282 P **P 01 48 07.4 -1.7**
comp=Z,83nm,1.7s,mb4.9
ESDC Sonseca Array 22.96 282 P **P 01 48 07.4 -1.7**
comp=Z,83nm,1.7s,mb4.9
EALB Alboran 22.98 272 P **P 01 48 09.6 +0.2**
comp=Z,184nm,1.9s,mb5.2
EALB Alboran 22.98 272 P **P 01 48 09.6 +0.2**
comp=Z,184nm,1.9s,mb5.2
GUD Guadarrama 23.00 284 P **P 01 48 08.2 -1.3**
comp=Z,57nm,1.2s,mb4.9
GUD Guadarrama 23.00 284 P **P 01 48 08.2 -1.3**
GUD pmax pmax
comp=Z,57nm,1.2s,mb4.9
GUD Guadarrama 23.00 284 P **P 01 48 08.2 -1.3**
comp=Z,57nm,1.2s,mb4.9
EBAN Banos Encina 23.06 278 P **P 01 48 08.9 -1.3**
comp=Z,52nm,0.9s,mb5.0
EBAN Banos Encina 23.06 278 P **P 01 48 08.9 -1.3**
EBAN pmax pmax
comp=Z,52nm,0.9s,mb5.0
EBAN Banos Encina 23.06 278 P **P 01 48 08.9 -1.3**
comp=Z,52nm,0.9s,mb5.0
ECOG Cogollos-Vega 23.07 275 P **P 01 48 09.6 -0.7**
comp=Z,16nm,0.7s,mb4.5
ECOG Cogollos-Vega 23.07 275 P **P 01 48 09.6 -0.7**
ECOG pmax pmax
comp=Z,16nm,0.7s,mb4.6
ECOG Cogollos-Vega 23.07 275 P **P 01 48 09.6 -0.7**
comp=Z,16nm,0.7s,mb4.5
EGUA Guajares 23.17 274 P **P 01 48 10.1 -1.2**
comp=Z,249nm,0.9s,mb5.6
EGUA Guajares 23.17 274 P **P 01 48 10.1 -1.3**
EGUA pmax pmax
comp=Z,249nm,0.9s,mb5.6
EGUA Guajares 23.17 274 P **P 01 48 10.1 -1.3**
comp=Z,249nm,0.9s,mb5.6
KONO Kongsberg 23.27 339 *e*P **P 01 48 10.7 -1.5**
PAB San Pablo 23.27 281 *e*P **P 01 48 12.1 -0.3**
comp=Z,83nm,1.3s,mb5.0
PAB San Pablo 23.27 281 *e*P **P 01 48 12.1 -0.3**
PAB pmax pmax
comp=Z,83nm,1.3s,mb5.0
PAB San Pablo 23.27 281 *e*P **P 01 48 12.1 -0.3**
comp=Z,83nm,1.3s,mb5.0
CWF Charnwood Fore 23.28 316 *e*P **P 01 48 12.5 +0.1**
CWF AMb AMB 01 48 20.0
comp=Z,118nm,1.3s,mb5.2
CWF Charnwood Fore 23.28 316 *e*P **P 01 48 12.5 +0.1**
comp=Z,118nm,1.3s,mb5.2
ERON Agron 23.31 275 P **P 01 48 12.5 -0.4**
comp=Z,52nm,1.4s,mb4.8
ERON Agron 23.31 275 P **P 01 48 12.5 -0.4**
comp=Z,52nm,1.4s,mb4.8
KAF Kangasniemi 23.37 1 *ep* **P 01 48 12.3 -0.9**
comp=Z,21nm,0.7s,mb4.7,baz=181,slow=9.6
KAF Kangasniemi 23.37 1 *e*P **P 01 48 12.3 -0.9**
KAF pmax pmax
comp=Z,21nm,0.7s,mb4.7
TAM Tamanrasset 23.46 233 *e*P **P 01 48 16.0 +1.4**
ELUQ Luque 23.55 276 P **P 01 48 13.4 -2.0**
comp=Z,50nm,1.2s,mb4.8
ELUQ Luque 23.55 276 P **P 01 48 13.4 -1.9**
ELUQ pmax pmax
comp=Z,50nm,1.2s,mb4.8
ELUQ Luque 23.55 276 P **P 01 48 13.4 -1.9**
comp=Z,50nm,1.2s,mb4.8
ELOJ Sierra Loja 23.55 275 P **P 01 48 12.7 -2.6**
comp=Z,23nm,1.0s,mb4.6
ELOJ Sierra Loja 23.55 275 P **P 01 48 12.7 -2.7**
ELOJ pmax pmax
comp=Z,23nm,1.0s,mb4.6
ELOJ Sierra Loja 23.55 275 P **P 01 48 12.7 -2.7**
comp=Z,23nm,1.0s,mb4.6
KBI1 Birley Grange 23.63 317 *e*P **P 01 48 15.9 0.0**
EADA Adamuz 23.67 278 P **P 01 48 14.4 -2.0**
comp=Z,347nm,2.0s,mb5.4
EADA Adamuz 23.67 278 P **P 01 48 14.4 -2.0**
comp=Z,347nm,2.0s,mb5.4
HGH Gray Hill 23.68 312 *e*P **P 01 48 16.2 -0.2**
EARI Arriondas 23.68 291 P **P 01 48 14.9 -1.6**
comp=Z,179nm,1.9s,mb5.2
EARI Arriondas 23.68 291 P **P 01 48 14.9 -1.6**
comp=Z,179nm,1.9s,mb5.2
KWE Weaver Farm 23.70 316 *e*P **P 01 48 15.6 -0.9**
KLMR Klimovskoe 23.73 17 *e*P **P 01 48 15.1 -1.7**
KLMR pmax pmax
comp=Z,105nm,1.6s,mb5.0
MCH1 Michaelchurch 23.92 313 *e*P **P 01 48 18.7 +0.1**
MCH1 AMb AMB 01 48 29.5
comp=Z,208nm,1.6s,mb5.3
MCH1 Michaelchurch 23.92 313 *e*P **P 01 48 18.7 +0.1**
comp=Z,208nm,1.6s,mb5.3
LHO Holmfirth 23.94 317 *e*P **P 01 48 18.9 +0.2**
NB2 NORSAR Array B 24.05 343 P **P 01 48 19.0 -0.7**
comp=Z,2.2nm,0.8s,mb3.6,baz=153,slow=11
NOA NORSAR Array B 24.05 343 P **P 01 48 19.0 -0.7**
comp=Z,19nm,0.9s,mb4.5,baz=151,slow=9.2,SNR=37
NOA LR LR 01 58 45.9
comp=Z,1µm,18.8s,MS4.4,baz=155,slow=39
NOA NORSAR Array B 24.05 343 P **P 01 48 19.0 -0.7**
NOA pmax pmax
comp=Z,19nm,0.9s
NOA MLR MLR
comp=Z,1µm,18.8s
HLM1 Long Mynd 24.06 314 *e*P **P 01 48 19.5 -0.4**
HTR Trewern Hill 24.11 313 *e*P **P 01 48 20.4 +0.1**
EMIJ Mijas 24.18 274 P **P 01 48 19.7 -1.3**
comp=Z,144nm,1.2s,mb5.3
EMIJ Mijas 24.18 274 P **P 01 48 19.7 -1.4**
comp=Z,144nm,1.2s,mb5.3
ECAB El Cabril 24.34 278 P **P 01 48 22.2 -0.4**
comp=Z,250nm,1.4s,mb5.5
ECAB El Cabril 24.34 278 P **P 01 48 22.2 -0.3**
comp=Z,250nm,1.4s,mb5.5
JOF Joensuu 24.41 6 *ep* **P 01 48 22.2 -0.8**
comp=Z,13nm,0.7s,mb4.5
JOF Joensuu 24.41 6 *e*P **P 01 48 22.2 -0.8**
JOF pmax pmax
comp=Z,13nm,0.7s,mb4.5
EPLA Plasencia 24.53 283 P **P 01 48 24.3 +0.1**
comp=Z,128nm,2.0s,mb5.1
EPLA Plasencia 24.53 283 P **P 01 48 24.3 +0.1**
EPLA pmax pmax
comp=Z,128nm,2.0s,mb5.1
EPLA Plasencia 24.53 283 P **P 01 48 24.3 +0.1**
comp=Z,128nm,2.0s,mb5.1
EJIF Jimena Fronter 24.75 274 P **P 01 48 24.5 -1.8**
comp=Z,28nm,0.7s,mb4.9
EJIF Jimena Fronter 24.75 274 P **P 01 48 24.5 -1.8**
EJIF pmax pmax
comp=Z,28nm,0.7s,mb4.9
EJIF Jimena Fronter 24.75 274 P **P 01 48 24.5 -1.8**
comp=Z,28nm,0.7s,mb4.9
ECAL Calabor 24.84 288 P **P 01 48 26.7 -0.4**
comp=Z,226nm,2.0s,mb5.3
ECAL Calabor 24.84 288 P **P 01 48 26.7 -0.4**
comp=Z,226nm,2.0s,mb5.3
ESPR Espera 24.94 276 P **P 01 48 25.6 -2.5**
comp=Z,99nm,1.7s,mb5.1
ESPR Espera 24.94 276 P **P 01 48 25.5 -2.6**
comp=Z,99nm,1.7s,mb5.1
XSO Sourhope Farm 25.07 321 *e*P **P 01 48 29.2 +0.2**
EPON Pontenova 25.09 291 P **P 01 48 29.2 -0.2**
comp=Z,174nm,1.9s,mb5.3
EPON Pontenova 25.09 291 P **P 01 48 29.2 -0.2**
comp=Z,174nm,1.9s,mb5.3
ERUA La Rua 25.12 289 P **P 01 48 29.6 0.0**
comp=Z,32nm,1.6s,mb4.6
ERUA La Rua 25.12 289 P **P 01 48 29.6 0.0**
ERUA pmax pmax
comp=Z,32nm,1.6s,mb4.6
ERUA La Rua 25.12 289 P **P 01 48 29.6 0.0**
comp=Z,32nm,1.6s,mb4.6
ECK Cauldkaine Hil 25.36 320 *e*P **P 01 48 31.5 -0.1**
EMIN Mina Concepcio 25.37 278 P **P 01 48 30.2 -1.7**
comp=Z,163nm,1.1s,mb5.5
EMIN Mina Concepcio 25.37 278 P **P 01 48 30.2 -1.7**
comp=Z,163nm,1.1s,mb5.5
EBAD Badajoz 25.44 280 P **P 01 48 31.1 -1.4**
comp=Z,72nm,1.7s,mb4.9
EBAD Badajoz 25.44 280 P **P 01 48 31.1 -1.5**
comp=Z,72nm,1.7s,mb4.9
EKA Eskdalemuir Ar 25.45 320 P **P 01 48 32.5 0.0**
comp=Z,5.6nm,0.7s,mb4.2,baz=116,slow=9.8,SNR=15
EKA Eskdalemuir Ar 25.45 320 P **P 01 48 32.5 +0.1**
EKA pmax pmax
comp=Z,6.0nm,0.7s
ESK Eskdalemuir 25.46 320 *e*P **P 01 48 34.1 +1.6**
comp=Z,39nm,0.9s,mb4.9
ESK Eskdalemuir 25.46 320 *e*P **P 01 48 32.8 +0.3**
ESK AMb AMB 01 48 41.7
comp=Z,112nm,1.6s,mb5.1
ESK Eskdalemuir 25.46 320 *e*P **P 01 48 34.1 +1.6**
ESK pmax pmax
comp=Z,39nm,0.9s,mb4.9
ESK Eskdalemuir 25.46 320 *e*P **P 01 48 32.8 +0.2**
comp=Z,112nm,1.6s,mb5.1
MTE Manteigas 25.60 284 *e*P **P 01 48 34.6 +0.7**
comp=Z,32nm,1.0s,mb4.8
MTE Manteigas 25.60 284 *e*P **P 01 48 34.6 +0.7**
comp=Z,32nm,1.0s,mb4.8
ELOB Lobios 25.84 288 P **P 01 48 32.9 -3.2**
comp=Z,166nm,3.1s
ELOB Lobios 25.84 288 P **P 01 48 32.9 -3.2**
comp=Z,166nm,3.1s
EGRO El Granado 26.05 278 P **P 01 48 37.6 -0.5**
comp=Z,123nm,1.3s,mb5.3
EGRO El Granado 26.05 278 P **P 01 48 37.6 -0.5**
comp=Z,123nm,1.3s,mb5.3
EBH Black Hill 26.07 322 *e*P **P 01 48 38.2 +0.2**
EBH Black Hill 26.07 322 *e*P **P 01 48 38.2 +0.2**
EVO Evora 26.25 280 ⇑*i*P **P 01 48 40.8 +0.9**
comp=Z,29nm,1.0s,mb4.5
EVO *e*MLR MLR
comp=Z,1µm,22.0s,MS4.1
GMM Mts of Mourne 26.43 316 *e*P **P 01 48 41.6 +0.3**
MLA1 Latheron 27.08 326 *e*P **P 01 48 47.0 -0.2**
ARU Arti 27.95 40 *ci*P **P 01 48 54.9 -0.1**
ARU *e* 01 49 42.4
ARU *e*S **S 01 53 41.1 +2.8**
ARU SS 01 54 55.1
ARU pmax pmax
comp=Z,15nm,1.0s,mb4.6
ARU Arti 27.95 40 *e*P **P 01 48 54.3 -0.7**
comp=Z,20nm,0.9s,mb4.7
SOKR Solikamsk 28.65 33 *e*P **P 01 49 01.1 0.0**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
SOKR MLR MLR
comp=Z,960nm,19.0s,MS4.4
SVE Sverdlovsk 29.16 40 ⇓*e*P **P 01 49 03.3 -2.4**
SVE *e*S **S 01 53 52.9 -4.4**
SVE pmax pmax
comp=Z,21nm,1.1s,mb4.8
SVE MLR MLR
comp=Z,631nm,11.0s,MS4.5
APA Apatity 29.17 6 ⇑*i*P **P 01 49 08.0 +2.3**
APA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
APA MLR MLR
comp=Z,2µm,15.0s,MS4.8
ARCES ARCESS Array B 30.82 360 P **P 01 49 16.8 -3.5**
comp=Z,6.9nm,1.0s,mb4.5,baz=188,slow=8.0,SNR=9.8
ARCES LR LR 02 01 40.3
comp=Z,1µm,18.9s,MS4.5,baz=175,slow=36
ARCES ARCESS Array B 30.82 360 P **P 01 49 16.8 -3.5**
ARCES pmax pmax
comp=Z,7.0nm,1.0s
ARCES MLR MLR
comp=Z,1µm,18.9s
KEV Kevo 31.05 1 *ep* **P 01 49 22.9 +0.6**
comp=Z,6.5nm,0.7s,mb4.6
KEV Kevo 31.05 1 *e*P **P 01 49 22.9 +0.6**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
SMDO Samad 31.66 110 ⇑P **P 01 49 29.3 +1.1**
SNR=8.0
WHFO Wadi Hawf 32.06 122 P **P 01 49 33.3 +1.6**
SNR=6.5
JMDO Jabal Madar 32.12 111 ⇑P **P 01 49 33.2 +1.0**
SNR=8.0
ABTO Aybut 32.16 124 P **P 01 49 34.1 +1.5**
SNR=9.4
WBK Wadi Bani Khal 32.61 110 ⇑P **P 01 49 37.7 +1.2**
SNR=7.7
RBK Rabkut 32.65 122 P **P 01 49 38.7 +1.9**
SNR=5.8
TORD Torodi Ar. Bea 33.23 226 P **P 01 49 42.1 +0.2**
comp=Z,12nm,0.7s,mb5.0,baz=34,slow=9.1,SNR=82
TORD LR LR 02 04 40.3
comp=Z,407nm,19.7s,MS4.1,baz=25,slow=39
BRVK Borovoye 33.56 50 *e*P **P 01 49 43.8 -0.7**
comp=Z,17nm,1.1s,mb4.9
BRVK Borovoye 33.56 50 *e*P **P 01 49 43.8 -0.7**
BRVK pmax pmax
comp=Z,17nm,1.1s,mb4.9
BRVK Borovoye 33.56 50 *e*P **P 01 49 43.8 -0.7**
comp=Z,17nm,1.1s,mb4.9
BVAR Borovoye Array 33.62 50 P **P 01 49 45.5 +0.5**
comp=Z,1.7nm,0.8s,mb4.0,baz=238,slow=8.0,SNR=6.0
BVAR LR LR 02 06 08.1
comp=Z,910nm,19.0s,MS4.5,baz=264,slow=41
BVAR Borovoye Array 33.62 50 P **P 01 49 45.5 +0.5**
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR MLR MLR
comp=Z,910nm,19.0s
KBL Kabul 34.78 83 *e*P **P 01 49 57.3 +2.0**
comp=Z,5.3nm,0.7s,mb4.6
KBL Kabul 34.78 83 *e*P **P 01 49 57.3 +2.0**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KBL Kabul 34.78 83 *e*P **P 01 49 57.3 +2.0**
comp=Z,5.3nm,0.7s,mb4.6
EKS2 Erkin-Say 36.26 68 *e*P **P 01 50 08.6 +0.7**
comp=Z,9.6nm,0.9s,mb4.7
EKS2 Erkin-Say 36.26 68 *e*P **P 01 50 08.6 +0.7**
comp=Z,9.6nm,0.9s,mb4.7
FRU Bishkek 36.83 68 ⇓*i*P **P 01 50 14.0 +1.2**
FRU *e* 01 50 24.0
FRU pmax pmax
comp=Z,90nm,1.2s,mb5.5
TKM2 Tokmak 2 37.52 67 *e*P **P 01 50 18.1 -0.5**
comp=Z,3.1nm,0.7s,mb4.2
TKM2 Tokmak 2 37.52 67 *e*P **P 01 50 18.2 -0.5**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
TKM2 Tokmak 2 37.52 67 *e*P **P 01 50 18.1 -0.6**
comp=Z,3.1nm,0.7s,mb4.2
KURK Kurchatov 38.64 54 P **P 01 50 27.8 -0.2**
SNR=6.4
KURK Kurchatov 38.64 54 P **P 01 50 27.8 -0.1**
baz=123,slow=7.4
KURK Kurchatov 38.64 54 *e*P **P 01 50 27.1 -0.9**
comp=Z,10nm,0.7s,mb4.7
KURK Kurchatov 38.64 54 *e*P **P 01 50 27.1 -0.9**
KURK pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
KURK Kurchatov 38.64 54 *e*P **P 01 50 27.1 -0.9**
comp=Z,10nm,0.7s,mb4.7
SPITS Spitsbergen Ar 39.71 357 P **P 01 50 36.0 -0.6**
comp=Z,28nm,1.1s,mb4.9,baz=169,slow=8.8,SNR=2.9
SPITS Spitsbergen Ar 39.71 357 P **P 01 50 36.0 -0.6**
SPITS pmax pmax
comp=Z,28nm,1.1s
NVS Novosibirsk 41.28 48 *i*P **P 01 50 49.4 -0.4**
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax

comp=E,7.0nm,0.8s
NVS pmax pmax
comp=Z,16nm,0.8s,mb4.7
MKAR Makanchi Array 41.50 60 P P 01 50 51.7 -0.1
comp=Z,9.1nm,1.0s,mb4.4,baz=285,slow=6.8,SNR=14
MKAR LR LR 02 10 13.9
comp=Z,676nm,19.8s,MS4.5,baz=274,slow=39
MKAR Makanchi Array 41.50 60 P P 01 50 51.7 -0.1
MKAR LR LR 02 10 13.9
MKAR Makanchi Array 41.50 60 P P 01 50 51.7 -0.1
MKAR pmax pmax
comp=Z,9.0nm,1.0s
MKAR MLR MLR
comp=Z,676nm,19.8s
DBIC Dimbokro 42.22 229 P P 01 50 57.6 -0.4
comp=Z,10nm,0.8s,mb4.5,baz=20,slow=10,SNR=18
DBIC Dimbokro 42.22 229 P P 01 50 57.6 -0.4
DBIC pmax pmax
comp=Z,10.0nm,0.8s
ZAA0 Zalesovo Array 42.25 49 eP P 01 50 57.5 -0.3
ZAA0 Zalesovo Array 42.25 49 eP P 01 50 57.5 -0.3
ZALV Zalesovo Beam 42.25 49 P P 01 50 57.3 -0.5
comp=Z,4.0nm,0.6s,mb4.2,baz=267,slow=9.3,SNR=21
ZALV LR LR 02 10 50.1
comp=Z,354nm,21.2s,MS4.2,baz=278,slow=40
ZALV Zalesovo Beam 42.25 49 P P 01 50 57.3 -0.5
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
ZALV MLR MLR
comp=Z,354nm,21.2s,MS4.2
TIC Toumodi 42.34 229 eP P 01 50 58.8 -0.1
comp=Z,115nm,1.0s,mb5.5
TIC Toumodi 42.34 229 eP P 01 50 58.8 -0.1
TIC pmax pmax
comp=Z,115nm,1.0s,mb5.5
KIC Kosan Boka 42.40 228 eP P 01 50 59.6 +0.1
comp=Z,118nm,1.0s,mb5.5
DAG Danmarks Havn 42.64 346⇑ eP P 01 51 00.9 +0.2
comp=Z,3.3nm,0.6s,mb4.2
DAG Danmarks Havn 42.64 346⇑ eP P 01 51 00.9 +0.2
DAG pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
DAG Danmarks Havn 42.64 346⇑ iP P 01 51 00.9 +0.2
comp=Z,3.3nm,0.6s,mb4.2
LIC Lamto 42.68 229 eP P 01 51 01.8 +0.1
comp=Z,69nm,0.9s,mb5.1
LIC eMLR MLR
comp=Z,571nm,21.2s,MS4.1
LIC Lamto 42.68 229 eP P 01 51 01.8 +0.1
comp=Z,34nm,0.9s,mb5.1
LIC LR LR
comp=Z,290nm,21.3s,MS4.1
WMQ Urumqi 45.89 63 P P 01 51 29.0 +1.9
WMQ PP PP 01 53 17.0 +2.5
WMQ S **S 01 58 13.0 +2.0**
WMQ SS SS 02 01 29.0 -6.4
WMQ AMB AMB
comp=Z,20nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,74nm,4.0s
WMQ LR LR
comp=N,1μm,15.0s,MS5.1
WMQ LR LR
comp=E,1μm,16.0s,MS5.1
WMQ LR LR
comp=Z,1μm,16.0s,MS4.9
PYUN Piuthan 48.28 85 eP P 01 51 46.3 +0.3
comp=Z,56nm,0.8s,mb5.6
DANN Dangsing 48.76 84 eP P 01 51 50.2 +0.5
comp=Z,114nm,0.9s,mb5.9
KOLN Koldanda 48.91 85 eP P 01 51 50.8 -0.1
comp=Z,32nm,0.7s,mb5.5
GKN Gorkha 49.61 84 eP P 01 51 56.0 -0.2
comp=Z,36nm,0.7s,mb5.5
DMN Daman 50.16 84 eP P 01 52 00.6 +0.2
comp=Z,72nm,0.9s,mb5.7
KKN Kakani 50.21 84 eP P 01 52 00.3 -0.5
comp=Z,30nm,0.8s,mb5.4
KKN Kakani 50.21 84 eP P 01 52 00.3 -0.5
KKN pmax pmax
comp=Z,30nm,0.8s,mb5.4
PKIN Phulchoki 50.40 84 eP P 01 52 02.2 0.0
comp=Z,76nm,1.3s,mb5.6
PKI Pulchoki 50.42 84 eP P 01 52 02.5 +0.2
comp=Z,65nm,1.2s,mb5.5
PKI Pulchoki 50.42 84 eP P 01 52 02.5 +0.2
PKI pmax pmax
comp=Z,65nm,1.2s,mb5.5
HYB Hyderabad 50.49 99 iP P 01 52 03.5 +0.5
HYB Hyderabad 50.49 99 eP P 01 52 03.5 +0.5
GUN Gumba 50.62 83 eP P 01 52 04.3 +0.4
comp=Z,94nm,1.1s,mb5.7
JIRN Jiri 50.98 83 eP P 01 52 06.7 +0.1
comp=Z,45nm,0.8s,mb5.5
RAMN Ramite 51.64 84 eP P 01 52 11.5 -0.1
comp=Z,71nm,0.8s,mb5.7
ODAN Odare 52.30 84 eP P 01 52 16.7 +0.2
comp=Z,64nm,1.3s,mb5.4
TAPN Taplejung 52.31 83 eP P 01 52 16.2 -0.3
LSZ Lusaka 53.81 177 P P 01 52 27.4 -0.1
comp=Z,7.4nm,1.0s,mb4.6,baz=3.5,slow=5.8,SNR=11
LSZ Lusaka 53.81 177 eP P 01 52 27.7 +0.1
comp=Z,16nm,1.4s,mb4.8
LSZ Lusaka 53.81 177 eP P 01 52 27.7 +0.2
LSZ pmax pmax
comp=Z,16nm,1.4s,mb4.8
LSZ Lusaka 53.81 177 eP P 01 52 27.7 +0.2
comp=Z,16nm,1.4s,mb4.8
LSA Lhasa 53.84 79 eP P 01 52 28.3 +0.5
LSA Lhasa 53.84 79 eP P 01 52 28.3 +0.5
ZAK Zakamensk 54.07 51 eP P 01 52 25.7 -3.5
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
GTA Gaotai 55.93 64 eP P 01 52 43.1 +0.3
GTA PP PP 01 54 49.1 +1.8
GTA S **S 02 00 29.8 -0.5**
GTA SS SS 02 04 14.4 -1.4
GTA AMB AMB
comp=Z,6.0nm,1.7s,mb4.3
GTA AMB AMB
comp=Z,44nm,7.2s
GTA LR LR
comp=N,348nm,24.6s,MS4.5
GTA LR LR
comp=E,233nm,20.7s,MS4.5
GTA LR LR
comp=Z,435nm,18.6s,MS4.6
SONM Songino Array 56.90 53 P P 01 52 49.5 0.0
comp=Z,1.7nm,0.7s,mb4.2,baz=290,slow=7.8,SNR=11
SONM LR LR 02 20 37.7
comp=Z,532nm,18.2s,MS4.7,baz=297,slow=40
SONM Songino Array 56.90 53 P P 01 52 49.5 -0.1
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,532nm,18.2s
ULN Ulaanbaatar 57.30 52 eP P 01 52 52.8 +0.4
comp=Z,6.2nm,0.8s,mb4.7
ULN Ulaanbaatar 57.30 52 eP P 01 52 52.8 +0.4
ULN pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ULN Ulaanbaatar 57.30 52 eP P 01 52 52.8 +0.4
comp=Z,6.2nm,0.8s,mb4.7
BOD Bodaibo 57.37 39 eP P 01 52 50.5 -2.2
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
TIXI Tiksi 57.64 21 eP P 01 52 53.8 -0.6
comp=Z,46nm,2.4s,mb5.1
TIXI Tiksi 57.64 21 eP P 01 52 52.2 -2.3
TIXI pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
TIXI MLR MLR
comp=Z,979nm,17.0s,MS5.0
TIXI Tiksi 57.64 21 eP P 01 52 53.8 -0.7
comp=Z,46nm,2.4s,mb5.1
TSUM Tsumeb 58.17 189 eP P 01 52 59.5 +0.8
comp=Z,6.0nm,1.1s,mb4.5
TSUM Tsumeb 58.17 189 eP P 01 52 59.5 +0.8
comp=Z,6.0nm,1.1s,mb4.5
LZH Lanzhou 60.27 66 eP P 01 53 13.5 +0.2
LZH PP PP 01 55 28.0 +2.1
LZH eS **S 02 01 28.0 +0.9**
LZH SS SS 02 05 28.0 +3.9
comp=Z,25nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,130nm,4.0s
LZH LR LR
comp=N,505nm,14.3s
LZH LR LR
comp=Z,678nm,16.9s,MS4.9
LZH Lanzhou 60.27 66 eP P 01 53 13.5 +0.2
LZH pP pP 01 53 16.0 -1.5
LZH sP sP 01 53 17.0 -2.0
LZH PP PP 01 55 28.0 +2.1
LZH eS **S 02 01 28.0 +0.9**
LZH SS SS 02 05 28.0 +3.9
LZH Lanzhou 60.27 66 eP P 01 53 13.5 +0.2
LZH *PP pP 01 53 16.0 -1.5
LZH *SP sP 01 53 17.0 -2.0
LZH 01 55 28.0
LZH eS **S 02 01 28.0 +0.9**
LZH SS SS 02 05 28.0 +3.9
LZH Lanzhou 60.27 66 eP P 01 53 13.5 +0.2
LZH pP pP 01 53 16.0 -1.5
LZH eS **S 02 01 28.0 +0.9**
RES Resolute Bay 60.30 345 eP P 01 53 13.2 +0.4
comp=Z,692nm,1.1s
RES Resolute Bay 60.30 345 eP P 01 53 13.2 +0.4
RES pmax pmax
comp=Z,692nm,1.1s
RES Resolute Bay 60.30 345 eP P 01 53 13.2 +0.4
comp=Z,692nm,1.1s
CD2 Chengdu 62.75 71 eP P 01 53 31.0 +0.9
CD2 AP pP 01 53 35.6 +1.3
CD2 PP PP 01 55 50.6 +2.7
CD2 S **S 02 01 56.8 -1.9**
CD2 SS SS 02 06 03.0 -0.1
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,60nm,4.2s
CD2 LR LR
comp=N,490nm,19.2s,MS4.8
CD2 LR LR
comp=E,470nm,18.0s,MS4.8
CD2 LR LR
comp=Z,470nm,18.0s,MS4.7
HHC Hu-ho-hao-te 63.31 58 eP P 01 53 34.1 +0.5
HHC PCP PcP 01 54 11.6 +0.9
HHC PP PP 01 55 55.0 +2.4
HHC PCS PcS 01 58 11.8 -2.5
HHC S **S 02 02 03.7 -1.7**
HHC SCS ScS 02 03 22.8 -3.6
HHC SS SS 02 06 11.7 +0.4
HHC AMB AMB
comp=Z,27nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,145nm,4.5s
HHC LR LR
comp=N,462nm,26.2s,MS4.8
HHC LR LR
comp=E,642nm,22.6s,MS4.8
HHC LR LR
comp=Z,496nm,21.4s,MS4.7
HIA Hailar 64.20 47 eP P 01 53 40.5 +1.1
XAN Xi'an 64.90 66 P P 01 53 44.5 +0.3
XAN AP pP 01 53 52.2 +3.8
XAN AMB AMB
comp=Z,10.0nm,1.4s,mb4.7
XAN AMB AMB
comp=Z,93nm,4.9s
XAN LR LR
comp=E,323nm,24.8s
XAN LR LR
comp=Z,390nm,23.1s,MS4.5
KMI Kunming 65.02 77 P P 01 53 46.6 +1.5
KMI PP PP 01 56 11.2 +3.2
KMI S S 02 02 22.9 -4.1
KMI SS SS 02 06 37.4 -1.3
KMI AMB AMB
comp=Z,12nm,0.5s,mb5.2
KMI AMB AMB
comp=Z,120nm,4.0s
KMI LR LR
comp=N,341nm,11.3s
KMI LR LR
comp=E,284nm,21.7s
KMI LR LR
comp=Z,303nm,22.9s
CHTO Chiang Mai 65.58 85 eP P 01 53 48.8 0.0
comp=Z,7.9nm,1.0s,mb4.7
CHTO Chiang Mai 65.58 85 eP P 01 53 48.8 0.0
CHTO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CHTO Chiang Mai 65.58 85 eP P 01 53 48.8 0.0
comp=Z,7.9nm,1.0s,mb4.7
CMAR Chiang Mai Arr 65.78 85 P P 01 53 49.8 -0.3
comp=Z,2.4nm,0.7s,mb4.3,baz=303,slow=7.4,SNR=9.7
CMAR LR LR 02 26 58.2
comp=Z,130nm,21.5s,MS4.1,baz=294,slow=40
CMAR Chiang Mai Arr 65.78 85⇑ eP P 01 53 50.5 +0.4
BOSA Boshof 67.04 180 P P 01 53 58.0 +0.2
comp=Z,12nm,1.1s,mb4.8,baz=8.5,slow=7.1,SNR=7.1
BOSA Boshof 67.04 180 P P 01 53 58.0 +0.2
BOSA Boshof 67.04 180 P P 01 53 58.0 +0.3
BOSA pmax pmax
comp=Z,12nm,1.1s,mb4.8
GYA Guiyang 67.26 74 P P 01 54 01.2 +1.7
GYA PCP PcP 01 54 29.8 +2.5
GYA PP PP 01 56 31.2 +3.7
GYA S S 02 02 53.7 -0.6
GYA SKS 02 03 55.4
GYA SS SS 02 07 13.2 -0.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,5.8s
GYA LR LR
comp=N,530nm,18.3s,MS4.9
GYA LR LR
comp=E,440nm,19.4s,MS4.9
GYA LR LR
comp=Z,420nm,18.7s,MS4.7
BILL Bilibino 69.47 15 eP P 01 54 13.0 +0.4
BILL pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
SEY Seymchan 70.06 23 eP P 01 54 15.8 -0.5
KLR Kul'dur 70.77 42 eP P 01 54 16.6 -4.3
KLR MLR MLR
comp=E,600nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS5.5
INK Inuvik 72.11 352 eP P 01 54 27.7 -0.9
comp=Z,459nm,1.2s
INK Inuvik 72.11 352 eP P 01 54 27.7 -1.0
INK pmax pmax
comp=Z,459nm,1.2s
INK Inuvik 72.11 352 eP P 01 54 27.7 -1.0
comp=Z,459nm,1.2s
NJ2 Nanjing 72.97 62 eP P 01 54 35.6 +1.2
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
QIZ Qiongzhong 73.88 78 P P 01 54 39.7 -0.3
QIZ S S 02 04 10.4 -1.2
QIZ SS SS 02 08 56.3 +0.8
QIZ AMB AMB
comp=Z,506nm,4.1s
YKA Yellowknife Ar 74.15 342 P P 01 54 41.1 +0.2
comp=Z,4.3nm,0.9s,mb4.4,baz=22,slow=6.1,SNR=5.2
YKA LR LR 02 28 29.1
comp=Z,176nm,18.9s,MS4.4,baz=85,slow=37
YKA Yellowknife Ar 74.15 342 P P 01 54 41.1 +0.3
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA MLR MLR
comp=Z,176nm,18.9s
SSPA Standing Stone 74.65 310 eP P 01 54 49.4 +5.3
comp=Z,17nm,1.1s,mb4.9
SSPA Standing Stone 74.65 310 eP P 01 54 49.4 +5.3
comp=Z,17nm,1.1s,mb4.9
IMA2 Indian Mountai 75.49 360 eP P 01 54 50.2 +1.7
IMA2 Indian Mountai 75.49 360 eP P 01 54 50.2 +1.7
KSRS Korea Array 75.76 53 P P 01 54 49.9 -0.7
comp=Z,5.6nm,0.8s,mb4.5,baz=305,slow=5.0,SNR=10
KSRS LR LR 02 32 13.5
comp=Z,800nm,18.6s,MS5.0,baz=306,slow=39
KSRS Korea Array 75.76 53 P P 01 54 49.9 -0.7
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KSRS MLR MLR
comp=Z,800nm,18.6s,MS5.0
COLA College 76.57 357 eP P 01 54 55.6 +0.9
FFC Flin Flon 76.66 332 eP P 01 54 56.6 +1.2
comp=Z,11nm,1.0s,mb4.7
FFC Flin Flon 76.66 332 eP P 01 54 56.6 +1.3
FFC pmax pmax
comp=Z,11nm,1.0s,mb4.7
FFC Flin Flon 76.66 332 eP P 01 54 56.6 +1.3
comp=Z,11nm,1.0s,mb4.7
DAWY Dawson 76.82 353 eP P 01 54 56.3 +0.2
DAWY Dawson 76.82 353 eP P 01 54 56.3 +0.2
ULM Lac du Bonnet 77.56 326 P P 01 55 00.1 -0.5
comp=Z,4.8nm,0.9s,mb4.4,baz=95,slow=3.9,SNR=3.1
ULM LR LR 02 30 07.4
comp=Z,524nm,18.1s,MS4.9,baz=59,slow=36
MCK McKinley 77.75 358 eP P 01 55 01.8 +0.5
YSS Yuzh-Sakhalins 77.83 39 eP P 01 54 56.0 -6.1
YSS e pP 01 55 00.0 -6.4
YSS eS S 02 04 44.0 -10
YSS ePPS 02 05 40.0
PETK Petropavlovsk- 79.50 27 P P 01 55 08.8 -2.4
comp=Z,4.1nm,1.0s,mb4.3,baz=268,slow=16,SNR=3.7
PETK LR LR 02 33 27.9
comp=Z,281nm,19.2s,MS4.6,baz=314,slow=38
HYT Haines Junctio 79.81 352 eP P 01 55 14.9 +2.2
HYT Haines Junctio 79.81 352 eP P 01 55 14.9 +2.2
PET Petropavlovsk 79.90 27 eP P 01 55 07.5 -5.9
PET e 01 58 09.2
PET eS S 02 05 05.3 -11
PET pmax pmax
comp=Z,100nm,15.5s
PET MLR MLR
comp=Z,500nm,20.0s,MS4.9
EDM Edmonton 81.76 337 eP P 01 55 22.8 -0.5
CPCT Cooper Cave 81.98 309 eP P 01 55 25.9 +1.1
CPCT Cooper Cave 81.98 309 eP P 01 55 25.9 +1.1
MJAR Matsushiro Arr 82.60 49 P P 01 55 25.9 -2.1
comp=Z,2.0nm,0.8s,mb4.2,baz=335,slow=5.5,SNR=4.7
MJAR LR LR 02 37 31.2
comp=Z,173nm,18.3s,MS4.5,baz=320,slow=40
WVT Waverly 83.49 312 eP P 01 55 31.9 -0.7
comp=Z,15nm,1.6s,mb4.8
WVT Waverly 83.49 312 eP P 01 55 31.9 -0.7
WVT pmax pmax
comp=Z,15nm,1.6s,mb4.8
WVT Waverly 83.49 312 eP P 01 55 31.9 -0.7
comp=Z,15nm,1.6s,mb4.8
LAO LASA Array 84.68 329 eP P 01 55 39.1 +0.7
comp=Z,261nm,2.8s,mb5.9
LAO LASA Array 84.68 329 eP P 01 55 39.1 +0.6
comp=Z,261nm,2.8s,mb5.9
EGMT Eagleton 84.94 332 eP P 01 55 39.2 -0.5
comp=Z,16nm,0.9s,mb5.2
EGMT Eagleton 84.94 332 eP P 01 55 39.2 -0.6
comp=Z,16nm,0.9s,mb5.2
LRAL Lakeview Retre 85.13 309 eP P 01 55 42.1 +1.1
comp=Z,7.5nm,0.7s,mb4.9
LRAL Lakeview Retre 85.13 309 eP P 01 55 42.1 +1.1
comp=Z,7.5nm,0.7s,mb4.9
CHGN Chignik 85.23 2 eP P 01 55 34.4 -6.7
CHGN Chignik 85.23 2 eP P 01 55 34.4 -6.6
WALA Waterton Lakes 85.52 335 eP P 01 55 42.1 -0.6
comp=Z,94nm,2.5s,mb5.6
WALA Waterton Lakes 85.52 335 eP P 01 55 42.1 -0.6
comp=Z,94nm,2.5s,mb5.6
RSSD Black Hills 85.83 326 eP P 01 55 45.5 +1.2
comp=Z,3.3nm,1.0s,mb4.5
RSSD Black Hills 85.83 326 eP P 01 55 45.5 +1.2
RSSD pmax pmax
comp=Z,3.0nm,1.0s,mb4.5
RSSD Black Hills 85.83 326 eP P 01 55 45.5 +1.2
comp=Z,3.3nm,1.0s,mb4.5
GCMT Greycliff 86.77 331 eP P 01 55 50.6 +1.7
GCMT Greycliff 86.77 331 eP P 01 55 50.6 +1.7
HRY Holter Researc 86.81 332 eP P 01 55 51.0 +2.0
HRY Holter Researc 86.81 332 eP P 01 55 51.0 +2.0
NEW Newport 87.26 336 eP P 01 55 52.2 +1.0
comp=Z,6.4nm,1.0s,mb4.8
NEW Newport 87.26 336 eP P 01 55 52.2 +1.0
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 87.26 336 eP P 01 55 52.2 +1.0
comp=Z,6.4nm,1.0s,mb4.8
MSO Missoula 87.46 334 eP P 01 55 52.4 +0.2
comp=Z,11nm,1.6s,mb4.8
MSO Missoula 87.46 334 eP P 01 55 52.4 +0.2
comp=Z,11nm,1.6s,mb4.8
BDFB Brasilia 87.48 248 P P 01 55 52.6 0.0
comp=Z,6.0nm,1.0s,mb4.8,baz=26,slow=14,SNR=9.7
BDFB LR LR 02 35 13.8
comp=Z,189nm,18.3s,MS4.5,baz=197,slow=36
BDFB Brasilia 87.48 248 P P 01 55 52.6 0.0
BDFB pmax pmax
comp=Z,6.0nm,1.0s
BDFB MLR MLR
comp=Z,189nm,18.3s
LRM Limekiln Ridge 87.79 332 eP P 01 55 55.3 +1.5
LRM Limekiln Ridge 87.79 332 eP P 01 55 55.3 +1.5
DLMT Dillon 88.23 332 eP P 01 55 56.8 +0.9
comp=Z,22nm,1.8s,mb5.1
DLMT Dillon 88.23 332 eP P 01 55 56.8 +0.9
comp=Z,22nm,1.8s,mb5.1
PHWY Pilot Hill 88.72 325 eP P 01 55 59.6 +1.3
PHWY Pilot Hill 88.72 325 eP P 01 55 59.6 +1.3
IMW Indian Meadow 88.85 330 eP P 01 56 01.7 +2.8
comp=Z,66nm,3.0s
IMW Indian Meadow 88.85 330 eP P 01 56 01.7 +2.8
comp=Z,66nm,3.0s
BW06 Boulder Array 89.25 329 eP P 01 56 01.7 +0.9
comp=Z,1.1nm,0.7s,mb4.3
PDAR Pinedale Array 89.25 329 P P 01 56 01.2 +0.4
comp=Z,0.8nm,0.9s,mb4.0,baz=46,slow=4.3,SNR=5.4
PDAR LR LR 02 36 23.5
comp=Z,481nm,19.1s,MS4.9,baz=37,slow=36
RRI2 Red Ridge 89.47 330 eP P 01 56 03.6 +1.8
comp=Z,86nm,3.0s
ISCO Idaho Springs 90.00 325 eP P 01 56 06.0 +1.7
comp=Z,22nm,1.9s,mb5.2
ISCO Idaho Springs 90.00 325 eP P 01 56 06.0 +1.7
ISCO pmax pmax
comp=Z,22nm,1.9s,mb5.2
ISCO Idaho Springs 90.00 325 eP P 01 56 06.0 +1.7
comp=Z,22nm,1.9s,mb5.2
HWUT Hardware Ranch 91.03 329 eP P 01 56 09.5 +0.4
comp=Z,1.9nm,0.8s,mb4.5
HWUT Hardware Ranch 91.03 329 eP P 01 56 09.5 +0.4
comp=Z,1.9nm,0.8s,mb4.5
SDCO Great Sand Dun 91.61 323 eP P 01 56 11.5 -0.4
comp=Z,4.6nm,1.3s,mb4.7
SDCO Great Sand Dun 91.61 323 eP P 01 56 11.5 -0.4
comp=Z,4.6nm,1.3s,mb4.7
ROSC El Rosal 94.78 280 LR LR 02 39 55.5
comp=Z,81nm,18.0s,MS4.2,baz=189,slow=36
NVAR Mina Array Bea 96.36 332 P P 01 56 33.2 -0.5
comp=Z,0.9nm,0.7s,mb4.3,baz=43,slow=4.0,SNR=8.5
TXAR Lajitas Array 97.41 317 P P 01 56 38.4 -0.2
comp=Z,0.1nm,0.5s,baz=25,slow=3.0,SNR=3.5
TXAR LR LR 02 42 06.8
comp=Z,231nm,18.8s,baz=355,slow=36

*CSEM **09** 02:26:28.5±0.1, 39.13N×2326E, h15km, ML2.2/2, Error ellipse: s-maj=4.4km s-min=2.6km az=119.0*
*ISCJB **09** 02:26:29.1±0.8, 39.14N±005×2330E±007, h12km±8km, Error ellipse: s-maj=9.2km s-min=7.6km az=13.9*
*ATH **09** 02:26:29.5, 39.18N×2308E, h10km, MD3.1/3*
*THE **09** 02:26:29.6, 39.15N×2325E, h12km±1km, ML2.2/2, Error ellipse: s-maj=1.2km s-min=0.4km az=153.0*
ISC 09 02:26:29.2±0.7,**3915N**±004×**2329E**±006,**h17**km±6km,**n32,**
s0551/42,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NEO	**Neokhori**	**0.17**	**343**	*e*PG		**Pg**	**02 26 33.3**	**-0.2**
XOR	**Xorichti**	**0.23**	**342**	P		**Pg**	**02 26 34.3**	**-0.2**
AOS	**Alonnisos**	**0.46**	**87**	P		**Pg**	**02 26 38.8**	**+0.3**
LKR	**Lokris**	**0.54**	**204**	P		**Pg**	**02 26 40.1**	**+0.1**
LKR				S		**Sg**	**02 26 47.8**	**+0.5**
LKR	**Lokris**	**0.54**	**204**	*e*Pb		**Pb**	**02 26 39.8**	**-0.5**
LKR	**Lokris**	**0.54**	**204**	P		**Pg**	**02 26 40.1**	**+0.1**
AGG	**Agios Georgios**	**0.75**	**261**	P		**Pb**	**02 26 43.2**	**-0.7**
AGG				S		**Sb**	**02 26 53.9**	**0.0**
PAIG	**Paliouri**	**0.84**	**21**	P		**Pb**	**02 26 45.7**	**+0.4**
THL	**Klokotos Trika**	**1.07**	**293**	P		**Pb**	**02 26 48.9**	**-0.4**
THL				S		**Sb**	**02 27 04.1**	**+1.1**

THL	**Klokotos Trika**	**1.07**	**293**	*e*Pb	**Pb**	**02**	**26**	**46.8 -2.5**
THL	**Klokotos Trika**	**1.07**	**293**	P	**Pb**	**02**	**26**	**48.9 -0.4**
THL				S	**Sb**	**02**	**27**	**04.1 +1.1**
LIT	**Litokhoron**	**1.13**	**327**	P	**Pn**	**02**	**26**	**50.2 -0.1**
PLG	**Polygyros**	**1.23**	**6**	P	**Pn**	**02**	**26**	**51.5 -0.2**
HORT	**Hortiatis**	**1.46**	**354**	P	**Pn**	**02**	**26**	**55.0 +0.2**

*ISCJB **09** 02:29:13.3±0.5, 4089S×009×444E±0.1, h10km, mb4.1/14, MS4.1/11, Error ellipse: s-maj=16.4km s-min=10.7km az=144.7*
*IDC **09** 02:29:13.4±0.7, 4087S×44.44E, h0km, mb4.2/11, mb1 4.2/12, mb1mx4.1/21, mbtmp4.1/12, ML3.5/1, MS4.1/12, Ms1 4.1/12, ms1mx4.0/21, Error ellipse: s-maj=31.6km s-min=15.0km az=40.0*
*NEIC **09** 02:29:14.8±0.3, 4094S×44.37E, h10km, mb4.2/5, Error ellipse: s-maj=14.5km s-min=8.2km az=224.0*

ISC 09 02:29:15.0±0.5, 4090S±009×444E±01, h10km, n28, σ0§56/22, mb4.1/14, MS4.1/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.87**	**302**	P	**Pn**	**02 33 47.3**	**-0.6**
	0.1nm,0.3s,baz=62,slow=7.3,SNR=4.4						
BOSA				LR	LR	02 39 38.2	
	comp=Z,560nm,21.6s,baz=159,slow=31						
LBTB	**Lobatse**	**22.27**	**310**	P	**P**	**02 34 13.6**	**+1.4**
	1.6nm,0.6s,mb3.6,baz=102,slow=7.8,SNR=4.3						
LBTB				LR	LR	02 41 46.9	
	comp=Z,466nm,19.5s,MS3.9,baz=151,slow=34						
LBTB	**Lobatse**	**22.27**	**310**	*e*P	**P**	**02 34 13.1**	**+1.0**
	4.2nm,0.6s,mb4.0						
LBTB				LR	LR	02 41 46.9	
MATP	**Matopo**	**24.48**	**322**	P	**P**	**02 34 33.1**	**-1.1**
	8.2nm,0.7s,mb4.3,baz=154,slow=8.4,SNR=40						
MATP				LR	LR	02 42 31.5	
	comp=Z,392nm,20.5s,MS3.9,baz=96,slow=33						
MAW	**Mawson**	**28.61**	**165**	LR	LR	02 45 06.0	
	comp=Z,376nm,18.0s,MS4.0,baz=34,slow=33						
LSZ	**Lusaka**	**29.15**	**326**	P	**P**	**02 35 16.2**	**-0.1**
	0.9nm,0.5s,mb3.8,baz=165,slow=7.8,SNR=4.3						
LSZ				LR	LR	02 45 46.2	
	comp=Z,791nm,20.1s,MS4.3,baz=182,slow=34						
LSZ	**Lusaka**	**29.15**	**326**	*e*P	**P**	**02 35 16.0**	**-0.3**
	5.9nm,1.2s,mb4.2						
LSZ				LR	LR	02 45 46.2	
SNAA	**Sanae**	**38.59**	**202**	*e*	**P**	**02 36 36.7**	**-0.9**
SNAA				*e*		02 36 44.3	
SNAA				*e*		02 36 53.0	
SNAA	**Sanae**	**38.59**	**202**	*e*P	**P**	**02 36 36.8**	**-0.8**
	7.3nm,1.3s,mb4.2						
VNA2	**Neumayer--Watz**	**39.63**	**204**	*e*	**P**	**02 36 47.0**	**+0.7**
VNA2				*e*		02 36 55.4	
VNA2				*e*		02 37 03.0	
VNA3	**Neumayer Olymp**	**40.44**	**204**	*e*	**P**	**02 36 53.3**	**+0.3**
VNA3				*e*		02 37 01.4	
VNA3				*e*		02 37 08.5	
QSPA	**South Pole Qui**	**49.30**	**180**	P	**P**	**02 38 03.1**	**-0.4**
	11nm,1.1s,mb4.8,baz=254,slow=6.8,SNR=11						
DBIC	**Dimbokro**	**65.39**	**304**	P	**P**	**02 39 58.0**	**+0.1**
	1.7nm,0.7s,mb4.2,baz=238,slow=9.0,SNR=3.4						
DBIC				LR	LR	03 03 38.6	
	comp=Z,238nm,21.7s,MS4.3,baz=110,slow=32						
DBIC	**Dimbokro**	**65.39**	**304**	P	**P**	**02 39 58.0**	**+0.1**
DBIC				LR	LR	03 03 38.6	
TOA0	**Torodi Ar. Sit**	**66.70**	**314**	*e*P	**P**	**02 40 06.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**66.70**	**314**	P	**P**	**02 40 06.9**	**+0.7**
	1.4nm,0.8s,mb4.0,baz=144,slow=3.9,SNR=10						
TORD				LR	LR	03 09 04.1	
	comp=Z,155nm,18.1s,MS4.3,baz=135,slow=36						
ASAR	**Alice Springs**	**74.57**	**108**	P	**P**	**02 40 54.0**	**-0.3**
	1.1nm,0.9s,mb3.8,baz=224,slow=5.8,SNR=9.6						
STKA	**Stephens Creek**	**74.83**	**119**	P	**P**	**02 40 56.1**	**+0.5**
	3.5nm,0.8s,mb4.3,baz=242,slow=5.1,SNR=8.4						
STKA				LR	LR	03 07 11.5	
	comp=Z,191nm,20.2s,MS4.4,baz=217,slow=30						
WRA	**Warramunga Arr**	**77.20**	**105**	P	**P**	**02 41 09.5**	**+0.2**
	0.9nm,0.6s,mb3.9,baz=226,slow=4.4,SNR=23						
WRAB	**Tennant Creek**	**77.21**	**105**	*e*P	**P**	**02 41 09.3**	**-0.1**
	2.3nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**77.77**	**52**	P	**P**	**02 41 12.4**	**+0.1**
	1.0nm,0.3s,mb4.2,baz=231,slow=7.0,SNR=7.1						
CMAR				LR	LR	03 12 11.9	
	comp=Z,64nm,18.0s,MS4.0,baz=338,slow=33						
BRTR	**Keskin Array B**	**80.84**	**352**	P	**P**	**02 41 28.2**	**-0.4**
	0.9nm,0.9s,mb3.7,baz=186,slow=10.0,SNR=3.2						
BRTR				LR	LR	03 17 54.7	
	comp=Z,58nm,18.1s,MS4.0,baz=4.7,slow=36						
KEST	**Kesra**	**82.77**	**332**	LR	LR	03 18 38.1	
	comp=Z,88nm,19.2s,MS4.2,baz=178,slow=36						
ESDC	**Sonseca Array**	**91.48**	**325**	LR	LR	03 21 54.7	
	comp=Z,119nm,21.1s,MS4.3,baz=350,slow=35						
LPAZ	**La Paz**	**95.56**	**243**	*e*P	**P**	**02 42 40.4**	**-0.2**
	0.5nm,0.5s,mb4.2						
ZALV	**Zalesovo Beam**	**100.67**	**23**	P	Pdif	02 43 01.3	-2.0
	0.4nm,0.4s,baz=245,slow=6.2,SNR=3.2						
CCM	**Cathedral Cave**	**145.90**	**280**	*e*PKPbc	PKPbc	02 48 55.0	+0.6
TXAR	**Lajitas Array**	**151.58**	**256**	PKPbc	PKPbc	02 49 10.2	+0.8
	0.7nm,0.7s,baz=128,slow=5.8,SNR=8.5						

*ATH **09** 02:37:23.4, 3856N×2555E, h10km, MD3.1/3*
*ISCJB **09** 02:37:26.5±1.2, 3875N±004×2571E±008, h10km, Error ellipse: s-maj=9.7km s-min=5.0km az=153.1*
*CSEM **09** 02:37:26.0±0.9, 3869N×2556E, h2km, MD3.1, Error ellipse: s-maj=25.3km s-min=10.1km az=57.0*
*DDA **09** 02:37:26.5, 3877N×2569E, h7km±7km, Md3.1*

ISC 09 02:37:25.9±2.1, 3876N±005×256E±01, h8km±15km, n10, σ0§88/16, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.72**	**47**	*e*PB	**Pg**	**02 37 40.2**	**+0.5**
URLA	**Izmir**	**0.88**	**117**	*i* P	**Pg**	**02 37 43.5**	**+0.7**
URLA				*i* S	**Sg**	**02 37 53.9**	**-0.4**
AYVA	**Ayvalik**	**1.01**	**57**	*i* P	**Pg**	**02 37 45.4**	**0.0**
AYVA				*i* S	**Sg**	**02 37 58.7**	**+0.1**
BOZC	**Bozcaada**	**1.14**	**18**	*i* P	**Pg**	**02 37 47.4**	**-0.4**
BOZC				*i* S	**Sg**	**02 38 02.8**	**+0.3**
LIA	**Limnos Island**	**1.18**	**345**	*e*PB	**Pn**	**02 37 49.0**	**+0.3**
KDAG	**Bornova**	**1.36**	**105**	*i* P	**Pn**	**02 37 50.6**	**-0.5**
KDAG				*i* S	**Sg**	**02 38 11.6**	**+2.0**
SMG	**Samos**	**1.44**	**137**	*e*PB	**Pn**	**02 37 48.3**	**-3.9**
GCAM	**G?zelcaml?**	**1.67**	**129**	*i* P	**Pn**	**02 37 55.7**	**+0.3**
GCAM				*i* S	**Sg**	**02 38 19.7**	**+0.1**
BALY	**Balya**	**1.85**	**57**	*i* P	**Pg**	**02 38 00.7**	**-0.8**
MANT	**Manisa**	**2.34**	**96**	*i* P	**Pg**	**02 38 07.5**	**-3.2**
MANT				*i* S	**Sg**	**02 38 39.9**	**-1.1**

*NEIC **09** 02:38:40.8, 34.18S×7179W, h40km, MD4.2(GUC), After GUC.*
NEIC Felt [III] at Navidad and Pichilemu and [II] at Rancagua.

GUC 09 02:38:40.8±0.5, 3418S×7179W, h40km±1km, MD4.2, ML3.8, 5C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.39**	**55**	⇓*i*P	Pn	02 38 50.2	+0.1
CHCH	**Chadas Angostu**	**0.98**	**76**	⇑*i*P	Pn	02 38 58.8	+0.7
CACH	**El Canelo**	**0.99**	**87**	⇓*i*P	Pn	02 38 59.4	+1.2
CACH				*i* S	Sn	02 39 13.9	+2.9
RCDM	**Rinconada Maip**	**1.07**	**50**	⇓*e*P	Pn	02 38 59.7	+0.4
RCDM				*i* S	Sn	02 39 14.5	+1.5
RCDM	**Rinconada Maip**	**1.07**	**50**	⇓*e*P	Pn	02 38 59.7	+0.4
RCDM				*i* S	Sn	02 39 14.5	+1.5
RCDM				AML	AML	02 39 16.6	
	comp=E,4μm,0.4s						
ANTU	**Antumapu**	**1.14**	**58**	*e*P	Pn	02 39 01.4	+1.1
ANTU				*i* S	Sn	02 39 17.1	+2.4
ANTU	**Antumapu**	**1.14**	**58**	*e*P	Pn	02 39 01.4	+1.1
ANTU				*i* S	Sn	02 39 17.1	+2.4
ANTU				AML	AML	02 39 18.4	
	comp=N,4μm,0.3s						
CICH	**Cipreses**	**1.15**	**97**	⇑*i*P	Pn	02 39 01.3	+1.0
CICH				*i* S	Sn	02 39 17.1	+2.4
CLCH	**Cerro Calan**	**1.31**	**53**	⇓*i*P	Pn	02 39 03.8	+1.3
CLCH				⇑*i*S	Sn	02 39 21.6	+2.8
CLCH				AML	AML	02 39 23.5	
	comp=N,3μm,0.4s						
LMEL	**Las Melosas**	**1.36**	**76**	⇓*i*P	Pn	02 39 04.5	+1.2
LMEL				*i* S	Sn	02 39 22.9	+2.8
LMEL	**Las Melosas**	**1.36**	**76**	⇓*i*P	Pn	02 39 04.5	+1.2
LMEL				*i* S	Sn	02 39 22.9	+2.8
LMEL				AML	AML	02 39 26.6	
	comp=N,3μm,0.2s						
PEL	**Peldehue**	**1.39**	**42**	⇓*i*P	Pn	02 39 04.8	+1.1
PEL				*i* S	Sn	02 39 23.3	+2.6
PEL				AML	AML	02 39 26.1	
	comp=N,2μm,0.3s						
YECH	**El Yeso**	**1.51**	**71**	⇑*i*P	Pn	02 39 07.2	+1.8
YECH				*i* S	Sn	02 39 27.3	+3.5
FCH	**Farellones**	**1.52**	**56**	⇓*i*P	Pn	02 39 06.8	+1.4
FCH				*i* S	Sn	02 39 26.9	+3.0
FCH				AML	AML	02 39 28.3	
	comp=N,2μm,0.3s						
LNCH	**Linares**	**1.67**	**175**	⇑*i*P	Pn	02 39 08.9	+1.4
LNCH				*i* S	Sn	02 39 29.7	+2.1

*VIE **09** 03:14:49.9±0.4, 4442N×733E, h10km, mb2.5/5, ML3.0/6, Error ellipse: s-maj=3.7km s-min=2.4km az=23.0*
*GEN **09** 03:14:49.9, 4439N×730E, h14km, ML2.0*
*CSEM **09** 03:14:49.1±0.1, 4441N×742E, h12km, ML3.3/16, Error ellipse: s-maj=1.3km s-min=1.0km az=82.0*
*ISCJB **09** 03:14:49.6±0.2, 4439N±001×734E±002, h24km±2km, Error ellipse: s-maj=2.2km s-min=2.0km az=153.3*
*NEIC **09** 03:14:49.3, 4439N×731E, h17km, ML3.3(LDG), ML2.9(ROM), ML2.9(STR), After ROM.*
*ROM **09** 03:14:49.3±0.2, 4439N×731E, h17km±3km, Md3.0/17, Ml2.9/9, Error ellipse: s-maj=3.8km s-min=1.7km az=63.0*
*LDG **09** 03:14:50.7±0.1, 4436N×743E, h10km, Md3.3/2, Ml3.3/26, Error ellipse: s-maj=2.7km s-min=2.0km az=83.0*
*STR **09** 03:14:50.3±0.1, 4437N×732E, h5km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 03:14:49.7±0.2, 4440N±001×735E±002, h15km±1km, n135, σ1§16/247, 2C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.13**	**327**	Pg	**Pg**	**03 14 53.9**	**+0.6**
DOI				Sg	**Sg**	**03 14 56.3**	**+0.6**
	24μm,0.2s						
STV	**Sant Anna di V**	**0.15**	**185**	Pg	**Pg**	**03 14 53.7**	**+0.2**
STV				Sg	**Sg**	**03 14 55.8**	**-0.3**
	6μm,0.1s						
ENR	**Entracque**	**0.18**	**162**	P	**Pg**	**03 14 54.1**	**+0.2**
PZZ	**Stroppo**	**0.20**	**304**	Pg	**Pg**	**03 14 54.6**	**+0.3**
TOUF	**Mont Tournerai**	**0.39**	**190**	Pg	**Pg**	**03 14 57.7**	**+0.2**
SURF	**Saint Ours**	**0.39**	**283**	Pg	**Pg**	**03 14 57.6**	**0.0**
SURF				Sg	**Sg**	**03 15 02.8**	**-0.1**
ROB	**Robourent**	**0.40**	**104**	P	**Pg**	**03 14 58.4**	**+0.6**
AUTN	**L'Aution**	**0.40**	**172**	Pg	**Pg**	**03 14 57.9**	**+0.1**
AUTN				Sg	**Sg**	**03 15 03.3**	**0.0**
SAOF	**Saorge**	**0.43**	**160**	Pg	**Pg**	**03 14 58.6**	**+0.2**
SAOF				Sg	**Sg**	**03 15 04.3**	**+0.1**
LUCF	**Luceram**	**0.50**	**180**	Pg	**Pg**	**03 14 59.7**	**+0.1**
LUCF				Sg	**Sg**	**03 15 06.3**	**0.0**
MVIF	**Mont Vial**	**0.52**	**196**	Pg	**Pg**	**03 14 59.8**	**-0.1**
MVIF				Sg	**Sg**	**03 15 06.7**	**-0.1**
MBDF	**Montbardon**	**0.53**	**309**	*e*Pg	**Pg**	**03 15 00.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**03 15 07.5**	**+0.3**
	268nm,0.2s,SNR=1.0						
MBDF	**Montbardon**	**0.53**	**309**	*e*Pg	**Pg**	**03 15 00.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**03 15 07.5**	**+0.3**
	134nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.54**	**173**	*e*Pg	**Pg**	**03 15 00.2**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**03 15 07.1**	**-0.3**
	2μm,0.4s,SNR=1.0						
SBF	**Sospel**	**0.54**	**173**	*e*Pg	**Pg**	**03 15 00.2**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**03 15 07.1**	**-0.3**
	891nm,0.4s,SNR=1.0						
NEGI	**Seborga**	**0.60**	**155**	P	**Pg**	**03 15 01.6**	**+0.1**
NEGI				S	**Sg**	**03 15 09.6**	**0.0**
IMI	**Imperia**	**0.62**	**141**	Pg	**Pg**	**03 15 02.1**	**+0.2**
IMI				Sg	**Sg**	**03 15 10.5**	**+0.3**
FIN	**Finale Ligure**	**0.65**	**106**	Pg	**Pg**	**03 15 02.8**	**+0.5**
FIN				Sg	**Sg**	**03 15 11.7**	**+0.8**
FIN	**Finale Ligure**	**0.65**	**106**	Pg	**Pg**	**03 15 02.8**	**+0.5**
FIN				S	**Sg**	**03 15 11.3**	**+0.4**
REVF	**Revere**	**0.66**	**179**	Pg	**Pg**	**03 15 02.5**	**0.0**
REVF				Sg	**Sg**	**03 15 11.4**	**+0.3**
RRL	**Rocca Remolon**	**0.66**	**323**	P	**Pg**	**03 15 02.5**	**-0.1**
RRL				S	**Sg**	**03 15 10.9**	**-0.4**
QLNO	**Quiliano**	**0.72**	**95**	Pg	**Pg**	**03 15 04.2**	**+0.5**
QLNO				Sg	**Sg**	**03 15 14.0**	**+0.8**
	448nm,0.4s						
CALN	**Calern**	**0.72**	**207**	Pg	**Pg**	**03 15 03.6**	**-0.1**
CALN				Sg	**Sg**	**03 15 13.2**	**0.0**
RSP	**Reno Superiore**	**0.76**	**356**	Pg	**Pg**	**03 15 03.3**	**-1.1**
	169nm,0.3s						
RSP				S	**Sg**	**03 15 13.1**	**-1.3**
MONC	**Moncucco Torin**	**0.80**	**31**	Pg	**Pg**	**03 15 05.9**	**+0.7**
	633nm,0.4s						
BNI	**Bardonecchia**	**0.81**	**324**	Pg	**Pg**	**03 15 05.2**	**-0.3**
BNI				Sg	**Sg**	**03 15 15.5**	**-0.6**
	88nm,0.3s						
PCP	**Piancastagn**	**0.87**	**80**	P	**Pb**	**03 15 06.8**	**+0.3**
PCP				S	**Sb**	**03 15 17.9**	**-0.1**
FRF	**La Foret Royal**	**0.97**	**211**	*e*Pg	**Pg**	**03 15 07.7**	**-0.8**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**03 15 20.2**	**-1.1**
FRF				*e*Sn	**Sn**	**03 15 22.6**	**+0.3**
	880nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.97**	**211**	*e*Pg	**Pg**	**03 15 07.7**	**-0.8**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**03 15 20.2**	**-1.1**
FRF				*e*Sn	**Sn**	**03 15 22.6**	**+0.3**
	440nm,0.2s,SNR=1.0						
LSD	**Lago del Serru**	**1.07**	**352**	Pg	**Pg**	**03 15 09.0**	**-1.5**
LSD				S	**Sb**	**03 15 23.5**	**-0.3**
TRAV	**Traversella**	**1.15**	**14**	Pg	**Pg**	**03 15 09.4**	**-2.5**
	68nm,0.3s						
TRAV	**Traversella**	**1.15**	**14**	P	**Pn**	**03 15 09.5**	**-1.8**
TRAV				S	**Sb**	**03 15 23.4**	**-2.7**
ORIF	**Oris-en-Rattie**	**1.17**	**297**	*e*Pg	**Pg**	**03 15 12.2**	**0.0**
ORIF				*e*Sg	**Sg**	**03 15 26.6**	**-0.9**
	74nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.17**	**297**	*e*Pn	**Pn**	**03 15 11.9**	**+0.4**
ORIF				*e*Pg	**Pg**	**03 15 12.2**	**0.0**
ORIF				*e*Sg	**Sg**	**03 15 26.6**	**-0.9**
ORIF	**Oris-en-Rattie**	**1.17**	**297**	*e*Pg	**Pg**	**03 15 12.2**	**0.0**
ORIF				*e*Sg	**Sg**	**03 15 26.6**	**-0.9**
	37nm,0.2s						
LPG	**La Plagne**	**1.18**	**339**	*e*Pg	**Pg**	**03 15 12.1**	**-0.4**
LPG				*e*Sg	**Sg**	**03 15 28.7**	**+0.8**
	76nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**1.18**	**339**	*e*Pn	**Pn**	**03 15 11.4**	**-0.3**
LPG				*e*Pg	**Pg**	**03 15 12.1**	**-0.4**
LPG				*e*Sg	**Sg**	**03 15 28.7**	**+0.8**
LPG	**La Plagne**	**1.18**	**339**	*e*Pg	**Pg**	**03 15 12.1**	**-0.4**
LPG				*e*Sg	**Sg**	**03 15 28.7**	**+0.8**
	38nm,0.3s,SNR=1.0						
GDM	**Grand'Maison**	**1.19**	**313**	Pg	**Pg**	**03 15 12.8**	**+0.1**
LPL	**La Plagne**	**1.20**	**339**	*e*Pg	**Pg**	**03 15 12.9**	**0.0**
LPL				*e*Sg	**Sg**	**03 15 28.9**	**+0.3**
	118nm,0.3s						
LPL	**La Plagne**	**1.20**	**339**	*e*Pn	**Pn**	**03 15 12.0**	**0.0**
LPL				*e*Pg	**Pg**	**03 15 12.9**	**0.0**
LPL				*e*Sg	**Sg**	**03 15 28.9**	**+0.3**
LPL	**La Plagne**	**1.20**	**339**	*e*Pg	**Pg**	**03 15 12.9**	**0.0**
LPL				*e*Sg	**Sg**	**03 15 28.9**	**+0.3**
	59nm,0.3s						
LMR	**La Mourre**	**1.22**	**210**	*e*Pg	**Pg**	**03 15 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**03 15 27.4**	**-1.7**
	1μm,0.3s						
LMR	**La Mourre**	**1.22**	**210**	*e*Pn	**Pn**	**03 15 12.1**	**-0.1**
LMR				*e*Pg	**Pg**	**03 15 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**03 15 27.4**	**-1.7**
LMR	**La Mourre**	**1.22**	**210**	*e*Pg	**Pg**	**03 15 12.3**	**-0.9**
LMR				*e*Sg	**Sg**	**03 15 27.4**	**-1.7**
	516nm,0.3s						
ORO	**Oropa**	**1.31**	**20**	Pg	**Pg**	**03 15 12.0**	**-3.0**
	29nm,0.2s						
SMRF	**Simiane la Rot**	**1.34**	**252**	*e*Pg	**Pg**	**03 15 16.0**	**+0.5**
SMRF				*e*Sg	**Sg**	**03 15 33.6**	**+0.7**
	290nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.34**	**252**	*e*Pn	**Pn**	**03 15 15.2**	**+1.4**
SMRF				*e*Pg	**Pg**	**03 15 16.0**	**+0.5**
SMRF				*e*Sg	**Sg**	**03 15 33.6**	**+0.7**
SMRF	**Simiane la Rot**	**1.34**	**252**	*e*Pg	**Pg**	**03 15 16.0**	**+0.5**
SMRF				*e*Sg	**Sg**	**03 15 33.6**	**+0.7**
	145nm,0.3s,SNR=1.0						
MRGE	**Morge**	**1.39**	**352**	Pg	**Pg**	**03 15 14.6**	**-1.8**
GRN	**Grenoble**	**1.42**	**307**	Pg	**Pg**	**03 15 17.2**	**+0.2**
BOB	**Bobbio (Coli)**	**1.55**	**75**	Pg	**Pg**	**03 15 19.3**	**-0.1**
SC2M	**Scurtabo**	**1.57**	**89**	Pg	**Pg**	**03 15 16.7**	**-3.1**
SC2M	**Scurtabo**	**1.57**	**89**	P	**Pn**	**03 15 16.6**	**-0.4**
SC2M				S	**Sn**	**03 15 34.6**	**-2.4**
MMK	**Mattmark**	**1.71**	**15**	Pg	**Pg**	**03 15 18.7**	**-3.9**
MUGIO	**Muggio**	**1.94**	**38**	Pg	**Pg**	**03 15 22.6**	**-4.4**
BACM	**Baccana**	**1.96**	**92**	P	**Pn**	**03 15 22.2**	**-0.2**
BACM				S	**Sn**	**03 15 44.2**	**-2.5**
VIVF	**Saint-Julien-l**	**1.96**	**285**	*e*Pn	**Pn**	**03 15 23.4**	**+1.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**03 15 47.4**	**+0.6**
VIVF				*e*Sg	**Sg**	**03 15 53.0**	**+0.2**
	68nm,0.4s						
VIVF	**Saint-Julien-l**	**1.96**	**285**	*e*Pn	**Pn**	**03 15 23.4**	**+1.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**03 15 47.4**	**+0.6**
VIVF				*e*Sg	**Sg**	**03 15 53.0**	**+0.2**
	34nm,0.4s						
SSB	**Saint Sauveur**	**2.18**	**295**	*e*Pn	**Pn**	**03 15 26.2**	**+0.8**
SSB				*e*Sn	**Sn**	**03 15 49.5**	**-2.6**
SSB	**Saint Sauveur**	**2.18**	**295**	*e*Pn	**Pn**	**03 15 26.2**	**+0.8**
SSB				*e*Sn	**Sn**	**03 15 49.5**	**-2.7**
PGF	**Pioggiola**	**2.20**	**146**	*e*Pn	**Pn**	**03 15 24.8**	**-0.9**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**03 15 49.5**	**-3.2**
	14nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**2.20**	**146**	*e*Pn	**Pn**	**03 15 24.8**	**-0.9**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**03 15 49.5**	**-3.2**
	7.2nm,0.2s,SNR=1.0						
SARO	**Sassorosso**	**2.20**	**94**	P	**Pn**	**03 15 25.7**	**0.0**
SARO				S	**Sn**	**03 15 49.9**	**-2.8**
MAIM	**Mastiano**	**2.31**	**101**	P	**Pn**	**03 15 27.1**	**-0.1**
MAIM				S	**Sn**	**03 15 52.2**	**-3.2**
CABF	**La Chapelle**	**2.39**	**339**	*e*Pn	**Pn**	**03 15 30.2**	**+2.0**
	SNR=1.0						
TUE	**Stuetta**	**2.51**	**33**	Pg	**Pg**	**03 15 30.5**	**-7.3**
	22nm,0.3s						
LASF	**Ste Croix**	**2.53**	**264**	*e*Pn	**Pn**	**03 15 30.5**	**+0.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**03 15 59.9**	**-0.8**
	51nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**2.53**	**264**	*e*Pn	**Pn**	**03 15 30.5**	**+0.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**03 15 59.9**	**-0.8**
	26nm,0.6s,SNR=1.0						
MAGA	**Magasa**	**2.70**	**58**	Pg	**Pg**	**03 15 32.5**	**-9.0**
SMF	**Signal de Mont**	**3.34**	**314**	*e*Pn	**Pn**	**03 15 43.0**	**+1.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**03 16 20.3**	**-0.3**
	15nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**3.34**	**314**	*e*Pn	**Pn**	**03 15 43.0**	**+1.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**03 16 20.3**	**-0.3**
	7.4nm,0.2s,SNR=1.0						
DAVA	**Damuels**	**3.39**	**31**	⇑*i*Pn	**Pn**	**03 15 43.1**	**+1.0**
DAVA				⇓*i*Sn	**Sn**	**03 16 23.5**	**+1.5**
HINF	**Hinteralfeld**	**3.44**	**354**	*e*Pn	**Pn**	**03 15 43.3**	**+0.6**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**03 16 22.7**	**-0.5**
	7.6nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.44**	**354**	*e*Pn	**Pn**	**03 15 43.3**	**+0.6**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**03 16 22.7**	**-0.5**
	3.8nm,0.3s,SNR=1.0						
FETA	**Feichten**	**3.54**	**41**	⇑*i*Pn	**Pn**	**03 15 45.0**	**+0.9**
FETA				⇓*i*Sn	**Sn**	**03 16 28.0**	**+2.4**
HAU	**Haudompre**	**3.68**	**349**	*e*Pn	**Pn**	**03 15 46.6**	**+0.6**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**03 16 27.2**	**-1.8**
	17nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**3.68**	**349**	*e*Pn	**Pn**	**03 15 46.6**	**+0.6**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**03 16 27.2**	**-1.8**
	8.4nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**3.69**	**312**	*e*Pn	**Pn**	**03 15 47.9**	**+1.8**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**03 16 28.7**	**-0.6**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**03

	SNR=1.0							
RJF				*e*Sg		**Sg**	**03 17 05.1**	**-0.8**
	4.3nm,0.4s							
RJF	**Les Rejaudoux**	**4.24**	**284**	*e*Pn		**Pn**	**03 15 54.5**	**+0.8**
	SNR=1.0							
RJF				*e*Sg		**Sg**	**03 17 05.1**	**-0.8**
	2.2nm,0.4s							
HYF	**Humbligny**	**4.37**	**313**	*e*Pn		**Pn**	**03 15 57.0**	**+1.6**
MEZF	**Maizieres J'vi**	**4.40**	**340**	*e*Sn		**Sn**	**03 16 45.4**	**-1.5**
	9.3nm,0.3s,SNR=1.0							
MEZF	**Maizieres J'vi**	**4.40**	**340**	*e*Sn		**Sn**	**03 16 45.4**	**-1.5**
	4.7nm,0.3s,SNR=1.0							
LFF	**La Frestale**	**4.74**	**279**	*e*Pn		**Pn**	**03 16 02.1**	**+1.5**
	SNR=1.0							
LFF				*e*Sg		**Sg**	**03 17 20.3**	**-1.6**
	6.6nm,0.4s							
LFF	**La Frestale**	**4.74**	**279**	*e*Pn		**Pn**	**03 16 02.1**	**+1.5**
	SNR=1.0							
LFF				*e*Sg		**Sg**	**03 17 20.3**	**-1.6**
	3.3nm,0.4s							
EMIR	**Miracle**	**4.93**	**242**	P		**Pn**	**03 16 04.9**	**+1.8**
EMIR				S		**Sn**	**03 16 57.6**	**-2.3**
EMIR	**Miracle**	**4.93**	**242**	P		**Pn**	**03 16 04.9**	**+1.8**
	6.6nm,0.3s,SNR=7.0							
EPF	**Esparros**	**5.26**	**257**	*e*Pn		**Pn**	**03 16 07.6**	**-0.1**
	SNR=1.0							
EPF				*e*Sg		**Sg**	**03 17 35.8**	**-2.6**
	3.8nm,0.3s							
EPF	**Esparros**	**5.26**	**257**	*e*Pn		**Pn**	**03 16 07.6**	**-0.1**
	SNR=1.0							
EPF				*e*Sg		**Sg**	**03 17 35.8**	**-2.6**
	1.9nm,0.3s							
EBIE	**Bielsa**	**5.51**	**254**	P		**Pn**	**03 16 13.7**	**+2.6**
EBIE				S		**Sn**	**03 17 15.1**	**+0.9**
EBIE	**Bielsa**	**5.51**	**254**	P		**Pn**	**03 16 13.7**	**+2.6**
	0.6nm,0.1s,SNR=4.0							
EPOB	**Poblet**	**5.52**	**239**	P		**Pn**	**03 16 12.4**	**+1.2**
EPOB				S		**Sn**	**03 17 11.4**	**-3.0**
EPOB	**Poblet**	**5.52**	**239**	P		**Pn**	**03 16 12.4**	**+1.1**
	0.5nm,0.1s,SNR=7.9							
MFF	**Saint Martin d**	**5.71**	**295**	*e*Pn		**Pn**	**03 16 16.1**	**+2.2**
	SNR=1.0							
ETOS	**Mallorca**	**5.72**	**218**	P		**Pn**	**03 16 15.2**	**+1.1**
ETOS				S		**Sn**	**03 17 14.4**	**-5.0**
ETOS	**Mallorca**	**5.72**	**218**	P		**Pn**	**03 16 15.2**	**+1.1**
	0.5nm,0.1s,SNR=7.9							
ETSF	**Etsaut**	**5.93**	**258**	*e*Pn		**Pn**	**03 16 17.6**	**+0.7**
	SNR=1.0							
ETSF				*e*Sn		**Sn**	**03 17 22.3**	**-2.2**
	9.3nm,0.5s							
ETSF	**Etsaut**	**5.93**	**258**	*e*Pn		**Pn**	**03 16 17.6**	**+0.7**
	SNR=1.0							
ETSF				*e*Sn		**Sn**	**03 17 22.3**	**-2.2**
	4.7nm,0.5s							
ERTA	**Horta de San J**	**6.21**	**239**	P		**Pn**	**03 16 22.5**	**+1.8**
ERTA				S		**Sn**	**03 17 29.1**	**-2.2**
ERTA	**Horta de San J**	**6.21**	**239**	P		**Pn**	**03 16 22.5**	**+1.8**
	1.0nm,0.2s,SNR=7.9							
GEC2	**GERESS Array S**	**6.24**	**42**	*e*Pn		**Pn**	**03 16 21.4**	**+0.2**
GEC2				*e*Sn		**Sn**	**03 17 29.0**	**-3.2**
SJPF	**Ste Jean**	**6.34**	**261**	*e*Pn		**Pn**	**03 16 20.8**	**-1.7**
KHC	**Kasperske Hory**	**6.38**	**40**	*e*PN		**Pn**	**03 16 19.5**	**-3.6**
KHC				*ex*		x	03 16 24.5	
KHC				*e*SN		**Sn**	**03 17 32.0**	**-3.7**
EALK	**Alkurruntz**	**6.51**	**263**	P		**Pn**	**03 16 26.4**	**+1.5**
EALK				S		**Sn**	**03 17 35.1**	**-3.8**
EALK	**Alkurruntz**	**6.51**	**263**	P		**Pn**	**03 16 26.4**	**+1.5**
	2.3nm,0.4s,SNR=7.9							
LDF	**La Druitiere**	**6.65**	**312**	*e*Pn		**Pn**	**03 16 28.6**	**+1.9**
	SNR=1.0							
GRR	**Gorron**	**6.94**	**308**	*e*Pn		**Pn**	**03 16 32.2**	**+1.5**
	SNR=1.0							
FLN	**La Foliniere**	**6.94**	**312**	*e*Pn		**Pn**	**03 16 31.7**	**+0.9**
	baz=131,SNR=1.0							
ETOR	**Torete**	**7.80**	**246**	P		**Pn**	**03 16 44.5**	**+2.0**
ETOR	**Torete**	**7.80**	**246**	P		**Pn**	**03 16 44.5**	**+1.9**
	2.7nm,0.3s,SNR=7.9							
ETOR	**Torete**	**7.80**	**246**	P		**Pn**	**03 16 44.5**	**+1.9**
ELAN	**Lanestosa**	**7.88**	**265**	P		**Pn**	**03 16 45.6**	**+1.9**
ELAN				S		**Sn**	**03 18 08.7**	**-4.0**
ELAN	**Lanestosa**	**7.88**	**265**	P		**Pn**	**03 16 45.6**	**+1.9**
	0.4nm,0.3s,SNR=7.9							
EARI	**Arriondas**	**9.14**	**268**	P		**Pn**	**03 17 02.7**	**+1.7**
EARI				S		**Sn**	**03 18 37.2**	**-6.3**

*ISCJB **09** 03:29:53.9±0.2, 44.18N×001.1637E×002, h10km, Error ellipse: s-maj=2.1km s-min=1.8km az=153.6*
*LDG **09** 03:29:53.5±0.1, 44.08N×001.657E, h10km, Ml3.6/11, Error ellipse: s-maj=2.4km s-min=1.8km az=124.0*
*PDG **09** 03:29:53.0±0.6, 44.13N×001.643E, h0km±11km, ML3.5/10, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
*VIE **09** 03:29:54.4±0.2, 44.08N×001.658E, h10km, mb3.0/11, ML3.1/14, Error ellipse: s-maj=2.2km s-min=1.4km az=3.0*
*NEIC **09** 03:29:55.0±0.2, 44.11N×001.636E, h10km, ML3.5(PDG), ML3.1(FUR), Error ellipse: s-maj=3.1km s-min=2.8km az=206.0*
*CSEM **09** 03:29:55.7±0.0, 44.20N×001.631E, h10km, ML3.6/8, Error ellipse: s-maj=1.4km s-min=1.0km az=25.0*
*PRU **09** 03:29:56.2, 44.24N×001.655E, h0km*
*IDC **09** 03:29:57.2±2.0, 44.37N×001.622E, h0km, mb3.5/1, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=29.2km s-min=20.6km az=69.0*

ISC 09 03:29:54.8±0.5, 44.14N±001×1641E±002, h7km±3km, n152, σ1§28/230, 21C-28D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.83**	**42**	*e*Pg		**Pg**	**03 30 10.9**	**+0.2**
BLY				*e*Sg		**Sg**	**03 30 22.5**	**+1.0**
NVLJ	**Novalja**	**1.18**	**292**	*e*Pg		**Pg**	**03 30 16.8**	**-0.6**
NVLJ				Sg		**Sg**	**03 30 34.0**	**+1.2**
SISC	**Sisak**	**1.34**	**359**	*e*Pg		**Pg**	**03 30 19.0**	**-1.4**
SISC				Sg		**Sg**	**03 30 39.0**	**+1.2**
SISC	**Sisak**	**1.34**	**359**	*e*Pg		**Pg**	**03 30 19.0**	**-1.4**
SISC				Sg		**Sg**	**03 30 38.9**	**+1.1**
STON	**Ston**	**1.57**	**143**	*e*Pn		**Pn**	**03 30 21.7**	**-1.4**
STON				Sn		**Sn**	**03 30 45.3**	**+1.6**
STON	**Ston**	**1.57**	**143**	*e*Pn		**Pn**	**03 30 21.6**	**-1.5**
STON				Sn		**Sn**	**03 30 45.3**	**+1.6**
BOJS	**Bojanci**	**1.60**	**329**	*i* Pn		**Pn**	**03 30 23.9**	**+0.5**
BOJS				*e*Sn		**Sn**	**03 30 45.4**	**+1.1**
BOJS	**Bojanci**	**1.60**	**329**	*i* Pn		**Pn**	**03 30 23.9**	**+0.5**
BOJS				*e*Sn		**Sn**	**03 30 45.4**	**+1.1**
BOJS								
	comp=Z,82nm,0.3s							
BOJS	**Bojanci**	**1.60**	**329**	*i* Pn		**Pn**	**03 30 23.9**	**+0.5**
BOJS				*e*Sn		**Sn**	**03 30 45.3**	**+1.1**
GCIS	**Gornji Cirnik**	**1.82**	**343**	*i* Pn		**Pn**	**03 30 26.7**	**+0.2**
CRES	**Cresnjev**	**1.82**	**339**	*i* Pn		**Pn**	**03 30 26.8**	**+0.4**
BRY	**Bratogost**	**1.98**	**128**	⇓*i*Pn		**Pn**	**03 30 29.2**	**+0.5**
BRY				*e*Sn		**Sg**	**03 30 57.0**	**-1.6**
TREB	**Trebinje**	**2.00**	**134**	*e*Pn		**Pn**	**03 30 31.0**	**+2.0**
TREB				*e*Sn		**Sn**	**03 30 56.1**	**+1.8**
UPM	**Unac-Piva**	**2.04**	**116**	⇓*i*Pn		**Pn**	**03 30 29.6**	**+0.1**
UPM				*e*Sn		**Sg**	**03 30 58.2**	**-2.2**
AOI	**Ancona**	**2.11**	**255**	Pn		**Pn**	**03 30 30.7**	**+0.2**
PDKS	**Podkum**	**2.17**	**333**	*i* Pn		**Pn**	**03 30 31.9**	**+0.7**
PDKS				*i* Sn		**Sg**	**03 31 00.9**	**-3.6**
PDKS	**Podkum**	**2.17**	**333**	*i* Pn		**Pn**	**03 30 31.9**	**+0.7**
PDKS				*i* Sn		**Sg**	**03 31 00.9**	**-3.6**
PDKS								
	comp=Z,100nm,0.6s							
RHK3	**Tenkes**	**2.19**	**36**	⇑*e*Pn		**Pn**	**03 30 30.8**	**-0.7**
RHK3				*e*Sn		**Sn**	**03 30 55.3**	**-3.6**
HCY	**Herceg Novi**	**2.28**	**137**	⇑*i*Pn		**Pn**	**03 30 33.3**	**+0.6**
HCY				*e*Sn		**Sg**	**03 31 04.4**	**-3.5**
NKY	**Niksic**	**2.30**	**124**	⇓*i*Pn		**Pn**	**03 30 33.6**	**+0.5**
NKY				*e*Sn		**Sg**	**03 31 04.6**	**-4.2**
PLE	**Pljevlja**	**2.31**	**109**	⇓*i*Pn		**Pn**	**03 30 33.5**	**+0.3**
PLE				*e*Sn		**Sg**	**03 31 04.8**	**-4.2**
KOGS	**Kog**	**2.32**	**357**	*i* Pn		**Pn**	**03 30 33.1**	**-0.2**
LJU	**Ljubljana**	**2.33**	**326**	*i* Pn		**Pn**	**03 30 34.5**	**+1.1**
LJU				*e*			03 30 37.5	
CING	**Cingoli**	**2.45**	**253**	Pn		**Pn**	**03 30 34.9**	**-0.2**
MS1	**Monte Sant'Ang**	**2.45**	**188**	*e*Pn		**Pn**	**03 30 35.8**	**+0.6**
MS1				*e*Sn		**Sn**	**03 31 05.1**	**-0.3**
RGNG	**Rignano Grg**	**2.53**	**194**	Pn		**Pn**	**03 30 34.9**	**-1.4**
BUM	**Brajici-Budva**	**2.58**	**134**	⇑*i*Pn		**Pn**	**03 30 37.5**	**+0.5**
BUM				*e*Sn		**Sn**	**03 31 11.1**	**+2.5**
VOY	**Vojsko**	**2.60**	**318**	⇑*e*Pn		**Pg**	**03 30 39.0**	**-5.6**
VOY				*e*Sn		**Sg**	**03 31 13.1**	**-5.2**
PKSM	**Moragy**	**2.61**	**37**	⇓P		**Pn**	**03 30 36.2**	**-1.1**
PKSM	**Moragy**	**2.61**	**37**	⇓P		**Pn**	**03 30 36.2**	**-1.1**
PKSM	**Moragy**	**2.61**	**37**	⇓*i*P		**Pn**	**03 30 36.3**	**-1.0**
FGSL	**Fruska Gora**	**2.64**	**66**	*e*Pn		**Pn**	**03 30 42.3**	**+4.6**
FGSL				*e*Sn		**Sn**	**03 31 10.3**	**+0.4**
FSSB	**Fossombrone**	**2.66**	**262**	Pn		**Pn**	**03 30 38.0**	**0.0**
PDG	**Podgorica**	**2.69**	**128**	⇑*i*Pn		**Pn**	**03 30 38.4**	**-0.1**
TTG	**Podgorica**	**2.69**	**128**	⇑*i*Pn		**Pn**	**03 30 38.4**	**-0.1**
TTG				*e*Sn		**Sn**	**03 31 14.2**	**+2.9**
OBKA	**Obir**	**2.71**	**332**	⇓*e*Pn		**Pn**	**03 30 39.5**	**+0.8**
	SNR=14							
OBKA				⇑*i*Sn		**Sg**	**03 31 14.9**	**-7.0**
NRCA	**Norcia**	**2.73**	**243**	Pn		**Pn**	**03 30 39.0**	**+0.1**
SJES	**Sjenica**	**2.73**	**107**	*e*Sn		**Sn**	**03 31 13.2**	**+1.0**
BEY	**Berane**	**2.84**	**115**	⇓*i*Pn		**Pn**	**03 30 40.6**	**+0.1**
IVA	**Berane**	**2.84**	**115**	⇓*i*Pn		**Pn**	**03 30 40.6**	**+0.1**
IVA				*e*Sn		**Sn**	**03 31 17.2**	**+2.3**
PIEI	**Pieia**	**2.86**	**259**	Pn		**Pn**	**03 30 40.7**	**-0.1**
ASS	**Assisi**	**2.93**	**250**	Pn		**Pn**	**03 30 41.8**	**+0.1**
MURB	**Monte Urbino**	**2.95**	**254**	Pn		**Pn**	**03 30 42.2**	**+0.2**
ULC	**Ulcinj**	**3.01**	**135**	⇑*i*Pn		**Pn**	**03 30 43.0**	**+0.2**
ULC				*e*Sn		**Sn**	**03 31 21.3**	**+2.2**
PVY	**Plav**	**3.02**	**119**	⇓*i*Pn		**Pn**	**03 30 43.1**	**+0.1**
PVY				*e*Sn		**Sn**	**03 31 21.4**	**+2.0**
FIAM	**Fiamignano**	**3.04**	**233**	Pn		**Pn**	**03 30 44.2**	**+0.9**
VVLD	**Villa Vallelon**	**3.05**	**223**	Pn		**Pn**	**03 30 42.5**	**-0.9**
PTQR	**Pietraquaria**	**3.05**	**227**	Pn		**Pn**	**03 30 43.4**	**0.0**
SDI	**San Donato**	**3.08**	**219**	Pn		**Pn**	**03 30 43.1**	**-0.8**
GMNA	**Gemona**	**3.10**	**315**	Pn		**Pn**	**03 30 45.3**	**+1.3**
PTCC	**Patocco-Chiusa**	**3.13**	**318**	Pn		**Pn**	**03 30 46.0**	**+1.5**
ARSA	**Arzberg**	**3.18**	**349**	⇓*i*Pn		**Pn**	**03 30 45.4**	**+0.2**
	SNR=32							
MNS	**Montasola**	**3.23**	**239**	Pn		**Pn**	**03 30 46.3**	**+0.4**
CRE	**Caprese Michel**	**3.26**	**262**	Pn		**Pn**	**03 30 47.1**	**+0.8**
SG1	**Sgolgore (BA)**	**3.30**	**176**	*e*Pn		**Pn**	**03 30 45.5**	**-1.3**
SG1				*e*Sn		**Sn**	**03 31 23.9**	**-2.3**
PE1	**Pezze di Greco**	**3.41**	**167**	*e*Pn		**Pn**	**03 30 47.0**	**-1.4**
PE1				*e*Sn		**Sn**	**03 31 28.2**	**-0.8**
CSSN	**Cassano Irpino**	**3.43**	**198**	Pn		**Pn**	**03 30 48.8**	**+0.2**
PKSG		**3.54**	**22**	⇓*e*Pn		**Pn**	**03 30 50.5**	**+0.4**
LTRZ	**Laterza**	**3.54**	**175**	Pn		**Pn**	**03 30 48.8**	**-1.4**
FVI	**Forni Avoltri**	**3.55**	**315**	⇑*i*Pn		**Pn**	**03 30 51.7**	**+1.5**
KBA	**Koelnbreinsper**	**3.64**	**325**	⇑*i*Pn		**Pn**	**03 30 52.9**	**+1.4**
SGO	**Sicignano**	**3.66**	**193**	Pn		**Pn**	**03 30 51.6**	**-0.2**
ABTA	**Abfaltersbach**	**3.79**	**315**	⇑*i*Pn		**Pn**	**03 30 54.9**	**+1.4**
	SNR=9.2							
ABTA				⇓*i*Sn		**Sn**	**03 31 41.7**	**+3.4**
CONA	**Conrad Observa**	**3.81**	**354**	*i* Pn		**Pn**	**03 30 54.4**	**+0.5**
	SNR=30							
CSNA	**Conrad Observa**	**3.81**	**354**	⇓*i*Pn		**Pn**	**03 30 54.4**	**+0.5**
BUD	**Budapest**	**3.82**	**28**	*e*Pn		**Pn**	**03 30 50.3**	**-3.6**
BUD				*e*Sg		**Sg**	**03 32 00.6**	**+3.3**
CTI	**Castel Tesino**	**3.87**	**301**	Pn		**Pn**	**03 30 54.6**	**-0.1**
BZS	**Buzias**	**3.99**	**66**	⇑P		**Pn**	**03 30 56.0**	**-0.3**
BZS				S		**Sn**	**03 31 41.8**	**-1.5**
BZS	**Buzias**	**3.99**	**66**	⇑*i*P		**Pn**	**03 30 56.0**	**-0.3**
BZS				S		**Sn**	**03 31 41.8**	**-1.5**
MOA	**Molln**	**4.00**	**339**	⇑*i*Pn		**Pn**	**03 30 57.7**	**+1.2**
	SNR=21							
MOA				⇑*i*Sn		**Sn**	**03 31 46.2**	**+2.6**
ZST	**Bratislava**	**4.09**	**7**	*e*PN		**Pn**	**03 30 57.6**	**-0.1**
PENC	**Penc**	**4.17**	**28**	⇓*e*Pn		**Pn**	**03 30 59.0**	**+0.2**
PENC				*e*Sn		**Sn**	**03 31 46.9**	**-0.8**
MODS	**Modra-Piesok**	**4.28**	**8**	*e*PN		**Pn**	**03 31 00.2**	**-0.1**
MODS				*e*SN		**Sn**	**03 31 48.0**	**-2.5**
SCE	**Schlegeis**	**4.39**	**313**	⇓*i*Pn		**Pn**	**03 31 03.7**	**+1.9**
SCE				*i* Sn		**Sn**	**03 31 55.0**	**+1.8**
OHR	**Ohrid**	**4.43**	**131**	*e*Pn		**Pn**	**03 31 02.8**	**+0.4**
SMOL	**Smolenice**	**4.44**	**9**	*e*PN		**Pn**	**03 31 02.5**	**+0.1**
SMOL				*e*SN		**Sn**	**03 31 53.1**	**-1.2**
PSZ	**Piszkesteto**	**4.50**	**31**	*e*Pn		**Pn**	**03 31 02.8**	**-0.4**
PSZ				S		**Sn**	**03 31 52.0**	**-3.7**
PSZ	**Piszkesteto**	**4.50**	**31**	⇑*e*Pn		**Pn**	**03 31 03.0**	**-0.3**
PSZ	**Piszkesteto**	**4.50**	**31**	*e*Pn		**Pn**	**03 31 02.8**	**-0.5**
PSZ	**Piszkesteto**	**4.50**	**31**	⇓*i*P		**Pn**	**03 31 02.8**	**-0.5**
PSZ	**Piszkesteto**	**4.50**	**31**	S		**Sn**	**03 31 52.0**	**-3.7**
WTTA	**Wattenberg**	**4.58**	**315**	⇑*i*Pn		**Pn**	**03 31 05.5**	**+1.2**
	SNR=13							
WTTA				⇓*i*Sn		**Sn**	**03 32 01.1**	**+3.4**
MABI	**Malga Bissina**	**4.59**	**297**	Pn		**Pn**	**03 31 05.2**	**+0.6**
KOLL	**Kolacno**	**4.66**	**17**	*e*PN		**Pn**	**03 31 05.9**	**+0.5**
KOLL				*e*SN		**Sn**	**03 31 56.4**	**-3.2**
WATA	**Walderalm**	**4.66**	**315**	⇓*i*Pn		**Pn**	**03 31 06.6**	**+1.2**
	SNR=8.9							
VYHS	**Vyhne**	**4.67**	**20**	*e*PN		**Pn**	**03 31 06.1**	**+0.4**
VYHS				*e*SN		**Sn**	**03 31 56.0**	**-4.1**
GZR	**Gura Zlata**	**4.71**	**72**	⇑P		**Pn**	**03 31 06.0**	**-0.1**
GZR				S		**Sn**	**03 31 58.7**	**-2.2**
GZR	**Gura Zlata**	**4.71**	**72**	⇑*i*P		**Pn**	**03 31 06.0**	**-0.1**
GZR	**Gura Zlata**	**4.71**	**72**	S		**Sn**	**03 31 58.7**	**-2.2**
BIA	**Bitola**	**4.78**	**129**	*e*Pn		**Pn**	**03 31 08.0**	**+0.8**
STIP	**Stip**	**4.90**	**118**	*e*Pn		**Pn**	**03 31 09.7**	**+0.9**
MOTA	**Moosalm**	**4.91**	**313**	⇑*i*Pn		**Pn**	**03 31 10.5**	**+1.7**
	SNR=9.0							
MOTA				⇓*i*Sn		**Sn**	**03 32 09.5**	**+3.7**
FETA	**Feichten**	**4.92**	**308**	⇓*i*Pn		**Pn**	**03 31 10.3**	**+1.3**
FETA				⇑*i*Sn		**Sn**	**03 32 09.6**	**+3.4**
FETA	**Feichten**	**4.92**	**308**	Pn		**Pn**	**03 31 10.3**	**+1.2**
FETA				Sn		**Sn**	**03 32 09.6**	**+3.4**
TIP	**Timpagrande**	**4.96**	**177**	*e*Pn		**Pn**	**03 31 09.3**	**-0.3**
TIP	**Timpagrande**	**4.96**	**177**	*e*Pn		**Pn**	**03 31 09.3**	**-0.3**
GEC2	**GERESS Array S**	**5.07**	**339**	*e*Pn		**Pn**	**03 31 10.7**	**-0.4**
GEC2				*e*Sn		**Sn**	**03 32 08.8**	**-1.0**
GERES	**GERESS Array B**	**5.07**	**339**	Pn		**Pn**	**03 31 11.7**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=160,slow=14,SNR=21							
GERES				Sn		**Sn**	**03 32 08.3**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=150,slow=23,SNR=5.7							
DRGR		**5.17**	**57**	⇓P		**Pn**	**03 31 13.4**	**+0.9**
DRGR				S		**Sn**	**03 32 10.7**	**-1.6**
DRGR		**5.17**	**57**	⇓*i*P		**Pn**	**03 31 13.4**	**+0.9**
DRGR				S		**Sn**	**03 32 10.7**	**-1.6**
VRAC	**Vranov**	**5.18**	**1**	Pn		**Pn**	**03 31 12.8**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=184,slow=14,SNR=7.7							
VRAC				Sn		**Sn**	**03 32 06.0**	**-6.5**
	comp=Z,0.6nm,0.3s,baz=80,slow=23,SNR=1.8							
VRAC	**Vranov**	**5.18**	**1**	⇓P		**Pn**	**03 31 11.8**	**-0.7**
VRAC				S		**Sn**	**03 32 10.3**	**-2.2**
VRAC	**Vranov**	**5.18**	**1**	*e*Pn		**Pn**	**03 31 12.5**	**-0.1**
VRAC	**Vranov**	**5.18**	**1**	⇓*i*P		**Pn**	**03 31 11.9**	**-0.7**
VRAC	**Vranov**	**5.18**	**1**	S		**Sn**	**03 32 10.3**	**-2.2**
KECS	**Kecovo**	**5.19**	**32**	*e*PN		**Pn**	**03 31 11.4**	**-1.3**
KECS				*e*SN		**Sn**	**03 32 09.4**	**-3.3**
VTS	**Vitosha**	**5.19**	**105**	⇓P		**Pn**	**03 31 14.8**	**+2.0**
VTS	**Vitosha**	**5.19**	**105**	⇓*i*P		**Pn**	**03 31 14.8**	**+2.0**
DAVOX	**Davos/Dischmat**	**5.30**	**302**	Pn		**Pn**	**03 31 15.0**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=343,slow=19,SNR=14							
DAVOX				Sn		**Sn**	**03 32 18.4**	**+2.9**
	comp=Z,1.4nm,0.3s,baz=214,slow=20,SNR=3.1							
KHC	**Kasperske Hory**	**5.36**	**340**	*e*PN		**Pn**	**03 31 15.8**	**+0.6**
KHC				*ex*		x	03 31 24.0	
KHC				*e*SN		**Sn**	**03 32 15.7**	**-1.4**
TUE	**Stuetta**	**5.50**	**298**	*e*Pn		**Pn**	**03 31 18.6**	**+1.5**
	comp=Z,4.6nm,0.6s							
TUE	**Stuetta**	**5.50**	**298**	*e*Pn		**Pn**	**03 31 18.6**	**+1.6**
	comp=Z,4.6nm,0.6s							
WET	**Wettzell**	**5.57**	**335**	*e*Pn		**Pn**	**03 31 18.6**	**+0.6**
PGF	**Pioggiola**	**5.63**	**256**	*e*Pn		**Pn**	**03 31 16.6**	**-2.2**
MORC	**Moravsky Berou**	**5.70**	**7**	*e*Pn		**Pn**	**03 31 19.4**	**-0.4**
MORC				*e*Sn		**Sn**	**03 32 21.9**	**-3.5**
MORC	**Moravsky Berou**	**5.70**	**7**	*e*Pn		**Pn**	**03 31 19.4**	**-0.3**
MORC				*e*Sn		**Sn**	**03 32 21.9**	**-3.4**
MORC	**Moravsky Berou**	**5.70**	**7**	⇑*i*P		**Pn**	**03 31 19.0**	**-0.7**
MORC	**Moravsky Berou**	**5.70**	**7**	S		**Sn**	**03 32 22.8**	**-2.5**
OKC	**Ostrava-Krasne**	**5.83**	**11**	*e*PN		**Pn**	**03 31 21.4**	**-0.1**
OKC				*e*SN		**Sn**	**03 32 26.5**	**-2.0**
PRU	**Pruhonice**	**5.99**	**348**	*e*PN		**Pn**	**03 31 24.3**	**+0.5**
ORO	**Oropa**	**6.17**	**287**	Pn		**Pn**	**03 31 24.6**	**-1.6**
DPC	**Dobruska-Polom**	**6.22**	**360**	*e*PN		**Pn**	**03 31 27.1**	**+0.2**
DPC				*ex*		x	03 31 35.5	
STHS	**Stebnicka Huta**	**6.24**	**30**	*e*PN		**Pn**	**03 31 29.0**	**+1.8**
STHS				*e*PG		**Pg**	**03 31 59.0**	**+4.7**
STHS				*e*SN		**Sn**	**03 32 36.5**	**-2.2**
STHS				*e*SG		**Sg**	**03 33 20.3**	**+5.3**
STHS	**Stebnicka Huta**	**6.24**	**30**	*e*Pn		**Pn**	**03 31 29.0**	**+1.8**
STHS				*e*Sn		**Sn**	**03 32 36.5**	**-2.2**
SBF	**Sospel**	**6.48**	**271**	*e*Pn		**Pn**	**03 31 28.4**	**-2.1**
SBF				*e*Sn		**Sn**	**03 32 38.3**	**-6.2**
	comp=Z,5.6nm,0.3s							
STU	**Stuttgart**	**6.80**	**315**	*e*Pn		**Pn**	**03 31 35.0**	**+0.1**
STU	**Stuttgart**	**6.80**	**315**	*e*Pn		**Pn**	**03 31 35.0**	**+0.1**
MBDF	**Montbardon**	**6.92**	**278**	*e*Pn		**Pn**	**03 31 35.0**	**-1.6**
MBDF				*e*Sn		**Sn**	**03 32 50.4**	**-5.1**
	comp=Z,10nm,0.5s							
BFO	**Black Forest**	**7.00**	**310**	*e*Pn		**Pn**	**03 31 37.4**	**-0.2**
LPG	**La Plagne**	**7.00**	**285**	*e*Pn		**Pn**	**03 31 35.7**	**-1.9**
LPG				*e*Sn		**Sn**	**03 32 52.3**	**-5.1**
	comp=Z,18nm,0.5s							
BNI	**Bardonecchia**	**7.00**	**281**	*e*Pn		**Pn**	**03 31 39.6**	**+1.9**
BNI	**Bardonecchia**	**7.00**	**281**	*e*Pn		**Pn**	**03 31 39.6**	**+1.9**
LPL	**La Plagne**	**7.02**	**285**	*e*Pn		**Pn**	**03 31 36.1**	**-1.8**
LPL				*e*Sn		**Sn**	**03 32 52.5**	**-5.3**
	comp=Z,22nm,0.4s							
FRF	**La Foret Royal**	**7.08**	**269**	*e*Pn		**Pn**	**03 31 36.8**	**-1.9**
FRF				*e*Sn		**Sn**	**03 32 54.4**	**-5.0**
	comp=Z,2.3nm,0.3s							
LMR	**La Mourre**	**7.21**	**267**	*e*Pn		**Pn**	**03 31 38.8**	**-1.8**
CLL	**Collm**	**7.53**	**343**	*e*Sg		**Sg**	**03 33 58.0**	**+1.5**
	comp=Z,7.0nm,1.0s							
ORIF	**Oris-en-Rattie**	**7.56**	**280**	*e*Pn		**Pn**	**03 31 42.8**	**-2.6**
ORIF				*e*Sn		**Sn**	**03 33 05.7**	**-5.6**
	comp=Z,14nm,0.5s							
HINF	**Hinteralfeld**	**7.60**	**302**	*e*Pn		**Pn**	**03 31 43.6**	**-2.3**
HINF				*e*Sn		**Sn**	**03 33 06.3**	**-6.0**
	comp=Z,3.8nm,0.4s							
HINF	**Hinteralfeld**	**7.60**	**302**	*e*Pn		**Pn**	**03 31 43.6**	**-2.3**
HINF				*e*Sn		**Sn**	**03 33 06.3**	**-6.0**
	comp=Z,1.9nm,0.4s							
CDF	**Champ du Feu**	**7.63**	**307**	*e*Pn		**Pn**	**03 31 45.9**	**-0.4**
CABF	**

HOPS	**Hopland**	**1.88**	**146**	*e*Pn	**Pn**	**03 37 38.9**	**-1.9**
HOPS	**Hopland**	**1.88**	**146**	⇑P	**Pn**	**03 37 39.3**	**-1.6**
	baz=1.8,SNR=75						
HOPS				⇑S	**Sn**	**03 38 00.7**	**-2.7**
	baz=1.8						
K01A	**Sixes**	**2.24**	**359**	⇑S	**Sn**	**03 38 09.6**	**-2.7**
	baz=2.5						
MNRC	**McLaughlin Nat**	**2.27**	**137**	⇓P	**Pn**	**03 37 45.4**	**-0.8**
	baz=2.3,SNR=104						
K02A	**Glendale**	**2.31**	**17**	⇑P	**Pn**	**03 37 46.4**	**-0.3**
	baz=2.6,SNR=1000						
K02A				⇓S	**Sn**	**03 38 13.2**	**-0.7**
	baz=2.6						
KEBM	**Edson Butte**	**2.31**	**1**	*e*Pn	**Pn**	**03 37 46.2**	**-0.5**
HUMO	**Hull Mountain**	**2.31**	**28**	*e*Pn	**Pn**	**03 37 46.1**	**-0.7**
HUMO				*e*Sn	**Sn**	**03 38 14.1**	**0.0**
HUMO	**Hull Mountain**	**2.31**	**28**	⇓P	**Pn**	**03 37 46.4**	**-0.4**
	baz=2.6,SNR=707						
HUMO				⇑S	**Sn**	**03 38 13.9**	**-0.2**
	baz=2.6						
ORV	**Oroville**	**2.45**	**113**	⇓P	**Pn**	**03 37 47.3**	**-1.4**
	baz=2.5,SNR=143						
NSHM	**Saint Helena R**	**2.48**	**145**	*e*Pn	**Pn**	**03 37 47.8**	**-1.2**
O04C	**Chester**	**2.55**	**94**	⇑P	**Pn**	**03 37 50.1**	**0.0**
	baz=2.7,SNR=533						
OHCM	**Honcut**	**2.56**	**118**	*e*Pn	**Pn**	**03 37 48.3**	**-2.0**
Q03C	**Winters**	**2.67**	**135**	⇓P	**Pn**	**03 37 51.7**	**-0.1**
	baz=2.7						
CVS	**Carmenet Viney**	**2.69**	**145**	⇑P	**Pn**	**03 37 50.6**	**-1.3**
	baz=2.6						
CVS				⇑S	**Sn**	**03 38 20.2**	**-3.0**
	baz=2.6						
MCCM	**Marconi Confer**	**2.69**	**153**	*e*Pn	**Pn**	**03 37 50.9**	**-1.1**
MCCM				*e*Sn	**Sn**	**03 38 19.8**	**-3.7**
MCCM	**Marconi Confer**	**2.69**	**153**	⇑P	**Pn**	**03 37 50.7**	**-1.3**
	baz=2.6						
MCCM				⇑S	**Sn**	**03 38 20.4**	**-3.0**
	baz=2.6						
O05C	**Quincy**	**2.74**	**102**	⇑P	**Pn**	**03 37 53.0**	**+0.3**
	baz=2.9						
J02A	**Umpqua**	**2.87**	**12**	⇓P	**Pn**	**03 37 54.5**	**+0.1**
	baz=3.1,SNR=596						
J02A				⇓S	**Sn**	**03 38 26.5**	**-1.2**
	baz=3.1						
FARB	**Farallon Islan**	**3.07**	**159**	P	**Pn**	**03 37 55.7**	**-1.5**
	baz=3.0,SNR=24						
FARB				⇓S	**Sn**	**03 38 27.9**	**-4.8**
	baz=3.0						
BEKR	**Beckwourth**	**3.18**	**101**	⇓P	**Pn**	**03 37 58.6**	**-0.1**
	baz=3.3,SNR=187						
LAVA	**Lava Cap Winer**	**3.36**	**121**	⇓P	**Pn**	**03 38 00.9**	**-0.3**
	baz=3.4						
LAVA				⇑S	**Sn**	**03 38 38.8**	**-1.2**
	baz=3.4						
MOD	**Modoc**	**3.38**	**65**	*e*Pn	**Pn**	**03 38 00.7**	**-0.6**
MOD	**Modoc**	**3.38**	**65**	P	**Pn**	**03 38 00.9**	**-0.4**
	baz=3.6,SNR=37						
K05A	**Summer Lake**	**3.41**	**50**	P	**Pn**	**03 38 02.4**	**+0.5**
	baz=3.7,SNR=140						
K05A				⇑S	**Sn**	**03 38 40.9**	**-0.1**
	baz=3.7						
I02A	**Mapleton**	**3.46**	**7**	⇑P	**Pn**	**03 38 02.3**	**-0.2**
	baz=3.7,SNR=24						
I02A				⇓S	**Sn**	**03 38 40.7**	**-1.7**
	baz=3.7						
N06A	**Buffalo Meadow**	**3.49**	**86**	⇓P	**Pn**	**03 38 02.0**	**-0.9**
	baz=3.7,SNR=121						
N06A				⇑S	**Sn**	**03 38 42.1**	**-0.9**
	baz=3.7						
I03A	**Eugene**	**3.51**	**14**	⇑P	**Pn**	**03 38 03.3**	**+0.1**
	baz=3.8,SNR=46						
I03A				⇓S	**Sn**	**03 38 42.5**	**-1.0**
	baz=3.8						
O06A	**Flanigan**	**3.53**	**95**	⇓P	**Pn**	**03 38 02.9**	**-0.5**
	baz=3.7						
R04C	**Big Horse Ranc**	**3.54**	**129**	⇓P	**Pn**	**03 38 02.7**	**-1.0**
	baz=3.6,SNR=19						
P06A	**Stead Airport,**	**3.57**	**103**	⇓P	**Pn**	**03 38 04.1**	**0.0**
	baz=3.7,SNR=9.1						
JRSC	**Jasper Ridge**	**3.58**	**151**	⇑P	**Pn**	**03 38 02.7**	**-1.6**
	baz=3.5,SNR=22						
JRSC				⇑S	**Sn**	**03 38 42.4**	**-3.0**
	baz=3.5						
WENL	**Wente Vineyard**	**3.59**	**144**	⇓P	**Pn**	**03 38 03.5**	**-0.9**
	baz=3.5						
WENL				⇑S	**Sn**	**03 38 43.6**	**-2.1**
	baz=3.5						
WCN	**Washoe City**	**3.80**	**108**	⇑P	**Pn**	**03 38 07.3**	**+0.1**
	baz=3.9,SNR=98						
PAHR	**Pah Rah Range**	**3.95**	**101**	*e*Pn	**Pn**	**03 38 08.7**	**-0.5**
CMB	**Columbia Colle**	**4.02**	**128**	*e*Pn	**Pn**	**03 38 10.3**	**0.0**
CMB	**Columbia Colle**	**4.02**	**128**	⇑P	**Pn**	**03 38 10.1**	**-0.1**
	baz=4.0						
L07A	**Adell**	**4.09**	**68**	P	**Pn**	**03 38 10.8**	**-0.3**
	baz=4.3,SNR=28						
H02A	**Toledo**	**4.12**	**4**	⇑S	**Sn**	**03 38 57.2**	**-1.4**
	baz=4.3						
N07B	**Gerlach**	**4.14**	**85**	P	**Pn**	**03 38 11.2**	**-0.8**
	baz=4.3,SNR=61						
J06A	**Christmas Vall**	**4.16**	**48**	⇓P	**Pn**	**03 38 12.7**	**+0.5**
	baz=4.4,SNR=17						
J06A				⇓S	**Sn**	**03 38 58.8**	**-0.8**
	baz=4.4						
H03A	**Soap Creek Ran**	**4.19**	**11**	⇓P	**Pn**	**03 38 13.4**	**+0.8**
	baz=4.4						
H03A				⇓S	**Sn**	**03 38 59.2**	**-1.2**
	baz=4.4						
O07A	**Toulon**	**4.25**	**94**	P	**Pn**	**03 38 13.1**	**-0.2**
	baz=4.4,SNR=300						
I05A	**Bend**	**4.28**	**32**	⇓P	**Pn**	**03 38 15.3**	**+1.4**
	baz=4.5						
R06C	**Coleville**	**4.34**	**116**	⇑P	**Pn**	**03 38 15.7**	**+1.0**
	baz=4.4						
P07A	**Fallon**	**4.36**	**102**	⇓P	**Pn**	**03 38 15.1**	**+0.2**
	baz=4.5						
K07A	**Rock Creek Ran**	**4.42**	**60**	P	**Pn**	**03 38 15.6**	**-0.1**
	baz=4.7,SNR=155						
K07A				⇓S	**Sn**	**03 39 05.9**	**0.0**
	baz=4.7						
H04A	**Detroit Lake**	**4.43**	**21**	⇓P	**Pn**	**03 38 16.6**	**+0.8**
	baz=4.7,SNR=53						
H04A				⇓S	**Sn**	**03 39 06.4**	**+0.1**
	baz=4.7						
SAO	**San Andreas Ge**	**4.45**	**148**	*e*Pn	**Pn**	**03 38 15.3**	**-0.9**
SAO				*e*Sn	**Sn**	**03 39 07.3**	**+0.5**
S05C	**Merced**	**4.52**	**134**	⇑P	**Pn**	**03 38 17.3**	**+0.2**
	baz=4.5						
Q07A	**Schurz**	**4.62**	**109**	⇑S	**Sn**	**03 39 10.1**	**-0.8**
	baz=4.7						
M08A	**Happy Creek Ra**	**4.65**	**77**	⇑P	**Pn**	**03 38 17.9**	**-1.0**
	baz=4.9,SNR=52						
M08A				⇑S	**Sn**	**03 39 11.5**	**-0.2**
	baz=4.9						
H05A	**Madras**	**4.71**	**29**	⇑P	**Pn**	**03 38 20.0**	**+0.3**
	baz=5.0						
WVOR	**Wild Horse Val**	**4.72**	**65**	*e*Pn	**Pn**	**03 38 18.9**	**-1.0**
N08A	**GE Springer Mi**	**4.78**	**85**	P	**Pn**	**03 38 19.8**	**-0.9**
	baz=5.0,SNR=85						
O08A	**Rochester Mine**	**4.78**	**91**	⇓P	**Pn**	**03 38 20.6**	**-0.2**
	baz=4.9						
G03A	**Yamhill**	**4.82**	**10**	⇑P	**Pn**	**03 38 22.0**	**+0.8**
	baz=5.1						
P08A	**Dixie Valley**	**4.93**	**98**	⇓P	**Pn**	**03 38 23.1**	**+0.3**
	baz=5.1						
K08A	**Mann Creek Ran**	**4.94**	**62**	P	**Pn**	**03 38 22.6**	**-0.3**
	baz=5.2,SNR=54						
I07A	**Izee**	**5.06**	**44**	⇑P	**Pn**	**03 38 25.2**	**+0.7**
	baz=5.3						
V03C	**Hunter Liggett**	**5.18**	**150**	⇑P	**Pn**	**03 38 25.2**	**-1.0**
	baz=5.1						
NVAR	**Mina Array Bea**	**5.18**	**112**	Pn	**Pn**	**03 38 26.9**	**+0.6**
	6.2nm,0.3s,baz=289,slow=14,SNR=170						
NVAR				Pg	**Pn**	**03 38 36.1**	**+10**
	2.5nm,0.3s,baz=286,slow=16,SNR=17						
NVAR				Lg		03 39 43.2	
	baz=318,slow=21,SNR=1.5						
J08A	**Circle Bar Ran**	**5.23**	**56**	⇑P	**Pn**	**03 38 26.8**	**-0.1**
	baz=5.5,SNR=38						
N09A	**Rock Creek Ran**	**5.24**	**85**	⇓P	**Pn**	**03 38 26.4**	**-0.7**
	baz=5.4,SNR=24						
L09A	**Wilkinson Ranc**	**5.29**	**72**	⇑P	**Pn**	**03 38 26.7**	**-0.9**
	baz=5.5						
M09A	**Marrel Ranch,**	**5.34**	**79**	⇑P	**Pn**	**03 38 27.9**	**-0.5**
	baz=5.5						
K09A	**Rome**	**5.45**	**65**	⇓P	**Pn**	**03 38 29.5**	**-0.3**
	baz=5.7,SNR=10.0						
BMN	**Battle Mountai**	**5.48**	**89**	*e*Pn	**Pn**	**03 38 29.7**	**-0.7**
	16nm,0.9s						
PKD	**Parkfield**	**5.53**	**145**	⇓P	**Pn**	**03 38 30.0**	**-0.9**
	baz=5.5,SNR=6.2						
MTUM	**Tungsten Hills**	**5.57**	**123**	*e*Pn	**Pn**	**03 38 32.7**	**+1.1**
J09A	**Fry Pan Ranch,**	**5.69**	**59**	⇑P	**Pn**	**03 38 33.3**	**+0.2**
	baz=5.9,SNR=7.3						
K10A	**MacKenzie Ranc**	**6.07**	**66**	⇓P	**Pn**	**03 38 37.8**	**-0.5**
	baz=6.3,SNR=22						
L10A	**Juniper Basin**	**6.17**	**73**	⇑P	**Pn**	**03 38 39.2**	**-0.5**
	baz=6.4,SNR=8.7						
LON	**Longmire**	**6.46**	**16**	*e*Pn	**Pn**	**03 38 45.6**	**+1.8**
	6.0nm,0.8s						
BMO	**Blue Mountains**	**6.76**	**48**	*e*Pn	**Pn**	**03 38 49.6**	**+1.8**
	4.4nm,0.6s						
ISA	**Isabella**	**6.77**	**134**	*e*Pn	**Pn**	**03 38 49.2**	**+1.1**
	6.6nm,0.4s						
RSW	**Rattlesnake Hi**	**6.80**	**29**	*e*Pn	**Pn**	**03 38 50.3**	**+1.9**
HAWA	**Hanford**	**6.82**	**30**	*e*Pn	**Pn**	**03 38 50.3**	**+1.6**
	19nm,0.8s						
LNOR	**Lincton Mounta**	**6.94**	**38**	*e*Pn	**Pn**	**03 38 52.4**	**+2.2**
Q11A	**Duckwater**	**6.97**	**101**	⇓P	**Pn**	**03 38 52.1**	**+1.4**
	baz=7.1						
ELK	**Elko**	**6.98**	**86**	*e*Pn	**Pn**	**03 38 52.7**	**+1.9**
	2.3nm,0.7s						
ARVC	**Arvin**	**7.00**	**139**	⇑P	**Pn**	**03 38 51.9**	**+0.8**
	baz=7.0						
N12A	**Clover Valley,**	**7.13**	**85**	⇓P	**Pn**	**03 38 53.1**	**+0.2**
	baz=7.3,SNR=7.3						
R11A	**Troy Canyon, C**	**7.18**	**105**	⇓P	**Pn**	**03 38 53.9**	**+0.3**
	baz=7.3						
TPNV	**Topopah Spring**	**7.33**	**117**	*e*Pn	**Pn**	**03 38 57.4**	**+1.7**
	5.0nm,0.8s						
TPNV	**Topopah Spring**	**7.33**	**117**	⇑P	**Pn**	**03 38 57.0**	**+1.3**
	baz=7.4						
O12A	**Currie**	**7.38**	**89**	⇑P	**Pn**	**03 38 57.2**	**+0.8**
	baz=7.5						
Q12A	**Willow Creek R**	**7.53**	**99**	⇑P	**Pn**	**03 38 59.8**	**+1.3**
	baz=7.7						
EDW2	**Edwards Air Fo**	**7.62**	**136**	⇓P	**Pn**	**03 39 00.6**	**+0.9**
	baz=7.6						
ETW	**Entiat**	**7.62**	**21**	*e*Pn	**Pn**	**03 39 01.4**	**+1.7**
T11A	**Corn Creek, Al**	**7.90**	**112**	⇓P	**Pn**	**03 39 04.8**	**+1.3**
	baz=8.0						
R12A	**Pony Springs,**	**7.91**	**103**	⇑P	**Pn**	**03 39 04.7**	**+1.0**
	baz=8.0						
O13A	**Hicks Ranch, I**	**7.98**	**90**	⇓P	**Pn**	**03 39 06.0**	**+1.4**
	baz=8.1						
HLID	**Hailey**	**8.02**	**65**	*e*Pn	**Pn**	**03 39 07.6**	**+2.5**
	5.7nm,1.2s						
P13A	**Bates Ranch, G**	**8.06**	**95**	⇓P	**Pn**	**03 39 07.2**	**+1.6**
	baz=8.2						
Q13A	**Wheeler Ranch,**	**8.17**	**98**	⇓P	**Pn**	**03 39 08.9**	**+1.8**
	baz=8.3						
BFSC	**Mount Baldy St**	**8.29**	**137**	⇓P	**Pn**	**03 39 09.5**	**+0.6**
	baz=8.3						
R13A	**O'Grain Ranch,**	**8.43**	**103**	⇑P	**Pn**	**03 39 12.2**	**+1.3**
	baz=8.5						
BGU	**Big Grassy Mou**	**8.65**	**84**	*e*Pn	**Pn**	**03 39 16.0**	**+2.2**
E12A	**Beaver Dam Sad**	**8.69**	**45**	⇓P	**Pn**	**03 39 16.0**	**+1.8**
	baz=8.9						
Q14A	**Sevier Lake (B**	**8.72**	**97**	⇑P	**Pn**	**03 39 16.3**	**+1.5**
	baz=8.9						
S13A	**Holt Ranch, En**	**8.73**	**107**	⇑P	**Pn**	**03 39 16.1**	**+1.2**
	baz=8.8						
P14A	**Drum Mountains**	**8.75**	**93**	⇑P	**Pn**	**03 39 16.9**	**+1.7**
	baz=8.9						
DUG	**Dugway**	**8.86**	**89**	*e*Pn	**Pn**	**03 39 18.8**	**+2.1**
	19nm,1.0s						
DUG	**Dugway**	**8.86**	**89**	⇑P	**Pn**	**03 39 18.5**	**+1.8**
	baz=9.0						
ARUT	**Antelope Range**	**8.96**	**105**	*e*Pn	**Pn**	**03 39 19.3**	**+1.2**
PFO	**Pinyon Flat Ob**	**9.41**	**135**	⇓P	**Pn**	**03 39 24.7**	**+0.4**
	baz=9.4						
MSU	**Marysvale**	**9.67**	**98**	*e*Pn	**Pn**	**03 39 30.0**	**+2.2**
HWUT	**Hardware Ranch**	**9.76**	**80**	*e*Pn	**Pn**	**03 39 31.8**	**+2.8**
	4.3nm,0.9s						
MSO	**Missoula**	**9.83**	**47**	*e*Pn	**Pn**	**03 39 32.7**	**+2.8**
	2.8nm,0.8s						
DAU	**Daniels Canyon**	**10.03**	**87**	*e*Pn	**Pn**	**03 39 33.5**	**+0.9**
SRU	**San Rafael**	**10.78**	**93**	*e*Pn	**Pn**	**03 39 47.4**	**+4.4**
	11nm,0.9s						
PDAR	**Pinedale Array**	**11.33**	**74**	Pn	**Pn**	**03 39 54.2**	**+3.8**
	0.1nm,0.3s,baz=252,slow=8.4,SNR=4.0						
WUAZ	**Wupatki**	**11.45**	**112**	*e*Pn	**Pn**	**03 39 54.1**	**+2.0**
	3.4nm,0.8s						
PV01	**Paradox Valley**	**12.50**	**96**	*e*Pn	**Pn**	**03 40 09.6**	**+3.0**
SMCO	**Snowmass**	**13.47**	**90**	*e*Pn	**Pn**	**03 40 21.7**	**+1.9**
	4.6nm,1.1s						
TUC	**Tucson**	**13.71**	**123**	*e*Pn	**Pn**	**03 40 25.7**	**+2.7**
	2.6nm,1.0s						
SDCO	**Great Sand Dun**	**14.94**	**95**	*e*Pn	**Pn**	**03 40 40.5**	**+0.7**
	15nm,1.4s						
ANMO	**Albuquerque**	**15.26**	**106**	*e*P	**Pn**	**03 40 45.8**	**+1.9**
	1.7nm,0.8s						
CBKS	**Cedar Bluff**	**19.06**	**87**	*e*P	**Pn**	**03 41 30.7**	**-0.7**
	16nm,0.9s						
TXAR	**Lajitas Array**	**20.31**	**117**	P	**P**	**03 41 45.9**	**+1.7**
	0.1nm,0.3s,baz=299,slow=9.1,SNR=28						
TXAR				LR	LR	03 50 59.6	
	comp=Z,57nm,18.1s,MS3.0,baz=175,slow=42						
JCT	**Junction City**	**22.35**	**109**	*e*P	**P**	**03 42 09.0**	**+2.9**
	2.8nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**22.74**	**12**	P	**P**	**03 42 17.6**	**+7.7**
	5.1nm,1.0s,mb3.9,baz=196,slow=11,SNR=3.8						
HKT	**Hockley**	**25.52**	**106**	*e*P	**P**	**03 42 38.1**	**+1.6**
	14nm,1.4s,mb4.3						
CN2	**Changchun**	**75.11**	**315**	*e*P	**P**	**03 48 50.2**	**+0.6**
RAO	**Raoul Island**	**85.35**	**225**	LR	LR	04 18 10.7	
	comp=Z,237nm,20.5s,MS4.6,baz=118,slow=29						
GYA	**Guiyang**	**98.16**	**315**	P	**P**	**03 50 46.0**	**+1.2**

*VIE **09** 03:38:37.0±0.3, 44.04N×16.58E, h10km, mb2.7/9, ML2.7/12, Error ellipse: s-maj=2.6km s-min=2.0km az=4.0 58 km N of Split*

*ISCJB **09** 03:38:38.2±0.3, 44.17N±003×16.46E±004, h10km, Error ellipse: s-maj=6.0km s-min=2.1km az=135.4*

*NEIC **09** 03:38:39.4, 44.11N×16.34E, h28km, ML3.1(PDG), After PDG.*

*PDG **09** 03:38:39.4±0.3, 44.11N×16.34E, h28km±2km, ML3.1/9, Error ellipse: s-maj=1.8km s-min=3.8km az=0.0*

*CSEM **09** 03:38:39.0±0.1, 44.27N×16.29E, h10km, ML3.1/9, Error ellipse: s-maj=3.1km s-min=0.8km az=46.0*

ISC 09 03:38:39.4±0.3, 44.17N±003×16.48E±005, h10km, n36, σ1§03/62, 15C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NVLJ	**Novalja**	**1.22**	**289**	*e*Pg		**Pg**	**03 39 00.1**	**-2.8**
NVLJ				Sg		**Sg**	**03 39 17.5**	**-1.2**
NVLJ	**Novalja**	**1.22**	**289**	*e*Pg		**Pg**	**03 39 00.0**	**-2.9**
NVLJ				Sg		**Sg**	**03 39 17.5**	**-1.3**
SISC	**Sisak**	**1.31**	**357**	*e*Pg		**Pg**	**03 39 03.5**	**-1.0**
SISC				Sg		**Sg**	**03 39 21.5**	**+0.1**
SISC	**Sisak**	**1.31**	**357**	*e*Pg		**Pg**	**03 39 03.4**	**-1.1**
SISC				Sg		**Sg**	**03 39 21.5**	**0.0**
STON	**Ston**	**1.57**	**145**	*e*Pn		**Pn**	**03 39 04.2**	**-3.1**
STON				Sn		**Sn**	**03 39 27.8**	**+0.2**
STON	**Ston**	**1.57**	**145**	*e*Pn		**Pn**	**03 39 04.1**	**-3.2**
STON				Sn		**Sn**	**03 39 27.8**	**+0.2**
BOJS	**Bojanci**	**1.60**	**327**	*i* Pn		**Pn**	**03 39 06.8**	**-0.9**
BOJS				*i* Sn		**Sn**	**03 39 28.8**	**+0.4**
GCIS	**Gornji Cirnik**	**1.81**	**341**	*i* Pn		**Pn**	**03 39 09.7**	**-0.8**
BRY	**Bratogost**	**1.96**	**129**	⇓*i* Pn		**Pn**	**03 39 12.9**	**+0.2**
BRY				*e*Sn		**Sn**	**03 39 38.0**	**+0.7**
UPM	**Unac-Piva**	**2.01**	**118**	*e*Pn		**Pn**	**03 39 13.7**	**+0.4**
UPM				*e*Sn		**Sn**	**03 39 39.3**	**+0.8**
HCY	**Herceg Novi**	**2.26**	**139**	⇓*i* Pn		**Pn**	**03 39 16.1**	**-0.7**
HCY				*e*Sn		**Sn**	**03 39 45.2**	**+0.5**
PLE	**Pljevlja**	**2.27**	**111**	⇓*i* Pn		**Pn**	**03 39 17.4**	**+0.5**
PLE				*e*Sn		**Sn**	**03 39 45.9**	**+1.0**
NKY	**Niksic**	**2.28**	**126**	⇑*i* Pn		**Pn**	**03 39 17.2**	**+0.2**
NKY				*e*Sn		**Sn**	**03 39 45.9**	**+0.8**
PKSM	**Moragy**	**2.55**	**36**	⇑*i* P		**Pn**	**03 39 19.9**	**-0.9**
BUM	**Brajici-Budva**	**2.57**	**136**	⇑*i* Pn		**Pn**	**03 39 20.4**	**-0.6**
BUM				*e*Sn		**Sn**	**03 39 52.7**	**+0.4**
VOY	**Vojsko**	**2.62**	**316**	*e*Pn		**Pn**	**03 39 21.8**	**+0.1**
VOY				*e*Sn		**Sn**	**03 39 56.3**	**+2.8**
PDG	**Podgorica**	**2.67**	**130**	⇑*i* Pn		**Pn**	**03 39 22.6**	**+0.2**
PDG				*e*Sn		**Sn**	**03 39 55.6**	**+0.8**
TTG	**Podgorica**	**2.67**	**130**	⇑*i* Pn		**Pn**	**03 39 22.6**	**+0.2**
TTG				*e*Sn		**Sn**	**03 39 55.6**	**+0.8**
OBKA	**Obir**	**2.71**	**330**	⇓*i* Pn		**Pn**	**03 39 22.9**	**-0.1**
OBKA				⇓*i* Sn		**Sn**	**03 39 58.1**	**+2.2**
BEY	**Berane**	**2.80**	**116**	⇓*i* Pn		**Pn**	**03 39 24.2**	**0.0**
BEY				*e*Sn		**Sn**	**03 39 57.8**	**-0.2**
IVA	**Berane**	**2.80**	**116**	⇓*i* Pn		**Pn**	**03 39 24.2**	**0.0**
IVA				*e*Sn		**Sn**	**03 39 57.8**	**-0.2**
PVY	**Plav**	**2.99**	**120**	⇓*i* Pn		**Pn**	**03 39 27.1**	**+0.3**
PVY				*e*Sn		**Sn**	**03 40 02.4**	**-0.3**
ULC	**Ulcinj**	**2.99**	**136**	⇑*i* Pn		**Pn**	**03 39 25.8**	**-1.1**
ULC				*e*Sn		**Sn**	**03 40 02.3**	**-0.5**
ARSA	**Arzberg**	**3.16**	**348**	⇑*i* Pn		**Pn**	**03 39 28.8**	**-0.3**
CONA	**Conrad Observa**	**3.79**	**354**	⇑*i* Pn		**Pn**	**03 39 37.2**	**-0.6**
CONA				⇑*i* Sn		**Sn**	**03 40 24.5**	**+2.2**
CSNA	**Conrad Observa**	**3.79**	**354**	⇑*i* Pn		**Pn**	**03 39 37.5**	**-0.3**
ABTA	**Abfaltersbach**	**3.80**	**314**	⇑*i* Pn		**Pn**	**03 39 37.9**	**-0.1**
ABTA				⇓*i* Sn		**Sn**	**03 40 25.2**	**+2.4**
BZS	**Buzias**	**3.93**	**67**	⇓*i* P		**Pn**	**03 39 43.9**	**+4.2**
BZS	**Buzias**	**3.93**	**67**	S		**Sn**	**03 40 24.6**	**-1.2**
MOA	**Molln**	**3.99**	**338**	⇑*i* Pn		**Pn**	**03 39 40.4**	**-0.2**
WTTA	**Wattenberg**	**4.59**	**314**	⇓*i* Pn		**Pn**	**03 39 48.4**	**-0.5**
WATA	**Walderalm**	**4.67**	**314**	⇓*i* Pn		**Pn**	**03 39 50.1**	**+0.1**
MOTA	**Moosalm**	**4.93**	**312**	⇑*i* Pn		**Pn**	**03 39 53.1**	**-0.3**
MOTA				⇑*i* Sn		**Sn**	**03 40 52.4**	**+1.9**
FETA	**Feichten**	**4.95**	**307**	⇓*i* Pn		**Pn**	**03 39 53.2**	**-0.5**
FETA				⇓*i* Sn		**Sn**	**03 40 53.2**	**+2.3**
VRAC	**Vranov**	**5.14**	**1**	⇑*i* P		**Pn**	**03 39 55.6**	**-0.8**
KHC	**Kasperske Hory**	**5.35**	**339**	*e*PN		**Pn**	**03 39 59.8**	**+0.5**
KHC				*ex*		x	03 40 07.0	
KHC				*e*SN		**Sn**	**03 40 58.6**	**-2.3**

*ISCJB **09** 04:02:27.7±1.0, 3880N±003×2570E±007, h8km±6km, Error ellipse: s-maj=9.4km s-min=4.3km az=162.1*

*ISK **09** 04:02:27.3, 3882N×2574E, h13km, MD3.2*

*CSEM **09** 04:02:27.6±0.1, 3881N×2577E, h15km, ML3.1/1, Error ellipse: s-maj=4.2km s-min=2.0km az=68.0*

*THE **09** 04:02:29.1, 3876N×2589E, h38km±5km, ML3.1/1, Error ellipse: s-maj=5.2km s-min=0.5km az=120.0*

*DDA **09** 04:02:30.4, 3877N×2588E, h5km±4km, Md3.0*

ISC 09 04:02:28.1±1.0, 3881N±003×2569E±007, h12km±5km, n25, σ0§95/41, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOS	**Chios island**	**0.51**	**146**	P		**Pg**	**04 02 38.1**	**+0.1**
CHOS				S		**Sg**	**04 02 44.8**	**+0.1**
PRK	**Paraskevi**	**0.63**	**46**	P		**Pg**	**04 02 40.3**	**-0.1**
PRK				S		**Sg**	**04 02 49.0**	**+0.3**
URLA	**Izmir**	**0.84**	**122**	*i* P		**Pg**	**04 02 44.1**	**-0.1**
URLA				*i* S		**Sg**	**04 02 54.1**	**-1.0**
AYVA	**Ayvalik**	**0.93**	**57**	*i* P		**Pg**	**04 02 46.6**	**+0.7**
AYVA				*i* S		**Sg**	**04 02 58.8**	**+0.8**
BOZC	**Bozcaada**	**1.07**	**15**	*i* P		**Pb**	**04 02 47.5**	**-1.1**
BOZC				*i* S		**Sb**	**04 03 02.4**	**-0.2**
EZN	**Ezine**	**1.13**	**26**	*e*PN		**Pn**	**04 02 48.9**	**-0.9**
EZN				*e*SN		**Sn**	**04 03 04.7**	**-0.4**
BLCB	**Balcova**	**1.14**	**111**	*e*PN		**Pn**	**04 02 49.2**	**-0.6**
BLCB				*e*SN		**Sn**	**04 03 04.7**	**-0.6**
LIA	**Limnos Island**	**1.16**	**340**	P		**Pb**	**04 02 49.8**	**-0.3**
LIA				S		**Sb**	**04 03 06.3**	**+1.2**
IZM	**Izmir**	**1.30**	**108**	*e*PN		**Pn**	**04 02 51.0**	**-1.0**
GADA	**Gvkgeada**	**1.39**	**7**	*e*PN		**Pn**	**04 02 53.2**	**-0.1**
GCAM	**G?zelcaml?**	**1.64**	**132**	*i* P		**Pn**	**04 02 59.7**	**+3.0**
GCAM				*i* S		**Sn**	**04 03 20.4**	**+2.7**
BALY	**Balya**	**1.76**	**57**	*i* P		**Pn**	**04 03 01.1**	**+2.7**
BALY				*i* S		**Sn**	**04 03 24.8**	**+4.1**
BODT	**Bodrum**	**2.16**	**143**	*e*PN		**Pn**	**04 03 03.7**	**-0.2**
MANT	**

CLL				*e*Pg		**Pg**	04 55 03.0	-0.1
CLL				*e*Sg		**Sg**	04 55 28.0	+0.4
CLL	**Collm**	**1.90**	**265**	*e*Pn		**Pn**	04 55 00.0	-0.3
	comp=Z,25nm,0.4s							
CLL				*e*Pg		**Pg**	04 55 03.0	-0.1
CLL				*ex*		x	04 55 07.0	
CLL				*e*Sg		**Sg**	04 55 28.0	+0.4
	comp=Z,46nm,0.6s							
CLL	**Collm**	**1.90**	**265**	Pg		**Pg**	04 55 03.0	-0.1
CLL				Sg		**Sg**	04 55 27.9	+0.3
RAC	**Raciborz**	**2.00**	**135**	*e*Pg		**Pg**	04 55 05.2	+0.2
RAC				*e*Sg		**Sg**	04 55 32.2	+1.3
MORC	**Moravsky Berou**	**2.00**	**150**	*e*Pn		**Pn**	04 55 01.0	-0.7
MORC				*e*Sg		**Sg**	04 55 31.0	+0.1
MORC	**Moravsky Berou**	**2.00**	**150**	*e*Pn		**Pn**	04 55 00.8	-0.9
MORC				*e*Sn		**Sn**	04 55 27.0	-0.5
MORC	**Moravsky Berou**	**2.00**	**150**	*e*Pn		**Pn**	04 55 01.3	-0.5
MORC				*e*Sn		**Sn**	04 55 27.0	-0.4
MORC				Sg		**Sg**	04 55 31.0	0.0
OKC	**Ostrava-Krasne**	**2.17**	**140**	*e*PG		**Pg**	04 55 07.5	-0.7
OKC				*e*SG		**Sg**	04 55 34.9	-1.4
	comp=Z,48nm,0.4s							
VRAC	**Vranov**	**2.25**	**170**	*e*Pn		**Pn**	04 55 05.2	+0.1
VRAC				*e*Sg		**Sg**	04 55 39.2	+0.3
	comp=Z,40nm,0.6s							
KRUC	**Moravsky**	**2.48**	**174**	*e*Pn		**Pn**	04 55 08.9	+0.6
KRUC				*e*Sg		**Sg**	04 55 46.4	+0.2
	comp=Z,58nm,1.0s							
TANN	**Tannenbergstha**	**2.50**	**245**	*e*Pn		**Pn**	04 55 08.9	+0.3
TANN				*e*Sg		**Sg**	04 55 46.2	-0.9
WERD	**Werda**	**2.58**	**247**	*e*Pn		**Pn**	04 55 09.9	+0.3
WERD				*e*Sg		**Sg**	04 55 49.0	-0.5
OJC	**Ojcow**	**2.73**	**117**	*e*Pn		**Pn**	04 55 09.6	-2.2
OJC				*e*Pg		**Pg**	04 55 18.2	-0.9
OJC				*e*Sg		**Sg**	04 55 53.4	-1.0
OJC	**Ojcow**	**2.73**	**117**	*e*Pn		**Pn**	04 55 09.8	-2.0
OJC				*e*Sg		**Sg**	04 55 53.5	-0.9
KHC	**Kasperske Hory**	**2.86**	**214**	*e*PN		**Pn**	04 55 13.4	-0.1
KHC				*e*PG		**Pg**	04 55 19.7	-1.8
KHC				*e*SG		**Sg**	04 55 57.5	-1.0
	comp=Z,17nm,0.3s							
JAVC	**Velka Javorina**	**2.87**	**158**	*e*Pn		**Pn**	04 55 14.5	+0.8
JAVC				*e*Sg		**Sg**	04 56 00.5	+1.6
	comp=Z,39nm,1.0s							
MOX	**Moxa**	**2.91**	**254**	*e*Pn		**Pn**	04 55 14.1	-0.1
MOX				*e*Pg		**Pg**	04 55 22.5	0.0
MOX				*e*Sg		**Sg**	04 55 59.7	-0.4
MOX	**Moxa**	**2.91**	**254**	*e*PN		**Pn**	04 55 14.0	-0.2
MOX				*e*PG		**Pg**	04 55 22.5	0.0
MOX				*e*SG		**Sg**	04 56 01.1	+1.0
MANZ	**Manzenberg**	**2.92**	**240**	*e*Sg		**Sg**	04 55 57.4	-3.0
ROTZ	**Rotzenmuhle**	**2.99**	**236**	*e*Pn		**Pn**	04 55 15.7	+0.3
ROTZ				*e*Sg		**Sg**	04 56 01.1	-1.7
GEC2	**GERESS Array S**	**3.06**	**210**	*e*Pn		**Pn**	04 55 17.5	+1.1
GEC2	**GERESS Array S**	**3.06**	**210**	*e*Pn		**Pn**	04 55 17.5	+1.1
WET	**Wettzell**	**3.11**	**221**	*e*Pn		**Pn**	04 55 17.5	+0.5
WET				*e*Sg		**Sg**	04 56 06.0	-0.8
WET	**Wettzell**	**3.11**	**221**	*e*Pn		**Pn**	04 55 17.5	+0.4
WET				*e*Sg		**Sg**	04 56 06.0	-0.7
WET	**Wettzell**	**3.11**	**221**	Pn		**Pn**	04 55 17.5	+0.4
WET				Sg		**Sg**	04 56 06.0	-0.7
SMOL	**Smolenice**	**3.15**	**163**	*e*PG		**Pg**	04 55 26.7	-0.3
SMOL				*e*SG		**Sg**	04 56 10.4	+2.6
MODS	**Modra-Piesok**	**3.26**	**165**	*e*PN		**Pn**	04 55 19.7	+0.7
MODS				*e*PG		**Pg**	04 55 28.9	-0.2
MODS				*e*SG		**Sg**	04 56 11.6	+0.3
KOLL	**Kolacno**	**3.32**	**151**	*e*PN		**Pn**	04 55 20.4	+0.4
KOLL				*e*PG		**Pg**	04 55 30.6	+0.2
KOLL				*e*SG		**Sg**	04 56 12.7	-0.8
ZST	**Bratislava**	**3.40**	**168**	*e*Sg		**Sg**	04 56 13.7	-2.3
ZST	**Bratislava**	**3.40**	**168**	*e*SG		**Sg**	04 56 13.7	-2.3
NIE	**Niedzica**	**3.46**	**126**	*e*P		**Pn**	04 55 31.2	-1.9
NIE				*e*S		**Sg**	04 56 15.8	-2.1
CLZ	**Clausthal**	**3.52**	**277**	*e*Pn		**Pn**	04 55 23.2	+0.5
CLZ				*e*Sg		**Sg**	04 56 19.3	-0.6
CLZ	**Clausthal**	**3.52**	**277**	*e*Pn		**Pn**	04 55 23.2	+0.5
CLZ				*e*Sg		**Sg**	04 56 19.3	-0.6
VYHS	**Vyhne**	**3.54**	**148**	*e*Pn		**Pn**	04 55 22.6	-0.3
VYHS				*e*Pg		**Pg**	04 55 34.7	+0.2
VYHS				*e*Sg		**Sg**	04 56 18.2	-2.1
VYHS	**Vyhne**	**3.54**	**148**	*e*PN		**Pn**	04 55 22.6	-0.3
VYHS				*e*PG		**Pg**	04 55 34.6	+0.1
VYHS				*e*SG		**Sg**	04 56 18.2	-2.1
GRA1	**Grafenberg Arr**	**3.56**	**241**	Sg		**Sg**	04 56 20.2	-0.8
GRF	**Grafenberg Arr**	**3.56**	**241**	*e*Sg		**Sg**	04 56 20.2	-0.8
CONA	**Conrad Observa**	**3.60**	**182**	⇑*i*Pn		**Pn**	04 55 24.5	+0.8
CONA				⇓*i*Sg		**Sg**	04 56 21.7	-0.6
	comp=Z,38nm,0.4s							
CSNA	**Conrad Observa**	**3.60**	**182**	⇓*i*Pn		**Pn**	04 55 24.4	+0.7
CSNA				⇓*i*Sg		**Sg**	04 56 22.1	-0.2
	comp=Z,35nm,0.4s							
MOA	**Molln**	**3.85**	**198**	⇑*i*Pn		**Pn**	04 55 27.9	+0.8
MOA				⇓*i*Sg		**Sg**	04 56 30.7	+0.4
	comp=Z,25nm,0.5s							
STHS	**Stebnicka Huta**	**3.95**	**120**	*e*PN		**Pn**	04 55 28.7	+0.1
STHS				*e*PG		**Pg**	04 55 42.5	+0.1
STHS				*e*SG		**Sg**	04 56 34.7	+1.1
KECS	**Kecovo**	**4.19**	**135**	*e*PN		**Pn**	04 55 33.4	+1.5
KECS				*e*PG		**Pg**	04 55 51.2	+4.1
KECS				*e*SG		**Sg**	04 56 42.2	+0.8
ARSA	**Arzberg**	**4.29**	**184**	⇓*i*Pn		**Pn**	04 55 34.4	+1.3
ARSA				⇑*i*Sg		**Sg**	04 56 44.9	+0.5
	comp=Z,28nm,0.6s							
KBA	**Koelnbreinsper**	**4.78**	**202**	⇑*i*Pn		**Pn**	04 55 41.0	+1.1
KBA				⇑*i*Sg		**Sg**	04 56 59.5	-0.6
	comp=Z,11nm,0.5s							
KBA	**Koelnbreinsper**	**4.78**	**202**	Pn		**Pn**	04 55 41.0	+1.1
KBA				Sg		**Sg**	04 56 59.5	-0.6
	comp=Z,11nm,0.5s							
KOLS	**Kolonicke sedl**	**4.78**	**120**	*e*PN		**Pn**	04 55 38.9	-1.1
KOLS				*e*PG		**Pg**	04 56 03.6	+5.3

*ISCJB **09** 05:08:57.5±0.9, 38.06N±0.08×698E±0.2, h10km, Error ellipse: s-maj=22.8km s-min=8.9km az=162.7*
*NNC **09** 05:08:57.0±2.0, 37.92N×6.988E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=20.1km s-min=16.0km az=160.0*
ISC 09 05:08:59.6±0.9, 3805N±008×698E±02, h10km, n7, σ0.95, 9, 2C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**4.54**	**158**	P		**Pn**	05 10 09.9	+1.6
CEP				S		**Sg**	05 11 10.0	-15
KK31	**Karatay Array**	**5.08**	**6**	Pn		**Pn**	05 10 16.5	+0.8
	0.9nm,0.3s,baz=200,slow=14,SNR=29							
KK31				Pg		**Pg**	05 10 32.4	-4.4
	6.0nm,0.6s,baz=186,slow=17,SNR=16							
KK31				Lg			05 11 41.1	
	8.3nm,0.4s,baz=192,slow=30,SNR=10							
CHCP	**Chirah Chowk**	**5.19**	**146**	P		**Pn**	05 10 17.5	+0.2
THW	**Thamme Wali**	**5.47**	**163**	P		**Pn**	05 10 19.6	-1.5
TKM2	**Tokmak 2**	**6.56**	**40**	⇓Pn		**Pn**	05 10 35.5	-0.6
	3.9nm,0.7s							
TKM2				⇑Lg			05 12 27.7	
	9.5nm,1.1s							
AB09	**Akbulak array**	**13.29**	**331**	⇓P		**Pn**	05 12 08.7	+0.4
	0.9nm,0.6s							
AKTO	**Aktyubinsk**	**14.98**	**330**	⇑P		**Pn**	05 12 30.5	-0.6
	1.0nm,0.8s							

*ISCJB **09** 05:09:16.3±0.6, 4.03S±0.05×129.26E±0.07, h109km±7km, mb3.7/6, Error ellipse: s-maj=11.4km s-min=7.6km az=178.1*
*DJA **09** 05:09:21, 382S×129.32E, h39km, MLv3.8/5*
*NEIC **09** 05:09:24.7±2.8, 4.23S×129.20E, h178km±30km, mb3.6/2, Error ellipse: s-maj=25.8km s-min=8.6km az=53.0*
*IDC **09** 05:09:25.9±3.5, 4.26S×129.15E, h190km±35km, mb3.3/6, mb1 3.5/9, mb1mx3.4/17, mbtmp3.3/9, MS3.0/1, Ms1 3.0/1, ms1mx1.5/13, Error ellipse: s-maj=32.0km s-min=10.7km az=70.0*
ISC 09 05:09:16.2±0.6, 418S±005×12933E±007, h94km±8km, n21, σ1.930/24, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**0.92**	**334**	P		**Pn**	05 09 34.4	-0.9
AAI	**Ambon**	**1.23**	**293**	P		**Pn**	05 09 40.2	+1.4
AAI	**Ambon**	**1.23**	**293**	S		**Sn**	05 09 55.5	-0.4
AAI	**Ambon**	**1.23**	**293**	P		**Pn**	05 09 40.0	+1.2
AAI	**Ambon**	**1.23**	**293**	S		**Sn**	05 09 55.6	-0.3
SWI	**Sorong**	**3.82**	**30**	P		**Pn**	05 10 14.1	+1.2
SWI	**Sorong**	**3.82**	**30**	S		**Sn**	05 10 55.1	-1.7
KAKA	**Kakadu**	**9.02**	**160**	*e*P		**Pn**	05 11 17.7	-5.9
	2.1nm,0.3s							
KAKA				*e*S		**Sn**	05 12 52.9	-11
KAPI	**Kappang**	**9.58**	**265**	P		**Pn**	05 11 37.4	+6.2
	1.6nm,0.3s,baz=197,slow=18,SNR=6.0							
WRAB	**Tennant Creek**	**16.41**	**163**	*e*Pn		**Pn**	05 13 04.8	+3.9
	1.1nm,0.3s							
WRAB				*e*Sn		**Sn**	05 16 01.5	-1.3
WRA	**Warramunga Arr**	**16.41**	**163**	P		**Pn**	05 13 03.6	+2.7
	0.5nm,0.3s,baz=344,slow=13,SNR=35							
WRA				S		**S**	05 16 02.8	-6.2
	0.2nm,0.3s,baz=348,slow=24,SNR=3.9							
WB2	**Warramunga Arr**	**16.41**	**163**	*e*P		**Pn**	05 13 04.8	+3.8
MBWA	**Marble Bar**	**19.28**	**208**	*e*P		**Pn**	05 13 34.7	-0.9
	0.8nm,0.4s							
ASAR	**Alice Springs**	**19.87**	**168**	P		**Pn**	05 13 43.2	+0.8
	0.6nm,0.3s,baz=351,slow=12,SNR=31							
ASAR				S		**S**	05 17 16.2	-2.5
	0.1nm,0.3s,baz=347,slow=19,SNR=9.1							
CTA	**Charters Tower**	**22.85**	**135**	P		**P**	05 14 12.6	+0.8
	1.3nm,0.5s,mb3.5,baz=309,slow=6.5,SNR=3.1							
STKA	**Stephens Creek**	**29.86**	**159**	P		**P**	05 15 16.6	+1.9
	0.6nm,0.2s,mb3.8,baz=330,slow=8.1,SNR=3.5							
JOW	**Kunigami**	**30.85**	**358**	LR		LR	05 27 55.3	
	comp=Z,25nm,19.8s,baz=331,slow=36							
CMAR	**Chiang Mai Arr**	**37.45**	**308**	P		**P**	05 16 20.4	-0.3
	0.5nm,0.3s,mb3.9,baz=138,slow=8.2,SNR=4.6							
SONM	**Songino Array**	**55.57**	**341**	P		**P**	05 18 42.0	+0.2
	0.3nm,0.3s,mb3.8,baz=175,slow=7.2,SNR=4.4							
PETK	**Petropavlovsk-**	**61.88**	**19**	P		**P**	05 19 26.1	+0.6
	1.9nm,0.9s,mb4.1,baz=170,slow=6.1,SNR=4.5							
MKAR	**Makanchi Array**	**65.52**	**326**	P		**P**	05 19 48.3	-1.2
	0.4nm,0.8s,mb3.3,baz=112,slow=10,SNR=4.1							

*NIED **09** 05:15:00, 40.30N×142.30E, h38km, Mw3.7 Best double couple: M0 3.38000×10^14 NP1:φs317.00000°, δ88.00000°, λ87.00000°. NP2:φs201.00000°, δ4.00000°, λ153.00000°.*
*JMA **09** 05:15:22.8±0.1, 40.29N×142.31E, h39km±1km, M3.8*
JMA Felt I J1.
ISC 09 05:15:23.0±1.5, 4031N±005×1423E±01, h33km±6km, n10, σ0.849/19, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTH	**Tanohata**	**0.50**	**222**	⇓P		**Pb**	05 15 33.4	-0.1
JTH				*e*S		**Sb**	05 15 40.7	-0.1
JANG	**Nango**	**0.60**	**276**	⇓P		**Pn**	05 15 34.9	-0.3
JANG				*e*S		**Sb**	05 15 43.6	+0.1
JKZ	**Kuzumaki**	**0.81**	**247**	⇓P		**Pn**	05 15 38.0	-0.1
JKZ				S		**Sn**	05 15 48.8	-0.1
MIYJ	**Miyakonagasawa**	**0.82**	**207**	⇓P		**Pn**	05 15 37.6	-0.6
MIYJ				*e*S		**Sn**	05 15 48.3	-0.8
JTM	**Tenmabayashi**	**1.05**	**297**	⇓P		**Pn**	05 15 41.2	-0.2
JTM				*e*S		**Sn**	05 15 54.7	-0.2
JOM	**Ohasama**	**1.14**	**223**	⇓P		**Pn**	05 15 42.6	0.0
JOM				*e*S		**Sn**	05 15 57.2	+0.2
JAH	**Hinai**	**1.28**	**265**	⇓P		**Pn**	05 15 44.7	+0.2
JAH				*e*S		**Sn**	05 16 00.7	+0.2
JOT	**Ohata**	**1.43**	**319**	P		**Pn**	05 15 46.5	-0.1
JMK	**Ichinoseki**	**1.59**	**212**	P		**Pn**	05 15 48.8	0.0
JMK				*e*S		**Sn**	05 16 08.4	+0.2
MAT	**Matsushiro**	**4.95**	**222**	P		**Pn**	05 16 36.8	+1.9
MAT				*e*S		**Sn**	05 17 30.9	-0.1

IDC 09 05:18:11.3±3.7, 521S×15075E, h0km, mb3.0/2, mb1 3.4/2, mb1mx3.3/14, mbtmp3.1/2, MS2.7/1, Ms1 2.7/1, ms1mx1.9/10, Error ellipse: s-maj=141.7km s-min=49.9km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**15.43**	**196**	LR		LR	05 26 27.2	
	comp=Z,27nm,18.3s,baz=231,slow=32							
WRA	**Warramunga Arr**	**21.67**	**226**	P		P	05 23 04.3	+0.5
	0.4nm,0.7s,baz=52,slow=10,SNR=5.3							
ASAR	**Alice Springs**	**24.50**	**220**	P		P	05 23 32.3	-0.2
	0.3nm,0.5s,baz=58,slow=9.2,SNR=5.8							
TORD	**Torodi Ar. Bea**	**148.48**	**287**	PKPbc		PKPbc	05 38 00.5	-0.6
	1.0nm,0.7s,baz=74,slow=2.6,SNR=7.5							

*IDC **09** 05:28:05.3±6.0, 36.45N×71.47E, h160km±54km, mb3.4/8, mb1 3.5/12, mb1mx3.4/24, mbtmp3.4/12, Error ellipse: s-maj=29.3km s-min=18.2km az=9.0*
*ISCJB **09** 05:28:06.4±0.3, 36.65N±0.003×71.49E±0.005, h180km±5km, mb3.5/8, Error ellipse: s-maj=6.7km s-min=3.8km az=160.2*
*NEIC **09** 05:28:06.9±0.6, 36.60N×71.46E, h169km±7km, mb4.7/12, Error ellipse: s-maj=8.5km s-min=5.1km az=56.0*
*NNC **09** 05:28:11.1±3.6, 36.98N×71.21E, h177km±34km, mb3.1, mpv4.1, Error ellipse: s-maj=32.2km s-min=21.6km az=28.0*
ISC 09 05:28:07.4±0.3, 3665N±003×7150E±005, h174km±5km, n53, σ1.904/68, mb3.5/8, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**2.84**	**173**	⇑P		**Pn**	05 28 55.2	+1.4
CEP				S		**Sn**	05 29 31.0	+1.1
KBL	**Kabul**	**2.91**	**224**	*e*Pn		**Pn**	05 28 53.6	-0.9
KBL				*e*Sn		**Sn**	05 29 30.5	-0.7
CHCP	**Chirah Chowk**	**3.32**	**154**	P		**Pn**	05 29 02.0	+2.3
THN	**Thein Dam**	**5.46**	**139**	*e*P		**Pn**	05 29 27.5	+0.3
THN				*e*S		**Sn**	05 30 25.5	-4.4
DLH	**Dalhousie**	**5.51**	**137**	*e*P		**Pn**	05 29 29.0	+1.1
DLH				*ex*		x	05 30 33.0	
AML	**Almayashu**	**5.73**	**17**	P		**Pn**	05 29 30.9	+0.3
	SNR=30							
UCH	**Uchtor**	**6.04**	**22**	*e*Pn		**Pn**	05 29 35.1	+0.5
UCH				*e*Sn		**Sn**	05 30 41.0	-2.4
UCH	**Uchtor**	**6.04**	**22**	P		**Sn**	05 30 40.9	-2.4
	SNR=6.1							
EKS2	**Erkin-Say**	**6.25**	**16**	*e*Pn		**Pn**	05 29 37.8	+0.3
	15nm,0.6s							
EKS2				*e*Sn		**Sn**	05 30 46.4	-2.1
EKS2	**Erkin-Say**	**6.25**	**16**	P		**Pn**	05 29 38.0	+0.6
	SNR=19							
KK31	**Karatay Array**	**6.49**	**354**	Pn		**Pn**	05 29 40.3	-0.2
	5.3nm,0.3s,baz=172,slow=12,SNR=225							
KK31				Sn		**Sn**	05 30 49.8	-4.2
	38nm,0.8s,baz=176,slow=22,SNR=11							
KBK	**Karagaybulak**	**6.56**	**23**	P		**Pn**	05 29 43.2	+1.7
	SNR=9.0							
CHMS	**Chumysh**	**6.81**	**21**	P		**Pn**	05 29 45.2	+0.3
	SNR=8.1							
SDNR	**Sundarnagar**	**6.86**	**137**	*e*P		**Pn**	05 29 45.6	0.0
SDNR				*e*S		**Sn**	05 30 59.0	-3.9
USP	**Ospenovka**	**7.00**	**18**	P		**Pn**	05 29 46.7	-0.6
	SNR=10							
TKM2	**Tokmak 2**	**7.01**	**25**	⇓Pn		**Pn**	05 29 47.7	+0.2
	7.2nm,0.5s							
TKM2				⇑Sn		**Sn**	05 31 07.6	+1.2
	6.0nm,0.6s							
TKM2	**Tokmak 2**	**7.01**	**25**	*e*Pn		**Pn**	05 29 47.6	+0.1
	11nm,0.5s							
TKM2	**Tokmak 2**	**7.01**	**25**	P		**Pn**	05 29 47.4	0.0
	SNR=23							
SMLA	**Simla**	**7.25**	**138**	⇑*i*P		**Pn**	05 29 51.4	+0.6
SMLA				*i* S		**Sn**	05 31 08.9	-3.4
SMLA				*ex*		x	05 31 12.5	
	comp=E,963nm,0.4s							
SMLA				*ex*		x	05 31 14.5	
	comp=N,711nm,0.3s							
KLP	**Kalpa**	**7.58**	**130**	*e*P		**Pn**	05 29 55.7	+0.6
KLP				*e*S		**Sn**	05 31 18.6	-1.5
KLP				AML		AML	05 31 24.5	
	comp=N,874nm,0.6s							
KLP				AML		AML	05 31 27.4	
	comp=E,760nm,0.6s							
JOSI	**Joshimath**	**9.06**	**130**	*e*P		**Pn**	05 30 15.1	+0.5
JOSI				*e*S		**Sn**	05 31 50.4	-5.2
JOSI				AML		AML	05 32 00.8	
	comp=N,142nm,0.6s							
JOSI				AML		AML	05 32 02.2	
	comp=E,123nm,0.5s							
KHET	**Khetri**	**9.30**	**156**	*e*P		**Pn**	05 30 15.6	-2.2
KHET				*e*S		**Sn**	05 31 51.9	-9.4
KUDL	**Kundal**	**9.47**	**152**	*e*P		**Pn**	05 30 18.6	-1.4
KUDL				*e*S		**Sn**	05 31 55.1	-10
PYUN	**Piuthan**	**12.92**	**128**	*e*P		**Pn**	05 31 03.1	-1.6
	comp=E,17nm,0.5s							
MKAR	**Makanchi Array**	**12.93**	**35**	P		**Pn**	05 31 05.6	+0.9
	comp=E,0.1nm,0.3s,baz=233,slow=13,SNR=5.1							
DANN	**Dangsing**	**13.24**	**125**	*e*P		**Pn**	05 31 08.2	-0.6
	comp=E,12nm,0.3s							
KOLN	**Koldanda**	**13.53**	**127**	*e*P		**Pn**	05 31 11.8	-0.7
	comp=E,12nm,0.4s							
GKN	**Gorkha**	**14.05**	**124**	*e*P		**Pn**	05 31 18.8	-0.2
	comp=E,38nm,0.6s							
KKN	**Kakani**	**14.62**	**123**	*e*P		**Pn**	05 31 25.9	-0.1
	comp=E,28nm,0.7s							
PKIN	**Phulchoki**	**14.84**	**124**	*e*P		**Pn**	05 31 28.5	-0.2
	comp=E,21nm,0.5s							
PKI	**Pulchoki**	**14.85**	**124**	*e*P		**Pn**	05 31 29.4	+0.5
	comp=E,22nm,0.5s							
GUN	**Gumba**	**14.95**	**122**	*e*P		**Pn**	05 31 30.7	+0.6
	comp=E,13nm,0.4s							
KURK	**Kurchatov**	**14.96**	**18**	P		**Pn**	05 31 26.0	-3.9
AB09	**Akbulak array**	**15.16**	**330**	⇓P		**Pn**	05 31 33.1	+0.6
	comp=E,2.6nm,0.5s							
AB09				⇓S		**S**	05 34 15.8	-5.4
JIRN	**Jiri**	**15.32**	**122**	*e*P		**Pn**	05 31 35.1	+0.4
	comp=E,13nm,0.3s							
RAMN	**Ramite**	**16.06**	**123**	*e*P		**Pn**	05 31 43.8	+0.2
	comp=E,22nm,0.6s							
VOSK	**Vostochnaya**	**16.07**	**359**	⇑P		**Pn**	05 31 42.4	-1.1
	comp=E,4.9nm,0.8s							
BVAR	**Borovoye Array**	**16.39**	**358**	P		**Pn**	05 31 46.8	-0.5
	comp=E,0.5nm,0.3s,baz=170,slow=14,SNR=7.9							
TAPN	**Taplejung**	**16.57**	**119**	*e*P		**Pn**	05 31 51.2	+1.4
	comp=E,24nm,0.5s							
ODAN	**Odare**	**16.65**	**121**	*e*P		**Pn**	05 31 51.5	+0.7
	comp=E,19nm,0.6s							
AKTK	**Aktyubinsk**	**16.85**	**329**	P		**Pn**	05 31 52.7	-0.2
AKTO	**Aktyubinsk**	**16.85**	**329**	⇓P		**Pn**	05 31 51.7	-1.2
	comp=E,0.8nm,0.7s							
AKTO				⇑S		**S**	05 34 53.6	-5.3
AKTO	**Aktyubinsk**	**16.85**	**329**	P		**Pn**	05 31 52.7	-0.2
	comp=E,1.2nm,0.3s,baz=133,slow=12,SNR=13							
ZALV	**Zalesovo Beam**	**19.61**	**24**	P		**P**	05 32 22.9	+0.7
	comp=E,0.6nm,0.3s,baz=211,slow=11,SNR=7.7							
BRTR	**Keskin Array B**	**29.77**	**288**	P		**P**	05 33 59.2	+1.7
	comp=E,0.6nm,0.6s,mb3.5,baz=94,slow=9.6,SNR=3.2							
AKASG	**Malin Array Be**	**33.16**	**309**	P		**P**	05 34 27.1	+0.1
	comp=E,0.9nm,0.4s,mb3.9,baz=81,slow=7.2,SNR=5.0							
ARCES	**ARCESS Array B**	**41.16**	**337**	P		**P**	05 35 35.0	+0.9
	comp=E,0.8nm,0.5s,mb3.6,baz=108,slow=8.6,SNR=12							
NB2	**NORSAR Subarra**	**44.50**	**323**	P		**P**	05 36 01.0	-0.1
	comp=Z,1.8nm,0.5s,mb4.0,baz=95,slow=7.9							
NOA	**NORSAR Array B**	**44.50**	**323**	P		**P**	05 36 01.4	+0.3
	comp=Z,2.4nm,0.5s,mb4.1,baz=96,slow=7.7,SNR=7.6							
TORD	**Torodi Ar. Bea**	**66.12**	**269**	P		**P**	05 38 34.3	-1.9
	comp=Z,1.2nm,0.5s,mb4.0,baz=48,slow=5.8,SNR=18							
YKA	**Yellowknife Ar**	**81.08**	**3**	P		**P**	05 40 03.1	+0.5
	comp=Z,1.1nm,0.8s,mb3.6,baz=349,slow=5.7,SNR=2.4							
WRA	**Warramunga Arr**	**81.73**	**122**	P		**P**	05 40 05.9	-0.8
	comp=Z,0.1nm,0.5s,mb2.8,baz=320,slow=4.8,SNR=4.7							
ASAR	**Alice Springs**	**84.01**	**125**	P		**P**	05 40 18.0	-0.3
	comp=Z,0.1nm,0.3s,mb3.0,baz=319,slow=5.1,SNR=5.2							

*IDC **09** 05:30:21.5±1.5, 108N×12652E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=55.4km s-min=25.0km az=67.0*
*NEIC **09** 05:30:26.9±1.4, 0.95N×12651E, h35km, mb3.8/1, Error ellipse: s-maj=28.5km s-min=17.9km az=50.0*
*ISCJB **09** 05:30:28.7±0.9, 1.1N±0.2×126.54E±0.09, h72km±8km, mb3.6/4, Error ellipse: s-maj=28.3km s-min=

0.5nm,0.7s,mb3.4,baz=341,slow=4.9,SNR=15
ULM Lac du Bonnet 43.04 340 LR LR 06 34 32.6
comp=Z,72nm,19.9s,MS3.6,baz=17,slow=37
PDAR Pinedale Array 44.00 323 P **P** **06 16 07.7 +0.4**
1.4nm,1.0s,mb3.6,baz=116,slow=10,SNR=6.4
PDAR pP pP 06 16 15.9 -0.3
2.9nm,0.9s,baz=122,slow=9.9,SNR=16
LOHW Long Hollow 45.11 323 P **P** **06 16 17.4 +1.2**
8.9nm,1.1s,mb4.5
SNOW Snow King Moun 45.12 323 *e*P **P** **06 16 17.9 +1.7**
13nm,1.0s,mb4.7
REDW Red Top Meadow 45.12 323 *e*P **P** **06 16 17.2 +0.9**
23nm,1.1s,mb4.9
MOOW Moose Ponds 45.28 323 P **P** **06 16 18.1 +0.6**
5.9nm,0.9s,mb4.4
MCMT McKenzie Canyo 47.13 323 *e*P **P** **06 16 33.8 +1.7**
NVAR Mina Array Bea 47.66 313 P **P** **06 16 37.1 +0.8**
0.1nm,0.3s,mb3.3,baz=184,slow=6.1,SNR=2.7
NVAR pP pP 06 16 45.5 +0.2
1.0nm,0.7s,baz=120,slow=7.3,SNR=8.0
PLCA Paso Flores 51.44 176 P **P** **06 17 05.4 +0.5**
3.6nm,1.0s,mb4.3,baz=354,slow=10,SNR=4.9
YKA Yellowknife Ar 59.02 340 LR LR 06 43 49.1
comp=Z,38nm,18.0s,MS3.6,baz=195,slow=36
DBIC Dimbokro 68.95 87 P **P** **06 19 05.4 -0.2**
1.0nm,0.4s,mb4.1,baz=249,slow=8.6,SNR=3.3
TORD Torodi Ar. Bea 74.42 79 P **P** **06 19 38.6 +0.1**
1.1nm,0.8s,mb3.8,baz=287,slow=5.6,SNR=11
ASAR Alice Springs 149.99 241 PKPbc PKPbc 06 27 50.2 -0.7
1.2nm,0.6s,baz=114,slow=3.3,SNR=13
WRA Warramunga Arr 150.69 248 PKPbc PKPbc 06 27 52.0 -0.7
0.5nm,0.5s,baz=101,slow=2.4,SNR=8.9
WRA pPKPbc pPKPbc 06 28 01.9 -0.7
2.1nm,1.0s,baz=108,slow=1.9,SNR=7.9

IDC 09 06:08:13.8±11.0, 951S×16169E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/16, mbtmp4.0/4, Error ellipse: s-maj=349.2km s-min=35.5km az=118.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**28.36**	**245**	*e*P	P	06 14 09.8	0.0
WRA	**Warramunga Arr**	**28.37**	**245**	P	P	06 14 10.2	+0.2
	2.8nm,0.5s,baz=76,slow=9.2,SNR=63						
ASAR	**Alice Springs**	**39.00**	**231**	P	P	06 14 24.8	0.0
	0.8nm,0.5s,baz=63,slow=9.8,SNR=14						
SONM	**Songino Array**	**75.10**	**325**	P	P	06 19 59.2	+1.6
	0.9nm,0.7s,baz=117,slow=5.0,SNR=5.4						
MKAR	**Makanchi Array**	**89.69**	**318**	P	P	06 21 12.0	-1.9
	0.5nm,0.6s,baz=94,slow=5.9,SNR=4.0						

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*ATH **09** 06:12:31.7, 3906N×2522E, h45km, MD3.0/3*
*ISCJB **09** 06:12:34.0±2.6, 3878N±005×256E±02, h2km±23km, Error ellipse: s-maj=22.2km s-min=7.9km az=175.0*
*CSEM **09** 06:12:35.7±0.2, 3874N×2593E, h31km±2km, MD3.0, Error ellipse: s-maj=13.6km s-min=4.0km az=94.0*
*THE **09** 06:12:36.5, 3878N×2576E, h15km±3km, Error ellipse: s-maj=4.6km s-min=0.4km az=99.0*

ISC 09 06:12:34.8±1.4, 3878N±005×256E±01, h8km±12km, n15, σ0 72/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.55**	**136**	P	**Pg**	**06 12 45.6**	**+0.2**
CHOS				S	**Sg**	**06 12 52.4**	**-0.2**
PRK	**Paraskevi**	**0.71**	**49**	*e*P	**Pg**	**06 12 48.3**	**-0.3**
PRK				*e*S	**Sg**	**06 12 59.6**	**+1.7**
PRK	**Paraskevi**	**0.71**	**49**	P	**Pg**	**06 12 48.2**	**-0.4**
PRK				S	**Sg**	**06 12 57.3**	**-0.6**
LIA	**Limnos Island**	**1.15**	**345**	P	**Pg**	**06 12 57.5**	**+0.5**
SMG	**Samos**	**1.46**	**137**	*e*P	**Pn**	**06 13 02.8**	**+1.3**
APE	**Apeiranthos**	**1.71**	**181**	*e*P	**Pn**	**06 13 03.9**	**-1.0**
ALN	**Alexandroupoli**	**2.14**	**10**	P	**Pn**	**06 13 10.5**	**-0.3**

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*IDC **09** 06:36:01.9±0.8, 5439N×16898E, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/23, mbtmp3.7/9, ML3.5/1, Error ellipse: s-maj=33.4km s-min=18.6km az=165.0*
*MOS **09** 06:36:04.4±1.3, 5420N×16884E, h32km, mb4.5/2, Error ellipse: s-maj=36.1km s-min=20.0km az=12.4*
*KRSC **09** 06:36:07.0±1.8, 5398N×16823E, h21km±20km, ML4.2*
*ISCJB **09** 06:36:10.2±1.3, 5399N±006×16810E±0.10, h47km±13km, mb3.7/8, Error ellipse: s-maj=10.5km s-min=9.5km az=24.6*

ISC 09 06:36:11.3±1.2, 5400N±007×1682E±01, h45km±12km, n28, σ0 94/44, mb3.7/8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**3.82**	**308**	*e*P	**Pn**	**06 37 05.5**	**-2.0**
KBTR				*e*S	**Sn**	**06 37 48.6**	**-2.5**
MKZ	**Mys Kozlova**	**3.85**	**281**	*e*P	**Pn**	**06 37 07.4**	**-0.6**
MKZ				*e*S	**Sn**	**06 37 51.0**	**-1.0**
SMKR	**Semkarok**	**4.65**	**307**	*e*P	**Pn**	**06 37 18.1**	**-0.9**
SMKR				*e*S	**Sn**	**06 38 10.6**	**-1.0**
ZLN	**Zelenaya**	**4.73**	**298**	*e*P	**Pn**	**06 37 20.0**	**0.0**
ZLN				*e*S	**Sn**	**06 38 13.3**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**4.76**	**297**	*e*P	**Pn**	**06 37 20.3**	**-0.1**
BZGR				*e*S	**Sn**	**06 38 14.2**	**0.0**
TUMR	**Tumrok**	**4.87**	**289**	*e*P	**Pn**	**06 37 22.6**	**+0.6**
TUMR				*e*S	**Sn**	**06 38 18.0**	**+1.0**
KRSR	**Krestovskiy**	**4.93**	**300**	*e*P	**Pn**	**06 37 23.4**	**+0.6**
KRSR				*e*S	**Sn**	**06 38 19.3**	**+0.8**
KMNR	**Kamenistaya**	**4.94**	**294**	*e*P	**Pn**	**06 37 23.2**	**+0.3**
KMNR				*e*S	**Sn**	**06 38 19.2**	**+0.4**
KIRR	**Kirishev**	**4.95**	**296**	*e*S	**Sn**	**06 38 22.1**	**+3.2**
SPN	**Mys Shipunski**	**4.98**	**263**	*e*P	**Pn**	**06 37 23.1**	**-0.4**
SPN				*e*S	**Sn**	**06 38 18.8**	**-0.9**
KPT	**Kopyto**	**5.02**	**296**	*e*P	**Pn**	**06 37 24.0**	**0.0**
KPT				*e*S	**Sn**	**06 38 20.5**	**-0.1**
KII	**Karymskiy**	**5.18**	**274**	*e*P	**Pn**	**06 37 26.6**	**+0.4**
KII				*e*S	**Sn**	**06 38 25.0**	**+0.3**
NLC	**Nalytchevo**	**5.36**	**265**	*e*P	**Pn**	**06 37 28.3**	**-0.4**
NLC				*e*S	**Sn**	**06 38 28.0**	**-1.1**
SRDR	**Sredinnyy**	**5.41**	**299**	*e*P	**Pn**	**06 37 31.3**	**+2.0**
SRDR				*e*S	**Sn**	**06 38 33.4**	**+3.2**
SDLR	**Sedlovina**	**5.61**	**266**	*e*P	**Pn**	**06 37 32.3**	**+0.2**
SDLR				*e*S	**Sn**	**06 38 35.3**	**+0.1**
RUS	**Russkaya**	**6.05**	**259**	*e*S	**Sn**	**06 38 45.0**	**-1.0**
GNL	**Ganaly**	**6.10**	**271**	*e*P	**Pn**	**06 37 39.8**	**+1.0**
GNL				*e*S	**Sn**	**06 38 48.2**	**+0.9**
PETK	**Petropavlovsk-**	**6.34**	**266**	Pn	**Pn**	**06 37 43.4**	**+1.2**
	0.9nm,0.3s,baz=252,slow=11,SNR=18						
PETK				Sn	**Sn**	**06 38 58.3**	**+5.1**
	0.5nm,0.3s,baz=76,slow=16,SNR=3.2						
SONM	**Songino Array**	**38.36**	**287**	P	**P**	**06 43 27.4**	**-0.2**
	0.4nm,0.6s,mb3.3,baz=60,slow=8.8,SNR=3.8						
NVAR	**Mina Array Bea**	**50.83**	**76**	P	**P**	**06 44 59.9**	**-7.2**
	0.3nm,0.6s,mb3.4,baz=298,slow=6.1,SNR=3.0						
PDAR	**Pinedale Array**	**52.77**	**66**	P	**P**	**06 45 14.9**	**-6.6**
	0.4nm,0.7s,mb3.5,baz=322,slow=3.6,SNR=4.4						
ARCES	**ARCESS Array B**	**53.82**	**345**	P	**P**	**06 45 22.9**	**-6.0**
	1.5nm,0.9s,mb3.9,baz=24,slow=8.9,SNR=3.5						
ARCES	**ARCESS Array B**	**53.82**	**345**	P	**P**	**06 45 22.9**	**-6.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**63.12**	**265**	P	**P**	**06 46 34.9**	**+0.6**
	comp=Z,1.4nm,0.3s,mb4.5,baz=32,slow=7.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**63.12**	**265**	P	**P**	**06 46 34.9**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**65.76**	**73**	P	**P**	**06 46 45.5**	**-6.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=300,slow=4.4,SNR=8.0						
WRA	**Warramunga Arr**	**79.20**	**212**	P	**P**	**06 48 10.6**	**-0.8**
	comp=Z,0.4nm,1.0s,mb3.3,baz=34,slow=6.7,SNR=4.9						
ASAR	**Alice Springs**	**82.83**	**211**	P	**P**	**06 48 30.9**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.8,baz=13,slow=4.8,SNR=10						

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*IDC **09** 06:54:01.6±0.5, 6495×10456E, h0km, mb4.5/21, mb1 4.6/23, mb1mx4.6/26, mbtmp4.5/23, MS4.4/14, Ms1 4.4/14, ms1mx4.1/27, Error ellipse: s-maj=16.7km s-min=11.4km az=47.0*
*ISCJB **09** 06:54:05.8±0.2, 6635±004×10434E±003, h37km, mb4.8/69, MS4.5/24, Error ellipse: s-maj=5.9km s-min=3.6km az=30.5*
*MOS **09** 06:54:05.1±1.0, 6425×10461E, h34km, mb5.1/20, Error ellipse: s-maj=14.5km s-min=7.2km az=115.4*
*NEIC **09** 06:54:07.1±0.2, 6515×10456E, h35km, mb5.1/22, Error ellipse: s-maj=8.1km s-min=5.0km az=48.0*
NEIC Felt [III] at Pandeglang.
*GCMT **09** 06:54:07.1±0.2, 6765×10450E, h34km±1km, MW5.2/71, Moment Tensor Solution. s47,c69; s71,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.14±.17; $M_{\theta\theta}$-2.97±.13; $M_{\phi\phi}$2.83±.19; $M_{r\theta}$1.91±.20; $M_{r\phi}$5.44±.13; $M_{\theta\phi}$1.59±.24; Best double couple: M_o6.63000×10^{16} NP1:ϕ344.00000°,δ71.00000°,λ172.00000°. NP2: ϕ77.00000°,δ82.00000°,λ19.00000°. Principal axes: T 6.9130, Plg19.0000°, Azm302.0000°; N -0.5710, Plg69.0000°, Azm99.0000°; P -6.3460, Plg8.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **09** 06:54:07.0, 6505×10460E, h35km, mB5.0, mb4.9, Ms4.9, Msz4.6*
*DJA **09** 06:54:07, 6675×10431E, h17km, Mw5.5/14*

ISC 09 06:54:08.0±0.2, 6625±004×10436E±003, h39km, h39km±2.0km: pP-P, n189, σ1 9 27/181, mb4.8/69, MS4.5/24, 5C-3D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**1.52**	**36**	P	**Pn**	**06 54 33.4**	**+0.6**
KLI	**Kotabumi**	**1.81**	**16**	P	**Pn**	**06 54 38.8**	**+2.1**
SBJI	**Serang**	**1.83**	**75**	P	**Pn**	**06 54 35.9**	**-1.1**
SKJI	**Sukabumi**	**2.22**	**100**	P	**Pn**	**06 54 46.6**	**+4.3**
TNG	**Tangerang**	**2.32**	**79**	P	**Pn**	**06 54 43.6**	**-0.1**
CBJI	**Citeko**	**2.48**	**86**	P	**Pn**	**06 54 47.1**	**+1.1**
LEM	**Lembang**	**3.25**	**94**	P	**Pn**	**06 54 57.5**	**+1.0**
KSI	**Kapahiang**	**3.43**	**329**	P	**Pn**	**06 55 00.9**	**+1.9**
JCJI	**Jatiwangi**	**3.89**	**88**	P	**Pn**	**06 55 11.2**	**+5.9**
XMIS	**Christmas Isla**	**4.05**	**162**	*e*Pn	**Pn**	**06 55 01.4**	**-6.2**
XMIS				*e*Sn	**Sn**	**06 55 41.0**	**-13**
XMIS	**Christmas Isla**	**4.05**	**162**	P	**Pn**	**06 55 07.3**	**-0.2**
PPBI	**Pangkal Pinang**	**4.77**	**22**	P	**Pn**	**06 55 18.8**	**+1.4**
BJII	**Banjamegara**	**5.36**	**98**	P	**Pn**	**06 55 26.9**	**+1.3**
UGM	**Wanagama**	**6.25**	**102**	P	**Pn**	**06 55 38.5**	**+0.7**
	672nm,0.7s,8μm2.6nm						
RGRI	**Rengat**	**6.54**	**342**	P	**Pn**	**06 55 48.7**	**+6.9**
PDSI	**Padang**	**6.87**	**325**	P	**Pn**	**06 55 46.4**	**+0.1**
	410nm,1.0s,8μm3.4nm						
PPI	**Padang Panjang**	**7.28**	**327**	P	**Pn**	**06 55 52.5**	**+0.5**
	288nm,1.0s,3μm2.2nm						
SJI	**Sawahan**	**7.44**	**99**	P	**Pn**	**06 55 55.4**	**+1.3**
KRKI	**Karangkates**	**8.17**	**101**	P	**Pn**	**06 56 04.6**	**+0.4**
COCO	**West Island**	**9.26**	**233**	*e*Pn	**Pn**	**06 56 18.5**	**-0.6**
COCO				*e*Sn	**Sn**	**06 57 46.5**	**-16**
COCO	**West Island**	**9.26**	**233**	P	**Pn**	**06 56 18.7**	**-0.4**
	260nm,1.2s						
KMMI	**Kalianget**	**9.55**	**93**	P	**Pn**	**06 56 25.1**	**+2.0**
	173nm,1.5s,2μm						
NBBI	**Negara**	**10.32**	**100**	P	**Pn**	**06 56 35.1**	**+1.4**
	670nm,0.6s,7μm						
BBKI	**Banjar Baru**	**10.90**	**74**	P	**Pn**	**06 56 44.3**	**+2.7**
	101nm,1.4s,3μm						
DNP	**Denpasar**	**10.95**	**101**	P	**Pn**	**06 56 41.7**	**-0.6**
	885nm,1.1s						
KHKI	**Kahang-Kahang**	**11.29**	**100**	P	**Pn**	**06 56 44.5**	**-2.4**
BSI	**Banda Aceh**	**15.05**	**323**	P	**Pn**	**06 57 44.2**	**+6.1**
KAPI	**Kappang**	**15.40**	**85**	Pn	**Pn**	**06 57 37.1**	**-5.6**
	0.3nm,0.3s,baz=252,slow=20,SNR=2.4						
KAPI				LR	LR	07 04 03.9	
	comp=Z,1μm,21.9s,baz=89,slow=40						
KAPI	**Kappang**	**15.40**	**85**	P	**Pn**	**06 57 43.5**	**+0.8**
	47nm,1.7s,876nm						
PCI	**Palu**	**16.45**	**70**	P	**Pn**	**06 57 58.9**	**+2.8**
	238nm,1.5s,3μm						
BATI	**Baumata**	**19.43**	**102**	P	**Pn**	**06 58 27.6**	**-5.1**
	27nm,0.3s,baz=349,slow=2.5,SNR=17						
BATI				S	**S**	**07 01 53.0**	**-16**
	4.7nm,0.3s,baz=311,slow=20,SNR=2.6						
BATI	**Baumata**	**19.43**	**102**	P	**Pn**	**06 58 31.4**	**-1.3**
	144nm,0.9s,2μm						
MBWA	**Marble Bar**	**20.75**	**136**	*e*Pn	**P**	**06 58 45.3**	**-0.3**
	27nm,0.7s						
MBWA				*e*S	**S**	**07 02 19.5**	**-16**
MBWA	**Marble Bar**	**20.75**	**136**	P	**P**	**06 58 48.2**	**+2.6**
	62nm,1.1s						
LBMI	**Labuha**	**23.84**	**77**	P	**P**	**06 59 19.4**	**+1.5**
	149nm,1.0s,2μm,mb5.4						
BDT	**Bhumibol Dam**	**24.29**	**347**	P	**P**	**06 59 21.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**25.48**	**348**	P	**P**	**06 59 30.5**	**-2.2**
	8.0nm,0.8s,mb4.3,baz=182,slow=8.4,SNR=27						
CMAR				LR	LR	07 10 13.5	
	comp=Z,669nm,19.4s,MS4.2,baz=180,slow=38						
CHG	**Chiang Mai**	**25.82**	**348**	↓P	**P**	**06 59 35.1**	**-0.8**
	15nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**25.82**	**348**	*e*P	**P**	**06 59 34.0**	**-1.8**
	9.3nm,0.7s,mb4.4						
CHTO	**Chiang Mai**	**25.82**	**348**	*e*P	**P**	**06 59 34.0**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
QIZ	**Qiongzhong**	**26.05**	**12**	P	**P**	**06 59 39.5**	**+1.6**
QIZ				AP	pP	06 59 48.3	-0.3
QIZ				S	**S**	**07 04 11.1**	**+4.6**
QIZ				LR	LR		
	comp=E,2μm,19.1s						
QIZ				LR	LR		
	comp=Z,1μm,18.4s,MS4.5						
KAKA	**Kakadu**	**28.32**	**104**	*e*P	**P**	**06 59 45.5**	**-13**
	comp=Z,32nm,0.6s,mb5.1						
NWAO	**Narrogin (SRO)**	**28.79**	**157**	LR	LR	07 09 53.8	
	comp=Z,498nm,20.6s,MS4.1,baz=148,slow=33						
KMI	**Kunming**	**31.59**	**357**	P	**P**	**07 00 31.2**	**+4.1**
KMI				AP	pP	07 00 41.2	+3.2
KMI				XP	sP	07 00 45.4	+2.8
KMI				PP	PP	07 01 37.6	-1.4
KMI				S	**S**	**07 05 38.6**	**+5.2**
KMI				XS	sS	07 05 55.7	+4.3
KMI				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.0						
KMI				AMB	AMB		
	comp=Z,95nm,3.5s						
KMI				LR	LR		
	comp=N,902nm,16.7s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,18.7s,MS5.0						
KMI				LR	LR		
	comp=Z,1μm,14.7s,MS4.7						
WRA	**Warramunga Arr**	**31.97**	**117**	P	**P**	**07 00 29.0**	**-1.6**
	comp=Z,17nm,0.7s,mb5.0,baz=290,slow=10,SNR=185						
WRA				LR	LR	07 14 01.3	
	comp=Z,325nm,20.2s,MS4.0,baz=305,slow=38						
WRAB	**Tennant Creek**	**31.98**	**117**	*e*P	**P**	**07 00 28.3**	**-2.4**
	comp=Z,36nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**31.98**	**117**	*c iP*	**P**	**07 00 29.2**	**-1.5**
WB2	**Warramunga Arr**	**31.98**	**117**	*e*P	**P**	**07 00 29.1**	**-1.6**
GYA	**Guiyang**	**32.95**	**4**	P	**P**	**07 00 40.7**	**+1.6**
GYA				AP	pP	07 00 52.4	+2.5
GYA				XP	sP	07 00 55.7	+1.1
GYA				PP	PP	07 01 52.0	-2.2
GYA				PCP	PcP	07 03 25.0	+2.2
GYA				S	**S**	**07 05 57.9**	**+3.2**
GYA				XS	sS	07 06 11.2	-1.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,150nm,6.9s						
GYA				LR	LR		
	comp=N,550nm,15.9s,MS4.8						
GYA				LR	LR		
	comp=E,1μm,16.2s,MS4.8						
GYA				LR	LR		
	comp=Z,730nm,12.6s,MS4.6						
ASAR	**Alice Springs**	**33.06**	**124**	P	**P**	**07 00 39.1**	**-1.1**
	comp=Z,3.8nm,0.7s,mb4.4,baz=305,slow=8.3,SNR=22						
ASAR				S	**S**	**07 05 56.5**	**-0.1**
	comp=Z,1.5nm,1.1s,baz=306,slow=7.9,SNR=3.0						
SHL	**Shillong**	**34.21**	**340**	*e*P	**P**	**07 00 49.7**	**-0.4**
SHL				*ex*	x	07 06 11.5	
HYB	**Hyderabad**	**34.93**	**313**	*e*P	**P**	**07 00 57.5**	**+1.1**
HYB	**Hyderabad**	**34.93**	**313**	*i* P	**P**	**07 00 57.5**	**+1.1**
HYB				*e*		07 01 11.5	
ODAN	**Odare**	**37.12**	**334**	*e*P	**P**	**07 01 14.0**	**-1.0**
CD2	**Chengdu**	**37.31**	**359**	*e*P	**P**	**07 01 17.9**	**+1.3**
CD2				AP	pP	07 01 27.6	0.0
CD2				XP	sP	07 01 31.6	-0.6
CD2				PP	PP	07 02 45.4	+3.1
CD2				XS	sS	07 07 18.5	-1.4
CD2				SS	SS	07 09 33.6	-13
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,180nm,12.6s,MS4.2						
CD2				LR	LR		
	comp=E,210nm,14.2s,MS4.2						
CD2				LR	LR		
	comp=Z,150nm,16.2s,MS3.9						
TAPN	**Taplejung**	**37.41**	**335**	*e*P	**P**	**07 01 17.2**	**-0.3**
	comp=Z,60nm,0.9s,mb5.4						
RAMN	**Ramite**	**37.54**	**333**	*e*P	**P**	**07 01 18.5**	**-0.1**
	comp=Z,46nm,1.0s,mb5.2						
KAD	**Karad**	**38.13**	**309**	*i* P	**P**	**07 01 25.3**	**+1.6**
WHN	**Wuhan**	**38.17**	**14**	P	**P**	**07 01 27.3**	**+3.5**
WHN				LR	LR		
	comp=N,1μm,19.0s						
WHN				LR	LR		
	comp=E,635nm,11.1s						
WHN				LR	LR		
	comp=Z,1μm,19.5s,MS4.8						
JIRN	**Jiri**	**38.33**	**334**	*e*P	**P**	**07 01 25.2**	**-0.1**
PKI	**Pulchoki**	**38.61**	**332**	*e*P	**P**	**07 01 27.4**	**-0.2**
	comp=Z,29nm,0.8s,mb5.0						
PKI	**Pulchoki**	**38.61**	**332**	*e*P	**P**	**07 01 27.4**	**-0.2**
PKI				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.1						
PKIN	**Phulchoki**	**38.62**	**332**	*e*P	**P**	**07 01 27.2**	**-0.5**
GUN	**Gumba**	**38.69**	**333**	*e*P	**P**	**07 01 28.2**	**-0.1**
DMN	**Daman**	**38.78**	**332**	*e*P	**P**	**07 01 29.1**	**0.0**
	comp=Z,39nm,0.9s,mb5.1						
COEN	**Coen**	**38.84**	**104**	*e*P	**P**	**07 01 28.3**	**-1.5**
	comp=Z,6.7nm,0.4s,mb4.7						
KKN	**Kakani**	**38.86**	**333**	*e*P	**P**	**07 01 29.1**	**-0.6**
	comp=Z,54nm,0.8s,mb5.3						
KKN	**Kakani**	**38.86**	**333**	*e*P	**P**	**07 01 29.1**	**-0.6**
KKN				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.3						
POO	**Poona**	**39.11**	**310**	↓*iP*	**P**	**07 01 32.0**	**+0.1**
	comp=Z,60nm,1.0s,mb5.3						
POO				*ex*	x	07 20 21.0	
GKN	**Gorkha**	**39.33**	**332**	*e*P	**P**	**07 01 33.0**	**-0.7**
KOLN	**Koldanda**	**39.63**	**331**	*e*P	**P**	**07 01 36.0**	**-0.2**
	comp=Z,52nm,0.7s,mb5.4						
DANN	**Dangsing**	**40.04**	**331**	*e*P	**P**	**07 01 39.3**	**-0.3**
	comp=Z,121nm,0.8s,mb5.7						
PYUN	**Piuthan**	**40.21**	**330**	*e*P	**P**	**07 01 41.0**	**+0.1**
	comp=Z,28nm,0.6s,mb5.2						
XAN	**Xi'an**	**40.66**	**6**	P	**P**	**07 01 44.3**	**-0.3**
XAN				AP	pP	07 01 50.7	-4.9
XAN				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.1						
XAN				AMB	AMB		
	comp=Z,66nm,5.2s						
XAN				LR	LR		
	comp=E,783nm,26.5s						
XAN				LR	LR		
	comp=Z,1μm,18.2s						
PMG	**Port Moresby**	**42.46**	**97**	*e*P	**P**	**07 01 57.7**	**-2.0**
PMG	**Port Moresby**	**42.46**	**97**	P	**P**	**07 01 58.1**	**-1.6**
	comp=Z,68nm,1.3s,comp=Z,724nm,mb5.1						
LZH	**Lanzhou**	**42.48**	**359**	*e*P	**P**	**07 02 03.2**	**+3.8**
LZH				AP	pP	07 02 14.0	+3.5
LZH				XP	sP	07 02 19.3	+4.2
LZH				PP	PP	07 03 43.4	+4.9
LZH				*e*S	**S**	**07 08 25.0**	**+6.2**
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,90nm,7.6s						
LZH				LR	LR		
	comp=E,780nm,13.2s						
LZH				LR	LR		
	comp=Z,858nm,15.4s,MS4.8						
LZH	**Lanzhou**	**42.48**	**359**	*e*P	**P**	**07 02 03.2**	**+3.8**
LZH				pP	pP	07 02 14.0	+3.5
LZH				sP	sP	07 02 19.3	+4.2
LZH				PP	PP	07 03 43.4	+4.9
LZH				*e*S	**S**	**07 08 25.0**	**+6.2**
LZH				sS	sS	07 08 42.0	+4.8
LZH				SS	SS	07 11 29.0	-0.5
LZH	**Lanzhou**	**42.48**	**359**	*e*P	**P**	**07 02 03.2**	**+3.8**
LZH				*PP	pP	07 02 14.0	+3.5
LZH				*SP	sP	07 02 19.3	+4.2
LZH						07 03 43.4	
LZH				*eS	**S**	**07 08 25.0**	**+6.2**
LZH				*SS	sS	07 08 42.0	+4.8
CTA	**Charters Tower**	**42.77**	**112**	P	**P**	**07 02 00.3**	**-1.8**
	comp=Z,4.0nm,0.8s,mb4.2,baz=247,slow=7.7,SNR=2.4						
STKA	**Stephens Creek**	**42.86**	**131**	*e*P	**P**	**07 02 02.0**	**-0.7**
	comp=Z,29nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**42.86**	**131**	P	**P**	**07 02 01.6**	**-1.1**
	comp=Z,10nm,0.7s,mb4.7,baz=302,slow=7.6,SNR=36						
STKA				LR	LR	07 20 43.5	
	comp=Z,660nm,20.3s,MS4.5,baz=300,slow=37						
GTA	**Gaotai**	**45.98**	**355**	*e*P	**P**	**07 02 26.9**	**-0.6**
GTA				AP	pP	07 02 36.1	-2.5
GTA				XP	sP	07 02 40.0	-3.2
GTA				PP	PP	07 04 16.2	+0.3
GTA				S	**S**	**07 09 10.2**	**+0.4**
GTA				XS	sS	07 09 27.7	-0.6
GTA				SS	SS	07 12 28.6	-6.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
GTA				AMB	AMB		
	comp=Z,42nm,8.1s						
GTA				LR	LR		
	comp=N,409nm,27.9s,MS4.6						
GTA				LR	LR		
	comp=E,769nm,26.4s,MS4.6						
GTA				LR	LR		
	comp=Z,536nm,23.1s,MS4.4						
THN	**Thein Dam**	**47.45**	**327**	*e*P	**P**	**07 02 36.9**	**-2.2**
BJI	**Beijing**	**47.69**	**12**	P	**P**	**07 02 40.7**	**-0.1**
BJI				S	**S**	**07 09 33.1**	**-1.0**
BJI				AMB	AMB		
	comp=Z,16nm,0.5s

KBL Kabul 52.80 323 *e*P **P 07 03 19.5 -0.1**
KBL pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KSH Kashi 52.88 333 *e*P **P 07 03 20.5 +0.4**
KSH *e*AP pP 07 03 30.5 -0.9
KSH *e*XP sP 07 03 34.5 -1.4
KSH *e*PCP PcP 07 04 29.8 +0.9
KSH *e*PP PP 07 05 21.3 +1.3
KSH *e*SCP ScP 07 08 22.9 -0.5
KSH *e*PCS PcS 07 08 26.3 -1.2
KSH *e*S **S 07 10 44.7 -1.6**
KSH *e*XS sS 07 11 01.6 -3.5
KSH *e*SCS ScS 07 13 04.0 -2.7
KSH *e*SS SS 07 14 23.1 -2.8
KSH AMB AMB
comp=Z,296nm,3.9s
KSH LR LR
comp=N,319nm,4.7s
KSH LR LR
comp=E,514nm,6.2s
KSH LR LR
comp=Z,422nm,5.1s
WBK Wadi Bani Khal 53.06 305 P **P 07 03 24.0 +2.2**
SNR=9.2
MJAR Matsushiro Arr 53.37 34 P **P 07 03 20.5 -3.3**
comp=Z,2.5nm,0.5s,mb4.4,baz=211,slow=8.0,SNR=7.9
JMDO Jabal Madar 53.66 304 P **P 07 03 28.1 +1.9**
SNR=9.5
CN2 Changchun 53.69 19 *e*P **P 07 03 26.4 +0.5**
CN2 *e*AP pP 07 03 36.4 -0.9
CN2 *e*XP sP 07 03 40.4 -1.4
CN2 *e*S **S 07 10 59.3 +2.1**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.6
CN2 LR LR
comp=E,300nm,15.0s,MS4.6
CN2 LR LR
comp=Z,300nm,16.0s,MS4.4
SMDO Samad 54.02 305 P **P 07 03 30.9 +2.2**
SNR=10
BIDO Bidbid 54.17 305 P **P 07 03 31.9 +2.1**
SNR=15
SONM Songino Array 54.24 2 P **P 07 03 29.6 -0.3**
comp=Z,4.2nm,0.8s,mb4.4,baz=183,slow=6.7,SNR=20
SONM ScP ScP 07 08 33.0 +3.8
comp=Z,0.5nm,0.6s,baz=174,slow=1.3,SNR=3.2
SONM LR LR 07 30 05.9
comp=Z,414nm,18.2s,MS4.5,baz=6.7,slow=40
ULN Ulaanbaatar 54.30 2 *e*P **P 07 03 31.4 +1.1**
comp=Z,1.7nm,0.6s,mb4.2
ULN Ulaanbaatar 54.30 2 *i*P **P 07 03 29.6 -0.7**
ULN Ulaanbaatar 54.30 2 P **P 07 03 32.9 +2.6**
comp=Z,6.3nm,0.9s,mb4.5
BSY Bisya 54.58 304 P **P 07 03 35.0 +2.2**
SNR=5.3
HOQ Hoqain 54.86 305 P **P 07 03 36.8 +1.9**
SNR=9.4
WHFO Wadi Hwf 55.56 297 P **P 07 03 41.3 +1.3**
SNR=8.5
TKM2 Tokmak 2 55.80 335 *e*P **P 07 03 41.1 -0.2**
comp=Z,12nm,0.8s,mb5.0
TKM2 Tokmak 2 55.80 335 *e*P **P 07 03 41.1 -0.2**
TKM2 pmax pmax
comp=Z,12nm,0.8s,mb5.0
EKS2 Erkin-Say 56.38 333 *e*P **P 07 03 45.7 +0.3**
comp=Z,20nm,0.9s,mb5.1
MK31 Makanchi Array 56.67 342 *i*P **P 07 03 46.2 -1.2**
MK31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
MKAR Makanchi Array 56.67 342 P **P 07 03 46.3 -1.1**
comp=Z,8.8nm,0.8s,mb4.9,baz=147,slow=8.3,SNR=39
MKAR LR LR 07 33 39.2
comp=Z,304nm,19.5s,MS4.4,baz=310,slow=42
MKAR Makanchi Array 56.67 342⇑ *e*P **P 07 03 46.2 -1.2**
OPO Ambohidratompo 56.83 252 P **P 07 03 51.2 +2.1**
comp=Z,2.9nm,0.8s,mb4.3,baz=144,slow=5.5,SNR=3.6
MOY Mondy 58.12 358 *e*P **P 07 04 02.6 +5.1**
KK31 Karatay Array 58.24 331 *i*P **P 07 03 57.1 -1.4**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KLR Kul'dur 60.54 20 *e*P **P 07 04 08.3 -6.0**
KURK Kurchatov 61.28 342 P **P 07 04 18.6 -0.6**
SNR=8.2
KURK Kurchatov 61.28 342 *e*P **P 07 04 18.2 -1.0**
comp=Z,11nm,0.8s,mb5.0
KURK Kurchatov 61.28 342 *e*P **P 07 04 18.2 -1.1**
KURK pmax pmax
comp=Z,11nm,0.8s,mb5.0
ZAA0 Zalesovo Array 62.54 347 *e*P **P 07 04 25.8 -1.9**
ZALV Zalesovo Beam 62.54 347 P **P 07 04 26.4 -1.3**
comp=Z,7.4nm,0.4s,mb5.2,baz=161,slow=5.8,SNR=40
YSS Yuzh-Sakhalins 63.26 28 *i*P **P 07 04 32.4 -0.2**
BOD Bodaibo 64.69 6 *e*P **P 07 04 38.0 -3.8**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
VOSK Vostochnaya 65.56 338 P **P 07 04 45.7 -1.8**
VOSK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 66.08 338 *e*P **P 07 04 49.8 -1.1**
comp=Z,33nm,1.5s,mb5.1
BRVK Borovoye 66.08 338 *e*P **P 07 04 49.8 -1.1**
BRVK pmax pmax
comp=Z,33nm,1.5s,mb5.1
MAW Mawson 66.99 196 P **P 07 04 57.6 +1.0**
comp=Z,1.9nm,0.5s,mb4.3,baz=319,slow=7.1,SNR=2.8
MAW LR LR 07 29 49.9
comp=Z,304nm,18.7s,MS4.5,baz=40,slow=32
AB31 Akbulak array 67.76 330 P **P 07 05 00.8 -0.9**
AB31 pmax pmax
comp=Z,21nm,0.6s,mb5.3
RPZ Rata Peaks 68.67 134 P **P 07 05 07.3 -0.3**
comp=Z,8.4nm,0.7s,mb4.8,baz=211,slow=5.9,SNR=3.1
RPZ LR LR 07 33 27.3
comp=Z,498nm,20.8s,MS4.7,baz=285,slow=34
GNI Garni 71.84 316 *e*P **P 07 05 27.7 +0.7**
GNI pmax pmax
comp=Z,15nm,0.9s
URZ Urewera 72.40 128 LR LR 07 35 58.7
comp=Z,372nm,19.7s,MS4.7,baz=294,slow=35
SVE Sverdlovsk 72.59 337 *e*P **P 07 05 30.2 -0.9**
SVE pmax pmax
comp=Z,26nm,1.0s,mb5.1
ARU Arti 73.16 335 *e*P **P 07 05 34.0 -0.5**
comp=Z,12nm,0.8s,mb4.9
ARU Arti 73.16 335⇑ *i*P **P 07 05 33.8 -0.7**
MATP Matopo 74.49 251 P **P 07 05 44.0 +0.9**
comp=Z,3.9nm,0.7s,mb4.4,baz=99,slow=7.4,SNR=6.6
PETK Petropavlovsk- 74.56 30 P **P 07 05 41.0 -1.8**
comp=Z,5.0nm,0.8s,mb4.5,baz=126,slow=1.9,SNR=7.7
KIV Kislovodsk 74.85 319 *e*P **P 07 05 45.7 +1.0**
KIV pmax pmax
comp=Z,24nm,1.4s,mb4.9
SYO Syowa Base 74.97 200⇓ *e*X 07 05 41.8
PET Petropavlovsk 74.99 31⇑ *e*P **P 07 05 43.3 -1.9**
PET pmax pmax
comp=Z,14nm,0.6s,mb5.1
EIL Elat 75.66 303 P **P 07 05 49.2 -0.4**
comp=Z,7.0nm,0.8s,mb4.6,baz=138,slow=15,SNR=4.9
BOSA Boshof 77.31 242 P **P 07 05 59.9 +0.8**
comp=Z,2.7nm,0.9s,mb4.2,baz=118,slow=12,SNR=3.6
SEY Seymchan 78.33 20 *i*P **P 07 06 02.3 -1.6**
VRHR Novokhopersk 78.57 325 *e*P **P 07 06 05.3 -0.2**
VRHR pmax pmax
comp=N,5.0nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.3s
VRHR pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
ANN Anapa 78.65 318 *e*P **P 07 06 04.5 -1.6**
ANN pmax pmax
comp=Z,54nm,0.9s,mb5.5
BRTR Keskin Array B 79.62 312 P **P 07 06 11.5 0.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=137,slow=7.8,SNR=11
BRTR LR LR 07 44 57.8
comp=Z,198nm,18.0s,MS4.5,baz=198,slow=38
BRTR Keskin Array B 79.62 312⇑ *e*P **P 07 06 11.5 0.0**
TIXI Tiksi 79.76 8 *e*P **P 07 06 09.4 -2.1**
comp=Z,5.9nm,0.4s,mb4.9
TIXI Tiksi 79.76 8 *e*P **P 07 06 08.5 -3.1**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
VORD Divnogorie 79.85 324 *e*P **P 07 06 12.0 -0.5**
VORD pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
VORD pmax pmax
comp=N,4.0nm,0.2s
VORD pmax pmax
comp=E,8.0nm,0.4s
VSR Storozhevoye 80.03 325 *e*P **P 07 06 12.4 -1.0**
VSR pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.4s
OBN Obninsk 82.99 328 *e*P **P 07 06 29.3 +0.3**
OBN *e* 07 06 36.2
OBN pmax pmax
comp=Z,26nm,1.2s,mb5.1
QSPA South Pole Qui 83.37 180 P **P 07 06 31.1 +0.5**
comp=Z,0.7nm,0.4s,mb4.0,baz=360,slow=3.0,SNR=4.3
KLMR Klimovskoe 83.86 334 P **P 07 06 31.6 -1.7**
KLMR pmax pmax
comp=Z,33nm,1.7s,mb5.2
AKASG Malin Array Be 85.77 322 P **P 07 06 41.4 -1.8**
comp=Z,1.8nm,0.6s,mb4.5,baz=86,slow=5.2,SNR=5.8
AKASG LR LR 07 49 28.4
comp=Z,130nm,21.7s,MS4.3,baz=225,slow=39
AKASG Malin Array Be 85.77 322 P **P 07 06 41.4 -1.8**
AKASG LR LR 07 49 28.4
AKASG Malin Array Be 85.77 322 *i*P **P 07 06 43.5 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
BUR08 Bucovina Ar. S 87.59 318 *e*P **P 07 06 53.6 +1.5**
SNAA Sanae 89.11 198 *e*P **P 07 06 58.6 -0.3**
SNAA *e* 07 07 02.4
SNAA *e* pP 07 07 12.4 +1.4
SNAA *e* 07 07 15.4
SNAA Sanae 89.11 198 *e*P **P 07 06 59.6 +0.7**
SNAA Sanae 89.11 198 *i*P **P 07 06 59.3 +0.4**
KOLS Kolonicke sedl 89.76 319 *e*P **P 07 07 03.4 +1.0**
KOLS *e*S S 07 17 47.5 -3.9
KOLS *e*S S 07 17 48.7 -2.7
STHS Stebnicka Huta 90.51 320 *e*P **P 07 07 04.9 -1.0**
comp=Z,4.1nm,1.0s,mb4.7
STHS Stebnicka Huta 90.51 320 *e*P **P 07 07 04.9 -1.0**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
STHS Stebnicka Huta 90.51 320 *e*P **P 07 07 04.9 -1.0**
VNA2 Neumayer--Watz 90.74 198 *e*P **P 07 07 08.2 +1.6**
VNA2 *e* 07 07 11.2
VNA2 *e* pP 07 07 21.4 +2.8
VNA2 *e* 07 07 24.2
VNA1 Neumayer--Stat 91.12 198 *e*P **P 07 07 10.7 +2.4**
VNA1 *e* 07 07 14.0
VNA1 *e* pP 07 07 23.8 +3.4
VNA1 *e* 07 07 26.5
VNA3 Neumayer Olymp 91.29 197 *e*P **P 07 07 09.6 +0.5**
VNA3 *e* 07 07 13.5
VNA3 *e* pP 07 07 23.6 +2.4
VNA3 *e* 07 07 26.9
VYHS Vyhne 91.94 318 *e*S S 07 18 08.3 -3.0
ARCES ARCESS Array B 92.27 340 P **P 07 07 12.4 -1.2**
comp=Z,2.3nm,0.9s,mb4.5,baz=93,slow=4.7,SNR=6.5
MODS Modra-Piesok 92.95 318 *e*S S 07 18 15.1 -5.3
ZST Bratislava 93.05 318 *e*S S 07 18 30.5 +9.2
GERES GERESS Array B 95.36 318 LR LR 07 55 03.6
comp=Z,175nm,19.0s,MS4.5,baz=85,slow=38
CLL Collm 95.96 321 *e*P **P 07 07 27.0 -3.9**
NOA NORSAR Array B 97.27 331 LR LR 07 54 48.4
comp=Z,167nm,18.1s,MS4.6,baz=180,slow=38
TBI Tubuai 102.08 115 *e*LR LR 07 41 16.7
comp=Z,238nm,23.5s
PPT Papeete 103.18 110 *e*LR LR 07 41 44.9
comp=Z,154nm,22.2s
EALK Alkurruntz 106.06 313 P PKiKP 07 12 27.4 -0.9
TAOE Nuku Hiva Isla 113.90 103 *e*LR LR 07 46 42.3
comp=Z,831nm,28.6s
RKT Rikitea 114.95 119 *e*LR LR 07 47 02.2
comp=Z,303nm,27.2s
PDAR Pinedale Array 133.20 34 PKP PKPdf 07 13 20.1 +0.1
comp=Z,0.3nm,0.6s,baz=177,slow=1.8,SNR=3.0
PDAR SKPbc SKPbc 07 16 46.1 +1.1
comp=Z,0.5nm,0.8s,baz=26,slow=4.3,SNR=3.8
ANMO Albuquerque 140.00 41 *i* PKIKP PKPdf 07 13 37.6 +4.8
BDFB Brasilia 144.82 231 PKPbc PKPdf 07 13 40.9 -1.0
comp=Z,2.8nm,0.7s,baz=134,slow=6.6,SNR=10
TXAR Lajitas Array 145.24 46 PKPbc PKPbc 07 13 41.9 -0.1
comp=Z,2.7nm,0.6s,baz=274,slow=1.0,SNR=75
CCM Cathedral Cave 145.65 22 *e*PKPab PKPab 07 13 43.3 0.0
SSPA Standing Stone 146.07 3 *e*PKPbc PKPbc 07 13 45.9 +1.7
MVL Millersville 146.76 1 *e*PKPbc PKPbc 07 13 45.8 -0.4
JCT Junction City 147.17 41 *e*PKPbc PKPbc 07 13 48.0 +0.3
MIAR Mount Ida 147.65 28 *e*PKPbc PKPbc 07 13 48.0 -0.9
WVT Waverly 148.57 19 *e*PKPbc PKPbc 07 13 50.6 -0.7
CPCT Cooper Cave 150.16 15 *e*PKPbc PKPbc 07 13 54.4 -0.9
LVC Limon Verde 150.22 193 *e*PKPbc PKPbc 07 13 57.5 +1.8

*SOF **09** 07:07:32.5, 3864N×2595E, h5km, MD4.2*
*BJI **09** 07:07:34.7, 3926N×2497E, h24km, mB4.7, mb4.8, Ms4.9, Msz4.9*
*PRU **09** 07:07:35.4, 3824N×2374E, h0km, M4.7*
*IDC **09** 07:07:35.9±0.6, 3879N×2574E, h0km, mb4.1/17, mb1 4.2/25, mb1mx4.1/33, mbtmp4.1/25, ML4.0/8, Error ellipse: s-maj=13.2km s-min=11.2km az=122.0*
*DDA **09** 07:07:35.7, 3877N×2558E, h29km±3km, Ml4.1*
*ISK **09** 07:07:36.7, 3881N×2576E, h10km, ML4.5*
*ATH **09** 07:07:37.2, 3876N×2570E, h38km±2km, MD4.3/24, ML4.6*
*NEIC **09** 07:07:37.3, 3876N×2570E, h38km, mb4.7/36, MD4.3(ATH), After ATH.*
*MOS **09** 07:07:37.0±1.1, 3882N×2584E, h19km, mb4.5/18, Error ellipse: s-maj=4.8km s-min=3.0km az=113.4*
*CSEM **09** 07:07:38.0±0.0, 3880N×2574E, h25km, mb4.9/26, Ms3.3, Error ellipse: s-maj=1.1km s-min=0.7km az=18.0*
*PDG **09** 07:07:38.7±0.7, 3882N×2579E, h29km±2km, ML4.1/8, Error ellipse: s-maj=1.3km s-min=2.4km az=0.0*
*ISCJB **09** 07:07:38.2±0.4, 3879N±001×2571E±001, h28km±3km, mb4.7/58, MS3.9/4, Error ellipse: s-maj=2.2km s-min=1.7km az=18.5*
*THE **09** 07:07:38.7, 3877N×2579E, h25km±3km, ML4.9/5, Error ellipse: s-maj=3.7km s-min=0.8km az=105.0*
*SKO **09** 07:07:55.6, 3978N×2448E, h0km*
ISC 09 07:07:38.3±0.4, 3879N±001×2573E±001, h15km±2km, h15km±1.1km:pP-P, n411, σ1§16/454, mb4.7/58, MS3.9/4, 29C-23D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.47**	**148**	P		P	**Pg**	**07 07 47.6**	**-0.2**
CHOS				S			**Sg**	**07 07 54.5**	**+0.3**
PRK	**Paraskevi**	**0.62**	**42**	P			**Pg**	**07 07 50.1**	**-0.4**
PRK				S			**Sg**	**07 08 00.2**	**+1.5**
PRK	**Paraskevi**	**0.62**	**42**	P	i	PN	**Pg**	**07 07 50.2**	**-0.3**
PRK				eSN			**Sg**	**07 08 01.2**	**+2.5**
URLA	**Izmir**	**0.80**	**122**	P		⇓	**Pg**	**07 07 53.8**	**-0.1**
URLA				*i* S			**Sg**	**07 08 06.2**	**+1.8**
AYVA	**Ayvalik**	**0.91**	**55**	P		⇓	**Pg**	**07 07 55.7**	**-0.2**
AYVA				*i* S			**Sg**	**07 08 08.5**	**+0.7**
BOZC	**Bozcaada**	**1.08**	**13**	P	i	P	**Pg**	**07 07 57.5**	**-1.8**
BOZC				*i* S			**Sg**	**07 08 12.8**	**-0.5**
BLCB	**Balcova**	**1.10**	**111**	PN			**Pg**	**07 07 58.4**	**-1.2**
BLCB				eSN			**Sg**	**07 08 13.1**	**-0.9**
EZN	**Ezine**	**1.13**	**24**	PN			**Pg**	**07 07 58.5**	**-1.7**
EZN				eSN			**Sg**	**07 08 13.1**	**-1.8**
LIA	**Limnos Island**	**1.19**	**339**	P			**Pn**	**07 07 59.2**	**-1.1**
LIA				S			**Sb**	**07 08 14.8**	**-0.9**
LIA	**Limnos Island**	**1.19**	**339**	P	i	PN	**Pn**	**07 07 59.3**	**-1.0**
LIA				eSN			**Sn**	**07 08 14.6**	**-1.6**
IZM	**Izmir**	**1.26**	**108**	ePN			**Pn**	**07 08 01.1**	**-0.3**
KDAG	**Bornova**	**1.26**	**107**	*i* P			**Pn**	**07 08 01.0**	**-0.4**
KDAG				*i* S			**Sb**	**07 08 19.6**	**+1.8**
SMG	**Samos**	**1.39**	**141**	P		⇓	**Pn**	**07 08 02.0**	**-1.1**
SMG				eSN			**Sn**	**07 08 19.5**	**-1.6**
GADA	**Gvkgeada**	**1.41**	**5**	ePN			**Pn**	**07 08 02.2**	**-1.1**
AOS	**Alonnisos**	**1.49**	**285**	P			**Pn**	**07 08 03.7**	**-0.9**
GCAM	**G?zelcaml?**	**1.60**	**132**	P		⇓	**Pn**	**07 08 05.3**	**-0.8**
GCAM				*i* S			**Sn**	**07 08 29.3**	**+2.8**
AKS	**Akhisar**	**1.63**	**86**	ePN			**Pn**	**07 08 06.0**	**-0.4**
PTL	**Penteli**	**1.64**	**244**	ePB			**Pn**	**07 08 05.0**	**-1.6**
APE	**Apeiranthos**	**1.73**	**185**	P			**Pn**	**07 08 05.8**	**-1.9**
APE	**Apeiranthos**	**1.73**	**185**	P	i	PN	**Pn**	**07 08 05.9**	**-1.8**
APE				eSN			**Sn**	**07 08 26.8**	**-2.7**
APE	**Apeiranthos**	**1.73**	**185**	P	i	P	**Pn**	**07 08 06.0**	**-1.7**
BALY	**Balya**	**1.74**	**56**	P	i	P	**Pn**	**07 08 07.6**	**-0.4**
BALY				*i* S			**Sn**	**07 08 33.6**	**+3.7**
ATH	**Athens Observa**	**1.78**	**243**	ePB			**Pn**	**07 08 07.2**	**-1.3**
ATH				eSN			**Sn**	**07 08 27.9**	**-3.0**
KVR	**Kavouri**	**1.82**	**239**	ePN			**Pn**	**07 08 07.5**	**-1.5**
PAIG	**Paliouri**	**1.96**	**306**	P			**Pn**	**07 08 09.7**	**-1.2**
PAIG				S			**Sn**	**07 08 34.4**	**-0.8**
ENEZ	**Enez**	**1.97**	**9**	ePN			**Pn**	**07 08 10.7**	**-0.4**
NEO	**Neokhori**	**2.02**	**286**	ePN			**Pn**	**07 08 10.7**	**-1.1**
NAIG	**Nisos Aigina**	**2.04**	**240**	ePN			**Pn**	**07 08 10.0**	**-2.1**
OUR	**Ouranopolis**	**2.05**	**319**	P			**Pn**	**07 08 11.4**	**-0.9**
XOR	**Xorichti**	**2.06**	**287**	P			**Pn**	**07 08 11.0**	**-1.4**
ALN	**Alexandroupoli**	**2.12**	**6**	P			**Pn**	**07 08 12.0**	**-1.2**
ALN				S			**Sn**	**07 08 38.1**	**-1.1**
BODT	**Bodrum**	**2.13**	**144**	ePN			**Pn**	**07 08 12.6**	**-0.7**
LKR	**Lokris**	**2.14**	**267**	P			**Pn**	**07 08 12.3**	**-1.2**
LKR	**Lokris**	**2.14**	**267**	ePN			**Pn**	**07 08 12.2**	**-1.3**
MLSB	**Milas**	**2.20**	**132**	ePN			**Pn**	**07 08 13.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**2.20**	**30**	ePN			**Pn**	**07 08 14.2**	**-0.1**
SART	**Tekirdag**	**2.20**	**30**	eP			**Pn**	**07 08 13.8**	**-0.5**
SART				eS			**Sg**	**07 08 46.3**	**-2.8**
EDC	**Edincik**	**2.26**	**46**	ePN			**Pn**	**07 08 15.1**	**0.0**
BNT	**Bandirma**	**2.30**	**47**	ePN			**Pn**	**07 08 15.3**	**-0.3**
LTK	**Loutraki**	**2.31**	**251**	P			**Pn**	**07 08 14.4**	**-1.3**
KULA	**Kula-Manisa**	**2.31**	**96**	ePN			**Pn**	**07 08 15.6**	**-0.1**
MFT	**Murefte**	**2.32**	**30**	ePN			**Pn**	**07 08 16.1**	**+0.1**
DID	**Didima**	**2.35**	**238**	P			**Pn**	**07 08 14.6**	**-1.7**
DID				S			**Sn**	**07 08 45.5**	**+0.6**
RDO	**Rodhopi**	**2.36**	**356**	P	i	PN	**Pn**	**07 08 15.6**	**-0.9**
PLG	**Polygyros**	**2.37**	**313**	P			**Pn**	**07 08 16.1**	**-0.6**
PLG	**Polygyros**	**2.37**	**313**	ePN			**Pn**	**07 08 15.7**	**-1.0**
PLG	**Polygyros**	**2.37**	**313**	P			**Pn**	**07 08 16.1**	**-0.6**
THR5	**Thira Island,**	**2.39**	**187**	P			**Pn**	**07 08 15.0**	**-1.9**
THR3	**Thira Island,**	**2.39**	**186**	P			**Pn**	**07 08 15.3**	**-1.6**
DST	**Dursunbey**	**2.39**	**69**	ePN			**Pn**	**07 08 16.3**	**-0.6**
THR6	**Thira Island,**	**2.44**	**186**	P			**Pn**	**07 08 16.2**	**-1.4**
KCT	**Karacabey**	**2.51**	**53**	ePN			**Pn**	**07 08 18.6**	**+0.1**
DAT	**Datca**	**2.52**	**144**	ePN			**Pn**	**07 08 18.0**	**-0.7**
TKR	**Tekirdag**	**2.60**	**32**	ePN			**Pn**	**07 08 20.2**	**+0.5**
YER	**Yerkesik**	**2.60**	**129**	ePN			**Pn**	**07 08 20.0**	**+0.2**
AGG	**Agios Georgios**	**2.67**	**276**	P			**Pn**	**07 08 20.2**	**-0.5**
AGG				S			**Sn**	**07 08 53.3**	**+0.6**
HORT	**Hortiatis**	**2.72**	**312**	P			**Pn**	**07 08 21.1**	**-0.3**
SOH	**Sokhos**	**2.73**	**319**	P			**Pn**	**07 08 21.4**	**-0.2**
DENT	**Denizli**	**2.79**	**111**	ePN			**Pn**	**07 08 22.7**	**+0.3**
THE	**Thessaloniki**	**2.82**	**312**	P			**Pn**	**07 08 22.6**	**-0.2**
LIT	**Litokhoron**	**2.83**	**299**	P			**Pn**	**07 08 22.6**	**-0.4**
LIT				S			**Sn**	**07 08 56.5**	**-0.3**
KDZ	**Kurdzhali**	**2.87**	**355**	P			**Pn**	**07 08 22.3**	**-1.1**
NVR	**Nevrokopi**	**2.93**	**331**	P	i	PN	**Pn**	**07 08 23.8**	**-0.6**
THL	**Klokotos Trika**	**2.99**	**286**	P			**Pn**	**07 08 25.0**	**-0.2**
THL	**Klokotos Trika**	**2.99**	**286**	ePN			**Pn**	**07 08 25.0**	**-0.2**
RZN	**Rozhen**	**3.00**	**345**	P			**Pn**	**07 08 25.1**	**-0.1**
VLX	**Vlachokerasia**	**3.00**	**243**	P			**Pn**	**07 08 24.6**	**-0.7**
KHL	**Karahalli**	**3.01**	**98**	ePN			**Pn**	**07 08 26.1**	**+0.7**
VLI	**Veliai**	**3.03**	**228**	ePN			**Pn**	**07 08 24.0**	**-1.7**
DALT	**Dalyan (Mudla)**	**3.06**	**130**	ePN			**Pn**	**07 08 27.0**	**+0.9**
EVR	**Evrytania**	**3.07**	**274**	ePN			**Pn**	**07 08 24.5**	**-1.7**
EVR	**Evrytania**	**3.07**	**274**	ePn			**Pn**	**07 08 26.5**	**+0.3**
SLVT	**Silivri**	**3.09**	**37**	ePN			**Pn**	**07 08 27.1**	**+0.6**
GEMT	**Gemlik**	**3.13**	**57**	ePN			**Pn**	**07 08 27.3**	**+0.2**
CTT	**Catalca**	**3.14**	**40**	ePN			**Pn**	**07 08 26.8**	**-0.3**
EDRB	**Edirne**	**3.15**	**14**	ePN			**Pn**	**07 08 27.7**	**+0.4**
MMB	**Musomiste**	**3.19**	**332**	P			**Pn**	**07 08 27.1**	**-0.8**
ARG	**Arkhangelos**	**3.20**	**143**	ePN			**Pn**	**07 08 27.3**	**-0.4**
KNT	**Kendrikon**	**3.22**	**318**	P			**Pn**	**07 08 28.2**	**+0.1**
CTKS	**Kestanelik-??a**	**3.24**	**40**	ePN			**Pn**	**07 08 28.0**	**-0.6**
DIM	**Dimitrovgrad**	**3.26**	**357**	P			**Pn**	**07 08 28.3**	**-0.5**
KYTH	**Kithira**	**3.30**	**221**	ePN			**Pn**	**07 08 28.0**	**-1.4**
CTYL	**Yal??k??y-??at**	**3.32**	**35**	ePN			**Pn**	**07 08 29.7**	**0.0**
YLV	**Yalova**	**3.32**	**57**	ePN			**Pn**	**07 08 29.2**	**-0.5**
BGKT	**Bogazkoy**	**3.34**	**43**	ePN			**Pn**	**07 08 29.9**	**0.0**
GRG	**Griva**	**3.35**	**311**	P			**Pn**	**07 08 30.3**	**+0.1**
PLD	**Plovdiv**	**3.40**	**347**	P			**Pn**	**07 08 31.0**	**+0.2**
ITM	**Ithomi**	**3.41**	**243**	P	i	PN	**Pn**	**07 08 30.0**	**-0.9**
ITM	**Ithomi**	**3.41**	**243**	*i*	Pn		**Pn**	**07 08 30.8**	**-0.1**
FETY	**Fethiye**	**3.42**	**128**	ePN			**Pn**	**07 08 31.9**	**+0.8**
KZN	**Kozani**	**3.42**	**298**	ePN			**Pn**	**07 08 30.6**	**-0.4**
ISK	**Istanbul-Kandi**	**3.42**	**47**	ePN			**Pn**	**07 08 30.4**	**-0.6**
ALT	**Altintas**	**3.42**	**84**	ePN			**Pn**	**07 08 31.7**	**+0.6**
RLS	**Riolos of Patr**	**3.43**	**259**	P			**Pn**	**07 08 33.2**	**+2.0**
KARP	**Karpathos**	**3.43**	**160**	ePN			**Pn**	**07 08 30.4**	**-0.8**
CAVI	**Cavuskoy**	**3.48**	**65**	ePN			**Pn**	**07 08 32.5**	**+1.1**
ADVT	**Abdulvahap**	**3.50**	**61**	ePN			**Pn**	**07 08 31.8**	**-0.4**
VAY	**Valandovo**	**3.50**	**317**	P			**Pn**	**07 08 32.0**	**-0.2**
VAY	**Valandovo**	**3.50**	**317**	*i*	Pn		**Pn**	**07 08 32.2**	**0.0**
VAY	**Valandovo**	**3.50**	**317**	*i*	Pn		**Pn**	**07 08 32.2**	**0.0**
VAY	**Valandovo**	**3.50**	**317**	P			**Pn**	**07 08 32.5**	**+0.3**
NPS	**Neapolis**	**3.52**	**182**	ePN			**Pn**	**07 08 30.9**	**-1.6**
KLYT	**Kilyos**	**3.54**	**45**	ePN			**Pn**	**07 08 32.7**	**+0.1**
IDI	**Anoyia**	**3.56**	**191**	Pn			**Pn**	**07 08 31.4**	**-1.6**
	13nm,0.3s,baz=20,slow=12,SNR=38								
IDI							Sn	**Sn**	**07 09 12.4**	**-2.4**
	26nm,0.3s,baz=131,slow=23,SNR=4.5								
IDI							Lg		07 09 30.4	
	19nm,0.3s,baz=145,slow=15,SNR=4.4								
IDI	**Anoyia**	**3.56**	**191**	Pn			**Pn**	**07 08 31.4**	**-1.6**
IDI							Sn	**Sn**	**07 09 12.4**	**-2.3**
HRT	**Hereke**	**3.65**	**55**	ePN			**Pn**	**07 08 35.1**	**+0.9**
KKB	**Krupnik**	**3.68**	**327**	P			**Pn**	**07 08 34.3**	**-0.3**
PYL	**PYLOS**	**3.68**	**240**	P			**Pn**	**07 08 35.2**	**+0.5**
JMB	**Yambol**	**3.73**	**10**	P			**Pn**	**07 08 34.9**	**-0.4**
SHUT	**Suhut-Afyon**	**3.78**	**92**	ePN			**Pn**	**07 08 37.3**	**+1.3**
SILT	**Sile**	**3.82**	**51**	ePN			**Pn**	**07 08 37.2**	**+0.6**
GPA	**Golpazari**	**3.84**	**66**	ePN			**Pn**	**07 08 37.6**	**+0.8**
JAN	**Janina**	**3.89**	**284**	ePN			**Pn**	**07 08 36.6**	**-0.9**
FNA	**Florina**	**3.90**	**302**	P			**Pn**	**07 08 38.2**	**+0.5**
PGB	**Panagyurishte**	**3.94**	**343**	P			**Pn**	**07 08 37.8**	**-0.4**
KFL	**Anninata**	**3.94**	**262**	P			**Pn**	**07 08 39.5**	**+1.3**
STIP	**Stip**	**3.97**	**318**	*i*	Pn		**Pn**	**07 08 40.0**	**+1.4**
LKD	**Levkas**	**3.98**	**270**	P			**Pn**	**07 08 41.4**	**+2.7**
GULT	**Gulveren**	**4.04**	**65**	ePN			**Pn**	**07 08 41.0**	**+1.4**
BCK	**Bucak**	**4.05**	**108**	ePN			**Pn**	**07 08 39.9**	**+0.2**
BIA	**Bitola**	**4.06**	**305**	ePn			**Pn**	**07 08 39.7**	**-0.1**
VLS	**Valsamata**	**4.08**	**263**	ePN			**Pn**	**07 08 39.7**	**-0.5**
VTS	**Vitosha**	**4.25**	**334**	P		⇑	**Pn**	**07 08 43.1**	**+0.6**
VTS

TIRR Tirgusor 6.01 19 *e*P **Pn 07 09 05.5 -1.1**
comp=Z,45nm,0.8s
TIRR Tirgusor 6.01 19 ⇓*i*P **Pn 07 09 06.1 -0.5**
BEY Berane 6.02 315 *e*Pn **Pn 07 09 07.7 +1.0**
BEY *e*Sn **Sn 07 10 13.8 -1.5**
IVA Berane 6.02 315 *e*Pn **Pn 07 09 07.7 +1.0**
IVA *e*Sn **Sn 07 10 13.8 -1.5**
PDG Podgorica 6.12 308 ⇑*i*Pn **Pn 07 09 09.7 +1.5**
PDG *e*Sn **Sn 07 10 16.9 -1.0**
TTG Podgorica 6.12 308 ⇑*i*Pn **Pn 07 09 09.7 +1.5**
TTG *e*Sn **Sn 07 10 16.9 -1.0**
BRTR Keskin Array B 6.21 79 Pn **Pn 07 09 10.4 +1.1**
comp=Z,2.7nm,0.3s,baz=259,slow=13,SNR=48
BRTR Sn **Sn 07 10 18.0 -2.0**
baz=262,slow=20,SNR=1.9
BRTR Lg 07 11 03.1
baz=273,slow=24,SNR=2.4
BRTR Keskin Array B 6.21 79 P **Pn 07 09 10.4 +1.1**
BRTR 07 10 18.0
BRTR pmax pmax
comp=Z,3.0nm,0.3s
BUM Brajici-Budva 6.28 306 ⇓*i*Pn **Pn 07 09 11.2 +0.9**
BUM *e*Sn **Sn 07 10 21.0 -0.7**
CANT Cankiri 6.35 71 *e*PN **Pn 07 09 12.3 +1.1**
NKY Niksic 6.50 310 ⇑*i*Pn **Pn 07 09 14.9 +1.5**
NKY *e*Sn **Sn 07 10 25.4 -1.8**
HCY Herceg Novi 6.61 306 ⇑*i*Pn **Pn 07 09 16.2 +1.4**
HCY *e*Sn **Sn 07 10 29.2 -0.6**
VOIR 6.66 356 P **Pn 07 09 15.4 -0.1**
VOIR 6.66 356 P **Pn 07 09 15.5 -0.1**
VOIR 6.66 356 ⇓*i*P **Pn 07 09 15.3 -0.3**
UPM Unac-Piva 6.79 313 ⇓*i*Pn **Pn 07 09 18.4 +1.1**
UPM *e*Sn **Sn 07 10 32.8 -1.4**
TLCR 6.79 19 ⇓P **Pn 07 09 15.1 -2.3**
TLCR 6.79 19 ⇓*i*P **Pn 07 09 15.1 -2.2**
IKL Isikli 6.81 109 *e*PN **Pn 07 09 20.4 +2.7**
BRY Bratogost 6.82 309 ⇑*i*Pn **Pn 07 09 19.1 +1.3**
BRY *e*Sn **Sn 07 10 34.0 -1.1**
GZR Gura Zlata 6.96 343 P **Pn 07 09 19.3 -0.3**
GZR Gura Zlata 6.96 343 P **Pn 07 09 19.3 -0.3**
GZR Gura Zlata 6.96 343 ⇓*i*P **Pn 07 09 18.8 -0.8**
TIP Timpagrande 7.00 276 *e*Pn **Pn 07 09 20.6 +0.3**
comp=Z,20nm,0.6s
TIP Timpagrande 7.00 276 *e*Pn **Pn 07 09 20.6 +0.3**
comp=Z,20nm,0.6s
CORM Corum 7.02 76 *e*PN **Pn 07 09 22.9 +2.4**
ODB Odobesti 7.05 8 ⇑P **Pn 07 09 21.8 +0.9**
ODB Odobesti 7.05 8 ⇑*i*P **Pn 07 09 21.8 +0.9**
PLOR Plostina 7.09 5 ⇓*i*P **Pn 07 09 23.1 +1.7**
LTRZ Laterza 7.11 288 Pn **Pn 07 09 22.2 +0.5**
comp=Z,40nm,0.7s
VRI Vrincioaia 7.11 6 P **Pn 07 09 22.6 +0.9**
VRI Vrincioaia 7.11 6 ⇓*i*P **Pn 07 09 22.6 +0.9**
MDB Medias 7.42 353 P **Pn 07 09 27.6 +1.7**
MDB Medias 7.42 353 P **Pn 07 09 27.6 +1.7**
MDB Medias 7.42 353 ⇓*i*P **Pn 07 09 26.8 +0.9**
BZS Buzias 7.47 337 P **Pn 07 09 26.0 -0.7**
BZS Buzias 7.47 337 ⇓*i*P **Pn 07 09 26.0 -0.7**
YOZ Yozgat 7.49 80 *e*PN **Pn 07 09 28.4 +1.4**
KARA Karaisali 7.51 99 *e*PN **Pn 07 09 28.6 +1.4**
CUC Castrocucco 7.78 282 *e*Pn **Pn 07 09 32.8 +1.9**
comp=Z,48nm,0.6s
CUC *e*Sn **Sn 07 10 59.0 +0.5**
MTTG Motta San Giov 7.92 267 Pn **Pn 07 09 32.9 0.0**
MGR Morigerati 7.99 283 Pn **Pn 07 09 35.8 +2.0**
FGMS Monte Sant'Ang 8.03 294 Pn **Pn 07 09 34.3 0.0**
SEV Sevastopol' 8.26 43 ⇓*e*P **Pn 07 09 36.7 -0.8**
SEV *e*S **Sn 07 11 03.7 -6.8**
RGNG Rignano Grg 8.28 294 Pn **Pn 07 09 37.3 -0.5**
DRGR 8.30 345 P **Pn 07 09 37.5 -0.5**
DRGR 8.30 345 P **Pn 07 09 37.5 -0.5**
DRGR 8.30 345 ⇓*i*P **Pn 07 09 37.4 -0.6**
YAL Yalta 8.49 45 *e*P **Pn 07 09 39.9 -0.8**
YAL *e*S **Sn 07 11 09.3 -6.9**
CSSN Cassano Irpino 8.50 287 Pn **Pn 07 09 35.1 -5.7**
KIS Kishinev 8.51 14 *e*P **Pn 07 09 44.0 +3.1**
ALU Alushta 8.75 45 *e*P **Pn 07 09 43.0 -1.2**
SVSK Karacayir 8.80 79 *e*PN **Pn 07 09 45.2 +0.3**
BURAR Bucovina Array 8.83 358 ⇑P **Pn 07 09 46.7 +1.4**
BURAR S Pn 07 10 09.2 +24
BURAR Bucovina Array 8.83 358 ⇑*i*P **Pn 07 09 46.7 +1.4**
BURAR S Pn 07 10 09.2 +24
BUR08 Bucovina Ar. S 8.86 358 *e*Pn **Pn 07 09 45.8 +0.1**
VAE Valguarnera 9.02 265 Pn **Pn 07 09 48.0 +0.1**
comp=Z,4.3nm,0.3s,baz=150,slow=20,SNR=3.9
PKSM Moragy 9.08 327 P **Pn 07 09 48.0 -0.7**
PKSM Moragy 9.08 327 P **Pn 07 09 48.0 -0.7**
PKSM Moragy 9.08 327 ⇑*i*P **Pn 07 09 48.2 -0.5**
SGG Gregorio Mates 9.08 290 Pn **Pn 07 09 50.8 +2.0**
SUDU Sudak 9.21 46 ⇓*i*P **Pn 07 09 50.3 -0.3**
SUDU *e*S **Sn 07 11 29.0 -4.9**
MMAI Mount Meron Ar 9.73 123 Pn **Pn 07 09 56.1 -1.6**
comp=Z,6.2nm,0.3s,baz=314,slow=12,SNR=13
PSZ Piszkesteto 10.06 337 *e*Pn **Pn 07 10 01.2 -0.9**
comp=Z,7.4nm,0.8s
PSZ Piszkesteto 10.06 337 ⇓*e*P **Pn 07 10 00.9 -1.3**
PSZ Piszkesteto 10.06 337 *e*Pn **Pn 07 10 01.2 -1.0**
comp=Z,7.4nm,0.8s
PSZ Piszkesteto 10.06 337 ⇑*i*P **Pn 07 10 02.4 +0.2**
PSZ Piszkesteto 10.06 337 ⇑*i*P **Pn 07 10 02.4 +0.2**
NRCA Norcia 10.38 297 Pn **Pn 07 10 06.4 -0.2**
KECS Kecovo 10.41 340 *e*PN **Pn 07 10 06.6 -0.3**
KOLS Kolonicke sedl 10.44 347 *e*Pn **Pn 07 10 09.9 +2.5**
KOLS *e*Sg 07 13 18.0
KOLS Kolonicke sedl 10.44 347 *e*PN **Pn 07 10 09.9 +2.5**
KOLS *e* 07 13 17.9
VYHS Vyhne 10.91 335 *e*PN **Pn 07 10 13.3 -0.4**
LVV L'vov 11.09 354 *e*P Px 07 10 31.4
STHS Stebnicka Huta 11.10 345 *e*Pn **Pn 07 10 23.4 +7.0**
STHS Stebnicka Huta 11.10 345 *e*pPN **Pn 07 10 23.4 +7.0**
ASF Jabal al Asfar 11.24 123 Pn **Pn 07 10 16.9 -1.5**
comp=Z,0.3nm,0.3s,baz=197,slow=24,SNR=3.6
OBKA Obir 11.28 317 ⇓*i*Pn **Pn 07 10 17.9 -0.9**
VOY Vojsko 11.35 313 *e*Pn **Pn 07 10 20.5 +0.7**
VOY *e* 07 10 22.9
VOY *e* 07 10 45.8
EIL Elat 11.86 137 Pn **Pn 07 10 24.3 -2.6**
comp=Z,0.3nm,0.3s,baz=321,slow=6.5,SNR=2.6
AKASG Malin Array Be 12.16 11 Pn **Pn 07 10 28.1 -2.8**
comp=Z,0.7nm,0.3s,baz=200,slow=12,SNR=3.5
AKASG Malin Array Be 12.16 11 P **Pn 07 10 28.1 -2.8**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
OKC Ostrava-Krasne 12.30 336 *e*P **Pn 07 10 33.8 +1.0**
OKC AMS AMS 07 19 50.0
comp=Z,900nm,12.3s
PGF Pioggiola 13.25 292 ⇑*i*P **Pn 07 10 48.1 +2.4**
comp=Z,97nm,1.2s
PGF Pioggiola 13.25 292 ⇑*i*P **Pn 07 10 48.1 +2.4**
PGF pmax pmax
comp=Z,48nm,1.2s
PGF Pioggiola 13.25 292 ⇑*i*P **Pn 07 10 48.1 +2.4**
comp=Z,48nm,1.2s
GERES GERESS Array B 13.27 323 Pn **Pn 07 10 47.5 +1.6**
comp=Z,0.5nm,0.3s,baz=128,slow=14,SNR=3.8
DPC Dobruska-Polom 13.35 333 *e*P **Pn 07 10 51.1 +4.0**
DPC AMS AMS 07 20 00.0
comp=Z,900nm,13.1s
KEST Kesra 13.41 262 Pn **Pn 07 10 50.8 +2.8**
comp=Z,0.1nm,0.3s,baz=15,slow=16,SNR=3.5
KHC Kasperske Hory 13.53 324 *i*P **Pn 07 10 49.4 -0.1**
KHC Kasperske Hory 13.53 324 *e*P Px 07 11 05.2
KHC *ex* x 07 11 11.0
KHC AMS AMS 07 20 50.0
comp=Z,2µm,10.1s
UPC Upice 13.59 333 *e*P **Pn 07 10 40.7 -10**
KIV Kislovodsk 13.73 63 *i*P **Pn 07 10 50.0 -2.3**
PRU Pruhonice 13.74 328 AMS AMS 07 20 20.0
comp=Z,1µm,9.6s
DAVOX Davos/Dischmat 14.10 310 Pn **Pn 07 11 01.9 +4.5**
comp=Z,0.4nm,0.3s,baz=342,slow=20,SNR=3.9
DAVOS Davos 14.18 310 P **Pn 07 11 01.9 +3.4**
SBF Sospel 14.65 296 ⇑*i*P **Pn 07 11 07.7 +2.9**
comp=Z,105nm,1.2s
SBF Sospel 14.65 296 ⇑*i*P **Pn 07 11 07.7 +2.9**
SBF pmax pmax
comp=Z,53nm,1.2s
SBF Sospel 14.65 296 ⇑*i*P **Pn 07 11 07.7 +2.9**
comp=Z,52nm,1.2s
BRG Berggiesshubel 14.67 329 *e*P **Pn 07 11 11.6 +6.5**
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG Berggiesshubel 14.67 329 *e*P **Pn 07 11 11.6 +6.5**
comp=Z,12nm,1.4s
FRF La Foret Royal 15.14 294 *e*P **Pn 07 11 14.8 +3.4**
comp=Z,105nm,1.3s
FRF La Foret Royal 15.14 294 *e*P **Pn 07 11 14.8 +3.4**
comp=Z,52nm,1.3s
FRF La Foret Royal 15.14 294 *e*P **Pn 07 11 14.8 +3.4**
FRF pmax pmax
comp=Z,52nm,1.3s
MBDF Montbardon 15.33 299 *e*P **Pn 07 11 16.1 +2.1**
comp=Z,69nm,1.4s
MBDF Montbardon 15.33 299 *e*P **Pn 07 11 16.1 +2.1**
MBDF pmax pmax
comp=Z,35nm,1.4s
MBDF Montbardon 15.33 299 *e*P **Pn 07 11 16.1 +2.1**
comp=Z,35nm,1.4s
CLL Collm 15.38 329 *e*P **Pn 07 11 20.0 +5.4**
CLL Collm 15.38 329 *e*PP 07 11 20.0
CLL LmV 07 16 00.0
comp=Z,200nm,18.9s
BNI Bardonecchia 15.49 300 *e*Pn **Pn 07 11 17.3 +1.3**
comp=Z,25nm,1.0s
BNI Bardonecchia 15.49 300 *e*P **Pn 07 11 17.3 +1.3**
BNI pmax pmax
comp=Z,25nm,1.0s
BNI Bardonecchia 15.49 300 *e*P **Pn 07 11 17.3 +1.3**
comp=Z,25nm,1.0s
LPL La Plagne 15.60 302 *e*P **Pn 07 11 20.0 +2.6**
comp=Z,69nm,1.3s
LPL La Plagne 15.60 302 *e*P **Pn 07 11 20.0 +2.6**
LPL pmax pmax
comp=Z,34nm,1.3s
LPL La Plagne 15.60 302 *e*P **Pn 07 11 20.0 +2.6**
comp=Z,34nm,1.3s
CABF La Chapelle 16.39 305 *e*P **Pn 07 11 29.4 +1.7**
comp=Z,230nm,1.7s
CABF La Chapelle 16.39 305 *e*P **Pn 07 11 29.4 +1.7**
CABF pmax pmax
comp=Z,115nm,1.7s
CABF La Chapelle 16.39 305 *e*P **Pn 07 11 29.4 +1.7**
comp=Z,115nm,1.7s
HAU Haudompre 16.80 310 *e*P **Pn 07 11 36.9 +4.1**
comp=Z,31nm,1.0s
HAU *e*MLR MLR
comp=Z,298nm,17.3s
HAU Haudompre 16.80 310 *e*P **Pn 07 11 36.9 +4.1**
comp=Z,15nm,1.0s
HAU Haudompre 16.80 310 *e*P **Pn 07 11 36.9 +4.1**
HAU pmax pmax
comp=Z,15nm,1.0s
VIVF Saint-Julien-l 16.81 298 *e*P **Pn 07 11 34.9 +1.9**
comp=Z,60nm,1.4s
VIVF Saint-Julien-l 16.81 298 *e*P **Pn 07 11 34.9 +1.9**
VIVF pmax pmax
comp=Z,30nm,1.4s
VIVF Saint-Julien-l 16.81 298 *e*P **Pn 07 11 34.9 +1.9**
comp=Z,30nm,1.4s
SMF Signal de Mont 17.86 303 *e*P **Pn 07 11 48.7 +2.6**
comp=Z,46nm,1.3s
SMF Signal de Mont 17.86 303 *e*P **Pn 07 11 48.7 +2.6**
SMF pmax pmax
comp=Z,23nm,1.3s
SMF Signal de Mont 17.86 303 *e*P **Pn 07 11 48.7 +2.6**
comp=Z,23nm,1.3s
OBN Obninsk 17.89 21 *i*P **Pn 07 11 45.5 -0.9**
OBN *e*S **Sn 07 15 05.3 -0.1**
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN Obninsk 17.89 21 *i*P **Pn 07 11 45.5 -0.9**
comp=Z,8.0nm,0.5s
SSF Saint Saulge 18.21 304 *e*P **Pn 07 11 53.3 +2.9**
comp=Z,20nm,1.0s
SSF Saint Saulge 18.21 304 *e*P **Pn 07 11 53.3 +2.9**
comp=Z,9.9nm,1.0s
SSF Saint Saulge 18.21 304 *e*P **Pn 07 11 53.3 +2.9**
SSF pmax pmax
comp=Z,10.0nm,1.0s
BGF Bois d'Agland 18.49 302 *e*P **Pn 07 11 54.7 +0.9**
comp=Z,64nm,1.2s
BGF Bois d'Agland 18.49 302 *e*P **Pn 07 11 54.7 +0.9**
BGF pmax pmax
comp=Z,32nm,1.2s
BGF Bois d'Agland 18.49 302 *e*P **Pn 07 11 54.7 +0.9**
comp=Z,32nm,1.2s
RJF Les Rejaudoux 19.09 298 *e*P **Pn 07 12 02.1 +1.0**
RJF *e*MLR MLR
comp=Z,228nm,18.8s
VSU Vasula 19.70 2 *i*P **Pn 07 12 06.8 -1.4**
EBIE Bielsa 19.75 290 P **Pn 07 12 13.5 +4.5**
comp=Z,25nm,1.0s
NAY Al-Naaiem 20.17 112 *e*P **P 07 12 12.5 +0.4**
NAY AMb AMB 07 12 16.3
comp=Z,26nm,1.5s
EBEN Beniarda 20.23 278 P **P 07 12 17.7 +5.0**
comp=Z,52nm,1.0s
EMOS Mosqueruela 20.24 283 P **P 07 12 16.9 +4.1**
comp=Z,113nm,1.5s
SJPF Ste Jean 20.78 291 *e*P **P 07 12 19.7 +1.1**
comp=Z,37nm,1.0s
SJPF Ste Jean 20.78 291 *e*P **P 07 12 19.7 +1.1**
SJPF pmax pmax
comp=Z,18nm,1.0s
SJPF Ste Jean 20.78 291 *e*P **P 07 12 19.7 +1.1**
comp=Z,18nm,1.0s
LDF La Druitiere 21.02 306 *e*P **P 07 12 22.7 +1.5**
FLN La Foliniere 21.30 306 *e*P **P 07 12 27.3 +3.1**
FLN *e*MLR MLR
comp=Z,221nm,18.0s,MS3.3
GRR Gorron 21.42 305 *e*P **P 07 12 27.4 +1.8**
ELAN Lanestosa 22.40 291 P **P 07 12 38.6 +2.6**
comp=Z,56nm,1.3s,mb4.8
SGMF Saint Gilles 22.48 304 *e*P **P 07 12 38.0 +1.2**
EBER Berja 22.65 274 P **P 07 12 39.9 +1.2**
comp=Z,15nm,0.7s,mb4.5
HFS Hagfors 22.68 344 P **P 07 12 37.7 -1.2**
comp=Z,11nm,1.1s,mb4.2,baz=128,slow=11,SNR=5.1
HFS Hagfors 22.68 344 P **P 07 12 37.7 -1.1**
HFS pmax pmax
comp=Z,11nm,1.1s
ROSF Rostrenen 22.96 304 *e*P **P 07 12 43.2 +1.2**
comp=Z,169nm,1.5s,mb5.0
ROSF Rostrenen 22.96 304 *e*P **P 07 12 43.2 +1.2**
ROSF pmax pmax
comp=Z,85nm,1.5s,mb5.0
ROSF Rostrenen 22.96 304 *e*P **P 07 12 43.2 +1.2**
comp=Z,85nm,1.5s,mb5.0
ESDC Sonseca Array 22.98 282 P **P 07 12 41.4 -0.8**
comp=Z,0.6nm,0.3s,baz=80,slow=10,SNR=7.7
ESDC Sonseca Array 22.98 282 P **P 07 12 44.2 +2.0**
comp=Z,4.3nm,0.8s,mb3.9
GUD Guadarrama 23.02 284 P **P 07 12 45.6 +3.0**
comp=Z,3.4nm,0.6s,mb4.0
GUD Guadarrama 23.02 284 P **P 07 12 45.6 +3.0**
GUD pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
EGUA Guajares 23.19 274 P **P 07 12 44.2 -0.3**
EGUA pmax pmax
comp=Z,24nm,0.7s,mb4.7
EGUA Guajares 23.19 274 P **P 07 12 44.2 -0.3**
comp=Z,24nm,0.7s,mb4.7
PAB San Pablo 23.29 281 *e*P **P 07 12 45.9 +0.5**
comp=Z,14nm,1.0s,mb4.4
PAB San Pablo 23.29 281 *e*P **P 07 12 45.9 +0.4**
PAB pmax pmax
comp=Z,14nm,1.0s,mb4.3
PAB San Pablo 23.29 281 *e*P **P 07 12 45.9 +0.4**
comp=Z,14nm,1.0s,mb4.4
TAM Tamanrasset 23.49 233 *e*P **P 07 12 49.9 +2.1**
EADA Adamuz 23.69 278 P **P 07 12 49.7 +0.3**
comp=Z,10nm,0.7s,mb4.4
EADA Adamuz 23.69 278 P **P 07 12 49.7 +0.2**
comp=Z,10nm,0.7s,mb4.4
NB2 NORSAR Subarra 24.04 343 P **P 07 12 52.7 +0.2**
comp=Z,12nm,1.0s,mb4.3,baz=151,slow=9.3
NOA NORSAR Array B 24.04 343 P **P 07 12 52.1 -0.3**
comp=Z,7.6nm,0.9s,mb4.1,baz=151,slow=9.3,SNR=7.5
NOA NORSAR Array B 24.04 343 P **P 07 12 52.1 -0.4**
NOA pmax pmax
comp=Z,8.0nm,1.0s
ECAB El Cabril 24.36 278 P **P 07 12 54.9 -0.7**
comp=Z,39nm,0.8s,mb4.9
EMIN Mina Concepcio 25.39 278 P **P 07 13 04.6 -0.4**
comp=Z,45nm,1.0s,mb5.0
EKA Eskdalemuir Ar 25.45 320 P **P 07 13 05.6 +0.3**
comp=Z,2.4nm,0.7s,mb3.8,baz=106,slow=9.7,SNR=3.6
EKA Eskdalemuir Ar 25.45 320 P **P 07 13 05.6 +0.3**
EKA pmax pmax
comp=Z,2.0nm,0.7s
AKTK Aktyubinsk 25.55 52 P **P 07 13 06.3 0.0**
AKTK Aktyubinsk 25.55 52 P **P 07 13 06.3 0.0**
AKTO Aktyubinsk 25.55 52 P **P 07 13 06.3 -0.1**
comp=Z,2.8nm,0.9s,mb3.8,baz=251,slow=12,SNR=6.6
AKTO Aktyubinsk 25.55 52 P **P 07 13 06.3 0.0**
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb3.8
EGRO El Granado 26.07 278 P **P 07 13 11.8 +0.7**
comp=Z,26nm,1.0s,mb4.7
EGRO El Granado 26.07 278 P **P 07 13 11.8 +0.7**
comp=Z,26nm,1.0s,mb4.7
EVO Evora 26.27 280 ⇑*i*P **P 07 13 17.1 +4.2**
comp=Z,28nm,1.2s,mb4.3
EVO *e*MLR MLR
comp=Z,160nm,22.5s,MS3.2
ARU Arti 27.92 40 *d i*P **P 07 13 27.1 -0.5**
ARU *e* 07 14 09.9
ARU *e*S **S 07 18 12.2 +1.7**
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
ARU Arti 27.92 40 *i*P **P 07 13 27.1 -0.5**
comp=Z,8.0nm,1.2s,mb4.2
TOA0 Torodi Ar. Sit 33.25 226 *e*P **P 07 14 15.1 +0.1**
TOA0 Torodi Ar. Sit 33.25 226 *e*P **P 07 14 15.1 +0.1**
TORD Torodi Ar. Bea 33.25 226 P **P 07 14 15.2 +0.1**
comp=Z,2.1nm,0.5s,mb4.4,baz=38,slow=9.1,SNR=20
TORD PcP PcP 07 16 56.5 -0.8
comp=Z,1.0nm,0.9s,baz=56,slow=2.4,SNR=5.0
BVAR Borovoye Array 33.59 50 P **P 07 14 18.1 +0.5**
comp=Z,1.2nm,0.8s,mb3.9,baz=346,slow=3.7,SNR=4.2
BVAR Borovoye Array 33.59 50 P **P 07 14 18.1 +0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 38.61 54 *i*P **P 07 15 00.9 +0.3**
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
KURK Kurchatov 38.61 54 *i*P **P 07 15 00.9 +0.3**
comp=Z,6.0nm,1.0s,mb4.3
JASL Jaisalmer 39.38 94 *e*P **P 07 15 04.5 -2.8**
NVS Novosibirsk 41.25 48 *i*P **P 07 15 22.5 0.0**
MKAR Makanchi Array 41.48 60 P **P 07 15 24.8 +0.4**
comp=Z,4.5nm,0.8s,mb4.2,baz=288,slow=6.3,SNR=20
MKAR Makanchi Array 41.48 60 P **P 07 15 24.8 +0.4**
MKAR Makanchi Array 41.48 60 *i*P **P 07 15 25.0 +0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
ZAA0 Zalesovo Array 42.22 49 *e*P **P 07 15 30.1 -0.3**
ZAA0 Zalesovo Array 42.22 49 *e*P **P 07 15 30.1 -0.3**
ZALV Zalesovo Beam 42.22 49 P **P 07 15 30.1 -0.4**
comp=Z,3.2nm,0.6s,mb4.1,baz=268,slow=8.9,SNR=14
ZALV Zalesovo Beam 42.22 49 P **P 07 15 30.1 -0.3**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
DBIC Dimbokro 42.25 229 P **P 07 15 31.0 -0.1**
comp=Z,1.9nm,0.6s,mb3.9,baz=360,slow=5.9,SNR=5.7
DBIC Dimbokro 42.25 229 P **P 07 15 31.0 -0.1**
DBIC pmax pmax
comp=Z,2.0nm,0.6s
TIC Toumodi 42.37 229 *e*P **P 07 15 31.9 -0.1**
comp=Z,9.3nm,0.2s,mb5.1
SMLA Simla 42.38 84 *e*P **P 07 15 29.8 -2.1**
KIC Kosan Boka 42.43 228 *e*P **P 07 15 32.5 0.0**
comp=Z,32nm,1.0s,mb4.9
KKR Kurukshetra 42.61 86 *e*P **P 07 15 29.8 -4.1**
KHET Khetri 42.67 89 *e*P **P 07 15 32.1 -2.3**
KHET AMb AMB 07 15 35.9
comp=Z,7.5nm,1.2s,mb4.3
RTK Rohtak 42.70 87 *e*P **P 07 15 29.7 -5.0**
LIC Lamto 42.71 229 ⇑*i*P **P 07 15 34.6 -0.2**
comp=Z,16nm,0.8s,mb4.5
LIC Lamto 42.71 229 *e*P **P 07 15 34.3 -0.5**
comp=Z,34nm,1.1s,mb5.0
LIC Lamto 42.71 229 ⇑*i*P **P 07 15 34.6 -0.2**
comp=Z,7.9nm,0.8s,mb4.5
KLP Kalpa 43.05 83 *e*P **P 07 15 33.8 -3.7**
KLP AMb AMB 07 15 39.3
comp=Z,13nm,1.0s,mb4.6
KLP *ex* x 07 19 57.7
AYAN Aya Nagar 43.51 88 *e*P **P 07 15 36.4 -4.8**
AYAN AMb AMB 07 15 43.4
comp=Z,20nm,0.8s,mb4.9
KALG Kalgarh 44.31 85 *ex* **P 07 15 40.8 -6.9**
KALG AMb AMB 07 15 41.3
comp=Z,27nm,0.3s,mb5.5
JOSI Joshimath 44.48 84 *e*P **P 07 15 45.7 -3.3**
JOSI *ex* x 07 20 08.2
WMQ Urumqi 45.86 63 *e*P **P 07 16 00.0 +0.2**
BHPL Bhopal 46.34 94 *e*P **P 07 15 59.4 -4.4**
BHPL AMb AMB 07 16 07.8
comp=Z,25nm,1.3s,mb5.0
BHPL *ex* x 07 20 22.9
AKL Akola 47.40 97 *ex* **P 07 16 00.9 -11**
AKL AMb AMB 07 16 14.8
comp=Z,25nm,1.1s,mb5.1
PYUN Piuthan 48.26 85 *e*P **P 07 16 19.3 +0.6**
comp=Z,32nm,0.6s,mb5.5
DANN Dangsing 48.74 84 *e*P **P 07 16 23.1 +0.7**
comp=Z,86nm,0.9s,mb5.8
KOLN Koldanda 48.89 85 *e*P **P 07 16 23.6 0.0**
comp=Z,43nm,1.1s,mb5.4
GKN Gorkha 49.59 84 *e*P **P 07 16 28.6 -0.3**
comp=Z,60nm,1.1s,mb5.5
DMN Daman 50.14 84 *e*P **P 07 16 33.6 +0.5**
comp=Z,53nm,1.1s,mb5.5
KKN Kakani 50.19 84 *e*P **P 07 16 33.8 +0.3**
PKIN Phulchoki 50.38 84 *e*P **P 07 16 34.3 -0.6**
comp=Z,13nm,0.9s,mb5.0
PKI Pulchoki 50.39 84 *e*P **P 07 16 34.8 -0.2**
comp=Z,24nm,1.0s,mb5.2
PKI Pulchoki 50.39 84 *e*P **P 07 16 34.8 -0.2**
PKI pmax pmax
comp=Z,24nm,1.0s,mb5.2
HYB Hyderabad 50.47 100 *e*P **P 07 16 35.5 -0.2**
GUN Gumba 50.59 83 *e*P **P 07 16 37.0 +0.5**
comp=Z,35nm,1.0s,mb5.3
JIRN Jiri 50.96 83 *e*P **P 07 16 39.6 +0.3**
comp=Z,23nm,0.9s,mb5.1
RAMN Ramite 51.62 84 *e*P **P 07 16 44.0 -0.3**
comp=Z,67nm,1.1s,mb5.5
ODAN Odare 52.28 84 *e*P **P 07 16 48.9 -0.3**
TAPN Taplejung 52.29 83 *e*P **P 07 16 49.6 +0.4**
comp=Z,28nm,1.1s,mb5.1
TLY Talaya 53.83 49 *i*P **P 07 17 00.6 +0.3**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TLY Talaya 53.83 49 *i*P **P 07 17 00.6 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
SHL Shillong 56.41 83 *ex* x 07 14 45.9
SONM Songino Array 56.87 53 P **P 07 17 22.8 +0.6**
comp=Z,2.1nm,0.8s,mb4.2,baz=286,slow=9.5,SNR=15
SONM Songino Array 56.87 53 P **P 07 17 22.8 +0.6**
SONM pmax pmax
comp=Z,2.0nm,0.8s
ULN Ulaanbaatar 57.27 52 *e*P **P 07 17 25.8 +0.8**
BOD Bodaibo 57.34 39 *e*P **P 07 17 20.1 -5.3**
TIXI Tiksi 57.62 21 *i*P **P 07 17 27.2 +0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
TIXI Tiksi 57.62 21 *i*P **P 07 17 27.2 +0.1**
comp=Z,5.0nm,1.4s,mb4.3
MATP Matopo 58.96 177 P **P 07 17 37.4 +0.4**
comp=Z,2.5nm,0.8s,mb4.3,baz=360,slow=8.0,SNR=5.0
LZH Lanzhou 60.24 66 *e*P **P 07 17 45.3 -0.6**
LZH AP pP 07 17 50.5 -0.3
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,140nm,4.0s
LZH LR LR
comp=E,780nm,13.2s
LZH LR LR
comp=Z,791nm,14.8s,MS5.0
CD2 Chengdu 62.72 71 *e*P **P 07 18 02.6 -0.1**
CD2 AP pP 07 18 07.2 -0.5
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,20nm,4.8s
HHC Hu-ho-hao-te 63.28 58 *e*P **P 07 18 05.7 -0.6**
HHC AP pP 07 18 10.5 -0.7
HHC XP sP 07 18 12.9 -0.2
HHC PP PP 07 20 26.1 +0.9
HHC AMB AMB
comp=Z,22nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,86nm,9.4s

HHC				LR	LR			
	comp=N,157nm,21.4s,MS4.4							
HHC				LR	LR			
	comp=E,236nm,21.4s,MS4.4							
HHC				LR	LR			
	comp=Z,165nm,21.4s,MS4.2							
KMI	**Kunming**	**64.99**	**77**	P	**P**	**07 18 19.2**	**+1.4**	
KMI				AP	pP	07 18 22.8	+0.1	
KMI				AMB	AMB			
	comp=Z,5.0nm,0.9s,mb4.5							
CMAR	**Chiang Mai Arr**	**65.76**	**85**	P	**P**	**07 18 22.2**	**-0.6**	
	comp=Z,0.9nm,0.3s,mb4.2,baz=300,slow=6.0,SNR=5.8							
CMAR	**Chiang Mai Arr**	**65.76**	**85**	P	**P**	**07 18 22.2**	**-0.6**	
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
GYA	**Guiyang**	**67.24**	**74**	P	**P**	**07 18 32.8**	**+0.6**	
GYA				AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8							
CN2	**Changchun**	**70.44**	**49**	*e*P	**P**	**07 18 49.7**	**-2.1**	
WHN	**Wuhan**	**70.62**	**66**	P	**P**	**07 18 56.5**	**+3.3**	
KSRS	**Korea Array**	**75.73**	**53**	P	**P**	**07 19 23.6**	**+0.3**	
	comp=Z,3.7nm,0.9s,mb4.3,baz=308,slow=5.7,SNR=6.9							
KSRS	**Korea Array**	**75.73**	**53**	P	**P**	**07 19 23.6**	**+0.3**	
KSRS				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
YSS	**Yuzh-Sakhalins**	**77.80**	**39**	*i* P	**P**	**07 19 35.5**	**+0.7**	
YSS				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
PET	**Petropavlovsk**	**79.88**	**27**	*e*P	**P**	**07 19 44.7**	**-1.4**	
PET				*e*		07 29 40.4		
BDFB	**Brasilia**	**87.50**	**248**	P	**P**	**07 20 27.1**	**+1.5**	
	comp=Z,2.0nm,0.7s,mb4.4,baz=354,slow=24,SNR=6.2							
BDFB	**Brasilia**	**87.50**	**248**	P	**P**	**07 20 27.1**	**+1.5**	
BDFB				pmax	pmax			
	comp=Z,2.0nm,0.7s							
PDAR	**Pinedale Array**	**89.25**	**329**	P	**P**	**07 20 33.9**	**+0.2**	
	comp=Z,0.3nm,0.6s,mb3.8,baz=19,slow=5.7,SNR=3.3							
LON	**Longmire**	**90.03**	**338**	*e*P	**P**	**07 20 37.6**	**+0.4**	
	comp=Z,168nm,1.1s							
LON	**Longmire**	**90.03**	**338**	*e*P	**P**	**07 20 37.6**	**+0.4**	
LON				pmax	pmax			
	comp=Z,168nm,1.1s							
JLU	**Jordanelle**	**91.84**	**329**	*e*P	**P**	**07 20 47.8**	**+2.1**	
NVAR	**Mina Array Bea**	**96.35**	**332**	P	**P**	**07 21 04.8**	**-1.7**	
	comp=Z,0.3nm,0.6s,mb3.9,baz=11,slow=1.5,SNR=3.5							

CSEM ***09*** *07:10:49.3±0.6, 3857N×3043W, h5km, ML3.0, Error ellipse: s-maj=23.6km s-min=5.7km az=179.0, After PDA*

PDA 09 07:10:49.3±0.6, 3857N×3043W, h5km, MD3.6, ML3.0, Error ellipse: s-maj=23.6km s-min=5.7km az=179.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.36**	**89**	*e*P	Pn	07 11 10.1	-4.8
CALA				*e*S	Sb	07 11 25.7	-7.1
PCED	**Cedros**	**1.36**	**87**	*e*P	Pn	07 11 10.1	-4.8
PCED				*e*S	Sb	07 11 25.2	-7.6
PCED				A		07 11 26.1	
	56nm,0.3s						
PCED	**Cedros**	**1.36**	**87**	*e*P	Pn	07 11 10.1	-4.8
PCED				*e*S	Sb	07 11 25.2	-7.6
HOR	**Horta**	**1.41**	**91**	*e*S	Sb	07 11 27.3	-7.2
PICO	**Pico**	**1.58**	**92**	*e*P	Pn	07 11 13.0	-4.9
PICO				*e*S	Sn	07 11 31.0	-7.6
ROSA	**Rosais**	**1.72**	**84**	*e*P	Pn	07 11 15.2	-4.7
ROSA				*e*S	Sn	07 11 34.5	-7.8

BJI ***09*** *07:11:51.9, 3875N×2527E, h18km, mB5.0, mb4.8, Ms5.0, Msz4.7*

ATH ***09*** *07:11:52.6, 3877N×2572E, h44km±3km, MD4.5/14, ML4.7*

DDA ***09*** *07:11:53.1, 3877N×2560E, h6km±7km, Ml4.8*

CSEM ***09*** *07:11:53.8±0.0, 3875N×2572E, h10km, mb5.1/37, Ms3.6, Mw4.9, Error ellipse: s-maj=1.0km s-min=0.8km az=15.0*

SKO ***09*** *07:11:54.0, 3877N×2591E, h0km*

ISCJB ***09*** *07:11:54.4±0.1, 3879N±001×2570E±001, h10km, mb4.7/76, MS4.0/18, Error ellipse: s-maj=1.9km s-min=1.3km az=19.9*

ISK ***09*** *07:11:54.0, 3880N×2566E, h9km, ML5.1*

MOS ***09*** *07:11:55.4±1.2, 3874N×2573E, h24km, mb4.6/38, Error ellipse: s-maj=3.7km s-min=2.6km az=102.2*

PDG ***09*** *07:11:55.2±0.8, 3881N×2570E, h11km±2km, ML4.2/10, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*

SOF ***09*** *07:11:55.6, 3898N×2574E, h5km, MD4.2*

NEIC ***09*** *07:11:55.8±0.2, 3874N×2571E, h10km, mb4.7/61, ML5.2(ISK), ML5.1(THE), ML4.7(ATH), Error ellipse: s-maj=3.1km s-min=2.2km az=18.0*

NEIC Felt [II] at Izmir, Turkey. Also felt at Mytilini, Greece.

GCMT ***09*** *07:11:55.8±0.5, 3876N×2566E, h20km±1km, MW4.9/56, Moment Tensor Solution. s19,c22; s56,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.59±.22; Mθθ 1.94±.14; Mφφ-0.35±.12; Mrθ-0.03±.23; Mrφ-1.36±.08; Mθφ 1.12±.28; Best double couple: M○2.50200×10^16 NP1:φs145.00000°, δ61.00000°, λ-49.00000°. Principal axes: T 2.6370, Plg7.0000°, Azm207.0000°; N -0.2710, Plg35.0000°, Azm302.0000°; P -2.3660, Plg54.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

THE ***09*** *07:11:57.0, 3875N×2577E, h27km±4km, ML5.1/6 Error ellipse: s-maj=4.5km s-min=1.0km az=101.0*

IDC ***09*** *07:11:58.1±1.6, 3871N×2567E, h35km±15km, mb4.0/17, mb1 4.2/25, mb1mx4.1/31, mbtmp4.1/25, ML4.3/7, MS3.9/17, Ms1 3.9/17, ms1mx3.7/38, Error ellipse: s-maj=11.3km s-min=9.9km az=118.0*

ISC 09 07:11:56.2±0.1, 3879N±001×2572E±001, h10km, (h14km±2.0km: pP-P), n600, σ1s21/663, mb4.7/77, MS4.0/18, 18C-30D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.48**	**147**	P	**Pg**	**07 12 05.7**	**+0.2**
PRK	**Paraskevi**	**0.63**	**43**	P	**Pg**	**07 12 08.2**	**-0.1**
PRK				S	**Sg**	**07 12 19.6**	**+3.1**
PRK	**Paraskevi**	**0.63**	**43**	⇑*i*P	**Pg**	**07 12 05.3**	**-3.0**
PRK				*e*S	**Sg**	**07 12 16.7**	**+0.2**
PRK	**Paraskevi**	**0.63**	**43**	P	**Pg**	**07 12 08.2**	**-0.1**
PRK				S	**Sg**	**07 12 19.6**	**+3.1**
URLA	**Izmir**	**0.81**	**122**	*i* P	**Pg**	**07 12 11.6**	**-0.1**
URLA				*i* S	**Sg**	**07 12 24.1**	**+1.8**
AYVA	**Ayvalik**	**0.92**	**55**	*i* P	**Pg**	**07 12 13.4**	**-0.4**
AYVA				*i* S	**Sg**	**07 12 27.0**	**+1.3**
BOZC	**Bozcaada**	**1.08**	**14**	*i* P	**Pb**	**07 12 15.2**	**-1.8**
BOZC				*i* S	**Sg**	**07 12 30.8**	**-0.3**
BLCB	**Balcova**	**1.11**	**111**	PN	**Pn**	**07 12 16.6**	**-1.1**
BLCB				*e*SN	**Sn**	**07 12 33.3**	**+0.2**
EZN	**Ezine**	**1.14**	**24**	PN	**Pn**	**07 12 16.6**	**-1.5**
EZN				*e*SN	**Sn**	**07 12 31.7**	**-2.1**
LIA	**Limnos Island**	**1.18**	**340**	P	**Pb**	**07 12 17.1**	**-1.6**
LIA				S	**Sb**	**07 12 32.9**	**-1.2**
LIA	**Limnos Island**	**1.18**	**340**	⇑*i*P	**Pb**	**07 12 14.3**	**-4.4**
LIA				*e*S	**Sb**	**07 12 29.1**	**-5.0**
IZM	**Izmir**	**1.27**	**107**	PN	**Pn**	**07 12 18.9**	**-1.1**
IZM	**Izmir**	**1.27**	**107**	P	**Pn**	**07 12 19.1**	**-0.8**
SMG	**Samos**	**1.39**	**140**	⇓*i*P	**Pn**	**07 12 17.0**	**-4.6**
SMG				*e*S	**Sb**	**07 12 33.9**	**-6.1**
GADA	**Gvkgeada**	**1.41**	**6**	*e*PN	**Pn**	**07 12 20.1**	**-1.8**
GADA	**Gvkgeada**	**1.41**	**6**	Pn	**Pn**	**07 12 20.3**	**-1.6**
GADA				Sn	**Sn**	**07 12 40.3**	**-0.1**
AOS	**Alonnisos**	**1.48**	**285**	P	**Pn**	**07 12 21.6**	**-1.3**
GCAM	**G?zelcaml?**	**1.61**	**132**	*i* P	**Pn**	**07 12 23.2**	**-1.4**
GCAM				*i* S	**Sn**	**07 12 47.4**	**+1.9**
GCAM	**G?zelcaml?**	**1.61**	**132**	*i* P	**Pn**	**07 12 23.2**	**-1.5**
GCAM				*i* S	**Sn**	**07 12 47.4**	**+1.9**
PTL	**Penteli**	**1.64**	**244**	P	**Pn**	**07 12 23.6**	**-1.4**
AKS	**Akhisar**	**1.64**	**86**	*e*PN	**Pn**	**07 12 24.1**	**-0.9**
AKS	**Akhisar**	**1.64**	**86**	*e*Pn	**Pn**	**07 12 24.1**	**-0.9**
AKS				Sn	**Sn**	**07 12 48.1**	**+2.0**
APE	**Apeiranthos**	**1.72**	**185**	P	**Pn**	**07 12 23.7**	**-2.5**
APE	**Apeiranthos**	**1.72**	**185**	⇑*i*P	**Pn**	**07 12 20.9**	**-5.3**
APE				*e*S	**Sn**	**07 12 41.6**	**-6.6**
APE	**Apeiranthos**	**1.72**	**185**	P	**Pn**	**07 12 23.7**	**-2.5**
APE				*e*S	**Sn**	**07 12 41.6**	**-6.6**
APE	**Apeiranthos**	**1.72**	**185**	⇑*i*P	**Pn**	**07 12 24.2**	**-2.0**
BALY	**Balya**	**1.75**	**57**	*i* P	**Pn**	**07 12 26.2**	**-0.4**
BALY				*i* S	**Sn**	**07 12 53.0**	**+4.0**
ATH	**Athens Observa**	**1.77**	**243**	⇑*i*P	**Pn**	**07 12 22.2**	**-4.7**
ATH				*e*S	**Sn**	**07 12 43.1**	**-6.4**
PAIG	**Paliouri**	**1.95**	**306**	P	**Pn**	**07 12 27.8**	**-1.5**
PAIG				S	**Sn**	**07 12 53.4**	**-0.4**
ENEZ	**Enez**	**1.97**	**10**	*e*PN	**Pn**	**07 12 29.0**	**-0.6**
NEO	**Neokhori**	**2.01**	**286**	*e*P	**Pn**	**07 12 25.6**	**-4.6**
AYDN	**Tasoluk**	**2.04**	**123**	*i* P	**Pn**	**07 12 28.3**	**-2.2**
AYDN				*i* S	**Sn**	**07 13 01.3**	**+5.2**
AYDN	**Tasoluk**	**2.04**	**123**	P	**Pn**	**07 12 28.2**	**-2.3**
OUR	**Ouranopolis**	**2.05**	**319**	P	**Pn**	**07 12 29.4**	**-1.2**
ALN	**Alexandroupoli**	**2.12**	**7**	P	**Pn**	**07 12 30.3**	**-1.4**
ALN				S	**Sn**	**07 12 57.1**	**-1.0**
BODT	**Bodrum**	**2.13**	**143**	*e*PN	**Pn**	**07 12 30.8**	**-1.0**
BODT	**Bodrum**	**2.13**	**143**	Pn	**Pn**	**07 12 30.7**	**-1.1**
LKR	**Lokris**	**2.13**	**267**	P	**Pn**	**07 12 30.2**	**-1.6**
LKR	**Lokris**	**2.13**	**267**	*e*P	**Pn**	**07 12 27.3**	**-4.5**
LKR	**Lokris**	**2.13**	**267**	P	**Pn**	**07 12 30.2**	**-1.6**
MLSB	**Milas**	**2.20**	**132**	*e*PN	**Pn**	**07 12 32.3**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.20**	**30**	*e*PN	**Pn**	**07 12 32.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.20**	**30**	Pn	**Pn**	**07 12 32.3**	**-0.5**
EDC	**Edincik**	**2.27**	**46**	*e*PN	**Pn**	**07 12 33.3**	**-0.4**
LTK	**Loutraki**	**2.29**	**251**	P	**Pn**	**07 12 32.5**	**-1.5**
BNT	**Bandirma**	**2.31**	**47**	*e*PN	**Pn**	**07 12 33.7**	**-0.5**
KULA	**Kula-Manisa**	**2.32**	**96**	*e*PN	**Pn**	**07 12 34.0**	**-0.4**
MFT	**Murefte**	**2.33**	**31**	*e*PN	**Pn**	**07 12 34.3**	**-0.3**
MFT	**Murefte**	**2.33**	**31**	Pn	**Pn**	**07 12 34.6**	**+0.1**
DID	**Didima**	**2.34**	**238**	P	**Pn**	**07 12 32.8**	**-1.9**
RDO	**Rodhopi**	**2.36**	**357**	⇑*i*P	**Pn**	**07 12 30.3**	**-4.6**
RDO	**Rodhopi**	**2.36**	**357**	P	**Pn**	**07 12 34.3**	**-0.6**
PLG	**Polygyros**	**2.37**	**313**	P	**Pn**	**07 12 33.6**	**-1.4**
PLG	**Polygyros**	**2.37**	**313**	*e*P	**Pn**	**07 12 30.7**	**-4.3**
PLG	**Polygyros**	**2.37**	**313**	P	**Pn**	**07 12 33.6**	**-1.4**
THR5	**Thira Island,**	**2.39**	**187**	P	**Pn**	**07 12 33.0**	**-2.3**
THR3	**Thira Island,**	**2.39**	**186**	P	**Pn**	**07 12 33.4**	**-1.9**
DST	**Dursunbey**	**2.40**	**69**	*e*PN	**Pn**	**07 12 35.1**	**-0.4**
DST	**Dursunbey**	**2.40**	**69**	P	**Pn**	**07 12 35.3**	**-0.2**
THR6	**Thira Island,**	**2.44**	**186**	P	**Pn**	**07 12 34.3**	**-1.8**
KCT	**Karacabey**	**2.52**	**53**	*e*PN	**Pn**	**07 12 37.0**	**-0.1**
KCT	**Karacabey**	**2.52**	**53**	Pn	**Pn**	**07 12 36.7**	**-0.4**
DAT	**Datca**	**2.53**	**144**	*e*PN	**Pn**	**07 12 36.1**	**-1.2**
TKR	**Tekirdag**	**2.60**	**32**	*e*PN	**Pn**	**07 12 37.9**	**-0.4**
TKR	**Tekirdag**	**2.60**	**32**	Pn	**Pn**	**07 12 38.5**	**+0.2**
YER	**Yerkesik**	**2.61**	**128**	*e*PN	**Pn**	**07 12 38.2**	**-0.2**
YER	**Yerkesik**	**2.61**	**128**	P	**Pn**	**07 12 38.3**	**-0.1**
AGG	**Agios Georgios**	**2.66**	**276**	P	**Pn**	**07 12 38.7**	**-0.3**
HORT	**Hortiatis**	**2.71**	**313**	P	**Pn**	**07 12 39.1**	**-0.7**
HORT				S	**Sn**	**07 13 10.6**	**-2.0**
SOH	**Sokhos**	**2.73**	**319**	P	**Pn**	**07 12 39.4**	**-0.6**
DENT	**Denizli**	**2.80**	**111**	*e*PN	**Pn**	**07 12 48.3**	**-0.3**
DENT	**Denizli**	**2.80**	**111**	Pn	**Pn**	**07 12 41.3**	**+0.2**
THE	**Thessaloniki**	**2.81**	**312**	P	**Pn**	**07 12 40.5**	**-0.7**
LIT	**Litokhoron**	**2.82**	**299**	P	**Pn**	**07 12 40.7**	**-0.6**
LIT				S	**Sn**	**07 13 11.4**	**-4.0**
KDZ	**Kurdzhali**	**2.87**	**355**	Pn	**Pn**	**07 12 40.4**	**-1.5**
KDZ	**Kurdzhali**	**2.87**	**355**	P	**Pn**	**07 12 40.6**	**-1.3**
NVR	**Nevrokopi**	**2.93**	**331**	⇑*i*P	**Pn**	**07 12 38.7**	**-4.1**
THL	**Klokotos Trika**	**2.98**	**286**	P	**Pn**	**07 12 42.9**	**-0.6**
THL				S	**Sn**	**07 13 19.6**	**+0.3**
THL	**Klokotos Trika**	**2.98**	**286**	*e*P	**Pn**	**07 12 39.9**	**-3.6**
VLX	**Vlachokerasia**	**2.99**	**243**	P	**Pn**	**07 12 42.6**	**-1.1**
RZN	**Rozhen**	**3.00**	**345**	Pn	**Pn**	**07 12 43.1**	**-0.6**
RZN	**Rozhen**	**3.00**	**345**	P	**Pn**	**07 12 43.2**	**-0.5**
KHL	**Karahalli**	**3.02**	**98**	*e*PN	**Pn**	**07 12 44.1**	**+0.2**
KHL	**Karahalli**	**3.02**	**98**	Pn	**Pn**	**07 12 44.4**	**+0.4**
EVR	**Evrytania**	**3.06**	**274**	*e*P	**Pn**	**07 12 40.9**	**-3.6**
DALT	**Dalyan (Mudla)**	**3.07**	**130**	*e*PN	**Pn**	**07 12 45.1**	**+0.4**
DALT	**Dalyan (Mudla)**	**3.07**	**130**	Pn	**Pn**	**07 12 44.5**	**-0.2**
SLVT	**Silivri**	**3.10**	**37**	*e*PN	**Pn**	**07 12 44.9**	**-0.2**
SLVT	**Silivri**	**3.10**	**37**	Pn	**Pn**	**07 12 44.8**	**-0.3**
CTT	**Catalca**	**3.14**	**41**	*e*PN	**Pn**	**07 12 44.5**	**-1.2**
CTT	**Catalca**	**3.14**	**41**	Pn	**Pn**	**07 12 46.4**	**+0.7**
GEMT	**Gemlik**	**3.14**	**57**	*e*PN	**Pn**	**07 12 46.5**	**+0.8**
GEMT	**Gemlik**	**3.14**	**57**	Pn	**Pn**	**07 12 47.3**	**+1.6**
EDRB	**Edirne**	**3.15**	**14**	*e*PN	**Pn**	**07 12 45.0**	**-0.9**
MMB	**Musomiste**	**3.19**	**332**	Pn	**Pn**	**07 12 45.8**	**-0.5**
MMB	**Musomiste**	**3.19**	**332**	P	**Pn**	**07 12 45.0**	**-1.3**
ARG	**Arkhangelos**	**3.20**	**143**	*e*P	**Pn**	**07 12 42.7**	**-3.8**
KNT	**Kendrikon**	**3.21**	**318**	P	**Pn**	**07 12 46.5**	**-0.2**
CTKS	**Kestanelik-??a**	**3.25**	**40**	*e*PN	**Pn**	**07 12 46.3**	**-0.8**
DIM	**Dimitrovgrad**	**3.26**	**358**	Pn	**Pn**	**07 12 46.5**	**-0.8**
DIM	**Dimitrovgrad**	**3.26**	**358**	P	**Pn**	**07 12 46.8**	**-0.5**
CTYL	**Yal??k??y-??at**	**3.33**	**35**	*e*PN	**Pn**	**07 12 47.3**	**-1.0**
YLV	**Yalova**	**3.33**	**57**	*e*PN	**Pn**	**07 12 47.9**	**-0.4**
YLV	**Yalova**	**3.33**	**57**	P	**Pn**	**07 12 50.7**	**+2.4**
BGKT	**Bogazkoy**	**3.35**	**43**	*e*PN	**Pn**	**07 12 47.2**	**-0.9**
BGKT	**Bogazkoy**	**3.35**	**43**	Pn	**Pn**	**07 12 48.5**	**0.0**
GRG	**Griva**	**3.35**	**311**	P	**Pn**	**07 12 48.6**	**+0.1**
ITM	**Ithomi**	**3.40**	**243**	⇑*i*P	**Pn**	**07 12 45.8**	**-3.5**
PLD	**Plovdiv**	**3.40**	**347**	P	**Pn**	**07 12 49.1**	**-0.2**
KZN	**Kozani**	**3.41**	**298**	*e*P	**Pn**	**07 12 46.3**	**-3.1**
RLS	**Riolos of Patr**	**3.42**	**259**	P	**Pn**	**07 12 50.8**	**+1.3**
FETY	**Fethiye**	**3.42**	**128**	*e*PN	**Pn**	**07 12 50.1**	**+0.5**
FETY	**Fethiye**	**3.42**	**128**	Pn	**Pn**	**07 12 50.5**	**+0.9**
ISK	**Istanbul-Kandi**	**3.43**	**47**	*e*PN	**Pn**	**07 12 49.0**	**-0.6**
ISK	**Istanbul-Kandi**	**3.43**	**47**	P	**Pn**	**07 12 51.0**	**+1.4**
ALT	**Altintas**	**3.43**	**84**	*e*PN	**Pn**	**07 12 49.7**	**-0.1**
ALT	**Altintas**	**3.43**	**84**	Pn	**Pn**	**07 12 49.8**	**+0.1**
KARP	**Karpathos**	**3.43**	**160**	⇓*i*P	**Pn**	**07 12 45.8**	**-3.9**
CAVI	**Cavuskoy**	**3.49**	**65**	*e*PN	**Pn**	**07 12 51.4**	**+0.9**
VAY	**Valandovo**	**3.50**	**317**	P	**Pn**	**07 12 49.8**	**-0.8**
VAY	**Valandovo**	**3.50**	**317**	*e*Pn	**Pn**	**07 12 50.5**	**-0.1**
VAY				*e*Sg	**Sg**	**07 12 50.6**	**+0.2**
VAY	**Valandovo**	**3.50**	**317**	*e*Pn	**Pn**	**07 12 50.6**	**0.0**
VAY				*e*Sg	**Sg**	**07 13 48.7**	**+0.2**
VAY	**Valandovo**	**3.50**	**317**	P	**Pn**	**07 12 50.6**	**0.0**
ADVT	**Abdulvahap**	**3.51**	**61**	Pn	**Pn**	**07 12 52.0**	**+1.2**
NPS	**Neapolis**	**3.52**	**181**	*e*P	**Pn**	**07 12 45.8**	**-5.1**
KLYT	**Kilyos**	**3.54**	**45**	*e*PN	**Pn**	**07 12 50.7**	**-0.6**
KLYT	**Kilyos**	**3.54**	**45**	Pn	**Pn**	**07 12 50.1**	**-1.1**
IDI	**Anoyia**	**3.56**	**191**	Pn	**Pn**	**07 12 49.2**	**-2.2**
	23nm,0.3s,baz=19,slow=10.0,SNR=17						
IDI				Pg	**Pg**	**07 13 01.2**	**-3.1**
	52nm,0.3s,baz=19,slow=16,SNR=20						
IDI				Sn	**Sn**	**07 13 30.6**	**-2.9**
	76nm,0.3s,baz=312,slow=14,SNR=6.7						
IDI				Lg		07 13 47.9	
	54nm,0.3s,baz=25,slow=7.5,SNR=3.1						
IDI	**Anoyia**	**3.56**	**191**	Pg	**Pg**	**07 13 01.2**	**-3.1**
VAM	**Vamos**	**3.59**	**200**	*e*P	**Pn**	**07 12 48.5**	**-3.3**
VAM	**Vamos**	**3.59**	**200**	*e*P	**Pn**	**07 12 48.8**	**-3.0**
HRT	**Hereke**	**3.66**	**55**	*e*PN	**Pn**	**07 12 52.5**	**-0.3**
HRT	**Hereke**	**3.66**	**55**	P	**Pn**	**07 12 54.6**	**+1.8**
PYL	**PYLOS**	**3.67**	**240**	P	**Pn**	**07 12 53.1**	**+0.1**
KKB	**Krupnik**	**3.68**	**328**	Pn	**Pn**	**07 12 53.7**	**+0.7**
JMB	**Yambol**	**3.73**	**10**	Pn	**Pn**	**07 12 53.3**	**-0.5**
SHUT	**Suhut-Afyon**	**3.79**	**92**	*e*PN	**Pn**	**07 12 55.4**	**+0.8**
SILT	**Sile**	**3.83**	**51**	*e*PN	**Pn**	**07 12 55.4**	**+0.3**
SILT	**Sile**	**3.83**	**51**	Pn	**Pn**	**07 12 55.2**	**+0.1**
GPA	**Golpazari**	**3.85**	**66**	*e*PN	**Pn**	**07 12 55.6**	**+0.1**
GPA	**Golpazari**	**3.85**	**66**	P	**Pn**	**07 12 55.8**	**+0.4**
EYL	**Eskiyayla**	**3.86**	**61**	*e*PN	**Pn**	**07 12 56.1**	**+0.6**
EYL	**Eskiyayla**	**3.86**	**61**	Pn	**Pn**	**07 12 55.7**	**+0.2**
JAN	**Janina**	**3.88**	**284**	*e*P	**Pn**	**07 12 52.0**	**-3.8**
FNA	**Florina**	**3.90**	**302**	P	**Pn**	**07 12 56.3**	**+0.3**
KFL	**Anninata**	**3.93**	**262**	P	**Pn**	**07 12 58.4**	**+1.8**
PGB	**Panagyurishte**	**3.94**	**343**	Pn	**Pn**	**07 12 55.9**	**-0.7**
LKD	**Levkas**	**3.96**	**270**	P	**Pn**	**07 12 57.8**	**+0.8**
STIP	**Stip**	**3.97**	**318**	*e*Pn	**Pn**	**07 12 57.1**	**+0.1**
STIP	**Stip**	**3.97**	**318**	*e*Pn	**Pn**	**07 12 57.2**	**+0.1**
BIA	**Bitola**	**4.05**	**305**	*e*Pn	**Pn**	**07 12 58.3**	**+0.1**
BIA	**Bitola**	**4.05**	**305**	*e*Pn	**Pn**	**07 12 58.4**	**+0.2**
GULT	**Gulveren**	**4.05**	**65**	*e*PN	**Pn**	**07 12 58.9**	**+0.8**
GULT	**Gulveren**	**4.05**	**65**	Pn	**Pn**	**07 13 00.4**	**+2.2**
BCK	**Bucak**	**4.06**	**108**	*e*PN	**Pn**	**07 12 58.1**	**-0.2**
BCK	**Bucak**	**4.06**	**108**	P	**Pn**	**07 12 59.6**	**+1.3**
VLS	**Valsamata**	**4.07**	**263**	*e*P	**Pn**	**07 12 54.4**	**-4.1**
VTS	**Vitosha**	**4.25**	**334**	⇓P	**Pn**	**07 13 01.0**	**+0.1**
VTS				S	**Sn**	**07 13 51.5**	**+0.9**
VTS	**Vitosha**	**4.25**	**334**	⇓P	**Pn**	**07 13 01.0**	**+0.1**
VTS				S	**Sn**	**07 13 51.5**	**+0.9**
VTS	**Vitosha**	**4.25**	**334**	P	**Pn**	**07 13 01.1**	**+0.2**
VTS	**Vitosha**	**4.25**	**334**	⇓*i*P	**Pn**	**07 13 01.0**	**+0.1**
KRUS	**Krusevo**	**4.29**	**308**	*e*Pn	**Pn**	**07 13 02.4**	**+0.9**
ANTB	**Antalya**	**4.34**	**114**	*e*PN	**Pn**	**07 13 03.5**	**+1.4**
PVL	**Pavlikeni**	**4.43**	**356**	Pn	**Pn**	**07 13 02.3**	**-1.1**
PVL	**Pavlikeni**	**4.43**	**356**	P	**Pn**	**07 13 01.8**	**-1.6**
OHR	**Ohrid**	**4.44**	**303**	P	**Pn**	**07 13 08.0**	**+4.5**
OHR	**Ohrid**	**4.44**	**303**	*e*Pn	**Pn**	**07 13 05.6**	**+2.1**
SZH	**Strazhica**	**4.48**	**2**	P	**Pn**	**07 13 03.2**	**-0.8**
MDU	**Mudurnu**	**4.56**	**67**	*e*PN	**Pn**	**07 13 06.0**	**+0.8**
SKO	**Skopje**	**4.56**	**316**	Pn	**Pn**	**07 13 07.7**	**+2.5**
SKO	**Skopje**	**4.56**	**316**	*e*Pn	**Pn**	**07 13 05.9**	**+0.7**
SKO	**Skopje**	**4.56**	**316**	*e*Pn	**Pn**	**07 13 06.0**	**+0.8**
SKO	**Skopje**	**4.56**	**316**	P	**Pn**	**07 13 05.8**	**+0.6**
PRD	**Provadia**	**4.59**	**16**	P	**Pn**	**07 13 04.6**	**-0.9**
KIZT	**Kizilcal**	**4.81**	**87**	*e*PN	**Pn**	**07 13 09.5**	**+0.9**
KIZT	**Kizilcal**	**4.81**	**87**	Pn	**Pn**	**07 13 09.6**	**+1.0**
ZIMR		**4.87**	**357**	⇓*i*P	**Pn**	**07 13 15.1**	**+5.6**
BARS	**Barje**	**5.00**	**325**	P	**Pn**	**07 13 10.9**	**-0.3**
BARS	**Barje**	**5.00**	**325**	⇑*i*Pn	**Pn**	**07 13 11.0**	**-0.2**
KDZE	**Karadeniz Ereo**	**5.06**	**58**	*e*PN	**Pn**	**07 13 12.4**	**+0.3**
TIR	**Tirane**	**5.17**	**301**	*e*Pn	**Pn**	**07 13 15.0**	**+1.4**
	103nm,0.6s						
TIR	**Tirane**	**5.17**	**301**	*e*P	**Pn**	**07 13 15.0**	**+1.5**
TIR				pmax	pmax		
	comp=Z,103nm,0.6s						
TIR	**Tirane**	**5.17**	**301**	*e*Pn	**Pn**	**07 13 15.0**	**+1.5**
	comp=Z,103nm,0.6s						
PSN	**Preselentsi**	**5.23**	**20**	Pn	**Pn**	**07 13 12.6**	**-1.8**
PSN	**Preselentsi**	**5.23**	**20**	P	**Pn**	**07 13 13.0**	**-1.4**
LADK	**Ladik-KONYA**	**5.25**	**94**	*e*PN	**Pn**	**07 13 16.8**	**+2.2**
LADK	**Ladik-KONYA**	**5.25**	**94**	Pn	**Pn**	**07 13 17.6**	**+3.0**
KONT	**Konya--Tatoy**	**5.29**	**97**	*e*PN	**Pn**	**07 13 16.8**	**+1.7**
LOD	**Lodumlu**	**5.57**	**76**	*e*PN	**Pn**	**07 13 19.7**	**+0.7**
LOD	**Lodumlu**	**5.57**	**76**	Pn	**Pn**	**07 13 20.9**	**+1.8**
ANTO	**Ankara**	**5.59**	**77**	*e*PN	**Pn**	**07 13 21.5**	**+2.2**
ANTO	**Ankara**	**5.59**	**77**	*e*Pn	**Pn**	**07 13 21.5**	**+2.2**
ANTO	**Ankara**	**5.59**	**77**	⇑*i*P	**Pn**	**07 13 19.9**	**+0.6**
HDMB	**Hadim**	**5.65**	**107**	*e*PN	**Pn**	**07 13 22.0**	**+1.8**
HDMB	**Hadim**	**5.65**	**107**	Pn	**Pn**	**07 13 22.2**	**+2.0**
PVY	**Plav**	**5.79**	**313**	⇓*i*

BMR Baia Mare 9.03 350 ⇓ *i*P Pn 07 14 11.2 +4.7
PKSM Moragy 9.07 327 ⇓ P Pn 07 14 06.1 -1.0
PKSM Moragy 9.07 327 ⇓ *i*P Pn 07 14 06.1 -1.0
SGG Gregorio Mates 9.07 290 Pn Pn 07 14 10.1 +3.0
SUDU Sudak 9.22 46 ⇓ *i*P Pn 07 14 09.8 +0.6
SUDU *e*S **Sn 07 15 46.6 -6.3**
HWQ Hawqa 9.38 116 *e*P **Pn 07 14 11.7 +0.4**
RCY Rachaya 9.73 120 *e*P **Pn 07 14 14.8 -1.4**
MMAI Mount Meron Ar 9.74 123 Pn **Pn 07 14 14.7 -1.6**
comp=Z,51nm,0.3s,baz=310,slow=12,SNR=87
MMAI Sn **Sn 07 15 59.1 -6.5**
comp=Z,2.5nm,0.3s,baz=307,slow=22,SNR=2.9
KSDI Kefar Szold 9.80 122 P **Pn 07 14 16.9 -0.2**
PSZ Piszkesteto 10.06 337 *e*Pn **Pn 07 14 20.1 -0.5**
PSZ Piszkesteto 10.06 337 *e*Pn **Pn 07 14 20.1 -0.5**
PSZ Piszkesteto 10.06 337 S **Pn 07 14 20.1 -0.5**
MMLI Mount Malkishu 10.12 126 P **Pn 07 14 21.9 +0.4**
FIAM Fiamignano 10.20 294 Pn **Pn 07 14 27.9 +5.3**
CRES Cresnjev 10.35 316 P **Pn 07 14 26.2 +1.6**
NRCA Norcia 10.37 297 Pn **Pn 07 14 25.2 +0.3**
comp=Z,30nm,0.8s
KECS Kecovo 10.40 340 P **Pn 07 14 31.5 +6.2**
CING Cingoli 10.51 300 Pn **Pn 07 14 29.4 +2.7**
comp=Z,127nm,2.2s
ANN Anapa 10.60 52 *e*P **Pn 07 14 29.5 +1.4**
ANN *e*S **Sn 07 16 30.4 +3.6**
ANN pmax pmax
comp=Z,47nm,0.7s
ANN MLR MLR
comp=N,425nm,11.0s
ANN MLR MLR
comp=E,258nm,11.0s
ANN MLR MLR
comp=Z,323nm,11.0s
ANN Anapa 10.60 52 *e*P **Pn 07 14 29.5 +1.4**
comp=Z,47nm,0.7s
ANN *e*S **Sn 07 16 30.4 +3.6**
KZIT Kziot 10.61 135 P **Pn 07 14 26.5 -1.7**
VYHS Vyhne 10.90 335 P **Pn 07 14 32.5 +0.3**
FSSB Fossombrone 10.90 301 Pn **Pn 07 14 32.1 -0.1**
comp=Z,15nm,0.4s
LJU Ljubljana 10.99 315 P **Pn 07 14 36.7 +3.3**
KWP Kalwaria 11.05 350 *e*Pn **Pn 07 14 35.5 +1.3**
comp=Z,21nm,0.8s
KWP Kalwaria 11.05 350 ⇓ *i*P Pn 07 14 34.9 +0.7
ASF Jabal al Asfar 11.25 123 Pn **Pn 07 14 36.3 -0.6**
comp=Z,1.7nm,0.3s,baz=180,slow=9.4,SNR=16
ASF Sn **Sn 07 16 36.8 -5.9**
comp=Z,0.3nm,0.3s,baz=215,slow=16,SNR=1.9
ASF LR LR 07 20 10.8
comp=Z,347nm,18.3s,baz=164,slow=44
ASF Jabal al Asfar 11.25 123 Pn **Pn 07 14 36.3 -0.6**
ASF Sn **Sn 07 16 36.8 -5.9**
ASF Jabal al Asfar 11.25 123 P **Pn 07 14 36.3 -0.6**
ASF 07 16 36.8
ASF pmax pmax
comp=Z,2.0nm,0.3s
ASF MLR MLR
comp=Z,347nm,18.3s
OBKA Obir 11.27 317 ⇑ *i*Pn Pn 07 14 37.3 +0.1
ARSA Arzberg 11.27 322 ⇓ *i*Pn Pn 07 14 37.9 +0.7
ARSA Arzberg 11.27 322 P **Pn 07 14 41.5 +4.3**
NIE Niedzica 11.31 342 *e*P **Pn 07 14 38.2 +0.5**
VOY Vojsko 11.34 313 *e*Pn **Pn 07 14 38.4 +0.2**
HRFI Mount Harif 11.63 136 P **Pn 07 14 43.4 +1.2**
EIL Elat 11.87 137 Pn **Pn 07 14 43.0 -2.5**
comp=Z,1.8nm,0.3s,baz=328,slow=10,SNR=7.6
EIL Sn **Sn 07 16 49.3 -8.7**
comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=2.5
EIL Elat 11.87 137 Pn **Pn 07 14 43.0 -2.5**
EIL Sn **Sn 07 16 49.3 -8.7**
EIL Elat 11.87 137 Sn **Sn 07 16 49.3 -8.7**
GLFJ 12.03 138 *e*P **Pn 07 14 48.2 +0.6**
SNR=50
AKASG Malin Array Be 12.17 11 Pn **Pn 07 14 47.6 -1.8**
comp=Z,2.5nm,0.3s,baz=197,slow=13,SNR=5.1
AKASG LR LR 07 19 27.1
comp=Z,396nm,20.4s,baz=55,slow=37
AKASG Malin Array Be 12.17 11 P **Pn 07 14 47.7 -1.7**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG MLR MLR
comp=Z,397nm,20.4s
OJC Ojcow 12.18 342 *e*P **Pn 07 14 51.8 +2.2**
KBA Koelnbreinsper 12.27 316 P **Pn 07 14 53.2 +2.3**
OKC Ostrava-Krasne 12.30 336 *e*P **Pn 07 14 52.5 +1.3**
MOA Molln 12.30 321 Pn **Pn 07 14 53.6 +2.3**
VRAC Vranov 12.39 331 Pn **Pn 07 14 53.4 +1.0**
comp=Z,1.0nm,0.3s,baz=198,slow=9.6,SNR=2.6
VRAC LR LR 07 19 46.5
comp=Z,178nm,18.2s,baz=327,slow=38
VRAC Vranov 12.39 331 P **Pn 07 14 53.4 +1.0**
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC MLR MLR
comp=Z,179nm,18.2s
MORC Moravsky Berou 12.44 335 *e*Pn **Pn 07 14 54.0 +0.9**
MORC Moravsky Berou 12.44 335 *e*P **Pn 07 14 54.0 +0.8**
GERES GERESS Array B 13.26 323 Pn **Pn 07 15 05.1 +0.7**
comp=Z,0.3nm,0.3s,baz=126,slow=10,SNR=3.4
GERES LR LR 07 19 43.5
comp=Z,268nm,18.2s,baz=297,slow=35
DPC Dobruska-Polom 13.35 333 *e*P **Pn 07 15 09.8 +4.3**
KEST Kesra 13.40 262 Pn **Pn 07 15 08.1 +1.8**
comp=Z,0.1nm,0.3s,baz=90,slow=4.0,SNR=3.1
KHC Kasperske Hory 13.52 324 *e*P **Pn 07 15 16.1 +8.2**
KHC *ex* x 07 15 29.0
FETA Feichten 13.71 312 Pn **Pn 07 15 11.2 +0.6**
KIV Kislovodsk 13.74 63 *e*P **Pn 07 15 11.1 +0.1**
KIV pmax pmax
comp=Z,12nm,1.3s
KIV Kislovodsk 13.74 63 *e*P **Pn 07 15 11.1 +0.1**
comp=Z,12nm,1.3s
MSL Mosul 13.99 94 *ex* x 07 15 19.0
MSL *ex* x 07 18 04.0
MSL *ex* x 07 21 18.0
DAVOX Davos/Dischmat 14.09 310 Pn **Pn 07 15 19.2 +3.4**
comp=Z,0.4nm,0.3s,baz=143,slow=13,SNR=6.0
DAVOX LR LR 07 20 53.8
comp=Z,852nm,18.6s,baz=264,slow=38
DAVOS Davos 14.17 310 P **Pn 07 15 19.2 +2.4**
TUE Stuetta 14.27 308 *e*Pn **Pn 07 15 19.8 +1.5**
comp=Z,18nm,0.9s
TUE Stuetta 14.27 308 *e*Pn **Pn 07 15 19.8 +1.6**
comp=Z,18nm,0.9s
BRG Berggiesshubel 14.67 329 *e*P **Pn 07 15 30.1 +6.6**
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG MLR MLR
comp=N,742nm,19.4s
BRG MLR MLR
comp=E,917nm,14.6s
BRG MLR MLR
comp=Z,366nm,20.7s
BRG Berggiesshubel 14.67 329 *e*P **Pn 07 15 30.1 +6.5**
comp=Z,11nm,1.4s
BRG
comp=N,1μm,19.4s
BRG
comp=E,2μm,14.6s
BRG
comp=Z,611nm,20.7s
GNI Garni 14.76 79 LR LR 07 21 10.3
comp=Z,855nm,19.3s,baz=298,slow=37
GNI Garni 14.76 79 ⇑ *e*P Pn 07 15 26.2 +1.4
GNI pmax pmax
comp=Z,30nm,1.6s
GNI Garni 14.76 79 *e*P **Pn 07 15 26.2 +1.4**
comp=Z,30nm,1.6s
FRF La Foret Royal 15.13 294 *e*P **Pn 07 15 34.4 +4.6**
comp=Z,114nm,1.3s
FRF La Foret Royal 15.13 294 *e*P **Pn 07 15 34.4 +4.6**
comp=Z,57nm,1.3s
FRF La Foret Royal 15.13 294 *e*P **Pn 07 15 34.4 +4.6**
FRF pmax pmax
comp=Z,57nm,1.3s
CKFL Kef-Lekhel 15.25 267 P pP 07 15 42.0 +2.7
MBDF Montbardon 15.32 299 *e*P **Pn 07 15 37.6 +5.2**
comp=Z,26nm,0.7s
MBDF Montbardon 15.32 299 *e*P **Pn 07 15 37.6 +5.2**
comp=Z,13nm,0.7s
MBDF Montbardon 15.32 299 *e*P **Pn 07 15 37.6 +5.2**
MBDF pmax pmax
comp=Z,13nm,0.7s
CLL Collm 15.38 329 *e*P **Pn 07 15 34.0 +0.9**
CLL *e*PP 07 15 42.0
comp=Z,39nm,1.7s
CLL LmH 07 20 00.0
comp=N,900nm,20.2s
CLL LmH 07 20 00.0
comp=E,1μm,21.8s
CLL LmV 07 21 00.0
comp=Z,400nm,18.0s
CASM Ain Smara 15.47 267 P **Pn 07 15 42.0 +7.7**
BNI Bardonecchia 15.48 300 *e*Pn **Pn 07 15 35.3 +0.9**
comp=Z,53nm,1.2s
BNI Bardonecchia 15.48 300 *e*P **Pn 07 15 35.3 +0.9**
BNI pmax pmax
comp=Z,53nm,1.2s
BNI Bardonecchia 15.48 300 *e*P **Pn 07 15 35.3 +0.9**
comp=Z,53nm,1.2s
VORD Divnogorie 15.48 34 *e*P **Pn 07 15 36.6 +2.1**
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD Divnogorie 15.48 34 *e*P **Pn 07 15 36.6 +2.1**
comp=E,20nm,0.6s
MOX Moxa 15.49 324 *e*P **Pn 07 15 42.1 +7.5**
comp=E,26nm,1.5s
MOX
comp=Z,2μm,12.0s
MOX Moxa 15.49 324 *e*P **Pn 07 15 42.1 +7.5**
MOX pmax pmax
comp=Z,26nm,1.5s
MOX MLR MLR
comp=Z,2μm,12.0s
LPG La Plagne 15.57 302 *e*P **Pn 07 15 40.0 +4.4**
comp=Z,76nm,1.1s
LPG La Plagne 15.57 302 *e*P **Pn 07 15 40.0 +4.4**
comp=Z,38nm,1.1s
LPG La Plagne 15.57 302 *e*P **Pn 07 15 40.0 +4.4**
LPG pmax pmax
comp=Z,38nm,1.1s
LPL La Plagne 15.59 302 *e*P **Pn 07 15 40.7 +4.9**
comp=Z,76nm,1.1s
LPL La Plagne 15.59 302 *e*P **Pn 07 15 40.7 +4.9**
comp=Z,38nm,1.1s
LPL La Plagne 15.59 302 *e*P **Pn 07 15 40.7 +4.9**
LPL pmax pmax
comp=Z,38nm,1.1s
VSR Storozhevoye 15.61 33 *e*P **Pn 07 15 34.4 -1.7**
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,9.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
ORIF Oris-en-Rattie 15.99 299 *e*P **Pn 07 15 44.9 +3.9**
comp=Z,125nm,1.7s
ORIF *e*MLR MLR
comp=Z,638nm,20.0s
ORIF Oris-en-Rattie 15.99 299 *e*P **Pn 07 15 44.9 +3.9**
comp=Z,62nm,1.7s
ORIF Oris-en-Rattie 15.99 299 *e*P **Pn 07 15 44.9 +3.9**
ORIF pmax pmax
comp=Z,62nm,1.7s
VOR Voronezh 16.01 32 P **Pn 07 15 40.0 -1.3**
VOR pmax pmax
comp=Z,300nm,1.2s
VOR Voronezh 16.01 32 P **Pn 07 15 40.0 -1.3**
comp=Z,300nm,1.2s
CKHR Kef el Ahmar 16.30 266 P **Pn 07 15 53.5 +8.4**
SET Setif 16.33 267 P **Pn 07 15 52.0 +6.5**
CABF La Chapelle 16.39 305 *e*P **Pn 07 15 49.3 +3.2**
comp=Z,142nm,1.2s
CABF La Chapelle 16.39 305 *e*P **Pn 07 15 49.3 +3.2**
comp=Z,71nm,1.2s
CABF La Chapelle 16.39 305 *e*P **Pn 07 15 49.3 +3.2**
CABF pmax pmax
comp=Z,71nm,1.2s
HINF Hinteralfeld 16.40 309 *e*P **Pn 07 15 48.0 +1.7**
CDF Champ du Feu 16.43 312 *e*P **Pn 07 15 48.6 +2.0**
comp=Z,127nm,1.8s
CDF Champ du Feu 16.43 312 *e*P **Pn 07 15 48.6 +2.0**
CDF pmax pmax
comp=Z,64nm,1.8s
CDF Champ du Feu 16.43 312 *e*P **Pn 07 15 48.6 +2.0**
comp=Z,64nm,1.8s
VRHR Novokhopersk 16.63 37 *e*P **Pn 07 15 47.3 -1.9**
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRHR Novokhopersk 16.63 37 *e*P **Pn 07 15 47.3 -1.9**
comp=E,10.0nm,0.5s
VIVF Saint-Julien-l 16.80 298 *e*P **Pn 07 15 54.9 +3.5**
comp=E,74nm,1.3s
VIVF Saint-Julien-l 16.80 298 *e*P **Pn 07 15 54.9 +3.5**
comp=E,37nm,1.3s
VIVF Saint-Julien-l 16.80 298 *e*P **Pn 07 15 54.9 +3.5**
VIVF pmax pmax
comp=Z,37nm,1.3s
MAK Makhachkala 16.98 69 *e*P **Pn 07 15 55.5 +1.8**
MAK MLR MLR
comp=Z,499nm,11.0s
MAK Makhachkala 16.98 69 *e*P **Pn 07 15 55.5 +1.8**
comp=Z,499nm,11.0s
LASF Ste Croix 17.21 295 *e*P **Pn 07 15 58.9 +2.4**
comp=Z,98nm,1.5s
AKET Djebel Ketaf 17.56 268 P **Pn 07 16 02.6 +1.6**
SMF Signal de Mont 17.85 303 *e*P **Pn 07 16 05.7 +1.2**
ADJB Djebel Djouab 17.88 268 P **Pn 07 16 05.6 +0.7**
OBN Obninsk 17.89 21 *e*P **Pn 07 16 04.3 -0.7**
OBN *e*S **Sn 07 19 23.5 -0.8**
OBN pmax pmax
comp=Z,23nm,1.1s
OBN Obninsk 17.89 21 *e*P **Pn 07 16 04.3 -0.7**
comp=Z,23nm,1.1s
OBN *e*S **Sn 07 19 23.5 -0.8**
SSF Saint Saulge 18.20 304 *e*P **Pn 07 16 11.2 +2.4**
comp=Z,27nm,0.8s
SSF Saint Saulge 18.20 304 *e*P **Pn 07 16 11.2 +2.4**
SSF pmax pmax
comp=Z,14nm,0.8s
SSF Saint Saulge 18.20 304 *e*P **Pn 07 16 11.2 +2.4**
comp=Z,14nm,0.8s
AVF Avril sur Loir 18.22 303 *e*P **Pn 07 16 12.9 +3.9**
comp=Z,64nm,1.1s
AVF Avril sur Loir 18.22 303 *e*P **Pn 07 16 12.9 +3.9**
comp=Z,32nm,1.1s
AVF Avril sur Loir 18.22 303 *e*P **Pn 07 16 12.9 +3.9**
AVF pmax pmax
comp=Z,32nm,1.1s
EMHD Djebel Mahouad 18.25 269 P **Pn 07 16 08.0 -1.4**
MTLF Montolieu 18.28 292 *e*P **Pn 07 16 14.9 +5.1**
comp=Z,116nm,1.6s
MTLF Montolieu 18.28 292 *e*P **Pn 07 16 14.9 +5.1**
comp=Z,58nm,1.6s
MTLF Montolieu 18.28 292 *e*P **Pn 07 16 14.9 +5.1**
MTLF pmax pmax
comp=Z,58nm,1.6s
BGF Bois d'Agland 18.48 302 *e*P **Pn 07 16 13.7 +1.5**
comp=Z,264nm,1.8s
BGF Bois d'Agland 18.48 302 *e*P **Pn 07 16 13.7 +1.5**
BGF pmax pmax
comp=Z,132nm,1.8s
BGF Bois d'Agland 18.48 302 *e*P **Pn 07 16 13.7 +1.5**
comp=Z,132nm,1.8s
VSU Vasula 19.70 2 *e*P **Pn 07 16 26.7 -0.1**
VSU pmax pmax
comp=Z,80nm,1.2s
VSU Vasula 19.70 2 *e*P **Pn 07 16 26.7 -0.1**
comp=Z,80nm,1.2s
EBIE Bielsa 19.74 290 P **Pn 07 16 30.1 +2.6**
comp=Z,19nm,0.8s
EANR 'Ain N'Sour 19.76 269 P **Pn 07 16 31.3 +3.6**
ETRT Tiaret 19.76 268 P **Pn 07 16 29.0 +1.3**
NAY Al-Naaiem 20.18 112 *e*P **P 07 16 30.9 +0.1**
comp=Z,42nm,0.7s
NAY Al-Naaiem 20.18 112 *e*P **P 07 16 30.9 +0.1**
baz=112
NAY AMb AMB 07 16 31.9
comp=Z,42nm,0.7s,baz=112
EMOS Mosqueruela 20.23 283 P **P 07 16 35.4 +4.1**
comp=Z,59nm,1.2s
ETSF Etsaut 20.27 290 *e*P **P 07 16 36.4 +4.7**
comp=Z,16nm,0.8s
ETSF Etsaut 20.27 290 *e*P **P 07 16 36.4 +4.7**
comp=Z,8.1nm,0.8s
ETSF Etsaut 20.27 290 *e*P **P 07 16 36.4 +4.7**
ETSF pmax pmax
comp=Z,8.0nm,0.8s
UMR Umm Al-Rimmam 20.36 110 *e*P **P 07 16 33.2 +0.4**
comp=Z,260nm,1.6s
UMR Umm Al-Rimmam 20.36 110 *e*P **P 07 16 33.2 +0.5**
baz=110
UMR AMb AMB 07 16 35.4
comp=Z,261nm,1.6s,baz=110
MFF Saint Martin d 20.49 301 *e*P **P 07 16 36.1 +2.0**
KBD Kabd 20.55 111 *e*P **P 07 16 35.1 +0.3**
comp=Z,113nm,1.7s
KBD Kabd 20.55 111 *e*P **P 07 16 35.1 +0.3**
baz=111
KBD AMb AMB 07 16 38.5
comp=Z,113nm,1.7s,baz=111
RDF Al-Radifah 20.58 112 *e*P **P 07 16 35.5 +0.3**
comp=Z,103nm,1.6s
RDF Al-Radifah 20.58 112 *e*P **P 07 16 35.5 +0.3**
baz=112
RDF AMb AMB 07 16 39.0
comp=Z,103nm,1.6s,baz=112
ECHE Chera 20.68 281 P **P 07 16 41.0 +4.8**
comp=Z,11nm,0.8s
ECHE Chera 20.68 281 P **P 07 16 41.0 +4.8**
ECHE pmax pmax
comp=Z,11nm,0.8s
SJPF Ste Jean 20.77 291 *e*P **P 07 16 39.6 +2.5**
comp=Z,38nm,1.1s
SJPF Ste Jean 20.77 291 *e*P **P 07 16 39.6 +2.5**
SJPF pmax pmax
comp=Z,19nm,1.1s
SJPF Ste Jean 20.77 291 *e*P **P 07 16 39.6 +2.5**
comp=Z,19nm,1.1s
EALK Alkurruntz 20.98 291 P **P 07 16 43.8 +4.4**
comp=Z,17nm,1.0s
ELIZ Elizondo 20.99 291 P **P 07 16 44.5 +5.0**
comp=Z,11nm,0.7s
ELIZ Elizondo 20.99 291 P **P 07 16 44.5 +5.0**
ELIZ pmax pmax
comp=Z,11nm,0.7s
LDF La Druitiere 21.01 306 *e*P **P 07 16 39.1 -0.6**
comp=Z,40nm,0.9s,mb4.5
LDF La Druitiere 21.01 306 *e*P **P 07 16 39.1 -0.6**
LDF pmax pmax
comp=Z,20nm,0.9s,mb4.5
LDF La Druitiere 21.01 306 *e*P **P 07 16 39.1 -0.6**
comp=Z,20nm,0.9s,mb4.5
ETOB Tobarra 21.25 278 P **P 07 16 46.1 +3.7**
comp=Z,61nm,1.5s,mb4.7
FLN La Foliniere 21.29 306 *e*P **P 07 16 46.1 +3.4**
FLN *e*MLR MLR
comp=Z,312nm,18.0s,MS3.4
ETOR Torete 21.40 284 P **P 07 16 48.5 +4.5**
comp=Z,6.6nm,0.7s,mb4.1
ETOR Torete 21.40 284 P **P 07 16 48.5 +4.5**
ETOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.1
GRR Gorron 21.42 305 *e*P **P 07 16 44.0 -0.1**
comp=Z,81nm,1.1s,mb4.7
GRR Gorron 21.42 305 *e*P **P 07 16 44.0 -0.1**
GRR pmax pmax
comp=Z,40nm,1.1s,mb4.7
GRR Gorron 21.42 305 *e*P **P 07 16 44.0 -0.1**
comp=Z,40nm,1.1s,mb4.7
EVIA Vianos 21.99 279 P **P 07 16 53.6 +3.3**
comp=Z,17nm,0.6s,mb4.7
EVIA Vianos 21.99 279 P **P 07 16 53.6 +3.3**
EVIA pmax pmax
comp=Z,17nm,0.6s,mb4.7
EHUE Huescar 22.21 276 P **P 07 16 55.6 +2.9**
comp=Z,1.9nm,0.1s,mb4.5
EHUE Huescar 22.21 276 P **P 07 16 55.6 +2.9**
EHUE pmax pmax
comp=Z,2.0nm,0.1s,mb4.5
ELAN Lanestosa 22.39 291 P **P 07 16 57.4 +2.9**
comp=Z,20nm,0.9s,mb4.5
SGMF Saint Gilles 22.47 304 *e*P **P 07 16 55.9 +0.5**
comp=Z,164nm,1.4s,mb5.0
SGMF Saint Gilles 22.47 304 *e*P **P 07 16 55.9 +0.5**
SGMF pmax pmax
comp=Z,82nm,1.4s,mb5.0
SGMF Saint Gilles 22.47 304 *e*P **P 07 16 55.9 +0.5**
comp=Z,82nm,1.4s,mb5.0
EBER Berja 22.64 274 P **P 07 16 58.1 +0.9**
comp=Z,52nm,1.1s,mb4.9
EBER Berja 22.64 274 P **P 07 16 58.1 +0.9**
comp=Z,52nm,1.1s,mb4.9
HFS Hagfors 22.68 344 P **P 07 16 55.4 -2.0**
comp=Z,12nm,0.9s,mb4.3,baz=134,slow=12,SNR=7.6
HFS LR LR 07 26 43.8
comp=Z,680nm,18.7s,MS4.1,baz=154,slow=39
HFS Hagfors 22.68 344 P **P 07 16 55.4 -2.0**
HFS pmax pmax
comp=Z,12nm,0.9s
HFS MLR MLR
comp=Z,680nm,18.7s
QUIF Quistinic 22.79 303 *e*P **P 07 17 01.1 +2.4**
ROSF Rostrenen 22.96 304 *e*P **P 07 17 00.0 -0.5**
comp=Z,195nm,1.5s,mb5.0
ROSF Rostrenen 22.96 304 *e*P **P 07 17 00.0 -0.5**
ROSF pmax pmax
comp=Z,98nm,1.5s,mb5.0
ROSF Rostrenen 22.96 304 *e*P **P 07 17 00.0 -0.5**
comp=Z,98nm,1.5s,mb5.0
ESDC Sonseca Array 22.97 282 P **P 07 16 59.0 -1.7**
comp=Z,3.5nm,0.6s,mb4.0,baz=81,slow=10,SNR=8.4
ESDC LR LR 07 25 52.0
comp=Z,154nm,19.4s,MS3.5,baz=80,slow=36
GUD Guadarrama 23.01 284 P **P 07 17 03.5 +2.4**
comp=Z,15nm,0.9s,mb4.4
GUD Guadarrama 23.01 284 P **P 07 17 03.5 +2.4**
GUD pmax pmax
comp=Z,15nm,0.9s,mb4.4
EBAN Banos Encina 23.07 278 P **P 07 17 02.1 +0.3**
comp=Z,6.9nm,0.4s,mb4.4
EBAN Banos Encina 23.07 278 P **P 07 17 02.1 +0.3**
EBAN pmax pmax
comp=Z,7.0nm,0.4s,mb4.4
EBAN Banos Encina 23.07 278 P **P 07 17 02.1 +0.3**
comp=Z,6.9nm,0.4s,mb4.4
EGUA Guajares 23.18 274 P **P 07 17 03.4 +0.4**
comp=Z,45nm,0.6s,mb5.1
EGUA Guajares 23.18 274 P **P 07 17 03.4 +0.4**
EGUA pmax pmax
comp=Z,45nm,0.6s,mb5.1
EGUA Guajares 23.18 274 P **P 07 17 03.4 +0.4**
comp=Z,45nm,0.6s,mb5.1
KONO Kongsberg 23.26 339 *e*P **P 07 17 03.2 -0.4**
PAB San Pablo 23.28 281 *e*P **P 07 17 04.0 +0.1**
comp=Z,86nm,1.6s,mb4.9
PAB San Pablo 23.28 281 *e*P **P 07 17 04.1 +0.1**
PAB pmax pmax
comp=Z,86nm,1.6s,mb4.9
PAB San Pablo 23.28 281 *e*P **P 07 17 04.1 +0.1**
comp=Z,86nm,1.6s,mb4.9
KAF Kangasniemi 23.36 1 *ep* **P 07 17 04.4 -0.1**
comp=Z,12nm,0.9s,mb4.3
KAF Kangasniemi 23.36 1 *e*P **P 07 17 04.4 -0.1**
KAF pmax pmax
comp=Z,12nm,0.9s,mb4.3
TAM Tamanrasset 23.48 233 *e*P **P 07 17 07.7 +1.4**
ELOJ Sierra Loja 23.56 275 P **P 07 17 10.4 +3.4**
comp=Z,9.9nm,0.5s,mb4.5
ELOJ Sierra Loja 23.56 275 P **P 07 17 10.4 +3.4**
ELOJ pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
EADA Adamuz 23.68 278 P **P 07 17 06.5 -1.5**
comp=Z,60nm,1.0s,mb5.0
EADA Adamuz 23.68 278 P **P 07 17 06.5 -1.5**
comp=Z,60nm,1.0s,mb5.0
EARI Arriondas 23.68 291 P **P 07 17 08.4 +0.4**
comp=Z,137nm,2.4s,mb5.0
KLMR Klimovskoe 23.71 17 *e*P **P 07 17 09.5 +1.4**
KLMR pmax pmax
comp=Z,45nm,1.2s,mb4.8
KLMR Klimovskoe 23.71 17 *e*P **P 07 17 09.5 +1.4**
comp=Z,45nm,1.2s,mb4.8
NB2 NORSAR Subarra 24.04 343 P **P 07 17 10.0 -1.1**
comp=Z,48nm,1.2s,mb4.8,baz=150,slow=10
NOA NORSAR Array B 24.04 343 P **P 07 17 10.5 -0.6**
comp=Z,17nm,0.9s,mb4.5,baz=152,slow=8.8,SNR=12
NOA LR LR 07 27 28.7
comp=Z,224nm,21.2s,MS3.6,baz=95,slow=39
NOA NORSAR Array B 24.04 343 P **P 07 17 10.5 -0.6**

NOA pmax pmax
comp=Z,17nm,0.9s
NOA MLR MLR
comp=Z,224nm,21.3s
EMIJ Mijas 24.19 274 P **P** **07 17 13.0 +0.3**
comp=Z,17nm,0.6s,mb4.7
EMIJ Mijas 24.19 274 P **P** **07 17 13.0 +0.3**
comp=Z,17nm,0.6s,mb4.7
ECAB El Cabril 24.35 278 P **P** **07 17 13.1 -1.0**
comp=Z,76nm,0.9s,mb5.1
JOF Joensuu 24.40 6 *ep* **P** **07 17 20.1 +5.8**
comp=Z,10nm,0.7s,mb4.4
JOF Joensuu 24.40 6 *eP* **P** **07 17 20.1 +5.8**
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
PBRG Braganca 24.86 287 *eP* **P** **07 17 19.0 +0.2**
MVO Moncorvo 25.13 286 *eP* **P** **07 17 25.8 +4.6**
EMIN Mina Concepcio 25.38 278 P **P** **07 17 22.8 -0.7**
comp=Z,80nm,0.9s,mb5.2
EMIN Mina Concepcio 25.38 278 P **P** **07 17 22.8 -0.7**
comp=Z,80nm,0.9s,mb5.2
EKA Eskdalemuir Ar 25.44 320 P **P** **07 17 22.6 -1.3**
comp=Z,6.9nm,0.7s,mb4.3,baz=115,slow=9.5,SNR=5.3
EKA Eskdalemuir Ar 25.44 320 P **P** **07 17 22.6 -1.3**
EKA pmax pmax
comp=Z,7.0nm,0.7s
EBAD Badajoz 25.45 280 P **P** **07 17 22.8 -1.4**
comp=Z,8.5nm,0.9s,mb4.3
EBAD Badajoz 25.45 280 P **P** **07 17 22.8 -1.3**
comp=Z,8.5nm,0.9s,mb4.3
AKTK Aktyubinsk 25.56 52 P **P** **07 17 24.3 -0.8**
AKTK Aktyubinsk 25.56 52 P **P** **07 17 24.3 -0.8**
AKTO Aktyubinsk 25.56 52 P **P** **07 17 24.3 -0.8**
comp=Z,4.1nm,0.9s,mb4.0,baz=248,slow=15,SNR=6.8
AKTO LR LR 07 27 58.2
comp=Z,188nm,21.7s,MS3.6,baz=298,slow=37
AKTO Aktyubinsk 25.56 52 P **P** **07 17 24.3 -0.8**
AKTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
AKTO MLR MLR
comp=Z,188nm,21.7s,MS3.6
MTE Manteigas 25.60 284 *eP* **P** **07 17 29.6 +4.1**
PMRV Marv??o 25.63 282 *eP* **P** **07 17 24.9 -0.8**
ELOB Lobios 25.84 288 P **P** **07 17 30.4 +2.7**
comp=Z,12nm,0.6s,mb4.6
EGRO El Granado 26.06 278 P **P** **07 17 28.9 -0.8**
comp=Z,13nm,0.7s,mb4.6
EGRO El Granado 26.06 278 P **P** **07 17 29.0 -0.7**
comp=Z,13nm,0.7s,mb4.6
EVO Evora 26.26 280 *eP* **P** **07 17 36.2 +4.7**
comp=Z,7.1nm,0.8s,mb4.0
EVO *e*MLR MLR
comp=Z,223nm,21.7s,MS3.4
PFVI Vila Bisbo 27.20 277 *eP* **P** **07 17 44.0 +4.1**
ARU Arti 27.93 40 *eP* **P** **07 17 45.8 -0.5**
comp=Z,29nm,1.3s,mb4.8
ARU Arti 27.93 40 *d iP* **P** **07 17 45.4 -0.9**
ARU *e*S **S** **07 22 30.6 +0.8**
ARU *e*SS 07 23 42.8
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.4
ARU Arti 27.93 40 *eP* **P** **07 17 45.8 -0.5**
comp=Z,29nm,1.3s,mb4.8
SVE Sverdlovsk 29.14 40 *eP* **P** **07 17 57.0 0.0**
SVE pmax pmax
comp=Z,19nm,0.7s,mb4.9
SVE Sverdlovsk 29.14 40 *eP* **P** **07 17 57.0 0.0**
comp=Z,19nm,0.7s,mb4.9
LVZ Lovozero 29.58 7 *eP* **P** **07 18 01.0 +0.2**
LVZ pmax pmax
comp=Z,15nm,1.7s,mb4.5
LVZ Lovozero 29.58 7 *eP* **P** **07 18 01.0 +0.2**
comp=Z,15nm,1.7s,mb4.5
ARCES ARCESS Array B 30.81 360 P **P** **07 18 11.0 -0.7**
comp=Z,2.3nm,0.8s,mb4.1,baz=152,slow=5.5,SNR=5.3
ARCES LR LR 07 32 17.1
comp=Z,278nm,19.0s,MS3.9,baz=360,slow=40
ARCES ARCESS Array B 30.81 360 P **P** **07 18 11.0 -0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES MLR MLR
comp=Z,278nm,19.0s
TOA0 Torodi Ar. Sit 33.24 226 *eP* **P** **07 18 32.7 -0.9**
TOA0 Torodi Ar. Sit 33.24 226 *eP* **P** **07 18 32.7 -0.9**
TORD Torodi Ar. Bea 33.24 226 P **P** **07 18 33.0 -0.6**
comp=Z,3.6nm,0.7s,mb4.4,baz=36,slow=9.1,SNR=16
TORD LR LR 07 33 30.1
comp=Z,140nm,18.7s,MS3.7,baz=30,slow=39
BRVK Borovoye 33.54 50 *eP* **P** **07 18 36.1 +0.2**
comp=Z,10nm,1.1s,mb4.7
BRVK Borovoye 33.54 50 *eP* **P** **07 18 36.1 +0.3**
BRVK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BRVK Borovoye 33.54 50 *eP* **P** **07 18 36.1 +0.3**
comp=Z,10nm,1.1s,mb4.7
BVAR Borovoye Array 33.60 50 P **P** **07 18 36.3 0.0**
comp=Z,1.3nm,0.8s,mb3.9,baz=284,slow=7.2,SNR=6.1
BVAR Borovoye Array 33.60 50 P **P** **07 18 36.3 0.0**
BVAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 38.62 54 *eP* **P** **07 19 19.2 -0.1**
comp=Z,9.8nm,1.1s,mb4.5
KURK Kurchatov 38.62 54 *eP* **P** **07 19 19.2 -0.1**
KURK pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KURK Kurchatov 38.62 54 *eP* **P** **07 19 19.2 -0.1**
comp=Z,9.8nm,1.1s,mb4.5
MKAR Makanchi Array 41.48 60 P **P** **07 19 42.7 -0.5**
comp=Z,9.9nm,0.9s,mb4.5,baz=282,slow=6.9,SNR=28
MKAR Makanchi Array 41.48 60 P **P** **07 19 42.7 -0.5**
MKAR Makanchi Array 41.48 60 P **P** **07 19 42.7 -0.5**
MKAR pmax pmax
comp=Z,10.0nm,0.9s
ZAA0 Zalesovo Array 42.23 49 *eP* **P** **07 19 48.6 -0.5**
ZAA0 Zalesovo Array 42.23 49 *eP* **P** **07 19 48.6 -0.5**
ZALV Zalesovo Beam 42.23 49 P **P** **07 19 48.6 -0.5**
comp=Z,5.1nm,0.8s,mb4.2,baz=269,slow=8.9,SNR=13
ZALV Zalesovo Beam 42.23 49 P **P** **07 19 48.6 -0.5**
ZALV pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
DBIC Dimbokro 42.24 229 P **P** **07 19 48.8 -0.9**
comp=Z,3.8nm,0.7s,mb4.1,baz=27,slow=11,SNR=7.5
DBIC Dimbokro 42.24 229 P **P** **07 19 48.8 -0.9**
DBIC pmax pmax
comp=Z,4.0nm,0.7s
TIC Toumodi 42.36 229 *eP* **P** **07 19 49.5 -1.1**
comp=Z,48nm,0.9s,mb5.1
TIC Toumodi 42.36 229 *eP* **P** **07 19 49.5 -1.1**
TIC pmax pmax
comp=Z,49nm,0.9s,mb5.1
KIC Kosan Boka 42.42 228 *eP* **P** **07 19 50.2 -0.9**
comp=Z,35nm,0.8s,mb5.0
LIC Lamto 42.70 229 *eP* **P** **07 19 52.5 -0.9**
comp=Z,33nm,1.0s,mb4.7
LIC *e*MLR MLR
comp=Z,212nm,18.5s,MS3.8
LIC Lamto 42.70 229 *eP* **P** **07 19 52.0 -1.4**
comp=Z,44nm,1.0s,mb5.2
LIC Lamto 42.70 229 *eP* **P** **07 19 52.5 -0.9**
comp=Z,16nm,1.0s,mb4.7
WMQ Urumqi 45.87 63 *eP* **P** **07 20 18.6 +0.1**
WMQ XP sP 07 20 25.6 +2.7
WMQ PP PP 07 22 06.0 +0.2
WMQ S **S** **07 27 01.0 -1.6**
WMQ SS SS 07 30 17.0 -10
WMQ AMB AMB
comp=Z,17nm,1.1s,mb4.9
WMQ AMB AMB
comp=Z,89nm,4.0s
WMQ LR LR
comp=N,347nm,16.0s,MS4.5
WMQ LR LR
comp=E,335nm,15.0s,MS4.5
WMQ LR LR
comp=Z,237nm,15.0s,MS4.3
PYUN Piuthan 48.27 85 *eP* **P** **07 20 37.3 -0.2**
comp=Z,66nm,0.6s,mb5.8
DANN Dangsing 48.75 84 *eP* **P** **07 20 41.3 +0.1**
comp=Z,170nm,0.9s
KOLN Koldanda 48.90 85 *eP* **P** **07 20 42.0 -0.3**
comp=Z,83nm,1.0s,mb5.7
GKN Gorkha 49.60 84 *eP* **P** **07 20 47.0 -0.6**
comp=Z,61nm,0.8s,mb5.7
DMN Daman 50.15 84 *eP* **P** **07 20 51.5 -0.3**
comp=Z,89nm,0.9s,mb5.8
KKN Kakani 50.20 84 *eP* **P** **07 20 51.4 -0.8**
comp=Z,36nm,0.9s,mb5.4
KKN Kakani 50.20 84 *eP* **P** **07 20 51.4 -0.8**
KKN pmax pmax
comp=Z,36nm,0.9s,mb5.4
PKIN Phulchoki 50.39 84 *eP* **P** **07 20 52.8 -0.9**
PKI Pulchoki 50.40 84 *eP* **P** **07 20 53.1 -0.7**
comp=Z,61nm,1.1s,mb5.5
PKI Pulchoki 50.40 84 *eP* **P** **07 20 53.1 -0.7**
PKI pmax pmax
comp=Z,61nm,1.1s,mb5.5
HYB Hyderabad 50.48 100 *i P* **P** **07 20 53.0 -1.4**
HYB Hyderabad 50.48 100 *eP* **P** **07 20 53.0 -1.4**
GUN Gumba 50.61 83 *eP* **P** **07 20 54.5 -0.8**
comp=Z,86nm,1.0s,mb5.6
JIRN Jiri 50.97 83 *eP* **P** **07 20 57.6 -0.4**
comp=Z,52nm,0.9s,mb5.4
RAMN Ramite 51.63 84 *eP* **P** **07 21 02.0 -1.0**
comp=Z,112nm,1.0s,mb5.8
TAPN Taplejung 52.30 83 *eP* **P** **07 21 07.3 -0.7**
comp=Z,83nm,1.4s,mb5.5
LSA Lhasa 53.82 79 P **P** **07 21 20.0 +0.8**
LSA Lhasa 53.82 79 P **P** **07 21 20.0 +0.8**
ZAK Zakamensk 54.05 51 *eP* **P** **07 21 20.3 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
ZAK Zakamensk 54.05 51 *eP* **P** **07 21 20.3 -0.3**
comp=Z,5.0nm,1.2s,mb4.3
SONM Songino Array 56.88 53 P **P** **07 21 40.5 -0.5**
comp=Z,3.4nm,1.0s,mb4.3,baz=288,slow=10,SNR=16
SONM Songino Array 56.88 53 P **P** **07 21 40.5 -0.5**
SONM pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 57.28 52 *eP* **P** **07 21 42.0 -1.7**
comp=Z,4.2nm,0.7s,mb4.6
ULN Ulaanbaatar 57.28 52 *c iP* **P** **07 21 44.0 +0.2**
ULN Ulaanbaatar 57.28 52 *i P* **P** **07 21 44.0 +0.2**
BOD Bodaibo 57.35 39 *eP* **P** **07 21 42.3 -1.8**
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TIXI Tiksi 57.62 21 *eP* **P** **07 21 43.9 -2.0**
TIXI pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
LZH Lanzhou 60.26 66 *eP* **P** **07 22 04.0 -0.7**
LZH AP pP 07 22 07.0 -0.9
LZH PP PP 07 24 17.0 -0.3
LZH *e*S **S** **07 30 16.1 -2.6**
LZH XS sS 07 30 27.0 +3.0
LZH AMB AMB
comp=Z,19nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,83nm,4.0s
LZH LR LR
comp=N,215nm,13.4s
LZH LR LR
comp=Z,296nm,15.2s,MS4.5
LZH Lanzhou 60.26 66 *eP* **P** **07 22 04.0 -0.7**
LZH pP pP 07 22 07.0 -0.9
LZH sP sP 07 22 08.5 -0.6
LZH PP PP 07 24 17.0 -0.3
LZH *e*S **S** **07 30 16.1 -2.6**
LZH sS sS 07 30 27.0 +3.0
LZH SS SS 07 34 07.3 -8.3
CD2 Chengdu 62.73 71 *eP* **P** **07 22 20.7 -0.8**
CD2 AP pP 07 22 25.3 +0.6
CD2 XP sP 07 22 27.8 +1.8
CD2 PP PP 07 24 40.3 +1.0
CD2 S **S** **07 30 46.5 -3.8**
CD2 SS SS 07 34 52.7 -1.9
CD2 AMB AMB
comp=Z,20nm,1.4s,mb5.0
CD2 AMB AMB
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,200nm,8.4s
CD2 LR LR
comp=E,190nm,8.4s
CD2 LR LR
comp=Z,160nm,8.8s
HHC Hu-ho-hao-te 63.29 58 *eP* **P** **07 22 23.7 -1.4**
HHC AP pP 07 22 28.2 -0.1
HHC XP sP 07 22 30.6 +1.1
HHC PP PP 07 24 43.8 -0.1
HHC PCS PcS 07 27 03.1 -2.6
HHC S **S** **07 30 52.5 -4.5**
HHC SCS ScS 07 32 12.0 -6.2
HHC SS SS 07 34 59.6 -3.3
HHC AMB AMB
comp=Z,25nm,1.0s,mb5.3
HHC AMB AMB
comp=Z,310nm,10.9s
HHC LR LR
comp=N,149nm,17.8s,MS4.4
HHC LR LR
comp=E,221nm,20.2s,MS4.4
HHC LR LR
comp=Z,165nm,18.4s,MS4.2
XAN Xi'an 64.88 66 P **P** **07 22 35.5 -0.1**
XAN AP pP 07 22 41.5 +2.6
XAN AMB AMB
comp=Z,9.0nm,1.3s,mb4.6
KMI Kunming 65.00 77 P **P** **07 22 37.0 +0.5**
KMI AP pP 07 22 40.1 +0.3
KMI S S 07 31 13.1 -5.6
KMI AMB AMB
comp=Z,6.0nm,0.5s,mb4.9
KMI AMB AMB
comp=Z,139nm,4.4s
KMI LR LR
comp=Z,68nm,27.3s,MS3.7
CMAR Chiang Mai Arr 65.77 85 P **P** **07 22 38.6 -2.9**
comp=Z,1.8nm,0.4s,mb4.5,baz=293,slow=11,SNR=7.8
CMAR LR LR 07 56 24.8
comp=Z,78nm,20.6s,MS3.9,baz=305,slow=40
CMAR Chiang Mai Arr 65.77 85 *i P* **P** **07 22 39.5 -2.0**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
BOSA Boshof 67.05 180 P **P** **07 22 46.5 -2.9**
comp=Z,2.0nm,0.6s,mb4.3,baz=292,slow=13,SNR=5.1
BOSA Boshof 67.05 180 P **P** **07 22 46.5 -2.9**
BOSA Boshof 67.05 180 P **P** **07 22 46.5 -2.9**
BOSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
GYA Guiyang 67.25 74 P **P** **07 22 50.4 -0.5**
GYA PP PP 07 25 21.2 +2.3
GYA SCP 07 27 21.0
GYA S S 07 31 42.8 -3.2
GYA SKS 07 32 44.9
GYA SS SS 07 36 02.6 -2.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,110nm,5.4s
GYA LR LR
comp=N,450nm,21.9s,MS4.8
GYA LR LR
comp=E,440nm,20.2s,MS4.8
GYA LR LR
comp=Z,530nm,21.6s,MS4.7
BILL Bilibino 69.45 15 *eP* **P** **07 23 00.4 -3.6**
BILL pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
CN2 Changchun 70.45 49 *eP* **P** **07 23 10.1 -0.5**
NJ2 Nanjing 72.95 62 *eP* **P** **07 23 26.6 +0.7**
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.5
KSRS Korea Array 75.74 53 P **P** **07 23 40.9 -1.1**
comp=Z,5.6nm,0.9s,mb4.5,baz=310,slow=6.0,SNR=12
KSRS LR LR 08 01 03.5
comp=Z,227nm,18.1s,MS4.5,baz=160,slow=39
KSRS Korea Array 75.74 53 P **P** **07 23 40.9 -1.1**
KSRS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KSRS MLR MLR
comp=Z,227nm,18.1s,MS4.5
DAWY Dawson 76.81 353 *eP* **P** **07 23 48.1 +0.5**
PETK Petropavlovsk- 79.48 27 LR LR 07 59 23.0
comp=Z,89nm,19.5s,MS4.1,baz=124,slow=36
EGMT Eagleton 84.93 332 *eP* **P** **07 24 30.4 -0.8**
comp=Z,101nm,2.5s,mb5.5
BDFB Brasilia 87.49 248 P **P** **07 24 45.0 +0.7**
comp=Z,1.8nm,0.7s,mb4.4,baz=55,slow=20,SNR=6.4
BDFB Brasilia 87.49 248 P **P** **07 24 45.0 +0.7**
BDFB pmax pmax
comp=Z,2.0nm,0.7s
PDAR Pinedale Array 89.25 329 P **P** **07 24 50.5 -1.8**
comp=Z,0.2nm,0.6s,mb3.6,baz=32,slow=12,SNR=3.5
PDAR LR LR 08 05 55.5
comp=Z,132nm,20.4s,MS4.3,baz=120,slow=36
NVAR Mina Array Bea 96.35 332 P **P** **07 25 23.0 -2.2**
comp=Z,0.2nm,0.5s,mb3.8,baz=46,slow=3.9,SNR=3.0
PLCA Paso Flores 118.06 239 PKP PKPdf 07 30 39.3 -3.6
comp=Z,1.2nm,0.8s,baz=18,slow=3.2,SNR=3.0
PLCA Paso Flores 118.06 239 PKIKP PKPdf 07 30 39.3 -3.6
PLCA pmax pmax
comp=Z,1.0nm,0.8s

TAP 09 07:15:34.2,2487N×12213E,h113km,ML3.6,3D,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.19**	**318**	*i* P		Pn 07 15 50.3	+0.4
	baz=311						
TWB1				S		Sn 07 16 01.5	-0.2
	baz=311						
TWC	**Suao**	**0.36**	**225**	*i* P		Pn 07 15 50.7	+0.1
	baz=233						
TWC				S		Sn 07 16 02.8	-0.1
	baz=233						
NWF	**Wu-fen Shan**	**0.38**	**303**	⇓ *i* P		Pn 07 15 51.2	+0.6
	baz=295						
NWF				S		Sn 07 16 03.2	+0.2
	baz=295						
TWE	**Neicheng**	**0.45**	**251**	*eP*		Pn 07 15 51.4	+0.4
	baz=254						
TWE				S		Sn 07 16 03.9	+0.3
	baz=254						
TWA	**Mucha**	**0.51**	**283**	P		Pn 07 15 51.6	+0.2
	baz=284						
TWA				S		Sn 07 16 03.8	-0.5
	baz=284						
ENTT	**Nioudou**	**0.56**	**246**	*i* P		Pn 07 15 52.5	+0.8
	baz=251						
ENTT				*e*S		Sn 07 16 06.2	+1.2
	baz=251						
ENA	**Nanau**	**0.56**	**219**	⇓ *i* P		Pn 07 15 52.5	+0.6
	baz=218						
ENA				*e*S		Sn 07 16 05.2	+0.2
	baz=218						
TWY	**Chenhua**	**0.63**	**310**	*eP*		Pn 07 15 52.7	+0.4
	baz=302						
EHP	**Heping Village**	**0.66**	**213**	*eP*		Pn 07 15 53.0	+0.4
	baz=213						
TWS1	**Kuangyinshan**	**0.69**	**290**	P		Pn 07 15 53.6	+0.9
	baz=293						
TWS1				*e*S		Sn 07 16 07.1	+0.5
	baz=293						
NSK	**Sanguang**	**0.73**	**255**	⇓ *i* P		Pn 07 15 53.6	+0.6
	baz=258						
NSK				*e*S		Sn 07 16 07.6	+0.4
	baz=258						
NNS	**Nan Shan**	**0.81**	**238**	*eP*		Pn 07 15 54.7	+0.9
	baz=243						
NNS				S		Sn 07 16 09.1	+0.5
	baz=243						
NCU	**National Centr**	**0.86**	**277**	*eP*		Pn 07 15 55.4	+1.1
	baz=270						
NCU				*e*S		Sn 07 16 10.2	+0.8
	baz=270						
TWD	**Chiawan**	**0.92**	**212**	*i* P		Pn 07 15 55.0	+0.1
	baz=226						
TWD				S		Sn 07 16 10.6	+0.1
	baz=226						
HWA	**Hwalien**	**1.01**	**208**	P		Pn 07 15 56.2	+0.5
	baz=220						
NSTT	**Nanjuang**	**1.05**	**257**	P		Pn 07 15 56.8	+0.6
	baz=254						
NSTT				S		Sn 07 16 12.8	0.0
	baz=254						
TWT	**Tachien**	**1.06**	**235**	*eP*		Pn 07 15 57.4	+1.1
	baz=240						
TWT				*e*S		Sn 07 16 14.3	+1.4
	baz=240						
WHF	**Hehuan Shan**	**1.07**	**228**	*i* P		Pn 07 15 57.4	+1.1
	baz=233						
WHF				S		Sn 07 16 14.1	+1.1
	baz=233						
ESL	**Shilin**	**1.23**	**211**	*eP*		Pn 07 15 57.4	-0.7
	baz=219						
NSY	**Sanyi**	**1.32**	**250**	*eP*		Pn 07 16 00.3	+1.2
	baz=252						
TWQ1	**Liyutan**	**1.34**	**248**	P		Pn 07 16 00.2	+0.8
	baz=251						
TWQ1				S		Sn 07 16 18.7	+0.4
	baz=251						
SMLT	**Sun Moon Lake**	**1.49**	**229**	P		Pn 07 16 02.3	+1.2
	baz=240						
SMLT				*e*S		Sn 07 16 22.8	+1.3
	baz=240						
TYC	**Yuchr**	**1.50**	**231**	P		Pn 07 16 02.6	+1.3
	baz=243						
TYC				S		Sn 07 16 22.9	+1.1
	baz=243						
EHY	**Hungye**	**1.54**	**209**	*eP*		Pn 07 16 02.0	+0.3
	baz=215						
EHY				*e*S		Sn 07 16 23.0	+0.3
	baz=215						
TWF1	**Yuli**	**1.69**	**207**	*eP*		Pn 07 16 03.4	-0.1
	baz=208						
YUS	**Yu-Shan**	**1.74**	**218**	*eP*		Pn 07 16 05.8	+1.6
	baz=218						
YUS				*e*S		Sn 07 16 28.3	+1.3
	baz=218						
ALS	**Alishan**	**1.81**	**222**	P		Pn 07 16 06.8	+1.8
	baz=236						
ALS				*e*S		Sn 07 16 30.4	+1.9
	baz=236						
CHN5	**Tsauling**	**1.83**	**227**	P		Pn 07 16 06.5	+1.2
	baz=233						
CHN5				*e*S		Sn 07 16 30.0	+1.1
	baz=233						
CHKT	**Chengkung**	**1.89**	**202**	*eP*		Pn 07 16 05.9	-0.1
	baz=212						
CHN4	**Tsaushan**	**2.06**	**223**	*eP*		Pn 07 16 09.8	+1.6
	baz=230						
CHN4				*e*S		Sn 07 16 35.2	+1.2
	baz=230						
STYT	**Tauyuan**	**2.11**	**217**	*eP*		Pn 07 16 09.8	+1.0
	baz=219						
WTP	**Ta-pu**	**2.13**	**221**	*eP*		Pn 07 16 10.1	+1.1
	baz=228						
WTP				*e*S		Sn 07 16 36.4	+0.8
	baz=228						
TWK	**Hsinying**	**2.19**	**224**	*eP*		Pn 07 16 12.9	+3.2
	baz=226						
CHN1	**Nanshi**	**2.23**	**221**	P		Pn 07 16 11.3	+1.1
	baz=229						
CHN1				*e*S		Sn 07 16 38.6	+0.8
	baz=229						
TWG	**Pinlang**	**2.26**	**206**	*eP*		Pn 07 16 11.4	+0.8
	baz=209						
TWG				*e*S		Sn 07 16 36.6	-1.9
	baz=209						

*ISCJB **09** 07:31:37.9±1.2,3878N±005×2553E±009,h10km,Error ellipse: s-maj=11.3km s-min=5.0km az=154.9*
*ISK **09** 07:31:37.5,3880N×2564E,h6km,MD3.1*
*DDA **09** 07:31:38.5,3880N×2559E,h3km,Md2.9*
*CSEM **09** 07:31:39.4±0.6,3880N×2557E,h30km,MD2.9,Error ellipse: s-maj=14.0km s-min=4.7km az=60.0*
*ATH **09** 07:31:40.7,3882N×2576E,h10km,MD3.3/3*
ISC 09 07:31:38.0±1.5,3879N±004×2556E±009,h8km±6km,n15, σ0s93/23,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.72**	**51**	*e*PB		**Pb**	**07 31 52.0**	**-0.8**
URLA	**Izmir**	**0.92**	**118**	*i* P		**Pg**	**07 31 55.0**	**-0.7**
URLA				*i* S		**Sg**	**07 32 08.1**	**+0.3**
AYVA	**Ayvalik**	**1.02**	**59**	*i* P		**Pg**	**07 31 57.0**	**-0.7**
AYVA				*i* S		**Sg**	**07 32 11.2**	**+0.3**
BOZC	**Bozcaada**	**1.12**	**20**	*i* P		**Pb**	**07 31 59.2**	**-0.3**
BOZC				*i* S		**Sb**	**07 32 16.1**	**+1.8**
EZN	**Ezine**	**1.19**	**30**	*e*PN		**Pn**	**07 31 59.7**	**-1.3**
EZN				*e*SN		**Sn**	**07 32 16.7**	**-0.7**
BLCB	**Balcova**	**1.23**	**109**	*e*PN		**Pn**	**07 32 01.0**	**-0.5**
BLCB				*e*SN		**Sn**	**07 32 16.6**	**-1.7**
IZM	**Izmir**	**1.39**	**106**	*e*PN		**Pn**	**07 32 03.2**	**-0.5**
IZM				*e*SN		**Sn**	**07 32 22.2**	**-0.2**
KDAG	**Bornova**	**1.40**	**106**	*i* P		**Pn**	**07 32 04.7**	**+0.9**
KDAG				*i* S		**Sn**	**07 32 23.3**	**+0.9**

GADA	**Gvkgeada**	**1.42**	**11**	*e*PN	**Pn**	**07 32 04.2**	**0.0**	
SMG	**Samos**	**1.48**	**137**	*e*PB	**Pb**	**07 32 07.0**	**+1.2**	
APE	**Apeiranthos**	**1.72**	**181**	*e*PN	**Pn**	**07 32 13.5**	**+5.2**	
BALY	**Balya**	**1.86**	**59**	*i* P	**Pn**	**07 32 12.4**	**+2.2**	
BALY				*i* S	**Sn**	**07 32 39.6**	**+5.7**	
ENEZ	**Enez**	**2.00**	**13**	*e*PN	**Pn**	**07 32 12.0**	**0.0**	
RKY	**Sarkoy-Tekirda**	**2.27**	**33**	*e*PN	**Pn**	**07 32 15.5**	**-0.3**	
KULA	**Kula-Manisa**	**2.45**	**96**	*e*PN	**Pn**	**07 32 18.9**	**+0.7**	

*ISCJB **09** 07:34:05.6±0.4, 3545N±004×13969E±006, h107km±3km, mb4.0/5, Error ellipse: s-maj=8.8km s-min=4.9km az=150.7*
*JMA **09** 07:34:06.6±0.2, 3548N×13972E, h98km±2km, M3.6*
JMA Felt I J1.
*NEIC **09** 07:34:06.6, 3548N×13972E, h98km, MG3.8(JMA), After JMA.*
*IDC **09** 07:34:07.3±4.2, 3541N×13956E, h102km±15km, mb3.7/5, mb1 3.8/6, mb1mx3.5/22, mbtmp3.8/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/35, Error ellipse: s-maj=105.9km s-min=6.0km az=67.0*

ISC 09 07:34:06.7±0.4, 3545N±004×13969E±006, h101km±3km, n25, σ0°60/40, mb4.0/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYO	**Yokosk**	**0.23**	**185**	P	**Pn**	**07 34 21.1**	**0.0**
JYO				S	**Sn**	**07 34 31.6**	**-0.2**
TOK	**Tokyo**	**0.24**	**13**	P	**Pn**	**07 34 21.2**	**+0.1**
TOK				S	**Sn**	**07 34 32.3**	**+0.4**
JCN	**Nagara**	**0.42**	**95**	P	**Pn**	**07 34 22.4**	**+0.4**
JCN				S	**Sn**	**07 34 34.4**	**+1.0**
JOD2	**Odawara 2**	**0.53**	**249**	P	**Pn**	**07 34 22.1**	**-0.6**
JOD2				S	**Sn**	**07 34 34.0**	**-0.8**
JIM2	**Oshima 3**	**0.77**	**196**	P	**Pn**	**07 34 23.7**	**-1.1**
JIM2				*e*S	**Sn**	**07 34 37.4**	**-0.9**
JRY	**Ryogami san**	**0.85**	**311**	P	**Pn**	**07 34 26.0**	**+0.4**
JRY				*e*S	**Sn**	**07 34 40.5**	**+0.7**
BSO3	**Boso 3**	**0.94**	**134**	P	**Pn**	**07 34 26.1**	**-0.4**
BSO3				S	**Sn**	**07 34 42.0**	**+0.7**
JYN	**Shimob**	**0.94**	**273**	P	**Pn**	**07 34 26.7**	**+0.2**
JYN				S	**Sn**	**07 34 42.2**	**+0.8**
JAG	**Ashikaga**	**0.99**	**349**	P	**Pn**	**07 34 26.6**	**-0.4**
JIZS	**Izushimoda**	**0.99**	**222**	P	**Pn**	**07 34 27.3**	**+0.2**
JIZS				S	**Sn**	**07 34 43.2**	**+0.8**
BSO1	**Boso 1**	**1.32**	**127**	P	**Pn**	**07 34 29.8**	**-1.0**
JKT	**Katashina**	**1.36**	**345**	P	**Pn**	**07 34 31.0**	**-0.2**
JKT				S	**Sn**	**07 34 49.0**	**-0.8**
MJAR	**Matsushiro Arr**	**1.62**	**313**	P	**Pn**	**07 34 34.4**	**0.0**
	36nm,0.3s,baz=161,slow=11,SNR=86						
MJAR				S	**Sn**	**07 34 54.5**	**-1.0**
	70nm,0.3s,baz=130,slow=19,SNR=40						
MAJO	**Matsushiro**	**1.62**	**313**	*e*Pn	**Pn**	**07 34 35.1**	**+0.7**
MAJO				*e*Sn	**Sn**	**07 34 54.9**	**-0.7**
MAT	**Matsushiro**	**1.62**	**313**	P	**Pn**	**07 34 34.6**	**+0.2**
MAT				S	**Sn**	**07 34 55.7**	**+0.2**
MAT	**Matsushiro**	**1.62**	**313**	P	**Pn**	**07 34 35.2**	**+0.8**
MAT				S	**Sn**	**07 34 55.9**	**+0.4**
JHJ	**Hachijo jima 2**	**2.33**	**178**	P	**Pn**	**07 34 43.0**	**-0.6**
	94nm,0.3s,baz=124,slow=22,SNR=16						
JHJ				S	**Sn**	**07 35 12.4**	**+0.6**
	156nm,0.3s,baz=304,slow=22,SNR=12						
JHJ				LR	LR	07 35 15.6	
	comp=Z,382nm,20.5s,baz=69,slow=30						
SONM	**Songino Array**	**27.57**	**307**	P	**P**	**07 39 43.6**	**-0.3**
	0.3nm,0.4s,mb3.2,baz=82,slow=7.7,SNR=2.8						
ZAA0	**Zalesovo Array**	**41.97**	**314**	*e*P	**P**	**07 41 47.5**	**+0.1**
ZALV	**Zalesovo Beam**	**41.97**	**314**	P	**P**	**07 41 47.6**	**+0.2**
	2.8nm,0.4s,mb4.3,baz=89,slow=7.5,SNR=14						
MKAR	**Makanchi Array**	**43.80**	**303**	P	**P**	**07 42 02.5**	**+0.3**
	2.2nm,0.6s,mb4.1,baz=89,slow=9.5,SNR=19						
KURK	**Kurchatov**	**45.83**	**309**	P	**P**	**07 42 19.4**	**+1.1**
	baz=76,slow=7.8						
WB2	**Warramunga Arr**	**55.32**	**186**	*e*P	**P**	**07 43 29.4**	**-0.5**
WRA	**Warramunga Arr**	**55.32**	**186**	P	**P**	**07 43 29.5**	**-0.4**
	1.7nm,0.3s,mb4.6,baz=360,slow=7.5,SNR=92						
ASAR	**Alice Springs**	**59.05**	**186**	P	**P**	**07 43 56.4**	**+0.3**
	0.4nm,0.4s,mb3.8,baz=20,slow=10,SNR=14						

*CSEM **09** 07:54:21.9±0.1, 3923N×2776E, h2km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.5km az=93.0*
*ISK **09** 07:54:22.9, 3922N×2774E, h7km, MD2.9*
*ISCJB **09** 07:54:23.0±0.5, 3923N±002×2775E±004, h3km±6km, Error ellipse: s-maj=4.9km s-min=3.9km az=17.8*
*DDA **09** 07:54:23.2, 3923N×2782E, h7km±6km, Md3.0*

ISC 09 07:54:23.7±0.4, 3922N±003×2775E±004, h11km±5km, n19, σ0°87/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.34**	**171**	*i* P	**Pg**	**07 54 29.7**	**-0.8**
AKHS				*i* S	**Sg**	**07 54 36.2**	**+1.1**
AKS	**Akhisar**	**0.34**	**172**	PG	**Pg**	**07 54 30.1**	**-0.4**
AKS				*e*SG	**Sg**	**07 54 35.7**	**+0.6**
BALY	**Balya**	**0.53**	**349**	*i* P	**Pg**	**07 54 33.5**	**-0.5**
BALY				*i* S	**Sg**	**07 54 41.9**	**+0.9**
DEMI	**Demirci**	**0.77**	**103**	*i* P	**Pg**	**07 54 37.8**	**-0.8**
DEMI				*i* S	**Sg**	**07 54 48.6**	**-0.1**
DST	**Dursunbey**	**0.78**	**60**	*e*PG	**Pg**	**07 54 38.7**	**-0.1**
DST				*e*SG	**Sg**	**07 54 49.8**	**+0.7**
AYVA	**Ayvalik**	**0.83**	**277**	*i* P	**Pg**	**07 54 39.3**	**-0.3**
AYVA				*i* S	**Sg**	**07 54 54.3**	**+3.9**
KDAG	**Bornova**	**0.90**	**205**	*i* P	**Pg**	**07 54 39.8**	**-1.2**
KDAG				*i* S	**Sg**	**07 54 54.9**	**+2.2**
IZM	**Izmir**	**0.90**	**205**	*e*PG	**Pg**	**07 54 40.3**	**-0.7**
IZM				*e*SG	**Sg**	**07 54 53.6**	**+0.7**
BLCB	**Balcova**	**1.00**	**214**	*e*PG	**Pg**	**07 54 42.0**	**-0.8**
KULA	**Kula-Manisa**	**1.00**	**134**	*e*PG	**Pg**	**07 54 41.9**	**-1.0**
EDC	**Edincik**	**1.13**	**4**	*e*PN	**Pn**	**07 54 44.9**	**-0.5**
BNT	**Bandirma**	**1.14**	**7**	*e*PN	**Pn**	**07 54 45.4**	**-0.2**
KCT	**Karacabey**	**1.15**	**24**	*e*PN	**Pn**	**07 54 45.2**	**-0.5**
EZN	**Ezine**	**1.26**	**299**	*e*PN	**Pn**	**07 54 47.0**	**-0.1**
GDZ	**Gediz**	**1.35**	**95**	*i* P	**Pg**	**07 54 46.9**	**-1.6**
GDZ				*i* S	**Sb**	**07 55 07.5**	**+1.1**
MRMT	**Marmara Adasi**	**1.39**	**355**	*e*PN	**Pn**	**07 54 49.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.53**	**344**	*e*PN	**Pn**	**07 54 51.3**	**+0.3**
GEMT	**Gemlik**	**1.65**	**42**	*e*PN	**Pn**	**07 54 53.2**	**+0.7**
YLV	**Yalova**	**1.84**	**42**	*e*PN	**Pn**	**07 54 56.3**	**+1.2**

*NEIC **09** 07:59:32.6, 6636N×14226W, h24km, ML3.0(AEIC), After AEIC.*

PGC 09 07:59:34.0±2.4, 6622N×14176W, h1km, ML3.0/2, 2D, 264km northwest of Dawson, Yt Alaska, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGAK	**Eagle**	**1.47**	**170**	P	Pn	07 59 59.7	-1.8
EGAK				S	Sg	08 00 21.4	+0.3
BM3	**Burnt Mountain**	**1.65**	**318**	P	Pn	07 59 56.0	-8.0
DAWY	**Dawson**	**2.38**	**154**	P	Pn	08 00 13.1	-1.0
DAWY				S	Sn	08 00 47.5	+3.6
DAWY	**Dawson**	**2.38**	**154**	⇑Pn	Pn	08 00 13.2	-0.9
DAWY				⇑Sn	Sn	08 00 43.7	-0.2
DAWY				⇑Sg	Sg	08 00 47.2	-3.2
IL1	**Eielson Array**	**2.59**	**238**	P	Pn	08 00 11.7	-5.2
IL1				S	Sn	08 00 42.5	-6.4
COLA	**College**	**2.87**	**245**	P	Pn	08 00 16.2	-4.6
BCA3	**Beaver Creek A**	**3.17**	**180**	P	Pn	08 00 23.4	-1.4
MENT	**Mentasta**	**3.40**	**195**	P	Pn	08 00 26.3	-1.8
COLD	**Coldfoot**	**3.50**	**291**	P	Pn	08 00 23.6	-5.8
INK	**Inuvik**	**3.82**	**53**	*e*Pn	Pn	08 00 32.3	-1.6
INK				*e*Sn	Sn	08 01 17.6	-1.7
INK	**Inuvik**	**3.82**	**53**	⇑Pn	Pn	08 00 33.0	-0.9
INK				⇓Sn	Sn	08 01 17.5	-1.9
INK				⇑Sg	Sg	08 01 31.9	-4.7
MCK	**McKinley**	**3.94**	**234**	P	Pn	08 00 30.1	-5.4
BPAW	**Bear Paw Mtn.**	**4.44**	**246**	P	Pn	08 00 36.6	-5.7
KTH	**Kantishna Hill**	**4.73**	**240**	P	Pn	08 00 41.7	-4.7
IM3	**Indian Mountai**	**4.88**	**273**	P	Pn	08 00 43.0	-5.4
HYT	**Haines Junctio**	**5.74**	**159**	⇑Pn	Pn	08 00 59.8	-0.4
HYT				⇑Sg	Sg	08 02 32.6	-5.5
WHY	**Whitehorse**	**6.37**	**148**	⇓Pn	Pn	08 01 07.9	-0.9
PLBC	**Pleasant Camp**	**7.22**	**158**	⇑Sg	Sg	08 03 18.8	-6.8

IDC 09 08:12:45.0±10.0, 2450S×17942E, h498km±351km, mb3.0/3, mb1 3.2/4, mb1mx3.0/15, mbtmp3.1/4, Error ellipse: s-maj=369.4km s-min=86.5km az=91.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.86**	**188**	P	P	08 15 43.6	+0.6
	0.8nm,0.3s,baz=4.5,slow=12,SNR=8.3						
URZ				S	S	08 18 07.3	-2.6
	0.1nm,0.3s,baz=49,slow=20,SNR=3.4						
STKA	**Stephens Creek**	**34.02**	**249**	P	P	08 18 46.9	+0.2
	0.6nm,0.4s,baz=91,slow=7.9,SNR=6.3						
ASAR	**Alice Springs**	**41.42**	**261**	P	P	08 19 47.6	+0.1
	1.2nm,0.9s,baz=95,slow=8.5,SNR=12						
WRA	**Warramunga Arr**	**41.84**	**267**	P	P	08 19 50.5	-0.4
	1.7nm,0.6s,baz=102,slow=8.3,SNR=27						

*ISCJB **09** 08:14:29.8±1.0, 1509S±006×7133W±007, h124km±10km, mb4.4/16, Error ellipse: s-maj=11.8km s-min=7.8km az=144.6*
*NEIC **09** 08:14:31.3±1.0, 1511S×7131W, h126km±10km, mb4.8/8, Error ellipse: s-maj=11.4km s-min=7.8km az=61.0*
*IDC **09** 08:14:32.1±1.4, 1513S×7121W, h131km±11km, mb3.9/12, mb1 4.0/16, mb1mx4.0/24, mbtmp4.0/16, MS2.9/1, Ms1 2.9/1, ms1mx2.2/27, Error ellipse: s-maj=16.0km s-min=10.9km az=71.0*

ISC 09 08:14:30.8±0.8, 1509S±005×7129W±006, h116km±9km, n44, σ1°97/40, mb4.4/16, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.27**	**112**	P	**Pn**	**08 15 27.0**	**+6.5**
	11nm,0.3s,baz=293,slow=10,SNR=252						
LPAZ				S	**Sn**	**08 16 07.8**	**+8.9**
	7.0nm,0.3s,baz=173,slow=24,SNR=8.9						
LPAZ	**La Paz**	**3.27**	**112**	P	**Pn**	**08 15 27.0**	**+6.5**
LPAZ				S	**Sn**	**08 16 07.8**	**+8.9**
NNA	**Nana**	**6.22**	**299**	*e*Pn	**Pn**	**08 15 59.2**	**-0.9**
	109nm,0.6s						
NNA				*e*Sn	**Sn**	**08 17 05.4**	**-4.5**
LVC	**Limon Verde**	**7.81**	**164**	P	**Pn**	**08 16 22.1**	**+0.4**
	29nm,0.3s,baz=332,slow=9.1,SNR=361						
LVC				S	**Sn**	**08 17 45.3**	**-3.3**
	13nm,0.3s,baz=59,slow=23,SNR=18						
LVC	**Limon Verde**	**7.81**	**164**	*e*Pn	**Pn**	**08 16 21.8**	**+0.1**
	26nm,1.0s						
LVC				*e*Sn	**Sn**	**08 17 47.3**	**-1.2**
SIV	**San Ignacio**	**9.89**	**97**	P	**Pn**	**08 16 51.2**	**+1.2**
	3.8nm,0.3s,baz=281,slow=11,SNR=79						
SIV				S	**Sn**	**08 18 38.5**	**-0.5**
	1.7nm,0.3s,baz=11,slow=19,SNR=4.4						
ATAH	**Atahualpa**	**10.64**	**318**	P	**Pn**	**08 16 59.5**	**-0.5**
	1.5nm,0.3s,baz=148,slow=9.8,SNR=11						
ATAH				LR	LR	08 21 08.5	
	comp=Z,66nm,19.2s,baz=175,slow=37						
LCO	**Las Campanas**	**13.86**	**178**	*e*Pn	**Pn**	**08 17 42.9**	**+0.7**
CFAA	**Coronel Fontan**	**16.67**	**171**	P	**Pn**	**08 18 17.8**	**+0.4**
	0.2nm,0.3s,baz=350,slow=11,SNR=36						
OTAV	**Otavalo**	**16.80**	**334**	*e*P	**Pn**	**08 18 26.4**	**+7.3**
	11nm,0.9s						
ROSC	**El Rosal**	**20.05**	**351**	P	**P**	**08 18 56.8**	**+2.0**
	2.1nm,0.5s,baz=107,slow=19,SNR=3.2						
BDFB	**Brasilia**	**22.45**	**94**	P	**P**	**08 19 20.6**	**+0.1**
	5.2nm,0.4s,mb4.2,baz=253,slow=16,SNR=17						
SPB	**Sao Paulo**	**24.02**	**114**	*e*P	**P**	**08 19 35.2**	**+0.2**
PLCA	**Paso Flores**	**25.55**	**179**	P	**P**	**08 19 49.0**	**+0.3**
	5.4nm,0.7s,mb4.1,baz=3.0,slow=11,SNR=26						
PLCA				PcP	PcP	08 23 17.4	+0.3
	1.1nm,1.0s,baz=297,slow=2.6,SNR=3.2						
PCRV	**Puerto La Cruz**	**25.96**	**15**	P	**P**	**08 19 54.3**	**+1.7**
	5.0nm,0.6s,mb4.1,baz=197,slow=2.0,SNR=3.3						
USHA	**Ushuaia**	**39.72**	**177**	P	**P**	**08 21 52.2**	**+0.6**
	4.3nm,0.4s,mb4.6,baz=17,slow=14,SNR=13						
TXAR	**Lajitas Array**	**54.11**	**325**	P	**P**	**08 23 43.3**	**-0.5**
	0.3nm,0.5s,mb3.6,baz=148,slow=8.2,SNR=5.6						
FVM	**French Village**	**55.77**	**342**	*e*P	**P**	**08 23 56.3**	**+0.7**
	7.4nm,0.6s,mb4.9						
VNA3	**Neumayer Olymp**	**66.84**	**162**	*e*	**P**	**08 25 10.0**	**+0.3**
VNA3				*e*		08 25 15.2	
VNA1	**Neumayer--Stat**	**67.05**	**161**	*e*	**P**	**08 25 12.3**	**+1.3**
VNA1				*e*		08 25 17.3	
VNA2	**Neumayer--Watz**	**67.41**	**161**	*e*	**P**	**08 25 13.8**	**+0.5**
	baz=288,slow=5.3						
VNA2				*e*		08 25 18.9	
PDAR	**Pinedale Array**	**67.45**	**330**	P	**P**	**08 25 13.9**	**0.0**
	0.3nm,0.5s,mb3.4,baz=119,slow=6.7,SNR=5.7						
LIC	**Lamto**	**68.98**	**77**	*e*P	**P**	**08 25 27.2**	**+3.1**
	18nm,1.1s,mb4.8						
SNAA	**Sanae**	**69.04**	**162**	*e*	**P**	**08 25 22.8**	**-0.7**
SNAA				*e*		08 25 27.2	
SNAA	**Sanae**	**69.04**	**162**	*e*P	**P**	**08 25 22.5**	**-1.0**
	9.0nm,0.8s,mb4.7						
TIC	**Toumodi**	**69.12**	**77**	*e*P	**P**	**08 25 24.7**	**-0.3**
	3.8nm,0.2s,mb4.9						
DBIC	**Dimbokro**	**69.28**	**77**	P	**P**	**08 25 24.0**	**-2.0**
	4.2nm,0.7s,mb4.4,baz=254,slow=4.3,SNR=9.8						
DBIC	**Dimbokro**	**69.28**	**77**	P	**P**	**08 25 24.0**	**-2.0**
KIC	**Kosan Boka**	**69.29**	**77**	*e*P	**P**	**08 25 23.8**	**-2.3**
	18nm,0.5s,mb5.2						
TORD	**Torodi Ar. Bea**	**77.48**	**73**	P	**P**	**08 26 12.0**	**-2.0**
	3.1nm,0.6s,mb4.2,baz=263,slow=5.1,SNR=27						
TSUM	**Tsumeb**	**84.12**	**108**	P	**P**	**08 26 49.4**	**0.0**
	7.5nm,0.8s,mb4.5,baz=221,slow=8.1,SNR=8.4						
YKA	**Yellowknife Ar**	**84.42**	**341**	P	**P**	**08 26 48.7**	**-1.1**
	1.9nm,0.7s,mb4.0,baz=141,slow=4.9,SNR=5.8						
YKA	**Yellowknife Ar**	**84.42**	**341**	P	**P**	**08 26 48.7**	**-1.1**
BOSA	**Boshof**	**88.49**	**119**	P	**P**	**08 27 10.4**	**-0.2**
	2.9nm,0.5s,mb4.6,baz=263,slow=3.3,SNR=8.8						
STKA	**Stephens Creek**	**123.65**	**214**	PKP	PKPdf	08 33 14.8	-0.5
	1.2nm,0.5s,baz=121,slow=5.7,SNR=6.0						
ASAR	**Alice Springs**	**134.28**	**213**	PKhKP		08 33 20.6	
	0.1nm,0.5s,baz=124,slow=1.0,SNR=4.4						
ASAR				PKP	PKPdf	08 33 34.8	-0.9
	0.8nm,0.5s,baz=124,slow=1.7,SNR=14						
ASAR	**Alice Springs**	**134.28**	**213**	PKP	PKPdf	08 33 34.8	-0.9
ZALV	**Zalesovo Beam**	**136.95**	**21**	PKhKP		08 33 33.8	
	1.1nm,0.5s,baz=304,slow=2.6,SNR=4.1						
ZALV				PKP	PKPdf	08 33 39.9	+0.2
	5.4nm,0.7s,baz=289,slow=2.6,SNR=16						
ZALV				SKPab		08 37 08.1	
	0.3nm,0.4s,baz=341,slow=6.6,SNR=4.2						
WRA	**Warramunga Arr**	**137.02**	**217**	PKhKP		08 33 31.7	
	0.2nm,0.5s,baz=181,slow=2.8,SNR=6.1						
WRA				PKP	PKPdf	08 33 40.4	-0.5
	1.6nm,0.6s,baz=146,slow=1.9,SNR=22						
WRA				SKP		08 37 00.4	
	0.8nm,0.7s,baz=147,slow=2.3,SNR=7.0						
MKAR	**Makanchi Array**	**141.48**	**29**	PKhKP		08 33 40.9	
	0.6nm,0.5s,baz=2.1,slow=3.2,SNR=6.8						
MKAR				PKP	PKPdf	08 33 47.5	-0.7
	0.5nm,0.5s,baz=288,slow=3.1,SNR=5.8						
MKAR				SKPbc	SKPbc	08 37 14.7	-0.1
	0.6nm,0.8s,baz=348,slow=3.5,SNR=3.6						
MKAR	**Makanchi Array**	**141.48**	**29**	PKP	PKPdf	08 33 40.9	-7.2
MKAR				PKP	PKPdf	08 33 47.5	-0.7
MKAR				SKPbc	SKPbc	08 37 14.7	-0.1
MJAR	**Matsushiro Arr**	**146.14**	**315**	PKPbc	PKPbc	08 33 57.1	-0.6
	3.6nm,0.8s,baz=100,slow=1.3,SNR=8.4						
SONM	**Songino Array**	**147.30**	**3**	PKPbc	PKPbc	08 34 01.0	+0.3
	8.7nm,0.7s,baz=317,slow=2.0,SNR=19						
KSRS	**Korea Array**	**151.95**	**326**	PKPbc	PKPbc	08 34 12.4	-0.1
	5.6nm,0.8s,baz=13,slow=1.8,SNR=12						

*CSEM **09** 08:24:18.6±0.9, 3868N×4007E, h2km, MD2.8, Error ellipse: s-maj=20.1km s-min=10.0km az=65.0*

DDA 09 08:24:18.3, 3870N×4017E, h7km±7km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.64**	**287**	*e*PG	Pg	08 24 30.9	+0.3
PTK				*e*SG	Sg	08 24 39.6	+0.7
SVRC	**Sivrice-ELAZID**	**0.75**	**245**	*e*PG	Pg	08 24 33.2	+0.4
ELZG	**Elazig**	**0.95**	**258**	*i* P	Pg	08 24 36.5	0.0
ELZG				*i* S	Sg	08 24 49.8	+0.9
KEMA	**Kemaliye**	**1.42**	**294**	*i* P	Pn	08 24 44.5	-0.1
KEMA				*i* S	Sb	08 25 05.2	+1.7
MARD	**Mardin**	**1.47**	**161**	*i* P	Pn	08 24 43.0	-2.2
MARD				*i* S	Sn	08 25 00.9	-3.8
URFA	**Urfa**	**1.65**	**221**	*e*PN	Pn	08 24 48.9	+1.2

*MOS **09** 08:25:12.8±1.5, 5527N×11039E, h5km, mb4.2/1, Error ellipse: s-maj=49.1km s-min=13.3km az=52.6*

BYKL 09 08:25:12.5±0.2, 5532N×11032E, 7C-9D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.64**	**316**	⇑*i*Pg	Pg	08 25 24.5	-0.2
NIZ				*e*Pb	Pg	08 25 25.1	+0.4
NIZ				*e*Sg	Sg	08 25 32.8	-0.1
NIZ				*e*Sb	Sg	08 25 34.3	+1.4
NIZ				max			
	74nm,0.2s						
NIZ				max			
	265nm,0.6s						
YLYR	**Ulyunkhan**	**0.66**	**132**	⇓*i*Pg	Pg	08 25 24.1	-1.0
	92nm,0.5s						
YLYR				⇑*i*Pg	Pg	08 25 24.1	-1.0
	85nm,0.5s						
YLYR				⇑*i*Pg	Pg	08 25 24.1	-1.0
	132nm,0.5s						
YLYR				*i*		08 25 24.4	
YLYR				*e*Sg	Sg	08 25 32.8	-0.8
YLYR				max			
	137nm,0.7s						
YLYR				Smax			
	245nm,0.1s						
KMO	**Kumora**	**0.76**	**41**	*e*PG	Pg	08 25 25.9	-1.1
KMO				*e*		08 25 35.5	
KMO				pmax	pmax		
	comp=Z,108nm,0.3s						
KMO				smax			
	comp=N,358nm,0.7s						
KMO	**Kumora**	**0.76**	**41**	⇑*i*Pg	Pg	08 25 26.0	-1.0
KMO				*e*Sg	Sg	08 25 36.0	-0.8
KMO				Pmax			
	comp=N,120nm,0.3s						
KMO				Smax			
	comp=N,367nm,1.0s						
YOA	**Uoyan**	**1.14**	**44**	⇓*i*PG	Pg	08 25 34.0	-0.3
YOA				*e*		08 25 49.9	
YOA				pmax	pmax		
	comp=Z,189nm,0.3s						
YOA				smax			
	comp=E,812nm,0.4s						
YOA	**Uoyan**	**1.14**	**44**	⇓*i*Pg	Pg	08 25 34.0	-0.3
YOA				*e*Sg	Sg	08 25 49.7	+0.7
YOA				Pmax			
	comp=E,182nm,0.5s						
YOA				Smax			
	comp=E,794nm,0.3s						
SYVR	**Suvo**	**1.68**	**187**	⇑*i*Pg	Pg	08 25 42.6	-2.0
SYVR				*e*		08 25 44.0	
SYVR				*e*		08 26 02.2	
SYVR				*e*Sg	Sg	08 26 05.8	-0.5
SYVR				max			
	comp=E,43nm,0.4s						
SYVR				Smax			
	comp=E,222nm,0.9s						
UKT	**Uakit**	**1.89**	**84**	*e*PN	Pn	08 25 45.7	-0.3
UKT				*e*		08 26 10.4	
UKT				pmax	pmax		
	comp=Z,84nm,0.3s						
UKT				smax			
	comp=N,275nm,0.3s						
UKT	**Uakit**	**1.89**	**84**	⇑*i*Pn	Pn	08 25 45.8	-0.2
UKT				⇑*i*Pg	Pg	08 25 46.6	-2.2
UKT				*e*Sg	Sg	08 26 12.0	-1.3
UKT				Pmax			
	comp=N,78nm,0.4s						
UKT				Smax			
	comp=N,324nm,0.5s						
SVKR	**Severomuysk**	**2.00**	**65**	*e*PN	Pn	08 25 47.0	-0.5
SVKR				*e*		08 25 47.9	
SVKR				*e*S	Sn	08 26 13.5	+0.3
SVKR				pmax	pmax		
	comp=Z,94nm,0.3s						
SVKR				smax			
	comp=E,767nm,0.5s						
SVKR	**Severomuysk**	**2.00**	**65**	⇓*i*Pg	Pg	08 25 47.4	-3.4
SVKR				*e*Sg	Sg	08 26 14.6	-2.1
SVKR				*e*		08 26 19.5	
SVKR				Pmax			
	comp=E,117nm,0.4s						
SVKR				max			
	comp=E,803nm,0.5s						
MXMB	**Maximikha**	**2.26**	**205**	*e*Pg	Pg	08 25 53.2	-2.5
MXMB				*e*Sg	Sg	08 26 24.2	-0.8
MXMB				Pmax			
	comp=E,25nm,0.4s						
MXMB				Smax			
	comp=E,343nm,0.7s						
OGRR	**Ongureny**	**2.31**	**225**	*e*PN	Pn	08 25 52.8	+1.0
OGRR				*e*		08 25 55.6	
OGRR				*e*		08 26 24.8	
OGRR				pmax	pmax		
	comp=Z,40nm,0.4s						
OGRR				smax			
	comp=N,170nm,0.4s						
OGRR	**Ongureny**	**2.31**	**225**	⇓*i*Pn	Pn	08 25 52.6	+0.8
OGRR				⇓*i*Pg	Pg	08 25 53.8	-3.0
OGRR				*e*		08 26 23.0	
OGRR				*e*Sg	Sg	08 26 24.8	-1.9
OGRR				Pmax			
	comp=N,40nm,0.3s						
OGRR				Smax			
	comp=N,172nm,0.4s						
BOD	**Bodaibo**	**3.23**	**38**	*e*Pn	Pn	08 26 04.8	+0.4
BOD				*e*		08

TLY				smax				
	comp=N,48nm,1.2s							
TLY	**Talaya**	**5.40**	**230**	*e*	Pg		08 26 49.6	-6.3
TLY				*e*Sn	Sn		08 27 36.9	-0.1
TLY				*e*Sg	Sg		08 27 58.5	-7.3
TLY				Smax				
	comp=N,47nm,1.1s							
TUP	**Tupik**	**5.63**	**95**	⇓*i*Pn	Pn		08 26 37.1	-0.3
TUP				*e*			08 26 44.8	
TUP				*e*Pg	Pg		08 26 52.5	-7.9
TUP				*e*Sn	Sn		08 27 41.7	-1.1
TUP				*e*Sg	Sg		08 28 06.6	-6.8
TUP				Pmax				
	comp=N,3.0nm,0.4s							
TUP				Smax				
	comp=N,23nm,1.0s							
KPC	**Khapcheranga**	**5.76**	**167**	*e*Pn	Pn		08 26 38.0	-1.2
KPC				*e*			08 26 48.2	
KPC				*e*			08 26 56.7	
KPC				*e*Sn	Sn		08 27 44.3	-1.6
KPC				*e*Sg	Sg		08 28 10.5	-7.0
KPC				max				
	comp=N,4.0nm,0.6s							
KPC				Smax				
	comp=N,20nm,1.2s							
ARS	**Arshan**	**5.80**	**237**	*e*	Pn		08 26 43.4	+3.7
ARS				*e*			08 26 58.4	
ARS				*e*Sn	Sn		08 27 45.9	-1.0
ARS				*e*Sg	Sg		08 28 12.0	-6.7
ARS				max				
	comp=N,23nm,0.8s							
ARS				Smax				
	comp=N,99nm,0.6s							
ZAK	**Zakamensk**	**6.53**	**224**	*e*Sg	Sg		08 28 36.1	-5.9
ZAK				Smax				
	comp=N,17nm,1.2s							
MOY	**Mondy**	**6.66**	**241**	⇓*i*Pn	Pn		08 26 53.3	+1.8
MOY				*e*			08 27 03.3	
MOY				*e*Sn	Sn		08 28 05.8	-2.2
MOY				*e*Sg	Sg		08 28 39.0	-7.2
MOY				Smax				
	comp=N,30nm,1.6s							
ORL	**Orlik**	**6.80**	**250**	*e*PN	Pn		08 26 54.7	+1.3
ORL				*e*S	Sn		08 28 11.7	+0.2
ORL				*e*S	Sg		08 28 43.4	-7.4
ORL				smax				
	comp=N,33nm,1.3s							
ORL	**Orlik**	**6.80**	**250**	⇓*i*Pn	Pn		08 26 54.8	+1.4
ORL				*i* Sn	Sn		08 28 11.7	+0.2
ORL				*e*Sg	Sg		08 28 43.2	-7.6
ORL				Smax				
	comp=N,33nm,1.2s							
IENR	**Iengra**	**8.25**	**78**	*e*Sg	Sg		08 29 27.5	-10

MOS ***09*** *08:28:06.1±1.3,5524N×11040E,h6km,mb4.2/1,Error ellipse: s-maj=53.8km s-min=15.8km az=51.1*

BYKL 09 08:28:06.5±0.3,5533N×11029E,10C-5D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.62**	**317**	⇓*i*Pg	Pg	08 28 18.7	+0.4
NIZ				⇑*i*Pb	Pg	08 28 19.9	+1.6
NIZ				*e*Sg	Sg	08 28 26.7	+0.4
NIZ				*e*Sb	Sg	08 28 28.5	+2.2
NIZ				Pmax			
	38nm,0.3s						
NIZ				max			
	204nm,0.2s						
YLYR	**Ulyunkhan**	**0.68**	**132**	⇑*i*Pg	Pg	08 28 18.3	-1.1
YLYR				*e*Sg	Sg	08 28 26.7	-1.5
YLYR				Pmax			
	74nm,0.7s						
YLYR				Smax			
	230nm,0.9s						
KMO	**Kumora**	**0.76**	**42**	*e*PG	Pg	08 28 20.1	-1.0
KMO				*e*		08 28 29.9	
KMO				pmax	pmax		
	comp=Z,173nm,0.4s						
KMO				smax			
	comp=N,323nm,0.6s						
KMO	**Kumora**	**0.76**	**42**	⇑*i*Pg	Pg	08 28 20.1	-1.0
	comp=N,27nm,0.5s						
KMO				⇑*i*Pg	Pg	08 28 20.1	-1.0
	comp=N,42nm,0.5s						
KMO				⇑*i*Pg	Pg	08 28 20.1	-1.0
	comp=N,335nm,0.5s						
KMO				*e*Sg	Sg	08 28 30.7	-0.2
KMO				Pmax			
	comp=N,374nm,0.6s						
KMO				Smax			
	comp=N,451nm,1.3s						
YOA	**Uoyan**	**1.14**	**45**	⇓*i*PG	Pg	08 28 27.3	-1.1
YOA				*i*		08 28 43.6	
YOA				pmax	pmax		
	comp=Z,306nm,0.2s						
YOA				smax			
	comp=E,1μm,0.5s						
YOA	**Uoyan**	**1.14**	**45**	*e*Pg	Pg	08 28 27.5	-0.9
YOA				*e*Sg	Sg	08 28 43.5	+0.3
YOA				Pmax			
	comp=E,292nm,0.2s						
YOA				Smax			
	comp=E,1μm,0.5s						
SYVR	**Suvo**	**1.68**	**186**	⇓*i*Pg	Pg	08 28 37.1	-1.6
SYVR				*e*		08 28 39.9	
SYVR				*e*Sg	Sg	08 29 00.1	-0.4
SYVR				max			
	comp=E,44nm,0.5s						
SYVR				Smax			
	comp=E,221nm,0.8s						
UKT	**Uakit**	**1.91**	**84**	*e*PN	Pn	08 28 40.0	-0.2
UKT				*e*		08 29 05.2	
UKT				pmax	pmax		
	comp=Z,86nm,0.4s						
UKT				smax			
	comp=N,204nm,0.3s						
UKT	**Uakit**	**1.91**	**84**	⇑*i*Pn	Pn	08 28 39.9	-0.3
UKT				⇑*i*Pg	Pg	08 28 40.8	-2.3
UKT				*e*Sg	Sg	08 29 05.7	-2.1
UKT				Pmax			
	comp=N,99nm,0.7s						
UKT				Smax			
	comp=N,267nm,0.9s						
SVKR	**Severomuysk**	**2.01**	**66**	*e*PN	Pn	08 28 41.1	-0.5
SVKR				*e*		08 29 07.2	
SVKR				pmax	pmax		
	comp=Z,133nm,0.9s						
SVKR				smax			
	comp=N,674nm,0.7s						
SVKR	**Severomuysk**	**2.01**	**66**	*e*Pn	Pn	08 28 40.2	-1.4
SVKR				*e*Pg	Pg	08 28 42.0	-3.0
SVKR				*e*Sg	Sg	08 29 08.9	-2.1
SVKR				*e*		08 29 11.6	
SVKR				Pmax			
	comp=N,134nm,0.4s						
SVKR				max			
	comp=N,732nm,0.8s						
MXMB	**Maximikha**	**2.26**	**204**	*e*Pg	Pg	08 28 47.4	-2.4
MXMB				*e*		08 28 49.6	
MXMB				*e*Sg	Sg	08 29 18.5	-0.6
MXMB				max			
	comp=N,31nm,0.8s						
MXMB				Smax			
	comp=N,812nm,0.8s						
OGRR	**Ongureny**	**2.31**	**224**	*i* Pn	Pn	08 28 46.9	+1.2
OGRR				⇑*e*Pg	Pg	08 28 48.1	-2.6
OGRR				*e*Sg	Sg	08 29 19.2	-1.4
OGRR				Pmax			
	comp=N,44nm,0.6s						
OGRR				Smax			
	comp=N,255nm,0.6s						
BOD	**Bodaibo**	**3.23**	**38**	*e*Pn	Pn	08 28 58.7	+0.3
BOD				*e*Pg	Pg	08 29 04.3	-4.1
BOD				*e*Sn	Sn	08 29 37.6	+0.1
BOD				*e*Sg	Sg	08 29 45.7	-4.5
BOD				Pmax			
	comp=N,33nm,0.4s						
BOD				Smax			
	comp=N,78nm,0.8s						
ZRHB	**Zarechye**	**3.34**	**215**	*e*Sg	Sg	08 29 50.0	-3.8
ZRHB				Smax			
	comp=N,277nm,1.2s						

TRG	**Tyrgan**	**3.47**	**224**	⇑*i*Pn	Pn		08 29 02.7	+1.0
TRG				*e*			08 29 07.3	
TRG				*e*			08 29 46.8	
TRG				*e*Sg	Sg		08 29 53.6	-4.2
TRG				max				
	comp=N,8.0nm,0.4s							
TRG				Smax				
	comp=N,66nm,1.0s							
UUDB	**Ulan-Yde**	**3.81**	**205**	*e*Pg	Pg		08 29 14.7	-4.7
UUDB				*e*Sg	Sg		08 30 03.7	-5.0
UUDB				Pmax				
	comp=N,16nm,1.1s							
UUDB				Smax				
	comp=N,74nm,0.8s							
FFNB	**Fofonovo**	**3.90**	**214**	*e*	Pn		08 28 58.4	-9.2
FFNB				*e*Sg	Sg		08 30 07.0	-4.7
FFNB				Smax				
	comp=N,219nm,0.6s							
HRMR	**Khuramsha**	**4.21**	**210**	*e*Pn	Pn		08 29 13.0	+1.2
HRMR				*e*Sg	Sg		08 30 16.9	-4.7
HRMR				Smax				
	comp=N,268nm,0.6s							
CRS	**Chara**	**4.74**	**67**	*e*PN	Pn		08 29 28.9	+10
CRS				*e*			08 30 31.6	
CRS				pmax	pmax			
	comp=Z,45nm,1.1s							
CRS				smax				
	comp=E,72nm,1.4s							
CRS	**Chara**	**4.74**	**67**	*e*Pn	Pn		08 29 19.2	+0.2
CRS				*e*Pg	Pg		08 29 29.8	-7.4
CRS				*e*			08 30 04.2	
CRS				*e*Sg	Sg		08 30 32.3	-6.2
CRS				Pmax				
	comp=E,45nm,1.3s							
CRS				Smax				
	comp=E,72nm,1.4s							
LSTR	**Listvyanka**	**4.75**	**225**	*e*Sg	Sg		08 30 32.8	-6.3
LSTR				Smax				
	comp=E,80nm,2.1s							
TLY	**Talaya**	**5.39**	**230**	*e*PN	Pn		08 29 27.3	-0.8
TLY				*e*			08 29 42.6	
TLY				*e*S	Sn		08 30 27.1	-3.7
TLY				*e*			08 30 51.8	
TLY				pmax	pmax			
	comp=Z,3.0nm,0.4s							
TLY				smax				
	comp=N,61nm,1.0s							
TLY	**Talaya**	**5.39**	**230**	*e*Pg	Pg		08 29 41.4	-8.4
TLY				*e*Sn	Sn		08 30 29.2	-1.6
TLY				*e*Sg	Sg		08 30 51.8	-7.8
TLY				Pmax				
	comp=N,8.0nm,0.5s							
TLY				Smax				
	comp=N,54nm,1.1s							
TUP	**Tupik**	**5.65**	**95**	⇓*i*Pn	Pn		08 29 31.1	-0.6
TUP				*e*Sn	Sn		08 30 35.1	-2.1
TUP				*e*Sg	Sg		08 31 01.9	-6.0
TUP				max				
	comp=N,5.0nm,1.1s							
TUP				Smax				
	comp=N,35nm,0.8s							
KPC	**Khapcheranga**	**5.78**	**166**	*e*Pg	Pg		08 29 50.5	-6.6
KPC				*e*Sn	Sn		08 30 36.4	-3.9
KPC				*e*Sg	Sg		08 31 06.3	-5.7
KPC				Pmax				
	comp=N,4.0nm,0.8s							
KPC				Smax				
	comp=N,22nm,1.0s							
ARS	**Arshan**	**5.79**	**237**	*e*Pn	Pn		08 29 35.1	+1.5
ARS				*e*			08 29 53.5	
ARS				*e*Sn	Sn		08 30 40.1	-0.6
ARS				*e*Sg	Sg		08 31 05.9	-6.5
ARS				max				
	comp=N,27nm,0.8s							
ARS				Smax				
	comp=N,148nm,1.0s							
ZAK	**Zakamensk**	**6.52**	**223**	*e*Sg	Sg		08 31 29.3	-6.6
ZAK				Smax				
	comp=N,23nm,1.1s							
MOY	**Mondy**	**6.65**	**240**	*e*PG	Pg		08 30 06.8	-7.0
MOY				*e*			08 31 30.4	
MOY				pmax	pmax			
	comp=Z,4.0nm,0.4s							
MOY				smax				
	comp=N,38nm,1.8s							
MOY	**Mondy**	**6.65**	**240**	⇓*i*Pn	Pn		08 29 47.6	+2.3
MOY				*e*			08 29 56.7	
MOY				*e*Sn	Sn		08 30 59.7	-2.0
MOY				*e*Sg	Sg		08 31 31.8	-8.1
MOY				max				
	comp=N,5.0nm,1.4s							
MOY				Smax				
	comp=N,38nm,1.7s							
ORL	**Orlik**	**6.79**	**250**	*e*PN	Pn		08 29 47.7	+0.4
ORL				*e*S	Sn		08 31 03.1	-2.1
ORL				*e*S	Sn		08 31 37.3	+32
ORL				smax				
	comp=N,55nm,1.1s							
ORL	**Orlik**	**6.79**	**250**	⇑*i*Pn	Pn		08 29 48.7	+1.4
ORL				*e*			08 30 00.6	
ORL				*e*Sg	Sg		08 31 37.3	-7.1
ORL				max				
	comp=N,9.0nm,1.0s							
ORL				Smax				
	comp=N,53nm,1.3s							
IENR	**Iengra**	**8.27**	**78**	*e*Sg	Sg		08 32 23.3	-8.4
TDJR	**Todzha**	**8.88**	**257**	*e*Sg	Sg		08 32 39.9	-12

IDC 09 08:32:24.7±3.0,3469S×17961W,h0km,mb3.7/2, mb1 4.0/3,mb1mx3.8/14,mbtmp3.8/3,ML3.7/1,Error ellipse: s-maj=67.3km s-min=42.1km az=51.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.43**	**216**	Pn	Pn	08 33 32.8	-0.4
	4.0nm,0.3s,baz=56,slow=2.1,SNR=31						
URZ				Sn	Sn	08 34 19.7	-5.8
	6.0nm,0.3s,baz=162,slow=20,SNR=3.0						
ASAR	**Alice Springs**	**41.72**	**272**	P	P	08 40 15.4	-0.1
	0.6nm,0.5s,baz=115,slow=7.5,SNR=17						
WRA	**Warramunga Arr**	**43.10**	**278**	P	P	08 40 26.9	+0.1
	0.6nm,0.5s,baz=118,slow=7.7,SNR=14						
TORD	**Torodi Ar. Bea**	**158.52**	**183**	PKPab	PKPab	08 52 59.0	-0.3
	0.4nm,0.6s,baz=162,slow=5.2,SNR=3.5						

NEIC ***09*** *08:35:56.0±0.7,928S×10676E,h10km,mb4.7/1,Error ellipse: s-maj=19.5km s-min=13.3km az=100.0*
ISCJB ***09*** *08:35:57.4±0.8,938S×10656E±0.1,h33km,mb3.9/6, Error ellipse: s-maj=18.9km s-min=7.7km az=14.6*
IDC ***09*** *08:35:59.8±2.2,9.17S×10688E,h30km±5km,mb3.7/5, mb1 3.8/5,mb1mx3.5/18,mbtmp3.7/5,Error ellipse: s-maj=102.7km s-min=18.6km az=51.0*
DJA ***09*** *08:36:00.0±0.0,908S×10612E,h20km,Mjma3.6/7, MLv3.9/7*

ISC 09 08:35:56.9±4.0,939S±007×1067E±01,h15km±27km, h33km±.7km:pP-P,n18,σ1§00/17,mb3.9/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.49**	**224**	*e*Pn	**Pn**	**08 36 24.5**	**+1.4**
XMIS	**Christmas Isla**	**1.49**	**224**	P	**Pn**	**08 36 24.1**	**+1.0**
LEM	**Lembang**	**2.71**	**20**	P	**Pn**	**08 36 38.9**	**-1.0**
LEM	**Lembang**	**2.71**	**20**	S	**Sn**	**08 37 14.4**	**+2.0**
DBJI	**Dramaga**	**2.82**	**1**	P	**Pn**	**08 36 41.3**	**-0.1**
DBJI	**Dramaga**	**2.82**	**1**	S	**Sn**	**08 37 14.9**	**-0.3**
CBJI	**Citeko**	**2.96**	**3**	P	**Pn**	**08 36 39.6**	**-3.7**
SBJI	**Serang**	**3.30**	**350**	P	**Pn**	**08 36 49.4**	**+1.4**
BJII	**Banjamegara**	**3.62**	**56**	P	**Pn**	**08 37 00.7**	**+8.3**
CMAR	**Chiang Mai Arr**	**28.71**	**345**	P	**P**	**08 41 52.5**	**-1.1**
	0.9nm,0.3s,mb4.0,baz=183,slow=7.8,SNR=8.9						
CMAR				pP	pP	08 42 01.4	+3.1
	1.3nm,0.4s,baz=177,slow=8.6,SNR=2.2						
ASAR	**Alice Springs**	**29.61**	**122**	P	**P**	**08 42 01.8**	**+0.1**
	0.5nm,0.9s,mb3.2,baz=291,slow=9.5,SNR=4.1						
ASAR				pP	pP	08 42 11.6	+5.2
	0.4nm,0.7s,baz=300,slow=9.2,SNR=3.5						
SONM	**Songino Array**	**56.98**	**360**	P	**P**	**08 45 40.7**	**-0.9**
	0.5nm,0.6s,mb3.8,baz=193,slow=5.9,SNR=2.7						
SONM				pP	pP	08 45 50.2	+3.7
	1.4nm,1.1s,baz=169,slow=9.1,SNR=3.7						

MKAR	**Makanchi Array**	**60.03**	**341**	P	**P**		**08 46 02.7**	**-0.3**
	1.5nm,0.6s,mb4.2,baz=142,slow=7.5,SNR=9.9							
MKAR				pP	pP		08 46 11.9	+4.1
	1.7nm,0.6s,baz=143,slow=7.8,SNR=6.3							
MKAR	**Makanchi Array**	**60.03**	**341**	P	**P**		**08 46 02.7**	**-0.3**
MKAR				pP	pP		08 46 11.9	+4.1
KURK	**Kurchatov**	**64.64**	**341**	P	**P**		**08 46 33.7**	**0.0**
	baz=152,slow=6.2							
KURK	**Kurchatov**	**64.64**	**341**	*e*P	**P**		**08 46 39.0**	**+5.3**
	5.1nm,0.9s,mb4.5							
BVAR	**Borovoye Array**	**69.44**	**338**	P	**P**		**08 47 04.0**	**-0.3**
	1.3nm,0.7s,mb4.0,baz=169,slow=8.8,SNR=4.9							
BVAR				pP	pP		08 47 13.7	+4.5
	1.2nm,0.5s,baz=151,slow=6.8,SNR=3.5							
TXAR	**Lajitas Array**	**145.34**	**51**	PKPbc	PKPbc		08 55 34.0	-0.6
	0.1nm,0.7s,baz=343,slow=2.8,SNR=2.4							

TEH ***09*** *09:08:02.8,3737N×4490E,h1km,ML4.7*
THR ***09*** *09:08:51.3±0.9,3753N×4467E,h14km±19km,ML4.2*
ISCJB ***09*** *09:08:52.5±0.6,3717N±002×4484E±002,h9km±4km, mb4.6/56,MS3.5/12,Error ellipse: s-maj=3.4km s-min=2.4km az=25.1*
ISK ***09*** *09:08:53.4,3715N×4461E,h5km,ML4.5*
CSEM ***09*** *09:08:53.5±0.1,3716N×4476E,h15km,mb4.9/17,Error ellipse: s-maj=2.9km s-min=1.8km az=18.0*
MOS ***09*** *09:08:54.0±1.1,3712N×4482E,h23km,mb4.6/26,Error ellipse: s-maj=7.4km s-min=5.0km az=117.6*
BJI ***09*** *09:08:55.1,3730N×4480E,h18km,mB5.1,mb4.8*
IDC ***09*** *09:08:55.2±4.5,3723N×4477E,h17km±29km,mb4.1/16, mb1 4.2/22,mb1mx4.2/28,mbtmp4.2/22,ML3.8/6,MS3.5/14, Ms1 3.5/14,ms1mx3.3/37,Error ellipse: s-maj=15.8km s-min=9.4km az=130.0*
NEIC ***09*** *09:08:57.1±1.3,3729N×4484E,h28km±10km,mb4.7/28, Error ellipse: s-maj=4.8km s-min=3.2km az=201.0*
SZGRF ***09*** *09:09:00.3,3734N×4401E,h10km,mb4.6,Turkey-Iran border region*
DDA ***09*** *09:09:01.6,3734N×4433E,h5km,Md4.1,Ml4.3*

ISC 09 09:08:53.5±0.6,3724N±002×4485E±002,h1km±4km,n281, σ1§30/300,mb4.6/56,MS3.5/12,16C-15D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.94**	**291**	PG	**Pg**	**09 09 09.6**	**-2.0**
HKR				*e*SG	**Sg**	**09 09 23.1**	**-0.8**
HAKT	**HAKKARI**	**0.96**	**290**	*i* P	**Pg**	**09 09 11.2**	**-0.7**
HAKT				*i* S	**Sg**	**09 09 25.8**	**+1.4**
IAZR	**Azarshahr**	**1.00**	**64**	Pg	**Pg**	**09 09 11.2**	**-1.5**
IAZR	**Azarshahr**	**1.00**	**64**	*e*Pg	**Pg**	**09 09 11.3**	**-1.4**
IAZR				*e*	**Sn**	**09 09 31.0**	**+1.5**
ISHB	**Shabestar**	**1.21**	**30**	Pg	**Pn**	**09 09 14.0**	**-3.5**
ISHB				Sg	**Sn**	**09 09 29.6**	**-4.9**
ISHB	**Shabestar**	**1.21**	**30**	*e*Pg	**Pn**	**09 09 14.0**	**-3.5**
ISHB				*e*Sg	**Sn**	**09 09 29.7**	**-4.8**
ISHB				*e*		09 09 34.6	
ITBZ	**Tabriz**	**1.43**	**46**	Pg	**Pg**	**09 09 18.1**	**-2.8**
ITBZ				Sg	**Sg**	**09 09 35.8**	**-3.6**
ITBZ	**Tabriz**	**1.43**	**46**	*e*Pg	**Pn**	**09 09 18.2**	**-2.4**
ITBZ				*e*	**Pg**	**09 09 21.9**	**+1.0**
ITBZ				*e*Sg	**Sg**	**09 09 35.9**	**-3.5**
IMRD	**Marand**	**1.62**	**24**	Pn	**Pn**	**09 09 20.8**	**-2.4**
IMRD	**Marand**	**1.62**	**24**	*e*Pn	**Pn**	**09 09 20.9**	**-2.3**
IMRD				*e*		09 09 49.4	
MSL	**Mosul**	**1.63**	**240**	*i* x	x	09 09 25.0	
MSL				*i* x	x	09 09 48.0	
VANT	**Van**	**1.67**	**317**	*e*PN	**Pn**	**09 09 24.8**	**+1.0**
IBST	**Bostanabad**	**1.69**	**74**	Pg	**Pn**	**09 09 23.2**	**-1.0**
IBST	**Bostanabad**	**1.69**	**74**	*e*Pg	**Pn**	**09 09 23.3**	**-0.9**
IBST				*e*		09 09 25.6	
TVAN	**Van**	**1.72**	**319**	*i* P	**Pn**	**09 09 24.5**	**0.0**
TVAN				*i* S	**Sg**	**09 09 51.6**	**+2.8**
VANB	**Van**	**1.78**	**320**	*e*PN	**Pn**	**09 09 25.7**	**+0.3**
VANB				*e*SN	**Sn**	**09 09 49.3**	**+0.6**
SIRT	**Sirnak**	**1.94**	**278**	*e*PN	**Pn**	**09 09 26.8**	**-0.8**
CLDR	**Caldiran**	**2.04**	**339**	*e*PN	**Pn**	**09 09 29.8**	**+0.9**
IHRS	**Heris**	**2.04**	**58**	Pn	**Pn**	**09 09 29.3**	**+0.3**
IHRS				Sn	**Sn**	**09 09 54.2**	**-1.0**
IHRS	**Heris**	**2.04**	**58**	*e*Pn	**Pn**	**09 09 29.3**	**+0.3**
IHRS				*e*		09 09 34.4	
IHRS				*e*Sn	**Sn**	**09 09 54.2**	**-1.0**
ISRB	**Sarab**	**2.31**	**75**	Pn	**Pn**	**09 09 33.8**	**+1.0**
ISRB				Sn	**Sn**	**09 10 00.6**	**-1.3**
ISRB	**Sarab**	**2.31**	**75**	*e*Pn	**Pn**	**09 09 33.9**	**+1.1**
ISRB				*e*Sn	**Sn**	**09 10 00.6**	**-1.3**
ISRB				*e*		09 10 07.0	
AGRB	**Hanur-Agry**	**2.75**	**329**	*e*PN	**Pn**	**09 09 40.5**	**+1.8**
IDHR	**Dehrash**	**2.83**	**153**	Pn	**Pn**	**09 09 42.7**	**+2.9**
IDHR	**Dehrash**	**2.83**	**153**	*e*Pn	**Pn**	**09 09 42.8**	**+3.0**
IDHR				*e*		09 10 29.2	
GRMI	**Germi**	**2.87**	**56**	*e*Pn	**Pn**	**09 09 38.8**	**-1.6**
GRMI				*e*Sg	**Sn**	**09 10 20.2**	**+4.7**
GRMI				AML	AML	09 10 29.6	
	comp=N,466nm,0.6s						
GRMI	**Germi**	**2.87**	**56**	*e*Pn	**Pn**	**09 09 38.1**	**-2.3**
	SNR=52						
ILIN	**Lien**	**2.88**	**143**	Pn	**Pn**	**09 09 42.4**	**+1.9**
ILIN	**Lien**	**2.88**	**143**	*e*Pn	**Pn**	**09 09 42.5**	**+2.0**
ILIN				*e*		09 10 39.7	
GNI	**Garni**	**2.91**	**358**	⇓P	**Pg**	**09 09 49.3**	**+0.1**
	SNR=34						
GNI	**Garni**	**2.91**	**358**	Pn	**Pn**	**09 09 43.3**	**+2.4**
	comp=N,16nm,0.3s,baz=272,slow=0.8,SNR=19						
GNI				Lg		09 10 31.9	
	comp=N,30nm,0.3s,baz=155,slow=22,SNR=3.5						
GNI	**Garni**	**2.91**	**358**	Pn	**Pn**	**09 09 43.3**	**+2.4**
GNI				Lg		09 10 31.9	
GNI	**Garni**	**2.91**	**358**	*e*Pn	**Pn**	**09 09 44.7**	**+3.8**
BEST	**Besiri**	**2.92**	**284**	*i* P	**Pg**	**09 09 46.4**	**-3.0**
SNGE	**Sanandaj**	**2.95**	**136**	*e*Pn	**Pn**	**09 09 44.2**	**+2.7**
SNGE				AML	AML	09 10 36.5	
	comp=E,800nm,0.6s						
SNGE				AML	AML	09 10 44.5	
	comp=N,1μm,0.6s						
IVIS	**Veis**	**3.16**	**148**	*e*Pn	**Pn**	**09 09 46.6**	**+2.3**
IVIS				*e*		09 10 45.4	
IGHG	**Ghaleghazi**	**3.22**	**154**	Pn	**Pn**	**09 09 47.1**	**+1.9**
IGHG	**Ghaleghazi**	**3.22**	**154**	*e*Pn	**Pn**	**09 09 47.2**	**+2.0**
IGHG				*e*		09 10 48.2	
MARD	**Mardin**	**3.25**	**273**	*i* P	**Pn**	**09 09 43.9**	**-1.6**
MARD				*i* S	**Sg**	**09 10 35.6**	**-2.2**
KARS	**Kars**	**3.63**	**338**	*e*PN	**Pn**	**09 09 53.5**	**+2.5**
IKOM	**Komasi**	**3.75**	**144**	*e*Pn	**Pn**	**09 09 54.6**	**+2.1**
EZM	**Erzurum**	**3.81**	**315**	*e*Pn	**Pn**	**09 09 54.4**	**+1.0**
BHD	**Baghdad**	**3.98**	**186**	*ex*	x	09 09 55.0	
BHD				*ex*	x	09 10 45.0	
DGRG	**David-gareji**	**4.22**	**5**	P	**Pg**	**09 10 13.0**	**-1.4**
DGRG				S	**Sg**	**09 11 13.3**	**+4.1**
TBLG	**Delisi**	**4.49**	**359**	*e*P	**Pn**	**09 10 09.6**	**+7.0**
TBLG	**Delisi**	**4.49**	**359**	P	**Pn**	**09 10 09.6**	**+7.0**
IRAZ	**Razeghan**	**4.49**	**113**	Pn	**Pn**	**09 10 03.0**	**+0.3**
IRAZ	**Razeghan**	**4.49**	**113**	*e*Pn	**Pn**	**09 10 04.4**	**+1.7**
IRAZ	**Razeghan**	**4.49**	**113**	*e*Pn	**Pn**	**09 10 03.1**	**+0.4**
IRAZ				*e*		09 10 42.4	
SVRC	**Sivrice-ELAZID**	**4.53**	**286**	*e*PN	**Pn**	**09 10 03.1**	**-0.1**
PTK	**Pertek**	**4.61**	**293**	*e*PN	**Pn**	**09 10 04.8**	**+0.5**
GOR	**Gori**	**4.77**	**353**	P	**Pg**	**09 10 22.3**	**-2.7**
URFA	**Urfa**	**4.81**	**274**	*e*PN	**Pn**	**09 10 06.2**	**-0.8**
ASAO	**Ashtian**	**4.99**	**121**	*e*Pn	**Pn**	**09 10 12.6**	**

IVRN **Varamin** 6.00 110 *e*Pn **Pn** 09 10 23.6 +0.2
IVRN **Varamin** 6.00 110 *e*Pn **Pn** 09 10 23.8 +0.4
IVRN *e*Pn **Pn** 09 10 24.0 +0.6
IVRN *e* 09 10 58.2
IDMV **Damavand** 6.03 104 *e*Pn **Pn** 09 10 24.3 +0.5
IDMV *e* 09 12 22.1
SHGR **Shooshtar-Gavs** 6.07 146 *e*Pn **Pn** 09 10 26.2 +1.9
SHGR Sn **Sn** 09 11 37.4 +3.0
GAZ **Gaziantep** 6.10 272 *e*PN **Pn** 09 10 25.8 +1.1
SARI **SarD1z-Kayseri** 6.60 285 *e*PN **Pn** 09 10 36.0 +4.4
SVSK **Karacayir** 6.71 296 *e*PN **Pn** 09 10 35.4 +2.3
IPIR **Pirpir** 6.73 131 Pn **Pn** 09 10 34.7 +1.3
IPIR **Pirpir** 6.73 131 *e*Pn **Pn** 09 10 34.8 +1.4
IPIR *e* 09 10 58.7
IKLH **Kolahrood** 6.75 123 Pn **Pn** 09 10 34.7 +1.0
IKLH **Kolahrood** 6.75 123 *e*Pn **Pn** 09 10 34.8 +1.1
IKLH **Kolahrood** 6.75 123 *e*Pn **Pn** 09 10 34.8 +1.1
KIV **Kislovodsk** 6.91 347 *e*Pn **Pn** 09 10 40.3 +4.4
comp=N,15nm,0.7s
KIV **Kislovodsk** 6.91 347 *i* P **Pn** 09 10 39.7 +3.9
HTY **Hatay** 7.09 264 *e*PN **Pn** 09 10 38.7 +0.3
IGLO **Ghaloghah** 7.24 93 Pn **Pn** 09 10 40.2 -0.2
IGLO **Ghaloghah** 7.24 93 *e*Pn **Pn** 09 10 40.2 -0.2
BNN **Bunyan** 7.28 285 *e*PN **Pn** 09 10 42.3 +1.3
SOC **Sochi** 7.45 330 *e*P **Pn** 09 10 45.1 +1.9
SOC *e* 09 12 05.7
SOC pmax pmax
comp=Z,36nm,0.6s
SOC MLR MLR
comp=Z,452nm,14.0s
SOC **Sochi** 7.45 330 *e*P **Pn** 09 10 45.1 +1.9
comp=Z,452nm,14.0s
IZEF **Zefreh** 7.51 123 Pn **Pn** 09 10 45.3 +1.2
IZEF **Zefreh** 7.51 123 *e*Pn **Pn** 09 10 45.4 +1.3
MIB **Mutribah** 7.70 164 *e*P **Pn** 09 10 46.4 -0.4
baz=164
MIB AML AML 09 12 11.2
comp=Z,63nm,0.5s,baz=164
HWQ **Hawqa** 7.82 250 *e*P **Pn** 09 10 48.6 +0.3
NASN **Na'in** 7.89 122 *e*Pn **Pn** 09 10 51.8 +2.4
UMR **Umm Al-Rimmam** 8.03 162 *e*P **Pn** 09 10 50.6 -0.7
baz=162
UMR AML AML 09 12 20.8
comp=Z,46nm,0.4s,baz=162
BHL **Bhannes** 8.20 249 *e*P **Pn** 09 10 54.1 +0.5
NAY **Al-Naaiem** 8.22 165 *e*P **Pn** 09 10 53.1 -0.8
baz=166
NAY AML AML 09 12 24.3
comp=Z,22nm,0.6s,baz=166
ASF **Jabal al Asfar** 8.27 235 Pn **Pn** 09 10 54.7 +0.1
comp=Z,1.0nm,0.3s,baz=293,slow=5.1,SNR=8.2
ASF Lg 09 13 15.2
comp=Z,1.5nm,0.3s,baz=90,slow=20,SNR=3.5
ASF LR LR 09 14 36.2
comp=Z,215nm,20.6s,baz=130,slow=42
RCY **Rachaya** 8.27 246 *e*P **Pn** 09 10 55.2 +0.6
RDF **Al-Radifah** 8.60 164 *e*P **Pn** 09 10 58.8 -0.3
baz=164
RDF AML AML 09 12 33.7
comp=Z,32nm,0.3s,baz=164
MMAI **Mount Meron Ar** 8.81 244 Pn **Pn** 09 11 02.8 +0.8
comp=Z,8.5nm,0.3s,baz=65,slow=14,SNR=27
MMAI Lg 09 13 29.5
comp=Z,1.7nm,0.3s,baz=26,slow=21,SNR=3.6
QRN **Al-Qurain** 8.85 162 *e*P **Pn** 09 11 02.4 -0.2
baz=163
QRN AML AML 09 12 43.5
comp=Z,52nm,0.4s,baz=163
MRVT **Maraveh tapeh** 8.95 84 *e*Pn **Pn** 09 11 04.3 +0.4
BRTR **Keskin Array B** 9.13 289 Pn **Pn** 09 11 06.1 -0.3
comp=Z,0.1nm,0.3s,baz=112,slow=11,SNR=2.1
BRTR **Keskin Array B** 9.13 289 *i* P **Pn** 09 11 12.3 +5.9
BRTR pmax pmax
comp=Z,4.0nm,1.0s
ANN **Anapa** 9.40 326 *e*P **Pn** 09 11 14.9 +4.9
ANN *e*S **Sn** 09 12 58.2 +1.9
ANN pmax pmax
comp=Z,71nm,1.3s
ANN **Anapa** 9.40 326 *e*P **Pn** 09 11 14.9 +4.9
comp=Z,71nm,1.3s
ANN *e*S **Sn** 09 12 58.2 +1.9
EIL **Elat** 11.19 230 Pn **Pn** 09 11 34.7 +0.1
comp=Z,0.4nm,0.3s,baz=27,slow=14,SNR=3.9
EIL Lg 09 14 46.4
comp=Z,0.7nm,0.3s,baz=112,slow=19,SNR=3.3
EIL LR LR 09 16 38.6
comp=Z,286nm,18.8s,baz=270,slow=42
EIL **Elat** 11.19 230 Pn **Pn** 09 11 34.7 +0.1
EIL Lg 09 14 46.4
EIL LR LR 09 16 38.6
VORD **Divnogorie** 14.28 346 *e*P **Pn** 09 12 18.5 +1.7
VORD pmax pmax
comp=Z,5.0nm,0.6s
VORD pmax pmax
comp=N,8.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.9s
VORD **Divnogorie** 14.28 346 *e*P **Pn** 09 12 18.5 +1.7
comp=E,8.0nm,0.8s
VSR **Storozhevoye** 14.55 346 *e*P **Pn** 09 12 23.2 +2.9
VSR pmax pmax
comp=Z,3.0nm,0.7s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.5s
BANOM **Banah** 14.90 136 ⇑P **Pn** 09 12 22.4 -2.9
SNR=57
APE **Apeiranthos** 15.41 275 *de*P **Pn** 09 12 37.5 +5.5
FAQ **Al Faqa, Dubai** 15.47 141 P **Pn** 09 12 33.8 +0.8
SNR=6.2
VRI **Vrincioaia** 16.05 308 ⇑P **Pn** 09 12 47.2 +7.0
VRI **Vrincioaia** 16.05 308 ⇑*i*P **Pn** 09 12 47.2 +6.9
PLOR **Plostina** 16.09 308 ⇑*i*P **Pn** 09 12 45.5 +4.7
IDI **Anoyia** 16.22 269 Pn **Pn** 09 12 44.0 +1.4
comp=E,0.2nm,0.3s,baz=71,slow=12,SNR=4.6
AKTK **Aktyubinsk** 16.22 31 Pn **Pn** 09 12 42.3 -0.2
AKTK LR LR 09 19 58.0
AKTK **Aktyubinsk** 16.22 31 P **Pn** 09 12 42.3 -0.2
comp=E,58nm,20.1s
AKTO **Aktyubinsk** 16.22 31 Pn **Pn** 09 12 42.3 -0.2
comp=E,0.2nm,0.3s,baz=227,slow=16,SNR=24
AKTO LR LR 09 19 58.0
comp=E,58nm,20.1s,baz=47,slow=41
VOIR 16.95 305 ⇑P **Pn** 09 12 55.3 +3.6
VOIR 16.95 305 ⇑*i*P **Pn** 09 12 55.3 +3.5
HOQ **Hoqain** 17.32 138 ⇓P **Pn** 09 12 56.1 -0.5
SNR=6.0
AKASG **Malin Array Be** 17.49 325 P **Pn** 09 12 57.0 -1.5
comp=E,0.5nm,0.3s,baz=132,slow=12,SNR=15
AKASG **Malin Array Be** 17.49 325 P **Pn** 09 12 57.0 -1.5
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV **Kiev** 17.49 325 *e*Pn **Pn** 09 12 56.8 -1.7
comp=Z,25nm,1.3s
KIEV **Kiev** 17.49 325 *e*P **Pn** 09 12 56.8 -1.7
KIEV pmax pmax
comp=Z,25nm,1.3s
KIEV **Kiev** 17.49 325 *e*P **Pn** 09 12 56.8 -1.7
comp=Z,25nm,1.3s
BURAR **Bucovina Array** 17.77 312 ⇑P **Pn** 09 13 03.2 +1.2
BURAR **Bucovina Array** 17.77 312 ⇑P **Pn** 09 13 03.2 +1.2
BURAR **Bucovina Array** 17.77 312 ⇑*i*P **Pn** 09 13 03.3 +1.3
BUR08 **Bucovina Ar. S** 17.80 312 *e*Pn **Pn** 09 13 02.7 +0.3
BUR08 **Bucovina Ar. S** 17.80 312 *e*Pn **Pn** 09 13 02.7 +0.4
BIDO **Bidbid** 17.81 136 P **Pn** 09 13 00.5 -2.2
SNR=11
BSY **Bisya** 17.95 140 P **Pn** 09 13 01.4 -3.0
SNR=17
SMDO **Samad** 18.14 137 P **Pn** 09 13 04.5 -2.2
SNR=21
GZR **Gura Zlata** 18.43 303 ⇓P **Pn** 09 13 10.6 +0.4
GZR **Gura Zlata** 18.43 303 ⇓*i*P **Pn** 09 13 10.6 +0.4
JMDO **Jabal Madar** 18.73 139 ⇓P **Pn** 09 13 10.5 -3.5
SNR=19
OBN **Obninsk** 18.75 345 *i* P **Pn** 09 13 11.6 -2.4
OBN *e*S **Sn** 09 16 37.5 -6.6
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,100nm,14.0s
DRGR 18.96 307 ⇑P **Pn** 09 13 17.9 +1.3
DRGR 18.96 307 ⇑*i*P **Pn** 09 13 17.9 +1.3
WBK **Wadi Bani Khal** 19.00 136 ⇑P **Pn** 09 13 16.0 -1.3
SNR=9.8

KBL **Kabul** 19.78 91 *e*P **Pn** 09 13 26.3 -0.2
comp=Z,8.0nm,0.8s
KBL **Kabul** 19.78 91 *e*P **Pn** 09 13 26.3 -0.2
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL **Kabul** 19.78 91 *e*P **Pn** 09 13 26.3 -0.2
comp=Z,8.0nm,0.8s
KOLS **Kolonicke sedl** 20.13 313 *e*P **P** 09 13 32.0 +3.3
KWP **Kalwaria** 20.21 315 *e*P **P** 09 13 30.2 +0.6
comp=Z,242nm,2.2s
KWP **Kalwaria** 20.21 315 *e*P **P** 09 13 30.2 +0.6
KWP pmax pmax
comp=Z,242nm,2.2s
KWP **Kalwaria** 20.21 315 *e*P **P** 09 13 30.2 +0.6
comp=Z,242nm,2.2s
WHFO **Wadi Hawf** 20.79 155 ⇓P **P** 09 13 34.2 -1.9
SNR=22
STHS **Stebnicka Huta** 20.95 313 *e*P **P** 09 13 39.1 +1.5
STHS pmax pmax
comp=Z,6.0nm,1.1s
STHS **Stebnicka Huta** 20.95 313 *e*P **P** 09 13 39.1 +1.5
comp=Z,5.6nm,1.1s
PSZ **Piszkesteto** 21.16 308 *e*P **P** 09 13 38.3 -1.6
comp=Z,19nm,1.1s,mb4.3
PSZ **Piszkesteto** 21.16 308⇓*e*P **P** 09 13 40.3 +0.4
PSZ **Piszkesteto** 21.16 308 P **P** 09 13 38.4 -1.5
PSZ **Piszkesteto** 21.16 308⇑*i*P **P** 09 13 38.3 -1.6
ABTO **Aybut** 21.16 157 P **P** 09 13 38.2 -2.0
SNR=12
ARU **Arti** 21.29 21 *e*P **P** 09 13 40.2 -1.1
comp=Z,5.9nm,0.4s,mb4.3
ARU **Arti** 21.29 21 *d i*P **P** 09 13 40.7 -0.6
ARU *e* 09 14 08.6
ARU *e*S **S** 09 17 31.8 -6.6
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.2
ARU **Arti** 21.29 21 *i* P **P** 09 13 40.7 -0.6
comp=Z,21nm,1.7s,mb4.2
RBK **Rabkut** 21.32 155 P **P** 09 13 39.7 -2.2
SNR=14
RBK P 09 13 40.0
SNR=22
RBK **Rabkut** 21.32 155 P **P** 09 13 40.0 -1.9
SNR=22
PKSM **Moragy** 21.44 303 ⇓P **P** 09 13 42.8 -0.1
PKSM **Moragy** 21.44 303⇓*e*P **P** 09 13 42.8 -0.2
PKSM **Moragy** 21.44 303⇓*i*P **P** 09 13 42.8 -0.2
NIE **Niedzica** 21.50 312 *e*P **P** 09 13 44.5 +1.0
VYHS **Vyhne** 22.03 309 *e*P **P** 09 13 49.9 +0.6
TIP **Timpagrande** 22.12 284 *e*P **P** 09 13 49.4 -1.0
comp=Z,32nm,1.0s,mb4.7
KOLL **Kolacno** 22.33 309 *e*P **P** 09 13 53.0 +0.6
EKS2 **Erkin-Say** 22.77 67 *e*P **P** 09 13 57.9 +0.7
comp=Z,6.1nm,0.8s,mb4.2
EKS2 **Erkin-Say** 22.77 67 *e*P **P** 09 13 57.9 +0.7
comp=Z,6.1nm,0.8s,mb4.2
MORC **Moravsky Berou** 23.29 311 *e*P **P** 09 14 01.5 -1.2
comp=Z,21nm,1.6s,mb4.4
MORC **Moravsky Berou** 23.29 311 *e*P **P** 09 14 01.5 -1.1
comp=Z,21nm,1.6s,mb4.4
MORC **Moravsky Berou** 23.29 311⇓*i*P **P** 09 14 01.7 -0.9
FRU **Bishkek** 23.40 67 *e*P **P** 09 14 04.0 +0.2
FRU *e* 09 14 16.0
FRU pmax pmax
comp=Z,60nm,1.8s,mb4.8
FRU **Bishkek** 23.40 67 *e*P **P** 09 14 04.0 +0.2
comp=Z,60nm,1.8s,mb4.8
VRAC **Vranov** 23.70 310 P **P** 09 14 05.9 -0.9
comp=Z,8.2nm,0.8s,mb4.3,baz=125,slow=15,SNR=6.5
VRAC LR LR 09 24 25.7
comp=Z,124nm,18.7s,MS3.4,baz=138,slow=39
VRAC **Vranov** 23.70 310 P **P** 09 14 05.9 -0.9
VRAC pmax pmax
comp=Z,8.0nm,0.9s
VRAC MLR MLR
comp=Z,124nm,18.7s
BRVK **Borovoye** 23.73 40 *e*P **P** 09 14 04.2 -2.9
comp=Z,36nm,1.2s,mb4.8
BRVK **Borovoye** 23.73 40 *e*P **P** 09 14 04.2 -2.9
BRVK pmax pmax
comp=Z,36nm,1.2s,mb4.8
BVAR **Borovoye Array** 23.77 40 P **P** 09 14 07.2 -0.2
comp=Z,5.6nm,0.8s,mb4.2,baz=228,slow=8.9,SNR=22
BVAR **Borovoye Array** 23.77 40 P **P** 09 14 07.2 -0.2
BVAR pmax pmax
comp=Z,6.0nm,0.8s
TKM2 **Tokmak 2** 24.12 67 *e*P **P** 09 14 11.4 +0.7
comp=Z,13nm,1.3s,mb4.3
TKM2 **Tokmak 2** 24.12 67 *e*P **P** 09 14 11.5 +0.8
TKM2 pmax pmax
comp=Z,13nm,1.3s,mb4.3
TKM2 **Tokmak 2** 24.12 67 *e*P **P** 09 14 11.4 +0.7
comp=Z,13nm,1.3s,mb4.3
DPC **Dobruska-Polom** 24.23 312 *e*P **P** 09 14 11.4 -0.3
UPC **Upice** 24.48 312 *e*P **P** 09 14 14.5 +0.6
PRU **Pruhonice** 25.18 310 *e*P **P** 09 14 19.4 -0.9
PVCC **Panska Ves** 25.34 311 *e*P **P** 09 14 20.6 -1.2
GEC2 **GERESS Array S** 25.37 307 *e*P **P** 09 14 22.4 +0.4
GEC2 pmax pmax
comp=Z,16nm,1.5s,mb4.5
GEC2 **GERESS Array S** 25.37 307 *e*P **P** 09 14 22.4 +0.4
comp=Z,16nm,1.5s,mb4.5
GERES **GERESS Array B** 25.37 307 P **P** 09 14 21.3 -0.7
comp=Z,2.5nm,0.6s,mb4.1,baz=111,slow=10,SNR=10
GERES LR LR 09 25 56.1
comp=Z,124nm,18.5s,MS3.5,baz=325,slow=40
GERES **GERESS Array B** 25.37 307 P **P** 09 14 21.3 -0.7
GERES pmax pmax
comp=Z,3.0nm,0.6s
GERES MLR MLR
comp=Z,124nm,18.5s
KHC **Kasperske Hory** 25.52 308 *e*P **P** 09 14 22.5 -0.9
KHC **Kasperske Hory** 25.52 308 *e*P **P** 09 14 18.6 -4.8
KHC *ex* x 09 14 22.5
BRG **Berggiesshubel** 25.84 312 *e*P **P** 09 14 26.0 -0.2
BRG pmax pmax
comp=Z,37nm,2.2s,mb4.6
BRG **Berggiesshubel** 25.84 312 *e*(P) **P** 09 14 26.0 -0.3
comp=Z,62nm,2.2s,mb4.9
WET **Wettzell** 25.97 307 *e*P **P** 09 14 26.1 -1.4
WET pmax pmax
comp=Z,12nm,1.3s,mb4.4
WET **Wettzell** 25.97 307 *e*P **P** 09 14 26.1 -1.4
comp=Z,12nm,1.3s,mb4.4
CLL **Collm** 26.54 312 *e*P **P** 09 14 34.1 +1.5
comp=Z,54nm,2.0s,mb4.9
CLL **Collm** 26.54 312 *e*P **P** 09 14 32.0 -0.6
comp=Z,16nm,1.4s,mb4.6
CLL LmV 09 27 00.0
comp=Z,200nm,18.4s
ROTZ **Rotzenmuhle** 26.56 309 *e*P **P** 09 14 33.0 +0.2
comp=Z,15nm,1.1s,mb4.6
WERN **Wernitzgruen** 26.60 310 *e*P **P** 09 14 35.1 +1.9
comp=Z,13nm,1.2s,mb4.5
GRA1 **Grenberg Arr** 27.16 308 *e*P **P** 09 14 38.1 -0.1
comp=Z,18nm,1.1s,mb4.7
GRF **Grafenberg Arr** 27.16 308 *e*P **P** 09 14 38.1 -0.1
GRF pmax pmax
comp=Z,18nm,1.1s,mb4.7
GRF **Grafenberg Arr** 27.16 308 *e*P **P** 09 14 38.1 -0.1
comp=Z,18nm,1.1s,mb4.7
KURK **Kurchatov** 27.52 50 P **P** 09 14 41.2 -0.2
baz=261,slow=9.1
KURK **Kurchatov** 27.52 50⇑*e*P **P** 09 14 41.8 +0.4
KURK pmax pmax
comp=Z,10.0nm,1.5s,mb4.4
KURK MLR MLR
comp=Z,100nm,27.0s,MS3.3
PGF **Pioggiola** 27.87 292 *e*P **P** 09 14 48.5 +3.8
comp=Z,36nm,0.8s,mb4.9
MK31 **Makanchi Array** 29.17 59 *e*P **P** 09 14 55.8 -0.4
MKAR **Makanchi Array** 29.17 59 P **P** 09 14 56.4 +0.2
comp=Z,2.3nm,0.7s,mb4.1,baz=262,slow=7.4,SNR=14
MKAR LR LR 09 28 54.1
comp=Z,76nm,19.9s,MS3.3,baz=178,slow=41
MKAR **Makanchi Array** 29.17 59 P **P** 09 14 56.4 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,76nm,19.9s
CDF **Champ du Feu** 29.45 304 *e*P **P** 09 15 01.5 +2.8
MBDF **Montbardon** 29.49 297 *e*P **P** 09 14 59.0 -0.1
CABF **La Chapelle** 30.06 300 *e*P **P** 09 15 02.0 -2.1
comp=Z,13nm,0.8s,mb4.5
CABF **La Chapelle** 30.06 300 *e*P **P** 09 15 02.0 -2.1
comp=Z,13nm,0.8s,mb4.8

NVS **Novosibirsk** 31.42 44 *i* P **P** 09 15 15.4 -0.6
SMF **Signal de Mont** 31.61 300 *e*P **P** 09 15 15.8 -1.9
comp=Z,11nm,0.8s,mb4.6
SMF **Signal de Mont** 31.61 300 *e*P **P** 09 15 15.8 -1.9
comp=Z,11nm,0.8s,mb4.8
NOA **NORSAR Array B** 31.81 329 LR LR 09 28 52.0
comp=Z,127nm,21.6s,MS3.6,baz=0.0,slow=38
ZALV **Zalesovo Beam** 32.05 46 P **P** 09 15 20.8 -0.7
comp=Z,0.7nm,0.3s,mb4.0,baz=268,slow=10,SNR=5.5
ZALV PcP PcP 09 18 08.4 -2.7
comp=Z,0.5nm,0.4s,baz=276,slow=4.1,SNR=2.7
ZALV LR LR 09 28 59.8
comp=Z,50nm,20.6s,MS3.2,baz=155,slow=38
ZALV **Zalesovo Beam** 32.05 46 P **P** 09 15 20.8 -0.7
ZALV 09 18 08.4
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV MLR MLR
comp=Z,50nm,20.6s,MS3.2
PYUN **Piuthan** 33.19 95 *e*P **P** 09 15 32.5 +0.7
DANN **Dangsing** 33.70 94 *e*P **P** 09 15 37.0 +0.8
comp=Z,50nm,0.9s,mb5.5
LFF **La Frestale** 33.78 297 *e*P **P** 09 15 36.4 -0.4
KOLN **Koldanda** 33.82 95 *e*P **P** 09 15 37.6 +0.3
comp=Z,14nm,0.8s,mb4.9
ARCES **ARCESS Array B** 34.01 348 P **P** 09 15 38.6 +0.1
comp=Z,2.0nm,0.8s,mb4.1,baz=139,slow=8.0,SNR=7.0
ARCES **ARCESS Array B** 34.01 348 P **P** 09 15 38.6 +0.1
ARCES pmax pmax
comp=Z,2.0nm,0.8s
GKN **Gorkha** 34.55 94 *e*P **P** 09 15 43.5 -0.1
comp=Z,35nm,0.9s,mb5.3
DMN **Daman** 35.09 94 *e*P **P** 09 15 48.6 +0.3
comp=Z,61nm,1.2s,mb5.4
PKIN **Phulchoki** 35.34 94 *e*P **P** 09 15 50.5 +0.1
PKI **Pulchoki** 35.35 94 *e*P **P** 09 15 51.0 +0.5
GUN **Gumba** 35.58 93 *e*P **P** 09 15 53.2 +0.7
JIRN **Jiri** 35.93 93 *e*P **P** 09 15 55.8 +0.3
SGMF **Saint Gilles** 35.98 303 *e*P **P** 09 15 55.4 -0.3
comp=Z,57nm,1.1s,mb5.0
SGMF **Saint Gilles** 35.98 303 *e*P **P** 09 15 55.4 -0.3
comp=Z,56nm,1.1s,mb5.3
ROSF **Rostrenen** 36.46 303 *e*P **P** 09 15 58.7 -1.1
comp=Z,108nm,1.3s,mb5.2
ROSF **Rostrenen** 36.46 303 *e*P **P** 09 15 58.7 -1.1
comp=Z,107nm,1.3s,mb5.5
RAMN **Ramite** 36.57 94 *e*P **P** 09 16 01.2 +0.2
comp=Z,71nm,1.1s,mb5.3
TAM **Tamanrasset** 36.70 258 *e*P **P** 09 16 01.8 -0.3
ODAN **Odare** 37.24 94 *e*P **P** 09 16 07.4 +0.7
comp=Z,94nm,1.3s,mb5.3
TAPN **Taplejung** 37.28 93 *e*P **P** 09 16 07.2 +0.2
comp=Z,12nm,0.6s,mb4.8
ESDC **Sonseca Array** 37.93 289 P **P** 09 16 10.1 -2.3
comp=Z,0.4nm,0.3s,mb3.6,baz=67,slow=8.4,SNR=4.8
GTA **Gaotai** 42.61 70 *e*P **P** 09 16 52.0 +0.7
GTA AP 09 16 56.7
GTA XP sP 09 16 59.5 +7.9
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.0
ZAK **Zakamensk** 43.08 53 *e*P **P** 09 16 46.9 -8.0
ZAK *e* 09 18 35.5
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
TORD **Torodi Ar. Bea** 45.30 250 P **P** 09 17 10.9 -2.2
comp=Z,1.9nm,0.8s,mb4.1,baz=45,slow=6.9,SNR=15
SONM **Songino Array** 45.46 56 P **P** 09 17 12.6 -1.3
comp=Z,0.9nm,0.7s,mb3.8,baz=269,slow=8.9,SNR=4.4
SONM LR LR 09 38 39.6
comp=Z,70nm,19.0s,MS3.6,baz=234,slow=39
SONM **Songino Array** 45.46 56 P **P** 09 17 12.6 -1.4
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,70nm,19.0s
ULN **Ulaanbaatar** 45.89 56 *e*P **P** 09 17 17.3 -0.1
comp=Z,8.4nm,0.9s,mb4.8
ULN **Ulaanbaatar** 45.89 56⇓*e*P **P** 09 17 17.6 +0.2
ULN **Ulaanbaatar** 45.89 56 *e*P **P** 09 17 17.3 -0.1
comp=Z,8.4nm,0.9s,mb4.8
LZH **Lanzhou** 46.66 73 *e*P **P** 09 17 24.5 +0.9
LZH AP 09 17 30.0
LZH XP sP 09 17 32.5 +8.5
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,110nm,4.1s
BOD **Bodaibo** 48.62 42 *e*P **P** 09 17 30.4 -8.1
BOD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CHTO **Chiang Mai** 50.47 96 *e*P **P** 09 17 48.2 -5.0
comp=Z,12nm,1.0s,mb4.8
CHTO **Chiang Mai** 50.47 96 *e*P **P** 09 17 48.2 -5.0
CHTO pmax pmax
comp=Z,12nm,1.0s,mb4.8
CHTO **Chiang Mai** 50.47 96 *e*P **P** 09 17 48.2 -5.0
comp=Z,12nm,1.0s,mb4.8
CMAR **Chiang Mai Arr** 50.66 96 P **P** 09 17 53.9 -0.7
comp=Z,4.9nm,0.7s,mb4.6,baz=297,slow=8.5,SNR=26
CMAR LR LR 09 44 21.4
comp=Z,37nm,20.8s,MS3.4,baz=46,slow=42
CMAR **Chiang Mai Arr** 50.66 96 P **P** 09 17 53.9 -0.7
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CMAR MLR MLR
comp=Z,37nm,20.8s
XAN **Xi'an** 51.28 73 P **P** 09 17 58.5 -0.6
XAN AP 09 18 06.3
XAN XP sP 09 18 10.0 +11
XAN AMB AMB
comp=Z,13nm,0.9s,mb4.9
XAN AMB AMB
comp=Z,72nm,5.5s
TIXI **Tiksi** 53.28 23⇑*e*P **P** 09 18 12.5 -0.9
TIXI pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
DBIC **Dimbokro** 54.39 249 P **P** 09 18 20.4 -1.9
comp=Z,1.9nm,0.5s,mb4.3,baz=45,slow=8.8,SNR=6.8
DBIC **Dimbokro** 54.39 249 P **P** 09 18 20.5 -1.8
DBIC pmax pmax
comp=Z,2.0nm,0.5s
KIC **Kosan Boka** 54.51 248 *e*P **P** 09 18 21.4 -1.8
comp=Z,70nm,1.2s,mb5.6
TIC **Toumodi** 54.53 249 *e*P **P** 09 18 22.8 -0.5
comp=Z,126nm,1.6s,mb5.7
TIC **Toumodi** 54.53 249 *e*P **P** 09 18 22.8 -0.5
TIC pmax pmax
comp=Z,126nm,1.6s,mb5.7
LIC **Lamto** 54.81 248 *e*P **P** 09 18 23.8 -1.6
comp=Z,8.2nm,0.7s,mb4.6
LIC **Lamto** 54.81 248 *e*P **P** 09 18 24.0 -1.4
comp=Z,14nm,0.7s,mb5.1
OPO **Ambohidratompo** 55.55 177 P **P** 09 18 30.0 -0.5
comp=Z,1.7nm,0.9s,mb4.1,baz=51,slow=13,SNR=3.5
MATP **Matopo** 59.39 198 P **P** 09 18 57.5 0.0
comp=Z,8.6nm,0.7s,mb4.9,baz=17,slow=7.5,SNR=20
MATP **Matopo** 59.39 198 P **P** 09 18 57.5 0.0
KSRS **Korea Array** 63.80 62 P **P** 09 19 26.1 -1.3
comp=Z,7.4nm,0.8s,mb5.0,baz=291,slow=6.8,SNR=17
KSRS LR LR 09 50 37.2
comp=Z,19nm,20.7s,MS3.2,baz=250,slow=39
KSRS **Korea Array** 63.80 62 P **P** 09 19 26.1 -1.2
KSRS pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
KSRS MLR MLR
comp=Z,19nm,20.7s,MS3.3
SEY **Seymchan** 64.80 29⇓*e*P **P** 09 19 33.0 -0.4
BILL **Bilibino** 66.31 21 *i* P **P** 09 19 42.2 -0.9
BILL pmax pmax
comp=Z,5.0nm,1.3s,mb4.6
BOSA **Boshof** 68.04 199 P **P** 09 19 54.1 -0.4
comp=Z,3.4nm,0.6s,mb4.8,baz=22,slow=6.0,SNR=10
BOSA **Boshof** 68.04 199 P **P** 09 19 54.1 -0.4
BOSA pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
MJAR **Matsushiro Arr** 71.36 58 P **P** 09 20 13.4 -1.8
comp=Z,2.5nm,0.9s,mb4.4,baz=310,slow=3.1,SNR=4.9
MJAR LR LR 09 54 26.2
comp=Z,39nm,18.7s,MS3.7,baz=85,slow=38
MJAR **Matsushiro Arr** 71.36 58 P **P** 09 20 13.4 -1.8
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR MLR MLR
comp=Z,39nm,18.7s

COLA	College	77.73	6	⇑*eP*		P		09 20 50.7	-0.9
COLA	College	77.73	6	*eP*		P		09 20 50.3	-1.3
	comp=Z,5.3nm,1.0s,mb4.6								
ULM	Lac du Bonnet	86.25	336	LR		LR		10 04 57.6	
	comp=Z,51nm,18.4s,MS4.0,baz=195,slow=39								
TKL	Tuckaleechee C	93.21	320	LR		LR		10 07 09.8	
	comp=Z,49nm,19.0s,MS4.0,baz=341,slow=38								

IDC ***09*** *09:09:54.0±2.4, 341S×100.41E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/19, mbtmp4.0/6, MS3.4/1, Ms1 3.4/1, ms1mx2.2/30, Error ellipse: s-maj=106.0km s-min=16.9km az=57.0*

ISCJB ***09*** *09:09:57.3±1.8, 33S±03.×1006E±04, h33km, mb4.1/11, Error ellipse: s-maj=73.2km s-min=12.5km az=146.9*

NEIC ***09*** *09:09:59.9±1.4, 322S×100.65E, h35km, mb4.3/5, Error ellipse: s-maj=58.7km s-min=10.4km az=57.0*

ISC 09 09:09:59.9±1.7, 32S±03×1006E±04, h35km, n14, σ0s72/13, mb4.1/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.61	356	P		P	09 14 46.9	-0.1
	1.3nm,0.3s,mb3.8,baz=189,slow=9.3,SNR=7.1							
MBWA	Marble Bar	25.74	135	*e*P		P	09 15 19.9	-7.4
	28nm,1.6s,mb4.5							
WRA	Warramunga Arr	36.83	119	P		P	09 17 04.4	-0.6
	0.5nm,0.4s,mb3.7,baz=308,slow=8.8,SNR=18							
WRAB	Tennant Creek	36.83	119	*e*P		P	09 17 05.5	+0.5
	1.0nm,0.4s,mb4.0							
ASAR	Alice Springs	38.02	125	P		P	09 17 14.8	-0.2
	1.2nm,0.4s,mb4.0,baz=299,slow=7.8,SNR=25							
STKA	Stephens Creek	47.86	131	P		P	09 18 34.9	+0.3
	0.8nm,0.5s,mb4.0,baz=334,slow=15,SNR=6.1							
STKA				LR		LR	09 40 21.6	
	comp=Z,42nm,18.6s,baz=210,slow=38							
SONM	Songino Array	51.10	5	P		P	09 19 00.6	+1.6
	4.2nm,0.7s,mb4.5,baz=188,slow=9.5,SNR=22							
SONM				PcP		PcP	09 20 14.8	+0.5
	0.4nm,0.5s,baz=159,slow=5.1,SNR=1.9							
SONM	Songino Array	51.10	5	P		P	09 19 00.6	+1.6
SONM				PcP		PcP	09 20 14.8	+0.5
ULN	Ulaanbaatar	51.19	6	*e*P		P	09 18 58.5	-1.1
	3.8nm,0.9s,mb4.3							
TKM2	Tokmak 2	51.21	336	*e*P		P	09 19 00.3	+0.4
	2.1nm,0.6s,mb4.2							
MKAR	Makanchi Array	52.38	344	P		P	09 19 08.4	-0.1
	2.2nm,0.7s,mb4.2,baz=144,slow=8.3,SNR=14							
KURK	Kurchatov	56.96	343	P		P	09 19 40.8	-0.8
	baz=164,slow=6.9							
KURK	Kurchatov	56.96	343	*e*P		P	09 19 41.0	-0.6
	1.6nm,0.6s,mb4.2							
TXAR	Lajitas Array	145.26	39	PKPbc		PKPbc	09 29 35.4	+1.0
	1.4nm,0.6s,baz=289,slow=0.9,SNR=27							

GEN ***09*** *09:26:59.7, 43.13N×1108E, h11km, ML2.0*

ISCJB ***09*** *09:27:00.3±0.3, 4320N±002×1102E±004, h13km±4km, Error ellipse: s-maj=4.5km s-min=3.1km az=171.7*

CSEM ***09*** *09:27:00.1±0.1, 4320N×1103E, h15km, MD2.5/7, Error ellipse: s-maj=1.2km s-min=0.9km az=52.0*

NEIC ***09*** *09:27:01.0, 43.19N×1102E, h11km, ML2.6(ROM), After ROM.*

ROM ***09*** *09:27:01.0±0.1, 43.19N×1102E, h11km, Md2.5/7, Ml2.6/16, Error ellipse: s-maj=1.7km s-min=0.8km az=6.0*

LDG ***09*** *09:27:02.0±0.2, 4321N×1104E, h10km, Ml2.8/2, Error ellipse: s-maj=4.8km s-min=3.8km az=176.0*

ISC 09 09:27:00.8±0.3, 4320N±002×1101E±004, h16km±3km, n33, σ0s60/48, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CSNT	Castellina Chi	0.34	37	⇑*i*P	g	Pg	09 27 07.5	-0.4
CSNT				Sg		Sg	09 27 12.3	-0.4
	1μm,0.5s							
CASP	Castiglione de	0.42	195	Pg		Pg	09 27 09.2	-0.2
CASP				Sg		Sg	09 27 14.8	-0.3
	1μm,0.3s							
ARCI	Arcidosso	0.49	136	Pg		Pg	09 27 10.3	-0.2
ARCI				Sg		Sg	09 27 17.1	0.0
	399nm,0.6s							
CRMI	Carmignano	0.59	357	Pg		Pg	09 27 12.3	-0.1
CRMI				Sg		Sg	09 27 21.1	+0.8
	382nm,0.3s							
PII	Pisa	0.63	326	Pg		Pg	09 27 13.2	0.0
PII				Sg		Sg	09 27 22.5	+0.9
	200nm,0.2s							
CAFI	Castiglion Fio	0.71	79	Pg		Pg	09 27 14.1	-0.5
SACS	San Casciano d	0.75	118	Pg		Pg	09 27 14.8	-0.6
	77nm,0.7s							
MAON	Monte Argentar	0.78	173	Pg		Pg	09 27 16.1	+0.2
MAON				Sg		Sg	09 27 26.6	+0.4
	610nm,0.7s							
CRE	Caprese Michel	0.80	58	Pg		Pg	09 27 16.3	-0.1
CRE				Sg		Sg	09 27 27.1	+0.1
	151nm,0.5s							
MAIM	Mastiano	0.81	332	Pg		Pg	09 27 16.3	-0.2
	170nm,0.4s							
VMG	Vicchio	0.85	27	Pg		Pg	09 27 17.7	+0.3
VMG				Sg		Sg	09 27 29.8	+1.2
	202nm,0.2s							
SEI	Scarperia	0.89	16	Pg		Pg	09 27 18.2	+0.1
	613nm,0.3s							
BDI	Bagni Di Lucca	0.91	341	Pg		Pg	09 27 18.3	-0.2
	211nm,0.7s							
SFI	Santa Sofia	0.93	41	Pg		Pg	09 27 18.5	-0.3
	180nm,0.7s							
PZZT	Monte Pizzetto	0.94	353	Pg		Pg	09 27 18.9	-0.1
	200nm,0.4s							
BADI	Badiali	0.95	71	Pg		Pg	09 27 18.9	-0.3
	106nm,0.7s							
FNVD	Fontana Vidola	0.97	5	Pg		Pg	09 27 19.5	-0.1
	237nm,0.8s							
SARO	Sassorosso	1.08	336	P		Pb	09 27 20.7	-0.3
SARO				S		Sb	09 27 34.9	+0.1
MURB	Monte Urbino	1.11	86	Pg		Pg	09 27 21.7	-0.5
	200nm,0.7s							
PIEI	Pieia	1.16	73	Pg		Pg	09 27 22.6	-0.6
	73nm,0.6s							
GSCL	Gusciola	1.19	345	Pg		Pn	09 27 23.8	+1.1
	29nm,0.2s							
ASS	Assisi	1.21	96	Pg		Pn	09 27 23.1	+0.2
	15nm,0.3s							
BACM	Baccana	1.27	328	P		Pn	09 27 24.0	+0.1
BACM				S		Sb	09 27 39.8	-0.7
VALM	Valbona	1.27	334	P		Pn	09 27 23.6	-0.3
VALM				S		Sb	09 27 39.8	-0.7
CESI	CESI - Serrava	1.40	97	Pg		Pn	09 27 26.0	+0.4
	90nm,2.1s							
GRAM	Graiana	1.46	332	P		Pn	09 27 26.1	-0.3
GRAM				S		Sn	09 27 43.8	-1.4
NRCA	Norcia	1.58	103	Pg		Pn	09 27 29.2	+1.1
	9.0nm,0.6s							
PGF	Pioggiola	1.62	247	*e*Pn		Pn	09 27 28.8	+0.2
PGF				*e*Sn		Sn	09 27 49.5	+0.5
	18nm,0.3s							
PGF	Pioggiola	1.62	247	*e*Pn		Pn	09 27 28.8	+0.2
PGF				*e*Sn		Sn	09 27 49.5	+0.5
	9.1nm,0.3s							
SBF	Sospel	2.68	285	*e*Pn		Pn	09 27 43.6	+0.4
LMR	La Mourre	3.29	274	*e*Pn		Pn	09 27 51.6	0.0
LMR				*e*Sn		Sn	09 28 28.9	-1.4
	2.6nm,0.3s							
MBDF	Montbardon	3.42	298	*e*Pn		Pn	09 27 55.1	+1.8
LPL	La Plagne	3.84	308	*e*P		Pn	09 28 03.3	+4.1

ISCJB ***09*** *09:40:09.8±3.3, 35S±01.×992E±02, h35km±26km, mb3.8/9, Error ellipse: s-maj=31.2km s-min=18.2km az=155.2*

IDC ***09*** *09:40:10.4±2.0, 385S×9889E, h30km±6km, mb3.5/6, mb1 3.6/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=93.6km s-min=16.9km az=50.0*

NEIC ***09*** *09:40:10.8±1.2, 381S×9908E, h35km, mb4.1/2, Error ellipse: s-maj=48.3km s-min=16.6km az=50.0*

DJA ***09*** *09:40:12.5±0.0, 329S×9931E, h10km, MLv4.3/2*

ISC 09 09:40:10.4±5.3, 352S±009×992E±01, h24km±38km, h32km±.3km:pP-P, n17, σ0s95/15, mb3.8/9, 1C, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDSI	Padang	2.87	25	P		Pn	09 40 55.1	+0.4
PDSI	Padang	2.87	25	S		Sn	09 41 28.1	-0.5
PPI	Padang Panjang	3.26	21	P		Pn	09 41 00.1	0.0
CHG	Chiang Mai	22.20	359	⇑P		P	09 45 03.7	-1.4
	14nm,0.8s,mb4.5							
CHTO	Chiang Mai	22.20	359	*e*P		P	09 45 02.9	-2.3
QIZ	Qiongzhong	24.73	25	*e*P		P	09 45 32.0	+1.9
	6.0nm,0.7s,mb4.2							
WRA	Warramunga Arr	37.92	118	P		P	09 47 26.3	0.0
	0.6nm,0.7s,mb3.5,baz=294,slow=8.9,SNR=6.2							
WRAB	Tennant Creek	37.93	118	P		P	09 47 22.5	-3.9
	1.5nm,0.8s,mb3.8							
ASAR	Alice Springs	39.02	124	P		P	09 47 35.2	-0.1
	0.9nm,0.9s,mb3.5,baz=290,slow=8.6,SNR=7.9							
ASAR				pP		pP	09 47 44.2	+1.6
	0.7nm,0.8s,baz=301,slow=8.1,SNR=4.7							
SONM	Songino Array	51.53	6	pP		pP	09 49 24.5	+2.9
	0.5nm,0.5s,baz=185,slow=8.1,SNR=3.7							
MKAR	Makanchi Array	52.29	345	P		P	09 49 21.0	+1.1
	0.3nm,0.5s,mb3.5,baz=147,slow=8.1,SNR=3.8							
MKAR				pP		pP	09 49 30.5	+3.1
	0.6nm,0.5s,baz=132,slow=6.7,SNR=3.1							
MKAR	Makanchi Array	52.29	345	P		P	09 49 21.0	+1.1
MKAR				pP		pP	09 49 30.5	+3.2
ZALV	Zalesovo Beam	58.52	350	P		P	09 50 05.3	+0.7
	1.1nm,0.6s,mb4.1,baz=186,slow=6.0,SNR=4.6							
ZALV				pP		pP	09 50 14.7	+2.5
	0.7nm,0.3s,baz=186,slow=7.2,SNR=2.6							
ZALV	Zalesovo Beam	58.52	350	P		P	09 50 05.3	+0.7
ZALV				pP		pP	09 50 14.7	+2.5
BVAR	Borovoye Array	61.34	341	P		P	09 50 23.6	-0.5
	0.4nm,0.5s,mb3.8,baz=111,slow=6.3,SNR=3.2							
BRTR	Keskin Array B	73.78	313	P		P	09 51 42.4	-0.6
	0.4nm,0.6s,mb3.5,baz=126,slow=3.9,SNR=3.8							
TXAR	Lajitas Array	146.37	38	PKPbc		PKPbc	09 59 50.9	+0.9
	0.5nm,0.7s,baz=53,slow=0.7,SNR=9.5							

CSEM ***09*** *10:18:14.8±0.4, 3759N×2998E, h2km, MD2.8, Error ellipse: s-maj=11.9km s-min=7.2km az=79.0*

ISCJB ***09*** *10:18:15.9±0.9, 3755N±004×2992E±008, h10km, Error ellipse: s-maj=9.1km s-min=5.0km az=19.8*

DDA ***09*** *10:18:15.8, 3756N×2988E, h7km±5km, Md2.8*

ISC 09 10:18:16.4±0.9, 3755N±004×2991E±009, h6km±11km, n6, σ1s02/10, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GOLH	Golhisar	0.42	221	⇑*i*P		Pg	10 18 23.3	-1.2
GOLH				*i* S		Sg	10 18 31.0	+1.1
TKTP	Tekketepe	0.59	34	*e*P		Pg	10 18 26.8	-1.0
TKTP				*e*S		Sg	10 18 37.3	+1.8
ELL	Elmali	0.80	180	*e*PG		Pg	10 18 32.0	+0.2
KHL	Karahalli	0.83	339	*e*PG		Pg	10 18 32.1	-0.3
KHL				*e*SG		Sg	10 18 42.4	-0.7
KULA	Kula-Manisa	1.38	315	*e*PN		Pn	10 18 41.5	-0.6
MANT	Manisa	1.42	312	*e*P		Pn	10 18 42.1	-0.6
MANT				*e*S		Sb	10 19 03.1	+1.5

IDC ***09*** *10:39:05.1±0.7, 2298S×17227E, h0km, mb4.6/12, mb1 4.8/13, mb1mx4.7/18, mbtmp4.7/13, ML3.5/1, MS4.4/19, Ms1 4.4/19, ms1mx4.3/22, Error ellipse: s-maj=20.8km s-min=17.2km az=1.0*

ISCJB ***09*** *10:39:06.9±2.0, 2294S±005×17220E±003, h21km±14km, mb5.1/50, MS4.5/29, Error ellipse: s-maj=7.8km s-min=4.8km az=169.0*

BJI ***09*** *10:39:08.4, 2309S×172.16E, h32km, mB5.2, mb5.0, Ms5.0, Msz4.6*

MOS ***09*** *10:39:08.9±1.3, 2288S×172.15E, h34km, mb5.6/12, Error ellipse: s-maj=14.0km s-min=8.8km az=152.3*

GCMT ***09*** *10:39:10.6±0.2, 2305S×172.13E, h15km, MW5.2/89, Moment Tensor Solution. s67,c104; s89,c149; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr5.88±.18; Mθθ-6.30±.14; Mφφ0.42±.12; Mrθ4.82±.42; Mθφ0.38±.09; Mrφ0.38±.41; Best double couple: M=7.78600×10^16 NP1:φ=279.00000°, δ26.00000°, λ100.00000°. NP2:φ=88.00000°, δ64.00000°, λ85.00000°. Principal axes: T 7.5900, Plg70.0000°, Azm348.0000°; N 0.3940, Plg4.0000°, Azm90.0000°; P -7.9830, Plg19.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***09*** *10:39:10.6±0.2, 2293S×172.19E, h35km, mb5.3/23 Error ellipse: s-maj=8.9km s-min=5.5km az=152.0*

DJA ***09*** *10:39:15.2±0.0, 2310S×172.13E, h69km, mB5.9/10, Mw(mB)5.5/10, Mwp5.0/13*

ISC 09 10:39:06.5±1.7, 2292S±004×17226E±003, h8km±10km, h35km±2.8km:pP-P, n343, σ0s79/319, mb5.1/50, MS4.5/29, 103C-73D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ONTRN	Noumea	5.40	275	*e*P		Pn	10 40 29.6	+2.2
ONTRN				*e*S		Sn	10 41 28.6	-1.1
DZM	Mont Dzumac	5.44	278	*e*Pn		Pn	10 40 29.4	+1.5
NOUC	Port Laguerre	5.57	277	*e*P		Pn	10 40 30.7	+1.0
NOUC				*e*S		Sn	10 41 32.6	-1.3
RAO	Raoul Island	10.85	128	LR		LR	10 44 36.1	
	comp=Z,3μm,19.2s,baz=296,slow=31							
URZ	Urewera	15.85	166	Pn		Pn	10 42 50.3	+0.4
	0.2nm,0.3s,baz=307,slow=1.7,SNR=7.0							
URZ				LR		LR	10 47 28.1	
	comp=Z,3μm,19.8s,baz=7.6,slow=32							
AFI	Afiamalu	17.58	62	LR		LR	10 47 32.8	
	comp=Z,830nm,18.5s,baz=190,slow=29							
AFI	Afiamalu	17.58	62	*e*Pn		Pn	10 43 14.3	+2.2
	96nm,1.3s							
AFI	Afiamalu	17.58	62	*e*P		Pn	10 43 14.3	+2.3
AFI				pmax		pmax		
	comp=Z,96nm,1.3s							
SNZO	South Karori	18.45	174	*e*P		Pn	10 43 22.2	-0.3
	comp=Z,199nm,1.4s							
EIDS	Eidsvold	19.48	259	*e*P		Pn	10 43 35.6	+0.5
	comp=Z,619nm,1.5s							
ARMA	Armidale	19.88	244	*e*P		Pn	10 43 40.6	+0.8
RPZ	Rata Peaks	20.77	182	P		P	10 43 48.2	+0.4
	comp=Z,36nm,0.8s,baz=352,slow=4.0,SNR=15							
RPZ				LR		LR	10 50 55.0	
	comp=Z,3μm,19.5s,MS4.6,baz=316,slow=34							
CNB	Canberra Magne	23.45	233	*e*P		P	10 44 17.2	+0.7
CNB				*e*S		S	10 48 32.2	+2.4
CAN	Canberra	23.72	233	*e*P		P	10 44 19.5	+0.4
CAN				*e*pP			10 44 29.8	
CTA	Charters Tower	24.35	272	*e*P		P	10 44 25.9	+0.9
	comp=Z,27nm,1.4s,mb4.5							
CTA				*e*S		S	10 48 45.8	+1.1
CTA	Charters Tower	24.35	272	P		P	10 44 26.2	+1.2
	comp=Z,9.1nm,0.8s,mb4.2,baz=88,slow=11,SNR=13							
CTA				LR		LR	10 52 12.8	
	comp=Z,478nm,19.9s,MS4.0,baz=283,slow=32							
CTA	Charters Tower	24.35	272	*e*P		P	10 44 25.9	+0.9
CTA				*e*S		S	10 48 45.8	+1.1
CTA				pmax		pmax		
	comp=Z,27nm,1.4s							
CTAO	Charters Tower	24.35	272	*e*P		P	10 44 24.3	-0.7
	comp=Z,367nm,2.2s,mb5.4							
CTAO	Charters Tower	24.35	272	*e*P		P	10 44 24.3	-0.7
CTAO				pmax		pmax		
	comp=Z,367nm,2.2s,mb5.4							
CTAO	Charters Tower	24.35	272	P		P	10 44 26.4	+1.4
	comp=Z,56nm,1.7s,comp=Z,1μm,mb4.7							
RAR	Rarotonga	25.96	92	LR		LR	10 52 46.3	
	comp=Z,357nm,18.7s,MS3.9,baz=262,slow=32							
TOO	Toolangi	27.23	231	*e*P		P	10 44 51.6	+0.6
PMG	Port Moresby	27.54	295	*e*P		P	10 44 52.8	-1.1
MOO	Moorlands	28.54	221	*e*P		P	10 45 03.7	+1.1
STKA	Stephens Creek	28.57	245	*e*P		P	10 45 03.7	+0.7
	comp=Z,11nm,1.6s,mb4.3							
STKA	Stephens Creek	28.57	245	P		P	10 45 03.3	+0.2
	comp=Z,8.2nm,1.1s,mb4.4,baz=71,slow=7.1,SNR=9.9							
STKA				LR		LR	10 56 37.1	
	comp=Z,898nm,18.3s,MS4.4,baz=73,slow=37							
STKA	Stephens Creek	28.57	245	*e*P		P	10 45 03.2	+0.1
	comp=Z,9.0nm,0.7s,mb4.6							
TAU	Tasmania Unive	28.73	220	*e*P		P	10 45 03.2	-1.1
	comp=Z,47nm,1.2s,mb5.1							
TAU	Tasmania Unive	28.73	220	*e*P		P	10 45 03.2	-1.1
TAU				pmax		pmax		
	comp=Z,47nm,1.2s,mb5.1							
COEN	Coen	28.95	283	*e*P		P	10 45 07.1	+0.6
	comp=Z,19nm,1.4s,mb4.6							
COEN	Coen	28.95	283	P		P	10 45 09.9	+3.4
	comp=Z,12nm,2.0s,mb4.3							
TBI	Tubuai	35.14	98	*e*LQ			10 53 37.9	
	comp=Z,679nm,27.5s							
TBI				*e*LR		LR	10 55 21.0	
	comp=Z,468nm,30.2s,baz=262							
ASAR	Alice Springs	35.17	261	P		P	10 46 00.8	-0.3
	comp=Z,24nm,0.9s,mb5.1,baz=84,slow=8.2,SNR=126							
ASAR				PcP		PcP	10 48 34.5	+2.1
	comp=Z,2.8nm,0.9s,baz=119,slow=2.6,SNR=4.4							
WB2	Warramunga Arr	35.35	268	*e*P		P	10 46 01.1	-1.5
WB2				*e*S		S	10 51 31.4	-6.0
WRAB	Tennant Creek	35.35	268	P		P	10 46 01.0	-1.7
	comp=Z,114nm,1.2s,mb5.7,SNR=6.2							
WRAB	Tennant Creek	35.35	268	*e*P		P	10 46 00.8	-1.9
	comp=Z,36nm,1.3s,mb5.2							
WRAB	Tennant Creek	35.35	268	⇑*e*P		P	10 46 01.0	-1.7
WRAB	Tennant Creek	35.35	268	P		P	10 46 00.7	-2.0
	comp=Z,27nm,1.6s,comp=Z,718nm,mb4.9							
WRA	Warramunga Arr	35.36	267	P		P	10 46 01.3	-1.5
	comp=Z,7.5nm,0.7s,mb4.7,baz=96,slow=8.2,SNR=46							
WRA				PcP		PcP	10 48 33.2	+0.2
	comp=Z,4.8nm,1.2s,baz=95,slow=2.9,SNR=4.5							
WRA				S		S	10 51 39.1	+1.5
	comp=Z,1.6nm,1.3s,baz=97,slow=16,SNR=4.9							
WRA				LR		LR	11 00 09.8	
	comp=Z,362nm,18.7s,MS4.2,baz=110,slow=36							
WRA	Warramunga Arr	35.36	267	P		P	10 46 01.3	-1.4
WRA							10 48 33.2	
WRA				S		S	10 51 39.1	+1.6
PPT	Papeete	36.13	89	*e*S		S	10 51 51.1	+1.7
	comp=Z,89nm,23.8s							
PPT				*e*LQ			10 53 58.5	
	comp=Z,828nm,26.5s							
PPT				*e*LR		LR	10 55 48.9	
	comp=Z,546nm,24.5s,baz=249							
PPT	Papeete	36.13	89	LR		LR	10 56 54.3	
	comp=Z,342nm,19.0s,MS4.1,baz=255,slow=30							
JAY	Jayapura	36.70	299	P		P	10 46 14.4	+0.2
KAKA	Kakadu	39.13	278	*e*P		Px	10 46 22.9	
	comp=Z,10nm,0.6s							
KAKA	Kakadu	39.13	278	P		Px	10 46 24.0	
FORT	Forrest	40.00	249	*e*P		P	10 46 39.4	-2.5
	comp=Z,19nm,0.7s,mb4.9							
GUMO	Guam	45.12	321	*e*P		P	10 47 21.6	-2.0
	comp=Z,22nm,0.7s,mb5.1							
GUMO	Guam	45.12	321	*e*P		P	10 47 21.6	-2.0
GUMO				pmax		pmax		
	comp=Z,22nm,0.7s,mb5.1							
SWI	Sorong	45.45	293	P		P	10 47 24.1	-2.2
	comp=Z,42nm,1.2s,comp=Z,745nm,mb5.1							
DRV	Dumont d'Urvil	48.26	197	P		P	10 47 52.0	+4.4
DRV				S		S	10 54 48.0	+0.9
DRV				R			11 01 00.0	
RKT	Rikitea	48.34	101	*e*LQ			10 59 40.0	
	comp=Z,1μm,39.8s							
RKT				*e*LR		LR	11 01 26.4	
	comp=Z,332nm,29.0s							
MBWA	Marble Bar	48.51	261	*e*P		P	10 47 48.9	-1.3
	comp=Z,106nm,1.4s,mb5.7							
MBWA	Marble Bar	48.51	261	P		P	10 47 49.1	-1.1
	comp=Z,65nm,1.5s,mb5.5							
LBMI	Labuha	48.78	291	P		P	10 47 52.9	+0.5
	comp=Z,44nm,1.3s,comp=Z,790nm,mb5.3							
KLBR	Kellerberrin	48.80	247	*e*P		P	10 47 51.5	-0.8
	comp=Z,61nm,1.1s,mb5.5							
NWAO	Narrogin (SRO)	49.16	246	LR		LR	11 07 32.0	
	comp=Z,879nm,18.9s,MS4.8,baz=96,slow=35							
NWAO	Narrogin (SRO)	49.16	246	*e*P		P	10 47 54.8	-0.3
	comp=Z,42nm,1.3s,mb5.3							
NWAO	Narrogin (SRO)	49.16	246	*e*P		P	10 47 54.8	-0.3
NWAO				pmax		pmax		
	comp=Z,42nm,1.3s							
TNTI	Ternate	49.62	292	P		P	10 47 57.2	-1.5
	comp=Z,46nm,2.2s,comp=Z,1μm,mb5.1							
MUN	Mundaring	50.09	247	*e*P		P	10 48 02.1	0.0
KDI	Kendari	51.52	284	P		P	10 48 15.0	+1.8
	comp=Z,22nm,1.5s,mb4.9							
KAPI	Kappang	53.65	281	*e*P		P	10 48 28.2	-0.7
KAPI	Kappang	53.65	281	P		P	10 48 29.5	+0.5
	comp=Z,30nm,1.7s,comp=Z,589nm,mb4.9							
SBA	Scott Base	55.05	181	*e*P		P	10 48 40.1	+1.9
	comp=Z,34nm,0.9s,mb5.4							
SBA	Scott Base	55.05	181	*e*P		P	10 48 40.2	+2.0
SBA				pmax		pmax		
	comp=Z,34nm,0.9s,mb5.4							
PCI	Palu	55.37	286	P		P	10 48 40.5	-1.0
	comp=Z,92nm,1.2s,comp=Z,1μm,mb5.7							
SJI	Sawahan	59.88	274	P		P	10 49 13.2	-0.1
STKI	Sintang	63.28	282	P		P	10 49 35.3	-0.9
	comp=Z,35nm,1.6s,mb5.2							
LEM	Lembang	64.04	274	P		P	10 49 42.0	+0.8
	comp=Z,76nm,1.6s,comp=Z,2μm,mb5.5							
DBJI	Dramaga	64.94	273	P		P	10 49 47.3	+0.2
	comp=Z,118nm,1.4s,mb5.7							
TPI	Tanjungpandan	65.58	278	P		P	10 49 52.1	+0.8
QSPA	South Pole Qui	67.16	180	P		P	10 49 59.2	-1.1
	comp=Z,6.6nm,0.8s,mb4.7,baz=22,slow=3.3,SNR=10							
QSPA				LR		LR	11 14 39.9	
	comp=Z,556nm,21.8s,MS4.7,baz=219,slow=32							
PPBI	Pangkal Pinang	67.20	278	P		P	10 50 00.8	-0.9
	comp=Z,25nm,1.6s,mb5.0							
MJAR	Matsushiro Arr	67.31	331	LR		LR	11 14 31.1	
	comp=Z,145nm,19.2s,MS4.2,baz=170,slow=32							
MAT	Matsushiro	67.31	331	P		P	10 50 00.0	-1.8
MAT				S		S	10 58 50.0	-7.4
SSE	Sheshan	72.66	316	P		P	10 50 36.1	+1.2
SSE				S	

GYA AP pP 10 51 30.6 +10
GYA XP sP 10 51 34.8 +13
GYA PP PP 10 54 23.9 +3.3
GYA S S 11 01 24.9 +1.4
GYA SKS 11 01 30.9
GYA XS sS 11 01 37.8 +10
GYA AMB AMB
comp=Z,30nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,340nm,6.4s
GYA LR LR
comp=N,710nm,20.0s,MS5.1
GYA LR LR
comp=E,600nm,21.7s,MS5.1
GYA LR LR
comp=Z,570nm,20.8s,MS4.9
KLR Kul'dur 80.38 334 *e*P **P 10 51 22.0 +3.9**
BJI Beijing 81.56 320 P **P 10 51 27.5 +2.8**
BJI PP PP 10 54 32.9 +1.5
BJI S S 11 01 36.0 -0.8
BJI SS SS 11 06 51.9 -2.5
BJI AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
BJI AMB AMB
comp=Z,149nm,3.7s
BJI LR LR
comp=N,278nm,27.9s,MS4.5
BJI LR LR
comp=E,185nm,30.9s,MS4.5
BJI LR LR
comp=Z,283nm,26.6s,MS4.5
SYO Syowa Base 82.18 196⇑ *e*P **P 10 51 25.0 -2.6**
SYO Syowa Base 82.18 196⇑ *e*PcP PcP 10 51 31.0 -2.0
PMSA Palmer Station 82.49 159 P **P 10 51 29.5 +0.2**
comp=Z,117nm,1.7s,mb5.5
CMAR Chiang Mai Arr 82.56 294 P **P 10 51 30.9 +0.4**
comp=Z,4.4nm,0.8s,mb4.5,baz=129,slow=3.9,SNR=17
KMI Kunming 82.59 301 P **P 10 51 32.2 +1.7**
KMI AP pP 10 51 43.0 +10
KMI XP sP 10 51 47.0 +13
KMI PP PP 10 54 44.3 +4.0
KMI S S 11 01 45.7 -2.4
KMI XS sS 11 02 02.9 +10
KMI SS SS 11 07 09.9 -0.4
KMI AMB AMB
comp=Z,14nm,1.2s,mb4.9
KMI AMB AMB
comp=Z,102nm,4.1s
KMI LR LR
comp=N,170nm,15.5s
KMI LR LR
comp=E,200nm,9.6s
KMI LR LR
comp=Z,175nm,15.8s,MS4.5
XAN Xi'an 82.66 312 P **P 10 51 30.1 -0.5**
XAN AP pP 10 51 38.4 +5.1
XAN AMB AMB
comp=Z,12nm,1.5s,mb4.7
XAN AMB AMB
comp=Z,156nm,8.5s
XAN LR LR
comp=E,140nm,14.7s
XAN LR LR
comp=Z,318nm,17.9s,MS4.7
CHTO Chiang Mai 82.73 294 *e*P **P 10 51 32.5 +1.3**
CHTO Chiang Mai 82.73 294 P **P 10 51 31.7 +0.4**
comp=Z,20nm,1.5s,comp=Z,477nm,mb4.9
CD2 Chengdu 84.69 307 *e*P **P 10 51 41.5 +0.4**
CD2 AP pP 10 51 52.0 +8.2
CD2 XP sP 10 51 56.2 +11
CD2 PP PP 10 54 59.8 +2.4
CD2 SKS 11 01 59.7
CD2 S S 11 02 05.7 -3.4
CD2 XS sS 11 02 23.2 +10
CD2 SS SS 11 07 41.2 -0.1
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,240nm,14.4s
CD2 LR LR
comp=E,140nm,9.6s
CD2 LR LR
comp=Z,230nm,13.2s,MS4.7
HHC Hu-ho-hao-te 84.83 318 *e*P **P 10 51 44.3 +2.7**
HHC AP pP 10 51 55.3 +11
HHC XP sP 10 51 58.9 +14
HHC PP PP 10 55 00.9 +2.6
HHC S S 11 02 05.5 -4.6
HHC XS sS 11 02 24.5 +10
HHC SS SS 11 07 43.5 +0.6
HHC AMB AMB
comp=Z,21nm,0.7s,mb5.4
HHC AMB AMB
comp=Z,153nm,6.3s
HHC LR LR
comp=N,203nm,16.6s,MS4.7
HHC LR LR
comp=E,219nm,19.0s,MS4.7
HHC LR LR
comp=Z,287nm,20.2s,MS4.7
SNAA Sanae 85.61 182 *e*P **P 10 51 43.8 -1.3**
SNAA *e* 10 51 51.4
SNAA Sanae 85.61 182 *e*P **P 10 51 42.4 -2.7**
BSC Santa Cruz Isl 85.98 51⇑P **P 10 51 49.6 +2.2**
baz=86
VNA3 Neumayer Olymp 86.09 179 *e*P **P 10 51 46.8 -0.7**
VNA3 *e* 10 51 56.8
VNA3 *e* 10 52 01.0
HOPS Hopland 86.28 45⇑P **P 10 51 50.4 +1.6**
baz=86
PKM Peak Mountain 86.31 50⇑P **P 10 51 50.2 +1.2**
baz=86
CVS Carmenet Viney 86.33 46⇓P **P 10 51 50.7 +1.6**
baz=87
PKD Parkfield 86.35 49⇓P **P 10 51 50.0 +0.8**
baz=87
SMMC Simmler 86.39 49⇑P **P 10 51 50.5 +1.1**
baz=87
PACP Pacheco Peak 86.40 47⇓P **P 10 51 50.4 +0.9**
baz=87
VNA2 Neumayer--Watz 86.42 180 *e*P **P 10 51 49.0 -0.1**
baz=179,slow=4.9
VNA2 *e* 10 51 59.0
VNA2 *e* 10 52 03.1
GASB Alder Springs 86.88 44⇓P **P 10 51 52.0 +0.3**
baz=87
MWC Mount Wilson 87.22 51 *e*P **P 10 51 53.4 -0.1**
LZH Lanzhou 87.27 311 *e*P **P 10 51 54.0 +0.3**
LZH AP pP 10 52 07.2 +11
LZH XP sP 10 52 10.0 +13
LZH PP PP 10 55 24.0 +5.9
LZH SKS 11 02 19.0
LZH S S 11 02 35.0 +0.9
LZH XS sS 11 02 51.0 +12
LZH SS SS 11 08 17.1 -1.8
LZH AMB AMB
comp=Z,32nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,120nm,4.0s
LZH LR LR
comp=E,398nm,17.3s
LZH LR LR
comp=Z,472nm,18.2s,MS4.9
LZH Lanzhou 87.27 311 *e*P **P 10 51 54.0 +0.3**
LZH pP pP 10 52 07.2 +11
LZH sP sP 10 52 10.0 +13
LZH PP PP 10 55 24.0 +5.9
LZH SKS 11 02 19.0
LZH S S 11 02 35.0 +0.9
LZH sS sS 11 02 51.0 +12
LZH SS SS 11 08 17.1 -1.8
LZH Lanzhou 87.27 311 *e*P **P 10 51 54.0 +0.3**
LZH *PP pP 10 52 07.2 +11
LZH 10 55 24.0
LZH 11 02 19.0
LZH S S 11 02 35.0 +0.9
LZH SS SS 11 08 17.1 -1.8
VES Vestal, Richgr 87.31 49⇓P **P 10 51 53.6 -0.3**
baz=88
T06C Millerton Lake 87.47 48⇑P **P 10 51 54.4 -0.3**
baz=88
WDC Whiskeytown Da 87.50 44 *e*P **P 10 51 55.7 +1.0**
WDC Whiskeytown Da 87.50 44⇑P **P 10 51 54.8 +0.1**
baz=88
OHCM Honcut 87.51 45 *e*P **P 10 51 55.7 +0.9**
BFSC Mount Baldy St 87.51 51⇓P **P 10 51 54.9 -0.1**
baz=88
CMB Columbia Colle 87.55 47 *e*P **P 10 51 55.6 +0.6**
CMB Columbia Colle 87.55 47⇑P **P 10 51 54.6 -0.4**
baz=88
EDW2 Edwards Air Fo 87.59 51⇑P **P 10 51 55.1 -0.3**
baz=88
ORV Oroville 87.61 45⇑P **P 10 51 55.4 +0.1**
baz=88
ISA Isabella 87.64 50 *e*P **P 10 51 55.8 +0.2**
ISA Isabella 87.64 50⇓P **P 10 51 55.1 -0.5**
baz=88
MONP Monument Peak 87.75 53⇓P **P 10 51 55.8 -0.3**
baz=88
KCC Kaiser Creek 87.90 48⇓P **P 10 51 56.9 +0.1**
baz=88
YBH Yreka Blue Hor 88.02 43 *e*P **P 10 51 58.5 +1.3**
YBH Yreka Blue Hor 88.02 43⇓P **P 10 51 56.6 -0.6**
baz=88
PFO Pinyon Flat Ob 88.08 52 *e*P **P 10 51 57.7 0.0**
LRMC Laurel Mountai 88.11 50⇓P **P 10 51 57.0 -0.8**
baz=88
M03C McCloud 88.14 43⇑P **P 10 51 58.0 +0.2**
baz=88
O04C Chester 88.29 45⇑P **P 10 51 58.7 +0.2**
baz=88
CWC Cottonwood Cre 88.31 49⇓P **P 10 51 58.4 -0.4**
baz=88
WAKR Walker 88.43 47 *e*P **P 10 51 59.9 +0.6**
MTUM Tungsten Hills 88.44 48 *e*P **P 10 52 00.0 +0.7**
BEKR Beckwourth 88.53 45⇓P **P 10 51 59.3 -0.4**
baz=89,SNR=13
MPMC Manual Prospec 88.53 50⇓P **P 10 51 59.5 -0.3**
baz=89
BELC Belle Mtn. 88.60 52⇑P **P 10 51 59.7 -0.5**
baz=89
WCN Washoe City 88.63 46⇑P **P 10 52 00.0 -0.1**
baz=89
GSC Goldstone 88.65 51 *e*P **P 10 52 00.3 0.0**
GSC Goldstone 88.65 51⇑P **P 10 52 00.1 -0.3**
baz=89
HEC Hector,Ludlow 88.76 51⇑P **P 10 52 00.6 -0.3**
baz=89
BC3 Big Chuckw Mtn 88.83 53⇑P **P 10 52 01.2 0.0**
baz=89
GLA Glamis 89.00 53 *e*P **P 10 52 02.3 +0.2**
comp=Z,45nm,1.4s,mb5.6
GLA Glamis 89.00 53 *e*P **P 10 52 02.3 +0.2**
GLA pmax pmax
comp=Z,45nm,1.4s,mb5.6
O06A Flanigan 89.03 45⇑P **P 10 52 01.8 -0.2**
baz=89,SNR=12
PAHR Pah Rah Range 89.08 46 *e*P **P 10 52 03.3 +1.0**
GRAC Grapevine Rang 89.08 49⇓P **P 10 52 02.3 -0.1**
baz=89,SNR=11
NVAR Mina Array Bea 89.16 47 P **P 10 52 03.0 +0.3**
comp=Z,8.5nm,1.2s,mb5.0,baz=218,slow=6.0,SNR=20
FURC Furnace Creek, 89.18 50⇑P **P 10 52 02.3 -0.6**
baz=89
IRM Iron Mountain 89.29 52⇓P **P 10 52 03.1 -0.3**
baz=90
SHOC Shoshone 89.31 50⇑P **P 10 52 03.3 -0.1**
baz=90
N06A Buffalo Meadow 89.33 45⇓P **P 10 52 03.3 -0.1**
baz=90,SNR=14
TUQ Turquoise Moun 89.34 51⇓P **P 10 52 03.3 -0.3**
baz=90
U10A Ash Meadows, A 89.53 50⇑P **P 10 52 04.0 -0.4**
baz=90
S09A Goldfield 89.54 48⇑P **P 10 52 04.1 -0.4**
baz=90
Y12C Blythe 89.56 53⇑P **P 10 52 04.2 -0.5**
baz=90
Q08A Gabbs 89.62 47⇑P **P 10 52 04.5 -0.3**
baz=90,SNR=9.6
MOD Modoc 89.63 44 *e*P **P 10 52 05.6 +0.8**
MOD Modoc 89.63 44⇓P **P 10 52 04.7 -0.1**
baz=90
O07A Toulon 89.65 46⇑P **P 10 52 04.6 -0.3**
baz=90,SNR=11
113A Mohawk Valley, 89.66 54⇑P **P 10 52 04.9 -0.2**
baz=90
K05A Summer Lake 89.69 43⇑P **P 10 52 05.4 +0.4**
baz=90
TPH Tonopah 89.72 48 *e*P **P 10 52 07.8 +2.5**
LDFC Landfair 89.76 52 *e*P **P 10 52 06.2 +0.7**
TPNV Topopah Spring 89.84 49 *e*P **P 10 52 06.0 0.0**
comp=Z,36nm,1.6s,mb5.5
TPNV Topopah Spring 89.84 49 *e*P **P 10 52 06.0 +0.1**
TPNV pmax pmax
comp=Z,36nm,1.6s,mb5.5
TPNV Topopah Spring 89.84 49⇑P **P 10 52 05.7 -0.2**
baz=90,SNR=13
V11A Goodsprings 89.89 51⇑P **P 10 52 05.7 -0.4**
baz=90
R09A Tonopah 89.90 48⇓P **P 10 52 05.8 -0.4**
baz=90,SNR=15
N07B Gerlach 89.91 45⇓P **P 10 52 05.7 -0.4**
baz=90
P08A Dixie Valley 89.94 46⇑P **P 10 52 06.0 -0.3**
baz=90
214A Organ Pipe Nat 90.01 55⇓P **P 10 52 06.3 -0.6**
baz=90
S10A Tonopah Range, 90.08 48⇑P **P 10 52 06.6 -0.4**
baz=90,SNR=16
PDMCI Parker Dam,Lak 90.09 53⇓P **P 10 52 06.7 -0.5**
baz=90
Y13A Salome 90.10 53⇓P **P 10 52 06.8 -0.4**
baz=90
O08A Rochester Mine 90.19 46⇑P **P 10 52 07.3 -0.2**
baz=90,SNR=13
L07A Adell 90.30 44⇑P **P 10 52 08.2 +0.3**
baz=90,SNR=5.0
SHPR Sheep Range 90.40 50 *e*P **P 10 52 09.1 +0.5**
J06A Christmas Vall 90.43 42⇑P **P 10 52 08.3 -0.2**
baz=91
N08A GE Springer Mi 90.45 45⇓P **P 10 52 08.5 -0.2**
baz=91,SNR=12
R10A Warm Springs 90.45 48⇑P **P 10 52 08.6 -0.2**
baz=91,SNR=16
X13A Yucca 90.46 52⇑P **P 10 52 08.7 -0.2**
baz=91,SNR=9.7
F04A Amboy 90.49 39⇓P **P 10 52 08.6 -0.2**
baz=91
H05A Madras 90.51 41⇑P **P 10 52 08.8 0.0**
baz=91
S11A Rachel 90.53 49⇓P **P 10 52 08.8 -0.2**
baz=91
Z14A Wintersburg 90.55 54⇓P **P 10 52 08.9 -0.4**
baz=91
M08A Happy Creek Ra 90.63 45⇓P **P 10 52 09.4 -0.1**
baz=91,SNR=6.8
Q10A Clear Creek Ra 90.65 48⇑P **P 10 52 09.4 -0.3**
baz=91,SNR=5.8
W13A Hualapai Mount 90.65 52⇑P **P 10 52 09.4 -0.3**
baz=91
T11A Corn Creek, Al 90.70 50⇑P **P 10 52 09.8 -0.1**
baz=91,SNR=13
K07A Rock Creek Ran 90.71 43⇑P **P 10 52 09.9 +0.1**
baz=91,SNR=11
I06A Prineville 90.75 42⇑P **P 10 52 09.8 -0.2**
baz=91
Y14A Wickenburg 90.76 53⇑P **P 10 52 09.9 -0.4**
baz=91
115A Sonoran Desert 90.78 55⇑P **P 10 52 10.5 0.0**
baz=91
BILL Bilibino 90.79 358 *e*P **P 10 52 08.9 -0.7**
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.8
U12A Valley of Fire 90.80 51⇓P **P 10 52 10.6 +0.2**
baz=91
BMN Battle Mountai 90.88 46 *e*P **P 10 52 10.9 +0.3**
comp=Z,31nm,1.4s,mb5.4
BMN Battle Mountai 90.88 46 *e*P **P 10 52 10.9 +0.2**
BMN pmax pmax
comp=Z,31nm,1.4s,mb5.5
N09A Rock Creek Ran 90.89 46⇓P **P 10 52 10.5 -0.2**
baz=91
V13A Grand Canyon W 90.93 51⇑P **P 10 52 10.8 -0.2**
baz=91,SNR=8.3
WVOR Wild Horse Val 90.96 44 *e*P **P 10 52 10.6 -0.4**
comp=Z,39nm,1.8s,mb5.4
WVOR Wild Horse Val 90.96 44 *e*P **P 10 52 10.6 -0.4**
WVOR pmax pmax
comp=Z,39nm,1.8s,mb5.4
R11A Troy Canyon, C 90.98 48⇓P **P 10 52 10.6 -0.6**
baz=91,SNR=9.2
J07A Hines 91.02 43⇓P **P 10 52 11.4 +0.2**
baz=91
L08A Fields 91.03 44⇑P **P 10 52 11.2 -0.1**
baz=91,SNR=12
216A Three Points, 91.06 56⇑P **P 10 52 11.5 -0.2**
baz=91
X14A Yava 91.09 53⇓P **P 10 52 11.6 -0.2**
baz=91
H06A Lindquist Farm 91.09 41⇑P **P 10 52 11.5 -0.1**
baz=91
116A Eloy 91.12 55⇑P **P 10 52 11.8 -0.1**
baz=91
S12A Delamar Landin 91.14 49⇑P **P 10 52 11.9 0.0**
baz=91,SNR=9.5
Q11A Duckwater 91.17 48⇓P **P 10 52 11.5 -0.6**
baz=91,SNR=16
K08A Mann Creek Ran 91.21 44⇓P **P 10 52 12.3 +0.2**
baz=91
M09A Marrel Ranch, 91.22 45⇓P **P 10 52 12.4 +0.1**
baz=92
I07A Izee 91.26 42⇓P **P 10 52 12.4 +0.1**
baz=92
Y15A Casa Rosa Ranc 91.27 54⇑P **P 10 52 12.2 -0.4**
baz=92,SNR=9.8
W14A Seligman 91.29 52⇑P **P 10 52 12.5 -0.2**
baz=92,SNR=12
O10A Cortez Mining, 91.29 46⇑P **P 10 52 12.1 -0.5**
baz=92
F06A Goldendale 91.37 40⇑P **P 10 52 12.6 -0.2**
baz=92
L09A Wilkinson Ranc 91.38 44⇑P **P 10 52 12.3 -0.6**
baz=92
P11A Circle Ranch, 91.44 47⇑P **P 10 52 12.6 -0.7**
baz=92
217A Green Valley 91.44 56⇑P **P 10 52 12.8 -0.7**
baz=92
V14A Boquillas Ranc 91.46 52⇑P **P 10 52 13.4 -0.1**
baz=92,SNR=9.1
ULN Ulaanbaatar 91.48 322 *i* P **P 10 52 13.8 +0.5**
H07A Lands Inn, Kim 91.49 42⇑P **P 10 52 13.3 -0.1**
baz=92
T13A Saint George 91.53 50⇑P **P 10 52 13.6 -0.1**
baz=92
J08A Circle Bar Ran 91.53 43⇓P **P 10 52 13.5 -0.2**
baz=92
SHL Shillong 91.55 297 *e*P **P 10 52 15.0 +0.9**
X15A Humboldt 91.58 53⇓P **P 10 52 14.2 +0.1**
baz=92,SNR=12
R12A Pony Springs, 91.64 49⇑P **P 10 52 14.2 -0.1**
baz=92,SNR=12
Z16A Peralta Trail, 91.67 54⇑P **P 10 52 14.3 -0.3**
baz=92
K09A Rome 91.68 44⇑P **P 10 52 14.0 -0.3**
baz=92
GTA Gaotai 91.68 312 *e*P **P 10 52 16.7 +2.3**
GTA AP pP 10 52 21.0 +3.9
GTA XP sP 10 52 24.2 +6.1
GTA AMB AMB
comp=Z,6.0nm,1.4s,mb4.7
TUC Tucson 91.70 56 *e*P **P 10 52 14.3 -0.4**
comp=Z,25nm,1.6s,mb5.3
TUC Tucson 91.70 56 *e*P **P 10 52 14.3 -0.4**
TUC pmax pmax
comp=Z,25nm,1.6s,mb5.3
I08A Drewsey 91.75 43⇑P **P 10 52 14.4 -0.3**
baz=92
G07A Ruggs Ranch, H 91.77 41⇓P **P 10 52 14.3 -0.4**
baz=92
O11A Cowboy Ranch, 91.78 47⇓P **P 10 52 14.9 +0.1**
baz=92,SNR=8.8
S13A Holt Ranch, En 91.82 50⇓P **P 10 52 15.3 +0.2**
baz=92,SNR=14
Q12A Willow Creek R 91.83 48⇓P **P 10 52 14.7 -0.4**
baz=92
SONM Songino Array 91.84 322 P **P 10 52 13.8 -1.1**
comp=Z,0.5nm,0.8s,mb3.9,baz=116,slow=3.4,SNR=3.8
SONM LR LR 11 33 36.5
comp=Z,162nm,18.9s,MS4.5,baz=136,slow=36
117A Oracle 91.85 55⇑P **P 10 52 15.2 -0.2**
baz=92,SNR=8.3
M10A I.L. Ranch, Tu 91.87 45⇑P **P 10 52 15.3 +0.1**
baz=92,SNR=7.1
Y16A Circle Bar Ran 91.87 54⇓P **P 10 52 15.1 -0.3**
baz=92,SNR=14
318A Bisbee 91.93 57⇑P **P 10 52 15.7 -0.1**
baz=92,SNR=5.9
B05A Bryant 91.95 38⇓P **P 10 52 15.3 -0.1**
baz=92
J09A Fry Pan Ranch, 91.98 43⇑P **P 10 52 15.7 0.0**
baz=92
H08A Prairie City 92.00 42⇓P **P 10 52 15.7 -0.1**
baz=92
R13A O'Grain Ranch, 92.02 49⇓P **P 10 52 15.7 -0.3**
baz=92
218A Dragoon 92.12 56⇑P **P 10 52 16.0 -0.6**
baz=92
T14A Hurricane 92.13 51⇑P **P 10 52 16.2 -0.3**
baz=92,SNR=9.7
X16A Lo Mia Camp, P 92.14 53⇓P **P 10 52 16.5 -0.1**
baz=92,SNR=13
CCUT Cedar City 92.16 50 *e*P **P 10 52 16.5 -0.1**
L10A Juniper Basin 92.18 45⇓P **P 10 52 16.3 -0.3**
baz=92
ARUT Antelope Range 92.21 50 *e*P **P 10 52 16.9 +0.1**
G08A Pilot Rock 92.22 41⇓P **P 10 52 16.4 -0.4**
baz=92
V15A Kaibab Nationa 92.22 52⇑P **P 10 52 17.1 +0.1**
baz=92,SNR=12
Y17A Roosevelt 92.26 54⇑P **P 10 52 17.0 -0.3**
baz=92
K10A MacKenzie Ranc 92.27 44⇑P **P 10 52 16.9 -0.1**
baz=92
M11A Holland Ranch, 92.31 46⇑P **P 10 52 17.4 +0.1**
baz=92
Q13A Wheeler Ranch, 92.34 49⇑P **P 10 52 17.2 -0.3**
baz=93
W16A Flagstaff 92.37 53⇑P **P 10 52 18.1 +0.4**
baz=93
Z17A San Carlos Hig 92.37 55⇓P **P 10 52 17.9 +0.2**
baz=93
S14A Cedar City 92.39 50⇓P **P 10 52 18.0 +0.3**
baz=93
U15A North Rim 92.41 51⇑P **P 10 52 18.0 +0.1**
baz=93,SNR=20
319A Douglas 92.45 57⇑P **P 10 52 18.0 -0.2**
baz=93
O12A Currie 92.46 47⇑P **P 10 52 18.2 +0.2**
baz=93
118A Homack Ranch, 92.47 56⇓P **P 10 52 17.8 -0.4**
baz=93
N12A Clover Valley, 92.54 46⇓P **P 10 52 18.4 +0.1**
baz=93
X17A Forest Lakes 92.57 54⇓P **P 10 52 18.6 -0.1**
baz=93
P13A Bates Ranch, G 92.58 48⇓P **P 10 52 18.5 -0.1**
baz=93,SNR=6.4
D07A Quincy 92.59 39⇑P **P 10 52 18.4 0.0**
baz=93
T15A Red Dirt Ranch 92.61 51⇓P **P 10 52 18.8 +0.1**
baz=93,SNR=11
WUAZ Wupatki 92.67 53 *e*P **P 10 52 19.6 +0.5**
WUAZ Wupatki 92.67 53⇓P **P 10 52 19.0 -0.1**
baz=93
L11A Cat Creek Ranc 92.69 45⇓P **P 10 52 18.8 -0.2**
baz=93
219A White Tail Can 92.73 56⇓P **P 10 52 19.4 0.0**
baz=93
COLA College 92.75 16 *e*P **P 10 52 15.5 -3.2**
comp=Z,31nm,1.5s,mb5.5
COLA College 92.75 16⇑ *e*P **P 10 52 17.2 -1.5**
K11A Parker Ranch, 92.80 44⇑P **P 10 52 19.9 +0.4**
baz=93
Y18A Canyon Day Jun 92.91 55⇓P **P 10 52 19.8 -0.5**
baz=93,SNR=14
G09A Cove 92.93 42⇑P **P 10 52 20.1 0.0**
baz=93
BMO Blue Mountains 93.01 42 *e*P **P 10 52 22.8 +2.4**
119A Ashpeak Ranch, 93.03 56⇑P **P 10 52 21.1 +0.3**
baz=93
U16A Tuba City 93.12 52⇑P **P 10 52 20.7 -0.5**
baz=93,SNR=12
D08A Wollman Farm, 93.14 40⇑P **P 10 52 20.7 -0.2**
baz=93
L12A House Creek Ra 93.16 45⇑P **P 10 52 21.4 +0.2**
baz=93

T16A	**Glen Canyon Da**	**93.22**	**51**	⇑P		**P**		**10 52 22.0**	**+0.4**
	baz=93								
H10A	**Noah's Angus R**	**93.23**	**43**	⇑P		**P**		**10 52 21.7**	**+0.3**
	baz=94								
MFID	**Camas Ranch**	**93.24**	**44**	⇑P		**P**		**10 52 21.6**	**+0.1**
	baz=94								
Z19A	**T-Link Ranch,**	**93.28**	**55**	⇓P		**P**		**10 52 21.8**	**-0.2**
	baz=94								
G10A	**Bishop Farm, J**	**93.34**	**42**	⇑P		**P**		**10 52 22.2**	**+0.3**
	baz=94								
M13A	**Montello**	**93.36**	**46**	⇓P		**P**		**10 52 22.2**	**+0.1**
	baz=94								
I11A	**Placerville**	**93.40**	**43**	⇑P		**P**		**10 52 22.1**	**-0.2**
	baz=94								
C08A	**Higginbotham F**	**93.44**	**39**	⇓P		**P**		**10 52 22.2**	**-0.1**
	baz=94								
Y19A	**Nutrioso**	**93.57**	**55**	⇓P		**P**		**10 52 23.3**	**0.0**
	baz=94,SNR=7.5								
F10A	**Beach Ranch, E**	**93.61**	**41**	⇑P		**P**		**10 52 23.2**	**0.0**
	baz=94								
J12A	**Stokes Ranch,**	**93.63**	**44**	⇑P		**P**		**10 52 23.1**	**-0.2**
	baz=94								
U17A	**Shonto**	**93.66**	**52**	⇓P		**P**		**10 52 23.6**	**0.0**
	baz=94								
T17A	**Navajo Res., N**	**93.73**	**51**	⇑P		**P**		**10 52 23.8**	**-0.2**
	baz=94,SNR=18								
DUG	**Dugway**	**93.74**	**48**	*e*P		**P**		**10 52 21.6**	**-2.3**
G11A	**Walters Elk Ra**	**93.92**	**42**	⇓P		**P**		**10 52 24.7**	**+0.2**
	baz=94								
PLCA	**Paso Flores**	**93.93**	**137**	LR		LR		11 24 29.7	
	comp=Z,145nm,18.9s,MS4.5,baz=204,slow=29								
M14A	**Sheep Mountain**	**93.97**	**46**	⇑P		**P**		**10 52 25.3**	**+0.3**
	baz=94								
T18A	**Mexican Hat**	**94.47**	**52**	⇓P		**P**		**10 52 27.1**	**-0.2**
	baz=95								
EGAK	**Eagle**	**94.49**	**18**	*e*P		**P**		**10 52 26.0**	**-0.7**
D11A	**Klaweano Farm,**	**94.67**	**41**	⇓P		**P**		**10 52 28.2**	**+0.2**
	baz=95								
F12A	**Elk City**	**94.71**	**42**	⇑P		**P**		**10 52 28.4**	**+0.1**
	baz=95								
L15A	**Malad City**	**94.84**	**46**	⇓P		**P**		**10 52 29.2**	**+0.3**
	baz=95								
JLU	**Jordanelle**	**94.85**	**48**	*e*P		**P**		**10 52 23.2**	**-5.8**
DAU	**Daniels Canyon**	**94.90**	**48**	*e*P		**P**		**10 52 19.4**	**-10**
ZAK	**Zakamensk**	**94.92**	**323**	*e*P		**P**		**10 52 20.4**	**-8.6**
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.4s,mb4.5								
BNM	**Barren Site**	**95.64**	**55**	*e*P		**P**		**10 52 32.4**	**-0.4**
J16A	**Bone**	**95.91**	**45**	⇑P		**P**		**10 52 34.2**	**+0.4**
	baz=96								
TXAR	**Lajitas Array**	**96.06**	**61**	P		**P**		**10 52 34.6**	**-0.2**
	comp=Z,2.2nm,1.1s,mb4.5,baz=212,slow=4.4,SNR=10								
TXAR				LR		LR		11 32 58.0	
	comp=Z,166nm,18.2s,MS4.5,baz=5.0,slow=34								
ANMO	**Albuquerque**	**96.08**	**55**	*e*P		**P**		**10 52 34.4**	**-0.3**
ANMO	**Albuquerque**	**96.08**	**55**	⇓*e*P		**P**		**10 52 34.5**	**-0.3**
G15A	**Dillon**	**96.18**	**43**	⇓P		**P**		**10 52 35.3**	**+0.3**
	baz=96								
PDAR	**Pinedale Array**	**97.06**	**47**	LR		LR		11 30 47.3	
	comp=Z,204nm,18.6s,MS4.6,baz=252,slow=32								
B14A	**Marquette Ranc**	**97.11**	**40**	⇑P		**P**		**10 52 40.0**	**+0.9**
	baz=97								
E16A	**East Helena**	**97.28**	**42**	⇑P		**P**		**10 52 40.7**	**+0.7**
	baz=98								
WMQ	**Urumqi**	**101.77**	**313**	*e*P		Pdif		10 53 01.0	+1.0
WMQ				PP		PP		10 57 14.0	+2.9
WMQ				SKS				11 03 37.0	
WMQ				SS		SS		11 11 43.0	-2.3
WMQ				PP		PP			
	comp=Z,85nm,8.0s								
WMQ				LR		LR			
	comp=N,98nm,24.0s,MS4.5								
WMQ				LR		LR			
	comp=E,126nm,25.0s,MS4.5								
WMQ				LR		LR			
	comp=Z,128nm,24.0s,MS4.4								
LSZ	**Lusaka**	**128.26**	**226**	PKP		PKPdf		10 58 15.7	+1.3
	comp=Z,2.4nm,0.7s,baz=280,slow=4.1,SNR=5.5								
APA	**Apatity**	**128.61**	**341**	⇑*i*PKIKP		PKPdf		10 58 19.0	+5.6
APA				pmax		pmax			
	comp=Z,18nm,0.8s								
TBG	**Guadaloupe-3**	**128.89**	**88**	*e*P		Pdif		10 55 03.9	+3.2
SOC	**Sochi**	**135.97**	**310**	*i* PKIKP		PKPdf		10 58 23.2	-4.9
ANN	**Anapa**	**137.28**	**312**	*i* PKIKP		PKPdf		10 58 34.8	+4.4
ANN				pmax		pmax			
	comp=Z,66nm,1.2s								
BRG	**Berggiesshubel**	**147.39**	**334**	*e*PKP2		PKPab		10 58 50.2	-2.3
BRG				pmax		pmax			
	comp=Z,14nm,1.7s								
BRG				pmax		pmax			
	comp=Z,18nm,1.8s								
BRG	**Berggiesshubel**	**147.39**	**334**	*e*PKP		PKPbc		10 58 50.2	-0.4
	comp=Z,23nm,1.7s								
BRG				*e*				11 12 47.5	
	comp=Z,30nm,1.8s								
CLL	**Collm**	**147.42**	**336**	*e*PKP		PKPdf		10 58 47.0	-1.2
KHC	**Kasperske Hory**	**148.88**	**332**	*e*PKP		PKPbc		10 58 53.0	-1.6
KHC				*ep*PKP		pPKPdf		10 59 07.5	+14
GERES	**GERESS Array B**	**149.05**	**332**	PKPbc		PKPbc		10 58 55.1	+0.1
	comp=Z,2.2nm,0.9s,baz=74,slow=4.5,SNR=3.4								
CABF	**La Chapelle**	**153.85**	**338**	*e*PKP2		PKPab		10 59 27.9	+8.7
	comp=Z,15nm,0.7s								
LOR	**Lormes**	**153.97**	**342**	*e*PKP2		PKPab		10 59 28.4	+8.7
	comp=Z,27nm,1.1s								
SSF	**Saint Saulge**	**154.26**	**342**	*e*PKP2		PKPab		10 59 29.8	+8.8
	comp=Z,6.0nm,0.4s								
LIC	**Lamto**	**163.20**	**189**	*e*P		PKPdf		10 59 12.2	+1.7
	comp=Z,78nm,2.0s								
KIC	**Kosan Boka**	**163.29**	**190**	*e*P		PKPdf		10 59 09.1	-1.5
	comp=Z,188nm,1.8s								
TIC	**Toumodi**	**163.61**	**190**	*e*P		PKPdf		10 59 09.6	-1.3
	comp=Z,189nm,1.8s								
TOA0	**Torodi Ar. Sit**	**166.78**	**224**	*e*P		PKPdf		10 59 11.3	-2.2
TORD	**Torodi Ar. Bea**	**166.78**	**224**	PKP		PKPdf		10 59 11.7	-1.8
	comp=Z,2.0nm,0.9s,baz=8.0,slow=0.4,SNR=13								
TORD				PKPab		PKPab		11 00 14.9	-1.4
	comp=Z,1.4nm,0.8s,baz=111,slow=3.4,SNR=4.1								

IDC ***09*** *10:49:59.8±44.0, 1524S×6593E, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.7/20, mbtmp4.1/3, MS3.8/4, Ms1 3.9/4, ms1mx3.5/22, Error ellipse: s-maj=1067.0km s-min=51.8km az=85.0*

ISCJB ***09*** *10:50:08.0±1.6, 151S±0.1×674E±0.3, h10km, mb4.2/6, MS3.9/4, Error ellipse: s-maj=46.1km s-min=19.5km az=2.8*

NEIC ***09*** *10:50:10.1±1.2, 1504S×6742E, h10km, mb4.6/3, Error ellipse: s-maj=34.5km s-min=14.7km az=92.0*

ISC 09 10:50:10.3±1.6, 151S±01×674E±03, h10km, n10, σ0s14/7, mb4.2/6, MS3.9/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**25.78**	**32**	P	**P**	**10 55 41.8**	**+0.2**
	2.0nm,0.5s,mb3.9						
PAF	**Port-aux-Franc**	**34.28**	**177**	P	**P**	**10 56 56.6**	**+0.1**
BOSA	**Boshof**	**41.20**	**244**	LR	LR	11 11 25.7	
	comp=Z,163nm,19.6s,MS3.9,baz=45,slow=32						
CMAR	**Chiang Mai Arr**	**45.52**	**44**	P	**P**	**10 58 30.2**	**0.0**
	0.5nm,0.3s,mb3.9,baz=232,slow=7.4,SNR=2.5						
CMAR				LR	LR	11 14 25.0	
	comp=Z,95nm,19.0s,MS3.8,baz=153,slow=31						
TKM2	**Tokmak 2**	**58.16**	**7**	*e*P	**P**	**11 00 04.1**	**-0.2**
	3.7nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**62.83**	**109**	P	**P**	**11 00 36.8**	**+0.1**
	1.6nm,0.9s,mb4.1,baz=258,slow=5.8,SNR=11						
WRA	**Warramunga Arr**	**63.64**	**105**	P	**P**	**11 00 42.0**	**-0.1**
	3.6nm,1.1s,mb4.3,baz=261,slow=6.7,SNR=16						
WRAB	**Tennant Creek**	**63.65**	**105**	*e*P	**P**	**11 00 42.0**	**-0.2**
	7.9nm,1.2s,mb4.6						
CTA	**Charters Tower**	**74.68**	**107**	LR	LR	11 30 17.0	
	comp=Z,79nm,22.0s,MS4.0,baz=232,slow=32						
KSRS	**Korea Array**	**77.14**	**45**	LR	LR	11 33 33.9	
	comp=Z,42nm,18.2s,MS3.8,baz=120,slow=33						

ISCJB ***09*** *11:34:32.7±0.4, 1247N±004×8723W±005, h97km±5km, mb4.6/66, Error ellipse: s-maj=9.1km s-min=5.3km az=142.7*

IDC ***09*** *11:34:32.9±0.7, 1251N×87.16W, h86km±4km, mb4.1/11, mb1 4.4/12, mb1mx4.0/23, mbtmp4.1/12, MS3.4/7, Ms1 3.4/7, ms1mx3.3/31, Error ellipse: s-maj=24.3km s-min=13.1km az=61.0*

BJI ***09*** *11:34:33.5, 1240N×8730W, h91km, mB5.0*

NEIC ***09*** *11:34:33.6±0.4, 1245N×8729W, mb4.6/57, Error ellipse: s-maj=8.8km s-min=6.5km az=206.0*

CASC ***09*** *11:34:33.0±0.1.7, 1238N×8735W, h69km±19km, MD4.2, mb4.6(NEIC)*

ISC 09 11:34:34.0±0.4, 1250N±004×8717W±005, h93km±4km, h96km±2.5km:pP-P, n444, σ0s66/419, mb4.6/66, 156C-146D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.46**	**90**	⇓*e*P	**Pn**	**11 34 47.8**	**-1.0**
COPN	**Copaltepe**	**0.65**	**119**	⇑*i*P	**Pn**	**11 34 48.9**	**-1.5**
HUEN		**0.99**	**99**	⇓*e*P	**Pn**	**11 34 53.5**	**-0.3**
CNCH	**Conchagua**	**1.00**	**320**	⇓*i*P	x	11 34 51.6	
CNCH				*e*S	x	11 35 05.8	
BLLM	**Bellamira**	**1.40**	**312**	⇓*e*P	x	11 34 56.3	
VSM	**San Miguel**	**1.42**	**311**	⇓*e*P	x	11 34 56.9	
VSM				*e*S	x	11 35 15.8	
TGUH	**Tegucigalpa,Un**	**1.55**	**356**	*e*Pn	**Pn**	**11 35 00.7**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.55**	**356**	⇓*i*P	**Pn**	**11 35 00.8**	**+0.2**
TGUH				⇓*i*P		11 35 00.9	
TGUH				*e*S	**Sn**	**11 35 20.6**	**+1.5**
TGUH				*e*S	**Sn**	**11 35 22.3**	**+3.3**
CAHU	**Cacacuatique**	**1.62**	**321**	⇓*e*P	x	11 34 59.8	
SNVI	**San Vicente**	**1.96**	**304**	⇓*e*P	x	11 35 03.7	
LFRS	**El Faro**	**2.15**	**301**	⇑*e*P	x	11 35 06.1	
LBRS	**Las Brisas**	**2.20**	**304**	⇓*e*P	x	11 35 06.9	
SNET	**Serv Nac Est T**	**2.33**	**301**	*e*P	x	11 35 08.2	
BOQS	**Boqueron**	**2.39**	**301**	⇑*e*P	x	11 35 09.8	
LIM1	**Limonal**	**2.59**	**133**	*e*P	**Pn**	**11 35 13.8**	**-0.4**
CUI	**Cuipilapa**	**2.67**	**133**	*e*P	**Pn**	**11 35 15.5**	**+0.2**
2RIO	**Dos Rios de Up**	**2.73**	**136**	⇑*e*P	**Pn**	**11 35 11.7**	**-4.3**
SBLS	**San Blas**	**2.73**	**299**	⇑*e*P	x	11 35 14.1	
RTR	**El Retiro**	**2.78**	**300**	*e*P	x	11 35 15.1	
MTO2	**Montecristo 2**	**2.85**	**312**	*e*P	x	11 35 16.1	
FORC	**Fortuna**	**3.18**	**129**	*e*P	**Pn**	**11 35 21.0**	**-1.0**
JCR	**Jicaral**	**3.32**	**142**	*e*P	**Pn**	**11 35 23.8**	**-0.2**
CGA2	**Cerro Gallo 2**	**3.63**	**133**	*e*P	**Pn**	**11 35 26.4**	**-1.7**
PRS1	**Puriscal**	**3.76**	**131**	*e*P	**Pn**	**11 35 30.9**	**+1.0**
QCR	**Quepos**	**4.25**	**136**	*e*P	**Pn**	**11 35 36.9**	**+0.3**
URSC	**Urasca**	**4.25**	**128**	*e*P	**Pn**	**11 35 37.6**	**+1.0**
BUS	**Buena Vista**	**4.45**	**131**	*e*P	**Pn**	**11 35 39.4**	**+0.2**
BCIP	**Isla Barro Col**	**7.93**	**114**	*e*Pn	**Pn**	**11 36 28.7**	**+2.1**
CMIG	**Matias Romero**	**8.74**	**302**	P	**Pn**	**11 36 36.4**	**-1.2**
	1.3nm,0.3s,baz=132,slow=10.0,SNR=33						
CMIG				S	**Sn**	**11 38 09.5**	**-5.1**
	0.7nm,0.3s,baz=72,slow=20,SNR=3.8						
CMIG	**Matias Romero**	**8.74**	**302**	P	**Pn**	**11 36 36.4**	**-1.3**
CMIG				S	**Sn**	**11 38 09.5**	**-5.1**
ROSC	**El Rosal**	**14.79**	**120**	LR	LR	11 44 00.6	
	comp=Z,86nm,18.1s,baz=28,slow=38						
ROSC	**El Rosal**	**14.79**	**120**	Pn	**Pn**	**11 37 52.1**	**-6.3**
OTAV	**Otavalo**	**14.94**	**144**	*e*Pn	**Pn**	**11 38 07.0**	**+6.5**
LAPE	**La Pedrera**	**16.12**	**106**	*e*P	Px	11 35 10.9	
VBMS	**Vicksburg**	**19.86**	**352**	*e*P	**Pn**	**11 38 55.2**	**-5.0**
NATX	**Nacogdoches**	**20.37**	**341**	*e*Pn	**P**	**11 39 04.4**	**+1.2**
	32nm,0.9s						
LRAL	**Lakeview Retre**	**20.44**	**0**	*e*Pn	**P**	**11 39 06.0**	**+2.1**
GOGA	**Godfrey**	**21.09**	**9**	*e*Pn	**P**	**11 39 13.0**	**+2.1**
	40nm,0.8s,mb4.8						
ATAH	**Atahualpa**	**21.25**	**155**	P	**P**	**11 39 14.1**	**+1.4**
	4.6nm,0.8s,mb3.9,baz=295,slow=11,SNR=4.0						
ATAH				LR	LR	11 45 47.6	
	comp=Z,181nm,19.1s,baz=157,slow=32						
JCT	**Junction City**	**21.37**	**329**	*e*P	**P**	**11 39 14.0**	**+0.1**
	14nm,0.7s,mb4.4						
OXF	**Oxford**	**22.01**	**355**	*e*P	**P**	**11 39 21.0**	**+0.4**
	15nm,0.6s,mb4.5						
PCRV	**Puerto La Cruz**	**22.21**	**94**	P	**P**	**11 39 24.5**	**+1.4**
	12nm,0.8s,mb4.3,baz=192,slow=6.4,SNR=3.6						
PCRV				LR	LR	11 49 22.0	
	comp=Z,66nm,19.7s,baz=276,slow=40						
PCRV	**Puerto La Cruz**	**22.21**	**94**	P	**P**	**11 39 24.5**	**+1.4**
PCRV				LR	LR	11 49 22.0	
JSC	**Jenkinsville**	**22.34**	**13**	*e*P	**P**	**11 39 25.8**	**+1.7**
SWET	**Sewanee**	**22.64**	**3**	*e*P	**P**	**11 39 28.2**	**+0.8**
UALR	**University of**	**22.67**	**349**	*e*P	**P**	**11 39 27.1**	**-0.5**
	12nm,0.7s,mb4.3						
MIAR	**Mount Ida**	**22.70**	**346**	*e*P	**P**	**11 39 27.9**	**-0.1**
	22nm,0.7s,mb4.6						
TXAR	**Lajitas Array**	**22.71**	**320**	P	**P**	**11 39 27.2**	**-0.9**
	18nm,0.6s,mb4.6,baz=138,slow=9.5,SNR=175						
TXAR				pP		11 39 46.8	
	8.7nm,0.8s,baz=141,slow=13,SNR=6.0						
TXAR				PcP	PcP	11 43 17.7	+0.5
	0.3nm,0.5s,baz=145,slow=3.3,SNR=5.4						
TXAR				pPcP		11 43 42.2	
	0.5nm,0.7s,baz=152,slow=4.9,SNR=3.5						
TXAR				ScP	ScP	11 46 46.6	-0.1
	0.4nm,0.7s,baz=141,slow=4.8,SNR=5.4						
TXAR	**Lajitas Array**	**22.71**	**320**	P	**P**	**11 39 27.2**	**-0.9**
TXAR				pP		11 39 46.8	
TXAR				PcP	PcP	11 43 17.7	+0.5
TXAR				pPcP		11 43 42.2	
TXAR				ScP	ScP	11 46 46.6	-0.1
CPCT	**Cooper Cave**	**22.97**	**6**	*e*P	**P**	**11 39 31.5**	**+0.9**
TKL	**Tuckaleechee C**	**23.26**	**7**	P	**P**	**11 39 34.5**	**+1.3**
	15nm,0.6s,mb4.5,baz=184,slow=12,SNR=24						
TKL				pP		11 39 51.0	
	15nm,0.8s,baz=192,slow=10,SNR=5.5						
TKL				LR	LR	11 51 13.9	
	comp=Z,70nm,18.0s,baz=136,slow=43						
TKL	**Tuckaleechee C**	**23.26**	**7**	*e*P	**P**	**11 39 34.4**	**+1.2**
TKL				*ep*P		11 39 54.2	
WVT	**Waverly**	**23.53**	**359**	*e*P	**P**	**11 39 35.2**	**-0.6**
	34nm,1.9s,mb4.3						
PARMO	**Parma**	**24.17**	**355**	*e*P	**P**	**11 39 41.0**	**-0.6**
PARMO				*ep*P		11 40 00.9	
LPIG	**La Paz**	**24.77**	**301**	LR	LR	11 49 41.1	
	comp=Z,79nm,18.3s,baz=159,slow=37						
GDL2	**Guadalupe Moun**	**25.17**	**324**	*e*P	**P**	**11 39 51.4**	**+0.7**
SIUC	**Southern Illin**	**25.18**	**356**	*e*P	**P**	**11 39 50.3**	**-0.4**
	16nm,0.6s,mb4.6						
ELN	**Prospectdale**	**25.29**	**12**	*e*P	**P**	**11 39 53.4**	**+1.7**
ELN				*ep*P	pP	11 40 13.2	+0.6
BLA	**Blacksburg**	**25.34**	**13**	*e*P	**P**	**11 39 53.4**	**+1.2**
	12nm,0.9s,mb4.3						
BLA				*ep*P	pP	11 40 17.6	+4.5
WCI	**Wyandotte Cave**	**25.63**	**2**	*e*P	**P**	**11 39 52.0**	**-2.8**
	9.7nm,0.8s,mb4.3						
CCM	**Cathedral Cave**	**25.71**	**353**	*e*P	**P**	**11 39 54.6**	**-0.9**
	11nm,0.9s,mb4.3						
AMTX	**Amarillo**	**25.88**	**332**	*e*P	**P**	**11 39 56.8**	**-0.3**
	19nm,1.0s,mb4.5						
319A	**Douglas**	**27.71**	**316**	⇓P	**P**	**11 40 14.0**	**+0.4**
	baz=28,SNR=6.6						
KSU1	**Kansas State U**	**27.78**	**344**	*e*P	**P**	**11 40 13.3**	**-0.8**
	20nm,0.6s,mb4.8						
ACSO	**Alum Creek Sta**	**27.87**	**7**	*e*P	**P**	**11 40 14.9**	**+0.1**
	14nm,0.6s,mb4.7						
BNM	**Barren Site**	**27.89**	**324**	*e*P	**P**	**11 40 15.7**	**+0.5**
219A	**White Tail Can**	**28.08**	**317**	⇓P	**P**	**11 40 17.3**	**+0.4**
	baz=28						
LENM	**Lemitar**	**28.10**	**323**	*e*P	**P**	**11 40 17.6**	**+0.6**
318A	**Bisbee**	**28.23**	**316**	⇑P	**P**	**11 40 17.8**	**-0.5**
	baz=28						
SDMD	**Soldier's Deli**	**28.32**	**17**	*e*P	**P**	**11 40 20.5**	**+1.6**
	16nm,0.9s,mb4.5						
LAZ	**Ladron**	**28.37**	**324**	*e*P	**P**	**11 40 16.3**	**-3.1**
ANMO	**Albuquerque**	**28.38**	**325**	P	**P**	**11 40 19.5**	**0.0**
	3.0nm,0.8s,mb3.9,baz=158,slow=8.9,SNR=14						
ANMO				LR	LR	11 51 55.0	
	comp=Z,48nm,21.4s,baz=337,slow=37						
ANMO	**Albuquerque**	**28.38**	**325**	*e*P	**P**	**11 40 19.7**	**+0.2**
	3.7nm,0.9s,mb3.9						
218A	**Dragoon**	**28.59**	**316**	⇑P	**P**	**11 40 21.6**	**+0.1**
	baz=28						
119A	**Ashpeak Ranch,**	**28.59**	**318**	⇓P	**P**	**11 40 21.6**	**+0.2**
	baz=28						
118A	**Homack Ranch,**	**28.95**	**318**	⇓P	**P**	**11 40 24.6**	**0.0**
	baz=29						
217A	**Green Valley**	**29.00**	**315**	⇓P	**P**	**11 40 25.0**	**0.0**
	baz=29						
SSPA	**Standing Stone**	**29.19**	**15**	*e*P	**P**	**11 40 28.0**	**+1.4**
	9.1nm,0.6s,mb4.6						
TUC	**Tucson**	**29.29**	**316**	*e*P	**P**	**11 40 27.1**	**-0.6**
	2.4nm,0.8s,mb3.9						
Y19A	**Nutrioso**	**29.34**	**320**	⇑P	**P**	**11 40 28.0**	**-0.1**
	baz=29						
117A	**Oracle**	**29.42**	**317**	⇑P	**P**	**11 40 28.6**	**-0.2**
	baz=29						
216A	**Three Points,**	**29.57**	**315**	⇓P	**P**	**11 40 30.2**	**0.0**
	baz=30						
X19A	**St. Johns**	**29.67**	**321**	⇑P	**P**	**11 40 31.5**	**+0.5**
	baz=30,SNR=5.8						
Y18A	**Canyon Day Jun**	**29.71**	**319**	⇑P	**P**	**11 40 31.6**	**+0.3**
	baz=30,SNR=6.2						
SDCO	**Great Sand Dun**	**30.00**	**330**	*e*P	**P**	**11 40 34.2**	**+0.3**
	5.7nm,0.9s,mb4.2						
116A	**Eloy**	**30.07**	**316**	⇓P	**P**	**11 40 34.3**	**-0.2**
	baz=30,SNR=5.6						
X18A	**Snowflake**	**30.14**	**320**	⇑P	**P**	**11 40 35.4**	**+0.3**
	baz=30						
W18A	**Petrified Fore**	**30.40**	**322**	⇓P	**P**	**11 40 37.9**	**+0.5**
	baz=30						
214A	**Organ Pipe Nat**	**30.49**	**314**	⇓P	**P**	**11 40 38.4**	**+0.1**
	baz=30						
115A	**Sonoran Desert**	**30.51**	**315**	⇑P	**P**	**11 40 38.5**	**+0.1**
	baz=30						
X17A	**Forest Lakes**	**30.56**	**319**	⇓P	**P**	**11 40 39.3**	**+0.5**
	baz=30						
Y16A	**Circle Bar Ran**	**30.71**	**318**	⇑P	**P**	**11 40 40.4**	**+0.2**
	baz=31						
V18A	**Ganado**	**30.92**	**322**	⇑P	**P**	**11 40 42.5**	**+0.5**
	baz=31,SNR=5.3						
W17A	**Winslow**	**30.98**	**320**	⇓P	**P**	**11 40 42.6**	**+0.1**
	baz=31						
X16A	**Lo Mia Camp, P**	**31.02**	**319**	⇑P	**P**	**11 40 43.3**	**+0.4**
	baz=31,SNR=16						
BINY	**Binghamton**	**31.15**	**16**	*e*P	**P**	**11 40 45.1**	**+1.2**
	13nm,0.8s,mb4.7						
MVCO	**Mesa Verde**	**31.15**	**326**	*e*P	**P**	**11 40 44.3**	**+0.3**
	10nm,1.0s,mb4.5						
MVCO	**Mesa Verde**	**31.15**	**326**	⇑P	**P**	**11 40 44.5**	**+0.5**
	baz=31,SNR=8.9						
T19A	**Beclabito**	**31.17**	**325**	⇑P	**P**	**11 40 44.2**	**0.0**
	baz=31						
Y15A	**Casa Rosa Ranc**	**31.32**	**317**	⇑P	**P**	**11 40 45.7**	**+0.2**
	baz=31						
U18A	**Rough Rock, Ch**	**31.37**	**323**	⇑P	**P**	**11 40 46.2**	**+0.3**
	baz=31						
Z14A	**Wintersburg**	**31.38**	**316**	⇓P	**P**	**11 40 46.3**	**+0.2**
	baz=31						
W16A	**Flagstaff**	**31.50**	**320**	⇓P	**P**	**11 40 47.7**	**+0.6**
	baz=32						
X15A	**Humboldt**	**31.57**	**318**	⇓P	**P**	**11 40 47.9**	**+0.1**
	baz=32						
113A	**Mohawk Valley,**	**31.61**	**314**	⇓P	**P**	**11 40 48.4**	**+0.2**
	baz=32						
WUAZ	**Wupatki**	**31.67**	**320**	*e*P	**P**	**11 40 48.7**	**+0.1**
	7.5nm,0.8s,mb4.5						
WUAZ				*ep*P	pP	11 41 10.5	+0.6
WUAZ	**Wupatki**	**31.67**	**320**	⇓P	**P**	**11 40 48.9**	**+0.3**
	baz=32,SNR=9.5						
Y14A	**Wickenburg**	**31.76**	**316**	⇓P	**P**	**11 40 49.3**	**0.0**
	baz=32						
SMCO	**Snowmass**	**31.84**	**330**	*e*P	**P**	**11 40 50.5**	**+0.5**
	6.7nm,0.9s,mb4.4						
T18A	**Mexican Hat**	**31.87**	**324**	⇑P	**P**	**11 40 50.4**	**+0.1**
	baz=32,SNR=9.2						
S19A	**Harvey Farm, M**	**31.89**	**326**	⇓P	**P**	**11 40 50.7**	**+0.3**
	baz=32,SNR=9.3						
U16A	**Tuba City**	**31.93**	**322**	⇓P	**P**	**11 40 51.3**	**+0.4**
	baz=32,SNR=17						
U17A	**Shonto**	**31.96**	**323**	⇑P	**P**	**11 40 51.3**	**+0.2**
	baz=32						
X14A	**Yava**	**31.99**	**317**	⇑P	**P**	**11 40 51.6**	**+0.1**
	baz=32,SNR=5.3						
W15A	**Williams**	**32.02**	**319**	⇓P	**P**	**11 40 52.3**	**+0.6**
	baz=32						
ECSD	**EROS,Sioux Fal**	**32.17**	**347**	*e*P	**P**	**11 40 51.2**	**-1.6**
	13nm,0.6s,mb4.8						
T17A	**Navajo Res., N**	**32.31**	**323**	⇑P	**P**	**11 40 54.6**	**+0.4**
	baz=32,SNR=13						
S18A	**Hurst Farm, Bl**	**32.33**	**325**	⇑P	**P**	**11 40 54.8**	**+0.5**
	baz=32,SNR=18						
R19A	**Curley Farm, L**	**32.35**	**326**	⇑P	**P**	**11 40 54.8**	**+0.3**
	baz=32						
V15A	**Kaibab Nationa**	**32.37**	**320**	⇓P	**P**	**11 40 55.2**	**+0.6**
	baz=32,SNR=12						
GLA	**Glamis**	**32.52**	**314**

baz=35
RSSD **Black Hills** 34.68 338 *e*P P 11 41 15.0 +0.3
6.1nm,0.6s,mb4.6
L20A **Wamsutter** 34.70 332 ⇓P P 11 41 14.9 +0.1
baz=35
MPU **Maple Canyon** 34.87 326 *e*P P 11 41 16.6 +0.3
10nm,0.8s,mb4.7
O16A **Springville** 34.94 327 ⇓P P 11 41 17.5 +0.6
baz=35,SNR=11
DAU **Daniels Canyon** 34.95 327 *e*P P 11 41 17.9 +0.9
R13A **O'Grain Ranch,** 34.98 322 ⇓P P 11 41 18.2 +0.9
baz=35,SNR=8.9
SHOC **Shoshone** 35.08 317 ⇓P P 11 41 18.3 +0.1
baz=35
M18A **Lyman** 35.08 329 ⇑P P 11 41 18.0 -0.2
baz=35
Q14A **Sevier Lake (B** 35.09 323 ⇑P P 11 41 19.1 +0.8
baz=35,SNR=15
GSC **Goldstone** 35.11 315 ⇓P P 11 41 18.9 +0.4
baz=35
N17A **Moffit Pass** 35.11 328 ⇑P P 11 41 18.9 +0.5
baz=35,SNR=7.9
BFSC **Mount Baldy St** 35.15 313 ⇑P P 11 41 19.4 +0.6
baz=35
S12A **Delamar Landin** 35.16 320 ⇑P P 11 41 19.6 +0.7
baz=35
T11A **Corn Creek, Al** 35.17 319 ⇓P P 11 41 19.4 +0.4
baz=35
JLU **Jordanelle** 35.19 327 *e*P P 11 41 19.7 +0.6
L19A **Farson** 35.25 331 ⇑P P 11 41 19.4 -0.1
baz=35,SNR=7.0
P14A **Drum Mountains** 35.38 324 ⇓P P 11 41 21.3 +0.6
baz=35,SNR=14
N16A **Rees Ranch, Co** 35.39 327 ⇑P P 11 41 21.2 +0.4
baz=35,SNR=5.4
U10A **Ash Meadows, A** 35.41 317 ⇓P P 11 41 21.6 +0.6
baz=35
M17A **Scullys Gap (B** 35.42 329 ⇓P P 11 41 21.1 0.0
baz=35,SNR=12
R12A **Pony Springs,** 35.46 321 ⇓P P 11 41 22.2 +0.7
baz=35,SNR=11
Q13A **Wheeler Ranch,** 35.51 323 ⇓P P 11 41 22.5 +0.7
baz=36,SNR=18
O15A **The Old Anders** 35.51 326 ⇓P P 11 41 22.5 +0.6
baz=36
EYMN **Ely** 35.52 355 *e*P P 11 41 20.2 -1.6
6.8nm,0.9s,mb4.6
DUG **Dugway** 35.64 325 *e*P P 11 41 23.3 +0.3
7.0nm,1.1s,mb4.5
DUG **Dugway** 35.64 325 ⇓P P 11 41 23.6 +0.6
baz=36,SNR=8.3
TPNV **Topopah Spring** 35.66 318 *e*P P 11 41 23.9 +0.7
6.6nm,1.0s,mb4.5
TPNV **Topopah Spring** 35.66 318 ⇑P P 11 41 23.8 +0.6
baz=36,SNR=8.5
EDW2 **Edwards Air Fo** 35.71 314 ⇑P P 11 41 23.4 -0.2
baz=36
S11A **Rachel** 35.75 319 ⇓P P 11 41 24.6 +0.7
baz=36,SNR=6.6
FURC **Furnace Creek,** 35.79 317 ⇑P P 11 41 24.8 +0.5
baz=36
M16A **Huntsville** 35.80 328 ⇓P P 11 41 24.6 +0.3
baz=36,SNR=9.0
LRMC **Laurel Mountai** 35.81 315 ⇓P P 11 41 25.0 +0.5
baz=36
P13A **Bates Ranch, G** 35.83 323 ⇑P P 11 41 25.7 +1.0
baz=36,SNR=19
PDAR **Pinedale Array** 35.86 331 P P 11 41 24.6 -0.2
5.6nm,0.6s,mb4.7,baz=129,slow=10.0,SNR=70
PDAR pP pP 11 41 46.0 -0.3
2.6nm,0.8s,baz=126,slow=11,SNR=5.6
BW06 **Boulder Array** 35.86 331 *e*P P 11 41 24.0 -0.8
5.0nm,0.6s,mb4.6
BW06 **Boulder Array** 35.86 331 ⇑P P 11 41 24.4 -0.3
baz=36,SNR=11
N15A **Stansbury Isla** 35.97 326 ⇑P P 11 41 25.9 +0.2
baz=36,SNR=6.9
HWUT **Hardware Ranch** 35.97 328 *e*P P 11 41 25.5 -0.3
20nm,0.8s,mb5.1
MPMC **Manual Prospec** 35.99 316 ⇑P P 11 41 26.1 +0.1
baz=36,SNR=5.3
Q12A **Willow Creek R** 36.04 322 ⇑P P 11 41 27.0 +0.5
baz=36
R11A **Troy Canyon, C** 36.07 321 ⇑P P 11 41 27.1 +0.4
baz=36,SNR=6.2
L16A **Fish Haven** 36.20 329 ⇓P P 11 41 27.7 0.0
baz=36,SNR=19
SPUT **South Promonto** 36.22 327 *e*P P 11 41 28.0 0.0
O13A **Hicks Ranch, I** 36.26 324 ⇓P P 11 41 28.9 +0.6
baz=36,SNR=6.4
BGU **Big Grassy Mou** 36.27 326 *e*P P 11 41 27.8 -0.5
BGU *e* pP 11 41 49.9 +0.1
N14A **Grayback Hills** 36.30 326 ⇑P P 11 41 28.7 +0.1
baz=36,SNR=8.2
M15A **Larsen Ranch,** 36.33 327 ⇑P P 11 41 29.0 +0.1
baz=36,SNR=22
AGMN **Agassiz Refuge** 36.41 350 *e*P P 11 41 27.9 -1.6
20nm,1.3s,mb4.9
Q11A **Duckwater** 36.42 321 ⇑P P 11 41 30.1 +0.5
baz=36,SNR=6.3
GRAC **Grapevine Rang** 36.43 317 ⇑P P 11 41 30.5 +0.8
baz=36
ARVC **Arvin** 36.43 314 ⇓P P 11 41 30.3 +0.5
baz=36
S10A **Tonopah Range,** 36.45 319 ⇓P P 11 41 30.4 +0.5
baz=36,SNR=12
ISA **Isabella** 36.45 315 ⇓P P 11 41 30.1 +0.1
baz=36
R10A **Warm Springs** 36.48 320 ⇑P P 11 41 30.9 +0.7
baz=36,SNR=5.2
AHID **Auburn Hatcher** 36.59 330 *e*P P 11 41 30.7 -0.3
13nm,0.6s,mb5.0
L15A **Malad City** 36.69 328 ⇓P P 11 41 31.7 -0.1
baz=37,SNR=15
I18A **Diamond G Ranc** 36.70 332 ⇓P P 11 41 32.2 +0.3
baz=37,SNR=13
HVU **Hansel Valley** 36.73 327 *e*P P 11 41 32.2 -0.1
6.5nm,0.7s,mb4.7
S09A **Goldfield** 36.74 318 ⇑P P 11 41 32.4 0.0
baz=37
O12A **Currie** 36.79 324 ⇓P P 11 41 33.2 +0.5
baz=37,SNR=7.9
M14A **Sheep Mountain** 36.84 326 ⇓P P 11 41 33.6 +0.4
baz=37,SNR=23
J17A **Brown Place, J** 36.86 331 ⇓P P 11 41 33.9 +0.6
baz=37,SNR=27
Q10A **Clear Creek Ra** 36.87 321 ⇑P P 11 41 34.2 +0.8
baz=37,SNR=11
N13A **Wendover, West** 36.87 325 ⇓P P 11 41 34.1 +0.7
baz=37,SNR=8.4
K16A **Soda Springs** 36.88 330 ⇓P P 11 41 33.6 +0.1
baz=37
REDW **Red Top Meadow** 36.92 331 *e*pP pP 11 41 56.8 +1.3
R09A **Tonopah** 36.94 319 ⇑P P 11 41 34.5 +0.4
baz=37,SNR=6.7
SNOW **Snow King Moun** 36.95 331 *e*P P 11 41 34.4 +0.3
27nm,0.6s,mb5.4
SNOW *e*pP pP 11 41 56.8 +1.1
VES **Vestal, Richgr** 36.97 314 ⇓P P 11 41 34.7 +0.3
baz=37
LOHW **Long Hollow** 37.00 331 *e*P P 11 41 34.2 -0.3
12nm,1.1s,mb4.7
PKM **Peak Mountain** 37.02 313 ⇑P P 11 41 35.5 +0.7
baz=37
TPAW **Teton Pass** 37.07 331 *e*P P 11 41 35.2 +0.1
14nm,0.8s,mb4.9
TPAW *e*pP pP 11 41 58.8 +2.2
RRI2 **Red Ridge** 37.14 330 *e*P P 11 41 35.8 +0.1
9.3nm,0.8s,mb4.8
MOOW **Moose Ponds** 37.17 331 *e*P P 11 41 35.8 -0.1
7.1nm,0.8s,mb4.7
M13A **Montello** 37.19 326 ⇓P P 11 41 36.2 +0.1
baz=37,SNR=8.9
I17A **Pilgram Creek** 37.22 332 ⇓P P 11 41 37.0 +0.6
baz=37,SNR=17
J16A **Bone** 37.22 330 ⇑P P 11 41 36.5 +0.1
baz=37,SNR=12
O11A **Cowboy Ranch,** 37.23 323 ⇑P P 11 41 36.9 +0.4
baz=37
K15A **Arbon** 37.25 329 ⇓P P 11 41 36.7 +0.1
baz=37,SNR=10
RCTC **Rector, Farmer** 37.32 315 ⇑P P 11 41 37.7 +0.4
baz=37
N12A **Clover Valley,** 37.34 324 ⇑P P 11 41 37.9 +0.4
baz=37,SNR=9.1
SMMC **Simmler** 37.35 313 ⇑P P 11 41 38.3 +0.7
baz=37
Q09A **Carvers** 37.36 320 ⇑P P 11 41 38.1 +0.5
baz=37
IMW **Indian Meadow** 37.37 331 *e*P P 11 41 37.4 -0.2
7.1nm,0.8s,mb4.7
ELK **Elko** 37.38 324 *e*P P 11 41 38.5 +0.7
P10A **Eureka** 37.40 322 ⇓P P 11 41 38.2 +0.3
baz=37
K14A **Jones Ranch, D** 37.48 328 ⇓P P 11 41 38.5 -0.1
baz=38,SNR=33
L13A **Double Diamond** 37.57 327 ⇓P P 11 41 39.1 -0.2
baz=38,SNR=5.4
RLMT **Red Lodge** 37.58 334 *e*P P 11 41 39.0 -0.3
56nm,2.3s,mb5.0
RLMT **Red Lodge** 37.58 334 ⇓P P 11 41 39.2 -0.2
baz=38,SNR=7.7
I16A **Newdale** 37.61 331 ⇑P P 11 41 39.9 +0.2
baz=38
M12A **Wells** 37.64 325 ⇓P P 11 41 40.0 0.0
baz=38,SNR=6.8
R08A **Mina** 37.67 319 ⇓P P 11 41 40.8 +0.5
baz=38
LAO **LASA Array** 37.68 338 *e*P P 11 41 40.0 -0.2
8.4nm,0.9s,mb4.6
N11A **Elko Archery C** 37.72 324 ⇑P P 11 41 40.8 +0.2
baz=38,SNR=5.9
J15A **Blackfoot** 37.72 329 ⇑P P 11 41 40.7 +0.1
baz=38,SNR=8.7
P09A **Austin** 37.77 321 ⇓P P 11 41 41.5 +0.5
baz=38
O10A **Cortez Mining,** 37.83 322 ⇑P P 11 41 42.0 +0.5
baz=38
NVAR **Mina Array Bea** 37.84 319 P P 11 41 42.4 +0.6
4.7nm,0.8s,mb4.3,baz=126,slow=7.8,SNR=38
NVAR pP pP 11 42 01.9 -1.4
1.2nm,0.7s,baz=120,slow=8.5,SNR=4.2
NVAR PcP PcP 11 43 56.6 +0.2
0.9nm,0.6s,baz=130,slow=4.6,SNR=6.6
NVAR pPcP 11 44 20.5
0.9nm,0.6s,baz=129,slow=4.2,SNR=6.3
NVAR ScP ScP 11 47 35.3 -0.3
0.9nm,0.8s,baz=133,slow=4.9,SNR=7.8
NVAR **Mina Array Bea** 37.84 319 P P 11 41 42.4 +0.6
NVAR pP pP 11 42 01.9 -1.4
NVAR PcP PcP 11 43 56.6 +0.2
NVAR pPcP 11 44 20.5
NVAR ScP ScP 11 47 35.3 -0.3
Q08A **Gabbs** 37.85 319 ⇓P P 11 41 41.9 +0.1
baz=38,SNR=9.0
G18A **Lazy EL Ranch,** 37.86 334 ⇑P P 11 41 41.4 -0.3
baz=38,SNR=7.2
KCC **Kaiser Creek** 37.91 316 ⇓P P 11 41 42.0 -0.2
baz=38,SNR=6.8
YMR **Madison River** 37.97 332 *e*P P 11 41 42.4 -0.3
5.2nm,0.7s,mb4.5
YMR *e*pP pP 11 42 03.0 -1.4
T06C **Millerton Lake** 38.00 316 ⇑P P 11 41 42.7 -0.3
baz=38,SNR=5.9
H16A **Russell Place,** 38.13 332 ⇑P P 11 41 44.3 +0.3
baz=38,SNR=7.1
M11A **Holland Ranch,** 38.15 324 ⇑P P 11 41 43.8 -0.4
baz=38
L12A **House Creek Ra** 38.19 326 ⇓P P 11 41 44.4 -0.2
baz=38
J14A **Carey** 38.21 328 ⇓P P 11 41 44.7 0.0
baz=38,SNR=11
ULM **Lac du Bonnet** 38.31 351 P P 11 41 43.3 -2.2
7.0nm,0.5s,mb4.7,baz=175,slow=9.9,SNR=5.2
G17A **Pierce Place,** 38.38 333 ⇓P P 11 41 47.1 +1.0
baz=38,SNR=5.9
F18A **Big Timber** 38.39 334 ⇑P P 11 41 46.0 -0.2
baz=38,SNR=8.7
K12A **Draper Farm, C** 38.46 326 ⇓P P 11 41 46.6 -0.2
baz=38,SNR=8.1
DGMT **Dagmar** 38.56 342 *e*P P 11 41 47.3 -0.2
34nm,0.7s,mb5.3
DGMT **Dagmar** 38.56 342 ⇑P P 11 41 47.4 -0.1
baz=39,SNR=7.3
J13A **Cove Ranch, Pi** 38.60 328 ⇓P P 11 41 47.6 -0.4
baz=39
L11A **Cat Creek Ranc** 38.61 325 ⇑P P 11 41 47.8 -0.2
baz=39,SNR=10
I14A **Mackay** 38.61 329 ⇑P P 11 41 48.5 +0.4
baz=39,SNR=13
WAKR **Walker** 38.62 318 *e*P P 11 41 49.2 +1.0
H15A **Lima** 38.72 331 ⇑P P 11 41 49.9 +1.0
baz=39,SNR=32
G16A **Moss Hill, Enn** 38.78 332 ⇓P P 11 41 49.8 +0.3
baz=39
N09A **Rock Creek Ran** 38.79 322 ⇓P P 11 41 49.9 +0.3
baz=39,SNR=12
F17A **Fitzpatrick Pl** 38.80 334 ⇑P P 11 41 49.6 0.0
baz=39,SNR=5.3
O08A **Rochester Mine** 38.83 321 ⇓P P 11 41 50.0 0.0
baz=39
HLID **Hailey** 38.84 328 *e*P P 11 41 49.6 -0.3
3.4nm,0.8s,mb4.2
HLID **Hailey** 38.84 328 ⇑P P 11 41 50.0 0.0
baz=39,SNR=8.8
I13A **Wildhorse Cree** 38.94 329 ⇓P P 11 41 51.4 +0.6
baz=39,SNR=12
L10A **Juniper Basin** 38.95 325 ⇑P P 11 41 50.5 -0.5
baz=39
MCMT **McKenzie Canyo** 38.97 331 *e*P P 11 41 52.0 +0.9
J12A **Stokes Ranch,** 38.98 327 ⇓P P 11 41 51.1 -0.1
baz=39,SNR=8.7
CMB **Columbia Colle** 39.00 317 *e*P P 11 41 51.2 -0.2
4.5nm,1.1s,mb4.2
CMB **Columbia Colle** 39.00 317 ⇑P P 11 41 51.3 -0.1
baz=39
E18A **Harlowton** 39.00 335 ⇓P P 11 41 51.4 +0.1
baz=39
BOZ **Bozeman (W)** 39.02 333 *e*P P 11 41 51.4 0.0
3.6nm,0.7s,mb4.3
BOZ **Bozeman (W)** 39.02 333 ⇑P P 11 41 51.6 +0.1
baz=39,SNR=8.0
G15A **Dillon** 39.05 331 ⇓P P 11 41 52.2 +0.4
baz=39,SNR=8.8
H14A **Leadore** 39.07 330 ⇑P P 11 41 52.5 +0.6
baz=39,SNR=15
PACP **Pacheco Peak** 39.09 315 ⇑P P 11 41 52.2 0.0
baz=39
M09A **Marrel Ranch,** 39.10 323 ⇑P P 11 41 52.8 +0.6
baz=39
N08A **GE Springer Mi** 39.12 322 ⇑P P 11 41 52.2 -0.2
baz=39
F16A **Kennard Place,** 39.13 333 ⇓P P 11 41 52.3 0.0
baz=39,SNR=5.5
K11A **Parker Ranch,** 39.17 326 ⇑P P 11 41 52.6 -0.1
baz=39
O07A **Toulon** 39.20 320 ⇓P P 11 41 52.9 -0.2
baz=39,SNR=7.3
DLMT **Dillon** 39.25 331 *e*P P 11 41 53.4 0.0
6.7nm,0.9s,mb4.5
LCCM **Lewis and Clar** 39.28 333 P P 11 41 53.9 +0.3
E17A **Martinsdale** 39.32 334 ⇑P P 11 41 53.9 0.0
baz=39
I12A **Atlanta** 39.38 328 ⇑P P 11 41 54.5 +0.1
baz=39,SNR=7.9
D18A **Linhart Farms,** 39.46 336 ⇓P P 11 41 55.2 0.0
baz=40,SNR=7.0
H13A **Challis** 39.47 329 ⇑P P 11 41 55.5 +0.2
baz=39,SNR=11
R04C **Big Horse Ranc** 39.49 317 ⇓P P 11 41 56.0 +0.6
baz=39
LRM **Limekiln Ridge** 39.53 332 *e*P P 11 41 56.0 +0.3
F15A **Butte** 39.56 332 ⇓P P 11 41 55.9 -0.1
baz=40,SNR=5.2
L09A **Wilkinson Ranc** 39.60 324 ⇓P P 11 41 56.1 -0.3
baz=40
LAVA **Lava Cap Winer** 39.62 317 ⇑P P 11 41 56.5 -0.1
baz=40
K10A **MacKenzie Ranc** 39.63 325 ⇑P P 11 41 56.3 -0.3
baz=40,SNR=6.7
M08A **Happy Creek Ra** 39.67 322 ⇓P P 11 41 56.5 -0.4
baz=40
E16A **East Helena** 39.73 333 ⇑P P 11 41 57.1 -0.2
baz=40,SNR=5.0
H12A **Diamond D Ranc** 39.76 329 ⇑P P 11 41 57.7 +0.1
baz=40,SNR=6.5
D17A **Six Diamond Ra** 39.79 335 ⇑P P 11 41 57.6 -0.3
baz=40,SNR=5.3
O06A **Flanigan** 39.80 320 ⇓P P 11 41 57.9 -0.1
baz=40,SNR=13
G13A **Cobalt** 39.84 330 ⇑P P 11 41 57.9 -0.3
baz=40,SNR=5.7
I11A **Placerville** 39.89 327 ⇓P P 11 41 59.0 +0.3
baz=40,SNR=18
HRY **Holter Researc** 39.93 333 *e*P P 11 41 59.0 0.0
F14A **Wisdom** 39.95 331 ⇓P P 11 41 59.2 +0.1
baz=40
BEKR **Beckwourth** 39.97 319 ⇑P P 11 41 59.3 -0.1
baz=40,SNR=7.5
D16A **Dana Ranch, Ca** 40.06 334 ⇓P P 11 41 59.8 -0.2
baz=40,SNR=5.5
K09A **Rome** 40.07 324 ⇓P P 11 42 00.4 +0.2
baz=40,SNR=16
E15A **Deer Lodge** 40.07 332 ⇑P P 11 42 00.1 -0.1
baz=40
L08A **Fields** 40.10 323 ⇑P P 11 41 59.8 -0.7
baz=40,SNR=13
EGMT **Eagleton** 40.12 336 ⇓P P 11 42 00.4 -0.1
baz=40
N06A **Buffalo Meadow** 40.14 321 ⇑P P 11 42 00.3 -0.5
baz=40
C17A **Wharram Farm,** 40.20 335 ⇑P P 11 42 00.9 -0.4
baz=40,SNR=7.6
O05C **Quincy** 40.38 319 ⇓P P 11 42 02.8 0.0
baz=40
F13A **Darby** 40.39 330 ⇑P P 11 42 02.3 -0.5
baz=40,SNR=11
WVOR **Wild Horse Val** 40.42 323 *e*P P 11 42 02.2 -0.9
7.7nm,0.8s,mb4.6
E14A **Clinton** 40.46 332 ⇓P P 11 42 02.8 -0.5
baz=40
H11A **Donnelly** 40.46 328 ⇑P P 11 42 02.9 -0.6
baz=40,SNR=17
D15A **Lincoln** 40.49 333 ⇑P P 11 42 03.5 -0.1
baz=40,SNR=5.1
J09A **Fry Pan Ranch,** 40.50 325 ⇑P P 11 42 03.6 -0.1
baz=40,SNR=17
K08A **Mann Creek Ran** 40.52 324 ⇑P P 11 42 03.9 -0.1
baz=40,SNR=44
ORV **Oroville** 40.54 318 ⇓P P 11 42 04.6 +0.4
baz=40,SNR=7.6
L07A **Adell** 40.59 322 ⇑P P 11 42 04.3 -0.2
baz=40,SNR=6.7
CHMT **Chamberlain Mo** 40.72 332 *e*P P 11 42 04.3 -1.1
CHMT *e*pP pP 11 42 26.9 -0.5
C16A **Fuhringer Ranc** 40.74 335 ⇑P P 11 42 05.3 -0.4
baz=41
H10A **Noah's Angus R** 40.77 327 ⇓P P 11 42 05.1 -0.9
baz=41,SNR=9.2
E13A **Victor** 40.80 331 ⇑P P 11 42 05.4 -0.8
baz=41,SNR=9.5
F12A **Elk City** 40.82 330 ⇓P P 11 42 05.9 -0.4
baz=41,SNR=26
I09A **Lost Marbles R** 40.90 326 ⇓P P 11 42 06.3 -0.7
baz=41,SNR=8.6
J08A **Circle Bar Ran** 40.91 325 ⇑P P 11 42 06.6 -0.5
baz=41
K07A **Rock Creek Ran** 40.94 323 ⇑P P 11 42 06.8 -0.5
baz=41,SNR=8.7
D14A **Greenough** 40.96 332 ⇓P P 11 42 06.5 -1.0
baz=41
G11A **Walters Elk Ra** 41.07 329 ⇓P P 11 42 07.2 -1.2
baz=41,SNR=11
C15A **Salmond Ranch,** 41.09 334 ⇓P P 11 42 08.1 -0.4
baz=41
MOD **Modoc** 41.09 322 ⇓P P 11 42 08.2 -0.4
baz=41
BMO **Blue Mountains** 41.24 327 *e*P P 11 42 08.3 -1.5
4.6nm,0.8s,mb4.4
H09A **Durkee** 41.31 327 ⇑P P 11 42 09.5 -0.8
baz=41
I08A **Drewsey** 41.31 325 ⇓P P 11 42 09.7 -0.7
baz=41
F11A **Grangeville** 41.36 329 ⇓P P 11 42 09.7 -1.0
baz=41
GASB **Alder Springs** 41.40 317 ⇓P P 11 42 11.6 +0.4
baz=41
D13A **Huson** 41.41 332 ⇓P P 11 42 10.5 -0.6
baz=41
G10A **Bishop Farm, J** 41.44 328 ⇓P P 11 42 10.2 -1.2
baz=41,SNR=8.4
E12A **Beaver Dam Sad** 41.44 330 ⇑P P 11 42 10.5 -0.9
baz=41,SNR=8.3
B15A **Bradely Ranch,** 41.49 334 ⇑P P 11 42 11.1 -0.6
baz=42
E11A **Bogner Ranch,** 41.71 330 ⇑P P 11 42 12.3 -1.3
baz=42,SNR=8.4
H08A **Prairie City** 41.76 326 ⇓P P 11 42 13.1 -0.9
baz=42
G09A **Cove** 41.77 327 ⇓P P 11 42 13.1 -1.1
baz=42,SNR=5.2
D12A **Red Ives Fores** 41.79 331 ⇑P P 11 42 13.3 -1.0
baz=42
J06A **Christmas Vall** 41.81 323 ⇑P P 11 42 13.9 -0.5
baz=42
B14A **Marquette Ranc** 41.83 334 ⇓P P 11 42 14.1 -0.4
baz=42
C13A **Hot Springs** 41.89 332 ⇑P P 11 42 14.7 -0.4
baz=42
I07A **Izee** 41.94 325 ⇑P P 11 42 14.6 -1.0
baz=42
F10A **Beach Ranch, E** 41.96 329 ⇑P P 11 42 14.8 -0.8
baz=42,SNR=7.9
A15A **Johnson Ranch,** 42.08 335 ⇑P P 11 42 16.0 -0.5
baz=42,SNR=7.0
F09A **S2 Ranch, Elgi** 42.13 328 ⇓P P 11 42 16.2 -0.8
baz=42,SNR=8.1
E10A **Myers Farm, Un** 42.25 329 ⇓P P 11 42 17.0 -1.0
baz=42
D11A **Klaveano Farm,** 42.26 330 ⇓P P 11 42 16.9 -1.2
baz=42
H07A **Lands Inn, Kim** 42.30 325 ⇑P P 11 42 17.3 -1.1
baz=42
C12B **Naegeli Ranch,** 42.33 332 ⇑P P 11 42 17.7 -0.9
baz=42
B13A **Whitefish** 42.36 333 ⇑P P 11 42 18.3 -0.6
baz=42
A14A **Double T Ranch** 42.36 334 ⇑P P 11 42 18.6 -0.3
baz=42,SNR=8.3
F08A **Pendleton** 42.64 327 ⇑P P 11 42 19.6 -1.6
baz=43
KHMM **Horse Mountain** 42.69 318 *e*P P 11 42 21.6 -0.1
D10A **Wagner Farm, O** 42.72 330 ⇓P P 11 42 20.2 -1.7
baz=43,SNR=11
A13A **Flathead Natio** 42.75 334 ⇓P P 11 42 21.2 -0.9
baz=43
C11A **Tepee Creek (N** 42.78 331 ⇓P P 11 42 21.7 -0.7
baz=43,SNR=5.7
D09A **Jones Farm, Ri** 43.24 329 ⇓P P 11 42 25.3 -0.8
baz=43,SNR=8.4
B11A **Sandpoint** 43.27 332 ⇓P P 11 42 25.6 -0.6
baz=43
A12A **Yaak River Ran** 43.30 333 ⇓P P 11 42 26.4 -0.1
baz=43
F07A **Phinny Hill Vi** 43.32 327 ⇓P P 11 42 26.4 -0.3
baz=43
HAWA **Hanford** 43.43 327 *e*P P 11 42 26.5 -1.1
6.8nm,0.8s,mb4.4
RSW **Rattlesnake Hi** 43.46 327 *e*P P 11 42 26.7 -1.1
D08A **Wollman Farm,** 43.55 329 ⇑P P 11 42 27.8 -0.8
baz=44,SNR=9.4
A11A **Hall Mountain,** 43.64 332 ⇑P P 11 42 29.1 -0.1
baz=44,SNR=6.7
OD2 **Odessa Site #2** 43.67 329 P P 11 42 29.3 -0.2
MDW **Midway** 43.69 327 P P 11 42 28.9 -0.7
F06A **Goldendale** 43.70 326 ⇑P P 11 42 29.6 -0.1
baz=44
FFC **Flin Flon** 43.71 348 *e*P P 11 42 29.0 -0.6
13nm,0.6s,mb4.8
E07A **Sunnyside** 43.71 327 ⇓P P 11 42 29.0 -0.8
baz=44,SNR=9.8
C09A **Chrisman Ranch** 43.73 330 ⇑P P 11 42 29.1 -0.9
baz=44,SNR=5.1
HOOD **Mount Hood Mea** 43.91 325 *e*P P 11 42 30.6 -0.8
18nm,1.0s,mb4.8
HOOD *e* pP 11 42 54.0 +0.4
B09A **Rice** 44.10 330 ⇓P P 11 42 32.1 -0.8
baz=44,SNR=8.8
C08A **Higginbotham F** 44.10 329 ⇓P P 11 42 32.9 0.0
baz=44
F05A **White Salmon** 44.15 326 ⇑P P 11 42 32.8 -0.5
baz=44
D07A **Quincy** 44.18 328 ⇓P P 11 42 32.8 -0.7
baz=44
A10A **Northport** 44.21 331 ⇑P P 11 42 32.7 -1.0
baz=44
WTV **Waterville** 44.50 329 P P 11 42 36.0 -0.1
C07A **Waterville** 44.55 328 ⇑P P 11 42 35.9 -0.5
baz=44
B08A **Colville Reser** 44.63 330 ⇑P P 11 42 35.6 -1.5
baz=45
A09A **Danville** 44.69 331 ⇓P P 11 42 36.5 -1.0
baz=45,SNR=8.0
A08A **Turner Farm, O** 45.00 330 ⇑P P 11 42 39.1 -0.9

baz=45
C05A Tolt Reservoir 45.40 327 ⇑P **P** **11 42 42.5 -0.7**
baz=45
A07A Ashnola River, 45.61 330 ⇑P **P** **11 42 44.3 -0.5**
baz=46
EDM Edmonton 45.66 338 *e*P **P** **11 42 44.1 -1.1**
B06A Marblemount 45.81 328 ⇓P **P** **11 42 45.3 -1.2**
baz=46
YKA Yellowknife Ar 53.63 345 P **P** **11 43 43.8 -1.7**
1.3nm,0.5s,mb4.2,baz=247,slow=15,SNR=7.4
PLCA Paso Flores 55.16 165 P **P** **11 43 56.7 -0.1**
1.6nm,0.7s,mb4.2,baz=10,slow=8.1,SNR=4.6
PLCA Paso Flores 55.16 165 P **P** **11 43 56.7 -0.2**
DLBC Dease Lake 55.98 334 *e*P **P** **11 44 02.5 -0.1**
PNL Peninsula 60.73 333 *e*P **P** **11 44 35.9 +0.4**
60nm,1.5s,mb5.4
PPT Papeete 68.47 245 LR LR 12 09 55.9
comp=Z,85nm,18.3s,baz=80,slow=31
ARCES ARCESS Array B 86.05 19 P **P** **11 47 03.2 -0.7**
2.1nm,0.9s,mb4.0,baz=256,slow=4.9,SNR=3.9
ARCES ARCESS Array B 86.05 19 P **P** **11 47 03.2 -0.7**
CN2 Changchun 116.57 334 *e*PKP PKPdf 11 53 03.2 -4.2
KSRS Korea Array 120.38 328 PKP PKPdf 11 53 12.5 -2.4
1.1nm,0.8s,baz=61,slow=1.8,SNR=3.2
KSRS pPKP pPKPdf 11 53 38.5 -2.3
1.8nm,1.0s,baz=103,slow=28,SNR=4.1
HHC Hu-ho-hao-te 124.16 343 *e*PKP PKPdf 11 53 20.7 -1.4
HHC PP PP 11 55 11.5 +5.1
HHC SKS SKSdf 12 00 22.0 -3.7
HHC SKKS SKKSac 12 01 51.1 -6.4
HHC SS SS 12 11 46.9 -2.4
HHC LR LR
comp=N,161nm,25.0s
HHC LR LR
comp=E,170nm,26.2s
HHC LR LR
comp=Z,91nm,26.2s
LZH Lanzhou 130.57 348 *e*PKP PKPdf 11 53 35.4 +0.9
LZH LR LR
comp=N,170nm,16.5s
LZH LR LR
comp=Z,160nm,18.7s
STKA Stephens Creek 131.35 238 PKP PKPdf 11 53 34.2 -1.8
comp=Z,0.7nm,0.5s,baz=3.0,slow=13,SNR=4.4
STKA pPKP pPKPdf 11 53 59.0 -2.9
comp=Z,1.0nm,0.6s,baz=134,slow=14,SNR=2.6
CD2 Chengdu 135.58 347 *e*PKP PKPdf 11 53 42.2 -1.8
GYA Guiyang 139.00 341 *e*PDIF Pdif 11 51 01.4 -0.6
GYA PKP PKPdf 11 53 50.6 +0.1
GYA XPKP 11 54 25.7
GYA PP PP 11 56 46.2 +4.1
GYA PP PP
comp=Z,70nm,7.0s
WB2 Warramunga Arr 139.53 254 *e*PKPdf PKPdf 11 53 50.4 -1.2
ASAR Alice Springs 139.54 248 PKhKP 11 53 42.8
comp=Z,0.7nm,0.6s,baz=112,slow=2.9,SNR=4.6
ASAR PKP PKPdf 11 53 50.7 -0.8
comp=Z,1.0nm,0.7s,baz=98,slow=2.3,SNR=14
ASAR pPKP pPKPdf 11 54 14.8 -2.6
comp=Z,1.5nm,0.8s,baz=90,slow=2.1,SNR=7.8
ASAR SKPbc SKPbc 11 57 19.6 +0.9
comp=Z,1.0nm,0.7s,baz=111,slow=3.1,SNR=13
WRA Warramunga Arr 139.54 254 PKhKP 11 53 41.0
comp=Z,0.2nm,0.4s,baz=91,slow=3.3,SNR=6.6
WRA PKP PKPdf 11 53 51.4 -0.2
comp=Z,1.5nm,0.5s,baz=90,slow=2.5,SNR=27
WRA pPKP pPKPdf 11 54 14.2 -3.3
comp=Z,2.5nm,0.8s,baz=90,slow=1.7,SNR=9.0
WRA SKPbc SKPbc 11 57 20.2 +1.4
comp=Z,0.9nm,0.8s,baz=90,slow=2.9,SNR=11
KMI Kunming 141.38 346 PKP PKPdf 11 53 52.9 -1.9
CMAR Chiang Mai Arr 148.65 349 PKPbc PKPbc 11 54 09.7 -1.6
comp=Z,1.7nm,0.5s,baz=336,slow=3.7,SNR=7.6
CMAR pPKPbc pPKPbc 11 54 33.8 -3.2
comp=Z,2.0nm,0.6s,baz=341,slow=3.4,SNR=3.2

*BJI **09** 12:01:29.7, 47.97N×115.59E, h27km, mB4.7, mb4.5*
*NEIC **09** 12:01:30.5±0.5, 48.06N×154.93E, h10km, mb5.0/13, Error ellipse: s-maj=12.1km s-min=5.9km az=135.0*
*MOS **09** 12:01:30.8±1.6, 48.04N×155.14E, h30km, mb4.5/16, Error ellipse: s-maj=9.5km s-min=8.2km az=79.7*
*ISCJB **09** 12:01:31.5±2.0, 48.12N±0.06×115.08E±0.10, h30km±14km, mb4.4/30, MS3.6/5, Error ellipse: s-maj=13.9km s-min=4.9km az=41.0*
*IDC **09** 12:01:35.0±0.6, 48.14N×154.89E, h41km±6km, mb3.8/16, mb1 4.0/17, mb1mx3.9/22, mbtmp3.8/17, ML4.0/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/38, Error ellipse: s-maj=18.0km s-min=13.0km az=147.0*
ISC 09 12:01:30.9±2.7, 4814N±006×1550E±01, h10km±16km, h42km±2.0km:pP-P, n86, σ1°09/90, mb4.4/30, MS3.6/5, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.66**	**16**	*e*P		**Pn**	**12 02 13.1**	**-0.6**
SKR				*e*S		**Sn**	**12 02 44.5**	**-1.4**
SKR				pmax	pmax			
	comp=N,80nm,0.5s							
SKR				pmax	pmax			
	comp=Z,160nm,0.5s							
SKR				smax				
	comp=N,310nm,0.5s							
SKR				smax				
	comp=E,450nm,0.5s							
SKR				smax				
	comp=N,1μm,1.0s							
SKR				smax				
	comp=E,1μm,2.0s							
SKR				MLR	MLR			
	comp=Z,1μm,14.0s							
SKR				MLR	MLR			
	comp=N,2μm,10.0s							
SKR				MLR	MLR			
	comp=E,2μm,14.0s							
PEA0B	**Petropavlovsk-**	**5.27**	**18**	*e*Pn		**Pn**	**12 02 50.4**	**+0.8**
PEA0B				Sn		**Sn**	**12 03 52.0**	**+1.6**
PETK	**Petropavlovsk-**	**5.27**	**18**	P		**Pn**	**12 02 51.6**	**+2.0**
	comp=E,4.6nm,0.3s,baz=202,slow=11,SNR=22							
PETK				LR		LR	12 05 17.4	
	comp=E,324nm,19.2s,baz=319,slow=42							
PET	**Petropavlovsk**	**5.42**	**24**	*e*Pn		**Pn**	**12 02 52.0**	**+0.2**
	comp=E,28nm,0.4s							
PET				*e*Sn		**Sn**	**12 03 53.5**	**-0.7**
PET	**Petropavlovsk**	**5.42**	**24**	*e*PN		**Pn**	**12 02 52.5**	**+0.7**
PET				pmax	pmax			
	comp=Z,41nm,0.5s							
PET				MLR	MLR			
	comp=Z,200nm,15.0s							
KUR	**Kuril'sk**	**5.68**	**242**	⇑*i*PN		**Pn**	**12 02 53.8**	**-1.5**
KUR				*e*S		**Sn**	**12 04 04.6**	**+4.1**
KUR				pmax	pmax			
	comp=N,60nm,0.5s							
KUR				pmax	pmax			
	comp=Z,150nm,0.5s							
KUR				smax				
	comp=N,150nm,0.5s							
KUR				smax				
	comp=E,80nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**7.54**	**240**	*e*PN		**Pn**	**12 03 22.1**	**+1.3**
YSS	**Yuzh-Sakhalins**	**8.34**	**266**	*e*Pn		**Pn**	**12 03 36.7**	**+4.9**
	comp=E,35nm,0.7s							
YSS	**Yuzh-Sakhalins**	**8.34**	**266**	⇑*i*PN		**Pn**	**12 03 36.5**	**+4.7**
YSS				pmax	pmax			
	comp=Z,50nm,0.8s							
YSS				MLR	MLR			
	comp=Z,500nm,14.0s							
YSS				MLR	MLR			
	comp=E,500nm,16.0s							
UGL	**Uglegorsk**	**8.60**	**281**	*e*PN		**Pn**	**12 03 41.0**	**+5.7**
UGL				pmax	pmax			
	comp=Z,46nm,0.7s							
UGL				MLR	MLR			
	comp=N,500nm,16.0s							
UGL				MLR	MLR			
	comp=E,500nm,16.0s							
UGL				MLR	MLR			
	comp=Z,800nm,16.0s							
ASAJ	**Asahikawa**	**9.48**	**249**	P		**Pn**	**12 03 51.5**	**+4.1**
	comp=Z,2.9nm,0.3s,baz=79,slow=14,SNR=24							
ASAJ				LR	LR		12 07 15.6	
	comp=Z,182nm,19.2s,baz=272,slow=36							
ASAJ	**Asahikawa**	**9.48**	**249**	PN		**Pn**	**12 03 51.5**	**+4.1**
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,182nm,19.2s							
HABR	**Khabarovsk**	**13.26**	**279**	*e*PN		**Pn**	**12 04 43.3**	**+4.3**
KLR	**Kul'dur**	**15.36**	**283**	*e*P		**Pn**	**12 05 08.3**	**+0.8**
KLR				MLR	MLR			
	comp=E,500nm,13.0s							
KLR				MLR	MLR			
	comp=Z,2μm,13.0s							
MAJO	**Matsushiro**	**16.92**	**233**	*e*Pn		**Pn**	**12 05 24.9**	**-2.8**
	comp=Z,8.3nm,0.7s							
MAJO	**Matsushiro**	**16.92**	**233**	*e*P		**Pn**	**12 05 24.9**	**-2.7**
MAJO				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MJAR	**Matsushiro Arr**	**16.92**	**233**	P		**Pn**	**12 05 25.0**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=30,slow=15,SNR=4.7							
YAK	**Yakutsk**	**19.88**	**324**	⇓*e*P		**Pn**	**12 06 02.3**	**-1.3**
YAK				pmax	pmax			
	comp=Z,11nm,1.1s							
YAK				MLR	MLR			
	comp=Z,100nm,11.0s							
CLNS	**Chul'man**	**20.12**	**307**	*e*P		**P**	**12 06 08.2**	**+3.5**
CLNS				pmax	pmax			
	comp=Z,17nm,1.0s							
CLNS				pmax	pmax			
	comp=N,8.0nm,1.0s							
CLNS				pmax	pmax			
	comp=E,12nm,1.2s							
BILL	**Bilibino**	**20.76**	**12**	⇑*e*P		**P**	**12 06 10.6**	**-0.9**
BILL				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BILL				MLR	MLR			
	comp=Z,200nm,23.0s,MS3.4							
CN2	**Changchun**	**20.90**	**269**	*e*P		**P**	**12 06 11.4**	**-1.8**
KSRS	**Korea Array**	**22.42**	**252**	P		**P**	**12 06 30.5**	**+1.0**
	comp=Z,7.0nm,0.5s,mb4.3,baz=50,slow=10,SNR=18							
KSRS	**Korea Array**	**22.42**	**252**	P		**P**	**12 06 30.5**	**+1.0**
KSRS				pmax	pmax			
	comp=Z,7.0nm,0.5s,mb4.3							
KS15	**Wonju Array Si**	**22.45**	**252**	*e*P		**P**	**12 06 29.5**	**-0.4**
TIXI	**Tiksi**	**26.51**	**342**	*e*P		**P**	**12 07 07.1**	**-0.9**
	comp=Z,1.3nm,0.4s,mb3.8							
TIXI	**Tiksi**	**26.51**	**342**	*e*P		**P**	**12 07 06.1**	**-2.0**
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.5s,mb3.8							
ULN	**Ulaanbaatar**	**31.64**	**288**	*e*P		**P**	**12 07 53.1**	**-0.8**
	comp=Z,1.2nm,0.6s,mb3.9							
ULN	**Ulaanbaatar**	**31.64**	**288**	*i* P		**P**	**12 07 53.0**	**-0.9**
SONM	**Songino Array**	**32.07**	**288**	P		**P**	**12 07 57.1**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=88,slow=8.6,SNR=5.3							
SONM				LR		LR	12 21 02.2	
	comp=Z,88nm,18.5s,MS3.5,baz=163,slow=36							
SONM	**Songino Array**	**32.07**	**288**	P		**P**	**12 07 57.1**	**-0.6**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SONM				MLR	MLR			
	comp=Z,88nm,18.5s							
ZALV	**Zalesovo Beam**	**42.82**	**305**	P		**P**	**12 09 27.6**	**-1.0**
	comp=Z,1.4nm,0.5s,mb3.9,baz=68,slow=5.8,SNR=6.8							
ZALV				PcP		PcP	12 11 19.2	-0.4
	comp=Z,1.0nm,0.6s,baz=70,slow=4.9,SNR=4.8							
ZALV	**Zalesovo Beam**	**42.82**	**305**	P		**P**	**12 09 27.6**	**-1.0**
ZALV				PcP		PcP	12 11 19.2	-0.4
ZALV	**Zalesovo Beam**	**42.82**	**305**	P		**P**	**12 09 27.6**	**-1.0**
ZALV							12 11 19.2	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7							
GYA	**Guiyang**	**43.23**	**258**	P		**P**	**12 09 32.9**	**+0.6**
GYA				AMB	AMB			
	comp=Z,10.0nm,0.5s,mb4.8							
QIZ	**Qiongzhong**	**46.54**	**247**	P		**P**	**12 09 56.4**	**-2.2**
	comp=Z,249nm,1.9s							
MK31	**Makanchi Array**	**47.42**	**297**	*e*P		**P**	**12 10 04.0**	**-1.2**
MKAR	**Makanchi Array**	**47.42**	**297**	P		**P**	**12 10 04.5**	**-0.7**
	comp=Z,3.5nm,0.6s,mb4.5,baz=64,slow=8.4,SNR=23							
MKAR				LR		LR	12 33 45.1	
	comp=Z,68nm,18.3s,MS3.6,baz=242,slow=41							
MKAR	**Makanchi Array**	**47.42**	**297**	*e*P		**P**	**12 10 04.5**	**-0.7**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.6s							
KURK	**Kurchatov**	**47.64**	**303**	*e*P		**P**	**12 10 05.6**	**-1.3**
	comp=Z,125nm,0.6s							
KURK	**Kurchatov**	**47.64**	**303**	*d* iP		**P**	**12 10 06.3**	**-0.6**
KURK				pmax	pmax			
	comp=Z,12nm,0.7s,mb5.0							
KURK				MLR	MLR			
	comp=Z,100nm,17.0s,MS3.9							
YKA	**Yellowknife Ar**	**49.06**	**38**	P		**P**	**12 10 18.0**	**+0.3**
	comp=Z,5.4nm,1.1s,mb4.5,baz=293,slow=7.1,SNR=3.2							
YKA	**Yellowknife Ar**	**49.06**	**38**	P		**P**	**12 10 18.0**	**+0.4**
YKA				pmax	pmax			
	comp=Z,5.0nm,1.1s							
BRVK	**Borovoye**	**50.98**	**309**	*e*P		**P**	**12 10 31.0**	**-1.4**
	comp=Z,9.7nm,0.9s,mb4.7							
BRVK	**Borovoye**	**50.98**	**309**	*e*P		**P**	**12 10 31.0**	**-1.4**
BRVK				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
SHL	**Shillong**	**53.65**	**269**	*e*P		**P**	**12 10 54.8**	**+2.2**
CMAR	**Chiang Mai Arr**	**53.91**	**257**	P		**P**	**12 10 54.1**	**-0.4**
	comp=Z,1.6nm,0.7s,mb4.1,baz=39,slow=6.8,SNR=9.5							
CMAR				pP		pP	12 11 05.8	+8.1
	comp=Z,0.6nm,0.5s,baz=35,slow=7.4,SNR=2.3							
CMAR				LR		LR	12 34 47.4	
	comp=Z,36nm,18.9s,MS3.5,baz=65,slow=37							
CMAR	**Chiang Mai Arr**	**53.91**	**257**	P		**P**	**12 10 54.1**	**-0.4**
CMAR				*PP	pP		12 11 05.8	+8.1
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
CMAR				MLR	MLR			
	comp=Z,36nm,18.9s							
TAPN	**Taplejung**	**55.27**	**274**	*e*P		**P**	**12 11 05.3**	**+1.0**
ODAN	**Odare**	**55.80**	**273**	*e*P		**P**	**12 11 09.9**	**+1.7**
JIRN	**Jiri**	**56.08**	**275**	*e*P		**P**	**12 11 10.9**	**+0.8**
	comp=Z,8.5nm,0.4s,mb5.1							
GUN	**Gumba**	**56.12**	**275**	*e*P		**P**	**12 11 11.1**	**+0.7**
	comp=Z,6.5nm,0.3s,mb5.1							
RAMN	**Ramite**	**56.27**	**274**	*e*P		**P**	**12 11 12.0**	**+0.5**
	comp=Z,13nm,0.6s,mb5.1							
KKN	**Kakani**	**56.60**	**276**	*e*P		**P**	**12 11 14.0**	**+0.2**
PKI	**Pulchoki**	**56.66**	**275**	*e*P		**P**	**12 11 14.9**	**+0.6**
PKIN	**Phulchoki**	**56.66**	**275**	*e*P		**P**	**12 11 14.9**	**+0.6**
DMN	**Daman**	**56.84**	**276**	*e*P		**P**	**12 11 16.6**	**+1.1**
GKN	**Gorkha**	**56.89**	**276**	*e*P		**P**	**12 11 16.5**	**+0.6**
	comp=Z,17nm,0.5s,mb5.3							
ARCES	**ARCESS Array B**	**56.95**	**341**	P		**P**	**12 11 14.6**	**-1.1**
	comp=Z,1.0nm,0.8s,mb3.9,baz=37,slow=9.5,SNR=3.2							
ARCES	**ARCESS Array B**	**56.95**	**341**	P		**P**	**12 11 14.6**	**-1.1**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
DANN	**Dangsing**	**57.24**	**277**	*e*P		**P**	**12 11 19.3**	**+0.9**
	comp=Z,26nm,0.5s,mb5.5							
KOLN	**Koldanda**	**57.73**	**277**	*e*P		**P**	**12 11 22.7**	**+0.8**
	comp=Z,8.3nm,0.4s,mb5.1							
PYUN	**Piuthan**	**57.92**	**278**	*e*P		**P**	**12 11 24.1**	**+0.9**
	comp=Z,6.2nm,0.4s,mb5.0							
NVAR	**Mina Array Bea**	**60.69**	**64**	P		**P**	**12 11 42.1**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=305,slow=3.2,SNR=2.8							
NVAR				pP		pP	12 11 54.0	+8.6
	comp=Z,0.4nm,0.6s,baz=301,slow=7.0,SNR=4.2							
NVAR	**Mina Array Bea**	**60.69**	**64**	P		**P**	**12 11 42.1**	**-0.1**
NVAR				pP		pP	12 11 54.0	+8.6
PDAR	**Pinedale Array**	**62.92**	**55**	P		**P**	**12 11 57.5**	**+0.4**
	comp=Z,0.8nm,1.0s,mb3.8,baz=316,slow=4.1,SNR=5.4							
NOA	**NORSAR Array B**	**67.31**	**342**	P		**P**	**12 12 25.1**	**-0.3**
	comp=Z,2.0nm,0.9s,mb4.2,baz=25,slow=6.4,SNR=4.0							
NOA	**NORSAR Array B**	**67.31**	**342**	*e*P		**P**	**12 12 25.0**	**-0.3**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
WRA	**Warramunga Arr**	**70.25**	**201**	P		**P**	**12 12 43.0**	**-1.0**
	comp=Z,0.4nm,0.8s,mb3.4,baz=11,slow=5.9,SNR=3.0							
WRA				pP		pP	12 12 55.2	+7.9
	comp=Z,2.9nm,0.8s,baz=17,slow=6.6,SNR=18							
WRA	**Warramunga Arr**	**70.25**	**201**	P		**P**	**12 12 43.0**	**-1.0**
WRA				*PP	pP		12 12 55.2	+7.9
WRA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
AKASG	**Malin Array Be**	**71.08**	**327**	P		**P**	**12 12 47.9**	**-0.9**
	comp=Z,1.3nm,0.4s,mb4.2,baz=32,slow=5.7,SNR=5.1							
AKASG	**Malin Array Be**	**71.08**	**327**	P		**P**	**12 12 47.9**	**-0.9**
AKASG	**Malin Array Be**	**71.08**	**327**	P		**P**	**12 12 47.9**	**-0.9**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ASAR	**Alice Springs**	**73.93**	**200**	P		**P**	**12 13 05.5**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.5,baz=9.1,slow=5.8,SNR=12							
ASAR				pP		pP	12 13 19.0	+10
	comp=Z,1.8nm,0.9s,baz=11,slow=5.7,SNR=9.7							
ASAR	**Alice Springs**	**73.93**	**200**	P		**P**	**12 13 05.5**	**-0.5**
ASAR				*PP	pP		12 13 19.0	+10
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.9s							
STHS	**Stebnicka Huta**	**74.93**	**331**	*e*P		**P**	**12 13 12.9**	**+1.2**
	comp=Z,4.6nm,0.7s,mb4.5							
STHS	**Stebnicka Huta**	**74.93**	**331**	*e*P		**P**	**12 13 12.9**	**+1.2**
STHS				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
CLL	**Collm**	**75.70**	**336**	*i* P		**P**	**12 13 16.0**	**-0.1**
CLL				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.6							
CLL	**Collm**	**75.70**	**336**	*i* P		**P**	**12 13 16.0**	**-0.1**
	comp=Z,7.0nm,0.9s,mb4.6							
TXAR	**Lajitas Array**	**75.73**	**62**	P		**P**	**12 13 16.6**	**0.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=301,slow=4.9,SNR=18							
TXAR	**Lajitas Array**	**75.73**	**62**	P		**P**	**12 13 16.6**	**0.0**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
BRG	**Berggiesshubel**	**75.84**	**336**	*e*P		**P**	**12 13 17.2**	**+0.3**
BRG				pmax	pmax			
	comp=Z,21nm,1.8s,mb4.8							
BRG	**Berggiesshubel**	**75.84**	**336**	*e*(P)		**P**	**12 13 17.2**	**+0.3**
	comp=Z,35nm,1.8s,mb5.0							
GERES	**GERESS Array B**	**77.74**	**335**	P		**P**	**12 13 27.9**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=36,slow=5.7,SNR=5.6							
GERES	**GERESS Array B**	**77.74**	**335**	P		**P**	**12 13 27.9**	**+0.2**
GERES				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BRTR	**Keskin Array B**	**78.22**	**318**	P		**P**	**12 13 30.0**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=67,slow=4.2,SNR=8.7							
BRTR	**Keskin Array B**	**78.22**	**318**	*e*P		**P**	**12 13 31.2**	**+0.7**
BRTR				pmax	pmax			
	comp=Z,2.0nm,0.8s							

NEIC 09 12:56:09.7, 3562S×17885E, h248km, mb3.7/1, After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	**Matakaoa Point**	**1.99**	**193**	P		Pn	12 56 52.1	+0.3
MXZ				S		S	12 57 24.9	-0.2
MWZ	**Matawai**	**2.91**	**201**	P		Pn	12 57 01.4	+0.4
URZ	**Urewera**	**2.98**	**207**	P		Pn	12 57 01.2	-0.5
KNZ	**Kokohu**	**3.52**	**195**	P		Pn	12 57 07.9	+0.1
BKZ	**Black Stump Fm**	**4.01**	**207**	P		Pn	12 57 12.5	-0.9
TUVZ	**Tukino**	**4.44**	**214**	P		Pn	12 57 17.8	-0.7
FWVZ	**Far West T-bar**	**4.48**	**215**	P		Pn	12 57 18.1	-0.9
MOVZ	**Moawhango**	**4.51**	**212**	P		Pn	12 57 17.8	-1.6
MOVZ				S		S	12 58 12.4	-2.5
WNVZ	**Wahianoa**	**4.52**	**214**	P		Pn	12 57 18.5	-0.9
TSZ	**Takapari Road**	**4.99**	**206**	P		Pn	12 57 23.1	-2.0
WAZ	**Wanganui**	**5.14**	**215**	P		Pn	12 57 25.7	-1.3
BFZ	**Birch Farm**	**5.45**	**201**	P		Pn	12 57 29.6	-1.3
MRZ	**Mangatainoka R**	**5.66**	**206**	P		Pn	12 57 30.8	-2.6
KIW	**Kapiti Island**	**6.08**	**209**	P		Pn	12 57 35.8	-2.9
MTW	**Mount Morrison**	**6.12**	**204**	P		Pn	12 57 36.4	-2.8
CAW	**Cannon Point**	**6.23**	**207**	P		Pn	12 57 37.4	-3.2
MSWZ	**Moikau Station**	**6.44**	**205**	P		Pn	12 57 40.7	-2.4
MRW	**Makara Radio**	**6.48**	**209**	P		Pn	12 57 40.6	-3.0
WEL	**Wellington**	**6.50**	**208**	P		Pn	12 57 40.8	-3.1
SNZO	**South Karori**	**6.54**	**209**	P		Pn	12 57 40.9	-3.6
TCW	**Tory Channel**	**6.64**	**211**	P		Pn	12 57 42.0	-3.6
NNZ	**Nelson**	**7.05**	**216**	P		Pn	12 57 46.4	-4.4
QRZ	**Quartz Range**	**7.19**	**222**	P		Pn	12 57 48.4	-4.3
BSWZ	**Blackbirch Sta**	**7.22**	**211**	P		Pn	12 57 49.6	-3.4
THZ	**Tophouse**	**7.70**	**215**	P		Pn	12 57 55.5	-3.5
KHZ	**Kahutara**	**7.95**	**210**	P		Pn	12 57 58.7	-3.4
DSZ	**Denniston Nort**	**8.23**	**220**	P		Pn	12 58 01.9	-3.9
LTZ	**Lake Taylor**	**8.79**	**214**	P		Pn	12 58 08.7	-4.1
WVZ	**Waitaha Valley**	**9.74**	**218**	P		Pn	12 58 20.9	-3.9
ODZ	**Otahua Downs**	**11.30**	**211**	P		Pn	12 58 42.3	-2.1
WB2	**Warramunga Arr**	**41.99**	**280**	*e*P		P	13 03 31.9	-4.9
WRAB	**Tennant Creek**	**41.99**	**280**	*e*P		P	13 03 31.6	-5.3
	1.5nm,0.5s							

*NEIC **09** 13:00:39.0, 3868N×2554E, h10km, ML4.1(ISK), ML3.7(ATH), After ISK.*
*ISK **09** 13:00:40.2, 3870N×2558E, h10km, ML4.2*
*IDC **09** 13:00:41.2±1.5, 3887N×2563E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.5/23, mbtmp3.7/6, ML3.7/3, Error ellipse: s-maj=31.4km s-min=16.0km az=130.0*
*DDA **09** 13:00:42.8, 3880N×2576E, h4km±4km, Md3.9*
*ATH **09** 13:00:42.3, 3876N×2574E, h33km±2km, MD3.8/14, ML3.7*
*ISCJB **09** 13:00:43.1±0.4, 3875N±001×2569E±002, h23km±4km, mb3.5/3, Error ellipse: s-maj=2.7km s-min=2.4km az=157.1*
*THE **09** 13:00:43.9, 3876N×2579E, h23km±2km, ML3.9/2, Error ellipse: s-maj=2.6km s-min=0.6km az=97.0*
*CSEM **09** 13:00:43.2±0.2, 3874N×2571E, h25km, ML3.9/2, Error ellipse: s-maj=1.1km s-min=1.0km az=165.0*
*SOF **09** 13:01:02.6, 4037N×2510E, h2km, MD3.3*
ISC 09 13:00:42.7±0.5, 3875N±002×2568E±002, h10km±4km, n131, σ0°89/163, mb3.5/3, 10C-6D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOS	**Chios island**	**0.47**	**141**	P		**Pg**	**13 00 52.9**	**+1.1**
CHOS				S		**Sg**	**13 00 59.4**	**+1.4**
PRK	**Paraskevi**	**0.68**	**43**	P		**Pg**	**13 00 55.4**	**-0.4**
PRK				S		**Sg**	**13 01 04.5**	**-0.2**
PRK	**Paraskevi**	**0.68**	**43**	⇑*i*PN		**Pg**	**13 00 55.4**	**-0.4**
PRK				*e*SN		**Sg**	**13 01 05.1**	**+0.4**
URLA	**Izmir**	**0.81**	**118**	*i* P		**Pg**	**13 00 59.4**	**+0.9**
URLA				*i* S		**Sg**	**13 01 10.1**	**+1.1**
AYVA	**Ayvalik**	**0.96**	**54**	*i* P		**Pg**	**13 01 01.2**	**-0.1**
AYVA				*i* S		**Sg**	**13 01 13.4**	**-0.4**
AYVA	**Ayvalik**	**0.96**	**54**	*i* P

BODT	**Bodrum**	**2.12**	**142**	*e*PN		**Pn**	13 01 17.3	**-0.8**
ALN	**Alexandroupoli**	**2.16**	**7**	P		**Pn**	13 01 17.6	**-1.2**
ALN				S		**Sn**	13 01 44.8	**-0.8**
BDRM	**Kayabasi**	**2.18**	**140**	*i* P		**Pn**	13 01 19.1	**0.0**
BDRM				*i* S		**Sn**	13 01 53.4	**+7.3**
BDRM	**Kayabasi**	**2.18**	**140**	*i* P		**Pn**	13 01 19.0	**0.0**
MLSB	**Milas**	**2.20**	**131**	*e*PN		**Pn**	13 01 17.8	**-1.5**
LTK	**Loutraki**	**2.25**	**252**	P		**Pn**	13 01 20.0	**0.0**
RKY	**Sarkoy-Tekirda**	**2.25**	**30**	*e*PN		**Pn**	13 01 20.4	**+0.4**
MANT	**Manisa**	**2.27**	**96**	*i* P		**Pn**	13 01 20.2	**0.0**
MANT				*i* S		**Sn**	13 01 54.7	**+6.6**
DID	**Didima**	**2.29**	**238**	P		**Pn**	13 01 20.2	**-0.3**
THR4	**Thira Island,**	**2.30**	**186**	P		**Pn**	13 01 20.0	**-0.6**
THR5	**Thira Island,**	**2.34**	**187**	P		**Pn**	13 01 20.4	**-0.8**
KULA	**Kula-Manisa**	**2.34**	**95**	*e*PN		**Pn**	13 01 20.8	**-0.5**
THR3	**Thira Island,**	**2.35**	**186**	P		**Pn**	13 01 20.7	**-0.6**
BNT	**Bandirma**	**2.36**	**46**	*e*PN		**Pn**	13 01 20.5	**-1.0**
PLG	**Polygyros**	**2.37**	**314**	P		**Pn**	13 01 21.5	**-0.1**
PLG	**Polygyros**	**2.37**	**314**	*e*PN		**Pn**	13 01 21.6	**0.0**
THR1	**Thera Island**	**2.38**	**184**	P		**Pn**	13 01 21.2	**-0.5**
DEMI	**Demirci**	**2.39**	**82**	*i* P		**Pn**	13 01 21.6	**-0.3**
DEMI				*i* S		**Sn**	13 01 57.2	**+6.1**
RDO	**Rodhopi**	**2.40**	**357**	*e*PN		**Pn**	13 01 21.4	**-0.6**
THR6	**Thira Island,**	**2.40**	**185**	P		**Pn**	13 01 21.1	**-0.9**
DST	**Dursunbey**	**2.44**	**69**	*e*PN		**Pn**	13 01 22.5	**-0.1**
DAT	**Datca**	**2.52**	**143**	*e*PN		**Pn**	13 01 22.2	**-1.4**
KCT	**Karacabey**	**2.56**	**53**	*e*PN		**Pn**	13 01 23.9	**-0.4**
YER	**Yerkesik**	**2.61**	**127**	*e*PN		**Pn**	13 01 24.6	**-0.3**
AGG	**Agios Georgios**	**2.63**	**277**	P		**Pn**	13 01 25.9	**+0.7**
AGG				S		**Sn**	13 01 58.9	**+1.8**
TKR	**Tekirdag**	**2.65**	**32**	*e*PN		**Pn**	13 01 26.2	**+0.7**
HORT	**Hortiatis**	**2.72**	**314**	P		**Pn**	13 01 26.8	**+0.4**
LIT	**Litokhoron**	**2.82**	**300**	P		**Pn**	13 01 28.4	**+0.7**
KDZ	**Kurdzhali**	**2.91**	**356**	P		**Pn**	13 01 27.9	**-1.0**
NVR	**Nevrokopi**	**2.95**	**332**	*e*PN		**Pn**	13 01 29.4	**-0.2**
THL	**Klokotos Trika**	**2.96**	**287**	P		**Pn**	13 01 30.4	**+0.6**
THL	**Klokotos Trika**	**2.96**	**287**	*e*PN		**Pn**	13 01 30.7	**+0.9**
VLI	**Veliai**	**2.97**	**228**	*e*PN		**Pn**	13 01 30.0	**+0.1**
EVR	**Evrytania**	**3.03**	**274**	*e*PN		**Pn**	13 01 30.2	**-0.5**
DALT	**Dalyan (Mudla)**	**3.06**	**129**	*e*PN		**Pn**	13 01 30.9	**-0.2**
SLVT	**Silivri**	**3.15**	**37**	*e*PN		**Pn**	13 01 32.5	**+0.2**
GEMT	**Gemlik**	**3.19**	**57**	*e*PN		**Pn**	13 01 33.8	**+1.0**
EDRB	**Edirne**	**3.20**	**14**	*e*PN		**Pn**	13 01 32.5	**-0.5**
MMB	**Musomiste**	**3.21**	**333**	*e*P		**Pn**	13 01 32.6	**-0.5**
KNT	**Kendrikon**	**3.22**	**319**	P		**Pn**	13 01 33.6	**+0.3**
KYTH	**Kithira**	**3.24**	**221**	*e*PN		**Pn**	13 01 33.0	**-0.6**
CTKS	**Kestanelik-??a**	**3.30**	**40**	*e*PN		**Pn**	13 01 34.1	**-0.3**
GRG	**Griva**	**3.35**	**312**	P		**Pn**	13 01 35.0	**-0.1**
ITM	**Ithomi**	**3.36**	**243**	*e*PN		**Pn**	13 01 36.5	**+1.3**
CTYL	**Yal??k??y-??at**	**3.38**	**35**	*e*PN		**Pn**	13 01 36.1	**+0.6**
YLV	**Yalova**	**3.38**	**56**	*e*PN		**Pn**	13 01 36.1	**+0.7**
RLS	**Riolos of Patr**	**3.38**	**260**	*e*PN		**Pn**	13 01 35.7	**+0.2**
BGKT	**Bogazkoy**	**3.40**	**43**	*e*PN		**Pn**	13 01 36.2	**+0.5**
KARP	**Karpathos**	**3.41**	**159**	*e*PN		**Pn**	13 01 35.5	**-0.4**
ISK	**Istanbul-Kandi**	**3.48**	**47**	*e*PN		**Pn**	13 01 37.7	**+0.9**
NPS	**Neapolis**	**3.48**	**181**	*e*PN		**Pn**	13 01 36.7	**-0.2**
VAY	**Valandovo**	**3.51**	**318**	*e*Pn		**Pn**	13 01 38.4	**+1.2**
VAY	**Valandovo**	**3.51**	**318**	*e*Pn		**Pn**	13 01 38.5	**+1.2**
VAY	**Valandovo**	**3.51**	**318**	P		**Pn**	13 01 38.1	**+0.9**
IDI	**Anoyia**	**3.51**	**191**	Pn		**Pn**	13 01 36.9	**-0.4**
	3.6nm,0.3s,baz=50,slow=15,SNR=14							
IDI				Sn		**Sn**	13 02 18.2	**-0.7**
	7.3nm,0.3s,baz=278,slow=21,SNR=6.1							
IDI				Lg			13 02 38.5	
	3.4nm,0.3s,baz=288,slow=19,SNR=1.9							
CAVI	**Cavuskoy**	**3.53**	**64**	*e*PN		**Pn**	13 01 38.2	**+0.7**
VAM	**Vamos**	**3.54**	**200**	*e*PN		**Pn**	13 01 38.6	**+0.9**
ADVT	**Abdulvahap**	**3.56**	**61**	*e*PN		**Pn**	13 01 38.6	**+0.7**
KLYT	**Kilyos**	**3.59**	**45**	*e*PN		**Pn**	13 01 39.1	**+0.7**
PYL	**PYLOS**	**3.63**	**241**	P		**Pn**	13 01 40.5	**+1.6**
HRT	**Hereke**	**3.70**	**55**	*e*PN		**Pn**	13 01 40.8	**+0.8**
ELL	**Elmali**	**3.90**	**120**	*e*PN		**Pn**	13 01 42.6	**0.0**
ISP	**Isparta**	**3.90**	**102**	Pn		**Pn**	13 01 43.0	**+0.3**
PGB	**Panagyurishte**	**3.97**	**344**	P		**Pn**	13 01 43.1	**-0.5**
GULT	**Gulveren**	**4.09**	**64**	*e*PN		**Pn**	13 01 46.1	**+0.8**
KRUS	**Krusevo**	**4.29**	**309**	*e*Pn		**Pn**	13 01 50.0	**+2.0**
SZH	**Strazhica**	**4.52**	**2**	*e*P		**Pn**	13 01 50.0	**-1.1**
PRD	**Provadia**	**4.63**	**16**	*e*P		**Pn**	13 01 56.4	**+3.7**
PRD				eS		**Sn**	13 02 42.3	**-4.2**
KIZT	**Kizilcal**	**4.84**	**87**	*e*PN		**Pn**	13 01 56.0	**+0.4**
BARS	**Barje**	**5.01**	**325**	⇑*i*Pn		**Pn**	13 01 58.6	**+0.7**
KONT	**Konya--Tatoy**	**5.31**	**97**	*e*PN		**Pn**	13 02 03.3	**+1.3**
BOLS	**Boljevac**	**5.80**	**332**	⇑*i*Pn		**Pn**	13 02 08.9	**+0.2**
TIRR	**Tirgusor**	**6.06**	**19**	⇑P		**Pn**	13 02 16.3	**+4.0**
TIRR	**Tirgusor**	**6.06**	**19**	⇑*i*P		**Pn**	13 02 16.3	**+4.0**
BR131	**Keskin Array S**	**6.25**	**79**	*e*Pn		**Pn**	13 02 15.3	**+0.4**
	3.1nm,0.5s							
BR131	**Keskin Array S**	**6.25**	**79**	*e*Pn		**Pn**	13 02 15.3	**+0.3**
	3.1nm,0.5s							
BRTR	**Keskin Array B**	**6.25**	**79**	Pn		**Pn**	13 02 15.9	**+0.9**
	1.1nm,0.3s,baz=266,slow=12,SNR=24							
BRTR				Pg		**Pg**	13 02 40.4	**-2.1**
	0.2nm,0.3s,baz=260,slow=15,SNR=4.1							
BRTR				Lg			13 04 02.4	
	baz=275,slow=29,SNR=2.1							
BRTR	**Keskin Array B**	**6.25**	**79**	Pn		**Pn**	13 02 15.9	**+0.9**
BRTR				Pg		**Pg**	13 02 40.4	**-2.1**
BRTR				Lg			13 04 02.4	
BRTR	**Keskin Array B**	**6.25**	**79**	Pg		**Pg**	13 02 40.4	**-2.1**
GRUS	**Gruza**	**6.35**	**326**	⇑*i*Pn		**Pn**	13 02 17.1	**+0.8**
VOIR		**6.70**	**356**	⇑P		**Pn**	13 02 21.2	**+0.1**
VOIR		**6.70**	**356**	⇑*i*P		**Pn**	13 02 21.2	**+0.1**
TIP	**Timpagrande**	**6.97**	**276**	*e*Pn		**Pn**	13 02 26.8	**+2.1**
	13nm,1.0s							
GZR	**Gura Zlata**	**6.98**	**343**	⇑P		**Pn**	13 02 24.6	**-0.3**
GZR	**Gura Zlata**	**6.98**	**343**	⇑*i*P		**Pn**	13 02 24.6	**-0.3**
VRI	**Vrincioaia**	**7.16**	**6**	⇓P		**Pn**	13 02 29.6	**+2.3**
VRI	**Vrincioaia**	**7.16**	**6**	⇓*i*P		**Pn**	13 02 29.6	**+2.3**
DRGR		**8.33**	**346**	⇓P		**Pn**	13 02 51.4	**+8.0**
DRGR		**8.33**	**346**	⇓*i*P		**Pn**	13 02 51.4	**+8.0**
BUR08	**Bucovina Ar. S**	**8.90**	**358**	*e*Pn		**Pn**	13 02 52.5	**+1.2**
MMAI	**Mount Meron Ar**	**9.74**	**123**	Pn		**Pn**	13 03 02.0	**-0.8**
	2.1nm,0.3s,baz=308,slow=12,SNR=6.7							
KIV	**Kislovodsk**	**13.79**	**62**	Pn		**Pn**	13 03 58.1	**0.0**
	9.8nm,0.4s							
TORD	**Torodi Ar. Bea**	**33.20**	**226**	P		**P**	13 07 20.6	**+1.0**
	0.5nm,0.7s,mb3.6,baz=33,slow=8.6,SNR=3.2							
MKAR	**Makanchi Array**	**41.53**	**50**	P		**P**	13 08 29.7	**-0.3**
	0.7nm,0.7s,mb3.4,baz=280,slow=7.0,SNR=3.9							
ZALV	**Zalesovo Beam**	**42.28**	**49**	P		**P**	13 08 35.7	**-0.3**
	0.8nm,0.6s,mb3.5,baz=292,slow=7.6,SNR=2.6							
ZALV	**Zalesovo Beam**	**42.28**	**49**	P		**P**	13 08 35.7	**-0.3**

PRE 09 13:03:34.0±0.9, 2176S×3368E, h5km, ML3.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.74**	**230**	*e*P	Pn	13 04 19.3	**+0.6**
MOPA				*e*S	Sn	13 04 53.1	**+0.9**
MOPA				AML	AML	13 05 03.2	
	comp=Z,579nm,0.4s						
MSNA	**Messina**	**3.44**	**260**	*e*P	Pn	13 04 29.3	**+1.0**
MSNA				*e*S	Sn	13 05 09.0	**-0.6**
MSNA				AML	AML	13 05 22.5	
	comp=Z,102nm,0.4s						
POGA	**Pongola**	**5.90**	**198**	*e*P	Pn	13 05 02.3	**+0.3**
POGA				*e*S	Sn	13 06 06.0	**-4.0**
POGA				AML	AML	13 06 51.3	
	comp=Z,18nm,0.6s						

CSEM 09 13:20:12.1±0.5, 4287N×617W, h0km, ML3.7/1, Error ellipse: s-maj=5.3km s-min=3.4km az=160.0, After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EARI	**Arriondas**	**0.83**	**58**	Pg	Pg	13 20 26.9	**-1.0**
	11nm,0.3s,SNR=14						
EARI				Lg		13 20 39.7	
	9.7nm,0.3s,SNR=6.7						
EPON	**Pontenova**	**0.85**	**303**	Pg	Pg	13 20 27.8	**-0.6**
	SNR=7.9						
EPON				Lg		13 20 40.4	
	SNR=7.9						
ERUA	**La Rua**	**0.86**	**237**	Pg	Pg	13 20 27.3	**-1.3**
	SNR=7.9						
ERUA				Lg		13 20 40.0	
	SNR=7.9						
ECAL	**Calabor**	**1.02**	**204**	Pg	Pg	13 20 31.5	**-0.1**
	55nm,0.3s,SNR=53						
ECAL				Lg		13 20 45.7	
	56nm,0.3s,SNR=8.7						
ELOB	**Lobios**	**1.72**	**235**	Pg	Pg	13 20 41.1	**-4.0**
	9.5nm,0.3s,SNR=20						
ELOB				Lg		13 21 05.5	
	19nm,0.3s,SNR=5.0						
STS	**Santiago**	**1.75**	**271**	Pg	Pg	13 20 42.9	**-2.7**
	SNR=7.9						
STS				Lg		13 21 07.1	
	SNR=7.9						
EZAM	**Zamans**	**2.00**	**250**	Lg		13 21 13.9	
	SNR=7.9						
ELAN	**Lanestosa**	**2.04**	**79**	Pg	Pg	13 20 47.8	**-3.4**
	8.9nm,0.3s,SNR=11						
ELAN				Lg		13 21 17.1	
	22nm,0.6s,SNR=6.6						
EMAZ	**Mazaricos**	**2.06**	**273**	Pg	Pg	13 20 45.1	**-6.5**
	6.6nm,0.3s,SNR=4.7						
EMAZ				Lg		13 21 15.2	
	6.8nm,0.3s,SNR=7.1						
GUD	**Guadarrama**	**2.69**	**145**	Pn	Pn	13 20 55.5	**-1.1**
	SNR=7.9						
GUD	**Guadarrama**	**2.69**	**145**	Pg	Pg	13 21 02.3	**-1.3**
	SNR=7.9						
GUD				Lg		13 21 36.6	
	SNR=7.9						
EPLA	**Plasencia**	**2.80**	**179**	Pg	Pg	13 21 05.7	**-0.1**
	4.9nm,0.3s,SNR=5.9						
EPLA				Lg		13 21 41.7	
	16nm,0.4s,SNR=5.2						
ETOR	**Torete**	**3.70**	**122**	Pn	Pn	13 21 08.7	**-1.7**
	SNR=7.9						

*MOS **09** 13:35:47.5±0.8, 5541N×11026E, h7km, mb4.2/1, Error ellipse: s-maj=32.7km s-min=12.0km az=57.6*

BYKL 09 13:35:48.5±0.3, 5534N×11031E, 5C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.62**	**315**	⇓*i*Pg	Pg	13 36 00.5	**+0.2**
NIZ				*e*Sg	Sg	13 36 09.5	**+1.2**
NIZ				Pmax			
	34nm,0.3s						
NIZ				Smax			
	195nm,1.0s						
YLYR	**Ulyunkhan**	**0.68**	**133**	⇓*i*Pg	Pg	13 36 00.4	**-1.0**
YLYR				*e*Sg	Sg	13 36 09.7	**-0.4**
YLYR				Pmax			
	62nm,0.8s						
YLYR				Smax			
	180nm,0.8s						
KMO	**Kumora**	**0.75**	**42**	*e*PG	Pg	13 36 01.8	**-1.0**
KMO				*e*		13 36 11.1	
KMO				pmax	pmax		
	comp=Z,232nm,0.4s						
KMO				smax			
	comp=E,325nm,1.3s						
KMO	**Kumora**	**0.75**	**42**	⇑*i*Pg	Pg	13 36 01.9	**-0.9**
	comp=E,23nm,0.6s						
KMO				⇑*i*Pg	Pg	13 36 01.9	**-0.9**
	comp=E,38nm,0.6s						
KMO				⇑*i*Pg	Pg	13 36 01.9	**-0.9**
	comp=E,206nm,0.6s						
KMO				*e*Pb	Pb	13 36 03.9	**-0.4**
KMO				*e*Sg	Sg	13 36 11.8	**-0.6**
KMO				max			
	comp=E,116nm,0.3s						
KMO				Smax			
	comp=E,412nm,1.5s						
YOA	**Uoyan**	**1.13**	**45**	*e*PG	Pg	13 36 09.0	**-1.1**
YOA				*i*		13 36 24.8	
YOA				pmax	pmax		
	comp=Z,219nm,0.3s						
YOA				smax			
	comp=E,700nm,0.7s						
YOA	**Uoyan**	**1.13**	**45**	⇓*i*Pg	Pg	13 36 09.1	**-1.0**
YOA				*e*Sg	Sg	13 36 25.1	**+0.4**
YOA				Pmax			
	comp=E,205nm,0.6s						
YOA				Smax			
	comp=E,666nm,1.2s						
SYVR	**Suvo**	**1.69**	**186**	*e*PN	Pn	13 36 19.2	**-0.1**
SYVR				*e*		13 36 41.8	
SYVR				pmax	pmax		
	comp=Z,40nm,0.6s						
SYVR				smax			
	comp=E,311nm,1.1s						
SYVR	**Suvo**	**1.69**	**186**	*e*Pn	Pn	13 36 18.8	**-0.5**
SYVR				⇑*i*Pg	Pg	13 36 19.8	**-1.2**
SYVR				*e*		13 36 21.7	
SYVR				*e*Sg	Sg	13 36 43.1	**+0.2**
SYVR				max			
	comp=E,27nm,0.9s						
SYVR				Smax			
	comp=E,300nm,1.1s						
UKT	**Uakit**	**1.90**	**84**	*e*PN	Pn	13 36 21.6	**-0.5**
UKT				*e*		13 36 45.7	
UKT				pmax	pmax		
	comp=Z,96nm,0.5s						
UKT				smax			
	comp=N,152nm,0.4s						
UKT	**Uakit**	**1.90**	**84**	⇑*i*Pg	Pg	13 36 21.7	**-3.1**
UKT				*e*		13 36 24.9	
UKT				*e*Sg	Sg	13 36 47.3	**-2.1**
UKT				Pmax			
	comp=N,50nm,1.1s						
UKT				Smax			
	comp=N,181nm,1.2s						
SVKR	**Severomuysk**	**2.00**	**66**	*e*Pg	Pg	13 36 23.5	**-3.2**
SVKR				*e*Sg	Sg	13 36 50.0	**-2.6**
SVKR				Pmax			
	comp=N,107nm,0.6s						
SVKR				Smax			
	comp=N,699nm,0.9s						
MXMB	**Maximikha**	**2.27**	**204**	*e*Pg	Pg	13 36 29.5	**-2.5**
MXMB				*e*Sg	Sg	13 37 00.2	**-1.3**
MXMB				Pmax			
	comp=N,26nm,0.6s						
MXMB				Smax			
	comp=N,606nm,0.8s						
OGRR	**Ongureny**	**2.32**	**224**	*e*PN	Pn	13 36 28.8	**+0.9**
OGRR				*e*		13 36 31.5	
OGRR				*e*		13 37 00.4	
OGRR				pmax	pmax		
	comp=Z,36nm,0.4s						
OGRR				smax			
	comp=E,204nm,0.8s						
OGRR	**Ongureny**	**2.32**	**224**	*e*Pn	Pn	13 36 28.7	**+0.8**
OGRR				*e*Pg	Pg	13 36 30.1	**-2.9**
OGRR				*e*		13 36 32.1	
OGRR				*e*Sg	Sg	13 37 00.5	**-2.6**
OGRR				max			
	comp=E,36nm,0.5s						
OGRR				Smax			
	comp=E,206nm,0.8s						
BOD	**Bodaibo**	**3.22**	**38**	*e*	Pn	13 36 42.8	**+2.6**
BOD				*e*Pg	Pg	13 36 45.5	**-4.6**
BOD				*e*Sn	Sn	13 37 17.6	**-1.6**
BOD				*e*Sg	Sg	13 37 27.4	**-4.4**
BOD				Pmax			
	comp=E,20nm,0.4s						
BOD				Smax			
	comp=E,59nm,1.0s						
NLYR	**Nelyaty**	**3.25**	**67**	*e*PN	Pn	13 36 40.5	**-0.1**
NLYR				*e*S	Sn	13 37 27.4	**+7.5**
NLYR				smax			
	comp=E,162nm,1.0s						
ZRHB	**Zarechye**	**3.36**	**215**	*e*	Pg	13 36 55.2	**+2.4**
ZRHB				*e*Sg	Sg	13 37 33.6	**-2.7**
ZRHB				Smax			
	comp=E,193nm,1.5s						
TRG	**Tyrgan**	**3.48**	**224**	*e*Pn	Pn	13 36 45.0	**+1.1**
TRG				*e*		13 36 47.3	
TRG				*e*		13 37 26.9	
TRG				*e*Sg	Sg	13 37 35.3	**-5.0**
TRG				max			
	comp=E,16nm,0.4s						
TRG				Smax			
	comp=E,68nm,0.8s						
UUDB	**Ulan-Yde**	**3.82**	**205**	*e*Pg	Pg	13 36 56.7	**-5.0**
UUDB				*e*Sg	Sg	13 37 47.1	**-4.0**
UUDB				Pmax			
	comp=E,17nm,0.9s						
UUDB				Smax			
	comp=E,57nm,0.9s						
FFNB	**Fofonovo**	**3.92**	**214**	*e*Pn	Pn	13 36 50.0	**+0.2**
FFNB				*e*		13 37 00.0	
FFNB				*e*		13 37 27.0	
FFNB				*e*Sg	Sg	13 37 48.3	**-5.9**
FFNB				max			
	comp=E,14nm,0.3s						
FFNB				Smax			
	comp=E,137nm,0.7s						
KAB	**Kabansk**	**3.95**	**215**	*e*Sg	Sg	13 37 52.7	**-2.5**
KAB				Smax			
	comp=E,208nm,1.3s						
HRMR	**Khuramsha**	**4.22**	**210**	*e*Pn	Pn	13 36 55.4	**+1.4**
HRMR				*e*Pg	Pg	13 37 04.5	**-4.9**
HRMR				*e*		13 37 31.4	
HRMR				*e*Sg	Sg	13 37 58.6	**-5.5**
HRMR				Pmax			
	comp=E,10.0nm,0.7s						
HRMR				Smax			
	comp=E,217nm,0.7s						
CRS	**Chara**	**4.72**	**67**	*e*Pn	Pn	13 37 01.5	**+0.7**
CRS				Pg	Pg	13 37 14.0	**-4.9**
CRS				*e*		13 37 45.9	
CRS				*e*Sg	Sg	13 38 14.1	**-5.9**
CRS				Pmax			
	comp=E,42nm,1.1s						
CRS				Smax			
	comp=E,60nm,1.1s						
LSTR	**Listvyanka**	**4.77**	**225**	*e*Sg	Sg	13 38 16.1	**-5.4**
LSTR				*e*		13 38 18.4	
LSTR				max			
	comp=E,48nm,1.3s						
TLY	**Talaya**	**5.41**	**230**	*e*PN	Pn	13 37 09.5	**-0.8**
TLY				*e*		13 37 25.0	
TLY				*e*		13 38 34.3	
TLY				pmax	pmax		
	comp=Z,11nm,0.7s						
TLY				smax			
	comp=N,52nm,1.0s						
TLY	**Talaya**	**5.41**	**230**	*e*	Sn	13 38 11.6	**-1.6**
TLY				*e*Sg	Sg	13 38 34.1	**-8.0**
TLY				Smax			
	comp=N,52nm,1.0s						
TUP	**Tupik**	**5.64**	**95**	⇓*i*Pn	Pn	13 37 12.8	**-0.7**
TUP				⇓*i*Pg	Pg	13 37 28.8	**-7.7**
TUP				*e*Sn	Sn	13 38 18.2	**-0.7**
TUP				*e*Sg	Sg	13 38 43.7	**-5.9**
TUP				*e*		13 38 54.5	
TUP				Pmax			
	comp=N,4.0nm,0.6s						
TUP				Smax			
	comp=N,47nm,1.2s						
ARS	**Arshan**	**5.81**	**237**	*e*Pn	Pn	13 37 17.9	**+2.1**
ARS				*e*		13 37 24.5	
ARS				*e*		13 37 36.4	
ARS				*e*Sn	Sn	13 38 20.1	**-2.9**
ARS				*e*Sg	Sg	13 38 47.7	**-7.2**
ARS				max			
	comp=N,26nm,0.6s						
ARS				Smax			
	comp=N,127nm,0.7s						
ZAK	**Zakamensk**	**6.54**	**223**	*e*Pn	Pn	13 37 27.1	**+1.3**
ZAK				*e*		13 38 47.2	
ZAK				*e*Sg	Sg	13 39 10.1	**-8.2**
ZAK				max			
	comp=N,2.0nm,1.2s						
ZAK				Smax			
	comp=N,25nm,1.2s						
MOY	**Mondy**	**6.66**	**240**	*e*PN	Pn	13 37 29.4	**+1.9**
MOY				*e*		13 37 50.7	
MOY				*e*		13 39 16.6	
MOY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MOY				smax			
	comp=N,31nm,1.4s						
MOY	**Mondy**	**6.66**	**240**	*i* Pn	Pn	13 37 29.4	**+1.9**
MOY				*e*		13 37 39.3	
MOY				*e*Sn	Sn	13 38 40.9	**-3.2**
MOY				*e*Sg	Sg	13 39 13.8	**-8.6**
MOY				max			
	comp=N,13nm,1.1s						
MOY				Smax			
	comp=N,21nm,1.0s						
ORL	**Orlik**	**6.80**	**250**	*e*PN	Pn	13 37 29.7	**+0.3**
ORL				*e*S	Sg	13 39 19.4	**-7.4**
ORL				smax			
	comp=N,52nm,1.1s						
ORL	**Orlik**	**6.80**	**250**	*e*Pn	Pn	13 37 30.5	**+1.1**
ORL				*i*		13 38 47.6	
ORL				*e*Sg	Sg	13 39 18.6	**-8.2**
ORL				max			
	comp=N,8.0nm,1.1s						
ORL				Smax			
	comp=N,51nm,1.1s						
IENR	**Iengra**	**8.25**	**78**	*e*Sg	Sg	13 40 05.5	**-7.8**
TDJR	**Todzha**	**8.90**	**257**	*e*Sg	Sg	13 40 24.2	**-10**

*IDC **09** 14:08:05.3±1.2, 403S×13369E, h0km, mb4.0/5, mb1 4.2/7, mb1mx4.0/13, mbtmp4.1/7, ML4.1/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/26, Error ellipse: s-maj=47.2km s-min=19.7km az=64.0*

*NEIC **09** 14:08:10.4±0.6, 437S×13332E, h35km, mb4.2/4, Error ellipse: s-maj=20.9km s-min=9.1km az=74.0*

*ISCJB **09** 14:08:14.1±3.1, 453S±009×1334E±01, h91km±30km, mb4.0/6, Error ellipse: s-maj=25.9km s-min=11.5km az=157.4*

ISC 09 14:08:11.9±2.0, 444S±008×1335E±01, h54km±19km, n17, σ1ᵗ19/17, mb4.1/6, MS3.4/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.29**	**187**	*e*P	Px	14 10 02.5	
	14nm,0.4s						
BATI	**Baumata**	**11.34**	**239**	Pn	**Pn**	**14 10 53.5**	**+2.2**
	2.0nm,0.3s,baz=56,slow=3.6,SNR=3.9						
WRAB	**Tennant Creek**	**15.42**	**177**	*e*Pn	**Pn**	**14 11 47.0**	**+0.9**
	6.9nm,0.8s						
WRA	**Warramunga Arr**	**15.43**	**177**	Pn	**Pn**	**14 11 45.9**	**-0.4**
	0.5nm,0.3s,baz=356,slow=13,SNR=26						
WRA				Sn	**Sn**	**14 14 35.2**	**-1.0**
	0.3nm,0.3s,baz=359,slow=22,SNR=6.0						
WB2	**Warramunga Arr**	**15.43**	**177**	*e*P	**Pn**	**14 11 45.8**	**-0.5**
WB2				*e*

ellipse: s-maj=139.2km s-min=35.7km az=61.0
ISC 09 14:25:03.8±6.8, 66S±01×1302E±02, h8km±49km, n12, σ0§40/12, mb3.8/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.43**	**160**	*e*P	Px	14 26 34.0	
	38nm,0.6s						
KAKA				*e*S	Sx	14 27 40.3	
KAKA	**Kakadu**	**6.43**	**160**	*e*Pn	Px	14 26 34.1	
KAKA				*e*Sn	Sx	14 27 37.2	
WRAB	**Tennant Creek**	**13.82**	**163**	*e*Pn	**Pn**	**14 28 20.1**	**-0.1**
	4.0nm,0.4s						
WRA	**Warramunga Arr**	**13.83**	**163**	P	**Pn**	**14 28 20.4**	**+0.1**
	2.0nm,0.3s,baz=341,slow=13,SNR=86						
WRA				S	**Sn**	**14 30 43.8**	**-10**
	0.8nm,0.3s,baz=341,slow=22,SNR=5.5						
WB2	**Warramunga Arr**	**13.83**	**163**	*e*P	**Pn**	**14 28 20.0**	**-0.3**
WB2				*e*S	**Sn**	**14 30 43.6**	**-11**
DAV	**Davao City (W)**	**14.37**	**341**	Pn	**Pn**	**14 28 27.5**	**-0.1**
	164nm,0.4s						
ASAR	**Alice Springs**	**17.31**	**168**	P	**Pn**	**14 29 06.8**	**+0.9**
	1.0nm,0.3s,baz=336,slow=8.3,SNR=72						
ASAR				S	**Sn**	**14 32 07.8**	**-11**
	0.3nm,0.3s,baz=349,slow=26,SNR=5.8						
MBWA	**Marble Bar**	**17.63**	**214**	*e*Pn	**Pn**	**14 29 09.8**	**-0.2**
	2.5nm,0.7s						
STKA	**Stephens Creek**	**27.28**	**158**	*e*P	**P**	**14 30 48.5**	**-0.3**
	0.6nm,0.3s,mb3.6						
STKA	**Stephens Creek**	**27.28**	**158**	P	**P**	**14 30 48.0**	**-0.8**
	0.8nm,0.3s,mb3.7,baz=330,slow=9.4,SNR=8.3						
MKAR	**Makanchi Array**	**68.02**	**327**	P	**P**	**14 36 03.9**	**+0.2**
	0.6nm,0.4s,mb4.0,baz=121,slow=7.2,SNR=9.8						
SWET	**Sewanee**	**136.30**	**44**	*e*PKPdf	PKPdf	14 44 25.5	-1.0

*ISCJB **09** 14:55:58.2±0.4, 8.59S±0.05×32.22E±0.07, h10km, mb4.0/10, MS3.4/4, Error ellipse: s-maj=10.7km s-min=7.0km az=11.5*
*IDC **09** 14:55:58.2±0.8, 8.57S×32.40E, h0km, mb4.0/10, mb1 4.3/13, mb1mx4.1/26, mbtmp4.2/13, ML2.7/1, MS3.5/7, Ms1 3.5/7, ms1mx3.2/23, Error ellipse: s-maj=23.0km s-min=17.8km az=122.0*
*NEIC **09** 14:56:00.1±0.4, 8.55S×32.26E, h10km, mb4.6/4, Error ellipse: s-maj=10.7km s-min=8.8km az=89.0*
*PRE **09** 14:56:12.0±2.8, 9.59S×31.71E, h10km, mb4.3*
ISC 09 14:56:00.2±0.4, 8.56S±0.05×32.24E±0.07, h10km, n31, σ1§14/44, mb4.0/11, MS3.4/4, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**7.76**	**210**	Pn	**Pn**	**14 57 54.7**	**+1.4**
	14nm,0.3s,baz=35,slow=12,SNR=75						
LSZ				Sn	**Sn**	**14 59 19.1**	**-2.3**
	28nm,0.3s,baz=330,slow=22,SNR=4.8						
LSZ				Lg		15 00 04.3	
	47nm,0.3s,baz=136,slow=19,SNR=4.8						
LSZ				LR	LR	15 01 14.1	
	comp=Z,274nm,19.7s,baz=74,slow=40						
LSZ	**Lusaka**	**7.76**	**210**	*e*Pn	**Pn**	**14 57 54.4**	**+1.1**
LSZ				Pn	**Pn**	**14 57 54.7**	**+1.4**
LSZ				*e*Sn	**Sn**	**14 59 14.7**	**-6.6**
LSZ				Sn	**Sn**	**14 59 19.1**	**-2.3**
LSZ				Lg		15 00 04.3	
LSZ				LR	LR	15 01 14.1	
MATP	**Matopo**	**12.34**	**197**	Pn	**Pn**	**14 58 55.2**	**-0.8**
	5.6nm,0.3s,baz=17,slow=14,SNR=144						
MATP				Sn	**Sn**	**15 01 07.4**	**-6.3**
	4.3nm,0.3s,baz=46,slow=21,SNR=2.9						
MATP				Lg		15 02 28.4	
	3.2nm,0.3s,baz=108,slow=21,SNR=6.9						
MATP				LR	LR	15 03 49.1	
	comp=Z,294nm,21.7s,baz=277,slow=38						
MOPA	**Mopani**	**14.89**	**183**	*e*P	**Pn**	**14 59 30.6**	**-0.3**
MOPA				AMb	AMB	14 59 41.1	
	comp=Z,181nm,1.9s						
MOPA				*e*S	**Sn**	**15 01 56.5**	**-20**
LBTB	**Lobatse**	**17.55**	**200**	P	**Pn**	**15 00 01.3**	**-3.7**
	comp=Z,1.0nm,0.3s,baz=32,slow=11,SNR=12						
LBTB				S	**Sn**	**15 03 09.9**	**-11**
	comp=Z,1.6nm,0.3s,baz=102,slow=18,SNR=3.2						
LBTB				Lg		15 05 07.5	
	comp=Z,0.6nm,0.3s,baz=132,slow=21,SNR=4.0						
LBTB				LR	LR	15 06 56.3	
	comp=Z,230nm,21.0s,baz=261,slow=37						
LBTB	**Lobatse**	**17.55**	**200**	*e*Pn	**Pn**	**15 00 01.2**	**-3.8**
	comp=Z,25nm,0.8s						
LBTB				*e*Sn	**Sn**	**15 03 09.8**	**-11**
LBTB	**Lobatse**	**17.55**	**200**	*e*P	**Pn**	**15 00 05.0**	**0.0**
LBTB				AMb	AMB	15 00 29.0	
	comp=Z,28nm,0.9s						
LBTB				*e*S	Sn	15 02 57.2	-23
OPO	**Ambohidratompo**	**17.59**	**126**	P	**Pn**	**15 00 07.3**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=300,slow=7.5,SNR=4.2						
OPO				S	**Sn**	**15 03 37.0**	**+15**
	comp=Z,0.1nm,0.3s,baz=74,slow=22,SNR=2.1						
TSUM	**Tsumeb**	**17.72**	**232**	P	**Pn**	**15 00 07.2**	**0.0**
	comp=Z,1.5nm,0.3s,baz=36,slow=10,SNR=16						
TSUM				S	**Sn**	**15 03 15.3**	**-9.4**
	comp=Z,1.2nm,0.3s,baz=275,slow=23,SNR=4.2						
TSUM				Lg		15 05 23.4	
	comp=Z,0.6nm,0.3s,baz=312,slow=15,SNR=3.0						
TSUM	**Tsumeb**	**17.72**	**232**	P	**Pn**	**15 00 07.2**	**0.0**
TSUM				*e*Sn	**Sn**	**15 03 12.4**	**-12**
TSUM				S	**Sn**	**15 03 15.3**	**-9.5**
TSUM				Lg		15 05 23.4	
ABPO	**Ambohimpanom**	**17.87**	**127**	*e*Pn	**Pn**	**15 00 10.3**	**+1.3**
	comp=Z,4.0nm,0.8s						
ERPM	**east rand prop**	**18.09**	**192**	*e*P	**Pn**	**15 00 11.9**	**+0.2**
ERPM				AMb	AMB	15 00 12.5	
	comp=Z,15nm,1.2s						
POGA	**Pongola**	**18.72**	**182**	*e*P	**Pn**	**15 00 22.4**	**+3.1**
POGA				AMb	AMB	15 00 24.4	
	comp=Z,39nm,1.7s						
BOSA	**Boshof**	**21.00**	**197**	P	**P**	**15 00 44.3**	**+0.4**
	comp=Z,6.4nm,0.6s,mb4.1,baz=18,slow=10.0,SNR=12						
BOSA				S	**S**	**15 04 28.3**	**-10**
	comp=Z,7.1nm,0.8s,baz=275,slow=22,SNR=2.3						
BOSA	**Boshof**	**21.00**	**197**	*e*P	**P**	**15 00 43.2**	**-0.7**
	comp=Z,51nm,1.3s,mb4.7						
BOSA				*e*S	**S**	**15 04 28.0**	**-10**
BOSA	**Boshof**	**21.00**	**197**	*e*P	**P**	**15 00 44.6**	**+0.6**
BOSA				AMb	AMB	15 00 59.0	
	comp=Z,31nm,1.7s,mb4.4						
SUR	**Sutherland**	**25.97**	**203**	P	**P**	**15 01 36.4**	**+3.4**
	comp=Z,7.7nm,0.7s,mb4.3,baz=37,slow=11,SNR=5.0						
SUR	**Sutherland**	**25.97**	**203**	*e*P	**P**	**15 01 33.3**	**+0.2**
	comp=Z,120nm,1.6s,mb5.2						
TOA0	**Torodi Ar. Sit**	**37.23**	**305**	*e*P	**P**	**15 03 12.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**37.23**	**305**	P	**P**	**15 03 12.4**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.2,baz=108,slow=7.8,SNR=20						
TORD				LR	LR	15 18 11.6	
	comp=Z,37nm,19.2s,MS3.2,baz=145,slow=36						
DBIC	**Dimbokro**	**39.96**	**291**	P	**P**	**15 03 36.0**	**+0.7**
	comp=Z,3.9nm,0.9s,mb4.1,baz=102,slow=5.8,SNR=4.4						
DBIC				LR	LR	15 19 14.1	
	comp=Z,54nm,20.1s,MS3.4,baz=98,slow=35						
TAM	**Tamanrasset**	**40.69**	**320**	P	**P**	**15 03 42.2**	**+1.1**
KEST	**Kesra**	**49.06**	**335**	LR	LR	15 24 54.8	
	comp=Z,32nm,18.8s,MS3.3,baz=210,slow=35						
ESDC	**Sonseca Array**	**58.54**	**328**	P	**P**	**15 05 58.0**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.8,baz=138,slow=8.7,SNR=6.0						
GERES	**GERESS Array B**	**59.44**	**346**	P	**P**	**15 06 03.1**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=163,slow=9.8,SNR=4.4						
GERES				LR	LR	15 35 17.8	
	comp=Z,57nm,18.0s,MS3.8,baz=288,slow=40						
AKTK	**Aktyubinsk**	**62.88**	**18**	P	**P**	**15 06 24.9**	**-1.4**
AKTO	**Aktyubinsk**	**62.88**	**18**	P	**P**	**15 06 24.9**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=258,slow=8.1,SNR=3.6						
BVAR	**Borovoye Array**	**69.39**	**23**	P	**P**	**15 07 08.1**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=211,slow=8.0,SNR=4.2						
MKAR	**Makanchi Array**	**70.80**	**34**	P	**P**	**15 07 15.4**	**-1.4**
	comp=Z,1.7nm,0.7s,mb4.1,baz=231,slow=6.0,SNR=11						
CMAR	**Chiang Mai Arr**	**71.05**	**67**	P	**P**	**15 07 18.8**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=225,slow=34,SNR=4.8						
ASAR	**Alice Springs**	**97.14**	**115**	P	**P**	**15 09 31.4**	**-2.1**
	comp=Z,0.5nm,1.1s,mb3.9,baz=249,slow=3.9,SNR=2.9						

IDC 09 16:04:01.2±3.6, 767S×12375E, h194km±49km, mb3.2/1, mb1 3.2/3, mb1mx2.9/15, mbtmp3.0/3, Error ellipse: s-maj=147.2km s-min=33.3km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.52**	**182**	P	Pn	16 04 46.9	+1.9
	83nm,0.3s,baz=31,slow=1.9,SNR=189						
BATI				S	Sn	16 05 19.4	+0.1
	54nm,0.3s,baz=34,slow=17,SNR=12						
WRA	**Warramunga Arr**	**15.95**	**141**	P	Pn	16 07 34.0	-1.3
	0.5nm,0.3s,baz=314,slow=13,SNR=30						
WRA				S	S	16 10 24.4	-7.7
	0.1nm,0.3s,baz=307,slow=22,SNR=4.2						
ASAR	**Alice Springs**	**18.66**	**150**	P	P	16 08 04.5	-0.1
	0.2nm,0.3s,baz=331,slow=13,SNR=19						
ASAR				S	S	16 11 28.8	+2.0
	0.0nm,0.3s,baz=325,slow=22,SNR=2.7						
STKA	**Stephens Creek**	**29.27**	**148**	P	P	16 09 44.8	-0.5
	0.3nm,0.3s,baz=336,slow=12,SNR=6.6						

*ISCJB **09** 16:23:15.3±3.0, 185N±02×146.1E±04, h110km±26km, mb3.8/8, Error ellipse: s-maj=71.3km s-min=21.3km az=18.6*
*IDC **09** 16:23:15.6±3.9, 1.850N×146.09E, h100km±35km, mb3.6/7, mb1 3.9/8, mb1mx3.5/20, mbtmp3.6/8, MS2.9/1, Ms1 2.9/1, ms1mx1.7/25, Error ellipse: s-maj=64.2km s-min=22.1km az=110.0*
*NEIC **09** 16:23:15.8±1.9, 1.848N×146.11E, h102km±17km, mb3.9/1, Error ellipse: s-maj=44.3km s-min=13.7km az=110.0*
ISC 09 16:23:16.0±2.7, 1.85N±02×146.1E±04, h103km±23km, n12, σ0§31/13, mb3.8/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.01**	**193**	P	**Pn**	**16 24 28.6**	**-0.3**
	7.5nm,0.3s,baz=198,slow=20,SNR=11						
GUMO				S	**Sn**	**16 25 26.0**	**+0.3**
	12nm,0.3s,baz=1.1,slow=22,SNR=3.3						
GUMO	**Guam**	**5.01**	**193**	P	**Pn**	**16 24 28.6**	**-0.3**
GUMO				S	**Sn**	**16 25 26.0**	**+0.3**
JOW	**Kunigami**	**18.37**	**300**	LR	LR	16 33 25.9	
	comp=Z,40nm,21.9s,baz=116,slow=33						
WRAB	**Tennant Creek**	**39.88**	**197**	*e*P	**P**	**16 30 39.9**	**0.0**
	0.9nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**39.89**	**197**	P	**P**	**16 30 40.0**	**+0.1**
	0.8nm,0.7s,mb3.7,baz=17,slow=8.2,SNR=15						
ASAR	**Alice Springs**	**43.55**	**196**	P	**P**	**16 31 09.7**	**0.0**
	0.1nm,0.3s,mb3.0,baz=19,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**50.27**	**185**	P	**P**	**16 32 01.4**	**-0.5**
	0.5nm,0.4s,mb3.8,baz=343,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**78.01**	**28**	P	**P**	**16 35 02.5**	**-0.3**
	2.3nm,0.7s,mb4.0,baz=280,slow=6.2,SNR=4.2						
YKA	**Yellowknife Ar**	**78.01**	**28**	P	**P**	**16 35 02.5**	**-0.3**
ARCES	**ARCESS Array B**	**82.78**	**342**	P	**P**	**16 35 28.4**	**+0.2**
	2.1nm,0.8s,mb4.0,baz=38,slow=8.0,SNR=4.9						
NVAR	**Mina Array Bea**	**83.00**	**52**	P	**P**	**16 35 30.6**	**+0.6**
	1.3nm,0.6s,mb3.9,baz=268,slow=5.5,SNR=8.5						
PDAR	**Pinedale Array**	**87.73**	**46**	P	**P**	**16 35 53.3**	**-0.1**
	0.4nm,0.7s,mb3.6,baz=259,slow=2.4,SNR=4.4						

*NIED **09** 16:47:00, 3.530N×131.90E, h5km, Mw4.2 Best double couple: M0 2.16000×10^15 NP1:φs 346.00000°, δ79.00000°, λ42.00000°. NP2:φs 247.00000°, δ49.00000°, λ165.00000°.*
*BJI **09** 16:47:23.1, 3.471N×132.17E, h18km, mB4.9, mb4.5, Ms4.1, Msz3.9*
*IDC **09** 16:47:24.3±1.0, 3.535N×132.13E, h0km, mb3.9/12, mb1 4.1/13, mb1mx4.0/22, mbtmp3.9/13, ML3.4/1, MS3.3/10, Ms1 3.3/10, ms1mx3.1/31, Error ellipse: s-maj=42.7km s-min=15.2km az=65.0*
*NEIC **09** 16:47:26.9, 3.527N×131.92E, h18km, mb4.4/5, After JMA.*
NEIC Recorded [2 JMA] in Hiroshima and Shimane; [1 JMA] in Tottori and Yamaguchi Prefectures, Honshu. Also recorded [1 JMA] in Ehime Prefecture, Shikoku.
*JMA **09** 16:47:26.9, 3.527N×131.92E, h18km±1km, M4.3*
JMA Felt II J1.
*ISCJB **09** 16:47:27.2±0.7, 3.521N±004×131.91E±004, h26km±6km, mb4.0/20, MS3.6/8, Error ellipse: s-maj=7.4km s-min=5.8km az=166.7*
*MOS **09** 16:47:27.7±1.6, 35.11N×131.95E, h33km, mb4.3/13, Error ellipse: s-maj=14.5km s-min=9.1km az=125.1*
ISC 09 16:47:27.7±0.9, 3521N±004×13194E±004, h18km±6km, n61, σ1§11/65, mb4.0/20, MS3.6/8, 2C-6D, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGT	**Gotsu**	**0.37**	**119**	⇓P	**Pg**	**16 47 35.2**	**-0.2**
JGT				S	**Sg**	**16 47 41.1**	**+1.3**
JHT	**Toyohira**	**0.67**	**144**	⇓P	**Pb**	**16 47 40.7**	**-0.2**
JHT				S	**Sb**	**16 47 49.8**	**-0.1**
JHIK	**Hikimi**	**0.68**	**181**	⇑P	**Pb**	**16 47 40.6**	**-0.4**
JHIK				S	**Sb**	**16 47 50.4**	**+0.4**
JNM	**Ikuma**	**0.94**	**72**	⇓P	**Pb**	**16 47 44.3**	**-1.1**
JNM				*e*S	**Sb**	**16 47 56.8**	**-0.7**
JHS	**Saijyo**	**0.99**	**102**	⇓P	**Pb**	**16 47 45.5**	**-0.8**
JHS				S	**Sb**	**16 47 58.3**	**-0.7**
KSRS	**Korea Array**	**3.94**	**306**	Pn	**Pn**	**16 48 26.6**	**-0.7**
	2.2nm,0.3s,baz=124,slow=14,SNR=23						
KSRS				Sn	**Sn**	**16 49 12.4**	**-0.7**
	10nm,0.3s,baz=125,slow=24,SNR=11						
KSRS				LR	LR	16 50 10.3	
	comp=Z,407nm,19.2s,baz=253,slow=41						
KSRS	**Korea Array**	**3.94**	**306**	P	**Pn**	**16 48 26.6**	**-0.7**
KSRS						16 49 12.4	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,10.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,407nm,19.2s						
KS15	**Wonju Array Si**	**3.96**	**305**	*e*Pn	**Pn**	**16 48 26.5**	**-1.1**
MAJO	**Matsushiro**	**5.26**	**74**	*e*Pn	**Pn**	**16 48 46.6**	**+1.2**
	comp=Z,35nm,0.8s						
MAJO	**Matsushiro**	**5.26**	**74**	*e*P	**Pn**	**16 48 46.6**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,35nm,0.8s						
MAT	**Matsushiro**	**5.26**	**74**	P	**Pn**	**16 48 47.2**	**+1.8**
MAT				*e*S	**Sn**	**16 49 49.9**	**+4.3**
MJAR	**Matsushiro Arr**	**5.26**	**74**	Pn	**Pn**	**16 48 46.3**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=274,slow=16,SNR=13						
MJAR				LR	LR	16 50 39.5	
	comp=Z,94nm,21.7s,baz=245,slow=38						
MJAR	**Matsushiro Arr**	**5.26**	**74**	P	**Pn**	**16 48 46.3**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,94nm,21.7s						
JOW	**Kunigami**	**8.92**	**202**	LR	LR	16 53 13.3	
	comp=Z,105nm,18.6s,baz=303,slow=38						
CN2	**Changchun**	**9.94**	**332**	⇑P	**Pn**	**16 49 57.0**	**+7.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,12.0s						
CN2				LR	LR		
	comp=E,700nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,9.0s						
ERM	**Erimo**	**11.09**	**49**	⇓*e*P	**Pn**	**16 49 56.3**	**-9.1**
CBIJ	**Chichi jima**	**11.93**	**130**	LR	LR	16 54 17.2	
	comp=Z,140nm,18.6s,baz=108,slow=35						
ASAJ	**Asahikawa**	**12.10**	**39**	LR	LR	16 54 25.3	
	comp=Z,184nm,19.5s,baz=309,slow=35						
TATO	**Taipei**	**13.62**	**224**	*e*Pn	**Pn**	**16 50 37.1**	**-2.9**
	comp=Z,14nm,0.5s						
YHNB	**Yeheng**	**13.92**	**224**	*e*Pn	**Pn**	**16 50 53.5**	**+9.4**
	comp=Z,38nm,1.0s						
KLR	**Kul'dur**	**14.01**	**359**	*e*P	**Pn**	**16 50 49.0**	**+3.8**
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
HIA	**Hailar**	**16.67**	**331**	*e*Pn	**Pn**	**16 51 24.1**	**+3.9**
	comp=Z,16nm,1.7s						
HIA	**Hailar**	**16.67**	**331**	*e*P	**Pn**	**16 51 24.2**	**+3.9**
HIA				pmax	pmax		
	comp=Z,16nm,1.7s						
ULN	**Ulaanbaatar**	**22.40**	**312**	*i* P	**P**	**16 52 28.4**	**+3.3**
SONM	**Songino Array**	**22.79**	**311**	P	**P**	**16 52 29.2**	**0.0**
	comp=Z,3.6nm,0.6s,mb4.0,baz=120,slow=10.0,SNR=13						
SONM				LR	LR	17 01 39.2	
	comp=Z,110nm,19.3s,MS3.3,baz=132,slow=38						
SONM	**Songino Array**	**22.79**	**311**	P	**P**	**16 52 29.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,110nm,19.3s						
LZH	**Lanzhou**	**22.82**	**280**	*e*P	**P**	**16 52 31.5**	**+1.9**
LZH				AP		16 52 36.4	
LZH				XP	sP	16 52 38.5	+1.6
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,107nm,5.4s						
LZH				LR	LR		
	comp=N,358nm,13.6s						
LZH				LR	LR		
	comp=Z,448nm,15.7s,MS4.0						
LZH	**Lanzhou**	**22.82**	**280**	*e*P	**P**	**16 52 31.5**	**+1.9**
	comp=Z,25nm,1.0s,mb4.6						
LZH				pP		16 52 36.4	
LZH				sP	sP	16 52 38.5	+1.6
LZH				LR	LR		
	comp=Z,450nm,15.7s,MS4.0						
ZAK	**Zakamensk**	**25.72**	**315**	*e*P	**P**	**16 52 54.6**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.7						
GTA	**Gaotai**	**25.82**	**289**	*e*P	**P**	**16 52 59.3**	**+1.4**
GTA				AP	pP	16 53 03.5	+0.3
GTA				XP	sP	16 53 06.9	+1.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.7						
YAK	**Yakutsk**	**26.88**	**358**	*i* P	**P**	**16 53 08.5**	**+1.3**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.0						
YAK				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.4						
CMAR	**Chiang Mai Arr**	**33.64**	**249**	P	**P**	**16 54 08.3**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=53,slow=5.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**37.60**	**315**	P	**P**	**16 54 40.8**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.8,baz=77,slow=6.7,SNR=4.7						
ZALV				LR	LR	17 10 26.3	
	comp=Z,43nm,21.2s,MS3.2,baz=65,slow=37						
ZALV	**Zalesovo Beam**	**37.60**	**315**	P	**P**	**16 54 40.8**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ZALV				MLR	MLR		
	comp=Z,43nm,21.3s,MS3.2						
MK31	**Makanchi Array**	**38.62**	**303**	*e*P	**P**	**16 54 49.9**	**+0.2**
MKAR	**Makanchi Array**	**38.62**	**303**	P	**P**	**16 54 49.2**	**-0.5**
	comp=Z,1.7nm,0.8s,mb3.8,baz=89,slow=10,SNR=11						
MKAR				LR	LR	17 11 42.5	
	comp=Z,100nm,19.3s,MS3.6,baz=87,slow=38						
MKAR	**Makanchi Array**	**38.62**	**303**	P	**P**	**16 54 49.2**	**-0.5**
MKAR				LR	LR	17 11 42.5	
MKAR	**Makanchi Array**	**38.62**	**303**	*i* P	**P**	**16 54 50.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**41.06**	**309**	*e*P	**P**	**16 55 09.8**	**-0.1**
	comp=Z,6.7nm,0.9s,mb4.3						
KURK	**Kurchatov**	**41.06**	**309**	*d* P	**P**	**16 55 10.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
KURK				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.7						
AML	**Almayashu**	**45.24**	**297**	*e*P	**P**	**16 55 45.5**	**+1.6**
	comp=Z,7.1nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	**54.89**	**177**	*e*P	**P**	**16 56 56.7**	**-0.6**
WRA	**Warramunga Arr**	**54.89**	**177**	P	**P**	**16 56 57.2**	**-0.1**
	comp=Z,4.1nm,0.6s,mb4.6,baz=355,slow=7.9,SNR=88						
WRA	**Warramunga Arr**	**54.89**	**177**	P	**P**	**16 56 57.2**	**0.0**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DAWY	**Dawson**	**58.41**	**31**	*e*P	**P**	**16 57 24.8**	**+3.0**
ASAR	**Alice Springs**	**58.58**	**178**	P	**P**	**16 57 23.4**	**+0.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=359,slow=6.1,SNR=20						
ASAR				PcP	PcP	16 58 14.8	+1.2
	comp=Z,0.7nm,0.8s,baz=357,slow=3.7,SNR=5.4						
ASAR	**Alice Springs**	**58.58**	**178**	P	**P**	**16 57 23.5**	**+0.1**
ASAR						16 58 14.8	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**62.88**	**338**	P	**P**	**16 57 50.5**	**-1.7**
	comp=Z,0.7nm,0.5s,mb4.0,baz=57,slow=8.8,SNR=6.0						
ARCES	**ARCESS Array B**	**62.88**	**338**	P	**P**	**16 57 50.5**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	**Obninsk**	**64.80**	**321**	*e*P	**P**	**16 58 04.3**	**-0.8**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**67.34**	**171**	P	**P**	**16 58 22.0**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.9,baz=323,slow=5.1,SNR=4.5						
STKA				LR	LR	17 29 42.2	
	comp=Z,33nm,19.1s,MS3.6,baz=24,slow=38						
STKA	**Stephens Creek**	**67.34**	**171**	P	**P**	**16 58 22.0**	**+0.5**
STKA				LR	LR	17 29 42.2	
AKASG	**Malin Array Be**	**70.83**	**319**	P	**P**	**16 58 44.3**	**+1.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=57,slow=5.7,SNR=3.1						
AKASG	**Malin Array Be**	**70.83**	**319**	P	**P**	**16 58 44.3**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**72.68**	**334**	P	**P**	**16 58 52.7**	**-1.3**
	comp=Z,2.6nm,0.8s,mb4.2,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**72.68**	**334**	P	**P**	**16 58 53.0**	**-1.1**
	comp=Z,1.9nm,0.8s,mb4.1,baz=49,slow=5.7,SNR=4.8						
NOA	**NORSAR Array B**	**72

*JMA **09** 17:13:52.9±0.4, 3339N×141.75E, h27km, M3.3*
*ISCJB **09** 17:13:55.3±1.1, 3344N±006×1417E±0.1, h33km, mb3.4/3, Error ellipse: s-maj=12.3km s-min=8.0km az=164.7*
*IDC **09** 17:14:04.8±2.8, 3329N×14078E, h78km±17km, mb3.1/3, mb1 3.3/4, mb1mx3.1/21, mbtmp3.0/4, MS2.5/1, Ms1 2.5/1, ms1mx1.6/18, Error ellipse: s-maj=42.3km s-min=14.3km az=81.0*
ISC 09 17:13:57.1±1.1, 3342N±006×1416E±01, h35km, n13, σ1§40/17, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.33**	**337**	P	**Pn**	**17 14 17.5**	**-1.7**
JHJ2	**Mitsune**	**1.52**	**259**	P	**Pn**	**17 14 20.9**	**-0.9**
JHJ2				*e*S	**Sn**	**17 14 41.9**	**+1.5**
JHJ	**Hachijo jima 2**	**1.55**	**259**	P	**Pn**	**17 14 20.9**	**-1.4**
	51nm,0.3s,baz=232,slow=10,SNR=18						
JHJ				S	**Sn**	**17 14 35.2**	**-5.9**
	45nm,0.3s,baz=66,slow=22,SNR=13						
BSO3	**Boso 3**	**1.64**	**327**	P	**Pn**	**17 14 22.9**	**-0.6**
JOD2	**Odawara 2**	**2.77**	**312**	P	**Pn**	**17 14 38.8**	**-0.2**
JYN	**Shimob**	**3.26**	**310**	P	**Pn**	**17 14 44.9**	**-0.9**
JYN				*e*S	**Sn**	**17 15 27.0**	**+3.7**
JRY	**Ryogami san**	**3.41**	**320**	P	**Pn**	**17 14 48.2**	**+0.4**
JRY				S	**Sn**	**17 15 28.7**	**+1.8**
JAG	**Ashikaga**	**3.47**	**330**	P	**Pn**	**17 14 48.0**	**-0.7**
MJAR	**Matsushiro Arr**	**4.17**	**319**	P	**Pn**	**17 15 01.5**	**+3.3**
	0.5nm,0.3s,baz=164,slow=14,SNR=3.7						
MJAR				S	**Sn**	**17 15 46.2**	**+0.4**
	0.6nm,0.3s,baz=156,slow=15,SNR=4.3						
ASAJ	**Asahikawa**	**10.71**	**4**	LR	LR	17 22 00.3	
	comp=Z,25nm,18.6s,baz=0.7,slow=44						
CMAR	**Chiang Mai Arr**	**40.86**	**259**	P	**P**	**17 21 33.0**	**-2.8**
	0.7nm,0.7s,mb3.4,baz=51,slow=7.2,SNR=7.2						
WRA	**Warramunga Arr**	**53.52**	**189**	P	**P**	**17 23 15.5**	**+1.3**
	0.4nm,0.5s,mb3.6,baz=5.4,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**57.24**	**188**	P	**P**	**17 23 43.3**	**+2.3**
	0.1nm,0.5s,mb3.1,baz=8.5,slow=6.9,SNR=5.3						

*ISK **09** 17:27:59.1, 3875N×2562E, h8km, ML3.7*
*ISCJB **09** 17:28:00.5±0.9, 3876N±002×2566E±002, h12km±7km, Error ellipse: s-maj=2.7km s-min=2.5km az=43.5*
*DDA **09** 17:28:00.9, 3879N×2571E, h39km±1km, Md3.6*
*CSEM **09** 17:28:00.3±0.0, 3875N×2570E, h15km, ML3.9/3, Error ellipse: s-maj=0.9km s-min=0.9km az=152.0*
*ATH **09** 17:28:01.1, 3878N×2578E, h62km±7km, ML3.6*
*NEIC **09** 17:28:01.1±1.4, 3873N×2572E, h11km±12km, ML3.8(ISK), ML3.6(ATH), Error ellipse: s-maj=6.8km s-min=4.1km az=86.0*
*THE **09** 17:28:02.5, 3875N×2577E, h26km±1km, ML3.9/3, Error ellipse: s-maj=2.0km s-min=0.5km az=93.0*
ISC 09 17:28:01.9±0.6, 3875N±002×2568E±002, h17km±4km, n170, σ0§81/213, 7C-11D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.47**	**141**	P	**Pg**	**17 28 11.4**	**+0.1**
CHOS				S	**Sg**	**17 28 18.2**	**+0.5**
PRK	**Paraskevi**	**0.68**	**43**	P	**Pg**	**17 28 14.1**	**-1.1**
PRK				S	**Sg**	**17 28 23.4**	**-0.8**
PRK	**Paraskevi**	**0.68**	**43**	⇑*i*P	**Pg**	**17 28 14.1**	**-1.1**
PRK				*e*S	**Sg**	**17 28 25.6**	**+1.4**
URLA	**Izmir**	**0.82**	**118**	*i*P	**Pb**	**17 28 17.6**	**-0.1**
URLA				*i*S	**Sb**	**17 28 28.9**	**+0.5**
AYVA	**Ayvalik**	**0.97**	**55**	*i*P	**Pb**	**17 28 19.5**	**-0.7**
AYVA				*i*S	**Sb**	**17 28 32.2**	**-0.5**
BOZC	**Bozcaada**	**1.13**	**15**	*i*P	**Pn**	**17 28 21.4**	**-1.5**
BOZC				*i*S	**Sb**	**17 28 36.3**	**-1.1**
BLCB	**Balcova**	**1.13**	**108**	*e*PN	**Pn**	**17 28 22.5**	**-0.5**
BLCB				*e*SN	**Sn**	**17 28 38.1**	**0.0**
LIA	**Limnos Island**	**1.21**	**342**	P	**Pn**	**17 28 23.1**	**-0.9**
LIA				S	**Sb**	**17 28 38.9**	**-0.7**
LIA	**Limnos Island**	**1.21**	**342**	⇑*i*P	**Pn**	**17 28 23.1**	**-0.9**
LIA				*e*S	**Sb**	**17 28 38.4**	**-1.2**
LIA	**Limnos Island**	**1.21**	**342**	*i*P	**Pn**	**17 28 23.1**	**-0.9**
LIA				S	**Sb**	**17 28 38.9**	**-0.7**
IZM	**Izmir**	**1.29**	**105**	*e*PN	**Pn**	**17 28 24.6**	**-0.5**
IZM				*e*SN	**Sn**	**17 28 43.6**	**+1.6**
KDAG	**Bornova**	**1.29**	**105**	⇓*i*P	**Pn**	**17 28 24.9**	**-0.3**
KDAG				*i*S	**Sb**	**17 28 44.2**	**+2.2**
KDAG	**Bornova**	**1.29**	**105**	*i*P	**Pn**	**17 28 24.9**	**-0.3**
KDAG				*i*S	**Sb**	**17 28 44.2**	**+2.1**
SMG	**Samos**	**1.39**	**138**	⇓*i*P	**Pn**	**17 28 25.9**	**-0.5**
SMG				*e*S	**Sn**	**17 28 42.3**	**-2.0**
GADA	**Gvkgeada**	**1.45**	**7**	*e*PN	**Pn**	**17 28 25.6**	**-1.7**
AOS	**Alonnisos**	**1.46**	**287**	P	**Pn**	**17 28 27.0**	**-0.5**
AOS				S	**Sn**	**17 28 46.8**	**+0.6**
PTL	**Penteli**	**1.59**	**244**	*e*P	**Pn**	**17 28 29.5**	**+0.3**
GCAM	**G?zelcaml?**	**1.61**	**130**	*i*P	**Pn**	**17 28 29.3**	**-0.2**
GCAM				*i*S	**Sn**	**17 28 50.5**	**+0.5**
AKS	**Akhisar**	**1.68**	**85**	*e*PN	**Pn**	**17 28 29.2**	**-1.2**
AKHS	**Akhisar**	**1.68**	**85**	*i*P	**Pn**	**17 28 29.9**	**-0.5**
AKHS				*i*S	**Sn**	**17 28 56.4**	**+4.9**
APE	**Apeiranthos**	**1.68**	**184**	P	**Pn**	**17 28 29.6**	**-0.9**
APE				S	**Sn**	**17 28 50.4**	**-1.2**
APE	**Apeiranthos**	**1.68**	**184**	⇓*i*P	**Pn**	**17 28 29.8**	**-0.7**
APE				*e*S	**Sn**	**17 28 50.4**	**-1.2**
APE	**Apeiranthos**	**1.68**	**184**	⇑*i*P	**Pn**	**17 28 29.5**	**-1.0**
ATH	**Athens Observa**	**1.73**	**244**	*e*P	**Pn**	**17 28 31.4**	**+0.3**
BALY	**Balya**	**1.81**	**56**	*i*P	**Pn**	**17 28 31.3**	**-0.9**
BALY				*i*S	**Sn**	**17 28 53.8**	**-0.9**
BALB	**Balikesir**	**1.93**	**62**	*e*PN	**Pn**	**17 28 33.1**	**-0.8**
PAIG	**Paliouri**	**1.94**	**308**	P	**Pn**	**17 28 33.8**	**-0.3**
PAIG				S	**Sn**	**17 28 58.3**	**+0.2**
NEO	**Neokhori**	**1.99**	**287**	*e*P	**Pn**	**17 28 35.6**	**+0.9**
ENEZ	**Enez**	**2.02**	**10**	*e*PN	**Pn**	**17 28 34.5**	**-0.6**
XOR	**Xorichti**	**2.03**	**288**	P	**Pn**	**17 28 35.3**	**0.0**
AYDN	**Tasoluk**	**2.05**	**121**	*i*P	**Pn**	**17 28 35.5**	**-0.1**
AYDN				*i*S	**Sn**	**17 29 05.7**	**+5.0**
OUR	**Ouranopolis**	**2.05**	**321**	P	**Pn**	**17 28 35.3**	**-0.3**
LKR	**Lokris**	**2.10**	**268**	*e*P	**Pn**	**17 28 36.5**	**+0.3**
LKR	**Lokris**	**2.10**	**268**	P	**Pn**	**17 28 36.2**	**0.0**
BODT	**Bodrum**	**2.12**	**142**	*e*PN	**Pn**	**17 28 36.5**	**-0.1**
ALN	**Alexandroupoli**	**2.16**	**7**	P	**Pn**	**17 28 35.9**	**-1.2**
ALN				S	**Sn**	**17 29 01.8**	**-1.7**
BDRM	**Kayabasi**	**2.19**	**140**	*i*P	**Pn**	**17 28 37.4**	**0.0**
BDRM				*i*S	**Sn**	**17 29 11.7**	**+7.6**
MLSB	**Milas**	**2.21**	**131**	*e*PN	**Pn**	**17 28 37.4**	**-0.3**
LTK	**Loutraki**	**2.25**	**252**	P	**Pn**	**17 28 38.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.25**	**30**	*e*PN	**Pn**	**17 28 39.0**	**+0.7**
SART	**Tekirdag**	**2.26**	**30**	*i*P	**Pn**	**17 28 37.8**	**-0.6**
SART				*i*S	**Sn**	**17 29 06.3**	**+0.5**
DID	**Didima**	**2.29**	**238**	P	**Pn**	**17 28 38.6**	**-0.2**
DID				S	**Sn**	**17 29 06.7**	**+0.1**
THR4	**Thira Island,**	**2.30**	**186**	P	**Pn**	**17 28 38.3**	**-0.7**
EDC	**Edincik**	**2.33**	**46**	*e*PN	**Pn**	**17 28 38.9**	**-0.5**
THR5	**Thira Island,**	**2.34**	**186**	P	**Pn**	**17 28 38.9**	**-0.7**
THR3	**Thira Island,**	**2.35**	**185**	P	**Pn**	**17 28 38.9**	**-0.7**
KULA	**Kula-Manisa**	**2.35**	**95**	*e*PN	**Pn**	**17 28 39.8**	**+0.1**
BNT	**Bandirma**	**2.36**	**47**	*e*PN	**Pn**	**17 28 39.0**	**-0.9**
PLG	**Polygyros**	**2.37**	**314**	*e*P	**Pn**	**17 28 38.8**	**-1.1**
PLG	**Polygyros**	**2.37**	**314**	P	**Pn**	**17 28 39.1**	**-0.8**
MRMT	**Marmara Adasi**	**2.37**	**38**	*e*PN	**Pn**	**17 28 40.7**	**+0.8**
THR1	**Thera Island**	**2.38**	**184**	P	**Pn**	**17 28 39.4**	**-0.7**
DEMI	**Demirci**	**2.39**	**82**	*i*P	**Pn**	**17 28 39.9**	**-0.3**
DEMI				*i*S	**Sn**	**17 29 15.5**	**+6.4**
RDO	**Rodhopi**	**2.40**	**358**	⇑*i*P	**Pn**	**17 28 39.5**	**-0.8**
THR6	**Thira Island,**	**2.40**	**185**	P	**Pn**	**17 28 39.9**	**-0.5**
DST	**Dursunbey**	**2.45**	**69**	*e*PN	**Pn**	**17 28 41.6**	**+0.6**
DAT	**Datca**	**2.52**	**143**	*e*PN	**Pn**	**17 28 41.8**	**-0.2**
KCT	**Karacabey**	**2.57**	**53**	*e*PN	**Pn**	**17 28 42.5**	**-0.2**
YER	**Yerkesik**	**2.62**	**127**	*e*PN	**Pn**	**17 28 43.4**	**0.0**
AGG	**Agios Georgios**	**2.62**	**277**	P	**Pn**	**17 28 43.8**	**+0.3**
HORT	**Hortiatis**	**2.71**	**314**	P	**Pn**	**17 28 44.8**	**+0.1**
SOH	**Sokhos**	**2.73**	**320**	P	**Pn**	**17 28 44.9**	**-0.1**
LIT	**Litokhoron**	**2.81**	**300**	P	**Pn**	**17 28 45.4**	**-0.6**
NVR	**Nevrokopi**	**2.95**	**332**	*e*P	**Pn**	**17 28 48.0**	**+0.1**
THL	**Klokotos Trika**	**2.96**	**287**	*e*P	**Pn**	**17 28 47.7**	**-0.4**
THL	**Klokotos Trika**	**2.96**	**287**	P	**Pn**	**17 28 48.8**	**+0.7**
VLI	**Veliai**	**2.97**	**228**	*e*P	**Pn**	**17 28 48.0**	**-0.2**
EVR	**Evrytania**	**3.02**	**274**	*e*P	**Pn**	**17 28 50.2**	**+1.3**
SLVT	**Silivri**	**3.15**	**37**	*e*PN	**Pn**	**17 28 51.1**	**+0.5**
ARG	**Arkhangelos**	**3.19**	**142**	*e*P	**Pn**	**17 28 49.9**	**-1.4**
GEMT	**Gemlik**	**3.19**	**57**	*e*PN	**Pn**	**17 28 52.3**	**+1.1**
CTT	**Catalca**	**3.20**	**41**	*e*PN	**Pn**	**17 28 51.9**	**+0.6**
EDRB	**Edirne**	**3.20**	**14**	*e*PN	**Pn**	**17 28 50.8**	**-0.6**
KNT	**Kendrikon**	**3.22**	**319**	P	**Pn**	**17 28 52.5**	**+0.9**
KYTH	**Kithira**	**3.24**	**221**	*e*P	**Pn**	**17 28 51.8**	**-0.1**
CTKS	**Kestanelik-??a**	**3.30**	**40**	*e*PN	**Pn**	**17 28 52.8**	**+0.1**
GRG	**Griva**	**3.35**	**312**	P	**Pn**	**17 28 53.7**	**+0.3**
ITM	**Ithomi**	**3.35**	**243**	*e*P	**Pn**	**17 28 54.7**	**+1.2**
CTYL	**Yal??k??y-??at**	**3.38**	**36**	*e*PN	**Pn**	**17 28 54.2**	**+0.4**
YLV	**Yalova**	**3.38**	**56**	*e*PN	**Pn**	**17 28 54.7**	**+0.8**
KZN	**Kozani**	**3.40**	**298**	*e*P	**Pn**	**17 28 54.6**	**+0.5**
BGKT	**Bogazkoy**	**3.40**	**43**	*e*PN	**Pn**	**17 28 54.9**	**+0.8**
KARP	**Karpathos**	**3.41**	**159**	*e*P	**Pn**	**17 28 54.2**	**-0.1**
FETY	**Fethiye**	**3.43**	**127**	*e*PN	**Pn**	**17 28 55.1**	**+0.6**
PLD	**Plovdiv**	**3.43**	**348**	P	**Pn**	**17 28 54.3**	**-0.3**
ALT	**Altintas**	**3.47**	**84**	*e*PN	**Pn**	**17 28 54.8**	**-0.3**
ISK	**Istanbul-Kandi**	**3.48**	**47**	*e*PN	**Pn**	**17 28 55.8**	**+0.6**
NPS	**Neapolis**	**3.48**	**181**	*e*P	**Pn**	**17 28 54.1**	**-1.1**
VAY	**Valandovo**	**3.50**	**318**	*e*Pn	**Pn**	**17 28 55.0**	**-0.5**
CAVI	**Cavuskoy**	**3.54**	**64**	*e*PN	**Pn**	**17 28 57.3**	**+1.3**
VAM	**Vamos**	**3.54**	**200**	*e*P	**Pn**	**17 28 57.2**	**+1.2**
ADVT	**Abdulvahap**	**3.56**	**61**	*e*PN	**Pn**	**17 28 57.2**	**+0.9**
KLYT	**Kilyos**	**3.60**	**45**	*e*PN	**Pn**	**17 28 56.8**	**0.0**
PYL	**PYLOS**	**3.62**	**240**	P	**Pn**	**17 28 57.9**	**+0.7**
HRT	**Hereke**	**3.71**	**55**	*e*PN	**Pn**	**17 28 59.9**	**+1.5**
SILT	**Sile**	**3.88**	**51**	*e*PN	**Pn**	**17 29 02.0**	**+1.3**
BCK	**Bucak**	**4.08**	**107**	*e*PN	**Pn**	**17 29 04.4**	**+0.9**
GULT	**Gulveren**	**4.10**	**64**	*e*PN	**Pn**	**17 29 05.2**	**+1.5**
VTS	**Vitosha**	**4.27**	**335**	⇓P	**Pn**	**17 29 07.2**	**+1.1**
VTS	**Vitosha**	**4.27**	**335**	⇓*i*P	**Pn**	**17 29 07.2**	**+1.1**
MDU	**Mudurnu**	**4.61**	**66**	*e*PN	**Pn**	**17 29 11.2**	**+0.5**
KIZT	**Kizilcal**	**4.85**	**87**	*e*PN	**Pn**	**17 29 14.8**	**+0.8**
BARS	**Barje**	**5.01**	**325**	⇓*i*Pn	**Pn**	**17 29 17.1**	**+0.9**
BOLS	**Boljevac**	**5.80**	**332**	⇓*i*Pn	**Pn**	**17 29 26.8**	**-0.2**
TIRR	**Tirgusor**	**6.06**	**19**	⇑*i*P	**Pn**	**17 29 29.7**	**-0.9**
VOIR		**6.70**	**356**	⇑*i*P	**Pn**	**17 29 39.4**	**0.0**
GZR	**Gura Zlata**	**6.98**	**343**	⇑P	**Pn**	**17 29 43.1**	**-0.2**
GZR	**Gura Zlata**	**6.98**	**343**	⇑*i*P	**Pn**	**17 29 43.1**	**-0.2**
VRI	**Vrincioaia**	**7.15**	**6**	⇑P	**Pn**	**17 29 47.2**	**+1.5**
VRI	**Vrincioaia**	**7.15**	**6**	⇑*i*P	**Pn**	**17 29 47.2**	**+1.5**
BZS	**Buzias**	**7.49**	**338**	⇓P	**Pn**	**17 29 50.2**	**-0.1**
BZS	**Buzias**	**7.49**	**338**	⇓*i*P	**Pn**	**17 29 50.2**	**-0.1**
BURAR	**Bucovina Array**	**8.87**	**358**	⇓P	**Pn**	**17 30 11.4**	**+2.2**
BURAR	**Bucovina Array**	**8.87**	**358**	⇓*i*P	**Pn**	**17 30 11.4**	**+2.3**
BUR08	**Bucovina Ar. S**	**8.90**	**358**	*e*Pn	**Pn**	**17 30 10.9**	**+1.3**
BUR08	**Bucovina Ar. S**	**8.90**	**358**	*e*Pn	**Pn**	**17 30 10.9**	**+1.4**

IDC 09 17:31:47.0±2.0, 129N×12659E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/15, mbtmp3.3/3, Error ellipse: s-maj=175.8km s-min=24.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.43**	**161**	P	**P**	**17 36 47.4**	**-0.1**
	0.5nm,0.4s,baz=339,slow=11,SNR=27						
ASAR	**Alice Springs**	**25.80**	**164**	P	**P**	**17 37 20.2**	**+0.2**
	0.2nm,0.3s,baz=345,slow=6.7,SNR=12						
MKAR	**Makanchi Array**	**59.48**	**326**	P	**P**	**17 41 51.9**	**0.0**
	0.1nm,0.3s,baz=116,slow=7.2,SNR=2.8						

*IDC **09** 17:32:47.0±1.2, 1861N×12125E, h0km, mb3.2/5, mb1 3.4/6, mb1mx3.3/19, mbtmp3.2/6, ML3.5/1, Error ellipse: s-maj=41.2km s-min=20.7km az=67.0*
*ISCJB **09** 17:32:48.5±1.4, 1879N±005×12095E±006, h9km±9km, mb3.1/4, Error ellipse: s-maj=10.2km s-min=7.3km az=164.1*
*MAN **09** 17:32:49, 1881N×12084E, h15km, mb4.5, ML3.4, MS3.3*
MAN INTENSITY I - SANCHEZ, MIRA, CAGAYAN.
ISC 09 17:32:49.0±1.2, 1876N±005×12101E±005, h5km±8km, n15, σ1§46/21, mb3.1/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.57**	**221**	⇑*i*P	**Pg**	**17 33 00.2**	**+0.3**
PIP				*e*S	**Sg**	**17 33 07.1**	**-0.2**
SGCP	**Mt. Cagua**	**1.11**	**117**	*e*P	**Pg**	**17 33 11.2**	**+0.9**
ABRA	**Dolores**	**1.14**	**194**	*e*P	**Pg**	**17 33 09.4**	**-1.4**
ABRA				*e*S	**Sg**	**17 33 26.2**	**+0.6**
CVP	**Callao Caves**	**1.30**	**143**	*e*P	**Pn**	**17 33 12.7**	**-1.2**
CVP				*e*S	**Sg**	**17 33 30.1**	**-0.8**
CAUP	**Cauayan**	**1.96**	**157**	*e*P	**Pn**	**17 33 25.4**	**+2.4**
CAUP				*e*S	**Sn**	**17 33 51.6**	**+3.6**
PALP	**Palanan**	**2.16**	**141**	⇓*i*P	**Pn**	**17 33 28.7**	**+3.0**
PALP				*i*S	**Sn**	**17 34 00.2**	**+7.4**
BOLP	**Bolinao**	**2.58**	**204**	*e*P	**Pn**	**17 33 29.0**	**-2.5**
BALP	**Baler**	**3.05**	**170**	*e*P	**Pn**	**17 33 38.9**	**+1.0**
BALP				*e*S	**Sn**	**17 34 13.8**	**-1.0**
SCZP	**Santa Cruz**	**3.14**	**200**	*e*P	**Pn**	**17 33 39.9**	**+0.7**
KSRS	**Korea Array**	**19.59**	**17**	P	**Pn**	**17 37 18.0**	**-1.3**
	0.2nm,0.3s,baz=195,slow=12,SNR=3.5						
CMAR	**Chiang Mai Arr**	**20.91**	**273**	P	**P**	**17 37 34.8**	**+2.1**
	0.5nm,0.6s,baz=83,slow=8.4,SNR=5.5						
WRA	**Warramunga Arr**	**40.62**	**161**	P	**P**	**17 40 26.5**	**-3.6**
	0.1nm,0.4s,mb2.8,baz=342,slow=9.1,SNR=5.0						
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**17 40 42.5**	**-0.8**
	0.8nm,0.9s,mb3.3,baz=137,slow=13,SNR=3.8						
ASAR	**Alice Springs**	**44.00**	**163**	P	**P**	**17 40 55.1**	**-2.5**
	0.1nm,0.4s,mb2.9,baz=338,slow=6.9,SNR=6.6						
ZALV	**Zalesovo Beam**	**44.78**	**330**	P	**P**	**17 41 04.6**	**+1.1**
	0.3nm,0.4s,mb3.5,baz=36,slow=25,SNR=2.3						

*ISCJB **09** 17:41:43.1±1.0, 116N±002×581E±002, h10km, mb3.8/9, Error ellipse: s-maj=24.1km s-min=20.8km az=140.4*
*IDC **09** 17:41:43.4±1.1, 1155N×5817E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.1/37, Error ellipse: s-maj=29.1km s-min=25.8km az=46.0*
*NEIC **09** 17:41:44.4±0.9, 1162N×5804E, h10km, mb4.3/2, Error ellipse: s-maj=23.2km s-min=19.7km az=210.0*
ISC 09 17:41:44.7±1.0, 116N±002×581E±002, h10km, n13, σ0§86/12, mb3.8/9, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASF	**Jabal al Asfar**	**28.26**	**320**	LR	LR	17 59 14.0	
	comp=Z,24nm,18.1s,baz=244,slow=37						
AKTK	**Aktyubinsk**	**38.70**	**360**	P	**P**	**17 49 08.5**	**-0.2**
AKTO	**Aktyubinsk**	**38.70**	**360**	P	**P**	**17 49 08.5**	**-0.2**
	1.2nm,0.7s,mb3.8,baz=188,slow=9.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**39.97**	**75**	P	**P**	**17 49 19.8**	**0.0**
	0.7nm,0.8s,mb3.5,baz=272,slow=7.5,SNR=6.5						
MKAR	**Makanchi Array**	**40.52**	**26**	P	**P**	**17 49 25.5**	**+1.0**
	0.4nm,0.6s,mb3.2,baz=201,slow=8.3,SNR=3.6						
KURK	**Kurchatov**	**42.46**	**19**	P	**P**	**17 49 39.7**	**0.0**
	baz=217,slow=7.8						
KURK	**Kurchatov**	**42.46**	**19**	*e*P	**P**	**17 49 39.1**	**-0.6**
	1.5nm,0.7s,mb3.7						
ZAA0	**Zalesovo Array**	**47.26**	**21**	*e*P	**P**	**17 50 18.2**	**+0.2**
ZALV	**Zalesovo Beam**	**47.26**	**21**	P	**P**	**17 50 18.3**	**+0.3**
	2.7nm,0.5s,mb4.5,baz=222,slow=7.9,SNR=13						
TORD	**Torodi Ar. Bea**	**55.00**	**278**	P	**P**	**17 51 18.1**	**+1.3**
	0.2nm,0.6s,mb3.4,baz=83,slow=4.9,SNR=2.9						
WLF	**Walferdange**	**57.00**	**322**	P	**P**	**17 51 27.9**	**-2.6**
	8.7nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**81.31**	**112**	P	**P**	**17 54 02.0**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=298,slow=4.3,SNR=10						
ASAR	**Alice Springs**	**81.94**	**116**	P	**P**	**17 54 04.5**	**-0.7**
	0.7nm,0.9s,mb3.6,baz=289,slow=5.4,SNR=7.1						

*ISCJB **09** 18:05:53.0±2.6, 294N±01×921E±01, h11km±17km, mb3.6/5, Error ellipse: s-maj=25.4km s-min=13.2km az=143.1*
*IDC **09** 18:05:53.2±1.4, 2935N×9229E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/21, mbtmp3.5/6, ML3.2/1, Error ellipse: s-maj=63.9km s-min=18.5km az=64.0*
*BJI **09** 18:05:56.7, 2961N×9217E, h32km, mB4.7, mb4.4, ML3.4, Ms3.7, Msz3.5*
*NEIC **09** 18:05:57.3±0.9, 2927N×9191E, h35km, mb4.5/1, Error ellipse: s-maj=25.2km s-min=15.2km az=51.0*
ISC 09 18:05:58.2±1.4, 294N±01×919E±01, h39km±17km, n12, σ1§10/14, mb3.6/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**0.77**	**296**	PG	**Pn**	**18 06 11.0**	**-1.6**
LSA				SG	**Sn**	**18 06 23.0**	**0.0**
LSA				Smax			
	comp=N,800nm,0.6s						
LSA				Smax			
	comp=E,2μm,0.6s						
LSA	**Lhasa**	**0.77**	**296**	*e*Pg	**Pn**	**18 06 11.2**	**-1.4**
LSA				*e*Sg	**Sn**	**18 06 24.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**12.60**	**148**	Pn	**Pn**	**18 08 56.0**	**+1.1**
	baz=316,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**18.96**	**339**	P	**Pn**	**18 10 16.5**	**-0.5**
	comp=E,0.1nm,0.3s,baz=148,slow=11,SNR=6.0						
KBL	**Kabul**	**20.09**	**291**	*e*P	**P**	**18 10 32.8**	**+4.4**
	comp=E,24nm,1.0s						
SONM	**Songino Array**	**21.56**	**27**	P	**P**	**18 10 42.9**	**-1.4**
	comp=E,2.1nm,0.9s,mb3.6,baz=219,slow=11,SNR=7.4						
KURK	**Kurchatov**	**23.57**	**339**	P	**P**	**18 11 06.7**	**+1.6**
	baz=148,slow=9.5						
ZALV	**Zalesovo Beam**	**25.11**	**350**	P	**P**	**18 11 20.4**	**+1.2**
	comp=E,0.4nm,0.4s,mb3.3,baz=178,slow=10,SNR=3.6						
ARCES	**ARCESS Array B**	**54.59**	**337**	P	**P**	**18 15 23.4**	**+1.1**
	comp=E,1.0nm,0.8s,mb3.9,baz=90,slow=7.2,SNR=4.1						
WRA	**Warramunga Arr**	**63.82**	**135**	P	**P**	**18 16 26.1**	**-0.7**
	comp=E,0.8nm,1.0s,mb3.7,baz=326,slow=7.0,SNR=9.4						
ASAR	**Alice Springs**	**66.39**	**138**	P	**P**	**18 16 43.0**	**-0.3**
	comp=E,0.3nm,0.6s,mb3.5,baz=321,slow=6.9,SNR=9.5						
TOA0	**Torodi Ar. Sit**	**83.88**	**282**	P	**P**	**18 18 23.2**	**-1.2**

IDC 09 18:07:21.8±59.0, 1333S×17735W, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=1106.0km s-min=187.7km az=73.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.85**	**237**	P	**P**	**18 15 13.9**	**+0.1**
	0.5nm,0.5s,baz=61,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**46.63**	**255**	P	**P**	**18 15 52.4**	**+0.1**
	0.3nm,0.8s,baz=80,slow=6.0,SNR=5.4						
ASAR	**Alice Springs**	**47.16**	**250**	P	**P**	**18 15 56.1**	**-0.3**
	0.8nm,0.4s,baz=83,slow=8.5,SNR=40						

*SZGRF **09** 18:13:24.3, 2260S×17926W, h33km, South of Fiji Islands*
*ISCJB **09** 18:14:32.7±0.9, 2093S±007×17886W±006, h624km±11km, mb4.3/46, Error ellipse: s-maj=10.6km s-min=7.8km az=154.3*
*BJI **09** 18:14:33.3, 2044S×178.16W, h634km, mB4.7, mb4.7*
*IDC **09** 18:14:34.7±2.3, 2096S×17878W, h635km±27km, mb3.8/18, mb1 3.9/19, mb1mx3.9/23, mbtmp3.8/19, Error ellipse: s-maj=16.4km s-min=13.1km az=144.0*
*NEIC **09** 18:14:34.4±1.0, 2098S×17879W, h635km±12km, mb4.4/29, Error ellipse: s-maj=10.7km s-min=8.0km az=153.0*
ISC 09 18:14:32.7±0.8, 2091S±006×17880W±006, h608km±10km, n183, σ0§89/84, mb4.3/46, 8C-19D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**8.34**	**175**	S	**S**	**18 18 15.3**	**-0.7**
	53nm,0.3s,baz=270,slow=20,SNR=5.5						
RAO	**Raoul Island**	**8.34**	**175**	*e*P	**P**	**18 16 36.0**

CN2				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.3							
TPH	**Tonopah**	**82.34**	**44**	*e*P	**P**	**18 25 52.5**	**+0.4**	
	comp=Z,10nm,0.8s,mb4.4							
TUC	**Tucson**	**83.82**	**52**	*e*P	**P**	**18 26 00.3**	**+0.6**	
	comp=Z,3.5nm,0.8s,mb3.9							
ELK	**Elko**	**85.09**	**43**	P	**P**	**18 26 05.9**	**+0.3**	
	comp=Z,1.6nm,0.7s,mb3.7,baz=238,slow=6.9,SNR=8.8							
ETW	**Entiat**	**86.01**	**35**	*e*P	**P**	**18 26 10.0**	**+0.1**	
BMO	**Blue Mountains**	**86.10**	**39**	*e*P	**P**	**18 26 10.6**	**+0.2**	
	comp=Z,1.8nm,0.6s,mb3.9							
SYO	**Syowa Base**	**86.16**	**193**⇑	*e*P	**P**	**18 26 08.3**	**-2.0**	
OD2	**Odessa Site #2**	**86.77**	**36**	*e*P	**P**	**18 26 13.5**	**+0.1**	
TRF	**Thorofare Moun**	**87.01**	**12**	*e*P	**P**	**18 26 12.9**	**-1.3**	
	comp=Z,15nm,0.7s,mb4.8							
HLID	**Hailey**	**87.13**	**41**	*e*P	**P**	**18 26 15.8**	**+0.6**	
	comp=Z,5.9nm,1.0s,mb4.3							
MCK	**McKinley**	**87.54**	**13**	*e*P	**P**	**18 26 15.1**	**-1.6**	
	comp=Z,12nm,0.9s,mb4.6							
SNAA	**Sanae**	**87.62**	**179**	*e*	**P**	**18 26 15.9**	**-1.2**	
SNAA				*e*		18 26 21.1		
SNAA	**Sanae**	**87.62**	**179**	*e*P	**P**	**18 26 15.4**	**-1.7**	
VNA3	**Neumayer Olymp**	**87.78**	**176**	*e*	**P**	**18 26 17.3**	**-0.6**	
VNA3				*e*		18 26 22.5		
TXAR	**Lajitas Array**	**87.91**	**58**	P	**P**	**18 26 20.2**	**+1.0**	
	comp=Z,4.2nm,0.8s,mb4.2,baz=216,slow=6.0,SNR=44							
NEW	**Newport**	**88.14**	**36**	P	**P**	**18 26 19.7**	**-0.2**	
	comp=Z,3.5nm,0.8s,mb4.1							
VNA2	**Neumayer--Watz**	**88.21**	**177**	*e*	**P**	**18 26 20.1**	**+0.2**	
VNA2				*e*		18 26 25.2		
ANMO	**Albuquerque**	**88.25**	**52**	P	**P**	**18 26 21.1**	**+0.4**	
	comp=Z,1.9nm,0.7s,mb4.0,baz=240,slow=4.8,SNR=5.1							
VNA1	**Neumayer--Stat**	**88.44**	**177**	*e*	**P**	**18 26 21.4**	**+0.4**	
COLA	**College**	**88.77**	**13**	*e*P	**P**	**18 26 21.0**	**-1.3**	
	comp=Z,9.8nm,1.1s,mb4.5							
RRI2	**Red Ridge**	**88.94**	**42**	*e*P	**P**	**18 26 23.9**	**+0.2**	
	comp=Z,9.8nm,0.9s,mb4.6							
BILL	**Bilibino**	**89.37**	**354**	P	**P**	**18 26 24.5**	**-0.6**	
	comp=Z,27nm,1.7s,mb4.8							
CMAR	**Chiang Mai Arr**	**89.55**	**290**	P	**P**	**18 26 28.4**	**+1.3**	
	comp=Z,7.3nm,0.9s,mb4.5,baz=128,slow=3.1,SNR=33							
CHTO	**Chiang Mai**	**89.68**	**290**	*e*P	**P**	**18 26 28.9**	**+1.3**	
	comp=Z,4.8nm,0.6s,mb4.5							
PDAR	**Pinedale Array**	**89.77**	**44**	P	**P**	**18 26 27.6**	**0.0**	
	comp=Z,4.0nm,0.7s,mb4.4,baz=215,slow=3.8,SNR=30							
DAWY	**Dawson**	**90.06**	**16**	*e*P	**P**	**18 26 27.8**	**-0.6**	
SDCO	**Great Sand Dun**	**90.19**	**49**	*e*P	**P**	**18 26 29.6**	**0.0**	
	comp=Z,1.3nm,1.0s,mb3.7							
WALA	**Waterton Lakes**	**90.36**	**37**	P	**P**	**18 26 31.4**	**+1.3**	
INK	**Inuvik**	**94.87**	**15**	*e*P	**P**	**18 26 47.6**	**-2.7**	
	comp=Z,78nm,1.0s							
ZALV	**Zalesovo Beam**	**110.34**	**321**	PKiKP	PKiKP	18 31 54.4	-2.1	
	comp=Z,1.8nm,0.7s,baz=101,slow=0.7,SNR=9.3							
MKAR	**Makanchi Array**	**110.94**	**313**	PKiKP	PKiKP	18 31 56.3	-1.5	
	comp=Z,0.6nm,0.4s,baz=97,slow=0.8,SNR=12							
KURK	**Kurchatov**	**113.79**	**317**	PKiKP	PKiKP	18 32 01.4	-1.8	
	baz=97,slow=2.4							
BVAR	**Borovoye Array**	**118.91**	**320**	PKP	PKPdf	18 32 11.6	-1.4	
	comp=Z,3.6nm,0.3s,baz=74,slow=3.4,SNR=33							
SFJD	**Kangerlussuaq**	**123.60**	**22**	PKP	PKPdf	18 32 19.8	-1.7	
	comp=Z,3.6nm,0.5s,baz=288,slow=6.6,SNR=4.3							
ARU	**Arti**	**125.11**	**325**	*e*PKPdf	PKPdf	18 32 23.9	-0.8	
AKTK	**Aktyubinsk**	**126.87**	**318**	PKP	PKPdf	18 32 27.9	-0.4	
AKTO	**Aktyubinsk**	**126.87**	**318**	PKP	PKPdf	18 32 27.9	-0.4	
	comp=Z,2.8nm,0.6s,baz=89,slow=4.2,SNR=12							
ARCES	**ARCESS Array B**	**129.19**	**349**	PKP	PKPdf	18 32 30.9	-1.3	
	comp=Z,3.7nm,0.5s,baz=16,slow=1.0,SNR=30							
JOF	**Joensuu**	**133.29**	**342**	*e*p	PKPdf	18 32 40.0	-0.1	
	comp=Z,1.6nm,0.4s							
KAF	**Kangasniemi**	**135.34**	**344**	*e*p	PKPdf	18 32 43.4	-0.5	
	comp=Z,1.1nm,0.4s							
NB2	**NORSAR Subarra**	**139.30**	**353**	PKP		18 32 42.6		
	comp=Z,2.8nm,0.8s,baz=14,slow=2.1							
NOA	**NORSAR Array B**	**139.30**	**353**	PKhKP		18 32 42.5		
	comp=Z,0.9nm,0.7s,baz=6.3,slow=4.0,SNR=5.5							
NOA				PKP	PKPdf	18 32 51.2	0.0	
	comp=Z,0.9nm,0.6s,baz=13,slow=4.1,SNR=3.6							
AKASG	**Malin Array Be**	**143.00**	**330**	PKP	PKPdf	18 32 54.7	-3.5	
	comp=Z,16nm,0.4s,baz=43,slow=4.2,SNR=131							
KIEV	**Kiev**	**143.02**	**330**	*e*PKPdf	PKPdf	18 32 54.7	-3.5	
BSEG	**Bad Segeberg**	**146.31**	**350**	*e*PKPbc	PKPbc	18 33 05.7	-0.4	
BR131	**Keskin Array S**	**146.56**	**311**	*e*PKPdf	PKPbc	18 33 06.5	-0.8	
BRTR	**Keskin Array B**	**146.56**	**311**	PKPbc	PKPbc	18 33 06.8	-0.5	
	comp=Z,5.5nm,0.5s,baz=142,slow=4.1,SNR=21							
BRTR	**Keskin Array B**	**146.56**	**311**	PKPbc	PKPbc	18 33 06.8	-0.5	
TLCR		**146.80**	**323**⇓	*i*P	PKPbc	18 33 07.4	-0.4	
BUR08	**Bucovina Ar. S**	**147.03**	**330**	*e*PKPbc	PKPbc	18 33 08.3	0.0	
BURAR	**Bucovina Array**	**147.04**	**330**	⇑P	PKPbc	18 33 08.6	+0.3	
BURAR	**Bucovina Array**	**147.04**	**330**⇑	*i*P	PKPbc	18 33 08.6	+0.3	
ANTO	**Ankara**	**147.08**	**312**	*e*PKPdf	PKPdf	18 33 03.9	-1.6	
ANTO				*e*PKPbc	PKPbc	18 33 08.0	-0.7	
KOLS	**Kolonicke sedl**	**147.36**	**334**	*e*PKP	PKPbc	18 33 09.9	+0.8	
KOLS				*e*		18 33 16.9		
STHS	**Stebnicka Huta**	**147.39**	**335**	*e*PKP	PKPbc	18 33 08.7	-0.5	
TIRR	**Tirgusor**	**147.47**	**322**	⇓P	PKPdf	18 33 06.4	+0.4	
TIRR	**Tirgusor**	**147.47**	**322**⇓	*i*P	PKPdf	18 33 06.4	+0.4	
VRI	**Vrincioaia**	**147.50**	**326**	⇑P	PKPbc	18 33 09.2	-0.4	
VRI	**Vrincioaia**	**147.50**	**326**⇑	*i*P	PKPbc	18 33 09.2	-0.4	
CRVS	**Cervenica-Dubn**	**147.71**	**335**	*e*PKP	PKPbc	18 33 12.7	+2.7	
NIE	**Niedzica**	**147.74**	**336**	*e*PX	PKPbc	18 33 10.1	0.0	
OKC	**Ostrava-Krasne**	**148.16**	**339**	*e*PKPbc	PKPbc	18 33 09.7	-1.4	
OKC				*e*PKPab	PKPab	18 33 16.5	+0.1	
UPC	**Upice**	**148.24**	**342**	*e*PKPbc	PKPbc	18 33 11.1	-0.2	
UPC				*e*PKPab	PKPab	18 33 16.6	-0.1	
IBBN	**Ibbenburen**	**148.25**	**352**	*e*PKPab	PKPab	18 33 15.8	-0.9	
CLL	**Collm**	**148.29**	**346**	*e*PKPbc	PKPbc	18 33 10.7	-0.7	
CLL				*e*PKPab	PKPab	18 33 16.2	-0.7	
CLL	**Collm**	**148.29**	**346**⇓	*i*PKPbc	PKPbc	18 33 10.9	-0.5	
	comp=Z,19nm,0.7s							
CLL				*i* PKPab	PKPab	18 33 16.3	-0.6	
DPC	**Dobruska-Polom**	**148.29**	**341**	*e*PKPbc	PKPbc	18 33 11.5	+0.1	
DPC				*e*PKPab	PKPab	18 33 17.3	+0.4	
CLZ	**Clausthal**	**148.31**	**349**	*e*PKPbc	PKPbc	18 33 11.1	-0.3	
KECS	**Kecovo**	**148.44**	**335**	*e*PKP	PKPbc	18 33 11.7	-0.1	
KECS				*e*		18 33 17.5		
BRG	**Berggiesshubel**	**148.46**	**345**	*e*PKPbc	PKPbc	18 33 11.3	-0.5	
BRG				*e*PKPab	PKPab	18 33 17.0	-0.6	
BRG	**Berggiesshubel**	**148.46**	**345**	*i* PKP	PKPbc	18 33 11.3	-0.5	
	comp=Z,7.3nm,0.6s							
BRG				*i*		18 33 17.2		
	comp=Z,8.7nm,0.9s							
PVCC	**Panska Ves**	**148.62**	**344**	*e*PKPbc	PKPbc	18 33 11.9	-0.3	
VOIR		**148.65**	**327**⇓	P	PKPbc	18 33 12.4	-0.1	
VOIR		**148.65**	**327**⇓	*i*P	PKPbc	18 33 12.4	-0.1	
VYHS	**Vyhne**	**149.05**	**337**	*e*PKP	PKPbc	18 33 20.7	+0.6	
PRU	**Pruhonice**	**149.12**	**343**	*e*PKPbc	PKPbc	18 33 12.7	-0.7	
VRAC	**Vranov**	**149.12**	**340**⇓	*i*P	PKPbc	18 33 12.4	-1.1	
KOLL	**Kolacno**	**149.14**	**337**	*e*PKP	PKPbc	18 33 13.4	-0.1	
KOLL				*e*		18 33 20.8		
MOX	**Moxa**	**149.21**	**347**	*e*PKP	PKPbc	18 33 13.0	-0.6	
	comp=Z,25nm,1.4s							
TANN	**Tannenbergstha**	**149.24**	**346**	*e*PKPbc	PKPbc	18 33 13.4	-0.3	
TANN				*e*PKPab	PKPab	18 33 20.1	-0.8	
GUNZ	**Gunzen**	**149.32**	**346**	*e*PKPbc	PKPbc	18 33 13.6	-0.3	
TREC	**Trest**	**149.47**	**341**	*e*PKPbc	PKPbc	18 33 12.5	-1.8	
SMOL	**Smolenice**	**149.53**	**338**	*e*PKP	PKPbc	18 33 14.7	+0.2	
MODS	**Modra-Piesok**	**149.71**	**339**	*e*PKP	PKPbc	18 33 15.2	+0.3	
MANZ	**Manzenberg**	**149.72**	**346**	*e*PKPbc	PKPbc	18 33 14.4	-0.5	
GZR	**Gura Zlata**	**149.81**	**329**	⇓P	PKPbc	18 33 14.6	-0.7	
GZR	**Gura Zlata**	**149.81**	**329**⇓	*i*P	PKPbc	18 33 14.6	-0.6	
ROTZ	**Rotzenmuhle**	**149.91**	**346**	*e*PKPbc	PKPbc	18 33 15.0	-0.3	
KHC	**Kasperske Hory**	**150.16**	**344**	*e*PKPbc	PKPbc	18 33 15.6	-0.3	
KHC				*e*PKPab	PKPab	18 33 24.8	+0.1	
TNS	**Taunus Mts**	**150.19**	**351**	*e*PKPbc	PKPbc	18 33 15.5	-0.5	
BZS	**Buzias**	**150.20**	**330**	⇓P	PKPbc	18 33 15.4	-0.7	
BZS	**Buzias**	**150.20**	**330**⇓	*i*P	PKPbc	18 33 15.4	-0.7	
GRF	**Grafenberg Arr**	**150.20**	**347**	*e*PKPbc	PKPbc	18 33 15.1	-0.9	
WET	**Wettzell**	**150.33**	**344**	*e*PKPbc	PKPbc	18 33 15.7	-0.6	
GEC2	**GERESS Array S**	**150.39**	**343**	*e*PKPbc	PKPbc	18 33 15.9	-0.5	
GERES	**GERESS Array B**	**150.39**	**343**	PKPbc	PKPbc	18 33 15.7	-0.8	
	comp=Z,5.5nm,0.7s,baz=27,slow=2.4,SNR=17							
CONA	**Conrad Observa**	**150.56**	**340**⇓	*i*PKiKP	PKiKP	18 33 16.8	-0.6	
	comp=Z,10nm,0.6s							
CSNA	**Conrad Observa**	**150.57**	**340**⇓	*i*PKiKP	PKiKP	18 33 16.7	-0.6	
	comp=Z,9.8nm,0.6s							
GIVF	**Givet**	**150.73**	**355**	*e*PKIKP	PKPbc	18 33 16.8	-0.4	
	comp=Z,30nm,0.8s							
BAIF	**Baives**	**150.82**	**356**	*e*PKIKP	PKPbc	18 33 16.8	-0.6	
	comp=Z,15nm,0.8s							
PKSM	**Moragy**	**151.01**	**335**⇓	P	PKPbc	18 33 17.2	-0.7	
PKSM	**Moragy**	**151.01**	**335**⇓	*i*P	PKPbc	18 33 17.3	-0.7	
WLF	**Walferdange**	**151.04**	**353**	*e*PKPbc	PKPbc	18 33 18.0	+0.1	
STU	**Stuttgart**	**151.47**	**349**	*e*PKPbc	PKPbc	18 33 18.5	-0.4	
VTS	**Vitosha**	**151.57**	**324**	⇑P	PKPbc	18 33 18.3	-1.0	
VTS	**Vitosha**	**151.57**	**324**⇑	*i*P	PKPbc	18 33 18.3	-1.0	
BFO	**Black Forest**	**152.05**	**350**	*e*PKPbc	PKPbc	18 33 19.6	-0.6	
BFO				*e*PKPab	PKPab	18 33 31.8	-0.9	
CDF	**Champ du Feu**	**152.13**	**351**	*e*PKIKP	PKPbc	18 33 19.9	-0.5	
	comp=Z,13nm,0.7s							
FLN	**La Foliniere**	**152.18**	**2**	*e*PKIKP	PKPbc	18 33 19.5	-1.0	
	comp=Z,12nm,0.6s							
MEZF	**Maizieres J'vi**	**152.30**	**354**	*e*PKIKP	PKPbc	18 33 20.3	-0.4	
	comp=Z,23nm,0.8s							
LDF	**La Drutiere**	**152.36**	**2**	*e*PKIKP	PKPbc	18 33 19.7	-1.2	
	comp=Z,12nm,0.6s							
ROSF	**Rostrenen**	**152.40**	**6**	*e*PKIKP	PKPbc	18 33 19.5	-1.5	
GCIS	**Gornji Cirnik**	**152.44**	**338**	*i* PKPbc	PKPbc	18 33 20.6	-0.6	
CRES	**Cresnjev**	**152.53**	**338**	*i* PKPbc	PKPbc	18 33 20.7	-0.7	
GRR	**Gorron**	**152.54**	**3**	*e*PKIKP	PKPbc	18 33 20.3	-1.0	
	comp=Z,9.7nm,0.7s							
VNDS	**Vrh nad Dolski**	**152.55**	**339**	*i* PKPbc	PKPbc	18 33 20.6	-0.8	
SGMF	**Saint Gilles**	**152.56**	**5**	*e*PKIKP	PKPbc	18 33 20.1	-1.2	
	comp=Z,5.8nm,0.5s							
HAU	**Haudompre**	**152.65**	**352**	*e*PKIKP	PKPbc	18 33 20.7	-0.8	
	comp=Z,12nm,0.9s							
DAVA	**Damuels**	**152.76**	**347**⇓	*i*PKiKP	PKiKP	18 33 21.7	-0.2	
	comp=Z,13nm,1.2s							
HINF	**Hinteralfeld**	**152.77**	**352**	*e*PKIKP	PKPbc	18 33 20.3	-1.5	
	comp=Z,6.6nm,0.7s							
VOJS	**Vojsko**	**152.88**	**340**	*i* PKPbc	PKPbc	18 33 20.9	-1.1	
BOJS	**Bojanci**	**152.88**	**338**	*i* PKPbc	PKPbc	18 33 21.8	-0.3	
LOR	**Lormes**	**153.62**	**356**	*e*PKIKP	PKPbc	18 33 20.8	-2.8	
TCF	**Toulx Ste Croi**	**154.68**	**358**	*e*PKIKP	PKPdf	18 33 22.4	+5.6	
ORIF	**Oris-en-Rattie**	**155.75**	**352**	*e*PKIKP	PKPdf	18 33 23.4	+5.2	
MBDF	**Montbardon**	**155.81**	**350**	*e*PKIKP	PKPdf	18 33 22.6	+4.3	
ESDC	**Sonseca Array**	**160.78**	**12**	PKPab	PKPab	18 34 09.6	-1.2	
	comp=Z,0.6nm,0.5s,baz=353,slow=4.1,SNR=6.0							
LIC	**Lamto**	**164.20**	**157**⇑	*i*PKIKP	PKPdf	18 33 26.8	-1.7	
DBIC	**Dimbokro**	**164.67**	**157**	PKP	PKPdf	18 33 26.9	-1.9	
	comp=Z,3.6nm,0.8s,baz=195,slow=6.6,SNR=4.5							
DBIC	**Dimbokro**	**164.67**	**157**	PKP	PKPdf	18 33 26.9	-2.0	
TOA0	**Torodi Ar. Sit**	**172.26**	**184**	*e*PKPdf	PKPdf	18 33 31.4	-2.3	
TORD	**Torodi Ar. Bea**	**172.26**	**184**	PKP	PKPdf	18 33 31.7	-2.0	
	comp=Z,1.8nm,0.8s,baz=341,slow=0.5,SNR=12							
TORD				PKPab	PKPab	18 35 01.5	-0.4	
	comp=Z,0.5nm,0.6s,baz=169,slow=3.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**172.26**	**184**	PKP	PKPdf	18 33 31.7	-2.0	
TORD				PKPab	PKPab	18 35 01.5	-0.4	

IDC 09 18:17:34.6±28.0, 3104N×9249E, h0km, mb3.2/1, mb1 3.3/3, mb1mx3.1/21, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=423.5km s-min=63.0km az=5.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.59**	**336**	P	Pn	18 21 41.1	+0.1
	0.0nm,0.3s,baz=150,slow=12,SNR=2.4						
SONM	**Songino Array**	**19.86**	**28**	P	Pn	18 22 07.1	-1.6
	0.2nm,0.3s,baz=207,slow=10,SNR=6.3						
KURK	**Kurchatov**	**22.20**	**336**	P	P	18 22 31.3	-1.1
	baz=147,slow=9.6						
ZALV	**Zalesovo Beam**	**23.55**	**349**	P	P	18 22 47.2	+0.5
	0.3nm,0.4s,baz=156,slow=11,SNR=2.2						

*IDC **09** 18:20:25.6±4.2, 001S×124.32E, h53km±40km, mb3.6/9, mb1 3.8/10, mb1mx3.7/19, mbtmp3.7/10, ML4.5/1, MS2.6/2, Ms1 2.6/2, ms1mx2.1/27, Error ellipse: s-maj=28.6km s-min=15.0km az=65.0*

*ISCJB **09** 18:20:26.8±0.7, 009S±005×124.31E±006, h86km±8km, mb4.1/17, Error ellipse: s-maj=9.6km s-min=8.1km az=21.6*

*NEIC **09** 18:20:27.1±2.1, 004S×124.35E, h70km±20km, mb4.3/8, Error ellipse: s-maj=20.6km s-min=8.2km az=60.0*

*DJA **09** 18:20:27, 013S×124.40E, h24km, MLv4.5/8*

ISC 09 18:20:28.1±0.7, 008S±005×12435E±006, h81km±7km, n33, σ0°90/32, mb4.1/17, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.59**	**18**	P	**Pn**	**18 20 54.7**	**0.0**
TNTI	**Ternate**	**3.13**	**74**	P	**Pn**	**18 21 15.4**	**+0.1**
LBMI	**Labuha**	**3.20**	**100**	P	**Pn**	**18 21 15.3**	**-0.9**
KDI	**Kendari**	**4.22**	**204**	P	**Pn**	**18 21 30.6**	**+0.5**
PCI	**Palu**	**4.59**	**260**	P	**Pn**	**18 21 36.9**	**+1.8**
AAI	**Ambon**	**5.25**	**133**	P	**Pn**	**18 21 44.4**	**+0.2**
	102nm,0.7s,1μm0.4nm						
AAI	**Ambon**	**5.25**	**133**	P	**Pn**	**18 21 44.4**	**+0.2**
	102nm,0.7s,1μm0.4nm						
KAPI	**Kappang**	**6.72**	**223**	P	**Pn**	**18 22 03.8**	**-0.4**
	9.9nm,0.3s,baz=351,slow=4.4,SNR=11						
KAPI				S	**Sn**	**18 23 18.1**	**-1.1**
	4.5nm,0.3s,baz=12,slow=20,SNR=8.0						
KAPI				LR	LR	18 25 13.7	
	comp=Z,68nm,19.3s,baz=190,slow=43						
BATI	**Baumata**	**10.08**	**184**	LR	LR	18 27 27.8	
	comp=Z,27nm,19.0s,baz=184,slow=42						
MBWA	**Marble Bar**	**21.43**	**192**	*e*P	**P**	**18 25 06.1**	**-3.6**
	14nm,1.1s,mb4.2						
WRAB	**Tennant Creek**	**22.03**	**154**	*e*P	**P**	**18 25 15.7**	**-0.3**
	9.7nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**22.03**	**154**	P	**P**	**18 25 15.1**	**-1.0**
	13nm,0.8s,mb4.3,baz=331,slow=12,SNR=18						
WB2	**Warramunga Arr**	**22.04**	**154**	*e*P	**P**	**18 25 16.1**	**-0.1**
WB2	**Warramunga Arr**	**22.04**	**154**	*e*P	**P**	**18 25 16.5**	**+0.3**
NACB	**Ninganchiao**	**24.26**	**354**	P	**P**	**18 25 38.0**	**+0.2**
	77nm,0.8s,mb5.1						
ASAR	**Alice Springs**	**25.21**	**159**	P	**P**	**18 25 47.1**	**+0.7**
	1.6nm,0.5s,mb3.7,baz=322,slow=6.1,SNR=19						
ASAR				PcP	PcP	18 29 20.7	+2.4
	0.2nm,0.6s,baz=349,slow=2.1,SNR=3.2						
CHTO	**Chiang Mai**	**31.22**	**308**	P	**P**	**18 26 40.7**	**+0.6**
	5.4nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**35.58**	**154**	*e*P	**P**	**18 27 19.2**	**+1.4**
	1.7nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**35.58**	**154**	P	**P**	**18 27 19.0**	**+1.2**
	2.2nm,0.6s,mb4.3,baz=321,slow=7.6,SNR=13						
MJAR	**Matsushiro Arr**	**38.64**	**18**	P	**P**	**18 27 44.1**	**+0.4**
	1.2nm,0.7s,mb3.9,baz=194,slow=8.4,SNR=3.2						
SONM	**Songino Array**	**50.22**	**344**	P	**P**	**18 29 16.3**	**+0.6**
	0.3nm,0.5s,mb3.5,baz=168,slow=9.9,SNR=2.7						
MK31	**Makanchi Array**	**59.40**	**328**	P	**P**	**18 30 21.4**	**-0.7**
MKAR	**Makanchi Array**	**59.40**	**328**	P	**P**	**18 30 22.2**	**+0.1**
	0.5nm,0.3s,mb4.0,baz=125,slow=7.8,SNR=17						
KBL	**Kabul**	**62.03**	**310**	*e*P	**P**	**18 30 40.1**	**-0.1**
	1.6nm,0.6s,mb4.2						
EKS2	**Erkin-Say**	**62.13**	**320**	P	**P**	**18 30 42.1**	**+1.4**
	1.5nm,0.7s,mb4.1						
ZALV	**Zalesovo Beam**	**62.95**	**335**	P	**P**	**18 30 45.0**	**-1.0**
	0.3nm,0.4s,mb3.6,baz=138,slow=6.7,SNR=3.2						
KURK	**Kurchatov**	**63.73**	**329**	P	**P**	**18 30 49.8**	**-1.4**
	1.8nm,0.5s,mb4.2						
BVAR	**Borovoye Array**	**69.25**	**329**	P	**P**	**18 31 26.6**	**+0.3**
	0.4nm,0.6s,mb3.4,baz=148,slow=8.5,SNR=3.5						
AKTK	**Aktyubinsk**	**75.19**	**323**	P	**P**	**18 32 01.0**	**-0.8**
AKTO	**Aktyubinsk**	**75.19**	**323**	P	**P**	**18 32 01.0**	**-0.8**
	0.5nm,0.3s,mb3.7,baz=131,slow=7.8,SNR=4.2						
SBA	**Scott Base**	**80.92**	**172**	P	**P**	**18 32 35.3**	**+2.2**
GNI	**Garni**	**82.11**	**310**	P	**P**	**18 32 39.2**	**-0.8**
	36nm,1.5s,mb5.0						
TORD	**Torodi Ar. Bea**	**121.73**	**285**	PKP	PKPdf	18 39 15.0	+1.2
	0.3nm,0.8s,baz=114,slow=1.7,SNR=2.7						

*NEIC **09** 18:26:00.4±5.6, 2020S×174.95W, h200km, Error ellipse: s-maj=103.0km s-min=25.6km az=57.0*

*IDC **09** 18:26:24.4±6.4, 2143S×176.97W, h281km±58km, mb3.5/4, mb1 3.7/5, mb1mx3.3/17, mbtmp3.6/5, Error ellipse: s-maj=58.3km s-min=23.9km az=71.0*

ISC 09 18:26:24.5±4.7, 214S±02×1764W±05, h325km±45km, n9, σ0°97/9, mb3.5/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.94**	**264**	*e*P	**P**	**18 29 51.1**	**+0.5**
URZ	**Urewera**	**17.75**	**197**	P	**P**	**18 30 08.8**	**-1.2**
	3.3nm,0.3s,baz=267,slow=3.4,SNR=20						
URZ				S	**S**	**18 33 16.9**	**-0.2**
	1.6nm,0.3s,baz=289,slow=23,SNR=7.8						
RPZ	**Rata Peaks**	**24.62**	**202**	P	**P**	**18 31 18.4**	**+2.3**
	10nm,0.6s,mb4.2,baz=337,slow=3.9,SNR=8.7						
STKA	**Stephens Creek**	**38.77**	**245**	*e*P	**P**	**18 33 19.5**	**+0.9**
	1.5nm,0.9s,mb3.2						
STKA	**Stephens Creek**	**38.77**	**245**	P	**P**	**18 33 19.3**	**+0.7**
	1.6nm,0.7s,mb3.4,baz=93,slow=9.9,SNR=7.5						
ASAR	**Alice Springs**	**45.77**	**257**	P	**P**	**18 34 14.5**	**-0.2**
	2.2nm,0.8s,mb3.3,baz=100,slow=8.1,SNR=28						
ASAR				PcP	PcP	18 35 49.0	+2.6
	0.2nm,0.5s,baz=108,slow=3.7,SNR=3.2						
WB2	**Warramunga Arr**	**45.94**	**263**	*e*P	**P**	**18 34 15.6**	**-0.5**
WRA	**Warramunga Arr**	**45.95**	**263**	P	**P**	**18 34 15.4**	**-0.8**
	1.1nm,0.7s,mb3.1,baz=96,slow=7.6,SNR=20						
KAKA	**Kakadu**	**49.47**	**271**	*e*P	Px	18 34 31.3	
	3.1nm,0.8s						

ISC 09 18:36:25.1±0.5, 4632N±003×1305E±005, h10km, n10, σ0°45/17, 4C-4D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOO	**Bordano**	**0.04**	**87**⇑	*i*Pg	**Pg**	**18 36 26.4**	**-0.6**
MPRI	**Monte Prat**	**0.09**	**208**⇓	*i*Pg	**Pg**	**18 36 27.1**	**-0.4**
MPRI				*i* Sg	**Sg**	**18 36 28.8**	**-0.4**
BUA	**Buia**	**0.11**	**152**⇓	*i*Pg	**Pg**	**18 36 27.5**	**-0.3**
BUA				*i* Sg	**Sg**	**18 36 29.7**	**-0.1**
BAD	**Bernadia**	**0.16**	**121**⇑	*i*Pg	**Pg**	**18 36 28.4**	**-0.2**
BAD				*i* Sg	**Sg**	**18 36 31.3**	**+0.3**
PLRO	**Paularo**	**0.24**	**17**⇑	*i*Pg	**Pg**	**18 36 29.9**	**-0.2**
PLRO				*i* Sg	**Sg**	**18 36 34.1**	**+0.6**
ZOU	**Zoufplan**	**0.24**	**348**⇓	*i*Pg	**Pg**	**18 36 29.8**	**-0.4**
ZOU				*i* Sg	**Sg**	**18 36 33.7**	**+0.2**
COLI	**

MKAR	**Makanchi Array**	**56.26**	**325**	P	**P**	**19 02 05.2**	**-0.2**
	0.8nm,0.4s,mb4.1,baz=116,slow=7.2,SNR=18						
ZALV	**Zalesovo Beam**	**59.16**	**333**	LR	LR	19 33 15.1	
	comp=Z,15nm,19.0s,baz=77,slow=41						
KURK	**Kurchatov**	**60.41**	**327**	P	**P**	**19 02 33.7**	**-0.5**
	baz=125,slow=7.3						
KURK	**Kurchatov**	**60.41**	**327**	*e*P	**P**	**19 02 33.5**	**-0.7**
	2.6nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**65.99**	**327**	P	**P**	**19 03 10.8**	**-0.3**
	1.3nm,0.6s,mb4.0,baz=106,slow=6.6,SNR=8.8						
BRVK	**Borovoye**	**66.06**	**327**	*e*P	**P**	**19 03 10.8**	**-0.8**
	5.8nm,0.9s,mb4.4						
AKTK	**Aktyubinsk**	**72.43**	**321**	P	**P**	**19 03 51.1**	**+0.1**
ARU	**Arti**	**73.59**	**327**	P	**P**	**19 03 56.7**	**-1.1**
	2.0nm,0.5s,mb4.1						
DLBC	**Dease Lake**	**92.23**	**31**	P	**P**	**19 05 36.0**	**+1.9**
TXAR	**Lajitas Array**	**120.45**	**51**	PKP	PKPdf	19 11 14.0	-2.3
	0.2nm,0.5s,baz=297,slow=2.6,SNR=3.5						

*IDC **09** 18:52:35.3±0.8,5102N×17078W,h0km,mb4.1/14, mb1 4.3/15,mb1mx4.1/25,mbtmp4.1/15,ML3.4/1,MS3.5/1, Ms1 3.5/1,ms1mx2.0/34,Error ellipse: s-maj=24.4km s-min=17.8km az=178.0*

*ISCJB **09** 18:52:36.5±2.1,5118N±007×17074W±007,h14km±13km, mb4.1/15,Error ellipse: s-maj=12.2km s-min=6.3km az=157.9*

*NEIC **09** 18:52:41.0±0.6,5125N×17058W,h35km,mb4.2/5, ML3.6(AEIC),Error ellipse: s-maj=16.0km s-min=7.9km az=155.0*

ISC 09 18:52:37.7±2.6,5123N±007×17073W±007,h10km±17km, n43,σ1$16/45,mb4.1/15,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**2.09**	**33**	Pn	**Pn**	**18 53 08.9**	**-3.8**
ATKA	**Atka Island**	**2.37**	**296**	P	**Pn**	**18 53 16.7**	**+0.2**
ATKA				S	**Sn**	**18 53 44.8**	**-0.8**
OKCE	**Okmok Cone E**	**2.70**	**35**	P	**Pn**	**18 53 21.9**	**+0.7**
OKCE				S	**Sn**	**18 53 54.3**	**+0.4**
OKCD	**Okmok Cone D**	**2.72**	**35**	P	**Pn**	**18 53 22.4**	**+0.9**
OKFG	**Magazine Ridge**	**2.78**	**37**	P	**Pn**	**18 53 22.5**	**+0.2**
OKFG				S	**Sn**	**18 53 54.4**	**-1.5**
UNV	**Unalaska Valle**	**3.67**	**43**	P	**Pn**	**18 53 34.7**	**+0.1**
OHAK	**Old Harbor**	**11.82**	**53**	*e*Pn	**Pn**	**18 55 23.9**	**-2.2**
KDAK	**Kodiak Island**	**12.39**	**51**	Pn	**Pn**	**18 55 45.8**	**+12**
	1.9nm,0.3s,baz=248,slow=11,SNR=14						
KDAK				Sn	**Sn**	**18 57 56.8**	**+4.8**
	0.1nm,0.3s,baz=252,slow=19,SNR=2.1						
KDAK	**Kodiak Island**	**12.39**	**51**	*e*Pn	**Pn**	**18 55 31.6**	**-2.3**
SEW	**Seward**	**14.87**	**45**	*e*Pn	**Pn**	**18 56 04.6**	**-3.1**
RC01	**Rabbit Creek A**	**15.23**	**42**	*e*Pn	**Pn**	**18 56 10.3**	**-2.2**
CHUM	**Lake Minchumin**	**15.98**	**31**	*e*Pn	**Pn**	**18 56 23.2**	**+0.9**
	6.1nm,0.5s						
KTH	**Kantishna Hill**	**16.22**	**33**	*e*Pn	**Pn**	**18 56 24.7**	**-0.7**
	5.2nm,0.6s						
BPAW	**Bear Paw Mtn.**	**16.56**	**31**	*e*Pn	**Pn**	**18 56 30.3**	**+0.6**
	19nm,0.7s						
PETK	**Petropavlovsk-**	**19.38**	**288**	P	**Pn**	**18 57 04.8**	**+0.3**
	0.1nm,0.3s,baz=74,slow=5.2,SNR=3.9						
PNL	**Peninsula**	**19.51**	**52**	*e*P	**Pn**	**18 57 05.5**	**-0.5**
EGAK	**Eagle**	**20.45**	**37**	*e*Pn	**P**	**18 57 14.9**	**-0.1**
	9.1nm,0.5s						
HYT	**Haines Junctio**	**20.68**	**49**	*e*Pn	**P**	**18 57 20.2**	**+2.7**
DAWY	**Dawson**	**20.84**	**40**	*e*Pn	**P**	**18 57 19.4**	**+0.2**
SKAG	**Skagway**	**21.52**	**54**	*e*P	**P**	**18 57 37.7**	**+4.2**
INK	**Inuvik**	**24.76**	**32**	*e*P	**P**	**18 57 59.0**	**0.0**
INK				*e*		18 58 12.0	
YKA	**Yellowknife Ar**	**31.63**	**47**	P	**P**	**18 59 02.4**	**+2.0**
	2.2nm,0.6s,mb4.2,baz=271,slow=7.3,SNR=6.7						
YKA	**Yellowknife Ar**	**31.63**	**47**	P	**P**	**18 59 02.4**	**+2.0**
PDAR	**Pinedale Array**	**41.46**	**77**	P	**P**	**19 00 24.4**	**-0.1**
	3.4nm,0.7s,mb4.1,baz=300,slow=5.7,SNR=6.7						
LAZ	**Ladron**	**48.04**	**85**	*e*P	**P**	**19 01 18.0**	**+1.0**
BNM	**Barren Site**	**48.53**	**85**	*e*P	**P**	**19 01 21.4**	**+0.7**
SONM	**Songino Array**	**51.16**	**301**	P	**P**	**19 01 41.7**	**+1.2**
	1.0nm,0.6s,mb4.0,baz=43,slow=7.4,SNR=6.5						
SONM				LR	LR	19 22 20.1	
	comp=Z,48nm,19.5s,baz=85,slow=35						
TXAR	**Lajitas Array**	**53.63**	**87**	P	**P**	**19 01 58.8**	**-0.3**
	3.7nm,0.7s,mb4.4,baz=296,slow=5.3,SNR=32						
WVT	**Waverly**	**58.71**	**70**	*e*P	**P**	**19 02 28.7**	**-6.6**
	3.9nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**58.96**	**353**	P	**P**	**19 02 35.7**	**-0.9**
	1.7nm,1.0s,mb4.0,baz=19,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**58.96**	**353**	P	**P**	**19 02 35.7**	**-0.9**
KURK	**Kurchatov**	**62.66**	**318**	P	**P**	**19 03 03.3**	**+1.2**
	baz=46,slow=6.7						
MKAR	**Makanchi Array**	**63.97**	**313**	P	**P**	**19 03 10.4**	**-0.3**
	1.0nm,0.7s,mb4.0,baz=54,slow=6.2,SNR=5.3						
NOA	**NORSAR Array B**	**68.07**	**359**	P	**P**	**19 03 38.0**	**+1.1**
	2.2nm,0.9s,mb4.2,baz=16,slow=9.1,SNR=3.4						
AKTO	**Aktyubinsk**	**70.57**	**329**	P	**P**	**19 03 51.1**	**-1.4**
	2.7nm,0.6s,mb4.4,baz=66,slow=8.1,SNR=11						
CMAR	**Chiang Mai Arr**	**76.04**	**282**	P	**P**	**19 04 25.1**	**-0.1**
	0.7nm,0.6s,mb3.7,baz=35,slow=6.2,SNR=5.6						
AKASG	**Malin Array Be**	**77.04**	**347**	P	**P**	**19 04 30.2**	**-0.2**
	1.5nm,0.5s,mb4.2,baz=12,slow=5.0,SNR=6.4						
GERES	**GERESS Array B**	**80.23**	**357**	P	**P**	**19 04 49.3**	**+1.2**
	0.9nm,0.8s,mb3.7,baz=2.9,slow=7.9,SNR=3.5						
WRA	**Warramunga Arr**	**85.63**	**231**	P	**P**	**19 05 13.8**	**-2.5**
	0.4nm,0.7s,mb3.8,baz=31,slow=5.8,SNR=7.1						
BRTR	**Keskin Array B**	**86.94**	**341**	P	**P**	**19 05 24.2**	**+1.5**
	1.3nm,1.0s,mb4.1,baz=15,slow=6.0,SNR=2.9						
ASAR	**Alice Springs**	**89.01**	**229**	P	**P**	**19 05 30.7**	**-1.8**
	2.9nm,0.7s,mb4.7,baz=27,slow=4.8,SNR=44						
TORD	**Torodi Ar. Bea**	**115.55**	**8**	PKP	PKPdf	19 11 19.0	-1.1
	0.1nm,0.4s,baz=344,slow=1.4,SNR=3.2						
MAW	**Mawson**	**149.46**	**217**	PKPbc	PKPbc	19 12 25.0	-0.6
	1.3nm,0.6s,baz=90,slow=6.1,SNR=3.5						

*NEIC **09** 18:55:17.7, 1683N×9481W,h121km,MD3.8(MEX),After MEX.*

MEX 09 18:55:17.7±1.4,1683N×9481W,h121km±28km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.62**	**92**	*i* P	Pn	18 55 45.2	-1.4
TGIG				*i* S	Sn	18 56 06.7	-2.0
OXX	**Oaxaca**	**1.84**	**278**	*e*P	Pn	18 55 49.0	-0.3
OXX				*i* S	Sn	18 56 12.7	-0.8
VHO	**Vista Hermosa**	**1.85**	**278**	*i* P	Pn	18 55 49.0	-0.4
VHO				*i* S	Sn	18 56 12.2	-1.5
PCIG		**1.90**	**126**	*i* P	Pn	18 55 49.5	-0.5
PCIG				*i* S	Sn	18 56 12.7	-1.9
UTMO	**Huajuapan**	**3.02**	**290**	*i* P	Pn	18 56 04.1	-0.2
UTMO				*i* S	Sn	18 56 37.3	-3.0
PNIG	**Pinotepa**	**3.21**	**263**	*i* P	Pn	18 56 04.3	-2.4
PNIG				*i* S	Sn	18 56 41.3	-3.3
PPM	**Popocatepetl**	**4.25**	**302**	*e*P	Pn	18 56 20.3	-0.4
PPM				*i* S	Sn	18 57 09.1	-0.5
CAIG	**El Cayaco**	**5.22**	**273**	*e*P	Pn	18 56 31.3	-2.5
CAIG				*i* S	Sn	18 57 29.9	-2.9

MAN 09 19:31:56,1870N×12090E,h5km,mb4.1,ML2.9,MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**1.06**	**190**	*e*P	Pg	19 32 16.8	+0.5
ABRA				*e*S	Sg	19 32 29.5	-0.5
SGCP	**Mt. Cagua**	**1.18**	**112**	*e*P	Pg	19 32 19.0	+0.4
CVP	**Callao Caves**	**1.32**	**138**	*e*P	Pn	19 32 20.2	-0.9
CVP				*e*S	Sg	19 32 37.9	-0.6
CAUP	**Cauayan**	**1.95**	**153**	*e*P	Pn	19 32 31.8	+2.0
CAUP				*e*S	Sn	19 32 59.1	+4.4
PALP	**Palanan**	**2.18**	**138**	*e*P	Pn	19 32 35.9	+2.9
PALP				*e*S	Sn	19 33 02.3	+2.0
BALP	**Baler**	**3.01**	**168**	*e*P	Pn	19 32 48.8	+4.4

*IDC **09** 19:48:19.3±3.2,2361S×17995W,h510km±32km,mb3.4/6, mb1 3.6/7,mb1mx3.3/17,mbtmp3.4/7,Error ellipse: s-maj=32.2km s-min=24.0km az=34.0*

*ISCJB **09** 19:48:21.4±3.9,236S±02×1799E±02,h550km±48km, mb4.0/8,Error ellipse: s-maj=31.9km s-min=18.1km az=145.3*

*NEIC **09** 19:48:22.6±3.2,2373S×17996E,h552km±35km,mb3.9/4, Error ellipse: s-maj=32.6km s-min=16.2km az=213.0*

ISC 09 19:48:23.4±3.7,238S±02×1799E±02,h557km±43km,n12, σ0$85/13,mb4.0/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.58**	**189**	P	**P**	**19 51 28.5**	**+0.3**
	0.7nm,0.3s,baz=113,slow=10,SNR=4.4						
URZ				S	**S**	**19 53 59.7**	**-0.8**
	0.3nm,0.3s,baz=246,slow=19,SNR=4.4						
RPZ	**Rata Peaks**	**21.13**	**198**	P	**P**	**19 52 29.2**	**+0.1**
	25nm,1.2s,mb4.7,baz=354,slow=16,SNR=3.2						
CTA	**Charters Tower**	**31.41**	**270**	P	**P**	**19 53 60.0**	**+0.3**
	10nm,0.5s,mb4.7,baz=94,slow=13,SNR=20						
CTAO	**Charters Tower**	**31.41**	**270**	*e*P	**P**	**19 53 59.8**	**+0.2**
	10nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.68**	**248**	P	**P**	**19 54 28.3**	**+1.2**
	0.9nm,0.8s,mb3.4,baz=96,slow=7.6,SNR=5.1						
STKA	**Stephens Creek**	**34.68**	**248**	*e*P	**P**	**19 54 27.9**	**+0.8**
	1.0nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**19 55 26.4**	**+0.1**
	1.7nm,0.5s,mb3.9,baz=95,slow=7.3,SNR=38						
ASAR				ScP	ScP	20 00 11.3	+5.1
	0.9nm,0.9s,baz=106,slow=4.0,SNR=8.2						
WRAB	**Tennant Creek**	**42.34**	**266**	*e*P	**P**	**19 55 28.6**	**-0.5**
	3.1nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**19 55 28.4**	**-0.8**
	1.7nm,0.3s,mb4.1,baz=94,slow=8.3,SNR=117						
QSPA	**South Pole Qui**	**66.25**	**180**	*e*P	**P**	**19 58 18.3**	**+2.3**
SNAA	**Sanae**	**84.73**	**179**	*e*P	**P**	**19 59 57.7**	**-0.9**
	0.4nm,0.4s,mb3.3						
TXAR	**Lajitas Array**	**90.45**	**58**	P	**P**	**20 00 25.7**	**-0.4**
	0.4nm,0.7s,mb3.4,baz=212,slow=4.4,SNR=3.8						

*ISCJB **09** 19:59:55.9±0.3,3640N±002×153E±002,h10km,mb3.4/2, Error ellipse: s-maj=2.8km s-min=2.3km az=144.6*

*CRAAG **09** 19:59:55.8,36.14N×161E,Ml4.4*

*IDC **09** 19:59:55.7±1.4,3633N×158E,h0km,mb3.4/2,mb1 3.5/5, mb1mx3.3/25,mbtmp3.4/5,ML3.7/3,Error ellipse: s-maj=27.2km s-min=19.7km az=153.0*

*NEIC **09** 19:59:56.4±0.5,3621N×167E,h10km,MG4.4(MDD), Error ellipse: s-maj=6.0km s-min=3.4km az=145.0*

*LDG **09** 19:59:57.7±0.2,3615N×168E,h10km,Ml3.2/26,Error ellipse: s-maj=4.0km s-min=1.9km az=145.0*

*MDD **09** 19:59:57.7±0.4,3629N×156E,h0km,mb4.4/19,Error ellipse: s-maj=4.7km s-min=3.3km az=125.0,PRIMO*

*CSEM **09** 19:59:57.8±0.1,3618N×151E,h10km,ML3.5/39,Error ellipse: s-maj=2.2km s-min=1.4km az=128.0*

*CNRM **09** 19:59:58.8,3641N×139W,h33km,MD4.4*

*SFS **09** 19:59:58.0,3618N×172E,h22km,ML4.4*

ISC 09 19:59:57.6±0.3,3634N±002×152E±002,h10km,n166, σ1$42/288,mb3.4/2,2C-1D,Northern Algeria

INMG 09 19:59:58.8±1.4,3620N×166E,h31km±25km,ML3.0,Error ellipse: s-maj=16.7km s-min=4.4km az=128.0,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.05**	**174**	P	**Pg**	**19 59 59.7**	**+0.1**
ECHA	**Ech Chlef**	**0.23**	**213**	P	**Pg**	**20 00 02.0**	**-0.3**
ECHF	**Ech Chlef**	**0.24**	**218**	P	**Pg**	**20 00 02.0**	**-0.5**
EANR	**'Ain N'Sour**	**0.52**	**221**	P	**Pg**	**20 00 07.3**	**-0.4**
OKGL	**Djebel Kef Gue**	**0.78**	**247**	P	**Pg**	**20 00 15.0**	**+2.5**
ETRT	**Tiaret**	**0.97**	**191**	P	**Pg**	**20 00 14.2**	**-2.0**
OJGS	**Djebel Guires**	**1.05**	**217**	P	**Pg**	**20 00 16.0**	**-1.7**
EMHD	**Djebel Mahouad**	**1.16**	**97**	P	**Pb**	**20 00 17.0**	**-2.8**
OJBR	**Djebel Berber**	**1.22**	**232**	P	**Pn**	**20 00 16.0**	**-4.7**
ABA	**Alger-Bouzarea**	**1.30**	**69**	P	**Pn**	**20 00 21.0**	**-0.8**
ADJB	**Djebel Djouab**	**1.56**	**96**	P	**Pn**	**20 00 27.5**	**+2.2**
ODJA	**Bouhanifia**	**1.69**	**234**	P	**Pn**	**20 00 30.0**	**+2.8**
USTO	**Oran**	**1.79**	**251**	P	**Pn**	**20 00 38.0**	**+10**
AKET	**Djebel Ketaf**	**1.93**	**98**	P	**Pn**	**20 00 34.0**	**+3.5**
CART	**Cartagena**	**2.37**	**302**	*e*Pn	**Pn**	**20 00 35.5**	**-1.0**
CART				*e*Sn	**Sn**	**20 01 03.3**	**-2.4**
CART	**Cartagena**	**2.37**	**302**	*e*P	**Pn**	**20 00 35.8**	**-1.0**
CART	**Cartagena**	**2.37**	**302**	*e*P	**Pn**	**20 00 35.8**	**-0.7**
CART				*e*Sn	**Sn**	**20 01 03.3**	**-2.4**
CART	**Cartagena**	**2.37**	**302**	P	**Pn**	**20 00 35.9**	**-0.7**
CART				S	**Sn**	**20 01 02.0**	**-3.6**
EMUR	**La Murta**	**2.67**	**305**	Pn	**Pn**	**20 00 40.7**	**+0.1**
	6.7nm,0.2s,SNR=14						
EMUR				Sn	**Sn**	**20 01 11.2**	**-1.8**
	48nm,0.6s,SNR=5.0						
EMUR	**La Murta**	**2.67**	**305**	Pn	**Pn**	**20 00 40.7**	**+0.1**
	6.7nm,0.2s,SNR=14						
EMUR				Sn	**Sn**	**20 01 11.2**	**-1.8**
	48nm,0.6s,SNR=5.0						
EIBI	**Ibiza**	**2.68**	**357**	Pn	**Pn**	**20 00 41.8**	**+1.0**
	10nm,0.1s,SNR=34						
EIBI				Sn	**Sn**	**20 01 12.4**	**-0.9**
	100nm,0.2s,SNR=166						
EIBI	**Ibiza**	**2.68**	**357**	Pn	**Pn**	**20 00 41.8**	**+1.0**
	10nm,0.1s,SNR=34						
EIBI				Sn	**Sn**	**20 01 12.4**	**-0.9**
	100nm,0.2s,SNR=166						
EBEN	**Beniarda**	**2.73**	**330**	Pn	**Pn**	**20 00 41.9**	**+0.4**
	1.9nm,0.1s,SNR=19						
EBEN				Sn	**Sn**	**20 01 15.4**	**+0.8**
	40nm,0.3s						
EBEN	**Beniarda**	**2.73**	**330**	Pn	**Pn**	**20 00 41.9**	**+0.4**
	1.9nm,0.1s,SNR=19						
EBEN				Sn	**Sn**	**20 01 15.4**	**+0.8**
	40nm,0.3s						
ENIJ	**Nijar**	**3.06**	**283**	Pn	**Pn**	**20 00 45.6**	**-0.4**
	2.6nm,0.2s,SNR=7.9						
ENIJ				Sn	**Sn**	**20 01 22.9**	**+0.1**
	22nm,0.3s,SNR=8.4						
SET	**Setif**	**3.14**	**91**	P	**Pg**	**20 01 01.0**	**+3.3**
ETOB	**Tobarra**	**3.35**	**314**	Pn	**Pn**	**20 00 51.5**	**+1.5**
	7.3nm,0.2s,SNR=42						
ETOB				Sn	**Sn**	**20 01 30.4**	**+0.5**
	20nm,0.2s,SNR=6.8						
ETOB	**Tobarra**	**3.35**	**314**	Pn	**Pn**	**20 00 51.5**	**+1.5**
	7.3nm,0.2s,SNR=42						
ETOB				Sn	**Sn**	**20 01 30.4**	**+0.6**
	20nm,0.2s,SNR=6.8						
ETOS	**Mallorca**	**3.57**	**16**	Pn	**Pn**	**20 00 52.2**	**-0.8**
	3.5nm,0.1s,SNR=14						
ETOS				Sn	**Sn**	**20 01 32.5**	**-2.6**
	11nm,0.3s,SNR=13						
ETOS	**Mallorca**	**3.57**	**16**	Pn	**Pn**	**20 00 52.2**	**-0.7**
	3.5nm,0.1s,SNR=14						
ETOS				Sn	**Sn**	**20 01 32.5**	**-2.6**
	11nm,0.3s,SNR=13						
EBER	**Berja**	**3.59**	**280**	Pn	**Pn**	**20 00 53.6**	**+0.3**
	19nm,0.2s,SNR=80						
EBER				Sn	**Sn**	**20 01 35.2**	**-0.6**
	19nm,0.3s,SNR=8.1						
EBER	**Berja**	**3.59**	**280**	Pn	**Pn**	**20 00 53.6**	**+0.3**
	19nm,0.2s,SNR=80						
EBER				Sn	**Sn**	**20 01 35.2**	**-0.6**
	19nm,0.3s,SNR=8.1						
EHUE	**Huescar**	**3.60**	**295**	Pn	**Pn**	**20 00 56.3**	**+2.8**
	3.2nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**20 01 34.7**	**-1.4**
	11nm,0.2s,SNR=7.9						
EALB	**Alboran**	**3.71**	**265**	Pn	**Pn**	**20 01 37.3**	**-1.4**
	15nm,0.2s,SNR=7.9						
EALB	**Alboran**	**3.71**	**265**	Sn	**Sn**	**20 01 37.3**	**-1.4**
	15nm,0.2s,SNR=7.9						
ZAI	**Zaio**	**3.74**	**250**	*e*P	**Pn**	**20 00 53.0**	**-2.3**
ZAI	**Zaio**	**3.74**	**250**	P	**Pn**	**20 00 53.0**	**-2.3**
ZAI				S	**Sn**	**20 01 32.0**	**-7.4**
EMEL	**Melilla**	**3.79**	**255**	Pn	**Pn**	**20 00 57.3**	**+1.3**
	54nm,0.1s,SNR=7.9						
ECHE	**Chera**	**3.79**	**329**	Pn	**Pn**	**20 00 57.4**	**+1.4**
	2.6nm,0.2s,SNR=7.8						
ECHE				Sn	**Sn**	**20 01 42.1**	**+1.4**
	11nm,0.3s,SNR=5.0						
EVIA	**Vianos**	**3.94**	**307**	Pn	**Pn**	**20 00 59.3**	**+1.3**
	5.5nm,0.2s,SNR=16						
EVIA				Sn	**Sn**	**20 01 45.6**	**+1.3**
	24nm,0.3s,SNR=10.0						
EQES	**Quesada**	**3.95**	**293**	Pn	**Pn**	**20 00 59.3**	**+1.0**
	6.3nm,0.2s,SNR=42						
EQES				Sn	**Sn**	**20 01 45.8**	**+1.1**
	45nm,0.3s,SNR=5.7						
EQES	**Quesada**	**3.95**	**293**	Pn	**Pn**	**20 00 59.3**	**+1.0**
	6.3nm,0.2s,SNR=42						
EQES				Sn	**Sn**	**20 01 45.8**	**+1.2**
	45nm,0.3s,SNR=5.7						
EQUE	**Quentar**	**4.08**	**284**	Pn	**Pn**	**20 01 01.2**	**+1.2**
	14nm,0.2s,SNR=18						
EQUE				Sn	**Sn**	**20 01 45.6**	**-2.1**
	12nm,0.4s,SNR=8.5						
EGUA	**Guajares**	**4.12**	**278**	Pn	**Pn**	**20 01 00.9**	**+0.3**
	16nm,0.4s,SNR=7.9						
EGUA				Sn	**Sn**	**20 01 48.3**	**-0.6**
	23nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**4.19**	**284**	Pn	**Pn**	**20 01 03.0**	**+1.5**
	6.6nm,0.3s,SNR=12						
ECOG				Sn	**Sn**	**20 01 45.2**	**-5.3**
	41nm,0.6s,SNR=4.0						
EMOS	**Mosqueruela**	**4.31**	**339**	Pn	**Pn**	**20 01 04.3**	**+1.1**
	4.5nm,0.1s,SNR=60						
EMOS				Sn	**Sn**	**20 01 51.7**	**-1.7**
	12nm,0.2s,SNR=5.0						
EMOS	**Mosqueruela**	**4.31**	**339**	Pn	**Pn**	**20 01 04.3**	**+1.2**
	4.5nm,0.1s,SNR=60						
EMOS				Sn	**Sn**	**20 01 51.7**	**-1.8**
	12nm,0.2s,SNR=5.0						
ERON	**Agron**	**4.34**	**281**	Pn	**Pn**	**20 01 05.1**	**+1.5**
	3.5nm,0.2s,SNR=4.0						
ERON				Sn	**Sn**	**20 01 57.0**	**+2.9**
	12nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**4.61**	**295**	Pn	**Pn**	**20 01 08.8**	**+1.5**
	4.5nm,0.3s,SNR=7.1						
EBAN				Sn	**Sn**	**20 02 00.0**	**-0.8**
	9.1nm,0.4s,SNR=5.0						
ELOJ	**Sierra Loja**	**4.63**	**282**	⇓Pn	**Pn**	**20 01 10.4**	**+2.8**
	8.7nm,0.3s,SNR=18						
ELOJ				Sn	**Sn**	**20 02 03.6**	**+2.3**
	12nm,0.5s,SNR=5.0						
ERTA	**Horta de San J**	**4.70**	**349**	Pn	**Pn**	**20 01 09.7**	**+1.2**
	1.7nm,0.2s,SNR=12						
ERTA				Sn	**Sn**	**20 02 01.8**	**-1.2**
	13nm,0.4s,SNR=5.0						
ERTA	**Horta de San J**	**4.70**	**349**	Pn	**Pn**	**20 01 09.7**	**+1.2**
	1.7nm,0.2s,SNR=12						
ERTA				Sn	**Sn**	**20 02 01.8**	**-1.2**
	13nm,0.4s,SNR=5.0						
ELUQ	**Luque**	**4.79**	**286**	Pn	**Pn**	**20 01 11.4**	**+1.6**
	1.4nm,0.1s,SNR=7.9						
ELUQ				Sn	**Sn**	**20 02 06.8**	**+1.4**
	3.8nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.01**	**356**	Pn	**Pn**	**20 01 14.0**	**+1.2**
	4.6nm,0.2s,SNR=10						
EPOB				Sn	**Sn**	**20 02 05.7**	**-5.1**
	2.4nm,0.3s,SNR=5.0						
EPOB	**Poblet**	**5.01**	**356**	Pn	**Pn**	**20 01 14.0**	**+1.2**
	4.6nm,0.2s,SNR=10						
EPOB				Sn	**Sn**	**20 02 05.7**	**-5.1**
	2.4nm,0.3s,SNR=5.0						
EMIJ	**Mijas**	**5.08**	**274**	Pn	**Pn**	**20 01 12.9**	**-0.9**
	2.0nm,0.2s,SNR=18						
EMIJ				Sn	**Sn**	**20 02 07.8**	**-4.7**
	10.0nm,0.5s,SNR=4.7						
EMIJ	**Mijas**	**5.08**	**274**	⇑Pn	**Pn**	**20 01 12.9**	**-0.8**
	2.0nm,0.2s,SNR=18						
EMIJ				Sn	**Sn**	**20 02 07.8**	**-4.6**
	10.0nm,0.5s,SNR=4.7						
TZK	**Tazeka**	**5.19**	**246**	*e*P	**Pn**	**20 01 13.0**	**-2.2**
TZK	**Tazeka**	**5.19**	**246**	P	**Pn**	**20 01 13.0**	**-2.2**
TZK				S	**Sn**	**20 02 07.0**	**-8.1**
EADA	**Adamuz**	**5.20**	**292**	Pn	**Pn**	**20 01 16.3**	**+1.0**
	0.8nm,0.2s,SNR=4.0						
EADA				Sn	**Sn**	**20 02 14.4**	**-0.9**
	22nm,0.4s,SNR=6.3						
EADA	**Adamuz**	**5.20**	**292**	Pn	**Pn**	**20 01 16.3**	**+1.0**
	0.8nm,0.2s,SNR=4.0						
EADA				Sn	**Sn**	**20 02 14.4**	**-0.9**
	22nm,0.4s,SNR=6.3						
ETOR	**Torete**	**5.28**	**329**	Pn	**Pn**	**20 01 18.1**	**+1.7**
ETOR				Sn	**Sn**	**20 02 16.3**	**-0.9**
	5.4nm,0.3s,SNR=4.0						
ETOR	**Torete**	**5.28**	**329**	Pn	**Pn**	**20 01 18.1**	**+1.7**
	1.3nm,0.1s,SNR=6.7						
ETOR				Sn	**Sn**	**20 02 16.3**	**-0.9**
	5.4nm,0.3s,SNR=4.0						
ESDC	**Sonseca Array**	**5.46**	**309**	Pn	**Pn**	**20 01 19.7**	**+0.8**
	3.2nm,0.3s,baz=123,slow=13,SNR=29						
ESDC				Sn	**Sn**	**20 02 21.5**	**-0.3**
	3.4nm,0.3s,baz=124,slow=25,SNR=9.4						
ESDC				Lg		20 02 34.1	
	3.2nm,0.3s,baz=120,slow=27,SNR=7.0						
ESDC	**Sonseca Array**	**5.46**	**309**	Pn	**Pn**	**20 01 19.7**	**+0.7**
	3.1nm,0.1s,SNR=18						
ESDC				Sn	**

MTLF	**Montolieu**	**7.01**	**4**	*e*Pn	**Pn**	**20 01 40.4**	**+0.2**
MTLF				*e*Sn	**Sn**	**20 02 57.8**	**-2.1**
	0.6nm,0.4s						
EPLA	**Plasencia**	**7.04**	**304**	Sn	**Sn**	**20 02 59.8**	**-1.0**
	10nm,0.5s,SNR=5.0						
EPLA	**Plasencia**	**7.04**	**304**	Sn	**Sn**	**20 02 59.8**	**-1.0**
	10nm,0.5s,SNR=5.0						
SJPF	**Ste Jean**	**7.08**	**343**	*e*Pn	**Pn**	**20 01 43.4**	**+2.1**
SJPF				*e*Sn	**Sn**	**20 03 00.3**	**-1.5**
	1.5nm,0.4s						
SJPF	**Ste Jean**	**7.08**	**343**	*e*Pn	**Pn**	**20 01 43.4**	**+2.1**
SJPF				*e*Sn	**Sn**	**20 03 00.3**	**-1.5**
	0.8nm,0.4s						
EBAD	**Badajoz**	**7.20**	**292**	Pn	**Pn**	**20 01 42.5**	**-0.3**
EBAD				Sn	**Sn**	**20 03 01.9**	**-2.7**
	8.4nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**7.20**	**292**	Pn	**Pn**	**20 01 42.4**	**-0.4**
	0.6nm,0.2s,SNR=4.7						
EBAD				Sn	**Sn**	**20 03 01.9**	**-2.7**
	8.4nm,0.3s,SNR=7.9						
ELIZ	**Elizondo**	**7.21**	**342**	Pn	**Pn**	**20 01 45.2**	**+2.3**
ELIZ	**Elizondo**	**7.21**	**342**	Pn	**Pn**	**20 01 45.2**	**+2.3**
	2.2nm,0.2s,SNR=10						
EALK	**Alkurruntz**	**7.25**	**342**	Pn	**Pn**	**20 01 46.3**	**+2.7**
	0.6nm,0.2s,SNR=7.1						
EGRO	**El Granado**	**7.31**	**282**	Pn	**Pn**	**20 01 43.9**	**-0.5**
EGRO				Sn	**Sn**	**20 03 04.6**	**-2.8**
EGRO	**El Granado**	**7.31**	**282**	Pn	**Pn**	**20 01 43.9**	**-0.5**
	1.3nm,0.2s,SNR=10.0						
EGRO				Sn	**Sn**	**20 03 04.6**	**-2.8**
	6.1nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**7.31**	**282**	Pn	**Pn**	**20 01 43.9**	**-0.5**
	1.3nm,0.2s,SNR=10.0						
EGRO				Sn	**Sn**	**20 03 04.6**	**-2.8**
	6.1nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**7.87**	**333**	Pn	**Pn**	**20 01 54.7**	**+2.7**
	3.5nm,0.2s,SNR=20						
ELAN				Sn	**Sn**	**20 03 20.8**	**-0.2**
	2.6nm,0.5s,SNR=5.9						
ELAN	**Lanestosa**	**7.87**	**333**	Pn	**Pn**	**20 01 54.7**	**+2.8**
	3.5nm,0.2s,SNR=20						
ELAN				Sn	**Sn**	**20 03 20.8**	**-0.2**
	2.6nm,0.5s,SNR=5.9						
EVO	**Evora**	**7.89**	**289**	*e*Pn	**Pn**	**20 01 54.1**	**+1.7**
EVO				*e*Sn	**Sn**	**20 03 20.6**	**-1.2**
	14nm,0.5s						
LASF	**Ste Croix**	**7.93**	**12**	*e*Pn	**Pn**	**20 01 52.5**	**-0.3**
LASF				*e*Sn	**Sn**	**20 03 18.8**	**-3.7**
	2.6nm,0.5s						
LASF	**Ste Croix**	**7.93**	**12**	*e*Pn	**Pn**	**20 01 52.5**	**-0.3**
LASF				*e*Sn	**Sn**	**20 03 18.8**	**-3.7**
	1.3nm,0.5s						
LMR	**La Mourre**	**7.96**	**27**	*e*Pn	**Pn**	**20 01 52.7**	**-0.6**
LMR				*e*Sn	**Sn**	**20 03 18.5**	**-4.9**
	5.2nm,0.4s						
LMR	**La Mourre**	**7.96**	**27**	Pn	**Pn**	**20 01 52.7**	**-0.6**
LMR				Sn	**Sn**	**20 03 18.5**	**-4.9**
	2.6nm,0.4s						
FRF	**La Foret Royal**	**8.21**	**27**	*e*Pn	**Pn**	**20 01 56.7**	**0.0**
FRF				*e*Sn	**Sn**	**20 03 24.6**	**-4.9**
	13nm,0.6s						
FRF	**La Foret Royal**	**8.21**	**27**	Pn	**Pn**	**20 01 56.7**	**0.0**
FRF				Sn	**Sn**	**20 03 24.6**	**-4.9**
	6.6nm,0.6s						
SMRF	**Simiane la Rot**	**8.23**	**21**	*e*Pn	**Pn**	**20 01 57.0**	**0.0**
SMRF				*e*Sn	**Sn**	**20 03 25.6**	**-4.3**
	0.5nm,0.3s						
SMRF	**Simiane la Rot**	**8.23**	**21**	*e*Pn	**Pn**	**20 01 57.0**	**0.0**
SMRF				*e*Sn	**Sn**	**20 03 25.6**	**-4.3**
	0.2nm,0.3s						
PGF	**Pioggiola**	**8.47**	**41**	*e*Pn	**Pn**	**20 01 58.9**	**-1.4**
PGF				*e*Sn	**Sn**	**20 03 29.4**	**-6.5**
	3.4nm,0.3s						
PGF	**Pioggiola**	**8.47**	**41**	*e*Pn	**Pn**	**20 01 58.9**	**-1.4**
PGF				*e*Sn	**Sn**	**20 03 29.4**	**-6.5**
	1.7nm,0.3s						
ECAL	**Calabor**	**8.51**	**314**	Pn	**Pn**	**20 02 02.7**	**+1.9**
ECAL				Sn	**Sn**	**20 03 35.1**	**-1.7**
ECAL	**Calabor**	**8.51**	**314**	Pn	**Pn**	**20 02 02.7**	**+1.9**
	1.7nm,0.2s,SNR=4.0						
ECAL				Sn	**Sn**	**20 03 35.1**	**-1.7**
	3.6nm,0.4s,SNR=4.0						
ECAL	**Calabor**	**8.51**	**314**	Pn	**Pn**	**20 02 02.7**	**+1.9**
	1.7nm,0.2s,SNR=4.0						
ECAL				Sn	**Sn**	**20 03 35.1**	**-1.7**
	3.6nm,0.4s,SNR=4.0						
CAF	**Calviac**	**8.58**	**3**	*e*Pn	**Pn**	**20 02 03.8**	**+2.0**
CAF				*e*Sn	**Sn**	**20 03 34.3**	**-4.3**
	2.6nm,0.6s						
CAF	**Calviac**	**8.58**	**3**	*e*Pn	**Pn**	**20 02 03.8**	**+2.0**
CAF				*e*Sn	**Sn**	**20 03 34.3**	**-4.3**
	1.3nm,0.6s						
LFF	**La Frestale**	**8.61**	**356**	*e*Pn	**Pn**	**20 02 02.8**	**+0.7**
LFF				*e*Sn	**Sn**	**20 03 35.4**	**-3.8**
	3.6nm,0.4s						
LFF	**La Frestale**	**8.61**	**356**	*e*Pn	**Pn**	**20 02 02.8**	**+0.7**
LFF				*e*Sn	**Sn**	**20 03 35.4**	**-3.8**
	1.8nm,0.4s						
EARI	**Arriondas**	**8.66**	**325**	Pn	**Pn**	**20 02 05.2**	**+2.3**
	0.4nm,0.2s,SNR=12						
EARI	**Arriondas**	**8.66**	**325**	Pn	**Pn**	**20 02 05.2**	**+2.3**
	0.4nm,0.2s,SNR=12						
VIVF	**Saint-Julien-l**	**8.83**	**15**	*e*Pn	**Pn**	**20 02 04.5**	**-0.7**
VIVF				*e*Sn	**Sn**	**20 03 40.7**	**-4.1**
	0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**8.83**	**15**	*e*Pn	**Pn**	**20 02 04.5**	**-0.7**
VIVF				*e*Sn	**Sn**	**20 03 40.7**	**-4.1**
	0.4nm,0.3s						
RJF	**Les Rejaudoux**	**8.95**	**360**	*e*Pn	**Pn**	**20 02 07.4**	**+0.5**
RJF				*e*Sn	**Sn**	**20 03 44.2**	**-3.5**
	1.0nm,0.4s						
RJF	**Les Rejaudoux**	**8.95**	**360**	*e*Pn	**Pn**	**20 02 07.4**	**+0.5**
RJF				*e*Sn	**Sn**	**20 03 44.2**	**-3.5**
	0.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**9.18**	**20**	*e*Pn	**Pn**	**20 02 09.6**	**-0.4**
ORIF				*e*Sn	**Sn**	**20 03 48.4**	**-4.9**
	0.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**9.18**	**20**	Pn	**Pn**	**20 02 09.6**	**-0.4**
ORIF				Sn	**Sn**	**20 03 48.4**	**-4.9**
	0.2nm,0.2s						
ELOB	**Lobios**	**9.27**	**309**	Pn	**Pn**	**20 02 12.3**	**+1.1**
	0.5nm,0.2s,SNR=4.0						
ELOB	**Lobios**	**9.27**	**309**	Pn	**Pn**	**20 02 12.3**	**+1.1**
	0.5nm,0.2s,SNR=4.0						
MBDF	**Montbardon**	**9.28**	**24**	*e*Pn	**Pn**	**20 02 10.9**	**-0.4**
MBDF				*e*Sn	**Sn**	**20 03 50.3**	**-5.3**
	0.6nm,0.3s						
MBDF	**Montbardon**	**9.28**	**24**	Pn	**Pn**	**20 02 10.9**	**-0.4**
MBDF				Sn	**Sn**	**20 03 50.3**	**-5.3**
	0.3nm,0.3s						
EPON	**Pontenova**	**9.64**	**319**	Pn	**Pn**	**20 02 18.2**	**+1.8**
	0.4nm,0.2s,SNR=4.0						
EPON	**Pontenova**	**9.64**	**319**	Pn	**Pn**	**20 02 18.2**	**+1.9**
	0.4nm,0.2s,SNR=4.0						
TCF	**Toulx Ste Croi**	**9.95**	**3**	*e*Pn	**Pn**	**20 02 20.7**	**+0.2**
TCF				*e*Sn	**Sn**	**20 04 08.0**	**-4.2**
	0.5nm,0.4s						
TCF	**Toulx Ste Croi**	**9.95**	**3**	*e*Pn	**Pn**	**20 02 20.7**	**+0.2**
TCF				*e*Sn	**Sn**	**20 04 08.0**	**-4.2**
	0.2nm,0.4s						
LPG	**La Plagne**	**9.96**	**22**	*e*Pn	**Pn**	**20 02 21.5**	**+0.8**
LPG				*e*Sn	**Sn**	**20 04 07.1**	**-5.4**
	0.5nm,0.3s						
LPG	**La Plagne**	**9.96**	**22**	Pn	**Pn**	**20 02 21.5**	**+0.8**
LPG				Sn	**Sn**	**20 04 07.1**	**-5.4**
	0.2nm,0.3s						
LPL	**La Plagne**	**9.97**	**22**	*e*Pn	**Pn**	**20 02 21.8**	**+1.0**
LPL				*e*Sn	**Sn**	**20 04 07.5**	**-5.2**
	0.5nm,0.4s						
LPL	**La Plagne**	**9.97**	**22**	Pn	**Pn**	**20 02 21.8**	**+1.0**
LPL				Sn	**Sn**	**20 04 07.5**	**-5.2**
	0.2nm,0.4s						
BGF	**Bois d'Agland**	**10.25**	**5**	*e*Pn	**Pn**	**20 02 24.4**	**-0.3**
BGF				*e*Sn	**Sn**	**20 04 15.0**	**-4.6**
	1.5nm,0.4s						
BGF	**Bois d'Agland**	**10.25**	**5**	*e*Pn	**Pn**	**20 02 24.4**	**-0.3**
BGF				*e*Sn	**Sn**	**20 04 15.0**	**-4.6**
	0.8nm,0.4s						
MFF	**Saint Martin d**	**10.32**	**354**	*e*Pn	**Pn**	**20 02 26.2**	**+0.5**
MFF				*e*Sn	**Sn**	**20 04 17.2**	**-4.2**
	5.4nm,0.8s						
MFF	**Saint Martin d**	**10.32**	**354**	*e*Pn	**Pn**	**20 02 26.2**	**+0.5**
MFF				*e*Sn	**Sn**	**20 04 17.2**	**-4.2**
	2.7nm,0.8s						
AVF	**Avril sur Loir**	**10.53**	**7**	*e*Pn	**Pn**	**20 02 28.3**	**-0.1**
AVF				*e*Sn	**Sn**	**20 04 21.5**	**-4.8**
	0.3nm,0.3s						
AVF	**Avril sur Loir**	**10.53**	**7**	*e*Pn	**Pn**	**20 02 28.3**	**-0.1**
AVF				*e*Sn	**Sn**	**20 04 21.5**	**-4.8**
	0.2nm,0.3s						
SSF	**Saint Saulge**	**10.81**	**7**	*e*Pn	**Pn**	**20 02 32.1**	**-0.2**
SSF				*e*Sn	**Sn**	**20 04 28.2**	**-5.1**
	0.5nm,0.3s						
SSF	**Saint Saulge**	**10.81**	**7**	*e*Pn	**Pn**	**20 02 32.1**	**-0.2**
SSF				*e*Sn	**Sn**	**20 04 28.2**	**-5.1**
	0.2nm,0.3s						
CABF	**La Chapelle**	**10.81**	**17**	*e*Pn	**Pn**	**20 02 32.0**	**-0.3**
CABF				*e*Sn	**Sn**	**20 04 27.5**	**-5.8**
	1.0nm,0.3s						
CABF	**La Chapelle**	**10.81**	**17**	*e*Pn	**Pn**	**20 02 32.0**	**-0.3**
CABF				*e*Sn	**Sn**	**20 04 27.5**	**-5.8**
	0.5nm,0.3s						
QUIF	**Quistinic**	**12.07**	**345**	*e*Pn	**Pn**	**20 02 49.8**	**+0.2**
QUIF				*e*Sn	**Sn**	**20 04 59.7**	**-4.5**
	0.9nm,0.3s						
QUIF	**Quistinic**	**12.07**	**345**	*e*Pn	**Pn**	**20 02 49.8**	**+0.2**
QUIF				*e*Sn	**Sn**	**20 04 59.7**	**-4.5**
	0.4nm,0.3s						
GRR	**Gorron**	**12.16**	**352**	*e*Pn	**Pn**	**20 02 51.2**	**+0.4**
SGMF	**Saint Gilles**	**12.28**	**347**	*e*Pn	**Pn**	**20 02 52.7**	**+0.3**
LDF	**La Druitiere**	**12.30**	**355**	*e*Pn	**Pn**	**20 02 53.0**	**+0.3**
ROSF	**Rostrenen**	**12.49**	**345**	*e*Pn	**Pn**	**20 02 55.5**	**+0.2**
FLN	**La Foliniere**	**12.50**	**354**	*e*Pn	**Pn**	**20 02 55.6**	**+0.2**
TOA0	**Torodi Ar. Sit**	**23.10**	**180**	P	**P**	**20 05 01.6**	**-2.1**
TOA0	**Torodi Ar. Sit**	**23.10**	**180**	P	**P**	**20 05 01.6**	**-2.0**
TORD	**Torodi Ar. Bea**	**23.10**	**180**	P	**P**	**20 05 01.8**	**-1.8**
	0.6nm,0.6s,mb3.2,baz=350,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**58.82**	**52**	P	**P**	**20 09 55.6**	**-0.5**
	0.6nm,0.9s,mb3.6,baz=304,slow=6.5,SNR=3.7						

IDC ***09*** *20:17:34.3±1.2, 1860N×12143E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/19, mbtmp3.4/5, Error ellipse: s-maj=41.0km s-min=23.1km az=64.0*

ISCJB ***09*** *20:17:35.9±0.8, 1878N±005×12098E±006, h10km, mb3.2/3, Error ellipse: s-maj=7.9km s-min=6.5km az=156.8*

MAN ***09*** *20:17:36, 1873N×12090E, h15km, mb4.3, ML3.1, MS2.9*

ISC 09 20:17:36.7±0.8, 1877N±005×12099E±006, h10km, n18, σ1°38/24, mb3.2/3, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.57**	**218**	⇑*i*P	**Pg**	**20 17 46.5**	**-1.2**
SGCP	**Mt. Cagua**	**1.13**	**118**	*e*P	**Pb**	**20 17 57.6**	**-0.8**
ABRA	**Dolores**	**1.15**	**193**	*e*P	**Pb**	**20 17 55.9**	**-2.8**
ABRA				*e*S	**Sb**	**20 18 12.7**	**-0.9**
CVP	**Callao Caves**	**1.32**	**143**	*e*P	**Pn**	**20 18 00.6**	**-0.7**
CVP				*e*S	**Sb**	**20 18 16.4**	**-2.3**
CAUP	**Cauayan**	**1.98**	**156**	*e*P	**Pn**	**20 18 10.2**	**-0.2**
CAUP				*e*S	**Sn**	**20 18 36.9**	**+1.6**
PALP	**Palanan**	**2.18**	**141**	*e*P	**Pn**	**20 18 14.4**	**+1.3**
PALP				*e*S	**Sn**	**20 18 40.8**	**+0.6**
BCPH	**Baguio City Da**	**2.41**	**189**	⇑*i*P	**Pn**	**20 18 16.2**	**0.0**
BCPH				*i* S	**Sn**	**20 18 46.4**	**+0.6**
BOLP	**Bolinao**	**2.59**	**204**	*e*P	**Pn**	**20 18 17.0**	**-1.7**
BALP	**Baler**	**3.06**	**169**	*e*P	**Pn**	**20 18 25.7**	**+0.5**
BALP				*e*S	**Sn**	**20 19 01.6**	**-0.4**
PCPH	**Palayan**	**3.19**	**178**	⇓*e*P	**Pn**	**20 18 27.9**	**+0.9**
POLP	**Polilio Island**	**4.12**	**167**	*e*P	**Pn**	**20 18 42.2**	**+2.4**
LUBP	**Lubang**	**5.06**	**188**	*e*P	**Pn**	**20 18 55.4**	**+2.7**
BUSP	**Coron**	**6.77**	**187**	*e*P	**Pn**	**20 19 17.4**	**+1.1**
KSRS	**Korea Array**	**19.58**	**17**	P	**Pn**	**20 22 05.0**	**-1.3**
	0.4nm,0.3s,baz=197,slow=11,SNR=6.9						
CMAR	**Chiang Mai Arr**	**20.80**	**273**	P	**P**	**20 22 23.6**	**+4.3**
	0.4nm,0.5s,baz=80,slow=8.4,SNR=5.1						
WRA	**Warramunga Arr**	**40.64**	**161**	P	**P**	**20 25 13.1**	**-4.0**
	0.2nm,0.3s,mb3.2,baz=342,slow=9.1,SNR=4.8						
WRA				PcP	PcP	20 27 17.7	-1.4
	0.2nm,0.6s,baz=344,slow=3.3,SNR=4.5						
MKAR	**Makanchi Array**	**42.23**	**320**	P	**P**	**20 25 31.2**	**+1.2**
	0.3nm,0.5s,mb3.2,baz=112,slow=9.4,SNR=3.7						
ASAR	**Alice Springs**	**44.02**	**163**	P	**P**	**20 25 41.6**	**-3.1**
	0.2nm,0.3s,mb3.3,baz=345,slow=7.1,SNR=7.3						

ISCJB ***09*** *20:20:08.8±0.8, 1879N±004×12093E±005, h10km, mb3.3/3, Error ellipse: s-maj=7.1km s-min=6.1km az=32.4*

MAN ***09*** *20:20:10, 1868N×12089E, h15km, mb4.8, ML3.7, MS3.7*

IDC ***09*** *20:20:14.2±8.5, 1865N×12144E, h56km±85km, mb3.0/4, mb1 3.3/5, mb1mx3.1/19, mbtmp3.1/5, ML3.6/1, Error ellipse: s-maj=38.5km s-min=24.1km az=67.0*

ISC 09 20:20:09.7±0.8, 1877N±005×12097E±005, h10km, n17, σ1°35/26, mb3.3/3, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.55**	**217**	⇑*i*P	**Pg**	**20 20 20.1**	**-0.3**
PIP				*i* S	**Sg**	**20 20 27.5**	**-0.1**
ABRA	**Dolores**	**1.14**	**192**	*e*P	**Pb**	**20 20 28.9**	**-2.5**
ABRA				*e*S	**Sb**	**20 20 44.3**	**-1.9**
SGCP	**Mt. Cagua**	**1.15**	**117**	*e*P	**Pb**	**20 20 30.9**	**-0.7**
CVP	**Callao Caves**	**1.33**	**142**	*e*P	**Pn**	**20 20 33.0**	**-1.3**
CVP				*e*S	**Sb**	**20 20 50.4**	**-1.5**
CAUP	**Cauayan**	**1.98**	**156**	*e*P	**Pn**	**20 20 44.8**	**+1.5**
CAUP				*e*S	**Sn**	**20 21 10.2**	**+1.9**
PALP	**Palanan**	**2.19**	**140**	*e*P	**Pn**	**20 20 47.3**	**+1.2**
PALP				*e*S	**Sn**	**20 21 17.1**	**+3.9**
BCPH	**Baguio City Da**	**2.40**	**189**	⇑*i*P	**Pn**	**20 20 47.8**	**-1.2**
BCPH				*i* S	**Sn**	**20 21 18.7**	**+0.2**
BOLP	**Bolinao**	**2.58**	**203**	*e*P	**Pn**	**20 20 51.2**	**-0.2**
BOLP				*e*S	**Sn**	**20 21 23.9**	**+1.0**
BALP	**Baler**	**3.06**	**169**	*e*P	**Pn**	**20 20 58.5**	**+0.3**
BALP				*e*S	**Sn**	**20 21 34.7**	**-0.1**
PCPH	**Palayan**	**3.19**	**178**	⇑*e*P	**Pn**	**20 21 01.3**	**+1.4**
POLP	**Polilio Island**	**4.12**	**167**	*e*P	**Pn**	**20 21 15.8**	**+3.1**
POLP				*e*S	**Sn**	**20 21 54.5**	**-6.5**
BUSP	**Coron**	**6.76**	**186**	*e*P	**Pn**	**20 21 50.8**	**+1.7**
KSRS	**Korea Array**	**19.59**	**17**	P	**Pn**	**20 24 38.1**	**-1.2**
	0.2nm,0.3s,baz=198,slow=12,SNR=5.5						
CMAR	**Chiang Mai Arr**	**20.88**	**273**	P	**P**	**20 24 57.0**	**+4.9**
	0.4nm,0.6s,baz=75,slow=8.2,SNR=4.3						
WRA	**Warramunga Arr**	**40.64**	**160**	P	**P**	**20 27 46.3**	**-3.8**
	0.5nm,0.7s,mb3.3,baz=347,slow=8.6,SNR=5.9						
WRA				PcP	PcP	20 29 50.1	-2.0
	0.2nm,0.5s,baz=343,slow=3.1,SNR=5.3						
MKAR	**Makanchi Array**	**42.22**	**320**	P	**P**	**20 28 03.8**	**+1.0**
	0.4nm,0.7s,mb3.2,baz=103,slow=7.4,SNR=4.4						
ASAR	**Alice Springs**	**44.02**	**163**	P	**P**	**20 28 14.2**	**-3.4**
	0.3nm,0.3s,mb3.4,baz=345,slow=7.0,SNR=6.3						

IDC ***09*** *20:25:04.9±0.5, 1858N×121.12E, h0km, mb4.3/19, mb1 4.5/21, mb1mx4.5/24, mbtmp4.4/21, ML4.4/2, MS4.2/21, Ms1 4.2/21, ms1mx4.0/30, Error ellipse: s-maj=20.4km s-min=11.5km az=82.0*

ISCJB ***09*** *20:25:06.7±0.2, 1881N±002×12097E±003, h13km, mb4.8/79, MS4.3/37, Error ellipse: s-maj=3.9km s-min=2.1km az=173.4*

NEIC ***09*** *20:25:07.0±2.8, 1860N×121.09E, h14km±17km, mb5.1/33, Error ellipse: s-maj=6.3km s-min=5.6km az=131.0*

NEIC Felt [II PIVS] at Pasuquin and Sanchez Mira. Also felt at Laoag.

MOS ***09*** *20:25:07.8±1.1, 1858N×121.10E, h33km, mb5.1/26, MS4.4/11, Error ellipse: s-maj=10.9km s-min=6.0km az=113.3*

GCMT ***09*** *20:25:07.0±0.2, 1877N×120.84E, h27km, MW5.2/84, Moment Tensor Solution. s51,c73; s84,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.69±.16; Mθθ 1.87±.12; Mϕϕ 0.81±.15; Mrθ-3.20±.23; Mϕθ-5.64±.10; Mϕr-2.68±.27; Best double couple: M07.38800×10^16 NP1:ϕs350.00000°, δ60.00000°, λ-28.00000°. NP2: ϕs94.00000°, δ66.00000°, λ-147.00000°. Principal axes: T 7.0470, Plg4.0000°, Azm221.0000°; N 0.6810, Plg50.0000°, Azm126.0000°; P -7.7300, Plg39.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***09*** *20:25:07.5, 1888N×120.92E, h9km, mB5.1, mb4.7, ML4.6, Ms4.7, Msz4.5*

MAN ***09*** *20:25:08, 1869N×120.90E, h12km, mb5.6, ML4.6, MS4.9*

MAN INTENSITY II - PASUQUIN, ILOCOS NORTE, SANCHEZ, MIRA, CAGAYAN.

DJA ***09*** *20:25:15, 1883N×120.62E, h52km, Mw5.2/4*

ISC 09 20:25:06.9±0.7, 1878N±002×12100E±003, h5km±4km, h14km±1.8km:pP-P, n195, σ1°19/230, mb4.8/79, MS4.3/37, 12C-13D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.58**	**218**	⇓*i*P	**Pg**	**20 25 17.8**	**-0.3**
PIP				*i* S	**Sg**	**20 25 25.6**	**0.0**
SGCP	**Mt. Cagua**	**1.13**	**118**	*e*P	**Pg**	**20 25 28.7**	**0.0**
ABRA	**Dolores**	**1.16**	**193**	*e*P	**Pg**	**20 25 26.5**	**-2.7**
ABRA				*e*S	**Sg**	**20 25 44.0**	**-0.2**
CVP	**Callao Caves**	**1.33**	**144**	⇑*i*P	**Pn**	**20 25 31.3**	**-0.9**
CVP				*i* S	**Sg**	**20 25 50.0**	**+0.3**
CAUP	**Cauayan**	**1.99**	**157**	*e*P	**Pn**	**20 25 43.0**	**+1.7**
CAUP				*e*S	**Sn**	**20 26 07.6**	**+1.0**
PALP	**Palanan**	**2.19**	**141**	*e*P	**Pn**	**20 25 45.5**	**+1.6**
PALP				*e*S	**Sg**	**20 26 16.6**	**-0.6**
BCPH	**Baguio City Da**	**2.42**	**189**	⇓*i*P	**Pn**	**20 25 45.4**	**-1.8**
BCPH				*i* S	**Sn**	**20 26 17.8**	**+0.5**
BOLP	**Bolinao**	**2.60**	**204**	*e*P	**Pn**	**20 25 49.1**	**-0.6**
BOLP				*e*S	**Sg**	**20 26 29.8**	**-0.7**
BALP	**Baler**	**3.08**	**170**	*e*P	**Pn**	**20 25 57.5**	**+1.3**
BALP				*e*S	**Sn**	**20 26 35.7**	**+2.3**
SCZP	**Santa Cruz**	**3.16**	**199**	*e*P	**Pn**	**20 25 56.8**	**-0.6**
SCZP				*e*S	**Sn**	**20 26 40.0**	**+4.5**
PCPH	**Palayan**	**3.20**	**178**	⇓*e*P	**Pn**	**20 25 58.7**	**+0.8**
PCPH				*e*S	**Sg**	**20 26 43.9**	**-6.0**
POLP	**Polilio Island**	**4.13**	**167**	*e*P	**Pn**	**20 26 11.9**	**+1.1**
POLP				*e*S	**Sn**	**20 27 00.3**	**+0.8**
GQP	**Guinayangan**	**5.05**	**164**	⇓*e*P	**Pn**	**20 26 23.9**	**+0.6**
GQP				*i* S	**Sn**	**20 27 25.4**	**+3.4**
LUBP	**Lubang**	**5.07**	**188**	*e*P	**Pn**	**20 26 26.3**	**+2.7**
NACB	**Ninganchiao**	**5.39**	**6**	*e*Pn	**Pn**	**20 26 29.2**	**+1.2**
	2µm,0.7s						
NACB				*e*Sn	**Sn**	**20 27 28.9**	**-1.7**
YHNB	**Yeheng**	**5.87**	**3**	*e*Pn	**Pn**	**20 26 36.7**	**+2.1**
YHNB				*e*Sn	**Sn**	**20 27 41.5**	**-0.8**
PVCP	**Virac**	**5.98**	**149**	*e*P	**Pn**	**20 26 34.8**	**-1.4**
PVCP				*e*S	Px	20 27 21.3	
TATO	**Taipei**	**6.18**	**4**	*e*Pn	**Pn**	**20 26 41.8**	**+3.0**
TATO				*e*Sn	**Sn**	**20 27 53.4**	**+3.4**
SJMP	**San Jose**	**6.29**	**179**	*e*P	**Pn**	**20 26 43.3**	**+2.9**
QZH	**Quanzhou**	**6.52**	**340**	P	**Pn**	**20 26 43.0**	**-0.6**
QZH				S	**Sn**	**20 27 53.3**	**-5.2**
QZH				Smax			
	comp=N,320nm,1.0s						
QZH				Smax			
	comp=E,660nm,0.9s						
QZH				LR	LR		
	comp=N,6µm,14.0s						
QZH				LR	LR		
	comp=E,4µm,15.2s						
QZH				LR	LR		
	comp=Z,6µm,22.2s						
BUSP	**Coron**	**6.78**	**187**	*e*P	**Pn**	**20 26 46.8**	**-0.4**
ENPP	**El Nido**	**7.68**	**192**	*e*P	**Pn**	**20 26 58.8**	**-0.8**
GUIM	**Jordan**	**8.25**	**169**	*e*P	**Pn**	**20 27 11.6**	**+4.2**
GZH	**Guangzhou**	**8.33**	**302**	P	**Pn**	**20 27 07.7**	**-0.8**
GZH				S	**Sn**	**20 28 36.0**	**-7.0**
GZH				Smax			
	comp=N,139nm,1.2s						
GZH				Smax			
	comp=E,121nm,1.1s						
MSLP	**Maasin**	**9.38**	**156**	*e*P	**Pn**	**20 27 27.9**	**+5.1**
JOW	**Kunigami**	**10.45**	**39**	Pn	**Pn**	**20 27 37.6**	**+0.2**
	comp=E,5.1nm,0.3s,baz=230,slow=8.0,SNR=12						
JOW				LR	LR	20 31 25.0	
	comp=E,2µm,20.3s,baz=266,slow=36						
QIZ	**Qiongzhong**	**10.56**	**273**	P	**Pn**	**20 27 37.5**	**-1.5**
QIZ				S	**Sn**	**20 29 33.1**	**-4.7**
QIZ				AMB	AMB		
	comp=Z,62nm,0.7s						
QIZ				AMB	AMB		
	comp=Z,339nm,3.8s						
QIZ				LR	LR		
	comp=N,3µm,15.5s						
QIZ				LR	LR		
	comp=Z,2µm,14.5s						
QIZ	**Qiongzhong**	**10.56**	**273**	*e*Pn	**Pn**	**20 27 37.0**	**-2.0**
	comp=Z,69nm,0.6s						
QIZ				*e*Sn	**Sn**	**20 29 30.9**	**-6.9**
SSE	**Sheshan

CD2 XP sP 20 29 46.8 +7.3
CD2 PP 20 29 58.6
CD2 S **Sn** **20 33 17.8 -3.1**
CD2 XS sS 20 33 24.5 +1.9
CD2 SS 20 33 46.2
CD2 AMB AMB
comp=Z,40nm,0.6s
CD2 AMB AMB
comp=Z,790nm,4.5s
CD2 LR LR
comp=N,2μm,11.8s
CD2 LR LR
comp=E,2μm,12.0s
CD2 LR LR
comp=Z,2μm,13.0s
TIY Taiyuan 20.29 340 P **P** **20 29 50.1 +6.5**
TIY LR LR
comp=N,1μm,14.8s,MS4.6
TIY LR LR
comp=E,1μm,13.0s,MS4.6
TIY LR LR
comp=Z,1μm,16.4s,MS4.3
LBMI Labuha 20.33 161 P **P** **20 29 51.6 +7.4**
comp=Z,52nm,1.5s,comp=Z,910nm
STKI Sintang 20.82 208 P **P** **20 29 49.0 -0.4**
comp=Z,53nm,1.2s,comp=Z,1μm
CM31 Chiang Mai Arr 20.90 273 *e*P **P** **20 29 51.7 +1.3**
CMAR Chiang Mai Arr 20.90 273 P **P** **20 29 51.6 +1.2**
comp=Z,11nm,0.6s,baz=79,slow=8.6,SNR=77
CMAR PcP PcP 20 33 58.4 -0.3
comp=Z,1.1nm,0.8s,baz=12,slow=0.8,SNR=5.7
BJT Baijiatuau 21.57 350 *e*P **P** **20 29 58.7 +1.4**
comp=Z,108nm,0.7s,mb5.4
BJT Baijiatuau 21.57 350 *e*P **P** **20 29 58.7 +1.3**
BJT pmax pmax
comp=Z,108nm,0.7s
BJI Beijing 21.59 350 P **P** **20 29 58.6 +1.0**
BJI S **S** **20 33 56.5 -0.7**
BJI AMB AMB
comp=Z,38nm,0.8s,mb4.9
BJI AMB AMB
comp=Z,285nm,4.1s
BJI LR LR
comp=N,2μm,16.7s,MS4.6
BJI LR LR
comp=E,2μm,20.4s,MS4.6
BJI LR LR
comp=Z,1μm,19.2s,MS4.2
PLKI Palangkaraya 22.00 199 P **P** **20 30 10.8 +8.6**
comp=Z,84nm,1.3s,mb5.0
JHJ Hachijo jima 2 22.07 46 LR LR 20 37 09.8
comp=Z,494nm,22.0s,MS3.9,baz=290,slow=33
BBKI Banjar Baru 22.92 196 P **P** **20 30 10.7 -1.3**
comp=Z,117nm,1.3s,comp=Z,2μm,mb5.1
LZH Lanzhou 22.93 322 ⇑P **P** **20 30 13.5 +1.5**
LZH AP 20 30 16.2
LZH XP sP 20 30 17.5 +3.5
LZH S **S** **20 34 21.0 -1.7**
LZH XS sS 20 34 28.0 +2.9
LZH AMB AMB
comp=Z,86nm,1.6s,mb4.9
LZH AMB AMB
comp=Z,300nm,4.2s
LZH LR LR
comp=N,2μm,13.2s
LZH LR LR
comp=Z,2μm,14.8s,MS4.7
LZH Lanzhou 22.93 322 ⇑P **P** **20 30 13.5 +1.5**
LZH pP 20 30 16.2
LZH sP sP 20 30 17.5 +3.5
LZH PPP 20 30 54.2
LZH S **S** **20 34 21.0 -1.7**
LZH sS sS 20 34 28.0 +2.9
LZH SS 20 35 05.1
SNY Shenyang 23.08 5 ⇓P **P** **20 30 13.1 -0.3**
SNY S **S** **20 34 22.5 -2.4**
SNY AMB AMB
comp=Z,53nm,0.9s,mb5.0
SNY AMB AMB
comp=Z,330nm,3.5s
SNY LR LR
comp=N,839nm,12.4s
SNY LR LR
comp=Z,992nm,14.4s,MS4.4
MAJO Matsushiro 23.29 37 *e*P **P** **20 30 16.1 +0.4**
comp=Z,26nm,1.1s,mb4.6
MAJO Matsushiro 23.29 37 *e*P **P** **20 30 16.1 +0.4**
MAJO pmax pmax
comp=Z,26nm,1.1s,mb4.6
MAT Matsushiro 23.29 37 P **P** **20 30 16.6 +0.9**
MAT S **S** **20 34 23.0 -5.5**
MJAR Matsushiro Arr 23.29 37 P **P** **20 30 15.1 -0.6**
comp=Z,12nm,1.1s,mb4.2,baz=222,slow=11,SNR=11
HHC Hu-ho-hao-te 23.43 342 *e*P **P** **20 30 18.0 +0.8**
HHC AP 20 30 21.5
HHC XP sP 20 30 25.1 +5.9
HHC PP 20 30 51.3
HHC PCP PcP 20 34 02.7 -0.7
HHC S **S** **20 34 30.1 -0.7**
HHC XS sS 20 34 36.0 +2.8
HHC AMB AMB
comp=Z,27nm,1.2s,mb4.5
HHC AMB AMB
comp=Z,605nm,5.4s
HHC LR LR
comp=N,1μm,17.8s,MS4.7
HHC LR LR
comp=E,2μm,17.8s,MS4.7
HHC LR LR
comp=Z,2μm,18.4s,MS4.5
GUMO Guam 23.49 99 LR LR 20 38 10.6
comp=Z,510nm,18.3s,MS4.0,baz=114,slow=34
KAPI Kappang 23.68 183 P **P** **20 30 17.8 -2.0**
comp=Z,13nm,0.8s,mb4.4,baz=19,slow=7.7,SNR=4.6
KAPI LR LR 20 40 35.9
comp=Z,719nm,18.7s,MS4.2,baz=6.6,slow=40
KAPI Kappang 23.68 183 P **P** **20 30 17.8 -2.0**
KAPI LR LR 20 40 35.9
BTO Baotou 23.71 339 *e*P **P** **20 30 19.6 -0.3**
TPI Tanjungpandan 25.11 213 P **P** **20 30 32.4 -0.5**
comp=Z,54nm,1.1s,comp=Z,475nm,mb5.0
CN2 Changchun 25.22 8 *e*P **P** **20 30 33.7 0.0**
CN2 *e*XP sP 20 30 40.7 +5.0
CN2 *e*S **S** **20 34 58.5 -1.1**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb4.9
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,1μm,14.0s,MS4.7
CN2 LR LR
comp=E,1μm,14.0s,MS4.7
CN2 LR LR
comp=Z,1μm,14.0s,MS4.6
PPBI Pangkal Pinang 25.43 217 P **P** **20 30 35.7 -0.1**
comp=Z,20nm,0.9s,mb4.7
MDJ Mudanjiang 26.74 14 P **P** **20 30 48.1 +0.7**
MDJ AP pP 20 30 50.8 +1.9
MDJ XP sP 20 30 52.3 +2.8
MDJ S **S** **20 35 26.6 +3.0**
MDJ XS sS 20 35 31.8 +5.8
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,62nm,3.8s
MDJ LR LR
comp=N,653nm,17.0s,MS4.6
MDJ LR LR
comp=E,1μm,15.8s,MS4.6
MDJ LR LR
comp=Z,873nm,14.6s,MS4.5
MDJ Mudanjiang 26.74 14 *e*P **P** **20 30 48.0 +0.6**
comp=Z,18nm,1.0s,mb4.6
GTA Gaotai 27.53 323 *e*P **P** **20 30 55.8 +1.2**
GTA AP pP 20 31 00.0 +3.9
GTA XP sP 20 31 02.8 +6.1
GTA PP 20 31 40.8
GTA S **S** **20 35 37.0 +0.8**
GTA XS sS 20 35 44.2 +5.6
GTA SS 20 36 55.8
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.0
GTA AMB AMB
comp=Z,207nm,9.3s
GTA LR LR
comp=N,638nm,19.2s,MS4.4
GTA LR LR
comp=E,585nm,16.2s,MS4.4
GTA LR LR
comp=Z,1μm,14.4s,MS4.5
BJII Banjamegara 28.23 204 P **P** **20 31 06.4 +5.3**
BATI Baumata 28.92 175 P **P** **20 31 04.9 -2.2**
comp=Z,18nm,0.5s,mb5.1,baz=288,slow=1.4,SNR=9.5
BATI LR LR 20 43 09.9
comp=Z,466nm,18.7s,MS4.1,baz=185,slow=38
LSA Lhasa 29.22 298 P **P** **20 31 12.0 +2.2**
LSA Lhasa 29.22 298 *e*P **P** **20 31 11.0 +1.2**
comp=Z,6.3nm,0.8s,mb4.4
LSA Lhasa 29.22 298 *e*P **P** **20 31 11.0 +1.2**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
HIA Hailar 30.43 358 *e*P **P** **20 31 18.5 -1.7**
comp=Z,28nm,1.1s,mb4.9
HIA Hailar 30.43 358 *e*P **P** **20 31 18.5 -1.7**
HIA pmax pmax
comp=Z,28nm,1.1s
ASAJ Asahikawa 31.08 31 P **P** **20 31 26.9 +0.9**
comp=Z,5.5nm,0.7s,mb4.5,baz=258,slow=19,SNR=4.7
ASAJ LR LR 20 44 32.5
comp=Z,539nm,20.1s,MS4.2,baz=6.0,slow=37
ULN Ulaanbaatar 31.16 342 *e*P **P** **20 31 27.4 +0.8**
comp=Z,28nm,1.5s,mb4.9
ULN Ulaanbaatar 31.16 342 ⇓*e*P **P** **20 31 27.1 +0.5**
ULN Ulaanbaatar 31.16 342 P **P** **20 31 28.6 +2.0**
comp=Z,13nm,1.4s,mb4.6
SONM Songino Array 31.33 341 P **P** **20 31 29.1 +1.0**
comp=Z,4.2nm,0.8s,mb4.3,baz=161,slow=6.9,SNR=23
SONM LR LR 20 45 37.3
comp=Z,960nm,18.2s,MS4.5,baz=152,slow=39
KLR Kul'dur 31.59 14 *e*P **P** **20 31 26.6 -3.8**
KLR *e*S **S** **20 36 31.0 -8.6**
KLR pmax pmax
comp=Z,38nm,1.4s,mb5.0
TAPN Taplejung 31.71 292 *e*P **P** **20 31 32.6 +0.8**
comp=Z,30nm,1.0s,mb5.1
ODAN Odare 31.93 291 *e*P **P** **20 31 34.6 +0.9**
comp=Z,32nm,0.6s,mb5.3
RAMN Ramite 32.64 291 *e*P **P** **20 31 41.0 +1.0**
comp=Z,45nm,0.6s,mb5.6
JIRN Jiri 33.09 292 *e*P **P** **20 31 44.8 +0.9**
comp=Z,70nm,1.1s,mb5.5
YSS Yuzh-Sakhalins 33.29 28 *e*P **P** **20 31 45.9 +0.5**
comp=Z,45nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 33.29 28⇑*i*P **P** **20 31 46.3 +0.9**
YSS *e*S **S** **20 37 06.0 -0.2**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.5
YSS MLR MLR
comp=E,500nm,17.0s
YSS MLR MLR
comp=Z,300nm,17.0s,MS4.1
GUN Gumba 33.40 292 *e*P **P** **20 31 47.5 +0.9**
comp=Z,104nm,0.9s,mb5.8
PKI Pulchoki 33.77 292 *e*P **P** **20 31 50.1 +0.3**
comp=Z,11nm,0.7s,mb4.9
PKI Pulchoki 33.77 292 *e*P **P** **20 31 50.1 +0.3**
PKI pmax pmax
comp=Z,11nm,0.7s,mb4.9
PKIN Phulchoki 33.78 292 *e*P **P** **20 31 50.1 +0.2**
comp=Z,11nm,0.7s,mb4.9
KKN Kakani 33.91 292 *e*P **P** **20 31 51.2 +0.1**
comp=Z,32nm,0.9s,mb5.3
KKN Kakani 33.91 292 *e*P **P** **20 31 51.2 +0.1**
KKN pmax pmax
comp=Z,32nm,0.9s,mb5.2
DMN Daman 34.04 292 *e*P **P** **20 31 52.5 +0.3**
comp=Z,57nm,1.0s,mb5.4
GKN Gorkha 34.50 292 *e*P **P** **20 31 56.2 0.0**
comp=Z,36nm,0.7s,mb5.4
ZAK Zakamensk 34.55 340 *e*P **P** **20 31 56.9 +0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
DANN Dangsing 35.31 293 *e*P **P** **20 32 03.5 +0.3**
comp=Z,20nm,0.6s,mb5.2
KOLN Koldanda 35.38 292 *e*P **P** **20 32 04.2 +0.4**
comp=Z,21nm,0.7s,mb5.2
TLY Talaya 35.56 341 *e*P **P** **20 32 04.1 -0.9**
TLY Talaya 35.56 341 *e*P **P** **20 32 09.7 +4.7**
TLY *e* 20 33 28.5
TLY *e*S **S** **20 37 31.3 -10**
TLY pmax pmax
comp=Z,25nm,1.6s,mb4.9
TLY MLR MLR
comp=Z,685nm,19.0s,MS4.4
IRK Irkutsk 35.88 342 *e*P **P** **20 32 12.6 +4.9**
IRK pmax pmax
comp=Z,33nm,1.5s,mb5.0
PYUN Piuthan 35.96 292 *e*P **P** **20 32 09.2 +0.4**
comp=Z,37nm,0.7s,mb5.4
MOY Mondy 36.41 339 *e*P **P** **20 32 14.4 +2.2**
MOY pmax pmax
comp=Z,39nm,3.5s
WMQ Urumqi 37.44 319 *e*P **P** **20 32 22.0 +0.8**
WMQ XP sP 20 32 29.0 +5.7
WMQ PP PP 20 33 51.0 +4.5
WMQ S **S** **20 38 11.0 +0.9**
WMQ SS SS 20 40 44.0 -10
WMQ AMB AMB
comp=Z,14nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,59nm,4.0s
WMQ LR LR
comp=N,456nm,15.0s,MS4.5
WMQ LR LR
comp=E,401nm,15.0s,MS4.5
WMQ LR LR
comp=Z,443nm,15.0s,MS4.4
BOD Bodaibo 39.32 354 *e*P **P** **20 32 34.5 -2.3**
BOD pmax pmax
comp=Z,9.0nm,1.4s,mb4.3
HYB Hyderabad 40.30 275 *e*P **P** **20 32 43.5 -2.0**
HYB Hyderabad 40.30 275 *i* P **P** **20 32 45.0 -0.5**
WRAB Tennant Creek 40.64 161 *e*P **P** **20 32 44.3 -3.9**
comp=Z,10nm,1.0s,mb4.4
WRAB Tennant Creek 40.64 161 *i* P **P** **20 32 43.8 -4.4**
WRA Warramunga Arr 40.65 161 P **P** **20 32 44.0 -4.2**
comp=Z,3.2nm,0.6s,mb4.1,baz=342,slow=9.0,SNR=40
WRA PcP PcP 20 34 49.0 -1.2
comp=Z,1.4nm,0.6s,baz=341,slow=3.2,SNR=5.5
WRA S **S** **20 38 50.9 -7.9**
comp=Z,1.4nm,0.8s,baz=345,slow=15,SNR=5.7
WB2 Warramunga Arr 40.65 161 *e*P **P** **20 32 43.9 -4.3**
SMLA Simla 41.35 296 *i* P **P** **20 32 54.9 +0.9**
MK31 Makanchi Array 42.23 320 *e*P **P** **20 33 02.1 +1.2**
MK31 Makanchi Array 42.23 320 *i* P **P** **20 33 01.9 +1.0**
MK31 pmax pmax
comp=Z,19nm,1.1s,mb4.6
MKAR Makanchi Array 42.23 320 P **P** **20 33 02.0 +1.1**
comp=Z,5.8nm,0.8s,mb4.2,baz=114,slow=9.5,SNR=40
MKAR LR LR 20 51 12.1
comp=Z,243nm,21.4s,MS4.0,baz=115,slow=37
YAK Yakutsk 43.63 6 *e*P **P** **20 33 11.4 -0.7**
comp=Z,19nm,0.8s,mb4.9
YAK Yakutsk 43.63 6*d i*P **P** **20 33 11.2 -0.9**
YAK *e**PP pP 20 33 23.0 +9.4
YAK *e* 20 34 58.0
YAK *e*S **S** **20 39 31.8 -10**
YAK *e*SS SS 20 42 46.5 -10
YAK *e* 20 43 13.0
YAK pmax pmax
comp=Z,17nm,1.0s,mb4.7
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK smax
comp=N,42nm,2.6s
YAK smax
comp=E,47nm,2.7s
YAK MLR MLR
comp=Z,552nm,16.0s,MS4.6
YAK MLR MLR
comp=N,441nm,16.0s,MS4.5
YAK MLR MLR
comp=E,152nm,19.0s,MS4.5
KSH Kashi 43.88 308 *e*P **P** **20 33 17.5 +3.1**
KSH *e*AP pP 20 33 21.9 +6.0
KSH *e*XP sP 20 33 24.4 +7.9
KSH *e*PP PP 20 35 02.0 +5.5
KSH *e*PCP PcP 20 35 03.0 +2.3
KSH *e*SCP ScP 20 38 52.3 -1.0
KSH *e*PCS PcS 20 38 54.4 +0.8
KSH *e*S **S** **20 39 50.4 +4.2**
KSH *e*XS sS 20 39 57.6 +8.9
KSH *e*SCS ScS 20 43 07.3 -7.3
KSH LR LR
comp=N,283nm,3.9s
KSH LR LR
comp=E,167nm,3.1s
KSH LR LR
comp=Z,286nm,4.3s
ASAR Alice Springs 44.03 163 P **P** **20 33 12.8 -3.0**
comp=Z,3.1nm,0.7s,mb4.2,baz=340,slow=7.1,SNR=30
PETK Petropavlovsk- 44.50 31 P **P** **20 33 19.0 -0.2**
comp=Z,5.8nm,0.7s,mb4.4,baz=188,slow=3.5,SNR=5.7
PETK LR LR 20 53 36.8
comp=Z,223nm,19.2s,MS4.1,baz=210,slow=38
POO Poona 44.56 278 *e*x x 20 33 18.5
ZAA0 Zalesovo Array 44.75 330 *e*P **P** **20 33 20.0 -1.1**
ZALV Zalesovo Beam 44.75 330 P **P** **20 33 21.3 +0.1**
comp=Z,3.5nm,0.8s,mb4.2,baz=108,slow=8.0,SNR=12
ZALV LR LR 20 52 59.9
comp=Z,331nm,21.5s,MS4.2,baz=124,slow=37
PET Petropavlovsk 44.92 32 *e*P **P** **20 33 19.8 -2.7**
PET *e*S **S** **20 39 54.3 -6.7**
PET MLR MLR
comp=Z,400nm,19.0s,MS4.4
NVS Novosibirsk 46.03 331 *e*P **P** **20 33 31.5 +0.2**
NVS *e* 20 35 14.2
NVS pmax pmax
comp=N,8.0nm,1.8s
NVS pmax pmax
comp=E,11nm,1.8s
NVS pmax pmax
comp=Z,14nm,1.8s,mb4.6
KURK Kurchatov 46.21 324 *e*P **P** **20 33 33.5 +0.6**
comp=Z,18nm,1.0s,mb5.0
KURK Kurchatov 46.21 324⇓*i*P **P** **20 33 32.5 -0.3**
KURK pmax pmax
comp=Z,22nm,1.0s,mb5.0
KURK MLR MLR
comp=Z,400nm,20.0s,MS4.4
KBL Kabul 48.50 300 *e*P **P** **20 33 51.2 +0.2**
comp=Z,15nm,1.2s,mb4.9
KBL Kabul 48.50 300 *e*P **P** **20 33 51.2 +0.3**
KBL pmax pmax
comp=Z,15nm,1.2s,mb4.9
KK31 Karatay Array 48.74 311 *i* P **P** **20 33 53.2 +0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
SEY Seymchan 49.11 18⇓*e*P **P** **20 33 54.7 -0.5**
FORT Forrest 49.74 172 *e*P **P** **20 33 59.5 -0.8**
comp=Z,12nm,0.7s,mb5.0
VOSK Vostochnaya 51.37 323 P **P** **20 34 12.2 -0.2**
VOSK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
NWAO Narrogin (SRO) 51.54 184 P **P** **20 34 09.4 -4.5**
comp=Z,3.7nm,0.5s,mb4.5,baz=7.1,slow=16,SNR=3.4
NWAO LR LR 20 56 09.4
comp=Z,140nm,21.9s,MS4.0,baz=74,slow=36
NWAO Narrogin (SRO) 51.54 184 *e*P **P** **20 34 11.8 -2.1**
BVA0 Borovoye Array 51.81 324 P **P** **20 34 15.9 +0.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRVK Borovoye 51.88 324 *e*P **P** **20 34 17.1 +0.9**
comp=Z,20nm,0.8s,mb5.1
BRVK Borovoye 51.88 324 *e*P **P** **20 34 17.1 +0.8**
BRVK pmax pmax
comp=Z,20nm,0.8s,mb5.1
TIXI Tiksi 53.07 3 *e*P **P** **20 34 22.3 -2.5**
TIXI pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
TIXI MLR MLR
comp=Z,782nm,16.0s,MS4.8
STKA Stephens Creek 54.10 158 P **P** **20 34 28.3 -4.6**
comp=Z,2.5nm,0.8s,mb4.2,baz=327,slow=10,SNR=2.9
STKA LR LR 20 57 44.0
comp=Z,166nm,19.7s,MS4.1,baz=2.0,slow=36
STKA Stephens Creek 54.10 158 *e*P **P** **20 34 28.9 -4.0**
comp=Z,2.3nm,0.6s,mb4.3
BILL Bilibino 56.82 19 *e*P **P** **20 34 50.9 -1.1**
comp=Z,12nm,0.8s,mb5.0
BILL Bilibino 56.82 19⇑*e*P **P** **20 34 51.6 -0.4**
BILL pmax pmax
comp=Z,18nm,1.3s,mb4.9
BILL MLR MLR
comp=Z,400nm,27.0s,MS4.4
SVE Sverdlovsk 58.34 326⇑*e*P **P** **20 35 03.3 +0.5**
SVE *e*PPP 20 38 43.4
SVE *e*S **S** **20 43 11.6 +5.8**
SVE pmax pmax
comp=Z,16nm,0.8s,mb5.1
ARU Arti 59.36 325 *e*P **P** **20 35 09.1 -0.8**
comp=Z,11nm,1.0s,mb4.8
ARU Arti 59.36 325*c i*P **P** **20 35 09.8 -0.1**
ARU *e* 20 37 20.9
ARU *e*S **S** **20 43 19.3 +0.3**
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU MLR MLR
comp=Z,354nm,17.0s,MS4.6
GAMB Gambell 63.31 27 *e*P **P** **20 35 38.0 +1.4**
RDF Al-Radifah 67.01 294 *e*P **P** **20 35 59.7 -1.6**
baz=294
RDF AMb AMB 20 36 09.6
comp=Z,43nm,1.0s,mb5.4,baz=294
MIB Mutribah 67.05 295 *e*P **P** **20 35 59.7 -1.8**
baz=295
MIB AMb AMB 20 36 06.4
comp=Z,12nm,0.7s,mb5.0,baz=295
NAY Al-Naaiem 67.22 294 *e*P **P** **20 36 00.9 -1.7**
baz=295
NAY AMb AMB 20 36 04.6
comp=Z,16nm,0.9s,mb5.0,baz=295
GNI Garni 67.78 306⇓*e*P **P** **20 36 10.3 +4.3**
GNI MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 68.90 311 *e*P **P** **20 36 11.2 -1.6**
comp=Z,17nm,0.7s,mb5.1
KIV Kislovodsk 68.90 311 *i* P **P** **20 36 12.8 -0.1**
KIV pmax pmax
comp=Z,19nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,300nm,32.0s,MS4.3
KLMR Klimovskoe 69.65 329 *e*P **P** **20 36 16.8 -0.4**
KLMR pmax pmax
comp=Z,34nm,1.9s,mb5.0
SVW2 Sparrevohn 70.58 31 *e*P **P** **20 36 22.7 -0.2**
IMA2 Indian Mountai 71.11 25 *e*P **P** **20 36 26.1 0.0**
OBN Obninsk 71.65 323 *i* P **P** **20 36 29.8 +0.3**
OBN *e*S S 20 45 50.0 +0.4
OBN pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.5
ANN Anapa 72.52 312 *e*P **P** **20 36 37.3 +2.4**
ANN pmax pmax
comp=Z,391nm,9.8s
JOF Joensuu 73.33 331 *ep* **P** **20 36 38.2 -1.2**
comp=Z,1.5nm,0.4s,mb4.3
JOF Joensuu 73.33 331 *e*P **P** **20 36 38.2 -1.2**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
PMR Palmer 73.62 30 *e*P **P** **20 36 40.2 -0.8**
COLA College 73.67 26 *e*P **P** **20 36 41.1 -0.3**
comp=Z,8.0nm,0.9s,mb4.7
COLA College 73.67 26⇑*e*P **P** **20 36 41.7 +0.4**
KEV Kevo 73.91 339 *ep* **P** **20 36 43.1 +0.4**
comp=Z,1.0nm,0.4s,mb4.1
KEV Kevo 73.91 339 *e*P **P** **20 36 43.1 +0.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ARCES ARCESS Array B 74.47 339 P **P** **20 36 46.6 +0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=72,slow=7.8,SNR=10
ARCES LR LR 21 12 06.9
comp=Z,233nm,21.0s,MS4.5,baz=184,slow=38
BRTR Keskin Array B 76.27 308 P **P** **20 36 56.8 -0.1**
comp=Z,0.5nm,0.5s,mb3.7,baz=116,slow=1.8,SNR=3.7
BRTR LR LR 21 15 46.4
comp=Z,97nm,20.7s,MS4.1,baz=250,slow=40
EGAK Eagle 76.48 26 *e*P **P** **20 36 56.1 -1.5**
comp=Z,9.4nm,0.8s,mb4.8
AKASG Malin Array Be 76.80 319 P **P** **20 36 57.8 -1.8**
comp=Z,1.7nm,0.6s,mb4.1,baz=61,slow=6.2,SNR=5.2
AKASG LR LR 21 12 47.6
comp=Z,228nm,19.8s,MS4.5,baz=55,slow=37
DAWY Dawson 77.42 26 *e*P **P** **20 37 02.2 -0.6**

INK	**Inuvik**	**78.28**	**21**	*e*P		**P**	**20 37 06.5**	**-1.1**
	comp=Z,287nm,1.0s							
INK	**Inuvik**	**78.28**	**21**	*e*P		**P**	**20 37 06.5**	**-1.1**
INK				pmax	pmax			
	comp=Z,287nm,1.0s							
HYT	**Haines Junctio**	**79.26**	**29**	*e*P		**P**	**20 37 12.4**	**-0.7**
SUW	**Suwalki**	**79.50**	**324**	P		**P**	**20 37 12.2**	**-2.4**
VRI	**Vrincioaia**	**79.65**	**315**	*i*P		**P**	**20 37 21.5**	**+5.9**
PLOR	**Plostina**	**79.71**	**315**	*i*P		**P**	**20 37 18.5**	**+2.6**
BURAR	**Bucovina Array**	**80.15**	**317**	*i*P		**P**	**20 37 18.1**	**-0.1**
SIT	**Sitka**	**81.63**	**32**	P		**P**	**20 37 26.3**	**+0.4**
DRGR		**82.03**	**317**	*i*P		**P**	**20 37 28.0**	**-0.2**
NB2	**NORSAR Subarra**	**82.91**	**333**	P		**P**	**20 37 31.5**	**-1.0**
	comp=Z,6.7nm,1.0s,mb4.6,baz=62,slow=5.3							
NOA	**NORSAR Array B**	**82.91**	**333**	P		**P**	**20 37 31.0**	**-1.5**
	comp=Z,1.4nm,0.8s,mb4.0,baz=63,slow=5.6,SNR=4.2							
NOA				LR	LR		21 18 09.6	
	comp=Z,338nm,18.6s,MS4.7,baz=65,slow=38							
NOA	**NORSAR Array B**	**82.91**	**333**	P		**P**	**20 37 31.0**	**-1.5**
NOA				LR	LR		21 18 09.6	
VTS	**Vitosha**	**83.05**	**313**	*i*P		**P**	**20 37 32.9**	**-0.8**
RES	**Resolute Bay**	**84.00**	**9**	*e*P		**P**	**20 37 36.4**	**-1.6**
	comp=Z,207nm,0.9s							
RES	**Resolute Bay**	**84.00**	**9**	*e*P		**P**	**20 37 36.4**	**-1.5**
RES				pmax	pmax			
	comp=Z,207nm,0.9s							
VRAC	**Vranov**	**84.97**	**320**	*i*P		**P**	**20 37 46.4**	**+3.1**
DRV	**Dumont d'Urvil**	**86.37**	**173**	S		S	20 48 18.0	-7.6
DRV				L			21 00 00.0	
DRV				R			21 08 00.0	
GERES	**GERESS Array B**	**86.89**	**321**	P		**P**	**20 37 53.9**	**+1.0**
	comp=Z,0.8nm,0.5s,mb4.2,baz=40,slow=7.7,SNR=4.4							
GERES				LR	LR		21 22 43.9	
	comp=Z,284nm,18.5s,MS4.7,baz=275,slow=40							
YKA	**Yellowknife Ar**	**88.00**	**23**	P		**P**	**20 37 57.3**	**-0.6**
	comp=Z,2.8nm,0.6s,mb4.7,baz=307,slow=4.3,SNR=9.9							
YKA				LR	LR		21 23 46.8	
	comp=Z,35nm,19.3s,MS3.8,baz=45,slow=40							
YKA	**Yellowknife Ar**	**88.00**	**23**	P		**P**	**20 37 57.3**	**-0.6**
YKA				LR	LR		21 23 46.9	
PPT	**Papeete**	**94.99**	**107**	LR	LR		21 19 40.3	
	comp=Z,10nm,18.1s,MS3.3,baz=307,slow=34							
TXAR	**Lajitas Array**	**115.62**	**43**	PKP		PKPdf	20 43 50.3	-0.6
	comp=Z,0.3nm,0.5s,baz=352,slow=7.7,SNR=4.6							
VNA2	**Neumayer--Watz**	**119.71**	**197**	*e*PKPdf		PKPdf	20 43 57.8	+0.4
	baz=162,slow=1.3							
VNA2				*e*			20 44 05.9	
VNA3	**Neumayer Olymp**	**120.17**	**196**	*e*PKPdf		PKPdf	20 43 57.6	-0.7
VNA3				*e*			20 44 05.6	
PLCA	**Paso Flores**	**155.98**	**158**	PKPab		PKPab	20 45 28.5	-1.0
	comp=Z,1.4nm,0.7s,baz=262,slow=7.1,SNR=2.7							

PGC 09 20:33:50.7±14.0, 4962N×13003W, h10km, ML3.1/4, Mw3.7, 4D, 221km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.59**	**50**	↓P	Pn	20 34 17.1	-1.8
PHC	**Port Hardy**	**1.99**	**56**	↓Pn	Pn	20 34 22.1	-2.3
PHC				↑Sn	Sn	20 34 47.0	-2.4
WOSB	**Woss**	**2.30**	**75**	↑Pn	Pn	20 34 28.3	-0.3
BBB	**Bella Bella**	**2.84**	**25**	↓Pn	Pn	20 34 34.6	-1.4
BBB				↓Sn	Sn	20 35 06.4	-3.8

*NEIC **09** 21:02:13.5, 3635N×165E, h0km, MG3.4(MDD), After MDD.*
*CRAAG **09** 21:03:11.6, 3622N×169E, Ml3.2*
*ISCJB **09** 21:03:12.4±0.6, 3633N±006×162E±006, h17km±11km, Error ellipse: s-maj=11.7km s-min=6.2km az=150.2*
*MDD **09** 21:03:12.8±0.6, 3629N×167E, h0km, mb3.5/6, Error ellipse: s-maj=6.9km s-min=5.6km az=119.0, PRIMO*
*CSEM **09** 21:03:12.0±0.1, 3623N×171E, h8km, ML2.5/10, Error ellipse: s-maj=3.5km s-min=2.2km az=1.0*
ISC 09 21:03:12.8±0.7, 3629N±005×166E±005, h15km±6km, n28, σ1§00/47, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.10**	**271**	P	**Pg**	**21 03 15.3**	**-0.8**
ECHA	**Ech Chlef**	**0.27**	**240**	P	**Pg**	**21 03 19.0**	**+0.4**
ECHF	**Ech Chlef**	**0.29**	**243**	P	**Pg**	**21 03 19.0**	**+0.1**
EANR	**'Ain N'Sour**	**0.56**	**233**	P	**Pg**	**21 03 22.6**	**-1.3**
ETRT	**Tiaret**	**0.94**	**198**	P	**Pb**	**21 03 29.1**	**-1.7**
EMHD	**Djebel Mahouad**	**1.05**	**94**	P	**Pb**	**21 03 32.4**	**-0.2**
EIBI	**Ibiza**	**2.75**	**355**	Pn	**Pn**	**21 03 57.1**	**+0.9**
	1.7nm,0.1s,SNR=8.9						
EIBI				Sn	**Sn**	**21 04 27.6**	**-1.5**
	15nm,0.2s						
EIBI	**Ibiza**	**2.75**	**355**	Pn	**Pn**	**21 03 57.1**	**+0.8**
	1.7nm,0.1s,SNR=8.9						
EIBI				Sn	**Sn**	**21 04 27.6**	**-1.5**
	15nm,0.2s						
EMUR	**La Murta**	**2.79**	**305**	Pn	**Pn**	**21 03 55.5**	**-1.4**
	0.9nm,0.2s,SNR=4.0						
EMUR				Sn	**Sn**	**21 04 30.0**	**-0.2**
	2.0nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.79**	**305**	Pn	**Pn**	**21 03 55.5**	**-1.4**
	0.9nm,0.2s,SNR=4.0						
EMUR				Sn	**Sn**	**21 04 30.0**	**-0.2**
	2.0nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.84**	**329**	Pn	**Pn**	**21 03 57.9**	**+0.4**
	0.7nm,0.2s,SNR=7.9						
EBEN				Sn	**Sn**	**21 04 30.9**	**-0.5**
	1.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.84**	**329**	Pn	**Pn**	**21 03 57.9**	**+0.4**
	0.7nm,0.2s,SNR=7.9						
EBEN				Sn	**Sn**	**21 04 30.9**	**-0.5**
	1.4nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.47**	**314**	Pn	**Pn**	**21 04 07.5**	**+1.3**
	1.0nm,0.1s,SNR=14						
ETOB				Sn	**Sn**	**21 04 46.5**	**-0.5**
	1.3nm,0.2s,SNR=5.6						
ETOB	**Tobarra**	**3.47**	**314**	Pn	**Pn**	**21 04 07.5**	**+1.3**
	1.0nm,0.1s,SNR=14						
ETOB				Sn	**Sn**	**21 04 46.5**	**-0.5**
	1.3nm,0.2s,SNR=5.6						
ETOS	**Mallorca**	**3.59**	**14**	Pn	**Pn**	**21 04 07.8**	**-0.1**
ETOS				Sn	**Sn**	**21 04 49.5**	**-0.5**
ETOS	**Mallorca**	**3.59**	**14**	Pn	**Pn**	**21 04 07.8**	**-0.1**
	0.7nm,0.2s,SNR=7.9						
ETOS				Sn	**Sn**	**21 04 49.5**	**-0.5**
	0.8nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.59**	**14**	Pn	**Pn**	**21 04 07.8**	**0.0**
	0.7nm,0.2s,SNR=7.9						
ETOS				Sn	**Sn**	**21 04 49.5**	**-0.5**
	0.8nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.71**	**281**	Pn	**Pn**	**21 04 09.4**	**-0.1**
	1.7nm,0.2s,SNR=7.9						
EBER				Sn	**Sn**	**21 04 52.4**	**-0.5**
	0.5nm,0.2s						
EBER	**Berja**	**3.71**	**281**	Pn	**Pn**	**21 04 09.4**	**-0.1**
	1.7nm,0.2s,SNR=7.9						
EBER				Sn	**Sn**	**21 04 52.4**	**-0.5**
	0.5nm,0.2s						
EHUE	**Huescar**	**3.73**	**295**	Pn	**Pn**	**21 04 12.0**	**+2.3**
	0.2nm,0.1s,SNR=7.9						
EHUE				Sn	**Sn**	**21 04 53.6**	**+0.3**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.07**	**293**	Pn	**Pn**	**21 04 16.1**	**+1.6**
	0.7nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**21 05 01.7**	**-0.2**
	1.4nm,0.3s,SNR=4.5						
EQES	**Quesada**	**4.07**	**293**	Pn	**Pn**	**21 04 16.1**	**+1.6**
	0.7nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**21 05 01.7**	**-0.2**
	1.4nm,0.3s,SNR=4.5						
EQUE	**Quentar**	**4.20**	**284**	Pn	**Pn**	**21 04 17.1**	**+0.9**
	0.9nm,0.2s,SNR=7.9						
EQUE				Sn	**Sn**	**21 05 04.7**	**-0.2**
	0.8nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**4.24**	**279**	Pn	**Pn**	**21 04 17.6**	**+0.8**
	0.3nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.40**	**338**	Pn	**Pn**	**21 04 20.3**	**+1.3**
	0.5nm,0.1s,SNR=17						
EMOS				Sn	**Sn**	**21 05 08.2**	**-1.7**
	0.4nm,0.2s						
EMOS	**Mosqueruela**	**4.40**	**338**	Pn	**Pn**	**21 04 20.3**	**+1.3**
	0.5nm,0.1s,SNR=17						
EMOS				Sn	**Sn**	**21 05 08.2**	**-1.8**
	0.4nm,0.2s						
ERTA	**Horta de San J**	**4.78**	**348**	Pn	**Pn**	**21 04 25.7**	**+1.6**
ERTA	**Horta de San J**	**4.78**	**348**	Pn	**Pn**	**21 04 25.7**	**+1.6**

IDC 09 21:12:43.9±1.7, 266N×12526E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/16, mbtmp3.4/4, Error ellipse: s-maj=167.9km s-min=23.2km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.16**	**159**	P	P	21 18 00.7	-1.2
	1.5nm,0.4s,baz=338,slow=11,SNR=15						
ASAR	**Alice Springs**	**27.48**	**163**	P	P	21 18 32.5	+0.4
	0.4nm,0.5s,baz=344,slow=7.6,SNR=8.6						
STKA	**Stephens Creek**	**37.69**	**157**	P	P	21 20 02.3	+1.2
	0.4nm,0.5s,baz=347,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**57.61**	**326**	P	P	21 22 35.4	-0.3
	0.2nm,0.6s,baz=114,slow=7.6,SNR=3.2						

IDC 09 21:19:36.4±1.6, 1251S×16759E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/16, mbtmp3.9/6, Error ellipse: s-maj=67.7km s-min=27.5km az=143.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.70**	**227**	P	P	21 25 54.8	+1.7
	1.0nm,0.7s,baz=34,slow=3.6,SNR=4.0						
WRA	**Warramunga Arr**	**32.73**	**253**	P	P	21 26 09.7	-1.4
	0.7nm,0.8s,baz=83,slow=8.7,SNR=6.2						
ASAR	**Alice Springs**	**33.81**	**246**	P	P	21 26 19.8	-0.7
	1.2nm,0.6s,baz=68,slow=9.8,SNR=21						
CMAR	**Chiang Mai Arr**	**74.35**	**293**	P	P	21 31 17.1	+0.6
	0.9nm,0.8s,baz=130,slow=5.1,SNR=5.7						
NVAR	**Mina Array Bea**	**85.59**	**49**	P	P	21 32 16.7	-0.2
	0.4nm,0.3s,baz=278,slow=2.5,SNR=4.4						
MKAR	**Makanchi Array**	**95.82**	**317**	P	P	21 33 05.5	+0.8
	0.4nm,0.6s,baz=89,slow=6.3,SNR=6.0						

*ISCJB **09** 21:22:09.3±2.6, 4.25S±007×15291E±0.10, h26km±18km, mb4.6/23, MS3.6/6, Error ellipse: s-maj=18.3km s-min=7.9km az=32.4*
*IDC **09** 21:22:12.8±2.4, 4.33S×15266E, h32km±16km, mb4.1/10, mb1 4.2/11, mb1mx4.1/18, mbtmp4.1/11, ML3.9/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/28, Error ellipse: s-maj=23.7km s-min=13.2km az=98.0*
*NEIC **09** 21:22:17.2±1.8, 4.33S×15276E, h78km±15km, mb4.7/13, Error ellipse: s-maj=13.9km s-min=8.8km az=101.0*
ISC 09 21:22:15.9±1.5, 4.32S±007×15286E±010, h68km±12km, n46, σ0§84/38, mb4.5/23, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.59**	**228**	*e*Pn	**Pn**	**21 24 04.2**	**+0.2**
	37nm,0.4s						
PMG				*e*Sn	**Sn**	**21 25 29.2**	**+0.7**
CTA	**Charters Tower**	**16.95**	**202**	*e*P	**Pn**	**21 26 09.2**	**+0.5**
	5.8nm,1.0s						
CTA	**Chars Tower**	**16.95**	**202**	Pn	**Pn**	**21 26 08.0**	**-0.7**
	0.3nm,0.3s,baz=28,slow=12,SNR=5.1						
CTA				LR	LR	21 30 29.7	
	comp=Z,49nm,19.6s,baz=49,slow=30						
CTAO	**Charters Tower**	**16.95**	**202**	*e*P	**Pn**	**21 26 09.2**	**+0.5**
	6.8nm,0.7s						
GUMO	**Guam**	**19.48**	**336**	LR	LR	21 33 07.7	
	comp=Z,168nm,18.7s,baz=69,slow=34						
KAKA	**Kakadu**	**21.84**	**246**	*e*P	**P**	**21 26 51.5**	**-11**
	20nm,0.4s,mb4.8						
WRAB	**Tennant Creek**	**23.80**	**228**	*e*P	**P**	**21 27 22.1**	**-0.5**
	75nm,0.7s,mb5.1						
WRAB				*e*S	**S**	**21 31 35.5**	**+2.0**
WB2	**Warramunga Arr**	**23.80**	**228**	↓*i*P	**P**	**21 27 22.2**	**-0.4**
WB2				*e*S	**S**	**21 31 33.5**	**-0.1**
WB2				*e*SCP	ScP	21 34 41.7	+4.5
WRA	**Warramunga Arr**	**23.81**	**228**	P	**P**	**21 27 22.2**	**-0.5**
	54nm,0.6s,mb5.0,baz=53,slow=9.7,SNR=278						
WRA				PcP	PcP	21 31 06.0	+1.3
	0.7nm,0.3s,baz=45,slow=2.5,SNR=4.6						
WRA				S	**S**	**21 31 34.4**	**+0.7**
	1.4nm,0.7s,baz=57,slow=17,SNR=5.7						
WRA				ScP	ScP	21 34 41.6	+4.4
	1.8nm,0.8s,baz=52,slow=2.8,SNR=11						
WRA				LR	LR	21 36 56.9	
	comp=Z,138nm,21.2s,baz=55,slow=37						
WRA	**Warramunga Arr**	**23.81**	**228**	P	**P**	**21 27 22.2**	**-0.5**
WRA				PcP	PcP	21 31 06.0	+1.3
WRA				S	**S**	**21 31 34.4**	**+0.7**
WRA				ScP	ScP	21 34 41.6	+4.4
ASAR	**Alice Springs**	**26.55**	**222**	P	**P**	**21 27 47.0**	**-0.5**
	9.6nm,0.6s,mb4.5,baz=54,slow=9.0,SNR=89						
ASAR				PcP	PcP	21 31 11.8	+1.0
	0.8nm,0.5s,baz=52,slow=3.8,SNR=3.6						
ASAR				ScP	ScP	21 34 49.2	+4.3
	1.8nm,0.8s,baz=47,slow=3.3,SNR=12						
STKA	**Stephens Creek**	**29.39**	**200**	*e*P	**P**	**21 28 11.8**	**-0.9**
	2.1nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**29.39**	**200**	P	**P**	**21 28 12.2**	**-0.6**
	3.0nm,0.6s,mb4.1,baz=34,slow=13,SNR=12						
STKA				PcP	PcP	21 31 19.8	+2.2
	1.2nm,0.6s,baz=128,slow=2.6,SNR=3.8						
STKA				ScP	ScP	21 35 00.2	+6.7
	0.8nm,0.4s,baz=14,slow=9.4,SNR=3.8						
STKA				LR	LR	21 39 17.6	
	comp=Z,109nm,21.0s,baz=26,slow=35						
STKA	**Stephens Creek**	**29.39**	**200**	*e*P	**P**	**21 28 12.0**	**-0.8**
	2.5nm,0.4s,mb4.2						
BBOO	**Buckleboo**	**32.41**	**207**	*e*P	**P**	**21 28 38.5**	**-0.9**
	4.1nm,0.6s,mb4.3						
FORT	**Forrest**	**35.20**	**219**	*e*P	**P**	**21 29 02.9**	**-0.8**
	38nm,0.6s,mb5.4						
AFI	**Afiamalu**	**36.14**	**108**	LR	LR	21 42 01.7	
	comp=Z,70nm,19.5s,baz=228,slow=33						
MBWA	**Marble Bar**	**36.27**	**240**	*e*P	**P**	**21 29 12.0**	**-0.9**
	12nm,0.6s,mb5.0						
TAU	**Tasmania Unive**	**38.74**	**187**	*e*P	**P**	**21 29 34.8**	**+1.3**
	5.2nm,0.5s,mb4.6						
URZ	**Urrera**	**40.37**	**150**	P	**P**	**21 29 47.9**	**+0.7**
	1.7nm,0.3s,mb4.3,baz=270,slow=5.1,SNR=4.1						
RPZ	**Rata Peaks**	**42.40**	**160**	P	**P**	**21 30 04.9**	**+1.2**
	20nm,0.7s,mb5.0,baz=315,slow=2.9,SNR=8.6						
KLBR	**Kellerberrin**	**42.68**	**226**	*e*P	**P**	**21 30 04.9**	**-1.3**
	15nm,1.1s,mb4.6						
MJAR	**Matsushiro Arr**	**42.89**	**343**	LR	LR	21 45 30.7	
	comp=Z,68nm,18.3s,baz=215,slow=33						
NWAO	**Narrogin (SRO)**	**43.77**	**225**	LR	LR	21 49 28.1	
	comp=Z,142nm,21.4s,baz=261,slow=38						
KSRS	**Korea Array**	**47.60**	**333**	P	**P**	**21 30 45.7**	**+0.7**
	0.3nm,0.3s,mb3.6,baz=138,slow=12,SNR=4.5						
PETK	**Petropavlovsk-**	**57.36**	**3**	P	**P**	**21 31 57.8**	**+0.9**
	2.1nm,0.5s,mb4.5,baz=151,slow=6.7,SNR=10						
SONM	**Songino Array**	**65.95**	**328**	P	**P**	**21 32 56.5**	**+1.6**
	0.8nm,0.6s,mb3.7,baz=144,slow=5.1,SNR=5.9						
BILL	**Bilibino**	**72.81**	**5**	*e*P	**P**	**21 33 37.1**	**+0.4**
	12nm,0.9s,mb4.7						
KDAK	**Kodiak Island**	**75.72**	**27**	P	**P**	**21 33 58.7**	**+4.8**
	18nm,1.1s,mb4.7,baz=342,slow=3.2,SNR=3.9						
RC01	**Rabbit Creek A**	**78.71**	**25**	*e*P	**P**	**21 34 10.2**	**-0.4**
	11nm,0.5s,mb4.9						
MKAR	**Makanchi Array**	**80.00**	**319**	P	**P**	**21 34 18.9**	**+1.0**
	0.8nm,0.8s,mb3.6,baz=99,slow=7.6,SNR=5.3						
MKAR	**Makanchi Array**	**80.00**	**319**	P	**P**	**21 34 18.9**	**+1.0**
ZALV	**Zalesovo Beam**	**80.79**	**326**	P	**P**	**21 34 22.0**	**0.0**
	0.5nm,0.4s,mb3.7,baz=108,slow=4.7,SNR=4.3						
COLA	**College**	**81.38**	**22**	*e*P	**P**	**21 34 23.8**	**-1.1**
	2.2nm,0.8s,mb4.4						
EGAK	**Eagle**	**83.89**	**23**	*e*P	**P**	**21 34 37.7**	**-0.2**
	2.5nm,0.6s,mb4.2						
INK	**Inuvik**	**87.98**	**21**	*e*P	**P**	**21 34 57.4**	**-0.7**
	200nm,1.0s						
BVAR	**Borovoye Array**	**88.89**	**323**	P	**P**	**21 35 01.7**	**-1.0**
	1.3nm,0.6s,mb4.1,baz=100,slow=6.5,SNR=6.0						
PDAR	**Pinedale Array**	**98.48**	**48**	LR	LR	22 13 29.8	
	comp=Z,57nm,19.8s,baz=150,slow=31						
HFS	**Hagfors**	**116.25**	**339**	PKP	PKPdf	21 40 51.4	+0.1
	5.3nm,1.0s,baz=73,slow=5.0,SNR=5.7						
NB2	**NORSAR Subarra**	**116.48**	**340**	PKPdf	PKPdf	21 40 51.8	+0.1
	comp=Z,1.4nm,0.8s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**116.48**	**340**	PKP	PKPdf	21 40 51.9	+0.2
	comp=Z,1.2nm,0.7s,baz=46,slow=1.9,SNR=4.6						
GERES	**GERESS Array B**	**123.68**	**329**	PKP	PKPdf	21 41 06.8	+0.9
	comp=Z,2.2nm,0.6s,baz=88,slow=2.4,SNR=16						
EKA	**Eskdalemuir Ar**	**125.59**	**343**	PKP	PKPdf	21 41 09.8	+0.5
	comp=Z,3.7nm,0.9s,baz=14,slow=2.7,SNR=13						
DAVOX	**Davos/Dischmat**	**126.98**	**329**	PKP	PKPdf	21 41 14.2	+1.9
	comp=Z,2.4nm,0.6s,baz=222,slow=2.6,SNR=7.4						
TOA0	**Torodi Ar. Sit**	**150.21**	**289**	*e*PKPbc	PKPbc	21 42 00.5	+0.2
TORD	**Torodi Ar. Bea**	**150.21**	**289**	PKP	PKPdf	21 41 56.3	+1.2
	comp=Z,3.9nm,0.3s,baz=90,slow=2.2,SNR=100						
TORD				PKPbc	PKPbc	21 42 00.4	+0.2
	comp=Z,3.9nm,0.3s,baz=89,slow=2.2,SNR=111						

KRSC 09 21:23:24.6±0.4, 5203N×15884E, h48km±47km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.45**	**334**	*e*P	Pn	21 23 35.7	+0.6
RUS				*i* S	Sn	21 23 43.9	+1.3
GRL	**Gorelyy**	**0.70**	**318**	*e*P	Pn	21 23 39.3	+1.0
GRL				*i* S	Sn	21 23 50.4	+2.2
PET	**Petropavlovsk**	**1.00**	**354**	*e*P	Pn	21 23 43.1	+0.8
PET				*i* S	Sn	21 23 56.5	+1.2
NLC	**Nalytchevo**	**1.18**	**15**	*e*P	Pn	21 23 44.7	0.0
NLC				*i* S	Sn	21 23 59.3	-0.4
AVH	**Avacha**	**1.24**	**357**	*e*P	Pn	21 23 46.9	+1.4
AVH				*i* S	Sn	21 24 03.3	+2.3
SPN	**Mys Shipunski**	**1.29**	**34**	*e*P	Pn	21 23 47.9	+1.7
SPN				*i* S	Sn	21 24 04.6	+2.3
MIPR	**Malaya Ipel'ka**	**1.31**	**282**	*e*P	Pn	21 23 46.8	+0.4
MIPR				*i* S	Sn	21 24 03.1	+0.5
GNL	**Ganaly**	**1.75**	**342**	*e*P	Pn	21 23 54.0	+1.5
GNL				*i* S	Sn	21 24 16.0	+2.4
KII	**Karymskiy**	**2.04**	**10**	*e*P	Pn	21 23 58.6	+2.2
KII				*i* S	Sn	21 24 23.4	+2.7
MKZ	**Mys Kozlova**	**3.07**	**33**	*e*P	Pn	21 24 12.0	+1.5
MKZ				*i* S	Sn	21 24 47.4	+1.5
TUMR	**Tumrok**	**3.35**	**13**	*e*P	Pn	21 24 17.1	+2.7
TUMR				*i* S	Sn	21 24 54.1	+1.3
KMNR	**Kamenistaya**	**3.82**	**12**	*e*P	Pn	21 24 25.5	+3.7
KMNR				*i* S	Sn	21 25 08.7	+4.2
BZGR	**Bezymyannyi-Gr**	**4.07**	**15**	*e*P	Pn	21 24 28.2	+4.0
BZGR				*i* S	Sn	21 25 14.4	+3.9
KBTR	**Krutoberegovo**	**4.80**	**28**	*e*P	Pn	21 24 36.9	+2.7
KBTR				*i* S	Sn	21 25 29.6	+1.2
SRKR	**Sorokina**	**4.83**	**15**	P	Pn	21 24 38.8	+4.2
SRKR				*i* S	Sn	21 25 34.3	+5.1

*MOS **09** 21:26:41.5±0.9, 5623S×2729W, h102km, mb5.0/8, Error ellipse: s-maj=24.9km s-min=12.5km az=100.1*
*ISCJB **09** 21:26:42.2±1.7, 5620S±005×272W±0.1, h108km±15km, mb5.0/30, Error ellipse: s-maj=10.7km s-min=7.9km az=146.7*
*IDC **09** 21:26:46.7±0.7, 5619S×2733W, h139km±5km, mb4.6/13, mb1 4.6/14, mb1mx4.5/18, mbtmp4.6/14, MS3.8/4, Ms1 3.8/4, ms1mx3.4/18, Error ellipse: s-maj=12.8km s-min=11.6km az=49.0*
*BJI **09** 21:26:48.4, 5630S×2730W, h155km, mB5.1*
*GCMT **09** 21:26:48.5±0.3, 5637S×2687W, h120km±4km, MW4.9/63, Moment Tensor Solution. s18,c20; s63,c79; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.83±.12; Mθθ 0.09±.20; Mϕϕ 1.74±.18; Mrθ -1.37±.10; Mϕθ 1.90±.14; Mϕr -0.76±.11; Best double couple: Mo 3.04000×10^16 NP1: ϕs 179.00000°, δ55.00000°, λ140.00000°. NP2: ϕs 295.00000°, δ58.00000°, λ42.00000°. Principal axes: T 3.0900, Plg51.0000°, Azm148.0000°; N -0.1010, Plg39.0000°, Azm325.0000°; P -2.9900, Plg2.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 21:26:48.5±1.6, 5627S×2730W, h155km±14km, mb5.0/23 Error ellipse: s-maj=7.1km s-min=6.1km az=60.0*
ISC 09 21:26:46.2±1.6, 5632S±005×272W±01, h131km±15km, n144, σ0§85/73, mb4.8/30, 6C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.55**	**158**	*e*Pn	**Pn**	**21 30 30.3**	**+0.2**
VNA1				*e*		21 30 32.3	
VNA1				*e*		21 30 34.9	
VNA1				*e*		21 35 12.6	
VNA1				*e*		21 38 34.6	
VNA3	**Neumayer Olymp**	**16.74**	**160**	*e*Pn	**Pn**	**21 30 32.3**	**-0.1**
VNA3				*e*		21 30 34.0	
VNA3				*e*		21 30 36.6	
VNA3				*e*		21 33 30.7	
VNA3				*e*		21 35 13.3	
VNA3				*e*		21 38 34.5	
VNA2	**Neumayer--Watz**	**16.94**	**158**	*e*Pn	**Pn**	**21 30 35.0**	**+0.1**
	baz=314,slow=13						
VNA2				*e*		21 30 36.6	
VNA2				*e*		21 30 38.4	
VNA2				*e*		21

comp=Z,56nm,0.6s,mb5.4
SBA Scott Base 45.81 184 *e*P P **21 34 55.3 +1.3**
comp=Z,26nm,0.8s,mb4.9
SBA *e*PcP PcP 21 36 30.2 +1.1
SBA Scott Base 45.81 184 *e*P P **21 34 55.3 +1.3**
SBA *e* 21 36 30.2
SBA pmax pmax
comp=Z,26nm,0.8s,mb4.9
BOSA Boshof 46.04 76 P P **21 34 56.5 0.0**
comp=Z,3.6nm,0.6s,mb4.2,baz=221,slow=14,SNR=8.7
BOSA LR LR 21 51 15.4
comp=Z,117nm,19.0s,baz=66,slow=32
LBTB Lobatse 49.09 73 *e*P P **21 35 19.9 -0.2**
comp=Z,14nm,0.6s,mb4.8
LBTB Lobatse 49.09 73 *e*P P **21 35 19.9 -0.2**
LBTB pmax pmax
comp=Z,14nm,0.6s,mb4.8
TSUM Tsumeb 49.82 61 *e*P P **21 35 25.9 +0.2**
comp=Z,10nm,1.4s,mb4.3
LPAZ La Paz 50.53 305 P P **21 35 31.3 +0.4**
comp=Z,16nm,0.6s,mb4.8,baz=140,slow=5.8,SNR=59
LPAZ PcP PcP 21 36 48.1 +1.1
comp=Z,4.3nm,0.6s,baz=188,slow=7.1,SNR=2.0
LPAZ ScP ScP 21 40 28.8 -1.6
comp=Z,2.4nm,0.8s,baz=144,slow=5.1,SNR=5.5
LPAZ S **S** **21 42 34.5 -0.4**
comp=Z,2.3nm,0.7s,baz=227,slow=25,SNR=11
LPAZ La Paz 50.53 305 P P **21 35 31.3 +0.4**
LPAZ PcP PcP 21 36 48.1 +1.1
LPAZ ScP ScP 21 40 28.8 -1.6
LPAZ S **S** **21 42 34.5 -0.4**
LPAZ La Paz 50.53 305 P P **21 35 31.3 +0.4**
LPAZ 21 36 48.1
LPAZ S **S** **21 42 34.5 -0.4**
ARE Arequipa 51.94 302 *e*P P **21 35 42.0 +0.5**
CASY Casey 53.66 160 *e*P P **21 35 54.4 +1.0**
comp=Z,19nm,0.8s,mb4.9
NNA Nana 58.37 299 *e*P P **21 36 26.9 -0.8**
comp=Z,9.7nm,0.5s,mb4.9
LSZ Lusaka 58.48 69 LR LR 21 59 42.8
comp=Z,120nm,21.2s,baz=339,slow=34
LSZ Lusaka 58.48 69 *e*P P **21 36 27.9 -0.5**
comp=Z,20nm,0.9s,mb4.9
LSZ Lusaka 58.48 69 *e*P P **21 36 27.9 -0.5**
LSZ pmax pmax
comp=Z,19nm,0.9s,mb4.9
LIC Lamto 64.95 24 *e*P P **21 37 11.2 -0.4**
comp=Z,29nm,0.6s,mb5.3
KIC Kosan Boka 65.14 25 *e*P P **21 37 12.4 -0.5**
comp=Z,68nm,1.0s,mb5.4
TIC Toumodi 65.35 24 *e*P P **21 37 13.5 -0.8**
comp=Z,44nm,0.7s,mb5.4
TIC Toumodi 65.35 24 *e*P P **21 37 13.5 -0.8**
TIC pmax pmax
comp=Z,44nm,0.7s,mb5.4
DBIC Dimbokro 65.42 25 P P **21 37 14.2 -0.5**
comp=Z,5.1nm,0.5s,mb4.6,baz=171,slow=7.8,SNR=19
DBIC Dimbokro 65.42 25 *e*P P **21 37 14.2 -0.5**
comp=Z,5.4nm,0.5s,mb4.6
DBIC Dimbokro 65.42 25 *e*P P **21 37 14.2 -0.5**
DBIC pmax pmax
comp=Z,5.0nm,0.5s
OTAV Otavalo 69.80 304 *e*P P **21 37 43.8 +1.5**
comp=Z,5.0nm,0.6s,mb4.4
TOA0 Torodi Ar. Sit 73.30 29 *e*P P **21 38 02.9 -0.1**
TORD Torodi Ar. Bea 73.30 29 P P **21 38 03.0 -0.1**
comp=Z,12nm,0.5s,mb4.9,baz=199,slow=6.6,SNR=376
TORD pP pP 21 38 36.0 +0.6
comp=Z,14nm,0.7s,baz=199,slow=6.6,SNR=7.8
RPZ Rata Peaks 79.15 193 P P **21 38 35.5 -0.4**
comp=Z,11nm,0.6s,mb4.7,baz=166,slow=4.2,SNR=5.6
TAU Tasmania Unive 81.03 176 P P **21 38 46.1 +0.1**
comp=Z,441nm,0.7s,mb6.2,SNR=13
TAU Tasmania Unive 81.03 176 *e*P P **21 38 45.9 -0.2**
comp=Z,51nm,0.8s,mb5.2
TAU Tasmania Unive 81.03 176 *e*P P **21 38 45.9 -0.1**
TAU pmax pmax
comp=Z,51nm,0.8s,mb5.2
MOO Moorlands 81.49 176 *e*P P **21 38 48.5 0.0**
TAM Tamanrasset 83.53 30 *e*P P **21 39 01.0 +1.9**
URZ Urewera 83.55 199 P P **21 38 59.0 -0.2**
comp=Z,10nm,0.8s,mb4.6,baz=180,slow=3.0,SNR=4.1
NWAO Narrogin (SRO) 86.09 151 P P **21 39 11.9 -0.1**
comp=Z,11nm,0.9s,mb4.6,baz=208,slow=6.8,SNR=6.5
TOO Toolangi 86.27 174 *e*P P **21 39 12.6 -0.2**
MUN Mundaring 86.70 150 *e*P P **21 39 14.9 -0.1**
KLBR Kellerberrin 87.50 151 *e*P P **21 39 18.4 -0.5**
comp=Z,22nm,0.8s,mb5.0
CNB Canberra Magne 88.68 177 *e*P P **21 39 25.0 +0.6**
BBOO Buckleboo 90.08 166 *e*P P **21 39 30.7 -0.3**
comp=Z,15nm,0.8s,mb5.0
FORT Forrest 90.72 159 *e*P P **21 39 34.3 +0.3**
comp=Z,13nm,0.6s,mb5.2
FORT Forrest 90.72 159 *e*P P **21 39 34.4 +0.4**
comp=Z,2.6nm,0.7s,mb4.4
STKA Stephens Creek 91.64 170 *e*P P **21 39 38.2 0.0**
comp=Z,7.1nm,0.6s,mb4.9
STKA Stephens Creek 91.64 170 P P **21 39 38.4 +0.2**
comp=Z,9.6nm,0.7s,mb4.9,baz=161,slow=6.1,SNR=26
STKA PP PP 21 43 15.7 -1.6
comp=Z,1.9nm,0.6s,baz=160,slow=6.5,SNR=4.4
ESDC Sonseca Array 97.64 18 P P **21 40 06.5 +1.4**
comp=Z,1.0nm,0.8s,mb4.3,baz=163,slow=5.1,SNR=4.1
ASAR Alice Springs 98.73 163 P P **21 40 09.9 -0.7**
comp=Z,4.7nm,0.6s,mb5.1,baz=186,slow=4.0,SNR=78
ASAR PP PP 21 44 09.4 -3.0
comp=Z,2.9nm,0.7s,baz=185,slow=7.2,SNR=14
ASAR PKKP PKKPbc 21 56 36.8 +1.4
comp=Z,0.2nm,0.4s,baz=42,slow=2.0,SNR=5.4
ASAR Alice Springs 98.73 163 P P **21 40 10.0 -0.7**
ASAR 21 44 09.4
WRA Warramunga Arr 102.45 162 P Pdif 21 40 26.7 -0.5
comp=Z,2.1nm,0.6s,baz=194,slow=4.1,SNR=17
WRA PP PP 21 44 41.7 +1.2
comp=Z,2.5nm,0.8s,baz=186,slow=6.1,SNR=4.6
WRA PKKP PKKPbc 21 56 26.1 +1.3
comp=Z,0.3nm,0.3s,baz=351,slow=3.0,SNR=5.4
WRA Warramunga Arr 102.45 162 P Pdif 21 40 26.7 -0.6
WRA 21 44 41.7
WB2 Warramunga Arr 102.45 162 *e*P Pdif 21 40 26.5 -0.8
WRAB Tennant Creek 102.46 162 *e*Pdif Pdif 21 40 26.4 -0.9
comp=Z,2.8nm,0.7s
WRAB Tennant Creek 102.46 162 *e*P Pdif 21 40 26.4 -0.9
WRAB pmax pmax
comp=Z,3.0nm,0.7s
TXAR Lajitas Array 106.91 297 SKP 21 48 17.8
comp=Z,0.4nm,0.9s,baz=208,slow=5.1,SNR=5.0
CLL Collm 112.30 26 *e*PKPdf Pdif 21 41 04.0 -7.0
AKASG Malin Array Be 116.42 36 *i* PKIKP PKPdf 21 45 11.1 -1.9
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BW06 Boulder Array 120.48 302 *e*PKPdf PKPdf 21 45 20.0 -1.1
PDAR Pinedale Array 120.48 302 PKP PKPdf 21 45 20.0 -1.2
comp=Z,0.7nm,0.4s,baz=246,slow=5.8,SNR=12
PDAR SKP 21 48 41.7
comp=Z,0.5nm,0.7s,baz=148,slow=5.3,SNR=3.5
NOA NORSAR Array B 120.86 21 PKP PKPdf 21 45 19.9 -1.4
comp=Z,1.7nm,0.6s,baz=207,slow=2.1,SNR=4.6
NVAR Mina Array Bea 121.50 293 PKP PKPdf 21 45 20.8 -2.5
comp=Z,10nm,0.7s,baz=202,slow=9.1,SNR=6.6
NVAR Mina Array Bea 121.50 293 PKP PKPdf 21 45 20.8 -2.5
TPAW Teton Pass 121.69 302 *e*PKPdf PKPdf 21 45 23.3 -0.1
MOOW Moose Ponds 121.79 302 *e*PKPdf PKPdf 21 45 23.2 -0.4
CMAR Chiang Mai Arr 124.98 111 PKP PKPdf 21 45 30.2 -0.3
comp=Z,4.6nm,0.8s,baz=233,slow=3.9,SNR=28
KAF Kangasniemi 125.25 28 *e*pkp PKPdf 21 45 28.1 -1.5
comp=Z,3.2nm,0.3s
JOF Joensuu 127.24 29 *e*pkp PKPdf 21 45 32.2 -1.2
comp=Z,3.0nm,0.4s
AKTK Aktyubinsk 127.50 53 PKP PKPdf 21 45 33.9 -0.5
AKTO Aktyubinsk 127.50 53 PKP PKPdf 21 45 33.9 -0.5
comp=Z,7.1nm,0.9s,baz=173,slow=2.8,SNR=20
KSH Kashi 128.65 75 *e*PKP PKPdf 21 45 38.2 +1.3
KSH *e*XPKP 21 46 37.1
KSH *e*PKS 21 49 13.4
KSH *e*SKS SKSdf 21 52 33.1 -2.8
KSH PP PP
comp=Z,540nm,5.0s
KSH LR LR
comp=N,258nm,5.0s
KSH LR LR
comp=E,146nm,3.2s
KSH LR LR
comp=Z,206nm,4.9s

ARCES ARCESS Array B 131.20 22 PKP PKPdf 21 45 40.0 -0.8
comp=Z,5.4nm,0.6s,baz=187,slow=1.7,SNR=43
ARCES SKP 21 48 58.9
comp=Z,0.7nm,0.6s,baz=211,slow=2.1,SNR=3.8
ARCES ARCESS Array B 131.20 22 PKP PKPdf 21 45 40.0 -0.8
ARCES SKP 21 48 58.9
KEV Kevo 131.69 22 *e*pkp PKPdf 21 45 41.3 -0.4
comp=Z,0.6nm,0.4s
ARU Arti 131.88 48 *e*PKPdf PKPdf 21 45 41.9 -0.6
ARU Arti 131.88 48 *i* PKIKP PKPdf 21 45 42.0 -0.5
KMI Kunming 132.44 110 PKP PKPdf 21 45 45.7 +1.1
KMI PP PP 21 48 14.8 +5.3
KMI SS SS 22 05 40.5 +2.4
KMI PP PP
comp=Z,60nm,7.0s
KMI LR LR
comp=Z,26nm,20.3s
KMI Kunming 132.44 110 PKIKP PKPdf 21 45 45.7 +1.1
KMI 21 48 14.8
KMI SS SS 22 05 40.5 +2.4
KMI SSS 22 10 39.2
BVAR Borovoye Array 134.93 58 PKP PKPdf 21 45 47.3 -1.0
comp=Z,3.7nm,0.7s,baz=222,slow=2.7,SNR=17
BVAR pPKP pPKPdf 21 46 22.5 -0.8
comp=Z,2.4nm,1.0s,baz=182,slow=1.2,SNR=2.0
BVAR SKPbc SKPbc 21 49 04.7 -1.6
comp=Z,1.4nm,0.8s,baz=178,slow=4.5,SNR=4.4
BVAR Borovoye Array 134.93 58 PKIKP PKPdf 21 45 47.3 -1.0
BVAR 21 46 22.5
GYA Guiyang 135.57 113 PKP PKPdf 21 45 51.1 +0.7
GYA XPKP 21 46 43.8
GYA PP PP 21 48 34.0 +4.7
GYA PKS 21 49 27.4
GYA SKS SKSdf 21 52 46.1 -2.9
GYA SKKS SKKSac 21 55 09.4 -1.9
GYA SS SS 22 06 16.7 +1.0
GYA PP PP
comp=Z,120nm,7.5s
GYA LR LR
comp=N,110nm,21.4s
GYA LR LR
comp=E,150nm,22.5s
GYA LR LR
comp=Z,210nm,21.9s
YKA Yellowknife Ar 136.37 318 PKP PKPdf 21 45 49.7 -0.9
comp=Z,3.4nm,0.7s,baz=130,slow=2.2,SNR=13
YKA SKPbc SKPbc 21 49 07.8 -2.7
comp=Z,5.2nm,0.9s,baz=122,slow=1.7,SNR=7.3
YKA Yellowknife Ar 136.37 318 PKP PKPdf 21 45 49.7 -0.9
YKA SKPbc SKPbc 21 49 07.8 -2.7
MK31 Makanchi Array 136.98 72 *e*PKPdf PKPdf 21 45 50.9 -1.4
MKAR Makanchi Array 136.98 72 PKhKP 21 45 43.4
comp=Z,0.4nm,0.6s,baz=212,slow=3.4,SNR=4.7
MKAR PKP PKPdf 21 45 49.9 -2.5
comp=Z,1.9nm,0.8s,baz=242,slow=2.0,SNR=9.6
MKAR SKPbc SKPbc 21 49 10.8 -2.1
comp=Z,2.6nm,1.1s,baz=263,slow=7.0,SNR=6.9
MKAR SKPab 21 49 17.8
comp=Z,0.5nm,0.5s,baz=245,slow=2.8,SNR=6.5
MKAR Makanchi Array 136.98 72 PKP 21 45 43.4
MKAR PKP PKPdf 21 45 49.9 -2.5
MKAR SKPbc SKPbc 21 49 10.8 -2.1
MKAR SKPab 21 49 17.8
MKAR Makanchi Array 136.98 72 PKHKP 21 45 43.4
MKAR 21 45 49.9
KURK Kurchatov 137.53 65 PKhKP 21 45 43.3
KURK PKP PKPdf 21 45 52.4 -0.8
baz=239,slow=2.7
KURK SKPbc SKPbc 21 49 12.4 -2.0
baz=232,slow=3.3
KURK Kurchatov 137.53 65 *i* PKIKP PKPdf 21 45 51.7 -1.5
CD2 Chengdu 137.59 106 *e*PKP PKPdf 21 45 54.6 +0.6
CD2 PP PP 21 48 47.6 +5.6
CD2 PKS 21 49 29.4
CD2 SKS SKSdf 21 52 47.2 -5.1
CD2 SS SS 22 06 41.1 +1.2
CD2 PP PP
comp=Z,180nm,10.2s
CD2 LR LR
comp=N,210nm,18.2s
CD2 LR LR
comp=Z,180nm,18.8s
WMQ Urumqi 137.97 79 *e*PKP PKPdf 21 45 53.0 -1.2
RES Resolute Bay 138.11 338 *e*PKPdf PKPdf 21 45 53.5 -0.1
LZH Lanzhou 141.56 101 *e*PKP PKPdf 21 45 59.5 -1.6
LZH XPKP 21 46 55.0
LZH LR LR
comp=N,212nm,17.3s
LZH LR LR
comp=Z,286nm,19.7s
GTA Gaotai 141.72 93 PKP PKPdf 21 46 00.6 -0.6
GTA PP PP 21 49 07.3 -0.1
GTA PKS 21 49 35.5
GTA SKS SKSdf 21 52 51.6 -7.0
GTA SKKS SKKSac 21 55 39.2 -7.8
GTA PP PP
comp=Z,98nm,9.3s
GTA LR LR
comp=N,67nm,17.4s
GTA LR LR
comp=E,61nm,17.4s
GTA LR LR
comp=Z,85nm,17.4s
NVS Novosibirsk 142.18 62 *e*PKHKP 21 45 56.8
NVS pmax pmax
comp=Z,12nm,1.0s
NVS pmax pmax
comp=N,6.0nm,1.2s
NVS pmax pmax
comp=E,4.0nm,1.0s
ZAA0 Zalesovo Array 142.50 64 *e*PKPdf 21 45 57.0
ZALV Zalesovo Beam 142.50 64 PKhKP 21 45 56.8
comp=E,1.6nm,0.4s,baz=222,slow=4.6,SNR=13
WHN Wuhan 142.78 118 PKP PKPdf 21 46 03.5 +0.1
HYT Haines Junctio 144.95 307 *e*PKPdf PKPdf 21 46 05.9 -0.3
INK Inuvik 146.01 320 *e*PKPdf PKPdf 21 46 07.5 -0.2
INK *e* 21 46 39.9
DAWY Dawson 146.97 312 *e*PKPbc PKPbc 21 46 10.8 -0.9
DAWY *e* 21 46 42.6
KRAR Krasnoyarsk 147.55 65 *i* PKP2 PKPdf 21 46 13.4 +2.7
EGAK Eagle 147.91 313 *e*PKPbc PKPbc 21 46 12.8 -1.4
TIA Tai'an 148.70 115 PKP PKPbc 21 46 16.5 -0.7
HHC Hu-ho-hao-te 149.19 102 *e*PKP PKPdf 21 46 12.2 -1.7
HHC XPKP 21 47 07.2
HHC PP PP 21 49 50.1 -1.6
HHC SKKS SKKSac 21 56 25.2 -4.1
HHC SS SS 22 08 52.9 -0.3
HHC PP PP
comp=Z,152nm,11.3s
HHC LR LR
comp=N,118nm,22.6s
HHC LR LR
comp=E,197nm,21.4s
HHC LR LR
comp=Z,119nm,20.8s
MOY Mondy 149.80 77 *e*PKP2 PKPbc 21 46 19.2 -0.2
MOY pmax pmax
comp=Z,27nm,1.6s
ZAK Zakamensk 150.40 80 *i* PKIKP PKPbc 21 46 20.7 -0.2
ZAK *e* 21 46 53.6
ZAK pmax pmax
comp=Z,21nm,1.1s
SLKM Skilak Lake 150.68 302 *e*PKPbc PKPbc 21 46 20.9 -0.3
COLA College 150.72 311 *e*PKPbc PKPbc 21 46 19.8 -1.4
COLA *e*PKPab PKPab 21 46 27.5 -1.3
SONM Songino Array 150.75 87 PKP PKPdf 21 46 15.5 -0.6
comp=Z,0.7nm,0.6s,baz=321,slow=1.9,SNR=6.1
SONM PKPbc PKPbc 21 46 21.5 -0.3
comp=Z,17nm,0.6s,baz=223,slow=3.2,SNR=81
SONM pPKP pPKPdf 21 46 53.2 +2.0
comp=Z,3.7nm,0.8s,baz=196,slow=4.7,SNR=2.8
KDAK Kodiak Island 150.93 296 *e*PKPbc PKPbc 21 46 21.4 -0.5
MCK McKinley 150.94 309 *e*PKPbc PKPbc 21 46 21.4 -0.3
BJI Beijing 151.09 109 PKP PKPdf 21 46 16.8 -0.1
ULN Ulaanbaatar 151.13 87 *e*PKPbc PKPbc 21 46 22.0 -0.7
ULN Ulaanbaatar 151.13 87 *c i* PKIKP PKPbc 21 46 22.3 -0.4
TLY Talaya 151.25 78 *i* PKIKP PKPbc 21 46 23.3 +0.5
COLD Coldfoot 152.01 316 *e*PKPbc PKPbc 21 46 23.9 -0.2
PPLA Purkeypile 152.19 306 *e*PKPbc PKPbc 21 46 23.9 -0.7
IMA2 Indian Mountai 153.29 313 *e*PKPbc PKPbc 21 46 26.6 -0.4
KSRS Korea Array 154.84 128 PKPab PKPab 21 46 46.6 -0.4
comp=Z,3.1nm,1.0s,baz=227,slow=5.6,SNR=4.6
CN2 Changchun 158.60 114 *e*PKP PKPdf 21 46 26.6 -0.5
CN2 *e*PKP2 PKPab 21 47 02.4 -0.7
CN2 PP PP 21 50 47.3 +2.9
BOD Bodaibo 159.05 70 *e*PKIKP PKPdf 21 46 22.5 -4.6
BOD *e* 21 46 57.9
BOD pmax pmax
comp=Z,3.0nm,1.4s
BOD pmax pmax
comp=Z,6.0nm,0.8s

IDC ***09*** *21:38:28.9±2.4, 259N×9509E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.8/22, mbtmp4.1/6, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/27, Error ellipse: s-maj=107.3km s-min=21.2km az=57.0*
ISCJB ***09*** *21:38:32.0±1.1, 26N±02×95.1E±02, h33km, mb4.2/8, Error ellipse: s-maj=40.3km s-min=13.1km az=146.1*
NEIC ***09*** *21:38:34.4±0.6, 267N×95.18E, h35km, mb4.5/3, Error ellipse: s-maj=22.2km s-min=7.4km az=58.0*
ISC 09 21:38:34.4±1.1, 26N±02×952E±02, h35km, n21, σ0§25/20, mb4.2/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.15**	**13**	Pn		**Pn**		**21 42 18.7**	**-0.1**
	0.3nm,0.3s,baz=202,slow=11,SNR=36								
ODAN	**Odare**	**25.22**	**343**	*e*P		**P**		**21 43 57.0**	**0.0**
RAMN	**Ramite**	**25.54**	**342**	*e*P		**P**		**21 44 00.3**	**+0.4**
	11nm,0.5s,mb4.6								
TAPN	**Taplejung**	**25.59**	**344**	*e*P		**P**		**21 44 00.6**	**+0.2**
	11nm,0.8s,mb4.5								
PKI	**Pulchoki**	**26.50**	**340**	*e*P		**P**		**21 44 08.6**	**0.0**
PKIN	**Phulchoki**	**26.51**	**340**	*e*P		**P**		**21 44 08.6**	**-0.1**
GUN	**Gumba**	**26.66**	**341**	*e*P		**P**		**21 44 10.2**	**+0.1**
KKN	**Kakani**	**26.74**	**340**	*e*P		**P**		**21 44 11.1**	**+0.3**
GKN	**Gorkha**	**27.16**	**339**	*e*P		**P**		**21 44 14.8**	**+0.2**
LSA	**Lhasa**	**27.18**	**352**	*e*P		**P**		**21 44 15.3**	**+0.5**
	4.3nm,0.7s,mb4.1								
KOLN	**Koldanda**	**27.33**	**337**	*e*P		**P**		**21 44 15.7**	**-0.5**
PYUN	**Piuthan**	**27.87**	**336**	*e*P		**P**		**21 44 20.9**	**0.0**
WRA	**Warramunga Arr**	**44.50**	**122**	P		**P**		**21 46 42.6**	**-0.1**
	0.8nm,0.7s,mb3.5,baz=300,slow=8.9,SNR=4.6								
WRA				LR		LR		22 04 33.9	
	comp=Z,32nm,20.8s,baz=130,slow=35								
WRA	**Warramunga Arr**	**44.50**	**122**	P		**P**		**21 46 42.6**	**-0.1**
WRA				LR		LR		22 04 33.9	
MK31	**Makanchi Array**	**45.39**	**348**	*e*P		**P**		**21 46 49.3**	**-0.2**
MKAR	**Makanchi Array**	**45.39**	**348**	P		**P**		**21 46 49.4**	**-0.1**
	3.2nm,0.6s,mb4.3,baz=166,slow=8.2,SNR=24								
ASAR	**Alice Springs**	**45.86**	**127**	P		**P**		**21 46 53.8**	**+0.2**
	0.4nm,0.7s,mb3.4,baz=300,slow=7.4,SNR=4.0								
KURK	**Kurchatov**	**49.91**	**346**	P		**P**		**21 47 24.0**	**-0.4**
	baz=166,slow=6.9								
ZALV	**Zalesovo Beam**	**51.85**	**352**	P		**P**		**21 47 38.7**	**-0.3**
	8.6nm,0.6s,mb4.8,baz=182,slow=7.7,SNR=20								
BVAR	**Borovoye Array**	**54.25**	**342**	P		**P**		**21 47 56.6**	**-0.1**
	1.1nm,0.6s,mb4.0,baz=147,slow=8.6,SNR=4.8								
LRAL	**Lakeview Retre**	**144.46**	**3**	*e*PKPdf		PKPdf		21 58 08.7	+1.0

IDC ***09*** *22:10:28.2±4.1, 3751N×2458W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=130.9km s-min=31.8km az=165.0*
ISCJB ***09*** *22:10:31.8±1.1, 3743N±009×249W±0.1, h39km±12km, mb3.5/4, Error ellipse: s-maj=19.3km s-min=7.2km az=136.2*
CSEM ***09*** *22:10:31.3±0.7, 3747N×2452W, h15km, ML3.6, Error ellipse: s-maj=5.7km s-min=2.5km az=72.0, After PDA*
PDA ***09*** *22:10:31.3±0.7, 3747N×2452W, h15km, MD4.1, ML3.6, Error ellipse: s-maj=5.7km s-min=2.5km az=72.0*
ISC 09 22:10:32.2±1.1, 3745N±007×2485W±008, h29km±7km, n16, σ0§75/26, mb3.5/4, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.47**	**201**	*i* P		**Pb**		**22 10 41.4**	**-0.8**
PSMN				*e*S		**Sb**		**22 10 48.9**	**0.0**
PSMN	**Pico do Norte,**	**0.47**	**201**	*e*S		**Sb**		**22 10 48.9**	**0.0**
PDA	**Ponta Delgada**	**0.71**	**295**	*e*P		**Pb**		**22 10 45.7**	**-0.4**
PDA				*e*S		**Sb**		**22 10 56.4**	**+0.8**
PSET	**Sete Cidades**	**0.79**	**299**	*e*P		**Pn**		**22 10 46.8**	**-0.5**
PSET				*e*S		**Sb**		**22 10 58.1**	**+0.4**
PSET				A				22 11 01.2	
	843nm,0.4s								
PSET	**Sete Cidades**	**0.79**	**299**	*e*P		**Pn**		**22 10 46.8**	**-0.5**
PSET				*e*S		**Sb**		**22 10 58.1**	**+0.4**
PSCM	**Serra do Cume**	**2.18**	**306**	*e*P		**Pn**		**22 11 05.8**	**-0.7**
PSCM				*e*S		**Sn**		**22 11 31.6**	**-1.0**
PSCM				A				22 11 34.7	
	68nm,0.2s								
PSCM	**Serra do Cume**	**2.18**	**306**	*e*P		**Pn**		**22 11 05.8**	**-0.7**
PSCM				*e*S		**Sn**		**22 11 31.6**	**-1.0**
PMAN	**Manadas**	**2.82**	**296**	*e*S		**Sn**		**22 11 47.8**	**-0.4**
PMAN				A				22 11 51.3	
	128nm,0.3s								
ROSA	**Rosais**	**2.96**	**296**	*e*P		**Pn**		**22 11 17.0**	**-0.2**
ROSA				*e*S		**Sn**		**22 11 51.4**	**-0.4**
PICO	**Pico**	**3.01**	**292**	*e*P		**Pn**		**22 11 18.8**	**+0.8**
PICO				*e*S		**Sn**		**22 11 53.0**	**-0.1**
HOR	**Horta**	**3.17**	**291**	*e*P		**Pn**		**22 11 20.7**	**+0.5**
HOR				*e*S		**Sn**		**22 11 56.6**	**-0.4**
CALA	**Caldeira**	**3.25**	**292**	*e*P		**Pn**		**22 11 21.4**	**+0.3**
CALA				*e*S		**Sn**		**22 11 58.8**	**0.0**
ARCES	**ARCESS Array B**	**41.81**	**24**	P		**P**		**22 18 18.4**	**-0.4**
	3.6nm,1.0s,mb4.0,baz=263,slow=12,SNR=4.1								
PDAR	**Pinedale Array**	**52.38**	**304**	P		**P**		**22 20 53.4**	**+1.4**
	0.2nm,0.5s,mb3.5,baz=57,slow=9.8,SNR=2.6								
TXAR	**Lajitas Array**	**64.54**	**288**	P		**P**		**22 21 09.1**	**+2.4**
	0.2nm,0.6s,mb3.3,baz=59,slow=8.7,SNR=5.7								
MKAR	**Makanchi Array**	**73.82**	**43**	P		**P**		**22 22 03.1**	**-0.7**
	0.3nm,0.7s,mb3.3,baz=324,slow=7.1,SNR=2.8								

IDC 09 22:15:52.5±5.3, 2007S×17611W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=213.5km s-min=61.0km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.57**	**244**	*e*P		P		22 23 24.8	-0.7
	2.4nm,1.6s								
STKA	**Stephens Creek**	**39.57**	**244**	P		P		22 23 25.0	-0.5
	0.6nm,0.4s,baz=77,slow=11,SNR=4.5								
ASAR	**Alice Springs**	**46.34**	**256**	P		P		22 24 20.8	+0.2
	1.2nm,0.7s,baz=87,slow=8.2,SNR=14								
WRA	**Warramunga Arr**	**46.41**	**261**	P		P		22 24 21.2	0.0
	1.0nm,0.6s,baz=98,slow=8.1,SNR=6.8								
KAKA	**Kakadu**	**49.74**	**270**	*e*P		Px		22 24 37.4	
	2.5nm,0.3s								
BRTR	**Keskin Array B**	**147.84**	**314**	PKPbc		PKPbc		22 35 39.2	-0.5
	0.8nm,0.7s,baz=137,slow=4.4,SNR=3.9								

ISK ***09*** *22:31:08.5, 3939N×4081E, h3km, MD2.8*
CSEM ***09*** *22:31:08.1±0.1, 3935N×4077E, h2km, MD2.8, Error ellipse: s-maj=2.3km s-min=1.1km az=150.0*
ISCJB ***09*** *22:31:09.0±0.6, 3939N±003×4086E±004, h10km, Error ellipse: s-maj=5.1km s-min=4.4km az=23.3*
DDA ***09*** *22:31:09.2, 3942N×4086E, h7km±1km, Md2.9*
ISC 09 22:31:09.5±0.8, 3940N±003×4081E±006, h4km±10km, n8, σ0§81/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.66**	**40**	*e*PG		**Pg**		**22 31 22.0**	**-0.2**
EZM				*e*SG		**Sg**		**22 31 32.2**	**+1.3**
ERZM	**Erzurum**	**0.67**	**40**	*i* P		**Pg**		**22 31 21.2**	**-1.1**
ERZM				*i* S		**Sg**		**22 31 30.6**	**-0.3**
KOPT	**Kop Dagi**	**0.67**	**339**	*i* P		**Pg**		**22 31 22.1**	**-0.2**
KOPT				*i* S		**Sg**		**22 31 31.6**	**+0.7**
PTK	**Pertek**	**1.21**	**246**	*e*PN		**Pn**		**22 31 32.5**	**-0.7**
PTK				*e*SN		**Sn**		**22 31 49.8**	**-0.2**
GUMT	**Gumushane**	**1.48**	**316**	*e*PN		**Pn**		**22 31 37.2**	**+0.5**
BEST	**Besiri**	**1.54**	**166**	*i* P		**Pg**		**22 31 38.6**	**-0.4**
BEST				*i* S		**Sg**		**22 32 00.6**	**+1.5**
TUTA	**Tutak**	**1.55**	**89**	*i* P		**Pg**		**22 31 37.7**	**-1.5**
TUTA				*i* S		**Sg**		**22 31 59.4**	**+0.1**
AGRB	**Hanur-Agry**	**1.70**	**83**	*e*PN		**Pn**		**22 31 40.5**	**+0.6**

IDC 09 22:42:35.9±25.0, 1896S×17330W, h0km, mb4.3/4, mb1 4.4/4, mb1mx4.0/18, mbtmp4.3/4, Error ellipse:

s-maj=473.2km s-min=148.2km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.08**	**261**	*eP*	P	22 49 57.4	+0.8
	1.7nm,0.4s						
CTA	**Charters Tower**	**38.08**	**261**	P	P	22 49 57.5	+0.9
	2.0nm,0.4s,baz=99,slow=12,SNR=7.6						
STKA	**Stephens Creek**	**42.44**	**243**	*eP*	P	22 50 32.6	-0.1
	0.8nm,0.4s						
STKA	**Stephens Creek**	**42.44**	**243**	P	P	22 50 32.5	-0.1
	1.1nm,0.4s,baz=81,slow=11,SNR=8.5						
ASAR	**Alice Springs**	**49.19**	**255**	P	P	22 51 25.7	-0.4
	2.2nm,0.6s,baz=93,slow=7.8,SNR=39						
WB2	**Warramunga Arr**	**49.21**	**260**	*eP*	P	22 51 25.8	-0.5
WRA	**Warramunga Arr**	**49.22**	**260**	P	P	22 51 26.0	-0.4
	2.0nm,0.3s,baz=97,slow=7.5,SNR=15						

MEX 09 23:49:27.4±0.5, 1672N×9955W, h17km±399km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.38**	**293**	*i* P	Pg	23 49 34.3	-0.9
ACX				*i* S	Sg	23 49 39.1	-1.5
MEIG	**Mezcala**	**1.20**	**357**	*i* P	Pn	23 49 46.0	-3.5
MEIG				*i* S	Sb	23 50 00.7	-4.4
UTMO	**Huajuapan**	**2.00**	**56**	*eP*	Pn	23 49 57.1	-3.4
UTMO				*i* S	Sn	23 50 20.8	-4.4
IIO	**Organos**	**2.96**	**15**	*eP*	Pn	23 50 11.6	-2.2

IDC 10 00:00:17.8±7.0, 769S×12783E, h234km±79km, mb3.1/1, mb1 3.1/3, mb1mx2.9/14, mbtmp2.9/3, Error ellipse: s-maj=184.9km s-min=28.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.71**	**153**	P	Pn	00 03 21.4	-1.6
	0.2nm,0.3s,baz=325,slow=13,SNR=2.6						
WRA				S	S	00 05 48.7	-6.6
	0.4nm,0.3s,baz=325,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**16.92**	**161**	P	P	00 04 01.7	+2.0
	0.2nm,0.3s,baz=338,slow=12,SNR=16						
ASAR				S	S	00 07 04.0	-0.1
	0.1nm,0.3s,baz=342,slow=23,SNR=3.6						
MKAR	**Makanchi Array**	**67.64**	**328**	P	P	00 10 49.6	0.0
	0.5nm,1.0s,baz=132,slow=8.0,SNR=2.7						

IDC 10 00:07:52.7±4.5, 514S×13224E, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.5/13, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=288.5km s-min=31.7km az=74.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.86**	**172**	Pn	Pn	00 11 22.7	-1.5
	0.2nm,0.3s,baz=352,slow=14,SNR=3.1						
WRA				Sn	Sn	00 14 03.5	-6.2
	0.1nm,0.3s,baz=1.4,slow=23,SNR=4.8						
ASAR	**Alice Springs**	**18.49**	**175**	P	Pn	00 12 11.2	+0.6
	0.1nm,0.3s,baz=2.8,slow=9.9,SNR=12						
MKAR	**Makanchi Array**	**67.93**	**325**	P	P	00 18 53.4	+0.1
	0.4nm,0.7s,baz=126,slow=5.7,SNR=4.9						

*ISCJB **10** 00:57:60.0±1.4, 1405S±0.10°×1753W±0.1, h173km±16km, mb3.7/10, Error ellipse: s-maj=19.1km s-min=13.9km az=35.8*

*NEIC **10** 00:58:01.3±1.3, 1438S×175.15W, h173km±14km, mb3.6/3, Error ellipse: s-maj=24.8km s-min=11.7km az=153.0*

*IDC **10** 00:58:01.1±2.5, 1435S×175.17W, h172km±26km, mb3.5/7, mb1 3.7/8, mb1mx3.5/19, mbtmp3.5/8, Error ellipse: s-maj=36.9km s-min=18.3km az=147.0*

ISC 10 00:58:01.8±1.2, 1428S±009×1752W±01, h176km±14km, n16, σ0°86/18, mb3.7/10, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.38**	**84**	P	**Pn**	**00 58 53.6**	**-1.3**
	10nm,0.3s,baz=323,slow=3.1,SNR=16						
AFI				S	**Sn**	**00 59 37.3**	**+1.0**
	4.7nm,0.3s,baz=102,slow=23,SNR=3.1						
RAO	**Raoul Island**	**15.10**	**189**	S	**S**	**01 04 15.0**	**+0.5**
	67nm,0.3s,baz=48,slow=22,SNR=3.8						
DZM	**Mont Dzumac**	**19.04**	**243**	*eP*	**P**	**01 02 10.5**	**-0.2**
URZ	**Urewera**	**24.83**	**194**	P	**P**	**01 03 06.0**	**-1.8**
	7.3nm,1.0s,mb4.2,baz=256,slow=8.3,SNR=2.9						
URZ				S	**S**	**01 07 17.3**	**-0.2**
	2.2nm,0.4s,baz=185,slow=13,SNR=3.1						
CTAO	**Charters Tower**	**37.18**	**256**	P	**P**	**01 04 56.5**	**+0.2**
	1.8nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**43.08**	**238**	*eP*	**P**	**01 05 43.4**	**-1.2**
	0.4nm,0.3s,mb3.5						
STKA	**Stephens Creek**	**43.08**	**238**	P	**P**	**01 05 43.2**	**-1.4**
	0.6nm,0.5s,mb3.5,baz=105,slow=12,SNR=5.0						
WB2	**Warramunga Arr**	**48.37**	**256**	*eP*	**P**	**01 06 27.0**	**+0.8**
WRAB	**Tennant Creek**	**48.37**	**256**	*eP*	**P**	**01 06 27.2**	**+1.0**
	1.3nm,0.8s,mb3.6						
WRA	**Warramunga Arr**	**48.38**	**256**	P	**P**	**01 06 26.6**	**+0.3**
	0.4nm,0.2s,mb3.6,baz=93,slow=7.3,SNR=7.0						
ASAR	**Alice Springs**	**48.78**	**251**	P	**P**	**01 06 29.6**	**+0.2**
	9.0nm,0.6s,mb4.6,baz=86,slow=7.9,SNR=120						
KAKA	**Kakadu**	**50.82**	**265**	*eP*	**P**	**01 06 36.7**	**-8.1**
	3.2nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**74.71**	**43**	P	**P**	**01 09 22.5**	**+0.2**
	0.2nm,0.5s,mb3.0,baz=250,slow=7.6,SNR=3.0						
NVAR	**Mina Array Bea**	**74.71**	**43**	P	**P**	**01 09 22.5**	**+0.2**
QSPA	**South Pole Qui**	**75.75**	**180**	P	**P**	**01 09 28.6**	**+1.0**
	0.9nm,0.5s,mb3.7,baz=55,slow=3.8,SNR=3.5						
PDAR	**Pinedale Array**	**82.64**	**43**	P	**P**	**01 10 04.9**	**-0.6**
	0.5nm,0.8s,mb3.3,baz=203,slow=1.9,SNR=4.3						

*IDC **10** 01:13:26.4±0.8, 5166S×16109E, h0km, mb4.4/7, mb1 4.6/9, mb1mx4.5/15, mbtmp4.5/9, ML4.6/2, Error ellipse: s-maj=26.7km s-min=20.1km az=78.0*

*ISCJB **10** 01:13:29.7±1.9, 5150S±005×16154E±008, h33km±14km, mb4.7/4, Error ellipse: s-maj=9.5km s-min=6.0km az=136.8*

ISC 10 01:13:31.1±2.4, 5155S±006×16146E±009, h28km±18km, n81, σ1°15/52, mb4.7/4, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.32**	**206**	*ePn*	**Pn**	**01 14 11.8**	**-9.3**
WHZ	**Wether Hill Ro**	**7.10**	**40**	P	**Pn**	**01 15 12.3**	**-0.8**
WHZ				S	**Sn**	**01 16 31.9**	**-0.9**
DCZ	**Deep Cove**	**7.16**	**34**	P	**Pn**	**01 15 14.3**	**+0.4**
DCZ				S	**Sn**	**01 16 34.8**	**+0.6**
MLZ	**Mavora Lakes**	**7.64**	**38**	P	**Pn**	**01 15 20.4**	**-0.1**
TUZ	**Tuapeka**	**7.78**	**47**	P	**Pn**	**01 15 21.8**	**-0.6**
EAZ	**Earnscleugh**	**8.20**	**43**	P	**Pn**	**01 15 28.5**	**+0.4**
WKZ	**Wanaka**	**8.41**	**40**	P	**Pn**	**01 15 32.2**	**+1.2**
ODZ	**Otahua Downs**	**8.93**	**47**	P	**Pn**	**01 15 37.9**	**-0.3**
JCZ	**Jackson Bay**	**8.95**	**36**	P	**Pn**	**01 15 39.5**	**+1.1**
LBZ	**Lake Benmore**	**9.25**	**43**	P	**Pn**	**01 15 42.2**	**-0.3**
RPZ	**Rata Peaks**	**10.16**	**43**	Pn	**Pn**	**01 15 56.5**	**+1.5**
	5.3nm,0.3s,baz=227,slow=2.6,SNR=17						
RPZ	**Rata Peaks**	**10.16**	**43**	P	**Pn**	**01 15 57.2**	**+2.2**
RPZ				Sn	**Sn**	**01 17 47.0**	**-0.9**
RPZ				LR	LR	01 19 36.1	
RPZ				LR	LR	01 19 36.1	
	comp=Z,499μm,19.0s,baz=200,slow=36						
RPZ	**Rata Peaks**	**10.16**	**43**	Sn	**Sn**	**01 17 47.0**	**-0.9**
	49nm,0.3s,baz=23,slow=23,SNR=10						
LTZ	**Lake Taylor**	**11.44**	**44**	P	**Pn**	**01 16 12.3**	**-0.2**
TAU	**Tasmania Unive**	**12.90**	**307**	*ePn*	**Pn**	**01 16 28.4**	**-4.2**
	397nm,0.7s						
TAU	**Tasmania Unive**	**12.90**	**307**	*eP*	**Pn**	**01 16 28.3**	**-4.2**
TAU						01 18 49.8	
TAU				pmax	pmax		
	comp=Z,400nm,0.7s						
QRZ	**Quartz Range**	**13.17**	**40**	P	**Pn**	**01 16 36.1**	**0.0**
SNZO	**South Karori**	**13.70**	**47**	*ePn*	**Pn**	**01 16 41.9**	**-1.5**
	comp=Z,362nm,1.1s						
URZ	**Urewera**	**17.26**	**46**	P	**Pn**	**01 17 31.0**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=238,slow=6.8,SNR=22						
URZ	**Urewera**	**17.26**	**46**	S	**Sn**	**01 20 36.9**	**-4.0**
URZ				LR	LR	01 24 17.2	
URZ				LR	LR	01 24 17.2	
	comp=Z,414μm,21.1s,baz=34,slow=37						
URZ	**Urewera**	**17.26**	**46**	S	**Sn**	**01 20 36.9**	**-4.0**
	comp=Z,0.9nm,0.3s,baz=43,slow=12,SNR=2.9						
TOO	**Toolangi**	**17.96**	**315**	*eP*	**Pn**	**01 17 38.7**	**0.0**
CNB	**Canberra Magne**	**18.41**	**327**	*eS*	**Sn**	**01 21 03.6**	**-5.3**
STKA	**Stephens Creek**	**24.48**	**316**	P	**P**	**01 18 46.3**	**-1.3**
	comp=Z,7.3nm,0.8s,baz=138,slow=10,SNR=12						
FORT	**Forrest**	**32.18**	**297**	*eP*	**P**	**01 19 56.9**	**+0.5**
	comp=Z,73nm,2.0s,mb5.2						
ASAR	**Alice Springs**	**34.98**	**312**	P	**P**	**01 20 18.9**	**-1.9**
	comp=Z,5.3nm,0.7s,mb4.6,baz=148,slow=8.2,SNR=34						
NWAO	**Narrogin (SRO)**	**36.97**	**283**	P	**P**	**01 20 37.0**	**-0.9**
	comp=Z,7.6nm,1.0s,baz=137,slow=3.9,SNR=2.3						
KLBR	**Kellerberrin**	**37.59**	**285**	*eP*	**P**	**01 20 44.2**	**+1.1**
	comp=Z,74nm,1.0s						
WB2	**Warramunga Arr**	**38.03**	**316**	*eP*	**P**	**01 20 46.6**	**-0.2**
WRA	**Warramunga Arr**	**38.03**	**316**	P	**P**	**01 20 44.6**	**-2.2**
	comp=Z,3.5nm,0.9s,baz=149,slow=7.7,SNR=12						
WRAB	**Tennant Creek**	**38.03**	**316**	*eP*	**P**	**01 20 47.3**	**+0.4**
WRAB	comp=Z,126nm,1.0s			LR	LR		
	comp=Z,42μm,20.0s						
WRAB	**Tennant Creek**	**38.03**	**316**	P	**P**	**01 20 47.5**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,130nm,1.0s						
MUN	**Mundaring**	**38.26**	**283**	*eP*	**P**	**01 20 49.7**	**+1.0**
QSPA	**South Pole Qui**	**38.57**	**180**	P	**P**	**01 20 48.5**	**-2.2**
	comp=Z,20nm,1.1s,baz=36,slow=9.7,SNR=7.9						
MBWA	**Marble Bar**	**44.33**	**297**	P	**P**	**01 21 40.4**	**+1.7**
	comp=Z,60nm,0.9s						
MAW	**Mawson**	**46.70**	**211**	P	**P**	**01 21 54.8**	**-2.1**
	comp=Z,7.9nm,1.1s,mb4.6,baz=118,slow=10,SNR=8.5						
MAW	**Mawson**	**46.70**	**211**	*eS*	**S**	**01 28 49.8**	**+5.5**
MAW	**Mawson**	**46.70**	**211**	*eS*	**S**	**01 28 49.8**	**+5.5**
MAW	**Mawson**	**46.70**	**211**	*eS*	**S**	**01 28 49.8**	**+5.5**
SNAA	**Sanae**	**56.58**	**186**	*eP*	**P**	**01 23 10.3**	**-0.2**
	comp=Z,48nm,1.1s						
SNAA	**Sanae**	**56.58**	**186**	*eP*	**P**	**01 23 10.3**	**-0.2**
SNAA	comp=Z,48nm,1.1s			pmax	pmax		
SNAA				*e*		01 23 14.7	
SNAA	**Sanae**	**56.58**	**186**	*eP*	**P**	**01 23 10.2**	**-0.3**
VNA3				*e*		01 23 20.9	
VNA3	**Neumayer Olymp**	**57.35**	**183**	*eP*	**P**	**01 23 16.8**	**+0.8**
VNA2				*e*		01 23 22.8	
VNA2	**Neumayer--Watz**	**57.57**	**184**	*eP*	**P**	**01 23 18.4**	**+0.8**
	baz=163,slow=6.6						
VNA1				*e*		01 23 21.4	
VNA1	**Neumayer--Stat**	**57.88**	**184**	*eP*	**P**	**01 23 17.8**	**-2.0**
PLCA	**Paso Flores**	**77.55**	**142**	P	**P**	**01 25 26.1**	**+2.0**
	comp=Z,54nm,1.9s						
PLCA	comp=Z,4μm,19.0s			LR	LR		
CMAR	**Chiang Mai Arr**	**88.41**	**303**	P	**P**	**01 26 20.4**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.6,baz=170,slow=3.3,SNR=8.7						
CHTO	**Chiang Mai**	**88.70**	**303**	*eP*	**P**	**01 26 23.5**	**+1.7**
	comp=Z,62nm,1.3s						
ABPO	**Ambohimpanom**	**89.39**	**240**	*eP*	**P**	**01 26 26.2**	**+1.0**
	comp=Z,20nm,1.4s						
LPAZ	**La Paz**	**99.85**	**132**	Pdif	Pdif	01 27 13.9	+0.9
LPAZ				LR	LR		
	comp=Z,2μm,21.0s						
PV10	**Paradox Valley**	**118.60**	**64**	PKPdf	PKPdf	01 32 17.7	+2.0
MKAR	**Makanchi Array**	**119.14**	**309**	PKP	PKPdf	01 32 14.1	-2.3
	comp=Z,0.5nm,0.7s,baz=50,slow=3.8,SNR=4.1						
CHUM	**Lake Minchumin**	**120.61**	**22**	*e*PKPdf	PKPdf	01 32 20.1	+1.4
BPAW	**Bear Paw Mtn.**	**121.11**	**22**	*e*PKPdf	PKPdf	01 32 20.9	+1.3
MCK	**McKinley**	**121.30**	**23**	*e*PKPdf	PKPdf	01 32 21.9	+1.9
PDAR	**Pinedale Array**	**121.35**	**60**	PKP	PKPdf	01 32 21.8	+1.1
	comp=Z,0.2nm,0.5s,baz=268,slow=3.2,SNR=3.0						
SKAG	**Skagway**	**121.86**	**32**	PKPdf	PKPdf	01 32 21.4	+0.2
WALA	**Waterton Lakes**	**123.36**	**52**	*e*PKPdf	PKPdf	01 32 23.9	-0.6
KURK	**Kurchatov**	**123.60**	**311**	PKP	PKPdf	01 32 25.4	+0.6
	baz=140,slow=1.2						
KSU1	**Kansas State U**	**126.24**	**71**	PKPdf	PKPdf	01 32 30.2	-0.1
KSU1				LR	LR		
	comp=Z,12μm,20.0s						
DGMT	**Dagmar**	**127.92**	**57**	*e*PKPdf	PKPdf	01 32 32.5	-0.7
DGMT				LR	LR		
	comp=Z,8μm,20.0s						
INK	**Inuvik**	**128.84**	**26**	*e*PKPdf	PKPdf	01 32 35.8	+1.5
BVAR	**Borovoye Array**	**129.01**	**309**	PKIKP	PKPdf	01 32 36.5	+1.4
	comp=Z,1.4nm,0.8s,baz=233,slow=37,SNR=3.0						
BVAR	**Borovoye Array**	**129.01**	**309**	PKIKP	PKPdf	01 32 36.5	+1.4
ECSD	**EROS,Sioux Fal**	**129.17**	**66**	*e*PKPdf	PKPdf	01 32 35.8	+0.1
ECSD				LR	LR		
	comp=Z,8μm,19.0s						
OLIL	**Olney**	**131.10**	**77**	*e*PKPdf	PKPdf	01 32 40.1	+0.6
LIC	**Lamto**	**133.45**	**199**	*eP*	PKPdf	01 32 36.6	-8.2
	comp=Z,98nm,1.9s						
KIC	**Kosan Boka**	**133.52**	**199**	*eP*	PKPdf	01 32 39.2	-5.8
	comp=Z,547nm,2.2s						
DBIC	**Dimbokro**	**133.85**	**199**	PKP	PKPdf	01 32 46.2	+0.6
	comp=Z,2.4nm,0.8s,baz=131,slow=20,SNR=3.6						
DBIC	**Dimbokro**	**133.85**	**199**	PKHKP	PKPdf	01 32 46.2	+0.6
TIC	**Toumodi**	**133.85**	**199**	*eP*	PKPdf	01 32 36.0	-10
	comp=Z,67nm,1.2s						
TORD	**Toodi Ar. Bea**	**138.35**	**210**	PKhKP		01 32 46.3	
	comp=Z,0.9nm,1.0s,baz=239,slow=0.5,SNR=4.6						
TORD				PKP	PKPdf	01 32 54.3	+0.4
	comp=Z,3.1nm,0.8s,baz=155,slow=3.1,SNR=13						
TORD	**Torodi Ar. Bea**	**138.35**	**210**	PKP	PKPdf	01 32 54.3	+0.4
BRTR	**Keskin Array B**	**142.42**	**273**	PKhKP		01 32 56.8	
	comp=Z,1.4nm,1.0s,baz=22,slow=1.3,SNR=5.4						
KDHN	**Kadinhani**	**142.65**	**270**	*i* P	PKPdf	01 33 02.6	+1.7
GOLH	**Golhisar**	**143.46**	**266**	*i* P	PKPdf	01 33 02.6	+0.3
DURS	**Dursunbey**	**145.57**	**268**	*i* P	PKPdf	01 33 04.7	-1.2
KDAG	**Bornova**	**145.60**	**266**	*i* P	PKPdf	01 33 03.2	-2.8
AKASG	**Malin Array Be**	**150.42**	**287**	PKPbc	PKPdf	01 33 16.2	+2.7
	comp=Z,2.9nm,0.7s,baz=83,slow=2.5,SNR=12						
ARCES	**ARCESS Array B**	**152.75**	**328**	PKPbc	PKPbc	01 33 25.0	+1.3
	comp=Z,5.1nm,0.9s,baz=336,slow=2.7,SNR=4.6						
GERES	**GERESS Array B**	**159.27**	**275**	PKPab	PKPab	01 34 00.2	-3.1
	comp=Z,0.6nm,0.6s,baz=344,slow=2.9,SNR=3.8						

*NEIC **10** 01:13:29.4±0.3, 5178S×16132E, h10km, mb5.4/22, MS6.4/159, Error ellipse: s-maj=9.6km s-min=6.3km az=139.0*

*GCMT **10** 01:13:29.4±0.1, 5138S×16123E, h28km, MW6.6/113, Moment Tensor Solution. s113,c279; s109,c458; Duration: 4s7 Moment tensor: Scale 10^{19}Nm; M_{rr}0.11±.00; $M_{\theta\theta}$0.76±.00; $M_{\phi\phi}$-0.87±.00; $M_{r\theta}$-0.22±.01; $M_{r\phi}$0.23±.00; $M_{\theta\phi}$0.05±.01; Best double couple: $M_0$0.88200×10^{19} NP1:$\phi_0$216.00000°, δ76.00000°, λ172.00000°. NP2:$\phi_0$308.00000°, δ82.00000°, λ15.00000°. Principal axes: T 0.8530, Plg16.0000°, Azm173.0000°; N 0.0580, Plg74.0000°, Azm335.0000°; P -0.9110, Plg5.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **10** 01:13:31.0, 5195S×16096E, h9km, mB5.6, mb5.6, Ms6.3, Msz6.0*

*IGIL **10** 01:13:34.4, 52.16S×159.53E, h10km, MS6.7*

*IDC **10** 01:13:35.7±0.4, 5136S×16129E, h0km, mb4.9/19, mb1 5.0/21, mb1mx5.0/22, mbtmp5.0/21, ML5.2/2, MS6.4/10, Ms1 6.4/10, ms1mx5.7/15, Error ellipse: s-maj=10.0km s-min=8.6km az=59.0*

*ISCJB **10** 01:13:36.3±0.3, 5149S±004×16158E±007, h17km, mb5.4/49, MS6.3/175, Error ellipse: s-maj=6.4km s-min=5.8km az=40.1*

*MOS **10** 01:13:39.6±2.3, 51.12S×161.21E, h33km, mb5.7/13, MS6.4/20, Error ellipse: s-maj=16.8km s-min=9.6km az=96.8*

*DJA **10** 01:13:51, 50.79S×159.27E, h10km, Mw6.1/16*

ISC 10 01:13:38.9±0.3, 5142S±004×16160E±006, h23km, h23km±2.2km; pP-P, n524, σ1°61/156, mb5.4/48, MS6.3/175, 14C-13D, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**7.97**	**35**	P	**Pn**	**01 15 30.1**	**-3.1**
FOZ	**Fox Glacier**	**9.57**	**38**	P	**Pn**	**01 15 51.9**	**-3.3**
RPZ	**Rata Peaks**	**10.00**	**43**	Pn	**Pn**	**01 16 02.1**	**+1.1**
	20nm,0.3s,baz=191,slow=5.9,SNR=22						
WVZ	**Waitaha Valley**	**10.39**	**40**	P	**Pn**	**01 16 04.8**	**-1.6**
MQZ	**McQueen's Vall**	**10.73**	**48**	P	**Pn**	**01 16 05.8**	**-5.2**
CRLZ	**Canterbury Las**	**10.81**	**48**	P	**Pn**	**01 16 07.8**	**-4.4**
DSZ	**Denniston Nort**	**11.94**	**40**	P	**Pn**	**01 16 22.8**	**-4.8**
KHZ	**Kahutara**	**12.14**	**47**	P	**Pn**	**01 16 26.4**	**-3.9**
THZ	**Tophouse**	**12.38**	**43**	P	**Pn**	**01 16 30.0**	**-3.6**
BSWZ	**Blackbirch Sta**	**12.85**	**46**	P	**Pn**	**01 16 37.8**	**-2.2**
NNZ	**Nelson**	**13.03**	**43**	P	**Pn**	**01 16 39.3**	**-3.2**
TCW	**Tory Channel**	**13.43**	**45**	P	**Pn**	**01 16 49.6**	**+1.7**
MRW	**Makara Radio**	**13.61**	**47**	*eP*	**Pn**	**01 16 50.7**	**+0.4**
MSWZ	**Moikau Station**	**13.71**	**48**	*eP*	**Pn**	**01 16 53.6**	**+1.8**
CAW	**Cannon Point**	**13.87**	**47**	P	**Pn**	**01 16 52.6**	**-1.4**
KIW	**Kapiti Island**	**13.99**	**46**	*eP*	**Pn**	**01 16 53.0**	**-2.6**
MTW	**Mount Morrison**	**14.03**	**48**	*eP*	**Pn**	**01 16 53.2**	**-3.0**
MRZ	**Mangatainoka R**	**14.46**	**47**	P	**Pn**	**01 16 58.6**	**-3.4**
HIZ	**Hauiti**	**15.92**	**41**	P	**Pn**	**01 17 24.5**	**+3.2**
URZ	**Urewera**	**17.10**	**46**	P	**Pn**	**01 17 36.8**	**+0.5**
	9.0nm,0.3s,baz=225,slow=8.6,SNR=43						
URZ	**Urewera**	**17.10**	**46**	P	**Pn**	**01 17 36.8**	**+0.5**
TOO	**Toolangi**	**17.93**	**314**	*eS*	**Sn**	**01 21 06.8**	**+1.0**
CNB	**Canberra Magne**	**18.35**	**327**	*eP*	**Pn**	**01 17 46.4**	**-5.3**
CAN	**Canberra**	**18.47**	**326**	*eP*	**Pn**	**01 17 47.6**	**-5.6**
CAN	**Canberra**	**18.47**	**326**	*eP*	**Pn**	**01 17 50.8**	**-2.4**
ARMA	**Armidale**	**22.25**	**337**	*eP*	**P**	**01 18 37.6**	**+3.6**
ARMA				*eS*	**S**	**01 22 36.9**	**-0.9**
STKA	**Stephens Creek**	**24.45**	**315**	*eP*	**P**	**01 18 50.1**	**-5.7**
	40nm,0.9s,mb4.8						
STKA				*eS*	**S**	**01 23 12.5**	**-2.0**
STKA	**Stephens Creek**	**24.45**	**315**	P	**P**	**01 18 54.9**	**-0.9**
	12nm,0.8s,baz=141,slow=13,SNR=20						
STKA				S	**S**	**01 23 14.6**	**+0.2**
	4.2nm,0.9s,baz=354,slow=21,SNR=2.1						
STKA	**Stephens Creek**	**24.45**	**315**	LR	LR	01 26 54.4	
	comp=Z,78μm,20.7s,MS6.2,baz=143,slow=33						
SBA	**Scott Base**	**26.61**	**178**	*eP*	**P**	**01 19 08.2**	**-6.8**
	120nm,1.4s,mb5.2						
SBA	**Scott Base**	**26.61**	**178**	*eP*	**P**	**01 19 08.2**	**-6.8**
SBA				pmax	pmax		
	comp=Z,120nm,1.4s,mb5.2						
RAO	**Raoul Island**	**26.92**	**42**	P	**P**	**01 19 20.5**	**+2.3**
	comp=Z,163nm,0.4s,baz=261,slow=23,SNR=1.7						
RAO				S	**S**	**01 23 58.6**	**+4.9**
	comp=Z,126nm,0.3s,baz=94,slow=23,SNR=1.9						
RAO				LR	LR	01 30 28.2	
	comp=Z,104μm,18.3s,baz=200,slow=38						
RAO	**Raoul Island**	**26.92**	**42**	P	**P**	**01 19 20.5**	**+2.3**
RAO				S	**S**	**01 23 58.6**	**+4.9**
EIDS	**Eidsvold**	**27.23**	**339**	*eP*	**P**	**01 19 17.3**	**-3.7**
	comp=Z,183nm,1.0s,mb5.6						
CASY	**Casey**	**29.28**	**220**	*eP*	**P**	**01 19 37.4**	**-1.6**
CASY				*eS*	**S**	**01 24 25.9**	**-4.4**
CASY	**Casey**	**29.28**	**220**	*eP*	**P**	**01 19 37.4**	**-1.6**
CASY				*eS*	**S**	**01 24 25.9**	**-4.4**
CASY				LR	LR		
	comp=Z,6μm,19.0s,MS5.2						
NOUC	**Port Laguerre**	**29.49**	**9**	*eP*	**P**	**01 19 44.7**	**+3.5**
DZM	**Mont Dzumac**	**29.54**	**9**	*eP*	**P**	**01 19 41.2**	**-0.3**
DZM	**Mont Dzumac**	**29.54**	**9**	*eP*	**P**	**01 19 40.2**	**-1.4**
CTA	**Charters Tower**	**33.51**	**333**	*eP*	**P**	**01 20 17.4**	**+0.8**
	comp=Z,52nm,1.0s,mb5.4						
CTA				*eS*	**S**	**01 25 42.8**	**+5.7**
CTA	**Charters Tower**	**33.51**	**333**	P	**P**	**01 20 15.5**	**-1.1**
	comp=Z,20nm,0.9s,mb5.0,baz=178,slow=10,SNR=7.1						
CTA	**Charters Tower**	**33.51**	**333**	*eP*	**P**	**01 20 17.4**	**+0.8**
CTA				pmax	pmax		
	comp=Z,53nm,1.0s						
CTA	**Charters Tower**	**33.51**	**333**	LR	LR	01 32 24.2	
	comp=Z,73μm,18.7s,MS6.4,baz=158,slow=34						
CTAO	**Charters Tower**	**33.51**	**333**	P	**P**	**01 20 14.9**	**-1.6**
	comp=Z,106nm,1.1s						
CTAO				LR	LR		
	comp=Z,77μm,21.0s						
CTAO	**Charters Tower**	**33.51**	**333**	P	**P**	**01 20 14.9**	**-1.7**
CTAO				pmax	pmax		
	comp=Z,106nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,77μm,21.0s						
CTAO	**Charters Tower**	**33.51**	**333**	P	**P**	**01 20 18.1**	**+1.5**
	comp=Z,122nm,1.5s,comp=Z,4μm,mb5.6						
ASAR	**Alice Springs**	**34.96**	**312**	P	**P**	**01 20 28.5**	**-0.6**
	comp=Z,16nm,0.7s,mb5.0,baz=145,slow=8.1,SNR=37						
MIR	**Mirnyy**	**36.29**	**219**	*eP*	**P**	**01 20 45.0**	**+4.9**
MIR				*eS*	**S**	**01 26 16.0**	**-3.1**
MIR				*i* SS	SS	01 28 52.0	-5.4
MIR				pmax	pmax		
	comp=Z,200nm,1.5s,mb5.8						
MIR				pmax	pmax		
	comp=E,1μm,3.0s						
NWAO	**Narrogin (SRO)**	**37.03**	**

BATI LR LR 01 44 01.8
comp=Z,34µm,21.0s,MS6.3,baz=176,slow=36
BATI Baumata 51.43 309 P **P** **01 22 44.1 +1.9**
comp=Z,82nm,1.6s,comp=Z,2µm,mb5.4
JAY Jayapura 51.80 333 P **P** **01 22 49.9 +5.0**
comp=Z,68nn,2.4s,mb5.2
SYO Syowa Base 52.58 203 ⇓*i*P **P** **01 22 48.0 -2.0**
TARA Tarawa 53.45 14 P **P** **01 22 56.8 -0.3**
comp=Z,154nm,1.2s,mb5.8
VAH Vaihoa 54.13 67 *e*P **P** **01 23 09.9 +7.8**
comp=Z,103nm,1.1s,mb5.7
PMOR Pomariorio Ree 54.17 67 *e*P **P** **01 23 10.3 +7.9**
comp=Z,229nm,1.4s
AAI Ambon 55.15 318 P **P** **01 23 14.1 +4.6**
comp=Z,132nm,1.5s,comp=Z,2µm,mb5.7
RKT Rikitea 55.78 85 *e*S **S** **01 31 09.7 +10**
comp=Z,31µm,31.5s
RKT *e*SS SS 01 35 02.4 +17
comp=Z,12µm,28.2s
RKT *e*LQ 01 37 14.6
comp=Z,27µm,29.2s
RKT *e*LR LR 01 39 19.8
comp=Z,45µm,33.2s,baz=220
SWI Sorong 56.49 323 P x 01 23 24.7
comp=Z,145nm,1.7s,comp=Z,3µm
SNAA Sanae 56.72 186 *e* **P** **01 23 18.7 -1.3**
SNAA *e* pP 01 23 26.8 -0.4
SNAA *e* 01 23 30.8
SNAA *e* 01 23 40.9
SNAA *e* 01 24 03.9
KDI Kendari 57.38 312 P x 01 23 31.1
comp=Z,65nm,1.6s,comp=Z,3µm
VNA3 Neumayer Olymp 57.49 183 *e* **P** **01 23 25.5 +0.1**
VNA3 *e* pP 01 23 33.7 +1.1
VNA3 *e* 01 23 37.2
VNA3 *e* 01 24 00.8
VNA3 *e* 01 24 10.8
VNA3 *e* 01 30 50.5
VNA3 *e* 01 30 55.1
VNA3 *e* 01 30 59.2
VNA2 Neumayer--Watz 57.71 184 *e* **P** **01 23 27.2 +0.2**
VNA2 *e* pP 01 23 35.0 +0.8
VNA2 *e* 01 23 39.1
VNA2 *e* 01 23 48.5
VNA2 *e* 01 24 01.9
VNA2 *e* 01 24 12.0
VNA2 *e* 01 30 51.5
VNA2 *e* 01 30 56.5
VNA2 *e* 01 31 00.6
KAPI Kappang 57.83 308 S **S** **01 31 26.4 -0.4**
comp=Z,26nm,0.4s,baz=186,slow=21,SNR=1.6
KAPI Kappang 57.83 308 P **P** **01 23 27.6 -1.0**
comp=Z,44nm,1.2s,mb5.4
KAPI Kappang 57.83 308 P **P** **01 23 30.2 +1.6**
comp=Z,57nm,2.6s,comp=Z,2µm,mb5.1
VNA1 Neumayer--Stat 58.02 184 *e* **P** **01 23 25.3 -3.9**
VNA1 *e* 01 23 40.1
VNA1 *e* 01 23 50.4
VNA1 *e* 01 24 04.1
VNA1 *e* 01 24 13.3
LBMI Labuha 58.19 319 P x 01 23 36.9
comp=Z,189nm,2.2s,comp=Z,4µm
PMSA Palmer Station 58.88 159 P **P** **01 23 36.7 +1.4**
comp=Z,7.2nm,1.0s,mb4.7,baz=177,slow=18,SNR=2.8
PMSA S **S** **01 31 44.4 +5.2**
comp=Z,3.5nm,0.6s,baz=2.1,slow=17,SNR=1.4
KMMI Kalianget 59.08 301 P **P** **01 23 39.1 +1.8**
comp=Z,144nm,1.6s,comp=Z,4µm,mb5.8
BBKI Banjar Baru 61.64 304 P **P** **01 23 55.5 +0.7**
comp=Z,165nm,1.8s,comp=Z,5µm,mb5.9
LEM Lembang 62.76 295 P **P** **01 24 04.7 +2.4**
comp=Z,233nm,1.6s,comp=Z,6µm,mb6.0
SMKI Samarinda 63.03 308 P **P** **01 24 10.1 +6.0**
comp=Z,160nm,1.0s,mb6.1
CBJI Citeko 63.53 295 P **P** **01 24 13.5 +6.1**
comp=Z,540nm,0.8s,mb6.6
XMAS Kiritimati 63.58 47 PFAKE 01 24 10.0 +2.3
XMAS LR LR
comp=Z,21µm,19.0s,MS6.3
TAOE Nuku Hiva Isla 63.59 70 *e*S **S** **01 32 53.7 +13**
comp=Z,86µm,29.6s
TAOE *e*SS SS 01 36 58.3 +11
comp=Z,69µm,27.3s
TAOE *e*LR LR 01 43 47.5
comp=Z,179µm,24.8s,baz=233
COCO West Island 64.88 282 PFAKE 01 24 20.0 +3.7
COCO LR LR
comp=Z,2µm,19.0s,MS5.4
DAV Davao City (W) 65.96 320 PFAKE 01 24 30.0 +6.8
DAV LR LR
comp=Z,9µm,21.0s,MS5.9
DAV Davao City (W) 65.96 320⇑*e*P x 01 24 35.1
TPI Tanjungpandan 66.09 298 P **P** **01 24 26.0 +1.9**
comp=Z,31nm,2.3s,comp=Z,1µm,mb4.9
USHA Ushuaia 66.22 151 P **P** **01 24 24.4 0.0**
comp=Z,8.8nm,1.0s,mb4.8,baz=80,slow=8.6,SNR=1.7
USHA S S 01 33 17.1 +5.4
comp=Z,9.4nm,1.1s,baz=358,slow=14,SNR=1.8
GUMO Guam 66.35 342 PFAKE 01 24 30.0 +4.4
GUMO LR LR
comp=Z,8µm,19.0s,MS6.0
STKI Sintang 66.39 303 P **P** **01 24 28.8 +2.8**
comp=Z,74nm,0.8s,mb5.8
PPBI Pangkal Pinang 67.42 297 P **P** **01 24 34.6 +2.0**
comp=Z,30nm,1.5s,mb5.1
RPN Rapa Nui 68.73 107 P **P** **01 24 43.3 +2.5**
comp=Z,25nm,0.4s,mb5.5,baz=291,slow=3.5,SNR=2.5
RPN S S 01 33 48.9 +6.2
comp=Z,19nm,0.5s,baz=49,slow=4.9,SNR=2.1
RPN Rapa Nui 68.73 107 P **P** **01 24 43.3 +2.5**
RPN S S 01 33 48.9 +6.2
RPN LR LR
comp=Z,9µm,19.0s
TBP Tagbilaran 69.03 320 *e*P **P** **01 24 46.9 +4.3**
PDSI Padang 71.67 293 P x 01 25 05.9
comp=Z,52nm,2.0s
EFI East Falkland 71.95 155 PFAKE 01 25 00.0 0.0
EFI LR LR
comp=Z,2µm,20.0s,MS5.4
PLCA Paso Flores 77.60 142 P **P** **01 25 33.6 +0.7**
comp=Z,4.0nm,1.0s,baz=186,slow=6.7,SNR=4.1
PLCA S S 01 35 30.1 +7.3
comp=Z,1.5nm,0.8s,baz=336,slow=12,SNR=2.0
PLCA Paso Flores 77.60 142 P **P** **01 25 33.6 +0.7**
PLCA S S 01 35 30.1 +7.3
PLCA pmax pmax
comp=Z,4.0nm,1.0s
PLCA smax
comp=N,2.0nm,0.9s
PLCA Paso Flores 77.60 142 S S 01 35 30.1 +7.3
POHA Pohakuloa 80.19 41 PFAKE 01 25 50.0 +2.8
POHA LR LR
comp=Z,17µm,21.0s,MS6.4
KIP Kipapa 80.72 38 PFAKE 01 26 00.0 +10
KIP LR LR
comp=Z,10µm,19.0s,MS6.2
MIDW Midway 81.42 19 PFAKE 01 26 00.0 +6.4
MIDW LR LR
comp=Z,28µm,20.0s,MS6.6
QIZ Qiongzhong 83.45 312 P **P** **01 26 00.6 -3.8**
QIZ XP sP 01 26 05.2 -9.3
QIZ PP PP 01 29 11.6 -5.4
QIZ S S 01 36 21.0 -3.4
QIZ SS SS 01 41 46.1 -4.8
QIZ AMB AMB
comp=Z,32nm,1.4s,mb5.2
QIZ LR LR
comp=N,5µm,26.8s,MS6.1
QIZ LR LR
comp=E,9µm,26.8s,MS6.1
QIZ LR LR
comp=Z,6µm,23.7s,MS5.9
QIZ Qiongzhong 83.45 312 PFAKE 01 26 10.0 +5.6
QIZ LR LR
comp=Z,4µm,21.0s,MS5.8
YHNB Yeheng 83.61 324 PFAKE 01 26 10.0 +4.9
YHNB LR LR
comp=Z,11µm,21.0s,MS6.2
TATO Taipei 83.84 324 PFAKE 01 26 10.0 +3.7
TATO LR LR
comp=Z,10µm,22.0s,MS6.1
HKC Hong Kong Obse 84.37 317 P **P** **01 26 04.0 -5.0**
HKC S S 01 36 30.0 -3.4
QZH Quanzhou 84.91 322 P **P** **01 26 06.0 -5.7**
QZH S S 01 36 44.0 +5.2
QZH LR LR
comp=N,16µm,21.0s
QZH LR LR
comp=E,60µm,35.0s
QZH LR LR
comp=Z,21µm,24.4s,MS6.4
GZH Guangzhou 85.42 316 P **P** **01 26 07.0 -7.3**
GZH S S 01 36 33.4 -10
GZH LR LR
comp=N,3µm,21.1s
GZH LR LR
comp=E,2µm,26.5s
GZH LR LR
comp=Z,7µm,19.1s,MS6.1
NST Nakhon Sawan 85.48 302 P **P** **01 26 14.0 -0.7**
LCO Las Campanas 87.66 136 P **P** **01 26 17.0 -8.5**
comp=Z,40nm,1.4s,mb5.5
LCO LR LR
comp=Z,3µm,20.0s,MS5.7
CM31 Chiang Mai Arr 88.42 302 P **P** **01 26 24.2 -4.8**
CM31 LR LR
comp=Z,3µm,20.0s,MS5.7
CMAR Chiang Mai Arr 88.42 302 P **P** **01 26 27.4 -1.6**
comp=Z,6.9nm,0.8s,mb4.9,baz=171,slow=3.9,SNR=17
CMAR PKKPbc PKKPbc 01 44 11.7 +1.9
comp=Z,0.7nm,0.3s,baz=316,slow=3.9,SNR=4.2
CMAR Chiang Mai Arr 88.42 302 P **P** **01 26 27.4 -1.6**
CMAR Chiang Mai Arr 88.42 302 S SKSac 01 36 59.6 +3.2
comp=Z,1.0nm,0.3s,baz=208,slow=14,SNR=2.8
CMAR Chiang Mai Arr 88.42 302 S SKSac 01 36 59.6 +3.2
CHG Chiang Mai 88.71 303 ⇑P **P** **01 26 33.5 +3.2**
comp=Z,42nm,0.7s,mb5.9
CHTO Chiang Mai 88.71 303 *e*P **P** **01 26 25.3 -5.0**
CHTO pmax pmax
comp=Z,62nm,1.2s,mb5.8
SUR Sutherland 89.72 212 P **P** **01 26 35.8 +0.7**
comp=Z,17nm,1.1s,mb5.3,baz=162,slow=3.5,SNR=2.8
SUR Sutherland 89.72 212 S SKSac 01 37 06.7 +2.5
SUR LR LR
comp=Z,3µm,19.0s,MS5.8
SUR Sutherland 89.72 212 S SKSac 01 37 06.7 +2.5
comp=Z,18nm,1.2s,baz=118,slow=13,SNR=1.7
SUR Sutherland 89.72 212 P **P** **01 26 35.8 +0.7**
MJAR Matsushiro Arr 89.96 341 P **P** **01 26 37.7 +1.9**
comp=Z,7.7nm,0.9s,mb5.0,baz=171,slow=5.8,SNR=10
MAJO Matsushiro 89.96 341 *e*P **P** **01 26 34.9 -0.9**
comp=Z,206nm,1.7s,mb6.2
MAJO LR LR
comp=Z,8µm,20.0s,MS6.2
MAJO Matsushiro 89.96 341 *e*P **P** **01 26 34.9 -0.9**
MAJO pmax pmax
comp=Z,206nm,1.7s,mb6.2
MAJO MLR MLR
comp=Z,8µm,20.0s,MS6.2
MAT Matsushiro 89.96 341 P **P** **01 26 37.1 +1.3**
MAT Matsushiro 89.96 341 S SKSac 01 37 09.0 +4.3
NJ2 Nanjing 91.22 325 *e*P **P** **01 26 37.8 -3.9**
NJ2 AP pP 01 26 43.7 -5.5
NJ2 XP sP 01 26 45.6 -6.3
NJ2 PP PP 01 30 16.6 -2.8
NJ2 S S 01 37 35.5 -3.0
NJ2 XS sS 01 37 44.0 -6.9
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
NJ2 AMB AMB
comp=Z,280nm,8.2s
NJ2 LR LR
comp=N,2µm,28.0s,MS5.8
NJ2 LR LR
comp=E,4µm,25.5s,MS5.8
NJ2 LR LR
comp=Z,9µm,25.5s,MS6.1
GYA Guiyang 91.32 313 P **P** **01 26 41.5 -0.9**
GYA PP PP 01 30 18.8 -1.5
GYA SKS 01 37 10.4
GYA S S 01 37 36.9 -2.7
GYA SS SS 01 43 44.6 -1.2
GYA AMB AMB
comp=Z,60nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,190nm,4.9s
GYA LR LR
comp=N,7µm,23.5s,MS6.1
GYA LR LR
comp=E,6µm,24.3s,MS6.1
GYA LR LR
comp=Z,2µm,25.6s,MS5.5
BOSA Boshof 91.54 217 P **P** **01 26 43.5 -0.1**
comp=Z,8.7nm,0.9s,mb5.1,baz=155,slow=8.1,SNR=3.7
BOSA Boshof 91.54 217 P **P** **01 26 43.5 -0.1**
BOSA MLR MLR
comp=Z,2µm,20.0s,MS5.7
TRIS Tristan da Cun 91.73 185 PFAKE 01 26 50.0 +5.6
TRIS LR LR
comp=Z,4µm,21.0s,MS5.8
KMI Kunming 92.04 309 P **P** **01 26 42.7 -3.0**
KMI AP pP 01 26 48.5 -4.7
KMI XP sP 01 26 50.6 -5.3
KMI PP PP 01 30 23.2 -2.8
KMI PPP 01 32 24.9
KMI SKS 01 37 14.5
KMI S S 01 37 40.4 -5.8
KMI SS SS 01 43 50.3 -6.0
KMI AMB AMB
comp=Z,7.0nm,0.5s,mb5.2
KMI AMB AMB
comp=Z,138nm,4.2s
KMI LR LR
comp=N,3µm,24.0s,MS5.9
KMI LR LR
comp=E,4µm,28.1s,MS5.9
KMI LR LR
comp=Z,7µm,29.6s,MS6.0
KMI Kunming 92.04 309 P **P** **01 26 42.7 -3.0**
comp=Z,7.0nm,0.5s,mb5.2
KMI pP pP 01 26 48.5 -4.7
KMI sP sP 01 26 50.6 -5.3
KMI PP PP 01 30 23.2 -2.8
KMI PPP 01 32 24.9
KMI SKS 01 37 14.5
KMI S S 01 37 40.4 -5.8
KMI sS sS 01 37 48.4 -10
KMI PS PS 01 38 54.0 -5.2
KMI PS PS 01 38 54.7 -4.5
KMI SS SS 01 43 50.3 -6.0
KMI SSS 01 47 25.4
KMI LR LR
comp=Z,7µm,29.6s,MS6.0
KMI Kunming 92.04 309 P **P** **01 26 42.7 -3.0**
KMI *SP sP 01 26 50.6 -5.3
KMI 01 30 23.2
KMI PPP 01 32 24.9
KMI 01 37 14.5
KMI S S 01 37 40.4 -5.8
KMI PS PS 01 38 54.0 -5.2
KMI PS PS 01 38 54.7 -4.5
KMI SS SS 01 43 50.3 -6.0
KMI SSS 01 47 25.4
KMI pmax pmax
comp=Z,7.0nm,0.5s,mb5.2
KMI MLR MLR
comp=Z,7µm,29.6s,MS6.0
KSRS Korea Array 93.29 334 P **P** **01 26 55.5 +4.3**
comp=Z,5.2nm,1.0s,mb4.9,baz=140,slow=4.6,SNR=7.7
KSRS LR LR 02 06 16.1
comp=Z,9µm,20.2s,MS6.2,baz=162,slow=34
KSRS Korea Array 93.29 334 S SKSac 01 37 27.8 +4.4
comp=Z,0.9nm,0.3s,baz=182,slow=40,SNR=3.5
INCN Inchon 93.68 333 PFAKE 01 27 00.0 +7.0
INCN LR LR
comp=Z,6µm,19.0s,MS6.1
LVC Limon Verde 94.01 134 PFAKE 01 27 00.0 +4.9
LVC LR LR
comp=Z,4µm,21.0s,MS5.8
ERM Erimo 94.43 346 PFAKE 01 27 00.0 +3.7
ERM LR LR
comp=Z,17µm,22.0s,MS6.5
LBTB Lobatse 94.64 219 P **P** **01 26 59.1 +1.1**
comp=Z,1.6nm,0.9s,baz=274,slow=22,SNR=2.2
LBTB Lobatse 94.64 219 P **P** **01 26 59.1 +1.1**
LBTB MLR MLR
comp=Z,2µm,20.0s,MS5.5
LBTB Lobatse 94.64 219 S SKSac 01 37 35.1 +3.1
LBTB Lobatse 94.64 219 S SKSac 01 37 35.1 +3.1
comp=Z,1.4nm,0.8s,baz=97,slow=13,SNR=1.5
YUK Yuzh-Kuril'sk 96.05 349 *e*P x 01 27 17.0
MSEY Mahe Island 96.33 254 PFAKE 01 27 10.0 +4.2
MSEY LR LR
comp=Z,3µm,20.0s,MS5.8
CD2 Chengdu 96.43 313 *e*P **P** **01 27 03.2 -2.6**
CD2 AP pP 01 27 08.1 -5.2
CD2 XP sP 01 27 10.8 -5.1
CD2 PP PP 01 30 58.9 -1.4
CD2 SKS 01 37 38.0
CD2 S S 01 38 18.9 -5.6
CD2 XS sS 01 38 27.0 -10
CD2 SS SS 01 44 54.7 -4.1
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.9
CD2 AMB AMB
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,5µm,25.2s,MS6.1
CD2 LR LR
comp=E,5µm,20.4s,MS6.1
CD2 LR LR
comp=Z,6µm,24.0s,MS6.0
DL2 Dalian 96.50 330 *e*P **P** **01 27 08.0 +2.2**
DL2 *e*SKS 01 37 42.6
DL2 *e*S S 01 38 26.2 +1.5
DL2 LR LR
comp=N,3µm,23.7s
DL2 LR LR
comp=Z,3µm,25.7s,MS5.7
SHL Shillong 97.97 301 *e*P x 01 27 21.0
HYB Hyderabad 99.18 286 *e*P **P** **01 27 15.0 -3.5**
HYB *e*S Sx 01 38 30.0
HYB Hyderabad 99.18 286 *i* P **P** **01 27 14.0 -4.5**
HYB *e*PP PP 01 31 18.0 -3.4
HYB *e* 01 32 24.0
HYB *e*SKKS SKKSac 01 38 08.0 -19
HYB *e*S S 01 38 44.0 -4.5
HYB *e*PS PS 01 40 20.0 +2.4
HYB *e*SS SS 01 45 36.0 -1.6
NNA Nana 99.19 122 PFAKE 01 27 20.0 +1.3
NNA LR LR
comp=Z,4µm,19.0s,MS6.0
BJT Baijiatuan 99.32 326 PFAKE 01 27 20.0 +1.5
BJT LR LR
comp=Z,9µm,21.0s,MS6.2
YSS Yuzh-Sakhalins 99.32 347 PFAKE 01 27 20.0 +1.7
YSS LR LR
comp=Z,7µm,20.0s,MS6.1
YSS Yuzh-Sakhalins 99.32 347 *e*P **P** **01 27 27.0 +8.7**
YSS *e* 01 37 56.0
BJI Beijing 99.33 326 P **P** **01 27 18.0 -0.6**
BJI PP PP 01 31 20.6 -1.8
BJI SKS 01 37 50.9
BJI S S 01 38 49.6 +0.9
BJI SS SS 01 45 40.4 +1.0
BJI LR LR
comp=N,7µm,25.8s,MS6.1
BJI LR LR
comp=E,4µm,24.9s,MS6.1
BJI LR LR
comp=Z,10µm,27.5s,MS6.2
BJI Beijing 99.33 326 P **P** **01 27 18.0 -0.6**
BJI 01 31 20.6
BJI 01 37 50.9
BJI S S 01 38 49.6 +0.9
BJI PS PS 01 40 19.6 +0.9
BJI SS SS 01 45 40.4 +1.0
BJI MLR MLR
comp=Z,10µm,27.5s,MS6.2
MDJ Mudanjiang 99.58 337 P **P** **01 27 19.8 +0.2**
MDJ PP PP 01 31 24.0 -0.2
MDJ SKS 01 37 57.2
MDJ S S 01 38 54.3 +3.7
MDJ AMB AMB
comp=Z,16nm,2.5s,mb5.0
MDJ AMB AMB
comp=Z,196nm,11.7s
MDJ LR LR
comp=N,11µm,41.2s,MS6.1
MDJ LR LR
comp=E,6µm,39.6s,MS6.1
MDJ LR LR
comp=Z,15µm,39.9s,MS6.2
MDJ Mudanjiang 99.58 337 PFAKE 01 27 20.0 +0.5
MDJ LR LR
comp=Z,9µm,20.0s,MS6.3
LPAZ La Paz 99.87 132 P Pdif 01 27 23.2 +1.5
comp=Z,0.8nm,0.8s,baz=45,slow=2.5,SNR=3.0
LPAZ La Paz 99.87 132 P Pdif 01 27 23.2 +1.6
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 99.87 132 S SKSac 01 38 02.2 +3.1
LPAZ La Paz 99.87 132 S SKSac 01 38 02.2 +3.1
comp=Z,0.2nm,0.3s,baz=270,slow=10.0,SNR=1.6
LPAZ La Paz 99.87 132 S SKSac 01 38 02.2 +3.1
CN2 Changchun 99.88 334 *e*P Pdif 01 27 20.9 -0.8
CN2 *e*AP 01 27 25.7
CN2 PP PP 01 31 29.3 +2.8
CN2 *e*S S 01 38 52.0 -1.1
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.4
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,8µm,20.0s,MS6.3
CN2 LR LR
comp=E,6µm,20.0s,MS6.3
CN2 LR LR
comp=Z,8µm,23.0s,MS6.2
PAYG Puerto Ayora 100.69 105 PFAKE 01 27 30.0 +4.7
PAYG LR LR
comp=Z,5µm,19.0s,MS6.1
LZH Lanzhou 100.75 316 *e*P Pdif 01 27 25.0 -0.5
LZH AP 01 27 30.5
LZH PP PP 01 31 35.2 +2.0
LZH SKS SKSac 01 38 04.0 +1.8
LZH S Sdif 01 39 03.0 +1.2
LZH SS SS 01 45 59.0 -0.4
LZH AMB AMB
comp=Z,18nm,1.5s
LZH AMB AMB
comp=Z,70nm,4.0s
LZH LR LR
comp=N,1µm,15.5s
LZH LR LR
comp=Z,2µm,18.5s,MS5.5
LZH Lanzhou 100.75 316 *e*P Pdif 01 27 25.0 -0.5
comp=Z,18nm,1.5s
LZH pP 01 27 30.5
LZH PP PP 01 31 35.2 +2.0
LZH SKS SKSac 01 38 04.0 +1.8
LZH S Sdif 01 39 03.0 +1.2
LZH SS SS 01 45 59.0 -0.4
LZH LR LR
comp=Z,2µm,18.5s,MS5.5
LZH Lanzhou 100.75 316 *e*P Pdif 01 27 25.0 -0.5
LZH PP PP 01 31 35.2 +2.0
LZH SKS SKSac 01 38 04.0 +1.8
LZH S Sdif 01 39 03.0 +1.2
LZH SS SS 01 45 59.0 -0.4
LZH pmax pmax
comp=Z,18nm,1.5s
LZH MLR MLR
comp=Z,2µm,18.5s,MS5.5
LSA Lhasa 101.66 303 PFAKE 01 27 30.0 +0.5
LSA LR LR
comp=Z,4µm,20.0s,MS5.9
HHC Hu-ho-hao-te 101.70 324 *e*P Pdif 01 27 28.1 -1.7
HHC XP 01 27 32.6
HHC PP PP 01 31 41.2 +0.8
HHC SKS 01 38 05.3
HHC S Sdif 01 39 06.0 -3.7
HHC XS 01 39 11.9
HHC SS SS 01 46 13.3 +0.9
HHC AMB AMB
comp=Z,16nm,0.7s
HHC AMB AMB
comp=Z,98nm,5.1s
HHC LR LR
comp=N,5µm,20.2s,MS6.2
HHC LR LR
comp=E,5µm,21.4s,MS6.2
HHC LR LR
comp=Z,8µm,23.8s,MS6.2
HABR Khabarovsk 102.07 342 *e*P Pdif 01 27 30.3 -1.1

HABR e 01 33 47.9
HABR eS SKSac 01 38 06.9 -0.9
HABR e 01 39 11.4
HABR e 01 40 44.8
HABR e 01 46 13.9
HABR e 01 50 06.1
LSZ Lusaka 102.19 226 PFAKE 01 27 30.0 -1.9
LSZ LR LR
comp=Z,3µm,21.0s,MS5.7
TSUM Tsumeb 102.94 215 PFAKE 01 27 40.0 +4.7
TSUM LR LR
comp=Z,3µm,19.0s,MS5.8
PET Petropavlovsk 104.10 358 PFAKE 01 27 40.0 -0.4
PET LR LR
comp=Z,23µm,21.0s,MS6.7
PET Petropavlovsk 104.10 358 eP Pdif 01 27 44.9 +4.5
PET e 01 31 59.7
PET e 01 38 20.8
PET e 01 39 00.6
PET ePS PS 01 41 03.0 -6.0
PET ePPS 01 42 03.9
PET eSS SS 01 46 48.0 +2.9
PET eSSS 01 50 43.7
PET pmax pmax
comp=Z,400nm,16.9s
PET pmax pmax
comp=Z,300nm,17.7s
PET pmax pmax
comp=Z,1µm,20.1s
PET pmax pmax
comp=Z,1µm,16.5s
SMY Shemya 104.31 8 PFAKE 01 27 50.0 +8.7
SMY LR LR
comp=Z,19µm,20.0s,MS6.6
HIA Hailar 106.47 333 PFAKE 01 32 10.0 +9.2
HIA LR LR
comp=Z,7µm,21.0s,MS6.2
BDFB Brasilia 108.40 150 PFAKE 01 32 10.0 +4.5
BDFB LR LR
comp=Z,3µm,19.0s,MS5.8
OTAV Otavalo 108.41 114 PFAKE 01 32 10.0 +4.4
OTAV LR LR
comp=Z,3µm,20.0s,MS5.8
SNCC San Nicolas Is 108.92 60 PFAKE 01 32 10.0 +4.1
SNCC LR LR
comp=Z,16µm,19.0s,MS6.6
ULN Ulaanbaatar 109.38 324 PFAKE 01 32 10.0 +3.8
ULN LR LR
comp=Z,7µm,21.0s,MS6.2
SONM Songino Array 109.60 324 PKiKP PKiKP 01 32 07.0 +0.3
comp=Z,0.5nm,0.8s,baz=133,slow=6.3,SNR=3.1
SONM PP PP 01 32 41.0 +2.4
comp=Z,1.1nm,0.9s,baz=152,slow=6.6,SNR=5.0
SONM PKKPbc PKKPbc 01 43 11.8 +1.1
comp=Z,0.5nm,0.8s,baz=316,slow=4.1,SNR=4.1
MWC Mount Wilson 110.45 61 PFAKE 01 32 10.0 +1.3
MWC LR LR
comp=Z,17µm,19.0s,MS6.6
SAO San Andreas Ge 110.55 57 PFAKE 01 32 10.0 +1.2
SAO LR LR
comp=Z,8µm,19.0s,MS6.3
MCCM Marconi Confer 110.86 55 PFAKE 01 32 10.0 +0.6
MCCM LR LR
comp=Z,9µm,19.0s,MS6.4
ISA Isabella 111.30 59 PFAKE 01 32 20.0 +10
ISA LR LR
comp=Z,11µm,19.0s,MS6.5
GLA Glamis 111.37 64 PFAKE 01 32 20.0 +9.5
GLA LR LR
comp=Z,13µm,20.0s,MS6.5
HOPS Hopland 111.41 54 PFAKE 01 32 20.0 +10
HOPS LR LR
comp=Z,18µm,20.0s,MS6.7
GSC Goldstone 111.94 61 PFAKE 01 32 20.0 +8.5
GSC LR LR
comp=Z,19µm,19.0s,MS6.7
SHEL Horse Pasture 112.01 193 PFAKE 01 32 20.0 +7.7
SHEL LR LR
comp=Z,4µm,20.0s,MS6.0
CMB Columbia Colle 112.06 56 PFAKE 01 32 20.0 +8.3
CMB LR LR
comp=Z,11µm,21.0s,MS6.4
DAC Darwin (Calif) 112.24 60 PFAKE 01 32 20.0 +8.0
DAC LR LR
comp=Z,16µm,19.0s,MS6.6
WDC Whiskeytown Da 112.87 53 PFAKE 01 32 20.0 +6.9
WDC LR LR
comp=Z,12µm,20.0s,MS6.5
TUC Tucson 113.12 67 PFAKE 01 32 20.0 +6.1
TUC LR LR
comp=Z,10µm,20.0s,MS6.4
NVAR Mina Array Bea 113.45 57 PKiKP PKiKP 01 32 15.8 +1.5
comp=Z,2.1nm,1.0s,baz=236,slow=4.0,SNR=5.2
NVAR PKKPab PKKPab 01 43 06.6 +3.0
comp=Z,0.5nm,0.5s,baz=65,slow=5.1,SNR=4.4
NVAR PKKP PKKPdf 01 43 19.1 -0.4
comp=Z,1.4nm,1.1s,baz=67,slow=8.2,SNR=4.2
TPNV Topopah Spring 113.46 60 PFAKE 01 32 20.0 +5.6
TPNV LR LR
comp=Z,12µm,21.0s,MS6.5
YBH Yreka Blue Hor 113.65 52 PFAKE 01 32 20.0 +5.4
YBH LR LR
comp=Z,9µm,21.0s,MS6.3
TPH Tonopah 113.77 58 PFAKE 01 32 20.0 +5.1
TPH LR LR
comp=Z,8µm,19.0s,MS6.3
TLY Talaya 113.78 325 PFAKE 01 32 20.0 +5.5
TLY LR LR
comp=Z,8µm,22.0s,MS6.3
TGUH Tegucigalpa,Un 114.03 98 PFAKE 01 32 20.0 +3.9
TGUH LR LR
comp=Z,3µm,20.0s,MS5.9
HUMO Hull Mountain 114.18 52 PFAKE 01 32 20.0 +4.5
HUMO LR LR
comp=Z,7µm,20.0s,MS6.3
WMQ Urumqi 114.35 310 ePKP PKiKP 01 32 14.0 -1.8
WMQ PP PP 01 33 12.0 -0.7
WMQ SKS SKSdf 01 39 25.0 -1.1
WMQ SKKS SKKSac 01 40 05.0 -6.8
WMQ SS SS 01 48 57.0 -6.4
WMQ PP PP
comp=Z,75nm,8.0s
WMQ LR LR
comp=N,12µm,25.0s,MS6.5
WMQ LR LR
comp=E,11µm,24.0s,MS6.5
WMQ LR LR
comp=Z,5µm,24.0s,MS6.0
BCIP Isla Barro Col 114.77 107 PFAKE 01 32 20.0 +2.4
BCIP LR LR
comp=Z,6µm,20.0s,MS6.2
MOD Modoc 114.98 54 PFAKE 01 32 20.0 +2.9
MOD LR LR
comp=Z,16µm,20.0s,MS6.6
WUAZ Wupatki 115.11 64 PFAKE 01 32 20.0 +2.4
WUAZ LR LR
comp=Z,11µm,20.0s,MS6.5
KDAK Kodiak Island 115.12 25 PFAKE 01 32 20.0 +3.2
KDAK LR LR
comp=Z,19µm,20.0s,MS6.7
TXAR Lajitas Array 115.16 74 PKP PKiKP 01 32 18.6 +0.7
comp=Z,1.1nm,0.9s,baz=190,slow=3.7,SNR=6.6
TXAR PKKPbc PKKPbc 01 42 46.4 -5.2
comp=Z,0.4nm,0.9s,baz=72,slow=4.1,SNR=3.6
TXAR PKKPab PKKPab 01 42 53.7 -3.5
comp=Z,0.8nm,0.9s,baz=74,slow=3.8,SNR=5.7
TXAR Lajitas Array 115.16 74 PKP PKiKP 01 32 18.6 +0.7
TXAR PKKPbc PKKPbc 01 42 46.4 -5.2
TXAR PKKPab PKKPab 01 42 53.7 -3.5
BMN Battle Mountai 115.49 57 PFAKE 01 32 20.0 +1.9
BMN LR LR
comp=Z,10µm,20.0s,MS6.4
COR Corvallis 115.49 50 PFAKE 01 32 20.0 +2.0
COR LR LR
comp=Z,16µm,20.0s,MS6.6
YAK Yakutsk 115.91 344 PFAKE 01 32 20.0 +1.8
YAK LR LR
comp=Z,13µm,21.0s,MS6.5
WVOR Wild Horse Val 116.21 54 PFAKE 01 32 20.0 +0.5
WVOR LR LR
comp=Z,13µm,20.0s,MS6.5
ELK Elko 116.76 58 PFAKE 01 32 30.0 +9.4
ELK LR LR
comp=Z,15µm,19.0s,MS6.6
KVTX Kingsville 117.39 79 PFAKE 01 32 30.0 +7.8
KVTX LR LR
comp=Z,10µm,19.0s,MS6.5
ANMO Albuquerque 117.52 68 PFAKE 01 32 30.0 +7.8
ANMO LR LR
comp=Z,14µm,20.0s,MS6.6
ANMO Albuquerque 117.52 68 *i* PKIKP PKPdf 01 32 22.1 -0.1
KBL Kabul 117.59 291 PKPdf PKPdf 01 32 15.7 -6.6
DUG Dugway 117.66 60 PFAKE 01 32 30.0 +7.7
DUG LR LR
comp=Z,18µm,19.0s,MS6.7
MVCO Mesa Verde 117.94 65 PKPdf PKPdf 01 32 20.3 -2.7
MVCO LR LR
comp=Z,12µm,20.0s,MS6.5
JCT Junction City 118.31 76 PFAKE 01 32 30.0 +6.1
JCT LR LR
comp=Z,16µm,19.0s,MS6.7
RSW Rattlesnake Hi 118.59 51 *e*PKPdf PKPdf 01 32 24.0 +0.1
HAWA Hanford 118.62 51 PFAKE 01 32 30.0 +6.0
HAWA LR LR
comp=Z,11µm,21.0s,MS6.5
BMO Blue Mountains 118.62 53 PFAKE 01 32 30.0 +6.0
BMO LR LR
comp=Z,13µm,19.0s,MS6.6
ETW Entiat 119.10 49 *e*PKPdf PKPdf 01 32 23.2 -1.6
MKAR Makanchi Array 119.12 309 PKP PKPdf 01 32 26.5 +1.6
comp=Z,2.0nm,0.9s,baz=126,slow=3.7,SNR=6.5
BILL Bilibino 119.19 2 *i* PKP PKPdf 01 32 24.4 0.0
BILL LR LR
comp=Z,12µm,22.0s,MS6.5
BILL Bilibino 119.19 2⇑ *i* PKIKP PKPdf 01 32 23.4 -1.0
BILL *e*PPP 01 36 12.7
BILL *e* 01 39 30.3
BILL ePS PS 01 43 30.4 -2.7
BILL eSS SS 01 49 58.6 -7.0
BILL eSSS 01 54 28.3
BILL pmax pmax
comp=Z,10.0nm,1.4s
HLID Hailey 119.19 56 PFAKE 01 32 30.0 +4.9
HLID LR LR
comp=Z,10µm,19.0s,MS6.5
PMR Palmer 119.30 25 PFAKE 01 32 30.0 +5.2
PMR LR LR
comp=Z,16µm,21.0s,MS6.6
HWUT Hardware Ranch 119.33 59 PFAKE 01 32 30.0 +4.5
HWUT LR LR
comp=Z,14µm,19.0s,MS6.6
OD2 Odessa Site #2 119.73 50 *e*PKPdf PKPdf 01 32 23.6 -2.4
SIT Sitka 119.87 34 PFAKE 01 32 30.0 +4.0
SIT LR LR
comp=Z,26µm,21.0s,MS6.8
SDCO Great Sand Dun 120.02 66 PFAKE 01 32 30.0 +3.0
SDCO LR LR
comp=Z,7µm,22.0s,MS6.3
AMTX Amarillo 120.27 71 PFAKE 01 32 30.0 +2.5
AMTX LR LR
comp=Z,13µm,20.0s,MS6.6
HKT Hockley 120.36 79 PFAKE 01 32 30.0 +2.1
HKT LR LR
comp=Z,9µm,19.0s,MS6.4
AHID Auburn Hatcher 120.38 59 PFAKE 01 32 30.0 +2.5
AHID LR LR
comp=Z,9µm,19.0s,MS6.4
WRAK Wrangell Islan 120.46 36 PFAKE 01 32 30.0 +2.8
WRAK LR LR
comp=Z,15µm,20.0s,MS6.6
ASCN Ascension 120.79 185 PFAKE 01 32 30.0 +0.7
ASCN LR LR
comp=Z,3µm,22.0s,MS5.8
REDW Red Top Meadow 120.92 58 PKPdf PKPdf 01 32 22.2 -6.3
RCBR Riachuelo 121.03 160 PFAKE 01 32 30.0 +0.3
RCBR LR LR
comp=Z,2µm,20.0s,MS5.8
NEW Newport 121.10 50 *e*PKPdf PKPdf 01 32 22.9 -5.8
NEW LR LR
comp=Z,16µm,22.0s
NEW Newport 121.10 50 *e*PKIKP PKPdf 01 32 26.2 -2.5
BW06 Boulder Array 121.21 59 PFAKE 01 32 30.0 +0.9
BW06 LR LR
comp=Z,16µm,19.0s,MS6.7
PDAR Pinedale Array 121.21 59 PKP PKPdf 01 32 32.7 +3.6
comp=Z,3.0nm,1.2s,baz=163,slow=1.5,SNR=6.6
PDAR Pinedale Array 121.21 59 PKP PKPdf 01 32 32.7 +3.6
IMW Indian Meadow 121.24 58 *e*PKPdf PKPdf 01 32 23.9 -5.2
MOOW Moose Ponds 121.24 58 *e*PKPdf PKPdf 01 32 24.2 -4.9
ISCO Idaho Springs 121.37 64 PFAKE 01 32 30.0 +0.5
ISCO LR LR
comp=Z,14µm,20.0s,MS6.6
DLMT Dillon 121.37 55 *e*PKPdf PKPdf 01 32 23.5 -5.7
QLMT Earthquake Lak 121.62 57 *e*PKPdf PKPdf 01 32 30.0 +0.2
MSO Missoula 121.69 53 PKPdf PKPdf 01 32 23.9 -5.9
MSO LR LR
comp=Z,10µm,21.0s,MS6.4
RWWY Rawlins 121.76 62 *e*PKPdf PKPdf 01 32 25.8 -4.3
LKWY Lake 121.98 57 PFAKE 01 32 40.0 +10
LKWY LR LR
comp=Z,13µm,19.0s,MS6.6
IMA2 Indian Mountai 122.03 20 *e*PKPdf PKPdf 01 32 24.1 -5.7
HYT Haines Junctio 122.03 30 PKPdf PKPdf 01 32 28.6 -1.4
BOZ Bozeman (W) 122.07 56 *e*PKPdf PKPdf 01 32 25.5 -5.1
BOZ LR LR
comp=Z,10µm,19.0s,MS6.5
CHMT Chamberlain Mo 122.09 54 *e*PKPdf PKPdf 01 32 24.8 -5.8
NATX Nacogdoches 122.35 78 PFAKE 01 32 40.0 +8.4
NATX LR LR
comp=Z,9µm,19.0s,MS6.5
COLA College 122.35 23 PFAKE 01 32 40.0 +9.5
COLA LR LR
comp=Z,22µm,21.0s,MS6.8
COLA College 122.35 23⇑ *i* PKIKP PKPdf 01 32 30.0 -0.5
PHWY Pilot Hill 122.47 63 PKPdf PKPdf 01 32 26.0 -5.5
HRY Holter Researc 122.68 55 *e*PKPdf PKPdf 01 32 26.1 -5.6
DLBC Dease Lake 122.80 36 PKP PKPdf 01 32 32.4 +0.9
comp=Z,12nm,1.1s,baz=197,slow=14,SNR=3.4
RLMT Red Lodge 122.95 58 *e*PKPdf PKPdf 01 32 27.1 -5.2
ZALV Zalesovo Beam 122.97 317 PKP PKPdf 01 32 32.1 0.0
comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=2.5
KURK Kurchatov 123.59 311 PKP PKPdf 01 32 33.0 -0.3
baz=113,slow=1.8
KURK Kurchatov 123.59 311 *i* PKIKP PKPdf 01 32 32.2 -1.1
KURK MLR MLR
comp=Z,6µm,30.0s
COLD Coldfoot 123.76 20 *e*PKPdf PKPdf 01 32 32.9 -0.3
DAWY Dawson 123.95 27 *e*PKPdf PKPdf 01 32 28.1 -5.5
EGAK Eagle 124.00 26 PFAKE 01 32 40.0 +6.3
EGAK LR LR
comp=Z,12µm,21.0s,MS6.5
CBKS Cedar Bluff 124.08 69 *e*PKPdf PKPdf 01 32 33.1 -1.6
CBKS LR LR
comp=Z,11µm,19.0s,MS6.5
OGNE Ogallala 124.16 65 *e*PKPdf PKPdf 01 32 28.5 -6.3
OGNE LR LR
comp=Z,13µm,20.0s,MS6.6
EGMT Eagleton 124.61 55 PFAKE 01 32 40.0 +4.6
EGMT LR LR
comp=Z,8µm,19.0s,MS6.4
MIAR Mount Ida 124.92 77 PFAKE 01 32 40.0 +3.5
MIAR LR LR
comp=Z,7µm,19.0s,MS6.4
TIXI Tiksi 124.94 348 *i* PKP PKPdf 01 32 34.0 -1.3
TIXI LR LR
comp=Z,10µm,21.0s,MS6.5
TIXI Tiksi 124.94 348 *i* PKIKP PKPdf 01 32 35.1 -0.2
TIXI *e* 01 45 54.4
TIXI pmax pmax
comp=Z,27nm,1.5s
RSSD Black Hills 125.11 61 *e*PKPdf PKPdf 01 32 30.1 -6.4
RSSD LR LR
comp=Z,15µm,19.0s,MS6.7
VBMS Vicksburg 125.22 81 PFAKE 01 32 40.0 +2.9
VBMS LR LR
comp=Z,5µm,21.0s,MS6.2
LAO LASA Array 125.58 58 PKPdf PKPdf 01 32 31.4 -5.9
LAO LR LR
comp=Z,10µm,21.0s,MS6.5
EDM Edmonton 126.19 48 *e*PKPdf PKPdf 01 32 36.1 -2.1
BRAL Brewton 126.54 84 PFAKE 01 32 40.0 +0.3
BRAL LR LR
comp=Z,5µm,20.0s,MS6.2
OXF Oxford 127.44 80 PFAKE 01 32 50.0 +8.7
OXF LR LR
comp=Z,9µm,19.0s,MS6.5
GRGR Grenville 127.50 122 PFAKE 01 32 50.0 +8.0
GRGR LR LR
comp=Z,2µm,19.0s,MS5.8
LRAL Lakeview Retre 127.95 83 PKPdf PKPdf 01 32 42.2 -0.1
LRAL LR LR
comp=Z,5µm,20.0s,MS6.2
DWPF Disney 128.04 91 PFAKE 01 32 50.0 +7.4
DWPF LR LR
comp=Z,4µm,21.0s,MS6.0
CCM Cathedral Cave 128.64 75 *e*PKPdf PKPdf 01 32 38.2 -5.3
CCM LR LR
comp=Z,24µm,20.0s,MS6.9
PARMO Parma 128.65 77 PKPdf PKPdf 01 32 41.5 -2.0
BVAR Borovoye Array 129.00 309 PKP PKPdf 01 32 45.3 +1.6
comp=Z,1.8nm,0.8s,baz=176,slow=4.5,SNR=6.1
BVAR Borovoye Array 129.00 309 PKPdf 01 32 45.3 +1.7
BRVK Borovoye 129.07 309 *i* PKP PKPdf 01 32 39.0 -4.8
BRVK LR LR
comp=Z,9µm,20.0s,MS6.5
BRVK Borovoye 129.07 309 *e*PKPdf PKPdf 01 32 44.4 +0.7
FVM French Village 129.09 76 *e*PKPdf PKPdf 01 32 43.5 -0.8
BBGH Gun Hill 129.45 124 PFAKE 01 32 50.0 +4.3
BBGH LR LR
comp=Z,3µm,20.0s,MS5.9
WVT Waverly 129.48 79 *e*PKPdf PKPdf 01 32 44.3 -0.8
WVT LR LR
comp=Z,9µm,19.0s,MS6.5
SLM Saint Louis 129.62 75 *e*PKPdf PKPdf 01 32 44.9 -0.4
SIUC Southern Illin 129.65 77 *e*PKPdf PKPdf 01 32 42.5 -2.9
SCIA State Center 129.88 70 *e*PKPdf PKPdf 01 32 39.6 -6.1
SCIA LR LR
comp=Z,16µm,20.0s,MS6.7
SJG San Juan 129.89 113 PFAKE 01 32 50.0 +3.6
SJG LR LR
comp=Z,5µm,21.0s,MS6.2
SWET Sewanee 130.06 81 *e*PKPdf PKPdf 01 32 45.1 -1.1
GOGA Godfrey 130.40 85 PFAKE 01 32 50.0 +3.0
GOGA LR LR
comp=Z,3µm,19.0s,MS6.0
GOGA Godfrey 130.40 85 *e*PKIKP PKPdf 01 32 45.9 -1.1
USIN University of 130.76 77 *e*PKPdf PKPdf 01 32 46.9 -0.6
CPCT Cooper Cave 131.08 82 *e*PKPdf PKPdf 01 32 41.7 -6.5
YKA Yellowknife Ar 131.23 38 PKP PKPdf 01 32 48.3 +0.7
comp=Z,1.7nm,0.8s,baz=266,slow=1.0,SNR=4.0
HDIL Hopedale 131.38 74 *e*PKPdf PKPdf 01 32 47.9 -0.7
HDIL LR LR
comp=Z,17µm,19.0s,MS6.8
TKL Tuckaleechee C 131.68 82 *e*PKPdf PKPdf 01 32 44.3 -5.0
TKL Tuckaleechee C 131.68 82 *e*PKIKP PKPdf 01 32 45.0 -4.3
WCI Wyandotte Cave 131.76 78 *e*PKPdf PKPdf 01 32 42.8 -6.5
WCI LR LR
comp=Z,12µm,19.0s,MS6.6
AGMN Agassiz Refuge 132.15 62 PFAKE 01 32 50.0 +0.2
AGMN LR LR
comp=Z,16µm,19.0s,MS6.7
JFWS Jewell Farm 132.24 71 PFAKE 01 32 50.0 -0.1
JFWS LR LR
comp=Z,12µm,19.0s,MS6.6
NHSC New Hope 132.25 88 PFAKE 01 33 00.0 +10
NHSC LR LR
comp=Z,5µm,21.0s,MS6.2
TZTN Tazewell 132.39 82 PFAKE 01 33 00.0 +9.4
TZTN LR LR
comp=Z,11µm,19.0s,MS6.6
FFC Flin Flon 132.51 51 *e*PKPdf PKPdf 01 32 54.1 +3.9
ULM Lac du Bonnet 133.23 59 PKP PKPdf 01 32 51.1 -0.6
comp=Z,1.5nm,0.4s,baz=227,slow=4.1,SNR=2.4
ULM Lac du Bonnet 133.23 59 PKP PKPdf 01 32 51.1 -0.6
ULM LR LR
comp=Z,10µm,19.0s,MS6.6
DBIC Dimbokro 134.00 199 PKP PKPdf 01 32 54.2 -0.2
comp=Z,4.6nm,0.8s,baz=119,slow=4.0,SNR=6.0
DBIC Dimbokro 134.00 199 PKPdf 01 32 54.2 -0.2
DBIC MLR MLR
comp=Z,2µm,20.0s
EYMN Ely 134.39 64 PKPdf PKPdf 01 32 47.9 -6.1
EYMN LR LR
comp=Z,15µm,21.0s,MS6.7
MSL Mosul 134.56 276 *ex* x 01 32 51.0
MSL *ex* x 01 36 25.0
COWI Conover 134.72 68 *e*PKPdf PKPdf 01 32 52.7 -1.9
BLA Blacksburg 134.75 83 *e*PKPdf PKPdf 01 32 58.3 +3.3
ACSO Alum Creek Sta 135.02 78 PFAKE 01 33 00.0 +4.6
ACSO LR LR
comp=Z,15µm,20.0s,MS6.7
AAM Ann Arbor 135.83 75 PFAKE 01 33 00.0 +3.1
AAM LR LR
comp=Z,23µm,19.0s,MS6.9
GNI Garni 135.86 281 *i* PKP PKPdf 01 32 55.4 -1.6
GNI LR LR
comp=Z,3µm,21.0s,MS6.0
GNI Garni 135.86 281 *i* PKIKP PKPdf 01 32 55.3 -1.7
GNI MLR MLR
comp=Z,2µm,25.0s
MCWV Mont Chateau 136.61 81 PFAKE 01 33 00.0 +1.6
MCWV LR LR
comp=Z,17µm,19.0s,MS6.8
ARU Arti 136.62 308 *i* PKIKP PKPdf 01 32 57.2 -0.7
GLMI Grayling 136.67 72 PFAKE 01 33 00.0 +1.6
GLMI LR LR
comp=Z,11µm,20.0s,MS6.6
CBN Corbin 137.26 84 PFAKE 01 33 00.0 +0.3
CBN LR LR
comp=Z,8µm,20.0s,MS6.5
ERPA Erie 137.95 78 PFAKE 01 33 10.0 +9.2
ERPA LR LR
comp=Z,14µm,21.0s,MS6.7
DDEM Demirkent 138.13 280 *i* P PKPdf 01 33 05.0 +3.8
ATAB Bozova 138.23 273 *i* P PKPdf 01 33 04.6 +3.1
SSPA Standing Stone 138.39 81 PFAKE 01 33 10.0 +8.3
SSPA LR LR
comp=Z,11µm,20.0s,MS6.6
TORD Torodi Ar. Bea 138.51 210 PKP PKPdf 01 33 02.6 -0.1
comp=Z,3.2nm,0.6s,baz=179,slow=1.7,SNR=8.7
TORD Torodi Ar. Bea 138.51 210 PKP PKPdf 01 33 02.6 -0.1
AKCD Akcadag 138.97 274 *i* P PKPdf 01 33 10.7 +7.9
KIV Kislovodsk 139.28 284 *i* PKIKP PKPdf 01 33 03.3 +0.1
KIV MLR MLR
comp=Z,5µm,19.0s,MS6.3
BINY Binghamton 140.46 80 PFAKE 01 33 10.0 +4.6
BINY LR LR
comp=Z,16µm,20.0s,MS6.8
SOC Sochi 140.89 282 *i* PKIKP PKPdf 01 33 07.0 +0.9
SOC eSS SS 01 54 25.1 -8.3
SOC eSSS 01 59 39.0
SOC MLR MLR
comp=Z,669nm,21.0s,MS5.4
BBSR BB Station 141.40 101 PFAKE 01 33 10.0 +2.6
BBSR LR LR
comp=Z,4µm,19.0s,MS6.2
CDAG Cicekdag 141.99 273 *i* P PKPdf 01 33 04.2 -4.1
RES Resolute Bay 142.23 25 *e*PKPdf PKPdf 01 33 04.4 -3.2
BR131 Keskin Array S 142.50 273 PFAKE 01 33 10.0 +0.9
BR131 LR LR
comp=Z,3µm,22.0s,MS6.0
BRTR Keskin Array B 142.50 273 PKP PKPdf 01 33 07.9 -1.3
comp=Z,2.1nm,0.9s,baz=230,slow=1.7,SNR=6.3
NCB Newcomb 142.50 79 PFAKE 01 33 10.0 +1.0
NCB LR LR
comp=Z,10µm,20.0s,MS6.6
ANN Anapa 142.93 282 *i* PKIKP PKPdf 01 33 14.2 +4.5
ANN *i* 01 33 21.5
ANN *e* 01 36 25.5
ANN pmax pmax
comp=Z,45nm,1.3s
ANTO Ankara 143.12 272 PFAKE 01 33 10.0 -0.2
ANTO LR LR
comp=Z,3µm,20.0s,MS6.1
ISP Isparta 143.34 268 PFAKE 01 33 10.0 -0.7
ISP LR LR
comp=Z,4µm,22.0s,MS6.2
VRHR Novokhopersk 143.36 294 *e*PKIKP PKPdf 01 33 08.6 -1.7
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,9.0nm,0.5s
VRHR pmax pmax
comp=Z,7.0nm,0.5s
WES Weston 143.45 83 PFAKE 01 33 20.0 +9.3
WES LR LR
comp=Z,9µm,20.0s,MS6.5
TKTP Tekketepe 143.57 268 *i* P PKPdf 01 33 08.9 -2.2
BOLV Bolvadin 143.59 269 *i* P PKPdf 01 33 06.2 -4.9
BALT Daday 143.69 275 *i* P PKPdf 01 33 14.8 +3.6
TURN Turunc 143.93 265 *i* P PKPdf 01 33 04.8 -6.9
SGKT Sivrigoynuk 143.98 273 *i* P PKPdf 01 33 06.7 -5.0
LBNH Lisbon 144.06 80 PFAKE 01 33 20.0 +8.3

LBNH				LR	LR		
	comp=Z,13µm,19.0s,MS6.7						
ESKT	**Eskisehir**	**144.13**	**270**	*i* P	PKPdf	01 33 07.3	-4.7
BORA	**Eskisehir**	**144.59**	**271**	*i* P	PKPdf	01 33 10.2	-2.6
GDZ	**Gediz**	**144.73**	**269**	*i* P	PKPdf	01 33 10.4	-2.7
VSR	**Storozhevoye**	**144.82**	**293**	*e*PKIKP	PKPdf	01 33 09.7	-3.1
VSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
HENT	**Hendek**	**144.85**	**272**	*i* P	PKPdf	01 33 09.1	-4.2
AYDN	**Tasoluk**	**144.87**	**265**	*i* P	PKPdf	01 33 11.8	-1.6
MANT	**Manisa**	**144.95**	**267**	*i* P	PKPdf	01 33 11.8	-1.7
VOR	**Voronezh**	**145.01**	**294**	*e*PKIKP	PKPdf	01 33 11.0	-2.1
VOR				pmax	pmax		
	comp=Z,200nm,0.2s						
DEMI	**Demirci**	**145.18**	**268**	*i* P	PKPbc	01 33 08.9	-4.7
GCAM	**G?zelcaml?**	**145.30**	**265**	*i* P	PKPbc	01 33 11.6	-2.3
AKHS	**Akhisar**	**145.65**	**267**	*i* P	PKPdf	01 33 14.3	-0.3
APE	**Apeiranthos**	**145.96**	**262**	⇓*i* P	PKPdf	01 33 07.9	-7.4
PKME	**Peaks-Kenny Pk**	**146.19**	**80**	*e*PKPbc	PKPbc	01 33 18.4	+2.0
PKME				LR	LR		
	comp=Z,13µm,20.0s						
BALY	**Balya**	**146.28**	**268**	*i* P	PKPdf	01 33 10.6	-5.1
SART	**Tekirdag**	**147.10**	**269**	*i* P	PKPdf	01 33 17.5	+0.4
KLMR	**Klimovskoe**	**147.42**	**310**	*e*PKP2	PKPab	01 33 23.4	+1.9
KLMR				pmax	pmax		
	comp=Z,198nm,1.5s						
OBN	**Obninsk**	**147.64**	**298**	*e*PKPbc	PKPbc	01 33 15.3	-5.0
OBN	**Obninsk**	**147.64**	**298**	⇓*i*PKHKP		01 33 12.9	
OBN				*e*		01 36 48.0	
OBN				*e*		01 40 02.9	
OBN				pmax	pmax		
	comp=Z,29nm,1.4s						
OBN				MLR	MLR		
	comp=Z,7µm,24.0s,MS6.4						
PRD	**Provadia**	**148.33**	**273**	*e*P	PKPdf	01 33 25.3	+6.3
TIRR	**Tirgusor**	**148.33**	**276**	⇑*i*P	PKPdf	01 33 27.3	+8.3
TLCR		**148.44**	**277**	⇓P	PKPbc	01 33 14.8	-7.9
TLCR		**148.44**	**277**	⇓*i*P	PKPbc	01 33 14.8	-7.9
RZN	**Rozhen**	**149.20**	**269**	*e*P	PKPdf	01 33 29.3	+8.8
KIS	**Kishinev**	**149.26**	**281**	*e*PKP	PKPdf	01 33 25.0	+4.6
KIS				LRM		02 55 46.0	
	comp=Z,7µm,20.0s						
SZH	**Strazhica**	**149.28**	**272**	*e*P	PKPdf	01 33 28.7	+8.2
MMB	**Musomiste**	**149.76**	**268**	*e*P	PKPdf	01 33 21.2	-0.2
LVZ	**Lovozero**	**149.78**	**323**	PFAKE		01 33 20.0	-0.6
LVZ				LR	LR		
	comp=Z,12µm,22.0s,MS6.6						
LVZ	**Lovozero**	**149.78**	**323**	*i* PKIKP	PKPdf	01 33 19.0	-1.6
LVZ				MLR	MLR		
	comp=Z,15µm,26.0s,MS6.7						
ZIMR		**149.83**	**273**	⇓P	PKPbc	01 33 18.6	-7.6
ZIMR		**149.83**	**273**	⇓*i*P	PKPbc	01 33 18.6	-7.6
VRI	**Vrincioaia**	**150.05**	**277**	⇓*i*P	PKPdf	01 33 25.2	+3.5
PLOR	**Plostina**	**150.09**	**277**	⇓*i*P	PKPab	01 33 32.4	-0.4
APA	**Apatity**	**150.29**	**323**	⇑*e*PKP2	PKPab	01 33 26.6	-6.4
APA				*e*PPS		01 49 58.0	
APA				*i* SS	SS	01 56 14.0	-5.4
APA				pmax	pmax		
	comp=Z,180nm,1.8s						
APA				MLR	MLR		
	comp=Z,13µm,23.0s,MS6.7						
SPITS	**Spitsbergen Ar**	**150.34**	**346**	PKPbc	PKPbc	01 33 26.6	+0.1
	comp=Z,40nm,0.8s,baz=352,slow=11,SNR=8.4						
SPITS				PKPab	PKPab	01 33 32.7	-0.3
	comp=Z,47nm,0.7s,baz=18,slow=7.0,SNR=14						
VAY	**Valandovo**	**150.34**	**266**	*i* PKP	PKPdf	01 33 24.1	+1.8
SPB4	**Spitsbergen Ar**	**150.34**	**346**	*e*PKPab	PKPab	01 33 33.0	-0.1
KBS	**Kingsbay**	**150.39**	**349**	*e*SS	SS	01 56 18.1	-1.9
KBS				AMS	AMS	02 34 57.8	
	comp=Z,5µm,25.3s,MS6.2						
KBS	**Kingsbay**	**150.39**	**349**	*e*	PKPdf	01 33 24.8	+3.4
AKASG	**Malin Array Be**	**150.47**	**288**	PKPbc	PKPbc	01 33 26.8	-0.7
	comp=Z,14nm,0.9s,baz=84,slow=2.5,SNR=18						
AKASG				PKPab	PKPab	01 33 31.7	-2.5
	comp=Z,22nm,0.8s,baz=87,slow=2.6,SNR=22						
AKASG	**Malin Array Be**	**150.47**	**288**	*i* PKIKP	PKPdf	01 33 19.7	-2.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	**150.47**	**288**	*e*PKPbc	PKPbc	01 33 26.8	-0.8
KIEV	**Kiev**	**150.48**	**288**	*e*PKPbc	PKPbc	01 33 26.8	-0.8
KIEV				LR	LR		
	comp=Z,9µm,22.0s						
VTS	**Vitosha**	**150.63**	**269**	⇑P	PKPdf	01 33 26.0	+3.3
VTS	**Vitosha**	**150.63**	**269**	⇑*i*P	PKPdf	01 33 26.0	+3.3
VOIR		**150.90**	**275**	⇑*i*P	PKPdf	01 33 25.0	+2.0
KRUS	**Krusevo**	**151.19**	**265**	*i* PKP	PKPdf	01 33 24.7	+1.1
OHR	**Ohrid**	**151.33**	**264**	*i* PKP	PKPdf	01 33 28.5	+4.6
SKO	**Skopje**	**151.41**	**267**	*i* PKP	PKPdf	01 33 25.9	+2.0
JOF	**Joensuu**	**151.47**	**313**	*ep*	PKPbc	01 33 32.5	+3.0
	comp=Z,14nm,0.8s						
BURAR	**Bucovina Array**	**151.75**	**280**	⇓*i*P	PKPdf	01 33 28.0	+3.8
BUR08	**Bucovina Ar. S**	**151.77**	**280**	*e*PKPbc	PKPbc	01 33 30.0	-0.6
WDD	**Wield Dalam**	**151.85**	**249**	PFAKE		01 33 30.0	+5.2
WDD				LR	LR		
	comp=Z,6µm,20.0s,MS6.4						
TIR	**Tirane**	**152.04**	**264**	PFAKE		01 33 30.0	+5.1
TIR				LR	LR		
	comp=Z,7µm,21.0s,MS6.4						
KEV	**Kevo**	**152.12**	**328**	*ep*	PKPbc	01 33 32.5	+1.7
	comp=Z,13nm,0.8s						
BJO	**Bjornoya**	**152.17**	**339**	AMS	AMS	02 39 12.8	
	comp=Z,6µm,19.8s,MS6.4						
GZR	**Gura Zlata**	**152.29**	**274**	⇓*i*P	PKPbc	01 33 35.8	+3.9
MNK	**Minsk**	**152.37**	**295**	*e*PKIKP	PKPdf	01 33 30.0	+5.1
CEL	**Celeste**	**152.63**	**255**	PFAKE		01 33 30.0	+4.1
CEL				LR	LR		
	comp=Z,26µm,19.0s,MS7.1						
TIP	**Timpagrande**	**152.68**	**257**	PFAKE		01 33 30.0	+4.1
TIP				LR	LR		
	comp=Z,6µm,20.0s,MS6.4						
ARCES	**ARCESS Array B**	**152.69**	**328**	PKPbc	PKPbc	01 33 33.8	+1.7
	comp=Z,11nm,0.8s,baz=99,slow=1.5,SNR=11						
ARCES	**ARCESS Array B**	**152.69**	**328**	PKIKP	PKPbc	01 33 33.8	+1.7
ARCES				pmax	pmax		
	comp=Z,11nm,0.8s						
BMR	**Baia Mare**	**152.83**	**279**	⇓*i*P	PKPab	01 33 38.1	-6.1
DRGR		**152.96**	**276**	⇑P	PKPdf	01 33 23.5	-2.5
DRGR		**152.96**	**276**	⇑*i*P	PKPdf	01 33 23.5	-2.6
LVV	**L'vov**	**153.30**	**283**	*i* PKIKP	PKPdf	01 33 26.0	-0.4
LVV				*i*		01 33 38.8	
LVV				*e*		01 37 17.0	
LVV				*e*		01 40 22.2	
KTK1	**Kautokeino**	**153.63**	**327**	*e*	PKPdf	01 33 23.4	-3.0
KTK1				*e*SS	SS	01 56 53.5	-2.5
CUC	**Castrocucco**	**153.76**	**258**	PFAKE		01 33 30.0	+2.6
CUC				LR	LR		
	comp=Z,10µm,21.0s,MS6.6						
KWP	**Kalwaria**	**154.04**	**282**	*e*PKPbc	PKPdf	01 33 29.6	+2.1
KWP	**Kalwaria**	**154.04**	**282**	⇓*i*P	PKPdf	01 33 33.4	+5.9
KOLS	**Kolonicke sedl**	**154.07**	**281**	*e*PKP	PKPdf	01 33 34.6	+7.0
KOLS	**Kolonicke sedl**	**154.07**	**281**	*e*	PKPab	01 33 45.3	-4.1
DAG	**Danmarks Havn**	**154.54**	**0**	⇑*e*P	PKPbc	01 33 31.5	-4.4
DAG	**Danmarks Havn**	**154.54**	**0**	⇑*i*P	PKPbc	01 33 31.5	-4.4
	comp=Z,19nm,1.2s						
CRVS	**Cervenica-Dubn**	**154.56**	**280**	*e*	PKPab	01 33 55.6	+4.1
CRVS				*e*SS	SS	01 57 08.4	+1.1
CRVS	**Cervenica-Dubn**	**154.56**	**280**	*e*PKP	PKPab	01 33 43.4	-8.1
STHS	**Stebnicka Huta**	**154.87**	**281**	*e*	PKPab	01 33 57.1	+4.3
STHS	**Stebnicka Huta**	**154.87**	**281**	*e*PKP	PKPab	01 33 44.1	-8.7
KECS	**Kecovo**	**155.01**	**279**	*e*	PKPab	01 33 58.4	+5.0
KECS	**Kecovo**	**155.01**	**279**	*e*PKP	PKPab	01 33 44.9	-8.5
PSZ	**Piszkesteto**	**155.16**	**277**	*e*PKPbc	PKPdf	01 33 35.4	+6.3
NIE	**Niedzica**	**155.44**	**281**	*e*PKP	PKPab	01 33 45.3	-10
OJC	**Ojcow**	**156.01**	**282**	*e*PKPab	PKPab	01 33 50.9	-6.8
OJC				*e*PP	PP	01 37 27.0	-8.8
OJC				*e*SS	SS	01 57 09.4	-14
OJC				L		02 53 46.0	
	comp=Z,9.7nm,21.6s						
OJC	**Ojcow**	**156.01**	**282**	*e*PKIKP	PKPdf	01 33 29.0	-1.2
OJC				MLR	MLR		
	comp=Z,10µm,21.6s,MS6.6						
OJC	**Ojcow**	**156.01**	**282**	*e*PKPdf	PKPdf	01 33 29.0	-1.2
OJC	**Ojcow**	**156.01**	**282**	*e*	PKPab	01 33 50.9	-6.8
VYHS	**Vyhne**	**156.03**	**278**	*e*	PKPab	01 34 01.6	+3.8
VYHS				*e*SS	SS	01 57 10.8	-13
KOLL	**Kolacno**	**156.33**	**278**	*e*PKP2	PKPab	01 33 59.1	0.0
KOLL	**Kolacno**	**156.33**	**278**	*e*	PKPab	01 33 59.1	0.0
OKC	**Ostrava-Krasne**	**156.91**	**281**	*e*PKP	PKPab	01 34 03.8	+2.2
OKC				*ex*	SS	01 57 29.3	-3.4
OKC				AMS	AMS	02 51 00.0	
	comp=Z,8µm,21.5s						
MODS	**Modra-Piesok**	**156.96**	**277**	*e*	PKPab	01 34 05.2	+3.4
MODS				*e*SS	SS	01 57 23.4	-10
ZST	**Bratislava**	**157.00**	**276**	*e*PKP	PKPab	01 33 58.4	-3.6
VSL	**Villasalto**	**157.31**	**249**	PFAKE		01 33 40.0	+7.8
VSL				LR	LR		
	comp=Z,8µm,19.0s,MS6.6						
VISS	**Visnje**	**157.45**	**269**	*i* PKPdf	PKPab	01 34 07.2	+3.2
PERS	**Pernice**	**157.63**	**271**	*i* PKPdf	PKPab	01 34 09.6	+4.8
SFJD	**Kangerlussuaq**	**157.69**	**34**	PFAKE		01 33 40.0	+8.2
SFJD				LR	LR		
	comp=Z,14µm,20.0s,MS6.8						
SFJD	**Kangerlussuaq**	**157.69**	**34**	*i* P	PKPab	01 34 05.7	+1.3
SFJD				*i*		01 43 59.8	
LJU	**Ljubljana**	**157.75**	**269**	*i* PKPdf	PKPab	01 34 10.2	+4.9
JAVS	**Javornik**	**157.97**	**268**	*i* PKPdf	PKPab	01 34 11.6	+5.3
DPC	**Dobruska-Polom**	**158.19**	**281**	*ex*	PKPab	01 34 10.1	+3.0
DPC				*e*SS	SS	01 57 36.5	-10
DPC				*ex*	x	02 03 38.8	
DPC				AMS	AMS	02 50 40.0	
	comp=Z,13µm,22.7s						
DPC	**Dobruska-Polom**	**158.19**	**281**	*e*PKP	PKPdf	01 33 42.4	+9.5
TREC	**Trest**	**158.38**	**278**	*e*PKP	PKPab	01 34 11.5	+3.5
TREC				AMS	AMS	02 51 00.0	
	comp=Z,16µm,23.0s						
UPC	**Upice**	**158.42**	**281**	*e*PKP	PKPdf	01 33 38.1	+4.9
UPC				*ex*	x	01 34 07.1	
PRU	**Pruhonice**	**159.18**	**279**	*e*PKP	PKPab	01 34 14.9	+3.5
PRU				*ex*	x	01 57 53.2	
PRU				*ex*	x	02 04 13.3	
PRU				AMS	AMS	02 54 10.0	
	comp=Z,13µm,21.4s						
PVCC	**Panska Ves**	**159.31**	**281**	*e*PKP	PKPdf	01 33 42.0	+7.7
PVCC				*ex*	x	01 34 16.2	
PVCC				AMS	AMS	02 52 10.0	
	comp=Z,16µm,20.8s						
GEC2	**GERESS Array S**	**159.35**	**275**	*e*PKPab	PKPab	01 34 14.2	+2.0
GEC2				*e*PP	PP	01 37 55.8	+1.6
GEC2				*e*SS	SS	01 57 59.3	+0.6
GERES	**GERESS Array B**	**159.35**	**275**	PKPab	PKPab	01 34 12.8	+0.6
	comp=Z,3.4nm,0.9s,baz=145,slow=4.9,SNR=5.3						
GERES	**GERESS Array B**	**159.35**	**275**	PKP2	PKPab	01 34 12.8	+0.6
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VLC	**Villacollemand**	**159.44**	**261**	PFAKE		01 33 40.0	+5.4
VLC				LR	LR		
	comp=Z,11µm,22.0s,MS6.7						
NSS	**Namsos**	**159.49**	**321**	AMS	AMS	02 40 28.3	
	comp=Z,9µm,26.0s,MS6.5						
KHC	**Kasperske Hory**	**159.52**	**276**	*e*PKP2	PKPab	01 34 11.4	-1.5
KHC				*e*		01 38 00.0	
KHC				*e*		01 57 57.9	
KHC				MLR	MLR		
	comp=Z,13µm,21.8s,MS6.7						
KHC	**Kasperske Hory**	**159.52**	**276**	*e*PKP	PKPab	01 33 55.0	-18
KHC				AMS	AMS	02 53 30.0	
	comp=Z,13µm,21.8s						
KHC				*ex*	x	01 38 00.0	
KHC				*e*SS	SS	01 57 57.9	-2.6
KHC	**Kasperske Hory**	**159.52**	**276**	*ex*	x	01 34 11.4	
BRG	**Berggiesshubel**	**159.79**	**281**	*e*SS	SS	01 58 05.1	+1.8
BRG	**Berggiesshubel**	**159.79**	**281**	*e*PKP	PKPab	01 34 18.9	+4.9
	comp=Z,17nm,1.3s						
BRG				*e*PP	PP	01 38 00.3	+3.8
	comp=Z,31nm,1.8s						
BRG				SS	SS	01 58 10.0	+6.7
BRG							
	comp=N,9µm,20.7s						
BRG							
	comp=E,5µm,21.0s						
BRG							
	comp=Z,11µm,23.0s						
WET	**Wettzell**	**159.96**	**276**	*e*PKPab	PKPab	01 34 18.4	+3.6
WET				*e*SS	SS	01 58 08.0	+2.8
CLL	**Collm**	**160.46**	**282**	*e*PKP	PKPdf	01 33 36.0	+0.5
CLL	**Collm**	**160.46**	**282**	*e*PKPab	PKPab	01 34 20.4	+3.4
CLL				*e*PP	PP	01 37 59.3	-0.9
CLL				*e*SS	SS	01 58 10.1	-0.3
CLL	**Collm**	**160.46**	**282**	*e*(PKPdf)	PKPdf	01 33 36.0	+0.5
	comp=Z,34nm,2.1s						
CLL				*i* x	x	01 33 46.9	
	comp=Z,62nm,2.2s						
CLL				*e*(PKPab)	PKPab	01 33 58.0	-19
CLL				*e*PKPmax		01 34 21.0	
	comp=Z,19nm,1.1s						
CLL				*e*PP	PP	01 37 59.0	-1.2
CLL				*e*SKSP		01 48 28.0	
CLL				*e*PPS		01 51 21.0	
CLL				*e*SS	SS	01 58 06.0	-4.4
CLL				*e*SSS		02 04 18.0	
CLL				*e*SSSS		02 08 12.0	
CLL				LmV		02 54 00.0	
	comp=N,7µm,21.7s						
CLL				LmV		02 54 00.0	
	comp=E,2µm,21.6s						
CLL				LmV		02 54 00.0	
	comp=Z,9µm,21.5s						
FETA	**Feichten**	**160.54**	**268**	⇑*i*pPKPdf	PKPdf	01 33 39.3	+3.5
	comp=Z,12nm,1.3s						
ROTZ	**Rotzenmuhle**	**160.56**	**277**	*e*PKPab	PKPab	01 34 20.0	+2.5
ROTZ				*e*SS	SS	01 58 11.6	+0.1
TANN	**Tannenbergstha**	**160.58**	**279**	*e*SS	SS	01 58 13.0	+1.3
MANZ	**Manzenberg**	**160.69**	**278**	*e*PKPab	PKPab	01 34 20.8	+2.8
MANZ				*e*SS	SS	01 58 15.2	+2.4
NB2	**NORSAR Subarra1**	**161.09**	**312**	PKP	PKPab	01 34 18.8	-0.6
	comp=Z,15nm,1.2s,baz=77,slow=4.4						
NB2	**NORSAR Subarra1**	**161.09**	**312**	PKP	PKPab	01 34 18.8	-0.6
	baz=77,slow=4.4						
GRA1	**Grafenberg Arr**	**161.16**	**276**	*e*PKPdf	PKPdf	01 33 35.8	-0.6
GRA1				*e*PP	PP	01 37 57.7	-6.2
GRA1				*e*SS	SS	01 58 18.8	+1.0
GRA1				LR	LR		
	comp=Z,6µm,21.6s						
GRF	**Grafenberg Arr**	**161.16**	**276**	*e*PKPdf	PKPdf	01 33 35.8	-0.6
GRF				*e*PP	PP	01 37 57.7	-6.2
GRF				*e*SS	SS	01 58 18.8	+1.0
GRF				*e*L		02 56 04.9	
	comp=Z,6µm,21.6s						
MOX	**Moxa**	**161.16**	**279**	*e*PKP	PKPdf	01 33 33.9	-2.4
MOX							
	comp=Z,2µm,20.0s						
MOX	**Moxa**	**161.16**	**279**	*e*SS	SS	01 58 18.8	+1.0
NAO01	**NORSAR Array S**	**161.31**	**312**	PFAKE		01 33 40.0	+3.9
NAO01				LR	LR		
	comp=Z,12µm,22.0s						
CLZ	**Clausthal**	**162.18**	**283**	*e*SS	SS	01 58 28.1	-0.3
KONO	**Kongsberg**	**162.26**	**309**	*e*SS	SS	01 58 25.4	-3.2
KONO				AMS	AMS	02 47 22.9	
	comp=Z,8µm,22.4s						
BSEG	**Bad Segeberg**	**162.46**	**290**	*e*PKPab	PKPab	01 34 31.0	+5.4
BFO	**Black Forest**	**162.53**	**270**	PFAKE		01 33 40.0	+2.2
BFO				LR	LR		
	comp=Z,7µm,21.0s						
BFO	**Black Forest**	**162.53**	**270**	*e*SS	SS	01 58 29.6	-2.5
SFS	**San Fernando**	**162.70**	**215**	PFAKE		01 33 40.0	+1.6
SFS				LR	LR		
	comp=Z,15µm,20.0s						
TNS	**Taunus Mts**	**163.03**	**277**	*e*PKPab	PKPab	01 34 32.4	+4.2
BER	**Bergen**	**164.03**	**313**	*e*SS	SS	01 58 42.4	-4.3
BER				AMS	AMS	02 48 32.5	
	comp=Z,5µm,19.0s						
WLF	**Walferdange**	**164.31**	**273**	*e*SS	SS	01 58 53.3	+2.8
ESDC	**Sonseca Array**	**164.54**	**226**	PKP	PKPdf	01 33 40.9	+0.9
	comp=Z,1.0nm,0.8s,baz=56,slow=3.2,SNR=4.2						
ESLA	**Sonseca Array**	**164.54**	**226**	PFAKE		01 33 40.0	0.0
ESLA				LR	LR		
	comp=Z,60µm,21.0s						
PAB	**San Pablo**	**164.60**	**225**	PFAKE		01 33 40.0	-0.1
PAB				LR	LR		
	comp=Z,8µm,19.0s						
SSF	**Saint Saulge**	**165.06**	**262**	*e*PKP2	PKPab	01 34 42.3	+5.0
	comp=Z,65nm,1.5s						
LIS	**Lisbon**	**165.73**	**211**	*e*P	PKPdf	01 33 37.8	-3.3
LIS				*e*S	SKSdf	01 40 42.5	-1.0
LIS				AMS	AMS	02 58 09.6	
	comp=Z,16µm,26.5s						
MFF	**Saint Martin d**	**167.09**	**255**	*e*PKP2	PKPab	01 34 50.8	+4.6
	comp=Z,53nm,1.1s						

IDC 10 02:37:04.5±2.8, 2190N×14288E, h258km±27km, mb2.9/6, mb1 3.1/8, mb1mx3.0/22, mbtmp3.1/8, Error ellipse:

s-maj=55.1km s-min=17.6km az=78.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.21**	**353**	P	Pn	02 38 22.9	0.0
	6.5nm,0.3s,baz=277,slow=22,SNR=6.2						
CBIJ				S	S	02 39 21.1	-4.6
	3.3nm,0.3s,baz=285,slow=20,SNR=4.8						
JOW	**Kunigami**	**14.19**	**293**	P	Pn	02 40 14.6	0.0
	3.3nm,0.3s,baz=112,slow=19,SNR=4.8						
KSRS	**Korea Array**	**20.18**	**323**	P	P	02 41 20.2	+0.4
	0.1nm,0.3s,baz=144,slow=9.0,SNR=4.8						
SONM	**Songino Array**	**39.00**	**320**	P	P	02 44 05.8	-0.3
	0.3nm,0.4s,baz=98,slow=6.1,SNR=2.5						
WRA	**Warramunga Arr**	**42.42**	**192**	P	P	02 44 34.2	0.0
	0.2nm,0.5s,baz=8.9,slow=8.7,SNR=5.7						
ASAR	**Alice Springs**	**46.13**	**191**	P	P	02 45 03.4	-0.1
	0.1nm,0.5s,baz=14,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**54.35**	**313**	P	P	02 46 04.6	-0.1
	0.2nm,0.3s,baz=89,slow=8.1,SNR=4.4						
ARCES	**ARCESS Array B**	**78.64**	**341**	P	P	02 48 37.8	+0.3
	2.4nm,0.9s,baz=72,slow=8.6,SNR=4.9						

*TRN **10** 02:40:26.0, 1551N×6061W, h62km, MD3.5, M3.2(FDF)*
*ISCJB **10** 02:40:26.1±0.9, 1557N±003×6047W±009, h40km±44km, Error ellipse: s-maj=13.9km s-min=5.3km az=170.3*
*NEIC **10** 02:40:26.6, 1554N×6068W, h68km, MD3.5(TRN), After TRN.*

ISC 10 02:40:26.5±1.4, 1557N±003×6049W±006, h33km±8km, n21, σ0 53/34, 3C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DWS	**Wesley**	**0.79**	**270**	*e*P	**Pn**	**02 40 41.8**	**+0.4**
DWS				*e*S	**Sb**	**02 40 52.4**	**0.0**
DSTT	**Stowe**	**0.85**	**248**	*e*P	**Pn**	**02 40 42.4**	**+0.2**
DSTT				*e*S	**Sb**	**02 40 53.5**	**-0.4**
DBCT	**Belle View Cho**	**0.88**	**250**	*e*P	**Pn**	**02 40 42.8**	**+0.2**
DBCT				*e*S	**Sn**	**02 40 53.4**	**-0.7**
MDN	**Morne-Daniel**	**0.91**	**254**	*e*P	**Pn**	**02 40 43.6**	**+0.6**
MDN				*e*S	**Sn**	**02 40 55.6**	**+0.8**
DPMT	**Pointe Michel**	**0.91**	**250**	*e*P	**Pn**	**02 40 43.9**	**+0.9**
DPMT				*e*S	**Sn**	**02 40 54.9**	**0.0**
DEG	**La Desirade**	**0.92**	**323**	*e*P	**Pn**	**02 40 42.5**	**-0.7**
DEG				*e*S	**Sn**	**02 40 54.3**	**-0.9**
FDF	**Fort de France**	**1.05**	**218**	*e*Pn	**Pn**	**02 40 44.1**	**-0.8**
FDF				*e*Sn	**Sn**	**02 40 58.0**	**-0.4**
FDF	**Fort de France**	**1.05**	**218**	⇑*e*P	**Pn**	**02 40 44.4**	**-0.5**
FDF				⇑*e*S	**Sn**	**02 40 57.9**	**-0.5**
MVM	**Montagne Vaucl**	**1.08**	**201**	⇓*e*P	**Pn**	**02 40 44.8**	**-0.6**
TBG	**Guadaloupe-3**	**1.15**	**284**	*e*P	**Pn**	**02 40 45.9**	**-0.4**
TBG				*e*S	**Sn**	**02 41 00.6**	**-0.2**
DOG	**Dongo Capester**	**1.18**	**293**	*e*P	**Pn**	**02 40 46.8**	**+0.1**
BIM	**Bigot**	**1.19**	**208**	*e*P	**Pn**	**02 40 46.5**	**-0.3**
BIM				*e*S	**Sn**	**02 41 01.6**	**-0.3**
BCG	**Bois Riant Cap**	**1.20**	**295**	*e*P	**Pn**	**02 40 47.1**	**+0.1**
SCG	**Saint Claude**	**1.23**	**292**	⇑*i*P	**Pn**	**02 40 47.7**	**+0.2**
HMG	**Houelmont**	**1.23**	**289**	*e*P	**Pn**	**02 40 47.7**	**+0.2**
LZG	**Guadaloupe-1**	**1.36**	**295**	*e*P	**Pn**	**02 40 49.7**	**+0.5**
SLW	**Petit Monier**	**1.60**	**196**	*e*P	**Pn**	**02 40 52.2**	**-0.3**
SLB	**Belfond**	**1.81**	**197**	*e*P	**Pn**	**02 40 56.3**	**+0.9**
SLB				*e*S	**Sn**	**02 41 18.8**	**+1.5**
SLB	**Belfond**	**1.81**	**197**	*e*P	**Pn**	**02 40 56.3**	**+0.9**
SLB				*e*S	**Sn**	**02 41 17.1**	**-0.2**
BPA	**Boggy Peak**	**1.97**	**318**	*e*P	**Pn**	**02 40 57.9**	**+0.4**
BPA				*e*S	**Sn**	**02 41 21.1**	**+0.1**
SSV	**Crater Summit**	**2.33**	**197**	*e*P	**Pn**	**02 41 01.9**	**-0.6**

*IDC **10** 02:43:40.7±0.4, 846Sx10802E, h0km, mb4.9/22, mb1 5.0/24, mb1mx5.0/25, mbtmp4.9/24, ML5.2/1, MS4.4/2, Ms1 4.5/2, ms1mx3.6/24, Error ellipse: s-maj=17.0km s-min=11.3km az=63.0*
*BJI **10** 02:43:42.2, 911Sx10779E, h58km, mB5.3, mb5.0, Ms5.2, Msz5.0*
*DJA **10** 02:43:43.9±0.0, 887Sx10777E, h16km, mB5.8/17, Mjma4.9/22, MLv5.6/23, Mw(mB)5.5/17, Mwp4.8/16*
*ISCJB **10** 02:43:44.4±0.2, 859S±003×10784E±003, h33km, mb5.2/104, MS4.8/12, Error ellipse: s-maj=4.8km s-min=

239nm,0.9s,1µm
SWI Sorong 24.52 73 P **P** **02 49 05.3 +2.3**
78nm,0.9s,mb5.2
MUN Mundaring 24.55 163 *e*P **P** **02 49 02.1 -0.9**
KLBR Kellerberrin 24.68 159 *e*P **P** **02 49 02.4 -1.9**
53nm,1.2s,mb5.0
NST Nakhon Sawan 25.28 342 P **P** **02 49 04.0 -5.7**
NWAO Narrogin (SRO) 25.74 162 P **P** **02 49 12.2 -1.7**
46nm,0.8s,mb5.1,baz=331,slow=9.6,SNR=22
NWAO LR LR 02 57 51.2
comp=Z,1µm,21.8s,MS4.4,baz=146,slow=33
NWAO Narrogin (SRO) 25.74 162 *e*P **P** **02 49 12.7 -1.2**
52nm,0.9s,mb5.1
NWAO Narrogin (SRO) 25.74 162 *e*P **P** **02 49 12.7 -1.1**
NWAO pmax pmax
comp=Z,52nm,0.9s
WRA Warramunga Arr 27.99 117 P **P** **02 49 32.9 -1.3**
comp=Z,24nm,0.9s,mb4.8,baz=286,slow=12,SNR=99
WRA PcP PcP 02 52 49.1 +0.2
comp=Z,1.4nm,0.7s,baz=309,slow=1.9,SNR=3.2
WRAB Tennant Creek 27.99 117 P **P** **02 49 33.6 -0.7**
comp=Z,240nm,1.1s,mb5.7,SNR=37
WRAB Tennant Creek 27.99 117 *e*P **P** **02 49 33.5 -0.7**
comp=Z,61nm,1.2s,mb5.1
WRAB Tennant Creek 27.99 117 *d i*P **P** **02 49 33.2 -1.1**
WRAB Tennant Creek 27.99 117 P **P** **02 49 33.0 -1.3**
WB2 Warramunga Arr 28.00 117 *e*P **P** **02 49 33.0 -1.3**
CMAR Chiang Mai Arr 28.26 342 P **P** **02 49 34.6 -2.0**
comp=Z,5.7nm,0.6s,mb4.4,baz=178,slow=8.7,SNR=18
CMAR ScP ScP 02 56 31.6 +3.5
comp=Z,1.2nm,0.3s,baz=187,slow=3.6,SNR=4.7
CMAR LR LR 03 01 35.9
comp=Z,552nm,18.6s,MS4.2,baz=0.0,slow=38
CHG Chiang Mai 28.60 342 ⇓P **P** **02 49 39.1 -0.5**
comp=Z,15nm,1.1s,mb4.6
CHTO Chiang Mai 28.60 342 *e*P **P** **02 49 37.7 -1.9**
comp=Z,16nm,1.1s,mb4.7
CHTO Chiang Mai 28.60 342 *e*P **P** **02 49 37.7 -1.9**
CHTO pmax pmax
comp=Z,16nm,1.1s,mb4.7
ASAR Alice Springs 29.09 124 P **P** **02 49 41.5 -2.6**
comp=Z,8.1nm,0.9s,mb4.5,baz=299,slow=8.7,SNR=63
ASAR PcP PcP 02 52 52.1 +0.5
comp=Z,2.4nm,0.5s,baz=311,slow=2.2,SNR=6.5
KMI Kunming 33.86 352 P **P** **02 50 29.3 +3.4**
KMI AP pP 02 50 38.7 +2.6
KMI S **S** **02 55 52.6 +4.7**
KMI AMB AMB
comp=Z,8.0nm,0.7s,mb4.8
KMI LR LR
comp=Z,716nm,19.5s,MS4.4
KMI Kunming 33.86 352 P **P** **02 50 29.3 +3.4**
comp=Z,8.0nm,0.7s,mb4.8
KMI pP pP 02 50 38.7 +2.6
KMI S **S** **02 55 52.6 +4.7**
KMI LR LR
comp=Z,720nm,19.5s,MS4.4
GYA Guiyang 34.84 358 P **P** **02 50 35.1 +0.8**
GYA AP pP 02 50 47.3 +2.7
GYA XP sP 02 50 52.4 +3.5
GYA PP PP 02 50 55.9 +2.0
GYA S **S** **02 56 06.8 +3.8**
GYA XS sS 02 56 23.6 +3.7
GYA SS SS 02 58 22.9 -12
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,140nm,4.8s
GYA LR LR
comp=N,560nm,15.6s,MS4.9
GYA LR LR
comp=E,1µm,16.0s,MS4.9
GYA LR LR
comp=Z,750nm,12.9s,MS4.6
QZH Quanzhou 34.91 17 P **P** **02 50 33.6 -1.4**
QZH *e*S **S** **02 56 01.0 -3.2**
COEN Coen 35.01 102 *e*P **P** **02 50 35.1 -0.9**
comp=Z,19nm,0.9s,mb5.0
COEN Coen 35.01 102 P **P** **02 50 35.4 -0.7**
comp=Z,27nm,1.1s,mb5.1
KOD Kodaikanal 35.56 301 *e*P **P** **02 50 41.2 +0.4**
KOD AMb AMB 02 50 44.8
comp=Z,70nm,0.9s,mb5.6
VIS Vishakhapatnam 35.64 317 *e*P **P** **02 50 40.1 -1.2**
VIS AMb AMB 02 50 44.4
comp=Z,47nm,0.9s,mb5.4
SHL Shillong 37.33 336 *ex* x 02 50 50.4
HYB Hyderabad 38.81 312 *e*P **P** **02 51 08.5 +0.2**
HYB *e*S **S** **02 57 05.0 +1.2**
HYB Hyderabad 38.81 312 *i*P **P** **02 51 08.5 +0.2**
HYB *e*S **S** **02 57 05.0 +1.2**
CTA Charters Tower 38.81 111 *e*P **P** **02 51 08.3 -0.1**
comp=Z,6.8nm,0.6s,mb4.5
CTA Charters Tower 38.81 111 *e*P **P** **02 51 08.3 -0.1**
CTA pmax pmax
comp=Z,7.0nm,0.6s
CTAO Charters Tower 38.81 111 *e*P **P** **02 51 08.5 +0.1**
comp=Z,57nm,1.5s,mb5.1
CTAO pP pP 02 51 17.7 -1.0
CTAO Charters Tower 38.81 111 *e*P **P** **02 51 08.5 +0.1**
CTAO *PP pP 02 51 17.7 -1.0
CTAO pmax pmax
comp=Z,57nm,1.5s,mb5.1
CTAO Charters Tower 38.81 111 P **P** **02 51 08.8 +0.4**
comp=Z,29nm,1.5s,mb4.8
STKA Stephens Creek 38.96 131 *e*P **P** **02 51 08.8 -0.6**
comp=Z,79nm,0.8s,mb5.5
STKA Stephens Creek 38.96 131 P **P** **02 51 08.9 -0.5**
comp=Z,110nm,0.8s,mb5.6,baz=304,slow=7.9,SNR=297
STKA PcP PcP 02 53 19.1 -0.5
comp=Z,5.5nm,0.6s,baz=290,slow=4.1,SNR=3.7
CD2 Chengdu 39.45 354 *e*P **P** **02 51 15.3 +1.9**
CD2 AP pP 02 51 25.1 +1.3
CD2 XP sP 02 51 29.8 +1.8
CD2 PP PP 02 52 51.0 +6.5
CD2 PCP PcP 02 53 21.7 +0.7
CD2 PCS PcS 02 57 10.7 -0.2
CD2 S **S** **02 57 17.2 +4.1**
CD2 SS SS 03 00 04.3 -4.2
CD2 AMB AMB
comp=Z,80nm,0.8s,mb5.5
CD2 AMB AMB
comp=Z,160nm,6.2s
CD2 LR LR
comp=N,2µm,19.2s,MS5.1
CD2 LR LR
comp=E,2µm,16.8s,MS5.1
CD2 LR LR
comp=Z,930nm,18.0s,MS4.7
ODAN Odare 40.44 331 *e*P **P** **02 51 21.1 -0.6**
comp=Z,78nm,0.8s,mb5.5
TAPN Taplejung 40.70 332 *e*P **P** **02 51 23.6 -0.3**
comp=Z,83nm,0.8s,mb5.4
RAMN Ramite 40.89 330 *e*P **P** **02 51 24.7 -0.8**
NGP Nagpur 40.91 317 *ex* x 02 51 20.6
NGP AMb AMB 02 51 21.9
comp=Z,76nm,0.8s,mb5.4
LSA Lhasa 41.31 338 P **P** **02 51 30.6 +1.7**
LSA Lhasa 41.31 338 *e*P **P** **02 51 29.8 +0.9**
comp=Z,36nm,0.8s,mb5.1
LSA Lhasa 41.31 338 *e*P **P** **02 51 29.8 +0.9**
LSA pmax pmax
comp=Z,36nm,0.8s,mb5.0
JIRN Jiri 41.69 330 *e*P **P** **02 51 31.6 -0.4**
comp=Z,86nm,0.7s,mb5.5
NJ2 Nanjing 41.73 14 *e*P **P** **02 51 34.3 +2.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
PKI Pulchoki 42.00 330 *e*P **P** **02 51 33.3 -1.2**
comp=Z,26nm,0.8s,mb4.9
PKI Pulchoki 42.00 330 *e*P **P** **02 51 33.9 -0.6**
PKIN Phulchoki 42.01 330 *e*P **P** **02 51 33.9 -0.7**
AKL Akola 42.03 314 *e*P **P** **02 51 33.2 -1.6**
AKL AMb AMB 02 51 36.2
comp=Z,54nm,2.4s,mb4.8
GUN Gumba 42.05 330 *e*P **P** **02 51 34.5 -0.4**
comp=Z,77nm,0.7s,mb5.4
KAD Karad 42.07 308 *ex* x 02 51 25.8
DMN Daman 42.18 329 *e*P **P** **02 51 35.3 -0.7**
comp=Z,72nm,0.8s,mb5.4
KKN Kakani 42.24 330 *e*P **P** **02 51 36.1 -0.4**
comp=Z,56nm,0.8s,mb5.2
KKN Kakani 42.24 330 *e*P **P** **02 51 36.1 -0.4**
KKN pmax pmax
comp=Z,56nm,0.8s,mb5.2
XAN Xi'an 42.39 1 P **P** **02 51 36.5 -1.1**
XAN AMB AMB
comp=Z,8.0nm,0.8s,mb4.4
XAN AMB AMB
comp=Z,591nm,14.4s
GKN Gorkha 42.74 329 *e*P **P** **02 51 39.5 -1.1**
comp=Z,75nm,0.8s,mb5.5
POO Poona 43.03 309 *e*P **P** **02 51 42.7 -0.3**
POO AMb AMB 02 51 46.4
comp=Z,44nm,1.6s,mb5.0
KOLN Koldanda 43.09 328 *e*P **P** **02 51 41.5 -1.9**
comp=Z,110nm,0.7s,mb5.7
BHPL Bhopal 43.43 317 *e*P **P** **02 51 44.4 -1.9**
BHPL AMb AMB 02 51 47.0
comp=Z,62nm,0.7s,mb5.5
DANN Dangsing 43.47 328 *e*P **P** **02 51 45.6 -0.9**
comp=Z,142nm,0.7s,mb5.8
PYUN Piuthan 43.68 327 *e*P **P** **02 51 47.0 -1.1**
comp=Z,67nm,0.6s,mb5.5
TOO Toolangi 44.58 136 *e*P **P** **02 51 56.0 +0.7**
LZH Lanzhou 44.58 355 *e*P **P** **02 51 55.0 -0.2**
LZH AP pP 02 52 07.6 +1.9
LZH XP sP 02 52 12.0 +2.1
LZH PP PP 02 53 42.1 +2.3
LZH *e*S **S** **02 58 36.0 +7.3**
LZH AMB AMB
comp=Z,30nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,167nm,4.0s
LZH LR LR
comp=N,1µm,13.8s
LZH LR LR
comp=Z,1µm,15.1s,MS5.0
LZH Lanzhou 44.58 355 *e*P **P** **02 51 55.0 -0.2**
comp=Z,30nm,1.1s,mb5.0
LZH *e*P pP 02 52 07.6 +1.9
LZH sP sP 02 52 12.0 +2.1
LZH PP PP 02 53 42.1 +2.3
LZH *e*S **S** **02 58 36.0 +7.3**
LZH sS sS 02 58 49.0 +3.1
LZH SS SS 03 01 49.0 -0.5
LZH LR LR
comp=Z,1µm,15.1s,MS5.0
LZH Lanzhou 44.58 355 *e*P **P** **02 51 55.0 -0.2**
LZH *PP pP 02 52 07.6 +1.9
LZH 02 53 42.1
LZH *e*S **S** **02 58 36.0 +7.3**
LZH *SS sS 02 58 49.0 +3.1
LZH SS SS 03 01 49.0 -0.5
LZH pmax pmax
comp=Z,30nm,1.1s,mb5.0
LZH MLR MLR
comp=Z,1µm,15.1s,MS5.0
AGRA Agra 45.91 322 *e*P **P** **02 52 05.4 -0.5**
AGRA AMb AMB 02 52 06.2
comp=Z,138nm,0.7s,mb6.0
CAN Canberra 46.02 132 *e*P **P** **02 52 07.3 +0.5**
ARMA Armidale 46.24 124 *e*P **P** **02 52 09.5 +0.9**
CNB Canberra Magne 46.29 131 *e*P **P** **02 52 08.9 0.0**
PTH Pithoragarh 46.32 326 *e*P **P** **02 52 08.2 -0.9**
PTH *ex* x 02 57 24.5
KALG Kalgarh 47.11 325 *ex* x 02 52 07.8
KALG AMb AMB 02 52 08.4
comp=Z,232nm,1.1s,mb6.0
AYAN Aya Nagar 47.31 322 *e*P **P** **02 52 15.8 -1.1**
AYAN AMb AMB 02 52 17.0
comp=Z,112nm,0.9s,mb5.8
NDI New Delhi 47.40 323 *e*P **P** **02 52 14.5 -3.1**
NDI *ex* x 02 59 05.5
KHET Khetri 47.83 321 *e*P **P** **02 52 20.6 -0.4**
KHET AMb AMB 02 52 22.0
comp=Z,121nm,1.3s,mb5.8
DDI Dehra Dun 48.12 325 *ex* x 02 52 19.6
GTA Gaotai 48.32 352 *e*P **P** **02 52 24.7 +0.2**
GTA AP pP 02 52 34.0 -1.0
GTA PP PP 02 52 15.4 -2.0
GTA S **S** **02 59 23.5 +1.4**
GTA SS SS 03 02 44.3 -8.0
GTA AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,712nm,7.8s
GTA LR LR
comp=N,794nm,18.6s,MS5.0
GTA LR LR
comp=E,1µm,19.2s,MS5.0
GTA LR LR
comp=Z,723nm,21.0s,MS4.6
KLP Kalpa 48.92 326 *e*P **P** **02 52 28.4 -0.9**
KLP AMb AMB 02 52 31.4
comp=Z,62nm,0.8s,mb5.7
BJI Beijing 48.97 8 P **P** **02 52 30.7 +1.2**
BJI AMB AMB
comp=Z,15nm,0.7s,mb5.1
BJI Beijing 48.97 8 P **P** **02 52 30.7 +1.2**
comp=Z,15nm,0.7s,mb5.1
SMLA Simla 49.23 325 ⇑*i*P **P** **02 52 31.4 -0.2**
SMLA *i* x 02 59 30.2
HHC Hu-ho-hao-te 49.29 4 *e*P **P** **02 52 36.1 +4.2**
HHC AP pP 02 52 46.6 +4.1
HHC XP sP 02 52 50.2 +3.5
HHC PP PP 02 54 31.2 +5.0
HHC S **S** **02 59 40.5 +4.7**
HHC XS sS 02 59 57.1 +3.9
HHC SS SS 03 03 08.6 +0.7
HHC AMB AMB
comp=Z,16nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,493nm,7.4s
HHC LR LR
comp=N,847nm,17.8s,MS5.0
HHC LR LR
comp=E,939nm,17.8s,MS5.0
HHC LR LR
comp=Z,803nm,22.6s,MS4.7
KSRS Korea Array 49.48 21 P **P** **02 52 32.5 -1.0**
comp=Z,4.0nm,0.8s,mb4.5,baz=202,slow=8.5,SNR=6.3
KSRS PcP PcP 02 53 53.9 -1.3
comp=Z,2.2nm,0.8s,baz=212,slow=4.1,SNR=3.0
KSRS Korea Array 49.48 21 P **P** **02 52 32.5 -1.0**
KSRS 02 53 53.9
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
THN Thein Dam 51.02 325 *e*P **P** **02 52 42.7 -2.5**
MSEY Mahe Island 52.15 271 *e*P **P** **02 52 56.2 +2.2**
comp=Z,8.0nm,1.3s,mb4.5
MAT Matsushiro 53.16 31 P **P** **02 52 58.6 -2.5**
MJAR Matsushiro Arr 53.16 31 P **P** **02 52 58.8 -2.3**
comp=Z,4.7nm,0.9s,mb4.4,baz=208,slow=8.2,SNR=9.2
CN2 Changchun 54.51 16 *e*P **P** **02 53 13.5 +2.7**
CN2 *e*XP sP 02 53 27.5 +1.8
CN2 *e*S **S** **03 00 49.2 +1.7**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,200nm,3.0s
WMQ Urumqi 55.26 342 *e*P **P** **02 53 16.0 -0.3**
WMQ AP pP 02 53 26.0 -0.9
WMQ PP PP 02 55 21.0 +0.8
WMQ S **S** **03 00 56.0 -1.6**
WMQ SCS ScS 03 02 59.0 -3.7
WMQ SS SS 03 04 39.0 -3.5
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,104nm,4.0s
WMQ LR LR
comp=N,810nm,18.0s,MS5.0
WMQ LR LR
comp=E,1µm,20.0s,MS5.0
WMQ LR LR
comp=Z,1µm,20.0s,MS5.0
SONM Songino Array 56.17 359 P **P** **02 53 21.7 -1.0**
comp=Z,3.8nm,0.5s,mb4.7,baz=178,slow=8.2,SNR=20
SONM PcP PcP 02 54 20.5 +0.3
comp=Z,5.5nm,0.8s,baz=161,slow=2.2,SNR=4.7
SONM ScP ScP 02 58 19.1 +2.2
comp=Z,1.2nm,0.9s,baz=174,slow=4.1,SNR=3.3
SONM Songino Array 56.17 359 P **P** **02 53 21.7 -1.0**
SONM 02 54 20.5
comp=Z,8.2nm,0.9s,mb4.8
ULN Ulaanbaatar 56.19 359 *e*P **P** **02 53 21.9 -0.9**
comp=Z,8.2nm,0.9s,mb4.8
ULN Ulaanbaatar 56.19 359 ⇓*e*P **P** **02 53 22.1 -0.7**
ULN Ulaanbaatar 56.19 359 P **P** **02 53 22.6 -0.2**
comp=Z,13nm,1.0s,mb4.9
MDJ Mudanjiang 56.46 18 P **P** **02 53 26.7 +1.9**
MDJ PCP PcP 02 54 22.2 +0.8
MDJ PP PP 02 55 32.6 +1.7
MDJ S **S** **03 01 18.0 +4.6**
KBL Kabul 56.46 322 *e*P **P** **02 53 24.2 -0.8**
comp=Z,66nm,1.2s,mb5.5
KBL Kabul 56.46 322 *e*P **P** **02 53 24.3 -0.7**
KBL pmax pmax
comp=Z,66nm,1.2s,mb5.5
WBK Wadi Bani Khal 57.03 304 P **P** **02 53 30.8 +1.5**
SNR=8.5
JMDO Jabal Madar 57.64 303 P **P** **02 53 34.7 +1.1**
SNR=12
SMDO Samad 57.99 304 P **P** **02 53 37.1 +1.1**
SNR=16
BIDO Bidbid 58.14 304 ⇑P **P** **02 53 38.2 +1.2**
SNR=20
ULHL Ulahol 58.26 333 P **P** **02 53 37.7 +0.2**
SNR=5.3
BSY Bisya 58.55 303 P **P** **02 53 41.2 +1.2**
SNR=7.3
HOQ Hoqain 58.83 304 P **P** **02 53 43.3 +1.4**
SNR=13
ZAK Zakamensk 58.84 357 *e*P **P** **02 53 40.6 -0.8**
ZAK pmax pmax
comp=Z,4.0nm,1.5s,mb4.2
TKM2 Tokmak 2 59.08 333 *e*P **P** **02 53 43.4 +0.2**
comp=Z,66nm,0.6s,mb5.8
TKM2 Tokmak 2 59.08 333 *e*P **P** **02 53 43.4 +0.1**
TKM2 pmax pmax
comp=Z,66nm,0.6s,mb5.8
TKM2 Tokmak 2 59.08 333 P **P** **02 53 43.2 -0.1**
SNR=93
KBK Karagaybulak 59.17 332 P **P** **02 53 44.2 +0.3**
SNR=33
AML Almayashu 59.36 331 *e*P **P** **02 53 45.4 +0.2**
comp=Z,20nm,0.7s,mb5.2
AAK Ala-Archa 59.36 332 P **P** **02 53 45.6 +0.4**
comp=Z,120nm,0.9s,mb5.9,SNR=15
AAK Ala-Archa 59.36 332 P **P** **02 53 45.0 -0.2**
SNR=16
FRU Bishkek 59.46 332 *i*P **P** **02 53 46.0 +0.1**
FRU MLR MLR
comp=N,1µm,18.0s
FRU MLR MLR
comp=Z,1µm,18.0s,MS5.0
CHMS Chumysh 59.53 332 P **P** **02 53 45.7 -0.6**
SNR=6.6
WHFO Wadi Hawf 59.54 297 ⇓P **P** **02 53 47.7 +0.7**
SNR=9.2
MK31 Makanchi Array 59.65 340 *e*P **P** **02 53 46.4 -0.7**
MKAR Makanchi Array 59.65 340 P **P** **02 53 46.0 -1.1**
comp=Z,21nm,0.5s,mb5.4,baz=152,slow=8.2,SNR=259
EKS2 Erkin-Say 59.72 331 *e*P **P** **02 53 47.7 0.0**
comp=Z,41nm,0.9s,mb5.5
EKS2 Erkin-Say 59.72 331 P **P** **02 53 47.9 +0.1**
SNR=46
ABTO Aybut 59.76 296 P **P** **02 53 49.4 +0.9**
SNR=12
USP Ospenovka 59.85 332 P **P** **02 53 47.2 -1.4**
SNR=6.6
HATD Hatta, Dubai 60.35 305 P **P** **02 53 53.6 +1.2**
SNR=11
ASAJ Asahikawa 61.14 28 P **P** **02 53 54.4 -2.9**
comp=Z,5.9nm,0.7s,mb4.8,baz=248,slow=28,SNR=4.1
ASAJ Asahikawa 61.14 28 P **P** **02 53 54.4 -2.9**
ASAJ pmax pmax
comp=Z,6.0nm,0.7s
KLR Kul'dur 61.25 18 *e*P **P** **02 53 52.8 -5.2**
KK31 Karatay Array 61.64 330 *i*P **P** **02 53 59.5 -1.3**
HABR Khabarovsk 61.65 20 *e*P **P** **02 53 59.4 -1.3**
HABR *e* pP 02 54 08.9 -2.6
HABR *e* 02 54 13.8
HABR *e*S **S** **03 02 19.8 -0.7**
HABR *e* 03 02 32.7
YSS Yuzh-Sakhalins 63.39 26 *e*P **P** **02 54 12.1 -0.2**
comp=Z,40nm,1.0s,mb5.5
YSS *e*pP pP 02 54 22.6 -0.7
YSS Yuzh-Sakhalins 63.39 26 *e*P **P** **02 54 12.4 0.0**
YSS *e* pP 02 54 21.0 -2.2
YSS *e* 02 54 48.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.5
KURK Kurchatov 64.26 340 P **P** **02 54 17.6 -0.4**
comp=Z,303nm,1.4s,mb6.1,SNR=30
KURK Kurchatov 64.26 340 P **P** **02 54 17.9 -0.1**
SNR=21
KURK Kurchatov 64.26 340 P **P** **02 54 17.1 -0.9**
baz=155,slow=5.7
KURK Kurchatov 64.26 340 *e*P **P** **02 54 17.8 -0.2**
comp=Z,118nm,1.4s,mb5.7
KURK *e*pP pP 02 54 28.9 0.0
KURK Kurchatov 64.26 340 *e*P **P** **02 54 17.8 -0.2**
KURK *e**PP pP 02 54 28.9 0.0
KURK pmax pmax
comp=Z,118nm,1.4s,mb5.7
ZAA0 Zalesovo Array 65.26 345 *e*P **P** **02 54 23.6 -0.8**
ZAA0 *e*pP pP 02 54 35.2 -0.1
ZALV Zalesovo Beam 65.26 345 P **P** **02 54 23.5 -1.0**
comp=Z,6.5nm,0.4s,mb5.0,baz=142,slow=5.1,SNR=39
KRAR Krasnoyarsk 65.54 351 ⇓*e*P **P** **02 54 26.3 +0.1**
KRAR pmax pmax
comp=Z,33nm,0.6s,mb5.5
KRAR MLR MLR
comp=Z,900nm,19.0s,MS5.0
MAW Mawson 66.12 197 *e*P **P** **02 54 30.3 +0.4**
comp=Z,16nm,0.6s,mb5.2
MAW Mawson 66.12 197 P **P** **02 54 30.4 +0.5**
comp=Z,18nm,0.6s,mb5.2,baz=46,slow=6.8,SNR=44
MAW Mawson 66.12 197 *e*P **P** **02 54 30.3 +0.4**
MAW pmax pmax
comp=Z,16nm,0.6s
BOD Bodaibo 66.35 4 *e*P **P** **02 54 30.1 -1.3**
BOD pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
NVS Novosibirsk 66.47 345 ⇓*i*P **P** **02 54 30.5 -1.7**
NVS *e* 03 04 21.8
NVS pmax pmax
comp=Z,18nm,1.4s,mb4.9
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,12nm,1.4s
VOSK Vostochnaya 68.68 337 P **P** **02 54 45.6 -0.6**
VOSK pmax pmax
comp=Z,44nm,1.3s,mb5.2
RDF Al-Radifah 69.02 305 *e*P **P** **02 54 48.5 -0.4**
baz=305
RDF AMb AMB 02 55 04.1
comp=Z,97nm,1.2s,mb5.6,baz=305
UMR Umm Al-Rimmam 69.13 306 *e*P **P** **02 54 49.2 -0.4**
baz=306
UMR AMb AMB 02 54 50.6
comp=Z,74nm,0.7s,mb5.7,baz=306
BVA0 Borovoye Array 69.14 337 *i*P **P** **02 54 48.4 -0.7**
BVA0 pmax pmax
comp=Z,19nm,1.2s,mb4.9
BVAR Borovoye Array 69.14 337 P **P** **02 54 48.9 -0.2**
comp=Z,23nm,0.6s,mb5.3,baz=145,slow=8.1,SNR=109
BRVK Borovoye 69.21 337 P **P** **02 54 49.9 +0.4**
comp=Z,248nm,1.2s,mb6.0,SNR=22
BRVK Borovoye 69.21 337 P **P** **02 54 49.6 +0.1**
SNR=19
BRVK Borovoye 69.21 337 *e*P **P** **02 54 49.4 -0.1**
comp=Z,91nm,1.2s,mb5.6
BRVK *e*pP pP 02 54 59.7 -0.7
BRVK Borovoye 69.21 337 *e*P **P** **02 54 49.4 -0.1**
BRVK *e**PP pP 02 54 59.7 -0.7
BRVK pmax pmax
comp=Z,91nm,1.2s,mb5.6
NAY Al-Naaiem 69.39 306 *e*P **P** **02 54 50.7 -0.5**
baz=306
NAY AMb AMB 02 54 55.6
comp=Z,37nm,0.7s,mb5.4,baz=306
MIB Mutribah 69.53 306 *e*P **P** **02 54 51.7 -0.3**
baz=306
MIB AMb AMB 02 54 55.7
comp=Z,83nm,1.0s,mb5.6,baz=306
AB31 Akbulak array 71.19 329 P **P** **02 55 01.5 -0.3**
AB31 pmax pmax
comp=Z,33nm,0.5s,mb5.5
YAK Yakutsk 72.40 11 *e*P **P** **02 55 08.2 -0.5**
comp=Z,46nm,0.8s,mb5.5
YAK Yakutsk 72.40 11 *e*P **P** **02 55 07.2 -1.5**
YAK pmax pmax

comp=Z,37nm,0.9s,mb5.3
YAK pmax pmax

AKTK Aktyubinsk 72.90 329 P **P** **02 55 11.5 -0.5**
AKTO Aktyubinsk 72.90 329 P **P** **02 55 11.5 -0.5**
comp=N,2.8nm,0.3s,mb4.6,baz=128,slow=5.5,SNR=17
SYO Syowa Base 74.33 200⇑*e*P **P** **02 55 18.9 -1.2**
SYO Syowa Base 74.33 200⇓*e*pP pP 02 55 29.8 -1.4
PETK Petropavlovsk- 74.55 29 P **P** **02 55 20.5 -1.0**
comp=N,9.3nm,0.6s,mb4.9,baz=210,slow=1.6,SNR=18
PET Petropavlovsk 74.95 29 *i*P **P** **02 55 25.5 +1.6**
PET Petropavlovsk 74.95 29 *i*P **P** **02 55 25.4 +1.5**
PET pmax pmax
comp=Z,65nm,1.2s,mb5.4
PET MLR MLR
comp=Z,300nm,15.0s,MS4.7
SBA Scott Base 75.35 169 *e*P **P** **02 55 27.3 +1.4**
comp=Z,25nm,0.9s,mb5.1
SBA Scott Base 75.35 169 *e*P **P** **02 55 27.3 +1.4**
SBA pmax pmax
comp=Z,25nm,0.9s,mb5.1
GNI Garni 75.67 315 *i*P **P** **02 55 28.4 +0.1**
GNI Garni 75.67 315 *i*P **P** **02 55 28.3 0.0**
SVE Sverdlovsk 75.79 335⇓*e*P **P** **02 55 28.6 0.0**
SVE pmax pmax
comp=Z,65nm,1.1s,mb5.5
ARU Arti 76.40 334 *e*P **P** **02 55 32.0 -0.1**
comp=Z,214nm,1.1s,mb6.0,SNR=9.7
ARU Arti 76.40 334 *e*P **P** **02 55 32.0 -0.1**
comp=Z,51nm,1.0s,mb5.4
ARU Arti 76.40 334⇓*e*P **P** **02 55 31.5 -0.6**
ARU pmax pmax
comp=Z,66nm,1.6s,mb5.3
LSZ Lusaka 77.89 256 *e*P **P** **02 55 42.7 +1.3**
comp=Z,5.4nm,0.8s,mb4.5
LSZ Lusaka 77.89 256 *e*P **P** **02 55 42.7 +1.3**
LSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIV Kislovodsk 78.61 318 *e*P **P** **02 55 45.2 +0.4**
comp=Z,27nm,0.8s,mb5.2
KIV Kislovodsk 78.61 318 *e*P **P** **02 55 45.2 +0.4**
KIV pmax pmax
comp=Z,27nm,0.8s,mb5.2
KIV Kislovodsk 78.61 318⇓*i*P **P** **02 55 46.6 +1.8**
SEY Seymchan 78.99 19⇑*e*P **P** **02 55 47.0 +0.6**
SEY Seymchan 78.99 19⇑*e*P **P** **02 55 47.9 +1.5**
BOSA Boshof 79.49 242 P **P** **02 55 51.0 +1.0**
comp=Z,5.9nm,1.1s,mb4.4,baz=100,slow=16,SNR=3.7
EIL Elat 79.63 302 P **P** **02 55 51.1 +0.5**
comp=Z,12nm,1.0s,mb4.8,baz=63,slow=7.1,SNR=6.1
MMAI Mount Meron Ar 80.21 306 P **P** **02 55 54.6 +0.9**
comp=Z,14nm,1.0s,mb4.8,baz=96,slow=8.5,SNR=5.4
TIXI Tiksi 81.26 7 *e*P **P** **02 55 57.5 -1.0**
comp=Z,22nm,0.7s,mb5.2
TIXI Tiksi 81.26 7 *e*P **P** **02 55 57.1 -1.4**
TIXI pmax pmax
comp=Z,26nm,0.8s,mb5.2
VRHR Novokhopersk 82.17 324 *e*P **P** **02 56 04.8 +1.1**
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,7.0nm,0.5s
VRHR pmax pmax
comp=E,9.0nm,0.6s
CSS Prodhromos 82.41 307 *e*P **P** **02 56 06.8 +1.4**
comp=E,39nm,1.0s,mb5.3
VORD Divnogorie 83.47 324 *e*P **P** **02 56 09.9 -0.6**
VORD *e**PP pP 02 56 15.2 -6.4
VORD pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
VORD pmax pmax
comp=N,3.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
BR131 Keskin Array S 83.51 312 *e*P **P** **02 56 11.6 +0.6**
comp=E,10nm,0.8s,mb5.0
BRTR Keskin Array B 83.51 312 P **P** **02 56 10.5 -0.4**
comp=E,15nm,1.0s,mb5.1,baz=127,slow=5.5,SNR=48
VSR Storozhevoye 83.64 324 *e*P **P** **02 56 10.5 -0.8**
VSR *e**PP pP 02 56 16.4 -6.1
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.7s
VSR pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
NVL N'lazarevskaya 83.96 199 *e*P **P** **02 56 14.1 +1.4**
NVL pmax pmax
comp=Z,32nm,1.1s,mb5.4
MAIT Maitri 83.99 199 *e*P **P** **02 56 12.9 +0.1**
ANTO Ankara 84.17 312 *e*P **P** **02 56 15.3 +0.9**
comp=Z,25nm,1.2s,mb5.2
ANTO Ankara 84.17 312 *e*P **P** **02 56 15.3 +1.0**
ANTO pmax pmax
comp=Z,25nm,1.2s,mb5.2
ANTO Ankara 84.17 312⇑*i*P **P** **02 56 15.5 +1.2**
OBN Obninsk 86.50 327 *e*P **P** **02 56 26.8 +1.2**
comp=Z,15nm,0.8s,mb5.3
OBN Obninsk 86.50 327⇑*e*P **P** **02 56 26.3 +0.7**
OBN *e* 02 59 45.8
OBN *e*S S 03 06 58.2 -1.1
OBN pmax pmax
comp=Z,26nm,0.6s,mb5.6
BILL Bilibino 86.69 19⇓*e*P **P** **02 56 26.6 +0.3**
KLMR Klimovskoe 87.16 333 *e*P **P** **02 56 28.7 0.0**
KLMR pmax pmax
comp=Z,28nm,1.0s,mb5.5
SNAA Sanae 88.29 197 *e*P **P** **02 56 34.1 +0.1**
SNAA *e* 02 56 37.5
SNAA *e* pP 02 56 44.9 -0.4
SNAA *e* 02 56 48.0
SNAA *e* 02 56 55.0
SNAA Sanae 88.29 197 *e*P **P** **02 56 34.6 +0.6**
comp=Z,32nm,0.9s,mb5.5
SNAA Sanae 88.29 197 *e*P **P** **02 56 34.6 +0.6**
SNAA pmax pmax
comp=Z,32nm,0.9s
TLCR 88.39 316⇓*i*P **P** **02 56 35.6 +0.7**
TLCR 88.39 316⇓*i*P **P** **02 56 35.6 +0.7**
TIRR Tirgusor 88.49 315⇓*i*P **P** **02 56 36.5 +1.1**
TIRR Tirgusor 88.49 315⇓*i*P **P** **02 56 36.5 +1.1**
IDI Anoyia 89.21 306 P **P** **02 56 39.8 +0.7**
comp=Z,11nm,0.9s,mb5.2,baz=345,slow=14,SNR=4.0
AKASG Malin Array Be 89.45 321 P **P** **02 56 38.7 -1.1**
comp=Z,2.3nm,0.6s,mb4.7,baz=88,slow=4.6,SNR=12
AKASG PP PP 03 00 08.3 -3.1
comp=Z,13nm,1.0s,baz=92,slow=6.4,SNR=15
AKASG Malin Array Be 89.45 321 P **P** **02 56 38.7 -1.1**
AKASG PP PP 03 00 08.3 -3.1
VNA2 Neumayer--Watz 89.94 197 *e*P **P** **02 56 43.2 +1.4**
baz=83,slow=3.2
VNA2 *e* 02 56 46.5
VNA2 *e* pP 02 56 54.2 +1.2
VNA2 *e* 02 56 57.4
VNA2 *e* 02 57 05.1
VRI Vrincioaia 89.97 316⇓*i*P **P** **02 56 44.0 +1.7**
VRI Vrincioaia 89.97 316⇓*i*P **P** **02 56 44.0 +1.7**
PLOR Plostina 90.02 316⇓*i*P **P** **02 56 47.1 +4.5**
VNA1 Neumayer--Stat 90.32 197 *e*P **P** **02 56 45.1 +1.6**
VNA1 *e* 02 56 48.8
VNA1 *e* pP 02 56 56.4 +1.6
VNA1 *e* 02 57 00.0
VNA1 *e* 02 57 07.1
VNA3 Neumayer Olymp 90.45 197 *e*P **P** **02 56 45.2 +1.1**
VNA3 *e* 02 56 48.6
VNA3 *e* pP 02 56 55.5 +0.1
VNA3 *e* 02 56 59.6
VNA3 *e* 02 57 07.1
BURAR Bucovina Array 91.34 318⇑*i*P **P** **02 56 50.3 +1.6**
BURAR Bucovina Array 91.34 318⇑*i*P **P** **02 56 50.3 +1.6**
BUR08 Bucovina Ar. S 91.36 318 *e*P **P** **02 56 50.2 +1.4**
JOF Joensuu 91.51 334 *ep* **P** **02 56 49.3 +0.2**
comp=Z,6.7nm,0.9s,mb5.0
LVZ Lovozero 91.66 339⇓*e*P **P** **02 56 49.7 0.0**
KWP Kalwaria 93.34 320⇓*i*P **P** **02 57 05.5 +7.6**
KAF Kangasniemi 93.58 332 *ep* **P** **02 57 01.9 +3.2**
comp=Z,5.6nm,0.8s,mb5.0
KAF Kangasniemi 93.58 332 *e*P **P** **02 57 01.9 +3.2**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
ARCES ARCESS Array B 95.30 340 P **P** **02 57 05.1 -1.3**
comp=Z,6.5nm,1.1s,mb5.0,baz=98,slow=6.2,SNR=16
GERES GERESS Array B 99.13 318 PP PP 03 01 25.2 -1.7
comp=Z,1.2nm,0.9s,baz=79,slow=6.9,SNR=4.3
NOA NORSAR Array B 100.67 331 PP PP 03 01 37.5 -0.8
comp=Z,1.9nm,0.9s,baz=90,slow=7.5,SNR=3.3
TORD Torodi Ar. Bea 107.57 281 PKiKP PKiKP 03 02 10.0 -0.7
comp=Z,0.3nm,0.6s,baz=81,slow=2.4,SNR=7.8
TORD PKKPbc PKKPbc 03 13 25.2 +0.1
comp=Z,0.2nm,0.4s,baz=308,slow=3.7,SNR=7.9
YKA Yellowknife Ar 118.02 21 PKP PKPdf 03 02 28.8 -0.4
comp=Z,0.9nm,0.5s,baz=330,slow=1.6,SNR=4.6
YKA Yellowknife Ar 118.02 21 PKiKP PKPdf 03 02 28.8 -0.5
EDM Edmonton 124.45 29 *e*PKPdf PKPdf 03 02 42.0 +0.1
NVAR Mina Array Bea 129.02 47 PKP PKPdf 03 02 52.4 +1.3
comp=Z,0.8nm,0.8s,baz=131,slow=0.4,SNR=6.5
NVAR PP PP 03 04 57.7 -1.0
comp=Z,0.8nm,0.9s,baz=289,slow=6.0,SNR=3.5
PDAR Pinedale Array 132.73 38 PKP PKPdf 03 02 59.0 +1.0
comp=Z,0.4nm,0.7s,baz=225,slow=5.0,SNR=5.9
PDAR SKPbc SKPbc 03 06 24.9 +2.1
comp=Z,1.0nm,1.0s,baz=296,slow=4.9,SNR=3.5
ANMO Albuquerque 139.06 45⇑*i*PKiKP PKPdf 03 03 16.4 +6.4
TXAR Lajitas Array 143.92 51 PKP PKPdf 03 03 17.4 -1.5
comp=Z,0.8nm,0.8s,baz=220,slow=2.2,SNR=14
HDIL Hopedale 144.67 23 *e*PKPdf PKPdf 03 03 18.3 -1.5
NCB Newcomb 144.69 3 *e*PKPdf PKPdf 03 03 18.7 -1.1
MDV Middlebury 144.70 1 *e*PKPdf PKPdf 03 03 18.6 -1.2
ACCN Adirondack Com 145.30 2 *e*PKPbc PKPbc 03 03 20.8 +0.2
ERPA Erie 145.88 10 *e*PKPbc PKPbc 03 03 22.6 +0.1
CCM Cathedral Cave 145.95 27 *e*PKPbc PKPbc 03 03 22.7 -0.1
BDFB Brasilia 146.10 225 PKPbc PKPbc 03 03 24.9 +1.0
comp=Z,8.6nm,0.8s,baz=147,slow=7.9,SNR=28
BDFB Brasilia 146.10 225 PKP2 PKPab 03 03 24.9 +0.4
BDFB pmax pmax
comp=Z,9.0nm,0.8s
JCT Junction City 146.19 46 *e*PKPbc PKPbc 03 03 24.5 +0.7
BINY Binghamton 146.34 5 *e*PKPbc PKPbc 03 03 24.2 +0.3
FVM French Village 146.38 27 *e*PKPbc PKPbc 03 03 23.9 -0.2
OLIL Olney 146.71 23 *e*PKPbc PKPbc 03 03 25.1 0.0
ACSO Alum Creek Sta 147.02 15 *e*PKPbc PKPbc 03 03 25.8 -0.1
SIUC Southern Illin 147.13 25 *e*PKPbc PKPbc 03 03 27.0 +0.7
USIN University of 147.55 23 *e*PKPbc PKPbc 03 03 28.9 +1.5
SSPA Standing Stone 147.66 8 *e*PKPbc PKPbc 03 03 27.6 0.0
PARMO Parma 147.77 27 *e*PKPbc PKPbc 03 03 28.9 +0.9
WCI Wyandotte Cave 147.83 21 *e*PKPbc PKPbc 03 03 28.2 0.0
GNAR Gosnell 148.22 28 *e*PKPbc PKPbc 03 03 30.3 +1.0
HBAR Harrisburg 148.25 29 *e*PKPbc PKPbc 03 03 29.2 -0.2
MCWV Mont Chateau 148.28 11 *e*PKPbc PKPbc 03 03 29.9 +0.6
LVC Limon Verde 148.85 186 *e*PKPbc PKPbc 03 03 33.5 +2.2
WVT Waverly 149.06 25 *e*PKPbc PKPbc 03 03 31.6 +0.1
TZTM Tazewell 150.28 19 *e*PKPbc PKPbc 03 03 34.6 +0.2
ELN Prospectdale 150.42 14 *e*PKPbc PKPbc 03 03 35.7 +0.9
SWET Sewanee 150.62 23 *e*PKPbc PKPbc 03 03 34.8 -0.5
URVA University of 150.72 9 *e*PKPbc PKPbc 03 03 37.4 +1.9
CPCT Cooper Cave 150.94 21 *e*PKPbc PKPbc 03 03 35.9 -0.1
TKL Tuckaleechee C 151.01 20 *e*PKPbc PKPbc 03 03 36.5 +0.3
LRAL Lakeview Retre 152.04 27 *e*PKPbc PKPbc 03 03 39.1 +0.4
JSC Jenkinsville 153.07 17 *e*PKPbc PKPbc 03 03 41.4 +0.5
LPAZ La Paz 154.99 189 PKPbc PKPbc 03 03 48.2 +2.7
comp=Z,0.7nm,0.4s,baz=218,slow=7.0,SNR=3.9
LPAZ PKPab PKPab 03 04 01.8 +1.0
comp=Z,4.3nm,0.8s,baz=170,slow=5.3,SNR=12
LPAZ La Paz 154.99 189 PKiKP PKPbc 03 03 48.2 +2.7
LPAZ 03 04 01.8
LPAZ pmax pmax
comp=Z,1.0nm,0.4s
LPAZ pmax pmax
comp=Z,4.0nm,0.8s

CSEM ***10*** *02:44:27.4±0.1,3826N×2646E, h8km, MD2.6, Error ellipse: s-maj=3.9km s-min=2.7km az=93.0*
ISCJB ***10*** *02:44:28.5±0.9, 3825N±003×2647E±006, h4km±5km, Error ellipse: s-maj=7.5km s-min=4.6km az=178.3*
ATH ***10*** *02:44:28.1, 3822N×2663E, h58km, MD3.0/3*
DDA ***10*** *02:44:28.6, 3826N×2652E, h7km±2km, Md2.6*

ISC 10 02:44:28.6±0.9, 3825N±003×2646E±006, h0km±6km, n12, σ1§06/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.15**	**46**	*i*	P		**Pg**	**02 44 31.9**	**+0.4**
URLA					*i*	S	**Sg**	**02 44 33.9**	**+0.4**
SMG	**Samos**	**0.62**	**151**	*e*	P		**Pg**	**02 44 41.1**	**+0.6**
SMG					*e*	S	**Sg**	**02 44 50.1**	**+1.6**
KDAG	**Bornova**	**0.66**	**77**	*i*	P		**Pg**	**02 44 40.6**	**-0.5**
KDAG					*i*	S	**Sg**	**02 44 49.7**	**+0.1**
GCAM	**G?zelcaml?**	**0.83**	**132**	*i*	P		**Pg**	**02 44 44.4**	**0.0**
GCAM					*i*	S	**Sg**	**02 44 55.0**	**-0.1**
PRK	**Paraskevi**	**1.00**	**352**	*e*	P		**Pg**	**02 44 47.8**	**0.0**
AYVA	**Ayvalik**	**1.07**	**10**	*i*	P		**Pg**	**02 44 48.5**	**-0.5**
AYVA					*i*	S	**Sg**	**02 45 04.4**	**+1.4**
AKHS	**Akhisar**	**1.23**	**59**	*i*	P		**Pg**	**02 44 50.8**	**-1.4**
AKHS					*i*	S	**Sg**	**02 45 07.4**	**-0.8**
AYDN	**Tasoluk**	**1.27**	**117**	*i*	P		**Pg**	**02 44 51.7**	**-1.2**
AYDN					*i*	S	**Sg**	**02 45 06.2**	**-3.2**
APE	**Apeiranthos**	**1.39**	**212**	*e*	P		**Pn**	**02 44 53.2**	**-2.0**
BDRM	**Kayabasi**	**1.42**	**146**	*i*	P		**Pn**	**02 44 55.9**	**+0.4**
BDRM					*i*	S	**Sg**	**02 45 15.3**	**+1.9**
MANT	**Manisa**	**1.67**	**81**	*i*	P		**Pn**	**02 44 59.1**	**+0.1**
MANT					*i*	S	**Sn**	**02 45 19.8**	**-1.3**
DEMI	**Demirci**	**1.94**	**65**	*i*	P		**Pn**	**02 45 03.5**	**+0.8**
DEMI					*i*	S	**Sn**	**02 45 29.7**	**+2.0**

MAN 10 02:50:54, 1574N×12150E, h6km, mb3.5, ML2.2, MS1.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.07**	**85**	*e*	P		g	02 50 57.4	+1.6
BALP					*e*	S	Sg	02 51 04.7	+7.7
PCPH	**Palayan**	**0.43**	**246**⇓	*e*	P		Pg	02 51 04.0	+1.7
PCPH					*i*	S	Sg	02 51 15.5	+7.7
POLP	**Polilio Island**	**1.09**	**157**	*e*	P		Pg	02 51 15.4	+0.5
CAUP	**Cauayan**	**1.24**	**14**	*e*	P		Pg	02 51 17.0	-0.8
PVCP	**Virac**	**3.33**	**129**	*e*	P		Pn	02 51 40.3	-6.4

MAN 10 02:56:41, 1577N×12202E, h40km, mb3.9, ML2.7, MS2.3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.43**	**266**	*e*	P		Pn	02 56 53.9	+3.0
BALP					*e*	S	Sn	02 57 01.2	+3.6
PCPH	**Palayan**	**0.91**	**257**⇓	*e*	P		Pn	02 57 00.6	+3.3
PCPH					*e*	S	Sn	02 57 11.2	+1.8
POLP	**Polilio Island**	**1.04**	**184**	*e*	P		Pn	02 57 00.3	+1.2
POLP					*e*	S	Sn	02 57 20.4	+7.9
CAUP	**Cauayan**	**1.18**	**351**	*e*	P		Pn	02 57 01.6	+0.6

JMA 10 03:16:51.7, 2665N×12768E, h15km±4km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.40**	**261**		P	Pg	03 16 59.6	-0.1
JAGN					S	Sg	03 17 05.2	+0.1
NAH1	**Naha**	**0.45**	**179**		P	Pg	03 17 00.3	-0.3
NAH1					S	Sg	03 17 06.3	-0.3
JIH	**Iheya**	**0.46**	**34**		P	Pg	03 17 00.9	0.0
JIH					S	Sg	03 17 07.2	+0.1
JJT2	**Tamagusuku 2**	**0.51**	**173**		P	Pg	03 17 01.8	-0.1
JOW	**Kunigami**	**0.56**	**71**		P	Pg	03 17 02.8	0.0
JKE	**Kume jima 2**	**0.86**	**248**		P	Pb	03 17 07.4	-1.0
JTK	**Tokunoshima**	**1.60**	**45**		P	Pn	03 17 19.6	+0.2
JTK					S	Sn	03 17 39.5	-0.3
JAM	**Amami Oshima**	**2.45**	**44**		P	Pn	03 17 32.4	+1.3
JMZ	**Minamidaito 2**	**3.29**	**104**		S	Sn	03 18 19.3	-2.2

IDC ***10*** *04:22:55.1±1.4, 3791N×2255E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=45.5km s-min=26.6km az=142.0*
NEIC ***10*** *04:22:57.3, 3799N×2240E, h17km, MD3.7(ATH), After ATH.*
ATH ***10*** *04:22:57.3, 3799N×2240E, h17km±1km, MD3.7/13*
CSEM ***10*** *04:22:57.8±0.1, 3801N×2250E, h15km, ML3.6/6, Error ellipse: s-maj=2.6km s-min=1.9km az=47.0*
ISCJB ***10*** *04:22:58.8±0.7, 3798N×2248E±003, h24km±6km, mb3.6/4, Error ellipse: s-maj=4.7km s-min=3.6km az=152.2*
THE ***10*** *04:22:59.5, 3802N×2257E, h15km±2km, ML3.6/6, Error ellipse: s-maj=2.8km s-min=1.4km az=51.0*

ISC 10 04:22:58.9±0.8, 3801N±002×2253E±004, h14km±5km, n103, σ1§10/141, mb3.6/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.74**	**30**		P		**Pg**	**04 23 12.2**	**-1.1**
LKR					S		**Sg**	**04 23 24.8**	**+1.7**
LKR	**Lokris**	**0.74**	**30**	*e*	PB		**Pb**	**04 23 12.3**	**-1.3**
LKR				*e*	SN		**Sg**	**04 23 24.7**	**+1.6**
RLS	**Riolos of Patr**	**0.84**	**274**	*e*	PN		**Pn**	**04 23 11.5**	**-4.8**
RLS				*e*	SN		**Sn**	**04 23 23.0**	**-5.5**
ATH	**Athens Observa**	**0.94**	**92**	*e*	PN		**Pn**	**04 23 17.8**	**+0.1**
ATH				*e*	SN		**Sn**	**04 23 31.2**	**+0.3**
ITM	**Ithomi**	**0.95**	**210**⇑	*i*	PB		**Pb**	**04 23 13.8**	**-3.4**
AGG	**Agios Georgios**	**1.03**	**351**		P		**Pb**	**04 23 16.7**	**-1.7**
AGG					S		**Sg**	**04 23 33.0**	**+0.9**
PTL	**Penteli**	**1.05**	**87**	*e*	PN		**Pn**	**04 23 18.5**	**-0.8**
EVR	**Evrytania**	**1.07**	**328**	*e*	PN		**Pn**	**04 23 17.2**	**-2.3**
VLI	**Veliai**	**1.33**	**166**	*e*	PN		**Pn**	**04 23 22.0**	**-1.0**
NEO	**Neokhori**	**1.41**	**23**	*e*	PN		**Pn**	**04 23 24.1**	**0.0**
XOR	**Xorichti**	**1.45**	**21**		P		**Pn**	**04 23 24.2**	**-0.5**
VLS	**Valsamata**	**1.54**	**277**		P		**Pn**	**04 23 24.4**	**-1.5**
VLS					S		**Sn**	**04 23 47.1**	**+1.4**
VLS	**Valsamata**	**1.54**	**277**	*e*	PN		**Pn**	**04 23 24.4**	**-1.5**
VLS				*e*	SN		**Sn**	**04 23 44.8**	**-0.9**
AOS	**Alonnisos**	**1.57**	**42**		P		**Pn**	**04 23 25.5**	**-0.9**
AOS					S		**Sn**	**04 23 45.7**	**-0.8**
THL	**Klokotos Trika**	**1.61**	**346**		P		**Pn**	**04 23 25.6**	**-1.2**
THL					S		**Sn**	**04 23 47.9**	**+0.5**
THL	**Klokotos Trika**	**1.61**	**346**	*e*	Pn		**Pn**	**04 23 26.1**	**-0.8**
THL					S		**Sn**	**04 23 47.9**	**+0.5**
LKD	**Levkas**	**1.63**	**296**		P		**Pn**	**04 23 28.8**	**+1.6**
KYTH	**Kithira**	**1.77**	**167**	*e*	PN		**Pn**	**04 23 30.0**	**+0.9**
LIT	**Litokhoron**	**2.09**	**359**		P		**Pn**	**04 23 33.0**	**-0.5**
LIT					S		**Sn**	**04 24 00.5**	**+1.2**
JAN	**Janina**	**2.10**	**322**	*e*	PN		**Pn**	**04 23 34.0**	**+0.3**
JAN	**Janina**	**2.10**	**322**	*e*	Pn		**Pn**	**04 23 34.2**	**+0.5**
PAIG	**Paliouri**	**2.12**	**25**		P		**Pn**	**04 23 32.7**	**-1.2**
IGT	**Igoumenitsa**	**2.30**	**312**		P		**Pn**	**04 23 37.1**	**+0.8**
KZN	**Kozani**	**2.37**	**346**	*e*	PN		**Pn**	**04 23 37.9**	**+0.5**
PLG	**Polygyros**	**2.47**	**16**	*e*	PN		**Pn**	**04 23 38.8**	**+0.1**
PLG	**Polygyros**	**2.47**	**16**		P		**Pn**	**04 23 37.6**	**-1.1**
PLG	**Polygyros**	**2.47**	**16**	*e*	Pn		**Pn**	**04 23 38.8**	**+0.1**
APE	**Apeiranthos**	**2.56**	**111**		P		**Pn**	**04 23 39.9**	**-0.1**
APE					S		**Sn**	**04 24 09.6**	**-1.4**
APE	**Apeiranthos**	**2.56**	**111**	*e*	Pn		**Pn**	**04 23 41.4**	**+1.4**
APE					S		**Sn**	**04 24 09.6**	**-1.4**
OUR	**Ouranopolis**	**2.58**	**25**		P		**Pn**	**04 23 39.6**	**-0.7**
HORT	**Hortiatis**	**2.62**	**10**		P		**Pn**	**04 23 41.5**	**+0.7**
KEK	**Kerkira**	**2.73**	**309**	*e*	PN		**Pn**	**04 23 41.3**	**-1.0**
CHOS	**Chios island**	**2.80**	**81**		P		**Pn**	**04 23 44.0**	**+0.7**
SOH	**Sokhos**	**2.88**	**13**		P		**Pn**	**04 23 44.1**	**-0.3**
SOH					S		**Sn**	**04 24 18.9**	**0.0**
FNA	**Florina**	**2.91**	**342**		P		**Pn**	**04 23 44.6**	**-0.2**
FNA					S		**Sn**	**04 24 20.9**	**+1.3**
VAM	**Vamos**	**2.92**	**152**	*e*	PN		**Pn**	**04 23 46.2**	**+1.3**
GRG	**Griva**	**2.95**	**358**		P		**Pn**	**04 23 45.2**	**-0.1**
BIA	**Bitola**	**3.15**	**343**		P		**Pn**	**04 23 49.5**	**+1.4**
BIA	**Bitola**	**3.15**	**343**	*e*	Pn		**Pn**	**04 23 52.3**	**+4.2**
KNT	**Kendrikon**	**3.16**	**5**		P		**Pn**	**04 23 48.2**	**-0.1**
PRK	**Paraskevi**	**3.18**	**66**		P		**Pn**	**04 23 49.2**	**+0.7**
IDI	**Anoyia**	**3.31**	**144**	*e*	Pn		**Pn**	**04 23 50.1**	**-0.1**
IDI	**Anoyia**	**3.31**	**144**	*e*	Pn		**Pn**	**04 23 50.1**	**-0.2**
GVD	**Gavdhos**	**3.40**	**158**	*e*	PN		**Pn**	**04 23 53.0**	**+1.5**
NVR	**Nevrokopi**	**3.49**	**17**	*e*	PN		**Pn**	**04 23 54.4**	**+1.6**
KRUS	**Krusevo**	**3.50**	**344**	*e*	Pn		**Pn**	**04 23 55.0**	**+2.1**
LAST	**Lasithi**	**3.70**	**139**		P		**Pn**	**04 23 56.0**	**+0.4**
TIR	**Tirane**	**3.92**	**329**		Pn		**Pn**	**04 23 58.7**	**0.0**
TIR	**Tirane**	**3.92**	**329**		Pn		**Pn**	**04 23 58.7**	**+0.1**
ZKR	**Zakros**	**4.14**	**133**		P		**Pn**	**04 24 03.5**	**+1.8**
ZKR					S		**Sn**	**04 24 51.7**	**+1.8**
TIP	**Timpagrande**	**4.67**	**286**	*e*	Pn		**Pn**	**04 24 09.4**	**+0.4**
TIP				*e*	Sn		**Sn**	**04 24 58.1**	**-4.9**
TIP	**Timpagrande**	**4.67**	**286**	*e*	Pn		**Pn**	**04 24 09.4**	**+0.4**
TIP				*e*	Sn		**Sn**	**04 24 58.1**	**-4.9**
EKA	**Eskdalemuir Ar**	**24.50**	**323**		P		**P**	**04 28 16.9**	**-0.5**
	1.1nm,0.6s,mb3.5,baz=127,slow=9.5,SNR=4.9								
TORD	**Torodi Ar. Bea**	**30.93**	**222**		P		**P**	**04 29 13.4**	**-2.0**
	0.5nm,0.7s,mb3.4,baz=31,slow=9.3,SNR=6.9								
MKAR	**Makanchi Array**	**44.04**	**59**		P		**P**	**04 31 04.2**	**-1.8**
	0.9nm,0.6s,mb3.7,baz=284,slow=7.1,SNR=4.9								
ZALV	**Zalesovo Beam**	**44.62**	**48**		P		**P**	**04 31 09.6**	**-1.0**
	1.3nm,0.6s,mb4.0,baz=260,slow=8.9,SNR=4.6								
ZALV	**Zalesovo Beam**	**44.62**	**48**		P		**P**	**04 31 09.6**	**-1.0**

FUNV 10 04:42:04.1, 1324N×7333W, h26km, MW3.5, 1C, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VIRV	**Villa del Rosa**	**2.86**	**162**⇑	*e*	P		Pn	04 42 46.7	-1.3
VIRV					*e*	S	Sn	04 43 18.4	-3.3
DABV	**Dabajuro**	**3.50**	**131**	*e*	P		Pn	04 42 55.7	-1.0
QARV	**Quebrada Arrib**	**4.07**	**137**	*e*	P		Pn	04 43 03.8	-1.0
QARV					*e*	S	Sn	04 43 47.7	-3.9
SIQV	**Siquisique**	**4.30**	**126**	*e*	P		Pn	04 43 05.8	-2.1
CURV	**Curarigua**	**4.60**	**134**	*e*	P		Pn	04 43 09.8	-2.2
CURV					*e*	S	Sn	04 43 59.6	-4.9
VIGV	**El Vigia**	**4.77**	**156**	*e*	P		Pn	04 43 13.3	-1.1
TEPV	**Terepaima**	**5.19**	**128**	*e*	P		Pn	04 43 18.2	-2.0
TEPV					*e*	S	Sn	04 44 14.1	-5.2
SANV	**Sanarito**	**5.25**	**135**	*e*	P		Pn	04 43 20.1	-0.9
CAPV	**Capacho**	**5.43**	**169**	*e*	P		Pn	04 43 22.6	-0.8
CAPV					*e*	S	Sn	04 44 19.4	-5.6
SOCV	**Socops**	**5.49**	**153**	*e*	P		Pn	04 43 23.2	-1.0
SOCV					*e*	S	Sn	04 44 20.0	-6.4
BAUV	**El Baul**	**6.71**	**129**	*e*	P		Pn	04 43 38.1	-3.0
BAUV					*e*	S	Sn	04 44 49.5	-7.3

ISCJB ***10*** *04:54:09.8±0.8, 3876N±003×2573E±007, h26km±8km, Error ellipse: s-maj=9.6km s-min=5.0km az=2.2*
DDA ***10*** *04:54:09.6, 3881N×2579E, h7km±5km, Md2.9*
CSEM ***10*** *04:54:09.4±0.3, 3876N×2579E, h25km, ML3.5/1, Error ellipse: s-maj=8.2km s-min=6.6km az=89.0*
THE ***10*** *04:54:10.4, 3877N×2588E, h29km±3km, ML3.5/1, Error ellipse: s-maj=4.1km s-min=0.7km az=91.0*

**ISC 10 04:54:09.6±1.0, 3877N±003×2571E±006, h19km

PCIG				*i* S		**Sn**	**04 57 13.7**	**+0.7**
SCX	**San Cristobal**	**1.18**	**354**	*i* P		**Pn**	**04 56 56.2**	**-0.6**
SCX				*i* S		**Sn**	**04 57 19.9**	**+0.6**
TGIG		**1.35**	**334**	*i* P		**Pn**	**04 56 58.5**	**+0.3**
TGIG				*i* S		**Sn**	**04 57 21.5**	**-0.4**
VHO	**Vista Hermosa**	**4.32**	**291**	*i* P		**Pn**	**04 57 33.1**	**+0.1**
VHO				*i* S		**Sn**	**04 58 23.5**	**-0.5**
TGUH	**Tegucigalpa,Un**	**5.28**	**106**	Pn		**Sn**	**04 57 44.2**	**-1.3**
TPIG	**Tehuac#an**	**5.44**	**302**	*i* S		**Sn**	**04 58 48.9**	**-1.2**
PNIG	**Pinotepa**	**5.46**	**280**	*i* P		**Pn**	**04 57 48.9**	**+1.1**
PNIG				*i* S		**Sn**	**04 58 49.0**	**-1.6**
UTMO	**Huajuapan**	**5.55**	**295**	*i* P		**Pn**	**04 57 50.0**	**+1.0**
UTMO				*i* S		**Sn**	**04 58 50.7**	**-1.9**
PPM	**Popocatepetl**	**6.80**	**302**	*i* P		**Pn**	**04 58 09.7**	**+4.3**
PPM				*i* S		**Sn**	**04 59 24.0**	**+1.7**
CAIG	**El Cayaco**	**7.59**	**282**	*e*P		**Pn**	**04 58 17.8**	**+2.0**

KRSC ***10*** *04:57:02.7±1.9, 48.98N×156.38E, h51km±50km, ML4.0*
MOS ***10*** *04:57:05.4±1.7, 49.11N×156.79E, h33km, mb4.1/2, Error ellipse: s-maj=45.3km s-min=12.9km az=77.0*
ISCJB ***10*** *04:57:06.0±2.0, 49.1N×02.2×1568E±03, h54km±28km, Error ellipse: s-maj=45.2km s-min=10.3km az=34.3*

ISC 10 04:57:05.8±2.9, 492N±02×1568E±04, h6km±26km, n12, σ0°67/17, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.58**	**344**	*e*PN	**Pn**	**04 57 29.7**	**-4.6**
RUS	**Russkaya**	**3.45**	**18**	*e*P	**Pn**	**04 57 59.7**	**-0.2**
RUS				*i* S	**Sn**	**04 58 40.9**	**-0.1**
NLC	**Nalytchevo**	**4.32**	**21**	*e*P	**Pn**	**04 58 11.8**	**-0.1**
NLC				*i* S	**Sn**	**04 59 01.9**	**-0.6**
SDLR	**Sedlovina**	**4.32**	**17**	*e*P	**Pn**	**04 58 11.9**	**0.0**
SDLR				*i* S	**Sn**	**04 59 02.3**	**-0.2**
SPN	**Mys Shipunski**	**4.43**	**26**	*e*P	**Pn**	**04 58 13.7**	**+0.3**
SPN				*e*S	**Sn**	**04 59 05.8**	**+0.6**
GNL	**Ganaly**	**4.59**	**9**	*e*P	**Pn**	**04 58 15.6**	**0.0**
MKZ	**Mys Kozlova**	**6.20**	**28**	*e*P	**Pn**	**04 58 37.7**	**0.0**
MKZ				*i* S	**Sn**	**04 59 48.4**	**-0.4**
KBTR	**Krutoberegovo**	**7.94**	**25**	*e*P	**Pn**	**04 59 01.9**	**+0.3**
YSS	**Yuzh-Sakhalins**	**9.66**	**262**	*e*PN	**Pn**	**04 59 34.7**	**+10**
ERM	**Erimo**	**11.92**	**238**	*e*PN	**Pn**	**04 59 55.5**	**-0.7**
NOA	**NORSAR Array B**	**66.70**	**343**	*e*P	**P**	**05 07 59.4**	**+2.5**
NOA	comp=Z,2.0nm,0.8s			pmax	pmax		
TXAR	**Lajitas Array**	**74.17**	**64**	*e*P	**P**	**05 08 38.5**	**-4.6**

IDC 10 05:02:30.1±0.8, 1016S×7547W, h0km, mb3.9/6, mb1 4.1/10, mb1mx4.0/20, mbtmp3.8/10, ML3.7/4, MS2.6/1, Ms1 2.7/1, ms1mx2.2/29, Error ellipse: s-maj=15.7km s-min=12.2km az=91.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.26**	**216**	Pn	Pn	05 03 09.3	+0.6
	43nm,0.3s,baz=23,slow=11,SNR=155						
NNA				Pg	Pg	05 03 11.4	-2.1
	67nm,0.3s,baz=34,slow=12,SNR=161						
NNA				Sn	Sn	05 03 36.5	-0.8
	50nm,0.3s,baz=143,slow=20,SNR=5.1						
NNA				Lg		05 03 41.3	
	50nm,0.3s,baz=152,slow=21,SNR=8.4						
ATAH	**Atahualpa**	**4.27**	**317**	Pn	Pn	05 03 37.4	+1.0
	4.9nm,0.3s,baz=129,slow=13,SNR=33						
ATAH				Lg		05 04 40.9	
	2.9nm,0.3s,baz=330,slow=16,SNR=4.5						
LPAZ	**La Paz**	**9.39**	**131**	Pn	Pn	05 04 48.9	+2.1
	0.1nm,0.3s,baz=316,slow=16,SNR=3.7						
LPAZ				Lg		05 07 27.8	
	0.5nm,0.3s,baz=203,slow=17,SNR=4.0						
LPAZ				LR	LR	05 08 20.2	
	comp=Z,35nm,19.4s,baz=310,slow=37						
SIV	**San Ignacio**	**15.17**	**114**	Pn	Pn	05 06 04.9	-1.0
	0.4nm,0.3s,baz=309,slow=11,SNR=13						
SIV				Lg		05 10 30.6	
	0.8nm,0.3s,baz=50,slow=16,SNR=4.6						
CFAA	**Coronel Fontan**	**22.37**	**164**	P	P	05 07 30.6	+0.7
	0.2nm,0.7s,baz=327,slow=8.8,SNR=4.5						
TXAR	**Lajitas Array**	**47.76**	**326**	P	P	05 11 09.7	+0.5
	0.7nm,0.7s,baz=146,slow=8.6,SNR=9.5						
PDAR	**Pinedale Array**	**61.19**	**332**	P	P	05 12 47.0	+0.4
	0.6nm,0.9s,baz=176,slow=5.9,SNR=5.0						
NVAR	**Mina Array Bea**	**62.70**	**323**	P	P	05 12 58.0	+1.1
	0.6nm,0.8s,baz=132,slow=7.3,SNR=5.2						
ULM	**Lac du Bonnet**	**62.74**	**345**	P	P	05 12 56.3	-0.6
	2.1nm,0.5s,baz=139,slow=9.3,SNR=3.1						
YKA	**Yellowknife Ar**	**78.50**	**343**	P	P	05 14 31.4	-1.4
	0.6nm,0.7s,baz=156,slow=6.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**80.01**	**75**	P	P	05 14 42.0	-0.1
	1.1nm,0.9s,baz=260,slow=4.6,SNR=5.9						

IDC 10 05:04:35.3±2.5, 838S×10813E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/19, Error ellipse: s-maj=140.4km s-min=21.4km az=50.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**25.84**	**162**	LR	LR	05 19 11.5	
	comp=Z,108nm,19.3s,baz=142,slow=34						
WRA	**Warramunga Arr**	**27.84**	**117**	P	P	05 10 26.5	-0.2
	0.2nm,0.5s,baz=290,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**28.98**	**125**	P	P	05 10 38.4	+1.5
	0.3nm,0.8s,baz=296,slow=9.6,SNR=4.2						
STKA	**Stephens Creek**	**38.89**	**132**	P	P	05 12 01.6	-1.1
	1.4nm,0.6s,baz=307,slow=12,SNR=5.3						
STKA				LR	LR	05 27 10.4	
	comp=Z,74nm,19.7s,baz=28,slow=35						
MKAR	**Makanchi Array**	**59.56**	**340**	P	P	05 14 39.4	-1.1
	0.3nm,0.5s,baz=155,slow=7.8,SNR=4.0						
KURK	**Kurchatov**	**64.17**	**340**	P	P	05 15 12.2	+0.6
	baz=150,slow=5.7						

ISCJB ***10*** *05:08:06.0±0.8, 2866S±0.10×17783W±0.09, h100km±6km, mb4.5/17, Error ellipse: s-maj=16.4km s-min=13.0km az=3.8*
IDC ***10*** *05:08:06.8±0.6, 2876S×17784W, h95km±4km, mb4.1/11, mb1 4.3/12, mb1mx4.2/17, mbtmp4.2/12, MS3.6/1, Ms1 3.6/1, ms1mx3.1/24, Error ellipse: s-maj=16.6km s-min=12.3km az=27.0*
NEIC ***10*** *05:08:06.8±0.4, 2870S×17774W, mb4.6/10, Error ellipse: s-maj=12.7km s-min=11.9km az=209.0*

ISC 10 05:08:07.1±0.8, 2869S±0.10×17781W±0.09, h97km±6km, h97km±2.9km: pP-P, n63, σ0°79/39, mb4.5/17, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.57**	**190**	P	**Pn**	**05 08 23.0**	**-0.1**
	8μm,0.3s,baz=260,slow=23,SNR=370						
RAO				S	**Sn**	**05 08 35.1**	**+0.1**
	21μm,0.3s,baz=162,slow=20,SNR=51						
RAO	**Raoul Island**	**0.57**	**190**	*e*Pn	**Pn**	**05 08 22.7**	**-0.4**
URZ	**Urewera**	**10.44**	**203**	S	**Sn**	**05 12 19.9**	**-8.8**
	17nm,0.3s,baz=59,slow=22,SNR=20						
AFI	**Afiamalu**	**15.74**	**22**	P	**Pn**	**05 11 35.3**	**-8.0**
	3.4nm,0.3s,baz=207,slow=4.5,SNR=4.4						
AFI				S	S	05 14 18.0	-28
	2.4nm,0.3s,baz=49,slow=19,SNR=5.8						
AFI	**Afiamalu**	**15.74**	**22**	*e*P	**Pn**	**05 11 35.5**	**-7.9**
	20nm,0.6s						
RPZ	**Rata Peaks**	**17.45**	**208**	P	**Pn**	**05 11 59.8**	**-4.4**
	2.2nm,0.3s,baz=165,slow=5.0,SNR=7.9						
RPZ				S	S	05 14 56.7	-22
	0.8nm,0.3s,baz=356,slow=22,SNR=3.2						
RAR	**Rarotonga**	**17.96**	**70**	P	**Pn**	**05 12 10.0**	**-0.5**
	4.5nm,0.3s,baz=229,slow=10,SNR=6.6						
TBI	**Tubuai**	**25.99**	**85**	*e*LR	LR	05 19 51.9	
	239nm,33.0s						
TBI	**Tubuai**	**25.99**	**85**	*e*T		05 40 13.0	
	31nm,0.3s						
PAE	**Papea**	**28.11**	**73**	*e*T		05 42 55.2	
	276nm,0.3s						
PPT	**Papeete**	**28.16**	**73**	*e*LR	LR	05 20 43.4	
	329nm,33.2s						
PPT	**Papeete**	**28.16**	**73**	*e*T		05 42 59.1	
	15nm,0.3s						
TVO	**Taravao**	**28.33**	**74**	*e*T		05 43 11.9	
	43nm,0.3s						
TIAR	**Tiarei**	**28.35**	**73**	*e*T		05 43 13.9	
	57nm,0.3s						
PMOR	**Pomariorio Ree**	**30.82**	**70**	*e*T		05 46 19.8	
	3.1nm,0.3s						
VAH	**Vaihoa**	**30.93**	**71**	*e*T		05 46 26.7	
	20nm,0.2s						
CTA	**Charters Tower**	**33.73**	**277**	*e*P	**P**	**05 14 41.2**	**+1.8**
	6.7nm,0.5s,mb4.7						
CTA	**Charters Tower**	**33.73**	**277**	P	**P**	**05 14 40.1**	**+0.7**
	8.6nm,0.5s,mb4.8,baz=99,slow=10,SNR=21						
CTA				pP	pP	05 15 01.2	-0.2
	4.9nm,0.7s,baz=85,slow=12,SNR=2.5						
CTAO	**Charters Tower**	**33.73**	**277**	*e*P	**P**	**05 14 41.1**	**+1.8**
	118nm,1.4s,mb5.5						
STKA	**Stephens Creek**	**35.06**	**255**	*e*P	**P**	**05 14 51.8**	**+1.1**
	2.2nm,0.9s,mb4.0						
STKA				*e*	pP	05 15 17.1	+4.2
STKA	**Stephens Creek**	**35.06**	**255**	P	**P**	**05 14 51.0**	**+0.3**
	1.9nm,0.4s,mb4.3,baz=89,slow=6.2,SNR=7.8						
STKA				pP	pP	05 15 13.5	+0.7
	4.9nm,0.7s,baz=102,slow=10,SNR=5.8						
RKT	**Rikitea**	**38.78**	**92**	*e*LR	LR	05 25 40.2	
	177nm,34.8s						
RKT	**Rikitea**	**38.78**	**92**	*e*T		05 56 07.4	
	4.1nm,0.4s						
ASAR	**Alice Springs**	**43.39**	**265**	P	**P**	**05 15 59.6**	**-0.5**
	3.7nm,0.7s,mb4.3,baz=98,slow=7.2,SNR=44						
ASAR				pP	pP	05 16 22.4	-0.6
	4.6nm,0.7s,baz=104,slow=8.0,SNR=8.4						
ASAR				PcP	PcP	05 17 46.5	-0.6
	1.0nm,0.5s,baz=108,slow=4.4,SNR=3.6						
ASAR				ScP	ScP	05 21 28.3	-1.3
	0.7nm,0.9s,baz=119,slow=4.2,SNR=4.0						
WB2	**Warramunga Arr**	**44.22**	**270**	*e*P	**P**	**05 16 07.0**	**+0.2**
WB2				*e*	pP	05 16 29.5	-0.2
WB2	**Warramunga Arr**	**44.22**	**270**	*e*P	**P**	**05 16 06.9**	**+0.1**
WB2				*e*	pP	05 16 29.5	-0.2
WRAB	**Tennant Creek**	**44.22**	**270**	*e*P	**P**	**05 16 07.2**	**+0.3**
	3.5nm,0.4s,mb4.4						
WRAB				epP	pP	05 16 28.7	-1.0
WRA	**Warramunga Arr**	**44.23**	**270**	P	**P**	**05 16 06.3**	**-0.6**
	3.8nm,0.3s,mb4.6,baz=109,slow=8.0,SNR=67						
WRA				pP	pP	05 16 29.5	-0.3
	8.0nm,0.9s,baz=107,slow=8.0,SNR=7.1						
WRA				PcP	PcP	05 17 50.0	+0.1
	1.6nm,0.6s,baz=112,slow=3.2,SNR=3.8						
WRA				ScP	ScP	05 21 30.9	-2.2
	0.8nm,0.8s,baz=102,slow=4.0,SNR=3.9						
WRA				S	**S**	**05 22 32.2**	**-1.2**
	0.4nm,0.8s,baz=106,slow=14,SNR=2.6						
WRA				LR	LR	05 33 19.3	
	comp=Z,67nm,18.4s,baz=100,slow=34						
WRA	**Warramunga Arr**	**44.23**	**270**	P	**P**	**05 16 06.3**	**-0.6**
WRA				pP	pP	05 16 29.5	-0.3
WRA				PcP	PcP	05 17 50.0	+0.1
WRA				ScP	ScP	05 21 30.9	-2.2
WRA				S	**S**	**05 22 32.2**	**-1.2**
WRA				LR	LR	05 33 19.3	
KAKA	**Kakadu**	**48.83**	**278**	*e*P	**P**	**05 16 31.8**	**-11**
	3.8nm,0.3s,mb4.8						
SBA	**Scott Base**	**49.75**	**184**	*e*P	**P**	**05 16 51.5**	**+2.5**
	7.7nm,0.7s,mb4.7						
GUMO	**Guam**	**55.40**	**314**	P	**P**	**05 17 30.9**	**-0.6**
	46nm,0.6s,mb5.7,baz=208,slow=23,SNR=4.3						
CASY	**Casey**	**56.73**	**207**	*e*P	**P**	**05 17 38.9**	**-1.4**
	16nm,0.5s,mb5.3						
MAW	**Mawson**	**73.96**	**200**	P	**P**	**05 19 32.1**	**+0.6**
	2.2nm,0.6s,mb4.0,baz=164,slow=7.6,SNR=8.6						
MAW	**Mawson**	**73.96**	**200**	*e*P	**P**	**05 19 31.5**	**0.0**
	3.0nm,0.7s,mb4.1						
MJAR	**Matsushiro Ar**	**76.94**	**325**	P	**P**	**05 19 49.2**	**+0.4**
	4.7nm,0.7s,mb4.3,baz=166,slow=6.2,SNR=8.2						
SNAA	**Sanae**	**79.86**	**178**	*e*	**P**	**05 20 03.3**	**-1.1**
SNAA				*e*		05 20 06.1	
SNAA				*e*		05 20 08.3	
SNAA				*e*		05 20 13.7	
SNAA	**Sanae**	**79.86**	**178**	*e*P	**P**	**05 20 03.3**	**-1.2**
	3.8nm,0.9s,mb4.2						
VNA3	**Neumayer Olymp**	**80.00**	**176**	*e*	**P**	**05 20 04.8**	**-0.4**
VNA3				*e*		05 20 07.8	
VNA3				*e*		05 20 10.4	
VNA3				*e*		05 20 15.6	
VNA2	**Neumayer--Watz**	**80.43**	**177**	*e*	**P**	**05 20 07.7**	**+0.1**
	baz=192,slow=2.8						
VNA2				*e*		05 20 11.0	
VNA2				*e*		05 20 13.2	
VNA2				*e*		05 20 18.9	
VNA1	**Neumayer--Stat**	**80.66**	**176**	*e*	**P**	**05 20 08.9**	**+0.1**
VNA1				*e*		05 20 11.9	
VNA1				*e*		05 20 14.4	
VNA1				*e*		05 20 19.4	
KSRS	**Korea Array**	**83.16**	**319**	P	**P**	**05 20 21.6**	**-0.6**
	1.7nm,0.7s,mb4.0,baz=123,slow=4.5,SNR=3.9						
PLCA	**Paso Flores**	**83.55**	**133**	P	**P**	**05 20 25.3**	**+0.9**
	4.6nm,1.0s,mb4.3,baz=210,slow=3.6,SNR=5.3						
PLCA	**Paso Flores**	**83.55**	**133**	*e*P	**P**	**05 20 24.7**	**+0.2**
	5.8nm,1.0s,mb4.4						
PETK	**Petropavlovsk-**	**84.20**	**345**	P	**P**	**05 20 27.7**	**+0.5**
	7.4nm,0.8s,mb4.5,baz=110,slow=7.9,SNR=16						
NVAR	**Mina Array Bea**	**86.87**	**43**	P	**P**	**05 20 41.3**	**+0.4**
	1.3nm,1.0s,mb3.8,baz=221,slow=7.7,SNR=6.7						
CFAA	**Coronel Fontan**	**90.12**	**126**	P	**P**	**05 20 56.6**	**0.0**
	0.6nm,0.8s,mb3.8,baz=276,slow=3.7,SNR=13						
MKAR	**Makanchi Array**	**116.79**	**311**	PKP	PKPdf	05 26 39.5	-0.3
	1.2nm,0.5s,baz=87,slow=1.0,SNR=17						
ZALV	**Zalesovo Beam**	**116.86**	**319**	PKP	PKPdf	05 26 39.8	0.0
	0.5nm,0.4s,baz=117,slow=0.3,SNR=2.8						
KURK	**Kurchatov**	**119.98**	**314**	PKP	PKPdf	05 26 45.8	-0.1
	baz=108,slow=1.9						
BVAR	**Borovoye Array**	**125.29**	**317**	PKP	PKPdf	05 26 56.4	+0.4
	4.2nm,0.6s,baz=90,slow=3.0,SNR=11						
ARCES	**ARCESS Array B**	**136.96**	**348**	PKhKP		05 27 11.7	
	1.8nm,0.6s,baz=343,slow=2.5,SNR=4.3						
ARCES				PKP	PKPdf	05 27 18.9	+1.4
	1.6nm,0.6s,baz=343,slow=1.3,SNR=7.2						
NOA	**NORSAR Array B**	**147.09**	**352**	PKPbc	PKPbc	05 27 37.4	-0.6
	4.2nm,0.5s,baz=15,slow=4.5,SNR=20						
AKASG	**Malin Array Be**	**150.03**	**325**	PKPbc	PKPbc	05 27 44.9	-1.0
	7.5nm,0.4s,baz=45,slow=3.1,SNR=37						
AKBB	**Malin Array Si**	**150.03**	**325**	*e*PKPbc	PKPbc	05 27 46.3	+0.4
KIEV	**Kiev**	**150.04**	**325**	*e*PKPbc	PKPbc	05 27 46.5	+0.5
BR131	**Keskin Array S**	**151.89**	**301**	*e*PKPbc	PKPbc	05 27 50.9	+0.2
BRTR	**Keskin Array B**	**151.89**	**301**	PKPbc	PKPbc	05 27 49.9	-0.8
	2.4nm,0.6s,baz=152,slow=6.1,SNR=15						
ANTO	**Ankara**	**152.49**	**302**	*e*PKPbc	PKPbc	05 27 53.2	+1.2
KWP	**Kalwaria**	**153.88**	**329**	*e*PKPab	PKPab	05 28 09.5	+1.3
GERES	**GERESS Array B**	**158.01**	**339**	PKPab	PKPab	05 28 26.8	+0.9
	0.6nm,0.7s,baz=112,slow=6.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**164.53**	**178**	PKP	PKPdf	05 27 59.9	-0.2
	0.7nm,0.8s,baz=156,slow=1.4,SNR=5.1						
TORD				PKPab	PKPab	05 28 54.9	-0.2
	1.2nm,0.5s,baz=181,slow=2.9,SNR=16						
TORD	**Torodi Ar. Bea**	**164.53**	**178**	PKP	PKPdf	05 27 59.9	-0.2
TORD				PKPab	PKPab	05 28 54.9	-0.2

IDC 10 05:15:10.1±5.6, 104N×9999E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=309.9km s-min=22.5km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.60**	**124**	P	P	05 22 44.1	+0.5
	0.9nm,0.4s,baz=303,slow=8.8,SNR=11						
ASAR	**Alice Springs**	**41.09**	**129**	P	P	05 22 55.0	-0.9
	0.1nm,0.3s,baz=304,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**48.13**	**344**	P	P	05 23 52.0	+0.3
	0.6nm,0.3s,baz=156,slow=8.4,SNR=15						
KURK	**Kurchatov**	**52.72**	**343**	P	P	05 24 25.6	-0.8
	baz=161,slow=6.9						

ISCJB ***10*** *05:19:23.7±0.7, 1091N±0.07×6252W±0.03, h95km±7km, Error ellipse: s-maj=11.0km s-min=5.1km az=174.2*
FUNV ***10*** *05:19:25.1, 1091N×6246W, h89km, MW2.8*
NEIC ***10*** *05:19:25.6, 11.12N×62.47W, h25km, MD3.2(TRN), After TRN.*
TRN ***10*** *05:19:25.7, 11.12N×62.47W, h25km, MD3.2*

ISC 10 05:19:24.6±0.8, 1092N±006×6252W±003, h90km±8km, n17, σ0°85/28, 2C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.40**	**134**	⇑*e*P	**Pn**	**05 19 38.6**	**+0.1**
GUIV				*e*S	**Sn**	**05 19 49.0**	**+0.1**
ITEV	**Isla Los Testi**	**0.74**	**305**	*e*P	**Pn**	**05 19 41.8**	**+0.4**
ITEV				*e*S	**Sn**	**05 19 54.2**	**+0.2**
CRUV	**Carupano**	**0.75**	**251**	⇓*i*P	**Pn**	**05 19 41.9**	**+0.4**
CRUV				*i* S	**Sn**	**05 19 54.6**	**+0.5**
TCE	**Chacachacare**	**0.78**	**107**	*e*P	**Pn**	**05 19 41.8**	**-0.1**
TCE				*e*S	**Sn**	**05 19 53.2**	**-1.6**
GUNV	**Guanoco**	**0.87**	**209**	⇑*e*P	**Pn**	**05 19 43.0**	**+0.3**
GUNV				*e*S	**Sn**	**05 19 56.0**	**-0.3**
TRN	**Trinidad (W)**	**1.13**	**104**	*e*P	**Pn**	**05 19 46.5**	**+0.8**
TRN				*e*S	**Sn**	**05 20 01.1**	**-0.5**
TPP	**Pointe-a-Pierr**	**1.21**	**120**	*e*P	**Pn**	**05 19 52.0**	**+5.3**
TPP	**Pointe-a-Pierr**	**1.21**	**120**	*e*P	**Pn**	**05 19 48.4**	**+1.7**
GRW	**Mount Saint Ca**	**1.49**	**34**	*e*P	**Pn**	**05 19 48.3**	**-1.9**
TBH	**Brigand Hill**	**1.49**	**107**	*e*P	**Pn**	**05 19 51.0**	**+0.9**
TBH				*e*S	**Sn**	**05 20 11.0**	**+1.5**
TPR	**Prospect**	**1.73**	**81**	*e*P	**Pn**	**05 19 54.0**	**+0.8**
TPR				*e*S	**Sn**	**05 20 13.9**	**-1.1**
BOT	**Bacolet**	**1.78**	**82**	*e*P	**Pn**	**05 19 54.4**	**+0.5**
PCRV	**Puerto La Cruz**	**2.21**	**251**	*e*P	**Pn**	**05 20 00.2**	**+0.6**
PCRV				*e*S	**Sn**	**05 20 25.7**	**-0.6**
RIOV	**Rio Grande**	**2.92**	**166**	*e*P	**Pn**	**05 20 08.2**	**-0.8**
CUPV	**Cœpira**	**3.33**	**255**	*e*P	**Pn**	**05 20 15.4**	**+0.9**
CAOV	**Caicara del Or**	**5.19**	**227**	*e*P	**Pn**	**05 20 38.6**	**-1.1**
CAOV				*e*S	**Sn**	**05 21 33.5**	**-4.8**
BAUV	**El Baul**	**5.79**	**251**	*e*P	**Pn**	**05 20 47.2**	**-0.7**
BAUV				*e*S	**Sn**	**05 21 48.5**	**-4.5**

ISCJB ***10*** *05:29:47.3±2.6, 266S±0.1×1788E±0.1, h525km±27km, mb3.4/5, Error ellipse: s-maj=22.7km s-min=18.2km az=26.3*
IDC ***10*** *05:29:48.5±2.6, 2653S×17886E, h532km±28km, mb3.1/6, mb1 3.4/8, mb1mx3.3/17, mbtmp3.3/8, Error ellipse: s-maj=23.4km s-min=15.3km az=10.0*

ISC 10 05:29:47.9±2.4, 267S±01×1789E±01, h519km±25km, n17, σ0°84/15, mb3.4/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**11.65**	**187**	P	**P**	**05 32 22.6**	**+0.1**
	8.1nm,0.3s,baz=3.2,slow=3.9,SNR=44						
URZ				S	**S**	**05 34 28.7**	**-1.2**
	2.2nm,0.3s,baz=66,slow=22,SNR=9.4						
RPZ	**Rata Peaks**	**18.15**	**198**	P	**P**	**05 33 29.1**	**+0.8**
	3.0nm,0.3s,baz=35,slow=5.0,SNR=10						
STKA	**Stephens Creek**	**32.81**	**252**	P	**P**	**05 35 39.1**	**+1.0**
	0.7nm,0.3s,mb3.6,baz=94,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**40.65**	**264**	P	**P**	**05 36 42.9**	**+0.1**
	1.0nm,0.6s,mb3.5,baz=100,slow=7.2,SNR=27						
ASAR				S	**S**	**05 42 07.5**	**-7.7**
	0.4nm,0.8s,baz=94,slow=15,SNR=4.5						
WRA	**Warramunga Arr**	**41.28**	**270**	P	**P**	**05 36 47.4**	**-0.4**
	0.6nm,0.4s,mb3.5,baz=106,slow=7.6,SNR=16						
WRA				S	**S**	**05 42 23.2**	**-1.2**
	0.4nm,0.9s,baz=96,slow=14,SNR=3.1						
QSPA	**South Pole Qui**	**63.42**	**180**	P	**P**	**05 39 27.5**	**+1.7**
	4.1nm,0.5s,baz=358,slow=0.9,SNR=36						
SNAA	**Sanae**	**81.92**	**179**	*e*	**P**	**05 41 11.3**	**-1.1**
SNAA				*e*		05 41 13.8	
SNAA				*e*		05 41 17.2	
VNA3	**Neumayer Olymp**	**82.17**	**177**	*e*	**P**	**05 41 13.5**	**-0.2**
VNA3				*e*		05 41 15.8	
VNA3				*e*		05 41 19.5	
VNA2	**Neumayer--Watz**	**82.58**	**178**	*e*	**P**	**05 41 15.8**	**+0.1**
	baz=187,slow=5.5						
VNA2				*e*		05 41 18.4	
VNA2				*e*		05 41 21.5	
VNA1	**Neumayer--Stat**	**82.82**	**178**	*e*	**P**	**05 41 17.0**	**+0.7**
VNA1				*e*		05 41 20.4	
NVAR	**Mina Array Bea**	**87.44**	**44**	P	**P**	**05 41 38.8**	**-1.1**
	0.2nm,0.5s,mb3.0,baz=213,slow=7.4,SNR=4.5						
TXAR	**Lajitas Array**	**92.75**	**59**	P	**P**	**05 42 04.7**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=193,slow=5.1,SNR=4.0						
NB2	**NORSAR Subarra**	**144.63**	**350**	PKP	PKPdf	05 48 22.6	-1.9
	comp=Z,4.0nm,1.0s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**144.63**	**350**	PKP	PKPdf	05 48 22.7	-1.8
	comp=Z,2.3nm,0.8s,baz=14,slow=4.6,SNR=5.2						
AKASG	**Malin Array Be**	**146.67**	**324**	PKPbc	PKPbc	05 48 29.1	-1.8
	comp=Z,0.3nm,0.3s,baz=45,slow=3.5,SNR=4.9						
BRTR	**Keskin Array B**	**148.33**	**303**	PKPbc	PKPbc	05 48 34.2	-1.4
	comp=Z,0.5nm,0.7s,baz=148,

YLYR					Smax				
	216nm,0.3s								
KMO	**Kumora**	**0.74**	**41**	*i*	Pg	Pg	05 56 07.0	-1.4	
KMO				*i*	Sg	Sg	05 56 17.3	-0.7	
KMO					Pmax				
	91nm,0.5s								
KMO					Smax				
	323nm,1.0s								
SYVR	**Suvo**	**1.69**	**187**	*e*	Pn	Pn	05 56 23.5	-0.2	
SYVR				⇓	*i* Pg	Pg	05 56 25.0	-1.4	
SYVR				*i*	Sg	Sg	05 56 47.8	-0.5	
SYVR					Pmax				
	50nm,0.4s								
SYVR					Smax				
	177nm,0.6s								
UKT	**Uakit**	**1.88**	**84**	*e*	Pn	Pn	05 56 26.8	+0.4	
UKT				⇑	*i* Pg	Pg	05 56 27.5	-2.6	
UKT				*e*	Sg	Sg	05 56 53.4	-1.1	
UKT					Pmax				
	81nm,0.6s								
UKT					Smax				
	339nm,0.5s								
OGRR	**Ongureny**	**2.33**	**225**	*e*	Pn	Pn	05 56 33.3	+0.8	
OGRR				*e*	Pg	Pg	05 56 34.8	-3.9	
OGRR				*i*	Sg	Sg	05 57 06.2	-2.6	
OGRR					Pmax				
	27nm,0.4s								
OGRR					Smax				
	165nm,0.4s								
NLYR	**Nelyaty**	**3.23**	**67**	*e*	Pn	Pn	05 56 45.9	+0.9	
NLYR				*i*	Pg	Pg	05 56 51.9	-4.1	
NLYR				*i*	Sg	Sg	05 57 34.5	-3.4	
NLYR					Pmax				
	22nm,0.7s								
NLYR					Smax				
	69nm,1.1s								
TUP	**Tupik**	**5.62**	**95**	*e*	Sg	Sg	05 58 49.1	-5.4	
TUP					Smax				
	22nm,1.0s								
KPC	**Khapcheranga**	**5.77**	**167**	*e*	Pg	Pg	05 57 36.7	-7.8	
KPC				*i*	Sg	Sg	05 58 52.6	-6.6	
KPC					Pmax				
	4.0nm,0.6s								
KPC					Smax				
	18nm,0.9s								
SONM	**Songino Array**	**7.90**	**200**		Pn	Pn	05 57 50.3	+1.3	
	0.1nm,0.3s,baz=25,slow=15,SNR=3.1								
SONM					Lg		06 00 02.8		
	0.4nm,0.3s,baz=14,slow=29,SNR=8.0								
ZALV	**Zalesovo Beam**	**14.82**	**275**		Pn	Pn	05 59 24.2	+0.7	
	0.1nm,0.3s,baz=71,slow=11,SNR=5.3								
MKAR	**Makanchi Array**	**19.48**	**256**		P	Pn	06 00 24.2	+2.0	
	0.1nm,0.3s,baz=42,slow=9.0,SNR=6.2								
KURK	**Kurchatov**	**19.53**	**270**		P	Pn	06 00 23.5	+0.7	
	baz=69,slow=12								

IDC 10 05:56:12.5±3.2, 2990N×14157E, h74km±29km, mb3.4/2, mb1 3.6/4, mb1mx3.2/21, mbtmp3.5/4, Error ellipse: s-maj=188.1km s-min=16.5km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.84**	**169**	P	Pn	05 56 55.8	+0.2
	18nm,0.3s,baz=255,slow=20,SNR=8.3						
CBIJ				S	Sn	05 57 28.9	+0.1
	35nm,0.3s,baz=278,slow=23,SNR=5.5						
MJAR	**Matsushiro Arr**	**7.20**	**338**	P	Pn	05 57 55.8	+0.8
	1.5nm,0.3s,baz=158,slow=12,SNR=8.9						
WRA	**Warramunga Arr**	**50.03**	**189**	P	P	06 05 00.7	+1.1
	0.4nm,0.8s,baz=8.0,slow=7.8,SNR=5.5						
KURK	**Kurchatov**	**50.66**	**313**	P	P	06 05 04.1	0.0
	baz=89,slow=7.4						
BRTR	**Keskin Array B**	**83.71**	**312**	P	P	06 08 32.8	-0.5
	1.1nm,0.8s,baz=69,slow=8.2,SNR=5.2						

KRSC 10 05:57:43.7±0.5, 5332N×16245E, h42km±41km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.31**	**341**	P	Pn	05 58 05.6	+0.1
MKZ				S	Sn	05 58 21.6	-0.1
NLC	**Nalytchevo**	**1.87**	**267**	*e*P	Pn	05 58 14.9	+1.7
NLC				*e*S	Sn	05 58 37.9	+2.4
KII	**Karymskiy**	**1.92**	**293**	*e*P	Pn	05 58 15.3	+1.4
KII				*e*S	Sn	05 58 38.5	+1.7
AVH	**Avacha**	**2.23**	**270**	*e*P	Pn	05 58 20.9	+2.8
AVH				*e*S	Sn	05 58 47.8	+3.5
PET	**Petropavlovsk**	**2.31**	**264**	*e*P	Pn	05 58 21.6	+2.5
PET				*e*S	Sn	05 58 48.5	+2.3
TUMR	**Tumrok**	**2.39**	**326**	S	Sn	05 58 52.4	+4.2
RUS	**Russkaya**	**2.55**	**251**	*e*P	Pn	05 58 24.0	+1.6
RUS				*e*S	Sn	05 58 53.4	+1.3
GNL	**Ganaly**	**2.72**	**280**	*e*P	Pn	05 58 27.8	+3.0
GNL				*e*S	Sn	05 59 00.4	+4.0
KMNR	**Kamenistaya**	**2.76**	**333**	P	Pn	05 58 28.1	+2.7
KMNR				S	Sn	05 59 01.3	+3.9
KBTR	**Krutoberegovo**	**2.90**	**4**	P	Pn	05 58 27.7	+0.4
KBTR				S	Sn	05 59 00.8	-0.1
KIRR	**Kirishev**	**2.91**	**336**	S	Sn	05 59 06.2	+5.1
KPT	**Kopyto**	**2.95**	**335**	*e*S	Sn	05 59 06.9	+4.8
KRSR	**Krestovskiy**	**3.10**	**340**	P	Pn	05 58 33.8	+3.8
KRSR				S	Sn	05 59 09.7	+3.9

*ISCJB **10** 06:21:01.1±1.7, 2520N±009×12528E±007, h18km±14km, mb3.4/2, MS3.3/2, Error ellipse: s-maj=15.9km s-min=9.8km az=157.9*
*JMA **10** 06:21:02.7±0.1, 2474N×12544E, h47km±1km, M3.3*
JMA Felt I J1.
*IDC **10** 06:21:04.0±3.9, 2555N×12487E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/19, mbtmp3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/25, Error ellipse: s-maj=260.6km s-min=23.8km az=63.0*

ISC 10 06:21:03.5±1.2, 249N±02×1254E±02, h42km±10km, n14, σ0898/15, mb3.4/2, MS3.3/2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.12**	**193**	P	**Pn**	**06 21 09.9**	**-0.6**
JOGS				S	**Sn**	**06 21 15.1**	**-0.2**
JMJ	**Miyako jima 2**	**0.14**	**244**	P	**Pn**	**06 21 10.3**	**-0.3**
JMJ				S	**Sn**	**06 21 15.7**	**+0.2**
JTJ	**Tarama**	**0.71**	**251**	P	**Pn**	**06 21 15.8**	**-1.3**
JTJ				S	**Sn**	**06 21 25.6**	**-1.3**
JIJ	**Ishigaki jima**	**1.28**	**247**	P	**Pn**	**06 21 24.1**	**-0.9**
JIJ				S	**Sn**	**06 21 40.9**	**-0.1**
JKRS	**Kuro-shima**	**1.45**	**244**	P	**Pn**	**06 21 28.0**	**+0.8**
JKRS				*e*S	**Sn**	**06 21 46.5**	**+1.5**
IRIF	**Iriomote-Funau**	**1.65**	**251**	P	**Pn**	**06 21 30.6**	**+0.7**
IRIF				*e*S	**Sn**	**06 21 51.3**	**+1.4**
JKE	**Kume jima 2**	**1.89**	**40**	P	**Pn**	**06 21 35.2**	**+1.9**
KSRS	**Korea Array**	**12.71**	**9**	LR	LR	06 28 35.9	
	comp=Z,52nm,19.3s,baz=190,slow=37						
SONM	**Songino Array**	**27.42**	**331**	LR	LR	06 38 14.9	
	comp=Z,128nm,18.2s,MS3.5,baz=200,slow=39						
PETK	**Petropavlovsk-**	**37.17**	**32**	LR	LR	06 45 02.6	
	comp=Z,25nm,18.2s,MS3.0,baz=18,slow=39						
MKAR	**Makanchi Array**	**40.60**	**314**	P	**P**	**06 28 38.6**	**-0.4**
	0.5nm,0.6s,mb3.3,baz=95,slow=9.6,SNR=5.9						
ZALV	**Zalesovo Beam**	**41.84**	**325**	P	**P**	**06 28 48.1**	**-1.1**
	0.5nm,0.4s,mb3.5,baz=103,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**45.39**	**169**	P	pP	06 29 29.6	-0.2
	1.2nm,0.9s,baz=350,slow=8.6,SNR=6.5						
ASAR	**Alice Springs**	**48.95**	**170**	P	pP	06 29 58.7	+1.1
	0.2nm,0.6s,baz=354,slow=15,SNR=4.1						

IDC 10 06:21:58.0±3.4, 1482S×17432W, h89km±37km, mb3.3/4, mb1 3.6/5, mb1mx3.4/18, mbtmp3.4/5, Error ellipse: s-maj=52.5km s-min=23.9km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.62**	**70**	P	Pn	06 22 38.5	+0.1
	22nm,0.3s,baz=234,slow=8.7,SNR=9.4						
AFI				S	Sn	06 23 05.6	-3.9
	26nm,0.3s,baz=26,slow=22,SNR=8.0						
URZ	**Urewera**	**24.55**	**196**	P	P	06 27 09.5	+0.2
	2.5nm,0.4s,baz=355,slow=8.1,SNR=6.0						
WRA	**Warramunga Arr**	**49.12**	**256**	P	P	06 30 37.5	+0.7
	0.1nm,0.4s,baz=96,slow=6.5,SNR=6.0						
ASAR	**Alice Springs**	**49.45**	**251**	P	P	06 30 38.5	-0.9
	0.2nm,0.3s,baz=82,slow=8.9,SNR=5.1						
NVAR	**Mina Array Bea**	**74.50**	**43**	P	P	06 33 27.2	+0.4
	0.9nm,0.8s,baz=240,slow=8.2,SNR=5.3						

IDC 10 06:40:51.0±3.6, 2297N×14309E, h96km±41km, mb3.4/6, mb1 3.6/7, mb1mx3.4/20, mbtmp3.5/7, Error ellipse: s-maj=72.4km s-min=19.7km az=75.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**4.19**	**349**	P	Pn	06 41 52.8	0.0
	64nm,0.3s,baz=132,slow=8.4,SNR=26						
CBIJ				S	Sn	06 42 37.8	-2.8
	91nm,0.3s,baz=286,slow=23,SNR=14						
SONM	**Songino Array**	**38.32**	**320**	P	P	06 48 02.7	+0.6
	0.5nm,0.5s,baz=129,slow=7.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**41.43**	**272**	P	P	06 48 28.1	-0.2
	0.7nm,0.3s,baz=61,slow=7.3,SNR=3.2						
WRA	**Warramunga Arr**	**43.50**	**192**	P	P	06 48 45.1	+0.2
	0.3nm,0.3s,baz=15,slow=8.1,SNR=12						
ASAR	**Alice Springs**	**47.21**	**192**	P	P	06 49 13.9	-0.3
	0.3nm,0.8s,baz=11,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**53.17**	**321**	P	P	06 49 58.2	-0.7
	0.6nm,0.3s,baz=95,slow=6.4,SNR=4.5						
MKAR	**Makanchi Array**	**53.78**	**312**	P	P	06 50 03.8	+0.3
	0.8nm,0.5s,baz=85,slow=9.4,SNR=13						

*ISCJB **10** 06:41:26.6±1.2, 3658N±006×13E±0.1, h9km±12km, Error ellipse: s-maj=14.9km s-min=9.8km az=164.8*
*MDD **10** 06:41:28.0±0.6, 3658N×131E, h0km, mb3.2/5, Error ellipse: s-maj=12.2km s-min=5.2km az=81.0, PRIMO*
*CSEM **10** 06:41:27.9, 3643N×132E, h0km, ML3.2, After ALG*
*CRAAG **10** 06:41:27.9, 3643N×132E, Ml3.2*

ISC 10 06:41:27.4±1.3, 3658N±008×13E±01, h8km±14km, n11, σ0887/14, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.34**	**148**	P	**Pg**	**06 41 34.0**	**-0.1**
ECHF	**Ech Chlef**	**0.42**	**177**	P	**Pg**	**06 41 34.8**	**-0.9**
ECHA	**Ech Chlef**	**0.43**	**174**	P	**Pg**	**06 41 34.8**	**-1.0**
EANR	**'Ain N'Sour**	**0.65**	**195**	P	**Pg**	**06 41 40.8**	**+0.8**
ETRT	**Tiaret**	**1.19**	**180**	P	**Pn**	**06 41 50.1**	**-0.2**
EMHD	**Djebel Mahouad**	**1.38**	**105**	P	**Pn**	**06 41 53.7**	**+0.8**
EIBI	**Ibiza**	**2.44**	**1**	P	**Pn**	**06 42 07.8**	**+0.2**
	0.7nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**06 42 35.4**	**-2.2**
	4.1nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.44**	**331**	P	**Pn**	**06 42 08.2**	**+0.6**
	0.2nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**06 42 36.9**	**-0.7**
	2.9nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.06**	**313**	P	**Pn**	**06 42 16.5**	**+0.4**
	0.4nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**06 42 52.6**	**-0.3**
	0.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.03**	**340**	P	**Pn**	**06 42 30.8**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.77**	**358**	P	**Pn**	**06 42 40.1**	**+0.6**
	0.2nm,0.1s,SNR=7.9						

*NEIC **10** 06:57:20.1, 1649N×9804W, h24km±16km, MD3.9(MEX), After MEX.*

MEX 10 06:57:20.1±1.2, 1649N×9804W, h24km±16km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.13**	**219**	*i* P	Pb	06 57 23.1	-1.7
PNIG				*i* S	Sb	06 57 27.2	-0.8
UTMO	**Huajuapan**	**1.35**	**10**	*i* P	Pn	06 57 40.5	-3.0
UTMO				*i* S	Sn	06 57 57.4	-3.3
VHO	**Vista Hermosa**	**1.38**	**65**	*i* P	Pn	06 57 41.9	-2.1
VHO				*i* S	Sn	06 57 57.2	-4.3
ACX	**Acapulco**	**1.83**	**282**	*i* P	Pn	06 57 48.9	-1.3
ACX				*i* S	Sn	06 58 10.0	-2.6
TPIG	**Tehuac#an**	**2.02**	**19**	*e*P	Pn	06 57 50.8	-2.0
TPIG				*i* S	Sn	06 58 14.7	-2.7
MEIG	**Mezcala**	**2.07**	**314**	*e*P	Pn	06 57 55.1	+1.6
MEIG				*i* S	Sn	06 58 15.0	-3.6
CAIG	**El Cayaco**	**2.20**	**285**	*i* P	Pn	06 57 53.1	-2.1
CAIG				*i* S	Sn	06 58 17.8	-3.9
PLIG	**Platanillo**	**2.35**	**324**	*e*P	Pn	06 57 56.1	-1.1
PLIG				*i* S	Sn	06 58 21.9	-3.4
PPM	**Popocatepetl**	**2.62**	**348**	*i* P	Pn	06 57 57.4	-3.6
PPM				*i* S	Sn	06 58 29.2	-2.8
MZVM		**2.91**	**337**	*e*P	Pn	06 58 04.1	-0.8
MZVM				*i* S	Sn	06 58 37.1	-2.1
IIO	**Organos**	**3.15**	**348**	*e*P	Pn	06 58 13.2	+4.9
IIO				*i* S	Sn	06 58 48.5	+3.4
ZIIG	**Zihuatanejo**	**3.46**	**289**	*e*P	Pn	06 58 14.2	+1.7
ZIIG				*i* S	Sn	06 58 57.3	+4.7

*NEIC **10** 07:40:28.3, 1789N×10174W, h15km, MD4.2(MEX), After MEX.*

MEX 10 07:40:27.8±0.8, 1789N×10174W, h11km±6km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.39**	**137**	*i* P	Pg	07 40 34.6	-0.8
ZIIG				*i* S	Sg	07 40 41.2	+0.7
MMIG	**Aquila**	**1.58**	**285**	*i* P	Pn	07 40 52.0	-3.8
MMIG				*i* S	Sn	07 41 11.7	-4.5
CAIG	**El Cayaco**	**1.64**	**121**	*e*P	Pn	07 40 53.0	-3.6
CAIG				*i* S	Sn	07 41 12.6	-5.1
MOIG	**Morelia**	**1.85**	**16**	*i* P	Pn	07 40 56.1	-3.4
MOIG				*i* S	Sn	07 41 18.9	-4.0
ACX	**Acapulco**	**2.02**	**120**	*i* P	Pn	07 40 59.6	-2.2
ACX				*i* S	Sn	07 41 21.7	-5.4
MEIG	**Mezcala**	**2.02**	**89**	*i* P	Pn	07 40 58.7	-3.1
MEIG				*i* S	Sn	07 41 22.6	-4.5
PLIG	**Platanillo**	**2.19**	**76**	*i* P	Pn	07 41 01.1	-3.0
PLIG				*i* S	Sn	07 41 26.9	-4.3
MZVM		**2.71**	**61**	*e*P	Pn	07 41 08.6	-2.7
MZVM				*i* S	Sn	07 41 40.4	-3.7
YAIG	**Yautepec**	**2.71**	**69**	*e*P	Pn	07 41 08.6	-2.9
YAIG				*i* S	Sn	07 41 39.9	-4.3
UNM	**Universidad Na**	**2.82**	**59**	*e*P	Pn	07 41 10.5	-2.3
UNM				*i* S	Sn	07 41 44.4	-2.4
SFJM	**Santa Fe**	**2.86**	**335**	*i* P	Pn	07 41 11.0	-2.4
SFJM				*i* S	Sn	07 41 43.9	-3.9
PBVM	**Pinon**	**2.95**	**58**	*e*P	Pn	07 41 11.9	-2.8
PBVM				*i* S	Sn	07 41 45.2	-4.9
PTVM	**Pico Tres Padr**	**3.01**	**55**	*e*P	Pn	07 41 11.5	-4.0
PTVM				*i* S	Sn	07 41 47.7	-3.9
PPM	**Popocatepetl**	**3.18**	**68**	*e*P	Pn	07 41 17.2	-0.6
PPM				*i* S	Sn	07 41 48.2	-7.5
PPM	**Popocatepetl**	**3.18**	**68**	*e*P	Pn	07 41 16.6	-1.2
PPM				*e*P		07 41 17.2	
PPM				*i* S	Sn	07 41 48.2	-7.5
IIO	**Organos**	**3.32**	**59**	*e*P	Pn	07 41 15.8	-4.0
IIO				*i* S	Sn	07 41 58.8	-0.5
UTMO	**Huajuapan**	**3.75**	**90**	*e*P	Pn	07 41 21.9	-3.8
UTMO				*i* S	Sn	07 42 04.5	-5.3
PNIG	**Pinotepa**	**3.76**	**113**	*e*P	Pn	07 41 22.4	-3.5
PNIG				*i* S	Sn	07 42 07.8	-2.3
ANIG	**Ahuacatlan**	**4.10**	**321**	*i* P	Pn	07 41 30.0	-0.5
ANIG				*i* S	Sn	07 42 19.3	+0.9
TPIG	**Tehuac#an**	**4.20**	**82**	*e*P	Pn	07 41 34.2	+2.5
TPIG				*i* S	Sn	07 42 24.3	+3.5
VHO	**Vista Hermosa**	**4.85**	**99**	*e*P	Pn	07 41 38.4	-2.3
VHO				*i* S	Sn	07 42 36.0	-0.9
ZAIG	**Zacatecas**	**4.92**	**351**	*e*P	Pn	07 41 40.9	-0.8
ZAIG				*i* S	Sn	07 42 43.7	+5.2
LNIG	**Linares**	**7.29**	**16**	*e*P	Pn	07 42 17.3	+3.0
LNIG				*i* S	Sn	07 43 36.7	-0.4

IDC 10 07:52:11.2±7.7, 1332N×9365E, h42km±70km, mb3.6/6, mb1 3.7/7, mb1mx3.5/20, mbtmp3.6/7, ML3.9/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/36, Error ellipse: s-maj=49.6km s-min=19.2km az=57.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.21**	**44**	P	Pn	07 53 55.8	+1.7
	0.6nm,0.3s,baz=234,slow=15,SNR=3.2						
CMAR				S	Sn	07 55 13.1	-1.7
	0.6nm,0.3s,baz=237,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**34.70**	**346**	P	P	07 58 57.4	+0.4
	1.7nm,0.7s,baz=163,slow=8.9,SNR=18						
MKAR				LR	LR	08 14 26.0	
	comp=Z,20nm,18.4s,baz=343,slow=38						
SONM	**Songino Array**	**36.01**	**15**	P	P	07 59 09.3	+1.1
	0.4nm,0.4s,baz=194,slow=5.5,SNR=6.7						
KSRS	**Korea Array**	**38.85**	**46**	LR	LR	08 15 42.3	
	comp=Z,21nm,19.9s,baz=97,slow=36						
ZALV	**Zalesovo Beam**	**41.12**	**352**	P	P	07 59 50.6	-0.4
	1.8nm,0.6s,baz=169,slow=8.5,SNR=12						
WRA	**Warramunga Arr**	**51.92**	**129**	P	P	08 01 15.9	-0.2
	0.5nm,0.6s,baz=312,slow=7.9,SNR=3.7						
ASAR	**Alice Springs**	**53.86**	**133**	P	P	08 01 30.3	0.0
	0.5nm,0.3s,baz=313,slow=7.1,SNR=16						
BRTR	**Keskin Array B**	**58.60**	**309**	P	P	08 02 03.0	-1.0
	0.8nm,0.7s,baz=129,slow=9.7,SNR=3.8						
MAW	**Mawson**	**83.74**	**191**	LR	LR	08 35 46.8	
	comp=Z,34nm,21.2s,baz=113,slow=31						

*ISCJB **10** 07:56:53.6±1.4, 2303N±009×1415E±02, h235km±16km, mb4.0/11, Error ellipse: s-maj=34.9km s-min=13.4km az=168.7*
*IDC **10** 07:56:54.6±1.5, 2307N×14157E, h229km±15km, mb3.7/8, mb1 3.8/9, mb1mx3.5/20, mbtmp3.7/9, Error ellipse: s-maj=26.4km s-min=10.8km az=76.0*

ISC 10 07:56:54.8±1.3, 2305N±009×1416E±02, h232km±15km, n18, σ0962/17, mb4.0/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**4.07**	**8**	P	**Pn**	**07 58 00.0**	**+1.4**
	51nm,0.3s,baz=290,slow=23,SNR=123						
CBIJ				S	**S**	**07 58 48.0**	**-1.2**
	79nm,0.3s,baz=128,slow=23,SNR=24						
KSRS	**Korea Array**	**18.53**	**324**	P	**P**	**08 00 54.6**	**+0.4**
	0.2nm,0.3s,baz=151,slow=9.3,SNR=3.1						
SONM	**Songino Array**	**37.34**	**320**	P	**P**	**08 03 45.3**	**+0.3**
	0.7nm,0.4s,mb3.5,baz=126,slow=6.7,SNR=7.1						
WB2	**Warramunga Arr**	**43.31**	**190**	*e*P	**P**	**08 04 34.0**	**-0.1**
WRA	**Warramunga Arr**	**43.31**	**190**	P	**P**	**08 04 34.2**	**+0.1**
	8.9nm,0.3s,mb4.7,baz=6.6,slow=8.5,SNR=124						
ASAR	**Alice Springs**	**47.03**	**190**	P	**P**	**08 05 02.9**	**-0.3**
	1.8nm,0.6s,mb3.6,baz=16,slow=13,SNR=40						
ZALV	**Zalesovo Beam**	**52.22**	**321**	P	**P**	**08 05 41.5**	**-0.4**
	3.1nm,0.4s,mb4.1,baz=108,slow=7.3,SNR=7.6						
MKAR	**Makanchi Array**	**52.67**	**312**	P	**P**	**08 05 45.7**	**+0.3**
	1.8nm,0.4s,mb3.9,baz=91,slow=9.0,SNR=24						
STKA	**Stephens Creek**	**54.62**	**180**	*e*P	**P**	**08 05 59.4**	**-0.2**
	1.3nm,0.6s,mb3.6						
STKA	**Stephens Creek**	**54.62**	**180**	P	**P**	**08 05 59.5**	**-0.1**
	0.9nm,0.4s,mb3.7,baz=342,slow=6.8,SNR=6.0						
FORT	**Forrest**	**55.07**	**194**	*e*P	**P**	**08 06 02.4**	**-0.4**
	7.8nm,0.3s,mb4.7						
KURK	**Kurchatov**	**55.46**	**317**	P	**P**	**08 06 05.8**	**+0.4**
	baz=92,slow=7.7						
BVAR	**Borovoye Array**	**60.66**	**319**	P	**P**	**08 06 41.4**	**0.0**
	6.0nm,0.3s,mb4.6,baz=90,slow=8.2,SNR=26						
ARCES	**ARCESS Array B**	**77.16**	**341**	P	**P**	**08 08 22.1**	**-0.4**
	2.1nm,0.6s,mb4.0,baz=65,slow=8.8,SNR=14						
JOF	**Joensuu**	**78.44**	**334**	*e*p	**P**	**08 08 28.7**	**-1.0**
	1.9nm,0.3s,mb4.2						
NVAR	**Mina Array Bea**	**83.48**	**51**	P	**P**	**08 08 57.6**	**+0.9**
	0.4nm,0.6s,mb3.3,baz=294,slow=4.8,SNR=7.0						
TORD	**Torodi Ar. Bea**	**126.72**	**308**	PKP	PKPdf	08 15 30.6	-0.9
	0.1nm,0.6s,baz=5.6,slow=1.6,SNR=4.7						
PLCA	**Paso Flores**	**147.78**	**131**	PKPbc	PKPbc	08 16 12.3	0.0
	0.6nm,0.4s,baz=277,slow=5.0,SNR=4.2						

*NEIC **10** 08:02:20.2, 1699N×100.13W, h11km, MD4.0(MEX), After MEX.*

MEX 10 08:02:20.2±1.1, 1699N×10013W, h11km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.14**	**294**	*i* P	Pg	08 02 22.8	-0.7
CAIG				*i* S	Sg	08 02 25.7	0.0
ACX	**Acapulco**	**0.24**	**120**	*i* P	Pg	08 02 24.5	-0.6
ACX				*i* S	Sg	08 02 28.4	-0.1
MEIG	**Mezcala**	**1.05**	**28**	*i* P	Pg	08 02 37.0	-3.5
MEIG				*i* S	Sg	08 02 49.9	-4.3
ZIIG	**Zihuatanejo**	**1.41**	**296**	*i* P	Pn	08 02 43.0	-2.9
ZIIG				*i* S	Sn	08 02 58.2	-6.4
PLIG	**Platanillo**	**1.52**	**23**	*i* P	Pn	08 02 44.6	-2.8
PLIG				*i* S	Sn	08 03 02.3	-4.9
PNIG	**Pinotepa**	**2.01**	**107**	*e*P	Pn	08 02 51.8	-2.4
PNIG				*i* S	Sn	08 03 15.9	-3.4
PNIG				*i* S	Sn	08 03 17.0	-2.4
MZVM		**2.35**	**21**	*e*P	Pn	08 02 56.3	-2.5
MZVM				*i* S	Sn	08 03 24.1	-3.6
UTMO	**Huajuapan**	**2.38**	**69**	*e*P	Pn	08 02 57.1	-2.1
UTMO				*i* S	Sn	08 03 25.3	-3.0
PPM	**Popocatepetl**	**2.52**	**35**	*i* P	Pn	08 02 58.7	-2.4
PPM				*i* S	Sn	08 03 29.1	-2.7
PBVM	**Pinon**	**2.63**	**22**	*e*P	Pn	08 03 04.1	+1.4
PBVM				*i* S	Sn	08 03 33.3	-1.4
PTVM	**Pico Tres Padr**	**2.77**	**20**	*e*P	Pn	08 03 01.8	-2.7
PTVM				*i* S	Sn	08 03 32.1	-5.8
IIO	**Organos**	**2.92**	**27

mb3.9/6,MS3.0/2,Error ellipse: s-maj=13.3km s-min=8.3km az=44.9
DJA ***10*** *08:20:58,0.13S×12887E,h20km,MLv4.2/6*
NEIC ***10*** *08:21:00.3±0.6,026S×12886E,h35km,mb4.1/3,Error ellipse: s-maj=18.7km s-min=9.8km az=69.0*
IDC ***10*** *08:21:05.2±14.0,041S×12861E,h79km±136km,mb3.4/6, mb1 3.6/7,mb1mx3.5/16,mbtmp3.5/7,ML4.0/1,MS3.1/4, Ms1 3.1/4,ms1mx2.6/35,Error ellipse: s-maj=145.1km s-min=18.8km az=61.0*

ISC 10 08:20:57.5±3.9,020S±007×12886E±006,h15km±26km, n26,σ0=89/22,mb3.9/6,MS3.0/2,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.42**	**252**	P	**Pn**	**08 21 22.2**	**-0.6**
LBMI	**Labuha**	**1.42**	**252**	S	**Sn**	**08 21 41.8**	**+0.6**
TNTI	**Ternate**	**1.77**	**303**	P	**Pn**	**08 21 26.8**	**-0.8**
TNTI	**Ternate**	**1.77**	**303**	S	**Sn**	**08 21 49.7**	**-0.2**
SWI	**Sorong**	**2.49**	**105**	P	**Pn**	**08 21 38.0**	**+0.5**
AAI	**Ambon**	**3.53**	**191**	P	**Pn**	**08 21 53.6**	**+1.8**
AAI	**Ambon**	**3.53**	**191**	P	**Pn**	**08 21 51.5**	**-0.3**
DAV	**Davao City (W)**	**7.93**	**336**	LR	LR	08 26 31.7	
	comp=Z,215nm,18.1s,baz=120,slow=41						
KAPI	**Kappang**	**10.27**	**242**	P	**Pn**	**08 23 25.9**	**+1.5**
	1.2nm,0.3s,baz=102,slow=10,SNR=5.7						
KAPI	**Kappang**	**10.27**	**242**	*e*Pn	**Pn**	**08 23 26.2**	**+1.8**
BATI	**Baumata**	**11.20**	**207**	LR	LR	08 28 21.3	
	comp=Z,96nm,19.2s,baz=138,slow=40						
KAKA	**Kakadu**	**12.93**	**164**	*e*P	Px	08 23 47.0	
	7.0nm,0.4s						
WRAB	**Tennant Creek**	**20.34**	**165**	*e*P	**P**	**08 25 32.7**	**-0.6**
	3.3nm,0.6s						
WRA	**Warramunga Arr**	**20.34**	**165**	P	**P**	**08 25 32.7**	**-0.7**
	1.7nm,0.8s,baz=345,slow=12,SNR=13						
WB2	**Warramunga Arr**	**20.35**	**165**	*e*P	**P**	**08 25 32.7**	**-0.7**
ASAR	**Alice Springs**	**23.84**	**168**	P	**P**	**08 26 10.0**	**-0.2**
	2.3nm,0.8s,mb3.7,baz=344,slow=8.7,SNR=26						
XMIS	**Christmas Isla**	**25.23**	**245**	P	**P**	**08 26 21.6**	**-1.5**
STKA	**Stephens Creek**	**33.73**	**160**	*e*P	**P**	**08 27 39.4**	**+1.0**
	3.9nm,1.9s,mb4.0						
STKA	**Stephens Creek**	**33.73**	**160**	P	**P**	**08 27 39.0**	**+0.6**
	0.6nm,0.4s,mb3.9,baz=358,slow=11,SNR=4.3						
STKA				LR	LR	08 41 09.2	
	comp=Z,32nm,20.1s,MS3.0,baz=22,slow=36						
KSRS	**Korea Array**	**37.48**	**359**	LR	LR	08 44 40.3	
	comp=Z,19nm,19.4s,MS2.9,baz=180,slow=38						
SONM	**Songino Array**	**51.68**	**341**	P	**P**	**08 30 06.0**	**+2.2**
	0.7nm,1.0s,mb3.5,baz=149,slow=8.0,SNR=2.4						
MK31	**Makanchi Array**	**61.97**	**326**	*e*P	**P**	**08 31 17.1**	**+0.2**
MKAR	**Makanchi Array**	**61.97**	**326**	P	**P**	**08 31 16.9**	**0.0**
	0.9nm,0.5s,mb4.2,baz=116,slow=7.3,SNR=8.3						
MKAR	**Makanchi Array**	**61.97**	**326**	P	**P**	**08 31 16.9**	**0.0**
ZALV	**Zalesovo Beam**	**65.03**	**333**	P	**P**	**08 31 36.6**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=120,slow=8.5,SNR=2.4						
KURK	**Kurchatov**	**66.17**	**328**	*e*P	**P**	**08 31 44.0**	**-0.4**
	3.8nm,0.8s,mb4.5						

NIED ***10*** *08:29:00,3260N×13000E,h5km,Mw3.8 Best double couple: M0=4.87000×10^14 NP1:φ=245.00000°,δ=63.00000°, λ=-110.00000°. NP2:φ=103.00000°,δ=33.00000°, λ=-57.00000°.*
ISCJB ***10*** *08:29:42.8±0.8,3256N±006×12996E±006,h15km±7km, mb3.5/3,Error ellipse: s-maj=9.6km s-min=8.1km az=177.9*
IDC ***10*** *08:29:42.6±1.3,3246N×12992E,h0km,mb3.3/3, mb1 3.5/5,mb1mx3.3/22,mbtmp3.3/5,ML3.1/2,Error ellipse: s-maj=41.4km s-min=21.3km az=75.0*
JMA ***10*** *08:29:43.1,3260N×12996E,h13km±1km,M3.7*
JMA Felt II J1.

ISC 10 08:29:43.6±0.6,3260N±004×12998E±005,h7km±5km,n9, σ0=92/14,mb3.5/3,4C,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGSJ	**Nagasakinomoza**	**0.16**	**284**	⇑P	**Pg**	**08 29 46.6**	**-0.2**
NGSJ				S	**Sg**	**08 29 49.0**	**0.0**
JHD	**Hondo**	**0.19**	**134**	⇑P	**Pg**	**08 29 47.5**	**+0.1**
JHD				S	**Sg**	**08 29 50.6**	**+0.7**
JUR	**Ureshino**	**0.50**	**357**	⇑P	**Pg**	**08 29 52.7**	**-0.5**
JUR				S	**Sg**	**08 30 00.1**	**+0.4**
JTA	**Tamana**	**0.59**	**52**	⇑P	**Pg**	**08 29 54.4**	**-0.6**
JTA				*e*S	**Sg**	**08 30 02.4**	**-0.4**
KSRS	**Korea Array**	**5.13**	**341**	Pn	**Pn**	**08 31 00.7**	**-0.1**
	0.8nm,0.3s,baz=157,slow=14,SNR=4.2						
KSRS				Pg	**Pg**	**08 31 16.5**	**-5.4**
	2.2nm,0.3s,baz=160,slow=16,SNR=11						
KSRS				Lg		08 32 21.9	
	2.3nm,0.3s,baz=181,slow=30,SNR=5.7						
MJAR	**Matsushiro Arr**	**7.85**	**58**	Pn	**Pn**	**08 31 41.1**	**+3.1**
	0.2nm,0.3s,baz=241,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**38.74**	**306**	P	**P**	**08 37 10.2**	**+1.9**
	0.4nm,0.8s,mb3.2,baz=104,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**52.41**	**175**	P	**P**	**08 38 55.3**	**-1.3**
	0.3nm,0.5s,mb3.5,baz=353,slow=8.1,SNR=4.6						
ASAR	**Alice Springs**	**56.07**	**176**	P	**P**	**08 39 22.4**	**-0.8**
	0.5nm,0.6s,mb3.8,baz=7.4,slow=14,SNR=13						

ISK ***10*** *08:33:40.4,3728N×2829E,h8km,MD2.7*
CSEM ***10*** *08:33:40.6±0.1,3724N×2821E,h15km,MD2.7,Error ellipse: s-maj=3.3km s-min=2.2km az=10.0*
ISCJB ***10*** *08:33:41.0±0.7,3726N±005×2825E±004,h10km,Error ellipse: s-maj=7.9km s-min=4.2km az=26.1*
DDA ***10*** *08:33:41.1,3723N×2820E,h7km±4km,Md2.9*

ISC 10 08:33:41.4±0.7,3725N±008×2825E±005,h13km±10km, n11,σ0=97/17,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.12**	**167**	*e*PG	**Pg**	**08 33 43.5**	**-1.0**
YER				*e*SG	**Sg**	**08 33 46.9**	**+0.1**
MLSB	**Milas**	**0.38**	**277**	*e*PG	**Pg**	**08 33 47.9**	**-1.1**
MLSB				*e*SG	**Sg**	**08 33 55.6**	**+1.5**
TURN	**Turunc**	**0.47**	**143**	*i* P	**Pg**	**08 33 50.2**	**-0.4**
TURN				*i* S	**Sg**	**08 33 58.4**	**+1.6**
DALT	**Dalyan (Mudla)**	**0.57**	**147**	*e*PG	**Pg**	**08 33 52.3**	**-0.1**
BDRM	**Kayabasi**	**0.67**	**255**	*i* P	**Pg**	**08 33 53.9**	**-0.5**
BDRM				*i* S	**Sg**	**08 34 03.6**	**+0.4**
DAT	**Datca**	**0.75**	**226**	*e*PG	**Pg**	**08 33 55.4**	**-0.4**
BODT	**Bodrum**	**0.77**	**256**	*e*PG	**Pg**	**08 33 55.7**	**-0.7**
FETY	**Fethiye**	**0.90**	**132**	*e*PG	**Pg**	**08 33 58.8**	**0.0**
GCAM	**G?zelcaml?**	**0.93**	**299**	*e*P	**Pg**	**08 33 57.8**	**-1.4**
GCAM				*e*S	**Sg**	**08 34 14.0**	**+2.6**
GOLH	**Golhisar**	**1.04**	**90**	*e*P	**Pb**	**08 34 01.8**	**+0.5**
GOLH				*i* S	**Sb**	**08 34 24.7**	**+10**
KULA	**Kula-Manisa**	**1.31**	**14**	*e*PN	**Pn**	**08 34 05.3**	**0.0**

NEIC ***10*** *08:40:15.6,1703N×100.14W,h11km,MD3.6(MEX),After MEX.*

MEX 10 08:40:15.6±0.6,1703N×10014W,h11km±8km,MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.12**	**278**	*i* P	Pg	08 40 17.8	-0.8
CAIG				*i* S	Sg	08 40 20.4	-0.3
ACX	**Acapulco**	**0.27**	**127**	*i* P	Pg	08 40 20.6	-0.5
ACX				*i* S	Sg	08 40 25.1	+0.3
MEIG	**Mezcala**	**1.02**	**29**	*e*P	Pg	08 40 32.5	-2.8
MEIG				*i* S	Sg	08 40 44.7	-3.8
ZIIG	**Zihuatanejo**	**1.39**	**295**	*i* P	Pn	08 40 38.1	-2.9
ZIIG				*i* S	Sn	08 40 53.6	-5.7
PNIG	**Pinotepa**	**2.03**	**108**	*e*P	Pn	08 40 46.9	-2.9
PNIG				*i* S	Sn	08 41 10.9	-4.4
MZVM		**2.31**	**22**	*i* P	Pn	08 40 50.7	-3.0
MZVM				*i* S	Sn	08 41 19.2	-3.1
UTMO	**Huajuapan**	**2.37**	**70**	*i* P	Pn	08 40 51.1	-3.4
UTMO				*i* S	Sn	08 41 19.2	-4.4
PPM	**Popocatepetl**	**2.48**	**35**	*e*P	Pn	08 40 51.2	-4.8
PPM				*i* S	Sn	08 41 24.4	-2.1

IDC 10 08:49:49.4±50.0,1567S×17530W,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.6/16,mbtmp3.6/3,Error ellipse: s-maj=938.8km s-min=177.7km az=78.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.32**	**240**	P	P	08 57 45.4	+0.3
	2.0nm,1.2s,baz=85,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**48.00**	**257**	P	P	08 58 30.1	-0.4
	0.1nm,0.4s,baz=94,slow=7.6,SNR=6.1						
ASAR	**Alice Springs**	**48.29**	**252**	P	P	08 58 32.6	0.0
	1.3nm,0.6s,baz=88,slow=8.1,SNR=28						

IDC ***10*** *09:03:56.6±1.0,4336N×8722E,h0km,mb3.6/5,mb1 3.7/8, mb1mx3.6/24,mbtmp3.6/8,ML3.6/2,MS4.1/1,Ms1 4.1/1, ms1mx1.9/41,Error ellipse: s-maj=44.5km s-min=14.4km az=45.0*
ISCJB ***10*** *09:04:00.7±0.9,4371N±008×873E±0.1,h46km±8km, mb3.5/5,Error ellipse: s-maj=16.3km s-min=8.3km az=40.8*
BJI ***10*** *09:04:00.5,4353N×8741E,h13km,mb3.9,ML3.5*
NNC ***10*** *09:04:01.1±3.3,4371N×8691E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=26.0km s-min=21.0km az=95.0*
NEIC ***10*** *09:04:12.3±1.8,4427N×8682E,h74km±21km,Error ellipse: s-maj=24.4km s-min=13.6km az=174.0*

ISC 10 09:03:58.1±1.9,4340N±007×8724E±010,h10km±12km, n21,σ1=26/30,mb3.5/5,4C-8D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.54**	**38**	⇓*i*PG	**Pg**	**09 04 08.5**	**-0.1**
WMQ				SG	**Sg**	**09 04 16.0**	**+0.3**
WMQ				Smax			
	comp=N,2μm,0.4s						
WMQ				Smax			
	comp=E,2μm,0.4s						
MK31	**Makanchi Array**	**4.88**	**316**	Pn	**Pn**	**09 05 13.0**	**+1.6**
	comp=E,3.2nm,0.5s,baz=137,slow=14,SNR=269						
MK31				⇓Sn	**Sn**	**09 06 09.4**	**+1.5**
	comp=E,6.8nm,0.4s,baz=129,slow=25,SNR=5.2						
MK31				⇓Lg		09 06 25.9	
	comp=E,24nm,0.7s,baz=137,slow=25,SNR=4.2						
MK31	**Makanchi Array**	**4.88**	**316**	*e*Pn	**Pn**	**09 05 13.1**	**+1.7**
MK31				*e*Sn	**Sn**	**09 06 09.5**	**+1.6**
MKAR	**Makanchi Array**	**4.88**	**316**	Pn	**Pn**	**09 05 12.9**	**+1.4**
	comp=E,2.3nm,0.3s,baz=125,slow=15,SNR=166						
MKAR				Sn	**Sn**	**09 06 09.1**	**+1.2**
	comp=E,5.7nm,0.3s,baz=128,slow=25,SNR=5.5						
MKAR				Lg		09 06 25.6	
	comp=E,9.0nm,0.3s,baz=140,slow=29,SNR=6.2						
TKM2	**Tokmak 2**	**8.52**	**271**	⇓Pn	**Pn**	**09 06 04.0**	**+2.5**
	comp=E,3.1nm,1.4s						
TKM2				⇓Sn	**Sn**	**09 07 36.7**	**-1.0**
	comp=E,3.1nm,0.7s						
TKM2				⇓Lg		09 08 21.5	
	comp=E,4.8nm,0.7s						
TKM2	**Tokmak 2**	**8.52**	**271**	*e*Pn	**Pn**	**09 06 08.9**	**+7.4**
KURBB	**Kurchatov Arra**	**9.36**	**324**	⇓Pn	**Pn**	**09 06 11.9**	**-0.9**
	comp=E,0.5nm,0.6s,baz=132,slow=12						
KURBB				⇑Sn	**Sn**	**09 07 55.9**	**-2.1**
	comp=E,2.2nm,0.6s						
KURBB				⇑Lg		09 08 47.8	
	comp=E,4.7nm,0.7s						
KURK	**Kurchatov**	**9.39**	**324**	⇑Pn	**Pn**	**09 06 12.7**	**-0.6**
	comp=E,2.4nm,1.0s						
KURK				⇑Sn	**Sn**	**09 07 55.5**	**-3.3**
	comp=E,11nm,1.1s						
KURK				⇓Lg		09 08 48.9	
	comp=E,18nm,1.2s						
KURK	**Kurchatov**	**9.39**	**324**	Pn	**Pn**	**09 06 11.8**	**-1.4**
	baz=130,slow=14						
KURK				Sn	**Sn**	**09 08 00.6**	**+1.8**
	baz=106,slow=34						
KURK				Lg		09 08 53.0	
	baz=137,slow=33						
KURK	**Kurchatov**	**9.39**	**324**	Pn	**Pn**	**09 06 11.8**	**-1.4**
KURK				Sn	**Sn**	**09 08 00.6**	**+1.8**
KURK				Lg		09 08 53.0	
ZALV	**Zalesovo Beam**	**10.68**	**352**	Pn	**Pn**	**09 06 29.6**	**-1.3**
	comp=E,0.5nm,0.3s,baz=177,slow=13,SNR=4.6						
ZALV				Sn	**Sn**	**09 08 25.0**	**-5.5**
	comp=E,1.5nm,0.3s,baz=172,slow=24,SNR=8.1						
ZALV				Lg		09 09 41.9	
	comp=E,0.2nm,0.3s,baz=166,slow=19,SNR=2.2						
SONM	**Songino Array**	**14.12**	**65**	Pn	**Pn**	**09 07 27.8**	**+10**
	comp=E,0.2nm,0.3s,baz=255,slow=11,SNR=5.6						
SONM				Lg		09 11 25.8	
	comp=E,0.1nm,0.3s,baz=269,slow=28,SNR=5.8						
BVAR	**Borovoye Array**	**14.76**	**317**	Pn	**Pn**	**09 07 24.5**	**-2.2**
	comp=E,0.3nm,0.3s,baz=123,slow=12,SNR=2.3						
BVAR	**Borovoye Array**	**14.76**	**317**	Pn	**Pn**	**09 07 24.5**	**-2.2**
KSRS	**Korea Array**	**31.30**	**87**	P	**P**	**09 10 18.7**	**+0.4**
	comp=E,1.2nm,0.6s,mb3.9,baz=287,slow=9.5,SNR=4.3						
JHJ	**Hachijo jima 2**	**41.90**	**86**	LR	LR	09 30 41.8	
	comp=E,221nm,18.1s,baz=330,slow=38						
NB2	**NORSAR Subarra**	**46.87**	**320**	P	**P**	**09 12 33.4**	**+5.5**
	comp=Z,0.3nm,0.4s,mb3.6,baz=77,slow=5.9						
NOA	**NORSAR Array B**	**46.87**	**320**	P	**P**	**09 12 28.6**	**+0.6**
	comp=Z,0.7nm,0.8s,mb3.7,baz=75,slow=7.8,SNR=2.7						
WRA	**Warramunga Arr**	**76.43**	**135**	P	**P**	**09 15 47.3**	**-0.5**
	comp=Z,0.3nm,0.7s,mb3.4,baz=336,slow=5.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**77.88**	**277**	P	**P**	**09 15 55.9**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.4,baz=58,slow=3.1,SNR=3.2						
ASAR	**Alice Springs**	**79.31**	**137**	P	**P**	**09 16 04.3**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=341,slow=5.4,SNR=4.1						

NIED ***10*** *09:25:00,2960N×14200E,h59km,Mw4.1 Best double couple: M0=1.88000×10^15 NP1:φ=306.00000°,δ77.00000°, λ=82.00000°. NP2:φ=158.00000°,δ=15.00000°,λ=121.00000°.*
ISCJB ***10*** *09:25:52.5±0.6,2959N±004×1419E±0.1,h54km±9km, mb3.9/8,Error ellipse: s-maj=21.5km s-min=4.1km az=168.0*
JMA ***10*** *09:25:52.5±0.1,2958N×14201E,h52km,M4.5*
IDC ***10*** *09:25:54.8±2.6,2938N×14140E,h38km±23km,mb3.6/8, mb1 4.0/11,mb1mx3.8/22,mbtmp3.8/11,ML4.1/3,MS2.8/1, Ms1 2.8/1,ms1mx1.7/39,Error ellipse: s-maj=28.0km s-min=14.1km az=75.0*

ISC 10 09:25:54.5±0.5,2954N±004×1418E±01,h44km±7km,n32, σ1=14/47,mb3.9/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.45**	**172**	Pn	**Pn**	**09 26 32.0**	**0.0**
	28nm,0.3s,baz=98,slow=22,SNR=27						
CBIJ				Sn	**Sn**	**09 27 00.7**	**0.0**
	89nm,0.3s,baz=287,slow=23,SNR=11						
CBIJ	**Chichi jima**	**2.45**	**172**	P	**Pn**	**09 26 31.4**	**-0.6**
CBIJ				S	**Sn**	**09 26 59.2**	**-1.5**
JHHJ	**Haha-jima-NKT**	**2.91**	**174**	P	**Pn**	**09 26 38.1**	**-0.2**
JHHJ				S	**Sn**	**09 27 12.3**	**+0.3**
JHJ2	**Mitsune**	**3.96**	**335**	P	**Pn**	**09 26 52.8**	**+0.2**
JHJ	**Hachijo jima 2**	**3.97**	**335**	Pn	**Pn**	**09 26 52.7**	**-0.1**
	41nm,0.3s,baz=100,slow=16,SNR=4.8						
JHJ				Sn	**Sn**	**09 27 37.1**	**-1.0**
	24nm,0.3s,baz=76,slow=21,SNR=2.4						
BSO1	**Boso 1**	**5.15**	**352**	P	**Pn**	**09 27 09.5**	**+0.5**
BSO1				S	**Sn**	**09 28 07.3**	**+0.1**
BSO3	**Boso 3**	**5.37**	**348**	P	**Pn**	**09 27 12.0**	**0.0**
BSO4	**Boso 4**	**5.58**	**347**	P	**Pn**	**09 27 15.7**	**+0.8**
JOD2	**Odawara 2**	**6.16**	**339**	P	**Pn**	**09 27 24.5**	**+1.7**
HMMJ	**Hamamatsu 2**	**6.34**	**328**	P	**Pn**	**09 27 26.6**	**+1.3**
JKN2	**Miekihoku**	**6.65**	**316**	P	**Pn**	**09 27 30.7**	**+1.2**
JHU	**Hanno**	**6.65**	**342**	P	**Pn**	**09 27 30.8**	**+1.2**
JHU				S	**Sn**	**09 28 41.9**	**-2.1**
JNY	**Yasuok**	**6.70**	**331**	P	**Pn**	**09 27 31.5**	**+1.3**
JNY				S	**Sn**	**09 28 47.0**	**+1.8**
JYT	**Yasato**	**6.81**	**349**	P	**Pn**	**09 27 32.2**	**+0.4**
JYT				S	**Sn**	**09 28 47.1**	**-0.9**
JRY	**Ryogami san**	**6.91**	**340**	P	**Pn**	**09 27 33.9**	**+0.7**
JRY				S	**Sn**	**09 28 52.5**	**+2.0**
JHO	**Hitachi**	**7.13**	**352**	P	**Pn**	**09 27 35.9**	**-0.3**
JHO				S	**Sn**	**09 28 52.4**	**-3.5**
JAG	**Ashikaga**	**7.15**	**345**	P	**Pn**	**09 27 35.7**	**-0.7**
JAG				S	**Sn**	**09 28 54.7**	**-1.7**
MJAR	**Matsushiro Arr**	**7.61**	**338**	Pn	**Pn**	**09 27 43.0**	**+0.2**
	5.2nm,0.3s,baz=162,slow=12,SNR=49						
MJAR				Sn	**Sn**	**09 29 05.9**	**-1.8**
	baz=186,slow=22,SNR=3.1						
MAT	**Matsushiro**	**7.62**	**338**	P	**Pn**	**09 27 43.0**	**+0.2**
MAT				S	**Sn**	**09 29 06.4**	**-1.4**
JFK	**Kawauchi**	**7.85**	**355**	P	**Pn**	**09 27 45.0**	**-1.0**
JFK				S	**Sn**	**09 29 08.3**	**-5.2**
JMK	**Ichinoseki**	**9.41**	**357**	P	**Pn**	**09 28 07.0**	**-0.3**
JMK				S	**Sn**	**09 29 45.2**	**-6.5**
ASAJ	**Asahikawa**	**14.57**	**2**	Pn	**Pn**	**09 29 17.1**	**-0.7**
	0.8nm,0.3s,baz=124,slow=24,SNR=6.0						
ASAJ				LR	LR	09 36 04.3	
	comp=Z,35nm,18.2s,baz=333,slow=41						
ZALV	**Zalesovo Beam**	**47.45**	**318**	P	**P**	**09 34 24.1**	**-0.4**
	0.6nm,0.5s,mb3.8,baz=72,slow=6.7,SNR=2.5						
MKAR	**Makanchi Array**	**48.70**	**308**	P	**P**	**09 34 34.9**	**+0.6**
	0.3nm,0.4s,mb3.7,baz=101,slow=5.8,SNR=2.2						
WB2	**Warramunga Arr**	**49.71**	**189**	*e*P	**P**	**09 34 41.2**	**-1.0**
WRA	**Warramunga Arr**	**49.71**	**189**	P	**P**	**09 34 41.2**	**-1.1**
	3.1nm,0.6s,mb4.5,baz=9.4,slow=8.0,SNR=54						
WRA				PcP	PcP	09 36 03.7	+0.8
	0.7nm,0.6s,baz=2.0,slow=3.8,SNR=5.1						
KURK	**Kurchatov**	**51.07**	**313**	P	**P**	**09 34 51.6**	**-0.6**
	baz=93,slow=10						
ASAR	**Alice Springs**	**53.44**	**189**	P	**P**	**09 35 07.7**	**-2.4**
	0.3nm,0.6s,mb3.4,baz=3.5,slow=6.1,SNR=8.0						
ASAR				PcP	PcP	09 36 18.1	+1.3
	0.6nm,0.7s,baz=360,slow=4.1,SNR=5.9						
NVAR	**Mina Array Bea**	**79.27**	**52**	P	**P**	**09 37 59.0**	**+3.7**
	0.6nm,0.6s,mb3.7,baz=279,slow=5.2,SNR=7.8						
PDAR	**Pinedale Array**	**82.71**	**45**	P	**P**	**09 38 16.7**	**+3.1**
	0.5nm,0.7s,mb3.6,baz=296,slow=2.0,SNR=5.0						
BRTR	**Keskin Array B**	**84.11**	**313**	P	**P**	**09 38 22.1**	**+1.2**
	2.0nm,0.8s,mb4.3,baz=115,slow=3.2,SNR=7.3						
TXAR	**Lajitas Array**	**94.40**	**53**	P	**P**	**09 39 11.8**	**+1.8**
	0.3nm,0.6s,mb3.9,baz=266,slow=2.3,SNR=7.4						

IDC ***10*** *09:43:26.1±1.1,439S×10125E,h0km,mb4.5/10, mb1 4.6/11,mb1mx4.4/19,mbtmp4.5/11,ML4.2/1,MS3.9/12, Ms1 3.9/12,ms1mx3.7/34,Error ellipse: s-maj=37.7km s-min=15.5km az=55.0*
BJI ***10*** *09:43:26.3,500S×10129E,h45km,mB5.0,mb4.9,Ms4.5, Msz4.3*
ISCJB ***10*** *09:43:28.7±1.2,452S±008×10124E±007,h33km±12km, mb4.9/58,MS4.0/24,Error ellipse: s-maj=15.4km s-min=8.4km az=42.8*
MOS ***10*** *09:43:28.8±1.0,444S×10125E,h33km,mb5.0/25,Error ellipse: s-maj=15.8km s-min=7.1km az=105.5*
NEIC ***10*** *09:43:31.3±0.4,444S×10131E,h35km,mb5.1/25,Error ellipse: s-maj=15.1km s-min=4.9km az=48.0*

ISC 10 09:43:31.5±1.1,451S±007×10126E±007,h39km±11km, h33km±1.8km:pP-P,n123,σ0=96/113,mb4.9/58,MS4.0/24, 12C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.43**	**92**	P	**Pn**	**09 47 43.9**	**-0.2**
	0.8nm,0.3s,baz=208,slow=12,SNR=4.0						
KAPI	**Kappang**	**18.43**	**92**	P	**Pn**	**09 47 43.9**	**-0.2**
CM31	**Chiang Mai Arr**	**22.94**	**354**	*e*P	**P**	**09 48 31.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**22.94**	**354**	P	**P**	**09 48 29.8**	**-2.6**
	18nm,0.9s,mb4.5,baz=187,slow=8.7,SNR=54						
CMAR				LR	LR	09 59 13.7	
	comp=Z,284nm,20.6s,MS3.7,baz=179,slow=42						
CMAR	**Chiang Mai Arr**	**22.94**	**354**	*e*P	**P**	**09 48 29.7**	**-2.7**
CHTO	**Chiang Mai**	**23.29**	**354**	*e*P	**P**	**09 48 35.4**	**-0.7**
	16nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**23.29**	**354**	*e*P	**P**	**09 48 35.4**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
QIZ	**Qiongzhong**	**24.87**	**20**	P	**P**	**09 48 51.6**	**+1.0**
QIZ				S	**S**	**09 53 13.0**	**+1.8**
QIZ				LR	LR		
	comp=Z,270nm,21.4s,MS3.7						
KMI	**Kunming**	**29.49**	**3**	P	**P**	**09 49 32.9**	**+0.9**
KMI				AP	pP	09 49 43.4	+0.5
KMI				XP	sP	09 49 48.4	+0.8
KMI				PP	PP	09 50 30.9	-8.3
KMI				S	**S**	**09 54 26.6**	**+2.6**
KMI				XS	sS	09 54 43.4	+1.3
KMI				SS	SS	09 56 00.3	-30
KMI				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,72nm,3.6s						
KMI				LR	LR		
	comp=N,417nm,15.7s,MS4.3						
KMI				LR	LR		
	comp=E,407nm,15.1s,MS4.3						
KMI				LR	LR		
	comp=Z,358nm,16.8s,MS4.1						
KMI	**Kunming**	**29.49**	**3**	P	**P**	**09 49 32.9**	**+0.9**
KMI				*PP	pP	09 49 43.4	+0.5
KMI				*SP	sP	09 49 48.4	+0.8
KMI						09 50 30.9	
KMI				PPP		09 50 46.3	
KMI				S	**S**	**09 54 26.6**	**+2.6**
KMI				*SS	sS	09 54 43.4	+1.3
KMI				SS	SS	09 56 00.3	-30
KMI				SSS		09 56 22.6	
GYA	**Guiyang**	**31.23**	**9**	P	**P**	**09 49 49.5**	**+2.1**
GYA				AP	pP	09 50 01.2	+2.9
GYA				XP	sP	09 50 05.7	+2.7
GYA				PP	PP	09 50 53.6	-4.9
GYA				PCP	PcP	09 52 42.8	+1.3
GYA				S	**S**	**09 54 50.1**	**-1.1**
GYA				XS	sS	09 55 11.0	+1.7
GYA				SS	SS	09 56 42.8	-23
GYA			

ASAR Alice Springs 36.78 124 P **P** **09 50 36.1 +0.4**
comp=Z,1.8nm,1.0s,mb3.9,baz=298,slow=8.1,SNR=12
ASAR PcP PcP 09 52 58.3 +0.9
comp=Z,1.0nm,0.8s,baz=308,slow=2.3,SNR=5.1
PYUN Piuthan 36.90 333 *eP* **P** **09 50 37.3 +0.8**
WHN Wuhan 37.04 19 P **P** **09 50 34.5 -3.2**
XAN Xi'an 39.02 10 P **P** **09 50 53.1 -1.2**
XAN AP pP 09 51 01.2 -4.2
XAN PP PP 09 52 28.9 +4.5
XAN S **S** **09 56 50.1 -0.7**
XAN AMB AMB
comp=Z,22nm,1.2s,mb4.8
XAN AMB AMB
comp=Z,26nm,5.3s
XAN LR LR
comp=E,224nm,17.9s
XAN LR LR
comp=Z,230nm,19.2s,MS4.0
NJ2 Nanjing 40.03 24 *eP* **P** **09 51 04.6 +1.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
LZH Lanzhou 40.46 3 ⇑P **P** **09 51 06.9 +0.6**
LZH AP pP 09 51 14.6 -2.8
LZH XP sP 09 51 18.5 -3.6
LZH *e*PP PP 09 52 45.2 +5.2
LZH S **S** **09 57 14.3 +2.0**
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,128nm,5.6s
LZH LR LR
comp=E,294nm,13.5s
LZH LR LR
comp=Z,496nm,15.5s,MS4.5
LZH Lanzhou 40.46 3 ⇑P **P** **09 51 06.9 +0.6**
LZH pP pP 09 51 14.6 -2.8
LZH sP sP 09 51 18.5 -3.6
LZH *e*PP PP 09 52 45.2 +5.2
LZH S **S** **09 57 14.3 +2.0**
LZH sS sS 09 57 30.1 -0.6
LZH SS SS 09 59 57.0 -16
LZH Lanzhou 40.46 3 ⇑P **P** **09 51 06.9 +0.6**
LZH *SP sP 09 51 18.5 -3.6
LZH *e* 09 52 45.2
LZH S **S** **09 57 14.3 +2.0**
LZH *SS sS 09 57 30.1 -0.6
GTA Gaotai 43.72 358 *eP* **P** **09 51 33.2 +0.4**
GTA AP pP 09 51 42.3 -1.8
GTA XP sP 09 51 46.3 -2.4
GTA PP PP 09 53 16.0 +0.8
GTA S **S** **09 57 59.3 -1.1**
GTA SS SS 10 01 07.9 -9.3
GTA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GTA AMB AMB
comp=Z,82nm,6.0s
GTA LR LR
comp=N,165nm,15.6s,MS4.3
GTA LR LR
comp=E,276nm,18.0s,MS4.3
GTA LR LR
comp=Z,211nm,21.0s,MS4.0
HHC Hu-ho-hao-te 46.12 11 *eP* **P** **09 51 53.0 +1.1**
HHC AP pP 09 52 03.8 +0.6
HHC XP sP 09 52 07.4 -0.4
HHC PCP PcP 09 53 28.3 +0.8
HHC PP PP 09 53 41.4 +0.8
HHC PCS PcS 09 57 21.4 -0.5
HHC SCS ScS 10 01 43.1 -1.2
HHC SS SS 10 01 55.3 -5.5
HHC AMB AMB
comp=Z,28nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,79nm,5.6s
HHC LR LR
comp=N,196nm,21.4s,MS4.3
HHC LR LR
comp=E,290nm,19.0s,MS4.3
HHC LR LR
comp=Z,146nm,22.6s,MS3.9
BJI Beijing 46.41 16 P **P** **09 51 53.5 -0.7**
BJI PP PP 09 53 41.9 -1.8
BJI S **S** **09 58 40.8 +1.6**
BJI AMB AMB
comp=Z,31nm,0.8s,mb5.3
BJI LR LR
comp=N,231nm,18.5s,MS4.3
BJI LR LR
comp=E,139nm,15.9s,MS4.3
BJI LR LR
comp=Z,155nm,21.5s
CTA Charters Tower 46.42 113 *eP* **P** **09 51 54.4 -0.3**
comp=Z,4.4nm,1.0s,mb4.3
CTA *e*pP pP 09 52 03.4 -2.5
CTA Charters Tower 46.42 113 *eP* **P** **09 51 54.4 -0.3**
CTA *e**PP pP 09 52 03.4 -2.5
CTA pmax pmax
comp=Z,4.0nm,1.0s
CTAO Charters Tower 46.42 113 *eP* **P** **09 51 55.9 +1.2**
comp=Z,26nm,1.2s,mb5.0
CTAO Charters Tower 46.42 113 *eP* **P** **09 51 55.9 +1.2**
CTAO pmax pmax
comp=Z,26nm,1.2s,mb5.0
STKA Stephens Creek 46.56 131 *eP* **P** **09 51 57.0 +1.4**
comp=Z,1.8nm,0.6s,mb4.2
STKA *e*pP pP 09 52 04.9 -1.9
STKA Stephens Creek 46.56 131 P **P** **09 51 56.5 +0.9**
comp=Z,2.3nm,0.8s,mb4.2,baz=321,slow=8.0,SNR=7.4
STKA LR LR 10 12 57.2
comp=Z,188nm,20.9s,MS4.0,baz=214,slow=38
KSRS Korea Array 48.57 28 P **P** **09 52 10.8 -0.3**
comp=Z,11nm,0.9s,mb4.9,baz=217,slow=8.3,SNR=23
WMQ Urumqi 49.64 347 P **P** **09 52 20.0 +0.9**
WMQ AP pP 09 52 30.0 -0.5
WMQ XP sP 09 52 34.0 -1.1
WMQ PP PP 09 54 15.0 +1.1
WMQ S **S** **09 59 24.0 -0.9**
WMQ SCS ScS 10 02 06.0 -1.6
WMQ SS SS 10 02 53.0 -4.7
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,98nm,4.0s
WMQ LR LR
comp=N,98nm,16.0s,MS4.1
WMQ LR LR
comp=E,127nm,15.0s,MS4.1
WMQ LR LR
comp=Z,98nm,15.0s,MS3.9
SONM Songino Array 52.32 4 P **P** **09 52 39.9 +0.7**
comp=Z,19nm,0.8s,mb5.1,baz=184,slow=8.6,SNR=90
SONM PcP PcP 09 53 50.2 +0.3
comp=Z,1.6nm,0.7s,baz=186,slow=3.2,SNR=1.8
ULN Ulaanbaatar 52.40 5 *eP* **P** **09 52 40.5 +0.7**
comp=Z,15nm,0.9s,mb4.9
ULN Ulaanbaatar 52.40 5⇑*eP* **P** **09 52 39.3 -0.5**
TKM2 Tokmak 2 52.62 336 *eP* **P** **09 52 41.7 +0.2**
comp=Z,8.6nm,0.8s,mb4.7
TKM2 Tokmak 2 52.62 336 *eP* **P** **09 52 41.7 +0.2**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CN2 Changchun 52.80 22 *eP* **P** **09 52 42.0 -0.8**
CN2 *e*AP pP 09 52 52.0 -2.3
CN2 *e*S **S** **10 00 07.8 -0.7**
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
CN2 AMB AMB
comp=Z,200nm,3.0s
EKS2 Erkin-Say 53.16 335 *eP* **P** **09 52 46.3 +0.9**
comp=Z,12nm,0.8s,mb4.9
MAT Matsushiro 53.47 37 P **P** **09 52 45.8 -2.0**
MJAR Matsushiro Arr 53.47 37 P **P** **09 52 46.2 -1.6**
comp=Z,8.0nm,0.9s,mb4.7,baz=220,slow=7.5,SNR=19
MK31 Makanchi Array 53.77 344 *eP* **P** **09 52 49.7 -0.2**
MK31 Makanchi Array 53.77 344 *iP* **P** **09 52 49.3 -0.6**
MK31 pmax pmax
comp=Z,17nm,0.9s,mb5.0
MKAR Makanchi Array 53.77 344 P **P** **09 52 49.6 -0.3**
comp=Z,10nm,0.8s,mb4.8,baz=147,slow=8.2,SNR=94
MKAR LR LR 10 20 25.3
comp=Z,55nm,18.1s,MS3.6,baz=159,slow=41
ZAK Zakamensk 54.70 2⇑*iP* **P** **09 52 56.7 +0.1**
ZAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MDJ Mudanjiang 55.11 24 P **P** **09 52 59.5 -0.1**
MDJ AP pP 09 53 08.6 -2.6
MDJ XP sP 09 53 12.4 -3.3
MDJ S **S** **10 00 40.0 +0.3**
MDJ SS SS 10 04 23.8 -0.5
MDJ AMB AMB
comp=Z,11nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,144nm,4.4s
MDJ LR LR
comp=E,59nm,20.7s
MDJ LR LR
comp=Z,46nm,21.7s,MS3.5
TLY Talaya 56.01 2 *eP* **P** **09 53 07.3 +1.3**
comp=Z,10nm,0.9s,mb4.8
TLY Talaya 56.01 2 *eP* **P** **09 53 06.9 +0.9**
TLY *e* 09 55 15.6
TLY pmax pmax
comp=Z,13nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,141nm,17.0s,MS4.1
KURK Kurchatov 58.36 343 *eP* **P** **09 53 22.2 -0.3**
comp=Z,18nm,1.0s,mb5.0
KURK Kurchatov 58.36 343⇑*eP* **P** **09 53 22.0 -0.6**
KURK pmax pmax
comp=Z,18nm,1.0s,mb5.1
KLR Kul'dur 59.72 23 *eP* **P** **09 53 25.4 -6.7**
ZAA0 Zalesovo Array 59.86 349 *eP* **P** **09 53 32.3 -0.6**
ZALV Zalesovo Beam 59.86 349 P **P** **09 53 32.3 -0.6**
comp=Z,15nm,0.9s,mb5.0,baz=175,slow=5.4,SNR=46
ZALV LR LR 10 21 11.2
comp=Z,63nm,20.9s,MS3.7,baz=164,slow=38
KRAR Krasnoyarsk 60.71 355 *eP* **P** **09 53 37.4 -1.3**
KRAR pmax pmax
comp=Z,15nm,1.3s,mb5.0
VOSK Vostochnaya 62.51 340 P **P** **09 53 49.3 -1.6**
VOSK pmax pmax
comp=Z,11nm,1.2s,mb4.9
YSS Yuzh-Sakhalins 62.96 31 *eP* **P** **09 53 53.9 -0.1**
comp=Z,20nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 62.96 31 *eP* **P** **09 53 53.9 -0.1**
YSS pmax pmax
comp=Z,20nm,0.9s,mb5.2
BVA0 Borovoye Array 62.96 340 *iP* **P** **09 53 52.8 -1.1**
BOD Bodaibo 62.98 8 *eP* **P** **09 53 53.2 -0.7**
BOD pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
BRVK Borovoye 63.02 340 *eP* **P** **09 53 53.5 -0.8**
comp=Z,13nm,1.0s,mb5.0
BRVK Borovoye 63.02 340 *eP* **P** **09 53 53.5 -0.8**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb5.0
AKTO Aktyubinsk 66.15 331 *iP* **P** **09 54 13.5 -1.3**
AKTO pmax pmax
comp=Z,1.0nm,1.1s,mb3.8
MAW Mawson 68.18 195 LR LR 10 18 42.9
comp=Z,156nm,20.2s,MS4.2,baz=198,slow=31
GNI Garni 68.20 316 *eP* **P** **09 54 28.6 +0.6**
GNI pmax pmax
comp=Z,14nm,1.3s
SVE Sverdlovsk 69.47 338⇑*eP* **P** **09 54 35.8 +0.2**
SVE pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK Yakutsk 69.85 14 *eP* **P** **09 54 34.2 -3.6**
YAK pmax pmax
comp=Z,23nm,0.9s,mb5.1
YAK pmax pmax
comp=N,9.0nm,1.2s
ARU Arti 70.00 336 *eP* **P** **09 54 38.5 -0.3**
comp=N,4.7nm,0.8s,mb4.5
ARU Arti 70.00 336*c iP* **P** **09 54 37.9 -0.9**
ARU *e*S S 10 03 47.4 +1.1
ARU *e*SS SS 10 08 16.3 -0.1
ARU pmax pmax
comp=Z,29nm,1.7s,mb4.9
ASF Jabal al Asfar 71.07 306 LR LR 10 26 56.3
comp=Z,106nm,18.6s,MS4.1,baz=258,slow=37
KIV Kislovodsk 71.25 319 *eP* **P** **09 54 46.7 -0.1**
KIV pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
EIL Elat 71.93 303 LR LR 10 27 35.8
comp=Z,105nm,19.6s,MS4.1,baz=92,slow=37
SOKR Solikamsk 72.85 338 *eP* **P** **09 54 56.5 +0.5**
SOKR pmax pmax
comp=Z,20nm,1.4s,mb4.8
BOSA Boshof 75.57 242 LR LR 10 23 51.9
comp=Z,125nm,18.0s,MS4.3,baz=155,slow=32
BRTR Keskin Array B 75.94 313 P **P** **09 55 13.6 -0.7**
comp=Z,1.3nm,0.8s,mb3.9,baz=123,slow=9.1,SNR=4.8
BRTR Keskin Array B 75.94 313⇑*eP* **P** **09 55 13.6 -0.8**
SEY Seymchan 77.48 21 *eP* **P** **09 55 23.4 +0.8**
TIXI Tiksi 78.13 9 *eP* **P** **09 55 24.8 -1.2**
comp=Z,4.2nm,0.8s,mb4.4
TIXI Tiksi 78.13 9⇑*eP* **P** **09 55 24.1 -1.9**
TIXI pmax pmax
comp=Z,15nm,1.5s,mb4.7
OBN Obninsk 79.58 328⇑*eP* **P** **09 55 33.6 -0.7**
OBN *e* 09 58 34.3
OBN *e*S S 10 05 30.2 -3.0
OBN *e*SS SS 10 10 42.4 +0.4
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KLMR Klimovskoe 80.62 334 *eP* **P** **09 55 39.0 -0.8**
KLMR pmax pmax
comp=Z,28nm,1.6s,mb4.9
AKASG Malin Array Be 82.23 322 *iP* **P** **09 55 53.2 +4.7**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
BILL Bilibino 85.07 20 *eP* **P** **09 56 02.7 0.0**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
VRAC Vranov 89.91 319 LR LR 10 40 53.1
comp=Z,63nm,18.4s,MS4.1,baz=34,slow=38
GERES GERESS Array B 91.75 319 LR LR 10 43 52.2
comp=Z,39nm,18.4s,MS3.9,baz=279,slow=40
HFS Hagfors 92.66 330 LR LR 10 42 32.3
comp=Z,81nm,20.9s,MS4.2,baz=67,slow=38
NOA NORSAR Array B 93.94 331 LR LR 10 46 43.0
comp=Z,39nm,18.7s,MS3.9,baz=180,slow=40
TBI Tubuai 105.77 116 *eLR* LR 10 32 51.8
comp=Z,91nm,23.8s
INK Inuvik 106.64 18 *ePKPdf* PKiKP 10 01 52.0 0.0
PPT Papeete 106.78 110 *eLR* LR 10 33 20.6
comp=Z,61nm,25.0s
NVAR Mina Array Bea 130.69 41 PKP PKPdf 10 02 41.3 +2.5
comp=Z,0.4nm,0.8s,baz=321,slow=1.2,SNR=2.9
CCM Cathedral Cave 144.72 17 *ePKPdf* PKPdf 10 03 03.2 -1.3
OLIL Olney 144.89 13 *ePKPdf* PKPdf 10 03 04.0 -0.7
SDMD Soldier's Deli 145.22 357 *ePKPbc* PKPbc 10 03 04.8 -0.2
SIUC Southern Illin 145.59 15 *ePKPbc* PKPbc 10 03 06.5 +0.3
WCI Wyandotte Cave 145.74 11 *ePKPbc* PKPbc 10 03 06.8 +0.1
TXAR Lajitas Array 145.84 41 PKPbc PKPbc 10 03 08.3 +1.1
comp=Z,10nm,1.0s,baz=291,slow=1.6,SNR=75
MIAR Mount Ida 147.10 23 *ePKPbc* PKPbc 10 03 10.8 +0.1
JCT Junction City 147.42 35 *ePKPbc* PKPbc 10 03 12.4 +0.7
WVT Waverly 147.44 14 *ePKPbc* PKPbc 10 03 11.9 +0.2
TKL Tuckaleechee C 148.66 8 *ePKPbc* PKPbc 10 03 15.1 +0.2
SWET Sewanee 148.73 11 *ePKPbc* PKPbc 10 03 14.4 -0.7
CPCT Cooper Cave 148.75 9 *ePKPbc* PKPbc 10 03 15.3 +0.2

IDC 10 09:51:54.1±2.4, 703S×12783E, h0km, mb3.9/1, mb1 3.9/3, mb1mx3.6/14, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=296.6km s-min=30.9km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.31**	**154**	Pn	Pn	09 55 16.3	-1.9
	0.5nm,0.3s,baz=330,slow=14,SNR=24						
WRA				Sn	Sn	09 57 45.0	-13
	0.5nm,0.3s,baz=341,slow=21,SNR=8.6						
ASAR	**Alice Springs**	**17.55**	**161**	P	Pn	09 56 01.7	+1.4
	0.2nm,0.3s,baz=340,slow=8.7,SNR=25						
ASAR				S	Sn	09 59 03.5	-13
	0.1nm,0.3s,baz=357,slow=30,SNR=3.2						
MKAR	**Makanchi Array**	**67.08**	**328**	P	P	10 02 49.5	+0.1
	0.8nm,0.6s,baz=117,slow=8.0,SNR=7.5						

IDC 10 10:16:14.6±5.3, 259S×10033E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=278.2km s-min=21.4km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.41**	**120**	P	P	10 23 29.6	-0.1
	0.1nm,0.4s,baz=300,slow=9.3,SNR=5.1						
ASAR	**Alice Springs**	**38.64**	**126**	P	P	10 23 40.2	+0.2
	0.5nm,0.6s,baz=298,slow=8.3,SNR=8.4						
MKAR	**Makanchi Array**	**51.68**	**344**	P	P	10 25 23.2	-0.1
	0.7nm,0.5s,baz=170,slow=8.8,SNR=6.6						
KURK	**Kurchatov**	**56.26**	**344**	P	P	10 25 56.8	+0.1
	baz=158,slow=7.4						
ZALV	**Zalesovo Beam**	**57.80**	**349**	P	P	10 26 07.3	-0.3
	0.4nm,0.3s,baz=143,slow=10,SNR=4.6						
TXAR	**Lajitas Array**	**144.96**	**38**	PKP	PKPdf	10 35 53.5	-1.1
	0.4nm,0.9s,baz=35,slow=3.3,SNR=3.3						

*ISCJB **10** 10:31:28.2±0.1, 49.349N±0.009×674E±0.002, h0km, Error ellipse: s-maj=1.5km s-min=1.2km az=19.6*
*MOS **10** 10:31:29.3±0.9, 49.37N×670E, h9km, mb4.6/1, Error ellipse: s-maj=6.0km s-min=3.4km az=82.2*
*BGR **10** 10:31:30.9±0.1, 49.37N×686E, h1km, ML3.5/14, Error ellipse: s-maj=2.2km s-min=2.2km az=135.0*
*BNS **10** 10:31:30.6±1.2, 49.34N×686E, h1km, ML3.1*
*CSEM **10** 10:31:30.7±0.0, 49.39N×685E, h1km, ML4.0/42, Error ellipse: s-maj=0.7km s-min=0.6km az=170.0*
*LEDBW **10** 10:31:31.2±0.3, 49.380N±0.009×686E±0.003, h1km, ML3.3, Error ellipse: s-maj=8.0km s-min=4.0km az=95.0*
*PRU **10** 10:31:31.5, 49.42N×696E, h0km*
*NEIC **10** 10:31:31.2, 49.38N×686E, h1km, ML4.0(LDG), ML3.5(SZGRF), ML3.4(STR), After LEDBW.*
*ZUR **10** 10:31:31.8, 49.40N×690E, h7km, ML3.5/12*
*STR **10** 10:31:31.3±0.2, 49.35N×685E, h1km, ML3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **10** 10:31:31.1±0.1, 49.37N×685E, h2km, Md3.9/3, Ml4.0/41, Error ellipse: s-maj=1.0km s-min=0.8km az=164.0*

ISC 10 10:31:29.5±0.1, 49362N±0008×675E±001, h0km, n277, σ1§24/564, 13C-11D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.40**	**30**⇓*eP**		**Pg**	**10 31 38.0**	**+1.0**
RUP	**Ruppelstein**	**0.40**	**30**	Pg	**Pg**	**10 31 37.9**	**+0.9**
RUP				Sg	**Sg**	**10 31 44.6**	**+2.5**
WLF	**Walferdange**	**0.49**	**308**	*e*Pg	**Pg**	**10 31 41.7**	**+2.8**
	SNR=174						
WLF				*e*Sg	**Sg**	**10 31 49.0**	**+3.7**
	SNR=5.2						
WLF	**Walferdange**	**0.49**	**308**	P	**Pg**	**10 31 41.5**	**+2.6**
WLF	**Walferdange**	**0.49**	**308**	*e*Pg	**Pg**	**10 31 41.6**	**+2.6**
WLF				*e*Sg	**Sg**	**10 31 48.9**	**+3.6**
ABH	**Alteburg**	**0.73**	**45**⇑*eP**		**Pg**	**10 31 43.7**	**+0.2**
ABH	**Alteburg**	**0.73**	**45**⇑*e*Pg		**Pg**	**10 31 43.7**	**+0.2**
ABH	**Alteburg**	**0.73**	**45**	Pg	**Pg**	**10 31 43.7**	**+0.2**
ABH				Sg	**Sg**	**10 31 54.6**	**+1.6**
LANF	**Langenberg**	**0.79**	**119**	Pg	**Pg**	**10 31 44.9**	**+0.3**
LANF				Sg	**Sg**	**10 31 56.5**	**+1.7**
LANF	**Langenberg**	**0.79**	**119**⇓*iP*g		**Pg**	**10 31 45.0**	**+0.5**
KTD	**Kalmit**	**0.87**	**92**	Pg	**Pg**	**10 31 46.2**	**+0.1**
KTD	**Kalmit**	**0.87**	**92**	Pg	**Pg**	**10 31 46.6**	**+0.4**
KTD				Sg	**Sg**	**10 31 59.3**	**+1.9**
KTD	**Kalmit**	**0.87**	**92**	Pg	**Pg**	**10 31 46.2**	**0.0**
KTD				Sg	**Sg**	**10 31 59.3**	**+1.9**
BGG	**Burgeitz**	**0.93**	**24**	*e*Pg	**Pg**	**10 31 47.3**	**+0.1**
BGG				*e*Sg	**Sg**	**10 32 01.1**	**+1.9**
	203nm,0.6s						
HILG	**Hillesheim**	**0.93**	**357**	*e*Pg	**Pg**	**10 31 48.6**	**+1.3**
HILG				*e*Sg	**Sg**	**10 32 01.9**	**+2.5**
	562nm,0.8s						
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pn	**Pn**	**10 31 50.6**	**-0.3**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**10 32 04.5**	**-1.3**
	510nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pg	**Pg**	**10 31 49.4**	**+0.6**
CDF				*e*Pn	**Pn**	**10 31 50.6**	**-0.3**
CDF				*e*Sn	**Sn**	**10 32 04.5**	**-1.3**
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pn	**Pn**	**10 31 50.6**	**-0.3**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**10 32 04.5**	**-1.3**
	255nm,0.3s,SNR=1.0						
STR	**Strasbourg**	**1.03**	**139**	Pg	**Pg**	**10 31 50.6**	**+1.5**
RFYF	**Reffroy**	**1.12**	**229**	*e*Pn	**Pn**	**10 31 52.9**	**+0.6**
	baz=45						
RFYF	**Reffroy**	**1.12**	**229**	*e*P	**Pg**	**10 31 54.0**	**+3.2**
	baz=45						
RFYF				*e*Sn	**Sn**	**10 32 08.3**	**0.0**
	1μm,0.3s						
RFYF	**Reffroy**	**1.12**	**229**	*e*Pn	**Pn**	**10 31 52.9**	**+0.6**
RFYF				*e*P		10 31 54.0	
RFYF				*e*Sn	**Sn**	**10 32 08.3**	**0.0**
RFYF	**Reffroy**	**1.12**	**229**	*e*P	**Pg**	**10 31 54.0**	**+3.2**
RFYF				*e*Sn	**Sn**	**10 32 08.3**	**0.0**
	618nm,0.3s						
ECH	**Echery**	**1.18**	**167**	Pg	**Pg**	**10 31 52.7**	**+0.7**
ECH				Sg	**Sg**	**10 32 08.6**	**+1.3**
ECH	**Echery**	**1.18**	**167**	*e*Pn	**Pn**	**10 31 52.6**	**-0.5**
ECH				*e*Sn	**Sn**	**10 32 09.2**	**-0.6**
ECH	**Echery**	**1.18**	**167**	P	**Pg**	**10 31 53.5**	**+1.5**
ECH	**Echery**	**1.18**	**167**	Pg	**Pg**	**10 31 53.5**	**+1.5**
ECH				Sg	**Sg**	**10 32 08.6**	**+1.3**
ECH				*e*Sn	**Sn**	**10 32 09.2**	**-0.7**
STB	**Steinbach**	**1.23**	**3**	*e*Pg	**Pg**	**10 31 53.4**	**+0.3**
STB				*e*Sg	**Sg**	**10 32 10.7**	**+1.6**
	243nm,0.4s						
KOE	**Koeppel**	**1.24**	**30**	*e*Pg	**Pg**	**10 31 52.9**	**-0.3**
THEF	**They Montfort**	**1.24**	**204**	Pg	**Pg**	**10 31 54.4**	**+1.1**
THEF				Sg	**Sg**	**10 32 12.2**	**+2.8**
THEF	**They Montfort**	**1.24**	**204**⇓*eP*		**Pg**	**10 31 54.6**	**+1.4**
THEF	**They Montfort**	**1.24**	**204**	Pg	**Pg**	**10 31 54.6**	**+1.3**
THEF				Sg	**Sg**	**10 32 12.2**	**+2.8**
SWS	**Schriesheim-Wi**	**1.28**	**84**	Pg	**Pg**	**10 31 53.3**	**-0.6**
KLL	**Kalltalsperre**	**1.32**	**348**	*e*Pg	**Pg**	**10 31 54.8**	**+0.1**
KLL				*e*Sg	**Sg**	**10 32 13.0**	**+1.3**
	149nm,0.8s						
LIBD	**Limburg**	**1.34**	**155**	P*	**Pb**	**10 31 56.7**	**+1.4**
LIBD	**Limburg**	**1.34**	**155**	Pg	**Pg**	**10 31 56.3**	**+1.2**
LIBD				Sg	**Sg**	**10 32 14.2**	**+1.8**
MEM	**Membach**	**1.34**	**339**	P	**Pg**	**10 31 55.5**	**+0.4**
MEM	**Membach**	**1.34**	**339**	P	**Pg**	**10 31 55.4**	**+0.3**
DREG	**Dreilaegerbach**	**1.34**	**346**	*e*Pg	**Pg**	**10 31 55.5**	**+0.2**
DREG				*e*Sg	**Sg**	**10 32 13.2**	**+0.6**
	307nm,0.6s						
TOD	**Tromm**	**1.36**	**79**	Pg	**Pg**	**10 31 55.3**	**-0.2**
TOD				Sg	**Sg**	**10 32 13.5**	**+0.4**
TOD	**Tromm**	**1.36**	**79**	Pg	**Pg**	**10 31 54.1**	**-1.4**
TOD				Sg	**Sg**	**10 32 13.1**	**0.0**
TOD	**Tromm**	**1.36**	**79**	Pg	**Pg**	**10 31 55.3**	**-0.2**
TOD				Sg	**Sg**	**10 32 13.1**	**0.0**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**10 31 57.4**	**+1.5**
HAU				*e*Sg	**Sg**	**10 32 15.3**	**+1.4**
	731nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**1.38**	**191**	*e*Pn	**Pn**	**10 31 56.0**	**0.0**
HAU				*e*Pg	**Pg**	**10 31 57.4**	**+1.5**
HAU				*e*Sg	**Sg**	**10 32 15.3**	**+1.4**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**10 31 57.4**	**+1.5**
HAU				*e*Sg	**Sg**	**10 32 15.3**	**+1.4**
	366nm,0.4s,SNR=1.0						
TNS	**Taunus Mts**	**1.40**	**51**	P	**Pn**	**10 31 55.0**	**-1.2**
TNS				Sg	**Sg**	**10 32 14.7**	**+0.4**
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pg	**Pg**	**10 31 55.0**	**-1.2**
TNS				Sg	**Sg**	**10 32 14.7**	**+0.4**
TNS				*e*S	**Sg**	**10 32 16.2**	**+1.9**
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pn	**Pn**	**10 31 57.0**	**+0.6**
	baz=56,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pg	**Pg**	**10 31 58.1**	**+1.6**
MEZF				*e*Sn	**Sn**	**10 32 15.7**	**0.0**
	455nm,0.4s,baz=56,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pn	**Pn**	**10 31 57.0**	**+0.6**
MEZF				*e*Pg	**Pg**	**10 31 58.1**	**+1.6**
MEZF				*e*Sn	**Sn**	**10 32 15.7**	**0.0**
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pg	**Pg**	**10 31 58.1**	**+1.6**
MEZF				*e*Sn	**Sn**	**10 32 15.7**	**0.0**
	227nm,0.4s,SNR=1.0						
BCLA	**Clavier**	**1.41**	**319**	P	**Pn**	**10 31 57.4**	**+1.0**
GIVF	**Givet**	**1.45**	**301**	*e*Pg	**Pg**	**10 31 59.0**	**+1.7**
GIVF				*e*Sg	**Sg**	**10 32 18.6**	**+2.4**
	742nm,0.5s,SNR=1.0						
GIVF	**Givet**	**1.45**	**301**	*e*Pn	**Pn**	**10 31 57.8**	**+0.8**
GIVF				*e*Pg	**Pg**	**10 31 59.0**	**+1.7**
GIVF				*e*Sg	**Sg**	**10 32 18.6**	**+2.4**
GIVF	**Givet**	**1.45**	**301**	*e*Pg	**Pg**	**10 31 59.0**	**+1.7**
GIVF				*e*Sg	**Sg**	**10 32 18.6**	**+2.4**
	371nm,0.5s,SNR=1.0						
BFO	**Black Forest**	**1.47**	**134**	*e*Pn	**Pn**	**10 31 56.5**	**-0.6**
	SNR=53						

BFO Pg **Pg** **10 31 58.2 +0.6**
BFO Sg **Sg** **10 32 17.4 +0.8**
BFO Black Forest 1.47 134 *e*Pn **Pn** **10 31 56.6 -0.5**
BFO *e*Sg **Sg** **10 32 17.9 +1.3**
HGN Heimansgroeve 1.50 340 *e*Pn **Pn** **10 31 58.0 +0.4**
5.4nm,0.1s
HGN Heimansgroeve 1.50 340 *e*Pg **Pg** **10 31 59.7 +1.5**
222nm,0.7s
HGN *e*Sn **Sn** **10 32 16.8 -1.0**
HGN *e*Sg **Sg** **10 32 19.0 +1.4**
HGN Heimansgroeve 1.50 340 *e*Pg **Pg** **10 31 59.7 +1.5**
222nm,0.7s
HGN Heimansgroeve 1.50 340 *e*Rg 10 32 38.0
MOF Molkenrain 1.53 170 Pg **Pg** **10 31 59.7 +0.9**
MOF Sg **Sg** **10 32 19.6 +1.0**
MOF Molkenrain 1.53 170 *e*Pn **Pn** **10 31 57.8 -0.3**
SNR=118
MOF ⇑*i*Pg **Pg** **10 32 00.1 +1.3**
MOF Molkenrain 1.53 170 ⇑*i*P **Pg** **10 32 00.1 +1.3**
MOF Molkenrain 1.53 170 Pg **Pg** **10 31 59.7 +0.9**
MOF Sg **Sg** **10 32 19.6 +1.0**
HINF Hinteralfeld 1.55 177 *e*Pg **Pg** **10 32 00.0 +0.9**
SNR=1.0
HINF *e*Sg **Sg** **10 32 20.3 +1.2**
503nm,0.3s,SNR=1.0
HINF Hinteralfeld 1.55 177 *e*Pn **Pn** **10 31 57.9 -0.3**
HINF *e*Pg **Pg** **10 32 00.0 +0.9**
HINF *e*Sg **Sg** **10 32 20.3 +1.2**
HINF Hinteralfeld 1.55 177 *e*Pg **Pg** **10 32 00.0 +0.9**
SNR=1.0
HINF *e*Sg **Sg** **10 32 20.3 +1.2**
252nm,0.3s,SNR=1.0
DOU Dourbes 1.58 299 P **Pn** **10 31 59.7 +1.0**
BEBN Eben Emael 1.59 335 P **Pn** **10 32 00.4 +1.5**
BEBN Eben Emael 1.59 335 P **Pn** **10 32 00.3 +1.4**
KIZ Kirchzarten 1.61 151 Pn **Pn** **10 31 58.3 -0.7**
KIZ Sg **Sg** **10 32 22.2 +1.2**
SFTF Sexfontaines 1.62 225 *e*Pn **Pn** **10 32 00.0 +0.8**
baz=48
SFTF Sexfontaines 1.62 225 *e*Pg **Pg** **10 32 02.5 +2.0**
SFTF *e*Sn **Sn** **10 32 20.1 -0.7**
389nm,0.4s,baz=46
SFTF Sexfontaines 1.62 225 *e*Pn **Pn** **10 32 00.0 +0.8**
SFTF *e*Pg **Pg** **10 32 02.5 +2.0**
SFTF *e*Sn **Sn** **10 32 20.1 -0.7**
SFTF Sexfontaines 1.62 225 *e*Pg **Pg** **10 32 02.5 +2.0**
SFTF *e*Sn **Sn** **10 32 20.1 -0.7**
194nm,0.4s
BNS Bensberg 1.63 9 *e*Pg **Pg** **10 32 00.0 -0.6**
HOBG Hohbusch 1.67 13 *e*Pg **Pg** **10 32 00.7 -0.7**
FELD Feldberg im Sc 1.70 150 Pg **Pg** **10 32 02.7 +0.6**
FELD Sg **Sg** **10 32 24.4 +0.2**
FELD Feldberg im Sc 1.70 150 Pg **Pg** **10 32 02.6 +0.5**
FELD Sg **Sg** **10 32 25.3 +1.2**
STU Stuttgart 1.71 109 *e*Pn **Pn** **10 31 59.9 -0.6**
SNR=4.0
STU *e*Sn **Sn** **10 32 19.2 -3.9**
SNR=2.1
STU Stuttgart 1.71 109 *e*Pn **Pn** **10 31 59.9 -0.5**
STU *e*Sn **Sn** **10 32 22.2 -0.8**
STU Stuttgart 1.71 109 Pn **Pn** **10 31 59.9 -0.6**
SNR=4.0
STU Sn **Sn** **10 32 19.2 -3.8**
SNR=2.1
STU *e*S **Sn** **10 32 22.2 -0.8**
TUBL Tuebingen-Lenn 1.75 118 Pg **Pg** **10 32 02.1 -0.9**
TUBL Tuebingen-Lenn 1.75 118 Px Px 10 32 02.1
BAIF Baives 1.79 294 *e*Pg **Pg** **10 32 05.4 +1.6**
BAIF *e*Sg **Sg** **10 32 28.5 +1.5**
409nm,0.6s
BAIF Baives 1.79 294 *e*Pn **Pn** **10 32 02.8 +1.2**
BAIF *e*Pg **Pg** **10 32 05.4 +1.6**
BAIF *e*Sg **Sg** **10 32 28.5 +1.5**
BAIF Baives 1.79 294 *e*Pg **Pg** **10 32 05.4 +1.6**
BAIF *e*Sg **Sg** **10 32 28.5 +1.5**
204nm,0.6s
SIND Sindeldorf 1.87 89 P **Pn** **10 32 01.4 -1.2**
BUCH Bad Urach 1.94 117 P **Pn** **10 32 04.1 +0.5**
BBS Basel-Blauen 1.96 165 *e*Pn **Pn** **10 32 04.2 +0.3**
SNR=13
BBS Pg **Pg** **10 32 07.7 +0.6**
BBS Basel-Blauen 1.96 165 Px Px 10 32 07.7
BBS Basel-Blauen 1.96 165 Pg **Pg** **10 32 07.6 +0.5**
BBS Sg **Sg** **10 32 34.2 +1.7**
SLE Schleitheim 1.97 143 *e*Pn **Pn** **10 32 03.9 -0.2**
785nm,0.5s
BOURR Bourrignon 2.00 171 *e*Pn **Pn** **10 32 04.5 +0.1**
1µm,0.9s
LOMF Lomont 2.01 179 Pg **Pg** **10 32 08.3 +0.3**
LOMF Sg **Sg** **10 32 35.7 +1.6**
LOMF Lomont 2.01 179 *e*Pn **Pn** **10 32 04.9 +0.2**
SNR=22
LOMF Pg **Pg** **10 32 08.9 +0.9**
LOMF Sg **Sg** **10 32 36.1 +2.0**
LOMF Lomont 2.01 179 P **Pg** **10 32 08.9 +0.9**
LOMF S **Sg** **10 32 36.1 +2.0**
LOMF Lomont 2.01 179 Pg **Pg** **10 32 08.9 +0.9**
LOMF Sg **Sg** **10 32 35.7 +1.6**
LOMF S **Sg** **10 32 35.7 +1.6**
GUT Gutenstein 2.03 129 P **Pn** **10 32 04.6 -0.2**
SULZ Cheisacher 2.05 153 *e*Pn **Pn** **10 32 05.7 +0.6**
859nm,1.1s
BUG Bochum--Univer 2.11 9 *e*Pg **Pg** **10 32 10.0 +0.2**
SNR=2.3
BUG *e*Sn **Sn** **10 32 32.6 -0.2**
SNR=2.4
BUG *e*Sg **Sg** **10 32 36.8 -0.4**
SNR=5.0
UCC Uccle 2.11 314 P **Pn** **10 32 11.9 +6.0**
BALST Balsthal 2.12 162 *e*Pn **Pn** **10 32 06.3 +0.2**
1µm,1.5s
SISB Singen-Schiene 2.23 138 P* **Pb** **10 32 13.1 +2.6**
WEIN Weingarten 2.36 140 *e*Pn **Pn** **10 32 09.7 +0.3**
224nm,1.3s
HDH Heidenheim-Cha 2.41 108 Pg **Pg** **10 32 14.9 -0.6**
WILA Wila 2.42 143 *e*Pn **Pn** **10 32 10.8 +0.6**
982nm,0.9s
BRANT Les Verrieres 2.43 185 *e*Pn **Pn** **10 32 10.9 +0.5**
700nm,1.1s
WTSB Winterswijk 2.61 1 *e*Pg **Pg** **10 32 19.0 -0.4**
117nm,1.4s
WTSB *e*Sg **Sg** **10 32 51.9 -1.3**
LIENZ Kamor/St.Gall 2.76 137 *e*Pn **Pn** **10 32 15.4 +0.5**
341nm,0.9s
WIMIS Wimmis 2.76 167 *e*Pn **Pn** **10 32 16.1 +1.2**
263nm,1.3s
HASLI Hasliberg/Brie 2.77 160 *e*Pn **Pn** **10 32 15.9 +0.9**
415nm,0.7s
CABF La Chapelle 2.79 189 *e*Pg **Pg** **10 32 23.4 +0.5**
CABF *e*Sg **Sg** **10 32 59.4 +0.4**
279nm,0.5s,SNR=1.0
CABF La Chapelle 2.79 189 *e*Pn **Pn** **10 32 15.4 +0.1**
CABF *e*Pg **Pg** **10 32 23.4 +0.5**
CABF *e*Sg **Sg** **10 32 59.4 +0.4**
CABF La Chapelle 2.79 189 *e*Pg **Pg** **10 32 23.4 +0.5**
CABF *e*Sg **Sg** **10 32 59.4 +0.4**
139nm,0.5s,SNR=1.0
UBR Ueberruh 2.79 126 P **Pn** **10 32 16.4 +1.0**
UBR Ueberruh 2.79 126 Px Px 10 32 16.4
GIMEL St. Georges / 2.85 187 *e*Pn **Pn** **10 32 18.0 +1.9**
562nm,0.5s
LOR Lormes 2.85 224 *e*Pn **Pn** **10 32 16.4 +0.3**
baz=48,SNR=1.0
LOR *e*Sn **Sn** **10 32 50.1 -1.0**
LOR *e*Sg **Sg** **10 33 02.4 +1.5**
206nm,0.4s,baz=44,SNR=1.0
LOR Lormes 2.85 224 *e*P **Pn** **10 32 16.4 +0.3**
LOR *e* 10 32 50.1
LOR Lormes 2.85 224 *e*Pn **Pn** **10 32 16.4 +0.3**
SNR=1.0
LOR *e*Sn **Sn** **10 32 50.1 -1.0**
LOR *e*Sg **Sg** **10 33 02.4 +1.5**
103nm,0.4s,SNR=1.0
PLONS Plons/SG 2.91 142 *e*Pn **Pn** **10 32 16.5 -0.4**
174nm,1.2s
GRA1 Grafenberg Arr 2.93 82 Sg **Sg** **10 33 02.2 -1.4**
GRF Grafenberg Arr 2.93 82 *e*Sg **Sg** **10 33 02.2 -1.3**
DAVA Damuels 2.94 134⇑*e*Pn **Pn** **10 32 18.6 +1.2**
SNR=10
DAVA ⇓*i*Sn **Sn** **10 32 54.2 +0.8**
DAVA ⇑*i*Sg **Sg** **10 33 05.1 +1.1**
61nm,0.4s
GTTG Gvttingen 3.00 42 *e*Pn **Pn** **10 32 17.8 -0.4**
SNR=1.1
GTTG *e*Pg **Pg** **10 32 27.4 +0.5**
SNR=1.8
GTTG *e*Sg **Sg** **10 33 03.0 -2.7**
SNR=3.1
IBBN Ibbenburen 3.02 12 *e*Pg **Pg** **10 32 26.4 -0.8**
SNR=1.6
IBBN *e*Sg **Sg** **10 33 04.8 -1.5**
SNR=3.0
IBBN Ibbenburen 3.02 12 Pg **Pg** **10 32 26.4 -0.8**
SNR=1.6
IBBN Sg **Sg** **10 33 04.8 -1.5**
SNR=3.0
OBER Oberstdorf 3.07 128⇑*i*Pn **Pn** **10 32 20.9 +1.8**
SSF Saint Saulge 3.16 225 *e*Pn **Pn** **10 32 20.5 +0.1**
SNR=1.0
SSF *e*Sn **Sn** **10 32 57.6 -1.3**
SNR=1.0
SSF *e*Sg **Sg** **10 33 12.3 +1.3**
212nm,0.5s
SSF Saint Saulge 3.16 225 *e*P **Pn** **10 32 20.5 +0.1**
SSF *e* 10 32 57.6
SSF Saint Saulge 3.16 225 *e*Pn **Pn** **10 32 20.5 +0.1**
SNR=1.0
SSF *e*Sn **Sn** **10 32 57.6 -1.3**
SNR=1.0
SSF *e*Sg **Sg** **10 33 12.3 +1.3**
106nm,0.5s
SMF Signal de Mont 3.35 217 *e*Pg **Pg** **10 32 34.1 +0.5**
SNR=1.0
SMF *e*Sn **Sn** **10 33 01.5 -1.9**
SNR=1.0
SMF *e*Sg **Sg** **10 33 17.6 +0.6**
106nm,0.4s,SNR=1.0
SMF Signal de Mont 3.35 217 *e*Pn **Pn** **10 32 22.6 -0.4**
SMF *e*Pg **Pg** **10 32 34.1 +0.5**
SMF *e*Sn **Sn** **10 33 01.5 -1.9**
SMF *e*Sg **Sg** **10 33 17.6 +0.6**
SMF Signal de Mont 3.35 217 *e*P **Pn** **10 32 22.6 -0.4**
SMF *e* 10 33 01.5
SMF Signal de Mont 3.35 217 *e*Pg **Pg** **10 32 34.1 +0.5**
SNR=1.0
SMF *e*Sn **Sn** **10 33 01.5 -1.9**
SNR=1.0
SMF *e*Sg **Sg** **10 33 17.6 +0.6**
53nm,0.4s,SNR=1.0
CLZ Clausthal 3.39 42 *e*Pn **Pn** **10 32 22.7 -0.8**
SNR=2.7
CLZ *e*Pg **Pg** **10 32 32.1 -2.3**
SNR=2.7
CLZ *e*Sn **Sn** **10 33 00.8 -3.6**
SNR=1.3
CLZ *e*Sg **Sg** **10 33 14.2 -4.0**
SNR=2.0
CLZ Clausthal 3.39 42 *e*Pn **Pn** **10 32 22.5 -1.0**
MOX Moxa 3.39 66 *e*Pn **Pn** **10 32 23.2 -0.4**
SNR=2.3
MOX *e*Pg **Pg** **10 32 32.4 -2.0**
SNR=2.7
MOX *e*Sn **Sn** **10 33 03.3 -1.2**
SNR=1.4
MOX *e*Sg **Sg** **10 33 16.7 -1.6**
SNR=2.9
MOX Moxa 3.39 66 *e*PN **Pn** **10 32 23.3 -0.3**
MOX *e*PG **Pg** **10 32 32.4 -2.0**
MOX *e*SG **Sg** **10 33 15.2 -3.1**
OG05 Jujurieux 3.44 195 Pn **Pn** **10 32 24.1 -0.1**
OG05 Pg **Pg** **10 32 36.2 +0.9**
AVF Avril sur Loir 3.44 223 *e*Pn **Pn** **10 32 23.8 -0.4**
SNR=1.0
AVF *e*Sn **Sn** **10 33 03.9 -1.7**
SNR=1.0
AVF *e*Sg **Sg** **10 33 21.3 +1.5**
96nm,0.5s,SNR=1.0
AVF Avril sur Loir 3.44 223 *e*P **Pn** **10 32 23.8 -0.4**
AVF *e* 10 33 03.9
AVF Avril sur Loir 3.44 223 *e*Pn **Pn** **10 32 23.8 -0.4**
SNR=1.0
AVF *e*Sn **Sn** **10 33 03.9 -1.7**
SNR=1.0
AVF *e*Sg **Sg** **10 33 21.3 +1.5**
48nm,0.5s,SNR=1.0
HYF Humbligny 3.45 234 *e*Pn **Pn** **10 32 24.6 +0.2**
HYF *e*Pg **Pg** **10 32 36.6 +1.0**
HYF *e*Sn **Sn** **10 33 04.7 -1.3**
HYF *e*Sg **Sg** **10 33 21.1 +0.8**
MOTA Moosalm 3.54 123⇑*i*Pn **Pn** **10 32 26.6 +1.0**
SNR=9.1
MOTA ⇑*i*Sg **Sg** **10 33 22.8 -0.1**
18nm,0.4s
FETA Feichten 3.54 130⇓*i*Pn **Pn** **10 32 27.2 +1.5**
SNR=21
FETA ⇑*i*Sg **Sg** **10 33 24.0 +0.8**
19nm,0.6s
FETA Feichten 3.54 130 Pn **Pn** **10 32 27.2 +1.5**
SNR=21
FETA Sg **Sg** **10 33 24.0 +0.7**
19nm,0.6s
RSL Roselend 3.68 181 Pn **Pn** **10 32 28.1 +0.6**
RSL Pg **Pg** **10 32 41.7 +1.8**
NEUB Neuenburg 3.71 58 *e*Sg **Sg** **10 33 25.8 -2.9**
SNR=1.4
GUNZ Gunzen 3.75 72 *e*Pn **Pn** **10 32 28.6 +0.2**
SNR=2.3
GUNZ *e*Sn **Sn** **10 33 08.5 -4.7**
SNR=1.0
GUNZ *e*Sg **Sg** **10 33 28.3 -1.5**
SNR=2.8
GUNZ Gunzen 3.75 72 Pn **Pn** **10 32 28.6 +0.2**
SNR=2.3
GUNZ Sn **Sn** **10 33 08.5 -4.7**
SNR=1.0
GUNZ Sg **Sg** **10 33 28.3 -1.4**
SNR=2.8
WERD Werda 3.75 71 *e*Pn **Pn** **10 32 28.0 -0.5**
SNR=1.3
WERD *e*Pg **Pg** **10 32 34.0 -7.3**
SNR=2.2
WERD *e*Sg **Sg** **10 33 26.9 -3.0**
SNR=4.1
VAI Varese 3.75 158 Pn **Pn** **10 32 29.8 +1.3**
WERN Wernitzgruen 3.76 74 *e*Pn **Pn** **10 32 28.9 +0.3**
WERN *e*Sg **Sg** **10 33 27.0 -3.1**
TANN Tannenbergstha 3.84 72 *e*Pn **Pn** **10 32 30.3 +0.6**
SNR=2.9
TANN *e*Sg **Sg** **10 33 29.8 -2.9**
SNR=3.4
BGF Bois d'Agland 3.84 225 *e*Pg **Pg** **10 32 43.1 +0.1**
BGF *e*Sn **Sn** **10 33 14.0 -1.6**
BGF *e*Sg **Sg** **10 33 33.6 +0.8**
474nm,0.4s
BGF Bois d'Agland 3.84 225 *e*Pn **Pn** **10 32 29.6 -0.2**
BGF *e*Pg **Pg** **10 32 43.1 +0.1**
BGF *e*Sn **Sn** **10 33 14.0 -1.6**
BGF *e*Sg **Sg** **10 33 33.6 +0.8**
BGF Bois d'Agland 3.84 225 *e*P **Pn** **10 32 29.6 -0.2**
BGF *e* 10 33 14.0
BGF Bois d'Agland 3.84 225 *e*Pg **Pg** **10 32 43.1 +0.1**
BGF *e*Sn **Sn** **10 33 14.0 -1.6**
BGF *e*Sg **Sg** **10 33 33.6 +0.8**
237nm,0.4s
LPL La Plagne 3.85 180 *e*Pg **Pg** **10 32 42.2 -1.0**
SNR=1.0
LPL *e*Sn **Sn** **10 33 13.1 -2.6**
LPL *e*Sg **Sg** **10 33 33.0 0.0**
29nm,0.5s,SNR=1.0
LPL La Plagne 3.85 180 *e*Pn **Pn** **10 32 29.8 0.0**
LPL *e*Pg **Pg** **10 32 42.2 -1.0**
LPL *e*Sn **Sn** **10 33 13.1 -2.6**
LPL *e*Sg **Sg** **10 33 33.0 0.0**
LPL La Plagne 3.85 180 *e*P **Pn** **10 32 29.8 0.0**
LPL *e* 10 33 13.1
LPL La Plagne 3.85 180 *e*Pg **Pg** **10 32 42.2 -1.0**
SNR=1.0
LPL *e*Sn **Sn** **10 33 13.1 -2.6**
LPL *e*Sg **Sg** **10 33 33.0 0.0**
15nm,0.5s,SNR=1.0
LPG La Plagne 3.87 180 *e*Pg **Pg** **10 32 42.8 -0.7**
LPG *e*Sn **Sn** **10 33 14.1 -2.1**
LPG *e*Sg **Sg** **10 33 32.7 -0.9**
95nm,0.8s
LPG La Plagne 3.87 180 *e*Pn **Pn** **10 32 30.5 +0.4**
LPG *e*Pg **Pg** **10 32 42.8 -0.7**
LPG *e*Sn **Sn** **10 33 14.1 -2.1**
LPG *e*Sg **Sg** **10 33 32.7 -0.9**
LPG La Plagne 3.87 180 *e*P **Pn** **10 32 30.5 +0.4**
LPG *e* 10 33 14.1
LPG La Plagne 3.87 180 *e*Pg **Pg** **10 32 42.8 -0.7**
LPG *e*Sn **Sn** **10 33 14.1 -2.1**
LPG *e*Sg **Sg** **10 33 32.7 -0.9**
48nm,0.8s
TRAV Traversella 3.91 170 Pn **Pn** **10 32 32.8 +2.1**
PLDF La Plantade 4.00 213 Pn **Pn** **10 32 33.2 +1.3**
WET Wettzell 4.02 91 *e*Pn **Pn** **10 32 32.5 +0.3**
SNR=10
WET *e*Sn **Sn** **10 33 12.7 -7.3**
SNR=1.9
WET *e*Sg **Sg** **10 33 35.8 -2.7**
SNR=3.2
WET Wettzell 4.02 91 *e*P **Pn** **10 32 32.9 +0.7**
AGO Saint Agoulin 4.12 218 Pn **Pn** **10 32 34.4 +0.9**
BNI Bardonecchia 4.31 181 *e*Pn **Pn** **10 32 37.7 +1.5**
BNI *e*Sn **Sn** **10 33 28.4 +1.2**
BNI Bardonecchia 4.31 181 *e*Pn **Pn** **10 32 37.7 +1.5**
BNI *e*S **Sn** **10 33 28.4 +1.2**
TCF Toulx Ste Croi 4.34 227 *e*Pn **Pn** **10 32 36.7 +0.1**
SNR=1.0
TCF *e*Sn **Sn** **10 33 25.8 -2.0**
SNR=1.0
TCF *e*Sg **Sg** **10 33 49.6 +0.9**
177nm,0.8s
TCF Toulx Ste Croi 4.34 227 *e*P **Pn** **10 32 36.7 +0.1**
TCF *e* 10 33 25.8
TCF Toulx Ste Croi 4.34 227 *e*Pn **Pn** **10 32 36.7 +0.1**
SNR=1.0
TCF *e*Sn **Sn** **10 33 25.8 -2.0**
SNR=1.0
TCF *e*Sg **Sg** **10 33 49.6 +0.9**
88nm,0.8s
SSB Saint Sauveur 4.35 201 *e*Pn **Pn** **10 32 38.2 +1.4**
SSB *e*Sn **Sn** **10 33 29.1 +0.9**
SSB Saint Sauveur 4.35 201 Pn **Pn** **10 32 37.4 +0.6**
SSB *e*S **Sn** **10 33 29.1 +0.9**
PYM Petit Puy Mans 4.41 216 Pn **Pn** **10 32 37.6 0.0**
PYM Pg **Pg** **10 32 55.6 +1.6**
CLL Collm 4.45 62 *e*Pg **Pg** **10 32 56.0 +1.3**
CLL *e*Sg **Sg** **10 33 48.5 -3.9**
SNR=3.1
CLL Collm 4.45 62 *e*Pn **Pn** **10 32 31.0 -7.1**
comp=Z,52nm,2.3s
CLL *e*Pg **Pg** **10 32 56.0 +1.3**
CLL *e*Sn **Sn** **10 33 16.0 -15**
CLL *e*Sg **Sg** **10 33 49.0 -3.4**
comp=Z,31nm,1.0s
CLL Collm 4.45 62 *e*P **Pn** **10 32 31.0 -7.1**
comp=Z,52nm,2.3s
CLL Sg **Sg** **10 33 48.5 -3.9**
SNR=3.1
KHC Kasperske Hory 4.48 90 *e*P **Pn** **10 32 38.6 +0.1**
KHC *e* 10 33 28.4
KHC Kasperske Hory 4.48 90 *e*PN **Pn** **10 32 38.6 +0.1**
KHC *e*PG **Pg** **10 32 56.5 +1.3**
KHC *e*SN **Sn** **10 33 28.4 -2.8**
KHC *e*SG **Sg** **10 33 51.1 -2.1**
comp=Z,13nm,0.6s
ORIF Oris-en-Rattie 4.49 188 *e*Pg **Pg** **10 32 53.7 -1.7**
ORIF *e*Sn **Sn** **10 33 28.3 -3.1**
ORIF *e*Sg **Sg** **10 33 52.7 -0.8**
comp=Z,101nm,0.6s
ORIF Oris-en-Rattie 4.49 188 *e*Pn **Pn** **10 32 38.6 0.0**
ORIF *e*Pg **Pg** **10 32 53.7 -1.7**
ORIF *e*Sn **Sn** **10 33 28.3 -3.1**
ORIF *e*Sg **Sg** **10 33 52.7 -0.8**
ORIF Oris-en-Rattie 4.49 188 *e*P **Pn** **10 32 38.6 0.0**
ORIF *e* 10 33 28.3
ORIF Oris-en-Rattie 4.49 188 *e*Pg **Pg** **10 32 53.7 -1.7**
ORIF *e*Sn **Sn** **10 33 28.3 -3.1**
ORIF *e*Sg **Sg** **10 33 52.7 -0.8**
comp=Z,50nm,0.6s
LDF La Druitiere 4.59 263 *e*Pg **Pg** **10 32 57.0 -0.4**
LDF *e*Sn **Sn** **10 33 31.0 -3.1**
SNR=1.0
LDF *e*Sg **Sg** **10 33 56.3 -0.6**
comp=Z,126nm,0.8s,SNR=1.0
LDF La Druitiere 4.59 263 *e*Pn **Pn** **10 32 40.8 +0.7**
LDF *e*Pg **Pg** **10 32 57.0 -0.4**
LDF *e*Sn **Sn** **10 33 31.0 -3.1**
LDF *e*Sg **Sg** **10 33 56.3 -0.6**
LDF La Druitiere 4.59 263 *e*P **Pn** **10 32 40.8 +0.7**
LDF *e* 10 33 31.0
LDF La Druitiere 4.59 263 *e*Pg **Pg** **10 32 57.0 -0.4**
LDF *e*Sn **Sn** **10 33 31.0 -3.1**
SNR=1.0
LDF *e*Sg **Sg** **10 33 56.3 -0.6**
comp=Z,63nm,0.8s,SNR=1.0
GEC2 GERESS Array S 4.59 94 *e*Pn **Pn** **10 32 40.5 +0.4**
SNR=27
GEC2 *e*Pg **Pg** **10 32 56.8 -0.7**
SNR=0.5
GEC2 *e*Sn **Sn** **10 33 29.7 -4.4**
SNR=3.3
GEC2 *e*Sg **Sg** **10 33 54.1 -2.9**
SNR=1.4
GEC2 GERESS Array S 4.59 94 *e*Pn **Pn** **10 32 40.5 +0.4**
GEC2 *e*Sn **Sn** **10 33 32.8 -1.3**
MBDF Montbardon 4.64 180 *e*Pg **Pg** **10 32 57.0 -1.3**
MBDF *e*Sn **Sn** **10 33 32.1 -3.1**
MBDF *e*Sg **Sg** **10 33 56.7 -1.7**
comp=Z,43nm,0.8s
MBDF Montbardon 4.64 180 *e*Pn **Pn** **10 32 40.6 -0.1**
MBDF *e*Pg **Pg** **10 32 57.0 -1.3**
MBDF *e*Sn **Sn** **10 33 32.1 -3.1**
MBDF *e*Sg **Sg** **10 33 56.7 -1.7**
MBDF Montbardon 4.64 180 *e*P **Pn** **10 32 40.6 -0.1**
MBDF *e* 10 33 32.1
MBDF Montbardon 4.64 180 *e*Pg **Pg** **10 32 57.0 -1.3**
MBDF *e*Sn **Sn** **10 33 32.1 -3.1**
MBDF *e*Sg **Sg** **10 33 56.7 -1.7**
comp=Z,22nm,0.8s
ABTA Abfaltersbach 4.67 122⇓*i*Pn **Pn** **10 32 42.1 +1.1**
SNR=9.3
ABTA ⇓*i*Pg **Pg** **10 32 59.0 +0.2**
VIVF Saint-Julien-l 4.73 198 *e*Pg **Pg** **10 32 58.8 -1.2**
SNR=1.0
VIVF *e*Sn **Sn** **10 33 34.1 -3.3**
VIVF *e*Sg **Sg** **10 34 00.6 -0.6**
comp=Z,88nm,0.7s
VIVF Saint-Julien-l 4.73 198 *e*Pn **Pn** **10 32 41.6 -0.3**
VIVF *e*Pg **Pg** **10 32 58.8 -1.2**
VIVF *e*Sn **Sn** **10 33 34.1 -3.3**
VIVF *e*Sg **Sg** **10 34 00.6 -0.6**
VIVF Saint-Julien-l 4.73 198 *e*P **Pn** **10 32 41.6 -0.3**
VIVF *e* 10 33 34.1
VIVF Saint-Julien-l 4.73 198 *e*Pg **Pg** **10 32 58.8 -1.2**
SNR=1.0
VIVF *e*Sn **Sn** **10 33 34.1 -3.3**
VIVF *e*Sg **Sg** **10 34 00.6 -0.6**
comp=Z,44nm,0.7s
LBL Lubilhac 4.77 211 Pn **Pn** **10 32 42.8 +0.3**
FLN La Foliniere 4.79 266 *e*Pn **Pn** **10 32 43.5 +0.7**
baz=87,SNR=1.0
FLN La Foliniere 4.79 266 *e*Pg **Pg** **10 33 00.9 -0.4**
baz=82
FLN *e*Sn **Sn** **10 33 36.5 -2.5**
SNR=1.0
FLN *e*Sg **Sg** **10 34 03.4 0.0**
comp=Z,66nm,0.4s
FLN La Foliniere 4.79 266 *e*Pn **Pn** **10 32 43.5 +0.7**
FLN *e*Pg **Pg** **10 33 00.9 -0.4**
FLN *e*Sn **Sn** **10 33 36.5 -2.5**
FLN *e*Sg **Sg** **10 34 03.4 0.0**
FLN La Foliniere 4.79 266 *e*P **Pn** **10 32 43.5 +0.7**
FLN *e* 10 33 36.5
FLN La Foliniere 4.79 266 *e*Pg **Pg** **10 33 00.9 -0.4**
FLN *e*Sn **Sn** **10 33 36.5 -2.5**
SNR=1.0
FLN *e*Sg **Sg** **10 34 03.4 0.0**
comp=Z,33nm,0.4s
PZZ Stroppo 4.86 177 Pn **Pn** **10 32 45.5 +1.7**
BRG Berggiesshubel 4.87 69 *e*Pn **Pn** **10 32 43.9 0.0**
SNR=0.9
BRG *e*Sn **Sn** **10 33 34.9 -6.0**
SNR=1.0
BRG *e*Sg **Sg** **10 34 04.0 -1.7**
SNR=2.9
BRG Berggiesshubel 4.87 69 PN **Pn** **10 32 48.1 +4.3**
BRG *e* 10 32 59.3
BRG Berggiesshubel 4.87 69 SG **Sg** **10 34 03.9 -1.8**
comp=Z,33nm,1.2s
KBA Koelnbreinsper 4.96 115⇑*i*Pn **Pn** **10 32 46.0 +0.9**

	SNR=9.4							
KBA				⇑*i*	Sn	**Sn**	10 33 43.3	+0.1
PRU	**Pruhonice**	**5.10**	**80**		Pg	**Pg**	10 32 59.0	-8.1
PRU					Sg	**Sg**	10 34 07.7	-5.4
	comp=Z,34nm,1.0s							
PRU	**Pruhonice**	**5.10**	**80**	*ex*	x		10 32 59.0	
PRU				*e*	SG	**Sg**	10 34 07.7	-5.4
	comp=Z,34nm,1.0s							
GRR	**Gorron**	**5.12**	**262**	*e*	Pg	**Pg**	10 33 07.0	-0.4
	SNR=1.0							
GRR				*e*	Sn	**Sn**	10 33 43.6	-3.4
	SNR=1.0							
GRR				*e*	Sg	**Sg**	10 34 13.3	-0.4
	comp=Z,68nm,0.6s,SNR=1.0							
GRR	**Gorron**	**5.12**	**262**	*e*	Pn	**Pn**	10 32 47.9	+0.6
GRR				*e*	Pg	**Pg**	10 33 07.0	-0.4
GRR				*e*	Sn	**Sn**	10 33 43.6	-3.4
GRR				*e*	Sg	**Sg**	10 34 13.3	-0.4
GRR	**Gorron**	**5.12**	**262**	*e*	P	**Pn**	10 32 47.9	+0.6
GRR				*e*			10 33 43.6	
GRR	**Gorron**	**5.12**	**262**	*e*	Pg	**Pg**	10 33 07.0	-0.4
	SNR=1.0							
GRR				*e*	Sn	**Sn**	10 33 43.6	-3.4
	SNR=1.0							
GRR				*e*	Sg	**Sg**	10 34 13.3	-0.4
	comp=Z,34nm,0.6s,SNR=1.0							
PVCC	**Panska Ves**	**5.18**	**74**	*e*	SG	**Sg**	10 34 09.9	-5.9
	comp=Z,66nm,1.0s							
MOA	**Molln**	**5.21**	**104**	⇓*i*	Pn	**Pn**	10 32 49.4	+0.9
	SNR=14							
MOA				⇑*i*	Sn	**Sn**	10 33 48.3	-1.0
MOA				⇓*i*	Sg	**Sg**	10 34 18.1	+1.4
	comp=Z,12nm,0.6s							
MFF	**Saint Martin d**	**5.39**	**242**	*e*	Pg	**Pg**	10 33 11.3	-1.4
MFF				*e*	Sn	**Sn**	10 33 51.3	-2.5
MFF				*e*	Sg	**Sg**	10 34 22.2	-0.4
	comp=Z,68nm,0.6s,SNR=1.0							
MFF	**Saint Martin d**	**5.39**	**242**	*e*	Pn	**Pn**	10 32 51.4	+0.3
MFF				*e*	Pg	**Pg**	10 33 11.3	-1.4
MFF				*e*	Sn	**Sn**	10 33 51.3	-2.5
MFF				*e*	Sg	**Sg**	10 34 22.2	-0.4
MFF	**Saint Martin d**	**5.39**	**242**	*e*	P	**Pn**	10 32 51.4	+0.3
MFF				*e*			10 33 51.3	
MFF	**Saint Martin d**	**5.39**	**242**	*e*	Pg	**Pg**	10 33 11.3	-1.4
MFF				*e*	Sn	**Sn**	10 33 51.3	-2.5
MFF				*e*	Sg	**Sg**	10 34 22.2	-0.4
	comp=Z,34nm,0.6s,SNR=1.0							
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*	Pn	**Pn**	10 32 50.9	-0.2
RJF				*e*	Sn	**Sn**	10 33 50.7	-3.2
RJF				*e*	Sg	**Sg**	10 34 20.4	-2.4
	comp=Z,56nm,0.6s,SNR=1.0							
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*	P	**Pn**	10 32 50.9	-0.2
RJF				*e*			10 33 50.7	
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*	Pn	**Pn**	10 32 50.9	-0.2
RJF				*e*	Sn	**Sn**	10 33 50.7	-3.2
RJF				*e*	Sg	**Sg**	10 34 20.4	-2.4
	comp=Z,28nm,0.6s,SNR=1.0							
SMRF	**Simiane la Rot**	**5.45**	**189**	*e*	Pn	**Pn**	10 32 51.5	-0.3
SMRF				*e*	Sn	**Sn**	10 33 51.4	-3.8
SMRF				*e*	Sg	**Sg**	10 34 22.6	-1.8
	comp=Z,8.5nm,0.4s							
SMRF	**Simiane la Rot**	**5.45**	**189**	*e*	Pn	**Pn**	10 32 51.5	-0.3
SMRF				*e*	Sn	**Sn**	10 33 51.4	-3.8
SMRF				*e*	Sg	**Sg**	10 34 22.6	-1.8
	comp=Z,4.2nm,0.4s							
CAF	**Calviac**	**5.47**	**218**	*e*	Pn	**Pn**	10 32 51.6	-0.5
	SNR=1.0							
CAF				*e*	Sn	**Sn**	10 33 52.8	-2.9
CAF				*e*	Sg	**Sg**	10 34 24.4	-0.7
	comp=Z,55nm,0.5s							
CAF	**Calviac**	**5.47**	**218**	*e*	P	**Pn**	10 32 51.6	-0.5
CAF				*e*			10 33 52.8	
CAF	**Calviac**	**5.47**	**218**	*e*	Pn	**Pn**	10 32 51.6	-0.5
	SNR=1.0							
CAF				*e*	Sn	**Sn**	10 33 52.8	-2.9
CAF				*e*	Sg	**Sg**	10 34 24.4	-0.7
	comp=Z,28nm,0.5s							
SBF	**Sospel**	**5.52**	**175**	*e*	Pn	**Pn**	10 32 52.7	-0.1
	comp=Z,42nm,0.7s							
SBF				*e*	Sn	**Sn**	10 33 53.3	-3.7
SBF	**Sospel**	**5.52**	**175**	*e*	Pn	**Pn**	10 32 52.7	-0.1
	comp=Z,21nm,0.7s							
SBF				*e*	Sn	**Sn**	10 33 53.3	-3.7
LASF	**Ste Croix**	**5.65**	**202**	*e*	Pg	**Pg**	10 33 15.8	-1.9
LASF				*e*	Sn	**Sn**	10 33 56.7	-3.4
LASF				*e*	Sg	**Sg**	10 34 30.2	-0.6
	comp=Z,52nm,0.6s,SNR=1.0							
LASF	**Ste Croix**	**5.65**	**202**	*e*	Pn	**Pn**	10 32 54.7	+0.1
LASF				*e*	Pg	**Pg**	10 33 15.8	-1.9
LASF				*e*	Sn	**Sn**	10 33 56.7	-3.4
LASF				*e*	Sg	**Sg**	10 34 30.2	-0.6
LASF	**Ste Croix**	**5.65**	**202**	*e*	P	**Pn**	10 32 54.7	+0.1
LASF				*e*			10 33 15.8	
LASF	**Ste Croix**	**5.65**	**202**	*e*	Pn	**Pn**	10 32 54.7	+0.1
	SNR=1.0							
LASF				*e*	Sn	**Sn**	10 33 56.7	-3.4
LASF				*e*	Sg	**Sg**	10 34 30.2	-0.6
	comp=Z,26nm,0.6s,SNR=1.0							
FRF	**La Foret Royal**	**5.80**	**181**	*e*	Pn	**Pn**	10 32 55.6	-1.1
FRF				*e*	Sn	**Sn**	10 34 00.4	-3.5
FRF				*e*	Sg	**Sg**	10 34 33.3	-2.5
	comp=Z,5.4nm,0.5s							
FRF	**La Foret Royal**	**5.80**	**181**	*e*	P	**Pn**	10 32 55.6	-1.1
FRF				*e*			10 34 00.4	
FRF	**La Foret Royal**	**5.80**	**181**	*e*	Pn	**Pn**	10 32 55.6	-1.1
FRF				*e*	Sn	**Sn**	10 34 00.4	-3.5
FRF				*e*	Sg	**Sg**	10 34 33.3	-2.5
	comp=Z,2.7nm,0.5s							
LFF	**La Frestale**	**6.03**	**225**	*e*	Pn	**Pn**	10 32 59.7	-0.1
LFF				*e*	Sn	**Sn**	10 34 05.5	-4.0
LFF				*e*	Sg	**Sg**	10 34 41.9	-1.2
	comp=Z,129nm,0.6s							
LFF	**La Frestale**	**6.03**	**225**	*e*	P	**Pn**	10 32 59.7	-0.1
LFF				*e*			10 34 05.5	
LFF	**La Frestale**	**6.03**	**225**	*e*	Pn	**Pn**	10 32 59.7	-0.1
LFF				*e*	Sn	**Sn**	10 34 05.5	-4.0
LFF				*e*	Sg	**Sg**	10 34 41.9	-1.2
	comp=Z,64nm,0.6s							
LMR	**La Mourre**	**6.03**	**182**	*e*	Pn	**Pn**	10 32 59.8	-0.1
LMR				*e*	Sn	**Sn**	10 34 05.4	-4.2
	comp=Z,2.9nm,0.4s							
LMR	**La Mourre**	**6.03**	**182**	*e*	Pn	**Pn**	10 32 59.8	-0.1
LMR				*e*	Sn	**Sn**	10 34 05.4	-4.2
	comp=Z,1.5nm,0.4s							
CONA	**Conrad Observa**	**6.21**	**100**	⇑*i*	Pn	**Pn**	10 33 02.7	+0.5
CONA				⇓*i*	Sg	**Sg**	10 34 49.0	+0.4
	comp=Z,14nm,0.7s							
CONA	**Conrad Observa**	**6.21**	**100**		Pn	**Pn**	10 33 02.7	+0.5
CONA					Sg	**Sg**	10 34 49.0	+0.3
	comp=Z,14nm,0.7s							
SGMF	**Saint Gilles**	**6.25**	**263**	*e*	Pn	**Pn**	10 33 02.9	+0.1
	SNR=1.0							
SGMF				*e*	Sn	**Sn**	10 34 11.5	-3.4
	SNR=1.0							
SGMF				*e*	Sg	**Sg**	10 34 47.8	-2.2
	comp=Z,57nm,0.5s							
SGMF	**Saint Gilles**	**6.25**	**263**	*e*	P	**Pn**	10 33 02.9	+0.1
SGMF				*e*			10 34 11.5	
SGMF	**Saint Gilles**	**6.25**	**263**	*e*	Pn	**Pn**	10 33 02.9	+0.1
	SNR=1.0							
SGMF				*e*	Sn	**Sn**	10 34 11.5	-3.4
	SNR=1.0							
SGMF				*e*	Sg	**Sg**	10 34 47.8	-2.2
	comp=Z,28nm,0.5s							
DPC	**Dobruska-Polom**	**6.27**	**77**	*e*	SG	**Sg**	10 34 45.4	-5.3
	comp=Z,44nm,1.3s							
VRAC	**Vranov**	**6.43**	**87**	*e*	Pn	**Pn**	10 33 04.8	-0.5
ROSF	**Rostrenen**	**6.70**	**265**	*e*	Pn	**Pn**	10 33 08.9	-0.1
ROSF				*e*	Sn	**Sn**	10 34 22.3	-3.6
ROSF				*e*	Sg	**Sg**	10 35 02.7	-1.7
	comp=Z,131nm,1.1s							
ROSF	**Rostrenen**	**6.70**	**265**	*e*	P	**Pn**	10 33 08.9	-0.1
ROSF				*e*			10 34 22.3	
ROSF	**Rostrenen**	**6.70**	**265**	*e*	Pn	**Pn**	10 33 08.9	-0.1
ROSF				*e*	Sn	**Sn**	10 34 22.3	-3.6
ROSF				*e*	Sg	**Sg**	10 35 02.7	-1.7
	comp=Z,65nm,1.1s							
QUIF	**Quistinic**	**6.73**	**261**	*e*	Pn	**Pn**	10 33 08.7	-0.7
QUIF				*e*	Sn	**Sn**	10 34 20.5	-6.2
QUIF				*e*	Sg	**Sg**	10 35 03.9	-1.6
	comp=Z,84nm,0.8s							
QUIF	**Quistinic**	**6.73**	**261**	*e*	P	**Pn**	10 33 08.7	-0.7
QUIF				*e*			10 34 20.5	
QUIF	**Quistinic**	**6.73**	**261**	*e*	Pn	**Pn**	10 33 08.7	-0.7
QUIF				*e*	Sn	**Sn**	10 34 20.5	-6.2
QUIF				*e*	Sg	**Sg**	10 35 03.9	-1.6
	comp=Z,42nm,0.8s							
MTLF	**Montolieu**	**6.79**	**209**	*e*	Pg	**Pg**	10 33 36.6	-2.9
	SNR=1.0							
MTLF				*e*	Sg	**Sg**	10 35 04.5	-2.9
	comp=Z,53nm,0.9s							
MTLF	**Montolieu**	**6.79**	**209**	*e*	Pn	**Pn**	10 33 09.3	-0.9
MTLF				*e*	Pg	**Pg**	10 33 36.6	-2.9
MTLF				*e*	Sg	**Sg**	10 35 04.5	-2.9
MTLF	**Montolieu**	**6.79**	**209**	*e*	Pg	**Pg**	10 33 36.6	-2.9
	SNR=1.0							
MTLF				*e*	Sg	**Sg**	10 35 04.5	-2.9
	comp=Z,27nm,0.9s							
EPF	**Esparros**	**7.74**	**217**	*e*	Pn	**Pn**	10 33 20.7	-2.5
EPF				*e*	Sn	**Sn**	10 34 45.9	-5.6
EPF				*e*	Sg	**Sg**	10 35 36.1	-1.7
	comp=Z,45nm,0.9s							
EPF	**Esparros**	**7.74**	**217**	*e*	P	**Pn**	10 33 20.7	-2.5
EPF				*e*			10 34 45.9	
ETSF	**Etsaut**	**8.22**	**221**	*e*	Pn	**Pn**	10 33 28.8	-1.0
ETSF				*e*	Sn	**Sn**	10 34 58.3	-5.0
ETSF				*e*	Sg	**Sg**	10 35 50.3	-2.9
	comp=Z,31nm,0.7s							
ETSF	**Etsaut**	**8.22**	**221**	*e*	P	**Pn**	10 33 28.8	-1.0
ETSF				*e*			10 34 58.3	
SJPF	**Ste Jean**	**8.34**	**224**	*e*	Pn	**Pn**	10 33 31.7	+0.2
SJPF				*e*	Sn	**Sn**	10 34 59.6	-6.8
SJPF				*e*	Sg	**Sg**	10 35 53.4	-3.7
	comp=Z,46nm,1.2s							
SJPF	**Ste Jean**	**8.34**	**224**	*e*	P	**Pn**	10 33 31.7	+0.2
SJPF				*e*			10 34 59.6	
ESK	**Eskdalemuir**	**8.52**	**318**	*e*	Pn	**Pn**	10 33 34.8	+0.8
ESK	**Eskdalemuir**	**8.52**	**318**	*e*	Pn	**Pn**	10 33 34.8	+0.8
VSU	**Vasula**	**14.83**	**45**	*e*	P	**Pn**	10 34 56.2	-4.0
OBN	**Obninsk**	**19.05**	**61**	⇓*e*	P	**Pn**	10 35 50.6	-3.0
OBN				pmax	pmax			
	comp=Z,14nm,0.5s							
OBN				MLR	MLR			
	comp=Z,100nm,21.0s							
ARU	**Arti**	**31.38**	**57**	*c*	P	**P**	10 37 49.3	-2.3
ARU				*e*	S	**S**	10 42 57.3	-2.3
ARU				pmax	pmax			
	comp=Z,8.0nm,1.7s							

PGC 10 10:58:14.3±0.1, 4959N×13026W, h10km, ML2.9/7, Mw3.5, 8D, 237km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.71**	**70**	⇓Pn	Pn	10 58 41.6	-2.5
BPBC				⇓Sn	Sn	10 59 01.8	-4.2
HOLB	**Holberg**	**1.73**	**52**	⇓Pn	Pn	10 58 42.0	-2.3
HOLB				⇑Sn	Sn	10 59 03.2	-3.2
PHC	**Port Hardy**	**2.13**	**57**	⇑Pn	Pn	10 58 48.2	-1.8
PHC				⇓Sn	Sn	10 59 12.8	-3.7
MAYB	**Maynard**	**2.15**	**67**	⇑Pn	Pn	10 58 49.5	-0.7
WOSB	**Woss**	**2.45**	**75**	⇓Pn	Pn	10 58 53.2	-1.1
NCRB	**Newcastle Ridg**	**2.83**	**72**	⇓Pn	Pn	10 58 58.2	-1.3
BBB	**Bella Bella**	**2.93**	**27**	⇓Pn	Pn	10 58 59.6	-1.3
BBB				⇓Sn	Sn	10 59 30.9	-5.2

*NEIC **10** 11:15:10.1, 1603N×9756W, h16km, MD3.6(MEX), After MEX.*

MEX 10 11:15:10.1±0.9, 1603N×9756W, h16km±20km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.65**	**303**	*i* P	Pg	11 15 20.5	-2.4
PNIG				*i* S	Sg	11 15 28.9	-2.7
VHO	**Vista Hermosa**	**1.30**	**37**	*i* P	Pn	11 15 29.9	-3.8
VHO				*i* S	Sb	11 15 45.2	-5.5
OXX	**Oaxaca**	**1.31**	**37**	*e* P	Pn	11 15 30.8	-3.0
OXX				*i* S	Sn	11 15 46.6	-4.4
UTMO	**Huajuapan**	**1.80**	**353**	*i* P	Pn	11 15 38.0	-2.5
UTMO				*i* S	Sn	11 15 58.4	-4.7
MEIG	**Mezcala**	**2.73**	**314**	*e* P	Pn	11 15 51.1	-2.2
MEIG				*i* S	Sn	11 16 22.5	-3.4
CAIG	**El Cayaco**	**2.79**	**292**	*e* P	Pn	11 15 50.6	-3.4
CAIG				*i* S	Sn	11 16 24.1	-3.3
PPM	**Popocatepetl**	**3.18**	**342**	*e* P	Pn	11 15 55.7	-3.9
PPM				*i* S	Sn	11 16 34.8	-2.4
MZVM		**3.52**	**333**	*e* P	Pn	11 16 01.3	-2.9
MZVM				*i* S	Sn	11 16 43.8	-1.7

*DDA **10** 11:28:23.0, 3858N×2532E, h16km±3km, Md3.9*
*SOF **10** 11:28:25.5, 3870N×2581E, h10km, MD3.3*
*ISK **10** 11:28:25.6, 3872N×2539E, h18km, ML4.1*
*IDC **10** 11:28:26.8±1.0, 3886N×2558E, h0km, mb3.8/6, mb1 3.8/9, mb1mx3.7/23, mbtmp3.7/9, ML3.6/3, Error ellipse: s-maj=26.4km s-min=14.2km az=119.0*
*NEIC **10** 11:28:27.6, 3873N×2557E, h23km, ML4.1(ISK), ML3.7(ATH), After ATH.*
*ATH **10** 11:28:27.8, 3874N×2557E, h26km±2km, MD3.8/14, ML3.7*
*MOS **10** 11:28:28.1±1.5, 3882N×2566E, h21km, mb4.1/2, Error ellipse: s-maj=14.3km s-min=6.7km az=76.7*
*ISCJB **10** 11:28:29.0±0.5, 3876N±002×2562E±002, h25km±5km, mb3.6/6, Error ellipse: s-maj=3.0km s-min=2.6km az=38.5*
*CSEM **10** 11:28:29.0±0.0, 3874N×2564E, h25km, ML4.3/4, Error ellipse: s-maj=1.2km s-min=1.0km az=13.0*
*THE **10** 11:28:30.0, 3875N×2568E, h25km±4km, ML4.3/4, Error ellipse: s-maj=5.3km s-min=0.9km az=98.0*

ISC 10 11:28:28.4±0.5, 3875N±002×2561E±002, h9km±3km, n144, σ0s96/168, mb3.6/6, 6C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.50**	**137**	P	**Pg**	**11 28 39.1**	**+0.9**
CHOS				S	**Sg**	**11 28 46.0**	**+1.2**
PRK	**Paraskevi**	**0.71**	**46**	P	**Pg**	**11 28 42.1**	**0.0**
PRK				S	**Sg**	**11 28 52.9**	**+1.5**
PRK	**Paraskevi**	**0.71**	**46**	⇑*e*	Pn	**11 28 42.2**	**+0.1**
PRK				*e*	Sn	**11 28 53.5**	**+2.1**
URLA	**Izmir**	**0.86**	**117**	*i* P	**Pg**	**11 28 45.6**	**+0.5**
URLA				*i* S	**Sg**	**11 28 56.2**	**0.0**
AYVA	**Ayvalik**	**1.00**	**56**	*i* P	**Pg**	**11 28 47.5**	**-0.3**
AYVA				*i* S	**Sg**	**11 29 00.4**	**-0.4**
BOZC	**Bozcaada**	**1.14**	**17**	*i* P	**Pb**	**11 28 48.9**	**-1.3**
BOZC				*i* S	**Sb**	**11 29 05.0**	**-0.1**
BLCB	**Balcova**	**1.18**	**108**	*e*	Pn	**11 28 49.9**	**-1.1**
BLCB				*e*	Sn	**11 29 07.0**	**-0.1**
LIA	**Limnos Island**	**1.19**	**344**	P	**Pb**	**11 28 50.4**	**-0.7**
LIA				S	**Sb**	**11 29 06.7**	**+0.1**
LIA	**Limnos Island**	**1.19**	**344**	⇑*e*	Pn	**11 28 50.5**	**-0.7**
LIA				*e*	Sn	**11 29 06.7**	**+0.1**
IZM	**Izmir**	**1.34**	**105**	*e*	Pn	**11 28 52.6**	**-0.6**
IZM				*e*	Sn	**11 29 12.6**	**+1.5**
KDAG	**Bornova**	**1.34**	**105**	*i* P	Pn	**11 28 52.5**	**-0.7**
KDAG	**Bornova**	**1.34**	**105**	*i* P	Pn	**11 28 52.5**	**-0.7**
AOS	**Alonnisos**	**1.41**	**288**	P	Pn	**11 28 54.3**	**+0.1**
SMG	**Samos**	**1.42**	**137**	*e*	PB	**11 28 53.5**	**-0.8**
SMG				*e*	Sn	**11 29 14.0**	**+0.9**
GADA	**Gvkgeada**	**1.45**	**9**	*e*	Pn	**11 28 53.2**	**-1.6**
PTL	**Penteli**	**1.54**	**243**	*e*	Pn	**11 28 55.5**	**-0.5**
GCAM	**G?zelcaml?**	**1.65**	**129**	*i* P	**Pg**	**11 28 59.9**	**-0.2**
GCAM				*i* S	**Sg**	**11 29 21.4**	**-0.2**
ATH	**Athens Observa**	**1.68**	**243**	*e*	Pn	**11 28 57.6**	**-0.3**
APE	**Apeiranthos**	**1.68**	**182**	P	Pn	**11 28 57.0**	**-0.9**
APE	**Apeiranthos**	**1.68**	**182**	*e*	PB	**11 28 56.6**	**-1.3**
APE	**Apeiranthos**	**1.68**	**182**	P	Pn	**11 28 57.0**	**-0.9**
APE	**Apeiranthos**	**1.68**	**182**	⇑*i*	P	**11 28 56.7**	**-1.2**
AKHS	**Akhisar**	**1.72**	**85**	*i* P	Pn	**11 28 58.0**	**-0.5**
AKHS				*i* S	Sn	**11 29 23.1**	**+2.6**
AKS	**Akhisar**	**1.72**	**85**	*e*	PN	**11 28 58.4**	**-0.1**
BALY	**Balya**	**1.84**	**57**	*i* P	Pn	**11 28 59.6**	**-0.5**
BALY				*i* S	Sn	**11 29 24.9**	**+1.4**
LPK	**Lapseki**	**1.84**	**28**	*e*	PN	**11 28 59.5**	**-0.6**
NAIG	**Nisos Aigina**	**1.95**	**240**	*e*	PB	**11 29 00.5**	**-1.0**
BALB	**Balikesir**	**1.97**	**63**	*e*	PN	**11 29 00.9**	**-1.0**
XOR	**Xorichti**	**1.98**	**289**	P	Pn	**11 29 01.6**	**-0.4**
XOR				S	Sn	**11 29 27.5**	**+0.6**
OUR	**Ouranopolis**	**2.02**	**322**	P	Pn	**11 29 02.5**	**-0.1**
ENEZ	**Enez**	**2.02**	**12**	*e*	PN	**11 29 00.0**	**-2.6**
LKR	**Lokris**	**2.05**	**268**	P	Pn	**11 29 02.6**	**-0.3**
LKR	**Lokris**	**2.05**	**268**	*e*	PB	**11 29 02.7**	**-0.2**
BODT	**Bodrum**	**2.16**	**141**	*e*	PN	**11 29 03.0**	**-1.4**
ALN	**Alexandroupoli**	**2.17**	**9**	P	Pn	**11 29 03.6**	**-1.0**
BDRM	**Kayabasi**	**2.22**	**139**	*i* P	Pn	**11 29 04.6**	**-0.7**
BDRM				*i* S	Sn	**11 29 25.8**	**-7.1**
MLSB	**Milas**	**2.25**	**130**	*e*	PN	**11 29 05.1**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.28**	**32**	*e*	PN	**11 29 05.7**	**-0.4**
SART	**Tekirdag**	**2.28**	**32**	*i* P	Pn	**11 29 06.4**	**+0.3**
THR4	**Thira Island,**	**2.30**	**184**	P	Pn	**11 29 05.6**	**-0.7**
PLG	**Polygyros**	**2.33**	**315**	P	Pn	**11 29 07.6**	**+0.8**
THR3	**Thira Island,**	**2.35**	**184**	P	Pn	**11 29 06.8**	**-0.2**
EDC	**Edincik**	**2.36**	**47**	*e*	PN	**11 29 06.4**	**-0.8**
DURS	**Dursunbey**	**2.38**	**68**	*i* P	Pn	**11 29 08.1**	**+0.6**
RDO	**Rodhopi**	**2.39**	**359**	⇑*e*	PN	**11 29 06.9**	**-0.7**
BNT	**Bandirma**	**2.40**	**47**	*e*	PN	**11 29 06.9**	**-0.9**
KULA	**Kula-Manisa**	**2.40**	**95**	*e*	PN	**11 29 06.9**	**-0.9**
THR6	**Thira Island,**	**2.40**	**184**	P	Pn	**11 29 08.4**	**+0.6**
DEMI	**Demirci**	**2.44**	**82**	*i* P	Pn	**11 29 08.1**	**-0.2**
DST	**Dursunbey**	**2.49**	**69**	*e*	PN	**11 29 09.6**	**+0.6**
DAT	**Datca**	**2.55**	**142**	*e*	PN	**11 29 07.8**	**-2.1**
AGG	**Agios Georgios**	**2.58**	**277**	P	Pn	**11 29 10.3**	**+0.1**
KCT	**Karacabey**	**2.60**	**54**	*e*	PN	**11 29 10.9**	**+0.4**
YER	**Yerkesik**	**2.66**	**127**	*e*	PN	**11 29 10.2**	**-1.1**
HORT	**Hortiatis**	**2.67**	**314**	P	Pn	**11 29 11.4**	**-0.1**
TKR	**Tekirdag**	**2.68**	**33**	*e*	PN	**11 29 11.8**	**+0.2**
SOH	**Sokhos**	**2.70**	**321**	P	Pn	**11 29 12.4**	**+0.5**
SOH				S	Sn	**11 29 44.5**	**-0.2**
LIT	**Litokhoron**	**2.77**	**300**	P	Pn	**11 29 12.9**	**+0.1**
LIT				S	Sn	**11 29 44.5**	**-1.8**
THE	**Thessaloniki**	**2.77**	**313**	P	Pn	**11 29 12.6**	**-0.3**
KDZ	**Kurdzhali**	**2.90**	**357**	*i* P	Pn	**11 29 14.0**	**-0.6**
THL	**Klokotos Trika**	**2.91**	**287**	P	Pn	**11 29 15.6**	**+0.8**
THL	**Klokotos Trika**	**2.91**	**287**	*e*	PN	**11 29 15.4**	**+0.6**
NVR	**Nevrokopi**	**2.92**	**333**	*e*	PN	**11 29 14.8**	**-0.1**
VLI	**Veliai**	**2.94**	**227**	*e*	PN	**11 29 15.0**	**-0.2**
EVR	**Evrytania**	**2.98**	**274**	*e*	PB	**11 29 16.7**	**+1.0**
TURN	**Turunc**	**3.02**	**128**	*i* P	Pn	**11 29 13.8**	**-2.5**
GDZ	**Gediz**	**3.04**	**82**	*i* P	Pn	**11 29 17.2**	**+0.7**
KHL	**Karahalli**	**3.10**	**97**	*e*	PN	**11 29 17.3**	**0.0**
SLVT	**Silivri**	**3.18**	**38**	*e*	PN	**11 29 17.9**	**-0.5**
MMB	**Musomiste**	**3.18**	**334**	*i* P	Pn	**11 29 18.0**	**-0.5**
KNT	**Kendrikon**	**3.18**	**320**	P	Pn	**11 29 19.2**	**+0.6**
EDRB	**Edirne**	**3.21**	**15**	*e*	PN	**11 29 17.3**	**-1.6**
KYTH	**Kithira**	**3.21**	**220**	*e*	PN	**11 29 18.7**	**-0.2**
CTT	**Catalca**	**3.23**	**41**	*e*	PN	**11 29 18.7**	**-0.4**
ARG	**Arkhangelos**	**3.23**	**141**	P	Pn	**11 29 21.2**	**+2.1**
GEMT	**Gemlik**	**3.23**	**58**	*e*	PN	**11 29 20.1**	**+0.9**
GRG	**Griva**	**3.31**	**313**	P	Pn	**11 29 21.6**	**+1.3**
GRG				S	Sn	**11 29 59.4**	**-0.3**
ITM	**Ithomi**	**3.31**	**243**	P	Pn	**11 29 23.1**	**+2.8**
CTKS	**Kestanelik-??a**	**3.33**	**41**	*e*	PN	**11 29 20.1**	**-0.5**
CTYL	**Yal??k??y-??at**	**3.41**	**36**	*e*	PN	**11 29 20.8**	**-0.8**
PLD	**Plovdiv**	**3.42**	**349**	P	Pn	**11 29 22.2**	**+0.4**
YLV	**Yalova**	**3.42**	**57**	*e*	PN	**11 29 22.6**	**+0.8**
BGKT	**Bogazkoy**	**3.43**	**44**	*e*	PN	**11 29 21.3**	**-0.6**
VAY	**Valandovo**	**3.47**	**319**	P	Pn	**11 29 23.3**	**+0.8**
FETY	**Fethiye**	**3.47**	**126**	*e*	PN	**11 29 23.0**	**+0.5**
NPS	**Neapolis**	**3.48**	**180**	P	Pn	**11 29 23.6**	**+0.9**
IDI	**Anoyia**	**3.51**	**190**	Pn	Pn	**11 29 24.0**	**+1.0**
	3.3nm,0.3s,baz=3.6,slow=11,SNR=13						
IDI				Pg	**Pg**	**11 29 34.2**	**-1.4**
	9.1nm,0.3s,baz=143,slow=20,SNR=10						
IDI				Lg		11 30 22.0	
	8.3nm,0.3s,baz=311,slow=13,SNR=4.7						
ALT	**Altintas**	**3.52**	**84**	*e*	PN	**11 29 22.7**	**-0.5**
CAVI	**Cavuskoy**	**3.58**	**65**	*e*	PN	**11 29 24.6**	**+0.7**
**L

PLCA					LR		LR		11 52 05.7		
	comp=Z,1μm,19.0s,baz=196,slow=41										
PLCA	**Paso Flores**	**5.28**	**16**	Pn		**Pn**		**11 49 53.6**		**+1.6**	
PLCA				Pg		**Pn**		**11 50 08.8**		**+17**	
PLCA				Lg				11 51 13.3			
PLCA				LR		LR		11 52 05.7			
USHA	**Ushuaia**	**9.36**	**166**	Pg		Px		11 51 21.5			
	0.4nm,0.3s,baz=318,slow=9.9,SNR=6.0										
USHA				Lg				11 53 36.9			
	0.5nm,0.3s,baz=249,slow=9.8,SNR=3.6										
USHA				LR		LR		11 55 08.3			
	comp=Z,998nm,19.0s,baz=19,slow=42										
CFAA	**Coronel Fontan**	**14.58**	**14**	Pn		**Pn**		**11 51 57.3**		**-1.8**	
	0.1nm,0.3s,baz=200,slow=14,SNR=7.5										
CFAA				Lg				11 56 17.2			
	0.0nm,0.3s,baz=52,slow=16,SNR=2.2										
CFAA				LR		LR		11 57 02.3			
	comp=Z,24nm,19.0s,baz=304,slow=35										
LCO	**Las Campanas**	**16.85**	**5**	*e*Pn		**Pn**		**11 52 29.6**		**+1.4**	
	28nm,0.9s										
PMSA	**Palmer Station**	**19.54**	**169**	P		**Pn**		**11 52 59.8**		**-0.8**	
	0.1nm,0.3s,baz=344,slow=9.4,SNR=3.2										
PMSA				LR		LR		11 59 42.2			
	comp=Z,534nm,18.1s,baz=169,slow=34										
LVC	**Limon Verde**	**23.34**	**8**	P		**P**		**11 53 39.7**		**-0.4**	
	4.5nm,0.6s,mb4.0,baz=223,slow=7.9,SNR=4.9										
LVC				LR		LR		12 02 36.4			
	comp=Z,149nm,19.6s,MS3.5,baz=64,slow=36										
LVC	**Limon Verde**	**23.34**	**8**	P		**P**		**11 53 39.7**		**-0.4**	
LVC				*e*P				11 53 40.1			
LVC				LR		LR		12 02 36.4			
LPAZ	**La Paz**	**29.68**	**8**	P		**P**		**11 54 37.1**		**0.0**	
	4.5nm,0.5s,mb4.4,baz=166,slow=2.9,SNR=11										
LPAZ				LR		LR		12 08 13.3			
	comp=Z,182nm,18.5s,MS3.7,baz=116,slow=40										
LPAZ	**La Paz**	**29.68**	**8**	P		**P**		**11 54 37.1**		**0.0**	
LPAZ				*e*P				11 54 38.5			
LPAZ				LR		LR		12 08 13.3			
BDFB	**Brasilia**	**36.41**	**42**	P		**P**		**11 55 35.6**		**-0.2**	
	1.8nm,0.6s,mb4.2,baz=191,slow=16,SNR=4.3										
VNA3	**Neumayer Olymp**	**38.74**	**153**	*e*		**P**		**11 55 55.2**		**+0.3**	
VNA3				*e*				11 55 59.4			
ATAH	**Atahualpa**	**39.03**	**351**	P		**P**		**11 55 55.9**		**-2.0**	
	3.9nm,0.6s,mb4.3,baz=171,slow=13,SNR=3.6										
VNA2	**Neumayer--Watz**	**39.45**	**152**	*e*		**P**		**11 56 01.2**		**+0.4**	
VNA2				*e*				11 56 05.8			
SNAA	**Sanae**	**40.95**	**153**	*e*		**P**		**11 56 12.3**		**-0.9**	
SNAA				*e*				11 56 16.7			
SNAA	**Sanae**	**40.95**	**153**	*e*P		**P**		**11 56 13.1**		**-0.1**	
	17nm,1.1s,mb4.6										
QSPA	**South Pole Qui**	**44.42**	**180**	P		**P**		**11 56 41.8**		**+0.5**	
	13nm,1.0s,mb4.6,baz=146,slow=4.7,SNR=25										
ROSC	**El Rosal**	**50.49**	**358**	P		**P**		**11 57 30.8**		**+1.6**	
	5.5nm,0.4s,mb4.9,baz=104,slow=23,SNR=3.5										
MAW	**Mawson**	**61.97**	**162**	P		**P**		**11 58 50.9**		**+0.5**	
	3.7nm,1.0s,mb4.5,baz=209,slow=6.5,SNR=6.0										
MAW				LR		LR		12 24 40.6			
	comp=Z,92nm,21.2s,MS3.9,baz=35,slow=35										
CMIG	**Matias Romero**	**65.85**	**336**	LR		LR		12 21 17.7			
	comp=Z,56nm,18.3s,MS3.8,baz=98,slow=30										
RAR	**Rarotonga**	**73.29**	**257**	LR		LR		12 24 46.3			
	comp=Z,111nm,19.2s,MS3.1,baz=285,slow=30										
BOSA	**Boshof**	**75.03**	**116**	LR		LR		12 32 30.8			
	comp=Z,64nm,18.2s,MS4.0,baz=168,slow=35										
LPIG	**La Paz**	**77.64**	**325**	LR		LR		12 26 14.2			
	comp=Z,33nm,19.6s,MS3.7,baz=68,slow=29										
TXAR	**Lajitas Array**	**80.00**	**333**	P		**P**		**12 00 39.8**		**-0.1**	
	1.9nm,0.9s,mb4.0,baz=148,slow=9.8,SNR=12										
TXAR				LR		LR		12 31 37.7			
	comp=Z,28nm,18.9s,MS3.6,baz=185,slow=32										
ANMO	**Albuquerque**	**86.08**	**333**	LR		LR		12 34 32.0			
	comp=Z,35nm,19.1s,MS3.8,baz=247,slow=32										
TORD	**Torodi Ar. Bea**	**88.59**	**70**	P		**P**		**12 01 23.7**		**-0.1**	
	3.9nm,1.1s,mb4.7,baz=229,slow=3.5,SNR=11										
TORD	**Torodi Ar. Bea**	**88.59**	**70**	P		**P**		**12 01 23.7**		**-0.1**	
PDAR	**Pinedale Array**	**94.20**	**334**	P		**P**		**12 01 49.0**		**-0.1**	
	0.7nm,1.0s,mb4.0,baz=157,slow=4.8,SNR=4.2										
PDAR				LR		LR		12 38 28.5			
	comp=Z,44nm,18.6s,MS4.0,baz=253,slow=32										
ELK	**Elko**	**94.31**	**329**	LR		LR		12 38 16.1			
	comp=Z,49nm,19.4s,MS4.0,baz=92,slow=32										
AKTO	**Aktyubinsk**	**147.12**	**64**	PKPbc		PKPbc		12 08 12.6		-0.2	
	3.7nm,1.0s,baz=178,slow=2.5,SNR=6.2										
CMAR	**Chiang Mai Arr**	**151.78**	**163**	PKP		PKPdf		12 08 18.2		-0.8	
	2.6nm,0.9s,baz=252,slow=3.3,SNR=4.2										
CMAR				PKPbc		PKPbc		12 08 26.6		+1.2	
	4.9nm,0.8s,baz=222,slow=3.6,SNR=15										
MKAR	**Makanchi Array**	**162.53**	**78**	PKP		PKPdf		12 08 33.7		+2.1	
	0.9nm,1.0s,baz=281,slow=2.3,SNR=4.8										
MKAR				PKPab		PKPab		12 09 20.7		+0.6	
	0.9nm,0.9s,baz=257,slow=4.4,SNR=5.4										
ZALV	**Zalesovo Beam**	**163.31**	**53**	PKP		PKPdf		12 08 33.1		+0.9	
	0.2nm,0.3s,baz=171,slow=10,SNR=3.8										

*ISCJB **10** 12:16:36.8±0.5,31.19S×004×6876W×006,h108km±6km, mb3.6/3,Error ellipse: s-maj=8.1km s-min=6.3km az=12.8*
*IDC **10** 12:16:36.6±1.3,31.11S×6877W,h94km±8km,mb3.5/3, mb1 3.5/5,mb1mx3.4/15,mbtmp3.4/5,Error ellipse: s-maj=39.4km s-min=18.7km az=75.0*
*GUC **10** 12:16:37.8±0.7,31.27S×6902W,h150km,MD3.7,ML3.6*
*NEIC **10** 12:16:37.8,3127S×6902W,h150km,MD3.7(GUC),After GUC.*

ISC 10 12:16:37.8±0.5,3118S×004×6876W±006,h101km±6km, n26,σ0°86/37,mb3.6/3,3C-1D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
CFAA	**Coronel Fontan**	**0.62**	**134**	P		**Pn**	**12 16 54.6**			**0.0**	
	21nm,0.3s,baz=313,slow=5.7,SNR=1115										
CFAA				S		**Sn**	**12 17 07.2**			**0.0**	
	87nm,0.3s,baz=134,slow=18,SNR=294										
JACH	**Jahuel**	**2.16**	**226**	⇑*i*P		**Pn**	**12 17 13.1**			**+0.6**	
JACH				*i* S		**Sn**	**12 17 39.7**			**+0.7**	
OVCH	**Ovalle**	**2.17**	**285**	⇑*i*P		**Pn**	**12 17 13.5**			**+0.8**	
OVCH				*i* S		**Sn**	**12 17 39.9**			**+0.6**	
OVCH	**Ovalle**	**2.17**	**285**	⇑*i*P		**Pn**	**12 17 13.5**			**+0.8**	
OVCH				*i* S		**Sn**	**12 17 39.9**			**+0.6**	
OVCH				AML		AML	12 17 43.5				
	comp=N,524nm,0.3s										
CHNG	**Los Chungos**	**2.44**	**253**	*e*P		**Pn**	**12 17 15.6**			**-0.5**	
CHNG				*i* S		**Sn**	**12 17 44.0**			**-1.6**	
CHNG				AML		AML	12 17 53.3				
	comp=E,402nm,0.6s										
FCH	**Farellones**	**2.50**	**211**	*e*P		**Pn**	**12 17 17.8**			**+0.8**	
FCH				*i* S		**Sn**	**12 17 48.8**			**+1.8**	
FCH				AML		AML	12 17 53.6				
	comp=N,110nm,0.2s										
PEL	**Peldehue**	**2.55**	**219**	*e*P		**Pn**	**12 17 17.5**			**-0.1**	
PEL				*i* S		**Sn**	**12 17 47.8**			**-0.3**	
PEL				AML		AML	12 17 50.0				
	comp=E,555nm,0.4s										
ROCH	**El Roble**	**2.62**	**226**	*e*P		**Pn**	**12 17 18.1**			**-0.4**	
CLCH	**Cerro Calan**	**2.67**	**214**	*e*P		**Pn**	**12 17 19.6**			**+0.4**	
CLCH				*i* S		**Sn**	**12 17 50.8**			**-0.2**	
CLCH				AML		AML	12 18 03.2				
	comp=E,214nm,0.3s										
LCO	**Las Campanas**	**2.74**	**322**	*e*Pn		**Pn**	**12 17 22.4**			**+2.3**	
LCO				*e*Sn		**Sn**	**12 17 52.2**			**-0.4**	
PCH	**Pirque**	**2.85**	**211**	⇓*i*P		**Pn**	**12 17 21.5**			**-0.1**	
PCH				*i* S		**Sn**	**12 17 55.2**			**-0.1**	
RCDM	**Rinconada Maip**	**2.88**	**216**	*e*P		**Pn**	**12 17 21.7**			**-0.3**	
RCDM				*i* S		**Sn**	**12 17 55.4**			**-0.6**	
RCDM	**Rinconada Maip**	**2.88**	**216**	*e*P		**Pn**	**12 17 21.7**			**-0.3**	
RCDM				*i* S		**Sn**	**12 17 55.4**			**-0.6**	
RCDM				AML		AML	12 17 59.1				
	comp=E,194nm,0.3s										
LMEL	**Las Melosas**	**2.93**	**204**	*e*P		**Pn**	**12 17 22.9**			**+0.4**	
LMEL				AML		AML	12 18 08.4				
	comp=N,98nm,0.2s										
TACH	**Talagante**	**3.08**	**216**	*e*P		**Pn**	**12 17 23.5**			**-1.1**	
LCCH	**Las Cruces**	**3.30**	**225**	*e*P		**Pn**	**12 17 26.3**			**-1.2**	
LVC	**Limon Verde**	**8.53**	**359**	P		**Pn**	**12 18 34.9**			**-3.7**	
	comp=N,0.5nm,0.3s,baz=256,slow=20,SNR=12										
LVC				S		**Sn**	**12 20 09.4**			**-3.7**	
	comp=N,0.2nm,0.3s,baz=159,slow=18,SNR=2.3										
LVC	**Limon Verde**	**8.53**	**359**	P		**Pn**	**12 18 34.9**			**-3.7**	
LVC				Pn		**Pn**	**12 18 37.1**			**-1.5**	
LVC				S		**Sn**	**12 20 09.4**			**-3.7**	
SIV	**San Ignacio**	**16.67**	**27**	P		**Pn**	**12 20 25.5**			**+0.2**	
	comp=N,0.2nm,0.3s,baz=223,slow=8.9,SNR=4.8										
TXAR	**Lajitas Array**	**68.73**	**328**	P		**P**	**12 27 31.8**			**+1.2**	
	comp=N,0.2nm,0.7s,mb3.1,baz=144,slow=7.8,SNR=3.3										
DBIC	**Dimbokro**	**71.64**	**70**	P		**P**	**12 27 48.4**			**-0.3**	
	comp=N,1.6nm,0.6s,mb4.0,baz=158,slow=3.7,SNR=3.4										

TORD	**Torodi Ar. Bea**	**80.62**	**69**	P		**P**		**12 28 39.2**		**-0.4**	
	comp=N,1.2nm,0.7s,mb3.9,baz=261,slow=5.2,SNR=6.9										
WRA	**Warramunga Arr**	**124.54**	**207**	PKP		PKPdf		12 35 23.2		-2.6	
	comp=N,0.2nm,0.6s,baz=170,slow=1.8,SNR=5.0										
KURK	**Kurchatov**	**148.94**	**42**	PKPbc		PKPbc		12 36 13.1		-0.3	
	baz=304,slow=3.0										
ZALV	**Zalesovo Beam**	**150.37**	**32**	PKPbc		PKPbc		12 36 16.2		-0.5	
	comp=N,1.2nm,0.5s,baz=319,slow=4.3,SNR=6.8										
MKAR	**Makanchi Array**	**152.82**	**47**	PKPbc		PKPbc		12 36 21.3		-1.3	
	comp=N,0.2nm,0.6s,baz=339,slow=1.5,SNR=3.1										
MKAR				PKPab		PKPab		12 36 33.7		-0.3	
	comp=N,0.4nm,0.7s,baz=311,slow=3.8,SNR=5.3										

*CSEM **10** 12:25:45.0±0.1,3976N×4179E,h12km,MD3.0,Error ellipse: s-maj=3.5km s-min=1.8km az=18.0*
*ISCJB **10** 12:25:47.0±0.6,3979N±003×4187E±004,h9km±5km, Error ellipse: s-maj=5.3km s-min=4.6km az=7.6*
*ISK **10** 12:25:46.0,3976N×4184E,h21km,MD3.3*
*DDA **10** 12:25:46.7,3981N×4185E,h7km±6km,Md3.0*

ISC 10 12:25:47.3±0.5,3980N±003×4186E±004,h15km±4km,n14, σ1°17/23,1C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
HOMI	**Horasan**	**0.25**	**9**	⇓*i*P		**Pg**	**12 25 52.0**			**-0.8**	
HOMI				*i* S		**Sg**	**12 25 56.9**			**+0.5**	
ERZM	**Erzurum**	**0.39**	**286**	⇑*i*P		**Pg**	**12 25 54.9**			**-0.3**	
ERZM				*i* S		**Sg**	**12 26 01.0**			**+0.4**	
EZM	**Erzurum**	**0.40**	**286**	*e*PG		**Pg**	**12 25 54.8**			**-0.6**	
EZM				*e*SG		**Sg**	**12 26 01.5**			**+0.8**	
TUTA	**Tutak**	**0.84**	**118**	*e*P		**Pb**	**12 26 03.0**			**-0.6**	
TUTA				*e*S		**Sb**	**12 26 16.8**			**+2.2**	
AGRB	**Hanur-Agry**	**0.90**	**104**	*e*PG		**Pg**	**12 26 03.5**			**-1.3**	
AGRB				*e*SG		**Sg**	**12 26 18.1**			**+1.5**	
BNGL	**BINGOL**	**1.01**	**213**	*e*P		**Pb**	**12 26 05.3**			**-1.1**	
BNGL				*e*S		**Sb**	**12 26 20.5**			**+1.1**	
KOPT	**Kop Dagi**	**1.07**	**282**	*e*P		**Pb**	**12 26 08.2**			**+0.7**	
KOPT				*e*S		**Sb**	**12 26 25.0**			**+3.7**	
DDEM	**Demirkent**	**1.10**	**356**	⇓*i*P		**Pb**	**12 26 06.8**			**-1.2**	
DDEM				*e*S		**Sb**	**12 26 23.4**			**+1.3**	
KARS	**Kars**	**1.25**	**49**	*e*PN		**Pn**	**12 26 08.8**			**-1.4**	
DAGI	**Agillar**	**1.28**	**2**	⇓*i*P		**Pn**	**12 26 10.1**			**-0.6**	
DAGI				*i* S		**Sb**	**12 26 28.5**			**+1.2**	
EZC	**Erzincan**	**1.57**	**269**	*e*PN		**Pn**	**12 26 17.4**			**+2.8**	
BCA	**Borcka**	**1.66**	**354**	*e*PN		**Pn**	**12 26 15.2**			**-0.6**	
GUMT	**Gumushane**	**1.94**	**291**	*e*PN		**Pn**	**12 26 18.3**			**-1.4**	
PTK	**Pertek**	**2.11**	**245**	*e*PN		**Pn**	**12 26 20.7**			**-1.4**	

IDC 10 12:43:47.5±4.5,629S×10348E,h0km,mb3.5/5,mb1 3.6/5, mb1mx3.5/18,mbtmp3.5/5,Error ellipse: s-maj=181.0km s-min=26.6km az=52.0,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
CMAR	**Chiang Mai Arr**	**25.00**	**350**	P		P	12 49 12.7			-0.5	
	0.6nm,0.6s,baz=184,slow=8.8,SNR=5.7										
WRA	**Warramunga Arr**	**32.90**	**117**	P		P	12 50 23.3			-0.4	
	0.2nm,0.9s,baz=286,slow=12,SNR=2.7										
SONM	**Songino Array**	**53.95**	**2**	P		P	12 53 13.5			+0.5	
	0.9nm,0.8s,baz=188,slow=7.3,SNR=2.5										
MKAR	**Makanchi Array**	**56.10**	**343**	P		P	12 53 28.9			+0.4	
	0.4nm,0.6s,baz=167,slow=8.7,SNR=5.1										
ZALV	**Zalesovo Beam**	**62.04**	**348**	P		P	12 54 08.8			-0.8	
	0.6nm,0.4s,baz=158,slow=4.5,SNR=4.4										
TXAR	**Lajitas Array**	**145.63**	**45**	PKPbc		PKPbc	13 03 29.1			+0.2	
	0.2nm,0.8s,baz=237,slow=4.2,SNR=3.1										

*ISCJB **10** 13:21:24.4±0.6,479S±0.1×1025E±0.2,h10km, mb4.4/9, MS3.7/9, Error ellipse: s-maj=26.5km s-min=10.4km az=40.0*
*IDC **10** 13:21:25.1±0.9,4797S×10263E,h0km,mb4.4/6, mb1 4.6/6,mb1mx4.3/13,mbtmp4.4/6,MS3.7/10, Ms1 3.7/10,ms1mx3.6/15,Error ellipse: s-maj=37.3km s-min=19.6km az=121.0*
*NEIC **10** 13:21:26.2±0.4,4799S×10264E,h10km,mb4.6/4,Error ellipse: s-maj=21.6km s-min=10.0km az=133.0*

ISC 10 13:21:26.4±0.6,480S±01×1026E±02,h10km,n34, σ0°42/18,mb4.4/9,MS3.7/9,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
NWAO	**Narrogin (SRO)**	**18.64**	**42**	LR		LR	13 31 05.4				
	comp=Z,227nm,21.3s,baz=180,slow=31										
MAW	**Mawson**	**28.12**	**211**	P		**P**	**13 27 18.5**			**+0.5**	
	1.6nm,0.8s,mb3.7,baz=16,slow=11,SNR=4.3										
MAW				LR		LR	13 36 17.5				
	comp=Z,151nm,18.8s,MS3.6,baz=69,slow=32										
MAW	**Mawson**	**28.12**	**211**	P		**P**	**13 27 18.5**			**+0.5**	
MAW				LR		LR	13 36 17.4				
STKA	**Stephens Creek**	**33.55**	**76**	*e*P		**P**	**13 28 06.4**			**+0.2**	
	3.5nm,0.9s,mb4.3										
STKA	**Stephens Creek**	**33.55**	**76**	P		**P**	**13 28 06.5**			**+0.3**	
	4.3nm,0.9s,mb4.4,baz=222,slow=9.5,SNR=10										
STKA	**Stephens Creek**	**33.55**	**76**	*e*P		**P**	**13 28 05.4**			**-0.8**	
	7.3nm,1.1s,mb4.5										
ASAR	**Alice Springs**	**34.71**	**57**	P		**P**	**13 28 16.2**			**-0.1**	
	5.2nm,1.0s,mb4.4,baz=213,slow=7.6,SNR=30										
WRA	**Warramunga Arr**	**37.93**	**54**	P		**P**	**13 28 44.2**			**+0.2**	
	8.3nm,1.0s,mb4.4,baz=216,slow=8.4,SNR=40										
WRA				LR		LR	13 42 17.4				
	comp=Z,101nm,19.4s,MS3.6,baz=215,slow=33										
WB2	**Warramunga Arr**	**37.94**	**54**	*e*P		**P**	**13 28 44.3**			**+0.3**	
WRAB	**Tennant Creek**	**37.94**	**54**	*e*P		**P**	**13 28 43.6**			**-0.5**	
	20nm,1.3s,mb4.7										
QSPA	**South Pole Qui**	**42.19**	**180**	P		**P**	**13 29 18.9**			**+0.3**	
	5.4nm,0.8s,mb4.3,baz=301,slow=3.4,SNR=28										
QSPA	**South Pole Qui**	**42.19**	**180**	P		**P**	**13 29 18.9**			**+0.3**	
CTA	**Charters Tower**	**44.78**	**67**	LR		LR	13 47 35.5				
	comp=Z,57nm,18.6s,MS3.5,baz=231,slow=35										
SNAA	**Sanae**	**49.78**	**204**	*e*		**P**	**13 30 17.6**			**-1.0**	
SNAA				*e*			13 30 24.6				
SNAA				*e*			13 30 28.4				
SNAA	**Sanae**	**49.78**	**204**	*e*P		**P**	**13 30 17.7**			**-0.9**	
	7.6nm,1.0s,mb4.7										
VNA2	**Neumayer--Watz**	**51.42**	**203**	*e*		**P**	**13 30 31.2**			**+0.3**	
VNA2				*e*			13 30 37.9				
VNA2				*e*			13 30 41.5				
VNA1	**Neumayer--Stat**	**51.81**	**203**	*e*		**P**	**13 30 34.1**			**+0.2**	
VNA1				*e*			13 30 41.1				
VNA1				*e*			13 30 44.7				
VNA3	**Neumayer Olymp**	**51.82**	**202**	*e*		**P**	**13 30 33.8**			**-0.1**	
VNA3				*e*			13 30 40.7				
VNA3				*e*			13 30 44.4				
BOSA	**Boshof**	**61.16**	**258**	LR		LR	13 52 09.8				
	comp=Z,61nm,20.7s,MS3.7,baz=165,slow=30										
CMAR	**Chiang Mai Arr**	**66.18**	**356**	P		**P**	**13 32 14.4**			**+0.4**	
	1.2nm,0.4s,mb4.3,baz=191,slow=6.2,SNR=12										
CMAR				LR		LR	13 58 47.0				
	comp=Z,61nm,18.3s,MS3.9,baz=354,slow=34										
LSZ	**Lusaka**	**68.38**	**271**	*e*P		**P**	**13 32 27.9**			**-0.4**	
	4.1nm,1.0s,mb4.4										
KSRS	**Korea Array**	**87.98**	**20**	LR		LR	14 15 01.3				
	comp=Z,10nm,21.1s,MS3.2,baz=155,slow=37										
PLCA	**Paso Flores**	**91.49**	**185**	LR		LR	14 12 15.2				
	comp=Z,84nm,19.7s,MS4.2,baz=182,slow=33										
SONM	**Songino Array**	**95.45**	**3**	LR		LR	14 18 23.7				
	comp=Z,56nm,18.2s,MS4.1,baz=222,slow=36										
MKAR	**Makanchi Array**	**96.00**	**346**	LR		LR	14 17 38.0				
	comp=Z,27nm,18.8s,MS3.7,baz=348,slow=35										
NSHM	**Saint Helena R**	**146.18**	**89**	*e*PKPdf		PKPdf	13 41 03.9			-1.5	
ISA	**Isabella**	**147.41**	**97**	*e*PKPdf		PKPdf	13 41 08.3			+0.8	
NVAR	**Mina Array Bea**	**149.03**	**93**	PKP		PKPdf	13 41 10.7			+0.6	
	4.6nm,1.0s,baz=246,slow=7.4,SNR=4.0										
NVAR				PKPbc		PKPbc	13 41 15.1			+0.9	
	6.7nm,0.8s,baz=219,slow=5.3,SNR=51										
NVAR	**Mina Array Bea**	**149.03**	**93**	PKP		PKPdf	13 41 10.7			+0.6	
NVAR				PKPbc		PKPbc	13 41 15.1			+0.9	
TPNV	**Topopah Spring**	**149.62**	**97**	*e*PKPbc		PKPbc	13 41 14.4			-1.3	
WVOR	**Wild Horse Val**	**150.70**	**85**	*e*PKPbc		PKPbc	13 41 17.9			-0.2	
TXAR	**Lajitas Array**	**152.54**	**123**	PKPbc		PKPbc	13 41 22.1			-0.7	
	1.4nm,1.0s,baz=211,slow=4.4,SNR=10										
MSU	**Marysvale**	**153.17**	**98**	*e*PKPdf		PKPdf	13 41 18.3			+1.9	
PDAR	**Pinedale Array**	**156.94**	**91**	PKPab		PKPab	13 41 51.1			-0.5	
	0.5nm,0.8s,baz=242,slow=3.2,SNR=3.8										

IDC 10 13:23:57.0±6.0,2363N×14388E,h58km±57km,mb2.9/3, mb1 3.2/4,mb1mx3.1/20,mbtmp3.1/4,ML3.7/1,MS2.5/1, Ms1 2.5/1,ms1mx1.7/18,Error ellipse: s-maj=280.0km s-min=26.1km az=72.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
CBIJ	**Chichi jima**	**3.78**	**336**	P		Pn	13 24 54.3			+1.6	
	8.4nm,0.3s,baz=304,slow=20,SNR=20										
CBIJ				S		Sn	13 25 36.0			+0.1	
	20nm,0.3s,baz=299,slow=23,SNR=7.2										
KSRS	**Korea Array**	**19.42**	**319**	LR		LR	13 34 53.2				
	comp=Z,14nm,19.4s,baz=115,slow=34										
WRA	**Warramunga Arr**	**44.30**	**193**	P		P	13 32 01.4			+0.3	
	0.3nm,0.3s,baz=17,slow=9.2,SNR=14										
ASAR	**Alice Springs**	**48.00**	**192**	P		P	13 32 29.4			-0.8	
	0.1nm,0.7s,baz=13,slow=12,SNR=2.7										
MKAR	**Makanchi Array**	**53.89**	**312**	P		P	13 33 14.7			+0.4	
	0.2nm,0.5s,baz=91,slow=8.6,SNR=4.0										

*MOS **10** 13:34:16.8±0.7,4987N×147.18E,h546km,mb4.1/29,Error ellipse: s-maj=11.7km s-min=6.8km az=101.0*
*ISCJB **10** 13:34:18.8±0.4,4967N±005×14726E±006,h586km±5km, mb4.2/68,Error ellipse: s-maj=8.5km s-min=5.2km az=153.5*
*BJI **10** 13:34:18.6,4967N×14723E,h583km,mB4.6,mb4.5*
*NEIC **10** 13:34:19.4±0.4,4966N×14720E,h580km±5km,mb4.3/47, Error ellipse: s-maj=5.7km s-min=3.7km az=159.0*
*IDC **10** 13:34:19.4±0.9,4958N×14720E,h585km±11km,mb3.5/14, mb1 3.6/18,mb1mx3.5/24,mbtmp3.4/18,Error ellipse: s-maj=11.7km s-min=10.1km az=140.0*

ISC 10 13:34:19.7±0.4,4967N±005×14727E±006,h581km±5km, h576km±13.1km:pP-P,n171,σ0°79/182,mb4.2/68,4C-3D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res	
				Op		ISC	h	m	s	ISC	
YSS	**Yuzh-Sakhalins**	**4.06**	**230**	⇑*i*P		**P**	**13 35 45.3**			**+1.1**	
YSS	**Yuzh-Sakhalins**	**4.06**	**230**	⇑*i*P		**P**	**13 35 45.0**			**+0.8**	
YSS				*i* S		**S**	**13 36 53.9**			**+0.8**	
YSS				pmax		pmax					
	comp=Z,220nm,0.8s										
YSS				smax							
	comp=N,90nm,1.0s										
YSS				smax							
	comp=E,70nm,1.1s										
ASAJ	**Asahikawa**	**6.41**	**212**	P		**P**	**13 36 02.5**			**-1.0

comp=Z,10.0nm,0.8s,mb4.4
EGAK Eagle 39.20 40 *eP* **P 13 40 57.1 -1.2**
comp=Z,90nm,2.8s,mb4.8
WMQ Urumqi 40.30 285 *eP* **P 13 41 07.0 -0.4**
WMQ AP pP 13 42 51.0 +3.5
WMQ XP sP 13 43 58.0 +4.9
WMQ AMB AMB
comp=Z,14nm,1.0s,mb4.5
MK31 Makanchi Array 42.17 292 *eP* **P 13 41 22.2 +0.1**
MKAR Makanchi Array 42.17 292 P **P 13 41 21.9 -0.2**
comp=Z,5.6nm,0.5s,mb4.4,baz=67,slow=7.5,SNR=82
MKAR PcP PcP 13 43 01.2 -1.2
comp=Z,0.4nm,0.5s,baz=80,slow=1.6,SNR=3.4
MKAR ScP ScP 13 45 54.5 -3.4
comp=Z,0.7nm,0.7s,baz=48,slow=4.2,SNR=6.0
MKAR Makanchi Array 42.17 292 P **P 13 41 21.9 -0.2**
MKAR pP 13 43 01.2 -2.3
KMI Kunming 42.20 251 P **P 13 41 23.0 +0.4**
KMI AP pP 13 43 04.8 +0.7
KMI PP PP 13 43 14.2 0.0
KMI S **S 13 47 02.3 +0.7**
KMI XS sS 13 50 05.0 -1.8
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.3
KMI AMB AMB
comp=Z,47nm,3.7s
KMI Kunming 42.20 251 P **P 13 41 23.0 +0.4**
KMI pP pP 13 43 04.8 +0.7
KMI PP PP 13 43 14.2 0.0
KMI S **S 13 47 02.3 +0.7**
KMI sS sS 13 50 05.0 -1.8
KMI SSS 13 51 48.8
KMI Kunming 42.20 251 P **P 13 41 23.0 +0.4**
KMI *PP pP 13 43 04.8 +0.7
KMI 13 43 14.2
KMI S **S 13 47 02.3 +0.7**
KURK Kurchatov 42.51 299 *eP* **P 13 41 24.7 +0.1**
comp=Z,18nm,0.7s,mb4.7
KURK Kurchatov 42.51 299*d iP* **P 13 41 24.5 -0.2**
KURK pmax pmax
comp=Z,18nm,0.7s,mb4.7
QIZ Qiongzhong 42.74 238 P **P 13 41 26.7 -0.2**
QIZ PP PP 13 43 18.4 -0.8
QIZ S **S 13 47 10.1 +0.7**
QIZ AMB AMB
comp=Z,258nm,3.9s
BVA0 Borovoye Array 45.98 305 *i* P **P 13 41 51.5 +0.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
BRVK Borovoye 46.02 305 *eP* **P 13 41 51.7 +0.1**
comp=Z,18nm,0.6s,mb4.8
BRVK Borovoye 46.02 305 *eP* **P 13 41 51.7 +0.1**
BRVK pmax pmax
comp=Z,18nm,0.6s,mb4.8
LSA Lhasa 46.38 266 *eP* **P 13 41 55.3 +0.6**
comp=Z,4.0nm,0.5s,mb4.2
LSA Lhasa 46.38 266 *eP* **P 13 41 55.3 +0.6**
LSA pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
RES Resolute Bay 49.29 18 *eP* **P 13 42 15.5 -0.1**
comp=Z,171nm,0.7s,mb5.6
RES Resolute Bay 49.29 18 *eP* **P 13 42 15.5 -0.1**
RES pmax pmax
comp=Z,171nm,0.7s,mb5.6
CMAR Chiang Mai Arr 49.52 249 P **P 13 42 17.2 -0.9**
comp=Z,0.7nm,0.4s,mb3.5,baz=30,slow=7.9,SNR=4.3
ARU Arti 50.19 314 *eP* **P 13 42 22.1 -0.3**
comp=Z,16nm,0.6s,mb4.6
ARU Arti 50.19 314*d iP* **P 13 42 22.3 -0.2**
ARU *eS* **S 13 48 53.5 +1.9**
ARU SS SS 13 52 31.7 -3.0
ARU pmax pmax
comp=Z,13nm,0.6s,mb4.5
TAPN Taplejung 50.20 267 *eP* **P 13 42 23.3 +0.3**
comp=Z,2.6nm,0.3s,mb4.1
YKA Yellowknife Ar 50.90 36 P **P 13 42 26.7 -0.8**
comp=Z,1.1nm,0.5s,mb3.6,baz=304,slow=7.2,SNR=4.2
YKA Yellowknife Ar 50.90 36 P **P 13 42 26.7 -0.8**
YKA pmax pmax
comp=Z,1.0nm,0.5s
JIRN Jiri 50.97 268 *eP* **P 13 42 29.1 +0.5**
comp=Z,24nm,0.7s,mb4.8
GUN Gumba 51.01 269 *eP* **P 13 42 29.0 +0.2**
comp=Z,18nm,0.4s,mb4.8
RAMN Ramite 51.19 267 *eP* **P 13 42 30.1 -0.1**
comp=Z,24nm,0.6s,mb4.8
KK31 Karatay Array 51.20 294 *i* P **P 13 42 29.7 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
KKN Kakani 51.48 269 *eP* **P 13 42 32.4 +0.2**
comp=Z,12nm,0.5s,mb4.6
KKN Kakani 51.48 269 *eP* **P 13 42 32.4 +0.2**
KKN pmax pmax
comp=Z,12nm,0.5s,mb4.6
PKI Pulchoki 51.54 269 *eP* **P 13 42 32.9 +0.2**
comp=Z,9.5nm,0.5s,mb4.4
PKI Pulchoki 51.54 269 *eP* **P 13 42 32.9 +0.2**
PKI pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
PKIN Phulchoki 51.55 269 *eP* **P 13 42 32.7 0.0**
comp=Z,4.9nm,0.4s,mb4.2
DMN Daman 51.71 269 *eP* **P 13 42 34.3 +0.4**
GKN Gorkha 51.75 270 *eP* **P 13 42 34.3 +0.1**
comp=Z,26nm,0.4s,mb4.9
DANN Dangsing 52.09 271 *eP* **P 13 42 37.0 +0.4**
comp=Z,38nm,0.5s,mb5.0
KOLN Koldanda 52.58 270 *eP* **P 13 42 40.3 +0.2**
comp=Z,13nm,0.5s,mb4.5
PYUN Piuthan 52.75 271 *eP* **P 13 42 41.6 +0.2**
comp=Z,11nm,0.4s,mb4.5
KEV Kevo 53.23 338 *ep* **P 13 42 43.5 -0.5**
comp=Z,2.2nm,0.3s,mb4.0
KEV Kevo 53.23 338 *eP* **P 13 42 43.5 -0.5**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb3.9
AB31 Akbulak array 53.55 306 P **P 13 42 46.2 -0.5**
AB31 pmax pmax
comp=Z,10.0nm,0.4s,mb4.5
ARCES ARCESS Array B 53.75 338 P **P 13 42 47.8 +0.1**
comp=Z,1.8nm,0.4s,mb3.8,baz=40,slow=7.1,SNR=25
POHA Pohakuloa 54.06 102 *eP* **P 13 42 52.1 +1.4**
comp=Z,301nm,1.9s,mb5.3
JOF Joensuu 56.93 331 *ep* **P 13 43 08.9 -0.9**
comp=Z,5.0nm,0.3s,mb4.2
PMG Port Moresby 58.83 180 *eP* **P 13 43 23.5 +0.2**
comp=Z,13nm,1.0s,mb4.0
PMG Port Moresby 58.83 180 *eP* **P 13 43 23.5 +0.2**
PMG pmax pmax
comp=Z,13nm,1.0s
KAF Kangasniemi 59.09 332 *ep* **P 13 43 23.7 -0.7**
comp=Z,1.3nm,0.3s,mb3.5,baz=40,slow=6.2
KAF Kangasniemi 59.09 332 *eP* **P 13 43 23.7 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.4
FINES FINESS Array B 59.67 332 *eP* **P 13 43 27.0 -1.3**
BMO Blue Mountains 60.62 54 *eP* **P 13 43 35.0 +0.1**
comp=Z,2.8nm,1.0s,mb3.5
BMO Blue Mountains 60.62 54 *eP* **P 13 43 35.0 +0.2**
BMO pmax pmax
comp=Z,3.0nm,1.0s,mb3.5
HRY Holter Researc 62.16 50 *eP* **P 13 43 45.8 +1.0**
DLMT Dillon 62.71 51 *eP* **P 13 43 49.4 +1.1**
comp=Z,76nm,2.6s,mb4.6
CMB Columbia Colle 63.55 62 *eP* **P 13 43 54.7 +0.8**
comp=Z,5.4nm,1.1s,mb3.8
CMB Columbia Colle 63.55 62 *eP* **P 13 43 54.7 +0.8**
CMB pmax pmax
comp=Z,5.0nm,1.1s,mb3.8
NB2 NORSAR Subarra 64.13 338 P **P 13 43 56.9 -0.3**
comp=Z,4.0nm,0.5s,mb4.0,baz=28,slow=6.5
NOA NORSAR Array B 64.13 338 P **P 13 43 57.0 -0.1**
comp=Z,7.0nm,0.7s,mb4.1,baz=29,slow=6.5,SNR=24
NVAR Mina Array Bea 64.46 60 P **P 13 44 00.6 +0.9**
comp=Z,3.3nm,0.7s,mb3.8,baz=297,slow=5.6,SNR=26
NVAR Mina Array Bea 64.46 60 P **P 13 44 00.6 +0.9**
RRI2 Red Ridge 64.77 52 *eP* **P 13 44 03.3 +1.7**
comp=Z,6.6nm,0.8s,mb4.1
HWUT Hardware Ranch 65.89 54 *eP* **P 13 44 09.7 +1.1**
comp=Z,3.0nm,0.8s,mb3.8
BW06 Boulder Array 66.09 52 *eP* **P 13 44 10.2 +0.4**
comp=Z,3.0nm,0.8s,mb3.8
PDAR Pinedale Array 66.09 52 P **P 13 44 09.8 +0.1**
comp=Z,3.2nm,0.7s,mb3.9,baz=307,slow=2.0,SNR=23
DUG Dugway 66.23 56 *eP* **P 13 44 11.6 +0.9**
comp=Z,2.8nm,0.8s,mb3.7
DUG Dugway 66.23 56 *eP* **P 13 44 11.6 +0.9**
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
TPNV Topopah Spring 66.66 60 *eP* **P 13 44 14.0 +0.6**
comp=Z,5.0nm,0.6s,mb4.1
TPNV Topopah Spring 66.66 60 *eP* **P 13 44 14.0 +0.6**
TPNV pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
NLU North Lily Min 66.80 55 *eP* **P 13 44 13.4 -0.8**
AKASG Malin Array Be 66.90 322 P **P 13 44 13.9 -0.7**
comp=Z,7.4nm,0.5s,mb4.4,baz=34,slow=6.0,SNR=15
PV01 Paradox Valley 69.99 54 *eP* **P 13 44 34.5 +1.0**
WRA Warramunga Arr 70.25 193 P **P 13 44 33.7 -1.4**
comp=Z,1.5nm,0.6s,mb3.6,baz=9.1,slow=6.2,SNR=24
BUR08 Bucovina Ar. S 70.93 323 *eP* **P 13 44 38.5 -0.3**
STHS Stebnicka Huta 70.97 326 *eP* **P 13 44 39.4 +0.4**
comp=Z,3.5nm,0.8s,mb3.9
STHS Stebnicka Huta 70.97 326 *eP* **P 13 44 39.4 +0.4**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
KOLS Kolonicke sedl 70.99 325 *eP* **P 13 44 42.3 +3.1**
KECS Kecovo 72.02 326 *eP* **P 13 44 43.2 -2.0**
comp=Z,2.0nm,0.9s,mb3.6
KECS Kecovo 72.02 326 *eP* **P 13 44 43.2 -2.0**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb3.6
CLL Collm 72.12 332 *i* P **P 13 44 44.9 -0.8**
CLL pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
CLL Collm 72.12 332 *eP* **P 13 44 45.4 -0.3**
comp=Z,8.0nm,0.6s,mb4.4
CLL Collm 72.12 332 *i* P **P 13 44 44.9 -0.8**
comp=Z,9.0nm,0.6s,mb4.5
CLZ Clausthal 72.43 334 *eP* **P 13 44 47.9 +0.4**
CLZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
CLZ Clausthal 72.43 334 *eP* **P 13 44 47.9 +0.4**
comp=Z,5.0nm,0.7s,mb4.2
VYHS Vyhne 72.61 327 *eP* **P 13 44 48.6 +0.1**
MODS Modra-Piesok 73.26 328 *eP* **P 13 44 53.2 +1.0**
ANMO Albuquerque 73.50 55 *eP* **P 13 44 51.8 -2.1**
KHC Kasperske Hory 73.84 330 *eP* **P 13 44 55.5 0.0**
ASAR Alice Springs 73.97 193 P **P 13 44 56.1 -0.3**
comp=Z,2.1nm,0.5s,mb4.0,baz=3.8,slow=5.2,SNR=52
GEC2 GERESS Array S 74.05 330 *eP* **P 13 44 56.6 -0.1**
GEC2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
GEC2 GERESS Array S 74.05 330 *eP* **P 13 44 56.6 -0.1**
comp=Z,3.0nm,0.6s,mb4.0
GERES GERESS Array B 74.05 330 P **P 13 44 56.5 -0.2**
comp=Z,2.2nm,0.6s,mb3.9,baz=41,slow=5.4,SNR=13
WET Wettzell 74.05 331 *eP* **P 13 44 57.0 +0.3**
WET pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
WET Wettzell 74.05 331 *eP* **P 13 44 57.0 +0.3**
comp=Z,4.0nm,0.6s,mb4.1
GRA1 Grafenberg Arr 74.08 332 *eP* **P 13 44 57.2 +0.3**
comp=Z,7.0nm,0.6s,mb4.4
GRF Grafenberg Arr 74.08 332 *eP* **P 13 44 57.2 +0.3**
GRF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
GRF Grafenberg Arr 74.08 332 *eP* **P 13 44 57.2 +0.3**
GRF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
GRF Grafenberg Arr 74.08 332 *eP* **P 13 44 57.2 +0.3**
comp=Z,7.0nm,0.6s,mb4.4
CDF Champ du Feu 76.39 334 *eP* **P 13 45 09.2 -0.5**
comp=Z,9.1nm,0.7s,mb4.0
CDF Champ du Feu 76.39 334 *eP* **P 13 45 09.2 -0.5**
comp=Z,4.6nm,0.7s,mb4.0
CDF Champ du Feu 76.39 334 *eP* **P 13 45 09.2 -0.5**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
HINF Hinteralfeld 77.05 334 *eP* **P 13 45 13.0 -0.4**
FLN La Floliniere 78.09 339 *eP* **P 13 45 18.8 -0.1**
LDF La Druitiere 78.16 339 *eP* **P 13 45 18.6 -0.7**
CABF La Chapelle 78.36 334 *eP* **P 13 45 20.5 +0.1**
LOR Lormes 78.38 336 *eP* **P 13 45 19.8 -0.7**
comp=Z,5.4nm,0.6s,mb3.9
LOR Lormes 78.38 336 *eP* **P 13 45 19.8 -0.7**
comp=Z,2.7nm,0.6s,mb3.9
LOR Lormes 78.38 336 *eP* **P 13 45 19.8 -0.7**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
GRR Gorron 78.53 339 *eP* **P 13 45 20.9 -0.4**
SSF Saint Saulge 78.67 336 *eP* **P 13 45 21.2 -0.8**
AVF Avril sur Loir 78.96 336 *eP* **P 13 45 23.0 -0.6**
comp=Z,4.0nm,0.5s,mb3.7
AVF Avril sur Loir 78.96 336 *eP* **P 13 45 23.0 -0.6**
comp=Z,2.0nm,0.5s,mb3.7
AVF Avril sur Loir 78.96 336 *eP* **P 13 45 23.0 -0.6**
AVF pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
SMF Signal de Mont 78.96 335 *eP* **P 13 45 23.0 -0.6**
LPL La Plagne 79.17 333 *eP* **P 13 45 24.8 +0.1**
LPG La Plagne 79.18 333 *eP* **P 13 45 25.1 +0.3**
BGF Bois d'Agland 79.31 336 *eP* **P 13 45 24.9 -0.5**
TXAR Lajitas Array 79.32 57 P **P 13 45 26.4 +0.5**
comp=Z,2.0nm,0.4s,mb3.8,baz=287,slow=3.8,SNR=58
TCF Toulx Ste Croi 79.73 336 *eP* **P 13 45 27.4 -0.2**
MBDF Montbardon 79.88 333 *eP* **P 13 45 28.2 -0.3**
ORIF Oris-en-Rattie 79.97 333 *eP* **P 13 45 28.9 0.0**
MFF Saint Martin d 80.03 338 *eP* **P 13 45 29.1 -0.1**
comp=Z,5.7nm,0.6s,mb3.8
MFF Saint Martin d 80.03 338 *eP* **P 13 45 29.1 -0.1**
comp=Z,2.8nm,0.6s,mb3.8
MFF Saint Martin d 80.03 338 *eP* **P 13 45 29.1 -0.1**
MFF pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
CAF Calviac 81.03 336 *eP* **P 13 45 35.2 +0.8**
LFF La Frestale 81.36 337 *eP* **P 13 45 35.7 -0.4**
SJPF Ste Jean 83.57 337 *eP* **P 13 45 47.6 +0.3**
ETSF Etsaut 83.60 337 *eP* **P 13 45 47.8 +0.4**
comp=Z,5.4nm,0.6s,mb4.0
ETSF Etsaut 83.60 337 *eP* **P 13 45 47.8 +0.4**
comp=Z,2.7nm,0.6s,mb4.0
ETSF Etsaut 83.60 337 *eP* **P 13 45 47.8 +0.4**
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
SPB Sao Paulo 151.53 29 *e*PKPdf PKPdf 13 53 04.7 +2.9
PLCA Pao Flores 152.14 86 PKPbc PKPbc 13 53 08.8 -0.7
comp=Z,0.8nm,0.5s,baz=226,slow=5.9,SNR=2.9
PLCA PKPab PKPab 13 53 22.1 -0.1
comp=Z,2.0nm,0.8s,baz=274,slow=8.1,SNR=3.2

SZGRF ***10*** *13:46:48.2, 53.36N×161.17E, h33km, mb4.6, Off east coast of Kamchatka Peninsula, Russia*
BJI ***10*** *13:46:54.0, 55.16N×161.31E, h55km, mB4.9, mb4.7, Ms4.3, Msz4.1*
ISCJB ***10*** *13:46:55.1±0.2, 54.70N±0.002×161.92E±0.004, h55km, mb4.5/49, MS4.1/5, Error ellipse: s-maj=3.7km s-min=2.4km az=25.6*
MOS ***10*** *13:46:55.4±1.1, 54.82N×161.58E, h61km, mb4.9/20, Error ellipse: s-maj=13.6km s-min=6.0km az=85.2*
KRSC ***10*** *13:46:55.8±0.5, 54.73N×161.74E, h59km±59km, ML4.8*
IDC ***10*** *13:46:56.2±0.6, 54.92N×161.28E, h50km±5km, mb3.9/18, mb1 4.2/19, mb1mx4.1/25, mbtmp3.9/19, Error ellipse: s-maj=17.0km s-min=11.5km az=149.0*
NEIC ***10*** *13:46:57.4±0.5, 54.96N×161.37E, h59km±5km, mb4.6/28, Error ellipse: s-maj=7.8km s-min=5.1km az=161.0*
ISC 10 13:46:56.8±0.2, 54.73N±0.002×161.81E±0.004, h57km, h57km±1.9km: pP-P, n151, σ1§24/179, mb4.5/49, MS4.1/5, 1C-2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.18**	**195**	*eP*		**Pn**	**13 47 05.1**	**-0.7**
TUMR	**Tumrok**	**1.11**	**301**	*eP*		**Pn**	**13 47 16.2**	**+0.1**
TUMR				*i*	S	**Sn**	**13 47 31.3**	**+0.8**
KMNR	**Kamenistaya**	**1.37**	**319**	*eP*		**Pn**	**13 47 20.1**	**+0.5**
KMNR				*i*	S	**Sn**	**13 47 37.4**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.37**	**333**	*eP*		**Pn**	**13 47 20.2**	**+0.6**
BZGR				*i*	S	**Sn**	**13 47 37.4**	**+0.7**
ZLN	**Zelenaya**	**1.41**	**336**	*eP*		**Pn**	**13 47 20.9**	**+0.7**
ZLN				*i*	S	**Sn**	**13 47 38.7**	**+0.9**
KIRR	**Kirishev**	**1.49**	**326**	*eP*		**Pn**	**13 47 21.7**	**+0.5**
KIRR				*i*	S	**Sn**	**13 47 40.4**	**+0.9**
KPT	**Kopyto**	**1.54**	**324**	*eP*		**Pn**	**13 47 22.5**	**+0.6**
KPT				*i*	S	**Sn**	**13 47 42.5**	**+1.8**
KII	**Karymskiy**	**1.54**	**244**	*eP*		**Pn**	**13 47 22.1**	**+0.1**
KII				*i*	S	**Sn**	**13 47 41.0**	**0.0**
KBTR	**Krutoberegovo**	**1.59**	**21**	*eP*		**Pn**	**13 47 22.7**	**+0.1**
KBTR				*i*	S	**Sn**	**13 47 42.4**	**+0.3**
KRSR	**Krestovskiy**	**1.65**	**335**	*eP*		**Pn**	**13 47 23.7**	**+0.3**
KRSR				*i*	S	**Sn**	**13 47 44.1**	**+0.6**
KLY	**Klyuchi**	**1.72**	**338**	*eP*		**Pn**	**13 47 24.1**	**-0.2**
KLY				*i*	S	**Sn**	**13 47 45.0**	**-0.2**
KOZR	**Kozyr**	**1.73**	**322**	PN		**Pn**	**13 47 25.3**	**+0.8**
KOZ	**Kozyrevsk**	**1.73**	**321**	*eP*		**Pn**	**13 47 25.3**	**+0.8**
KOZ				*i*	S	**Sn**	**13 47 47.0**	**+1.5**
SPN	**Mys Shipunski**	**1.95**	**214**	*eP*		**Pn**	**13 47 26.6**	**-0.8**
SPN				*i*	S	**Sn**	**13 47 48.8**	**-1.9**
SRKR	**Sorokina**	**1.96**	**350**	*eP*		**Pn**	**13 47 28.5**	**+0.8**
SRKR				*i*	S	**Sn**	**13 47 52.6**	**+1.5**
SRDR	**Sredinnyy**	**1.99**	**324**	*eP*		**Pn**	**13 47 28.3**	**+0.3**
SRDR				*i*	S	**Sn**	**13 47 51.3**	**-0.4**
NLC	**Nalytchevo**	**2.13**	**224**	*eP*		**Pn**	**13 47 30.2**	**+0.2**
NLC				*i*	S	**Sn**	**13 47 55.6**	**+0.3**
SDLR	**Sedlovina**	**2.26**	**231**	*eP*		**Pn**	**13 47 32.5**	**+0.8**
SDLR				*i*	S	**Sn**	**13 47 59.4**	**+1.1**
AVH	**Avacha**	**2.33**	**232**	*eP*		**Pn**	**13 47 33.6**	**+0.9**
AVH				*i*	S	**Sn**	**13 48 01.5**	**+1.4**
GNL	**Ganaly**	**2.50**	**247**	*eP*		**Pn**	**13 47 36.0**	**+1.1**
INSR	**Institute**	**2.52**	**230**	*eP*		**Pn**	**13 47 36.0**	**+0.7**
INSR				*i*	S	**Sn**	**13 48 05.9**	**+1.1**
PET	**Petropavlovsk**	**2.53**	**229**	*e*Pn		**Pn**	**13 47 36.1**	**+0.7**
PET				*e*Sn		**Sn**	**13 48 05.4**	**+0.4**
PET	**Petropavlovsk**	**2.53**	**229**K	*i*PN		**Pn**	**13 47 35.9**	**+0.5**
PET				*e*S		**Sn**	**13 48 06.1**	**+1.1**
PET				pmax	pmax			
	comp=Z,100nm,2.4s							
PET				pmax	pmax			
	comp=Z,1μm,0.3s							
PET				pmax	pmax			
	comp=Z,1μm,0.4s							
PET				smax				
	comp=E,1μm,0.7s							
PET				smax				
	comp=N,1μm,0.5s							
PET				smax				
	comp=N,2μm,0.6s							
PET				smax				
	comp=E,1μm,0.4s							
PET				MLR	MLR			
	comp=Z,1μm,11.0s							
PET				MLR	MLR			
	comp=Z,500nm,19.0s							
PET	**Petropavlovsk**	**2.53**	**229**	*eP*		**Pn**	**13 47 35.9**	**+0.5**
PET				*i*	S	**Sn**	**13 48 05.8**	**+0.8**
PEA0B	**Petropavlovsk-**	**2.92**	**238**	*eP*		**Pn**	**13 47 41.3**	**+0.5**
PETK	**Petropavlovsk-**	**2.92**	**238**	P		**Pn**	**13 47 41.2**	**+0.4**
	comp=Z,59nm,0.3s,baz=67,slow=18,SNR=164							
PETK				S		**Sn**	**13 48 18.3**	**+3.7**
	comp=Z,41nm,0.3s,baz=289,slow=12,SNR=5.7							
PETK	**Petropavlovsk-**	**2.92**	**238**	P		**Pn**	**13 47 41.2**	**+0.4**
PETK				S		**Sn**	**13 48 18.3**	**+3.7**
RUS	**Russkaya**	**3.02**	**222**	*eP*		**Pn**	**13 47 42.1**	**-0.1**
RUS				*i*	S	**Sn**	**13 48 16.6**	**-0.5**
GRL	**Gorelyy**	**3.11**	**227**	*eP*		**Pn**	**13 47 45.3**	**+1.9**
GRL				*i*	S	**Sn**	**13 48 21.7**	**+2.4**
SKR	**Severo-Kuril's**	**5.33**	**223**	*e*PN		**Pn**	**13 48 13.5**	**-0.2**
SKR				*e*S		**Sn**	**13 49 16.5**	**+2.9**
SKR				pmax	pmax			
	comp=Z,80nm,0.5s							
SKR				smax				
	comp=N,150nm,0.5s							
SKR				smax				
	comp=E,150nm,0.5s							
BILL	**Bilibino**	**13.52**	**7**	*e*Pn		**Pn**	**13 50 10.0**	**+4.5**
	comp=E,44nm,1.8s							
BILL	**Bilibino**	**13.52**	**7**	*e*PN		**Pn**	**13 50 10.0**	**+4.5**
BILL				pmax	pmax			
	comp=Z,44nm,1.8s							
ASAJ	**Asahikawa**	**16.34**	**237**	P		**Pn**	**13 50 41.7**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=100,slow=14,SNR=10							
ASAJ	**Asahikawa**	**16.34**	**237**	P		**Pn**	**13 50 41.7**	**-0.5**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
HABR	**Khabarovsk**	**17.69**	**260**	*eP*		**Pn**	**13 50 53.6**	**-5.3**
HABR				*e*S		**S**	**13 54 04.6**	**-15**
YAK	**Yakutsk**	**18.20**	**307**	*eP*		**Pn**	**13 51 01.4**	**-3.6**
	comp=Z,14nm,0.9s							
YAK	**Yakutsk**	**18.20**	**307**	*eP*		**Pn**	**13 51 01.4**	**-3.6**
YAK				pmax	pmax			
	comp=Z,14nm,0.9s							
MDJ	**Mudanjiang**	**22.98**	**257**	P		**P**	**13 51 53.5**	**-2.7**
MDJ				AP			13 52 05.3	
MDJ				XP	sP		13 52 11.0	-5.2
MDJ				S		**S**	**13 55 58.7**	**-3.3**
MDJ				AMB	AMB			
	comp=Z,144nm,3.7s							
IMA2	**Indian Mountai**	**24.15**	**44**	*eP*		**P**	**13 52 07.4**	**+0.4**
MJAR	**Matsushiro Arr**	**24.36**	**231**	P		**P**	**13 52 09.4**	**+0.2**
	comp=Z,2.0nm,0.6s,mb3.7,baz=28,slow=9.0,SNR=7.9							
MAJO	**Matsushiro**	**24.36**	**231**	*eP*		**P**	**13 52 08.1**	**-1.1**
MAT	**Matsushiro**	**24.36**	**231**	P		**P**	**13 52 08.8**	**-0.4**
CHUM	**Lake Minchumin**	**24.61**	**50**	*eP*		**P**	**13 52 11.8**	**+0.6**
	comp=Z,4.5nm,1.1s,mb3.9							
KDAK	**Kodiak Island**	**25.15**	**64**	P		pP	13 52 29.9	-0.4
	comp=Z,5.8nm,0.8s,baz=352,slow=12,SNR=6.8							
CN2	**Changchun**	**25.83**	**260**	*eP*		**P**	**13 52 20.4**	**-2.1**
DAWY	**Dawson**	**30.26**	**48**	*eP*		**P**	**13 52 55.7**	**-6.1**
BJI	**Beijing**	**33.55**	**263**	P		**P**	**13 53 28.4**	**-2.5**
BJI				S		**S**	**13 58 42.9**	**-5.9**
HHC	**Hu-ho-hao-te**	**35.69**	**268**	*eP*		**P**	**13 53 48.5**	**-0.9**
HHC				AP	pP		13 54 04.0	+0.2
HHC				XP	sP		13 54 11.1	+0.6
HHC				PP	PP		13 55 09.4	-1.7
HHC				PCP	PcP		13 56 19.1	+2.7
HHC				S		**S**	**13 59 18.0**	**-3.7**
HHC				XS	sS		13 59 43.7	-2.5
HHC				SS	SS		14 01 39.0	-20
HHC				AMB	AMB			
	comp=Z,15nm,0.6s,mb5.1							
HHC				AMB	AMB			
	comp=Z,95nm,4.9s							
HHC				LR	LR			
	comp=N,199nm,18.4s,MS4.1							
HHC				LR	LR			
	comp=E,230nm,19.0s,MS4.1							
HHC				LR	LR			
	comp=Z,205nm,16.1s,MS4.0							
DLBC	**Dease Lake**	**36.27**	**56**	P		**P**	**13 53 56.7**	**+2.6**
	comp=Z,3.4nm,0.9s,mb4.3,baz=182,slow=25,SNR=3.7							
DLBC	**Dease Lake**	**36.27**	**56**	P		**P**	**13 53 56.7**	**+2.6**
YKA	**Yellowknife Ar**	**41.28**	**44**	P		**P**	**13 54 36.2**	**+0.4**
	comp=Z,1.5nm,0.5s,mb3.9,baz=299,slow=8.2,SNR=6.4							
ZALV	**Zalesovo Beam**	**42.76**	**302**	PcP		PcP	13 56 37.4	-1.1
	comp=Z,0.7nm,0.5s,baz=34,slow=3.9,SNR=3.7							
LZH	**Lanzhou**	**43.37**	**269**	*eP*		**P**	**13 54 46.5**	**-6.7**
LZH				AP	pP		13 55 01.0	-7.0
LZH				XP	sP		13 55 09.0	-5.6
LZH				*e*S		**S**	**14 01 02.3**	**-15**
LZH				AMB	AMB			
	comp=Z,13nm,1.0s,mb4.6							
LZH				AMB	AMB			
	comp=Z,70nm,4.0s							
LZH				LR	LR			
	comp=N,281nm,12.0s							
LZH				LR	LR			
	comp=Z,396nm,14.6s,MS4.5							
CD2	**Chengdu**	**47.14**	**264**	*eP*		**P**	**13 55 22.0**	**-1.2**
CD2				AP	pP		13 55 37.5	-0.6
CD2				XP	sP		13 55 44.6	-0.1
CD2				PP	PP		13 57 12.5	-1.7
CD2				S		**S**	**14 02 06.9**	**-4.4**
CD2				XS	sS		14 02 33.5	-3.0
CD2				SS	SS		14 05 26.8	-12
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB	AMB			
	comp=Z,30nm,4.2s							
CD2				LR	LR			
	comp=N,180nm,18.2s							
CD2				LR	LR			
	comp=Z,150nm,16.2s,MS4.0							
WMQ	**Urumqi**	**47.39**	**289**	*eP*		**P**	**13 55 24.0**	**-0.9**
WMQ				AP	pP		13 55 40.0	+0.1
WMQ				XP	sP		13 55 47.0	+0.5

WMQ PP PP 13 57 15.0 -1.3
WMQ S **S** **14 02 10.0 -4.6**
WMQ SS SS 14 05 31.0 -11
WMQ AMB AMB
comp=Z,16nm,1.0s,mb4.9
WMQ LR LR
comp=N,38nm,15.0s,MS3.6
WMQ LR LR
comp=E,35nm,15.0s,MS3.6
WMQ LR LR
comp=Z,31nm,15.0s,MS3.4
KURK Kurchatov 47.74 301 P **P** **13 55 25.0 -2.6**
baz=56,slow=7.8
KURK PcP PcP 13 56 55.2 -0.6
baz=45,slow=3.2
MKAR Makanchi Array 48.37 295 P **P** **13 55 28.9 -3.5**
comp=Z,0.7nm,0.6s,mb3.9,baz=57,slow=7.7,SNR=8.8
MKAR PcP PcP 13 56 56.9 -1.2
comp=Z,0.1nm,0.3s,baz=65,slow=6.5,SNR=2.1
GYA Guiyang 48.84 258 P **P** **13 55 35.8 -0.5**
GYA AP pP 13 55 51.6 +0.3
GYA XP sP 13 55 58.4 +0.5
GYA PCP PcP 13 57 02.0 +1.9
GYA PP PP 13 57 30.2 +0.4
GYA SCP ScP 14 00 50.4 +0.5
GYA PCS PcS 14 00 56.8 +0.2
GYA S **S** **14 02 31.8 -3.6**
GYA XS sS 14 02 57.4 -3.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,80nm,4.8s
GYA LR LR
comp=N,450nm,17.8s,MS4.7
GYA LR LR
comp=E,440nm,16.6s,MS4.7
GYA LR LR
comp=Z,560nm,17.6s,MS4.6
BSMT Bassoo Peak 49.69 61 *eP* **P** **13 55 44.1 +1.6**
BVAR Borovoye Array 50.17 308 P **P** **13 55 43.3 -2.8**
comp=Z,1.9nm,0.6s,mb4.3,baz=59,slow=6.9,SNR=14
BVAR PcP PcP 13 57 03.2 -1.4
comp=Z,0.5nm,0.3s,baz=69,slow=3.3,SNR=5.3
BRVK Borovoye 50.20 308 *eP* **P** **13 55 42.9 -3.4**
comp=Z,85nm,3.0s
BRVK Borovoye 50.20 308 *eP* **P** **13 55 42.9 -3.4**
BRVK pmax pmax
comp=Z,85nm,3.0s
MOD Modoc 50.74 71 *eP* **P** **13 55 51.5 +1.0**
comp=Z,2.6nm,0.6s,mb4.3
KEV Kevo 51.58 342 *ep* **P** **13 55 55.0 -1.5**
comp=Z,0.5nm,0.3s,mb3.9
KEV Kevo 51.58 342 *eP* **P** **13 55 55.0 -1.5**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
HRY Holter Researc 51.95 61 *eP* **P** **13 55 59.4 -0.1**
ARCES ARCESS Array B 52.05 342 P **P** **13 55 58.8 -1.1**
comp=Z,6.0nm,0.9s,mb4.5,baz=22,slow=8.9,SNR=10
ARCES PcP PcP 13 57 10.2 -1.0
comp=Z,3.8nm,0.9s,baz=26,slow=5.1,SNR=4.1
KMI Kunming 52.11 260 P **P** **13 56 02.4 +1.4**
KMI AMB AMB
comp=Z,5.0nm,0.5s,mb4.7
ARU Arti 52.88 317 *eP* **P** **13 56 03.5 -2.8**
comp=Z,5.7nm,0.4s,mb4.8
ARU Arti 52.88 317 *c iP* **P** **13 56 03.2 -3.1**
ARU 13 57 09.8
ARU *eS* **S** **14 03 23.7 -6.8**
ARU *eSS* SS 14 06 59.5 -10
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WAKR Walker 53.57 73 *eP* **P** **13 56 14.4 +2.8**
NVAR Mina Array Bea 54.25 72 P **P** **13 56 18.8 +2.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=297,slow=7.5,SNR=20
NVAR pP pP 13 56 34.2 +2.4
comp=Z,0.7nm,0.5s,baz=310,slow=6.6,SNR=4.0
NVAR Mina Array Bea 54.25 72 P **P** **13 56 18.8 +2.3**
NVAR pP pP 13 56 34.2 +2.4
RLMT Red Lodge 54.34 61 *eP* **P** **13 56 18.9 +1.8**
comp=Z,95nm,2.7s,mb5.2
TPAW Teton Pass 54.62 63 *eP* **P** **13 56 21.4 +2.3**
comp=Z,18nm,1.9s,mb4.8
HWUT Hardware Ranch 55.63 65 *eP* **P** **13 56 28.9 +2.4**
comp=Z,3.2nm,0.8s,mb4.4
BW06 Boulder Array 55.85 63 *eP* **P** **13 56 29.6 +1.5**
comp=Z,54nm,3.0s
PDAR Pinedale Array 55.85 63 P **P** **13 56 29.4 +1.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=320,slow=2.2,SNR=18
PDAR pP pP 13 56 44.0 +0.7
comp=Z,0.7nm,0.6s,baz=321,slow=3.5,SNR=3.9
SFJD Kangerlussuaq 56.18 15 P **P** **13 56 29.1 -0.9**
comp=Z,3.4nm,0.4s,mb4.7,baz=18,slow=20,SNR=3.0
JOF Joensuu 56.51 335 *ep* **P** **13 56 30.5 -1.9**
comp=Z,1.0nm,0.4s,mb4.2
RSSD Black Hills 57.67 58 *eP* **P** **13 56 42.6 +1.7**
comp=Z,4.3nm,0.8s,mb4.5
RSSD Black Hills 57.67 58 *eP* **P** **13 56 42.6 +1.7**
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SRU San Rafael 57.98 66 *eP* **P** **13 56 44.8 +1.6**
comp=Z,2.7nm,0.7s,mb4.4
SRU San Rafael 57.98 66 *eP* **P** **13 56 44.8 +1.6**
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 58.37 337 *ep* **P** **13 56 43.6 -1.9**
comp=Z,2.2nm,0.3s,mb4.7,baz=28,slow=6.5
KAF Kangasniemi 58.37 337 *eP* **P** **13 56 43.6 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
CMAR Chiang Mai Arr 59.51 259 P **P** **13 56 53.6 -0.3**
comp=Z,0.6nm,0.5s,mb3.9,baz=26,slow=8.3,SNR=3.5
NB2 NORSAR Subarra 62.25 344 P **P** **13 57 10.8 -1.2**
comp=Z,2.5nm,0.4s,mb4.7,baz=20,slow=6.9
NOA NORSAR Array B 62.25 344 P **P** **13 57 09.7 -2.3**
comp=Z,1.1nm,0.6s,mb4.2,baz=19,slow=6.7,SNR=6.3
AKASG Malin Array Be 67.72 330 P **P** **13 57 45.5 -2.2**
comp=Z,3.5nm,0.4s,mb4.7,baz=27,slow=6.8,SNR=6.8
AKASG Malin Array Be 67.72 330 P **P** **13 57 45.5 -2.2**
TXAR Lajitas Array 69.08 69 P **P** **13 57 57.2 +0.7**
comp=Z,2.2nm,0.5s,mb4.3,baz=296,slow=4.8,SNR=50
TXAR pP pP 13 58 12.1 -0.2
comp=Z,0.9nm,0.6s,baz=304,slow=4.7,SNR=5.7
MIV Mineville/With 70.92 39 *ep* pP 13 58 22.9 -0.4
CLL Collm 71.18 340 *eP* **P** **13 58 08.0 -1.0**
CLL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CLL Collm 71.18 340 *eP* **P** **13 58 08.0 -1.0**
comp=Z,10.0nm,1.1s,mb4.7
GRA1 Grafenberg Arr 73.06 341 *eP* **P** **13 58 20.2 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 73.06 341 *eP* **P** **13 58 20.2 -0.1**
GRF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 73.06 341 *eP* **P** **13 58 20.2 -0.1**
GRF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 73.06 341 *eP* **P** **13 58 20.2 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
MEM Membach 73.10 344 P **P** **13 58 20.3 -0.2**
GERES GERESS Array B 73.37 339 P **P** **13 58 21.2 -0.8**
comp=Z,2.1nm,0.6s,mb4.2,baz=39,slow=5.3,SNR=9.8
BAIF Baives 73.41 345 *eP* **P** **13 58 23.9 -1.3**
CDF Champ du Feu 75.02 343 *eP* **P** **13 58 30.6 -1.1**
comp=Z,15nm,0.8s,mb4.7
CDF Champ du Feu 75.02 343 *eP* **P** **13 58 30.6 -1.1**
comp=Z,7.6nm,0.8s,mb4.7
CDF Champ du Feu 75.02 343 *eP* **P** **13 58 30.6 -1.1**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HAU Haudompre 75.57 343 *eP* **P** **13 58 33.5 -1.3**
comp=Z,9.0nm,0.6s,mb4.6
HAU Haudompre 75.57 343 *eP* **P** **13 58 33.5 -1.3**
comp=Z,4.5nm,0.6s,mb4.6
HAU Haudompre 75.57 343 *eP* **P** **13 58 33.5 -1.3**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
HINF Hinteralfeld 75.67 343 *eP* **P** **13 58 33.7 -1.7**
BRTR Keskin Array B 75.99 321 P **P** **13 58 35.3 -2.1**
comp=Z,0.6nm,0.3s,mb4.0
GRR Gorron 76.22 348 *eP* **P** **13 58 37.0 -1.6**
comp=Z,15nm,0.8s,mb4.7
GRR Gorron 76.22 348 *eP* **P** **13 58 37.0 -1.6**
comp=Z,7.6nm,0.8s,mb4.7
GRR Gorron 76.22 348 *eP* **P** **13 58 37.0 -1.6**
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SGMF Saint Gilles 76.55 349 *eP* **P** **13 58 39.2 -1.2**
LOR Lormes 76.68 345 *eP* **P** **13 58 39.7 -1.5**
comp=Z,16nm,0.9s,mb4.7
LOR Lormes 76.68 345 *eP* **P** **13 58 39.7 -1.5**
comp=Z,8.2nm,0.9s,mb4.7
LOR Lormes 76.68 345 *eP* **P** **13 58 39.7 -1.5**
LOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SSF Saint Saulge 76.94 345 *eP* **P** **13 58 41.1 -1.5**
comp=Z,6.7nm,0.7s,mb4.4
SSF Saint Saulge 76.94 345 *eP* **P** **13 58 41.1 -1.5**
comp=Z,3.3nm,0.7s,mb4.4
SSF Saint Saulge 76.94 345 *eP* **P** **13 58 41.1 -1.5**
SSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CABF La Chapelle 76.96 343 *eP* **P** **13 58 41.8 -1.0**
AVF Avril sur Loir 77.22 345 *eP* **P** **13 58 43.0 -1.2**
comp=Z,6.9nm,0.7s,mb4.4
AVF Avril sur Loir 77.22 345 *eP* **P** **13 58 43.0 -1.2**
comp=Z,3.5nm,0.7s,mb4.4
AVF Avril sur Loir 77.22 345 *eP* **P** **13 58 43.0 -1.2**
AVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SMF Signal de Mont 77.29 345 *eP* **P** **13 58 43.2 -1.4**
LPL La Plagne 77.91 342 *eP* **P** **13 58 48.2 +0.1**
comp=Z,10nm,0.7s,mb4.6
LPL La Plagne 77.91 342 *eP* **P** **13 58 48.2 +0.1**
comp=Z,5.2nm,0.7s,mb4.6
LPL La Plagne 77.91 342 *eP* **P** **13 58 48.2 +0.1**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 77.93 342 *eP* **P** **13 58 48.4 +0.2**
comp=Z,15nm,0.8s,mb4.7
LPG La Plagne 77.93 342 *eP* **P** **13 58 48.4 +0.2**
comp=Z,7.6nm,0.8s,mb4.7
LPG La Plagne 77.93 342 *eP* **P** **13 58 48.4 +0.2**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
WRA Warramunga Arr 78.00 206 P **P** **13 58 48.8 +0.1**
comp=Z,1.5nm,0.7s,mb4.0,baz=13,slow=5.8,SNR=25
WRA pP pP 13 59 02.2 -2.5
comp=Z,1.7nm,0.7s,baz=20,slow=6.0,SNR=8.1
ORIF Oris-en-Rattie 78.64 343 *eP* **P** **13 58 52.7 +0.6**
comp=Z,13nm,0.9s,mb4.5
ORIF Oris-en-Rattie 78.64 343 *eP* **P** **13 58 52.7 +0.6**
comp=Z,6.3nm,0.9s,mb4.5
ORIF Oris-en-Rattie 78.64 343 *eP* **P** **13 58 52.7 +0.6**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MBDF Montbardon 78.67 342 *eP* **P** **13 58 51.9 -0.4**
RJF Les Rejaudoux 78.95 346 *eP* **P** **13 58 51.6 -2.2**
comp=Z,28nm,1.2s,mb4.8
RJF Les Rejaudoux 78.95 346 *eP* **P** **13 58 51.6 -2.2**
comp=Z,14nm,1.2s,mb4.8
RJF Les Rejaudoux 78.95 346 *eP* **P** **13 58 51.6 -2.2**
RJF pmax pmax
comp=Z,14nm,1.2s,mb4.8
CAF Calviac 79.24 346 *eP* **P** **13 58 55.0 -0.4**
comp=Z,11nm,0.9s,mb4.5
CAF Calviac 79.24 346 *eP* **P** **13 58 55.0 -0.4**
comp=Z,5.5nm,0.9s,mb4.5
CAF Calviac 79.24 346 *eP* **P** **13 58 55.0 -0.4**
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MTLF Montolieu 80.77 345 *eP* **P** **13 59 03.5 -0.2**
comp=Z,11nm,0.8s,mb4.5
MTLF Montolieu 80.77 345 *eP* **P** **13 59 03.5 -0.2**
comp=Z,5.4nm,0.8s,mb4.5
MTLF Montolieu 80.77 345 *eP* **P** **13 59 03.5 -0.2**
MTLF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ASAR Alice Springs 81.67 206 P **P** **13 59 09.4 +0.9**
comp=Z,3.0nm,0.8s,mb4.3,baz=17,slow=5.5,SNR=41
ASAR pP pP 13 59 23.4 -1.2
comp=Z,2.5nm,0.9s,baz=15,slow=4.5,SNR=8.2
ESDC Sonseca Array 85.18 349 P **P** **13 59 26.7 +0.1**
comp=Z,1.2nm,0.7s,mb4.2,baz=1.7,slow=6.6,SNR=6.4
QSPA South Pole Qui 144.48 180 PKP PKPdf 14 06 23.3 -1.3
comp=Z,6.2nm,0.7s,baz=333,slow=1.1,SNR=30
QSPA South Pole Qui 144.48 180 PKP PKPdf 14 06 23.3 -1.3
VNA3 Neumayer Olymp 163.01 189 *e*PKPdf PKPab 14 07 40.4 -0.5
VNA3 *e* 14 07 57.1
VNA2 Neumayer--Watz 163.06 192 *e*PKPdf PKPab 14 07 41.1 0.0
VNA2 *e* 14 07 58.3

NIED **10** *14:39:00.3±40.0N×141.00E±7.6km, h41.1±3.1km, Mw3.8 Best double couple: M0=5.52000×10^14 NP1:φ=316.00000°±6.00000°, δ=84.00000°±6.00000°, λ=67.00000°±6.00000°. NP2:φ=273.00000°±6.00000°, δ=24.00000°±6.00000°, λ=165.00000°±6.00000°.*
IDC **10** *14:39:43.1±1.0, 36.26N×140.96E±1.6km, h0.0km±0.0km, mb3.6/6, mb1 3.8/10,mb1mx3.7/25,mbtmp3.7/10,ML3.6/4,MS3.2/2, Ms1 3.2/2,ms1mx2.4/28,Error ellipse: s-maj=24.4km s-min=17.4km az=56.0*
ISCJB **10** *14:39:46.1±0.7, 36.35N±0.003×141.10E±0.006, h43.9km±1.7km, mb3.6/6, Error ellipse: s-maj=8.5km s-min=5.0km az=6.3*
JMA **10** *14:39:47.7±0.1, 36.34N×140.96E, h45.9km±1.1km, M3.7 Broadband fault plane solution: P waves. NP1: φ=221.00000°,δ13.00000°,λ119.00000°. NP2: φ=10.00000°,δ78.00000°,λ83.00000°. Principal axes: T Plg56.0000°, Azm272.0000°; N Plg7.0000°, Azm12.0000°; P Plg33.0000°, Azm106.0000°;*
JMA Felt I J1.
NEIC **10** *14:39:47.7, 36.34N×140.96E, h46.0km, MG3.7(JMA), After JMA.*

ISC 10 14:39:47.0±0.7, 36.35N±0.003×141.04E±0.005, h29.0km±5.5km, n24, σ=0.978/35, mb3.6/6, 1C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.46**	**304**	↓P		**Pb**	**14 39 57.4**	**+0.6**
JHO				*e*S		**Sb**	**14 40 04.5**	**+1.0**
CHOJ	**Chosi**	**0.66**	**193**	↑P		**Pb**	**14 40 00.3**	**+0.2**
CHOJ				S		**Sb**	**14 40 08.9**	**-0.1**
JYT	**Yasato**	**0.70**	**260**	↓P		**Pb**	**14 40 00.3**	**-0.4**
JYT				*e*S		**Sb**	**14 40 08.9**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.78**	**345**	↓P		**Pn**	**14 40 01.8**	**-0.2**
ONAJ				*e*S		**Sb**	**14 40 11.4**	**-0.8**
JFK	**Kawauchi**	**1.02**	**352**	↓P		**Pn**	**14 40 05.1**	**-0.3**
JFK				*e*S		**Sn**	**14 40 17.4**	**-1.3**
JAG	**Ashikaga**	**1.29**	**274**	↓P		**Pn**	**14 40 08.7**	**-0.3**
JFT	**Otama**	**1.30**	**334**	P		**Pn**	**14 40 10.1**	**+1.0**
JFT				*e*S		**Sn**	**14 40 24.6**	**-0.8**
JKT	**Katashina**	**1.50**	**287**	↓P		**Pn**	**14 40 12.6**	**+0.6**
JKT				S		**Sn**	**14 40 30.8**	**+0.2**
JFY	**Yanaizu**	**1.50**	**315**	↓P		**Pn**	**14 40 12.6**	**+0.6**
MJAR	**Matsushiro Arr**	**2.29**	**276**	Pn		**Pn**	**14 40 23.1**	**+0.3**
	25nm,0.3s,baz=85,slow=9.8,SNR=335							
MJAR					Sn	**Sn**	**14 40 50.5**	**+0.4**
	11nm,0.3s,baz=36,slow=25,SNR=8.5							
MAJO	**Matsushiro**	**2.30**	**276**	*e*Pn		**Pn**	**14 40 23.6**	**+0.8**
MAT	**Matsushiro**	**2.30**	**276**	P		**Pn**	**14 40 23.7**	**+0.9**
MAT				S		**Sn**	**14 40 49.6**	**-0.5**
JHJ	**Hachijo jima 2**	**3.39**	**198**	Pn		**Pn**	**14 40 31.6**	**-6.3**
	26nm,0.3s,baz=75,slow=20,SNR=2.0							
JHJ					Sn	**Sn**	**14 41 16.9**	**-0.1**
	16nm,0.3s,baz=90,slow=20,SNR=2.4							
ASAJ	**Asahikawa**	**7.85**	**8**	Pn		**Pn**	**14 41 39.2**	**+0.2**
	0.8nm,0.3s,baz=153,slow=22,SNR=8.1							
ASAJ					Sn	**Sn**	**14 43 06.7**	**-0.2**
	0.5nm,0.3s,baz=105,slow=20,SNR=3.6							
CBIJ	**Chichi jima**	**9.28**	**174**	Pn		**Pn**	**14 41 57.5**	**-1.2**
	4.2nm,0.3s,baz=268,slow=23,SNR=6.9							
CBIJ					Sn	**Sn**	**14 43 34.5**	**-7.6**
	2.8nm,0.3s,baz=286,slow=20,SNR=2.2							
KSRS	**Korea Array**	**10.57**	**280**	Pn		**Pn**	**14 42 14.6**	**-1.8**
	0.1nm,0.3s,baz=95,slow=15,SNR=2.7							
KSRS					LR	LR	14 46 10.0	
	comp=Z,36nm,20.1s,baz=90,slow=37							
SONM	**Songino Array**	**27.93**	**305**	P		**P**	**14 45 34.0**	**-0.5**
	0.5nm,0.4s,mb3.5,baz=111,slow=7.9,SNR=3.3							
ZALV	**Zalesovo Beam**	**42.16**	**313**	P		**P**	**14 47 36.8**	**+0.2**
	1.0nm,0.5s,mb3.7,baz=72,slow=9.5,SNR=8.9							
MKAR	**Makanchi Array**	**44.23**	**303**	P		**P**	**14 47 54.5**	**+1.0**
	1.0nm,0.7s,mb3.6,baz=91,slow=9.1,SNR=9.5							
KURK	**Kurchatov**	**46.12**	**309**	P		**P**	**14 48 08.6**	**+0.2**
	baz=85,slow=7.9							
WRA	**Warramunga Arr**	**56.34**	**188**	P		**P**	**14 49 24.7**	**-0.6**
	0.2nm,0.3s,mb3.6,baz=6.2,slow=7.4,SNR=13							
ASAR	**Alice Springs**	**60.07**	**188**	P		**P**	**14 49 51.1**	**-0.2**
	0.3nm,0.7s,mb3.4,baz=14,slow=7.5,SNR=6.8							
STKA	**Stephens Creek**	**67.87**	**179**	LR		LR	15 19 17.4	
	comp=Z,47nm,18.3s,baz=23,slow=35							
NVAR	**Mina Array Bea**	**75.64**	**53**	P		**P**	**14 51 31.9**	**+2.6**
	0.4nm,0.4s,mb3.7,baz=274,slow=6.1,SNR=5.1							

IDC **10** *14:51:11.4±3.0, 561N×12702E, h33.3km±21km, mb3.9/10, mb1 4.0/10,mb1mx3.8/17,mbtmp3.9/10,MS3.2/6, Ms1 3.3/6,ms1mx2.8/26,Error ellipse: s-maj=34.5km s-min=14.2km az=78.0*
ISCJB **10** *14:51:14.2±1.5, 572N±0.006×127.3E±0.1, h72.2km±14km, mb4.3/19,Error ellipse: s-maj=17.7km s-min=8.7km az=158.5*
NEIC **10** *14:51:15.1±1.5, 572N×12738E, h68.9km±13km, mb4.8/9, Error ellipse: s-maj=16.4km s-min=7.0km az=67.0*

ISC 10 14:51:15.3±1.5, 571N±0.006×127.3E±0.1, h64.1km±13km, n35, σ=0.909/32, mb4.4/19, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.18**	**308**	*e*Pn		**Pn**	**14 51 49.6**	**+0.2**
DAV				*e*Sn		**Sn**	**14 52 14.1**	**-1.1**
BATI	**Baumata**	**16.23**	**193**	Pn		**Pn**	**14 55 01.8**	**+2.4**
	1.2nm,0.3s,baz=315,slow=4.3,SNR=2.6							
GUMO	**Guam**	**18.99**	**64**	LR		LR	15 02 59.6	
	comp=Z,34nm,19.6s,baz=202,slow=37							
CBIJ	**Chichi jima**	**25.55**	**32**	P		**P**	**14 56 39.1**	**+0.8**
	46nm,0.6s,mb5.2,baz=300,slow=23,SNR=7.7							
CBIJ					LR	LR	15 05 56.2	
	comp=Z,56nm,18.4s,baz=34,slow=34							
WRAB	**Tennant Creek**	**26.41**	**165**	*e*P		**P**	**14 56 46.2**	**+0.1**
	6.1nm,0.8s,mb4.2							
WRA	**Warramunga Arr**	**26.42**	**165**	P		**P**	**14 56 44.5**	**-1.6**
	1.4nm,0.3s,mb3.9,baz=343,slow=10,SNR=19							
WRA					ScP	ScP	15 03 47.4	+2.5
	0.3nm,0.5s,baz=343,slow=2.9,SNR=6.1							
WB2	**Warramunga Arr**	**26.42**	**165**	*e*P		**P**	**14 56 46.7**	**+0.5**
ASAR	**Alice Springs**	**29.90**	**168**	P		**P**	**14 57 16.4**	**-0.8**
	0.4nm,0.4s,mb3.5,baz=348,slow=7.0,SNR=22							
ASAR					PcP	PcP	15 00 18.6	-0.2
	0.1nm,0.3s,baz=349,slow=2.5,SNR=2.9							
ASAR					ScP	ScP	15 03 58.1	+2.5
	0.5nm,0.4s,baz=341,slow=3.0,SNR=21							
CMAR	**Chiang Mai Arr**	**30.43**	**297**	LR		LR	15 09 15.4	
	comp=Z,47nm,19.4s,baz=115,slow=36							
MJAR	**Matsushiro Arr**	**32.27**	**17**	P		**P**	**14 57 38.2**	**+0.3**
	0.7nm,0.6s,mb3.6,baz=180,slow=9.0,SNR=5.2							
LZH	**Lanzhou**	**37.12**	**328**	*e*P		**P**	**14 58 22.0**	**+2.2**
LZH				pP	pP		14 58 26.5	-9.2
LZH				sP	sP		14 58 28.1	-15
MUN	**Mundaring**	**38.95**	**195**	*e*P		**P**	**14 58 35.2**	**0.0**
STKA	**Stephens Creek**	**39.79**	**161**	*e*P		**P**	**14 58 40.8**	**-1.4**
	2.1nm,0.4s,mb4.2							
STKA	**Stephens Creek**	**39.79**	**161**	P		**P**	**14 58 41.4**	**-0.8**
	1.4nm,0.4s,mb4.1,baz=347,slow=6.7,SNR=8.4							
YSS	**Yuzh-Sakhalins**	**43.19**	**15**	*e*P		**P**	**14 59 08.3**	**-1.5**
	23nm,1.3s,mb4.8							
TAPN	**Taplejung**	**43.35**	**304**	*e*P		**P**	**14 59 12.1**	**+0.7**
ODAN	**Odare**	**43.43**	**304**	*e*P		**P**	**14 59 13.5**	**+1.4**
RAMN	**Ramite**	**44.12**	**303**	*e*P		**P**	**14 59 18.1**	**+0.5**
JIRN	**Jiri**	**44.71**	**304**	*e*P		**P**	**14 59 23.3**	**+0.9**
	5.7nm,0.5s,mb4.7							
SONM	**Songino Array**	**45.62**	**340**	P		**P**	**14 59 28.4**	**-0.9**
	0.4nm,0.5s,mb3.6,baz=140,slow=11,SNR=2.6							
KOLN	**Koldanda**	**46.90**	**303**	*e*P		**P**	**14 59 39.5**	**-0.1**
	5.8nm,0.3s,mb4.9							
DANN	**Dangsing**	**46.97**	**304**	*e*P		**P**	**14 59 39.8**	**-0.3**
	9.3nm,0.6s,mb4.9							
PYUN	**Piuthan**	**47.52**	**303**	*e*P		**P**	**14 59 44.3**	**-0.2**
	6.8nm,0.6s,mb4.8							
PETK	**Petropavlovsk-**	**53.39**	**22**	P		**P**	**15 00 30.5**	**+2.2**
	6.7nm,1.0s,mb4.5,baz=258,slow=13,SNR=2.9							
YAK	**Yakutsk**	**56.22**	**1**	*e*P		**P**	**15 00 48.5**	**-0.1**
	6.2nm,0.6s,mb4.8							
MK31	**Makanchi Array**	**56.28**	**324**	*e*P		**P**	**15 00 49.7**	**+0.4**
MKAR	**Makanchi Array**	**56.28**	**324**	P		**P**	**15 00 49.7**	**+0.4**
	2.0nm,0.4s,mb4.5,baz=114,slow=7.4,SNR=27							
MKAR					LR	LR	15 26 49.2	
	comp=Z,36nm,19.4s,baz=152,slow=38							
MKAR	**Makanchi Array**	**56.28**	**324**	P		**P**	**15 00 49.7**	**+0.4**
MKAR					LR	LR	15 26 49.2	
ZALV	**Zalesovo Beam**	**59.10**	**332**	P		**P**	**15 01 07.2**	**-1.7**
	0.7nm,0.3s,mb4.2,baz=124,slow=7.1,SNR=5.7							
ZALV					LR	LR	15 29 08.1	
	comp=Z,14nm,18.3s,baz=66,slow=38							
KURK	**Kurchatov**	**60.40**	**327**	*e*P		**P**	**15 01 18.1**	**+0.2**
	4.3nm,0.6s,mb4.7							
KHU	**Kahuku**	**75.95**	**72**	*e*P		**P**	**15 02 51.5**	**-4.5**
ARCES	**ARCESS Array B**	**88.80**	**340**	P		**P**	**15 04 01.1**	**-0.8**
	1.5nm,0.8s,mb4.4,baz=81,slow=6.5,SNR=3.9							
BRTR	**Keskin Array B**	**89.20**	**310**	P		**P**	**15 04 02.0**	**-2.4**
	0.6nm,0.4s,mb4.3							
NOA	**NORSAR Array B**	**97.27**	**334**	LR		LR	15 57 24.5	
	comp=Z,20nm,18.3s,baz=155,slow=41							
TORD	**Torodi Ar. Bea**	**122.83**	**290**	PKP		PKPdf	15 10 05.1	0.0
	0.3nm,0.6s,baz=90,slow=0.4,SNR=3.4							

IDC **10** *14:59:11.6±2.2, 101N×12693E, h0km, mb3.3/3,mb1 3.5/3, mb1mx3.3/15,mbtmp3.3/3,Error ellipse: s-maj=173.1km s-min=27.5km az=66.0*
DJA **10** *14:59:14.7±0.0, 0.74N×126.23E, h106km*
ISCJB **10** *14:59:16.5±1.6, 06N±0.02×126.12E±0.10, h44km±23km, mb3.4/3,Error ellipse: s-maj=32.3km s-min=13.8km az=16.1.*

ISC 10 14:59:12.9±4.7, 06N±0.02×126.1E±0.2, h0km±36km, n6, σ=1.920/6, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**81**	P		**Pg**	**14 59 37.0**	**-0.6**
TNTI	**Ternate**	**1.28**	**81**	S		**Sg**	**14 59 54.7**	**+0.5**
MNI	**Manado**	**1.53**	**305**	P		**Pn**	**14 59 42.0**	**+0.5**
WRA	**Warramunga Arr**	**21.93**	**159**	P		**P**	**15 04 07.3**	**-0.8**
	0.4nm,0.3s,mb3.3,baz=340,slow=11,SNR=6.5							
ASAR	**Alice Springs**	**25.26**	**163**	P		**P**	**15 04 42.0**	**+1.0**
	0.3nm,0.3s,mb3.5,baz=344,slow=12,SNR=11							
MKAR	**Makanchi Array**	**59.80**	**327**	P		**P**	**15 09 19.3**	**-0.7**
	0.3nm,0.7s,mb3.4,baz=133,slow=8.7,SNR=3.6							

DJA 10 15:12:41.6±0.0, 886S×10943E, h30km, Mjma3.3/3, MLv3.5/3, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**1.54**	**10**	P		Pn	15 13 07.3	+0.2
BJII	**Banjamegara**	**1.54**	**10**	S		Sn	15 13 27.2	+1.1
SMRI	**Semarang**	**2.06**	**29**	P		Pn	15 13 13.2	-1.0
SJI	**Sawahan**	**2.57**	**64**	P		Pn	15 13 22.6	+1.4
SJI	**Sawahan**	**2.57**	**64**	S		Sn	15 13 52.9	+1.5
KRKI	**Karangkates**	**3.07**	**77**	P		Pn	15 13 28.1	0.0

IDC **10** *15:48:06.4±2.0, 155N×12739E, h0km, mb3.9/4,mb1 4.1/4, mb1mx3.7/15,mbtmp3.9/4,Error ellipse: s-maj=163.4km s-min=24.7km az=65.0*
ISCJB **10** *15:48:09.6±1.5, 15N±0.02×1272E±0.3, h33km,mb4.2/6, Error ellipse: s-maj=46.4km s-min=18.0km az=144.5*
NEIC **10** *15:48:11.6±1.3, 146N×12724E, h35km,mb4.5/3,Error ellipse: s-maj=40.1km s-min=15.3km az=55.0*

ISC 10 15:48:11.9±1.5, 14N±0.02×1272E±0.3, h35km, n9, σ=0.950/9, mb4.2/6, Halmahera

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SZGRF ***10*** *16:11:15.3, 1226S×16869E, h33km, mb5.1, Santa Cruz Islands region*

MOS ***10*** *16:11:22.2±1.2, 1148S×16620E, h37km, mb5.6/32, MS5.0/5, Error ellipse: s-maj=9.3km s-min=8.7km az=53.3*

ISCJB ***10*** *16:11:23.7±0.1, 1161S±003×16634E±003, h52km, mb5.4/94, MS4.9/40, Error ellipse: s-maj=5.3km s-min=3.6km az=150.7*

GCMT ***10*** *16:11:24.5±0.1, 1164S×16609E, h52km, MW5.7/108, Moment Tensor Solution. s108,c202; s98,c235; Duration: 1s6 Moment tensor: Scale 10^17Nm; Mrr3.60±.04; Mθθ-0.13±.03; Mφφ-3.46±.03; Mrθ-0.18±.03; Mθφ0.87±.03; Mφr0.74±.03; Best double couple: Mo3.71500×10^17 NP1:φs166.00000°, δ39.00000°, λ90.00000°. NP2:φs346.00000°, δ51.00000°, λ90.00000°. Principal axes: T 3.6780, Plg84.0000°, Azm256.0000°; N 0.0800, Plg0.0000°, Azm346.0000°; P -3.7520, Plg6.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***10*** *16:11:24.5±0.2, 1155S×16628E, h45km, mb5.5/55, ME4.9, MS5.1/1, MW5.7 Error ellipse: s-maj=7.3km s-min=5.2km az=134.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^17Nm; Mrr3.88; Mθθ0.40; Mφφ-4.28; Mrθ0.85; Mθφ0.54; Mφr1.08; Best double couple: Mo4.30000×10^17 NP1:φs7.00000°, δ53.00000°, λ108.00000°. NP2: φs159.00000°, δ40.00000°, λ68.00000°. Principal axes: T 4.2400, Plg74.0000°, Azm329.0000°; N 0.2200, Plg14.0000°, Azm176.0000°; P -4.4600, Plg6.0000°, Azm84.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

IDC ***10*** *16:11:25.0±0.7, 1157S×16635E, h54km±5km, mb4.7/20, mb1 4.8/20, mb1mx4.8/21, mbtmp4.7/20, MS4.8/19, Ms1 4.8/19, ms1mx4.7/21 Error ellipse: s-maj=13.6km s-min=10.8km az=133.0*

BJI ***10*** *16:11:24.2, 11.18S×16645E, h50km, mB5.6, mb5.3, Ms5.1, Msz5.0*

DJA ***10*** *16:11:48.2±0.0, 1189S×16552E, h199km, mB5.8/11, Mw(mB)5.5/11, Mwp5.6/12*

ISC 10 16:11:25.5±0.1, 1159S±003×16638E±003, h54km, h54km±1.6km:pP-P, n399, σ0997/348, mb5.4/93, MS4.9/40, 63C-60D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.42**	**180**	*e*Pn		**Pn**	**16 13 53.3**	**+1.0**
NOUC	**Port Laguerre**	**10.45**	**180**	*e*P		**Pn**	**16 13 54.3**	**+1.6**
NOUC				*e*S		**Sn**	**16 15 45.9**	**-2.5**
FUNA	**Funafuti**	**12.98**	**78**	*e*Pn		**Pn**	**16 14 29.4**	**+2.0**
	167nm,1.1s							
TARA	**Tarawa**	**14.41**	**27**	*e*Pn		**Pn**	**16 14 48.8**	**+2.1**
	1μm,1.1s							
PMG	**Port Moresby**	**19.02**	**275**	*e*Pn		**Pn**	**16 15 44.4**	**0.0**
	62nm,0.9s							
PMG	**Port Moresby**	**19.02**	**275**	*e*P		**Pn**	**16 15 46.0**	**+1.6**
PMG	**Port Moresby**	**19.02**	**275**	P		**Pn**	**16 15 46.2**	**+1.8**
	130nm,2.7s,5μm							
EIDS	**Eidsvold**	**19.93**	**224**	*e*Pn		**Pn**	**16 15 54.4**	**-0.6**
	2μm,2.4s							
CTA	**Charters Tower**	**21.10**	**244**	*e*P		**P**	**16 16 07.3**	**+1.6**
	44nm,0.8s,mb4.8							
CTA				*e*S		**S**	**16 20 00.0**	**+2.3**
CTA	**Charters Tower**	**21.10**	**244**	P		**P**	**16 16 04.0**	**-1.8**
	56nm,0.8s,mb5.0,baz=75,slow=10,SNR=24							
CTA				S		**S**	**16 19 58.4**	**+0.6**
	1.4nm,0.4s,baz=180,slow=20,SNR=2.9							
CTA				LR		LR	16 23 18.1	
	comp=Z,6μm,20.3s,MS5.0,baz=64,slow=34							
CTA	**Charters Tower**	**21.10**	**244**	*e*P		**P**	**16 16 07.3**	**+1.6**
	44nm,0.8s,mb4.8							
CTA				S		**S**	**16 19 58.4**	**+0.6**
CTA				*e*S		**S**	**16 20 00.0**	**+2.3**
CTA				LR		LR	16 23 18.1	
CTA	**Charters Tower**	**21.10**	**244**	*e*P		**P**	**16 16 07.3**	**+1.6**
CTA				S		**S**	**16 19 58.4**	**+0.7**
CTA				*e*S		**S**	**16 20 00.0**	**+2.3**
CTA				pmax		pmax		
	comp=Z,44nm,0.8s							
CTAO	**Charters Tower**	**21.10**	**244**	*e*P		**P**	**16 16 05.3**	**-0.5**
	comp=Z,60nm,0.7s,mb5.0							
CTAO	**Charters Tower**	**21.10**	**244**	*e*P		**P**	**16 16 05.3**	**-0.4**
CTAO				pmax		pmax		
	comp=Z,61nm,0.7s,mb5.0							
CTAO	**Charters Tower**	**21.10**	**244**	P		**P**	**16 16 08.2**	**+2.5**
	comp=Z,102nm,0.9s,comp=Z,3μm,mb5.2							
AFI	**Afiamalu**	**21.43**	**99**	P		**P**	**16 16 10.9**	**+1.6**
	comp=Z,37nm,0.8s,mb4.8,baz=173,slow=4.6,SNR=9.0							
AFI				LR		LR	16 22 51.2	
	comp=Z,3μm,21.7s,MS4.6,baz=256,slow=32							
AFI	**Afiamalu**	**21.43**	**99**	P		**P**	**16 16 12.0**	**+2.7**
AFI				pmax		pmax		
	comp=Z,170nm,1.4s,mb5.2							
RAO	**Raoul Island**	**22.87**	**143**	LR		LR	16 22 16.9	
	comp=Z,1μm,21.7s,MS4.2,baz=274,slow=28							
ARMA	**Armidale**	**23.20**	**214**	*e*P		**P**	**16 16 28.9**	**+1.0**
ARMA				*e*S		**S**	**16 20 44.5**	**+8.9**
CNB	**Canberra Magne**	**28.21**	**210**	*e*P		**P**	**16 17 13.6**	**+0.3**
URZ	**Urewera**	**28.24**	**162**	P		**P**	**16 17 13.4**	**0.0**
	comp=Z,5.8nm,0.4s,mb4.6,baz=56,slow=3.1,SNR=15							
URZ				LR		LR	16 27 09.3	
	comp=Z,2μm,21.2s,MS4.8,baz=174,slow=33							
CAN	**Canberra**	**28.40**	**211**	*e*P		**P**	**16 17 14.9**	**0.0**
STKA	**Stephens Creek**	**30.48**	**225**	⇑ *i*P		**P**	**16 17 33.8**	**+0.4**
	comp=Z,44nm,0.8s,mb5.2							
STKA				*e*PCP		PcP	16 20 31.6	-0.1
STKA				*e*S		**S**	**16 22 30.5**	**-0.5**
STKA				*e*PCS		PcS	16 24 13.1	-2.4
STKA	**Stephens Creek**	**30.48**	**225**	P		**P**	**16 17 33.9**	**+0.5**
	comp=Z,50nm,0.7s,mb5.3,baz=41,slow=8.4,SNR=136							
STKA				PcP		PcP	16 20 31.2	-0.5
	comp=Z,9.5nm,0.9s,baz=85,slow=3.7,SNR=3.8							
STKA				LR		LR	16 29 07.1	
	comp=Z,5μm,20.4s,MS5.2,baz=47,slow=35							
SNZO	**South Karori**	**30.49**	**168**	*e*P		**P**	**16 17 32.2**	**-1.1**
	comp=Z,63nm,1.3s,mb5.2							
WRAB	**Tennant Creek**	**31.87**	**251**	*e*P		**P**	**16 17 44.9**	**-0.9**
	comp=Z,94nm,1.1s,mb5.5							
WRAB	**Tennant Creek**	**31.87**	**251**	*c i*P		**P**	**16 17 44.6**	**-1.2**
WRAB	**Tennant Creek**	**31.87**	**251**	P		**P**	**16 17 45.4**	**-0.4**
	comp=Z,99nm,1.3s,comp=Z,1μm,mb5.5							
WB2	**Warramunga Arr**	**31.87**	**251**	*e*P		**P**	**16 17 44.6**	**-1.2**
WB2				*e*PCP		PcP	16 20 35.3	-0.3
WB2				*e*S		**S**	**16 22 50.1**	**-2.9**
WB2				*e*PCS		PcS	16 24 18.4	-2.1
WB2	**Warramunga Arr**	**31.87**	**251**	*e*P		**P**	**16 17 44.9**	**-0.9**
WRA	**Warramunga Arr**	**31.88**	**251**	P		**P**	**16 17 45.1**	**-0.8**
	comp=Z,56nm,0.9s,mb5.4,baz=82,slow=9.3,SNR=189							
WRA				pP		pP	16 17 59.9	+0.3
	comp=Z,25nm,1.0s,baz=83,slow=8.6,SNR=5.9							
WRA				PcP		PcP	16 20 35.4	-0.3
	comp=Z,6.5nm,0.9s,baz=78,slow=3.0,SNR=6.7							
WRA				S		**S**	**16 22 48.7**	**-4.5**
	comp=Z,5.0nm,1.4s,baz=82,slow=18,SNR=8.1							
WRA				ScP		ScP	16 24 15.4	+0.7
	comp=Z,1.4nm,0.8s,baz=78,slow=3.6,SNR=5.6							
WRA				LR		LR	16 29 27.1	
	comp=Z,2μm,20.1s,MS4.9,baz=75,slow=34							
WRA	**Warramunga Arr**	**31.88**	**251**	P		**P**	**16 17 45.1**	**-0.8**
WRA				*PP		pP	16 17 59.9	+0.3
WRA							16 20 35.4	
WRA				S		**S**	**16 22 48.7**	**-4.5**
TOO	**Toolangi**	**31.94**	**212**	⇑ *i*P		**P**	**16 17 46.6**	**+0.5**
TOO				*e*S		**S**	**16 22 43.7**	**-10**
RPZ	**Rata Peaks**	**32.26**	**174**	P		**P**	**16 17 48.4**	**-0.5**
	comp=Z,30nm,0.5s,mb5.4,baz=296,slow=3.2,SNR=47							
ASAR	**Alice Springs**	**33.11**	**244**	P		**P**	**16 17 55.2**	**-1.3**
	comp=Z,36nm,0.7s,mb5.4,baz=70,slow=9.6,SNR=311							
ASAR				PcP		PcP	16 20 37.7	-1.3
	comp=Z,8.4nm,1.0s,baz=80,slow=2.7,SNR=8.8							
ASAR				ScP		ScP	16 24 18.8	-0.1
	comp=Z,1.1nm,0.8s,baz=68,slow=3.7,SNR=5.8							
ASAR	**Alice Springs**	**33.11**	**244**	P		**P**	**16 17 55.3**	**-1.3**
ASAR							16 20 37.7	
KAKA	**Kakadu**	**33.18**	**264**	⇓ *i*P		Px	16 17 45.6	
	comp=Z,85nm,0.6s							
MOO	**Moorlands**	**34.99**	**205**	*e*P		**P**	**16 18 14.0**	**+1.4**
TAU	**Tasmania Unive**	**35.32**	**205**	*e*P		**P**	**16 18 16.0**	**+0.5**
	comp=Z,86nm,1.4s,mb5.5							
TAU	**Tasmania Unive**	**35.32**	**205**	*e*P		**P**	**16 18 16.0**	**+0.5**
TAU				pmax		pmax		
	comp=Z,86nm,1.4s,mb5.5							
AAI	**Ambon**	**38.61**	**279**	P		**P**	**16 18 45.9**	**+2.0**
	comp=Z,56nm,1.0s,comp=Z,1μm,mb5.2							
LBMI	**Labuha**	**40.09**	**283**	P		**P**	**16 18 58.2**	**+2.0**
	comp=Z,260nm,1.9s,comp=Z,4μm,mb5.6							
FORT	**Forest**	**40.24**	**236**	*e*P		**P**	**16 18 57.4**	**+0.2**
	comp=Z,60nm,0.8s,mb5.4							
BATI	**Baumata**	**41.94**	**268**	P		**P**	**16 19 13.2**	**+1.8**
	comp=Z,118nm,1.2s,comp=Z,2μm,mb5.4							
PPT	**Papeete**	**42.97**	**103**	*e*S		**S**	**16 25 50.0**	**+8.6**
	comp=Z,989nm,28.0s							
PPT				*e*LQ			16 29 27.6	
	comp=Z,4μm,28.2s							
PPT				*e*LR		LR	16 31 11.6	
	comp=Z,8μm,29.5s,baz=275							
PPT	**Papeete**	**42.97**	**103**	LR		LR	16 33 47.9	
	comp=Z,1μm,20.0s,MS4.8,baz=268,slow=31							
MNI	**Manado**	**43.26**	**285**	P		**P**	**16 19 22.7**	**+0.6**
	comp=Z,342nm,0.9s,mb6.1							
TBI	**Tubuai**	**43.55**	**112**	*e*S		**S**	**16 25 57.0**	**+7.1**
	comp=Z,655nm,28.2s							
TBI				*e*LQ			16 29 41.6	
	comp=Z,4μm,29.8s							
TBI				*e*LR		LR	16 31 31.6	
	comp=Z,8μm,29.0s,baz=284							
DAV	**Davao City (W)**	**44.62**	**293**	⇑ *e*P		**P**	**16 19 30.0**	**-3.0**
MBWA	**Marble Bar**	**45.61**	**252**	P		**P**	**16 19 41.4**	**+0.6**
	SNR=13							
MBWA	**Marble Bar**	**45.61**	**252**	*e*P		**P**	**16 19 41.1**	**+0.3**
	comp=Z,142nm,0.9s,mb5.9							
MBWA	**Marble Bar**	**45.61**	**252**	P		**P**	**16 19 41.4**	**+0.6**
	comp=Z,222nm,1.0s,mb6.0							
KAPI	**Kappang**	**46.55**	**274**	P		**P**	**16 19 48.3**	**0.0**
	SNR=5.2							
KAPI	**Kappang**	**46.55**	**274**	*e*P		**P**	**16 19 48.3**	**0.0**
KAPI				*e*pP		pP	16 19 59.1	-3.4
PCI	**Palu**	**47.39**	**280**	P		**P**	**16 19 57.0**	**+2.2**
	comp=Z,264nm,1.4s,comp=Z,3μm,mb6.0							
KLBR	**Kellerberrin**	**48.94**	**238**	*e*P		**P**	**16 20 06.6**	**0.0**
	comp=Z,89nm,0.9s,mb5.8							
NWAO	**Narrogin (SRO)**	**49.68**	**237**	*e*P		**P**	**16 20 11.8**	**-0.4**
	comp=Z,79nm,1.0s,mb5.7							
NWAO	**Narrogin (SRO)**	**49.68**	**237**	*e*P		**P**	**16 20 11.8**	**-0.4**
NWAO				pmax		pmax		
	comp=Z,79nm,1.0s							
KHKI	**Kahang-Kahang**	**50.05**	**269**	P		**P**	**16 20 15.3**	**0.0**
MUN	**Mundaring**	**50.31**	**238**	*e*P		**P**	**16 20 17.3**	**+0.3**
BBKI	**Banjar Baru**	**51.66**	**275**	P		**P**	**16 20 29.7**	**+2.3**
TAOE	**Nuku Hiva Isla**	**52.64**	**92**	*e*LR		LR	16 35 57.1	
	comp=Z,10μm,27.1s							
KRKI	**Karangkates**	**53.17**	**268**	P		**P**	**16 20 39.4**	**+0.8**
SJI	**Sawahan**	**53.91**	**269**	P		**P**	**16 20 44.8**	**+0.8**
MJAR	**Matsushiro Arr**	**54.74**	**332**	P		**P**	**16 20 47.4**	**-2.1**
	comp=Z,7.0nm,0.9s,mb4.7,baz=168,slow=8.5,SNR=17							
MJAR				LR		LR	16 41 58.0	
	comp=Z,551nm,20.5s,MS4.6,baz=150,slow=34							
MJAR	**Matsushiro Arr**	**54.74**	**332**	P		**P**	**16 20 47.4**	**-2.2**
MJAR				LR		LR	16 41 58.0	
MAJO	**Matsushiro**	**54.74**	**332**	*e*P		**P**	**16 20 46.9**	**-2.7**
	comp=Z,33nm,1.3s,mb5.2							
MAJO	**Matsushiro**	**54.74**	**332**	*e*P		**P**	**16 20 47.2**	**-2.4**
MAJO				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.1							
MAT	**Matsushiro**	**54.74**	**332**	P		**P**	**16 20 48.0**	**-1.6**
MAT				S		**S**	**16 28 25.0**	**-1.2**
PBKI	**Pangkalan Bun**	**54.91**	**275**	P		**P**	**16 20 53.3**	**+2.0**
	comp=Z,92nm,1.0s,comp=Z,2μm,mb5.8							
RKT	**Rikitea**	**56.82**	**110**	*e*S		**S**	**16 29 04.3**	**+10**
	comp=Z,445nm,32.0s							
RKT				*e*LQ			16 35 16.7	
	comp=Z,1μm,33.2s							
RKT				*e*LR		LR	16 37 40.3	
	comp=Z,7μm,27.5s,baz=278							
DRV	**Dumont d'Urvil**	**57.80**	**192**	P		**P**	**16 21 10.0**	**-1.0**
DRV				S		**S**	**16 29 09.0**	**+3.0**
DRV				SS		SS	16 33 10.0	+13
DRV				L			16 35 00.0	
DRV				R			16 38 00.0	
QZH	**Quanzhou**	**59.07**	**308**	*e*P		**P**	**16 21 21.1**	**+0.6**
QZH				*e*S		**S**	**16 29 27.0**	**+3.2**
QZH				LR		LR		
	comp=Z,2μm,24.2s,MS5.2							
SSE	**Sheshan**	**60.67**	**316**	P		**P**	**16 21 31.6**	**+0.2**
SSE				S		**S**	**16 29 45.7**	**+1.5**
SSE				AMB		AMB		
	comp=Z,39nm,0.7s,mb5.7							
SSE				AMB		AMB		
	comp=Z,292nm,5.1s							
SSE				LR		LR		
	comp=N,470nm,30.1s,MS4.6							
SSE				LR		LR		
	comp=E,441nm,30.7s,MS4.6							
SSE				LR		LR		
	comp=Z,763nm,24.5s							
SSE	**Sheshan**	**60.67**	**316**	P		**P**	**16 21 31.6**	**+0.2**
	comp=Z,39nm,0.7s,mb5.7							
SSE				S		**S**	**16 29 45.7**	**+1.5**
SSE				LR		LR		
	comp=Z,760nm,24.5s,MS4.8							
KSRS	**Korea Array**	**60.67**	**325**	P		**P**	**16 21 30.9**	**-0.4**
	comp=Z,4.3nm,0.7s,mb4.7,baz=134,slow=7.1,SNR=13							
KSRS				LR		LR	16 45 46.7	
	comp=Z,373nm,19.8s,MS4.5,baz=139,slow=34							
YSS	**Yuzh-Sakhalins**	**61.99**	**342**	⇑ *e*P		**P**	**16 21 38.0**	**-2.0**
YSS				*e*		pP	16 21 53.0	-1.8
YSS				*e*			16 23 52.0	
YSS				*e*S		**S**	**16 30 01.0**	**+0.7**
YSS				*e*PPS			16 30 31.0	
YSS				MLR		MLR		
	comp=N,400nm,18.0s							
YSS				MLR		MLR		
	comp=Z,500nm,18.0s,MS4.7							
NJ2	**Nanjing**	**62.84**	**315**	*e*P		**P**	**16 21 45.3**	**-0.7**
NJ2				AP		pP	16 22 00.6	-0.2
NJ2				PP		PP	16 24 01.8	-3.1
NJ2				S		**S**	**16 29 59.0**	**-13**
NJ2				XS		sS	16 30 26.5	-10
NJ2				AMB		AMB		
	comp=Z,30nm,0.7s,mb5.5							
NJ2				AMB		AMB		
	comp=Z,2μm,5.2s							
NJ2				LR		LR		
	comp=N,450nm,25.6s							
NJ2				LR		LR		
	comp=E,600nm,15.9s							
NJ2				LR		LR		
	comp=Z,9μm,27.1s,MS5.8							
QIZ	**Qiongzhong**	**63.48**	**298**	P		**P**	**16 21 51.5**	**+1.1**
QIZ				AP		pP	16 22 05.6	+0.3
QIZ				XP		sP	16 22 11.9	+0.5
QIZ				S		**S**	**16 30 21.7**	**+1.7**
QIZ				XS		sS	16 30 45.5	+0.5
QIZ				SS		SS	16 34 30.9	+2.7
QIZ				AMB		AMB		
	comp=Z,499nm,7.2s							
QIZ				LR		LR		
	comp=E,864nm,21.8s							
QIZ				LR		LR		
	comp=Z,2μm,22.8s,MS5.2							
PET	**Petropavlovsk**	**64.70**	**355**	*e*P		**P**	**16 21 59.5**	**+1.8**
PET				*e*S		**S**	**16 30 36.1**	**+2.3**
PET				*e*SS		SS	16 34 43.8	-2.1
PET				*e*SSS			16 37 34.3	
PET				pmax		pmax		
	comp=Z,300nm,18.7s							
PETK	**Petropavlovsk-**	**64.87**	**354**	P		**P**	**16 21 57.9**	**-1.0**
	comp=Z,4.3nm,0.8s,mb4.5,baz=129,slow=11,SNR=3.3							
PETK				LR		LR	16 45 14.9	
	comp=Z,576nm,20.1s,MS4.8,baz=172,slow=31							
PETK	**Petropavlovsk-**	**64.87**	**354**	P		**P**	**16 21 57.9**	**-1.0**
PETK				LR		LR	16 45 14.9	
MDJ	**Mudanjiang**	**65.12**	**332**	P		**P**	**16 22 03.4**	**+2.8**
MDJ				XP		sP	16 22 19.9	-1.8
MDJ				S		S	16 30 42.4	+3.1
MDJ				AMB		AMB		
	comp=Z,209nm,6.8s							
MDJ				LR		LR		
	comp=N,458nm,31.0s,MS4.7							
MDJ				LR		LR		
	comp=E,541nm,29.7s,MS4.7							
MDJ				LR		LR		
	comp=Z,941nm,29.7s,MS4.8							
WHN	**Wuhan**	**65.22**	**311**	⇑ P		**P**	**16 22 01.0**	**-0.6**
WHN				AP		pP	16 22 14.2	-2.3
WHN				*e*S		S	16 30 38.4	-2.7
WHN				AMB		AMB		
	comp=Z,64nm,1.2s,mb5.5							
WHN				AMB		AMB		
	comp=Z,882nm,5.8s							
WHN				LR		LR		
	comp=N,3μm,25.2s,MS5.4							
WHN				LR		LR		
	comp=E,1μm,22.5s,MS5.4							
WHN				LR		LR		
	comp=Z,4μm,27.2s,MS5.4							
DL2	**Dalian**	**65.29**	**323**	P		**P**	**16 22 01.4**	**-0.5**
DL2				*e*S		S	16 30 39.3	-2.3
DL2				AMB		AMB		
	comp=Z,180nm,6.5s							
DL2				LR		LR		
	comp=N,380nm,27.8s							
DL2				LR		LR		
	comp=Z,470nm,23.5s,MS4.6							
HABR	**Khabarovsk**	**65.92**	**338**	*e*P		**P**	**16 22 04.0**	**-1.7**
HABR				*e*		pP	16 22 19.6	-1.1
HABR				*e*			16 22 33.9	
HABR				*e*S		S	16 30 47.9	-1.1
HABR				*e*			16 31 16.3	
HABR				*e*			16 31 55.2	
HABR				*e*			16 35 05.8	
CASY	**Casey**	**66.10**	**201**	P		**P**	**16 22 05.6**	**-1.0**
	comp=Z,229nm,1.9s,mb5.9							
SNY	**Shenyang**	**66.13**	**326**	⇑ P		**P**	**16 22 03.2**	**-4.0**
SNY				AMB		AMB		
	comp=Z,311nm,5.6s							
SNY				LR		LR		
	comp=N,527nm,16.7s,MS5.0							
SNY				LR		LR		
	comp=E,554nm,19.6s,MS5.0							
SNY				LR		LR		
	comp=Z,650nm,27.0s							
SBA	**Scott Base**	**66.25**	**180**	*e*P		**P**	**16 22 08.3**	**+0.8**
	comp=Z,72nm,1.5s,mb5.5							
SBA	**Scott Base**	**66.25**	**180**	*e*P		**P**	**16 22 08.3**	**+0.8**
SBA				pmax		pmax		
	comp=Z,72nm,1.5s,mb5.5							
CN2	**Changchun**	**66.53**	**329**	*e*P		**P**	**16 22 09.3**	**-0.4**
CN2				*e*XP		sP	16 22 32.6	+1.8
CN2				*e*S		S	16 30 54.3	-2.2
CN2				AMB		AMB		
	comp=Z,30nm,1.2s,mb5.2							
CN2				AMB		AMB		
	comp=Z,500nm,10.0s							
CN2				LR		LR		
	comp=N,500nm,20.0s,MS4.9							
CN2				LR		LR		
	comp=E,580nm,20.0s,MS4.9							
CN2				LR		LR		
	comp=Z,780nm,25.0s,MS4.8							
KLR	**Kul'dur**	**67.80**	**336**	*e*P		**P**	**16 22 13.2**	**-4.5**
KLR				*e*S		S	16 31 06.0	-5.6
KLR				pmax		pmax		
	comp=Z,50nm,1.6s,mb5.3							
KLR				pmax		pmax		
	comp=Z,800nm,9.5s							
GYA	**Guiyang**	**69.24**	**304**	P		**P**	**16 22 27.5**	**+0.4**
GYA				AP		pP	16 22 44.0	+1.8
GYA				XP		sP	16 22 51.0	+2.7
GYA				PCP		PcP	16 22 53.0	+2.4
GYA				PP		PP	16 25 01.9	+1.0
GYA				SCP			16 26 49.0	
GYA				S		S	16 31 22.7	-6.9
GYA				SS		SS	16 35 53.8	-3.5
GYA				AMB		AMB		
	comp=Z,50nm,1.0s,mb5.4							
GYA				AMB		AMB		
	comp=Z,290nm,3.5s							
GYA				LR		LR		
	comp=N,430nm,18.3s,MS4.9							
GYA				LR		LR		
	comp=E,440nm,20.0s,MS4.9							
GYA				LR		LR		
	comp=Z,710nm,21.2s,MS4.9							
BJI	**Beijing**	**69.29**	**321**	P		**P**	**16 22 27.1**	**-0.1**
BJI				PP		PP	16 25 02.7	+1.6
BJI				S		S	16 31 29.6	-0.1
BJI				AMB		AMB		
	comp=Z,42nm,1.3s,mb5.2							
BJI				AMB		AMB		
	comp=Z,581nm,3.8s							
BJI				LR		LR		
	comp=N,643nm,27.5s,MS4.8							
BJI				LR		LR		
	comp=E,509nm,29.8s,MS4.8							
BJI				LR		LR		
	comp=Z,2μm,32.0s,MS5.0							
BJI	**Beijing**	**69.29**	**321**	P		**P**	**16 22 27.1**	**-0.1**
	comp=Z,42nm,1.3s,mb5.2							
BJI				PP		PP	16 25 02.7	+1.6
BJI				S		S	16 31 29.6	-0.1
BJI				SS		SS	16 35 59.4	+1.7
BJI				LR		LR		
	comp=Z,2μm,32.0s,MS5.0							
TIY	**Taiyuan**	**70.38**	**317**	⇑ P		**P**	**16 22 38.9**	**+5.0**
TIY				AP		pP	16 22 49.9	+0.9
TIY				AMB		AMB		
	comp=Z,439nm,5.6s							
TIY				LR		LR		
	comp=N,239nm,8.2s							
TIY				LR		LR		
	comp=E,176nm,7.6s							
TIY				LR		LR		
	comp=Z,1μm,26.4s,MS5.1							
XAN	**Xi'an**	**70.94**	**312**	P		**P**	**16 22 37.4**	**-0.1**
XAN				PP		PP	16 25 13.3	-2.2
XAN				S		S	16 31 48.2	-1.1
XAN				SS		SS	16 36 23.1	-0.3
XAN				AMB		AMB		
	comp=Z,62nm,1.2s,mb5.4							
XAN				AMB		AMB		
	comp=Z,405nm,6.4s							
XAN				LR		LR		
	comp=E,645nm,26.1s							
XAN				LR		LR		
	comp=Z,2μm,24.7s,MS5.2							
KMI	**Kunming**	**71.93**	**301**	P		**P**	**16 22 44.3**	**+0.7**
KMI				AP		pP	16 22 59.3	+0.6
KMI				PCP		PcP	16 23 02.2	+0.1
KMI				XP		sP	16 23 06.3	+1.5
KMI				PP		PP	16 25 28.3	+4.2
KMI				S		S	16 31 58.9	-2.1
KMI				XS		sS	16 32 25.8	-0.7
KMI				SS		SS	16 36 36.7	-2.2
KMI				AMB		AMB		
	comp=Z,79nm,1.7s,mb5.4							
KMI				LR		LR		
	comp=N,361nm,14.7s,MS5.1							
KMI				LR		LR		
	comp=E,813nm,19.5s,MS5.1							
KMI				LR		LR		

HHC S S 16 32 08.0 -0.6
HHC SKS 16 32 44.3
HHC AMB AMB
comp=Z,36nm,1.2s,mb5.2
HHC AMB AMB
comp=Z,428nm,7.4s
HHC LR LR
comp=N,583nm,22.6s,MS5.0
HHC LR LR
comp=E,924nm,26.2s,MS5.0
HHC LR LR
comp=Z,2µm,29.7s,MS5.1
CMAR Chiang Mai Arr 72.90 293 P P 16 22 50.3 +0.8
comp=Z,42nm,0.8s,mb5.4,baz=123,slow=4.4,SNR=200
CMAR pP pP 16 23 04.8 +0.2
comp=Z,13nm,0.8s,baz=127,slow=5.1,SNR=6.2
CMAR LR LR 16 52 33.4
comp=Z,383nm,21.4s,MS4.7,baz=296,slow=34
CMAR Chiang Mai Arr 72.90 293 P P 16 22 50.3 +0.8
CMAR *PP pP 16 23 04.8 +0.2
CHTO Chiang Mai 73.01 294 ⇑P P 16 22 50.7 +0.6
SNR=20
CHTO Chiang Mai 73.01 294 eP P 16 22 50.8 +0.7
comp=Z,114nm,1.3s,mb5.6
CHTO Chiang Mai 73.01 294 eP P 16 22 50.8 +0.7
CHTO pmax pmax
comp=Z,114nm,1.3s,mb5.6
HIA Hailar 73.15 330 eP P 16 22 50.1 -0.2
comp=Z,49nm,1.4s,mb5.2
HIA Hailar 73.15 330 eP P 16 22 50.1 -0.2
HIA pmax pmax
comp=Z,49nm,1.4s
CD2 Chengdu 73.42 307 ⇑i P P 16 22 52.5 +0.2
CD2 AP pP 16 23 09.2 +1.7
CD2 XP sP 16 23 16.1 +2.5
CD2 PP PP 16 25 38.7 +1.9
CD2 S S 16 32 15.6 -2.2
CD2 SS SS 16 37 01.2 -0.3
CD2 AMB AMB
comp=Z,80nm,1.4s,mb5.5
CD2 AMB AMB
comp=Z,580nm,7.2s
CD2 LR LR
comp=N,590nm,25.2s,MS5.2
CD2 LR LR
comp=E,1µm,25.2s,MS5.2
CD2 LR LR
comp=Z,1µm,24.0s,MS5.1
LZH Lanzhou 75.58 312 ⇓P P 16 23 06.0 +1.3
LZH AP pP 16 23 19.0 -1.0
LZH XP sP 16 23 24.4 -1.6
LZH PP PP 16 25 50.0 -4.9
LZH S S 16 32 43.1 +1.4
LZH SS SS 16 37 35.2 +1.1
LZH AMB AMB
comp=Z,87nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,516nm,4.0s
LZH LR LR
comp=E,2µm,16.8s
LZH LR LR
comp=Z,2µm,17.9s,MS5.4
LZH Lanzhou 75.58 312 ⇓P P 16 23 06.0 +1.3
comp=Z,87nm,1.0s,mb5.6
LZH pP pP 16 23 19.0 -1.0
LZH sP sP 16 23 24.4 -1.6
LZH PP PP 16 25 50.0 -4.9
LZH S S 16 32 43.1 +1.4
LZH sS sS 16 33 09.0 +1.6
LZH SS SS 16 37 35.2 +1.1
LZH LR LR
comp=Z,2µm,17.9s,MS5.4
LZH Lanzhou 75.58 312 ⇓P P 16 23 06.0 +1.3
LZH *PP pP 16 23 19.0 -1.0
LZH *SP sP 16 23 24.4 -1.6
LZH 16 25 50.0
LZH S S 16 32 43.1 +1.4
LZH *SS sS 16 33 09.0 +1.6
LZH SS SS 16 37 35.2 +1.1
LZH pmax pmax
comp=Z,87nm,1.0s,mb5.6
LZH MLR MLR
comp=Z,2µm,17.9s,MS5.4
CIT Chita 77.94 330 eP P 16 23 17.6 -0.1
CIT *e* pP 16 23 30.8 -2.2
CIT pmax pmax
comp=Z,158nm,1.6s,mb5.7
QSPA South Pole Qui 78.42 180 P P 16 23 19.2 -0.8
comp=Z,49nm,1.0s,mb5.4,baz=19,slow=1.9,SNR=65
QSPA South Pole Qui 78.42 180 eP P 16 23 19.5 -0.4
comp=Z,70nm,1.1s,mb5.5
YAK Yakutsk 78.79 343 eP P 16 23 22.1 -0.1
comp=Z,36nm,1.2s,mb5.2
YAK Yakutsk 78.79 343 eP P 16 23 20.1 -2.0
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.0
ULN Ulaanbaatar 79.11 324 P P 16 23 25.0 +0.8
SNR=17
ULN Ulaanbaatar 79.11 324 eP P 16 23 24.4 +0.2
comp=Z,49nm,1.1s,mb5.3
ULN Ulaanbaatar 79.11 324 eP P 16 23 24.4 +0.2
ULN pmax pmax
comp=Z,49nm,1.1s,mb5.3
BILL Bilibino 79.42 360 eP P 16 23 24.4 -1.0
comp=Z,29nm,1.0s,mb5.2
BILL Bilibino 79.42 360 *c i*P P 16 23 24.1 -1.4
BILL pmax pmax
comp=Z,25nm,1.7s,mb4.9
SONM Songino Array 79.47 324 P P 16 23 25.9 -0.3
comp=Z,13nm,1.0s,mb4.8,baz=134,slow=3.2,SNR=46
SONM LR LR 16 58 15.0
comp=Z,372nm,20.1s,MS4.7,baz=90,slow=35
GTA Gaotai 79.88 314 ⇑P P 16 23 29.4 +0.8
GTA AP pP 16 23 46.0 +2.0
GTA XP sP 16 23 52.8 +2.8
GTA PP PP 16 26 33.9 +3.0
GTA S S 16 33 29.1 +1.1
GTA SKS 16 33 32.7
GTA SS SS 16 38 41.1 +2.3
GTA AMB AMB
comp=Z,56nm,1.7s,mb5.2
GTA AMB AMB
comp=Z,569nm,8.1s
GTA LR LR
comp=N,470nm,22.2s,MS5.0
GTA LR LR
comp=E,657nm,20.4s,MS5.0
GTA LR LR
comp=Z,946nm,21.6s,MS5.1
BOD Bodaibo 81.29 335 eP P 16 23 33.8 -1.9
BOD pmax pmax
comp=Z,13nm,1.6s,mb4.6
SHL Shillong 81.32 298 *i* P P 16 23 37.0 +0.4
SHL *eS* S 16 33 44.0 +0.3
KCPM Cahto Peak 82.47 47 eP P 16 23 39.0 -3.4
ZAK Zakamensk 82.50 325 ⇑i P P 16 23 41.9 -0.4
ZAK pmax pmax
comp=Z,18nm,1.1s,mb5.0
IRK Irkutsk 82.85 327 eP P 16 23 42.4 -1.6
IRK pmax pmax
comp=Z,32nm,2.2s,mb5.0
V03C Hunter Liggett 82.91 51 ⇑P P 16 23 46.1 +1.4
baz=83
TLY Talaya 82.92 326 P P 16 23 44.4 0.0
SNR=7.3
TLY Talaya 82.92 326 eP P 16 23 44.0 -0.3
comp=Z,28nm,1.1s,mb5.2
TLY Talaya 82.92 326 eP P 16 23 43.9 -0.5
TLY *e* 16 26 54.8
TLY *eS* S 16 34 00.4 +1.4
TLY pmax pmax
comp=Z,31nm,1.1s,mb5.2
N02C Big Bar 83.08 46 ⇑P P 16 23 46.2 +0.7
baz=83
LSA Lhasa 83.17 302 P P 16 23 47.2 +1.0
LSA Lhasa 83.17 302 eP P 16 23 47.2 +1.0
comp=Z,31nm,1.2s,mb5.2
LSA Lhasa 83.17 302 eP P 16 23 47.2 +1.0
LSA pmax pmax
comp=Z,31nm,1.2s,mb5.2
PACP Pacheco Peak 83.20 50 ⇑P P 16 23 46.9 +0.7
baz=83
PKD Parkfield 83.41 51 ⇓P P 16 23 47.4 0.0
baz=84
WDC Whiskeytown Da 83.53 46 eP P 16 23 51.1 +3.3
comp=Z,222nm,3.0s
WDC Whiskeytown Da 83.53 46 eP P 16 23 51.1 +3.3
WDC pmax pmax
comp=Z,223nm,3.0s
CAL Calcutta 83.60 294 ex x 16 23 25.3
M02C Callahan 83.61 46 ⇑P P 16 23 48.5 +0.3
baz=84
COLA College 83.61 18 eP P 16 23 46.6 -1.1
comp=Z,18nm,1.0s,mb5.2
COLA College 83.61 18 eP P 16 23 46.3 -1.4
OHCM Honcut 83.86 48 eP P 16 23 56.0 +6.5
ORV Oroville 83.92 48 ⇑P P 16 23 49.5 -0.3
baz=84
HUMO Hull Mountain 83.98 44 ⇑P P 16 23 51.1 +1.0
baz=84
M03C McCloud 84.08 46 ⇑P P 16 23 50.4 -0.2
baz=84
LAVA Lava Cap Winer 84.20 49 ⇓P P 16 23 50.5 -0.8
baz=84
CMB Columbia Colle 84.22 49 eP P 16 23 51.2 -0.2
comp=Z,43nm,1.9s,mb5.2
CMB Columbia Colle 84.22 49 eP P
CMB pmax pmax
comp=Z,43nm,1.9s,mb5.2
CMB Columbia Colle 84.22 49 ⇓P P 16 23 50.7 -0.7
baz=84
MOY Mondy 84.38 325 eP P 16 23 52.1 +0.2
MOY pmax pmax
comp=Z,76nm,3.6s
T06C Millerton Lake 84.39 51 ⇑P P 16 23 50.4 -1.9
baz=85
MAW Mawson 84.45 202 eP P 16 23 51.2 -0.8
comp=Z,6.9nm,1.2s,mb4.7
MAW Mawson 84.45 202 P P 16 23 50.8 -1.3
comp=Z,17nm,1.3s,mb5.0,baz=92,slow=7.2,SNR=11
MAW LR LR 16 55 34.2
comp=Z,651nm,21.7s,MS5.0,baz=93,slow=31
MAW Mawson 84.45 202 P P 16 23 51.6 -0.4
MAW pmax pmax
comp=Z,20nm,1.2s
O04C Chester 84.48 47 ⇓P P 16 23 50.8 -1.9
baz=85
BBB Bella Bella 84.68 34 LR LR 16 51 57.7
comp=Z,1µm,21.2s,MS5.3,baz=267,slow=29
KCC Kaiser Creek 84.79 50 ⇑P P 16 23 53.7 -0.6
baz=85
BEKR Beckwourth 84.85 48 ⇓P P 16 23 54.3 -0.3
baz=85
ISA Isabella 84.92 52 eP P 16 23 55.5 +0.6
comp=Z,72nm,2.4s,mb5.4
ISA *ep*P pP 16 24 10.8 +0.4
ISA Isabella 84.92 52 eP P 16 23 55.5 +0.5
ISA *e*PP pP 16 24 10.8 +0.3
ISA pmax pmax
comp=Z,72nm,2.4s,mb5.4
EDW2 Edwards Air Fo 85.05 53 ⇑P P 16 23 55.5 -0.2
baz=85
WAKR Walker 85.08 49 eP P 16 23 56.7 +1.0
BFSC Mount Baldy St 85.12 54 ⇓P P 16 23 56.6 +0.6
baz=85
O06A Flanigan 85.34 48 ⇓P P 16 23 57.5 +0.5
baz=86
MTUM Tungsten Hills 85.37 51 eP P 16 23 58.2 +1.0
MTUM *ep*P pP 16 24 10.8 -1.9
TAPN Taplejung 85.41 299 eP P 16 23 57.8 +0.2
comp=Z,216nm,1.4s,mb6.1
CWC Cottwood Cre 85.46 52 ⇓P P 16 23 57.9 +0.2
baz=86
PAHR Pah Rah Range 85.51 48 eP P 16 23 59.9 +2.1
comp=Z,29nm,1.3s,mb5.3
N06A Buffalo Meadow 85.53 47 ⇓P P 16 23 58.3 +0.4
baz=86
ODAN Odare 85.56 298 eP P 16 23 58.7 +0.3
comp=Z,388nm,1.3s,mb6.5
EGAK Eagle 85.68 20 eP P 16 23 57.8 -0.2
comp=Z,64nm,1.5s,mb5.6
MPMC Manual Prospec 85.80 52 ⇓P P 16 23 59.5 +0.1
baz=86
DAWY Dawson 85.84 21 eP P 16 23 59.8 +0.9
NVAR Mina Array Bea 85.90 50 P P 16 23 59.5 -0.3
comp=Z,3.1nm,0.8s,mb4.6,baz=232,slow=7.9,SNR=21
GSC Goldstone 86.11 53 eP P 16 24 01.4 +0.5
RAMN Ramite 86.26 298 eP P 16 24 01.8 -0.1
comp=Z,221nm,1.4s,mb6.2
L07A Adell 86.29 46 ⇓P P 16 24 01.3 -0.4
baz=86
S09A Goldfield 86.50 51 ⇑P P 16 24 02.7 0.0
baz=87
H06A Lindquist Farm 86.52 43 ⇑P P 16 24 03.3 +0.6
baz=87
F06A Goldendale 86.57 42 ⇓P P 16 24 03.8 +0.8
baz=87
K07A Rock Creek Ran 86.58 45 ⇓P P 16 24 03.3 +0.3
baz=87
BC3 Big Chuckw Mtn 86.71 55 ⇓P P 16 24 03.7 -0.2
baz=87
TIXI Tiksi 86.74 349 eP P 16 23 58.9 -4.3
TIXI pmax pmax
comp=Z,16nm,1.8s,mb5.0
TIXI MLR MLR
comp=Z,334nm,20.0s,MS4.7
N08A GE Springer Mi 86.76 47 ⇓P P 16 24 04.3 +0.3
baz=87
R09A Tonopah 86.77 50 ⇑P P 16 24 04.3 +0.2
baz=87
JIRN Jiri 86.79 299 eP P 16 24 04.8 +0.3
comp=Z,303nm,1.6s,mb6.3
GMRC Granite Mounta 86.86 54 ⇓P P 16 24 04.1 -0.5
baz=87
I07A Izee 86.86 44 ⇓P P 16 24 04.9 +0.5
baz=87
WVOR Wild Horse Val 86.92 46 eP P 16 24 05.3 +0.6
comp=Z,33nm,1.5s,mb5.3
WVOR Wild Horse Val 86.92 46 P P 16 24 08.5 +3.8
WVOR pmax pmax
comp=Z,33nm,1.5s,mb5.3
VIS Vishakhapatnam 86.98 289 eP P 16 24 05.0 -0.5
VIS AMb AMB 16 24 08.7
comp=Z,63nm,1.6s,mb5.6
TPNV Topopah Spring 87.01 52 eP P 16 24 06.9 +1.6
comp=Z,70nm,2.0s,mb5.5
TPNV Topopah Spring 87.01 52 eP P 16 24 06.9 +1.6
TPNV pmax pmax
comp=Z,70nm,2.0s,mb5.5
TPNV Topopah Spring 87.01 52 ⇓P P 16 24 05.1 -0.2
baz=87
S10A Tonopah Range, 87.03 51 ⇑P P 16 24 05.2 -0.1
baz=87
GUN Gumba 87.12 299 eP P 16 24 06.1 0.0
comp=Z,465nm,1.8s,mb6.4
G07A Ruggs Ranch, H 87.14 43 ⇑P P 16 24 05.5 -0.2
baz=87
R10A Warm Springs 87.36 50 ⇓P P 16 24 04.4 -2.5
baz=88
PKI Pulchoki 87.44 299 eP P 16 24 07.4 -0.2
comp=Z,225nm,1.3s,mb6.2
PKI Pulchoki 87.44 299 eP P 16 24 07.4 -0.2
PKI pmax pmax
comp=Z,225nm,1.3s,mb6.2
Q10A Clear Creek Ra 87.44 50 ⇓P P 16 24 07.5 +0.1
baz=88
PKIN Phulchoki 87.45 299 eP P 16 24 07.4 -0.3
comp=Z,207nm,1.5s,mb6.2
KKN Kani 87.61 299 eP P 16 24 08.5 +0.1
K09A Rome 87.64 46 ⇓P P 16 24 08.1 -0.1
baz=88
DMN Daman 87.71 299 eP P 16 24 09.2 +0.3
SHPR Sheep Range 87.73 52 eP P 16 24 09.9 +1.1
J09A Fry Pan Ranch, 87.82 45 ⇑P P 16 24 09.0 -0.1
baz=88
R11A Troy Canyon, C 87.92 50 ⇓P P 16 24 09.6 0.0
baz=88
B07A Winthrop 87.92 40 ⇓P P 16 24 09.6 +0.2
baz=88
Q11A Duckwater 88.01 50 ⇓P P 16 24 08.9 -1.1
baz=88,SNR=8.9
GKN Gorkha 88.21 299 eP P 16 24 10.6 -0.7
L10A Juniper Basin 88.34 47 ⇑P P 16 24 10.7 -0.8
baz=88
W13A Hualapai Mount 88.35 54 ⇑P P 16 24 11.1 -0.7
baz=88
O11A Cowboy Ranch, 88.37 49 ⇓P P 16 24 11.2 -0.5
baz=88
E09A Wood Farm, Sta 88.55 42 ⇓P P 16 24 13.0 +0.6
baz=89
BMO Blue Mountains 88.59 44 eP P 16 24 13.9 +1.3
comp=Z,146nm,2.7s,mb5.8
BMO *ep*P pP 16 24 27.9 -0.3
BMO Blue Mountains 88.59 44 eP P 16 24 13.9 +1.2
BMO *e*PP pP 16 24 27.9 -0.3
BMO pmax pmax
comp=Z,146nm,2.7s,mb5.8
D09A Jones Farm, Ri 88.62 41 ⇓P P 16 24 13.0 +0.3
baz=89
P12A McGill 88.74 49 ⇑P P 16 24 13.8 +0.4
baz=89
T13A Saint George 88.84 52 ⇑P P 16 24 14.1 +0.1
baz=89,SNR=7.3
ELK Elko 88.85 48 eP P 16 24 14.0 +0.1
comp=Z,6.6nm,1.2s,mb4.8
ELK *e* pP 16 24 29.5 0.0
ELK Elko 88.85 48 P P 16 24 15.7 +1.7
ELK *e* 16 24 22.3
ELK *e* pP 16 24 29.8 +0.3
ELK pmax pmax
comp=Z,47nm,1.9s
G10A Bishop Farm, J 88.85 43 ⇑P P 16 24 13.5 -0.4
baz=89,SNR=9.4
K11A Parker Ranch, 88.86 46 ⇑P P 16 24 14.5 +0.5
baz=89
MDRS Chennai 88.88 283 ⇑ex x 16 23 36.2
MDRS *ex* x 16 27 01.2
MDRS *ex* x 16 28 17.2
L11A Cat Creek Ranc 88.88 47 ⇑P P 16 24 14.6 +0.5
baz=89
H10A Noah's Angus R 88.89 44 ⇓P P 16 24 14.2 +0.1
baz=89
F10A Beach Ranch, E 88.99 43 ⇑P P 16 24 14.7 +0.2
baz=89
S13A Holt Ranch, En 89.02 51 ⇓P P 16 24 14.0 -0.9
baz=89
N12A Clover Valley, 89.02 48 ⇓P P 16 24 14.4 -0.3
baz=89
DANN Dangsing 89.05 299 eP P 16 24 14.4 -0.8
comp=Z,92nm,1.0s,mb6.1
KOLN Koldanda 89.05 298 eP P 16 24 14.3 -0.9
comp=Z,32nm,0.8s,mb5.7
O12A Currie 89.08 49 ⇓P P 16 24 14.8 -0.3
baz=89
R13A O'Grain Ranch, 89.10 51 ⇑P P 16 24 15.1 0.0
baz=89
V14A Boquillas Ranc 89.10 53 ⇓P P 16 24 15.1 -0.2
baz=89
Q13A Wheeler Ranch, 89.26 50 ⇓P P 16 24 15.1 -0.9
baz=89,SNR=8.6
M12A Wells 89.27 48 ⇓P P 16 24 15.0 -0.9
baz=89
D10A Wagner Farm, O 89.29 42 ⇑P P 16 24 15.0 -0.8
baz=90
Y15A Casa Rosa Ranc 89.29 55 ⇓P P 16 24 15.4 -0.8
baz=90
P13A Bates Ranch, G 89.40 50 ⇓P P 16 24 16.6 0.0
baz=90,SNR=14
G11A Walters Elk Ra 89.46 43 ⇑P P 16 24 17.1 +0.4
baz=90
X15A Humboldt 89.50 55 ⇑P P 16 24 16.8 -0.3
baz=90,SNR=5.1
N13A Wendover, West 89.63 48 ⇑P P 16 24 16.7 -0.9
baz=90
PYUN Piuthan 89.65 299 eP P 16 24 16.9 -1.1
comp=Z,55nm,1.0s,mb5.8
J12A Stokes Ranch, 89.65 46 ⇑P P 16 24 17.3 -0.4
baz=90,SNR=5.7
W15A Williams 89.65 54 ⇓P P 16 24 17.1 -0.8
baz=90
A10A Northport 89.70 40 ⇓P P 16 24 17.4 -0.3
baz=90
NEW Newport 89.75 41 eP P 16 24 19.8 +1.7
comp=Z,128nm,2.8s,mb5.8
NEW Newport 89.75 41 eP P 16 24 19.8 +1.8
NEW pmax pmax
comp=Z,128nm,2.8s
I12A Atlanta 89.78 45 ⇑P P 16 24 18.3 +0.1
baz=90,SNR=6.6
M13A Montello 89.80 48 ⇑P P 16 24 17.0 -1.4
baz=90,SNR=7.1
Q14A Sevier Lake (B 89.83 50 ⇑P P 16 24 18.3 -0.3
baz=90,SNR=17
V15A Kaibab Nationa 89.88 53 ⇑P P 16 24 19.6 +0.7
baz=90,SNR=5.6
D11A Klaveano Farm, 89.90 42 ⇑P P 16 24 19.1 +0.3
baz=90
WMQ Urumqi 89.92 315 P P 16 24 19.0 +0.1
WMQ AP pP 16 24 36.0 +1.5
WMQ PP PP 16 27 54.0 +1.6
WMQ SKS 16 34 42.0
WMQ S S 16 35 04.0 -3.3
WMQ SS SS 16 41 06.0 -0.4
WMQ AMB AMB
comp=Z,38nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,135nm,7.0s
WMQ LR LR
comp=N,425nm,20.0s,MS5.1
WMQ LR LR
comp=E,701nm,22.0s,MS5.1
WMQ LR LR
comp=Z,911nm,22.0s,MS5.2
U15A North Rim 89.94 53 ⇑P P 16 24 19.1 -0.1
baz=90,SNR=17
G12A Big Creek, Yel 90.02 44 ⇓P P 16 24 19.4 +0.1
baz=90
X16A Lo Mia Camp, P 90.12 55 ⇑P P 16 24 18.1 -2.0
baz=90
P14A Drum Mountains 90.14 50 ⇑P P 16 24 19.4 -0.7
baz=90,SNR=11
TUC Tucson 90.16 57 eP P 16 24 22.7 +2.4
comp=Z,9.8nm,1.2s,mb5.0
TUC Tucson 90.16 57 eP P 16 24 22.7 +2.4
TUC pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
C11A Tepee Creek (N 90.18 41 ⇓P P 16 24 19.6 -0.4
baz=90,SNR=6.2
HLID Hailey 90.22 46 eP P 16 24 21.3 +1.0
comp=Z,24nm,0.3s,mb6.0
E12A Beaver Dam Sad 90.22 43 ⇑P P 16 24 19.7 -0.5
baz=90
F12A Elk City 90.24 43 ⇑P P 16 24 19.9 -0.4
baz=90
B11A Sandpoint 90.29 41 ⇓P P 16 24 20.2 -0.3
baz=90,SNR=6.1
M14A Sheep Mountain 90.43 48 ⇓P P 16 24 21.1 -0.3
baz=91,SNR=12
WUAZ Wupatki 90.44 54 eP P 16 24 24.1 +2.6
comp=Z,14nm,1.1s,mb5.2
A11A Hall Mountain, 90.44 40 ⇑P P 16 24 20.8 -0.4
baz=91,SNR=7.7
BGU Big Grassy Mou 90.51 48 eP P 16 24 22.0 +0.3
I13A Wildhorse Cree 90.52 45 ⇓P P 16 24 21.6 0.0
baz=91
MSU Marysvale 90.54 51 eP P 16 24 24.0 +2.1
D12A Red Ives Fores 90.54 42 ⇑P P 16 24 21.4 -0.3
baz=91
H13A Challis 90.60 45 ⇑P P 16 24 22.3 +0.3
baz=91
218A Dragoon 90.69 58 ⇑P P 16 24 22.5 -0.3
baz=91
G13A Cobalt 90.75 44 ⇑P P 16 24 22.7 0.0
baz=91,SNR=6.2
B12A Libby 90.79 41 ⇓P P 16 24 22.6 -0.2
baz=91
F13A Darby 90.87 43 ⇓P P 16 24 22.5 -0.8
baz=91,SNR=15
N15A Stansbury Isla 90.88 49 ⇑P P 16 24 23.0 -0.4
baz=91
HVU Hansel Valley 90.91 48 eP P 16 24 25.6 +2.0
comp=Z,72nm,2.0s,mb5.7
HVU Hansel Valley 90.91 48 eP P 16 24 25.6 +2.0
HVU pmax pmax
comp=Z,72nm,2.0s,mb5.7
KOD Kodaikanal 90.97 280 eP P 16 24 25.7 +1.2
KOD AMb AMB 16 24 26.9
comp=Z,34nm,0.8s,mb5.7
M15A Larsen Ranch, 91.07 48 ⇓P P 16 24 23.7 -0.7
baz=91
TRD Trivandrum 91.12 278 ⇓ex x 16 24 28.0
BSMT Bassoo Peak 91.13 41 eP P 16 24 25.5 +1.0
H14A Leadore 91.22 45 ⇓P P 16 24 24.5 -0.4
baz=91
C13A Hot Springs 91.23 42 ⇓P P 16 24 24.5 -0.4
baz=91
219A White Tail Can 91.35 58 ⇓P P 16 24 26.3 +0.5

baz=92
HYB Hyderabad 91.37 287 eP P 16 24 25.5 -0.7
HYB Hyderabad 91.37 287 i P 16 24 25.5 -0.7
HYB epP pP 16 24 41.0 -0.8
MCMT McKenzie Canyo 91.63 45 eP P 16 24 26.8 0.0
DLMT Dillon 91.94 44 eP P 16 24 29.4 +1.2
comp=Z,99nm,2.3s,mb5.7
DLMT epP pP 16 24 49.2 +5.4
T18A Mexican Hat 91.99 53 ⇓P P 16 24 28.8 +0.1
baz=92
S18A Hurst Farm, BI 92.02 52 ⇑P P 16 24 29.2 +0.4
baz=92
J16A Bone 92.11 46 ⇑P P 16 24 28.6 -0.5
baz=92
F15A Butte 92.13 44 ⇓P P 16 24 28.9 -0.2
baz=92
E15A Deer Lodge 92.17 43 ⇓P P 16 24 29.4 +0.1
baz=92
P18A Preston Nutter 92.27 50 ⇓P P 16 24 30.0 +0.1
baz=92,SNR=7.4
C15A Salmond Ranch, 92.53 42 ⇑P P 16 24 30.6 -0.4
baz=93
F16A Kennard Place, 92.70 44 ⇓P P 16 24 31.5 -0.2
baz=93,SNR=6.0
HRY Holter Researc 92.79 43 eP P 16 24 34.4 +2.3
AKL Akola 93.44 290 eP P 16 24 35.6 -0.1
AKL AMb AMB 16 24 37.5
comp=Z,59nm,1.1s,mb5.9
PDAR Pinedale Array 93.47 47 P P 16 24 36.4 +1.0
comp=Z,1.0nm,0.7s,mb4.4,baz=263,slow=1.6,SNR=9.4
PDAR PKKPbc PKKPbc 16 41 40.6 -2.4
comp=Z,0.6nm,0.7s,baz=93,slow=5.3,SNR=5.9
PDAR LR LR 17 00 10.8
comp=Z,403nm,20.5s,MS4.9,baz=240,slow=31
A16A West Butte Ran 93.47 41 ⇓P P 16 24 34.5 -0.8
baz=94
BHPL Bhopal 93.55 293 eP P 16 24 36.5 +0.3
BHPL AMb AMB 16 24 38.1
comp=Z,30nm,1.7s,mb5.5
LPM Los Pinos Moun 93.98 56 eP P 16 24 36.7 -1.3
ANMO Albuquerque 94.25 55⇑eP P 16 24 38.2 -0.9
MK31 Makanchi Array 94.34 317 eP P 16 24 38.9 -0.4
MKAR Makanchi Array 94.34 317 P P 16 24 38.8 -0.5
comp=Z,21nm,0.8s,mb5.6,baz=94,slow=6.2,SNR=108
MKAR pP pP 16 24 52.9 -2.0
comp=Z,14nm,0.9s,baz=107,slow=5.6,SNR=8.5
MKAR PKKPbc PKKPbc 16 41 39.0 -1.9
comp=Z,0.5nm,0.7s,baz=283,slow=6.1,SNR=4.2
MKAR LR LR 17 06 53.0
comp=Z,156nm,19.2s,MS4.5,baz=103,slow=35
MKAR Makanchi Array 94.34 317 P P 16 24 38.8 -0.5
MKAR pP pP 16 24 52.9 -2.0
MKAR PKKPbc PKKPbc 16 41 39.0 -1.9
MKAR LR LR 17 06 53.0
MKAR Makanchi Array 94.34 317 P P 16 24 38.8 -0.5
MKAR *PP pP 16 24 52.9 -2.0
ZAA0 Zalesovo Array 94.36 324 eP P 16 24 38.0 -1.2
ZALV Zalesovo Beam 94.36 324 P P 16 24 37.1 -2.1
comp=Z,6.3nm,0.8s,mb5.1,baz=104,slow=4.7,SNR=27
ZALV pP pP 16 24 53.0 -1.8
comp=Z,3.5nm,0.8s,baz=106,slow=4.8,SNR=4.9
ZALV LR LR 17 07 36.6
comp=Z,282nm,21.6s,MS4.7,baz=83,slow=36
ZALV Zalesovo Beam 94.36 324 P P 16 24 37.1 -2.1
ZALV pP pP 16 24 53.0 -1.8
ZALV LR LR 17 07 36.6
ZALV Zalesovo Beam 94.36 324 P P 16 24 37.1 -2.1
ZALV *PP pP 16 24 53.0 -1.8
YKA Yellowknife Ar 95.17 27 P P 16 24 43.1 +0.4
comp=Z,1.3nm,0.6s,mb4.5,baz=256,slow=4.7,SNR=3.5
YKA LR LR 17 00 46.6
comp=Z,143nm,20.4s,MS4.4,baz=170,slow=31
SMLA Simla 95.23 301 eP P 16 24 43.2 -0.5
NVS Novosibirsk 95.46 325 i P P 16 24 34.5 -10
TXAR Lajitas Array 95.55 61 P P 16 24 45.3 +0.1
comp=Z,0.6nm,0.7s,baz=255,slow=4.9,SNR=8.7
TXAR LR LR 16 59 58.0
comp=Z,799nm,20.4s,MS5.2,baz=355,slow=30
POO Poona 95.97 288⇑i P P 16 24 45.0 -2.4
comp=Z,40nm,1.0s,mb5.8
POO eP 16 24 46.9
POO AMb AMB 16 24 49.5
comp=Z,54nm,1.2s,mb5.9
AJM Ajmer 96.61 296 eP P 16 24 49.9 -0.3
AJM AMb AMB 16 24 51.8
comp=Z,31nm,1.4s,mb5.6
SNAA Sanae 96.61 183 eP P 16 24 47.8 -1.4
SNAA e pP 16 25 03.0 -1.9
SNAA Sanae 96.61 183 eP P 16 24 47.5 -1.7
SNAA Sanae 96.61 183 eP P 16 24 48.0 -1.2
THN Thein Dam 96.67 302 eP P 16 24 48.3 -2.0
VNA3 Neumayer Olymp 97.31 181 eP P 16 24 52.1 -0.3
VNA3 e pP 16 25 07.6 -0.5
KURK Kurchatov 97.45 320 P P 16 24 52.7 -0.7
SNR=5.4
KURK Kurchatov 97.45 320 eP P 16 24 52.0 -1.4
comp=Z,40nm,2.0s,mb5.5
KURK Kurchatov 97.45 320 eP P 16 24 52.0 -1.4
KURK pmax pmax
comp=Z,40nm,2.0s,mb5.5
VNA2 Neumayer--Watz 97.57 182 eP P 16 24 52.4 -1.2
VNA2 e pP 16 25 08.8 -0.4
AML Almayashu 99.65 311 eP Pdif 16 25 03.1 0.0
comp=Z,4.2nm,0.8s
BRVK Borovoye 102.83 322 ePdif Pdif 16 25 15.6 -1.7
ARCES ARCESS Array B 117.02 346 PKP PKPdf 16 30 02.5 -1.3
comp=Z,3.6nm,0.7s,baz=98,slow=2.3,SNR=22
LPAZ La Paz 119.39 116 PKP PKPdf 16 30 09.3 -0.6
comp=Z,0.9nm,0.7s,baz=170,slow=1.3,SNR=5.1
BOSA Boshof 125.14 222 PKP PKPdf 16 30 19.0 -1.7
comp=Z,7.4nm,0.9s,baz=75,slow=2.8,SNR=5.2
NOA NORSAR Array B 127.39 345 PKP PKPdf 16 30 22.8 -1.1
comp=Z,1.5nm,0.7s,baz=34,slow=2.0,SNR=4.2
LSZ Lusaka 130.74 238 eP PKPdf 16 30 31.4 -0.2
LSZ Lusaka 130.74 238 PKIKP PKPdf 16 30 31.7 +0.1
BSEG Bad Segeberg 133.68 341 ePP PP 16 33 04.9 +0.2
BRG Berggiesshubel 134.82 336 ePP PP 16 33 14.1 +2.1
CLL Collm 134.85 337 ePP PP 16 33 14.3 +2.1
CLL Collm 134.85 337 ePP PP 16 33 15.0 +2.8
CLL LmV 16 34 00.0
comp=Z,500nm,20.1s
CLL ePPP 16 36 06.0
CLL ePPS 16 45 30.0
CLL ex x 16 46 18.0
CLL eSSS 16 56 12.0
CLZ Clausthal 135.40 339 ePP PP 16 33 18.0 +2.4
TANN Tannenbergstha 135.77 336 ePP PP 16 33 20.8 +2.8
IBBN Ibbenburen 135.88 341 ePP PP 16 33 19.7 +1.1
MOX Moxa 135.91 337 ePP PP 16 33 21.1 +2.2
MANZ Manzenberg 136.24 336 ePP PP 16 33 23.0 +2.0
KHC Kasperske Hory 136.30 334 ePKP PKPdf 16 30 36.5 -4.6
KHC ex x 16 30 49.5
ROTZ Rotzenmuhle 136.38 336 ePP PP 16 33 24.2 +2.3
GEC2 GERESS Array S 136.47 334 ePP PP 16 33 23.3 +0.8
GERES GERESS Array B 136.47 334 PKP PKPdf 16 30 39.8 -1.6
comp=Z,1.0nm,0.8s,baz=48,slow=2.0,SNR=6.0
GERES SKP 16 34 09.8
comp=Z,0.1nm,0.3s,baz=28,slow=4.4,SNR=2.7
WET Wettzell 136.59 335 ePP PP 16 33 25.4 +2.2
BUG Bochum--Univer 136.78 341 ePP PP 16 33 25.3 +1.1
GRF Grafenberg Arr 136.83 336 ePP PP 16 33 26.6 +1.9
GRF eL 17 35 18.9
comp=Z,395nm,20.2s
TNS Taunus Mts 137.42 339 ePP PP 16 33 29.2 +0.9
RJOB Jochberg 137.70 333 ePP PP 16 33 32.2 +2.0
MEM Membach 137.90 341 PKP PKPdf 16 30 46.6 +2.6
FUR Furstenfeldbru 138.02 335 ePP PP 16 33 32.6 +0.5
STU Stuttgart 138.35 337 ePP PP 16 33 36.3 +2.2
WLF Walferdange 138.67 341 ePP PP 16 33 37.5 +1.5
BFO Black Forest 139.04 338 ePP PP 16 33 39.8 +1.4
LPL La Plagne 141.99 337 ePKP1 PKPdf 16 30 51.0 -0.6
LPG La Plagne 142.00 337 ePKP1 PKPdf 16 30 51.2 -0.4
SMF Signal de Mont 142.06 340 ePKP1 PKPdf 16 30 49.4 -2.3
AVF Avril sur Loir 142.09 341 ePKP1 PKPdf 16 30 49.8 -1.9
ORIF Oris-en-Rattie 142.82 337 ePKP1 PKPdf 16 30 52.1 -1.0
comp=Z,12nm,0.7s
SBF Sospel 143.06 334 ePKP1 PKPdf 16 30 49.6 -4.0
comp=Z,43nm,0.9s
MFF Saint Martin d 143.29 344 ePKP1 PKPdf 16 30 49.6 -4.3
FRF La Foret Royal 143.64 335 ePKP1 PKPdf 16 30 51.8 -2.8
comp=Z,32nm,1.0s
LMR La Mourre 143.88 335 ePKP1 PKPdf 16 30 51.3 -3.7
LASF Ste Croix 144.29 338 ePKP1 PKPdf 16 30 53.3 -2.4
LFF La Frestale 144.56 342 ePKP1 PKPdf 16 30 53.8 -2.3
comp=Z,26nm,0.9s
MTLF Montolieu 145.52 339 ePKP1 PKPbc 16 30 57.2 -0.8
comp=Z,25nm,1.0s
EALK Alkurruntz 146.78 344 P PKPab 16 31 02.0 -1.1
ETSF Etsaut 146.81 342 ePKP1 PKPbc 16 31 00.0 -1.9
comp=Z,14nm,0.8s
ELIZ Elizondo 146.84 344 P PKPab 16 31 02.2 -1.1
KEST Kesra 148.22 323 PKPbc PKPbc 16 31 04.9 -1.1
comp=Z,4.1nm,0.8s,baz=221,slow=4.2,SNR=6.6
ETOR Torete 149.16 343 P PKPbc 16 31 08.2 0.0
GUD Guadarrama 149.88 346 P PKPbc 16 31 10.2 +0.2
ESDC Sonseca Array 150.75 345 PKPbc PKPbc 16 31 11.3 -0.8
comp=Z,0.9nm,0.5s,baz=21,slow=2.1,SNR=44
ESDC Sonseca Array 150.75 345 P PKPbc 16 31 12.2 +0.1
ETOB Tobarra 150.99 340 P PKPbc 16 31 12.6 -0.1
EVIA Vianos 151.30 342 P PKPbc 16 31 13.7 +0.3
EHUE Huescar 152.08 341 P PKPbc 16 31 15.0 -0.3
EBAN Banos Encina 152.12 343 P PKPbc 16 31 15.2 -0.1
EQES Quesada 152.24 342 P PKPbc 16 31 15.9 +0.3
EADA Adamuz 152.33 345 P PKPbc 16 31 15.9 +0.1
ERON Agron 153.19 342 P PKPbc 16 31 17.1 -0.6
TORD Torodi Ar. Bea 164.96 278 PKP PKPdf 16 31 24.0 -0.6
comp=Z,2.5nm,1.1s,baz=306,slow=0.7,SNR=8.1
TORD PKPab PKPab 16 32 21.2 -0.1
comp=Z,5.1nm,0.8s,baz=75,slow=4.2,SNR=16
TORD PP PP 16 36 03.4 -4.7
comp=Z,1.1nm,0.9s,baz=129,slow=7.0,SNR=3.9
TORD Torodi Ar. Bea 164.96 278 PKP PKPdf 16 31 24.0 -0.6
TORD PKPab PKPab 16 32 21.2 -0.1
TORD PP PP 16 36 03.4 -4.8
KIC Kosan Boka 169.80 240 ePKP2 PKPab 16 32 43.0 +0.4
comp=Z,430nm,1.7s
LIC Lamto 169.97 239 ePKP2 PKPab 16 32 41.7 -1.7
comp=Z,147nm,1.5s
LIC Lamto 169.97 239 ePKP2 PKPab 16 32 43.8 +0.4
comp=Z,128nm,1.5s
DBIC Dimbokro 170.06 241 PKPab PKPab 16 32 42.9 -0.9
comp=Z,9.9nm,1.0s,baz=106,slow=5.4,SNR=9.3
TIC Toumodi 170.19 241 ePKP2 PKPab 16 32 44.6 +0.3
comp=Z,134nm,1.1s

MAN 10 16:48:07,1773N×12278E,h30km,mb4.6,ML3.5,MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	Palanan	0.75	207	eP	Pn	16 48 22.2	+0.7
SGCP	Mt. Cagua	0.86	306	eP	Pn	16 48 23.1	0.0
CAUP	Cauayan	1.20	229	eP	Pn	16 48 29.5	+1.7
CAUP				eS	Sn	16 48 44.1	+1.1
ABRA	Dolores	1.97	268	eP	Pn	16 48 39.1	+0.7
ABRA				eS	Sn	16 49 03.3	+1.2
BALP	Baler	2.29	210	eP	Pn	16 48 43.1	+0.4
BALP				eS	Sn	16 49 08.0	-2.0
BOLP	Bolinao	3.05	244	eP	Pn	16 48 55.8	+2.6

*IDC **10** 16:59:18.9±1.6, 5.70S×146.11E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.9/15, mbtmp3.9/7, ML3.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.2/24, Error ellipse: s-maj=61.9km s-min=21.4km az=89.0*
*ISCJB **10** 16:59:24.8±3.1, 58S±0.1×1459E±0.2, h50km±29km, mb3.8/6, Error ellipse: s-maj=29.3km s-min=22.8km az=18.6*
*NEIC **10** 16:59:25.1±1.1, 5.67S×145.83E, h35km, mb3.9/2, Error ellipse: s-maj=25.0km s-min=13.0km az=79.0*

ISC 10 16:59:26.7±2.9, 58S±01×1459E±02, h54km±29km, n22, σ0s88/16, mb3.8/6,1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.82	161	ePn	Pn	17 00 22.3	-0.7
CTA	Charters Tower	14.23	179	eP	Pn	17 02 48.1	+2.6
	2.7nm,0.6s						
CTA	Charters Tower	14.23	179	Pn	Pn	17 02 47.7	+2.2
	0.5nm,0.3s,baz=337,slow=16,SNR=5.5						
CTA				LR	LR	17 08 06.3	
	comp=Z,205nm,19.3s,baz=144,slow=37						
KAKA	Kakadu	14.97	242	eP	Px	17 02 43.1	
	11nm,0.6s						
KAKA	Kakadu	14.97	242	ePn	Pn	17 02 45.8	-9.3
	19nm,0.5s						
WRAB	Tennant Creek	18.01	218	eP	Pn	17 03 32.8	-0.6
	9.4nm,0.9s						
WB2	Warramunga Arr	18.02	218	eP	Pn	17 03 33.4	0.0
WRA	Warramunga Arr	18.02	218	P	Pn	17 03 33.0	-0.5
	0.2nm,0.3s,baz=41,slow=12,SNR=20						
WRA				PcP	PcP	17 08 08.5	+2.3
	0.0nm,0.3s,baz=40,slow=1.5,SNR=5.3						
ASAR	Alice Springs	21.21	212	P	P	17 04 08.2	+0.1
	3.2nm,0.9s,mb3.7,baz=43,slow=9.8,SNR=19						
STKA	Stephens Creek	26.28	188	eP	P	17 04 57.3	+0.1
	5.4nm,1.4s,mb3.9						
STKA	Stephens Creek	26.28	188	P	P	17 04 56.5	-0.7
	1.0nm,0.3s,mb3.8,baz=356,slow=11,SNR=11						
CMAR	Chiang Mai Arr	52.18	299	P	P	17 08 33.5	+1.1
	0.6nm,0.6s,mb3.7,baz=124,slow=6.2,SNR=8.4						
MKAR	Makanchi Array	76.63	321	P	P	17 11 11.6	-0.1
	0.5nm,0.6s,mb3.6,baz=116,slow=5.5,SNR=4.4						
ZALV	Zalesovo Beam	78.24	328	P	P	17 11 19.7	-0.9
	0.5nm,0.5s,mb3.8,baz=130,slow=8.0,SNR=4.2						
KURK	Kurchatov	80.38	324	P	P	17 11 33.5	+1.2
	baz=126,slow=4.6						
BVAR	Borovoye Array	85.94	324	P	P	17 12 00.1	-0.9
	1.0nm,0.7s,mb4.1,baz=100,slow=7.8,SNR=5.1						
SYO	Syowa Base	90.43	200⇑	eP	P	17 12 22.0	-0.1
TORD	Torodi Ar. Bea	143.98	284	PKP	PKPdf	17 18 56.0	-1.3
	0.4nm,0.4s,baz=67,slow=4.1,SNR=9.1						
KIC	Kosan Boka	150.81	273	eP	PKPbc	17 19 14.6	+0.3
	49nm,1.2s						
DBIC	Dimbokro	150.92	273	PKPbc	PKPbc	17 19 15.7	+1.2
	7.0nm,0.9s,baz=64,slow=3.4,SNR=6.6						
TIC	Tomondi	151.08	273	eP	PKPbc	17 19 16.0	+1.0
	12nm,0.4s						
LIC	Lamto	151.09	272	eP	PKPbc	17 19 16.0	+1.0
	18nm,0.6s						

*ISCJB **10** 17:06:14.0±0.5, 2387N±004×12665E±003, h33km, mb4.0/9, Error ellipse: s-maj=5.6km s-min=4.3km az=162.3*
*JMA **10** 17:06:15.8±0.3, 2400N×12655E, h93km, M3.5*
*NEIC **10** 17:06:16.4±0.5, 2384N×12662E, h35km, mb4.4/1, Error ellipse: s-maj=13.6km s-min=9.3km az=62.0*
*IDC **10** 17:06:17.5±0.8, 2394N×12692E, h46km±9km, mb3.7/7, mb1 3.8/8, mb1mx3.6/21, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=21.2km s-min=9.6km az=95.0*

ISC 10 17:06:16.0±0.5, 2391N±004×12661E±003, h35km, (h47km±1.1km:pP-P), n29, σ1s04/38, mb4.0/9, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.39	308	P	Pn	17 06 39.4	+0.5
JOGS				eS	Sn	17 06 56.8	+0.8
JMJ	Miyako jima 2	1.50	307	eS	Sn	17 07 00.2	+1.4
JTJ	Tarama	1.89	293	P	Pn	17 06 45.7	-0.1
JTJ				eS	Sn	17 07 07.7	-0.7
JIJ	Ishigaki jima	2.30	282	P	Pn	17 06 51.8	+0.3
JIJ				eS	Sn	17 07 17.0	-1.6
JKRS	Kuro-shima	2.40	278	P	Pn	17 06 53.4	+0.5
JKRS				eS	Sn	17 07 20.1	-1.0
JKE	Kume jima 2	2.41	4	P	Pn	17 06 53.0	+0.1
JKE				S	Sn	17 07 20.8	-0.4
JJT2	Tamagusuku 2	2.44	25	P	Pn	17 06 53.4	0.0
HATJ	Hateruma jima	2.57	274	eS	Sn	17 07 23.2	-2.1
IRIF	Iriomote-Funau	2.67	280	P	Pn	17 06 56.7	+0.2
IRIF				eS	Sn	17 07 27.5	-0.1
JAGN	Aguni-jima	2.73	12	P	Pn	17 06 57.9	+0.6
JOW	Kunigami	3.27	27	P	Pn	17 07 04.8	0.0
	12nm,0.3s,baz=139,slow=25,SNR=20						
JOW				S	Sn	17 07 41.0	-1.5
	18nm,0.3s,baz=120,slow=26,SNR=12						
JOW	Kunigami	3.27	27	P	Pn	17 07 04.7	-0.1
JOW				eS	Sn	17 07 41.0	-1.5
JIH	Iheya	3.34	21	P	Pn	17 07 06.1	+0.3
JIH				eS	Sn	17 07 42.5	-1.7
NACB	Ninganchiao	4.60	274	ePn	Pn	17 07 22.0	-1.0
YHNB	Yeheng	4.84	280	ePn	Pn	17 07 26.9	+0.5
JAM	Amami Oshima	5.22	30	P	Pn	17 07 30.9	-0.8
JAM				eS	Sn	17 08 25.5	-5.2
MJAR	Matsushiro Arr	16.07	36	pP	pP	17 10 08.0	-3.4
	0.2nm,0.3s,baz=220,slow=9.4,SNR=5.2						
SONM	Songino Array	28.78	331	P	P	17 12 12.4	+1.9
	0.5nm,0.4s,mb3.6,baz=167,slow=8.6,SNR=2.9						
BATI	Baumata	34.03	185	P	P	17 12 54.8	-2.0
	11nm,0.7s,mb4.9,baz=37,slow=5.1,SNR=4.1						
MKAR	Makanchi Array	42.04	314	P	P	17 14 05.8	+1.8
	0.5nm,0.5s,mb3.4,baz=98,slow=10,SNR=7.7						
MKAR				pP	pP	17 14 18.5	+4.1
	0.4nm,0.6s,baz=100,slow=12,SNR=2.4						
ZALV	Zalesovo Beam	43.25	325	P	P	17 14 14.5	+0.7
	1.4nm,0.5s,mb4.0,baz=108,slow=7.7,SNR=7.7						
WRAB	Tennant Creek	44.23	170	eP	P	17 14 21.9	-0.1
	4.2nm,0.7s,mb4.3						
WRA	Warramunga Arr	44.23	170	P	P	17 14 22.3	+0.3
	5.0nm,0.7s,mb4.4,baz=352,slow=8.7,SNR=28						
WRA				pP	pP	17 14 34.2	+1.8
	2.0nm,0.6s,baz=352,slow=8.8,SNR=6.5						
WB2	Warramunga Arr	44.24	170	eP	P	17 14 22.5	+0.4
WB2	Warramunga Arr	44.24	170	eP	P	17 14 21.9	-0.2
KURK	Kurchatov	45.53	319	P	P	17 14 33.5	+1.3
	baz=109,slow=8.1						
ASAR	Alice Springs	47.82	171	P	P	17 14 51.1	+0.9
	0.8nm,0.5s,mb4.0,baz=353,slow=8.0,SNR=42						
ASAR				pP	pP	17 15 03.7	+3.0
	0.4nm,0.6s,baz=357,slow=15,SNR=4.3						
BVAR	Borovoye Array	51.06	320	P	P	17 15 16.7	+2.1
	0.4nm,0.6s,mb3.6,baz=98,slow=8.9,SNR=3.4						
STKA	Stephens Creek	57.29	165	P	P	17 15 59.0	-1.3
	0.7nm,0.6s,mb3.9,baz=357,slow=15,SNR=4.5						

*NIED **10** 17:26:00,4320N×13780E,h290km,Mw4.3 Best double couple: M0 2.92000×10^15 NP1:φ225.00000°,δ84.00000°,λ160.00000°. NP2:φ317.00000°,δ71.00000°,λ6.00000°.*
*ISCJB **10** 17:26:49.0±0.2, 4326N±003×13772E±005, h281km±4km, mb3.9/41, Error ellipse: s-maj=5.7km s-min=5.3km az=8.0*
*MOS **10** 17:26:48.9±0.8, 4330N×13767E, h281km, mb4.2/10, Error ellipse: s-maj=10.4km s-min=7.6km az=116.0*
*NEIC **10** 17:26:49.7±0.4, 4331N×13763E, h270km±5km, mb4.3/28, Error ellipse: s-maj=5.7km s-min=5.2km az=139.0*
*IDC **10** 17:26:49.6±1.0, 4329N×13763E, h267km±11km, mb3.4/14, mb1 3.6/18, mb1mx3.6/25, mbtmp3.5/18, Error ellipse: s-maj=12.5km s-min=10.1km az=81.0*
*BJI **10** 17:26:49.2, 4324N×13767E, h293km, mB4.6, mb4.3*
*JMA **10** 17:26:50.1±0.4, 4324N×13776E, h278km±4km, M4.0*

ISC 10 17:26:49.9±0.2, 4329N±003×13771E±005, h273km±4km, n120, σ0s83/133, mb3.9/41, 4C-2D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	1.77	132	P	Pn	17 27 32.7	+0.3
JSH	Shimam	1.83	110	P	Pn	17 27 33.0	+0.1
JSK	Shakotan	2.02	87	P	Pn	17 27 34.8	+0.4
JSK				eS	S	17 28 10.4	+0.7
JEW	Eniwo	2.77	98	P	Pn	17 27 42.1	+0.6
JKB	Kayabe	2.82	119	P	Pn	17 27 42.1	+0.1
JYG	Yagishiri	2.92	66	P	Pn	17 27 43.4	+0.5
JHR	Hokuryu	2.95	80	P	Pn	17 27 44.1	+0.8
JOT	Ohata	3.12	126	P	Pn	17 27 44.7	-0.4
JFR	Furan	3.57	90	P	Pn	17 27 50.0	+0.1
JFR				eS	S	17 28 36.5	-1.1
JWK2	Keihoku	3.63	55	P	Pn	17 27 52.2	+1.8
JWK2				eS	S	17 28 40.5	+1.8
ASAJ	Asahikawa	3.64	75	P	Pn	17 27 51.0	+0.5
	36nm,0.3s,baz=261,slow=9.9,SNR=293						
ASAJ				S	S	17 28 39.2	+0.3
	baz=144,slow=33,SNR=6.0						
ASAJ	Asahikawa	3.64	75	P	Pn	17 27 51.1	+0.5
ASAJ				S	S	17 28 39.3	+0.3
ASAJ				pmax	pmax		
	comp=Z,36nm,0.3s						
JKK2	Kamakawa 2	3.71	79	P	Pn	17 27 52.0	+0.7
JKK2				eS	S	17 28 40.0	-0.3
JNBK	Urakawa-nobuka	3.84	103	P	Pn	17 27 52.6	-0.3
JSE	Soyaes	3.89	63	P	Pn	17 27 54.3	+1.0
JSE				eS	S	17 28 44.2	+0.2
JANG	Nango	4.07	134	P	Pn	17 27 55.6	+0.1
JANG				eS	S	17 28 43.8	-4.0
JCH	Churui	4.20	97	P	Pn	17 27 55.2	-1.8
ERM	Erimo	4.21	106	ePn	Pn	17 27 56.5	-0.6
ERM				eS	S	17 28 46.0	-4.8
JAR	Ashorobuto	4.42	88	P	Pn	17 27 59.0	-0.5
JAR				eS	S	17 28 52.7	-2.5
JTKR	Abashiri--Toko	4.55	79	P	Pn	17 28 01.1	+0.1
JOM	Ohasama	4.66	144	P	Pn	17 28 01.3	-1.2
JMK	Ichinoseki	5.07	147	P	Pn	17 28 06.1	-1.2
YSS	Yuzh-Sakhalins	5.12	42	ePn	Pn	17 28 08.1	+0.4
	comp=Z,65nm,0.7s						
YSS	Yuzh-Sakhalins	5.12	42	eP	Pn	17 28 08.0	+0.3
YSS				eS	S	17 29 08.6	-1.4
YSS				pmax	pmax		
	comp=N,60nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				smax			
	comp=N,90nm,1.0s						
YSS				smax			
	comp=E,180nm,1.1s						
HABR	Khabarovsk	5.51	341⇑	iP	Pn	17 28 12.8	+0.4
HABR				eS	S	17 29 18.2	-0.4
HABR				pmax	pmax		
	comp=Z,120nm,1.0s						
NEM2	Nemuro 2	5.86	86	P	Pn	17 28 14.2	-2.5
NEM2				eS	S	17 29 19.1	-7.3
MDJ	Mudanjiang	6.01	286	P	Pn	17 28 19.5	+0.9
MDJ				AMB	AMB		
	comp=Z,46nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,165nm,3.8s						
MDJ	Mudanjiang	6.01	286	ePn	Pn	17 28 19.1	+0.5
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	6.75	177	ePn	Pn	17 28 27.8	+0.1
	comp=Z,26nm,0.4s						
MAJO	Matsushiro	6.75	177	eP	Pn	17 28 27.8	+0.1
MAJO				pmax	pmax		
	comp=Z,26nm,0.4s						
MAT	Matsushiro	6.75	177	P	Pn	17 28 27.4	-0.3
MAT				S	S	17 29 48.6	+2.2
MJAR	Matsushiro Arr	6.75	177	P	Pn	17 28 28.2	+0.5
	comp=Z,10nm,0.3s,baz=359,slow=12,SNR=148						
CN2	Changchun	8.93	278	eP	Pn	17 28 54.5	-0.2
KSRS	Korea Array	9.47	235	P	Pn	17 29 01.8	+0.2
	comp=Z,0.0nm,0.3s,baz=46,slow=10,SNR=2.7						
HIA	Hailar	13.78	302	eP	Pn	17 29 53.8	-0.6
	comp=Z,10.0nm,0.8s						
HIA	Hailar	13.78	302	eP	Pn	17 29 53.8	-0.6
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJI	Beijing	16.41	266	P	P	17 30 23.8	+0.1
BJI				AMB	AMB		
	comp=Z,34nm,0.7s						
BJI				AMB	AMB		
	comp=Z,152nm,3.4s						
BJT	Baijiatuan	16.43	266	eP	P	17 30 23.6	-0.3
	comp=Z,32nm,0.6s						
BJT	Baijiatuan	16.43	266	eP	P	17 30 23.6	-0.3
BJT				pmax	pmax		
	comp=Z,32nm,0.6s						
PETK	Petropavlovsk-	16.50	47	P	P	17 30 25.8	+1.2
	comp=Z,0.1nm,0.3s,baz=212,slow=5.1,SNR=3.3						
PETK	Petropavlovsk-	16.50	47	P	P	17 30 25.8	+1.2
CBIJ	Chichi jima	16.56	166	P	P	17 30 24.9	-0.5
	comp=Z,35nm,0.3s,baz=70,slow=24,SNR=18						
YAK	Yakutsk	19.37	349	eP	P	17 30 53.0	-2.4
	comp=Z,11nm,0.6s						
YAK	Yakutsk	19.37	349	di P	P	17 30 53.1	-2.2
ULN	Ulaanbaatar	21.86	293	eP	P	17 31 18.4	-2.2
	comp=Z,4.8nm,0.9s,mb3.8						
ULN	Ulaanbaatar	21.86	293⇑	eP	P	17 31 19.6	-0.9
SONM	Songino Array	22.31	293	P	P	17 31 23.6	-0.9
	comp=Z,2.2nm,0.8s,mb3.5,baz=85,slow=7.8,SNR=12						
ZAK	Zakamensk

comp=Z,5.0nm,1.0s,mb4.0
ZAA0 Zalesovo Array 35.76 306 *e*P **P 17 33 21.5 -1.4**
ZALV Zalesovo Beam 35.76 306 P **P 17 33 22.4 -0.5**
comp=Z,3.4nm,0.3s,mb4.3,baz=88,slow=8.6,SNR=24
ZALV PcP PcP 17 35 44.2 +0.2
comp=Z,1.1nm,0.4s,baz=76,slow=3.9,SNR=5.4
ZALV ScP ScP 17 39 03.3 -0.2
comp=Z,0.8nm,0.5s,baz=85,slow=4.3,SNR=4.9
ZALV Zalesovo Beam 35.76 306 P **P 17 33 22.4 -0.5**
ZALV 17 35 44.2
MK31 Makanchi Array 38.64 295 *e*P **P 17 33 46.0 -1.0**
MKAR Makanchi Array 38.64 295 P **P 17 33 46.7 -0.3**
comp=Z,2.6nm,0.6s,mb3.9,baz=82,slow=9.8,SNR=38
LSA Lhasa 39.32 266 *e*P **P 17 33 52.4 -0.5**
comp=Z,2.7nm,0.7s,mb3.8
LSA Lhasa 39.32 266 *e*P **P 17 33 52.4 -0.5**
LSA pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
KURK Kurchatov 40.02 302 *e*P **P 17 33 57.1 -1.2**
comp=Z,5.6nm,0.8s,mb4.0
KURK Kurchatov 40.02 302⇑ *e*P **P 17 33 56.9 -1.4**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb3.8
CMAR Chiang Mai Arr 40.94 245 P **P 17 34 06.7 +0.5**
comp=Z,0.7nm,0.4s,mb3.2,baz=26,slow=8.2,SNR=13
IMA2 Indian Mountai 42.91 34 *e*P **P 17 34 21.9 +0.5**
TAPN Taplejung 43.14 265 *e*P **P 17 34 23.9 +0.1**
comp=Z,8.5nm,0.5s,mb4.3
ODAN Odare 43.65 265 *e*P **P 17 34 28.5 +0.6**
JIRN Jiri 44.07 267 *e*P **P 17 34 31.4 +0.2**
comp=Z,9.7nm,0.5s,mb4.3
GUN Gumba 44.16 267 *e*P **P 17 34 31.8 -0.1**
comp=Z,23nm,0.4s,mb4.8
RAMN Ramite 44.18 266 *e*P **P 17 34 31.9 -0.2**
comp=Z,9.4nm,0.5s,mb4.3
BVA0 Borovoye Array 44.40 307 P **P 17 34 33.7 +0.3**
BVA0 pmax pmax
comp=Z,1.0nm,0.3s,mb3.5
TKM2 Tokmak 2 44.40 292 *e*P **P 17 34 34.4 +0.7**
comp=Z,24nm,0.6s,mb4.6
TKM2 Tokmak 2 44.40 292 *e*P **P 17 34 34.4 +0.8**
TKM2 pmax pmax
comp=Z,24nm,0.6s,mb4.6
TKM2 Tokmak 2 44.40 292 P **P 17 34 34.7 +1.1**
SNR=38
BRVK Borovoye 44.45 307 *e*P **P 17 34 34.0 +0.1**
comp=Z,10nm,0.6s,mb4.2
BRVK Borovoye 44.45 307 *e*P **P 17 34 34.0 +0.2**
BRVK pmax pmax
comp=Z,10.0nm,0.6s,mb4.2
KKN Kakani 44.66 268 *e*P **P 17 34 35.9 0.0**
comp=Z,12nm,0.6s,mb4.3
KKN Kakani 44.66 268 *e*P **P 17 34 35.9 0.0**
KKN pmax pmax
comp=Z,13nm,0.6s,mb4.3
PKI Pulchoki 44.69 267 *e*P **P 17 34 35.8 -0.3**
PKIN Phulchoki 44.70 267 *e*P **P 17 34 35.7 -0.4**
KBK Karagaybulak 44.95 292 P **P 17 34 38.8 +0.9**
SNR=24
GKN Gorkha 45.01 268 *e*P **P 17 34 38.1 -0.5**
comp=Z,17nm,0.5s,mb4.5
USP Ospenovka 45.01 293 P **P 17 34 38.8 +0.4**
SNR=6.9
AAK Ala-Archa 45.26 292 P **P 17 34 40.8 +0.4**
SNR=9.6
DANN Dangsing 45.45 269 *e*P **P 17 34 42.6 +0.5**
comp=Z,121nm,0.5s
EKS2 Erkin-Say 45.74 292 *e*P **P 17 34 43.9 -0.1**
comp=Z,76nm,0.6s
EKS2 Erkin-Say 45.74 292 P **P 17 34 44.5 +0.4**
SNR=14
KOLN Koldanda 45.90 269 *e*P **P 17 34 45.8 +0.3**
comp=Z,10nm,0.4s,mb4.5
AML Almayashu 46.01 292 *e*P **P 17 34 47.2 +1.0**
comp=Z,7.7nm,0.8s,mb4.1
AML Almayashu 46.01 292 P **P 17 34 47.4 +1.2**
SNR=6.1
PYUN Piuthan 46.16 269 *e*P **P 17 34 47.7 +0.2**
KK31 Karatay Array 47.75 294 *e*P **P 17 34 59.6 0.0**
KK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.1
ARU Arti 49.88 314 *e*P **P 17 35 15.2 -0.2**
comp=Z,4.0nm,0.7s,mb3.9
ARU Arti 49.88 314*d i*P **P 17 35 15.7 +0.2**
ARU *e**PP pP 17 36 12.5 -1.0
ARU 17 36 30.4
ARU *e* 17 37 12.8
ARU *e*S **S 17 42 05.6 +2.0**
ARU SS SS 17 45 39.9 +0.4
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb3.9
INK Inuvik 50.20 29 *e*P **P 17 35 18.4 +0.7**
comp=Z,109nm,0.4s
INK Inuvik 50.20 29 *e*P **P 17 35 18.4 +0.7**
INK pmax pmax
comp=Z,109nm,0.4s
AKTO Aktyubinsk 52.50 308 P **P 17 35 34.0 -0.9**
AKTO pmax pmax
comp=Z,1.0nm,1.0s,mb3.1
KBL Kabul 52.78 285 *e*P **P 17 35 36.5 -0.8**
comp=Z,10nm,0.9s,mb4.2
KBL Kabul 52.78 285 *e*P **P 17 35 36.5 -0.7**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
BATI Baumata 54.76 197 P **P 17 35 51.4 -0.2**
comp=Z,10.0nm,0.6s,mb4.4,baz=84,slow=4.7,SNR=3.9
ARCES ARCESS Array B 57.15 337 P **P 17 36 07.8 0.0**
comp=Z,5.9nm,1.0s,mb4.0,baz=55,slow=7.8,SNR=3.3
RES Resolute Bay 57.26 15 *e*P **P 17 36 09.7 +1.1**
comp=Z,21nm,0.5s,mb4.8
RES Resolute Bay 57.26 15 *e*P **P 17 36 09.7 +1.2**
RES pmax pmax
comp=Z,21nm,0.5s,mb4.8
WRAB Tennant Creek 62.98 184 *e*P **P 17 36 47.2 -0.5**
comp=Z,1.8nm,0.6s,mb3.9
WRAB Tennant Creek 62.98 184 *e*P **P 17 36 47.2 -0.5**
WRAB pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
WRA Warramunga Arr 62.99 184 P **P 17 36 47.4 -0.4**
comp=Z,1.3nm,0.6s,mb3.8,baz=1.6,slow=7.2,SNR=33
KIV Kislovodsk 64.77 307 *e*P **P 17 37 00.5 +1.3**
comp=Z,7.5nm,0.8s,mb4.4
KIV Kislovodsk 64.77 307⇑ *e*P **P 17 37 00.1 +0.9**
KIV pmax pmax
comp=Z,15nm,1.6s,mb4.4
MBWA Marble Bar 66.22 198 P **P 17 37 08.4 -0.2**
comp=Z,2.6nm,0.6s,mb4.1
ASAR Alice Springs 66.71 184 P **P 17 37 12.0 +0.4**
comp=Z,1.2nm,0.7s,mb3.7,baz=359,slow=4.8,SNR=26
NOA NORSAR Array B 67.33 335 P **P 17 37 14.8 -0.3**
comp=Z,1.4nm,0.8s,mb3.8,baz=39,slow=6.1,SNR=3.4
AKASG Malin Array Be 67.67 319 P **P 17 37 17.4 0.0**
comp=Z,0.2nm,0.3s,mb3.3,baz=44,slow=5.2,SNR=5.2
AKASG Malin Array Be 67.67 319 P **P 17 37 17.4 0.0**
BRTR Keskin Array B 72.67 308 P **P 17 37 48.5 +0.6**
comp=Z,0.7nm,0.7s,mb3.4
MORC Moravsky Berou 73.61 324 P **P 17 37 52.7 -0.4**
comp=Z,1.9nm,0.7s,mb3.8
MORC Moravsky Berou 73.61 324 P **P 17 37 52.7 -0.4**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
STKA Stephens Creek 74.88 177 P **P 17 38 01.9 +1.4**
comp=Z,1.1nm,0.6s,mb3.7,baz=332,slow=8.3,SNR=4.3
STKA Stephens Creek 74.88 177 P **P 17 38 01.7 +1.2**
comp=Z,1.0nm,0.5s,mb3.7
PDAR Pinedale Array 75.26 45 P **P 17 38 04.4 +1.7**
comp=Z,0.2nm,0.5s,mb3.0,baz=228,slow=1.1,SNR=2.6
GERES GERESS Array B 75.93 326 P **P 17 38 06.2 -0.2**
comp=Z,0.3nm,0.5s,mb3.2,baz=52,slow=3.8,SNR=3.9
SNAA Sanae 145.74 201 *e*PKPdf PKPbc 17 45 56.5 +1.1
VNA2 Neumayer--Watz 147.37 200 *e*PKPdf PKPbc 17 46 00.9 +0.9

IDC 10 17:45:34.5±3.9, 495S×14959E, h0km, mb3.3/2, mb1 3.7/2, mb1mx3.3/14, mbtmp3.4/2, Error ellipse: s-maj=141.5km s-min=48.8km az=113.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**21.04**	**224**	P		P	17 50 20.8	+0.7
	0.9nm,0.4s,baz=49,slow=10,SNR=35							
ASAR	**Alice Springs**	**23.98**	**218**	P		P	17 50 50.6	-0.3
	0.4nm,0.3s,baz=49,slow=9.8,SNR=28							
TORD	**Torodi Ar. Bea**	**147.30**	**287**	PKPbc		PKPbc	18 05 20.3	-0.8
	0.3nm,0.5s,baz=102,slow=2.3,SNR=4.6							

*IDC **10** 17:53:13.0±0.6, 870N×9379E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.2/23, mbtmp4.2/17, MS3.7/5, Ms1 3.7/5, ms1mx3.3/36, Error ellipse: s-maj=28.5km s-min=14.4km az=54.0*
*ISCJB **10** 17:53:17.8±1.6, 865N±006×9378E±006, h47km±14km, mb4.3/41, MS3.7/5, Error ellipse: s-maj=12.0km s-min=8.3km az=42.7*
*BJI **10** 17:53:21.8, 906N×93.18E, h43km, mB4.7, mb4.3*
*NEIC **10** 17:53:23.3±1.3, 875N×9385E, h80km±11km, mb4.6/24, Error ellipse: s-maj=12.9km s-min=5.0km az=52.0*
ISC 10 17:53:20.5±1.2, 864N±006×9372E±006, h54km±10km, n83, σ0§84/79, mb4.3/41, MS3.7/5, 7C, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CM31	**Chiang Mai Arr**	**11.00**	**27**	*e*Pn		**Pn**	**17 55 55.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**11.00**	**27**	Pn		**Pn**	**17 55 57.0**	**+1.9**
	0.7nm,0.3s,baz=213,slow=15,SNR=26							
CHTO	**Chiang Mai**	**11.31**	**26**	P		**Pn**	**17 56 00.1**	**+0.6**
	12nm,1.4s							
VIS	**Vishakhapatnam**	**13.55**	**313**	*e*P		**Pn**	**17 56 29.0**	**-1.1**
VIS				AMb		AMB	17 56 29.6	
	comp=Z,39nm,1.4s							
KOD	**Kodaikanal**	**16.11**	**277**	*e*P		**Pn**	**17 57 04.2**	**+0.6**
BOK	**Bokaro**	**16.83**	**334**	*e*P		**Pn**	**17 57 10.2**	**-2.4**
BOK				AMb		AMB	17 57 15.7	
	comp=Z,24nm,0.0s							
SHL	**Shillong**	**16.92**	**354**	*e*P		**Pn**	**17 57 13.0**	**-0.7**
HYB	**Hyderabad**	**17.15**	**302**	*i* P		**Pn**	**17 57 15.0**	**-1.5**
HYB				*e*S		**S**	**18 00 28.0**	**-5.4**
ODAN	**Odare**	**19.09**	**342**	*e*P		**Pn**	**17 57 39.9**	**-0.2**
RAMN	**Ramite**	**19.42**	**341**	*e*P		**Pn**	**17 57 43.5**	**-0.5**
	comp=Z,30nm,0.6s							
TAPN	**Taplejung**	**19.46**	**344**	*e*P		**Pn**	**17 57 43.4**	**-1.1**
	comp=Z,56nm,0.8s							
AKL	**Akola**	**20.10**	**308**	*e*P		**P**	**17 57 50.3**	**+0.4**
JIRN	**Jiri**	**20.21**	**340**	*e*P		**P**	**17 57 51.6**	**+0.6**
PKI	**Pulchoki**	**20.40**	**338**	*e*P		**P**	**17 57 53.5**	**+0.4**
	comp=Z,58nm,1.0s							
PKIN	**Phulchoki**	**20.41**	**338**	*e*P		**P**	**17 57 53.3**	**+0.1**
	comp=Z,18nm,0.7s							
GUN	**Gumba**	**20.55**	**340**	*e*P		**P**	**17 57 55.2**	**+0.5**
	comp=Z,72nm,0.9s							
DMN	**Daman**	**20.55**	**338**	*e*P		**P**	**17 57 55.0**	**+0.3**
KKN	**Kakani**	**20.65**	**338**	*e*P		**P**	**17 57 55.9**	**+0.1**
	comp=Z,33nm,0.9s							
GKN	**Gorkha**	**21.08**	**337**	*e*P		**P**	**17 58 00.4**	**0.0**
	comp=Z,46nm,0.8s,mb4.9							
LSA	**Lhasa**	**21.09**	**354**	P		**P**	**17 58 00.0**	**-0.5**
LSA	**Lhasa**	**21.09**	**354**	*e*P		**P**	**17 57 59.8**	**-0.7**
	comp=Z,16nm,0.9s,mb4.3							
KOLN	**Koldanda**	**21.30**	**335**	*e*P		**P**	**17 58 03.1**	**+0.4**
	comp=Z,23nm,0.7s,mb4.7							
BHPL	**Bhopal**	**21.33**	**315**	*e*P		**P**	**17 58 03.5**	**+0.5**
BHPL				AMb		AMB	17 58 05.6	
	comp=Z,19nm,0.6s,mb4.6							
BHPL				*ex*		x	18 00 58.9	
GYA	**Guiyang**	**21.56**	**33**	P		**P**	**17 58 08.9**	**+3.3**
GYA				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.3							
DANN	**Dangsing**	**21.74**	**336**	*e*P		**P**	**17 58 06.7**	**-0.7**
	comp=Z,59nm,0.9s,mb5.0							
PYUN	**Piuthan**	**21.84**	**334**	*e*P		**P**	**17 58 08.8**	**+0.2**
	comp=Z,43nm,0.9s,mb4.9							
LGTI	**Lohaghat**	**24.26**	**330**	*e*P		**P**	**17 58 34.5**	**+1.9**
AYAN	**Aya Nagar**	**25.18**	**324**	*e*P		**P**	**17 58 41.2**	**+0.2**
KUDL	**Kundal**	**25.31**	**322**	*e*P		**P**	**17 58 42.1**	**-0.1**
KHET	**Khetri**	**25.68**	**321**	*e*P		**P**	**17 58 46.2**	**+0.6**
KHET				AMb		AMB	17 58 49.6	
	comp=Z,14nm,1.1s,mb4.4							
KLP	**Kalpa**	**26.95**	**330**	*e*P		**P**	**17 58 57.5**	**+0.5**
LZH	**Lanzhou**	**28.84**	**17**	*e*P		**P**	**17 59 21.0**	**+7.2**
LZH				AP		pP	17 59 25.3	-2.1
LZH				XP		sP	17 59 27.8	-6.0
LZH				AMB		AMB		
	comp=Z,18nm,1.4s,mb4.6							
LZH				AMB		AMB		
	comp=Z,73nm,4.3s							
KAPI	**Kappang**	**29.29**	**117**	LR		LR	18 10 52.1	
	comp=Z,77nm,21.3s,MS3.3,baz=136,slow=36							
GTA	**Gaotai**	**31.12**	**9**	*e*P		**P**	**17 59 34.6**	**+0.7**
GTA				AMB		AMB		
	comp=Z,5.0nm,1.2s,mb4.2							
KBL	**Kabul**	**34.32**	**322**	*e*P		**P**	**18 00 01.8**	**-0.1**
	comp=Z,3.8nm,0.8s,mb4.4							
AML	**Almayashu**	**37.74**	**335**	*e*P		**P**	**18 00 32.0**	**+0.9**
	comp=Z,5.3nm,0.7s,mb4.4							
EKS2	**Erkin-Say**	**38.15**	**336**	*e*P		**P**	**18 00 35.5**	**+0.9**
	comp=Z,2.2nm,0.7s,mb4.0							
MK31	**Makanchi Array**	**39.26**	**348**	*e*P		**P**	**18 00 40.0**	**-3.7**
MKAR	**Makanchi Array**	**39.26**	**348**	P		**P**	**18 00 43.3**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.0,baz=161,slow=7.7,SNR=15							
MKAR				PcP		PcP	18 02 53.5	+1.7
	comp=Z,0.2nm,0.5s,baz=153,slow=8.0,SNR=4.2							
SONM	**Songino Array**	**40.51**	**13**	P		**P**	**18 00 53.6**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=192,slow=6.7,SNR=6.3							
SONM				PcP		PcP	18 02 56.8	+1.0
	comp=Z,1.3nm,1.0s,baz=198,slow=1.9,SNR=3.5							
ULN	**Ulaanbaatar**	**40.69**	**14**	*e*P		**P**	**18 00 55.4**	**-0.2**
	comp=Z,1.3nm,0.9s,mb3.6							
KURK	**Kurchatov**	**43.77**	**346**	*e*P		**P**	**18 01 20.2**	**-0.4**
	comp=Z,5.7nm,1.2s,mb4.2							
ZAA0	**Zalesovo Array**	**45.75**	**353**	*e*P		**P**	**18 01 36.5**	**+0.1**
ZALV	**Zalesovo Beam**	**45.75**	**353**	P		**P**	**18 01 36.7**	**+0.3**
	comp=Z,7.2nm,0.7s,mb4.7,baz=170,slow=9.0,SNR=41							
ZALV	**Zalesovo Beam**	**45.75**	**353**	P		**P**	**18 01 36.7**	**+0.3**
MUN	**Mundaring**	**45.75**	**153**	*e*P		**P**	**18 01 38.1**	**+1.4**
KLBR	**Kellerberrin**	**46.14**	**151**	*e*P		**P**	**18 01 40.1**	**+0.3**
	comp=Z,24nm,1.2s,mb5.0							
BRVK	**Borovoye**	**48.20**	**341**	P		**P**	**18 01 53.7**	**-1.8**
	comp=Z,3.0nm,0.7s,mb4.4							
WRA	**Warramunga Arr**	**49.04**	**126**	P		**P**	**18 02 01.7**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=306,slow=8.6,SNR=14							
WRA				PcP		PcP	18 03 26.5	+0.8
	comp=Z,0.8nm,0.8s,baz=316,slow=2.9,SNR=5.2							
WRA				LR		LR	18 26 14.5	
	comp=Z,34nm,18.1s,MS3.4,baz=60,slow=40							
WRAB	**Tennant Creek**	**49.05**	**126**	*e*P		**P**	**18 02 02.0**	**-0.5**
	comp=Z,1.3nm,0.7s,mb4.1							
WB2	**Warramunga Arr**	**49.05**	**126**	*e*P		**P**	**18 02 01.6**	**-0.9**
ASAR	**Alice Springs**	**50.72**	**130**	P		**P**	**18 02 14.2**	**-1.0**
	comp=Z,0.8nm,0.7s,mb3.8,baz=305,slow=7.2,SNR=20							
ASAR				PcP		PcP	18 03 32.1	+0.4
	comp=Z,1.0nm,0.7s,baz=303,slow=3.7,SNR=9.9							
ARU	**Arti**	**55.03**	**337**	P		**P**	**18 02 45.5**	**-0.9**
	comp=Z,3.5nm,1.0s,mb4.3							
MMAI	**Mount Meron Ar**	**58.85**	**303**	LR		LR	18 32 43.5	
	comp=Z,42nm,18.1s,MS3.6,baz=150,slow=40							
YAK	**Yakutsk**	**59.41**	**19**	*e*P		**P**	**18 03 16.8**	**-0.4**
	comp=Z,5.8nm,0.6s,mb4.8							
STKA	**Stephens Creek**	**60.93**	**134**	P		**P**	**18 03 27.3**	**-0.8**
	comp=Z,1.5nm,1.0s,mb4.1,baz=319,slow=9.3,SNR=3.3							
STKA				LR		LR	18 33 05.0	
	comp=Z,64nm,18.1s,MS3.8,baz=207,slow=39							
BRTR	**Keskin Array B**	**61.62**	**311**	P		**P**	**18 03 31.9**	**-0.8**
	comp=Z,2.8nm,0.7s,mb4.5							
TIXI	**Tiksi**	**66.57**	**11**	*e*P		**P**	**18 04 04.0**	**-0.5**
	comp=Z,6.8nm,0.7s,mb4.8							
AKASG	**Malin Array Be**	**67.30**	**322**	P		**P**	**18 04 08.0**	**-1.6**
	comp=Z,1.6nm,0.7s,mb4.2,baz=91,slow=4.9,SNR=4.8							
ARCES	**ARCESS Array B**	**74.41**	**340**	P		**P**	**18 04 52.5**	**+0.1**
	comp=Z,4.1nm,0.9s,mb4.3,baz=97,slow=6.6,SNR=5.5							
ARCES				LR		LR	18 40 18.3	
	comp=Z,154nm,18.4s,MS4.3,baz=11,slow=38							
BOSA	**Boshof**	**75.64**	**238**	P		**P**	**18 05 02.2**	**+1.9**
	comp=Z,2.8nm,0.7s,mb4.3,baz=345,slow=12,SNR=6.0							
BOSA	**Boshof**	**75.64**	**238**	P		**P**	**18 05 02.2**	**+1.9**
GERES	**GERESS Array B**	**76.98**	**318**	P		**P**	**18 05 07.9**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.0,baz=76,slow=5.6,SNR=13							
CLL	**Collm**	**77.51**	**321**	*e*P		**P**	**18 05 10.0**	**-0.4**
HFS	**Hagfors**	**77.59**	**330**	P		**P**	**18 05 10.3**	**-0.4**
	comp=Z,1.5nm,0.4s,mb4.3,baz=94,slow=4.9,SNR=17							
NB2	**NORSAR Subarra**	**78.86**	**331**	P		**P**	**18 05 17.0**	**-0.7**
	comp=Z,3.9nm,0.9s,mb4.3,baz=92,slow=5.6							
NOA	**NORSAR Array B**	**78.86**	**331**	P		**P**	**18 05 17.5**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.2,baz=95,slow=5.2,SNR=5.8							
MAW	**Mawson**	**79.19**	**192**	P		**P**	**18 05 15.5**	**-3.8**
DAVOX	**Davos/Dischmat**	**79.55**	**316**	P		**P**	**18 05 21.6**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.3,baz=109,slow=8.0,SNR=4.4							
LPG	**La Plagne**	**81.79**	**315**⇑	*i* P		**P**	**18 05 34.4**	**+0.6**
	comp=Z,14nm,1.0s,mb4.5							
LPG	**La Plagne**	**81.79**	**315**⇑	*i* P		**P**	**18 05 34.4**	**+0.6**
	comp=Z,6.8nm,1.0s,mb4.5							
LPL	**La Plagne**	**81.80**	**315**⇑	*i* P		**P**	**18 05 34.5**	**+0.7**
	comp=Z,3.4nm,0.7s,mb4.4							
ORIF	**Oris-en-Rattie**	**82.44**	**314**⇑	*i* P		**P**	**18 05 37.9**	**+0.7**
SMF	**Signal de Mont**	**83.71**	**316**	*e*P		**P**	**18 05 43.7**	**0.0**
MFF	**Saint Martin d**	**86.44**	**316**⇑	*i* P		**P**	**18 05 57.6**	**+0.2**
	comp=Z,12nm,1.0s,mb4.8							
MFF	**Saint Martin d**	**86.44**	**316**⇑	*i* P		**P**	**18 05 57.6**	**+0.2**
	comp=Z,5.9nm,1.0s,mb4.8							
EKA	**Eskdalemuir Ar**	**86.86**	**325**	P		**P**	**18 05 60.0**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.5,baz=103,slow=6.1,SNR=6.4							
TORD	**Torodi Ar. Bea**	**90.02**	**283**	P		**P**	**18 06 15.7**	**-0.7**
	comp=Z,0.5nm,0.7s,mb4.0,baz=83,slow=4.9,SNR=4.4							
ESDC	**Sonseca Array**	**90.41**	**310**	P		**P**	**18 06 17.0**	**+0.6**
	comp=Z,0.4nm,0.6s,mb4.0,baz=69,slow=7.0,SNR=3.1							
PDAR	**Pinedale Array**	**124.61**	**21**	PKP		PKPdf	18 12 12.4	-1.8
	comp=Z,0.4nm,0.7s,baz=335,slow=4.0,SNR=3.0							
PLCA	**Paso Flores**	**145.11**	**201**	PKPbc		PKPbc	18 12 53.5	+1.7
	comp=Z,3.3nm,0.9s,baz=240,slow=3.0,SNR=4.8							
PLCA	**Paso Flores**	**145.11**	**201**	PKPbc		PKPbc	18 12 53.5	+1.7

*IDC **10** 18:06:57.2±2.0, 3745N×8912E, h0km, mb3.1/2, mb1 3.4/5, mb1mx3.3/24, mbtmp3.4/5, ML3.5/3, Error ellipse: s-maj=62.4km s-min=22.0km az=62.0*
*NEIC **10** 18:06:57.4±1.1, 3745N×8881E, h10km, mb3.7/1, Error ellipse: s-maj=21.2km s-min=12.9km az=51.0*
*ISCJB **10** 18:06:58.0±0.9, 3738N±009×887E±02, h33km, Error ellipse: s-maj=19.6km s-min=10.3km az=151.4*
*BJI **10** 18:07:08.7, 3787N×8878E, h9km, mb4.0, ML3.6*
ISC 10 18:07:00.8±0.9, 375N±01×888E±02, h35km, n11, σ1§18/12, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WMQ	**Urumqi**	**6.39**	**353**	P		**Pn**	**18 08 40.0**	**+7.7**
WMQ				S		**Sn**	**18 09 50.0**	**+6.0**
WMQ				Smax				
	comp=N,35nm,0.7s							
WMQ				Smax				
	comp=E,56nm,0.7s							
MK31	**Makanchi Array**	**10.48**	**335**	*e*Pn		**Pn**	**18 09 28.1**	**-0.4**
MKAR	**Makanchi Array**	**10.48**	**335**	Pn		**Pn**	**18 09 28.9**	**+0.5**
	comp=E,0.3nm,0.3s,baz=151,slow=14,SNR=13							
MKAR				Lg			18 12 36.9	
	comp=E,0.1nm,0.3s,baz=147,slow=29,SNR=4.2							
TKM2	**Tokmak 2**	**11.47**	**302**	*e*P		**Pn**	**18 09 40.1**	**-1.8**
	comp=E,2.4nm,0.8s							
KURK	**Kurchatov**	**15.10**	**334**	Pn		**Pn**	**18 10 30.1**	**-1.1**
	baz=143,slow=12							
SONM	**Songino Array**	**16.52**	**46**	Pn		**Pn**	**18 10 49.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=236,slow=12,SNR=3.8							
ZALV	**Zalesovo Beam**	**16.70**	**352**	Pn		**Pn**	**18 10 51.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=170,slow=13,SNR=2.8							
BVAR	**Borovoye Array**	**20.15**	**326**	P		**P**	**18 11 33.9**	**+2.2**
	comp=E,0.8nm,0.7s,baz=133,slow=11,SNR=6.1							
BRVK	**Borovoye**	**20.21**	**326**	P		**P**	**18 11 35.6**	**+3.1**
	comp=E,3.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**20.93**	**152**	P		**P**	**18 11 40.1**	**-0.3**
	comp=E,0.8nm,0.7s,baz=333,slow=10,SNR=6.5							
WB2	**Warramunga Arr**	**71.42**	**135**	*e*P		**P**	**18 18 18.0**	**+0.5**

*NIED **10** 18:21:00.4240N×144.70E, h14km, Mw3.4 Best double couple: M0 1.64000×10^14 NP1:φ§45.00000°, δ57.00000°, λ104.00000°. NP2:φ§202.00000°, δ36.00000°, λ70.00000°.*
*ISCJB **10** 18:21:07.9±1.4, 424N±0.1×1447E±0.1, h54km±26km, Error ellipse: s-maj=20.0km s-min=9.2km az=144.9*
*JMA **10** 18:21:07.7, 4236N×14467E, h33km±1km, M3.6*
ISC 10 18:21:08.2±1.4, 424N±01×1447E±01, h50km±31km, n9, σ0§30/13, 5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAK	**Akkeshi**	**0.60**	**1**	⇓P		**Pn**	**18 21 20.3**	**-0.4**
JAK				*e*S		**Sn**	**18 21 29.7**	**+0.1**
JOB	**Onbets**	**0.81**	**309**	⇓P		**Pn**	**18 21 23.2**	**-0.1**
JCH	**Churui**	**1.00**	**283**	⇓P		**Pn**	**18 21 25.8**	**-0.1**
JCH				*e*S		**Sn**	**18 21 39.4**	**+0.4**
JAR	**Ashorobuto**	**1.12**	**324**	⇓P		**Pn**	**18 21 27.4**	**-0.2**
JAR				*e*S		**Sn**	**18 21 42.0**	**0.0**
JNK	**Nakash**	**1.19**	**1**	⇓P		**Pn**	**18 21 28.4**	**-0.1**
JNK				*e*S		**Sn**	**18 21 43.4**	**-0.1**
JEM	**Erimo**	**1.20**	**252**	P		**Pn**	**18 21 28.9**	**+0.4**
NEM2	**Nemuro 2**	**1.24**	**38**	P		**Pn**	**18 21 29.4**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.44**	**266**	P		**Pn**	**18 21 31.2**	**-0.6**
JRA	**Rausu**	**1.57**	**12**	P		**Pn**	**18 21 34.2**	**+0.5**

MEX 10 18:25:19.6±0.5, 1953N×9891W, h21km±15km, MD3.6, Central Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IIO	**Organos**	**0.18**	**71**	*i* P		Pb	18 25 23.9	-0.7
IIO				*i* S		Sb	18 25 27.5	-0.6
PBVM	**Pinon**	**0.19**	**241**	*i* P		Pb	18 25 23.8	-1.0
PBVM				*i* S		Sb	18 25 27.6	-0.6
PTVM	**Pico Tres Padr**	**0.20**	**287**	*i* P		Pb	18 25 23.2	-1.7
PTVM				*i* S		Sb	18 25 27.8	-0.7
MZVM		**0.46**	**222**	*i* P		Pb	18 25 26.6	-2.3
PPM	**Popocatepetl**	**0.53**	**150**	*i* P		Pb	18 25 29.7	-0.6
PPM				*i* S		Sb	18 25 35.8	-1.8
UTMO	**

STKA	**Stephens Creek**	**27.22**	**236**	P		**P**	**19**	**13**	**16.4** **+2.3**
	comp=Z,4.4nm,0.9s,mb4.0,baz=30,slow=8.1,SNR=5.4								
STKA	**Stephens Creek**	**27.22**	**236**	*e*P		**P**	**19**	**13**	**14.7** **+0.6**
	comp=Z,6.6nm,0.9s,mb4.2								
WRAB	**Tennant Creek**	**31.72**	**262**	P		pP	19	14	02.1 -4.3
	comp=Z,5.0nm,1.2s								
WRA	**Warramunga Arr**	**31.73**	**262**	P		**P**	**19**	**13**	**53.5** **-0.8**
	comp=Z,0.1nm,0.4s,mb3.0,baz=82,slow=6.0,SNR=6.2								
WRA					pP	pP	19	14	05.2 -1.2
	comp=Z,0.4nm,0.5s,baz=82,slow=6.2,SNR=3.8								
ASAR	**Alice Springs**	**32.12**	**255**	P		**P**	**19**	**13**	**58.4** **+0.8**
	comp=Z,1.0nm,0.6s,mb3.8,baz=84,slow=8.4,SNR=47								
ASAR					pP	pP	19	14	09.4 -0.4
	comp=Z,2.4nm,0.6s,baz=81,slow=8.6,SNR=12								
QSPA	**South Pole Qui**	**71.55**	**180**	*e*P		**P**	**19**	**18**	**50.2** **0.0**
	comp=Z,5.2nm,1.1s,mb4.4								
CMAR	**Chiang Mai Arr**	**77.08**	**295**	P		**P**	**19**	**19**	**24.9** **+1.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=122,slow=4.1,SNR=7.8								
CMAR					pP	pP	19	19	37.2 +0.4
	comp=Z,1.1nm,0.8s,baz=134,slow=4.6,SNR=5.8								
SONM	**Songino Array**	**85.89**	**324**	P		**P**	**19**	**20**	**08.0** **-1.3**
	comp=Z,0.5nm,0.8s,mb3.8,baz=151,slow=3.3,SNR=3.0								
NVAR	**Mina Array Bea**	**89.24**	**49**	P		**P**	**19**	**20**	**26.8** **+1.2**
	comp=Z,0.7nm,0.8s,mb4.1,baz=228,slow=7.4,SNR=5.9								
SNAA	**Sanae**	**89.84**	**183**	*e*		**P**	**19**	**20**	**25.8** **-2.1**
SNAA				*e*			19	20	49.4
VNA3	**Neumayer Olymp**	**90.47**	**181**	*e*		**P**	**19**	**20**	**29.9** **-1.0**
VNA3				*e*			19	20	35.2
VNA3				*e*			19	20	53.6
VNA2	**Neumayer--Watz**	**90.75**	**182**	*e*		**P**	**19**	**20**	**31.5** **-0.7**
	baz=183,slow=5.6								
VNA2				*e*			19	20	37.0
VNA2				*e*			19	20	55.0
TXAR	**Lajitas Array**	**97.50**	**62**	LR		LR	19	58	09.5
	comp=Z,24nm,19.1s,MS3.7,baz=0.0,slow=31								
ARCES	**ARCESS Array B**	**124.04**	**345**	PKP		PKPdf	19	26	25.0 -2.1
	comp=Z,7.2nm,1.1s,baz=29,slow=2.8,SNR=8.4								
ARCES	**ARCESS Array B**	**124.04**	**345**	PKP		PKPdf	19	26	25.0 -2.1
BAIF	**Baives**	**145.93**	**341**	*e*PKP1		PKPbc	19	27	08.3 -0.5
CDF	**Champ du Feu**	**146.28**	**337**	*e*PKP1		PKPbc	19	27	08.7 -1.3
	comp=Z,5.9nm,0.7s								
HAU	**Haudompre**	**146.97**	**337**	*e*PKP1		PKPbc	19	27	11.6 -0.4
MEZF	**Maizieres J'vi**	**147.01**	**339**	*e*PKP1		PKPbc	19	27	11.1 -1.0
CABF	**La Chapelle**	**148.23**	**336**	*e*PKP1		PKPbc	19	27	14.5 -0.9
	comp=Z,12nm,0.9s								
FLN	**La Foliniere**	**148.39**	**345**	*e*PKP1		PKPbc	19	27	13.9 -1.9
	comp=Z,9.6nm,0.8s								
LDF	**La Druitiere**	**148.46**	**345**	*e*PKP1		PKPbc	19	27	14.4 -1.6
LOR	**Lormes**	**148.48**	**339**	*e*PKP1		PKPbc	19	27	14.6 -1.5
SSF	**Saint Saulge**	**148.78**	**339**	*e*PKP1		PKPbc	19	27	15.5 -1.4
	comp=Z,4.9nm,0.8s								
GRR	**Gorron**	**148.83**	**346**	*e*PKP1		PKPbc	19	27	15.3 -1.6
LPL	**La Plagne**	**148.86**	**334**	*e*PKP1		PKPbc	19	27	16.4 -0.7
LPG	**La Plagne**	**148.87**	**334**	*e*PKP1		PKPbc	19	27	16.5 -0.6
SGMF	**Saint Gilles**	**149.33**	**348**	*e*PKP1		PKPbc	19	27	16.1 -2.1
	comp=Z,40nm,1.1s								
TCF	**Toulx Ste Croi**	**149.88**	**340**	*e*PKP1		PKPbc	19	27	18.3 -1.3
	comp=Z,14nm,1.1s								
MFF	**Saint Martin d**	**150.30**	**343**	*e*PKP1		PKPbc	19	27	19.0 -1.6
	comp=Z,12nm,1.1s								
RJF	**Les Rejaudoux**	**150.98**	**340**	*e*PKP1		PKPbc	19	27	20.8 -1.5
LFF	**La Frestale**	**151.55**	**341**	*e*PKP1		PKPbc	19	27	22.2 -1.4

ISCJB ***10*** *19:22:37.6±0.4, 4983N±003×1840E±003, h0km, Error ellipse: s-maj=3.8km s-min=2.4km az=18.1*
CSEM ***10*** *19:22:38.4±0.2, 4988N×1849E, h0km, ML2.9/4, Error ellipse: s-maj=3.5km s-min=1.5km az=43.0*
IPEC ***10*** *19:22:38.6±0.1, 4983N×1851E, h9km±1km, ML1.8/3, Error ellipse: s-maj=1.1km s-min=0.7km az=173.0*
PRU ***10*** *19:22:39.3, 4984N×1841E, h0km*

ISC 10 19:22:38.5±0.4, 4980N±002×1843E±003, h0km, n32, σ1§21/58, 3C-1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.19**	**283**	*e*Pg	**Pg**	**19 22 43.3**	**+1.2**
OKC				Sg	**Sg**	**19 22 46.0**	**+1.5**
	91nm,0.6s						
OKC	**Ostrava-Krasne**	**0.19**	**283**	*e*PG	**Pg**	**19 22 43.6**	**+1.5**
OKC				*e*SG	**Sg**	**19 22 46.0**	**+1.5**
	comp=Z,91nm,0.6s						
RAC	**Raciborz**	**0.32**	**332**	*e*Pg	**Pg**	**19 22 46.1**	**+1.3**
RAC				*e*Sg	**Sg**	**19 22 51.7**	**+2.7**
MORC	**Moravsky Berou**	**0.57**	**268**	*e*Pg	**Pg**	**19 22 50.4**	**+0.9**
MORC				*e*Sg	**Sg**	**19 22 58.8**	**+1.9**
	comp=Z,12nm,0.3s						
MORC	**Moravsky Berou**	**0.57**	**268**	⇑*i*P	**Pg**	**19 22 50.9**	**+1.4**
OJC	**Ojcow**	**0.98**	**64**	*e*Pg	**Pg**	**19 22 55.7**	**-1.6**
OJC				*e*Sg	**Sg**	**19 23 08.4**	**-1.7**
OJC	**Ojcow**	**0.98**	**64**	*e*Pg	**Pg**	**19 22 55.6**	**-1.7**
OJC				*e*Sg	**Sg**	**19 23 08.0**	**-2.1**
JAVC	**Velka Javorina**	**1.06**	**208**	*e*Pn	**Pn**	**19 23 00.7**	**+0.1**
KOLL	**Kolacno**	**1.22**	**181**	*e*PN	**Pn**	**19 23 02.1**	**-0.7**
KOLL				*e*SN	**Sn**	**19 23 19.6**	**-0.4**
NIE	**Niedzica**	**1.28**	**106**	*e*Pg	**Pg**	**19 23 02.2**	**-0.9**
NIE				*e*Sg	**Sg**	**19 23 20.9**	**+1.1**
VRAC	**Vranov**	**1.29**	**248**	*e*Pn	**Pg**	**19 23 03.0**	**-0.8**
VRAC				*e*Sg	**Sg**	**19 23 21.1**	**+1.1**
	comp=Z,18nm,0.2s						
VRAC	**Vranov**	**1.29**	**248**	⇑*i*P	**Pg**	**19 23 03.5**	**+0.3**
VYHS	**Vyhne**	**1.33**	**168**	*e*PN	**Pn**	**19 23 03.5**	**-0.8**
VYHS				*e*SN	**Sn**	**19 23 21.8**	**-0.9**
VYHS	**Vyhne**	**1.33**	**168**	*e*Pn	**Pn**	**19 23 03.5**	**-0.8**
VYHS				*e*Sg	**Sg**	**19 23 21.7**	**+0.4**
VYHS				*e*Sn	**Sn**	**19 23 21.8**	**-0.9**
SMOL	**Smolenice**	**1.44**	**207**	*e*PN	**Pn**	**19 23 05.5**	**-0.4**
SMOL				*e*SN	**Sn**	**19 23 26.2**	**+0.8**
DPC	**Dobruska-Polom**	**1.47**	**293**	*e*Pn	**Pn**	**19 23 05.8**	**-0.4**
DPC	**Dobruska-Polom**	**1.47**	**293**	Pg	**Pg**	**19 23 06.0**	**-0.6**
DPC				*e*Sg	**Sg**	**19 23 25.4**	**-0.2**
DPC	**Dobruska-Polom**	**1.47**	**293**	*e*PG	**Pg**	**19 23 06.0**	**-0.6**
DPC				*e*SG	**Sg**	**19 23 25.7**	**+0.1**
	comp=Z,8.4nm,0.3s						
KRUC	**Moravsky**	**1.52**	**242**	*e*Pn	**Pn**	**19 23 06.8**	**-0.1**
KRUC				*e*Sg	**Sg**	**19 23 27.3**	**+0.1**
	comp=Z,8.8nm,0.3s						
MODS	**Modra-Piesok**	**1.61**	**208**	*e*PN	**Pn**	**19 23 08.5**	**+0.3**
MODS				*e*SN	**Sn**	**19 23 28.9**	**-0.8**
MODS	**Modra-Piesok**	**1.61**	**208**	*e*Pn	**Pn**	**19 23 08.6**	**+0.4**
MODS				*e*Sn	**Sn**	**19 23 28.9**	**-0.8**
UPC	**Upice**	**1.71**	**296**	*e*PG	**Pg**	**19 23 10.1**	**-1.2**
UPC				*e*SG	**Sg**	**19 23 33.4**	**0.0**
ZST	**Bratislava**	**1.82**	**209**	*e*PN	**Pn**	**19 23 10.2**	**-0.9**
ZST				*e*SN	**Sn**	**19 23 35.4**	**+0.5**
STHS	**Stebnicka Huta**	**1.87**	**101**	*e*PN	**Pn**	**19 23 13.2**	**+1.4**
STHS				*e*SN	**Sn**	**19 23 39.1**	**+3.0**
PSZ	**Piszkesteto**	**2.12**	**152**	⇓*i*P	**Pn**	**19 23 15.1**	**0.0**
CRVS	**Cervenica-Dubn**	**2.18**	**113**	*e*PN	**Pn**	**19 23 17.9**	**+1.9**
CRVS				*e*SN	**Sn**	**19 23 46.3**	**+2.7**
PRU	**Pruhonice**	**2.52**	**276**	*e*PG	**Pg**	**19 23 25.2**	**-1.6**
PRU				*e*SG	**Sg**	**19 23 58.3**	**-1.1**
PVCC	**Panska Ves**	**2.59**	**288**	*e*SG	**Sg**	**19 24 00.5**	**-1.1**
	comp=Z,15nm,0.7s						
BRG	**Berggiesshubel**	**3.07**	**292**	PG	**Pg**	**19 23 34.7**	**-2.6**
BRG				SG	**Sg**	**19 24 16.1**	**-1.0**
	comp=Z,2.7nm,0.4s						
KHC	**Kasperske Hory**	**3.23**	**260**	*e*PN	**Pn**	**19 23 31.5**	**+1.0**
KHC				*e*PG	**Pg**	**19 23 37.7**	**-2.8**
KHC				*ex*	x	19 24 04.0	
KHC				*e*SG	**Sg**	**19 24 21.8**	**-0.5**
	comp=Z,3.5nm,0.6s						
CLL	**Collm**	**3.77**	**296**	*e*Sg	**Sg**	**19 24 42.0**	**+2.2**
DRGR		**4.15**	**135**	⇑*i*P	**Pn**	**19 23 42.6**	**-0.5**

LDG ***10*** *19:36:20.8±0.4, 2936N×9527E, h10km, Mb4.8/9, Ms3.7/7, Error ellipse: s-maj=17.2km s-min=6.7km az=146.0*
ISCJB ***10*** *19:36:21.1±0.9, 2940N±003×9545E±002, h13km±6km, mb4.8/110, MS3.9/27, Error ellipse: s-maj=4.4km s-min=3.0km az=171.0*
BJI ***10*** *19:36:23.1, 2948N×9542E, h25km, mB5.0, mb4.9, ML4.5, Ms4.3, Msz4.1*
NEIC ***10*** *19:36:24.4±1.3, 2939N×9548E, h24km±9km, mb5.0/55, Error ellipse: s-maj=4.9km s-min=4.0km az=202.0*
MOS ***10*** *19:36:24.2±0.8, 2939N×9551E, h37km, mb5.1/43, Error ellipse: s-maj=6.7km s-min=4.1km az=118.3*
IDC ***10*** *19:36:26.9±3.2, 2945N×9555E, h42km±30km, mb4.3/25, mb1 4.4/26, mb1mx4.4/30, mbtmp4.3/26, ML4.6/1, MS3.8/14, Ms1 3.8/14, ms1mx3.6/26, Error ellipse: s-maj=16.4km s-min=10.9km az=41.0*
SZGRF ***10*** *19:36:43.7, 3099N×9301E, h41km, mb4.9, Xizang*
DJA ***10*** *19:36:52, 2998N×102.18E, h49km, mb5.2/8*

ISC 10 19:36:25.2±0.9, 2939N±003×9544E±002, h28km±6km, h36km±1.6km: pP-P, n323, σ1§04/348, mb4.8/110, MS3.9/27, 21C-4D, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.75**	**276**	PG	**Pn**	**19 37 25.0**	**+3.7**
LSA				SG	**Sn**	**19 38 11.0**	**+6.4**
LSA				Smax			
	comp=N,360nm,0.6s						
LSA				Smax			
	comp=E,1μm,0.6s						
LSA	**Lhasa**	**3.75**	**276**	*e*P	**Pn**	**19 37 25.0**	**+3.7**
IMP	**Imphal**	**4.78**	**197**	*i* P	**Pn**	**19 37 36.0**	**+0.6**
IMP				*i* x	x	19 39 00.0	
SHL	**Shillong**	**4.95**	**221**	⇑*i*P	**Pn**	**19 37 38.0**	**+0.3**
SHL				*i* x	x	19 38 58.5	
TAPN	**Taplejung**	**7.11**	**255**	*e*Pn	**Pn**	**19 38 08.9**	**+1.5**
TAPN				*e*Sn	**Sn**	**19 39 26.4**	**-0.9**
	comp=E,334nm,0.3s						
CD2	**Chengdu**	**7.36**	**76**	P	**Pn**	**19 38 11.2**	**+0.4**
CD2				S	**Sn**	**19 39 33.0**	**-0.4**
CD2				LR	LR		
	comp=N,1μm,8.2s						
CD2				LR	LR		
	comp=E,970nm,8.8s						
CD2				LR	LR		
	comp=Z,1μm,10.8s						
ODAN	**Odare**	**7.54**	**252**	*e*Pn	**Pn**	**19 38 13.1**	**-0.2**
ODAN				*e*Sn	**Sn**	**19 39 38.7**	**+0.7**
KMI	**Kunming**	**7.76**	**121**	P	**Pn**	**19 38 19.2**	**+2.9**
KMI				PG	Pn	19 38 39.1	+23
KMI				S	**Sn**	**19 39 49.6**	**+6.3**
KMI				SG	Sn	19 40 18.0	+35
KMI				Smax			
	comp=N,107nm,1.3s						
KMI				Smax			
	comp=E,117nm,0.9s						
KMI				LR	LR		
	comp=N,2μm,6.3s						
KMI				LR	LR		
	comp=E,965nm,5.8s						
SHBG	**Sahibganj**	**8.07**	**241**	*e*P	**Pn**	**19 38 14.0**	**-6.6**
SHBG				*e*S	**Sn**	**19 39 35.0**	**-16**
RAMN	**Ramite**	**8.17**	**255**	*e*Pn	**Pn**	**19 38 22.4**	**+0.4**
JIRN	**Jiri**	**8.32**	**260**	*e*Pn	**Pn**	**19 38 25.1**	**+1.1**
JIRN				*e*Sn	**Sn**	**19 39 53.2**	**-3.9**
	comp=E,414nm,0.3s						
GUN	**Gumba**	**8.53**	**262**	*e*Pn	**Pn**	**19 38 27.3**	**+0.4**
GUN				*e*Sn	**Sn**	**19 39 58.4**	**-3.9**
PKI	**Pulchoki**	**9.01**	**261**	*e*Pn	**Pn**	**19 38 33.3**	**-0.2**
PKI				*e*Sn	**Sn**	**19 40 09.4**	**-4.7**
	comp=E,271nm,0.4s						
PKIN	**Phulchoki**	**9.02**	**261**	*e*Pn	**Pn**	**19 38 33.2**	**-0.5**
PKIN				*e*Sn	**Sn**	**19 40 09.2**	**-5.2**
	comp=E,237nm,0.4s						
KKN	**Kakani**	**9.07**	**262**	*e*Pn	**Pn**	**19 38 34.2**	**-0.2**
KKN				*e*Sn	**Sn**	**19 40 11.0**	**-4.6**
	comp=E,314nm,0.3s						
DMN	**Daman**	**9.27**	**261**	*e*Pn	**Pn**	**19 38 36.8**	**-0.2**
DMN				*e*Sn	**Sn**	**19 40 16.2**	**-4.1**
GKN	**Gorkha**	**9.59**	**264**	*e*Pn	**Pn**	**19 38 40.1**	**-1.3**
GKN				*e*Sn	**Sn**	**19 40 21.8**	**-6.5**
	comp=E,225nm,0.3s						
LZH	**Lanzhou**	**9.73**	**44**	P	**Pn**	**19 38 44.0**	**+0.7**
LZH				AP		19 38 48.8	
LZH				XP		19 38 52.8	
LZH				S	**Sn**	**19 40 34.4**	**+2.8**
LZH				XS		19 40 40.2	
LZH				AMB	AMB		
	comp=Z,250nm,1.0s						
LZH				AMB	AMB		
	comp=Z,1μm,4.0s						
LZH				Smax			
	comp=N,263nm,1.3s						
LZH				Smax			
	comp=E,289nm,1.2s						
LZH				LR	LR		
	comp=E,2μm,11.3s						
LZH				LR	LR		
	comp=Z,2μm,12.4s						
BOK	**Bokaro**	**10.20**	**239**	*i* P	**Pn**	**19 38 48.6**	**-1.2**
BOK				*i* x	x	19 40 39.6	
DANN	**Dangsing**	**10.29**	**267**	*e*Pn	**Pn**	**19 38 48.3**	**-2.8**
DANN				*e*Sn	**Sn**	**19 40 38.5**	**-7.1**
	comp=Z,173nm,0.3s						
GYA	**Guiyang**	**10.34**	**104**	⇓*i*P	**Pn**	**19 38 52.8**	**+1.1**
GYA				AP		19 39 01.2	
GYA				S	**Sn**	**19 40 44.9**	**-1.9**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				AMB	AMB		
	comp=Z,180nm,5.4s						
GYA				LR	LR		
	comp=N,490nm,12.5s						
GYA				LR	LR		
	comp=E,440nm,11.7s						
GYA				LR	LR		
	comp=Z,480nm,10.2s						
KOLN	**Koldanda**	**10.54**	**264**	*e*Pn	**Pn**	**19 38 52.4**	**-2.0**
KOLN				*e*Sn	**Sn**	**19 40 44.3**	**-7.2**
	comp=Z,260nm,0.4s						
GTA	**Gaotai**	**10.63**	**19**	*e*P	**Pn**	**19 38 54.9**	**-0.7**
GTA				AP		19 39 00.2	
GTA				XP		19 39 04.5	
GTA				S	**Sn**	**19 40 51.9**	**-1.8**
GTA				XS		19 41 00.0	
GTA				SS		19 41 05.4	
GTA				AMB	AMB		
	comp=Z,14nm,1.1s						
GTA				AMB	AMB		
	comp=Z,77nm,8.1s						
GTA				LR	LR		
	comp=N,1μm,12.9s						
GTA				LR	LR		
	comp=E,424nm,12.6s						
GTA				LR	LR		
	comp=Z,1μm,16.8s						
CHG	**Chiang Mai**	**11.00**	**162**	PG	**Pn**	**19 39 03.3**	**+2.5**
CHG				SG		19 39 08.2	
CHTO	**Chiang Mai**	**11.00**	**162**	*e*Pn	**Pn**	**19 39 01.6**	**+0.8**
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**11.00**	**162**	*e*P	**Pn**	**19 39 01.6**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
PYUN	**Piuthan**	**11.01**	**266**	*e*Pn	**Pn**	**19 38 58.3**	**-2.5**
CM31	**Chiang Mai Arr**	**11.34**	**163**	*e*Pn	**Pn**	**19 39 07.7**	**+2.2**
CMAR	**Chiang Mai Arr**	**11.34**	**163**	P	**Pn**	**19 39 06.3**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=335,slow=12,SNR=74						
CMAR				LR	LR	19 43 55.7	
	comp=Z,654nm,19.2s,baz=323,slow=40						
CMAR	**Chiang Mai Arr**	**11.34**	**163**	*i* P	**Pn**	**19 39 07.0**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	**Xi'an**	**12.38**	**65**	P	**Pn**	**19 39 18.9**	**-0.6**
XAN				AP		19 39 26.4	
XAN				XP		19 39 29.5	
BWNR	**Bhubaneshwar**	**12.58**	**226**	*e*P	**Pn**	**19 39 20.0**	**-2.4**
LGTI	**Lohaghat**	**13.25**	**274**	*e*P	**Pn**	**19 39 32.8**	**+1.3**
LGTI				*e*S	**Sn**	**19 41 47.5**	**-10**
PTH	**Pithoragarh**	**13.27**	**274**	*ex*	x	19 39 33.2	
PTH				*e*S	**Sn**	**19 41 45.0**	**-13**
NST	**Nakhon Sawan**	**14.32**	**161**	P	**Pn**	**19 39 44.3**	**-1.8**
	comp=Z,25nm,0.5s						
KALG	**Kalgarh**	**14.54**	**275**	*e*P	**Pn**	**19 39 49.6**	**+0.5**
KALG				AMb	AMB	19 39 56.9	
	comp=Z,38nm,0.6s						
KLP	**Kalpa**	**14.98**	**283**	*e*P	**Pn**	**19 39 53.8**	**-1.3**
DDI	**Dehra Dun**	**15.12**	**278**	*e*P	**Pn**	**19 39 54.2**	**-2.7**
DDI				*e*P		19 39 54.2	
DDI				*ex*	x	19 42 33.5	
WMQ	**Urumqi**	**15.68**	**339**	P	**Pn**	**19 40 03.6**	**-0.5**
WMQ				AP	pP	19 40 09.6	-5.7
WMQ				XP	sP	19 40 13.6	-5.3
WMQ				S	**Sn**	**19 42 56.0**	**-0.9**
WMQ				SS		19 43 15.0	
WMQ				AMB	AMB		
	comp=Z,35nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,127nm,3.0s						
WMQ				LR	LR		
	comp=N,296nm,6.0s						
WMQ				LR	LR		
	comp=E,201nm,5.0s						
WMQ				LR	LR		
	comp=Z,378nm,5.0s						
SMLA	**Simla**	**15.89**	**281**	*e*P	**Pn**	**19 40 04.7**	**-2.2**
SMLA				AMb	AMB	19 40 06.9	
	comp=Z,18nm,0.3s						
SMLA				*i* x	x	19 42 50.8	
NDI	**New Delhi**	**15.96**	**272**	*ex*	x	19 40 13.5	
NDI				*ex*	x	19 42 51.5	
VIS	**Vishakhapatnam**	**16.05**	**226**	*e*P	**Pn**	**19 40 08.5**	**-0.5**
VIS				AMb	AMB	19 40 10.7	
	comp=Z,39nm,0.7s						
AYAN	**Aya Nagar**	**16.07**	**271**	*e*P	**Pn**	**19 40 08.0**	**-1.1**
AYAN				AMb	AMB	19 40 20.0	
	comp=Z,12nm,0.6s						
BTO	**Baotou**	**16.34**	**43**	*e*P	**Pn**	**19 40 09.1**	**-3.6**
WHN	**Wuhan**	**16.43**	**81**	⇑P	**Pn**	**19 40 12.1**	**-1.7**
WHN				XP	sP	19 40 21.0	-6.2
WHN				PP		19 40 26.5	
WHN				*e*S	**Sn**	**19 43 16.5**	**+1.2**
WHN				AMB	AMB		
	comp=Z,52nm,0.6s						
WHN				AMB	AMB		
	comp=Z,702nm,4.8s						
WHN				LR	LR		
	comp=Z,916nm,17.6s						
KUDL	**Kundal**	**16.67**	**270**	*e*P	**Pn**	**19 40 15.8**	**-1.1**
QIZ	**Qiongzhong**	**16.68**	**125**	P	**Pn**	**19 40 18.8**	**+1.7**
QIZ				S	**Sn**	**19 43 25.1**	**+3.5**
QIZ				LR	LR		
	comp=Z,417nm,13.7s						
NGP	**Nagpur**	**16.93**	**245**	*ex*	x	19 40 11.8	
NGP				*ex*	x	19 40 12.2	
	comp=Z,19nm,0.7s						
NGP				*ex*	x	19 43 11.7	
DLH	**Dalhousie**	**17.00**	**286**	*e*P	**Pn**	**19 40 23.0**	**+2.0**
THN	**Thein Dam**	**17.20**	**285**	*e*P	**Pn**	**19 40 22.9**	**-0.6**
BHPL	**Bhopal**	**17.27**	**253**	*e*P	**Pn**	**19 40 21.9**	**-2.5**
BHPL				*ex*	x	19 43 21.0	
KHET	**Khetri**	**17.28**	**270**	*e*P	**Pn**	**19 40 23.7**	**-0.8**
HHC	**Hu-ho-hao-te**	**17.43**	**45**	*e*P	**Pn**	**19 40 24.5**	**-1.7**
HHC				AP	pP	19 40 30.6	-4.1
HHC				XP	sP	19 40 35.4	-2.8
HHC				PP		19 40 38.9	
HHC				S	**Sn**	**19 43 36.1**	**-3.2**
HHC				XS	sS	19 43 43.9	-15
HHC				SS		19 43 57.6	
HHC				PCP	PcP	19 45 07.1	+0.5
HHC				AMB	AMB		
	comp=Z,18nm,0.7s						
HHC				AMB	AMB		
	comp=Z,116nm,5.5s						
HHC				LR	LR		
	comp=N,995nm,14.3s						
HHC				LR	LR		
	comp=E,668nm,11.3s						
HHC				LR	LR		
	comp=Z,1μm,13.7s						
AJM	**Ajmer**	**18.61**	**266**	*e*P	**Pn**	**19 40 40.4**	**-0.4**
AJM				AMb	AMB	19 40 43.9	
	comp=Z,38nm,0.8s						
AJM				*ex*	x	19 43 49.7	
AKL	**Akola**	**18.78**	**247**	*e*P	**Pn**	**19 40 41.6**	**-1.4**
KSH	**Kashi**	**18.94**	**307**	*e*P	**Pn**	**19 40 44.3**	**-0.4**
KSH				*e*AP	pP	19 40 50.1	-1.3
KSH				*e*XP	sP	19 40 54.1	-0.8
KSH				*e*PP		19 41 00.8	
KSH				*e*S	**Sn**	**19 44 08.5**	**-7.4**
KSH				*e*XS	sS	19 44 18.1	-11
KSH				*e*SS		19 44 33.0	
KSH				*e*PCP	PcP	19 45 12.2	+3.0
KSH				*e*SCP	ScP	19 48 44.4	+1.4
KSH				*e*PCS	PcS	19 48 48.4	+2.4
KSH				*e*SCS	ScS	19 52 24.2	-0.2
KSH				AMB	AMB		
	comp=Z,40nm,0.5s						
KSH				LR	LR		
	comp=N,589nm,5.8s						
KSH				LR	LR		
	comp=E,764nm,8.2s						
KSH				LR	LR		
	comp=Z,569nm,6.5s						
HYB	**Hyderabad**	**19.52**	**236**	*e*P	**Pn**	**19 40 51.5**	**-0.4**
HYB				*e*S	**Sn**	**19 44 34.0**	**+3.7**
HYB	**Hyderabad**	**19.52**	**236**	*i* P	**Pn**	**19 40 51.5**	**-0.4**
HYB				*e*S	**Sn**	**19 44 27.5**	**-2.8**
BJT	**Baijiatuau**	**20.02**	**53**	*e*P	**P**	**19 40 56.0**	**+0.2**
	comp=Z,33nm,0.7s						
BJT	**Baijiatuau**	**20.02**	**53**	*e*P	**P**	**19 40 56.0**	**+0.2**
BJT				pmax	pmax		
	comp=Z,33nm,0.7s						
BJI	**Beijing**	**20.04**	**52**	P	**P**	**19 40 56.0**	**0.0**
BJI				S	**S**	**19 44 39.1**	**-0.7**
BJI				AMB	AMB		
	comp=Z,60nm,0.7s						
BJI				LR	LR		
	comp=N,555nm,19.0s,MS4.1						
BJI				LR	LR		
	comp=E,510nm,14.4s,MS4.1						
BJI				LR	LR		
	comp=Z,666nm,22.3s						
ULHL	**Ulahol**	**20.12**	**315**	P	**P**	**19 40 59.3**	**+2.4**
	SNR=12						
MK31	**Makanchi Array**	**20.18**	**333**	*e*Pn	**P**	**19 40 57.8**	**+0.3**
MKAR	**Makanchi Array**	**20.18**	**333**	P	**P**	**19 40 57.7**	**+0.3**
	comp=Z,30nm,0.5s,baz=137,slow=14,SNR=299						
MKAR				LR	LR	19 49 39.6	
	comp=Z,318nm,20.1s,MS3.7,baz=159,slow=39						

EKS2 **Erkin-Say** 21.89 313 P **P** 19 41 17.4 +1.4
SNR=26
SSE **Sheshan** 22.29 79 P **P** **19 41 21.7 +1.3**
SSE S **S** **19 45 23.8 -0.5**
SSE XS sS 19 45 33.1 -3.3
SSE AMB AMB
comp=Z,27nm,0.7s,mb4.8
SSE AMB AMB
comp=Z,99nm,2.8s,mb4.8
SSE LR LR
comp=N,182nm,16.2s,MS3.6
SSE LR LR
comp=E,22nm,16.6s,MS3.6
SSE LR LR
comp=Z,128nm,20.5s,MS3.3
POO **Poona** 22.46 246 *eP* **P** **19 41 23.5 +1.3**
POO *ex* x 19 46 01.5
MOY **Mondy** 22.64 9 *eP* **P** **19 41 24.2 +0.4**
MOY pmax pmax
comp=Z,32nm,2.1s,mb4.4
KBL **Kabul** 22.95 290 *eP* **P** **19 41 27.1 -0.2**
comp=Z,29nm,0.7s,mb4.8
KBL *eS* **S** **19 45 32.5 -3.3**
KBL **Kabul** 22.95 290 *eP* **P** **19 41 27.1 -0.2**
KBL *eS* **S** **19 45 32.5 -3.3**
KBL pmax pmax
comp=Z,29nm,0.7s,mb4.8
TLY **Talaya** 23.10 13 P **P** **19 41 28.8 +0.1**
TLY **Talaya** 23.10 13 *eP* **P** **19 41 34.3 +5.7**
TLY *e* 19 41 48.5
TLY *eS* **S** **19 45 33.8 -4.0**
TLY *eSS* 19 46 21.9
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.3
TLY MLR MLR
comp=Z,506nm,17.0s,MS4.0
BOM **Bombay** 23.10 248 *eP* **P** **19 41 21.8 -7.2**
BOM *ex* x 19 41 26.1
comp=Z,146nm,1.4s
BOM *eS* **S** **19 45 30.9 -7.5**
YHNB **Yeheng** 23.55 95 *eP* **P** **19 41 31.5 -2.0**
comp=Z,38nm,0.7s,mb4.9
KK31 **Karatay Array** 24.21 311 P **P** **19 41 41.0 +1.6**
KK31 pmax pmax
comp=Z,13nm,0.5s,mb4.6
GOA **Goa** 24.24 240 *eP* **P** **19 41 39.6 -0.3**
KURK **Kurchatov** 24.78 334 P **P** **19 41 43.5 -0.9**
baz=138,slow=12
KURK **Kurchatov** 24.78 334⇑ *eP* **P** **19 41 44.2 -0.3**
comp=Z,64nm,1.3s,mb5.0
KURK **Kurchatov** 24.78 334 *d iP* **P** **19 41 44.8 +0.3**
KOD **Kodaikanal** 25.41 225 *eP* **P** **19 41 52.1 +1.6**
KOD AMb AMB 19 41 55.0
comp=Z,42nm,0.7s,mb5.0
ZAA0 **Zalesovo Array** 25.73 345⇑ *iP* **P** **19 41 52.8 -0.3**
ZALV **Zalesovo Beam** 25.73 345 P **P** **19 41 53.0 -0.2**
comp=Z,53nm,0.6s,mb5.3,baz=162,slow=9.2,SNR=140
ZALV LR LR 19 53 02.5
comp=Z,158nm,21.6s,MS3.5,baz=228,slow=39
KRAR **Krasnoyarsk** 26.67 357 *eP* **P** **19 42 01.4 -0.2**
KRAR pmax pmax
comp=Z,21nm,1.3s,mb4.5
NVS **Novosibirsk** 26.92 344⇑ *iP* **P** **19 42 03.0 -0.8**
NVS *e* 19 42 21.0
NVS *e* 19 42 55.6
NVS pmax pmax
comp=N,20nm,1.1s
NVS pmax pmax
comp=E,11nm,1.1s
NVS pmax pmax
comp=Z,25nm,1.1s,mb4.7
HIA **Hailar** 27.14 36 *eP* **P** **19 42 06.0 +0.2**
comp=Z,15nm,0.8s,mb4.6
HIA **Hailar** 27.14 36 *eP* **P** **19 42 06.0 +0.2**
HIA pmax pmax
comp=Z,15nm,0.8s
CN2 **Changchun** 27.88 51 *eP* **P** **19 42 12.2 -0.3**
CN2 *eXP* sP 19 42 22.8 -1.2
CN2 *eS* **S** **19 46 52.0 -2.2**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,430nm,16.0s,MS4.3
CN2 LR LR
comp=E,480nm,16.0s,MS4.3
CN2 LR LR
comp=Z,550nm,16.0s,MS4.2
KSRS **Korea Array** 28.17 65 P **P** **19 42 13.2 -2.1**
comp=Z,8.1nm,0.6s,mb4.5,baz=257,slow=8.6,SNR=35
KSRS LR LR 19 54 56.4
comp=Z,71nm,18.6s,MS3.3,baz=80,slow=40
KSRS **Korea Array** 28.17 65 P **P** **19 42 13.2 -2.1**
KSRS pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
KSRS MLR MLR
comp=Z,71nm,18.6s,MS3.3
VOSK **Vostochnaya** 29.46 329 P **P** **19 42 26.5 0.0**
VOSK pmax pmax
comp=Z,13nm,1.0s,mb4.6
BVA0 **Borovoye Array** 29.93 329 *i* P **P** **19 42 30.9 +0.2**
BVA0 pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
BVAR **Borovoye Array** 29.93 329 P **P** **19 42 31.2 +0.5**
comp=Z,2.4nm,0.4s,mb4.2,baz=132,slow=10.0,SNR=30
BVAR PcP PcP 19 45 32.9 +0.1
comp=Z,0.9nm,0.5s,baz=146,slow=3.3,SNR=3.8
BVAR LR LR 19 55 43.6
comp=Z,212nm,20.9s,MS3.8,baz=137,slow=39
BVAR **Borovoye Array** 29.93 329 P **P** **19 42 31.2 +0.5**
BVAR 19 45 32.9
BRVK **Borovoye** 30.00 329 *eP* **P** **19 42 31.8 +0.5**
comp=Z,14nm,0.9s,mb4.7
BRVK **Borovoye** 30.00 329 *eP* **P** **19 42 31.8 +0.5**
BRVK pmax pmax
comp=Z,14nm,0.9s,mb4.7
MDJ **Mudanjiang** 30.96 51 P **P** **19 42 40.0 +0.1**
MDJ XP sP 19 42 48.6 -2.7
MDJ S **S** **19 47 42.7 +0.1**
MDJ AMB AMB
comp=Z,11nm,1.8s,mb4.4
MDJ AMB AMB
comp=Z,80nm,3.6s
MDJ LR LR
comp=N,84nm,24.8s,MS3.5
MDJ LR LR
comp=E,100nm,22.4s,MS3.5
MDJ LR LR
comp=Z,160nm,20.1s,MS3.7
MDJ **Mudanjiang** 30.96 51 P **P** **19 42 37.5 -2.4**
BOD **Bodaibo** 31.22 19 *eP* **P** **19 42 41.9 -0.1**
BOD pmax pmax
comp=Z,12nm,1.5s,mb4.5
AB31 **Akbulak array** 33.45 316 P **P** **19 43 02.5 +0.8**
AB31 pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
KLR **Kul'dur** 33.93 44 *eP* **P** **19 43 00.0 -5.8**
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s,MS5.0
AKTK **Aktyubinsk** 35.06 317 P **P** **19 43 16.5 +0.9**
AKTK LR LR 19 59 25.1
AKTO **Aktyubinsk** 35.06 317 P **P** **19 43 16.5 +0.9**
comp=Z,7.9nm,0.5s,mb4.9,baz=104,slow=9.3,SNR=28
AKTO LR LR 19 59 25.1
comp=Z,154nm,20.7s,MS3.7,baz=325,slow=39
PBKI **Pangkalan Bun** 35.49 151 P **P** **19 43 30.4 +11**
comp=Z,61nm,1.4s,mb5.3
HABR **Khabarovsk** 35.72 47 *eP* **P** **19 43 18.0 -3.3**
HABR *e* 19 43 28.3
HABR *eS* **S** **19 48 53.3 -3.1**
HABR *e* 19 49 10.5
HABR *e* 19 51 35.9
HABR *e* 19 53 34.9
MAJO **Matsushiro** 36.35 67 *eP* **P** **19 43 25.1 -1.8**
comp=Z,8.3nm,0.8s,mb4.7
MAJO **Matsushiro** 36.35 67 *eP* **P** **19 43 25.1 -1.7**
MAJO pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MAT **Matsushiro** 36.35 67 P **P** **19 43 24.6 -2.2**
MAT *eS* **S** **19 49 07.6 +1.3**
MJAR **Matsushiro Arr** 36.35 67 P **P** **19 43 25.6 -1.2**
comp=Z,3.1nm,0.6s,mb4.4,baz=274,slow=8.7,SNR=15
MJAR LR LR 19 58 52.2
comp=Z,63nm,18.8s,MS3.4,baz=320,slow=37
MJAR **Matsushiro Arr** 36.35 67 P **P** **19 43 25.6 -1.2**
MJAR LR LR 19 58 52.1
SVE **Sverdlovsk** 36.70 328⇓ *eP* **P** **19 43 30.4 +0.8**
SVE pmax pmax
comp=Z,28nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,315nm,15.0s,MS4.2
ARU **Arti** 37.46 327⇑ *eP* **P** **19 43 35.7 -0.3**
comp=Z,21nm,1.3s,mb4.8
ARU **Arti** 37.46 327 *c iP* **P** **19 43 36.4 +0.4**
ARU *e* 19 45 02.4
ARU *e* 19 45 49.5
ARU *eS* **S** **19 49 25.9 +3.2**
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.7
YAK **Yakutsk** 39.58 25 *eP* **P** **19 43 53.1 -0.7**
comp=Z,47nm,0.8s,mb5.3
YAK **Yakutsk** 39.58 25 *eP* **P** **19 43 52.6 -1.2**
YAK pmax pmax
comp=Z,30nm,0.8s,mb5.1
YAK pmax pmax
comp=E,12nm,1.3s
YAK pmax pmax
comp=N,5.0nm,0.9s
YSS **Yuzh-Sakhalins** 40.45 51 *eP* **P** **19 44 00.5 -0.7**
comp=N,36nm,1.2s,mb5.0
YSS **Yuzh-Sakhalins** 40.45 51⇑ *eP* **P** **19 44 01.2 +0.1**
YSS pmax pmax
comp=Z,51nm,1.6s,mb5.0
GNI **Garni** 42.51 299 *eP* **P** **19 44 17.6 -0.5**
VRHR **Novokhopersk** 45.27 314 *eP* **P** **19 44 40.4 +0.2**
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.7s
TIXI **Tiksi** 46.07 14 *eP* **P** **19 44 45.0 -1.2**
comp=E,12nm,0.6s,mb5.0
TIXI **Tiksi** 46.07 14 *eP* **P** **19 44 45.3 -0.9**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
VORD **Divnogorie** 46.72 314 *eP* **P** **19 44 51.8 +0.2**
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,20nm,0.5s
VSR **Storozhevoye** 46.82 314 *eP* **P** **19 44 51.9 -0.5**
VSR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VSR pmax pmax
comp=E,3.0nm,0.5s
KLMR **Klimovskoe** 48.31 327 *i* **P** **19 45 04.1 +0.3**
KLMR pmax pmax
comp=Z,40nm,0.9s,mb5.5
OBN **Obninsk** 48.79 319 *eP* **P** **19 45 07.8 +0.2**
comp=Z,27nm,0.5s,mb5.5
OBN **Obninsk** 48.79 319⇑ *eP* **P** **19 45 08.1 +0.5**
OBN *e* 19 46 59.4
OBN *eS* **S** **19 52 04.0 -4.8**
OBN pmax pmax
comp=Z,32nm,1.0s,mb5.3
OBN MLR MLR
comp=Z,200nm,22.0s,MS4.1
SEY **Seymchan** 49.31 30 *eP* **P** **19 45 10.7 -0.8**
ASF **Jabal al Asfar** 49.84 289 P **P** **19 45 15.6 -0.4**
comp=Z,2.7nm,0.5s,mb4.6,baz=324,slow=3.3,SNR=10
PETK **Petropavlovsk-** 50.62 44 P **P** **19 45 19.7 -1.9**
comp=Z,2.6nm,0.8s,mb4.2,baz=324,slow=27,SNR=3.1
PETK LR LR 20 08 14.7
comp=Z,112nm,20.2s,MS3.9,baz=248,slow=38
PETK **Petropavlovsk-** 50.62 44 P **P** **19 45 19.7 -1.9**
PETK LR LR 20 08 14.7
MMAI **Mount Meron Ar** 50.88 290 P **P** **19 45 24.0 +0.2**
comp=Z,1.1nm,0.3s,mb4.2,baz=81,slow=6.8,SNR=7.9
EIL **Elat** 52.08 286 P **P** **19 45 33.1 +0.3**
comp=Z,21nm,0.5s,mb5.3,baz=47,slow=2.8,SNR=50
CSS **Prodhromos** 52.14 293 P **P** **19 45 33.5 +0.3**
comp=Z,54nm,1.3s,mb5.3
LVZ **Lovozero** 52.19 335⇑ *eP* **P** **19 45 33.2 +0.1**
LVZ pmax pmax
comp=Z,67nm,1.3s,mb5.4
JOF **Joensuu** 52.53 329 *ep* **P** **19 45 35.6 -0.1**
comp=Z,19nm,0.3s,mb5.5
AKASG **Malin Array Be** 53.09 313 P **P** **19 45 39.6 -0.4**
comp=Z,3.0nm,0.4s,mb4.6,baz=76,slow=6.7,SNR=24
AKASG **Malin Array Be** 53.09 313 *i* **P** **19 45 39.5 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB **Malin Array Si** 53.09 313 *eP* **P** **19 45 39.0 -0.9**
KIEV **Kiev** 53.10 313 *eP* **P** **19 45 39.2 -0.9**
comp=Z,21nm,1.1s,mb5.0
KIEV **Kiev** 53.10 313 *eP* **P** **19 45 39.2 -0.9**
KIEV pmax pmax
comp=Z,21nm,1.1s,mb5.0
KAF **Kangasniemi** 54.76 327 *ep* **P** **19 45 52.2 +0.2**
comp=Z,1.6nm,0.4s,mb4.4,baz=93,slow=7.2
KAF **Kangasniemi** 54.76 327 *eP* **P** **19 45 52.2 +0.2**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
FINES **FINESS Array B** 54.84 327 *eP* **P** **19 45 52.0 -0.6**
KEV **Kevo** 55.30 337 *ep* **P** **19 45 55.9 +0.1**
comp=Z,6.8nm,0.3s,mb5.2
KEV **Kevo** 55.30 337 *eP* **P** **19 45 55.9 +0.1**
KEV pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
ARCES **ARCESS Array B** 55.78 336 P **P** **19 45 59.7 +0.4**
comp=Z,7.7nm,0.6s,mb4.9,baz=84,slow=8.3,SNR=46
ARCES LR LR 20 13 02.4
comp=Z,117nm,18.1s,MS4.0,baz=241,slow=39
ARE0 **ARCESS Array S** 55.78 336 *eP* **P** **19 45 57.8 -1.5**
BILL **Bilibino** 55.93 25 *eP* **P** **19 46 00.5 +0.1**
comp=Z,41nm,1.0s,mb5.4
BILL **Bilibino** 55.93 25⇑ *iP* **P** **19 46 00.3 -0.1**
BILL pmax pmax
comp=Z,35nm,1.0s,mb5.3
BILL MLR MLR
comp=Z,100nm,19.0s,MS3.9
KTK1 **Kautokeino** 56.53 336 *eP* **P** **19 46 05.6 +1.0**
SUW **Suwalki** 56.56 318 *eP* **P** **19 46 05.2 +0.1**
KWP **Kalwaria** 57.36 312 *eP* **P** **19 46 11.4 +0.6**
TRO **Tromso** 58.09 336 *eP* **P** **19 46 15.9 +0.2**
CRVS **Cervenica-Dubn** 58.28 312 *eP* **P** **19 46 20.4 +3.1**
STHS **Stebnicka Huta** 58.34 312 *eP* **P** **19 46 17.6 -0.1**
SPITS **Spitsbergen Ar** 59.22 346 P **P** **19 46 23.3 0.0**
comp=Z,6.5nm,0.6s,mb4.8,baz=351,slow=10,SNR=12
MOR8 **Moi Rana** 59.90 332 *eP* **P** **19 46 28.1 -0.1**
comp=Z,38nm,2.0s,mb5.1
MOR8 **Moi Rana** 59.90 332 *eP* **P** **19 46 28.1 -0.1**
MOR8 AMb AMB 19 46 40.4
comp=Z,38nm,2.0s,mb5.1
VYHS **Vyhne** 60.07 312 *eP* **P** **19 46 28.1 -1.6**
LOF **Lofoten** 60.09 335 *eP* **P** **19 46 31.1 +1.6**
comp=Z,98nm,1.6s,mb5.6
LOF **Lofoten** 60.09 335 *eP* **P** **19 46 31.1 +1.6**
LOF AMb AMB 19 46 35.0
comp=Z,98nm,1.6s,mb5.6
OKC **Ostrava-Krasne** 60.24 313 *eP* **P** **19 46 31.0 +0.2**
OKC *epP* pP 19 46 42.5 +3.1
KOLL **Kolacno** 60.33 312 *eP* **P** **19 46 32.6 +1.1**
STOK **Stokkvaagen** 60.46 333 *eP* **P** **19 46 32.0 0.0**
comp=Z,164nm,1.7s,mb5.8
STOK **Stokkvaagen** 60.46 333 *eP* **P** **19 46 32.0 0.0**
STOK AMb AMB 19 46 41.7
comp=Z,164nm,1.7s,mb5.8
MORC **Moravsky Berou** 60.64 313 *eP* **P** **19 46 33.3 -0.2**
comp=Z,7.9nm,1.0s,mb4.8
MORC *e* 19 46 43.7
MORC **Moravsky Berou** 60.64 313 *eP* **P** **19 46 33.3 -0.2**
MORC *e* 19 46 43.7
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
MODS **Modra-Piesok** 61.11 312 *eP* **P** **19 46 33.9 -2.9**
DPC **Dobruska-Polom** 61.29 314 *eP* **P** **19 46 38.8 +0.8**
DPC *epP* pP 19 46 49.1 +2.6
UPC **Upice** 61.45 314 *eP* **P** **19 46 40.3 +1.3**
UPC *epP* pP 19 46 50.2 +2.6
WRAB **Tennant Creek** 61.74 138 *eP* **P** **19 46 41.5 +0.2**
comp=Z,9.2nm,0.6s,mb5.1
WRAB *e* pP 19 46 48.8 -1.0
WRAB **Tennant Creek** 61.74 138 *eP* **P** **19 46 41.5 +0.2**
WRAB pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
WRA **Warramunga Arr** 61.74 138 P **P** **19 46 41.5 +0.2**
comp=Z,2.2nm,0.5s,mb4.5,baz=322,slow=8.3,SNR=49
WB2 **Warramunga Arr** 61.75 138 *eP* **P** **19 46 41.4 +0.1**
WB2 *e* pP 19 46 49.9 0.0
NB2 **NORSAR Subarra** 62.02 327 P **P** **19 46 42.3 -0.4**
comp=Z,18nm,0.9s,mb5.2,baz=81,slow=6.9
NOA **NORSAR Array B** 62.02 327 P **P** **19 46 42.6 0.0**
comp=Z,14nm,0.8s,mb5.1,baz=80,slow=6.7,SNR=28
NOA LR LR 20 15 34.0
comp=Z,74nm,20.9s,MS3.8,baz=0,0,slow=38
CONA **Conrad Observa** 62.13 312⇑ *iP* **P** **19 46 44.0 +0.3**
comp=Z,8.6nm,0.9s,mb4.9
CSNA **Conrad Observa** 62.13 312⇑ *iP* **P** **19 46 43.9 +0.3**
comp=Z,8.6nm,1.0s,mb4.8
NAO01 **NORSAR Array S** 62.21 327 *eP* **P** **19 46 43.3 -0.7**
comp=Z,6.7nm,0.7s,mb4.9
PVCC **Panska Ves** 62.34 315 *eP* **P** **19 46 46.0 +1.0**
RUE **Ruedersdorf** 62.38 317 *eP* **P** **19 46 45.6 +0.4**
comp=Z,22nm,0.7s,mb5.4
PRU **Pruhonice** 62.49 314 *eP* **P** **19 46 46.5 +0.5**
PRU *epP* pP 19 46 58.0 +3.4
BRG **Berggiesshubel** 62.65 315 *eP* **P** **19 46 47.6 +0.5**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
BRG **Berggiesshubel** 62.65 315 *eP* **P** **19 46 47.3 +0.2**
comp=Z,9.0nm,1.0s,mb4.8
BRG *ePP* PP 19 48 59.0 -5.7
BRG **Berggiesshubel** 62.65 315 *eP* **P** **19 46 47.6 +0.5**
comp=Z,8.5nm,1.0s,mb4.8
FBE **Freiberg** 63.00 315 *eP* **P** **19 46 50.0 +0.6**
comp=Z,14nm,1.1s,mb5.0
CLL **Collm** 63.12 316⇑ *iP* **P** **19 46 49.7 -0.5**
CLL pmax pmax
comp=Z,21nm,1.5s,mb5.0
CLL **Collm** 63.12 316 *eP* **P** **19 46 49.8 -0.4**
comp=Z,21nm,1.5s,mb5.0
CLL *epP* pP 19 47 01.8 +3.0
CLL **Collm** 63.12 316⇑ *iP* **P** **19 46 49.7 -0.5**
comp=Z,21nm,1.5s,mb5.0
GEC2 **GERESS Array S** 63.30 313 *eP* **P** **19 46 51.8 +0.4**
GEC2 **GERESS Array S** 63.30 313 *eP* **P** **19 46 51.6 +0.2**
comp=Z,8.0nm,1.0s,mb4.8
GERES **GERESS Array B** 63.30 313 P **P** **19 46 52.1 +0.7**
comp=Z,2.8nm,0.6s,mb4.6,baz=69,slow=5.3,SNR=25
GERES LR LR 20 17 00.1
comp=Z,70nm,18.1s,MS3.9,baz=355,slow=38
KHC **Kasperske Hory** 63.31 313 *eP* **P** **19 46 52.0 +0.5**
KHC *epP* pP 19 47 02.5 +2.4
TANN **Tannenbergstha** 63.68 315 *eP* **P** **19 46 54.3 +0.4**
comp=Z,8.0nm,1.2s,mb4.6
TANN *epP* pP 19 47 05.4 +2.9
TANN *ePP* PP 19 49 08.3 -5.5
WET **Wettzell** 63.75 313 *eP* **P** **19 46 55.2 +0.8**
WET *e* 19 49 11.6
WET pmax pmax
comp=Z,14nm,1.3s,mb4.8
WET **Wettzell** 63.75 313 *eP* **P** **19 46 55.2 +0.8**
comp=Z,14nm,1.3s,mb4.8
WET *ePP* PP 19 49 11.6 -2.8
WERN **Wernitzgruen** 63.76 315 *eP* **P** **19 46 55.4 +0.9**
comp=Z,8.0nm,1.1s,mb4.7
WERD **Werda** 63.77 315 *eP* **P** **19 46 54.8 +0.3**
comp=Z,12nm,1.2s,mb4.8
GUNZ **Gunzen** 63.77 315 *eP* **P** **19 46 54.9 +0.4**
comp=Z,15nm,1.1s,mb4.9
GUNZ *epP* pP 19 47 06.5 +3.4
TIP **Timpagrande** 63.88 302 P **P** **19 46 54.2 -1.2**
comp=Z,22nm,1.2s,mb5.1
ROTZ **Rotzenmuhle** 64.00 314 *eP* **P** **19 46 56.7 +0.6**
comp=Z,14nm,0.9s,mb5.0
ROTZ *epP* pP 19 47 08.1 +3.4
MANZ **Manzenberg** 64.01 314 *eP* **P** **19 46 57.3 +1.2**
comp=Z,10.0nm,1.4s,mb4.7
BSEG **Bad Segeberg** 64.05 319 *eP* **P** **19 46 57.8 +1.5**
comp=Z,34nm,1.2s,mb5.2
MUN **Mundaring** 64.14 160 *eP* **P** **19 46 56.6 -0.4**
ASAR **Alice Springs** 64.42 141 P **P** **19 46 59.5 +0.5**
comp=Z,1.4nm,0.4s,mb4.3,baz=326,slow=6.5,SNR=29
CLZ **Clausthal** 64.57 317 *eP* **P** **19 47 00.4 +0.7**
CLZ *e*PP pP 19 47 11.6 +3.2
CLZ pmax pmax
comp=Z,23nm,0.8s,mb5.3
CLZ **Clausthal** 64.57 317 *eP* **P** **19 47 00.4 +0.7**
comp=Z,23nm,0.8s,mb5.3
CLZ *epP* pP 19 47 11.6 +3.2
GRA1 **Grafenberg Arr** 64.64 314 *eP* **P** **19 47 00.9 +0.7**
comp=Z,21nm,1.2s,mb5.0
GRF **Grafenberg Arr** 64.64 314 *eP* **P** **19 47 00.9 +0.7**
GRF pmax pmax
comp=Z,21nm,1.2s,mb5.0
GRF **Grafenberg Arr** 64.64 314 *eP* **P** **19 47 00.9 +0.7**
GRF pmax pmax
comp=Z,21nm,1.2s,mb5.0
GRF **Grafenberg Arr** 64.64 314 *eP* **P** **19 47 00.9 +0.7**
comp=Z,21nm,1.2s,mb5.0
FUR **Furstenfeldbru** 65.04 313 *eP* **P** **19 47 03.5 +0.7**
FUR pmax pmax
comp=Z,44nm,1.4s,mb5.3
FUR **Furstenfeldbru** 65.04 313 *eP* **P** **19 47 03.5 +0.7**
comp=Z,44nm,1.4s,mb5.3
NWAO **Narrogin (SRO)** 65.33 160 *eP* **P** **19 47 04.2 -0.5**
comp=Z,16nm,1.2s,mb4.9
NWAO **Narrogin (SRO)** 65.33 160 *eP* **P** **19 47 04.2 -0.5**
NWAO pmax pmax
comp=Z,17nm,1.2s
STU **Stuttgart** 66.18 314 *eP* **P** **19 47 11.2 +1.0**
comp=Z,16nm,1.3s,mb4.9
CDF **Champ du Feu** 67.50 314 *eP* **P** **19 47 18.7 +0.1**
WLF **Walferdange** 67.78 315 P **P** **19 47 21.6 +1.2**
comp=Z,16nm,1.4s,mb4.9
WLF **Walferdange** 67.78 315 *eP* **P** **19 47 21.6 +1.2**
comp=Z,29nm,1.1s,mb5.2
HINF **Hinteralfeld** 67.97 313 *eP* **P** **19 47 21.5 -0.1**
BCLA **Clavier** 68.05 316 P **P** **19 47 22.5 +0.5**
comp=Z,21nm,2.1s,mb4.8
HAU **Haudompre** 68.22 314 *eP* **P** **19 47 23.1 -0.1**
HAU *e*MLR MLR
comp=Z,75nm,19.2s,MS3.6
HAU **Haudompre** 68.22 314 *eP* **P** **19 47 23.1 -0.1**
HAU MLR MLR
comp=Z,80nm,19.3s,MS4.0
PGF **Pioggiola** 68.35 307 *eP* **P** **19 47 23.9 -0.2**
GIVF **Givet** 68.44 316 *eP* **P** **19 47 24.8 +0.3**
UCC **Uccle** 68.48 317 P **P** **19 47 27.1 +2.3**
comp=Z,58nm,2.4s,mb5.2
BAIF **Baives** 68.83 316 *eP* **P** **19 47 25.7 +0.6**
LPG **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
comp=Z,8.3nm,0.5s,mb4.7
LPG **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
comp=Z,4.2nm,0.5s,mb4.6
LPG **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
LPG pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
comp=Z,19nm,0.7s,mb4.8
LPL **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
comp=Z,9.4nm,0.7s,mb4.8
LPL **La Plagne** 68.84 311 *eP* **P** **19 47 27.8 +0.7**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
MEZF **Maizieres J'vi** 68.86 315 *eP* **P** **19 47 27.4 +0.2**
CABF **La Chapelle** 68.88 312 *eP* **P** **19 47 27.2 -0.1**
SBF **Sospel** 68.96 309 *eP* **P** **19 47 28.2 +0.3**
MBDF **Montbardon** 69.10 310 *eP* **P** **19 47 28.0 -0.7**
CTA **Charters Tower** 69.41 129 *eP* **P** **19 47 30.8 -0.1**
comp=Z,6.9nm,1.2s,mb4.5
CTA **Charters Tower** 69.41 129 *eP* **P** **19 47 30.8 -0.1**
CTA pmax pmax
comp=Z,7.0nm,1.2s
CTAO **Charters Tower** 69.41 129 *eP* **P** **19 47 30.5 -0.4**
comp=Z,16nm,1.2s,mb4.8
CTAO **Charters Tower** 69.41 129 *eP* **P** **19 47 30.5 -0.4**
CTAO pmax pmax
comp=Z,16nm,1.2s,mb4.8
FRF **La Foret Royal** 69.60 309 *eP* **P** **19 47 31.6 -0.2**
ORIF **Oris-en-Rattie** 69.62 311 *eP* **P** **19 47 31.8 -0.1**
comp=Z,7.4nm,0.7s,mb4.4
ORIF *e*MLR MLR
comp=Z,122nm,20.0s,MS3.8
ORIF **Oris-en-Rattie** 69.62 311 *eP* **P** **19 47 31.8 -0.1**
comp=Z,3.7nm,0.7s,mb4.4
ORIF **Oris-en-Rattie** 69.62 311 *eP* **P** **19 47 31.8 -0.1**
ORIF pmax pmax

comp=Z,4.0nm,0.7s,mb4.5
LOR Lormes 70.06 314 *e*P **P 19 47 34.1 -0.5**
LOR *e*MLR MLR
comp=Z,78nm,23.0s,MS3.6
LOR Lormes 70.06 314 *e*P **P 19 47 34.1 -0.5**
LOR MLR MLR
comp=Z,80nm,23.0s,MS3.9
SMF Signal de Mont 70.30 313 *e*P **P 19 47 35.9 -0.2**
comp=Z,4.8nm,0.5s,mb4.4
SMF Signal de Mont 70.30 313 *e*P **P 19 47 35.9 -0.2**
comp=Z,2.4nm,0.5s,mb4.4
SMF Signal de Mont 70.30 313 *e*P **P 19 47 35.9 -0.2**
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
SSF Saint Saulge 70.36 313 *e*P **P 19 47 36.2 -0.2**
AVF Avril sur Loir 70.56 313 *e*P **P 19 47 37.6 -0.1**
KEST Kesra 70.60 301 P **P 19 47 38.0 -0.1**
comp=Z,1.2nm,0.5s,mb4.1,baz=266,slow=9.9,SNR=12
BGF Bois d'Agland 70.97 313 *e*P **P 19 47 39.6 -0.6**
TCF Toulx Ste Croi 71.48 313 *e*P **P 19 47 43.0 -0.3**
LDF La Druitiere 72.01 316 *e*P **P 19 47 46.1 -0.3**
CAF Calviac 72.12 312 *e*P **P 19 47 47.4 +0.3**
RJF Les Rejaudoux 72.32 312 *e*P **P 19 47 47.9 -0.4**
RJF *e*MLR MLR
comp=Z,64nm,23.0s,MS3.5
RJF Les Rejaudoux 72.32 312 *e*P **P 19 47 47.9 -0.4**
RJF MLR MLR
comp=Z,60nm,23.0s,MS3.8
GRR Gorron 72.54 316 *e*P **P 19 47 49.4 -0.2**
CHUM Lake Minchumin 73.05 25 *e*P **P 19 47 52.8 +0.5**
comp=Z,11nm,0.7s,mb4.9
BPAW Bear Paw Mtn. 73.42 25 *e*P **P 19 47 54.5 0.0**
comp=Z,20nm,1.0s,mb5.0
PPLA Purkeypile 73.63 26 *e*P **P 19 47 55.9 +0.2**
comp=Z,16nm,0.6s,mb5.1
KTH Kantishna Hill 73.75 25 *e*P **P 19 47 56.2 -0.2**
comp=Z,5.8nm,0.8s,mb4.6
COLA College 74.10 23 *e*P **P 19 47 58.3 -0.1**
comp=Z,13nm,0.9s,mb4.9
COLA College 74.10 23 ⇓*i*P **P 19 47 58.6 +0.2**
MCK McKinley 74.38 25 *e*P **P 19 47 59.8 -0.3**
comp=Z,5.8nm,0.7s,mb4.6
MCK McKinley 74.38 25 *e*P **P 19 47 59.8 -0.3**
MCK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ETSF Etsaut 74.69 311 *e*P **P 19 48 02.8 +0.5**
comp=Z,4.2nm,0.4s,mb4.5
ETSF Etsaut 74.69 311 *e*P **P 19 48 02.8 +0.5**
comp=Z,2.1nm,0.4s,mb4.4
ETSF Etsaut 74.69 311 *e*P **P 19 48 02.8 +0.5**
ETSF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
SJPF Ste Jean 75.03 311 *e*P **P 19 48 04.0 -0.3**
STKA Stephens Creek 75.06 141 *e*P **P 19 48 04.3 -0.1**
comp=Z,2.3nm,1.1s,mb4.0
STKA *e* pP 19 48 12.8 -0.4
STKA Stephens Creek 75.06 141 P **P 19 48 04.3 -0.1**
comp=Z,2.1nm,0.8s,mb4.1,baz=300,slow=4.4,SNR=6.0
STKA LR LR 20 22 30.0
comp=Z,62nm,20.4s,MS3.9,baz=26,slow=37
STKA Stephens Creek 75.06 141 *e*P **P 19 48 03.9 -0.5**
comp=Z,12nm,1.1s,mb4.8
PMR Palmer 75.55 26 *e*P **P 19 48 04.7 -2.2**
comp=Z,8.7nm,0.7s,mb4.8
PMR Palmer 75.55 26 *e*P **P 19 48 04.7 -2.2**
PMR pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
RES Resolute Bay 75.97 3 *e*P **P 19 48 08.6 -0.5**
comp=Z,194nm,0.9s,mb6.0
RES Resolute Bay 75.97 3 *e*P **P 19 48 08.6 -0.5**
RES pmax pmax
comp=Z,194nm,0.9s,mb6.0
INK Inuvik 76.10 17 *e*P **P 19 48 09.7 -0.2**
comp=Z,436nm,1.2s
INK Inuvik 76.10 17 *e*P **P 19 48 09.7 -0.2**
INK pmax pmax
comp=Z,435nm,1.2s
ESDC Sonseca Array 78.44 309 P **P 19 48 23.2 -0.4**
comp=Z,0.3nm,0.4s,mb3.6,baz=46,slow=5.1,SNR=5.5
LSZ Lusaka 78.59 245 P **P 19 48 24.6 -0.1**
comp=Z,2.6nm,0.4s,mb4.5,baz=44,slow=5.6,SNR=8.6
SFJD Kangerlussuaq 80.54 347 *i*P **P 19 48 32.7 -1.8**
SFJD pmax pmax
comp=Z,22nm,1.0s,mb5.0
SFJD Kangerlussuaq 80.54 347 *i*P **P 19 48 32.7 -1.8**
comp=Z,22nm,1.0s,mb5.0
TOO Toolangi 81.44 142 *e*P **P 19 48 40.6 +1.0**
MDT Midelt 82.24 303 P **P 19 48 44.1 -0.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=86,slow=8.1,SNR=3.4
YKA Yellowknife Ar 85.32 13 P **P 19 48 58.0 -1.3**
comp=Z,1.4nm,0.8s,mb4.2,baz=301,slow=6.6,SNR=3.0
LBTB Lobatse 86.13 239 *e*P **P 19 49 03.5 -0.4**
comp=Z,4.8nm,0.5s,mb5.0
LBTB Lobatse 86.13 239 *e*P **P 19 49 03.5 -0.4**
LBTB pmax pmax
comp=Z,5.0nm,0.5s,mb5.0
TOA0 Torodi Ar. Sit 86.86 283 *e*P **P 19 49 07.0 -0.8**
TORD Torodi Ar. Bea 86.86 283 P **P 19 49 07.8 0.0**
comp=Z,1.7nm,0.7s,mb4.4,baz=52,slow=5.5,SNR=28
BOSA Boshof 88.42 236 LR LR 20 27 45.5
comp=Z,69nm,18.9s,MS4.1,baz=257,slow=35
YMR Madison River 102.46 19 *e*P Pdif 19 50 11.3 -7.3
comp=Z,17nm,0.8s
TXAR Lajitas Array 118.82 19 PKP PKPdf 19 55 10.6 -0.8
comp=Z,0.1nm,0.4s,baz=126,slow=0.8,SNR=3.6
VNA2 Neumayer--Watz 121.66 202 *e*PKPdf PKPdf 19 55 15.6 +0.2
baz=42,slow=2.1
VNA2 *e* 19 55 24.6
VNA2 *e* 19 55 29.5
VNA2 *e* 19 56 50.9
VNA1 Neumayer--Stat 121.95 202 *e*PKPdf PKPdf 19 55 16.4 +0.5
VNA1 *e* 19 55 25.6
VNA1 *e* 19 55 30.0
VNA3 Neumayer Olymp 122.38 202 *e*PKPdf PKPdf 19 55 16.4 -0.4
VNA3 *e* 19 55 25.4
VNA3 *e* 19 55 30.4
VNA3 *e* 19 56 55.2
BDFB Brasilia 143.74 284 PKP PKPdf 19 55 55.7 -2.6
comp=Z,1.6nm,0.8s,baz=73,slow=25,SNR=3.4
ROSC El Rosal 144.56 342 PKP PKPdf 19 55 59.7 -0.2
comp=Z,16nm,0.6s,baz=92,slow=23,SNR=9.7
ROSC El Rosal 144.56 342 *e*PKPdf PKPdf 19 55 58.9 -1.0
OTAV Otavalo 149.97 348 *e*PKPbc PKPbc 19 56 14.0 +0.2
SIV San Ignacio 154.62 297 PKPbc PKPbc 19 56 24.2 +0.1
comp=Z,1.4nm,0.9s,baz=94,slow=6.1,SNR=5.4
ATAH Atahualpa 156.99 344 PKPab PKPab 19 56 48.6 -0.2
comp=Z,5.5nm,0.6s,baz=3.1,slow=6.4,SNR=4.8

IDC 10 20:08:12.3±62.0, 2352S×17501W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=1163.0km s-min=168.7km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.11**	**248**	P	P	20 15 41.7	+0.2
	0.5nm,0.4s,baz=56,slow=7.3,SNR=2.6						
ASAR	**Alice Springs**	**46.61**	**259**	P	P	20 16 42.1	-0.4
	0.3nm,0.5s,baz=99,slow=7.7,SNR=14						
WRA	**Warramunga Arr**	**47.00**	**264**	P	P	20 16 45.7	+0.1
	0.8nm,0.5s,baz=104,slow=8.2,SNR=20						

*CSEM **10** 21:09:11.6, 2009N×3994E, h26km, ML3.8, After SNSN*
SGS 10 21:09:11.6, 2009N×3994E, h26km, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHS	**Al Lith**	**0.48**	**67**	P	Pb	21 09 21.4	-0.2
SHBS		**0.94**	**346**	P	Pn	21 09 22.6	-6.6
FRAS	**Faraa**	**1.11**	**29**	P	Pn	21 09 29.7	-1.7
SHMS		**1.37**	**350**	P	Pn	21 09 33.5	-1.6
BLJS	**Baljurashi**	**1.58**	**94**	P	Pn	21 09 36.2	-1.6
FDAS		**1.78**	**13**	P	Pn	21 09 39.1	-1.6
FRSS	**Farasan al Kab**	**3.92**	**148**	P	Pn	21 09 57.3	-13
DJNS	**Zahran al Janu**	**4.16**	**124**	P	Pn	21 10 14.2	+0.8

*ISCJB **10** 21:10:13.5±0.4, 4378N±003×105.15W±004, h0km, mb4.0/3, Error ellipse: s-maj=4.4km s-min=4.2km az=158.3*
*IDC **10** 21:10:14.0±1.9, 4361N×10539W, h0km, mb3.9/3, mb1 3.9/5, mb1mx3.6/22, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=54.0km s-min=12.3km az=152.0*

*NEIC **10** 21:10:16.0±0.6, 4377N×10529W, h0km, ML3.3, Error ellipse: s-maj=7.0km s-min=6.2km az=126.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
ISC 10 21:10:15.4±0.3, 4378N±002×10517W±002, h0km, n98, σ1$03/149, mb4.0/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.89**	**67**	*e*Pg	**Pg**	**21 10 34.0**	**+1.6**
PHWY	**Pilot Hill**	**2.48**	**185**	*e*Pn	**Pn**	**21 10 57.0**	**0.0**
PHWY				*e*Sn	**Sn**	**21 11 28.9**	**+1.0**
RWWY	**Rawlins**	**2.57**	**216**	*e*Pn	**Pn**	**21 10 58.3**	**+0.1**
RWWY				*e*Sn	**Sn**	**21 11 30.5**	**+0.4**
LAO	**LASA Array**	**3.01**	**346**	*e*Pn	**Pn**	**21 11 04.8**	**+0.6**
RLMT	**Red Lodge**	**3.23**	**296**	*e*Pn	**Pn**	**21 11 07.4**	**+0.1**
PDAR	**Pinedale Array**	**3.36**	**254**	Pn	**Pn**	**21 11 08.6**	**-0.5**
	3.2nm,0.3s,baz=78,slow=18,SNR=36						
PDAR				Lg		21 11 52.4	
	8.2nm,0.3s,baz=76,slow=34,SNR=4.2						
PDAR	**Pinedale Array**	**3.36**	**254**	Pn	**Pn**	**21 11 08.6**	**-0.5**
PDAR				Lg		21 11 52.4	
BW06	**Boulder Array**	**3.36**	**254**	*e*Pn	**Pn**	**21 11 08.4**	**-0.6**
BW06				*e*Sn	**Sn**	**21 11 51.0**	**+1.4**
GCMT	**Greycliff**	**3.78**	**304**	*e*Pn	**Pn**	**21 11 14.9**	**0.0**
LOHW	**Long Hollow**	**3.94**	**269**	*e*Pn	**Pn**	**21 11 17.1**	**0.0**
ISCO	**Idaho Springs**	**3.99**	**185**	*e*Pn	**Pn**	**21 11 18.0**	**+0.3**
ISCO				*e*Sn	**Sn**	**21 12 06.2**	**+1.1**
MOOW	**Moose Ponds**	**4.04**	**272**	*e*Pn	**Pn**	**21 11 19.1**	**+0.7**
SNOW	**Snow King Moun**	**4.07**	**268**	*e*Pn	**Pn**	**21 11 19.5**	**+0.7**
SNOW				*e*Sn	**Sn**	**21 12 08.2**	**+1.2**
YNR	**Norris Junctio**	**4.07**	**285**	*e*Pg	**Pg**	**21 11 29.6**	**-3.7**
YFT	**Old Faithful**	**4.13**	**281**	*e*Pn	**Pn**	**21 11 19.3**	**-0.4**
YFT				*e*Pg	**Pg**	**21 11 31.2**	**-3.4**
YFT				*e*Sg	**Sg**	**21 12 25.9**	**-2.3**
REDW	**Red Top Meadow**	**4.15**	**266**	*e*Pn	**Pn**	**21 11 21.0**	**+1.1**
REDW				*e*Sg	**Sg**	**21 12 30.9**	**+2.3**
IMW	**Indian Meadow**	**4.17**	**274**	*e*Pn	**Pn**	**21 11 21.3**	**+1.0**
TPAW	**Teton Pass**	**4.21**	**268**	*e*Pn	**Pn**	**21 11 21.2**	**+0.5**
TPAW				*e*Sn	**Sn**	**21 12 12.3**	**+1.8**
DCID1	**Drake Creek**	**4.37**	**270**	*e*Pn	**Pn**	**21 11 23.3**	**+0.8**
AHID	**Auburn Hatcher**	**4.45**	**259**	*e*Pg	**Pg**	**21 11 37.3**	**-3.3**
AHID				*e*Sg	**Sg**	**21 12 36.9**	**-1.3**
RRI2	**Red Ridge**	**4.49**	**267**	*e*Pn	**Pn**	**21 11 24.5**	**-0.1**
RRI2				*e*Sn	**Sn**	**21 12 16.1**	**-1.4**
DGMT	**Dagmar**	**4.74**	**8**	*e*Pg	**Pg**	**21 11 47.0**	**+0.8**
DGMT				*e*Sg	**Sg**	**21 12 46.3**	**-1.4**
SMCO	**Snowmass**	**4.79**	**197**	*e*Pn	**Pn**	**21 11 30.4**	**+1.7**
SMCO				*e*Pg	**Pg**	**21 11 46.1**	**-1.0**
BOZ	**Bozeman (W)**	**4.97**	**294**	*e*Pn	**Pn**	**21 11 30.6**	**-0.6**
HWUT	**Hardware Ranch**	**5.19**	**247**	*e*Pn	**Pn**	**21 11 33.1**	**-1.1**
EGMT	**Eagleton**	**5.32**	**325**	*e*Pn	**Pn**	**21 11 35.7**	**-0.2**
HRY	**Holter Researc**	**5.54**	**304**	*e*Pn	**Pn**	**21 11 39.9**	**+0.9**
HRY				*e*Sg	**Sg**	**21 13 13.6**	**+0.2**
LRM	**Limekiln Ridge**	**5.57**	**294**	*e*Pn	**Pn**	**21 11 41.3**	**+1.9**
LRM				*e*Sb	**Sb**	**21 13 06.6**	**+5.9**
DAU	**Daniels Canyon**	**5.64**	**235**	*e*Pn	**Pn**	**21 11 40.9**	**+0.6**
JLU	**Jordanelle**	**5.64**	**238**	*e*Pn	**Pn**	**21 11 40.2**	**-0.2**
JLU				*e*Pg	**Pg**	**21 12 02.4**	**-1.0**
JLU				*e*Sg	**Sg**	**21 13 13.2**	**-3.3**
SPUT	**South Promonto**	**5.91**	**248**	*e*Pn	**Pn**	**21 11 44.1**	**-0.1**
SPUT				*e*Sg	**Sg**	**21 13 23.4**	**-1.9**
HVU	**Hansel Valley**	**5.94**	**253**	*e*Pn	**Pn**	**21 11 44.5**	**0.0**
SDCO	**Great Sand Dun**	**6.03**	**182**	*e*Pn	**Pn**	**21 11 46.1**	**+0.4**
SDCO				*e*Sg	**Sg**	**21 13 24.7**	**-4.3**
MPU	**Maple Canyon**	**6.11**	**234**	*e*Pg	**Pg**	**21 12 08.3**	**-4.1**
SRU	**San Rafael**	**6.16**	**223**	*e*Pn	**Pn**	**21 11 46.6**	**-0.9**
ECSD	**EROS,Sioux Fal**	**6.20**	**87**	*e*Pn	**Pn**	**21 11 49.0**	**+0.9**
ECSD				*e*Pg	**Pg**	**21 12 13.6**	**-0.5**
TMUT	**Trail Mountain**	**6.37**	**227**	*e*Pn	**Pn**	**21 11 50.5**	**+0.1**
CBKS	**Cedar Bluff**	**6.43**	**139**	*e*Pg	**Pg**	**21 12 17.7**	**-0.8**
CBKS				*e*Sg	**Sg**	**21 13 41.1**	**-0.6**
HLID	**Hailey**	**6.71**	**271**	*e*Pn	**Pn**	**21 11 55.9**	**+0.8**
DUG	**Dugway**	**6.72**	**240**	*e*Pn	**Pn**	**21 11 54.3**	**-1.0**
DUG				*e*Pg	**Pg**	**21 12 28.0**	**+3.9**
MVCO	**Mesa Verde**	**7.03**	**202**	*e*Pn	**Pn**	**21 12 00.6**	**+1.1**
MSU	**Marysvale**	**7.45**	**228**	*e*Pn	**Pn**	**21 12 04.7**	**-0.7**
MSU				*e*Pg	**Pg**	**21 12 34.0**	**-4.1**
MSU				*e*Sg	**Sg**	**21 14 14.9**	**+0.2**
AGMN	**Agassiz Refuge**	**7.90**	**52**	*e*Pg	**Pg**	**21 12 41.9**	**-4.7**
AGMN				*e*Sg	**Sg**	**21 14 27.8**	**-1.1**
KSU1	**Kansas State U**	**7.95**	**123**	*e*Pg	**Pg**	**21 12 46.9**	**-0.7**
KSU1				*e*Sg	**Sg**	**21 14 29.7**	**-0.8**
ELK	**Elko**	**8.06**	**251**	Pn	**Pn**	**21 12 12.0**	**-1.6**
	0.2nm,0.3s,baz=67,slow=15,SNR=5.2						
ELK	**Elko**	**8.06**	**251**	Pn	**Pn**	**21 12 12.0**	**-1.6**
WUAZ	**Wupatki**	**9.53**	**212**	*e*Pn	**Pn**	**21 12 34.8**	**+1.0**
MTUM	**Tungsten Hills**	**12.03**	**242**	*e*Pn	**Pn**	**21 13 16.4**	**+8.4**
TXAR	**Lajitas Array**	**14.46**	**175**	Lg		21 17 37.4	
	0.0nm,0.3s,baz=356,slow=27,SNR=2.9						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**21 20 31.9**	**-0.5**
	2.7nm,0.9s,mb4.4,baz=332,slow=5.5,SNR=6.5						
ZALV	**Zalesovo Beam**	**82.28**	**354**	P	**P**	**21 22 38.0**	**-0.3**
	0.4nm,0.4s,mb3.9,baz=5.7,slow=4.3,SNR=2.2						
SONM	**Songino Array**	**84.63**	**339**	P	**P**	**21 22 51.1**	**+0.6**
	0.5nm,0.7s,mb3.9,baz=20,slow=4.6,SNR=2.5						

*IDC **10** 21:14:04.2±1.0, 4694N×15550E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.9/21, mbtmp3.9/11, ML3.7/2, MS2.8/5, Ms1 2.9/5, ms1mx2.2/30, Error ellipse: s-maj=26.2km s-min=21.6km az=99.0*
*ISCJB **10** 21:14:08.3±0.9, 469N±0.1×155.1E±0.2, h33km, mb3.9/14, MS3.1/3, Error ellipse: s-maj=18.8km s-min=11.9km az=40.7*
*MOS **10** 21:14:08.7±2.3, 4685N×15485E, h31km, mb4.1/9, Error ellipse: s-maj=13.9km s-min=11.9km az=84.6*
ISC 10 21:14:10.1±0.8, 469N±01×1552E±02, h35km, n33, σ1$47/32, mb3.9/14, MS3.1/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.80**	**9**	*e*PN	**Pn**	**21 15 14.5**	**+8.5**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PETK	**Petropavlovsk-**	**6.38**	**14**	Pn	**Pn**	**21 15 37.2**	**-4.3**
	comp=Z,1.0nm,0.3s,baz=182,slow=12,SNR=14						
YSS	**Yuzh-Sakhalins**	**8.49**	**275**	*e*PN	**Pn**	**21 16 08.0**	**-2.5**
ASAJ	**Asahikawa**	**9.27**	**257**	Pn	**Pn**	**21 16 20.6**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=88,slow=20,SNR=8.1						
ASAJ				LR	LR	21 20 25.4	
	comp=Z,28nm,18.3s,baz=177,slow=40						
ASAJ	**Asahikawa**	**9.27**	**257**	PN	**Pn**	**21 16 20.6**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,28nm,18.3s						
ERM	**Erimo**	**9.89**	**244**	*e*PN	**Pn**	**21 16 30.8**	**+1.1**
HABR	**Khabarovsk**	**13.63**	**284**	*e*PN	**Pn**	**21 17 16.6**	**-4.1**
MJAR	**Matsushiro Arr**	**16.34**	**237**	Pn	**Pn**	**21 17 54.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=32,slow=14,SNR=3.8						
YAK	**Yakutsk**	**20.94**	**325**	*e*P	**P**	**21 18 46.8**	**-2.7**
YAK				pmax	pmax		
	comp=Z,12nm,1.3s						
BILL	**Bilibino**	**21.91**	**11**	*e*P	**P**	**21 18 58.4**	**-1.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
KSRS	**Korea Array**	**22.20**	**255**	LR	LR	21 27 48.7	
	comp=Z,6.4nm,18.8s,baz=70,slow=37						
KSRS	**Korea Array**	**22.20**	**255**	*e*P	**P**	**21 19 11.1**	**+7.9**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
SONM	**Songino Array**	**32.60**	**290**	P	**P**	**21 20 38.3**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=75,slow=10,SNR=4.6						
SONM				LR	LR	21 35 43.8	
	comp=Z,22nm,18.5s,MS2.9,baz=184,slow=40						
SONM	**Songino Array**	**32.60**	**290**	P	**P**	**21 20 38.3**	**+0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,22nm,18.5s						
ZALV	**Zalesovo Beam**	**43.64**	**306**	P	**P**	**21 22 10.5**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.2,baz=58,slow=6.9,SNR=9.1						
ZALV				LR	LR	21 39 49.5	
	comp=Z,16nm,18.3s,MS3.0,baz=24,slow=35						
ZALV	**Zalesovo Beam**	**43.64**	**306**	P	**P**	**21 22 10.5**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,16nm,18.3s,MS3.0						
MKAR	**Makanchi Array**	**48.10**	**298**	P	**P**	**21 22 46.8**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.8,baz=65,slow=6.4,SNR=6.1						
MKAR	**Makanchi Array**	**48.10**	**298**	P	**P**	**21 22 46.8**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**48.43**	**304**	*e*P	**P**	**21 22 49.4**	**+0.9**
KURK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
CMAR	**Chiang Mai Arr**	**53.79**	**258**	P	**P**	**21 23 31.7**	**+2.6**
	comp=Z,0.2nm,0.3s,mb3.5,baz=40,slow=7.1,SNR=4.3						
ARCES	**ARCESS Array B**	**58.13**	**341**	P	**P**	**21 24 00.2**	**+0.7**
	comp=Z,7.2nm,1.1s,mb4.6,baz=29,slow=8.4,SNR=3.3						
ARCES	**ARCESS Array B**	**58.13**	**341**	P	**P**	**21 24 00.2**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NOA	**NORSAR Array B**	**68.49**	**342**	P	**P**	**21 25 11.0**	**+2.8**
	comp=Z,1.3nm,0.8s,mb4.0,baz=21,slow=6.3,SNR=7.4						
NOA				LR	LR	22 04 35.0	
	comp=Z,20nm,18.3s,MS3.4,baz=0.0,slow=44						
NOA	**NORSAR Array B**	**68.49**	**342**	P	**P**	**21 25 11.0**	**+2.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,20nm,18.3s						
WRA	**Warramunga Arr**	**69.17**	**201**	P	**P**	**21 25 12.1**	**-0.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=19,slow=6.6,SNR=8.4						
WRA	**Warramunga Arr**	**69.17**	**201**	P	**P**	**21 25 12.1**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**72.16**	**327**	P	**P**	**21 25 32.5**	**+1.8**
	comp=Z,1.0nm,0.5s,mb4.0,baz=36,slow=5.7,SNR=3.5						
AKASG	**Malin Array Be**	**72.16**	**327**	P	**P**	**21 25 32.5**	**+1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**72.86**	**200**	P	**P**	**21 25 35.6**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=19,slow=5.7,SNR=8.3						
ASAR	**Alice Springs**	**72.86**	**200**	P	**P**	**21 25 35.6**	**+0.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**76.17**	**62**	P	**P**	**21 25 52.8**	**-1.7**
	comp=Z,0.7nm,0.8s,mb3.7,baz=319,slow=4.0,SNR=4.8						
TXAR	**Lajitas Array**	**76.17**	**62**	P	**P**	**21 25 52.8**	**-1.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**78.89**	**335**	P	**P**	**21 26 13.9**	**+4.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=35,slow=6.0,SNR=8.4						

*NEIC **10** 21:16:49.1, 3056S×7151W, h30km, ML3.5(GUC), After GUC.*
GUC 10 21:16:49.1±0.7, 3056S×7151W, h30km±3km, MD3.7, ML3.5, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.27**	**100**	⇑*i*P	Pb	21 16 56.1	+0.1
OVCH				*i* S	Sb	21 17 00.9	+0.1
OVCH	**Ovalle**	**0.27**	**100**	⇑*i*P	Pb	21 16 56.1	+0.1
OVCH				*i* S	Sb	21 17 00.9	+0.1
OVCH				AML	AML	21 17 01.2	
	comp=N,4μm,0.2s						
LSCH	**La Serena**	**0.69**	**19**	⇓*i*P	Pb	21 17 10.4	+7.8
LSCH				*i* S	Sb	21 17 19.9	+8.0
CHNG	**Los Chungos**	**1.32**	**180**	⇓*i*P	Pn	21 17 11.8	+0.4
CHNG				*i* S	Sn	21 17 29.0	+1.0
LCO	**Las Campanas**	**1.70**	**25**	*e*Pn	Pn	21 17 16.5	-0.1
LCO				*e*Sn	Sn	21 17 37.7	+0.4
PEL	**Peldehue**	**2.67**	**165**	*e*P	Pn	21 17 31.2	+1.2
PEL				*i* S	Sn	21 18 03.6	+2.3
PEL				AML	AML	21 18 17.8	
	comp=E,206nm,0.6s						
CLCH	**Cerro Calan**	**2.94**	**164**	*e*P	Pn	21 17 35.1	+1.3
CLCH				*i* S	Sn	21 18 10.5	+2.3
CLCH				AML	AML	21 18 25.6	
	comp=E,209nm,0.5s						
FCH	**Farellones**	**2.94**	**160**	*e*P	Pn	21 17 35.6	+1.8
FCH				*i* S	Sn	21 18 11.7	+3.6
FCH				AML	AML	21 18 18.6	
	comp=N,100nm,0.2s						
RCDM	**Rinconada Maip**	**2.98**	**169**	*e*P	Pn	21 17 35.7	+1.4
RCDM				*i* S	Sn	21 18 10.8	+1.8
RCDM	**Rinconada Maip**	**2.98**	**169**	*e*P	Pn	21 17 35.7	+1.4
RCDM				*i* S	Sn	21 18 10.8	+1.8
RCDM				AML	AML	21 18 14.0	
	comp=E,180nm,0.1s						
LMEL	**Las Melosas**	**3.46**	**162**	*e*P	Pn	21 17 43.0	+2.2
LMEL				AML	AML	21 18 27.6	
	comp=N,172nm,0.5s						

*ISCJB **10** 21:20:48.3±0.3, 3653N±002×280W±002, h10km, Error ellipse: s-maj=3.1km s-min=2.2km az=35.1*
*SFS **10** 21:20:51.0, 3644N×271W, h12km, ML3.0*
*MDD **10** 21:20:51.1±0.3, 3645N×273W, h11km, mbLg3.0/26, Error ellipse: s-maj=3.4km s-min=2.3km az=111.0, PRIMO*
*LDG **10** 21:20:51.1±0.2, 3645N×276W, h5km, Ml3.2/5, Error ellipse: s-maj=3.9km s-min=2.4km az=165.0*
*NEIC **10** 21:20:51.1, 3644N×271W, h12km, MN3.0(MDD), After MDD.*
*CSEM **10** 21:20:51.5±0.1, 3640N×278W, h22km±1km, ML3.4/22, Error ellipse: s-maj=2.6km s-min=1.7km az=119.0*
*CNRM **10** 21:20:52.3, 3648N×258W, h30km, MD3.6*
ISC 10 21:20:50.4±0.4, 3649N±002×278W±002, h19km±2km, n123, σ1$46/205, 3C-2D, Strait of Gibraltar
INMG 10 21:20:51.7±1.4, 3647N×280W, h20km±2km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=114.0, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBER	**Berja**	**0.41**	**348**	Pg	**Pg**	**21 21 00.0**	**+1.0**
	27nm,0.1s,SNR=18						
EBER	**Berja**	**0.41**	**348**	⇓Pg	**Pg**	**21 20 60.0**	**+1.0**
	27nm,0.1s,SNR=18						
EBER				Lg		21 21 07.2	
	235nm,0.1s						
EALB	**Alboran**	**0.59**	**200**	Pg	**Pg**	**21 21 01.4**	**-0.8**
	36n

	3.2nm,0.1s,SNR=7.9								
EMAL					Lg			21 21 33.5	
	27nm,0.2s,SNR=7.9								
ZAI	**Zaio**	**1.52**	**179**	*i*	P	**Pn**	**21 21 16.0**	**-0.5**	
ZAI				*i*	S	**Sn**	**21 21 33.0**	**-2.8**	
MPAL	**Palemas**	**1.58**	**217**	*i*	P	**Pn**	**21 21 18.0**	**+0.7**	
MPAL				*i*	S	**Sn**	**21 21 36.0**	**-1.1**	
ELUQ	**Luque**	**1.59**	**312**		Pg	**Pg**	**21 21 19.9**	**-1.2**	
	18nm,0.2s,SNR=7.9								
ELUQ					Lg		21 21 42.3		
	54nm,0.2s,SNR=7.9								
EMIJ	**Mijas**	**1.60**	**273**		Pn	**Pn**	**21 21 15.9**	**-1.8**	
	3.2nm,0.1s,SNR=66								
EMIJ					Pg	**Pg**	**21 21 20.9**	**-0.4**	
	14nm,0.1s,SNR=7.9								
EMIJ					Lg		21 21 36.0		
	90nm,0.2s,SNR=11								
TOU	**Touzarine**	**1.72**	**208**	*e*	P	**Pn**	**21 21 21.0**	**+1.7**	
TOU					eS	**Sn**	**21 21 41.0**	**+0.3**	
CART	**Cartagena**	**1.80**	**52**	*e*	Pn	**Pn**	**21 21 20.7**	**+0.4**	
CART	**Cartagena**	**1.80**	**52**	*e*	P	**Pn**	**21 21 18.0**	**-2.3**	
CART	**Cartagena**	**1.80**	**52**	*e*	Pn	**Pn**	**21 21 20.7**	**+0.4**	
CART	**Cartagena**	**1.80**	**52**		P	**Pn**	**21 21 18.0**	**-2.3**	
CART					S	**Sn**	**21 21 31.3**	**-11**	
EMUR	**La Murta**	**1.82**	**42**		Pn	**Pn**	**21 21 19.6**	**-1.1**	
	9.3nm,0.3s,SNR=38								
EMUR					Sn	**Sn**	**21 21 42.0**	**-1.3**	
EMUR	**La Murta**	**1.82**	**42**		Pn	**Pn**	**21 21 19.6**	**-1.1**	
	9.3nm,0.3s,SNR=38								
EMUR					Sn	**Sn**	**21 21 41.9**	**-1.3**	
	142nm,0.4s,SNR=22								
EBAN	**Banos Encina**	**1.85**	**335**		Pn	**Pn**	**21 21 22.6**	**+1.5**	
	1.6nm,0.1s,SNR=14								
EBAN					Lg		21 21 51.3		
	26nm,0.2s,SNR=4.0								
REAL	**Reales**	**1.95**	**270**	*e*	P	**Pn**	**21 21 20.7**	**-1.8**	
REAL	**Reales**	**1.95**	**270**		P	**Pn**	**21 21 20.7**	**-1.8**	
REAL					S	**Sn**	**21 21 42.9**	**-3.5**	
EVIA	**Vianos**	**2.15**	**6**		Pn	**Pn**	**21 21 28.0**	**+2.8**	
	6.4nm,0.2s,SNR=7.9								
EVIA					Sn	**Sn**	**21 21 53.5**	**+2.1**	
	91nm,0.3s,SNR=17								
EJIF	**Jimena Fronter**	**2.16**	**270**		Pn	**Pn**	**21 21 25.7**	**+0.3**	
	0.5nm,0.1s,SNR=7.9								
EJIF					Pg	**Pg**	**21 21 29.5**	**-2.5**	
	4.3nm,0.2s,SNR=7.9								
EJIF					Lg		21 22 00.8		
	30nm,0.3s,SNR=7.9								
ECEU	**Ceuta**	**2.18**	**255**		Pn	**Pn**	**21 21 25.2**	**-0.4**	
	1.7nm,0.1s,SNR=8.4								
ECEU					Sn	**Sn**	**21 21 49.3**	**-2.7**	
	10.0nm,0.1s,SNR=4.6								
ECEU	**Ceuta**	**2.18**	**255**		Pn	**Pn**	**21 21 25.2**	**-0.3**	
	1.7nm,0.1s,SNR=8.4								
ECEU					Sn	**Sn**	**21 21 49.3**	**-2.7**	
	10.0nm,0.1s,SNR=4.6								
EADA	**Adamuz**	**2.20**	**320**		Pn	**Pn**	**21 21 27.1**	**+1.3**	
	0.8nm,0.1s,SNR=66								
EADA	**Adamuz**	**2.20**	**320**		Pg	**Pg**	**21 21 30.4**	**-2.2**	
EADA					Sn	**Sn**	**21 21 54.5**	**+2.0**	
	6.8nm,0.1s,SNR=7.9								
EADA	**Adamuz**	**2.20**	**320**		Pn	**Pn**	**21 21 27.1**	**+1.2**	
	0.8nm,0.1s,SNR=66								
EADA					Pg	**Pg**	**21 21 30.3**	**-2.3**	
	6.9nm,0.1s,SNR=7.9								
EADA					Sn	**Sn**	**21 21 54.5**	**+2.0**	
	6.8nm,0.1s,SNR=7.9								
EADA					Lg		21 21 59.9		
	22nm,0.1s,SNR=9.3								
ETOB	**Tobarra**	**2.36**	**24**		Pn	**Pn**	**21 21 29.0**	**+0.9**	
	32nm,0.3s,SNR=18								
ETOB					Sn	**Sn**	**21 21 57.8**	**+1.3**	
	129nm,0.4s,SNR=4.5								
ETOB	**Tobarra**	**2.36**	**24**	⇑	Pn	**Pn**	**21 21 29.0**	**+0.9**	
	32nm,0.3s,SNR=18								
ETOB					Sn	**Sn**	**21 21 57.8**	**+1.3**	
	129nm,0.4s,SNR=4.5								
ESPR	**Espera**	**2.50**	**280**		Pn	**Pn**	**21 21 32.5**	**+2.5**	
	1.0nm,0.2s,SNR=13								
ESPR	**Espera**	**2.50**	**280**		Pn	**Pn**	**21 21 32.5**	**+2.5**	
	1.0nm,0.2s,SNR=13								
ESPR					Sn	**Sn**	**21 22 02.8**	**+3.0**	
	34nm,0.3s,SNR=5.0								
GIBL	**Gibalbin**	**2.58**	**278**		P	**Pn**	**21 21 36.4**	**+5.3**	
ECAB	**El Cabril**	**2.63**	**308**		Pn	**Pn**	**21 21 32.8**	**+1.1**	
	1.3nm,0.1s,SNR=13								
ECAB					Sn	**Sn**	**21 22 05.5**	**+2.4**	
	13nm,0.2s,SNR=4.8								
ECAB	**El Cabril**	**2.63**	**308**		Pn	**Pn**	**21 21 32.8**	**+1.0**	
	1.3nm,0.1s,SNR=13								
ECAB					Sn	**Sn**	**21 22 05.5**	**+2.4**	
	13nm,0.2s,SNR=4.8								
ECAB					Lg		21 22 11.0		
	73nm,0.3s,SNR=16								
TZK	**Tazeka**	**2.66**	**206**	*e*	P	**Pn**	**21 21 33.0**	**+0.8**	
TZK				*i*	S	**Sn**	**21 22 04.0**	**+0.2**	
RSA	**Sarsar**	**2.96**	**238**	*e*	P	**Pn**	**21 21 37.0**	**+0.7**	
RSA				*i*	S	**Sn**	**21 22 12.0**	**+0.8**	
EBEN	**Beniarda**	**3.00**	**42**		Pn	**Pn**	**21 21 35.6**	**-1.3**	
	0.3nm,0.1s,SNR=8.9								
EBEN					Sn	**Sn**	**21 22 10.5**	**-1.7**	
	5.1nm,0.3s,SNR=7.4								
EBEN	**Beniarda**	**3.00**	**42**		Pn	**Pn**	**21 21 35.6**	**-1.2**	
	0.3nm,0.1s,SNR=8.9								
EBEN					Sn	**Sn**	**21 22 10.5**	**-1.8**	
	5.1nm,0.3s,SNR=7.4								
PAB	**San Pablo**	**3.29**	**338**	*e*	Pn	**Pn**	**21 21 43.4**	**+2.6**	
ESDC	**Sonseca Array**	**3.31**	**344**		Pn	**Pn**	**21 21 43.3**	**+2.2**	
ESDC					Pg	**Pg**	**21 21 51.3**	**-2.5**	
ESDC					Sn	**Sn**	**21 22 19.2**	**-0.7**	
ESDC					Lg		21 22 36.7		
ESDC	**Sonseca Array**	**3.31**	**344**		Pn	**Pn**	**21 21 43.3**	**+2.2**	
	SNR=46								
ESDC	**Sonseca Array**	**3.31**	**344**		Pg	**Pg**	**21 21 51.3**	**-2.5**	
	3.5nm,0.3s,SNR=17								
ESDC					Sn	**Sn**	**21 22 19.2**	**-0.7**	
	6.9nm,0.3s,SNR=4.2								
ESDC	**Sonseca Array**	**3.31**	**344**		Pn	**Pn**	**21 21 43.6**	**+2.5**	
	SNR=7.9								
ESDC					Pg	**Pg**	**21 21 51.3**	**-2.5**	
	3.5nm,0.3s,baz=163,slow=17,SNR=17								
ESDC					Sn	**Sn**	**21 22 19.2**	**-0.7**	
	6.9nm,0.3s,baz=164,slow=24,SNR=4.2								
ESDC					Lg		21 22 36.7		
	5.2nm,0.3s,baz=155,slow=29,SNR=11								
ESLA	**Sonseca Array**	**3.31**	**344**	*e*	Pn	**Pn**	**21 21 43.5**	**+2.4**	
ESLA	**Sonseca Array**	**3.31**	**344**	*e*	Pn	**Pn**	**21 21 43.5**	**+2.4**	
EMIN	**Mina Concepcio**	**3.36**	**293**		Pn	**Pn**	**21 21 41.8**	**0.0**	
	0.8nm,0.1s,SNR=38								
EMIN					Sn	**Sn**	**21 22 20.2**	**-0.9**	
	8.6nm,0.2s,SNR=6.4								
EMIN	**Mina Concepcio**	**3.36**	**293**		Pn	**Pn**	**21 21 41.8**	**0.0**	
	0.8nm,0.1s,SNR=38								
EMIN					Sn	**Sn**	**21 22 20.2**	**-0.8**	
	8.6nm,0.2s,SNR=6.4								
EMIN					Lg		21 22 35.1		
	9.9nm,0.3s,SNR=7.9								
ECHE	**Chera**	**3.41**	**24**		Pn	**Pn**	**21 21 44.4**	**+2.0**	
	0.6nm,0.1s,SNR=4.8								
ECHE					Pg	**Pg**	**21 21 52.2**	**-3.6**	
	0.4nm,0.2s,SNR=7.9								
ERIP	**Rio Piedras**	**3.69**	**285**		Pn	**Pn**	**21 21 47.0**	**+0.7**	
ERIP					Sn	**Sn**	**21 22 28.1**	**-1.1**	
	15nm,0.2s,SNR=7.9								
ERIP	**Rio Piedras**	**3.69**	**285**		Pn	**Pn**	**21 21 47.1**	**+0.7**	
	1.7nm,0.1s,SNR=7.9								
ERIP					Sn	**Sn**	**21 22 28.1**	**-1.2**	
	15nm,0.2s,SNR=7.9								
EGRO	**El Granado**	**3.90**	**287**		Pn	**Pn**	**21 21 49.6**	**+0.3**	
EGRO					Pg	**Pg**	**21 22 01.3**	**-3.8**	
EGRO					Sn	**Sn**	**21 22 32.9**	**-1.6**	
EGRO	**El Granado**	**3.90**	**287**		Pn	**Pn**	**21 21 49.6**	**+0.3**	
	0.2nm,0.1s,SNR=57								
EGRO	**El Granado**	**3.90**	**287**		Pg	**Pg**	**21 22 01.3**	**-3.8**	
	0.9nm,0.3s,SNR=7.6								
EGRO					Sn	**Sn**	**21 22 32.9**	**-1.6**	
	12nm,0.2s,SNR=12								
EGRO	**El Granado**	**3.90**	**287**		Pn	**Pn**	**21 21 49.6**	**+0.3**	
	0.2nm,0.1s,SNR=57								
EGRO					Pg	**Pg**	**21 22 01.3**	**-3.8**	
	0.9nm,0.3s,SNR=7.6								
EGRO					Sn	**Sn**	**21 22 32.9**	**-1.6**	
	12nm,0.2s,SNR=12								
CZD	**Col de Zad**	**3.92**	**209**	*e*	P	**Pn**	**21 21 50.0**	**+0.5**	
CZD				*i*	S	**Sn**	**21 22 34.0**	**-1.0**	
EBAD	**Badajoz**	**4.05**	**305**		Pn	**Pn**	**21 21 51.7**	**+0.5**	
	3.0nm,0.1s,SNR=18								
EBAD					Sn	**Sn**	**21 22 36.8**	**-1.2**	
	11nm,0.2s,SNR=11								
EBAD	**Badajoz**	**4.05**	**305**	⇑	Pn	**Pn**	**21 21 51.7**	**+0.4**	
	3.0nm,0.1s,SNR=18								
EBAD					Sn	**Sn**	**21 22 36.8**	**-1.2**	
	11nm,0.2s,SNR=11								
EBAD					Lg		21 22 57.3		
	8.9nm,0.3s,SNR=6.7								
EIBI	**Ibiza**	**4.13**	**51**		Pn	**Pn**	**21 21 51.8**	**-0.6**	
EIBI					Sn	**Sn**	**21 22 36.8**	**-3.4**	
EIBI	**Ibiza**	**4.13**	**51**		Pn	**Pn**	**21 21 51.8**	**-0.7**	
	0.7nm,0.1s,SNR=7.7								
EIBI	**Ibiza**	**4.13**	**51**		Pn	**Pn**	**21 21 51.8**	**-0.6**	
	0.7nm,0.1s,SNR=7.7								
EIBI					Sn	**Sn**	**21 22 36.8**	**-3.4**	
	16nm,0.3s,SNR=6.0								
EMOS	**Mosqueruela**	**4.27**	**24**		Pn	**Pn**	**21 21 55.4**	**+1.1**	
	0.2nm,0.1s,SNR=8.9								
EMOS	**Mosqueruela**	**4.27**	**24**		Pg	**Pg**	**21 22 09.2**	**-3.0**	
	1.7nm,0.3s,SNR=5.9								
EMOS					Sn	**Sn**	**21 22 42.8**	**-0.7**	
	2.5nm,0.3s,SNR=5.0								
EMOS	**Mosqueruela**	**4.27**	**24**		Pn	**Pn**	**21 21 55.4**	**+1.1**	
	0.2nm,0.1s,SNR=8.9								
EMOS					Pg	**Pg**	**21 22 09.2**	**-3.0**	
	1.7nm,0.3s,SNR=5.9								
EMOS					Sn	**Sn**	**21 22 42.8**	**-0.8**	
	2.5nm,0.3s,SNR=5.0								
GUD	**Guadarrama**	**4.28**	**346**		Pn	**Pn**	**21 21 56.5**	**+2.0**	
	1.7nm,0.3s,SNR=7.9								
GUD					Lg		21 23 06.0		
	12nm,0.4s,SNR=7.9								
ETOR	**Torete**	**4.36**	**7**		Pn	**Pn**	**21 21 57.3**	**+1.8**	
	5.0nm,0.2s,SNR=15								
ETOR					Pg	**Pg**	**21 22 11.2**	**-2.6**	
	7.9nm,0.3s,SNR=4.0								
ETOR					Sn	**Sn**	**21 22 45.1**	**-0.6**	
	15nm,0.4s,SNR=4.8								
ETOR					Lg		21 23 05.8		
	23nm,0.3s,SNR=6.1								
EPLA	**Plasencia**	**4.41**	**325**		Pn	**Pn**	**21 21 58.2**	**+2.0**	
	7.5nm,0.2s,SNR=24								
EPLA					Sn	**Sn**	**21 22 47.7**	**+0.7**	
	5.2nm,0.2s,SNR=7.9								
EPLA	**Plasencia**	**4.41**	**325**		Pn	**Pn**	**21 21 58.2**	**+2.0**	
	7.5nm,0.2s,SNR=24								
EPLA					Sn	**Sn**	**21 22 47.7**	**+0.7**	
	5.2nm,0.2s,SNR=7.9								
EPLA					Lg		21 23 08.5		
	11nm,0.3s,SNR=5.0								
EVO	**Evora**	**4.63**	**298**	*e*	Pn	**Pn**	**21 22 00.6**	**+1.4**	
EVO	**Evora**	**4.63**	**298**	*e*	Pg	**Pg**	**21 22 18.1**	**-0.9**	
EVO				*e*	Sn	**Sn**	**21 22 52.5**	**+0.1**	
EVO				*e*	Sg	**Sg**	**21 23 18.0**	**-1.0**	
	28nm,0.5s								
ZFT	**Errachidia**	**4.63**	**197**	*e*	P	**Pn**	**21 22 01.0**	**+1.7**	
ZFT				*i*	S	**Sn**	**21 22 50.0**	**-2.6**	
EVOP	**Sao Brissos**	**4.71**	**297**	*e*	Pn	**Pn**	**21 22 00.6**	**+0.3**	
EVOP	**Sao Brissos**	**4.71**	**297**	*e*	Pg	**Pg**	**21 22 18.1**	**-2.4**	
EVOP				*e*	Sn	**Sn**	**21 22 52.5**	**-1.8**	
EVOP				*e*	Sg	**Sg**	**21 23 18.0**	**-3.4**	
	14nm,0.5s								
MORF	**Marmelete**	**4.77**	**282**		P	**Pn**	**21 22 02.0**	**+0.7**	
MORF					S	**Sn**	**21 22 53.4**	**-2.5**	
	0.0nm,0.3s								
ERTA	**Horta de San J**	**5.08**	**28**		Pn	**Pn**	**21 22 07.2**	**+1.8**	
	0.7nm,0.2s,SNR=13								
ERTA					Sn	**Sn**	**21 23 02.2**	**-1.3**	
	5.7nm,0.3s,SNR=7.9								
ERTA	**Horta de San J**	**5.08**	**28**		Pn	**Pn**	**21 22 07.2**	**+1.8**	
	0.7nm,0.2s,SNR=13								
ERTA					Sn	**Sn**	**21 23 02.2**	**-1.3**	
	5.7nm,0.3s,SNR=7.9								
MTE	**Manteigas**	**5.40**	**318**	*e*	Pn	**Pn**	**21 22 11.6**	**+1.7**	
MTE					Sn	**Sn**	**21 23 11.0**	**-0.5**	
MTE	**Manteigas**	**5.40**	**318**	*e*	Pn	**Pn**	**21 22 11.6**	**+1.8**	
ETOS	**Mallorca**	**5.49**	**52**		Pn	**Pn**	**21 22 11.2**	**+0.1**	
	1.6nm,0.4s,SNR=7.9								
ETOS	**Mallorca**	**5.49**	**52**		Pn	**Pn**	**21 22 11.2**	**+0.1**	
	1.6nm,0.4s,SNR=7.9								
ETOS					Sn	**Sn**	**21 23 10.1**	**-3.6**	
	1.5nm,0.3s,SNR=7.9								
EPOB	**Poblet**	**5.71**	**31**		Pn	**Pn**	**21 22 15.7**	**+1.6**	
	0.3nm,0.1s,SNR=7.9								
EPOB	**Poblet**	**5.71**	**31**		Pn	**Pn**	**21 22 15.7**	**+1.6**	
	0.3nm,0.1s,SNR=7.9								
EPOB					Sn	**Sn**	**21 23 16.2**	**-2.9**	
	1.4nm,0.4s,SNR=7.9								
ECAL	**Calabor**	**6.25**	**332**		Pn	**Pn**	**21 22 23.6**	**+2.2**	
	0.6nm,0.2s,SNR=7.9								
ECAL					Sn	**Sn**	**21 23 31.3**	**-0.9**	
	3.3nm,0.3s,SNR=7.9								
ECAL	**Calabor**	**6.25**	**332**		Pn	**Pn**	**21 22 23.6**	**+2.1**	
	0.6nm,0.2s,SNR=7.9								
ECAL					Sn	**Sn**	**21 23 31.3**	**-0.9**	
	3.3nm,0.3s,SNR=7.9								
ECAL					Lg		21 24 09.1		
	5.1nm,0.4s,SNR=7.9								
EBIE	**Bielsa**	**6.58**	**19**		Pn	**Pn**	**21 22 28.0**	**+1.9**	
EBIE					Sn	**Sn**	**21 23 39.5**	**-1.0**	
EBIE	**Bielsa**	**6.58**	**19**		Pn	**Pn**	**21 22 28.0**	**+1.9**	
	1.0nm,0.4s,SNR=8.1								
EBIE					Sn	**Sn**	**21 23 39.5**	**-1.1**	
	1.2nm,0.4s,SNR=7.9								
EBIE	**Bielsa**	**6.58**	**19**		Pn	**Pn**	**21 22 28.0**	**+1.9**	
	1.0nm,0.4s,SNR=8.1								
EBIE					Sn	**Sn**	**21 23 39.5**	**-1.0**	
	1.2nm,0.4s,SNR=7.9								
ETSF	**Etsaut**	**6.62**	**14**	*e*	Pn	**Pn**	**21 22 27.5**	**+0.9**	
ETSF				*e*	Sn	**Sn**	**21 23 38.8**	**-2.7**	
	5.3nm,0.7s								
ETSF	**Etsaut**	**6.62**	**14**		Pn	**Pn**	**21 22 27.5**	**+0.9**	
ETSF					Sn	**Sn**	**21 23 38.8**	**-2.7**	
	2.7nm,0.7s								
SJPF	**Ste Jean**	**6.72**	**10**	*e*	Pn	**Pn**	**21 22 29.3**	**+1.4**	
SJPF				*e*	Sn	**Sn**	**21 23 41.6**	**-2.3**	
	8.3nm,0.6s								
SJPF	**Ste Jean**	**6.72**	**10**	*e*	Pn	**Pn**	**21 22 29.3**	**+1.4**	
SJPF				*e*	Sn	**Sn**	**21 23 41.6**	**-2.3**	
	4.2nm,0.6s								
ELIZ	**Elizondo**	**6.73**	**8**		Pn	**Pn**	**21 22 30.6**	**+2.5**	
	1.1nm,0.5s,SNR=7.9								
ELAN	**Lanestosa**	**6.75**	**356**		Pn	**Pn**	**21 22 29.9**	**+1.6**	
	0.4nm,0.1s,SNR=6.1								
ELAN					Sn	**Sn**	**21 23 43.1**	**-1.5**	
	0.6nm,0.3s,SNR=7.9								
ELAN	**Lanestosa**	**6.75**	**356**		Pn	**Pn**	**21 22 29.9**	**+1.5**	
	0.4nm,0.1s,SNR=6.1								
ELAN					Sn	**Sn**	**21 23 43.1**	**-1.5**	
	0.6nm,0.3s,SNR=7.9								
ELAN					Lg		21 24 22.9		
	1.5nm,0.3s,SNR=7.9								
ELOB	**Lobios**	**6.75**	**324**		Pn	**Pn**	**21 22 30.0**	**+1.6**	
ELOB					Sn	**Sn**	**21 23 41.2**	**-3.5**	
ELOB					Lg		21 24 23.5		
ELOB	**Lobios**	**6.75**	**324**		Pn	**Pn**	**21 22 30.0**	**+1.6**	
	0.9nm,0.1s,SNR=10.0								
ELOB	**Lobios**	**6.75**	**324**		Pn	**Pn**	**21 22 30.0**	**+1.6**	
	0.9nm,0.1s,SNR=10.0								
ELOB					Sn	**Sn**	**21 23 41.2**	**-3.5**	
	6.1nm,0.4s,SNR=4.6								
ELOB					Lg		21 24 23.5		
	2.8nm,0.4s,SNR=7.9								
EALK	**Alkurruntz**	**6.79**	**8**		Pn	**Pn**	**21 22 31.2**	**+2.3**	
	2.0nm,0.4s,SNR=6.9								
EALK					Sn	**Sn**	**21 23 44.8**	**-0.8**	
	2.1nm,0.3s,SNR=7.9								
EPF	**Esparros**	**6.96**	**19**	*e*	Pn	**Pn**	**21 22 32.2**	**+1.0**	
EPF				*e*	Sn	**Sn**	**21 23 46.8**	**-3.0**	
	2.8nm,0.4s								
EPF	**Esparros**	**6.96**	**19**		Pn	**Pn**	**21 22 32.2**	**+1.0**	
EPF					Sn	**Sn**	**21 23 46.8**	**-3.0**	
	1.4nm,0.4s								
EARI	**Arriondas**	**7.05**	**345**		Pn	**Pn**	**21 22 34.4**	**+1.9**	
	1.3nm,0.4s,SNR=5.0								
EARI					Sn	**Sn**	**21 23 50.3**	**-1.7**	
	1.2nm,0.4s,SNR=7.9								
EARI	**Arriondas**	**7.05**	**345**		Pn	**Pn**	**21 22 34.4**	**+1.9**	
	1.3nm,0.4s,SNR=5.0								
EARI					Sn	**Sn**	**21 23 50.3**	**-1.8**	
	1.2nm,0.4s,SNR=7.9								
EARI					Lg		21 24 32.3		
	1.4nm,0.4s,SNR=7.9								
MTLF	**Montolieu**	**7.84**	**28**	*e*	Pn	**Pn**	**21 22 43.5**	**+0.1**	
MTLF				*e*	Sn	**Sn**	**21 24 08.0**	**-3.5**	
	0.8nm,0.3s								
MTLF	**Montolieu**	**7.84**	**28**	*e*	Pn	**Pn**	**21 22 43.5**	**+0.1**	
MTLF				*e*	Sn	**Sn**	**21 24 08.0**	**-3.5**	
	0.4nm,0.3s								
EMAZ	**Mazaricos**	**8.02**	**325**		Pn	**Pn**	**21 22 47.6**	**+1.8**	
	0.6nm,0.1s,SNR=7.9								
EMAZ	**Mazaricos**	**8.02**	**325**		Pn	**Pn**	**21 22 47.6**	**+1.9**	
	0.6nm,0.1s,SNR=7.9								
LFF	**La Frestale**	**8.85**	**16**	*e*	Pn	**Pn**	**21 22 57.3**	**+0.1**	
CAF	**Calviac**	**9.19**	**22**	*e*	Pn	**Pn**	**21 23 01.9**	**+0.1**	
MFF	**Saint Martin d**	**10.29**	**10**	*e*	Pn	**Pn**	**21 23 16.8**	**-0.1**	
QUIF	**Quistinic**	**11.42**	**359**	*e*	Pn	**Pn**	**21 23 32.0**	**-0.3**	
SGMF	**Saint Gilles**	**11.75**	**1**	*e*	Pn	**Pn**	**21 23 36.7**	**-0.2**	
ROSF	**Rostrenen**	**11.84**	**358**	*e*	Pn	**Pn**	**21 23 38.3**	**+0.2**	

CSEM ***10*** *21:26:04.7±0.1, 3929N×2922E, h2km, ML3.0, Error ellipse: s-maj=2.0km s-min=1.7km az=105.0*
DDA ***10*** *21:26:05.0, 3931N×2924E, h8km±4km, Md3.0, Ml3.0*
ISCJB ***10*** *21:26:05.7±0.4, 3928N±002×2921E±003, h10km, Error ellipse: s-maj=3.8km s-min=3.4km az=35.6*
ISK ***10*** *21:26:05.3, 3928N×2920E, h5km, MD2.9*

ISC 10 21:26:05.6±0.5, 3930N±003×2922E±003, h2km±5km, n26, σ0§67/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.29**	**135**	*i*	P	**Pg**	**21 26 11.2**	**0.0**
GDZ				*i*	S	**Sg**	**21 26 15.2**	**+0.3**
GDZ	**Gediz**	**0.29**	**135**	*i*	P	**Pg**	**21 26 11.2**	**0.0**
DEMI	**Demirci**	**0.47**	**237**	*i*	P	**Pg**	**21 26 15.1**	**+0.6**
DEMI				*i*	S	**Sg**	**21 26 21.4**	**+0.9**
DST	**Dursunbey**	**0.55**	**304**	*e*	PG	**Pg**	**21 26 16.6**	**+0.4**
DST				*e*	SG	**Sg**	**21 26 24.0**	**+0.7**
DURS	**Dursunbey**	**0.65**	**298**	*i*	P	**Pg**	**21 26 18.2**	**+0.1**
DURS				*i*	S	**Sg**	**21 26 24.7**	**-1.8**
ULDT	**Uludag**	**0.85**	**356**	*i*	P	**Pg**	**21 26 21.2**	**-0.6**
ULDT				*i*	S	**Sg**	**21 26 32.2**	**-0.6**
ULDT	**Uludag**	**0.85**	**356**	*i*	P	**Pg**	**21 26 21.2**	**-0.7**
KULA	**Kula-Manisa**	**0.89**	**209**	*e*	PG	**Pg**	**21 26 22.6**	**-0.1**
KULA				*e*	SG	**Sg**	**21 26 34.0**	**-0.3**
KHL	**Karahalli**	**1.00**	**166**	*e*	PG	**Pg**	**21 26 24.7**	**-0.1**
CAVI	**Cavuskoy**	**1.02**	**28**	*e*	PG	**Pg**	**21 26 25.6**	**+0.4**
CAVI				*e*	SG	**Sg**	**21 26 40.4**	**+1.8**
BALB	**Balikesir**	**1.09**	**289**	*e*	PN	**Pn**	**21 26 27.3**	**-0.6**
GEMT	**Gemlik**	**1.14**	**359**	*e*	PN	**Pn**	**21 26 28.2**	**-0.3**
AKS	**Akhisar**	**1.17**	**250**	*e*	PN	**Pn**	**21 26 28.2**	**-0.8**
KCT	**Karacabey**	**1.17**	**326**	*e*	PN	**Pn**	**21 26 28.6**	**-0.4**
ADVT	**Abdulvahap**	**1.20**	**19**	*e*	PN	**Pn**	**21 26 28.6**	**-0.9**
YLV	**Yalova**	**1.27**	**5**	*e*	PN	**Pn**	**21 26 30.4**	**-0.1**
ESKT	**Eskisehir**	**1.28**	**79**	*i*	P	**Pg**	**21 26 29.4**	**-0.8**
ESKT				*i*	S	**Sg**	**21 26 46.1**	**-0.7**
SEYT	**Eskypehyr**	**1.28**	**79**	*i*	P	**Pg**	**21 26 29.4**	**-0.8**
SEYT				*i*	S	**Sg**	**21 26 46.1**	**-0.8**
BNT	**Bandirma**	**1.46**	**317**	*e*	PN	**Pn**	**21 26 33.4**	**+0.4**
EDC	**Edincik**	**1.48**	**316**	*e*	PN	**Pn**	**21 26 33.7**	**+0.5**
GULT	**Gulveren**	**1.51**	**41**	*e*	PN	**Pn**	**21 26 34.2**	**+0.5**
HRT	**Hereke**	**1.56**	**13**	*e*	PN	**Pn**	**21 26 34.6**	**+0.2**
ISK	**Istanbul-Kandi**	**1.77**	**356**	*e*	P

JMA ***10*** *23:07:57.4±0.1, 2458N×122.30E, h70km±2km, M2.5*
TAP ***10*** *23:07:57.7, 2426N×122.23E, h53km, ML3.3, C*
ISCJB ***10*** *23:07:58.2±0.3, 2421N±002×12227E±002, h33km, Error ellipse: s-maj=3.0km s-min=2.3km az=164.6*

ISC 10 23:07:58.4±0.5, 2423N±002×12227E±002, h33km±4km, n45, σ0§87/84, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.52**	**293**	⇓*i* P	**Pb**	**23 08 09.1**	**-0.3**
	baz=296						
ENA				S	**Sb**	**23 08 17.6**	**+0.6**
	baz=296						
TWC	**Suao**	**0.54**	**315**	*i* P	**Pb**	**23 08 09.1**	**-0.5**
	baz=318						
TWC				S	**Sb**	**23 08 17.0**	**-0.4**
	baz=318						
TWD	**Chiawan**	**0.63**	**257**	*i* P	**Pn**	**23 08 10.3**	**-0.8**
	baz=244						
TWD				*i* S	**Sb**	**23 08 19.7**	**-0.2**
	baz=244						
YOJ	**Yonaguni jima**	**0.71**	**71**	P	**Pn**	**23 08 11.9**	**-0.2**
YOJ				S	**Sn**	**23 08 22.6**	**+0.6**
TWE	**Neicheng**	**0.74**	**312**	P	**Pn**	**23 08 12.1**	**-0.4**
	baz=307						
TWE				S	**Sn**	**23 08 22.4**	**-0.2**
	baz=307						
ENTT	**Nioudou**	**0.76**	**303**	*i* P	**Pn**	**23 08 12.5**	**-0.3**
	baz=302						
ENTT				S	**Sn**	**23 08 22.9**	**-0.3**
	baz=302						
TWB1	**Santiao Chiao**	**0.82**	**342**	*e*P	**Pn**	**23 08 14.2**	**+0.6**
	baz=344						
NNS	**Nan Shan**	**0.85**	**285**	*e*P	**Pn**	**23 08 13.4**	**-0.5**
	baz=283						
NNS				*e*S	**Sn**	**23 08 24.7**	**-0.6**
	baz=283						
ESL	**Shilin**	**0.87**	**242**	P	**Pn**	**23 08 13.3**	**-1.0**
	baz=231						
ESL				*e*S	**Sn**	**23 08 24.8**	**-1.0**
	baz=231						
WHF	**Hehuan Shan**	**0.92**	**265**	P	**Pn**	**23 08 14.5**	**-0.5**
	baz=252						
WHF				S	**Sn**	**23 08 26.9**	**-0.2**
	baz=252						
NSK	**Sanguang**	**0.94**	**298**	P	**Pn**	**23 08 14.8**	**-0.5**
	baz=288						
NSK				S	**Sn**	**23 08 26.7**	**-1.0**
	baz=288						
NWF	**Wu-fen Shan**	**0.95**	**332**	*e*P	**Pn**	**23 08 14.9**	**-0.5**
	baz=333						
NWF				*e*S	**Sn**	**23 08 26.9**	**-0.9**
	baz=333						
TWA	**Mucha**	**0.98**	**320**	P	**Pn**	**23 08 15.8**	**0.0**
	baz=332						
TWA				S	**Sn**	**23 08 29.1**	**+0.7**
	baz=332						
TWT	**Tachien**	**1.00**	**272**	*e*P	**Pn**	**23 08 16.1**	**0.0**
	baz=269						
TWT				S	**Sn**	**23 08 29.0**	**0.0**
	baz=269						
EHY	**Hungye**	**1.13**	**231**	*e*P	**Pn**	**23 08 17.3**	**-0.6**
	baz=238						
TWS1	**Kuangyinshan**	**1.17**	**318**	P	**Pn**	**23 08 18.3**	**-0.1**
	baz=328						
TWS1				*e*S	**Sn**	**23 08 33.7**	**+0.6**
	baz=328						
NSTT	**Nanjuang**	**1.23**	**289**	P	**Pn**	**23 08 19.2**	**0.0**
	baz=288						
NSTT				*e*S	**Sn**	**23 08 34.9**	**+0.3**
	baz=288						
TWF1	**Yuli**	**1.25**	**226**	P	**Pn**	**23 08 18.4**	**-1.1**
	baz=235						
TWF1				*e*S	**Sn**	**23 08 34.2**	**-0.9**
	baz=235						
SMLT	**Sun Moon Lake**	**1.30**	**255**	P	**Pn**	**23 08 20.3**	**+0.1**
	baz=245						
SMLT				*e*S	**Sn**	**23 08 36.2**	**-0.2**
	baz=245						
TYC	**Yuchr**	**1.33**	**256**	P	**Pn**	**23 08 21.1**	**+0.4**
	baz=248						
TYC				*e*S	**Sn**	**23 08 36.6**	**-0.6**
	baz=248						
IRIF	**Iriomote-Funau**	**1.34**	**85**	P	**Pn**	**23 08 20.1**	**-0.6**
IRIF				S	**Sn**	**23 08 36.9**	**-0.4**
TWQ1	**Liyutan**	**1.37**	**275**	*e*P	**Pn**	**23 08 21.0**	**-0.2**
	baz=274						
TWQ1				*e*S	**Sn**	**23 08 39.0**	**+0.8**
	baz=274						
NSY	**Sanyi**	**1.39**	**278**	*e*S	**Sn**	**23 08 38.8**	**+0.1**
	baz=276						
CHKT	**Chengkung**	**1.40**	**217**	*e*P	**Pn**	**23 08 20.1**	**-1.5**
	baz=206						
CHKT				*e*S	**Sn**	**23 08 35.9**	**-2.9**
	baz=206						
HATJ	**Hateruma jima**	**1.41**	**97**	P	**Pn**	**23 08 22.3**	**+0.6**
HATJ				*e*S	**Sn**	**23 08 40.4**	**+1.2**
YUS	**Yu-Shan**	**1.41**	**239**	*e*P	**Pn**	**23 08 21.7**	**0.0**
	baz=237						
YUS				*e*S	**Sn**	**23 08 39.3**	**0.0**
	baz=237						
TCU	**Taichung**	**1.46**	**267**	*e*P	**Pn**	**23 08 22.7**	**+0.3**
	baz=278						
TCU				*e*S	**Sn**	**23 08 40.1**	**-0.2**
	baz=278						
WNT	**Mingjian**	**1.49**	**257**	*e*P	**Pn**	**23 08 24.1**	**+1.2**
	baz=255						
WNT				*e*S	**Sn**	**23 08 42.3**	**+1.1**
	baz=255						
ALS	**Alishan**	**1.52**	**242**	P	**Pn**	**23 08 24.1**	**+0.8**
	baz=233						
ALS				*e*S	**Sn**	**23 08 42.1**	**+0.3**
	baz=233						
ELDTW	**Lidau**	**1.55**	**228**	*e*P	**Pn**	**23 08 23.2**	**-0.4**
	baz=226						
ELDTW				*e*S	**Sn**	**23 08 40.5**	**-2.0**
	baz=226						
CHN5	**Tsauling**	**1.59**	**247**	*e*P	**Pn**	**23 08 24.7**	**+0.6**
	baz=235						
CHN5				*e*S	**Sn**	**23 08 44.9**	**+1.4**
	baz=235						
JKRS	**Kuro-shima**	**1.59**	**89**	P	**Pn**	**23 08 24.2**	**0.0**
JKRS				*e*S	**Sn**	**23 08 44.0**	**+0.5**
WGK	**Gukeng**	**1.65**	**251**	*e*P	**Pn**	**23 08 26.4**	**+1.3**
	baz=250						
JIJ	**Ishigaki jima**	**1.71**	**85**	P	**Pn**	**23 08 25.5**	**-0.4**
JIJ				S	**Sn**	**23 08 45.5**	**-1.1**
STYT	**Tauyuan**	**1.75**	**233**	*e*P	**Pn**	**23 08 27.2**	**+0.8**
	baz=225						
STYT				*e*S	**Sn**	**23 08 47.5**	**+0.1**
	baz=225						
CHN4	**Tsaushan**	**1.77**	**241**	*e*P	**Pn**	**23 08 28.0**	**+1.3**
	baz=232						
CHN4				*e*S	**Sn**	**23 08 48.6**	**+0.7**
	baz=232						
TWG	**Pinlang**	**1.78**	**218**	*e*P	**Pn**	**23 08 25.6**	**-1.2**
	baz=217						
TWG				*e*S	**Sn**	**23 08 47.1**	**-1.2**
	baz=217						
WTP	**Ta-pu**	**1.81**	**238**	*e*P	**Pn**	**23 08 27.5**	**+0.4**
	baz=236						
WTP				*e*S	**Sn**	**23 08 48.1**	**-0.9**
	baz=236						
TWK	**Hsinying**	**1.89**	**240**	*e*P	**Pn**	**23 08 28.7**	**+0.3**
	baz=239						
TWK				*e*S	**Sn**	**23 08 52.3**	**+1.3**
	baz=239						
CHN1	**Nanshi**	**1.91**	**237**	*e*P	**Pn**	**23 08 29.4**	**+0.9**
	baz=236						
CHN1				*e*S	**Sn**	**23 08 53.5**	**+2.1**
	baz=236						
SGST	**Jiashian**	**1.92**	**234**	*e*P	**Pn**	**23 08 29.0**	**+0.3**
	baz=233						
SGST				*e*S	**Sn**	**23 08 51.2**	**-0.6**
	baz=233						
ECL	**Taimali**	**2.02**	**217**	*e*P	**Pn**	**23 08 29.8**	**-0.4**
	baz=216						
ECL				*e*S	**Sn**	**23 08 51.8**	**-2.6**
	baz=216						
SSD	**Sandimen**	**2.11**	**226**	*e*P	**Pn**	**23 08 32.7**	**+1.4**
	baz=225						
SSD				*e*S	**Sn**	**23 08 57.9**	**+1.6**
	baz=225						
EAST	**Anshuo**	**2.25**	**216**	*e*P	**Pn**	**23 08 36.1**	**+2.7**
	baz=207						
SCZT	**Fangliau**	**2.39**	**220**	*e*P	**Pn**	**23 08 36.7**	**+1.4**
	baz=210						

ISCJB ***10*** *23:17:59.4±2.5, 475N±02×1529E±02, h36km±20km, mb3.6/5, Error ellipse: s-maj=44.3km s-min=17.3km az=148.8*
IDC ***10*** *23:18:02.3±3.2, 4748N×15294E, h47km±28km, mb3.4/5, mb1 3.7/7, mb1mx3.4/23, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=49.3km s-min=22.1km az=169.0*

ISC 10 23:18:02.4±2.1, 475N±02×1529E±02, h45km±17km, n9, σ0§40/8, mb3.6/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.38**	**27**	P	**Pn**	**23 19 33.7**	**-0.1**
	0.1nm,0.3s,baz=214,slow=13,SNR=3.0						
ASAJ	**Asahikawa**	**7.97**	**249**	P	**Pn**	**23 19 55.7**	**+0.1**
	0.6nm,0.3s,baz=282,slow=33,SNR=3.8						
MKAR	**Makanchi Array**	**46.48**	**297**	P	**P**	**23 26 24.3**	**-0.4**
	0.3nm,0.7s,mb3.3,baz=83,slow=6.7,SNR=2.2						
KURK	**Kurchatov**	**46.84**	**303**	P	**P**	**23 26 27.7**	**+0.2**
	baz=72,slow=8.2						
BVAR	**Borovoye Array**	**50.28**	**309**	PcP	PcP	23 28 11.2	-1.0
	0.3nm,0.5s,baz=45,slow=4.3,SNR=3.0						
PDAR	**Pinedale Array**	**64.40**	**54**	P	**P**	**23 28 34.0**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=57,slow=6.6,SNR=3.6						
NOA	**NORSAR Array B**	**67.47**	**341**	P	**P**	**23 28 53.2**	**+0.2**
	0.8nm,0.8s,mb3.8,baz=50,slow=8.0,SNR=3.4						
AKASG	**Malin Array Be**	**70.84**	**326**	P	**P**	**23 29 14.1**	**0.0**
	0.8nm,0.3s,mb4.1,baz=35,slow=6.3,SNR=4.4						
TXAR	**Lajitas Array**	**77.23**	**61**	P	**P**	**23 29 51.3**	**-0.4**
	0.2nm,0.5s,mb3.3,baz=296,slow=4.4,SNR=7.2						

IDC ***10*** *23:19:40.7±0.4, 330S×100.53E, h0km, mb5.3/41, mb1 5.3/41, mb1mx5.3/41, mbtmp5.3/41, MS5.4/21, Ms1 5.4/21, ms1mx5.1/36, Error ellipse: s-maj=13.9km s-min=9.4km az=45.0*
BJI ***10*** *23:19:41.5, 344S×100.43E, h23km, mB6.0, mb5.8, Ms6.0, Msz5.9*
ISCJB ***10*** *23:19:43.2±0.1, 327S±002×100.53E±002, h25km, mb5.5/198, MS5.7/232, Error ellipse: s-maj=3.8km s-min=2.6km az=34.6*
NEIC ***10*** *23:19:43.3±0.1, 328S×100.53E, h15km, mb5.6/92, ME5.5, MS5.7/193, MW5.7, Error ellipse: s-maj=4.3km s-min=2.6km az=51.0 Broadband fault plane solution: P waves. NP1:φs130.00000°, δ75.00000°, λ85.00000°. NP2:φs329.00000°, δ16.00000°, λ108.00000°. Principal axes: T Plg60.0000°, Azm33.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm224.0000°; Moment Tensor Solution. s62 Moment tensor: Scale 10^17 Nm; Mrr2.81; Mθθ-0.82; Mφφ-1.99; Mrθ2.43; Mθφ0.65; Mφr-1.42; Best double couple: M0:3.80000×10^17 NP1:φs344.00000°, δ24.00000°, λ120.00000°. NP2:φs132.00000°, δ69.00000°, λ78.00000°. Principal axes: T 4.1900, Plg63.0000°, Azm21.0000°; N -0.8900, Plg11.0000°, Azm136.0000°; P -3.3000, Plg23.0000°, Azm231.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt (III] in Bengkulu Utara and at Mukomuko.
MOS ***10*** *23:19:44.9±1.0, 315S×100.54E, h33km, mb5.8/67, MS5.6/50 Error ellipse: s-maj=8.8km s-min=4.2km az=113.5*
GCMT ***10*** *23:19:44.9±0.1, 360S×100.25E, h15km, MW5.9/86, Moment Tensor Solution. s86,c158; s82,c132; Duration: 2s7 Moment tensor: Scale 10^17Nm; Mrr2.22±.06; Mθθ-1.06±.05; Mφφ-1.16±.05; Mrθ6.80±.16; Mθφ1.52±.04; Mφr-3.91±.16; Best double couple: M0:8.21600×10^17 NP1:φs334.00000°, δ10.00000°, λ123.00000°. NP2:φs121.00000°, δ82.00000°, λ85.00000°. Principal axes: T 8.1170, Plg53.0000°, Azm24.0000°; N 0.1980, Plg5.0000°, Azm121.0000°; P -8.3150, Plg37.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
DJA ***10*** *23:19:45.7±0.0, 335S×100.39E, h30km, mB6.3/29, Mjma5.8/10, MLv6.2/10, Mw(mB)6.0/29, Mwp5.6/26*
SZGRF ***10*** *23:19:45.8, 295S×100.79E, h30km, mb5.5, MS5.5, Southern Sumatera, Indonesia*

ISC 10 23:19:45.2±0.1, 328S±002×10051E±002, h27km, h27km±.4km: pP-P, n741, σ0§92/586, mb5.5/198, MS5.7/232, 67C-16D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**2.11**	**100**	P	**Pn**	**23 20 19.1**	**+0.3**
PDSI	**Padang**	**2.35**	**359**	P	**Pn**	**23 20 21.7**	**-0.4**
PPI	**Padang Panjang**	**2.81**	**358**	P	**Pn**	**23 20 28.7**	**+0.3**
RGRI	**Rengat**	**3.43**	**32**	P	**Pn**	**23 20 39.2**	**+2.2**
KLI	**Kotabumi**	**4.61**	**110**	P	**Pn**	**23 20 55.1**	**+1.9**
SBJI	**Serang**	**6.27**	**117**	P	**Pn**	**23 21 17.2**	**+1.2**
	4μm,1.3s,10nm						
DBJI	**Dramaga**	**7.01**	**118**	P	**Pn**	**23 21 26.6**	**+0.3**
	2μm,1.8s,8.2nm						
CBJI	**Citeko**	**7.04**	**117**	P	**Pn**	**23 21 30.0**	**+3.3**
	8μm,1.2s,18nm						
TPI	**Tanjungpandan**	**7.15**	**86**	P	**Pn**	**23 21 30.2**	**+2.1**
	298nm,1.1s,5μm2.1nm						
LEM	**Lembang**	**7.91**	**117**	P	**Pn**	**23 21 40.1**	**+1.6**
	2μm,1.3s,6.8nm						
XMIS	**Christmas Isla**	**8.79**	**145**	*e*P	**Pn**	**23 21 43.8**	**-6.8**
XMIS				*e*S	**Sn**	**23 23 12.3**	**-17**
XMIS	**Christmas Isla**	**8.79**	**145**	*e*Pn	**Pn**	**23 21 50.7**	**+0.1**
XMIS				*e*S	**Sn**	**23 23 12.3**	**-17**
COCO	**West Island**	**9.57**	**202**	*e*Pn	**Pn**	**23 21 56.8**	**-4.6**
COCO	**West Island**	**9.57**	**202**	P	**Pn**	**23 21 56.8**	**-4.6**
	460nm,1.2s,5μm						
BJII	**Banjamegara**	**10.00**	**114**	P	**Pn**	**23 22 08.3**	**+1.0**
BSI	**Banda Aceh**	**10.15**	**329**	P	**Pn**	**23 22 09.7**	**+0.3**
	218nm,1.2s,3μm						
SNG	**Songkhla**	**10.39**	**1**	P	**Pn**	**23 22 11.0**	**-1.5**
	1μm,1.0s						
PBKI	**Pangkalan Bun**	**11.16**	**87**	P	**Pn**	**23 22 28.1**	**+5.0**
STKI	**Sintang**	**11.45**	**73**	P	**Pn**	**23 22 31.7**	**+4.6**
	576nm,1.4s						
SJI	**Sawahan**	**12.04**	**112**	P	**Pn**	**23 22 35.0**	**-0.2**
KRKI	**Karangkates**	**12.83**	**113**	P	**Pn**	**23 22 48.9**	**+2.9**
PLKI	**Palangkaraya**	**13.46**	**86**	P	**Pn**	**23 22 57.8**	**+3.2**
	952nm,1.2s,9μm						
KMMI	**Kalianget**	**13.91**	**106**	P	**Pn**	**23 23 01.6**	**+0.8**
	683nm,1.3s,10μm						
BBKI	**Banjar Baru**	**14.31**	**91**	P	**Pn**	**23 23 08.9**	**+2.7**
	2μm,1.2s						
NNT	**Nongplab**	**15.78**	**357**	P	**Pn**	**23 23 28.3**	**+2.5**
KHKI	**Kahang-Kahang**	**15.84**	**109**	P	**Pn**	**23 23 25.2**	**-1.4**
PCI	**Palu**	**19.45**	**83**	P	**Pn**	**23 24 11.8**	**+0.5**
	862nm,1.5s						
KKTK	**Khon Kaen**	**19.62**	**7**	P	**Pn**	**23 24 11.0**	**-2.3**
	802nm,0.5s						
CM31	**Chiang Mai Arr**	**21.65**	**356**	PFAKE		23 24 40.0	+6.2
CM31				LR	LR		
	comp=Z,14μm,20.0s,MS5.3						
CMAR	**Chiang Mai Arr**	**21.65**	**356**	P	**P**	**23 24 32.3**	**-1.5**
	comp=Z,82nm,0.8s,mb5.2,baz=185,slow=8.8,SNR=160						
CMAR				S	**S**	**23 28 32.2**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=284,slow=41,SNR=2.6						
CMAR				PcP	PcP	23 28 36.1	+1.3
	comp=Z,6.8nm,0.9s,baz=220,slow=3.0,SNR=4.8						
CMAR				ScP	ScP	23 32 11.8	+1.4
	comp=Z,0.9nm,0.3s,baz=212,slow=3.2,SNR=4.8						
CMAR				LR	LR	23 34 40.4	
	comp=Z,16μm,19.0s,MS5.5,baz=186,slow=42						
CMAR	**Chiang Mai Arr**	**21.65**	**356**	P	**P**	**23 24 32.3**	**-1.5**
CMAR				S	**S**	**23 28 32.2**	**-0.1**
CMAR				PcP	PcP	23 28 36.1	+1.3
CMAR				ScP	ScP	23 32 11.8	+1.4
CMAR				LR	LR	23 34 40.4	
CMAR	**Chiang Mai Arr**	**21.65**	**356**	P	**P**	**23 24 32.3**	**-1.5**
CMAR				S	**S**	**23 28 32.2**	**-0.1**
CMAR						23 28 36.2	
CHG	**Chiang Mai**	**22.01**	**356**	⇑P	**P**	**23 24 35.7**	**-1.9**
	comp=Z,143nm,1.2s,mb5.3						
CHTO	**Chiang Mai**	**22.01**	**356**	P	**P**	**23 24 36.6**	**-0.9**
	SNR=43						
CHTO	**Chiang Mai**	**22.01**	**356**	*e*P	**P**	**23 24 36.0**	**-1.6**
	comp=Z,154nm,1.1s,mb5.3						
CHTO				LR	LR		
	comp=Z,17μm,19.0s,MS5.5						
CHTO	**Chiang Mai**	**22.01**	**356**	*e*P	**P**	**23 24 36.0**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,155nm,1.1s,mb5.3						
CHTO				MLR	MLR		
	comp=Z,17μm,19.0s,MS5.5						
KDI	**Kendari**	**22.07**	**92**	P	**P**	**23 24 38.7**	**+0.3**
	comp=Z,337nm,1.7s,comp=Z,5μm,mb5.5						
ENPP	**El Nido**	**23.69**	**52**	*e*P	**P**	**23 24 55.0**	**-0.1**
BATI	**Baumata**	**23.99**	**108**	P	**P**	**23 24 55.1**	**-2.8**
	comp=Z,138nm,0.9s,mb5.4,baz=148,slow=1.6,SNR=35						
BATI				S	**S**	**23 29 05.6**	**-7.7**
	comp=Z,170nm,0.9s,baz=269,slow=21,SNR=9.2						
BATI	**Baumata**	**23.99**	**108**	P	**P**	**23 24 54.9**	**-2.9**
	comp=Z,148nm,0.9s,comp=Z,1μm,mb5.4						
QIZ	**Qiongzhong**	**23.99**	**22**	P	**P**	**23 24 57.5**	**-0.3**
QIZ				AP		23 25 04.1	
QIZ				XP	sP	23 25 06.7	-2.3
QIZ				S	**S**	**23 29 15.4**	**+2.1**
QIZ				XS	sS	23 29 23.6	-2.7
QIZ				AMB	AMB		
	comp=Z,232nm,1.4s,mb5.4						
QIZ				AMB	AMB		
	comp=Z,3μm,7.6s						
QIZ				LR	LR		
	comp=N,17μm,14.6s						
QIZ				LR	LR		
	comp=Z,19μm,15.3s,MS5.7						
QIZ	**Qiongzhong**	**23.99**	**22**	*e*P	**P**	**23 24 57.6**	**-0.2**
	comp=Z,304nm,1.3s,mb5.6						
QIZ				LR	LR		
	comp=Z,10μm,21.0s,MS5.3						
BUSP	**Coron**	**24.77**	**52**	*e*P	**P**	**23 25 05.6**	**+0.7**
CUYO	**Cuyo Island**	**24.77**	**55**	*e*P	**P**	**23 25 05.7**	**+0.7**
PAGZ	**Pagadian**	**25.35**	**64**	*e*P	**P**	**23 25 11.2**	**+0.9**
SJMP	**San Jose**	**25.76**	**52**	*e*P	**P**	**23 25 14.7**	**+0.7**
MBWA	**Marble Bar**	**25.80**	**135**	*e*P	**P**	**23 25 14.1**	**-0.2**
	comp=Z,120nm,1.1s,mb5.3						
MBWA				LR	LR		
	comp=Z,14μm,20.0s,MS5.5						
MBWA	**Marble Bar**	**25.80**	**135**	P	**P**	**23 25 18.0**	**+3.8**
	comp=Z,145nm,1.4s,comp=Z,2μm,mb5.3						
LUBP	**Lubang**	**25.86**	**49**	*e*P	**P**	**23 25 15.0**	**+0.1**
GUIM	**Jordan**	**25.96**	**58**	*e*P	**P**	**23 25 16.4**	**+0.7**
TRD	**Trivandrum**	**26.24**	**297**	⇓*e*P	**P**	**23 25 20.0**	**+1.6**
TRD				*ex*	x	23 29 48.0	
OTRP	**Odiongan**	**26.43**	**54**	*e*P	**P**	**23 25 20.2**	**+0.3**
KOD	**Kodaikanal**	**26.59**	**301**	*e*P	**P**	**23 25 23.0**	**+1.5**
KOD				AMb	AMB	23 25 35.1	
	comp=Z,160nm,2.9s,mb5.0						
TBP	**Tagbilaran**	**26.59**	**61**	*e*P	**P**	**23 25 21.7**	**+0.1**
VIS	**Vishakhapatnam**	**26.88**	**321**	*e*P	**P**	**23 25 23.8**	**-0.3**
VIS				AMb	AMB	23 25 28.9	
	comp=Z,89nm,1.8s,mb5.0						
BUKP	**Musuan**	**26.88**	**66**	*e*P	**P**	**23 25 24.6**	**+0.4**
DAV	**Davao City (W)**	**27.05**	**68**	P	**P**	**23 25 27.1**	**+1.5**
	SNR=14						
DAV	**Davao City (W)**	**27.05**	**68**	P	**P**	**23 25 24.2**	**-1.4**
	comp=Z,127nm,0.4s,mb5.8,baz=46,slow=5.5,SNR=13						
DAV	**Davao City (W)**	**27.05**	**68**	*e*P	**P**	**23 25 25.1**	**-0.6**
	comp=Z,160nm,0.4s,mb5.9						
DAV				LR	LR		
	comp=Z,12μm,19.0s,MS5.5						
DAV	**Davao City (W)**	**27.05**	**68**	⇑*e*P	**P**	**23 25 23.8**	**-1.8**
LBMI	**Labuha**	**27.10**	**85**	P	**P**	**23 25 25.6**	**-0.5**
	comp=Z,718nm,1.2s,comp=Z,7μm,mb6.1						
BWNR	**Bhubaneshwar**	**27.52**	**329**	*e*P	**P**	**23 25 28.0**	**-1.7**
AAI	**Ambon**	**27.63**	**92**	P	**P**	**23 25 39.8**	**+8.9**
MSLP	**Maasin**	**27.67**	**61**	*e*P	**P**	**23 25 30.9**	**-0.3**
BALP	**Baler**	**28.13**	**47**	*e*P	**P**	**23 25 35.2**	**-0.1**
PLP	**Palo**	**28.26**	**59**	⇓*e*P	**P**	**23 25 36.1**	**-0.4**
CAL	**Calcutta**	**28.29**	**336**	*e*P	**P**	**23 25 36.6**	**0.0**
CAL				*ex*	x	23 30 46.9	
KMI	**Kunming**	**28.32**	**4**	⇑P	**P**	**23 25 37.9**	**+1.1**
KMI				AP	pP	23 25 45.9	+1.1
KMI				XP	sP	23 25 49.3	+1.2
KMI				PP	PP	23 26 31.9	-9.2
KMI				S	**S**	**23 30 22.3**	**+0.6**
KMI				SS		23 31 49.6	
KMI				AMB	AMB		
	comp=Z,128nm,1.3s,mb5.4						
KMI				AMB	AMB		
	comp=Z,1μm,7.2s						
KMI				LR	LR		
	comp=N,18μm,12.2s						
KMI				LR	LR		
	comp=E,15μm,20.9s						
KMI				LR	LR		
	comp=Z,17μm,13.9s,MS5.8						
KMI	**Kunming**	**28.32**	**4**	⇑P	**P**	**23 25 37.9**	**+1.1**
	comp=Z,128nm,1.3s,mb5.4						
KMI				pP	pP	23 25 45.9	+1.1
KMI				sP	sP	23 25 49.3	+1.2
KMI				PP	PP	23 26 31.9	-9.2
KMI				PPP		23 26 44.9	
KMI				S	**S**	**23 30 22.3**	**+0.6**
KMI				sS	sS	23 30 34.5	-0.4
KMI				SS		23 31 49.6	
KMI				SSS		23 32 09.1	
KMI				LR	LR		
	comp=Z,17μm,13.9s,MS5.8						
KMI	**Kunming**	**28.32**	**4**	⇑P	**P**	**23 25 37.9**	**+1.1**
KMI				*PP	pP	23 25 45.9	+1.1
KMI				*SP	sP	23 25 49.3	+1.2
KMI						23 26 31.9	
KMI				PPP		23 26 44.9	
KMI				S	**S**	**23 30 22.3**	**+0.6**
KMI				*SS	sS	23 30 34.5	-0.4
KMI				SS		23 31 49.6	
IMP	**Imphal**	**28.62**	**347**	*e*P	**P**	**23 25 40.0**	**+0.5**
IMP				*e*S	**S**	**23 30 27.0**	**+0.5**
HKC	**Hong Kong Obse**	**28.72**	**27**	*i* P	**P**	**23 25 40.0**	**-0.4**
PVCP	**Virac**	**28.84**	**54**	*e*P	**P**	**23 25 41.0**	**-0.5**
GZH	**Guangzhou**	**29.04**	**25**	P	**P**	**23 25 49.1**	**+5.8**
GZH				LR	LR		
	comp=N,19μm,12.3s,MS5.9						
GZH				LR	LR		
	comp=E,9μm,13.6s,MS5.9						
GZH				LR	LR		
	comp=Z,30μm,13.2s,MS6.1						
SHL	**Shillong**	**29.87**	**344**	⇑*i*P	**P**	**23 25 51.0**	**+0.4**
SHL				*i* x	x	23 30 45.0	
HYB	**Hyderabad**	**29.87**	**314**	*e*P	**P**	**23 25 50.0**	**-0.7**
HYB				*e*S	**S**	**23 30 46.0**	**-0.4**
HYB	**Hyderabad**	**29.87**	**314**	*i* P	**P**	**23 25 50.0**	**-0.7**
HYB				*e*S	**S**	**23 30 46.0**	**-0.4**
GYA	**Guiyang**	**30.16**	**11**	⇑*i*P	**P**	**23 25 51.7**	**-1.4**
GYA				AP	pP	23 25 59.6	-1.5
GYA				PP	PP	23 26 50.0	-12
GYA				PCP	PcP	23 28 55.0	+0.8
GYA				S	**S**	**23 30 48.0**	**-2.6**
GYA				SCP	ScP	23 32 34.1	-0.7
GYA				PCS	PcS	23 32 38.0	+0.2
GYA				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.6						
GYA				AMB	AMB		
	comp=Z,900nm,5.3s						
GYA				LR	LR		
	comp=N,16μm,16.5s,MS5.9						
GYA				LR	LR		
	comp=E,16μm,15.3s,MS5.9						
GYA				LR	LR		

QZH AMB AMB
comp=Z,480nm,1.4s,mb6.2
QZH AMB AMB
comp=Z,3μm,6.4s
QZH LR LR
comp=N,16μm,15.4s,MS6.1
QZH LR LR
comp=E,26μm,13.8s,MS6.1
QZH LR LR
comp=Z,26μm,18.9s
AKL Akola 33.15 317 *e*P **P** **23 26 19.4 -0.2**
AKL AMb AMB 23 26 54.0
comp=Z,60nm,0.8s,mb5.6
NWAO Narrogin (SRO) 33.40 154 P **P** **23 26 20.6 -1.0**
comp=Z,25nm,1.1s,mb5.1,baz=310,slow=9.7,SNR=6.0
NWAO S **S** **23 31 40.9 -0.2**
comp=Z,5.5nm,0.9s,baz=344,slow=17,SNR=1.8
NWAO LR LR 23 39 09.3
comp=Z,16μm,20.1s,MS5.7,baz=332,slow=35
NWAO Narrogin (SRO) 33.40 154 *e*P **P** **23 26 21.3 -0.3**
comp=Z,64nm,1.2s,mb5.4
NWAO *e*pP pP 23 26 29.5 -0.1
NWAO LR LR
comp=Z,13μm,20.0s,MS5.6
NWAO Narrogin (SRO) 33.40 154 *e*P **P** **23 26 21.3 -0.3**
NWAO *e**PP pP 23 26 29.5 -0.1
NWAO pmax pmax
comp=Z,64nm,1.2s
NWAO MLR MLR
comp=Z,13μm,20.0s
JIRN Jiri 33.72 337 *e*P **P** **23 26 25.7 +1.3**
comp=Z,433nm,0.9s,mb6.4
PKI Pulchoki 33.95 336 *e*P **P** **23 26 27.1 +0.6**
PKI Pulchoki 33.95 336 *e*P **P** **23 26 27.2 +0.7**
comp=Z,59nm,0.5s,mb5.8
PKI Pulchoki 33.95 336 *e*P **P** **23 26 27.2 +0.7**
PKI pmax pmax
comp=Z,59nm,0.5s,mb5.8
PKIN Phulchoki 33.96 336 *e*P **P** **23 26 27.2 +0.7**
comp=Z,59nm,0.5s,mb5.7
LSA Lhasa 33.99 345 P **P** **23 26 28.0 +1.2**
LSA AP pP 23 26 37.0 +2.2
LSA XP sP 23 26 41.2 +3.1
LSA PP PP 23 27 45.6 +1.5
LSA S **S** **23 31 50.0 -0.5**
LSA XS sS 23 32 08.6 +4.9
LSA AMB AMB
comp=Z,140nm,1.5s,mb5.7
LSA LR LR
comp=N,3μm,31.8s,MS5.1
LSA LR LR
comp=E,5μm,29.2s,MS5.1
LSA LR LR
comp=Z,3μm,28.0s,MS4.9
LSA Lhasa 33.99 345 *e*P **P** **23 26 28.3 +1.5**
comp=Z,81nm,0.6s,mb5.8
LSA *e*S **S** **23 31 50.8 +0.3**
LSA LR LR
comp=Z,6μm,22.0s,MS5.2
LSA Lhasa 33.99 345 *e*P **P** **23 26 28.3 +1.5**
LSA *e*S **S** **23 31 50.8 +0.3**
LSA pmax pmax
comp=Z,81nm,0.6s,mb5.8
LSA MLR MLR
comp=Z,6μm,22.0s,MS5.2
POO Poona 34.05 310⇑ *i*P **P** **23 26 26.0 -1.4**
comp=Z,179nm,1.5s,mb5.8
POO *ex* x 23 27 52.0
GUN Gumba 34.06 336 *e*P **P** **23 26 28.6 +1.2**
DMN Daman 34.11 335 *e*P **P** **23 26 28.7 +0.9**
comp=Z,207nm,0.9s,mb6.1
CD2 Chengdu 34.14 5⇑ *i*P **P** **23 26 27.3 -0.7**
CD2 AP pP 23 26 34.6 -1.4
CD2 PP PP 23 27 43.2 -2.5
CD2 PCP PcP 23 29 01.7 -3.3
CD2 S **S** **23 31 51.8 -0.8**
CD2 PCS PcS 23 32 45.8 -5.4
CD2 SS SS 23 34 03.7 -17
CD2 AMB AMB
comp=Z,200nm,1.2s,mb5.9
CD2 AMB AMB
comp=Z,460nm,5.8s
CD2 LR LR
comp=N,13μm,16.8s,MS6.0
CD2 LR LR
comp=E,20μm,20.4s,MS6.0
CD2 LR LR
comp=Z,17μm,19.2s,MS5.8
NACB Ninganchiao 34.14 36 *e*P **P** **23 26 27.4 -0.7**
comp=Z,40nm,0.9s,mb5.3
KKN Kakani 34.20 336 *e*P **P** **23 26 29.6 +1.0**
YHNB Yeheng 34.39 35 PFAKE 23 26 40.0 +10
YHNB LR LR
comp=Z,6μm,22.0s,MS5.3
GKN Gorkha 34.65 335 *e*P **P** **23 26 33.3 +0.8**
BHPL Bhopal 34.67 321 *e*P **P** **23 26 33.0 +0.3**
BHPL AMb AMB 23 26 45.6
comp=Z,74nm,0.6s,mb5.8
TATO Taipei 34.69 35 PFAKE 23 26 40.0 +7.1
TATO LR LR
comp=Z,6μm,20.0s,MS5.3
KOLN Koldanda 34.91 333 *e*P **P** **23 26 35.8 +1.1**
comp=Z,429nm,0.8s,mb6.4
DANN Dangsing 35.33 334 *e*P **P** **23 26 39.5 +1.1**
comp=Z,574nm,0.6s,mb6.7
PYUN Piuthan 35.47 333 *e*P **P** **23 26 40.1 +0.6**
comp=Z,233nm,0.8s,mb6.2
WRA Warramunga Arr 36.92 119 P **P** **23 26 51.0 -1.1**
comp=Z,44nm,0.9s,mb5.3,baz=294,slow=10,SNR=84
WRA PcP PcP 23 29 13.7 +0.3
comp=Z,4.2nm,0.6s,baz=313,slow=2.4,SNR=3.2
WRA S **S** **23 32 30.5 -5.1**
comp=Z,38nm,0.9s,baz=295,slow=16,SNR=21
WRAB Tennant Creek 36.92 119 *e*P **P** **23 26 51.2 -1.0**
comp=Z,210nm,1.3s,mb5.8
WRAB LR LR
comp=Z,12μm,21.0s,MS5.7
WRAB Tennant Creek 36.92 119 *c i*P **P** **23 26 50.2 -2.0**
WRAB Tennant Creek 36.92 119 P **P** **23 26 51.1 -1.1**
comp=Z,168nm,1.0s,comp=Z,2μm,mb5.8
WB2 Warramunga Arr 36.93 119⇑ *i*P **P** **23 26 51.0 -1.2**
WB2 *e*S **S** **23 32 31.2 -4.6**
FORT Forrest 37.74 139 *e*P **P** **23 26 58.8 -0.2**
comp=Z,31nm,0.8s,mb5.1
FORT *e* pP 23 27 08.3 +1.3
LGTI Lohaghat 37.90 331 *e*P **P** **23 27 01.9 +1.6**
LGTI *e*S **S** **23 32 52.0 +1.7**
XAN Xi'an 37.96 11 P **P** **23 27 00.1 -0.6**
XAN AP pP 23 27 09.0 +0.3
XAN PP PP 23 28 29.9 +2.1
XAN S **S** **23 32 48.8 -2.2**
XAN SS SS 23 35 28.7 -10
XAN AMB AMB
comp=Z,413nm,0.9s,mb6.2
XAN AMB AMB
comp=Z,1μm,7.8s
XAN LR LR
comp=E,12μm,19.0s
XAN LR LR
comp=Z,24μm,15.9s,MS6.1
PTH Pithoragarh 38.00 331 *e*P **P** **23 27 01.2 +0.1**
PTH *ex* x 23 33 10.5
ASAR Alice Springs 38.10 125 P **P** **23 27 01.8 -0.3**
comp=Z,49nm,0.8s,mb5.3,baz=299,slow=7.8,SNR=299
ASAR PcP PcP 23 29 17.6 +0.6
comp=Z,3.8nm,0.5s,baz=297,slow=2.8,SNR=3.4
ASAR S **S** **23 32 49.3 -4.2**
comp=Z,2.7nm,1.0s,baz=294,slow=9.3,SNR=3.1
AJM Ajmer 38.74 321 *e*P **P** **23 27 07.2 -0.2**
AJM AMb AMB 23 27 16.5
comp=Z,101nm,1.4s,mb5.4
NDI New Delhi 38.87 326 *e*P **P** **23 27 06.0 -2.4**
NDI *ex* x 23 33 16.0
NJ2 Nanjing 39.22 25 *e*P **P** **23 27 11.1 -0.2**
NJ2 AP pP 23 27 19.0 -0.4
NJ2 XP sP 23 27 21.6 -1.1
NJ2 PP PP 23 28 42.9 +1.3
NJ2 S **S** **23 33 08.5 -1.7**
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
NJ2 AMB AMB
comp=Z,550nm,6.8s
NJ2 LR LR
comp=N,8μm,16.8s,MS5.9
NJ2 LR LR
comp=E,11μm,17.2s,MS5.9
NJ2 LR LR
comp=Z,18μm,17.2s,MS6.0
LZH Lanzhou 39.28 4⇓ P **P** **23 27 12.0 +0.2**
LZH AP pP 23 27 18.0 -1.9
LZH PP PP 23 28 46.0 +3.7
LZH S **S** **23 33 11.0 0.0**
LZH SS SS 23 35 59.1 -6.1
LZH AMB AMB
comp=Z,560nm,1.5s,mb6.1
LZH AMB AMB
comp=Z,2μm,4.6s
LZH LR LR
comp=E,16μm,14.2s
LZH LR LR
comp=Z,20μm,16.3s,MS6.0
LZH Lanzhou 39.28 4⇓ P **P** **23 27 12.0 +0.2**
comp=Z,560nm,1.5s,mb6.1
LZH pP pP 23 27 18.0 -1.9
LZH sP sP 23 27 21.0 -2.2
LZH PP PP 23 28 46.0 +3.7
LZH S **S** **23 33 11.0 0.0**
LZH sS sS 23 33 23.1 -1.3
LZH SS SS 23 35 59.1 -6.1
LZH LR LR
comp=Z,20μm,16.3s,MS6.0
LZH Lanzhou 39.28 4⇓ P **P** **23 27 12.0 +0.2**
LZH *SP sP 23 27 21.0 -2.2
LZH 23 28 46.0
LZH S **S** **23 33 11.0 0.0**
LZH *SS sS 23 33 23.1 -1.3
LZH SS SS 23 35 59.1 -6.1
SSE Sheshan 39.46 28 P **P** **23 27 13.7 +0.4**
SSE AP pP 23 27 22.5 +1.1
SSE PP PP 23 28 51.7 +7.5
SSE AMB AMB
comp=Z,100nm,1.2s,mb5.4
SSE AMB AMB
comp=Z,1μm,6.0s
SSE LR LR
comp=N,7μm,16.8s,MS5.7
SSE LR LR
comp=E,7μm,16.8s,MS5.7
SSE LR LR
comp=Z,14μm,14.7s,MS5.9
SSE Sheshan 39.46 28 P **P** **23 27 13.7 +0.4**
comp=Z,100nm,1.2s,mb5.4
SSE pP pP 23 27 22.5 +1.1
SSE PP PP 23 28 51.7 +7.5
SSE S **S** **23 33 26.4 +13**
SSE LR LR
comp=Z,14μm,14.7s,MS5.9
DDI Dehra Dun 39.71 329 *e*P **P** **23 27 13.6 -1.9**
DDI *ex* x 23 33 28.0
JAY Jayapura 40.15 90 P **P** **23 27 17.2 -2.2**
comp=Z,114nm,1.8s,mb5.3
JOW Kunigami 40.19 40 P **P** **23 27 19.9 +0.5**
comp=Z,28nm,0.8s,mb5.1,baz=213,slow=10,SNR=5.8
JOW LR LR 23 44 14.8
comp=Z,2μm,20.5s,MS5.0,baz=273,slow=37
SMLA Simla 40.81 329⇓ *i*P **P** **23 27 25.0 +0.4**
SMLA *ex* x 23 27 34.3
comp=Z,127nm,0.3s
SMLA *i* x x 23 33 32.4
SDNR Sundarnagar 41.21 329 *e*P **P** **23 27 29.6 +1.8**
SDNR *ex* x 23 33 40.0
BHK Bhakra 41.43 328 *ex* x 23 27 50.2
TIA Tai'an 42.24 20 P **P** **23 27 35.7 -0.5**
TIA S **S** **23 33 57.0 +1.9**
TIA AMB AMB
comp=Z,29nm,0.9s,mb4.9
TIA LR LR
comp=E,6μm,13.0s
TIY Taiyuan 42.26 14⇑ P **P** **23 27 41.3 +5.0**
TIY PP PP 23 29 20.4 +5.8
TIY S **S** **23 34 00.6 +5.3**
TIY XS sS 23 34 14.3 +5.6
TIY AMB AMB
comp=Z,1μm,5.0s
TIY LR LR
comp=N,15μm,13.9s,MS6.1
TIY LR LR
comp=E,8μm,12.3s,MS6.1
TIY LR LR
comp=Z,16μm,14.4s,MS6.0
GTA Gaotai 42.48 359⇑ *i*P **P** **23 27 38.3 +0.2**
GTA AP pP 23 27 45.7 -0.6
GTA XP sP 23 27 48.9 -0.6
GTA PP PP 23 29 19.6 +2.6
GTA PCP PcP 23 29 30.2 -0.5
GTA S **S** **23 33 56.7 -1.8**
GTA SCS ScS 23 37 36.1 -2.0
GTA AMB AMB
comp=Z,134nm,1.4s,mb5.4
GTA AMB AMB
comp=Z,2μm,7.2s
GTA LR LR
comp=N,7μm,16.8s,MS6.0
GTA LR LR
comp=E,16μm,16.2s,MS6.0
GTA LR LR
comp=Z,7μm,21.9s
DLH Dalhousie 42.55 329 *e*P **P** **23 27 38.0 -0.8**
THN Thein Dam 42.60 328 *e*P **P** **23 27 37.7 -1.5**
COEN Coen 43.42 107 *e*P **P** **23 27 43.0 -3.1**
comp=Z,61nm,1.0s,mb5.3
COEN Coen 43.42 107 P **P** **23 27 44.4 -1.7**
comp=Z,34nm,1.5s,comp=Z,589nm,mb4.8
BTO Baotou 44.53 10 *e*P **P** **23 27 54.4 -0.2**
BTO AMB AMB
comp=Z,69nm,1.8s,mb5.2
MSEY Mahe Island 44.94 267 *e*P **P** **23 27 58.9 +0.6**
comp=Z,61nm,1.4s,mb5.2
MSEY *ep*P pP 23 28 06.4 -0.2
MSEY LR LR
comp=Z,4μm,19.0s,MS5.3
HHC Hu-ho-hao-te 45.06 12 *e*P **P** **23 28 00.1 +1.3**
HHC AP pP 23 28 08.2 +1.2
HHC XP sP 23 28 10.5 +0.2
HHC PCP PcP 23 29 40.9 +1.5
HHC PP PP 23 29 46.9 +2.3
HHC PCS PcS 23 33 32.8 -0.2
HHC S **S** **23 34 38.2 +2.0**
HHC SS SS 23 37 52.1 -7.0
HHC AMB AMB
comp=Z,313nm,1.3s,mb6.0
HHC AMB AMB
comp=Z,3μm,5.4s
HHC LR LR
comp=N,11μm,14.3s,MS6.1
HHC LR LR
comp=E,10μm,13.1s,MS6.1
HHC LR LR
comp=Z,10μm,15.5s,MS5.9
BJT Baijiatuau 45.42 17 *e*P **P** **23 28 02.3 +0.6**
comp=Z,179nm,0.7s,mb6.0
BJT LR LR
comp=Z,18μm,19.0s,MS6.0
BJT Baijiatuau 45.42 17 *e*P **P** **23 28 02.3 +0.6**
BJT pmax pmax
comp=Z,179nm,0.7s
BJT MLR MLR
comp=Z,18μm,19.0s
BJI Beijing 45.44 17 P **P** **23 28 02.2 +0.3**
BJI PP PP 23 29 50.9 +2.3
BJI S **S** **23 34 39.0 -2.7**
BJI AMB AMB
comp=Z,284nm,1.1s,mb6.0
BJI AMB AMB
comp=Z,2μm,3.8s
BJI LR LR
comp=N,29μm,15.9s,MS6.3
BJI LR LR
comp=E,9μm,15.9s,MS6.3
BJI LR LR
comp=Z,17μm,16.4s,MS6.1
BJI Beijing 45.44 17 P **P** **23 28 02.2 +0.3**
comp=Z,284nm,1.1s,mb6.0
BJI PP PP 23 29 50.9 +2.3
BJI S **S** **23 34 39.0 -2.7**
BJI SS SS 23 38 08.3 +2.3
BJI LR LR
comp=Z,17μm,16.4s,MS6.1
DL2 Dalian 46.28 23 P **P** **23 28 08.3 -0.2**
DL2 PP PP 23 29 56.4 -1.1
DL2 S **S** **23 34 55.0 +1.2**
DL2 AMB AMB
comp=Z,80nm,1.3s,mb5.5
DL2 AMB AMB
comp=Z,670nm,6.1s
DL2 LR LR
comp=N,7μm,15.3s
DL2 LR LR
comp=Z,10μm,15.3s,MS5.9
PMG Port Moresby 46.72 100 *e*P **P** **23 28 11.4 -1.1**
PMG LR LR
comp=Z,4μm,21.0s,MS5.4
PMG Port Moresby 46.72 100 P **P** **23 28 12.6 +0.2**
comp=Z,114nm,1.6s,comp=Z,2μm,mb5.6
GUMO Guam 47.09 68 P **P** **23 28 12.0 -3.2**
comp=Z,52nm,0.6s,mb5.7,baz=164,slow=7.4,SNR=5.4
GUMO Guam 47.09 68 P **P** **23 28 12.0 -3.3**
GUMO MLR MLR
comp=Z,1μm,19.0s,MS5.0
INCN Inchon 47.26 28 *e*P **P** **23 28 15.1 -1.1**
comp=Z,157nm,1.4s,mb5.8
INCN LR LR
comp=Z,5μm,19.0s,MS5.5
CTA Charters Tower 47.60 114⇑ *i*P **P** **23 28 18.6 -0.6**
comp=Z,43nm,0.9s,mb5.5
CTA *e*S **S** **23 35 12.1 -1.2**
CTA Charters Tower 47.60 114 P **P** **23 28 18.8 -0.4**
comp=Z,52nm,0.8s,mb5.6,baz=292,slow=9.1,SNR=26
CTA S **S** **23 35 10.4 -2.9**
comp=Z,8.7nm,1.0s,baz=72,slow=17,SNR=11
CTA Charters Tower 47.60 114 P **P** **23 28 18.8 -0.4**
CTA S **S** **23 35 10.4 -2.9**
CTA pmax pmax
comp=Z,52nm,0.8s
CTA smax
comp=N,9.0nm,1.0s
CTAO Charters Tower 47.60 114 *e*P **P** **23 28 18.8 -0.4**
comp=N,95nm,1.0s,mb5.8
CTAO LR LR
comp=Z,5μm,20.0s,MS5.5
CTAO Charters Tower 47.60 114 *e*P **P** **23 28 18.8 -0.4**
CTAO pmax pmax
comp=Z,95nm,1.0s,mb5.8
CTAO MLR MLR
comp=Z,5μm,20.0s,MS5.5
CTAO Charters Tower 47.60 114 P **P** **23 28 18.8 -0.4**
comp=Z,124nm,1.9s,comp=Z,2μm,mb5.6
KS15 Wonju Array Si 47.83 30 *e*P **P** **23 28 20.5 -0.1**
KSRS Korea Array 47.86 30 P **P** **23 28 21.0 +0.1**
comp=Z,241nm,1.1s,mb6.1,baz=220,slow=8.1,SNR=125
KSRS Korea Array 47.86 30 P **P** **23 28 21.0 +0.1**
KSRS pmax pmax
comp=Z,241nm,1.1s,mb6.1
KBL Kabul 47.86 324 *e*P **P** **23 28 20.6 -0.4**
comp=Z,30nm,0.7s,mb5.4
KBL *ep*P pP 23 28 29.3 +0.1
KBL Kabul 47.86 324 *e*P **P** **23 28 20.6 -0.4**
KBL *e**PP pP 23 28 29.3 +0.1
KBL pmax pmax
comp=Z,30nm,0.7s,mb5.4
STKA Stephens Creek 47.92 131⇑ *i*P **P** **23 28 21.6 +0.1**
comp=Z,88nm,0.8s,mb5.8
STKA *i* S **S** **23 35 16.3 -1.3**
STKA Stephens Creek 47.92 131 P **P** **23 28 21.6 +0.1**
comp=Z,26nm,0.8s,mb5.3,baz=305,slow=7.7,SNR=86
STKA S **S** **23 35 14.7 -2.9**
comp=Z,2.3nm,1.0s,baz=203,slow=20,SNR=1.9
STKA LR LR 23 50 16.7
comp=Z,10μm,21.1s,MS5.8,baz=297,slow=38
WBK Wadi Bani Khal 48.03 304⇓ P **P** **23 28 23.1 +0.6**
SNR=6.2
KSH Kashi 48.20 334 P **P** **23 28 24.4 +0.9**
KSH AP pP 23 28 31.8 +0.1
KSH XP sP 23 28 35.1 +0.1
KSH *e*PCP PcP 23 29 52.7 +2.2
KSH *e*PP PP 23 30 15.6 -0.5
KSH *e*SCP ScP 23 33 44.2 +0.7
KSH *e*PCS PcS 23 33 46.7 +0.5
KSH S **S** **23 35 19.9 -1.3**
KSH *e*SCS ScS 23 38 13.2 -1.6
KSH *e*SS SS 23 38 43.6 -7.3
KSH AMB AMB
comp=Z,299nm,1.2s,mb6.2
KSH LR LR
comp=N,6μm,12.6s
KSH LR LR
comp=E,13μm,20.3s
KSH LR LR
comp=Z,6μm,13.0s,MS5.8
WMQ Urumqi 48.28 348⇑ *i*P **P** **23 28 25.0 +1.0**
WMQ AP pP 23 28 32.5 +0.2
WMQ XP sP 23 28 36.0 +0.5
WMQ PP PP 23 30 17.0 +0.3
WMQ S **S** **23 35 23.0 +0.8**
WMQ SCS ScS 23 38 13.0 -2.2
WMQ SS SS 23 38 46.0 -6.1
WMQ AMB AMB
comp=Z,354nm,1.0s,mb6.3
WMQ AMB AMB
comp=Z,3μm,4.0s
WMQ LR LR
comp=N,5μm,15.0s,MS5.8
WMQ LR LR
comp=E,6μm,16.0s,MS5.8
WMQ LR LR
comp=Z,5μm,16.0s,MS5.6
JMDO Jabal Madar 48.63 304 P **P** **23 28 27.4 +0.3**
SNR=5.8
SMDO Samad 48.98 305 P **P** **23 28 30.8 +1.0**
SNR=8.3
BIDO Bidbid 49.13 305 P **P** **23 28 32.2 +1.3**
SNR=9.9
BSY Bisya 49.55 304 P **P** **23 28 34.8 +0.6**
SNR=16
SNY Shenyang 49.55 23⇑ P **P** **23 28 32.9 -0.9**
SNY AMB AMB
comp=Z,90nm,1.3s,mb5.6
SNY AMB AMB
comp=Z,1μm,5.5s
SNY LR LR
comp=N,6μm,13.5s,MS6.0
SNY LR LR
comp=E,10μm,15.3s,MS6.0
SNY LR LR
comp=Z,9μm,15.3s,MS5.9
HOQ Hoqain 49.83 305 P **P** **23 28 37.1 +0.9**
SNR=17
RBK Rabkut 50.12 296 P **P** **23 28 39.4 +0.8**
SNR=15
CBIJ Chichi jima 50.28 50 P **P** **23 28 38.8 -0.8**
comp=Z,112nm,0.7s,mb6.0,baz=277,slow=6.2,SNR=11
CBIJ S **S** **23 35 51.3 +0.6**
comp=Z,45nm,1.0s,baz=117,slow=23,SNR=2.6
CBIJ LR LR 23 52 21.5
comp=Z,2μm,18.4s,MS5.1,baz=221,slow=39
ULHL Ulahol 50.38 337 P **P** **23 28 40.9 +0.9**
SNR=9.9
KZA Kyzart 50.63 336 P **P** **23 28 42.1 +0.1**
SNR=36
WHFO Wadi Hawf 50.65 296⇓ P **P** **23 28 42.7 +0.2**
SNR=15
ABTO Aybut 50.89 295 P **P** **23 28 44.9 +0.5**
SNR=9.5
AAA Alma-Ata 50.98 338 *i* P **P** **23 28 44.4 -0.2**
AAA Alma-Ata 50.98 338 *e*P **P** **23 28 44.7 +0.1**
AAA *i* S **S** **23 35 56.8 -3.1**
AAA pmax pmax
comp=Z,3μm,4.5s
AAA smax
comp=N,5μm,6.9s
AAA MLR MLR
comp=Z,4μm,21.0s,MS5.5
UCH Uchtor 51.06 335 *e*P **P** **23 28 46.4 +1.2**
comp=Z,65nm,1.2s,mb5.4
UCH *ep*P pP 23 28 53.5 0.0
UCH LR LR
comp=Z,3μm,20.0s,MS5.3
UCH Uchtor 51.06 335 P **P** **23 28 46.7 +1.5**
SNR=9.1
SONM Songino Array 51.16 5 P **P** **23 28 46.8 +1.0**
comp=Z,201nm,0.7s,mb6.2,baz=188,slow=9.4,SNR=1257
SONM PcP PcP 23 30 01.7 +0.6
comp=Z,27nm,1.0s,baz=199,slow=2.2,SNR=2.6
SONM S **S** **23 36 03.9 +1.7**
comp=Z,0.3nm,0.5s,baz=335,slow=10,SNR=3.2
SONM ScS ScS 23 38 31.2 -3.4
comp=Z,0.1nm,0.4s,baz=6.3,slow=23,SNR=2.6

TKM2 Tokmak 2 51.20 337 *e*P P **23 28 46.9 +0.6**
comp=Z,3.6nm,0.8s,mb4.3
TKM2 LR LR
comp=Z,6μm,20.0s,MS5.6
TKM2 Tokmak 2 51.20 337 *e*P P **23 28 46.9 +0.6**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TKM2 MLR MLR
comp=Z,6μm,20.0s,MS5.6
TKM2 Tokmak 2 51.20 337 P P **23 28 46.9 +0.6**
SNR=107
KBK Karagaybulak 51.24 336 P P **23 28 48.1 +1.5**
SNR=12
ULN Ulaanbaatar 51.25 6 P P **23 28 47.7 +1.2**
SNR=141
ULN Ulaanbaatar 51.25 6 *e*P P **23 28 47.1 +0.6**
comp=Z,263nm,1.0s,mb6.1
ULN *e* pP 23 28 55.6 +0.8
ULN LR LR
comp=Z,12μm,19.0s,MS5.9
ULN Ulaanbaatar 51.25 6 *e*P P **23 28 47.1 +0.6**
ULN *e* pP 23 28 55.6 +0.8
ULN pmax pmax
comp=Z,263nm,1.0s,mb6.1
ULN MLR MLR
comp=Z,12μm,19.0s,MS5.9
ULN Ulaanbaatar 51.25 6 P P **23 28 47.4 +0.9**
comp=Z,415nm,1.4s,comp=Z,5μm,mb6.2
AML Almayashu 51.33 335 *e*P P **23 28 48.4 +1.2**
comp=Z,49nm,0.6s,mb5.6
AML *e*pP pP 23 28 55.6 +0.1
AML LR LR
comp=Z,4μm,20.0s,MS5.5
AML Almayashu 51.33 335 P P **23 28 48.5 +1.3**
SNR=59
HATD Hatta, Dubai 51.34 306 P P **23 28 48.7 +1.1**
SNR=13
AAK Ala-Archa 51.41 336 P P **23 28 48.9 +1.1**
SNR=28
FRU Bishkek 51.52 336⇑ *i*P P **23 28 50.0 +1.3**
FRU *e*S S **23 36 09.0 +1.5**
FRU pmax pmax
comp=Z,2μm,6.0s
FRU smax
comp=E,4μm,8.0s
FRU MLR MLR
comp=Z,6μm,20.0s,MS5.6
CHMS Chumysh 51.60 336 P P **23 28 49.5 +0.2**
SNR=34
EKS2 Erkin-Say 51.73 335 *e*P P **23 28 51.0 +0.7**
comp=Z,108nm,0.9s,mb5.8
EKS2 *e*pP pP 23 28 56.9 -1.6
EKS2 LR LR
comp=Z,4μm,20.0s,MS5.4
EKS2 Erkin-Say 51.73 335 P P **23 28 51.2 +1.0**
SNR=82
USP Ospenovka 51.93 336 P P **23 28 52.0 +0.3**
SNR=112
CN2 Changchun 51.95 23 *e*P P **23 28 50.6 -1.3**
CN2 *e*AP pP 23 28 58.2 -2.0
CN2 *e*S **S** **23 36 11.1 -2.2**
CN2 SS SS 23 39 46.1 -4.6
CN2 AMB AMB
comp=Z,360nm,1.2s,mb6.2
CN2 AMB AMB
comp=Z,500nm,10.0s
CN2 LR LR
comp=N,9μm,17.0s,MS6.0
CN2 LR LR
comp=E,6μm,17.0s,MS6.0
CN2 LR LR
comp=Z,11μm,16.0s,MS6.0
MK31 Makanchi Array 52.39 344 *e*P P **23 28 55.6 +0.5**
MK31 *e*pP pP 23 29 03.2 -0.1
MKAR Makanchi Array 52.39 344 P P **23 28 55.5 +0.5**
comp=Z,106nm,0.7s,mb5.9,baz=147,slow=8.1,SNR=538
MKAR S S **23 36 17.6 -1.6**
comp=Z,1.6nm,0.9s,baz=212,slow=30,SNR=2.5
MKAR LR LR 23 56 06.0
comp=Z,2μm,19.7s,MS5.2,baz=165,slow=42
MKAR Makanchi Array 52.39 344 P P **23 28 55.5 +0.5**
MKAR S S **23 36 17.6 -1.6**
MAJO Matsushiro 52.95 38 *e*P P **23 28 58.5 -0.9**
comp=Z,126nm,1.3s,mb5.7
MAJO *e*pP pP 23 29 06.9 -0.8
MAJO LR LR
comp=Z,4μm,20.0s,MS5.5
MAJO Matsushiro 52.95 38 *e*P P **23 28 58.5 -0.9**
MAJO *e**PP pP 23 29 06.9 -0.8
MAJO pmax pmax
comp=Z,126nm,1.3s,mb5.7
MAJO MLR MLR
comp=Z,4μm,20.0s,MS5.5
MAT Matsushiro 52.95 38 P P **23 28 58.2 -1.2**
MAT S S **23 36 34.0 +6.8**
MJAR Matsushiro Arr 52.95 38 P P **23 28 58.4 -1.0**
comp=Z,60nm,1.0s,mb5.5,baz=221,slow=8.0,SNR=87
MJAR ScP ScP 23 34 04.1 +0.1
comp=Z,1.4nm,0.5s,baz=224,slow=5.6,SNR=5.6
MJAR S S **23 36 30.5 +3.3**
comp=Z,0.5nm,0.3s,baz=101,slow=9.8,SNR=3.8
EIDS Eidsvold 53.28 119 *e*P P **23 29 02.2 +0.1**
comp=Z,55nm,0.9s,mb5.5
TOO Toolangi 53.44 136 *e*P P **23 29 04.1 +1.1**
ZAK Zakamensk 53.50 2⇑ *i*P P **23 29 04.1 +0.9**
ZAK pmax pmax
comp=Z,49nm,1.1s,mb5.3
KK31 Karatay Array 53.52 333 *i* P P **23 29 02.6 -0.8**
KK31 pmax pmax
comp=Z,15nm,0.7s,mb5.0
MDJ Mudanjiang 54.31 25 P P **23 29 09.2 0.0**
MDJ PCP PcP 23 30 12.6 -0.5
MDJ PP PP 23 31 10.4 -1.0
MDJ SCP ScP 23 34 09.4 -0.3
MDJ S S **23 36 47.1 +1.7**
MDJ SS SS 23 40 32.4 +4.5
MDJ AMB AMB
comp=Z,78nm,1.1s,mb5.5
MDJ AMB AMB
comp=Z,1μm,8.1s
MDJ LR LR
comp=N,8μm,14.7s,MS5.9
MDJ LR LR
comp=E,4μm,17.9s,MS5.9
MDJ LR LR
comp=Z,10μm,15.8s,MS6.0
MDJ Mudanjiang 54.31 25 *e*P P **23 29 09.4 +0.2**
comp=Z,94nm,1.1s,mb5.6
MDJ LR LR
comp=Z,8μm,19.0s,MS5.8
ABPO Ambohimpanom 54.33 249 *e*P P **23 29 10.2 +0.3**
comp=Z,22nm,1.0s,mb5.0
ABPO *e*pP pP 23 29 17.7 -0.5
ABPO LR LR
comp=Z,5μm,21.0s,MS5.6
MOY Mondy 54.74 0 *e*P P **23 29 12.9 +0.7**
MOY pmax pmax
comp=Z,242nm,2.9s,mb5.7
TLY Talaya 54.81 2 P P **23 29 14.4 +1.7**
SNR=18
TLY Talaya 54.81 2 *e*P P **23 29 13.7 +1.0**
comp=Z,164nm,1.2s,mb5.9
TLY *e* pP 23 29 21.7 +0.6
TLY LR LR
comp=Z,4μm,21.0s,MS5.4
TLY Talaya 54.81 2*c* *i*P P **23 29 12.8 +0.1**
TLY pmax pmax
comp=Z,45nm,1.0s,mb5.5
HIA Hailar 54.93 15⇑ *i*P P **23 29 13.0 -0.6**
HIA LR LR
comp=Z,11μm,19.0s,MS6.0
CAN Canberra 54.98 132 *e*P P **23 29 15.0 +0.7**
comp=Z,79nm,1.0s,mb5.7
CAN *e*pP pP 23 29 21.9 -0.8
ARMA Armidale 55.25 125⇑ *i*P P **23 29 17.5 +1.1**
CNB Canberra Magne 55.25 131 *e*P P **23 29 16.4 +0.1**
IRK Irkutsk 55.41 3⇑ *i*P P **23 29 17.6 +0.6**
IRK *e*S S **23 37 03.5 +3.7**
IRK pmax pmax
comp=Z,282nm,2.0s,mb6.0
CIT Chita 56.20 10 *e*P P **23 29 23.8 +1.1**
CIT *e* pP 23 29 32.7 +1.7
CIT *e* 23 29 38.9
CIT pmax pmax
comp=Z,582nm,2.9s,mb6.1
MOO Moorlands 56.96 140 *e*P P **23 29 32.5 +4.2**

KURK Kurchatov 56.97 344 P P **23 29 28.4 +0.2**
SNR=89
KURK Kurchatov 56.97 344 P P **23 29 27.5 -0.7**
baz=160,slow=7.2
KURK S S **23 37 17.8 -2.8**
KURK LR LR 23 58 24.2
comp=Z,4977μm,20.6s,baz=170,slow=41
KURK Kurchatov 56.97 344 *e*P P **23 29 28.1 -0.1**
comp=Z,247nm,1.0s,mb6.2
KURK LR LR
comp=Z,7μm,21.0s,MS5.7
TAU Tasmania Unive 57.28 140 PFAKE 23 29 40.0 +9.4
TAU LR LR
comp=Z,6μm,19.0s,MS5.7
DHBB Dhamar BB 58.35 289 *e*P P **23 29 43.8 +5.2**
ZAA0 Zalesovo Array 58.51 349 *e*P P **23 29 38.8 -0.1**
ZALV Zalesovo Beam 58.51 349 P P **23 29 38.7 -0.2**
comp=Z,214nm,0.9s,mb6.2,baz=163,slow=5.4,SNR=521
ZALV S S **23 37 38.7 -2.1**
comp=Z,0.7nm,0.4s,baz=154,slow=18,SNR=3.8
ZALV LR LR 00 01 15.0
comp=Z,3μm,18.1s,MS5.4,baz=168,slow=43
ZALV Zalesovo Beam 58.51 349 P P **23 29 38.7 -0.2**
ZALV S S **23 37 38.7 -2.1**
ZALV LR LR 00 01 15.1
ZALV Zalesovo Beam 58.51 349 P P **23 29 38.7 -0.3**
ZALV S S **23 37 38.7 -2.1**
KLR Kul'dur 58.89 23*c* *i*P P **23 29 37.0 -4.7**
KLR *e*S S **23 37 44.5 -1.3**
KLR *e* 23 39 20.0
KLR pmax pmax
comp=E,80nm,1.4s
KLR pmax pmax
comp=Z,300nm,1.4s,mb6.1
KLR pmax pmax
comp=N,600nm,7.0s
KLR pmax pmax
comp=E,500nm,7.0s
KLR pmax pmax
comp=Z,2μm,7.0s
KLR smax
comp=N,2μm,9.5s
KLR smax
comp=E,500nm,9.5s
KLR MLR MLR
comp=Z,47μm,13.0s,MS6.8
ERM Erimo 59.38 36 PFAKE 23 30 00.0 +15
ERM LR LR
comp=Z,3μm,20.0s,MS5.4
KRAR Krasnoyarsk 59.42 355*c* *i*P P **23 29 45.3 +0.1**
KRAR pmax pmax
comp=Z,366nm,1.7s,mb6.1
QRN Al-Qurain 59.64 306 *e*P P **23 29 45.8 -1.5**
baz=306
QRN AMb AMB 23 29 55.9
comp=Z,137nm,1.3s,mb5.8,baz=306
NVS Novosibirsk 59.66 349⇑ *i*P P **23 29 45.8 -1.1**
NVS *e* 23 31 56.7
NVS pmax pmax
comp=Z,202nm,1.7s,mb5.9
NVS pmax pmax
comp=N,140nm,1.6s
NVS pmax pmax
comp=E,72nm,1.4s
HABR Khabarovsk 59.68 26⇑ *i*P P **23 29 46.6 -0.6**
HABR *e* pP 23 29 55.3 -0.3
HABR *e* 23 30 31.5
HABR *e* 23 31 57.4
HABR *e*S S **23 37 56.7 +0.6**
HABR *e* 23 38 12.2
HABR *e* 23 39 33.2
HABR *e* 23 41 52.7
HABR pmax pmax
comp=Z,270nm,2.3s,mb5.9
KBD Kabd 59.99 306 *e*P P **23 29 49.0 -0.7**
baz=306
KBD AMb AMB 23 29 57.8
comp=Z,77nm,1.4s,mb5.5,baz=306
RDF Al-Radifah 60.01 306 *e*P P **23 29 48.8 -1.1**
baz=306
RDF AMb AMB 23 29 58.5
comp=Z,173nm,1.2s,mb6.0,baz=306
UMR Umm Al-Rimmam 60.12 307 *e*P P **23 29 49.6 -1.0**
baz=307
UMR AMb AMB 23 29 59.5
comp=Z,153nm,1.1s,mb5.9,baz=307
ASAJ Asahikawa 60.38 34 P P **23 29 51.2 -0.9**
comp=Z,56nm,1.1s,mb5.5,baz=265,slow=11,SNR=10
ASAJ Asahikawa 60.38 34 P P **23 29 51.2 -0.9**
ASAJ pmax pmax
comp=Z,56nm,1.1s
NAY Al-Naaiem 60.38 306 *e*P P **23 29 51.4 -1.0**
baz=306
NAY AMb AMB 23 30 00.2
comp=Z,51nm,1.6s,mb5.3,baz=306
VOSK Vostochnaya 61.10 340 P P **23 29 55.3 -1.5**
VOSK pmax pmax
comp=Z,94nm,1.1s,mb5.8
BVA0 Borovoye Array 61.55 340 *i* P P **23 29 59.0 -0.9**
BVA0 pmax pmax
comp=Z,14nm,1.0s,mb5.0
BVAR Borovoye Array 61.55 340 P P **23 29 59.3 -0.5**
comp=Z,40nm,0.8s,mb5.6,baz=143,slow=9.0,SNR=241
BVAR S S **23 38 15.2 -4.7**
comp=Z,0.8nm,0.6s,baz=225,slow=44,SNR=2.5
BVAR ScS ScS 23 39 47.9 -1.6
comp=Z,1.3nm,0.8s,baz=226,slow=39,SNR=3.1
BRVK Borovoye 61.62 340 P P **23 29 59.7 -0.5**
SNR=31
BRVK Borovoye 61.62 340 *e*P P **23 29 59.3 -1.0**
comp=Z,118nm,1.3s,mb5.9
BRVK *e*pP pP 23 30 06.8 -1.9
BRVK LR LR
comp=Z,3μm,20.0s,MS5.5
BRVK Borovoye 61.62 340 *e*P P **23 29 59.3 -1.0**
BRVK *e**PP pP 23 30 06.8 -1.9
BRVK pmax pmax
comp=Z,183nm,1.3s,mb6.0
BRVK MLR MLR
comp=Z,5μm,20.0s,MS5.7
BOD Bodaibo 61.86 8 *e*P P **23 30 01.6 -0.3**
BOD pmax pmax
comp=Z,118nm,1.3s,mb5.9
YSS Yuzh-Sakhalins 62.30 31 *e*P P **23 30 05.1 +0.1**
comp=Z,242nm,1.2s,mb6.2
YSS *e*pP pP 23 30 12.6 -0.8
YSS LR LR
comp=Z,690nm,21.0s,MS4.8
YSS Yuzh-Sakhalins 62.30 31 *e*P P **23 30 05.1 +0.1**
YSS *e**PP pP 23 30 12.6 -0.8
YSS pmax pmax
comp=Z,242nm,1.2s,mb6.2
YSS MLR MLR
comp=Z,690nm,21.0s,MS4.8
AB31 Akbulak array 63.00 331 P P **23 30 08.7 -0.9**
AB31 pmax pmax
comp=Z,92nm,0.7s,mb6.0
CLNS Chul'man 63.11 15 *e*P P **23 30 10.3 +0.1**
CLNS *e**PP pP 23 30 17.3 -1.4
CLNS *e* 23 30 44.7
CLNS *e*S S **23 38 44.5 +5.2**
CLNS *e*SS SS 23 42 46.2 +0.5
CLNS pmax pmax
comp=Z,56nm,1.1s,mb5.6
CLNS pmax pmax
comp=E,26nm,1.1s
CLNS pmax pmax
comp=N,33nm,1.0s
CLNS pmax pmax
comp=N,17nm,1.0s
CLNS pmax pmax
comp=E,17nm,1.1s
CLNS pmax pmax
comp=Z,12nm,1.0s,mb5.0
CLNS smax
comp=N,847nm,14.5s
CLNS smax
comp=E,506nm,12.8s
CLNS MLR MLR
comp=E,10μm,16.0s
CLNS MLR MLR
comp=E,8μm,16.0s
CLNS MLR MLR
comp=Z,13μm,16.0s,MS6.2
CASY Casey 63.28 175 PFAKE 23 30 20.0 +8.8
CASY LR LR
comp=Z,7μm,20.0s,MS5.8
AKTK Aktyubinsk 64.72 331 P P **23 30 20.1 -0.8**
AKTK S S **23 38 56.3 -3.3**
AKTK LR LR 00 02 20.4
AKTO Aktyubinsk 64.72 331 P P **23 30 20.1 -0.8**
comp=Z,25nm,0.9s,mb5.2,baz=131,slow=7.2,SNR=50
AKTO S S **23 38 56.3 -3.3**
comp=Z,0.4nm,0.4s,baz=278,slow=20,SNR=6.8
AKTO LR LR 00 02 20.4
comp=Z,2μm,20.4s,MS5.3,baz=342,slow=40
AKTO Aktyubinsk 64.72 331 P P **23 30 20.2 -0.7**
AKTO S S **23 38 56.3 -3.3**
MAK Makhachkala 66.27 320*c* *i*P P **23 30 28.4 -2.7**
MAK *i* 23 30 59.3
MAK *e* 23 32 56.0
MAK *i*S S 23 39 16.8 -2.1
MAK *i* 23 40 20.2
MAK pmax pmax
comp=Z,196nm,1.5s,mb5.9
DZM Mont Dzumac 66.49 113 *e*P P **23 30 32.5 -0.5**
comp=Z,53nm,1.2s,mb5.4
GNI Garni 66.80 316 P P **23 30 35.0 +0.5**
comp=Z,6.8nm,0.7s,mb4.8,baz=74,slow=9.7,SNR=4.9
GNI S S 23 39 26.0 +0.6
comp=Z,3.3nm,0.7s,baz=218,slow=20,SNR=2.6
GNI LR LR 00 04 09.7
comp=Z,887nm,21.4s,MS5.0,baz=106,slow=40
GNI Garni 66.80 316 *e*P P **23 30 34.8 +0.2**
comp=Z,60nm,1.0s,mb5.6
GNI *e*pP pP 23 30 43.0 -0.1
GNI LR LR
comp=Z,2μm,19.0s,MS5.4
GNI Garni 66.80 316⇑ *e*P P **23 30 34.6 0.0**
GNI pmax pmax
comp=Z,26nm,1.3s
DGRG David-gareji 66.95 318 P P **23 30 36.5 +1.0**
MTA Mtatsminda 67.45 318 P P **23 30 39.0 +0.3**
TBLG Delisi 67.50 318 *e*P P **23 30 39.2 +0.2**
TBLG Delisi 67.50 318 P P **23 30 39.2 +0.2**
GOR Gori 68.04 318 P P **23 30 43.0 +0.6**
SVE Sverdlovsk 68.05 338‖ *e*P P **23 30 42.1 0.0**
SVE *e* 23 31 09.3
SVE *e* 23 33 09.6
SVE *e*PPP 23 34 51.3
SVE *e*S S 23 39 36.5 -3.3
SVE *e*SS SS 23 43 55.2 -7.4
SVE pmax pmax
comp=Z,183nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,5μm,22.0s,MS5.7
BEST Besiri 68.33 313 *e*P P **23 30 51.1 +6.7**
MARD Mardin 68.47 312 *i* P P **23 30 45.8 +0.6**
ARU Arti 68.58 336 *e*P P **23 30 44.8 -0.7**
comp=Z,110nm,1.2s,mb5.7
ARU *e*pP pP 23 30 52.8 -1.1
ARU LR LR
comp=Z,4μm,21.0s,MS5.7
ARU Arti 68.58 336 *e*P P **23 30 44.8 -0.6**
ARU *e**PP pP 23 30 52.8 -1.2
ARU pmax pmax
comp=Z,110nm,1.2s,mb5.7
ARU MLR MLR
comp=Z,4μm,21.0s,MS5.7
ONI Oni 68.74 318 P P **23 30 47.4 +0.6**
YAK Yakutsk 68.84 14 *e*P P **23 30 46.0 -1.0**
comp=Z,354nm,1.1s,mb6.2
YAK *e*pP pP 23 30 53.9 -1.7
YAK LR LR
comp=Z,7μm,20.0s,MS5.9
YAK Yakutsk 68.84 14*c* *i*P P **23 30 46.0 -1.0**
YAK *e**PP pP 23 31 11.4 +16
YAK *e* 23 33 18.1
YAK *e*PPP 23 34 59.9
YAK *e*S S 23 39 42.9 -6.1
YAK *e**SS sS 23 40 16.7 +14
YAK *e* 23 40 38.0
YAK *e*SS SS 23 44 12.4 -2.2
YAK pmax pmax
comp=Z,296nm,1.1s,mb6.1
YAK pmax pmax
comp=E,81nm,1.2s
YAK pmax pmax
comp=N,99nm,1.1s
YAK pmax pmax
comp=Z,198nm,3.4s
YAK pmax pmax
comp=N,267nm,3.3s
YAK pmax pmax
comp=E,213nm,2.7s
YAK smax
comp=N,614nm,12.4s
YAK smax
comp=E,121nm,12.1s
DRV Dumont d'Urvil 68.96 164 P P **23 30 53.0 +5.3**
DRV S S 23 39 52.0 +1.7
DRV SS SS 23 44 30.0 +14
DRV L 23 48 00.0
DRV R 23 52 00.0
ERZM Erzurum 69.05 315 *e*P P **23 30 49.8 +1.0**
DAGI Agillar 69.14 316 *e*P P **23 30 50.4 +1.2**
MAW Mawson 69.18 194 *e*P P **23 30 49.0 0.0**
comp=E,12nm,0.9s,mb4.8
MAW Mawson 69.18 194 P P **23 30 49.0 0.0**
comp=E,7.8nm,0.9s,mb4.6,baz=24,slow=8.1,SNR=14
MAW S S 23 39 53.7 +0.7
comp=E,1.3nm,0.8s,baz=344,slow=8.4,SNR=2.6
MAW LR LR 23 54 42.8
comp=E,5μm,21.9s,MS5.7,baz=36,slow=30
MAW PKP2bc 23 58 56.8
comp=E,6.2nm,0.9s,baz=249,slow=6.2,SNR=7.4
MAW Mawson 69.18 194 P P **23 30 49.5 +0.5**
MAW pmax pmax
comp=Z,20nm,1.0s
DIYA Diyarbakir 69.19 313 *e*P P **23 30 50.1 +0.4**
DBAD Bademkaya 69.27 316 *e*P P **23 30 50.9 +0.8**
DBOC Borcka 69.42 317 *e*P P **23 30 50.7 -0.3**
ASF Jabal al Asfar 69.75 306 P P **23 30 53.8 +0.6**
comp=Z,15nm,1.0s,mb4.9,baz=334,slow=4.3,SNR=15
ASF S S 23 40 04.1 +3.2
comp=Z,1.2nm,0.7s,baz=128,slow=13,SNR=2.3
ASF LR LR 00 01 43.3
comp=Z,4μm,19.4s,MS5.7,baz=133,slow=36
ASF Jabal al Asfar 69.75 306 P P **23 30 53.8 +0.6**
ASF S S 23 40 04.1 +3.2
KIV Kislovodsk 69.84 319 P P **23 30 54.0 +0.5**
SNR=11
KIV Kislovodsk 69.84 319 *e*P P **23 30 53.6 +0.1**
comp=Z,78nm,1.1s,mb5.5
KIV *e*pP pP 23 31 01.6 -0.5
KIV LR LR
comp=Z,2μm,21.0s,MS5.2
KIV Kislovodsk 69.84 319*c* *i*P P **23 30 53.3 -0.2**
KIV pmax pmax
comp=Z,148nm,2.5s,mb5.5
KIV MLR MLR
comp=Z,2μm,20.0s,MS5.2
KIV Kislovodsk 69.84 319⇑ *i*P P **23 30 53.4 -0.1**
ELZG Elazig 70.23 313 *i* P P **23 30 57.0 +1.0**
ATAB Bozova 70.38 312 *e*P P **23 30 56.7 -0.2**
EIL Elat 70.64 303 P P **23 30 59.1 +0.3**
comp=Z,34nm,0.9s,mb5.2,baz=61,slow=2.1,SNR=21
EIL S S 23 40 10.4 -1.0
comp=Z,3.4nm,0.9s,baz=339,slow=22,SNR=3.0
EIL LR LR 00 01 04.2
comp=Z,6μm,19.8s,MS5.8,baz=108,slow=35
KEMA Kemaliye 70.86 313 *i* P P **23 31 00.5 +0.5**
GZT Gaziantep 70.88 311 *i* P P **23 31 01.0 +0.9**
AKCD Akcadag 70.94 312 *e*P P **23 30 53.8 -6.6**
MMAI Mount Meron Ar 71.20 306 P P **23 31 02.7 +0.6**
comp=Z,10nm,0.6s,mb4.9,baz=92,slow=9.2,SNR=15
MMAI S S 23 40 19.4 +1.6
comp=Z,5.6nm,1.0s,baz=330,slow=41,SNR=2.5
MMAI LR LR 00 02 42.7
comp=Z,5μm,19.2s,MS5.8,baz=125,slow=36
SOKR Solikamsk 71.43 338*c* *i*P P **23 31 03.3 +0.4**
SOKR *i* 23 40 24.2
SOKR pmax pmax
comp=Z,130nm,1.0s,mb5.8
SOC Sochi 71.64 318 *e*P P **23 31 03.2 -1.3**
SOC *e**PP pP 23 31 12.1 -1.0
SOC *e*PPP 23 35 19.4
SOC *e*S S 23 40 19.6 -2.9
SOC pmax pmax
comp=Z,91nm,1.2s,mb5.6
LSZ Lusaka 72.09 255 LR LR 00 00 48.2

comp=Z,4µm,18.2s,MS5.8,baz=98,slow=34
LSZ Lusaka 72.09 255 *e*P P **23 31 07.9 +0.1**
comp=Z,19nm,1.1s,mb4.9
LSZ *e*pP pP 23 31 16.2 -0.2
LSZ LR LR
comp=Z,3µm,21.0s,MS5.6
LSZ Lusaka 72.09 255 *e*P P **23 31 07.9 +0.1**
LSZ *e**PP pP 23 31 16.2 -0.2
LSZ pmax pmax
comp=Z,19nm,1.1s,mb4.9
LSZ MLR MLR
comp=Z,3µm,21.0s,MS5.6
CSS Prodhromos 73.41 308 *e*P P **23 31 15.5 +0.3**
comp=Z,97nm,1.2s,mb5.6
CSS *e*pP pP 23 31 23.3 -0.6
CSS LR LR
comp=Z,3µm,20.0s,MS5.6
ANN Anapa 73.62 319 *e*P P **23 31 12.5 -3.8**
ANN *e*PPP 23 35 40.7
ANN *e*S S 23 40 39.4 -5.7
ANN pmax pmax
comp=Z,163nm,1.2s,mb5.8
VRHR Novokhopersk 73.67 326 *e*P P **23 31 15.5 -0.9**
VRHR pmax pmax
comp=Z,130nm,0.8s,mb5.9
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.7s
PEA0B Petropavlovsk- 73.69 32 *e*P P **23 31 16.3 -0.2**
PEA0B *e*pP pP 23 31 24.1 -0.9
PETK Petropavlovsk- 73.69 32 P P **23 31 16.2 -0.2**
comp=E,27nm,0.9s,mb5.2,baz=228,slow=2.3,SNR=12
PETK LR LR 00 10 18.0
comp=E,2µm,18.3s,MS5.4,baz=247,slow=41
RPZ Rata Peaks 73.72 135 P P **23 31 16.4 -0.5**
comp=E,8.7nm,0.8s,mb4.7,baz=228,slow=7.4,SNR=7.2
RPZ S S 23 40 44.3 -2.0
comp=E,2.8nm,0.8s,baz=61,slow=21,SNR=1.4
PET Petropavlovsk 74.15 32⇑ *e*P P **23 31 18.4 -0.8**
PET LR LR
comp=Z,3µm,21.0s,MS5.5
PET Petropavlovsk 74.15 32 *e*P P **23 31 18.8 -0.4**
PET *e* 23 34 05.4
PET *e*S S 23 40 52.8 +2.1
PET *e*PS 23 41 35.4
PET pmax pmax
comp=Z,160nm,1.1s,mb5.9
PET pmax pmax
comp=Z,1µm,6.8s
PET pmax pmax
comp=Z,1µm,19.9s
PET pmax pmax
comp=Z,800nm,20.3s
PET pmax pmax
comp=Z,1µm,21.8s
PET MLR MLR
comp=Z,3µm,20.0s,MS5.6
PET MLR MLR
comp=Z,2µm,18.0s
BRTR Keskin Array B 74.56 313 P P **23 31 20.9 -1.0**
comp=Z,17nm,0.8s,mb5.0
VORD Divnogorie 74.93 325 *e*P P **23 31 22.8 -1.0**
VORD *e**PP pP 23 31 30.1 -2.3
VORD pmax pmax
comp=Z,40nm,0.8s,mb5.4
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,30nm,0.7s
LBTB Lobatse 74.95 245 PFAKE 23 31 30.0 +5.5
LBTB LR LR
comp=Z,3µm,19.0s,MS5.7
VSR Storozhevoye 75.11 325 *e*P P **23 31 23.6 -1.2**
VSR *e**PP pP 23 31 31.1 -2.3
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=E,40nm,0.7s
ANTO Ankara 75.22 313 *e*P P **23 31 25.2 -0.5**
comp=E,6.0nm,0.7s,mb4.6
ANTO *e*pP pP 23 31 33.3 -1.0
ANTO LR LR
comp=Z,2µm,20.0s,MS5.5
ANTO Ankara 75.22 313 *e*P P **23 31 25.2 -0.5**
ANTO *e**PP pP 23 31 33.3 -1.0
ANTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ANTO MLR MLR
comp=Z,2µm,20.0s,MS5.5
BALT Daday 75.30 314 *i* P P **23 31 26.0 -0.1**
VOR Voronezh 75.31 326⇑ *i*P P **23 31 25.0 -0.9**
VOR pmax pmax
comp=Z,240nm,1.8s,mb5.8
BOSA Boshof 75.49 241 P P **23 31 26.6 -0.9**
comp=Z,8.9nm,0.8s,mb4.7,baz=135,slow=3.8,SNR=12
BOSA S S 23 41 06.2 -0.4
comp=Z,6.1nm,1.2s,baz=115,slow=21,SNR=2.2
BOSA LR LR 00 00 14.1
comp=Z,2µm,18.3s,MS5.5,baz=94,slow=32
BOSA Boshof 75.49 241 *e*P P **23 31 27.6 0.0**
comp=Z,87nm,1.6s,mb5.4
BOSA *e*pP pP 23 31 36.2 +0.1
BOSA LR LR
comp=Z,2µm,19.0s,MS5.5
BOSA Boshof 75.49 241 *e*P P **23 31 27.6 +0.1**
BOSA *e**PP pP 23 31 36.3 +0.1
BOSA pmax pmax
comp=Z,87nm,1.6s,mb5.4
BOSA MLR MLR
comp=Z,2µm,19.0s,MS5.5
SGKT Sivrigoynuk 75.97 313 *e*P P **23 31 35.1 +5.2**
SNZO South Karori 75.98 132 PFAKE 23 31 40.0 +10
SNZO LR LR
comp=Z,7µm,22.0s,MS5.9
ISP Isparta 76.37 310 PFAKE 23 31 40.0 +7.7
ISP LR LR
comp=Z,3µm,21.0s,MS5.5
ESKT Eskisehir 76.56 312 *i* P P **23 31 32.9 -0.5**
SEY Seymchan 76.62 22⇑ *e*P P **23 31 33.7 +0.6**
TIXI Tiksi 77.03 9 *e*P P **23 31 34.2 -1.1**
comp=Z,89nm,1.0s,mb5.7
TIXI LR LR
comp=Z,12µm,19.0s,MS6.2
TIXI Tiksi 77.03 9*c i*P P **23 31 33.8 -1.5**
TIXI *e*S S 23 41 17.5 -4.4
TIXI pmax pmax
comp=Z,119nm,1.1s,mb5.7
URZ Urewera 77.45 128 P P **23 31 37.4 -1.1**
comp=Z,8.7nm,0.8s,mb4.7,baz=236,slow=3.7,SNR=6.0
URZ S S 23 41 24.9 -2.9
comp=Z,5.2nm,1.0s,baz=298,slow=14,SNR=2.0
ULDT Uludag 78.00 312 *i* P P **23 31 40.8 -0.6**
OBN Obninsk 78.14 328 *e*P P **23 31 41.6 -0.2**
comp=Z,110nm,1.0s,mb5.7
OBN *e*pP pP 23 31 49.1 -1.4
OBN LR LR
comp=Z,2µm,21.0s,MS5.5
OBN Obninsk 78.14 328⇑ *e*P P **23 31 41.4 -0.5**
OBN *e* 23 34 43.0
OBN *i*S S 23 41 35.0 +0.5
OBN *e*SS SS 23 46 37.3 +0.6
OBN pmax pmax
comp=Z,224nm,1.6s,mb5.8
FUNA Funafuti 78.34 98 PFAKE 23 31 50.0 +6.2
FUNA LR LR
comp=Z,2µm,20.0s,MS5.5
KLMR Klimovskoe 79.19 334 *i* P P **23 31 47.4 -0.1**
KLMR pmax pmax
comp=Z,144nm,1.3s,mb5.7
SUR Sutherland 79.55 238 *e*P P **23 31 51.1 +1.0**
comp=Z,46nm,1.0s,mb5.4
SUR *e*pP pP 23 31 58.7 -0.1
SUR LR LR
comp=Z,4µm,20.0s,MS5.7
TIRR Tirgusor 79.62 316⇑ *i*P P **23 31 49.9 -0.4**
TIRR Tirgusor 79.62 316⇑ *i*P P **23 31 49.8 -0.4**
HARR Harsova 80.02 316⇑ *i*P P **23 31 52.4 +0.1**
HARR Harsova 80.02 316⇑ *i*P P **23 31 52.4 0.0**
IDI Anoyia 80.20 306 P P **23 31 53.0 -0.6**
comp=Z,27nm,0.9s,mb5.2,baz=67,slow=7.3,SNR=4.4
IDI S S 23 41 56.8 -0.4
comp=Z,27nm,1.1s,baz=306,slow=14,SNR=2.1
AKASG Malin Array Be 80.80 322 P P **23 31 55.1 -1.4**
comp=Z,5,8nm,0.7s,mb4.6,baz=83,slow=4.0,SNR=25
AKASG PP PP 23 35 03.1 +2.2
comp=Z,3.9nm,0.9s,baz=97,slow=5.3,SNR=4.1
AKASG S S 23 42 00.9 -2.0
comp=Z,0.4nm,0.4s,baz=165,slow=30,SNR=2.6
AKBB Malin Array Si 80.80 322 *e*P P **23 31 55.9 -0.6**
AKBB *e*PcP PcP 23 32 03.3 +0.3
KIEV Kiev 80.81 322 *e*P P **23 31 55.6 -0.9**
comp=Z,36nm,1.1s,mb5.2
KIEV *e*PcP PcP 23 32 03.5 +0.4
KIEV LR LR
comp=Z,2µm,20.0s,MS5.6
KIEV Kiev 80.81 322 *e*P P **23 31 55.6 -0.9**
KIEV *e* pP 23 32 03.5 -1.7
KIEV pmax pmax
comp=Z,36nm,1.1s,mb5.2
KIEV MLR MLR
comp=Z,2µm,20.0s,MS5.6
RAO Raoul Island 81.05 119 PFAKE 23 32 10.0 +12
RAO LR LR
comp=Z,4µm,21.0s,MS5.7
VRI Vrincioaia 81.13 317 P P **23 31 58.9 +0.6**
VRI Vrincioaia 81.13 317⇑ *i*P P **23 31 58.7 +0.4**
PLOR Plostina 81.18 317⇓ *i*P P **23 31 58.0 -0.6**
PVL Pavlikeni 81.49 314 *e*P P **23 32 01.2 +0.9**
SBA Scott Base 81.91 169 *e*P P **23 32 02.7 +0.8**
comp=Z,106nm,1.7s,mb5.5
SBA *e*PcP PcP 23 32 08.5 +1.1
SBA LR LR
comp=Z,2µm,21.0s,MS5.4
SBA Scott Base 81.91 169 *e*P P **23 32 02.7 +0.8**
SBA *e* 23 32 08.5
SBA pmax pmax
comp=Z,106nm,1.7s,mb5.5
SBA MLR MLR
comp=Z,2µm,21.0s,MS5.4
VOIR 82.18 317⇑ *i*P P **23 32 03.4 -0.5**
TSUM Tsumeb 82.26 251 *e*P P **23 32 05.1 +0.2**
comp=Z,14nm,1.3s,mb4.7
TSUM *e* 23 32 10.9
TSUM LR LR
comp=Z,3µm,20.0s,MS5.7
MMB Musomiste 82.32 313 *i* P P **23 32 04.2 -0.5**
BURAR Bucovina Array 82.55 319⇑ P P **23 32 06.6 +0.9**
BURAR Bucovina Array 82.55 319⇑ *i*P P **23 32 06.6 +0.8**
BUR08 Bucovina Ar. S 82.57 319 *e*P P **23 32 06.5 +0.6**
MNK Minsk 82.69 326⇓ *e*P P **23 32 04.0 -2.3**
MNK *e* pP 23 32 14.0 -1.0
SMY Shemya 82.73 36 PFAKE 23 32 20.0 +13
SMY LR LR
comp=Z,1µm,19.0s,MS5.4
VTS Vitosha 82.89 313 *i* P P **23 32 07.3 -0.4**
VTS Vitosha 82.89 313⇓ *i*P P **23 32 07.5 -0.2**
PUL Pulkovo 82.98 331⇑ *e*P P **23 32 07.2 -0.5**
VAY Valandovo 83.12 312 *i* P P **23 32 06.8 -2.0**
JOF Joensuu 83.58 334 *e*p P **23 32 10.6 -0.1**
comp=Z,17nm,0.8s,mb5.2
BMR Baia Mare 83.70 319 P P **23 32 13.0 +1.3**
BMR Baia Mare 83.70 319⇑ *i*P P **23 32 12.3 +0.6**
LVV L'vov 83.81 321 *e*P P **23 32 11.9 -0.3**
LVV *e* pP 23 32 19.9 -1.0
LVV *e* 23 35 32.7
LVV *e*S S 23 42 32.1 -1.6
LVV *e*PS 23 43 47.7
LVV *e*SS SS 23 48 07.5 +6.0
BIA Bitola 84.00 312 *e*P P **23 32 12.5 -0.9**
DRGR 84.05 318 P P **23 32 13.9 +0.4**
DRGR 84.05 318⇑ *i*P P **23 32 13.6 +0.1**
LVZ Lovozero 84.15 340⇑ *e*P P **23 32 13.4 -0.2**
LVZ MLR MLR
comp=Z,3µm,20.0s,MS5.7
BILL Bilibino 84.17 20 *e*P P **23 32 13.2 -0.5**
comp=Z,44nm,1.1s,mb5.5
BILL LR LR
comp=Z,4µm,20.0s,MS5.8
BILL Bilibino 84.17 20*c i*P P **23 32 12.7 -1.0**
BILL pmax pmax
comp=Z,65nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,3µm,21.0s,MS5.7
VSU Vasula 84.36 330 *e*P P **23 32 14.0 -0.8**
APA Apatity 84.46 339⇑ *i*P P **23 32 15.5 +0.4**
APA *i* 23 32 27.0
APA *i*S S 23 42 38.0 -1.5
APA pmax pmax
comp=Z,64nm,1.3s,mb5.6
APA MLR MLR
comp=Z,4µm,23.0s,MS5.8
BZS Buzias 84.58 316 P P **23 32 16.0 -0.2**
BZS Buzias 84.58 316⇓ *i*P P **23 32 15.2 -1.0**
KWP Kalwaria 84.61 320 *e*P P **23 32 17.0 +0.7**
KWP Kalwaria 84.61 320 *e*P P **23 32 17.0 +0.7**
KWP Kalwaria 84.61 320 P P **23 32 16.5 +0.2**
KWP pmax pmax
comp=Z,72nm,1.2s,mb5.7
KWP Kalwaria 84.61 320⇓ *i*P P **23 32 16.5 +0.2**
UZH Uzhgorod 84.68 319 *e*P P **23 32 17.0 +0.3**
UZH *e*S S 23 42 43.0 +0.5
KOLS Kolonicke sedl 84.75 320 *e*P P **23 32 17.7 +0.7**
KOLS *e* 23 32 32.0
TIR Tirane 85.14 312 PFAKE 23 32 30.0 +11
TIR LR LR
comp=Z,2µm,22.0s,MS5.5
SUW Suwalki 85.22 325 *e*P P **23 32 18.7 -0.5**
SUW *e* pP 23 32 26.0 -2.0
SUW Suwalki 85.22 325 *e*P P **23 32 18.8 -0.5**
CRVS Cervenica-Dubn 85.27 319 *e*P P **23 32 19.6 0.0**
CRVS *e* 23 32 32.2
STHS Stebnicka Huta 85.50 320 *i* P P **23 32 21.3 +0.5**
STHS *e*pP pP 23 32 29.0 -0.5
KAF Kangasniemi 85.55 333 *e*p P **23 32 20.6 -0.1**
comp=Z,24nm,0.6s,mb5.6,baz=99,slow=4.5
KAF Kangasniemi 85.55 333 *e*P P **23 32 20.6 -0.1**
KAF pmax pmax
comp=Z,24nm,0.6s,mb5.6
KECS Kecovo 85.83 319 *e*P P **23 32 21.5 -0.9**
PSZ Piszkesteto 86.13 318 *e*P P **23 32 24.1 +0.2**
comp=Z,28nm,1.1s,mb5.4
PSZ *e*pP pP 23 32 31.9 -0.7
PSZ LR LR
comp=Z,1µm,19.0s,MS5.3
PSZ Piszkesteto 86.13 318 *e*P P **23 32 24.1 +0.2**
PSZ *e**PP pP 23 32 31.9 -0.8
PSZ pmax pmax
comp=Z,28nm,1.1s,mb5.4
PSZ MLR MLR
comp=Z,1µm,19.0s,MS5.3
PSZ Piszkesteto 86.13 318⇑ *e*PcP PcP 23 32 24.5 -2.0
PSZ Piszkesteto 86.13 318⇑ *i*P P **23 32 23.9 0.0**
NVL N'lazarevskaya 86.49 199 P P **23 32 26.4 +1.2**
NVL *PP pP 23 32 36.9 +2.9
NVL S S 23 42 45.0 -15
NVL pmax pmax
comp=Z,12nm,1.2s,mb5.0
MAIT Maitri 86.52 199 *e*P P **23 32 23.5 -1.9**
QSPA South Pole Qui 86.69 180 *e*P P **23 32 26.5 +0.5**
comp=Z,27nm,1.2s,mb5.3
QSPA *e* 23 32 32.4
PKSM Moragy 86.72 316 P P **23 32 26.8 0.0**
PKSM Moragy 86.72 316⇑ *i*P P **23 32 26.5 -0.4**
VYHS Vyhne 86.92 319 *e*P P **23 32 27.5 -0.3**
VYHS *e*pP pP 23 32 34.8 -1.7
VYHS *e*S S 23 43 04.5 0.0
AFI Afiamalu 87.00 104 P P **23 32 29.2 +0.3**
comp=Z,72nm,1.0s,mb5.9,baz=284,slow=4.2,SNR=8.9
AFI Afiamalu 87.00 104 *e*P P **23 32 29.4 +0.5**
comp=Z,94nm,1.1s,mb5.9
AFI LR LR
comp=Z,1µm,21.0s,MS5.4
AFI Afiamalu 87.00 104 P P **23 32 30.4 +1.5**
AFI pmax pmax
comp=Z,94nm,1.1s,mb5.9
TIP Timpagrande 87.21 309 *e*P P **23 32 29.2 -0.2**
comp=Z,37nm,1.4s,mb5.4
TIP *e*pP pP 23 32 37.3 -0.9
TIP LR LR
comp=Z,964nm,21.0s,MS5.2
KOLL Kolacno 87.22 319 *e*P P **23 32 29.3 +0.1**
KOLL *e*pP pP 23 32 37.1 -0.9
KEV Kevo 87.40 340 *e*P P **23 32 29.3 -0.3**
comp=Z,12nm,0.7s,mb5.2
KEV LR LR
comp=Z,3µm,21.0s,MS5.7
KEV Kevo 87.40 340 *e*P P **23 32 29.3 -0.3**
KEV pmax pmax
comp=Z,12nm,0.7s,mb5.2
KEV MLR MLR
comp=Z,3µm,21.0s,MS5.7
OKC Ostrava-Krasne 87.56 320 *e*P P **23 32 30.9 +0.1**
OKC *e*pP pP 23 32 38.7 -0.9
OKC *e*SKS 23 43 10.9
OKC Ostrava-Krasne 87.56 320 *e*P P **23 32 30.9 +0.1**
OKC *e*pP pP 23 32 38.7 -0.9
OKC *e*S S 23 43 10.9 +0.3
OKC AMS AMS 00 24 40.0
comp=Z,1µm,16.6s
CEL Celeste 87.78 308 PFAKE 23 32 40.0 +7.8
CEL LR LR
comp=Z,31µm,22.0s,MS6.7
ARCES ARCESS Array B 87.84 340 P P **23 32 32.1 +0.4**
comp=Z,48nm,1.1s,mb5.7,baz=73,slow=4.1,SNR=26
ARCES LR LR 00 16 16.2
comp=Z,4µm,20.1s,MS5.8,baz=103,slow=39
ARE0 ARCESS Array S 87.84 340 *e*P P **23 32 31.4 -0.4**
MODS Modra-Piesok 87.93 319 *e*P P **23 32 33.0 +0.3**
comp=Z,28nm,1.6s,mb5.2
MODS *e* pP 23 32 40.6 -0.8
MODS *e*S S 23 43 14.7 +0.5
MODS Modra-Piesok 87.93 319 *e*P P **23 32 33.0 +0.3**
MODS *e* pP 23 32 40.6 -0.8
MODS *e*S S 23 43 14.7 +0.5
MODS pmax pmax
comp=Z,28nm,1.6s,mb5.2
MORC Moravsky Berou 87.94 320 *e*P P **23 32 32.5 -0.1**
comp=Z,28nm,1.3s,mb5.3
MORC *e*pP pP 23 32 40.6 -0.8
MORC Moravsky Berou 87.94 320 *e*P P **23 32 32.5 -0.1**
MORC *e**PP pP 23 32 40.6 -0.8
MORC pmax pmax
comp=Z,28nm,1.3s,mb5.3
MORC Moravsky Berou 87.94 320⇑ *i*P P **23 32 33.3 +0.7**
CUC Castrocucco 88.02 310 PFAKE 23 32 40.0 +6.7
CUC LR LR
comp=Z,2µm,20.0s,MS5.5
ZST Bratislava 88.03 318 *e*P P **23 32 32.8 -0.3**
comp=Z,55nm,1.6s,mb5.5
ZST *e* pP 23 32 40.1 -1.8
ZST *e*S S 23 43 13.1 -2.0
ZST LR LR
comp=Z,300nm,19.8s,MS4.7
ZST Bratislava 88.03 318 *e*P P **23 32 32.8 -0.3**
ZST *e* pP 23 32 40.1 -1.8
ZST *e*S S 23 43 13.1 -2.0
ZST pmax pmax
comp=Z,55nm,1.6s,mb5.5
ZST MLR MLR
comp=Z,300nm,19.8s,MS4.7
ZST Bratislava 88.03 318 *e*P P **23 32 32.8 -0.3**
ZST *e*pP pP 23 32 40.1 -1.8
ZST *e*S S 23 43 13.1 -2.0
ADK Adak 88.11 38 PFAKE 23 32 40.0 +6.6
ADK LR LR
comp=Z,1µm,20.0s,MS5.4
SGO Sicignano 88.47 311 P P **23 32 35.5 +0.1**
comp=Z,7.4nm,1.0s,mb4.9
SGO Sicignano 88.47 311 P P **23 32 35.5 +0.1**
SGO pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
VRAC Vranov 88.49 319 P P **23 32 35.7 +0.4**
comp=Z,1.1nm,0.6s,mb4.3,baz=79,slow=5.3,SNR=2.1
VRAC S S 23 43 12.1 -7.4
comp=Z,1.9nm,0.5s,baz=172,slow=2.8,SNR=5.4
GKP Gorka Klasztor 88.58 323 *e*P P **23 32 35.8 +0.2**
WDD Wield Dalam 88.65 306 PFAKE 23 32 50.0 +14
WDD LR LR
comp=Z,2µm,19.0s,MS5.4
CSSN Cassano Irpino 88.71 311 P P **23 32 36.6 +0.1**
comp=Z,56nm,1.4s,mb5.7
DPC Dobruska-Polom 88.79 320 *e*P P **23 32 36.9 +0.2**
DPC *e*pP pP 23 32 44.9 -0.5
DPC *e*S S 23 43 20.9 -1.4
DPC AMS AMS 00 22 00.0
comp=Z,2µm,17.1s
KSP Ksiaz 88.86 321 *e*P P **23 32 37.8 +0.8**
KSP Ksiaz 88.86 321⇑ *e*P P **23 32 37.6 +0.6**
KSP *e**PP pP 23 32 43.9 -1.9
KSP *e* 23 36 04.0
KSP *e*S S 23 43 19.0 -3.9
KSP MLR MLR
comp=Z,4µm,24.6s,MS5.7
VAE Valguarnera 88.88 307 P P **23 32 38.0 +0.6**
comp=Z,11nm,0.8s,mb5.2,baz=57,slow=15,SNR=3.2
VAE S S 23 43 19.3 -4.3
comp=Z,5.7nm,0.7s,baz=276,slow=16,SNR=2.3
ARSA Arzberg 88.98 317⇑ *i*P P **23 32 38.2 +0.6**
comp=Z,34nm,1.6s,mb5.4
BOJS Bojanci 88.99 315 *i* P P **23 32 37.4 -0.3**
BOJS *e*pP pP 23 32 46.6 +0.1
BOJS *e*SKSac SKSac 23 43 21.6 +16
BOJS *e*S S 23 43 34.7 +10
UPC Upice 89.00 321 *e*P P **23 32 37.3 -0.4**
UPC *e*pP pP 23 32 45.9 -0.5
PERS Pernice 89.19 317 *i* P P **23 32 38.8 +0.1**
TREC Trest 89.21 319 *e*P P **23 32 38.9 +0.2**
TREC *e*S S 23 43 25.4 -0.9
TREC AMS AMS 00 19 20.0
comp=Z,1µm,20.5s
SOKA Soboth 89.26 317⇑ *i*P P **23 32 39.5 +0.5**
comp=Z,40nm,1.4s,mb5.6
MIDA Miranda 89.36 312 P P **23 32 35.3 -4.2**
comp=Z,334nm,3.0s
RNI2 Rionero Sannit 89.44 312 P P **23 32 47.4 +7.5**
LJU Ljubljana 89.55 316 *i* P P **23 32 40.7 +0.4**
LJU *i**PP pP 23 32 48.5 -0.6
LJU *e* 23 43 28.9
LJU Ljubljana 89.55 316 *i* P P **23 32 40.7 +0.3**
LJU *i*pP pP 23 32 48.5 -0.5
LJU *e*SKSac SKSac 23 43 28.9 +20
LJU *e*S S 23 43 43.4 +14
JAVS Javornik 89.85 316 *i* P P **23 32 41.6 -0.1**
PRU Pruhonice 89.89 320 *e*P P **23 32 42.0 +0.2**
PRU *e*pP pP 23 32 49.4 -1.2
PRU *e*S S 23 43 33.4 +0.8
PRU AMS AMS 00 21 00.0
comp=Z,2µm,19.3s
PVCC Panska Ves 89.92 320 *e*P P **23 32 42.4 +0.4**
PVCC *e*pP pP 23 32 48.9 -1.8
PVCC AMS AMS 00 23 40.0
comp=Z,2µm,18.0s
VOY Vojsko 89.98 316 *e*P P **23 32 41.8 -0.6**
VOY *e* 23 33 02.5
PTQR Pietraguaria 90.02 312 P P **23 32 42.7 +0.1**
comp=Z,44nm,1.3s,mb5.6
AQU L'Aquila 90.05 312 P P **23 32 43.6 +0.9**
comp=Z,27nm,0.9s,mb5.6
AQU L'Aquila 90.05 312 P P **23 32 43.6 +0.9**
AQU pmax pmax
comp=Z,27nm,0.9s,mb5.6
TRO Tromso 90.12 340 *e*P P **23 32 46.3 +3.8**
TRO *e*SKS 23 43 14.4
TRO *e* 23 43 33.5
TRO *e*SS SS 23 49 35.7 +2.9
TRO AMS AMS 00 16 31.0
comp=Z,3µm,25.2s,MS5.6
NRCA Norcia 90.29 313 P P **23 32 44.3 +0.4**
comp=Z,11nm,1.0s,mb5.1
GEC2 GERESS Array S 90.34 319 *e*P P **23 32 43.7 -0.3**
GEC2 *e*S S 23 43 34.4 -2.4
GEC2 pmax pmax
comp=Z,63nm,1.5s,mb5.7
GEC2 GERESS Array S 90.34 319 *e*P P **23 32 43.7 -0.3**
comp=Z,63nm,1.5s,mb5.7
GEC2 *e*S S 23 43 34.4 -2.4
GERES GERESS Array B 90.34 319 P P **23 32 44.3 +0.4**
comp=Z,10nm,1.0s,mb5.1,baz=101,slow=4.2,SNR=48
BRG Berggiesshubel 90.35 321 *e*P P **23 32 44.4 +0.5**
BRG *i* pP 23 32 53.3 +0.6
BRG S S 23 43 38.0 +1.2
BRG SS SS 23 49 36.0 -1.1
BRG pmax pmax
comp=Z,24nm,1.3s,mb5.4
BRG Berggiesshubel 90.35 321 *e*P P **23 32 43.7 -0.2**
comp=Z,39nm,1.3s,mb5.6
BRG *e*S S 23 43 36.2 -0.6
BRG Berggiesshubel 90.35 321 *e*P P **23 32 44.4 +0.5**
comp=Z,40nm,1.3s,mb5.6
BRG *i* pP 23 32 53.3 +0.6
comp=Z,38nm,1.3s

BRG *e* 23 36 55.2
comp=Z,33nm,1.9s
BRG S S 23 43 38.0 +1.2
BRG SS SS 23 49 36.0 -1.1
PTCC Patocco-Chiusa 90.39 316 P **P** **23 32 44.3 +0.1**
comp=Z,39nm,1.6s,mb5.5
KHC Kasperske Hory 90.44 319 *e*P **P** **23 32 44.5 +0.1**
KHC *e*pP pP 23 32 52.2 -1.0
KHC *e*S S 23 43 37.3 -0.4
KHC AMS AMS 00 20 00.0
comp=Z,2µm,18.7s
GMNA Gemona 90.46 316 P **P** **23 32 45.0 +0.4**
comp=Z,308nm,1.5s,mb6.4
RUE Ruedersdorf 90.58 322 *e*P **P** **23 32 45.9 +0.9**
comp=Z,75nm,1.1s,mb5.9
RJOB Jochberg 90.86 318 *e*P **P** **23 32 46.1 -0.3**
comp=Z,14nm,1.3s,mb5.1
WET Wettzell 90.90 319 *e*P **P** **23 32 46.2 -0.4**
WET *e**PP pP 23 32 54.7 -0.7
WET *e*S S 23 43 41.1 -0.8
WET pmax pmax
comp=Z,36nm,1.3s,mb5.5
WET Wettzell 90.90 319 *e*P **P** **23 32 46.2 -0.4**
comp=Z,36nm,1.3s,mb5.5
WET *e*pP pP 23 32 54.7 -0.7
WET *e*S S 23 43 41.1 -0.8
CLL Collm 90.97 321 ⇑*i*P **P** **23 32 46.9 +0.1**
comp=Z,33nm,1.4s,mb5.5
CLL *e*SKS 23 43 17.0
CLL *e*S S 23 43 40.0 -2.5
CLL LR LR
comp=Z,2µm,19.5s,MS5.5
CLL Collm 90.97 321 ⇑*i*P **P** **23 32 46.9 +0.1**
CLL *e* 23 43 17.0
CLL *e*S S 23 43 40.0 -2.5
CLL pmax pmax
comp=Z,33nm,1.4s,mb5.5
CLL MLR MLR
comp=Z,2µm,19.5s,MS5.5
CLL Collm 90.97 321 *e*P **P** **23 32 46.1 -0.7**
comp=Z,33nm,1.4s,mb5.5
CLL *e*pP pP 23 32 55.5 -0.1
CLL *e*S S 23 43 40.8 -1.7
CLL Collm 90.97 321 ⇑*i*P **P** **23 32 46.9 +0.1**
comp=Z,33nm,1.4s,mb5.5
CLL LmV 23 24 00.0
comp=Z,2µm,19.5s
CLL *e*sP sP 23 32 53.0 -5.8
CLL *i* x x 23 32 55.7
CLL *e*SKSac SKSac 23 43 17.0 0.0
CLL *e*S S 23 43 40.0 -2.5
comp=N,1µm,16.6s
CLL *e*S S 23 43 40.0 -2.5
comp=E,400nm,11.2s
CLL *e*SS SS 23 49 42.0 -4.1
ABTA Abfaltersbach 90.99 317 ⇑*i*P **P** **23 32 46.7 -0.3**
comp=E,15nm,1.2s,mb5.2
SNAA Sanae 91.09 198 *e*P **P** **23 32 47.3 +0.3**
comp=E,20nm,1.3s,mb5.3
SNAA *e*pP pP 23 32 54.5 -1.2
SNAA Sanae 91.09 198 *e*P **P** **23 32 47.3 +0.3**
SNAA *e**PP pP 23 32 54.6 -1.2
SNAA pmax pmax
comp=Z,20nm,1.3s
HFS Hagfors 91.23 330 P **P** **23 32 47.7 -0.2**
comp=Z,18nm,1.0s,mb5.4,baz=152,slow=6.7,SNR=8.6
HFS LR LR 00 16 07.7
comp=Z,688nm,19.2s,MS5.1,baz=90,slow=37
TANN Tannenbergstha 91.26 320 *e*P **P** **23 32 47.8 -0.4**
comp=Z,21nm,1.4s,mb5.3
TANN *e*S S 23 43 45.1 0.0
ROTZ Rotzenmuhle 91.38 320 *e*P **P** **23 32 48.9 +0.1**
comp=Z,32nm,1.4s,mb5.5
ROTZ *e*S S 23 43 46.2 -0.1
MANZ Manzenberg 91.46 320 *e*P **P** **23 32 49.2 +0.1**
comp=Z,60nm,1.5s,mb5.7
MANZ *e*S S 23 43 46.8 -0.1
CTI Castel Tesino 91.55 316 P **P** **23 32 50.1 +0.5**
MOX Moxa 91.81 320 *e*P **P** **23 32 50.9 +0.2**
comp=Z,31nm,1.7s,mb5.4
MOX *e* pP 23 32 59.3 -0.2
MOX
comp=Z,1µm,22.0s
MOX Moxa 91.81 320 *e*P **P** **23 32 50.9 +0.2**
MOX *e* pP 23 32 59.3 -0.2
MOX pmax pmax
comp=Z,31nm,1.7s,mb5.4
MOX MLR MLR
comp=Z,1µm,22.0s,MS5.4
MOX Moxa 91.81 320 *e*P **P** **23 32 50.4 -0.3**
comp=Z,33nm,1.6s,mb5.4
MOX *e*S S 23 43 49.7 -0.4
FUR Furstenfeldbru 91.91 318 *e*P **P** **23 32 50.2 -1.1**
FUR *e*S S 23 43 48.4 -2.7
FUR pmax pmax
comp=Z,52nm,1.5s,mb5.6
FUR Furstenfeldbru 91.91 318 *e*P **P** **23 32 50.2 -1.1**
comp=Z,52nm,1.5s,mb5.6
FUR *e*S S 23 43 48.4 -2.7
SPITS Spitsbergen Ar 91.98 348 P **P** **23 32 50.6 -0.4**
comp=Z,7.5nm,0.6s,mb5.2,baz=45,slow=4.8,SNR=7.6
MOTA Moosalm 91.98 317 ⇑*i*P **P** **23 32 51.3 -0.3**
comp=Z,12nm,1.0s,mb5.2
SPB4 Spitsbergen Ar 91.99 348 *e*P **P** **23 32 49.7 -1.4**
GRA1 Grafenberg Arr 92.02 319 *e*P **P** **23 32 51.4 -0.3**
comp=Z,19nm,1.1s,mb5.3
GRA1 *e*pP pP 23 33 00.0 -0.5
GRA1 *e*PP PP 23 36 35.8 +4.3
GRA1 *e*S S 23 43 51.6 -0.4
GRF Grafenberg Arr 92.02 319 *e*P **P** **23 32 51.4 -0.3**
comp=Z,19nm,1.1s,mb5.3
GRF *e*pP pP 23 33 00.0 -0.5
GRF *e*PP PP 23 36 35.8 +4.3
GRF *e*S S 23 43 51.6 -0.4
GRF LR LR
comp=Z,2µm,19.9s,MS5.5
GRF Grafenberg Arr 92.02 319 *e*P **P** **23 32 51.4 -0.3**
GRF *e**PP pP 23 33 00.0 -0.5
GRF *e* 23 36 35.8
GRF *e*S S 23 43 51.6 -0.4
GRF pmax pmax
comp=Z,19nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,2µm,19.9s,MS5.5
GRF Grafenberg Arr 92.02 319 *e*P **P** **23 32 51.4 -0.3**
comp=Z,19nm,1.1s,mb5.3
GRF *e*pP pP 23 33 00.0 -0.5
GRF *e*PP PP 23 36 35.8 +4.3
GRF *e*S S 23 43 51.6 -0.4
GRF Grafenberg Arr 92.02 319 *e*L 00 22 33.8
comp=Z,2µm,19.9s
FETA Feichten 92.23 317 ⇑*i*P **P** **23 32 52.8 +0.1**
comp=Z,12nm,1.2s,mb5.1
NSS Namsos 92.31 334 *e* S 23 43 55.4 +1.4
VLC Villacollemand 92.35 314 PFAKE 23 33 00.0 +6.6
VLC LR LR
comp=Z,1µm,20.0s,MS5.4
NB2 NORSAR Subarra 92.50 331 P **P** **23 32 53.1 -0.6**
comp=Z,17nm,1.1s,mb5.4,baz=95,slow=5.3
NOA NORSAR Array B 92.50 331 P **P** **23 32 53.5 -0.3**
comp=Z,7.5nm,1.0s,mb5.1,baz=95,slow=4.5,SNR=8.2
NOA PP PP 23 36 38.5 +3.4
comp=Z,4.8nm,1.1s,baz=91,slow=7.5,SNR=4.0
NOA LR LR 00 20 20.3
comp=Z,1µm,21.1s,MS5.4,baz=105,slow=39
NOA NORSAR Array B 92.50 331 P **P** **23 32 53.5 -0.2**
NOA 23 36 38.5
CLZ Clausthal 92.64 322 *e*P **P** **23 32 54.2 -0.3**
CLZ *e**PP pP 23 33 03.2 -0.1
CLZ *e*S S 23 43 54.5 -3.0
CLZ pmax pmax
comp=Z,44nm,1.5s,mb5.7
CLZ Clausthal 92.64 322 *e*P **P** **23 32 54.2 -0.3**
comp=Z,44nm,1.5s,mb5.7
CLZ *e*pP pP 23 33 03.2 -0.1
CLZ *e*S S 23 43 54.5 -3.0
BSEG Bad Segeberg 92.74 324 *e*P **P** **23 32 54.6 -0.4**
comp=Z,89nm,2.1s,mb5.8
BSEG *e*S S 23 43 55.9 -2.4
DAVOX Davos/Dischmat 92.80 317 P **P** **23 32 55.6 +0.2**
comp=Z,4.7nm,0.6s,mb5.1,baz=138,slow=4.9,SNR=7.5
DAVA Damuels 92.81 317 ⇑*i*PcP PcP 23 32 55.7 -0.4
comp=Z,28nm,1.5s
KEST Kesra 92.84 305 P **P** **23 32 56.6 +0.7**
comp=Z,6.8nm,1.0s,mb5.0,baz=248,slow=3.7,SNR=6.6

KEST LR LR 00 17 29.6
comp=Z,1µm,18.5s,MS5.3,baz=192,slow=37
DAVOS Davos 92.86 317 P **P** **23 32 55.6 -0.1**
KBS Kingsbay 92.92 349 *e*P **P** **23 32 55.1 -0.2**
KBS *e*PP PP 23 36 39.2 +1.2
KBS *e*SKS 23 43 25.2
KBS AMS AMS 00 24 32.2
comp=Z,3µm,17.8s,MS5.8
KBS Kingsbay 92.92 349⇑ *e*P **P** **23 32 54.2 -1.1**
KBS MLR MLR
comp=Z,3µm,22.0s,MS5.7
TUE Stuetta 93.16 316 PFAKE 23 33 10.0 +13
TUE LR LR
comp=Z,1µm,22.0s,MS5.3
KONO Kongsberg 93.27 329 PFAKE 23 33 10.0 +13
KONO LR LR
comp=Z,2µm,21.0s,MS5.4
KONO Kongsberg 93.27 329 *e*P **P** **23 33 00.1 +2.8**
KONO *e*PP PP 23 36 39.7 -1.4
KONO *e*SKS 23 43 33.3
KONO AMS AMS 00 27 01.1
comp=Z,2µm,17.6s,MS5.6
STU Stuttgart 93.31 319 *e*P **P** **23 32 57.0 -0.7**
comp=Z,11nm,1.2s,mb5.2
STU *e*S S 23 44 01.9 -1.7
TNS Taunus Mts 93.82 320 *e*P **P** **23 32 59.6 -0.4**
TNS *e*S S 23 44 07.1 -0.9
TNS pmax pmax
comp=Z,16nm,1.0s,mb5.4
TNS Taunus Mts 93.82 320 *e*P **P** **23 32 59.6 -0.4**
comp=Z,16nm,1.0s,mb5.4
TNS *e*S S 23 44 07.1 -0.9
BFO Black Forest 93.88 318 *e*P **P** **23 32 59.2 -1.2**
comp=Z,15nm,1.4s,mb5.2
BFO *e*S S 23 44 06.8 -1.8
BFO LR LR
comp=Z,911nm,20.0s,MS5.2
BFO Black Forest 93.88 318 *e*P **P** **23 32 59.2 -1.2**
BFO *e*S S 23 44 06.8 -1.8
BFO pmax pmax
comp=Z,15nm,1.4s,mb5.2
BFO MLR MLR
comp=Z,911nm,20.0s,MS5.2
BFO Black Forest 93.88 318 *e*P **P** **23 32 59.2 -1.2**
comp=Z,15nm,1.4s,mb5.2
BFO *e*S S 23 44 06.8 -1.8
MOL Molde 94.26 332 *e* S 23 44 05.8 -5.5
IBBN Ibbenburen 94.26 322 *e*P **P** **23 33 02.1 +0.1**
comp=Z,52nm,1.5s,mb5.7
IBBN *e*S S 23 44 11.0 -0.7
BUG Bochum--Univer 94.57 321 *e*S S 23 44 12.7 -1.8
LPG La Plagne 94.96 315 *e*P **P** **23 33 05.2 -0.2**
comp=Z,26nm,1.1s,mb5.3
LPG La Plagne 94.96 315 *e*P **P** **23 33 05.2 -0.2**
comp=Z,13nm,1.1s,mb5.3
LPG La Plagne 94.96 315 *e*P **P** **23 33 05.2 -0.2**
LPG pmax pmax
comp=Z,13nm,1.1s,mb5.3
LPL La Plagne 94.97 315 *e*P **P** **23 33 05.1 -0.3**
comp=Z,43nm,1.4s,mb5.4
LPL La Plagne 94.97 315 *e*P **P** **23 33 05.1 -0.3**
comp=Z,22nm,1.4s,mb5.4
LPL La Plagne 94.97 315 *e*P **P** **23 33 05.1 -0.3**
LPL pmax pmax
comp=Z,22nm,1.4s,mb5.4
BNI Bardonecchia 95.01 315 PFAKE 23 33 20.0 +14
BNI LR LR
comp=Z,2µm,20.0s,MS5.6
WLF Walferdange 95.31 319 PFAKE 23 33 20.0 +13
WLF LR LR
comp=Z,2µm,20.0s,MS5.6
WLF Walferdange 95.31 319 *e*P **P** **23 33 06.2 -0.7**
comp=Z,12nm,1.0s,mb5.3
WLF *e*S S 23 44 20.6 -0.4
BER Bergen 95.40 330 *e*P **P** **23 33 08.9 +1.9**
BER *e*SKS 23 43 47.6
BER *e* 23 44 26.3
BER AMS AMS 00 27 53.8
comp=Z,2µm,16.5s,MS5.6
CABF La Chapelle 95.41 316 *e*P **P** **23 33 06.2 -1.2**
comp=Z,22nm,1.1s,mb5.2
CABF La Chapelle 95.41 316 *e*P **P** **23 33 06.2 -1.2**
comp=Z,11nm,1.1s,mb5.2
CABF La Chapelle 95.41 316 *e*P **P** **23 33 06.2 -1.2**
CABF pmax pmax
comp=Z,11nm,1.1s,mb5.2
TAM Tamanrasset 95.85 292 *e*P **P** **23 33 09.7 -0.3**
comp=Z,5.8nm,1.4s,mb4.8
TAM *e*pP pP 23 33 18.2 -0.6
RAR Rarotonga 97.86 112 PFAKE 23 33 30.0 +11
RAR LR LR
comp=Z,4µm,21.0s,MS5.8
JMIC Jan Mayen 99.23 342 *e*PP PP 23 37 24.7 -2.1
JMIC AMS AMS 00 27 13.6
comp=Z,2µm,14.0s,MS5.7
TORD Torodi Ar. Bea 99.32 283 P **P** **23 33 24.7 -1.1**
comp=Z,0.5nm,0.9s,baz=98,slow=5.0,SNR=3.3
TORD PKKPbc PKKPbc 23 49 50.2 +0.6
comp=Z,0.2nm,0.6s,baz=301,slow=3.4,SNR=6.4
TORD LR LR 00 13 57.3
comp=Z,2µm,21.4s,MS5.5,baz=75,slow=33
TORD Torodi Ar. Bea 99.32 283 P **P** **23 33 24.7 -1.1**
TORD PKKPbc PKKPbc 23 49 50.2 +0.6
TORD LR LR 00 13 57.2
IMA2 Indian Mountai 99.37 23 *e*P **P** **23 33 24.7 -0.1**
IMA2 *e*pP pP 23 33 32.5 -1.2
ESK Eskdalemuir 100.48 326 PFAKE 23 33 40.0 +10
ESK LR LR
comp=Z,2µm,22.0s,MS5.6
KDAK Kodiak Island 101.74 32 PFAKE 23 33 50.0 +14
KDAK LR LR
comp=Z,2µm,20.0s,MS5.7
COLA College 102.04 24 PFAKE 23 33 50.0 +13
COLA LR LR
comp=Z,2µm,19.0s,MS5.6
XMAS Kiritimati 102.13 89 PFAKE 23 33 50.0 +13
XMAS LR LR
comp=Z,1µm,19.0s,MS5.4
PMR Palmer 102.47 27 PFAKE 23 33 50.0 +11
PMR LR LR
comp=Z,2µm,19.0s,MS5.7
ESDC Sonseca Array 103.22 310 PP PP 23 38 05.4 +7.5
comp=Z,0.1nm,0.3s,baz=107,slow=5.0,SNR=4.2
ESDC PKKPbc PKKPbc 23 49 44.9 +5.9
comp=Z,0.4nm,0.7s,baz=256,slow=3.1,SNR=4.1
ESLA Sonseca Array 103.22 310 PFAKE 23 33 50.0 +7.8
ESLA LR LR
comp=Z,5µm,21.0s,MS6.0
PAB San Pablo 103.53 310 PFAKE 23 33 50.0 +6.4
PAB LR LR
comp=Z,847nm,20.0s,MS5.3
POHA Pohakuloa 104.23 71 PFAKE 23 34 00.0 +13
POHA LR LR
comp=Z,1µm,21.0s,MS5.5
EGAK Eagle 104.73 23 PFAKE 23 34 00.0 +11
EGAK LR LR
comp=Z,2µm,19.0s,MS5.7
SFS San Fernando 105.37 307 PFAKE 23 38 20.0 +14
SFS LR LR
comp=Z,2µm,19.0s,MS5.7
DBIC Dimbokro 105.63 276 PFAKE 23 38 20.0 +13
DBIC LR LR
comp=Z,2µm,20.0s,MS5.7
MTE Manteigas 105.84 311 PFAKE 23 38 20.0 +13
MTE LR LR
comp=Z,1µm,20.0s,MS5.4
TRIS Tristan da Cun 106.00 230 PFAKE 23 38 20.0 +13
TRIS LR LR
comp=Z,3µm,19.0s,MS5.8
TBI Tubuai 106.97 115 *e*Sdif Sdif 23 45 54.2 -4.7
comp=Z,945nm,28.0s
TBI *e*SS SS 23 53 32.3 +0.8
comp=Z,1µm,26.8s
TBI Tubuai 106.97 115 *e*LR LR 00 09 27.9
comp=Z,4µm,23.0s
PPT Papeete 107.90 110 *e*PP PP 23 38 21.9 -11
comp=Z,174nm,25.8s
PPT *e*Sdif Sdif 23 45 55.7 -11
comp=Z,1µm,25.5s
PPT Papeete 107.90 110 *e*LR LR 00 09 53.4
comp=Z,2µm,24.5s
PPT Papeete 107.90 110 *e*Pdif Pdif 23 34 02.8 -0.2
PPT *e*PP PP 23 38 21.9 -11
SIT Sitka 110.73 29 PFAKE 23 38 30.0 +15
SIT LR LR

comp=Z,3µm,21.0s,MS5.8
PMSA Palmer Station 111.17 187 PFAKE 23 38 30.0 +14
PMSA LR LR
comp=Z,3µm,22.0s,MS5.8
WRAK Wrangell Islan 112.47 29 PFAKE 23 38 30.0 +11
WRAK LR LR
comp=Z,2µm,19.0s,MS5.7
SFJD Kangerlussuaq 113.32 348 PFAKE 23 38 30.0 +10
SFJD LR LR
comp=Z,2µm,19.0s,MS5.7
ASCN Ascension 114.09 260 PFAKE 23 38 30.0 +6.9
ASCN LR LR
comp=Z,2µm,20.0s,MS5.7
TAOE Nuku Hiva Isla 118.34 102 *e*LR LR 00 14 59.3
comp=Z,4µm,23.9s
RKT Rikitea 119.91 119 *e*PS PS 23 49 47.9 -0.4
comp=Z,747nm,28.0s
RKT *e*SS SS 23 56 23.8 +1.3
comp=Z,421nm,34.0s
RKT Rikitea 119.91 119 *e*LR LR 00 15 30.9
comp=Z,3µm,25.8s
EFI East Falkland 122.29 196 PFAKE 23 38 50.0 +12
EFI LR LR
comp=Z,1µm,19.0s,MS5.6
EDM Edmonton 122.95 24 *e*PKPdf PKPdf 23 38 38.9 -0.1
EDM *ep*PKPdf pPKPdf 23 38 48.1 0.0
ERK Elk Rock 123.25 34 P PKPdf 23 38 40.7 +0.9
TDL Tradedollar La 123.30 34 P PKPdf 23 38 40.8 +0.9
COR Corvallis 123.68 36 PFAKE 23 38 50.0 +9.3
COR LR LR
comp=Z,2µm,20.0s,MS5.7
EPH Ephrata 124.12 32 P PKPdf 23 38 41.5 +0.1
WRD Warden 124.70 32 P PKPdf 23 38 43.1 +0.5
RSW Rattlesnake Hi 124.72 33 *e*PKPdf PKPdf 23 38 43.1 +0.5
RSW *ep*PKPdf pPKPdf 23 38 51.5 -0.2
HAWA Hanford 124.75 33 *e*PKPdf PKPdf 23 38 43.1 +0.4
HAWA LR LR
comp=Z,2µm,20.0s,MS5.7
NEW Newport 124.79 30 PFAKE 23 38 50.0 +7.3
NEW LR LR
comp=Z,2µm,20.0s,MS5.7
HUMO Hull Mountain 124.98 38 *e*PKPdf PKPdf 23 38 43.9 +0.7
HUMO *ep*PKPdf pPKPdf 23 38 51.9 -0.4
HUMO LR LR
comp=Z,2µm,21.0s,MS5.7
VIPM Ingram Point 125.29 35 P PKPdf 23 38 44.8 +1.1
FFC Flin Flon 125.55 16 *e*PKPdf PKPdf 23 38 43.4 -0.6
FFC LR LR
comp=Z,3µm,20.0s,MS5.9
YBH Yreka Blue Hor 125.61 39 PKP PKPdf 23 38 44.6 +0.1
comp=Z,1.8nm,0.6s,baz=0.0,slow=2.0,SNR=3.8
YBH Yreka Blue Hor 125.61 39 PKIKP PKPdf 23 38 44.6 +0.1
YBH MLR MLR
comp=Z,1µm,20.0s
LNOR Lincton Mounta 125.75 33 *e*PKPdf PKPdf 23 38 44.7 +0.1
LNOR *ep*PKPdf pPKPdf 23 38 53.6 -0.1
WDC Whiskeytown Da 126.33 40 *e*PKPdf PKPdf 23 38 46.0 0.0
WDC LR LR
comp=Z,1µm,20.0s,MS5.6
LTIM Timbered Crate 126.68 39 P PKPdf 23 38 47.4 +0.8
HOPS Hopland 126.81 42 PFAKE 23 39 00.0 +13
HOPS LR LR
comp=Z,2µm,19.0s,MS5.7
BMO Blue Mountains 126.94 33 PFAKE 23 39 00.0 +13
BMO LR LR
comp=Z,1µm,19.0s,MS5.7
MOD Modoc 127.00 38 *e*PKPdf PKPdf 23 38 48.1 +1.0
MOD *ep*PKPdf pPKPdf 23 38 56.2 +0.1
MOD LR LR
comp=Z,1µm,20.0s,MS5.6
MSO Missoula 127.34 29 *e*PKPdf PKPdf 23 38 47.3 -0.3
MSO *ep*PKPdf pPKPdf 23 38 56.3 -0.3
MSO LR LR
comp=Z,2µm,19.0s,MS5.7
NSHM Saint Helena R 127.37 42 *e*PKPdf PKPdf 23 38 48.7 +0.8
MCCM Marconi Confer 127.37 43 PFAKE 23 39 00.0 +12
MCCM LR LR
comp=Z,1µm,22.0s,MS5.5
CHMT Chamberlain Mo 127.62 29 *e*PKPdf PKPdf 23 38 48.0 -0.1
CHMT *ep*PKPdf pPKPdf 23 38 57.2 0.0
OHCM Honcut 127.68 41 *e*PKPdf PKPdf 23 38 48.4 -0.1
OHCM *ep*PKPdf pPKPdf 23 38 56.7 -0.8
WVOR Wild Horse Val 127.69 36 *ep*PKPdf pPKPdf 23 38 56.8 -0.7
WVOR LR LR
comp=Z,1µm,20.0s,MS5.7
EGMT Eagleton 128.39 26 PFAKE 23 39 00.0 +10
EGMT LR LR
comp=Z,2µm,20.0s,MS5.8
DLMT Dillon 129.04 30 *e*PKPdf PKPdf 23 38 51.8 +0.9
DLMT *ep*PKPdf pPKPdf 23 38 59.6 -0.4
SAO San Andreas Ge 129.05 44 PFAKE 23 39 00.0 +8.8
SAO LR LR
comp=Z,1µm,19.0s,MS5.5
CMB Columbia Colle 129.11 42 *e*PKPdf PKPdf 23 38 51.8 +0.5
CMB *ep*PKPdf pPKPdf 23 38 59.7 -0.6
CMB LR LR
comp=Z,1µm,21.0s,MS5.5
MCMT McKenzie Canyo 129.29 30 *e*PKPdf PKPdf 23 38 52.2 +0.8
MCMT *ep*PKPdf pPKPdf 23 39 00.2 -0.3
BOZ Bozeman (W) 129.31 29 PFAKE 23 39 00.0 +8.6
BOZ LR LR
comp=Z,2µm,19.0s,MS5.8
HLID Hailey 129.35 33 PFAKE 23 39 00.0 +8.4
HLID LR LR
comp=Z,2µm,20.0s,MS5.7
BMN Battle Mountai 129.75 37 PFAKE 23 39 00.0 +7.6
BMN LR LR
comp=Z,1µm,19.0s,MS5.5
DGMT Dagmar 130.24 21 PFAKE 23 39 00.0 +6.9
DGMT LR LR
comp=Z,2µm,20.0s,MS5.8
NVAR Mina Array Bea 130.25 40 PKhKP 23 38 47.7
comp=Z,0.4nm,0.7s,baz=48,slow=1.3,SNR=3.5
NVAR PKP PKPdf 23 38 54.5 +1.1
comp=Z,5.0nm,0.9s,baz=286,slow=1.6,SNR=23
NVAR SKPab 23 42 16.0
comp=Z,5.1nm,1.0s,baz=278,slow=3.6,SNR=6.4
NVAR Mina Array Bea 130.25 40 PKP 23 38 47.7
NVAR PKP PKPdf 23 38 54.5 +1.1
NVAR SKPab 23 42 16.0
YMR Madison River 130.34 29 PFAKE 23 39 00.0 +6.6
YMR LR LR
comp=Z,2µm,21.0s,MS5.8
YFT Old Faithful 130.57 29 *e*PKPdf PKPdf 23 38 55.0 +1.1
LKWY Lake 130.69 29 PFAKE 23 39 00.0 +5.9
LKWY LR LR
comp=Z,4µm,20.0s,MS6.1
ELK Elko 130.74 36 *e*PKPdf PKPdf 23 38 54.9 +0.6
ELK *e* 23 39 04.3
ELK LR LR
comp=Z,1µm,19.0s,MS5.7
RLMT Red Lodge 130.82 28 PFAKE 23 39 00.0 +5.7
RLMT LR LR
comp=Z,3µm,19.0s,MS6.0
LAO LASA Array 130.92 24 PFAKE 23 39 00.0 +5.5
LAO LR LR
comp=Z,3µm,20.0s,MS5.9
TPH Tonopah 131.15 40 PFAKE 23 39 10.0 +15
TPH LR LR
comp=Z,1µm,20.0s,MS5.6
ULM Lac du Bonnet 131.18 14 PKP PKPdf 23 38 55.0 +0.1
comp=Z,7.1nm,0.8s,baz=22,slow=3.9,SNR=6.0
ULM Lac du Bonnet 131.18 14 PKP PKPdf 23 38 55.0 +0.1
ULM LR LR
comp=Z,3µm,19.0s,MS6.1
REDW Red Top Meadow 131.35 30 *e*PKPdf PKPdf 23 38 56.3 +1.0
HVU Hansel Valley 131.45 33 *e*PKPdf PKPdf 23 38 55.9 +0.3
HVU *ep*PKPdf pPKPdf 23 39 04.5 -0.2
AHID Auburn Hatcher 131.65 31 PFAKE 23 39 10.0 +14
AHID LR LR
comp=Z,1µm,20.0s,MS5.7
ISA Isabella 131.68 43 PFAKE 23 39 10.0 +14
ISA LR LR
comp=Z,959nm,20.0s,MS5.5
BGU Big Grassy Mou 131.88 34 *e*PKPdf PKPdf 23 38 57.1 +0.7
DAC Darwin (Calif) 131.94 42 PFAKE 23 39 10.0 +13
DAC LR LR
comp=Z,989nm,20.0s,MS5.5
SPUT South Promonto 131.95 33 *e*PKPdf PKPdf 23 38 57.8 +1.3
SNCC San Nicolas Is 132.19 47 PFAKE 23 39 10.0 +13
SNCC LR LR
comp=Z,1µm,22.0s,MS5.6
HWUT Hardware Ranch 132.22 33 *e*PKPdf PKPdf 23 38 55.8 -1.3
HWUT *e* 23 39 07.2

HWUT				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
BW06	**Boulder Array**	**132.43**	**30**	PFAKE			23 39 10.0	+13	
BW06				LR	LR				
	comp=Z,2μm,19.0s,MS5.7								
PDAR	**Pinedale Array**	**132.43**	**30**	PKhKP			23 38 45.7		
	comp=Z,0.2nm,0.5s,baz=346,slow=3.0,SNR=2.5								
PDAR				PKP	PKPdf		23 38 58.0	+0.6	
	comp=Z,1.8nm,1.0s,baz=270,slow=0.9,SNR=8.2								
PDAR				PP	PP		23 41 18.1	-1.9	
	comp=Z,1.6nm,1.0s,baz=194,slow=0.6,SNR=3.6								
TPNV	**Topopah Spring**	**132.44**	**41**	*e*PKPdf	PKPdf		23 38 58.5	+0.8	
TPNV				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
DUG	**Dugway**	**132.50**	**35**	*e*PKPdf	PKPdf		23 38 58.3	+0.7	
DUG				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
MWC	**Mount Wilson**	**132.74**	**45**	PFAKE			23 39 10.0	+12	
MWC				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
AGMN	**Agassiz Refuge**	**133.00**	**15**	PFAKE			23 39 10.0	+12	
AGMN				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
GSC	**Goldstone**	**133.01**	**43**	*e*PKPdf	PKPdf		23 38 59.8	+1.1	
GSC				*ep*PKPdf	pPKPdf		23 39 07.5	-0.3	
GSC				LR	LR				
	comp=Z,1μm,19.0s,MS5.6								
NLU	**North Lily Min**	**133.08**	**35**	*e*PKPdf	PKPdf		23 38 58.5	-0.3	
NLU				*e*			23 39 07.8		
MPU	**Maple Canyon**	**133.28**	**34**	PFAKE			23 39 10.0	+11	
MPU				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
RSSD	**Black Hills**	**133.91**	**25**	*e*PKPdf	PKPdf		23 39 00.1	0.0	
RSSD				*ep*PKPdf	pPKPdf		23 39 09.6	+0.4	
RSSD				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
MSU	**Marysvale**	**133.98**	**36**	*e*PKPdf	PKPdf		23 39 01.6	+1.1	
MSU				*ep*PKPdf	pPKPdf		23 39 10.0	+0.5	
PFO	**Pinyon Flat Ob**	**134.19**	**44**	*e*PKPdf	PKPdf		23 39 02.5	+1.5	
PFO				*ep*PKPdf	pPKPdf		23 39 09.9	-0.2	
PFO				LR	LR				
	comp=Z,953nm,21.0s,MS5.5								
LDFC	**Landfair**	**134.28**	**42**	*e*PKPdf	PKPdf		23 39 01.8	+0.6	
LDFC				*ep*PKPdf	pPKPdf		23 39 09.4	-0.8	
EYMN	**Ely**	**134.31**	**11**	PFAKE			23 39 10.0	+9.2	
EYMN				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
SRU	**San Rafael**	**134.53**	**34**	*e*PKPdf	PKPdf		23 39 02.2	+0.7	
SRU				*ep*PKPdf	pPKPdf		23 39 09.3	-1.2	
PLCA	**Paso Flores**	**135.44**	**190**	PFAKE			23 39 10.0	+6.8	
PLCA				LR	LR				
	comp=Z,1μm,19.0s,MS5.6								
RCBR	**Riachuelo**	**135.54**	**258**	PFAKE			23 39 10.0	+5.9	
RCBR				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
GLA	**Glamis**	**135.63**	**44**	PFAKE			23 39 10.0	+6.3	
GLA				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
PV10	**Paradox Valley**	**135.87**	**34**	*e*PKPdf	PKPdf		23 39 04.8	+0.8	
PV10				*ep*PKPdf	pPKPdf		23 39 13.4	+0.4	
PV01	**Paradox Valley**	**136.30**	**34**	*e*PKPdf	PKPdf		23 39 05.7	+0.9	
SMCO	**Snowmass**	**136.40**	**31**	*e*PKPdf	PKPdf		23 39 05.8	+0.9	
WUAZ	**Wupatki**	**136.42**	**39**	*e*PKPdf	PKPdf		23 39 05.3	+0.2	
WUAZ				LR	LR				
	comp=Z,956nm,19.0s,MS5.5								
COWI	**Conover**	**136.53**	**10**	PFAKE			23 39 20.0	+15	
COWI				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
ISCO	**Idaho Springs**	**136.62**	**30**	PFAKE			23 39 20.0	+15	
ISCO				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
ECSD	**EROS,Sioux Fal**	**136.95**	**18**	*ep*PKPdf	pPKPdf		23 39 14.3	-0.6	
ECSD				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
MVCO	**Mesa Verde**	**137.00**	**35**	*e*PKPdf	PKPdf		23 39 07.1	+0.9	
MVCO				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
PKME	**Peaks-Kenny Pk**	**137.24**	**349**	PFAKE			23 39 20.0	+14	
PKME				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
OGNE	**Ogallala**	**137.36**	**25**	PFAKE			23 39 20.0	+13	
OGNE				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
SDCO	**Great Sand Dun**	**138.24**	**31**	PFAKE			23 39 20.0	+12	
SDCO				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
GLMI	**Grayling**	**138.38**	**5**	PFAKE			23 39 20.0	+12	
GLMI				LR	LR				
	comp=Z,3μm,19.0s,MS6.0								
LBNH	**Lisbon**	**138.67**	**352**	PFAKE			23 39 20.0	+11	
LBNH				LR	LR				
	comp=Z,3μm,19.0s,MS6.0								
TUC	**Tucson**	**138.82**	**42**	*e*PKPdf	PKPdf		23 39 09.4	-0.3	
TUC				LR	LR				
	comp=Z,1μm,20.0s,MS5.6								
NCB	**Newcomb**	**139.21**	**354**	PFAKE			23 39 20.0	+10	
NCB				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
JFWS	**Jewell Farm**	**139.39**	**12**	PFAKE			23 39 20.0	+10	
JFWS				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
SCIA	**State Center**	**139.62**	**16**	PFAKE			23 39 20.0	+9.2	
SCIA				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
LAZ	**Ladron**	**139.75**	**36**	*e*PKPdf	PKPdf		23 39 12.2	+0.9	
ANMO	**Albuquerque**	**139.76**	**35**	*e*PKPdf	PKPdf		23 39 05.2	-6.1	
ANMO				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
LENM	**Lemitar**	**140.01**	**37**	*e*PKPdf	PKPdf		23 39 12.2	+0.4	
CBKS	**Cedar Bluff**	**140.11**	**25**	PFAKE			23 39 20.0	+8.2	
CBKS				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
LPM	**Los Pinos Moun**	**140.11**	**36**	*e*PKPdf	PKPdf		23 39 08.1	-3.8	
BNM	**Barren Site**	**140.22**	**36**	*e*PKPdf	PKPdf		23 39 07.9	-4.3	
WES	**Weston**	**140.39**	**350**	PFAKE			23 39 20.0	+7.8	
WES				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
BRYW	**Bryant College**	**140.88**	**351**	*e*PKPdf	PKPdf		23 39 13.6	+0.5	
AAM	**Ann Arbor**	**140.97**	**5**	PFAKE			23 39 20.0	+6.7	
AAM				LR	LR				
	comp=Z,3μm,19.0s,MS6.0								
KSU1	**Kansas State U**	**141.09**	**21**	*e*PKPdf	PKPdf		23 39 11.4	-2.2	
KSU1				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
BINY	**Binghamton**	**141.12**	**356**	PFAKE			23 39 20.0	+6.5	
BINY				LR	LR				
	comp=Z,3μm,21.0s,MS6.0								
ERPA	**Erie**	**141.33**	**1**	PFAKE			23 39 20.0	+6.1	
ERPA				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
HDIL	**Hopedale**	**141.85**	**12**	PFAKE			23 39 20.0	+5.1	
HDIL				LR	LR				
	comp=Z,3μm,22.0s,MS5.9								
AMTX	**Amarillo**	**142.40**	**31**	PFAKE			23 39 30.0	+14	
AMTX				LR	LR				
	comp=Z,2μm,19.0s,MS6.0								
SSPA	**Standing Stone**	**142.78**	**358**	PFAKE			23 39 30.0	+13	
SSPA				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
ACSO	**Alum Creek Sta**	**143.08**	**4**	*e*PKPdf	PKPdf		23 39 12.9	-4.2	
ACSO				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
BDFB	**Brasilia**	**143.62**	**238**	PKP	PKPdf		23 39 17.4	-1.3	
	comp=Z,2.6nm,0.8s,baz=213,slow=22,SNR=3.0								
BDFB	**Brasilia**	**143.62**	**238**	PKIKP	PKPdf		23 39 17.4	-1.3	
BDFB				MLR	MLR				
	comp=Z,2μm,19.0s								
BLO	**Bloomington**	**143.71**	**9**	*e*PKPdf	PKPdf		23 39 15.2	-3.0	
CCM	**Cathedral Cave**	**143.75**	**16**	*e*PKPdf	PKPdf		23 39 15.0	-3.3	
CCM				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
MCWV	**Mont Chateau**	**143.79**	**0**	*e*PKPdf	PKPdf		23 39 15.8	-2.6	
MCWV				LR	LR				
	comp=Z,2μm,19.0s,MS6.0								
OLIL	**Olney**	**143.85**	**11**	*e*PKPdf	PKPdf		23 39 15.7	-2.8	
FVM	**French Village**	**144.04**	**15**	*e*PKPdf	PKPdf		23 39 15.9	-3.0	
SIUC	**Southern Illin**	**144.59**	**13**	*e*PKPdf	PKPdf		23 39 18.1	-1.7	
WCI	**Wyandotte Cave**	**144.66**	**9**	*e*PKPdf	PKPdf		23 39 18.2	-1.8	
WCI				LR	LR				
	comp=Z,2μm,21.0s,MS6.0								
USIN	**University of**	**144.68**	**11**	*e*PKPdf	PKPdf		23 39 18.4	-1.5	
CBN	**Corbin**	**145.19**	**357**	*e*PKPbc	PKPbc		23 39 20.4	0.0	
CBN				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
TXAR	**Lajitas Array**	**145.38**	**39**	PKPbc	PKPbc		23 39 22.1	+0.8	
	comp=Z,141nm,1.0s,baz=288,slow=1.3,SNR=768								
PARMO	**Parma**	**145.46**	**15**	*e*PKPbc	PKPbc		23 39 21.1	-0.2	
URVA	**University of**	**145.83**	**357**	*e*PKPdf	PKPdf		23 39 22.2	+0.2	
GLAT	**Glass**	**145.95**	**14**	*e*PKPdf	PKPdf		23 39 23.0	+0.8	
UTMT	**University of**	**145.98**	**14**	*e*PKPdf	PKPdf		23 39 23.0	+0.8	
UTMT				*ep*PKPdf	pPKPdf		23 39 30.7	-0.6	
GNAR	**Gosnell**	**146.05**	**15**	*e*PKPdf	PKPdf		23 39 23.4	+1.0	
GNAR				*ep*PKPdf	pPKPdf		23 39 31.1	-0.3	
ELN	**Prospectdale**	**146.19**	**2**	*e*PKPdf	PKPdf		23 39 22.6	0.0	
ELN				*ep*PKPdf	pPKPdf		23 39 31.2	-0.4	
BLA	**Blacksburg**	**146.22**	**1**	*e*PKPdf	PKPdf		23 39 22.8	+0.2	
BLA				LR	LR				
	comp=Z,2μm,22.0s,MS5.9								
MIAR	**Mount Ida**	**146.25**	**21**	*e*PKPdf	PKPdf		23 39 23.0	+0.2	
MIAR				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
HBAR	**Harrisburg**	**146.26**	**17**	*e*PKPdf	PKPdf		23 39 23.8	+1.1	
HALT	**Halls**	**146.28**	**14**	*e*PKPdf	PKPdf		23 39 23.6	+0.8	
WVT	**Waverly**	**146.41**	**12**	*e*PKPdf	PKPdf		23 39 22.8	-0.2	
WVT				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
UALR	**University of**	**146.46**	**19**	*e*PKPdf	PKPdf		23 39 23.7	+0.5	
TZTN	**Tazewell**	**146.69**	**6**	*e*PKPdf	PKPdf		23 39 23.1	-0.4	
TZTN				LR	LR				
	comp=Z,3μm,22.0s,MS6.1								
LCO	**Las Campanas**	**146.81**	**194**	*e*PKPbc	PKPbc		23 39 25.9	+0.3	
LCO				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
JCT	**Junction City**	**146.82**	**33**	*e*PKPdf	PKPdf		23 39 24.1	+0.3	
JCT				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
MAIG	**Mazatlaan**	**147.27**	**50**	*i* P	PKPdf		23 39 25.3	+0.5	
TKL	**Tuckaleechee C**	**147.54**	**7**	*e*PKPdf	PKPdf		23 39 25.0	+0.1	
TKL				*e*PKPbc	PKPbc		23 39 27.2	-0.3	
OXF	**Oxford**	**147.58**	**15**	*e*PKPdf	PKPdf		23 39 24.9	-0.1	
OXF				*e*PKPbc	PKPbc		23 39 27.1	-0.5	
OXF				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
CPCT	**Cooper Cave**	**147.65**	**8**	*e*PKPdf	PKPdf		23 39 25.0	-0.1	
CPCT				*e*PKPbc	PKPbc		23 39 27.3	-0.5	
SWET	**Sewanee**	**147.66**	**10**	*e*PKPdf	PKPdf		23 39 24.7	-0.4	
SWET				*e*PKPbc	PKPbc		23 39 27.1	-0.7	
BBSR	**BB Station**	**147.90**	**336**	PFAKE			23 39 40.0	+14	
BBSR				LR	LR				
	comp=Z,1μm,20.0s,MS5.8								
CNNC	**Cliffs of the**	**148.16**	**358**	*e*PKPdf	PKPdf		23 39 26.0	+0.1	
CNNC				*e*PKPbc	PKPbc		23 39 29.3	+0.1	
CNNC				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
NATX	**Nacogdoches**	**148.28**	**25**	*e*PKPdf	PKPdf		23 39 26.8	+0.6	
NATX				*e*PKPbc	PKPbc		23 39 30.0	+0.4	
NATX				LR	LR				
	comp=Z,3μm,19.0s,MS6.0								
JSC	**Jenkinsville**	**149.11**	**3**	*e*PKPdf	PKPdf		23 39 27.9	+0.4	
JSC				*e*PKPbc	PKPbc		23 39 31.3	-0.3	
HKT	**Hockley**	**149.28**	**29**	*e*PKPdf	PKPdf		23 39 27.9	-0.1	
HKT				*e*PKPbc	PKPbc		23 39 32.6	+0.4	
HKT				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
VBMS	**Vicksburg**	**149.41**	**19**	*e*PKPbc	PKPbc		23 39 32.5	+0.1	
VBMS				*e*PKPab	PKPab		23 39 37.3	+0.2	
VBMS				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
GOGA	**Godfrey**	**149.79**	**7**	*e*PKPdf	PKPdf		23 39 29.1	+0.5	
GOGA				*e*PKPbc	PKPbc		23 39 33.3	0.0	
GOGA				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
KVTX	**Kingsville**	**150.14**	**34**	*e*PKPbc	PKPbc		23 39 35.2	+0.8	
KVTX				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
NHSC	**New Hope**	**150.32**	**1**	*e*PKPbc	PKPbc		23 39 34.7	0.0	
NHSC				*e*PKPab	PKPab		23 39 40.8	+0.1	
NHSC				LR	LR				
	comp=Z,3μm,22.0s,MS6.0								
ZAIG	**Zacatecas**	**150.41**	**47**	*e*P	PKPbc		23 39 31.7	-3.5	
SFJM	**Santa Fe**	**151.38**	**51**	*e*P	PKPbc		23 39 33.4	-4.1	
BRAL	**Brewton**	**151.51**	**14**	*e*PKPdf	PKPdf		23 39 31.5	+0.1	
BRAL				*e*PKPbc	PKPbc		23 39 37.7	+0.2	
BRAL				*e*PKPab	PKPab		23 39 45.5	-0.2	
BRAL				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
LVC	**Limon Verde**	**152.27**	**201**	*e*PKPbc	PKPbc		23 39 40.2	+0.7	
LVC				*e*PKPab	PKPab		23 39 48.3	-0.9	
LVC				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
DWPF	**Disney**	**155.24**	**4**	PFAKE			23 39 50.0	+13	
DWPF				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
LVIG	**Laguna Verde**	**156.76**	**44**	*e*P	PKPdf		23 39 37.8	-1.3	
LPAZ	**La Paz**	**157.55**	**210**	PKP	PKPdf		23 39 40.9	+0.8	
	comp=Z,1.8nm,0.9s,baz=38,slow=4.8,SNR=7.9								
LPAZ	**La Paz**	**157.55**	**210**	*e*PKIKP	PKPdf		23 39 41.1	+1.0	
LPAZ				*e*			23 39 49.7		
LPAZ				MLR	MLR				
	comp=Z,2μm,20.0s								
BBGH	**Gun Hill**	**158.00**	**298**	PFAKE			23 39 50.0	+9.3	
BBGH				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
GRGR	**Grenville**	**160.27**	**297**	PFAKE			23 39 50.0	+6.6	
GRGR				LR	LR				
	comp=Z,1μm,21.0s								
SJG	**San Juan**	**160.30**	**319**	PFAKE			23 39 50.0	+6.7	
SJG				LR	LR				
	comp=Z,1μm,19.0s								
NNA	**Nana**	**164.61**	**190**	PFAKE			23 40 00.0	+12	
NNA				LR	LR				
	comp=Z,1μm,20.0s								
TGUH	**Tegucigalpa,Un**	**166.82**	**35**	PFAKE			23 40 00.0	+11	
TGUH				LR	LR				
	comp=Z,2μm,20.0s								
PAYG	**Puerto Ayora**	**168.51**	**110**	PFAKE			23 40 00.0	+9.2	
PAYG				LR	LR				
	comp=Z,1μm,21.0s								
BCIP	**Isla Barro Col**	**174.14**	**3**	PFAKE			23 40 00.0	+6.5	
BCIP				LR	LR				
	comp=Z,2μm,19.0s								
OTAV	**Otavalo**	**176.81**	**199**	*e*PKPdf	PKPdf		23 39 54.4	+0.1	
OTAV				*ep*PKPdf	pPKPdf		23 40 02.6	-0.7	
OTAV				LR	LR				
	comp=Z,2μm,20.0s								

IDC 10 23:32:59.9±2.6, 2973N×14100E, h0^{km}, mb3.4/2, mb1 3.5/4, mb1mx3.4/21, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=110.9km s-min=27.1km az=71.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op	ISC		h	m	s	ISC
CBIJ	**Chichi jima**	**2.83**	**158**	Pn	Pn		23	33	46.9	+0.6
	8.1nm,0.3s,baz=279,slow=20,SNR=9.3									
CBIJ				Sn	Sn		23	34	20.8	-0.3
	10nm,0.3s,baz=275,slow=22,SNR=5.1									
MJAR	**Matsushiro Arr**	**7.18**	**342**	Pn	Pn		23	34	45.9	-0.3
	0.5nm,0.3s,baz=159,slow=11,SNR=6.2									
WRA	**Warramunga Arr**	**49.80**	**188**	P	P		23	41	56.0	+1.5
	0.5nm,0.5s,baz=6.6,slow=7.6,SNR=2.7									
ASAR	**Alice Springs**	**53.53**	**188**	P	P		23	42	21.2	-1.1
	0.3nm,0.9s,baz=6.0,slow=11,SNR=2.7									

*IDC **10** 23:42:37.0±0.4, 0.53S×9945E, h0^{km}, mb4.9/34, mb1 4.9/35, mb1mx4.9/35, mbtmp4.9/35, ML5.0/1, MS4.9/10, Ms1 4.9/10, ms1mx4.6/24, Error ellipse: s-maj=15.9km s-min=10.5km az=46.0*

*BJI **10** 23:42:38.0, 1.18S×9947E, h51^{km}, mB5.8, mb5.1, Ms5.3, Msz5.1*

*MOS **10** 23:42:41.5±0.9, 0.43S×9954E, h39^{km}, mb5.6/57, MS5.0/8, Error ellipse: s-maj=9.1km s-min=4.4km az=114.0*

*DJA **10** 23:42:42.0±0.0, 0.54S×99.10E, h10^{km}, mB6.2/7, Mjma5.3/6, MLv5.8/8, Mw(mB)5.9/7, Mwp5.5/5*

*NEIC **10** 23:42:42.5±0.1, 0.55S×9947E, h35^{km}, mb5.5/68, MS5.0/2, Error ellipse: s-maj=6.3km s-min=3.5km az=54.0*

*GCMT **10** 23:42:42.5±0.1, 0.73S×99.18E, h63^{km}±1^{km}, MW5.5/88, Moment Tensor Solution. s71,c114; s88,c181; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.27±.04; $M_{\theta\theta}$-0.78±.03; $M_{\phi\phi}$0.51±.04; $M_{r\theta}$1.29±.03; $M_{\theta\phi}$1.29±.03; $M_{r\phi}$0.16±.03; Best double couple: M_o1.94600×10^{17} NP1:ϕ_s346.00000°, δ47.00000°, λ174.00000°. NP2:ϕ_s80.00000°, δ86.00000°, λ43.00000°. Principal axes: T. 1.8300, Plg32.0000°, Azm313.0000°; N 0.2320, Plg47.0000°, Azm85.0000°; P -2.0620, Plg25.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **10** 23:42:43.1±0.2, 0.45S±003×9942E±003, h49^{km}, mb5.3/159, MS5.0/28 Error ellipse: s-maj=5.1km s-min=3.2km az=136.4*

*SZGRF **10** 23:42:44.7, 0.87S×9842E, h52^{km}, mb5.6, Southern Sumatera, Indonesia*

ISC 10 23:42:44.9±0.2, 049S±003×9940E±003, h51^{km}, h51^{km}±.7^{km}:pP-P, n429, σ0.97/418, mb5.3/159, MS5.0/28, 18C-23D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op	ISC		h	m	s	ISC
PPI	**Padang Panjang**	**1.00**	**88**	P	**Pn**		**23**	**43**	**03.8**	**+1.1**
PDSI	**Padang**	**1.15**	**112**	P	**Pn**		**23**	**43**	**04.8**	**+0.2**
RGRI	**Rengat**	**2.94**	**87**	P	**Pn**		**23**	**43**	**31.8**	**+2.6**
KSI	**Kapahiang**	**4.48**	**135**	P	**Pn**		**23**	**43**	**51.3**	**+1.0**
KLI	**Kotabumi**	**6.97**	**129**	P	**Pn**		**23**	**44**	**27.2**	**+2.7**
	1μm,1.1s,5.6nm									
BSI	**Banda Aceh**	**7.22**	**325**	P	**Pn**		**23**	**44**	**27.8**	**-0.1**
	544nm,0.9s,5.2nm									
TPI	**Tanjungpandan**	**8.55**	**105**	P	**Pn**		**23**	**44**	**51.5**	**+5.3**
	174nm,0.9s,0.5nm									
SBJI	**Serang**	**8.74**	**130**	P	**Pn**		**23**	**44**	**53.8**	**+5.0**
	450nm,1.0s,1.6nm									
CBJI	**Citeko**	**9.49**	**129**	P	**Pn**		**23**	**45**	**01.9**	**+2.9**
	2μm,0.9s									
DBJI	**Dramaga**	**9.49**	**130**	P	**Pn**		**23**	**44**	**58.3**	**-0.8**
	605nm,0.7s									
LEM	**Lembang**	**10.34**	**128**	P	**Pn**		**23**	**45**	**13.8**	**+3.1**
	490nm,1.5s									
XMIS	**Christmas Isla**	**11.71**	**148**	*e*P	**Pn**		**23**	**45**	**23.8**	**-5.7**
XMIS				*e*S	**Sn**		**23**	**47**	**19.3**	**-20**
STKI	**Sintang**	**12.09**	**87**	P	**Pn**		**23**	**45**	**43.2**	**+8.5**
BJII	**Banjamegara**	**12.33**	**124**	P	**Pn**		**23**	**45**	**39.1**	**+1.2**
PBKI	**Pangkalan Bun**	**12.46**	**100**	P	**Pn**		**23**	**45**	**46.0**	**+6.3**
	326nm,1.1s,5μm									
NNT	**Nongplab**	**13.00**	**1**	P	**Pn**		**23**	**45**	**53.1**	**+6.1**
SJI	**Sawahan**	**14.28**	**121**	P	**Pn**		**23**	**46**	**05.4**	**+1.0**
PLKI	**Palangkaraya**	**14.65**	**97**	P	**Pn**		**23**	**46**	**17.1**	**+7.9**
KRKI	**Karangkates**	**15.08**	**121**	P	**Pn**		**23**	**46**	**23.3**	**+8.4**
BBKI	**Banjar Baru**	**15.71**	**101**	P	**Pn**		**23**	**46**	**25.4**	**+2.3**
	341nm,1.6s,6μm									
KMMI	**Kalianget**	**15.93**	**115**	P	**Pn**		**23**	**46**	**30.3**	**+4.5**
	289nm,1.1s									
NST	**Nakhon Sawan**	**16.07**	**3**	P	**Pn**		**23**	**46**	**24.3**	**-3.3**
	81nm,1.0s									
KKTK	**Khon Kaen**	**17.06**	**11**	P	**Pn**		**23**	**46**	**50.0**	**+10**
	617nm,0.5s									
KHKI	**Kahang-Kahang**	**17.95**	**116**	P	**Pn**		**23**	**46**	**54.1**	**+3.1**
CMAR	**Chiang Mai Arr**	**18.83**	**359**	P	**Pn**		**23**	**47**	**00.0**	**-1.6**
	1.8nm,0.3s,baz=191,slow=11,SNR=44									
CMAR				S	**S**		**23**	**50**	**40.1**	**+7.8**
	0.2nm,0.3s,baz=180,slow=7.8,SNR=2.6									
CMAR				LR	LR		23	54	31.5	
	comp=Z,6μm,19.2s,baz=182,slow=38									
CHG	**Chiang Mai**	**19.18**	**359**	⇓P	**Pn**		**23**	**47**	**05.7**	**-0.2**
	81nm,1.3s									
CHTO	**Chiang Mai**	**19.18**	**359**	⇓P	**Pn**		**23**	**47**	**01.7**	**-4.2**
	SNR=21									
CHTO	**Chiang Mai**	**19.18**	**359**	*e*P	**Pn**		**23**	**47**	**03.8**	**-2.0**
	65nm,1.0s									
CHTO	**Chiang Mai**	**19.18**	**359**	*e*P	**Pn**		**23**	**47**	**03.8**	**-2.1**
CHTO				pmax	pmax					
	comp=Z,65nm,1.0s									
PCI	**Palu**	**20.44**	**91**	P	**P**		**23**	**47**	**20.5**	**+2.2**
	comp=Z,226nm,1.6s,comp=Z,4μm									
QIZ	**Qiongzhong**	**21.94**	**27**	P	**P**		**23**	**47**	**34.8**	**+0.5**
QIZ				S	**S**		**23**	**51**	**35.3**	**+1.4**
QIZ				LR	LR					
	comp=N,2μm,13.9s,MS4.9									
QIZ				LR	LR					
	comp=E,3μm,15.4s,MS4.9									
QIZ				LR	LR					
	comp=Z,4μm,18.6s

PKI pmax pmax
comp=Z,402nm,1.5s,mb6.0
PKIN Phulchoki 30.98 335 *e*P **P** **23 48 57.7 +0.2**
LSA Lhasa 31.03 346 P **P** **23 48 59.0 +1.0**
LSA Lhasa 31.03 346 *e*P **P** **23 48 59.4 +1.4**
comp=Z,225nm,1.1s,mb5.9
LSA *e*pP pP 23 49 13.1 +2.0
LSA Lhasa 31.03 346 *e*P **P** **23 48 59.4 +1.4**
LSA *e**PP pP 23 49 13.1 +2.0
LSA pmax pmax
comp=Z,225nm,1.1s,mb5.9
GUN Gumba 31.07 336 *e*P **P** **23 48 59.2 +0.8**
DMN Daman 31.13 335 *e*P **P** **23 48 59.2 +0.4**
KKN Kakani 31.21 335 *e*P **P** **23 49 00.0 +0.4**
POO Poona 31.42 308⇓*i*P **P** **23 49 00.5 -1.1**
comp=Z,80nm,1.0s,mb5.5
CD2 Chengdu 31.50 7⇓*i*P **P** **23 49 02.0 0.0**
CD2 AP pP 23 49 13.9 -1.3
CD2 XP sP 23 49 20.0 -1.2
CD2 PP PP 23 50 07.5 -6.5
CD2 PCP PcP 23 51 53.2 -1.0
CD2 S **S** **23 54 06.5 -0.3**
CD2 PCS PcS 23 55 36.9 -1.7
CD2 AMB AMB
comp=Z,30nm,1.4s,mb4.9
CD2 AMB AMB
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,4μm,16.8s,MS5.4
CD2 LR LR
comp=E,5μm,18.0s,MS5.4
CD2 LR LR
comp=Z,6μm,15.6s,MS5.3
GKN Gorkha 31.67 335 *e*P **P** **23 49 04.1 +0.5**
comp=Z,274nm,1.2s,mb6.0
BHPL Bhopal 31.83 319 *e*P **P** **23 49 06.1 +1.1**
BHPL AMb AMB 23 49 07.9
comp=Z,105nm,1.6s,mb5.4
SWI Sorong 31.86 91 P **P** **23 49 09.6 +4.1**
comp=Z,74nm,1.6s,mb5.3
KOLN Koldanda 31.93 333 *e*P **P** **23 49 06.7 +0.8**
comp=Z,203nm,0.8s,mb6.0
DANN Dangsing 32.35 334 *e*P **P** **23 49 10.3 +0.7**
PYUN Piuthan 32.49 332 *e*P **P** **23 49 11.6 +0.8**
comp=Z,89nm,0.4s,mb6.0
KAKA Kakadu 34.94 112 *e*P Px 23 49 18.3
LGTI Lohaghat 34.94 330 *e*P **P** **23 49 33.4 +1.3**
LGTI *ex* x 23 51 47.5
PTH Pithoragarh 35.03 330 *e*P **P** **23 49 32.8 -0.1**
PTH *e*S **S** **23 55 04.5 +2.8**
MUN Mundaring 35.12 155 *e*P pP 23 49 49.0 +2.2
XAN Xi'an 35.49 14 P **P** **23 49 37.1 +0.3**
XAN AP pP 23 49 49.3 -0.7
XAN S **S** **23 55 07.4 -1.2**
XAN AMB AMB
comp=Z,24nm,1.2s,mb5.0
XAN AMB AMB
comp=Z,3μm,9.3s
XAN LR LR
comp=N,1μm,16.5s,MS4.9
XAN LR LR
comp=E,2μm,17.8s,MS4.9
XAN LR LR
comp=Z,5μm,16.2s,MS5.4
AJM Ajmer 35.89 320 *i* P **P** **23 49 40.0 -0.3**
NDI New Delhi 35.95 326 *e*P **P** **23 49 38.5 -2.3**
NDI *e*S **S** **23 55 17.5 +1.7**
LZH Lanzhou 36.62 6⇓P **P** **23 49 47.0 +0.6**
LZH AP pP 23 49 57.0 -2.7
LZH PP PP 23 51 12.0 +1.4
LZH *e*S **S** **23 55 27.0 +1.2**
LZH AMB AMB
comp=Z,69nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,668nm,8.0s
LZH LR LR
comp=E,2μm,14.9s
LZH LR LR
comp=Z,3μm,15.4s,MS5.2
LZH Lanzhou 36.62 6⇓P **P** **23 49 47.0 +0.6**
LZH *PP pP 23 49 57.0 -2.7
LZH *SP sP 23 50 01.8 -3.9
LZH 23 51 12.0
LZH *e*S **S** **23 55 27.0 +1.2**
LZH *SS sS 23 55 46.0 -2.2
LZH SS SS 23 57 56.0 -12
DDI Dehra Dun 36.76 328 *e*P **P** **23 49 46.0 -1.7**
DDI *ex* x 23 55 25.6
NJ2 Nanjing 37.23 28 *e*P **P** **23 49 52.4 +0.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
SMLA Simla 37.87 328⇓*i*P **P** **23 49 57.3 +0.3**
SMLA *ex* x 23 49 59.1
comp=Z,148nm,0.3s
SMLA *i* x x 23 56 04.2
SDNR Sundarnagar 38.26 328 *e*P **P** **23 50 02.0 +1.6**
SDNR *ex* x 23 55 47.6
BHK Bhakra 38.49 328 *ex* x 23 50 09.8
WRA Warramunga Arr 39.28 122 P **P** **23 50 06.4 -2.7**
comp=Z,23nm,0.6s,mb5.1,baz=301,slow=9.1,SNR=62
WRAB Tennant Creek 39.29 122 *e*P **P** **23 50 07.1 -2.0**
comp=Z,44nm,0.8s,mb5.2
WRAB Tennant Creek 39.29 122 *e*P **P** **23 50 07.1 -2.1**
WRAB pmax pmax
comp=Z,44nm,0.8s,mb5.2
WRAB Tennant Creek 39.29 122 P **P** **23 50 07.6 -1.6**
WB2 Warramunga Arr 39.29 122 *e*P **P** **23 50 06.5 -2.7**
DLH Dalhousie 39.61 328 *e*P **P** **23 50 11.0 -0.6**
DLH *ex* x 23 50 26.0
THN Thein Dam 39.65 328 *e*P **P** **23 50 10.1 -1.9**
THN *ex* x 23 56 20.6
GTA Gaotai 39.71 1 P **P** **23 50 12.5 +0.2**
GTA AP pP 23 50 24.8 -0.9
GTA XP sP 23 50 30.1 -1.6
GTA PCP PcP 23 52 17.0 -1.2
GTA S **S** **23 56 12.4 0.0**
GTA AMB AMB
comp=Z,83nm,1.8s,mb5.2
GTA AMB AMB
comp=Z,4μm,8.7s
GTA LR LR
comp=N,2μm,17.1s,MS5.1
GTA LR LR
comp=E,2μm,18.0s,MS5.1
GTA LR LR
comp=Z,2μm,18.3s,MS5.0
FORT Forrest 40.58 141 *e*P **P** **23 50 19.2 -0.5**
comp=Z,74nm,0.7s,mb5.4
ASAR Alice Springs 40.63 127 P **P** **23 50 18.4 -1.8**
comp=Z,16nm,0.6s,mb4.8,baz=300,slow=7.5,SNR=123
ASAR S **S** **23 56 20.1 -6.6**
comp=Z,2.8nm,0.9s,baz=298,slow=14,SNR=5.6
HHC Hu-ho-hao-te 42.60 14 *e*P **P** **23 50 36.8 +0.7**
HHC AP pP 23 50 49.7 +0.1
HHC XP sP 23 50 54.5 -1.0
HHC PP PP 23 52 18.9 +3.1
HHC PCP PcP 23 52 29.6 +2.0
HHC PCS PcS 23 56 20.4 +0.8
HHC S **S** **23 56 56.0 +0.6**
HHC AMB AMB
comp=Z,29nm,0.7s,mb5.1
HHC LR LR
comp=N,2μm,21.4s,MS5.1
HHC LR LR
comp=E,2μm,20.2s,MS5.1
HHC LR LR
comp=Z,3μm,20.2s,MS5.2
BJT Baijiatuan 43.12 19 *e*P **P** **23 50 40.7 +0.4**
comp=Z,98nm,0.9s,mb5.5
BJT Baijiatuan 43.12 19 *e*P **P** **23 50 40.7 +0.4**
BJT pmax pmax
comp=Z,98nm,0.9s
BJI Beijing 43.15 19 P **P** **23 50 40.7 +0.2**
BJI AMB AMB
comp=Z,31nm,1.4s,mb4.8
MSEY Mahe Island 44.06 264⇑P **P** **23 50 58.6 +10**
SNR=6.0
MSEY Mahe Island 44.06 264 *e*pP pP 23 51 04.4 +2.5
KBL Kabul 44.96 324 *e*P **P** **23 50 55.0 -0.1**
comp=Z,18nm,0.9s,mb4.9
KBL Kabul 44.96 324 *e*P **P** **23 50 55.0 -0.2**
KBL pmax pmax
comp=Z,18nm,0.9s,mb4.9
KSH Kashi 45.22 334 P **P** **23 50 58.2 +1.1**
KSH *e*AP pP 23 51 10.7 0.0
KSH *e*XP sP 23 51 15.7 -0.9
KSH *e*PCP PcP 23 52 39.1 +2.5
KSH *e*PP PP 23 52 44.3 +0.6
KSH *e*PCS PcS 23 56 31.2 +0.8
KSH *e*S **S** **23 57 33.4 -0.1**
KSH AMB AMB
comp=Z,323nm,1.4s,mb6.0
KSH AMB AMB
comp=Z,553nm,5.1s
KSH LR LR
comp=N,2μm,10.9s
KSH LR LR
comp=E,6μm,16.6s
KSH LR LR
comp=Z,3μm,11.3s,MS5.5
WMQ Urumqi 45.34 348 P **P** **23 50 59.0 +1.0**
WMQ AP pP 23 51 11.8 +0.2
WMQ XP sP 23 51 17.0 -0.5
WMQ PP PP 23 52 46.0 +1.1
WMQ S **S** **23 57 36.0 +0.9**
WMQ AMB AMB
comp=Z,102nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,857nm,4.0s
WMQ LR LR
comp=N,2μm,16.0s,MS5.2
WMQ LR LR
comp=E,2μm,15.0s,MS5.2
WMQ LR LR
comp=Z,2μm,16.0s,MS5.1
WBK Wadi Bani Khal 45.56 303 P **P** **23 51 01.4 +1.3**
SNR=10
KS15 Wonju Array Si 46.02 32 *e*P **P** **23 51 03.1 -0.3**
KS15 *e*pP pP 23 51 14.8 -2.3
KSRS Korea Array 46.05 32 P **P** **23 51 02.4 -1.3**
comp=Z,12nm,0.7s,mb5.0,baz=223,slow=8.3,SNR=27
KSRS LR LR 00 12 50.1
comp=Z,1μm,18.0s,MS4.9,baz=247,slow=39
KSRS Korea Array 46.05 32 P **P** **23 51 02.4 -1.3**
KSRS pmax pmax
comp=Z,12nm,0.7s,mb4.9
KSRS MLR MLR
comp=Z,1μm,18.0s,MS4.9
JMDO Jabal Madar 46.19 302 P **P** **23 51 06.0 +0.9**
SNR=8.3
SMDO Samad 46.52 303 P **P** **23 51 08.1 +0.5**
SNR=14
BIDO Bidbid 46.65 304 P **P** **23 51 09.4 +0.8**
SNR=14
BSY Bisya 47.11 302 P **P** **23 51 13.5 +1.3**
SNR=22
GUMO Guam 47.16 71 LR LR 00 11 14.6
comp=Z,393nm,19.2s,MS4.4,baz=92,slow=36
HOQ Hoqain 47.35 303 P **P** **23 51 15.5 +1.4**
SNR=19
SNY Shenyang 47.45 25⇑P **P** **23 51 12.9 -1.7**
SNY AMB AMB
comp=Z,27nm,1.4s,mb5.0
ARQ Araqi 47.91 303 P **P** **23 51 19.6 +1.0**
SNR=12
RBK Rabkut 47.94 294⇓P **P** **23 51 20.0 +1.2**
SNR=24
UCH Uchtor 48.08 335 *e*P **P** **23 51 20.8 +1.3**
comp=Z,40nm,1.0s,mb5.4
UCH *e*pP pP 23 51 33.4 +0.2
UCH Uchtor 48.08 335 P **P** **23 51 20.8 +1.4**
SNR=9.2
TKM2 Tokmak 2 48.21 337 *e*P **P** **23 51 21.3 +0.8**
comp=Z,189nm,1.0s,mb6.1
TKM2 Tokmak 2 48.21 337 *e*P **P** **23 51 21.3 +0.8**
TKM2 pmax pmax
comp=Z,189nm,1.0s,mb6.1
TKM2 Tokmak 2 48.21 337 P **P** **23 51 21.4 +1.0**
SNR=59
KBK Karagaybulak 48.25 336 P **P** **23 51 22.2 +1.4**
SNR=39
AML Almayashu 48.35 334 *e*P **P** **23 51 22.6 +1.1**
comp=Z,68nm,0.8s,mb5.7
AML *e*pP pP 23 51 36.0 +0.7
AML Almayashu 48.35 334 P **P** **23 51 22.7 +1.2**
SNR=52
AAK Ala-Archa 48.42 335 P **P** **23 51 23.2 +1.2**
SNR=36
SONM Songino Array 48.51 6 P **P** **23 51 23.4 +0.8**
comp=Z,22nm,0.8s,mb5.2,baz=187,slow=9.3,SNR=102
FRU Bishkek 48.54 336 *i* P **P** **23 51 24.0 +1.0**
ULN Ulaanbaatar 48.62 7 P **P** **23 51 24.2 +0.8**
SNR=23
ULN Ulaanbaatar 48.62 7 *e*P **P** **23 51 23.9 +0.4**
comp=Z,81nm,1.1s,mb5.7
ULN Ulaanbaatar 48.62 7 P **P** **23 51 24.3 +0.8**
comp=Z,86nm,1.1s,mb5.7
CHMS Chumysh 48.62 336 P **P** **23 51 24.0 +0.4**
SNR=20
EKS2 Erkin-Say 48.75 335 *e*P **P** **23 51 25.6 +1.0**
comp=Z,146nm,0.9s,mb6.0
EKS2 *e*pP pP 23 51 38.7 +0.4
EKS2 Erkin-Say 48.75 335 P **P** **23 51 25.7 +1.1**
SNR=49
HATD Hatta, Dubai 48.84 304 P **P** **23 51 26.7 +1.1**
SNR=14
USP Ospenovka 48.94 336 P **P** **23 51 26.6 +0.5**
SNR=106
MK31 Makanchi Array 49.42 345 *e*P **P** **23 51 29.8 +0.1**
MKAR Makanchi Array 49.42 345 P **P** **23 51 29.5 -0.2**
comp=Z,37nm,0.6s,mb5.6,baz=154,slow=7.9,SNR=299
MKAR LR LR 00 16 14.1
comp=Z,1μm,21.0s,MS4.8,baz=157,slow=41
CBIJ Chichi jima 49.43 53 P **P** **23 51 29.4 -0.7**
comp=Z,33nm,0.6s,mb5.5,baz=327,slow=21,SNR=4.2
CBIJ LR LR 00 08 44.9
comp=Z,812nm,19.5s,MS4.7,baz=78,slow=32
CTA Charters Tower 49.79 116 *e*P **P** **23 51 28.1 -4.9**
comp=Z,10.0nm,0.7s,mb5.0
CTA Charters Tower 49.79 116 P **P** **23 51 31.8 -1.2**
comp=Z,5.7nm,0.5s,mb4.8,baz=280,slow=7.4,SNR=9.2
CTA Charters Tower 49.79 116 *e*P **P** **23 51 28.1 -4.9**
CTA P 23 51 31.8
CTAO Charters Tower 49.79 116 *e*P **P** **23 51 31.5 -1.5**
comp=Z,215nm,2.1s,mb5.8
CTAO Charters Tower 49.79 116 *e*P **P** **23 51 31.5 -1.5**
CTAO pmax pmax
comp=Z,215nm,2.1s,mb5.8
CN2 Changchun 49.86 25 *e*P **P** **23 51 31.4 -1.7**
CN2 *e*AP pP 23 51 46.7 -0.1
CN2 *e*S **S** **23 58 39.9 +0.6**
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.2
CN2 AMB AMB
comp=Z,300nm,5.0s
KK31 Karatay Array 50.54 333 *i* P **P** **23 51 38.0 -0.2**
KK31 pmax pmax
comp=Z,64nm,1.1s,mb5.5
STKA Stephens Creek 50.60 132⇓*i*P **P** **23 51 37.8 -1.1**
comp=Z,56nm,1.5s,mb5.3
STKA Stephens Creek 50.60 132 P **P** **23 51 37.9 -1.0**
comp=Z,9.4nm,0.4s,mb5.1,baz=308,slow=7.4,SNR=42
STKA LR LR 00 13 00.9
comp=Z,3μm,19.4s,MS5.2,baz=317,slow=36
ZAK Zakamensk 50.78 3 *e*P **P** **23 51 40.3 +0.4**
ZAK *e* pP 23 51 54.2 +0.5
ZAK pmax pmax
comp=Z,25nm,1.7s,mb4.9
MAJO Matsushiro 51.50 40 *e*P **P** **23 51 44.9 -0.7**
comp=Z,56nm,1.4s,mb5.3
MAJO *e*pP pP 23 51 58.0 -1.4
MAJO Matsushiro 51.50 40 *e*P **P** **23 51 44.9 -0.7**
MAJO *e**PP pP 23 51 58.0 -1.4
MAJO pmax pmax
comp=Z,56nm,1.4s,mb5.3
MAT Matsushiro 51.50 40 P **P** **23 51 44.5 -1.1**
MJAR Matsushiro Arr 51.50 40 P **P** **23 51 44.2 -1.4**
comp=Z,1.2nm,0.3s,mb4.3,baz=134,slow=32,SNR=5.5
TLY Talaya 52.10 3 P **P** **23 51 51.1 +1.4**
SNR=11
TLY Talaya 52.10 3 *e*P **P** **23 51 50.7 +0.9**
comp=Z,46nm,1.0s,mb5.4
TLY Talaya 52.10 3 *e*P **P** **23 51 50.3 +0.6**
TLY *e* pP 23 52 08.1 +4.5
TLY pmax pmax
comp=Z,65nm,1.3s,mb5.4
MDJ Mudanjiang 52.31 27 P **P** **23 51 51.1 -0.4**
MDJ AP pP 23 52 02.9 -2.4
MDJ XP sP 23 52 07.8 -3.4
MDJ PP PP 23 53 49.1 -1.4
MDJ XS sS 23 59 34.2 -2.2
MDJ AMB AMB
comp=Z,18nm,2.6s,mb4.5
MDJ LR LR
comp=N,1μm,17.3s
MDJ LR LR
comp=Z,1μm,15.0s,MS5.1
HIA Hailar 52.57 17 *e*P **P** **23 51 52.0 -1.3**
HIA *e*P 23 51 53.4
IRK Irkutsk 52.70 4 *e*P **P** **23 51 53.0 -1.2**
IRK pmax pmax
comp=Z,156nm,1.8s,mb5.6
CIT Chita 53.66 11 *e*P **P** **23 52 02.4 +1.1**
CIT *e* pP 23 52 18.7 +3.6
KURK Kurchatov 54.00 344 P **P** **23 52 03.1 -0.6**
KURK S **S** **23 59 34.0 -1.9**
KURK Kurchatov 54.00 344 *e*P **P** **23 52 03.7 0.0**
comp=Z,130nm,1.0s,mb5.8
KURK *e*pP pP 23 52 17.0 -0.6
ZAA0 Zalesovo Array 55.58 350 *e*P **P** **23 52 15.1 -0.1**
ZAA0 *e*pP pP 23 52 28.5 -0.6
ZALV Zalesovo Beam 55.58 350 P **P** **23 52 15.0 -0.1**
comp=Z,44nm,0.5s,mb5.8,baz=172,slow=6.9,SNR=268
ZALV S **S** **23 59 56.5 -0.5**
comp=Z,1.5nm,0.6s,baz=156,slow=15,SNR=3.9
EIDS Eidsvold 55.63 121 *e*P **P** **23 52 14.8 -1.3**
comp=Z,311nm,1.5s,mb6.1
TOO Toolangi 56.21 136 *e*P **P** **23 52 20.3 +0.3**
DHBB Dhamar BB 56.42 288 *e*P **P** **23 52 24.0 +2.2**
KRAR Krasnoyarsk 56.57 356 *e*P **P** **23 52 22.1 0.0**
KRAR pmax pmax
comp=Z,311nm,1.7s,mb6.1
KLR Kul'dur 56.81 25 *e*P **P** **23 52 19.4 -4.6**
KLR *e* pP 23 52 32.8 -5.2
KLR pmax pmax
comp=E,40nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.5
QRN Al-Qurain 57.12 305 *e*P **P** **23 52 25.2 -1.4**
baz=305
QRN AMb AMB 23 52 28.3
comp=Z,210nm,1.5s,mb6.0,baz=305
KBD Kabd 57.46 305 *e*P **P** **23 52 28.0 -1.0**
baz=305
KBD AMb AMB 23 52 30.8
comp=Z,113nm,1.5s,mb5.7,baz=305
RDF Al-Radifah 57.49 305 *e*P **P** **23 52 28.0 -1.2**
baz=305
RDF AMb AMB 23 52 31.6
comp=Z,228nm,1.7s,mb5.9,baz=305
UMR Umm Al-Rimmam 57.58 306 *e*P **P** **23 52 28.8 -1.1**
baz=306
UMR AMb AMB 23 52 33.1
comp=Z,128nm,1.4s,mb5.8,baz=306
CAN Canberra 57.67 133 *e*P **P** **23 52 30.0 -0.3**
CAN *e* pP 23 52 43.8 -0.6
HABR Khabarovsk 57.70 27 *e*P **P** **23 52 27.9 -2.4**
HABR *eS* **S** **00 00 25.2 0.0**
ARMA Armidale 57.77 126 *e*P **P** **23 52 31.3 +0.1**
NAY Al-Naaiem 57.86 305 *e*P **P** **23 52 30.0 -1.8**
baz=305
NAY AMb AMB 23 52 33.3
comp=Z,70nm,1.3s,mb5.5,baz=305
CNB Canberra Magne 57.93 132 *e*P **P** **23 52 32.4 +0.2**
VOSK Vostochnaya 58.11 340 P **P** **23 52 31.9 -1.2**
VOSK pmax pmax
comp=Z,73nm,1.3s,mb5.5
BVA0 Borovoye Array 58.56 340 *i* P **P** **23 52 35.2 -1.0**
BVA0 pmax pmax
comp=Z,26nm,1.5s,mb5.0
BVAR Borovoye Array 58.56 340 P **P** **23 52 35.2 -1.1**
comp=Z,6.1nm,0.5s,mb4.9,baz=141,slow=9.5,SNR=35
BVAR LR LR 00 19 46.8
comp=Z,1μm,20.5s,MS5.0,baz=352,slow=38
BRVK Borovoye 58.63 340 P **P** **23 52 36.8 +0.1**
SNR=16
BRVK Borovoye 58.63 340 *e*P **P** **23 52 36.0 -0.7**
ASAJ Asahikawa 58.72 35 P **P** **23 52 36.9 -0.7**
comp=Z,5.1nm,0.6s,mb4.7,baz=143,slow=28,SNR=3.3
ASAJ Asahikawa 58.72 35 P **P** **23 52 36.9 -0.6**
ASAJ pmax pmax
comp=Z,5.0nm,0.6s
BOD Bodaibo 59.29 9 *e*P **P** **23 52 40.7 -0.5**
BOD *e* pP 23 52 53.2 -2.0
BOD pmax pmax
comp=Z,47nm,1.7s,mb5.2
BOD pmax pmax
comp=Z,99nm,1.0s,mb5.8
AB31 Akbulak array 60.03 331 P **P** **23 52 45.0 -1.5**
AB31 pmax pmax
comp=Z,75nm,0.7s,mb5.8
YSS Yuzh-Sakhalins 60.53 33 *e*P **P** **23 52 50.1 +0.2**
comp=Z,146nm,1.2s,mb6.0
YSS *e*pP pP 23 53 02.1 -1.9
YSS Yuzh-Sakhalins 60.53 33⇓*i*P **P** **23 52 49.5 -0.4**
YSS *e* pP 23 53 06.0 +2.0
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.6
YSS MLR MLR
comp=E,900nm,16.0s
YSS MLR MLR
comp=Z,900nm,16.0s,MS5.0
CLNS Chul'man 60.72 16 *e*P pP 23 53 01.6 -3.5
CLNS pmax pmax
comp=E,20nm,1.0s
CLNS pmax pmax
comp=Z,43nm,1.0s,mb5.5
CLNS pmax pmax
comp=N,23nm,1.0s
AKTK Aktyubinsk 61.75 331 P **P** **23 52 56.9 -1.2**
AKTO Aktyubinsk 61.75 331 P **P** **23 52 56.9 -1.2**
comp=N,3.1nm,0.4s,mb4.8,baz=125,slow=6.7,SNR=25
GNI Garni 64.03 316 P **P** **23 53 14.3 +0.8**
comp=N,2.9nm,0.4s,mb4.7,baz=109,slow=5.2,SNR=7.0
GNI Garni 64.03 316 *e*P **P** **23 53 14.7 +1.3**
GNI Garni 64.03 316‖*e*P **P** **23 53 12.8 -0.7**
GNI pmax pmax
comp=Z,45nm,1.9s
MTA Mtatsminda 64.65 318 P **P** **23 53 22.6 +5.1**
TBLG Delisi 64.70 318 *e*P **P** **23 53 18.2 +0.4**
TBLG Delisi 64.70 318 P **P** **23 53 14.7 -3.1**
SVE Sverdlovsk 65.06 338 *e*P **P** **23 53 19.6 -0.3**
SVE pmax pmax
comp=Z,108nm,1.2s,mb5.8
GOR Gori 65.23 318 P **P** **23 53 18.2 -3.1**
ARU Arti 65.59 336 *e*P **P** **23 53 22.0 -1.3**
ARU Arti 65.59 336‖*e*P **P** **23 53 22.8 -0.5**
ARU pmax pmax
comp=Z,81nm,2.2s,mb5.4
ONI Oni 65.93 318 P **P** **23 53 24.4 -1.3**
YAK Yakutsk 66.44 15 *e*P **P** **23 53 27.6 -1.1**
YAK *e*pP pP 23 53 40.4 -2.6
YAK Yakutsk 66.44 15*c* *i*P **P** **23 53 27.3 -1.4**
YAK *e* pP 23 53 39.2 -3.7
YAK pmax pmax
comp=Z,20nm,0.9s,mb5.2
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,12nm,1.4s
KIV Kislovodsk 67.01 319 P **P** **23 53 33.2 +0.6**
SNR=8.0
KIV Kislovodsk 67.01 319 *e*P **P** **23 53 32.4 -0.3**
comp=E,105nm,1.3s,mb5.7
KIV *e*pP pP 23 53 46.1 -0.8
KIV Kislovodsk 67.01 319⇑*e*P **P** **23 53 32.2 -0.5**
KIV pmax pmax
comp=Z,76nm,1.5s,mb5.5
KIV MLR MLR
comp=Z,500nm,19.0s,MS4.8
KIV Kislovodsk 67.01 319⇑*i*P **P** **23 53 32.0 -0.7**
ASF Jabal al Asfar 67.23 305 P **P** **23 53 35.1 +0.9**
comp=Z,20nm,1.3s,mb5.0,baz=353,slow=3.1,SNR=14
EIL Elat 68.21 302 P **P** **23 53 40.0 -0.5**
comp=Z,10nm,0.8s,mb4.9,baz=147,slow=4.1,SNR=16
MMAI Mount Meron Ar 68.67 306 P **P** **23 53 43.8 +0.5**
comp=Z,9.4nm,1.0s,mb4.7,baz=22,slow=4.8,SNR=6.8
SOC Sochi 68.84 318 *e*P pP 23 54 02.1 +3.6
SOC *e**PP sP 23 54 05.4 +1.2
SOC *eS* S 00 02 43.5 -0.9
SOC *e* 00 03 21.6
SOC pmax pmax
comp=Z,93nm,1.0s,mb5.7
VRHR Novokhopersk 70.75 326 *e*P **P** **23 53 54.6 -1.1**
VRHR *e**PP pP 23 54 05.9 -4.2

VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.8s
MAW Mawson 71.59 194 *e*P **P 23 54 00.4 -0.1**
comp=E,13nm,0.8s,mb4.9
MAW Mawson 71.59 194 P **P 23 54 00.8 +0.3**
comp=E,12nm,1.0s,mb4.8,baz=37,slow=8.1,SNR=21
MAW LR LR 00 17 38.1
comp=E,2µm,21.7s,MS5.3,baz=44,slow=29
MAW Mawson 71.59 194 *e*P **P 23 54 00.4 -0.1**
MAW pmax pmax
comp=Z,13nm,0.8s
LSZ Lusaka 71.75 254 *e*P **P 23 54 02.8 +0.3**
comp=Z,12nm,1.2s,mb4.7
LSZ *e* pP 23 54 18.2 +1.2
LSZ Lusaka 71.75 254 *e*P **P 23 54 02.8 +0.3**
LSZ *e* pP 23 54 18.2 +1.3
LSZ pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRTR Keskin Array B 71.86 312 P **P 23 54 01.2 -1.5**
comp=Z,3.0nm,0.8s,mb4.3
PETK Petropavlovsk- 71.94 33 P **P 23 54 02.0 -0.9**
comp=Z,2.2nm,0.8s,mb4.1,baz=150,slow=19,SNR=5.4
VSR Storozhevoye 72.20 325 *e*P **P 23 54 03.3 -1.2**
VSR *e**PP pP 23 54 15.4 -3.5
VSR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.5s
VOR Voronezh 72.39 326 *e*P **P 23 54 05.0 -0.6**
VOR pmax pmax
comp=Z,160nm,1.4s,mb5.8
PET Petropavlovsk 72.42 33 *e*P **P 23 54 04.8 -0.9**
PET *e*S S 00 03 23.0 -2.7
PET pmax pmax
comp=Z,63nm,1.0s,mb5.5
PET pmax pmax
comp=Z,600nm,14.9s
PET pmax pmax
comp=Z,400nm,13.6s
PET MLR MLR
comp=Z,700nm,16.0s,MS5.0
PET MLR MLR
comp=Z,700nm,21.0s
SEY Seymchan 74.46 22⇑ *e*P **P 23 54 17.5 -0.1**
TIXI Tiksi 74.47 9 *e*P **P 23 54 15.9 -1.6**
TIXI Tiksi 74.47 9 *e*P **P 23 54 14.7 -2.8**
TIXI *i* pP 23 54 28.2 -3.8
TIXI pmax pmax
comp=Z,55nm,2.0s,mb5.1
LBTB Lobatse 75.13 244 *e*P **P 23 54 22.2 0.0**
comp=Z,40nm,1.3s,mb5.2
LBTB Lobatse 75.13 244 *e*P **P 23 54 22.2 0.0**
LBTB pmax pmax
comp=Z,40nm,1.3s,mb5.2
OBN Obninsk 75.20 328 *e*P **P 23 54 21.4 -0.6**
OBN *e*pP pP 23 54 34.9 -1.6
OBN Obninsk 75.20 328⇓ *e*P **P 23 54 21.6 -0.4**
OBN *e* 23 57 07.4
OBN *e*S S 00 04 01.3 +4.4
OBN pmax pmax
comp=Z,163nm,2.1s,mb5.6
OBN MLR MLR
comp=Z,600nm,20.0s,MS4.9
BOSA Boshof 75.86 241 P **P 23 54 25.9 -0.5**
comp=Z,6.7nm,0.4s,mb4.9,baz=79,slow=4.6,SNR=28
BOSA LR LR 00 21 41.8
comp=Z,1µm,18.3s,MS5.2,baz=100,slow=31
BOSA Boshof 75.86 241 *e*P **P 23 54 26.3 0.0**
comp=Z,52nm,1.4s,mb5.3
KLMR Klimovskoe 76.21 334 *e*P **P 23 54 26.6 -1.1**
KLMR pmax pmax
comp=Z,62nm,1.5s,mb5.3
IDI Anoyia 77.66 306 P **P 23 54 36.0 -0.3**
comp=Z,17nm,0.8s,mb5.0,baz=53,slow=20,SNR=4.1
AKASG Malin Array Be 77.93 322 P **P 23 54 35.9 -1.6**
comp=Z,1.2nm,0.5s,mb4.1,baz=88,slow=3.7,SNR=13
AKASG PP PP 23 57 28.6 -5.4
comp=Z,0.3nm,0.2s,baz=111,slow=5.4,SNR=4.0
VRI Vrincioaia 78.34 317 ⇓P **P 23 54 40.1 +0.2**
VRI Vrincioaia 78.34 317⇓ *i*P **P 23 54 40.1 +0.2**
SNZO South Karori 78.66 132 *e*P **P 23 54 41.0 -0.8**
comp=Z,33nm,0.8s,mb5.3
VOIR 79.40 316⇑P **P 23 54 44.8 -0.9**
VOIR 79.40 316⇑ *i*P **P 23 54 44.8 -0.9**
BURAR Bucovina Array 79.73 319 ⇓P **P 23 54 47.7 +0.2**
BURAR Bucovina Array 79.73 319⇓ *i*P **P 23 54 47.7 +0.2**
BUR08 Bucovina Ar. S 79.75 319 *e*P **P 23 54 48.0 +0.4**
BUR08 *e* pP 23 55 03.4 +1.2
URZ Urewera 80.05 129 P **P 23 54 48.4 -1.1**
comp=Z,4.7nm,0.7s,mb4.6,baz=41,slow=2.5,SNR=8.6
SUR Sutherland 80.10 237 *e*P **P 23 54 50.1 +0.3**
comp=Z,112nm,1.9s,mb5.5
VTS Vitosha 80.18 313 P **P 23 54 49.9 -0.2**
VTS Vitosha 80.18 313⇓ *i*P **P 23 54 49.8 -0.2**
JOF Joensuu 80.60 335 *e*p **P 23 54 51.2 -0.6**
comp=Z,11nm,0.6s,mb5.0
BMR Baia Mare 80.89 318 P **P 23 54 54.7 +1.0**
BMR Baia Mare 80.89 318⇑ *i*P **P 23 54 53.0 -0.7**
LVV L'vov 80.95 321 *e*P **P 23 54 53.9 -0.1**
LVV *e* pP 23 55 08.3 -0.4
GZR Gura Zlata 80.96 316 P **P 23 54 55.0 +0.8**
LVZ Lovozero 81.16 340 *e*P **P 23 54 58.9 +4.2**
DRGR 81.25 317 P **P 23 54 56.6 +0.9**
DRGR 81.25 317⇑ *i*P **P 23 54 56.0 +0.3**
APA Apatity 81.47 339⇓ *e*P **P 23 54 57.4 +1.0**
APA *i* pP 23 55 11.0 0.0
APA *e*S S 00 05 08.0 +4.3
APA *i* 00 05 47.0
APA pmax pmax
comp=Z,38nm,1.4s,mb5.1
APA MLR MLR
comp=Z,2µm,18.0s,MS5.5
KWP Kalwaria 81.76 320 *e*P **P 23 54 58.5 +0.3**
KWP *e* pP 23 55 13.8 +0.8
BZS Buzias 81.81 316 P **P 23 54 58.7 +0.1**
BZS Buzias 81.81 316⇓ *i*P **P 23 54 58.5 -0.1**
KOLS Kolonicke sedl 81.92 320 *e*P **P 23 54 59.0 -0.1**
KOLS *e*pP pP 23 55 14.6 +0.8
BILL Bilibino 81.96 20 *e*P **P 23 54 58.9 0.0**
BILL Bilibino 81.96 20 *e*P **P 23 54 58.8 -0.1**
BILL pmax pmax
comp=Z,3.0nm,1.5s,mb4.0
BILL MLR MLR
comp=Z,1µm,21.0s,MS5.2
TSUM Tsumeb 82.11 251 *e*P **P 23 55 00.9 +0.1**
comp=Z,25nm,1.2s,mb5.0
TSUM *e*pP pP 23 55 15.0 -0.4
SUW Suwalki 82.31 325 *e*P **P 23 55 00.9 -0.1**
SUW *e* pP 23 55 15.8 0.0
CRVS Cervenica-Dubn 82.44 319 *e*P **P 23 55 02.1 +0.3**
CRVS *e*pP pP 23 55 18.1 +1.6
KAF Kangasniemi 82.57 333 *e*p **P 23 55 01.4 -0.8**
comp=Z,22nm,0.9s,mb5.2,baz=101,slow=4.7
KAF Kangasniemi 82.57 333 *e*P **P 23 55 01.4 -0.8**
KAF pmax pmax
comp=Z,22nm,0.9s,mb5.2
STHS Stebnicka Huta 82.67 320 *e*P **P 23 55 03.9 +0.9**
comp=Z,25nm,0.9s,mb5.2
STHS *e* pP 23 55 19.0 +1.3
STHS Stebnicka Huta 82.67 320 *e*P **P 23 55 03.9 +0.9**
STHS *e* pP 23 55 19.0 +1.3
STHS pmax pmax
comp=Z,25nm,0.9s,mb5.2
KECS Kecovo 83.01 319 *e*P **P 23 55 04.5 -0.3**
KECS *e*pP pP 23 55 19.4 -0.1
NIE Niedzica 83.27 320 *e*P pP 23 55 21.5 +0.7
PSZ Piszkesteto 83.32 318 *e*P **P 23 55 06.7 +0.3**
comp=Z,25nm,1.0s,mb5.2
PSZ *e*pP pP 23 55 21.1 -0.1
PSZ Piszkesteto 83.32 318 *e*P **P 23 55 06.7 +0.3**
PSZ *e**PP pP 23 55 21.1 -0.1
PSZ pmax pmax
comp=Z,25nm,1.0s,mb5.2
PSZ Piszkesteto 83.32 318⇓ *e*P **P 23 55 06.6 +0.2**
PSZ Piszkesteto 83.32 318⇑ *i*P **P 23 55 06.5 +0.1**
BUD Budapest 83.84 318⇓ *e*P **P 23 55 09.4 +0.3**
PKSM Moragy 83.95 316 P **P 23 55 09.7 0.0**
PKSM Moragy 83.95 316⇑ *i*P **P 23 55 09.3 -0.4**

VYHS Vyhne 84.10 319 *e*P **P 23 55 09.9 -0.5**
VYHS *e*pP pP 23 55 23.4 -1.7
KOLL Kolacno 84.40 319 *e*P **P 23 55 11.7 -0.2**
KOLL *e*pP pP 23 55 26.7 0.0
OKC Ostrava-Krasne 84.72 320 *e*P **P 23 55 14.0 +0.5**
OKC *e*pP pP 23 55 27.1 -1.2
SBA Scott Base 84.85 169 *e*P **P 23 55 13.8 +0.1**
comp=Z,20nm,0.9s,mb5.2
SBA *e*pP pP 23 55 27.7 -0.7
SBA Scott Base 84.85 169 *e*P **P 23 55 13.8 +0.2**
SBA *e**PP pP 23 55 27.7 -0.7
SBA pmax pmax
comp=Z,20nm,0.9s,mb5.2
ARCES ARCESS Array B 84.86 340 P **P 23 55 13.4 -0.3**
comp=Z,2.8nm,0.4s,mb4.8,baz=99,slow=6.3,SNR=35
ARE0 ARCESS Array S 84.86 340 *e*P **P 23 55 14.2 +0.4**
ARE0 *e*pP pP 23 55 28.6 +0.1
MORC Moravsky Berou 85.10 320 *e*P **P 23 55 15.5 +0.1**
comp=Z,27nm,1.2s,mb5.2
MORC *e*pP pP 23 55 30.0 -0.2
MORC Moravsky Berou 85.10 320 *e*P **P 23 55 15.5 +0.1**
MORC *e**PP pP 23 55 30.0 -0.2
MORC pmax pmax
comp=Z,27nm,1.2s,mb5.2
MORC Moravsky Berou 85.10 320⇓ *i*P **P 23 55 16.0 +0.6**
MODS Modra-Piesok 85.12 318 *e*P **P 23 55 16.2 +0.7**
comp=Z,22nm,1.4s,mb5.1
MODS *e* pP 23 55 29.2 -1.1
MODS *e* 23 55 47.7
MODS Modra-Piesok 85.12 318 *e*P **P 23 55 16.2 +0.7**
MODS *e* pP 23 55 29.2 -1.1
MODS pmax pmax
comp=Z,22nm,1.4s,mb5.1
ZST Bratislava 85.21 318 *e*P **P 23 55 16.1 +0.1**
comp=Z,18nm,0.9s,mb5.2
ZST *e* pP 23 55 30.2 -0.6
ZST *e* 23 55 47.6
ZST LR LR
comp=Z,300nm,19.8s,MS4.7
ZST Bratislava 85.21 318 *e*P **P 23 55 16.1 +0.1**
ZST *e* pP 23 55 30.2 -0.6
ZST pmax pmax
comp=Z,18nm,0.9s,mb5.2
ZST MLR MLR
comp=Z,300nm,19.8s,MS4.7
ZST Bratislava 85.21 318 *e*P **P 23 55 16.1 +0.1**
ZST *e*pP pP 23 55 30.2 -0.6
ZST *e* 23 55 47.6
VRAC Vranov 85.66 319 P **P 23 55 18.6 +0.3**
comp=Z,1.3nm,0.6s,mb4.4,baz=112,slow=8.3,SNR=5.4
SGO Sicignano 85.81 311 P pP 23 55 34.5 +0.5
DPC Dobruska-Polom 85.94 320 *e*P **P 23 55 19.9 +0.3**
DPC *e*pP pP 23 55 34.7 +0.3
KSP Ksiaz 86.01 321 *e*P **P 23 55 20.9 +1.0**
KSP *e* pP 23 55 34.4 -0.3
KSP Ksiaz 86.01 321 *e*P **P 23 55 20.5 +0.6**
KSP *e**PP pP 23 55 34.0 -0.7
UPC Upice 86.16 321 *e*P **P 23 55 21.3 +0.6**
UPC *e*pP pP 23 55 35.8 +0.4
ARSA Arzberg 86.19 317⇓ *i*P **P 23 55 21.2 +0.3**
comp=Z,23nm,1.4s,mb5.2
BOJS Bojanci 86.23 315 *i* P pP 23 55 32.4 -3.5
TREC Trest 86.38 319 *e*P **P 23 55 22.1 +0.3**
TREC *e*pP pP 23 55 36.1 -0.5
PERS Pernice 86.41 317 *i* P pP 23 55 33.3 -3.5
SOKA Soboth 86.47 317⇑ *i*P **P 23 55 21.7 -0.6**
comp=Z,25nm,1.4s,mb5.3
LJU Ljubljana 86.78 316 *i* P pP 23 55 37.6 -0.9
PRU Pruhonice 87.05 320 *e*P **P 23 55 25.3 +0.2**
PRU *e*pP pP 23 55 38.2 -1.7
PVCC Panska Ves 87.08 320 *e*P **P 23 55 25.9 +0.7**
PVCC *e*pP pP 23 55 38.9 -1.0
JAVS Javornik 87.09 316 *i* P pP 23 55 36.8 -3.3
BRG Berggiesshubel 87.50 321 *e*P **P 23 55 27.1 -0.1**
BRG *e* pP 23 55 42.7 +0.7
BRG pmax pmax
comp=Z,29nm,1.8s,mb5.2
BRG Berggiesshubel 87.50 321 *e*P **P 23 55 27.6 +0.4**
comp=Z,70nm,1.9s,mb5.6
BRG *e*pP pP 23 55 42.6 +0.6
BRG Berggiesshubel 87.50 321 *e*P **P 23 55 27.1 -0.1**
comp=Z,48nm,1.8s,mb5.4
BRG *e* pP 23 55 42.7 +0.7
comp=Z,20nm,1.2s
BRG *i* 23 56 25.0
GEC2 GERESS Array S 87.52 319 *e*P **P 23 55 27.6 +0.2**
GEC2 pmax pmax
comp=Z,51nm,1.6s,mb5.5
GEC2 GERESS Array S 87.52 319 *e*P **P 23 55 27.6 +0.2**
comp=Z,51nm,1.6s,mb5.5
GERES GERESS Array B 87.52 319 P **P 23 55 27.5 +0.1**
comp=Z,8.9nm,1.2s,mb4.9,baz=83,slow=4.2,SNR=24
KHC Kasperske Hory 87.62 319 *e*P **P 23 55 27.7 -0.1**
KHC *ex* x 23 55 33.0
KHC *e*pP pP 23 55 42.1 -0.5
RUE Ruedersdorf 87.70 322 *e*P **P 23 55 28.8 +0.6**
comp=Z,31nm,0.8s,mb5.6
RUE *e*pP pP 23 55 42.8 -0.2
RJOB Jochberg 88.06 318 *e*P **P 23 55 30.0 0.0**
comp=Z,84nm,2.5s,mb5.5
WET Wettzell 88.08 319 *e*P **P 23 55 30.2 +0.2**
WET *e**PP pP 23 55 45.1 +0.3
WET pmax pmax
comp=Z,77nm,1.9s,mb5.6
WET Wettzell 88.08 319 *e*P **P 23 55 30.2 +0.2**
comp=Z,77nm,1.9s,mb5.6
WET *e*pP pP 23 55 45.1 +0.3
CLL Collm 88.11 321 *e*P **P 23 55 30.0 -0.1**
CLL pmax pmax
comp=Z,35nm,1.6s,mb5.3
CLL MLR MLR
comp=Z,1µm,18.6s,MS5.3
CLL Collm 88.11 321 *e*P **P 23 55 30.0 -0.1**
comp=Z,35nm,1.6s,mb5.3
CLL *e*pP pP 23 55 45.4 +0.5
CLL Collm 88.11 321 *e*P **P 23 55 30.0 -0.1**
comp=Z,35nm,1.6s,mb5.3
CLL *e*sP sP 23 55 45.0 -5.6
CLL LmV 00 39 00.0
comp=Z,1µm,18.6s
HFS Hagfors 88.27 330 P **P 23 55 30.7 +0.1**
comp=Z,5.8nm,0.8s,mb4.9,baz=134,slow=4.3,SNR=12
TANN Tannenbergstha 88.41 320 *e*P **P 23 55 31.9 +0.4**
comp=Z,36nm,1.8s,mb5.3
TANN *e*pP pP 23 55 46.9 +0.5
ROTZ Rotzenmuhle 88.55 320 *e*P **P 23 55 33.0 +0.8**
comp=Z,61nm,1.9s,mb5.6
MANZ Manzenberg 88.62 320 *e*P **P 23 55 33.3 +0.8**
comp=Z,104nm,1.9s,mb5.8
MANZ *e*pP pP 23 55 48.1 +0.7
NVL N'lazarevskaya 88.74 199 *e*P **P 23 55 34.3 +1.6**
NVL pmax pmax
comp=Z,72nm,1.7s,mb5.7
MAIT Maitri 88.77 199 *e*P **P 23 55 32.2 -0.6**
MAIT *e*E pP 23 55 49.4 +1.8
CTI Castel Tesino 88.78 316 P **P 23 55 33.9 +0.5**
comp=Z,1µm,3.4s
CTI Castel Tesino 88.78 316 P **P 23 55 33.9 +0.5**
CTI pmax pmax
comp=Z,1µm,3.4s
WTTA Wattenberg 88.83 317⇑ *i*P **P 23 55 32.9 -0.7**
comp=Z,22nm,1.3s,mb5.3
SEI Scarperia 88.92 314 P pP 23 55 48.1 -0.8
MOX Moxa 88.96 320 *e*P **P 23 55 34.3 +0.2**
comp=Z,57nm,1.8s,mb5.6
MOX *e* pP 23 55 48.2 -0.8
MOX Moxa 88.96 320 *e*P **P 23 55 34.3 +0.2**
MOX *e* pP 23 55 48.2 -0.8
MOX pmax pmax
comp=Z,57nm,1.8s,mb5.6
MOX Moxa 88.96 320 *e*P **P 23 55 34.5 +0.4**
comp=Z,47nm,1.7s,mb5.5
MOX *e*pP pP 23 55 49.8 +0.8
SPITS Spitsbergen Ar 89.04 348 P **P 23 55 33.0 -1.0**
comp=Z,11nm,0.5s,mb5.4,baz=354,slow=7.5,SNR=24
SPB4 Spitsbergen Ar 89.04 348 *e*P **P 23 55 33.6 -0.4**
SPB4 *e*pP pP 23 55 48.4 -0.4
FUR Furstenfeldbru 89.10 318 *e*P **P 23 55 34.5 -0.3**
FUR *e**PP pP 23 55 49.7 0.0
FUR pmax pmax
comp=Z,28nm,1.5s,mb5.4
FUR Furstenfeldbru 89.10 318 *e*P **P 23 55 34.5 -0.3**
comp=Z,28nm,1.5s,mb5.4
FUR *e*pP pP 23 55 49.7 0.0

GRA1 Grafenberg Arr 89.18 320 *e*P **P 23 55 35.8 +0.6**
comp=Z,97nm,1.8s,mb5.8
GRF Grafenberg Arr 89.18 320 *e*P **P 23 55 35.8 +0.6**
GRF pmax pmax
comp=Z,97nm,1.8s,mb5.8
GRF Grafenberg Arr 89.18 320 *e*P **P 23 55 35.8 +0.6**
GRF pmax pmax
comp=Z,97nm,1.8s,mb5.8
GRF Grafenberg Arr 89.18 320 *e*P **P 23 55 35.8 +0.6**
comp=Z,97nm,1.8s,mb5.8
RETA Reutte 89.43 317⇓ *i*P **P 23 55 36.0 -0.4**
comp=Z,26nm,1.8s,mb5.3
QSPA South Pole Qui 89.47 180 *e*P **P 23 55 36.0 +0.1**
comp=Z,150nm,1.8s,mb6.0
NOA NORSAR Array B 89.54 331 P **P 23 55 35.8 -0.8**
comp=Z,1.3nm,0.8s,mb4.3,baz=93,slow=5.5,SNR=3.0
CLZ Clausthal 89.78 322 *e*P **P 23 55 38.5 +0.6**
CLZ *e**PP pP 23 55 53.4 +0.6
CLZ pmax pmax
comp=Z,90nm,1.9s,mb5.8
CLZ Clausthal 89.78 322 *e*P **P 23 55 38.5 +0.6**
comp=Z,90nm,1.9s,mb5.8
CLZ *e*pP pP 23 55 53.4 +0.6
BSEG Bad Segeberg 89.85 324 *e*P **P 23 55 38.8 +0.6**
comp=Z,77nm,1.8s,mb5.7
BSEG *e*pP pP 23 55 54.2 +1.2
DAVOX Davos/Dischmat 90.02 317 P **P 23 55 39.3 +0.1**
comp=Z,7.5nm,0.5s,mb5.3,baz=147,slow=4.5,SNR=23
DAVA Damuels 90.03 317⇑ *i*PcP PcP 23 55 39.7 -0.7
comp=Z,30nm,1.4s
DAVOS Davos 90.08 317 P **P 23 55 39.3 -0.2**
KEST Kesra 90.32 306 P **P 23 55 41.6 +0.7**
comp=Z,5.2nm,1.1s,mb4.8,baz=128,slow=4.8,SNR=5.8
KEST LR LR 00 39 19.8
comp=Z,284nm,18.6s,MS4.7,baz=181,slow=38
TUE Stuetta 90.38 316 *e*P **P 23 55 41.8 +0.9**
comp=Z,27nm,1.2s,mb5.5
STU Stuttgart 90.50 319 *e*P **P 23 55 41.5 +0.2**
comp=Z,48nm,1.6s,mb5.6
TNS Taunus Mts 90.98 320 *e*P **P 23 55 44.1 +0.5**
TNS pmax pmax
comp=Z,77nm,2.0s,mb5.7
TNS Taunus Mts 90.98 320 *e*P **P 23 55 44.1 +0.5**
comp=Z,77nm,2.0s,mb5.7
BFO Black Forest 91.07 318 *e*P **P 23 55 43.8 -0.2**
BFO *e**PP pP 23 55 58.8 -0.1
BFO pmax pmax
comp=Z,14nm,1.2s,mb5.2
BFO Black Forest 91.07 318 *e*P **P 23 55 43.8 -0.2**
comp=Z,14nm,1.2s,mb5.2
BFO *e*pP pP 23 55 58.8 -0.1
FIN Finale Ligure 91.19 314 P **P 23 55 45.0 +0.3**
IBBN Ibbenburen 91.39 322 *e*P **P 23 55 46.0 +0.6**
comp=Z,85nm,1.8s,mb5.8
BUG Bochum--Univer 91.71 321 *e*P **P 23 55 47.4 +0.5**
comp=Z,26nm,0.9s,mb5.6
CDF Champ du Feu 91.77 318 *e*P **P 23 55 46.4 -0.9**
comp=Z,29nm,1.2s,mb5.2
CDF Champ du Feu 91.77 318 *e*P **P 23 55 46.4 -0.9**
comp=Z,14nm,1.2s,mb5.2
CDF Champ du Feu 91.77 318 *e*P **P 23 55 46.4 -0.9**
CDF pmax pmax
comp=Z,14nm,1.2s,mb5.2
ECH Echery 91.86 318 *e*P **P 23 55 48.2 +0.5**
ECH *e*pP pP 23 56 01.5 -1.0
HINF Hinteralfeld 92.07 318 *e*P **P 23 55 47.7 -1.0**
LPG La Plagne 92.20 315 *e*P **P 23 55 48.9 -0.5**
comp=Z,35nm,0.9s,mb5.4
LPG La Plagne 92.20 315 *e*P **P 23 55 48.9 -0.5**
comp=Z,18nm,0.9s,mb5.4
LPG La Plagne 92.20 315 *e*P **P 23 55 48.9 -0.5**
LPG pmax pmax
comp=Z,18nm,0.9s,mb5.4
MBDF Montbardon 92.21 315 *e*P **P 23 55 47.7 -1.7**
comp=Z,21nm,1.0s,mb5.1
MBDF Montbardon 92.21 315 *e*P **P 23 55 47.7 -1.7**
comp=Z,11nm,1.0s,mb5.1
MBDF Montbardon 92.21 315 *e*P **P 23 55 47.7 -1.7**
MBDF pmax pmax
comp=Z,11nm,1.0s,mb5.1
LPL La Plagne 92.22 315 *e*P **P 23 55 48.9 -0.5**
comp=Z,50nm,0.9s,mb5.5
LPL La Plagne 92.22 315 *e*P **P 23 55 48.9 -0.5**
comp=Z,25nm,0.9s,mb5.5
LPL La Plagne 92.22 315 *e*P **P 23 55 48.9 -0.5**
LPL pmax pmax
comp=Z,25nm,0.9s,mb5.5
FRF La Foret Royal 92.33 313 *e*P **P 23 55 49.2 -0.8**
comp=Z,62nm,1.2s,mb5.5
FRF La Foret Royal 92.33 313 *e*P **P 23 55 49.2 -0.8**
comp=Z,31nm,1.2s,mb5.5
FRF La Foret Royal 92.33 313 *e*P **P 23 55 49.2 -0.8**
FRF pmax pmax
comp=Z,31nm,1.2s,mb5.5
HAU Haudompre 92.41 318 *e*P **P 23 55 49.2 -1.0**
comp=Z,76nm,1.2s,mb5.6
HAU Haudompre 92.41 318 *e*P **P 23 55 49.2 -1.0**
comp=Z,38nm,1.2s,mb5.6
HAU Haudompre 92.41 318 *e*P **P 23 55 49.2 -1.0**
HAU pmax pmax
comp=Z,38nm,1.2s,mb5.6
WLF Walferdange 92.48 320 *e*P **P 23 55 51.2 +0.7**
comp=Z,82nm,2.1s,mb5.7
CABF La Chapelle 92.63 316 *e*P **P 23 55 50.8 -0.5**
comp=Z,58nm,1.1s,mb5.6
CABF La Chapelle 92.63 316 *e*P **P 23 55 50.8 -0.5**
comp=Z,29nm,1.1s,mb5.6
CABF La Chapelle 92.63 316 *e*P **P 23 55 50.8 -0.5**
CABF pmax pmax
comp=Z,29nm,1.1s,mb5.6
MEZF Maizieres J'vi 93.25 318 *e*P **P 23 55 53.2 -0.9**
comp=Z,75nm,1.4s,mb5.6
MEZF Maizieres J'vi 93.25 318 *e*P **P 23 55 53.2 -0.9**
comp=Z,75nm,1.4s,mb5.9
SNAA Sanae 93.38 198 *e*P **P 23 55 54.0 -0.3**
comp=Z,5.6nm,1.0s,mb5.0
SNAA *e* pP 23 56 10.2 +1.1
SNAA Sanae 93.38 198 *e*P **P 23 55 54.0 -0.2**
SNAA *e* pP 23 56 10.2 +1.1
SNAA pmax pmax
comp=Z,6.0nm,1.0s
BAIF Baives 93.71 320 *e*P **P 23 55 54.2 -2.0**
TAM Tamanrasset 93.76 293 *e*P **P 23 55 59.0 +2.0**
TAM *e*pP pP 23 56 12.9 +1.0
LOR Lormes 94.12 317 *e*P **P 23 55 57.3 -0.9**
comp=Z,29nm,1.1s,mb5.3
LOR Lormes 94.12 317 *e*P **P 23 55 57.3 -0.9**
comp=Z,14nm,1.1s,mb5.3
LOR Lormes 94.12 317 *e*P **P 23 55 57.3 -0.9**
LOR pmax pmax
comp=Z,14nm,1.1s,mb5.3
SMF Signal de Mont 94.18 317 *e*P **P 23 55 57.4 -1.0**
comp=Z,35nm,1.0s,mb5.4
SMF Signal de Mont 94.18 317 *e*P **P 23 55 57.4 -1.0**
comp=Z,17nm,1.0s,mb5.4
SMF Signal de Mont 94.18 317 *e*P **P 23 55 57.4 -1.0**
SMF pmax pmax
comp=Z,17nm,1.0s,mb5.4
SSF Saint Saulge 94.38 317 *e*P **P 23 55 58.3 -1.0**
comp=Z,76nm,1.8s,mb5.5
SSF Saint Saulge 94.38 317 *e*P **P 23 55 58.3 -1.0**
comp=Z,38nm,1.8s,mb5.5
SSF Saint Saulge 94.38 317 *e*P **P 23 55 58.3 -1.0**
SSF pmax pmax
comp=Z,38nm,1.8s,mb5.5
AVF Avril sur Loir 94.50 317 *e*P **P 23 55 58.9 -1.0**
comp=Z,36nm,1.5s,mb5.3
AVF Avril sur Loir 94.50 317 *e*P **P 23 55 58.9 -1.0**
comp=Z,18nm,1.5s,mb5.3
AVF Avril sur Loir 94.50 317 *e*P **P 23 55 58.9 -1.0**
AVF pmax pmax
comp=Z,18nm,1.5s,mb5.3
TCF Toulx Ste Croi 95.33 316 *e*P **P 23 56 04.6 +0.9**
comp=Z,44nm,1.5s,mb5.4
TCF Toulx Ste Croi 95.33 316 *e*P **P 23 56 04.6 +0.9**
comp=Z,22nm,1.5s,mb5.4
TCF Toulx Ste Croi 95.33 316 *e*P **P 23 56 04.6 +0.9**
TCF pmax pmax
comp=Z,22nm,1.5s,mb5.4
IMA2 Indian Mountai 97.26 23 *e*P **P 23 56 11.5 -0.6**
IMA2 *e*pP pP 23 56 25.6 -1.3
TORD Torodi Ar. Bea 97.61 283 P **P 23 56 13.7 -1.1**
comp=Z,1.6nm,1.0s,mb4.5,baz=98,slow=5.5,SNR=12
TORD PP PP 00 00 16.6 +3.7
comp=Z,0.6nm,0.9s,baz=160,slow=18,SNR=7.6
BPAW Bear Paw Mtn. 98.92 25 *e*P **P 23 56 20.0 +0.5**

comp=Z,22nm,1.5s,mb5.5
BPAW ep P pP 23 56 32.5 -1.9
ESDC Sonseca Array 100.59 310 PP PP 00 00 34.8 -0.1
comp=Z,2.6nm,1.2s,baz=60,slow=8.8,SNR=4.5
MDT Midelt 102.03 303 PP PP 00 00 43.3 -2.8
comp=Z,1.6nm,0.9s,baz=77,slow=9.4,SNR=5.9
NVAR Mina Array Bea 128.80 38 PKP PKPdf PKPdf 00 01 47.5 +0.3
comp=Z,0.7nm,0.8s,baz=260,slow=1.5,SNR=4.8
PDAR Pinedale Array 130.54 28 PKP PKPdf PKPdf 00 01 49.1 -1.3
comp=Z,0.6nm,0.9s,baz=115,slow=2.5,SNR=3.8
PDAR SKP 00 05 27.8
comp=Z,2.7nm,1.0s,baz=29,slow=2.1,SNR=4.8
PV10 Paradox Valley 134.13 31 ePKPdf PKPdf 00 01 55.4 -1.9
KSU1 Kansas State U 138.87 19 ePKPdf PKPdf 00 02 04.6 -1.5
SIUC Southern Illin 142.11 11 ePKPdf PKPdf 00 02 13.2 +1.2
TXAR Lajitas Array 143.85 35 PKP PKPdf 00 02 12.8 -2.5
comp=Z,3.8nm,0.6s,baz=274,slow=1.1,SNR=77
BDFB Brasilia 144.04 242 PKP PKPdf 00 02 13.8 -2.2
comp=Z,1.8nm,0.7s,baz=153,slow=9.9,SNR=5.5
TKL Tuckaleechee C 144.88 4 ePKPdf PKPdf 00 02 14.8 -2.1
SWET Sewanee 145.09 8 ePKPbc PKPbc 00 02 15.0 -1.7
JSC Jenkinsville 146.38 1 ePKPbc PKPbc 00 02 19.8 -1.0
BRAL Brewton 149.03 11 ePKPbc PKPbc 00 02 27.6 -0.4
LPAZ La Paz 159.28 216 PKP PKPdf 00 02 38.9 +0.2
comp=Z,0.8nm,0.5s,baz=4.6,slow=2.6,SNR=5.7
LPAZ La Paz 159.28 216 ePKIKP PKPdf 00 02 39.5 +0.8
LPAZ e 00 02 54.5
ROSC El Rosal 172.38 305 ePKPdf PKPdf 00 02 49.7 +0.3

IDC 11 00:03:21.8±14.0, 3229N×4080W, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/24, mbtmp3.9/5, Error ellipse: s-maj=479.7km s-min=33.4km az=175.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GERES	**GERESS Array B**	**43.61**	**51**	P	P	00 11 28.2	+0.6
	0.3nm,0.6s,baz=276,slow=8.8,SNR=2.8						
AKASG	**Malin Array Be**	**53.54**	**48**	P	P	00 12 43.1	-1.0
	0.6nm,0.4s,baz=276,slow=6.2,SNR=5.2						
PDAR	**Pinedale Array**	**54.15**	**302**	P	P	00 12 49.0	+0.3
	1.0nm,0.9s,baz=87,slow=6.2,SNR=6.1						
AKTO	**Aktyubinsk**	**70.99**	**42**	P	P	00 14 41.3	+0.2
	2.7nm,0.7s,baz=285,slow=7.0,SNR=10.0						
ZALV	**Zalesovo Beam**	**82.11**	**29**	P	P	00 15 44.6	+0.7
	0.6nm,0.6s,baz=316,slow=6.0,SNR=3.8						
ASAR	**Alice Springs**	**170.22**	**30**	PKPab	PKPab	00 24 46.7	-0.9
	0.5nm,1.0s,baz=350,slow=4.7,SNR=4.9						

CASC 11 00:08:42.5±2.1, 1061N×8628W, h21km±8km, MD4.0, 11C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**0.79**	**127**	*e*P	Pb	00 08 56.3	-1.3
LIM1	**Limonal**	**1.01**	**85↑**	*e*P	Pb	00 09 00.5	-0.8
2RIO	**Dos Rios de Up**	**1.03**	**94↑**	*e*P	Pb	00 08 59.9	-1.7
2RIO				*e*S	Sb	00 09 13.2	-1.5
CUI	**Cuipilapa**	**1.08**	**87↑**	*e*P	Pn	00 09 01.8	-0.7
CUI				*e*S	Sb	00 09 16.6	+0.3
CONN	**Concepcion**	**1.15**	**34**	*e*P	Pn	00 09 02.3	-1.1
CONN				*e*S	Sb	00 09 20.1	+1.9
APON	**Apoyo**	**1.32**	**9**	*e*P	Pn	00 09 05.5	-0.2
APON				*e*S	Sn	00 09 24.1	+1.4
CRUN	**El Crucero**	**1.37**	**359**	*e*P	Pn	00 09 06.3	-0.2
JCR	**Jicaral**	**1.37**	**123**	*e*P	Pn	00 09 05.3	-1.1
TISN	**Laguna Tiscapa**	**1.53**	**0↑**	*e*P	Pn	00 09 10.1	+1.4
MGAN	**Managua**	**1.53**	**1↑**	*e*P	Pn	00 09 10.1	+1.4
MGAN				*e*S	Sn	00 09 28.2	+0.2
CSAN		**1.57**	**355↑**	*e*P	Pn	00 09 10.1	+0.9
CSAN				*e*S	Sn	00 09 28.6	-0.4
FORC	**Fortuna**	**1.59**	**95**	*e*P	Pn	00 09 09.2	-0.2
FORC				*i*P		00 09 09.6	
COPN	**Copaltepe**	**1.60**	**349↑**	*e*P	Pn	00 09 10.1	+0.5
COPN				*e*S	Sn	00 09 29.5	-0.1
APYN	**Apoyeque**	**1.62**	**357↑**	*e*P	Pn	00 09 10.1	+0.2
APYN				*e*S	Sn	00 09 31.0	+0.8
HUEN		**1.73**	**3↑**	*e*P	Pn	00 09 10.1	-1.2
HUEN				*e*S	Sn	00 09 33.1	+0.3
MOMN	**Momotombo**	**1.81**	**352**	*e*P	Pn	00 09 11.5	-1.0
CGA2	**Cerro Gallo 2**	**1.88**	**108**	*e*P	Pn	00 09 13.8	+0.4
PRS1	**Puriscal**	**2.03**	**108**	*e*P	Pn	00 09 17.4	+1.9
URSC	**Urasca**	**2.58**	**107**	*e*P	Pn	00 09 23.6	+0.5
BUS	**Buena Vista**	**2.69**	**113**	*e*P	Pn	00 09 26.9	+2.3
LAPE	**La Pedrera**	**14.83**	**101↑**	*e*P		00 08 57.5	
LAPE				*e*S		00 09 09.8	

*KISR **11** 01:18:22.6, 2856N×5093E, h33km, ML2.8*
*CSEM **11** 01:18:25.0±1.1, 2842N×5113E, h2km, ML3.7, Error ellipse: s-maj=30.7km s-min=9.1km az=56.0*
ISC 11 01:18:25.7±1.7, 2853N±007×513E±01, h10km, n13, σ0$89/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMR	**Umm Al-Rimmam**	**3.32**	**289**	*e*P	**Pn**	**01 19 17.2**	**-0.5**
UMR				*e*S	**Sn**	**01 19 58.8**	**+1.6**
	24nm,0.3s						
UMR	**Umm Al-Rimmam**	**3.32**	**289**	*e*P	**Pn**	**01 19 17.2**	**-0.5**
	baz=290						
UMR				*e*S	**Sn**	**01 19 58.8**	**+1.5**
	baz=290						
UMR				AML	AML	01 20 00.5	
	comp=Z,25nm,0.3s,baz=290						
RDF	**Al-Radifah**	**3.34**	**278**	*e*P	**Pn**	**01 19 17.1**	**-0.9**
RDF				*e*S	**Sn**	**01 19 58.6**	**+0.9**
RDF	**Al-Radifah**	**3.34**	**278**	*e*P	**Pn**	**01 19 17.1**	**-0.8**
	baz=278						
RDF				*e*S	**Sn**	**01 19 58.6**	**+0.9**
	baz=278						
RDF				AML	AML	01 20 01.8	
	comp=Z,22nm,0.4s,baz=278						
NAY	**Al-Naaiem**	**3.65**	**282**	*e*P	**Pn**	**01 19 21.9**	**-0.3**
	baz=283						
NAY				AML	AML	01 20 08.1	
	comp=Z,10.0nm,0.4s,baz=283						
MIB	**Mutribah**	**3.71**	**291**	*e*P	**Pn**	**01 19 21.9**	**-1.2**
MIB				*e*S	**Sn**	**01 20 06.6**	**-0.3**
	comp=Z,10nm,0.4s						
MIB	**Mutribah**	**3.71**	**291**	*e*P	**Pn**	**01 19 21.9**	**-1.1**
	baz=292						
MIB				*e*S	**Sn**	**01 20 06.6**	**-0.3**
	baz=292						
MIB				AML	AML	01 20 22.0	
	comp=Z,10.0nm,0.4s,baz=292						
SLWS			**3.76**	**189**	P	**Pn**	**01 19 24.6**	**+0.8**
BTHS			**4.48**	**186**	P	**Pn**	**01 19 34.4**	**+0.7**
HRDDS			**5.82**	**197**	S	**Sn**	**01 20 59.4**	**+0.5**
HRDDS			**5.82**	**197**	P	**Pn**	**01 19 52.5**	**+0.4**
LYLS			**7.44**	**211**	P	**Pn**	**01 20 14.2**	**-0.1**
LYLS			**7.44**	**211**	P	**Pn**	**01 20 14.2**	**-0.1**
LYLS					S	**Sn**	**01 21 36.9**	**-1.9**

*ISCJB **11** 01:25:56.4±1.4, 1878N±006×1455E±0.1, h236km±12km, mb4.0/20, Error ellipse: s-maj=22.2km s-min=10.1km az=172.2*
*IDC **11** 01:25:57.8±1.6, 1876N×14538E, h231km±14km, mb3.7/12, mb1 3.7/14, mb1mx3.6/25, mbtmp3.6/14, Error ellipse: s-maj=19.7km s-min=10.2km az=79.0*
*NEIC **11** 01:25:58.1±1.4, 1882N×14553E, h238km±13km, mb4.3/7, Error ellipse: s-maj=16.5km s-min=7.8km az=80.0*
ISC 11 01:25:57.0±1.3, 1878N±006×1455E±01, h225km±12km, n31, σ1$10/27, mb4.0/20, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.20**	**187**	P	**Pn**	**01 27 16.3**	**+1.7**
	11nm,0.3s,baz=191,slow=16,SNR=10						
GUMO				S	**S**	**01 28 14.7**	**-1.5**
	39nm,0.3s,baz=16,slow=20,SNR=6.6						
JOW	**Kunigami**	**17.77**	**300**	P	**P**	**01 29 51.1**	**+2.4**
	5.1nm,0.3s,baz=130,slow=12,SNR=7.1						
MJAR	**Matsushiro Arr**	**18.82**	**342**	P	**P**	**01 29 59.0**	**-0.9**
	0.4nm,0.3s,baz=165,slow=9.7,SNR=4.9						
COEN	**Coen**	**32.61**	**184**	*e*P	**P**	**01 32 07.5**	**-0.2**
	2.2nm,0.5s,mb3.9						
PET	**Petropavlovsk**	**35.67**	**14**	*e*P	**P**	**01 32 32.5**	**-1.1**
	43nm,0.7s,mb5.1						
BATI	**Baumata**	**35.97**	**219**	P	**P**	**01 32 34.7**	**-1.8**
	11nm,0.4s,mb4.7,baz=10,slow=2.2,SNR=3.5						
CTA	**Charters Tower**	**38.64**	**179**	P	**P**	**01 32 59.3**	**+0.4**
	6.0nm,0.8s,mb4.2,baz=346,slow=2.0,SNR=5.1						
CTAO	**Charters Tower**	**38.64**	**179**	*e*P	**P**	**01 32 58.4**	**-0.5**
	6.7nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**40.00**	**196**	*e*P	**P**	**01 33 10.4**	**+0.4**
	28nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**40.01**	**196**	P	**P**	**01 33 10.8**	**+0.7**
	22nm,0.6s,mb4.8,baz=19,slow=9.1,SNR=20						
SONM	**Songino Array**	**42.96**	**321**	P	**P**	**01 33 34.1**	**+0.4**
	0.3nm,0.4s,mb3.1,baz=117,slow=9.1,SNR=2.8						
ASAR	**Alice Springs**	**43.68**	**195**	P	**P**	**01 33 40.1**	**+0.3**
	3.0nm,0.6s,mb3.8,baz=12,slow=6.5,SNR=32						
CMAR	**Chiang Mai Arr**	**44.02**	**277**	P	**P**	**01 33 43.4**	**+0.7**
	0.9nm,0.3s,mb3.5,baz=65,slow=7.0,SNR=6.3						
MBWA	**Marble Bar**	**47.04**	**214**	*e*P	**P**	**01 34 06.3**	**+0.2**
	8.1nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**50.51**	**184**	P	**P**	**01 34 31.9**	**-0.4**
	1.7nm,0.5s,mb3.7,baz=7.3,slow=7.3,SNR=6.6						
FORT	**Forrest**	**52.05**	**199**	*e*P	**P**	**01 34 44.5**	**+0.7**
	1.9nm,0.7s,mb3.6						
NWAO	**Narrogin (SRO)**	**58.09**	**208**	P	**P**	**01 35 26.9**	**0.0**
	3.2nm,0.5s,mb4.2,baz=9.4,slow=6.9,SNR=5.3						
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**	**01 35 28.1**	**+0.1**
	0.8nm,0.6s,mb3.5,baz=101,slow=6.7,SNR=5.7						
MKAR				PcP	PcP	01 36 15.6	-1.1
	0.3nm,0.6s,baz=80,slow=4.8,SNR=2.3						
KURK	**Kurchatov**	**61.08**	**318**	P	**P**	**01 35 46.7**	**-0.4**
	baz=101,slow=7.2						
URZ	**Urewera**	**64.04**	**153**	P	**P**	**01 36 06.5**	**-0.3**
	2.3nm,0.4s,mb4.2,baz=283,slow=4.3,SNR=4.8						
BRVK	**Borovoye**	**66.35**	**320**	*e*P	**P**	**01 36 22.1**	**+0.6**
	3.1nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**82.35**	**342**	P	**P**	**01 37 52.4**	**-0.9**
	2.9nm,1.0s,mb3.9,baz=86,slow=9.6,SNR=5.9						
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**01 37 59.9**	**+1.5**
	0.6nm,0.6s,mb3.5,baz=274,slow=5.0,SNR=5.5						
JOF	**Joensuu**	**83.86**	**335**	*e*p	**P**	**01 37 59.1**	**-2.0**
	1.4nm,0.5s,mb4.0						
ELK	**Elko**	**84.71**	**49**	P	**P**	**01 38 07.6**	**+1.8**
	0.4nm,0.4s,mb3.5,baz=143,slow=20,SNR=1.8						
KAF	**Kangasniemi**	**86.26**	**336**	*e*p	**P**	**01 38 10.2**	**-2.8**
VNA2	**Neumayer--Watz**	**125.42**	**191**	*e*P	PKPdf	01 44 30.5	+0.1
	baz=217,slow=1.1						
VNA3	**Neumayer Olymp**	**125.52**	**190**	*e*P	PKPdf	01 44 29.9	-0.6
TORD	**Torodi Ar. Bea**	**132.25**	**309**	PKP	PKPdf	01 44 44.5	-0.6
	0.2nm,0.8s,baz=62,slow=1.7,SNR=4.2						
TORD				SKPbc	SKPbc	01 47 47.1	-3.2
	0.6nm,0.8s,baz=65,slow=2.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**132.25**	**309**	PKP	PKPdf	01 44 44.5	-0.6
TORD				SKPbc	SKPbc	01 47 47.1	-3.2
LPAZ	**La Paz**	**147.87**	**91**	PKPbc	PKPbc	01 45 17.3	+1.0
	0.9nm,0.5s,baz=31,slow=3.0,SNR=5.0						

*MOS **11** 01:32:53.4±1.1, 3.15S×10080E, h33km, mb5.0/16, Error ellipse: s-maj=16.4km s-min=7.9km az=104.5*
*BJI **11** 01:32:53.9, 334S×10075E, h53km, mB5.1, mb4.9, Ms4.5, Msz4.5*
*IDC **11** 01:32:53.4±3.4, 337S×10057E, h27km±21km, mb4.4/16, mb1 4.5/16, mb1mx4.3/23, mbtmp4.4/16, MS4.0/3, Ms1 4.0/3, ms1mx3.5/25, Error ellipse: s-maj=23.2km s-min=11.9km az=47.0*
*DJA **11** 01:32:55.5±0.0, 3.12S×10032E, h16km, mB5.6/5, Mjma4.3/9, MLv5.0/9, Mw(mB)5.3/5, Mwp4.3/3*
*NEIC **11** 01:32:56.3±2.4, 333S×10065E, h52km±20km, mb4.8/14, Error ellipse: s-maj=15.9km s-min=6.1km az=49.0*
*ISCJB **11** 01:32:56.9±1.0, 322S±007×10064E±007, h68km±7km, mb4.8/52, Error ellipse: s-maj=14.9km s-min=6.2km az=136.7*
ISC 11 01:32:59.4±0.9, 320S±007×10074E±007, h73km±7km, n104, σ1$04/98, mb4.8/52, 5C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.32**	**33**	P	**Pn**	**01 33 20.9**	**-1.2**
KSI	**Kapahiang**	**1.90**	**104**	P	**Pn**	**01 33 29.2**	**-0.6**
PDSI	**Padang**	**2.29**	**353**	P	**Pn**	**01 33 31.4**	**-3.6**
PPI	**Padang Panjang**	**2.75**	**353**	P	**Pn**	**01 33 38.4**	**-2.8**
RGRI	**Rengat**	**3.25**	**29**	P	**Pn**	**01 33 47.7**	**-0.4**
KLI	**Kotabumi**	**4.43**	**112**	P	**Pn**	**01 34 11.4**	**+7.3**
PPBI	**Pangkal Pinang**	**5.49**	**79**	P	**Pn**	**01 34 21.6**	**+3.0**
	60nm,1.2s,6μm0.3nm						
DBJI	**Dramaga**	**6.85**	**119**	P	**Pn**	**01 34 35.6**	**-1.7**
	185nm,1.0s,4μm0.6nm						
CBJI	**Citeko**	**6.88**	**118**	P	**Pn**	**01 34 39.7**	**+2.1**
	510nm,0.8s,3.0nm						
LEM	**Lembang**	**7.74**	**118**	P	**Pn**	**01 34 51.8**	**+2.4**
	149nm,1.1s,2μm0.4nm						
BJII	**Banjamegara**	**9.83**	**115**	P	**Pn**	**01 35 26.7**	**+8.7**
SJI	**Sawahan**	**11.86**	**113**	P	**Pn**	**01 35 50.6**	**+4.9**
BBKI	**Banjar Baru**	**14.08**	**91**	P	**Pn**	**01 36 22.4**	**+6.9**
	114nm,1.1s,2μm						
PCI	**Palu**	**19.22**	**84**	P	**Pn**	**01 37 20.3**	**+0.8**
	76nm,1.7s,670nm						
CMAR	**Chiang Mai Arr**	**21.59**	**355**	P	**P**	**01 37 41.4**	**-2.0**
	9.0nm,0.8s,mb4.2,baz=186,slow=9.7,SNR=23						
CMAR				LR	LR	01 47 14.5	
	comp=Z,243nm,19.1s,baz=180,slow=40						
CMAR	**Chiang Mai Arr**	**21.59**	**355↑**	*e*P	**P**	**01 37 41.5**	**-1.8**
KDI	**Kendari**	**21.85**	**93**	P	**P**	**01 37 52.6**	**+6.4**
	31nm,1.1s,mb4.6						
CHTO	**Chiang Mai**	**21.95**	**355**	*e*P	**P**	**01 37 45.7**	**-1.4**
	12nm,1.0s,mb4.2						
CHTO	**Chiang Mai**	**21.95**	**355**	*e*P	**P**	**01 37 45.7**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.2						
BATI	**Baumata**	**23.79**	**108**	P	**P**	**01 38 03.5**	**-2.2**
	comp=Z,9.5nm,0.5s,mb4.3,baz=72,slow=9.6,SNR=3.4						
BATI				S	**S**	**01 42 15.3**	**-0.9**
	comp=Z,8.2nm,0.5s,baz=295,slow=15,SNR=4.3						
LBMI	**Labuha**	**26.87**	**85**	P	**P**	**01 38 41.8**	**+8.3**
KMI	**Kunming**	**28.22**	**4**	P	**P**	**01 38 45.9**	**+0.5**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.1						
KMI	**Kunming**	**28.22**	**4**	P	**P**	**01 38 45.9**	**+0.5**
	comp=Z,8.0nm,1.3s,mb4.1						
ODAN	**Odare**	**32.55**	**337**	*e*P	**P**	**01 39 24.1**	**+0.5**
	comp=Z,27nm,0.6s,mb5.3						
TAPN	**Taejung**	**32.87**	**338**	*e*P	**P**	**01 39 27.5**	**+1.0**
	comp=Z,79nm,0.9s,mb5.5						
RAMN	**Ramite**	**32.94**	**336**	*e*P	**P**	**01 39 27.9**	**+0.8**
	comp=Z,31nm,1.0s,mb5.1						
NWAO	**Narrogin (SRO)**	**33.37**	**154**	LR	LR	01 52 06.8	
	comp=Z,296nm,18.2s,baz=162,slow=35						
JIRN	**Jiri**	**33.73**	**336**	*e*P	**P**	**01 39 34.7**	**+0.7**
	comp=Z,56nm,0.8s,mb5.4						
PKI	**Pulchoki**	**33.98**	**335**	*e*P	**P**	**01 39 36.7**	**+0.6**
	comp=Z,16nm,0.7s,mb5.0						
PKI	**Pulchoki**	**33.98**	**335**	*e*P	**P**	**01 39 36.7**	**+0.6**
PKI				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.0						
LSA	**Lhasa**	**33.98**	**345**	*e*P	**P**	**01 39 37.2**	**+1.1**
LSA	**Lhasa**	**33.98**	**345**	*e*P	**P**	**01 39 37.0**	**+0.9**
	comp=Z,7.7nm,0.6s,mb4.7						
LSA	**Lhasa**	**33.98**	**345**	*e*P	**P**	**01 39 37.0**	**+0.9**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
PKIN	**Phulchoki**	**33.99**	**335**	*e*P	**P**	**01 39 36.6**	**+0.4**
GUN	**Gumba**	**34.08**	**336**	*e*P	**P**	**01 39 37.5**	**+0.5**
	comp=Z,58nm,0.5s,mb5.7						
DMN	**Daman**	**34.14**	**335**	*e*P	**P**	**01 39 38.0**	**+0.5**
	comp=Z,28nm,0.9s,mb5.1						
KKN	**Kakani**	**34.22**	**335**	*e*P	**P**	**01 39 39.0**	**+0.8**
	comp=Z,38nm,0.8s,mb5.3						
KKN	**Kakani**	**34.22**	**335**	*e*P	**P**	**01 39 39.0**	**+0.8**
KKN				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.3						
GKN	**Gorkha**	**34.68**	**334**	*e*P	**P**	**01 39 42.6**	**+0.4**
	comp=Z,46nm,0.9s,mb5.3						
KOLN	**Koldanda**	**34.94**	**333**	*e*P	**P**	**01 39 44.9**	**+0.5**
	comp=Z,30nm,0.7s,mb5.2						
DANN	**Dangsing**	**35.37**	**334**	*e*P	**P**	**01 39 48.4**	**+0.3**
	comp=Z,69nm,0.8s,mb5.5						
PYUN	**Piuthan**	**35.50**	**332**	*e*P	**P**	**01 39 49.3**	**+0.1**
	comp=Z,29nm,0.9s,mb5.2						
WHN	**Wuhan**	**35.98**	**20**	*e*P	**P**	**01 39 49.4**	**-3.9**
WHN				*e*S	**S**	**01 45 24.4**	**-2.4**
WHN				LR	LR		
	comp=Z,1μm,14.4s						
WRA	**Warramunga Arr**	**36.76**	**120**	P	**P**	**01 39 59.3**	**-0.8**
	comp=Z,4.1nm,0.4s,mb4.7,baz=307,slow=8.7,SNR=23						
WRA				S	**S**	**01 45 40.9**	**+1.9**
	comp=Z,2.2nm,0.9s,baz=297,slow=16,SNR=8.2						
WRAB	**Tennant Creek**	**36.76**	**120**	*e*P	**P**	**01 39 58.9**	**-1.3**
	comp=Z,6.5nm,0.4s,mb4.9						
WRAB	**Tennant Creek**	**36.76**	**120**	*e*P	**P**	**01 39 58.5**	**-1.6**
XAN	**Xi'an**	**37.84**	**11**	P	**P**	**01 40 08.7**	**-0.3**
XAN				AMB	AMB		
	comp=Z,32nm,0.7s,mb5.3						
XAN				AMB	AMB		
	comp=Z,93nm,10.6s						
ASAR	**Alice Springs**	**37.96**	**125**	P	**P**	**01 40 09.8**	**-0.4**
	comp=Z,8.3nm,0.4s,mb4.9,baz=302,slow=8.1,SNR=51						
ASAR				S	**S**	**01 46 02.5**	**+5.5**
	comp=Z,1.7nm,0.9s,baz=294,slow=14,SNR=8.1						
NJ2	**Nanjing**	**39.05**	**25**	*e*P	**P**	**01 40 19.0**	**-0.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
LZH	**Lanzhou**	**39.19**	**4**	*e*P	**P**	**01 40 20.0**	**-0.3**
LZH				AP	pP	01 40 30.0	-8.1
LZH				XP	sP	01 40 34.1	-12
LZH				AMB	AMB		
	comp=Z,43nm,1.6s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
LZH				LR	LR		
	comp=E,431nm,15.0s						
LZH				LR	LR		
	comp=Z,717nm,16.8s						
LZH	**Lanzhou**	**39.19**	**4**	*e*P	**P**	**01 40 20.0**	**-0.3**
	comp=Z,43nm,1.6s,mb5.0						
LZH				pP	pP	01 40 30.0	-8.1
LZH				sP	sP	01 40 34.1	-12
LZH				PP	PP	01 42 10.1	+19
LZH				S	S	01 46 56.0	+41
LZH				sS	sS	01 47 12.0	+26
LZH				SS	SS	01 50 09.2	+58
LZH				LR	LR		
	comp=Z,720nm,16.8s						
LZH	**Lanzhou**	**39.19**	**4**	*e*P	**P**	**01 40 20.0**	**-0.3**
LZH				*PP	pP	01 40 30.0	-8.1
LZH				*SP	sP	01 40 34.1	-12
LZH						01 42 10.1	
LZH				pmax	pmax		
	comp=Z,43nm,1.6s,mb5.0						
LZH				MLR	MLR		
	comp=Z,720nm,16.8s						
GTA	**Gaotai**	**42.41**	**359**	*e*P	**P**	**01 40 47.5**	**+0.8**
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.4						
GTA				AMB	AMB		
	comp=Z,48nm,3.8s						
GTA				LR	LR		
	comp=N,96nm,13.5s						
GTA				LR	LR		
	comp=E,228nm,16.5s						
GTA				LR	LR		
	comp=Z,153nm,16.8s						
CTA	**Charters Tower**	**47.43**	**114**	P	**P**	**01 41 26.4**	**-0.5**
	comp=Z,5.4nm,0.7s,mb4.4,baz=301,slow=11,SNR=7.1						
CTAO	**Charters Tower**	**47.43**	**114**	*e*P	**P**	**01 41 26.4**	**-0.6**
	comp=Z,5.6nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**47.43**	**114**	*e*P	**P**	**01 41 26.4**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
KSRS	**Korea Array**	**47.68**	**29**	P	**P**	**01 41 29.1**	**+0.5**
	comp=Z,21nm,1.2s,mb4.9,baz=225,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**47.81**	**131**	P	**P**	**01 41 29.9**	**+0.2**
	comp=Z,3.9nm,0.6s,mb4.4,baz=307,slow=7.8,SNR=16						
STKA				LR	LR	02 03 11.2	
	comp=Z,212nm,20.1s,baz=287,slow=38						
STKA	**Stephens Creek**	**47.81**	**131**	P	**P**	**01 41 29.9**	**+0.2**
STKA				LR	LR	02 03 11.2	
WMQ	**Urumqi**	**48.26**	**347**	P	**P**	**01 41 34.3**	**+1.4**
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.1						
SONM	**Songino Array**	**51.06**	**5**	P	**P**	**01 41 55.8**	**+1.6**
	comp=Z,22nm,0.6s,mb5.4,baz=188,slow=9.4,SNR=150						
SONM				PcP	PcP	01 43 09.7	+0.6
	comp=Z,2.0nm,0.5s,baz=185,slow=3.9,SNR=3.0						
ULN	**Ulaanbaatar**	**51.15**	**5**	*e*P	**P**	**01 41 55.9**	**+1.1**
	comp=Z,29nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**51.15**	**5↑**	*e*P	**P**	**01 41 56.0**	**+1.1**
TKM2	**Tokmak 2**	**51.22**	**336**	*e*P	**P**	**01 41 55.8**	**+0.3**
	comp=Z,9.1nm,0.4s,mb5.2						
TKM2	**Tokmak 2**	**51.22**	**336**	*e*P	**P**	**01 41 55.8**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.2						
AML	**Almayashu**	**51.36**	**334**	*e*P	**P**	**01 41 56.9**	**+0.3**
	comp=Z,4.6nm,0.6s,mb4.7						
EKS2	**Erkin-Say**	**51.76**	**335**	*e*P	**P**	**01 41 59.7**	**+0.2**
	comp=Z,9.8nm,0.8s,mb4.9						
CN2	**Changchun**	**51.79**	**23**	*e*P	**P**	**01 41 59.5**	**-0.2**
CN2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
MK31	**Makanchi Array**	**52.38**	**344**	*e*P	**P**	**01 42 04.1**	**+0.1**
MKAR	**Makanchi Array**	**52.38**	**344**	P	**P**	**01 42 04.2**	**+0.3**
	comp=Z,8.4nm,0.6s,mb4.9,baz=154,slow=9.1,SNR=101						
MJAR

comp=Z,15nm,0.8s,baz=293,slow=1.0,SNR=123

MIAR	**Mount Ida**	**146.09**	**21**	*e*PKPbc	PKPbc	01 52 32.1	+0.5
WVT	**Waverly**	**146.29**	**13**	*e*PKPbc	PKPbc	01 52 31.7	-0.5
JCT	**Junction City**	**146.63**	**33**	*e*PKPbc	PKPbc	01 52 34.1	+0.7
TKL	**Tuckaleechee C**	**147.44**	**7**	PKPbc	PKPbc	01 52 34.5	-1.0

comp=Z,3.3nm,0.8s,baz=113,slow=6.2,SNR=6.6

HKT	**Hockley**	**149.11**	**29**	*e*PKPbc	PKPbc	01 52 40.3	+0.2

CASC 11 01:43:44.5±2.5, 968N×8279W, h13km±10km, MD4.1, 5C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIO	**Limon**	**0.41**	**323**	*e*P	Pg	01 43 53.9	+1.3
BAR1		**0.68**	**230**↑	*e*P	Pg	01 43 57.9	+0.2
BAR1				*e*S	Sg	01 44 07.8	+1.3
BRU2	**Volcan**	**0.88**	**174**↓	*e*P	Pg	01 44 00.7	-0.9
BRU2				*e*S	Sg	01 44 13.0	-0.2
TBS2		**0.89**	**172**↑	*e*P	Pg	01 44 00.6	-1.1
TBS2				*e*S	Sg	01 44 11.9	-1.4
BUS	**Buena Vista**	**0.97**	**263**↓	*e*P	Pb	01 44 02.5	-0.6
URSC	**Urasca**	**0.99**	**279**↑	*e*P	Pb	01 44 02.4	-1.1
ACR	**Cerro Adams**	**1.09**	**200**↓	*e*P	Pb	01 44 04.6	-0.6
SJS	**Escuela Geolog**	**1.28**	**282**	*e*S	Sb	01 44 25.6	+0.9
QCR	**Quepos**	**1.38**	**260**↓	*e*P	Pn	01 44 09.4	-0.1
QCR				*e*S	Sn	01 44 26.5	-1.2
PRS1	**Puriscal**	**1.53**	**282**	*e*P	Pn	01 44 12.3	+0.7
PRS1				*e*S	Sn	01 44 31.9	+0.5
CGA2	**Cerro Gallo 2**	**1.69**	**282**↑	*e*P	Pn	01 44 14.0	+0.2
CGA2				*e*S	Sn	01 44 36.0	+0.7
JCR	**Jicaral**	**2.30**	**274**	*e*P	Pn	01 44 23.2	+1.1
CUI	**Cuipilapa**	**2.55**	**293**	*e*P	Pn	01 44 24.5	-1.1
PTP	**Ponta Puerca**	**18.70**	**61**↑	*e*P		01 44 10.9	

IDC 11 02:46:54.5±37.0, 1708S×17432E, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.3/4, Error ellipse: s-maj=638.9km s-min=128.7km az=70.0

NEIC 11 02:46:53.4±5.3, 1661S×17494E, h35km, mb3.9/1, Error ellipse: s-maj=109.0km s-min=35.9km az=112.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.69**	**235**	*e*Pn	Pn	02 49 10.3	0.0
CTA	**Charters Tower**	**27.43**	**258**	P	P	02 52 36.8	+0.7

1.8nm,0.5s,baz=95,slow=12,SNR=3.3

STKA	**Stephens Creek**	**33.83**	**237**	P	P	02 53 32.6	+0.2

1.7nm,0.7s,baz=38,slow=9.2,SNR=4.5

WB2	**Warramunga Arr**	**38.62**	**259**	*e*P	P	02 54 13.3	-0.2
WRAB	**Tennant Creek**	**38.62**	**259**	*e*P	P	02 54 13.3	-0.2

1.5nm,0.6s

WRA	**Warramunga Arr**	**38.63**	**259**	P	P	02 54 13.7	0.0

0.7nm,0.3s,baz=94,slow=8.7,SNR=15

ASAR	**Alice Springs**	**39.06**	**253**	P	P	02 54 17.1	-0.1

7.0nm,0.4s,baz=82,slow=8.9,SNR=148

ISCJB 11 02:51:45.8±0.7, 2374N±003×12288E±003, h27km±7km, Error ellipse: s-maj=5.9km s-min=3.9km az=150.5
JMA 11 02:51:45.8±0.3, 2381N×12283E, h28km, M2.8
TAP 11 02:51:46.6, 2370N×12280E, h19km±1km, ML3.2, D

ISC 11 02:51:46.2±0.8, 2375N±003×12289E±003, h26km±8km, n35, σ1s05/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.72**	**9**	P	**Pb**	**02 51 58.6**	**-1.5**
YOJ				S	**Sb**	**02 52 07.6**	**-2.0**
HATJ	**Hateruma jima**	**0.90**	**70**	P	**Pn**	**02 52 02.5**	**-0.6**
HATJ				S	**Sb**	**02 52 15.1**	**+0.5**
IRIF	**Iriomote-Funau**	**0.97**	**53**	P	**Pn**	**02 52 03.7**	**-0.4**
IRIF				S	**Sb**	**02 52 16.5**	**-0.2**
JKRS	**Kuro-shima**	**1.14**	**64**	P	**Pn**	**02 52 06.6**	**+0.1**
JKRS				S	**Sn**	**02 52 21.5**	**+0.3**
TWD	**Chiawan**	**1.23**	**286**	*e*P	**Pn**	**02 52 06.6**	**-1.1**

baz=288

TWD				*e*S	**Sn**	**02 52 21.1**	**-2.3**

baz=288

ENA	**Nanau**	**1.25**	**303**	*e*P	**Pn**	**02 52 08.0**	**0.0**

baz=306

TWC	**Suao**	**1.28**	**312**	P	**Pn**	**02 52 09.0**	**+0.6**

baz=316

TWC				*e*S	**Sn**	**02 52 25.2**	**+0.5**

baz=316

JIJ	**Ishigaki jima**	**1.30**	**62**	P	**Pn**	**02 52 08.3**	**-0.4**
JIJ				S	**Sn**	**02 52 24.4**	**-0.9**
ESL	**Shilin**	**1.33**	**273**	*e*P	**Pn**	**02 52 07.6**	**-1.6**

baz=275

ESL				*e*S	**Sn**	**02 52 23.4**	**-2.6**

baz=275

EHY	**Hungye**	**1.45**	**261**	*e*P	**Pn**	**02 52 10.6**	**-0.2**

baz=261

EHY				*e*S	**Sn**	**02 52 28.2**	**-0.8**

baz=261

TWE	**Neicheng**	**1.48**	**311**	*e*P	**Pn**	**02 52 11.2**	**+0.1**

baz=314

TWE				*e*S	**Sn**	**02 52 30.1**	**+0.5**

baz=314

ENTT	**Nioudou**	**1.50**	**307**	*e*P	**Pn**	**02 52 11.2**	**-0.2**

baz=309

ENTT				*e*S	**Sn**	**02 52 30.5**	**+0.4**

baz=309

TWB1	**Santiao Chiao**	**1.50**	**327**	*e*P	**Pn**	**02 52 11.6**	**+0.1**

baz=330

TWF1	**Yuli**	**1.51**	**255**	*i* P	**Pn**	**02 52 11.2**	**-0.4**

baz=255

TWF1				*e*S	**Sn**	**02 52 30.0**	**-0.4**

baz=255

WHF	**Hehuan Shan**	**1.54**	**285**	P	**Pn**	**02 52 11.5**	**-0.4**

baz=287

CHKT	**Chengkung**	**1.54**	**246**	*e*S	**Sn**	**02 52 29.3**	**-1.8**

baz=245

NNS	**Nan Shan**	**1.54**	**297**	*e*P	**Pn**	**02 52 11.9**	**-0.1**

baz=299

NWF	**Wu-fen Shan**	**1.66**	**323**	P	**Pn**	**02 52 14.9**	**+1.3**

baz=325

NWF				*e*S	**Sn**	**02 52 35.0**	**+0.9**

baz=325

NSK	**Sanguang**	**1.67**	**304**	P	**Pn**	**02 52 14.0**	**+0.1**

baz=306

NSK				*e*S	**Sn**	**02 52 34.6**	**+0.1**

baz=306

YUS	**Yu-Shan**	**1.79**	**262**	P	**Pn**	**02 52 16.1**	**+0.6**

baz=262

YUS				*e*S	**Sn**	**02 52 36.5**	**-0.8**

baz=262

ELDTW	**Lidau**	**1.80**	**252**	P	**Pn**	**02 52 15.2**	**-0.4**

baz=252

SMLT	**Sun Moon Lake**	**1.82**	**275**	P	**Pn**	**02 52 16.2**	**+0.3**

baz=275

TYC	**Yuchr**	**1.86**	**275**	P	**Pn**	**02 52 16.8**	**+0.3**

baz=276

TWG	**Pinlang**	**1.91**	**241**	*e*P	**Pn**	**02 52 17.3**	**+0.3**

baz=240

TWG				*e*S	**Sn**	**02 52 39.3**	**-0.9**

baz=240

ALS	**Alishan**	**1.92**	**263**	P	**Pn**	**02 52 18.3**	**+1.1**

baz=263

TWQ1	**Liyutan**	**2.02**	**288**	*e*P	**Pn**	**02 52 21.3**	**+2.7**

baz=289

CHN5	**Tsauling**	**2.03**	**266**	*e*P	**Pn**	**02 52 20.2**	**+1.5**

baz=266

CHN5				*e*S	**Sn**	**02 52 44.9**	**+1.6**

baz=266

STYT	**Tauyuan**	**2.04**	**254**	*e*P	**Pn**	**02 52 19.6**	**+0.7**

baz=253

STYT				*e*S	**Sn**	**02 52 42.7**	**-0.8**

baz=253

ECL	**Taimali**	**2.11**	**238**	*e*P	**Pn**	**02 52 20.4**	**+0.5**

baz=236

ECL				S	**Sn**	**02 52 43.5**	**-1.8**

baz=236

CHN4	**Tsaushan**	**2.14**	**260**	*e*P	**Pn**	**02 52 23.1**	**+2.9**

baz=260

WTP	**Ta-pu**	**2.14**	**257**	*e*P	**Pn**	**02 52 21.6**	**+1.3**

baz=257

SGST	**Jiashian**	**2.22**	**253**	*e*P	**Pn**	**02 52 22.5**	**+1.2**

baz=253

CHN1	**Nanshi**	**2.24**	**256**	*e*P	**Pn**	**02 52 23.2**	**+1.7**

baz=256

EAST	**Anshuo**	**2.32**	**235**	P	**Pn**	**02 52 22.8**	**+0.1**

baz=233

EAST				*e*S	**Sn**	**02 52 49.5**	**-0.9**

baz=233

SCZT	**Fangliau**	**2.50**	**237**	*e*P	**Pn**	**02 52 27.1**	**+2.0**

baz=236

ISCJB 11 03:15:13.6±0.6, 3683N±002×12160W±003, h9km±3km, Error ellipse: s-maj=4.5km s-min=3.0km az=140.3
NEIC 11 03:15:14.5, 3683N×12156W, h4km, ML2.8(NCEDC), After NCEDC.
NEIC Felt [IV] at San Juan Bautista. Felt at Aromas and Hollister.

ISC 11 03:15:13.9±0.5, 3683N±002×12159W±003, h11km±3km, n31, σ0s89/56, 26C-16D, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAO	**San Andreas Ge**	**0.13**	**121**	*e*Pg	**Pg**	**03 15 16.7**	**-0.4**
SAO				*e*Sg	**Sg**	**03 15 19.0**	**-0.4**
PACP	**Pacheco Peak**	**0.30**	**54**	↑P	**Pg**	**03 15 20.8**	**+0.8**

baz=0.3,SNR=163

PACP				↑S	**Sg**	**03 15 25.1**	**+1.1**

baz=0.3

JRSC	**Jasper Ridge**	**0.77**	**318**	↓P	**Pg**	**03 15 29.1**	**+0.3**

baz=0.8

JRSC				↑S	**Sg**	**03 15 39.6**	**+0.7**

baz=0.8

WENL	**Wente Vineyard**	**0.80**	**350**	↓S	**Sg**	**03 15 40.4**	**+0.6**

baz=0.8

U04C	**Hernandez Rese**	**0.80**	**126**	↑P	**Pg**	**03 15 29.5**	**+0.2**

baz=0.8,SNR=519

V03C	**Hunter Liggett**	**0.86**	**160**	↓P	**Pg**	**03 15 30.6**	**+0.1**

baz=0.9,SNR=334

V03C				↓S	**Sg**	**03 15 42.6**	**+0.9**

baz=0.9

S05C	**Merced**	**1.13**	**63**	↑P	**Pb**	**03 15 34.9**	**-0.5**

baz=1.1,SNR=78

S05C				↑S	**Sb**	**03 15 50.2**	**+0.1**

baz=1.1

BDM	**Black Diamond**	**1.14**	**349**	↑P	**Pb**	**03 15 35.3**	**-0.3**

baz=1.1

BDM				↑S	**Sb**	**03 15 50.7**	**+0.4**

baz=1.1

PKD	**Parkfield**	**1.23**	**136**	↑P	**Pn**	**03 15 36.3**	**-0.6**

baz=1.2,SNR=209

PKD				↑S	**Sb**	**03 15 53.0**	**+0.2**

baz=1.2

U05C	**Westside ANR,**	**1.28**	**112**	↓Pn	**Pn**	**03 15 37.0**	**-0.7**

baz=1.3,SNR=10

U05C				↓Pg	**Pg**	**03 15 38.5**	**0.0**

baz=1.3

U05C				↑S	**Sb**	**03 15 54.9**	**+0.5**

baz=1.3

FARB	**Farallon Islan**	**1.42**	**308**	↓Pn	**Pn**	**03 15 39.1**	**-0.5**

baz=1.4

FARB				↑Pb	**Pb**	**03 15 40.2**	**-0.1**

baz=1.4

FARB				↑S	**Sn**	**03 15 57.9**	**-0.3**

baz=1.4

R04C	**Big Horse Ranc**	**1.51**	**20**	↓Pg	**Pg**	**03 15 43.3**	**+0.4**

baz=1.5

R04C				↑S	**Sn**	**03 16 00.2**	**-0.3**

baz=1.5

T06C	**Millerton Lake**	**1.52**	**83**	↓Pn	**Pn**	**03 15 40.2**	**-0.7**

baz=1.5,SNR=22

T06C				↑Pb	**Pb**	**03 15 41.5**	**-0.5**

baz=1.5

T06C				↑S	**Sn**	**03 16 00.2**	**-0.4**

baz=1.5

CMB	**Columbia Colle**	**1.54**	**38**	*e*Pn	**Pn**	**03 15 40.9**	**-0.2**
CMB				*e*Sn	**Sn**	**03 15 58.7**	**-2.3**
CMB	**Columbia Colle**	**1.54**	**38**	↑Pn	**Pn**	**03 15 40.5**	**-0.7**

baz=1.5,SNR=47

CMB				↑Pb	**Pb**	**03 15 41.3**	**-1.0**

baz=1.5

CMB				↓S	**Sn**	**03 16 01.1**	**0.0**

baz=1.5

PTRM	**Twissleman Ran**	**1.62**	**136**	*e*Pn	**Pn**	**03 15 42.0**	**-0.3**
CVS	**Carmenet Viney**	**1.66**	**336**	↑Pn	**Pn**	**03 15 42.3**	**-0.5**

baz=1.7,SNR=42

MCCM	**Marconi Confer**	**1.66**	**322**	↓Pn	**Pn**	**03 15 42.4**	**-0.5**

baz=1.7,SNR=24

MCCM				↓Pb	**Pb**	**03 15 44.1**	**-0.4**

baz=1.7

NSHM	**Saint Helena R**	**1.87**	**335**	*e*Pn	**Pn**	**03 15 46.0**	**+0.3**
KCC	**Kaiser Creek**	**1.88**	**74**	↑P	**Pn**	**03 15 46.7**	**+0.8**

baz=1.9,SNR=59

KCC				↑Sn	**Sn**	**03 16 09.7**	**+0.2**

baz=1.9

SMMC	**Simmler**	**1.99**	**139**	↓Pn	**Pn**	**03 15 46.9**	**-0.5**

baz=2.0

SMMC				↓Sn	**Sn**	**03 16 12.4**	**+0.1**

baz=2.0

VES	**Vestal, Richgr**	**2.25**	**115**	↑Pn	**Pn**	**03 15 50.7**	**-0.2**

baz=2.2,SNR=12

MLAC	**Mammoth Lakes**	**2.34**	**69**	↓Pb	**Pb**	**03 15 54.7**	**-1.3**

baz=2.3

R06C	**Coleville**	**2.39**	**45**	↑Pb	**Pb**	**03 15 55.7**	**-1.2**

baz=2.4

R06C				↑Sb	**Sb**	**03 16 27.0**	**+0.6**

baz=2.4

OHCM	**Honcut**	**2.50**	**2**	*e*Pn	**Pn**	**03 15 55.7**	**+1.3**
ISA	**Isabella**	**2.78**	**114**	*e*Pn	**Pn**	**03 15 59.4**	**+1.2**
ISA				*e*Sn	**Sn**	**03 16 34.5**	**+2.9**
R08A	**Mina**	**3.15**	**60**	↓Sb	**Sb**	**03 16 50.0**	**+1.7**

baz=3.1

PAHR	**Pah Rah Range**	**3.35**	**31**	*e*Pn	**Pn**	**03 16 08.3**	**+2.1**
PAHR				*e*Pg	**Pg**	**03 16 16.4**	**-1.7**
MPMC	**Manual Prospec**	**3.40**	**102**	↑Pb	**Pb**	**03 16 13.0**	**-1.0**

baz=3.4

S09A	**Goldfield**	**3.59**	**74**	↑Pb	**Pb**	**03 16 17.0**	**-0.3**

baz=3.6

TPNV	**Topopah Spring**	**4.28**	**87**	*e*Pn	**Pn**	**03 16 21.3**	**+2.3**
TPNV				*e*Pg	**Pg**	**03 16 31.1**	**-4.8**
TPNV				*e*Sg	**Sg**	**03 17 28.5**	**-2.9**

ISK 11 03:23:28.9, 3827N×2646E, h8km, MD3.8, ML4.0
ISCJB 11 03:23:29.4±0.4, 3826N±002×2651E±002, h6km±3km, mb3.6/2, MS3.1/3, Error ellipse: s-maj=2.8km s-min=2.4km az=39.9
NEIC 11 03:23:29.0, 3830N×2646E, h8km, ML4.2(ISK), ML4.0(ATH), After ISK.
CSEM 11 03:23:29.5±0.0, 3826N×2651E, h10km, MD3.9, Error ellipse: s-maj=1.1km s-min=0.9km az=14.0
DDA 11 03:23:30.5, 3827N×2653E, h13km, Md3.9
THE 11 03:23:30.5, 3822N×2654E, h6km±1km, ML4.8/2, Error ellipse: s-maj=2.2km s-min=0.9km az=287.0
ATH 11 03:23:30.2, 3824N×2649E, h29km±2km, MD3.9/14, ML4.0
IDC 11 03:23:32.3±1.4, 3784N×2668E, h0km, mb3.6/2, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.6/4, MS3.0/7, Ms1 3.0/7, ms1mx2.7/30, Error ellipse: s-maj=26.7km s-min=21.6km az=32.0

ISC 11 03:23:30.9±0.4, 3825N±002×2652E±002, h9km±2km, n147, σ0s95/169, mb3.6/2, MS3.1/3, 8C-15D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.12**	**29**	*i* P	**Pg**	**03 23 33.7**	**-0.1**
URLA				*i* S	**Sg**	**03 23 36.1**	**+0.3**
CHOS	**Chios island**	**0.39**	**291**	P	**Pg**	**03 23 38.9**	**+0.3**
CHOS				S	**Sg**	**03 23 44.7**	**+1.0**
BLCB	**Balcova**	**0.43**	**72**	PG	**Pg**	**03 23 38.8**	**-0.6**
BLCB				*e*SG	**Sg**	**03 23 45.2**	**+0.1**
SMG	**Samos**	**0.60**	**155**	*e*PN	**Pg**	**03 23 42.5**	**0.0**
IZM	**Izmir**	**0.60**	**76**	PG	**Pg**	**03 23 41.9**	**-0.7**
IZM				*e*SG	**Sg**	**03 23 51.1**	**+0.6**
GCAM	**G?zelcaml?**	**0.79**	**134**	*i* P	**Pg**	**03 23 45.9**	**-0.2**
GCAM				*i* S	**Sg**	**03 23 57.1**	**+0.7**
PRK	**Paraskevi**	**1.01**	**349**	P	**Pg**	**03 23 49.3**	**-1.1**
PRK				S	**Sg**	**03 24 04.5**	**+0.9**
PRK	**Paraskevi**	**1.01**	**349**↑	*e*PN	**Pg**	**03 23 49.4**	**-1.0**
PRK				*e*SN	**Sg**	**03 24 04.2**	**+0.6**
AYVA	**Ayvalik**	**1.06**	**7**↑	*i* P	**Pg**	**03 23 50.5**	**-0.8**
AYVA				*i* S	**Sg**	**03 24 06.8**	**+1.6**
AKS	**Akhisar**	**1.19**	**58**	*e*PN	**Pn**	**03 23 52.8**	**-0.9**
AKS				*e*SN	**Sn**	**03 24 10.1**	**+0.1**
AKHS	**Akhisar**	**1.19**	**58**	*i* P	**Pn**	**03 23 52.6**	**-1.1**
AKHS				*i* S	**Sb**	**03 24 09.5**	**+0.3**
BODT	**Bodrum**	**1.34**	**152**	*e*PN	**Pn**	**03 23 55.0**	**-0.8**
MLSB	**Milas**	**1.38**	**133**	*e*PN	**Pn**	**03 23 55.5**	**-0.8**
BDRM	**Kayabasi**	**1.39**	**148**	*i* P	**Pn**	**03 23 55.6**	**-0.9**
BDRM				*i* S	**Sb**	**03 24 17.1**	**+2.2**
APE	**Apeiranthos**	**1.42**	**214**	P	**Pn**	**03 23 55.1**	**-1.7**
APE				S	**Sn**	**03 24 14.2**	**-1.4**

APE	**Apeiranthos**	**1.42**	**214**	*e*Pn	**Pn**	**03 23 55.4**	**-1.4**
APE				S	**Sn**	**03 24 14.2**	**-1.4**
KULA	**Kula-Manisa**	**1.70**	**80**	*e*PN	**Pn**	**03 24 00.2**	**-0.5**
BALY	**Balya**	**1.72**	**30**	*i* P	**Pn**	**03 24 01.9**	**+0.9**
BALY				*i* S	**Sg**	**03 24 27.3**	**+1.1**
DAT	**Datca**	**1.74**	**151**	*e*PN	**Pn**	**03 24 00.2**	**-1.1**
BALB	**Balikesir**	**1.75**	**37**	*e*PN	**Pn**	**03 24 00.6**	**-0.8**
YER	**Yerkesik**	**1.79**	**128**	*e*PN	**Pn**	**03 24 01.9**	**-0.1**
DEMI	**Demirci**	**1.89**	**65**	*i* P	**Pn**	**03 24 02.6**	**-0.8**
DEMI				*i* S	**Sn**	**03 24 30.4**	**+3.0**
LIA	**Limnos Island**	**1.95**	**328**	P	**Pn**	**03 24 03.5**	**-0.6**
LIA				S	**Sn**	**03 24 28.7**	**+0.1**
LIA	**Limnos Island**	**1.95**	**328**	*e*Pb	**Pn**	**03 24 03.6**	**-0.5**
LIA				S	**Sn**	**03 24 28.7**	**+0.1**
GADA	**Gvkgeada**	**2.00**	**346**	*e*PN	**Pn**	**03 24 03.0**	**-1.8**
DENT	**Denizli**	**2.05**	**103**	*e*PN	**Pn**	**03 24 05.6**	**+0.1**
PTL	**Penteli**	**2.10**	**265**	*e*PB	**Pn**	**03 24 05.5**	**-0.8**
LPK	**Lapseki**	**2.13**	**5**	*e*PN	**Pn**	**03 24 05.1**	**-1.5**
DST	**Dursunbey**	**2.13**	**50**	*e*PN	**Pn**	**03 24 05.9**	**-0.8**
TURN	**Turunc**	**2.15**	**129**	*i* P	**Pn**	**03 24 04.6**	**-2.4**
TURN				*i* S	**Sg**	**03 24 41.5**	**+1.4**
ATH	**Athens Observa**	**2.23**	**264**	*e*PB	**Pn**	**03 24 07.6**	**-0.4**
DALT	**Dalyan (Mudla)**	**2.24**	**131**	*e*PN	**Pn**	**03 24 08.6**	**+0.4**
EDC	**Edincik**	**2.34**	**26**	*e*PN	**Pn**	**03 24 09.1**	**-0.4**
KHL	**Karahalli**	**2.37**	**87**	*e*PN	**Pn**	**03 24 09.7**	**-0.2**
BNT	**Bandirma**	**2.37**	**27**	*e*PN	**Pn**	**03 24 09.1**	**-0.8**
ARG	**Arkhangelos**	**2.40**	**147**	*e*PN	**Pn**	**03 24 10.2**	**-0.2**
GDZ	**Gediz**	**2.46**	**69**	*i* P	**Pg**	**03 24 16.3**	**-1.8**
GDZ				*i* S	**Sg**	**03 24 49.4**	**-0.7**
KCT	**Karacabey**	**2.47**	**35**	*e*PN	**Pn**	**03 24 10.8**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.49**	**12**	*e*PN	**Pn**	**03 24 10.6**	**-0.9**
SART	**Tekirdag**	**2.49**	**12**	*i* P	**Pn**	**03 24 10.8**	**-0.8**
SART				*i* S	**Sg**	**03 24 50.5**	**-0.3**
MRMT	**Marmara Adasi**	**2.49**	**19**	*e*PN	**Pn**	**03 24 10.7**	**-0.9**
ENEZ	**Enez**	**2.50**	**354**	*e*PN	**Pn**	**03 24 11.1**	**-0.6**
GOLH	**Golhisar**	**2.62**	**112**	*i* P	**Pn**	**03 24 15.7**	**+2.3**
GOLH				*e*S	**Sg**	**03 24 55.1**	**+0.2**
ALN	**Alexandroupoli**	**2.67**	**352**	P	**Pn**	**03 24 13.2**	**-0.8**
ALN				S	**Sn**	**03 24 46.6**	**+0.1**
ULDT	**Uludag**	**2.77**	**46**	*i* P	**Pg**	**03 24 22.1**	**-2.0**
ULDT				*i* S	**Sg**	**03 24 59.0**	**-1.1**
NEO	**Neokhori**	**2.78**	**293**	*e*PN	**Pn**	**03 24 14.5**	**-1.1**
NEO	**Neokhori**	**2.78**	**293**	*e*Pn	**Pn**	**03 24 10.7**	**-4.9**
LKR	**Lokris**	**2.79**	**279**	P	**Pn**	**03 24 15.3**	**-0.4**
LKR	**Lokris**	**2.79**	**279**	*e*PN	**Pn**	**03 24 15.6**	**-0.1**
XOR	**Xorichti**	**2.83**	**294**	P	**Pn**	**03 24 15.3**	**-0.9**
TKR	**Tekirdag**	**2.85**	**16**	*e*PN	**Pn**	**03 24 16.2**	**-0.3**
OUR	**Ouranopolis**	**2.86**	**317**	P	**Pn**	**03 24 16.4**	**-0.3**
RDO	**Rodhopi**	**2.99**	**346**	*e*PN	**Pn**	**03 24 18.1**	**-0.3**
GEMT	**Gemlik**	**3.01**	**43**	*e*PN	**Pn**	**03 24 18.9**	**+0.2**
ELL	**Elmali**	**3.08**	**118**	*e*PN	**Pn**	**03 24 20.3**	**+0.6**
ISP	**Isparta**	**3.18**	**96**	*e*PN	**Pn**	**03 24 20.9**	**-0.2**
SHUT	**Suhut-Afyon**	**3.18**	**83**	*e*PN	**Pn

BVAR Borovoye Array 33.47 49 LR LR 03 44 43.1
comp=Z,30nm,20.0s,MS3.0,baz=60,slow=38

DJA 11 03:36:39,429S×10204E,h20km,MLv4.5/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**0.84**	**41**	P	Pb	03 36 56.2	+1.3
KSI	**Kapahiang**	**0.84**	**41**	S	Sb	03 37 05.9	+0.1
PDSI	**Padang**	**3.71**	**335**	P	Pn	03 37 35.8	+0.6
PDSI	**Padang**	**3.71**	**335**	S	Sn	03 38 20.3	+2.0
PPI	**Padang Panjang**	**4.15**	**337**	P	Pn	03 37 43.1	+1.9
PPI	**Padang Panjang**	**4.15**	**337**	S	Sn	03 38 33.4	+4.3

NIED ***11*** *04:04:00,4220N×14420E,h41km,Mw3.6 Best double couple: M₀2.94000×10¹⁴ NP1:φ=292.00000°,δ=76.00000°, λ=-113.00000°. NP2:φ=173.00000°,δ=27.00000°, λ=-32.00000°.*

ISCJB ***11*** *04:04:02.9±1.3,4221N±007×14424E±008,h62km±18km, Error ellipse: s-maj=13.6km s-min=7.2km az=149.1*

JMA ***11*** *04:04:02.8±0.1,4218N×14424E,h65km±2km,M3.6*

ISC 11 04:04:03.4±1.2,4219N±007×14425E±007,h56km±24km, n13,σ=0.45/21,3D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.77**	**337**	⇓P	**Pn**	**04 04 18.7**	**+0.4**
JCH	**Churui**	**0.78**	**303**	⇓P	**Pn**	**04 04 18.6**	**+0.2**
JCH				*eS*	**Sn**	**04 04 29.2**	**-0.1**
JEM	**Erimo**	**0.83**	**258**	P	**Pn**	**04 04 19.4**	**+0.4**
JAK	**Akkeshi**	**0.87**	**22**	P	**Pn**	**04 04 19.6**	**+0.1**
JAK				*eS*	**Sn**	**04 04 31.7**	**+0.3**
JNBK	**Urakawa-nobuka**	**1.11**	**275**	P	**Pn**	**04 04 22.5**	**-0.2**
JAR	**Ashorobuto**	**1.16**	**342**	⇓P	**Pn**	**04 04 23.3**	**-0.1**
JAR				*eS*	**Sn**	**04 04 38.2**	**0.0**
JNK	**Nakash**	**1.44**	**14**	P	**Pn**	**04 04 26.9**	**-0.2**
JNK				*eS*	**Sn**	**04 04 44.0**	**-0.9**
JBT2	**Biratori 2**	**1.51**	**293**	P	**Pn**	**04 04 27.5**	**-0.6**
JFR	**Furan**	**1.56**	**309**	P	**Pn**	**04 04 28.5**	**-0.2**
JFR				*eS*	**Sn**	**04 04 47.2**	**-0.7**
NEM2	**Nemuro 2**	**1.61**	**43**	P	**Pn**	**04 04 29.3**	**-0.1**
NEM2				*eS*	**Sn**	**04 04 48.3**	**-0.8**
JTKR	**Abashiri--Toko**	**1.80**	**352**	P	**Pn**	**04 04 32.6**	**+0.6**
JTKR				*eS*	**Sn**	**04 04 54.5**	**+0.9**
JRA	**Rausu**	**1.86**	**20**	P	**Pn**	**04 04 33.2**	**+0.4**
JRA				*eS*	**Sn**	**04 04 55.3**	**+0.1**
JMP	**Maruseppu**	**1.93**	**341**	P	**Pn**	**04 04 34.1**	**+0.3**

PRE 11 04:05:21.3±1.4,2098S×3351E,h5km,ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.51**	**247**	*eP*	Pn	04 06 18.8	+2.2
MSNA				*eS*	Sn	04 06 59.3	+0.7
MSNA				AML	AML	04 07 11.1	
	comp=Z,83nm,0.5s						
POGA	**Pongola**	**6.60**	**195**	*eP*	Pn	04 06 59.1	+0.1
POGA				*eS*	Sn	04 08 10.9	-3.6
POGA				AML	AML	04 09 05.4	
	comp=Z,12nm,0.5s						
PRYS	**Parys**	**8.16**	**222**	*eP*	Pn	04 07 21.4	+1.0
PRYS				*eS*	Sn	04 08 50.4	-2.7
PRYS				AML	AML	04 09 57.5	
	comp=Z,11nm,0.5s						
LBTB	**Lobatse**	**8.32**	**240**	*eP*	Pn	04 07 23.1	+0.5
LBTB				*eS*	Sn	04 08 52.8	-4.2
LBTB				AML	AML	04 09 42.9	
	comp=Z,13nm,0.7s						
BOSA	**Boshof**	**10.67**	**223**	*eS*	Sn	04 09 48.7	-6.1
BOSA				AML	AML	04 10 59.0	
	comp=Z,6.5nm,0.8s						

IDC ***11*** *04:08:28.6±1.7,367S×10072E,h0km,mb3.9/9,mb1 3.9/9, mb1mx3.8/20,mbtmp3.9/9,Error ellipse: s-maj=67.5km s-min=16.4km az=57.0*

ISCJB ***11*** *04:08:29.5±2.7,39S±0.1×1002E±0.1,h34km±20km, mb4.0/12,Error ellipse: s-maj=31.1km s-min=10.7km az=41.0*

NEIC ***11*** *04:08:33.8±1.3,361S×10083E,h35km,mb4.4/3,Error ellipse: s-maj=60.0km s-min=10.1km az=55.0*

DJA ***11*** *04:08:35,346S×10050E,h30km,MLv3.9/3*

ISC 11 04:08:31.0±7.9,38S±02×1004E±03,h25km±51km,n19, σ=1.9/19,mb4.0/12,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**2.21**	**85**	P	**Pn**	**04 09 08.2**	**+2.1**
KSI	**Kapahiang**	**2.21**	**85**	S	**Sn**	**04 09 35.9**	**+3.3**
PDSI	**Padang**	**2.91**	**1**	P	**Pn**	**04 09 14.1**	**-1.7**
PDSI	**Padang**	**2.91**	**1**	S	**Sn**	**04 09 44.5**	**-5.6**
PPI	**Padang Panjang**	**3.37**	**0**	P	**Pn**	**04 09 22.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**22.21**	**356**	P	**P**	**04 13 25.4**	**-0.3**
	1.5nm,0.6s,mb3.6,baz=192,slow=8.8,SNR=6.0						
WRA	**Warramunga Arr**	**36.75**	**119**	P	**P**	**04 15 35.1**	**-1.6**
	0.5nm,0.3s,mb3.8,baz=304,slow=9.1,SNR=8.6						
WRAB	**Tennant Creek**	**36.76**	**119**	*eP*	**P**	**04 15 35.5**	**-1.3**
	2.4nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**37.88**	**124**	P	**P**	**04 15 45.2**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=295,slow=8.2,SNR=7.0						
STKA	**Stephens Creek**	**47.65**	**131**	P	**P**	**04 17 07.2**	**+1.8**
	0.7nm,0.7s,mb3.8,baz=318,slow=12,SNR=2.0						
KSRS	**Korea Array**	**48.41**	**29**	P	**P**	**04 17 10.1**	**-1.1**
	3.0nm,0.9s,mb4.3,baz=91,slow=25,SNR=3.7						
SONM	**Songino Array**	**51.73**	**5**	P	**P**	**04 17 36.3**	**+0.1**
	1.5nm,0.6s,mb4.1,baz=186,slow=10,SNR=5.7						
MKAR	**Makanchi Array**	**52.90**	**344**	P	**P**	**04 17 46.1**	**+1.2**
	2.0nm,0.8s,mb4.1,baz=160,slow=7.6,SNR=6.6						
KURK	**Kurchatov**	**57.48**	**344**	P	**P**	**04 18 18.1**	**+0.3**
	baz=165,slow=6.5						
KURK	**Kurchatov**	**57.48**	**344**	*eP*	**P**	**04 18 18.6**	**+0.8**
	3.9nm,1.0s,mb4.4						
ZALV	**Zalesovo Beam**	**59.04**	**349**	P	**P**	**04 18 29.1**	**+0.4**
	2.3nm,0.8s,mb4.3,baz=172,slow=4.0,SNR=10						
BVAR	**Borovoye Array**	**62.04**	**340**	P	**P**	**04 18 49.6**	**+0.4**
	1.0nm,0.7s,mb4.1,baz=116,slow=6.8,SNR=4.0						
BRVK	**Borovoye**	**62.10**	**340**	*eP*	**P**	**04 18 49.7**	**+0.1**
	2.9nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**145.90**	**39**	PKPbc	PKPbc	04 28 09.7	+0.7
	1.1nm,0.4s,baz=258,slow=0.8,SNR=29						

IDC ***11*** *04:12:07.3±0.8,373S×10081E,h0km,mb4.5/16, mb1 4.7/17,mb1mx4.5/22,mbtmp4.6/17,ML4.7/1,MS3.6/4, Ms1 3.6/4,ms1mx3.0/32,Error ellipse: s-maj=29.7km s-min=10.3km az=46.0*

BJI ***11*** *04:12:09.4,399S×10081E,h39km,mB5.0,mb4.8,Ms4.5, Msz4.3*

ISCJB ***11*** *04:12:09.4±0.4,377S±0.06×10062E±0.05,h27km, mb4.8/61,MS4.1/16,Error ellipse: s-maj=10.1km s-min=4.9km az=44.0*

MOS ***11*** *04:12:10.0±1.1,373S×10068E,h33km,mb5.1/21, MS4.2/4,Error ellipse: s-maj=16.6km s-min=6.9km az=102.6*

NEIC ***11*** *04:12:11.5±0.4,375S×10076E,mb4.9/13,Error ellipse: s-maj=14.6km s-min=5.3km az=47.0*

DJA ***11*** *04:12:15,341S×10074E,h30km,MLv4.8/10*

ISC 11 04:12:11.7±0.4,379S±005×10064E±005,h29km, h29km±2.0km:pP-P,n125,σ=1.8/18/134,mb4.8/61,MS4.1/16, 5C-1D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.95**	**86**	P	**Pn**	**04 12 42.1**	**-0.7**
PDSI	**Padang**	**2.86**	**356**	P	**Pn**	**04 12 53.6**	**-1.8**
PPI	**Padang Panjang**	**3.32**	**356**	P	**Pn**	**04 13 00.3**	**-1.4**
KLI	**Kotabumi**	**4.33**	**104**	P	**Pn**	**04 13 20.2**	**+4.5**
PPBI	**Pangkal Pinang**	**5.72**	**74**	P	**Pn**	**04 13 37.0**	**+2.3**
PPBI	**Pangkal Pinang**	**5.72**	**74**	P	**Pn**	**04 13 34.7**	**0.0**
	35nm,1.1s,4μm0.3nm						
GSI	**Gunungsitoli**	**5.91**	**329**	P	**Pn**	**04 13 38.4**	**+1.0**
SBJI	**Serang**	**5.94**	**113**	P	**Pn**	**04 13 46.6**	**+8.9**
	189nm,1.1s,4μm0.7nm						
TRSI	**Tarutung**	**6.01**	**344**	P	**Sn**	**04 14 40.9**	**-5.8**
	965nm,0.5s,4.4nm						
DBJI	**Dramaga**	**6.67**	**115**	P	**Pn**	**04 13 48.9**	**+1.1**
	91nm,1.2s,0.6nm						
CBJI	**Citeko**	**6.71**	**113**	P	**Pn**	**04 13 55.4**	**+7.0**
CBJI	**Citeko**	**6.71**	**113**	P	**Pn**	**04 13 52.2**	**+3.8**
	378nm,0.8s,2.1nm						
LEM	**Lembang**	**7.57**	**114**	P	**Pn**	**04 14 03.0**	**+2.8**
	115nm,0.8s,0.4nm						
LEM	**Lembang**	**7.57**	**114**	P	**Pn**	**04 14 02.5**	**+2.3**
	87nm,0.8s,0.4nm						
BJII	**Banjamegara**	**9.69**	**112**	P	**Pn**	**04 14 34.5**	**+5.3**
SJI	**Sawahan**	**11.74**	**110**	P	**Pn**	**04 15 06.4**	**+9.1**
SJI	**Sawahan**	**11.74**	**110**	P	**Pn**	**04 15 02.1**	**+4.8**
BBKI	**Banjar Baru**	**14.17**	**89**	P	**Pn**	**04 15 37.5**	**+6.9**
	277nm,0.9s,2μm						
BBKI	**Banjar Baru**	**14.17**	**89**	P	**Pn**	**04 15 37.5**	**+6.9**
	232nm,0.8s,2μm						
KAPI	**Kappang**	**19.09**	**94**	P	**Pn**	**04 16 30.0**	**-3.2**
	2.3nm,0.3s,baz=286,slow=12,SNR=8.6						
KAPI	**Kappang**	**19.09**	**94**	*eP*	**Pn**	**04 16 31.0**	**-2.2**
KAPI	**Kappang**	**19.09**	**94**	P	**Pn**	**04 16 31.0**	**-2.2**
	35nm,1.4s						
KAPI	**Kappang**	**19.09**	**94**	P	**Pn**	**04 16 31.0**	**-2.2**
	35nm,1.4s						
PCI	**Palu**	**19.39**	**82**	P	**Pn**	**04 16 40.1**	**+3.3**
	74nm,1.5s						
CMAR	**Chiang Mai Arr**	**22.17**	**356**	P	**P**	**04 17 03.5**	**-2.0**
	8.6nm,0.7s,mb4.3,baz=185,slow=9.6,SNR=20						
CMAR					LR	04 26 24.6	
	comp=Z,134nm,20.4s,MS3.4,baz=175,slow=39						
CHTO	**Chiang Mai**	**22.52**	**356**	*eP*	**P**	**04 17 09.8**	**+0.6**
	9.6nm,0.9s,mb4.2						
CHTO	**Chiang Mai**	**22.52**	**356**	*eP*	**P**	**04 17 09.8**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI	**Kunming**	**28.81**	**4**	P	**P**	**04 18 07.9**	**+0.5**
KMI				AP	pP	04 18 18.8	+3.0
KMI				XP	sP	04 18 25.1	+5.8
KMI				PP	PP	04 19 03.8	-9.0
KMI				S	**S**	**04 22 58.4**	**+2.9**
KMI				XS	sS	04 23 15.0	+5.5
KMI				SS	SS	04 24 27.0	-31
KMI				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.6						
KMI				AMB	AMB		
	comp=Z,51nm,3.6s						
KMI				LR	LR		
	comp=N,357nm,14.4s,MS4.2						
KMI				LR	LR		
	comp=E,252nm,15.0s,MS4.2						
KMI				LR	LR		
	comp=Z,414nm,13.2s,MS4.2						
KMI	**Kunming**	**28.81**	**4**	P	**P**	**04 18 07.9**	**+0.5**
	comp=Z,9.0nm,0.7s,mb4.6						
KMI				pP	pP	04 18 18.8	+3.0
KMI				sP	sP	04 18 25.1	+5.8
KMI				PP	PP	04 19 03.8	-9.0
KMI				PPP		04 19 17.9	
KMI				S	**S**	**04 22 58.4**	**+2.9**
KMI				sS	sS	04 23 15.0	+5.5
KMI				SS	SS	04 24 27.0	-31
KMI				SSS		04 24 47.0	
KMI				LR	LR		
	comp=Z,410nm,13.2s,MS4.2						
KMI	**Kunming**	**28.81**	**4**	P	**P**	**04 18 07.9**	**+0.5**
KMI				*PP	pP	04 18 18.8	+3.0
KMI				*SP	sP	04 18 25.1	+5.8
KMI						04 19 03.8	
KMI				PPP		04 19 17.9	
KMI				S	**S**	**04 22 58.4**	**+2.9**
KMI				*SS	sS	04 23 15.0	+5.5
KMI				SS	SS	04 24 27.0	-31
KMI				SSS		04 24 47.0	
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
KMI				MLR	MLR		
	comp=Z,410nm,13.2s,MS4.2						
SHL	**Shillong**	**30.39**	**344**	*eP*	**P**	**04 18 21.5**	**+0.1**
GYA	**Guiyang**	**30.63**	**11**	P	**P**	**04 18 25.3**	**+1.8**
GYA				AP	pP	04 18 30.5	-1.4
GYA				XP	sP	04 18 40.6	+5.2
GYA				PP	PP	04 19 22.0	-11
GYA				PCP	PcP	04 21 23.2	+1.6
GYA				S	**S**	**04 23 26.8**	**+2.7**
GYA				XS	sS	04 23 42.7	+4.7
GYA				SCP	ScP	04 25 01.5	-0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,110nm,6.9s						
GYA				LR	LR		
	comp=N,550nm,17.7s,MS4.5						
GYA				LR	LR		
	comp=E,740nm,16.0s,MS4.5						
GYA				LR	LR		
	comp=Z,360nm,14.4s,MS4.2						
NWAO	**Narrogin (SRO)**	**32.88**	**154**	LR	LR	04 29 42.1	
	comp=Z,176nm,19.5s,MS3.8,baz=102,slow=32						
ODAN	**Odare**	**33.05**	**338**	*eP*	**P**	**04 18 46.1**	**+1.3**
	comp=Z,80nm,1.0s,mb5.6						
TAPN	**Taplejung**	**33.38**	**339**	*eP*	**P**	**04 18 49.4**	**+1.8**
	comp=Z,145nm,0.9s,mb5.9						
RAMN	**Ramite**	**33.44**	**337**	*eP*	**P**	**04 18 49.9**	**+1.8**
	comp=Z,56nm,1.2s,mb5.4						
JIRN	**Jiri**	**34.23**	**337**	*eP*	**P**	**04 18 56.7**	**+1.6**
	comp=Z,37nm,0.7s,mb5.4						
PKI	**Pulchoki**	**34.47**	**336**	*eP*	**P**	**04 18 58.1**	**+1.0**
PKIN	**Phulchoki**	**34.48**	**336**	*eP*	**P**	**04 18 57.9**	**+0.7**
GUN	**Gumba**	**34.58**	**337**	*eP*	**P**	**04 18 59.3**	**+1.2**
	comp=Z,49nm,0.7s,mb5.5						
DMN	**Daman**	**34.62**	**335**	*eP*	**P**	**04 18 59.8**	**+1.3**
	comp=Z,204nm,1.6s,mb5.8						
CD2	**Chengdu**	**34.63**	**5**	*eP*	**P**	**04 18 57.5**	**-1.0**
CD2				AP	pP	04 19 07.5	+0.5
CD2				XP	sP	04 19 11.9	+1.4
CD2				PP	PP	04 20 15.8	-1.5
CD2				S	**S**	**04 24 25.8**	**-0.5**
CD2				XS	sS	04 24 42.1	+1.8
CD2				SS	SS	04 26 40.3	-17
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
CD2				AMB	AMB		
	comp=Z,100nm,4.2s						
CD2				LR	LR		
	comp=N,420nm,13.0s,MS4.6						
CD2				LR	LR		
	comp=E,750nm,15.4s,MS4.6						
CD2				LR	LR		
	comp=Z,350nm,13.0s,MS4.3						
KKN	**Kakani**	**34.71**	**336**	*eP*	**P**	**04 19 00.2**	**+1.0**
	comp=Z,30nm,0.8s,mb5.3						
KKN	**Kakani**	**34.71**	**336**	*eP*	**P**	**04 19 00.2**	**+1.0**
KKN				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
GKN	**Gorkha**	**35.17**	**335**	*eP*	**P**	**04 19 03.9**	**+0.8**
	comp=Z,51nm,1.1s,mb5.4						
KOLN	**Koldanda**	**35.42**	**333**	*eP*	**P**	**04 19 06.5**	**+1.2**
	comp=Z,24nm,0.8s,mb5.2						
DANN	**Dangsing**	**35.85**	**334**	*eP*	**P**	**04 19 10.0**	**+1.0**
	comp=Z,68nm,1.0s,mb5.5						
PYUN	**Piuthan**	**35.97**	**333**	*eP*	**P**	**04 19 11.1**	**+1.0**
	comp=Z,22nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**36.56**	**119**	P	**P**	**04 19 14.5**	**-0.7**
	comp=Z,4.7nm,0.6s,mb4.5,baz=305,slow=9.2,SNR=24						
WRA				S	**S**	**04 24 54.1**	**-2.1**
	comp=Z,1.0nm,0.9s,baz=289,slow=16,SNR=4.8						
WRAB	**Tennant Creek**	**36.56**	**119**	*eP*	**P**	**04 19 14.8**	**-0.5**
	comp=Z,6.6nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**36.56**	**119**	*eP*	**P**	**04 19 14.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
WHN	**Wuhan**	**36.56**	**20**	P	**P**	**04 19 15.1**	**0.0**
WHN				*eS*	**S**	**04 24 55.3**	**-0.7**
WHN				LR	LR		
	comp=Z,1μm,14.5s,MS4.8						
WB2	**Warramunga Arr**	**36.57**	**119**	*eP*	**P**	**04 19 14.9**	**-0.4**
ASAR	**Alice Springs**	**37.70**	**125**	P	**P**	**04 19 24.9**	**0.0**
	comp=Z,1.8nm,0.3s,mb4.2,baz=296,slow=8.0,SNR=26						
ASAR				PcP	PcP	04 21 42.8	+0.9
	comp=Z,0.4nm,0.4s,baz=292,slow=2.7,SNR=4.9						
ASAR				S	**S**	**04 25 15.7**	**+2.1**
	comp=Z,1.3nm,1.0s,baz=300,slow=15,SNR=6.2						
XAN	**Xi'an**	**38.42**	**11**	P	**P**	**04 19 29.5**	**-1.3**
XAN				AP	pP	04 19 36.8	-2.6
XAN				PP	PP	04 21 01.4	+2.3
XAN				S	**S**	**04 25 20.1**	**-4.0**
XAN				AMB	AMB		
	comp=Z,38nm,0.9s,mb5.1						
XAN				AMB	AMB		
	comp=Z,84nm,5.7s						
XAN				LR	LR		
	comp=N,136nm,13.6s,MS4.2						
XAN				LR	LR		
	comp=E,259nm,18.3s,MS4.2						
XAN				LR	LR		
	comp=Z,349nm,15.2s,MS4.3						
NJ2	**Nanjing**	**39.62**	**25**	*eP*	**P**	**04 19 42.0**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
LZH	**Lanzhou**	**39.78**	**4**	*eP*	**P**	**04 19 41.5**	**-0.6**
LZH				AP	pP	04 19 48.8	-1.9
LZH				XP	sP	04 19 52.5	-1.7
LZH				PP	PP	04 21 15.0	+1.1
LZH				*eS*	**S**	**04 25 43.2**	**-1.2**
LZH				SS	SS	04 28 32.0	-9.2
LZH				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
LZH				AMB	AMB		
	comp=Z,101nm,4.0s						
LZH				LR	LR		
	comp=E,310nm,14.3s						
LZH				LR	LR		
	comp=Z,577nm,15.4s,MS4.5						
LZH	**Lanzhou**	**39.78**	**4**	*eP*	**P**	**04 19 41.5**	**-0.6**
	comp=Z,50nm,1.1s,mb5.2						
LZH				pP	pP	04 19 48.8	-1.9
LZH				sP	sP	04 19 52.5	-1.7
LZH				PP	PP	04 21 15.0	+1.1
LZH				*eS	**S**	**04 25 43.2**	**-1.2**
LZH				sS	sS	04 25 56.0	-2.6
LZH				SS	SS	04 28 32.0	-9.2
LZH				LR	LR		
	comp=Z,580nm,15.4s,MS4.5						
LZH	**Lanzhou**	**39.78**	**4**	*eP*	**P**	**04 19 41.5**	**-0.6**
LZH				*SP	sP	04 19 52.5	-1.7
LZH						04 21 15.0	
LZH				*eS	**S**	**04 25 43.2**	**-1.2**
LZH				*SS	sS	04 25 56.0	-2.6
LZH				SS	SS	04 28 32.0	-9.2
LZH				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.2						
LZH				MLR	MLR		
	comp=Z,580nm,15.4s,MS4.5						
GTA	**Gaotai**	**42.99**	**359**	⇑P	**P**	**04 20 08.6**	**+0.2**
GTA				AP	pP	04 20 16.5	-0.5
GTA				XP	sP	04 20 19.7	-0.8
GTA				PP	PP	04 21 51.1	+2.5
GTA				S	**S**	**04 26 28.7**	**-3.3**
GTA				SS	SS	04 29 34.3	-10
GTA				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,53nm,5.7s						
GTA				LR	LR		
	comp=N,193nm,15.9s,MS4.2						
GTA				LR	LR		
	comp=E,179nm,16.2s,MS4.2						
GTA				LR	LR		
	comp=Z,207nm,14.4s,MS4.2						
HHC	**Hu-ho-hao-te**	**45.53**	**12**	*eP*	**P**	**04 20 29.7**	**+1.0**
HHC				AP	pP	04 20 37.7	+0.3
HHC				XP	sP	04 20 39.2	-1.7
HHC				PP	PP	04 22 16.7	+1.0
HHC				PCS	PcS	04 26 00.3	-0.8
HHC				S	**S**	**04 27 11.7**	**+2.7**
HHC				XS	sS	04 27 23.6	+0.3
HHC				SS	SS	04 30 26.7	-6.7
HHC				AMB	AMB		
	comp=Z,19nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,131nm,6.1s						
HHC				LR	LR		
	comp=N,236nm,14.3s,MS4.4						
HHC				LR	LR		
	comp=E,228nm,15.5s,MS4.4						
HHC				LR	LR		
	comp=Z,237nm,15.5s,MS4.2						
BJI	**Beijing**	**45.89**	**17**	P	**P**	**04 20 31.6**	**0.0**
BJI				PP	PP	04 22 21.4	+1.9
BJI				S	**S**	**04 27 16.9**	**+2.8**
BJI				SS	SS	04 30 34.4	-4.9
BJI				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.1						
BJI				LR	LR		
	comp=N,331nm,15.3s,MS4.5						
BJI				LR	LR		
	comp=E,126nm,12.2s,MS4.5						
BJI				LR	LR		
	comp=Z,196nm,16.9s,MS4.1						
BJI	**Beijing**	**45.89**	**17**	P	**P**	**04 20 31.6**	**0.0**
	comp=Z,17nm,0.7s,mb5.1						
BJI				PP	PP	04 22 21.4	+1.9
BJI				S	**S**	**04 27 16.9**	**+2.8**
BJI				SS	SS	04 30 34.4	-4.9
BJI				LR	LR		
	comp=Z,200nm,16.9s,MS4.1						
BJI	**Beijing**	**45.89**	**17**	P	**P**	**04 20 31.6**	**0.0**
BJI						04 22 21.4	
BJI				S	**S**	**04 27 16.9**	**+2.8**
BJI				SS	SS	04 30 34.4	-4.9
BJI				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
BJI				MLR	MLR		
	comp=Z,200nm,16.9s,MS4.1						
STKA	**Stephens Creek**	**47.49**	**131**	P	**P**	**04 20 45.5**	**+1.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=297,slow=7.9,SNR=5.9						
STKA	**Stephens Creek**	**47.49**	**131**	*eP*	**P**	**04 20 45.5**	**+1.1**
	comp=Z,7.0nm,0.9s,mb4.6						
KSRS	**Korea Array**	**48.24**	**29**	P	**P**	**04 20 49.5**	**-0.4**
	comp=Z,15nm,1.0s,mb5.0,baz=217,slow=8.6,SNR=19						
WMQ	**Urumqi**	**48.80**	**348**	P	**P**	**04 20 56.0**	**+1.8**
WMQ				AP	pP	04 21 04.0	+1.1
WMQ				XP	sP	04 21 07.0	+0.6
WMQ				PP	PP	04 22 49.0	+1.3
WMQ				S	**S**	**04 27 56.0**	**+0.5**
WMQ				SCS	ScS	04 30 44.0	-0.6
WMQ				SS	SS	04 31 23.0	-3.5
WMQ				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,152nm,4.0s						
WMQ				LR	LR		
	comp=N,89nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=E,98nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,79nm,15.0s,MS3.8						
CBIJ	**Chichi jima**	**50.50**	**50**	LR	LR	04 39 50.8	
	comp=Z,20nm,21.7s,MS3.1,baz=324,slow=33						
SONM	**Songino Array**	**51.65**	**5**	P	**P**	**04 21 16.6**	**+0.9**
	comp=Z,11nm,0.8s,mb4.9,baz=187,slow=9.1,SNR=38						
SONM				PcP	PcP	04 22 29.8	+0.7
	comp=Z,3.2nm,0.9s,baz=193,slow=3.8,SNR=2.5						
TKM2	**Tokmak 2**	**51.72**	**337**	*eP*	**P**	**04 21 16.6**	**+0.4**
	comp=Z,14nm,0.9s,mb4.9						
TKM2	**Tokmak 2**	**51.72**	**337**	*eP*	**P**	**04 21 16.6**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
ULN

MK31	**Makanchi Array**	**52.91**	**344**	*e*P		**P**		**04 21 25.8**	**+0.8**
MKAR	**Makanchi Array**	**52.91**	**344**	P		**P**		**04 21 25.4**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9,baz=148,slow=8.0,SNR=38								
MAT	**Matsushiro**	**53.27**	**38**	P		**P**		**04 21 26.1**	**-1.8**
MJAR	**Matsushiro Arr**	**53.27**	**38**	P		**P**		**04 21 26.7**	**-1.2**
	comp=Z,7.7nm,0.9s,mb4.7,baz=219,slow=7.9,SNR=15								
ZAK	**Zakamensk**	**54.00**	**2**	*e*P		**P**		**04 21 32.4**	**-0.6**
ZAK				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.2								
TLY	**Talaya**	**55.31**	**2**	*e*P		**P**		**04 21 42.5**	**0.0**
TLY				*e*				04 23 44.0	
TLY				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.6								
TLY				MLR	MLR				
	comp=Z,194nm,16.0s,MS4.3								
HIA	**Hailar**	**55.38**	**15**	*e*P		**P**		**04 21 40.4**	**-2.6**
KURK	**Kurchatov**	**57.49**	**344**	P		**P**		**04 21 57.7**	**-0.4**
	baz=167,slow=7.0								
KURK	**Kurchatov**	**57.49**	**344**	*e*P		**P**		**04 21 57.9**	**-0.2**
	comp=Z,17nm,0.9s,mb5.1								
KURK				*e*pP		pP		04 22 06.5	-0.4
KURK	**Kurchatov**	**57.49**	**344**	*e*P		**P**		**04 21 57.9**	**-0.1**
KURK				*e**PP		pP		04 22 06.5	-0.4
KURK				pmax	pmax				
	comp=Z,17nm,0.9s,mb5.1								
ZAA0	**Zalesovo Array**	**59.03**	**349**	*e*P		**P**		**04 22 08.7**	**-0.1**
ZALV	**Zalesovo Beam**	**59.03**	**349**	P		**P**		**04 22 08.6**	**-0.1**
	comp=Z,18nm,0.8s,mb5.1,baz=172,slow=5.5,SNR=65								
KLR	**Kul'dur**	**59.30**	**23**	*e*P		**P**		**04 22 05.7**	**-5.0**
NVS	**Novosibirsk**	**60.18**	**348**	*e*P		**P**		**04 22 14.6**	**-2.1**
NVS				*e*S		**S**		**04 30 22.7**	**-5.6**
NVS				pmax	pmax				
	comp=N,6.0nm,1.2s								
NVS				pmax	pmax				
	comp=E,5.0nm,1.2s								
NVS				pmax	pmax				
	comp=Z,8.0nm,1.2s,mb4.6								
NVS				smax					
	comp=N,12nm,2.1s								
NVS				smax					
	comp=E,19nm,3.3s								
VOSK	**Vostochnaya**	**61.62**	**340**	P		**P**		**04 22 25.2**	**-1.3**
VOSK				pmax	pmax				
	comp=Z,45nm,1.9s,mb5.3								
BVA0	**Borovoye Array**	**62.07**	**340**	P		**P**		**04 22 28.2**	**-1.3**
BVA0				pmax	pmax				
	comp=Z,1.0nm,0.7s,mb4.0								
BVAR	**Borovoye Array**	**62.07**	**340**	P		**P**		**04 22 29.0**	**-0.5**
	comp=Z,6.5nm,0.7s,mb4.9,baz=144,slow=8.5,SNR=31								
BRVK	**Borovoye**	**62.13**	**340**	*e*P		**P**		**04 22 29.6**	**-0.4**
	comp=Z,12nm,0.7s,mb5.1								
BRVK	**Borovoye**	**62.13**	**340**	*e*P		**P**		**04 22 29.6**	**-0.3**
BRVK				pmax	pmax				
	comp=Z,12nm,0.7s,mb5.1								
BOD	**Bodaibo**	**62.34**	**8**	*e*P		**P**		**04 22 30.8**	**-0.4**
BOD				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.7								
YSS	**Yuzh-Sakhalins**	**62.66**	**31**	*e*P		**P**		**04 22 33.3**	**-0.2**
	comp=Z,22nm,0.9s,mb5.3								
YSS				*e*pP		pP		04 22 41.1	-1.4
YSS	**Yuzh-Sakhalins**	**62.66**	**31⇑**	*e*P		**P**		**04 22 33.2**	**-0.4**
YSS				pmax	pmax				
	comp=Z,25nm,1.0s,mb5.3								
AB31	**Akbulak array**	**63.51**	**331**	P		**P**		**04 22 38.2**	**-1.0**
AB31				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.9								
AKTK	**Aktyubinsk**	**65.22**	**332**	P		**P**		**04 22 49.8**	**-0.5**
AKTO	**Aktyubinsk**	**65.22**	**332**	P		**P**		**04 22 49.8**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.1,baz=114,slow=10,SNR=3.9								
SVE	**Sverdlovsk**	**68.57**	**338⇑**	*e*P		**P**		**04 23 11.9**	**+0.4**
SVE				*e*				04 23 35.0	
SVE				*e*S		S		04 32 09.1	-2.8
SVE				pmax	pmax				
	comp=Z,15nm,0.9s,mb4.9								
ARU	**Arti**	**69.09**	**337**	*d*	*i*P	**P**		**04 23 13.8**	**-1.0**
ARU				*e*S		S		04 32 17.6	-0.5
ARU				*e*SS		SS		04 36 38.0	-6.7
ARU				pmax	pmax				
	comp=Z,13nm,2.5s,mb4.4								
YAK	**Yakutsk**	**69.30**	**14**	*e*P		**P**		**04 23 13.5**	**-2.5**
YAK				pmax	pmax				
	comp=Z,17nm,1.2s,mb4.8								
PETK	**Petropavlovsk-**	**74.05**	**32**	P		**P**		**04 23 43.5**	**-1.2**
	comp=Z,4.4nm,0.8s,mb4.4,baz=258,slow=6.6,SNR=2.5								
ANN	**Anapa**	**74.09**	**319**	*e*P		**P**		**04 23 42.9**	**-2.3**
VRHR	**Novokhopersk**	**74.16**	**326**	*e*P		**P**		**04 23 44.7**	**-0.7**
VRHR				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9								
VRHR				pmax	pmax				
	comp=N,10.0nm,0.5s								
VRHR				pmax	pmax				
	comp=E,10.0nm,0.5s								
BRTR	**Keskin Array B**	**75.00**	**313**	P		**P**		**04 23 50.3**	**-0.3**
	comp=E,2.7nm,0.8s,mb4.2								
BOSA	**Boshof**	**75.37**	**242**	LR		LR		04 50 45.0	
	comp=E,91nm,20.8s,MS4.1,baz=158,slow=31								
VSR	**Storozhevoye**	**75.60**	**325**	*e*P		**P**		**04 23 52.1**	**-1.7**
VSR				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5								
VSR				pmax	pmax				
	comp=N,5.0nm,0.6s								
VSR				pmax	pmax				
	comp=E,5.0nm,0.5s								
TIXI	**Tiksi**	**77.51**	**9⇑**	*e*P		**P**		**04 24 02.8**	**-1.4**
TIXI				pmax	pmax				
	comp=Z,8.0nm,1.3s,mb4.5								
OBN	**Obninsk**	**78.64**	**328**	*e*P		**P**		**04 24 10.1**	**-0.7**
OBN				pmax	pmax				
	comp=Z,9.0nm,1.2s,mb4.6								
AKASG	**Malin Array Be**	**81.28**	**322**	P		**P**		**04 24 24.6**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=98,slow=4.6,SNR=3.3								
ARCES	**ARCESS Array B**	**88.36**	**340**	P		**P**		**04 25 01.0**	**+0.6**
	comp=Z,7.3nm,0.9s,mb4.9,baz=48,slow=3.6,SNR=5.5								
SNAA	**Sanae**	**90.65**	**198⇑**	*e*P		**P**		**04 25 10.5**	**-0.6**
GERES	**GERESS Array B**	**90.81**	**319**	P		**P**		**04 25 12.5**	**+0.2**
	comp=Z,1.0nm,0.7s,mb4.3,baz=104,slow=5.6,SNR=10								
NVAR	**Mina Array Bea**	**130.55**	**41**	PKP		PKPdf		04 31 21.4	+1.3
	comp=Z,0.4nm,0.7s,baz=271,slow=1.9,SNR=4.4								
NVAR	**Mina Array Bea**	**130.55**	**41**	PKP		PKPdf		04 31 21.4	+1.3
DUG	**Dugway**	**132.83**	**35**	*e*PKPdf		PKPdf		04 31 25.0	+0.6
WCI	**Wyandotte Cave**	**145.14**	**10**	*e*PKPbc		PKPbc		04 31 45.2	-1.2
TXAR	**Lajitas Array**	**145.69**	**40**	PKPbc		PKPbc		04 31 49.5	+1.0
	comp=Z,9.0nm,0.6s,baz=270,slow=0.6,SNR=119								
MIAR	**Mount Ida**	**146.67**	**22**	*e*PKPbc		PKPbc		04 31 51.0	-0.2
WVT	**Waverly**	**146.88**	**13**	*e*PKPbc		PKPbc		04 31 51.3	-0.4
JCT	**Junction City**	**147.17**	**34**	*e*PKPbc		PKPbc		04 31 52.4	-0.4
JCT				*e*pPKPdf		pPKPdf		04 32 01.9	+1.7

IDC ***11*** *04:14:03.2±2.0, 366S×10072E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.0/21, mbtmp4.1/8, ML4.2/1, MS3.7/6, Ms1 3.7/6, ms1mx3.1/32, Error ellipse: s-maj=68.7km s-min=20.5km az=50.0*

ISCJB ***11*** *04:14:05.6±1.2, 37S±02×1007E±02, h33km, mb4.2/13, MS3.7/6, Error ellipse: s-maj=38.8km s-min=11.3km az=136.9*

NEIC ***11*** *04:14:07.9±0.8, 375S×10069E, h35km, mb4.3/6, Error ellipse: s-maj=26.9km s-min=7.8km az=48.0*

ISC 11 04:14:08.1±1.2, 37S±02×1008E±02, h35km, n22, σ0s49/19, mb4.2/13, MS3.7/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.99**	**95**	P		P	**Pn**	**04 18 27.2**	**-0.5**
	0.7nm,0.3s,baz=281,slow=15,SNR=3.3								
KAPI	**Kappang**	**18.99**	**95**	P		P	**Pn**	**04 18 27.2**	**-0.5**
CHTO	**Chiang Mai**	**22.48**	**356**	*e*P		**P**		**04 19 04.7**	**+0.3**
	4.1nm,0.7s,mb4.0								
WRA	**Warramunga Arr**	**36.49**	**119**	P		**P**		**04 21 10.5**	**+0.3**
	1.2nm,0.6s,mb4.0,baz=304,slow=9.4,SNR=4.7								
WRA				LR		LR		04 36 16.3	
	comp=Z,152nm,21.1s,MS3.8,baz=295,slow=36								
WRAB	**Tennant Creek**	**36.49**	**119**	*e*P		**P**		**04 21 09.8**	**-0.4**
	2.6nm,0.7s,mb4.3								
ASAR	**Alice Springs**	**37.64**	**125**	P		**P**		**04 21 20.8**	**+0.8**
	0.5nm,0.3s,mb3.7,baz=300,slow=8.5,SNR=2.4								
ASAR	**Alice Springs**	**37.64**	**125**	P		**P**		**04 21 20.8**	**+0.8**
STKA	**Stephens Creek**	**47.45**	**131**	LR		LR		04 41 42.7	
	comp=Z,168nm,19.4s,MS4.0,baz=305,slow=35								
SONM	**Songino Array**	**51.59**	**5**	P		**P**		**04 23 11.7**	**+0.9**
	2.7nm,0.7s,mb4.3,baz=184,slow=10,SNR=3.9								
ULN	**Ulaanbaatar**	**51.68**	**5**	*e*P		**P**		**04 23 12.2**	**+0.7**
	1.7nm,0.7s,mb4.1								
TKM2	**Tokmak 2**	**51.71**	**337**	*e*P		**P**		**04 23 11.9**	**+0.1**
	4.1nm,0.8s,mb4.4								
EKS2	**Erkin-Say**	**52.24**	**335**	*e*P		**P**		**04 23 15.6**	**-0.2**
	3.7nm,0.8s,mb4.4								
MK31	**Makanchi Array**	**52.89**	**344**	*e*P		**P**		**04 23 20.5**	**0.0**
MKAR	**Makanchi Array**	**52.89**	**344**	P		**P**		**04 23 19.9**	**-0.5**
	2.2nm,0.7s,mb4.2,baz=147,slow=7.7,SNR=3.7								
MKAR	**Makanchi Array**	**52.89**	**344**	P		**P**		**04 23 19.9**	**-0.6**
MJAR	**Matsushiro Arr**	**53.16**	**38**	P		**P**		**04 23 22.2**	**-0.5**
	1.4nm,0.6s,mb4.1,baz=228,slow=7.5,SNR=4.0								
MJAR				LR		LR		04 45 11.9	
	comp=Z,36nm,20.8s,MS3.4,baz=290,slow=35								
KURK	**Kurchatov**	**57.47**	**343**	*e*P		**P**		**04 23 53.4**	**-0.1**
	4.2nm,1.0s,mb4.4								
ZALV	**Zalesovo Beam**	**59.00**	**349**	P		**P**		**04 24 04.0**	**-0.1**
	4.3nm,0.8s,mb4.5,baz=180,slow=5.6,SNR=3.6								
ZALV				LR		LR		04 49 53.2	
	comp=Z,43nm,21.9s,MS3.5,baz=77,slow=36								
BVAR	**Borovoye Array**	**62.06**	**340**	P		**P**		**04 24 24.3**	**-0.7**
	1.7nm,0.6s,mb4.3,baz=144,slow=8.9,SNR=4.5								
BVAR				LR		LR		04 54 24.9	
	comp=Z,57nm,19.0s,MS3.8,baz=34,slow=39								
BVAR	**Borovoye Array**	**62.06**	**340**	P		**P**		**04 24 24.3**	**-0.7**
BVAR				LR		LR		04 54 24.9	
NOA	**NORSAR Array B**	**93.01**	**331**	LR		LR		05 12 35.0	
	comp=Z,24nm,19.1s,MS3.7,baz=50,slow=38								
TXAR	**Lajitas Array**	**145.58**	**40**	PKPbc		PKPbc		04 33 45.0	+1.5
	1.8nm,0.4s,baz=270,slow=0.7,SNR=16								

LDG ***11*** *04:26:24.3±0.2, 1506S×16673E, h120km, Mb4.0/1, Error ellipse: s-maj=25.2km s-min=5.5km az=86.0*

ISCJB ***11*** *04:26:26.7±2.6, 153S±01×1673E±01, h167km±22km, mb4.1/13, Error ellipse: s-maj=24.9km s-min=18.3km az=145.9*

NEIC ***11*** *04:26:27.6±3.1, 1531S×16745E, h169km±26km, mb4.0/5, Error ellipse: s-maj=25.1km s-min=17.8km az=203.0*

IDC ***11*** *04:26:36.1±10.0, 1545S×16724E, h241km±95km, mb3.8/9, mb1 3.9/9, mb1mx3.7/18, mbtmp3.8/9, Error ellipse: s-maj=53.9km s-min=24.9km az=37.0*

ISC 11 04:26:27.3±2.6, 153S±01×1674E±01, h163km±21km, n53, σ0s87/23, mb4.1/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.77**	**188**	*e*Pn			**Pn**	**04 28 04.4**	**0.0**
NOUC	**Port Laguerre**	**6.82**	**189**	*e*S			**Sn**	**04 29 21.9**	**0.0**
NORM	**Noumea**	**6.92**	**187**	*e*P			**Pn**	**04 28 06.1**	**-0.3**
NORM				*e*S			**Sn**	**04 29 24.0**	**-0.2**
CTA	**Charters Tower**	**20.70**	**254**	P		**P**		**04 30 57.2**	**+2.3**
	3.7nm,1.0s,baz=84,slow=9.2,SNR=2.8								
CTA	**Charters Tower**	**20.70**	**254**	P		**P**		**04 30 57.2**	**+2.3**
URZ	**Urewera**	**24.40**	**161**	P		**P**		**04 31 31.7**	**+1.1**
	4.0nm,0.6s,mb4.1,baz=186,slow=8.3,SNR=3.6								
STKA	**Stephens Creek**	**28.72**	**230**	P		**P**		**04 32 10.5**	**+1.2**
	5.3nm,0.6s,mb4.5,baz=54,slow=7.2,SNR=16								
WRAB	**Tennant Creek**	**31.81**	**257**	*e*P		**P**		**04 32 35.5**	**-1.2**
	1.7nm,0.8s,mb3.8								
WRA	**Warramunga Arr**	**31.82**	**257**	P		**P**		**04 32 35.5**	**-1.3**
	1.5nm,0.7s,mb3.8,baz=85,slow=9.0,SNR=15								
ASAR	**Alice Springs**	**32.59**	**250**	P		**P**		**04 32 43.0**	**-0.5**
	5.2nm,0.7s,mb4.4,baz=78,slow=9.2,SNR=55								
FORT	**Forrest**	**39.11**	**240**	*e*P		**P**		**04 33 38.9**	**-0.1**
	2.1nm,0.8s,mb3.9								
MBWA	**Marble Bar**	**45.52**	**255**	*e*P		**P**		**04 34 30.7**	**-0.1**
	3.5nm,0.7s,mb4.1								
CMAR	**Chiang Mai Arr**	**75.31**	**294**	P		**P**		**04 37 54.6**	**+1.5**
	0.9nm,0.3s,mb3.8,baz=134,slow=3.9,SNR=2.9								
CMAR	**Chiang Mai Arr**	**75.31**	**294**	P		**P**		**04 37 54.6**	**+1.5**
ULN	**Ulaanbaatar**	**82.69**	**324**	*e*P		**P**		**04 38 32.5**	**0.0**
	3.0nm,0.8s,mb4.1								
SONM	**Songino Array**	**83.05**	**324**	P		**P**		**04 38 34.7**	**+0.3**
	1.4nm,0.8s,mb3.8,baz=150,slow=6.6,SNR=6.0								
SNAA	**Sanae**	**92.97**	**183**	*e*		**P**		**04 39 20.6**	**-1.0**
SNAA				*e*				04 39 23.6	
SNAA	**Sanae**	**92.97**	**183**	*e*P		**P**		**04 39 20.7**	**-0.9**
	0.8nm,0.6s,mb4.0								
VNA3	**Neumayer Olymp**	**93.63**	**181**	*e*		**P**		**04 39 24.2**	**-0.4**
VNA3				*e*				04 39 27.6	
VNA2	**Neumayer--Watz**	**93.89**	**182**	*e*		**P**		**04 39 26.3**	**+0.4**
	baz=186,slow=4.8								
VNA2				*e*				04 39 29.4	
MKAR	**Makanchi Array**	**97.72**	**316**	P		**P**		**04 39 43.4**	**-0.2**
	0.7nm,0.7s,mb4.2,baz=83,slow=5.9,SNR=4.6								
ZALV	**Zalesovo Beam**	**97.95**	**324**	P		**P**		**04 39 43.5**	**-1.0**
	1.3nm,0.7s,mb4.5,baz=79,slow=3.2,SNR=5.2								
ARCES	**ARCESS Array B**	**120.86**	**345**	PKP		PKPdf		04 44 58.7	-0.8
	4.7nm,1.0s,baz=42,slow=3.8,SNR=7.5								
CDF	**Champ du Feu**	**143.17**	**338**	*e*PKP1		PKPdf		04 45 38.9	-3.0
	6.0nm,0.8s								
HAU	**Haudompre**	**143.85**	**338**	*e*PKP1		PKPdf		04 45 41.1	-2.0
	12nm,0.8s								
CABF	**La Chapelle**	**145.12**	**337**	*e*PKP1		PKPbc		04 45 46.1	+0.9
	24nm,0.9s								
FLN	**La Poliniere**	**145.20**	**346**	*e*PKP1		PKPbc		04 45 45.3	-0.1
	18nm,0.5s								
LDF	**La Druitiere**	**145.27**	**345**	*e*PKP1		PKPbc		04 45 45.4	-0.2
	20nm,0.7s								
LOR	**Lormes**	**145.34**	**340**	*e*PKP1		PKPbc		04 45 46.3	+0.4
	42nm,1.0s								
SSF	**Saint Saulge**	**145.64**	**340**	*e*PKP1		PKPbc		04 45 47.4	+0.6
	27nm,0.8s								
GRR	**Gorron**	**145.64**	**346**	*e*PKP1		PKPbc		04 45 47.1	+0.3
	39nm,0.9s								
HYF	**Humbligny**	**145.73**	**341**	*e*PKP1		PKPbc		04 45 47.9	+0.8
LPL	**La Plagne**	**145.79**	**336**	*e*PKP1		PKPbc		04 45 48.3	+1.0
	18nm,1.0s								
LPG	**La Plagne**	**145.79**	**336**	*e*PKP1		PKPbc		04 45 48.6	+1.3
	14nm,0.9s								
SMF	**Signal de Mont**	**145.89**	**340**	*e*PKP1		PKPbc		04 45 47.8	+0.2
	5.7nm,0.7s								
AVF	**Avril sur Loir**	**145.93**	**340**	*e*PKP1		PKPbc		04 45 47.8	+0.1
	6.7nm,0.7s								
SGMF	**Saint Gilles**	**146.14**	**348**	*e*PKP1		PKPbc		04 45 48.2	0.0
	7.6nm,0.5s								
ROSF	**Rostrenen**	**146.20**	**349**	*e*PKP1		PKPbc		04 45 48.3	-0.1
	56nm,1.1s								
BGF	**Bois d'Agland**	**146.29**	**341**	*e*PKP1		PKPbc		04 45 49.1	+0.3
	18nm,0.6s								
MBDF	**Montbardon**	**146.42**	**335**	*e*PKP1		PKPbc		04 45 50.2	+1.0
	10nm,0.8s								
ORIF	**Oris-en-Rattie**	**146.62**	**336**	*e*PKP1		PKPbc		04 45 50.4	+0.6
TCF	**Toulx Ste Croi**	**146.73**	**341**	*e*PKP1		PKPbc		04 45 50.4	+0.4
	14nm,0.9s								
SBF	**Sospel**	**146.83**	**333**	*e*PKP1		PKPbc		04 45 49.5	-0.9
	19nm,0.8s								
MFF	**Saint Martin d**	**147.13**	**344**	*e*PKP1		PKPbc		04 45 51.5	+0.4
	19nm,0.7s								
FRF	**La Foret Royal**	**147.42**	**334**	*e*PKP1		PKPbc		04 45 51.9	-0.1
SMRF	**Simiane la Rot**	**147.52**	**335**	*e*PKP1		PKPbc		04 45 51.5	-0.8
RJF	**Les Rejaudoux**	**147.83**	**341**	*e*PKP1		PKPbc		04 45 52.9	-0.2
	7.0nm,0.7s								
LASF	**Ste Croix**	**148.11**	**337**	*e*PKP1		PKPbc		04 45 54.4	+0.6
	55nm,1.2s								
LFF	**La Frestale**	**148.40**	**342**	*e*PKP1		PKPbc		04 45 54.2	-0.4
	15nm,0.7s								
MTLF	**Montolieu**	**149.34**	**339**	*e*PKP1		PKPbc		04 45 57.5	+0.5
ETSF	**Etsaut**	**150.64**	**342**	*e*PKP1		PKPbc		04 46 01.0	+0.9
	3.8nm,0.7s								
TORD	**Torodi Ar. Bea**	**165.98**	**263**	PKP		PKPdf		04 46 12.8	-0.9
	0.5nm,0.6s,baz=28,slow=0.7,SNR=8.6								
TORD	**Torodi Ar. Bea**	**165.98**	**263**	PKP		PKPdf		04 46 12.8	-0.9

ISCJB ***11*** *04:26:57.7±0.5, 2451N±003×12252E±002, h57km±8km, Error ellipse: s-maj=5.3km s-min=2.9km az=175.1*

JMA ***11*** *04:26:57.6±0.1, 2466N×12256E, h68km±1km, M3.4*

TAP ***11*** *04:26:57.1, 2452N×12248E, h69km, ML4.3, C*

ISC 11 04:26:58.2±0.5, 2453N±003×12252E±002, h56km±8km, n58, σ0s83/99, 8C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**99**	P		P	**Pn**	**04 27 09.8**	**+0.5**
YOJ				S		S	**Sn**	**04 27 18.8**	**+1.4**
TWC	**Suao**	**0.61**	**277⇑**	*i*P		P	**Pn**	**04 27 10.7**	**-0.4**
	baz=283								
TWC				S		S	**Sn**	**04 27 20.2**	**-0.3**
	baz=283								
TWB1	**Santiao Chiao**	**0.68**	**315**	P		P	**Pn**	**04 27 11.3**	**-0.5**
	baz=319								
TWB1				*e*S		S	**Sn**	**04 27 21.4**	**-0.4**
	baz=319								
ENA	**Nanau**	**0.71**	**262**	P		P	**Pn**	**04 27 12.1**	**-0.2**
	baz=258								
ENA				*e*S		S	**Sn**	**04 27 23.1**	**+0.4**
	baz=258								
ILA	**Ilan**	**0.74**	**288**	P		P	**Pn**	**04 27 12.4**	**-0.2**
	baz=290								
ILA				S		S	**Sn**	**04 27 23.7**	**+0.5**
	baz=290								
TWE	**Neicheng**	**0.80**	**284⇑**	*i*P		P	**Pn**	**04 27 13.1**	**-0.2**
	baz=289								
TWE				*e*S		S	**Sn**	**04 27 24.6**	**+0.1**
	baz=289								
NWF	**Wu-fen Shan**	**0.86**	**309⇑**	*i*P		P	**Pn**	**04 27 14.0**	**-0.1**
	baz=310								
NWF				*e*S		S	**Sn**	**04 27 25.7**	**-0.2**
	baz=310								
ENTT	**Nioudou**	**0.87**	**277⇑**	*i*P		P	**Pn**	**04 27 14.2**	**-0.1**
	baz=283								
ENTT				*e*S		S	**Sn**	**04 27 26.7**	**+0.4**
	baz=283								
TWD	**Chiawan**	**0.95**	**242**	P		P	**Pn**	**04 27 14.6**	**-0.9**
	baz=233								
TWD				*e*S		S	**Sn**	**04 27 27.3**	**-0.9**
	baz=233								
TWA	**Mucha**	**0.96**	**298⇑**	*i*P		P	**Pn**	**04 27 15.2**	**-0.3**
	baz=299								
TWA				*e*S		S	**Sn**	**04 27 27.8**	**-0.5**
	baz=299								
HWA	**Hwalien**	**1.00**	**237**	*e*P		P	**Pn**	**04 27 15.4**	**-0.7**
	baz=229								
HWA				*e*S		S	**Sn**	**04 27 28.8**	**-0.4**
	baz=229								
TAP1	**Taipei**	**1.03**	**299**	P		P	**Pn**	**04 27 16.0**	**-0.5**
	baz=300								
NNS	**Nan Shan**	**1.05**	**265**	*e*P		P	**Pn**	**04 27 16.0**	**-0.7**
	baz=256								
NNS				S		S	**Sn**	**04 27 30.3**	**-0.1**
	baz=256								
NSK	**Sanguang**	**1.06**	**278⇑**	*i*P		P	**Pn**	**04 27 16.8**	**0.0**
	baz=278								
NSK				S		S	**Sn**	**04 27 31.1**	**+0.4**
	baz=278								
TWY	**Chenhua**	**1.11**	**312⇑**	*i*P		P	**Pn**	**04 27 17.4**	**-0.2**
	baz=313								
IRIF	**Iriomote-Funau**	**1.12**	**100**	P		P	**Pn**	**04 27 17.5**	**-0.2**
IRIF				S		S	**Sn**	**04 27 32.9**	**+0.7**
TWS1	**Kuangyinshan**	**1.15**	**300⇑**	*i*P		P	**Pn**	**04 27 17.7**	**-0.3**
	baz=294								
TWS1				*e*S		S	**Sn**	**04 27 32.9**	**+0.1**
	baz=294								
PCYT	**Pengchaiyu**	**1.16**	**340**	*e*P		P	**Pn**	**04 27 18.2**	**0.0**
	baz=341								
WHF	**Hehuan Shan**	**1.21**	**252**	P		P	**Pn**	**04 27 18.3**	**-0.5**
	baz=251								
WHF				*e*S		S	**Sn**	**04 27 33.7**	**-0.4**
	baz=251								
TEGC	**Jichi Village**	**1.21**	**228**	*e*P		P	**Pn**	**04 27 18.0**	**-0.8**
	baz=219								
ESL	**Shilin**	**1.22**	**234**	P		P	**Pn**	**04 27 17.6**	**-1.3**
	baz=233								
ESL				*e*S		S	**Sn**	**04 27 32.8**	**-1.7**
	baz=233								
TWT	**Tachien**	**1.25**	**257**	P		P	**Pn**	**04 27 19.4**	**0.0**
	baz=251								
TWT				S		S	**Sn**	**04 27 35.3**	**0.0**
	baz=251								
HATJ	**Hateruma jima**	**1.27**	**112**	P		P	**Pn**	**04 27 19.9**	**+0.3**
NCU	**National Centr**	**1.28**	**290**	*e*P		P	**Pn**	**04 27 19.8**	**-0.1**
	baz=290								
NSTT	**Nanjuang**	**1.38**	**274**	P		P	**Pn**	**04 27 20.9**	**-0.3**
	baz=274								
NSTT				*e*S		S	**Sn**	**04 27 38.6**	**+0.2**
	baz=274								
JKRS	**Kuro-shima**	**1.39**	**102**	P		P	**Pn**	**04 27 21.5**	**+0.2**
JKRS

EAST	**Anshuo**	**2.63**	**216**	P	**Pn**	**04 27 36.5**	**-1.7**
	baz=209						
EAST				*e*S	**Sn**	**04 28 06.8**	**-2.1**
	baz=209						
SCZT	**Fangliau**	**2.77**	**219**	*e*P	**Pn**	**04 27 40.5**	**+0.5**
	baz=231						

*ATH **11** 04:35:44.5,3824N×2647E, h28km±4km, MD3.3/5*
*ISCJB **11** 04:35:45.8±0.6, 3825N±004×2654E±005, h10km, Error ellipse: s-maj=6.0km s-min=5.0km az=141.8*
*ISK **11** 04:35:45.4, 3824N×2665E, h5km, MD3.4*
*NEIC **11** 04:35:45.0, 3824N×2669E, h5km, MD3.4(ISK), MD3.3(ATH), After ISK.*
*CSEM **11** 04:35:45.7±0.1, 3828N×2665E, h2km, MD3.4, Error ellipse: s-maj=1.8km s-min=1.3km az=77.0*

ISC 11 04:35:46.3±0.5, 3824N±004×2654E±005, h10km, n25, σ1§34/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.42**	**70**	PG		**Pg**	**04 35 53.1**	**-1.4**
BLCB				*e*SG		**Sg**	**04 35 58.8**	**-1.2**
SMG	**Samos**	**0.58**	**156**	*e*PN		**Pg**	**04 35 56.8**	**-0.7**
IZM	**Izmir**	**0.59**	**74**	PG		**Pg**	**04 35 56.5**	**-1.1**
IZM				*e*SG		**Sg**	**04 36 04.9**	**-0.5**
PRK	**Paraskevi**	**1.03**	**348**	*e*PN		**Pn**	**04 36 03.9**	**-2.8**
PRK				*e*SN		**Sn**	**04 36 18.6**	**-2.6**
AKS	**Akhisar**	**1.18**	**57**	*e*PN		**Pn**	**04 36 07.2**	**-1.7**
BODT	**Bodrum**	**1.32**	**152**	*e*PN		**Pn**	**04 36 10.7**	**-0.1**
MLSB	**Milas**	**1.36**	**134**	*e*PN		**Pn**	**04 36 10.8**	**-0.5**
APE	**Apeiranthos**	**1.42**	**215**	*e*PN		**Pn**	**04 36 10.0**	**-2.1**
KULA	**Kula-Manisa**	**1.69**	**80**	*e*PN		**Pn**	**04 36 16.2**	**+0.4**
DAT	**Datca**	**1.72**	**151**	*e*PN		**Pn**	**04 36 17.6**	**+1.4**
BALB	**Balikesir**	**1.74**	**36**	*e*PN		**Pn**	**04 36 17.1**	**+0.5**
YER	**Yerkesik**	**1.77**	**128**	*e*PN		**Pn**	**04 36 17.5**	**+0.6**
LIA	**Limnos Island**	**1.96**	**328**	*e*PN		**Pn**	**04 36 17.6**	**-2.0**
GADA	**Gvkgeada**	**2.01**	**346**	*e*PN		**Pn**	**04 36 21.6**	**+1.3**
DST	**Dursunbey**	**2.12**	**49**	*e*PN		**Pn**	**04 36 21.7**	**-0.1**
LPK	**Lapseki**	**2.13**	**4**	*e*PN		**Pn**	**04 36 24.3**	**+2.3**
DALT	**Dalyan (Mudla)**	**2.22**	**131**	*e*PN		**Pn**	**04 36 24.4**	**+1.3**
EDC	**Edincik**	**2.34**	**26**	*e*PN		**Pn**	**04 36 26.4**	**+1.7**
KHL	**Karahalli**	**2.35**	**87**	*e*PN		**Pn**	**04 36 24.9**	**0.0**
BNT	**Bandirma**	**2.37**	**26**	*e*PN		**Pn**	**04 36 26.6**	**+1.5**
KCT	**Karacabey**	**2.46**	**34**	*e*PN		**Pn**	**04 36 27.9**	**+1.4**
RKY	**Sarkoy-Tekirda**	**2.49**	**11**	*e*PN		**Pn**	**04 36 27.9**	**+1.0**
ENEZ	**Enez**	**2.51**	**353**	*e*PN		**Pn**	**04 36 28.7**	**+1.6**
RDO	**Rodhopi**	**3.00**	**345**	*e*PN		**Pn**	**04 36 32.4**	**-1.5**
SHUT	**Suhut-Afyon**	**3.16**	**83**	*e*PN		**Pn**	**04 36 37.3**	**+1.1**

*DJA **11** 05:02:08.5±0.0, 1800S×17821W, h527km*
*ISCJB **11** 05:02:13.1±1.2, 178S±0.1×17864W±009, h555km±16km, mb4.2/11, Error ellipse: s-maj=18.1km s-min=12.0km az=154.9*
*NEIC **11** 05:02:13.6±0.9, 1765S×17868W, h549km±11km, mb4.6/1, Error ellipse: s-maj=19.8km s-min=9.1km az=147.0*
*IDC **11** 05:02:14.3±1.4, 1783S×17857W, h555km±16km, mb3.5/9, mb1 3.9/10, mb1mx3.6/19, mbtmp3.6/10, Error ellipse: s-maj=19.4km s-min=11.2km az=132.0*

ISC 11 05:02:13.9±1.1, 178S±01×17863W±009, h552km±14km, n28, σ0§73/26, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.62**	**61**	P		**P**	**05 04 07.4**	**-0.6**
	14nm,0.3s,baz=132,slow=2.2,SNR=20							
DZM	**Mont Dzumac**	**14.68**	**251**	*e*P		**P**	**05 05 20.6**	**+0.4**
URZ	**Urewera**	**20.78**	**189**	P		**P**	**05 06 16.3**	**-0.5**
	1.7nm,0.4s,baz=89,slow=13,SNR=2.4							
URZ				S		**S**	**05 09 29.9**	**-3.2**
	3.5nm,0.8s,baz=11,slow=8.8,SNR=3.6							
RPZ	**Rata Peaks**	**27.32**	**196**	P		**P**	**05 07 15.9**	**+1.2**
	2.9nm,0.4s,mb4.2,baz=355,slow=17,SNR=4.6							
CTAO	**Charters Tower**	**33.27**	**260**	P		**P**	**05 08 06.2**	**-0.1**
PMG	**Port Moresby**	**34.23**	**279**	P		**P**	**05 08 15.1**	**+0.7**
	60nm,1.0s,mb5.1							
PMG	**Port Moresby**	**34.23**	**279**	P		**P**	**05 08 15.1**	**+0.7**
	60nm,1.0s,mb5.1							
COEN	**Coen**	**36.90**	**270**	P		**P**	**05 08 36.8**	**+0.3**
	21nm,0.8s,mb4.7							
COEN	**Coen**	**36.90**	**270**	P		**P**	**05 08 36.8**	**+0.3**
	21nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**38.52**	**241**	P		**P**	**05 08 50.9**	**+1.3**
	16nm,0.5s,mb4.8,baz=91,slow=9.3,SNR=66							
WB2	**Warramunga Arr**	**44.45**	**259**	*e*P		**P**	**05 09 35.7**	**-0.8**
WRAB	**Tennant Creek**	**44.45**	**259**	*e*P		**P**	**05 09 35.6**	**-0.9**
	9.6nm,0.5s,mb4.6							
WRAB	**Tennant Creek**	**44.45**	**259**	P		**P**	**05 09 35.7**	**-0.8**
	27nm,1.4s,mb4.6							
WRAB	**Tennant Creek**	**44.45**	**259**	P		**P**	**05 09 35.7**	**-0.8**
	27nm,1.4s,mb4.6							
WRA	**Warramunga Arr**	**44.46**	**259**	P		**P**	**05 09 35.7**	**-0.8**
	11nm,0.5s,mb4.6,baz=96,slow=6.8,SNR=287							
WRA				PcP		PcP	05 11 07.9	-0.2
	1.1nm,0.6s,baz=90,slow=3.5,SNR=3.2							
WRA				ScP		ScP	05 14 07.6	-0.4
	1.1nm,0.8s,baz=89,slow=4.1,SNR=7.2							
ASAR	**Alice Springs**	**44.63**	**254**	P		**P**	**05 09 38.1**	**+0.2**
	98nm,0.6s,baz=88,slow=8.1,SNR=1225							
ASAR				ScP		ScP	05 14 08.8	+0.2
	0.9nm,0.8s,baz=92,slow=3.9,SNR=5.1							
SWI	**Sorong**	**52.00**	**283**	P		**P**	**05 10 32.8**	**-0.1**
YBH	**Yreka Blue Hor**	**78.53**	**39**	P		**P**	**05 13 18.3**	**-0.1**
	1.6nm,0.8s,mb3.4,baz=243,slow=4.5,SNR=2.7							
NVAR	**Mina Array Bea**	**79.45**	**44**	P		**P**	**05 13 23.8**	**+0.5**
	1.0nm,0.7s,mb3.3,baz=224,slow=8.4,SNR=10							
TXAR	**Lajitas Array**	**86.08**	**58**	P		**P**	**05 13 58.1**	**+1.2**
	2.2nm,0.8s,mb3.8,baz=213,slow=6.5,SNR=20							
PDAR	**Pinedale Array**	**87.38**	**4**	P		**P**	**05 14 02.3**	**-0.3**
	0.8nm,0.6s,mb3.5,baz=214,slow=3.2,SNR=9.1							
CMAR	**Chiang Mai Arr**	**88.63**	**290**	P		**P**	**05 14 08.2**	**-0.9**
	1.1nm,0.3s,mb4.1,baz=115,slow=3.8,SNR=4.8							
SNAA	**Sanae**	**90.76**	**179**	*e*		**P**	**05 14 17.3**	**-0.6**
VNA3	**Neumayer Olymp**	**90.91**	**176**	*e*		**P**	**05 14 19.2**	**+0.6**
VNA2	**Neumayer--Watz**	**91.35**	**177**	*e*		**P**	**05 14 20.5**	**-0.1**
	baz=186,slow=2.3							
BRTR	**Keskin Array B**	**144.52**	**315**	PKP		PKPdf	05 20 47.9	-0.1
	1.6nm,0.8s							
MMAI	**Mount Meron Ar**	**145.88**	**303**	PKPbc		PKPbc	05 20 52.5	+0.2
	1.4nm,0.4s,baz=111,slow=6.3,SNR=2.7							
GERES	**GERESS Array B**	**147.40**	**345**	PKPbc		PKPbc	05 20 56.0	+0.1
	0.2nm,0.4s,baz=28,slow=4.4,SNR=3.7							

IDC 11 05:27:09.7±2.4, 3219S×17921W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/15, mbtmp3.9/3, ML3.8/1, MS3.8/2, Ms1 3.8/2, ms1mx2.8/29, Error ellipse: s-maj=57.9km s-min=42.8km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.77**	**205**	Pn		Pn	05 28 48.9	-1.4
	1.8nm,0.3s,baz=333,slow=1.9,SNR=16							
URZ				Sn		Sn	05 30 01.9	-6.1
	2.4nm,0.3s,baz=295,slow=23,SNR=8.9							
RAR	**Rarotonga**	**20.48**	**63**	LR		LR	05 37 52.0	
	comp=Z,153nm,19.9s,baz=292,slow=31							
ASAR	**Alice Springs**	**42.02**	**269**	P		P	05 35 03.0	0.0
	0.9nm,0.8s,baz=106,slow=7.8,SNR=8.6							
WRA	**Warramunga Arr**	**43.17**	**275**	P		P	05 35 12.4	+0.1
	1.0nm,0.3s,baz=113,slow=8.0,SNR=29							
PMSA	**Palmer Station**	**71.07**	**156**	LR		LR	06 03 04.1	
	comp=Z,101nm,19.1s,baz=88,slow=30							
NOA	**NORSAR Array B**	**150.34**	**350**	PKPbc		PKPbc	05 47 02.1	-0.1
	1.1nm,0.8s,baz=41,slow=4.9,SNR=3.1							

IDC 11 06:00:22.2±3.4, 1552S×17309W, h204km±127km, mb3.6/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, Error ellipse: s-maj=172.6km s-min=34.7km az=64.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.04**	**39**	P		Pn	06 01 02.6	+1.2
	83nm,0.3s,baz=175,slow=1.5,SNR=83							
AFI				S		Sn	06 01 32.4	+0.4
	115nm,0.3s,baz=219,slow=22,SNR=15							
URZ	**Urewera**	**24.25**	**199**	P		P	06 05 20.3	-0.1
	2.4nm,0.3s,baz=56,slow=4.5,SNR=6.5							
STKA	**Stephens Creek**	**44.24**	**240**	P		P	06 08 10.9	-0.5
	0.9nm,0.4s,baz=97,slow=6.5,SNR=5.1							
WRA	**Warramunga Arr**	**50.11**	**257**	P		P	06 08 56.9	0.0
	0.8nm,0.4s,baz=91,slow=7.2,SNR=24							
ASAR	**Alice Springs**	**50.36**	**252**	P		P	06 08 58.9	+0.1
	4.1nm,0.7s,baz=88,slow=8.2,SNR=40							

*IDC **11** 06:11:23.7±0.9, 354S×13166E, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.2/17, mbtmp4.3/9, ML4.2/2, Error ellipse: s-maj=36.4km s-min=17.0km az=63.0*
*ISCJB **11** 06:11:27.8±0.8, 391S±007×13095E±008, h38km±10km, mb4.0/6, Error ellipse: s-maj=15.2km s-min=7.2km az=141.7*
*DJA **11** 06:11:28, 359S×13121E, h30km, MLv3.9/5*
*NEIC **11** 06:11:33.7±2.7, 383S×13135E, h81km±26km, mb4.1/3, Error ellipse: s-maj=27.2km s-min=9.1km az=48.0*

ISC 11 06:11:25.3±3.7, 385S±007×13101E±008, h4km±25km, n28, σ1§13/29, mb4.0/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.13**	**284**	P		**Pn**	**06 12 01.8**	**+0.1**
TLE	**Tual**	**2.48**	**136**	P		**Pn**	**06 12 06.3**	**-0.1**
TLE	**Tual**	**2.48**	**136**	S		**Sn**	**06 12 37.6**	**+0.5**
AAI	**Ambon**	**2.81**	**273**	P		**Pn**	**06 12 09.3**	**-1.7**
SWI	**Sorong**	**2.98**	**5**	P		**Pn**	**06 12 14.3**	**+0.9**
SWI	**Sorong**	**2.98**	**5**	S		**Sn**	**06 12 42.7**	**-6.9**
LBMI	**Labuha**	**4.74**	**312**	P		**Pn**	**06 12 37.6**	**0.0**
BATI	**Baumata**	**9.64**	**229**	Pn		**Pn**	**06 13 54.1**	**+9.2**
	2.7nm,0.3s,baz=175,slow=2.9,SNR=6.1							
BATI	**Baumata**	**9.64**	**229**	P		**Pn**	**06 13 56.8**	**+12**
	41nm,1.2s,493nm							
KAPI	**Kappang**	**11.28**	**264**	Pn		**Pn**	**06 14 16.4**	**+9.0**
	1.1nm,0.3s,baz=82,slow=16,SNR=2.7							
COEN	**Coen**	**15.65**	**131**	P		**Pn**	**06 15 06.5**	**-0.4**
WRAB	**Tennant Creek**	**16.31**	**169**	*e*P		**Pn**	**06 15 18.6**	**+3.2**
	9.0nm,0.7s							
WRAB				*e*Sn		**Sn**	**06 18 02.1**	**-15**
WRA	**Warramunga Arr**	**16.32**	**169**	Pn		**Pn**	**06 15 10.1**	**-5.4**
	0.5nm,0.3s,baz=343,slow=14,SNR=11							
WRA				Sn		**Sn**	**06 18 03.4**	**-14**
	0.9nm,0.3s,baz=0.2,slow=23,SNR=7.0							
WB2	**Warramunga Arr**	**16.32**	**169**	*e*P		**Pn**	**06 15 18.8**	**+3.3**
ASAR	**Alice Springs**	**19.90**	**172**	P		**Pn**	**06 15 58.9**	**-0.6**
	9.3nm,0.5s,baz=354,slow=10,SNR=107							
ASAR				S		**Sn**	**06 19 32.8**	**-11**
	1.4nm,0.6s,baz=358,slow=27,SNR=6.1							
MBWA	**Marble Bar**	**20.40**	**212**	*e*P		**P**	**06 16 05.0**	**+1.6**
	7.7nm,0.9s							
CTA	**Charters Tower**	**21.94**	**139**	P		**P**	**06 16 18.4**	**-1.6**
	5.7nm,0.5s,mb4.3,baz=306,slow=11,SNR=11							
CTA	**Charters Tower**	**21.94**	**139**	P		**P**	**06 16 18.4**	**-1.6**
CTAO	**Charters Tower**	**21.94**	**139**	P		**P**	**06 16 16.7**	**-3.3**
	5.9nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**29.60**	**162**	P		**P**	**06 17 30.6**	**-1.0**
	3.2nm,0.7s,mb4.2,baz=349,slow=10,SNR=7.3							
CMAR	**Chiang Mai Arr**	**38.59**	**306**	P		**P**	**06 18 51.6**	**+1.9**
	0.8nm,0.4s,mb3.8,baz=132,slow=7.2,SNR=11							
MKAR	**Makanchi Array**	**66.18**	**326**	P		**P**	**06 22 14.4**	**+0.3**
	2.1nm,0.9s,mb4.1,baz=114,slow=7.5,SNR=7.5							
ZALV	**Zalesovo Beam**	**69.24**	**333**	P		**P**	**06 22 32.5**	**-0.8**
	2.2nm,0.9s,mb4.1,baz=123,slow=5.5,SNR=6.2							
KURK	**Kurchatov**	**70.39**	**328**	P		**P**	**06 22 40.2**	**-0.2**
	baz=122,slow=5.6							
KURK	**Kurchatov**	**70.39**	**328**	P		**P**	**06 22 40.2**	**-0.2**
BVAR	**Borovoye Array**	**75.96**	**327**	P		**P**	**06 23 12.6**	**-0.7**
	0.6nm,0.4s,mb3.8,baz=104,slow=6.3,SNR=5.0							
TORD	**Torodi Ar. Bea**	**129.11**	**284**	PKP		PKPdf	06 30 35.2	-0.6
	0.6nm,0.6s,baz=44,slow=1.5,SNR=6.0							
TORD	**Torodi Ar. Bea**	**129.11**	**284**	PKP		PKPdf	06 30 35.2	-0.6

NEIC 11 06:18:32.0, 3415N×2243E, h10km, ML3.5(ATH), After ATH., Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**2.32**	**60**	P		Pn	06 19 14.8	+4.5
LAST	**Lasithi**	**2.71**	**67**	P		Pn	06 19 14.9	-0.7
ZKR	**Zakros**	**3.27**	**72**	P		Pn	06 19 22.6	-0.7
APE	**Apeiranthos**	**3.85**	**40**	P		Pn	06 19 29.8	-1.5
NEO	**Neokhori**	**5.19**	**7**	P		Pn	06 19 50.5	+0.9

MAN 11 07:26:32, 908N×12670E, h32km, mb4.5, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**2.01**	**234**	*e*P		Pn	07 27 04.2	+0.5
BUKP				*e*S		Sn	07 27 29.1	+1.3
MSLP	**Maasin**	**2.10**	**300**	*e*P		Pn	07 27 08.7	+3.7
MATI	**Mati**	**2.17**	**192**	*e*P		Pn	07 27 06.5	+0.6
MATI				*e*S		Sn	07 27 29.4	-2.2
TBP	**Tagbilaran**	**2.87**	**282**	*e*P		Pn	07 27 17.3	+1.8
TBP				*e*S		Sn	07 27 50.3	+1.3

*ISCJB **11** 07:37:30.9±1.9, 2160S±004×17535E±004, h6km±12km, mb5.1/88, MS5.2/191, Error ellipse: s-maj=7.5km s-min=5.4km az=156.3*
*IDC **11** 07:37:31.4±0.5, 2168S×17537E, h0km, mb4.8/17, mb1 4.9/17, mb1mx4.9/18, mbtmp4.8/17, MS4.9/17, Ms1 4.9/17, ms1mx4.6/31, Error ellipse: s-maj=19.4km s-min=15.3km az=150.0*
*BJI **11** 07:37:31.0, 2239S×17553E, h25km, mB5.3, mb4.9, Ms5.3, Ms4.9*
*GCMT **11** 07:37:35.4±0.1, 2157S×17546E, h12km, MW5.5/100, Moment Tensor Solution. s90,c148; s100,c184; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr=0.64±.02; Mθθ=0.79±.02; Mϕϕ 1.43±.02; Mrθ 0.18±.06; Mθϕ=1.41±.02; Mϕr 0.28±.05; Best double couple: M0 1.84400×10^17 NP1:ϕs290.00000°, δ75.00000°, λ=170.00000°. NP2:ϕs198.00000°, δ81.00000°, λ=15.00000°. Principal axes: T 2.1250, Plg4.0000°, Azm244.0000°; N -0.5590, Plg72.0000°, Azm346.0000°; P -1.5630, Plg17.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 07:37:35.4±0.1, 2155S×17534E, mb5.2/59, MS5.3/172, MW5.5 Error ellipse: s-maj=6.5km s-min=4.3km az=152.0, Moment Tensor Solution. s8 Moment tensor: Scale 1017 Nm; Mrr0.00; Mθθ-1.90; Mϕϕ 1.90; Mrθ 0.10; Mθϕ-1.46; Mϕr 0.41; Best double couple: M0 2.40000×1017 NP1: ϕs296.00000°, δ80.00000°, λ178.00000°. NP2: ϕs26.00000°, δ88.00000°, λ 10.00000°. Principal axes: T 2.4500, Plg8.0000°, Azm251.0000°; N -0.0300, Plg80.0000°, Azm38.0000°; P -2.4200, Plg5.0000°, Azm160.0000°;*
*MOS **11** 07:37:35.4±1.4, 2160S×17531E, h33km, mb5.4/37, MS5.2/27 Error ellipse: s-maj=10.6km s-min=9.0km az=152.9*
*DJA **11** 07:38:53, 2197S×17187E, h650km, mb4.7/10*

ISC 11 07:37:33.6±2.1, 2158S±004×17538E±004, h13km±12km, h32km±2.6km: pP-P, n707, σ0§68/466, mb5.1/88, MS5.2/191, 146C-140D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.31**	**265**	*e*Pn		**Pn**	**07 39 35.1**	**+1.2**
NOUC	**Port Laguerre**	**8.44**	**265**	*e*P		**Pn**	**07 39 38.0**	**+2.4**
RAO	**Raoul Island**	**9.75**	**143**	LR		LR	07 42 47.4	
	comp=Z,13μm,21.8s,baz=131,slow=33							
AFI	**Afiamalu**	**14.41**	**60**	Pn		**Pn**	**07 40 54.8**	**-2.6**
	2.2nm,0.3s,baz=354,slow=1.1,SNR=5.5							
AFI				LR		LR	07 45 20.7	
	comp=Z,8μm,21.6s,baz=236,slow=32							
AFI	**Afiamalu**	**14.41**	**60**	*e*Pn		**Pn**	**07 40 55.1**	**-2.3**
	78nm,0.9s							
AFI	**Afiamalu**	**14.41**	**60**	*e*P		**Pn**	**07 40 55.1**	**-2.3**
AFI				pmax		pmax		
	comp=Z,78nm,0.9s							
URZ	**Urewera**	**16.69**	**175**	Pn		**Pn**	**07 41 28.7**	**+1.6**
	comp=Z,1.8nm,0.3s,baz=28,slow=4.6,SNR=22							
URZ				LR		LR	07 46 09.5	
	comp=Z,6μm,21.5s,baz=8.2,slow=31							
SNZO	**South Karori**	**19.68**	**181**	*e*P		**Pn**	**07 42 03.1**	**-0.6**
	comp=Z,130nm,1.0s							
THZ	**Tophouse**	**20.23**	**185**	*e*P		**P**	**07 42 09.8**	**+1.5**
RPZ	**Rata Peaks**	**22.36**	**188**	P		**P**	**07 42 33.1**	**+1.8**
	comp=Z,16nm,0.7s,mb4.5,baz=301,slow=2.7,SNR=11							
RPZ				LR		LR	07 50 09.9	
	comp=Z,4μm,19.3s,MS4.8,baz=272,slow=34							
FOZ	**Fox Glacier**	**22.43**	**191**	*e*P		**P**	**07 42 32.3**	**+0.3**
EIDS	**Eidsvold**	**22.59**	**256**	*e*P		**P**	**07 42 34.3**	**+0.4**
	comp=Z,196nm,1.1s,mb5.5							
TARA	**Tarawa**	**22.92**	**354**	PFAKE			07 42 50.0	+13
TARA				LR		LR		
	comp=Z,2μm,19.0s,MS4.5							
ARMA	**Armidale**	**23.05**	**243**	*e*P		**P**	**07 42 38.8**	**+0.1**
	comp=Z,2.9nm,1.2s							
RAR	**Rarotonga**	**23.14**	**94**	P		**P**	**07 42 38.9**	**-0.8**
	comp=Z,55nm,1.0s,mb4.9,baz=264,slow=5.9,SNR=4.0							
RAR				LR		LR	07 49 22.6	
	comp=Z,2μm,20.0s,MS4.6,baz=266,slow=31							
CAN	**Canberra**	**26.83**	**234**	*e*P		**P**	**07 43 14.1**	**+0.4**
CTA	**Charters Tower**	**27.24**	**268**	P		**P**	**07 43 18.9**	**+1.3**
	comp=Z,7.9nm,0.9s,mb4.2,baz=75,slow=14,SNR=4.8							
CTAO	**Charters Tower**	**27.24**	**268**	*e*P		**P**	**07 43 16.3**	**-1.3**
	comp=Z,53nm,1.5s,mb4.8							
CTAO				LR		LR		
	comp=Z,7μm,21.0s,MS5.2							
CTAO	**Charters Tower**	**27.24**	**268**	*e*P		**P**	**07 43 16.3**	**-1.3**
CTAO				pmax		pmax		
	comp=Z,53nm,1.5s,mb4.8							
CTAO				MLR		MLR		
	comp=Z,7μm,21.0s,MS5.2							
CTAO	**Charters Tower**	**27.24**	**268**	P		**P**	**07 43 19.3**	**+1.7**
	comp=Z,26nm,1.9s,mb4.4							
CTAO	**Charters Tower**	**27.24**	**268**	P		**P**	**07 43 24.9**	**+7.3**
	comp=Z,26nm,1.9s,mb4.4							
PMG	**Port Moresby**	**29.70**	**290**	*e*P		**P**	**07 43 39.8**	**+0.3**
	comp=Z,36nm,1.0s,mb5.0							
PMG				LR		LR		
	comp=Z,2μm,19.0s,MS4.7							
PMG	**Port Moresby**	**29.70**	**290**	P		**P**	**07 43 49.1**	**+10**
	comp=Z,44nm,1.1s,mb5.1							
PMG	**Port Moresby**	**29.70**	**290**	P		**P**	**07 43 50.1**	**+11**
	comp=Z,44nm,1.1s,mb5.1							
COEN	**Coen**	**31.54**	**279**	*e*P		**P**	**07 43 53.7**	**-2.1**
	comp=Z,12nm,1.0s,mb4.7							
COEN	**Coen**	**31.54**	**279**	P		**P**	**07 43 55.5**	**-0.3**
	comp=Z,12nm,1.1s,mb4.7							
COEN	**Coen**	**31.54**	**279**	P		**P**	**07 43 57.7**	**+1.9**
	comp=Z,15nm,1.2s,mb4.7							
TAU	**Tasmania Unive**	**31.62**	**221**	*e*P		**P**	**07 43 57.0**	**+0.8**
	comp=Z,75nm,1.2s,mb5.4							
TAU				LR		LR		
	comp=Z,3μm,21.0s,MS5.0							
TAU	**Tasmania Unive**	**31.62**	**221**	*e*P		**P**	**07 43 57.0**	**+0.8**
TAU				pmax		pmax		
	comp=Z,75nm,1.2s,mb5.4							
TAU				MLR		MLR		
	comp=Z,3μm,21.0s,MS5.0							
STKA	**Stephens Creek**	**31.75**	**244**	P		**P**	**07 43 56.9**	**-0.6**
	comp=Z,14nm,0.9s,mb4.8,baz=73,slow=8.2,SNR=14							
STKA				LR		LR	07 55 58.4	
	comp=Z,5μm,19.0s,MS5.2,baz=74,slow=35							
STKA	**Stephens Creek**	**31.75**	**244**	*e*P		**P**	**07 43 57.1**	**-0.4**
	comp=Z,43nm,2.0s,mb4.9							
TBI	**Tubuai**	**32.50**	**100**	*e*S		**S**	**07 49 19.1**	**+0.1**
	comp=Z,984nm,34.0s							
TBI				*e*LQ			07 51 03.1	
	comp=Z,7μm,27.2s							
TBI				*e*LR		LR	07 52 13.8	
	comp=Z,2μm,31.5s							
PPT	**Papeete**	**33.22**	**89**	*e*P		**P**	**07 44 10.9**	**+0.4**
	comp=Z,64nm,1.3s,mb5.4							
PPT				*e*S		**S**	**07 49 31.7**	**+1.3**
	comp=Z,710nm,25.2s							
PPT				*e*LQ			07 51 32.5	
	comp=Z,6μm,26.8s							
PPT				*e*LR		LR	07 52 54.6	
	comp=Z,6μm,28.0s,baz=253							
PPT	**Papeete**	**33.22**	**89**	LR		LR	07 53 48.9	
	comp=Z,2μm,20.5s,MS4.8,baz=257,slow=29							
PPT	**Papeete**	**33.22**	**89**	*e*P		**P**	**07 44 10.9**	**+0.4**
	comp=Z,64nm,1.3s,mb5.4							
PPT				*e*S		**S**	**07 49 31.7**	**+1.3**
PPT				*e*LQ			07 51 32.5	
PPT	**Papeete**	**33.22**	**89**	*e*P		**P**	**07 44 10.9**	**+0.4**
PPT				*e*S		**S**	**07 49 31.7**	**+1.3**
PPT				pmax		pmax		
	comp=Z,64nm,1.3s							
TIAR	**Tiarei**	**33.44**	**89**	*e*P		**P**	**07 44 12.8**	**+0.4**
	comp=Z,522nm,1.1s							
MEH	**Mehetia**	**34.56**	**90**	*e*P		**P**	**07 44 23.5**	**+1.3**
	comp=Z,2μm,1.1s							
PMOR	**Pomariorio Ree**	**35.42**	**86**	*e*P		**P**	**07 44 29.8**	**+0.2**
	comp=Z,123nm,1.2s,mb5.7							
XMAS	**Kiritimati**	**35.46**	**52**	PFAKE			07 44 40.0	+10
XMAS				LR		LR		
	comp=Z,3μm,19.0s,MS5.1							
VAH	**Vaihoa**	**35.60**	**86**	*e*P		**P**	**07 44 31.1**	**-0.1**
	comp=Z,98nm,1.

KAPI Kappang 56.27 279 PFAKE 07 47 30.0 +16
KAPI LR LR
comp=Z,545nm,21.0s,MS4.6
SBA Scott Base 56.47 182 *e*P **P** **07 47 15.0 +0.3**
comp=Z,49nm,0.9s,mb5.5
SBA *e*pP pP 07 47 22.2 +3.3
SBA LR LR
comp=Z,909nm,20.0s,MS4.9
SBA Scott Base 56.47 182 *e*P **P** **07 47 15.0 +0.3**
SBA *e**PP pP 07 47 22.2 +3.4
SBA pmax pmax
comp=Z,49nm,0.9s,mb5.5
SBA MLR MLR
comp=Z,909nm,20.0s,MS4.9
DAV Davao City (W) 56.52 295 PFAKE 07 47 30.0 +14
DAV LR LR
comp=Z,384nm,20.0s,MS4.5
KHKI Kahang-Kahang 58.90 273 P **P** **07 47 31.8 -1.0**
CASY Casey 60.36 205 PFAKE 07 47 50.0 +8.0
CASY LR LR
comp=Z,759nm,20.0s,MS4.8
SJI Sawahan 62.68 272 P **P** **07 48 03.9 +5.3**
MJAR Matsushiro Arr 67.63 328 P **P** **07 48 29.4 -0.8**
comp=Z,6.3nm,1.0s,mb4.6,baz=158,slow=5.2,SNR=9.2
MAJO Matsushiro 67.64 328 *e*P **P** **07 48 30.8 +0.6**
comp=Z,10nm,0.9s,mb4.9
MAJO LR LR
comp=Z,2µm,19.0s,MS5.4
MAJO Matsushiro 67.64 328 *e*P **P** **07 48 30.8 +0.6**
MAJO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MAJO MLR MLR
comp=Z,2µm,19.0s,MS5.4
MAT Matsushiro 67.64 328 P **P** **07 48 29.2 -1.0**
MAT S S 07 57 23.0 -4.1
QSPA South Pole Qui 68.49 180 P **P** **07 48 34.9 -0.1**
comp=Z,30nm,0.9s,mb5.3,baz=25,slow=2.6,SNR=50
QSPA South Pole Qui 68.49 180 P **P** **07 48 34.9 -0.1**
QSPA LR LR
comp=Z,774nm,20.0s,MS4.9
YHNB Yeheng 69.76 308 PFAKE 07 49 00.0 +16
YHNB LR LR
comp=Z,3µm,20.0s,MS5.5
TATO Taipei 69.86 309 PFAKE 07 49 00.0 +16
TATO LR LR
comp=Z,2µm,20.0s,MS5.4
PPBI Pangkal Pinang 69.92 276 P **P** **07 48 45.2 +0.2**
comp=Z,14nm,1.0s,mb4.8
ERM Erimo 69.94 335 PFAKE 07 49 00.0 +16
ERM LR LR
comp=Z,966nm,22.0s,MS5.0
KSRS Korea Array 73.77 322 P **P** **07 49 09.2 +1.6**
comp=Z,4.2nm,1.1s,mb4.3,baz=38,slow=33,SNR=4.1
SSE Sheshan 73.78 314 *e*P **P** **07 49 08.5 +0.7**
SSE AP pP 07 49 20.3 +8.3
SSE PCP PcP 07 49 24.6 +1.2
SSE S S 07 58 35.1 -3.8
SSE XS sS 07 58 54.2 +8.3
SSE AMB AMB
comp=Z,29nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,124nm,4.4s
SSE LR LR
comp=N,368nm,25.8s,MS4.7
SSE LR LR
comp=E,320nm,25.8s,MS4.7
SSE LR LR
comp=Z,600nm,23.5s,MS4.8
SSE Sheshan 73.78 314 *e*P **P** **07 49 08.5 +0.7**
comp=Z,29nm,0.7s,mb5.3
SSE pP pP 07 49 20.3 +8.3
SSE PcP PcP 07 49 24.6 +1.2
SSE S S 07 58 35.1 -3.8
SSE sS sS 07 58 54.2 +8.3
SSE ScS ScS 07 59 17.2 -0.2
SSE LR LR
comp=Z,600nm,23.5s,MS4.8
YSS Yuzh-Sakhalins 74.30 337 *e*P **P** **07 49 12.2 +1.8**
comp=Z,101nm,0.9s,mb5.8
YSS LR LR
comp=Z,307nm,20.0s,MS4.6
YSS Yuzh-Sakhalins 74.30 337⇑ *e*P **P** **07 49 10.3 -0.1**
YSS pmax pmax
comp=Z,42nm,1.2s,mb5.2
INCN Inchon 74.53 322 PFAKE 07 49 20.0 +8.0
INCN LR LR
comp=Z,5µm,20.0s,MS5.8
COCO West Island 75.08 263 PFAKE 07 49 30.0 +14
COCO LR LR
comp=Z,915nm,22.0s,MS5.0
PET Petropavlovsk 75.70 350 PFAKE 07 49 30.0 +12
PET LR LR
comp=Z,269nm,20.0s,MS4.5
PET Petropavlovsk 75.70 350 *e*P **P** **07 49 20.9 +2.5**
PET *e*S S 07 58 59.7 +0.3
PET *e*PS 07 59 26.1
PET *e*PPS 07 59 55.7
PET pmax pmax
comp=Z,70nm,1.1s,mb5.5
PET MLR MLR
comp=Z,200nm,17.0s,MS4.5
QIZ Qiongzhong 75.75 297 P **P** **07 49 21.2 +1.8**
QIZ AMB AMB
comp=Z,45nm,1.8s,mb5.1
QIZ LR LR
comp=Z,342nm,24.8s,MS4.6
QIZ Qiongzhong 75.75 297 PFAKE 07 49 30.0 +11
QIZ LR LR
comp=Z,1µm,21.0s,MS5.1
PETK Petropavlovsk- 75.94 349 P **P** **07 49 20.4 +0.6**
comp=Z,18nm,0.9s,mb5.0,baz=120,slow=6.5,SNR=8.8
PETK LR LR 08 21 03.5
comp=Z,190nm,18.0s,MS4.4,baz=64,slow=34
NJ2 Nanjing 75.94 313 *e*P **P** **07 49 21.1 +0.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
MDJ Mudanjiang 78.02 328 P **P** **07 49 33.5 +1.8**
MDJ AP pP 07 49 45.9 +10
MDJ PP PP 07 52 36.5 +8.3
MDJ S S 07 59 27.7 +2.6
MDJ SS SS 08 04 30.0 +3.0
MDJ AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,173nm,4.9s
MDJ LR LR
comp=N,162nm,35.1s
MDJ LR LR
comp=E,364nm,27.5s
MDJ LR LR
comp=Z,476nm,21.1s
MDJ Mudanjiang 78.02 328 PFAKE 07 49 40.0 +8.3
MDJ LR LR
comp=Z,2µm,20.0s,MS5.4
MAW Mawson 78.39 201 P **P** **07 49 33.0 -0.5**
comp=Z,13nm,1.0s,mb4.8,baz=106,slow=6.2,SNR=11
MAW LR LR 08 23 13.2
comp=Z,704nm,18.2s,MS5.0,baz=102,slow=35
MAW Mawson 78.39 201 *e*P **P** **07 49 32.8 -0.7**
comp=Z,26nm,1.2s,mb5.0
MAW LR LR
comp=Z,1µm,20.0s,MS5.1
MAW Mawson 78.39 201 *e*P **P** **07 49 32.8 -0.7**
MAW pmax pmax
comp=Z,26nm,1.2s
MAW MLR MLR
comp=Z,1µm,20.0s
HABR Khabarovsk 78.51 334 *e*P **P** **07 49 32.7 -1.6**
HABR *e* 07 49 41.2
HABR *e**PP pP 07 49 42.8 +4.3
HABR *e*PPP 07 54 18.0
HABR *e**SS sS 07 59 44.2 +7.1
HABR *e* 07 59 50.2
HABR *e*SS SS 08 04 30.9 -3.3
HABR *e*SSS 08 07 57.0
KLR Kul'dur 80.47 333 *e*P **P** **07 49 43.0 -2.0**
GYA Guiyang 81.90 302 *e*P **P** **07 49 53.7 +0.6**
GYA AP pP 07 50 05.8 +8.4
GYA XP sP 07 50 10.4 +11
GYA PP PP 07 53 02.9 +2.0
GYA S S 08 00 02.7 -4.1
GYA SKS 08 00 09.6
GYA XS sS 08 00 22.4 +8.6
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.2
GYA AMB AMB
comp=Z,130nm,5.7s
GYA LR LR
comp=N,560nm,21.7s,MS5.1
GYA LR LR
comp=E,640nm,20.0s,MS5.1
GYA LR LR
comp=Z,530nm,20.4s,MS4.9
BJT Baijiatuau 82.43 318 PFAKE 07 50 10.0 +14
BJT LR LR
comp=Z,3µm,19.0s,MS5.7
BJI Beijing 82.44 318 P **P** **07 49 56.0 +0.4**
BJI S S 08 00 12.6 +0.8
BJI AMB AMB
comp=Z,6.0nm,0.7s,mb4.6
BJI AMB AMB
comp=Z,221nm,5.0s
BJI LR LR
comp=N,417nm,19.5s,MS5.0
BJI LR LR
comp=E,459nm,21.0s,MS5.0
BJI LR LR
comp=Z,621nm,24.8s,MS4.9
BJI Beijing 82.44 318 P **P** **07 49 56.0 +0.4**
comp=Z,6.0nm,0.7s,mb4.6
BJI S S 08 00 12.6 +0.8
BJI SS SS 08 05 26.1 -7.3
BJI LR LR
comp=Z,620nm,24.8s,MS4.9
SNCC San Nicolas Is 82.60 50 PFAKE 07 50 10.0 +13
SNCC LR LR
comp=Z,884nm,21.0s,MS5.1
PMSA Palmer Station 82.67 158 PFAKE 07 50 10.0 +13
PMSA LR LR
comp=Z,809nm,21.0s,MS5.1
MCCM Marconi Confer 82.97 44 PFAKE 07 50 10.0 +12
MCCM LR LR
comp=Z,952nm,20.0s,MS5.2
SAO San Andreas Ge 83.15 46 PFAKE 07 50 10.0 +11
SAO LR LR
comp=Z,860nm,19.0s,MS5.1
PKD Parkfield 83.32 47 ⇓P **P** **07 49 59.6 -0.7**
baz=84
HOPS Hopland 83.32 44 PFAKE 07 50 10.0 +10
HOPS LR LR
comp=Z,2µm,20.0s,MS5.4
KDAK Kodiak Island 83.46 17 PFAKE 07 50 10.0 +10
KDAK LR LR
comp=Z,1µm,20.0s,MS5.2
MNRC McLaughlin Nat 83.66 44 ⇓P **P** **07 50 02.7 +0.7**
baz=84
GASB Alder Springs 83.92 43 ⇓P **P** **07 50 03.6 +0.4**
baz=84
DECC Green Verdugo 83.97 50 ⇓P **P** **07 50 03.8 +0.2**
baz=84
ARVC Arvin 84.07 49 ⇓P **P** **07 50 04.6 +0.4**
baz=84
MWC Mount Wilson 84.15 50 PFAKE 07 50 20.0 +15
MWC LR LR
comp=Z,940nm,19.0s,MS5.2
109C Camp Elliot, M 84.16 51 ⇑P **P** **07 50 04.8 +0.1**
baz=84,SNR=5.2
S05C Merced 84.21 46 ⇓P **P** **07 50 05.5 +0.7**
baz=84
SYO Syowa Base 84.22 195⇑ *e*P **P** **07 50 01.0 -3.4**
SYO Syowa Base 84.22 195⇑ *e*PcP PcP 07 50 04.6 -3.6
VES Vestal, Richgr 84.26 48 ⇓P **P** **07 50 05.2 0.0**
baz=84
KMI Kunming 84.41 300 P **P** **07 50 06.7 +0.6**
KMI AP pP 07 50 16.5 +6.1
KMI XP sP 07 50 20.5 +8.6
KMI PP PP 07 53 22.9 +1.4
KMI S S 08 00 28.5 -3.9
KMI XS sS 08 00 47.4 +8.0
KMI SS SS 08 06 01.9 -1.3
KMI AMB AMB
comp=Z,9.0nm,1.3s,mb4.7
KMI AMB AMB
comp=Z,103nm,3.9s
KMI LR LR
comp=N,178nm,19.9s,MS4.7
KMI LR LR
comp=E,238nm,18.5s,MS4.7
KMI LR LR
comp=Z,262nm,21.2s,MS4.6
KMI Kunming 84.41 300 P **P** **07 50 06.7 +0.6**
comp=Z,9.0nm,1.3s,mb4.7
KMI pP pP 07 50 16.5 +6.1
KMI sP sP 07 50 20.5 +8.6
KMI PP PP 07 53 22.9 +1.4
KMI PPP 07 55 19.9
KMI S S 08 00 28.5 -3.9
KMI sS sS 08 00 47.4 +8.0
KMI SS SS 08 06 01.9 -1.3
KMI SSS 08 09 31.9
KMI LR LR
comp=Z,260nm,21.2s,MS4.6
KMI Kunming 84.41 300 P **P** **07 50 06.7 +0.6**
KMI *PP pP 07 50 16.5 +6.1
KMI *SP sP 07 50 20.5 +8.6
KMI 07 53 22.9
KMI PPP 07 55 19.9
KMI S S 08 00 28.5 -3.9
KMI SS SS 08 06 01.9 -1.3
KMI SSS 08 09 31.9
KMI pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
KMI MLR MLR
comp=Z,260nm,21.2s,MS4.6
BFSC Mount Baldy St 84.44 50 ⇓P **P** **07 50 05.5 -0.6**
baz=85
MURC Murrieta 84.44 51 ⇓P **P** **07 50 05.4 -0.7**
baz=85,SNR=5.1
T06C Millerton Lake 84.45 47 ⇑P **P** **07 50 05.5 -0.5**
baz=85
EDW2 Edwards Air Fo 84.53 49 ⇑P **P** **07 50 05.9 -0.6**
baz=85,SNR=11
OHCM Honcut 84.53 44 *e*P **P** **07 50 05.1 -1.3**
CMB Columbia Colle 84.55 46 *e*P **P** **07 50 05.7 -0.8**
comp=Z,40nm,1.5s,mb5.3
CMB LR LR
comp=Z,855nm,21.0s,MS5.1
CMB Columbia Colle 84.55 46 *e*P **P** **07 50 05.7 -0.8**
CMB pmax pmax
comp=Z,40nm,1.5s,mb5.3
CMB MLR MLR
comp=Z,855nm,21.0s,MS5.1
CMB Columbia Colle 84.55 46 ⇑P **P** **07 50 05.7 -0.8**
baz=85
WDC Whiskeytown Da 84.55 43 *e*P **P** **07 50 06.5 +0.1**
comp=Z,29nm,1.4s,mb5.2
WDC *es*P sP 07 50 22.8 +11
WDC LR LR
comp=Z,2µm,20.0s,MS5.4
WDC Whiskeytown Da 84.55 43 *e*P **P** **07 50 06.6 +0.1**
WDC *e**SP sP 07 50 22.8 +11
WDC pmax pmax
comp=Z,29nm,1.4s,mb5.2
WDC MLR MLR
comp=Z,2µm,20.0s,MS5.4
WDC Whiskeytown Da 84.55 43 ⇑P **P** **07 50 06.1 -0.4**
baz=85
ISA Isabella 84.59 48 *e*P **P** **07 50 06.7 -0.2**
comp=Z,26nm,1.1s,mb5.3
ISA LR LR
comp=Z,997nm,19.0s,MS5.2
ISA Isabella 84.59 48 *e*P **P** **07 50 06.7 -0.1**
ISA pmax pmax
comp=Z,26nm,1.1s,mb5.3
ISA MLR MLR
comp=Z,997nm,19.0s,MS5.2
ISA Isabella 84.59 48 P **P** **07 50 07.0 +0.2**
baz=85,SNR=20
ORV Oroville 84.64 44 ⇓P **P** **07 50 06.7 -0.3**
baz=85
MONP Monument Peak 84.66 52 ⇑P **P** **07 50 06.8 -0.4**
baz=85,SNR=11
LAVA Lava Cap Winer 84.70 45 ⇓P **P** **07 50 07.4 +0.1**
baz=85
CM31 Chiang Mai Arr 84.71 292 PFAKE 07 50 20.0 +12
CM31 LR LR
comp=Z,927nm,20.0s,MS5.2
CMAR Chiang Mai Arr 84.71 292 P **P** **07 50 08.7 +0.9**
comp=Z,15nm,1.2s,mb5.0,baz=121,slow=3.6,SNR=29
DVTC Desert V Tower 84.78 52 ⇑P **P** **07 50 07.1 -0.7**
baz=85
M02C Callahan 84.82 42 ⇑P **P** **07 50 07.8 0.0**
baz=85
CHTO Chiang Mai 84.86 292 *e*P **P** **07 50 08.2 -0.4**
comp=Z,11nm,0.8s,mb5.0
CHTO LR LR
comp=Z,710nm,20.0s,MS5.0
CHTO Chiang Mai 84.86 292 *e*P **P** **07 50 08.2 -0.3**
CHTO pmax pmax
comp=Z,11nm,0.8s,mb5.0
CHTO MLR MLR
comp=Z,710nm,20.0s,MS5.0
KCC Kaiser Creek 84.88 47 ⇓P **P** **07 50 07.9 -0.4**
baz=85
PFO Pinyon Flat Ob 84.99 51 *e*P **P** **07 50 08.8 0.0**
comp=Z,5.7nm,0.9s,mb4.7
PFO LR LR
comp=Z,937nm,20.0s,MS5.2
PFO Pinyon Flat Ob 84.99 51 *e*P **P** **07 50 08.8 -0.1**
PFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
PFO MLR MLR
comp=Z,937nm,20.0s,MS5.2
PFO Pinyon Flat Ob 84.99 51 ⇑P **P** **07 50 08.6 -0.2**
baz=85
YBH Yreka Blue Hor 85.10 42 PFAKE 07 50 20.0 +11
YBH LR LR
comp=Z,2µm,19.0s,MS5.4
YBH Yreka Blue Hor 85.10 42 ⇑P **P** **07 50 09.5 +0.3**
baz=85
SWSC Sam W. Stewart 85.14 52 ⇓P **P** **07 50 10.1 +0.5**
baz=85,SNR=7.1
M03C McCloud 85.20 42 ⇓P **P** **07 50 10.5 +0.8**
baz=85
O05C Quincy 85.24 44 ⇓P **P** **07 50 10.1 +0.1**
baz=85
LPIG La Paz 85.33 62 LR LR 08 19 39.3
comp=Z,902nm,20.0s,MS5.2,baz=183,slow=30
O04C Chester 85.33 43 ⇓P **P** **07 50 11.0 +0.6**
baz=86,SNR=7.9
MLAC Mammoth Lakes 85.37 47 ⇑P **P** **07 50 10.9 +0.2**
baz=86
MTUM Tungsten Hills 85.41 47 *e*P **P** **07 50 11.1 +0.2**
R06C Coleville 85.43 46 ⇑P **P** **07 50 11.3 +0.4**
baz=86,SNR=9.7
HUMO Hull Mountain 85.44 41 PFAKE 07 50 20.0 +9.1
HUMO LR LR
comp=Z,2µm,20.0s,MS5.4
HUMO Hull Mountain 85.44 41 ⇓P **P** **07 50 10.7 -0.2**
baz=86
MPMC Manual Prospec 85.48 48 ⇓P **P** **07 50 10.8 -0.4**
baz=86,SNR=14
BELC Belle Mtn. 85.51 51 ⇓P **P** **07 50 10.8 -0.7**
baz=86,SNR=16
DAC Darwin (Calif) 85.52 48 PFAKE 07 50 20.0 +8.5
DAC LR LR
comp=Z,974nm,20.0s,MS5.2
GSC Goldstone 85.58 49 *e*P **P** **07 50 11.8 0.0**
comp=Z,17nm,1.1s,mb5.2
GSC LR LR
comp=Z,1µm,19.0s,MS5.3
GSC Goldstone 85.58 49 *e*P **P** **07 50 11.8 0.0**
GSC pmax pmax
comp=Z,17nm,1.1s,mb5.2
GSC MLR MLR
comp=Z,1µm,19.0s,MS5.3
GSC Goldstone 85.58 49 *e*P **P** **07 50 11.3 -0.5**
baz=86,SNR=10.0
HEC Hector,Ludlow 85.68 50 ⇑P **P** **07 50 12.4 +0.1**
baz=86,SNR=7.2
BC3 Big Chuckw Mtn 85.74 51 ⇓P **P** **07 50 11.5 -1.1**
baz=86,SNR=6.5
HHC Hu-ho-hao-te 85.79 317 *e*P **P** **07 50 14.0 +1.3**
HHC AP pP 07 50 24.2 +7.2
HHC XP sP 07 50 27.8 +9.3
HHC PP PP 07 53 35.7 +3.2
HHC SKS 08 00 33.0
HHC S S 08 00 43.8 -1.6
HHC XS sS 08 01 01.5 +9.1
HHC SS SS 08 06 26.8 +3.8
HHC AMB AMB
comp=Z,15nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,189nm,6.3s
HHC LR LR
comp=N,229nm,19.6s,MS4.7
HHC LR LR
comp=E,265nm,22.6s,MS4.7
HHC LR LR
comp=Z,558nm,26.8s,MS4.8
GLA Glamis 85.90 52 *e*P **P** **07 50 14.1 +0.7**
comp=Z,31nm,1.0s,mb5.5
GLA LR LR
comp=Z,708nm,19.0s,MS5.1
GLA Glamis 85.90 52 *e*P **P** **07 50 14.1 +0.7**
GLA pmax pmax
comp=Z,31nm,1.0s,mb5.5
GLA MLR MLR
comp=Z,708nm,19.0s,MS5.1
GLA Glamis 85.90 52 ⇑P **P** **07 50 14.0 +0.6**
baz=86,SNR=9.3
GRAC Grapevine Rang 86.05 48 ⇓P **P** **07 50 14.5 +0.4**
baz=86,SNR=10.0
O06A Flanigan 86.06 44 ⇓P **P** **07 50 14.1 +0.1**
baz=86,SNR=5.9
PAHR Pah Rah Range 86.10 45 *e*P **P** **07 50 14.4 +0.1**
comp=Z,9.3nm,0.9s,mb5.0
HIA Hailar 86.11 327 PFAKE 07 50 30.0 +16
HIA LR LR
comp=Z,2µm,21.0s,MS5.4
FURC Furnace Creek, 86.13 48 ⇑P **P** **07 50 14.0 -0.5**
baz=86,SNR=6.0
GMRC Granite Mounta 86.14 50 ⇓P **P** **07 50 14.6 +0.1**
baz=86,SNR=7.4
NVAR Mina Array Bea 86.15 46 P **P** **07 50 14.2 -0.3**
comp=Z,6.8nm,1.1s,mb4.8,baz=223,slow=7.2,SNR=22
SEY Seymchan 86.17 350⇑ *e*P **P** **07 50 14.7 +0.7**
IRM Iron Mountain 86.20 51 ⇓P **P** **07 50 15.0 +0.1**
baz=86,SNR=16
CD2 Chengdu 86.25 305 *e*P **P** **07 50 15.8 +0.6**
CD2 AP pP 07 50 26.4 +6.9
CD2 XP sP 07 50 30.2 +9.2
CD2 PP PP 07 53 39.3 +2.9
CD2 SKS 08 00 36.5
CD2 S S 08 00 46.8 -3.5
CD2 XS sS 08 01 04.4 +7.0
CD2 SS SS 08 06 29.5 -0.6
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.5
CD2 AMB AMB
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,330nm,19.0s,MS4.8
CD2 LR LR
comp=E,220nm,19.0s,MS4.8
CD2 LR LR
comp=Z,210nm,17.8s,MS4.6
SHOC Shoshone 86.25 49 ⇑P **P** **07 50 14.5 -0.6**
baz=86,SNR=7.6
TUQ Turquoise Moun 86.27 50 ⇑P **P** **07 50 15.2 -0.1**
baz=86,SNR=9.3
N06A Buffalo Meadow 86.36 44 ⇑P **P** **07 50 15.6 +0.1**
baz=87,SNR=6.6
COR Corvallis 86.37 39 PFAKE 07 50 30.0 +15
COR LR LR
comp=Z,2µm,20.0s,MS5.5
SLKM Skilak Lake 86.43 16 *e*P **P** **07 50 14.4 -0.9**
Y12C Blythe 86.46 52 ⇑P **P** **07 50 16.1 -0.1**
baz=87,SNR=7.2
U10A Ash Meadows, A 86.47 49 ⇑P **P** **07 50 17.0 +0.8**
baz=87,SNR=8.8
S09A Goldfield 86.51 47 ⇑P **P** **07 50 15.6 -0.7**
baz=87
113A Mohawk Valley, 86.55 53 ⇑P **P** **07 50 16.5 -0.2**
baz=87,SNR=8.7
Q08A Gabbs 86.62 46 ⇓P **P** **07 50 17.1 +0.3**
baz=87,SNR=7.3
O07A Toulon 86.67 44 ⇑P **P** **07 50 16.4 -0.7**
baz=87,SNR=8.2
LDFC Landfair 86.68 50 *e*P **P** **07 50 17.4 +0.2**
comp=Z,47nm,1.1s,mb5.6
MOD Modoc 86.69 42 *e*P **P** **07 50 16.4 -0.7**
comp=Z,14nm,0.9s,mb5.2
MOD LR LR
comp=Z,2µm,19.0s,MS5.4
MOD Modoc 86.69 42 ⇑P **P** **07 50 17.1 0.0**
baz=87
TPH Tonopah 86.69 47 PFAKE 07 50 30.0 +13

TPH LR LR
comp=Z,728nm,22.0s,MS5.0
K05A Summer Lake 86.77 41 ⇓P P 07 50 17.3 -0.1
baz=87
TPNV Topopah Spring 86.80 48 *eP* **P 07 50 17.9 +0.2**
comp=Z,13nm,1.0s,mb5.1
TPNV LR LR
comp=Z,1μm,19.0s,MS5.3
TPNV Topopah Spring 86.80 48 *eP* **P 07 50 17.9 +0.2**
TPNV pmax pmax
comp=Z,13nm,1.0s,mb5.1
TPNV MLR MLR
comp=Z,1μm,19.0s,MS5.3
TPNV Topopah Spring 86.80 48 ⇑P P 07 50 17.8 +0.1
baz=87,SNR=14
V11A Goodsprings 86.82 50 ⇓P P 07 50 18.1 +0.2
baz=87,SNR=7.3
R09A Tonopah 86.88 47 ⇑P P 07 50 17.8 -0.3
baz=87
N07B Gerlach 86.94 44 ⇑P P 07 50 18.5 +0.2
baz=87
SNAA Sanae 86.99 181 *eP* **P 07 50 15.7 -2.5**
SNAA *e* 07 50 33.9
SNAA Sanae 86.99 181 *eP* **P 07 50 15.8 -2.3**
comp=Z,12nm,1.1s,mb5.0
SNAA Sanae 86.99 181 ⇑*i*P P 07 50 16.0 -2.2
Y13A Salome 87.00 52 ⇓P P 07 50 18.8 0.0
baz=87,SNR=10
PDMCI Parker Dam,Lak 87.00 51 ⇓P P 07 50 18.8 0.0
baz=87,SNR=7.4
S10A Tonopah Range, 87.04 47 ⇑P P 07 50 18.6 -0.3
baz=87,SNR=19
RC01 Rabbit Creek A 87.05 16 *eP* **P 07 50 16.4 -1.9**
comp=Z,26nm,1.2s,mb5.3
MAIT Maitri 87.18 185 *eP* **P 07 50 16.4 -2.7**
NVL N'lazarevskaya 87.18 185 P **P 07 50 13.6 -5.5**
NVL pmax pmax
comp=Z,14nm,1.2s,mb5.1
NVL MLR MLR
comp=N,411nm,19.0s,MS4.9
NVL MLR MLR
comp=E,251nm,19.0s,MS4.9
NVL MLR MLR
comp=Z,1μm,19.0s,MS5.3
O08A Rochester Mine 87.21 45 ⇑P P 07 50 19.9 +0.2
baz=87,SNR=6.7
L07A Adell 87.36 43 ⇓P P 07 50 20.4 +0.1
baz=88
VNA3 Neumayer Olymp 87.36 178 *eP* **P 07 50 18.9 -1.1**
VNA3 *e* 07 50 32.7
VNA3 *e* 07 50 48.1
X13A Yucca 87.37 51 ⇑P P 07 50 20.8 +0.2
baz=88,SNR=7.4
R10A Warm Springs 87.43 47 ⇓P P 07 50 21.3 +0.5
baz=88,SNR=9.8
Z14A Wintersburg 87.44 53 P **P 07 50 21.6 +0.6**
baz=88,SNR=7.4
N08A GE Springer Mi 87.48 44 ⇑P P 07 50 21.0 0.0
baz=88,SNR=6.1
S11A Rachel 87.49 48 ⇓P P 07 50 20.8 -0.2
baz=88
J06A Christmas Vall 87.51 41 ⇓P P 07 50 20.6 -0.4
baz=88
W13A Hualapai Mount 87.57 51 ⇓P P 07 50 20.8 -0.8
baz=88
Q10A Clear Creek Ra 87.63 47 ⇑P P 07 50 22.6 +0.8
baz=88,SNR=5.9
PMR Palmer 87.64 16 PFAKE 07 50 30.0 +8.8
PMR LR LR
comp=Z,568nm,21.0s,MS5.0
T11A Corn Creek, Al 87.65 48 ⇓P P 07 50 21.8 -0.1
baz=88,SNR=12
Y14A Wickenburg 87.66 52 P **P 07 50 22.2 +0.2**
baz=88,SNR=7.0
M08A Happy Creek Ra 87.67 44 ⇑P P 07 50 22.5 +0.7
baz=88
VNA2 Neumayer--Watz 87.72 179 *eP* **P 07 50 19.1 -2.6**
baz=154,slow=2.9
VNA2 *e* pP 07 50 21.1 -4.9
VNA2 *e* 07 50 25.1
VNA2 *e* 07 50 34.4
VNA2 *e* 07 50 50.3
U12A Valley of Fire 87.74 49 ⇑P P 07 50 22.4 0.0
baz=88
K07A Rock Creek Ran 87.77 42 ⇓P P 07 50 21.8 -0.5
baz=88
O09A Fish Creek Ran 87.78 45 ⇓P P 07 50 21.8 -0.7
baz=88,SNR=5.9
V13A Grand Canyon W 87.86 50 ⇑P P 07 50 22.8 -0.1
baz=88,SNR=7.7
BMN Battle Mountai 87.89 45 *eP* **P 07 50 23.1 +0.1**
comp=Z,13nm,1.0s,mb5.1
BMN LR LR
comp=Z,783nm,20.0s,MS5.1
BMN Battle Mountai 87.89 45 *eP* **P 07 50 23.1 +0.2**
BMN pmax pmax
comp=Z,13nm,1.0s,mb5.1
BMN MLR MLR
comp=Z,783nm,20.0s,MS5.1
N09A Rock Creek Ran 87.91 44 ⇓P P 07 50 23.2 +0.2
baz=88
R11A Troy Canyon, C 87.95 47 ⇑P P 07 50 23.4 +0.1
baz=88
P10A Eureka 87.98 46 ⇓P P 07 50 23.2 -0.2
baz=88
VNA1 Neumayer--Stat 87.98 179 *eP* **P 07 50 22.2 -0.8**
VNA1 *e* pP 07 50 25.2 -2.1
VNA1 *e* 07 50 35.7
X14A Yava 87.99 52 ⇑P P 07 50 23.1 -0.5
baz=88,SNR=14
116A Eloy 88.00 54 ⇑P P 07 50 22.5 -1.2
baz=88
WVOR Wild Horse Val 88.02 43 *eP* **P 07 50 19.0 -4.5**
comp=Z,45nm,1.7s,mb5.4
WVOR LR LR
comp=Z,2μm,20.0s,MS5.5
WVOR Wild Horse Val 88.02 43 *eP* **P 07 50 19.0 -4.5**
WVOR pmax pmax
comp=Z,45nm,1.7s,mb5.4
WVOR MLR MLR
comp=Z,2μm,20.0s,MS5.5
L08A Fields 88.08 43 ⇓P P 07 50 24.5 +0.7
baz=88,SNR=12
S12A Delamar Landin 88.09 48 ⇑P P 07 50 24.5 +0.5
baz=88
J07A Hines 88.10 42 ⇓P P 07 50 24.2 +0.4
baz=88
Q11A Duckwater 88.14 47 ⇓P P 07 50 24.4 +0.3
baz=88,SNR=9.6
Y15A Casa Rosa Ranc 88.17 52 ⇓P P 07 50 23.9 -0.5
baz=88,SNR=9.9
W14A Seligman 88.20 51 ⇓P P 07 50 23.6 -1.0
baz=88,SNR=10
H06A Lindquist Farm 88.21 40 ⇑P P 07 50 23.7 -0.7
baz=88
M09A Marrel Ranch, 88.25 44 ⇓P P 07 50 25.3 +0.7
baz=88,SNR=7.0
K08A Mann Creek Ran 88.27 42 ⇓P P 07 50 25.1 +0.4
baz=88,SNR=9.0
O10A Cortez Mining, 88.30 45 ⇑P P 07 50 25.6 +0.8
baz=88
217A Green Valley 88.31 55 ⇓P P 07 50 25.4 +0.2
baz=88,SNR=5.4
V14A Boquillas Ranc 88.38 51 ⇓P P 07 50 25.9 +0.5
baz=89,SNR=17
L09A Wilkinson Ranc 88.42 43 ⇓P P 07 50 26.4 +1.0
baz=89,SNR=13
T13A Saint George 88.47 49 ⇑P P 07 50 25.9 +0.2
baz=89,SNR=6.4
X15A Humboldt 88.48 52 ⇑P P 07 50 25.7 -0.2
baz=89,SNR=16
SIT Sitka 88.55 24 PFAKE 07 50 40.0 +14
SIT LR LR
comp=Z,1μm,21.0s,MS5.3
Z16A Peralta Trail, 88.56 53 ⇓P P 07 50 26.6 +0.4
baz=89,SNR=6.9
TUC Tucson 88.58 54 *eP* **P 07 50 26.1 -0.3**
comp=Z,5.7nm,1.0s,mb4.9
TUC LR LR
comp=Z,768nm,20.0s,MS5.1
TUC Tucson 88.58 54 *eP* **P 07 50 26.1 -0.3**
TUC pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
TUC MLR MLR
comp=Z,768nm,20.0s,MS5.1
H07A Lands Inn, Kim 88.59 40 ⇓P P 07 50 26.0 -0.2
baz=89

LZH Lanzhou 88.60 310 *eP* **P 07 50 26.8 +0.4**
LZH AP pP 07 50 35.8 +5.1
LZH XP sP 07 50 40.0 +7.8
LZH AMB AMB
comp=Z,32nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,120nm,4.0s
LZH LR LR
comp=N,200nm,13.2s
LZH LR LR
comp=Z,401nm,15.6s,MS4.9
LZH Lanzhou 88.60 310 *eP* **P 07 50 26.8 +0.4**
comp=Z,32nm,1.0s,mb5.6
LZH pP pP 07 50 35.8 +5.1
LZH sP sP 07 50 40.0 +7.8
LZH LR LR
comp=Z,400nm,15.6s,MS4.9
D05A Enumclaw 88.60 37 ⇓P P 07 50 26.6 +0.5
baz=89
J08A Circle Bar Ran 88.61 42 ⇑P P 07 50 25.8 -0.4
baz=89,SNR=5.2
R12A Pony Springs, 88.61 48 ⇑P P 07 50 26.4 0.0
baz=89,SNR=8.2
117A Oracle 88.73 54 ⇑P P 07 50 26.5 -0.6
baz=89,SNR=5.5
K09A Rome 88.73 43 ⇑P P 07 50 27.3 +0.4
baz=89,SNR=18
Y16A Circle Bar Ran 88.76 53 ⇑P P 07 50 27.3 +0.1
baz=89,SNR=12
S13A Holt Ranch, En 88.77 49 ⇑P P 07 50 27.4 +0.3
baz=89,SNR=7.4
O11A Cowboy Ranch, 88.78 46 ⇓P P 07 50 27.3 +0.1
baz=89,SNR=15
318A Bisbee 88.80 56 ⇑P P 07 50 26.5 -1.0
baz=89,SNR=7.7
Q12A Willow Creek R 88.80 47 ⇓P P 07 50 26.5 -0.8
baz=89,SNR=9.3
E06A Yakima 88.82 38 ⇓P P 07 50 27.4 +0.2
baz=89
I08A Drewsey 88.84 41 ⇓P P 07 50 27.0 -0.3
baz=89
G07A Ruggs Ranch, H 88.89 40 ⇑P P 07 50 27.8 +0.3
baz=89
M10A I.L. Ranch, Tu 88.89 44 P **P 07 50 28.4 +0.7**
baz=89,SNR=18
TRF Thorofare Moun 88.93 15 *eP* **P 07 50 26.9 -0.4**
comp=Z,19nm,1.2s,mb5.3
P12A McGill 88.96 47 ⇓P P 07 50 28.4 +0.4
baz=89
R13A O'Grain Ranch, 88.98 48 ⇓P P 07 50 28.7 +0.6
baz=89
218A Dragoon 88.99 55 ⇑P P 07 50 28.9 +0.5
baz=89,SNR=5.1
X16A Lo Mia Camp, P 89.03 52 ⇓P P 07 50 28.9 +0.4
baz=89,SNR=20
J09A Fry Pan Ranch, 89.05 42 P **P 07 50 29.3 +1.0**
baz=89,SNR=21
C05A Tolt Reservoir 89.06 37 ⇓P P 07 50 28.5 +0.2
baz=89
T14A Hurricane 89.07 49 ⇑P P 07 50 29.4 +0.8
baz=89
A04A Legoe Bay, Lum 89.08 36 ⇓P P 07 50 29.0 +0.7
baz=89
F07A Phinny Hill Vi 89.08 39 ⇓P P 07 50 28.3 -0.1
baz=89
H08A Prairie City 89.10 41 ⇓P P 07 50 28.6 0.0
baz=89
CCUT Cedar City 89.10 49 *eP* **P 07 50 29.3 +0.6**
V15A Kaibab Nationa 89.14 51 ⇓P P 07 50 29.3 +0.3
baz=89,SNR=12
Y17A Roosevelt 89.15 53 ⇑P P 07 50 28.7 -0.4
baz=89,SNR=6.4
ARUT Antelope Range 89.16 49 *eP* **P 07 50 28.8 -0.2**
L10A Juniper Basin 89.22 44 P **P 07 50 29.6 +0.4**
baz=89,SNR=21
D06A Cle Elum 89.26 38 ⇑P P 07 50 29.6 +0.4
baz=90
W16A Flagstaff 89.28 52 ⇓P P 07 50 30.0 +0.4
baz=89,SNR=12
WRAK Wrangell Islan 89.29 26 PFAKE 07 50 40.0 +11
WRAK LR LR
comp=Z,794nm,20.0s,MS5.1
Q13A Wheeler Ranch, 89.31 47 ⇓P P 07 50 29.3 -0.3
baz=90,SNR=8.1
K10A MacKenzie Ranc 89.31 43 ⇑P P 07 50 29.8 +0.2
baz=90,SNR=14
319A Douglas 89.31 56 ⇑P P 07 50 30.7 +0.8
baz=90,SNR=8.0
G08A Pilot Rock 89.33 40 ⇓P P 07 50 29.2 -0.4
baz=90,SNR=6.7
M11A Holland Ranch, 89.33 45 ⇓P P 07 50 30.8 +1.1
baz=90,SNR=15
S14A Cedar City 89.33 49 ⇑P P 07 50 30.0 +0.2
baz=90
U15A North Rim 89.33 50 ⇑P P 07 50 29.9 0.0
baz=90,SNR=22
118A Homack Ranch, 89.34 54 ⇑P P 07 50 30.0 0.0
baz=90,SNR=8.2
ELK Elko 89.36 45 *eP* **P 07 50 29.5 -0.3**
comp=Z,18nm,1.1s,mb5.3
ELK LR LR
comp=Z,980nm,22.0s,MS5.2
ELK Elko 89.36 45 *eP* **P 07 50 29.5 -0.3**
ELK pmax pmax
comp=Z,18nm,1.1s
ELK MLR MLR
comp=Z,980nm,22.0s
I09A Lost Marbles R 89.38 42 ⇓P P 07 50 30.0 +0.1
baz=90,SNR=7.1
O12A Currie 89.45 46 ⇓P P 07 50 30.4 +0.1
baz=90,SNR=8.9
X17A Forest Lakes 89.47 53 ⇑P P 07 50 30.9 +0.3
baz=90,SNR=12
E07A Sunnyside 89.48 39 ⇓P P 07 50 30.9 +0.6
baz=90
MCK McKinley 89.49 15 *eP* **P 07 50 30.3 +0.4**
comp=Z,7.3nm,1.0s,mb5.0
MCK McKinley 89.49 15 *eP* **P 07 50 30.3 +0.4**
MCK pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
N12A Clover Valley, 89.54 45 ⇑P P 07 50 31.1 +0.3
baz=90,SNR=19
T15A Red Dirt Ranch 89.54 50 P **P 07 50 31.6 +0.7**
baz=90,SNR=10
RSW Rattlesnake Hi 89.54 39 *eP* **P 07 50 31.4 +0.8**
P13A Bates Ranch, G 89.55 47 ⇑P P 07 50 31.0 +0.2
baz=90,SNR=20
HAWA Hanford 89.58 39 *eP* **P 07 50 30.5 -0.2**
comp=Z,16nm,1.0s,mb5.3
HAWA LR LR
comp=Z,1μm,20.0s,MS5.4
WUAZ Wupatki 89.58 51 *eP* **P 07 50 31.4 +0.4**
comp=Z,16nm,1.1s,mb5.3
WUAZ LR LR
comp=Z,768nm,22.0s,MS5.1
WUAZ Wupatki 89.58 51 ⇑P P 07 50 31.8 +0.7
baz=90,SNR=12
219A White Tail Can 89.60 55 ⇓P P 07 50 31.6 +0.4
baz=90,SNR=8.5
BILL Bilibino 89.61 357 PFAKE 07 50 40.0 +10
BILL LR LR
comp=Z,293nm,22.0s,MS4.7
BILL Bilibino 89.61 357 ⇓*i*P P 07 50 29.6 -0.8
BILL *e* 07 50 36.2
BILL pmax pmax
comp=Z,16nm,1.3s,mb5.2
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.5
H2OWA Water 89.64 39 P **P 07 50 32.1 +1.1**
F08A Pendleton 89.71 40 ⇑P P 07 50 31.1 -0.3
baz=90,SNR=5.4
L11A Cat Creek Ranc 89.72 44 ⇓P P 07 50 31.9 +0.4
baz=90,SNR=20
GBL Gable Mountain 89.73 39 P **P 07 50 32.1 +0.6**
ETW Entiat 89.77 38 *eP* **P 07 50 31.7 +0.1**
H09A Durkee 89.79 41 ⇑P P 07 50 31.8 0.0
baz=90,SNR=7.3
Y18A Canyon Day Jun 89.79 53 ⇑P P 07 50 32.2 +0.1
baz=90,SNR=19
Q14A Sevier Lake (B 89.84 48 ⇓P P 07 50 32.3 +0.2
baz=90,SNR=39
K11A Parker Ranch, 89.84 43 ⇑P P 07 50 32.4 +0.3
baz=90,SNR=12
S15A Panguitch 89.86 49 ⇑P P 07 50 32.0 -0.3
baz=90,SNR=8.9
M12A Wells 89.90 45 ⇑P P 07 50 31.5 -0.8
baz=90,SNR=21

O13A Hicks Ranch, I 89.90 46 ⇓P P 07 50 32.6 +0.2
baz=90,SNR=5.4
E08A Dider Farm, El 89.91 39 ⇓P P 07 50 31.9 -0.4
baz=90,SNR=7.4
C07A Waterville 89.97 38 ⇑P P 07 50 31.8 -0.8
baz=90
G09A Cove 90.03 40 ⇓P P 07 50 32.3 -0.6
baz=90,SNR=5.6
WTV Waterville 90.04 38 P **P 07 50 32.9 +0.1**
U16A Tuba City 90.04 51 ⇑P P 07 50 32.9 -0.2
baz=90,SNR=24
N13A Wendover, West 90.10 46 ⇑P P 07 50 33.4 +0.1
baz=90,SNR=18
BMO Blue Mountains 90.10 41 *eP* **P 07 50 33.6 +0.4**
comp=Z,19nm,1.6s,mb5.2
BMO LR LR
comp=Z,1μm,20.0s,MS5.3
BMO Blue Mountains 90.10 41 *eP* **P 07 50 33.6 +0.4**
BMO pmax pmax
comp=Z,19nm,1.6s,mb5.2
BMO MLR MLR
comp=Z,1μm,20.0s,MS5.3
T16A Glen Canyon Da 90.15 50 ⇓P P 07 50 34.0 +0.3
baz=90,SNR=11
R15A Junction 90.17 49 ⇓P P 07 50 33.1 -0.6
baz=90,SNR=5.8
F09A S2 Ranch, Elgi 90.18 40 ⇑P P 07 50 33.6 0.0
baz=90
X18A Snowflake 90.19 53 ⇑P P 07 50 32.4 -1.5
baz=90,SNR=5.7
L12A House Creek Ra 90.19 44 ⇑P P 07 50 33.8 +0.1
baz=90,SNR=25
P14A Drum Mountains 90.26 47 P **P 07 50 34.6 +0.5**
baz=90,SNR=6.4
D08A Wollman Farm, 90.29 39 ⇑P P 07 50 33.7 -0.4
baz=90
MFID Camas Ranch 90.30 43 ⇓P P 07 50 34.0 -0.2
baz=90,SNR=7.8
H10A Noah's Angus R 90.31 41 ⇓P P 07 50 34.1 -0.1
baz=90,SNR=11
B07A Winthrop 90.36 37 ⇑P P 07 50 34.6 +0.3
baz=91
M13A Montello 90.37 45 P **P 07 50 34.7 +0.2**
baz=90,SNR=31
MSU Marysvale 90.38 48 *eP* **P 07 50 34.6 -0.1**
S16A Weppner Ranch, 90.42 49 ⇓P P 07 50 34.4 -0.5
baz=91,SNR=11
G10A Bishop Farm, J 90.44 41 ⇑P P 07 50 34.4 -0.4
baz=91,SNR=9.4
Y19A Nutrioso 90.45 54 ⇓P P 07 50 35.6 +0.4
baz=91,SNR=14
E09A Wood Farm, Sta 90.46 39 ⇑P P 07 50 34.4 -0.4
baz=91
I11A Placerville 90.46 42 ⇓P P 07 50 34.8 -0.2
baz=91,SNR=11
Q15A Fillmore 90.46 48 ⇓P P 07 50 35.3 +0.2
baz=91,SNR=9.2
K12A Draper Farm, C 90.50 44 ⇑P P 07 50 35.2 0.0
baz=91,SNR=12
A07A Ashnola River, 90.53 36 ⇓P P 07 50 35.0 -0.1
baz=91
U17A Shonto 90.58 51 ⇑P P 07 50 35.5 -0.1
baz=91,SNR=21
OD2 Odessa Site #2 90.59 38 *eP* **P 07 50 35.0 -0.4**
C08A Higginbotham F 90.60 38 ⇓P P 07 50 35.2 -0.2
baz=91
X19A St. Johns 90.63 53 ⇑P P 07 50 35.9 0.0
baz=91,SNR=7.4
D09A Jones Farm, Ri 90.65 39 ⇓P P 07 50 35.7 0.0
baz=91,SNR=7.5
T17A Navajo Res., N 90.66 50 ⇓P P 07 50 35.9 -0.1
baz=91,SNR=28
J12A Stokes Ranch, 90.68 43 ⇑P P 07 50 36.2 +0.3
baz=91,SNR=20
COLA College 90.71 15 *eP* **P 07 50 33.0 -2.6**
comp=Z,12nm,1.1s,mb5.1
COLA LR LR
comp=Z,708nm,21.0s,MS5.1
COLA College 90.71 15 ⇑*i*P P 07 50 33.9 -1.7
V18A Ganado 90.72 52 ⇑P P 07 50 36.9 +0.6
baz=91,SNR=8.6
DUG Dugway 90.72 47 *eP* **P 07 50 36.2 0.0**
comp=Z,7.9nm,1.0s,mb5.0
DUG LR LR
comp=Z,591nm,19.0s,MS5.0
DUG Dugway 90.72 47 *eP* **P 07 50 36.2 0.0**
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
DUG MLR MLR
comp=Z,591nm,19.0s,MS5.0
DUG Dugway 90.72 47 ⇑P P 07 50 36.7 +0.4
baz=91,SNR=8.7
F10A Beach Ranch, E 90.72 40 ⇑P P 07 50 35.9 -0.2
baz=91,SNR=7.0
B08A Colville Reser 90.74 37 ⇓P P 07 50 35.8 -0.3
baz=91,SNR=5.3
N14A Grayback Hills 90.78 46 ⇓P P 07 50 35.9 -0.6
baz=91,SNR=7.2
P15A Leamington 90.79 47 ⇑P P 07 50 36.7 +0.1
baz=91,SNR=8.4
H11A Donnelly 90.82 42 ⇑P P 07 50 36.1 -0.4
baz=91,SNR=18
L13A Double Diamond 90.86 45 ⇓P P 07 50 37.1 +0.3
baz=91,SNR=12
YAK Yakutsk 90.92 340 PFAKE 07 50 50.0 +13
YAK LR LR
comp=Z,592nm,19.0s,MS5.0
YAK Yakutsk 90.92 340 *eP* **P 07 50 42.0 +5.4**
YAK pmax pmax
comp=Z,15nm,1.0s,mb5.3
I12A Atlanta 90.92 43 P **P 07 50 37.6 +0.5**
baz=91,SNR=6.1
S17A Black Ridge (B 90.94 50 ⇓P P 07 50 36.6 -0.8
baz=91,SNR=9.4
M14A Sheep Mountain 90.97 45 ⇓P P 07 50 37.2 -0.2
baz=91,SNR=18
O15A The Old Anders 90.99 47 ⇓P P 07 50 37.8 +0.3
baz=91,SNR=8.4
G11A Walters Elk Ra 91.01 41 ⇑P P 07 50 36.7 -0.8
baz=91,SNR=16
K13A Stover Farm, H 91.04 44 ⇑P P 07 50 37.7 +0.1
baz=91,SNR=14
C09A Chrisman Ranch 91.05 38 ⇑P P 07 50 37.7 +0.1
baz=91
E10A Myers Farm, Un 91.05 40 ⇑P P 07 50 37.3 -0.3
baz=91
U18A Rough Rock, Ch 91.08 51 ⇑P P 07 50 37.7 -0.3
baz=91,SNR=17
A08A Turner Farm, O 91.10 37 ⇓P P 07 50 37.8 0.0
baz=91
P16A Fountain Green 91.24 48 ⇓P P 07 50 39.0 +0.4
baz=91
N15A Stansbury Isla 91.24 46 ⇓P P 07 50 38.6 0.0
baz=91,SNR=8.7
D10A Wagner Farm, O 91.25 39 ⇑P P 07 50 38.0 -0.5
baz=91,SNR=5.1
Q16A Castle Valley 91.26 48 ⇑P P 07 50 38.9 +0.2
baz=91,SNR=25
HLID Hailey 91.26 43 *eP* **P 07 50 38.9 +0.2**
comp=Z,4.2nm,0.8s,mb4.8
HLID LR LR
comp=Z,916nm,20.0s,MS5.2
HLID Hailey 91.26 43 ⇓P P 07 50 38.9 +0.2
baz=92,SNR=8.3
L14A Malta 91.30 45 ⇓P P 07 50 39.6 +0.7
baz=92,SNR=6.1
J13A Cove Ranch, Pi 91.34 43 ⇓P P 07 50 39.4 +0.3
baz=92,SNR=11
R17A Hanksville Air 91.36 49 ⇑P P 07 50 38.8 -0.4
baz=92,SNR=18
T18A Mexican Hat 91.39 50 ⇓P P 07 50 39.1 -0.3
baz=92,SNR=53
TMUT Trail Mountain 91.41 48 *eP* **P 07 50 39.9 +0.4**
MPU Maple Canyon 91.44 47 *eP* **P 07 50 40.0 +0.4**
comp=Z,14nm,1.0s,mb5.2
MPU LR LR
comp=Z,2μm,21.0s,MS5.5
H12A Diamond D Ranc 91.46 42 ⇓P P 07 50 39.7 +0.1
baz=92,SNR=12
SPUT South Promonto 91.48 46 *eP* **P 07 50 40.5 +0.8**
HVU Hansel Valley 91.48 45 *eP* **P 07 50 40.0 +0.2**
comp=Z,14nm,1.0s,mb5.2
HVU Hansel Valley 91.48 45 *eP* **P 07 50 40.0 +0.3**
HVU pmax pmax
comp=Z,13nm,1.0s,mb5.2
S18A Hurst Farm, Bl 91.54 50 ⇑P P 07 50 40.1 0.0
baz=92,SNR=8.7
M15A Larsen Ranch, 91.55 46 ⇑P P 07 50 40.0 -0.1

baz=92,SNR=14
K14A Jones Ranch, D 91.58 44 P P 07 50 40.6 +0.4
baz=92,SNR=7.3
O16A Springville 91.62 47 P P 07 50 41.0 +0.6
baz=92,SNR=14
J14A Carey 91.72 44 ⇓P P 07 50 40.6 -0.2
baz=92,SNR=9.1
D11A Klaveano Farm, 91.80 39 ⇓P P 07 50 39.9 -1.2
baz=92
SRU San Rafael 91.80 48 eP P 07 50 41.3 0.0
comp=Z,17nm,0.8s,mb5.4
SRU San Rafael 91.80 48 eP P 07 50 41.3 0.0
SRU pmax pmax
comp=Z,17nm,0.8s,mb5.4
SRU San Rafael 91.80 48 ⇑P P 07 50 41.3 0.0
baz=92,SNR=30
F12A Elk City 91.81 41 ⇓P P 07 50 40.2 -0.9
baz=92
JLU Jordanelle 91.83 47 eP P 07 50 41.7 +0.3
L15A Malad City 91.84 45 ⇓P P 07 50 40.8 -0.6
baz=92,SNR=9.2
H13A Challis 91.85 42 ⇑P P 07 50 41.7 +0.4
baz=92
T19A Beclabito 91.86 51 ⇑P P 07 50 41.7 +0.1
baz=92,SNR=7.6
DAU Daniels Canyon 91.88 47 eP P 07 50 42.5 +0.9
R18A Canyonlands Na 91.92 49 ⇑P P 07 50 42.0 +0.1
baz=92,SNR=23
E12A Beaver Dam Sad 91.94 40 ⇑P P 07 50 42.1 +0.3
baz=92
NEW Newport 91.95 38 PFAKE 07 50 50.0 +8.3
NEW LR LR
comp=Z,860nm,20.0s,MS5.2
N16A Rees Ranch, Co 91.97 47 ⇓P P 07 50 42.3 +0.3
baz=92,SNR=6.3
M16A Huntsville 92.03 46 ⇓P P 07 50 42.7 +0.4
baz=92
I14A Mackay 92.05 43 ⇑P P 07 50 42.6 +0.3
baz=92,SNR=15
K15A Arbon 92.06 45 ⇓P P 07 50 42.8 +0.4
baz=92
Q18A Rafter H Ranch 92.07 49 ⇓P P 07 50 42.5 0.0
baz=92,SNR=13
A10A Northport 92.07 37 ⇓P P 07 50 42.3 0.0
baz=92
G13A Cobalt 92.11 42 ⇑P P 07 50 42.8 +0.2
baz=92
O17A Robinson Place 92.13 47 P P 07 50 43.4 +0.6
baz=92,SNR=43
S19A Harvey Farm, M 92.18 50 ⇑P P 07 50 42.8 -0.3
baz=92,SNR=15
HWUT Hardware Ranch 92.21 46 eP P 07 50 42.8 -0.3
comp=Z,9.3nm,1.1s,mb5.0
HWUT LR LR
comp=Z,901nm,19.0s,MS5.2
P18A Preston Nutter 92.22 48 ⇓P P 07 50 43.0 -0.2
baz=92,SNR=6.4
ULN Ulaanbaatar 92.23 321 PFAKE 07 50 50.0 +7.0
ULN LR LR
comp=Z,3μm,21.0s,MS5.7
ULN Ulaanbaatar 92.23 321 ⇓iP P 07 50 42.1 -0.9
LAZ Ladron 92.23 54 eP P 07 50 43.3 -0.1
LENM Lemitar 92.26 54 eP P 07 50 44.1 +0.6
Y22D IRIS PASSCAL I 92.26 54 ⇓P P 07 50 42.3 -1.2
baz=92
DAWY Dawson 92.31 18 eP P 07 51 41.9 -1.1
R19A Curley Farm, L 92.33 50 ⇑P P 07 50 43.8 0.0
baz=92,SNR=9.2
EGAK Eagle 92.35 17 eP P 07 50 42.2 -0.9
comp=Z,9.8nm,1.0s,mb5.1
EGAK LR LR
comp=Z,653nm,20.0s,MS5.1
D12A Red Ives Fores 92.38 40 ⇓P P 07 50 43.1 -0.7
baz=93
F13A Darby 92.39 41 ⇑P P 07 50 43.1 -0.7
baz=93,SNR=6.3
N17A Moffit Pass 92.40 47 ⇑P P 07 50 43.9 -0.1
baz=93
MVCO Mesa Verde 92.41 51 eP P 07 50 44.3 +0.2
comp=Z,30nm,2.0s,mb5.3
MVCO LR LR
comp=Z,735nm,19.0s,MS5.2
MVCO Mesa Verde 92.41 51 ⇑P P 07 50 43.6 -0.5
baz=93
H14A Leadore 92.43 43 P P 07 50 44.5 +0.4
baz=93,SNR=6.6
J15A Blackfoot 92.46 44 P P 07 50 45.1 +0.9
baz=93,SNR=9.0
L16A Fish Haven 92.48 46 ⇑P P 07 50 44.0 -0.3
baz=93
BNM Barren Site 92.51 54 eP P 07 50 44.9 +0.2
BNM epP pP 07 50 52.6 +3.6
PV10 Paradox Valley 92.52 50 eP P 07 50 44.9 +0.3
LPM Los Pinos Moun 92.58 54 eP P 07 50 45.1 +0.1
SONM Songino Array 92.60 321 P P 07 50 44.1 -0.7
comp=Z,0.6nm,0.5s,mb4.3,baz=134,slow=8.3,SNR=3.1
Q19A Hogan Spring (92.61 49 P P 07 50 45.0 0.0
baz=93,SNR=18
O18A Roosevelt 92.67 48 ⇑P P 07 50 45.9 +0.7
baz=93,SNR=7.0
PV01 Paradox Valley 92.75 50 eP P 07 50 45.4 -0.3
MCMT McKenzie Canyo 92.86 43 eP P 07 50 45.5 -0.5
H15A Lima 92.89 43 ⇓P P 07 50 46.5 +0.4
baz=93,SNR=8.9
TXAR Lajitas Array 92.89 60 P P 07 50 47.0 +0.4
comp=Z,2.8nm,1.0s,mb4.7,baz=221,slow=4.3,SNR=21
TXAR LR LR 08 24 40.6
comp=Z,1μm,19.9s,MS5.3,baz=40,slow=30
TXAR Lajitas Array 92.89 60 P P 07 50 47.0 +0.4
TXAR LR LR 08 24 40.6
PLCA Paso Flores 92.91 136 P P 07 50 46.8 +0.2
comp=Z,3.2nm,1.1s,mb4.7,baz=237,slow=7.3,SNR=3.2
PLCA LR LR 08 22 53.0
comp=Z,488nm,21.4s,MS4.9,baz=83,slow=29
J16A Bone 92.93 44 P P 07 50 47.0 +0.6
baz=93,SNR=12
GTA Gaotai 92.95 311 eP P 07 50 47.3 +0.7
GTA AP pP 07 50 58.4 +7.5
GTA XP sP 07 51 02.2 +10
GTA PP PP 07 54 34.1 +4.5
GTA SKS 08 01 17.3
GTA S S 08 01 49.7 -2.7
GTA XS sS 08 02 06.5 +7.0
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.8
GTA AMB AMB
comp=Z,106nm,5.7s
GTA LR LR
comp=N,2μm,21.3s,MS5.7
GTA LR LR
comp=E,2μm,16.5s,MS5.7
GTA LR LR
comp=Z,3μm,17.1s,MS5.8
ANMO Albuquerque 92.97 54 LR LR 08 26 21.2
comp=Z,622nm,18.2s,MS5.1,baz=69,slow=32
ANMO Albuquerque 92.97 54 eP P 07 50 46.3 -0.4
comp=Z,10.0nm,1.0s,mb5.2
ANMO epP pP 07 50 52.3 +1.3
ANMO LR LR
comp=Z,924nm,22.0s,MS5.2
ANMO Albuquerque 92.97 54 eP P 07 50 46.3 -0.5
ANMO e*PP pP 07 50 52.3 +1.2
ANMO pmax pmax
comp=Z,10.0nm,1.0s
ANMO MLR MLR
comp=Z,924nm,22.0s
ANMO Albuquerque 92.97 54⇑eP P 07 50 47.0 +0.2
AHID Auburn Hatcher 93.04 45 PFAKE 07 51 00.0 +13
AHID LR LR
comp=Z,538nm,21.0s,MS5.0
P19A Cripple Cowboy 93.10 49 ⇑P P 07 50 47.9 +0.6
baz=93,SNR=8.0
MSO Missoula 93.12 40 PFAKE 07 51 00.0 +13
MSO LR LR
comp=Z,777nm,20.0s,MS5.2
RRI2 Red Ridge 93.16 44 eP P 07 50 47.7 +0.3
comp=Z,8.3nm,0.9s,mb5.2
E14A Clinton 93.20 41 ⇑P P 07 50 45.9 -1.6
baz=93
N18A Larsen Ranch, 93.20 47 ⇑P P 07 50 46.5 -1.2
baz=93
DLMT Dillon 93.26 42 eP P 07 50 48.2 +0.4
comp=Z,8.0nm,1.1s,mb5.1
I16A Newdale 93.29 44 ⇑P P 07 50 47.5 -0.5
baz=94,SNR=8.1
O19A Miners Draw (B 93.29 48 ⇑P P 07 50 47.1 -1.1
baz=94,SNR=9.0

EFI East Falkland 93.39 150 PFAKE 07 51 00.0 +11
EFI LR LR
comp=Z,633nm,21.0s,MS5.0
EFI East Falkland 93.39 150⇓iP P 07 50 48.7 +0.2
REDW Red Top Meadow 93.47 45 eP P 07 50 49.2 +0.3
comp=Z,10.0nm,1.1s,mb5.2
F15A Butte 93.55 42 ⇑P P 07 50 48.8 -0.4
baz=94
J17A Brown Place, J 93.56 45 ⇑P P 07 50 50.0 +0.7
baz=94
IMW Indian Meadow 93.65 44 eP P 07 50 50.6 +0.9
comp=Z,8.6nm,1.0s,mb5.1
QLMT Earthquake Lak 93.75 43 eP P 07 50 50.1 0.0
YMR Madison River 93.98 43 PFAKE 07 51 00.0 +8.8
YMR LR LR
comp=Z,928nm,20.0s,MS5.2
BOZ Bozeman (W) 94.00 42 PFAKE 07 51 00.0 +8.8
BOZ LR LR
comp=Z,1μm,19.0s,MS5.4
BOZ Bozeman (W) 94.00 42 ⇑P P 07 50 51.4 +0.2
baz=94
BW06 Boulder Array 94.06 46 PFAKE 07 51 00.0 +8.4
BW06 LR LR
comp=Z,727nm,19.0s,MS5.2
BW06 Boulder Array 94.06 46 ⇓P P 07 50 51.9 +0.3
baz=94
PDAR Pinedale Array 94.06 46 P P 07 50 51.5 -0.2
comp=Z,1.4nm,1.0s,mb4.3,baz=209,slow=4.6,SNR=7.5
PDAR PP PP 07 54 32.0 -6.2
comp=Z,0.9nm,1.1s,baz=256,slow=6.0,SNR=3.7
PDAR LR LR 08 25 51.3
comp=Z,557nm,19.6s,MS5.0,baz=253,slow=31
D15A Lincoln 94.08 41 ⇓P P 07 50 51.2 -0.4
baz=94
LKWY Lake 94.29 44 PFAKE 07 51 00.0 +7.4
LKWY LR LR
comp=Z,840nm,20.0s,MS5.2
SMCO Snowmass 94.32 50 eP P 07 50 53.1 +0.2
comp=Z,7.5nm,1.0s,mb5.1
A14A Double T Ranch 94.44 39 ⇓P P 07 50 52.0 -1.2
baz=95
SDCO Great Sand Dun 94.80 51 PFAKE 07 51 10.0 +15
SDCO LR LR
comp=Z,843nm,20.0s,MS5.2
D17A Six Diamond Ra 95.25 41 ⇑P P 07 50 56.8 -0.1
baz=95
RLMT Red Lodge 95.26 43 PFAKE 07 51 10.0 +13
RLMT LR LR
comp=Z,1μm,22.0s,MS5.4
RLMT Red Lodge 95.26 43 ⇓P P 07 50 57.2 +0.1
baz=95
F18A Big Timber 95.31 43 ⇑P P 07 50 57.3 0.0
baz=96
C17A Wharram Farm, 95.42 41 ⇓P P 07 50 57.0 -0.7
baz=96
A16A West Butte Ran 95.50 39 ⇑P P 07 50 57.6 -0.4
baz=96
ISCO Idaho Springs 95.54 49 PFAKE 07 51 10.0 +12
ISCO LR LR
comp=Z,630nm,19.0s,MS5.1
ZAK Zakamensk 95.61 322 eP P 07 50 59.9 +1.4
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.5
LSA Lhasa 95.67 300 PFAKE 07 51 10.0 +11
LSA LR LR
comp=Z,1μm,19.0s,MS5.5
TLY Talaya 96.00 324 PFAKE 07 51 10.0 +10
TLY LR LR
comp=Z,2μm,21.0s,MS5.5
EGMT Eagleton 96.20 41 PFAKE 07 51 10.0 +8.8
EGMT LR LR
comp=Z,887nm,21.0s,MS5.2
JCT Junction City 96.43 60 PFAKE 07 51 10.0 +7.2
JCT LR LR
comp=Z,885nm,20.0s,MS5.2
AMTX Amarillo 96.56 55 PFAKE 07 51 10.0 +6.8
AMTX LR LR
comp=Z,1μm,20.0s,MS5.4
KVTX Kingsville 96.96 63 PFAKE 07 51 20.0 +15
KVTX LR LR
comp=Z,638nm,21.0s,MS5.1
LAO LASA Array 97.84 43 PFAKE 07 51 20.0 +11
LAO LR LR
comp=Z,1μm,20.0s,MS5.3
TIXI Tiksi 98.28 347 PFAKE 07 51 20.0 +10
TIXI LR LR
comp=Z,684nm,19.0s,MS5.2
TIXI Tiksi 98.28 347⇑eP P 07 51 08.6 -1.5
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
OGNE Ogallala 98.50 49 PFAKE 07 51 20.0 +8.2
OGNE LR LR
comp=Z,521nm,20.0s,MS5.0
DGAR Diego Garcia 99.18 258 PFAKE 07 51 30.0 +14
DGAR LR LR
comp=Z,2μm,20.0s,MS5.6
CBKS Cedar Bluff 99.41 52 PFAKE 07 51 30.0 +14
CBKS LR LR
comp=Z,633nm,20.0s,MS5.1
HKT Hockley 99.47 62 PFAKE 07 51 30.0 +14
HKT LR LR
comp=Z,1μm,20.0s,MS5.3
DGMT Dagmar 99.78 42 PFAKE 07 51 30.0 +13
DGMT LR LR
comp=Z,1μm,19.0s,MS5.4
NATX Nacogdoches 101.01 60 PFAKE 07 51 30.0 +7.0
NATX LR LR
comp=Z,838nm,20.0s,MS5.2
NNA Nana 101.69 108 PFAKE 07 51 40.0 +14
NNA LR LR
comp=Z,228nm,21.0s,MS4.7
TGUH Tegucigalpa,Un 101.76 79 PFAKE 07 51 40.0 +14
TGUH LR LR
comp=Z,472nm,22.0s,MS5.0
KSU1 Kansas State U 101.81 53 PFAKE 07 51 40.0 +14
KSU1 LR LR
comp=Z,615nm,19.0s,MS5.1
MIAR Mount Ida 102.74 58 PFAKE 07 51 40.0 +9.4
MIAR LR LR
comp=Z,1μm,19.0s,MS5.5
WMQ Urumqi 103.01 312 eP Pdif 07 51 32.0 +0.2
WMQ XP 07 51 47.0
WMQ PP PP 07 55 49.0 +2.3
WMQ SKS 08 02 08.0
WMQ S Sdif 08 03 12.0 -5.9
WMQ LR LR
comp=N,548nm,25.0s,MS5.2
WMQ LR LR
comp=E,685nm,24.0s,MS5.2
WMQ LR LR
comp=Z,1μm,24.0s,MS5.3
ECSD EROS,Sioux Fal 103.21 48 PFAKE 07 51 40.0 +7.3
ECSD LR LR
comp=Z,763nm,20.0s,MS5.2
FFC Flin Flon 103.22 36 PFAKE 07 51 40.0 +7.2
FFC LR LR
comp=Z,817nm,20.0s,MS5.2
LVC Limon Verde 103.49 121 PFAKE 07 51 50.0 +16
LVC LR LR
comp=Z,615nm,19.0s,MS5.2
VBMS Vicksburg 104.51 61 PFAKE 07 51 50.0 +12
VBMS LR LR
comp=Z,654nm,21.0s,MS5.2
AGMN Agassiz Refuge 105.00 44 PFAKE 07 56 10.0 +15
AGMN LR LR
comp=Z,1μm,21.0s,MS5.4
SCIA State Center 105.10 51 PFAKE 07 56 10.0 +14
SCIA LR LR
comp=Z,1μm,21.0s,MS5.4
OTAV Otavalo 105.12 96 PFAKE 07 56 10.0 +13
OTAV LR LR
comp=Z,204nm,20.0s,MS4.7
ULM Lac du Bonnet 105.51 42 PFAKE 07 56 10.0 +14
ULM LR LR
comp=Z,2μm,19.0s,MS5.6
CCM Cathedral Cave 105.53 55 PFAKE 07 56 10.0 +13
CCM LR LR
comp=Z,1μm,22.0s,MS5.4
OXF Oxford 106.03 59 PFAKE 07 56 10.0 +12
OXF LR LR
comp=Z,1μm,19.0s,MS5.5
BRAL Brewton 107.02 63 PFAKE 07 56 10.0 +10
BRAL LR LR
comp=Z,769nm,20.0s,MS5.2
LPAZ La Paz 107.27 116 PFAKE 07 56 10.0 +9.5
LPAZ LR LR

comp=Z,206nm,20.0s,MS4.7
JFWS Jewell Farm 107.47 50 PFAKE 07 56 10.0 +10
JFWS LR LR
comp=Z,1μm,19.0s,MS5.4
HDIL Hopedale 107.62 53 PFAKE 07 56 10.0 +10
HDIL LR LR
comp=Z,1μm,19.0s,MS5.4
WVT Waverly 107.69 58 PFAKE 07 56 10.0 +9.3
WVT LR LR
comp=Z,1μm,21.0s,MS5.5
EYMN Ely 107.75 45 PFAKE 07 56 10.0 +10
EYMN LR LR
comp=Z,774nm,20.0s,MS5.3
WCI Wyandotte Cave 109.36 56 PFAKE 07 56 20.0 +16
WCI LR LR
comp=Z,1μm,19.0s,MS5.4
GOGA Godfrey 110.55 61 PFAKE 07 56 20.0 +14
GOGA LR LR
comp=Z,768nm,21.0s,MS5.3
KURK Kurchatov 110.60 318 PFAKE 07 56 20.0 +14
KURK LR LR
comp=Z,3μm,19.0s,MS5.9
KURK Kurchatov 110.60 318⇑iPKIKP PKiKP 07 56 02.8 -2.9
DWPF Disney 111.04 67 PFAKE 07 56 20.0 +13
DWPF LR LR
comp=Z,282nm,20.0s,MS4.8
TZTN Tazewell 111.15 58 PFAKE 07 56 20.0 +13
TZTN LR LR
comp=Z,1μm,20.0s,MS5.5
TKM2 Tokmak 2 111.36 309 PFAKE 07 56 20.0 +13
TKM2 LR LR
comp=Z,793nm,19.0s,MS5.3
GLMI Grayling 111.84 49 PFAKE 07 56 20.0 +12
GLMI LR LR
comp=Z,1μm,19.0s,MS5.4
AAM Ann Arbor 112.12 52 PFAKE 07 56 20.0 +11
AAM LR LR
comp=Z,937nm,19.0s,MS5.4
ACSO Alum Creek Sta 112.28 54 PFAKE 07 56 20.0 +11
ACSO LR LR
comp=Z,1μm,20.0s,MS5.5
EKS2 Erkin-Say 112.64 308 PFAKE 07 56 20.0 +10
EKS2 LR LR
comp=Z,786nm,20.0s,MS5.3
NHSC New Hope 113.19 62 PFAKE 07 56 20.0 +8.8
NHSC LR LR
comp=Z,932nm,22.0s,MS5.3
BLA Blacksburg 113.74 58 PFAKE 07 56 20.0 +7.9
BLA LR LR
comp=Z,1μm,20.0s,MS5.5
MCWV Mont Chateau 114.57 55 PFAKE 07 56 30.0 +16
MCWV LR LR
comp=Z,1μm,20.0s,MS5.5
ERPA Erie 114.79 52 PFAKE 07 56 30.0 +16
ERPA LR LR
comp=Z,987nm,20.0s,MS5.4
ABPO Ambohimpanom 115.18 235 PFAKE 07 56 30.0 +15
ABPO LR LR
comp=Z,860nm,20.0s,MS5.4
CNNC Cliffs of the 115.43 60 PFAKE 07 56 30.0 +15
CNNC LR LR
comp=Z,648nm,21.0s,MS5.2
MSEY Mahe Island 115.64 253 PFAKE 07 56 30.0 +13
MSEY LR LR
comp=Z,991nm,20.0s,MS5.4
BRVK Borovoye 115.97 320 PFAKE 07 56 30.0 +14
BRVK LR LR
comp=Z,743nm,19.0s,MS5.3
SSPA Standing Stone 116.18 54 PFAKE 07 56 30.0 +13
SSPA LR LR
comp=Z,985nm,20.0s,MS5.4
CBN Corbin 116.28 57 PFAKE 07 56 30.0 +13
CBN LR LR
comp=Z,1μm,20.0s,MS5.6
BINY Binghamton 117.76 53 PFAKE 07 56 30.0 +10
BINY LR LR
comp=Z,1μm,19.0s,MS5.5
LONY Lake Ozonia 118.93 50 PFAKE 07 56 30.0 +8.1
LONY LR LR
comp=Z,1μm,19.0s,MS5.5
NCB Newcomb 119.16 51 PFAKE 07 56 30.0 +7.7
NCB LR LR
comp=Z,1μm,20.0s,MS5.5
SUR Sutherland 121.08 205 PFAKE 07 56 40.0 +13
SUR LR LR
comp=Z,591nm,19.0s,MS5.2
WES Weston 121.22 53 PFAKE 07 56 40.0 +14
WES LR LR
comp=Z,1μm,19.0s,MS5.7
SVE Sverdlovsk 121.31 324 ePKIKP PKPdf 07 56 25.6 -0.4
SVE pmax pmax
comp=Z,8.0nm,0.8s
KBS Kingsbay 122.09 356 PFAKE 07 56 40.0 +13
KBS LR LR
comp=Z,418nm,20.0s,MS5.1
SJG San Juan 122.35 82 PFAKE 07 56 40.0 +11
SJG LR LR
comp=Z,506nm,22.0s,MS5.1
BOSA Boshof 122.36 211 PFAKE 07 56 40.0 +11
BOSA LR LR
comp=Z,600nm,20.0s,MS5.2
ARU Arti 122.50 324 ePKPdf PKPdf 07 56 25.1 -3.3
ARU LR LR
comp=Z,1μm,22.0s,MS5.6
ARU Arti 122.50 324 i PKIKP PKPdf 07 56 25.5 -2.9
ARU 08 03 22.6
ARU SS SS 08 14 44.0 -1.9
BDFB Brasilia 123.62 127 PFAKE 07 56 40.0 +8.2
BDFB LR LR
comp=Z,461nm,20.0s,MS5.1
GRGR Grenville 124.87 90 PFAKE 07 56 50.0 +16
GRGR LR LR
comp=Z,331nm,21.0s,MS5.0
LBTB Lobatse 125.16 214 PFAKE 07 56 50.0 +15
LBTB LR LR
comp=Z,572nm,20.0s,MS5.2
LVZ Lovozero 127.67 342 PFAKE 07 56 50.0 +12
LVZ LR LR
comp=Z,548nm,20.0s,MS5.2
KEV Kevo 128.22 347 PFAKE 07 56 50.0 +11
KEV LR LR
comp=Z,1μm,21.0s,MS5.6
APA Apatity 128.25 342⇑iPKHKP 07 56 26.2
APA pmax pmax
comp=Z,26nm,1.3s
ARCES ARCESS Array B 128.72 347 PKP PKPdf 07 56 42.2 +2.4
comp=Z,1.5nm,0.6s,baz=22,slow=3.9,SNR=4.6
LSZ Lusaka 131.24 224 PFAKE 07 57 00.0 +14
LSZ LR LR
comp=Z,750nm,20.0s,MS5.4
TSUM Tsumeb 134.01 210 PFAKE 07 57 00.0 +8.5
TSUM LR LR
comp=Z,836nm,19.0s,MS5.5
OBN Obninsk 134.56 328 PFAKE 07 57 00.0 +8.7
OBN LR LR
comp=Z,1μm,21.0s,MS5.7
OBN Obninsk 134.56 328⇑iPKIKP PKPdf 07 56 54.9 +3.6
OBN pmax pmax
comp=Z,14nm,1.1s
OBN MLR MLR
comp=Z,300nm,24.0s,MS4.9
KIV Kislovodsk 135.13 311 PFAKE 07 57 00.0 +7.2
KIV LR LR
comp=Z,407nm,19.0s,MS5.2
RCBR Riachuelo 138.99 128 PFAKE 07 57 10.0 +9.1
RCBR LR LR
comp=Z,835nm,19.0s,MS5.5
NOA NORSAR Array B 139.05 348 PKP PKPdf 07 57 01.3 +1.8
comp=Z,1.2nm,0.9s,baz=16,slow=4.3,SNR=3.3
AKASG Malin Array Be 140.69 326 PKP PKPdf 07 57 03.3 +0.5
comp=Z,0.3nm,0.2s,baz=63,slow=2.0,SNR=3.8
KIEV Kiev 140.71 326 PFAKE 07 57 10.0 +7.2
KIEV LR LR
comp=Z,725nm,22.0s,MS5.4
CSS Prodhromos 144.23 300 PFAKE 07 57 20.0 +10
CSS LR LR
comp=Z,443nm,21.0s,MS5.2
BUR08 Bucovina Ar. S 144.63 324 ePKPdf PKPdf 07 57 09.2 -0.7
KWP Kalwaria 144.63 329 PFAKE 07 57 20.0 +10
KWP LR LR
comp=Z,1μm,19.0s,MS5.7
BURAR Bucovina Array 144.64 324 ⇑P PKPdf 07 57 09.6 -0.3
BURAR Bucovina Array 144.64 324⇑iP PKPdf 07 57 09.6 -0.3
VRI Vrincioaia 144.78 321⇓iP PKiKP 07 57 15.6 +1.6
KOLS Kolonicke sedl 145.31 328 ePKP PKPdf 07 57 09.7 -1.3

STHS	**Stebnicka Huta**	**145.47 330**	*e*PKP		PKPdf	07 57 10.9	-0.4
STHS			*e*			07 57 17.8	
STHS	**Stebnicka Huta**	**145.47 330**	*e*PKP		PKPdf	07 57 10.9	-0.4
STHS			*e*			07 57 17.8	
OJC	**Ojcow**	**145.55 332**	*e*PKP		PKPdf	07 57 10.3	-1.1
ISP	**Isparta**	**145.69 306**	PFAKE			07 57 20.0	+8.0
ISP			LR	LR			
	comp=Z,484nm,19.0s,MS5.3						
CRVS	**Cervenica-Dubn**	**145.73 329**	*e*PKP		PKPdf	07 57 11.0	-0.7
CRVS			*e*			07 57 18.3	
NIE	**Niedzica**	**145.90 331**	*e*PKP		PKPdf	07 57 12.4	+0.4
VOIR		**146.00 321**	*i*P		PKPab	07 57 14.9	+1.3
VOIR		**146.00 321**	*i*P		PKPab	07 57 14.9	+1.3
EKA	**Eskdalemuir Ar**	**146.28 358**	PKPbc		PKPbc	07 57 13.4	-0.2
	comp=Z,6.1nm,0.9s,baz=330,slow=2.3,SNR=8.4						
ESK	**Eskdalemuir**	**146.30 359**	PFAKE			07 57 20.0	+7.5
ESK			LR	LR			
	comp=Z,633nm,19.0s,MS5.4						
DRGR		**146.49 325**	⇑*i*P		PKPdf	07 57 11.9	-1.1
DRGR		**146.49 325**	⇑*i*P		PKPdf	07 57 11.9	-1.2
KSP	**Ksiaz**	**146.51 336**	*e*PKP		PKPdf	07 57 14.1	+1.1
KSP	**Ksiaz**	**146.51 336**	*e*PKP		PKPdf	07 57 13.4	+0.4
KSP			*e*			07 57 19.4	
MORC	**Moravsky Berou**	**146.85 333**	*e*PKPbc		PKPbc	07 57 14.7	-0.7
MORC	**Moravsky Berou**	**146.85 333**	⇓*i*P		PKPbc	07 57 15.5	+0.1
UPC	**Upice**	**146.89 336**	*e*PKP		PKPdf	07 57 14.6	+1.0
DPC	**Dobruska-Polom**	**146.89 335**	*e*PKP		PKPdf	07 57 14.7	+1.1
DPC			AMS		AMS	09 01 50.0	
	comp=Z,600nm,16.5s						
PSZ	**Piszkesteto**	**147.16 329**	*e*PKPbc		PKPbc	07 57 15.9	-0.5
PSZ			LR	LR			
	comp=Z,862nm,19.0s,MS5.6						
PSZ	**Piszkesteto**	**147.16 329**	⇓*e*PKP		PKPdf	07 57 15.7	+1.5
PSZ	**Piszkesteto**	**147.16 329**	⇑*i*P		PKPdf	07 57 15.9	+1.7
VYHS	**Vyhne**	**147.25 331**	*e*PKP		PKPdf	07 57 15.4	+1.1
CLL	**Collm**	**147.30 339**	*i*PKP		PKPdf	07 57 15.2	+0.9
CLL			*i*PKP		PKPdf	07 57 16.1	+1.8
CLL	**Collm**	**147.30 339**	*e*PKP		PKPdf	07 57 15.4	+1.1
CLL	**Collm**	**147.30 339**	*i*PKPdf		PKPdf	07 57 15.2	+0.9
	comp=Z,11nm,1.1s						
CLL			*i*PKPbc		PKPbc	07 57 16.1	-0.5
	comp=Z,12nm,0.9s						
CLL			*ep*PKPbc		pPKPbc	07 57 23.0	+2.0
	comp=Z,33nm,0.9s						
CLL			LmV			09 02 00.0	
	comp=Z,300nm,20.4s						
GZR	**Gura Zlata**	**147.32 323**	⇑*i*P		PKPab	07 57 20.1	+1.4
BRG	**Berggiesshubel**	**147.34 338**	*i*PKP2		PKPbc	07 57 15.9	-0.9
BRG			*e*			08 00 38.2	
BRG			pmax	pmax			
	comp=Z,7.0nm,1.0s						
BRG			pmax	pmax			
	comp=Z,39nm,2.5s						
BRG	**Berggiesshubel**	**147.34 338**	*e*PKP		PKPdf	07 57 16.0	+1.6
BRG	**Berggiesshubel**	**147.34 338**	*i*PKP		PKPdf	07 57 15.9	+1.5
	comp=Z,11nm,1.1s						
BRG			*i*			07 57 23.2	
	comp=Z,11nm,1.0s						
BRG			*i*			07 57 23.2	
	comp=Z,27nm,1.0s						
BRG			*i*pPKP		pPKPdf	07 57 34.1	+15
	comp=Z,17nm,1.1s						
BRG			*e*			08 00 38.1	
	comp=Z,65nm,2.5s						
KOLL	**Kolacno**	**147.38 331**	*e*PKP		PKPdf	07 57 16.3	+1.8
KOLL			*e*			07 57 22.3	
PVCC	**Panska Ves**	**147.41 337**	*e*PKP		PKPdf	07 57 16.2	+1.7
PVCC			*ep*PKP		pPKPdf	07 57 23.2	+4.3
PVCC			AMS		AMS	09 01 50.0	
	comp=Z,600nm,23.5s						
FBE	**Freiberg**	**147.51 339**	*e*PKP		PKPbc	07 57 16.6	-0.6
VRAC	**Vranov**	**147.60 334**	PKPbc		PKPbc	07 57 17.5	0.0
	comp=Z,3.6nm,0.4s,baz=33,slow=4.6,SNR=5.5						
VRAC	**Vranov**	**147.60 334**	⇓*i*P		PKPab	07 57 22.9	+3.2
BZS	**Buzias**	**147.82 324**	⇓*i*P		PKPbc	07 57 17.5	-0.7
BZS	**Buzias**	**147.82 324**	⇓*i*P		PKPbc	07 57 17.5	-0.8
SMOL	**Smolenice**	**147.86 332**	*e*PKP		PKPbc	07 57 18.0	-0.3
PRU	**Pruhonice**	**147.86 337**	*e*PKP		PKPdf	07 57 16.6	+1.3
PRU			*ep*PKP		pPKPdf	07 57 23.6	+3.9
PRU			AMS		AMS	09 01 40.0	
	comp=Z,400nm,17.7s						
BUD	**Budapest**	**147.89 329**	⇓*e*PKP		PKPbc	07 57 17.7	-0.7
MODS	**Modra-Piesok**	**148.03 332**	*e*PKP		PKPbc	07 57 18.0	-0.7
ZST	**Bratislava**	**148.24 332**	*e*PKP		PKPbc	07 57 19.6	+0.3
ZST			*e*			07 57 25.2	
ZST			LR	LR			
	comp=Z,100nm,20.0s,MS4.6						
ZST	**Bratislava**	**148.24 332**	*e*PKP		PKPbc	07 57 19.6	+0.3
ZST			*e*			07 57 25.2	
MOX	**Moxa**	**148.31 340**	*e*PKP		PKPdf	07 57 13.8	-2.2
	comp=Z,27nm,1.8s						
MOX	**Moxa**	**148.31 340**	*e*PKHKP		PKPdf	07 57 13.8	-2.2
MOX			pmax	pmax			
	comp=Z,27nm,1.8s						
GUNZ	**Gunzen**	**148.32 339**	*e*PKP		PKPbc	07 57 18.9	-0.5
WERN	**Wernitzgruen**	**148.38 339**	*e*PKP		PKPbc	07 57 19.2	-0.4
VTS	**Vitosha**	**148.69 318**	⇓*i*P		PKPbc	07 57 19.4	-1.3
VTS	**Vitosha**	**148.69 318**	⇓*i*P		PKPbc	07 57 19.4	-1.3
MANZ	**Manzenberg**	**148.72 339**	*e*PKP		PKPbc	07 57 19.7	-0.8
ROTZ	**Rotzenmuhle**	**148.88 339**	*e*PKP		PKPbc	07 57 20.4	-0.5
KHC	**Kasperske Hory**	**148.93 337**	*e*PKP		PKPbc	07 57 20.0	-1.0
KHC			*ep*PKP		pPKPdf	07 57 26.0	+4.6
KHC			*ex*		x	07 57 41.5	
KHC			AMS		AMS	09 02 40.0	
	comp=Z,500nm,16.8s						
PKSM	**Moragy**	**148.97 328**	⇓*i*P		PKPbc	07 57 20.2	-1.1
PKSM	**Moragy**	**148.97 328**	⇓*i*P		PKPbc	07 57 20.2	-1.0
CONA	**Conrad Observa**	**148.98 333**	⇑*i*PKPbc		PKPbc	07 57 20.9	-0.3
	comp=Z,31nm,1.7s						
CSNA	**Conrad Observa**	**148.98 333**	⇑*i*PKPbc		PKPbc	07 57 20.9	-0.3
	comp=Z,28nm,1.7s						
GEC2	**GERESS Array S**	**149.12 336**	*e*PKP		PKPbc	07 57 20.5	-1.0
GERES	**GERESS Array B**	**149.12 336**	PKPbc		PKPbc	07 57 20.6	-0.9
	comp=Z,6.8nm,1.0s,baz=48,slow=2.0,SNR=24						
GRA1	**Grafenberg Arr**	**149.27 340**	*e*PKP		PKPbc	07 57 20.8	-1.1
GRF	**Grafenberg Arr**	**149.27 340**	*e*PKP		PKPbc	07 57 20.8	-1.1
VAY	**Valandovo**	**149.78 317**	*i*PKP		PKPdf	07 57 17.8	-0.9
MEM	**Membach**	**149.85 346**	PKP		PKPdf	07 57 19.5	+1.1
MEM			PKPab		PKPab	07 57 27.1	-1.6
KOGS	**Kog**	**149.94 331**	*i*PKPdf		PKPbc	07 57 22.6	-1.0
SKO	**Skopje**	**150.13 319**	*i*PKP		PKPbc	07 57 23.9	-0.3
PERS	**Pernice**	**150.30 332**	*e*PKPdf		PKPbc	07 57 23.5	-1.0
SOKA	**Soboth**	**150.31 332**	⇑*i*PKPbc		PKPbc	07 57 22.8	-1.7
	comp=Z,14nm,1.1s						
GIVF	**Givet**	**150.58 348**	*e*PKP1		PKPbc	07 57 22.6	-2.4
	comp=Z,55nm,1.0s						
KRUS	**Krusevo**	**150.59 318**	*i*PKP		PKPbc	07 57 23.5	-1.9
DOU	**Dourbes**	**150.63 348**	PKP		PKPdf	07 57 17.8	-1.9
DOU			PKPbc		PKPbc	07 57 23.6	-1.5
WLF	**Walferdange**	**150.70 346**	PKPbc		PKPbc	07 57 25.4	+0.1
WLF	**Walferdange**	**150.70 346**	*e*PKIKP		PKPdf	07 57 19.1	-0.7
WLF			*e*			07 57 25.4	
WLF			MLR	MLR			
	comp=Z,759nm,21.0s,MS5.5						
STU	**Stuttgart**	**150.71 341**	*e*PKPbc		PKPbc	07 57 25.7	+0.3
BAIF	**Baives**	**150.74 348**	*e*PKP1		PKPbc	07 57 23.1	-2.3
	comp=Z,89nm,1.5s						
IDI	**Anoyia**	**150.80 304**	PKPbc		PKPbc	07 57 27.1	+1.1
	comp=Z,15nm,1.0s,baz=344,slow=16,SNR=2.6						
LJU	**Ljubljana**	**151.02 332**	*e*PKPdf		PKPbc	07 57 24.2	-2.0
WTTA	**Wattenberg**	**151.20 337**	⇑*i*PKPbc		PKPbc	07 57 25.3	-1.3
	comp=Z,26nm,1.2s						
ABTA	**Abfaltersbach**	**151.30 335**	⇑*i*PKPbc		PKPbc	07 57 25.4	-1.4
	comp=Z,20nm,1.0s						
VOY	**Vojsko**	**151.31 333**	*e*PKPdf		PKPbc	07 57 25.4	-1.5
VOY			*e*			07 57 28.3	
VOY			*e*			07 57 48.1	
MOTA	**Moosalm**	**151.33 337**	⇓*i*PKPbc		PKPbc	07 57 25.3	-1.5
	comp=Z,18nm,1.0s						
BFO	**Black Forest**	**151.36 342**	PFAKE			07 57 30.0	+9.1
BFO			LR	LR			
	comp=Z,936nm,21.0s,MS5.6						
TIR	**Tirane**	**151.45 319**	PFAKE			07 57 30.0	+8.7
TIR			LR	LR			
	comp=Z,1μm,19.0s,MS5.7						
CDF	**Champ du Feu**	**151.58 343**	*e*PKP1		PKPbc	07 57 26.1	-1.3
	comp=Z,47nm,1.2s						
FETA	**Feichten**	**151.74 338**	⇑*i*PKPbc		PKPbc	07 57 26.5	-1.3
	comp=Z,17nm,1.0s						
ECH	**Echery**	**151.79 343**	*e*PKPbc		PKPbc	07 57 27.3	-0.6
MEZF	**Maizieres J'vi**	**152.04 346**	*e*PKP1		PKPbc	07 57 26.1	-2.4
	comp=Z,122nm,1.6s						
HAU	**Haudompre**	**152.20 344**	*e*PKP1		PKPbc	07 57 27.2	-1.7
DAVOS	**Davos**	**152.22 338**	PKIKP		PKPdf	07 57 23.6	+1.4
DAVOS						07 57 30.9	
DAVOX	**Davos/Dischmat**	**152.24 338**	PKP		PKPdf	07 57 23.6	+1.3
	comp=Z,1.8nm,0.6s,baz=312,slow=16,SNR=2.8						
DAVOX			PKPbc		PKPbc	07 57 30.9	+1.9
	comp=Z,4.8nm,0.6s,baz=280,slow=14,SNR=5.7						
HINF	**Hinteralfeld**	**152.24 343**	*e*PKP1		PKPbc	07 57 27.5	-1.5
TUE	**Stuetta**	**152.69 339**	*e*PKPbc		PKPbc	07 57 29.3	-0.7
TUE			LR	LR			
	comp=Z,937nm,20.0s,MS5.6						
VLC	**Villacollemand**	**154.28 335**	PFAKE			07 57 40.0	+15
VLC			LR	LR			
	comp=Z,1μm,19.0s,MS5.7						
TIP	**Timpagrande**	**154.65 319**	PFAKE			07 57 40.0	+14
TIP			LR	LR			
	comp=Z,668nm,20.0s,MS5.5						
CUC	**Castrocucco**	**154.70 321**	PFAKE			07 57 40.0	+14
CUC			LR	LR			
	comp=Z,829nm,22.0s,MS5.5						
BNI	**Bardonecchia**	**154.81 341**	PFAKE			07 57 40.0	+14
BNI			LR	LR			
	comp=Z,1μm,21.0s,MS5.6						
WDD	**Wield Dalam**	**158.04 315**	PFAKE			07 57 40.0	+9.5
WDD			LR	LR			
	comp=Z,604nm,19.0s,MS5.5						
MTE	**Manteigas**	**161.08 7**	PFAKE			07 57 40.0	+6.1
MTE			LR	LR			
	comp=Z,640nm,19.0s						
ESDC	**Sonseca Array**	**161.96 358**	PKP		PKPdf	07 57 35.5	+0.7
	comp=Z,0.1nm,0.2s,baz=343,slow=4.6,SNR=3.3						
ESDC			PKPab		PKPab	07 58 21.2	+0.6
	comp=Z,0.1nm,0.3s,baz=35,slow=3.1,SNR=3.5						
ESLA	**Sonseca Array**	**161.96 358**	PFAKE			07 57 50.0	+15
ESLA			LR	LR			
	comp=Z,4μm,19.0s						
PAB	**San Pablo**	**162.09 359**	PFAKE			07 57 50.0	+15
PAB			LR	LR			
	comp=Z,675nm,20.0s						
SFS	**San Fernando**	**165.10 5**	PFAKE			07 57 50.0	+12
SFS			LR	LR			
	comp=Z,2μm,21.0s						
DBIC	**Dimbokro**	**165.17 179**	PFAKE			07 57 50.0	+11
DBIC			LR	LR			
	comp=Z,626nm,22.0s						
TORD	**Torodi Ar. Bea**	**169.67 217**	PKP		PKPdf	07 57 39.0	-2.8
	comp=Z,2.7nm,1.0s,baz=338,slow=2.2,SNR=10.0						
TORD			PKPab		PKPab	07 58 54.3	-1.1
	comp=Z,1.6nm,1.1s,baz=203,slow=3.5,SNR=2.8						
TORD			PP		PP	08 02 48.8	+4.5
	comp=Z,3.1nm,1.1s,baz=132,slow=2.1,SNR=3.8						

NEIC ***11*** *07:40:45.9, 29.12S×71.05W, h9km, ML3.7(GUC), After GUC.*

GUC 11 07:40:45.9±0.5, 2912S×7105W, h9km±4km, ML3.7, 2D,
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.33**	**72**	*e*Pg		Pg	Pg	07 40 58.4	+6.0
LCO				Sg		Sg	Sg	07 41 06.0	+9.3
LSCH	**La Serena**	**0.81**	**192**	*e*P		Pg	Pg	07 41 18.6	+17
LSCH				*i*S		Sg	Sg	07 41 30.2	+18
OVCH	**Ovalle**	**1.49**	**185**	*e*P		Pn	Pn	07 41 12.0	-0.9
OVCH				*e*S		Sn	Sn	07 41 31.7	-0.8
OVCH	**Ovalle**	**1.49**	**185**	*e*P		Pn	Pn	07 41 12.0	-0.9
OVCH				*e*S		Sn	Sn	07 41 31.7	-0.8
OVCH				AML		AML	AML	07 41 37.3	
	comp=N,645nm,0.4s								
CPCH	**Copiapo**	**1.86**	**20**	⇓*i*P		Pn		07 41 17.8	-0.1
CPCH				*e*S		Sn		07 41 42.4	+0.9
CPCH	**Copiapo**	**1.86**	**20**	⇓*i*P		Pn		07 41 17.8	-0.1
CPCH				*e*S		Sn		07 41 42.4	+0.9
CPCH				AML		AML	AML	07 41 47.8	
	comp=E,3μm,0.1s								
FCH	**Farellones**	**4.25**	**171**	*e*P		Pn		07 41 52.8	+2.0
FCH				*e*S		Sn		07 42 42.8	+2.3
CLCH	**Cerro Calan**	**4.29**	**174**	*e*P		Pn		07 41 52.5	+1.2
CLCH				*e*S		Sn		07 42 43.4	+1.9
LVC	**Limon Verde**	**6.76**	**17**	Pn		Pn		07 42 25.1	-0.2

TAP ***11*** *07:51:38.9, 24.81N×122.44E, h109km±1km, ML3.6, D*

ISC 11 07:51:39.8±0.9, 2480N±005×12244E±008, h104km±7km,
n30, σ0.944/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**297**	*i*P		P	**Pn**	**07 51 55.5**	**-0.2**
	baz=295								
TWB1				*i*S			**Sn**	**07 52 07.6**	**-0.1**
	baz=295								
TWC	**Suao**	**0.57**	**251**	*i*P		Pn		**07 51 56.3**	**-0.2**
	baz=249								
TWC				*i*S			**Sn**	**07 52 08.9**	**-0.1**
	baz=249								
ILA	**Ilan**	**0.63**	**267**	P		P	**Pn**	**07 51 56.9**	**-0.1**
	baz=265								
ILA				S			**Sn**	**07 52 10.4**	**+0.5**
	baz=265								
NWF	**Wu-fen Shan**	**0.66**	**295**	*i*P		P	**Pn**	**07 51 57.0**	**-0.2**
	baz=293								
NWF				*i*S			**Sn**	**07 52 10.7**	**+0.5**
	baz=293								
TWE	**Neicheng**	**0.71**	**264**	P		P	**Pn**	**07 51 57.6**	**-0.1**
	baz=262								
TWE				S			**Sn**	**07 52 10.9**	**-0.1**
	baz=262								
ENA	**Nanau**	**0.73**	**240**	P		Pn	**Pn**	**07 51 58.2**	**+0.3**
	baz=239								
ENA				S			**Sn**	**07 52 12.2**	**+0.7**
	baz=239								
TWA	**Mucha**	**0.80**	**283**	P		Pn	**Pn**	**07 51 58.0**	**-0.5**
	baz=281								
TWA				S			**Sn**	**07 52 11.9**	**-0.6**
	baz=281								
ENTT	**Nioudou**	**0.81**	**259**	P		P	**Pn**	**07 51 58.6**	**0.0**
	baz=257								
ENTT				*e*S			**Sn**	**07 52 12.8**	**+0.1**
	baz=257								
TWY	**Chenhua**	**0.90**	**302**	*e*P		Pn	**Pn**	**07 51 59.1**	**-0.3**
	baz=301								
TWY				*e*S			**Sn**	**07 52 14.4**	**+0.1**
	baz=301								
TWS1	**Kuangyinshan**	**0.98**	**288**	P		P	**Pn**	**07 51 59.7**	**-0.5**
	baz=287								
TWS1				*e*S			**Sn**	**07 52 15.3**	**-0.4**
	baz=287								
NSK	**Sanguang**	**0.99**	**263**	*e*P		Pn	**Pn**	**07 52 00.3**	**-0.1**
	baz=262								
NSK				*e*S			**Sn**	**07 52 15.7**	**-0.3**
	baz=262								
NNS	**Nan Shan**	**1.03**	**250**	*e*P		Pn	**Pn**	**07 52 01.2**	**+0.3**
	baz=249								
NNS				*e*S			**Sn**	**07 52 17.2**	**+0.4**
	baz=249								
TWD	**Chiawan**	**1.05**	**227**	*e*P		Pn	**Pn**	**07 52 00.9**	**-0.1**
	baz=226								
TWD				*e*S			**Sn**	**07 52 17.2**	**+0.1**
	baz=226								
WHF	**Hehuan Shan**	**1.25**	**239**	*e*P		Pn	**Pn**	**07 52 03.9**	**+0.6**
	baz=238								
WHF				*e*S			**Sn**	**07 52 21.4**	**+0.3**
	baz=238								
TWT	**Tachien**	**1.27**	**245**	*e*P		Pn	**Pn**	**07 52 04.4**	**+0.9**
	baz=244								
TWT				*e*S			**Sn**	**07 52 22.4**	**+0.9**
	baz=244								
NSTT	**Nanjuang**	**1.32**	**263**	*e*P		Pn	**Pn**	**07 52 03.4**	**-0.7**
	baz=262								
NSTT				*e*S			**Sn**	**07 52 21.9**	**-0.6**
	baz=262								
ESL	**Shilin**	**1.34**	**223**	*e*P		Pn	**Pn**	**07 52 03.6**	**-0.8**
	baz=222								
ESL				*e*S			**Sn**	**07 52 22.4**	**-0.6**
	baz=222								
TWQ1	**Liyutan**	**1.58**	**254**	*e*P		Pn	**Pn**	**07 52 07.2**	**-0.1**
	baz=253								
TWQ1				*e*S			**Sn**	**07 52 28.0**	**-0.1**
	baz=253								
EHY	**Hungye**	**1.64**	**219**	*e*P		Pn	**Pn**	**07 52 08.2**	**+0.2**
	baz=218								
EHY				*e*S			**Sn**	**07 52 28.9**	**-0.6**
	baz=218								
SMLT	**Sun Moon Lake**	**1.67**	**237**	*e*P		Pn	**Pn**	**07 52 09.2**	**+0.8**
	baz=236								
SMLT				*e*S			**Sn**	**07 52 31.4**	**+1.2**
	baz=236								
TYC	**Yuchr**	**1.70**	**239**	*e*P		Pn	**Pn**	**07 52 09.6**	**+0.9**
	baz=237								
TYC				*e*S			**Sn**	**07 52 31.0**	**+0.3**
	baz=237								
TWF1	**Yuli**	**1.78**	**216**	*e*P		Pn	**Pn**	**07 52 09.5**	**-0.2**
	baz=215								
TWF1				*e*S			**Sn**	**07 52 31.8**	**-0.7**
	baz=215								
YUS	**Yu-Shan**	**1.88**	**227**	*e*P		Pn	**Pn**	**07 52 11.0**	**-0.1**
	baz=225								
YUS				*e*S			**Sn**	**07 52 34.9**	**0.0**
	baz=225								
CHKT	**Chengkung**	**1.96**	**210**	*e*P		Pn	**Pn**	**07 52 12.0**	**0.0**
	baz=210								
CHKT				*e*S			**Sn**	**07 52 36.3**	**-0.2**
	baz=210								
ALS	**Alishan**	**1.97**	**230**	*e*P		Pn	**Pn**	**07 52 12.4**	**+0.3**
	baz=229								
ALS				*e*S			**Sn**	**07 52 36.7**	**-0.1**
	baz=229								
CHN5	**Tsauling**	**2.00**	**234**	*e*P		Pn	**Pn**	**07 52 12.7**	**+0.1**
	baz=233								
CHN5				*e*S			**Sn**	**07 52 37.6**	**0.0**
	baz=233								
CHN4	**Tsaushan**	**2.22**	**230**	*e*P		Pn	**Pn**	**07 52 15.6**	**+0.2**
	baz=229								
CHN4				*e*S			**Sn**	**07 52 42.2**	**-0.3**
	baz=229								
STYT	**Tauyuan**	**2.24**	**224**	*e*P		Pn	**Pn**	**07 52 15.8**	**+0.2**
	baz=223								
STYT				*e*S			**Sn**	**07 52 42.8**	**-0.3**
	baz=223								
WTP	**Ta-pu**	**2.27**	**228**	*e*P		Pn	**Pn**	**07 52 16.4**	**+0.2**
	baz=226								
WTP				*e*S			**Sn**	**07 52 43.2**	**-0.7**
	baz=226								
CHN1	**Nanshi**	**2.37**	**228**	*e*P		Pn	**Pn**	**07 52 17.9**	**+0.5**
	baz=227								
CHN1				*e*S			**Sn**	**07 52 45.7**	**-0.5**
	baz=227								

ISCJB ***11*** *08:07:03.1±1.1, 63S±0.1×155.1E±0.2, h33km, mb4.0/11, Error ellipse: s-maj=30.4km s-min=14.9km az=27.1*
NEIC ***11*** *08:07:06.6±0.9, 630S×15499E, mb4.2/1, Error ellipse: s-maj=27.6km s-min=14.6km az=122.0*
IDC ***11*** *08:07:07.4±0.9, 629S×15476E, h45km±6km, mb3.9/10, mb1 4.0/10, mb1mx3.9/16, mbtmp3.9/10, Error ellipse: s-maj=31.4km s-min=17.6km az=112.0*

ISC 11 08:07:03.9±1.2, 63S±01×1553E±02, h35km,
(h48km±3.0km: pP-P), n14, σ0.971/13, mb4.0/11,
Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.61**	**249**	*e*Pn		Pn	**Pn**	**08 09 06.8**	**+0.7**
	57nm,0.8s								
WRAB	**Tennant Creek**	**24.42**	**234**	*e*P		P	**P**	**08 12 18.2**	**-1.1**
	6.4nm,0.9s,mb4.0								
WB2	**Warramunga Arr**	**24.42**	**234**	*e*P		P	**P**	**08 12 19.3**	**0.0**
WRA	**Warramunga Arr**	**24.43**	**234**	P		P	**P**	**08 12 19.4**	**0.0**
	1.7nm,0.6s,mb3.6,baz=55,slow=9.4,SNR=17								
WRA				PcP		PcP	PcP	08 15 59.5	+1.4
	0.7nm,0.7s,baz=53,slow=2.2,SNR=4.9								
WRA				pPcP				08 16 12.3	
	0.7nm,0.5s,baz=54,slow=2.1,SNR=6.6								
ASAR	**Alice Springs**	**26.83**	**228**	P		P	**P**	**08 12 40.8**	**-0.3**
	0.7nm,0.5s,mb3.5,baz=58,slow=8.6,SNR=17								
ASAR				pP		pP		08 12 51.6	+0.4
	1.2nm,0.6s,baz=58,slow=9.4,SNR=8.3								
ASAR				PcP		PcP	PcP	08 16 04.9	+1.4
	0.7nm,0.7s,baz=56,slow=2.5,SNR=6.4								
ASAR				pPcP				08 16 17.6	
	0.5nm,0.6s,baz=62,slow=2.5,SNR=5.0								
STKA	**Stephens Creek**	**28.46**	**205**	P		P	**P**	**08 12 55.2**	**-0.4**
	0.9nm,0.6s,mb3.6,baz=49,slow=11,SNR=3.4								
STKA				pP		pP		08 13 08.7	+3.0
	1.3nm,0.5s,baz=6.6,slow=11,SNR=3.0								
CMAR	**Chiang Mai Arr**	**60.76**	**295**	P		P	**P**	**08 17 13.1**	**+0.4**
	3.7nm,0.6s,mb4.7,baz=120,slow=4.9,SNR=18								
SONM	**Songino Array**	**68.93**	**327**	P		P	**P**	**08 18 05.8**	**+0.5**
	0.4nm,0.4s,mb3.7,baz=142,slow=7.3,SNR=3.0								
MKAR	**Makanchi Array**	**83.09**	**319**	P		P	**P**	**08 19 26.3**	**+0.3**
	1.1nm,0.6s,mb4.0,baz=98,slow=6.6,SNR=8.0								
ZALV	**Zalesovo Beam**	**83.79**	**326**	P		P	**P**	**08 19 28.6**	**-0.8**
	1.5nm,0.8s,mb4.2,baz=90,slow=5.9,SNR=5.7								
MAW	**Mawson**	**85.12**	**203**	P		P	**P**	**08 19 37.5**	**+1.5**
	2.7nm,0.6s,mb4.6,baz=84,slow=8.3,SNR=8.1								
NVAR	**Mina Array Bea**	**91.09**	**52**	P		P	**P**	**08 20 10.2**	**+5.1**
	1.0nm,0.8s,mb4.2,baz=249,slow=6.8,SNR=9.3								
NVA

s-maj=15.1km s-min=11.3km az=109.0
IDC ***11*** *08:11:30.1±0.8, 632S×15472E, h41km±5km, mb4.1/14, mb1 4.2/14, mb1mx4.1/18, mbtmp4.1/14, Error ellipse: s-maj=20.8km s-min=14.3km az=93.0*
ISC 11 08:11:32.5±3.1, 6355±010×1547E±01, h64km±26km, n19, σ0s80/19, mb4.3/15, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.09**	**247**	*e*Pn		**Pn**	**08 13 26.9**	**-0.4**
	68nm,0.8s							
PMG				*e*Sn		**Sn**	**08 15 03.3**	**+5.9**
WRAB	**Tennant Creek**	**23.95**	**234**	*e*Pn		**P**	**08 16 41.1**	**0.0**
	12nm,1.0s,mb4.3							
WB2	**Warramunga Arr**	**23.96**	**234**	*e*Pn		**P**	**08 16 41.6**	**+0.5**
WRA	**Warramunga Arr**	**23.97**	**234**	P		**P**	**08 16 41.9**	**+0.7**
	2.4nm,0.5s,mb3.9,baz=60,slow=9.1,SNR=17							
WRA				pP			08 16 51.5	
	3.8nm,0.6s,baz=59,slow=10,SNR=12							
WRA				PcP		PcP	08 20 22.5	+0.3
	1.0nm,0.6s,baz=58,slow=2.4,SNR=6.7							
WRA				pPcP			08 20 34.8	
	0.8nm,0.6s,baz=65,slow=2.3,SNR=4.9							
ASAR	**Alice Springs**	**26.40**	**227**	P		**P**	**08 17 03.5**	**+0.2**
	1.2nm,0.6s,mb3.6,baz=56,slow=9.2,SNR=18							
ASAR				pP		pP	08 17 14.1	-4.6
	1.4nm,0.5s,baz=59,slow=8.9,SNR=8.5							
ASAR				PcP		PcP	08 20 28.1	+0.4
	1.4nm,0.7s,baz=59,slow=2.9,SNR=9.3							
ASAR				pPcP			08 20 39.3	
	0.6nm,0.5s,baz=51,slow=3.0,SNR=3.8							
ASAR				ScP		ScP	08 24 04.7	+2.5
	0.3nm,1.0s,baz=60,slow=4.4,SNR=3.6							
STKA	**Stephens Creek**	**28.20**	**204**	P		**P**	**08 17 18.8**	**-0.6**
	1.5nm,0.7s,mb3.8,baz=31,slow=5.7,SNR=4.3							
STKA				PcP		PcP	08 20 31.5	-0.3
	1.5nm,0.7s,baz=45,slow=4.3,SNR=3.2							
URZ	**Urewera**	**37.69**	**151**	P		**P**	**08 18 42.1**	**+0.3**
	3.4nm,0.6s,mb4.2,baz=29,slow=16,SNR=4.5							
RPZ	**Rata Peaks**	**39.88**	**161**	P		**P**	**08 18 59.5**	**-0.6**
	7.2nm,0.9s,mb4.4,baz=35,slow=13,SNR=4.0							
KSRS	**Korea Array**	**50.25**	**332**	P		**P**	**08 20 23.7**	**+1.3**
	3.0nm,0.8s,mb4.3,baz=152,slow=8.5,SNR=4.9							
PETK	**Petropavlovsk-**	**59.29**	**2**	P		**P**	**08 21 28.0**	**+0.6**
	4.2nm,0.8s,mb4.5,baz=183,slow=5.5,SNR=3.3							
CMAR	**Chiang Mai Arr**	**60.27**	**295**	P		**P**	**08 21 36.1**	**+1.2**
	6.7nm,0.8s,mb4.8,baz=118,slow=5.2,SNR=26							
SONM	**Songino Array**	**68.66**	**327**	P		**P**	**08 22 28.9**	**-0.2**
	0.7nm,0.4s,mb3.9,baz=142,slow=4.9,SNR=4.7							
MKAR	**Makanchi Array**	**82.75**	**319**	P		**P**	**08 23 49.0**	**-0.6**
	1.5nm,0.6s,mb4.2,baz=93,slow=7.5,SNR=16							
ZALV	**Zalesovo Beam**	**83.50**	**326**	P		**P**	**08 23 51.8**	**-1.5**
	2.0nm,0.7s,mb4.4,baz=89,slow=6.1,SNR=8.0							
MAW	**Mawson**	**84.88**	**203**	P		**P**	**08 24 00.5**	**+0.4**
	3.6nm,0.5s,mb4.7,baz=115,slow=4.3,SNR=15							
KURK	**Kurchatov**	**86.17**	**322**	P		**P**	**08 24 06.2**	**-0.6**
	baz=99,slow=4.7							
NVAR	**Mina Array Bea**	**91.53**	**52**	P		**P**	**08 24 33.4**	**+0.9**
	1.4nm,0.8s,mb4.4,baz=255,slow=6.6,SNR=12							
NVAR				pP		pP	08 24 46.2	-4.1
	1.2nm,0.8s,baz=242,slow=6.1,SNR=5.9							
BVAR	**Borovoye Array**	**91.62**	**323**	P		**P**	**08 24 30.8**	**-1.8**
	1.6nm,0.8s,mb4.4,baz=95,slow=7.4,SNR=6.8							
TORD	**Torodi Ar. Bea**	**152.59**	**286**	PKPbc		PKPbc	08 31 21.6	-1.4
	1.1nm,0.7s,baz=50,slow=2.7,SNR=6.5							
TORD				pPKPbc		pPKPbc	08 31 35.9	-5.5
	1.8nm,0.8s,baz=67,slow=2.3,SNR=6.9							
TORD				pPKPab		pPKPab	08 31 44.6	-7.0
	0.5nm,0.4s,baz=81,slow=3.7,SNR=4.5							

NIED ***11*** *08:22:00, 29.40N×130.60E, h20km, Mw5.1 Best double couple: M0=5.22000×10^16 NP1: φs=199.00000°, δ=87.00000°, λ=-96.00000°. NP2: φs=86.00000°, δ=7.00000°, λ=-23.00000°.*
SZGRF ***11*** *08:22:04.8, 29.14N×131.65E, h33km, mb5.2, Southeast of Ryukyu Islands, Japan*
ISCJB ***11*** *08:22:06.7±0.1, 2939N±002×13052E±002, h32km, mb4.9/127, MS4.8/117, Error ellipse: s-maj=2.8km s-min=2.4km az=170.5*
MOS ***11*** *08:22:06.9±1.1, 2948N×130.45E, h33km, mb5.2/62, MS4.8/22, Error ellipse: s-maj=7.4km s-min=4.7km az=104.6*
IDC ***11*** *08:22:06.6±2.3, 2944N×130.47E, h24km±14km, mb4.5/25, mb1 4.6/30, mb1mx4.6/32, mbtmp4.6/30, ML4.3/5, MS4.5/22, Ms1 4.5/22, ms1mx4.2/36, Error ellipse: s-maj=12.8km s-min=11.0km az=85.0*
JMA ***11*** *08:22:07.3±0.2, 2938N×130.59E, h34km±5km, M5.1*
JMA Felt II J1.
BJI ***11*** *08:22:07.2, 2931N×130.76E, h49km, mB5.0, mb4.8, Ms4.8, Msz4.7*
NEIC ***11*** *08:22:08.3±0.2, 2943N×130.42E, mb5.1/79, MS4.8/90, MW5.1(NIED), Error ellipse: s-maj=4.8km s-min=3.4km az=168.0*
NEIC Recorded [2 JMA] on Tanega-shima and [1 JMA] on Amami-oshima, Kuchino-shima and Yaku-shima. Also recorded [1 JMA] in Kagoshima Prefecture, Kyushu.
ISC 11 08:22:08.5±0.1, 2939N±002×13055E±002, h34km, h34km±1.0km; pP-P, n684, σ0s89/620, mb4.9/127, MS4.8/117, 154C-116D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.74**	**307**	P		**Pn**	**08 22 21.5**	**-1.0**
JNN				S		**Sn**	**08 22 32.6**	**0.0**
JKC	**Kuchinoerabu**	**1.11**	**344**	P		**Pn**	**08 22 27.3**	**-0.3**
JKC				*e*S		**Sn**	**08 22 42.3**	**+0.5**
JAM	**Amami Oshima**	**1.28**	**220**	P		**Pn**	**08 22 29.7**	**-0.3**
JAM				*e*S		**Sn**	**08 22 47.8**	**+1.8**
JTN	**Tanegashima 3**	**1.31**	**16**	P		**Pn**	**08 22 30.2**	**-0.2**
JTN				*e*S		**Sn**	**08 22 47.8**	**+1.0**
JTSR	**Tashiro 2**	**1.80**	**10**	P		**Pn**	**08 22 37.1**	**0.0**
JTSR				*e*S		**Sn**	**08 22 59.5**	**+0.8**
JSU	**Suzuyama**	**2.11**	**358**	P		**Pn**	**08 22 40.9**	**-0.5**
JSU				*e*S		**Sn**	**08 23 06.8**	**+0.4**
JTK	**Tokunoshima**	**2.13**	**222**	P		**Pn**	**08 22 41.9**	**+0.2**
JNAR	**Kushima--Naru**	**2.22**	**16**	P		**Pn**	**08 22 43.2**	**+0.3**
JSJ	**Shimokoshiki**	**2.39**	**343**	P		**Pn**	**08 22 44.9**	**-0.3**
JSJ				*e*S		**Sn**	**08 23 14.0**	**+0.7**
JTSN	**Tsuno**	**2.96**	**16**	P		**Pn**	**08 22 52.5**	**-0.6**
JOW	**Kunigami**	**3.25**	**219**	Pn		**Pn**	**08 22 56.9**	**-0.2**
	37nm,0.3s,baz=60,slow=12,SNR=38							
JOW				Sn		**Sn**	**08 23 30.4**	**-4.1**
	74nm,0.3s,baz=45,slow=14,SNR=6.0							
JOW				Lg			08 23 49.5	
	51nm,0.3s,baz=12,slow=28,SNR=6.8							
JOW	**Kunigami**	**3.25**	**219**	P		**Pn**	**08 22 56.8**	**-0.2**
JIH	**Iheya**	**3.27**	**225**	P		**Pn**	**08 22 57.2**	**-0.2**
JKIT	**Kitakata**	**3.31**	**13**	P		**Pn**	**08 22 57.9**	**-0.1**
OIT2	**Oita 2**	**3.95**	**11**	P		**Pn**	**08 23 07.5**	**+0.8**
JAI	**Aioi**	**5.51**	**36**	P		**Pn**	**08 23 27.4**	**-0.7**
JKN2	**Miekihoku**	**6.86**	**44**	P		**Pn**	**08 23 46.3**	**-0.4**
JAA	**Atsumi**	**7.66**	**45**	P		**Pn**	**08 23 57.5**	**-0.1**
JGM	**Miyama**	**8.16**	**38**	P		**Pn**	**08 24 05.0**	**+0.5**
SSE	**Sheshan**	**8.28**	**284**	*e*P		**Pn**	**08 24 05.9**	**-0.2**
SSE					AMB	AMB		
	comp=Z,19nm,0.7s							
SSE					AMB	AMB		
	comp=Z,134nm,4.6s							
SSE					LR	LR		
	comp=N,2μm,20.1s							
SSE					LR	LR		
	comp=E,3μm,20.2s							
SSE					LR	LR		
	comp=Z,4μm,15.0s							
KS15	**Wonju Array Si**	**8.33**	**345**	*e*Pn		**Pn**	**08 24 10.5**	**+3.6**
KSRS	**Korea Array**	**8.33**	**345**	Pn		**Pn**	**08 24 09.4**	**+2.5**
	comp=Z,1.3nm,0.3s,baz=156,slow=15,SNR=24							
KSRS				Lg			08 26 27.1	
	comp=Z,0.2nm,0.3s,baz=148,slow=33,SNR=3.7							
KSRS					LR	LR	08 27 38.6	
	comp=Z,4μm,18.6s,baz=168,slow=40							
JNY	**Yasuok**	**8.58**	**44**	P		**Pn**	**08 24 09.7**	**-0.5**
INCN	**Inchon**	**8.71**	**339**	*e*Pn		**Pn**	**08 24 12.5**	**+0.5**
JHJ	**Hachijo jima 2**	**8.73**	**62**	Pn		**Pn**	**08 24 13.9**	**+1.6**
	comp=Z,38nm,0.3s,baz=231,slow=22,SNR=4.8							
JHJ					LR	LR	08 27 13.7	
	comp=Z,2μm,20.9s,baz=208,slow=35							
JOD2	**Odawara 2**	**9.29**	**49**	P		**Pn**	**08 24 20.6**	**+0.5**
MAJO	**Matsushiro**	**9.60**	**40**	*e*Pn		**Pn**	**08 24 23.9**	**-0.4**
MAT	**Matsushiro**	**9.60**	**40**	P		**Pn**	**08 24 24.5**	**+0.3**
MAT				S		**Sn**	**08 26 12.0**	**+1.1**
MJAR	**Matsushiro Arr**	**9.60**	**40**	Pn		**Pn**	**08 24 24.4**	**+0.1**
	comp=Z,3.8nm,0.3s,baz=151,slow=32,SNR=44							
MJAR	**Matsushiro Arr**	**9.60**	**40**	P		**Pn**	**08 24 24.4**	**+0.2**
MJAR				pmax		pmax		
	comp=Z,4.0nm,0.3s							
NJ2	**Nanjing**	**10.41**	**288**	*e*P		**Pn**	**08 24 37.1**	**+1.8**
NJ2				PP			08 24 46.3	
NJ2				XP			08 24 51.5	
NJ2				S		**Sn**	**08 26 33.0**	**+2.2**
NJ2				AMB		AMB		
	comp=Z,30nm,1.0s							
NJ2				AMB		AMB		
	comp=Z,350nm,7.6s							
NJ2				LR		LR		
	comp=N,1μm,19.2s							
NJ2				LR		LR		
	comp=E,3μm,14.1s							
NJ2				LR		LR		
	comp=Z,3μm,14.1s							
CBIJ	**Chichi jima**	**10.51**	**100**	Pn		**Pn**	**08 24 36.1**	**-0.7**
	comp=Z,22nm,0.3s,baz=280,slow=24,SNR=10							
CBIJ				Sn		**Sn**	**08 26 31.8**	**-1.6**
	comp=Z,6.0nm,0.3s,baz=276,slow=19,SNR=3.6							
CBIJ				LR		LR	08 28 02.1	
	comp=Z,2μm,21.2s,baz=313,slow=34							
QZH	**Quanzhou**	**11.53**	**250**	*e*P		**Pn**	**08 24 52.7**	**+2.0**
QZH				*e*S		**Sn**	**08 26 59.0**	**+0.7**
QZH				LR		LR		
	comp=N,3μm,9.0s							
QZH				LR		LR		
	comp=E,2μm,9.9s							
QZH				LR		LR		
	comp=Z,4μm,23.1s							
DL2	**Dalian**	**12.02**	**324**	P		**Pn**	**08 25 00.1**	**+2.8**
DL2				*e*S		**Sn**	**08 27 12.5**	**+2.3**
DL2				AMB		AMB		
	comp=Z,30nm,1.1s							
DL2				AMB		AMB		
	comp=Z,440nm,3.0s							
DL2				LR		LR		
	comp=N,2μm,13.1s							
DL2				LR		LR		
	comp=Z,3μm,14.0s							
TIA	**Tai'an**	**13.18**	**305**	*e*P		**Pn**	**08 25 14.6**	**+1.4**
TIA				LR		LR		
	comp=E,3μm,13.0s							
WHN	**Wuhan**	**14.09**	**279**	*i*P		**Pn**	**08 25 26.8**	**+1.1**
WHN				S		**Sn**	**08 28 11.5**	**+11**
WHN				LR		LR		
	comp=N,2μm,7.9s							
WHN				LR		LR		
	comp=E,4μm,14.4s							
WHN				LR		LR		
	comp=Z,5μm,18.0s							
CN2	**Changchun**	**14.95**	**346**	*e*P		**Pn**	**08 25 39.0**	**+1.8**
CN2				*e*AP		pP	08 25 46.7	-4.5
CN2				*e*XP		sP	08 25 54.2	-1.3
CN2				*e*S		**Sn**	**08 28 22.3**	**+0.7**
CN2				AMB		AMB		
	comp=Z,70nm,1.2s							
CN2				AMB		AMB		
	comp=Z,500nm,8.0s							
CN2				LR		LR		
	comp=N,5μm,13.0s							
CN2				LR		LR		
	comp=E,2μm,13.0s							
CN2				LR		LR		
	comp=Z,5μm,15.0s							
MDJ	**Mudanjiang**	**15.21**	**357**	P		**Pn**	**08 25 40.7**	**0.0**
MDJ				S		**Sn**	**08 28 27.4**	**-0.7**
MDJ				AMB		AMB		
	comp=Z,12nm,1.7s							
MDJ				AMB		AMB		
	comp=Z,228nm,10.4s							
MDJ				LR		LR		
	comp=N,1μm,17.9s							
MDJ				LR		LR		
	comp=E,979nm,13.9s							
MDJ				LR		LR		
	comp=Z,2μm,15.6s							
BJT	**Baijiatuan**	**15.86**	**316**	*e*P		**Pn**	**08 25 51.2**	**+2.1**
	comp=Z,112nm,0.9s							
BJT	**Baijiatuan**	**15.86**	**316**	*e*P		**Pn**	**08 25 51.2**	**+2.1**
BJT				pmax		pmax		
	comp=Z,112nm,0.9s							
BJI	**Beijing**	**15.87**	**316**	P		**Pn**	**08 25 51.1**	**+1.9**
BJI				S		**Sn**	**08 28 40.1**	**-3.9**
BJI				AMB		AMB		
	comp=Z,35nm,1.1s							
BJI				AMB		AMB		
	comp=Z,733nm,3.6s							
BJI				LR		LR		
	comp=N,4μm,13.9s							
BJI				LR		LR		
	comp=E,3μm,14.7s							
BJI				LR		LR		
	comp=Z,3μm,16.2s							
ERM	**Erimo**	**16.21**	**36**	*i*P		**Pn**	**08 25 52.6**	**-1.0**
TIY	**Taiyuan**	**17.21**	**304**	P		**Pn**	**08 26 12.8**	**+6.6**
TIY				XP		sP	08 26 25.2	+4.5
TIY				LR		LR		
	comp=N,3μm,12.7s							
TIY				LR		LR		
	comp=E,3μm,15.1s							
TIY				LR		LR		
	comp=Z,4μm,13.5s							
ASAJ	**Asahikawa**	**17.55**	**30**	P		**Pn**	**08 26 08.0**	**-2.5**
	comp=Z,0.7nm,0.3s,baz=235,slow=6.5,SNR=6.1							
ASAJ				LR		LR	08 33 01.0	
	comp=Z,2μm,21.6s,baz=238,slow=37							
ASAJ	**Asahikawa**	**17.55**	**30**	P		**Pn**	**08 26 08.0**	**-2.4**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,2μm,21.6s							
XAN	**Xi'an**	**18.96**	**290**	P		**Pn**	**08 26 26.2**	**-1.5**
XAN				AP		pP	08 26 36.9	+1.1
XAN				AMB		AMB		
	comp=Z,26nm,1.8s							
XAN				AMB		AMB		
	comp=Z,138nm,6.3s							
XAN				LR		LR		
	comp=N,1μm,18.8s							
XAN				LR		LR		
	comp=E,4μm,52.4s							
XAN				LR		LR		
	comp=Z,2μm,12.5s							
HHC	**Hu-ho-hao-te**	**19.24**	**311**	*e*P		**Pn**	**08 26 33.6**	**+2.6**
HHC				AP		pP	08 26 42.9	+4.2
HHC				XP		sP	08 26 49.5	+6.5
HHC				S		**Sn**	**08 30 01.6**	**-4.0**
HHC				XS		sS	08 30 15.2	-4.8
HHC				SS			08 30 27.1	
HHC				AMB		AMB		
	comp=Z,89nm,1.0s							
HHC				AMB		AMB		
	comp=Z,425nm,2.8s							
HHC				LR		LR		
	comp=N,1μm,15.5s							
HHC				LR		LR		
	comp=E,2μm,16.6s							
HHC				LR		LR		
	comp=Z,3μm,16.7s							
HABR	**Khabarovsk**	**19.37**	**9**	*e*P		**Pn**	**08 26 29.3**	**-3.1**
HABR				*e*S		**Sn**	**08 30 05.8**	**-2.7**
KLR	**Kul'dur**	**19.83**	**2**	*e*P		**Pn**	**08 26 30.8**	**-7.1**
KLR				*e*S		**Sn**	**08 30 20.0**	**+0.3**
KLR				pmax		pmax		
	comp=N,45nm,2.0s							
KLR				pmax		pmax		
	comp=Z,90nm,2.0s							
KLR				MLR		MLR		
	comp=N,800nm,13.0s							
KLR				MLR		MLR		
	comp=E,800nm,13.0s							
KLR				MLR		MLR		
	comp=Z,2μm,13.0s							
YSS	**Yuzh-Sakhalins**	**19.94**	**25**	*e*P		**Pn**	**08 26 37.1**	**-2.1**
	comp=Z,82nm,1.1s							
YSS	**Yuzh-Sakhalins**	**19.94**	**25**	*e*P		**Pn**	**08 26 38.0**	**-1.3**
YSS				*e*S		**Sn**	**08 30 14.0**	**-8.5**
YSS				pmax		pmax		
	comp=Z,80nm,1.0s							
YSS				MLR		MLR		
	comp=Z,900nm,16.0s							
BTO	**Baotou**	**20.15**	**309**	*e*P		**P**	**08 26 42.0**	**+2.3**
GUMO	**Guam**	**20.58**	**137**	P		**P**	**08 26 45.9**	**+1.3**
	comp=Z,131nm,1.1s,baz=288,slow=3.2,SNR=3.7							
GUMO				LR		LR	08 33 42.4	
	comp=Z,847nm,18.1s,MS4.2,baz=312,slow=34							
GUMO	**Guam**	**20.58**	**137**	P		**P**	**08 26 45.9**	**+1.3**
GUMO				pmax		pmax		
	comp=Z,131nm,1.1s							
GUMO				MLR		MLR		
	comp=Z,847nm,18.1s,MS4.2							
GYA	**Guiyang**	**21.30**	**268**	P		**P**	**08 26 53.0**	**+0.7**
GYA				AP			08 27 04.0	
GYA				XP		sP	08 27 10.0	+4.4
GYA				S		**S**	**08 30 44.8**	**-2.3**
GYA				PCP		PcP	08 30 59.3	+3.2
GYA				XS		sS	08 31 01.2	-0.2
GYA				SCP		ScP	08 34 31.0	+0.5
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.2							
GYA				AMB		AMB		
	comp=Z,190nm,4.0s							
GYA				LR		LR		
	comp=N,2μm,12.9s,MS4.8							
GYA				LR		LR		
	comp=E,2μm,14.6s,MS4.8							
GYA				LR		LR		
	comp=Z,3μm,14.1s,MS4.8							
QIZ	**Qiongzhong**	**21.49**	**246**	P		**P**	**08 26 55.9**	**+1.5**
QIZ				XP		sP	08 27 11.4	+3.8
QIZ				S		**S**	**08 30 52.4**	**+1.5**
QIZ				LR		LR		
	comp=N,1μm,16.3s,MS4.5							
QIZ				LR		LR		
	comp=E,912nm,15.8s,MS4.5							
QIZ				LR		LR		
	comp=Z,2μm,19.3s,MS4.4							
QIZ	**Qiongzhong**	**21.49**	**246**	PFAKE			08 27 10.0	+16
QIZ				LR		LR		
	comp=Z,2μm,19.0s,MS4.5							
HIA	**Hailar**	**21.49**	**340**	*e*P		**P**	**08 26 53.3**	**-0.9**
	comp=Z,40nm,1.0s,mb4.7							
HIA				LR		LR		
	comp=Z,2μm,21.0s,MS4.4							
HIA	**Hailar**	**21.49**	**340**	*e*P		**P**	**08 26 53.3**	**-0.9**
HIA				pmax		pmax		
	comp=Z,40nm,1.0s							
HIA				MLR		MLR		
	comp=Z,2μm,21.0s							
DAV	**Davao City (W)**	**22.69**	**193**	PFAKE			08 27 20.0	+13
DAV				LR		LR		
	comp=Z,678nm,20.0s,MS4.1							
CD2	**Chengdu**	**23.20**	**280**	P		**P**	**08 27 12.1**	**-0.4**
CD2				AP			08 27 23.7	
CD2				XP		sP	08 27 30.0	+4.2
CD2				PP			08 27 43.4	
CD2				PCP		PcP	08 31 02.3	+2.5
CD2				S		**S**	**08 31 15.7**	**-6.2**
CD2				XS		sS	08 31 34.6	-3.2
CD2				SS			08 32 02.9	
CD2				AMB		AMB		
	comp=Z,30nm,0.6s,mb4.9							
CD2				AMB		AMB		
	comp=Z,340nm,3.8s							
CD2				LR		LR		
	comp=N,3μm,18.6s							
CD2				LR		LR		
	comp=E,3μm,13.1s							
LZH	**Lanzhou**	**23.39**	**294**	*e*P		**P**	**08 27 13.0**	**-1.5**
LZH				AP			08 27 23.2	
LZH				XP		sP	08 27 28.0	+0.2
LZH				S		**S**	**08 31 21.0**	**-3.9**
LZH				AMB		AMB		
	comp=Z,46nm,1.0s,mb4.9							
LZH				AMB		AMB		
	comp=Z,295nm,4.0s							
LZH				LR		LR		
	comp=E,4μm,13.6s							
LZH				LR		LR		
	comp=Z,4μm,15.6s,MS5.0							
LZH	**Lanzhou**	**23.39**	**294**	*e*P		**P**	**08 27 13.0**	**-1.5**
LZH				*PP			08 27 23.2	
LZH				*SP		sP	08 27 28.0	+0.2
LZH							08 27 41.0	
LZH				S		**S**	**08 31 21.0**	**-3.9**
LZH				*SS		sS	08 31 32.0	-8.8
LZH				SS			08 32 00.0	
KMI	**Kunming**	**25.06**	**267**	P		**P**	**08 27 30.0**	**+0.2**
KMI				AP		pP	08 27 39.1	-0.3
KMI				PP			08 28 10.4	
KMI				S		**S**	**08 31 53.8**	**+1.8**
KMI				XS		sS	08 32 08.7	+0.7
KMI				SS			08 32 55.4	
KMI				AMB		AMB		
	comp=Z,32nm,0.7s,mb5.0							
KMI				AMB		AMB		
	comp=Z,105nm,4.3s							
KMI				LR		LR		
	comp=N,1μm,13.8s,MS4.8							
KMI				LR		LR		
	comp=E,2μm,14.1s,MS4.8							
KMI				LR		LR		
	comp=Z,3μm,14.9s,MS4.9							
KMI	**Kunming**	**25.06**	**267**	P		**P**	**08 27 30.0**	**+0.2**
KMI				pP		pP	08 27 39.1	-0.3
KMI				sP		sP	08 27 41.8	-1.8
KMI				PP			08 28 10.4	
KMI				PPP			08 28 21.1	
KMI				S		**S**	**08 31 53.8**	**+1.8**
KMI				sS		sS	08 32 08.7	+0.7
KMI				SS			08 32 55.4	
KMI				SSS			08 33 14.3	
KMI	**Kunming**	**25.06**	**267**	P		**P**	**08 27 30.0**	**+0.2**
KMI				*PP		pP	08 27 39.1	-0.3
KMI				*SP		sP	08 27 41.8	-1.8
KMI							08 28 10.4	
KMI				PPP			08 28 21.1	
KMI				S		**S**	**08 31 53.8**	**+1.8**
KMI				*SS		sS	08 32 08.7	+0.7
ULN	**Ulaanbaatar**	**25.86**	**322**	*e*P		**P**	**08 27 35.6**	**-1.2**
	comp=Z,36nm,0.7s,mb5.0							
ULN				LR		LR		
	comp=Z,3μm,21.0s,MS4.8							
ULN	**Ulaanbaatar**	**25.86**	**322**	*e*P		**P**	**08 27 35.7**	**-1.1**
SONM	**Songino Array**	**26.19**	**321**	P		**P**	**08 27 39.2**	**-0.7**
	comp=Z,28nm,0.7s,mb4.9,baz=136,slow=6.7,SNR=30							
SONM				ScP		ScP	08 34 44.9	+1.6
	comp=Z,0.3nm,0.5s,baz=169,slow=1.5,SNR=2.7							
SONM				LR		LR	08 39 15.1	
	comp=Z,2μm,21.2s,MS4.7,baz=117,slow=39							
GTA	**Gaotai**	**27.14**	**300**	P		**P**	**08 27 51.4**	**+2.9**
GTA				AP		pP	08 28 03.5	+5.3
GTA				XP		sP	08 28 09.2	+6.9
GTA				PP			08 28 40.8	
GTA				S		**S**	**08 32 28.1**	**+3.4**
GTA				XS		sS	08 32 48.2	+7.4
GTA				AMB		AMB		
	comp=Z,44nm,1.0s,mb4.9							
GTA				AMB		AMB		
	comp=Z,353nm,6.6s							
GTA				LR		LR		
	comp=N,2μm,20.7s,MS4.8							
GTA				LR		LR		
	comp=E,2μm,17.1s,MS4.8							
GTA				LR		LR		
	comp=Z,3μm,16.5s,MS4.9							
ZAK	**Zakamensk**	**29.34**	**323**	*e*P		**P**	**08 28 06.9**	**-1.1**
ZAK				*e*			08 29 01.0	
ZAK				*e*			08 31 19.0	
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.4s,mb4.3							
TLY	**Talaya**	**29.93**	**326**	*e*P		**P**	**08 28 11.9**	**-1.2**
	comp=Z,19nm,1.3s,mb4.7							
TLY	

CMAR Chiang Mai Arr 30.78 256 P **P** **08 28 20.6 -0.4**
comp=Z,0.9nm,0.3s,mb4.1,baz=75,slow=4.9,SNR=6.4
CMAR PcP PcP 08 31 19.0 +1.0
comp=Z,0.7nm,0.3s,baz=66,slow=0.8,SNR=4.2
CMAR LR LR 08 41 30.7
comp=Z,947nm,19.5s,MS4.5,baz=69,slow=38
CMAR Chiang Mai Arr 30.78 256⇑ *eP* **P** **08 28 23.2 +2.2**
PETK Petropavlovsk- 30.94 32 P **P** **08 28 21.4 -0.6**
comp=Z,7.3nm,0.8s,mb4.5,baz=185,slow=8.5,SNR=3.8
PETK LR LR 08 43 15.1
comp=Z,381nm,18.7s,MS4.1,baz=226,slow=41
PETK Petropavlovsk- 30.94 32 P **P** **08 28 21.4 -0.6**
PETK LR LR 08 43 15.1
PET Petropavlovsk 31.34 33 PFAKE 08 28 40.0 +14
PET LR LR
comp=Z,838nm,19.0s,MS4.4
PET Petropavlovsk 31.34 33 *eP* **P** **08 28 24.9 -0.6**
PET *e**PP pP 08 28 36.2 +0.9
PET *eS* **S** **08 33 27.8 -2.5**
PET pmax pmax
comp=Z,73nm,1.1s,mb5.4
PET MLR MLR
comp=Z,800nm,16.0s,MS4.5
YAK Yakutsk 32.65 359 PFAKE 08 28 50.0 +13
YAK LR LR
comp=Z,592nm,19.0s,MS4.3
YAK Yakutsk 32.65 359 *eP* **P** **08 28 36.4 -0.5**
YAK pmax pmax
comp=Z,14nm,1.1s,mb4.8
YAK MLR MLR
comp=Z,672nm,17.0s,MS4.4
YAK MLR MLR
comp=N,642nm,18.0s,MS4.4
YAK MLR MLR
comp=E,393nm,19.0s,MS4.4
LSA Lhasa 34.16 280 P **P** **08 28 51.0 +0.4**
LSA Lhasa 34.16 280 PFAKE 08 29 00.0 +9.4
LSA LR LR
comp=Z,1μm,19.0s,MS4.7
SHL Shillong 34.41 273 *ex* **P** **08 28 51.6 -1.2**
KAPI Kappang 35.75 199 PFAKE 08 29 20.0 +16
KAPI LR LR
comp=Z,330nm,20.0s,MS4.1
SEY Seymchan 36.41 17⇑ *eP* **P** **08 29 09.9 +0.4**
WMQ Urumqi 36.87 305 *eP* **P** **08 29 15.0 +1.3**
WMQ AP pP 08 29 25.0 +1.5
WMQ XP sP 08 29 29.0 +1.4
WMQ PP PP 08 30 41.0 +3.1
WMQ S **S** **08 34 56.0 0.0**
WMQ SS SS 08 37 25.0 -13
WMQ AMB AMB
comp=Z,18nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,57nm,4.0s
WMQ LR LR
comp=N,642nm,15.0s,MS4.7
WMQ LR LR
comp=E,697nm,15.0s,MS4.7
WMQ LR LR
comp=Z,1μm,15.0s,MS4.8
TAPN Taplejung 37.60 278 *eP* **P** **08 29 20.5 +0.5**
comp=Z,72nm,1.3s,mb5.2
KRAR Krasnoyarsk 37.63 326⇑ *iP* **P** **08 29 19.1 -0.9**
KRAR pmax pmax
comp=Z,35nm,0.6s,mb5.3
ODAN Odare 37.99 277 *eP* **P** **08 29 22.8 -0.6**
comp=Z,44nm,0.8s,mb5.3
RAMN Ramite 38.65 277 *eP* **P** **08 29 28.2 -0.7**
comp=Z,12nm,0.5s,mb4.9
JIRN Jiri 38.84 279 *eP* **P** **08 29 31.3 +0.8**
comp=Z,28nm,0.7s,mb5.1
GUN Gumba 39.05 279 *eP* **P** **08 29 32.3 +0.1**
comp=Z,142nm,0.9s,mb5.7
PKI Pulchoki 39.53 279 *eP* **P** **08 29 35.9 -0.4**
comp=Z,44nm,0.8s,mb5.3
PKI Pulchoki 39.53 279 *eP* **P** **08 29 35.9 -0.4**
PKI pmax pmax
comp=Z,44nm,0.8s,mb5.2
KKN Kakani 39.59 279 *eP* **P** **08 29 36.4 -0.4**
comp=Z,87nm,1.0s,mb5.4
KKN Kakani 39.59 279 *eP* **P** **08 29 36.4 -0.4**
KKN pmax pmax
comp=Z,87nm,1.0s,mb5.4
DMN Daman 39.79 279 *eP* **P** **08 29 37.9 -0.5**
comp=Z,67nm,1.1s,mb5.3
BATI Baumata 39.92 191 P **P** **08 29 39.4 -0.1**
comp=Z,44nm,0.9s,mb5.2,baz=302,slow=9.5,SNR=3.9
BATI LR LR 08 44 54.0
comp=Z,465nm,19.3s,MS4.3,baz=294,slow=34
GKN Gorkha 40.10 280 *eP* **P** **08 29 40.3 -0.7**
comp=Z,30nm,0.6s,mb5.2
DANN Dangsing 40.77 280 *eP* **P** **08 29 46.5 -0.1**
comp=Z,91nm,0.8s,mb5.7
KOLN Koldanda 41.05 280 *eP* **P** **08 29 48.2 -0.6**
comp=Z,53nm,0.9s,mb5.2
MK31 Makanchi Array 41.06 309 *eP* **P** **08 29 47.8 -1.0**
MK31 Makanchi Array 41.06 309 *i* P **P** **08 29 48.2 -0.5**
MK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
MKAR Makanchi Array 41.06 309 P **P** **08 29 47.9 -0.8**
comp=Z,3.2nm,0.5s,mb4.2,baz=88,slow=10,SNR=24
MKAR PcP PcP 08 31 47.8 -0.2
comp=Z,3.0nm,1.0s,baz=72,slow=4.7,SNR=3.2
MKAR ScP ScP 08 35 34.5 -0.8
comp=Z,2.9nm,1.1s,baz=92,slow=3.6,SNR=5.5
MKAR LR LR 08 48 43.3
comp=Z,725nm,18.6s,MS4.6,baz=111,slow=39
MKAR Makanchi Array 41.06 309 P **P** **08 29 47.9 -0.8**
MKAR PcP PcP 08 31 47.8 -0.2
MKAR ScP ScP 08 35 34.5 -0.8
MKAR LR LR 08 48 43.4
MKAR Makanchi Array 41.06 309⇑ *eP* **P** **08 29 48.4 -0.3**
ZAA0 Zalesovo Array 41.07 320 *eP* **P** **08 29 47.3 -1.3**
ZALV Zalesovo Beam 41.07 320 P **P** **08 29 47.0 -1.6**
comp=Z,6.1nm,0.7s,mb4.3,baz=111,slow=8.1,SNR=12
ZALV PcP PcP 08 31 46.4 -1.4
comp=Z,3.3nm,0.9s,baz=108,slow=3.2,SNR=4.0
ZALV ScP ScP 08 35 35.4 +0.3
comp=Z,0.2nm,0.3s,baz=109,slow=3.5,SNR=2.7
ZALV LR LR 08 48 45.3
comp=Z,1μm,18.4s,MS4.8,baz=111,slow=39
ZALV Zalesovo Beam 41.07 320 P **P** **08 29 47.0 -1.6**
ZALV PcP PcP 08 31 46.4 -1.4
ZALV ScP ScP 08 35 35.4 +0.3
ZALV LR LR 08 48 45.3
PYUN Piuthan 41.49 280 *eP* **P** **08 29 52.6 +0.1**
comp=Z,79nm,0.8s,mb5.4
PMG Port Moresby 41.76 155 PFAKE 08 30 10.0 +15
PMG LR LR
comp=Z,555nm,21.0s,MS4.4
NVS Novosibirsk 42.22 321 *eP* **P** **08 29 55.4 -2.7**
NVS pmax pmax
comp=Z,14nm,1.2s,mb4.5
NVS pmax pmax
comp=N,18nm,1.7s
NVS pmax pmax
comp=E,15nm,1.3s
TIXI Tiksi 42.32 359 *eP* **P** **08 29 56.6 -2.0**
comp=E,15nm,1.2s,mb4.5
TIXI LR LR
comp=Z,684nm,19.0s,MS4.6
TIXI Tiksi 42.32 359 *eP* **P** **08 29 56.8 -1.8**
TIXI pmax pmax
comp=Z,25nm,2.0s,mb4.5
TIXI MLR MLR
comp=Z,662nm,15.0s,MS4.6
KURK Kurchatov 44.03 314 P **P** **08 30 12.8 +0.1**
comp=Z,168nm,1.0s,mb5.7,SNR=29
KURK Kurchatov 44.03 314 P **P** **08 30 11.9 -0.8**
baz=100,slow=8.5
KURK Kurchatov 44.03 314 *eP* **P** **08 30 12.0 -0.7**
comp=Z,35nm,1.1s,mb5.0
KURK LR LR
comp=Z,3μm,19.0s,MS5.2
KURK Kurchatov 44.03 314 *eP* **P** **08 30 12.0 -0.7**
KURK pmax pmax
comp=Z,35nm,1.1s,mb5.0
KURK MLR MLR
comp=Z,3μm,19.0s,MS5.2
BILL Bilibino 44.03 18 *eP* **P** **08 30 12.3 -0.2**
comp=Z,9.9nm,0.3s,mb5.0
BILL LR LR
comp=Z,461nm,21.0s,MS4.4
BILL Bilibino 44.03 18⇑ *iP* **P** **08 30 11.8 -0.7**
BILL *i* pP 08 30 19.6 -2.9
BILL pmax pmax
comp=Z,27nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,500nm,18.0s,MS4.5
TKM2 Tokmak 2 45.62 303 *eP* **P** **08 30 25.1 -0.4**
comp=Z,9.1nm,1.0s,mb4.7
TKM2 LR LR
comp=Z,793nm,19.0s,MS4.7
TKM2 Tokmak 2 45.62 303 *eP* **P** **08 30 25.1 -0.4**
TKM2 pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TKM2 MLR MLR
comp=Z,793nm,19.0s,MS4.7
UCH Uchtor 46.44 302 *eP* **P** **08 30 32.1 +0.1**
comp=Z,5.5nm,0.7s,mb4.6
EKS2 Erkin-Say 46.97 302 *eP* **P** **08 30 35.7 -0.4**
comp=Z,2.6nm,0.8s,mb4.2
EKS2 LR LR
comp=Z,786nm,20.0s,MS4.7
AML Almayashu 47.06 302 *eP* **P** **08 30 36.3 -0.6**
comp=Z,8.1nm,1.1s,mb4.6
HYB Hyderabad 48.83 268 *eP* **P** **08 30 50.5 -0.4**
HYB Hyderabad 48.83 268 *i* P **P** **08 30 50.5 -0.4**
VOSK Vostochnaya 48.97 316 P **P** **08 30 49.8 -1.7**
VOSK pmax pmax
comp=Z,24nm,1.2s,mb5.1
WRAB Tennant Creek 49.17 175 *eP* **P** **08 30 52.6 -0.7**
comp=Z,19nm,1.1s,mb5.0
WRAB *ep*P pP 08 31 00.8 -2.6
WRAB LR LR
comp=Z,360nm,20.0s,MS4.4
WRAB Tennant Creek 49.17 175 *eP* **P** **08 30 52.6 -0.7**
WRAB *e**PP pP 08 31 00.8 -2.6
WRAB pmax pmax
comp=Z,19nm,1.1s,mb5.0
WRAB MLR MLR
comp=Z,360nm,20.0s,MS4.4
WRA Warramunga Arr 49.18 175 P **P** **08 30 52.8 -0.6**
comp=Z,7.5nm,1.0s,mb4.7,baz=353,slow=8.3,SNR=21
WRA LR LR 08 49 49.2
comp=Z,226nm,19.8s,MS4.2,baz=45,slow=34
WB2 Warramunga Arr 49.18 175 *eP* **P** **08 30 52.9 -0.5**
WB2 *ep*P pP 08 31 03.2 -0.3
KK31 Karatay Array 49.33 303 *i* P **P** **08 30 53.6 -0.8**
KK31 pmax pmax
comp=Z,16nm,0.9s,mb5.0
BVA0 Borovoye Array 49.35 316 *i* P **P** **08 30 53.2 -1.1**
BVA0 pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
BVAR Borovoye Array 49.35 316 P **P** **08 30 53.3 -1.1**
comp=Z,24nm,1.0s,mb5.2,baz=93,slow=9.2,SNR=56
BVAR Borovoye Array 49.35 316 P **P** **08 30 53.3 -1.0**
BVAR pmax pmax
comp=Z,24nm,1.0s
BRVK Borovoye 49.42 316 P **P** **08 30 54.2 -0.6**
comp=Z,183nm,0.8s,mb6.2,SNR=21
BRVK Borovoye 49.42 316 *eP* **P** **08 30 54.0 -0.9**
comp=Z,49nm,0.9s,mb5.5
BRVK LR LR
comp=Z,743nm,19.0s,MS4.7
BRVK Borovoye 49.42 316 *eP* **P** **08 30 54.0 -0.8**
BRVK pmax pmax
comp=Z,49nm,0.9s,mb5.5
BRVK MLR MLR
comp=Z,743nm,19.0s,MS4.7
MBWA Marble Bar 51.33 193 *eP* **P** **08 31 15.8 +6.3**
comp=Z,16nm,1.1s,mb4.9
CTA Charters Tower 51.47 161 LR LR 08 51 36.4
comp=Z,341nm,18.4s,MS4.4,baz=47,slow=34
CTAO Charters Tower 51.47 161 PFAKE 08 31 20.0 +9.3
CTAO LR LR
comp=Z,414nm,20.0s,MS4.5
KBL Kabul 51.74 292 *eP* **P** **08 31 11.8 -0.8**
comp=Z,20nm,1.2s,mb4.9
KBL *ep*P pP 08 31 27.3 +4.5
KBL *es*P sP 08 31 32.2 +5.3
KBL Kabul 51.74 292 *eP* **P** **08 31 11.8 -0.9**
KBL *e**PP pP 08 31 27.3 +4.5
KBL pmax pmax
comp=Z,20nm,1.2s,mb4.9
ASAR Alice Springs 52.85 176 P **P** **08 31 20.3 -0.6**
comp=Z,1.9nm,0.6s,mb4.2,baz=7.9,slow=14,SNR=41
ASAR Alice Springs 52.85 176 P **P** **08 31 20.3 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
SVE Sverdlovsk 55.06 321⇓ *eP* **P** **08 31 35.6 -1.1**
SVE pmax pmax
comp=Z,41nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.5
AB31 Akbulak array 56.03 312 P **P** **08 31 42.7 -1.1**
AB31 pmax pmax
comp=Z,27nm,1.0s,mb5.2
ARU Arti 56.23 321 P **P** **08 31 44.4 -0.7**
comp=Z,237nm,1.0s,mb6.2,SNR=13
ARU Arti 56.23 321 *eP* **P** **08 31 43.6 -1.5**
comp=Z,37nm,0.9s,mb5.4
ARU LR LR
comp=Z,1μm,22.0s,MS5.0
ARU Arti 56.23 321 *c i*P **P** **08 31 43.9 -1.2**
ARU 08 32 39.6
ARU 08 33 45.7
ARU PPP 08 35 02.7
ARU *e*S **S** **08 39 31.8 -0.4**
ARU *e*SS SS 08 43 18.2 -0.5
ARU pmax pmax
comp=Z,55nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,3μm,19.0s,MS5.3
SOKR Solikamsk 57.01 324⇑ *iP* **P** **08 31 50.5 -0.1**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,840nm,16.0s,MS4.9
AKTK Aktyubinsk 57.12 313 P **P** **08 31 50.5 -1.1**
AKTO Aktyubinsk 57.12 313 P **P** **08 31 50.5 -1.1**
comp=Z,7.1nm,0.9s,mb4.7,baz=77,slow=10,SNR=12
AKTO Aktyubinsk 57.12 313 P **P** **08 31 50.5 -1.0**
AKTO pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
IMA2 Indian Mountai 57.77 28 *eP* **P** **08 31 56.0 +0.2**
CHUM Lake Minchumin 58.41 30 *eP* **P** **08 32 01.1 +0.7**
comp=Z,27nm,1.0s,mb5.2
PPLA Purkeypile 58.52 32 *eP* **P** **08 32 01.8 +0.6**
comp=Z,20nm,1.0s,mb5.1
KDAK Kodiak Island 58.77 38 P pP 08 32 16.1 +2.9
comp=Z,14nm,0.7s,baz=285,slow=4.8,SNR=14
KDAK LR LR 08 56 36.7
comp=Z,250nm,21.1s,MS4.3,baz=262,slow=35
BPAW Bear Paw Mtn. 58.98 30 *eP* **P** **08 32 04.7 +0.4**
comp=Z,14nm,1.1s,mb4.9
BPAW *ep*P pP 08 32 15.3 +0.7
KTH Kantishna Hill 59.05 31 *eP* **P** **08 32 05.3 +0.5**
comp=Z,25nm,1.3s,mb5.1
COLD Coldfoot 59.13 26 *eP* **P** **08 32 05.8 +0.6**
comp=Z,9.2nm,1.2s,mb4.7
TRF Thorofare Moun 59.34 31 *eP* **P** **08 32 06.8 0.0**
comp=Z,17nm,1.3s,mb4.9
RC01 Rabbit Creek A 59.84 34 *eP* **P** **08 32 09.8 -0.4**
comp=Z,27nm,1.1s,mb5.2
FORT Forrest 59.88 182 *eP* **P** **08 32 19.1 +8.3**
comp=Z,6.2nm,1.0s,mb4.6
MCK McKinley 59.92 30 *eP* **P** **08 32 10.5 -0.3**
comp=Z,25nm,1.0s,mb5.2
MCK McKinley 59.92 30 *eP* **P** **08 32 10.5 -0.3**
MCK pmax pmax
comp=Z,25nm,1.0s,mb5.2
PMR Palmer 60.07 33 *eP* **P** **08 32 12.0 +0.2**
comp=Z,31nm,1.1s,mb5.3
PMR *ep*P pP 08 32 24.6 +2.4
PMR LR LR
comp=Z,182nm,20.0s,MS4.2
PMR Palmer 60.07 33 *eP* **P** **08 32 12.0 +0.2**
PMR *e**PP pP 08 32 24.6 +2.4
PMR pmax pmax
comp=Z,31nm,1.1s,mb5.2
PMR MLR MLR
comp=Z,182nm,20.0s,MS4.2
SEW Seward 60.10 35 *eP* **P** **08 32 11.6 -0.5**
FUNA Funafuti 60.11 121 PFAKE 08 32 30.0 +17
FUNA LR LR
comp=Z,3μm,20.0s,MS5.4
COLA College 60.27 29 PFAKE 08 32 30.0 +17
COLA LR LR
comp=Z,410nm,20.0s,MS4.6
COLA College 60.27 29⇑ *iP* **P** **08 32 13.6 +0.4**
STKA Stephens Creek 61.83 169 P **P** **08 32 23.9 -0.2**
comp=Z,3.0nm,0.7s,mb4.5,baz=359,slow=8.8,SNR=6.3
STKA LR LR 08 57 47.4
comp=Z,281nm,18.5s,MS4.5,baz=137,slow=35
EGAK Eagle 63.11 29 *eP* **P** **08 32 31.6 -0.7**
comp=Z,7.4nm,0.8s,mb4.9
EGAK LR LR
comp=Z,263nm,20.0s,MS4.4
NWAO Narrogin (SRO) 63.25 193 *eP* **P** **08 32 33.4 -0.1**
comp=Z,44nm,0.8s,mb5.6
NWAO Narrogin (SRO) 63.25 193 *eP* **P** **08 32 33.4 -0.2**
NWAO pmax pmax
comp=Z,44nm,0.8s
DAWY Dawson 64.02 29 *eP* **P** **08 32 38.6 +0.3**
KLMR Klimovskoe 65.29 327 *eP* **P** **08 32 44.9 -1.7**
KLMR pmax pmax
comp=Z,24nm,1.4s,mb5.0
LVZ Lovozero 65.29 336 PFAKE 08 33 00.0 +13
LVZ LR LR
comp=Z,548nm,20.0s,MS4.8
HYT Haines Junctio 65.72 32 *eP* **P** **08 32 50.6 +1.2**
APA Apatity 65.84 335⇑ *eP* **P** **08 32 48.2 -1.9**
APA pmax pmax
comp=Z,21nm,1.0s,mb5.1
APA MLR MLR
comp=Z,1μm,15.0s,MS5.1
SPITS Spitsbergen Ar 66.17 348 P **P** **08 32 51.6 -0.4**
comp=Z,4.4nm,0.7s,mb4.6,baz=53,slow=7.5,SNR=4.5
SPITS Spitsbergen Ar 66.17 348 P **P** **08 32 51.7 -0.4**
SPITS pmax pmax
comp=Z,4.0nm,0.7s
KBS Kingsbay 66.53 349 PFAKE 08 33 10.0 +16
KBS LR LR
comp=Z,418nm,20.0s,MS4.7
KEV Kevo 67.26 338 *eP* **P** **08 32 58.9 -0.2**
KEV LR LR
comp=Z,1μm,21.0s,MS5.2
ARCES ARCESS Array B 67.83 338 P **P** **08 33 01.3 -1.5**
comp=Z,4.8nm,0.9s,mb4.5,baz=42,slow=4.1,SNR=3.5
ARCES LR LR 09 07 52.6
comp=Z,1μm,19.7s,MS5.1,baz=59,slow=40
ARCES ARCESS Array B 67.83 338 P **P** **08 33 01.3 -1.5**
ARCES LR LR 09 07 52.6
ARCES ARCESS Array B 67.83 338 P **P** **08 33 01.3 -1.4**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES MLR MLR
comp=Z,1μm,19.7s
SIT Sitka 68.00 36 *eP* **P** **08 33 05.3 +1.3**
comp=Z,208nm,1.4s,mb6.0
JOF Joensuu 68.28 331 *ep* **P** **08 33 04.5 -1.2**
comp=Z,18nm,0.7s,mb5.2
JOF Joensuu 68.28 331 *eP* **P** **08 33 04.5 -1.2**
JOF pmax pmax
comp=Z,18nm,0.7s,mb5.2
OBN Obninsk 68.60 322 PFAKE 08 33 20.0 +12
OBN LR LR
comp=Z,1μm,21.0s,MS5.2
OBN Obninsk 68.60 322 *eP* **P** **08 33 06.5 -1.3**
OBN *e* 08 33 27.3
OBN pmax pmax
comp=Z,16nm,1.6s,mb4.7
OBN MLR MLR
comp=Z,1μm,19.0s,MS5.2
KIV Kislovodsk 68.82 309 *eP* **P** **08 33 09.1 -0.3**
comp=Z,64nm,1.5s,mb5.3
KIV LR LR
comp=Z,407nm,19.0s,MS4.7
KIV Kislovodsk 68.82 309 *eP* **P** **08 33 08.7 -0.7**
KIV pmax pmax
comp=Z,29nm,1.2s,mb5.1
DLBC Dease Lake 70.12 33 P **P** **08 33 18.0 +0.9**
comp=Z,7.4nm,1.0s,mb4.6,baz=302,slow=6.7,SNR=6.8
AFI Afiamalu 70.33 119 LR LR 08 59 41.4
comp=Z,244nm,19.7s,MS4.5,baz=287,slow=32
MIB Mutribah 70.66 294 *eP* **P** **08 33 19.8 -1.2**
baz=294
MIB AMb AMB 08 33 24.8
comp=Z,36nm,1.0s,mb5.3,baz=294
KAF Kangasniemi 70.73 331 *ep* **P** **08 33 21.8 +1.0**
comp=Z,7.5nm,0.8s,mb4.7
KAF Kangasniemi 70.73 331 *eP* **P** **08 33 21.8 +1.0**
KAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
RDF Al-Radifah 70.84 293 *eP* **P** **08 33 21.1 -1.0**
baz=293
NAY Al-Naaiem 70.96 293 *eP* **P** **08 33 21.5 -1.3**
baz=293
NAY AMb AMB 08 33 26.5
comp=Z,19nm,0.9s,mb5.0,baz=293
RES Resolute Bay 72.06 11 *eP* **P** **08 33 28.3 -0.4**
comp=Z,662nm,0.8s
VSU Vasula 72.19 328⇑ *iP* **P** **08 33 26.8 -2.9**
VSU pmax pmax
comp=Z,27nm,1.0s,mb5.1
TAU Tasmania Unive 73.58 167 PFAKE 08 33 50.0 +12
TAU LR LR
comp=Z,406nm,19.0s,MS4.7
AKASG Malin Array Be 74.46 320 P **P** **08 33 41.1 -2.2**
comp=Z,3.9nm,0.7s,mb4.5,baz=54,slow=6.1,SNR=14
AKASG LR LR 09 09 43.5
comp=Z,627nm,18.5s,MS4.9,baz=85,slow=38
AKASG Malin Array Be 74.46 320 *i* P **P** **08 33 41.7 -1.5**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 74.46 320 *eP* **P** **08 33 41.0 -2.2**
KIEV Kiev 74.48 320 *eP* **P** **08 33 41.6 -1.7**
comp=Z,10nm,0.9s,mb4.8
KIEV LR LR
comp=Z,725nm,22.0s,MS4.9
KIEV Kiev 74.48 320 *eP* **P** **08 33 41.6 -1.7**
KIEV pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KIEV MLR MLR
comp=Z,725nm,22.0s,MS4.9
YKA Yellowknife Ar 74.80 26 P **P** **08 33 44.9 -0.1**
comp=Z,3.1nm,0.7s,mb4.3,baz=295,slow=5.5,SNR=3.7
YKA LR LR 09 06 05.1
comp=Z,68nm,19.5s,MS4.0,baz=100,slow=35
YKA Yellowknife Ar 74.80 26 P **P** **08 33 44.9 -0.1**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,69nm,19.5s
SUW Suwalki 76.09 325 *eP* **P** **08 33 51.3 -1.3**
comp=Z,33nm,1.0s,mb5.2
SUW Suwalki 76.09 325 *eP* **P** **08 33 51.3 -1.2**
SUW pmax pmax
comp=Z,33nm,1.0s,mb5.2
BRTR Keskin Array B 76.71 308 P **P** **08 33 56.0 -0.4**
comp=Z,7.8nm,0.8s,mb4.7
BRTR Keskin Array B 76.71 308 P **P** **08 33 56.0 -0.3**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
NB2 NORSAR Subarra 77.38 334 P **P** **08 33 57.4 -2.3**
comp=Z,6.7nm,0.8s,mb4.6,baz=50,slow=5.9
NOA NORSAR Array B 77.38 334 P **P** **08 33 57.5 -2.2**
comp=Z,8.0nm,0.9s,mb4.7,baz=49,slow=5.5,SNR=6.9
NOA NORSAR Array B 77.38 334 P **P** **08 33 57.5 -2.2**
NOA pmax pmax
comp=Z,8.0nm,0.9s
BUR08 Bucovina Ar. S 78.26 318 *eP* **P** **08 34 04.0 -0.8**
BURAR Bucovina Array 78.26 318⇑ P **P** **08 34 05.5 +0.6**
BURAR Bucovina Array 78.26 318⇑ *iP* **P** **08 34 05.5 +0.7**
KWP Kalwaria 78.63 321 *eP* **P** **08 34 06.8 -0.1**
KWP Kalwaria 78.63 321 *eP* **P** **08 34 06.8 0.0**
KWP LR LR
comp=Z,1μm,19.0s,MS5.3
CSS Prodhromos 79.14 304 PFAKE 08 34 20.0 +10
CSS LR LR
comp=Z,443nm,21.0s,MS4.8
KOLS Kolonicke sedl 79.25 320 *eP* **P** **08 34 12.7 +2.5**
MSEY Mahe Island 79.36 258 PFAKE 08 34 20.0 +8.6
MSEY LR LR
comp=Z,341nm,19.0s,MS4.7
STHS Stebnicka Huta 79.55 321 *eP* PcP 08 34 20.7 +1.0
STHS Stebnicka Huta 79.55 321 *e*PCP PcP 08 34 20.7 +1.0
A07A Ashnola River, 79.62 39⇑ P **P** **08 34 11.6 -0.6**
baz=79
CRVS Cervenica-Dubn 79.71 321 *eP* **P** **08 34 11.3 -1.5**
ISP Isparta 79.75 308 PFAKE 08 34 20.0 +6.8
ISP LR LR
comp=Z,484nm,19.0s,MS4.9
OJC Ojcow 79.89 322 *eP* **P** **08 34 13.1 -0.6**
NIE Niedzica 80.06 322 *eP* **P** **08 34 14.2 -0.4**
B07A Winthrop 80.09 40⇓ P **P** **08 34 13.6 -1.2**
baz=80

F04A Amboy 80.14 43 ⇑P P 08 34 13.7 -1.4
baz=80
URZ Urewera 80.14 145 LR LR 09 06 00.0
comp=Z,194nm,19.2s,MS4.5,baz=148,slow=33
DRGR 80.15 318 ⇓P P 08 34 15.7 +0.6
DRGR 80.15 318 ⇓*i*P P 08 34 15.7 +0.5
A08A Turner Farm, O 80.29 39 ⇓P P 08 34 15.7 -0.2
baz=80
ETW Entiat 80.44 40 *e*P P 08 34 17.2 +0.5
C07A Waterville 80.55 40 ⇓P P 08 34 16.6 -0.7
baz=80
B08A Colville Reser 80.58 39 ⇓P P 08 34 16.7 -0.7
baz=80,SNR=7.9
A09A Danville 80.65 39 ⇑P P 08 34 18.0 +0.2
baz=80,SNR=9.3
E06A Yakima 80.65 42 ⇑P P 08 34 17.4 -0.4
baz=80
I03A Eugene 80.66 45 ⇑P P 08 34 18.4 +0.4
baz=80
F05A White Salmon 80.73 42 ⇑P P 08 34 18.5 +0.2
baz=81
D07A Quincy 80.87 41 ⇑P P 08 34 18.6 -0.4
baz=81
HOOD Mount Hood Mea 80.92 43 *e*P P 08 34 20.2 +0.9
H04A Detroit Lake 80.94 44 ⇑P P 08 34 19.6 +0.1
baz=81
OKC Ostrava-Krasne 80.98 323 *e*P P 08 34 19.8 +0.2
OKC AMS AMS 09 13 20.0
comp=Z,800nm,17.0s
C08A Higginbotham F 81.06 40 ⇑P P 08 34 18.2 -1.9
baz=81,SNR=8.9
PSZ Piszkesteto 81.13 320 PFAKE 08 34 30.0 +10
PSZ LR LR
comp=Z,862nm,19.0s,MS5.1
K02A Glendale 81.16 46 ⇓P P 08 34 20.2 -0.5
baz=81
F06A Goldendale 81.19 42 ⇑P P 08 34 20.0 -0.8
baz=81
B09A Rice 81.20 39 ⇓P P 08 34 19.9 -0.9
baz=81
A10A Northport 81.20 38 ⇓P P 08 34 20.4 -0.4
baz=81
M01C Crescent City 81.25 47 ⇓P P 08 34 21.0 -0.1
baz=81
E07A Sunnyside 81.29 41 ⇑P P 08 34 20.9 -0.4
baz=81
MORC Moravsky Berou 81.34 323 *e*P P 08 34 19.9 -1.6
comp=Z,4.4nm,0.8s,mb4.4
MORC Moravsky Berou 81.34 323 *e*P P 08 34 19.9 -1.5
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MORC Moravsky Berou 81.34 323 ⇓*i*P P 08 34 26.1 +4.7
VYHS Vyhne 81.38 321 *e*P P 08 34 21.3 -0.4
L02A Cave Junction 81.42 46 ⇑P P 08 34 21.9 -0.1
baz=81
OD2 Odessa Site #2 81.47 40 P P 08 34 22.4 +0.2
C09A Chrisman Ranch 81.48 39 ⇑P P 08 34 21.8 -0.5
baz=81
RSW Rattlesnake Hi 81.53 41 P P 08 34 23.2 +0.7
D08A Wollman Farm, 81.54 40 ⇑P P 08 34 21.7 -0.9
baz=81,SNR=7.6
G06A Carlson Farm, 81.57 43 ⇓P P 08 34 22.0 -0.8
baz=81
HAWA Hanford 81.57 41 *e*P P 08 34 23.1 +0.3
comp=Z,9.8nm,1.0s,mb4.7
HAWA *e*PcP PcP 08 34 27.8 -0.8
HAWA *e*pP pP 08 34 32.9 -0.5
KOLL Kolacno 81.57 322 *e*P P 08 34 23.1 +0.4
KOLL Kolacno 81.57 322 *e*P P 08 34 23.0 +0.3
H2OWA Water 81.63 41 P P 08 34 23.7 +0.6
DPC Dobruska-Polom 81.63 324 *e*P P 08 34 26.3 +3.3
DPC AMS AMS 09 13 50.0
comp=Z,1μm,19.2s
UPC Upice 81.70 324 *e*P P 08 34 26.8 +3.4
E08A Dider Farm, El 81.78 41 ⇓P P 08 34 23.3 -0.6
baz=82,SNR=5.4
NEW Newport 81.85 39 *e*P P 08 34 24.7 +0.5
NEW *e*pP pP 08 34 34.3 -0.6
A11A Hall Mountain, 81.86 38 ⇓P P 08 34 24.1 -0.1
baz=82,SNR=7.6
D09A Jones Farm, Ri 81.89 40 ⇓P P 08 34 23.9 -0.5
baz=82
VIPM Ingram Point 81.98 43 P P 08 34 25.8 +0.8
H06A Lindquist Farm 82.02 43 ⇑P P 08 34 24.7 -0.5
baz=82
G07A Ruggs Ranch, H 82.12 42 ⇑P P 08 34 25.5 -0.1
baz=82
B11A Sandpoint 82.16 38 ⇓P P 08 34 25.5 -0.3
baz=82,SNR=6.9
YBH Yreka Blue Hor 82.20 46 *e*P P 08 34 27.3 +1.1
YBH Yreka Blue Hor 82.20 46 ⇓P P 08 34 26.1 0.0
baz=82
A12A Yaak River Ran 82.25 38 ⇓P P 08 34 26.2 -0.1
baz=82,SNR=7.6
E09A Wood Farm, Sta 82.29 40 ⇑P P 08 34 26.3 -0.3
baz=82
M02C Callahan 82.30 47 ⇓P P 08 34 26.1 -0.5
baz=82
MODS Modra-Piesok 82.30 322 *e*P PcP 08 34 31.2 -0.6
MODS Modra-Piesok 82.30 322 *e*PcP PcP 08 34 31.2 -0.6
N02C Big Bar 82.31 47 ⇓P P 08 34 26.4 -0.3
baz=82
F08A Pendleton 82.34 41 ⇓P P 08 34 26.9 +0.1
baz=82,SNR=5.8
O01C Eel River Cons 82.34 48 ⇑P P 08 34 26.8 -0.1
baz=82
PVCC Panska Ves 82.42 325 AMS AMS 09 15 10.0
comp=Z,1μm,15.6s
D10A Wagner Farm, O 82.47 40 ⇓P P 08 34 27.5 0.0
baz=82
ZST Bratislava 82.50 322 *e*P PcP 08 34 32.1 -0.6
ZST LR LR
comp=Z,100nm,17.9s,MS4.2
ZST Bratislava 82.50 322 *e* PcP 08 34 32.1 -0.6
BRG Berggiesshubel 82.52 325 *e*P P 08 34 29.2 +1.6
comp=Z,11nm,1.6s,mb4.7
BRG *e* 08 38 08.1
BRG LR LR
comp=Z,660nm,16.1s,MS5.1
BRG Berggiesshubel 82.52 325 *e*P P 08 34 29.2 +1.6
comp=Z,19nm,1.6s,mb4.9
BRG *e* 08 38 08.1
comp=Z,16nm,1.8s
BRG
comp=N,850nm,13.9s
BRG
comp=E,601nm,15.8s
BRG
comp=Z,1μm,16.1s
I06A Prineville 82.53 43 ⇓P P 08 34 26.9 -1.0
baz=82
C11A Tepee Creek (N 82.57 39 ⇑P P 08 34 27.9 -0.1
baz=82,SNR=9.6
LNOR Lincton Mounta 82.58 41 *e*P P 08 34 28.7 +0.6
LNOR *e*PcP PcP 08 34 33.9 +0.9
LNOR *e*pP pP 08 34 39.1 +0.3
TREC Trest 82.70 323 AMS AMS 09 14 40.0
comp=Z,700nm,13.9s
CLL Collm 82.72 326 ⇑*i*P P 08 34 27.7 -1.0
comp=Z,10.0nm,1.2s,mb4.7
CLL LR LR
comp=Z,1μm,17.9s,MS5.4
CLL Collm 82.72 326 ⇑*i*P P 08 34 27.7 -1.0
comp=Z,10.0nm,1.2s,mb4.7
CLL *e*PcP PcP 08 34 32.0 -1.5
comp=Z,9.0nm,0.8s
CLL Lm 09 15 00.0
comp=N,1μm,19.0s
CLL Lm 09 15 00.0
comp=E,900nm,18.3s
PRU Pruhonice 82.77 324 *e*P P 08 34 31.9 +3.0
PRU *e*pP pP 08 34 39.1 -0.5
PRU AMS AMS 09 14 30.0
comp=E,1μm,15.8s
K05A Summer Lake 82.80 45 ⇑P P 08 34 28.5 -0.7
baz=83
PKSM Moragy 82.81 320 ⇓P P 08 34 28.2 -1.0
PKSM Moragy 82.81 320 ⇓*i*P P 08 34 28.2 -1.0
M03C McCloud 82.82 46 ⇓P P 08 34 29.4 0.0
baz=83,SNR=6.9
E10A Myers Farm, Un 82.89 40 ⇓P P 08 34 29.1 -0.5
baz=83,SNR=7.1
A13A Flathead Natio 82.91 37 ⇓P P 08 34 28.8 -0.9
baz=83
WDC Whiskeytown Da 82.93 47 *e*P P 08 34 30.6 +0.6
WDC Whiskeytown Da 82.93 47 ⇑P P 08 34 30.1 +0.1
baz=83
D11A Klaveano Farm, 82.99 39 ⇑P P 08 34 29.4 -0.8
baz=83,SNR=7.9
WALA Waterton Lakes 83.09 37 *e*P P 08 34 31.4 +0.8
F10A Beach Ranch, E 83.12 41 ⇑P P 08 34 30.5 -0.4
baz=83
H08A Prairie City 83.13 42 ⇓P P 08 34 30.9 0.0
baz=83,SNR=5.5
G09A Cove 83.21 41 ⇑P P 08 34 31.1 -0.3
baz=83,SNR=9.4
B13A Whitefish 83.22 37 ⇓P P 08 34 31.2 -0.2
baz=83,SNR=13
LTIM Timbered Crate 83.28 46 P P 08 34 32.5 +0.7
CONA Conrad Observa 83.33 322 ⇑*i*PcP PcP 08 34 33.1 -3.2
comp=E,21nm,1.3s
CSNA Conrad Observa 83.33 322 ⇑*i*PcP PcP 08 34 33.1 -3.2
comp=E,19nm,1.3s
BSMT Basoo Peak 83.36 38 *e*P P 08 34 32.5 +0.5
J07A Hines 83.40 44 ⇓P P 08 34 31.8 -0.6
baz=83,SNR=8.4
A14A Double T Ranch 83.40 37 ⇓P P 08 34 32.2 -0.1
baz=83,SNR=16
E11A Bogner Ranch, 83.47 40 ⇓P P 08 34 32.1 -0.5
baz=83
D12A Red Ives Fores 83.53 39 ⇑P P 08 34 32.7 -0.2
baz=83
I08A Drewsey 83.53 43 ⇑P P 08 34 33.0 -0.1
baz=83,SNR=6.4
C13A Hot Springs 83.58 38 ⇑P P 08 34 33.3 +0.1
baz=83,SNR=7.9
G10A Bishop Farm, J 83.58 41 ⇓P P 08 34 33.1 -0.2
baz=83,SNR=13
MOD Modoc 83.62 45 *e*P P 08 34 34.9 +1.4
MOD Modoc 83.62 45 ⇓P P 08 34 33.3 -0.2
baz=83,SNR=5.1
H09A Durkee 83.63 42 ⇑P P 08 34 33.6 0.0
baz=83,SNR=5.7
BMO Blue Mountains 83.73 42 *e*P P 08 34 34.7 +0.7
A15A Johnson Ranch, 83.75 36 ⇑P P 08 34 34.0 -0.1
baz=84,SNR=11
F11A Grangeville 83.78 40 ⇑P P 08 34 34.1 -0.2
baz=84,SNR=8.3
KHC Kasperske Hory 83.79 324 *e*P P 08 34 33.5 -0.7
KHC *ex* x 08 34 41.1
KHC *e*PP PP 08 37 51.5 +4.5
KHC AMS AMS 09 15 00.0
comp=E,1μm,18.3s
E12A Beaver Dam Sad 83.79 40 ⇑P P 08 34 34.3 0.0
baz=84,SNR=22
K07A Rock Creek Ran 83.82 44 ⇑P P 08 34 34.6 +0.1
baz=84,SNR=12
RAR Rarotonga 83.85 118 LR LR 09 07 26.9
comp=E,269nm,20.6s,MS4.6,baz=289,slow=32
B14A Marquette Ranc 83.86 37 ⇓P P 08 34 34.4 -0.2
baz=84,SNR=9.0
GERES GERESS Array B 83.90 324 P P 08 34 33.9 -0.9
comp=E,2.6nm,0.9s,mb4.4,baz=36,slow=5.0,SNR=9.1
GERES GERESS Array B 83.90 324 P P 08 34 33.9 -0.9
GERES pmax pmax
comp=Z,3.0nm,0.9s
J08A Circle Bar Ran 83.91 43 ⇓P P 08 34 34.8 -0.2
baz=84,SNR=13
SFJD Kangerlussuaq 83.91 0 P P 08 34 33.4 -1.1
comp=Z,7.0nm,0.7s,mb4.9,baz=53,slow=5.1,SNR=3.1
SFJD Kangerlussuaq 83.91 0 P P 08 34 33.4 -1.1
SFJD pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
MNRC McLaughlin Nat 83.92 49 ⇓P P 08 34 34.9 -0.2
baz=84
I09A Lost Marbles R 83.99 42 ⇓P P 08 34 35.4 +0.1
baz=84,SNR=15
D13A Huson 84.00 39 ⇑P P 08 34 35.3 0.0
baz=84
O04C Chester 84.00 47 ⇓P P 08 34 35.9 +0.4
baz=84,SNR=24
G11A Walters Elk Ra 84.00 41 P P 08 34 35.4 -0.1
baz=84,SNR=15
MCCM Marconi Confer 84.03 49 ⇑P P 08 34 35.4 -0.3
baz=84
L07A Adell 84.14 45 ⇓P P 08 34 36.3 +0.1
baz=84,SNR=15
ORV Oroville 84.16 48 ⇑P P 08 34 35.9 -0.5
baz=84,SNR=8.5
H10A Noah's Angus R 84.21 41 ⇑P P 08 34 36.2 -0.2
baz=84,SNR=19
B15A Brely Ranch, 84.26 37 P P 08 34 36.9 +0.2
baz=84,SNR=11
K08A Mann Creek Ran 84.26 44 ⇓P P 08 34 36.5 -0.2
baz=84,SNR=7.5
O05C Quincy 84.31 47 ⇓P P 08 34 37.3 +0.2
baz=84,SNR=7.8
J09A Fry Pan Ranch, 84.34 43 ⇓P P 08 34 38.0 +0.8
baz=84,SNR=17
A16A West Butte Ran 84.36 36 ⇓P P 08 34 36.7 -0.4
baz=84,SNR=6.3
F12A Elk City 84.36 40 ⇑P P 08 34 37.1 -0.1
baz=84
MSO Missoula 84.44 39 *e*P P 08 34 36.6 -1.0
comp=Z,6.7nm,1.3s,mb4.6
D14A Greenough 84.52 38 ⇓P P 08 34 37.6 -0.4
baz=84,SNR=5.1
SOKA Soboth 84.53 321 ⇑*i*P P 08 34 37.7 -0.4
comp=Z,22nm,1.1s,mb5.2
N06A Buffalo Meadow 84.56 46 ⇓P P 08 34 38.1 -0.2
baz=84,SNR=15
H11A Donnelly 84.56 41 ⇑P P 08 34 37.7 -0.5
baz=84,SNR=7.2
C15A Salmond Ranch, 84.57 37 ⇓P P 08 34 37.9 -0.3
baz=84,SNR=5.8
M07A Soldier Meadow 84.61 45 ⇑P P 08 34 38.7 +0.2
baz=84,SNR=12
GRA1 Grafenberg Arr 84.62 325 *e*P P 08 34 37.8 -0.7
comp=Z,21nm,1.2s,mb5.1
GRF Grafenberg Arr 84.62 325 *e*P P 08 34 37.8 -0.7
GRF pmax pmax
comp=Z,21nm,1.2s,mb5.1
GRF Grafenberg Arr 84.62 325 *e*P P 08 34 37.8 -0.7
GRF pmax pmax
comp=Z,21nm,1.2s,mb5.1
GRF Grafenberg Arr 84.62 325 *e*P P 08 34 37.8 -0.7
comp=Z,21nm,1.2s,mb5.1
B16A M & M Farms, S 84.64 36 ⇓P P 08 34 38.0 -0.5
baz=84,SNR=8.5
L08A Fields 84.66 44 ⇑P P 08 34 38.9 +0.1
baz=84,SNR=18
G12A Big Creek, Yel 84.70 40 ⇓P P 08 34 38.5 -0.4
baz=84
BEKR Beckwourth 84.72 47 P P 08 34 39.4 +0.2
baz=85,SNR=22
K09A Rome 84.73 43 ⇑P P 08 34 38.8 -0.4
baz=85,SNR=15
CHMT Chamberlain Mo 84.76 38 *e*P P 08 34 39.7 +0.5
CHMT *e*pP pP 08 34 49.7 -0.2
FFC Flin Flon 84.85 28 *e*P P 08 34 39.6 0.0
comp=Z,12nm,0.9s,mb5.0
FFC Flin Flon 84.85 28 *e*P P 08 34 39.6 +0.1
FFC pmax pmax
comp=Z,12nm,0.9s,mb5.0
TIR Tirane 84.88 315 PFAKE 08 34 50.0 +10
TIR LR LR
comp=Z,1μm,19.0s,MS5.2
O06A Flanigan 84.89 46 ⇓P P 08 34 40.0 0.0
baz=85,SNR=27
E14A Clinton 84.94 39 ⇑P P 08 34 39.7 -0.4
baz=85,SNR=6.6
C16A Fuhringer Ranc 85.00 37 ⇑P P 08 34 39.7 -0.7
baz=85,SNR=7.8
WENL Wente Vineyard 85.06 49 ⇑P P 08 34 41.0 +0.1
baz=85
M08A Happy Creek Ra 85.06 45 ⇓P P 08 34 41.0 +0.1
baz=85,SNR=5.8
I11A Placerville 85.06 42 ⇑P P 08 34 40.7 -0.1
baz=85,SNR=7.8
N07B Gerlach 85.08 46 ⇓P P 08 34 41.2 +0.3
baz=85,SNR=12
LAVA Lava Cap Winer 85.09 48 ⇑P P 08 34 40.8 -0.3
baz=85,SNR=9.2
P06A Stead Airport, 85.12 47 ⇑P P 08 34 40.4 -0.7
baz=85,SNR=6.9
L09A Wilkinson Ranc 85.17 44 ⇑P P 08 34 41.0 -0.4
baz=85,SNR=8.6
K10A MacKenzie Ranc 85.20 43 ⇑P P 08 34 41.6 +0.1
baz=85,SNR=11
H12A Diamond D Ranc 85.32 41 ⇑P P 08 34 42.3 +0.3
baz=85,SNR=15
G13A Cobalt 85.34 40 ⇓P P 08 34 41.5 -0.7
baz=85,SNR=5.8
E15A Deer Lodge 85.39 38 ⇑P P 08 34 42.2 -0.2
baz=85,SNR=5.7
PAHR Pah Rah Range 85.43 47 *e*P P 08 34 43.3 +0.5
comp=Z,23nm,1.0s,mb5.2
PAHR *e*pP pP 08 34 52.8 -0.6
MFID Camas Ranch 85.44 42 ⇑P P 08 34 42.7 +0.1
baz=85,SNR=14
O07A Toulon 85.49 46 ⇑P P 08 34 43.5 +0.5
baz=85,SNR=16
D16A Dana Ranch, Ca 85.59 37 ⇑P P 08 34 42.8 -0.6
baz=85,SNR=7.9
N08A GE Springer Mi 85.60 45 ⇑P P 08 34 43.6 0.0
baz=85,SNR=21
I12A Atlanta 85.61 41 ⇓P P 08 34 43.1 -0.4
baz=85,SNR=6.1
C17A Wharram Farm, 85.62 37 ⇑P P 08 34 42.9 -0.6
baz=85,SNR=6.4
M09A Marrel Ranch, 85.64 44 ⇓P P 08 34 43.6 -0.1
baz=86,SNR=5.8
H13A Challis 85.65 40 ⇑P P 08 34 42.6 -1.1
baz=86,SNR=12
HRY Holter Researc 85.65 38 *e*P P 08 34 44.6 +0.9
HRY *e*pP pP 08 34 54.4 0.0
K11A Parker Ranch, 85.70 43 ⇑P P 08 34 44.1 0.0
baz=86,SNR=7.2
PACP Pacheco Peak 85.71 50 ⇓P P 08 34 43.8 -0.3
baz=86
CMB Columbia Colle 85.73 48 *e*P P 08 34 44.3 0.0
comp=Z,17nm,1.0s,mb5.2
CMB *e*pP pP 08 34 53.9 -1.1
CMB Columbia Colle 85.73 48 *e*P P 08 34 44.3 +0.1
CMB *e**PP pP 08 34 53.9 -1.1
CMB pmax pmax
comp=Z,17nm,1.0s,mb5.2
CMB Columbia Colle 85.73 48 ⇑P P 08 34 44.1 -0.1
baz=86,SNR=14
F15A Butte 85.84 39 ⇑P P 08 34 43.9 -0.8
baz=86,SNR=15
E16A East Helena 85.84 38 ⇓P P 08 34 44.2 -0.4
baz=86
L10A Juniper Basin 85.85 43 ⇓P P 08 34 44.6 -0.2
baz=86,SNR=12
O08A Rochester Mine 85.87 46 ⇑P P 08 34 46.3 +1.4
baz=86,SNR=25
LRM Limekiln Ridge 85.87 39 *e*P P 08 34 45.3 +0.5
EGMT Eagleton 85.89 36 *e*P P 08 34 45.4 +0.6
comp=Z,11nm,1.0s,mb5.0
EGMT Eagleton 85.89 36 ⇑P P 08 34 44.4 -0.5
baz=86,SNR=5.5
N09A Rock Creek Ran 85.93 45 ⇓P P 08 34 44.3 -0.9
baz=86,SNR=7.9
J12A Stokes Ranch, 85.96 42 ⇓P P 08 34 45.2 -0.1
baz=86,SNR=7.0
D17A Six Diamond Ra 85.97 37 ⇑P P 08 34 45.0 -0.3
baz=86,SNR=10
R06C Coleville 86.06 48 ⇓P P 08 34 45.9 +0.1
baz=86,SNR=12
WAKR Walker 86.08 48 *e*P P 08 34 46.7 +0.8
DLMT Dillon 86.08 39 *e*P P 08 34 46.8 +1.0
comp=Z,21nm,1.1s,mb5.3
I13A Wildhorse Cree 86.12 41 ⇑P P 08 34 47.5 +1.4
baz=86,SNR=20
M10A I.L. Ranch, Tu 86.14 44 ⇑P P 08 34 47.8 +1.6
baz=86,SNR=10
S05C Merced 86.15 49 ⇑P P 08 34 46.0 -0.3
baz=86,SNR=8.9
HLID Hailey 86.17 41 *e*P P 08 34 47.3 +1.0
comp=Z,7.9nm,0.9s,mb4.9
HLID Hailey 86.17 41 ⇓P P 08 34 45.6 -0.7
baz=86
HLID ⇓P 08 34 47.4
baz=86,SNR=19
LCCM Lewis and Clar 86.17 38 P P 08 34 46.9 +0.6
L11A Cat Creek Ranc 86.23 43 ⇓P P 08 34 47.6 +1.0
baz=86,SNR=14
G15A Dillon 86.26 39 ⇑P P 08 34 47.6 +0.9
baz=86,SNR=20
MCMT McKenzie Canyo 86.28 40 *e*P P 08 34 47.4 +0.6
MCMT *e*pP pP 08 34 57.6 +0.1
E17A Martinsdale 86.32 37 ⇑P P 08 34 48.1 +1.1
baz=86,SNR=10
F16A Kennard Place, 86.34 38 ⇑P P 08 34 46.7 -0.4
baz=86,SNR=7.3
BMN Battle Mountai 86.36 45 *e*P P 08 34 48.6 +1.3
comp=Z,14nm,1.1s,mb5.1
BMN *e*pP pP 08 34 57.1 -0.9
BMN LR LR
comp=Z,335nm,22.0s,MS4.7
BMN Battle Mountai 86.36 45 *e*P P 08 34 48.6 +1.3
BMN *e**PP pP 08 34 57.1 -1.0
BMN pmax pmax
comp=Z,14nm,1.1s,mb5.1
BMN MLR MLR
comp=Z,335nm,22.0s,MS4.7
J13A Cove Ranch, Pi 86.41 41 ⇑P P 08 34 46.6 -0.9
baz=86
J13A ⇓P 08 34 48.9
baz=86,SNR=15
BOZ Bozeman (W) 86.43 38 *e*P P 08 34 48.5 +1.0
BOZ LR LR
comp=Z,383nm,21.0s,MS4.8
BOZ Bozeman (W) 86.43 38 ⇑P P 08 34 46.8 -0.8
baz=86,SNR=10
K12A Draper Farm, C 86.45 42 ⇑P P 08 34 48.9 +1.2
baz=86,SNR=8.1
I14A Mackay 86.49 41 ⇑P P 08 34 49.4 +1.5
baz=86,SNR=22
MEM Membach 86.50 328 P P 08 34 48.2 +0.4
O09A Fish Creek Ran 86.54 45 ⇓P P 08 34 47.9 -0.3
baz=86,SNR=12
G16A Moss Hill, Enn 86.60 39 ⇓P P 08 34 48.1 -0.2
baz=86,SNR=7.0
M11A Holland Ranch, 86.64 44 ⇑P P 08 34 50.5 +1.8
baz=86,SNR=7.9
L12A House Creek Ra 86.68 43 ⇑P P 08 34 50.3 +1.5
baz=86,SNR=7.9
T06C Millerton Lake 86.75 49 ⇑P P 08 34 49.2 -0.1
baz=87,SNR=14
E18A Harlowton 86.75 37 ⇑P P 08 34 50.2 +1.1
baz=86,SNR=9.4
F17A Fitzpatrick Pl 86.79 38 P P 08 34 50.2 +0.9
baz=87,SNR=6.1
PKD Parkfield 86.80 50 ⇓P P 08 34 49.4 -0.2
baz=87,SNR=7.6
ESK Eskdalemuir 86.81 336 PFAKE 08 35 00.0 +11
ESK LR LR
comp=Z,633nm,19.0s,MS5.0
KCC Kaiser Creek 86.83 49 ⇑P P 08 34 49.4 -0.3
baz=87,SNR=12
J14A Carey 86.83 41 ⇓P P 08 34 49.1 -0.5
baz=87,SNR=11
Q08A Gabbs 86.84 47 ⇑P P 08 34 49.6 -0.1
baz=87,SNR=9.1
NVAR Mina Array Bea 86.85 47 P P 08 34 50.5 +0.7
comp=Z,6.2nm,0.9s,mb4.8,baz=294,slow=5.0,SNR=41
O10A Cortez Mining, 86.89 45 ⇑P P 08 34 51.5 +1.6
baz=87
K13A Stover Farm, H 86.92 42 P P 08 34 51.4 +1.4
baz=87,SNR=6.2
BFO Black Forest 86.95 326 PFAKE 08 35 00.0 +10
BFO LR LR
comp=Z,936nm,21.0s,MS5.2
R08A Mina 87.02 47 ⇑P P 08 34 50.3 -0.3
baz=87,SNR=6.8
QLMT Earthquake Lak 87.06 39 *e*P P 08 34 52.0 +1.4
QLMT *e*pP pP 08 35 01.7 +0.3
WLF Walferdange 87.09 328 P P 08 34 53.5 +2.8
comp=Z,18nm,1.6s,mb5.0
WLF Walferdange 87.09 328 PFAKE 08 35 00.0 +9.3
WLF LR LR
comp=Z,759nm,21.0s,MS5.1
M12A Wells 87.18 43 ⇓P P 08 34 52.7 +1.4
baz=87,SNR=12
PTRM Twissleman Ran 87.18 50 *e*P P 08 34 51.8 +0.3
F18A Big Timber 87.29 37 ⇑P P 08 34 52.6 +0.8
baz=87,SNR=6.4
P10A Eureka 87.31 45 ⇑P P 08 34 53.3 +1.4
baz=87
L13A Double Diamond 87.34 42 ⇑P P 08 34 53.6 +1.5
baz=87,SNR=6.1
ELK Elko 87.39 44 PFAKE 08 35 00.0 +7.7
ELK LR LR
comp=Z,351nm,20.0s,MS4.8
GIVF Givet 87.40 328 *e*P P 08 34 53.3 +1.1
J15A Blackfoot 87.40 41 ⇓P P 08 34 53.6 +1.3
baz=87
CDF Champ du Feu 87.41 326 *e*P P 08 34 53.7 +1.4
comp=Z,16nm,1.1s,mb4.9

CDF **Champ du Feu** 87.41 326 *e*P P 08 34 53.7 +1.4
comp=Z,8.3nm,1.1s,mb4.9
CDF **Champ du Feu** 87.41 326 *e*P P 08 34 53.7 +1.4
CDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
YMR **Madison River** 87.42 39 PFAKE 08 35 00.0 +7.6
YMR LR LR
comp=Z,875nm,21.0s,MS5.1
N12A **Clover Valley,** 87.45 44 ⇓P P 08 34 54.1 +1.4
baz=87,SNR=9.7
RCTC **Rector, Farmer** 87.46 49 ⇓P P 08 34 52.5 -0.2
baz=87
O11A **Cowboy Ranch,** 87.50 45 ⇑P P 08 34 54.1 +1.2
baz=87,SNR=6.5
K14A **Jones Ranch, D** 87.51 42 ⇓P P 08 34 54.1 +1.2
baz=87,SNR=7.1
YNR **Norris Junctio** 87.54 39 *e*P P 08 34 55.9 +3.0
YFT **Old Faithful** 87.63 39 *e*P P 08 34 56.5 +3.1
I16A **Newdale** 87.63 40 ⇓P P 08 34 54.6 +1.2
baz=87,SNR=10
M13A **Montello** 87.66 43 ⇑P P 08 34 54.8 +1.2
baz=88,SNR=6.6
TUE **Stuetta** 87.68 324 PFAKE 08 35 00.0 +6.4
TUE LR LR
comp=Z,937nm,20.0s,MS5.2
R09A **Tonopah** 87.75 47 ⇓P P 08 34 53.8 -0.3
baz=88,SNR=9.8
TPH **Tonopah** 87.75 47 PFAKE 08 35 10.0 +16
TPH LR LR
comp=Z,164nm,19.0s,MS4.5
LKWY **Lake** 87.79 39 *e*P P 08 34 56.6 +2.4
comp=Z,10.0nm,0.9s,mb5.0
LKWY LR LR
comp=Z,273nm,19.0s,MS4.7
LKWY **Lake** 87.79 39 *e*P P 08 34 56.6 +2.4
LKWY pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LKWY MLR MLR
comp=Z,273nm,19.0s,MS4.7
H17A **Grant Village** 87.80 39 ⇓P P 08 34 55.4 +1.1
baz=88,SNR=6.9
Q10A **Clear Creek Ra** 87.83 46 ⇑P P 08 34 54.1 -0.3
baz=88,SNR=5.8
VES **Vestal, Richgr** 87.83 50 ⇑P P 08 34 54.0 -0.6
baz=88,SNR=5.1
J16A **Bone** 87.94 40 ⇓P P 08 34 54.3 -0.7
baz=88,SNR=6.3
S09A **Goldfield** 87.95 47 ⇓P P 08 34 54.6 -0.5
baz=88,SNR=9.3
O12A **Currie** 87.98 44 ⇑P P 08 34 56.3 +1.2
baz=88,SNR=14
DCID1 **Drake Creek** 87.98 40 *e*P P 08 34 57.4 +2.3
RLMT **Red Lodge** 88.04 38 *e*P P 08 34 55.8 +0.4
comp=Z,14nm,1.2s,mb5.1
M14A **Sheep Mountain** 88.06 42 ⇑P P 08 34 55.0 -0.5
baz=88,SNR=14
RRI2 **Red Ridge** 88.06 40 *e*P P 08 34 56.2 +0.7
comp=Z,7.0nm,1.0s,mb4.8
TIP **Timpagrande** 88.08 315 PFAKE 08 35 10.0 +14
TIP LR LR
comp=Z,668nm,20.0s,MS5.0
MOOW **Moose Ponds** 88.13 39 *e*P P 08 34 57.4 +1.6
CWC **Cottonwood Cre** 88.15 49 ⇓P P 08 34 55.7 -0.4
baz=88
CUC **Castrocucco** 88.16 316 PFAKE 08 35 10.0 +14
CUC LR LR
comp=Z,829nm,22.0s,MS5.1
TPAW **Teton Pass** 88.18 40 *e*P P 08 34 57.0 +1.0
comp=Z,8.1nm,1.0s,mb4.9
R10A **Warm Springs** 88.20 46 ⇑P P 08 34 57.4 +1.1
baz=88
HVU **Hansel Valley** 88.22 42 *e*P P 08 34 57.8 +1.5
S10A **Tonopah Range,** 88.24 47 ⇑P P 08 34 57.4 +0.9
baz=88,SNR=6.1
K16A **Soda Springs** 88.24 41 ⇓P P 08 34 57.2 +0.8
baz=88,SNR=12
LOHW **Long Hollow** 88.29 40 *e*P P 08 34 56.9 +0.3
comp=Z,5.8nm,1.1s,mb4.7
SNOW **Snow King Moun** 88.31 40 *e*P P 08 34 58.3 +1.6
comp=Z,5.7nm,1.0s,mb4.8
REDW **Red Top Meadow** 88.32 40 *e*P P 08 34 57.4 +0.7
comp=Z,11nm,1.2s,mb5.0
REDW *e*pP pP 08 35 08.2 +0.8
DGMT **Dagmar** 88.33 33 *e*P P 08 34 57.8 +1.2
ISA **Isabella** 88.34 50 PFAKE 08 35 10.0 +13
ISA LR LR
comp=Z,133nm,19.0s,MS4.4
N14A **Grayback Hills** 88.56 43 ⇑P P 08 34 57.6 -0.3
baz=88,SNR=9.6
DAC **Darwin (Calif)** 88.56 49 PFAKE 08 35 10.0 +12
DAC LR LR
comp=Z,227nm,21.0s,MS4.6
M15A **Larsen Ranch,** 88.61 42 ⇑P P 08 34 57.8 -0.3
baz=88,SNR=5.7
R11A **Troy Canyon, C** 88.62 46 ⇑P P 08 34 59.1 +0.9
baz=88,SNR=6.1
VLC **Villacollemand** 88.66 322 PFAKE 08 35 10.0 +12
VLC LR LR
comp=Z,1μm,19.0s,MS5.3
MPMC **Manual Prospec** 88.76 49 ⇓P P 08 34 58.0 -1.0
baz=89
MPMC ⇓P 08 34 59.4
baz=89
P13A **Bates Ranch, G** 88.92 44 ⇑P P 08 34 59.0 -0.6
baz=89,SNR=7.7
N15A **Stansbury Isla** 88.93 43 ⇓P P 08 34 58.5 -1.1
baz=89
HWUT **Hardware Ranch** 89.03 42 *e*P P 08 35 01.5 +1.4
comp=Z,15nm,1.2s,mb5.2
HWUT *e*pP pP 08 35 11.2 +0.3
TPNV **Topopah Spring** 89.04 47 *e*P P 08 35 00.1 -0.2
comp=Z,8.3nm,1.1s,mb5.0
TPNV *e*pP pP 08 35 10.6 -0.4
TPNV **Topopah Spring** 89.04 47 *e*P P 08 35 00.1 -0.1
TPNV *e**PP pP 08 35 10.6 -0.4
TPNV pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
TPNV **Topopah Spring** 89.04 47 ⇑P P 08 35 00.9 +0.7
baz=89,SNR=6.0
DUG **Dugway** 89.19 43 *e*P P 08 35 02.2 +1.3
DUG **Dugway** 89.19 43 ⇑P P 08 35 01.5 +0.6
baz=89,SNR=9.9
P14A **Drum Mountains** 89.41 44 ⇑P P 08 35 02.7 +0.7
baz=89,SNR=8.7
BW06 **Boulder Array** 89.42 40 PFAKE 08 35 10.0 +8.1
BW06 LR LR
comp=Z,253nm,20.0s,MS4.6
BW06 **Boulder Array** 89.42 40 ⇑P P 08 35 01.2 -0.7
baz=89,SNR=6.9
PDAR **Pinedale Array** 89.42 40 P P 08 35 02.4 +0.4
comp=Z,2.8nm,0.8s,mb4.6,baz=292,slow=1.8,SNR=21
T11A **Corn Creek, Al** 89.52 47 ⇓P P 08 35 01.8 -0.7
baz=89,SNR=6.2
GSC **Goldstone** 89.65 49 *e*P P 08 35 04.2 +1.0
Q14A **Sevier Lake (B** 89.66 44 ⇓P P 08 35 02.7 -0.4
baz=90,SNR=7.0
JLU **Jordanelle** 89.74 42 *e*P P 08 35 04.4 +0.9
NLU **North Lily Min** 89.78 43 *e*P P 08 35 03.9 +0.3
P15A **Leamington** 89.90 43 ⇓P P 08 35 03.7 -0.5
baz=90,SNR=6.8
L19A **Farson** 89.97 40 ⇑P P 08 35 04.9 +0.4
baz=90,SNR=5.8
DAU **Daniels Canyon** 89.97 42 *e*P P 08 35 04.8 +0.2
DAU *e*pP pP 08 35 15.8 +0.5
SHPR **Sheep Range** 90.00 47 *e*P P 08 35 06.1 +1.4
MPU **Maple Canyon** 90.00 43 *e*P P 08 35 06.6 +2.0
MPU LR LR
comp=Z,1μm,21.0s,MS5.3
PPT **Papeete** 90.01 110 *e*LR LR 09 04 01.7
comp=Z,232nm,24.0s
PPT **Papeete** 90.01 110 LR LR 09 07 34.8
comp=Z,237nm,21.4s,MS4.6,baz=29,slow=30
BNI **Bardonecchia** 90.02 324 PFAKE 08 35 20.0 +15
BNI LR LR
comp=Z,1μm,21.0s,MS5.2
S13A **Holt Ranch, En** 90.17 46 ⇓P P 08 35 06.1 +0.6
baz=90,SNR=8.1
MBDF **Montbardon** 90.20 324 *e*P P 08 35 06.5 +1.0
comp=Z,11nm,0.9s,mb4.9
MBDF **Montbardon** 90.20 324 *e*P P 08 35 06.5 +1.0
comp=Z,5.4nm,0.9s,mb4.9
MBDF **Montbardon** 90.20 324 *e*P P 08 35 06.5 +1.0
MBDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
V11A **Goodsprings** 90.23 48 ⇑P P 08 35 05.7 -0.1
baz=90
SMF **Signal de Mont** 90.31 326 *e*P P 08 35 06.4 +0.4
comp=Z,62nm,1.5s,mb5.4
SMF **Signal de Mont** 90.31 326 *e*P P 08 35 06.4 +0.4
comp=Z,31nm,1.5s,mb5.4
SMF **Signal de Mont** 90.31 326 *e*P P 08 35 06.4 +0.4
SMF pmax pmax
comp=Z,31nm,1.5s,mb5.4
O17A **Robinson Place** 90.42 42 ⇑P P 08 35 05.4 -1.2
baz=90,SNR=7.1
AVF **Avril sur Loir** 90.44 327 *e*P P 08 35 07.1 +0.5
comp=Z,39nm,1.6s,mb5.2
AVF **Avril sur Loir** 90.44 327 *e*P P 08 35 07.1 +0.5
comp=Z,20nm,1.6s,mb5.2
AVF **Avril sur Loir** 90.44 327 *e*P P 08 35 07.1 +0.5
AVF pmax pmax
comp=Z,19nm,1.6s,mb5.2
T13A **Saint George** 90.48 46 ⇓P P 08 35 06.5 -0.5
baz=90,SNR=8.1
N18A **Larsen Ranch,** 90.53 41 ⇑P P 08 35 05.9 -1.3
baz=90
MSU **Marysvale** 90.63 44 *e*P P 08 35 08.7 +1.0
MSU *e*pP pP 08 35 18.8 +0.4
ULM **Lac du Bonnet** 90.68 28 P P 08 35 07.4 -0.2
comp=Z,8.1nm,0.9s,mb5.1,baz=323,slow=9.6,SNR=4.2
ULM **Lac du Bonnet** 90.68 28 P P 08 35 07.4 -0.2
ULM LR LR
comp=Z,323nm,22.0s,MS4.7
LDF **La Druitiere** 90.71 330 *e*P P 08 35 08.5 +0.7
comp=Z,61nm,1.3s,mb5.5
LDF **La Druitiere** 90.71 330 *e*P P 08 35 08.5 +0.7
comp=Z,30nm,1.3s,mb5.5
LDF **La Druitiere** 90.71 330 *e*P P 08 35 08.5 +0.7
LDF pmax pmax
comp=Z,30nm,1.3s,mb5.5
FLN **La Foliniere** 90.74 330 *e*P P 08 35 08.9 +1.0
comp=Z,33nm,1.1s,mb5.3
FLN **La Foliniere** 90.74 330 *e*P P 08 35 08.9 +1.0
comp=Z,16nm,1.1s,mb5.3
FLN **La Foliniere** 90.74 330 *e*P P 08 35 08.9 +1.0
FLN pmax pmax
comp=Z,16nm,1.1s,mb5.3
N19A **John Jarvie Ra** 90.87 41 ⇑P P 08 35 07.7 -0.9
baz=91,SNR=5.9
P17A **Butcher Ranch,** 90.88 43 ⇓P P 08 35 09.0 +0.2
baz=91,SNR=5.3
Q16A **Castle Valley** 90.98 43 ⇑P P 08 35 09.5 +0.2
baz=91,SNR=9.2
S15A **Panguitch** 91.04 45 ⇑P P 08 35 09.9 +0.4
91,SNR=6.5
P18A **Preston Nutter** 91.07 42 ⇑P P 08 35 08.8 -0.9
baz=91,SNR=13
V13A **Grand Canyon W** 91.15 47 ⇑P P 08 35 10.3 +0.2
baz=91,SNR=5.1
SRU **San Rafael** 91.24 43 *e*P P 08 35 11.1 +0.7
comp=Z,2.9nm,0.7s,mb4.7
SRU **San Rafael** 91.24 43 *e*P P 08 35 11.1 +0.6
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
SRU **San Rafael** 91.24 43 ⇑P P 08 35 09.2 -1.2
baz=91,SNR=7.5
O19A **Miners Draw (B** 91.29 41 ⇓P P 08 35 09.5 -1.2
baz=91
IRM **Iron Mountain** 91.43 49 ⇑P P 08 35 11.0 -0.4
baz=91
T15A **Red Dirt Ranch** 91.44 45 ⇓P P 08 35 11.4 -0.1
baz=91,SNR=10.0
Q18A **Rafter H Ranch** 91.48 43 ⇓P P 08 35 11.5 0.0
baz=91
S16A **Weppner Ranch,** 91.48 45 ⇓P P 08 35 11.6 0.0
baz=91,SNR=6.3
WDD **Wield Dalam** 91.50 313 PFAKE 08 35 20.0 +8.3
WDD LR LR
comp=Z,604nm,19.0s,MS5.1
R17A **Hanksville Air** 91.57 44 ⇑P P 08 35 11.8 -0.2
baz=91,SNR=12
W13A **Hualapai Mount** 91.68 48 ⇑P P 08 35 13.0 +0.4
baz=92,SNR=7.3
P19A **Cripple Cowboy** 91.81 42 ⇑P P 08 35 13.3 +0.3
baz=92
V14A **Boquillas Ranc** 91.85 47 ⇑P P 08 35 14.0 +0.6
baz=92,SNR=8.3
U15A **North Rim** 91.87 46 ⇑P P 08 35 12.6 -0.8
baz=92,SNR=7.7
S17A **Black Ridge (B** 92.02 44 ⇓P P 08 35 14.1 0.0
baz=92,SNR=8.2
X13A **Yucca** 92.03 48 ⇓P P 08 35 13.7 -0.5
baz=92,SNR=7.2
R18A **Canyonlands Na** 92.08 43 ⇑P P 08 35 14.0 -0.4
baz=92,SNR=9.0
Y12C **Blythe** 92.09 49 ⇓P P 08 35 14.3 -0.2
baz=92,SNR=5.9
W14A **Seligman** 92.13 47 ⇑P P 08 35 14.4 -0.2
baz=92,SNR=8.2
MFF **Saint Martin d** 92.22 328 *e*P P 08 35 14.8 0.0
comp=Z,40nm,1.3s,mb5.3
MFF **Saint Martin d** 92.22 328 *e*P P 08 35 14.8 0.0
comp=Z,20nm,1.3s,mb5.3
MFF **Saint Martin d** 92.22 328 *e*P P 08 35 14.8 0.0
MFF pmax pmax
comp=Z,20nm,1.3s,mb5.3
ROSF **Rostrenen** 92.27 331 *e*P P 08 35 15.2 +0.2
comp=Z,129nm,1.4s,mb5.8
ROSF **Rostrenen** 92.27 331 *e*P P 08 35 15.2 +0.2
comp=Z,64nm,1.4s,mb5.8
GLA **Glamis** 92.31 50 *e*P P 08 35 16.6 +1.1
V15A **Kaibab Nationa** 92.33 46 ⇓P P 08 35 15.3 -0.3
baz=92,SNR=9.1
S18A **Hurst Farm, Bl** 92.47 44 ⇑P P 08 35 16.0 -0.2
baz=92,SNR=11
R19A **Curley Farm, L** 92.52 43 ⇓P P 08 35 15.9 -0.5
baz=92,SNR=6.4
PV10 **Paradox Valley** 92.60 43 *e*P P 08 35 17.4 +0.6
PV10 *e*pP pP 08 35 28.6 +1.1
W15A **Williams** 92.67 47 ⇑P P 08 35 16.7 -0.4
baz=92,SNR=8.3
X14A **Yava** 92.71 48 ⇓P P 08 35 17.1 -0.3
baz=92,SNR=7.4
U17A **Shonto** 92.77 45 ⇑P P 08 35 17.4 -0.2
baz=93,SNR=20
U16A **Tuba City** 92.77 46 ⇑P P 08 35 17.3 -0.4
baz=93,SNR=9.4
T18A **Mexican Hat** 92.91 44 ⇓P P 08 35 17.9 -0.3
baz=93,SNR=9.9
S19A **Harvey Farm, M** 92.95 43 ⇓P P 08 35 18.1 -0.3
baz=93
Y14A **Wickenburg** 92.97 48 ⇑P P 08 35 18.7 +0.2
baz=93,SNR=13
WUAZ **Wupatki** 93.02 46 *e*P P 08 35 20.1 +1.4
WUAZ *e*pP pP 08 35 29.8 +0.2
WUAZ LR LR
comp=Z,111nm,19.0s,MS4.3
WUAZ **Wupatki** 93.02 46 ⇓P P 08 35 18.7 -0.1
baz=93,SNR=9.6
PV01 **Paradox Valley** 93.04 43 *e*P P 08 35 19.5 +0.7
PV01 *e*pP pP 08 35 29.9 +0.3
TBI **Tubuai** 93.04 115 *e*LR LR 09 05 21.1
comp=Z,148nm,29.8s
X15A **Humboldt** 93.12 47 ⇑P P 08 35 18.9 -0.4
baz=93,SNR=15
113A **Mohawk Valley,** 93.19 50 ⇓P P 08 35 19.8 +0.2
baz=93,SNR=5.3
SMCO **Snowmass** 93.27 41 *e*P P 08 35 21.2 +1.3
U18A **Rough Rock, Ch** 93.38 45 ⇑P P 08 35 20.6 +0.2
baz=93,SNR=21
Y15A **Casa Rosa Ranc** 93.39 48 ⇑P P 08 35 20.1 -0.4
baz=93,SNR=12
ABPO **Ambohimpanom** 93.56 250 PFAKE 08 35 30.0 +8.6
ABPO LR LR
comp=Z,173nm,19.0s,MS4.5
T19A **Beclabito** 93.62 44 ⇓P P 08 35 21.3 -0.2
baz=93,SNR=6.7
X16A **Lo Mia Camp, P** 93.67 47 ⇑P P 08 35 22.1 +0.3
baz=94,SNR=12
MVCO **Mesa Verde** 93.69 43 ⇑P P 08 35 21.8 0.0
baz=94,SNR=6.2
V18A **Canado** 93.80 45 ⇑P P 08 35 22.2 -0.1
baz=94,SNR=7.2
Y16A **Circle Bar Ran** 93.99 47 ⇓P P 08 35 23.4 +0.1
baz=94,SNR=11
X17A **Forest Lakes** 94.13 47 ⇓P P 08 35 24.1 +0.2
baz=94,SNR=6.4
214A **Organ Pipe Nat** 94.33 50 ⇓P P 08 35 24.0 -0.8
baz=94
Z16A **Peralta Trail,** 94.37 48 ⇑P P 08 35 24.3 -0.7
baz=94,SNR=7.5
Y17A **Roosevelt** 94.52 47 ⇓P P 08 35 25.8 +0.1
baz=94,SNR=7.7
X18A **Snowflake** 94.55 46 ⇑P P 08 35 24.7 -1.1
baz=94
116A **Eloy** 94.68 49 ⇑P P 08 35 25.3 -1.2
baz=94,SNR=7.3
OGNE **Ogallala** 94.76 37 PFAKE 08 35 40.0 +13
OGNE LR LR
comp=Z,295nm,22.0s,MS4.7
Y18A **Canyon Day Jun** 94.98 47 ⇑P P 08 35 28.0 +0.2
baz=95,SNR=6.4
Z17A **San Carlos Hig** 95.01 47 ⇑P P 08 35 28.0 +0.1
baz=95,SNR=7.5
X19A **St. Johns** 95.03 46 ⇑P P 08 35 27.6 -0.4
baz=95,SNR=6.6
117A **Oracle** 95.30 48 ⇓P P 08 35 28.6 -0.7
baz=95,SNR=5.6
TUC **Tucson** 95.44 48 *e*P P 08 35 30.3 +0.4
comp=Z,4.3nm,1.0s,mb4.8
TUC *e*pP pP 08 35 40.8 +0.1
TUC LR LR
comp=Z,134nm,19.0s,MS4.4
TUC **Tucson** 95.44 48 *e*P P 08 35 30.3 +0.4
TUC *e**PP pP 08 35 40.8 +0.1
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
TUC MLR MLR
comp=Z,134nm,19.0s,MS4.4
217A **Green Valley** 95.76 49 ⇓P P 08 35 31.2 -0.2
baz=96,SNR=7.8
318A **Bisbee** 96.51 49 ⇓P P 08 35 35.1 +0.2
baz=96,SNR=5.2
KSU1 **Kansas State U** 98.92 35 PFAKE 08 36 00.0 +15
KSU1 LR LR
comp=Z,272nm,19.0s,MS4.8
ESDC **Sonseca Array** 99.31 326 P P 08 35 45.0 -2.2
comp=Z,1.0nm,0.9s,mb4.3,baz=53,slow=6.6,SNR=3.0
ESLA **Sonseca Array** 99.31 326 PFAKE 08 36 00.0 +13
ESLA LR LR
comp=Z,4μm,19.0s,MS5.9
PAB **San Pablo** 99.59 326 PFAKE 08 36 00.0 +12
PAB LR LR
comp=Z,675nm,20.0s,MS5.2
MTE **Manteigas** 100.42 329 PFAKE 08 36 00.0 +8.0
MTE LR LR
comp=Z,640nm,19.0s,MS5.2
TXAR **Lajitas Array** 101.98 46 P Pdif 08 35 57.1 -1.8
comp=Z,1.0nm,1.0s,baz=274,slow=3.3,SNR=7.9
TXAR **Lajitas Array** 101.98 46 P Pdif 08 35 57.1 -1.8
TXAR pmax pmax
comp=Z,1.0nm,1.0s
SFS **San Fernando** 102.92 325 PFAKE 08 36 10.0 +6.9
SFS LR LR
comp=Z,2μm,21.0s,MS5.6
ERPA **Erie** 103.47 23 PFAKE 08 36 20.0 +14
ERPA LR LR
comp=Z,399nm,20.0s,MS4.9
JCT **Junction City** 103.55 43 PFAKE 08 36 20.0 +14
JCT LR LR
comp=Z,197nm,20.0s,MS4.6
RKT **Rikitea** 104.68 108 *e*LR LR 09 10 54.4
comp=Z,190nm,31.8s
WES **Weston** 105.79 17 PFAKE 08 40 40.0 +11
WES LR LR
comp=Z,854nm,22.0s,MS5.2
OXF **Oxford** 106.08 34 PFAKE 08 40 40.0 +11
OXF LR LR
comp=Z,182nm,20.0s,MS4.6
HKT **Hockley** 106.26 41 PFAKE 08 40 40.0 +10
HKT LR LR
comp=Z,199nm,21.0s,MS4.6
CBN **Corbin** 107.86 23 PFAKE 08 40 40.0 +7.4
CBN LR LR
comp=Z,252nm,19.0s,MS4.8
LSZ **Lusaka** 107.95 262 PFAKE 08 40 40.0 +6.8
LSZ LR LR
comp=Z,348nm,19.0s,MS4.9
MAW **Mawson** 108.90 202 PFAKE 08 40 50.0 +17
MAW LR LR
comp=Z,258nm,20.0s,MS4.8
SBA **Scott Base** 109.15 172 PFAKE 08 40 50.0 +16
SBA LR LR
comp=Z,134nm,20.0s,MS4.5
GOGA **Godfrey** 109.72 30 PFAKE 08 40 50.0 +14
GOGA LR LR
comp=Z,210nm,19.0s,MS4.7
CNNC **Cliffs of the** 110.35 25 PFAKE 08 40 50.0 +13
CNNC LR LR
comp=Z,197nm,20.0s,MS4.7
NHSC **New Hope** 111.36 27 PFAKE 08 40 50.0 +11
NHSC LR LR
comp=Z,338nm,20.0s,MS4.9
LBTB **Lobatse** 114.18 254 PFAKE 08 41 00.0 +15
LBTB LR LR
comp=Z,354nm,19.0s,MS5.0
TORD **Torodi Ar. Bea** 115.02 303 PKP PKiKP 08 40 46.0 -0.7
comp=Z,0.4nm,0.6s,baz=38,slow=2.6,SNR=2.5
TSUM **Tsumeb** 118.78 263 PFAKE 08 41 10.0 +16
TSUM LR LR
comp=Z,375nm,22.0s,MS5.0
QSPA **South Pole Qui** 119.16 180 PFAKE 08 41 10.0 +17
QSPA LR LR
comp=Z,112nm,21.0s,MS4.5
TGUH **Tegucigalpa,Un** 123.44 45 PFAKE 08 41 10.0 +7.1
TGUH LR LR
comp=Z,146nm,21.0s,MS4.6
DBIC **Dimbokro** 124.12 303 PFAKE 08 41 20.0 +16
DBIC LR LR
comp=Z,621nm,22.0s,MS5.2
SJG **San Juan** 130.10 21 PFAKE 08 41 30.0 +14
SJG LR LR
comp=Z,470nm,22.0s,MS5.1
VNA2 **Neumayer--Watz** 132.39 197 *e*PKPdf PKPdf 08 41 19.3 +1.1
baz=4.0,slow=0.8
VNA2 *e* 08 41 32.0
VNA3 **Neumayer Olymp** 132.76 196 *e*PKPdf PKPdf 08 41 18.9 0.0
VNA3 *e* 08 41 31.7
GRGR **Grenville** 137.07 18 PFAKE 08 41 40.0 +11
GRGR LR LR
comp=Z,166nm,20.0s,MS4.8
OTAV **Otavalo** 139.57 48 PFAKE 08 41 50.0 +17
OTAV LR LR
comp=Z,192nm,22.0s,MS4.8
ASCN **Ascension** 140.74 296 PFAKE 08 41 50.0 +15
ASCN LR LR
comp=Z,534nm,19.0s,MS5.3
LPAZ **La Paz** 158.44 57 PKPab PKPab 08 42 35.7 -1.9
comp=Z,2.0nm,0.8s,baz=289,slow=4.8,SNR=5.6
LPAZ **La Paz** 158.44 57 PFAKE 08 42 10.0 +7.1
LPAZ LR LR
comp=Z,152nm,21.0s,MS4.8
LPAZ **La Paz** 158.44 57 PKP2 PKPab 08 42 35.7 -1.9
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
PLCA **Paso Flores** 159.41 129 PKPab PKPab 08 42 41.1 -0.1
comp=Z,2.4nm,0.9s,baz=236,slow=3.0,SNR=3.0
PLCA **Paso Flores** 159.41 129 PKP2 PKPab 08 42 41.2 0.0
PLCA pmax pmax
comp=Z,2.0nm,1.0s
CFAA **Coronel Fontan** 163.66 102 PKPab PKPab 08 42 59.2 -0.9
comp=Z,0.8nm,1.2s,baz=270,slow=3.0,SNR=3.6
BDFB **Brasilia** 166.25 354 PKPab PKPab 08 43 12.9 +1.4
comp=Z,1.0nm,0.7s,baz=53,slow=20,SNR=3.1
BDFB **Brasilia** 166.25 354 PFAKE 08 42 20.0 +9.3
BDFB LR LR
comp=Z,144nm,22.0s
BDFB **Brasilia** 166.25 354 PKP2 PKPab 08 43 12.9 +1.3
BDFB pmax pmax
comp=Z,1.0nm,0.7s

NIED ***11*** *10:48:00,36.00N×139.90E,h50km,Mw4.3 Best double couple: M0 3.19000×10^15 NP1:φ=46.00000°,δ=76.00000°, λ=79.00000°. NP2:φ=264.00000°,δ=18.00000°,λ=127.00000°.*
BJI ***11*** *10:48:47.9,36.01N×140.55E,h59km,mB5.0,mb4.6,Ms4.2, Msz3.7*
MOS ***11*** *10:48:49.7±1.0,36.14N×140.00E,h33km,mb4.7/22, Error ellipse: s-maj=16.3km s-min=8.7km az=126.8*
ISCJB ***11*** *10:48:52.7±0.3,36.02N±0.02×139.95E±0.04,h60km±2km, mb4.5/42, Error ellipse: s-maj=5.2km s-min=4.1km az=173.4*
NEIC ***11*** *10:48:54.7±0.9,36.04N×139.87E,h60km±7km,mb4.8/15, MW4.3(NIED), Error ellipse: s-maj=8.1km s-min=7.3km az=115.0*
NEIC Felt [III] at Tokyo. Also felt at Fujisawa, Hitachinaka, Kashiwa, Kawasaki, Ome, Sagamihara, Sakado,

Tatebayashi, Utsunomiya, Wako and Washimiya. Recorded [3 JMA] in Ibaraki, Gumma, Saitama and Tochigi; [2 JMA] in Chiba, Kanagawa and Tokyo; [1 JMA] in Fukushima and Yamanashi Prefectures.

JMA ***11*** *10:48:54.1±0.1,3605N×13990E,h44km±1km,M4.3 Broadband fault plane solution: P waves. NP1: φs243.00000°,δ24.00000°,λ106.00000°. NP2: φs46.00000°,δ67.00000°,λ83.00000°. Principal axes: T Plg67.0000°, Azm303.0000°; N Plg6.0000°, Azm48.0000°; P Plg22.0000°, Azm141.0000°;*

JMA Felt III J1.

IDC ***11*** *10:48:55.0±1.4,3592N×13981E,h64km±13km,mb3.9/12, mb1 4.1/15,mb1mx4.0/23,mbtmp3.9/15,MS3.2/8, Ms1 3.3/8,ms1mx3.0/34 Error ellipse: s-maj=19.6km s-min=7.2km az=63.0*

ISC 11 10:48:53.9±0.3,3603N±002×13991E±004,h53km±2km, h62km±2.7km:pP-P,n107,σ1§01/127,mb4.5/42,MS3.4/12, 8C-7D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
JYT	**Yasato**	**0.31**	**48**	⇑P		**Pn**	**10 49 02.7**	**-0.7**
JYT				S		**Sn**	**10 49 08.8**	**-1.3**
TOK	**Tokyo**	**0.36**	**200**	⇑P		**Pn**	**10 49 04.2**	**+0.3**
TOK				S		**Sn**	**10 49 11.6**	**+0.6**
JAG	**Ashikaga**	**0.55**	**317**	⇓P		**Pn**	**10 49 05.5**	**-0.4**
JAG				S		**Sn**	**10 49 13.4**	**-1.1**
JCN	**Nagara**	**0.65**	**159**	⇑P		**Pn**	**10 49 08.5**	**+1.3**
JRY	**Ryogami san**	**0.82**	**270**	⇓P		**Pn**	**10 49 08.8**	**-0.5**
JRY				S		**Sn**	**10 49 19.6**	**-1.0**
JYO	**Yokosk**	**0.82**	**194**	⇓P		**Pn**	**10 49 10.3**	**+0.9**
JKT	**Katashina**	**0.91**	**324**	⇓P		**Pn**	**10 49 10.2**	**-0.4**
JKT				S		**Sn**	**10 49 23.1**	**+0.3**
JOD2	**Odawara 2**	**1.01**	**222**	⇓P		**Pn**	**10 49 11.7**	**-0.2**
JOD2				S		**Sn**	**10 49 24.8**	**-0.3**
JYN	**Shimob**	**1.23**	**245**	⇑P		**Pn**	**10 49 15.4**	**+0.6**
BSO3	**Boso 3**	**1.31**	**158**	P		**Pn**	**10 49 15.5**	**-0.5**
JFY	**Yanaizu**	**1.39**	**353**	⇓P		**Pn**	**10 49 17.5**	**+0.5**
JFY				*e*S		**Sn**	**10 49 35.0**	**+0.8**
MJAR	**Matsushiro Arr**	**1.47**	**291**	P		**Pn**	**10 49 17.7**	**-0.3**
	148nm,0.3s,baz=96,slow=14,SNR=1526							
MJAR				S		**Sn**	**10 49 36.5**	**+0.3**
	119nm,0.3s,baz=93,slow=23,SNR=12							
MJAR	**Matsushiro Arr**	**1.47**	**291**	P		**Pn**	**10 49 17.7**	**-0.3**
MJAR				S		**Sn**	**10 49 36.5**	**+0.3**
MJAR				pmax	pmax			
	comp=Z,148nm,0.3s							
MJAR				smax				
	comp=N,119nm,0.3s							
MAJO	**Matsushiro**	**1.47**	**291**	⇓*i*P		**Pn**	**10 49 18.7**	**+0.6**
MAJO				*e*S		**Sn**	**10 49 34.4**	**-1.8**
MAT	**Matsushiro**	**1.47**	**291**	P		**Pn**	**10 49 17.7**	**-0.4**
MAT				S		**Sn**	**10 49 37.6**	**+1.4**
JHJ	**Hachijo jima 2**	**2.90**	**182**	P		**Pn**	**10 49 37.1**	**-0.5**
	comp=N,307nm,0.3s,baz=359,slow=1.4,SNR=50							
JHJ				S		**Sn**	**10 50 09.9**	**-1.3**
	comp=N,94nm,0.3s,baz=307,slow=20,SNR=8.0							
ERM	**Erimo**	**6.49**	**22**	*e*Pn		**Pn**	**10 50 27.7**	**+0.9**
ERM				*e*Sn		**Sn**	**10 51 41.0**	**+1.6**
ERM	**Erimo**	**6.49**	**22**	⇑*i*P		**Pn**	**10 50 27.5**	**+0.7**
ASAJ	**Asahikawa**	**8.34**	**13**	P		**Pn**	**10 50 53.9**	**+1.7**
	comp=N,1.4nm,0.3s,baz=214,slow=12,SNR=14							
ASAJ				S		**Sn**	**10 52 22.0**	**-2.8**
	comp=N,0.7nm,0.3s,baz=176,slow=13,SNR=1.7							
ASAJ	**Asahikawa**	**8.34**	**13**	P		**Pn**	**10 50 53.9**	**+1.8**
ASAJ				S		**Sn**	**10 52 22.0**	**-2.8**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ				smax				
	comp=N,1.0nm,0.3s							
CBIJ	**Chichi jima**	**9.11**	**167**	P		**Pn**	**10 50 59.4**	**-3.3**
	comp=N,14nm,0.3s,baz=329,slow=20,SNR=18							
CBIJ				S		**Sn**	**10 52 35.6**	**-8.3**
	comp=N,5.3nm,0.3s,baz=311,slow=19,SNR=2.8							
KSRS	**Korea Array**	**9.73**	**282**	P		**Pn**	**10 51 13.4**	**+2.3**
	comp=N,0.7nm,0.3s,baz=95,slow=14,SNR=7.7							
KSRS				LR		LR	10 55 10.4	
	comp=N,77nm,19.0s,baz=166,slow=39							
YSS	**Yuzh-Sakhalins**	**11.12**	**10**	⇑*i*P		**Pn**	**10 51 28.0**	**-2.2**
YSS				pmax	pmax			
	comp=Z,10.0nm,1.0s							
MDJ	**Mudanjiang**	**11.64**	**321**	P		**Pn**	**10 51 38.7**	**+1.5**
MDJ				S		**Sn**	**10 53 49.8**	**+4.3**
MDJ				AMB	AMB			
	comp=Z,16nm,1.1s							
MDJ				AMB	AMB			
	comp=Z,187nm,4.0s							
MDJ				LR	LR			
	comp=Z,122nm,27.7s							
CN2	**Changchun**	**13.54**	**309**	*e*P		**Pn**	**10 52 05.6**	**+2.5**
CN2				*e*AP			10 52 15.3	
CN2				*e*S		**Sn**	**10 54 35.7**	**+3.9**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.6s							
CN2				AMB	AMB			
	comp=Z,200nm,3.0s							
NJ2	**Nanjing**	**17.89**	**263**	*e*P		**Pn**	**10 53 01.4**	**+2.4**
NJ2				AMB	AMB			
	comp=Z,10.0nm,1.0s							
BJI	**Beijing**	**19.11**	**289**	P		**Pn**	**10 53 12.3**	**-1.3**
BJI				S		**S**	**10 56 45.8**	**-0.3**
BJI				AMB	AMB			
	comp=Z,7.0nm,0.4s							
BJI				LR	LR			
	comp=Z,75nm,24.8s							
PETK	**Petropavlovsk-**	**21.17**	**31**	LR		LR	11 00 47.8	
	comp=Z,40nm,20.8s,MS2.8,baz=72,slow=34							
HHC	**Hu-ho-hao-te**	**22.67**	**291**	*e*P		**P**	**10 53 50.3**	**-0.4**
HHC				AP			10 54 05.2	
HHC				XP		sP	10 54 11.1	+1.6
HHC				PP			10 54 20.6	
HHC				S		**S**	**10 57 48.7**	**-6.5**
HHC				AMB	AMB			
	comp=Z,17nm,0.7s,mb4.6							
HHC				LR	LR			
	comp=N,226nm,14.9s,MS3.9							
HHC				LR	LR			
	comp=E,226nm,13.7s,MS3.9							
HHC				LR	LR			
	comp=Z,242nm,15.5s,MS3.7							
YAK	**Yakutsk**	**26.81**	**349**	*e*P		**P**	**10 54 27.8**	**-1.0**
YAK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.3							
ULN	**Ulaanbaatar**	**26.95**	**306**	⇑*i*P		**P**	**10 54 28.5**	**-1.7**
SONM	**Songino Array**	**27.37**	**306**	P		**P**	**10 54 33.6**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.5,baz=115,slow=8.0,SNR=5.8							
SONM				LR		LR	11 04 46.5	
	comp=Z,51nm,20.1s,MS3.1,baz=154,slow=35							
SONM	**Songino Array**	**27.37**	**306**	P		**P**	**10 54 33.6**	**-0.4**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.4s							
SONM				MLR	MLR			
	comp=Z,51nm,20.1s							
LZH	**Lanzhou**	**29.06**	**281**	*e*P		**P**	**10 54 50.5**	**+1.4**
LZH				AP		pP	10 55 07.0	+4.4
LZH				XP		sP	10 55 12.6	+3.7
LZH				AMB	AMB			
	comp=Z,21nm,1.5s,mb4.7							
LZH				AMB	AMB			
	comp=Z,78nm,4.0s							
LZH	**Lanzhou**	**29.06**	**281**	*e*P		**P**	**10 54 50.5**	**+1.4**
	comp=Z,21nm,1.5s,mb4.7							
LZH				pP		pP	10 55 07.0	+4.4
LZH				sP		sP	10 55 12.6	+3.7
GYA	**Guiyang**	**29.86**	**261**	*e*P		**P**	**10 54 57.8**	**+1.4**
GYA				AP		pP	10 55 12.0	+2.2
GYA				XP		sP	10 55 19.2	+3.1
GYA				PP		PP	10 55 57.8	-6.6
GYA				S		**S**	**10 59 48.3**	**-1.4**
GYA				XS		sS	11 00 13.4	+0.9
GYA				SCP		ScP	11 01 35.3	-0.7
GYA				SCS		ScS	11 05 30.2	-1.2
GYA				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.6							
GYA				AMB	AMB			
	comp=Z,90nm,4.6s							
GYA				LR	LR			
	comp=N,590nm,18.9s,MS4.4							
GYA				LR	LR			
	comp=E,470nm,17.6s,MS4.4							
GYA				LR	LR			
	comp=Z,480nm,17.1s,MS4.2							
CD2	**Chengdu**	**30.47**	**271**	*e*P		**P**	**10 55 02.3**	**+0.6**
CD2				AP		pP	10 55 17.1	+1.9
CD2				XP		sP	10 55 24.4	+2.9
CD2				PP		PP	10 56 03.6	-7.6
CD2				S		**S**	**10 59 57.4**	**-1.8**
CD2				XS		sS	11 00 22.9	+0.9
CD2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.7							
CD2				AMB	AMB			
	comp=Z,30nm,5.2s							
CD2				LR	LR			
	comp=N,130nm,14.2s,MS4.0							
CD2				LR	LR			
	comp=E,210nm,14.8s,MS4.0							
CD2				LR	LR			
	comp=Z,120nm,15.2s,MS3.7							
KMI	**Kunming**	**33.62**	**262**	P		**P**	**10 55 30.6**	**+1.3**
KMI				AP		pP	10 55 45.4	+2.5
KMI				XP		sP	10 55 51.1	+2.0
KMI				PP		PP	10 56 44.7	-1.4
KMI				S		**S**	**11 00 48.5**	**+0.2**
KMI				XS		sS	11 01 13.0	+1.8
KMI				AMB	AMB			
	comp=Z,7.0nm,0.9s,mb4.6							
KMI				AMB	AMB			
	comp=Z,82nm,3.8s							
KMI				LR	LR			
	comp=N,130nm,11.4s							
KMI				LR	LR			
	comp=E,86nm,8.2s							
KMI				LR	LR			
	comp=Z,80nm,20.2s							
KMI	**Kunming**	**33.62**	**262**	P		**P**	**10 55 30.6**	**+1.3**
	comp=Z,7.0nm,0.9s,mb4.6							
KMI				pP		pP	10 55 45.4	+2.5
KMI				sP		sP	10 55 51.1	+2.0
KMI				PP		PP	10 56 44.7	-1.4
KMI				S		**S**	**11 00 48.5**	**+0.2**
KMI				sS		sS	11 01 13.0	+1.8
KMI				SS		SS	11 02 54.9	-20
KMI				LR	LR			
	comp=Z,80nm,20.2s,MS3.4							
KMI	**Kunming**	**33.62**	**262**	P		**P**	**10 55 30.6**	**+1.3**
KMI				*PP		pP	10 55 45.4	+2.5
KMI							10 56 44.7	
KMI				S		**S**	**11 00 48.5**	**+0.2**
KMI				SS		SS	11 02 54.9	-20
KMI				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.6							
KMI				MLR	MLR			
	comp=Z,80nm,20.2s,MS3.4							
TIXI	**Tiksi**	**36.16**	**354**	P		**P**	**10 55 50.3**	**-0.4**
	comp=Z,2.8nm,0.5s,mb4.5							
TIXI	**Tiksi**	**36.16**	**354**	⇑*i*P		**P**	**10 55 50.1**	**-0.6**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
CMAR	**Chiang Mai Arr**	**40.07**	**255**	LR		LR	11 15 42.7	
	comp=Z,23nm,20.2s,MS3.0,baz=295,slow=40							
WMQ	**Urumqi**	**40.23**	**298**	*e*P		**P**	**10 56 26.0**	**+0.7**
WMQ				AP		pP	10 56 41.0	+1.9
WMQ				XP		sP	10 56 49.0	+3.7
WMQ				PP		PP	10 58 03.0	+4.6
WMQ				S		**S**	**11 02 28.0**	**-0.5**
WMQ				AMB	AMB			
	comp=Z,16nm,1.0s,mb4.7							
WMQ				LR	LR			
	comp=N,28nm,13.0s,MS3.5							
WMQ				LR	LR			
	comp=E,35nm,14.0s,MS3.5							
WMQ				LR	LR			
	comp=Z,31nm,13.0s,MS3.3							
ZAA0	**Zalesovo Array**	**41.71**	**313**	*e*P		**P**	**10 56 37.3**	**0.0**
ZALV	**Zalesovo Beam**	**41.71**	**313**	P		**P**	**10 56 37.2**	**-0.1**
	comp=Z,12nm,0.6s,mb4.7,baz=92,slow=6.5,SNR=44							
ZALV				PcP		PcP	10 58 32.5	-0.4
	comp=Z,1.9nm,0.5s,baz=105,slow=3.0,SNR=5.0							
ZALV				LR		LR	11 13 45.6	
	comp=Z,10nm,19.8s,MS2.7,baz=310,slow=36							
NVS	**Novosibirsk**	**42.67**	**315**	*i*P		**P**	**10 56 43.8**	**-1.3**
NVS				pmax	pmax			
	comp=E,10.0nm,0.8s							
NVS				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.6							
MK31	**Makanchi Array**	**43.64**	**303**	*i*P		**P**	**10 56 52.2**	**-0.9**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
MKAR	**Makanchi Array**	**43.64**	**303**	P		**P**	**10 56 52.9**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.0,baz=84,slow=11,SNR=18							
MKAR				LR		LR	11 15 50.9	
	comp=Z,47nm,19.2s,MS3.4,baz=356,slow=37							
MKAR	**Makanchi Array**	**43.64**	**303**	P		**P**	**10 56 52.9**	**-0.1**
MKAR				LR		LR	11 15 50.9	
MKAR	**Makanchi Array**	**43.64**	**303**	P		**P**	**10 56 52.9**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MKAR				MLR	MLR			
	comp=Z,47nm,19.2s							
TAPN	**Taplejung**	**44.80**	**274**	*e*P		**P**	**10 57 02.5**	**-0.1**
	comp=Z,4.9nm,0.4s,mb4.7							
ODAN	**Odare**	**45.27**	**274**	*e*P		**P**	**10 57 06.2**	**-0.1**
	comp=Z,3.7nm,0.4s,mb4.6							
KURK	**Kurchatov**	**45.61**	**309**	*e*P		**P**	**10 57 08.5**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0							
KURK	**Kurchatov**	**45.61**	**309**	*e*P		**P**	**10 57 08.5**	**-0.2**
KURK				pmax	pmax			
	comp=Z,12nm,0.6s,mb5.0							
RAMN	**Ramite**	**45.87**	**274**	*e*P		**P**	**10 57 10.3**	**-0.8**
	comp=Z,18nm,0.7s,mb5.1							
JIRN	**Jiri**	**45.91**	**275**	*e*P		**P**	**10 57 11.9**	**+0.5**
	comp=Z,8.2nm,0.4s,mb5.0							
GUN	**Gumba**	**46.05**	**276**	*e*P		**P**	**10 57 12.8**	**+0.3**
PKI	**Pulchoki**	**46.57**	**276**	*e*P		**P**	**10 57 16.6**	**0.0**
KKN	**Kakani**	**46.59**	**276**	*e*P		**P**	**10 57 16.8**	**+0.1**
DMN	**Daman**	**46.80**	**276**	*e*P		**P**	**10 57 18.2**	**-0.2**
GKN	**Gorkha**	**47.02**	**277**	*e*P		**P**	**10 57 20.1**	**0.0**
	comp=Z,32nm,0.8s,mb5.3							
DANN	**Dangsing**	**47.58**	**277**	*e*P		**P**	**10 57 25.2**	**+0.8**
	comp=Z,59nm,0.8s,mb5.7							
KOLN	**Koldanda**	**47.95**	**277**	*e*P		**P**	**10 57 27.3**	**0.0**
	comp=Z,8.0nm,0.6s,mb4.9							
PYUN	**Piuthan**	**48.30**	**278**	*e*P		**P**	**10 57 30.4**	**+0.4**
	comp=Z,20nm,0.6s,mb5.4							
KDAK	**Kodiak Island**	**48.66**	**41**	P		pP	10 57 47.0	+0.6
	comp=Z,5.1nm,0.6s,baz=278,slow=3.9,SNR=9.2							
TKM2	**Tokmak 2**	**49.05**	**299**	*e*P		**P**	**10 57 36.8**	**+1.2**
	comp=Z,5.6nm,0.5s,mb4.8							
TKM2	**Tokmak 2**	**49.05**	**299**	*e*P		**P**	**10 57 36.8**	**+1.2**
TKM2				pmax	pmax			
	comp=Z,6.0nm,0.5s,mb4.9							
VOSK	**Vostochnaya**	**50.06**	**312**	P		**P**	**10 57 41.9**	**-1.2**
VOSK				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.9							
AML	**Almayashu**	**50.62**	**298**	*e*P		**P**	**10 57 49.2**	**+1.7**
	comp=Z,24nm,0.7s,mb5.2							
KK31	**Karatay Array**	**52.59**	**300**	*i*P		**P**	**10 58 01.7**	**-0.5**
KK31				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4							
WRAB	**Tennant Creek**	**55.90**	**186**	*e*P		**P**	**10 58 26.1**	**-0.3**
	comp=Z,5.5nm,0.9s,mb4.6							
WRAB	**Tennant Creek**	**55.90**	**186**	*e*P		**P**	**10 58 26.1**	**-0.3**
WRAB				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
WB2	**Warramunga Arr**	**55.91**	**186**	*e*P		**P**	**10 58 26.1**	**-0.4**
WRA	**Warramunga Arr**	**55.91**	**186**	P		**P**	**10 58 25.6**	**-0.8**
	comp=Z,3.5nm,0.5s,mb4.7,baz=1.7,slow=7.6,SNR=64							
WRA	**Warramunga Arr**	**55.91**	**186**	P		**P**	**10 58 25.6**	**-0.8**
WRA				pmax	pmax			
	comp=Z,4.0nm,0.5s							
ARU	**Arti**	**56.32**	**319**	*e*P		**P**	**10 58 29.3**	**+0.3**
	comp=Z,6.2nm,0.4s,mb5.0							
ARU	**Arti**	**56.32**	**319**	*e*P		**P**	**10 58 28.8**	**-0.2**
ARU				*e*			11 00 32.6	
ARU				*e*S		**S**	**11 06 18.5**	**+3.4**
ARU				*e*SS		SS	11 10 00.4	-1.5
AB31	**Akbulak array**	**57.66**	**310**	P		**P**	**10 58 38.3**	**-0.4**
AB31				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7							
AKTO	**Aktyubinsk**	**58.45**	**312**	P		**P**	**10 58 43.3**	**-0.8**
ASAR	**Alice Springs**	**59.64**	**186**	P		**P**	**10 58 52.5**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.9,baz=7.1,slow=6.0,SNR=14							
ASAR	**Alice Springs**	**59.64**	**186**	P		**P**	**10 58 52.6**	**+0.1**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
MBWA	**Marble Bar**	**59.99**	**202**	*e*P		**P**	**10 58 55.4**	**+0.4**
	comp=Z,2.4nm,0.5s,mb4.5							
KEV	**Kevo**	**63.95**	**339**	*e*p		**P**	**10 59 21.0**	**0.0**
ARCES	**ARCESS Array B**	**64.51**	**339**	P		**P**	**10 59 24.6**	**-0.1**
	comp=Z,4.4nm,0.9s,mb4.5,baz=51,slow=7.7,SNR=10							
ARCES	**ARCESS Array B**	**64.51**	**339**	P		**P**	**10 59 24.6**	**-0.1**
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.9s							
JOF	**Joensuu**	**66.28**	**332**	*e*p		**P**	**10 59 34.1**	**-2.1**
	comp=Z,1.8nm,0.5s,mb4.4							
JOF	**Joensuu**	**66.28**	**332**	*e*P		**P**	**10 59 34.1**	**-2.1**
JOF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
STKA	**Stephens Creek**	**67.56**	**178**	P		**P**	**10 59 46.3**	**+1.6**
	comp=Z,1.4nm,0.7s,mb4.1,baz=9.5,slow=12,SNR=3.6							
STKA				LR		LR	11 26 15.8	
	comp=Z,88nm,18.8s,MS4.0,baz=24,slow=33							
KAF	**Kangasniemi**	**68.64**	**332**	*e*p		**P**	**10 59 50.5**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.4							
KAF	**Kangasniemi**	**68.64**	**332**	*e*P		**P**	**10 59 50.5**	**-0.7**
KAF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.3							
FINES	**FINESS Array B**	**69.14**	**332**	*e*P		**P**	**10 59 53.0**	**-1.2**
AKASG	**Malin Array Be**	**74.35**	**322**	P		**P**	**11 00 24.9**	**-0.8**
	comp=Z,0.7nm,0.3s,mb4.0,baz=49,slow=6.2,SNR=8.0							
AKASG	**Malin Array Be**	**74.35**	**322**	*i* P		**P**	**11 00 25.2**	**-0.5**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
NB2	**NORSAR Subarra**	**74.64**	**337**	P		**P**	**11 00 27.2**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.2,baz=42,slow=5.9							
NOA	**NORSAR Array B**	**74.64**	**337**	P		**P**	**11 00 27.0**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.2,baz=41,slow=5.8,SNR=9.5							
NOA				LR		LR	11 35 55.3	
	comp=Z,24nm,18.9s,MS3.5,baz=65,slow=38							
NOA	**NORSAR Array B**	**74.64**	**337**	P		**P**	**11 00 27.0**	**-0.2**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NOA				MLR	MLR			
	comp=Z,24nm,18.9s							
NVAR	**Mina Array Bea**	**76.56**	**52**	P		**P**	**11 00 40.2**	**+1.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=284,slow=5.5,SNR=5.6							
PDAR	**Pinedale Array**	**79.23**	**45**	P		**P**	**11 00 54.3**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=283,slow=1.8,SNR=5.2							
GERES	**GERESS Array B**	**82.92**	**328**	P		**P**	**11 01 12.4**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=34,slow=5.0,SNR=4.2							
GERES	**GERESS Array B**	**82.92**	**328**	P		**P**	**11 01 12.4**	**-0.5**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TXAR	**Lajitas Array**	**91.70**	**51**	P		**P**	**11 01 57.0**	**+1.2**
	comp=Z,0.8nm,0.6s,mb4.3,baz=307,slow=2.9,SNR=16							
TXAR	**Lajitas Array**	**91.70**	**51**	P		**P**	**11 01 57.1**	**+1.3**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**117.16**	**313**	PKP		PKPdf	11 07 32.7	-1.0
	comp=Z,0.2nm,0.6s,baz=11,slow=1.3,SNR=2.9							
DBIC	**Dimbokro**	**126.17**	**315**	PKP		PKPdf	11 07 49.9	-1.2
	comp=Z,1.0nm,0.5s,baz=5.1,slow=4.7,SNR=4.0							
DBIC	**Dimbokro**	**126.17**	**315**	PKIKP		PKPdf	11 07 49.9	-1.1
DBIC				pmax	pmax			
	comp=Z,1.0nm,0.5s							
LPAZ	**La Paz**	**148.25**	**59**	PKPbc		PKPbc	11 08 36.1	+1.6
	comp=Z,1.5nm,0.7s,baz=286,slow=1.7,SNR=5.5							

MEX 11 11:00:53.1±0.9,1712N×10076W,h5km±8km,MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
CAIG	**El Cayaco**	**0.48**	**99**	*i* P		Pg	11 01 01.6	-0.8
CAIG				*i* S		Sg	11 01 08.8	+0.2
ZIIG	**Zihuatanejo**	**0.82**	**306**	*i* P		Pg	11 01 07.6	-1.3
ZIIG				*i* S		Sg	11 01 17.4	-2.3
ACX	**Acapulco**	**0.85**	**107**	*i* P		Pg	11 01 08.7	-0.7
ACX				*i* S		Sg	11 01 19.1	-1.4
MEIG	**Mezcala**	**1.35**	**54**	*i* P		Pn	11 01 16.0	-2.7
MEIG				*i* S		Sb	11 01 31.9	-4.7
MZVM		**2.52**	**35**	*e*P		Pn	11 01 33.2	-1.5
MZVM				*i* S		Sn	11 02 01.6	-4.3
UTMO	**Huajuapan**	**2.91**	**76**	*e*P		Pn	11 01 35.8	-4.3
UTMO				*i* S		Sn	11 02 12.2	-3.4

MAN 11 11:02:49,1259N×12538E,h2km,mb3.9,ML2.7,MS2.4, Samar

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
CNP	**Catarman**	**0.70**	**264**	*e*P		Pg	11 03 04.4	+1.9
CNP				*e*S		Sg	11 03 17.4	+5.7
BESP	**Borongan**	**0.98**	**177**	*e*P		Pg	11 03 08.3	+0.4
PVCP	**Virac**	**1.56**	**310**	*e*P		Pn	11 03 16.6	-1.1
PVCP				*e*S		Sn	11 03 39.9	+1.3
MSLP	**Maasin**	**2.49**	**192**	*e*P		Pn	11 03 33.8	+3.3

ISCJB ***11*** *11:29:18.4±1.4,174S±04×1789W±02,h535km±21km, mb3.6/10,Error ellipse: s-maj=63.3km s-min=13.7km az=153.8*

NEIC ***11*** *11:29:20.0±1.0,1745S×17876W,h548km±15km,mb3.6/3, Error ellipse: s-maj=50.1km s-min=10.4km az=154.0*

IDC ***11*** *11:29:19.0±2.2,1747S×17882W,h531km±28km,mb3.7/7, mb1 3.6/8,mb1mx3.3/18,mbtmp3.3/8,Error ellipse: s-maj=86.5km s-min=13.9km az=154.0*

ISC 11 11:29:20.0±1.2,174S±04×1788W±02,h544km±18km,n16, σ0§81/15,mb3.6/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
AFI	**Afiamalu**	**7.61**	**64**	P		**P**	**11 31 13.0**	**-0.7**
	2.3nm,0.3s,baz=243,slow=22,SNR=4.1							
DZM	**Mont Dzumac**	**14.65**	**249**	*e*P		**P**	**11 32 28.1**	**+2.2**
ARMA	**Armidale**	**29.87**	**239**	*e*P		**P**	**11 34 43.6**	**0.0**
	0.1nm,0.5s,mb2.6							
CTA	**Charters Tower**	**33.17**	**260**	P		**P**	**11

CD2				Smax				
	comp=E,760nm,0.6s							
KMI	**Kunming**	**3.82**	**213**	P	**Pn**	**11**	**40**	**10.7 -3.9**
KMI				LR	LR			
	comp=N,497nm,8.4s							
KMI				LR	LR			
	comp=E,494nm,8.4s							
KMI				LR	LR			
	comp=Z,296nm,8.4s							
XAN	**Xi'an**	**6.57**	**30**	P	**Pn**	**11**	**40**	**54.0 +1.6**
XAN				S	**Sn**	**11**	**42**	**02.7 -4.4**
XAN				SG	**Sg**	**11**	**42**	**47.2 0.0**
XAN				Smax				
	comp=N,104nm,1.1s							
XAN				Smax				
	comp=E,158nm,1.3s							
LZH	**Lanzhou**	**7.76**	**353**	*e*P	**Pn**	**11**	**41**	**07.5 -1.2**
LZH				*e*S	**Sn**	**11**	**42**	**35.6 -0.8**
LZH				Smax				
	comp=N,36nm,0.9s							
LZH				Smax				
	comp=E,48nm,0.8s							
LZH				LR	LR			
	comp=E,450nm,8.0s							
LZH				LR	LR			
	comp=Z,593nm,10.3s							
CMAR	**Chiang Mai Arr**	**11.33**	**211**	P	**Pn**	**11**	**41**	**59.7 +2.0**
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=20							
CMAR				LR	LR	11	46	41.4
	comp=Z,51nm,21.2s,baz=175,slow=39							
SONM	**Songino Array**	**19.47**	**3**	P	**Pn**	**11**	**43**	**43.4 -0.3**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=6.4							
SONM				LR	LR	11	51	56.7
	comp=Z,62nm,18.6s,baz=30,slow=39							
KSRS	**Korea Array**	**21.22**	**59**	P	**P**	**11**	**44**	**01.7 +0.1**
	comp=Z,1.0nm,0.5s,mb3.4,baz=236,slow=9.9,SNR=5.7							
MKAR	**Makanchi Array**	**25.59**	**322**	P	**P**	**11**	**44**	**44.0 -0.8**
	comp=Z,1.1nm,0.7s,mb3.5,baz=122,slow=10,SNR=4.7							
ZALV	**Zalesovo Beam**	**29.53**	**336**	P	**P**	**11**	**45**	**18.4 -1.6**
	comp=Z,0.4nm,0.3s,mb3.6,baz=130,slow=6.4,SNR=2.5							
ZALV				LR	LR	11	58	10.9
	comp=Z,34nm,19.5s,baz=76,slow=38							
WRA	**Warramunga Arr**	**55.77**	**146**	P	**P**	**11**	**48**	**51.6 -1.2**
	comp=Z,2.5nm,0.9s,mb4.2,baz=338,slow=8.2,SNR=18							
ASAR	**Alice Springs**	**58.75**	**149**	P	**P**	**11**	**49**	**12.8 -1.0**
	comp=Z,0.7nm,0.6s,mb3.9,baz=332,slow=6.8,SNR=13							

*IDC **11** 12:07:32.7±1.7, 650S×130.17E, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.9/15, mbtmp4.0/6, ML4.2/3, Error ellipse: s-maj=49.9km s-min=27.0km az=77.0*
*NEIC **11** 12:07:33.9±1.6, 655S×130.16E, h10km, Error ellipse: s-maj=109.0km s-min=11.4km az=66.0*
*ISCJB **11** 12:07:35.4±1.0, 66S±0.1×130.1E±0.2, h33km, mb3.8/3, Error ellipse: s-maj=24.4km s-min=11.1km az=152.9*
ISC 11 12:07:37.5±1.0, 66S±0.1×1302E±0.2, h35km, n9, σ0§59/8, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
KAKA	**Kakadu**	**6.50**	**160**	*e*Pn	Px	12	09	07.0
	44nm,0.4s							
KAKA				*e*Sn	Sx	12	10	12.4
BATI	**Baumata**	**7.38**	**240**	Pn	**Pn**	**12**	**09**	**23.1 +0.2**
	14nm,0.3s,baz=88,slow=4.8,SNR=18							
BATI				Sn	Sx	12	10	33.4
	11nm,0.3s,baz=257,slow=3.1,SNR=9.0							
WRAB	**Tennant Creek**	**13.89**	**163**	*e*Pn	**Pn**	**12**	**10**	**52.1 +0.1**
WRAB				*e*Sn	Sx	12	13	13.0
WRA	**Warramunga Arr**	**13.90**	**163**	Pn	**Pn**	**12**	**10**	**51.4 -0.6**
	0.8nm,0.3s,baz=346,slow=13,SNR=30							
WRA				Sn	Sx	12	13	13.8
	1.3nm,0.3s,baz=332,slow=22,SNR=13							
WB2	**Warramunga Arr**	**13.90**	**163**	*e*Pn	**Pn**	**12**	**10**	**52.1 0.0**
WB2				*e*Sn	Sx	12	13	13.5
ASAR	**Alice Springs**	**17.38**	**168**	P	**Pn**	**12**	**11**	**37.7 +0.4**
	0.4nm,0.3s,baz=346,slow=9.3,SNR=30							
ASAR				S	Sx	12	14	38.5
	0.2nm,0.3s,baz=349,slow=27,SNR=4.8							
CMAR	**Chiang Mai Arr**	**39.59**	**309**	P	**P**	**12**	**15**	**04.6 -1.2**
	0.3nm,0.4s,mb3.4,baz=140,slow=7.1,SNR=4.2							
MKAR	**Makanchi Array**	**67.96**	**327**	P	**P**	**12**	**18**	**33.8 +0.9**
	1.3nm,0.5s,mb4.2,baz=115,slow=8.3,SNR=16							
ZALV	**Zalesovo Beam**	**71.27**	**334**	P	**P**	**12**	**18**	**53.3 +0.1**
	0.7nm,0.5s,mb3.8,baz=117,slow=5.2,SNR=4.1							

IDC 11 12:27:28.0±3.6, 2188N×14318E, h41km±33km, mb3.6/9, mb1 3.8/10, mb1mx3.7/21, mbtmp3.7/10, ML3.9/1, MS2.9/8, Ms1 2.9/8, ms1mx2.9/26, Error ellipse: s-maj=28.3km s-min=16.3km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
CBIJ	**Chichi jima**	**5.27**	**350**	P	Pn	12	28	44.5 +0.3
	10nm,0.3s,baz=272,slow=17,SNR=8.9							
CBIJ				S	Sn	12	29	43.7 0.0
	1.6nm,0.3s,baz=285,slow=23,SNR=2.0							
GUMO	**Guam**	**8.40**	**169**	LR	LR	12	32	09.7
	comp=Z,59nm,21.8s,baz=84,slow=34							
MJAR	**Matsushiro Arr**	**15.24**	**345**	LR	LR	12	35	28.7
	comp=Z,15nm,21.0s,baz=215,slow=32							
KSRS	**Korea Array**	**20.37**	**323**	P	P	12	32	02.6 +1.5
	3.0nm,0.7s,baz=144,slow=8.4,SNR=4.7							
KSRS				LR	LR	12	37	46.6
	comp=Z,22nm,21.6s,baz=341,slow=30							
ASAJ	**Asahikawa**	**22.18**	**359**	LR	LR	12	39	53.7
	comp=Z,33nm,19.3s,baz=169,slow=34							
DAV	**Davao City (W)**	**22.48**	**232**	LR	LR	12	39	32.2
	comp=Z,87nm,18.9s,baz=299,slow=32							
PETK	**Petropavlovsk-**	**33.10**	**16**	LR	LR	12	44	25.0
	comp=Z,21nm,21.7s,baz=111,slow=31							
SONM	**Songino Array**	**39.20**	**320**	P	P	12	34	52.1 +0.1
	1.9nm,0.8s,baz=130,slow=6.5,SNR=7.0							
CMAR	**Chiang Mai Arr**	**41.56**	**273**	P	P	12	35	12.6 +0.7
	0.6nm,0.7s,baz=61,slow=8.8,SNR=6.2							
CMAR				LR	LR	12	54	01.2
	comp=Z,9.4nm,18.7s,baz=195,slow=38							
WRA	**Warramunga Arr**	**42.45**	**192**	P	P	12	35	18.9 -0.2
	1.5nm,0.9s,baz=16,slow=8.9,SNR=11							
ASAR	**Alice Springs**	**46.16**	**192**	P	P	12	35	48.6 0.0
	0.7nm,0.6s,baz=17,slow=9.2,SNR=24							
STKA	**Stephens Creek**	**53.47**	**182**	P	P	12	36	43.6 -0.4
	0.9nm,0.4s,baz=357,slow=11,SNR=3.4							
ZALV	**Zalesovo Beam**	**54.07**	**322**	P	P	12	36	47.1 -1.2
	2.9nm,0.8s,baz=97,slow=6.1,SNR=13							
MKAR	**Makanchi Array**	**54.57**	**313**	P	P	12	36	52.0 -0.1
	0.4nm,0.6s,baz=105,slow=7.6,SNR=3.5							
MKAR				LR	LR	13	02	33.6
	comp=Z,26nm,18.2s,baz=357,slow=39							
NVAR	**Mina Array Bea**	**83.03**	**51**	P	P	12	39	50.7 +1.4
	0.9nm,0.8s,baz=258,slow=6.7,SNR=5.0							
PLCA	**Paso Flores**	**145.88**	**131**	PKPbc	PKPbc	12	47	00.8 -2.2
	1.0nm,0.8s,baz=243,slow=4.5,SNR=2.4							
LPAZ	**La Paz**	**149.93**	**85**	PKPbc	PKPbc	12	47	15.9 +1.3
	0.8nm,0.4s,baz=344,slow=2.3,SNR=5.0							

*CSEM **11** 12:42:38.6, 3690N×361E, h0km, ML3.6, After ALG*
CRAAG 11 12:42:38.6, 3690N×361E, Ml3.6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
ABMS	**Boumerdes**	**0.19**	**215**	P	Pg	12	42	43.0 +0.8
ABA	**Alger-Bouzarea**	**0.47**	**258**	P	Pg	12	42	49.4 +1.7
ADJB	**Djebel Djouab**	**0.76**	**191**	P	Pg	12	42	54.3 +1.2
AKF	**Akfadou**	**0.81**	**109**	P	Pg	12	42	53.8 -0.4
EMHD	**Djebel Mahouad**	**0.88**	**217**	P	Pg	12	42	57.0 +1.5
AKET	**Djebel Ketaf**	**0.88**	**166**	P	Pg	12	42	56.5 +1.0
EBNR	**Beni Rached**	**1.78**	**251**	P	Pn	12	43	06.0 -4.6
EANR	**'Ain N'Sour**	**2.24**	**246**	P	Pn	12	43	21.6 +4.7
ETRT	**Tiaret**	**2.41**	**232**	P	Pn	12	43	20.0 +0.8

KRSC 11 13:08:39.2±0.9, 5098N×15693E, h150km±90km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
RUS	**Russkaya**	**1.76**	**33**	*e*P	Pn	13	09	12.6 +1.2
RUS				*e*S	Sn	13	09	37.3 +1.0
NLC	**Nalytchevo**	**2.65**	**33**	S	Sn	13	09	56.6 +1.4
GNL	**Ganaly**	**2.79**	**12**	P	Pn	13	09	26.4 +2.6
SPN	**Mys Shipunski**	**2.85**	**41**	P	Pn	13	09	27.3 +2.7
SPN				S	Sn	13	10	02.5 +2.8
MKZ	**Mys Kozlova**	**4.62**	**37**	P	Pn	13	09	49.4 +2.0
MKZ				S	Sn	13	10	39.2 -1.4
KBTR	**Krutoberegovo**	**6.30**	**31**	P	Pn	13	10	12.1 +2.4

IDC 11 13:34:26.5±2.0, 663S×12937E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.3/14, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=55.1km s-min=30.5km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
BATI	**Baumata**	**6.67**	**237**	Pn	Pn	13	36	04.9 -0.9
	14nm,0.3s,baz=100,slow=3.4,SNR=23							
BATI				Sn	Sn	13	37	05.1 -18
	4.8nm,0.3s,baz=90,slow=22,SNR=4.2							
WRA	**Warramunga Arr**	**14.09**	**160**	Pn	Pn	13	37	47.3 -0.2
	0.2nm,0.3s,baz=348,slow=13,SNR=5.5							
WRA				Sn	Sn	13	40	09.1 -16
	0.7nm,0.3s,baz=334,slow=22,SNR=6.6							
ASAR	**Alice Springs**	**17.50**	**166**	P	Pn	13	38	32.9 +0.8
	0.1nm,0.3s,baz=341,slow=9.0,SNR=4.1							
ASAR				S	Sn	13	41	30.8 -17
	0.3nm,0.3s,baz=319,slow=16,SNR=6.6							
MKAR	**Makanchi Array**	**67.57**	**327**	P	P	13	45	25.0 +0.2
	0.2nm,0.4s,baz=117,slow=7.9,SNR=8.5							

*IDC **11** 13:47:10.2±5.2, 562N×12502E, h98km±59km, mb3.4/4, mb1 3.6/4, mb1mx3.3/18, mbtmp3.4/4, Error ellipse: s-maj=99.1km s-min=19.0km az=68.0*
*NEIC **11** 13:47:10.3±0.7, 561N×12500E, h100km, mb3.7/1, Error ellipse: s-maj=30.2km s-min=10.2km az=83.0*
*ISCJB **11** 13:47:11.9±0.7, 60N±02×1260E±0.3, h146km±15km, mb3.6/5, Error ellipse: s-maj=55.5km s-min=15.5km az=142.3*
*MAN **11** 13:47:11, 605N×12596E, h142km, mb4.7, ML3.6, MS3.5*
ISC 11 13:47:13.1±0.8, 60N±02×1260E±02, h138km±15km, n12, σ0§62/16, mb3.6/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
MATI	**Mati**	**0.96**	**16**	*e*P	**Pn**	**13**	**47**	**36.3 -0.2**
MATI				*e*S	**Sn**	**13**	**47**	**54.1 -0.1**
DAV	**Davao City (W)**	**1.12**	**339**	P	**Pn**	**13**	**47**	**37.5 -0.4**
	68nm,0.3s,baz=227,slow=2.0,SNR=12							
DAV				S	**Sn**	**13**	**47**	**57.2 +0.4**
	162nm,0.3s,baz=265,slow=23,SNR=12							
DAV	**Davao City (W)**	**1.12**	**339**	*e*Pn	**Pn**	**13**	**47**	**37.3 -0.6**
DAV				S	**Sn**	**13**	**47**	**57.2 +0.4**
BUKP	**Musuan**	**2.07**	**334**	*e*P	**Pn**	**13**	**47**	**47.7 -0.7**
BUKP				*e*S	**Sn**	**13**	**48**	**16.2 +0.8**
WRAB	**Tennant Creek**	**27.06**	**162**	*e*P	**P**	**13**	**52**	**42.8 -0.1**
	1.1nm,0.4s,mb3.8							
WRA	**Warramunga Arr**	**27.07**	**163**	P	**P**	**13**	**52**	**42.7 -0.3**
	0.5nm,0.5s,mb3.4,baz=337,slow=10,SNR=17							
WB2	**Warramunga Arr**	**27.07**	**162**	*e*P	**P**	**13**	**52**	**42.5 -0.5**
ASAR	**Alice Springs**	**30.49**	**166**	P	**P**	**13**	**53**	**13.3 +0.1**
	0.6nm,0.4s,mb3.7,baz=339,slow=7.5,SNR=41							
CTAO	**Charters Tower**	**32.71**	**143**	*e*P	**P**	**13**	**53**	**36.3 +3.6**
STKA	**Stephens Creek**	**40.51**	**159**	P	**P**	**13**	**54**	**39.6 +0.9**
	1.5nm,0.5s,mb3.9,baz=340,slow=6.7,SNR=6.4							
MKAR	**Makanchi Array**	**55.27**	**325**	P	**P**	**13**	**56**	**31.8 -0.4**
	0.4nm,0.8s,mb3.2,baz=116,slow=7.4,SNR=3.0							
MKAR	**Makanchi Array**	**55.27**	**325**	P	**P**	**13**	**56**	**31.8 -0.4**

*NEIC **11** 13:59:22.0, 1837N×10293W, h10km, MD4.3(MEX), After MEX.*
MEX 11 13:59:22.0±1.1, 1837N×10293W, h10km±14km, MD4.3, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
MMIG	**Aquila**	**0.40**	**258**	*i* P	Pg	13	59	29.1 -0.9
MMIG				*i* S	Sg	13	59	36.1 +0.8
ZIIG	**Zihuatanejo**	**1.59**	**118**	*i* P	Pn	13	59	46.4 -3.8
ZIIG				*i* S	Sn	14	00	06.0 -4.7
MOIG	**Morelia**	**2.10**	**51**	*i* P	Pn	13	59	54.1 -3.1
MOIG				*i* S	Sn	14	00	19.9 -3.4
SFJM	**Santa Fe**	**2.11**	**357**	*i* P	Pn	13	59	53.3 -4.0
SFJM				*i* S	Sn	14	00	19.0 -4.6
CJM	**Chamela**	**2.29**	**300**	*i* P	Pn	13	59	57.5 -2.4
CJM				*i* S	Sn	14	00	24.6 -3.7
MEIG	**Mezcala**	**3.18**	**98**	*i* P	Pn	14	00	10.3 -1.8
MEIG				*i* S	Sn	14	00	46.5 -3.6
ACX	**Acapulco**	**3.24**	**117**	*e*P	Pn	14	00	10.9 -2.1
ACX				*i* S	Sn	14	00	48.5 -3.0
PLIG	**Platanillo**	**3.25**	**89**	*i* P	Pn	14	00	10.8 -2.3
PLIG				*i* S	Sn	14	00	48.6 -3.6
MZVM		**3.60**	**76**	*e*P	Pn	14	00	17.6 -0.3
MZVM				*i* S	Sn	14	00	55.1 -5.3
YAIG	**Yautepec**	**3.69**	**82**	*i* P	Pn	14	00	18.2 -0.9
YAIG				*i* S	Sn	14	00	57.5 -5.3
PPM	**Popocatepetl**	**4.14**	**80**	*i* P	Pn	14	00	25.9 +0.6
PPM				*e*P		14	00	33.4
PPM				*i* S	Sn	14	01	09.8 -3.9
PPM				*i* S	Sn	14	01	15.4 +1.7
IIO	**Organos**	**4.16**	**72**	*e*P	Pn	14	00	24.9 -0.6
IIO				*i* S	Sn	14	01	16.9 +2.6
ZAIG	**Zacatecas**	**4.39**	**4**	*i* P	Pn	14	00	25.2 -3.5
ZAIG				*i* S	Sn	14	01	22.6 +2.7
UTMO	**Huajuapan**	**4.91**	**96**	*i* P	Pn	14	00	34.6 -1.3
PNIG	**Pinotepa**	**4.99**	**113**	*i* P	Pn	14	00	34.8 -2.2
PNIG				*i* S	Sn	14	01	39.0 +4.3
TPIG	**Tehuac#an**	**5.29**	**89**	*i* P	Pn	14	00	40.4 -0.7
TPIG				*i* S	Sn	14	01	38.1 -4.0

MOS 11 14:08:17.6±0.8, 4397N×4268E, h6km, mb3.9/1, 3D, Error ellipse: s-maj=0.0km s-min=0.0km az=114.6, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
KIV	**Kislovodsk**	**0.02**	**157**	⇓*i* PG	Pg	14	08	18.9 +0.2
KIV				*i* S	Sg	14	08	25.7 +6.3
KIV0	**Kislovodsk Arr**	**0.02**	**139**	⇓*i* PG	Pg	14	08	18.9 +0.2
KIV0				*i* S	Sg	14	08	25.8 +6.3
SHAR	**Shatzhatmas**	**0.23**	**182**	⇓*i* PG	Pg	14	08	23.1 +1.0
SHAR				*i* S	Sg	14	08	32.5 +7.4
KUBR	**Kubataba**	**0.56**	**108**	*i* PG	Pg	14	08	28.5 +0.2
KUBR				*e*S	Sg	14	08	42.0 +6.5
LSNR	**Lesken**	**1.08**	**130**	*e*PG	Pg	14	08	38.6 +0.3
LSNR				*e*S	Sg	14	08	59.0 +6.7
KMSR	**Komsomolskaya**	**1.32**	**117**	*e*PG	Pg	14	08	42.5 -0.3
KMSR				*e*S	Sb	14	09	06.0 +6.2
KORR	**Kora**	**1.34**	**131**	*e*PG	Pg	14	08	43.3 0.0
KORR				*e*S	Sb	14	09	07.1 +6.5
ARNR	**Ardon**	**1.40**	**123**	*e*PG	Pg	14	08	44.5 0.0
ARNR				*e*S	Sb	14	09	09.0 +6.7
ZEI	**Tsey**	**1.50**	**143**	*e*PG	Pg	14	08	44.8 -1.4
ZEI				*e*S	Sn	14	09	10.3 +5.6
LACR	**Lac**	**1.64**	**134**	*e*PN	Pn	14	08	48.5 +1.5
LACR				*e*S	Sn	14	09	15.9 +7.5

IDC 11 14:10:26.9±72.0, 5537S×13924E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.5/10, mbtmp3.3/3, Error ellipse: s-maj=1289.0km s-min=194.2km az=150.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
STKA	**Stephens Creek**	**23.54**	**5**	P	P	14	15	38.8 0.0
	1.6nm,0.8s,baz=155,slow=19,SNR=3.2							
ASAR	**Alice Springs**	**31.91**	**351**	P	P	14	16	53.8 -0.1
	0.2nm,0.7s,baz=169,slow=9.9,SNR=3.6							
WRA	**Warramunga Arr**	**35.56**	**352**	P	P	14	17	25.8 +0.1
	0.4nm,0.9s,baz=174,slow=8.2,SNR=3.5							

KRSC 11 14:44:16.1±1.3, 5596N×16155E, h22km±21km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
ZLN	**Zelenaya**	**0.42**	**278**	*e*P	Pb	14	44	25.7 +0.8
ZLN				*i* S	Sb	14	44	32.9 +2.0
CIRR	**Tsirk**	**0.48**	**289**	*e*P	Pb	14	44	26.6 +0.8
CIRR				*i* S	Sb	14	44	34.1 +1.7
BZGR	**Bezymyannyi-Gr**	**0.48**	**268**	*e*P	Pb	14	44	26.5 +0.6
BZGR				*i* S	Sb	14	44	34.0 +1.5
BZWR	**Bezymyannyi-We**	**0.59**	**271**	*e*P	Pb	14	44	28.3 +0.5
BZWR				*i* S	Sb	14	44	38.0 +2.3
BZMR	**Bezymyannaya**	**0.60**	**268**	*e*P	Pb	14	44	28.1 +0.3
KRSR	**Krestovskiy**	**0.61**	**295**	*e*P	Pb	14	44	28.3 +0.3
KRSR				*i* S	Sb	14	44	37.1 +0.9
KLY	**Klyuchi**	**0.61**	**306**	*e*P	Pb	14	44	27.3 -0.8
KLY				*i* S	Sb	14	44	35.5 -0.8
KIRR	**Kirishev**	**0.68**	**270**	*e*P	Pb	14	44	29.9 +0.7
KIRR				*i* S	Sb	14	44	39.7 +1.5
SRKR	**Sorokina**	**0.73**	**343**	*e*P	Pb	14	44	31.3 +1.2
SRKR				*i* S	Sb	14	44	42.6 +3.0
KPT	**Kopyto**	**0.75**	**271**	*e*P	Pb	14	44	31.1 +0.7
KPT				*i* S	Sb	14	44	42.4 +2.3
KBTR	**Krutoberegovo**	**0.75**	**70**	*e*P	Pb	14	44	31.5 +1.0
KBTR				*i* S	Sb	14	44	43.2 +2.9
KMNR	**Kamenistaya**	**0.77**	**255**	*e*P	Pb	14	44	31.4 +0.7
KMNR				*i* S	Sb	14	44	43.0 +2.3
KOZ	**Kozyrevsk**	**0.95**	**277**	*e*P	Pb	14	44	34.5 +0.7
KOZ				*i* S	Sb	14	44	48.9 +3.0
TUMR	**Tumrok**	**1.05**	**230**	*e*P	Pn	14	44	36.3 +0.9
TUMR				*i* S	Sb	14	44	51.1 +2.4
SRDR	**Sredinnyy**	**1.09**	**290**	*e*P	Pn	14	44	36.6 +0.7
SRDR				*i* S	Sb	14	44	51.7 +1.8
MKZ	**Mys Kozlova**	**1.41**	**176**	*e*P	Pn	14	44	40.7 +0.3
MKZ				*i* S	Sn	14	44	58.7 +0.4
KII	**Karymskiy**	**2.28**	**213**	P	Pn	14	44	55.0 +2.7
SPN	**Mys Shipunski**	**3.00**	**198**	*e*P	Pn	14	45	03.1 +0.8
SPN				*i* S	Sn	14	45	37.0 -0.5
NLC	**Nalytchevo**	**3.08**	**206**	*e*P	Pn	14	45	05.5 +2.2
NLC				*i* S	Sn	14	45	41.9 +2.6
GNL	**Ganaly**	**3.08**	**224**	P	Pn	14	45	05.7 +2.3
AVH	**Avacha**	**3.16**	**212**	P	Pn	14	45	07.7 +3.3
PET	**Petropavlovsk**	**3.39**	**211**	P	Pn	14	45	10.2 +2.4
PET				*i* S	Sn	14	45	50.0 +2.9
RUS	**Russkaya**	**3.96**	**208**	*e*P	Pn	14	45	17.6 +2.2
RUS				*i* S	Sn	14	46	03.0 +1.9

*IDC **11** 15:09:39.2±2.7, 184S×9942E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.8/7, MS2.6/1, Ms1 2.6/1, ms1mx2.0/32, Error ellipse: s-maj=114.8km s-min=18.3km az=59.0*
*ISCJB **11** 15:09:42.5±1.9, 17S±03×996E±05, h33km, mb3.9/8, Error ellipse: s-maj=79.1km s-min=11.7km az=147.5*
*NEIC **11** 15:09:44.6±1.1, 177S×9956E, h35km, mb4.1/2, Error ellipse: s-maj=48.5km s-min=8.0km az=58.0*
ISC 11 15:09:44.8±1.8, 18S±03×996E±05, h35km, n15, σ0§44/13, mb3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
CMAR	**Chiang Mai Arr**	**20.09**	**358**	P	**P**	**15**	**14**	**15.2 -0.4**
	0.8nm,0.5s,baz=188,slow=9.8,SNR=11							
WRA	**Warramunga Arr**	**38.47**	**120**	P	**P**	**15**	**17**	**03.6 -0.2**
	1.0nm,0.7s,mb3.7,baz=301,slow=9.1,SNR=10							
WRAB	**Tennant Creek**	**38.48**	**120**	*e*P	**P**	**15**	**17**	**03.6 -0.2**
	2.2nm,0.7s,mb4.0							
WB2	**Warramunga Arr**	**38.48**	**120**	*e*P	**P**	**15**	**17**	**03.3 -0.5**
ASAR	**Alice Springs**	**39.73**	**126**	P	**P**	**15**	**17**	**14.7 +0.5**
	0.4nm,0.6s,mb3.4,baz=302,slow=7.7,SNR=15							
KSRS	**Korea Array**	**47.02**	**31**	LR	LR	15	38	55.5
	comp=Z,7.1nm,19.1s,baz=295,slow=37							
STKA	**Stephens Creek**	**49.62**	**132**	P	**P**	**15**	**18**	**33.2 +0.3**
	2.3nm,1.0s,mb4.2,baz=331,slow=10,SNR=3.1							
SONM	**Songino Array**	**49.74**	**6**	P	**P**	**15**	**18**	**34.6 +1.0**
	0.9nm,0.6s,mb4.0,baz=191,slow=7.1,SNR=4.3							
MK31	**Makanchi Array**	**50.68**	**345**	*e*P	**P**	**15**	**18**	**40.3 -0.5**
MKAR	**Makanchi Array**	**50.68**	**345**	P	**P**	**15**	**18**	**40.9 +0.2**
	0.9nm,0.6s,mb3.9,baz=162,slow=8.5,SNR=6.0							
MKAR	**Makanchi Array**	**50.68**	**345**	P	**P**	**15**	**18**	**40.9 +0.2**
KURK	**Kurchatov**	**55.26**	**344**	*e*P	**P**	**15**	**19**	**14.5 +0.1**
	1.3nm,0.7s,mb4.1							
ZALV	**Zalesovo Beam**	**56.85**	**350**	P	**P**	**15**	**19**	**25.5 -0.2**
	2.3nm,0.6s,mb4.4,baz=180,slow=5.9,SNR=8.7							
ZALV	**Zalesovo Beam**	**56.85**	**350**	P	**P**	**15**	**19**	**25.5 -0.2**
TXAR	**Lajitas Array**	**144.75**	**37**	PKP	PKPdf	15	29	18.3 -0.4
	1.1nm,0.6s,baz=188,slow=1.4,SNR=18							

MEX 11 15:22:02.9±0.3, 1683N×9843W, h45km±9km, MD3.8, Near coast of Guerrero

| Code | Station Name | Δ° | AZ

baz=9.0
TWC eS Sn 16 22 00.4 +1.2
baz=9.0
ENTT Nioudou 0.60 344 *i* P Pn 16 21 50.7 -0.6
baz=350
ENTT S Sn 16 21 60.0 -0.2
baz=350
TWE Neicheng 0.66 354 *i* P Pn 16 21 51.6 -0.6
baz=354
TWE S Sn 16 22 01.8 +0.2
baz=354
EHY Hungye 0.67 215 P Pn 16 21 50.3 -1.9
baz=210
EHY eS Sn 16 21 59.9 -1.9
baz=210
ILA Ilan 0.70 0 *e*P Pn 16 21 53.3 +0.6
baz=357
ILA eS Sn 16 22 04.1 +1.5
baz=357
NSK Sanguang 0.71 330⇓ *i*P Pn 16 21 52.1 -0.6
baz=335
NSK S Sn 16 22 01.8 -0.9
baz=335
SMLT Sun Moon Lake 0.79 257 *i* P Pn 16 21 53.2 -0.7
baz=254
SMLT eS Sn 16 22 05.4 +0.8
baz=254
TWF1 Yuli 0.81 210⇑ *i*P Pn 16 21 52.2 -1.9
baz=212
TYC Yuchr 0.83 259 P Pn 16 21 53.5 -0.7
baz=256
TYC eS Sn 16 22 06.1 +0.7
baz=256
NSTT Nanjuang 0.89 310 *i* P Pn 16 21 55.1 0.0
baz=313
NSTT eS Sn 16 22 07.1 +0.2
baz=313
YUS Yu-Shan 0.92 232 P Pn 16 21 55.4 -0.1
baz=223
YUS eS Sn 16 22 07.2 -0.5
baz=223
TWA Mucha 0.93 351 *e*P Pn 16 21 55.3 -0.4
baz=345
TWA eS Sn 16 22 07.7 -0.2
baz=345
TWQ1 Liyutan 0.93 288 P Pn 16 21 55.4 -0.3
baz=289
TWQ1 S Sn 16 22 08.2 +0.2
baz=289
NSY Sanyi 0.97 292 *e*P Pn 16 21 56.0 -0.2
baz=293
NSY eS Sn 16 22 08.9 +0.1
baz=293
TWB1 Santiao Chiao 0.97 13 P Pn 16 21 56.6 +0.3
baz=24
TWB1 S Sn 16 22 09.6 +0.6
baz=24
TCU Taichung 0.98 275 P Pn 16 21 56.1 -0.3
baz=275
TCU S Sn 16 22 09.4 +0.3
baz=275
WNT Mingjian 0.99 260 *e*P Pn 16 21 56.8 +0.4
baz=251
WNT eS Sn 16 22 09.9 +0.6
baz=251
TAP1 Taipei 1.00 348 *e*P Pn 16 21 56.0 -0.6
baz=351
TAP1 eS Sn 16 22 09.2 -0.4
baz=351
NWF Wu-fen Shan 1.01 2 P Pn 16 21 56.6 -0.2
baz=351
NWF eS Sn 16 22 10.8 +0.9
baz=351
CHKT Chengkung 1.02 200 P Pn 16 21 55.9 -0.9
baz=208
CHKT eS Sn 16 22 10.5 +0.5
baz=208
ALS Alishan 1.02 238 *i* P Pn 16 21 56.9 0.0
baz=230
ALS eS Sn 16 22 10.8 +0.7
baz=230
HSN Hsinchu 1.02 317 *e*P Pn 16 21 57.3 +0.4
baz=334
HSN eS Sn 16 22 09.7 -0.6
baz=334
NCU National Centr 1.04 331 *e*P Pn 16 21 57.1 -0.1
baz=334
NCU eS Sn 16 22 10.5 -0.2
baz=334
CHN5 Tsauling 1.08 245 *i* P Pn 16 21 57.6 -0.1
baz=234
CHN5 eS Sn 16 22 13.1 +1.6
baz=234
TWS1 Kuangyinshan 1.08 344 P Pn 16 21 57.1 -0.6
baz=357
TWS1 eS Sn 16 22 11.4 -0.2
baz=357
ELDTW Lidau 1.09 218 P Pn 16 21 56.4 -1.6
baz=210
ELDTW eS Sn 16 22 10.6 -1.3
baz=210
WGK Gukeng 1.14 251 P Pn 16 21 58.8 +0.2
baz=239
WGK eS Sn 16 22 14.6 +1.4
baz=239
YOJ Yonaguni jima 1.22 71 P Pn 16 21 59.5 -0.2
YOJ S Sn 16 22 15.3 +0.2
CHN4 Tsaushan 1.27 237 P Pn 16 22 00.6 +0.3
baz=234
CHN4 eS Sn 16 22 17.5 +1.4
baz=234
STYT Tauyuan 1.27 226 P Pn 16 22 00.3 -0.1
baz=224
STYT eS Sn 16 22 16.5 +0.3
baz=224
CHN2 Minshiung 1.27 246 *e*P Pn 16 22 01.1 +0.7
baz=235
CHN2 eS Sn 16 22 18.3 +2.0
baz=235
WTP Ta-pu 1.31 232 P Pn 16 22 00.9 -0.1
baz=230
WTP eS Sn 16 22 18.0 +0.7
baz=230
CHY Chiayi 1.33 246 *e*P Pn 16 22 01.3 +0.2
baz=234
CHY eS Sn 16 22 17.9 +0.2
baz=234
WTCT Ta-ch'eng 1.35 262 *e*P Pn 16 22 01.0 -0.4
baz=272
WTCT eS Sn 16 22 18.0 -0.2
baz=272
TWG Pinlang 1.38 207 *e*P Pn 16 22 00.3 -1.5
baz=196
TWK Hsinying 1.40 236 P Pn 16 22 02.3 +0.3
baz=233
TWK eS Sn 16 22 19.4 +0.2
baz=233
CHN1 Nanshi 1.41 232 P Pn 16 22 02.6 +0.3
baz=230
CHN1 eS Sn 16 22 19.8 +0.1
baz=230
SGST Jiashian 1.44 228 P Pn 16 22 03.2 +0.5
baz=226
SGST eS Sn 16 22 20.6 +0.1
baz=226
WSF Szhu 1.46 254 *e*P Pn 16 22 02.7 -0.1
baz=263
WSF eS Sn 16 22 22.5 +1.7
baz=263
CHN8 Yiju 1.57 244 *e*P Pn 16 22 04.3 -0.2
baz=230
CHN8 eS Sn 16 22 23.8 +0.2
baz=230
ECL Taimali 1.62 207 *e*P Pn 16 22 03.2 -2.0
baz=200
SSD Sandimen 1.66 218 P Pn 16 22 06.3 +0.7
baz=211
SSD eS Sn 16 22 26.8 +1.1
baz=211
SCLT Jiali 1.67 239 *e*P Pn 16 22 05.8 0.0
baz=237
TWM1 Shoushan 1.73 225 *e*P Pn 16 22 06.9 +0.3
baz=223
IRIF Iriomote-Funau 1.83 81 P Pn 16 22 07.8 -0.2
IRIF S Sn 16 22 30.1 0.0
EAST Anshuo 1.86 206 *e*P Pn 16 22 08.9 +0.5
baz=200
EAST eS Sn 16 22 31.3 +0.6

baz=200
HATJ Hateruma jima 1.88 90 P Pn 16 22 09.1 +0.4
HATJ S Sn 16 22 32.6 +1.3
SCZT Fangliau 1.97 212 *e*P Pn 16 22 10.6 +0.7
baz=222
WDGT Dungji 2.07 248 *e*P Pn 16 22 10.6 -0.7
baz=246
JKRS Kuro-shima 2.08 85 P Pn 16 22 11.9 +0.5
JKRS S Sn 16 22 37.0 +1.0
JIJ Ishigaki jima 2.21 82 P Pn 16 22 12.9 -0.3
JIJ S Sn 16 22 38.3 -1.1
JTJ Tarama 2.76 77 P Pn 16 22 20.8 +0.1
JTJ eS Sn 16 22 53.5 +0.6
KNM Kinmen 3.04 277 *e*S Sn 16 22 57.6 -2.3
baz=276

MEX 11 16:28:03.6±0.7, 1700N×10014W, h5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.13**	**291**	*i* P	Pg	16 28 05.8	-0.4
CAIG				*i* S	Sg	16 28 08.2	+0.1
ACX	**Acapulco**	**0.25**	**122**	*i* P	Pg	16 28 07.9	-0.6
ACX				*i* S	Sg	16 28 12.4	+0.6
MEIG	**Mezcala**	**1.04**	**28**	*i* P	Pg	16 28 20.8	-2.9
MEIG				*i* S	Sg	16 28 35.1	-2.2
ZIIG	**Zihuatanejo**	**1.40**	**296**	*i* P	Pn	16 28 26.0	-3.8
ZIIG				*i* S	Sb	16 28 44.4	-4.0
PNIG	**Pinotepa**	**2.02**	**107**	*i* P	Pn	16 28 36.3	-2.0
PNIG				*i* S	Sn	16 29 00.4	-3.6
UTMO	**Huajuapan**	**2.38**	**69**	*i* P	Pn	16 28 41.0	-2.2
UTMO				*i* S	Sn	16 29 10.0	-2.8

IDC 11 16:28:12.5±2.3, 256N×12797E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=160.1km s-min=27.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.22**	**165**	P	P	16 33 21.4	0.0
	1.1nm,0.5s,baz=344,slow=10,SNR=5.8						
ASAR	**Alice Springs**	**26.70**	**168**	P	P	16 33 53.1	-0.4
	0.7nm,1.1s,baz=348,slow=7.6,SNR=5.5						
MKAR	**Makanchi Array**	**59.22**	**325**	P	P	16 38 16.0	+0.5
	0.2nm,0.4s,baz=105,slow=8.2,SNR=4.2						

IDC 11 17:10:36.3±2.7, 497N×9373E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=106.1km s-min=23.0km az=61.0
ISCJB 11 17:10:38.8±1.4, 49N±0.1×937E±0.3, h33km, mb3.8/5, Error ellipse: s-maj=40.6km s-min=13.5km az=158.7
NEIC 11 17:10:40.7±1.3, 487N×9367E, h35km, mb4.2/1, Error ellipse: s-maj=37.0km s-min=13.3km az=72.0

ISC 11 17:10:40.8±1.3, 49N±0.1×937E±0.2, h35km, n9, σ1s07/9, mb3.8/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**14.45**	**20**	*e*Pn	**Pn**	**17 14 04.9**	**+2.0**
	3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.45**	**20**	Pn	**Pn**	**17 14 01.1**	**-1.8**
	0.2nm,0.3s,baz=209,slow=15,SNR=6.1						
MK31	**Makanchi Array**	**42.91**	**349**	*e*P	**P**	**17 18 36.1**	**+0.1**
MKAR	**Makanchi Array**	**42.91**	**349**	P	**P**	**17 18 36.1**	**+0.2**
	1.1nm,0.6s,mb3.8,baz=158,slow=7.9,SNR=9.4						
WRA	**Warramunga Arr**	**46.96**	**123**	P	**P**	**17 19 09.2**	**+0.5**
	0.5nm,0.7s,mb3.6,baz=301,slow=9.7,SNR=4.3						
WRAB	**Tennant Creek**	**46.97**	**123**	P	**P**	**17 19 07.2**	**-1.6**
	3.0nm,1.2s,mb4.1						
WB2	**Warramunga Arr**	**46.97**	**123**	P	**P**	**17 19 08.7**	**0.0**
ASAR	**Alice Springs**	**48.41**	**128**	P	**P**	**17 19 20.9**	**+1.0**
	0.2nm,0.6s,mb3.4,baz=305,slow=8.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**49.45**	**353**	P	**P**	**17 19 27.0**	**-0.4**
	0.7nm,0.3s,mb4.1,baz=178,slow=6.8,SNR=5.4						

NEIC 11 17:24:33.1±0.9, 2132S×17270W, h35km, mb4.7/5, Error ellipse: s-maj=21.5km s-min=16.3km az=141.0

IDC 11 17:24:55.5±3.0, 2204S×17630W, h0km, mb4.2/4, mb1 4.3/4, mb1mx4.0/16, mbtmp4.2/4, Error ellipse: s-maj=123.8km s-min=45.2km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**20.66**	**200**	*e*P	P	17 29 30.7	-6.0
	49nm,1.1s						
CTA	**Charters Tower**	**34.95**	**266**	P	P	17 31 50.8	+1.4
	5.9nm,0.5s,baz=96,slow=13,SNR=19						
CTAO	**Charters Tower**	**34.95**	**266**	*e*P	P	17 31 50.7	+1.3
	8.9nm,0.7s						
PMG	**Port Moresby**	**37.24**	**284**	P	P	17 32 08.4	-0.7
	29nm,1.3s						
STKA	**Stephens Creek**	**38.59**	**246**	P	P	17 32 20.8	+0.5
	1.1nm,0.7s,baz=77,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**45.73**	**258**	P	P	17 33 18.1	-0.7
	2.4nm,0.8s,baz=88,slow=9.0,SNR=28						
ASAR				PcP	PcP	17 34 56.3	-0.4
	0.4nm,0.8s,baz=111,slow=3.9,SNR=4.1						
WB2	**Warramunga Arr**	**45.97**	**263**	*e*P	P	17 33 19.5	-1.1
WRAB	**Tennant Creek**	**45.97**	**263**	*e*P	P	17 33 19.8	-0.9
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**45.98**	**263**	P	P	17 33 19.6	-1.1
	1.9nm,0.6s,baz=101,slow=8.6,SNR=15						
AKASG	**Malin Array Be**	**145.12**	**331**	PKPbc	PKPbc	17 44 33.5	-0.6
	0.8nm,0.4s,baz=42,slow=4.4,SNR=17						

KRSC 11 17:40:05.7±0.9, 5601N×16452E, h5km±5km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.97**	**282**	*e*P	Pg	17 40 24.3	0.0
KBTR				*i* S	Sg	17 40 37.3	+0.3
BDR	**Baidarnaya**	**1.93**	**288**	*e*P	Pn	17 40 40.0	+0.9
BDR				*i* S	Sn	17 41 05.1	+1.4
SRKR	**Sorokina**	**1.98**	**290**	*e*P	Pn	17 40 40.2	+0.5
SRKR				*i* S	Sn	17 41 05.4	+0.6
ZLN	**Zelenaya**	**2.09**	**272**	*e*P	Pn	17 40 42.6	+1.3
ZLN				*i* S	Sn	17 41 10.0	+2.4
CIRR	**Tsirk**	**2.12**	**274**	*e*P	Pn	17 40 42.8	+1.1
CIRR				*i* S	Sn	17 41 10.3	+1.9
BZGR	**Bezymyannyi-Gr**	**2.15**	**270**	*e*P	Pn	17 40 43.7	+1.6
BZGR				*i* S	Sn	17 41 11.0	+1.8
MKZ	**Mys Kozlova**	**2.16**	**229**	*e*P	Pn	17 40 42.2	-0.1
MKZ				*i* S	Sn	17 41 09.2	-0.2
KLY	**Klyuchi**	**2.19**	**280**	*e*P	Pn	17 40 41.9	-0.7
KLY				*i* S	Sn	17 41 08.1	-1.9
KRSR	**Krestovskiy**	**2.23**	**277**	*e*P	Pn	17 40 44.8	+1.6
BZWR	**Bezymyannyi-We**	**2.26**	**270**	*e*P	Pn	17 40 45.0	+1.3
BZWR				*i* S	Sn	17 41 13.6	+1.7
BZMR	**Bezymyannaya**	**2.27**	**270**	*e*P	Pn	17 40 45.2	+1.5
BZMR				*i* S	Sn	17 41 13.7	+1.7
KIRR	**Kirishev**	**2.35**	**270**	*e*P	Pn	17 40 46.1	+1.2
KIRR				*i* S	Sn	17 41 15.6	+1.6
KPT	**Kopyto**	**2.42**	**271**	*e*P	Pn	17 40 47.5	+1.7
KPT				*i* S	Sn	17 41 18.3	+2.6
KMNR	**Kamenistaya**	**2.43**	**266**	*e*P	Pn	17 40 48.2	+2.3
TUMR	**Tumrok**	**2.58**	**255**	P	Pn	17 40 49.9	+1.8
KOZ	**Kozyrevsk**	**2.61**	**273**	P	Pn	17 40 52.4	+4.0
SRDR	**Sredinnyy**	**2.70**	**279**	*e*P	Pn	17 40 51.3	+1.6
SRDR				*i* S	Sn	17 41 24.9	+2.1
AVH	**Avacha**	**4.34**	**233**	*e*P	Pn	17 41 14.4	+2.2
GNL	**Ganaly**	**4.45**	**241**	*e*P	Pn	17 41 15.9	+2.1
RUS	**Russkaya**	**5.03**	**227**	P	Pn	17 41 22.8	+1.2

NOU 11 17:45:11.5±1.6, 1470S×16881E, h30km, MD3.6, MS2.6
BJI 11 17:45:13.1, 1490S×16740E, h135km, mB5.1, mb4.6
MOS 11 17:45:14.1±1.2, 1497S×16724E, h123km, mb4.9/6, Error ellipse: s-maj=15.1km s-min=12.3km az=1.7
NEIC 11 17:45:16.1±2.3, 1491S×16736E, h136km±19km, mb5.0/8, Error ellipse: s-maj=14.8km s-min=12.5km az=61.0
ISCJB 11 17:45:17.5±1.3, 1497S±0.06×16738E±0.10, h165km±12km, mb4.5/20, Error ellipse: s-maj=15.2km s-min=10.6km az=176.9
IDC 11 17:45:17.2±2.1, 1494S×16728E, h144km±18km, mb4.2/13,

mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, MS3.0/3,
Ms1 3.0/3, ms1mx2.7/26, Error ellipse: s-maj=17.5km s-min=13.8km az=100.0
LDG 11 17:45:18.0±0.2, 1493S×16667E, h140km, Mb4.4/3, Error ellipse: s-maj=23.0km s-min=4.7km az=84.0

ISC 11 17:45:18.9±1.3, 1499S±007×16740E±009, h164km±11km, n81, σ0s90/56, mb4.5/20, 18C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.10**	**187**	*e*Pn	**Pn**	**17 46 58.8**	**-1.4**
DZM				*e*Sn	**Sn**	**17 48 21.6**	**+1.5**
NOUC	**Port Laguerre**	**7.15**	**188**	*e*P	**Pn**	**17 46 59.9**	**-1.0**
NOUC				*e*S	**Sn**	**17 48 22.5**	**+1.3**
NOUC				AMP		17 48 27.4	
	comp=Z,40nm,5.7s						
NORM	**Noumea**	**7.25**	**187**	*e*P	**Pn**	**17 47 02.5**	**+0.2**
NORM				*e*S	**Sn**	**17 48 22.8**	**-0.8**
NORM				AMP		17 48 37.8	
	comp=Z,95nm,14.1s						
PLUM	**Mont Dore**	**7.28**	**186**	*e*P	**Pn**	**17 47 02.3**	**-0.4**
ONTRN	**Noumea**	**7.33**	**187**	*e*P	**Pn**	**17 47 03.1**	**-0.3**
PMG	**Port Moresby**	**20.54**	**283**	*e*P	**P**	**17 49 45.3**	**+0.6**
CTA	**Charters Tower**	**20.78**	**253**	P	**P**	**17 49 46.2**	**-1.1**
	comp=Z,6.8nm,0.8s,baz=78,slow=11,SNR=5.7						
CTAO	**Charters Tower**	**20.78**	**253**	*e*P	**P**	**17 49 46.9**	**-0.4**
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**20.78**	**253**	*e*P	**P**	**17 49 46.9**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,12nm,0.9s						
ARMA	**Armidale**	**21.11**	**221**	*e*P	**P**	**17 49 52.2**	**+1.6**
	comp=Z,2.0nm,1.0s,mb3.4						
URZ	**Urewera**	**24.72**	**161**	P	**P**	**17 50 25.2**	**+0.2**
	comp=Z,4.8nm,0.3s,mb4.5,baz=92,slow=3.2,SNR=10						
RPZ	**Rata Peaks**	**28.80**	**174**	P	**P**	**17 51 01.7**	**+0.3**
	comp=Z,17nm,0.6s,mb5.0,baz=260,slow=1.5,SNR=11						
STKA	**Stephens Creek**	**28.92**	**230**	P	**P**	**17 51 04.1**	**+1.5**
	comp=Z,20nm,0.4s,mb5.2,baz=50,slow=7.8,SNR=202						
STKA				PcP	PcP	17 54 08.3	+0.7
	comp=Z,4.8nm,0.8s,baz=24,slow=2.3,SNR=4.1						
STKA				LR	LR	18 01 41.2	
	comp=Z,70nm,19.5s,baz=212,slow=34						
STKA	**Stephens Creek**	**28.92**	**230**	*e*P	**P**	**17 51 03.8**	**+1.1**
	comp=Z,93nm,1.1s,mb5.4						
STKA				PcP	PcP	17 54 08.3	+0.7
STKA				LR	LR	18 01 41.2	
WRAB	**Tennant Creek**	**31.87**	**256**	*e*P	**P**	**17 51 27.7**	**-1.0**
WRA	**Warramunga Arr**	**31.88**	**256**	P	**P**	**17 51 27.9**	**-1.0**
	comp=Z,1.0nm,0.3s,mb4.0,baz=83,slow=8.0,SNR=21						
WRA				PcP	PcP	17 54 15.8	+0.1
	comp=Z,2.4nm,1.1s,baz=81,slow=1.8,SNR=5.8						
WRA				ScP	ScP	17 57 47.3	+3.5
	comp=Z,1.8nm,1.0s,baz=84,slow=4.1,SNR=5.8						
WRA	**Warramunga Arr**	**31.88**	**256**	P	**P**	**17 51 27.9**	**-1.0**
WRA						17 54 15.8	
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**17 51 35.2**	**-0.7**
	comp=Z,6.0nm,0.5s,mb4.6,baz=78,slow=9.2,SNR=67						
ASAR				S	**S**	**17 56 38.8**	**-1.5**
	comp=Z,0.6nm,0.9s,baz=63,slow=20,SNR=4.1						
ASAR				ScP	ScP	17 57 50.2	+3.6
	comp=Z,2.7nm,0.9s,baz=88,slow=3.1,SNR=14						
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**17 51 35.2**	**-0.7**
ASAR				S	**S**	**17 56 38.8**	**-1.5**
GUMO	**Guam**	**36.10**	**321**	LR	LR	18 03 39.4	
	comp=Z,38nm,20.3s,baz=131,slow=31						
PPT	**Papeete**	**41.32**	**100**	*e*LR	LR	18 05 08.6	
	comp=Z,124nm,32.0s						
MBWA	**Marble Bar**	**45.59**	**255**	*e*P	**P**	**17 53 22.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**48.72**	**239**	*e*P	**P**	**17 53 46.4**	**-0.6**
	comp=Z,61nm,1.5s,mb5.0						
NWAO	**Narrogin (SRO)**	**48.72**	**239**	*e*P	**P**	**17 53 46.4**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,61nm,1.5s						
MJAR	**Matsushiro Arr**	**58.19**	**332**	P	**P**	**17 54 54.4**	**-1.4**
	comp=Z,2.0nm,0.7s,mb4.1,baz=173,slow=8.4,SNR=7.5						
SBA	**Scott Base**	**62.88**	**180**	*e*P	**P**	**17 55 28.1**	**+1.1**
	comp=Z,19nm,0.9s,mb4.9						
SBA	**Scott Base**	**62.88**	**180**	*e*P	**P**	**17 55 28.1**	**+1.1**
SBA				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
KSRS	**Korea Array**	**64.02**	**326**	LR	LR	18 22 32.6	
	comp=Z,3.6nm,20.4s,baz=185,slow=35						
YSS	**Yuzh-Sakhalins**	**65.51**	**342**⇑ *i*P		**P**	**17 55 45.0**	**+0.5**
YSS				pmax	pmax		
	comp=Z,31nm,1.7s,mb4.9						
WHN	**Wuhan**	**68.21**	**312**	*e*P	**P**	**17 56 02.9**	**+1.0**
PETK	**Petropavlovsk-**	**68.33**	**354**	P	**P**	**17 56 02.6**	**+0.5**
	comp=Z,5.7nm,0.9s,mb4.3,baz=144,slow=2.7,SNR=3.8						
QSPA	**South Pole Qui**	**75.04**	**180**	*e*P	**P**	**17 56 42.0**	**+0.1**
	comp=Z,13nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**75.17**	**294**	P	**P**	**17 56 45.0**	**+1.3**
	comp=Z,1.2nm,0.8s,mb3.6,baz=127,slow=4.5,SNR=9.5						
CMAR				pP	pP	17 57 19.9	-3.7
	comp=Z,0.8nm,0.7s,baz=126,slow=4.6,SNR=3.8						
CMAR	**Chiang Mai Arr**	**75.17**	**294**	*i* P	**P**	**17 56 45.0**	**+1.3**
HIA	**Hailar**	**76.57**	**330**⇑ *i*P		**P**	**17 56 50.8**	**-0.2**
HIA				*i* *PP	pP	17 57 39.1	+8.1
MAW	**Mawson**	**81.69**	**202**	P	**P**	**17 57 19.5**	**+0.9**
	comp=Z,8.5nm,0.9s,mb4.4,baz=126,slow=6.3,SNR=8.7						
MAW	**Mawson**	**81.69**	**202**	*e*P	**P**	**17 57 18.5**	**-0.1**
	comp=Z,21nm,1.3s,mb4.6						
MAW	**Mawson**	**81.69**	**202**	*e*P	**P**	**17 57 18.5**	**-0.1**
MAW				pmax	pmax		
	comp=Z,21nm,1.3s						
YAK	**Yakutsk**	**82.31**	**343**	*e*P	**P**	**17 57 21.4**	**-0.3**
	comp=Z,22nm,0.8s,mb4.8						
YAK	**Yakutsk**	**82.31**	**343** *c* *i*P		**P**	**17 57 21.4**	**-0.3**
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**82.42**	**324**⇑ *i*P		**P**	**17 57 23.0**	**+0.4**
SONM	**Songino Array**	**82.78**	**324**	P	**P**	**17 57 24.8**	**+0.4**
	comp=Z,1.5nm,0.5s,mb4.0,baz=152,slow=5.7,SNR=9.0						
GTA	**Gaotai**	**82.94**	**314**	*e*P	**P**	**17 57 26.9**	**+1.4**
SHL	**Shillong**	**83.80**	**298**	*e*P	**P**	**17 57 31.5**	**+1.3**
TRF	**Thorofare Moun**	**84.75**	**18**	*e*P	**P**	**17 57 33.1**	**-1.0**
	comp=Z,95nm,2.2s,mb5.1						
ZAK	**Zakamensk**	**85.83**	**325**	*e*P	**P**	**17 57 39.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
SNAA	**Sanae**	**93.30**	**183**	*e*P	**P**	**17 58 12.9**	**-1.7**
SNAA	**Sanae**	**93.30**	**183**⇑ *i*P		**P**	**17 58 13.4**	**-1.2**
VNA3	**Neumayer Olymp**	**93.96**	**181**	*e*P	**P**	**17 58 16.9**	**-0.8**
VNA3				*e*		17 58 21.6	
VNA2	**Neumayer--Watz**	**94.22**	**182**	*e*P	**P**	**17 58 18.2**	**-0.7**
	baz=191,slow=6.2						
VNA2				*e*		17 58 23.0	
MKAR	**Makanchi Array**	**97.47**	**316**	P	**P**	**17 58 34.4**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.3,baz=87,slow=7.0,SNR=6.8						
MKAR	**Makanchi Array**	**97.47**	**316**	P	**P**	**17 58 34.4**	**+0.4**
MKAR	**Makanchi Array**	**97.47**	**316**	*i* P	**P**	**17 58 35.0**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**97.67**	**324**	P	**P**	**17 58 34.0**	**-0.7**
	comp=Z,1.7nm,0.9s,mb4.5,baz=133,slow=6.3,SNR=6.5						
ARU	**Arti**	**112.77**	**325**	*i* PKIKP	PKiKP	18 03 35.2	-0.6
ARU						18 04 20.8	
ARCES	**ARCESS Array B**	**120.53**	**345**	PKP	PKPdf	18 03 49.8	-0.6
	comp=Z,4.5nm,1.0s,baz=82,slow=2.0,SNR=13						
JOF	**Joensuu**	**123.17**	**338**	*e*p	PKPdf	18 03 54.2	-1.4
BOSA	**Boshof**	**123.26**	**220**	PKP	PKPdf	18 03 57.2	+0.3
	comp=Z,2.3nm,0.7s,baz=157,slow=6.6,SNR=3.0						
TUE	**Stuetta**	**143.63**	**334**	*e*PKPdf	PKPdf	18 04 32.5	-1.8
CABF	**La Chapelle**	**144.81**	**337**⇑ *i*PKP1		PKPdf	18 04 36.8	+0.5
	comp=Z,41nm,1.0s						
FLN	**La Foliniere**	**144.88**	**346** *e*PKP1		PKPdf	18 04 36.5	+0.1
LOR	**Lormes**	**145.02**	**340**⇑ *i*PKP1		PKPbc	18 04 36.9	+0.5
	comp=Z,18nm,1.0s						
GRR	**Gorron**	**145.31**	**346** *e*PKP1		PKPbc	18 04 37.6	+0.3
SSF	**Saint Saulge**	**145.32**	**341**⇑ *i*PKP1		PKPbc	18 04 38.0	+0.7
	comp=Z,49nm,0.9s						
HYF	**Humbligny**	**145.41**	**342**⇑ *i*PKP1		PKPbc	18 04 38.4	+0.8
LPL	**La Plagne**	**145.48**	**336**⇑ *i*PKP1		PKPbc	18 04 39.0	+1.1
	comp=Z,36nm,1.0s						
LPG	**La Plagne**	**145.49**	**336** *e*PKP1		PKPbc	18 04 39.2	+1.3
	comp=Z,37nm,1.0s						
SMF	**Signal de Mont**	**145.57**	**340**⇑ *i*PKP1		PKPbc	18 04 38.7	+0.6
	comp=Z,37nm,1.2s						
AVF	**Avril sur Loir**	**145.61**	**340**⇑ *i*PKP1		PKPbc	18 04 38.6	+0.4
	comp=Z,28nm,1.3s						
BNI	**Bardonecchia**	**145.88**	**335** *e*P		PKPdf	18 04 39.3	+1.1
BGF	**Bois d'Agland**	**145.98**	**341**⇑ *i*PKP1		PKPbc	18 04 39.7	+0.4
	comp=Z,13nm,0.7s						
MBDF	**Montbardon**	**146.11**	**335**⇑ *i*PKP1		PKPbc	18 04 40.1	+0.3
	comp=Z,11nm,0.8s						
ORIF	**Oris-en-Rattie**	**146.31**	**336**⇑ *i*PKP1		PKPbc	18 04 41.1	+0.7

	comp=Z,25nm,0.9s							
TCF	**Toulx Ste Croi**	**146.42**	**341**	⇑*i*	PKP1	PKPbc	18 04 41.2	+0.6
	comp=Z,28nm,1.1s							
MFF	**Saint Martin d**	**146.81**	**344**	⇑*i*	PKP1	PKPbc	18 04 42.0	+0.3
	comp=Z,30nm,0.9s							
RJF	**Les Rejaudoux**	**147.51**	**341**	⇑*i*	PKP1	PKPbc	18 04 44.2	+0.5
	comp=Z,23nm,1.1s							
LFF	**La Frestale**	**148.08**	**342**	*e*	PKP1	PKPbc	18 04 45.7	+0.4
SJPF	**Ste Jean**	**150.32**	**343**	*e*	PKP1	PKPbc	18 04 51.5	+0.6
	comp=Z,24nm,1.2s							
ETSF	**Etsaut**	**150.32**	**342**	*e*	PKP1	PKPbc	18 04 51.8	+0.9
	comp=Z,13nm,0.9s							
ESDC	**Sonseca Array**	**154.27**	**345**		PKPab	PKPab	18 05 13.4	-0.9
	comp=Z,0.2nm,0.4s,baz=22,slow=4.2,SNR=4.1							
TORD	**Torodi Ar. Bea**	**166.01**	**264**		PKP	PKPdf	18 05 04.7	-0.5
	comp=Z,1.1nm,0.8s,baz=62,slow=0.9,SNR=6.7							
TORD					PKPab	PKPab	18 06 05.9	-0.5
	comp=Z,1.3nm,0.9s,baz=114,slow=3.0,SNR=5.0							

*NEIC **11** 18:01:24.6, 1845N×10139W, h29km, MD3.9(MEX), After MEX.*

MEX 11 18:01:24.6±1.2, 1845N×10139W, h30km±20km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.84**	**185**	*i* P	Pn	18 01 37.4	-3.1
ZIIG				*i* S	Sb	18 01 49.2	-2.4
MOIG	**Morelia**	**1.24**	**9**	*i* P	Pn	18 01 44.2	-1.7
MOIG				*i* S	Sn	18 01 58.9	-2.7
CAIG	**El Cayaco**	**1.76**	**142**	*e*P	Pn	18 01 50.1	-3.0
CAIG				*i* S	Sn	18 02 10.9	-3.5
MEIG	**Mezcala**	**1.76**	**107**	*e*P	Pn	18 01 50.7	-2.5
MEIG				*i* S	Sn	18 02 11.5	-3.1
PLIG	**Platanillo**	**1.80**	**92**	*e*P	Pn	18 01 51.8	-1.8
PLIG				*i* S	Sn	18 02 12.0	-3.4
MMIG	**Aquila**	**1.86**	**265**	*i* P	Pn	18 01 52.4	-2.1
MMIG				*i* S	Sn	18 02 14.7	-2.3
ACX	**Acapulco**	**2.11**	**138**	*i* P	Pn	18 01 57.1	-0.8
ACX				*i* S	Sn	18 02 21.4	-1.8
MZVM		**2.18**	**70**	*i* P	Pn	18 01 57.1	-1.7
MZVM				*i* S	Sn	18 02 22.0	-2.8
PTVM	**Pico Tres Padr**	**2.44**	**62**	*e*P	Pn	18 02 00.0	-2.4
PTVM				*i* S	Sn	18 02 28.5	-2.8
PPM	**Popocatepetl**	**2.69**	**76**	*e*P	Pn	18 02 01.4	-4.5
PPM				*i* S	Sn	18 02 36.2	-1.4
IIO	**Organos**	**2.77**	**65**	*e*P	Pn	18 02 02.0	-4.9
IIO				*i* S	Sn	18 02 37.9	-1.5
UTMO	**Huajuapan**	**3.47**	**100**	*e*P	Pn	18 02 15.2	-1.5
UTMO				*i* S	Sn	18 02 57.4	+0.7
PNIG	**Pinotepa**	**3.73**	**123**	*e*P	Pn	18 02 19.0	-1.2
PNIG				*i* S	Sn	18 02 57.5	-5.7
ANIG	**Ahuacatlan**	**3.92**	**312**	*e*P	Pn	18 02 43.0	+20
ANIG				*i* S	Sn	18 03 22.2	+14

*DDA **11** 18:13:43.7, 3826N×2647E, h5km±2km, Md3.0*
*ISK **11** 18:13:43.9, 3821N×2662E, h5km, MD3.4*
*NEIC **11** 18:13:43.0, 3820N×2660E, h5km, MD3.5(ATH), MD3.4(ISK), After ISK.*
*ISCJB **11** 18:13:43.4±1.2, 3819N±003×2649E±006, h2km±8km, Error ellipse: s-maj=8.1km s-min=4.7km az=176.1*
*CSEM **11** 18:13:43.8±0.1, 3820N×2661E, h2km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.2km az=92.0*
*ATH **11** 18:13:43.8, 3826N×2652E, h30km±1km, MD3.5/5*

ISC 11 18:13:44.4±1.2, 3822N±003×2649E±007, h4km±8km, n31, σ1§08/38, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.46**	**69**	PG	**Pg**	**18 13 52.4**	**-0.8**
BLCB				*e*SG	**Sg**	**18 13 58.5**	**-0.7**
SMG	**Samos**	**0.58**	**152**	*e*PN	**Pg**	**18 13 56.1**	**+0.6**
SMG				*e*SN	**Sg**	**18 14 05.3**	**+2.2**
SMG	**Samos**	**0.58**	**152**	*e*Sn	**Sg**	**18 14 05.3**	**+2.2**
IZM	**Izmir**	**0.63**	**74**	PG	**Pg**	**18 13 55.6**	**-0.8**
IZM				*e*SG	**Sg**	**18 14 04.1**	**-0.5**
GCAM	**G?zelcaml?**	**0.79**	**132**	*i* P	**Pg**	**18 13 59.6**	**+0.2**
GCAM				*i* S	**Sg**	**18 14 10.6**	**+1.1**
PRK	**Paraskevi**	**1.03**	**350**	*e*PN	**Pn**	**18 14 03.2**	**-2.5**
PRK				*e*SN	**Sn**	**18 14 17.0**	**-3.6**
AKS	**Akhisar**	**1.22**	**57**	*e*PN	**Pn**	**18 14 06.3**	**-1.9**
BODT	**Bodrum**	**1.33**	**151**	*e*PN	**Pn**	**18 14 09.0**	**-0.7**
MLSB	**Milas**	**1.38**	**132**	*e*PN	**Pn**	**18 14 09.9**	**-0.4**
APE	**Apeiranthos**	**1.38**	**214**	*e*PN	**Pn**	**18 14 09.6**	**-0.8**
KULA	**Kula-Manisa**	**1.73**	**80**	*e*PN	**Pn**	**18 14 15.2**	**0.0**
BALY	**Balya**	**1.75**	**30**	*i* P	**Pn**	**18 14 16.5**	**+1.0**
BALY				*i* S	**Sn**	**18 14 40.9**	**+2.6**
BALY	**Balya**	**1.75**	**30**	*i* P	**Pn**	**18 14 16.5**	**+1.0**
BALY				*i* S	**Sn**	**18 14 40.8**	**+2.6**
BALB	**Balikesir**	**1.78**	**37**	*e*PN	**Pn**	**18 14 16.4**	**+0.5**
YER	**Yerkesik**	**1.79**	**127**	*e*PN	**Pn**	**18 14 15.5**	**-0.5**
LIA	**Limnos Island**	**1.96**	**329**	*e*PN	**Pn**	**18 14 17.0**	**-1.4**
DENT	**Denizli**	**2.06**	**102**	*e*PN	**Pn**	**18 14 18.4**	**-1.3**
LPK	**Lapseki**	**2.15**	**5**	*e*PN	**Pn**	**18 14 22.3**	**+1.3**
DST	**Dursunbey**	**2.16**	**50**	*e*PN	**Pn**	**18 14 21.4**	**+0.3**
DALT	**Dalyan (Mudla)**	**2.24**	**130**	*e*PN	**Pn**	**18 14 22.4**	**+0.2**
EDC	**Edincik**	**2.37**	**26**	*e*PN	**Pn**	**18 14 24.8**	**+0.8**
KHL	**Karahalli**	**2.39**	**87**	*e*PN	**Pn**	**18 14 23.2**	**-1.0**
ARG	**Arkhangelos**	**2.39**	**146**	*e*PN	**Pn**	**18 14 23.5**	**-0.8**
BNT	**Bandirma**	**2.40**	**27**	*e*PN	**Pn**	**18 14 25.1**	**+0.7**
ENEZ	**Enez**	**2.52**	**354**	*e*PN	**Pn**	**18 14 27.6**	**+1.5**
MRMT	**Marmara Adasi**	**2.52**	**19**	*e*PN	**Pn**	**18 14 27.4**	**+1.2**
FETY	**Fethiye**	**2.60**	**127**	*e*PN	**Pn**	**18 14 27.3**	**+0.1**
MFT	**Murefte**	**2.63**	**13**	*e*PN	**Pn**	**18 14 29.0**	**+1.4**
KARP	**Karpathos**	**2.73**	**168**	P	**Pn**	**18 14 28.7**	**-0.2**
RDO	**Rodhopi**	**3.01**	**346**	P	**Pn**	**18 14 31.9**	**-0.9**
ZKR	**Zakros**	**3.11**	**184**	P	**Pn**	**18 14 34.6**	**+0.4**

*IDC **11** 18:23:30.8±1.1, 203N×12774E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/15, mbtmp3.6/4, Error ellipse: s-maj=64.9km s-min=21.7km az=79.0*
*ISCJB **11** 18:23:33.3±1.0, 2.1N±0.1×1280E±0.4, h33km, mb3.7/5, Error ellipse: s-maj=64.5km s-min=16.5km az=168.4*
*NEIC **11** 18:23:35.6±0.9, 201N×12803E, h35km, mb3.8/1, Error ellipse: s-maj=57.6km s-min=14.1km az=78.0*

ISC 11 18:23:35.7±1.0, 20N±01×1280E±04, h35km, n6, σ1§01/6, mb3.7/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**22.67**	**164**	*e*P	**P**	**18 28 34.2**	**+0.1**
	5.0nm,1.3s,mb3.8						
WRA	**Warramunga Arr**	**22.68**	**164**	P	**P**	**18 28 34.9**	**+0.7**
	0.4nm,0.3s,mb3.4,baz=339,slow=11,SNR=12						
WB2	**Warramunga Arr**	**22.68**	**164**	*e*P	**P**	**18 28 32.7**	**-1.5**
ASAR	**Alice Springs**	**26.16**	**168**	P	**P**	**18 29 07.4**	**+0.6**
	0.2nm,0.3s,mb3.1,baz=340,slow=7.4,SNR=15						
ASAR				PcP	PcP	18 32 35.9	+2.2
	0.1nm,0.4s,baz=349,slow=1.9,SNR=4.8						
PETK	**Petropavlovsk-**	**56.54**	**21**	P	**P**	**18 33 14.5**	**0.0**
	3.0nm,0.8s,mb4.4,baz=217,slow=6.9,SNR=2.0						
MKAR	**Makanchi Array**	**59.70**	**325**	P	**P**	**18 33 36.6**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=118,slow=7.4,SNR=4.9						

*ISCJB **11** 18:44:40.7±2.0, 3825N±006×2655E±0.1, h8km±14km, Error ellipse: s-maj=15.4km s-min=9.7km az=8.9*
*ISK **11** 18:44:41.6, 3823N×2657E, h7km, MD2.7*
*ATH **11** 18:44:41.4, 3824N×2655E, h31km, MD3.1/3*
*CSEM **11** 18:44:41.3±0.1, 3829N×2654E, h12km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.9km az=136.0*

ISC 11 18:44:41.0±1.8, 3828N±006×265E±01, h7km±14km, n8, σ0§18/11, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.47**	**77**	*e*PG	**Pg**	**18 44 49.9**	**-0.1**
BLCB				*e*SG	**Sg**	**18 44 56.0**	**-0.1**
IZM	**Izmir**	**0.64**	**79**	*e*PG	**Pg**	**18 44 53.2**	**-0.1**
IZM				*e*SG	**Sg**	**18 45 17.7**	**+0.1**
SMG	**Samos**	**0.64**	**153**	*e*PN	**Pg**	**18 44 53.5**	**+0.1**
PRK	**Paraskevi**	**0.97**	**351**	*e*PN	**Pn**	**18 45 01.2**	**+0.1**
PRK				*e*SN	**Sn**	**18 45 15.0**	**-0.2**
AKS	**Akhisar**	**1.21**	**60**	*e*PN	**Pn**	**18 45 04.8**	**+0.4**
APE	**Apeiranthos**	**1.42**	**212**	*e*PN	**Pn**	**18 45 07.2**	**0.0**
MLSB	**Milas**	**1.43**	**133**	*e*PN	**Pn**	**18 45 07.0**	**-0.3**
KULA	**Kula-Manisa**	**1.74**	**82**	*e*PN	**Pn**	**18 45 11.7**	**+0.1**

*IDC **11** 18:59:34.3±3.4, 2482S×17997E, h480km±33km, mb3.5/5, mb1 3.8/5, mb1mx3.5/14, mbtmp3.5/5, Error ellipse: s-maj=48.3km s-min=25.5km az=168.0*
*ISCJB **11** 18:59:35.5±1.0, 247S±02×1798E±02, h500km, mb4.2/12, Error ellipse: s-maj=26.1km s-min=19.4km az=12.0*
*NEIC **11** 18:59:36.9±6.0, 2464S×17977E, h507km±67km, mb4.4/8, Error ellipse: s-maj=32.4km s-min=21.7km az=68.0*

ISC 11 18:59:36.4±1.0, 246S±02×1798E±02, h500km, n15, σ0§68/14, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTAO	**Charters Tower**	**31.28**	**272**	*e*P	**P**	**19 05 15.4**	**+0.4**
	23nm,0.8s,mb4.7						
TAU	**Tasmania Unive**	**32.30**	**228**	P	**P**	**19 05 24.3**	**+0.9**
	5.1nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**34.27**	**249**	P	**P**	**19 05 41.0**	**+0.8**
	3.8nm,0.5s,mb4.1,baz=99,slow=9.9,SNR=21						
STKA	**Stephens Creek**	**34.27**	**249**	*e*P	**P**	**19 05 40.4**	**+0.2**
	6.2nm,0.8s,mb4.1						
PMG	**Port Moresby**	**34.54**	**290**	*e*P	**P**	**19 05 43.0**	**+0.2**
	28nm,1.3s,mb4.5						
ASAR	**Alice Springs**	**41.72**	**261**	P	**P**	**19 06 41.5**	**+0.4**
	3.0nm,0.6s,mb3.9,baz=90,slow=6.8,SNR=68						
WB2	**Warramunga Arr**	**42.15**	**267**	*e*P	**P**	**19 06 44.1**	**-0.5**
WRAB	**Tennant Creek**	**42.15**	**267**	*e*P	**P**	**19 06 43.7**	**-0.9**
	14nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**42.16**	**267**	P	**P**	**19 06 44.2**	**-0.5**
	7.6nm,0.5s,mb4.3,baz=104,slow=8.1,SNR=59						
WRA				ScP	ScP	19 11 32.6	+2.1
	2.3nm,0.9s,baz=103,slow=4.2,SNR=8.9						
MBWA	**Marble Bar**	**55.05**	**261**	*e*P	**P**	**19 08 19.5**	**-1.3**
	12nm,1.1s,mb4.1						
QSPA	**South Pole Qui**	**65.47**	**180**	*e*P	**P**	**19 09 28.7**	**-0.2**
	1.9nm,0.7s,mb3.8						
MAW	**Mawson**	**77.01**	**201**	*e*P	**P**	**19 10 36.6**	**-0.2**
	46nm,1.9s,mb4.7						
CMAR	**Chiang Mai Arr**	**89.58**	**290**	P	**P**	**19 11 41.9**	**+1.3**
	0.9nm,0.8s,mb3.7,baz=147,slow=3.5,SNR=6.2						
TXAR	**Lajitas Array**	**90.98**	**58**	P	**P**	**19 11 46.8**	**-0.1**
	0.9nm,0.9s,mb3.7,baz=223,slow=6.2,SNR=8.4						
TORD	**Torodi Ar. Bea**	**168.45**	**189**	PKPab	PKPab	19 19 56.5	-2.1
	0.3nm,0.7s,baz=169,slow=2.9,SNR=3.6						

KRSC 11 19:25:29.0±0.6, 5283N×16230E, h42km±41km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.40**	**282**	P	Pn	19 25 53.5	+1.5
SPN				*i* S	Sn	19 26 11.0	+1.7
MKZ	**Mys Kozlova**	**1.76**	**349**	*e*P	Pn	19 25 58.2	+1.2
MKZ				*i* S	Sn	19 26 19.3	+1.2
NLC	**Nalytchevo**	**1.82**	**282**	*e*P	Pn	19 25 59.5	+1.8
NLC				*i* S	Sn	19 26 21.7	+2.2
KII	**Karymskiy**	**2.09**	**306**	P	Pn	19 26 03.7	+2.2
KII				*i* S	Sn	19 26 28.5	+2.3
AVH	**Avacha**	**2.19**	**283**	*e*P	Pn	19 26 05.7	+2.8
RUS	**Russkaya**	**2.34**	**262**	*e*P	Pn	19 26 06.7	+1.8
RUS				*i* S	Sn	19 26 33.7	+1.3
GNL	**Ganaly**	**2.76**	**290**	P	Pn	19 26 14.1	+3.5
GNL				*i* S	Sn	19 26 47.9	+5.3
KMNR	**Kamenistaya**	**3.17**	**338**	*e*P	Pn	19 26 20.4	+4.1
KMNR				*i* S	Sn	19 26 58.6	+5.8
KBTR	**Krutoberegovo**	**3.40**	**5**	*e*P	Pn	19 26 20.5	+1.1

*ATH **11** 19:32:53.1, 3826N×2691E, h72km±6km*
*CSEM **11** 19:32:53.6±0.1, 3828N×2652E, h2km, MD2.8, Error ellipse: s-maj=2.3km s-min=2.0km az=134.0*
*ISK **11** 19:32:54.4, 3836N×2656E, h5km, MD3.0*
*ISCJB **11** 19:32:55.7±0.8, 3828N±003×2655E±006, h9km±4km, Error ellipse: s-maj=7.5km s-min=5.1km az=174.8*
*DDA **11** 19:32:55.9, 3830N×2664E, h7km±3km, Md2.8*

ISC 11 19:32:55.9±0.7, 3830N±003×2655E±006, h10km±5km, n14, σ1§11/21, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.07**	**29**	*i* P	**Pg**	**19 32 58.2**	**-0.1**
URLA				*i* S	**Sg**	**19 33 00.6**	**+0.7**
BLCB	**Balcova**	**0.40**	**77**	PG	**Pg**	**19 33 03.1**	**-0.7**
BLCB				*e*SG	**Sg**	**19 33 09.2**	**+0.1**
IZM	**Izmir**	**0.57**	**79**	PG	**Pg**	**19 33 06.4**	**-0.6**
IZM				*e*SG	**Sg**	**19 33 15.5**	**+0.9**
SMG	**Samos**	**0.63**	**159**	*e*P	**Pg**	**19 33 06.8**	**-1.3**
SMG				*e*S	**Sg**	**19 33 17.6**	**+1.3**
GCAM	**G?zelcaml?**	**0.80**	**137**	*i* P	**Pg**	**19 33 10.4**	**-1.0**
GCAM				*i* S	**Sg**	**19 33 21.6**	**-0.2**
PRK	**Paraskevi**	**0.97**	**347**	*e*P	**Pg**	**19 33 14.1**	**-0.6**
PRK				*e*S	**Sg**	**19 33 28.9**	**+1.5**
AKHS	**Akhisar**	**1.15**	**59**	*i* P	**Pb**	**19 33 15.7**	**-2.2**
AKHS				*i* S	**Sg**	**19 33 32.4**	**-0.6**
AKS	**Akhisar**	**1.15**	**59**	*e*PN	**Pn**	**19 33 16.2**	**-1.8**
BODT	**Bodrum**	**1.37**	**154**	*e*PN	**Pn**	**19 33 22.1**	**+1.0**
MLSB	**Milas**	**1.39**	**135**	*e*PN	**Pn**	**19 33 22.6**	**+1.2**
APE	**Apeiranthos**	**1.47**	**214**	*e*P	**Pn**	**19 33 20.9**	**-1.5**
KULA	**Kula-Manisa**	**1.67**	**82**	*e*PN	**Pn**	**19 33 26.3**	**+1.0**
BALB	**Balikesir**	**1.70**	**37**	*e*PN	**Pn**	**19 33 26.0**	**+0.4**
YER	**Yerkesik**	**1.80**	**130**	*e*PN	**Pn**	**19 33 29.0**	**+2.0**

*MOS **11** 19:41:19.8±1.0, 4389N×13827E, h269km, mb4.3/9, Error ellipse: s-maj=16.3km s-min=9.8km az=89.8*
*ISCJB **11** 19:41:20.5±0.4, 4379N±005×13830E±007, h273km±5km, mb3.7/18, Error ellipse: s-maj=9.4km s-min=6.6km az=39.1*
*IDC **11** 19:41:21.0±1.4, 4386N×13824E, h259km±14km, mb3.3/14, mb1 3.5/19, mb1mx3.4/26, mbtmp3.4/19, Error ellipse: s-maj=13.0km s-min=9.9km az=71.0*
*NEIC **11** 19:41:20.6±0.6, 4389N×13824E, h256km±7km, mb4.3/4, Error ellipse: s-maj=8.6km s-min=6.6km az=123.0*
*JMA **11** 19:41:21.1±0.2, 4377N×13832E, h274km±4km, M3.2*

ISC 11 19:41:21.2±0.4, 4383N±005×13826E±007, h264km±5km, n61, σ0§80/67, mb3.7/18, 1C, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**1.68**	**106**	P	**Pn**	**19 42 02.4**	**+0.3**
JOSM	**Okushiri--Mats**	**1.96**	**153**	P	**Pn**	**19 42 04.9**	**+0.4**
JOSM				*e*S	**S**	**19 42 39.0**	**+0.3**
JHR	**Hokuryu**	**2.51**	**91**	P	**Pn**	**19 42 10.0**	**+0.5**
JWK2	**Keihoku**	**2.99**	**59**	P	**Pn**	**19 42 15.6**	**+1.3**
ASAJ	**Asahikawa**	**3.14**	**83**	P	**Pn**	**19 42 16.0**	**0.0**
	1.8nm,0.3s,baz=346,slow=7.9,SNR=12						
ASAJ	**Asahikawa**	**3.14**	**83**	P	**Pn**	**19 42 16.0**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JKK2	**Kamakawa 2**	**3.25**	**88**	P	**Pn**	**19 42 17.6**	**+0.5**
JKK2				*e*S	**S**	**19 43 02.2**	**+0.8**
JSE	**Soyaes**	**3.30**	**68**	P	**Pn**	**19 42 18.4**	**+0.8**
JNBK	**Urakawa-nobuka**	**3.64**	**114**	*e*S	**S**	**19 43 08.6**	**-0.7**
JCH	**Churui**	**3.92**	**106**	P	**Pn**	**19 42 24.6**	**-0.1**
JCH				*e*S	**S**	**19 43 10.2**	**-5.0**
JAR	**Ashorobuto**	**4.04**	**96**	P	**Pn**	**19 42 26.0**	**0.0**
JAR				*e*S	**S**	**19 43 16.8**	**-0.8**
JANG	**Nango**	**4.22**	**144**	P	**Pn**	**19 42 27.2**	**-0.9**
JANG				*e*S	**S**	**19 43 17.1**	**-4.4**
YSS	**Yuzh-Sakhalins**	**4.45**	**44**	*e*Pn	**Pn**	**19 42 30.3**	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.45**	**44**	⇑*i* P	**Pn**	**19 42 30.5**	**-0.2**
YSS				pmax	pmax		
	comp=Z,110nm,0.8s						
JMK	**Ichinoseki**	**5.36**	**154**	P	**Pn**	**19 42 40.4**	**-1.4**
JMK				*e*S	**S**	**19 43 41.5**	**-4.7**
NEM2	**Nemuro 2**	**5.45**	**92**	*e*S	**S**	**19 43 41.3**	**-6.8**
MAJO	**Matsushiro**	**7.28**	**180**	*e*P	**Pn**	**19 43 05.0**	**-0.6**
	comp=Z,14nm,0.6s						
MAJO	**Matsushiro**	**7.28**	**180**	*e*P	**Pn**	**19 43 05.0**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s						
MAT	**Matsushiro**	**7.28**	**180**	P	**Pn**	**19 43 05.1**	**-0.4**
MJAR	**Matsushiro Arr**	**7.28**	**180**	P	**Pn**	**19 43 05.6**	**+0.1**
	comp=Z,6.7nm,0.3s,baz=4.4,slow=12,SNR=98						
MJAR	**Matsushiro Arr**	**7.28**	**180**	P	**Pn**	**19 43 05.6**	**0.0**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KSRS	**Korea Array**	**10.11**	**234**	P	**Pn**	**19 43 41.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=57,slow=12,SNR=5.6						
KS15	**Wonju Array Si**	**10.14**	**235**	*e*Pn	**Pn**	**19 43 40.5**	**-0.8**

INCN	**Inchon**	**10.87**	**238**	*e*Pn		**Pn**	**19 43 51.5**	**+1.1**
PETK	**Petropavlovsk-**	**15.84**	**47**	P		**Pn**	**19 44 48.0**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=218,slow=6.8,SNR=5.1							
CBIJ	**Chichi jima**	**17.00**	**168**	P		**P**	**19 45 02.6**	**+0.5**
	comp=Z,7.2nm,0.3s,baz=247,slow=21,SNR=6.6							
YAK	**Yakutsk**	**18.92**	**347**	*e*P		**P**	**19 45 19.7**	**-2.7**
	comp=Z,13nm,0.8s							
YAK	**Yakutsk**	**18.92**	**347**	*e*P		**P**	**19 45 19.7**	**-2.8**
YAK				pmax	pmax			
	comp=Z,13nm,0.8s							
SONM	**Songino Array**	**22.47**	**291**	P		**P**	**19 45 58.7**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.0,baz=76,slow=9.1,SNR=2.4							
ZALV	**Zalesovo Beam**	**35.77**	**306**	P		**P**	**19 47 54.5**	**-0.6**
	comp=Z,1.3nm,0.4s,mb3.8,baz=86,slow=9.1,SNR=7.3							
ZALV	**Zalesovo Beam**	**35.77**	**306**	P		**P**	**19 47 54.5**	**-0.6**
ZALV	**Zalesovo Beam**	**35.77**	**306**	P		**P**	**19 47 54.5**	**-0.5**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.7							
MKAR	**Makanchi Array**	**38.77**	**295**	P		**P**	**19 48 20.2**	**-0.1**
	comp=Z,2.3nm,1.1s,mb3.5,baz=82,slow=11,SNR=3.8							
MKAR	**Makanchi Array**	**38.77**	**295**	P		**P**	**19 48 20.2**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,2.0nm,1.1s							
KURK	**Kurchatov**	**40.07**	**302**	P		**P**	**19 48 31.4**	**+0.4**
	baz=78,slow=8.6							
CHUM	**Lake Minchumin**	**43.00**	**37**	*e*P		**P**	**19 48 55.1**	**+0.7**
	comp=Z,12nm,0.5s,mb4.4							
BVAR	**Borovoye Array**	**44.39**	**307**	P		**P**	**19 49 06.3**	**+0.7**
	comp=Z,2.4nm,0.3s,mb3.9,baz=75,slow=11,SNR=13							
BVAR	**Borovoye Array**	**44.39**	**307**	P		**P**	**19 49 06.3**	**+0.8**
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
INK	**Inuvik**	**49.53**	**29**	*e*P		**P**	**19 49 44.2**	**-0.7**
	comp=Z,75nm,0.4s							
KEV	**Kevo**	**56.25**	**337**	*ep*		**P**	**19 50 32.9**	**-0.8**
ARCES	**ARCESS Array B**	**56.80**	**337**	P		**P**	**19 50 36.9**	**-0.7**
	comp=Z,1.9nm,0.5s,mb3.8,baz=60,slow=9.0,SNR=14							
ARCES	**ARCESS Array B**	**56.80**	**337**	P		**P**	**19 50 36.9**	**-0.7**
ARCES	**ARCESS Array B**	**56.80**	**337**	P		**P**	**19 50 36.9**	**-0.7**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
JOF	**Joensuu**	**58.87**	**329**	*ep*		**P**	**19 50 51.2**	**-0.8**
	comp=Z,1.9nm,0.5s,mb3.8							
JOF	**Joensuu**	**58.87**	**329**	*e*P		**P**	**19 50 51.2**	**-0.8**
JOF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.8							
YKA	**Yellowknife Ar**	**59.19**	**31**	P		**P**	**19 50 54.2**	**0.0**
	comp=Z,1.2nm,0.6s,mb3.5,baz=302,slow=5.9,SNR=3.6							
YKA	**Yellowknife Ar**	**59.19**	**31**	P		**P**	**19 50 54.2**	**0.0**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KAF	**Kangasniemi**	**61.20**	**330**	*ep*		**P**	**19 51 07.0**	**-0.8**
	comp=Z,2.9nm,0.7s,mb3.9,baz=47,slow=6.4							
KAF	**Kangasniemi**	**61.20**	**330**	*e*P		**P**	**19 51 07.0**	**-0.8**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb3.9							
WRA	**Warramunga Arr**	**63.56**	**184**	P		**P**	**19 51 23.4**	**-0.4**
	comp=Z,1.4nm,0.6s,mb3.8,baz=1.2,slow=6.9,SNR=26							
WRA				PcP	PcP	19 51 58.3	+0.5	
	comp=Z,1.3nm,0.5s,baz=359,slow=4.7,SNR=17							
WRA	**Warramunga Arr**	**63.56**	**184**	P		**P**	**19 51 23.4**	**-0.4**
WRA						19 51 58.3		
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
NOA	**NORSAR Array B**	**67.01**	**335**	P		**P**	**19 51 45.9**	**+0.5**
	comp=Z,0.2nm,0.3s,mb3.3,baz=39,slow=8.3,SNR=3.0							
ASAR	**Alice Springs**	**67.28**	**184**	P		**P**	**19 51 48.2**	**+0.7**
	comp=Z,1.1nm,0.6s,mb3.8,baz=357,slow=5.5,SNR=23							
ASAR	**Alice Springs**	**67.28**	**184**	P		**P**	**19 51 48.2**	**+0.7**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**67.51**	**319**	P

CSEM ***11*** *20:03:06.3±0.1, 41.33N×20.47E, h8km, ML3.1, Error ellipse: s-maj=3.6km s-min=1.9km az=49.0*
ATH ***11*** *20:03:24.3, 40.30N×21.13E, h10km, MD3.6/3*
ISC 11 20:03:05.5±0.4, **4128N**±002×**2035E**±002, **h0**km±2km, **n106**, σ1°**14**/193, **17C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.37**	**281**	P	**Pg**	**20 03 11.4**	**-1.2**
TIR				*i* SG	**Sg**	**20 03 17.2**	**-0.3**
TIR	**Tirane**	**0.37**	**281**	*e*PG	**Pg**	**20 03 11.5**	**-1.1**
TIR				*i* SG	**Sg**	**20 03 17.3**	**-0.2**
TIR	**Tirane**	**0.37**	**281**	↑*i*Pg	**Pg**	**20 03 11.4**	**-1.2**
TIR				*e*Sg	**Sg**	**20 03 17.0**	**-0.5**
OHR	**Ohrid**	**0.38**	**116**	P	**Pg**	**20 03 13.0**	**+0.3**
OHR				S	**Sg**	**20 03 19.7**	**+2.2**
OHR	**Ohrid**	**0.38**	**116**	↑*i*Pg	**Pg**	**20 03 13.0**	**+0.3**
OHR				*e*Sg	**Sg**	**20 03 20.1**	**+2.6**
OHR	**Ohrid**	**0.38**	**116**	↑*i*Pg	**Pg**	**20 03 13.1**	**+0.5**
OHR				*i* Sg	**Sg**	**20 03 20.6**	**+3.1**
OHR				*e*Lg		20 03 20.9	
	comp=E,2μm,0.5s						
OHR				*e*Lg		20 03 21.0	
	comp=N,2μm,0.3s						
PHP	**Peshkopia**	**0.41**	**9**	*e*PG	**Pg**	**20 03 12.5**	**-0.9**
PHP				*i* SG	**Sg**	**20 03 18.9**	**+0.1**
LACI	**Lac**	**0.60**	**307**	*e*PG	**Pg**	**20 03 15.1**	**-1.9**
LACI				*i* SG	**Sg**	**20 03 24.2**	**-0.6**
KRUS	**Krusevo**	**0.68**	**82**	↑*i*Pg	**Pg**	**20 03 18.5**	**0.0**
KRUS				*i* Sg	**Sg**	**20 03 29.9**	**+2.5**
KRUS	**Krusevo**	**0.68**	**82**	↑*i*Pg	**Pg**	**20 03 18.6**	**0.0**
KRUS				*i* Sg	**Sg**	**20 03 29.9**	**+2.5**
KRUS				*e*Lg		20 03 31.2	
	comp=E,319nm,0.4s						
KRUS				*e*Lg		20 03 31.2	
	comp=N,221nm,0.3s						
BIA	**Bitola**	**0.78**	**109**	↑*i*Pg	**Pg**	**20 03 19.7**	**-0.7**
BIA				*e*Sg	**Sg**	**20 03 32.8**	**+2.4**
BIA	**Bitola**	**0.78**	**109**	P	**Pg**	**20 03 19.6**	**-0.8**
BIA				S	**Sg**	**20 03 32.0**	**+1.6**
BIA	**Bitola**	**0.78**	**109**	↑*i*Pg	**Pg**	**20 03 19.7**	**-0.7**
BIA				*i* Sg	**Sg**	**20 03 32.6**	**+2.2**
BIA	**Bitola**	**0.78**	**109**	↑*i*Pg	**Pg**	**20 03 19.6**	**-0.7**
BIA				*i* Sg	**Sg**	**20 03 32.6**	**+2.2**
BIA				*e*Lg		20 03 33.3	
	comp=N,250nm,0.3s						
BIA				*e*Lg		20 03 34.9	
	comp=E,309nm,0.3s						
PUK	**Puka**	**0.84**	**336**	*e*PG	**Pg**	**20 03 20.2**	**-1.4**
PUK				*i* SG	**Sg**	**20 03 32.5**	**0.0**
FNA	**Florina**	**0.92**	**122**	P	**Pg**	**20 03 23.2**	**+0.1**
FNA				S	**Sg**	**20 03 36.6**	**+1.7**
SKO	**Skopje**	**1.07**	**49**	P	**Pg**	**20 03 26.0**	**0.0**
SKO				S	**Sg**	**20 03 40.1**	**+0.2**
SKO	**Skopje**	**1.07**	**49**	*e*Pg	**Pg**	**20 03 26.1**	**+0.1**
SKO				*e*Sg	**Sg**	**20 03 40.5**	**+0.6**
SKO	**Skopje**	**1.07**	**49**	*i* Pg	**Pg**	**20 03 26.2**	**+0.2**
SKO				*i* Sg	**Sg**	**20 03 41.0**	**+1.1**
SKO				*e*Lg		20 03 42.0	
	comp=E,426nm,0.7s						
SKO				*e*Lg		20 03 42.9	
	comp=N,842nm,0.8s						
SKO	**Skopje**	**1.07**	**49**	*i* P	**Pg**	**20 03 26.2**	**+0.2**
SKO				*i* Sg	**Sg**	**20 03 40.4**	**+0.5**
ULC	**Ulcinj**	**1.07**	**310**	↓*i*Pg	**Pg**	**20 03 23.6**	**-2.5**
ULC				*e*Sg	**Sg**	**20 03 40.6**	**+0.6**
ULC	**Ulcinj**	**1.07**	**310**	*i* PG	**Pg**	**20 03 23.6**	**-2.5**
ULC				*i* SG	**Sg**	**20 03 40.6**	**+0.6**
BCI	**Bajram Curri**	**1.11**	**349**	*e*PG	**Pg**	**20 03 27.3**	**+0.5**
PVY	**Plav**	**1.35**	**348**	↑*i*Pg	**Pg**	**20 03 30.7**	**-0.6**
PVY				*e*Sg	**Sg**	**20 03 51.2**	**+2.4**
PVY	**Plav**	**1.35**	**348**	*i* PG	**Pg**	**20 03 30.7**	**-0.6**
PVY				*i* SG	**Sg**	**20 03 51.2**	**+2.4**
PDG	**Podgorica**	**1.41**	**325**	*i* PG	**Pg**	**20 03 29.8**	**-2.7**
PDG				*i* SG	**Sg**	**20 03 52.5**	**+1.7**
PDG	**Podgorica**	**1.41**	**325**	↑*i*Pg	**Pg**	**20 03 29.8**	**-2.7**
PDG				*e*Sg	**Sg**	**20 03 52.5**	**+1.7**
TTG	**Podgorica**	**1.41**	**325**	↑*i*Pg	**Pg**	**20 03 29.8**	**-2.7**
TTG				*e*Sg	**Sg**	**20 03 52.5**	**+1.7**
SRN	**Sarande**	**1.42**	**191**	*e*PG	**Pg**	**20 03 33.5**	**+0.8**
KZN	**Kozani**	**1.45**	**131**	*e*PB	**Pb**	**20 03 34.0**	**+0.7**
BUM	**Brajici-Budva**	**1.49**	**314**	↑*i*Pg	**Pg**	**20 03 31.4**	**-2.7**
BUM				*e*Sg	**Sg**	**20 03 54.9**	**+1.5**
BUM	**Brajici-Budva**	**1.49**	**314**	*i* PG	**Pg**	**20 03 31.4**	**-2.7**
BUM				*i* SG	**Sg**	**20 03 54.9**	**+1.5**
GRG	**Griva**	**1.58**	**101**	P	**Pn**	**20 03 34.2**	**-0.5**
GRG				S	**Sn**	**20 03 55.2**	**-0.6**
BEY	**Berane**	**1.63**	**348**	*i* PG	**Pn**	**20 03 35.6**	**+0.2**
BEY				*i* SG	**Sg**	**20 03 59.6**	**+1.8**
IVA	**Berane**	**1.63**	**348**	↑*i*Pn	**Pn**	**20 03 35.6**	**+0.2**
IVA				*e*Sn	**Sg**	**20 03 59.6**	**+1.8**
JAN	**Janina**	**1.66**	**167**	*e*PB	**Pb**	**20 03 37.0**	**+0.1**
VAY	**Valandovo**	**1.67**	**88**	*e*Pn	**Pn**	**20 03 34.7**	**-1.3**
VAY				*e*Sg	**Sg**	**20 03 59.3**	**+0.1**
VAY	**Valandovo**	**1.67**	**88**	P	**Pn**	**20 03 34.0**	**-2.0**
VAY				S	**Sn**	**20 03 57.2**	**-0.9**
VAY	**Valandovo**	**1.67**	**88**	P	**Pn**	**20 03 34.0**	**-2.0**
VAY	**Valandovo**	**1.67**	**88**	*i* Pn	**Pn**	**20 03 35.0**	**-1.0**
VAY				S	**Sn**	**20 03 57.2**	**-0.9**
VAY				*e*Sg	**Sg**	**20 03 59.3**	**+0.1**
VAY	**Valandovo**	**1.67**	**88**	*i* Pn	**Pn**	**20 03 35.1**	**-0.9**
VAY	**Valandovo**	**1.67**	**88**	*i* P	**Pn**	**20 03 35.0**	**-1.0**
VAY				*i* Pg	**Pg**	**20 03 36.9**	**-0.6**
VAY				*i* Sg	**Sg**	**20 03 58.2**	**-1.0**
IGT	**Igoumenitsa**	**1.74**	**180**	P	**Pn**	**20 03 37.8**	**+0.9**
IGT				S	**Sn**	**20 04 02.2**	**+2.4**
HCY	**Herceg Novi**	**1.81**	**311**	↑*i*Pn	**Pn**	**20 03 36.7**	**-1.2**
HCY				*e*Sn	**Sg**	**20 04 02.9**	**-0.8**
HCY	**Herceg Novi**	**1.81**	**311**	*i* PG	**Pn**	**20 03 36.7**	**-1.2**
HCY				*i* SG	**Sg**	**20 04 02.9**	**-0.8**
NKY	**Niksic**	**1.84**	**327**	↑*i*Pn	**Pn**	**20 03 37.4**	**-0.8**
NKY				*e*Sn	**Sn**	**20 04 04.7**	**+2.5**
BARS	**Barje**	**1.89**	**35**	*e*Pn	**Pn**	**20 03 39.3**	**+0.4**
BARS				*e*Sg	**Sg**	**20 04 05.8**	**-0.3**
KNT	**Kendrikon**	**1.92**	**93**	P	**Pn**	**20 03 37.6**	**-1.8**
SJES	**Sjenica**	**2.00**	**352**	*e*Pn	**Sg**	**20 03 41.4**	**+0.9**
SJES				*e*Sg	**Sg**	**20 04 11.4**	**+1.6**
LIT	**Litokhoron**	**2.01**	**125**	P	**Pn**	**20 03 40.4**	**-0.1**
LIT				S	**Sn**	**20 04 07.1**	**+0.8**
THE	**Thessaloniki**	**2.08**	**107**	P	**Pn**	**20 03 39.9**	**-1.7**
BRY	**Bratogost**	**2.11**	**321**	↑*i*Pn	**Pn**	**20 03 41.5**	**-0.5**
BRY				*e*Sn	**Sn**	**20 04 10.7**	**+1.9**
THL	**Klokotos Trika**	**2.13**	**143**	P	**Pn**	**20 03 43.0**	**+0.8**
THL				S	**Sn**	**20 04 09.8**	**+0.5**
KKB	**Krupnik**	**2.13**	**73**	*i* P	**Pn**	**20 03 42.1**	**-0.2**
KKB				*i* S	**Sn**	**20 04 14.4**	**+5.0**
PLE	**Pljevlja**	**2.17**	**341**	↓*i*Pn	**Pn**	**20 03 43.1**	**+0.3**
PLE				*e*Sn	**Sn**	**20 04 12.3**	**+1.9**
UPM	**Unac-Piva**	**2.20**	**331**	↑*i*Pn	**Pn**	**20 03 43.6**	**+0.3**
UPM				*e*Sn	**Sn**	**20 04 13.1**	**+1.9**
SOH	**Sokhos**	**2.32**	**100**	P	**Pn**	**20 03 44.6**	**-0.2**
SOH				S	**Sn**	**20 04 13.3**	**-0.6**
VTS	**Vitosha**	**2.50**	**57**	*e*Pn	**Pn**	**20 03 47.1**	**-0.3**
VTS				*e*Sn	**Sn**	**20 04 18.7**	**+0.1**
VTS	**Vitosha**	**2.50**	**57**	P	**Pn**	**20 03 46.7**	**-0.7**
VTS				*i* S	**Sn**	**20 04 18.1**	**-0.5**
PLG	**Polygyros**	**2.52**	**110**	P	**Pn**	**20 03 47.6**	**+0.1**
PLG				S	**Sn**	**20 04 17.7**	**-1.2**
MMB	**Musomiste**	**2.56**	**82**	*i* P	**Pn**	**20 03 48.0**	**-0.1**
MMB				*i* Pg	**Pg**	**20 03 53.2**	**-1.3**
MMB				*e*S	**Sn**	**20 04 27.0**	**+7.1**
EVR	**Evrytania**	**2.61**	**154**	*e*PB	**Pb**	**20 03 52.0**	**-1.0**
GRUS	**Gruza**	**2.62**	**6**	*e*Pn	**Pn**	**20 03 49.7**	**+0.6**
BBLS	**Lazići**	**2.68**	**345**	*e*Pn	**Pn**	**20 03 50.4**	**+0.6**
BBLS				*e*Sn	**Sn**	**20 04 22.9**	**-0.1**
AGG	**Agios Georgios**	**2.71**	**145**	P	**Pn**	**20 03 50.3**	**0.0**
AGG				S	**Sn**	**20 04 24.8**	**+1.0**
PAIG	**Paliouri**	**2.87**	**117**	P	**Pn**	**20 03 51.3**	**-1.1**
XOR	**Xorichti**	**2.89**	**130**	P	**Pn**	**20 03 53.1**	**+0.4**
SVIS	**Svilajnac**	**3.06**	**12**	*e*Pn	**Pn**	**20 03 55.4**	**+0.4**
SVIS				*e*Sn	**Sn**	**20 04 33.1**	**+0.9**
PGB	**Panagyurishte**	**3.12**	**65**	*e*S	**Sn**	**20 04 32.3**	**-1.5**
FGSL	**Fruska Gora**	**3.90**	**354**	*e*Pn	**Pn**	**20 04 06.0**	**-0.6**
FGSL				*e*Sn	**Sn**	**20 04 52.4**	**-0.6**
BZS	**Buzias**	**4.44**	**12**	*e*Pn	**Pn**	**20 04 12.7**	**-1.2**
BZS				*e*Sn	**Sn**	**20 05 05.3**	**-0.9**
VYHS	**Vyhne**	**7.30**	**352**	*e*SN	**Sn**	**20 06 13.6**	**-3.1**

ISK ***11*** *20:09:42.9, 38.73N×25.44E, h7km, ML4.0*

DDA ***11*** *20:09:43.9, 38.74N×25.46E, h21km±1km, Md3.4*
NEIC ***11*** *20:09:45.2, 38.76N×25.57E, h36km, MD3.8(ATH), After ATH.*
ATH ***11*** *20:09:45.2, 38.76N×25.57E, h36km±2km, MD3.8/23, ML3.9*
THE ***11*** *20:09:45.8, 38.73N×25.53E, h10km±2km, ML4.3/7, Error ellipse: s-maj=2.7km s-min=0.6km az=108.0*
CSEM ***11*** *20:09:45.9±0.0, 38.75N×25.54E, h25km, ML4.3/7, Error ellipse: s-maj=1.1km s-min=0.9km az=7.0*
ISCJB ***11*** *20:09:45.9±0.5, 38.74N±002×25.53E±002, h25km±5km, mb3.5/4, Error ellipse: s-maj=2.8km s-min=2.5km az=137.8*
SOF ***11*** *20:09:46.8, 39.08N×25.63E, h2km, MD3.1*
IDC ***11*** *20:09:46.0±1.1, 38.52N×25.50E, h0km, mb3.6/4, mb1 3.6/8, mb1mx3.5/24, mbtmp3.5/8, ML3.6/3, Error ellipse: s-maj=24.9km s-min=17.1km az=125.0*
ISC 11 20:09:45.3±0.5, **3874N**±002×**2551E**±002, **h8**km±3km, **n142**, σ0°**86**/175, **mb3.5/4, 13C-15D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.56**	**129**	P	**Pg**	**20 09 56.4**	**+0.4**
CHOS				S	**Sg**	**20 10 04.0**	**+0.7**
PRK	**Paraskevi**	**0.78**	**49**	P	**Pg**	**20 10 00.1**	**-0.2**
PRK				S	**Sg**	**20 10 12.0**	**+1.5**
PRK	**Paraskevi**	**0.78**	**49**	↑*i*PN	**Pg**	**20 10 00.1**	**-0.2**
PRK				*e*SN	**Sg**	**20 10 10.5**	**0.0**
URLA	**Izmir**	**0.93**	**114**	*i* P	**Pg**	**20 10 03.3**	**+0.1**
URLA				*i* S	**Sg**	**20 10 16.6**	**+1.3**
AYVA	**Ayvalik**	**1.08**	**58**	*i* P	**Pg**	**20 10 05.6**	**-0.2**
AYVA				*i* S	**Sg**	**20 10 20.4**	**+0.2**
LIA	**Limnos Island**	**1.18**	**348**	P	**Pb**	**20 10 07.2**	**-0.8**
LIA				S	**Sg**	**20 10 23.8**	**+0.4**
LIA	**Limnos Island**	**1.18**	**348**	↑*i*PN	**Pn**	**20 10 07.3**	**-0.8**
LIA				*e*SN	**Sn**	**20 10 22.5**	**-1.9**
LIA	**Limnos Island**	**1.18**	**348**	↑*i*Pn	**Pn**	**20 10 07.3**	**-0.8**
LIA				*e*Sn	**Sn**	**20 10 22.5**	**-1.9**
LIA				S	**Sg**	**20 10 23.8**	**+0.4**
BLCB	**Balcova**	**1.25**	**106**	*e*PN	**Pn**	**20 10 08.2**	**-0.9**
BLCB				*e*SN	**Sn**	**20 10 26.4**	**+0.3**
AOS	**Alonnisos**	**1.34**	**289**	P	**Pn**	**20 10 09.9**	**-0.3**
IZM	**Izmir**	**1.42**	**103**	*e*PN	**Pn**	**20 10 10.5**	**-0.8**
IZM				*e*SN	**Sn**	**20 10 30.7**	**+0.6**
PTL	**Penteli**	**1.46**	**242**	*e*PN	**Pn**	**20 10 11.2**	**-0.7**
SMG	**Samos**	**1.47**	**134**	*e*PN	**Pn**	**20 10 11.0**	**-1.0**
GADA	**Gvkgeada**	**1.48**	**12**	*e*PN	**Pn**	**20 10 11.0**	**-1.2**
ATH	**Athens Observa**	**1.60**	**242**	*e*Pn	**Pn**	**20 10 13.4**	**-0.4**
ATH				P		20 10 18.7	
KVR	**Kavouri**	**1.64**	**237**	*e*PN	**Pn**	**20 10 13.5**	**-0.9**
APE	**Apeiranthos**	**1.67**	**179**	P	**Pn**	**20 10 13.2**	**-1.5**
APE	**Apeiranthos**	**1.67**	**179**	*e*Pn	**Pn**	**20 10 13.6**	**-1.1**
APE				S	**Sn**	**20 10 34.3**	**-2.0**
APE				*e*Sn	**Sn**	**20 10 35.4**	**-0.9**
APE	**Apeiranthos**	**1.67**	**179**	↑*i*P	**Pn**	**20 10 13.0**	**-1.7**
APE				S	**Sn**	**20 10 34.3**	**-2.0**
GCAM	**G?zelcaml?**	**1.71**	**127**	*i* P	**Pn**	**20 10 15.7**	**+0.4**
GCAM				*i* P		20 10 39.8	
AKS	**Akhisar**	**1.81**	**85**	*e*PN	**Pn**	**20 10 15.9**	**-0.8**
AKHS	**Akhisar**	**1.81**	**85**	*i* P	**Pn**	**20 10 16.0**	**-0.6**
AKHS				*i* S	**Sn**	**20 10 42.8**	**+3.1**
PAIG	**Paliouri**	**1.85**	**311**	P	**Pn**	**20 10 16.6**	**-0.6**
PAIG				S	**Sn**	**20 10 41.3**	**+0.6**
NAIG	**Nisos Aigina**	**1.87**	**239**	*e*PN	**Pn**	**20 10 17.5**	**0.0**
NEO	**Neokhori**	**1.87**	**288**	↓*i*PN	**Pn**	**20 10 17.0**	**-0.5**
LPK	**Lapseki**	**1.90**	**30**	*e*PN	**Pn**	**20 10 16.9**	**-1.0**
XOR	**Xorichti**	**1.91**	**290**	P	**Pn**	**20 10 17.5**	**-0.5**
BALY	**Balya**	**1.92**	**58**	*i* P	**Pn**	**20 10 20.7**	**+2.5**
BALY				*i* S	**Sn**	**20 10 46.8**	**+4.2**
LKR	**Lokris**	**1.96**	**268**	P	**Pn**	**20 10 18.3**	**-0.5**
LKR				S	**Sn**	**20 10 44.6**	**+1.0**
LKR	**Lokris**	**1.96**	**268**	↓*i*Pn	**Pn**	**20 10 18.4**	**-0.4**
LKR				S	**Sn**	**20 10 44.6**	**+1.0**
OUR	**Ouranopolis**	**1.98**	**324**	P	**Pn**	**20 10 18.6**	**-0.4**
BALB	**Balikesir**	**2.05**	**63**	*e*PN	**Pn**	**20 10 18.8**	**-1.2**
ENEZ	**Enez**	**2.06**	**14**	*e*PN	**Pn**	**20 10 19.4**	**-0.6**
ALN	**Alexandroupoli**	**2.19**	**11**	P	**Pn**	**20 10 20.8**	**-1.2**
ALN				S	**Sn**	**20 10 50.1**	**+0.8**
BODT	**Bodrum**	**2.20**	**139**	*e*PN	**Pn**	**20 10 21.0**	**-1.0**
PLG	**Polygyros**	**2.28**	**316**	P	**Pn**	**20 10 22.9**	**-0.3**
PLG	**Polygyros**	**2.28**	**316**	*e*PN	**Pn**	**20 10 22.9**	**-0.3**
MLSB	**Milas**	**2.30**	**128**	*e*PN	**Pn**	**20 10 22.9**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.33**	**33**	*e*PN	**Pn**	**20 10 23.9**	**0.0**
MANT	**Manisa**	**2.40**	**95**	*i* P	**Pn**	**20 10 24.7**	**-0.1**
MANT				*i* S	**Sn**	**20 10 56.0**	**+4.6**
RDO	**Rodhopi**	**2.40**	**1**	↑*i*PN	**Pn**	**20 10 24.0**	**-0.9**
EDC	**Edincik**	**2.43**	**48**	*e*PN	**Pn**	**20 10 24.4**	**-0.7**
MRMT	**Marmara Adasi**	**2.46**	**40**	*e*PN	**Pn**	**20 10 25.9**	**+0.2**
BNT	**Bandirma**	**2.47**	**48**	*e*PN	**Pn**	**20 10 24.8**	**-1.0**
KULA	**Kula-Manisa**	**2.48**	**94**	*e*PN	**Pn**	**20 10 25.3**	**-0.6**
AGG	**Agios Georgios**	**2.50**	**277**	P	**Pn**	**20 10 26.1**	**0.0**
AGG				S	**Sn**	**20 10 56.6**	**-0.1**
DEMI	**Demirci**	**2.52**	**82**	*i* P	**Pn**	**20 10 26.0**	**-0.5**
DEMI				*i* S	**Sn**	**20 11 01.6**	**+4.3**
DST	**Dursunbey**	**2.58**	**69**	*e*PN	**Pn**	**20 10 27.2**	**0.0**
SOH	**Sokhos**	**2.66**	**322**	P	**Pn**	**20 10 28.5**	**+0.1**
SOH				S	**Sn**	**20 11 01.8**	**+1.0**
LIT	**Litokhoron**	**2.70**	**301**	P	**Pn**	**20 10 29.0**	**0.0**
LIT				S	**Sn**	**20 11 03.0**	**+1.2**
YER	**Yerkesik**	**2.72**	**125**	*e*PN	**Pn**	**20 10 28.7**	**-0.4**
THE	**Thessaloniki**	**2.72**	**315**	P	**Pn**	**20 10 29.4**	**+0.2**
TKD	**Tekirdag**	**2.74**	**34**	*e*PN	**Pn**	**20 10 29.1**	**-0.3**
THL	**Klokotos Trika**	**2.84**	**288**	P	**Pn**	**20 10 31.1**	**+0.3**
THL	**Klokotos Trika**	**2.84**	**288**	↓*i*PN	**Pn**	**20 10 31.0**	**+0.2**
VLI	**Veliai**	**2.87**	**226**	*e*PN	**Pn**	**20 10 31.5**	**+0.3**
EVR	**Evrytania**	**2.89**	**275**	*e*PN	**Pn**	**20 10 32.5**	**+0.9**
NVR	**Nevrokopi**	**2.90**	**335**	↑*i*PN	**Pn**	**20 10 31.4**	**-0.2**
KDZ	**Kurdzhali**	**2.91**	**359**	*i* P	**Pn**	**20 10 30.7**	**-1.1**
KDZ				*i* S	**Sn**	**20 11 14.7**	**+7.8**
DENT	**Denizli**	**2.94**	**108**	*e*PN	**Pn**	**20 10 32.4**	**+0.1**
KNT	**Kendrikon**	**3.14**	**321**	P	**Pn**	**20 10 35.5**	**+0.5**
KYTH	**Kithira**	**3.14**	**219**	*e*PN	**Pn**	**20 10 35.0**	**0.0**
MMB	**Musomiste**	**3.16**	**335**	*i* P	**Pn**	**20 10 35.3**	**+0.1**
DALT	**Dalyan (Mudla)**	**3.17**	**127**	*e*PN	**Pn**	**20 10 35.1**	**-0.2**
KHL	**Karahalli**	**3.18**	**96**	*e*PN	**Pn**	**20 10 35.9**	**+0.5**
ITM	**Ithomi**	**3.23**	**242**	*e*PN	**Pn**	**20 10 37.0**	**+0.8**
SLVT	**Silivri**	**3.24**	**39**	*e*PN	**Pn**	**20 10 36.2**	**-0.1**
EDRB	**Edirne**	**3.25**	**17**	*e*PN	**Pn**	**20 10 35.5**	**-0.9**
RLS	**Riolos of Patr**	**3.25**	**259**	*e*PN	**Pn**	**20 10 36.9**	**+0.6**
GRG	**Griva**	**3.26**	**314**	P	**Pn**	**20 10 37.7**	**+1.1**
ARG	**Arkhangelos**	**3.27**	**140**	*e*PN	**Pn**	**20 10 37.0**	**+0.3**
KZN	**Kozani**	**3.29**	**300**	P	**Pn**	**20 10 38.8**	**+1.8**
GEMT	**Gemlik**	**3.31**	**58**	*e*PN	**Pn**	**20 10 37.6**	**+0.3**
CTKS	**Kestanelik-??a**	**3.40**	**42**	*e*PN	**Pn**	**20 10 38.0**	**-0.5**
PLD	**Plovdiv**	**3.42**	**350**	P	**Pn**	**20 10 39.1**	**+0.3**
VAY	**Valandovo**	**3.42**	**320**	P	**Pn**	**20 10 39.1**	**+0.2**
VAY	**Valandovo**	**3.42**	**320**	*e*Pn	**Pn**	**20 10 39.9**	**+1.0**
VAY	**Valandovo**	**3.42**	**320**	*e*Pn	**Pn**	**20 10 40.0**	**+1.1**
VAY	**Valandovo**	**3.42**	**320**	*i* P	**Pn**	**20 10 40.4**	**+1.5**
KARP	**Karpathos**	**3.45**	**157**	*e*PN	**Pn**	**20 10 38.5**	**-0.7**
NPS	**Neapolis**	**3.47**	**179**	*e*PN	**Pn**	**20 10 39.5**	**0.0**
IDI	**Anoyia**	**3.48**	**188**	Pn	**Pn**	**20 10 38.7**	**-1.0**
	3.5nm,0.3s,baz=343,slow=9.6,SNR=25						
IDI				S	**Sn**	**20 11 19.0**	**-2.0**
	4.4nm,0.3s,baz=66,slow=20,SNR=3.2						
VAM	**Vamos**	**3.49**	**198**	*e*PN	**Pn**	**20 10 40.1**	**+0.4**
YLV	**Yalova**	**3.50**	**57**	*e*PN	**Pn**	**20 10 39.4**	**-0.5**
BGKT	**Bogazkoy**	**3.50**	**45**	*e*PN	**Pn**	**20 10 40.0**	**+0.1**
FETY	**Fethiye**	**3.53**	**125**	*e*PN	**Pn**	**20 10 40.6**	**+0.3**
LAST	**Lasithi**	**3.57**	**180**	P	**Pn**	**20 10 41.3**	**+0.4**
ISK	**Istanbul-Kandi**	**3.59**	**49**	*e*PN	**Pn**	**20 10 41.4**	**+0.3**
KKB	**Krupnik**	**3.63**	**330**	*i* P	**Pn**	**20 10 42.2**	**+0.5**
KKB				*i* S	**Sn**	**20 11 20.3**	**-4.4**
KKB				*i* Sg	**Sg**	**20 11 37.7**	**-4.2**
CAVI	**Cavuskoy**	**3.66**	**65**	*e*PN	**Pn**	**20 10 42.5**	**+0.4**
ZKR	**Zakros**	**3.66**	**171**	P	**Pn**	**20 10 41.8**	**-0.4**
ADVT	**Abdulvahap**	**3.68**	**61**	*e*PN	**Pn**	**20 10 43.0**	**+0.6**
KLYT	**Kilyos**	**3.70**	**46**	*e*PN	**Pn**	**20 10 43.0**	**+0.4**
SIVA	**Sivas**	**3.76**	**189**	P	**Pn**	**20 10 43.9**	**+0.5**
JMB	**Yambol**	**3.81**	**12**	P	**Pn**	**20 10 43.6**	**-0.6**
JMB	**Yambol**	**3.81**	**12**	*i* P	**Pn**	**20 10 44.0**	**-0.2**
JMB				*i* S	**Sn**	**20 11 28.0**	**-1.2**
JMB				*i* Sg	**Sg**	**20 11 46.9**	**-0.8**
VLS	**Valsamata**	**3.90**	**263**	P	**Pn**	**20 10 46.3**	**+0.9**
PGB	**Panagyurishte**	**3.94**	**345**	*i* P	**Pn**	**20 10 45.5**	**-0.5**
SHUT	**Suhut-Afyon**	**3.95**	**91**	*e*PN	**Pn**	**20 10 47.0**	**+0.8**
SILT	**Sile**	**3.99**	**52**	*e*PN	**Pn**	**20 10 47.2**	**+0.6**
ELL	**Elmali**	**4.01**	**118**	*e*PN	**Pn**	**20 10 47.4**	**+0.4**
EYL	**Eskiyayla**	**4.03**	**62**	*e*PN	**Pn**	**20 10 47.6**	**+0.5**
ISP	**Isparta**	**4.04**	**101**	*e*PN	**Pn**	**20 10 48.4**	**+1.1**
BCK	**Bucak**	**4.21**	**106**	*e*PN	**Pn**	**20 10 49.7**	**+0.1**
GULT	**Gulveren**	**4.22**	**65**	*e*PN	**Pn**	**20 10 50.7**	**+0.9**
VTS	**Vitosha**	**4.23**	**336**	↑P	**Pn**	**20 10 48.0**	**-1.9**
VTS	**Vitosha**	**4.23**	**336**	*i* P	**Pn**	**20 10 51.9**	**+2.0**
VTS	**Vitosha**	**4.23**	**336**	↑*i*P	**Pn**	**20 10 48.0**	**-1.9**
VTS	**Vitosha**	**4.23**	**336**	S	**Sg**	**20 12 00.2**	**-0.8**
SZH	**Strazhica**	**4.53**	**4**	*i* P	**Pn**	**20 10 53.3**	**-0.8**
SZH				*i* S	**Sn**	**20 11 46.9**	**-0.1**
PRD	**Provadia**	**4.68**	**17**	*i* P	**Pn**	**20 10 54.7**	**-1.4**
PRD				*i* S	**Sn**	**20 11 46.7**	**-3.9**
TIRR	**Tirgusor**	**6.11**	**20**	↓P	**Pn**	**20 11 14.7**	**-1.2**
TIRR	**Tirgusor**	**6.11**	**20**	↓*i*P	**Pn**	**20 11 14.7**	**-1.1**
HARR	**Harsova**	**6.22**	**16**	↓P	**Pn**	**20 11 16.8**	**-0.5**
HARR	**Harsova**	**6.22**	**16**	↓*i*P	**Pn**	**20 11 16.8**	**-0.4**
BRTR	**Keskin Array B**	**6.39**	**79**	Pn	**Pn**	**20 11 20.6**	**+1.0**
VOIR		**6.70**	**357**	↑P	**Pn**	**20 11 24.0**	**+0.1**
VOIR		**6.70**	**357**	↑*i*P	**Pn**	**20 11 24.0**	**+0.1**
MLR	**Muntele Rosu**	**6.75**	**3**	↓*i*P	**Pn**	**20 11 25.6**	**+1.0**
GZR	**Gura Zlata**	**6.95**	**344**	↑P	**Pn**	**20 11 27.3**	**0.0**
GZR	**Gura Zlata**	**6.95**	**344**	↑*i*P	**Pn**	**20 11 27.3**	**0.0**
PLOR	**Plostina**	**7.16**	**6**	↓*i*P	**Pn**	**20 11 31.0**	**+0.9**
VRI	**Vrincioaia**	**7.18**	**7**	↓P	**Pn**	**20 11 31.2**	**+0.7**
VRI	**Vrincioaia**	**7.18**	**7**	↓*i*P	**Pn**	**20 11 31.2**	**+0.8**
BZS	**Buzias**	**7.45**	**338**	↓P	**Pn**	**20 11 33.7**	**-0.5**
BZS	**Buzias**	**7.45**	**338**	↓*i*P	**Pn**	**20 11 33.7**	**-0.5**
DRGR		**8.30**	**347**	↑P	**

ISK 11 20:48:35.1,3997N×3002E,h11km,MD2.8
DDA 11 20:48:36.1,3984N×3006E,h8km±2km,Md2.8

ISC 11 20:48:35.8±0.5,3997N±003×3003E±005,h11km±8km,n14,σ0642/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAVI	**Cavuskoy**	**0.27**	**328**	*e*PG	**Pg**	**20 48 40.6**	**-0.7**
CAVI				*e*SG	**Sg**	**20 48 45.0**	**0.0**
BORA	**Eskisehir**	**0.34**	**106**	*i* P	**Pg**	**20 48 42.2**	**-0.2**
BORA				*i* S	**Sg**	**20 48 47.4**	**+0.4**
GPA	**Golpazari**	**0.38**	**34**	*e*PG	**Pg**	**20 48 43.1**	**-0.2**
GPA				*e*SG	**Sg**	**20 48 49.6**	**+1.2**
ADVT	**Abdulvahap**	**0.51**	**334**	*e*PG	**Pg**	**20 48 45.6**	**-0.1**
GULT	**Gulveren**	**0.59**	**39**	*e*PG	**Pg**	**20 48 46.7**	**-0.5**
EYL	**Eskiyayla**	**0.60**	**9**	*e*PG	**Pg**	**20 48 47.0**	**-0.5**
YLV	**Yalova**	**0.78**	**320**	*e*PG	**Pg**	**20 48 51.3**	**+0.5**
GEMT	**Gemlik**	**0.79**	**306**	*e*PG	**Pg**	**20 48 51.5**	**+0.4**
HRT	**Hereke**	**0.89**	**342**	*e*PG	**Pg**	**20 48 52.9**	**0.0**
GDZ	**Gediz**	**0.98**	**206**	*i* P	**Pg**	**20 48 54.3**	**-0.3**
GDZ				*i* S	**Sg**	**20 49 07.6**	**+0.3**
MDU	**Mudurnu**	**1.03**	**61**	*e*PG	**Pg**	**20 48 55.3**	**-0.3**
DST	**Dursunbey**	**1.14**	**252**	*e*PN	**Pn**	**20 48 57.6**	**-0.1**
DEMI	**Demirci**	**1.38**	**228**	*i* P	**Pn**	**20 49 01.3**	**+0.4**
DEMI				*i* S	**Sb**	**20 49 19.2**	**+0.1**
SHUT	**Suhut-Afyon**	**1.47**	**164**	*e*PN	**Pn**	**20 49 02.0**	**-0.3**

MAN 11 21:00:38,1133N×12563E,h23km,mb4.2,ML3.0,MS2.7,1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.33**	**325**	*e*P	Pb	21 00 47.1	+1.8
BESP				*e*S	Sb	21 00 53.3	+3.0
PLP	**Palo**	**0.66**	**256**⇓	*e*P	Pb	21 00 51.3	+0.4
PLP				*e*S	Sb	21 00 59.9	+0.3
OCLP	**Ormoc**	**1.04**	**255**	*e*P	Pn	21 00 56.6	-0.6
OCLP				*e*S	Sb	21 01 11.6	+1.0
MSLP	**Maasin**	**1.41**	**213**	*e*P	Pn	21 01 03.9	+1.6
MSLP				*e*S	Sn	21 01 23.6	+3.4
CNP	**Catarman**	**1.51**	**321**	*e*P	Pn	21 01 04.7	+1.1
CNP				*e*S	Sn	21 01 24.2	+1.6

IDC 11 21:05:51.1±1.7,110N×12662E,h0km,mb3.6/3,mb1 3.8/3,mb1mx3.5/15,mbtmp3.6/3,MS3.2/2,Ms1 3.2/2,ms1mx2.3/21,Error ellipse: s-maj=173.9km s-min=21.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.16**	**228**	LR	LR	21 12 28.0	
	comp=Z,28nm,18.2s,baz=339,slow=43						
WRA	**Warramunga Arr**	**22.25**	**160**	P	P	21 10 49.6	-0.1
	1.9nm,0.5s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.62**	**164**	P	P	21 11 22.6	+0.2
	0.4nm,0.3s,baz=338,slow=10,SNR=9.8						
MKAR	**Makanchi Array**	**59.65**	**326**	P	P	21 15 57.1	0.0
	0.3nm,0.5s,baz=119,slow=8.1,SNR=7.0						
KURK	**Kurchatov**	**63.89**	**328**	P	P	21 16 25.6	0.0
	baz=124,slow=6.5						
KDAK	**Kodiak Island**	**84.16**	**32**	LR	LR	21 57 27.8	
	comp=Z,64nm,18.9s,baz=111,slow=37						

IDC 11 21:11:44.2±3.0,1043S×6622E,h0km,mb3.8/4,mb1 3.9/4,mb1mx3.6/21,mbtmp3.8/4,Error ellipse: s-maj=92.8km s-min=35.1km az=51.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**58.75**	**13**	P	P	21 21 42.6	-1.2
	0.4nm,0.7s,baz=212,slow=7.8,SNR=3.6						
KURK	**Kurchatov**	**61.84**	**9**	P	P	21 22 04.5	-0.4
	baz=207,slow=7.2						
WRA	**Warramunga Arr**	**66.06**	**107**	P	P	21 22 33.3	-0.1
	1.5nm,1.1s,baz=277,slow=5.7,SNR=5.5						
SONM	**Songino Array**	**68.07**	**28**	P	P	21 22 47.0	+1.5
	1.1nm,0.8s,baz=223,slow=8.1,SNR=4.5						
AKASG	**Malin Array Be**	**68.85**	**336**	P	P	21 22 50.5	+0.2
	0.4nm,0.6s,baz=139,slow=5.6,SNR=5.1						

CASC 11 21:12:37.6±1.8,874N×8411W,h13km±34km,MD4.0,6C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.68**	**356**⇑	*e*P	Pg	21 12 50.5	-0.4
BUS	**Buena Vista**	**0.88**	**23**	*e*P	Pg	21 12 54.5	-0.2
BAR1		**0.94**	**58**⇑	*e*P	Pb	21 12 54.9	-0.8
BAR1				*e*S	Sg	21 13 07.8	-0.1
ACR	**Cerro Adams**	**0.94**	**95**⇑	*e*P	Pb	21 12 54.6	-1.1
ACR				*e*S	Sg	21 13 06.0	-1.9
URSC	**Urasca**	**1.14**	**17**⇑	*e*P	Pb	21 12 58.2	-0.9
PRS1	**Puriscal**	**1.25**	**351**⇓	*e*P	Pn	21 12 57.9	-2.9
CGA2	**Cerro Gallo 2**	**1.32**	**345**	*e*P	Pn	21 13 00.0	-1.7
TBS2		**1.44**	**88**⇑	*e*P	Pn	21 13 03.6	+0.3
CNI	**Changuinola**	**1.71**	**67**⇑	*e*P	Pn	21 13 07.3	+0.2

IDC 11 21:18:55.1±4.2,235S×14155E,h0km,mb3.5/2,mb1 3.7/3,mb1mx3.5/14,mbtmp3.5/3,ML3.7/1,Error ellipse: s-maj=148.5km s-min=29.8km az=89.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.85**	**201**	P	Pn	21 23 16.6	-0.7
	0.2nm,0.3s,baz=23,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**22.45**	**199**	P	P	21 23 55.9	0.0
	0.9nm,0.5s,baz=28,slow=11,SNR=17						
MKAR	**Makanchi Array**	**71.25**	**321**	P	P	21 30 16.6	+0.3
	0.7nm,0.9s,baz=96,slow=8.0,SNR=5.6						

DHMR 11 21:21:31.3±1.3,1180N×40.7E,h12km±55km,ML4.5
SZGRF 11 21:21:34.1,1152N×4187E,h33km,mb4.8,Ethiopia
CSEM 11 21:21:38.6±0.1,1213N×4071E,h2km,mb4.7/32,Ms3.5,Error ellipse: s-maj=3.9km s-min=2.8km az=168.0
ISCJB 11 21:21:40.0±0.5,1213N±007×4068E±004,h10km,mb4.5/46,MS3.8/22,Error ellipse: s-maj=9.9km s-min=5.4km az=174.4
MOS 11 21:21:40.1±0.9,1216N×4068E,h10km,mb4.8/24,Error ellipse: s-maj=11.1km s-min=4.7km az=108.7
IDC 11 21:21:41.0±1.0,1222N×4063E,h0km,mb3.9/13,mb1 4.1/13,mb1mx4.0/23,mbtmp3.9/13,MS3.8/17,Ms1 3.8/17,ms1mx3.7/23,Error ellipse: s-maj=26.3km s-min=18.5km az=6.0
NEIC 11 21:21:41.8±0.4,1215N×4069E,h10km,mb4.7/30,Error ellipse: s-maj=8.9km s-min=7.0km az=171.0

ISC 11 21:21:41.9±0.5,1216N±007×4073E±004,h10km,n196,σ0993/192,mb4.5/46,MS3.8/22,12C-12D,Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**3.48**	**72**⇓	*i* P	**Pn**	**21 22 36.7**	**+0.6**
TRBA				*i* S	**Sn**	**21 23 27.5**	**+10**
TRBA				AML	AML	21 23 33.8	
	comp=E,2μm,0.8s						
UDYN	**Al 'Udayn**	**3.63**	**60**⇑	*i* P	**Pn**	**21 22 37.8**	**-0.4**
UDYN				*i* S	**Sn**	**21 23 31.7**	**+11**
UDYN				AML	AML	21 23 50.1	
	comp=Z,1μm,0.8s						
KAMRY	**Kamaran Island**	**3.65**	**30**	*i* P	**Pn**	**21 22 38.6**	**+0.1**
KAMRY				*i* S	**Sn**	**21 23 29.6**	**+8.0**
DHBB	**Dhamar BB**	**4.30**	**56**	*i* P	**Pn**	**21 22 45.8**	**-1.6**
DHBB				*i* S	**Sn**	**21 23 44.0**	**+6.4**
HAJJ	**Hajjah**	**4.49**	**38**	*i* P	**Pn**	**21 22 47.9**	**-2.1**
HAJJ				*i* S	**Sn**	**21 23 48.5**	**+6.1**
LBOS		**4.72**	**68**⇓	*i* P	**Pn**	**21 22 51.8**	**-1.5**
LBOS				*i* S	**Sn**	**21 23 54.5**	**+6.4**
BDHA	**Al Bayda'**	**5.05**	**69**⇑	*i* P	**Pn**	**21 22 56.1**	**-1.6**
BDHA				*i* S	**Sn**	**21 24 02.2**	**+6.0**
ASF	**Jabal al Asfar**	**20.23**	**351**	P	**P**	**21 26 18.7**	**+1.5**
	comp=Z,6.1nm,0.9s,baz=130,slow=14,SNR=3.9						
ASF				LR	LR	21 33 32.2	
	comp=Z,101nm,18.7s,MS3.2,baz=168,slow=35						
GNI	**Garni**	**28.11**	**7**	LR	LR	21 39 54.0	
	comp=Z,187nm,18.4s,MS3.7,baz=327,slow=39						
GNI	**Garni**	**28.11**	**7**	P	**P**	**21 27 33.9**	**+0.1**
GNI	**Garni**	**28.11**	**7**	P	**P**	**21 27 33.9**	**0.0**
BRTR	**Keskin Array B**	**28.16**	**348**	P	**P**	**21 27 35.5**	**+1.1**
	comp=Z,3.3nm,1.0s,mb3.9						
ANTO	**Ankara**	**28.48**	**347**	*e*P	**P**	**21 27 37.9**	**+0.7**
ANTO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
ANTO	**Ankara**	**28.48**	**347**	*e*P	**P**	**21 27 37.9**	**+0.7**
	comp=Z,8.1nm,0.8s,mb4.4						
LSZ	**Lusaka**	**29.95**	**205**	*e*P	**P**	**21 27 50.4**	**-0.1**
	comp=Z,3.8nm,1.2s,mb4.0						
LSZ	**Lusaka**	**29.95**	**205**	*e*P	**P**	**21 27 50.4**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
LSZ	**Lusaka**	**29.95**	**205**	*e*P	**P**	**21 27 50.3**	**-0.2**
	comp=Z,3.8nm,1.2s,mb4.0						
KIV	**Kislovodsk**	**31.73**	**3**	*e*P	**P**	**21 28 05.9**	**0.0**
KIV	**Kislovodsk**	**31.73**	**3**	*e*P	**P**	**21 28 05.9**	**0.0**
TIRR	**Tirgusor**	**33.88**	**344**	P	**P**	**21 28 25.2**	**+0.5**
TIRR	**Tirgusor**	**33.88**	**344**	P	**P**	**21 28 25.2**	**+0.5**
VTS	**Vitosha**	**33.93**	**337**⇑	P	**P**	**21 28 22.0**	**-3.2**
VTS	**Vitosha**	**33.93**	**337**⇑	*i*P	**P**	**21 28 22.0**	**-3.2**
KBL	**Kabul**	**34.03**	**44**	*e*P	**P**	**21 28 26.9**	**+0.6**
	comp=Z,2.6nm,0.9s,mb4.2						
KBL	**Kabul**	**34.03**	**44**	*e*P	**P**	**21 28 26.9**	**+0.7**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KBL	**Kabul**	**34.03**	**44**	*e*P	**P**	**21 28 26.9**	**+0.7**
	comp=Z,2.6nm,0.9s,mb4.2						
TIP	**Timpagrande**	**34.29**	**326**	P	**P**	**21 28 28.0**	**-0.4**
TIP	**Timpagrande**	**34.29**	**326**	P	**P**	**21 28 28.0**	**-0.4**
TAM	**Tamanrasset**	**35.12**	**292**	*e*P	**P**	**21 28 36.4**	**+0.6**
TAM	**Tamanrasset**	**35.12**	**292**	*e*P	**P**	**21 28 36.4**	**+0.6**
VRI	**Vrincioaia**	**35.64**	**343**⇑	P	**P**	**21 28 41.4**	**+1.4**
VRI	**Vrincioaia**	**35.64**	**343**⇑	*i*P	**P**	**21 28 41.4**	**+1.5**
PLOR	**Plostina**	**35.65**	**343**⇑	*i*P	**P**	**21 28 41.7**	**+1.7**
VOIR		**35.76**	**341**	⇓P	**P**	**21 28 42.3**	**+1.3**
VOIR		**35.76**	**341**	⇓*i*P	**P**	**21 28 42.3**	**+1.3**
GZR	**Gura Zlata**	**36.49**	**339**	⇓P	**P**	**21 28 46.9**	**-0.3**
GZR	**Gura Zlata**	**36.49**	**339**	⇓*i*P	**P**	**21 28 46.9**	**-0.3**
KEST	**Kesra**	**36.78**	**315**	P	**P**	**21 28 49.5**	**-0.4**
	comp=Z,2.6nm,0.9s,mb4.1,baz=163,slow=20,SNR=1.9						
KEST				LR	LR	21 44 17.3	
	comp=Z,29nm,18.5s,MS3.1,baz=227,slow=37						
BZS	**Buzias**	**37.10**	**338**	⇓P	**P**	**21 28 52.5**	**+0.1**
BZS	**Buzias**	**37.10**	**338**	⇓*i*P	**P**	**21 28 52.5**	**+0.1**
DRGR		**37.72**	**340**	⇓P	**P**	**21 28 55.5**	**-2.2**
DRGR		**37.72**	**340**	⇓*i*P	**P**	**21 28 55.5**	**-2.2**
TORD	**Torodi Ar. Bea**	**38.07**	**276**	P	**P**	**21 29 00.5**	**-0.6**
	comp=Z,2.1nm,1.1s,mb3.8,baz=92,slow=5.8,SNR=8.8						
TORD				PcP	PcP	21 31 16.7	+0.3
	comp=Z,0.5nm,0.9s,baz=112,slow=2.6,SNR=3.8						
TORD				LR	LR	21 44 44.1	
	comp=Z,297nm,18.6s,MS4.1,baz=115,slow=36						
TORD	**Torodi Ar. Bea**	**38.07**	**276**	P	**P**	**21 29 00.5**	**-0.6**
TORD				PcP	PcP	21 31 16.7	+0.3
TORD				LR	LR	21 44 44.1	
TSUM	**Tsumeb**	**38.62**	**217**	*e*P	**P**	**21 29 04.4**	**-1.1**
TSUM	**Tsumeb**	**38.62**	**217**	*e*P	**P**	**21 29 04.4**	**-1.1**
PKSM	**Moragy**	**38.76**	**335**⇑	P	**P**	**21 29 06.8**	**+0.3**
PKSM	**Moragy**	**38.76**	**335**⇑	*i*P	**P**	**21 29 06.8**	**+0.4**
AKASG	**Malin Array Be**	**39.57**	**349**	P	**P**	**21 29 12.0**	**-1.1**
	comp=Z,0.2nm,0.2s,mb3.4,baz=167,slow=7.1,SNR=9.7						
PSZ	**Piszkesteto**	**39.68**	**338**⇑	P	**P**	**21 29 14.7**	**+0.6**
PSZ	**Piszkesteto**	**39.68**	**338**⇑	*i*P	**P**	**21 29 14.7**	**+0.6**
KOLS	**Kolonicke sedl**	**39.74**	**341**	*e*P	**P**	**21 29 17.2**	**+2.7**
CRVS	**Cervenica-Dubn**	**39.97**	**340**	*e*P	**P**	**21 29 17.4**	**+0.9**
KWP	**Kalwaria**	**40.22**	**342**	*e*P	**P**	**21 29 18.0**	**-0.5**
KWP	**Kalwaria**	**40.22**	**342**	*e*P	**P**	**21 29 18.0**	**-0.5**
KWP	**Kalwaria**	**40.22**	**342**	⇑*i*P	**P**	**21 29 20.3**	**+1.8**
STHS	**Stebnicka Huta**	**40.49**	**340**	*e*P	**P**	**21 29 21.5**	**+0.7**
STHS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
STHS	**Stebnicka Huta**	**40.49**	**340**	*e*P	**P**	**21 29 21.5**	**+0.7**
	comp=Z,5.3nm,1.3s,mb4.1						
VYHS	**Vyhne**	**40.55**	**338**	*e*P	**P**	**21 29 21.6**	**+0.3**
AKTK	**Aktyubinsk**	**40.72**	**17**	P	**P**	**21 29 23.4**	**+0.8**
AKTK	**Aktyubinsk**	**40.72**	**17**	P	**P**	**21 29 23.4**	**+0.8**
AKTO	**Aktyubinsk**	**40.72**	**17**	P	**P**	**21 29 23.4**	**+0.8**
	comp=Z,1.5nm,0.8s,mb3.7,baz=205,slow=11,SNR=4.2						
KOLL	**Kolacno**	**40.78**	**337**	*e*P	**P**	**21 29 24.2**	**+1.0**
ZST	**Bratislava**	**40.98**	**336**	*e*P	**P**	**21 29 25.9**	**+1.0**
ZST				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
ZST	**Bratislava**	**40.98**	**336**	*e*P	**P**	**21 29 25.9**	**+1.0**
	comp=Z,7.7nm,1.0s,mb4.3						
MODS	**Modra-Piesok**	**41.05**	**336**	*e*P	**P**	**21 29 24.9**	**-0.6**
MODS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
MODS	**Modra-Piesok**	**41.05**	**336**	*e*P	**P**	**21 29 24.9**	**-0.6**
	comp=Z,9.9nm,1.3s,mb4.3						
VLC	**Villacollemand**	**41.18**	**326**	P	**P**	**21 29 25.6**	**-0.9**
VLC	**Villacollemand**	**41.18**	**326**	P	**P**	**21 29 25.6**	**-0.9**
EKS2	**Erkin-Say**	**41.77**	**37**	*e*P	**P**	**21 29 31.8**	**+0.4**
EKS2				*e*PP	PP	21 31 09.4	+1.4
EKS2	**Erkin-Say**	**41.77**	**37**	*e*P	**P**	**21 29 31.8**	**+0.4**
VRAC	**Vranov**	**42.07**	**336**	⇓P	**P**	**21 29 33.9**	**0.0**
VRAC	**Vranov**	**42.07**	**336**	⇓*i*P	**P**	**21 29 33.8**	**0.0**
MORC	**Moravsky Berou**	**42.09**	**338**	*e*P	**P**	**21 29 31.9**	**-2.1**
	comp=Z,3.4nm,0.9s,mb4.0						
MORC	**Moravsky Berou**	**42.09**	**338**	*e*P	**P**	**21 29 31.9**	**-2.1**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
MORC	**Moravsky Berou**	**42.09**	**338**	*e*P	**P**	**21 29 31.9**	**-2.1**
	comp=Z,3.4nm,0.9s,mb4.0						
AAK	**Ala-Archa**	**42.17**	**38**	*e*P	**P**	**21 29 35.0**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.5						
AAK	**Ala-Archa**	**42.17**	**38**	*e*P	**P**	**21 29 35.0**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
AAK	**Ala-Archa**	**42.17**	**38**	*e*P	**P**	**21 29 35.0**	**+0.2**
	comp=Z,0.5nm,0.4s,mb3.5						
GEC2	**GERESS Array S**	**42.90**	**334**	*e*P	**P**	**21 29 40.0**	**-0.6**
GEC2				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.7						
GEC2	**GERESS Array S**	**42.90**	**334**	*e*P	**P**	**21 29 40.0**	**-0.6**
	comp=Z,21nm,1.4s,mb4.7						
GERES	**GERESS Array B**	**42.90**	**334**	P	**P**	**21 29 40.4**	**-0.1**
	comp=Z,3.4nm,1.0s,mb4.0,baz=124,slow=7.2,SNR=15						
OBN	**Obninsk**	**42.98**	**356**	*e*P	**P**	**21 29 40.8**	**-0.3**
	comp=Z,34nm,1.5s,mb4.9						
OBN	**Obninsk**	**42.98**	**356**	*e*P	**P**	**21 29 40.9**	**-0.2**
OBN				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.7						
OBN	**Obninsk**	**42.98**	**356**	*e*P	**P**	**21 29 40.9**	**-0.2**
	comp=Z,24nm,1.5s,mb4.7						
TKM2	**Tokmak 2**	**43.00**	**38**	*e*P	**P**	**21 29 42.0**	**+0.5**
TKM2	**Tokmak 2**	**43.00**	**38**	*e*P	**P**	**21 29 42.0**	**+0.5**
DPC	**Dobruska-Polom**	**43.02**	**337**	*e*P	**P**	**21 29 41.1**	**-0.4**
KHC	**Kasperske Hory**	**43.17**	**334**	*e*P	**P**	**21 29 42.0**	**-0.7**
BOSA	**Boshof**	**43.20**	**200**	LR	LR	21 48 24.4	
	comp=Z,355nm,19.2s,MS4.3,baz=27,slow=37						
UPC	**Upice**	**43.26**	**337**	*e*P	**P**	**21 29 43.2**	**-0.2**
PRU	**Pruhonice**	**43.43**	**336**	*e*P	**P**	**21 29 44.9**	**+0.1**
MBDF	**Montbardon**	**43.54**	**325**	*e*P	**P**	**21 29 45.4**	**-0.4**
	comp=Z,42nm,1.0s,mb4.8						
MBDF	**Montbardon**	**43.54**	**325**	*e*P	**P**	**21 29 45.4**	**-0.4**
MBDF				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
MBDF	**Montbardon**	**43.54**	**325**	*e*P	**P**	**21 29 45.4**	**-0.4**
	comp=Z,21nm,1.0s,mb4.8						
PVCC	**Panska Ves**	**43.84**	**336**	*e*P	**P**	**21 29 47.8**	**-0.3**
LPL	**La Plagne**	**44.04**	**326**	*e*P	**P**	**21 29 48.2**	**-1.6**
	comp=Z,9.6nm,1.0s,mb4.2						
LPL	**La Plagne**	**44.04**	**326**	*e*P	**P**	**21 29 48.2**	**-1.6**
LPL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
LPL	**La Plagne**	**44.04**	**326**	*e*P	**P**	**21 29 48.2**	**-1.6**
	comp=Z,4.8nm,1.0s,mb4.2						
ORIF	**Oris-en-Rattie**	**44.16**	**324**	*e*P	**P**	**21 29 50.6**	**-0.2**
	comp=Z,44nm,1.4s,mb4.7						
ORIF				*e*MLR	MLR		
	comp=E,85nm,17.0s,MS3.4						
ORIF	**Oris-en-Rattie**	**44.16**	**324**	*e*P	**P**	**21 29 50.6**	**-0.2**
ORIF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
ORIF	**Oris-en-Rattie**	**44.16**	**324**	*e*P	**P**	**21 29 50.6**	**-0.2**
	comp=Z,22nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**44.36**	**336**	*e*P	**P**	**21 29 51.0**	**-1.3**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.3						
BRG	**Berggiesshubel**	**44.36**	**336**	*e*P	**P**	**21 29 51.0**	**-1.3**
	comp=Z,8.4nm,1.4s,mb4.3						
TANN	**Tannenbergstha**	**44.62**	**334**	*e*P	**P**	**21 29 53.8**	**-0.5**
	comp=Z,40nm,2.0s,mb4.9						
GRA1	**Grafenberg Arr**	**44.62**	**333**	*e*P	**P**	**21 29 52.7**	**-1.7**
	comp=Z,10.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**44.62**	**333**	*e*P	**P**	**21 29 52.7**	**-1.7**
GRF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**44.62**	**333**	*e*P	**P**	**21 29 52.7**	**-1.7**
GRF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**44.62**	**333**	*e*P	**P**	**21 29 52.7**	**-1.7**
	comp=Z,10.0nm,1.2s,mb4.5						
WERD	**Werda**	**44.70**	**334**	*e*P	**P**	**21 29 54.1**	**-0.9**
	comp=Z,19nm,1.5s,mb4.7						
CLL	**Collm**	**45.07**	**336**	*e*P	**P**	**21 29 59.0**	**+1.1**
CABF	**La Chapelle**	**45.07**	**326**	*e*P	**P**	**21 29 56.5**	**-1.5**
	comp=Z,30nm,1.1s,mb4.7						
CABF	**La Chapelle**	**45.07**	**326**	*e*P	**P**	**21 29 56.5**	**-1.5**
CABF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
CABF	**La Chapelle**	**45.07**	**326**	*e*P	**P**	**21 29 56.5**	**-1.5**
	comp=Z,15nm,1.1s,mb4.7						
DBIC	**Dimbokro**	**45.26**	**267**	LR	LR	21 47 50.5	
	comp=Z,129nm,21.1s,MS3.8,baz=64,slow=35						
HINF	**Hinteralfeld**	**45.43**	**328**	*e*P	**P**	**21 30 00.6**	**-0.3**
	comp=Z,27nm,1.1s,mb4.7						
HINF	**Hinteralfeld**	**45.43**	**328**	*e*P	**P**	**21 30 00.6**	**-0.3**
HINF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7						
HINF	**Hinteralfeld**	**45.43**	**328**	*e*P	**P**	**21 30 00.6**	**-0.3**
	comp=Z,13nm,1.1s,mb4.7						
LIC	**Lamto**	**45.50**	**267**	*e*P	**P**	**21 30 03.1**	**+1.1**
	comp=Z,19nm,1.0s,mb4.7						
LIC				*e*MLR	MLR		
	comp=Z,186nm,21.8s,MS3.7						
LIC	**Lamto**	**45.50**	**267**	*e*P	**P**	**21 30 03.1**	**+1.1**
	comp=Z,9.4nm,1.0s,mb4.7						
LIC				LR	LR		
	comp=Z,90nm,21.8s,MS3.7						
LIC	**Lamto**	**45.50**	**267**	*e*P	**P**	**21 30 03.1**	**+1.1**
	comp=Z,9.4nm,1.0s,mb4.7						
CDF	**Champ du Feu**	**45.60**	**329**	*e*P	**P**	**21 30 01.1**	**-1.1**
	comp=Z,30nm,1.4s,mb4.7						
CDF	**Champ du Feu**	**45.60**	**329**	*e*P	**P**	**21 30 01.1**	**-1.1**
CDF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
CDF	**Champ du Feu**	**45.60**	**329**	*e*P	**P**	**21 30 01.1**	**-1.1**
	comp=Z,15nm,1.4s,mb4.7						
HAU	**Haudompre**	**45.81**	**328**	*e*P	**P**	**21 30 03.3**	**-0.6**
HAU				*e*MLR	MLR		
	comp=Z,70nm,17.0s,MS3.4						
HAU	**Haudompre**	**45.81**	**328**	*e*P	**P**	**21 30 03.3**	**-0.6**
HAU				MLR	MLR		
	comp=Z,70nm,17.0s,MS3.7						
ARU	**Arti**	**46.28**	**14**	*e*P	**P**	**21 30 08.2**	**+0.7**
	comp=Z,3.3nm,1.0s,mb4.2						
ARU	**Arti**	**46.28**	**14**	*e*P	**P**	**21 30 08.2**	**+0.8**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ARU	**Arti**	**46.28**	**14**	*e*P	**P**	**21 30 08.2**	**+0.8**
	comp=Z,3.3nm,1.0s,mb4.2						
SMF	**Signal de Mont**	**46.33**	**325**	*e*P	**P**	**21 30 08.3**	**+0.3**
EPF	**Esparros**	**46.49**	**319**	*e*P	**P**	**21 30 09.4**	**+0.1**
LOR	**Lormes**	**46.69**	**326**	*e*P	**P**	**21 30 10.6**	**-0.2**
	comp=Z,54nm,1.5s,mb5.0						
LOR				*e*MLR	MLR		
	comp=Z,93nm,19.6s,MS3.5						
LOR	**Lormes**	**46.69**	**326**	*e*P	**P**	**21 30 10.6**	**-0.2**
	comp=Z,27nm,1.5s,mb5.0						
LOR				LR	LR		
	comp=Z,90nm,19.6s,MS3.7						
LOR	**Lormes**	**46.69**	**326**	*e*P	**P**	**21 30 10.6**	**-0.2**
LOR				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0						
LOR				MLR	MLR		
	comp=Z,90nm,19.6s,MS3.7						
AVF	**Avril sur Loir**	**46.69**	**325**	*e*P	**P**	**21 30 11.0**	**+0.2**
	comp=Z,36nm,1.6s,mb4.7						
**A

CMAR	**Chiang Mai Arr**	**56.31**	**76**	P	**P**		**21 31 24.1**	**+0.8**
	comp=Z,0.6nm,0.8s,mb3.7,baz=284,slow=7.0,SNR=6.1							
CMAR				LR	LR		21 52 04.0	
	comp=Z,54nm,21.6s,MS3.6,baz=300,slow=32							
CMAR	**Chiang Mai Arr**	**56.31**	**76**	P	**P**		**21 31 24.1**	**+0.8**
CMAR				LR	LR		21 52 04.0	
CMAR	**Chiang Mai Arr**	**56.31**	**76**	P	**P**		**21 31 24.1**	**+0.8**
ARCES	**ARCESS Array B**	**58.15**	**354**	LR	LR		21 58 45.9	
	comp=Z,85nm,18.1s,MS3.9,baz=350,slow=38							
TLY	**Talaya**	**63.84**	**38**	P	**P**		**21 32 14.8**	**+0.3**
TLY	**Talaya**	**63.84**	**38**	P	**P**		**21 32 14.8**	**+0.4**
SONM	**Songino Array**	**64.78**	**43**	P	**P**		**21 32 21.3**	**+0.5**
	comp=Z,1.9nm,1.0s,mb4.1,baz=250,slow=5.9,SNR=7.9							
SONM				LR	LR		22 04 30.6	
	comp=Z,226nm,19.8s,MS4.4,baz=237,slow=40							
KSRS	**Korea Array**	**80.52**	**54**	LR	LR		22 14 46.1	
	comp=Z,54nm,19.7s,MS3.9,baz=5.3,slow=40							
MAW	**Mawson**	**81.15**	**172**	LR	LR		22 06 17.7	
	comp=Z,64nm,19.8s,MS4.0,baz=118,slow=33							
BATI	**Baumata**	**85.32**	**101**	P	**P**		**21 34 21.9**	**+1.9**
	comp=Z,16nm,0.8s,mb5.2,baz=320,slow=3.2,SNR=6.5							
MJAR	**Matsushiro Arr**	**88.77**	**53**	LR	LR		22 20 14.5	
	comp=Z,46nm,18.5s,MS3.9,baz=45,slow=40							
BDFB	**Brasilia**	**92.03**	**255**	LR	LR		22 13 56.8	
	comp=Z,46nm,18.6s,MS4.0,baz=13,slow=34							
PETK	**Petropavlovsk-**	**95.77**	**33**	LR	LR		22 27 01.3	
	comp=Z,52nm,18.1s,MS4.0,baz=85,slow=41							
NVAR	**Mina Array Bea**	**125.99**	**340**	PKP	PKPdf		21 40 46.5	+1.8
	comp=Z,0.8nm,0.8s,baz=102,slow=2.9,SNR=3.9							
TXAR	**Lajitas Array**	**126.31**	**321**	PKP	PKPdf		21 40 46.1	+0.5
	comp=Z,0.6nm,0.8s,baz=44,slow=3.8,SNR=6.9							

IDC ***11*** *21:27:21.5±3.6, 597S×14925E, h0km, mb4.2/2, mb1 4.6/2, mb1mx3.8/14, mbtmp4.4/2, Error ellipse: s-maj=121.9km s-min=46.2km az=113.0*

ISCJB ***11*** *21:27:28.0±3.6, 6.1S±01×1492E±03, h68km±26km, Error ellipse: s-maj=55.9km s-min=20.2km az=13.2*

NEIC ***11*** *21:27:29.1±2.2, 6.12S×14935E, h66km±16km, mb4.2/2, Error ellipse: s-maj=32.2km s-min=12.1km az=100.0*

ISC 11 21:27:30.4±3.5, 62S±01×1492E±03, h71km±26km, n14, σ0s95/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.79**	**211**	*e*Pn	**Pn**	**21 28 27.0**	**+0.6**
PMG				*e*Sn	**Sn**	**21 29 10.3**	**+0.6**
WRAB	**Tennant Creek**	**19.86**	**225**	*e*P	**Pn**	**21 31 56.6**	**-1.5**
	14nm,0.6s						
WB2	**Warramunga Arr**	**19.87**	**225**	*e*P	**Pn**	**21 31 56.5**	**-1.7**
WRA	**Warramunga Arr**	**19.88**	**225**	P	**Pn**	**21 31 56.6**	**-1.6**
	12nm,0.4s,baz=51,slow=11,SNR=25						
ASAR	**Alice Springs**	**22.77**	**219**	P	**P**	**21 32 28.0**	**+1.0**
	2.7nm,0.5s,baz=52,slow=9.6,SNR=62						
FITZ	**Fitzroy Crossi**	**25.83**	**241**	P	**P**	**21 32 56.5**	**+1.1**
STKA	**Stephens Creek**	**26.55**	**195**	*e*P	**P**	**21 33 01.0**	**-0.6**
	5.6nm,1.2s						
MBWA	**Marble Bar**	**32.16**	**239**	P	**P**	**21 33 51.9**	**+0.3**
NWAO	**Narrogin (SRO)**	**39.88**	**224**	P	**P**	**21 34 58.6**	**+1.3**
BJT	**Baijiatuau**	**55.09**	**329**	P	**P**	**21 36 54.9**	**-0.4**
ULN	**Ulaanbaatar**	**65.29**	**330**	P	**P**	**21 38 04.7**	**-0.1**
LSA	**Lhasa**	**66.06**	**306**	P	**P**	**21 38 10.5**	**+0.4**
TKM2	**Tokmak 2**	**82.27**	**315**	P	**P**	**21 39 44.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**147.21**	**285**	PKPbc	PKPbc	21 47 07.2	+0.5
	0.1nm,0.3s,baz=80,slow=2.9,SNR=4.6						

ISCJB ***11*** *21:38:46.2±1.4, 76S±0.1×1266E±0.1, h316km±15km, mb3.4/5, Error ellipse: s-maj=25.1km s-min=7.8km az=141.9*

NEIC ***11*** *21:38:47.2±2.9, 770S×12647E, h312km±35km, mb3.8/4, Error ellipse: s-maj=24.5km s-min=14.0km az=223.0*

IDC ***11*** *21:38:49.6±4.5, 782S×12630E, h337km±48km, mb2.9/4, mb1 3.2/7, mb1mx3.1/15, mbtmp3.1/7, Error ellipse: s-maj=84.2km s-min=13.6km az=55.0*

ISC 11 21:38:48.5±1.4, 778S±010×1265E±01, h327km±14km, n17, σ0s88/21, mb3.3/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.67**	**229**	P	**Pn**	**21 39 52.8**	**0.0**
	28nm,0.3s,baz=32,slow=3.4,SNR=27						
BATI				S	**S**	**21 40 44.3**	**-0.2**
	24nm,0.3s,baz=267,slow=18,SNR=16						
WRAB	**Tennant Creek**	**14.30**	**148**	*e*Pn	**Pn**	**21 41 56.3**	**-1.6**
	2.1nm,0.4s						
WRAB				*e*S	**S**	**21 44 31.0**	**-1.5**
WRA	**Warramunga Arr**	**14.30**	**149**	P	**P**	**21 41 56.2**	**-0.4**
	0.8nm,0.3s,baz=324,slow=12,SNR=11						
WRA				S	**S**	**21 44 32.9**	**+0.3**
	0.2nm,0.3s,baz=332,slow=25,SNR=4.1						
WB2	**Warramunga Arr**	**14.31**	**149**	*e*P	**P**	**21 41 56.4**	**-0.2**
MBWA	**Marble Bar**	**14.81**	**205**	*e*Pn	**Pn**	**21 42 04.9**	**+1.0**
	2.0nm,0.5s						
ASAR	**Alice Springs**	**17.34**	**157**	P	**P**	**21 42 31.4**	**+1.8**
	1.0nm,0.3s,baz=334,slow=12,SNR=47						
ASAR				S	**S**	**21 45 32.9**	**-0.1**
	0.1nm,0.3s,baz=334,slow=21,SNR=4.3						
CTAO	**Charters Tower**	**22.74**	**125**	Pn	**P**	**21 43 24.9**	**+1.6**
NWAO	**Narrogin (SRO)**	**26.45**	**198**	P	**P**	**21 43 55.8**	**-0.7**
STKA	**Stephens Creek**	**27.81**	**152**	P	**P**	**21 44 10.0**	**+1.5**
	0.5nm,0.3s,mb3.2,baz=318,slow=10,SNR=2.5						
STKA	**Stephens Creek**	**27.81**	**152**	*e*P	**P**	**21 44 09.4**	**+0.9**
	4.2nm,1.1s,mb3.6						
CMAR	**Chiang Mai Arr**	**37.64**	**314**	P	**P**	**21 45 33.4**	**+0.1**
	0.3nm,0.5s,mb2.8,baz=151,slow=7.5,SNR=4.5						
ENH	**Enshi**	**41.20**	**337**	*e*P	**P**	**21 46 02.1**	**-0.1**
	0.6nm,0.3s,mb3.3						
MKAR	**Makanchi Array**	**67.01**	**329**	P	**P**	**21 49 06.8**	**-0.1**
	0.3nm,0.6s,mb3.2,baz=124,slow=7.9,SNR=3.8						
TKM2	**Tokmak 2**	**68.40**	**322**	P	**P**	**21 49 16.2**	**+0.6**
AAK	**Ala-Archa**	**68.91**	**321**	*e*P	**P**	**21 49 18.1**	**-0.6**
ZALV	**Zalesovo Beam**	**70.78**	**335**	P	**P**	**21 49 28.5**	**-1.2**
	0.6nm,0.4s,mb3.7,baz=159,slow=4.5,SNR=2.7						
BRVK	**Borovoye**	**76.96**	**329**	*e*P	**P**	**21 50 05.5**	**+0.2**

IDC 11 21:40:09.4±17.0, 2412S×17930E, h700km±244km, mb2.9/5, mb1 3.1/5, mb1mx2.9/15, mbtmp2.9/5, Error ellipse: s-maj=114.0km s-min=89.0km az=144.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.84**	**271**	P	P	21 45 34.1	+0.2
	4.4nm,0.4s,baz=92,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**34.05**	**248**	P	P	21 46 00.1	-0.5
	0.9nm,0.5s,baz=100,slow=6.1,SNR=3.6						
ASAR	**Alice Springs**	**41.37**	**261**	P	P	21 46 59.5	+0.2
	0.3nm,0.3s,baz=87,slow=6.6,SNR=4.1						
WRA	**Warramunga Arr**	**41.76**	**267**	P	P	21 47 02.2	-0.1
	1.1nm,0.3s,baz=102,slow=8.4,SNR=4.0						
TXAR	**Lajitas Array**	**91.09**	**58**	P	P	21 52 02.9	+0.1
	0.6nm,0.8s,baz=211,slow=6.0,SNR=7.8						

MAN 11 21:43:49, 934N×12226E, h35km, mb4.0, ML2.8, MS2.5, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.96**	**90**	*e*P	Pn	21 44 05.5	-0.5
GUIM	**Jordan**	**1.32**	**14**	*e*P	Pn	21 44 11.7	+0.8
GUIM				*e*S	Sn	21 44 28.3	+1.0
PAGZ	**Pagadian**	**1.85**	**143**	*e*P	Pn	21 44 19.6	+1.4
PAGZ				*e*S	Sn	21 44 41.6	+1.2
CUYO	**Cuyo Island**	**1.94**	**321**	*e*P	Pn	21 44 20.8	+1.3
ENPP	**El Nido**	**3.35**	**304**	*e*P	Pn	21 44 40.3	+1.4

ISCJB ***11*** *21:58:12.5±0.4, 3206S±003×6845W±005, h119km±3km, mb4.3/24, Error ellipse: s-maj=7.0km s-min=4.7km az=10.3*

NEIC ***11*** *21:58:12.8±0.2, 3209S×6842W, mb4.6/12, MD4.1(SJA), Error ellipse: s-maj=6.7km s-min=4.5km az=101.0*

NEIC Felt [III] at San Juan.

IDC ***11*** *21:58:12.9±0.5, 3205S×6848W, h116km±3km, mb4.0/14, mb1 4.1/17, mb1mx4.1/20, mbtmp4.0/17, Error ellipse: s-maj=18.1km s-min=10.6km az=86.0*

GUC ***11*** *21:58:12.8±0.6, 3206S×6871W, h159km±13km, ML4.4*

BJI ***11*** *21:58:12.7, 32.10S×6840W, h114km, mB4.7*

ISC 11 21:58:13.5±0.4, 3206S±003×6845W±005, h115km±3km, h120km±3.0km: pP-P, n235, σ0s62/235, mb4.3/24, 77C-83D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.48**	**21**	P	**Pn**	**21 58 31.1**	**+0.4**
	48nm,0.3s,baz=195,slow=5.2,SNR=4821						
CFAA				S	**Sn**	**21 58 45.1**	**+1.5**
	378nm,0.3s,baz=292,slow=16,SNR=251						
FCH	**Farellones**	**2.01**	**230**	⇓*i*P	**Pn**	**21 58 47.5**	**+0.7**
FCH				*i* S	**Sn**	**21 59 14.2**	**+2.1**
FCH				AML	AML	21 59 16.6	
	comp=E,2μm,0.4s						
YECH	**El Yeso**	**2.12**	**220**	*e*P	**Pn**	**21 58 49.1**	**+1.1**
YECH				AML	AML	21 59 18.6	
	comp=N,1μm,0.3s						
PEL	**Peldehue**	**2.18**	**240**	⇓*i*P	**Pn**	**21 58 48.7**	**-0.2**
PEL				*i* S	**Sn**	**21 59 15.9**	**-0.1**
PEL				AML	AML	21 59 17.4	
	comp=E,3μm,0.2s						
CLCH	**Cerro Calan**	**2.21**	**232**	⇓*i*P	**Pn**	**21 58 49.5**	**+0.2**
CLCH				*i* S	**Sn**	**21 59 17.4**	**+0.6**
CLCH				AML	AML	21 59 19.9	
	comp=N,4μm,0.8s						
LMEL	**Las Melosas**	**2.32**	**219**	⇓*i*P	**Pn**	**21 58 51.2**	**+0.5**
LMEL				*i* S	**Sn**	**21 59 20.6**	**+1.3**
LMEL	**Las Melosas**	**2.32**	**219**	⇓*i*P	**Pn**	**21 58 51.2**	**+0.5**
LMEL				*i* S	**Sn**	**21 59 20.6**	**+1.3**
LMEL				AML	AML	21 59 35.7	
	comp=N,736nm,0.5s						
ANTU	**Antumapu**	**2.38**	**230**	*e*P	**Pn**	**21 58 51.4**	**-0.1**
ANTU				*i* S	**Sn**	**21 59 20.7**	**+0.1**
ANTU	**Antumapu**	**2.38**	**230**	*e*P	**Pn**	**21 58 51.4**	**-0.1**
ANTU				*i* S	**Sn**	**21 59 20.7**	**+0.1**
ANTU				AML	AML	21 59 29.7	
	comp=E,1μm,0.4s						
RCDM	**Rinconada Maip**	**2.45**	**234**	*e*P	**Pn**	**21 58 52.1**	**-0.2**
RCDM				*i* S	**Sn**	**21 59 22.3**	**+0.1**
RCDM	**Rinconada Maip**	**2.45**	**234**	*e*P	**Pn**	**21 58 52.1**	**-0.2**
RCDM				*i* S	**Sn**	**21 59 22.3**	**+0.1**
RCDM				AML	AML	21 59 24.2	
	comp=E,3μm,0.1s						
CHNG	**Los Chungos**	**2.60**	**273**	⇑*i*P	**Pn**	**21 58 53.1**	**-1.3**
CHNG				*i* S	**Sn**	**21 59 24.0**	**-1.7**
CHNG				AML	AML	21 59 30.1	
	comp=N,1μm,0.8s						
CHCH	**Chadas Angostu**	**2.63**	**224**	⇓*i*P	**Pn**	**21 58 54.7**	**0.0**
CHCH				*i* S	**Sn**	**21 59 26.5**	**0.0**
OVCH	**Ovalle**	**2.77**	**301**	⇑*i*P	**Pn**	**21 58 56.0**	**-0.5**
OVCH				*i* S	**Sn**	**21 59 28.4**	**-1.2**
OVCH	**Ovalle**	**2.77**	**301**	⇑*i*P	**Pn**	**21 58 56.0**	**-0.5**
OVCH				*i* S	**Sn**	**21 59 28.4**	**-1.2**
OVCH				AML	AML	21 59 33.4	
	comp=N,2μm,0.5s						
LNV	**Longovilo**	**3.13**	**232**	*i* P	**Pn**	**21 58 59.5**	**-1.8**
LNV				*i* S	**Sn**	**21 59 35.2**	**-3.0**
LCO	**Las Campanas**	**3.60**	**327**	*e*Pn	**Pn**	**21 59 07.6**	**0.0**
LCO				*e*Sn	**Sn**	**21 59 48.9**	**-0.6**
PLCA	**Paso Flores**	**8.82**	**190**	P	**Pn**	**22 00 15.2**	**-2.8**
	comp=N,0.2nm,0.3s,baz=354,slow=14,SNR=6.9						
LVC	**Limon Verde**	**9.42**	**357**	P	**Pn**	**22 00 24.3**	**-1.9**
	comp=N,2.7nm,0.3s,baz=200,slow=9.1,SNR=18						
LVC				S	**Sn**	**22 02 03.5**	**-6.7**
	comp=N,3.0nm,0.3s,baz=240,slow=16,SNR=3.2						
LVC	**Limon Verde**	**9.42**	**357**	*e*Pn	**Pn**	**22 00 24.1**	**-2.1**
LVC				*e*Sn	**Sn**	**22 02 05.3**	**-4.9**
LPAZ	**La Paz**	**15.70**	**1**	P	**Pn**	**22 01 49.3**	**+1.0**
	comp=N,2.6nm,0.3s,baz=185,slow=5.5,SNR=31						
LPAZ	**La Paz**	**15.70**	**1**	*e*Pn	**Pn**	**22 01 49.6**	**+1.3**
	comp=N,12nm,0.5s						
ARE	**Arequipa**	**15.77**	**349**	*e*P	**Pn**	**22 01 50.0**	**+0.8**
SIV	**San Ignacio**	**17.34**	**24**	P	**Pn**	**22 02 08.2**	**-0.3**
	comp=N,1.6nm,0.3s,baz=219,slow=10,SNR=34						
NNA	**Nana**	**21.42**	**337**	P	**P**	**22 02 52.6**	**+0.4**
	comp=N,6.0nm,0.5s,mb4.2,baz=212,slow=7.8,SNR=5.3						
USHA	**Ushuaia**	**22.77**	**180**	P	**P**	**22 03 05.0**	**-0.9**
	comp=N,11nm,0.7s,mb4.3,baz=339,slow=7.1,SNR=3.8						
BDFB	**Brasilia**	**24.75**	**53**	P	**P**	**22 03 23.5**	**-0.9**
	comp=N,1.9nm,0.6s,mb3.7,baz=264,slow=27,SNR=5.8						
VNA3	**Neumayer Olymp**	**50.05**	**159**	*e*P	**P**	**22 06 55.5**	**-0.4**
VNA3				*e*		22 06 59.1	
VNA3				*e*	pP	22 07 22.9	+0.1
VNA3				*e*	pP	22 07 26.4	+3.6
VNA1	**Neumayer--Stat**	**50.30**	**158**	*e*P	**P**	**22 06 58.2**	**+0.4**
VNA1				*e*		22 07 02.0	
VNA1				*e*	pP	22 07 28.7	+3.9
VNA1				*e*		22 07 32.8	
VNA2	**Neumayer--Watz**	**50.66**	**158**	*e*P	**P**	**22 07 00.1**	**-0.4**
	baz=291,slow=7.5						
VNA2				*e*		22 07 04.6	
VNA2				*e*	pP	22 07 27.0	-0.5
VNA2				*e*	pP	22 07 30.2	+2.7
SNAA	**Sanae**	**52.27**	**159**	*e*P	**P**	**22 07 11.1**	**-1.4**
SNAA				*e*		22 07 15.3	
SNAA				*e*	pP	22 07 36.9	-2.7
SNAA				*e*	pP	22 07 41.2	+1.6
SNAA	**Sanae**	**52.27**	**159**	*e*P	**P**	**22 07 11.0**	**-1.4**
	comp=N,4.9nm,0.6s,mb4.7						
SNAA				*e*pP	pP	22 07 37.0	-2.6
CMIG	**Matias Romero**	**55.05**	**329**	P	**P**	**22 07 31.4**	**-1.9**
	comp=N,4.7nm,0.9s,mb4.5,baz=159,slow=4.4,SNR=6.8						
QSPA	**South Pole Qui**	**58.18**	**180**	P	**P**	**22 07 54.6**	**-0.1**
	comp=N,2.7nm,0.5s,mb4.5,baz=142,slow=1.7,SNR=8.2						
QSPA				pP	pP	22 08 23.3	+0.9
	comp=N,12nm,0.7s,baz=164,slow=2.6,SNR=9.2						
QSPA	**South Pole Qui**	**58.18**	**180**	*e*P	**P**	**22 07 55.2**	**+0.4**
	comp=N,13nm,0.8s,mb5.0						
SBA	**Scott Base**	**65.57**	**191**	*e*P	**P**	**22 08 44.6**	**+0.3**
	comp=N,27nm,1.8s,mb4.8						
SYO	**Syowa Base**	**66.55**	**158**	*e*X	**P**	**22 08 51.6**	**+1.0**
SYO	**Syowa Base**	**66.55**	**158**	*e*PcP	PcP	22 09 17.4	-1.7
SWET	**Sewanee**	**68.90**	**345**	*e*P	**P**	**22 09 05.0**	**-0.7**
JCT	**Junction City**	**68.94**	**331**	*e*P	**P**	**22 09 05.9**	**-0.1**
	comp=N,11nm,0.7s,mb4.8						
TXAR	**Lajitas Array**	**69.62**	**328**	P	**P**	**22 09 10.1**	**-0.1**
	comp=N,2.4nm,0.6s,mb4.2,baz=153,slow=8.4,SNR=40						
DBIC	**Dimbokro**	**71.69**	**70**	P	**P**	**22 09 22.6**	**-0.6**
	comp=N,1.5nm,0.5s,mb4.0,baz=152,slow=10,SNR=5.3						
DBIC				pP	pP	22 09 51.5	-0.3
	comp=N,3.2nm,0.7s,baz=182,slow=6.9,SNR=2.6						
SIUC	**Southern Illin**	**72.07**	**343**	*e*P	**P**	**22 09 23.9**	**-1.0**
GDL2	**Guadalupe Moun**	**72.37**	**329**	*e*P	**P**	**22 09 27.1**	**+0.3**
FVM	**French Village**	**72.63**	**342**	*e*P	**P**	**22 09 27.5**	**-0.7**
	comp=N,7.2nm,0.6s,mb4.7						
319A	**Douglas**	**73.99**	**324**	⇓P	**P**	**22 09 36.9**	**+0.5**
	baz=74,SNR=6.5						
MAW	**Mawson**	**74.16**	**163**	P	**P**	**22 09 36.2**	**-0.7**
	comp=N,2.5nm,0.8s,mb4.0,baz=256,slow=8.3,SNR=3.4						
MAW				pP	pP	22 10 06.6	+0.9
	comp=N,5.8nm,0.5s,baz=234,slow=7.5,SNR=8.6						
318A	**Bisbee**	**74.39**	**324**	P	**P**	**22 09 38.9**	**+0.2**
	baz=75,SNR=9.5						
219A	**White Tail Can**	**74.48**	**325**	⇓P	**P**	**22 09 39.3**	**+0.1**
	baz=75,SNR=7.6						
218A	**Dragoon**	**74.85**	**324**	⇓P	**P**	**22 09 40.9**	**-0.4**
	baz=75						
217A	**Green Valley**	**75.08**	**324**	⇓P	**P**	**22 09 42.7**	**+0.1**
	baz=75,SNR=5.0						
LPM	**Los Pinos Moun**	**75.16**	**328**	*e*P	**P**	**22 09 43.9**	**+0.8**
118A	**Homack Ranch,**	**75.35**	**325**	⇓P	**P**	**22 09 44.1**	**-0.1**
	baz=76						
ANMO	**Albuquerque**	**75.62**	**329**	*e*P	**P**	**22 09 46.3**	**+0.6**
	comp=N,2.9nm,0.6s,mb4.2						
117A	**Oracle**	**75.68**	**324**	⇓P	**P**	**22 09 46.5**	**+0.4**
	baz=76						
Y19A	**Nutrioso**	**76.08**	**326**	⇑P	**P**	**22 09 49.2**	**+0.8**
	baz=76,SNR=14						
Z17A	**San Carlos Hig**	**76.13**	**325**	⇓P	**P**	**22 09 48.6**	**0.0**
	baz=76						
116A	**Eloy**	**76.16**	**323**	⇑P	**P**	**22 09 49.0**	**+0.2**
	baz=76						
214A	**Organ Pipe Nat**	**76.24**	**322**	⇓P	**P**	**22 09 49.5**	**+0.2**
	baz=77						
CBKS	**Cedar Bluff**	**76.28**	**335**	*e*P	**P**	**22 09 49.6**	**+0.3**
Y18A	**Canyon Day Jun**	**76.31**	**325**	⇑P	**P**	**22 09 50.1**	**+0.4**
	baz=77						
X19A	**St. Johns**	**76.48**	**326**	⇑P	**P**	**22 09 51.3**	**+0.7**
	baz=77						
115A	**Sonoran Desert**	**76.53**	**323**	⇓P	**P**	**22 09 51.7**	**+0.8**
	baz=77						
Y17A	**Roosevelt**	**76.64**	**325**	P	**P**	**22 09 52.2**	**+0.8**
	baz=77,SNR=7.5						
Z16A	**Peralta Trail,**	**76.64**	**324**	⇑P	**P**	**22 09 52.1**	**+0.6**
	baz=77						
X18A	**Snowflake**	**76.88**	**326**	⇑P	**P**	**22 09 53.4**	**+0.6**
	baz=77						
W19A	**Sanders**	**77.09**	**327**	⇓P	**P**	**22 09 54.3**	**+0.3**
	baz=77						
Y16A	**Circle Bar Ran**	**77.10**	**324**	⇓P	**P**	**22 09 54.7**	**+0.7**
	baz=78						
X17A	**Forest Lakes**	**77.14**	**325**	⇑P	**P**	**22 09 55.2**	**+1.0**
	baz=78						
V19A	**Window Rock**	**77.42**	**327**	⇑P	**P**	**22 09 56.6**	**+0.7**
	baz=78						
X16A	**Lo Mia Camp, P**	**77.51**	**325**	⇓P	**P**	**22 09 57.0**	**+0.7**
	baz=78,SNR=9.6						
112A	**Yuma**	**77.62**	**321**	⇑P	**P**	**22 09 57.4**	**+0.3**
	baz=78						
V18A	**Ganado**	**77.83**	**327**	⇑P	**P**	**22 09 58.4**	**+0.3**
	baz=78						
Y14A	**Wickenburg**	**77.91**	**323**	⇑P	**P**	**22 09 58.8**	**+0.3**
	baz=78						
X15A	**Humboldt**	**77.96**	**324**	⇓P	**P**	**22 09 59.4**	**+0.5**
	baz=78,SNR=8.5						
W16A	**Flagstaff**	**78.10**	**325**	⇑P	**P**	**22 10 00.0**	**+0.5**
	baz=78						
GLA	**Glamis**	**78.16**	**322**	⇑P	**P**	**22 10 00.6**	**+0.6**
	baz=78						
Y13A	**Salome**	**78.23**	**323**	⇓P	**P**	**22 10 00.8**	**+0.5**
	baz=79						
BOSA	**Boshof**	**78.26**	**116**	P	**P**	**22 10 00.6**	**-0.3**
	comp=N,4.0nm,1.0s,mb4.1,baz=207,slow=7.6,SNR=2.2						
X14A	**Yava**	**78.27**	**324**	⇑P	**P**	**22 10 01.1**	**+0.5**
	baz=79						
T19A	**Beclabito**	**78.33**	**328**	⇓P	**P**	**22 10 01.1**	**+0.2**
	baz=79,SNR=8.4						
WUAZ	**Wupatki**	**78.36**	**325**	⇓P	**P**	**22 10 01.4**	**+0.4**
	baz=79						
U18A	**Rough Rock, Ch**	**78.38**	**327**	⇑P	**P**	**22 10 01.9**	**+0.7**
	baz=79,SNR=5.6						
MVCO	**Mesa Verde**	**78.41**	**328**	*e*P	**P**	**22 10 01.7**	**+0.4**
	comp=N,2.8nm,0.6s,mb4.2						
MVCO	**Mesa Verde**	**78.41**	**328**	⇑P	**P**	**22 10 01.7**	**+0.4**
	baz=79						
U16A	**Tuba City**	**78.75**	**326**	⇓P	**P**	**22 10 03.6**	**+0.4**
	baz=79						
X13A	**Yucca**	**78.84**	**323**	⇓P	**P**	**22 10 04.4**	**+0.7**
	baz=79						
U17A	**Shonto**	**78.90**	**327**	⇑P	**P**	**22 10 04.9**	**+1.0**
	baz=79,SNR=6.8						
BC3	**Big Chuckw Mtn**	**78.95**	**322**	⇑P	**P**	**22 10 04.8**	**+0.5**
	baz=79						
T18A	**Mexican Hat**	**78.97**	**327**	⇑P	**P**	**22 10 04.7**	**+0.4**
	baz=79,SNR=5.9						
V15A	**Kaibab Nationa**	**78.99**	**325**	⇑P	**P**	**22 10 05.4**	**+0.9**
	baz=79,SNR=6.7						
S19A	**Harvey Farm, M**	**79.14**	**328**	⇓P	**P**	**22 10 04.9**	**-0.3**
	baz=80,SNR=9.0						
IRM	**Iron Mountain**	**79.18**	**322**	⇑P	**P**	**22 10 05.0**	**-0.6**
	baz=80						
W13A	**Hualapai Mount**	**79.27**	**324**	⇓P	**P**	**22 10 06.3**	**+0.3**
	baz=80						
T17A	**Navajo Res., N**	**79.29**	**327**	⇑P	**P**	**22 10 06.5**	**+0.4**
	baz=80,SNR=5.2						
V14A	**Boquillas Ranc**	**79.30**	**324**	⇓P	**P**	**22 10 07.2**	**+1.0**
	baz=80,SNR=6.0						
PFO	**Pinyon Flat Ob**	**79.45**	**321**	⇑P	**P**	**22 10 07.1**	**0.0**
	baz=80						
S18A	**Hurst Farm, Bl**	**79.48**	**328**	⇓P	**P**	**22 10 07.4**	**+0.3**
	baz=80,SNR=15						
BELC	**Belle Mtn.**	**79.51**	**321**	⇓P	**P**	**22 10 08.0**	**+0.7**
	baz=80						
T16A	**Glen Canyon Da**	**79.61**	**326**	⇓P	**P**	**22 10 08.6**	**+0.8**
	baz=80						
R19A	**Curley Farm, L**	**79.64**	**328**	⇑P	**P**	**22 10 08.4**	**+0.4**
	baz=80						
ECSD	**EROS,Sioux Fal**	**79.70**	**340**	*e*P	**P**	**22 10 07.1**	**-1.0**
	comp=N,9.9nm,0.8s,mb4.7						
S17A	**Black Ridge (B**	**79.81**	**327**	⇓P	**P**	**22 10 09.2**	**+0.3**
	baz=80						
V13A	**Grand Canyon W**	**79.91**	**324**	⇓P	**P**	**22 10 09.8**	**+0.4**
	baz=80						
GMRC	**Granite Mounta**	**79.93**	**322**	⇑P	**P**	**22 10 09.9**	**+0.3**
	baz=80						
T15A	**Red Dirt Ranch**	**80.05**	**326**	⇑P	**P**	**22 10 11.1**	**+0.9**
	baz=80						
S16A	**Weppner Ranch,**	**80.24**	**327**	⇓P	**P**	**22 10 11.1**	**-0.1**

I18A	**Diamond G Ranc**	**84.35**	**331**	⇑P		**P**		**22 10 32.5**	**+0.1**
	baz=85,SNR=5.6								
N12A	**Clover Valley,**	**84.35**	**326**	⇓P		**P**		**22 10 32.4**	**-0.1**
	baz=85								
K16A	**Soda Springs**	**84.38**	**330**	⇑P		**P**		**22 10 33.0**	**+0.4**
	baz=85								
J17A	**Brown Place, J**	**84.44**	**330**	⇓P		**P**		**22 10 32.4**	**-0.4**
	baz=85								
K15A	**Arbon**	**84.67**	**329**	⇓P		**P**		**22 10 33.7**	**-0.4**
	baz=85								
L13A	**Double Diamond**	**84.82**	**328**	⇓P		**P**		**22 10 34.6**	**-0.3**
	baz=85,SNR=7.7								
K14A	**Jones Ranch, D**	**84.84**	**329**	⇑P		**P**		**22 10 34.5**	**-0.5**
	baz=85								
M11A	**Holland Ranch,**	**85.16**	**326**	⇓P		**P**		**22 10 36.7**	**+0.2**
	baz=86								
I16A	**Newdale**	**85.18**	**330**	⇓P		**P**		**22 10 36.5**	**0.0**
	baz=86								
J15A	**Blackfoot**	**85.20**	**329**	⇑P		**P**		**22 10 36.3**	**-0.4**
	baz=86								
RLMT	**Red Lodge**	**85.30**	**332**	*e*P		**P**		**22 10 36.7**	**-0.5**
	comp=N,3.2nm,0.5s,mb4.5								
RLMT	**Red Lodge**	**85.30**	**332**	P		**P**		**22 10 37.2**	**+0.1**
	baz=86,SNR=5.2								
L12A	**House Creek Ra**	**85.35**	**327**	⇓P		**P**		**22 10 38.0**	**+0.5**
	baz=86								
O08A	**Rochester Mine**	**85.42**	**324**	⇑P		**P**		**22 10 37.9**	**+0.1**
	baz=86								
ULM	**Lac du Bonnet**	**85.47**	**343**	P		**P**		**22 10 37.1**	**-0.8**
	comp=N,2.4nm,0.5s,mb4.4,baz=207,slow=2.3,SNR=3.2								
G18A	**Lazy EL Ranch,**	**85.58**	**332**	⇑P		**P**		**22 10 37.7**	**-0.8**
	baz=86								
J14A	**Carey**	**85.61**	**329**	⇑P		**P**		**22 10 38.7**	**0.0**
	baz=86								
K12A	**Draper Farm, C**	**85.69**	**328**	⇓P		**P**		**22 10 38.9**	**-0.3**
	baz=86								
O07A	**Toulon**	**85.69**	**324**	⇓P		**P**		**22 10 39.1**	**-0.1**
	baz=86								
L11A	**Cat Creek Ranc**	**85.71**	**327**	⇑P		**P**		**22 10 38.5**	**-0.8**
	baz=86								
N08A	**GE Springer Mi**	**85.78**	**325**	⇑P		**P**		**22 10 39.2**	**-0.5**
	baz=86								
J13A	**Cove Ranch, Pi**	**85.96**	**328**	⇓P		**P**		**22 10 40.7**	**+0.2**
	baz=86,SNR=6.1								
L10A	**Juniper Basin**	**85.98**	**326**	⇑P		**P**		**22 10 40.1**	**-0.5**
	baz=86								
I14A	**Mackay**	**86.06**	**329**	⇓P		**P**		**22 10 41.1**	**+0.2**
	baz=86,SNR=6.2								
F18A	**Big Timber**	**86.13**	**333**	⇑P		**P**		**22 10 40.8**	**-0.4**
	baz=86,SNR=11								
HLID	**Hailey**	**86.20**	**328**	⇓P		**P**		**22 10 42.0**	**+0.3**
	baz=87,SNR=7.1								
N07B	**Gerlach**	**86.20**	**324**	⇓P		**P**		**22 10 41.8**	**+0.1**
	baz=87								
J12A	**Stokes Ranch,**	**86.26**	**328**	⇑P		**P**		**22 10 42.1**	**+0.1**
	baz=87								
DGMT	**Dagmar**	**86.31**	**337**	⇑P		**P**		**22 10 41.1**	**-0.9**
	baz=87								
K11A	**Parker Ranch,**	**86.31**	**327**	⇑P		**P**		**22 10 41.7**	**-0.5**
	baz=87								
I13A	**Wildhorse Cree**	**86.34**	**329**	⇑P		**P**		**22 10 42.9**	**+0.6**
	baz=87,SNR=7.8								
M08A	**Happy Creek Ra**	**86.41**	**325**	⇑P		**P**		**22 10 42.8**	**+0.1**
	baz=87								
F17A	**Fitzpatrick Pl**	**86.50**	**332**	⇑P		**P**		**22 10 43.2**	**+0.2**
	baz=87								
O05C	**Quincy**	**86.58**	**322**	⇓P		**P**		**22 10 43.8**	**+0.2**
	baz=87								
N06A	**Buffalo Meadow**	**86.61**	**324**	⇑P		**P**		**22 10 43.7**	**0.0**
	baz=87								
G15A	**Dillon**	**86.65**	**330**	⇑P		**P**		**22 10 43.0**	**-0.7**
	baz=87								
BOZ	**Bozeman (W)**	**86.68**	**331**	⇓P		**P**		**22 10 43.0**	**-0.9**
	baz=87								
I12A	**Atlanta**	**86.70**	**328**	⇓P		**P**		**22 10 43.8**	**-0.3**
	baz=87								
E18A	**Harlowton**	**86.75**	**333**	⇑P		**P**		**22 10 44.2**	**-0.1**
	baz=87								
H13A	**Challis**	**86.92**	**329**	⇓P		**P**		**22 10 45.4**	**+0.3**
	baz=87,SNR=7.7								
L08A	**Fields**	**86.96**	**325**	⇑P		**P**		**22 10 45.0**	**-0.4**
	baz=87								
E17A	**Martinsdale**	**87.04**	**332**	⇑P		**P**		**22 10 45.5**	**-0.2**
	baz=87								
K09A	**Rome**	**87.05**	**326**	⇓P		**P**		**22 10 45.5**	**-0.3**
	baz=87								
F15A	**Butte**	**87.19**	**331**	⇓P		**P**		**22 10 45.8**	**-0.6**
	baz=88,SNR=5.2								
D18A	**Linhart Farms,**	**87.23**	**333**	⇑P		**P**		**22 10 46.2**	**-0.3**
	baz=88								
L07A	**Adell**	**87.31**	**325**	⇑P		**P**		**22 10 46.8**	**-0.3**
	baz=88								
G13A	**Cobalt**	**87.33**	**329**	⇑P		**P**		**22 10 46.7**	**-0.4**
	baz=88								
D17A	**Six Diamond Ra**	**87.53**	**333**	P		**P**		**22 10 48.0**	**0.0**
	baz=88,SNR=10								
F14A	**Wisdom**	**87.53**	**330**	⇓P		**P**		**22 10 48.0**	**0.0**
	baz=88,SNR=8.0								
MOD	**Modoc**	**87.70**	**324**	⇓P		**P**		**22 10 48.5**	**-0.4**
	baz=88								
E15A	**Deer Lodge**	**87.72**	**331**	⇑P		**P**		**22 10 48.5**	**-0.5**
	baz=88								
K07A	**Rock Creek Ran**	**87.77**	**325**	⇓P		**P**		**22 10 49.6**	**+0.3**
	baz=88								
D16A	**Dana Ranch, Ca**	**87.78**	**332**	⇑P		**P**		**22 10 48.9**	**-0.2**
	baz=88								
H11A	**Donnelly**	**87.81**	**328**	⇓P		**P**		**22 10 49.3**	**-0.1**
	baz=88								
F13A	**Darby**	**87.92**	**330**	⇓P		**P**		**22 10 49.3**	**-0.6**
	baz=88								
C17A	**Wharram Farm,**	**87.96**	**333**	⇑P		**P**		**22 10 49.6**	**-0.4**
	baz=88								
F12A	**Elk City**	**88.30**	**329**	⇓P		**P**		**22 10 51.4**	**-0.2**
	baz=89								
E13A	**Victor**	**88.38**	**330**	⇓P		**P**		**22 10 52.3**	**+0.2**
	baz=89								
G11A	**Walters Elk Ra**	**88.46**	**329**	⇑P		**P**		**22 10 52.5**	**+0.1**
	baz=89								
C16A	**Fuhringer Ranc**	**88.48**	**332**	⇓P		**P**		**22 10 52.1**	**-0.3**
	baz=89,SNR=5.8								
J06A	**Christmas Vall**	**88.63**	**325**	⇓P		**P**		**22 10 53.4**	**+0.1**
	baz=89								
C15A	**Salmond Ranch,**	**88.80**	**332**	⇑P		**P**		**22 10 54.0**	**0.0**
	baz=89								
D13A	**Huson**	**89.01**	**331**	⇓P		**P**		**22 10 54.5**	**-0.4**
	baz=89								
G09A	**Cove**	**89.05**	**328**	⇑P		**P**		**22 10 55.1**	**-0.1**
	baz=89								
B15A	**Bradely Ranch,**	**89.22**	**332**	⇑P		**P**		**22 10 54.8**	**-1.1**
	baz=90								
A16A	**West Butte Ran**	**89.36**	**333**	⇑P		**P**		**22 10 56.3**	**-0.2**
	baz=90,SNR=7.6								
D12A	**Red Ives Fores**	**89.36**	**330**	⇓P		**P**		**22 10 56.2**	**-0.4**
	baz=90								
A13A	**Flathead Natio**	**90.45**	**332**	⇓P		**P**		**22 11 01.2**	**-0.5**
	baz=91								
ESDC	**Sonseca Array**	**93.07**	**44**	P		**P**		**22 11 14.2**	**+0.1**
	comp=N,0.1nm,0.5s,mb3.4,baz=245,slow=2.7,SNR=3.7								
ASAR	**Alice Springs**	**120.61**	**204**	PKP		PKPdf		22 16 50.1	-2.1
	comp=N,0.2nm,0.6s,baz=147,slow=1.9,SNR=6.8								
WRA	**Warramunga Arr**	**123.88**	**206**	PKP		PKPdf		22 16 56.6	-2.0
	comp=N,1.7nm,0.5s,baz=171,slow=1.6,SNR=10								
AAK	**Ala-Archa**	**148.93**	**60**	*e*PKPbc		PKPbc		22 17 47.8	+0.2
KURK	**Kurchatov**	**149.40**	**43**	PKP		PKPdf		22 17 44.8	+0.8
	baz=304,slow=3.0								
KURK				PKPbc		PKPbc		22 17 48.0	-0.5
	baz=302,slow=3.3								
KURK				pPKPbc		pPKPbc		22 18 17.3	-2.1
	baz=310,slow=3.1								
KURK	**Kurchatov**	**149.40**	**43**	PKP		PKPdf		22 17 44.8	+0.8
KURK				PKPbc		PKPbc		22 17 48.0	-0.6
KURK				pPKPbc		pPKPbc		22 18 17.3	-2.1
TKM2	**Tokmak 2**	**149.69**	**59**	*e*PKPbc		PKPbc		22 17 49.0	-0.4
ZAA0	**Zalesovo Array**	**150.96**	**33**	*e*PKPbc		PKPbc		22 17 51.1	-1.0
ZALV	**Zalesovo Beam**	**150.96**	**33**	PKPbc		PKPbc		22 17 51.0	-1.1
	comp=N,12nm,0.5s,baz=301,slow=3.0,SNR=56								
ZALV				pPKPbc		pPKPbc		22 18 21.6	-1.5
	comp=N,7.4nm,0.7s,baz=305,slow=3.1,SNR=6.1								
MKAR	**Makanchi Array**	**153.22**	**48**	PKPbc		PKPbc		22 17 56.7	-0.8
	comp=N,1.4nm,0.7s,baz=237,slow=1.6,SNR=11								
MKAR				PKPab		PKPab		22 18 09.2	-0.5
	comp=N,1.1nm,0.5s,baz=294,slow=2.9,SNR=16								
MKAR				pPKPbc		pPKPbc		22 18 28.3	-0.2
	comp=N,1.0nm,0.7s,baz=282,slow=1.1,SNR=3.2								
MKAR	**Makanchi Array**	**153.22**	**48**	PKPbc		PKPbc		22 17 56.7	-0.8
MKAR				PKPab		PKPab		22 18 09.2	-0.5
MKAR				pPKPbc		pPKPbc		22 18 28.3	-0.2
SONM	**Songino Array**	**163.76**	**13**	PKPab		PKPab		22 18 54.1	-1.1
	comp=N,0.6nm,0.9s,baz=326,slow=4.4,SNR=5.2								
CN2	**Changchun**	**163.98**	**321**	*e*PKP		PKPdf		22 18 03.3	+0.5
KMI	**Kunming**	**169.62**	**130**	PKP		PKPdf		22 18 05.1	-2.5
HHC	**Hu-ho-hao-te**	**171.22**	**360**	*e*PKP		PKPdf		22 18 08.5	+0.5
HHC				APKP				22 18 34.6	
HHC				XPKP				22 18 45.3	
HHC				PKS				22 21 40.1	
HHC				PP		PP		22 23 22.4	+3.9
HHC				SKS		SKSdf		22 25 01.1	+0.3
HHC				SKKS		SKKSac		22 29 58.5	+3.6
HHC				SS		SS		22 44 16.4	+3.0
HHC				LR		LR			
	comp=N,109nm,19.0s								
HHC				LR		LR			
	comp=E,119nm,19.0s								
HHC				LR		LR			
	comp=Z,82nm,19.6s								
LZH	**Lanzhou**	**172.44**	**56**	*e*PKP		PKPdf		22 18 08.5	-0.3
LZH				XPKP				22 18 47.0	
LZH				LR		LR			
	comp=N,125nm,19.6s								
LZH				LR		LR			
	comp=Z,154nm,20.4s								
GYA	**Guiyang**	**172.97**	**141**	PKP		PKPdf		22 18 08.2	-1.1
GYA				APKP				22 18 38.0	
GYA				XPKP				22 18 47.9	
GYA				PKP2		PKPab		22 19 37.4	+0.8
GYA				PKS				22 21 38.0	
GYA				PP		PP		22 23 28.6	+0.8
GYA				PP		PP			
	comp=Z,90nm,8.2s								
CD2	**Chengdu**	**173.24**	**98**	*e*PKP		PKPdf		22 18 09.1	-0.2
CD2				XPKP				22 18 49.2	
CD2				PP		PP		22 23 30.7	+0.4
CD2				SKKS		SKKSac		22 30 02.1	-3.6
CD2				SS		SS		22 44 33.7	-2.9
CD2				PP		PP			
	comp=Z,90nm,10.2s								
CD2				LR		LR			
	comp=N,90nm,18.8s								
CD2				LR		LR			
	comp=Z,120nm,16.8s								

ISCJB ***11*** *22:04:30.9±0.3, 52.44N±0.02×102.96E±0.03, h10km, mb3.9/5, Error ellipse: s-maj=3.5km s-min=2.4km az=173.8*

MOS ***11*** *22:04:31.3±1.0, 52.43N×102.82E, h13km, mb4.9/4, Error ellipse: s-maj=10.5km s-min=8.2km az=82.1*

MOS Felt (II) at Irkutsk.

BYKL ***11*** *22:04:32.6±0.3, 52.35N×102.75E, h18km±23km, FELT I=IV MSK at Razdolye, Talyany, Onot, III-IV at Tunguska, Cheremkhovo, III at Mishelevka, Usolye-Sibirskoye, II-III at Angarsk, Shelekhov, Irkutsk*

IDC ***11*** *22:04:35.1±4.7, 51.97N×102.42E, h0km, mb1 3.8/2, mb1mx3.3/23, mbtmp3.8/2, ML3.5/2, Error ellipse: s-maj=68.5km s-min=18.3km az=29.0*

NEIC ***11*** *22:04:36.7±3.4, 52.07N×102.83E, h10km, mb3.5/5, Error ellipse: s-maj=75.4km s-min=8.0km az=204.0*

ISC 11 22:04:32.2±0.3, 52.45N±0.02×102.91E±0.03, h10km, n67, σ1§53/133, mb3.9/5, 16C-14D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARS	**Arshan**	**0.60**	**210**	*e*PG		**Pg**		**22 04 42.1**	**-1.8**
ARS				*e*				22 04 48.7	
ARS				pmax		pmax			
	comp=Z,3μm,0.1s								
ARS				smax					
	comp=N,61μm,0.3s								
ARS	**Arshan**	**0.60**	**210**	⇑*i*Pg		**Pg**		**22 04 42.1**	**-1.8**
ARS				Pmax				22 04 43.3	
	comp=N,3μm,0.4s								
ARS				*e*Sg		**Sg**		**22 04 48.4**	**-3.4**
ARS				Smax				22 04 49.9	
	comp=N,62μm,0.9s								
IRK	**Irkutsk**	**0.86**	**103**	*e*PG		**Pg**		**22 04 50.2**	**+1.5**
IRK				*e*				22 05 02.3	
IRK				pmax		pmax			
	comp=Z,833nm,0.2s								
IRK				smax					
	comp=N,33μm,0.2s								
IRK	**Irkutsk**	**0.86**	**103**	⇓*i*Pg		**Pg**		**22 04 50.1**	**+1.4**
IRK				Pmax				22 04 55.3	
	comp=N,1μm,0.2s								
IRK				*i* Sg		**Sg**		**22 05 02.2**	**+2.3**
IRK				Smax				22 05 04.5	
	comp=N,32μm,0.4s								
TLY	**Talaya**	**0.89**	**149**	*e*P		**Pg**		**22 04 48.8**	**-0.5**
TLY				*e*S		**Sg**		**22 04 59.8**	**-1.1**
TLY	**Talaya**	**0.89**	**149**	⇑*i*PG		**Pg**		**22 04 48.8**	**-0.5**
TLY				*e*				22 04 59.9	
TLY				pmax		pmax			
	comp=Z,2μm,0.2s								
TLY				smax					
	comp=E,3μm,0.2s								
TLY	**Talaya**	**0.89**	**149**	⇑*i*Pg		**Pg**		**22 04 48.8**	**-0.5**
TLY				*e*Pb		**Pb**		**22 04 50.6**	**+0.9**
TLY				max				22 04 53.6	
	comp=E,696nm,0.3s								
TLY				*e*Sg		**Sg**		**22 04 59.5**	**-1.3**
TLY				Smax				22 05 02.2	
	comp=E,3μm,0.2s								
MOY	**Mondy**	**1.42**	**237**	⇓*i*PG		**Pg**		**22 04 55.7**	**-3.7**
MOY				*e*				22 05 12.7	
MOY				pmax		pmax			
	comp=Z,737nm,0.2s								
MOY				smax					
	comp=E,1μm,0.6s								
MOY	**Mondy**	**1.42**	**237**	⇓*i*Pg		**Pg**		**22 04 55.7**	**-3.7**
MOY				*e*Pb		**Pb**		**22 04 56.6**	**-2.1**
MOY				max				22 05 08.8	
	comp=E,453nm,0.5s								
MOY				*i* Sg		**Sg**		**22 05 12.9**	**-4.8**
MOY				Smax				22 05 18.4	
	comp=E,1μm,0.6s								
ORL	**Orlik**	**1.90**	**274**	*e*PN		**Pn**		**22 05 05.0**	**+0.4**
ORL				*e*				22 05 27.9	
ORL				pmax		pmax			
	comp=Z,269nm,0.2s								
ORL				smax					
	comp=N,5μm,1.1s								
ORL	**Orlik**	**1.90**	**274**	⇓*i*Pg		**Pg**		**22 05 04.8**	**-3.8**
ORL				*e*				22 05 09.8	
ORL				max				22 05 16.7	
	comp=N,226nm,0.5s								
ORL				*i* Sg		**Sg**		**22 05 27.8**	**-5.4**
ORL				Smax				22 05 31.9	
	comp=N,5μm,1.5s								
ZAK	**Zakamensk**	**2.08**	**173**	*e*PN		**Pn**		**22 05 07.4**	**+0.3**
ZAK				*e*				22 05 08.8	
ZAK				*e*				22 05 34.5	
ZAK				pmax		pmax			
	comp=Z,739nm,0.4s								
ZAK				smax					
	comp=E,3μm,0.6s								
ZAK	**Zakamensk**	**2.08**	**173**	⇑*i*Pn		**Pn**		**22 05 07.9**	**+0.8**
ZAK				⇓*i*Pg		**Pg**		**22 05 09.0**	**-3.0**
	comp=E,551nm,0.5s								
ZAK				⇑*i*Pg		**Pg**		**22 05 09.0**	**-3.0**
	comp=E,141nm,0.5s								
ZAK				⇑*i*Pg		**Pg**		**22 05 09.0**	**-3.0**
	comp=E,688nm,0.5s								
ZAK				Pmax				22 05 09.3	
	comp=E,740nm,0.5s								
ZAK				*e*Sg		**Sg**		**22 05 34.9**	**-4.0**
ZAK				*e*				22 05 36.7	
ZAK				max				22 05 37.3	
	comp=E,3μm,0.6s								
TRG	**Tyrgan**	**2.12**	**80**	⇓*i*PN		**Pn**		**22 05 08.9**	**+1.3**
TRG				*e*				22 05 11.9	
TRG				*e*S		**Sn**		**22 05 34.9**	**+0.9**
TRG				*e*				22 05 40.4	
TRG				pmax		pmax			
	comp=Z,432nm,0.3s								
TRG				smax					
	comp=N,6μm,0.4s								
TRG	**Tyrgan**	**2.12**	**80**	⇓*i*Pn		**Pn**		**22 05 08.9**	**+1.3**
	comp=N,35nm,0.3s								
TRG				⇓*i*Pn		**Pn**		**22 05 08.9**	**+1.3**
	comp=N,121nm,0.3s								
TRG				⇓*i*Pn		**Pn**		**22 05 08.9**	**+1.3**
	comp=N,121nm,0.3s								
TRG				*i* Pg		**Pg**		**22 05 12.0**	**-0.8**
TRG				*e*				22 05 16.9	
TRG				max				22 05 17.9	
	comp=N,426nm,0.3s								
TRG				*i* Sn		**Sn**		**22 05 35.0**	**+1.0**
TRG				*i* Sg		**Sg**		**22 05 40.3**	**0.0**
TRG				Smax				22 05 40.8	
	comp=N,6μm,0.4s								
STDB	**Stepnoy Dvoret**	**2.14**	**96**	⇑*i*Pn		**Pn**		**22 05 10.7**	**+2.8**
STDB				*e*				22 05 13.6	
STDB				*e*Pg		**Pg**		**22 05 14.1**	**+0.9**
STDB				Pmax				22 05 25.8	
	comp=N,348nm,0.3s								
STDB				*e*				22 05 39.7	
STDB				*e*Sg		**Sg**		**22 05 43.5**	**+2.6**
STDB				Smax				22 05 49.1	
	comp=N,12μm,0.9s								
KAB	**Kabansk**	**2.33**	**98**	*e*Pn		**Pn**		**22 05 12.6**	**+2.0**
KAB				*e*Pg		**Pg**		**22 05 16.6**	**-0.3**
KAB				*e*				22 05 21.5	
KAB				max				22 05 24.5	
	comp=N,452nm,0.3s								
KAB				*e*				22 05 42.7	
KAB				*e*Sg		**Sg**		**22 05 47.8**	**+0.7**
KAB				Smax				22 05 52.3	
	comp=N,8μm,0.7s								
FFNB	**Fofonovo**	**2.40**	**98**	*e*Pn		**Pn**		**22 05 12.6**	**+1.1**
FFNB				⇑*i*Pg		**Pg**		**22 05 16.5**	**-1.7**
FFNB				Pmax				22 05 25.0	
	comp=N,1μm,0.3s								
FFNB				*e*Sn		**Sn**		**22 05 43.5**	**+2.6**
FFNB				*e*Sg		**Sg**		**22 05 48.7**	**-0.6**
FFNB				Smax				22 05 52.8	
	comp=N,12μm,0.8s								
ZRHB	**Zarechye**	**2.59**	**86**	*e*Pn		**Pn**		**22 05 16.4**	**+2.2**
ZRHB				*e*Pg		**Pg**		**22 05 20.3**	**-1.6**
ZRHB				Pmax				22 05 32.1	
	comp=N,633nm,0.9s								
ZRHB				*e*				22 05 49.2	
ZRHB				*i* Sg		**Sg**		**22 05 56.1**	**+0.6**
ZRHB				Smax				22 06 05.2	
	comp=N,8μm,0.9s								
HRMR	**Khuramsha**	**2.63**	**107**	⇑*i*Pn		**Pn**		**22 05 15.7**	**+1.1**
HRMR				*e*Pg		**Pg**		**22 05 20.6**	**-1.9**
HRMR				*e*				22 05 21.8	
HRMR				max				22 05 23.0	
	comp=N,650nm,0.5s								
HRMR				*i* Sn		**Sn**		**22 05 47.8**	**+1.3**
HRMR				*e*Sg		**Sg**		**22 05 55.2**	**-1.3**
HRMR				Smax				22 05 58.6	
	comp=N,9μm,0.6s								
UUDB	**Ulan-Yde**	**2.98**	**99**	⇑*i*Pn		**Pn**		**22 05 20.7**	**+1.2**
UUDB				*e*				22 05 24.9	
UUDB				*e*Pg		**Pg**		**22 05 26.9**	**-2.4**
UUDB				Pmax				22 05 35.5	
	comp=N,126nm,0.6s								
UUDB				*i* Sg		**Sg**		**22 06 06.1**	**-1.8**
UUDB				Smax				22 06 11.3	
	comp=N,2μm,0.9s								
OGRR	**Ongureny**	**3.07**	**65**	*e*PN		**Pn**		**22 05 21.8**	**+1.1**
OGRR				*e*				22 05 28.1	
OGRR				*e*S		**Sn**		**22 05 58.8**	**+1.3**
OGRR				*e*				22 06 08.2	
OGRR				pmax		pmax			
	comp=Z,591nm,0.2s								
OGRR				smax					
	comp=N,2μm,0.7s								
OGRR	**Ongureny**	**3.07**	**65**	⇓*i*Pn		**Pn**		**22 05 21.6**	**+0.9**
OGRR				*e*				22 05 28.7	
OGRR				*e*Pg		**Pg**		**22 05 30.4**	**-0.6**
OGRR				Pmax				22 05 32.4	
	comp=N,595nm,0.2s								
OGRR				*e*Sn		**Sn**		**22 05 58.2**	**+0.7**
OGRR				*e*Sg		**Sg**		**22 06 09.7**	**-1.1**
OGRR				Smax				22 06 13.1	
	comp=N,1μm,0.5s								
MXMB	**Maximikha**	**3.63**	**75**	⇑*i*Pn		**Pn**		**22 05 29.8**	**+1.4**
MXMB				*e*Pg		**Pg**		**22 05 39.2**	**-2.5**
MXMB				Pmax				22 05 44.0	
	comp=N,127nm,0.6s								
MXMB				*e*Sn		**Sn**		**22 06 12.0**	**+0.8**
MXMB				*e*Sg		**Sg**		**22 06 27.2**	**-1.5**
MXMB				*e*				22 06 29.4	
MXMB				max				22 06 36.8	
	comp=N,2μm,1.0s								
TDJR	**Todzha**	**4.17**	**272**	*e*Pn		**Pn**		**22 05 36.7**	**+0.9**
TDJR				*e*Sg		**Sg**		**22 06 36.7**	**-9.3**
SYVR	**Suvo**	**4.45**	**71**	*e*Pn		**Pn**		**22 05 40.5**	**+0.9**
SYVR				*e*Pg		**Pg**		**22 05 53.4**	**-3.9**
SYVR				Pmax				22 05 56.0	
	comp=N,86nm,0.6s								
SYVR				*e*Sn		**Sn**		**22 06 43.5**	**+12**
SYVR				*e*Sg		**Sg**		**22 06 52.7**	**-2.1**
SYVR				Smax				22 06 59.7	
	comp=N,339nm,0.9s								
SONM	**Songino Array**	**5.13**	**153**	Pn		**Pn**		**22 05 49.8**	**+0.8**
	comp=N,13nm,0.3s,baz=330,slow=13,SNR=368								
SONM				Pg		**Pg**		**22 06 02.9**	**-7.5**
	comp=N,28nm,0.3s,baz=332,slow=16,SNR=50								
SONM				Lg				22 07 10.7	
	comp=N,42nm,0.3s,baz=334,slow=33,SNR=14								
SONM	**Songino Array**	**5.13**	**153**	PN		**Pn**		**22 05 49.8**	**+0.8**
SONM								22 06 02.9	
SONM								22 07 10.7	
SONM				pmax		pmax			
	comp=Z,13nm,0.3s								
SONM				pmax		pmax			
	comp=Z,28nm,0.3s								
NIZ	**Nizh Angarsk**	**5.13**	**47**	*e*PN		**Pn**		**22 05 50.3**	**+1.3**
NIZ				*e*				22 06 05.8	
NIZ				*e*S		**Sn**		**22 06 47.8**	**-0.4**
NIZ				*e*				22 07 14.3	
NIZ				pmax		pmax			
	comp=Z,145nm,0.4s								
NIZ				smax					
	comp=N,566nm,1.3s								
NIZ	**Nizh Angarsk**	**5.13**	**47**

KTRR				*e*				22 07 31.2	
KMO	**Kumora**	**5.96**	**51**	⇑*i* Pn		**Pn**		**22 06 02.2**	**+1.8**
KMO				*e*				22 06 06.3	
KMO				*e* Pg		**Pg**		**22 06 23.4**	**-2.9**
KMO				Pmax				22 06 28.3	
	comp=N,88nm,0.6s								
KMO				*i* Sn		**Sn**		**22 07 08.7**	**0.0**
KMO				*e* Sg		**Sg**		**22 07 42.6**	**-0.9**
KMO				Smax				22 07 52.8	
	comp=N,381nm,1.3s								
YOA	**Uoyan**	**6.34**	**51**	*e*		**Pg**		**22 06 48.2**	**+15**
YOA				max				22 06 54.3	
	comp=N,287nm,0.2s								
YOA				Sg		**Sg**		**22 07 53.9**	**-1.8**
YOA				Smax				22 08 19.7	
	comp=N,1μm,1.7s								
CIT	**Chita**	**6.55**	**89**	Pn		**Pn**		**22 06 12.5**	**+4.0**
CIT				*e*				22 06 22.2	
CIT				max				22 06 28.4	
	comp=N,107nm,0.3s								
CIT				*e*				22 07 28.3	
CIT				*e* Sg		**Sg**		**22 07 59.2**	**-3.1**
CIT				Smax				22 08 01.6	
	comp=N,515nm,1.6s								
KPC	**Khapcheranga**	**6.57**	**111**	*e* PN		**Pn**		**22 06 10.5**	**+1.8**
KPC				*e*				22 06 33.5	
KPC				*e*				22 07 57.5	
KPC				pmax	pmax				
	comp=Z,20nm,0.3s								
KPC				smax					
	comp=N,329nm,1.7s								
KPC	**Khapcheranga**	**6.57**	**111**	*e* Pn		**Pn**		**22 06 08.5**	**-0.2**
KPC				Pg		**Pg**		**22 06 32.8**	**-5.0**
KPC				Pmax				22 06 34.3	
	comp=N,19nm,0.6s								
KPC				*e* Sg		**Sg**		**22 07 56.8**	**-6.0**
KPC				Smax				22 08 10.9	
	comp=N,329nm,1.7s								
KRAR	**Krasnoyarsk**	**6.88**	**305**	⇑*i* PN		**Pn**		**22 06 12.6**	**-0.4**
UKT	**Uakit**	**7.02**	**60**	*e* Pn		**Pn**		**22 06 16.0**	**+1.1**
UKT				*e*				22 06 19.6	
UKT				*e* Pg		**Pg**		**22 06 40.7**	**-5.8**
UKT				*e*				22 06 42.8	
UKT				max				22 06 46.3	
	comp=N,25nm,1.4s								
UKT				*e*				22 07 53.5	
UKT				*e* Sg		**Sg**		**22 08 13.6**	**-3.6**
UKT				Smax				22 08 20.9	
	comp=N,131nm,1.3s								
ABNR	**Abakan**	**7.03**	**285**	*i* PN		**Pn**		**22 06 16.1**	**+1.0**
ABNR				*i*				22 06 34.1	
SVKR	**Severomuysk**	**7.24**	**55**	*e* Pn		**Pn**		**22 06 21.8**	**+3.9**
SVKR				Pg		**Pg**		**22 06 47.5**	**-3.1**
SVKR				Pmax				22 06 49.2	
	comp=N,43nm,0.7s								
SVKR				*e* Sn		**Sn**		**22 07 42.2**	**+2.2**
SVKR				*e* Sg		**Sg**		**22 08 22.0**	**-2.2**
SVKR				Smax				22 08 45.0	
	comp=N,359nm,1.1s								
BOD	**Bodaibo**	**8.32**	**45**	*e* PN		**Pn**		**22 06 33.4**	**+0.6**
BOD	**Bodaibo**	**8.32**	**45**	*e* Pn		**Pn**		**22 06 33.0**	**+0.2**
BOD				*e*				22 06 43.2	
BOD				max				22 07 07.2	
	comp=N,15nm,0.5s								
BOD				*e* Sn		**Sn**		**22 08 04.8**	**-1.9**
BOD				*e* Sg		Sn		22 08 54.1	+47
BOD				Smax				22 09 05.9	
	comp=N,147nm,1.6s								
NLYR	**Nelyaty**	**8.48**	**56**	*e*		Px		22 07 06.5	
NLYR				max				22 07 09.7	
	comp=N,11nm,0.6s								
NLYR				*e* Sg		Sx		22 08 58.4	
NLYR				Smax				22 09 27.6	
	comp=N,193nm,1.3s								
CRS	**Chara**	**9.95**	**57**	*e* Pg		Px		22 07 35.4	
CRS				*e* Sg		Sx		22 09 44.8	
CRS				Smax				22 10 06.6	
	comp=N,136nm,1.6s								
TUP	**Tupik**	**10.36**	**72**	⇓*i* Pn		**Pn**		**22 07 01.8**	**+1.1**
TUP				*e*				22 09 53.9	
TUP				*e* Sg		Sn		22 09 57.1	+60
TUP				Smax				22 10 09.2	
	comp=N,124nm,2.4s								
ZALV	**Zalesovo Beam**	**10.96**	**285**	Pg		Px		22 07 53.3	
	comp=N,1.1nm,0.3s,baz=100,slow=16,SNR=9.9								
ZALV				Lg				22 10 10.2	
	comp=N,0.3nm,0.3s,baz=92,slow=28,SNR=5.3								
MKAR	**Makanchi Array**	**14.49**	**255**	Pn		**Pn**		**22 07 56.6**	**-0.5**
	comp=N,0.0nm,0.3s,baz=56,slow=11,SNR=2.4								
MKAR				Lg				22 11 59.3	
	comp=N,0.0nm,0.3s,baz=78,slow=34,SNR=2.5								
KURK	**Kurchatov**	**15.18**	**273**	*e* Pn		**Pn**		**22 08 11.1**	**+4.6**
	comp=N,6.3nm,1.7s								
KURK	**Kurchatov**	**15.18**	**273**	*e* P		**Pn**		**22 08 11.1**	**+4.6**
KURK				pmax	pmax				
	comp=Z,6.0nm,1.7s								
YAK	**Yakutsk**	**17.25**	**46**	*e* P		**Pn**		**22 08 34.0**	**+1.2**
YAK				pmax	pmax				
	comp=Z,7.0nm,1.1s								
TKM2	**Tokmak 2**	**20.60**	**253**	*e* P		**P**		**22 09 11.9**	**+0.7**
	comp=Z,1.2nm,0.6s								
TKM2	**Tokmak 2**	**20.60**	**253**	*e* P		**P**		**22 09 11.9**	**+0.7**
TKM2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
AAK	**Ala-Archa**	**21.42**	**254**	*e* P		**P**		**22 09 24.0**	**+3.9**
	comp=Z,0.7nm,0.9s,mb3.0								
AAK	**Ala-Archa**	**21.42**	**254**	*e* P		**P**		**22 09 24.0**	**+3.9**
AAK				pmax	pmax				
	comp=Z,10.0nm,0.9s,mb4.2								
UCH	**Uchtor**	**21.66**	**253**	*e* P		**P**		**22 09 26.9**	**+4.3**
	comp=Z,1.6nm,0.3s,mb3.9								
EKS2	**Erkin-Say**	**21.83**	**255**	*e* P		**P**		**22 09 28.1**	**+3.6**
	comp=Z,1.5nm,0.8s,mb3.5								
AML	**Almayashu**	**22.20**	**254**	P		**P**		**22 09 32.1**	**+3.7**
ARU	**Arti**	**25.75**	**297**	*c* P		**P**		**22 10 02.4**	**-0.2**
ARU				*e*				22 10 37.6	
ARU				*e* S		**S**		**22 14 31.0**	**-0.3**
ARU				pmax	pmax				
	comp=Z,13nm,1.7s,mb4.2								
SEY	**Seymchan**	**27.73**	**48**	⇑*i* P		**P**		**22 10 23.4**	**+3.0**
KBL	**Kabul**	**30.02**	**247**	P		**P**		**22 10 43.6**	**+2.7**
KIV	**Kislovodsk**	**39.96**	**283**	*e* P		**P**		**22 12 05.5**	**-1.0**
KIV				pmax	pmax				
	comp=Z,12nm,1.2s,mb4.5								

*ISCJB **11** 22:10:39.5±1.2, 36.96N±0.05×71.92E±0.10, h59km±34km, Error ellipse: s-maj=12.9km s-min=7.8km az=1.1*
*NEIC **11** 22:10:40.7±0.9, 37.04N×71.70E, h120km±67km, mb4.1/3, Error ellipse: s-maj=43.6km s-min=10.5km az=109.0*

ISC 11 22:10:41.2±0.7, 36.98N±0.05×71.82E±0.01, h98km±26km, n16, σ0.56/20, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**3.30**	**223**	*e* Pn	**Pn**	**22 11 31.2**	**+0.3**
KBL				*e* Sn	**Sn**	**22 12 08.7**	**-0.5**
AML	**Almayashu**	**5.35**	**15**	*e* Pn	**Pn**	**22 11 58.2**	**-0.3**
AML				Sn	**Sn**	**22 12 58.7**	**-0.1**
THN	**Thein Dam**	**5.57**	**143**	*e* P	**Pn**	**22 12 03.1**	**+1.5**
THN				*e* S	**Sn**	**22 13 03.5**	**-0.8**
KK31	**Karatay Array**	**6.19**	**351**	⇑Pn	**Pn**	**22 12 19.9**	**+10**
	1.3nm,0.3s,baz=178,slow=12,SNR=61						
KK31				⇑Sn	**Sn**	**22 13 30.4**	**+11**
	0.6nm,0.3s,baz=180,slow=20,SNR=6.5						
PYUN	**Piuthan**	**12.94**	**130**	*e* P	**Pn**	**22 13 41.1**	**-0.2**
	11nm,0.3s						
DANN	**Dangsing**	**13.25**	**127**	*e* P	**Pn**	**22 13 46.0**	**+0.6**
	6.3nm,0.3s						
KOLN	**Koldanda**	**13.56**	**129**	*e* P	**Pn**	**22 13 49.8**	**+0.4**
	4.6nm,0.3s						
GKN	**Gorkha**	**14.05**	**126**	*e* P	**Pn**	**22 13 55.9**	**+0.1**
KKN	**Kakani**	**14.62**	**125**	*e* P	**Pn**	**22 14 02.9**	**-0.1**
	2.6nm,0.2s						
DMN	**Daman**	**14.62**	**126**	*e* P	**Pn**	**22 14 03.4**	**+0.3**
PKIN	**Phulchoki**	**14.84**	**125**	*e* P	**Pn**	**22 14 05.3**	**-0.5**
	2.0nm,0.3s						
PKI	**Pulchoki**	**14.85**	**125**	*e* P	**Pn**	**22 14 05.3**	**-0.7**
	2.0nm,0.3s						
AB09	**Akbulak array**	**15.00**	**329**	⇑Pn	**Pn**	**22 14 13.2**	**+5.5**
	0.3nm,0.3s						
JIRN	**Jiri**	**15.30**	**123**	*e* P	**Pn**	**22 14 12.3**	**+0.5**
	8.5nm,0.3s						
RAMN	**Ramite**	**16.05**	**124**	*e* P	**Pn**	**22 14 21.2**	**+0.1**
TAPN	**Taplejung**	**16.54**	**121**	*e* P	**Pn**	**22 14 26.6**	**-0.5**

*IDC **11** 22:34:06.2±1.1, 1068S×12356E, h0km, mb4.1/5, mb1 4.2/7, mb1mx4.0/14, mbtmp4.1/7, ML3.9/2, MS2.8/1, Ms1 2.8/1, ms1mx1.8/33, Error ellipse: s-maj=35.8km s-min=10.7km az=103.0*
*ISCJB **11** 22:34:07.6±1.3, 1064S±0.07×123.8E±0.1, h26km±9km, mb4.1/12, Error ellipse: s-maj=19.4km s-min=6.7km az=147.1*
*NEIC **11** 22:34:11.5±0.8, 1065S×123.78E, h40km±8km, mb4.2/7, Error ellipse: s-maj=12.8km s-min=6.4km az=57.0*

ISC 11 22:34:11.4±1.1, 1072S±0.06×123.83E±0.07, h42km±11km, n29, σ1.9/05/33, mb4.1/12, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.54**	**342**	Pg	**Pn**	**22 34 16.4**	**-6.4**
	3μm,0.3s,baz=148,slow=5.4,SNR=1956						
BATI				Lg		22 34 21.2	
	baz=105,slow=20						
KAPI	**Kappang**	**6.97**	**324**	Pn	**Pn**	**22 35 50.4**	**-0.6**
	0.9nm,0.3s,baz=179,slow=13,SNR=3.7						
KAPI				LR	LR	22 38 42.1	
	comp=Z,74nm,19.3s,baz=53,slow=41						
MBWA	**Marble Bar**	**11.10**	**200**	Pn	**Pn**	**22 36 49.4**	**+1.8**
MBWA				*e* Sn	**Sn**	**22 38 49.4**	**-1.0**
WRA	**Warramunga Arr**	**13.65**	**133**	Pn	**Pn**	**22 37 23.3**	**+0.8**
	0.4nm,0.3s,baz=305,slow=14,SNR=6.1						
WRA				Sn	**Sn**	**22 39 51.5**	**-1.4**
	1.3nm,0.3s,baz=307,slow=25,SNR=11						
WRAB	**Tennant Creek**	**13.66**	**133**	*e* Pn	**Pn**	**22 37 23.2**	**+0.7**
	6.9nm,1.0s						
WRAB				*e* Sn	**Sn**	**22 39 48.8**	**-4.2**
WB2	**Warramunga Arr**	**13.66**	**133**	*e* Pn	**Pn**	**22 37 22.9**	**+0.2**
WB2				*e* Sn	**Sn**	**22 39 50.9**	**-2.3**
ASAR	**Alice Springs**	**16.06**	**145**	Pn	**Pn**	**22 37 56.6**	**+2.3**
	0.9nm,0.3s,baz=319,slow=12,SNR=53						
ASAR				Sn	**Sn**	**22 40 49.8**	**-1.5**
	0.6nm,0.3s,baz=316,slow=21,SNR=12						
STKA	**Stephens Creek**	**26.70**	**145**	P	**P**	**22 39 48.3**	**+1.6**
TAU	**Tasmania Unive**	**38.03**	**152**	*e* P	**P**	**22 41 27.0**	**+1.3**
CHTO	**Chiang Mai**	**38.26**	**320**	P	**P**	**22 41 26.2**	**-1.7**
MJAR	**Matsushiro Arr**	**48.92**	**15**	P	**P**	**22 42 54.2**	**+0.8**
	0.6nm,0.4s,mb4.0,baz=212,slow=8.6,SNR=3.3						
LSA	**Lhasa**	**51.06**	**323**	*e* P	**P**	**22 43 09.9**	**+0.2**
	1.2nm,0.4s,mb4.2						
SONM	**Songino Array**	**60.32**	**347**	P	**P**	**22 44 15.6**	**-0.3**
	0.3nm,0.5s,mb3.6,baz=159,slow=8.5,SNR=5.5						
MK31	**Makanchi Array**	**68.22**	**331**	*e* P	**P**	**22 45 07.9**	**+0.3**
MKAR	**Makanchi Array**	**68.22**	**331**	P	**P**	**22 45 08.2**	**+0.5**
	2.2nm,0.6s,mb4.4,baz=138,slow=7.4,SNR=30						
KBL	**Kabul**	**68.69**	**314**	*e* P	**P**	**22 45 11.2**	**+0.3**
	1.1nm,0.4s,mb4.1						
TKM2	**Tokmak 2**	**69.18**	**324**	*e* P	**P**	**22 45 12.1**	**-1.6**
	3.3nm,1.5s,mb4.0						
AAK	**Ala-Archa**	**69.65**	**323**	*e* P	**P**	**22 45 15.8**	**-0.8**
	0.6nm,0.7s,mb3.6						
PETK	**Petropavlovsk-**	**69.85**	**21**	P	**P**	**22 45 19.1**	**+1.5**
	1.9nm,0.6s,mb4.2,baz=232,slow=1.6,SNR=3.9						
EKS2	**Erkin-Say**	**70.09**	**323**	*e* P	**P**	**22 45 19.1**	**-0.2**
	10nm,2.1s,mb4.4						
ZAA0	**Zalesovo Array**	**72.41**	**337**	*e* P	**P**	**22 45 32.7**	**-0.4**
ZALV	**Zalesovo Beam**	**72.41**	**337**	P	**P**	**22 45 32.6**	**-0.4**
	1.9nm,0.4s,mb4.4,baz=142,slow=5.3,SNR=9.7						
KURK	**Kurchatov**	**72.70**	**332**	*e* P	**P**	**22 45 34.7**	**-0.2**
	1.7nm,0.8s,mb4.0						
BRVK	**Borovoye**	**78.17**	**330**	*e* P	**P**	**22 46 05.5**	**-0.7**
	1.9nm,0.6s,mb4.2						
ARU	**Arti**	**85.72**	**330**	P	**P**	**22 46 45.7**	**-0.1**
SNAA	**Sanae**	**90.59**	**195**	*e* P	**P**	**22 47 10.1**	**+1.1**
BOSA	**Boshof**	**92.34**	**240**	P	**P**	**22 47 17.7**	**-0.2**
LSZ	**Lusaka**	**92.57**	**254**	P	**P**	**22 47 18.8**	**-0.4**
TSUM	**Tsumeb**	**101.50**	**248**	Pdif	Pdif	22 48 00.2	+1.4

NEIC 11 22:35:39.0, 3711S×177.41E, h136km, MG3.9 (WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.85**	**123**	P	Pn	22 36 01.2	+0.1
MXZ				S	Sn	22 36 18.3	+0.4
URZ	**Urewera**	**1.17**	**192**	P	Pn	22 36 04.1	+0.1
PUZ	**Puketiti**	**1.17**	**145**	P	Pn	22 36 04.1	0.0
PUZ				S	Sn	22 36 22.8	-0.4
MWZ	**Matawai**	**1.23**	**176**	P	Pn	22 36 04.9	+0.3
KNZ	**Kokohu**	**1.92**	**174**	P	Pn	22 36 11.9	-0.4
BKZ	**Black Stump Fm**	**2.18**	**199**	P	Pn	22 36 14.9	-0.5
WTVZ	**West Tongariro**	**2.46**	**215**	P	Pn	22 36 19.3	+0.3
TWVZ	**Taurewa**	**2.50**	**218**	P	Pn	22 36 19.8	+0.4
TUVZ	**Tukino**	**2.56**	**212**	P	Pn	22 36 20.2	0.0
WNVZ	**Wahianoa**	**2.63**	**212**	P	Pn	22 36 21.2	+0.1
MOVZ	**Moawhango**	**2.64**	**209**	P	Pn	22 36 20.3	-0.9
TSZ	**Takapari Road**	**3.16**	**201**	P	Pn	22 36 25.7	-2.1
WAZ	**Wanganui**	**3.26**	**215**	P	Pn	22 36 28.8	-0.3
BFZ	**Birch Farm**	**3.68**	**194**	P	Pn	22 36 32.1	-2.5
MRZ	**Mangatainoka R**	**3.82**	**201**	P	Pn	22 36 33.5	-3.0
KIW	**Kapiti Island**	**4.22**	**207**	P	Pn	22 36 38.5	-3.3
MTW	**Mount Morrison**	**4.31**	**200**	P	Pn	22 36 38.9	-4.0
CAW	**Cannon Point**	**4.39**	**204**	P	Pn	22 36 40.3	-3.7
MSWZ	**Moikau Station**	**4.62**	**201**	P	Pn	22 36 42.6	-4.4
MRW	**Makara Radio**	**4.62**	**206**	P	Pn	22 36 43.1	-4.0
TCW	**Tory Channel**	**4.77**	**210**	P	Pn	22 36 45.0	-4.0
QRZ	**Quartz Range**	**5.31**	**224**	P	Pn	22 36 52.9	-3.4
BSWZ	**Blackbirch Sta**	**5.35**	**210**	P	Pn	22 36 52.7	-4.1
THZ	**Tophouse**	**5.81**	**215**	P	Pn	22 36 59.1	-3.8

*ISCJB **11** 22:50:19.1±0.6, 3324S±0.05×704W±0.1, h107km±4km, Error ellipse: s-maj=15.5km s-min=7.1km az=167.9*
*NEIC **11** 22:50:20.7, 3326S×70.43W, h98km, mb4.0/1, MD3.9(GUC), After GUC.*
NEIC Felt [II] at Santiago.
*GUC **11** 22:50:20.7±0.4, 3326S×70.43W, h98km±2km, MD3.9, ML4.1*

ISC 11 22:50:20.4±0.6, 3323S±0.05×704W±0.1, h100km±4km, n21, σ0.38/37, 3C-9D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.15**	**130**	⇓*i* P	**Pn**	**22 50 34.3**	**-0.1**
FCH				*i* S	**Sn**	**22 50 45.3**	**+0.4**
FCH				AML	AML	22 50 45.5	
	comp=N,15μm,0.3s						
CLCH	**Cerro Calan**	**0.19**	**210**	⇑*i* P	**Pn**	**22 50 34.5**	**0.0**
CLCH				*i* S	**Sn**	**22 50 45.1**	**0.0**
CLCH				AML	AML	22 50 45.8	
	comp=E,61μm,0.5s						
PEL	**Peldehue**	**0.24**	**292**	⇓*i* P	**Pn**	**22 50 34.6**	**-0.1**
PEL				*i* S	**Sn**	**22 50 45.2**	**-0.2**
PEL				AML	AML	22 50 45.7	
	comp=N,19μm,0.3s						
SAN	**Santiago**	**0.29**	**222**	⇓*i* P	**Pn**	**22 50 34.8**	**-0.2**
SAN				*i* S	**Sn**	**22 50 45.4**	**-0.4**
SAN	**Santiago**	**0.29**	**222**	⇓*i* P	**Pn**	**22 50 34.8**	**-0.2**
SAN				*i* S	**Sn**	**22 50 45.4**	**-0.4**
SAN				AML	AML	22 50 46.0	
	comp=E,6μm,0.2s						
ANTU	**Antumapu**	**0.38**	**208**	⇑*i* P	**Pn**	**22 50 35.1**	**-0.2**
ANTU				*i* S	**Sn**	**22 50 46.5**	**-0.1**
ANTU	**Antumapu**	**0.38**	**208**	⇑*i* P	**Pn**	**22 50 35.1**	**-0.2**
ANTU				*i* S	**Sn**	**22 50 46.5**	**-0.1**
ANTU				AML	AML	22 50 47.1	
	comp=N,6μm,0.2s						
PCH	**Pirque**	**0.39**	**191**	*i* P	**Pn**	**22 50 35.5**	**+0.1**
PCH				*i* S	**Sn**	**22 50 46.9**	**+0.1**
RCDM	**Rinconada Maip**	**0.41**	**231**	*e* P	**Pn**	**22 50 35.4**	**-0.1**
RCDM				*e* S	**Sn**	**22 50 46.8**	**-0.1**
RCDM	**Rinconada Maip**	**0.41**	**231**	*e* P	**Pn**	**22 50 35.4**	**-0.1**
RCDM				*e* S	**Sn**	**22 50 46.8**	**-0.1**
RCDM				AML	AML	22 50 47.4	
	comp=E,50μm,0.1s						
YECH	**El Yeso**	**0.52**	**147**	⇓*i* P	**Pn**	**22 50 36.4**	**+0.1**
YECH				*i* S	**Sn**	**22 50 48.7**	**+0.5**
YECH				AML	AML	22 50 49.8	
	comp=N,4μm,0.5s						
TACH	**Talagante**	**0.60**	**226**	⇓*i* P	**Pn**	**22 50 36.8**	**-0.1**
TACH				*i* S	**Sn**	**22 50 49.1**	**-0.3**
LMEL	**Las Melosas**	**0.64**	**163**	⇓*i* P	**Pn**	**22 50 37.2**	**0.0**
LMEL				*i* S	**Sn**	**22 50 50.4**	**+0.5**
LMEL	**Las Melosas**	**0.64**	**163**	⇓*i* P	**Pn**	**22 50 37.2**	**0.0**
LMEL				*i* S	**Sn**	**22 50 50.4**	**+0.5**
LMEL				AML	AML	22 50 54.7	
	comp=N,5μm,0.1s						
CHNG	**Los Chungos**	**1.62**	**326**	⇓*i* P	**Pn**	**22 50 48.9**	**+0.7**
CHNG				*i* S	**Sn**	**22 51 10.2**	**+0.9**
CHNG				AML	AML	22 51 10.8	
	comp=N,1μm,0.7s						
LCO	**Las Campanas**	**4.22**	**357**	*e* Pn	**Pn**	**22 51 21.9**	**-0.6**
LCO				*e* Sn	**Sn**	**22 52 10.3**	**-0.4**
PLCA	**Paso Flores**	**7.49**	**181**	*e* Pn	**Pn**	**22 52 06.2**	**-0.6**
LVC	**Limon Verde**	**10.66**	**8**	*e* Pn	**Pn**	**22 52 49.4**	**-0.7**
OTAV	**Otavalo**	**34.14**	**346**	*e* P	**P**	**22 56 55.9**	**+0.1**
QSPA	**South Pole Qui**	**57.00**	**180**	*e* P	**P**	**22 59 55.2**	**+0.3**
WVT	**Waverly**	**70.90**	**345**	*e* P	**P**	**23 01 26.9**	**+0.5**
	comp=N,1.4nm,0.6s						

*NIED **11** 23:02:00, 24.70N×122.10E, h11km, Mw3.9 Best double couple: M0 8.13000×10^14 NP1:φ89.00000°, δ70.00000°, λ-78.00000°. NP2:φ237.00000°, δ23.00000°, λ-119.00000°.*
*ISCJB **11** 23:02:48.5±0.4, 24.36N±0.002×122.19E±0.001, h4km±2km, mb3.7/8, MS3.4/2, Error ellipse: s-maj=2.7km s-min=2.2km az=165.8*
*BJI **11** 23:02:49.2, 24.46N×122.11E, h16km, ML3.5, Ms3.3, Ms2.2*
*NEIC **11** 23:02:49.0, 24.39N×122.03E, h10km, mb3.8/1, ML4.2(TAP), After TAP.*
NEIC Recorded [3 TAP] in I-lan and [1 TAP] in Hua-lien Counties.
*TAP **11** 23:02:49.5, 24.36N×122.09E, h17km, ML4.1, C*
*JMA **11** 23:02:50.0±0.3, 24.73N×122.14E, h40km, M3.8*
*IDC **11** 23:02:50.7±0.9, 24.39N×122.10E, h27km±6km, mb3.6/7, mb1 3.7/8, mb1mx3.6/22, mbtmp3.6/8, ML3.4/1, MS3.1/3, Ms1 3.1/3, ms1mx2.4/27, Error ellipse: s-maj=41.6km s-min=14.7km az=63.0*

ISC 11 23:02:49.1±0.4, 2437N±002×12218E±002, h8km±2km, h28km±.8km: pP-P, n81, σ1.9/08/126, mb3.7/8, MS3.4/2, 5C-13D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.39**	**308**	⇓*i* P	**Pg**	**23 02 56.7**	**0.0**
	baz=318						
TWC				*e* S	**Sg**	**23 03 01.3**	**-0.5**
	baz=318						
EHP	**Heping Village**	**0.41**	**262**	*e* P	**Pg**	**23 02 56.3**	**-0.7**
	baz=268						
EHP				*e* S	**Sg**	**23 03 01.7**	**-0.7**
	baz=268						
ENA	**Nanau**	**0.41**	**279**	⇓*i* P	**Pg**	**23 02 56.6**	**-0.4**
	baz=290						
ENA				*e* S	**Sg**	**23 03 01.2**	**-1.2**
	baz=290						
ILA	**Ilan**	**0.56**	**315**	⇓*i* P	**Pg**	**23 03 00.5**	**+0.5**
	baz=314						
ILA				S	**Sg**	**23 03 08.2**	**+0.9**
	baz=314						
NACB	**Ninganchiao**	**0.57**	**250**	*e* P	**Pg**	**23 02 59.1**	**-1.1**
NACB				*e* S	**Sg**	**23 03 07.9**	**+0.3**
TWE	**Neicheng**	**0.59**	**307**	⇓*i* P	**Pg**	**23 03 00.4**	**0.0**
	baz=313						
TWE				S	**Sg**	**23 03 08.2**	**+0.1**
	baz=313						
TWD	**Chiawan**	**0.61**	**242**	*e* P	**Pg**	**23 03 00.5**	**-0.4**
	baz=241						
TWD				*e* S	**Sg**	**23 03 10.0**	**+1.2**
	baz=241						
ENTT	**Nioudou**	**0.62**	**296**	⇓*i* P	**Pg**	**23 03 01.0**	**-0.2**
	baz=299						
ENTT				S	**Sg**	**23 03 08.6**	**-0.7**
	baz=299						
HWA	**Hwalien**	**0.66**	**234**	*e* P	**Pg**	**23 03 03.2**	**+1.4**
	baz=228						
HWA				*e* S	**Sg**	**23 03 12.9**	**+2.6**
	baz=228						
TWB1	**Santiao Chiao**	**0.66**	**345**	⇓P	**Pg**	**23 03 02.7**	**+0.8**
	baz=352						
TWB1				S	**Sg**	**23 03 12.1**	**+1.5**
	baz=352						
NNS	**Nan Shan**	**0.74**	**276**	⇓*i* P	**Pg**	**23 03 02.9**	**-0.6**
	baz=283						
NNS				S	**Sg**	**23 03 11.3**	**-1.7**
	baz=283						
YOJ	**Yonaguni jima**	**0.76**	**83**	P	**Pg**	**23 03 05.4**	**+1.6**
YOJ				S	**Sg**	**23 03 16.3**	**+2.6**
YOJ	**Yonaguni jima**	**0.76**	**83**	⇓*i* P	**Pg**	**23 03 05.3**	**+1.5**
	baz=73						
YOJ				S	**Sg**	**23 03 16.5**	**+2.8**
	baz=73						
NWF	**Wu-fen Shan**	**0.79**	**333**	⇓*i* P	**Pg**	**23 03 05.2**	**+0.9**
	baz=338						
NWF				*i* S	**Sg**	**23 03 15.4**	**+0.8**
	baz=338						
YHNB	**Yeheng**	**0.79**	**292**	*e* P	**Pg**	**23 03 04.1**	**-0.3**
YHNB				*e* S	**Sg**	**23 03 13.1**	**-1.7**
NSK	**Sanguang**	**0.81**	**292**	⇓*i* P	**Pg**	**23 03 04.5**	**-0.2**
	baz=294						
NSK				S	**Sg**	**23 03 13.5**	**-1.8**
	baz=294						
TWA	**Mucha**	**0.82**	**318**	⇓*i* P	**Pg**	**23 03 05.4**	**+0.5**
	baz=323						
TWA				S	**Sg**	**23 03 15.5**	**0.0**
	baz=323						
WHF	**Hehuan Shan**	**0.87**	**255**	⇓*i* P	**Pg**	**23 03 05.1**	**-0.6**
	baz=260						
WHF				S	**Sg**	**23 03 17.3**	**+0.3**
	baz=260						
**

TCU	**Taichung**	**1.39**	**261**	P		**Pn**	**23 03 16.1**	**+1.2**
	baz=260							
TCU				*e*S		**Sb**	**23 03 35.6**	**+2.3**
	baz=260							
IRIF	**Iriomote-Funau**	**1.41**	**91**	P		**Pn**	**23 03 14.7**	**-0.5**
IRIF				S		**Sb**	**23 03 33.9**	**0.0**
YUS	**Yu-Shan**	**1.43**	**232**⇑	*i*P		**Pn**	**23 03 15.2**	**-0.1**
	baz=212							
YUS				*e*S		**Sn**	**23 03 32.8**	**-1.5**
	baz=212							
WNT	**Mingjian**	**1.45**	**251**	*e*P		**Pn**	**23 03 16.4**	**+0.6**
	baz=236							
WNT				*e*S		**Sn**	**23 03 37.2**	**+2.3**
	baz=236							
CHKT	**Chengkung**	**1.47**	**211**	*e*P		**Pn**	**23 03 13.5**	**-2.4**
	baz=193							
HATJ	**Hateruma jima**	**1.51**	**101**	P		**Pn**	**23 03 17.7**	**+1.1**
HATJ				S		**Sn**	**23 03 37.5**	**+1.0**
ALS	**Alishan**	**1.52**	**236**	*e*P		**Pn**	**23 03 16.7**	**+0.1**
	baz=231							
CHN5	**Tsauling**	**1.57**	**241**	P		**Pn**	**23 03 18.0**	**+0.6**
	baz=238							
CHN5				*e*S		**Sn**	**23 03 39.7**	**+1.7**
	baz=238							
ELDTW	**Lidau**	**1.59**	**223**	*e*P		**Pn**	**23 03 15.8**	**-1.7**
	baz=205							
JKRS	**Kuro-shima**	**1.67**	**94**	P		**Pn**	**23 03 19.0**	**+0.3**
JKRS				S		**Sn**	**23 03 40.4**	**0.0**
CHN2	**Minshiung**	**1.77**	**242**	*e*P		**Pn**	**23 03 21.3**	**+1.2**
	baz=222							
CHN4	**Tsaushan**	**1.77**	**235**	*e*P		**Pn**	**23 03 21.0**	**+0.9**
	baz=231							
CHN4				*e*S		**Sn**	**23 03 45.1**	**+2.2**
	baz=231							
STYT	**Tauyuan**	**1.77**	**228**	*e*P		**Pn**	**23 03 19.8**	**-0.4**
	baz=209							
JIJ	**Ishigaki jima**	**1.79**	**90**	P		**Pn**	**23 03 19.9**	**-0.4**
JIJ				S		**Sn**	**23 03 42.2**	**-1.1**
WTP	**Ta-pu**	**1.82**	**232**	*e*P		**Pn**	**23 03 21.2**	**+0.5**
	baz=213							
CHY	**Chiayi**	**1.83**	**242**	*e*P		**Pn**	**23 03 21.5**	**+0.6**
	baz=238							
TWG	**Pinlang**	**1.85**	**214**	*e*P		**Pn**	**23 03 18.7**	**-2.4**
	baz=197							
TTN	**Taitung**	**1.87**	**211**	*e*P		**Pn**	**23 03 19.2**	**-2.2**
	baz=196							
TWK	**Hsinying**	**1.90**	**235**	*e*P		**Pn**	**23 03 22.6**	**+0.7**
	baz=231							
TWK				*e*S		**Sn**	**23 03 47.0**	**+1.0**
	baz=231							
CHN1	**Nanshi**	**1.92**	**232**	*e*P		**Pn**	**23 03 23.1**	**+0.9**
	baz=228							
CHN1				*e*S		**Sn**	**23 03 47.9**	**+1.4**
	baz=228							
WSF	**Szhu**	**1.93**	**248**	*e*P		**Pn**	**23 03 22.9**	**+0.6**
	baz=246							
WSF				*e*S		**Sn**	**23 03 48.5**	**+1.6**
	baz=246							
SGST	**Jiashian**	**1.94**	**229**	*e*P		**Pn**	**23 03 23.2**	**+0.7**
	baz=224							
SGST				*e*S		**Sn**	**23 03 48.0**	**+0.9**
	baz=224							
CHN8	**Yiju**	**2.07**	**241**	*e*P		**Pn**	**23 03 24.7**	**+0.5**
	baz=220							
ECL	**Taimali**	**2.09**	**213**	*e*P		**Pn**	**23 03 22.1**	**-2.4**
	baz=207							
SSD	**Sandimen**	**2.15**	**222**	P		**Pn**	**23 03 25.5**	**+0.1**
	baz=203							
SSD				*e*S		**Sn**	**23 03 52.9**	**+0.7**
	baz=203							
TWM1	**Shoushan**	**2.23**	**227**	*e*P		**Pn**	**23 03 27.3**	**+0.9**
	baz=221							
JTJ	**Tarama**	**2.31**	**83**	P		**Pn**	**23 03 28.0**	**+0.5**
JTJ				S		**Sn**	**23 03 56.4**	**+0.2**
TAW	**Tawu**	**2.32**	**211**	*e*P		**Pn**	**23 03 27.1**	**-0.7**
	baz=205							
LAY	**Lan-yu**	**2.39**	**194**	*e*P		**Pn**	**23 03 24.6**	**-4.0**
	baz=190							
SCZT	**Fangliau**	**2.45**	**216**	*e*P		**Pn**	**23 03 29.0**	**-0.4**
	baz=198							
SCZT				*e*S		**Sn**	**23 04 00.0**	**+0.4**
	baz=198							
PNG	**Penghu**	**2.53**	**252**	*e*P		**Pn**	**23 03 30.0**	**-0.6**
	baz=250							
WDGT	**Dungji**	**2.56**	**245**	*e*P		**Pn**	**23 03 31.4**	**+0.5**
	baz=242							
TWK1	**Hengchun**	**2.73**	**208**	*e*P		**Pn**	**23 03 31.1**	**-2.1**
	baz=195							
QZH	**Quanzhou**	**3.32**	**281**⇑	*i*P		**Pn**	**23 03 40.7**	**-0.7**
QZH				S		**Sn**	**23 04 18.3**	**-2.7**
QZH				Smax				
	comp=N,180nm,0.7s							
QZH				Smax				
	comp=E,140nm,0.7s							
KNM	**Kinmen**	**3.42**	**272**	*e*P		**Pn**	**23 03 42.8**	**0.0**
	baz=272							
JOW	**Kunigami**	**6.02**	**65**	Pn		**Pn**	**23 04 18.6**	**0.0**
	comp=E,2.3nm,0.3s,baz=295,slow=17,SNR=3.7							
KSRS	**Korea Array**	**13.94**	**19**	LR		LR	23 11 07.1	
	comp=E,21nm,20.7s,baz=205,slow=36							
SONM	**Songino Array**	**26.56**	**336**	P		**P**	**23 08 26.6**	**-0.9**
	comp=E,1.8nm,0.9s,mb3.6,baz=146,slow=12,SNR=8.4							
KAPI	**Kappang**	**29.30**	**185**	LR		LR	23 20 22.9	
	comp=E,25nm,19.4s,MS2.8,baz=14,slow=36							
MKAR	**Makanchi Array**	**38.84**	**315**	P		**P**	**23 10 12.1**	**-2.6**
	comp=E,0.7nm,0.7s,mb3.5,baz=95,slow=7.9,SNR=8.7							
ZALV	**Zalesovo Beam**	**40.59**	**327**	P		**P**	**23 10 26.6**	**-2.5**
	comp=E,0.6nm,0.5s,mb3.5,baz=104,slow=11,SNR=3.7							
TKM2	**Tokmak 2**	**42.37**	**308**	*e*P		**P**	**23 10 41.5**	**-2.4**
	comp=E,1.0nm,0.5s,mb3.7							
WRA	**Warramunga Arr**	**45.61**	**164**	P		**P**	**23 11 08.6**	**-1.4**
	comp=E,0.7nm,0.4s,mb3.9,baz=346,slow=8.8,SNR=3.7							
WRA				pP		pP	23 11 16.5	+4.0
	comp=E,2.9nm,0.7s,baz=346,slow=8.7,SNR=6.2							
BVAR	**Borovoye Array**	**48.11**	**320**	P		**P**	**23 11 27.6**	**-1.7**
	comp=E,0.5nm,0.5s,mb3.8,baz=87,slow=7.7,SNR=3.4							
BVAR				pP		pP	23 11 36.1	+4.3
	comp=E,0.6nm,0.5s,baz=111,slow=7.9,SNR=3.7							
ASAR	**Alice Springs**	**49.08**	**166**	P		**P**	**23 11 37.2**	**+0.1**
	comp=E,0.2nm,0.4s,mb3.5,baz=354,slow=11,SNR=4.2							
ASAR				pP		pP	23 11 44.8	+5.2
	comp=E,0.7nm,0.6s,baz=348,slow=9.6,SNR=6.9							
STKA	**Stephens Creek**	**58.93**	**161**	P		**P**	**23 12 47.1**	**-1.7**
	comp=E,0.9nm,0.6s,mb4.0,baz=302,slow=13,SNR=2.8							
IDI	**Anoyia**	**81.88**	**305**	LR		LR	23 51 53.0	
	comp=E,54nm,20.9s,MS3.9,baz=269,slow=36							

CASC 11 23:12:48.3±2.1, 866N×8309W, h27km±6km, MD4.0, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.08**	**265**⇓	*e*P	Pb	23 12 53.1	0.0
ACR				*e*S	Sb	23 12 57.8	+1.4
BRU2	**Volcan**	**0.41**	**71**⇑	*e*P	Pb	23 12 56.8	-0.4
BRU2				*e*S	Sb	23 13 04.6	+1.4
TBS2		**0.44**	**73**⇑	*e*P	Pb	23 12 58.5	+0.8
TBS2				*e*S	Sb	23 13 06.7	+2.7
BAR1		**0.62**	**339**	*e*P	Pb	23 12 59.9	-0.8
BAR1				*e*S	Sb	23 13 08.5	-0.5
URSC	**Urasca**	**1.35**	**330**	*e*P	Pn	23 13 10.9	-0.6
PRS1	**Puriscal**	**1.79**	**317**	*e*P	Pn	23 13 16.4	-1.0
CGA2	**Cerro Gallo 2**	**1.92**	**315**	*e*P	Pn	23 13 20.1	+1.0
CGA2				*e*S	Sn	23 13 45.4	+2.9
PTP	**Ponta Puerca**	**19.45**	**59**	*e*P		23 12 58.0	

MOS 11 23:17:20.8±1.3, 4415N×4229E, h8km, mb4.0/1, 1C-6D, Error ellipse: s-maj=20.2km s-min=7.6km az=132.7, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIV	**Kislovodsk**	**0.35**	**124**⇓	*i*PG	Pg	23 17 26.7	-0.9
KIV				*i* S	Sg	23 17 33.6	+1.5
KIV0	**Kislovodsk Arr**	**0.35**	**123**⇓	*i*PG	Pg	23 17 26.8	-0.8
KIV0				*i* S	Sg	23 17 33.7	+1.4
SHAR	**Shatzhatmas**	**0.49**	**146**⇓	*i*PG	Pg	23 17 31.0	+0.7
SHAR				*i* S	Sg	23 17 40.4	+3.7
KUBR	**Kubataba**	**0.88**	**113**	*e*PG	Pg	23 17 38.8	+1.1
KUBR				*e*S	Sg	23 17 49.9	+0.7
DOMR	**Dombai**	**0.98**	**210**⇓	*i*PG	Pg	23 17 39.7	0.0
DOMR				*e*S	Sg	23 17 56.0	+3.5
LSNR	**Lesken**	**1.41**	**128**⇓	*i*PG	Pg	23 17 46.4	-1.4
LSNR				*e*S	Sb	23 18 06.5	+1.0
PRTR	**Priterechnaya**	**1.49**	**105**	*e*PG	Pg	23 17 46.8	-2.6
PRTR				*e*S	Sn	23 18 07.5	0.0
KMSR	**Komsomolskaya**	**1.65**	**118**	*e*PN	Pn	23 17 52.1	+2.1
KMSR				*e*S	Sn	23 18 15.3	+4.0
KORR	**Kora**	**1.67**	**129**	*e*PN	Pn	23 17 52.3	+2.0
KORR				*e*S	Sn	23 18 15.6	+3.6
ARNR	**Ardon**	**1.73**	**123**	*e*PN	Pn	23 17 53.1	+1.9
ARNR				*e*S	Sn	23 18 17.4	+3.9
BTKR	**Batakoyurt**	**1.81**	**115**	*e*PN	Pn	23 17 54.1	+1.9
BTKR				*e*S	Sn	23 18 19.1	+3.8
ZEI	**Tsey**	**1.81**	**139**⇓	*i*PN	Pn	23 17 53.3	+1.1
ZEI				*e*S	Sn	23 18 18.6	+3.3
LACR	**Lac**	**1.97**	**132**⇑	*i*PN	Pn	23 17 56.4	+2.0
LACR				*e*S	Sn	23 18 23.3	+4.0

TEH **11** *23:23:10.1, 2774N×5366E, h36km, ML4.1*
ISCJB **11** *23:23:42.8±0.2, 2781N±003×5380E±002, h10km, mb4.4/68, MS3.1/3, Error ellipse: s-maj=3.9km s-min=2.9km az=11.9*
IDC **11** *23:23:42.9±0.7, 2786N×5381E, h0km, mb4.2/19, mb1 4.3/21, mb1mx4.3/27, mbtmp4.2/21, ML3.5/2, MS3.1/6, Ms1 3.1/6, ms1mx2.9/29, Error ellipse: s-maj=17.0km s-min=12.9km az=170.0*
CSEM **11** *23:23:43.2±0.1, 2778N×5385E, h17km, mb4.5/44, Error ellipse: s-maj=2.2km s-min=1.7km az=13.0*
MOS **11** *23:23:45.8±0.8, 2783N×5385E, h33km, mb4.6/40, Error ellipse: s-maj=8.2km s-min=4.6km az=126.8*
BJI **11** *23:23:45.6, 2770N×5370E, h35km, mB5.0, mb4.6, Ms4.3*
NEIC **11** *23:23:48.6, 2774N×5366E, h36km, mb4.5/33, ML3.9(THR), MN4.1(TEH), After TEH.*
THR **11** *23:23:51.6±0.3, 2850N×5394E, h14km±3km, ML3.7*

ISC 11 23:23:44.7±0.2, 2780N±003×5381E±002, h10km, n283, σ1ᵍ06/299, mb4.4/68, MS3.1/3, 9C-18D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**1.69**	**339**	Pn	**Pn**	**23 24 16.2**	**+1.9**
ISRV				Lg		23 24 43.2	
ISRV	**Sarvestan**	**1.69**	**339**	*e*Pn	**Pn**	**23 24 16.3**	**+2.0**
ISRV				*e*Lg		23 24 43.3	
ISRV				*e*		23 24 53.8	
IPAR	**Pars**	**2.14**	**342**	Pn	**Pn**	**23 24 22.4**	**+1.9**
IPAR	**Pars**	**2.14**	**342**	*e*Pn	**Pn**	**23 24 22.5**	**+2.0**
IPAR				*e*		23 25 05.8	
SHI	**Shiraz**	**2.16**	**329**	*e*Sg	**Sg**	**23 24 56.1**	**+1.9**
IBND	**Bandar-abas**	**2.45**	**98**	*e*Pn	**Pn**	**23 24 27.5**	**+2.7**
IBND				*e*		23 25 37.6	
BANOM	**Banah** SNR=21	**2.91**	**129**	P	**Pn**	**23 24 32.3**	**+1.3**
BANOM	**Banah** SNR=21	**2.91**	**129**	Pn	**Pn**	**23 24 32.3**	**+1.3**
BANOM				Sn	**Sn**	**23 25 02.5**	**-3.5**
NAZ	**Nazwa, Dubai**	**3.25**	**149**	Pn	**Pn**	**23 24 39.3**	**+3.5**
KRBR	**Kerman**	**3.38**	**49**	*e*Pn	**Pn**	**23 24 39.0**	**+1.4**
KRBR				*e*Sg	**Sn**	**23 25 21.0**	**+3.2**
KRBR	**Kerman**	**3.38**	**49**	*e*Pn	**Pn**	**23 24 39.3**	**+1.7**
KRBR				*e*Sg	**Sn**	**23 25 21.5**	**+3.7**
KRBR				AML	AML	23 25 34.5	
	comp=N,477nm,0.7s						
KRBR				AML	AML	23 25 41.4	
	comp=E,420nm,0.7s						
FAQ	**Al Faqa, Dubai** SNR=31	**3.44**	**152**	Pn	**Pn**	**23 24 41.4**	**+3.1**
ASUD	**Al Ashush, Dub** SNR=101	**3.44**	**156**	Pn	**Pn**	**23 24 42.2**	**+3.8**
IMEH	**Mehriz**	**3.65**	**11**	Pn	**Pn**	**23 24 43.1**	**+1.9**
IMEH	**Mehriz**	**3.65**	**11**	*e*Pn	**Pn**	**23 24 43.2**	**+2.0**
IMEH				*e*		23 25 43.0	
IBAF	**Bafgh**	**4.08**	**22**	*e*Pn	**Pn**	**23 24 47.9**	**+0.8**
IBAF				*e*Sn	**Sn**	**23 25 34.6**	**-0.3**
IBAF	**Bafgh**	**4.08**	**22**	*e*Pn	**Pn**	**23 24 47.9**	**+0.8**
IBAF				*e*Sn	**Sn**	**23 25 34.6**	**-0.3**
IBAF				*e*		23 25 57.2	
ISAD	**Sadrabad**	**4.10**	**359**	Pn	**Pn**	**23 24 49.5**	**+2.0**
ISAD	**Sadrabad**	**4.10**	**359**	*e*Pn	**Pn**	**23 24 49.6**	**+2.1**
ISAD				*e*		23 26 09.1	
ICHK	**Chekchek**	**4.46**	**7**	*e*Pn	**Pn**	**23 24 54.0**	**+1.6**
ICHK				*e*		23 26 11.5	
BTHS		**4.59**	**216**	P	**Pn**	**23 24 56.7**	**+2.5**
IGAR	**Gharneh**	**4.84**	**342**	*e*Pn	**Pn**	**23 24 58.4**	**+0.8**
NASN	**Na'in**	**5.06**	**350**	*e*Pn	**Pn**	**23 25 00.0**	**-0.6**
NASN				Sn	**Sn**	**23 25 50.0**	**-9.1**
NASN	**Na'in**	**5.06**	**350**	*e*Pn	**Pn**	**23 25 00.2**	**-0.4**
NASN				Sn	**Sn**	**23 25 50.4**	**-8.7**
NASN				AML	AML	23 26 00.6	
	comp=E,63nm,0.5s						
NASN				AML	AML	23 26 02.7	
	comp=N,34nm,0.5s						
NASN	**Na'in** SNR=52	**5.06**	**350**	*e*Pn	**Pn**	**23 25 00.2**	**-0.4**
NASN				Sn	**Sn**	**23 25 50.0**	**-9.1**
IZEF	**Zefreh**	**5.24**	**346**	Pn	**Pn**	**23 25 03.2**	**+0.1**
IZEF	**Zefreh**	**5.24**	**346**	*e*Pn	**Pn**	**23 25 03.3**	**+0.2**
KBD	**Kabd**	**5.55**	**286**	*e*P	**Pn**	**23 25 08.1**	**+0.7**
KBD				*e*S	**Sn**	**23 26 10.8**	**-0.5**
KBD	**Kabd**	**5.55**	**286**	*e*P	**Pn**	**23 25 08.1**	**+0.6**
	baz=284						
KBD				*e*S	**Sn**	**23 26 10.8**	**-0.6**
	baz=284						
KBD				AML	AML	23 26 14.1	
	comp=Z,23nm,0.4s,baz=284						
UMR	**Umm Al-Rimmam**	**5.63**	**290**	*e*P	**Pn**	**23 25 09.6**	**+1.1**
UMR				*e*S	**Sn**	**23 26 12.1**	**-1.1**
UMR	**Umm Al-Rimmam**	**5.63**	**290**	*e*P	**Pn**	**23 25 09.6**	**+1.1**
	baz=288						
UMR				*e*S	**Sn**	**23 26 12.1**	**-1.1**
	baz=288						
UMR				AML	AML	23 26 13.5	
	comp=Z,43nm,0.5s,baz=288						
IKLH	**Kolahrood**	**5.83**	**341**	*e*Pn	**Pn**	**23 25 11.9**	**+0.7**
NAY	**Al-Naaiem**	**5.95**	**286**	*e*P	**Pn**	**23 25 13.2**	**+0.3**
NAY				*e*S	**Sn**	**23 26 21.3**	**+0.1**
	comp=Z,21nm,0.6s						
NAY	**Al-Naaiem**	**5.95**	**286**	*e*P	**Pn**	**23 25 13.2**	**+0.3**
	baz=284						
NAY				*e*S	**Sn**	**23 26 21.3**	**+0.1**
	baz=284						
NAY				AML	AML	23 26 21.9	
	comp=Z,21nm,0.6s,baz=284						
MIB	**Mutribah**	**6.02**	**291**	*e*P	**Pn**	**23 25 14.4**	**+0.6**
MIB				*e*S	**Sn**	**23 26 21.9**	**-0.8**
MIB	**Mutribah**	**6.02**	**291**	*e*P	**Pn**	**23 25 14.3**	**+0.6**
	baz=290						
MIB				*e*S	**Sn**	**23 26 21.9**	**-0.8**
	baz=290						
MIB				AML	AML	23 26 25.9	
	comp=Z,36nm,0.6s,baz=290						
SMDO	**Samad** SNR=8.9	**6.08**	**140**	S	**Pn**	**23 25 18.0**	**+3.3**
SHGR	**Shooshtar-Gavs**	**6.11**	**316**	*e*Pn	**Pn**	**23 25 18.0**	**+3.0**
SHGR	**Shooshtar-Gavs**	**6.11**	**316**	*e*Pn	**Pn**	**23 25 18.1**	**+3.1**
HRDDS		**6.24**	**220**	P	**Pn**	**23 25 19.4**	**+2.5**
ZHSF	**Zahedan**	**6.38**	**72**	*e*Pn	**Pn**	**23 25 23.3**	**+4.5**
ZHSF	**Zahedan**	**6.38**	**72**	*e*Pn	**Pn**	**23 25 23.0**	**+4.2**
ITEG	**Tejag**	**6.64**	**39**	*e*Pn	**Pn**	**23 25 24.2**	**+1.9**
ITEG				*e*		23 27 46.6	
ISFB	**Sefidab**	**6.67**	**349**	Pn	**Pn**	**23 25 22.9**	**+0.1**
ISFB	**Sefidab**	**6.67**	**349**	*e*Pn	**Pn**	**23 25 23.0**	**+0.2**
ISFB				*e*		23 25 56.5	
GHVR	**GHOM**	**7.00**	**343**	*e*Pn	**Pn**	**23 25 27.5**	**+0.2**
IVRN	**Varamin**	**7.39**	**347**	*e*Pn	**Pn**	**23 25 32.8**	**+0.1**
IVRN				*e*		23 25 37.6	
ASAO	**Ashtian**	**7.47**	**335**	*e*Pn	**Pn**	**23 25 34.0**	**+0.3**
ASAO	**Ashtian**	**7.47**	**335**	*e*Pn	**Pn**	**23 25 34.7**	**+1.0**
IANJ	**Anjilo**	**7.65**	**1**	Pn	**Pn**	**23 25 36.7**	**+0.5**
IANJ	**Anjilo**	**7.65**	**1**	*e*Pn	**Pn**	**23 25 36.8**	**+0.6**
IANJ				*e*		23 25 38.6	
IFIR	**Firoozkooh**	**7.87**	**354**	Pn	**Pn**	**23 25 39.9**	**+0.7**
IFIR	**Firoozkooh**	**7.87**	**354**	*e*Pn	**Pn**	**23 25 40.0**	**+0.8**
IFIR				*e*		23 25 51.6	
DAMV	**Damavand**	**7.96**	**349**	*e*Pn	**Pn**	**23 25 40.0**	**-0.5**
DAMV	**Damavand**	**7.96**	**349**	*e*Pn	**Pn**	**23 25 40.4**	**-0.1**
ISHM	**Shahmirzad**	**8.00**	**357**	*e*Pn	**Pn**	**23 25 42.1**	**+1.1**
ISHM				*e*		23 25 43.5	
IAFJ	**Afjeh**	**8.23**	**348**	*e*Pn	**Pn**	**23 25 44.7**	**+0.6**
IAFJ				*e*		23 25 49.1	
LYLS		**8.27**	**228**	P	**Pn**	**23 25 46.9**	**+2.2**
IRAZ	**Razeghan**	**8.27**	**337**	Pn	**Pn**	**23 25 44.5**	**-0.2**
IRAZ	**Razeghan**	**8.27**	**337**	*e*Pn	**Pn**	**23 25 44.6**	**-0.1**
IRAZ				*e*		23 25 48.9	
IALA	**Alasht**	**8.30**	**354**	Pn	**Pn**	**23 25 46.2**	**+1.0**
IALA	**Alasht**	**8.30**	**354**	*e*Pn	**Pn**	**23 25 46.3**	**+1.1**
IALA				*e*		23 25 51.4	
IKOM	**Komasi**	**8.34**	**321**	Pn	**Pn**	**23 25 45.8**	**+0.1**
IKOM	**Komasi**	**8.34**	**321**	*e*Pn	**Pn**	**23 25 45.9**	**+0.2**
IKOM				*e*		23 27 37.5	
IKIA	**Kiasar**	**8.38**	**359**⇑	*e*Pn	**Pn**	**23 25 47.6**	**+1.3**
IKIA	**Kiasar**	**8.38**	**359**	*e*Pn	**Pn**	**23 25 47.7**	**+1.4**
IKIA				*e*		23 25 52.2	
CHTH	**Charan**	**8.40**	**345**	*e*Pn	**Pn**	**23 25 46.0**	**-0.5**
CHTH	**Charan**	**8.40**	**345**	*e*Pn	**Pn**	**23 25 46.7**	**+0.2**
IPRN	**Peran**	**8.51**	**352**	Pn	**Pn**	**23 25 50.8**	**+2.8**
IPRN	**Peran**	**8.51**	**352**	*e*Pn	**Pn**	**23 25 50.9**	**+2.9**
IPRN				*e*		23 26 05.1	
IGLO	**Ghaloghah**	**8.68**	**0**	Pn	**Pn**	**23 25 52.9**	**+2.6**
IGLO	**Ghaloghah**	**8.68**	**0**	*e*Pn	**Pn**	**23 25 52.9**	**+2.6**
IGLO				*e*		23 26 06.9	
IVIS	**Veis**	**8.97**	**320**	*e*Pn	**Pn**	**23 25 53.5**	**-0.8**
IVIS				*e*		23 27 45.0	
WHFO	**Wadi Hawf** SNR=22	**9.83**	**180**	P	**Pn**	**23 26 08.1**	**+1.9**
IMYA	**Miami**	**10.05**	**30**	*e*Pn	**Pn**	**23 26 10.3**	**+1.2**
IMYA				*e*		23 27 29.2	
GNI	**Garni**	**14.42**	**331**	Pn	**Pn**	**23 27 16.1**	**+7.3**
	comp=Z,1.2nm,0.3s,baz=323,slow=0.5,SNR=17						
GNI				LR	LR	23 32 15.6	
	comp=Z,97nm,20.7s,baz=126,slow=36						
KBL	**Kabul**	**14.67**	**59**	*e*Pn	**Pn**	**23 27 12.0**	**-0.3**
	comp=Z,11nm,1.2s						
KBL	**Kabul**	**14.67**	**59**	*e*P	**Pn**	**23 27 12.0**	**-0.2**
KBL				pmax	pmax		
	comp=Z,11nm,1.2s						
KBL	**Kabul**	**14.67**	**59**	*e*P	**Pn**	**23 27 12.0**	**-0.2**
	comp=Z,11nm,1.2s						
ASF	**Jabal al Asfar**	**15.29**	**291**	Pn	**Pn**	**23 27 18.7**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=156,slow=12,SNR=3.7						
ASF				LR	LR	23 33 36.4	
	comp=Z,34nm,18.6s,baz=302,slow=39						
EIL	**Elat**	**16.64**	**281**	Pn	**Pn**	**23 27 39.5**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=14,slow=10,SNR=3.9						
EIL				LR	LR	23 34 42.0	
	comp=Z,55nm,18.2s,baz=113,slow=40						
EIL	**Elat**	**16.64**	**281**	Pn	**Pn**	**23 27 39.5**	**+1.3**
KIV	**Kislovodsk**	**18.44**	**334**	*e*Pn	**Pn**	**23 27 59.7**	**-0.7**
	comp=Z,23nm,0.9s						
KIV	**Kislovodsk**	**18.44**	**334**	*e*P	**Pn**	**23 28 01.0**	**+0.6**
KIV				pmax	pmax		
	comp=Z,33nm,1.2s						
KIV	**Kislovodsk**	**18.44**	**334**	*e*Pn	**Pn**	**23 27 59.7**	**-0.7**
KIV	**Kislovodsk**	**18.44**	**334**	*e*P	**Pn**	**23 28 01.0**	**+0.6**
	comp=Z,33nm,1.2s						
BRTR	**Keskin Array B**	**20.51**	**311**	P	**P**	**23 28 22.3**	**-0.7**
	comp=Z,5.3nm,0.9s						
BRTR	**Keskin Array B**	**20.51**	**311**	P	**P**	**23 28 22.3**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SMLA	**Simla**	**20.60**	**75**	*i* P	**P**	**23 28 23.5**	**-0.5**
SMLA				*ex*	x	23 28 34.6	
	comp=Z,68nm,0.7s						
ANTO	**Ankara**	**21.15**	**310**⇓	P	**P**	**23 28 31.6**	**+1.8**
ANTO	**Ankara**	**21.15**	**310**⇓	*i*P	**P**	**23 28 31.6**	**+1.7**
AML	**Almayashu**	**21.61**	**43**	*e*Pn	**P**	**23 28 35.6**	**+0.8**
	comp=Z,22nm,0.9s,mb4.6						
AML	**Almayashu**	**21.61**	**43**	*e*Pn	**P**	**23 28 35.6**	**+0.8**
	comp=Z,22nm,0.9s,mb4.6						
EKS2	**Erkin-Say**	**21.97**	**42**	*e*P	**P**	**23 28 41.2**	**+2.6**
	comp=Z,6.5nm,0.7s,mb4.2						
AAK	**Ala-Archa**	**22.38**	**43**	*e*P	**P**	**23 28 43.2**	**+0.1**
	comp=Z,4.5nm,1.0s,mb3.9						
AAK	**Ala-Archa**	**22.38**	**43**	*e*P	**P**	**23 28 43.2**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
AAK	**Ala-Archa**	**22.38**	**43**	*e*P	**P**	**23 28 43.2**	**+0.1**
	comp=Z,4.5nm,1.0s,mb3.9						
AKTK	**Aktyubinsk**	**22.83**	**7**	P	**P**	**23 28 46.9**	**-0.9**
AKTK				LR	LR	23 39 45.5	
AKTK	**Aktyubinsk**	**22.83**	**7**	P	**P**	**23 28 46.9**	**-0.9**
	comp=Z,57nm,18.6s						
AKTO	**Aktyubinsk**	**22.83**	**7**	P	**P**	**23 28 46.9**	**-0.9**
	comp=Z,3.6nm,0.5s,mb4.1,baz=186,slow=11,SNR=14						
AKTO				LR	LR	23 39 45.5	
	comp=Z,57nm,18.6s,MS3.0,baz=134,slow=42						
AKTO	**Aktyubinsk**	**22.83**	**7**	P	**P**	**23 28 46.9**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						

BUR08 Bucovina Ar. S 29.81 319 *e*P P **23 29 52.0 +0.2**
BUR08 Bucovina Ar. S 29.81 319 *e*P P **23 29 52.0 +0.3**
TAPN Taplejung 30.00 83 *e*P P **23 29 51.5 -2.2**
GZR Gura Zlata 30.22 314⇑*i*P P **23 29 55.1 -0.3**
DRGR 30.88 316 ⇓P P **23 30 02.1 +0.9**
DRGR 30.88 316⇓*i*P P **23 30 02.1 +0.9**
BZS Buzias 31.06 314 ⇓P P **23 30 03.3 +0.5**
BZS Buzias 31.06 314⇓*i*P P **23 30 03.3 +0.5**
KOLS Kolonicke sedl 32.15 320 *e*P P **23 30 13.0 +0.7**
KWP Kalwaria 32.26 321 ⇓P P **23 30 13.3 0.0**
KWP Kalwaria 32.26 321⇓*i*P P **23 30 13.3 0.0**
CRVS Cervenica-Dubn 32.60 319 *e*P P **23 30 16.6 +0.3**
PKSM Moragy 33.20 313 ⇓P P **23 30 21.6 -0.1**
PKSM Moragy 33.20 313⇓*i*P P **23 30 21.6 0.0**
VYHS Vyhne 33.98 317 *e*P P **23 30 28.0 -0.3**
VYHS Vyhne 33.98 317 *e*P P **23 30 28.1 -0.2**
OJC Ojcow 34.18 320 *e*P P **23 30 29.4 -0.7**
KOLL Kolacno 34.27 317 *e*P P **23 30 31.0 +0.1**
NVS Novosibirsk 34.44 30 *e*P P **23 30 29.7 -2.5**
ZAA0 Zalesovo Array 34.62 32 *e*P P **23 30 32.7 -1.0**
ZAA0 Zalesovo Array 34.62 32 *e*P P **23 30 32.7 -1.1**
ZALV Zalesovo Beam 34.62 32 P P **23 30 32.8 -1.0**
comp=Z,7.8nm,0.6s,mb4.8,baz=238,slow=9.4,SNR=42
ZALV LR LR 23 45 47.8
comp=Z,20nm,18.3s,MS2.9,baz=28,slow=38
ZALV Zalesovo Beam 34.62 32 P P **23 30 32.8 -1.0**
ZALV pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ZALV MLR MLR
comp=Z,21nm,18.3s,MS2.9
MODS Modra-Piesok 34.88 316 *e*P P **23 30 36.9 +0.8**
MODS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
MODS Modra-Piesok 34.88 316 *e*P P **23 30 36.9 +0.8**
comp=Z,6.5nm,1.4s,mb4.4
OKC Ostrava-Krasne 34.96 319 *e*P P **23 30 36.3 -0.5**
MORC Moravsky Berou 35.29 318 ⇓P P **23 30 39.6 -0.1**
MORC Moravsky Berou 35.29 318 *e*P P **23 30 39.2 -0.4**
MORC Moravsky Berou 35.29 318⇓*i*P P **23 30 39.6 0.0**
VRAC Vranov 35.66 317 ⇓P P **23 30 43.1 +0.2**
VRAC Vranov 35.66 317 *e*P P **23 30 42.7 -0.1**
VRAC Vranov 35.66 317⇓*i*P P **23 30 43.1 +0.3**
DPC Dobruska-Polom 36.24 319 *e*P P **23 30 47.6 -0.2**
DPC *ex* x 23 30 50.7
UPC Upice 36.48 319 *e*P P **23 30 49.2 -0.7**
PRU Pruhonice 37.15 317 *e*P P **23 30 54.1 -1.5**
GEC2 GERESS Array S 37.26 315 *e*P P **23 30 55.7 -0.8**
GEC2 pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
GEC2 GERESS Array S 37.26 315 *e*P P **23 30 55.7 -0.8**
comp=Z,3.0nm,1.0s,mb4.1
GERES GERESS Array B 37.26 315 P P **23 30 55.8 -0.7**
comp=Z,1.2nm,0.7s,mb3.8,baz=106,slow=8.4,SNR=8.1
GERES GERESS Array B 37.26 315 P P **23 30 55.8 -0.7**
GERES pmax pmax
comp=Z,1.0nm,0.7s
KHC Kasperske Hory 37.43 316 *e*P P **23 30 57.4 -0.6**
KHC *ex* x 23 31 00.1
RJOB Jochberg 37.49 313 *e*P P **23 31 00.6 +2.1**
comp=Z,4.0nm,0.8s,mb4.3
BRG Berggiesshubel 37.84 319 *e*P P **23 31 00.7 -0.7**
comp=Z,2.0nm,0.8s,mb3.9
WET Wettzell 37.87 316 *e*P P **23 31 01.0 -0.7**
WET pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
WET Wettzell 37.87 316 *e*P P **23 31 01.0 -0.7**
comp=Z,1.0nm,0.7s,mb3.6
JOF Joensuu 38.09 344 *e*p P **23 31 01.7 -1.6**
comp=Z,7.1nm,0.8s,mb4.5
JOF Joensuu 38.09 344 *e*P P **23 31 01.7 -1.6**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
WTTA Wattenberg 38.11 312⇑*i*P P **23 31 03.1 -0.6**
comp=Z,7.0nm,0.6s,mb4.6
WATA Walderalm 38.17 312⇑*i*P P **23 31 03.4 -0.8**
comp=Z,9.0nm,0.9s,mb4.5
MOTA Moosalm 38.48 312⇑*i*P P **23 31 05.7 -1.1**
comp=Z,4.4nm,0.7s,mb4.3
ROTZ Rotzenmuhle 38.49 316 *e*P P **23 31 07.0 +0.1**
comp=Z,3.0nm,0.8s,mb4.1
CLL Collm 38.55 319 *e*P P **23 31 07.4 0.0**
comp=Z,5.0nm,0.9s,mb4.2
CLL Collm 38.55 319 *i*P P **23 31 07.2 -0.2**
comp=Z,8.0nm,1.0s,mb4.4
CLL *ex* x 23 31 10.0
comp=Z,11nm,1.2s
MANZ Manzenberg 38.62 317 *e*P P **23 31 07.7 -0.3**
comp=Z,2.0nm,1.0s,mb3.8
FETA Feichten 38.64 312⇑*i*P P **23 31 07.7 -0.5**
comp=Z,10nm,0.9s,mb4.6
FETA Feichten 38.64 312 P P **23 31 07.7 -0.5**
comp=Z,10nm,0.9s,mb4.6
KAF Kangasniemi 38.84 340 *e*p P **23 31 08.2 -1.5**
GRA1 Grafenberg Arr 39.07 316 *e*P P **23 31 11.3 -0.5**
comp=Z,6.0nm,0.8s,mb4.4
GRF Grafenberg Arr 39.07 316 *e*P P **23 31 11.3 -0.5**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GRF Grafenberg Arr 39.07 316 *e*P P **23 31 11.3 -0.5**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GRF Grafenberg Arr 39.07 316 *e*P P **23 31 11.3 -0.5**
comp=Z,6.0nm,0.8s,mb4.4
NEUB Neuenburg 39.24 318 *e*P P **23 31 12.8 -0.3**
DAVA Damuels 39.27 312⇑*i*P P **23 31 12.7 -0.8**
comp=Z,18nm,0.5s,mb5.1
GTA Gaotai 39.65 61 *e*P P **23 31 17.4 +0.7**
GTA AP pP 23 31 22.7 +2.9
GTA AMB AMB
comp=Z,3.0nm,0.7s,mb4.1
CLZ Clausthal 40.28 319 *e*P P **23 31 21.7 -0.1**
CLZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
CLZ Clausthal 40.28 319 *e*P P **23 31 21.7 -0.1**
comp=Z,7.0nm,0.8s,mb4.4
MBDF Montbardon 40.91 307 *e*P P **23 31 26.4 -0.7**
comp=Z,17nm,0.9s,mb4.4
MBDF Montbardon 40.91 307 *e*P P **23 31 26.4 -0.7**
MBDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
MBDF Montbardon 40.91 307 *e*P P **23 31 26.4 -0.7**
comp=Z,8.7nm,0.9s,mb4.4
LPG La Plagne 41.04 308 *e*P P **23 31 28.1 -0.1**
comp=Z,14nm,0.7s,mb4.4
LPG La Plagne 41.04 308 *e*P P **23 31 28.1 -0.1**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
LPG La Plagne 41.04 308 *e*P P **23 31 28.1 -0.1**
comp=Z,6.8nm,0.7s,mb4.4
BSEG Bad Segeberg 41.05 322 *e*P P **23 31 28.7 +0.6**
BSEG pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
BSEG Bad Segeberg 41.05 322 *e*P P **23 31 28.7 +0.6**
comp=Z,3.0nm,0.8s,mb4.0
LPL La Plagne 41.05 308 *e*P P **23 31 27.4 -0.9**
comp=Z,16nm,1.0s,mb4.3
LPL La Plagne 41.05 308 *e*P P **23 31 27.4 -0.9**
LPL pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
LPL La Plagne 41.05 308 *e*P P **23 31 27.4 -0.9**
comp=Z,7.8nm,1.0s,mb4.3
CABF La Chapelle 41.68 310 *e*P P **23 31 32.8 -0.6**
comp=Z,12nm,0.6s,mb4.4
CABF La Chapelle 41.68 310 *e*P P **23 31 32.8 -0.6**
CABF pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
CABF La Chapelle 41.68 310 *e*P P **23 31 32.8 -0.6**
comp=Z,6.2nm,0.6s,mb4.4
CMAR Chiang Mai Arr 42.34 93 P P **23 31 39.4 +0.2**
comp=Z,0.8nm,0.4s,mb3.7,baz=281,slow=9.3,SNR=6.7
CMAR PcP PcP 23 33 32.5 -0.2
comp=Z,1.1nm,0.3s,baz=304,slow=4.3,SNR=4.7
CMAR Chiang Mai Arr 42.34 93 P P **23 31 39.4 +0.2**
CMAR 23 33 32.5
CMAR pmax pmax
comp=Z,1.0nm,0.4s
LZH Lanzhou 42.87 66 *e*P P **23 31 40.0 -3.3**
LZH AMB AMB
comp=Z,18nm,1.4s,mb4.6
LZH AMB AMB
comp=Z,89nm,5.0s
GIVF Givet 43.17 315 *e*P P **23 31 45.3 -0.2**
SMF Signal de Mont 43.21 310 *e*P P **23 31 44.8 -1.1**
comp=Z,21nm,0.7s,mb4.6
SMF Signal de Mont 43.21 310 *e*P P **23 31 44.8 -1.1**
SMF pmax pmax
comp=Z,11nm,0.8s,mb4.6
SMF Signal de Mont 43.21 310 *e*P P **23 31 44.8 -1.1**
comp=Z,10nm,0.8s,mb4.6
LOR Lormes 43.29 311 *e*P P **23 31 45.3 -1.2**
SSF Saint Saulge 43.50 310 *e*P P **23 31 47.2 -1.0**
comp=Z,11nm,0.8s,mb4.3
SSF Saint Saulge 43.50 310 *e*P P **23 31 47.2 -1.0**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
SSF Saint Saulge 43.50 310 *e*P P **23 31 47.2 -1.0**
comp=Z,5.4nm,0.8s,mb4.3
BAIF Baives 43.55 315 *e*P P **23 31 48.6 0.0**
comp=Z,10nm,0.7s,mb4.3
BAIF Baives 43.55 315 *e*P P **23 31 48.6 0.0**
BAIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
BAIF Baives 43.55 315 *e*P P **23 31 48.6 0.0**
comp=Z,5.2nm,0.7s,mb4.3
AVF Avril sur Loir 43.56 310 *e*P P **23 31 48.3 -0.4**
TAM Tamanrasset 43.72 275 *e*P P **23 31 51.0 +0.6**
TAM Tamanrasset 43.72 275 *e*P P **23 31 51.0 +0.7**
NB2 NORSAR Subarra 43.73 332 P P **23 31 48.0 -1.8**
comp=Z,1.5nm,0.6s,mb3.9,baz=120,slow=7.9
NOA NORSAR Array B 43.73 332 P P **23 31 48.1 -1.7**
comp=Z,2.1nm,0.7s,mb4.0,baz=120,slow=8.1,SNR=8.1
NOA NORSAR Array B 43.73 332 P P **23 31 48.1 -1.7**
NOA pmax pmax
comp=Z,2.0nm,0.7s
BGF Bois d'Agland 43.88 309 *e*P P **23 31 50.3 -1.0**
comp=Z,11nm,0.8s,mb4.3
BGF Bois d'Agland 43.88 309 *e*P P **23 31 50.3 -1.0**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
BGF Bois d'Agland 43.88 309 *e*P P **23 31 50.3 -1.0**
comp=Z,5.5nm,0.8s,mb4.3
MTLF Montolieu 44.04 305 *e*P P **23 31 52.8 +0.2**
CAF Calviac 44.26 307 *e*P P **23 31 54.1 -0.3**
comp=Z,11nm,0.7s,mb4.4
CAF Calviac 44.26 307 *e*P P **23 31 54.1 -0.3**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
CAF Calviac 44.26 307 *e*P P **23 31 54.1 -0.3**
comp=Z,5.4nm,0.7s,mb4.4
TCF Toulx Ste Croi 44.29 309 *e*P P **23 31 53.9 -0.6**
comp=Z,12nm,0.8s,mb4.4
TCF Toulx Ste Croi 44.29 309 *e*P P **23 31 53.9 -0.6**
TCF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TCF Toulx Ste Croi 44.29 309 *e*P P **23 31 53.9 -0.6**
comp=Z,5.8nm,0.8s,mb4.4
RJF Les Rejaudoux 44.68 307 *e*P P **23 31 57.5 -0.2**
comp=Z,30nm,1.0s,mb4.8
RJF Les Rejaudoux 44.68 307 *e*P P **23 31 57.5 -0.2**
RJF pmax pmax
comp=Z,15nm,1.0s,mb4.8
RJF Les Rejaudoux 44.68 307 *e*P P **23 31 57.5 -0.2**
comp=Z,15nm,1.0s,mb4.8
KEV Kevo 44.75 347 *e*p P **23 31 57.0 -0.9**
comp=Z,6.0nm,0.7s,mb4.5
KEV Kevo 44.75 347 *e*P P **23 31 57.0 -0.9**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
ARCES ARCESS Array B 44.88 346 P P **23 31 58.2 -0.7**
comp=Z,1.9nm,0.6s,mb4.1,baz=148,slow=8.0,SNR=14
ARCES ARCESS Array B 44.88 346 P P **23 31 58.3 -0.6**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
SONM Songino Array 45.14 49 P P **23 32 01.5 +0.2**
comp=Z,3.4nm,0.9s,mb4.2,baz=266,slow=9.0,SNR=20
SONM LR LR 23 50 42.2
comp=Z,35nm,18.2s,MS3.3,baz=12,slow=36
SONM Songino Array 45.14 49 P P **23 32 01.5 +0.2**
SONM pmax pmax
comp=Z,3.0nm,0.9s
SONM MLR MLR
comp=Z,35nm,18.2s
LFF La Frestale 45.20 307 *e*P P **23 32 01.7 -0.1**
comp=Z,26nm,0.7s,mb4.9
LFF La Frestale 45.20 307 *e*P P **23 32 01.7 -0.1**
comp=Z,13nm,0.7s,mb4.9
EPF Esparros 45.40 304 *e*P P **23 32 02.2 -1.3**
ETSF Etsaut 46.06 304 *e*P P **23 32 08.7 0.0**
comp=Z,11nm,0.7s,mb4.6
ETSF Etsaut 46.06 304 *e*P P **23 32 08.7 0.0**
ETSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ETSF Etsaut 46.06 304 *e*P P **23 32 08.7 0.0**
comp=Z,5.3nm,0.7s,mb4.6
SJPF Ste Jean 46.55 304 *e*P P **23 32 12.7 +0.2**
comp=Z,15nm,0.6s,mb4.8
SJPF Ste Jean 46.55 304 *e*P P **23 32 12.7 +0.2**
SJPF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SJPF Ste Jean 46.55 304 *e*P P **23 32 12.7 +0.2**
comp=Z,7.7nm,0.6s,mb4.8
XAN Xi'an 47.22 68 P P **23 32 16.6 -1.3**
XAN AP pP 23 32 26.3 +5.2
XAN AMB AMB
comp=Z,7.0nm,0.7s,mb4.7
XAN AMB AMB
comp=Z,84nm,5.4s
ESDC Sonseca Array 48.73 300 P P **23 32 29.1 -0.4**
comp=Z,0.4nm,0.4s,mb3.8,baz=70,slow=7.3,SNR=8.0
TOA0 Torodi Ar. Sit 50.59 264 *e*P P **23 32 43.4 -0.6**
TOA0 Torodi Ar. Sit 50.59 264 *e*P P **23 32 43.4 -0.6**
TORD Torodi Ar. Bea 50.59 264 P P **23 32 43.7 -0.3**
comp=Z,3.2nm,0.5s,mb4.5,baz=64,slow=8.0,SNR=79
BOD Bodaibo 51.13 37 *e*P P **23 32 46.5 -1.0**
BOD pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
BOD Bodaibo 51.13 37 *e*P P **23 32 46.5 -1.0**
comp=Z,9.0nm,1.4s,mb4.5
DBIC Dimbokro 59.26 261 P P **23 33 46.6 -0.2**
comp=Z,4.5nm,0.7s,mb4.6,baz=61,slow=8.4,SNR=7.5
DBIC Dimbokro 59.26 261 P P **23 33 46.6 -0.2**
DBIC pmax pmax
comp=Z,5.0nm,0.7s
LIC Lamto 59.62 260 *e*P P **23 33 49.1 -0.2**
comp=Z,6.9nm,0.5s,mb4.6
LIC Lamto 59.62 260 *e*P P **23 33 49.1 -0.2**
comp=Z,3.5nm,0.5s,mb4.6
KSRS Korea Array 61.72 60 P P **23 34 01.6 -1.7**
comp=Z,2.3nm,0.6s,mb4.5,baz=284,slow=6.8,SNR=4.1
KSRS Korea Array 61.72 60 P P **23 34 01.6 -1.7**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
BOSA Boshof 62.41 208 P P **23 34 08.7 +0.9**
comp=Z,3.3nm,0.6s,mb4.7,baz=35,slow=5.8,SNR=9.2
BOSA Boshof 62.41 208 P P **23 34 08.7 +0.8**
BOSA pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
WRA Warramunga Arr 91.16 112 P P **23 36 49.2 -1.1**
comp=Z,0.5nm,0.3s,mb4.3,baz=311,slow=4.1,SNR=4.5
WRA Warramunga Arr 91.16 112 P P **23 36 49.2 -1.0**
WRA pmax pmax
comp=Z,1.0nm,0.3s
ASAR Alice Springs 92.61 115 P P **23 36 56.0 -0.8**
comp=Z,1.1nm,0.7s,mb4.4,baz=298,slow=5.4,SNR=12
ASAR Alice Springs 92.61 115 P P **23 36 56.1 -0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.7s

MOS **12** *00:01:43.1±1.3,5531N×11030E,h12km,mb4.4/1, Error ellipse: s-maj=18.2km s-min=11.0km az=69.1*

BYKL 12 00:01:43.1±0.2,5531N×11034E,h6km±17km,6C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.64**	**132**	*e*PG		Pg	00 01 54.7	-0.7
YLYR				*e*			00 02 03.8	
YLYR				pmax	pmax			
	comp=Z,284nm,0.4s							
YLYR				smax				
	comp=N,531nm,0.2s							
YLYR	**Ulyunkhan**	**0.64**	**132**	⇓*i*Pg		Pg	00 01 54.7	-0.7
	comp=N,218nm,0.5s							
YLYR				⇑*i*Pg		Pg	00 01 54.7	-0.7
	comp=N,232nm,0.5s							
YLYR				⇑*i*Pg		Pg	00 01 54.7	-0.7
	comp=N,311nm,0.5s							
YLYR				*e*Sg		Sg	00 02 03.4	-0.3
YLYR				Pmax				
	comp=N,294nm,0.3s							
YLYR				Smax				
	comp=N,532nm,0.3s							
NIZ	**Nizh Angarsk**	**0.65**	**316**	*e*PG		Pg	00 01 55.2	-0.4
NIZ				*e*			00 02 04.3	
NIZ				pmax	pmax			
	comp=Z,234nm,0.6s							
NIZ				smax				
	comp=E,564nm,0.5s							
NIZ	**Nizh Angarsk**	**0.65**	**316**	⇑*i*Pg		Pg	00 01 55.3	-0.3
NIZ				*e*			00 02 02.8	
NIZ				*e*Sg		Sg	00 02 04.3	+0.3
NIZ				Pmax				
	comp=E,57nm,0.5s							
NIZ				Smax				
	comp=E,550nm,0.5s							
KMO	**Kumora**	**0.76**	**40**	*e*PG		Pg	00 01 56.6	-1.0
KMO				*e*			00 02 06.0	
KMO				pmax	pmax			
	comp=Z,181nm,0.4s							
KMO				smax				
	comp=N,837nm,0.8s							
KMO	**Kumora**	**0.76**	**40**	⇑*i*Pg		Pg	00 01 56.7	-0.9
KMO				*e*Sg		Sg	00 02 06.8	-0.6
KMO				Pmax				
	comp=N,181nm,0.5s							
KMO				Smax				
	comp=N,839nm,0.8s							
YOA	**Uoyan**	**1.14**	**43**	⇓*i*PG		Pg	00 02 04.4	-0.5
YOA				*i*			00 02 20.7	
YOA				pmax	pmax			
	comp=Z,245nm,0.3s							
YOA				smax				
	comp=E,1μm,0.4s							
YOA	**Uoyan**	**1.14**	**43**	*e*Pg		Pg	00 02 04.0	-0.9
YOA				*e*Sg		Sg	00 02 20.1	+0.5
YOA				Pmax				
	comp=E,238nm,0.4s							
YOA				Smax				
	comp=E,1μm,0.4s							
SYVR	**Suvo**	**1.67**	**187**	⇑*i*Pg		Pg	00 02 13.3	-1.7
SYVR				*e*Sg		Sg	00 02 36.2	-0.4
SYVR				Pmax				
	comp=E,115nm,0.3s							
SYVR				Smax				
	comp=E,558nm,0.7s							
UKT	**Uakit**	**1.88**	**83**	⇑*i*Pg		Pg	00 02 16.5	-2.7
UKT				*e*Sg		Sg	00 02 42.0	-1.5
UKT				Pmax				
	comp=E,189nm,0.5s							
UKT				Smax				
	comp=E,814nm,0.5s							
SVKR	**Severomuysk**	**1.99**	**65**	*e*PN		Pn	00 02 18.8	+1.5
SVKR				*e*			00 02 45.0	
SVKR				pmax	pmax			
	comp=Z,127nm,0.7s							
SVKR				smax				
	comp=E,2μm,0.5s							
SVKR	**Severomuysk**	**1.99**	**65**	*e*Pg		Pg	00 02 19.2	-2.1
SVKR				*e*Sg		Sg	00 02 45.9	-1.2
SVKR				Pmax				
	comp=E,159nm,0.4s							
SVKR				Smax				
	comp=E,2μm,0.5s							
OGRR	**Ongureny**	**2.31**	**225**	*e*PN		Pn	00 02 23.1	+1.4
OGRR				*e*			00 02 25.8	
OGRR				*e*			00 02 54.7	
OGRR				pmax	pmax			
	comp=Z,53nm,0.4s							
OGRR				smax				
	comp=N,383nm,0.4s							
OGRR	**Ongureny**	**2.31**	**225**	*e*Pn		Pn	00 02 23.1	+1.4
OGRR				*e*Pg		Pg	00 02 25.2	-2.2
OGRR				*e*Sg		Sg	00 02 55.7	-1.7
OGRR				Pmax				
	comp=N,56nm,0.3s							
OGRR				Smax				
	comp=N,383nm,0.4s							
BOD	**Bodaibo**	**3.23**	**37**	*e*Pn		Pn	00 02 34.2	-0.1
BOD				*e*Pg		Pg	00 02 40.3	-4.6
BOD				*e*Sn		Sn	00 03 12.8	-0.2
BOD				*e*Sg		Sg	00 03 22.0	-4.8
BOD				Pmax				
	comp=N,20nm,0.4s							
BOD				Smax				
	comp=N,119nm,1.1s							
NLYR	**Nelyaty**	**3.24**	**66**	*e*Pn		Pn	00 02 35.7	+1.3
NLYR				*e*Pg		Pg	00 02 41.3	-3.9
NLYR				*e*Sn		Sn	00 03 13.3	0.0
NLYR				*e*Sg		Sg	00 03 23.4	-3.8
NLYR				Pmax				
	comp=N,55nm,0.7s							
NLYR				Smax				
	comp=N,260nm,1.4s							
TRG	**Tyrgan**	**3.47**	**224**	*e*		Pn	00 02 38.9	+1.3
TRG				*e*Pg		Pg	00 02 44.5	-5.1
TRG				*e*			00 03 13.4	
TRG				*e*Sg		Sg	00 03 29.0	-5.6
TRG				Pmax				
	comp=N,14nm,0.3s							
TRG				Smax				
	comp=N,109nm,0.7s							
CIT	**Chita**	**3.81**	**149**	*e*Sg		Sg	00 03 41.1	-4.2
CIT				Smax				
	comp=N,227nm,0.3s							
FFNB	**Fofonovo**	**3.90**	**215**	*e*Pn		Pn	00 02 44.2	+0.7
FFNB				*e*Pg		Pg	00 02 53.2	-4.5
FFNB				*e*Sg		Sg	00 03 43.4	-4.8
FFNB				Pmax				
	comp=N,38nm,0.3s							
FFNB				Smax				
	comp=N,276nm,0.5s							
HRMR	**Khuramsha**	**4.21**	**210**	*e*		Pn	00 02 48.9	+1.2
HRMR				*e*Pg		Pg	00 02 58.6	-5.0
HRMR				*e*Sg		Sg	00 03 53.2	-4.9
HRMR				Pmax				
	comp=N,48nm,0.6s							
HRMR				Smax				
	comp=N,284nm,0.5s							
CRS	**Chara**	**4.72**	**67**	*e*PN		Pg	00 03 09.0	-4.4
CRS				*e*			00 04 09.1	
CRS				pmax	pmax			
	comp=Z,38nm,0.8s							
CRS				smax				
	comp=E,89nm,1.0s							
CRS	**Chara**	**4.72**	**67**	*e*Pg		Pg	00 03 08.0	-5.4
CRS				*e*Sg		Sg	00 04 08.9	-5.5
CRS				Pmax				
	comp=E,35nm,1.0s							
CRS				Smax				
	comp=E,121nm,2.3s							
IRK	**Irkutsk**	**4.73**	**232**	*e*Sg		Sg	00 04 09.6	-5.3
IRK				Smax				
	comp=E,215nm,0.8s							
LSTR	**Listvyanka**	**4.76**	**226**	*e*Pg		Pg	00 03 08.4	-5.8
LSTR				*e*			00 03 53.2	
LSTR				*e*Sg		Sg	00 04 10.0	-5.8
LSTR				Pmax				
	comp=E,7.0nm,0.6s							
LSTR				Smax				
	comp=E,110nm,1.2s							
TLY	**Talaya**	**5.40**	**230**	*e*PN		Pn	00 03 04.3	+0.2
TLY				*e*			00 03 19.2	
TLY				*e*S		Sn	00 04 04.2	-2.3
TLY				*e*			00 04 28.0	
TLY				pmax	pmax			
	comp=Z,14nm,0.9s							
TLY				smax				
	comp=N,62nm,1.1s							
TLY	**Talaya**	**5.40**	**230**	*e*Pn		Pn	00 03 03.7	-0.4
TLY				*e*Pg		Pg	00 03 19.4	-7.1
TLY				*e*			00 04 07.6	
TLY				*e*Sg		Sg	00 04 29.1	-7.3
TLY				Pmax				
	comp=N,23nm,0.6s							
TLY				Smax				
	comp=N,58nm,0.8s							
TUP	**Tupik**	**5.62**	**95**	*e*PN		Pn	00 03 07.6	+0.5
TUP				*e*			00 03 24.8	
TUP				*e*S		Sn	00 04 11.2	-0.7
TUP				*e*			00 04 37.8	
TUP				smax				
	comp=N,54nm,1.0s							
TUP	**Tupik**	**5.62**	**95**	*e*Pn		Pn	00 03 07.2	+0.1
TUP				*e*			00 03 15.7	

TUP			*e*Pg	Pg	00 03 23.6	-7.1	
TUP			*e*		00 04 09.7		
TUP			*e*Sg	Sg	00 04 37.5	-6.0	
TUP			Pmax				
	comp=N,8.0nm,0.8s						
TUP			Smax				
	comp=N,41nm,0.6s						
KPC	**Khapcheranga**	**5.75 167**	*e*PN	Pn	00 03 08.8	-0.1	
KPC			*e*		00 03 28.2		
KPC			*e*		00 04 42.4		
KPC			pmax	pmax			
	comp=Z,15nm,0.6s						
KPC			smax				
	comp=E,62nm,1.7s						
KPC	**Khapcheranga**	**5.75 167**	*e*Pn	Pn	00 03 08.7	-0.2	
KPC			*e*		00 03 15.8		
KPC			*e*Pg	Pg	00 03 26.9	-6.3	
KPC			*e*Sg	Sg	00 04 41.1	-6.5	
KPC			Pmax				
	comp=E,9.0nm,0.6s						
KPC			Smax				
	comp=E,62nm,1.4s						
ARS	**Arshan**	**5.81 237**	*e*PN	Pg	00 03 27.7	-6.5	
ARS			*e*S	Sn	00 04 14.6	-1.9	
ARS			*e*		00 04 42.9		
ARS			pmax	pmax			
	comp=Z,23nm,0.4s						
ARS			smax				
	comp=E,196nm,0.5s						
ARS	**Arshan**	**5.81 237**	*e*Pn	Pn	00 03 11.8	+2.2	
ARS			*e*Pg	Pg	00 03 28.2	-6.0	
ARS			*e*Sn	Sn	00 04 16.0	-0.5	
ARS			*e*Sg	Sg	00 04 43.6	-5.8	
ARS			Pmax				
	comp=E,28nm,0.8s						
ARS			Smax				
	comp=E,200nm,0.8s						
ZAK	**Zakamensk**	**6.53 224**	*e*	Sx	00 04 42.5		
ZAK			*e*Sg	Sg	00 05 06.6	-5.9	
ZAK			Smax				
	comp=E,20nm,0.7s						
ORL	**Orlik**	**6.81 250**	*e*PN	Pn	00 03 25.1	+1.7	
ORL			*e*		00 03 46.7		
ORL			*e*		00 05 14.7		
ORL			pmax	pmax			
	comp=Z,12nm,0.8s						
ORL			smax				
	comp=N,78nm,1.3s						
ORL	**Orlik**	**6.81 250**	*e*Pn	Pn	00 03 24.0	+0.6	
ORL			*e*Sg	Sg	00 05 14.0	-7.5	
ORL			max				
	comp=N,11nm,1.0s						
ORL			Smax				
	comp=N,77nm,0.9s						

BJI ***12*** *00:19:54.8, 34.61N×99.46E, h15km, mb4.4, ML3.5, Ms3.3, Msz3.3*

ISCJB ***12*** *00:19:55.1±0.9, 3501N±006×9962E±007, h10km, Error ellipse: s-maj=8.6km s-min=7.9km az=178.8*

IDC ***12*** *00:19:56.2±3.1, 3484N×9936E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/24, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=72.2km s-min=36.5km az=81.0*

ISC 12 00:19:57.0±0.9, 3493N±006×9955E±007, h10km, n7, σ1°00/10, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.69**	**70**	PG	**Pg**	**00 21 07.4**	**-0.2**
LZH				S	**Sn**	**00 21 47.1**	**+10**
LZH				SG	**Sg**	**00 21 55.3**	**0.0**
LZH				Smax			
	comp=N,80nm,0.6s						
LZH				Smax			
	comp=E,137nm,0.9s						
LZH				LR	LR		
	comp=N,256nm,4.5s						
LZH				LR	LR		
	comp=Z,310nm,7.0s						
GTA	**Gaotai**	**4.48**	**3**	PG	**Pg**	**00 21 21.4**	**-1.4**
GTA				SG	**Sg**	**00 22 20.3**	**-0.5**
GTA				Smax			
	comp=N,15nm,0.9s						
GTA				Smax			
	comp=E,13nm,1.1s						
SONM	**Songino Array**	**13.87**	**20**	Pn	**Pn**	**00 23 15.7**	**+2.2**
	comp=E,0.2nm,0.3s,baz=205,slow=15,SNR=4.1						
CMAR	**Chiang Mai Arr**	**16.41**	**182**	Pn	**Pn**	**00 23 46.7**	**-0.8**
	comp=E,0.2nm,0.3s,baz=4.8,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**17.59**	**318**	P	**P**	**00 24 01.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=116,slow=14,SNR=3.0						
ZALV	**Zalesovo Beam**	**21.65**	**336**	P	**P**	**00 24 48.7**	**+1.4**
	comp=E,0.9nm,0.4s,baz=136,slow=11,SNR=4.4						
KURK	**Kurchatov**	**21.90**	**322**	P	**P**	**00 24 50.2**	**+0.1**
	baz=126,slow=11						

NIED ***12*** *00:20:00, 36.80N×140.90E, h53km, Mw3.9 Best double couple: M0 7.61000×10^14 NP1:φs188.00000°, δ81.00000°, λ92.00000°. NP2:φs354.00000°, δ10.00000°, λ76.00000°.*

IDC ***12*** *00:20:34.7±1.8, 3701N×14153E, h12km±3km, mb3.8/6, mb1 3.9/9, mb1mx3.8/24, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=51.6km s-min=15.9km az=68.0*

ISCJB ***12*** *00:20:40.5±0.6, 3675N±003×14104E±006, h61km±4km, mb3.9/8, Error ellipse: s-maj=8.0km s-min=4.9km az=21.4*

NEIC ***12*** *00:20:42.4, 3677N×14092E, h57km, mb4.3/2, After JMA.*

NEIC Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma and Saitama Prefectures.

JMA ***12*** *00:20:42.4±0.1, 3677N×14092E, h57km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs225.00000°, δ6.00000°, λ-64.00000°. NP2:φs19.00000°, δ85.00000°, λ-92.00000°. Principal axes: T Plg40.0000°, Azm111.0000°; N Plg2.0000°, Azm19.0000°; P Plg50.0000°, Azm286.0000°;*

JMA Felt II J1.

ISC 12 00:20:42.0±0.5, 3676N±003×14099E±006, h54km±4km, n27, σ0°63/43, mb3.9/8, 9C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.37**	**246**	↑↑P	**Pn**	**00 20 52.4**	**+0.2**
JHO				S	**Sn**	**00 20 59.2**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.37**	**336**	↑↑P	**Pn**	**00 20 52.3**	**+0.1**
ONAJ				S	**Sn**	**00 20 59.3**	**-0.2**
JFK	**Kawauchi**	**0.61**	**351**	↑↑P	**Pn**	**00 20 54.9**	**0.0**
JFK				S	**Sn**	**00 21 03.4**	**-0.7**
JYT	**Yasato**	**0.83**	**231**	↑↑P	**Pn**	**00 20 57.4**	**-0.3**
JYT				S	**Sn**	**00 21 08.2**	**-0.9**
JFT	**Otama**	**0.92**	**325**	↑↑P	**Pn**	**00 20 59.1**	**+0.3**
JFT				S	**Sn**	**00 21 11.1**	**+0.5**
JMM	**Marumori**	**1.11**	**352**	↑↑P	**Pn**	**00 21 01.5**	**+0.1**
JMM				S	**Sn**	**00 21 15.5**	**+0.1**
JFY	**Yanaizu**	**1.21**	**302**	↑↑P	**Pn**	**00 21 02.6**	**-0.1**
JFY				S	**Sn**	**00 21 17.5**	**-0.4**
JAG	**Ashikaga**	**1.28**	**255**	↑↑P	**Pn**	**00 21 03.4**	**-0.2**
JAG				S	**Sn**	**00 21 18.6**	**-1.0**
JKT	**Katashina**	**1.40**	**271**	↑↑P	**Pn**	**00 21 05.4**	**+0.2**
JKT				S	**Sn**	**00 21 22.6**	**+0.2**
MJAR	**Matsushiro Arr**	**2.25**	**265**	Pn	**Pn**	**00 21 17.2**	**+0.4**
	29nm,0.3s,baz=85,slow=16,SNR=66						
MJAR				Sn	**Sn**	**00 21 44.7**	**+1.4**
	48nm,0.3s,baz=3.1,slow=17,SNR=7.0						
MJAR	**Matsushiro Arr**	**2.25**	**265**	Pn	**Pn**	**00 21 17.2**	**+0.4**
MJAR				Sn	**Sn**	**00 21 44.7**	**+1.4**
MAJO	**Matsushiro**	**2.25**	**265**	*e*Pn	**Pn**	**00 21 17.7**	**+0.9**
MAT	**Matsushiro**	**2.25**	**265**	P	**Pn**	**00 21 17.8**	**+1.0**
MAT				S	**Sn**	**00 21 43.9**	**+0.6**
JHJ	**Hachijo jima 2**	**3.77**	**196**	Pn	**Pn**	**00 21 38.4**	**+0.7**
	16nm,0.3s,baz=260,slow=20,SNR=1.6						
JHJ				Sn	**Sn**	**00 22 20.9**	**+0.2**
	28nm,0.3s,baz=274,slow=22,SNR=1.6						
ERM	**Erimo**	**5.51**	**17**	*e*Pn	**Pn**	**00 22 01.5**	**+0.1**
ERM				Sn	**Sn**	**00 23 04.4**	**+1.0**
CBIJ	**Chichi jima**	**9.69**	**174**	Pn	**Pn**	**00 22 58.5**	**-0.2**
	4.6nm,0.3s,baz=276,slow=20,SNR=2.9						
CBIJ				Sn	**Sn**	**00 24 38.6**	**-7.5**
	5.8nm,0.3s,baz=278,slow=19,SNR=2.8						
KSRS	**Korea Array**	**10.46**	**278**	Pn	**Pn**	**00 23 14.4**	**+5.1**
	0.3nm,0.3s,baz=90,slow=15,SNR=3.5						
KSRS				Sn	**Sn**	**00 25 20.2**	**+15**
	0.9nm,0.3s,baz=85,slow=31,SNR=4.1						
SONM	**Songino Array**	**27.66**	**305**	P	**P**	**00 26 24.8**	**+0.3**
	3.0nm,0.7s,mb4.0,baz=106,slow=8.2,SNR=20						
SONM				pP	pP	00 26 27.2	-11
	3.1nm,0.7s,baz=108,slow=10.0,SNR=17						
GAMB	**Gambell**	**39.12**	**31**	P	**P**	**00 28 09.6**	**+5.8**
ZALV	**Zalesovo Beam**	**41.85**	**313**	P	**P**	**00 28 25.9**	**-0.5**
	1.3nm,0.5s,mb3.8,baz=89,slow=6.4,SNR=10						
MKAR	**Makanchi Array**	**43.98**	**302**	P	**P**	**00 28 43.6**	**-0.1**
	1.6nm,0.9s,mb3.8,baz=88,slow=7.9,SNR=5.6						
MKAR				sP	sP	00 28 48.5	-16
	0.8nm,0.7s,baz=88,slow=10,SNR=5.0						
KURK	**Kurchatov**	**45.84**	**308**	P	**P**	**00 28 58.5**	**0.0**
	baz=79,slow=7.6						
KURK				pP	pP	00 29 02.8	-10
	baz=84,slow=8.1						
KURK	**Kurchatov**	**45.84**	**308**	*e*P	**P**	**00 28 58.1**	**-0.4**
	1.3nm,0.4s,mb4.2						
TKM2	**Tokmak 2**	**49.46**	**299**	*e*P	**P**	**00 29 27.5**	**+0.8**
	2.7nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**50.51**	**312**	P	**P**	**00 29 32.4**	**-2.0**
	0.2nm,0.4s,mb3.4,baz=356,slow=4.3,SNR=4.3						
BVAR				sP	sP	00 29 39.2	-16
	0.6nm,0.5s,baz=72,slow=9.3,SNR=3.7						
WRA	**Warramunga Arr**	**56.74**	**187**	P	**P**	**00 30 20.6**	**+0.2**
	0.6nm,0.4s,mb3.9,baz=4.2,slow=7.3,SNR=4.7						
WRA				sP	sP	00 30 26.0	-15
	0.7nm,0.6s,baz=354,slow=7.5,SNR=2.7						
ASAR	**Alice Springs**	**60.47**	**187**	P	**P**	**00 30 45.4**	**-0.9**
	0.4nm,0.8s,mb3.5,baz=353,slow=6.5,SNR=4.2						

NEIC ***12*** *00:23:05.6, 1864N×101.41W, h28km, MD4.2(MEX), After MEX.*

MEX 12 00:23:05.6±1.1, 1864N×101.41W, h28km±11km, MD4.2, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.03**	**183**	*e*P	Pn	00 23 20.8	-3.4
ZIIG				*i* S	Sn	00 23 34.7	-2.9
MOIG	**Morelia**	**1.05**	**11**	*i* P	Pn	00 23 22.4	-2.1
MOIG				*i* S	Sn	00 23 34.6	-3.6
PLIG	**Platanillo**	**1.83**	**97**	*i* P	Pn	00 23 34.4	-0.7
PLIG				*i* S	Sn	00 23 55.4	-2.0
MEIG	**Mezcala**	**1.84**	**112**	*i* P	Pn	00 23 33.4	-1.9
MEIG				*i* S	Sn	00 23 55.9	-1.9
MMIG	**Aquila**	**1.87**	**260**	*i* P	Pn	00 23 33.6	-2.2
MMIG				*i* S	Sn	00 23 56.4	-2.0
CAIG	**El Cayaco**	**1.92**	**145**	*i* P	Pn	00 23 33.3	-3.1
CAIG				*i* S	Sn	00 23 55.1	-4.6
YAIG	**Yautepec**	**2.23**	**84**	*i* P	Pn	00 23 37.3	-3.4
YAIG				*i* S	Sn	00 24 04.2	-3.1
EZ5V		**2.24**	**292**	*e*P	Pn	00 23 39.0	-1.8
EZ5V				*i* S	Sn	00 24 05.2	-2.2
ACX	**Acapulco**	**2.27**	**141**	*i* P	Pn	00 23 39.8	-1.4
ACX				*i* S	Sn	00 24 11.8	+3.6
SFJM	**Santa Fe**	**2.40**	**320**	*e*P	Pn	00 23 40.6	-2.4
SFJM				*i* S	Sn	00 24 12.6	+1.2
R15V		**2.49**	**283**	*i* P	Pn	00 23 42.6	-1.7
R15V				*i* S	Sn	00 24 12.2	-1.6
PPM	**Popocatepetl**	**2.67**	**80**	*i* P	Pn	00 23 45.3	-1.5
PPM				*i* S	Sn	00 24 15.6	-2.6
UTMO	**Huajuapan**	**3.52**	**103**	*i* P	Pn	00 23 57.4	-1.0
CJM	**Chamela**	**3.54**	**285**	*i* P	Pn	00 23 59.6	+0.8
CJM				*i* S	Sn	00 24 35.1	-4.6
TPIG	**Tehuac#an**	**3.85**	**93**	*i* P	Pn	00 24 01.1	-1.9
TPIG				*i* S	Sn	00 24 43.5	-3.8
PNIG	**Pinotepa**	**3.85**	**125**	*i* P	Pn	00 24 00.7	-2.3
PNIG				*i* S	Sn	00 24 44.5	-2.8
ZAIG	**Zacatecas**	**4.25**	**345**	*i* P	Pn	00 24 06.3	-2.1
ZAIG				*i* S	Sn	00 24 55.1	-2.0
VHO	**Vista Hermosa**	**4.72**	**109**	*i* P	Pn	00 24 14.8	-0.1
VHO				*i* S	Sn	00 25 05.2	-3.6

BJI ***12*** *00:25:40.2, 1034N×146.10E, h10km, mB6.0, mb5.6, Ms5.4, Msz5.2*

ISCJB ***12*** *00:25:42.3±0.1, 1046N±002×14573E±002, h7km, mb5.7/224, MS5.4/233, Error ellipse: s-maj=3.2km s-min=2.4km az=179.5*

IDC ***12*** *00:25:42.6±0.4, 1038N×14557E, h0km, mb5.4/21, mb1 5.4/23, mb1mx5.3/25, mbtmp5.4/23, ML4.8/2, MS5.2/26, Ms1 5.2/26, ms1mx5.0/29, Error ellipse: s-maj=12.4km s-min=7.0km az=75.0*

GCMT ***12*** *00:25:44.5±0.1, 1050N×14580E, h12km, MW5.7/108, Moment Tensor Solution. s91,c159; s108,c292; Duration: 1s8 Moment tensor: Scale 10^17Nm; Mrr2.34±.04; Mθθ1.32±.04; Mφφ-3.66±.04; Mrθ2.09±.11; Mθφ2.68±.03; Mφr0.82±.11; Best double couple: M0 4.74500×10^17 NP1:φs12.00000°, δ60.00000°, λ146.00000°. NP2:φs121.00000°, δ61.00000°, λ35.00000°. Principal axes: T 4.6600, Plg44.0000°, Azm337.0000°; N 0.1690, Plg46.0000°, Azm155.0000°; P -4.8290, Plg1.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***12*** *00:25:44.0±0.1, 1045N×14575E, h7km, mb5.8/142, ME5.7, MS5.5/191, MW5.5 Error ellipse: s-maj=3.2km s-min=3.0km az=117.0 Broadband fault plane solution: P waves. NP1:φs110.00000°, δ65.00000°, λ50.00000°. NP2:φs353.00000°, δ46.00000°, λ144.00000°. Principal axes: T Plg52.0000°, Azm332.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm228.0000°; Moment Tensor Solution. s36 Moment tensor: Scale 10^17 Nm; Mrr1.43; Mθθ0.97; Mφφ-2.40; Mrθ1.29; Mθφ0.18; Mφr0.83; Best double couple: M0 2.60000×10^17 NP1:φs30.00000°, δ67.00000°, λ131.00000°. NP2:φs144.00000°, δ46.00000°, λ33.00000°. Principal axes: T 2.6200, Plg50.0000°, Azm346.0000°; N -0.0500, Plg36.0000°, Azm190.0000°; P -2.5700, Plg12.0000°, Azm91.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

DJA ***12*** *00:25:46, 1074N×146.40E, h51km, Mw5.8/12*

MOS ***12*** *00:25:46.4±1.2, 1048N×14568E, h33km, mb6.0/69, MS5.3/54, Error ellipse: s-maj=7.8km s-min=4.6km az=105.6*

ISC 12 00:25:43.9±0.1, 1047N±002×14579E±002, h7km, h7km±.9km:pP-P, n992, σ0°84/782, mb5.7/223, MS5.4/233, 207C-174D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.23**	**344**	Pn	**Pn**	**00 26 33.7**	**-1.3**
	575nm,0.3s,baz=168,slow=6.6,SNR=112						
GUMO				Sn	**Sn**	**00 27 11.7**	**-2.1**
	790nm,0.3s,baz=21,slow=21,SNR=13						
GUMO				LR	LR	00 27 43.8	
	comp=Z,41μm,18.8s,baz=7.9,slow=37						
GUMO	**Guam**	**3.23**	**344**	*e*Pn	**Pn**	**00 26 33.7**	**-1.4**
GUMO				Sn	**Sn**	**00 27 12.6**	**-1.3**
GUMO	**Guam**	**3.23**	**344**	*e*P	**Pn**	**00 26 33.7**	**-1.4**
GUMO						00 27 13.0	
GUMO	**Guam**	**3.23**	**344**	P	**Pn**	**00 26 33.1**	**-2.0**
CBIJ	**Chichi jima**	**16.89**	**349**	Pn	**Pn**	**00 29 41.4**	**+0.6**
	6.2nm,0.3s,baz=172,slow=21,SNR=4.1						
CBIJ				Sn	**Sn**	**00 32 51.5**	**+2.7**
	3.8nm,0.3s,baz=288,slow=17,SNR=2.2						
SWI	**Sorong**	**18.32**	**233**	P	**Pn**	**00 30 01.1**	**+2.4**
	372nm,1.7s,5μm						
MATI	**Mati**	**19.62**	**261**	*e*P	**Pn**	**00 30 13.3**	**-1.1**
PMG	**Port Moresby**	**19.79**	**176**	*e*P	**Pn**	**00 30 14.8**	**-1.7**
	327nm,1.3s						
PMG	**Port Moresby**	**19.79**	**176**	*e*P	**Pn**	**00 30 14.7**	**-1.8**
PMG				S	**Sn**	**00 33 59.7**	**+0.6**
PMG	**Port Moresby**	**19.79**	**176**	P	**Pn**	**00 30 15.5**	**-0.9**
	367nm,1.2s,7μm						
BUTP	**Butuan**	**19.93**	**267**	*e*P	**Pn**	**00 30 17.6**	**-0.6**
BESP	**Borongan**	**20.01**	**275**	*e*P	**P**	**00 30 21.1**	**+3.8**
DAV	**Davao City (W)**	**20.25**	**262**	↑↑P	**P**	**00 30 20.0**	**-0.1**
	SNR=21						
DAV	**Davao City (W)**	**20.25**	**262**	P	**P**	**00 30 22.4**	**+2.3**
	147nm,0.4s,baz=336,slow=4.0,SNR=14						
DAV				S	**S**	**00 34 10.4**	**+2.7**
	221nm,0.4s,baz=230,slow=13,SNR=1.9						
DAV				LR	LR	00 36 33.6	
	comp=Z,12μm,18.8s,MS5.3,baz=76,slow=32						
DAV	**Davao City (W)**	**20.25**	**262**	*e*P	**P**	**00 30 22.3**	**+2.2**
DAV	**Davao City (W)**	**20.25**	**262**	P	**pP**	**00 30 30.8**	**+8.8**
	947nm,2.2s						
MSLP	**Maasin**	**20.59**	**271**	*e*P	**P**	**00 30 25.4**	**+1.6**
BUKP	**Musuan**	**20.62**	**265**	*e*P	**P**	**00 30 25.5**	**+1.4**
CNP	**Catarman**	**20.80**	**278**	*e*P	**P**	**00 30 29.0**	**+3.0**
OCLP	**Ormoc**	**20.82**	**274**	*e*P	**P**	**00 30 28.2**	**+2.1**
LBMI	**Labuha**	**21.27**	**240**	P	**P**	**00 30 35.4**	**+4.3**
	694nm,2.2s,mb5.6						
PVCP	**Virac**	**21.38**	**281**	*e*P	**P**	**00 30 33.5**	**+1.2**
LLP	**Lapu-Lapu**	**21.46**	**272**	*e*P	**P**	**00 30 34.2**	**+1.1**
TBP	**Tagbilaran**	**21.60**	**270**	*e*P	**P**	**00 30 32.6**	**-2.1**
PAGZ	**Pagadian**	**22.27**	**265**	*e*P	**P**	**00 30 43.1**	**+1.3**
AAI	**Ambon**	**22.46**	**232**	P	**P**	**00 30 45.8**	**+1.9**
	472nm,1.0s,5μm,mb5.9						
GUIM	**Jordan**	**22.81**	**273**	*e*P	**P**	**00 30 47.7**	**+0.1**
JOW	**Kunigami**	**23.20**	**317**	P	**P**	**00 30 51.7**	**+0.2**
	82nm,0.7s,mb5.2,baz=145,slow=7.4,SNR=10						
JOW				S	**S**	**00 35 06.9**	**+3.2**
	35nm,1.0s,baz=32,slow=18,SNR=2.1						
JOW				LR	LR	00 38 02.5	
	comp=Z,3μm,20.7s,MS4.8,baz=125,slow=32						
JHJ	**Hachijo jima 2**	**23.21**	**347**	P	**P**	**00 30 51.4**	**-0.2**
	339nm,0.7s,mb5.9,baz=184,slow=15,SNR=5.5						
JHJ				LR	LR	00 39 24.1	
	comp=Z,6μm,18.7s,MS5.0,baz=118,slow=35						
OTRP	**Odiongan**	**23.37**	**277**	*e*P	**P**	**00 30 53.0**	**-0.5**
CAUP	**Cauayan**	**24.14**	**288**	*e*P	**P**	**00 30 59.3**	**-1.5**
BALP	**Baler**	**24.15**	**285**	*e*P	**P**	**00 30 59.1**	**-1.7**
SJMP	**San Jose**	**24.25**	**277**	*e*P	**P**	**00 31 03.0**	**+1.2**
CUYO	**Cuyo Island**	**24.34**	**273**	*e*P	**P**	**00 31 03.1**	**+0.5**
COEN	**Coen**	**24.40**	**186**	*e*P	**P**	**00 31 03.3**	**+0.2**
	162nm,1.4s,mb5.3						
COEN	**Coen**	**24.40**	**186**	P	**P**	**00 31 03.2**	**+0.1**
	100nm,1.3s,2μm,mb5.1						
LUBP	**Lubang**	**25.18**	**280**	*e*P	**P**	**00 31 09.2**	**-1.0**
ABRA	**Dolores**	**25.33**	**289**	*e*P	**P**	**00 31 11.4**	**-0.2**
SCZP	**Santa Cruz**	**25.73**	**285**	*e*P	**P**	**00 31 13.3**	**-2.0**
ENPP	**El Nido**	**25.90**	**274**	*e*P	**P**	**00 31 18.4**	**+1.6**
KAKA	**Kakadu**	**26.57**	**210**	*e*P	Px	00 31 10.3	
	107nm,0.9s						
PPR	**Puerto Princes**	**26.64**	**271**	↑↑*e*P	**P**	**00 31 25.7**	**+2.2**
NACB	**Ninganchiao**	**26.76**	**304**	*e*P	**P**	**00 31 23.8**	**-0.6**
MJAR	**Matsushiro Arr**	**26.85**	**346**	P	**P**	**00 31 23.4**	**-1.7**
	139nm,1.0s,mb5.4,baz=174,slow=10,SNR=81						
MJAR				LR	LR	00 41 40.2	
	comp=Z,3μm,19.2s,MS4.8,baz=170,slow=36						
MAJO	**Matsushiro**	**26.85**	**346**	*e*P	**P**	**00 31 23.9**	**-1.2**
	2μm,2.0s,mb6.3						
MAJO				LR	LR		
	comp=Z,4μm,22.0s,MS4.9						
MAJO	**Matsushiro**	**26.85**	**346**	*e*P	**P**	**00 31 24.2**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,2μm,2.0s,mb6.3						
MAT	**Matsushiro**	**26.85**	**346**	P	**P**	**00 31 23.6**	**-1.6**
MAT				S	**S**	**00 36 00.0**	**-1.9**
YHNB	**Yeheng**	**27.16**	**305**	*e*P	**P**	**00 31 28.6**	**+0.5**
	comp=Z,146nm,0.9s,mb5.5						
YHNB				LR	LR		
	comp=Z,5μm,20.0s,MS5.1						
KDI	**Kendari**	**27.16**	**239**	P	**P**	**00 31 29.2**	**+1.0**
	comp=Z,192nm,2.3s,comp=Z,4μm,mb5.2						
TATO	**Taipei**	**27.21**	**305**	PFAKE		00 31 40.0	+12
TATO				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
BATP	**Bataraza**	**27.64**	**269**	*e*P	**P**	**00 31 33.0**	**+0.5**
TARA	**Tarawa**	**28.44**	**107**	PFAKE		00 31 50.0	+10
TARA				LR	LR		
	comp=Z,6μm,21.0s,MS5.2						
QZH	**Quanzhou**	**29.55**	**303**	↑*i*P	**P**	**00 31 49.2**	**-0.3**
QZH				S	**S**	**00 36 43.0**	**-1.8**
QZH				AMB	AMB		
	comp=Z,2μm,9.2s						
QZH				LR	LR		
	comp=N,3μm,12.0s						
QZH				LR	LR		
	comp=E,4μm,9.1s						
QZH				LR	LR		
	comp=Z,6μm,20.4s						
BATI	**Baumata**	**30.10**	**228**	LR	LR	00 44 23.6	
	comp=Z,5μm,19.6s,MS5.2,baz=238,slow=38						
BATI	**Baumata**	**30.10**	**228**	P	**P**	**00 31 54.1**	**-0.2**
	comp=Z,195nm,1.2s,comp=Z,2μm,mb5.7						
KAPI	**Kappang**	**30.14**	**241**	P	**P**	**00 31 54.0**	**-0.8**
	comp=Z,280nm,1.0s,mb6.0,SNR=13						
KAPI	**Kappang**	**30.14**	**241**	*e*P	**P**	**00 31 53.9**	**-0.9**
	comp=Z,197nm,1.5s,mb5.6						
KAPI				LR	LR		
	comp=Z,14μm,21.0s,MS5.6						
KAPI	**Kappang**	**30.14**	**241**	P	**P**	**00 31 53.9**	**-0.9**
	comp=Z,71nm,1.4s,comp=Z,1μm,mb5.2						
CTA	**Charters Tower**	**30.36**	**179**	↓*i*P	**P**	**00 31 56.4**	**-0.2**
	comp=Z,40nm,0.8s,mb5.2						
CTA				*e*		00 32 03.8	
CTA	**Charters Tower**	**30.36**	**179**	LR	LR	00 42 16.7	
	comp=Z,5μm,20.1s,MS5.1,baz=0.3,slow=33						
CTA	**Charters Tower**	**30.36**	**179**	↓*i*P	**P**	**00 31 56.4**	**-0.2**
CTA				*e*		00 32 03.8	
CTA				pmax	pmax		
	comp=Z,40nm,0.8s						
CTAO	**Charters Tower**	**30.36**	**179**	*e*P	**P**	**00 31 56.7**	**+0.1**
	comp=Z,180nm,1.3s,mb5.6						
CTAO				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
CTAO	**Charters Tower**	**30.36**	**179**	*e*P	**P**	**00 31 56.7**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,180nm,1.3s,mb5.6						
CTAO				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.1						
CTAO	**Charters Tower**	**30.36**	**179**	P	**P**	**00 31 56.9**	**+0.3**
	comp=Z,155nm,1.4s,comp=Z,2μm,mb5.5						
SSE	**Sheshan**	**30.69**	**316**	↑↑P	**P**	**00 31 59.3**	**-0.1**
SSE				AP	pP	00 32 03.1	+1.5
SSE				S	**S**	**00 37 00.3**	**-2.2**
SSE				AMB	AMB		
	comp=Z,47nm,1.4s,mb5.1						
SSE				AMB	AMB		
	comp=Z,971nm,5.3s						
SSE				LR	LR		
	comp=N,2μm,21.7s,MS4.9						
SSE				LR	LR		
	comp=E,2μm,21.7s,MS4.9						
SSE				LR	LR		
	comp=Z,2μm,19.4s,MS4.8						
SSE	**Sheshan**	**30.69**	**316**	↑↑P	**P**	**00 31 59.3**	**-0.1**
	comp=Z,47nm,1.4s,mb5.1						
SSE				pP	pP	00 32 03.1	+1.5
SSE				PP	PP	00 33 07.1	-1.6
SS

WRA PcP PcP 00 35 02.1 +0.4
comp=Z,12nm,0.7s,baz=19,slow=3.2,SNR=9.1
WRA S **S** **00 37 23.3 -3.6**
comp=Z,4.1nm,1.1s,baz=37,slow=37,SNR=4.0
HKC Hong Kong Obse 32.45 295 *i* P **P** **00 32 15.0 -0.1**
NJ2 Nanjing 32.87 315 *e*P **P** **00 32 19.2 +0.6**
NJ2 AP pP 00 32 23.6 +2.9
NJ2 XP sP 00 32 26.2 +4.6
NJ2 PP PP 00 33 28.9 -4.0
NJ2 S **S** **00 37 32.0 -4.5**
NJ2 AMB AMB
comp=Z,30nm,1.1s,mb5.1
NJ2 AMB AMB
comp=Z,950nm,6.9s
NJ2 LR LR
comp=N,1μm,22.0s
NJ2 LR LR
comp=E,2μm,15.2s
NJ2 LR LR
comp=Z,2μm,15.2s
GZH Guangzhou 33.41 296 P **P** **00 32 22.4 -1.0**
GZH S **S** **00 37 42.0 -3.2**
GZH LR LR
comp=N,2μm,16.2s,MS5.1
GZH LR LR
comp=E,3μm,17.1s,MS5.1
GZH LR LR
comp=Z,3μm,13.7s,MS5.1
ASAJ Asahikawa 33.64 356 P **P** **00 32 25.2 +0.1**
comp=Z,27nm,0.8s,mb5.2,baz=258,slow=28,SNR=6.1
WHN Wuhan 35.39 309 P **P** **00 32 41.6 +1.1**
WHN S **S** **00 38 11.0 -4.5**
WHN LR LR
comp=N,5μm,9.9s
WHN LR LR
comp=E,3μm,9.4s
WHN LR LR
comp=Z,6μm,20.2s,MS5.4
DL2 Dalian 35.60 327⇑ *i*P **P** **00 32 43.3 +1.1**
DL2 PP PP 00 34 01.6 -1.4
DL2 S **S** **00 38 14.5 -4.1**
DL2 AMB AMB
comp=Z,200nm,0.9s,mb6.0
DL2 AMB AMB
comp=Z,1μm,4.3s
DL2 LR LR
comp=N,2μm,18.5s
DL2 LR LR
comp=Z,2μm,16.7s,MS5.0
QIZ Qiongzhong 35.73 288 P **P** **00 32 43.4 -0.1**
QIZ PP PP 00 34 04.6 -0.1
QIZ S **S** **00 38 21.2 +0.2**
QIZ AMB AMB
comp=Z,93nm,1.4s,mb5.5
QIZ AMB AMB
comp=Z,1μm,6.9s
QIZ LR LR
comp=N,4μm,21.2s
QIZ LR LR
comp=Z,4μm,22.4s,MS5.1
QIZ Qiongzhong 35.73 288 *e*P **P** **00 32 45.6 +2.0**
comp=Z,1μm,2.3s,mb6.3
QIZ LR LR
comp=Z,4μm,22.0s,MS5.2
ASAR Alice Springs 35.86 199 P **P** **00 32 44.1 -0.4**
comp=Z,32nm,0.7s,mb5.4,baz=24,slow=8.4,SNR=201
ASAR PP PP 00 34 06.6 +0.5
comp=Z,40nm,1.1s,baz=24,slow=9.8,SNR=6.6
ASAR PcP PcP 00 35 12.5 +0.5
comp=Z,7.2nm,0.7s,baz=36,slow=2.6,SNR=7.9
ASAR S **S** **00 38 19.9 -2.9**
comp=Z,1.4nm,1.0s,baz=358,slow=33,SNR=2.7
ASAR PKiKP PKiKP 00 42 31.4 -1.0
comp=Z,0.5nm,0.7s,baz=25,slow=1.4,SNR=4.1
ASAR Alice Springs 35.86 199 P **P** **00 32 44.1 -0.4**
ASAR 00 34 06.6
ASAR 00 35 12.5
ASAR S **S** **00 38 19.9 -2.8**
EIDS Eidsvold 35.99 172 *e*P **P** **00 32 44.5 -1.2**
YSS Yuzh-Sakhalins 36.45 357 PFAKE 00 33 00.0 +11
YSS LR LR
comp=Z,948nm,20.0s,MS4.6
YSS Yuzh-Sakhalins 36.45 357α *i*P **P** **00 32 48.0 -1.4**
YSS *e*S **S** **00 38 27.0 -4.4**
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.6
YSS pmax pmax
comp=Z,1μm,9.0s
YSS MLR MLR
comp=Z,2μm,19.0s,MS5.0
YSS MLR MLR
comp=E,2μm,15.0s
MDJ Mudanjiang 36.78 341 P **P** **00 32 52.7 +0.5**
MDJ AP pP 00 32 55.8 +1.4
MDJ S **S** **00 38 37.5 +1.0**
MDJ SCP ScP 00 39 01.4 -0.5
MDJ PCS PcS 00 39 02.7 +0.4
MDJ AMB AMB
comp=Z,145nm,1.4s,mb5.6
MDJ AMB AMB
comp=Z,2μm,5.4s
MDJ LR LR
comp=N,2μm,26.8s,MS5.1
MDJ LR LR
comp=E,3μm,22.2s,MS5.1
MDJ LR LR
comp=Z,3μm,16.4s
MDJ Mudanjiang 36.78 341 *e*P **P** **00 32 52.8 +0.6**
comp=Z,172nm,1.1s,mb5.8
MDJ PP PP 00 34 14.3 -1.6
MDJ LR LR
comp=Z,4μm,22.0s,MS5.1
SNY Shenyang 36.82 332⇑P **P** **00 32 52.9 +0.3**
SNY PP PP 00 34 22.1 +5.6
SNY S **S** **00 38 36.5 -0.7**
SNY AMB AMB
comp=Z,185nm,2.3s,mb5.5
SNY LR LR
comp=N,3μm,16.2s,MS5.2
SNY LR LR
comp=E,2μm,20.1s,MS5.2
SNY LR LR
comp=Z,4μm,18.9s,MS5.2
CN2 Changchun 37.60 336⇑P **P** **00 32 59.6 +0.4**
CN2 *e*XP sP 00 33 06.1 +3.9
CN2 *e*PP PP 00 34 23.6 -1.4
CN2 *e*S **S** **00 38 48.3 -0.7**
CN2 AMB AMB
comp=Z,200nm,1.0s,mb5.8
CN2 AMB AMB
comp=Z,2μm,6.0s
CN2 LR LR
comp=N,4μm,18.0s,MS5.3
CN2 LR LR
comp=E,3μm,18.0s,MS5.3
CN2 LR LR
comp=Z,4μm,19.0s,MS5.3
NOUC Port Laguerre 38.11 148 *e*P **P** **00 33 03.5 -0.3**
DZM Mont Dzumac 38.16 148 *e*P **P** **00 33 03.4 -0.7**
DZM Mont Dzumac 38.16 148 *e*P **P** **00 33 04.7 +0.6**
comp=Z,172nm,1.3s,mb5.6
FUNA Funafuti 38.23 118 PFAKE 00 33 20.0 +15
FUNA LR LR
comp=Z,6μm,21.0s,MS5.4
MIDW Midway 38.78 58 PFAKE 00 33 20.0 +11
MIDW LR LR
comp=Z,6μm,20.0s,MS5.4
HABR Khabarovsk 38.94 349⇑ *i*P **P** **00 33 09.3 -1.1**
HABR *e**PP pP 00 33 18.7 +6.2
HABR *e*PPP 00 35 00.4
HABR *e*S **S** **00 39 07.0 -2.1**
HABR *e**SS sS 00 39 23.0 +10
HABR *e*SSS 00 42 18.0
HABR *e* 00 43 16.0
HABR pmax pmax
comp=Z,33nm,2.0s,mb4.7
BJT Baijiatuau 39.44 323 *e*P **P** **00 33 15.3 +0.6**
comp=Z,105nm,0.8s,mb5.6
BJT LR LR
comp=Z,3μm,19.0s,MS5.2
BJT Baijiatuau 39.44 323 *e*P **P** **00 33 15.3 +0.6**
BJT pmax pmax
comp=Z,105nm,0.8s
BJT MLR MLR
comp=Z,3μm,19.0s
BJI Beijing 39.45 323 P **P** **00 33 15.2 +0.4**

BJI S **S** **00 39 11.1 -6.0**
BJI AMB AMB
comp=Z,154nm,1.0s,mb5.7
BJI LR LR
comp=N,3μm,17.6s,MS5.2
BJI LR LR
comp=E,2μm,19.6s,MS5.2
BJI LR LR
comp=Z,3μm,23.0s,MS5.0
BJI Beijing 39.45 323 P **P** **00 33 15.2 +0.4**
comp=Z,154nm,1.0s,mb5.7
BJI sP sP 00 33 19.7 +1.8
BJI PP PP 00 34 43.0 -2.4
BJI S **S** **00 39 11.1 -6.0**
BJI sS sS 00 39 20.2 -0.5
BJI SS SS 00 42 13.6 +2.3
BJI LR LR
comp=Z,3μm,23.0s,MS5.0
GYA Guiyang 40.18 299⇑ *i*P **P** **00 33 22.0 +0.9**
GYA PP PP 00 34 57.6 +4.1
GYA PCP PcP 00 35 27.0 +1.6
GYA SCP ScP 00 39 15.4 +0.2
GYA S **S** **00 39 27.3 -1.1**
GYA AMB AMB
comp=Z,130nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,7μm,4.8s
GYA LR LR
comp=N,7μm,18.4s,MS5.6
GYA LR LR
comp=E,4μm,17.8s,MS5.6
GYA LR LR
comp=Z,5μm,17.3s,MS5.5
KLR Kul'dur 40.38 346κ *i*P **P** **00 33 18.0 -4.3**
KLR *e* 00 43 26.5
KLR pmax pmax
comp=E,180nm,2.0s
KLR pmax pmax
comp=Z,740nm,2.0s,mb6.1
KLR pmax pmax
comp=E,600nm,7.0s
KLR pmax pmax
comp=Z,2μm,7.0s
KLR MLR MLR
comp=N,2μm,13.0s
KLR MLR MLR
comp=Z,8μm,13.0s,MS5.8
MBWA Marble Bar 40.54 219 *e*P **P** **00 33 24.3 +0.3**
comp=Z,212nm,1.4s,mb5.6
MBWA LR LR
comp=Z,3μm,21.0s,MS5.2
SKR Severo-Kuril's 40.99 10 *e*P **P** **00 33 26.0 -1.4**
SKR *e* 00 35 04.0
SKR *e*S **S** **00 39 41.0 +1.3**
SKR *e* 00 43 32.0
SKR pmax pmax
comp=Z,2μm,4.0s
SKR smax
comp=E,5μm,10.0s
SKR smax
comp=Z,2μm,10.0s
SKR MLR MLR
comp=N,2μm,20.0s
SKR MLR MLR
comp=Z,2μm,20.0s,MS5.1
SKR MLR MLR
comp=Z,2μm,18.0s
ARMA Armidale 41.03 172 *e*P **P** **00 33 27.7 -0.3**
XAN Xi'an 41.06 311 P **P** **00 33 28.5 +0.2**
XAN AP pP 00 33 36.5 +6.1
XAN PP PP 00 35 02.9 -0.1
XAN AMB AMB
comp=Z,80nm,1.2s,mb5.2
XAN AMB AMB
comp=Z,1μm,7.9s
XAN LR LR
comp=Z,4μm,18.8s,MS5.3
STKA Stephens Creek 42.29 185 *e*P **P** **00 33 36.6 -1.7**
comp=Z,55nm,1.3s,mb5.0
STKA *e*S **S** **00 39 53.2 -6.2**
STKA Stephens Creek 42.29 185 P **P** **00 33 37.0 -1.3**
comp=Z,48nm,0.9s,mb5.1,baz=351,slow=8.1,SNR=60
STKA LR LR 00 51 24.4
comp=Z,5μm,18.6s,MS5.4,baz=0.4,slow=36
HHC Hu-ho-hao-te 42.73 321 *e*P **P** **00 33 42.7 +0.9**
HHC PP PP 00 35 25.4 +4.5
HHC PCP PcP 00 35 35.0 +1.5
HHC PCS PcS 00 39 26.9 +1.4
HHC S **S** **00 40 06.1 +0.3**
HHC SCS ScS 00 43 42.6 -1.2
HHC AMB AMB
comp=Z,77nm,1.1s,mb5.3
HHC AMB AMB
comp=Z,2μm,6.8s
HHC LR LR
comp=N,2μm,17.8s,MS5.2
HHC LR LR
comp=E,2μm,20.2s,MS5.2
HHC LR LR
comp=Z,3μm,20.2s,MS5.2
KMI Kunming 43.30 296 P **P** **00 33 48.6 +1.9**
KMI PP PP 00 35 33.9 +6.6
KMI AMB AMB
comp=Z,116nm,1.4s,mb5.4
KMI AMB AMB
comp=Z,2μm,4.8s
KMI LR LR
comp=N,4μm,19.3s,MS5.4
KMI LR LR
comp=E,2μm,18.7s,MS5.4
KMI LR LR
comp=Z,3μm,21.3s,MS5.1
KMI Kunming 43.30 296 P **P** **00 33 48.6 +1.9**
comp=Z,116nm,1.4s,mb5.4
KMI pP pP 00 34 04.6 +16
KMI sP sP 00 34 11.9 +22
KMI PP PP 00 35 33.9 +6.6
KMI PPP 00 36 11.7
KMI S **S** **00 40 16.6 +2.0**
KMI sS sS 00 40 41.0 +23
KMI SS SS 00 43 29.8 +1.7
KMI SSS 00 44 21.4
KMI LR LR
comp=Z,3μm,21.3s,MS5.1
BTO Baotou 43.56 320 *e*P **P** **00 33 49.4 +0.9**
PETK Petropavlovsk- 43.60 10 P **P** **00 33 48.7 +0.1**
comp=Z,13nm,1.0s,mb4.6,baz=220,slow=6.7,SNR=5.7
PETK PcP PcP 00 35 36.1 0.0
comp=Z,13nm,0.7s,baz=149,slow=2.9,SNR=5.7
PETK S **S** **00 40 18.2 +0.1**
comp=Z,5.0nm,1.1s,baz=300,slow=39,SNR=2.4
PETK LR LR 00 50 32.7
comp=Z,2μm,18.3s,MS5.1,baz=198,slow=34
PET Petropavlovsk 43.69 11 PFAKE 00 34 00.0 +11
PET LR LR
comp=Z,2μm,20.0s,MS5.0
PET Petropavlovsk 43.69 11 *e*P **P** **00 33 48.9 -0.5**
PET *i*S **S** **00 40 18.5 -1.0**
PET *e*SS SS 00 43 26.8 -8.1
PET pmax pmax
comp=Z,2μm,4.5s
PET pmax pmax
comp=Z,103nm,1.2s,mb5.4
PET pmax pmax
comp=Z,900nm,7.0s
PET MLR MLR
comp=Z,2μm,16.0s,MS5.0
PET MLR MLR
comp=Z,2μm,15.0s
CD2 Chengdu 43.93 304⇑ *i*P **P** **00 33 51.9 +0.2**
CD2 AP pP 00 34 01.8 +8.0
CD2 PP PP 00 35 35.8 +1.9
CD2 PCS PcS 00 39 30.2 -0.6
CD2 S **S** **00 40 20.4 -3.3**
CD2 XS sS 00 40 36.3 +9.0
CD2 SCS ScS 00 43 46.2 -5.5
CD2 AMB AMB
comp=Z,220nm,1.2s,mb5.8
CD2 AMB AMB
comp=Z,1μm,7.1s
CD2 LR LR
comp=N,4μm,15.6s,MS5.5
CD2 LR LR
comp=E,2μm,16.8s,MS5.5
CD2 LR LR
comp=Z,3μm,14.2s,MS5.3

HIA Hailar 44.34 336 *e*P **P** **00 33 55.1 +0.5**
comp=Z,175nm,0.9s,mb5.8
HIA LR LR
comp=Z,5μm,19.0s,MS5.4
HIA Hailar 44.34 336 *e*P **P** **00 33 55.1 +0.5**
HIA pmax pmax
comp=Z,175nm,0.9s
HIA MLR MLR
comp=Z,5μm,19.0s
FORT Forrest 44.40 202 *e*P **P** **00 33 54.2 -1.2**
comp=Z,253nm,0.6s,mb6.1
NST Nakhon Sawan 44.71 282 P **P** **00 34 00.0 +1.9**
comp=Z,100nm,1.0s,mb5.6
SNG Songkhla 44.73 270 P **P** **00 34 02.0 +3.7**
comp=Z,180nm,0.7s,mb6.0
XMIS Christmas Isla 45.01 244 *e*P **P** **00 33 59.8 -0.7**
CAN Canberra 45.64 176 *e*P **P** **00 34 04.9 -0.2**
comp=Z,122nm,1.2s,mb5.7
CAN Canberra 45.64 176 P **P** **00 34 04.7 -0.4**
CNB Canberra Magne 45.66 176 *e*P **P** **00 34 04.7 -0.5**
CNB *e* 00 34 12.4
LZH Lanzhou 45.70 311⇑P **P** **00 34 07.2 +1.5**
LZH AP pP 00 34 11.0 +3.1
LZH XP sP 00 34 13.1 +4.4
LZH PP PP 00 35 54.0 +1.3
LZH S **S** **00 40 49.2 0.0**
LZH AMB AMB
comp=Z,294nm,1.3s,mb6.0
LZH AMB AMB
comp=Z,2μm,4.0s
LZH LR LR
comp=N,3μm,13.4s
LZH LR LR
comp=Z,5μm,14.6s,MS5.5
LZH Lanzhou 45.70 311⇑P **P** **00 34 07.2 +1.5**
comp=Z,294nm,1.3s,mb6.0
LZH pP pP 00 34 11.0 +3.1
LZH sP sP 00 34 13.1 +4.4
LZH PP PP 00 35 54.0 +1.3
LZH S **S** **00 40 49.2 0.0**
LZH sS sS 00 40 56.0 +3.2
LZH SS SS 00 43 54.1 -19
LZH LR LR
comp=Z,5μm,14.6s,MS5.5
CMAR Chiang Mai Arr 45.94 286 P **P** **00 34 08.6 +0.7**
comp=Z,105nm,0.8s,mb5.8,baz=86,slow=5.9,SNR=260
CMAR S **S** **00 40 52.3 -0.9**
comp=Z,0.8nm,0.3s,baz=306,slow=34,SNR=5.7
CMAR LR LR 00 52 08.4
comp=Z,2μm,19.3s,MS5.0,baz=93,slow=35
CMAR Chiang Mai Arr 45.94 286 P **P** **00 34 08.6 +0.7**
CMAR S **S** **00 40 52.3 -0.9**
CM31 Chiang Mai Arr 45.94 286 *e*P **P** **00 34 09.8 +1.9**
comp=Z,85nm,0.8s,mb5.7
CM31 LR LR
comp=Z,2μm,20.0s,MS5.0
CHG Chiang Mai 45.96 286⇑P **P** **00 34 09.1 +1.1**
comp=Z,56nm,0.8s,mb5.5
CHTO Chiang Mai 45.96 286⇑P **P** **00 34 07.4 -0.7**
SNR=16
CHTO Chiang Mai 45.96 286 *e*P **P** **00 34 09.0 +1.0**
comp=Z,50nm,1.3s,mb5.3
CHTO LR LR
comp=Z,2μm,20.0s,MS5.0
TOO Toolangi 47.78 180 *e*P **P** **00 34 21.9 0.0**
TOO *e* 00 34 29.8
TOO *e*S **S** **00 41 18.8 0.0**
SMY Shemya 47.94 23 *e*P **P** **00 34 22.8 -0.2**
comp=Z,287nm,1.1s,mb6.2
SMY LR LR
comp=Z,3μm,22.0s,MS5.2
SMY Shemya 47.94 23 *e*P **P** **00 34 22.8 -0.2**
SMY pmax pmax
comp=Z,287nm,1.1s,mb6.2
SMY MLR MLR
comp=Z,3μm,22.0s,MS5.2
AFI Afiamalu 48.56 119 P **P** **00 34 29.8 +1.5**
comp=Z,40nm,1.0s,mb5.4,baz=261,slow=22,SNR=3.9
AFI S **S** **00 41 34.9 +4.3**
comp=Z,19nm,0.9s,baz=128,slow=22,SNR=1.8
AFI LR LR 00 49 59.6
comp=Z,2μm,19.8s,MS5.1,baz=296,slow=30
AFI Afiamalu 48.56 119 P **P** **00 34 29.8 +1.5**
AFI S **S** **00 41 34.9 +4.3**
AFI LR LR 00 49 59.6
AFI Afiamalu 48.56 119 P **P** **00 34 29.8 +1.5**
AFI S **S** **00 41 34.9 +4.3**
CIT Chita 49.00 334 *e*P **P** **00 34 32.3 +1.1**
CIT *e* 00 34 49.6
CIT *e* 00 35 50.6
CIT *e* 00 37 18.2
CIT pmax pmax
comp=Z,912nm,2.1s,mb6.4
CLNS Chul'man 49.02 345*c* *i*P **P** **00 34 31.6 +0.4**
CLNS *e**PP pP 00 34 41.8 +8.4
CLNS *e* 00 36 25.0
CLNS *e*S **S** **00 41 35.5 -0.4**
CLNS *e*SS ScS 00 44 20.3 -3.5
CLNS *e*SSS 00 46 24.7
CLNS pmax pmax
comp=Z,77nm,0.7s,mb5.8
CLNS pmax pmax
comp=N,81nm,1.1s
CLNS pmax pmax
comp=E,24nm,0.8s
CLNS pmax pmax
comp=Z,49nm,2.0s,mb5.2
CLNS pmax pmax
comp=E,16nm,1.0s
CLNS pmax pmax
comp=N,59nm,1.9s
CLNS smax
comp=N,392nm,11.9s
CLNS smax
comp=E,400nm,13.3s
CLNS MLR MLR
comp=Z,1μm,15.0s,MS5.0
CLNS MLR MLR
comp=N,1μm,14.0s,MS5.0
CLNS MLR MLR
comp=E,435nm,16.0s,MS5.0
AMKA Amchitka 49.11 27 *e*P **P** **00 34 32.2 +0.2**
comp=E,108nm,0.8s,mb5.9
ULN Ulaanbaatar 49.45 326 P **P** **00 34 35.8 +1.1**
SNR=58
ULN Ulaanbaatar 49.45 326 *e*P **P** **00 34 35.5 +0.8**
comp=E,159nm,1.0s,mb6.0
ULN *e*PcP PcP 00 35 59.6 +2.8
ULN LR LR
comp=Z,3μm,19.0s,MS5.3
ULN Ulaanbaatar 49.45 326 *e*P **P** **00 34 35.5 +0.8**
ULN *e* 00 35 59.6
ULN pmax pmax
comp=Z,159nm,1.0s,mb6.0
ULN MLR MLR
comp=Z,3μm,19.0s,MS5.3
KLBR Kellerberrin 49.70 212 *e*P **P** **00 34 35.9 -0.8**
comp=Z,96nm,1.3s,mb5.7
SONM Songino Array 49.80 326 P **P** **00 34 37.8 +0.5**
comp=Z,101nm,1.1s,mb5.8,baz=138,slow=7.6,SNR=252
SONM PcP PcP 00 35 58.7 +0.6
comp=Z,18nm,0.8s,baz=145,slow=4.7,SNR=5.4
SONM S **S** **00 41 49.9 +2.8**
comp=Z,0.3nm,0.3s,baz=21,slow=41,SNR=2.9
SONM LR LR 00 56 50.1
comp=Z,4μm,18.6s,MS5.4,baz=126,slow=38
SONM Songino Array 49.80 326 P **P** **00 34 37.8 +0.5**
SONM 00 35 58.7
SONM S **S** **00 41 49.9 +2.8**
GTA Gaotai 49.93 313⇑P **P** **00 34 39.6 +1.1**
GTA XP sP 00 34 50.9 +9.4
GTA PP PP 00 36 36.3 +2.9
GTA S **S** **00 41 48.2 -1.0**
GTA SS SS 00 45 20.7 -1.4
GTA AMB AMB
comp=Z,111nm,1.8s,mb5.6
GTA AMB AMB
comp=Z,2μm,7.2s
GTA LR LR
comp=N,2μm,15.6s,MS5.3
GTA LR LR
comp=E,2μm,18.6s,MS5.3
GTA LR LR
comp=Z,3μm,19.5s,MS5.3
MUN Mundaring 50.81 213 *e*P **P** **00 34 44.2 -1.0**
MUN *e* 00 34 53.1

MUN eS S 00 41 59.3 -2.3
NWAO Narrogin (SRO) 51.03 211 eP P 00 34 46.9 +0.1
comp=Z,68nm,1.3s,mb5.4
NWAO LR LR
comp=Z,2µm,19.0s,MS5.0
NWAO Narrogin (SRO) 51.03 211 P P 00 34 46.3 -0.5
NWAO pmax pmax
comp=Z,68nm,1.3s
IMP Imphal 51.14 293 *i* P P 00 34 47.0 -0.8
ADK Adak 51.31 29 eP P 00 34 49.3 +0.6
comp=Z,59nm,0.6s,mb5.7
ADK LR LR
comp=Z,3µm,22.0s,MS5.3
ADK Adak 51.31 29 eP P 00 34 49.3 +0.6
ADK pmax pmax
comp=Z,59nm,0.6s,mb5.7
ADK MLR MLR
comp=Z,3µm,22.0s,MS5.3
SEY Seymchan 52.59 4⇑ eP P 00 34 57.7 -0.3
MOO Moorlands 52.66 179 eP P 00 34 59.9 +1.1
RAO Raoul Island 52.77 139 S S 00 42 35.8 +7.2
comp=Z,100nm,0.3s,baz=242,slow=22,SNR=1.8
RAO LR LR 00 54 40.9
comp=Z,5µm,19.1s,MS5.6,baz=329,slow=33
RAO Raoul Island 52.77 139 PFAKE 00 35 10.0 +10
RAO LR LR
comp=Z,5µm,19.0s,MS5.6
YAK Yakutsk 52.79 351 PFAKE 00 35 10.0 +10
YAK LR LR
comp=Z,3µm,22.0s,MS5.3
ZAK Zakamensk 52.92 327 eP P 00 35 00.5 -0.2
ZAK pmax pmax
comp=Z,119nm,1.2s,mb5.7
SHL Shillong 53.07 294 eP P 00 35 03.5 +1.3
SHL ePCS PcS 00 40 10.0 +0.3
SHL eS S 00 42 34.0 +1.0
TAU Tasmania Unive 53.13 179 eP P 00 35 02.8 +0.5
comp=Z,235nm,1.4s,mb5.9
TAU LR LR
comp=Z,3µm,19.0s,MS5.4
TAU Tasmania Unive 53.13 179 eP P 00 35 02.8 +0.5
TAU pmax pmax
comp=Z,235nm,1.4s,mb5.9
TAU MLR MLR
comp=Z,3µm,19.0s,MS5.4
BOD Bodaibo 53.14 339⇓ *i* P P 00 35 01.3 -0.8
BOD pmax pmax
comp=Z,108nm,1.8s,mb5.5
TLY Talaya 53.47 329 P P 00 35 06.0 +1.4
SNR=23
TLY Talaya 53.47 329 eP P 00 35 05.8 +1.2
comp=Z,117nm,1.0s,mb5.8
TLY LR LR
comp=Z,2µm,20.0s,MS5.2
TLY Talaya 53.47 329 *c i* P P 00 35 05.4 +0.7
TLY *e* 00 37 05.6
TLY eS S 00 42 41.2 +3.7
TLY *e* 00 42 56.4
TLY ePS 00 43 03.1
TLY *e* 00 44 55.2
TLY pmax pmax
comp=Z,134nm,1.1s,mb5.8
TLY MLR MLR
comp=Z,2µm,18.0s,MS5.2
IRK Irkutsk 53.47 330 eP P 00 35 04.8 +0.1
IRK pmax pmax
comp=Z,273nm,2.2s,mb5.8
COCO West Island 53.58 246 PFAKE 00 35 20.0 +14
COCO LR LR
comp=Z,2µm,22.0s,MS5.2
LSA Lhasa 54.25 299 P P 00 35 12.2 +1.4
LSA XP sP 00 35 24.7 +11
LSA S S 00 42 47.7 -1.2
LSA SCS ScS 00 44 57.0 -4.2
LSA AMB AMB
comp=Z,80nm,1.0s,mb5.6
LSA AMB AMB
comp=Z,1µm,6.0s
LSA LR LR
comp=N,540nm,18.0s,MS4.8
LSA LR LR
comp=E,630nm,18.0s,MS4.8
LSA LR LR
comp=Z,890nm,24.0s
LSA Lhasa 54.25 299 eP P 00 35 12.5 +1.7
comp=Z,143nm,1.3s,mb5.7
LSA LR LR
comp=Z,1µm,22.0s,MS5.0
LSA Lhasa 54.25 299 eP P 00 35 12.5 +1.7
LSA pmax pmax
comp=Z,143nm,1.3s,mb5.7
LSA MLR MLR
comp=Z,1µm,22.0s,MS5.0
MOY Mondy 54.84 328 eP P 00 35 14.9 +0.2
MOY pmax pmax
comp=Z,351nm,2.8s,mb5.9
KIP Kipapa 54.88 71 PFAKE 00 35 30.0 +15
KIP LR LR
comp=Z,7µm,21.0s,MS5.7
NIKO Nikolski 55.83 31 P P 00 35 22.3 +0.5
comp=Z,138nm,0.9s,mb6.0
CAL Calcutta 56.09 290 eP P 00 35 24.2 0.0
CAL eS S 00 43 12.8 -0.9
URZ Urewera 56.62 151 S S 00 43 21.8 +1.7
comp=Z,6.4nm,1.0s,baz=70,slow=20,SNR=2.6
URZ LR LR 00 56 47.6
comp=Z,2µm,18.3s,MS5.2,baz=112,slow=33
TAPN Taplejung 56.97 296 eP P 00 35 30.6 +0.2
comp=Z,427nm,1.1s,mb6.4
XMAS Kiritimati 56.97 94 PFAKE 00 35 40.0 +9.4
XMAS LR LR
comp=Z,4µm,20.0s,MS5.5
POHA Pohakuloa 57.17 73 PFAKE 00 35 40.0 +8.1
POHA LR LR
comp=Z,3µm,22.0s,MS5.4
ODAN Odare 57.21 295 eP P 00 35 32.4 +0.3
comp=Z,329nm,0.9s,mb6.3
UNV Unalaska Valle 57.48 31 eP P 00 35 33.6 0.0
comp=Z,79nm,1.1s,mb5.7
RAMN Ramite 57.92 295 eP P 00 35 37.7 +0.5
comp=Z,458nm,1.2s,mb6.4
SNZO South Karori 58.00 155 PFAKE 00 35 50.0 +13
SNZO LR LR
comp=Z,2µm,19.0s,MS5.3
JIRN Jiri 58.34 296 eP P 00 35 40.8 +0.7
comp=Z,437nm,0.9s,mb6.5
GUN Gumba 58.64 296 eP P 00 35 42.5 +0.4
comp=Z,853nm,0.9s,mb6.8
PKI Pulchoki 59.02 296 eP P 00 35 44.6 -0.3
comp=Z,303nm,1.0s,mb6.3
PKI Pulchoki 59.02 296 eP P 00 35 44.6 -0.3
PKI pmax pmax
comp=Z,303nm,1.0s,mb6.3
KKN Kakani 59.16 296 eP P 00 35 45.7 -0.1
comp=Z,298nm,0.8s,mb6.4
KKN Kakani 59.16 296 eP P 00 35 45.7 -0.1
KKN pmax pmax
comp=Z,298nm,0.8s,mb6.4
DMN Daman 59.30 296 eP P 00 35 46.2 -0.5
comp=Z,609nm,1.2s,mb6.5
GKN Gorkha 59.74 296 eP P 00 35 49.2 -0.6
comp=Z,930nm,1.4s,mb6.6
WMQ Urumqi 59.95 315 P P 00 35 51.2 +0.3
WMQ AP pP 00 36 01.2 +8.1
WMQ XP sP 00 36 05.2 +11
WMQ PP PP 00 38 04.2 +1.1
WMQ S S 00 43 59.2 -4.3
WMQ SCS ScS 00 45 35.2 -6.8
WMQ SS SS 00 47 56.2 -3.7
WMQ AMB AMB
comp=Z,78nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,264nm,5.0s
WMQ LR LR
comp=N,1µm,18.0s,MS5.3
WMQ LR LR
comp=E,1µm,18.0s,MS5.3
WMQ LR LR
comp=Z,1µm,20.0s,MS5.1
DANN Dangsing 60.53 297 eP P 00 35 55.1 -0.1
comp=Z,676nm,0.8s,mb6.8
KOLN Koldanda 60.64 296 eP P 00 35 55.9 -0.1
comp=Z,329nm,0.8s,mb6.5
KRAR Krasnoyarsk 61.16 329⇑ *i* P P 00 35 59.0 +0.1
KRAR pmax pmax
comp=Z,163nm,1.7s,mb5.9
PYUN Piuthan 61.20 296 eP P 00 35 59.4 -0.4
comp=Z,343nm,0.8s,mb6.5
SDPT Sand Point 61.29 32 eP P 00 36 00.5 +0.7
comp=Z,230nm,0.7s,mb6.4
TIXI Tiksi 62.01 354 PFAKE 00 36 10.0 +5.5
TIXI LR LR
comp=Z,1µm,19.0s,MS5.1
RAR Rarotonga 62.04 121 LR LR 00 56 47.3
comp=Z,1µm,20.1s,MS5.0,baz=281,slow=30
LGTI Lohaghat 63.67 298 eP P 00 36 18.2 +1.9
PTH Pithoragarh 63.70 298 eP P 00 36 11.8 -4.7
PTH eS PP 00 38 37.4 +0.8
MDRS Chennai 64.06 279⇑ *ex* x 00 35 41.2
MDRS *ex* x 00 38 08.2
MK31 Makanchi Array 64.36 317 eP P 00 36 21.0 +0.5
MK31 Makanchi Array 64.36 317 *i* P P 00 36 20.4 -0.1
MK31 pmax pmax
comp=Z,590nm,2.2s,mb6.2
MKAR Makanchi Array 64.36 317 P P 00 36 20.3 -0.2
comp=Z,27nm,0.7s,mb5.4,baz=91,slow=9.3,SNR=141
MKAR S S 00 44 59.0 -0.1
comp=Z,0.1nm,0.3s,baz=115,slow=22,SNR=3.2
MKAR LR LR 01 02 33.2
comp=Z,1µm,20.9s,MS5.1,baz=272,slow=34
MKAR PKP2bc 01 05 13.3
comp=Z,2.9nm,1.1s,baz=318,slow=1.6,SNR=7.7
MKAR Makanchi Array 64.36 317 P P 00 36 20.3 -0.2
MKAR S S 00 44 59.0 -0.1
MKAR LR LR 01 02 33.2
MKAR ⇑ *e* 01 05 13.3
MKAR Makanchi Array 64.36 317 P P 00 36 20.3 -0.2
MKAR S S 00 44 59.0 -0.2
ZAA0 Zalesovo Array 64.68 325 eP P 00 36 22.5 +0.1
ZAA0 ePcP PcP 00 36 57.2 +1.1
ZALV Zalesovo Beam 64.68 325 P P 00 36 21.2 -1.2
comp=Z,24nm,0.6s,mb5.4,baz=106,slow=6.2,SNR=100
ZALV S S 00 45 01.4 -1.4
comp=Z,0.3nm,0.3s,baz=43,slow=24,SNR=2.1
ZALV PKPPKP 01 05 10.5
comp=Z,1.3nm,0.7s,baz=266,slow=2.4,SNR=6.2
ZALV PKP2bc 01 05 14.2
comp=Z,1.5nm,0.9s,baz=299,slow=3.1,SNR=3.8
ZALV LR LR 01 06 20.9
comp=Z,1µm,19.6s,MS5.1,baz=8.5,slow=38
ZALV Zalesovo Beam 64.68 325 P P 00 36 21.2 -1.2
ZALV S S 00 45 01.4 -1.4
ZALV P'P' 01 05 10.5
ZALV ⇑ *e* 01 05 14.2
ZALV LR LR 01 06 20.9
ZALV Zalesovo Beam 64.68 325 P P 00 36 21.2 -1.2
ZALV S S 00 45 01.4 -1.4
NGP Nagpur 64.70 288⇑ *i* P P 00 36 17.9 -5.3
NGP *ex* x 00 36 22.2
comp=Z,128nm,1.9s
NGP *i* S S 00 44 57.0 -7.2
KALG Kalgarh 64.98 298 *ex* x 00 36 17.1
KALG AMb AMB 00 36 20.9
comp=Z,151nm,1.2s,mb5.9
HYB Hyderabad 65.35 284 eP P 00 36 27.5 0.0
HYB eS S 00 45 12.0 -0.3
HYB Hyderabad 65.35 284⇑ *i* P P 00 36 27.5 0.0
HYB eS S 00 45 12.0 -0.3
KLP Kalpa 65.49 300 eP P 00 36 28.7 +0.5
KLP AMb AMB 00 36 33.0
comp=Z,316nm,1.2s,mb6.2
DDI Dehra Dun 65.61 299⇑ *i* P P 00 36 26.5 -2.5
AGRA Agra 65.64 295 eP P 00 36 27.7 -1.5
AGRA AMb AMB 00 36 31.6
comp=Z,196nm,1.1s,mb6.1
OHAK Old Harbor 65.70 31 eP P 00 36 29.3 +0.3
comp=Z,705nm,2.2s,mb6.3
ASOR Ausora 65.81 297 *ex* x 00 36 10.1
ASOR AMb AMB 00 36 14.0
comp=Z,158nm,0.7s,mb6.2
NVS Novosibirsk 65.83 326⇑ *i* P P 00 36 29.2 -0.7
NVS *i* 00 36 47.2
NVS pmax pmax
comp=Z,370nm,2.0s,mb6.1
NVS pmax pmax
comp=N,105nm,1.9s
NVS pmax pmax
comp=E,245nm,1.9s
SVW2 Sparrevohn 66.02 27 eP P 00 36 30.5 -0.5
BHPL Bhopal 66.15 291 eP P 00 36 32.0 -0.5
BHPL AMb AMB 00 36 35.5
comp=Z,90nm,1.1s,mb5.7
KDAK Kodiak Island 66.25 31 P pP 00 36 45.6 +11
comp=Z,14nm,0.7s,baz=255,slow=5.1,SNR=14
KDAK Kodiak Island 66.25 31 eP P 00 36 33.1 +0.6
comp=Z,275nm,1.7s,mb6.0
KDAK LR LR
comp=Z,3µm,20.0s,MS5.6
NDI New Delhi 66.30 297⇑ eP P 00 36 31.0 -2.4
NDI eS S 00 45 19.0 -4.6
AYAN Aya Nagar 66.38 296 eP P 00 36 32.7 -1.2
AYAN AMb AMB 00 36 37.0
comp=Z,116nm,1.3s,mb5.7
SMLA Simla 66.40 299 *i* P P 00 36 34.5 +0.4
SMLA *ex* x 00 36 36.1
comp=Z,321nm,0.7s
SMLA *i* S S 00 45 24.0 -0.8
AKL Akola 66.62 288 eP P 00 36 33.7 -1.9
AKL AMb AMB 00 36 39.0
comp=Z,102nm,2.0s,mb5.5
KKR Kurukshetra 66.67 298 eP P 00 36 34.3 -1.5
KKR AMb AMB 00 36 37.7
comp=Z,458nm,0.9s,mb6.5
KUDL Kundal 66.94 296 eP P 00 36 36.6 -0.9
KUDL AMb AMB 00 36 40.1
comp=Z,239nm,1.0s,mb6.2
BHK Bhakra 67.05 300 *ex* x 00 36 49.4
KOD Kodaikanal 67.08 277 eP P 00 36 39.4 +0.8
KOD AMb AMB 00 36 42.9
comp=Z,68nm,1.4s,mb5.5
KHET Khetri 67.54 296 eP P 00 36 40.8 -0.5
KHET AMb AMB 00 36 44.4
comp=Z,141nm,1.4s,mb5.8
KURK Kurchatov 67.55 321 P P 00 36 40.9 0.0
SNR=95
KURK Kurchatov 67.55 321 P P 00 36 40.5 -0.4
KURK Kurchatov 67.55 321 eP P 00 36 40.7 -0.2
comp=Z,158nm,1.0s,mb6.0
KURK LR LR
comp=Z,2µm,19.0s,MS5.4
THN Thein Dam 67.68 301 eP P 00 36 39.6 -2.5
TRD Trivandrum 67.80 275⇓ *ex* x 00 36 52.0
ULHL Ulahol 67.91 311 P P 00 36 44.5 +1.1
SNR=14
PPLA Purkeypile 68.18 26 eP P 00 36 45.0 +0.3
comp=Z,179nm,1.5s,mb5.9
SLKM Skilak Lake 68.27 29 eP P 00 36 44.0 -1.2
SLKM Skilak Lake 68.27 29 P P 00 36 44.5 -0.8
TKM2 Tokmak 2 68.45 312 eP P 00 36 47.8 +1.0
comp=Z,134nm,1.6s,mb5.7
TKM2 LR LR
comp=Z,1µm,20.0s,MS5.1
TKM2 Tokmak 2 68.45 312 eP P 00 36 47.8 +1.0
TKM2 pmax pmax
comp=Z,134nm,1.6s,mb5.7
TKM2 MLR MLR
comp=Z,1µm,20.0s,MS5.1
TKM2 Tokmak 2 68.45 312 P P 00 36 47.6 +0.8
SNR=32
CHUM Lake Minchumin 68.47 25 eP P 00 36 47.2 +0.7
comp=Z,284nm,1.7s,mb6.0
SEW Seward 68.51 29 eP P 00 36 47.0 +0.2
comp=Z,125nm,1.3s,mb5.7
KZA Kyzart 68.62 311 P P 00 36 49.7 +1.8
SNR=10.0
RC01 Rabbit Creek A 68.67 28 eP P 00 36 47.4 -0.4
comp=Z,32nm,0.5s,mb5.5
IMA2 Indian Mountai 68.77 22 eP P 00 36 48.2 -0.1
KBK Karagaybulak 68.90 312 P P 00 36 50.4 +0.8
SNR=24
KTH Kantishna Hill 68.94 25 eP P 00 36 49.1 -0.3
comp=Z,112nm,1.2s,mb5.7
CHMS Chumysh 69.08 312 P P 00 36 51.2 +0.5
SNR=18
BPAW Bear Paw Mtn. 69.10 25 eP P 00 36 50.3 -0.1
comp=Z,241nm,1.9s,mb5.8
PMR Palmer 69.10 28 eP P 00 36 51.3 +0.8
comp=Z,68nm,1.0s,mb5.5
PMR LR LR
comp=Z,2µm,22.0s,MS5.3
PMR Palmer 69.10 28 eP P 00 36 51.3 +0.8
PMR pmax pmax
comp=Z,68nm,1.0s,mb5.5
PMR MLR MLR
comp=Z,2µm,22.0s,MS5.3
FRU Bishkek 69.16 312⇑ *i* P P 00 36 52.0 +0.8
FRU *e* 00 37 04.0
FRU *e* 00 45 54.0
FRU *e* 00 46 41.0
FRU pmax pmax
comp=Z,1µm,4.0s
FRU MLR MLR
comp=Z,2µm,18.0s,MS5.3
TRF Thorofare Moun 69.18 26 eP P 00 36 50.2 -0.7
comp=Z,50nm,1.1s,mb5.4
UCH Uchtor 69.18 311 P P 00 36 53.3 +1.9
SNR=11
AAK Ala-Archa 69.23 312 P P 00 36 52.7 +1.1
comp=Z,181nm,1.0s,mb6.0,SNR=15
AAK Ala-Archa 69.23 312 P P 00 36 52.4 +0.7
SNR=16
USP Ospenovka 69.28 312 P P 00 36 52.4 +0.4
SNR=32
MNGI Mangalore 69.33 280 *ex* x 00 36 40.9
PPT Papeete 69.65 113 eP P 00 36 54.9 +0.3
comp=Z,90nm,1.4s,mb5.5
PPT eS S 00 46 00.5 -3.4
comp=Z,2µm,26.2s
PPT eLQ 00 54 24.9
comp=Z,5µm,30.0s
PPT eLR LR 00 57 53.5
comp=Z,7µm,28.5s,baz=294
PPT Papeete 69.65 113 LR LR 00 59 00.9
comp=Z,2µm,21.6s,MS5.3,baz=282,slow=29
PPT Papeete 69.65 113 eP P 00 36 54.9 +0.3
comp=Z,90nm,1.4s,mb5.5
PPT eS S 00 46 00.5 -3.4
PPT eLQ 00 54 24.9
PPT Papeete 69.65 113 eP P 00 36 54.9 +0.3
PPT eS S 00 46 00.5 -3.4
PPT pmax pmax
comp=Z,90nm,1.4s
POO Poona 69.74 286 eP P 00 36 53.4 -1.8
POO AMb AMB 00 36 58.1
comp=Z,120nm,1.6s,mb5.6
EKS2 Erkin-Say 69.76 312 eP P 00 36 55.7 +0.8
comp=Z,167nm,1.6s,mb5.7
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.2
EKS2 Erkin-Say 69.76 312 P P 00 36 55.8 +0.9
SNR=26
AML Almayashu 69.78 311 eP P 00 36 56.9 +1.8
comp=Z,276nm,1.7s,mb5.9
AML Almayashu 69.78 311 P P 00 36 56.7 +1.6
SNR=13
MCK McKinley 69.84 26 eP P 00 36 54.4 -0.6
comp=Z,98nm,1.3s,mb5.6
MCK McKinley 69.84 26 eP P 00 36 54.4 -0.6
MCK pmax pmax
comp=Z,98nm,1.3s,mb5.6
TIAR Tiarei 69.85 113 eP P 00 36 56.0 +0.1
comp=Z,658nm,1.0s,mb6.5
GOA Goa 70.03 283 eP P 00 36 56.5 -0.6
GOA AMb AMB 00 37 00.4
comp=Z,97nm,1.9s,mb5.4
PMOR Pomariorio Ree 70.41 110 eP P 00 37 00.4 +1.1
comp=Z,156nm,1.1s,mb5.8
COLD Coldfoot 70.49 22 eP P 00 36 59.5 +0.6
comp=Z,140nm,1.6s,mb5.6
COLA College 70.64 24 eP P 00 36 59.7 -0.1
comp=Z,22nm,0.8s,mb5.2
COLA LR LR
comp=Z,2µm,19.0s,MS5.4
COLA College 70.64 24 *c i* P P 00 36 58.6 -1.2
TBI Tubuai 71.67 119 eS S 00 46 25.0 -2.3
comp=Z,1µm,31.5s
TBI eLQ 00 55 24.2
comp=Z,2µm,38.0s
TBI eLR LR 00 58 45.4
comp=Z,3µm,31.5s,baz=298
MENT Mentasta 71.90 27 eP P 00 37 07.6 +0.1
KK31 Karatay Array 72.18 312 *i* P P 00 37 09.5 -0.1
KK31 pmax pmax
comp=Z,793nm,2.4s,mb6.2
VOSK Vostochnaya 72.54 322 P P 00 37 11.0 -0.6
VOSK pmax pmax
comp=Z,913nm,3.0s
BVA0 Borovoye Array 72.93 322 P P 00 37 13.6 -0.2
BVA0 pmax pmax
comp=Z,200nm,3.0s
BVAR Borovoye Array 72.93 322 P P 00 37 13.2 -0.6
comp=Z,101nm,0.8s,mb5.8,baz=101,slow=7.7,SNR=273
BVAR S S 00 46 38.3 -2.5
comp=Z,0.2nm,0.4s,baz=320,slow=35,SNR=2.3
BRVK Borovoye 72.99 322 P P 00 37 14.6 +0.3
SNR=74
BRVK Borovoye 72.99 322 eP P 00 37 14.3 +0.1
comp=Z,189nm,1.1s,mb5.9
BRVK LR LR
comp=Z,3µm,22.0s,MS5.6
BRVK Borovoye 72.99 322 P P 00 37 13.7 -0.5
BRVK pmax pmax
comp=Z,354nm,1.2s,mb6.2
KBL Kabul 73.26 303 eP P 00 37 16.6 +0.3
comp=Z,92nm,0.9s,mb5.7
KBL Kabul 73.26 303 eP P 00 37 16.6 +0.4
KBL pmax pmax
comp=Z,92nm,0.9s,mb5.7
EGAK Eagle 73.39 25 eP P 00 37 16.6 +0.3
comp=Z,401nm,1.8s,mb6.0
EGAK ePP PP 00 39 59.5 -0.2
EGAK LR LR
comp=Z,1µm,20.0s,MS5.2
DAWY Dawson 74.02 26 eP P 00 37 20.8 +0.7
HYT Haines Junctio 74.45 30 eP P 00 37 23.9 +1.2
DGAR Diego Garcia 75.13 259 PFAKE 00 37 40.0 +13
DGAR LR LR
comp=Z,1µm,21.0s,MS5.2
SIT Sitka 75.24 34 PFAKE 00 37 40.0 +13
SIT LR LR
comp=Z,4µm,20.0s,MS5.7
SKAG Skagway 75.40 31 eP P 00 37 28.6 +0.4
comp=Z,243nm,1.8s,mb5.8
WRAK Wrangell Islan 76.86 34 PFAKE 00 37 50.0 +13
WRAK LR LR
comp=Z,3µm,21.0s,MS5.6
INK Inuvik 76.90 22 eP P 00 37 36.2 -0.4
comp=Z,5µm,1.8s,mb7.2
DRV Dumont d'Urvil 77.04 182 P P 00 37 37.0 -0.2
DRV S S 00 47 33.0 +7.2
DRV L 00 58 00.0
DRV R 01 03 00.0
DLBC Dease Lake 78.12 32 eP P 00 37 44.4 +0.9
DLBC ePcP PcP 00 37 52.8 -0.3
SVE Sverdlovsk 78.67 326⇓ eP P 00 37 46.8 +0.2
SVE *e* 00 38 03.2
SVE eS S 00 47 31.8 -12
SVE pmax pmax
comp=Z,173nm,2.1s,mb5.6
SVE MLR MLR
comp=Z,3µm,18.0s,MS5.7
AB31 Akbulak array 79.45 318 P P 00 37 50.0 -1.1
AB31 pmax pmax
comp=Z,51nm,1.1s,mb5.4
ARU Arti 79.83 326 eP P 00 37 53.4 +0.4
comp=Z,221nm,1.5s,mb5.9
ARU LR LR
comp=Z,2µm,19.0s,MS5.5
ARU Arti 79.83 326 *c i* P P 00 37 53.0 0.0
ARU *e* 00 40 50.1
ARU ePPP 00 42 42.9
ARU eS S 00 47 56.2 -0.2
ARU SS SS 00 53 11.0 +5.9
ARU pmax pmax
comp=Z,255nm,2.5s,mb5.7
ARU MLR MLR
comp=Z,2µm,20.0s,MS5.5
SOKR Solikamsk 80.55 329 *c i* P P 00 37 57.5 +0.7
SOKR pmax pmax
comp=Z,140nm,1.6s,mb5.6
SOKR MLR MLR
comp=Z,2µm,20.0s,MS5.5
CASY Casey 80.80 194 PFAKE 00 38 10.0 +12
CASY LR LR
comp=Z,1µm,22.0s,MS5.2
B04A Port Angeles 82.78 43 ⇓P P 00 38 08.8 0.0
baz=83

C04A Brinnon 83.18 43 ⇓P P 00 38 10.4 -0.5
baz=83,SNR=5.3
GNW Green Mountain 83.30 43 eP P 00 38 12.0 +0.5
comp=Z,194nm,1.7s,mb5.9
J02A Umpqua 83.37 47 ⇓P P 00 38 11.9 0.0
baz=83
H03A Soap Creek Ran 83.39 46 ⇓P P 00 38 12.5 +0.5
baz=83
I03A Eugene 83.50 47 ⇑P P 00 38 12.6 0.0
baz=84
BIDO Bidbid 83.77 293 ⇑P P 00 38 14.5 +0.1
SNR=7.0
F04A Amboy 83.81 45 ⇑P P 00 38 14.4 +0.2
baz=84,SNR=6.6
KCPM Cahto Peak 83.89 51 eP P 00 38 16.2 +1.4
comp=Z,14nm,0.7s,mb5.2
TDL Tradedollar La 83.89 44 P P 00 38 15.4 +0.8
SMDO Samad 83.91 292 P P 00 38 16.0 +0.8
SNR=5.6
D05A Enumclaw 83.92 43 ⇓P P 00 38 14.7 0.0
baz=84,SNR=6.3
HUMO Hull Mountain 83.93 48 eP P 00 38 16.0 +1.1
comp=Z,69nm,1.4s,mb5.6
HUMO LR LR
comp=Z,3μm,22.0s,MS5.7
HUMO Hull Mountain 83.93 48 ⇑P P 00 38 15.2 +0.4
baz=84
N02C Big Bar 83.93 50 ⇓P P 00 38 15.2 +0.2
baz=84,SNR=9.1
SSOR Sweet Springs 83.95 46 P P 00 38 15.3 +0.4
KIPM Iron Peak 83.95 51 eP P 00 38 16.3 +1.3
comp=Z,179nm,1.6s,mb6.0
RPW Rockport 84.04 42 eP P 00 38 15.9 +0.6
comp=Z,67nm,1.5s,mb5.5
H04A Detroit Lake 84.17 46 ⇓P P 00 38 15.3 -0.7
baz=84
E05A Randle 84.17 44 ⇓P P 00 38 16.1 +0.1
baz=84,SNR=5.5
M02C Callahan 84.18 49 ⇑P P 00 38 16.2 0.0
baz=84,SNR=6.3
IRO Indian Ridge 84.22 46 P P 00 38 16.5 +0.2
YBH Yreka Blue Hor 84.24 49 PFAKE 00 38 30.0 +14
YBH LR LR
comp=Z,4μm,22.0s,MS5.7
YBH Yreka Blue Hor 84.24 49 ⇑P P 00 38 16.9 +0.4
baz=84,SNR=7.7
FRIS Frissel Point 84.30 46 P P 00 38 17.4 +0.7
RKT Rikitea 84.34 115 eS S 00 48 41.4 -2.6
comp=Z,962nm,36.8s
RKT eSS SS 00 54 09.2 -5.0
comp=Z,377nm,25.5s
RKT eLQ 01 00 34.1
comp=Z,1μm,28.8s
RKT eLR LR 01 04 31.1
comp=Z,3μm,30.2s,baz=292
HOPS Hopland 84.39 52 eP P 00 38 17.6 +0.3
comp=Z,59nm,1.7s,mb5.4
HOPS LR LR
comp=Z,3μm,20.0s,MS5.7
HOOD Mount Hood Mea 84.44 45 eP P 00 38 18.5 +1.1
comp=Z,28nm,0.9s,mb5.4
F05A White Salmon 84.48 45 ⇓P P 00 38 17.4 -0.2
baz=84
WDC Whiskeytown Da 84.54 50 eP P 00 38 18.4 +0.4
comp=Z,139nm,1.8s,mb5.8
WDC LR LR
comp=Z,3μm,22.0s,MS5.6
WDC Whiskeytown Da 84.54 50 eP P 00 38 18.4 +0.4
WDC pmax pmax
comp=Z,139nm,1.8s,mb5.8
WDC MLR MLR
comp=Z,3μm,22.0s,MS5.6
WDC Whiskeytown Da 84.54 50 ⇑P P 00 38 18.2 +0.1
baz=84
GASB Alder Springs 84.56 51 ⇑P P 00 38 18.5 +0.4
baz=84
MCCM Marconi Confer 84.67 52 PFAKE 00 38 30.0 +11
MCCM LR LR
comp=Z,2μm,20.0s,MS5.5
A07A Ashnola River, 84.68 41 ⇑P P 00 38 17.9 -0.7
baz=85,SNR=13
G05A Wamic 84.69 45 ⇑P P 00 38 18.9 +0.2
baz=85
D06A Cle Elum 84.69 43 ⇓P P 00 38 18.9 +0.3
baz=85,SNR=7.5
E06A Yakima 84.70 44 ⇑P P 00 38 18.8 +0.1
baz=85,SNR=10
NSHM Saint Helena R 84.82 52 eP P 00 38 21.1 +1.7
H05A Madras 84.85 46 ⇑P P 00 38 18.9 -0.6
baz=85,SNR=5.1
TBM Table Mountain 84.86 43 P P 00 38 19.6 +0.1
MNRC McLaughlin Nat 84.89 52 ⇑P P 00 38 20.1 +0.3
baz=85
HOG Hogback Mounta 84.90 48 P P 00 38 20.4 +0.6
I05A Bend 84.90 46 ⇑P P 00 38 19.6 -0.2
baz=85
B07A Winthrop 84.95 42 ⇑P P 00 38 19.4 -0.5
baz=85,SNR=6.6
CVS Carmenet Viney 84.96 52 ⇓P P 00 38 20.2 0.0
baz=85
ETW Entiat 84.96 43 eP P 00 38 20.6 +0.6
comp=Z,139nm,1.5s,mb5.9
F06A Goldendale 84.97 45 ⇓P P 00 38 20.2 +0.2
baz=85,SNR=6.9
BANOM Banah 85.04 295 P P 00 38 21.9 +1.1
SNR=21
LASM Arnica Sink 85.10 49 P P 00 38 21.7 +0.9
C07A Waterville 85.13 43 ⇑P P 00 38 20.0 -0.8
baz=85,SNR=7.6
G06A Carlson Farm, 85.16 45 ⇑P P 00 38 21.0 0.0
baz=85
MXC Moxie City 85.17 44 P P 00 38 21.5 +0.5
YKA Yellowknife Ar 85.20 27 P P 00 38 20.4 -0.5
comp=Z,21nm,0.8s,mb5.3,baz=285,slow=5.2,SNR=23
YKA S S 00 48 47.9 -3.3
comp=Z,2.4nm,0.9s,baz=154,slow=39,SNR=2.7
YKA LR LR 01 18 24.9
comp=Z,487nm,19.3s,MS4.9,baz=155,slow=37
YKA Yellowknife Ar 85.20 27 i P P 00 38 20.3 -0.6
YKA pmax pmax
comp=Z,21nm,0.8s
VIPM Ingram Point 85.30 46 P P 00 38 22.1 +0.4
HATD Hatta, Dubai 85.37 294 P P 00 38 23.0 +0.5
SNR=44
LBCM Butte Creek Ri 85.39 49 P P 00 38 22.9 +0.6
K05A Summer Lake 85.41 48 ⇑P P 00 38 22.3 -0.1
baz=85,SNR=11
A08A Turner Farm, O 85.42 41 ⇓P P 00 38 22.4 +0.1
baz=85,SNR=12
H06A Lindquist Farm 85.46 46 ⇓P P 00 38 22.7 +0.2
baz=85,SNR=12
E07A Sunnyside 85.47 44 ⇓P P 00 38 22.6 +0.1
baz=85,SNR=7.5
B08A Colville Reser 85.49 42 ⇓P P 00 38 21.9 -0.7
baz=85,SNR=15
ORV Oroville 85.50 51 ⇓P P 00 38 22.4 -0.5
baz=86,SNR=21
OHCM Honcut 85.55 51 eP P 00 38 23.6 +0.5
RSW Rattlesnake Hi 85.67 44 eP P 00 38 23.9 +0.3
comp=Z,91nm,1.5s,mb5.8
O04C Chester 85.68 50 ⇑P P 00 38 24.0 +0.2
baz=86,SNR=19
I06A Prineville 85.69 46 ⇓P P 00 38 23.8 +0.1
baz=86,SNR=8.4
HAWA Hanford 85.72 44 PFAKE 00 38 30.0 +6.2
HAWA LR LR
comp=Z,3μm,20.0s,MS5.6
GBL Gable Mountain 85.73 44 P P 00 38 24.3 +0.5
C08A Higginbotham F 85.78 42 ⇑P P 00 38 23.7 -0.4
baz=86,SNR=7.2
G07A Ruggs Ranch, H 85.83 45 ⇑P P 00 38 23.7 -0.7
baz=86,SNR=8.9
MIR Mirnyy 85.83 199 ⇓iP P 00 38 24.0 +0.2
MIR pmax pmax
comp=Z,300nm,1.5s,mb6.3
J06A Christmas Vall 85.85 47 ⇑P P 00 38 24.8 +0.3
baz=86,SNR=9.3
A09A Danville 85.86 41 ⇓P P 00 38 24.1 -0.4
baz=86,SNR=14
O05C Quincy 85.87 50 ⇓P P 00 38 24.1 -0.6
baz=86,SNR=12
MOD Modoc 85.98 48 eP P 00 38 25.7 +0.5
comp=Z,90nm,1.5s,mb5.8
MOD LR LR
comp=Z,2μm,22.0s,MS5.5
MOD Modoc 85.98 48 ⇑P P 00 38 25.2 0.0
baz=86,SNR=16

D08A Wollman Farm, 86.00 43 ⇑P P 00 38 23.7 -1.5
baz=86,SNR=9.4
SAO San Andreas Ge 86.02 54 PFAKE 00 38 40.0 +14
SAO LR LR
comp=Z,2μm,20.0s,MS5.5
H07A Lands Inn, Kim 86.03 46 ⇓P P 00 38 24.3 -1.1
baz=86,SNR=7.7
OD2 Odessa Site #2 86.08 43 P P 00 38 25.9 +0.3
PACP Pacheco Peak 86.10 53 ⇑P P 00 38 25.6 -0.3
baz=86,SNR=6.1
I07A Izee 86.16 46 ⇓P P 00 38 25.8 -0.3
baz=86,SNR=6.6
LAVA Lava Cap Winer 86.22 51 ⇑P P 00 38 26.2 -0.3
baz=86,SNR=38
B09A Rice 86.25 42 ⇑P P 00 38 26.0 -0.4
baz=86,SNR=14
ALE Alert 86.27 4 P P 00 38 26.6 +0.7
comp=Z,132nm,0.9s,mb6.2,SNR=6.5
BEKR Beckwourth 86.31 50 ⇓P P 00 38 26.6 -0.3
baz=86
G08A Pilot Rock 86.32 45 ⇑P P 00 38 26.5 -0.3
baz=86,SNR=12
F08A Pendleton 86.34 44 ⇑P P 00 38 26.4 -0.5
baz=86,SNR=15
D09A Jones Farm, Ri 86.41 43 ⇓P P 00 38 27.3 +0.1
baz=86,SNR=20
J07A Hines 86.43 47 ⇓P P 00 38 27.7 +0.3
baz=86,SNR=14
A10A Northport 86.52 41 ⇓P P 00 38 27.5 -0.2
baz=86,SNR=20
N06A Buffalo Meadow 86.54 49 ⇓P P 00 38 28.3 +0.2
baz=86
K07A Rock Creek Ran 86.61 47 ⇑P P 00 38 28.5 +0.2
baz=87,SNR=20
U04C Hernandez Rese 86.62 54 ⇑P P 00 38 28.6 +0.2
baz=87,SNR=7.2
CMB Columbia Colle 86.62 52 eP P 00 38 28.9 +0.5
comp=Z,89nm,1.4s,mb5.8
CMB LR LR
comp=Z,2μm,22.0s,MS5.6
CMB Columbia Colle 86.62 52 eP P 00 38 28.9 +0.4
CMB pmax pmax
comp=Z,89nm,1.4s,mb5.8
CMB MLR MLR
comp=Z,2μm,22.0s,MS5.6
CMB Columbia Colle 86.62 52 ⇓P P 00 38 28.0 -0.4
baz=87,SNR=18
E09A Wood Farm, Sta 86.63 43 ⇑P P 00 38 28.5 +0.2
baz=87,SNR=16
O06A Flanigan 86.66 50 ⇓P P 00 38 28.8 +0.2
baz=87,SNR=21
H08A Prairie City 86.67 45 ⇑P P 00 38 27.4 -1.1
baz=87,SNR=9.0
LNOR Lincton Mounta 86.67 44 eP P 00 38 28.5 0.0
comp=Z,54nm,1.8s,mb5.5
L07A Adell 86.67 48 ⇓P P 00 38 28.2 -0.4
baz=87,SNR=29
S05C Merced 86.79 53 ⇓P P 00 38 29.2 -0.1
baz=87
WCN Washoe City 86.87 51 ⇓P P 00 38 28.9 -0.8
baz=87,SNR=11
PKD Parkfield 86.88 54 ⇑P P 00 38 29.7 -0.1
baz=87,SNR=5.9
M07A Soldier Meadow 86.91 49 ⇑P P 00 38 29.4 -0.4
baz=87,SNR=12
NEW Newport 86.95 42 eP P 00 38 29.9 +0.1
comp=Z,85nm,1.3s,mb5.8
NEW LR LR
comp=Z,2μm,20.0s,MS5.5
NEW Newport 86.95 42 eP P 00 38 30.0 +0.2
NEW pmax pmax
comp=Z,85nm,1.3s
NEW MLR MLR
comp=Z,2μm,20.0s
J08A Circle Bar Ran 87.03 47 ⇑P P 00 38 30.3 -0.1
baz=87,SNR=13
PAHR Pah Rah Range 87.08 50 eP P 00 38 31.1 +0.4
comp=Z,81nm,1.6s,mb5.7
WVOR Wild Horse Val 87.10 48 eP P 00 38 31.1 +0.3
comp=Z,132nm,1.6s,mb5.9
WVOR LR LR
comp=Z,2μm,19.0s,MS5.5
WVOR Wild Horse Val 87.10 48 eP P 00 38 31.1 +0.4
WVOR pmax pmax
comp=Z,132nm,1.6s,mb5.9
WVOR MLR MLR
comp=Z,2μm,19.0s,MS5.5
D10A Wagner Farm, O 87.11 43 ⇑P P 00 38 30.5 -0.1
baz=87,SNR=17
G09A Cove 87.13 45 ⇓P P 00 38 30.2 -0.6
baz=87,SNR=15
U05C Westside ANR, 87.15 54 ⇑P P 00 38 31.3 +0.3
baz=87,SNR=5.0
K08A Mann Creek Ran 87.15 47 ⇑P P 00 38 31.1 +0.2
baz=87,SNR=29
N07B Gerlach 87.18 49 ⇑P P 00 38 31.6 +0.4
baz=87,SNR=12
R06C Coleville 87.25 51 ⇓P P 00 38 32.7 +1.2
baz=87,SNR=21
SPB4 Spitsbergen Ar 87.26 351 eP P 00 38 30.7 -0.1
A11A Hall Mountain, 87.30 41 ⇑P P 00 38 32.8 +1.3
baz=87,SNR=32
E10A Myers Farm, Un 87.34 43 ⇓P P 00 38 30.8 -1.0
baz=87,SNR=13
H09A Durkee 87.34 45 ⇑P P 00 38 31.0 -0.8
baz=87,SNR=7.8
T06C Millerton Lake 87.34 53 ⇓P P 00 38 31.8 -0.2
baz=87,SNR=22
L08A Fields 87.36 48 ⇓P P 00 38 33.0 +1.0
baz=87,SNR=28
RES Resolute Bay 87.36 13 eP P 00 38 31.4 +0.1
comp=Z,4μm,1.8s
F10A Beach Ranch, E 87.37 44 ⇓P P 00 38 31.9 0.0
baz=87,SNR=11
O07A Toulon 87.37 50 ⇑P P 00 38 32.3 +0.2
baz=87,SNR=9.2
KBS Kingsbay 87.40 352 eP P 00 38 31.5 0.0
KBS LR LR
comp=Z,968nm,21.0s,MS5.2
KBS Kingsbay 87.40 352 eP P 00 38 31.2 -0.3
KBS ePP PP 00 41 55.0 -0.4
KBS eS SKSac 00 48 59.9 +0.6
KBS AMS AMS 01 12 18.8
comp=Z,1μm,29.8s,MS5.1
KBS Kingsbay 87.40 352 eP P 00 38 31.4 -0.1
B11A Sandpoint 87.41 41 ⇑P P 00 38 32.1 +0.1
baz=87,SNR=16
I09A Lost Marbles R 87.43 46 ⇓P P 00 38 32.7 +0.5
baz=87,SNR=5.1
M08A Happy Creek Ra 87.49 48 ⇓P P 00 38 33.6 +1.0
baz=87,SNR=14
BMO Blue Mountains 87.55 45 PFAKE 00 38 40.0 +7.2
BMO LR LR
comp=Z,3μm,21.0s,MS5.7
J09A Fry Pan Ranch, 87.55 47 ⇑P P 00 38 32.4 -0.4
baz=88,SNR=23
G10A Bishop Farm, J 87.59 45 ⇑P P 00 38 32.6 -0.3
baz=88,SNR=31
KCC Kaiser Creek 87.59 53 ⇓P P 00 38 33.3 +0.2
baz=88,SNR=22
C11A Tepee Creek (N 87.61 42 ⇑P P 00 38 33.2 +0.2
baz=88,SNR=20
PKM Peak Mountain 87.66 55 ⇓P P 00 38 33.8 +0.2
baz=88,SNR=5.5
K09A Rome 87.71 47 ⇓P P 00 38 33.6 0.0
baz=88,SNR=20
D11A Klaveano Farm, 87.74 43 P P 00 38 33.3 -0.4
baz=88,SNR=18
A12A Yaak River Ran 87.76 41 ⇓P P 00 38 34.8 +1.1
baz=88,SNR=16
N08A GE Springer Mi 87.80 49 ⇓P P 00 38 33.7 -0.4
baz=88,SNR=18
O08A Rochester Mine 87.89 50 ⇓P P 00 38 35.6 +1.0
baz=88,SNR=27
L09A Wilkinson Ranc 87.89 48 ⇑P P 00 38 34.2 -0.4
baz=88,SNR=24
E11A Bogner Ranch, 87.97 43 ⇑P P 00 38 34.0 -0.8
baz=88,SNR=23
H10A Noah's Angus R 88.00 45 ⇑P P 00 38 34.6 -0.4
baz=88,SNR=30
VES Vestal, Richgr 88.06 54 ⇑P P 00 38 34.5 -1.0
baz=88,SNR=8.9
P08A Dixie Valley 88.07 50 ⇓P P 00 38 36.6 +1.2
baz=88
I10A Payette 88.07 46 ⇑P P 00 38 35.1 -0.2
baz=88
F11A Grangeville 88.12 44 ⇑P P 00 38 34.5 -1.0
baz=88,SNR=12

LVZ Lovozero 88.12 339 PFAKE 00 38 50.0 +15
LVZ LR LR
comp=Z,1μm,20.0s,MS5.3
EDM Edmonton 88.12 36 eP P 00 38 35.7 +0.3
G11A Walters Elk Ra 88.15 44 ⇑P P 00 38 34.8 -0.9
baz=88,SNR=35
C12B Naegeli Ranch, 88.16 42 ⇑P P 00 38 34.8 -0.8
baz=88,SNR=5.2
NVAR Mina Array Bea 88.16 51 P P 00 38 36.6 +0.7
comp=Z,24nm,0.6s,mb5.6,baz=268,slow=5.1,SNR=117
MTUM Tungsten Hills 88.17 53 eP P 00 38 37.0 +1.1
M09A Marrel Ranch, 88.17 48 ⇓P P 00 38 37.1 +1.2
baz=88,SNR=8.3
SNCC San Nicolas Is 88.22 57 PFAKE 00 38 50.0 +14
SNCC LR LR
comp=Z,4μm,22.0s,MS5.8
J10A Berg Farm, Mel 88.24 46 ⇓P P 00 38 36.1 0.0
baz=88
N09A Rock Creek Ran 88.24 49 ⇑P P 00 38 37.1 +0.9
baz=88,SNR=9.8
K10A MacKenzie Ranc 88.31 47 ⇑P P 00 38 37.2 +0.8
baz=88,SNR=34
D12A Red Ives Fores 88.39 43 ⇓P P 00 38 36.6 -0.2
baz=88,SNR=20
E12A Beaver Dam Sad 88.39 43 ⇑P P 00 38 36.5 -0.3
baz=88,SNR=44
RBK Rabkut 88.39 287 P P 00 38 37.0 -0.4
SNR=19
H11A Donnelly 88.48 45 ⇑P P 00 38 36.9 -0.3
baz=88,SNR=25
A13A Flathead Natio 88.55 41 ⇓P P 00 38 38.5 +1.0
baz=88,SNR=16
BMN Battle Mountai 88.56 49 eP P 00 38 39.1 +1.4
comp=Z,73nm,1.6s,mb5.8
BMN LR LR
comp=Z,2μm,20.0s,MS5.5
BMN Battle Mountai 88.56 49 eP P 00 38 39.1 +1.4
BMN pmax pmax
comp=Z,73nm,1.6s,mb5.8
BMN MLR MLR
comp=Z,2μm,20.0s,MS5.5
ISA Isabella 88.59 54 eP P 00 38 37.6 -0.4
comp=Z,72nm,1.9s,mb5.7
ISA LR LR
comp=Z,2μm,19.0s,MS5.6
ISA Isabella 88.59 54 eP P 00 38 37.6 -0.4
ISA pmax pmax
comp=Z,72nm,1.9s,mb5.7
ISA MLR MLR
comp=Z,2μm,19.0s,MS5.6
ISA Isabella 88.59 54 ⇓P P 00 38 37.4 -0.6
baz=89,SNR=6.1
O09A Fish Creek Ran 88.64 50 ⇑P P 00 38 37.7 -0.4
baz=89,SNR=16
B13A Whitefish 88.65 41 ⇑P P 00 38 38.1 +0.1
baz=89,SNR=20
APA Apatity 88.69 339 ⇓eP P 00 38 37.8 +0.1
APA pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
APA MLR MLR
comp=Z,2μm,20.0s,MS5.5
I11A Placerville 88.70 46 ⇓P P 00 38 37.8 -0.6
baz=89,SNR=24
L10A Juniper Basin 88.75 48 ⇑P P 00 38 38.5 -0.1
baz=89,SNR=39
C13A Hot Springs 88.75 42 ⇑P P 00 38 38.2 -0.3
baz=89,SNR=7.3
F12A Elk City 88.76 44 ⇑P P 00 38 38.2 -0.4
baz=89,SNR=14
M10A I.L. Ranch, Tu 88.82 48 ⇑P P 00 38 38.2 -0.7
baz=89
M10A ⇑P pP 00 38 39.8 -1.4
baz=89,SNR=17
G12A Big Creek, Yel 88.86 44 P P 00 38 38.6 -0.4
baz=89,SNR=34
MFID Camas Ranch 88.91 46 ⇓P P 00 38 40.2 +0.9
baz=89,SNR=50
K11A Parker Ranch, 88.91 47 ⇓P P 00 38 39.0 -0.3
baz=89,SNR=39
Q09A Carvers 88.93 51 ⇑P P 00 38 39.4 -0.1
baz=89
MAK Makhachkala 88.94 313 eP P 00 38 37.0 -2.4
MAK e 00 42 09.8
MAK ePPP 00 44 13.5
MAK eS SKSac 00 49 04.8 -5.0
MAK i 00 49 28.8
MAK pmax pmax
comp=Z,666nm,1.9s,mb6.6
SBA Scott Base 88.96 176 eP P 00 38 39.7 +1.0
comp=Z,49nm,1.4s,mb5.6
SBA LR LR
comp=Z,741nm,19.0s,MS5.1
SBA Scott Base 88.96 176 eP P 00 38 39.7 +1.0
SBA pmax pmax
comp=Z,49nm,1.4s,mb5.6
SBA MLR MLR
comp=Z,741nm,19.0s,MS5.1
D13A Huson 88.97 42 ⇓P P 00 38 38.9 -0.6
baz=89,SNR=7.1
N10A Dunphy 89.02 49 ⇓P P 00 38 40.6 +0.7
baz=89
TPH Tonopah 89.06 52 eP P 00 38 41.2 +1.1
comp=Z,17nm,0.6s,mb5.6
TPH LR LR
comp=Z,2μm,20.0s,MS5.6
TPH Tonopah 89.06 52 eP P 00 38 41.2 +1.1
TPH pmax pmax
comp=Z,17nm,0.6s,mb5.5
TPH MLR MLR
comp=Z,2μm,20.0s,MS5.6
PTCN Pitcairn Islan 89.12 116 PFAKE 00 38 50.0 +9.4
PTCN LR LR
comp=Z,2μm,21.0s,MS5.5
O10A Cortez Mining, 89.12 49 ⇓P P 00 38 39.9 -0.5
baz=89
EDW2 Edwards Air Fo 89.14 55 ⇑P P 00 38 40.2 -0.4
baz=89,SNR=8.4
S09A Goldfield 89.14 52 ⇓P P 00 38 40.9 +0.4
baz=89,SNR=24
R09A Tonopah 89.14 51 ⇓P P 00 38 40.1 -0.4
baz=89,SNR=40
DAC Darwin (Calif) 89.16 53 PFAKE 00 38 50.0 +9.4
DAC LR LR
comp=Z,2μm,20.0s,MS5.6
A14A Double T Ranch 89.17 40 ⇑P P 00 38 40.6 +0.2
baz=89,SNR=16
MWC Mount Wilson 89.22 55 eP P 00 38 42.4 +1.5
comp=Z,45nm,1.6s,mb5.5
MWC LR LR
comp=Z,4μm,20.0s,MS5.8
MWC Mount Wilson 89.22 55 eP P 00 38 42.4 +1.4
MWC pmax pmax
comp=Z,45nm,1.6s,mb5.5
MWC MLR MLR
comp=Z,4μm,20.0s,MS5.8
L11A Cat Creek Ranc 89.25 47 ⇑P P 00 38 41.7 +0.8
baz=89,SNR=28
C14A Swan Lake 89.27 42 ⇑P P 00 38 40.4 -0.5
baz=89
MPMC Manual Prospec 89.29 54 ⇑P P 00 38 41.2 0.0
baz=89,SNR=24
P10A Eureka 89.30 50 ⇑P P 00 38 41.6 +0.4
baz=89,SNR=8.0
I12A Atlanta 89.31 46 ⇑P P 00 38 40.8 -0.4
baz=89,SNR=16
E13A Victor 89.31 43 ⇓P P 00 38 40.3 -0.9
baz=89,SNR=5.5
H12A Diamond D Ranc 89.32 45 P P 00 38 41.2 0.0
baz=89,SNR=24
F13A Darby 89.38 44 ⇑P P 00 38 40.5 -0.9
baz=89,SNR=28
MSO Missoula 89.38 43 PFAKE 00 38 50.0 +8.6
MSO LR LR
comp=Z,1μm,20.0s,MS5.4
M11A Holland Ranch, 89.39 48 ⇓P P 00 38 42.2 +0.6
baz=89,SNR=9.5
B14A Marquette Ranc 89.43 41 ⇑P P 00 38 41.4 -0.2
baz=89,SNR=9.8
J12A Stokes Ranch, 89.46 46 ⇑P P 00 38 42.5 +0.6
baz=89,SNR=41
Q10A Clear Creek Ra 89.53 51 ⇓P P 00 38 42.7 +0.4
baz=90,SNR=13
N11A Elko Archery C 89.57 49 ⇑P P 00 38 43.1 +0.6
baz=90,SNR=10
S10A Tonopah Range, 89.58 52 ⇑P P 00 38 43.1 +0.5
baz=90,SNR=43
D14A Greenough 89.61 42 ⇑P P 00 38 41.3 -1.2

baz=90
A15A Johnson Ranch, 89.61 40 ⇓P P 00 38 42.2 -0.3
baz=90,SNR=16
G13A Cobalt 89.62 44 ⇓P P 00 38 42.0 -0.6
baz=90,SNR=34
FURC Furnace Creek, 89.69 53 ⇑P P 00 38 43.8 +0.7
baz=90,SNR=7.0
R10A Warm Springs 89.72 51 ⇑P P 00 38 44.0 +0.8
baz=90,SNR=8.0
H13A Challis 89.73 45 P P 00 38 43.0 -0.1
baz=90,SNR=30
K12A Draper Farm, C 89.75 47 ⇓P P 00 38 43.7 +0.4
baz=90,SNR=26
KEV Kevo 89.75 342 PFAKE 00 38 50.0 +7.3
KEV LR LR
comp=Z,2μm,22.0s,MS5.4
L12A House Creek Ra 89.78 47 ⇓P P 00 38 44.3 +0.8
baz=90,SNR=25
E14A Clinton 89.79 43 ⇓P P 00 38 43.0 -0.4
baz=90,SNR=5.3
O11A Cowboy Ranch, 89.79 49 ⇑P P 00 38 43.1 -0.4
baz=90,SNR=21
CHMT Chamberlain Mo 89.82 42 *e*P P 00 38 43.6 +0.1
comp=Z,32nm,1.6s,mb5.4
P11A Circle Ranch, 89.85 50 ⇓P P 00 38 44.4 +0.6
baz=90,SNR=8.4
HLID Hailey 89.87 46 *e*P P 00 38 44.6 +0.8
HLID comp=Z,107nm,1.6s,mb5.9 LR LR
comp=Z,2μm,22.0s,MS5.6
HLID Hailey 89.87 46 ⇓P P 00 38 44.3 +0.5
baz=90,SNR=34
B15A Bradely Ranch, 89.90 41 ⇓P P 00 38 43.2 -0.6
baz=90,SNR=14
ELK Elko 89.96 49 *e*P P 00 38 45.0 +0.7
ELK comp=Z,70nm,1.1s,mb5.9 LR LR
comp=Z,3μm,20.0s,MS5.7
ELK Elko 89.96 49 *e*P P 00 38 45.0 +0.7
ELK pmax pmax
comp=Z,70nm,1.1s
ELK MLR MLR
comp=Z,3μm,20.0s
I13A Wildhorse Cree 89.99 45 ⇑P P 00 38 45.1 +0.7
baz=90,SNR=21
GSC Goldstone 89.99 54 *e*P P 00 38 45.8 +1.2
GSC comp=Z,28nm,1.3s,mb5.4 LR LR
comp=Z,3μm,19.0s,MS5.7
GSC Goldstone 89.99 54 *e*P P 00 38 45.8 +1.2
GSC pmax pmax
comp=Z,28nm,1.3s,mb5.4
GSC MLR MLR
comp=Z,3μm,19.0s,MS5.7
GSC Goldstone 89.99 54 ⇑P P 00 38 44.8 +0.2
baz=90,SNR=8.3
C15A Salmond Ranch, 90.01 41 ⇓P P 00 38 44.0 -0.4
baz=90,SNR=9.1
F14A Wisdom 90.02 43 ⇑P P 00 38 44.3 -0.1
baz=90
M12A Wells 90.03 48 ⇑P P 00 38 45.2 +0.5
baz=90,SNR=35
TPNV Topopah Spring 90.07 53 *e*P P 00 38 45.8 +1.0
TPNV comp=Z,148nm,1.6s,mb6.1 LR LR
comp=Z,1μm,19.0s,MS5.4
TPNV Topopah Spring 90.07 53 *e*P P 00 38 45.8 +0.9
TPNV pmax pmax
comp=Z,148nm,1.6s,mb6.1
TPNV MLR MLR
comp=Z,1μm,19.0s,MS5.4
TPNV Topopah Spring 90.07 53 ⇓P P 00 38 44.4 -0.5
baz=90,SNR=23
N12A Clover Valley, 90.08 48 ⇓P P 00 38 45.2 +0.4
baz=90,SNR=32
J13A Cove Ranch, Pi 90.08 46 ⇑P P 00 38 45.2 +0.4
baz=90,SNR=21
Q11A Duckwater 90.09 51 ⇑P P 00 38 45.6 +0.6
baz=90,SNR=23
U10A Ash Meadows, A 90.12 53 ⇓P P 00 38 45.7 +0.5
baz=90,SNR=9.8
R11A Troy Canyon, C 90.26 51 ⇑P P 00 38 46.6 +0.9
baz=90,SNR=35
D15A Lincoln 90.27 42 ⇓P P 00 38 45.3 -0.3
baz=90,SNR=5.4
SHOC Shoshone 90.28 54 ⇓P P 00 38 45.3 -0.6
baz=90,SNR=6.6
SHOC ⇓P pP 00 38 46.4 -1.8
baz=90
S11A Rachel 90.30 52 ⇑P P 00 38 46.4 +0.5
baz=90,SNR=12
ARCES ARCESS Array B 90.31 342 P P 00 38 45.0 -0.3
comp=Z,9.3nm,0.8s,mb5.2,baz=59,slow=4.7,SNR=21
ARCES S SKSac 00 49 17.8 +1.0
comp=Z,5.7nm,1.0s,baz=313,slow=21,SNR=3.1
ARCES LR LR 01 24 12.5
ARCES ARCESS Array B 90.31 342 P P 00 38 45.0 -0.3
ARCES S SKSac 00 49 17.8 +1.0
K13A Stover Farm, H 90.33 47 ⇑P P 00 38 46.9 +0.9
baz=90,SNR=16
H14A Leadore 90.33 45 P P 00 38 46.5 +0.6
baz=90,SNR=22
A16A West Butte Ran 90.34 40 ⇑P P 00 38 45.3 -0.5
baz=90,SNR=8.2
E15A Deer Lodge 90.35 43 ⇑P P 00 38 45.7 -0.3
baz=90,SNR=22
E15A ⇑P pP 00 38 46.4 -1.9
baz=90
B16A M & M Farms, S 90.42 41 ⇓P P 00 38 45.8 -0.5
baz=90,SNR=6.0
O12A Currie 90.44 49 ⇓P P 00 38 47.0 +0.5
baz=90,SNR=30
I14A Mackay 90.45 45 ⇑P P 00 38 46.0 -0.5
baz=90
I14A ⇑P pP 00 38 47.3 -1.6
baz=90,SNR=6.5
HEC Hector,Ludlow 90.48 55 ⇓P P 00 38 46.5 -0.3
baz=90
HEC ⇓P pP 00 38 47.3 -1.9
baz=90
P12A McGill 90.51 50 ⇑P P 00 38 46.4 -0.4
baz=90,SNR=20
P12A ⇑P pP 00 38 47.8 -1.4
baz=90
J14A Carey 90.56 46 ⇓P P 00 38 47.7 +0.7
baz=90,SNR=18
C16A Fuhringer Ranc 90.56 41 ⇑P P 00 38 46.5 -0.5
baz=90,SNR=9.0
L13A Double Diamond 90.57 47 ⇑P P 00 38 47.8 +0.7
baz=90,SNR=12
M13A Montello 90.59 48 ⇓P P 00 38 47.9 +0.7
baz=90,SNR=20
F15A Butte 90.61 43 ⇑P P 00 38 46.4 -0.8
baz=90,SNR=10
F15A ⇑P pP 00 38 47.6 -2.0
baz=90
MCMT McKenzie Canyo 90.64 44 *e*P P 00 38 48.2 +0.9
comp=Z,23nm,1.5s,mb5.3
PFO Pinyon Flat Ob 90.65 56 *e*P P 00 38 48.0 +0.3
comp=Z,34nm,1.5s,mb5.5
PFO LR LR
comp=Z,3μm,22.0s,MS5.7
PFO Pinyon Flat Ob 90.65 56 *e*P P 00 38 48.0 +0.3
PFO pmax pmax
comp=Z,34nm,1.5s,mb5.5
PFO MLR MLR
comp=Z,3μm,22.0s,MS5.7
PFO Pinyon Flat Ob 90.65 56 ⇑P P 00 38 46.9 -0.8
baz=91
PFO ⇑P pP 00 38 47.7 -2.3
baz=91
TUQ Turquoise Moun 90.67 54 ⇓P P 00 38 48.3 +0.6
baz=91
DLMT Dillon 90.67 44 *e*P P 00 38 47.4 -0.1
comp=Z,57nm,1.7s,mb5.6
Q12A Willow Creek R 90.67 50 ⇑P P 00 38 48.1 +0.5
baz=91,SNR=19
VRHR Novokhopersk 90.67 322 *e*P P 00 38 45.2 -2.2
VRHR pmax pmax
comp=E,40nm,1.5s
VRHR pmax pmax
comp=Z,60nm,1.5s,mb5.7
VRHR pmax pmax
comp=N,20nm,1.4s
VRHR MLR MLR
comp=Z,1μm,23.0s,MS5.3
VRHR MLR MLR
comp=N,1μm,22.0s,MS5.4
VRHR MLR MLR
comp=E,630nm,19.0s,MS5.4
N13A Wendover, West 90.69 48 ⇑P P 00 38 47.0 -0.7
baz=91
N13A ⇓P pP 00 38 48.1 -2.0
baz=91
G15A Dillon 90.79 44 ⇓P P 00 38 47.1 -1.0
baz=91,SNR=13
T11A Corn Creek, Al 90.80 52 ⇓P P 00 38 47.4 -0.8
baz=91,SNR=19
T11A ⇓P pP 00 38 48.5 -2.1
baz=91
HRY Holter Researc 90.81 42 *e*P P 00 38 48.8 +0.6
comp=E,29nm,1.1s,mb5.5
HRY *e*PP PP 00 42 23.2 -0.2
H15A Lima 90.83 44 ⇑P P 00 38 47.6 -0.7
baz=91,SNR=11
H15A ⇑P pP 00 38 48.6 -2.0
baz=91
MONP Monument Peak 90.84 56 ⇓P P 00 38 47.8 -0.8
baz=91
MONP ⇑P pP 00 38 49.0 -1.9
baz=91,SNR=7.8
D16A Dana Ranch, Ca 90.91 42 ⇓P P 00 38 49.1 +0.5
baz=91,SNR=12
BELC Belle Mtn, 90.93 55 ⇓P P 00 38 48.3 -0.7
baz=91,SNR=7.7
E16A East Helena 90.96 42 ⇑P P 00 38 48.5 -0.4
baz=91,SNR=8.3
V11A Goodsprings 90.96 53 ⇑P P 00 38 49.1 +0.1
baz=91
S12A Delamar Landin 91.00 52 ⇓P P 00 38 50.2 +1.0
baz=91,SNR=8.2
K14A Jones Ranch, D 91.01 47 P P 00 38 50.0 +0.9
baz=91,SNR=24
R12A Pony Springs, 91.01 51 ⇑P P 00 38 49.9 +0.7
baz=91,SNR=20
LCCM Lewis and Clar 91.02 43 P P 00 38 49.2 +0.1
GMRC Granite Mounta 91.03 55 ⇓P P 00 38 49.5 +0.1
baz=91,SNR=13
O13A Hicks Ranch, I 91.04 49 ⇑P P 00 38 49.4 +0.1
baz=91,SNR=11
L14A Malta 91.09 47 ⇓P P 00 38 48.9 -0.7
baz=91,SNR=10
MSEY Mahe Island 91.14 265 PFAKE 00 39 00.0 +10
MSEY LR LR
comp=Z,701nm,20.0s,MS5.1
M14A Sheep Mountain 91.15 48 ⇓P P 00 38 49.7 -0.1
baz=91,SNR=20
DVTC Desert V Tower 91.16 57 ⇓P P 00 38 49.8 -0.2
baz=91
P13A Bates Ranch, G 91.18 50 ⇓P P 00 38 50.4 +0.4
baz=91,SNR=35
F16A Kennard Place, 91.21 43 ⇓P P 00 38 49.6 -0.4
baz=91,SNR=7.5
F16A ⇓P pP 00 38 50.5 -1.9
baz=91
G16A Moss Hill, Enn 91.24 44 P P 00 38 50.5 +0.4
baz=91,SNR=22
BOZ Bozeman (W) 91.24 43 *e*P P 00 38 50.5 +0.4
comp=Z,39nm,1.6s,mb5.5
BOZ LR LR
comp=Z,2μm,20.0s,MS5.5
BOZ Bozeman (W) 91.24 43 *e*P P 00 38 50.5 +0.4
BOZ pmax pmax
comp=Z,39nm,1.6s,mb5.5
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.5
BOZ Bozeman (W) 91.24 43 ⇓P P 00 38 49.8 -0.4
baz=91,SNR=14
C17A Wharram Farm, 91.25 41 P P 00 38 49.8 -0.4
baz=91,SNR=13
Q13A Wheeler Ranch, 91.30 50 ⇑P P 00 38 50.8 +0.2
baz=91,SNR=9.3
J15A Blackfoot 91.31 46 ⇓P P 00 38 51.4 +0.9
baz=91,SNR=39
SWSC Sam W. Stewart 91.34 56 ⇓P P 00 38 49.8 -1.1
baz=91
LDFC Landfair 91.40 54 *e*P P 00 38 51.9 +0.8
comp=Z,23nm,0.8s,mb5.6
K15A Arbon 91.43 46 ⇑P P 00 38 50.6 -0.5
baz=91,SNR=10
D17A Six Diamond Ra 91.44 42 ⇓P P 00 38 51.4 +0.4
baz=91,SNR=18
N14A Grayback Hills 91.44 48 ⇑P P 00 38 51.4 +0.3
baz=91,SNR=14
BC3 Big Chuckw Mtn 91.45 56 ⇑P P 00 38 50.9 -0.5
baz=91,SNR=8.2
JOF Joensuu 91.49 335 *e*p P 00 38 49.0 -1.9
comp=Z,13nm,0.8s,mb5.3
JOF Joensuu 91.49 335 *e*P P 00 38 49.0 -1.9
JOF pmax pmax
comp=Z,13nm,0.8s,mb5.3
HVU Hansel Valley 91.50 47 *e*P P 00 38 52.6 +1.2
comp=Z,190nm,1.9s,mb6.1
HVU *e*PP PP 00 42 29.3 +0.3
HVU Hansel Valley 91.50 47 *e*P P 00 38 52.7 +1.3
HVU *e* 00 42 29.3
HVU pmax pmax
comp=Z,190nm,1.9s,mb6.1
U12A Valley of Fire 91.52 53 ⇓P P 00 38 51.1 -0.6
baz=92,SNR=6.7
E17A Martinsdale 91.53 42 ⇑P P 00 38 51.1 -0.3
baz=92,SNR=9.5
R13A O'Grain Ranch, 91.53 51 ⇑pP pP 00 38 53.2 -0.8
baz=92,SNR=28
BGU Big Grassy Mou 91.53 48 *e*P P 00 38 52.8 +1.1
comp=Z,61nm,1.8s,mb5.6
IRM Iron Mountain 91.58 55 ⇓P P 00 38 51.1 -0.9
baz=92,SNR=12
QLMT Earthquake Lak 91.61 44 *e*P P 00 38 53.4 +1.5
comp=Z,29nm,1.3s,mb5.5
GNI Garni 91.64 311 P P 00 38 52.9 +0.8
SNR=5.3
GNI Garni 91.64 311 *e*P P 00 38 52.1 0.0
comp=Z,130nm,1.8s,mb6.0
GNI LR LR
comp=Z,702nm,19.0s,MS5.1
GNI Garni 91.64 311⇑*e*P P 00 38 51.8 -0.3
GNI pmax pmax
comp=Z,88nm,1.9s
L15A Malad City 91.72 47 ⇓P P 00 38 52.0 -0.4
baz=92,SNR=16
S13A Holt Ranch, En 91.77 51 ⇑P P 00 38 52.5 -0.3
baz=92,SNR=16
EGMT Eagleton 91.78 41 *e*P P 00 38 52.8 +0.2
comp=Z,37nm,1.1s,mb5.6
EGMT LR LR
comp=Z,2μm,20.0s,MS5.5
EGMT Eagleton 91.78 41 ⇑P P 00 38 51.9 -0.7
baz=92,SNR=6.8
M15A Larsen Ranch, 91.82 47 ⇑P P 00 38 53.0 +0.1
baz=92,SNR=7.0
F17A Fitzpatrick Pl 91.82 43 ⇑P P 00 38 52.9 +0.1
baz=92,SNR=6.9
UMR Umm Al-Rimmam 91.82 300 *e*P P 00 38 51.6 -1.6
baz=300
UMR AMb AMB 00 38 54.3
comp=Z,76nm,1.8s,mb5.7,baz=300
I16A Newdale 91.84 45 ⇓P P 00 38 52.7 -0.3
baz=92,SNR=16
P14A Drum Mountains 91.85 49 ⇓P P 00 38 52.9 -0.2
baz=92,SNR=18
Q14A Sevier Lake (B 91.85 50 ⇑P P 00 38 53.2 +0.1
baz=92,SNR=26
SPUT South Promonto 91.86 48 *e*P P 00 38 53.7 +0.6
comp=Z,37nm,1.2s,mb5.6
T13A Saint George 91.87 52 ⇑P P 00 38 53.4 +0.1
baz=92,SNR=21
DUG Dugway 91.89 49 *e*P P 00 38 53.8 +0.6
comp=Z,76nm,1.4s,mb5.8
DUG LR LR
comp=Z,2μm,20.0s,MS5.6
DUG Dugway 91.89 49 *e*P P 00 38 53.8 +0.5
DUG pmax pmax
comp=Z,76nm,1.4s,mb5.8
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.6
DUG Dugway 91.89 49 ⇓P P 00 38 53.1 -0.1
baz=92,SNR=29
J16A Bone 91.92 45 ⇑P P 00 38 53.2 -0.1
baz=92,SNR=16
KBD Kabd 91.92 300 *e*P P 00 38 52.1 -1.6
baz=300
KBD AMb AMB 00 38 55.8
comp=Z,47nm,1.9s,mb5.5,baz=300
YMR Madison River 91.97 44 *e*P P 00 38 55.2 +1.7
comp=Z,36nm,1.0s,mb5.7
YMR LR LR
comp=Z,4μm,22.0s,MS5.8
ARUT Antelope Range 92.04 51 *e*P P 00 38 55.4 +1.4
comp=Z,41nm,1.2s,mb5.6
KIV Kislovodsk 92.07 315 *e*P P 00 38 53.9 -0.2
comp=Z,28nm,0.8s,mb5.7
KIV LR LR
comp=Z,1μm,20.0s,MS5.4
KIV Kislovodsk 92.07 315 *e*P P 00 38 53.3 -0.7
KIV *e* 00 42 32.1
KIV *e* 00 49 23.7
KIV *e*SS SS 00 56 00.4 -5.0
KIV pmax pmax
comp=Z,34nm,1.0s,mb5.6
KIV pmax pmax
comp=Z,335nm,8.4s
KIV MLR MLR
comp=Z,936nm,20.0s,MS5.2
KIV Kislovodsk 92.07 315⇑*i*P P 00 38 53.6 -0.4
MIB Mutribah 92.08 301 *e*P P 00 38 52.7 -1.7
baz=301
MIB AMb AMB 00 38 55.6
comp=Z,76nm,1.2s,mb5.9,baz=301
VSR Storozhevoye 92.10 323 *e*P P 00 38 51.9 -2.1
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR MLR MLR
comp=N,2μm,24.0s
RRI2 Red Ridge 92.10 45 *e*P P 00 38 55.1 +0.9
comp=N,56nm,1.5s,mb5.7
V13A Grand Canyon W 92.10 53 ⇓P P 00 38 53.9 -0.5
baz=92,SNR=14
GLA Glamis 92.11 56 *e*P P 00 38 55.4 +0.9
comp=N,32nm,1.3s,mb5.5
GLA *e*PP PP 00 42 34.7 +0.5
GLA LR LR
comp=Z,2μm,22.0s,MS5.6
GLA Glamis 92.11 56 *e*P P 00 38 55.4 +1.0
GLA *e* 00 42 34.7
GLA pmax pmax
comp=Z,32nm,1.3s,mb5.5
GLA MLR MLR
comp=Z,2μm,22.0s,MS5.6
GLA Glamis 92.11 56 ⇓P P 00 38 53.8 -0.7
baz=92,SNR=6.2
VORD Divnogorie 92.11 323 *e*P P 00 38 51.7 -2.3
VORD pmax pmax
comp=Z,30nm,1.2s,mb5.5
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=N,2μm,18.0s
VORD MLR MLR
comp=Z,1μm,18.0s,MS5.5
VORD MLR MLR
comp=E,2μm,25.0s
O15A The Old Anders 92.12 49 ⇓P P 00 38 53.9 -0.5
baz=92,SNR=6.0
E18A Harlowton 92.12 42 ⇑P P 00 38 54.2 0.0
baz=92,SNR=9.5
YFT Old Faithful 92.12 44 *e*P P 00 38 57.1 +2.8
comp=E,137nm,1.8s,mb6.0
DCID1 Drake Creek 92.13 45 *e*P P 00 38 55.4 +1.2
comp=E,60nm,1.8s,mb5.6
TRO Tromso 92.15 344 *e*P P 00 38 52.4 -1.4
TRO *e*SKS 00 49 25.0
TRO AMS AMS 01 25 40.1
comp=Z,2μm,16.6s,MS5.6
YNR Norris Junctio 92.15 44 *e*P P 00 38 56.4 +2.0
comp=Z,39nm,1.1s,mb5.7
CCUT Cedar City 92.16 51 *e*P P 00 38 55.8 +1.2
comp=Z,84nm,1.6s,mb5.8
OBN Obninsk 92.19 327 *e*P P 00 38 53.5 -0.8
comp=Z,304nm,1.8s,mb6.3
OBN LR LR
comp=Z,3μm,20.0s,MS5.7
OBN Obninsk 92.19 327α *i*P P 00 38 52.9 -1.4
OBN *e* 00 39 00.2
OBN *e* 00 39 05.9
OBN 00 42 35.6
OBN PPP 00 44 45.0
OBN *i*PS PS 00 51 06.1 -2.1
OBN pmax pmax
comp=Z,127nm,1.7s,mb6.0
OBN MLR MLR
comp=Z,2μm,18.0s,MS5.6
IMW Indian Meadow 92.21 45 *e*P P 00 38 55.8 +1.1
comp=Z,17nm,0.9s,mb5.4
S14A Cedar City 92.25 51 ⇓P P 00 38 54.3 -0.7
baz=92,SNR=7.1
NAY Al-Naaiem 92.29 300 *e*P P 00 38 53.5 -1.9
baz=300
NAY AMb AMB 00 38 56.2
comp=Z,55nm,1.6s,mb5.6,baz=300
H17A Grant Village 92.32 44 ⇓P P 00 38 54.4 -0.7
baz=92,SNR=6.1
W13A Hualapai Mount 92.37 54 ⇓P P 00 38 54.8 -0.8
baz=92,SNR=10
LKWY Lake 92.39 44 PFAKE 00 39 10.0 +15
LKWY LR LR
comp=Z,3μm,20.0s,MS5.8
MOOW Moose Ponds 92.39 45 *e*P P 00 38 56.0 +0.6
comp=Z,44nm,1.7s,mb5.5
MOOW *e*PP PP 00 42 35.4 -0.6
HWUT Hardware Ranch 92.41 47 *e*P P 00 38 56.3 +0.7
comp=Z,116nm,1.8s,mb5.9
HWUT LR LR
comp=Z,3μm,21.0s,MS5.7
AHID Auburn Hatcher 92.42 46 PFAKE 00 39 10.0 +14
AHID LR LR
comp=Z,3μm,22.0s,MS5.6
REDW Red Top Meadow 92.42 45 *e*P P 00 38 57.2 +1.6
comp=Z,20nm,1.3s,mb5.3
DAG Danmarks Havn 92.44 356⇓*e*P P 00 38 53.7 -1.4
comp=Z,8.2nm,0.8s,mb5.1
DAG Danmarks Havn 92.44 356⇓*e*P P 00 38 53.7 -1.4
DAG pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
DAG Danmarks Havn 92.44 356⇓*i*P P 00 38 53.7 -1.4
comp=Z,8.2nm,0.8s,mb5.1
P15A Leamington 92.45 49 ⇑P P 00 38 55.4 -0.5
baz=92,SNR=18
M16A Huntsville 92.45 47 ⇓P P 00 38 55.4 -0.4
baz=92
F18A Big Timber 92.45 43 ⇓P P 00 38 55.6 -0.1
baz=92,SNR=18
NLU North Lily Min 92.50 49 *e*P P 00 38 55.6 -0.5
comp=Z,65nm,1.5s,mb5.7
GCMT Greycliff 92.52 43 *e*P P 00 38 57.0 +1.0
comp=Z,30nm,1.3s,mb5.6
J17A Brown Place, J 92.52 45 ⇑P P 00 38 55.4 -0.8
baz=92
N16A Rees Ranch, Co 92.71 48 ⇓P P 00 38 56.3 -0.8
baz=93
G18A Lazy EL Ranch, 92.73 43 ⇓P P 00 38 57.0 0.0
baz=93,SNR=9.7
JLU Jordanelle 92.78 48 *e*P P 00 38 58.2 +0.9
comp=Z,83nm,1.5s,mb5.9
MVU Marysvale 92.78 50 PFAKE 00 39 10.0 +13
MVU LR LR
comp=Z,2μm,22.0s,MS5.5
MPU Maple Canyon 92.81 49 *e*P P 00 38 58.2 +0.7
comp=Z,69nm,1.6s,mb5.8
MPU LR LR
comp=Z,4μm,22.0s,MS5.8
MSU Marysvale 92.81 50 *e*P P 00 38 58.6 +1.0
comp=Z,58nm,1.6s,mb5.8
O16A Springville 92.85 48 ⇓P P 00 38 57.6 -0.1
baz=93,SNR=10
V14A Boquillas Ranc 92.85 53 ⇑P P 00 38 57.4 -0.4
baz=93,SNR=18
S15A Panguitch 92.89 51 ⇑P P 00 38 57.1 -0.8
baz=93,SNR=8.7
DAU Daniels Canyon 92.97 48 *e*P P 00 38 59.0 +0.7
comp=Z,47nm,1.3s,mb5.8
W14A Seligman 92.97 54 ⇓P P 00 38 57.9 -0.5
baz=93,SNR=9.3
RLMT Red Lodge 92.99 43 *e*P P 00 38 58.9 +0.6
comp=Z,89nm,1.9s,mb5.9
RLMT LR LR

comp=Z,2µm,21.0s,MS5.5
RLMT Red Lodge 92.99 43 ⇓P **P 00 38 57.6 -0.6**
baz=93,SNR=9.6
113A Mohawk Valley, 93.04 56 ⇓P **P 00 38 57.9 -0.8**
baz=93
I18A Diamond G Ranc 93.04 45 ⇓P **P 00 38 57.4 -1.1**
baz=93,SNR=7.4
T15A Red Dirt Ranch 93.05 52 ⇑P **P 00 38 57.6 -1.1**
baz=93,SNR=8.8
M17A Scullys Gap (B 93.10 47 ⇓P **P 00 38 58.0 -0.8**
baz=93,SNR=11
U15A North Rim 93.28 52 ⇓pP pP 00 39 01.4 -0.7
baz=93,SNR=23
X14A Yava 93.32 54 ⇓P **P 00 38 59.0 -1.0**
baz=93,SNR=7.9
TMUT Trail Mountain 93.32 49 *e*P **P 00 39 01.1 +1.2**
comp=Z,85nm,1.8s,mb5.9
Y14A Wickenburg 93.36 55 ⇑pP pP 00 39 02.1 -0.4
baz=93
O17A Robinson Place 93.41 48 ⇓P **P 00 38 59.5 -0.8**
baz=93,SNR=9.9
Q16A Castle Valley 93.45 50 ⇑P **P 00 38 59.8 -0.7**
baz=93,SNR=14
S16A Weppner Ranch, 93.46 51 ⇑P **P 00 38 59.8 -0.8**
baz=93,SNR=16
BW06 Boulder Array 93.50 46 PFAKE 00 39 10.0 +9.3
BW06 LR LR
comp=Z,2µm,22.0s,MS5.6
BW06 Boulder Array 93.50 46 ⇓P **P 00 39 00.2 -0.5**
baz=93
PDAR Pinedale Array 93.51 46 P **P 00 39 00.9 +0.2**
comp=Z,1.9nm,0.8s,mb4.6,baz=267,slow=3.0,SNR=10
PDAR PP PP 00 42 45.6 +0.8
comp=Z,2.2nm,1.2s,baz=264,slow=1.5,SNR=4.1
PDAR S SKSac 00 49 40.2 +4.3
comp=Z,0.1nm,0.4s,baz=291,slow=18,SNR=2.7
PDAR PKKP PKKPbc 00 56 05.8 -1.9
comp=Z,0.5nm,0.6s,baz=122,slow=6.0,SNR=4.4
PDAR LR LR 01 13 37.6
comp=Z,2µm,21.7s,MS5.5,baz=305,slow=31
V15A Kaibab Nationa 93.53 53 ⇓P **P 00 39 00.5 -0.5**
baz=94,SNR=16
M18A Lyman 93.54 47 ⇓P **P 00 39 00.4 -0.5**
baz=94
Z14A Wintersburg 93.56 55 ⇑pP pP 00 39 03.5 0.0
baz=94
W15A Williams 93.63 53 ⇑P **P 00 39 00.6 -0.8**
baz=94
W15A ⇓pP pP 00 39 03.6 -0.1
baz=94,SNR=6.8
BHD Baghdad 93.69 305 *ex* x 00 39 04.0
BHD *ex* x 00 50 18.5
T16A Glen Canyon Da 93.73 52 ⇓P **P 00 39 01.9 0.0**
baz=94,SNR=6.0
X15A Humboldt 93.83 54 ⇑P **P 00 39 01.6 -0.8**
baz=94,SNR=10
L19A Farson 93.85 46 ⇑P **P 00 39 01.3 -0.9**
baz=94,SNR=9.5
SRU San Rafael 93.88 49 *e*P **P 00 39 02.6 +0.1**
comp=Z,48nm,1.3s,mb5.8
SRU San Rafael 93.88 49 *e*P **P 00 39 02.6 +0.1**
SRU pmax pmax
comp=Z,32nm,1.3s,mb5.6
SRU San Rafael 93.88 49 ⇓P **P 00 39 02.1 -0.4**
baz=94
KAF Kangasniemi 93.92 336 *ep* **P 00 39 00.3 -1.8**
comp=Z,12nm,0.8s,mb5.4,baz=56,slow=4.3
KAF Kangasniemi 93.92 336 *e*P **P 00 39 00.3 -1.8**
KAF pmax pmax
comp=Z,12nm,0.8s,mb5.4
P18A Preston Nutter 93.94 49 ⇑P **P 00 39 01.9 -0.9**
baz=94,SNR=6.4
R17A Hanksville Air 93.94 50 ⇓P **P 00 39 01.9 -0.9**
baz=94,SNR=20
FFC Flin Flon 93.95 33 PFAKE 00 39 10.0 +7.6
FFC LR LR
comp=Z,2µm,20.0s,MS5.7
N18A Larsen Ranch, 93.96 47 ⇑P **P 00 39 01.9 -0.9**
baz=94,SNR=9.6
S17A Black Ridge (B 94.09 51 ⇑P **P 00 39 02.5 -1.0**
baz=94,SNR=19
Q18A Rafter H Ranch 94.18 49 ⇓P **P 00 39 03.0 -0.8**
baz=94,SNR=11
WUAZ Wupatki 94.24 53 *e*P **P 00 39 05.8 +1.6**
comp=Z,33nm,1.2s,mb5.6
WUAZ *e*PP PP 00 42 52.8 +2.0
WUAZ LR LR
comp=Z,2µm,19.0s,MS5.5
WUAZ Wupatki 94.24 53 ⇓P **P 00 39 03.4 -0.8**
baz=94,SNR=10
U16A Tuba City 94.26 52 ⇑P **P 00 39 03.6 -0.7**
baz=94
T17A Navajo Res., N 94.27 51 ⇑P **P 00 39 03.8 -0.5**
baz=94,SNR=21
N19A John Jarvie Ra 94.34 47 ⇓P **P 00 39 04.0 -0.6**
baz=94
LAO LASA Array 94.49 41 *e*P **P 00 39 05.7 +0.6**
comp=Z,58nm,1.2s,mb5.9
LAO LR LR
comp=Z,2µm,20.0s,MS5.5
R18A Canyonlands Na 94.56 50 ⇑P **P 00 39 05.0 -0.6**
baz=94,SNR=16
O19A Miners Draw (B 94.56 48 ⇑P **P 00 39 05.2 -0.4**
baz=94,SNR=8.3
L20A Wamsutter 94.60 46 ⇓P **P 00 39 05.5 -0.3**
baz=94
L20A ⇑pP pP 00 39 07.6 -0.4
baz=94
S18A Hurst Farm, BI 94.69 50 ⇑P **P 00 39 05.5 -0.7**
baz=95,SNR=9.9
S18A ⇑pP pP 00 39 08.2 -0.4
baz=95
Q19A Hogan Spring (94.87 49 ⇓pP pP 00 39 08.7 -0.7
baz=95
P19A Cripple Cowboy 94.87 48 ⇓P **P 00 39 06.7 -0.3**
baz=95,SNR=14
T18A Mexican Hat 94.94 51 ⇓P **P 00 39 07.4 0.0**
baz=95,SNR=12
DGMT Dagmar 95.13 39 PFAKE 00 39 20.0 +12
DGMT LR LR
comp=Z,2µm,21.0s,MS5.5
DGMT Dagmar 95.13 39 ⇑P **P 00 39 07.4 -0.6**
baz=95
U18A Rough Rock, Ch 95.16 52 ⇓P **P 00 39 08.1 -0.3**
baz=95,SNR=5.4
Y17A Roosevelt 95.16 55 ⇓P **P 00 39 08.0 -0.5**
baz=95
PV10 Paradox Valley 95.21 50 *e*P **P 00 39 09.5 +0.9**
comp=Z,220nm,0.8s,mb6.6
V18A Ganado 95.31 52 ⇑P **P 00 39 08.7 -0.4**
baz=95,SNR=9.0
S19A Harvey Farm, M 95.32 50 ⇓P **P 00 39 08.4 -0.8**
baz=95,SNR=8.8
RWWY Rawlins 95.50 46 *e*P **P 00 39 11.1 +1.3**
comp=Z,44nm,1.7s,mb5.6
TUC Tucson 95.59 56 PFAKE 00 39 20.0 +10
TUC LR LR
comp=Z,3µm,22.0s,MS5.7
VSU Vasula 95.60 333 ⇑*i*P **P 00 39 08.7 -1.2**
VSU pmax pmax
comp=Z,86nm,2.0s,mb5.8
PV01 Paradox Valley 95.63 50 *e*P **P 00 39 11.3 +0.8**
comp=Z,2µm,1.4s
X18A Snowflake 95.64 54 ⇓P **P 00 39 09.8 -0.8**
baz=96
X18A ⇓pP pP 00 39 13.2 +0.3
baz=96
T19A Beclabito 95.68 51 ⇓P **P 00 39 10.3 -0.5**
baz=96
T19A ⇓pP pP 00 39 13.2 +0.1
baz=96
217A Green Valley 95.71 56 ⇓P **P 00 39 10.3 -0.8**
baz=96,SNR=5.1
217A ⇑pP pP 00 39 13.4 0.0
baz=96
Y18A Canyon Day Jun 95.78 54 ⇓P **P 00 39 10.8 -0.5**
baz=96
MVCO Mesa Verde 95.97 51 *e*P **P 00 39 13.2 +1.1**
comp=Z,31nm,1.4s,mb5.5
MVCO LR LR
comp=Z,2µm,21.0s,MS5.6
MVCO Mesa Verde 95.97 51 ⇑P **P 00 39 11.6 -0.5**
baz=96,SNR=8.7
MVCO ⇑pP pP 00 39 14.3 -0.1
baz=96
V19A Window Rock 96.00 52 ⇓pP pP 00 39 14.7 +0.1
baz=96
118A Homack Ranch, 96.16 55 ⇑P **P 00 39 12.1 -0.9**
baz=96
118A ⇑pP pP 00 39 15.0 -0.4
baz=96
X19A St. Johns 96.19 53 ⇓pP pP 00 39 14.9 -0.6
baz=96
218A Dragoon 96.28 56 ⇑P **P 00 39 13.0 -0.7**
baz=96,SNR=6.0
Y19A Nutrioso 96.36 54 ⇑pP pP 00 39 16.4 +0.2
baz=96,SNR=10.0
SMCO Snowmass 96.49 48 *e*P **P 00 39 15.0 +0.6**
comp=Z,33nm,1.4s,mb5.6
RSSD Black Hills 96.84 43 PFAKE 00 39 30.0 +14
RSSD LR LR
comp=Z,2µm,20.0s,MS5.5
MAW Mawson 96.91 203 P **P 00 39 13.6 -1.9**
comp=Z,3.4nm,0.9s,mb4.8,baz=82,slow=9.2,SNR=3.5
MAW PP PP 00 43 08.9 -2.0
comp=Z,9.7nm,1.1s,baz=89,slow=3.3,SNR=6.8
MAW S SKSac 00 49 54.6 +1.9
comp=Z,0.4nm,0.5s,baz=8.0,slow=15,SNR=1.5
MAW LR LR 01 23 00.4
comp=Z,2µm,19.6s,MS5.5,baz=72,slow=36
MAW Mawson 96.91 203 P **P 00 39 13.6 -1.9**
MAW 00 43 08.9
MAW S SKSac 00 49 54.6 +1.9
ISCO Idaho Springs 97.27 47 PFAKE 00 39 30.0 +12
ISCO LR LR
comp=Z,2µm,19.0s,MS5.7
LAZ Ladron 97.89 53 *e*P **P 00 39 21.2 +0.3**
comp=Z,1.0nm,0.8s,mb4.4
SDCO Great Sand Dun 98.06 49 PFAKE 00 39 30.0 +8.5
SDCO LR LR
comp=Z,2µm,22.0s,MS5.6
AKASG Malin Array Be 98.07 325 P **P 00 39 19.0 -2.3**
comp=Z,2.8nm,0.8s,mb4.9,baz=52,slow=4.5,SNR=18
AKASG PP PP 00 43 18.7 -1.2
comp=Z,1.7nm,0.5s,baz=52,slow=7.2,SNR=5.0
AKASG LR LR 01 27 39.7
comp=Z,2µm,19.4s,MS5.5,baz=60,slow=38
AKASG Malin Array Be 98.07 325 *i* P **P 00 39 19.5 -1.8**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
KIEV Kiev 98.08 325 PFAKE 00 39 30.0 +8.7
KIEV LR LR
comp=Z,2µm,20.0s,MS5.6
ANMO Albuquerque 98.25 52 PFAKE 00 39 30.0 +7.6
ANMO LR LR
comp=Z,2µm,19.0s,MS5.6
ANMO Albuquerque 98.25 52⇑ *e*P **P 00 39 21.3 -1.1**
ULM Lac du Bonnet 99.29 35 LR LR 01 18 26.4
comp=Z,3µm,21.0s,MS5.7,baz=302,slow=32
ULM Lac du Bonnet 99.29 35 PFAKE 00 39 40.0 +13
ULM LR LR
comp=Z,4µm,21.0s,MS5.8
OGNE Ogallala 99.41 45 PFAKE 00 39 40.0 +13
OGNE LR LR
comp=Z,3µm,22.0s,MS5.7
BRTR Keskin Array B 99.85 314 P Pdif 00 39 29.7 +0.6
comp=Z,1.6nm,0.7s
BRTR LR LR 01 31 20.7
comp=Z,496nm,19.8s,MS5.0,baz=34,slow=40
AGMN Agassiz Refuge 100.23 37 PFAKE 00 39 40.0 +9.2
AGMN LR LR
comp=Z,3µm,20.0s,MS5.8
NB2 NORSAR Subarra100.27 339 P Pdif 00 39 29.6 -1.4
comp=Z,10nm,1.2s,baz=48,slow=4.8
NOA NORSAR Array B 100.27 339 P Pdif 00 39 30.4 -0.6
comp=Z,2.4nm,0.8s,baz=47,slow=4.6,SNR=5.4
NOA PP PP 00 43 33.6 -2.6
comp=Z,2.0nm,0.8s,baz=39,slow=8.2,SNR=4.1
ANTO Ankara 100.40 314 PFAKE 00 39 40.0 +8.5
ANTO LR LR
comp=Z,654nm,20.0s,MS5.1
ABPO Ambohimpanom 101.36 253 PFAKE 00 39 50.0 +14
ABPO LR LR
comp=Z,705nm,22.0s,MS5.1
LVV L'vov 101.41 326 *e*P Pdif 00 39 34.4 -1.6
VRI Vrincioaia 101.81 321 ⇓P Pdif 00 39 39.7 +1.9
VRI Vrincioaia 101.81 321 ⇓*i*P Pdif 00 39 39.7 +1.9
KONO Kongsberg 101.83 339 PFAKE 00 39 50.0 +12
KONO LR LR
comp=Z,2µm,20.0s,MS5.5
BURAR Bucovina Array 101.86 323 ⇓P Pdif 00 39 38.0 0.0
BURAR Bucovina Array 101.86 323 ⇓*i*P Pdif 00 39 38.0 0.0
CSS Prodhromos 101.87 309 PFAKE 00 39 50.0 +12
CSS LR LR
comp=Z,1µm,20.0s,MS5.3
PLOR Plostina 101.87 321⇑ *i*P Pdif 00 39 39.9 +1.8
CBKS Cedar Bluff 101.87 47 PFAKE 00 39 50.0 +12
CBKS LR LR
comp=Z,2µm,20.0s,MS5.6
ECSD EROS,Sioux Fal 101.89 41 PFAKE 00 39 50.0 +12
ECSD LR LR
comp=Z,2µm,21.0s,MS5.5
AMTX Amarillo 101.95 51 PFAKE 00 39 50.0 +12
AMTX LR LR
comp=Z,2µm,20.0s,MS5.7
KWP Kalwaria 102.24 326⇑P Pdif 00 39 39.5 -0.2
KWP LR LR
comp=Z,2µm,20.0s,MS5.6
KWP Kalwaria 102.24 326⇑ *i*P Pdif 00 39 39.5 -0.2
TXAR Lajitas Array 102.33 57 P Pdif 00 39 41.1 +1.0
comp=Z,0.2nm,0.6s,baz=269,slow=2.5,SNR=4.6
ISP Isparta 102.84 313 PFAKE 00 39 50.0 +7.6
ISP LR LR
comp=Z,586nm,20.0s,MS5.1
KOLS Kolonicke sedl 102.85 326 *e*Pdif Pdif 00 39 40.9 -1.6
KOLS *e* 00 43 00.9
KOLS Kolonicke sedl 102.85 326 PDIF Pdif 00 39 40.9 -1.6
KOLS *e* 00 43 00.9
EYMN Ely 102.93 35 PFAKE 00 39 50.0 +7.2
EYMN LR LR
comp=Z,2µm,20.0s,MS5.7
STHS Stebnicka Huta 103.15 326 *e*Pdif Pdif 00 39 44.7 +0.9
STHS Stebnicka Huta 103.15 326 PDIF Pdif 00 39 44.7 +0.9
CRVS Cervenica-Dubn 103.32 326 *e*Pdif Pdif 00 39 44.6 +0.1
CRVS Cervenica-Dubn 103.32 326 PDIF Pdif 00 39 44.6 +0.1
DRGR 103.75 324⇑ *i*P Pdif 00 39 46.4 0.0
KSU1 Kansas State U 103.96 45 PFAKE 00 40 00.0 +13
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.7
KECS Kecovo 104.09 326 *e*Pdif Pdif 00 39 46.7 -1.2
KECS Kecovo 104.09 326 PDIF Pdif 00 39 46.7 -1.2
OKC Ostrava-Krasne 104.56 328 AMS AMS 01 30 20.0
comp=Z,3µm,17.8s
PSZ Piszkesteto 104.73 326 PFAKE 00 40 00.0 +9.2
PSZ LR LR
comp=Z,2µm,19.0s,MS5.6
SCIA State Center 104.95 41 PFAKE 00 40 00.0 +8.2
SCIA LR LR
comp=Z,2µm,21.0s,MS5.5
VYHS Vyhne 104.98 327 *e*Pdif Pdif 00 39 51.6 -0.3
VYHS Vyhne 104.98 327 PDIF Pdif 00 39 51.6 -0.3
BZS Buzias 105.02 323⇑P Pdif 00 39 52.1 0.0
BZS Buzias 105.02 323⇑ *i*P Pdif 00 39 52.1 0.0
JCT Junction City 105.06 54 PFAKE 00 44 20.0 +12
JCT LR LR
comp=Z,2µm,19.0s,MS5.7
KOLL Kolacno 105.17 327 *e*Pdif Pdif 00 39 52.7 0.0
KOLL *e*PP PP 00 44 15.2 +2.0
KOLL Kolacno 105.17 327 PDIF Pdif 00 39 52.7 0.0
KOLL *e*PP PP 00 44 15.2 +2.0
DPC Dobruska-Polom 105.19 329 *e*PKP PKiKP 00 44 03.5 -3.8
DPC AMS AMS 01 32 20.0
comp=Z,1µm,16.8s
COWI Conover 105.29 36 PFAKE 00 44 20.0 +12
COWI LR LR
comp=Z,3µm,20.0s,MS5.8
VTS Vitosha 105.63 320 ⇓P Pdif 00 39 58.3 +3.5
VTS Vitosha 105.63 320 ⇓*i*P Pdif 00 39 58.3 +3.5
MODS Modra-Piesok 105.89 327 *e*Pdif Pdif 00 39 57.5 +1.5
MODS *e*PP PP 00 44 15.9 -2.7
MODS Modra-Piesok 105.89 327 PDIF Pdif 00 39 57.5 +1.5
MODS *e*PP PP 00 44 15.9 -2.7
PVCC Panska Ves 105.94 330 *e*PKP PKiKP 00 44 08.5 -0.2
PVCC AMS AMS 01 32 20.0
comp=Z,2µm,17.8s
BRG Berggiesshubel 106.03 331 *e*PP PP 00 44 16.1 -3.4
BRG Berggiesshubel 106.03 331 *e*PKP PKiKP 00 44 15.4 +6.5
comp=Z,57nm,2.1s
BRG
comp=N,972nm,17.8s
BRG
comp=E,721nm,13.3s
BRG
comp=Z,2µm,16.8s
ZST Bratislava 106.09 327 *e*Pdif Pdif 00 39 57.0 +0.1
ZST *e*PP PP 00 44 14.7 -5.4
ZST LR LR
comp=Z,700nm,17.4s,MS5.3
ZST Bratislava 106.09 327 PDIF Pdif 00 39 57.0 +0.1
ZST *e*PP PP 00 44 14.7 -5.4
CLL Collm 106.19 331 *e*P Pdif 00 39 58.0 +0.7
CLL pmax pmax
comp=Z,21nm,1.8s
CLL MLR MLR
comp=Z,2µm,18.9s,MS5.6
CLL Collm 106.19 331 *e*PP PP 00 44 19.1 -1.6
CLL Collm 106.19 331 *e*Pdif Pdif 00 39 58.0 +0.7
comp=Z,21nm,1.8s
CLL *e*PP PP 00 44 17.0 -3.7
CLL *ex* x 00 44 41.0
CLL *e*PS PS 00 53 34.0 -4.8
CLL *e*PPS 00 54 35.0
CLL *e*SS SS 00 59 36.0 +14
CLL *e*SSS 01 03 54.0
CLL LmV 01 31 00.0
comp=Z,2µm,18.9s
TREC Trest 106.27 329 AMS AMS 01 31 20.0
comp=Z,1µm,18.7s
PRU Pruhonice 106.30 330 *e*PKP PP 00 44 21.8 +0.3
PRU LR LR
comp=Z,2µm,18.2s,MS5.6
PRU Pruhonice 106.30 330 *e*PP PP 00 44 21.8 +0.3
PRU AMS AMS 01 33 10.0
comp=Z,2µm,18.2s
JFWS Jewell Farm 106.33 39 PFAKE 00 44 20.0 +10
JFWS LR LR
comp=Z,2µm,20.0s,MS5.6
PKSM Moragy 106.41 325 ⇓P Pdif 00 39 58.0 -0.3
PKSM Moragy 106.41 325 ⇓*i*P Pdif 00 39 58.0 -0.3
TANN Tannenbergstha 107.04 331 *e*PP PP 00 44 23.5 -3.4
MOX Moxa 107.29 331 *e*(PKP) PP 00 44 27.7 -1.0
comp=Z,52nm,2.0s
MOX
comp=Z,1µm,20.0s
MOX Moxa 107.29 331 *e*PP PP 00 44 27.0 -1.7
KHC Kasperske Hory 107.34 329 *e*PKP PKiKP 00 44 10.5 -0.8
KHC *ex* x 00 44 30.5
KHC AMS AMS 01 34 00.0
comp=Z,2µm,14.9s
GERES GERESS Array B 107.46 329 PKiKP PKiKP 00 44 12.7 +1.1
comp=Z,1.2nm,0.8s,baz=134,slow=3.9,SNR=6.2
GERES PP PP 00 44 27.6 -2.5
comp=Z,1.1nm,0.8s,baz=103,slow=4.2,SNR=3.8
MANZ Manzenberg 107.50 331 *e*PP PP 00 44 28.5 -1.8
KVTX Kingsville 107.71 57 PFAKE 00 44 20.0 +7.4
KVTX LR LR
comp=Z,2µm,19.0s,MS5.7
GRF Grafenberg Arr 108.12 331 *e*PP PP 00 44 32.5 -2.3
GRF *e*SP SP 00 53 49.9 -7.3
GRF *e*L 01 34 15.7
comp=Z,2µm,18.8s
CCM Cathedral Cave 108.16 44 PFAKE 00 44 20.0 +6.8
CCM LR LR
comp=Z,2µm,22.0s,MS5.6
MIAR Mount Ida 108.17 48 PFAKE 00 44 20.0 +6.7
MIAR LR LR
comp=Z,2µm,20.0s,MS5.7
HDIL Hopedale 108.19 41 PFAKE 00 44 20.0 +6.8
HDIL LR LR
comp=Z,2µm,20.0s,MS5.6
TIR Tirane 108.40 320 PFAKE 00 44 20.0 +6.5
TIR LR LR
comp=Z,1µm,21.0s,MS5.4
HKT Hockley 108.43 54 PFAKE 00 44 20.0 +6.1
HKT LR LR
comp=Z,2µm,19.0s,MS5.6
NATX Nacogdoches 108.58 51 PFAKE 00 44 20.0 +5.8
NATX LR LR
comp=Z,2µm,19.0s,MS5.7
GLMI Grayling 108.62 35 PFAKE 00 44 20.0 +6.2
GLMI LR LR
comp=Z,2µm,20.0s,MS5.7
RJOB Jochberg 108.64 329 *e*PP PP 00 44 39.6 +0.9
FUR Furstenfeldbru 109.12 330 *e*PP PP 00 44 40.8 -1.3
WTTA Wattenberg 109.54 329⇑ *i*PP PP 00 44 44.0 -1.2
comp=Z,18nm,1.3s
STU Stuttgart 109.72 331 *e*PP PP 00 44 45.9 -0.5
BFO Black Forest 110.44 331 PFAKE 00 44 30.0 +13
BFO LR LR
comp=Z,2µm,19.0s,MS5.6
BFO Black Forest 110.44 331 *e*PP PP 00 44 51.5 -0.1
WLF Walferdange 110.47 333 PFAKE 00 44 30.0 +13
WLF LR LR
comp=Z,1µm,19.0s,MS5.5
WLF Walferdange 110.47 333 *e*PP PP 00 44 49.7 -2.1
AAM Ann Arbor 110.70 37 PFAKE 00 44 30.0 +12
AAM LR LR
comp=Z,3µm,22.0s,MS5.9
CDF Champ du Feu 110.87 332 *e*PP PP 00 44 55.3 +0.5
comp=Z,75nm,1.8s
OXF Oxford 111.21 47 PFAKE 00 44 30.0 +11
OXF LR LR
comp=Z,2µm,19.0s,MS5.6
TUE Stuetta 111.23 329 PFAKE 00 44 30.0 +11
TUE LR LR
comp=Z,966nm,19.0s,MS5.4
WCI Wyandotte Cave 111.40 42 PFAKE 00 44 30.0 +11
WCI LR LR
comp=Z,1µm,20.0s,MS5.5
WVT Waverly 111.49 44 PFAKE 00 44 30.0 +10
WVT LR LR
comp=Z,2µm,22.0s,MS5.5
HINF Hinteralfeld 111.50 332 *e*PP PP 00 44 59.8 +0.5
comp=Z,167nm,1.9s
VBMS Vicksburg 111.52 49 PFAKE 00 44 30.0 +10
VBMS LR LR
comp=Z,2µm,19.0s,MS5.8
TIP Timpagrande 111.58 320 PFAKE 00 44 30.0 +10
TIP LR LR
comp=Z,538nm,21.0s,MS5.1
HAU Haudompre 111.60 332 *e*PP PP 00 44 59.3 -0.6
comp=Z,186nm,1.9s
CUC Castrocucco 111.71 321 PFAKE 00 44 30.0 +10
CUC LR LR
comp=Z,961nm,19.0s,MS5.4
VLC Villacollemand 112.26 327 PFAKE 00 44 30.0 +9.3
VLC LR LR
comp=Z,2µm,20.0s,MS5.7
ACSO Alum Creek Sta 112.35 38 PFAKE 00 44 30.0 +9.0
ACSO LR LR
comp=Z,3µm,22.0s,MS5.8
ERPA Erie 112.94 35 PFAKE 00 44 30.0 +7.9
ERPA LR LR
comp=Z,2µm,19.0s,MS5.8
LPL La Plagne 113.20 330 *e*PP PP 00 45 11.2 -0.3
LPG La Plagne 113.21 330 *e*PP PP 00 45 11.4 -0.1
LOR Lormes 113.28 333 *e*PP PP 00 45 11.9 0.0
comp=Z,270nm,1.9s
BNI Bardonecchia 113.56 330 PFAKE 00 44 30.0 +6.8
BNI LR LR
comp=Z,2µm,20.0s,MS5.8
SSF Saint Saulge 113.59 333 *e*PP PP 00 45 13.2 -1.0
comp=Z,240nm,1.9s
SMF Signal de Mont 113.75 332 *e*PP PP 00 45 13.3 -2.0
comp=Z,263nm,1.9s
HYF Humbligny 113.82 333 *e*PP PP 00 45 15.9 +0.1
AVF Avril sur Loir 113.86 333 *e*PP PP 00 45 15.1 -1.0
comp=Z,289nm,1.9s
LDF La Druitiere 113.94 336 *e*PP PP 00 45 17.4 +0.8
FLN La Foliniere 113.95 336 *e*PP PP 00 45 17.5 +0.9
comp=Z,82nm,1.4s
TZTN Tazewell 114.15 42 PFAKE 00 44 30.0 +5.4
TZTN LR LR
comp=Z,2µm,21.0s,MS5.6
BGF Bois d'Agland 114.27 333 *e*PP PP 00 45 19.1 +0.1
comp=Z,349nm,1.9s
MCWV Mont Chateau 114.60 37 PFAKE 00 44 40.0 +15
MCWV LR LR
comp=Z,3µm,20.0s,MS5.9
BRAL Brewton 114.68 49 PFAKE 00 44 40.0 +14
BRAL LR LR
comp=Z,2µm,20.0s,MS5.7
TCF Toulx Ste Croi 114.76 333 *e*PP PP 00 45 21.0 -1.4
comp=Z,212nm,1.9s
NCB Newcomb 114.78 31 PFAKE 00 44 40.0 +14
NCB LR LR
comp=Z,2µm,21.0s,MS5.7
WDD Wield Dalam 114.94 318 PFAKE 00 44 40.0 +14

WDD LR LR
comp=Z,710nm,21.0s,MS5.2
BINY Binghamton 115.11 33 PFAKE 00 44 40.0 +14
BINY LR LR
comp=Z,3μm,20.0s,MS5.8
SSPA Standing Stone 115.11 35 PFAKE 00 44 40.0 +14
SSPA LR LR
comp=Z,2μm,20.0s,MS5.8
SGMF Saint Gilles 115.17 337 *e*PP PP 00 45 24.4 -0.8
comp=Z,150nm,1.5s
MFF Saint Martin d 115.54 335 *e*PP PP 00 45 28.2 +0.4
comp=Z,79nm,1.7s
LBNH Lisbon 115.71 29 PFAKE 00 44 40.0 +13
LBNH LR LR
comp=Z,3μm,20.0s,MS5.8
BLA Blacksburg 115.77 40 PFAKE 00 44 40.0 +12
BLA LR LR
comp=Z,1μm,20.0s,MS5.6
RJF Les Rejaudoux 115.83 333 *e*PP PP 00 45 30.5 +0.6
comp=Z,98nm,1.9s
SNAA Sanae 115.91 191 *e*PKPdf PKPdf 00 44 24.7 -2.2
SNAA *e* 00 44 30.6
SNAA *e* 00 44 34.3
SNAA *e* 00 45 27.8
SNAA *e* 00 45 34.5
SNAA *e* 00 54 56.1
SNAA Sanae 115.91 191 *e*PKPdf PKPdf 00 44 25.3 -1.6
SNAA Sanae 115.91 191 *i* PKIKP PKPdf 00 44 24.8 -2.1
VSL Villasalto 115.91 324 PFAKE 00 44 40.0 +12
VSL LR LR
comp=Z,512nm,20.0s,MS5.1
GOGA Godfrey 115.98 45 PFAKE 00 44 40.0 +12
GOGA LR LR
comp=Z,2μm,20.0s,MS5.8
PKME Peaks-Kenny Pk 116.15 27 PFAKE 00 44 40.0 +12
PKME LR LR
comp=Z,2μm,20.0s,MS5.6
MTLF Montolieu 117.00 331 *e*PP PP 00 45 38.2 0.0
CBN Corbin 117.01 37 PFAKE 00 44 40.0 +10
CBN LR LR
comp=Z,3μm,21.0s,MS5.8
VNA2 Neumayer--Watz 117.33 190 *e*PKPdf PKPdf 00 44 29.5 -0.1
baz=339,slow=0.4
VNA2 *e* 00 44 34.6
VNA2 *e* 00 44 37.6
VNA2 *e* 00 45 39.2
VNA2 *e* 00 45 45.9
VNA2 *e* 00 54 53.5
VNA2 *e* 00 54 57.4
WES Weston 117.38 30 PFAKE 00 44 40.0 +9.4
WES LR LR
comp=Z,2μm,22.0s,MS5.6
VNA3 Neumayer Olymp 117.40 189 *e*PKPdf PKPdf 00 44 28.6 -1.1
VNA3 *e* 00 44 34.5
VNA3 *e* 00 44 37.7
VNA3 *e* 00 45 39.2
VNA3 *e* 00 45 46.2
VNA3 *e* 00 54 53.0
VNA3 *e* 00 54 57.1
VNA1 Neumayer--Stat 117.71 189 *e*PKPdf PKPdf 00 44 29.7 -0.6
VNA1 *e* 00 44 35.4
VNA1 *e* 00 44 38.4
VNA1 *e* 00 45 41.1
VNA1 *e* 00 45 47.3
VNA1 *e* 00 54 52.9
VNA1 *e* 00 54 55.9
KEST Kesra 118.36 320 PKP PKPdf 00 44 34.5 +1.8
comp=Z,4.4nm,1.0s,baz=343,slow=3.7,SNR=6.1
NHSC New Hope 118.41 43 PFAKE 00 44 40.0 +7.1
NHSC LR LR
comp=Z,2μm,20.0s,MS5.6
CNNC Cliffs of the 118.60 40 PFAKE 00 44 40.0 +6.8
CNNC LR LR
comp=Z,2μm,20.0s,MS5.8
LSZ Lusaka 119.15 258 *e*PKPdf PKPdf 00 44 34.8 +0.1
LSZ LR LR
comp=Z,528nm,19.0s,MS5.2
DWPF Disney 120.37 49 PFAKE 00 44 50.0 +13
DWPF LR LR
comp=Z,2μm,20.0s,MS5.7
EMOS Mosqueruela 120.57 330 PKP PKPdf 00 44 36.9 +0.1
ETOR Torete 120.96 332 PKP PKPdf 00 44 37.8 +0.3
LBTB Lobatse 121.64 247 *e*PKPdf PKPdf 00 44 40.2 +0.9
LBTB LR LR
comp=Z,845nm,21.0s,MS5.4
BOSA Boshof 121.69 243 PKP PKPdf 00 44 39.7 +0.5
comp=Z,3.5nm,0.7s,baz=90,slow=1.6,SNR=8.7
BOSA Boshof 121.69 243 *e*PKIKP PKPdf 00 44 40.0 +0.8
BOSA MLR MLR
comp=Z,1μm,19.0s,MS5.5
PMSA Palmer Station 121.92 165 PFAKE 00 44 50.0 +11
PMSA LR LR
comp=Z,608nm,20.0s,MS5.2
TGUH Tegucigalpa,Un 122.01 66 PFAKE 00 44 50.0 +10
TGUH LR LR
comp=Z,958nm,21.0s,MS5.4
GUD Guadarrama 122.05 333 PKP PKPdf 00 44 40.5 +0.8
ETOB Tobarra 122.42 330 PKP PKPdf 00 44 42.1 +1.7
ELOB Lobios 122.65 337 PKP PKPdf 00 44 41.5 +0.7
ESDC Sonseca Array 122.75 332 PKP PKPdf 00 44 41.4 +0.4
comp=Z,1.3nm,0.8s,baz=27,slow=2.5,SNR=13
ESDC PP PP 00 46 17.6 -0.1
comp=Z,2.4nm,0.9s,baz=28,slow=7.2,SNR=10.0
ESLA Sonseca Array 122.75 332 PFAKE 00 44 50.0 +9.0
ESLA LR LR
comp=Z,7μm,20.0s,MS6.3
EVIA Vianos 122.89 331 PKP PKPdf 00 44 41.6 +0.3
PAB San Pablo 123.03 333 *e*PKPdf PKPdf 00 44 42.4 +0.8
PAB LR LR
comp=Z,845nm,21.0s,MS5.4
EHUE Huescar 123.58 330 PKP PKPdf 00 44 41.5 -1.2
MTE Manteigas 123.69 336 *e*PKPdf PKPdf 00 44 44.1 +1.3
MTE LR LR
comp=Z,882nm,20.0s,MS5.4
EQES Quesada 123.83 330 PKP PKPdf 00 44 42.3 -0.9
EBAN Banos Encina 123.88 331 PKP PKPdf 00 44 43.6 +0.3
EADA Adamuz 124.25 332 PKP PKPdf 00 44 45.0 +1.0
ECAB El Cabril 124.71 332 PKP PKPdf 00 44 45.2 +0.4
EBAD Badajoz 124.85 334 PKP PKPdf 00 44 44.9 -0.2
ELOJ Sierra Loja 124.87 331 PKP PKPdf 00 44 45.0 -0.2
SUR Sutherland 124.98 238 PFAKE 00 45 00.0 +15
SUR LR LR
comp=Z,1μm,20.0s,MS5.5
EVO Evora 125.47 335 *e*PKIKP PKPdf 00 44 46.6 +0.3
comp=Z,82nm,1.6s
EMIN Mina Concepcio 125.53 333 PKP PKPdf 00 44 46.2 -0.2
ESPR Espera 125.90 332 PKP PKPdf 00 44 47.7 +0.5
EJIF Jimena Fronter 126.05 331 PKP PKPdf 00 44 47.9 +0.4
EGRO El Granado 126.08 334 PKP PKPdf 00 44 48.7 +1.2
SFS San Fernando 126.39 332 PFAKE 00 45 00.0 +12
SFS LR LR
comp=Z,2μm,21.0s,MS5.8
BBSR BB Station 128.40 33 PFAKE 00 45 00.0 +7.9
BBSR LR LR
comp=Z,1μm,20.0s,MS5.5
TAM Tamanrasset 128.94 311 *e*PKPdf PKPdf 00 44 54.4 +1.1
TAM *e*PP PP 00 46 59.0 -0.8
TSUM Tsumeb 129.34 254 PFAKE 00 45 00.0 +5.9
TSUM LR LR
comp=Z,866nm,22.0s,MS5.4
BCIP Isla Barro Col 130.59 68 PFAKE 00 45 10.0 +13
BCIP LR LR
comp=Z,1μm,21.0s,MS5.6
EFI East Falkland 134.54 159 PFAKE 00 45 10.0 +7.0
EFI LR LR
comp=Z,520nm,20.0s,MS5.2
OTAV Otavalo 134.74 79 *e*PKPdf PKPdf 00 45 06.2 +1.7
OTAV LR LR
comp=Z,1μm,20.0s,MS5.7
PLCA Paso Flores 136.01 140 PKP PKPdf 00 45 05.3 -0.8
comp=Z,2.3nm,0.8s,baz=254,slow=5.2,SNR=4.5
PLCA Paso Flores 136.01 140 PKIKP PKPdf 00 45 05.3 -0.8
PLCA MLR MLR
comp=Z,495nm,19.0s
ROSC El Rosal 137.25 71 PKP PKPdf 00 45 09.8 +0.6
comp=Z,2.9nm,0.5s,baz=272,slow=23,SNR=4.6
TOA0 Torodi Ar. Sit 137.33 303 PKPdf PKPdf 00 45 08.9 -0.3
TORD Torodi Ar. Bea 137.33 303 PKhKP 00 44 56.7
comp=Z,1.6nm,0.7s,baz=52,slow=2.5,SNR=21
TORD PKP PKPdf 00 45 06.3 -3.0
comp=Z,2.5nm,0.6s,baz=37,slow=1.7,SNR=14
TORD PKiKP PKiKP 00 45 10.1 -1.1
comp=Z,10nm,0.9s,baz=5.4,slow=2.0,SNR=20
TORD PP PP 00 47 51.7 -2.1
comp=Z,6.2nm,0.9s,baz=56,slow=4.6,SNR=8.3
TORD Torodi Ar. Bea 137.33 303 PKP 00 44 56.7
TORD PKP PKPdf 00 45 06.3 -3.0
TORD PKPdf PKPdf 00 45 10.1 +0.8
TORD PP PP 00 47 51.7 -2.1
SJG San Juan 137.57 48 PFAKE 00 45 20.0 +10
SJG LR LR
comp=Z,1μm,21.0s,MS5.7
NNA Nana 138.19 96 PFAKE 00 45 20.0 +9.1
NNA LR LR
comp=Z,1μm,22.0s,MS5.6
LCO Las Campanas 141.24 124 *e*PKPdf PKPdf 00 45 18.3 +2.3
LCO LR LR
comp=Z,773nm,20.0s,MS5.5
ARE Arequipa 143.30 103 *e*P PKPdf 00 45 17.0 -3.0
GRGR Grenville 144.68 51 PFAKE 00 45 30.0 +7.5
GRGR LR LR
comp=Z,1μm,20.0s,MS5.7
LVC Limon Verde 144.71 114 *e*PKPdf PKPdf 00 45 22.4 0.0
LVC LR LR
comp=Z,1μm,20.0s,MS5.6
BBGH Gun Hill 145.60 48 PFAKE 00 45 30.0 +5.9
BBGH LR LR
comp=Z,2μm,21.0s,MS5.9
DBIC Dimbokro 146.17 299 PKPbc PKPbc 00 45 25.2 -0.9
comp=Z,52nm,0.6s,baz=45,slow=3.7,SNR=70
DBIC Dimbokro 146.17 299 *e*PKP2 PKPab 00 45 26.1 -0.6
DBIC MLR MLR
comp=Z,828nm,19.0s
KIC Kosan Boka 146.23 298 *e*PKP1 PKPbc 00 45 26.3 +0.1
comp=Z,535nm,1.1s
TIC Toumodi 146.33 299 *e*PKP1 PKPbc 00 45 26.4 -0.1
comp=Z,157nm,0.7s
LPAZ La Paz 146.53 104 PKPbc PKPbc 00 45 27.5 +0.5
comp=Z,24nm,0.6s,baz=285,slow=1.2,SNR=60
LPAZ La Paz 146.53 104 *e*PKP2 PKPab 00 45 27.8 -0.2
LPAZ MLR MLR
comp=Z,693nm,21.0s
LIC Lamto 146.54 298⇑ *i* PKIKP PKPdf 00 45 27.0 +1.2
comp=Z,214nm,0.7s
LIC Lamto 146.54 298 *e*PKP1 PKPbc 00 45 27.0 -0.2
comp=Z,348nm,0.7s
ASCN Ascension 160.24 276 PFAKE 00 46 00.0 +15
ASCN LR LR
comp=Z,836nm,21.0s
BDFB Brasilia 165.61 112 PKP PKPdf 00 45 50.9 +0.5
comp=Z,3.0nm,0.9s,baz=46,slow=8.1,SNR=7.4
BDFB PKPab PKPab 00 46 50.0 +0.9
comp=Z,5.0nm,1.1s,baz=345,slow=12,SNR=4.9
BDFB Brasilia 165.61 112 PKIKP PKPdf 00 45 50.9 +0.5
BDFB 00 46 50.0
BDFB MLR MLR
comp=Z,1μm,21.0s
RCBR Riachuelo 175.10 20 PFAKE 00 46 10.0 +14
RCBR LR LR
comp=Z,1μm,20.0s

IDC 12 00:35:46.4±1.3, 1040N×14585E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/22, mbtmp4.1/12, ML4.1/1, Error ellipse: s-maj=39.9km s-min=17.9km az=91.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.32**	**343**	Pn	Pn	00 36 37.6	-2.0
	20nm,0.3s,baz=147,slow=17,SNR=3.4						
GUMO				Sn	Sn	00 37 15.3	-4.5
	76nm,0.3s,baz=100,slow=17,SNR=5.4						
MJAR	**Matsushiro Arr**	**26.93**	**346**	P	P	00 41 29.4	-0.1
	1.1nm,0.7s,baz=169,slow=8.8,SNR=3.4						
BATI	**Baumata**	**30.10**	**228**	P	P	00 41 56.9	-1.1
	7.4nm,0.3s,baz=107,slow=20,SNR=3.2						
KSRS	**Korea Array**	**31.41**	**332**	P	P	00 42 09.3	0.0
	1.4nm,0.5s,baz=147,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**32.21**	**201**	P	P	00 42 16.5	+0.1
	0.8nm,0.6s,baz=30,slow=9.5,SNR=5.8						
ASAR	**Alice Springs**	**35.81**	**199**	P	P	00 42 47.5	-0.2
	1.1nm,0.8s,baz=22,slow=6.4,SNR=5.9						
CMAR	**Chiang Mai Arr**	**46.02**	**286**	P	P	00 44 13.4	+1.3
	3.9nm,0.8s,baz=87,slow=6.0,SNR=13						
SONM	**Songino Array**	**49.89**	**326**	P	P	00 44 42.2	+0.6
	3.0nm,1.0s,baz=136,slow=7.3,SNR=9.5						
MKAR	**Makanchi Array**	**64.45**	**317**	P	P	00 46 24.7	-0.1
	0.8nm,0.7s,baz=93,slow=8.6,SNR=9.4						
ZALV	**Zalesovo Beam**	**64.77**	**325**	P	P	00 46 26.1	-0.6
	0.6nm,0.4s,baz=80,slow=9.2,SNR=3.7						
BVAR	**Borovoye Array**	**73.02**	**322**	P	P	00 47 18.0	-0.1
	1.6nm,0.6s,baz=111,slow=6.3,SNR=10						
NVAR	**Mina Array Bea**	**88.15**	**51**	P	P	00 48 40.4	+0.9
	0.2nm,0.4s,baz=286,slow=5.5,SNR=3.9						
DBIC	**Dimbokro**	**146.26**	**299**	PKPbc	PKPbc	00 55 29.6	-0.5
	3.1nm,0.9s,baz=23,slow=7.7,SNR=3.2						

BJI ***12*** *01:36:27.4, 298N×12650E, h30km, mB5.2, mb5.0, Ms4.6, Msz4.5*

IDC ***12*** *01:36:32.0±0.4, 384N×12608E, h0km, mb4.9/18, mb1 4.9/21, mb1mx4.9/22, mbtmp4.8/21, ML4.3/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/23, Error ellipse: s-maj=23.9km s-min=10.1km az=79.0*

ISCJB ***12*** *01:36:34.8±0.2, 374N±003×12609E±004, h31km, mb5.1/94, MS4.2/11, Error ellipse: s-maj=6.3km s-min=3.3km az=161.4*

MOS ***12*** *01:36:35.3±1.3, 387N×12610E, h33km, mb5.2/29, Error ellipse: s-maj=13.8km s-min=6.1km az=113.8*

NEIC ***12*** *01:36:36.6±0.2, 381N×12608E, mb5.1/51, Error ellipse: s-maj=7.3km s-min=4.1km az=70.0*

MAN ***12*** *01:36:39, 409N×126.14E, h34km, mb5.7, ML4.7, MS5.1*

DJA ***12*** *01:36:47.4±0.0, 384N×12644E, h90km, mB5.4/7, MLv5.1/4, Mw(mB)5.2/7, Mwp4.3/8*

ISC 12 01:36:36.9±0.2, 376N±003×12612E±004, h33km, h33km±1.1km; pP-P, n217, σ1§15/208, mb5.1/93, MS4.2/11, 14C-10D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.59**	**333**	*e*P	**Pn**	**01 37 17.1**	**+0.6**
GSPH				*e*S	**Sn**	**01 37 49.4**	**+2.6**
MATI	**Mati**	**3.17**	**3**	*e*P	**Pn**	**01 37 22.6**	**-1.9**
DAV	**Davao City (W)**	**3.33**	**351**	Pn	**Pn**	**01 37 26.3**	**-0.4**
	75nm,0.3s,baz=90,slow=20,SNR=3.6						
DAV				Lg		01 38 15.5	
	327nm,0.3s,baz=85,slow=23,SNR=7.8						
DAV	**Davao City (W)**	**3.33**	**351**	*e*Pn	**Pn**	**01 37 26.1**	**-0.7**
DAV				*e*Sn	**Sn**	**01 38 04.9**	**-0.3**
DAV	**Davao City (W)**	**3.33**	**351**	P	**Pn**	**01 37 36.1**	**+9.4**
KCP	**Kidapawan**	**3.38**	**342**⇓	*e*P	**Pn**	**01 37 29.0**	**+1.6**
KCP				*i* S	**Sn**	**01 38 08.8**	**+2.2**
CTBH	**Cotabato--PC H**	**3.91**	**332**⇓	*e*P	**Pn**	**01 37 36.0**	**+1.3**
CTBH				*i* S	**Sn**	**01 38 21.8**	**+2.4**
BUKP	**Musuan**	**4.22**	**346**	*e*P	**Pn**	**01 37 38.9**	**-0.1**
BUKP				*e*S	**Sn**	**01 38 24.2**	**-3.1**
LBMI	**Labuha**	**4.58**	**162**	P	**Pn**	**01 37 53.6**	**+10**
CGP	**Cagayan de Oro**	**4.87**	**343**	*e*P	**Pn**	**01 37 48.8**	**+0.8**
PAGZ	**Pagadian**	**4.89**	**326**	*e*P	**Pn**	**01 37 49.9**	**+1.7**
ZMPH	**Zamboanga City**	**5.13**	**308**⇑	*i*P	**Pn**	**01 37 53.6**	**+2.1**
ZMPH				*i* S	**Sn**	**01 38 43.1**	**-6.5**
BUTP	**Butuan**	**5.20**	**355**	*e*P	**Pn**	**01 37 53.1**	**+0.6**
TBP	**Tagbilaran**	**6.30**	**339**	*e*P	**Pn**	**01 38 08.3**	**+0.7**
SWI	**Sorong**	**6.89**	**132**	P	**Pn**	**01 38 16.6**	**+0.8**
	115nm,0.9s,1μm0.3nm						
GUIM	**Jordan**	**7.66**	**333**	*e*P	**Pn**	**01 38 29.2**	**+2.9**
PCI	**Palu**	**7.80**	**234**	P	Px	01 38 40.2	
	251nm,0.9s,2μm0.6nm						
KDI	**Kendari**	**8.43**	**205**	P	**Pn**	**01 38 43.1**	**+6.3**
BATP	**Bataraza**	**9.66**	**302**	*e*P	**Pn**	**01 38 56.9**	**+3.2**
SMKI	**Samarinda**	**9.83**	**245**	P	Px	01 39 14.4	
KAPI	**Kappang**	**10.79**	**216**	Pn	**Pn**	**01 39 10.3**	**+1.1**
	0.3nm,0.3s,baz=34,slow=22,SNR=1.7						
KAPI				LR	LR	01 43 46.6	
	comp=Z,634nm,19.1s,baz=62,slow=40						
KAPI	**Kappang**	**10.79**	**216**	Pn	**Pn**	**01 39 10.2**	**+1.0**
KAPI	**Kappang**	**10.79**	**216**	P	Px	01 39 22.7	
	38nm,1.1s,419nm						
BBKI	**Banjar Baru**	**13.36**	**238**	P	Px	01 39 55.2	
	127nm,1.7s,3μm						
BATI	**Baumata**	**14.09**	**190**	Pn	**Pn**	**01 39 55.5**	**+1.2**
	4.5nm,0.3s,baz=116,slow=0.8,SNR=2.1						
BATI	**Baumata**	**14.09**	**190**	P	**Pn**	**01 40 03.5**	**+9.2**
	82nm,0.8s,593nm						
STKI	**Sintang**	**15.08**	**256**	P	Px	01 40 18.7	
	82nm,0.2s						
JAY	**Jayapura**	**15.86**	**113**	P	**Pn**	**01 40 26.3**	**+8.4**
	71nm,1.0s,4μm						
KAKA	**Kakadu**	**17.53**	**159**	*e*P	Px	01 40 23.2	
	44nm,0.6s						
NACB	**Ninganchiao**	**20.76**	**348**	P	**P**	**01 41 15.2**	**+0.2**
	64nm,1.0s						
GUMO	**Guam**	**20.93**	**61**	LR	LR	01 49 15.8	
	comp=Z,130nm,18.1s,MS3.4,baz=266,slow=36						
YHNB	**Yeheng**	**21.28**	**348**	*e*P	**P**	**01 41 19.9**	**-0.9**
	129nm,1.8s,mb5.0						
JOW	**Kunigami**	**23.03**	**5**	P	**P**	**01 41 39.5**	**+0.1**
	32nm,0.7s,mb4.9,baz=247,slow=15,SNR=4.2						
COEN	**Coen**	**24.42**	**136**	P	**P**	**01 41 51.8**	**-0.9**
	12nm,1.7s,mb4.0						
WRAB	**Tennant Creek**	**24.90**	**161**	P	**P**	**01 41 56.0**	**-1.0**
	266nm,0.9s,mb5.8,SNR=15						
WRAB	**Tennant Creek**	**24.90**	**161**	*e*P	**P**	**01 41 56.8**	**-0.2**
	40nm,0.7s,mb5.1						
WRAB				S	**S**	**01 46 21.5**	**+3.3**
WRAB	**Tennant Creek**	**24.90**	**161**	*e*P	**P**	**01 41 56.8**	**-0.2**
WRAB				S	**S**	**01 46 21.5**	**+3.3**
WRAB				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.1						
WRA	**Warramunga Arr**	**24.90**	**161**	P	**P**	**01 41 55.7**	**-1.3**
	comp=Z,18nm,0.8s,mb4.7,baz=342,slow=11,SNR=67						
WB2	**Warramunga Arr**	**24.91**	**161**	*e*P	**P**	**01 41 55.8**	**-1.2**
MBWA	**Marble Bar**	**25.54**	**194**	*e*P	**P**	**01 42 03.9**	**+1.1**
	comp=Z,54nm,1.1s,mb5.0						
ASAR	**Alice Springs**	**28.30**	**165**	P	**P**	**01 42 27.4**	**-0.2**
	comp=Z,4.3nm,0.6s,mb4.2,baz=346,slow=7.3,SNR=60						
ASAR				PcP	PcP	01 45 40.8	+0.4
	comp=Z,3.6nm,0.6s,baz=350,slow=2.5,SNR=6.2						
WHN	**Wuhan**	**28.86**	**339**⇓	P	**P**	**01 42 33.4**	**+0.8**
NJ2	**Nanjing**	**28.96**	**347**	*e*P	**P**	**01 42 35.2**	**+1.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
GYA	**Guiyang**	**29.27**	**322**	P	**P**	**01 42 37.6**	**+1.4**
GYA				AP	pP	01 42 46.5	+0.7
GYA				XP	sP	01 42 52.8	+3.0
GYA				PP	PP	01 43 34.3	-8.3
GYA				S	**S**	**01 47 27.9**	**+0.8**
GYA				XS	sS	01 47 44.0	+1.1
GYA				SCS	ScS	01 53 15.2	-1.4
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,150nm,6.0s						
GYA				LR	LR		
	comp=N,850nm,17.5s,MS4.5						
GYA				LR	LR		
	comp=E,640nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=Z,760nm,14.9s,MS4.4						
CMAR	**Chiang Mai Arr**	**30.33**	**301**	P	**P**	**01 42 46.9**	**+1.2**
	comp=Z,4.5nm,0.8s,mb4.3,baz=122,slow=7.5,SNR=14						
CMAR				PcP	PcP	01 45 47.3	+1.7
	comp=Z,1.2nm,0.4s,baz=152,slow=1.2,SNR=5.3						
CHTO	**Chiang Mai**	**30.48**	**301**	*e*P	**P**	**01 42 47.2**	**+0.1**
	comp=Z,9.2nm,0.7s,mb4.6						
CHTO				*e*pP	pP	01 42 54.8	-1.9
CHTO	**Chiang Mai**	**30.48**	**301**	*e*P	**P**	**01 42 47.2**	**+0.1**
CHTO				*e**PP	pP	01 42 54.8	-1.8
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
CTA	**Charters Tower**	**30.87**	**141**	P	**P**	**01 42 52.0**	**+1.5**
	comp=Z,4.7nm,0.6s,mb4.5,baz=322,slow=7.1,SNR=6.2						
CTAO	**Charters Tower**	**30.87**	**141**	*e*P	**P**	**01 42 51.8**	**+1.3**
	comp=Z,47nm,2.1s,mb5.0						
CTAO	**Charters Tower**	**30.87**	**141**	*e*P	**P**	**01 42 51.8**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,47nm,2.1s,mb5.0						
KMI	**Kunming**	**30.93**	**316**	P	**P**	**01 42 52.6**	**+1.7**
KMI				AP	pP	01 43 02.8	+2.3
KMI				XP	sP	01 43 06.8	+2.3
KMI				PP	PP	01 43 55.0	-6.1
KMI				S	**S**	**01 47 53.7**	**+0.5**
KMI				XS	sS	01 48 10.0	+1.0
KMI				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
KMI				AMB	AMB		
	comp=Z,85nm,3.7s						
KMI				LR	LR		
	comp=N,216nm,11.8s,MS4.1						
KMI				LR	LR		
	comp=E,176nm,13.2s,MS4.1						
KMI				LR	LR		
	comp=Z,135nm,17.7s,MS3.7						
KMI	**Kunming**	**30.93**	**316**	P	**P**	**01 42 52.6**	**+1.7**
	comp=Z,9.0nm,0.7s,mb4.7						
KMI				pP	pP	01 43 02.8	+2.3
KMI				sP	sP	01 43 06.8	+2.3
KMI				PP	PP	01 43 55.0	-6.1
KMI				S	**S**	**01 47 53.7**	**+0.5**
KMI				sS	sS	01 48 10.0	+1.0
KMI				SS	SS	01 49 38.8	-27
KMI				LR	LR		
	comp=Z,140nm,17.7s,MS3.7						
KS15	**Wonju Array Si**	**33.56**	**3**	*e*P	**P**	**01 43 14.2**	**+0.3**
KSRS	**Korea Array**	**33.57**	**3**	P	**P**	**01 43 13.7**	**-0.2**
	comp=Z,11nm,0.4s,mb5.2,baz=178,slow=9.7,SNR=37						
KSRS				PcP	PcP	01 45 55.0	+1.0
	comp=Z,2.7nm,0.7s,baz=190,slow=3.6,SNR=5.0						
XAN	**Xi'an**	**34.12**	**334**	P	**P**	**01 43 16.9**	**-1.8**
XAN				AP	pP	01 43 26.6	-1.8
XAN				XP	sP	01 43 30.5	-1.9
XAN				S	**S**	**01 48 38.4**	**-4.3**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6						
XAN				AMB	AMB		
	comp=Z,138nm,4.9s						
XAN				LR	LR		
	comp=N,56nm,16.9s,MS3.9						
XAN				LR	LR		
	comp=E,153nm,14.6s,MS3.9						
XAN				LR	LR		
	comp=Z,306nm,17.9s,MS4.1						
CD2	**Chengdu**	**34.26**	**324**	*e*P	**P**	**01 43 21.7**	**+1.7**
CD2				AP	pP	01 43 31.6	+2.0
CD2				XP	sP	01 43 35.5	+1.8
CD2				PP	PP	01 44 38.2	+0.2
CD2				XS	sS	01 49 02.7	+1.8
CD2				SCS	ScS	01 53 39.9	-1.5
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
CD2				LR	LR		
	comp=N,340nm,15.6s,MS4.3						
CD2				LR	LR		
	comp=E,262nm,14.3s,MS4.3						
CD2				LR	LR		
	comp=Z,400nm,19.0s,MS4.2						
FORT	**Forrest**	**34.40**	**177**	*e*P	**P**	**01 43 21.3**	**+0.2**
	comp=Z,29nm,0.6s,mb5.4						
FORT				*e*		01 45 57.1	
MJAR	**Matsushiro Arr**	**34.47**	**17**	P	**P**	**01 43 20.8**	**-0.9**
	comp=Z,2.0nm,0.5s,mb4.3,baz=193,slow=8.9,SNR=4.8						
KLBR	**Kellerberrin**	**36.05**	**192**⇑	*i*P	**P**	**01 43 36.0**	**+0.6**
	comp=Z,18nm,0.6s,mb5.2						
KLBR				*e*	pP	01 43 46.0	+1.0
KLBR				*e*		01 46 02.0	
MUN	**Mundaring**	**36.77**	**194**	*e*P	**P**	**01 43 42.3**	**+0.8**
BJT	**Baijiatuau**	**37.20**	**347**	*e*P	**P**	**01 43 44.2**	**-0.8**
	comp=Z,31nm,0.5s,mb5.4						
BJT	**Baijiatuau**	**37.20**	**347**	*e*P	**P**	**01 43 44.2**	**-0.9**
BJT				pmax	pmax		
	comp=Z,31nm,0.5s						
BJI	**Beijing**	**37.22**	**347**	P	**P**	**01 43 44.8**	**-0.4**
BJI				AMB	AMB		
	comp=Z,47nm,0.8s,mb5.4						
BJI	**Beijing**	**37.22**	**347**	P	**P**	**01 43 44.8**	**-0.4**
	comp=Z,47nm,0.8s,mb5.4						
NWAO	**Narrogin (SRO)**	**37.45**	**192**	*e*P	**P**	**01 43 48.8**	**+1.5**
	comp=Z,47nm,1.2s,mb5.2						
NWAO	**Narrogin (SRO)**	**37.45**	**192**	*e*P	**P**	**01 43 48.8**	**+1.5**
NWAO				pmax	pmax		
	comp=Z,47nm,1.2s						
EIDS	**Eidsvold**	**37.76**	**141**	*e*P	**P**	**01 43 50.0**	**-0.1**
	comp=Z,73nm,1.0s,mb5.4						
SNY	**Shenyang**	**37.97**	**357**	⇓P	**P**	**01 43 51.8**	**+0.2**
SNY				AMB	AMB		
	comp=Z,87nm,0.5s,mb5.7						
SNY				LR	LR		
	comp=N,355nm,9.9s						
SNY				LR	LR		
	comp=E,354nm,10.2s						

SNY LR LR
comp=Z,224nm,11.4s,MS4.2
LZH Lanzhou 38.17 330 *e*P **P** **01 43 55.1 +1.7**
LZH AP pP 01 44 05.3 +2.2
LZH XP sP 01 44 08.6 +1.5
LZH PP PP 01 45 26.2 +5.2
LZH *e*S **S** **01 49 46.0 +1.4**
LZH XS sS 01 50 04.0 +3.4
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,120nm,4.5s
LZH LR LR
comp=N,375nm,14.0s
LZH LR LR
comp=Z,570nm,15.8s,MS4.5
LZH Lanzhou 38.17 330 *e*P **P** **01 43 55.1 +1.7**
comp=Z,21nm,1.2s,mb4.7
LZH pP pP 01 44 05.3 +2.2
LZH sP sP 01 44 08.6 +1.5
LZH PP PP 01 45 26.2 +5.2
LZH *e*S **S** **01 49 46.0 +1.4**
LZH sS sS 01 50 04.0 +3.4
LZH SS SS 01 52 23.3 -9.3
LZH LR LR
comp=Z,570nm,15.8s,MS4.5
LZH Lanzhou 38.17 330 *e*P **P** **01 43 55.1 +1.7**
LZH *PP pP 01 44 05.3 +2.2
LZH *SP sP 01 44 08.6 +1.5
LZH 01 45 26.2
LZH *e*S **S** **01 49 46.0 +1.4**
LZH *SS sS 01 50 04.0 +3.4
LZH SS SS 01 52 23.3 -9.3
LZH pmax pmax
comp=Z,21nm,1.2s,mb4.7
LZH MLR MLR
comp=Z,570nm,15.8s,MS4.5
STKA Stephens Creek 38.38 159⇓ *i*P **P** **01 43 55.5 +0.3**
comp=Z,16nm,0.7s,mb4.9
STKA Stephens Creek 38.38 159 P **P** **01 43 55.5 +0.3**
comp=Z,22nm,0.8s,mb5.0,baz=330,slow=8.7,SNR=48
STKA PcP PcP 01 46 08.9 +0.6
comp=Z,11nm,0.6s,baz=332,slow=5.5,SNR=5.7
HHC Hu-ho-hao-te 39.18 342 *e*P **P** **01 44 03.7 +1.9**
HHC AP pP 01 44 14.0 +2.5
HHC XP sP 01 44 17.5 +2.0
HHC PP PP 01 45 39.6 +7.6
HHC S **S** **01 50 03.6 +3.9**
HHC XS sS 01 50 17.9 +2.1
HHC AMB AMB
comp=Z,32nm,0.5s,mb5.3
HHC AMB AMB
comp=Z,199nm,11.3s
HHC LR LR
comp=N,191nm,14.3s,MS4.2
HHC LR LR
comp=E,195nm,16.6s,MS4.2
HHC LR LR
comp=Z,148nm,17.8s,MS3.9
SHL Shillong 39.37 307 *ex* x 01 43 59.6
CN2 Changchun 39.88 359 *e*P **P** **01 44 07.1 -0.4**
CN2 *e*AP pP 01 44 16.8 -0.5
CN2 *e*S **S** **01 50 10.3 +0.2**
CN2 AMB AMB
comp=Z,60nm,0.9s,mb5.3
CN2 AMB AMB
comp=Z,300nm,7.0s
CN2 LR LR
comp=N,300nm,13.0s,MS4.5
CN2 LR LR
comp=E,300nm,13.0s,MS4.5
CN2 LR LR
comp=Z,500nm,14.0s,MS4.5
MDJ Mudanjiang 40.80 4 P **P** **01 44 15.3 +0.1**
MDJ AP pP 01 44 24.2 -0.7
MDJ XP sP 01 44 28.1 -0.8
MDJ PP PP 01 45 49.5 -0.2
MDJ SCP ScP 01 50 03.2 0.0
MDJ PCS PcS 01 50 06.8 +0.3
MDJ S **S** **01 50 24.7 +0.8**
MDJ XS sS 01 50 40.1 +0.1
MDJ AMB AMB
comp=Z,35nm,1.3s,mb4.8
MDJ AMB AMB
comp=Z,176nm,5.9s
MDJ LR LR
comp=N,60nm,14.8s
MDJ LR LR
comp=E,105nm,29.7s
MDJ LR LR
comp=Z,104nm,23.2s
MDJ Mudanjiang 40.80 4 *e*P **P** **01 44 15.6 +0.4**
comp=Z,45nm,1.1s,mb5.0
ARMA Armidale 41.83 146 *e*P **P** **01 44 24.7 +0.9**
LSA Lhasa 41.96 312 P **P** **01 44 25.9 +1.0**
comp=Z,18nm,0.6s,mb4.9
LSA Lhasa 41.96 312 P **P** **01 44 25.9 +1.0**
LSA pmax pmax
comp=Z,18nm,0.6s,mb4.9
TAPN Taplejung 43.51 307 *e*P **P** **01 44 37.9 +0.4**
comp=Z,18nm,0.6s,mb5.0
ODAN Odare 43.55 306 *e*P **P** **01 44 37.8 -0.1**
VIS Vishakhapatnam 44.13 292 *e*P **P** **01 44 42.4 -0.3**
VIS AMb AMB 01 44 45.9
comp=Z,20nm,1.0s,mb4.8
RAMN Ramite 44.23 305 *e*P **P** **01 44 44.0 +0.6**
CAN Canberra 44.41 153 *e*P **P** **01 44 46.1 +1.5**
CNB Canberra Magne 44.58 153 *e*P **P** **01 44 46.4 +0.5**
JIRN Jiri 44.86 306 *e*P **P** **01 44 48.7 +0.3**
comp=Z,21nm,0.5s,mb5.2
TOO Toolangi 44.89 158 *e*P **P** **01 44 49.7 +1.3**
HABR Khabarovsk 45.20 8 *e*P **P** **01 44 50.0 -0.7**
HABR *e*S **S** **01 51 29.5 +1.2**
HABR *e**SS sS 01 51 46.0 +1.4
HABR *e* 01 54 43.0
HABR *eSSS 01 55 41.6
GUN Gumba 45.21 306 *e*P **P** **01 44 51.7 +0.5**
comp=Z,34nm,0.6s,mb5.3
PKI Pulchoki 45.45 306 *e*P **P** **01 44 53.0 -0.1**
KLR Kul'dur 45.56 5 *e*P **P** **01 44 49.0 -4.5**
KKN Kakani 45.65 306 *e*P **P** **01 44 54.1 -0.5**
comp=Z,9.8nm,0.4s,mb5.1
KKN Kakani 45.65 306 *e*P **P** **01 44 54.1 -0.5**
KKN pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
HIA Hailar 45.66 354 *e*P **P** **01 44 54.6 +0.3**
comp=Z,23nm,0.9s,mb5.1
HIA Hailar 45.66 354 *e*P **P** **01 44 54.6 +0.2**
HIA pmax pmax
comp=Z,23nm,0.9s
DMN Daman 45.71 306 *e*P **P** **01 44 55.5 +0.4**
GKN Gorkha 46.25 306 *e*P **P** **01 44 58.6 -0.8**
comp=Z,9.2nm,0.4s,mb5.0
ULN Ulaanbaatar 46.90 342 P **P** **01 45 03.3 -0.8**
comp=Z,11nm,0.7s,mb4.9
ULN *e*PcP PcP 01 46 38.0 +1.5
ULN Ulaanbaatar 46.90 342 P **P** **01 45 03.3 -0.8**
ULN *e* 01 46 38.0
ULN pmax pmax
comp=Z,11nm,0.7s,mb4.9
KOLN Koldanda 47.00 305 *e*P **P** **01 45 05.2 -0.1**
comp=Z,50nm,0.6s,mb5.7
SONM Songino Array 47.08 342 P **P** **01 45 04.9 -0.6**
comp=Z,7.5nm,0.6s,mb4.8,baz=159,slow=8.1,SNR=33
SONM PcP PcP 01 46 37.6 +0.5
comp=Z,7.2nm,0.8s,baz=157,slow=3.1,SNR=9.9
DANN Dangsing 47.10 306 *e*P **P** **01 45 05.5 -0.5**
comp=Z,70nm,0.6s,mb5.8
PYUN Piuthan 47.63 305 *e*P **P** **01 45 10.2 +0.1**
comp=Z,31nm,0.6s,mb5.5
HYB Hyderabad 48.53 290 *e*P **P** **01 45 19.0 +1.7**
HYB Hyderabad 48.53 290 *i*P **P** **01 45 19.0 +1.7**
HYB *e* 01 45 23.5
KOD Kodaikanal 48.67 280 *e*P **P** **01 45 16.4 -2.0**
KOD AMb AMB 01 45 20.4
comp=Z,16nm,1.1s,mb5.0
NGP Nagpur 48.86 295 *ex* **P** **01 45 15.0 -4.8**
NGP AMb AMB 01 45 17.5
comp=Z,20nm,1.2s,mb5.0
ZAK Zakamensk 50.29 341 *e*P **P** **01 45 30.1 -0.1**
ZAK *e* 01 46 48.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
AKL Akola 50.61 294 *e*P **P** **01 45 33.9 +0.8**
AKL AMb AMB 01 45 39.2
comp=Z,33nm,1.1s,mb5.2
BHPL Bhopal 50.84 297 *e*P **P** **01 45 34.3 -0.5**
BHPL AMb AMB 01 45 36.8
comp=Z,5.4nm,0.4s,mb4.8
TLY Talaya 51.31 342 *e*P **P** **01 45 38.5 +0.7**
comp=Z,11nm,0.8s,mb4.8
TLY Talaya 51.31 342 *e*P **P** **01 45 38.3 +0.5**
TLY pmax pmax
comp=Z,17nm,1.1s,mb4.9
AGRA Agra 51.52 302 *e*P **P** **01 45 38.5 -1.4**
AGRA AMb AMB 01 45 40.8
comp=Z,30nm,0.3s,mb5.7
WMQ Urumqi 52.35 325 *e*P **P** **01 45 46.0 +0.3**
WMQ AP pP 01 45 56.0 +0.3
WMQ XP sP 01 46 00.0 +0.4
WMQ PP PP 01 47 45.0 +0.4
WMQ S **S** **01 53 07.0 -2.2**
WMQ SCS ScS 01 55 30.0 -3.2
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,87nm,4.0s
WMQ LR LR
comp=N,135nm,16.0s,MS4.2
WMQ LR LR
comp=E,112nm,16.0s,MS4.2
WMQ LR LR
comp=Z,98nm,16.0s,MS3.9
AYAN Aya Nagar 52.60 303 *e*P **P** **01 45 46.5 -1.4**
AYAN AMb AMB 01 45 50.7
comp=Z,8.4nm,0.2s,mb5.2
KLP Kalpa 52.73 307 *e*P **P** **01 45 48.0 -0.8**
KLP AMb AMB 01 45 50.5
comp=Z,17nm,0.5s,mb5.2
CLNS Chul'man 52.93 359 *e*P **P** **01 45 48.5 -1.3**
CLNS pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,8.0nm,0.7s
KUDL Kundal 53.03 303 *e*P **P** **01 45 49.5 -1.6**
KUDL AMb AMB 01 45 51.1
comp=Z,30nm,0.7s,mb5.4
POO Poona 53.13 290 *e*P **P** **01 45 50.9 -1.0**
POO AMb AMB 01 45 55.4
comp=Z,12nm,0.3s,mb5.3
KKR Kurukshetra 53.34 305 *e*P **P** **01 45 52.1 -1.1**
SMLA Simla 53.45 306 *i*P **P** **01 45 54.4 +0.3**
SMLA *ex* x 01 45 56.0
comp=Z,169nm,0.4s
SMLA *i*x x 01 51 58.8
KHET Khetri 53.58 302 *e*P **P** **01 45 53.8 -1.3**
KHET AMb AMB 01 46 00.8
comp=Z,28nm,0.9s,mb5.2
BOD Bodaibo 54.75 352 *e*P **P** **01 46 01.6 -1.4**
BOD pmax pmax
comp=Z,16nm,1.1s,mb5.0
PETK Petropavlovsk- 55.63 22 P **P** **01 46 09.6 +0.1**
comp=Z,3.9nm,0.5s,mb4.7,baz=178,slow=3.2,SNR=20
MK31 Makanchi Array 57.18 326 *e*P **P** **01 46 19.7 -1.0**
MK31 *e*PcP PcP 01 47 15.6 +0.6
MKAR Makanchi Array 57.18 326 P **P** **01 46 19.5 -1.2**
comp=Z,4.2nm,0.4s,mb4.8,baz=119,slow=7.6,SNR=72
MKAR PcP PcP 01 47 15.0 0.0
comp=Z,3.6nm,0.4s,baz=193,slow=9.3,SNR=9.6
TKM2 Tokmak 2 59.32 319 *e*P **P** **01 46 35.6 -0.1**
comp=Z,5.1nm,0.6s,mb4.7
TKM2 PcP PcP 01 47 23.9 +0.3
TKM2 Tokmak 2 59.32 319 *e*P **P** **01 46 35.6 -0.1**
TKM2 01 47 23.9
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
UCH Uchtor 59.74 318 *e*P **P** **01 46 39.5 +0.9**
comp=Z,9.9nm,1.2s,mb4.7
AML Almayashu 60.25 317 P **P** **01 46 42.5 +0.3**
comp=Z,8.9nm,0.8s,mb4.8
AML *e*PcP PcP 01 47 28.3 +1.0
ZAA0 Zalesovo Array 60.28 333 *e*P **P** **01 46 39.7 -2.4**
ZALV Zalesovo Beam 60.28 333 P **P** **01 46 39.8 -2.3**
comp=Z,3.8nm,0.5s,mb4.7,baz=131,slow=6.7,SNR=17
ZALV PcP PcP 01 47 25.9 -1.3
comp=Z,2.2nm,0.6s,baz=117,slow=5.8,SNR=3.9
EKS2 Erkin-Say 60.41 318 *e*P **P** **01 46 42.8 -0.4**
comp=Z,5.9nm,0.7s,mb4.7
KBL Kabul 61.02 308 *e*P **P** **01 46 47.5 -0.1**
comp=Z,10nm,0.8s,mb5.0
KBL Kabul 61.02 308 *e*P **P** **01 46 47.5 0.0**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KURK Kurchatov 61.38 328 P **P** **01 46 48.1 -1.6**
comp=Z,173nm,0.6s,mb6.4,SNR=20
KURK Kurchatov 61.38 328 *e*P **P** **01 46 48.2 -1.5**
comp=Z,20nm,0.6s,mb5.4
KURK Kurchatov 61.38 328 *e*P **P** **01 46 48.2 -1.5**
KURK pmax pmax
comp=Z,19nm,0.6s,mb5.4
NVS Novosibirsk 61.57 333⇑ *i*P **P** **01 46 47.5 -3.3**
NVS *e* 01 47 29.9
NVS pmax pmax
comp=Z,25nm,1.9s,mb5.0
NVS pmax pmax
comp=N,23nm,2.1s
NVS pmax pmax
comp=E,29nm,2.3s
SEY Seymchan 62.14 13⇑ *e*P **P** **01 46 55.1 +0.6**
BRVK Borovoye 67.03 327 P **P** **01 47 25.5 -1.2**
comp=E,110nm,0.5s,mb6.1,SNR=8.2
BRVK Borovoye 67.03 327 *e*P **P** **01 47 25.4 -1.3**
comp=E,16nm,0.6s,mb5.2
BRVK pP pP 01 47 33.9 -3.0
BRVK Borovoye 67.03 327 *e*P **P** **01 47 25.4 -1.3**
BRVK *PP pP 01 47 33.9 -3.0
BRVK pmax pmax
comp=Z,16nm,0.6s,mb5.2
SVE Sverdlovsk 73.61 329⇑ *e*P **P** **01 48 05.7 -1.1**
SVE pmax pmax
comp=Z,16nm,0.9s,mb5.0
ARU Arti 74.58 328 P **P** **01 48 10.3 -2.2**
comp=Z,130nm,0.5s,mb6.1,SNR=9.2
ARU Arti 74.58 328 *e*P **P** **01 48 10.6 -1.9**
comp=Z,13nm,0.6s,mb5.0
ARU *e*pP pP 01 48 21.5 -1.3
ARU Arti 74.58 328 *c i*P **P** **01 48 10.3 -2.2**
ARU *e*S S 01 57 44.5 -1.2
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.9
QRN Al-Qurain 77.85 298 *e*P **P** **01 48 30.0 -1.7**
baz=298
QRN AMb AMB 01 48 36.2
comp=Z,33nm,0.6s,mb5.4,baz=298
UMR Umm Al-Rimmam 78.06 299 *e*P **P** **01 48 31.1 -1.7**
baz=299
UMR AMb AMB 01 48 33.2
comp=Z,15nm,0.5s,mb5.2,baz=299
MIB Mutribah 78.40 300 *e*P **P** **01 48 32.7 -2.0**
baz=300
MIB AMb AMB 01 48 35.5
comp=Z,31nm,0.7s,mb5.3,baz=300
ABPO Ambohimpanom 80.74 250 *e*P **P** **01 48 48.0 +0.4**
comp=Z,7.1nm,0.8s,mb4.7
ABPO Ambohimpanom 80.74 250 *e*P **P** **01 48 48.0 +0.4**
ABPO pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SVW2 Sparrevohn 81.07 29 *e*P **P** **01 48 49.4 +0.9**
KDAK Kodiak Island 82.19 32 P pP 01 49 09.1 +4.1
comp=Z,29nm,0.9s,baz=353,slow=9.9,SNR=8.4
IMA2 Indian Mountai 82.60 24 *e*P **P** **01 48 57.5 +1.1**
PPLA Purkeypile 82.88 27 *e*P **P** **01 48 58.9 +0.9**
comp=Z,44nm,1.6s,mb5.2
CHUM Lake Minchumin 82.92 26 *e*P **P** **01 48 59.4 +1.2**
comp=Z,51nm,1.4s,mb5.4
KTH Kantishna Hill 83.51 27 *e*P **P** **01 49 02.1 +0.8**
comp=Z,24nm,1.3s,mb5.2
BPAW Bear Paw Mtn. 83.53 26 *e*P **P** **01 49 02.1 +0.8**
comp=Z,37nm,1.2s,mb5.4
MAW Mawson 83.57 200 P **P** **01 49 03.2 +1.8**
comp=Z,8.3nm,0.8s,mb4.9,baz=75,slow=6.6,SNR=14
MAW Mawson 83.57 200 *e*P **P** **01 49 02.9 +1.5**
comp=Z,14nm,1.3s,mb4.9
MAW Mawson 83.57 200 *e*P **P** **01 49 02.9 +1.5**
MAW pmax pmax
comp=Z,14nm,1.3s
TRF Thorofare Moun 83.79 27 *e*P **P** **01 49 02.9 +0.2**
comp=Z,14nm,0.9s,mb5.1
RC01 Rabbit Creek A 83.89 29 *e*P **P** **01 49 03.1 -0.1**
comp=Z,37nm,1.0s,mb5.5
SEW Seward 83.98 30 *e*P **P** **01 49 03.8 +0.1**
SEW *e*pP pP 01 49 12.0 -2.2
COLD Coldfoot 84.10 23 *e*P **P** **01 49 05.2 +1.0**
comp=Z,40nm,1.0s,mb5.5
PMR Palmer 84.21 29 *e*P **P** **01 49 04.7 -0.1**
comp=Z,40nm,1.3s,mb5.4
PMR Palmer 84.21 29 *e*P **P** **01 49 04.7 -0.1**
PMR pmax pmax
comp=Z,40nm,1.3s,mb5.4
MCK McKinley 84.41 26 *e*P **P** **01 49 05.8 0.0**
comp=Z,37nm,1.0s,mb5.5
MCK *e*pP pP 01 49 14.8 -1.5
MCK McKinley 84.41 26 *e*P **P** **01 49 05.8 0.0**
MCK *e**PP pP 01 49 14.8 -1.5
MCK pmax pmax
comp=Z,37nm,1.0s,mb5.5
COLA College 84.93 25⇑ *e*P **P** **01 49 08.2 -0.2**
OBN Obninsk 86.68 325 P **P** **01 49 16.0 -1.3**
OBN *e* pP 01 49 26.0 -1.8
OBN pmax pmax
comp=Z,38nm,1.7s,mb5.3
APA Apatity 87.59 337⇓ *i*P **P** **01 49 24.0 +2.6**
APA pmax pmax
comp=Z,22nm,1.2s,mb5.3
APA MLR MLR
comp=Z,1μm,21.0s,MS5.2
DAWY Dawson 88.62 26 *e*P **P** **01 49 26.7 +0.3**
JOF Joensuu 88.87 333 *e*p **P** **01 49 25.8 -1.8**
comp=Z,4.4nm,0.4s,mb5.1
KEV Kevo 89.65 340 *e*p **P** **01 49 29.3 -1.8**
comp=Z,1.6nm,0.3s,mb4.8
KEV Kevo 89.65 340 *e*P **P** **01 49 29.3 -1.8**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.9
ARCES ARCESS Array B 90.21 340 P **P** **01 49 32.6 -1.1**
comp=Z,20nm,0.7s,mb5.6,baz=79,slow=6.3,SNR=48
KAF Kangasniemi 91.28 332 *e*p **P** **01 49 36.9 -2.0**
comp=Z,2.5nm,0.4s,mb4.9,baz=75,slow=4.3
KAF Kangasniemi 91.28 332 *e*P **P** **01 49 36.9 -2.0**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
AKASG Malin Array Be 91.48 321 P **P** **01 49 38.2 -1.9**
comp=Z,2.7nm,0.6s,mb4.7,baz=70,slow=4.5,SNR=13
SYO Syowa Base 92.23 201⇑ *i*P **P** **01 49 43.4 +0.3**
VRI Vrincioaia 93.85 316⇑ P **P** **01 49 57.2 +6.1**
VRI Vrincioaia 93.85 316⇑ *i*P **P** **01 49 57.2 +6.1**
DLBC Dease Lake 94.03 31 P **P** **01 49 52.7 +1.0**
comp=Z,5.6nm,0.9s,mb5.0,baz=253,slow=13,SNR=4.4
BURAR Bucovina Array 94.57 318⇑ P **P** **01 49 53.3 -1.1**
BURAR Bucovina Array 94.57 318⇑ *i*P **P** **01 49 53.3 -1.1**
BUR08 Bucovina Ar. S 94.58 318 *e*P **P** **01 49 54.0 -0.4**
KWP Kalwaria 95.79 321⇓ P **P** **01 49 59.8 -0.1**
KWP Kalwaria 95.79 321⇓ *i*P **P** **01 49 59.8 -0.1**
DRGR 96.41 318⇑ P **P** **01 50 02.0 -0.8**
DRGR 96.41 318⇑ *i*P **P** **01 50 02.0 -0.8**
BZS Buzias 97.41 317⇓ P **P** **01 50 05.7 -1.6**
BZS Buzias 97.41 317⇓ *i*P **P** **01 50 05.7 -1.6**
NOA NORSAR Array B 98.49 333 P **P** **01 50 10.2 -1.7**
comp=Z,9.3nm,0.7s,mb5.4,baz=67,slow=4.6,SNR=25
NOA PKKPbc PKKPbc 02 06 36.0 -8.2
comp=Z,1.7nm,0.9s,baz=283,slow=4.5,SNR=3.7
YKA Yellowknife Ar 99.72 24 P Pdif 01 50 17.1 -0.4
comp=Z,1.3nm,0.7s,baz=105,slow=18,SNR=4.6
BRG Berggiesshubel 100.85 323 *e*P Pdif 01 50 26.0 +3.5
BRG pmax pmax
comp=Z,3.0nm,0.7s
BRG Berggiesshubel 100.85 323 *e*P Pdif 01 50 26.0 +3.5
comp=Z,4.5nm,0.7s
GERES GERESS Array B 101.68 321 P Pdif 01 50 25.9 -0.2
comp=Z,0.5nm,0.6s,baz=32,slow=5.2,SNR=4.3
VNA2 Neumayer--Watz 106.70 194 *e*PKiKP PKiKP 01 54 59.8 +1.5
baz=22,slow=0.9
VNA3 Neumayer Olymp 107.04 194 *e*PKiKP PKiKP 01 54 59.1 +0.2
PDAR Pinedale Array 111.73 41 PKKPbc PKKPbc 02 06 01.1 -2.1
comp=Z,0.5nm,0.6s,baz=137,slow=4.2,SNR=5.6
PDAR PKKPab PKKPab 02 06 11.0 -1.1
comp=Z,1.5nm,0.8s,baz=119,slow=5.4,SNR=12
PDAR PKKP PKKPdf 02 06 20.6 -1.3
comp=Z,1.7nm,1.1s,baz=120,slow=5.3,SNR=5.3
PV10 Paradox Valley 114.07 45 *e*PKPdf PKiKP 01 55 14.1 +0.9
TXAR Lajitas Array 122.06 52 PKP PKPdf 01 55 29.5 +0.6
comp=Z,1.0nm,0.6s,baz=332,slow=1.4,SNR=16
TOA0 Torodi Ar. Sit 122.33 288 *e*PKPdf PKPdf 01 55 30.4 +0.7
TORD Torodi Ar. Bea 122.33 288 PKP PKPdf 01 55 27.6 -2.1
comp=Z,2.7nm,0.7s,baz=58,slow=1.8,SNR=32
JCT Junction City 124.50 49 *e*PKPdf PKPdf 01 55 34.2 +0.7
MIAR Mount Ida 126.66 41 *e*PKPdf PKPdf 01 55 38.6 +1.1
DBIC Dimbokro 129.97 282 PKP PKPdf 01 55 45.5 +1.1
comp=Z,2.6nm,0.6s,baz=193,slow=4.9,SNR=4.4
TKL Tuckaleechee C 131.81 33 PKP PKPdf 01 55 48.6 +1.3
comp=Z,2.1nm,0.6s,baz=97,slow=3.5,SNR=4.6
CMIG Matias Romero 134.53 62 PKP PKPdf 01 55 53.8 +0.9
comp=Z,1.5nm,0.5s,baz=307,slow=6.6,SNR=4.5
PLCA Paso Flores 140.25 160 PKhKP 01 55 55.3
comp=Z,1.5nm,0.9s,baz=105,slow=2.2,SNR=3.4
PLCA PKP PKPdf 01 56 04.7 +1.9
comp=Z,3.3nm,0.8s,baz=210,slow=3.5,SNR=6.1
LCO Las Campanas 150.24 149 *e*PKPbc PKPbc 01 56 26.8 +1.4
LPAZ La Paz 161.27 133 PKP PKPdf 01 56 36.7 +1.6
comp=Z,1.8nm,0.8s,baz=23,slow=8.6,SNR=5.9
BDFB Brasilia 166.86 206 PKPab PKPab 01 57 45.3 +2.0
comp=Z,1.9nm,0.8s,baz=152,slow=12,SNR=4.6

NNC **12** *02:00:44.0±7.9, 40.12N×7660E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=87.5km s-min=47.1km az=134.0*
ISCJB **12** *02:01:05.6±3.4, 418N±03×758E±02, h33km, Error ellipse: s-maj=43.0km s-min=11.8km az=162.8*

ISC 12 02:01:07.7±2.7, 420N±03×758E±01, h35km, n11, σ1s 47/11, 6C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.42**	**47**	P		**Pn**	**02 01 15.4**	**-1.9**
	SNR=37							
KZA	**Kyzart**	**0.44**	**286**	P		**Pn**	**02 01 19.1**	**+1.5**
	SNR=9.6							
KBK	**Karagaybulak**	**0.95**	**317**	P		**Pn**	**02 01 30.3**	**+5.7**
	SNR=8.5							
TKM2	**Tokmak 2**	**0.98**	**350**	⇑Pn		**Pn**	**02 01 26.2**	**+1.2**
	11nm,0.5s							
TKM2				⇑Lg			02 02 17.4	
	9.5nm,0.5s							
TKM2	**Tokmak 2**	**0.98**	**350**	P		**Pn**	**02 01 25.9**	**+0.9**
	SNR=21							
UCH	**Uchtor**	**1.01**	**286**	P		**Pn**	**02 01 26.6**	**+1.2**
	SNR=6.9							
AAK	**Ala-Archa**	**1.20**	**305**	P		**Pn**	**02 01 26.1**	**-1.8**
	SNR=7.5							
KNDC	**Almaty**	**1.52**	**33**	⇑Pn		**Pn**	**02 01 34.1**	**+1.8**
	21nm,0.5s							
KNDC				⇑Lg			02 02 23.2	
	43nm,0.7s							
USP	**Ospenovka**	**1.63**	**324**	P		**Pn**	**02 01 33.2**	**-0.7**
	SNR=7.3							
EKS2	**Erkin-Say**	**1.67**	**296**	P		**Pn**	**02 01 31.2**	**-3.3**
	SNR=7.0							
KK31	**Karatay Array**	**4.09**	**288**	⇑Pn		**Pn**	**02 02 07.3**	**-0.4**
	1.8nm,0.6s,baz=127,slow=16							
KK31				⇑Lg			02 03 35.2	
	4.1nm,0.5s,baz=120,slow=30							

TAP 12 02:14:12.5, 2211N×12106E, h6km, ML3.7, 2C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TAW	**Tawu**	**0.29**	**327**	*i*P		Pg	02 14 19.6	+1.4
	baz=327							
TAW				S		Sg	02 14 24.3	+2.3
	baz=327							
TWK1	**Hengchun**	**0.29**	**235**	P		Pg	02 14 19.4	+1.2
	baz=234							
TWK1				S		Sg	02 14 24.5	+2.4
	baz=234							
HEN	**Hengchun**	**0.32**	**250**	*i*P		Pg	02 14 20.3	+1.6
	baz=250							
HEN				S		Sg	02 14 25.5	+2.6
	baz=250							
EAST	**Anshuo**	**0.33**	**323**	⇑*i*P		Pg	02 14 20.4	+1.4
	baz=323							
EAST				*e*S		Sg	02 14 25.8	+2.4
	baz=323							
LAY	**Lan-yu**	**0.46**	**99**	P		Pg	02 14 22.6	+1.2

baz=99
LAY eS Sg 02 14 29.8 +2.5
baz=99
SCZT Fangliau 0.48 302 ⇑*i*P Pg 02 14 23.0 +1.1
baz=301
SCZT eS Sg 02 14 30.0 +1.8
baz=301
ECL Taimali 0.49 348 *i* P Pg 02 14 22.7 +0.7
baz=348
ECL eS Sg 02 14 29.9 +1.5
baz=348
TTN Taitung 0.64 7 *e*P Pg 02 14 26.5 +1.6
baz=6.0
TTN eS Sg 02 14 36.8 +3.6
baz=6.0
TWP Hsiaoliuchiu 0.69 290 *e*P Pg 02 14 29.6 +3.8
baz=289
TWG Pinlang 0.70 1 P Pg 02 14 25.7 -0.4
TWG eS Sg 02 14 37.5 +2.4
SSD Sandimen 0.74 328 P Pg 02 14 27.4 +0.5
baz=327
SSD eS Sg 02 14 37.2 +0.7
baz=327
SGLT Jiouru 0.81 319 *e*P Pg 02 14 31.3 +3.3
baz=318
KAU Kaohsiung 0.83 303 *e*P Pg 02 14 29.1 +0.5
baz=302
TWM1 Shoushan 0.92 320 *e*P Pg 02 14 32.5 +2.3
baz=319
CHKT Chengkung 1.02 16 *e*P Pg 02 14 32.6 +0.5
baz=15
CHKT eS Sg 02 14 44.3 -1.1
baz=15
SGST Jiashian 1.06 335 *e*P Pg 02 14 33.0 +0.1
baz=335
SGST eS Sg 02 14 48.9 +2.2
baz=335
ELDTW Lidau 1.07 358 *e*P Pg 02 14 33.9 +0.8
baz=357
ELDTW eS Sg 02 14 48.4 +1.4
baz=357
STYT Tauyuan 1.08 345 *e*P Pg 02 14 34.3 +1.0
baz=344
STYT eS Sg 02 14 49.4 +2.0
baz=344
CHN1 Nanshi 1.18 335 *i* P Pg 02 14 35.9 +0.8
baz=335
CHN1 eS Sg 02 14 52.2 +1.9
baz=335
WTP Ta-pu 1.20 340 P Pg 02 14 35.9 +0.4
baz=339
WTP eS Sg 02 14 52.8 +1.7
baz=339
TWF1 Yuli 1.25 10 *e*P Pg 02 14 36.1 -0.4
baz=9.0
TWF1 eS Sg 02 14 55.8 +3.0
baz=9.0
TWK Hsinying 1.27 335 P Pn 02 14 37.0 +0.2
baz=335
TWK eS Sg 02 14 54.8 +1.6
baz=335
CHN4 Tsaushan 1.31 341 P Pn 02 14 38.1 +0.7
baz=340
CHN4 eS Sb 02 14 55.9 +1.4
baz=340
YUS Yu-Shan 1.37 356 *e*P Pn 02 14 39.1 +0.9
baz=355
YUS eS Sb 02 14 57.8 +1.3
baz=355
EHY Hungye 1.41 10 *e*P Pn 02 14 37.9 -0.8
baz=9.0
EHY eS Sb 02 14 58.8 +1.4
baz=9.0
ALS Alishan 1.41 350 P Pn 02 14 39.8 +1.1
baz=350
ALS eS Sb 02 14 59.4 +1.8
baz=350
CHY Chiayi 1.50 337 *e*P Pn 02 14 40.3 +0.3
baz=336
CHY eS Sn 02 15 00.5 +0.7
baz=336
CHN5 Tsauling 1.52 347 P Pn 02 14 40.6 +0.4
baz=346
CHN5 eS Sn 02 15 01.5 +1.1
baz=346
ESL Shilin 1.73 11 *e*P Pn 02 14 43.6 +0.5
baz=11
ESL eS Sn 02 15 05.0 -0.5
baz=11
WDGT Dungji 1.73 312 *e*P Pn 02 14 41.6 -1.5
baz=311
WDGT eS Sn 02 15 03.2 -2.4
baz=311
SMLT Sun Moon Lake 1.77 355 P Pn 02 14 44.8 +1.1
baz=355
SMLT eS Sn 02 15 07.2 +0.7
baz=355
TYC Yuchr 1.79 354 P Pn 02 14 45.1 +1.1
baz=353
TYC eS Sn 02 15 08.2 +1.1
baz=353
TWD Chiawan 2.02 14 *e*P Pn 02 14 48.0 +0.8
baz=14
WHF Hehuan Shan 2.03 5 *e*P Pn 02 14 47.8 +0.5
baz=5.0
WHF eS Sn 02 15 12.8 -0.2
baz=5.0
TCU Taichung 2.06 350 *e*P Pn 02 14 49.2 +1.6
baz=349
TCU eS Sn 02 15 14.9 +1.3
baz=349
TWQ1 Liyutan 2.24 353 *e*P Pn 02 14 51.4 +1.3
baz=353
TWQ1 eS Sn 02 15 19.3 +1.1
baz=353
NNS Nan Shan 2.33 7 *e*P Pn 02 14 55.2 +3.7
baz=6.0
ENA Nanau 2.39 15 *e*P Pn 02 14 55.9 +3.7
baz=15
ENTT Nioudou 2.56 10 *e*P Pn 02 14 55.2 +0.7
baz=10.0
NSK Sanguang 2.56 6 *e*P Pn 02 14 56.5 +1.8
baz=6.0
NSK eS Sn 02 15 25.7 -0.5
baz=6.0
TWC Suao 2.59 16 *e*P Pn 02 14 55.9 +1.0
baz=16
TWC eS Sn 02 15 26.5 -0.3
baz=16

SKHL 12 02:27:54.1±0.5, 4866N×14237E, h10km, mb4.3/4, 1C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UGL	**Uglegorsk**	**0.46**	**334**	⇑*i*P	g	Pg	02 28 03.8	+0.6
UGL					AMB	AMB	02 28 04.5	
	644nm,0.3s							
UGL				*e*Sg		Sg	02 28 10.2	+0.9
UGL				A			02 28 14.7	
	5μm,0.5s							
UGL				A			02 28 14.7	
	10μm,0.5s							
UGL				A			02 28 14.7	
	4μm,0.5s							
YSS	**Yuzh-Sakhalins**	**1.73**	**171**	⇓*i*Pg		Pg	02 28 27.8	+0.6
YSS				*e*Sg		Sg	02 28 52.0	+2.4
YSS				A			02 28 57.8	
	220nm,0.5s							
TYV	**Tymovskoe**	**2.21**	**5**	*e*Pg		Pg	02 28 36.7	+0.2
TYV				*e*S		Sn	02 28 59.0	+0.8
TYV				*e*Sg		Sg	02 29 07.3	+2.1
GRNR	**Gornyy**	**4.40**	**301**	*e*Pg		Pg	02 29 14.8	-3.5
GRNR				AMB		AMB	02 29 15.5	
	23nm,0.4s							
GRNR				*e*Sg		Sg	02 30 14.0	-1.2
NKL	**Nikolayevsk**	**4.62**	**347**	*e*P		Pn	02 29 07.0	+3.1
NKL				*e*Pb		Pb	02 29 16.0	+0.8
NKL				AMB		AMB	02 29 23.0	
	23nm,0.4s							
NKL				*e*Sg		Sg	02 30 30.0	+7.6
NKL				A			02 30 31.0	
	18nm,0.5s							
OKH	**Okha**	**4.91**	**4**	*e*Pg		Pg	02 29 32.0	+3.9
TEY	**Ternei**	**5.37**	**230**	*e*Sg		Sg	02 30 54.5	+8.3
EKMR	**Ekimchan**	**7.42**	**310**	*e*Pg		Pg	02 30 11.0	-5.0
EKMR				AMB		AMB	02 30 11.4	
	2.0nm,0.5s							
EKMR				*e*Sg		Sg	02 31 45.9	-6.0
EKMR				A			02 31 56.0	
	8.0nm,0.5s							
EKMR				A			02 31 56.0	
	4.0nm,0.5s							
EKMR				A			02 31 56.0	
	5.0nm,0.5s							
YASR	**Yasnyy**	**10.19**	**302**	*e*Sg		Sn	02 33 18.0	+64
YASR				A			02 33 36.5	
	13nm,0.9s							
ZEA	**Zeya**	**10.76**	**304**	*e*Sg		Sn	02 33 37.6	+69
ZEA				A			02 33 40.2	
	28nm,1.2s							

BJI 12 04:16:38.0, 3482N×9966E, h18km, ML3.5, Ms3.4, Msz3.5, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LZH	**Lanzhou**	**3.64**	**68**		PG	Pg	04 17 43.0	-4.8
LZH					S	Sn	04 18 21.7	+5.8
LZH					SG	Sg	04 18 34.1	-0.9
LZH					Smax			
	comp=N,138nm,1.0s							
LZH					Smax			
	comp=E,178nm,0.9s							
LZH					LR	LR		
	comp=N,332nm,5.1s							
LZH					LR	LR		
	comp=Z,454nm,6.6s							
GTA	**Gaotai**	**4.58**	**1**		P	Pn	04 17 47.7	+1.3
GTA					PG	Pg	04 18 00.7	-5.1
GTA					S	Sn	04 18 44.6	+5.4
GTA					SG	Sg	04 19 04.0	-1.1
GTA					Smax			
	comp=N,20nm,0.8s							
GTA					Smax			
	comp=E,21nm,0.7s							

CSEM ***12*** *04:51:55.3±1.0, 3995N×2955W, h5km, ML2.6, Error ellipse: s-maj=12.3km s-min=7.0km az=68.0, After PDA*

PDA 12 04:51:55.3±1.0, 3995N×2955W, h5km, MD3.6, ML2.6, Error ellipse: s-maj=12.3km s-min=7.0km az=68.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CALA	**Caldeira**	**1.52**	**154**	*e*P		Pn	04 52 18.1	-4.9
CALA				*e*S		Sn	04 52 35.6	-7.5
ROSA	**Rosais**	**1.59**	**140**	*e*P		Pn	04 52 19.6	-4.5
PICO	**Pico**	**1.69**	**148**	*e*P		Pn	04 52 20.9	-4.5
PICO				*e*S		Sn	04 52 39.8	-7.6
PMAN	**Manadas**	**1.74**	**139**	*e*P		Pn	04 52 21.5	-4.6
PMAN				*e*S		Sn	04 52 40.3	-8.3
PMAN				A			04 52 41.8	
	20nm,0.3s							
PMAN	**Manadas**	**1.74**	**139**	*e*P		Pn	04 52 21.5	-4.6
PMAN				*e*S		Sn	04 52 40.3	-8.3
PID	**Ribeirinha**	**1.87**	**143**	*e*P		Pn	04 52 23.3	-4.6
PID				*e*S		Sn	04 52 44.8	-7.1
PSBA	**Serra de Santa**	**2.09**	**124**	*e*P		Pn	04 52 26.1	-4.9
PSBA				*e*S		Sn	04 52 49.6	-7.7
PSBA				A			04 52 53.5	
	40nm,0.3s							
PSBA	**Serra de Santa**	**2.09**	**124**	*e*P		Pn	04 52 26.1	-4.9
PSBA				*e*S		Sn	04 52 49.6	-7.7

SZGRF ***12*** *04:56:53.3, 3330N×7328E, h33km, mb5.1, Pakistan*
LDG ***12*** *04:56:56.1±0.2, 3540N×7322E, h10km, Mb4.8/20, Ms4.0/1, Error ellipse: s-maj=8.4km s-min=5.4km az=14.0*
IDC ***12*** *04:56:57.2±0.4, 3549N×7315E, h0km, mb4.8/27, mb1 4.9/30, mb1mx4.9/31, mbtmp4.8/30, ML4.6/3, MS4.0/18, Ms1 4.0/18, ms1mx3.8/29, Error ellipse: s-maj=13.3km s-min=11.0km az=19.0*
MOS ***12*** *04:57:01.1±0.9, 3558N×7321E, h33km, mb5.1/62, MS4.1/14, Error ellipse: s-maj=6.3km s-min=3.8km az=119.0*
ISCJB ***12*** *04:57:01.7±0.4, 3554N±002×7321E±002, h41km±3km, mb4.9/122, MS4.1/27, Error ellipse: s-maj=3.5km s-min=3.0km az=141.2*
DJA ***12*** *04:57:02, 3533N×7337E, h10km, mb5.3/11*
NEIC ***12*** *04:57:03.7±0.2, 3543N×7333E, mb4.9/59, Error ellipse: s-maj=6.0km s-min=3.7km az=32.0*
NNC ***12*** *04:57:04.0±7.4, 3550N×7298E, h110km±68km, mb4.3, mpv5.3, Error ellipse: s-maj=62.1km s-min=49.7km az=28.0*
BJI ***12*** *04:57:07.5, 3577N×7385E, h52km, mB4.8, mb4.8, Ms4.5, Msz4.2*
BGS ***12*** *04:57:19.6±1.6, 37.11N×7146E, h50km, mb5.1*

ISC 12 04:57:04.1±0.3, 3551N±002×7322E±002, h47km±3km, h51km±1.5km: pP-P, n399, σ0.95/418, mb4.9/122, MS4.1/27, 39C-16D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHCP	**Chirah Chowk**	**1.85**	**179**	⇑P		Pn	**04 57 32.3**	**-1.0**
SRNI	**Srinagar**	**1.95**	**136**	*e*P		Pn	**04 57 36.0**	**+1.4**
SRNI				*ex*		x	04 58 05.0	
CEP	**Cherat**	**2.00**	**213**	P		Pn	**04 57 34.8**	**-0.6**
CEP				S		Sn	**04 58 05.0**	**+5.8**
THW	**Thamme Wali**	**2.97**	**205**	P		Pn	**04 57 50.8**	**+2.1**
JMU	**Jammu**	**3.12**	**153**	*e*P		Pn	**04 57 51.5**	**+0.8**
JMU				*ex*		x	04 58 29.0	
KBL	**Kabul**	**3.56**	**255**	*e*Pn		Pn	**04 57 58.7**	**+1.9**
THN	**Thein Dam**	**3.71**	**145**	*e*P		Pn	**04 57 58.1**	**-0.7**
THN				*ex*		x	04 59 10.9	
DLH	**Dalhousie**	**3.74**	**142**	*e*P		Pn	**04 58 00.0**	**+0.8**
DLH				*ex*		x	04 59 14.0	
BHK	**Bhakra**	**4.88**	**146**	*e*P		Pn	**04 58 13.8**	**-1.1**
BHK				*ex*		x	04 59 10.2	
SDNR	**Sundarnagar**	**5.08**	**141**	*e*P		Pn	**04 58 18.8**	**+1.1**
SDNR				*ex*		x	04 59 17.0	
SMLA	**Simla**	**5.48**	**142**	*i*P		Pn	**04 58 22.9**	**-0.2**
SMLA				*e*S		Sn	**04 59 20.2**	**-4.7**
KLP	**Kalpa**	**5.78**	**132**	*e*P		Pn	**04 58 27.6**	**+0.4**
KLP				*e*S		Sn	**04 59 27.2**	**-5.0**
KLP					AML	AML	05 00 11.3	
	comp=E,1μm,0.6s							
KLP					AML	AML	05 00 11.5	
	comp=N,1μm,0.9s							
DDI	**Dehra Dun**	**6.58**	**140**	*ex*		x	04 58 34.9	
DDI				*ex*		x	04 59 53.3	
AML	**Almayashu**	**6.62**	**3**	*e*Pn		Pn	**04 58 39.7**	**+1.0**
	comp=N,99nm,0.5s							
AML	**Almayashu**	**6.62**	**3**	P		Pn	**04 58 39.9**	**+1.2**
	SNR=59							
UCH	**Uchtor**	**6.78**	**8**	P		Pn	**04 58 42.7**	**+1.7**
	SNR=41							
ULHL	**Ulahol**	**7.12**	**18**	P		Pn	**04 58 46.9**	**+1.3**
	SNR=23							
EKS2	**Erkin-Say**	**7.15**	**3**	*e*Pn		Pn	**04 58 47.0**	**+1.0**
	comp=N,81nm,0.8s							
EKS2	**Erkin-Say**	**7.15**	**3**	P		Pn	**04 58 47.4**	**+1.4**
	SNR=74							
AAK	**Ala-Archa**	**7.18**	**8**	P		Pn	**04 58 47.8**	**+1.4**
	SNR=41							
KBK	**Karagaybulak**	**7.26**	**10**	P		Pn	**04 58 49.1**	**+1.7**
	SNR=24							
JOSI	**Joshimath**	**7.26**	**131**	*e*P		Pn	**04 58 47.6**	**0.0**
JOSI				*ex*		x	05 00 07.5	
JOSI					AML	AML	05 00 20.4	
	comp=E,1μm,0.8s							
JOSI					AML	AML	05 00 26.7	
	comp=N,677nm,0.8s							
CHMS	**Chumysh**	**7.57**	**9**	P		Pn	**04 58 52.6**	**+0.9**
	SNR=17							
KALG	**Kalgarh**	**7.59**	**140**	*ex*		x	05 00 07.4	
NDI	**New Delhi**	**7.61**	**152**	*e*P		Pn	**04 58 49.0**	**-3.3**
NDI				*ex*		x	05 00 13.0	
TKM2	**Tokmak 2**	**7.62**	**13**	⇑P		Pn	**04 58 53.6**	**+1.1**
	comp=N,88nm,0.8s							
TKM2				⇑S		Sn	**05 00 18.3**	**+0.9**
	comp=N,68nm,0.8s							
TKM2	**Tokmak 2**	**7.62**	**13**	*e*Pn		Pn	**04 58 53.6**	**+1.1**
	comp=N,97nm,0.9s							
TKM2	**Tokmak 2**	**7.62**	**13**	*i*P		Pn	**04 58 53.6**	**+1.1**
TKM2				pmax		pmax		
	comp=Z,58nm,0.8s							
TKM2	**Tokmak 2**	**7.62**	**13**	P		Pn	**04 58 53.6**	**+1.1**
	SNR=72							
KHET	**Khetri**	**7.74**	**163**	*e*P		Pn	**04 58 51.1**	**-2.9**
KHET				*e*S		Sn	**05 00 12.2**	**-8.1**
USP	**Ospenovka**	**7.81**	**7**	P		Pn	**04 58 55.5**	**+0.5**
	SNR=26							
KUDL	**Kundal**	**7.85**	**158**	*e*P		Pn	**04 58 53.9**	**-1.8**
KUDL				*e*S		Sn	**05 00 15.6**	**-7.6**
KK31	**Karatay Array**	**7.87**	**345**	⇓P		Pn	**04 58 55.5**	**-0.2**
	comp=Z,213nm,0.8s,baz=172,slow=13							
KK31				⇑S		Sn	**05 00 23.0**	**-0.4**
	comp=Z,55nm,0.5s,baz=171,slow=22							
KK31	**Karatay Array**	**7.87**	**345**	*i*P		Pn	**04 58 55.5**	**-0.3**
KK31				*i*S		Sn	**05 00 22.9**	**-0.5**
KK31				pmax		pmax		
	comp=Z,257nm,0.7s							
KK31				smax				
	comp=Z,82nm,0.4s							
AAA	**Alma-Ata**	**8.27**	**19**	*e*P		Pn	**04 59 01.9**	**+0.6**
AAA				*e*S		Sn	**05 00 36.6**	**+3.3**
AAA				pmax		pmax		
	comp=Z,400nm,2.2s							
AAA				smax				
	comp=E,600nm,4.6s							
AAA				MLR		MLR		
	comp=Z,4μm,8.0s							
PTH	**Pithoragarh**	**8.38**	**133**	*e*P		Pn	**04 59 04.0**	**+1.1**
PTH				*ex*		x	05 01 25.8	
LGTI	**Lohaghat**	**8.47**	**134**	*e*P		Pn	**04 59 04.8**	**+0.7**
LGTI				*ex*		x	05 00 32.0	
JASL	**Jaisalmer**	**8.79**	**194**	*e*P		Pn	**04 59 06.3**	**-2.1**
AJM	**Ajmer**	**9.09**	**172**	*i*P		Pn	**04 59 11.0**	**-1.6**
AJM				*i*x		x	05 00 49.0	
AGRA	**Agra**	**9.19**	**153**	*e*P		Pn	**04 59 11.6**	**-2.4**
PYUN	**Piuthan**	**11.12**	**129**	*e*P		Pn	**04 59 36.9**	**-3.4**
	comp=Z,140nm,0.5s							
DANN	**Dangsing**	**11.45**	**126**	*e*P		Pn	**04 59 41.7**	**-3.2**
	comp=Z,156nm,0.6s							
KOLN	**Koldanda**	**11.73**	**128**	*e*P		Pn	**04 59 45.0**	**-3.8**
GKN	**Gorkha**	**12.26**	**124**	*e*P		Pn	**04 59 51.8**	**-4.2**
	comp=Z,155nm,0.6s							
BHPL	**Bhopal**	**12.76**	**162**	*ex*		x	04 59 59.5	
BHPL				*ex*		x	05 02 13.4	
DMN	**Daman**	**12.83**	**125**	*e*P		Pn	**04 59 59.5**	**-4.3**
	comp=Z,203nm,0.7s							
KKN	**Kakani**	**12.83**	**124**	*e*P		Pn	**04 59 59.3**	**-4.5**
	comp=Z,154nm,0.7s							
KKN	**Kakani**	**12.83**	**124**	*e*P		Pn	**04 59 59.3**	**-4.5**
KKN				pmax		pmax		
	comp=Z,155nm,0.7s							
PKI	**Pulchoki**	**13.06**	**124**	*e*P		Pn	**05 00 02.3**	**-4.6**
	comp=Z,146nm,0.7s							
PKI	**Pulchoki**	**13.06**	**124**	*e*P		Pn	**05 00 02.3**	**-4.6**
PKI				pmax		pmax		
	comp=Z,146nm,0.7s							
GUN	**Gumba**	**13.17**	**122**	*e*P		Pn	**05 00 03.3**	**-5.1**
MK31	**Makanchi Array**	**13.17**	**28**	P		Pn	**05 00 06.9**	**-1.3**
	comp=Z,57nm,1.2s,baz=203,slow=12,SNR=74							
MK31	**Makanchi Array**	**13.17**	**28**	*e*P		Pn	**05 00 07.5**	**-0.8**
MKAR	**Makanchi Array**	**13.17**	**28**	Pn		Pn	**05 00 07.2**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=204,slow=12,SNR=60							
MKAR					LR	LR	05 05 36.4	
	comp=Z,2μm,18.0s,baz=179,slow=39							
MKAR	**Makanchi Array**	**13.17**	**28**	P		Pn	**05 00 07.2**	**-1.1**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MKAR					MLR	MLR		
	comp=Z,2μm,18.0s							
JIRN	**Jiri**	**13.54**	**122**	*e*P		Pn	**05 00 08.2**	**-5.2**
	comp=Z,284nm,0.6s							
WMQ	**Urumqi**	**13.88**	**49**	P		Pn	**05 00 17.0**	**-1.0**
WMQ				AP			05 00 27.0	
WMQ				S		Sn	**05 02 50.0**	**-0.6**
WMQ				AMB		AMB		
	comp=Z,17nm,1.0s							
WMQ					LR	LR		
	comp=N,568nm,5.0s							
WMQ					LR	LR		
	comp=E,896nm,5.0s							
WMQ					LR	LR		
	comp=Z,1μm,5.0s							
RAMN	**Ramite**	**14.27**	**123**	*e*P		Pn	**05 00 17.0**	**-6.4**
	comp=Z,111nm,0.6s							
TAPN	**Taplejung**	**14.79**	**119**	*e*P		Pn	**05 00 23.3**	**-7.0**
	comp=Z,82nm,0.6s							
ODAN	**Odare**	**14.87**	**122**	*e*P		Pn	**05 00 25.2**	**-6.1**
	comp=Z,101nm,0.8s							
AKL	**Akola**	**15.13**	**166**	*ex*		x	05 00 30.8	
AKL				*ex*		x	05 03 13.2	
NGP	**Nagpur**	**15.20**	**159**	⇑*i*P		Pn	**05 00 24.8**	**-11**
NGP				*e*S		S	05 03 06.7	-31
KURBB	**Kurchatov Arra**	**15.59**	**13**	⇑P		Pn	**05 00 36.3**	**-4.1**
	comp=Z,9.9nm,0.9s							
KURK	**Kurchatov**	**15.69**	**13**	P		Pn	**05 00 38.6**	**-3.2**
	SNR=25							
KURK	**Kurchatov**	**15.69**	**13**	Pn		Pn	**05 00 36.8**	**-5.0**
	baz=202,slow=12							
KURK	**Kurchatov**	**15.69**	**13**	*e*Pn		Pn	**05 00 38.0**	**-3.8**
	comp=Z,63nm,1.0s							
KURK	**Kurchatov**	**15.69**	**13**	*e*P		Pn	**05 00 38.0**	**-3.8**
KURK				pmax		pmax		
	comp=Z,63nm,1.0s							
BOK	**Bokaro**	**16.03**	**133**	*i*P		Pn	**05 00 35.6**	**-11**
BOK				*i*S		S	05 03 33.6	-21
LSA	**Lhasa**	**16.18**	**106**	P		Pn	**05 00 48.0**	**-0.1**
LSA				AMB		AMB		
	comp=Z,20nm,0.8s							
LSA	**Lhasa**	**16.18**	**106**	*e*Pn		Pn	**05 00 48.7**	**+0.6**
	comp=Z,17nm,0.8s							
LSA	**Lhasa**	**16.18**	**106**	*e*P		Pn	**05 00 48.7**	**+0.6**
LSA				pmax		pmax		
	comp=Z,17nm,0.8s							
AB01	**Akbulak array**	**16.84**	**329**	⇑P		Pn	**05 00 51.9**	**-4.4**
	comp=Z,11nm,0.6s							
AB31	**Akbulak array**	**16.84**	**329**	P		Pn	**05 00 51.8**	**-4.5**
AB31				S		S	**05 03 51.6**	**-19**
AB31				pmax		pmax		
	comp=Z,9.0nm,0.4s							
AB31				smax				
	comp=N,20nm,0.8s							
POO	**Poona**	**16.93**	**178**	*e*P		Pn	**05 00 57.0**	**-0.6**
POO				*ex*		x	05 01 10.5	
POO				*ex*		x	05 03 55.3	
VOSK	**Vostochnaya**	**17.28**	**355**	⇑P		Pn	**05 00 57.6**	**-4.1**
	comp=N,25nm,0.9s							
VOSK	**Vostochnaya**	**17.28**	**355**	P		Pn	**05 00 57.6**	**-4.1**
VOSK				pmax		pmax		
	comp=Z,25nm,1.0s							
BVA0	**Borovoye Array**	**17.62**	**354**	P		Pn	**05 01 03.1**	**-2.8**
	comp=Z,7.4nm,1.1s,baz=167,slow=11,SNR=113							
BVA0	**Borovoye Array**	**17.62**	**354**	*i*P		Pn	**05 01 03.1**	**-2.8**
BVA0				pmax		pmax		
	comp=Z,4.0nm,0.5s							
BVAR	**Borovoye Array**	**17.62**	**354**	P		Pn	**05 01 03.3**	**-2.6**
	comp=Z,4.1nm,0.3s,baz=165,slow=12,SNR=66							
BVAR					LR	LR	05 08 00.5	
	comp=Z,938nm,18.3s,baz=176,slow=38							
BVAR	**Borovoye Array**	**17.62**	**354**	P		Pn	**05 01 03.3**	**-2.6**
BVAR				pmax		pmax		
	comp=Z,4.0nm,0.3s							
BVAR					MLR	MLR		
	comp=Z,939nm,18.3s							
BRVK	**Borovoye**	**17.67**	**354**	⇑P		Pn	**05 01 03.1**	**-3.3**
	SNR=24							
BRVK	**Borovoye**	**17.67**	**354**	*e*Pn		Pn	**05 01 04.2**	**-2.3**
	comp=Z,97nm,1.1s							
BRVK	**Borovoye**	**17.67**	**354**	*e*P		Pn	**05 01 04.2**	**-2.3**
BRVK				pmax		pmax		
	comp=Z,97nm,1.1s							
WBK	**Wadi Bani Khal**	**17.87**	**228**	P		Pn	**05 01 12.1**	**+2.8**
	SNR=10							
AKTK	**Aktyubinsk**	**18.55**	**328**	P		Pn	**05 01 15.2**	**-2.1**
AKTK				S		S	**05 04 38.1**	**-6.6**
AKTK				LR		LR	05 09 09.7	
AKTO	**Aktyubinsk**	**18.55**	**328**	P		Pn	**05 01 15.2**	**-2.1**
	comp=Z,2.0nm,0.3s,baz=138,slow=8.2,SNR=70							
AKTO				S		S	**05 04 38.1**	**-6.6**
	comp=Z,0.2nm,0.3s,baz=215,slow=18,SNR=4.2							
AKTO					LR	LR	05 09 09.7	
	comp=Z,214nm,19.5s,baz=297,slow=40							
JMDO	**Jabal Madar**	**18.58**	**229**	P		Pn	**05 01 20.4**	**+2.6**
	SNR=13							
HYB	**Hyderabad**	**18.64**	**164**	*e*P		Pn	**05 01 14.0**	**-4.5**
HYB				*e*S		S	**05 04 51.0**	**+3.8**
HYB	**Hyderabad**	**18.64**	**164**	*i*P		Pn	**05 01 14.0**	**-4.5**

HYB eS S 05 04 33.0 -14
SHL Shillong 18.86 117 ex x 05 01 13.5
SHL ex x 05 04 38.5
BSY Bisya 18.88 232 P Pn **05 01 23.6 +2.2**
SNR=12
ARQ Araqi 18.91 235 ⇑P Pn **05 01 23.3 +1.5**
SNR=12
ZAA0 Zalesovo Array 20.14 20 eP P **05 01 32.9 -1.1**
ZALV Zalesovo Beam 20.14 20 P P **05 01 32.8 -1.2**
comp=Z,140nm,0.9s,baz=216,slow=9.1,SNR=130
ZALV S S **05 05 17.8 +0.3**
comp=Z,8.0nm,1.0s,baz=217,slow=14,SNR=5.6
ZALV LR LR 05 09 58.5
comp=Z,422nm,18.3s,MS3.8,baz=262,slow=39
ZALV Zalesovo Beam 20.14 20 P P **05 01 32.8 -1.2**
ZALV S S **05 05 17.8 +0.3**
ZALV pmax pmax
comp=Z,140nm,0.9s
ZALV smax
comp=N,8.0nm,1.0s
ZALV MLR MLR
comp=Z,422nm,18.3s,MS3.8
NVS Novosibirsk 20.54 17⇓*i*P P **05 01 36.1 -2.2**
NVS eS S **05 05 24.8 -0.5**
NVS pmax pmax
comp=Z,121nm,1.6s
NVS pmax pmax
comp=N,176nm,1.7s
NVS smax
comp=N,67nm,1.7s
IMP Imphal 20.82 115 eP P **05 01 42.0 +0.4**
GTA Gaotai 21.44 72 ⇓P P **05 01 48.4 +0.3**
GTA XP sP 05 02 04.3 -0.9
GTA PP 05 02 13.5
GTA S S **05 05 38.2 -5.1**
GTA AMB AMB
comp=Z,69nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,109nm,3.9s
GTA LR LR
comp=N,272nm,11.7s,MS4.0
GTA LR LR
comp=E,214nm,12.9s,MS4.0
GTA LR LR
comp=Z,401nm,10.5s,MS4.1
UMR Umm Al-Rimmam 22.28 262 eP P **05 01 56.5 -0.7**
baz=262
UMR AMb AMB 05 02 00.2
comp=Z,135nm,0.8s,mb5.4,baz=262
KBD Kabd 22.44 261 eP P **05 01 58.3 -0.6**
baz=261
KBD AMb AMB 05 02 01.9
comp=Z,99nm,0.9s,mb5.2,baz=261
MIB Mutribah 22.49 263 eP P **05 01 58.9 -0.5**
baz=263
MIB AMb AMB 05 02 06.7
comp=Z,231nm,0.8s,mb5.7,baz=263
RDF Al-Radifah 22.65 260 eP P **05 02 00.3 -0.8**
baz=260
RDF AMb AMB 05 02 05.1
comp=Z,183nm,0.9s,mb5.5,baz=260
NAY Al-Naaiem 22.77 261 eP P **05 02 01.5 -0.9**
baz=261
NAY AMb AMB 05 02 11.1
comp=Z,67nm,1.0s,mb5.0,baz=261
GNI Garni 22.92 290 P P **05 02 03.0 -0.9**
comp=Z,34nm,0.8s,mb4.8,baz=8.9,slow=5.3,SNR=13
GNI LR LR 05 13 06.5
comp=Z,121nm,20.4s,MS3.3,baz=113,slow=42
GNI Garni 22.92 290 eP P **05 02 05.2 +1.4**
comp=Z,91nm,1.2s,mb5.1
GNI Garni 22.92 290 eP P **05 02 05.2 +1.4**
GNI pmax pmax
comp=Z,91nm,1.2s
SVE Sverdlovsk 22.96 342⇓eP P **05 02 03.8 -0.3**
SVE eS S **05 06 11.7 +1.0**
SVE pmax pmax
comp=Z,54nm,1.0s,mb4.9
SVE MLR MLR
comp=Z,735nm,14.0s,MS4.3
ARU Arti 23.17 339 eP P **05 02 05.6 -0.8**
comp=Z,37nm,0.9s,mb4.8
ARU Arti 23.17 339*d i*P P **05 02 05.6 -0.8**
ARU *e* 05 02 30.0
ARU eS S **05 06 15.2 +1.0**
ARU eSS 05 06 49.2
ARU pmax pmax
comp=Z,47nm,1.0s,mb4.9
KRAR Krasnoyarsk 24.50 27⇑*i*P P **05 02 19.2 +0.6**
KRAR pmax pmax
comp=Z,25nm,0.4s,mb5.1
WHFO Wadi Hawf 24.59 230 P P **05 02 20.8 +1.0**
SNR=24
RBK Rabkut 24.64 228 P P **05 02 21.5 +1.3**
SNR=15
LZH Lanzhou 24.80 80 ⇑P P **05 02 22.5 +0.9**
LZH PP 05 03 00.3
LZH S S **05 06 38.9 -2.0**
LZH AMB AMB
comp=Z,56nm,1.5s,mb4.9
LZH AMB AMB
comp=Z,140nm,5.3s
LZH LR LR
comp=E,560nm,12.9s
LZH LR LR
comp=Z,620nm,13.6s,MS4.3
LZH Lanzhou 24.80 80 ⇑P P **05 02 22.5 +0.9**
comp=Z,56nm,1.5s,mb4.9
LZH pP 05 02 36.0
LZH sP sP 05 02 40.0 +0.6
LZH PP 05 03 00.3
LZH S S **05 06 38.9 -2.0**
LZH sS sS 05 07 00.0 -1.4
LZH SS 05 07 36.3
LZH LR LR
comp=Z,620nm,13.6s,MS4.3
LZH Lanzhou 24.80 80 ⇑P P **05 02 22.5 +0.9**
LZH *PP 05 02 36.0
LZH 05 03 00.3
LZH S S **05 06 38.9 -2.0**
LZH SS 05 07 36.3
LZH pmax pmax
comp=Z,56nm,1.5s,mb4.9
LZH MLR MLR
comp=Z,620nm,13.6s,MS4.3
KIV Kislovodsk 24.84 299 eP P **05 02 22.5 +0.7**
comp=Z,34nm,0.8s,mb4.9
KIV Kislovodsk 24.84 299 eP P **05 02 22.2 +0.4**
KIV eS S **05 06 42.8 +1.5**
KIV pmax pmax
comp=Z,20nm,0.9s,mb4.7
ABTO Aybut 25.32 230 P P **05 02 27.5 +1.2**
SNR=27
CD2 Chengdu 25.91 91 eP P **05 02 32.2 +0.6**
CD2 AP pP 05 02 44.7 +0.8
CD2 PP 05 03 14.3
CD2 S S **05 06 57.5 -1.0**
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.6
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,490nm,15.6s,MS4.2
CD2 LR LR
comp=E,280nm,14.4s,MS4.2
CD2 LR LR
comp=Z,310nm,15.6s,MS3.9
ZAK Zakamensk 26.33 46 eP P **05 02 35.4 +0.2**
ZAK pmax pmax
comp=Z,19nm,1.3s,mb4.5
SOKR Solikamsk 26.35 341⇑*i*P P **05 02 35.3 -0.1**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb4.7
SOKR MLR MLR
comp=Z,740nm,22.0s,MS4.2
TLY Talaya 27.06 44 eP P **05 02 43.5 +1.7**
TLY *e* 05 07 21.0
TLY MLR MLR
comp=Z,512nm,17.0s,MS4.2
KMI Kunming 27.41 104 P P **05 02 46.1 +0.8**
KMI AP pP 05 02 59.6 +2.0
KMI PP 05 03 34.8
KMI S S **05 07 22.1 -0.3**
KMI AMB AMB
comp=Z,13nm,0.8s,mb4.5
KMI AMB AMB
comp=Z,67nm,4.1s
KMI LR LR
comp=N,194nm,12.7s,MS3.9
KMI LR LR
comp=E,88nm,14.5s,MS3.9
KMI LR LR
comp=Z,133nm,14.5s,MS3.6
KMI Kunming 27.41 104 P P **05 02 46.1 +0.8**
comp=Z,13nm,0.8s,mb4.5
KMI pP pP 05 02 59.6 +2.0
KMI sP sP 05 03 06.0 +2.8
KMI PP 05 03 34.8
KMI S S **05 07 22.1 -0.3**
KMI sS sS 05 07 44.9 +1.8
KMI SS 05 08 42.3
KMI SSS 05 09 01.4
KMI LR LR
comp=Z,130nm,14.5s,MS3.6
KMI Kunming 27.41 104 P P **05 02 46.1 +0.8**
KMI *PP pP 05 02 59.6 +2.0
KMI 05 03 34.8
KMI S S **05 07 22.1 -0.3**
KMI SS 05 08 42.3
KMI SSS 05 09 01.4
KMI pmax pmax
comp=Z,13nm,0.8s,mb4.5
KMI MLR MLR
comp=Z,130nm,14.5s,MS3.6
SONM Songino Array 27.45 53 P P **05 02 46.1 +0.7**
comp=Z,10nm,0.8s,mb4.4,baz=257,slow=8.4,SNR=34
SONM PcP PcP 05 06 04.6 +1.8
comp=Z,1.4nm,0.8s,baz=270,slow=3.6,SNR=3.9
SONM LR LR 05 14 52.4
comp=Z,673nm,19.2s,MS4.2,baz=48,slow=39
SONM Songino Array 27.45 53 P P **05 02 46.1 +0.7**
SONM 05 06 04.6
SONM pmax pmax
comp=Z,10.0nm,0.9s
SONM MLR MLR
comp=Z,673nm,19.3s
VRHR Novokhopersk 27.50 314 eP P **05 02 45.2 -0.6**
VRHR pmax pmax
comp=Z,20nm,0.6s,mb4.8
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,40nm,0.9s
ULN Ulaanbaatar 27.89 53 eP P **05 02 48.9 -0.4**
comp=E,6.8nm,0.9s,mb4.3
ULN Ulaanbaatar 27.89 53⇑eP P **05 02 49.6 +0.3**
ULN Ulaanbaatar 27.89 53 P P **05 02 50.2 +0.9**
comp=E,12nm,1.1s,mb4.4
CHG Chiang Mai 28.17 119⇓P P **05 02 53.1 +1.1**
comp=E,19nm,0.9s,mb4.7
CHTO Chiang Mai 28.17 119 P P **05 02 53.9 +1.8**
SNR=5.6
CHTO Chiang Mai 28.17 119 eP P **05 02 52.5 +0.4**
comp=E,15nm,0.9s,mb4.6
CHTO Chiang Mai 28.17 119 eP P **05 02 52.5 +0.5**
CHTO pmax pmax
comp=Z,15nm,0.9s,mb4.6
CMAR Chiang Mai Arr 28.40 120 P P **05 02 54.5 +0.4**
comp=Z,8.2nm,0.8s,mb4.4,baz=304,slow=8.9,SNR=34
CMAR Chiang Mai Arr 28.40 120 P P **05 02 54.6 +0.5**
CMAR pmax pmax
comp=Z,8.0nm,0.8s
VORD Divnogorie 28.83 313 eP P **05 02 56.7 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,30nm,1.0s
VSR Storozhevoye 28.99 313 eP P **05 02 54.2 -4.8**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VSR pmax pmax
comp=E,20nm,1.0s
XAN Xi'an 29.27 82 P P **05 03 01.4 -0.3**
XAN AMB AMB
comp=Z,5.0nm,0.9s,mb4.2
XAN AMB AMB
comp=Z,48nm,4.8s
XAN LR LR
comp=N,101nm,12.0s,MS3.9
XAN LR LR
comp=E,151nm,10.7s,MS3.9
XAN LR LR
comp=Z,313nm,13.3s,MS4.1
GYA Guiyang 29.94 98 P P **05 03 09.4 +1.6**
GYA PP PP 05 04 07.2 -8.7
GYA PCP PcP 05 06 11.4 +1.9
GYA S S **05 08 01.6 -0.5**
GYA SCP ScP 05 09 47.6 -0.1
GYA SCS ScS 05 13 41.3 -1.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,150nm,5.0s
GYA LR LR
comp=N,550nm,17.3s,MS4.4
GYA LR LR
comp=E,440nm,16.9s,MS4.4
GYA LR LR
comp=Z,560nm,17.2s,MS4.3
HHC Hu-ho-hao-te 30.44 68 eP P **05 03 13.6 +1.6**
HHC AP pP 05 03 26.3 +1.9
HHC PP PP 05 04 10.4 -11
HHC PCP PcP 05 06 14.0 +3.5
HHC S S **05 08 08.2 -1.4**
HHC XS sS 05 08 26.1 -4.3
HHC SS SS 05 09 46.7 -34
HHC PCS PcS 05 09 57.6 +3.5
HHC AMB AMB
comp=Z,17nm,0.7s,mb4.9
HHC LR LR
comp=N,243nm,12.5s,MS4.2
HHC LR LR
comp=E,230nm,11.9s,MS4.2
HHC LR LR
comp=Z,249nm,11.9s,MS4.1
NST Nakhon Sawan 31.13 122 P P **05 03 09.0 -9.3**
BRTR Keskin Array B 31.45 290 P P **05 03 20.8 -0.2**
comp=Z,7nm,0.7s,mb4.2
BRTR Keskin Array B 31.45 290 P P **05 03 20.8 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
OBN Obninsk 31.86 319 eP P **05 03 24.4 +0.1**
comp=Z,83nm,0.8s,mb5.6
OBN Obninsk 31.86 319*ae*P P **05 03 24.1 -0.2**
OBN *e* pP 05 03 35.6 -1.1
OBN SS SS 05 10 16.0 -33
OBN pmax pmax
comp=Z,87nm,0.8s,mb5.6
BJI Beijing 34.01 69 P P **05 03 44.7 +1.4**
BJI S S **05 09 03.5 -1.8**
BJI AMB AMB
comp=Z,25nm,0.8s,mb5.2
BJI LR LR
comp=N,319nm,11.7s,MS4.4
BJI LR LR
comp=E,354nm,12.4s,MS4.4
BJI LR LR
comp=Z,203nm,17.6s
BJI Beijing 34.01 69 P P **05 03 44.7 +1.4**
comp=Z,25nm,0.8s,mb5.2
BJI S S **05 09 03.5 -1.8**
BJI LR LR
comp=Z,200nm,17.6s,MS3.9
WHN Wuhan 34.66 86 ⇑P P **05 03 49.8 +0.8**
AKASG Malin Array Be 34.96 310 P P **05 03 50.9 -0.5**
comp=Z,19nm,0.8s,mb5.1,baz=78,slow=7.4,SNR=47
AKASG Malin Array Be 34.96 310 P P **05 03 50.9 -0.5**
AKASG pmax pmax
comp=Z,19nm,0.8s
AKBB Malin Array Si 34.96 310 eP P **05 03 50.8 -0.6**
KIEV Kiev 34.97 310 eP P **05 03 50.8 -0.6**
comp=Z,11nm,0.6s,mb5.0
KIEV Kiev 34.97 310 eP P **05 03 50.8 -0.7**
KIEV pmax pmax
comp=Z,11nm,0.6s,mb5.0
BOD Bodaibo 35.01 38⇑*i*P P **05 03 50.5 -1.2**
BOD *e* 05 05 15.1
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BURAR Bucovina Array 37.33 304⇑P P **05 04 11.7 0.0**
BURAR Bucovina Array 37.33 304⇑*i*P P **05 04 11.7 0.0**
BUR08 Bucovina Ar. S 37.34 304 eP P **05 04 12.0 +0.3**
VOIR 37.46 300⇑P P **05 04 13.4 +0.6**
VOIR 37.46 300⇑*i*P P **05 04 13.4 +0.6**
JOF Joensuu 37.62 330 ep P **05 04 13.5 -0.4**
comp=Z,30nm,0.9s,mb5.0
JOF Joensuu 37.62 330 eP P **05 04 13.5 -0.4**
JOF pmax pmax
comp=Z,30nm,0.9s,mb5.0
NJ2 Nanjing 37.83 82 eP P **05 04 18.7 +2.6**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
VSU Vasula 38.07 322*de*P P **05 04 17.4 -0.4**
LVV L'vov 38.19 308 eP P **05 04 18.6 -0.3**
KWP Kalwaria 39.04 307 eP P **05 04 27.2 +1.2**
KWP Kalwaria 39.04 307⇑*i*P P **05 04 27.1 +1.1**
DRGR 39.04 303⇓P P **05 04 26.2 +0.1**
DRGR 39.04 303⇓*i*P P **05 04 26.2 +0.1**
LVZ Lovozero 39.04 338⇓eP P **05 04 25.7 -0.1**
LVZ pmax pmax
comp=Z,41nm,0.9s,mb5.2
GZR Gura Zlata 39.06 300⇑*i*P P **05 04 28.7 +2.4**
SUW Suwalki 39.10 314 eP P **05 04 26.1 -0.3**
APA Apatity 39.24 337⇓eP P **05 04 22.3 -5.2**
APA *i* 05 04 28.0
APA pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
APA MLR MLR
comp=Z,1μm,21.0s,MS4.7
KOLS Kolonicke sedl 39.31 306 eP P **05 04 28.9 +0.6**
KOLS *e* 05 04 36.0
KOLS ePP PP 05 05 58.7 -0.3
KAF Kangasniemi 39.43 327 ep P **05 04 28.7 -0.4**
comp=Z,8.5nm,0.8s,mb4.5,baz=110,slow=8.3
KAF Kangasniemi 39.43 327 eP P **05 04 28.7 -0.4**
KAF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CRVS Cervenica-Dubn 39.85 306 eP P **05 04 33.1 +0.3**
CRVS *e* 05 04 38.8
CRVS ePP PP 05 06 08.1 +3.3
BZS Buzias 39.86 301⇓P P **05 04 33.3 +0.4**
BZS Buzias 39.86 301⇓*i*P P **05 04 33.3 +0.4**
STHS Stebnicka Huta 39.99 307 eP P **05 04 34.0 +0.1**
comp=Z,4.8nm,0.8s,mb4.3
STHS Stebnicka Huta 39.99 307 eP P **05 04 34.0 +0.1**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
CN2 Changchun 40.48 62 eP P **05 04 39.4 +1.4**
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NIE Niedzica 40.60 307 eP P **05 04 40.3 +1.3**
PSZ Piszkesteto 40.91 305 eP P **05 04 42.2 +0.6**
PSZ Piszkesteto 40.91 305⇑*i*P P **05 04 42.5 +0.9**
OJC Ojcow 40.93 308 eP P **05 04 41.3 -0.4**
VYHS Vyhne 41.60 305 eP P **05 04 47.4 +0.2**
VYHS ePP PP 05 06 26.3 +2.5
KOLL Kolacno 41.88 306 eP P **05 04 49.4 -0.1**
PKSM Moragy 41.89 302⇓P P **05 04 49.7 +0.1**
PKSM Moragy 41.89 302⇓*i*P P **05 04 49.7 +0.1**
KEV Kevo 42.39 338 ep P **05 04 52.6 -0.7**
comp=Z,13nm,0.7s,mb4.7
KEV Kevo 42.39 338 eP P **05 04 52.6 -0.7**
KEV pmax pmax
comp=Z,13nm,0.7s,mb4.7
MORC Moravsky Berou 42.39 307 eP P **05 04 53.5 -0.2**
comp=Z,11nm,0.8s,mb4.5
MORC Moravsky Berou 42.39 307⇑*i*P P **05 04 54.3 +0.6**
GKP Gorka Klasztor 42.57 313 eP P **05 04 55.6 +0.6**
MODS Modra-Piesok 42.64 305 eP P **05 04 52.5 -3.2**
MODS ePP PP 05 06 36.7 +1.7
ARCES ARCESS Array B 42.74 337 P P **05 04 56.2 0.0**
comp=Z,28nm,0.8s,mb5.1,baz=114,slow=7.3,SNR=57
ARCES LR LR 05 23 56.6
comp=Z,506nm,19.8s,MS4.4,baz=118,slow=38
ARCES ARCESS Array B 42.74 337 P P **05 04 56.2 0.0**
ARCES pmax pmax
comp=Z,28nm,0.8s
ARCES MLR MLR
comp=Z,506nm,19.8s
VRAC Vranov 43.03 307⇑P P **05 04 59.9 +1.1**
VRAC Vranov 43.03 307⇑*i*P P **05 04 59.9 +1.1**
DPC Dobruska-Polom 43.16 308 eP P **05 05 00.5 +0.7**
KTK1 Kautokeino 43.24 336 eP P **05 05 00.5 +0.2**
KTK1 AMb AMB 05 05 01.9
comp=N,35nm,1.2s
MDJ Mudanjiang 43.33 60 P P **05 05 00.2 -1.1**
MDJ AP pP 05 05 13.6 -0.4
MDJ PP PP 05 06 41.1 -1.4
MDJ SCP ScP 05 10 35.9 -0.9
MDJ PCS PcS 05 10 41.7 -0.1
MDJ S S **05 11 23.6 -1.9**
MDJ AMB AMB
comp=Z,3.0nm,0.8s,mb4.1
MDJ AMB AMB
comp=Z,110nm,6.5s
MDJ LR LR
comp=N,258nm,9.0s
MDJ LR LR
comp=E,321nm,12.6s
MDJ LR LR
comp=Z,271nm,21.7s
UPC Upice 43.35 309 eP P **05 05 02.2 +0.8**
KSRS Korea Array 43.51 71 P P **05 05 03.0 +0.2**
comp=Z,11nm,1.0s,mb4.5,baz=275,slow=7.5,SNR=18
KSRS PcP PcP 05 06 50.2 +0.1
comp=Z,2.1nm,0.8s,baz=277,slow=2.8,SNR=5.5
KSRS LR LR 05 25 39.0
comp=Z,168nm,20.2s,MS3.9,baz=85,slow=40
KSRS Korea Array 43.51 71 P P **05 05 03.1 +0.3**
KSRS 05 06 50.3
KSRS pmax pmax
comp=Z,11nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,168nm,20.2s,MS3.9
CONA Conrad Observa 43.62 305⇑*i*P P **05 05 03.2 -0.4**
comp=Z,14nm,0.9s,mb4.7
CSNA Conrad Observa 43.62 305⇑*i*P P **05 05 03.3 -0.3**
comp=Z,14nm,1.0s,mb4.7
YAK Yakutsk 43.74 35 eP P **05 05 03.6 -0.8**
YAK pmax pmax
comp=Z,29nm,0.9s,mb5.0
YAK pmax pmax
comp=N,6.0nm,1.4s
PPI Padang Panjang 43.85 139 P P **05 05 06.3 +0.5**
comp=N,23nm,1.1s,comp=N,2μm,mb4.8
PDSI Padang 44.27 139 P P **05 05 09.0 -0.1**
comp=N,72nm,0.9s,mb5.4
SOKA Soboth 44.32 303⇑*i*P P **05 05 09.3 +0.1**
comp=N,12nm,0.7s,mb4.7
PRU Pruhonice 44.32 308 eP P **05 05 09.6 +0.4**
BRG Berggiesshubel 44.64 309 eP P **05 05 12.0 +0.3**
comp=N,6.9nm,1.1s,mb4.4
BRG Berggiesshubel 44.64 309 eP P **05 05 12.0 +0.3**
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
BRG Berggiesshubel 44.64 309 eP P **05 05 12.1 +0.4**
comp=Z,12nm,1.1s,mb4.6
MOA Molln 44.70 305⇑*i*P P **05 05 12.5 +0.3**
comp=Z,12nm,1.0s,mb4.7
TRO Tromso 44.90 336 eP P **05 05 13.6 +0.1**
CUC Castrocucco 44.94 294 eP P **05 05 14.6 +0.3**
comp=Z,48nm,0.8s,mb5.4
HFS Hagfors 44.95 322 P P **05 05 13.8 -0.2**
comp=Z,46nm,0.7s,mb5.4,baz=98,slow=11,SNR=75
GERES GERESS Array B 44.97 306 P P **05 05 14.5 +0.1**
comp=Z,1.6nm,0.7s,mb3.9,baz=79,slow=6.9,SNR=7.6
GERES PcP PcP 05 06 56.1 +1.2
comp=Z,1.5nm,0.7s,baz=46,slow=2.8,SNR=4.8
GERES GERESS Array B 44.97 306 P P **05 05 14.5 +0.2**
GERES 05 06 56.1
GERES pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 45.02 307⇑eP P **05 05 15.1 +0.3**
KHC Kasperske Hory 45.02 307 eP P **05 05 14.8 0.0**
KHC epP pP 05 05 27.5 0.0
CLL Collm 45.21 310 eP P **05 05 17.0 +0.8**
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CLL Collm 45.21 310 eP P **05 05 17.0 +0.8**
comp=Z,9.0nm,1.0s,mb4.5
MOR8 Moi Rana 45.56 331 eP P **05 05 17.6 -1.2**

comp=Z,82nm,0.9s,mb5.7
MOR8 Moi Rana 45.56 331 *e*P **P 05 05 17.6 -1.2**
MOR8 AMb AMB 05 05 19.4
comp=Z,82nm,0.9s,mb5.7
MOX Moxa 46.14 309 *e*P **P 05 05 23.3 -0.3**
comp=Z,17nm,1.5s,mb4.8
MOX Moxa 46.14 309 *e*P **P 05 05 23.3 -0.3**
MOX pmax pmax
comp=Z,17nm,1.5s,mb4.8
NB2 NORSAR Subarra 46.25 323 P **P 05 05 23.4 -0.9**
comp=Z,20nm,0.8s,mb5.1,baz=93,slow=7.9
NOA NORSAR Array B 46.25 323 P **P 05 05 23.5 -0.8**
comp=Z,19nm,0.7s,mb5.1,baz=95,slow=7.6,SNR=53
NOA LR LR 05 25 46.9
comp=Z,112nm,18.3s,MS3.9,baz=290,slow=37
NOA NORSAR Array B 46.25 323 P **P 05 05 23.5 -0.8**
NOA pmax pmax
comp=Z,19nm,0.7s
NOA MLR MLR
comp=Z,113nm,18.3s
LOF Lofoten 46.33 333 *e*P **P 05 05 26.6 +1.8**
NAO01 NORSAR Array S 46.39 323 *e*P **P 05 05 25.0 -0.4**
comp=Z,16nm,0.9s,mb5.0
GRA1 Grafenberg Arr 46.49 308 *e*P **P 05 05 27.2 +0.9**
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 46.49 308 *e*P **P 05 05 27.2 +0.9**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 46.49 308 *e*P **P 05 05 27.2 +0.9**
GRF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 46.49 308 *e*P **P 05 05 27.2 +0.9**
comp=Z,10.0nm,0.8s,mb4.8
BSEG Bad Segeberg 46.68 314 *e*P **P 05 05 29.0 +1.2**
BSEG pmax pmax
comp=Z,31nm,1.0s,mb5.2
BSEG Bad Segeberg 46.68 314 *e*P **P 05 05 29.0 +1.2**
comp=Z,31nm,1.0s,mb5.2
CLZ Clausthal 46.80 311 *e*P **P 05 05 28.9 +0.1**
CLZ pmax pmax
comp=Z,20nm,1.1s,mb5.0
CLZ Clausthal 46.80 311 *e*P **P 05 05 28.9 +0.1**
comp=Z,20nm,1.1s,mb5.0
MOTA Moosalm 46.89 305⇑ *i*P **P 05 05 28.8 -0.7**
comp=Z,9.1nm,0.9s,mb4.7
KONO Kongsberg 46.98 322 *e*P **P 05 05 29.7 -0.4**
comp=Z,19nm,0.7s,mb5.1
KONO Kongsberg 46.98 322⇑ *e*P **P 05 05 30.2 +0.2**
KSI Kapahiang 47.70 139 P **P 05 05 35.9 -0.3**
comp=Z,213nm,0.9s,comp=Z,8µm,mb6.2
DAVA Damuels 47.72 305⇓ *i*P **P 05 05 35.6 -0.3**
comp=Z,17nm,0.7s,mb5.2
BLS5 Blasjo 48.58 321 *e*P **P 05 05 43.4 +1.0**
SPITS Spitsbergen Ar 48.87 347 P **P 05 05 43.5 -0.9**
comp=Z,6.5nm,0.6s,mb4.9,baz=336,slow=12,SNR=12
SPITS Spitsbergen Ar 48.87 347 P **P 05 05 43.5 -0.9**
SPITS pmax pmax
comp=Z,7.0nm,0.6s
CDF Champ du Feu 49.25 307 *e*P **P 05 05 48.2 +0.5**
HINF Hinteralfeld 49.64 306 *e*P **P 05 05 49.8 -0.9**
comp=Z,14nm,1.0s,mb4.6
HINF Hinteralfeld 49.64 306 *e*P **P 05 05 49.8 -0.9**
comp=Z,6.8nm,1.0s,mb4.6
HINF Hinteralfeld 49.64 306 *e*P **P 05 05 49.8 -0.9**
HINF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
HAU Haudompre 49.93 306 *e*P **P 05 05 53.1 +0.2**
SBF Sospel 50.11 301 *e*P **P 05 05 54.5 +0.2**
comp=Z,80nm,1.2s,mb5.3
SBF Sospel 50.11 301 *e*P **P 05 05 54.5 +0.2**
comp=Z,40nm,1.2s,mb5.3
SBF Sospel 50.11 301 *e*P **P 05 05 54.5 +0.2**
SBF pmax pmax
comp=Z,40nm,1.2s,mb5.3
STKI Sintang 50.11 126 P **P 05 05 56.3 +1.6**
comp=Z,55nm,0.9s,mb5.6
LPG La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
comp=Z,23nm,0.9s,mb4.9
LPG La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
comp=Z,11nm,0.9s,mb4.9
LPG La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
LPG pmax pmax
comp=Z,11nm,0.9s,mb4.9
LPL La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
comp=Z,22nm,1.0s,mb4.8
LPL La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
comp=Z,11nm,1.0s,mb4.8
LPL La Plagne 50.20 303 *e*P **P 05 05 54.7 -0.3**
LPL pmax pmax
comp=Z,11nm,1.0s,mb4.8
MBDF Montbardon 50.36 302 *e*P **P 05 05 56.1 -0.1**
comp=Z,17nm,0.8s,mb4.8
MBDF Montbardon 50.36 302 *e*P **P 05 05 56.1 -0.1**
comp=Z,8.4nm,0.8s,mb4.8
MBDF Montbardon 50.36 302 *e*P **P 05 05 56.1 -0.1**
MBDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CABF La Chapelle 50.40 304 *e*P **P 05 05 56.1 -0.4**
FRF La Foret Royal 50.74 301 *e*P **P 05 05 58.8 -0.3**
comp=Z,46nm,1.2s,mb5.0
FRF La Foret Royal 50.74 301 *e*P **P 05 05 58.8 -0.3**
comp=Z,23nm,1.2s,mb5.0
FRF La Foret Royal 50.74 301 *e*P **P 05 05 58.8 -0.3**
FRF pmax pmax
comp=Z,23nm,1.2s,mb5.0
BAIF Baives 50.91 309 *e*P **P 05 06 01.6 +1.3**
ORIF Oris-en-Rattie 50.93 302 *e*P **P 05 06 00.0 -0.5**
KEST Kesra 51.06 290 P **P 05 06 02.0 +0.4**
comp=Z,4.6nm,0.7s,mb4.5,baz=254,slow=2.3,SNR=12
SMRF Simiane la Rot 51.38 301 *e*P **P 05 06 04.2 +0.3**
comp=Z,72nm,1.3s,mb5.1
SMRF Simiane la Rot 51.38 301 *e*P **P 05 06 04.2 +0.3**
comp=Z,72nm,1.3s,mb5.5
MJAR Matsushiro Arr 51.64 69 P **P 05 06 05.2 -0.7**
comp=Z,2.4nm,0.6s,mb4.3,baz=284,slow=11,SNR=4.4
MJAR LR LR 05 29 45.7
comp=Z,49nm,20.9s,MS3.5,baz=300,slow=38
MJAR Matsushiro Arr 51.64 69 P **P 05 06 05.2 -0.8**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
MJAR MLR MLR
comp=Z,49nm,21.0s
VIVF Saint-Julien-l 51.78 303 *e*P **P 05 06 07.6 +0.8**
SMF Signal de Mont 51.90 305 *e*P **P 05 06 06.9 -0.8**
comp=Z,21nm,1.1s,mb4.7
SMF Signal de Mont 51.90 305 *e*P **P 05 06 06.9 -0.8**
comp=Z,10nm,1.1s,mb4.7
SMF Signal de Mont 51.90 305 *e*P **P 05 06 06.9 -0.8**
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
SSF Saint Saulge 52.02 306 *e*P **P 05 06 07.5 -1.1**
AVF Avril sur Loir 52.19 305 *e*P **P 05 06 08.9 -1.0**
comp=Z,12nm,0.8s,mb4.6
AVF Avril sur Loir 52.19 305 *e*P **P 05 06 08.9 -1.0**
comp=Z,6.2nm,0.8s,mb4.6
AVF Avril sur Loir 52.19 305 *e*P **P 05 06 08.9 -1.0**
AVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LASF Ste Croix 52.55 302 *e*P **P 05 06 12.2 -0.4**
comp=Z,66nm,1.4s,mb5.1
TCF Toulx Ste Croi 53.08 305 *e*P **P 05 06 16.1 -0.3**
CAF Calviac 53.54 303 *e*P **P 05 06 19.7 -0.2**
HPK Haverah Park 53.66 315 *e*P **P 05 06 20.0 -0.6**
HPK AMb AMB 05 06 23.8
comp=Z,153nm,1.9s,mb5.6
XSO Sourhope Farm 53.70 317 *e*P **P 05 06 20.3 -0.6**
XAL Allendale 53.81 316 *e*P **P 05 06 21.1 -0.6**
MCD Coleburn Disti 53.84 320 *e*P **P 05 06 21.4 -0.5**
LDF La Druitiere 54.01 308 *e*P **P 05 06 23.7 +0.5**
WOL Wolverton 54.02 312 *e*P **P 05 06 23.3 0.0**
EDI Edinburgh 54.13 318 *e*P **P 05 06 23.3 -0.7**
EDI AMb AMB 05 06 32.0
comp=Z,45nm,1.6s,mb5.1
FLN La Foliniere 54.19 308 *e*P **P 05 06 24.5 -0.1**
comp=Z,52nm,1.1s,mb5.1
FLN La Foliniere 54.19 308 *e*P **P 05 06 24.5 -0.1**
comp=Z,26nm,1.1s,mb5.1
FLN La Foliniere 54.19 308 *e*P **P 05 06 24.5 -0.1**
FLN pmax pmax
comp=Z,26nm,1.1s,mb5.1
SEY Seymchan 54.24 34⇑ *e*P **P 05 06 25.2 +0.5**
EKA Eskdalemuir Ar 54.24 317 P **P 05 06 24.4 -0.4**
comp=Z,17nm,0.9s,mb5.0,baz=90,slow=7.7,SNR=22
EKA PcP PcP 05 07 29.1 +0.5
comp=Z,5.4nm,0.9s,baz=107,slow=4.5,SNR=3.9
EKA Eskdalemuir Ar 54.24 317 P **P 05 06 24.5 -0.3**
EKA 05 07 29.1
EKA pmax pmax
comp=Z,17nm,0.9s
ECK Cauldkaine Hil 54.26 317 *e*P **P 05 06 24.5 -0.4**
MVH1 Achvaich 54.27 320 *e*P **P 05 06 24.4 -0.6**
LFF La Frestale 54.44 304 *e*P **P 05 06 27.0 +0.5**
MDO Dochfour 54.46 320 *e*P **P 05 06 25.7 -0.6**
RSC Scourie 54.69 321 *e*P **P 05 06 28.0 -0.1**
PCA1 Carrot 54.77 317 *e*P **P 05 06 28.2 -0.5**
HGH Gray Hill 54.90 312 *e*P **P 05 06 29.3 -0.3**
MCH1 Michaelchurch 54.92 313 *e*P **P 05 06 29.5 -0.3**
MCH1 AMb AMB 05 06 31.1
comp=Z,82nm,2.0s,mb5.4
KAC Achnashellach 54.94 320 *e*P **P 05 06 29.4 -0.4**
BBKI Banjar Baru 54.97 126 P **P 05 06 32.1 +1.5**
comp=Z,71nm,0.7s,mb5.8
HTR Trewern Hill 55.06 313 *e*P **P 05 06 30.3 -0.6**
KSB Sheil Bridge 55.07 319 *e*P **P 05 06 30.1 -0.6**
KPL Plockton 55.16 320 *e*P **P 05 06 30.7 -0.7**
KPL AMb AMB 05 06 43.4
comp=Z,92nm,1.7s,mb5.5
EPF Esparros 55.30 302 *e*P **P 05 06 31.7 -1.0**
comp=Z,9.3nm,0.9s,mb4.5
EPF Esparros 55.30 302 *e*P **P 05 06 31.7 -1.0**
comp=Z,4.7nm,0.9s,mb4.5
EPF Esparros 55.30 302 *e*P **P 05 06 31.7 -1.0**
EPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KAR1 Arisaig 55.35 319 *e*P **P 05 06 32.5 -0.3**
RRH Rhenigidale 55.57 320 *e*P **P 05 06 34.3 -0.1**
ETSF Etsaut 55.97 302 *e*P **P 05 06 37.1 -0.4**
comp=Z,33nm,1.2s,mb5.0
ETSF Etsaut 55.97 302 *e*P **P 05 06 37.1 -0.4**
comp=Z,16nm,1.2s,mb4.9
ETSF Etsaut 55.97 302 *e*P **P 05 06 37.1 -0.4**
ETSF pmax pmax
comp=Z,16nm,1.2s,mb4.9
PETK Petropavlovsk- 59.42 44 P **P 05 07 01.7 +0.1**
comp=Z,4.2nm,0.8s,mb4.5,baz=234,slow=5.1,SNR=3.7
PETK LR LR 05 34 27.0
comp=Z,92nm,18.9s,MS3.9,baz=109,slow=38
TAM Tamanrasset 59.44 277 *e*P **P 05 07 02.3 +0.2**
ESDC Sonseca Array 59.51 299 P **P 05 07 01.6 -0.8**
comp=Z,12nm,0.6s,mb4.1,baz=57,slow=7.0,SNR=11
MTE Iteigas 61.75 301 *e*P **P 05 07 18.4 +0.7**
comp=Z,9.4nm,0.8s,mb5.0
EVO Evora 62.85 299 *e*P **P 05 07 26.0 +0.9**
comp=Z,11nm,1.1s,mb4.6
LSZ Lusaka 66.11 228 P **P 05 07 46.3 -0.2**
comp=Z,7.8nm,1.1s,mb4.7,baz=64,slow=7.0,SNR=8.4
LSZ Lusaka 66.11 228 P **P 05 07 46.3 -0.2**
LSZ pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
TOA0 Torodi Ar. Sit 67.51 270 *e*P **P 05 07 54.4 -1.2**
TORD Torodi Ar. Bea 67.51 270 P **P 05 07 54.0 -1.6**
comp=Z,18nm,0.7s,mb5.2,baz=46,slow=5.7,SNR=128
TORD LR LR 05 40 55.4
comp=Z,91nm,18.9s,MS4.0,baz=120,slow=39
SFJD Kangerlussuaq 69.32 340 P **P 05 08 04.2 -1.8**
comp=Z,13nm,0.8s,mb4.9,baz=38,slow=5.9,SNR=4.9
SFJD Kangerlussuaq 69.32 340 P **P 05 08 04.2 -1.8**
SFJD pmax pmax
comp=Z,13nm,0.8s,mb4.9
COLD Coldfoot 72.42 16 *e*P **P 05 08 25.3 +0.5**
comp=Z,17nm,0.9s,mb5.0
IMA2 Indian Mountai 72.51 18 *e*P **P 05 08 25.2 -0.2**
KAKA Kakadu 73.68 119 *e*P Px 05 08 21.1
comp=Z,12nm,0.9s
INK Inuvik 74.58 10 *e*P **P 05 08 38.0 +0.5**
comp=Z,598nm,0.8s
BPAW Bear Paw Mtn. 74.77 19 *e*P **P 05 08 38.7 0.0**
comp=Z,12nm,0.8s,mb4.9
COLA College 74.91 17 *e*P **P 05 08 39.8 +0.3**
comp=Z,20nm,0.8s,mb5.1
COLA College 74.91 17 *d i*P **P 05 08 40.0 +0.5**
LBTB Lobatse 75.18 224 *e*P **P 05 08 42.2 +0.7**
comp=Z,12nm,0.8s,mb4.9
LBTB Lobatse 75.18 224 *e*P **P 05 08 42.3 +0.8**
LBTB pmax pmax
comp=Z,12nm,0.8s,mb4.9
KTH Kantishna Hill 75.23 19 *e*P **P 05 08 41.8 +0.4**
comp=Z,21nm,0.9s,mb5.1
PPLA Purkeypile 75.42 20 *e*P **P 05 08 42.6 +0.2**
comp=Z,31nm,1.3s,mb5.1
TRF Thorofare Moun 75.48 19 *e*P **P 05 08 42.9 +0.1**
comp=Z,11nm,0.9s,mb4.8
MCK McKinley 75.60 18 *e*P **P 05 08 43.5 0.0**
comp=Z,10nm,0.9s,mb4.8
MCK *e*PcP PcP 05 08 56.1 -0.1
MCK *e*pP pP 05 08 57.9 +0.8
MCK McKinley 75.60 18 *e*P **P 05 08 43.5 0.0**
MCK *e* pP 05 08 56.1 -1.0
MCK *e**PP pP 05 08 57.9 +0.8
MCK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TSUM Tsumeb 75.75 234 *e*P **P 05 08 46.2 +1.3**
comp=Z,15nm,0.8s,mb5.0
SVW2 Sparrevohn 75.86 22 *e*P **P 05 08 44.5 -0.4**
DBIC Dimbokro 76.46 269 P **P 05 08 48.8 -0.4**
comp=Z,11nm,0.8s,mb4.8,baz=28,slow=5.7,SNR=10
DBIC LR LR 05 45 57.6
comp=Z,116nm,19.4s,MS4.2,baz=302,slow=38
DBIC Dimbokro 76.46 269 *e*P **P 05 08 48.9 -0.3**
comp=Z,12nm,0.8s,mb4.9
DBIC Dimbokro 76.46 269 *e*P **P 05 08 48.9 -0.3**
DBIC pmax pmax
comp=Z,12nm,0.8s
EGAK Eagle 76.47 14 *e*P **P 05 08 48.7 +0.3**
comp=Z,8.2nm,0.9s,mb4.7
KIC Kosan Boka 76.54 268 *e*P **P 05 08 49.2 -0.5**
comp=Z,109nm,1.0s,mb5.8
TIC Toumodi 76.61 269 *e*P **P 05 08 49.5 -0.5**
comp=Z,62nm,0.9s,mb5.5
TIC Toumodi 76.61 269 *e*P **P 05 08 49.5 -0.5**
TIC pmax pmax
comp=Z,62nm,0.9s,mb5.5
LIC Lamto 76.85 268 *e*P **P 05 08 50.8 -0.6**
comp=Z,37nm,1.0s,mb5.0
LIC Lamto 76.85 268 *e*P **P 05 08 50.9 -0.5**
comp=Z,48nm,1.0s,mb5.4
LIC Lamto 76.85 268 *e*P **P 05 08 50.8 -0.6**
comp=Z,18nm,1.0s,mb5.0
PMR Palmer 77.32 19 *e*P **P 05 08 53.1 -0.1**
comp=Z,7.2nm,0.9s,mb4.6
PMR Palmer 77.32 19 *e*P **P 05 08 53.1 -0.1**
PMR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
DAWY Dawson 77.46 14 *e*P **P 05 08 53.8 -0.2**
SLKM Skilak Lake 77.91 20 *e*P **P 05 08 56.1 -0.4**
BOSA Boshof 78.18 222 P **P 05 08 57.8 -0.7**
comp=Z,8.7nm,0.8s,mb4.8,baz=52,slow=2.3,SNR=6.7
BOSA LR LR 05 42 14.4
comp=Z,139nm,18.5s,MS4.3,baz=359,slow=35
KDAK Kodiak Island 79.42 23 P pP 05 09 16.8 -1.9
comp=Z,15nm,0.9s,baz=351,slow=5.3,SNR=6.5
WRA Warramunga Arr 79.94 123 P **P 05 09 08.8 +0.5**
comp=Z,10nm,0.8s,mb4.8,baz=322,slow=5.1,SNR=80
WRA Warramunga Arr 79.94 123 P **P 05 09 08.8 +0.6**
WRA pmax pmax
comp=Z,10.0nm,0.8s
WRAB Tennant Creek 79.94 123 *e*P **P 05 09 08.7 +0.4**
comp=Z,14nm,0.8s,mb4.9
WRAB Tennant Creek 79.94 123 *e*P **P 05 09 08.7 +0.5**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb4.9
WRAB Tennant Creek 79.94 123 P **P 05 09 09.1 +0.9**
comp=Z,24nm,0.9s,mb5.1
WB2 Warramunga Arr 79.95 123 *e*P **P 05 09 08.4 +0.1**
HYT Haines Junctio 80.77 15 *e*P **P 05 09 13.1 +1.0**
YKA Yellowknife Ar 82.13 4 P **P 05 09 19.6 +0.4**
comp=Z,11nm,0.8s,mb4.8,baz=348,slow=5.2,SNR=12
YKA LR LR 05 50 03.1
comp=Z,47nm,18.1s,MS3.9,baz=50,slow=39
ASAR Alice Springs 82.22 126 P **P 05 09 20.6 +0.4**
comp=Z,6.3nm,0.8s,mb4.6,baz=317,slow=5.4,SNR=58
ASAR Alice Springs 82.22 126 P **P 05 09 20.7 +0.4**
ASAR pmax pmax
comp=Z,6.0nm,0.8s
SUR Sutherland 83.52 222 P **P 05 09 28.0 +1.2**
comp=Z,8.4nm,0.8s,mb4.9,baz=76,slow=6.4,SNR=6.0
SUR Sutherland 83.52 222 P **P 05 09 28.0 +1.2**
CTA Charters Tower 88.49 116 *e*P **P 05 09 50.8 -0.8**
comp=Z,4.9nm,0.7s,mb4.8
CTA Charters Tower 88.49 116 LR LR 05 56 36.3
comp=Z,28nm,18.0s,MS3.7,baz=231,slow=40
CTA Charters Tower 88.49 116 *e*P **P 05 09 50.8 -0.8**
CTA pmax pmax
comp=Z,5.0nm,0.7s
FFC Flin Flon 90.03 357 *e*P **P 05 09 58.5 +0.1**
comp=Z,13nm,0.9s,mb5.3
FFC Flin Flon 90.03 357 *e*P **P 05 09 58.5 +0.1**
FFC pmax pmax
comp=Z,13nm,0.9s,mb5.3
EDM Edmonton 91.45 4 *e*P **P 05 10 05.9 +0.9**
STKA Stephens Creek 92.76 128 P **P 05 10 11.1 -0.2**
comp=Z,1.6nm,0.7s,mb4.5,baz=310,slow=8.6,SNR=3.5
STKA LR LR 05 57 16.6
comp=Z,75nm,18.9s,MS4.2,baz=208,slow=39
ULM Lac du Bonnet 94.07 353 LR LR 05 54 54.2
comp=Z,122nm,18.6s,MS4.4,baz=78,slow=37
MIV Mineville/With 95.22 337 *e*P **P 05 10 20.9 -1.7**
CHMT Chamberlain Mo 97.74 4 *e*P **P 05 10 34.9 +1.0**
ARMA Armidale 98.61 121 *e*P **P 05 10 39.1 +1.1**
comp=Z,1.2nm,0.8s,mb4.5
ARMA *ep*P pP 05 10 53.7 +1.8
GCMT Greycliff 99.03 2 *e*P **P 05 10 39.7 0.0**
GCMT *ep*P pP 05 10 55.0 +1.3
GCMT *es*P sP 05 11 01.9 +2.9
PDAR Pinedale Array 102.06 2 P Pdif 05 10 53.7 +0.5
comp=Z,0.7nm,0.9s,baz=11,slow=3.0,SNR=3.8
TXAR Lajitas Array 115.44 357 PKP PKPdf 05 15 41.1 +0.2
comp=Z,0.2nm,0.7s,baz=14,slow=2.2,SNR=2.8
QSPA South Pole Qui 125.31 180 PKP PKPdf 05 15 58.2 0.0
comp=Z,2.2nm,0.7s,baz=233,slow=1.4,SNR=7.1
NNA Nana 144.20 303 *e*PKPdf PKPdf 05 16 33.6 -1.6
PLCA Paso Flores 151.16 249 PKPbc PKPbc 05 16 51.0 -0.9
comp=Z,3.0nm,0.8s,baz=99,slow=2.3,SNR=8.9
PLCA Paso Flores 151.16 249 PKIKP PKPbc 05 16 51.0 -0.8
PLCA pmax pmax
comp=Z,3.0nm,0.8s

IDC ***12*** *05:20:28.7±0.9,3784N×7161E,h0km,mb4.1/9, mb1 4.4/13,mb1mx4.2/25,mbtmp4.2/13,ML4.1/4,MS3.3/9, Ms1 3.4/9,ms1mx3.1/34,Error ellipse: s-maj=19.0km s-min=17.3km az=147.0*
NNC ***12*** *05:20:29.4±2.7,3807N×7111E,h0km,mb4.3,mpv4.3, Error ellipse: s-maj=22.0km s-min=19.5km az=24.0*
NEIC ***12*** *05:20:30.2±0.5,3797N×7142E,h10km,mb4.6/6,Error ellipse: s-maj=10.1km s-min=4.9km az=63.0*
BJI ***12*** *05:20:32.0,3837N×7139E,h10km,mb4.3,ML4.1,Ms4.1*
ISCJB ***12*** *05:20:32.1±0.3,3800N±003×7149E±005,h53km, mb4.1/15,MS3.3/7,Error ellipse: s-maj=6.6km s-min=3.5km az=157.3*
MOS ***12*** *05:20:36.9±1.5,3824N×7156E,h75km,mb4.3/8,Error ellipse: s-maj=14.6km s-min=7.0km az=89.0*

ISC 12 05:20:29.8±1.6,3799N±003×7149E±005,h3km±10km,n99,
σ1°23/104,mb4.1/15,MS3.3/7,6C-7D,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.82**	**65**	*e*PG		**Pg**	**05 21 39.8**	**-3.3**
KSH					SG	**Sg**	**05 22 31.9**	**-0.8**
KSH					Smax			
	comp=N,99nm,0.8s							
KSH					Smax			
	comp=E,101nm,1.0s							
CEP	**Cherat**	**4.17**	**175**	P		**Pb**	**05 21 43.2**	**-0.7**
CEP					S	**Sg**	**05 22 50.0**	**+6.1**
AML	**Almayashu**	**4.47**	**22**	*e*Pn		**Pn**	**05 21 39.7**	**+1.3**
AML				*e*Sn		**Sn**	**05 22 35.5**	**+4.6**
AML	**Almayashu**	**4.47**	**22**	P		**Pn**	**05 21 39.5**	**+1.1**
	SNR=18							
UCH	**Uchtor**	**4.82**	**28**	*e*Pn		**Pn**	**05 21 47.2**	**+4.0**
EKS2	**Erkin-Say**	**4.98**	**20**	*e*Pn		**Pn**	**05 21 47.8**	**+2.4**
	comp=E,74nm,0.6s							
EKS2	**Erkin-Say**	**4.98**	**20**	P		**Pn**	**05 21 49.2**	**+3.8**
	SNR=48							
KK31	**Karatay Array**	**5.16**	**352**	⇓Pn		**Pn**	**05 21 46.7**	**-1.2**
	comp=E,17nm,0.4s,baz=178,slow=14							
KK31				⇓Sn		**Sn**	**05 22 46.8**	**-1.0**
	comp=E,47nm,0.5s,baz=180,slow=23							
KK31				⇑Lg			05 23 10.3	
	comp=E,201nm,0.8s,baz=176,slow=27							
KK31	**Karatay Array**	**5.16**	**352**	PN		**Pn**	**05 21 46.6**	**-1.3**
KK31							05 22 47.9	
KK31					pmax	pmax		
	comp=Z,8.0nm,0.2s							
KK31					smax			
	comp=N,28nm,0.3s							
KK31					pmax	pmax		
	comp=N,114nm,0.5s							
AAK	**Ala-Archa**	**5.17**	**25**	P		**Pn**	**05 21 51.6**	**+3.6**
	SNR=11							
THW	**Thamme Wali**	**5.19**	**178**	P		**Pn**	**05 21 57.9**	**+10**
KBK	**Karagaybulak**	**5.36**	**29**	P		**Pn**	**05 21 55.4**	**+4.8**
	SNR=14							
CHMS	**Chumysh**	**5.58**	**25**	P		**Pn**	**05 21 59.1**	**+5.4**
	SNR=8.3							
USP	**Ospenovka**	**5.75**	**23**	P		**Pn**	**05 21 59.7**	**+3.8**
	SNR=5.6							
TKM2	**Tokmak 2**	**5.83**	**31**	⇑Pn		**Pn**	**05 21 59.1**	**+1.9**
	comp=N,26nm,0.7s							
TKM2				⇑Lg			05 23 34.6	
	comp=N,121nm,1.4s							
TKM2	**Tokmak 2**	**5.83**	**31**	*e*Pn		**Pn**	**05 21 58.4**	**+1.3**
	comp=N,30nm,0.6s							
TKM2	**Tokmak 2**	**5.83**	**31**	PN		**Pn**	**05 22 00.4**	**+3.2**
TKM2					pmax	pmax		
	comp=Z,15nm,0.5s							
TKM2					pmax	pmax		
	comp=N,40nm,0.7s							
TKM2	**Tokmak 2**	**5.83**	**31**	P		**Pn**	**05 22 01.0**	**+3.9**
	SNR=42							
THN	**Thein Dam**	**6.54**	**147**	*e*P		**Pn**	**05 22 13.5**	**+6.6**
THN				*e*x		x	05 23 35.4	
DLH	**Dalhousie**	**6.56**	**145**	*e*P		**Pn**	**05 22 14.0**	**+6.9**
DLH				*e*x		x	05 23 34.0	
SDNR	**Sundarnagar**	**7.89**	**144**	*e*P		**Pn**	**05 22 33.0**	**+7.5**
SDNR				*e*x		x	05 24 47.0	
SMLA	**Simla**	**8.30**	**144**	*i* P		**Pn**	**05 22 37.8**	**+6.8**
SMLA				*e*S		**Sn**	**05 24 04.9**	**-0.3**
SMLA				*e*x		x	05 24 15.2	
	comp=E,239nm,0.3s							
SMLA				*e*x		x	05 24 17.2	
	comp=N,235nm,0.4s							
KLP	**Kalpa**	**8.51**	**137**	*e*P		**Pn**	**05 22 40.8**	**+6.8**
KLP				*e*S		**Sn**	**05 24 10.0**	**-0.6**
KLP					AML	AML	05 24 28.0	
	comp=E,222nm,0.7s							
KLP					AML	AML	05 24 28.4	
	comp=N,168nm,0.9s							
DDI	**Dehra Dun**	**9.39**	**143**	*e*x		x	05 23 52.3	
DDI				*e*x		x	05 25 40.8	
JOSI	**Joshimath**	**9.98**	**136**	*e*P		**Pn**	**05 22 59.5**	**+5.5**
JOSI				*e*S		**Sn**	**05 24 45.6**	**-0.9**
NDI	**New Delhi**	**10.45**	**151**	*e*P		**Pn**	**05 23 05.5**	**+5.0**
NDI				*e*x		x	05 24 53.0	
MK31	**Makanchi Array**	**11.87**	**39**	P		**Pn**	**05 23 20.8**	**+1.0**
	comp=N,42nm,1.2s,baz=228,slow=13,SNR=56							
MK31	**Makanchi Array**	**11.87**	**39**	*e*Pn		**Pn**	**05 23 20.9**	**+1.0**
MK31	**Makanchi Array**	**11.87**	**39**	*i* P		**Pn**	**05 23 20.8**	**+0.9**
MK31					pmax	pmax		
	comp=Z,42nm,1.2s							
MKAR	**Makanchi Array**	**11.87**	**39**	Pn		**Pn**	**05 23 20.4**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=229,slow=13,SNR=25							
MKAR	**Makanchi Array**	**11.87**	**39**	P		**Pn**	**05 23 20.4**	**+0.5**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.3s							
KURBB	**Kurchatov Arra**	**13.59**	**19**	⇑P		**Pn**	**05 23 41.6**	**-1.7**
	comp=Z,0.8nm,1.1s							
KURBB				⇓Lg			05 27 42.3	
	comp=Z,3.9nm,1.2s							
KURK	**Kurchatov**	**13.70**	**19**	⇓Lg			05 27 45.3	
	comp=Z,28nm,1.4s							
KURK	**Kurchatov**	**13.70**	**19**	Pn		**Pn**	**05 23 43.2**	**-1.6**
	baz=203,slow=14							
PYUN	**Piuthan**	**13.79**	**132**	*e*P		**Pn**	**05 23 45.8**	**-0.4**
AB31	**Akbulak array**	**14.00**	**327**	P		**Pn**	**05 23 43.5**	**-5.5**
	comp=Z,2.7nm,0.5s,baz=143,slow=12,SNR=69							
DANN	**Dangsing**	**14.06**	**130**	*e*P		**Pn**	**05 23 49.9**	**0.0**
	comp=Z,28nm,0.5s							
KOLN	**Koldanda**	**14.39**	**132**	*e*P		**Pn**	**05 23 53.5**	**-0.9**
VOSK	**Vostochnaya**	**14.73**	**359**	⇓P		**Pn**	**05 23 57.6**	**-1.3**
	comp=Z,4.7nm,0.9s							
VOSK	**Vostochnaya**	**14.73**	**359**	P		**Pn**	**05 23 57.6**	**-1.3**
VOSK					pmax	pmax		
	comp=Z,4.0nm,1.0s							

GKN	**Gorkha**	**14.85**	**128**	*e*P	**Pn**	**05 24 00.6**	**-0.1**
BVA0	**Borovoye Array**	**15.05**	**357**	⇑P	**Pn**	**05 24 04.6**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=159,slow=15,SNR=16						
BVA0	**Borovoye Array**	**15.05**	**357**	*i* P	**Pn**	**05 24 05.5**	**+2.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BVAR	**Borovoye Array**	**15.05**	**357**	Pn	**Pn**	**05 24 02.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=167,slow=11,SNR=13						
BVAR				LR	LR	05 29 30.4	
	comp=Z,67nm,19.1s,baz=350,slow=36						
BRVK	**Borovoye**	**15.09**	**357**	*e*P	**Pn**	**05 24 04.3**	**+0.6**
	comp=Z,6.9nm,0.6s						
BRVK	**Borovoye**	**15.09**	**357**	*e*P	**Pn**	**05 24 04.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KKN	**Kakani**	**15.40**	**127**	*e*P	**Pn**	**05 24 08.2**	**+0.1**
	comp=Z,17nm,0.5s						
KKN	**Kakani**	**15.40**	**127**	*e*P	**Pn**	**05 24 08.2**	**+0.1**
KKN				pmax	pmax		
	comp=Z,17nm,0.5s						
PKI	**Pulchoki**	**15.64**	**128**	*e*P	**Pn**	**05 24 11.7**	**+0.6**
GUN	**Gumba**	**15.70**	**126**	*e*P	**Pn**	**05 24 12.7**	**+0.8**
	comp=Z,82nm,1.1s						
AKTK	**Aktyubinsk**	**15.71**	**327**	Pn	**Pn**	**05 24 11.3**	**-0.7**
AKTK				Sn	**Sn**	**05 26 56.7**	**-10**
AKTK				LR	LR	05 30 01.3	
AKTO	**Aktyubinsk**	**15.71**	**327**	⇑P	**Pn**	**05 24 12.9**	**+0.9**
	comp=Z,2.0nm,0.7s						
AKTO	**Aktyubinsk**	**15.71**	**327**	Pn	**Pn**	**05 24 11.3**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=131,slow=11,SNR=16						
AKTO				Sn	**Sn**	**05 26 56.7**	**-10**
	comp=Z,0.1nm,0.3s,baz=127,slow=20,SNR=3.5						
AKTO				LR	LR	05 30 01.3	
	comp=Z,103nm,18.1s,baz=140,slow=36						
AKTO	**Aktyubinsk**	**15.71**	**327**	P	**Pn**	**05 24 11.3**	**-0.7**
AKTO						05 26 56.7	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,103nm,18.1s						
JIRN	**Jiri**	**16.07**	**126**	*e*P	**Pn**	**05 24 16.7**	**-0.1**
RAMN	**Ramite**	**16.83**	**126**	*e*P	**Pn**	**05 24 26.4**	**0.0**
	comp=Z,35nm,0.6s						
TAPN	**Taplejung**	**17.27**	**123**	*e*P	**Pn**	**05 24 33.5**	**+1.5**
ODAN	**Odare**	**17.39**	**125**	*e*P	**Pn**	**05 24 35.3**	**+1.8**
	comp=Z,50nm,0.7s						
ZAA0	**Zalesovo Array**	**18.40**	**26**	*e*P	**Pn**	**05 24 44.8**	**-1.0**
ZALV	**Zalesovo Beam**	**18.40**	**26**	P	**Pn**	**05 24 44.2**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=223,slow=11,SNR=15						
ZALV				LR	LR	05 32 23.1	
	comp=Z,30nm,18.9s,baz=258,slow=39						
NVS	**Novosibirsk**	**18.65**	**22**	*e*P	**Pn**	**05 24 50.1**	**+1.3**
NVS				*e*S	**Sn**	**05 28 10.5**	**-7.1**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NVS				smax			
	comp=N,15nm,1.6s						
ARU	**Arti**	**20.36**	**339**	*e*P	**P**	**05 25 10.6**	**+3.4**
	comp=N,5.7nm,0.4s						
ARU	**Arti**	**20.36**	**339**	*d i*P	**P**	**05 25 09.4**	**+2.2**
ARU						05 25 29.5	
ARU				*e*S	**S**	**05 28 48.5**	**-7.3**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GNI	**Garni**	**20.85**	**284**	P	**P**	**05 25 16.7**	**+4.0**
	comp=Z,6.5nm,0.5s,baz=23,slow=14,SNR=4.4						
GNI	**Garni**	**20.85**	**284**	P	**P**	**05 25 16.7**	**+4.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MIB	**Mutribah**	**21.60**	**255**	*e*P	**P**	**05 25 26.2**	**+5.4**
MIB				AMb	AMB	05 25 27.5	
	comp=Z,26nm,0.7s,mb4.8						
NAY	**Al-Naaiem**	**21.94**	**254**	*e*P	**P**	**05 25 26.8**	**+2.3**
NAY				AMb	AMB	05 25 33.0	
	comp=Z,23nm,1.6s,mb4.4						
GTA	**Gaotai**	**22.12**	**77**	*e*P	**P**	**05 25 30.4**	**+4.0**
GTA				AP		05 25 36.1	
GTA				XP	sP	05 25 39.1	+11
GTA				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.1						
KIV	**Kislovodsk**	**22.48**	**294**	*e*P	**P**	**05 25 29.8**	**-0.3**
KIV				*e*S	**S**	**05 29 22.4**	**-15**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
KIV				MLR	MLR		
	comp=Z,60nm,13.0s,MS3.2						
ZAK	**Zakamensk**	**25.73**	**51**	*e*P	**P**	**05 26 03.3**	**+2.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
ANN	**Anapa**	**26.30**	**296**	*e*P	**P**	**05 26 05.1**	**-1.4**
SONM	**Songino Array**	**27.19**	**58**	P	**P**	**05 26 14.0**	**-0.5**
	comp=Z,0.5nm,0.8s,mb3.1,baz=261,slow=9.0,SNR=3.4						
SONM				LR	LR	05 37 55.3	
	comp=Z,167nm,19.3s,MS3.6,baz=261,slow=38						
SONM	**Songino Array**	**27.19**	**58**	P	**P**	**05 26 14.0**	**-0.5**
SONM				LR	LR	05 37 55.3	
SONM	**Songino Array**	**27.19**	**58**	P	**P**	**05 26 14.0**	**-0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,167nm,19.3s						
ULN	**Ulaanbaatar**	**27.63**	**58**	*e*P	**P**	**05 26 22.5**	**+4.1**
ASF	**Jabal al Asfar**	**28.78**	**269**	LR	LR	05 39 02.7	
	comp=Z,48nm,18.8s,MS3.1,baz=111,slow=39						
OBN	**Obninsk**	**29.08**	**317**	P	**P**	**05 26 30.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**30.87**	**121**	LR	LR	05 41 33.8	
	comp=Z,33nm,21.6s,MS3.0,baz=305,slow=41						
AKASG	**Malin Array Be**	**32.34**	**307**	P	**P**	**05 27 00.7**	**+0.7**
	comp=Z,1.8nm,0.6s,mb4.1,baz=84,slow=7.3,SNR=5.3						
AKASG	**Malin Array Be**	**32.34**	**307**	*i* P	**P**	**05 26 55.4**	**-4.6**
WHN	**Wuhan**	**35.95**	**89**	⇓P	**P**	**05 27 39.6**	**+8.0**
FINES	**FINESS Array B**	**36.47**	**325**	*e*P	**P**	**05 27 36.1**	**+0.4**
ARCES	**ARCESS Array B**	**39.92**	**337**	P	**P**	**05 28 04.3**	**-0.4**
	comp=Z,5.4nm,0.7s,mb4.4,baz=110,slow=7.4,SNR=15						
ARCES				LR	LR	05 45 53.6	
	comp=Z,110nm,19.5s,MS3.7,baz=300,slow=38						
ARCES	**ARCESS Array B**	**39.92**	**337**	P	**P**	**05 28 04.3**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,110nm,19.5s						
GERES	**GERESS Array B**	**42.40**	**304**	LR	LR	05 50 56.5	
	comp=Z,36nm,19.8s,MS3.3,baz=324,slow=43						
NB2	**NORSAR Subarra**	**43.43**	**322**	P	**P**	**05 28 32.0**	**-1.5**
	comp=Z,3.7nm,0.9s,mb4.1,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**43.43**	**322**	P	**P**	**05 28 32.4**	**-1.1**
	comp=Z,2.4nm,0.7s,mb4.0,baz=94,slow=8.0,SNR=6.1						
NOA				LR	LR	05 47 32.8	
	comp=Z,55nm,19.4s,MS3.5,baz=70,slow=37						
NOA	**NORSAR Array B**	**43.43**	**322**	P	**P**	**05 28 32.4**	**-1.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,55nm,19.4s						
LPG	**La Plagne**	**47.71**	**301**	*e*P	**P**	**05 29 00.4**	**-7.2**
	comp=Z,16nm,1.0s,mb4.7						
LPL	**La Plagne**	**47.71**	**301**	*e*P	**P**	**05 28 59.8**	**-7.9**
ESDC	**Sonseca Array**	**57.11**	**297**	P	**P**	**05 30 19.8**	**+2.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=56,slow=7.8,SNR=6.2						
TORD	**Torodi Ar. Bea**	**66.14**	**268**	P	**P**	**05 31 18.4**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.5,baz=48,slow=5.7,SNR=30						
YKA	**Yellowknife Ar**	**79.74**	**3**	P	**P**	**05 32 40.0**	**+1.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=353,slow=5.6,SNR=3.2						
YKA	**Yellowknife Ar**	**79.74**	**3**	P	**P**	**05 32 40.0**	**+1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**82.46**	**122**	P	**P**	**05 32 53.2**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=327,slow=5.3,SNR=6.0						
WRA	**Warramunga Arr**	**82.46**	**122**	P	**P**	**05 32 53.2**	**-0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**84.79**	**125**	P	**P**	**05 33 03.7**	**-1.9**
	comp=Z,0.1nm,0.3s,mb3.4,baz=307,slow=5.8,SNR=3.1						
LPAZ	**La Paz**	**138.49**	**290**	PKP	PKPdf	05 39 55.9	-1.4
	comp=Z,2.0nm,0.3s,baz=243,slow=6.8,SNR=7.2						
LPAZ	**La Paz**	**138.49**	**290**	PKIKP	PKPdf	05 39 55.9	-1.4
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.3s						

*ATH **12** 05:24:22.8, 3674N-2808E, h72km±1km*
*ISK **12** 05:24:22.4, 3667N-2806E, h65km, MD3.2*
*NEIC **12** 05:24:22.8, 3674N-2808E, h72km, MD3.2(ISK), After ATH.*
*CSEM **12** 05:24:22.1±0.1, 3679N-2815E, h60km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.5km az=37.0*
*ISCJB **12** 05:24:23.3±0.7, 3675N±004×2816E±005, h67km±7km, Error ellipse: s-maj=6.9km s-min=6.6km az=149.6*
*DDA **12** 05:24:26.6, 3686N-2815E, h7km±6km, Md2.9*

ISC 12 05:24:23.9±0.7, 3675N±004×2816E±005, h64km±7km, n35, σ0.74/44, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.38**	**71**	*i* P	**Pn**	**05 24 33.1**	**-2.0**
TURN				*i* S	**Sn**	**05 24 40.8**	**-2.3**
DALT	**Dalyan (Mudla)**	**0.38**	**87**	PG	**Pn**	**05 24 35.0**	**-0.1**
DALT				*e*SG	**Sn**	**05 24 43.8**	**+0.5**
DALT	**Dalyan (Mudla)**	**0.38**	**87**	Pg	**Pn**	**05 24 35.2**	**+0.1**
DALT				Sg	**Sn**	**05 24 43.2**	**-0.1**
YER	**Yerkesik**	**0.40**	**14**	*e*PG	**Pn**	**05 24 35.8**	**+0.6**
YER				*e*SG	**Sn**	**05 24 44.7**	**+1.3**
YER	**Yerkesik**	**0.40**	**14**	Pg	**Pn**	**05 24 35.5**	**+0.2**
YER	**Yerkesik**	**0.40**	**14**	Pg	**Pn**	**05 24 35.5**	**+0.3**
YER				*e*Sg	**Sn**	**05 24 44.7**	**+1.2**
ARG	**Arkhangelos**	**0.53**	**183**	*e*P	**Pn**	**05 24 36.7**	**+0.1**
ARG				*e*S	**Sn**	**05 24 46.9**	**+1.1**
MLSB	**Milas**	**0.62**	**331**	*e*PG	**Pn**	**05 24 37.4**	**-0.2**
MLSB	**Milas**	**0.62**	**331**	Pg	**Pn**	**05 24 37.2**	**-0.4**
MLSB	**Milas**	**0.62**	**331**	Pg	**Pn**	**05 24 37.2**	**-0.4**
BDRM	**Kayabasi**	**0.65**	**299**	P	**Pn**	**05 24 38.0**	**+0.1**
BDRM				*i* S	**Sn**	**05 24 48.2**	**+0.1**
BODT	**Bodrum**	**0.75**	**295**	*e*PG	**Pn**	**05 24 37.5**	**-1.5**
BODT	**Bodrum**	**0.75**	**295**	Pg	**Pn**	**05 24 39.0**	**+0.1**
BODT	**Bodrum**	**0.75**	**295**	Pg	**Pn**	**05 24 39.0**	**0.0**
FETY	**Fethiye**	**0.75**	**99**	*e*PG	**Pn**	**05 24 39.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.20**	**322**	*i* P	**Pn**	**05 24 44.8**	**+0.1**
GCAM				*i* S	**Sn**	**05 25 00.6**	**+0.3**
DENT	**Denizli**	**1.22**	**35**	Pn	**Pn**	**05 24 44.4**	**-0.6**
DENT	**Denizli**	**1.22**	**35**	Pn	**Pn**	**05 24 44.4**	**-0.6**
ELL	**Elmali**	**1.41**	**90**	*e*PN	**Pn**	**05 24 48.5**	**+1.0**
ELL	**Elmali**	**1.41**	**90**	Pn	**Pn**	**05 24 47.9**	**+0.5**
ELL	**Elmali**	**1.41**	**90**	Pn	**Pn**	**05 24 47.9**	**+0.5**
SMG	**Samos**	**1.42**	**313**	*e*P	**Pn**	**05 24 47.4**	**-0.3**
KARP	**Karpathos**	**1.45**	**214**	*e*P	**Pn**	**05 24 47.7**	**-0.3**
KARP				*e*S	**Sn**	**05 25 05.7**	**-0.4**
IZM	**Izmir**	**1.79**	**337**	*e*PN	**Pn**	**05 24 52.7**	**+0.1**
IZM	**Izmir**	**1.79**	**337**	Pn	**Pn**	**05 24 52.8**	**+0.1**
KULA	**Kula-Manisa**	**1.81**	**13**	*e*PN	**Pn**	**05 24 53.0**	**+0.2**
BLCB	**Balcova**	**1.86**	**332**	*e*PN	**Pn**	**05 24 53.3**	**-0.2**
BLCB	**Balcova**	**1.86**	**332**	Pn	**Pn**	**05 24 53.5**	**0.0**
BLCB	**Balcova**	**1.86**	**332**	Pn	**Pn**	**05 24 53.5**	**0.0**
KHL	**Karahalli**	**1.91**	**34**	*e*PN	**Pn**	**05 24 55.9**	**+1.7**
KHL	**Karahalli**	**1.91**	**34**	Pn	**Pn**	**05 24 54.2**	**0.0**
KHL	**Karahalli**	**1.91**	**34**	Pn	**Pn**	**05 24 54.2**	**0.0**
BCK	**Bucak**	**2.07**	**69**	*e*PN	**Pn**	**05 24 56.9**	**+0.5**
AKS	**Akhisar**	**2.14**	**353**	*e*PN	**Pn**	**05 24 57.1**	**-0.3**
AKS	**Akhisar**	**2.14**	**353**	Pn	**Pn**	**05 24 57.1**	**-0.3**

IDC 12 06:05:44.5±1.2, 5420N×3504W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/26, mbtmp3.4/2, MS3.2/3, Ms1 3.3/3, ms1mx2.8/26, Error ellipse: s-maj=45.9km s-min=32.2km az=180.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOA	**NORSAR Array B**	**25.23**	**56**	LR	LR	06 20 25.7	
	comp=Z,33nm,18.6s,baz=235,slow=35						
GERES	**GERESS Array B**	**30.30**	**80**	LR	LR	06 23 38.2	
	comp=Z,48nm,20.0s,baz=286,slow=35						
TORD	**Torodi Ar. Bea**	**50.09**	**131**	P	P	06 14 41.1	-0.1
	1.1nm,1.0s,baz=338,slow=8.2,SNR=4.7						
TXAR	**Lajitas Array**	**54.45**	**272**	P	P	06 15 13.5	+0.1
	0.2nm,0.7s,baz=68,slow=9.8,SNR=3.1						
TXAR				LR	LR	06 38 28.8	
	comp=Z,39nm,18.9s,baz=5.0,slow=36						
KURK	**Kurchatov**	**61.66**	**41**	P	P	06 16 03.9	+0.2
	baz=321,slow=7.2						
ASAR	**Alice Springs**	**148.40**	**20**	PKPbc	PKPbc	06 25 32.0	-0.5
	1.5nm,0.7s,baz=350,slow=2.4,SNR=17						

IDC 12 06:07:56.9±3.9, 323S×15243E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/15, mbtmp3.3/2, Error ellipse: s-maj=163.5km s-min=51.0km az=115.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.24**	**225**	P	P	06 13 16.1	+0.4
	0.3nm,0.3s,baz=52,slow=9.8,SNR=5.9						
ASAR	**Alice Springs**	**27.08**	**220**	P	P	06 13 42.1	+0.6
	0.2nm,0.3s,baz=44,slow=9.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**149.44**	**291**	PKPbc	PKPbc	06 27 47.9	-1.3
	0.3nm,0.5s,baz=74,slow=2.3,SNR=4.6						

JMA 12 06:45:26.8±0.3, 4061N×14526E, h48km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**2.12**	**312**	P	Pn	06 46 00.9	+1.2
JEM				*e*S	Sn	06 46 24.4	-0.4
JAK	**Akkeshi**	**2.42**	**350**	*e*S	Sn	06 46 30.7	-1.5
JCH	**Churui**	**2.46**	**325**	P	Pn	06 46 05.6	+1.3
JCH				*e*S	Sn	06 46 32.7	-0.4
JNBK	**Urakawa-nobuka**	**2.52**	**312**	*e*S	Sn	06 46 35.2	+0.6
JANG	**Nango**	**2.87**	**266**	P	Pn	06 46 10.4	+0.5
JAR	**Ashorobuto**	**2.91**	**338**	P	Pn	06 46 11.7	+1.2
JAR				*e*S	Sn	06 46 43.3	-0.9
JFR	**Furan**	**3.24**	**323**	P	Pn	06 46 16.8	+1.8
JFR				*e*S	Sn	06 46 51.5	-0.8
JOM	**Ohasama**	**3.25**	**251**	P	Pn	06 46 16.8	+1.6
JOM				*e*S	Sn	06 46 51.3	-1.4
JRA	**Rausu**	**3.33**	**358**	*e*S	Sn	06 46 53.6	-0.9
JTKR	**Abashiri--Toko**	**3.50**	**344**	*e*S	Sn	06 46 59.4	+0.5
JMK	**Ichinoseki**	**3.53**	**243**	P	Pn	06 46 20.2	+1.2
JMK				*e*S	Sn	06 46 57.8	-1.6
JEW	**Eniwo**	**3.62**	**309**	*e*S	Sn	06 47 03.2	+1.5
JHR	**Hokuryu**	**4.09**	**321**	*e*S	Sn	06 47 14.8	+1.6

IDC 12 06:47:09.6±4.2, 403S×10075E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=178.5km s-min=22.8km az=55.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.34**	**119**	P	P	06 54 15.0	-0.6
	0.2nm,0.6s,baz=309,slow=8.8,SNR=7.1						
ASAR	**Alice Springs**	**37.47**	**124**	P	P	06 54 25.2	0.0
	0.1nm,0.5s,baz=300,slow=8.3,SNR=4.8						
SONM	**Songino Array**	**51.88**	**5**	P	P	06 56 19.9	+0.2
	0.3nm,0.6s,baz=186,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**53.17**	**344**	P	P	06 56 29.0	-0.3
	0.7nm,0.8s,baz=145,slow=7.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**59.29**	**349**	P	P	06 57 12.3	-0.6
	0.3nm,0.3s,baz=155,slow=4.8,SNR=3.5						
TXAR	**Lajitas Array**	**145.81**	**40**	PKPbc	PKPbc	07 06 52.0	+0.5
	0.8nm,0.5s,baz=256,slow=0.6,SNR=15						

OTT 12 07:23:55.8±0.8, 7196N×7470W, h18km, MN3.5/7, 139km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt., Baffin Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINU	**Pond Inlet**	**1.25**	**308**	PG	Pg	07 24 18.6	-1.2
PINU				SG	Sg	07 24 34.8	-1.2
PINU				Trac		07 24 38.1	
	comp=Z,122nm,0.1s						
GIFN	**Gifford Fjord,**	**3.01**	**232**	PN	Pn	07 24 42.6	+0.2
GIFN				SN	Sn	07 25 17.0	-0.9
GIFN				SG	Sg	07 25 24.2	-8.0
GIFN				Trac		07 25 26.8	
	comp=Z,57nm,0.3s						
ILON	**Igloolik, Nuna**	**3.51**	**226**	PN	Pn	07 24 49.5	+0.1
ILON				SN	Sn	07 25 30.5	+0.1
ILON				SG	Sg	07 25 39.8	-8.7
ILON				Trac		07 25 45.1	
	comp=Z,67nm,0.4s						
LAIN	**Lailor River,**	**4.11**	**230**	PN	Pn	07 24 57.2	-0.3
LAIN				SN	Sn	07 25 43.4	-1.7
LAIN				SG	Sg	07 25 58.4	-9.2
LAIN				Trac		07 26 02.1	
	comp=Z,52nm,0.5s						
SRLN	**Sarcpa Lake, N**	**4.50**	**225**	PN	Pn	07 25 02.2	-0.7
SRLN				SN	Sn	07 25 51.4	-3.2
SRLN				LG		07 26 10.4	
SRLN				Trac		07 26 11.8	
	comp=Z,43nm,0.4s						
RES	**Resolute Bay**	**6.40**	**305**	PN	Pn	07 25 29.8	+0.8
RES				SN	Sn	07 26 38.7	-2.8
RES				LG		07 27 13.1	
RES				Trac		07 27 26.6	
	comp=Z,59nm,1.7s						
KUGN	**Kugaaruk Camp,**	**6.53**	**241**	PN	Pn	07 25 28.2	-2.5
KUGN				SN	Sn	07 26 38.6	-5.8
KUGN				LG		07 27 14.8	
KUGN				Trac		07 27 15.1	
	comp=Z,55nm,0.6s						
QILN	**Qikiltugaq Expl**	**6.73**	**223**	PN	Pn	07 25 32.2	-1.3
QILN				SN	Sn	07 26 44.3	-5.2
QILN				LG		07 27 16.3	
QILN				Trac		07 27 24.0	
	comp=Z,32nm,0.6s						
STLN	**Stellar Camp,**	**7.87**	**243**	PN	Pn	07 25 46.2	-2.9
STLN				SN	Sn	07 27 10.0	-7.5
STLN				LG		07 27 49.5	
STLN				Trac		07 28 03.7	
	comp=Z,42nm,0.7s						
WAGN	**Wager Bay**	**8.07**	**228**	PN	Pn	07 25 46.5	-5.3
WAGN				SN	Sn	07 27 14.4	-7.9
WAGN				LG		07 28 00.4	
WAGN				Trac		07 28 13.2	
	comp=Z,19nm,0.4s						
FRB	**Frobisher Bay**	**8.56**	**161**	PN	Pn	07 25 57.5	-1.1
FRB				SN	Sn	07 27 28.6	-5.9
FRB				LG		07 28 16.1	
FRB				Trac		07 28 22.6	
	comp=Z,28nm,0.5s						
BULN	**Bullion Camp,**	**8.58**	**239**	PN	Pn	07 25 55.8	-3.0
BULN				SN	Sn	07 27 28.3	-6.6
BULN				LG		07 28 16.6	
BULN				Trac		07 28 21.7	
	comp=Z,20nm,0.6s						
NUNN	**Nunuq Camp, NU**	**9.00**	**229**	PN	Pn	07 26 01.6	-3.0
NUNN				SN	Sn	07 27 39.4	-5.9
NUNN				LG		07 28 26.8	
IVKQ	**Ivujivik**	**9.66**	**189**	PN	Pn	07 26 12.2	-1.4
IVKQ				SN	Sn	07 27 51.0	-11
IVKQ				LG		07 28 48.1	
SEDN	**First Sedna Si**	**10.72**	**224**	PN	Pn	07 26 22.9	-5.2
SEDN				SN	Sn	07 28 13.4	-14
SEDN				LG		07 29 18.1	
SEDN				Trac		07 29 24.5	
	comp=Z,32nm,1.2s						
JOSN	**Second Sedna S**	**10.87**	**224**	PN	Pn	07 26 26.7	-3.4
JOSN				SN	Sn	07 28 20.2	-11
JOSN				LG		07 29 22.9	
YBKN	**Baker Lake, Hu**	**10.96**	**236**	SN	Sn	07 28 21.8	-12
YBKN				LG		07 29 31.5	
AKVQ	**Akulivik**	**11.28**	**189**	PN	Pn	07 26 30.9	-4.9
AKVQ				SN	Sn	07 28 26.1	-15
AKVQ				LG		07 29 38.5	

OTT 12 07:31:11.9±0.4, 7191N×7520W, h18km, MN3.9/9, 130km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt., Baffin Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINU	**Pond Inlet**	**1.16**	**314**	PG	Pg	07 31 32.4	-1.9
PINU				SG	Sg	07 31 48.5	-1.0
PINU				Trac		07 31 52.6	
	comp=Z,715nm,0.2s						
GIFN	**Gifford Fjord,**	**2.85**	**231**	PN	Pn	07 31 56.6	+0.2
GIFN				SN	Sn	07 32 31.7	+1.5
GIFN				SG	Sg	07 32 37.2	-6.3
GIFN				Trac		07 32 42.1	
	comp=Z,232nm,0.5s						
ILON	**Igloolik, Nuna**	**3.37**	**224**	PN	Pn	07 32 03.5	0.0
ILON				PG	Pg	07 32 10.4	-6.0
ILON				SN	Sn	07 32 43.5	+0.6
ILON				SG	Sg	07 32 52.8	-7.1
ILON				Trac		07 33 00.0	
	comp=Z,116nm,0.3s						
LAIN	**Lailor River,**	**3.96**	**229**	PN	Pn	07 32 11.2	-0.4
LAIN				SN	Sn	07 32 57.4	-0.1
LAIN				SG	Sg	07 33 11.0	-7.9
LAIN				Trac		07 33 16.0	
	comp=Z,162nm,0.5s						
SRLN	**Sarcpa Lake, N**	**4.35**	**223**	PN	Pn	07 32 16.1	-0.9
SRLN				SN	Sn	07 33 06.5	-0.6
SRLN				SG	Sg	07 33 23.9	-7.5
SRLN				Trac		07 33 27.0	
	comp=Z,84nm,0.3s						
RES	**Resolute Bay**	**6.31**	**305**	PN	Pn	07 32 43.3	-0.5
RES				SN	Sn	07 33 56.5	+1.4
RES				LG		07 34 29.4	
RES				Trac		07 34 47.2	
	comp=Z,21nm,0.6s						
KUGN	**Kugaaruk Camp,**	**6.37**	**240**	PN	Pn	07 32 42.0	-2.6
KUGN				SN	Sn	07 33 52.8	-3.8
KUGN				LG		07 34 28.1	
KUGN				Trac		07 34 29.1	
	comp=Z,185nm,0.7s						
QILN	**Qikiltugaq Expl**	**6.59**	**222**	PN	Pn	07 32 46.1	-1.6
QILN				SN	Sn	07 33 59.0	-3.1
QILN				LG		07 34 30.5	
QILN				Trac		07 34 39.0	

INUQ				LG		07 37 58.2	
FCC	**Fort Churchill**	**15.25**	**220**	PN	Pn	07 34 38.8	-7.0
FCC				SN	Sn	07 37 19.1	-15
FCC				LG		07 39 03.7	
ROMN	**Roman Lake**	**17.28**	**266**	PN	Pn	07 35 06.4	-5.4
ROMN				SN	Sn	07 38 07.5	-16
YKW3	**Yellowknife Ar**	**17.51**	**258**	PN	Pn	07 35 09.7	-4.9
YKW3				SN	Sn	07 38 15.1	-14
YKW3				LG		07 40 00.9	
YKW3				Trac		07 40 27.9	
	comp=Z,35nm,1.1s						
SILO	**Sutton Inlier**	**17.99**	**199**	PN	Pn	07 35 19.3	-1.3
SILO				SN	Sn	07 38 23.2	-17
SILO				LG		07 40 18.0	
LG4Q	**La Grande 4**	**18.36**	**178**	PN	Pn	07 35 19.6	-5.5
LG4Q				SN	Sn	07 38 26.2	-23
LG4Q				LG		07 40 33.0	
LG4Q				Trac		07 40 38.0	
	comp=Z,6.3nm,0.4s						
WEMQ	**Wemindji, Queb**	**18.96**	**185**	PN	Pn	07 35 28.3	-4.1
WEMQ				SN	Sn	07 38 47.6	-16
WEMQ				LG		07 40 52.1	

IDC 12 08:11:53.6±1.7, 094N×12560E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=166.2km s-min=22.9km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.45**	**158**	P	P	08 16 54.3	0.0
	1.6nm,0.4s,baz=337,slow=10,SNR=40						
WRA				S	S	08 20 55.9	-6.2
	0.6nm,0.4s,baz=334,slow=23,SNR=9.2						
ASAR	**Alice Springs**	**25.75**	**162**	P	P	08 17 25.2	-0.9
	0.5nm,0.5s,baz=338,slow=8.0,SNR=11						
STKA	**Stephens Creek**	**35.98**	**156**	P	P	08 18 57.1	+0.8
	1.8nm,0.5s,baz=338,slow=8.2,SNR=11						
MKAR	**Makanchi Array**	**59.22**	**327**	P	P	08 21 56.8	+0.1
	0.2nm,0.6s,baz=130,slow=7.7,SNR=4.0						

MOS ***12*** *08:21:50.5±1.2, 3632N×7116E, h114km, mb4.5/18, Error ellipse: s-maj=10.5km s-min=5.9km az=95.4*
ISCJB ***12*** *08:21:50.3±0.4, 3632N±002×7124E±004, h116km±4km, mb4.4/24, Error ellipse: s-maj=5.3km s-min=3.1km az=167.2*
NEIC ***12*** *08:21:51.1±0.6, 3624N×7123E, h110km±7km, mb5.0/21, Error ellipse: s-maj=7.9km s-min=4.7km az=59.0*
BJI ***12*** *08:21:51.9, 3653N×7102E, h115km, mB5.4, mb4.6*
IDC ***12*** *08:21:52.9±0.6, 3619N×7097E, h128km±5km, mb4.0/13, mb1 4.2/14, mb1mx4.0/22, mbtmp4.0/14, MS3.1/4, Ms1 3.2/4, ms1mx2.7/35, Error ellipse: s-maj=16.0km s-min=11.4km az=32.0*
NNC ***12*** *08:21:57.2±4.6, 3683N×7079E, h156km±47km, mb3.9, mpv5.0, Error ellipse: s-maj=37.8km s-min=27.1km az=27.0*

ISC 12 08:21:51.5±0.3, 3630N±002×7124E±004, h115km±4km, h130km±2.8km; pP-P, n132, σ1°21/164, mb4.4/24, 6C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.51**	**226**	*e*Pn	**Pn**	**08 22 31.7**	**+0.5**
KBL				*e*Sn	**Sn**	**08 23 01.3**	**-0.5**
CEP	**Cherat**	**2.54**	**167**	⇓P	**Pn**	**08 22 34.4**	**+2.8**
CEP				S	**Sn**	**08 23 06.0**	**+3.7**
THW	**Thamme Wali**	**3.52**	**173**	P	**Pn**	**08 22 47.5**	**+2.9**
SARP	**Sargodha**	**4.53**	**164**	P	**Pn**	**08 22 57.5**	**-0.6**
SARP				S	**Sn**	**08 23 51.0**	**+1.3**
JMU	**Jammu**	**4.68**	**139**	*e*P	**Pn**	**08 23 03.0**	**+2.9**
JMU				*ex*	x	08 23 54.5	
KSH	**Kashi**	**4.93**	**48**	*e*P	**Pn**	**08 23 08.2**	**+4.8**
KSH				S	**Sn**	**08 24 05.1**	**+5.8**
KSH				Smax			
	comp=N,87nm,0.2s						
KSH				Smax			
	comp=E,91nm,0.3s						
THN	**Thein Dam**	**5.35**	**135**	*e*P	**Pn**	**08 23 10.1**	**+1.0**
THN				*ex*	x	08 24 10.2	
DLH	**Dalhousie**	**5.42**	**132**	*e*P	**Pn**	**08 23 11.0**	**+1.0**
DLH				*ex*	x	08 24 14.0	
AML	**Almayashu**	**6.12**	**17**	*e*Pn	**Pn**	**08 23 19.9**	**+0.5**
	comp=E,358nm,0.5s						
AML				*e*Sn	**Sn**	**08 24 25.7**	**-2.4**
AML	**Almayashu**	**6.12**	**17**	P	**Pn**	**08 23 20.5**	**+1.0**
	SNR=76						
UCH	**Uchtor**	**6.44**	**22**	*e*Pn	**Pn**	**08 23 25.0**	**+1.3**
	comp=E,17nm,0.4s						
UCH				*e*Sn	**Sn**	**08 24 33.9**	**-1.9**
UCH	**Uchtor**	**6.44**	**22**	P	**Pn**	**08 23 25.3**	**+1.5**
	SNR=14						
BHK	**Bhakra**	**6.50**	**137**	*e*P	**Pn**	**08 23 25.6**	**+0.9**
BHK				*e*S	**Sn**	**08 24 35.2**	**-2.3**
EKS2	**Erkin-Say**	**6.64**	**16**	*e*Pn	**Pn**	**08 23 27.2**	**+0.6**
	comp=E,39nm,0.5s						
EKS2				*e*Sn	**Sn**	**08 24 39.2**	**-1.6**
EKS2	**Erkin-Say**	**6.64**	**16**	P	**Pn**	**08 23 27.4**	**+0.9**
	SNR=52						
SDNR	**Sundarnagar**	**6.76**	**134**	*e*P	**Pn**	**08 23 29.5**	**+1.4**
SDNR				*e*S	**Sn**	**08 24 41.6**	**-2.0**
AAK	**Ala-Archa**	**6.80**	**21**	Pn	**Pn**	**08 23 29.1**	**+0.4**
	comp=E,737nm,0.4s,SNR=49						
AAK	**Ala-Archa**	**6.80**	**21**	P	**Pn**	**08 23 29.9**	**+1.2**
	SNR=44						
KK31	**Karatay Array**	**6.81**	**356**	⇓P	**Pn**	**08 23 28.4**	**-0.4**
	comp=E,38nm,0.3s,baz=187,slow=14,SNR=644						
KK31				⇑S	**Sn**	**08 24 39.0**	**-5.9**
	comp=E,143nm,0.6s,baz=35,slow=34,SNR=5.5						
KK31	**Karatay Array**	**6.81**	**356**	*i* PN	**Pn**	**08 23 28.4**	**-0.4**
KK31				pmax	pmax		
	comp=Z,42nm,0.2s						
KBK	**Karagaybulak**	**6.96**	**23**	P	**Pn**	**08 23 32.6**	**+1.8**
	SNR=38						
SMLA	**Simla**	**7.14**	**135**	*i* P	**Pn**	**08 23 34.3**	**+0.9**
SMLA				*i* S	**Sn**	**08 24 50.5**	**-2.4**
SMLA				*ex*	x	08 24 55.9	
	comp=E,4μm,0.3s						
SMLA				*ex*	x	08 24 56.1	
	comp=N,4μm,0.3s						
CHMS	**Chumysh**	**7.21**	**21**	P	**Pn**	**08 23 35.0**	**+0.8**
	SNR=36						
USP	**Ospenovka**	**7.39**	**19**	P	**Pn**	**08 23 37.0**	**+0.3**
	SNR=38						
TKM2	**Tokmak 2**	**7.41**	**26**	⇓P	**Pn**	**08 23 37.7**	**+0.7**
	comp=N,57nm,0.5s						
TKM2				⇑S	**Sn**	**08 24 59.9**	**+0.4**
	comp=N,112nm,1.0s						
TKM2	**Tokmak 2**	**7.41**	**26**	*e*Pn	**Pn**	**08 23 37.6**	**+0.7**
	comp=N,75nm,0.5s						
TKM2	**Tokmak 2**	**7.41**	**26**	*i* PN	**Pn**	**08 23 37.9**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,57nm,0.5s						
TKM2	**Tokmak 2**	**7.41**	**26**	P	**Pn**	**08 23 37.6**	**+0.7**
	SNR=32						
KLP	**Kalpa**	**7.52**	**127**	*e*P	**Pn**	**08 23 39.2**	**+0.7**
KLP				*e*S	**Sn**	**08 24 57.2**	**-4.9**
KLP				AML	AML	08 25 08.3	
	comp=E,1μm,0.8s						
KLP				AML	AML	08 25 08.7	
	comp=N,2μm,0.4s						
DDI	**Dehra Dun**	**8.25**	**134**	*e*P	**Pn**	**08 23 46.6**	**-1.8**
DDI				*e*S	**Sn**	**08 25 12.4**	**-7.5**
JOSI	**Joshimath**	**9.01**	**127**	*e*P	**Pn**	**08 23 59.5**	**+0.8**
JOSI				*e*S	**Sn**	**08 25 32.2**	**-6.1**
JOSI				AML	AML	08 25 47.8	
	comp=E,455nm,0.4s						
JOSI				AML	AML	08 25 51.4	
	comp=N,656nm,0.6s						
KHET	**Khetri**	**9.07**	**153**	*e*P	**Pn**	**08 23 58.8**	**-0.8**
KHET				*e*S	**Sn**	**08 25 31.8**	**-8.0**
NDI	**New Delhi**	**9.12**	**145**	*e*P	**Pn**	**08 24 01.5**	**+1.3**
NDI				*e*S	**Sn**	**08 25 36.0**	**-5.0**
KALG	**Kalgarh**	**9.26**	**135**	*e*P	**Pn**	**08 23 55.3**	**-6.8**
KALG				*e*S	**Sn**	**08 25 30.3**	**-14**
JASL	**Jaisalmer**	**9.36**	**182**	*e*P	**Pn**	**08 24 03.5**	**0.0**
SONA	**Sohna**	**9.43**	**147**	*e*P	**Pn**	**08 24 02.8**	**-1.6**
SONA				*e*S	**Sn**	**08 25 40.5**	**-8.0**
PTH	**Pithoragarh**	**10.11**	**129**	*e*P	**Pn**	**08 24 14.4**	**+0.8**
PTH				*e*S	**Sn**	**08 25 58.5**	**-6.5**
LGTI	**Lohaghat**	**10.20**	**130**	*e*P	**Pn**	**08 24 14.3**	**-0.5**
LGTI				*ex*	x	08 26 01.9	
AJM	**Ajmer**	**10.21**	**163**	*e*P	**Pn**	**08 24 14.0**	**-1.0**
AJM				*i* x	x	08 26 02.0	
PYUN	**Piuthan**	**12.87**	**126**	*e*P	**Pn**	**08 24 49.5**	**-0.7**
	comp=N,74nm,0.5s						
DANN	**Dangsing**	**13.22**	**123**	*e*P	**Pn**	**08 24 54.0**	**-0.8**
	comp=N,39nm,0.3s						
MK31	**Makanchi Array**	**13.34**	**35**	⇑P	**Pn**	**08 24 57.0**	**+0.8**
	comp=N,3.4nm,0.5s,baz=219,slow=12,SNR=41						
MK31	**Makanchi Array**	**13.34**	**35**	*e*Pn	**Pn**	**08 24 56.5**	**+0.3**
MK31	**Makanchi Array**	**13.34**	**35**	*i* P	**Pn**	**08 24 56.5**	**+0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	**13.34**	**35**	P	**Pn**	**08 24 56.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=216,slow=13,SNR=16						
MKAR				S	**Sn**	**08 27 28.6**	**+5.6**
	baz=78,slow=12,SNR=1.8						
GKN	**Gorkha**	**14.04**	**122**	*e*P	**Pn**	**08 25 04.3**	**-1.0**
DMN	**Daman**	**14.61**	**122**	*e*P	**Pn**	**08 25 12.0**	**-0.6**
KKN	**Kakani**	**14.61**	**122**	*e*P	**Pn**	**08 25 11.8**	**-0.8**
	comp=Z,69nm,0.6s						
KKN	**Kakani**	**14.61**	**122**	*e*P	**Pn**	**08 25 11.8**	**-0.8**
KKN				pmax	pmax		
	comp=Z,69nm,0.6s						
PKI	**Pulchoki**	**14.84**	**122**	*e*P	**Pn**	**08 25 14.9**	**-0.6**
GUN	**Gumba**	**14.95**	**120**	*e*P	**Pn**	**08 25 15.9**	**-1.0**
	comp=Z,68nm,0.5s						
KURBB	**Kurchatov Arra**	**15.25**	**18**	⇓P	**Pn**	**08 25 17.4**	**-3.1**
	comp=Z,2.9nm,0.7s						
JIRN	**Jiri**	**15.32**	**120**	*e*P	**Pn**	**08 25 21.2**	**-0.4**
	comp=Z,109nm,0.4s						
AB01	**Akbulak array**	**15.35**	**331**	⇓P	**Pn**	**08 25 19.6**	**-2.1**
	comp=Z,26nm,0.8s						
AB01				⇑S	S	08 27 56.0	-24
	comp=Z,20nm,0.5s						
AB31	**Akbulak array**	**15.35**	**331**	P	**Pn**	**08 25 19.6**	**-2.1**
AB31				pmax	pmax		
	comp=Z,20nm,0.6s						
KURK	**Kurchatov**	**15.36**	**18**	P	**Pn**	**08 25 24.5**	**+2.7**
	comp=Z,123nm,0.9s,SNR=10						
KURK	**Kurchatov**	**15.36**	**18**	P	**Pn**	**08 25 17.3**	**-4.5**
KURK				S	S	08 28 00.0	-20
KURK	**Kurchatov**	**15.36**	**18**	*e*P	**Pn**	**08 25 23.4**	**+1.6**
	comp=Z,18nm,0.9s						
KURK				S	S	08 28 00.0	-20
KURK	**Kurchatov**	**15.36**	**18**	*e*P	**Pn**	**08 25 23.4**	**+1.6**
KURK				S	S	08 28 00.0	-20
KURK				pmax	pmax		
	comp=Z,18nm,0.9s						
RAMN	**Ramite**	**16.05**	**121**	*e*P	**Pn**	**08 25 30.4**	**-0.2**
	comp=Z,69nm,0.6s						
VOSK	**Vostochnaya**	**16.42**	**359**	⇓P	**Pn**	**08 25 32.6**	**-2.4**
	comp=Z,22nm,0.9s						
VOSK	**Vostochnaya**	**16.42**	**359**	P	**Pn**	**08 25 32.5**	**-2.4**
VOSK				pmax	pmax		
	comp=Z,22nm,0.9s						
TAPN	**Taplejung**	**16.58**	**118**	*e*P	**Pn**	**08 25 37.2**	**0.0**
	comp=Z,134nm,0.5s						
ODAN	**Odare**	**16.66**	**120**	*e*P	**Pn**	**08 25 38.3**	**+0.2**
	comp=Z,56nm,0.6s						
BVA0	**Borovoye Array**	**16.73**	**358**	⇓P	**Pn**	**08 25 38.0**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=185,slow=9.4,SNR=77						
BVA0				⇓S	**S**	**08 28 38.1**	**-7.1**
	comp=Z,1.9nm,1.0s,baz=164,slow=25,SNR=5.0						
BVA0	**Borovoye Array**	**16.73**	**358**	*i* P	**Pn**	**08 25 37.9**	**-0.9**
BVA0				*i*		08 28 38.1	
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVA0				smax			
	comp=N,2.0nm,1.0s						
BVAR	**Borovoye Array**	**16.73**	**358**	P	**Pn**	**08 25 37.1**	**-1.6**
	comp=N,2.0nm,0.3s,baz=177,slow=8.9,SNR=38						
BVAR				S	**S**	**08 28 36.4**	**-8.8**
	comp=N,0.7nm,0.3s,baz=168,slow=22,SNR=4.5						
BVAR				LR	LR	08 32 20.9	
	comp=N,58nm,21.1s,baz=82,slow=37						
BVAR	**Borovoye Array**	**16.73**	**358**	P	**Pn**	**08 25 37.1**	**-1.7**
BVAR				S	**S**	**08 28 36.4**	**-8.8**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	**16.77**	**358**	*e*P	**Pn**	**08 25 38.6**	**-0.6**
	comp=N,34nm,0.7s						
BRVK	**Borovoye**	**16.77**	**358**	*e*P	**Pn**	**08 25 38.6**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,34nm,0.7s						
AKTK	**Aktyubinsk**	**17.05**	**330**	P	**Pn**	**08 25 42.1**	**-0.5**
AKTK				S	**S**	**08 28 38.8**	**-14**
AKTK				LR	LR	08 33 22.9	
AKTO	**Aktyubinsk**	**17.05**	**330**	P	**Pn**	**08 25 42.1**	**-0.5**
	comp=Z,4.2nm,0.3s,baz=137,slow=13,SNR=104						
AKTO				S	**S**	**08 28 38.8**	**-14**
	comp=Z,2.2nm,0.3s,baz=70,slow=17,SNR=8.1						
AKTO				LR	LR	08 33 22.9	
	comp=Z,20nm,18.8s,baz=183,slow=40						
AKTO	**Aktyubinsk**	**17.05**	**330**	P	**Pn**	**08 25 42.1**	**-0.5**
AKTO				S	**S**	**08 28 38.8**	**-14**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
LSA	**Lhasa**	**17.94**	**106**	P	**Pn**	**08 25 57.0**	**+3.4**
LSA				AMB	AMB		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**17.94**	**106**	*e*P	**Pn**	**08 25 57.1**	**+3.5**
	comp=Z,20nm,0.7s						
LSA	**Lhasa**	**17.94**	**106**	*e*P	**Pn**	**08 25 57.1**	**+3.5**
LSA				pmax	pmax		
	comp=Z,20nm,0.7s						
HYB	**Hyderabad**	**19.90**	**159**	*i* P	**P**	**08 26 16.0**	**+2.0**
HYB				*e*		08 26 20.0	
HYB				*e*S	**S**	**08 29 46.0**	**-5.8**
ZAA0	**Zalesovo Array**	**20.01**	**24**	*e*P	**P**	**08 26 15.3**	**+0.3**
ZALV	**Zalesovo Beam**	**20.01**	**24**	P	**P**	**08 26 15.7**	**+0.7**
	comp=Z,30nm,0.5s,baz=220,slow=11,SNR=64						
ZALV				pP		08 26 40.2	
	comp=Z,8.7nm,0.6s,baz=222,slow=9.2,SNR=2.7						
ZALV				S	**S**	**08 29 54.3**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=214,slow=20,SNR=3.2						
ZALV	**Zalesovo Beam**	**20.01**	**24**	P	**P**	**08 26 15.7**	**+0.7**
ZALV				*PP		08 26 40.2	
ZALV				S	**S**	**08 29 54.3**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,30nm,0.5s						
ZALV				smax			
	comp=N,2.0nm,0.9s						
NVS	**Novosibirsk**	**20.30**	**20**	*e*P	**P**	**08 26 17.8**	**-0.2**
NVS				*e*		08 26 41.9	
NVS				*e*S	**S**	**08 29 55.8**	**-3.3**
NVS				pmax	pmax		
	comp=Z,38nm,1.3s						
NVS				pmax	pmax		
	comp=N,38nm,1.6s						
NVS				pmax	pmax		
	comp=E,11nm,1.2s						
NVS				smax			
	comp=N,27nm,2.0s						
NVS				smax			
	comp=E,16nm,2.0s						
MIB	**Mutribah**	**21.03**	**259**	*e*P	**P**	**08 26 25.4**	**-0.7**
	baz=257						
MIB				AMb	AMB	08 26 34.1	
	comp=Z,56nm,0.9s,mb4.9,baz=257						
GNI	**Garni**	**21.14**	**288**	*e*P	**P**	**08 26 28.7**	**+1.5**
	comp=Z,32nm,0.9s,mb4.7						
GNI	**Garni**	**21.14**	**288**	*e*P	**P**	**08 26 28.7**	**+1.5**
GNI				pmax	pmax		
	comp=Z,32nm,0.9s						
RDF	**Al-Radifah**	**21.24**	**257**	*e*P	**P**	**08 26 27.3**	**-1.1**
	baz=255						
RDF				AMb	AMB	08 26 31.5	
	comp=Z,32nm,1.2s,mb4.5,baz=255						
NAY	**Al-Naaiem**	**21.34**	**258**	*e*P	**P**	**08 26 28.3**	**-1.1**
	baz=256						
NAY				AMb	AMB	08 26 38.4	
	comp=Z,13nm,0.8s,mb4.3,baz=256						
SVE	**Sverdlovsk**	**21.73**	**344**	*e*P	**P**	**08 26 34.2**	**+0.9**
SVE				*e*S	**S**	**08 30 26.7**	**-0.3**
SVE				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.7						
ARU	**Arti**	**21.88**	**341**	*e*P	**P**	**08 26 35.5**	**+0.6**
	comp=Z,28nm,0.8s,mb4.6						
ARU	**Arti**	**21.88**	**341**	*d i*P	**P**	**08 26 35.7**	**+0.8**
ARU				*e*S	**S**	**08 30 26.0**	**-3.3**
ARU				pmax	pmax		
	comp=Z,65nm,1.7s,mb4.7						
KIV	**Kislovodsk**	**23.05**	**298**	*e*P	**P**	**08 26 46.6**	**-0.2**
KIV				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.3						
ANN	**Anapa**	**26.90**	**299**	*e*P	**P**	**08 27 27.7**	**+6.1**
ANN				*e**PP	pP	08 27 56.0	+10
ANN				*e*S	**S**	**08 31 55.3**	**+5.4**
SONM	**Songino Array**	**28.29**	**55**	P	**P**	**08 27 37.4**	**+3.5**
	comp=Z,1.5nm,0.8s,mb3.6,baz=271,slow=9.7,SNR=9.1						
SONM	**Songino Array**	**28.29**	**55**	P	**P**	**08 27 37.4**	**+3.4**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	**Ulaanbaatar**	**28.73**	**55**	*i* P	**P**	**08 27 25.4**	**-12**
CMAR	**Chiang Mai Arr**	**30.19**	**119**	P	**P**	**08 27 53.5**	**+2.5**
	comp=Z,2.0nm,0.5s,mb4.0,baz=297,slow=8.4,SNR=14						
CMAR				pP	pP	08 28 20.6	+4.4
	comp=Z,1.2nm,0.4s,baz=302,slow=9.5,SNR=2.0						
CMAR	**Chiang Mai Arr**	**30.19**	**119**	P	**P**	**08 27 53.5**	**+2.4**
CMAR				*PP	pP	08 28 20.6	+4.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OBN	**Obninsk**	**30.21**	**319**	⇑*e*P	**P**	**08 27 52.5**	**+1.6**
OBN				*e*		08 28 34.0	
OBN						08 28 58.0	
OBN				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.6						
AKASG	**Malin Array Be**	**33.22**	**309**	P	**P**	**08 28 17.9**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.2,baz=80,slow=7.3,SNR=5.9						
AKASG				pP	pP	08 28 44.4	+1.9
	comp=Z,1.2nm,0.5s,baz=82,slow=7.9,SNR=2.4						
AKASG	**Malin Array Be**	**33.22**	**309**	P	**P**	**08 28 17.9**	**+0.6**
AKASG				*PP	pP	08 28 44.4	+1.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JOF	**Joensuu**	**36.13**	**330**	*e*p	**P**	**08 28 43.2**	**+1.0**
	comp=Z,3.3nm,0.3s,mb4.7						
JOF	**Joensuu**	**36.13**	**330**	*e*P	**P**	**08 28 43.2**	**+1.0**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.7						
WHN	**Wuhan**	**36.21**	**86**	*e*P	**P**	**08 28 51.5**	**+8.2**
FINES	**FINESS Array B**	**37.75**	**326**	*e*P	**P**	**08 28 56.0**	**+0.1**
ARCES	**ARCESS Array B**	**41.40**	**338**	P	**P**	**08 29 26.7**	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.2,baz=113,slow=8.2,SNR=13						
ARCES	**ARCESS Array B**	**41.40**	**338**	P	**P**	**08 29 26.7**	**+0.6**
ARCES	**ARCESS Array B**	**41.40**	**338**	P	**P**	**08 29 26.7**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	**Hagfors**	**43.34**	**322**	LR	LR	08 48 22.0	
	comp=Z,33nm,21.4s,baz=65,slow=37						
NB2	**NORSAR Subarra**	**44.65**	**323**	P	**P**	**08 29 52.1**	**-0.2**
	comp=Z,2.8nm,0.5s,mb4.2,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**08 29 52.4**	**+0.1**
	comp=Z,4.5nm,0.6s,mb4.3,baz=97,slow=7.8,SNR=13						
NOA				pP	pP	08 30 20.1	+1.4
	comp=Z,2.4nm,0.7s,baz=96,slow=8.1,SNR=3.3						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**08 29 52.4**	**+0.1**
NOA				*PP	pP	08 30 20.1	+1.4
NOA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSRS	**Korea Array**	**44.76**	**71**	P	**P**	**08 29 55.4**	**+1.9**
	comp=Z,1.4nm,0.7s,mb3.8,baz=286,slow=5.6,SNR=3.8						
KSRS	**Korea Array**	**44.76**	**71**	P	**P**	**08 29 55.4**	**+1.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ESDC	**Sonseca Array**	**57.72**	**298**	pP	pP	08 31 58.8	+1.0
	comp=Z,0.5nm,0.3s,baz=63,slow=8.0,SNR=2.4						
ESDC				LR	LR	09 01 16.6	
	comp=Z,50nm,19.8s,baz=165,slow=41						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**08 32 23.2**	**-2.2**
	comp=Z,2.9nm,0.7s,mb4.2,baz=50,slow=6.0,SNR=29						
TORD				pP	pP	08 32 55.3	+1.7
	comp=Z,1.9nm,0.6s,baz=43,slow=5.6,SNR=4.4						
INK	**Inuvik**	**74.07**	**9**	*e*P	**P**	**08 33 15.4**	**+1.0**
	comp=Z,65nm,0.6s,mb5.5						
COLA	**College**	**74.61**	**16**	*e*P	**P**	**08 33 19.0**	**+1.4**
	comp=Z,4.5nm,1.0s,mb4.2						
COLA	**College**	**74.61**	**16**	*e*P	**P**	**08 33 19.0**	**+1.4**
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BOSA	**Boshof**	**77.72**	**220**	P	**P**	**08 33 35.1**	**-0.6**
	comp=Z,6.3nm,0.7s,mb4.4,baz=50,slow=7.5,SNR=8.2						
BOSA	**Boshof**	**77.72**	**220**	*e*P	**P**	**08 33 35.1**	**-0.5**
	comp=Z,7.2nm,0.7s,mb4.5						
BOSA	**Boshof**	**77.72**	**220**	*e*P	**P**	**08 33 35.2**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	**81.43**	**3**	P	**P**	**08 33 55.7**	**+0.4**
	comp=Z,1.0nm,0.4s,mb4.0,baz=350,slow=5.4,SNR=6.1						
YKA	**Yellowknife Ar**	**81.43**	**3**	P	**P**	**08 33 55.7**	**+0.3**
YKA	**Yellowknife Ar**	**81.43**	**3**	P	**P**	**08 33 55.7**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**81.72**	**122**	P	**P**	**08 33 57.1**	**-0.4**
	comp=Z,2.7nm,0.8s,mb4.1,baz=324,slow=4.9,SNR=40						
WRA				pP	pP	08 34 30.5	+3.8
	comp=Z,0.2nm,0.4s,baz=242,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**81.72**	**122**	P	**P**	**08 33 57.1**	**-0.4**
WRA				*PP	pP	08 34 30.5	+3.8
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**81.72**	**122**	*e*P	**P**	**08 33 57.2**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**81.72**	**122**	*e*P	**P**	**08 33 57.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**83.98**	**125**	P	**P**	**08 34 08.9**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.2,baz=311,slow=5.0,SNR=42						
ASAR		

AKHS				*i* S	**Sg**	09 24 25.4	**+0.7**	
BODT	**Bodrum**	**1.39**	**151**	*e*PN	**Pn**	09 24 11.0	**-0.6**	
APE	**Apeiranthos**	**1.42**	**212**	*e*PN	**Pn**	09 24 15.0	**+3.0**	
MLSB	**Milas**	**1.43**	**133**	*e*PN	**Pn**	09 24 10.5	**-1.6**	
BDRM	**Kayabasi**	**1.44**	**147**	*e*P	**Pn**	09 24 11.4	**-0.9**	
BDRM				*i* S	**Sb**	09 24 33.8	**+2.4**	
BALY	**Balya**	**1.71**	**31**	*e*P	**Pn**	09 24 17.3	**+1.3**	
BALY				*i* S	**Sn**	09 24 42.6	**+4.3**	
KULA	**Kula-Manisa**	**1.74**	**82**	*e*PN	**Pn**	09 24 17.4	**+1.0**	
YER	**Yerkesik**	**1.84**	**128**	*e*PN	**Pn**	09 24 18.3	**+0.5**	
DALT	**Dalyan (Mudla)**	**2.29**	**131**	*e*PN	**Pn**	09 24 23.9	**-0.1**	

*IDC **12** 09:28:09.3±3.2, 954N×8649W, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.8/20, mbtmp3.7/5, ML3.4/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/23, Error ellipse: s-maj=90.8km s-min=31.8km az=31.0*
*ISCJB **12** 09:28:28.6±0.7, 1148N±003×8705W±005, h10km, mb3.6/2, MS3.7/2, Error ellipse: s-maj=7.5km s-min=4.6km az=161.5*
*CASC **12** 09:28:31.2±2.2, 1151N×8690W, h15km±9km, MD4.0, ML3.5*

ISC 12 09:28:31.0±2.2, 1157N±005×8696W±006, h18km±16km, n39, σ0°89/32, mb3.6/2, MS3.7/2, 11C-6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
COPN	**Copaltepe**	**0.70**	**31**	⇓*e*P		**Pb**	**09 28 45.3**	**+0.6**
CRUN	**El Crucero**	**0.76**	**58**	*e*P		**Pb**	**09 28 46.2**	**+0.5**
CSAN		**0.80**	**41**	⇑*e*P		**Pb**	**09 28 46.1**	**-0.3**
XAVN	**Gruta Xavier**	**0.84**	**47**	*e*P		**Pb**	**09 28 46.9**	**-0.2**
TICN	**Ticuantepe**	**0.85**	**57**	⇑*e*P		**Pb**	**09 28 47.4**	**+0.3**
TISN	**Laguna Tiscapa**	**0.88**	**50**	⇑*e*P		**Pb**	**09 28 47.4**	**-0.3**
APYN	**Apoyeque**	**0.89**	**42**	*e*P		**Pb**	**09 28 47.5**	**-0.4**
APYN				AML		AML	09 29 02.4	
	comp=Z,2μm,0.4s							
MIRN	**Miramar**	**0.90**	**16**	⇓*e*P		**Pb**	**09 28 48.0**	**0.0**
MGAN	**Managua**	**0.90**	**51**	⇑*e*P		**Pb**	**09 28 47.4**	**-0.7**
MGAN				*e*S		**Sb**	**09 29 00.7**	**+1.0**
MGAN				AML		AML	09 29 04.0	
	comp=E,2μm,0.4s							
MOMN	**Momotombo**	**0.93**	**26**	⇑*e*P		**Pb**	**09 28 48.8**	**+0.3**
APON	**Apoyo**	**0.94**	**69**	⇑*e*P		**Pb**	**09 28 48.3**	**-0.4**
CNGN	**Cerro Negro**	**0.96**	**15**	⇑*e*P		**Pb**	**09 28 48.7**	**-0.3**
CNGN				*e*P			09 28 49.1	
CNGN				*e*S		**Sb**	**09 29 04.5**	**+3.1**
CNGN				AML		AML	09 29 07.3	
	comp=N,956nm,0.4s							
TEL3	**Telica 3**	**1.00**	**6**	⇑*e*P		**Pb**	**09 28 50.2**	**+0.4**
HUEN		**1.08**	**45**	⇓*e*P		**Pb**	**09 28 50.4**	**-0.8**
CRIN	**San Cristobal**	**1.12**	**355**	*e*P		**Pn**	**09 28 51.9**	**+0.1**
CONN	**Concepcion**	**1.31**	**90**	*e*P		**Pn**	**09 28 52.1**	**-2.2**
CNCH	**Conchagua**	**1.90**	**333**	⇑*e*P		x	09 29 02.9	
CNCH				*e*S		x	09 29 29.6	
VCR	**Vista de Mar**	**1.94**	**138**	*e*P		**Pn**	**09 29 03.9**	**+0.8**
BLLM	**Bellamira**	**2.24**	**326**	⇓*e*P		x	09 29 08.2	
VSM	**San Miguel**	**2.25**	**325**	*e*P		x	09 29 08.8	
VSM				*e*S		x	09 29 39.8	
TGUH	**Tegucigalpa,Un**	**2.49**	**353**	⇑*e*P		**Pn**	**09 29 11.4**	**+0.9**
JCR	**Jicaral**	**2.50**	**133**	*e*P		**Pn**	**09 29 12.0**	**+1.3**
JCR				*e*S		**Sn**	**09 29 41.3**	**+0.6**
FORC	**Fortuna**	**2.50**	**116**	*e*P		**Pn**	**09 29 09.9**	**-0.9**
CAHU	**Cacacuatique**	**2.50**	**331**	*e*P		x	09 29 12.3	
SNVI	**San Vicente**	**2.73**	**318**	*e*P		x	09 29 16.6	
SNVI				*e*S		x	09 29 51.7	
LFRS	**El Faro**	**2.89**	**315**	*e*P		x	09 29 17.8	
CGA2	**Cerro Gallo 2**	**2.90**	**122**	*e*P		**Pn**	**09 29 16.8**	**+0.6**
PRS1	**Puriscal**	**3.04**	**121**	*e*P		**Pn**	**09 29 17.2**	**-1.0**
BOQS	**Boqueron**	**3.12**	**314**	*e*P		x	09 29 21.7	
BOQS				*e*S		x	09 30 00.9	
RTR	**El Retiro**	**3.49**	**312**	*e*P		x	09 29 27.4	
URSC	**Urasca**	**3.57**	**119**	*e*P		**Pn**	**09 29 25.8**	**+0.3**
BUS	**Buena Vista**	**3.73**	**122**	*e*P		**Pn**	**09 29 28.2**	**+0.5**
CMIG	**Matias Romero**	**9.44**	**306**	Pn		**Pn**	**09 30 47.7**	**+1.6**
	comp=N,0.3nm,0.3s,baz=115,slow=10,SNR=7.5							
CMIG				Sn		**Sn**	**09 32 43.6**	**+12**
	comp=N,0.1nm,0.3s,baz=211,slow=23,SNR=2.1							
CMIG				LR		LR	09 34 54.3	
	comp=N,144nm,21.7s,baz=118,slow=36							
CHI2		**14.78**	**117**	⇓*e*P		Px	09 28 51.1	
CHI2				AML		AML	09 29 08.4	
	comp=Z,2μm,0.5s							
TXAR	**Lajitas Array**	**23.55**	**321**	P		**P**	**09 33 39.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=145,slow=9.6,SNR=25							
TKL	**Tuckaleechee C**	**24.15**	**6**	P		**P**	**09 33 44.9**	**-1.1**
	comp=Z,1.2nm,0.5s,mb3.6,baz=184,slow=14,SNR=5.0							
PDAR	**Pinedale Array**	**36.77**	**332**	P		**P**	**09 35 35.9**	**-1.6**
	comp=Z,0.4nm,0.5s,mb3.5,baz=133,slow=12,SNR=9.0							
YKA	**Yellowknife Ar**	**54.58**	**345**	LR		LR	10 03 54.2	
	comp=Z,34nm,18.6s,MS3.5,baz=120,slow=38							
RAR	**Rarotonga**	**78.55**	**245**	LR		LR	10 06 19.9	
	comp=Z,61nm,20.4s,MS3.9,baz=90,slow=29							

*ISCJB **12** 09:33:37.7±1.2, 090N×007×12085E±006, h82km±13km, mb4.1/12, Error ellipse: s-maj=11.7km s-min=9.4km az=9.4*
*DJA **12** 09:33:38.5±0.0, 088N×12080E, h79km, mB5.2/3, Mjma3.9/3, MLv4.8/4, Mw(mB)5.1/3, Mwp4.6/3*
*NEIC **12** 09:33:39.0±1.9, 088N×12096E, h80km±19km, mb4.6/4, Error ellipse: s-maj=26.8km s-min=8.3km az=63.0*
*IDC **12** 09:33:40.5±3.1, 082N×12082E, h91km±29km, mb3.8/9, mb1 3.9/11, mb1mx3.8/20, mbtmp3.8/11, MS3.5/3, Ms1 3.5/3, ms1mx2.8/25, Error ellipse: s-maj=42.4km s-min=14.1km az=66.0*

ISC 12 09:33:40.0±1.1, 086N±007×12083E±006, h87km±12km, n30, σ1°92/25, mb4.1/12, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PCI	**Palu**	**2.01**	**209**	P		**Pn**	**09 34 08.8**	**-3.4**
PCI	**Palu**	**2.01**	**209**	S		**Sn**	**09 34 36.8**	**0.0**
KDI	**Kendari**	**5.11**	**159**	P		**Pn**	**09 34 52.2**	**-1.9**
	95nm,0.9s,2μm0.2nm							
KDI	**Kendari**	**5.11**	**159**	S		**Sn**	**09 35 53.4**	**+1.7**
	95nm,0.9s,2μm0.2nm							
KAPI	**Kappang**	**5.93**	**190**	P		**Pn**	**09 35 04.9**	**-0.4**
	3.3nm,0.3s,baz=20,slow=14,SNR=8.8							
KAPI				LR		LR	09 37 50.1	
	comp=Z,418nm,18.8s,baz=258,slow=42							
LBMI	**Labuha**	**6.84**	**103**	P		**Pn**	**09 35 16.3**	**-1.4**
	88nm,0.9s,2μm0.7nm							
LBMI	**Labuha**	**6.84**	**103**	S		**Sn**	**09 36 34.2**	**+0.1**
	88nm,0.9s,2μm0.7nm							
AAI	**Ambon**	**8.64**	**122**	P		**Pn**	**09 35 44.5**	**+2.3**
	191nm,0.9s,1μm0.6nm							
SWI	**Sorong**	**10.57**	**99**	P		**Pn**	**09 36 15.2**	**+6.6**
BATI	**Baumata**	**11.35**	**166**	P		**Pn**	**09 36 20.5**	**+1.4**
	2.9nm,0.3s,baz=116,slow=18,SNR=2.3							
BATI				LR		LR	09 41 30.3	
	comp=Z,360nm,19.8s,baz=184,slow=42							
KAKA	**Kakadu**	**17.73**	**140**	*e*Pn		Px	09 37 32.7	
	40nm,0.9s							
WRAB	**Tennant Creek**	**24.55**	**148**	*e*P		**P**	**09 38 50.8**	**-0.9**
	7.9nm,0.8s,mb4.2							
WRA	**Warramunga Arr**	**24.55**	**148**	P		**P**	**09 38 50.4**	**-1.3**
	2.3nm,0.3s,mb4.0,baz=326,slow=11,SNR=20							
WB2	**Warramunga Arr**	**24.56**	**148**	*e*P		**P**	**09 38 50.8**	**-0.9**
GUMO	**Guam**	**26.95**	**61**	LR		LR	09 47 45.0	
	comp=Z,50nm,20.1s,baz=270,slow=31							
ASAR	**Alice Springs**	**27.49**	**153**	P		**P**	**09 39 18.4**	**+0.2**
	1.2nm,0.5s,mb3.6,baz=345,slow=15,SNR=21							
ASAR				PcP		PcP	09 42 35.1	+0.5
	0.4nm,0.5s,baz=348,slow=2.8,SNR=5.5							
KSRS	**Korea Array**	**37.00**	**9**	P		**P**	**09 40 41.4**	**+0.3**
	1.9nm,0.7s,mb4.2,baz=185,slow=8.4,SNR=7.1							
STKA	**Stephens Creek**	**38.04**	**151**	P		**P**	**09 40 50.2**	**+0.3**
	3.6nm,0.7s,mb4.3,baz=330,slow=7.9,SNR=9.7							
MDJ	**Mudanjiang**	**44.26**	**9**	*e*P		**P**	**09 41 39.5**	**-1.2**
	11nm,1.0s,mb4.5							
ULN	**Ulaanbaatar**	**48.33**	**348**	*e*P		**P**	**09 42 12.7**	**+0.2**
	7.2nm,1.1s,mb4.4							
SONM	**Songino Array**	**48.44**	**347**	P		**P**	**09 42 14.2**	**+0.8**
	4.8nm,0.9s,mb4.3,baz=163,slow=8.9,SNR=24							
MKAR	**Makanchi Array**	**56.76**	**329**	P		**P**	**09 43 15.3**	**+0.5**
	0.6nm,0.7s,mb3.8,baz=118,slow=9.6,SNR=4.2							
MKAR	**Makanchi Array**	**56.76**	**329**	P		**P**	**09 43 15.3**	**+0.5**
ZALV	**Zalesovo Beam**	**60.65**	**337**	P		**P**	**09 43 41.3**	**-0.4**
	0.9nm,0.6s,mb4.0,baz=119,slow=5.2,SNR=5.0							
AKTK	**Aktyubinsk**	**72.33**	**323**	P		**P**	**09 44 56.9**	**+0.7**
AKTO	**Aktyubinsk**	**72.33**	**323**	⇓S		S	09 53 58.0	-15
	0.2nm,0.7s							
AKTO	**Aktyubinsk**	**72.33**	**323**	P		**P**	**09 44 56.9**	**+0.7**
	0.6nm,0.5s,mb3.7,baz=94,slow=4.6,SNR=5.7							
BRTR	**Keskin Array B**	**87.29**	**310**	P		**P**	**09 46 17.5**	**+0.2**
	2.3nm,0.8s,mb4.2							
PDAR	**Pinedale Array**	**117.35**	**40**	PKP		PKPdf	09 52 15.8	+0.1
	0.3nm,0.7s,baz=103,slow=1.9,SNR=2.5							
TORD	**Torodi Ar. Bea**	**118.09**	**285**	PKP		PKPdf	09 52 17.6	-0.2
	0.8nm,0.7s,baz=54,slow=1.2,SNR=5.9							

*CSEM **12** 09:37:15.9±0.1, 3798N×2245E, h12km, ML3.0/2, Error ellipse: s-maj=4.2km s-min=3.4km az=97.0*
*ISCJB **12** 09:37:16.2±0.5, 3799N±002×2241E±003, h6km±5km, Error ellipse: s-maj=4.4km s-min=3.9km az=174.5*
*THE **12** 09:37:16.2, 3799N×2240E, h3km±1km, ML3.0/2, Error ellipse: s-maj=1.7km s-min=0.6km az=130.0*
*NEIC **12** 09:37:16.6, 3799N×2241E, h21km, MD3.3(ATH), After ATH.*
*ATH **12** 09:37:16.6, 3799N×2241E, h21km±3km, MD3.3/9*

ISC 12 09:37:16.6±0.5, 3799N±002×2241E±003, h9km±5km, n21, σ0°85/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LTK	**Loutraki**	**0.45**	**85**	P		**Pg**	**09 37 25.2**	**-0.1**
LTK				S		**Sg**	**09 37 31.6**	**+0.4**
VLX	**Vlachokerasia**	**0.61**	**182**	P		**Pg**	**09 37 28.2**	**-0.3**
VLX				S		**Sg**	**09 37 36.8**	**+0.3**
RLS	**Riolos of Patr**	**0.74**	**276**	*e*PN		**Pg**	**09 37 30.7**	**-0.3**
RLS				*e*SN		**Sg**	**09 37 42.5**	**+1.8**
LKR	**Lokris**	**0.81**	**35**	P		**Pg**	**09 37 31.4**	**-0.9**
LKR				S		**Sg**	**09 37 43.7**	**+0.9**
LKR	**Lokris**	**0.81**	**35**	*e*Pb		**Pg**	**09 37 31.7**	**-0.6**
LKR				S		**Sg**	**09 37 43.7**	**+0.9**
DID	**Didima**	**0.81**	**126**	P		**Pg**	**09 37 31.7**	**-0.6**
DID				S		**Sg**	**09 37 43.1**	**+0.2**
NAIG	**Nisos Aigina**	**0.89**	**104**	*e*PN		**Pg**	**09 37 34.0**	**+0.3**
NAIG				*e*SN		**Sg**	**09 37 46.5**	**+1.3**
ITM	**Ithomi**	**0.89**	**205**	*e*PB		**Pg**	**09 37 33.1**	**-0.6**
AGG	**Agios Georgios**	**1.04**	**357**	P		**Pg**	**09 37 35.8**	**-0.7**
AGG				S		**Sg**	**09 37 50.1**	**+0.1**
AGG	**Agios Georgios**	**1.04**	**357**	P		**Pg**	**09 37 35.8**	**-0.7**
AGG				S		**Sg**	**09 37 50.1**	**+0.1**
ATH	**Athens Observa**	**1.04**	**90**	*e*PN		**Pn**	**09 37 36.2**	**-1.2**
EVR	**Evrytania**	**1.04**	**333**	*e*PN		**Pn**	**09 37 36.4**	**-1.0**
PYL	**PYLOS**	**1.21**	**206**	P		**Pb**	**09 37 38.7**	**-1.0**
VLI	**Veliai**	**1.33**	**161**	*e*PB		**Pb**	**09 37 41.0**	**-0.8**
VLI				*e*SN		**Sn**	**09 38 01.0**	**+1.7**
VLS	**Valsamata**	**1.45**	**278**	*e*PN		**Pn**	**09 37 44.2**	**+1.2**
XOR	**Xorichti**	**1.51**	**24**	P		**Pn**	**09 37 43.3**	**-0.6**
XOR				S		**Sn**	**09 38 04.8**	**+1.1**
THL	**Klokotos Trika**	**1.61**	**349**	P		**Pn**	**09 37 45.4**	**+0.2**
THL				S		**Sn**	**09 38 06.8**	**+0.7**
THL	**Klokotos Trika**	**1.61**	**349**	*e*Pn		**Pn**	**09 37 45.9**	**+0.7**
THL				S		**Sn**	**09 38 06.8**	**+0.7**
AOS	**Alonnisos**	**1.65**	**44**	P		**Pn**	**09 37 45.0**	**-0.9**
LIT	**Litokhoron**	**2.11**	**2**	P		**Pn**	**09 37 51.8**	**-0.4**
PAIG	**Paliouri**	**2.18**	**27**	P		**Pn**	**09 37 52.1**	**-1.0**

*MOS **12** 09:45:19.5±2.4, 5525N×11031E, h8km, mb4.2/1, Error ellipse: s-maj=58.3km s-min=16.7km az=53.5*

BYKL 12 09:45:20.9±0.3, 5532N×11032E, h4km±16km, 3C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.64**	**316**	*e*Pg		Pg	09 45 33.2	+0.1
NIZ				*e*			09 45 40.6	
NIZ				*e*Sg		Sg	09 45 41.9	+0.6
NIZ				Pmax				
	16nm,0.1s							
NIZ				Smax				
	222nm,0.6s							
YLYR	**Ulyunkhan**	**0.66**	**132**	⇑*i*Pg		Pg	09 45 32.5	-1.0
YLYR				*e*Sg		Sg	09 45 41.2	-0.8
YLYR				Pmax				
	58nm,0.6s							
YLYR				Smax				
	178nm,0.1s							
KMO	**Kumora**	**0.76**	**41**	*e*PG		Pg	09 45 34.3	-1.1
KMO				*e*			09 45 43.4	
KMO				pmax		pmax		
	comp=Z,189nm,0.4s							
KMO				smax				
	comp=N,427nm,1.2s							
KMO	**Kumora**	**0.76**	**41**	⇑*i*Pg		Pg	09 45 34.4	-1.0
KMO				*e*Sg		Sg	09 45 43.7	-1.5
KMO				Pmax				
	comp=N,198nm,0.4s							
KMO				Smax				
	comp=N,428nm,1.1s							
YOA	**Uoyan**	**1.14**	**44**	⇓*i*PG		Pg	09 45 42.3	-0.4
YOA				*i*			09 45 57.4	
YOA				pmax		pmax		
	comp=Z,188nm,0.3s							
YOA				smax				
	comp=E,620nm,0.5s							
YOA	**Uoyan**	**1.14**	**44**	*e*Pg		Pg	09 45 41.7	-1.0
YOA				*e*Sg		Sg	09 45 57.2	-0.2
YOA				Pmax				
	comp=E,195nm,0.4s							
YOA				Smax				
	comp=E,591nm,0.7s							
SYVR	**Suvo**	**1.68**	**187**	*e*Pg		Pg	09 45 51.9	-1.1
SYVR				*e*Sg		Sg	09 46 13.9	-0.8
SYVR				Pmax				
	comp=E,54nm,0.6s							
SYVR				Smax				
	comp=E,241nm,0.9s							
UKT	**Uakit**	**1.89**	**84**	*e*PN		Pn	09 45 54.0	+0.1
UKT				*e*			09 46 19.5	
UKT				pmax		pmax		
	comp=Z,70nm,0.3s							
UKT				smax				
	comp=N,172nm,0.4s							
UKT	**Uakit**	**1.89**	**84**	⇑*i*Pg		Pg	09 45 54.2	-3.0
UKT				*e*Sg		Sg	09 46 19.4	-2.3
UKT				Pmax				
	comp=N,69nm,0.4s							
UKT				Smax				
	comp=N,222nm,0.9s							
SVKR	**Severomuysk**	**2.00**	**65**	*e*		Sn	09 46 11.0	-10
SVKR				*e*Sg		Sg	09 46 23.6	-1.5
SVKR				Smax				
	comp=N,770nm,0.9s							
MXMB	**Maximikha**	**2.26**	**205**	*e*Pn		Pn	09 46 00.5	+1.6
MXMB				*e*Pg		Pg	09 46 02.2	-1.9
MXMB				*e*Sg		Sg	09 46 31.8	-1.6
MXMB				Pmax				
	comp=N,55nm,0.7s							
MXMB				Smax				
	comp=N,558nm,0.6s							
OGRR	**Ongureny**	**2.31**	**225**	*e*PN		Pn	09 46 04.0	+4.3
OGRR				*e*			09 46 33.4	
OGRR				pmax		pmax		
	comp=Z,38nm,0.4s							
OGRR				smax				
	comp=N,267nm,0.8s							
OGRR	**Ongureny**	**2.31**	**225**	*e*		Pn	09 46 01.0	+1.3
OGRR				*e*Pg		Pg	09 46 02.8	-2.4
OGRR				*e*Sg		Sg	09 46 33.3	-1.8
OGRR				Pmax				
	comp=N,33nm,0.5s							
OGRR				Smax				
	comp=N,267nm,0.6s							
BOD	**Bodaibo**	**3.23**	**38**	*e*Pn		Pn	09 46 12.2	-0.1
BOD				*e*Pg		Pg	09 46 18.0	-4.7
BOD				*e*			09 46 50.8	
BOD				*e*Sg		Sg	09 46 59.0	-5.5
BOD				Pmax				
	comp=N,15nm,0.5s							
BOD				Smax				
	comp=N,62nm,0.9s							
NLYR	**Nelyaty**	**3.25**	**67**	*e*Pn		Pn	09 46 12.9	+0.3
NLYR				*e*Pg		Pg	09 46 19.2	-3.9
NLYR				*e*Sg		Sg	09 47 01.4	-3.8
NLYR				Pmax				
	comp=N,46nm,0.6s							
NLYR				Smax				
	comp=N,192nm,1.0s							
TRG	**Tyrgan**	**3.47**	**224**	*e*		Pn	09 46 16.3	+0.7
TRG				*e*Pg		Pg	09 46 22.0	-5.4
TRG				*e*Sg		Sg	09 47 06.7	-5.7
TRG				Pmax				
	comp=N,4.0nm,0.3s							
TRG				Smax				
	comp=N,97nm,1.2s							
FFNB	**Fofonovo**	**3.90**	**214**	*e*		Sn	09 46 59.8	-7.9
FFNB				*e*Sg		Sg	09 47 20.0	-6.1
FFNB				Smax				
	comp=N,194nm,0.6s							
HRMR	**Khuramsha**	**4.21**	**210**	*e*		Pn	09 46 29.3	+3.5
HRMR				*e*Pg		Pg	09 46 36.7	-4.8
HRMR				*e*Sg		Sg	09 47 30.5	-5.5
HRMR				Pmax				
	comp=N,17nm,0.4s							
HRMR				Smax				
	comp=N,236nm,0.9s							
CRS	**Chara**	**4.72**	**67**	*e*PN		Pg	09 46 46.0	-5.3
CRS				*e*			09 47 47.3	
CRS				pmax		pmax		
	comp=Z,43nm,1.1s							
CRS				smax				
	comp=E,81nm,1.1s							
CRS	**Chara**	**4.72**	**67**	*e*Pg		Pg	09 46 46.1	-5.2
CRS				*e*Sg		Sg	09 47 47.3	-5.1
CRS				Pmax				
	comp=E,43nm,1.1s							
CRS				Smax				
	comp=E,81nm,0.9s							
TLY	**Talaya**	**5.40**	**230**	*e*PN		Pn	09 46 42.9	+0.8
TLY				*e*			09 46 58.1	
TLY				*e*S		Sn	09 47 43.4	-1.2
TLY				*e*			09 48 05.6	
TLY				pmax		pmax		
	comp=Z,8.0nm,0.7s							
TLY				smax				
	comp=N,71nm,1.0s							
TUP	**Tupik**	**5.63**	**95**	*e*Pn		Pn	09 46 45.0	-0.3
TUP				*e*			09 47 02.2	
TUP				*e*Sg		Sg	09 48 15.8	-5.9
TUP				max				
	comp=N,2.0nm,0.3s							
TUP				Smax				
	comp=N,37nm,1.2s							
KPC	**Khapcheranga**	**5.76**	**167**	*e*Pg		Pg	09 47 04.8	-6.4
KPC				*e*Sg		Sg	09 48 19.3	-6.6
KPC				Pmax				
	comp=N,2.0nm,0.5s							
KPC				Smax				
	comp=N,12nm,0.9s							
ARS	**Arshan**	**5.80**	**237**	*e*		Pn	09 46 50.4	+2.8
ARS				*e*Pg		Pg	09 47 06.3	-5.7
ARS				*e*Sn		Sn	09 47 54.3	-0.2
ARS				*e*Sg		Sg	09 48 21.9	-5.2
ARS				Pmax				
	comp=N,17nm,0.6s							
ARS				Smax				
	comp=N,132nm,0.6s							
ORL	**Orlik**	**6.80**	**250**	*e*PN		Pn	09 47 02.8	+1.5
ORL				*e*S		Sn	09 48 50.7	+32
ORL				smax				
	comp=N,32nm,1.0s							
ORL	**Orlik**	**6.80**	**250**	*e*Pn		Pn	09 47 01.9	+0.6
ORL				*e*Sn		Sn	09 48 18.5	-0.7
ORL				*e*Sg		Sg	09 48 50.8	-8.3
ORL				max				
	comp=N,16nm,1.2s							
ORL				Smax				
	comp=N,53nm,1.1s							

*NIED **12** 10:24:00.2480N×12190E, h32km, Mw4.1 Best double couple: M0 1.36000×10^15 NP1:φ=93.00000°, δ78.00000°, λ30.00000°. NP2:φ=356.00000°, δ61.00000°, λ166.00000°.*
*ISCJB **12** 10:24:41.5±0.3, 2446N±002×12195E±002, h7km±2km, mb3.6/6, Error ellipse: s-maj=2.8km s-min=2.2km az=144.7*
*NEIC **12** 10:24:42.5, 2446N×12184E, h18km, ML4.5(TAP), After TAP.*
NEIC Recorded [4 TAP] in I-lan, [3 TAP] in Hua-lien and [1 TAP] in T'ai-pei and T'ao-yuan Counties.
*TAP **12** 10:24:42.2, 2447N×12186E, h23km, ML4.4, B*
*JMA **12** 10:24:42.1±0.4, 2483N×12188E, h38km, M3.7*
*IDC **12** 10:25:07.2±6.9, 2475N×12236E, h282km±81km, mb3.0/6, mb1 3.1/7, mb1mx3.1/21, mbtmp3.0/7, Error ellipse: s-maj=31.5km s-min=15.9km az=63.0*

ISC 12 10:24:42.0±0.3, 2446N±002×12194E±002, h8km±2km, n84, σ1°00/134, mb3.6/6, 14C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TWC	**Suao**	**0.17**	**330**	⇑*i*P		**Pg**	**10 24 47.1**	**+1.5**
	baz=357							
ENA	**Nanau**	**0.19**	**261**	⇑*i*P		**Pg**	**10 24 46.8**	**+1.0**
	baz=249							
ENA				S		**Sg**	**10 24 49.9**	**+1.5**
	baz=249							
EHP	**Heping Village**	**0.24**	**231**	P		**Pg**	**10 24 47.2**	**+0.5**
	baz=215							
EHP				*e*S		**Sg**	**10 24 51.1**	**+1.2**
	baz=215							
ILA	**Ilan**	**0.35**	**330**	*i* P		**Pg**	**10 24 49.8**	**+0.9**
	baz=334							
ILA				*i* S		**Sg**	**10 24 54.8**	**+1.2**
	baz=334							
TWE	**Neicheng**	**0.36**	**316**	⇓*i*P		**Pg**	**10 24 49.5**	**+0.4**
	baz=325							
TWE				S		**Sg**	**10 24 53.6**	**-0.3**
	baz=325							
ENTT	**Nioudou**	**0.39**	**298**	⇓*i*P		**Pg**	**10 24 49.7**	**+0.2**
	baz=302							
NACB	**Ninganchiao**	**0.43**	**228**	*e*P		**Pg**	**10 24 49.6**	**-0.7**
TWD	**Chiawan**	**0.49**	**220**	⇑P		**Pg**	**10 24 51.2**	**-0.3**
	baz=212							
NNS	**Nan Shan**	**0.52**	**268**	⇓*i*P		**Pg**	**10 24 51.8**	**-0.3**
	baz=264							
NNS				S		**Sg**	**10 24 57.6**	**-1.3**
	baz=264							
TWB1	**Santiao Chiao**	**0.55**	**4**	⇑*i*P		**Pg**	**10 24 53.4**	**+0.8**
	baz=7.0							
T

	baz=315							
TWY	**Chenhua**	**0.87**	**339**	*e*P	**Pg**	**10 24 58.9**	**+0.1**
	baz=344							
TWY				S	**Sg**	**10 25 09.9**	**-0.2**
	baz=344							
NSTT	**Nanjuang**	**0.88**	**282**	⇓*i*P	**Pg**	**10 24 58.1**	**-0.7**
	baz=282							
NSTT				*e*S	**Sg**	**10 25 08.1**	**-2.1**
	baz=282							
HSN	**Hsinchu**	**0.95**	**291**	⇓P	**Pg**	**10 24 59.8**	**-0.4**
	baz=296							
HSN				*e*S	**Sg**	**10 25 12.2**	**-0.4**
	baz=296							
YOJ	**Yonaguni jima**	**0.97**	**90**	P	**Pg**	**10 25 01.3**	**+0.6**
YOJ				S	**Sg**	**10 25 15.1**	**+1.8**
YOJ	**Yonaguni jima**	**0.97**	**90**	P	**Pg**	**10 25 01.0**	**+0.4**
	baz=77							
YOJ				*e*S	**Sg**	**10 25 14.0**	**+0.7**
	baz=77							
TWQ1	**Liyutan**	**1.07**	**264**	P	**Pg**	**10 25 02.2**	**-0.4**
	baz=274							
TWQ1				*e*S	**Sg**	**10 25 16.7**	**+0.2**
	baz=274							
NSY	**Sanyi**	**1.08**	**268**	*e*P	**Pg**	**10 25 02.7**	**0.0**
	baz=278							
NSY				*e*S	**Sg**	**10 25 18.1**	**+1.4**
	baz=278							
EHY	**Hungye**	**1.11**	**211**	⇑P	**Pg**	**10 25 00.8**	**-2.4**
	baz=208							
SMLT	**Sun Moon Lake**	**1.11**	**239**	⇓P	**Pg**	**10 25 02.3**	**-1.0**
	baz=237							
SMLT				*e*S	**Sg**	**10 25 17.6**	**-0.1**
	baz=237							
TYC	**Yuchr**	**1.14**	**241**	⇓*e*P	**Pg**	**10 25 02.6**	**-1.2**
	baz=239							
TYC				*e*S	**Sg**	**10 25 17.5**	**-1.0**
	baz=239							
PCYT	**Pengchaiyu**	**1.17**	**6**	P	**Pb**	**10 25 02.5**	**-2.0**
	baz=9.0							
TCU	**Taichung**	**1.20**	**255**	*e*P	**Pb**	**10 25 04.4**	**-0.5**
	baz=255							
TCU				*e*S	**Sb**	**10 25 21.1**	**+0.6**
	baz=255							
TWF1	**Yuli**	**1.25**	**208**	⇑P	**Pn**	**10 25 02.9**	**-2.9**
	baz=218							
WNT	**Mingjian**	**1.29**	**244**	*e*P	**Pn**	**10 25 06.3**	**0.0**
	baz=242							
WNT				*e*S	**Sb**	**10 25 24.3**	**+1.2**
	baz=242							
YUS	**Yu-Shan**	**1.32**	**223**	⇑P	**Pn**	**10 25 06.0**	**-0.8**
	baz=208							
YUS				*e*S	**Sb**	**10 25 23.2**	**-1.1**
	baz=208							
ALS	**Alishan**	**1.41**	**228**	⇑P	**Pn**	**10 25 07.6**	**-0.3**
	baz=212							
ALS				*e*S	**Sb**	**10 25 27.6**	**+1.1**
	baz=212							
CHN5	**Tsauling**	**1.44**	**234**	*e*P	**Pn**	**10 25 08.6**	**+0.2**
	baz=231							
CHN5				*e*S	**Sn**	**10 25 28.9**	**+1.4**
	baz=231							
CHKT	**Chengkung**	**1.45**	**201**	*e*P	**Pn**	**10 25 07.0**	**-1.5**
	baz=182							
CHKT				*e*S	**Sn**	**10 25 26.4**	**-1.4**
	baz=182							
WGK	**Gukeng**	**1.48**	**239**	*e*P	**Pn**	**10 25 09.1**	**+0.1**
	baz=237							
WGK				*e*S	**Sn**	**10 25 29.9**	**+1.5**
	baz=237							
ELDTW	**Lidau**	**1.52**	**214**	⇓*e*P	**Pn**	**10 25 07.3**	**-2.2**
	baz=200							
CHN2	**Minshiung**	**1.63**	**236**	*e*P	**Pn**	**10 25 11.9**	**+0.9**
	baz=234							
CHN2				*e*S	**Sn**	**10 25 33.9**	**+1.8**
	baz=234							
WTCT	**Ta-ch'eng**	**1.63**	**249**	*e*P	**Pn**	**10 25 10.5**	**-0.5**
	baz=264							
WTCT				*e*S	**Sn**	**10 25 31.8**	**-0.4**
	baz=264							
IRIF	**Iriomote-Funau**	**1.63**	**94**	P	**Pn**	**10 25 10.2**	**-0.8**
IRIF				S	**Sn**	**10 25 32.2**	**-0.1**
CHN4	**Tsaushan**	**1.66**	**229**	⇓*e*P	**Pn**	**10 25 11.8**	**+0.5**
	baz=214							
CHN4				*e*S	**Sn**	**10 25 34.4**	**+1.5**
	baz=214							
CHY	**Chiayi**	**1.69**	**236**	*e*P	**Pn**	**10 25 12.1**	**+0.4**
	baz=234							
CHY				*e*S	**Sn**	**10 25 33.8**	**+0.2**
	baz=234							
STYT	**Tauyuan**	**1.69**	**220**	⇑P	**Pn**	**10 25 11.4**	**-0.4**
	baz=209							
STYT				*e*S	**Sn**	**10 25 33.0**	**-0.6**
	baz=209							
WTP	**Ta-pu**	**1.71**	**226**	⇑P	**Pn**	**10 25 12.5**	**+0.4**
	baz=210							
WTP				*e*S	**Sn**	**10 25 35.3**	**+1.0**
	baz=210							
HATJ	**Hateruma jima**	**1.75**	**103**	P	**Pn**	**10 25 13.6**	**+1.0**
HATJ				*e*S	**Sn**	**10 25 36.6**	**+1.6**
WSF	**Szhu**	**1.77**	**243**	*e*P	**Pn**	**10 25 11.2**	**-1.8**
	baz=242							
WSF				*e*S	**Sn**	**10 25 35.9**	**+0.2**
	baz=242							
TWK	**Hsinying**	**1.78**	**229**	*e*P	**Pn**	**10 25 13.7**	**+0.6**
	baz=212							
TWK				*e*S	**Sn**	**10 25 37.6**	**+1.6**
	baz=212							
CHN1	**Nanshi**	**1.81**	**226**	⇑*e*P	**Pn**	**10 25 13.4**	**-0.1**
	baz=223							
CHN1				*e*S	**Sn**	**10 25 37.7**	**+0.9**
	baz=223							
TWG	**Pinlang**	**1.82**	**206**	*e*P	**Pn**	**10 25 10.8**	**-2.8**
	baz=191							
TTN	**Taitung**	**1.85**	**203**	*e*P	**Pn**	**10 25 13.1**	**-0.9**
	baz=202							
SGST	**Jiashian**	**1.85**	**223**	⇓*e*P	**Pn**	**10 25 13.9**	**-0.1**
	baz=219							
SGST				*e*S	**Sn**	**10 25 39.3**	**+1.7**
	baz=219							
JKRS	**Kuro-shima**	**1.90**	**96**	P	**Pn**	**10 25 15.1**	**+0.4**
JKRS				S	**Sn**	**10 25 39.3**	**+0.5**
CHN8	**Yiju**	**1.93**	**235**	*e*P	**Pn**	**10 25 15.8**	**+0.6**
	baz=218							
CHN8				*e*S	**Sn**	**10 25 41.1**	**+1.4**
	baz=218							
JIJ	**Ishigaki jima**	**2.01**	**92**	P	**Pn**	**10 25 16.0**	**-0.2**
JIJ				S	**Sn**	**10 25 40.9**	**-0.6**
SCLT	**Jiali**	**2.05**	**232**	*e*P	**Pn**	**10 25 17.3**	**+0.6**
	baz=213							
SCLT				*e*S	**Sn**	**10 25 44.2**	**+1.7**
	baz=213							
ECL	**Taimali**	**2.06**	**206**	*e*P	**Pn**	**10 25 14.9**	**-2.1**
	baz=194							
SSD	**Sandimen**	**2.09**	**215**	*e*P	**Pn**	**10 25 17.8**	**+0.5**
	baz=212							
SSD				*e*S	**Sn**	**10 25 43.5**	**+0.1**
	baz=212							
TAI1	**Yung-k'ang**	**2.11**	**228**	*e*P	**Pn**	**10 25 17.6**	**-0.1**
	baz=226							
TAI1				*e*S	**Sn**	**10 25 43.1**	**-1.0**
	baz=226							
TWM1	**Shoushan**	**2.14**	**221**	*e*P	**Pn**	**10 25 19.1**	**+1.0**
	baz=219							
SGLT	**Jiouru**	**2.18**	**218**	*e*P	**Pn**	**10 25 19.0**	**+0.4**
	baz=217							
EAST	**Anshuo**	**2.30**	**206**	*e*P	**Pn**	**10 25 20.2**	**0.0**
	baz=195							
TAW	**Tawu**	**2.30**	**205**	*e*P	**Pn**	**10 25 20.2**	**-0.1**
	baz=194							
PNG	**Penghu**	**2.36**	**248**	*e*P	**Pn**	**10 25 19.5**	**-1.5**
	baz=249							
SCZT	**Fangliau**	**2.41**	**211**	*e*P	**Pn**	**10 25 22.3**	**+0.6**
	baz=194							
SCZT				*e*S	**Sn**	**10 25 51.2**	**-0.2**
	baz=194							
LAY	**Lan-yu**	**2.44**	**189**	*e*P	**Pn**	**10 25 19.9**	**-2.2**
	baz=188							
JTJ	**Tarama**	**2.52**	**85**	P	**Pn**	**10 25 23.6**	**+0.4**
JTJ				*e*S	**Sn**	**10 25 54.2**	**+0.1**
TWP	**Hsiaoliuchiu**	**2.56**	**215**	*e*P	**Pn**	**10 25 26.9**	**+3.1**
	baz=214							
HEN	**Hengchun**	**2.68**	**205**	*e*P	**Pn**	**10 25 26.1**	**+0.6**
	baz=196							
TWK1	**Hengchun**	**2.71**	**203**	*e*P	**Pn**	**10 25 25.6**	**-0.4**
	baz=191							
KNM	**Kinmen**	**3.20**	**270**	*e*P	**Pn**	**10 25 32.3**	**-0.3**
	baz=269							
KSRS	**Korea Array**	**13.93**	**20**	P	**Pn**	**10 28 08.0**	**+8.3**
	0.3nm,0.3s,baz=198,slow=12,SNR=16							
CMAR	**Chiang Mai Arr**	**22.21**	**259**	P	**P**	**10 29 44.7**	**+5.7**
	0.5nm,0.4s,mb3.3,baz=81,slow=6.5,SNR=3.3							
SONM	**Songino Array**	**26.39**	**336**	P	**P**	**10 30 17.8**	**-1.0**
	2.0nm,0.8s,mb3.7,baz=151,slow=10.0,SNR=13							
MKAR	**Makanchi Array**	**38.63**	**315**	P	**P**	**10 32 03.7**	**-2.0**
	0.7nm,0.6s,mb3.6,baz=98,slow=11,SNR=8.1							
ZALV	**Zalesovo Beam**	**40.40**	**327**	P	**P**	**10 32 17.1**	**-3.2**
	0.5nm,0.3s,mb3.7,baz=112,slow=9.5,SNR=3.8							
WRA	**Warramunga Arr**	**45.75**	**164**	P	**P**	**10 33 01.0**	**-3.0**
	0.5nm,0.6s,mb3.6,baz=346,slow=8.9,SNR=8.2							
ASAR	**Alice Springs**	**49.23**	**165**	P	**P**	**10 33 30.6**	**-0.4**
	0.2nm,0.6s,mb3.4,baz=340,slow=6.6,SNR=4.9							

IDC 12 10:26:34.6±5.8, 2064S×17765W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=182.6km s-min=93.2km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.02**	**244**	P	P	10 33 54.2	-0.5
	0.8nm,0.5s,baz=100,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**44.81**	**257**	P	P	10 34 50.7	+0.1
	0.7nm,0.6s,baz=96,slow=8.7,SNR=9.6						
WRA	**Warramunga Arr**	**44.91**	**262**	P	P	10 34 51.4	0.0
	0.3nm,0.3s,baz=96,slow=8.1,SNR=23						
AKASG	**Malin Array Be**	**143.29**	**331**	PKP	PKPdf	10 46 10.2	-0.5
	0.2nm,0.3s,baz=35,slow=3.6,SNR=4.0						

ISK ***12*** *10:33:42.4, 3698N×2924E, h2km, MD3.4*
NEIC ***12*** *10:33:42.0, 3698N×2925E, h2km, MD3.6(ATH), ML3.3(ISK), After ISK.*
ISCJB ***12*** *10:33:43.3±0.5, 3702N±002×2924E±003, h0km±5km, Error ellipse: s-maj=4.4km s-min=3.3km az=147.6*
CSEM ***12*** *10:33:43.0±0.1, 3699N×2923E, h5km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.4km az=173.0*
DDA ***12*** *10:33:46.2, 3708N×2930E, h15km, Md3.2*

ISC 12 10:33:43.9±0.5, 3702N±003×2924E±003, h1km±4km, n43, σ0§88/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**50**	*i* P	**Pg**	**10 33 50.7**	**+0.3**
GOLH				*i* S	**Sg**	**10 33 57.2**	**+2.4**
FETY	**Fethiye**	**0.40**	**198**	PG	**Pg**	**10 33 50.2**	**-1.3**
FETY				*e*SG	**Sg**	**10 33 56.6**	**-0.1**
TURN	**Turunc**	**0.53**	**254**	*i* P	**Pg**	**10 33 58.9**	**+4.9**
TURN				*i* S	**Sg**	**10 34 11.3**	**+10**
DALT	**Dalyan (Mudla)**	**0.54**	**243**	PG	**Pg**	**10 33 53.6**	**-0.7**
DALT				*e*SG	**Sg**	**10 34 01.5**	**+0.2**
ELL	**Elmali**	**0.60**	**116**	*e*PG	**Pg**	**10 33 54.4**	**-0.9**
ELL				*e*SG	**Sg**	**10 34 03.6**	**+0.4**
DENT	**Denizli**	**0.75**	**348**	*e*PG	**Pg**	**10 33 58.1**	**-0.3**
YER	**Yerkesik**	**0.77**	**279**	*e*PG	**Pg**	**10 33 58.9**	**+0.2**
KSL	**Kastellorizon**	**0.91**	**162**	*e*Pn	**Pn**	**10 34 02.0**	**-1.7**
ANTB	**Antalya**	**1.14**	**95**	*e*PN	**Pn**	**10 34 05.1**	**-1.8**
BCK	**Bucak**	**1.17**	**67**	*e*PN	**Pn**	**10 34 06.0**	**-1.2**
ARG	**Arkhangelos**	**1.20**	**229**	*e*Pn	**Pn**	**10 34 08.7**	**+1.0**
ARG				*e*Sn	**Sn**	**10 34 26.7**	**+2.1**
MLSB	**Milas**	**1.20**	**284**	*e*PN	**Pn**	**10 34 07.1**	**-0.7**
ISP	**Isparta**	**1.30**	**50**	*e*PN	**Pn**	**10 34 08.4**	**-0.8**
ISP	**Isparta**	**1.30**	**50**	*e*Pg	**Pg**	**10 34 07.5**	**-1.3**
ISP	**Isparta**	**1.30**	**50**	*e*Pg	**Pg**	**10 34 07.6**	**-1.3**
ISP	**Isparta**	**1.30**	**50**	*e*Pn	**Pn**	**10 34 08.5**	**-0.7**
KHL	**Karahalli**	**1.32**	**10**	*e*PN	**Pn**	**10 34 09.1**	**-0.3**
BDRM	**Kayabasi**	**1.44**	**272**	*i* P	**Pn**	**10 34 11.6**	**+0.6**
BDRM				*i* S	**Sg**	**10 34 30.7**	**+0.7**
BODT	**Bodrum**	**1.54**	**272**	*e*PN	**Pn**	**10 34 12.1**	**-0.4**
KULA	**Kula-Manisa**	**1.56**	**343**	*e*PN	**Pn**	**10 34 12.1**	**-0.7**
MANT	**Manisa**	**1.57**	**340**	*i* P	**Pn**	**10 34 12.8**	**0.0**
MANT				*i* S	**Sn**	**10 34 33.6**	**-0.2**
GCAM	**G?zelcaml?**	**1.74**	**294**	*i* P	**Pn**	**10 34 15.0**	**-0.1**
GCAM				*i* S	**Sn**	**10 34 36.4**	**-1.5**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*PN	**Pn**	**10 34 17.1**	**+0.4**
SMG	**Samos**	**2.03**	**291**	*e*Pn	**Pn**	**10 34 19.3**	**+0.1**
DEMI	**Demirci**	**2.06**	**349**	*i* P	**Pn**	**10 34 19.5**	**-0.1**
DEMI				*i* S	**Sn**	**10 34 45.4**	**-0.6**
DEMI	**Demirci**	**2.06**	**349**	*i* P	**Pn**	**10 34 19.5**	**-0.1**
DEMI				*i* S	**Sn**	**10 34 45.3**	**-0.7**
GDZ	**Gediz**	**2.08**	**5**	*i* P	**Pn**	**10 34 20.2**	**+0.4**
GDZ				*i* S	**Sn**	**10 34 43.1**	**-3.2**
IZM	**Izmir**	**2.09**	**312**	*e*PN	**Pn**	**10 34 19.9**	**-0.1**
BOLV	**Bolvadin**	**2.17**	**38**	*i* P	**Pn**	**10 34 22.0**	**+0.8**
BOLV				*i* S	**Sn**	**10 34 48.2**	**-0.5**
AKHS	**Akhisar**	**2.17**	**329**	*i* P	**Pn**	**10 34 20.6**	**-0.5**
AKHS				*i* S	**Sn**	**10 34 48.4**	**-0.3**
AKS	**Akhisar**	**2.17**	**329**	*e*PN	**Pn**	**10 34 21.1**	**0.0**
BLCB	**Balcova**	**2.21**	**309**	*e*PN	**Pn**	**10 34 21.4**	**-0.3**
KARP	**Karpathos**	**2.23**	**229**	*e*Pn	**Pn**	**10 34 22.5**	**+0.6**
KARP				*e*Sn	**Sn**	**10 34 50.5**	**+0.4**
HDMB	**Hadim**	**2.60**	**90**	*e*PN	**Pn**	**10 34 27.6**	**+0.6**
DST	**Dursunbey**	**2.63**	**350**	*e*PN	**Pn**	**10 34 27.8**	**+0.4**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*PN	**Pn**	**10 34 28.4**	**+0.7**
LADK	**Ladik-KONYA**	**2.75**	**64**	*e*PN	**Pn**	**10 34 29.9**	**+0.9**
KIZT	**Kizilcal**	**2.80**	**48**	*e*PN	**Pn**	**10 34 30.0**	**+0.3**
BALB	**Balikesir**	**2.83**	**338**	*e*PN	**Pn**	**10 34 30.7**	**+0.6**
ADVT	**Abdulvahap**	**3.43**	**2**	*e*PN	**Pn**	**10 34 39.6**	**+1.1**
YLV	**Yalova**	**3.55**	**2**	*e*PN	**Pn**	**10 34 41.7**	**+1.7**
GULT	**Gulveren**	**3.55**	**16**	*e*PN	**Pn**	**10 34 41.2**	**+1.1**
IKL	**Isikli**	**3.66**	**101**	*e*PN	**Pn**	**10 34 41.9**	**+0.3**

NEIC ***12*** *10:42:31.8, 3499N×391W, h18km, MG3.5(MDD), After MDD.*
ISCJB ***12*** *10:42:32.3±0.4, 3518N±002×399W±003, h17km±4km, Error ellipse: s-maj=4.4km s-min=3.8km az=1.9*
CSEM ***12*** *10:42:32.1±0.1, 3515N×395W, h20km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.8km az=98.0*
CNRM ***12*** *10:42:33.7, 3519N×391W, h11km, MD3.1*
MDD ***12*** *10:42:33.5±0.4, 3517N×394W, h12km±2km, mbLg1.9/10, Error ellipse: s-maj=4.9km s-min=3.3km az=63.0, PRIMO*

ISC 12 10:42:32.7±0.5, 3517N±002×395W±003, h14km±3km, n39, σ0§76/74, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	**0.06**	**9**	*i* P	**Pg**	**10 42 35.5**	**0.0**
MPAL	**Palemas**	**0.06**	**9**	P	**Pg**	**10 42 35.5**	**0.0**
MPAL				S	**Sg**	**10 42 37.5**	**+0.1**
TOU	**Touzarine**	**0.26**	**141**	*i* P	**Pg**	**10 42 38.5**	**+0.2**
TOU	**Touzarine**	**0.26**	**141**	P	**Pg**	**10 42 38.5**	**+0.2**
TOU				S	**Sg**	**10 42 42.5**	**+0.4**
EMEL	**Melilla**	**0.83**	**81**	P	**Pg**	**10 42 48.2**	**-0.5**
	56nm,0.1s,SNR=7.9						
EMEL				S	**Sg**	**10 42 59.4**	**-0.2**
	217nm,0.3s,SNR=7.9						
EMLI	**Melilla**	**0.83**	**81**	P	**Pg**	**10 42 48.2**	**-0.6**
	56nm,0.1s,SNR=7.9						
EMLI				S	**Sg**	**10 42 59.3**	**-0.4**
	217nm,0.3s,SNR=7.9						
ZAI	**Zaio**	**1.01**	**101**	*e*P	**Pb**	**10 42 51.0**	**-0.9**
ZAI				*i* S	**Sb**	**10 43 05.0**	**0.0**
EALB	**Alboran**	**1.07**	**44**	P	**Pb**	**10 42 52.4**	**-0.6**
	5.3nm,0.1s,SNR=10						
EALB				S	**Sb**	**10 43 06.8**	**-0.1**
	14nm,0.3s,SNR=7.1						
EALB	**Alboran**	**1.07**	**44**	P	**Pb**	**10 42 52.4**	**-0.6**
	5.3nm,0.1s,SNR=10						
EALB				S	**Sb**	**10 43 06.8**	**-0.1**
	14nm,0.3s,SNR=7.1						
TZK	**Tazeka**	**1.09**	**190**	*i* P	**Pb**	**10 42 54.0**	**+0.7**
TZK				*i* S	**Sb**	**10 43 09.0**	**+1.6**
ECEU	**Ceuta**	**1.37**	**303**	P	**Pn**	**10 42 56.9**	**-0.4**
	1.2nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**10 43 12.9**	**-2.3**
	7.4nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**1.37**	**303**	P	**Pn**	**10 42 56.9**	**-0.4**
	1.2nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**10 43 12.9**	**-2.3**
	7.4nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**1.54**	**335**	P	**Pn**	**10 42 59.5**	**-0.2**
	2.0nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**10 43 20.6**	**+1.1**
	4.4nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**1.69**	**11**	P	**Pn**	**10 43 01.3**	**-0.4**
EGUA				S	**Sn**	**10 43 24.5**	**+1.4**
EGUA	**Guajares**	**1.69**	**11**	P	**Pn**	**10 43 01.3**	**-0.4**
	2.0nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**10 43 22.7**	**-0.5**
	10nm,0.3s,SNR=4.0						
ERON	**Agron**	**1.85**	**4**	P	**Pn**	**10 43 04.0**	**+0.1**
ERON				S	**Sn**	**10 43 28.5**	**+1.5**
ERON	**Agron**	**1.85**	**4**	P	**Pn**	**10 43 04.0**	**+0.1**
ERON				S	**Sn**	**10 43 28.5**	**+1.4**
EBER	**Berja**	**1.93**	**26**	P	**Pn**	**10 43 05.0**	**0.0**
EBER				S	**Sn**	**10 43 30.0**	**+1.0**
EBER	**Berja**	**1.93**	**26**	P	**Pn**	**10 43 05.0**	**0.0**
	0.2nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**10 43 29.1**	**+0.1**
	8.0nm,0.3s,SNR=4.8						
EBER	**Berja**	**1.93**	**26**	P	**Pn**	**10 43 05.0**	**0.0**
	0.2nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**10 43 29.1**	**+0.1**
	8.0nm,0.3s,SNR=4.8						
CZD	**Col de Zad**	**2.31**	**203**	*e*P	**Pn**	**10 43 10.0**	**-0.3**
CZD				*i* S	**Sn**	**10 43 39.0**	**+0.5**
EQES	**Quesada**	**2.72**	**15**	P	**Pn**	**10 43 16.2**	**+0.3**
EQES				S	**Sn**	**10 43 49.2**	**+0.5**
EQES	**Quesada**	**2.72**	**15**	P	**Pn**	**10 43 16.2**	**+0.3**
EQES				S	**Sn**	**10 43 49.2**	**+0.6**
EHUE	**Huescar**	**2.86**	**22**	P	**Pn**	**10 43 18.2**	**+0.4**
EHUE				S	**Sn**	**10 43 51.4**	**-0.6**
EHUE	**Huescar**	**2.86**	**22**	P	**Pn**	**10 43 18.2**	**+0.4**
EHUE				S	**Sn**	**10 43 53.0**	**+1.0**
	1.8nm,0.6s,SNR=4.0						
EHUE	**Huescar**	**2.86**	**22**	S	**Sn**	**10 43 53.0**	**+1.0**
	1.8nm,0.6s,SNR=4.0						
EADA	**Adamuz**	**3.04**	**351**	P	**Pn**	**10 43 20.9**	**+0.7**
EADA				S	**Sn**	**10 43 56.9**	**+0.6**
EADA	**Adamuz**	**3.04**	**351**	P	**Pn**	**10 43 20.9**	**+0.7**
EADA				S	**Sn**	**10 43 56.9**	**+0.6**
ECAB	**El Cabril**	**3.13**	**338**	P	**Pn**	**10 43 22.2**	**+0.7**
	2.4nm,0.1s,SNR=4.0						
ECAB				S	**Sn**	**10 43 58.7**	**0.0**
	1.6nm,1.2s,SNR=4.0						
ECAB	**El Cabril**	**3.13**	**338**	P	**Pn**	**10 43 22.2**	**+0.7**
	2.4nm,0.1s,SNR=4.0						
ECAB				S	**Sn**	**10 43 58.7**	**0.0**
	1.6nm,1.2s,SNR=4.0						
ZFT	**Errachidia**	**3.14**	**186**	*e*P	**Pn**	**10 43 22.0**	**+0.3**
ZFT				*i* S	**Sn**	**10 43 57.0**	**-2.0**
EMIN	**Mina Concepcio**	**3.40**	**321**	P	**Pn**	**10 43 25.1**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**10 44 05.0**	**-0.2**
	4.3nm,0.7s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.40**	**321**	P	**Pn**	**10 43 25.1**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**10 44 05.0**	**-0.2**
	4.3nm,0.7s,SNR=7.9						
EGRO	**El Granado**	**3.70**	**311**	P	**Pn**	**10 43 29.4**	**+0.1**
	0.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**10 44 11.5**	**-1.2**
	3.4nm,0.8s,SNR=7.9						
EGRO	**El Granado**	**3.70**	**311**	P	**Pn**	**10 43 29.4**	**+0.1**
	0.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**10 44 11.5**	**-1.2**
	3.4nm,0.8s,SNR=7.9						
ETOB	**Tobarra**	**3.97**	**28**	P	**Pn**	**10 43 33.3**	**+0.3**
ETOB				S	**Sn**	**10 44 18.0**	**-1.3**
ETOB	**Tobarra**	**3.97**	**28**	P	**Pn**	**10 43 33.3**	**+0.3**
ETOB				S	**Sn**	**10 44 18.0**	**-1.3**
EBAD	**Badajoz**	**4.34**	**327**	P	**Pn**	**10 43 38.6**	**+0.5**
EBAD				S	**Sn**	**10 44 27.5**	**-1.0**
EBAD	**Badajoz**	**4.34**	**327**	P	**Pn**	**10 43 38.6**	**+0.5**

NEIC ***12*** *10:57:34.0±1.4, 176S×12890E, h10km, mb4.6/1, Error ellipse: s-maj=126.0km s-min=9.6km az=67.0*
ISCJB ***12*** *10:57:37.7±1.2, 223S±009×128.1E±02, h44km±16km, mb4.0/4, Error ellipse: s-maj=29.1km s-min=7.6km az=153.8*
DJA ***12*** *10:57:41.3±0.0, 169S×12840E, h0km, MLv3.7/4*
IDC ***12*** *10:57:42.7±4.8, 2.185S×12830E, h82km±46km, mb3.4/3, mb1 3.5/4, mb1mx3.3/15, mbtmp3.3/4, ML3.7/1, Error ellipse: s-maj=119.2km s-min=11.7km az=70.0*

ISC 12 10:57:38.9±1.1, 224S±009×1282E±02, h41km±15km, n13, σ1§10/16, mb4.0/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.35**	**145**	P	**Sn**	**10 58 16.3**	**-1.7**
AAI	**Ambon**	**1.44**	**178**	P	**Sn**	**10 58 12.4**	**-7.9**
LBMI	**Labuha**	**1.71**	**338**	P	**Pn**	**10 58 06.6**	**+0.3**
LBMI	**Labuha**	**1.71**	**338**	S	**Sn**	**10 58 25.6**	**-1.4**
SWI	**Sorong**	**3.40**	**66**	P	**Pn**	**10 58 30.3**	**+0.9**
WRAB	**Tennant Creek**	**18.60**	**161**	*e*P	**Pn**	**11 01 54.1**	**+0.7**
WRA	**Warramunga Arr**	**18.61**	**161**	P	**Pn**	**11 01 54.2**	**+0.7**
	0.3nm,0.3s,baz=341,slow=12,SNR=27						
WRA				S	**S**	**11 05 21.7**	**-1.4**
	0.1nm,0.3s,baz=339,slow=22,SNR=4.7						
WB2	**Warramunga Arr**	**18.61**	**161**	*e*P	**Pn**	**11 01 54.3**	**+0.8**
ASAR	**Alice Springs**	**22.02**	**166**	P	**P**	**11 02 32.0**	**+2.1**
	1.0nm,0.4s,mb3.6,baz=346,slow=12,SNR=49						
ASAR				S	**S**	**11 06 29.8

KSRS	**Korea Array**	**31.37 332**	P		**P**		**11 29 49.5**	**+0.1**
	1.3nm,0.8s,mb3.8,baz=146,slow=10,SNR=5.9							
WRAB	**Tennant Creek**	**32.29 201**	*e*P		**P**		**11 29 57.0**	**-0.6**
	2.4nm,0.8s,mb4.1							
WB2	**Warramunga Arr**	**32.30 201**	*e*P		**P**		**11 29 57.4**	**-0.3**
WRA	**Warramunga Arr**	**32.30 201**	P		**P**		**11 29 56.6**	**-1.1**
	1.8nm,1.0s,mb3.8,baz=26,slow=9.4,SNR=15							
ASAR	**Alice Springs**	**35.91 199**	P		**P**		**11 30 28.4**	**-0.6**
	1.0nm,0.5s,mB4.0,baz=30,slow=6.8,SNR=26							
CMAR	**Chiang Mai Arr**	**46.06 286**	P		**P**		**11 31 54.4**	**+1.7**
	2.4nm,0.8s,mb4.2,baz=86,slow=5.8,SNR=10.0							
SONM	**Songino Array**	**49.86 326**	P		**P**		**11 32 22.8**	**+1.1**
	1.1nm,0.6s,mb4.1,baz=144,slow=7.4,SNR=8.0							
SONM			PcP	PcP			11 33 43.5	+1.7
	0.6nm,0.6s,baz=120,slow=2.9,SNR=3.3							
MKAR	**Makanchi Array**	**64.44 317**	P		**P**		**11 34 05.6**	**+0.8**
	0.9nm,0.6s,mb4.0,baz=88,slow=11,SNR=5.5							
MKAR			PcP	PcP			11 34 39.7	+0.7
	0.9nm,0.7s,baz=100,slow=2.5,SNR=6.1							
MKAR	**Makanchi Array**	**64.44 317**	P		**P**		**11 34 05.6**	**+0.8**
MKAR			PcP	PcP			11 34 39.7	+0.7
ZALV	**Zalesovo Beam**	**64.74 325**	P		**P**		**11 34 06.6**	**0.0**
	0.9nm,0.5s,mb4.0,baz=134,slow=8.5,SNR=4.6							
ZALV	**Zalesovo Beam**	**64.74 325**	P		**P**		**11 34 06.6**	**0.0**
KURK	**Kurchatov**	**67.61 321**	P		**P**		**11 34 26.2**	**+1.0**
	baz=106,slow=6.9							
BVAR	**Borovoye Array**	**72.99 322**	P		**P**		**11 34 58.3**	**+0.3**
	1.9nm,0.6s,mb4.2,baz=106,slow=9.4,SNR=6.2							
NVAR	**Mina Array Bea**	**88.06 51**	P		**P**		**11 36 19.9**	**+0.8**
	0.4nm,0.3s,mb4.1,baz=269,slow=4.5,SNR=6.0							
DBIC	**Dimbokro**	**146.27 299**	PKPbc	PKPbc			11 43 10.2	+0.2
	1.8nm,0.7s,baz=44,slow=6.3,SNR=4.1							

HLW ***12*** *11:31:05.3,3453N×2533E,h7km,Mb4.2*
ISCJB ***12*** *11:31:05.9±0.4,3458N±003×2538E±005,h50km±6km, mb3.8/7,Error ellipse: s-maj=7.2km s-min=3.8km az=154.7*
IDC ***12*** *11:31:08.0±1.7,3466N×2512E,h52km±13km,mb3.6/7, mb1 3.6/10,mb1mx3.5/23,mbtmp3.5/10,ML3.9/3,Error ellipse: s-maj=23.0km s-min=18.6km az=149.0*
CSEM ***12*** *11:31:09.4±0.3,3485N×2508E,h24km±1km,ML4.2,Error ellipse: s-maj=10.1km s-min=3.5km az=10.0*
ATH ***12*** *11:31:11.7,3500N×2525E,h63km±6km*
THE ***12*** *11:31:11.2,3490N×2511E,h18km±1km,Error ellipse: s-maj=2.6km s-min=1.0km az=182.0*

ISC 12 11:31:07.4±0.4,3461N±003×2531E±005,h44km±6km,n60, σ1℘15/86,mb3.8/7,2C,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.57**	**14**	P	**Pn**	**11 31 20.3**	**+1.1**
LAST				S	**Sn**	**11 31 25.3**	**-2.4**
SIVA	**Sivas**	**0.58**	**315**	P	**Pn**	**11 31 17.4**	**-1.9**
SIVA				S	**Sn**	**11 31 21.8**	**-6.0**
NPS	**Neapolis**	**0.70**	**21**	*e*P	**Pn**	**11 31 23.0**	**+2.1**
IDI	**Anoyia**	**0.76**	**333**	P	**Pn**	**11 31 21.3**	**-0.4**
	90nm,0.3s,baz=171,slow=15,SNR=132						
IDI				S	**Sn**	**11 31 32.9**	**+0.8**
	186nm,0.3s,baz=106,slow=18,SNR=31						
ZKR	**Zakros**	**0.91**	**56**	P	**Pn**	**11 31 27.6**	**+3.9**
ZKR				S	**Sn**	**11 31 40.9**	**+5.3**
VAM	**Vamos**	**1.21**	**312**	*e*P	**Pn**	**11 31 29.7**	**+1.9**
VAM				*e*S	**Sn**	**11 31 44.1**	**+1.1**
THR6	**Thira Island,**	**1.75**	**2**	P	**Pn**	**11 31 36.0**	**+0.8**
THR6				S	**Sn**	**11 31 55.0**	**-1.2**
THR1	**Thera Island**	**1.76**	**4**	P	**Pn**	**11 31 35.9**	**+0.5**
THR1				S	**Sn**	**11 31 54.6**	**-2.0**
KARP	**Karpathos**	**1.79**	**58**	*e*P	**Pn**	**11 31 40.4**	**+4.6**
THR3	**Thira Island,**	**1.80**	**2**	P	**Pn**	**11 31 36.1**	**+0.2**
THR3				S	**Sn**	**11 31 56.0**	**-1.5**
APE	**Apeiranthos**	**2.46**	**4**	P	**Pn**	**11 31 45.2**	**+0.2**
APE				S	**Sn**	**11 32 12.6**	**-1.3**
APE	**Apeiranthos**	**2.46**	**4**	*e*P	**Pn**	**11 31 45.7**	**+0.7**
KYTH	**Kithira**	**2.49**	**313**	*e*P	**Pn**	**11 31 48.0**	**+2.6**
KYTH	**Kithira**	**2.49**	**313**	*e*P	**Pn**	**11 31 48.5**	**+3.1**
ARG	**Arkhangelos**	**2.81**	**54**	*e*P	**Pn**	**11 31 53.4**	**+3.6**
VLI	**Veliai**	**2.85**	**318**	*e*P	**Pn**	**11 31 51.5**	**+1.1**
VLI	**Veliai**	**2.85**	**318**	*e*P	**Pn**	**11 31 50.4**	**0.0**
SLUM		**3.11**	**181**	⇑*i*P	**Pn**	**11 31 53.1**	**-0.8**
SLUM				S	**Sn**	**11 32 27.8**	**-2.0**
AYT	**Al 'Ayyat**	**6.96**	**133**	P	**Pn**	**11 32 46.6**	**-0.2**
AWBH		**6.98**	**153**	P	**Pn**	**11 32 46.7**	**-0.4**
KOT	**Kottamia**	**7.23**	**128**	P	**Pn**	**11 32 50.7**	**+0.2**
HSAF	**As Saff**	**7.27**	**131**	P	**Pn**	**11 32 51.2**	**+0.2**
HHAG	**Hagoal**	**7.39**	**127**	P	**Pn**	**11 32 52.9**	**+0.2**
HHAG				S	**Sn**	**11 34 11.3**	**-3.9**
GLL	**Jalalah**	**7.39**	**131**	P	**Pn**	**11 32 53.4**	**+0.7**
AMAG	**Maghara**	**7.75**	**118**	P	**Pn**	**11 32 57.7**	**+0.1**
HFRF	**Wahat Farafira**	**7.87**	**160**	P	**Pn**	**11 32 58.6**	**-0.6**
SUZ		**7.95**	**125**	P	**Pn**	**11 33 00.2**	**-0.2**
ZAF		**8.13**	**129**	P	**Pn**	**11 33 02.9**	**+0.2**
ZNM		**8.28**	**127**	P	**Pn**	**11 33 05.1**	**+0.2**
HRSH	**Kfar Ka'horesh**	**8.53**	**100**	P	**Pn**	**11 33 01.1**	**-7.2**
MMAI	**Mount Meron Ar**	**8.55**	**98**	P	**Pn**	**11 33 10.9**	**+2.3**
	1.5nm,0.3s,baz=276,slow=14,SNR=3.2						
MMAI				S	**Sn**	**11 34 43.4**	**-0.4**
	3.1nm,0.3s,baz=296,slow=18,SNR=4.1						
HNKL	**Nakhl**	**8.70**	**120**	P	**Pn**	**11 33 10.7**	**+0.1**
HNKL				S	**Sn**	**11 34 43.1**	**-4.2**
EIL	**Elat**	**9.54**	**118**	S	**Sn**	**11 35 05.1**	**-3.0**
	0.8nm,0.3s,baz=279,slow=19,SNR=5.8						
HKAT	**Jabal Katrina**	**9.57**	**127**	P	**Pn**	**11 33 23.0**	**+0.4**
HDK1	**Dakhla**	**9.71**	**157**	⇑*i*P	**Pn**	**11 33 24.9**	**+0.4**
AKASG	**Malin Array Be**	**16.34**	**9**	P	**Pn**	**11 34 54.0**	**+0.6**
	0.9nm,0.3s,baz=202,slow=11,SNR=3.8						
GERES	**GERESS Array B**	**16.62**	**332**	P	**Pn**	**11 34 56.7**	**-0.3**
	0.1nm,0.3s,baz=151,slow=12,SNR=2.9						
ESDC	**Sonseca Array**	**23.82**	**291**	P	**P**	**11 36 15.8**	**-0.4**
	0.5nm,0.5s,mb3.2,baz=88,slow=9.5,SNR=3.0						
HFS	**Hagfors**	**26.64**	**347**	P	**P**	**11 36 40.3**	**-1.2**
	2.2nm,0.8s,mb3.7,baz=148,slow=12,SNR=3.7						
TORD	**Torodi Ar. Bea**	**30.23**	**231**	P	**P**	**11 37 13.2**	**-0.7**
	3.0nm,0.4s,mb4.3,baz=35,slow=8.7,SNR=46						
ARCES	**ARCESS Array B**	**34.98**	**0**	P	**P**	**11 37 52.5**	**-2.4**
	3.0nm,1.0s,mb4.2,baz=193,slow=9.9,SNR=5.3						
KURK	**Kurchatov**	**41.44**	**50**	P	**P**	**11 38 49.9**	**+0.5**
	baz=274,slow=8.6						
MKAR	**Makanchi Array**	**43.98**	**56**	P	**P**	**11 39 11.9**	**+1.8**
	0.2nm,0.3s,mb3.3,baz=261,slow=8.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**45.30**	**46**	P	**P**	**11 39 20.8**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=265,slow=9.9,SNR=3.2						
SONM	**Songino Array**	**59.74**	**50**	P	**P**	**11 41 08.2**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=280,slow=7.4,SNR=3.8						
ASAR	**Alice Springs**	**117.83**	**101**	PKP	PKPdf	11 49 48.9	-0.2
	0.2nm,0.8s,baz=331,slow=2.0,SNR=3.2						

IDC ***12*** *12:00:06.0±3.4,047S×12338E,h24km±20km,mb3.8/6, mb1 4.0/7,mb1mx3.8/16,mbtmp3.9/7,ML3.8/1,MS3.2/4, Ms1 3.2/4,ms1mx2.6/23,Error ellipse: s-maj=72.9km s-min=15.8km az=63.0*
ISCJB ***12*** *12:00:08.2±0.9,072S±005×12289E±006,h58km±11km, mb4.0/8,MS3.3/3,Error ellipse: s-maj=9.5km s-min=9.0km az=32.4*
NEIC ***12*** *12:00:08.4±5.2,046S×12335E,h43km±52km,mb4.3/2, Error ellipse: s-maj=60.2km s-min=12.3km az=56.0*
DJA ***12*** *12:00:09.5±0.0,075S×12290E,h30km,mb4.7/3,mB5.2/2, Mjma3.7/6,MLv4.6/6,Mwp4.2/3*

ISC 12 12:00:09.9±0.8,073S±006×12288E±006,h56km±11km, n20,σ0℘94/19,mb4.0/8,MS3.3/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.91**	**42**	P	**Pn**	**12 00 53.8**	**0.0**
PCI	**Palu**	**3.05**	**267**	P	**Pn**	**12 00 55.2**	**-0.5**
KDI	**Kendari**	**3.22**	**185**	P	**Pn**	**12 00 55.8**	**-2.2**
KDI	**Kendari**	**3.22**	**185**	S	**Sn**	**12 01 36.6**	**+1.5**
LBMI	**Labuha**	**4.62**	**89**	P	**Pn**	**12 01 16.6**	**-0.6**
LBMI	**Labuha**	**4.62**	**89**	S	**Sn**	**12 02 10.2**	**+0.6**
AAI	**Ambon**	**6.07**	**119**	P	**Pn**	**12 01 37.5**	**+0.5**
	89nm,0.8s,2µm0.3nm						
AAI	**Ambon**	**6.07**	**119**	P	**Pn**	**12 01 37.5**	**+0.5**
	89nm,0.8s,2µm0.3nm						
BATI	**Baumata**	**9.45**	**175**	Pn	**Pn**	**12 02 23.5**	**+0.1**
	0.9nm,0.3s,baz=329,slow=5.9,SNR=3.0						
BATI				LR	LR	12 07 38.6	
	comp=Z,86nm,19.2s,baz=144,slow=47						
WRAB	**Tennant Creek**	**22.14**	**150**	*e*P	**P**	**12 05 00.8**	**-0.2**
	10nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**22.14**	**150**	P	**P**	**12 05 00.8**	**-0.3**
	9.8nm,0.9s,mb4.2,baz=330,slow=10,SNR=41						
WRA				ScP	ScP	12 12 31.9	+2.5
	0.7nm,0.8s,baz=327,slow=2.4,SNR=8.7						
WB2	**Warramunga Arr**	**22.15**	**150**	*e*P	**P**	**12 05 01.7**	**+0.6**
ASAR	**Alice Springs**	**25.18**	**156**	P	**P**	**12 05 30.0**	**-0.2**
	2.8nm,0.6s,mb4.0,baz=344,slow=15,SNR=59						
ASAR				PcP	PcP	12 09 03.2	+0.2
	0.2nm,0.5s,baz=350,slow=2.0,SNR=6.3						
ASAR				ScP	ScP	12 12 41.6	+4.0
	0.2nm,0.6s,baz=354,slow=2.9,SNR=4.2						
CMAR	**Chiang Mai Arr**	**30.29**	**310**	P	**P**	**12 06 17.8**	**+1.8**
	0.6nm,0.5s,mb3.5,baz=126,slow=6.5,SNR=3.6						
CHTO	**Chiang Mai**	**30.50**	**311**	P	**P**	**12 06 19.1**	**+1.3**
	4.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**35.67**	**152**	P	**P**	**12 07 01.8**	**-1.0**
	2.4nm,0.8s,mb4.2,baz=337,slow=9.9,SNR=3.8						
STKA				LR	LR	12 21 05.4	
	comp=Z,48nm,18.8s,MS3.3,baz=214,slow=35						
STKA	**Stephens Creek**	**35.67**	**152**	P	**P**	**12 07 01.8**	**-1.0**
STKA				LR	LR	12 21 05.4	
SONM	**Songino Array**	**50.46**	**346**	P	**P**	**12 09 01.5**	**-0.4**
	0.4nm,0.5s,mb3.7,baz=168,slow=9.9,SNR=3.0						
SONM				LR	LR	12 31 36.4	
	comp=Z,23nm,19.8s,MS3.2,baz=115,slow=38						
MKAR	**Makanchi Array**	**59.17**	**329**	P	**P**	**12 10 03.8**	**-1.1**
	0.3nm,0.5s,mb3.6,baz=122,slow=8.5,SNR=6.3						
MKAR				LR	LR	12 37 08.4	
	comp=Z,28nm,18.6s,MS3.4,baz=178,slow=38						
TORD	**Torodi Ar. Bea**	**120.48**	**285**	PKP	PKPdf	12 18 58.5	+2.3
	0.3nm,0.7s,baz=70,slow=2.2,SNR=2.4						

IDC ***12*** *12:07:28.7±3.7,2598N×9551E,h135km±37km,mb3.1/4, mb1 3.3/5,mb1mx3.1/21,mbtmp3.1/5,Error ellipse: s-maj=68.4km s-min=17.4km az=70.0*
ISCJB ***12*** *12:07:29.1±1.7,259N±01×956E±02,h153km±24km, mb3.4/4,Error ellipse: s-maj=33.0km s-min=15.6km az=139.3*

ISC 12 12:07:29.2±1.9,260N±02×957E±02,h134km±26km,n7, σ0℘88/8,mb3.4/4,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.03**	**233**	*e*S	**Pn**	**12 08 03.0**	**-0.8**
IMP				*i* P		12 08 06.0	
SHL	**Shillong**	**3.49**	**263**	*e*PN	**Pn**	**12 08 22.8**	**+0.5**
SHL				*e*SN	**Sn**	**12 09 03.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**8.09**	**158**	P	**Pn**	**12 09 24.0**	**0.0**
	0.3nm,0.3s,baz=344,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**23.32**	**336**	P	**P**	**12 12 23.9**	**-1.1**
	0.5nm,0.4s,mb3.3,baz=139,slow=10,SNR=10						
SONM	**Songino Array**	**23.34**	**18**	P	**P**	**12 12 26.1**	**+0.8**
	0.2nm,0.4s,mb2.9,baz=201,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**59.10**	**137**	P	**P**	**12 17 15.4**	**-0.2**
	0.7nm,0.4s,mb3.8,baz=323,slow=7.6,SNR=35						
ASAR	**Alice Springs**	**61.68**	**140**	P	**P**	**12 17 33.5**	**+0.4**
	0.6nm,0.6s,mb3.6,baz=322,slow=6.6,SNR=18						

BUC 12 12:35:15.6±2.0,4536N×2366E,h11km±8km,MD2.7/2, 1C-1D,Error ellipse: s-maj=31.0km s-min=11.5km az=356.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZR	**Gura Zlata**	**0.62**	**274**	⇑*i*P	Pg	**12 35 28.5**	**+0.8**
GZR				*i* S	Sg	12 35 37.9	+2.1
BZS	**Buzias**	**1.46**	**281**	*i* S	Sn	12 36 02.2	+1.3
DRGR		**1.58**	**336**	⇓*i*P	Pn	12 35 45.2	+1.7
DRGR				*i* S	Sn	12 36 05.4	+1.5

CRAAG ***12*** *12:42:37.6,3669N×371E,Ml3.2*
ISCJB ***12*** *12:42:39.8±0.7,3714N±006×347E±007,h10km,Error ellipse: s-maj=10.6km s-min=5.3km az=39.0*
MDD ***12*** *12:42:39.6±0.6,3695N×349E,h0km,mb3.9/5,Error ellipse: s-maj=10.9km s-min=5.2km az=68.0,PRIMO*
NEIC ***12*** *12:42:42.7,3703N×360E,h24km,MG3.6(MDD),After MDD.*
CSEM ***12*** *12:42:42.7±0.1,3711N×362E,h20km,ML2.9/6,Error ellipse: s-maj=5.3km s-min=2.7km az=44.0*

ISC 12 12:42:41.4±0.8,3716N±006×350E±007,h10km,n30, σ1℘22/48,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABMS	**Boumerdes**	**0.41**	**183**	P	**Pg**	**12 42 43.0**	**-6.5**
SET	**Setif**	**1.80**	**122**	P	**Pn**	**12 43 12.0**	**-0.5**
CKHR	**Kef el Ahmar**	**1.98**	**125**	P	**Pn**	**12 43 11.0**	**-3.9**
DFRA	**Djebel Bou Aff**	**2.00**	**107**	P	**Pn**	**12 43 13.6**	**-1.6**
EIBI	**Ibiza**	**2.52**	**318**	Pn	**Pn**	**12 43 22.8**	**+0.5**
EIBI				Sn	**Sn**	**12 43 53.4**	**+0.2**
EIBI	**Ibiza**	**2.52**	**318**	Pn	**Pn**	**12 43 22.8**	**+0.4**
	1.5nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**12 43 53.4**	**+0.2**
	6.0nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**2.52**	**318**	Pn	**Pn**	**12 43 22.8**	**+0.5**
	1.5nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**12 43 53.4**	**+0.2**
	6.0nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.66**	**348**	Pn	**Pn**	**12 43 24.5**	**+0.3**
	1.8nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**12 43 56.1**	**-0.4**
	1.5nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.66**	**348**	Pn	**Pn**	**12 43 24.5**	**+0.3**
	1.8nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**12 43 56.1**	**-0.3**
	1.5nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**3.33**	**299**	Pn	**Pn**	**12 43 33.9**	**+0.5**
	0.2nm,0.2s,SNR=4.0						
EBEN				Sn	**Sn**	**12 44 10.5**	**-2.4**
	0.5nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**3.33**	**299**	Pn	**Pn**	**12 43 33.9**	**+0.5**
	0.2nm,0.2s,SNR=4.0						
EBEN				Sn	**Sn**	**12 44 10.5**	**-2.5**
	0.5nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**4.26**	**292**	Pn	**Pn**	**12 43 47.3**	**+1.0**
ETOB				Sn	**Sn**	**12 44 34.4**	**-1.6**
ETOB	**Tobarra**	**4.26**	**292**	Pn	**Pn**	**12 43 47.3**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**12 44 34.4**	**-1.6**
	0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.26**	**292**	Pn	**Pn**	**12 43 47.3**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**12 44 34.4**	**-1.6**
	0.7nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.27**	**306**	Pn	**Pn**	**12 43 47.8**	**+1.4**
	1.5nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.46**	**317**	Pn	**Pn**	**12 43 50.8**	**+1.8**
EMOS				Sn	**Sn**	**12 44 40.8**	**0.0**
EMOS	**Mosqueruela**	**4.46**	**317**	Pn	**Pn**	**12 43 50.5**	**+1.5**
	0.4nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**12 44 40.8**	**-0.1**
	0.4nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.46**	**317**	Pn	**Pn**	**12 43 50.5**	**+1.5**
	0.4nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**12 44 40.8**	**0.0**
	0.4nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**4.52**	**328**	Sn	**Sn**	**12 44 41.6**	**-0.8**
	0.3nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**4.52**	**328**	Sn	**Sn**	**12 44 41.6**	**-0.8**
	0.3nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.59**	**337**	Pn	**Pn**	**12 43 50.4**	**-0.4**
EPOB				Sn	**Sn**	**12 44 42.0**	**-2.1**
EPOB	**Poblet**	**4.59**	**337**	Pn	**Pn**	**12 43 51.4**	**+0.7**
	0.6nm,0.1s,SNR=6.9						
EPOB				Sn	**Sn**	**12 44 42.0**	**-2.1**
	SNR=7.9						
EPOB	**Poblet**	**4.59**	**337**	Pn	**Pn**	**12 43 51.4**	**+0.7**
	0.6nm,0.1s,SNR=6.9						
EPOB				Sn	**Sn**	**12 44 42.0**	**-2.1**
	0.0nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**4.99**	**343**	Pn	**Pn**	**12 43 57.9**	**+1.7**
	1.7nm,0.3s,SNR=12						
EMIR				Sn	**Sn**	**12 44 52.9**	**-1.0**
	1.6nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**4.99**	**343**	Pn	**Pn**	**12 43 57.9**	**+1.7**
	1.7nm,0.3s,SNR=12						
EMIR				Sn	**Sn**	**12 44 52.9**	**-1.0**
	1.6nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**5.30**	**355**	Pn	**Pn**	**12 44 01.6**	**+1.1**
	1.9nm,0.1s,SNR=11						
EJON	**La Jonquera**	**5.30**	**355**	Pn	**Pn**	**12 44 01.6**	**+1.1**
	1.9nm,0.1s,SNR=11						
EBIE	**Bielsa**	**6.09**	**336**	Pn	**Pn**	**12 44 13.6**	**+2.2**
EBIE	**Bielsa**	**6.09**	**336**	Pn	**Pn**	**12 44 13.6**	**+2.2**
EBIE	**Bielsa**	**6.09**	**336**	Pn	**Pn**	**12 44 12.5**	**+1.1**
	0.1nm,0.1s,SNR=7.9						

ISCJB ***12*** *12:54:46.6±0.9,2988N±004×3626E±006,h0km,Error ellipse: s-maj=7.5km s-min=5.6km az=169.3*
SGS ***12*** *12:54:46.2,3011N×3626E,h5km*
CSEM ***12*** *12:54:47.9±0.2,2990N×3637E,h30km,ML2.9,Error ellipse: s-maj=5.2km s-min=2.4km az=109.0*
GII ***12*** *12:54:47.4±1.3,2989N×3619E,h0km,ML2.3/1, EXPLOSION*
HLW ***12*** *12:54:49.1,2977N×3648E,h25km,Mb2.9*

ISC 12 12:54:46.8±0.9,2987N±004×3630E±006,h0km,n23, σ0℘86/29,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**263**	Pg	**Pg**	**12 55 07.5**	**-0.3**
HRFI	**Mount Harif**	**1.11**	**279**	Pg	**Pg**	**12 55 07.2**	**-0.8**
ZFRI	**Zfri**	**1.18**	**305**	Pg	**Pg**	**12 55 08.7**	**-0.9**
EIL	**Elat**	**1.19**	**261**	Pg	**Pg**	**12 55 09.4**	**-0.2**
EIL				Sg	**Sg**	**12 55 26.6**	**+1.5**
MBRI	**Mt Berech**	**1.20**	**267**	Pg	**Pg**	**12 55 09.2**	**-0.8**
HQLS		**1.22**	**242**	P	**Pg**	**12 55 09.3**	**-0.8**
HQLS		**1.22**	**242**	P	**Pg**	**12 55 09.3**	**-0.9**
HQLS				S	**Sg**	**12 55 26.5**	**+0.6**
PRNI	**Paran**	**1.22**	**294**	Pg	**Pg**	**12 55 09.1**	**-1.1**
JLOS		**1.33**	**212**	P	**Pg**	**12 55 12.0**	**-0.4**
JLOS		**1.33**	**212**	P	**Pg**	**12 55 12.0**	**-0.4**
JLOS				S	**Sg**	**12 55 31.6**	**+1.9**
KRMI	**Paran Flat**	**1.39**	**281**	Pg	**Pg**	**12 55 12.5**	**-1.0**
KRMI				Sg	**Sg**	**12 55 31.2**	**-0.2**
HBST	**Basata**	**1.51**	**245**	P	**Pn**	**12 55 15.0**	**-0.2**
TBKS	**Tabuk**	**1.66**	**173**	P	**Pn**	**12 55 17.3**	**+0.1**
BDAS	**Al Bad'**	**1.78**	**216**	P	**Pn**	**12 55 18.1**	**-0.8**
DSI	**Dead Sea**	**1.87**	**335**	Pn	**Pn**	**12 55 20.8**	**+0.7**
DSI				Sn	**Sn**	**12 55 46.1**	**+1.7**
HNKL	**Nakhl**	**2.01**	**272**	P	**Pn**	**12 55 22.1**	**+0.1**
HNKL				S	**Sn**	**12 55 47.4**	**-0.5**
HKAT	**Jabal Katrina**	**2.42**	**237**	P	**Pn**	**12 55 27.3**	**-0.4**
RSH		**2.48**	**297**	P	**Pn**	**12 55 29.8**	**+1.4**
TR2		**2.69**	**237**	P	**Pn**	**12 55 31.0**	**-0.5**
TR1		**2.77**	**228**	P	**Pn**	**12 55 32.2**	**-0.3**
AMAG	**Maghara**	**2.78**	**287**	P	**Pn**	**12 55 33.6**	**+1.0**
HRSH	**Kfar Ka'horesh**	**2.95**	**343**	P	**Pn**	**12 55 29.8**	**-5.2**
SUZ		**3.01**	**270**	P	**Pn**	**12 55 36.5**	**+0.7**

NEIC ***12*** *12:57:57.4±0.6,2186N×9464E,h101km±8km,mb4.6/1, Error ellipse: s-maj=17.4km s-min=5.5km az=222.0*
IDC ***12*** *12:58:00.1±4.1,2226N×9537E,h112km±36km,mb3.3/4, mb1 3.4/4,mb1mx3.2/20,mbtmp3.3/4,Error ellipse: s-maj=108.2km s-min=17.6km az=61.0*

ISC 12 12:57:58.6±1.7,219N±01×946E±01,h111km±17km,n20, σ0℘74/31,mb3.6/4,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.93**	**348**	*e*P	**Pn**	**12 58 47.0**	**+3.3**
IMP				*e*S	**Sn**	**12 59 17.0**	**-1.5**
SHL	**Shillong**	**4.41**	**326**	*e*PN	**Pn**	**12 59 03.7**	**+0.2**
SHL				*e*SN	Sx	12 59 19.2	
CMAR	**Chiang Mai Arr**	**5.33**	**129**	P	**Pn**	**12 59 13.7**	**-2.2**
	0.1nm,0.3s,baz=313,slow=14,SNR=6.0						
ODAN	**Odare**	**8.22**	**308**	*e*Pn	**Pn**	**12 59 55.1**	**+0.1**
ODAN				*e*Sn	**Sn**	**13 01 18.0**	**-8.1**
	79nm,0.4s						
TAPN	**Taplejung**	**8.29**	**312**	*e*Pn	**Pn**	**12 59 55.4**	**-0.5**
TAPN				*e*Sn	**Sn**	**13 01 19.5**	**-8.3**
	76nm,0.5s						
LSA	**Lhasa**	**8.36**	**339**	*e*Pn	**Pn**	**12 59 57.2**	**+0.2**
	9.4nm,0.6s						
RAMN	**Ramite**	**8.85**	**306**	*e*Pn	**Pn**	**13 00 03.4**	**-0.2**
RAMN				*e*Sn	**Sn**	**13 01 33

KSRS ScP ScP 13 30 59.6 -3.7
comp=Z,3.8nm,1.0s,baz=147,slow=4.5,SNR=7.9
KS15 Wonju Array Si 25.17 325 *e*P **P** **13 24 59.9 0.0**
ASAJ Asahikawa 26.50 355 P **P** **13 25 11.9 +0.5**
comp=Z,47nm,0.7s,mb5.2,baz=227,slow=11,SNR=20
PMG Port Moresby 26.93 177 *e*P **P** **13 25 15.7 +0.1**
AAI Ambon 27.36 221 P **P** **13 25 19.9 +0.5**
comp=Z,113nm,0.8s,mb5.6
AAI Ambon 27.36 221 P **P** **13 25 19.2 -0.2**
comp=Z,113nm,0.8s,mb5.6
NJ2 Nanjing 28.16 306 *e*P **P** **13 25 26.8 +0.6**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
YSS Yuzh-Sakhalins 29.31 356 *e*P **P** **13 25 34.9 -1.0**
comp=Z,71nm,1.2s,mb5.2
YSS Yuzh-Sakhalins 29.31 356⇑ *i*P **P** **13 25 36.0 0.0**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.2
MDJ Mudanjiang 30.09 337 P **P** **13 25 42.4 -0.3**
MDJ XP sP 13 28 12.8 -2.7
MDJ S **S** **13 30 03.1 -0.1**
MDJ SCP ScP 13 31 19.0 +0.5
MDJ PCS PcS 13 32 11.8 +0.4
MDJ AMB AMB
comp=Z,16nm,1.1s,mb4.5
MDJ AMB AMB
comp=Z,72nm,4.4s
MDJ Mudanjiang 30.09 337 *e*P **P** **13 25 42.7 0.0**
comp=Z,12nm,0.8s,mb4.5
SNY Shenyang 30.63 326⇑P **P** **13 25 47.8 +0.4**
SNY AMB AMB
comp=Z,31nm,1.0s,mb4.8
CN2 Changchun 31.17 331 *e*P **P** **13 25 51.1 -0.9**
CN2 *e*S **S** **13 30 20.6 +0.8**
CN2 AMB AMB
comp=Z,30nm,1.4s,mb4.6
CN2 AMB AMB
comp=Z,600nm,7.0s
WHN Wuhan 31.25 300 *e*P **P** **13 25 54.3 +1.4**
WHN AMB AMB
comp=Z,72nm,1.0s,mb5.2
KDI Kendari 31.31 229 P **P** **13 25 55.1 +1.5**
comp=Z,56nm,0.8s,comp=Z,2µm,mb5.2
KDI Kendari 31.31 229 P **P** **13 25 55.4 +1.8**
comp=Z,56nm,0.8s,comp=Z,2µm,mb5.2
PCI Palu 31.45 237 P **P** **13 25 56.5 +1.6**
comp=Z,55nm,0.9s,mb5.1
PCI Palu 31.45 237 P **P** **13 25 56.0 +1.1**
comp=Z,55nm,0.9s,mb5.1
HABR Khabarovsk 31.94 347⇓ *i*P **P** **13 25 56.9 -1.6**
HABR *e* 13 28 29.0
HABR *e**SP sP 13 28 32.0 +0.1
HABR S **S** **13 30 30.1 -1.3**
HABR pmax pmax
comp=Z,66nm,1.2s,mb5.0
KAKA Kakadu 32.90 204 *e*P Px 13 25 55.6
comp=Z,15nm,0.6s
SMKI Samarinda 33.32 240 P **P** **13 26 14.2 +3.5**
comp=Z,116nm,1.1s,comp=Z,2µm,mb5.3
SMKI Samarinda 33.32 240 P **P** **13 26 13.5 +2.8**
comp=Z,116nm,1.1s,comp=Z,2µm,mb5.3
KLR Kul'dur 33.46 343 *e*P **P** **13 26 06.6 -4.8**
KLR *e*S **S** **13 30 46.2 -8.4**
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,90nm,1.8s,mb5.0
BJT Baijiatuau 33.88 317 *e*P **P** **13 26 15.1 0.0**
comp=Z,43nm,0.5s,mb5.2
BJT Baijiatuau 33.88 317 *e*P **P** **13 26 15.1 0.0**
BJT pmax pmax
comp=Z,43nm,0.5s
BJI Beijing 33.89 317 P **P** **13 26 14.9 -0.2**
BJI AP 13 27 44.1
BJI S **S** **13 31 00.7 -0.7**
BJI XS sS 13 33 48.8 -2.4
BJI AMB AMB
comp=Z,75nm,0.7s,mb5.3
BJI AMB AMB
comp=Z,307nm,3.1s
BJI Beijing 33.89 317 P **P** **13 26 14.9 -0.2**
comp=Z,75nm,0.7s,mb5.3
BJI pP 13 27 44.1
BJI sP sP 13 28 46.0 -3.3
BJI S **S** **13 31 00.7 -0.7**
BJI sS sS 13 33 48.8 -2.4
BJI Beijing 33.89 317 P **P** **13 26 14.9 -0.2**
BJI *SP sP 13 28 46.0 -3.3
BJI S **S** **13 31 00.7 -0.7**
BJI *SS sS 13 33 48.8 -2.4
BJI pmax pmax
comp=Z,75nm,0.7s,mb5.3
KAPI Kappang 34.12 231 *e*P **P** **13 26 16.8 -0.6**
KAPI Kappang 34.12 231 P **P** **13 26 17.3 -0.1**
comp=Z,59nm,0.9s,mb5.1
BATI Baumata 35.22 220 P **P** **13 26 26.7 +0.1**
comp=Z,39nm,0.8s,mb5.0
PETK Petropavlovsk- 36.60 12 P **P** **13 26 38.0 +0.5**
comp=Z,7.3nm,0.9s,mb4.2,baz=144,slow=6.7,SNR=40
PETK PcP PcP 13 28 45.4 -0.5
comp=Z,13nm,1.1s,baz=153,slow=5.0,SNR=4.3
XAN Xi'an 36.67 304 P **P** **13 26 38.5 +0.2**
XAN AMB AMB
comp=Z,17nm,0.7s,mb4.7
GYA Guiyang 37.11 291⇑ *i*P **P** **13 26 43.5 +1.4**
GYA PCP PcP 13 28 48.8 +0.7
GYA SCP ScP 13 31 45.2 +1.3
GYA S **S** **13 31 54.3 +4.3**
GYA PCS PcS 13 32 37.5 0.0
GYA XS sS 13 34 42.7 +0.6
GYA SS SS 13 34 56.4 -9.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.6
GYA AMB AMB
comp=Z,110nm,4.8s
HHC Hu-ho-hao-te 37.33 315 *e*P **P** **13 26 44.8 +1.1**
HHC AP pP 13 28 20.2 +2.9
HHC PP PP 13 28 28.5 +2.1
HHC PCP PcP 13 28 51.1 +2.6
HHC XP sP 13 29 19.6 +0.3
HHC S **S** **13 31 55.4 +2.5**
HHC XS sS 13 34 44.3 -0.9
HHC SS SS 13 34 59.8 -9.4
HHC AMB AMB
comp=Z,44nm,1.3s,mb4.8
HHC AMB AMB
comp=Z,152nm,4.6s
CTA Charters Tower 37.52 179 *e*P **P** **13 26 45.7 +0.3**
comp=Z,14nm,1.0s,mb4.5
CTA Charters Tower 37.52 179 *e*P **P** **13 26 45.7 +0.3**
CTA pmax pmax
comp=Z,14nm,1.0s
CTAO Charters Tower 37.52 179 *e*P **P** **13 26 45.6 +0.2**
comp=Z,41nm,1.2s,mb4.8
CTAO Charters Tower 37.52 179 *e*P **P** **13 26 45.6 +0.2**
CTAO pmax pmax
comp=Z,41nm,1.2s,mb4.8
HIA Hailar 37.87 332 *e*P **P** **13 26 48.1 +0.2**
comp=Z,152nm,1.3s,mb5.4
HIA Hailar 37.87 332 *e*P **P** **13 26 48.2 +0.3**
HIA pmax pmax
comp=Z,152nm,1.3s
STKI Sintang 37.94 246 P **P** **13 26 49.1 +0.1**
comp=Z,51nm,0.7s,comp=Z,3µm,mb5.1
BTO Baotou 38.27 314 *e*P **P** **13 26 51.8 +0.5**
WRAB Tennant Creek 38.98 197 *e*P **P** **13 26 56.7 -0.6**
comp=Z,37nm,0.6s,mb5.1
WRAB Tennant Creek 38.98 197 *e*P **P** **13 26 57.4 +0.1**
WB2 Warramunga Arr 38.99 197 *e*P **P** **13 26 57.0 -0.4**
WB2 *e*SCP ScP 13 31 48.8 -2.3
WB2 *e*S **S** **13 32 15.9 -1.9**
WB2 *e*SS SS 13 35 43.0 +3.9
WRA Warramunga Arr 39.00 197 P **P** **13 26 57.6 +0.1**
comp=Z,20nm,0.6s,mb4.9,baz=16,slow=8.5,SNR=362
WRA PcP PcP 13 28 54.0 -0.1
comp=Z,1.1nm,0.4s,baz=22,slow=4.2,SNR=3.2
WRA ScP ScP 13 31 49.1 -2.0
comp=Z,8.5nm,0.8s,baz=14,slow=4.1,SNR=31
WRA S **S** **13 32 15.3 -2.5**
comp=Z,1.7nm,1.1s,baz=15,slow=14,SNR=3.0
WRA Warramunga Arr 39.00 197 *i* P **P** **13 26 57.5 +0.1**
WRA pmax pmax
comp=Z,21nm,0.6s
CD2 Chengdu 40.21 297 *e*P **P** **13 27 07.2 0.0**
CD2 AP pP 13 28 44.2 +1.6
CD2 PP PP 13 28 54.4 -1.2
CD2 XP sP 13 29 43.7 -0.3
CD2 S **S** **13 32 36.5 +1.0**
CD2 XS sS 13 35 29.0 -1.1
CD2 SS SS 13 35 52.3 -6.4
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
CD2 AMB AMB
comp=Z,30nm,4.8s
KMI Kunming 40.55 288 P **P** **13 27 10.1 +0.1**
KMI AP pP 13 28 46.6 +1.0
KMI PP PP 13 28 58.5 -0.3
KMI S **S** **13 32 40.9 +0.3**
KMI SS SS 13 35 55.9 -8.5
KMI AMB AMB
comp=Z,12nm,1.3s,mb4.3
KMI AMB AMB
comp=Z,54nm,5.4s
KMI LR LR
comp=Z,58nm,15.9s
KMI Kunming 40.55 288 P **P** **13 27 10.1 +0.1**
comp=Z,12nm,1.3s,mb4.3
KMI pP pP 13 28 46.6 +1.0
KMI PP PP 13 28 58.5 -0.3
KMI S **S** **13 32 40.9 +0.3**
KMI sS sS 13 35 32.4 -3.1
KMI SS SS 13 35 55.9 -8.5
KMI SSS 13 37 16.1
KMI LR LR
comp=Z,60nm,15.9s
KMI Kunming 40.55 288 P **P** **13 27 10.1 +0.1**
KMI *PP pP 13 28 46.6 +1.0
KMI 13 28 58.5
KMI S **S** **13 32 40.9 +0.3**
KMI *SS sS 13 35 32.4 -3.1
KMI SS SS 13 35 55.9 -8.5
KMI pmax pmax
comp=Z,12nm,1.3s,mb4.3
KMI MLR MLR
comp=Z,60nm,15.9s
LZH Lanzhou 41.23 305⇑P **P** **13 27 16.0 +0.8**
LZH AP pP 13 28 53.6 +2.3
LZH PCP PcP 13 29 01.0 -0.2
LZH XP sP 13 29 53.4 +0.9
LZH S **S** **13 32 51.0 +0.9**
LZH XS sS 13 35 46.2 +0.6
LZH SS SS 13 36 13.0 -2.1
LZH AMB AMB
comp=Z,97nm,1.5s,mb5.1
LZH Lanzhou 41.23 305⇑P **P** **13 27 16.0 +0.8**
comp=Z,97nm,1.5s,mb5.1
LZH pP pP 13 28 53.6 +2.3
LZH PcP PcP 13 29 01.0 -0.2
LZH PP PP 13 29 53.0 +48
LZH sP sP 13 29 53.4 +0.9
LZH S **S** **13 32 51.0 +0.9**
LZH sS sS 13 35 46.2 +0.6
LZH SS SS 13 36 13.0 -2.1
SJI Sawahan 41.96 236 P **P** **13 27 21.4 +0.2**
CLNS Chul'man 42.12 343 *e*P **P** **13 27 16.2 -5.6**
CLNS pmax pmax
comp=Z,24nm,0.7s,mb4.8
CLNS pmax pmax
comp=N,17nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,0.8s
ASAR Alice Springs 42.66 196 P **P** **13 27 26.4 -0.1**
comp=E,12nm,0.6s,mb4.6,baz=19,slow=6.7,SNR=432
ASAR PcP PcP 13 29 06.5 +0.4
comp=E,0.7nm,0.5s,baz=26,slow=4.5,SNR=2.8
ASAR ScP ScP 13 32 03.1 -2.5
comp=E,5.1nm,0.8s,baz=16,slow=4.3,SNR=22
ASAR S **S** **13 33 08.4 -2.3**
comp=E,1.6nm,0.8s,baz=19,slow=18,SNR=7.7
ASAR Alice Springs 42.66 196 P **P** **13 27 26.5 0.0**
ASAR pP 13 29 06.5 +2.9
ASAR S **S** **13 33 08.4 -2.3**
ULN Ulaanbaatar 43.59 322 P **P** **13 27 34.2 +0.7**
SNR=20
ULN Ulaanbaatar 43.59 322 *e*P **P** **13 27 33.9 +0.5**
comp=E,66nm,1.1s,mb5.1
ULN Ulaanbaatar 43.59 322*d i*P **P** **13 27 33.6 +0.2**
SONM Songino Array 43.96 322 P **P** **13 27 36.5 +0.2**
comp=E,20nm,0.7s,mb4.8,baz=122,slow=6.0,SNR=98
SONM PcP PcP 13 29 10.2 0.0
comp=E,4.2nm,0.8s,baz=139,slow=3.1,SNR=3.9
SONM ScP ScP 13 32 07.0 -3.6
comp=E,4.0nm,1.1s,baz=138,slow=3.8,SNR=8.5
SONM Songino Array 43.96 322 P **P** **13 27 36.5 +0.2**
SONM pP 13 29 10.2 -3.9
CHTO Chiang Mai 44.33 279 *e*P **P** **13 27 39.6 0.0**
comp=E,7.4nm,0.8s,mb4.3
CHTO Chiang Mai 44.33 279 *e*P **P** **13 27 39.6 0.0**
CHTO pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
CMAR Chiang Mai Arr 44.37 279 P **P** **13 27 40.9 +0.9**
comp=Z,28nm,0.9s,mb4.8,baz=72,slow=6.1,SNR=112
GTA Gaotai 45.19 308 *e*P **P** **13 27 46.0 +0.1**
GTA PCP PcP 13 29 15.6 +0.9
GTA AP pP 13 29 25.6 +1.1
GTA XP sP 13 30 25.6 +0.6
GTA SCP ScP 13 32 13.2 -2.7
GTA S **S** **13 33 45.1 -1.2**
GTA SCS ScS 13 36 38.3 -4.7
GTA XS sS 13 36 43.5 -1.7
GTA SS SS 13 37 14.9 -3.9
GTA AMB AMB
comp=Z,20nm,1.0s,mb4.6
GTA AMB AMB
comp=Z,120nm,5.4s
YAK Yakutsk 45.74 350 *e*P **P** **13 27 48.9 -0.8**
comp=Z,145nm,1.1s,mb5.4
YAK Yakutsk 45.74 350 *e*P **P** **13 27 48.6 -1.1**
YAK *e* 13 29 14.9
YAK *e* 13 29 48.8
YAK *e*S **S** **13 33 51.2 -2.0**
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=Z,64nm,0.9s,mb5.2
YAK pmax pmax
comp=N,25nm,1.0s
YAK pmax pmax
comp=E,55nm,2.7s
YAK pmax pmax
comp=Z,111nm,3.0s
YAK pmax pmax
comp=N,68nm,3.5s
YAK smax
comp=N,9.0nm,0.8s
YAK smax
comp=E,37nm,1.9s
MBWA Marble Bar 46.22 214 *e*P **P** **13 27 54.1 +0.1**
comp=E,21nm,1.0s,mb4.6
RGRI Rengat 46.27 252 P **P** **13 28 04.3 +10**
comp=E,442nm,0.4s
BOD Bodaibo 46.46 337⇑ *i*P **P** **13 27 54.1 -1.2**
BOD pmax pmax
comp=Z,34nm,1.5s,mb4.7
ZAK Zakamensk 46.98 324⇓ *i*P **P** **13 27 59.2 -0.2**
ZAK *e* 13 29 20.6
ZAK pmax pmax
comp=Z,34nm,1.2s,mb4.8
IRK Irkutsk 47.36 326 *e*P **P** **13 28 02.2 0.0**
IRK pmax pmax
comp=Z,87nm,1.4s,mb5.1
TLY Talaya 47.41 325 P **P** **13 28 03.2 +0.6**
SNR=10.0
TLY Talaya 47.41 325 *e*P **P** **13 28 02.6 0.0**
comp=Z,38nm,0.9s,mb4.9
TLY Talaya 47.41 325 *e*P **P** **13 28 02.5 -0.1**
TLY pmax pmax
comp=Z,40nm,0.8s,mb5.0
STKA Stephens Creek 49.41 185 *e*P **P** **13 28 17.5 -0.2**
comp=Z,8.7nm,0.9s,mb4.3
STKA Stephens Creek 49.41 185 P **P** **13 28 17.8 +0.2**
comp=Z,5.6nm,0.4s,mb4.5,baz=6.3,slow=6.9,SNR=34
LSA Lhasa 50.97 294 *e*P **P** **13 28 31.6 +2.3**
comp=Z,39nm,0.7s,mb4.8
LSA Lhasa 50.97 294 *e*P **P** **13 28 31.6 +2.4**
LSA pmax pmax
comp=Z,39nm,0.7s,mb4.8
BILL Bilibino 52.04 10 *e*P **P** **13 28 36.0 -0.2**
comp=Z,77nm,1.0s,mb5.0
BILL Bilibino 52.04 10ĸ *i*P **P** **13 28 36.1 -0.2**
BILL *e* 13 29 37.8
BILL *e**PP pP 13 30 16.6 -2.4
BILL *e* 13 30 48.8
BILL pmax pmax
comp=Z,101nm,1.4s,mb5.0
TAPN Taplejung 54.03 291 *e*P **P** **13 28 51.5 +0.3**
comp=Z,21nm,0.5s,mb4.7
ODAN Odare 54.34 291 *e*P **P** **13 28 53.6 +0.2**
comp=Z,36nm,0.5s,mb5.0
TIXI Tiksi 54.90 354 *e*P **P** **13 28 55.2 -1.3**
TIXI pmax pmax
comp=Z,15nm,1.1s,mb4.1
WMQ Urumqi 54.99 311 P **P** **13 28 58.6 +1.0**
WMQ AP pP 13 30 43.6 +1.6
WMQ XP sP 13 31 40.6 -0.1
WMQ S **S** **13 35 58.6 -0.3**
WMQ SCS ScS 13 37 49.6 -1.1
WMQ SS SS 13 39 54.6 +1.3
WMQ AMB AMB
comp=Z,45nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,95nm,4.0s
RAMN Ramite 55.04 291 *e*P **P** **13 28 58.4 +0.1**
comp=Z,36nm,1.0s,mb4.5
SDPT Sand Point 55.32 34 *e*P **P** **13 28 59.7 0.0**
JIRN Jiri 55.37 292 *e*P **P** **13 29 01.3 +0.8**
comp=Z,56nm,0.6s,mb5.0
GUN Gumba 55.63 292 *e*P **P** **13 29 03.0 +0.6**
comp=Z,48nm,0.6s,mb4.9
PKI Pulchoki 56.06 292 *e*P **P** **13 29 05.2 -0.2**
comp=Z,34nm,0.5s,mb4.8
PKI Pulchoki 56.06 292 *e*P **P** **13 29 05.2 -0.2**
PKI pmax pmax
comp=Z,34nm,0.5s,mb4.8
KKN Kakani 56.17 292 *e*P **P** **13 29 05.9 -0.2**
comp=Z,58nm,1.1s,mb4.7
KKN Kakani 56.17 292 *e*P **P** **13 29 05.9 -0.2**
KKN pmax pmax
comp=Z,58nm,1.1s,mb4.7
DMN Daman 56.33 292 *e*P **P** **13 29 07.3 +0.1**
comp=Z,38nm,0.5s,mb4.9
GKN Gorkha 56.72 292 *e*P **P** **13 29 10.0 +0.1**
CHGN Chignik 56.74 33 *e*P **P** **13 29 09.2 -0.2**
DANN Dangsing 57.47 293 *e*P **P** **13 29 15.4 +0.4**
comp=Z,81nm,0.6s,mb5.1
KOLN Koldanda 57.65 292 *e*P **P** **13 29 16.1 -0.2**
comp=Z,25nm,0.8s,mb4.5
PYUN Piuthan 58.17 292 *e*P **P** **13 29 19.5 -0.2**
comp=Z,30nm,0.5s,mb4.8
ZAA0 Zalesovo Array 58.84 323 *e*P **P** **13 29 23.2 -0.6**
ZAA0 *e*PcP PcP 13 30 05.6 -0.6
ZALV Zalesovo Beam 58.84 323 P **P** **13 29 23.1 -0.6**
comp=Z,15nm,0.5s,mb4.5,baz=104,slow=6.3,SNR=80
ZALV PcP PcP 13 30 05.2 -0.9
comp=Z,6.0nm,0.6s,baz=113,slow=3.9,SNR=6.1
ZALV ScP ScP 13 33 10.0 -4.8
comp=Z,1.8nm,0.8s,baz=122,slow=5.4,SNR=4.5
ZALV Zalesovo Beam 58.84 323 P **P** **13 29 23.1 -0.7**
ZALV 13 30 05.3
MKAR Makanchi Array 59.18 314 P **P** **13 29 26.2 -0.1**
comp=Z,27nm,0.4s,mb4.8,baz=90,slow=8.3,SNR=565
MKAR ScP ScP 13 33 13.1 -3.4
comp=Z,1.1nm,0.7s,baz=77,slow=4.7,SNR=4.6
MKAR Makanchi Array 59.18 314 P **P** **13 29 26.2 -0.1**
MKAR ScP ScP 13 33 13.1 -3.4
OHAK Old Harbor 59.71 33 *e*P **P** **13 29 29.4 -0.1**
SVW2 Sparrevohn 59.73 29 *e*P **P** **13 29 30.1 +0.5**
NVS Novosibirsk 59.94 324 *e*P **P** **13 29 29.7 -1.4**
NVS pmax pmax
comp=Z,119nm,1.3s,mb5.1
NVS pmax pmax
comp=N,27nm,1.5s
NVS pmax pmax
comp=E,88nm,1.4s
KDAK Kodiak Island 60.22 33 P **P** **13 29 46.8 +14**
comp=E,6.9nm,0.3s,mb4.5,baz=270,slow=5.1,SNR=56
PPLA Purkeypile 61.82 27 *e*P **P** **13 29 43.8 +0.5**
comp=E,14nm,0.8s,mb4.5
KURK Kurchatov 62.05 318 P **P** **13 29 44.7 -0.3**
SNR=44
KURK Kurchatov 62.05 318 *e*P **P** **13 29 44.2 -0.8**
KURK Kurchatov 62.05 318‖ *e*P **P** **13 29 44.4 -0.6**
KURK pmax pmax
comp=Z,126nm,1.2s,mb5.2
CHUM Lake Minchumin 62.06 26 *e*P **P** **13 29 45.5 +0.6**
comp=Z,14nm,0.8s,mb4.4
SLKM Skilak Lake 62.08 30 *e*P **P** **13 29 44.5 -0.5**
IMA2 Indian Mountai 62.22 24 *e*P **P** **13 29 46.0 +0.1**
SEW Seward 62.36 31 *e*P **P** **13 29 46.5 -0.3**
RC01 Rabbit Creek A 62.45 30 *e*P **P** **13 29 46.8 -0.6**
comp=Z,87nm,1.1s,mb5.1
KTH Kantishna Hill 62.55 27 *e*P **P** **13 29 47.8 -0.2**
comp=Z,67nm,1.2s,mb5.0
BPAW Bear Paw Mtn. 62.68 26 *e*P **P** **13 29 48.7 -0.1**
comp=Z,49nm,1.1s,mb4.8
TRF Thorofare Moun 62.80 27 *e*P **P** **13 29 49.0 -0.6**
comp=Z,29nm,1.0s,mb4.7
PMR Palmer 62.85 29 *e*P **P** **13 29 48.8 -1.2**
comp=Z,40nm,0.9s,mb4.8
PMR Palmer 62.85 29 *e*P **P** **13 29 48.8 -1.2**
PMR pmax pmax
comp=Z,40nm,0.9s,mb4.8
MCK McKinley 63.46 27 *e*P **P** **13 29 53.2 -0.6**
KSH Kashi 63.47 306 P **P** **13 29 56.7 +2.2**
KSH *e*PCP PcP 13 30 30.0 +4.6
KSH *e*AP pP 13 31 46.1 +2.9
KSH *e*PP PP 13 32 24.1 +1.1
KSH *e*XP sP 13 32 42.1 +1.6
KSH *e*S **S** **13 37 41.8 -3.9**
KSH *e*SCS ScS 13 38 52.0 -2.4
KSH AMB AMB
comp=Z,92nm,1.0s,mb5.2
KSH AMB AMB
comp=Z,421nm,5.3s
HYB Hyderabad 63.69 281 *e*P **P** **13 29 56.0 -0.2**
TKM2 Tokmak 2 63.71 310 *e*P **P** **13 29 56.5 +0.6**
comp=Z,16nm,0.7s,mb4.6
TKM2 Tokmak 2 63.71 310 *e*P **P** **13 29 56.5 +0.6**
TKM2 pmax pmax
comp=Z,16nm,0.7s,mb4.6
TKM2 Tokmak 2 63.71 310 P **P** **13 29 56.2 +0.4**
SNR=25
COLD Coldfoot 63.90 23 *e*P **P** **13 29 57.1 +0.5**
comp=Z,31nm,1.0s,mb4.7
KZA Kyzart 63.97 309 P **P** **13 29 58.8 +1.2**
SNR=21
KBK Karagaybulak 64.19 309 P **P** **13 29 59.4 +0.4**
SNR=20
COLA College 64.19 26 *e*P **P** **13 29 57.5 -1.0**
USP Ospenovka 64.51 310 P **P** **13 30 01.2 +0.2**
SNR=20
UCH Uchtor 64.52 309 *e*P **P** **13 30 02.4 +1.3**
comp=Z,3.4nm,0.7s,mb3.9
AAK Ala-Archa 64.52 309 P **P** **13 30 01.3 +0.2**
SNR=14
EKS2 Erkin-Say 65.05 309 *e*P **P** **13 30 04.6 +0.2**
comp=Z,16nm,1.1s,mb4.3
EKS2 Erkin-Say 65.05 309 P **P** **13 30 04.9 +0.5**
SNR=13
AML Almayashu 65.13 309 P **P** **13 30 06.2 +1.3**
SNR=20
RPZ Rata Peaks 65.35 160 P **P** **13 30 04.3 -1.7**
comp=Z,20nm,0.9s,mb4.6,baz=113,slow=1.9,SNR=5.4
VOSK Vostochnaya 66.91 320 P **P** **13 30 14.4 -1.4**
VOSK pmax pmax
comp=Z,22nm,1.0s,mb4.6
EGAK Eagle 66.99 26 *e*P **P** **13 30 15.8 -0.1**
BVA0 Borovoye Array 67.28 321 P **P** **13 30 17.3 -0.7**
BVA0 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
BVAR Borovoye Array 67.28 321 P **P** **13 30 17.7 -0.3**
comp=Z,36nm,0.6s,mb5.1,baz=100,slow=7.5,SNR=213
BVAR PcP PcP 13 30 40.5 -0.5
comp=Z,4.0nm,0.6s,baz=119,slow=5.4,SNR=3.6
PNL Peninsula 67.30 32 *e*P **P** **13 30 18.5 +0.5**
comp=Z,40nm,1.1s,mb4.9
BRVK Borovoye 67.34 321 P **P** **13 30 18.3 -0.1**
SNR=17
BRVK Borovoye 67.34 321 *e*P **P** **13 30 17.7 -0.7**
KK31 Karatay Array 67.43 310 *i* P **P** **13 30 19.1 -0.1**
KK31 pmax pmax
comp=Z,27nm,0.5s,mb5.0
DAWY Dawson 67.67 27 *e*P **P** **13 30 20.5 +0.3**
DAWY *e*PcP PcP 13 30 42.9 +0.5
HYT Haines Junctio 68.31 31 *e*P **P** **13 30 25.2 +1.1**
SKAG Skagway 69.37 32 *e*P **P** **13 30 30.9 +0.4**

KBL **Kabul** 69.40 301 *e*P P 13 30 30.9 -0.3
comp=Z,32nm,1.0s,mb4.8
KBL **Kabul** 69.40 301 *e*P P 13 30 31.0 -0.3
KBL pmax pmax
comp=Z,31nm,1.0s,mb4.8
INK **Inuvik** 70.32 23 *e*P P 13 30 35.5 -0.6
DLBC **Dease Lake** 72.15 33 *e*P P 13 30 48.0 +1.0
SVE **Sverdlovsk** 72.73 325⇓ *e*P P 13 30 50.4 +0.1
SVE pmax pmax
comp=Z,56nm,0.9s,mb5.0
ARU **Arti** 73.91 325 *e*P P 13 30 56.2 -0.9
ARU **Arti** 73.91 325 *d* iP P 13 30 56.3 -0.8
ARU *e* 13 31 04.7
ARU *e**PP pP 13 32 47.5 -2.8
ARU *e* 13 33 47.6
ARU *e*S S 13 39 46.3 +1.0
ARU SS SS 13 44 43.1 -0.9
ARU pmax pmax
comp=Z,109nm,1.7s,mb5.0
AKTK **Aktyubinsk** 75.14 319 P P 13 31 03.1 -1.0
AKTO **Aktyubinsk** 75.14 319 P P 13 31 03.1 -1.0
comp=Z,6.2nm,0.6s,mb4.2,baz=92,slow=7.7,SNR=27
K01A **Sixes** 78.10 49 ⇑P P 13 31 20.2 -0.2
baz=78
JCW **Jim Creek** 78.60 43 *e*P P 13 31 23.7 +0.7
J02A **Umpqua** 78.61 48 ⇑P P 13 31 24.2 +1.1
baz=78
I03A **Eugene** 78.68 47 ⇓P P 13 31 24.8 +1.3
baz=79
D05A **Enumclaw** 78.80 44 ⇑P P 13 31 25.4 +1.3
baz=79
RPW **Rockport** 78.81 43 P P 13 31 23.8 -0.4
L02A **Cave Junction** 78.87 49 ⇓P P 13 31 25.9 +1.3
baz=79
YKA **Yellowknife Ar** 78.90 28 P P 13 31 23.7 -0.6
comp=Z,6.7nm,0.5s,mb4.3,baz=288,slow=4.9,SNR=32
YKA **Yellowknife Ar** 78.90 28 P P 13 31 23.7 -0.6
YKA **Yellowknife Ar** 78.90 28 *i* P P 13 31 24.1 -0.2
YKA pmax pmax
comp=Z,7.0nm,0.5s
HUMO **Hull Mountain** 79.23 49 *e*P P 13 31 27.8 +1.3
HUMO **Hull Mountain** 79.23 49 ⇑P P 13 31 26.6 +0.1
baz=79
A07A **Ashnola River,** 79.38 42 ⇓P P 13 31 27.1 -0.1
baz=79
N02C **Big Bar** 79.41 51 ⇓P P 13 31 27.8 +0.3
baz=79
F05A **White Salmon** 79.47 45 ⇑P P 13 31 27.9 +0.2
baz=79
M02C **Callahan** 79.60 50 ⇓P P 13 31 29.0 +0.5
baz=80,SNR=5.1
YBH **Yreka Blue Hor** 79.62 50 P P 13 31 29.4 +0.8
comp=Z,16nm,0.9s,mb4.3,baz=309,slow=1.6,SNR=22
YBH **Yreka Blue Hor** 79.62 50 ⇓P P 13 31 29.0 +0.4
baz=80,SNR=8.8
E06A **Yakima** 79.63 44 ⇓P P 13 31 28.7 +0.2
baz=80
G05A **Wamic** 79.73 46 ⇓P P 13 31 29.3 +0.2
baz=80
C07A **Waterville** 79.94 43 ⇑P P 13 31 30.0 -0.2
baz=80
WDC **Whiskeytown Da** 80.03 51 *e*P P 13 31 31.6 +0.8
WDC **Whiskeytown Da** 80.03 51 ⇑P P 13 31 31.5 +0.7
baz=80,SNR=5.1
HOPS **Hopland** 80.03 52 ⇓P P 13 31 31.1 +0.3
baz=80
I05A **Bend** 80.03 47 ⇑P P 13 31 31.3 +0.6
baz=80
A08A **Turner Farm, O** 80.11 42 ⇓P P 13 31 31.6 +0.6
baz=80
D07A **Quincy** 80.13 44 ⇑P P 13 31 31.7 +0.6
baz=80
GASB **Alder Springs** 80.14 52 ⇓P P 13 31 31.8 +0.5
baz=80
M03C **McCloud** 80.16 50 ⇓P P 13 31 32.4 +0.9
baz=80,SNR=5.5
SPB4 **Spitsbergen Ar** 80.19 351 *e*P P 13 31 30.5 -0.4
B08A **Colville Reser** 80.23 42 ⇓P P 13 31 31.4 -0.2
baz=80,SNR=6.5
E07A **Sunnyside** 80.37 44 ⇑P P 13 31 33.0 +0.6
baz=80
H06A **Lindquist Farm** 80.53 46 ⇓P P 13 31 33.3 +0.1
baz=80
MNRC **McLaughlin Nat** 80.54 52 ⇓P P 13 31 33.8 +0.4
baz=80,SNR=5.5
A09A **Danville** 80.55 42 ⇓P P 13 31 33.1 -0.1
baz=80
RSW **Rattlesnake Hi** 80.59 44 *e*P P 13 31 34.2 +0.6
HAWA **Hanford** 80.63 44 *e*P P 13 31 34.5 +0.8
K05A **Summer Lake** 80.67 48 ⇑P P 13 31 34.0 -0.1
baz=81,SNR=6.6
G07A **Ruggs Ranch, H** 80.84 45 ⇓P P 13 31 34.5 -0.4
baz=81
D08A **Wollman Farm,** 80.86 44 ⇑P P 13 31 35.4 +0.5
baz=81
OD2 **Odessa Site #2** 80.90 43 *e*P P 13 31 35.2 +0.1
B09A **Rice** 80.98 42 ⇑P P 13 31 35.4 -0.1
baz=81,SNR=5.3
BIDO **Bidbid** 80.99 292 P P 13 31 37.1 +1.1
SNR=5.8
ORV **Oroville** 81.07 51 ⇑P P 13 31 36.1 -0.1
baz=81,SNR=16
OHCM **Honcut** 81.14 52 *e*P P 13 31 36.4 -0.1
O04C **Chester** 81.17 51 P P 13 31 37.6 +1.0
baz=81,SNR=14
A10A **Northport** 81.19 41 ⇑P P 13 31 36.6 -0.1
baz=81,SNR=6.7
F08A **Pendleton** 81.30 45 ⇑P P 13 31 36.1 -1.1
baz=81,SNR=6.3
MOD **Modoc** 81.31 49 *e*P P 13 31 37.8 +0.4
MOD **Modoc** 81.31 49 ⇑P P 13 31 37.1 -0.2
baz=81,SNR=5.3
G08A **Pilot Rock** 81.32 45 ⇑P P 13 31 36.9 -0.4
baz=81
E09A **Wood Farm, Sta** 81.52 44 ⇑P P 13 31 37.9 -0.4
baz=81
J07A **Hines** 81.61 47 ⇑P P 13 31 38.7 -0.2
baz=82,SNR=6.3
NEW **Newport** 81.68 42 *e*P P 13 31 39.5 +0.4
BEKR **Beckwourth** 81.83 51 ⇓P P 13 31 40.1 0.0
baz=82,SNR=17
K07A **Rock Creek Ran** 81.85 48 ⇑P P 13 31 39.8 -0.3
baz=82,SNR=6.6
LAVA **Lava Cap Winer** 81.85 52 ⇓P P 13 31 40.5 +0.3
baz=82,SNR=8.3
PACP **Pacheco Peak** 81.92 54 ⇑P P 13 31 40.0 -0.5
baz=82
D10A **Wagner Farm, O** 81.93 43 ⇓P P 13 31 39.6 -0.9
baz=82
BANOM **Banah** 81.95 295 ⇓P P 13 31 41.3 +0.3
SNR=8.8
A11A **Hall Mountain,** 81.95 41 ⇑P P 13 31 40.7 +0.2
baz=82
L07A **Adell** 81.97 49 ⇑P P 13 31 40.3 -0.4
baz=82,SNR=9.9
N06A **Buffalo Meadow** 81.97 50 P P 13 31 41.3 +0.5
baz=82,SNR=7.8
APA **Apatity** 81.98 339 ⇓P P 13 31 39.4 -0.8
APA pmax pmax
comp=Z,8.0nm,0.5s,mb4.4
I08A **Drewsey** 81.98 47 ⇑P P 13 31 40.5 -0.2
baz=82
O06A **Flanigan** 82.14 50 ⇓P P 13 31 41.7 +0.1
baz=82
J08A **Circle Bar Ran** 82.20 47 ⇑P P 13 31 41.6 -0.3
baz=82,SNR=6.4
V03C **Hunter Liggett** 82.23 55 ⇓P P 13 31 42.6 +0.4
baz=82
M07A **Soldier Meadow** 82.27 49 ⇓P P 13 31 43.1 +0.8
baz=82,SNR=6.3
F10A **Beach Ranch, E** 82.28 44 ⇓P P 13 31 42.6 +0.3
baz=82
CMB **Columbia Colle** 82.32 53 *e*P P 13 31 42.9 +0.3
CMB **Columbia Colle** 82.32 53 ⇑P P 13 31 43.1 +0.5
baz=82,SNR=9.1
C11A **Tepee Creek (N** 82.36 42 ⇑P P 13 31 42.5 -0.1
baz=82
K08A **Mann Creek Ran** 82.37 48 ⇑P P 13 31 43.1 +0.3
baz=82,SNR=8.9
HATD **Hatta, Dubai** 82.39 294 P P 13 31 43.9 +0.6
SNR=7.5
A12A **Yaak River Ran** 82.41 41 ⇑P P 13 31 43.5 +0.7
baz=82,SNR=5.2
WCN **Washoe City** 82.44 51 ⇑P P 13 31 43.9 +0.7
baz=82,SNR=6.8
D11A **Klaveano Farm,** 82.55 43 ⇓P P 13 31 43.2 -0.3
baz=82,SNR=5.5

S05C **Merced** 82.56 53 ⇓P P 13 31 44.1 +0.3
baz=82
G10A **Bishop Farm, J** 82.56 45 ⇑P P 13 31 44.1 +0.4
baz=82,SNR=7.8
BMO **Blue Mountains** 82.57 45 *e*P P 13 31 43.8 +0.1
N07B **Gerlach** 82.59 50 ⇑P P 13 31 44.0 +0.1
baz=82,SNR=7.7
L08A **Fields** 82.63 48 ⇓P P 13 31 44.8 +0.7
baz=82,SNR=11
J09A **Fry Pan Ranch,** 82.71 47 P P 13 31 44.9 +0.4
baz=83,SNR=9.3
PKD **Parkfield** 82.79 55 ⇑P P 13 31 44.8 -0.2
baz=83
M08A **Happy Creek Ra** 82.82 49 ⇓P P 13 31 45.4 +0.3
baz=83
O07A **Toulon** 82.84 50 ⇓P P 13 31 45.2 0.0
baz=83
E11A **Bogner Ranch,** 82.84 44 ⇑P P 13 31 44.6 -0.5
baz=83,SNR=7.0
R06C **Coleville** 82.89 52 ⇑P P 13 31 45.3 -0.2
baz=83,SNR=5.4
C12B **Naegeli Ranch,** 82.90 42 ⇓P P 13 31 44.9 -0.4
baz=83
WAKR **Walker** 82.90 52 *e*P P 13 31 46.8 +1.2
KEV **Kevo** 82.92 342 *ep* P 13 31 43.2 -1.7
comp=Z,6.1nm,0.3s,mb4.6
KEV **Kevo** 82.92 342 *e*P P 13 31 43.2 -1.7
KEV pmax pmax
comp=Z,6.0nm,0.3s,mb4.6
K09A **Rome** 82.92 48 ⇓P P 13 31 45.5 0.0
baz=83,SNR=6.8
F11A **Grangeville** 83.03 44 ⇓P P 13 31 45.6 -0.3
baz=83,SNR=6.4
H10A **Noah's Angus R** 83.03 46 ⇑P P 13 31 46.0 0.0
baz=83,SNR=8.5
G11A **Walters Elk Ra** 83.10 45 P P 13 31 46.1 -0.3
baz=83,SNR=14
T06C **Millerton Lake** 83.13 53 ⇑P P 13 31 46.2 -0.5
baz=83,SNR=8.5
L09A **Wilkinson Ranc** 83.16 48 ⇓P P 13 31 47.4 +0.6
baz=83,SNR=7.6
A13A **Flathead Natio** 83.18 41 ⇑P P 13 31 47.2 +0.5
baz=83
D12A **Red Ives Fores** 83.19 43 ⇓P P 13 31 46.1 -0.7
baz=83
N08A **GE Springer Mi** 83.20 49 P P 13 31 47.7 +0.7
baz=83,SNR=10.0
E12A **Beaver Dam Sad** 83.25 44 P P 13 31 47.4 +0.3
baz=83,SNR=34
BSMT **Bassoo Peak** 83.30 42 *e*P P 13 31 47.8 +0.5
B13A **Whitefish** 83.33 41 ⇓P P 13 31 47.9 +0.4
baz=83,SNR=11
O08A **Rochester Mine** 83.33 50 ⇑P P 13 31 48.2 +0.6
baz=83,SNR=12
KCC **Kaiser Creek** 83.33 53 ⇑P P 13 31 47.6 -0.1
baz=83,SNR=7.0
WALA **Waterton Lakes** 83.45 41 *e*P P 13 31 49.8 +1.7
ARCES **ARCESS Array B** 83.48 342 P P 13 31 46.8 -0.9
comp=Z,21nm,0.8s,mb4.7,baz=81,slow=7.4,SNR=102
C13A **Hot Springs** 83.49 42 ⇓P P 13 31 48.1 -0.1
baz=83,SNR=9.5
H11A **Donnelly** 83.49 45 ⇑P P 13 31 47.8 -0.6
baz=83,SNR=15
K10A **MacKenzie Ranc** 83.50 47 ⇑P P 13 31 48.0 -0.3
baz=83,SNR=17
MLAC **Mammoth Lakes** 83.61 53 ⇑P P 13 31 49.2 +0.1
baz=84
N09A **Rock Creek Ran** 83.62 49 ⇑P P 13 31 48.7 -0.4
baz=84,SNR=6.9
F12A **Elk City** 83.66 44 ⇑P P 13 31 49.1 0.0
baz=84
D13A **Huson** 83.75 43 ⇑P P 13 31 49.4 -0.2
baz=84,SNR=6.6
I11A **Placerville** 83.78 46 ⇓P P 13 31 50.0 +0.2
baz=84,SNR=17
NVAR **Mina Array Bea** 83.78 52 P P 13 31 50.4 +0.5
comp=Z,15nm,0.8s,mb4.5,baz=264,slow=5.7,SNR=84
G12A **Big Creek, Yel** 83.82 45 ⇑P P 13 31 49.3 -0.7
baz=84
Q08A **Gabbs** 83.92 51 ⇓P P 13 31 51.2 +0.6
baz=84,SNR=9.9
R08A **Mina** 83.95 52 ⇑P P 13 31 51.4 +0.7
baz=84,SNR=6.7
C14A **Swn Lake** 83.98 42 ⇑P P 13 31 50.9 +0.2
baz=84
L10A **Juniper Basin** 83.99 48 P P 13 31 51.5 +0.7
baz=84,SNR=14
MFID **Camas Ranch** 84.02 46 ⇑P P 13 31 51.3 +0.3
baz=84,SNR=26
O09A **Fish Creek Ran** 84.07 50 ⇓P P 13 31 51.5 +0.2
baz=84,SNR=8.2
K11A **Parker Ranch,** 84.08 47 ⇑P P 13 31 51.3 0.0
baz=84,SNR=10
B14A **Marquette Ranc** 84.08 41 ⇓P P 13 31 51.2 +0.1
baz=84,SNR=7.9
E13A **Victor** 84.14 43 ⇓P P 13 31 51.1 -0.4
baz=84
MSO **Missoula** 84.17 43 *e*P P 13 31 51.4 -0.3
A15A **Johnson Ranch,** 84.21 40 ⇑P P 13 31 51.8 0.0
baz=84,SNR=14
F13A **Darby** 84.26 44 ⇑P P 13 31 51.6 -0.6
baz=84,SNR=14
H12A **Diamond D Ranc** 84.32 45 ⇑P P 13 31 52.5 0.0
baz=84,SNR=8.8
D14A **Greenough** 84.37 42 ⇓P P 13 31 52.2 -0.4
baz=84
I12A **Atlanta** 84.38 46 ⇓P P 13 31 52.5 -0.3
baz=84,SNR=8.5
L11A **Cat Creek Ranc** 84.47 48 ⇓P P 13 31 52.9 -0.4
baz=84,SNR=12
O10A **Cortez Mining,** 84.53 50 ⇑P P 13 31 53.4 -0.2
baz=84,SNR=5.0
B15A **Bradely Ranch,** 84.55 41 ⇑P P 13 31 53.1 -0.3
baz=84,SNR=15
G13A **Cobalt** 84.56 44 ⇓P P 13 31 53.1 -0.5
baz=84,SNR=22
J12A **Stokes Ranch,** 84.58 46 ⇓P P 13 31 53.3 -0.5
baz=84,SNR=13
CHMT **Chamberlain Mo** 84.59 43 *e*P P 13 31 53.6 -0.1
M11A **Holland Ranch,** 84.68 48 ⇓P P 13 31 54.3 0.0
baz=85,SNR=6.6
C15A **Salmon Ranch,** 84.70 42 ⇑P P 13 31 53.8 -0.5
baz=85,SNR=12
H13A **Challis** 84.72 45 ⇓P P 13 31 54.1 -0.3
baz=85,SNR=8.8
R09A **Tonopah** 84.75 52 ⇑P P 13 31 54.3 -0.4
baz=85,SNR=18
S09A **Goldfield** 84.80 52 ⇓P P 13 31 55.1 +0.2
baz=85,SNR=6.7
K12A **Draper Farm, C** 84.92 47 ⇑P P 13 31 54.9 -0.5
baz=85,SNR=13
GRAC **Grapevine Rang** 84.92 53 ⇓P P 13 31 55.6 +0.1
baz=85
N11A **Elko Archery C** 84.92 49 ⇓P P 13 31 55.6 +0.1
baz=85
A16A **West Butte Ran** 84.92 40 ⇑P P 13 31 54.2 -1.1
baz=85,SNR=5.4
HLID **Hailey** 84.95 46 *e*P P 13 31 56.0 +0.5
HLID **Hailey** 84.95 46 ⇑P P 13 31 55.6 +0.1
baz=85,SNR=21
JOF **Joensuu** 84.96 335 *ep* P 13 31 53.1 -2.0
comp=Z,8.0nm,0.3s,mb4.7
L12A **House Creek Ra** 85.00 47 ⇓P P 13 31 56.4 +0.6
baz=85,SNR=15
D15A **Lincoln** 85.02 42 ⇑P P 13 31 55.4 -0.4
baz=85
I13A **Wildhorse Cree** 85.03 46 ⇓P P 13 31 55.6 -0.3
baz=85,SNR=17
B16A **M & M Farms, S** 85.05 41 ⇑P P 13 31 55.8 -0.1
baz=85,SNR=9.7
Q10A **Clear Creek Ra** 85.07 51 ⇑P P 13 31 56.0 -0.2
baz=85,SNR=5.7
MPMC **Manual Prospec** 85.12 54 ⇑P P 13 31 56.6 +0.1
baz=85,SNR=7.6
E15A **Deer Lodge** 85.15 43 ⇑P P 13 31 56.3 -0.2
baz=85,SNR=17
J13A **Cove Ranch, Pi** 85.17 46 P P 13 31 57.2 +0.6
baz=85,SNR=20
O11A **Cowboy Ranch,** 85.20 50 ⇓P P 13 31 56.3 -0.5
baz=85,SNR=8.7
S10A **Tonopah Range,** 85.21 52 ⇑P P 13 31 57.4 +0.5
baz=85,SNR=22
C16A **Fuhringer Ranc** 85.24 41 ⇑P P 13 31 56.3 -0.6
baz=85
ELK **Elko** 85.30 49 *e*P P 13 31 57.9 +0.6
comp=Z,27nm,1.1s,mb4.7
ELK **Elko** 85.30 49 *e*P P 13 31 57.9 +0.6
ELK pmax pmax
comp=Z,27nm,1.1s
H14A **Leadore** 85.30 45 ⇓P P 13 31 57.4 +0.2
baz=85,SNR=13
M12A **Wells** 85.31 48 ⇓P P 13 31 57.2 -0.1
baz=85,SNR=13
R10A **Warm Springs** 85.31 51 ⇓P P 13 31 57.2 -0.2
baz=85,SNR=9.9
N12A **Clover Valley,** 85.41 49 ⇓P P 13 31 57.4 -0.4
baz=85,SNR=7.6
F15A **Butte** 85.45 43 ⇑P P 13 31 57.7 -0.2
baz=85,SNR=11
FURC **Furnace Creek,** 85.47 53 ⇓P P 13 31 57.7 -0.5
baz=85,SNR=6.1
I14A **Mackay** 85.48 45 ⇑P P 13 31 58.1 0.0
baz=85,SNR=10
K13A **Stover Farm, H** 85.48 47 ⇓P P 13 31 58.4 +0.3
baz=85,SNR=9.7
LRM **Limekiln Ridge** 85.49 43 *e*P P 13 31 58.6 +0.5
DLMT **Dillon** 85.56 44 *e*P P 13 31 58.8 +0.4
MCMT **McKenzie Canyo** 85.57 44 *e*P P 13 31 58.9 +0.4
Q11A **Duckwater** 85.62 51 ⇓P P 13 31 58.5 -0.3
baz=86,SNR=11
D16A **Dana Ranch, Ca** 85.64 42 ⇓P P 13 31 58.2 -0.6
baz=86
J14A **Carey** 85.64 46 ⇓P P 13 31 58.4 -0.5
baz=86,SNR=17
E16A **East Helena** 85.74 42 ⇑P P 13 31 58.7 -0.6
baz=86
L13A **Double Diamond** 85.77 47 ⇑P P 13 31 59.0 -0.5
baz=86,SNR=8.1
TPNV **Topopah Spring** 85.78 53 *e*P P 13 32 00.2 +0.5
TPNV **Topopah Spring** 85.78 53 ⇓P P 13 31 59.5 -0.2
baz=86,SNR=12
O12A **Currie** 85.81 49 ⇓P P 13 31 59.2 -0.5
baz=86,SNR=17
R11A **Troy Canyon, C** 85.83 51 ⇓P P 13 31 59.6 -0.3
baz=86,SNR=20
M13A **Montello** 85.86 48 ⇓P P 13 31 59.7 -0.2
baz=86,SNR=15
GSC **Goldstone** 85.88 54 *e*P P 13 32 00.9 +0.7
GSC **Goldstone** 85.88 54 ⇓P P 13 32 00.4 +0.2
baz=86,SNR=6.2
U10A **Ash Meadows, A** 85.89 53 ⇑P P 13 31 59.7 -0.5
baz=86,SNR=5.2
S11A **Rachel** 85.94 52 ⇑P P 13 31 59.8 -0.6
baz=86,SNR=6.9
P12A **McGill** 85.96 50 ⇓P P 13 31 59.7 -0.8
baz=86
D17A **Six Diamond Ra** 86.14 42 ⇓P P 13 31 59.4 -1.8
baz=86
K14A **Jones Ranch, D** 86.15 47 ⇑P P 13 32 01.0 -0.3
baz=86,SNR=8.2
OBN **Obninsk** 86.15 327 *j e*P P 13 31 59.9 -1.1
OBN pmax pmax
comp=Z,42nm,1.4s,mb4.9
Q12A **Willow Creek R** 86.16 50 ⇓P P 13 32 01.8 +0.4
baz=86,SNR=11
RBK **Rabkut** 86.20 287 P P 13 32 01.6 -0.4
SNR=7.6
J15A **Blackfoot** 86.36 46 ⇓P P 13 32 02.7 +0.4
baz=86,SNR=13
M14A **Sheep Mountain** 86.39 48 ⇑P P 13 32 02.1 -0.3
baz=86,SNR=12
T11A **Corn Creek, Al** 86.47 52 ⇓P P 13 32 03.0 +0.1
baz=86,SNR=5.9
WHFO **Wadi Hawf** 86.47 288 ⇑P P 13 32 03.0 -0.3
SNR=5.9
QLMT **Earthquake Lak** 86.52 44 *e*P P 13 32 03.4 +0.4
K15A **Arbon** 86.54 46 ⇓P P 13 32 03.8 +0.6
baz=86,SNR=5.9
R12A **Pony Springs,** 86.56 51 ⇓P P 13 32 03.0 -0.3
baz=86,SNR=14
P13A **Bates Ranch, G** 86.61 50 ⇓P P 13 32 03.4 -0.1
baz=86,SNR=16
PFO **Pinyon Flat Ob** 86.70 56 P P 13 32 04.1 0.0
comp=Z,5.2nm,1.0s,mb4.1,baz=270,slow=2.6,SNR=3.7
PFO **Pinyon Flat Ob** 86.70 56 ⇓P P 13 32 03.9 -0.2
baz=87
N14A **Grayback Hills** 86.73 48 ⇑P P 13 32 03.8 -0.3
baz=87,SNR=6.8
SHPR **Sheep Range** 86.76 53 *e*P P 13 32 05.1 +0.8
V11A **Goodsprings** 86.77 54 ⇓P P 13 32 04.4 0.0
baz=87,SNR=7.9
Q13A **Wheeler Ranch,** 86.78 50 ⇓P P 13 32 04.4 +0.1
baz=87,SNR=5.6
YMR **Madison River** 86.88 44 *e*P P 13 32 06.0 +1.2
comp=Z,7.8nm,0.9s,mb4.3
L15A **Malad City** 86.89 47 ⇑P P 13 32 05.0 +0.2
baz=87,SNR=6.5
KIV **Kislovodsk** 86.94 315 *e*P P 13 32 04.2 -0.8
KIV *e* 13 41 38.0
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.5
GMRC **Granite Mounta** 86.94 55 ⇑P P 13 32 05.2 0.0
baz=87,SNR=7.3
J16A **Bone** 86.96 46 ⇓P P 13 32 06.2 +1.1
baz=87,SNR=8.2
MONP **Monument Peak** 86.96 57 ⇓P P 13 32 04.7 -0.6
baz=87
YNR **Norris Junctio** 87.06 44 *e*P P 13 32 08.4 +2.9
ABTO **Aybut** 87.07 287 P P 13 32 05.8 -0.3
SNR=6.0
R13A **O'Grain Ranch,** 87.08 51 ⇑P P 13 32 06.3 +0.5
baz=87,SNR=8.8
RRI2 **Red Ridge** 87.13 45 *e*P P 13 32 07.0 +1.1
DCID1 **Drake Creek** 87.13 45 *e*P P 13 32 07.7 +1.8
comp=Z,6.1nm,0.9s,mb4.2
K16A **Soda Springs** 87.14 46 ⇓P P 13 32 06.1 +0.2
baz=87,SNR=7.6
IMW **Indian Meadow** 87.19 45 *e*P P 13 32 07.5 +1.3
DUG **Dugway** 87.22 49 *e*P P 13 32 07.1 +0.7
comp=Z,30nm,1.2s,mb4.8
DUG **Dugway** 87.22 49 *e*P P 13 32 07.1 +0.7
DUG pmax pmax
comp=Z,30nm,1.2s,mb4.8
DUG **Dugway** 87.22 49 ⇑P P 13 32 06.3 -0.1
baz=87,SNR=16
U12A **Valley of Fire** 87.25 53 ⇓P P 13 32 06.6 0.0
baz=87
P14A **Drum Mountains** 87.25 49 ⇑P P 13 32 06.6 +0.1
baz=87,SNR=15
LDFC **Landfair** 87.27 54 *e*P P 13 32 07.7 +1.0
Q14A **Sevier Lake (B** 87.31 50 ⇓P P 13 32 07.0 +0.2
baz=87,SNR=20
S13A **Holt Ranch, En** 87.37 51 ⇑P P 13 32 07.7 +0.6
baz=87,SNR=8.4
MOOW **Moose Ponds** 87.37 45 *e*P P 13 32 07.9 +0.9
I17A **Pilgram Creek** 87.42 45 ⇑P P 13 32 07.7 +0.5
baz=87
BC3 **Big Chuckw Mtn** 87.48 56 ⇓P P 13 32 07.2 -0.5
baz=87,SNR=5.1
T13A **Saint George** 87.53 52 ⇓P P 13 32 08.0 +0.1
baz=87,SNR=6.4
J17A **Brown Place, J** 87.54 45 ⇑P P 13 32 07.0 -0.8
baz=87
L16A **Fish Haven** 87.54 47 ⇓P P 13 32 07.4 -0.4
baz=87,SNR=6.5
IRM **Iron Mountain** 87.55 55 ⇓P P 13 32 07.0 -1.0
baz=88,SNR=6.0
ARUT **Antelope Range** 87.61 51 *e*P P 13 32 09.1 +0.8
P15A **Leamington** 87.83 49 ⇓P P 13 32 09.1 -0.2
baz=88,SNR=12
NLU **North Lily Min** 87.84 49 *e*P P 13 32 08.6 -0.7
V13A **Grand Canyon W** 87.87 53 ⇓P P 13 32 09.0 -0.6
baz=88,SNR=7.6
Q15A **Fillmore** 87.96 50 ⇑P P 13 32 09.6 -0.4
baz=88
I18A **Diamond G Ranc** 88.01 45 ⇑P P 13 32 09.7 -0.4
baz=88
MPU **Maple Canyon** 88.13 49 *e*P P 13 32 12.0 +1.3
O16A **Springville** 88.16 48 ⇓P P 13 32 10.6 -0.2
baz=88,SNR=5.5
Y12C **Blythe** 88.17 55 ⇓P P 13 32 11.3 +0.3
baz=88
W13A **Hualapai Mount** 88.21 54 ⇑P P 13 32 11.6 +0.4
baz=88,SNR=5.9
DAU **Daniels Canyon** 88.26 48 *e*P P 13 32 12.3 +1.0
M17A **Scullys Gap (B** 88.28 47 ⇓P P 13 32 10.8 -0.6
baz=88,SNR=6.6
MSU **Marysvale** 88.29 50 *e*P P 13 32 12.3 +0.9
MIB **Mutribah** 88.36 301 *e*P P 13 32 09.4 -2.6
baz=301
MIB AMb AMB 13 32 11.0
comp=Z,21nm,1.2s,mb4.7,baz=301
X13A **Yucca** 88.42 54 ⇑P P 13 32 12.7 +0.5
baz=88,SNR=8.4
RDF **Al-Radifah** 88.48 300 *e*P P 13 32 10.4 -2.2

baz=300
PDAR Pinedale Array 88.55 45 P P 13 32 12.6 0.0
comp=Z,0.7nm,0.6s,mb3.7,baz=162,slow=0.8,SNR=5.9
V14A Boquillas Ranc 88.62 53 ⇓P P 13 32 13.6 +0.5
baz=88,SNR=14
NAY Al-Naaiem 88.63 300 eP P 13 32 10.9 -2.3
baz=300
NAY AMb AMB 13 32 15.3
comp=Z,18nm,1.3s,mb4.7,baz=300
T15A Red Dirt Ranch 88.67 52 ⇓P P 13 32 13.9 +0.6
baz=89
O17A Robinson Place 88.71 48 ⇑P P 13 32 13.1 -0.3
baz=89,SNR=13
M18A Lyman 88.71 47 ⇓P P 13 32 13.3 -0.1
baz=89
W14A Seligman 88.78 53 ⇑P P 13 32 13.5 -0.3
baz=89,SNR=8.2
Q16A Castle Valley 88.87 49 ⇑P P 13 32 14.7 +0.5
baz=89,SNR=6.7
U15A North Rim 88.95 52 ⇑P P 13 32 14.4 -0.2
baz=89,SNR=11
113A Mohawk Valley, 89.11 56 ⇑P P 13 32 15.0 -0.4
baz=89
LAO LASA Array 89.14 41 eP P 13 32 15.6 +0.4
N18A Larsen Ranch, 89.16 47 ⇓P P 13 32 15.0 -0.4
baz=89
X14A Yava 89.19 54 ⇑P P 13 32 16.4 +0.6
baz=89,SNR=7.0
V15A Kaibab Nationa 89.26 53 ⇑P P 13 32 15.6 -0.4
baz=89,SNR=12
SRU San Rafael 89.27 49 eP P 13 32 16.2 +0.2
SRU San Rafael 89.27 49 ⇑P P 13 32 16.1 +0.1
baz=89
P18A Preston Nutter 89.27 49 ⇓P P 13 32 16.2 +0.2
baz=89,SNR=5.5
Y14A Wickenburg 89.29 55 ⇑P P 13 32 16.3 +0.1
baz=89,SNR=13.1
R17A Hanksville Air 89.39 50 ⇑P P 13 32 16.5 -0.1
baz=89,SNR=12
N19A John Jarvie Ra 89.54 47 ⇑P P 13 32 17.2 0.0
baz=89
Q18A Rafter H Ranch 89.55 49 ⇑P P 13 32 16.4 -0.9
baz=89,SNR=5.7
X15A Humboldt 89.69 54 ⇑P P 13 32 17.1 -1.0
baz=90,SNR=6.0
Y15A Casa Rosa Ranc 89.81 54 ⇓P P 13 32 16.9 -1.7
baz=90,SNR=5.9
T17A Navajo Res., N 89.85 51 ⇓P P 13 32 17.8 -0.9
baz=90,SNR=5.3
WUAZ Wupatki 89.98 53 eP P 13 32 20.5 +1.1
WUAZ Wupatki 89.98 53 ⇓P P 13 32 20.2 +0.9
baz=90,SNR=8.8
R18A Canyonlands Na 90.00 50 ⇓P P 13 32 18.1 -1.3
baz=90,SNR=11
U17A Shonto 90.11 51 ⇓P P 13 32 19.2 -0.7
baz=90,SNR=6.4
P19A Cripple Cowboy 90.17 48 ⇑P P 13 32 19.8 -0.3
baz=90,SNR=16
S18A Hurst Farm, Bl 90.19 50 ⇓P P 13 32 17.3 -3.0
baz=90,SNR=5.3
L21A Rawlins 90.36 46 ⇓P P 13 32 19.8 -1.1
baz=90,SNR=8.1
Y16A Circle Bar Ran 90.50 54 ⇓P P 13 32 22.5 +0.7
baz=90,SNR=6.8
RWWY Rawlins 90.58 46 eP P 13 32 22.7 +0.7
PV10 Paradox Valley 90.62 49 eP P 13 32 22.9 +0.6
U18A Rough Rock, Ch 90.77 51 ⇑P P 13 32 22.1 -0.8
baz=91,SNR=5.8
S19A Harvey Farm, M 90.80 50 ⇑P P 13 32 22.2 -0.8
baz=91
V18A Ganado 90.99 52 ⇓P P 13 32 23.6 -0.4
baz=91,SNR=6.5
PV01 Paradox Valley 91.05 49 eP P 13 32 24.3 +0.1
T19A Beclabito 91.23 51 ⇑P P 13 32 24.6 -0.5
baz=91,SNR=12
MVCO Mesa Verde 91.47 50 eP P 13 32 26.9 +0.7
TUC Tucson 91.62 55 eP P 13 32 28.2 +1.2
Y18A Canyon Day Jun 91.65 54 ⇓P P 13 32 27.4 +0.2
baz=92,SNR=5.4
SMCO Snowmass 91.78 48 eP P 13 32 28.6 +1.0
118A Homack Ranch, 92.13 55 ⇓P P 13 32 27.5 -1.9
baz=92
AKASG Malin Array Be 92.16 325 PP PP 13 36 18.6 +0.5
comp=Z,0.6nm,0.5s,baz=48,slow=9.0,SNR=4.3
ISCO Idaho Springs 92.47 47 eP P 13 32 31.9 +1.2
318A Bisbee 92.57 56 ⇑P P 13 32 30.2 -1.2
baz=92
HFS Hagfors 93.34 338 P P 13 32 32.0 -2.3
comp=Z,2.6nm,0.3s,mb4.7,baz=94,slow=2.5,SNR=19
SDCO Great Sand Dun 93.42 49 eP P 13 32 35.6 +0.5
NOA NORSAR Array B 93.54 340 P P 13 32 33.4 -1.8
comp=Z,1.8nm,0.7s,mb4.3,baz=45,slow=4.4,SNR=5.2
ANMO Albuquerque 93.90 52 eP P 13 32 34.9 -2.5
TXAR Lajitas Array 98.42 56 P Pdif 13 32 58.3 +1.0
comp=Z,0.1nm,0.6s,baz=268,slow=2.7,SNR=2.8
LSZ Lusaka 120.27 262 ePKPdf PKPdf 13 38 08.1 +0.3
SNAA Sanae 122.91 191 ePKPdf PKPdf 13 38 08.4 -2.9
SNAA e 13 38 10.2
VNA2 Neumayer--Watz 124.35 190 ePKPdf PKPdf 13 38 13.9 -0.2
baz=33,slow=0.7
VNA2 e 13 38 15.7
VNA2 e 13 38 18.9
VNA3 Neumayer Olymp 124.45 189 ePKPdf PKPdf 13 38 13.4 -0.9
VNA3 e 13 38 15.6
VNA3 e 13 38 18.4
TORD Torodi Ar. Bea 133.10 308 PKP PKPdf 13 38 32.4 0.0
comp=Z,1.0nm,0.5s,baz=24,slow=1.3,SNR=10.0
TORD SKPbc SKPbc 13 41 05.9 -4.0
comp=Z,5.4nm,0.8s,baz=40,slow=3.3,SNR=18
TORD Torodi Ar. Bea 133.10 308 PKP PKPdf 13 38 32.4 0.0
TORD SKPbc SKPbc 13 41 05.9 -4.0
PLCA Paso Flores 141.29 134 SKPbc SKPbc 13 41 30.4 -2.4
comp=Z,2.5nm,0.9s,baz=237,slow=1.6,SNR=3.4
DBIC Dimbokro 142.19 307 PKhKP 13 38 45.0
comp=Z,6.7nm,0.4s,baz=35,slow=3.4,SNR=32
KIC Kosan Boka 142.29 307 ePKP1 PKPdf 13 38 45.1 -4.2
comp=Z,82nm,1.0s
TIC Toumodi 142.33 307 ePKP1 PKPdf 13 38 45.1 -4.2
comp=Z,63nm,1.0s
LIC Lamto 142.60 307 ePKP1 PKPdf 13 38 46.2 -3.6
comp=Z,61nm,0.8s
LPAZ La Paz 147.63 93 PKP PKPdf 13 38 59.3 +1.0
comp=Z,5.9nm,0.5s,baz=260,slow=3.4,SNR=16
LPAZ PKPbc PKPbc 13 39 03.3 +1.5
comp=Z,5.9nm,0.5s,baz=18,slow=3.2,SNR=22

*ISCJB **12** 14:22:34.9±1.4,561N±004×124.17E±006,h27km±10km, mb3.4/3, Error ellipse: s-maj=10.3km s-min=7.2km az=5.0*
*IDC **12** 14:22:34.8±8.8, 548N×12445E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, MS3.1/2, Ms1 3.1/2, ms1mx2.2/36, Error ellipse: s-maj=238.1km s-min=22.1km az=107.0*
*MAN **12** 14:22:34, 579N×12428E, h142km, mb4.6, ML3.5, MS3.4*
ISC 12 14:22:34.8±2.3, 566N±005×12418E±005, h14km±15km, n14, σ0°86/19, mb3.4/3, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.88	61	⇓eP	Pb	14 22 51.4	-0.4
GSPH				eS	Sb	14 23 03.8	+0.5
CTBH	Cotabato--PC H	1.56	2	eP	Pn	14 23 01.8	-0.3
CTBH				i S	Sn	14 23 21.4	-0.6
KCP	Kidapawan	1.62	34	⇓eP	Pn	14 23 01.6	-1.3
KCP				i S	Sn	14 23 23.8	+0.2
DAV	Davao City (W)	1.98	45	Pn	Pn	14 23 09.7	+1.9
DAV	85nm,0.3s,baz=67,slow=1.1,SNR=6.1			Sn	Sn	14 23 33.4	+1.0
	92nm,0.3s,baz=117,slow=23,SNR=11						
PAGZ	Pagadian	2.32	340	eP	Pn	14 23 12.1	-0.4
PAGZ				eS	Sn	14 23 41.4	+0.6
BUKP	Musuan	2.38	22	eP	Pn	14 23 12.0	-1.3
BUKP				eS	Sn	14 23 41.0	-1.3
ZMPH	Zamboanga City	2.47	302	i/P	Pn	14 23 15.5	+0.9
ZMPH				i S	Sn	14 23 36.1	-8.4
CGP	Cagayan de Oro	2.83	10	eP	Pn	14 23 20.8	+1.3
KAPI	Kappang	11.48	203	LR	LR	14 30 04.3	
	comp=Z,29nm,20.3s,baz=252,slow=39						
WRA	Warramunga Arr	27.33	159	P	P	14 28 19.0	-0.4
	0.8nm,0.7s,mb3.4,baz=335,slow=10.0,SNR=13						
WB2	Warramunga Arr	30.65	162	P	P	14 28 18.9	-0.5
ASAR	Alice Springs	30.65	162	P	P	14 28 49.0	+0.1
	0.2nm,0.6s,mb3.2,baz=341,slow=8.0,SNR=6.9						
STKA	Stephens Creek	40.85	157	P	P	14 30 16.4	+0.2
	1.0nm,0.5s,mb3.7,baz=328,slow=8.5,SNR=5.0						
GNI	Garni	78.31	310	LR	LR	15 16 45.0	
	comp=Z,30nm,18.0s,baz=82,slow=41						

*BJI **12** 14:36:50.3, 1580N×146.11E, h143km, mB4.9, mb4.8*
*ISCJB **12** 14:36:52.4±1.1, 1595N±007×14583E±006, h145km±11km, mb4.6/41, Error ellipse: s-maj=11.9km s-min=10.0km az=7.7*
*IDC **12** 14:36:52.1±1.9, 1600N×14589E, h128km±18km, mb3.8/11, mb1 4.0/13, mb1mx3.9/21, mbtmp3.9/13, Error ellipse: s-maj=21.8km s-min=14.4km az=70.0*
*MOS **12** 14:36:52.4±1.0, 1598N×14588E, h146km, mb4.6/6, Error ellipse: s-maj=15.2km s-min=11.2km az=120.9*
*NEIC **12** 14:36:53.8±1.0, 1595N×14587E, h143km±9km, mb5.0/21, Error ellipse: s-maj=7.6km s-min=6.4km az=189.0*
ISC 12 14:36:53.6±1.0, 1592N±007×14588E±006, h140km±10km, h139km±5.0km; pP-P, n72, σ0s99/75, mb4.6/41, 1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.52	203	P	Pn	14 37 35.1	+0.6
	173nm,0.3s,baz=118,slow=2.7,SNR=160						
GUMO				S	Sn	14 38 05.3	-0.6
	150nm,0.3s,baz=178,slow=23,SNR=16						
GUMO	Guam	2.52	203	eP	Pn	14 37 34.8	+0.3
GUMO				eS	Sn	14 38 04.3	-1.6
JOW	Kunigami	19.64	306	P	P	14 41 11.8	+0.4
	3.0nm,0.3s,baz=128,slow=15,SNR=5.2						
KSRS	Korea Array	26.69	327	P	P	14 42 17.6	-1.9
	4.4nm,0.9s,mb4.1,baz=151,slow=9.9,SNR=8.1						
NJ2	Nanjing	29.34	308	eP	P	14 42 44.4	+1.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
MDJ	Mudanjiang	31.75	338	P	P	14 43 04.6	+0.4
MDJ				AP	pP	14 43 34.5	+0.1
MDJ				XP	sP	14 43 50.9	+0.4
MDJ				S	S	14 48 04.7	+1.0
MDJ				XS	sS	14 48 58.1	+1.6
MDJ				SCP	ScP	14 49 22.5	-0.2
MDJ				PCS	PcS	14 49 37.1	+0.2
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.8s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,129nm,3.3s						
CN2	Changchun	32.77	332	eP	P	14 43 15.0	+1.8
WRAB	Tennant Creek	37.39	198	eP	P	14 43 53.8	+0.9
WB2	Warramunga Arr	37.40	198	eP	P	14 43 53.0	0.0
WRA	Warramunga Arr	37.40	198	P	P	14 43 53.1	+0.1
	comp=Z,0.7nm,0.7s,mb3.4,baz=18,slow=8.8,SNR=15						
GYA	Guiyang	37.91	293	⇓iP	P	14 43 58.7	+1.3
GYA				AP	pP	14 44 28.7	+0.6
GYA				XP	sP	14 44 46.0	+1.9
GYA				PP	PP	14 45 32.7	+5.9
GYA				PCP	PcP	14 46 10.9	+0.2
GYA				S	S	14 49 41.4	+2.7
GYA				SCP	ScP	14 49 45.0	-0.3
GYA				PCS	PcS	14 49 59.7	-0.1
GYA				XS	sS	14 50 34.0	+1.7
GYA				SS	SS	14 52 25.7	-5.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,110nm,6.3s						
HHC	Hu-ho-hao-te	38.70	317	eP	P	14 44 03.1	-0.7
HHC				AP	pP	14 44 34.6	-0.1
HHC				XP	sP	14 44 50.1	-0.6
HHC				PP	PP	14 45 38.8	+3.5
HHC				PCP	PcP	14 46 08.6	-4.2
HHC				S	S	14 49 47.4	-2.8
HHC				XS	sS	14 50 42.1	-1.9
HHC				SS	SS	14 52 37.5	-9.1
HHC				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.6						
HHC				AMB	AMB		
	comp=Z,92nm,6.1s						
ASAR	Alice Springs	41.05	197	P	P	14 44 22.8	-0.6
	comp=Z,0.2nm,0.5s,baz=18,slow=8.5,SNR=11						
CD2	Chengdu	41.18	299	eP	P	14 44 24.1	-0.3
CD2				AP	pP	14 44 55.4	-0.2
CD2				XP	sP	14 45 11.4	-0.1
CD2				PP	PP	14 46 04.0	+1.7
CD2				S	S	14 50 25.4	-2.0
CD2				XS	sS	14 51 20.3	-1.3
CD2				SS	SS	14 53 28.2	-7.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
KMI	Kunming	41.28	290	P	P	14 44 26.4	+1.1
KMI				AP	pP	14 44 52.5	-4.0
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.3						
KMI	Kunming	41.28	290	P	P	14 44 26.4	+1.1
	comp=Z,7.0nm,0.9s,mb4.3						
KMI				pP	pP	14 44 52.5	-4.0
LZH	Lanzhou	42.38	306	eP	P	14 44 35.1	+1.0
LZH				AP	pP	14 45 07.3	+1.9
LZH				XP	sP	14 45 23.1	+1.8
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,66nm,4.2s						
LZH	Lanzhou	42.38	306	eP	P	14 44 35.1	+1.0
	comp=Z,15nm,1.0s,mb4.6						
LZH				pP	pP	14 45 07.3	+1.9
LZH				sP	sP	14 45 23.1	+1.8
LZH	Lanzhou	42.38	306	eP	P	14 44 35.1	+1.0
LZH				*PP	pP	14 45 07.3	+1.9
LZH				*SP	sP	14 45 23.1	+1.8
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
CHTO	Chiang Mai	44.79	281	eP	P	14 44 54.1	+0.4
CMAR	Chiang Mai Arr	44.82	280	P	P	14 44 55.0	+1.1
	comp=Z,7.8nm,0.8s,mb4.4,baz=76,slow=6.3,SNR=47						
SONM	Songino Array	45.43	323	P	P	14 44 57.7	-0.5
	comp=Z,1.7nm,0.8s,mb3.7,baz=130,slow=7.1,SNR=10						
GTA	Gaotai	46.41	310	eP	P	14 45 06.5	+0.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.0						
LSA	Lhasa	51.85	295	eP	P	14 45 49.8	+2.2
TAPN	Taplejung	54.84	292	eP	P	14 46 10.0	+0.5
	comp=Z,20nm,0.4s,mb5.2						
ODAN	Odare	55.13	292	eP	P	14 46 11.7	+0.1
	comp=Z,12nm,0.4s,mb5.0						
RAMN	Ramite	55.83	292	eP	P	14 46 16.7	+0.1
	comp=Z,18nm,0.8s,mb5.0						
JIRN	Jiri	56.18	293	eP	P	14 46 19.8	+0.7
	comp=Z,18nm,0.6s,mb5.1						
WMQ	Urumqi	56.27	312	eP	P	14 46 19.0	-0.5
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.9						
GUN	Gumba	56.45	293	eP	P	14 46 21.5	+0.5
	comp=Z,16nm,0.4s,mb5.2						
PKI	Pulchoki	56.88	293	eP	P	14 46 24.0	0.0
	comp=Z,11nm,0.5s,mb5.0						
PKI	Pulchoki	56.88	293	eP	P	14 46 24.0	0.0
PKI				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.9						
KKN	Kakani	56.98	293	eP	P	14 46 24.7	-0.1
DMN	Daman	57.14	293	eP	P	14 46 26.0	+0.1
	comp=Z,17nm,0.5s,mb5.1						
GKN	Gorkha	57.55	293	eP	P	14 46 28.6	-0.1
	comp=Z,35nm,0.7s,mb5.3						
DANN	Dangsing	58.31	294	eP	P	14 46 34.2	+0.1
	comp=Z,58nm,0.6s,mb5.6						
KOLN	Koldanda	58.47	293	eP	P	14 46 35.0	-0.2
	comp=Z,19nm,0.7s,mb5.0						
PYUN	Piuthan	59.00	293	eP	P	14 46 38.7	-0.1
	comp=Z,26nm,0.8s,mb5.1						
ZALV	Zalesovo Beam	60.33	323	P	P	14 46 46.2	-1.2
	comp=Z,0.9nm,0.5s,mb3.9,baz=108,slow=8.8,SNR=4.6						
MK31	Makanchi Array	60.52	315	eP	P	14 46 49.0	+0.1
MKAR	Makanchi Array	60.52	315	P	P	14 46 48.6	-0.2
	comp=Z,3.8nm,0.4s,mb4.6,baz=90,slow=8.4,SNR=47						
SVW2	Sparrevohn	61.17	28	eP	P	14 46 53.3	+0.3
PPLA	Purkeypile	63.28	27	eP	P	14 47 07.5	+0.5
	comp=Z,5.7nm,0.6s,mb4.6						
KURK	Kurchatov	63.46	319	P	P	14 47 07.7	-0.7
	comp=Z,103nm,0.7s,SNR=13						
KURK	Kurchatov	63.46	319	eP	P	14 47 07.5	-0.9
	comp=Z,16nm,0.8s,mb4.9						
KURK	Kurchatov	63.46	319	eP	P	14 47 07.5	-0.9
KURK				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
BPAW	Bear Paw Mtn.	64.16	26	eP	P	14 47 12.7	-0.1
	comp=Z,8.1nm,1.0s,mb4.5						
TRF	Thorofare Moun	64.27	27	eP	P	14 47 12.8	-0.7
	comp=Z,9.3nm,0.8s,mb4.7						
TKM2	Tokmak 2	64.95	310	eP	P	14 47 18.7	+0.4
	comp=Z,5.6nm,1.1s,mb4.3						
TKM2	Tokmak 2	64.95	310	eP	P	14 47 18.7	+0.4
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
EGAK	Eagle	68.46	26	eP	P	14 47 39.6	-0.5
	comp=Z,3.8nm,0.5s,mb4.4						
BRVK	Borovoye	68.79	321	eP	P	14 47 41.1	-1.3
DAWY	Dawson	69.13	27	eP	P	14 47 44.3	0.0
INK	Inuvik	71.85	23	eP	P	14 47 59.9	-0.9
ARU	Arti	75.42	325	eP	P	14 48 20.4	-1.4
ARU	Arti	75.42	325	eP	P	14 48 20.4	-1.4
YKA	Yellowknife Ar	80.35	28	P	P	14 48 47.8	-1.1
	comp=Z,2.2nm,0.4s,mb4.1,baz=286,slow=5.1,SNR=12						
NVAR	Mina Array Bea	84.71	52	P	P	14 49 12.8	+0.8
	comp=Z,2.6nm,0.6s,mb4.2,baz=256,slow=7.3,SNR=29						
ARCES	ARCESS Array B	85.18	342	P	P	14 49 11.6	-2.1
	comp=Z,2.5nm,0.8s,mb4.0,baz=64,slow=6.1,SNR=4.4						
HLID	Hailey	86.03	46	eP	P	14 49 19.2	+0.7
ELK	Elko	86.31	49	eP	P	14 49 20.7	+0.8
	comp=Z,3.3nm,1.0s,mb4.0						
ELK	Elko	86.31	49	eP	P	14 49 20.7	+0.8
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TPNV	Topopah Spring	86.70	53	eP	P	14 49 22.6	+0.7
QLMT	Earthquake Lak	87.64	44	eP	P	14 49 27.6	+1.3
HWUT	Hardware Ranch	88.66	47	eP	P	14 49 31.8	+0.7
	comp=Z,2.4nm,0.4s,mb4.5						
MIB	Mutribah	89.39	301	eP	P	14 49 31.9	-2.9
	baz=301						
MIB				AMb	AMB	14 49 37.0	
	comp=Z,8.0nm,1.4s,mb4.5,baz=301						
RDF	Al-Radifah	89.49	300	eP	P	14 49 32.4	-2.8
	baz=300						
RDF				AMb	AMB	14 49 34.3	
	comp=Z,21nm,1.1s,mb5.0,baz=300						
PDAR	Pinedale Array	89.64	45	P	P	14 49 35.9	+0.2
	comp=Z,0.8nm,0.7s,mb3.8,baz=245,slow=2.9,SNR=6.5						
NAY	Al-Naaiem	89.64	300	eP	P	14 49 33.3	-2.7
	baz=300						
NAY				AMb	AMB	14 49 34.5	
	comp=Z,11nm,1.4s,mb4.6,baz=300						
LCO	Las Campanas	143.93	118	ePKPdf	PKPdf	14 56 12.3	-0.6
LPAZ	La Paz	147.34	95	PKPbc	PKPab	14 56 23.6	-0.2
	comp=Z,3.1nm,0.7s,baz=287,slow=3.9,SNR=9.9						
LPAZ	La Paz	147.34	95	ePKP2	PKPab	14 56 22.8	-1.0

IDC 12 14:56:12.1±4.8, 1420S×16676E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.7/4, MS3.2/2, Ms1 3.1/2, ms1mx2.3/27, Error ellipse: s-maj=127.1km s-min=38.4km az=116.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	20.44	250	LR	LR	15 07 14.9	
	comp=Z,58nm,19.6s,baz=225,slow=32						
STKA	Stephens Creek	28.97	228	P	P	15 02 13.0	-0.4
	2.0nm,0.5s,baz=40,slow=8.5,SNR=12						
STKA				LR	LR	15 13 14.8	
	comp=Z,43nm,18.1s,baz=203,slow=35						
WRA	Warramunga Arr	31.48	255	P	P	15 02 36.4	+0.6
	0.2nm,0.5s,baz=85,slow=9.3,SNR=9.5						
ASAR	Alice Springs	32.40	248	P	P	15 02 43.8	-0.1
	0.6nm,0.5s,baz=74,slow=9.4,SNR=10						
SONM	Songino Array	81.78	324	P	P	15 08 33.0	+0.3
	0.3nm,0.5s,baz=130,slow=4.9,SNR=3.0						

DJA 12 14:59:06, 875S×11849E, h34km, MLv4.1/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	Kahang-Kahang	2.88	277	P	Pn	14 59 50.4	+0.9
KHKI	Kahang-Kahang	2.88	277	S	Sn	15 00 27.8	+4.9
DNP	Denpasar	3.24	271	P	Pn	14 59 55.8	+1.3
DNP	Denpasar	3.24	271	S	Sn	15 00 35.5	+3.5
IGBI	Denpasar	3.31	269	P	Pn	14 59 54.5	-0.9
IGBI	Denpasar	3.31	269	S	Sn	15 00 33.9	+0.4
KAPI	Kappang	3.92	19	P	Pn	15 00 04.3	+0.5
KAPI	Kappang	3.92	19	S	Sn	15 00 51.3	+2.7

*ISK **12** 15:02:09.9, 3701N×2923E, h4km, ML4.0*
*NEIC **12** 15:02:10.4, 3698N×2923E, h10km, mb4.2/4, MD4.1(ATH), ML4.1(ISK), After ATH.*
*CSEM **12** 15:02:10.1±0.0, 3687N×2928E, h20km, mb5.2/6, Mw3.6, Error ellipse: s-maj=1.5km s-min=1.0km az=76.0*
*DDA **12** 15:02:10.7, 3696N×2925E, h8km±5km, Md3.9*
*ATH **12** 15:02:11.2, 3697N×2943E, h39km±29km, MD4.1/13*
*ISCJB **12** 15:02:11.4±0.3, 3691N±002×2928E±002, h23km±3km, mb4.5/13, MS3.2/6, Error ellipse: s-maj=2.8km s-min=2.3km az=42.6*
*MOS **12** 15:02:13.1±0.8, 3699N×2928E, h10km, mb4.1/4, Error ellipse: s-maj=8.8km s-min=7.1km az=39.2*
*NIC **12** 15:02:14.9±0.3, 3655N×2885E, h55km, ML3.2, MW3.6*
*HLW **12** 15:02:14.2, 3690N×2926E, h24km, Mb4.1*
*IDC **12** 15:02:15.6±1.8, 3694N×2934E, h44km±23km, mb3.8/7, mb1 4.0/11, mb1mx3.8/25, mbtmp3.9/11, ML4.2/4, MS3.2/8, Ms1 3.2/8, ms1mx2.9/37, Error ellipse: s-maj=20.1km s-min=10.9km az=179.0*
*GII **12** 15:02:15.3±0.0, 3662N×2899E, h30km, ML3.4/2*
ISC 12 15:02:11.8±0.4, 3694N±001×2926E±002, h10km±3km, n189, σ1s13/210, mb4.5/13, MS3.2/6, 7C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.34	204	PG	Pg	15 02 17.7	-0.7
FETY				eSG	Sg	15 02 24.1	+1.2
GOLH	Golhisar	0.38	40	i P	Pg	15 02 17.9	-1.4
GOLH				i S	Sg	15 02 24.9	+0.5
DALT	Dalyan (Mudla)	0.53	251	ePG	Pg	15 02 20.9	-1.1
DALT				eSG	Sg	15 02 29.1	+0.1
TURN	Turunc	0.53	263	i P	Pg	15 02 26.3	+4.3
ELL	Elmali	0.56	110	ePG	Pg	15 02 21.9	-0.8
ELL				eSG	Sg	15 02 31.3	+1.3
YER	Yerkesik	0.80	284	ePG	Pg	15 02 25.6	-1.6
DENT	Denizli	0.83	348	ePG	Pg	15 02 24.8	-2.9
KSL	Kastellorizon	0.83	161	ePB	Pb	15 02 27.0	-1.3
KSL				eSN	Sn	15 02 40.0	-1.8
ANTB	Antalya	1.12	92	ePN	Pn	15 02 32.8	-0.7
ARG	Arkhangelos	1.16	232	ePN	Pn	15 02 33.0	-1.1
ARG	Arkhangelos	1.16	232	ePb	Pb	15 02 32.5	-1.4
BCK	Bucak	1.18	64	ePN	Pn	15 02 33.3	-1.1
MLSB	Milas	1.23	287	ePN	Pn	15 02 33.8	-1.2
ISP	Isparta	1.34	48	ePN	Pn	15 02 35.2	-1.4
ISP	Isparta	1.34	48	eP	Pn	15 02 35.7	-0.8
KHL	Karahalli	1.39	9	ePN	Pn	15 02 35.9	-1.4
BDRM	Kayabasi	1.46	275	i P	Pn	15 02 38.4	+0.3
BDRM				i S	Sn	15 02 59.2	+2.0
BODT	Bodrum	1.56	275	ePN	Pn	15 02 38.9	-0.6
KULA	Kula-Manisa	1.64	343	ePN	Pn	15 02 39.0	-1.5
GCAM	G?zelcaml?	1.78	296	i P	Pn	15 02 42.5	0.0
GCAM				i S	Sn	15 03 05.6	+0.4
SHUT	Suhut-Afyon	1.91	32	ePN	Pn	15 02 44.0	-0.3
SMG	Samos	2.07	292	ePN	Pn	15 02 47.0	+0.4
SMG	Samos	2.07	292	ePn	Pn	15 02 46.8	+0.2
DEMI	Demirci	2.14	349	i P	Pn	15 02 47.2	-0.3
IZM	Izmir	2.15	313	ePN	Pn	15 02 46.9	-0.7
KARP	Karpathos	2.19	231	ePN	Pn	15 02 49.5	+1.3
BOLV	Bolvadin	2.22	37

6.1nm,0.9s
ALFC S Sn
CAVI Cavuskoy 3.29 8 ePN Pn 15 03 44.9 +3.6
PRK Paraskevi 3.29 315 ePN Pn 15 03 02.6 -0.7
KCT Karacabey 3.39 348 ePN Pn 15 03 04.0 +0.7
NPS Neapolis 3.39 241 eP Pn 15 03 03.9 -0.8
NPS eS Sn 15 03 05.7 +1.0
GPA Golpazari 3.44 14 ePN Pn 15 03 45.7 +0.7
LEF Lefka 3.46 121 ePN Pn 15 03 04.9 -0.4
GEMT Gemlik 3.49 359 ePN Pn 15 03 07.0 +1.3
ADVT Abdulvahap 3.50 6 ePN Pn 15 03 05.9 -0.1
BNT Bandirma 3.56 343 ePN Pn 15 03 06.0 -0.2
YLV Yalova 3.62 1 ePN Pn 15 03 05.9 -1.2
GULT Gulveren 3.62 15 ePN Pn 15 03 07.9 +0.1
IKL Isikli 3.63 100 ePN Pn 15 03 07.5 -0.3
SZAC Souni-Zanaja 3.67 125 ⇑P Pn 15 03 09.9 +1.9
SZAC S Sn 15 03 10.7 +2.2
MDU Mudurnu 3.84 23 ePN Pn 15 03 54.9 +3.1
LFK Lefkose 3.84 114 ePN Pn 15 03 10.8 0.0
CSS Prodhromos 3.85 120 eP Pn 15 03 13.0 +2.1
IDI Anoyia 3.90 246 P Pn 15 03 12.8 +1.7
11nm,0.3s,baz=66,slow=13,SNR=49
IDI S Sn 15 03 13.7 +2.0
14nm,0.3s,baz=356,slow=18,SNR=8.8
IDI Anoyia 3.90 246 S Sn 15 03 59.9 +2.4
ANTO Ankara 4.03 42 eP Pn 15 03 13.2 -0.3
ANTO Ankara 4.03 42 P Pn 15 03 13.2 -0.3
ANTO Ankara 4.03 42 ⇑P Pn 15 03 14.6 +1.1
ISK Istanbul-Kandi 4.12 358 ePN Pn 15 03 14.6 -0.1
GADA Gvkgeada 4.17 322 ePN Pn 15 03 14.8 -0.7
SILT Sile 4.21 4 ePN Pn 15 03 16.3 +0.3
EREN Erenkoy 4.22 108 ePN Pn 15 03 18.5 +2.4
MERS Mersin 4.22 89 ePN Pn 15 03 17.9 +1.8
BGKT Bogazkoy 4.25 355 ePN Pn 15 03 16.8 +0.3
KAMT Kaman 4.27 54 ePN Pn 15 03 17.4 +0.6
PHNC Paralimni 4.33 115 P Pn 15 03 21.7 +4.1
PHNC S Sn 15 04 13.1 +5.0
LIA Limnos Island 4.35 314 ePN Pn 15 03 18.8 +0.9
VAM Vamos 4.37 251 ePN Pn 15 03 20.0 +1.9
KARA Karaisali 4.65 84 ePN Pn 15 03 23.5 +1.6
KYTH Kithira 5.05 264 ePN Pn 15 03 30.0 +2.6
SAFT Safranbolu 5.05 31 ePN Pn 15 03 27.8 +0.2
VLI Veliai 5.07 269 ePN Pn 15 03 31.0 +3.2
VLI Veliai 5.07 269 ePN Pn 15 03 30.0 +2.2
RDO Rodhopi 5.10 327 ePN Pn 15 03 28.6 +0.5
CORM Corum 5.31 51 ePN Pn 15 03 31.6 +0.6
TOS Tosya 5.52 41 ePN Pn 15 03 34.9 +0.9
HTY Hatay 5.60 96 ePN Pn 15 03 36.5 +1.4
HWQ Hawqa 6.06 114 ePn Pn 15 03 43.2 +1.7
NVR Nevrokopi 6.08 318 ePN Pn 15 03 42.6 +1.0
SARI SarD1z-Kayseri 6.14 71 ePN Pn 15 03 41.4 -1.0
SLUM 6.39 213 P Pn 15 03 45.1 -0.8
SLUM S Sn 15 04 53.3 -5.5
MMA0 Mount Meron ar 6.39 126 Pn Pn 15 03 46.4 +0.5
MMAI Mount Meron Ar 6.39 126 P Pn 15 03 46.8 +0.9
20nm,0.3s,baz=317,slow=12,SNR=24
MMAI S Sn 15 04 58.9 +0.1
9.8nm,0.3s,baz=315,slow=26,SNR=5.7
MMA2 Mount Meron ar 6.39 126 Pn Pn 15 03 46.5 +0.5
MMB1 Mount Meron ar 6.39 126 Pn Pn 15 03 46.6 +0.6
MMC3 Mount Meron ar 6.39 126 Pn Pn 15 03 47.0 +1.0
KSDI Kefar Szold 6.45 124 Pn Pn 15 03 47.6 +0.9
HRI Mount Hermon 6.45 123 Pn Pn 15 03 47.4 +0.6
HRSH Kfar Ka'horesh 6.52 129 ⇓P Pn 15 03 53.9 +6.2
KSHT Keshet 6.68 124 Pn Pn 15 03 50.4 +0.6
MMLI Mount Malkishu 6.78 130 Pn Pn 15 03 51.6 +0.3
AANS 6.87 164 P Pn 15 03 51.8 -0.7
HMDT Nahal Hemdat 6.97 130 Pn Pn 15 03 54.4 +0.5
HMDT Sn Sn 15 05 13.1 -0.1
RSH 7.03 147 P Pn 15 03 53.9 -0.8
AMAG Maghara 7.09 151 P Pn 15 03 54.8 -0.8
HMYD Mayadein 7.24 169 P Pn 15 03 56.7 -0.9
KOT Kottamia 7.32 162 P Pn 15 03 57.7 -1.0
KOT S Sn 15 05 15.1 -6.7
HHAG Hagoal 7.37 160 P Pn 15 03 58.9 -0.4
HHAG S Sn 15 05 16.0 -7.0
DSI Dead Sea 7.38 135 Pn Pn 15 04 00.1 +0.7
DSI Sn Sn 15 05 22.5 -0.7
KZIT Kziot 7.38 143 Pn Pn 15 03 59.1 -0.4
TIRR Tirgusor 7.53 355 ⇑*i*P Pn 15 04 03.8 +2.2
MZDA Masada 7.56 136 Pn Pn 15 04 01.9 -0.1
GLL Jalalah 7.63 164 P Pn 15 04 02.3 -0.6
ASF Jabal al Asfar 7.90 125 P Pn 15 04 10.1 +3.5
1.0nm,0.3s,baz=176,slow=15,SNR=8.2
ASF S Sn 15 05 39.9 +3.9
0.9nm,0.3s,baz=27,slow=16,SNR=2.6
ASF Jabal al Asfar 7.90 125 P Pn 15 04 10.1 +3.5
ASF S Sn 15 05 39.9 +3.9
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF smax
comp=N,1.0nm,0.3s
HNKL Nakhl 8.03 149 ⇓P Pn 15 04 07.6 -0.8
HNKL S Sn 15 05 32.5 -6.8
PRNI Paran 8.13 142 Pn Pn 15 04 08.7 -1.1
PRNI Sn Sn 15 05 38.4 -3.4
KRMI Paran Flat 8.20 145 Pn Pn 15 04 09.9 -0.8
HRFI Mount Harif 8.41 143 Pn Pn 15 04 13.2 -0.4
HRFI Sn Sn 15 05 46.1 -2.6
MBRI Mt Berech 8.55 145 Pn Pn 15 04 14.7 -0.9
AWBH 8.60 182 ⇑P Pn 15 04 15.6 -0.8
EIL Elat 8.68 145 P Pn 15 04 16.4 -0.9
comp=N,2.6nm,0.3s,baz=336,slow=9.8,SNR=14
EIL S Sn 15 05 50.0 -5.2
comp=N,1.4nm,0.3s,baz=93,slow=20,SNR=2.8
EIL Elat 8.68 145 Pn Pn 15 04 16.1 -1.2
EIL Sn Sn 15 05 51.6 -3.6
MLR Muntele Rosu 8.89 345 ⇑*i*P Pn 15 04 21.9 +1.7
VOIR 9.06 341 ⇑*i*P Pn 15 04 23.9 +1.4
VRI Vrincioaia 9.12 349 ⇑*i*P Pn 15 04 25.3 +2.1
HKAT Jabal Katrina 9.29 153 P Pn 15 04 25.1 -0.7
TR2 9.32 155 ⇓P Pn 15 04 25.2 -1.0
TR1 9.75 155 ⇓P Pn 15 04 31.2 -0.9
HFRF Wahat Farafira 9.80 185 ⇓P Pn 15 04 31.8 -0.9
TIP Timpagrande 10.11 287 eP Pn 15 04 39.0 +2.1
comp=N,19nm,1.0s
TIP Timpagrande 10.11 287 eP Pn 15 04 39.0 +2.1
comp=N,19nm,1.0s
HHRG Al Ghardaqah 10.36 158 P Pn 15 04 39.5 -0.9
HDK1 Dakhla 11.37 179 P Pn 15 04 53.0 -1.2
AKASG Malin Array Be 13.75 360 P Pn 15 05 26.6 -0.1
comp=N,0.5nm,0.3s,baz=178,slow=12,SNR=4.1
AKASG Malin Array Be 13.75 360 P Pn 15 05 26.6 -0.1
AKASG pmax pmax
comp=Z,1.0nm,0.3s
VRAC Vranov 15.40 327 LR LR 15 11 34.6
comp=Z,28nm,21.7s,baz=334,slow=36
PGF Pioggiola 16.54 296 eP Pn 15 05 59.7 -4.0
comp=Z,175nm,1.4s
PGF Pioggiola 16.54 296 eP Pn 15 05 59.7 -4.0
comp=Z,88nm,1.4s
PGF Pioggiola 16.54 296 eP Pn 15 05 59.7 -4.0
PGF pmax pmax
comp=Z,88nm,1.4s
MIB Mutribah 16.69 110 eP Pn 15 06 07.6 +1.9
baz=110
MIB AMb AMB 15 06 11.2
comp=Z,19nm,1.1s,baz=110
NAY Al-Naaiem 16.90 112 eP Pn 15 06 09.2 +0.9
baz=112
NAY AMb AMB 15 06 19.7
comp=Z,11nm,1.2s,baz=112
RDF Al-Radifah 17.30 112 eP Pn 15 06 14.7 +1.4
baz=112
RDF AMb AMB 15 06 20.8
comp=Z,36nm,0.8s,baz=112
DAVOX Davos/Dischmat 17.42 310 LR LR 15 13 32.1
comp=Z,49nm,21.7s,baz=338,slow=39
SBF Sospel 17.97 299 eP Pn 15 06 20.6 -1.0
FRF La Foret Royal 18.45 298 eP Pn 15 06 27.2 -0.3
MBDF Montbardon 18.67 302 eP Pn 15 06 29.7 -0.4
comp=Z,13nm,0.8s
MBDF Montbardon 18.67 302 eP Pn 15 06 29.7 -0.4
MBDF pmax pmax
comp=Z,7.0nm,0.8s
MBDF Montbardon 18.67 302 eP Pn 15 06 29.7 -0.4
comp=Z,6.6nm,0.8s
LPG La Plagne 18.92 304 eP Pn 15 06 32.2 -0.9
LPL La Plagne 18.94 304 eP Pn 15 06 33.0 -0.3
ORIF Oris-en-Rattie 19.33 302 eP Pn 15 06 37.8 -0.3
comp=Z,35nm,1.2s
ORIF Oris-en-Rattie 19.33 302 eP Pn 15 06 37.8 -0.3
ORIF pmax pmax
comp=Z,17nm,1.2s
ORIF Oris-en-Rattie 19.33 302 eP Pn 15 06 37.8 -0.3
comp=Z,17nm,1.2s
CABF La Chapelle 19.73 307 eP Pn 15 06 43.6 +0.7
comp=Z,29nm,1.0s
CABF La Chapelle 19.73 307 eP Pn 15 06 43.6 +0.7
CABF pmax pmax
comp=Z,15nm,1.0s
CABF La Chapelle 19.73 307 eP Pn 15 06 43.6 +0.7
comp=Z,15nm,1.0s
CDF Champ du Feu 19.74 312 eP Pn 15 06 42.2 -0.7
HAU Haudompre 20.11 311 eP P 15 06 46.8 +1.3
SMF Signal de Mont 21.20 305 eP P 15 06 56.9 -0.5
AVF Avril sur Loir 21.57 305 eP P 15 07 02.1 +0.8
GIVF Givet 21.94 315 eP P 15 07 05.2 -0.1
TCF Toulx Ste Croi 22.18 303 eP P 15 07 07.7 -0.1
AKTK Aktyubinsk 24.60 48 P P 15 07 31.1 -0.8
AKTK LR LR 15 21 35.2
AKTK Aktyubinsk 24.60 48 P P 15 07 31.1 -0.8
AKTO Aktyubinsk 24.60 48 P P 15 07 31.1 -0.8
comp=Z,2.7nm,0.8s,mb3.9,baz=253,slow=8.6,SNR=9.3
AKTO LR LR 15 21 35.2
comp=Z,46nm,18.2s,MS3.0,baz=336,slow=47
TAM Tamanrasset 24.86 242 eP P 15 07 35.8 +1.3
HFS Hagfors 25.26 342 P P 15 07 38.2 +0.4
comp=Z,5.4nm,0.8s,mb4.1,baz=204,slow=3.3,SNR=5.1
HFS LR LR 15 17 53.4
comp=Z,94nm,18.7s,MS3.3,baz=74,slow=37
HFS Hagfors 25.26 342 P P 15 07 38.2 +0.4
HFS LR LR 15 17 53.4
HFS Hagfors 25.26 342 P P 15 07 38.2 +0.5
HFS pmax pmax
comp=Z,5.0nm,0.8s
HFS MLR MLR
comp=Z,94nm,18.7s
ESDC Sonseca Array 26.13 286 P P 15 07 45.6 -0.3
comp=Z,0.6nm,0.5s,mb3.4,baz=74,slow=9.5,SNR=3.4
NOA NORSAR Array B 26.68 340 P P 15 07 50.3 -0.3
comp=Z,1.4nm,0.8s,mb3.5,baz=127,slow=6.7,SNR=3.5
NOA LR LR 15 20 06.2
comp=Z,47nm,19.0s,MS3.1,baz=0.0,slow=40
NOA NORSAR Array B 26.68 340 P P 15 07 50.3 -0.3
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,47nm,19.0s
BVAR Borovoye Array 32.71 47 LR LR 15 25 00.5
comp=Z,48nm,18.7s,MS3.2,baz=356,slow=42
TOA0 Torodi Ar. Sit 34.20 233 eP P 15 08 57.1 -0.4
TOA0 Torodi Ar. Sit 34.20 233 eP P 15 08 57.1 -0.4
TORD Torodi Ar. Bea 34.20 233 P P 15 08 57.3 -0.1
comp=Z,5.3nm,0.6s,mb4.7,baz=34,slow=9.3,SNR=39
KURK Kurchatov 37.47 52 P P 15 09 24.2 -1.0
baz=264,slow=9.2
MK31 Makanchi Array 40.02 59 eP P 15 09 45.7 -0.9
MK31 Makanchi Array 40.02 59 eP P 15 09 45.7 -0.9
MKAR Makanchi Array 40.02 59 P P 15 09 45.1 -1.6
comp=Z,1.1nm,0.7s,mb3.7,baz=100,slow=5.9,SNR=5.9
MKAR Makanchi Array 40.02 59 P P 15 09 45.1 -1.5
MKAR pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 41.37 48 LR LR 15 30 04.1
comp=Z,27nm,19.6s,MS3.1,baz=238,slow=40
SPITS Spitsbergen Ar 41.70 356 LR LR 15 28 52.1
comp=Z,60nm,20.1s,MS3.5,baz=195,slow=38
DBIC Dimbokro 43.29 234 eP P 15 10 13.8 +0.1
PYUN Piuthan 45.65 85 eP P 15 10 31.8 -0.7
DANN Dangsing 46.16 84 eP P 15 10 35.7 -0.8
comp=Z,40nm,0.8s,mb5.4
KOLN Koldanda 46.28 85 eP P 15 10 36.7 -0.8
comp=Z,13nm,0.6s,mb5.0
GKN Gorkha 47.00 84 eP P 15 10 42.2 -1.0
DMN Daman 47.55 84 eP P 15 10 45.9 -1.5
comp=Z,21nm,0.8s,mb5.2
KKN Kakani 47.61 84 eP P 15 10 46.3 -1.6
PKI Pulchoki 47.81 84 eP P 15 10 48.6 -0.9
comp=Z,20nm,0.9s,mb5.2
JIRN Jiri 48.39 84 eP P 15 10 51.6 -2.4
comp=Z,9.1nm,0.8s,mb4.9
RAMN Ramite 49.03 84 eP P 15 10 56.8 -2.1
comp=Z,18nm,0.8s,mb5.2
CMAR Chiang Mai Arr 63.11 86 P P 15 12 38.1 -1.6
comp=Z,0.4nm,0.3s,mb4.0,baz=296,slow=8.8,SNR=4.1
PPLA Purkeypile 80.50 1 eP P 15 14 23.9 +0.4
PPLA Purkeypile 80.50 1 eP P 15 14 23.9 +0.4

BJI ***12*** *15:11:22.5, 1026N×14627E, h30km, mB5.1, mb4.8, Ms4.4, Msz4.4*
IDC ***12*** *15:11:23.2±0.6, 1039N×14575E, h0km, mb4.6/16, mb1 4.7/17, mb1mx4.6/23, mbtmp4.6/17, ML4.3/1, MS3.8/3, Ms1 3.8/3, ms1mx2.8/29, Error ellipse: s-maj=22.2km s-min=13.8km az=85.0*
NEIC ***12*** *15:11:24.4±0.3, 1039N×14582E, h10km, mb5.2/29, Error ellipse: s-maj=8.7km s-min=5.3km az=85.0*
ISCJB ***12*** *15:11:25.8±0.4, 1038N±005×14586E±008, h33km, mb4.9/60, MS3.8/4, Error ellipse: s-maj=11.8km s-min=6.6km az=177.0*
MOS ***12*** *15:11:25.3±1.0, 1043N×14600E, h33km, mb5.1/18, Error ellipse: s-maj=15.7km s-min=7.1km az=113.3*
ISC 12 15:11:27.9±0.4, 1036N±005×14590E±008, h35km, (h38km±7.0km: pP-P), n109, σ0s88/97, mb4.9/60, MS3.8/4, 6C-4D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.36**	**343**	Pn		**Pn**	**15 12 14.0**	**-3.9**
	34nm,0.3s,baz=172,slow=12,SNR=27							
GUMO				Sn		**Sn**	**15 12 51.6**	**-5.0**
	162nm,0.3s,baz=26,slow=22,SNR=15							
GUMO	**Guam**	**3.36**	**343**	*e*Pn		**Pn**	**15 12 13.8**	**-4.1**
GUMO				Sn		**Sn**	**15 12 51.6**	**-5.0**
PMG	**Port Moresby**	**19.68**	**176**	*e*P		**Pn**	**15 15 54.6**	**-1.1**
	38nm,1.2s							
PMG	**Port Moresby**	**19.68**	**176**	*e*P		**Pn**	**15 15 54.6**	**-1.1**
PMG				pmax	pmax			
	comp=Z,38nm,1.2s							
MJAR	**Matsushiro Arr**	**26.98**	**346**	P		**P**	**15 17 04.2**	**-2.1**
	comp=Z,6.0nm,0.8s,mb4.2,baz=173,slow=10,SNR=12							
MAJO	**Matsushiro**	**26.98**	**346**	*e*P		**P**	**15 17 04.9**	**-1.4**
	comp=Z,33nm,1.2s,mb4.7							
MAJO	**Matsushiro**	**26.98**	**346**	*e*P		**P**	**15 17 04.9**	**-1.4**
MAJO				pmax	pmax			
	comp=Z,33nm,1.2s,mb4.7							
MAT	**Matsushiro**	**26.98**	**346**	P		**P**	**15 17 04.4**	**-1.9**
BATI	**Baumata**	**30.11**	**228**	LR		LR	15 29 41.2	
	comp=Z,159nm,19.4s,MS3.7,baz=275,slow=37							
KSRS	**Korea Array**	**31.46**	**332**	P		**P**	**15 17 45.4**	**-0.8**
	comp=Z,11nm,0.9s,mb4.7,baz=145,slow=9.5,SNR=18							
KSRS				PcP		PcP	15 20 40.7	+1.8
	comp=Z,3.4nm,1.2s,baz=180,slow=4.6,SNR=4.4							
WRAB	**Tennant Creek**	**32.18**	**201**	*e*P		**P**	**15 17 51.4**	**-1.2**
	comp=Z,23nm,1.4s,mb4.8							
WRAB	**Tennant Creek**	**32.18**	**201**	*i* P		**P**	**15 17 52.3**	**-0.3**
WB2	**Warramunga Arr**	**32.19**	**201**	*e*P		**P**	**15 17 51.8**	**-0.9**
WRA	**Warramunga Arr**	**32.19**	**201**	P		**P**	**15 17 51.9**	**-0.8**
	comp=Z,5.3nm,1.0s,mb4.3,baz=26,slow=9.7,SNR=17							
WRA				PcP		PcP	15 20 41.9	+0.8
	comp=Z,1.6nm,0.8s,baz=14,slow=3.2,SNR=7.0							
NJ2	**Nanjing**	**33.02**	**315**	*e*P		**P**	**15 18 00.4**	**+0.5**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.8							
WHN	**Wuhan**	**35.54**	**309**	⇓P		**P**	**15 18 22.3**	**+0.5**
WHN				AMB		AMB		
	comp=Z,55nm,1.1s,mb5.4							
ASAR	**Alice Springs**	**35.80**	**199**	P		**P**	**15 18 23.9**	**0.0**
	comp=Z,3.2nm,1.0s,mb4.2,baz=30,slow=11,SNR=21							
ASAR				PP		PP	15 19 45.6	-0.2
	comp=Z,2.5nm,1.0s,baz=23,slow=10,SNR=3.4							
ASAR				PcP		PcP	15 20 52.3	+1.0
	comp=Z,1.5nm,1.0s,baz=75,slow=1.6,SNR=5.4							
CN2	**Changchun**	**37.74**	**336**	*e*P		**P**	**15 18 39.8**	**-0.5**
CN2				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.8							
HABR	**Khabarovsk**	**39.06**	**349**	*e*P		**P**	**15 18 48.9**	**-2.5**
HABR				*e*			15 20 19.4	
HABR				*e*PPP			15 20 41.3	
HABR				*e*S		**S**	**15 24 47.3**	**-1.0**
HABR				*e**SS		sS	15 25 03.5	-1.7
HABR				*e*SSS			15 28 00.7	
HABR				*e*			15 28 54.8	
GYA	**Guiyang**	**40.33**	**299**	⇑*i*P		**P**	**15 19 03.4**	**+1.2**
GYA				AMB		AMB		
	comp=Z,20nm,1.2s,mb4.7							
MBWA	**Marble Bar**	**40.52**	**219**	*e*P		**P**	**15 19 02.9**	**-1.0**
	comp=Z,20nm,1.3s,mb4.6							
XAN	**Xi'an**	**41.21**	**311**	P		**P**	**15 19 08.8**	**-0.6**
XAN				AP		pP	15 19 16.4	-3.3
XAN				AMB		AMB		
	comp=Z,9.0nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**42.20**	**185**	*e*P		**P**	**15 19 16.7**	**-0.7**
	comp=Z,5.1nm,1.1s,mb4.1							
STKA	**Stephens Creek**	**42.20**	**185**	P		**P**	**15 19 16.8**	**-0.7**
	comp=Z,4.8nm,0.9s,mb4.1,baz=330,slow=9.4,SNR=5.7							
KMI	**Kunming**	**43.44**	**296**	P		**P**	**15 19 29.2**	**+1.5**
	comp=Z,20nm,1.1s,mb4.8							
KMI				pP		pP	15 19 45.0	+6.9
KMI				sP		sP	15 19 55.6	+13
KMI				LR		LR		
	comp=Z,80nm,28.8s,MS3.5							
KMI	**Kunming**	**43.44**	**296**	P		**P**	**15 19 29.2**	**+1.5**
KMI				*PP		pP	15 19 45.0	+6.9
KMI				pmax	pmax			
	comp=Z,20nm,1.1s,mb4.8							
PETK	**Petropavlovsk-**	**43.68**	**10**	P		**P**	**15 19 29.7**	**+0.5**
	comp=Z,7.7nm,1.1s,mb4.3,baz=234,slow=7.1,SNR=3.5							
PETK	**Petropavlovsk-**	**43.68**	**10**	P		**P**	**15 19 29.7**	**+0.5**
CD2	**Chengdu**	**44.08**	**304**	*e*P		**P**	**15 19 32.2**	**-0.6**
CD2				AMB		AMB		
	comp=Z,30nm,1.0s,mb5.0							
CD2				AMB		AMB		
	comp=Z,150nm,5.6s							
FORT	**Forrest**	**44.35**	**202**	*e*P		**P**	**15 19 35.0**	**+0.2**
	comp=Z,23nm,0.7s,mb5.0							
HIA	**Hailar**	**44.48**	**336**	*e*P		**P**	**15 19 35.6**	**0.0**
	comp=Z,12nm,1.1s,mb4.5							
HIA	**Hailar**	**44.48**	**336**	*e*P		**P**	**15 19 35.6**	**0.0**
HIA				pmax	pmax			
	comp=Z,12nm,1.1s							
LZH	**Lanzhou**	**45.85**	**311**	⇑P		**P**	**15 19 47.6**	**+0.8**
LZH				AMB		AMB		
	comp=Z,44nm,1.5s,mb5.2							
LZH				AMB		AMB		
	comp=Z,150nm,4.5s							
LZH	**Lanzhou**	**45.85**	**311**	⇑P		**P**	**15 19 47.6**	**+0.8**
	comp=Z,44nm,1.5s,mb5.2							
LZH				pP		pP	15 20 03.5	+6.3
LZH				sP		sP	15 20 10.2	+8.9
CMAR	**Chiang Mai Arr**	**46.08**	**286**	P		**P**	**15 19 49.8**	**+0.9**
	comp=Z,12nm,0.8s,mb4.9,baz=86,slow=6.1,SNR=73							
TOO	**Toolangi**	**47.68**	**180**	*e*P		**P**	**15 20 02.0**	**+1.0**
ULN	**Ulaanbaatar**	**49.60**	**326**	*e*P		**P**	**15 20 15.9**	**+0.2**
	comp=Z,20nm,1.2s,mb5.0							
ULN	**Ulaanbaatar**	**49.60**	**326**	*c i*P		**P**	**15 20 16.2**	**+0.5**
SONM	**Songino Array**	**49.94**	**326**	P		**P**	**15 20 19.0**	**+0.8**
	comp=Z,5.3nm,0.7s,mb4.7,baz=142,slow=7.2,SNR=39							
SONM				PcP		PcP	15 21 39.0	+0.8
	comp=Z,2.7nm,0.8s,baz=143,slow=6.1,SNR=4.0							
GTA	**Gaotai**	**50.08**	**313**	⇑P		**P**	**15 20 19.9**	**+0.4**
GTA				AP		pP	15 20 31.0	+1.0
GTA				XP		sP	15 20 36.0	+1.9
GTA				AMB		AMB		
	comp=Z,10.0nm,1.2s,mb4.7							
GTA				AMB		AMB		
	comp=Z,148nm,5.1s							
YAK	**Yakutsk**	**52.91**	**350**	*e*P		**P**	**15 20 39.3**	**-0.9**
	comp=Z,26nm,0.9s,mb5.2							
YAK	**Yakutsk**	**52.91**	**350**	*e*P		**P**	**15 20 38.7**	**-1.6**
YAK				*e*			15 20 52.4	
YAK				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.0							
YAK				pmax	pmax			
	comp=E,4.0nm,1.2s							
YAK				pmax	pmax			
	comp=N,12nm,1.4s							
ZAK	**Zakamensk**	**53.07**	**327**	*e*P		**P**	**15 20 41.2**	**-0.4**
ZAK				*e*			15 20 55.6	
ZAK				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.8							
BOD	**Bodaibo**	**53.27**	**339**	*e*P		**P**	**15 20 42.2**	**-0.8**
BOD				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
TLY	**Talaya**	**53.61**	**329**	*e*P		**P**	**15 20 45.9**	**+0.3**
TLY				pmax	pmax			
	comp=Z,15nm,1.2s,mb4.8							
LSA	**Lhasa**	**54.40**	**299**	*e*P		**P**	**15 20 53.2**	**+1.5**
	comp=Z,14nm,1.1s,mb4.8							
LSA	**Lhasa**	**54.40**	**299**	*e*P		**P**	**15 20 53.2**	**+1.5**
LSA				pmax	pmax			
	comp=Z,14nm,1.1s,mb4.8							
TAPN	**Taplejung**	**57.11**	**296**	*e*P		**P**	**15 21 11.9**	**+0.7**
	comp=Z,68nm,1.2s,mb5.6							
ODAN	**Odare**	**57.35**	**295**	*e*P		**P**	**15 21 12.5**	**-0.5**
	comp=Z,66nm,1.1s,mb5.6							
RAMN	**Ramite**	**58.06**	**295**	*e*P		**P**	**15 21 17.9**	**0.0**
	comp=Z,60nm,1.1s,mb5.5							
JIRN	**Jiri**	**58.48**	**296**	*e*P		**P**	**15 21 21.5**	**+0.6**
	comp=Z,39nm,0.8s,mb5.5							
GUN	**Gumba**	**58.78**	**296**	*e*P		**P**	**15 21 23.5**	**+0.6**
	comp=Z,116nm,1.0s,mb5.9							
BILL	**Bilibino**	**59.17**	**9**	*e*P		**P**	**15 21 24.8**	**-0.1**
	comp=Z,42nm,1.8s,mb5.2							
BILL	**Bilibino**	**59.17**	**9**	*e*P		**P**	**15 21 25.2**	**+0.3**
BILL				*PP		pP	15 21 36.0	+0.5
BILL				*e*SP		sP	15 21 42.2	+2.5
BILL							15 22 14.0	
BILL							15 23 38.0	
BILL				pmax	pmax			
	comp=Z,19nm,1.5s,mb4.9							
PKI	**Pulchoki**	**59.17**	**296**	*e*P		**P**	**15 21 25.7**	**+0.1**
	comp=Z,58nm,1.1s,mb5.5							
PKI	**Pulchoki**	**59.17**	**296**	*e*P		**P**	**15 21 25.7**	**+0.1**
PKI				pmax	pmax			
	comp=Z,59nm,1.1s,mb5.5							
KKN	**Kakani**	**59.30**	**296**	*e*P		**P**	**15 21 26.5**	**0.0**
	comp=Z,48nm,0.9s,mb5.5							
KKN	**Kakani**	**59.30**	**296**	*e*P		**P**	**15 21 26.5**	**0.0**
KKN				pmax	pmax			
	comp=Z,48nm,0.9s,mb5.5							
DMN	**Daman**	**59.44**	**296**	*e*P		**P**	**15 21 27.6**	**+0.1**
	comp=Z,84nm,1.1s,mb5.7							
GKN	**Gorkha**	**59.88**	**296**	*e*P		**P**	**15 21 30.3**	**-0.3**
	comp=Z,86nm,1.1s,mb5.7							
WMQ	**Urumqi**	**60.10**	**315**	P		**P**	**15 21 32.6**	**+0.9**
WMQ				AMB		AMB		
	comp=Z,14nm,1.0s,mb5.0							
DANN	**Dangsing**	**60.68**	**297**	*e*P		**P**	**15 21 36.1**	**+0.1**
	comp=Z,70nm,0.7s,mb5.9							
KOLN	**Koldanda**	**60.78**	**296**	*e*P		**P**	**15 21 36.7**	**0.0**
	comp=Z,38nm,0.8s,mb5.6							
PYUN	**Piuthan**	**61.34**	**296**	*e*P		**P**	**15 21 40.5**	**0.0**
	comp=Z,61nm,0.9s,mb5.7							
TIXI	**Tiksi**	**62.13**	**354**	⇑*e*P		**P**	**15 21 44.5**	**-0.5**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.5							
MK31	**Makanchi Array**	**64.51**	**317**	*e*P		**P**	**15 22 01.5**	**+0.3**
MKAR	**Makanchi Array**	**64.51**	**317**	P		**P**	**15 22 01.6**	**+0.4**
	comp=Z,4.3nm,0.8s,mb4.5,baz=93,slow=8.5,SNR=32							
MKAR	**Makanchi Array**	**64.51**	**317**	*i* P		**P**	**15 22 01.6**	**+0.4**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ZAA0	**Zalesovo Array**	**64.83**	**325**	*e*P		**P**	**15 22 02.2**	**-0.9**
ZALV	**Zalesovo Beam**	**64.83**	**325**	P		**P**	**15 22 02.2**	**-0.9**
	comp=Z,2.4nm,0.6s,mb4.4,baz=109,slow=6.4,SNR=15							
NVS	**Novosibirsk**	**65.98**	**326**	*e*

BRVK	**Borovoye**	**73.14**	**322**	*e*P		**P**		**15 22 55.1**	**+0.3**
BRVK					pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0								
KBL	**Kabul**	**73.41**	**303**	*e*P		**P**		**15 22 56.5**	**-0.2**
	comp=Z,18nm,1.1s,mb4.9								
KBL	**Kabul**	**73.41**	**303**	*e*P		**P**		**15 22 56.5**	**-0.3**
KBL					pmax	pmax			
	comp=Z,18nm,1.1s,mb4.9								
DAWY	**Dawson**	**74.06**	**26**	*e*P		**P**		**15 23 00.8**	**+0.8**
INK	**Inuvik**	**76.95**	**22**	*e*P		**P**		**15 23 16.2**	**-0.3**
DLBC	**Dease Lake**	**78.15**	**32**	P		**P**		**15 23 25.4**	**+2.1**
	comp=Z,6.4nm,1.1s,mb4.5,baz=138,slow=11,SNR=4.9								
SVE	**Sverdlovsk**	**78.82**	**326**	*e*P		**P**		**15 23 27.5**	**+0.4**
SVE					pmax	pmax			
	comp=Z,12nm,1.0s,mb4.8								
ARU	**Arti**	**79.98**	**326**	*e*P		**P**		**15 23 33.3**	**-0.1**
	comp=Z,13nm,1.3s,mb4.7								
ARU	**Arti**	**79.98**	**326**	*d i*P		**P**		**15 23 33.0**	**-0.4**
ARU				*e*				15 26 34.7	
ARU				*e*PPP				15 28 21.1	
ARU				*e*S		S		15 33 35.9	+1.1
ARU				*e*SS		SS		15 38 39.9	-4.8
ARU					pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.6								
AKTK	**Aktyubinsk**	**80.76**	**320**	P		**P**		**15 23 37.9**	**+0.1**
AKTO	**Aktyubinsk**	**80.76**	**320**	P		**P**		**15 23 37.9**	**+0.1**
	comp=Z,3.6nm,0.9s,mb4.3,baz=82,slow=5.8,SNR=8.9								
YKA	**Yellowknife Ar**	**85.25**	**27**	P		**P**		**15 24 01.2**	**+0.5**
	comp=Z,2.8nm,0.9s,mb4.4,baz=339,slow=3.3,SNR=3.3								
YKA					LR	LR		15 59 11.9	
	comp=Z,38nm,19.2s,MS3.8,baz=280,slow=34								
NVAR	**Mina Array Bea**	**88.14**	**51**	P		**P**		**15 24 17.1**	**+1.8**
	comp=Z,3.0nm,0.8s,mb4.6,baz=261,slow=5.1,SNR=20								
ELK	**Elko**	**89.94**	**49**	P		**P**		**15 24 25.8**	**+2.0**
	comp=Z,4.0nm,0.9s,mb4.8,baz=265,slow=5.3,SNR=10								
OBN	**Obninsk**	**92.34**	**327**	P		**P**		**15 24 34.0**	**-0.6**
OBN				*e*		pP		15 24 43.3	-2.4
OBN					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0								
SOC	**Sochi**	**94.39**	**316**	*i* P		**P**		**15 24 50.9**	**+6.6**
LPIG	**La Paz**	**98.15**	**64**	LR		LR		15 59 31.9	
	comp=Z,76nm,20.7s,MS4.2,slow=29								
VNA2	**Neumayer--Watz**	**117.24**	**190**	*e*PKPdf		PKPdf		15 30 09.0	+0.1
	baz=9.5,slow=1.4								
VNA2				*e*				15 30 16.7	
VNA3	**Neumayer Olymp**	**117.31**	**189**	*e*PKPdf		PKPdf		15 30 09.5	+0.5
VNA3				*e*				15 30 17.6	
TORD	**Torodi Ar. Bea**	**137.48**	**303**	PKP		PKPdf		15 30 49.7	+0.7
	comp=Z,1.2nm,0.9s,baz=43,slow=1.6,SNR=6.0								
LVC	**Limon Verde**	**144.57**	**115**	*e*PKPdf		PKPdf		15 31 02.0	+0.5
DBIC	**Dimbokro**	**146.32**	**299**	PKPbc		PKPbc		15 31 06.6	+0.6
	comp=Z,9.0nm,0.9s,baz=37,slow=4.5,SNR=9.3								
DBIC	**Dimbokro**	**146.32**	**299**	*e*PKP2		PKPab		15 31 06.1	-0.7
KIC	**Kosan Boka**	**146.37**	**298**	*e*PKP1		PKPbc		15 31 06.0	-0.2
	comp=Z,65nm,1.0s								
LPAZ	**La Paz**	**146.40**	**104**	PKPbc		PKPbc		15 31 08.5	+2.4
	comp=Z,2.4nm,0.8s,baz=291,slow=2.8,SNR=9.9								
LPAZ	**La Paz**	**146.40**	**104**	*e*PKP2		PKPab		15 31 08.1	+1.1
TIC	**Toumodi**	**146.47**	**299**	*e*PKP1		PKPbc		15 31 06.5	0.0
	comp=Z,9.0nm,0.2s								
LIC	**Lamto**	**146.69**	**298**	*e*PKP1		PKPbc		15 31 07.0	-0.1
	comp=Z,41nm,0.9s								

IDC 12 15:16:36.8±5.3, 2169N×9188E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/20, mbtmp3.4/3, ML3.7/1, MS4.3/1, Ms1 4.3/1, ms1mx2.7/21, Error ellipse: s-maj=142.2km s-min=63.2km az=7.0, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHL	**Shillong**	**3.86**	**0**	*e*PN		Pn	15 17 44.2	+6.7
SHL				*e*SN		Sn	15 18 09.2	-14
CMAR	**Chiang Mai Arr**	**7.37**	**115**	Pn		Pn	15 18 25.1	-0.7
	0.3nm,0.3s,baz=294,slow=14,SNR=9.9							
CMAR				Pg		Pg	15 18 52.5	-5.7
	0.3nm,0.3s,baz=293,slow=17,SNR=4.0							
BATI	**Baumata**	**44.47**	**132**	LR		LR	15 44 37.0	
	comp=Z,350nm,20.8s,baz=225,slow=38							
WRA	**Warramunga Arr**	**58.60**	**132**	P		P	15 26 35.9	0.0
	0.3nm,0.7s,baz=320,slow=7.4,SNR=4.6							
ASAR	**Alice Springs**	**60.87**	**135**	P		P	15 26 51.5	+0.1
	0.3nm,0.7s,baz=317,slow=6.7,SNR=6.2							

MOS ***12*** *15:24:01.3±1.4, 4.16S×152.65E, h33km, mb4.9/11, Error ellipse: s-maj=14.6km s-min=8.4km az=71.6*
ISCJB ***12*** *15:24:01.5±1.3, 4.19S±004×152.75E±006, h41km±11km, mb4.7/41, MS3.9/14, Error ellipse: s-maj=10.6km s-min=6.9km az=14.3*
NEIC ***12*** *15:24:02.5±0.3, 4.15S×152.70E, h35km, mb4.9/18, Error ellipse: s-maj=12.6km s-min=7.3km az=100.0*
BJI ***12*** *15:24:02.5, 4.10S×152.70E, h35km, mB5.1, mb4.7, Ms4.7, Msz4.5*
IDC ***12*** *15:24:05.8±2.0, 4.30S×152.64E, h60km±17km, mb4.3/15, mb1 4.5/16, mb1mx4.4/19, mbtmp4.3/16, MS3.7/8, Ms1 3.7/8, ms1mx3.3/15, Error ellipse: s-maj=16.4km s-min=11.2km az=104.0*
DJA ***12*** *15:24:37.6±0.0, 5.60S×150.94E, h183km, mB5.4/3, mb4.7/8, Mw(mB)5.2/3, Mwp4.3/3*
ISC 12 15:24:06.7±1.1, 425S±004×15272E±006, h71km±10km, h39km±8.5km, pP-P, n107, σ1s13/109, mb4.7/41, 3C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**7.53**	**227**	*e*Pn		**Pn**	**15 25 53.1**	**-0.8**
	92nm,0.8s							
PMG				*e*Sn		**Sn**	**15 27 18.9**	**+1.1**
PMG	**Port Moresby**	**7.53**	**227**	*e*P		**Pn**	**15 25 53.1**	**-0.7**
PMG				*e*			15 27 18.9	
PMG					pmax	pmax		
	comp=Z,92nm,0.8s							
PMG	**Port Moresby**	**7.53**	**227**	P		**Pn**	**15 25 56.1**	**+2.3**
	comp=Z,153nm,1.1s,comp=Z,2μmcomp=Z,0.7nm							
JAY	**Jayapura**	**12.12**	**278**	P		**Pn**	**15 26 59.8**	**+3.3**
	comp=Z,49nm,1.2s,comp=Z,5μmcomp=Z,0.4nm							
JAY	**Jayapura**	**12.12**	**278**	P		**Pn**	**15 27 03.4**	**+6.9**
	comp=Z,49nm,1.2s,comp=Z,5μm							
CTA	**Charters Tower**	**16.95**	**201**	*e*P		**Pn**	**15 27 59.9**	**+0.5**
	comp=Z,15nm,0.6s							
CTA	**Charters Tower**	**16.95**	**201**	P		**Pn**	**15 27 59.7**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=26,slow=14,SNR=14							
CTA	**Charters Tower**	**16.95**	**201**	*e*P		**Pn**	**15 27 59.9**	**+0.5**
CTA					pmax	pmax		
	comp=Z,15nm,0.6s							
CTAO	**Charters Tower**	**16.95**	**201**	*e*P		**Pn**	**15 27 58.9**	**-0.5**
	comp=Z,26nm,0.8s							
CTAO	**Charters Tower**	**16.95**	**201**	*e*P		**Pn**	**15 27 58.9**	**-0.5**
CTAO					pmax	pmax		
	comp=Z,26nm,0.8s							
CTAO	**Charters Tower**	**16.95**	**201**	P		**Pn**	**15 28 00.0**	**+0.6**
	comp=Z,50nm,1.4s							
CTAO	**Charters Tower**	**16.95**	**201**	P		**Pn**	**15 28 00.8**	**+1.4**
	comp=Z,50nm,1.4s							
EIDS	**Eidsvold**	**21.06**	**184**	*e*P		**P**	**15 28 44.7**	**-0.3**
	comp=Z,99nm,0.9s,mb5.1							
KAKA	**Kakadu**	**21.73**	**246**	*e*P		Px	15 28 38.7	
	comp=Z,78nm,0.5s							
KAKA	**Kakadu**	**21.73**	**246**	P		Px	15 28 39.2	
	comp=Z,277nm,0.8s,comp=Z,2μm							
WRAB	**Tennant Creek**	**23.73**	**227**	*i* P		**P**	**15 29 11.6**	**-0.9**
	comp=Z,71nm,0.9s,mb5.0							
WRAB	**Tennant Creek**	**23.73**	**227**	*c i*P		**P**	**15 29 11.3**	**-1.2**
WRAB	**Tennant Creek**	**23.73**	**227**	P		**P**	**15 29 11.3**	**-1.2**
	comp=Z,100nm,0.8s,mb5.2							
WRAB	**Tennant Creek**	**23.73**	**227**	P		**P**	**15 29 11.3**	**-1.2**
	comp=Z,100nm,0.8s,mb5.2							
WB2	**Warramunga Arr**	**23.74**	**227**	*e*P		**P**	**15 29 11.6**	**-1.0**
WB2				*e*S		**S**	**15 33 22.6**	**-0.2**
WB2				*e*			15 36 29.1	
WRA	**Warramunga Arr**	**23.75**	**227**	P		**P**	**15 29 11.7**	**-0.9**
	comp=Z,39nm,0.4s,mb5.1,baz=53,slow=9.8,SNR=288							
WRA					S	**S**	**15 33 24.0**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=40,slow=22,SNR=4.0							
WRA					ScP	ScP	15 36 28.8	+1.6
	comp=Z,2.1nm,0.8s,baz=45,slow=3.0,SNR=8.1							
WRA					LR	LR	15 38 46.3	
	comp=Z,180nm,18.9s,baz=45,slow=37							
WRA					PKiKP	PKiKP	15 40 38.3	-0.1
	comp=Z,0.3nm,0.4s,baz=335,slow=1.0,SNR=12							
WRA	**Warramunga Arr**	**23.75**	**227**	P		**P**	**15 29 11.7**	**-1.0**
WRA					S	**S**	**15 33 23.9**	**+1.0**
WRA					ScP	ScP	15 36 28.8	+1.6
WRA					LR	LR	15 38 46.3	
WRA	**Warramunga Arr**	**23.75**	**227**	P		**P**	**15 29 11.7**	**-0.9**
WRA					S	**S**	**15 33 24.0**	**+1.0**
AAI	**Ambon**	**24.47**	**270**	P		**P**	**15 29 19.8**	**+0.5**
	comp=Z,50nm,0.8s,mb4.9							
AAI	**Ambon**	**24.47**	**270**	P		**P**	**15 29 19.0**	**-0.3**
	comp=Z,50nm,0.8s,mb4.9							
AAI	**Ambon**	**24.47**	**270**	P		**P**	**15 29 26.8**	**+7.5**
	comp=Z,50nm,0.8s,mb4.9							
LBMI	**Labuha**	**25.44**	**277**	P		**P**	**15 29 29.6**	**+1.4**
	comp=Z,74nm,1.1s,comp=Z,1μm,mb5.0							
ARMA	**Armidale**	**26.05**	**182**	*e*P		**P**	**15 29 34.3**	**+0.9**
ASAR	**Alice Springs**	**26.50**	**222**	P		**P**	**15 29 36.6**	**-1.0**
	comp=Z,8.1nm,0.3s,mb4.7,baz=55,slow=9.1,SNR=227							
ASAR					S	**S**	**15 34 05.9**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=45,slow=14,SNR=4.1							
ASAR					ScP	ScP	15 36 37.2	+2.3
	comp=Z,2.2nm,0.9s,baz=49,slow=3.4,SNR=7.9							
ASAR					PKiKP	PKiKP	15 40 39.5	-0.4
	comp=Z,0.2nm,0.6s,baz=67,slow=0.8,SNR=5.4							
ASAR	**Alice Springs**	**26.50**	**222**	P		**P**	**15 29 36.6**	**-1.0**
ASAR					S	**S**	**15 34 05.9**	**-0.8**
ASAR					ScP	ScP	15 36 37.2	+2.3
ASAR	**Alice Springs**	**26.50**	**222**	P		**P**	**15 29 36.6**	**-1.0**
ASAR					S	**S**	**15 34 05.9**	**-0.8**
STKA	**Stephens Creek**	**29.40**	**200**	*e*P		**P**	**15 30 02.2**	**-1.1**
	comp=Z,21nm,0.5s,mb5.0							
STKA	**Stephens Creek**	**29.40**	**200**	P		**P**	**15 30 02.3**	**-1.0**
	comp=Z,27nm,0.6s,mb5.1,baz=12,slow=8.9,SNR=74							
STKA					LR	LR	15 40 59.5	
	comp=Z,197nm,22.0s,baz=22,slow=35							
CNB	**Canberra Magne**	**31.07**	**185**	*e*P		**P**	**15 30 18.8**	**+0.8**
CAN	**Canberra**	**31.11**	**186**	*e*P		**P**	**15 30 18.5**	**+0.1**
PCI	**Palu**	**33.01**	**275**	P		**P**	**15 30 39.4**	**+4.0**
	comp=Z,41nm,1.3s,comp=Z,495nm,mb5.1							
PCI	**Palu**	**33.01**	**275**	P		**P**	**15 30 43.2**	**+7.8**
	comp=Z,41nm,1.3s,comp=Z,507nm,mb5.1							
TOO	**Toolangi**	**33.82**	**190**	*e*P		**P**	**15 30 42.2**	**+0.1**
FORT	**Forrest**	**35.16**	**219**	*e*P		**P**	**15 30 52.5**	**-1.3**
	comp=Z,45nm,0.9s,mb5.3							
MBWA	**Marble Bar**	**36.17**	**239**	*e*P		**P**	**15 31 01.2**	**-1.4**
	comp=Z,20nm,0.8s,mb5.1							
MBWA	**Marble Bar**	**36.17**	**239**	P		**P**	**15 31 01.4**	**-1.2**
	comp=Z,37nm,1.0s,mb5.3							
MOO	**Moorlands**	**38.34**	**187**	*e*P		**P**	**15 31 21.9**	**+1.2**
TAU	**Tasmania Unive**	**38.79**	**186**	*e*P		**P**	**15 31 25.9**	**+1.5**
	comp=Z,114nm,1.2s,mb5.6							
TAU	**Tasmania Unive**	**38.79**	**186**	*e*P		**P**	**15 31 25.9**	**+1.5**
TAU					pmax	pmax		
	comp=Z,114nm,1.2s,mb5.6							
URZ	**Urewera**	**40.50**	**150**	P		**P**	**15 31 39.9**	**+1.2**
	comp=Z,6.8nm,0.5s,mb4.7,baz=273,slow=9.8,SNR=9.9							
RPZ	**Rata Peaks**	**42.51**	**160**	P		**P**	**15 31 55.9**	**+0.8**
	comp=Z,36nm,0.7s,mb5.2,baz=72,slow=0.3,SNR=14							
KLBR	**Kellerberrin**	**42.62**	**226**	*e*P		**P**	**15 31 54.3**	**-1.8**
	comp=Z,38nm,1.3s,mb5.0							
NWAO	**Narrogin (SRO)**	**43.71**	**225**	*e*P		**P**	**15 32 03.1**	**-1.8**
	comp=Z,16nm,1.1s,mb4.7							
NWAO	**Narrogin (SRO)**	**43.71**	**225**	*e*P		**P**	**15 32 03.1**	**-1.8**
NWAO					pmax	pmax		
	comp=Z,16nm,1.1s							
MUN	**Mundaring**	**43.94**	**227**	*e*P		**P**	**15 32 05.5**	**-1.3**
KSRS	**Korea Array**	**47.48**	**333**	P		**P**	**15 32 34.2**	**-0.3**
	comp=Z,2.6nm,0.9s,mb4.0,baz=143,slow=8.2,SNR=6.2							
NJ2	**Nanjing**	**48.37**	**321**	*e*P		**P**	**15 32 39.8**	**-1.7**
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9							
MDJ	**Mudanjiang**	**52.88**	**339**	P		**P**	**15 33 15.0**	**-0.2**
MDJ					PP	PP	15 35 14.7	-0.8
MDJ					SCP	ScP	15 38 18.9	+4.0
MDJ					PCS	PcS	15 38 22.4	+0.3
MDJ					S	**S**	**15 40 42.7**	**+3.9**
MDJ					XS	sS	15 40 58.3	-11
MDJ					AMB	AMB		
	comp=Z,9.0nm,2.5s,mb4.4							
MDJ					AMB	AMB		
	comp=Z,81nm,3.8s							
MDJ					LR	LR		
	comp=N,53nm,31.6s							
MDJ					LR	LR		
	comp=E,88nm,36.3s							
CN2	**Changchun**	**53.77**	**336**	*e*P		**P**	**15 33 22.8**	**+1.0**
HABR	**Khabarovsk**	**54.73**	**346**	*e*P		**P**	**15 33 27.1**	**-1.6**
HABR				*e*			15 35 30.8	
HABR				*e*S		**S**	**15 41 00.0**	**-3.7**
KLR	**Kul'dur**	**56.30**	**344**	*e*P		**P**	**15 33 48.3**	**+8.4**
KMI	**Kunming**	**56.61**	**304**	P		**P**	**15 33 41.5**	**-1.1**
KMI					AP	pP	15 33 53.4	-7.6
KMI					XP	sP	15 33 57.4	-12
KMI					PP	PP	15 35 51.5	+2.1
KMI					S	**S**	**15 41 29.7**	**+0.1**
KMI					XS	sS	15 41 46.3	-15
KMI					SS	SS	15 45 19.6	+1.2
KMI					AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7							
KMI					AMB	AMB		
	comp=Z,101nm,7.4s							
KMI					LR	LR		
	comp=N,138nm,21.5s							
KMI					LR	LR		
	comp=E,103nm,20.9s							
KMI					LR	LR		
	comp=Z,126nm,23.9s							
KMI	**Kunming**	**56.61**	**304**	P		**P**	**15 33 41.5**	**-1.1**
	comp=Z,6.0nm,0.8s,mb4.7							
KMI					pP	pP	15 33 53.4	-7.6
KMI					sP	sP	15 33 57.4	-12
KMI					P	pP	15 34 01.0	0.0
KMI					pP	pP	15 34 18.4	+17
KMI					PP	PP	15 35 51.5	+2.1
KMI					S	**S**	**15 41 29.7**	**+0.1**
KMI					sS	sS	15 41 46.3	-15
KMI					SS	SS	15 45 19.6	+1.2
KMI					SSS		15 47 26.4	
KMI					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
PETK	**Petropavlovsk-**	**57.30**	**4**	P		**P**	**15 33 47.0**	**+0.1**
	comp=Z,1.4nm,0.5s,mb4.3,baz=161,slow=6.8,SNR=12							
PETK					LR	LR	15 54 58.4	
	comp=Z,49nm,19.8s,baz=95,slow=32							
CMAR	**Chiang Mai Arr**	**57.57**	**295**	P		**P**	**15 33 50.6**	**+1.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=113,slow=5.0,SNR=9.3							
CMAR					LR	LR	15 56 02.2	
	comp=Z,29nm,21.3s,baz=253,slow=33							
PPT	**Papeete**	**57.97**	**108**	*e*LR		LR	15 50 49.7	
	comp=Z,177nm,32.5s							
CD2	**Chengdu**	**58.32**	**310**	*e*P		**P**	**15 33 54.6**	**+0.1**
CD2					AP	pP	15 34 05.7	-7.3
CD2					XP	sP	15 34 09.6	-11
CD2					PP	PP	15 36 06.2	+1.7
CD2					S	**S**	**15 41 53.4**	**+1.6**
CD2					SS	SS	15 45 46.6	+1.5
CD2					AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2							
CD2					AMB	AMB		
	comp=Z,120nm,8.2s							
CD2					LR	LR		
	comp=N,190nm,14.6s							
CD2					LR	LR		
	comp=E,210nm,16.2s							
CD2					LR	LR		
	comp=Z,150nm,14.6s							
HHC	**Hu-ho-hao-te**	**58.56**	**324**	*e*P		**P**	**15 33 55.5**	**-0.5**
HHC					AP	pP	15 34 05.2	-9.2
HHC					XP	sP	15 34 09.9	-13
HHC					PCP	PcP	15 34 45.6	0.0
HHC					PP	PP	15 36 06.5	+0.2
HHC					PCS	PcS	15 38 44.6	-2.6
HHC					S	**S**	**15 41 54.9**	**+0.4**
HHC					XS	sS	15 42 10.4	-15
HHC					SCS	ScS	15 43 39.6	+0.2
HHC					AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.9							
HHC					AMB	AMB		
	comp=Z,143nm,5.2s							
HHC					LR	LR		
	comp=N,143nm,15.5s							
HHC					LR	LR	15 38 46.3	
	comp=E,227nm,18.4s							
HHC					LR	LR		
	comp=Z,112nm,15.5s							
TBI	**Tubuai**	**58.86**	**115**	*e*LR		LR	15 51 12.6	
	comp=Z,211nm,30.2s							
LZH	**Lanzhou**	**60.78**	**316**	*e*P		**P**	**15 34 13.5**	**+2.1**
LZH					AP	pP	15 34 23.4	-6.6
LZH					XP	sP	15 34 28.0	-10
LZH					PP	PP	15 36 29.5	+3.3
LZH				*e*S		**S**	**15 42 26.5**	**+3.1**
LZH					XS	sS	15 42 43.2	-12
LZH					SS	SS	15 46 26.4	+2.8
LZH					AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9							
LZH					AMB	AMB		
	comp=Z,70nm,4.1s							
LZH					LR	LR		
	comp=E,210nm,15.7s							
LZH					LR	LR		
	comp=Z,420nm,16.9s							
LZH	**Lanzhou**	**60.78**	**316**	*e*P		**P**	**15 34 13.5**	**+2.1**
	comp=Z,13nm,1.0s,mb4.9							
LZH					pP	pP	15 34 23.4	-6.6
LZH					sP	sP	15 34 28.0	-10
LZH					PP	PP	15 36 29.5	+3.3
LZH				*e*S		**S**	**15 42 26.5**	**+3.1**
LZH					sS	sS	15 42 43.2	-12
LZH					SS	SS	15 46 26.4	+2.8
LZH					LR	LR		
	comp=Z,420nm,16.9s							
LZH	**Lanzhou**	**60.78**	**316**	*e*P		**P**	**15 34 13.5**	**+2.1**
LZH					*PP	pP	15 34 23.4	-6.6
LZH					*SP	sP	15 34 28.0	-10
LZH							15 36 29.5	
LZH				*e*S		**S**	**15 42 26.5**	**+3.1**
LZH					*SS	sS	15 42 43.2	-12
LZH					SS	SS	15 46 26.4	+2.8
LZH					pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9							
LZH					MLR	MLR		
	comp=Z,420nm,16.9s							
ULN	**Ulaanbaatar**	**65.49**	**328**	*e*P		**P**	**15 34 39.5**	**-2.8**
ULN	**Ulaanbaatar**	**65.49**	**328**	*e*P		**P**	**15 34 42.6**	**+0.3**
SONM	**Songino Array**	**65.82**	**328**	P		**P**	**15 34 46.1**	**+1.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=140,slow=4.9,SNR=5.7							
SONM					LR	LR	16 03 36.0	
	comp=Z,39nm,18.9s,baz=51,slow=36							
YAK	**Yakutsk**	**68.42**	**349**	*i* P		**P**	**15 35 02.3**	**+1.7**
YAK					pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4							
ZAK	**Zakamensk**	**68.98**	**329**	*e*P		pP	15 35 16.6	-6.7
ZAK					pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.2							
BOD	**Bodaibo**	**69.25**	**339**	*e*P		**P**	**15 35 09.2**	**+3.3**
RKT	**Rikitea**	**72.08**	**113**	*e*LR		LR	15 57 21.3	
	comp=Z,178nm,32.8s							
BILL	**Bilibino**	**72.75**	**5**	*e*P		**P**	**15 35 27.3**	**+0.4**
BILL				*e*			15 35 40.6	
BILL				*e*		pP	15 35 48.0	+2.0
BILL					PPP		15 39 55.0	
BILL					pmax	pmax		
	comp=Z,26nm,2.7s,mb4.6							
SBA	**Scott Base**	**73.92**	**177**	*e*P		**P**	**15 35 35.4**	**+1.7**
WMQ	**Urumqi**	**75.28**	**317**	*e*P		**P**	**15 35 42.0**	**-0.2**
WMQ					AP	pP	15 35 52.0	-9.3
WMQ					XP	sP	15 35 56.0	-13
WMQ					PP	PP	15 38 32.0	+0.3
WMQ					S	S	15 45 16.0	0.0
WMQ					ScS	ScS	15 45 48.0	-1.0
WMQ					SS	SS	15 50 07.0	-0.3
WMQ					AMB	AMB		
	comp=Z,21nm,1.0s,mb4.8							
WMQ					AMB	AMB		
	comp=Z,64nm,6.0s							
WMQ					LR	LR		
	comp=N,54nm,18.0s							
WMQ					LR	LR		
	comp=E,75nm,18.0s							
WMQ					LR	LR		
	comp=Z,45nm,18.0s							
MKAR	**Makanchi Array**	**79.86**	**319**	P		**P**	**15 36 08.3**	**+0.8**
	comp=Z,0.5nm,0.5s,mb3.6,baz=79,slow=6.3,SNR=6.5							
MKAR	**Makanchi Array**	**79.86**	**319**	*i* P		**P**	**15 36 08.3**	**+0.7**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
MCK	**McKinley**	**80.39**	**23**	*e*P		**P**	**15 36 08.1**	**-2.0**
	comp=Z,11nm,0.9s,mb4.7							
MCK	**McKinley**	**80.39**	**23**	*e*P		**P**	**15 36 08.1**	**-2.0**
MCK					pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7							
ZALV	**Zalesovo Beam**	**80.65**	**326**	P		**P**	**15 36 12.2**	**+0.5**
	comp=Z,0.5nm,0.3s,mb3.8,baz=101,slow=7.5,SNR=3.1							
COLA	**College**	**81.37**	**22**	*e*P		**P**	**15 36 13.3**	**-2.0**
	comp=Z,9.9nm,1.0s,mb4.6							
COLA	**College**	**81.37**	**22**	*e*P		**P**	**15 36 13.3**	**-2.0**
COLA					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6							
KURK	**Kurchatov**	**83.29**	**322**	*e*P		**P**	**15 36 24.6**	**-1.0**
KURK					pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.1							
TKM2	**Tokmak 2**	**83.49**	**314**	P		**P**	**15 36 27.1**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.0							
TKM2	**Tokmak 2**	**83.49**	**314**	P		**P**	**15 36 27.1**	**+0.3**
TKM2					pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9							
HYT	**Haines Junctio**	**83.99**	**28**	*

IZM	**Izmir**	**0.47**	**347**	PG	**Pg**	**15 34 12.2**	**-0.4**
IZM				SG	**Sg**	**15 34 18.7**	**-0.1**
BLCB	**Balcova**	**0.52**	**328**	*e*PG	**Pg**	**15 34 13.2**	**-0.4**
BLCB				*e*SG	**Sg**	**15 34 20.8**	**+0.3**
MLSB	**Milas**	**0.71**	**155**	*e*PG	**Pg**	**15 34 17.9**	**+0.7**
BDRM	**Kayabasi**	**0.87**	**177**	*i* P	**Pb**	**15 34 19.7**	**-1.1**
BDRM				*i* S	**Sb**	**15 34 37.2**	**+0.2**
BODT	**Bodrum**	**0.88**	**184**	*e*PG	**Pg**	**15 34 20.6**	**+0.2**
AKHS	**Akhisar**	**0.99**	**19**	*i* P	**Pb**	**15 34 22.2**	**-0.6**
AKHS				*i* S	**Sb**	**15 34 37.8**	**+1.8**
AKS	**Akhisar**	**0.99**	**19**	*e*PG	**Pg**	**15 34 21.9**	**-0.6**
MANT	**Manisa**	**1.07**	**59**	*i* P	**Pb**	**15 34 25.1**	**+1.0**
MANT				*i* S	**Sb**	**15 34 37.3**	**-0.9**

*ISCJB **12** 16:05:13.0±0.3, 4848N±001×12068W±002, h5km±3km, Error ellipse: s-maj=2.5km s-min=2.0km az=14.4*
*NEIC **12** 16:05:14.7, 4847N×12072W, h1km, MD3.1(SEA), ML2.9(PGC), After SEA.*
NEIC Felt at Chelan.
*PNSN **12** 16:05:14.8, 4847N×12072W, h1km, MD3.2, Fault plane solution: NP1:φs55.00000°, δ25.00000°, NP2: φs267.00000°, δ69.00000°, Principal axes: T Plg64.0000°, Azm199.0000°; P Plg22.0000°, Azm347.0000°;*
*PGC **12** 16:05:14.8±0.3, 4846N×12073W, h1km, ML2.9/6, 113km southwest of Princeton, Bc Washington*

ISC 12 16:05:13.8±0.2, 4847N±001×12071W±002, h7km±2km, n101, σ0s86/138, 40C-58D, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
B07A	**Winthrop** baz=0.4	**0.39**	**91**	⇑P	**Pg**	**16 05 22.4**	**+1.1**
B07A				⇑S	**Sg**	**16 05 27.8**	**+1.3**
NLW	**Nelson Butte**	**0.46**	**148**	⇓P	**Pg**	**16 05 23.3**	**+0.6**
B06A	**Marblemount** baz=0.5,SNR=127	**0.52**	**275**	⇑P	**Pg**	**16 05 24.2**	**+0.4**
B06A				⇓S	**Sg**	**16 05 30.7**	**+0.1**
RPW	**Rockport**	**0.54**	**268**	⇓P	**Pg**	**16 05 24.8**	**+0.6**
C06A	**Tall Timber Ra** baz=0.6,SNR=58	**0.56**	**193**	⇓P	**Pg**	**16 05 24.8**	**+0.2**
C06A				⇑S	**Sg**	**16 05 31.9**	**-0.1**
A07A	**Ashnola River,** baz=0.6,SNR=946	**0.61**	**20**	⇓P	**Pg**	**16 05 26.0**	**+0.4**
A07A				⇓S	**Sg**	**16 05 34.6**	**+1.0**
WRW	**Wenatchee Ridg**	**0.63**	**191**	⇓P	**Pg**	**16 05 26.2**	**+0.4**
SLFW	**Sugar Loaf**	**0.72**	**170**	⇓P	**Pg**	**16 05 27.9**	**+0.2**
DHW2	**Dyer Hill 2**	**0.79**	**128**	⇑P	**Pg**	**16 05 29.2**	**+0.2**
CBSW	**Chelan Butte S**	**0.80**	**146**	⇓P	**Pg**	**16 05 29.3**	**+0.1**
A06A	**Chilliwack** baz=0.8	**0.81**	**321**	⇓P	**Pg**	**16 05 29.3**	**0.0**
A06A				⇑S	**Sg**	**16 05 40.1**	**+0.2**
JCW	**Jim Creek**	**0.86**	**252**	⇑P	**Pg**	**16 05 30.7**	**+0.3**
C07A	**Waterville** baz=0.9,SNR=302	**0.89**	**151**	⇑P	**Pg**	**16 05 30.9**	**0.0**
ETW	**Entiat**	**0.90**	**164**	P	**Pg**	**16 05 31.1**	**+0.1**
B08A	**Colville Reser** baz=0.9,SNR=184	**0.92**	**97**	⇓P	**Pg**	**16 05 31.4**	**0.0**
B08A				⇓S	**Sg**	**16 05 44.6**	**+1.2**
WTV	**Waterville**	**0.92**	**147**	⇓P	**Pg**	**16 05 31.5**	**0.0**
B05A	**Bryant** baz=0.9,SNR=45	**0.95**	**258**	⇓P	**Pg**	**16 05 31.7**	**-0.3**
B05A				⇑S	**Sg**	**16 05 44.5**	**+0.2**
HTW	**Haystack Looko**	**0.98**	**227**	P	**Pg**	**16 05 32.6**	**+0.1**
C05A	**Tolt Reservoir** baz=1.0,SNR=15	**1.02**	**221**	⇓P	**Pg**	**16 05 33.1**	**-0.2**
C05A				⇓S	**Sg**	**16 05 46.0**	**-0.6**
HOPB	**Hope**	**1.03**	**333**	P	**Pg**	**16 05 33.4**	**-0.1**
HOPB				⇓S	**Sg**	**16 05 47.0**	**+0.1**
A05A	**Maple Falls** baz=1.0	**1.05**	**300**	⇓P	**Pg**	**16 05 33.8**	**-0.2**
A05A				⇓S	**Sg**	**16 05 48.1**	**+0.4**
A08A	**Turner Farm, O** baz=1.1,SNR=347	**1.06**	**63**	⇓P	**Pg**	**16 05 34.5**	**+0.3**
VDB	**Vedder Mountai**	**1.08**	**301**	⇓P	**Pg**	**16 05 34.5**	**+0.1**
VDB	**Vedder Mountai**	**1.08**	**301**	P	**Pg**	**16 05 34.5**	**+0.1**
VDB				⇑S	**Sg**	**16 05 48.7**	**+0.3**
PNT	**Penticton**	**1.11**	**40**	⇓P	**Pg**	**16 05 35.4**	**+0.4**
PNT				⇑S	**Sg**	**16 05 49.5**	**+0.1**
SAW	**Saint Andrews**	**1.17**	**131**	P	**Pg**	**16 05 35.7**	**-0.4**
D06A	**Cle Elum** baz=1.3,SNR=101	**1.28**	**184**	⇓Pb	**Pb**	**16 05 37.7**	**-0.5**
D06A				⇑S	**Sb**	**16 05 54.5**	**-0.4**
TBM	**Table Mountain**	**1.30**	**177**	⇑P	**Pn**	**16 05 38.6**	**+0.2**
C08A	**Higginbotham F** baz=1.3	**1.31**	**121**	⇓Pn	**Pn**	**16 05 37.9**	**-0.6**
C08A				⇓S	**Sb**	**16 05 56.1**	**+0.4**
TWW	**Teanaway**	**1.34**	**185**	P	**Pn**	**16 05 39.4**	**+0.5**
EPH	**Ephrata**	**1.34**	**146**	P	**Pn**	**16 05 39.0**	**0.0**
A04A	**Legoe Bay, Lum** baz=1.3	**1.35**	**281**	⇓Pg	**Pg**	**16 05 39.4**	**-0.3**
D07A	**Quincy** baz=1.4,SNR=100	**1.37**	**159**	⇑Pg	**Pg**	**16 05 39.9**	**-0.1**
A09A	**Danville** baz=1.5	**1.49**	**69**	⇑Pb	**Pb**	**16 05 41.5**	**-0.3**
A09A				⇑Sn	**Sn**	**16 06 00.9**	**+0.2**
D05A	**Enumclaw** baz=1.5,SNR=15	**1.55**	**214**	⇑Pg	**Pg**	**16 05 43.1**	**-0.3**
EBG	**Ellensburg**	**1.57**	**177**	⇓P	**Pn**	**16 05 43.2**	**+1.2**
SNB	**Saturna Island**	**1.66**	**281**	⇓Pn	**Pn**	**16 05 44.3**	**+0.9**
SNB				⇓Sg	**Sg**	**16 06 07.0**	**-0.2**
FMW	**Mount Fremont**	**1.67**	**203**	P	**Pn**	**16 05 45.0**	**+1.6**
C04A	**Brinnon** baz=1.7,SNR=20	**1.70**	**244**	⇓Pb	**Pb**	**16 05 44.5**	**-0.8**
C04A				⇑Sn	**Sn**	**16 06 04.9**	**-0.8**
C04A				⇓Sb	**Sb**	**16 06 06.6**	**-0.2**
OD2	**Odessa Site #2**	**1.72**	**128**	*e*Pn	**Pn**	**16 05 43.9**	**-0.2**
OD2				*e*Pg	**Pg**	**16 05 46.4**	**-0.4**
OD2				*e*Sn	**Sn**	**16 06 05.9**	**-0.6**
OD2				*e*Sg	**Sg**	**16 06 08.8**	**-0.3**
VGZ	**Gonzales**	**1.74**	**269**	⇓Pn	**Pn**	**16 05 46.0**	**+1.6**
VGZ				⇓Sg	**Sg**	**16 06 08.5**	**-1.3**
PGC	**Sidney**	**1.83**	**277**	*e*Pn	**Pn**	**16 05 47.1**	**+1.4**
PGC				*e*Sn	**Sn**	**16 06 10.4**	**+1.3**
PGC	**Sidney**	**1.83**	**277**	⇑Pn	**Pn**	**16 05 47.0**	**+1.4**
PGC				⇑Sg	**Sg**	**16 06 10.6**	**-2.0**
D08A	**Wollman Farm,** baz=1.9	**1.86**	**139**	⇑Sn	**Sn**	**16 06 09.1**	**-0.7**
CRF	**Corfu**	**1.87**	**151**	P	**Pn**	**16 05 48.8**	**+2.6**
LON	**Longmire**	**1.88**	**204**	*e*Pn	**Pn**	**16 05 47.2**	**+0.9**
LON				*e*Sn	**Sn**	**16 06 11.4**	**+1.2**
WAH2	**Wahluke Slope**	**1.88**	**155**	P	**Pn**	**16 05 49.1**	**+2.7**
B04A	**Port Angeles** baz=1.9,SNR=6.6	**1.92**	**259**	⇓Pb	**Pb**	**16 05 47.9**	**-1.1**
B04A				⇑Sb	**Sb**	**16 06 13.0**	**-0.1**
E06A	**Yakima** baz=1.9,SNR=58	**1.94**	**186**	⇓Pn	**Pn**	**16 05 46.1**	**-1.0**
E06A				⇑Sb	**Sb**	**16 06 14.3**	**+0.5**
LOCW	**Locke Island**	**1.96**	**153**	⇑P	**Pn**	**16 05 50.1**	**+2.8**
MDW	**Midway**	**1.97**	**161**	P	**Pn**	**16 05 50.2**	**+2.7**
E07A	**Sunnyside** baz=2.0,SNR=16	**2.00**	**163**	⇓Pn	**Pn**	**16 05 47.1**	**-0.9**
E07A				⇑Pg	**Pg**	**16 05 52.0**	**0.0**
GLK	**Glacier Lake**	**2.00**	**198**	P	**Pn**	**16 05 50.8**	**+2.7**
E05A	**Randle** baz=2.0,SNR=94	**2.04**	**201**	⇓Pb	**Pb**	**16 05 50.0**	**-1.1**
GBL	**Gable Mountain**	**2.06**	**155**	⇑P	**Pn**	**16 05 52.1**	**+3.4**
SNIWA	**Snively Ranch**	**2.13**	**160**	P	**Pn**	**16 05 53.8**	**+4.0**
A10A	**Northport** baz=2.1,SNR=32	**2.15**	**75**	⇑Pn	**Pn**	**16 05 49.4**	**-0.5**
D09A	**Jones Farm, Ri** baz=2.1,SNR=9.1	**2.15**	**130**	⇓Pn	**Pn**	**16 05 49.4**	**-0.6**
D09A				⇑Sn	**Sn**	**16 06 15.4**	**-1.5**
D09A				⇑Sb	**Sb**	**16 06 21.1**	**+1.3**

baz=2.1

RSW	**Rattlesnake Hi**	**2.21**	**160**	P	**Pn**	**16 05 54.9**	**+4.0**
HAWA	**Hanford**	**2.23**	**159**	*e*Pn	**Pn**	**16 05 54.4**	**+3.3**
H2OWA	**Water**	**2.25**	**157**	P	**Pn**	**16 05 56.0**	**+4.6**
LLLB	**Lillooet**	**2.27**	**341**	⇑Pn	**Pn**	**16 05 52.6**	**+0.9**
LLLB				⇑Pg	**Pg**	**16 05 56.0**	**-1.3**
LLLB				⇑Sg	**Sg**	**16 06 25.9**	**-0.8**
B10A	**Chitwood Farm,** baz=2.3	**2.33**	**93**	⇓Pn	**Pn**	**16 05 52.1**	**-0.4**
PRW	**Prosser**	**2.36**	**163**	P	**Pn**	**16 05 57.8**	**+4.8**
NEW	**Newport**	**2.40**	**94**	*e*Pn	**Pn**	**16 05 53.6**	**+0.2**
NEW				*e*Sn	**Sn**	**16 06 23.5**	**+0.4**
E09A	**Wood Farm, Sta** baz=2.6	**2.62**	**138**	⇑Pb	**Pb**	**16 06 00.5**	**-0.5**
F07A	**Phinny Hill Vi** baz=2.6	**2.63**	**168**	⇓Pn	**Pn**	**16 05 56.0**	**-0.6**
F07A				⇑Pb	**Pb**	**16 06 00.5**	**-0.7**
F06A	**Goldendale** baz=2.7	**2.71**	**181**	⇓Pb	**Pb**	**16 06 01.8**	**-0.7**
D10A	**Wagner Farm, O** baz=2.7	**2.71**	**120**	⇓Pb	**Pb**	**16 06 01.9**	**-0.7**
F04A	**Amboy** baz=2.8	**2.80**	**205**	⇓Pb	**Pb**	**16 06 03.3**	**-0.8**
F04A				⇑Sb	**Sb**	**16 06 39.5**	**+1.0**
B11A	**Sandpoint** baz=2.9,SNR=5.9	**2.89**	**89**	⇓Pn	**Pn**	**16 05 59.6**	**-0.6**
A11A	**Hall Mountain,** baz=2.9,SNR=19	**2.92**	**79**	⇓Pn	**Pn**	**16 06 00.4**	**-0.1**
C11A	**Tepee Creek (N** baz=3.0	**3.05**	**100**	⇓Pn	**Pn**	**16 06 01.9**	**-0.5**
LNOR	**Lincton Mounta**	**3.08**	**147**	*e*Pn	**Pn**	**16 06 04.6**	**+1.8**
E10A	**Myers Farm, Un** baz=3.1,SNR=35	**3.15**	**128**	⇑Pn	**Pn**	**16 06 03.3**	**-0.4**
HOOD	**Mount Hood Mea**	**3.22**	**192**	*e*Pn	**Pn**	**16 06 05.2**	**+0.5**
HOOD				*e*Pg	**Pg**	**16 06 13.8**	**-1.6**
D11A	**Klaveano Farm,** baz=3.3,SNR=14	**3.27**	**114**	⇓Pn	**Pn**	**16 06 04.6**	**-0.9**
G07A	**Ruggs Ranch, H** baz=3.3	**3.29**	**167**	⇓Pb	**Pb**	**16 06 11.7**	**-0.7**
A12A	**Yaak River Ran** baz=3.4,SNR=5.5	**3.38**	**80**	⇓Pn	**Pn**	**16 06 06.3**	**-0.7**
E11A	**Bogner Ranch,** baz=3.7,SNR=79	**3.71**	**123**	⇑Pn	**Pn**	**16 06 11.8**	**+0.2**
D12A	**Red Ives Fores** baz=3.9	**3.88**	**109**	⇑Pn	**Pn**	**16 06 14.0**	**+0.2**
F11A	**Grangeville** baz=4.0,SNR=13	**4.04**	**128**	⇓Pn	**Pn**	**16 06 15.3**	**-0.7**
E12A	**Beaver Dam Sad** baz=4.0,SNR=15	**4.05**	**119**	⇑Pn	**Pn**	**16 06 15.5**	**-0.6**
B13A	**Whitefish** baz=4.1	**4.16**	**89**	⇑Pn	**Pn**	**16 06 16.7**	**-0.9**
C13A	**Hot Springs** baz=4.2,SNR=7.7	**4.19**	**99**	⇓Pn	**Pn**	**16 06 17.2**	**-0.8**
A13A	**Flathead Natio** baz=4.2	**4.19**	**81**	⇓Pn	**Pn**	**16 06 17.4**	**-0.7**
G11A	**Walters Elk Ra** baz=4.3,SNR=29	**4.32**	**134**	⇓Pn	**Pn**	**16 06 20.3**	**+0.4**
D13A	**Huson** baz=4.4,SNR=7.9	**4.43**	**106**	⇑Pn	**Pn**	**16 06 21.3**	**-0.1**
I07A	**Izee** baz=4.5,SNR=5.3	**4.47**	**169**	⇓Pn	**Pn**	**16 06 22.9**	**+0.9**
C14A	**Swan Lake** baz=4.7	**4.71**	**96**	⇑Pn	**Pn**	**16 06 24.9**	**-0.4**
H10A	**Noah's Angus R** baz=4.7,SNR=18	**4.75**	**143**	⇓Pn	**Pn**	**16 06 26.3**	**+0.5**
E13A	**Victor** baz=4.9,SNR=5.3	**4.87**	**112**	⇓Pn	**Pn**	**16 06 27.5**	**+0.2**
G12A	**Big Creek, Yel** baz=5.0	**4.98**	**130**	⇓Pn	**Pn**	**16 06 28.7**	**-0.3**
D14A	**Greenough** baz=5.0,SNR=10	**5.05**	**103**	⇑Pn	**Pn**	**16 06 29.4**	**-0.5**
F13A	**Darby** baz=5.1,SNR=52	**5.11**	**119**	⇑Pn	**Pn**	**16 06 30.4**	**-0.4**
CHMT	**Chamberlain Mo**	**5.27**	**104**	*e*Pn	**Pn**	**16 06 33.8**	**+0.9**
CHMT				*e*Sn	**Sn**	**16 07 32.4**	**-1.5**
C15A	**Salmond Ranch,** baz=5.5	**5.47**	**94**	⇑Pn	**Pn**	**16 06 34.8**	**-0.8**
G13A	**Cobalt** baz=5.6,SNR=9.2	**5.58**	**125**	⇑Pn	**Pn**	**16 06 36.5**	**-0.7**
I12A	**Atlanta** baz=6.1,SNR=10	**6.07**	**138**	⇓Pn	**Pn**	**16 06 42.6**	**-1.3**
I13A	**Wildhorse Cree** baz=6.4,SNR=27	**6.46**	**132**	⇓Pn	**Pn**	**16 06 48.8**	**-0.4**
I14A	**Mackay** baz=6.8,SNR=17	**6.78**	**129**	⇑Pn	**Pn**	**16 06 52.6**	**-1.0**

*ISCJB **12** 16:52:47.4±0.5, 5137N±003×16108E±002, h0km, Error ellipse: s-maj=3.7km s-min=1.9km az=14.4*
*IPEC **12** 16:52:47.6±0.3, 5149N×1596E, h0km, ML2.5/4, Error ellipse: s-maj=4.0km s-min=1.8km az=72.0*
*BGR **12** 16:52:48.0±0.5, 5152N×1609E, h1km, ML3.1, Error ellipse: s-maj=5.6km s-min=2.2km az=11.0*
*NEIC **12** 16:52:47.5±0.7, 5156N×1608E, h5km, ML3.1(SZGRF), Error ellipse: s-maj=8.9km s-min=4.5km az=199.0*
*WAR **12** 16:52:48.9, 5150N×1610E, ML2.8, Mining Induced*
*PRU **12** 16:52:49.5, 5143N×1606E, h0km*
*CSEM **12** 16:52:50.1±0.1, 5139N×1602E, h0km, ML3.5/8, Error ellipse: s-maj=2.4km s-min=1.5km az=13.0*
*VIE **12** 16:52:51.1±0.6, 5123N×1618E, h0km, mb2.5/5, ML3.1/5, Error ellipse: s-maj=3.8km s-min=3.7km az=103.0 59 km WNW of Wroclaw Suspected Mining induced.*

ISC 12 16:52:48.1±0.5, 5146N±003×1609E±002, h0km, n66, σ0s88/125, 3C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**168**	*e*Pg	**Pg**	**16 53 01.2**	**+1.0**
KSP				*e*Sg	**Sg**	**16 53 10.2**	**+1.7**
KSP	**Ksiaz**	**0.64**	**168**	*e*Pg	**Pg**	**16 53 01.3**	**+1.1**
KSP				*e*Sg	**Sg**	**16 53 10.3**	**+1.9**
KSP	**Ksiaz**	**0.64**	**168**	⇓*i*Pg	**Pg**	**16 53 01.2**	**+1.0**
KSP				*e*Sg	**Sg**	**16 53 10.2**	**+1.8**
KSP				*e*		16 53 13.5	
KSP	**Ksiaz**	**0.64**	**168**	Pg	**Pg**	**16 53 01.3**	**+1.1**
KSP				*e*Sg	**Sg**	**16 53 10.0**	**+1.6**
UPC	**Upice**	**0.96**	**183**	*e*Pg	**Pg**	**16 53 07.1**	**+0.7**
DPC	**Dobruska-Polom**	**1.12**	**172**	*e*PG	**Pg**	**16 53 10.1**	**+0.5**
DPC				*e*SG	**Sg**	**16 53 24.7**	**+0.6**
PVCC	**Panska Ves**	**1.34**	**226**	*e*Pg	**Pg**	**16 53 14.0**	**+0.3**
BRG	**Berggiesshubel**	**1.48**	**247**	*e*Pn	**Pn**	**16 53 15.8**	**0.0**
BRG				*e*Sg	**Sg**	**16 53 37.0**	**+1.6**
BRG	**Berggiesshubel**	**1.48**	**247**	Pg	**Pg**	**16 53 16.6**	**+0.3**
BRG				Sg	**Sg**	**16 53 37.0**	**+1.6**
BRG	**Berggiesshubel**	**1.48**	**247**	PN	**Pn**	**16 53 15.0**	**-0.8**
BRG				PG	**Pg**	**16 53 16.6**	**+0.3**
BRG				SG	**Sg**	**16 53 36.6**	**+1.2**
RUE	**Ruedersdorf**	**1.75**	**306**	*e*Pn	**Pn**	**16 53 16.4**	**-3.2**
RUE	**Ruedersdorf**	**1.75**	**306**	*e*Pn	**Pn**	**16 53 16.4**	**-3.3**
PRU	**Pruhonice**	**1.77**	**214**	*e*Pg	**Pg**	**16 53 21.3**	**-0.7**
PRU	**Pruhonice**	**1.77**	**214**	*e*PN	**Pn**	**16 53 19.6**	**-0.3**
PRU				*e*PG	**Pg**	**16 53 21.3**	**-0.7**
PRU				*ex*	x	16 53 38.6	
PRU				*e*SG	**Sg**	**16 53 45.6**	**+0.6**
FBE	**Freiberg**	**1.80**	**254**	*e*Pn	**Pn**	**16 53 19.8**	**-0.6**
FBE				*e*Sg	**Sg**	**16 53 46.0**	**+0.1**
RAC	**Raciborz**	**1.92**	**135**	*e*Pg	**Pg**	**16 53 23.9**	**-1.0**
RAC				*e*Sg	**Sg**	**16 53 49.5**	**-0.3**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**16 53 21.5**	**-0.6**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**16 53 21.4**	**-0.6**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**16 53 21.7**	**-0.3**
MORC				*e*Sg	**Sg**	**16 53 49.5**	**-0.4**
CLL	**Collm**	**1.94**	**267**	*e*Pn	**Pn**	**16 53 21.2**	**-1.0**
CLL				*e*Pg	**Pg**	**16 53 24.0**	**-1.2**
CLL				*e*Sg	**Sg**	**16 53 49.9**	**-0.4**
CLL	**Collm**	**1.94**	**267**	*i* Pn	**Pn**	**16 53 21.2**	**-1.0**
CLL				*e*Pg	**Pg**	**16 53 24.0**	**-1.2**
CLL				*e*Sg	**Sg**	**16 53 51.0**	**+0.7**
CLL	**Collm** comp=Z,10.0nm,0.6s	**1.94**	**267**	*i* Pn	**Pn**	**16 53 21.2**	**-1.0**
CLL				*e*Pg	**Pg**	**16 53 24.0**	**-1.2**
CLL				*ex*	x	16 53 28.0	
CLL				*e*Sg	**Sg**	**16 53 51.0**	**+0.7**
CLL	**Collm** comp=Z,60nm,0.6s	**1.94**	**267**	Pg	**Pg**	**16 53 24.0**	**-1.2**
CLL				Sg	**Sg**	**16 53 49.9**	**-0.4**
OKC	**Ostrava-Krasne**	**2.09**	**140**	*e*Pn	**Pn**	**16 53 23.5**	**-0.8**
OKC	**Ostrava-Krasne**	**2.09**	**140**	*e*PN	**Pn**	**16 53 23.6**	**-0.7**
OKC				*e*PG	**Pg**	**16 53 27.7**	**-0.4**
OKC				*e*SG	**Sg**	**16 53 54.5**	**-0.7**
VRAC	**Vranov** comp=Z,62nm,0.6s	**2.18**	**171**	*e*Pn	**Pn**	**16 53 25.8**	**+0.2**
VRAC				*e*Sg	**Sg**	**16 53 56.7**	**-1.4**
KRUC	**Moravsky** comp=Z,16nm,0.2s	**2.41**	**175**	*e*Pn	**Pn**	**16 53 29.7**	**+1.0**
KRUC				*e*Sg	**Sg**	**16 54 03.5**	**-2.0**
TANN	**Tannenbergstha** comp=Z,29nm,0.4s	**2.52**	**247**	*e*Pn	**Pn**	**16 53 30.4**	**+0.1**
TANN				*e*Sg	**Sg**	**16 54 09.1**	**0.0**
WERD	**Werda**	**2.60**	**248**	*e*Pn	**Pn**	**16 53 31.1**	**-0.2**
WERD				*e*Sg	**Sg**	**16 54 11.6**	**+0.1**
NKC	**Novy Kostel**	**2.62**	**243**	*e*Pg	**Pg**	**16 53 38.1**	**-0.1**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**16 53 31.7**	**+0.2**
NKC				*e*PG	**Pg**	**16 53 38.1**	**-0.1**
NKC				*e*SG	**Sg**	**16 54 13.9**	**+1.9**
OJC	**Ojcow** comp=Z,100nm,0.3s	**2.66**	**116**	*e*Pg	**Pg**	**16 53 38.3**	**-0.7**
OJC				*e*Sg	**Sg**	**16 54 13.9**	**+0.4**
OJC	**Ojcow**	**2.66**	**116**	*e*Sg	**Sg**	**16 54 14.7**	**+1.2**
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pg**	**16 53 38.9**	**-0.1**
OJC				*e*Sg	**Sg**	**16 54 13.9**	**+0.4**
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pg**	**16 53 38.1**	**-0.1**
OJC				Sg	**Sg**	**16 54 14.7**	**+1.2**
JAVC	**Velka Javorina** comp=Z,19nm,0.5s	**2.80**	**158**	*e*Sg	**Sg**	**16 54 17.8**	**-0.1**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*Pg	**Pg**	**16 53 40.4**	**-2.0**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**16 53 34.7**	**+0.2**
KHC				*e*PG	**Pg**	**16 53 40.4**	**-2.0**
KHC				*e*SN	**Sn**	**16 54 09.2**	**-0.2**
KHC				*e*SG	**Sg**	**16 54 18.6**	**-0.5**
MANZ	**Manzenberg** comp=Z,33nm,0.5s	**2.93**	**241**	*e*Pn	**Pn**	**16 53 36.2**	**+0.3**
MANZ				*e*Sg	**Sg**	**16 54 21.6**	**-0.5**
MOX	**Moxa**	**2.94**	**256**	*e*Pn	**Pn**	**16 53 36.4**	**+0.4**
MOX				*e*Pg	**Pg**	**16 53 44.0**	**-0.4**
MOX				*e*Sg	**Sg**	**16 54 23.8**	**+1.4**
MOX	**Moxa**	**2.94**	**256**	*e*PG	**Pg**	**16 53 44.0**	**-0.4**
MOX				*e*SG	**Sg**	**16 54 23.8**	**+1.4**
ROTZ	**Rotzenmuhle**	**3.00**	**237**	*e*Pn	**Pn**	**16 53 36.9**	**+0.1**
ROTZ				*e*Sg	**Sg**	**16 54 23.6**	**-0.7**
GEC2	**GERESS Array S**	**3.04**	**211**	*e*Pn	**Pn**	**16 53 38.2**	**+0.9**
GEC2	**GERESS Array S**	**3.04**	**211**	*e*Pn	**Pn**	**16 53 38.2**	**+0.9**
WET	**Wettzell**	**3.10**	**223**	*e*Pn	**Pn**	**16 53 38.6**	**+0.4**
WET	**Wettzell**	**3.10**	**223**	*e*Pn	**Pn**	**16 53 38.6**	**+0.4**
MODS	**Modra-Piesok**	**3.19**	**166**	*e*Pn	**Pn**	**16 53 40.9**	**+1.5**
MODS				*e*Pg	**Pg**	**16 53 48.7**	**-0.4**
MODS				*e*Sg	**Sg**	**16 54 30.6**	**+0.2**
MODS	**Modra-Piesok**	**3.19**	**166**	*e*PN	**Pn**	**16 53 40.9**	**+1.5**
MODS				*e*PG	**Pg**	**16 53 48.6**	**-0.5**
MODS				*e*SG	**Sg**	**16 54 30.6**	**+0.2**
KOLL	**Kolacno**	**3.25**	**152**	*e*PN	**Pn**	**16 53 41.1**	**+0.9**
KOLL				*e*Pg	**Pg**	**16 53 51.4**	**+1.1**
KOLL				*e*SG	**Sg**	**16 54 33.7**	**+1.3**
ZST	**Bratislava**	**3.34**	**168**	*e*Sg	**Sg**	**16 54 35.0**	**-0.2**
ZST	**Bratislava**	**3.34**	**168**	*e*SG	**Sg**	**16 54 35.0**	**-0.2**
NIE	**Niedzica**	**3.39**	**126**	*e*P	**Pg**	**16 53 52.2**	**-0.8**
NIE				*e*S	**Sg**	**16 54 35.7**	**-1.2**
VYHS	**Vyhne**	**3.46**	**148**	*e*PN	**Pn**	**16 53 42.3**	**-0.8**
VYHS				*e*Pg	**Pg**	**16 53 53.9**	**-0.5**
VYHS				*e*SG	**Sg**	**16 54 40.0**	**+0.8**
CONA	**Conrad Observa** comp=Z,32nm,0.4s	**3.54**	**182**	⇓*i*Pn	**Pn**	**16 53 44.5**	**+0.3**
CONA				⇑*i*Sg	**Sg**	**16 54 40.7**	**-1.1**
CSNA	**Conrad Observa** comp=Z,25nm,0.4s	**3.54**	**182**	⇑*i*Pn	**Pn**	**16 53 45.0**	**+0.7**
CSNA				⇓*i*Sg	**Sg**	**16 54 40.7**	**-1.1**
GRA1	**Grafenberg Arr**	**3.57**	**242**	Sg	**Sg**	**16 54 41.2**	**-1.6**
GRF	**Grafenberg Arr**	**3.57**	**242**	*e*Sg	**Sg**	**16 54 41.2**	**-1.6**
MOA	**Molln**	**3.81**	**199**	⇑*i*Pn	**Pn**	**16 53 48.7**	**+0.8**
MOA				⇓*i*Sg	**Sg**	**16 54 51.5**	**+1.3**
MOA	**Molln** comp=Z,26nm,0.5s	**3.81**	**199**	Pn	**Pn**	**16 53 48.7**	**+0.8**
MOA				Sg	**Sg**	**16 54 51.5**	**+1.2**
STHS	**Stebnicka Huta** comp=Z,26nm,0.5s	**3.88**	**120**	*e*PN	**Pn**	**16 53 49.5**	**+0.6**
STHS				*e*PG	**Pg**	**16 54 01.7**	**-0.7**
STHS				*e*SG	**Sg**	**16 54 56.8**	**+4.2**
ARSA	**Arzberg** comp=Z,23nm,0.7s	**4.23**	**185**	⇓*i*Pn	**Pn**	**16 53 54.2**	**+0.4**
ARSA				⇓*i*Sg	**Sg**	**16 55 02.8**	**-1.2**
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*Pg	**Pg**	**16 54 10.8**	**+0.4**
CRVS				*e*Sg	**Sg**	**16 55 08.0**	**+1.9**
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PG	**Pg**	**16 54 10.8**	**+0.4**
CRVS				*e*SG	**Sg**	**16 55 08.0**	**+1.9**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pg	**Pg**	**16 54 12.7**	**-3.5**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pg	**Pg**	**16 54 12.7**	**-3.5**
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*PN	**Pn**	**16 54

SONM Songino Array 47.46 8 P **P 17 34 08.8 +1.1**
0.5nm,0.4s,mb3.6,baz=190,slow=10,SNR=6.0
MKAR Makanchi Array 47.93 345 P **P 17 34 12.2 +0.9**
0.5nm,0.7s,mb3.5,baz=154,slow=8.4,SNR=7.7
KURK Kurchatov 52.49 344 P **P 17 34 45.2 -0.5**
baz=159,slow=7.2
ZALV Zalesovo Beam 54.17 350 P **P 17 34 58.3 +0.3**
1.1nm,0.3s,mb4.3,baz=159,slow=4.5,SNR=5.4
BVAR Borovoye Array 57.01 340 P **P 17 35 19.2 +0.8**
0.6nm,0.5s,mb3.9,baz=152,slow=9.4,SNR=4.4

IDC ***12*** *17:29:46.1±1.4, 1838N×12099E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, MS3.2/1, Ms1 3.2/1, ms1mx2.2/16, Error ellipse: s-maj=65.1km s-min=20.1km az=57.0*
ISCJB ***12*** *17:29:49.2±2.9, 1864N±007×12061E±009, h10km±20km, mb3.2/3, Error ellipse: s-maj=15.4km s-min=8.7km az=145.7*
MAN ***12*** *17:29:53, 1836N×12082E, h3km, mb4.2, ML3.0, MS2.8*
ISC 12 17:29:49.5±2.4, 1863N±009×12068E±010, h3km±15km, n12, σ1§10/15, mb3.2/3, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ABRA	**Dolores**	**0.97**	**178**	*e*P		**Pg**	**17 30 06.8**	**-1.5**
ABRA				*e*S		**Sg**	**17 30 22.0**	**+1.1**
SCCP	**Mt. Cagua**	**1.35**	**106**	*e*P		**Pn**	**17 30 15.8**	**+0.5**
CAUP	**Cauayan**	**2.00**	**147**	*e*P		**Pn**	**17 30 22.6**	**-1.6**
CAUP				*e*S		**Sn**	**17 30 47.2**	**-2.6**
PALP	**Palanan**	**2.28**	**133**	*e*P		**Pn**	**17 30 28.5**	**+0.4**
PALP				*e*S		**Sn**	**17 30 57.8**	**+1.1**
SCZP	**Santa Cruz**	**2.93**	**195**	*e*P		**Pn**	**17 30 37.0**	**-0.1**
SCZP				*e*S		**Sn**	**17 31 18.6**	**+5.8**
BALP	**Baler**	**3.00**	**163**	*e*P		**Pn**	**17 30 39.3**	**+1.4**
CMAR	**Chiang Mai Arr**	**20.61**	**273**	P		**P**	**17 34 30.4**	**+0.3**
	0.4nm,0.4s,baz=90,slow=9.2,SNR=5.3							
KAPI	**Kappang**	**23.51**	**182**	LR		LR	17 44 10.3	
	comp=Z,54nm,19.1s,baz=215,slow=37							
WRA	**Warramunga Arr**	**40.61**	**160**	P		**P**	**17 37 24.4**	**-6.4**
	0.2nm,0.5s,mb3.0,baz=342,slow=9.1,SNR=9.1							
MKAR	**Makanchi Array**	**42.15**	**321**	P		**P**	**17 37 43.6**	**+0.3**
	0.6nm,0.8s,mb3.2,baz=120,slow=8.8,SNR=3.1							
ASAR	**Alice Springs**	**43.97**	**162**	P		**P**	**17 37 53.1**	**-5.1**
	0.4nm,0.8s,mb3.2,baz=341,slow=7.1,SNR=12							
KURK	**Kurchatov**	**46.16**	**324**	P		**P**	**17 38 14.9**	**-0.5**
	baz=124,slow=8.0							

NEIC 12 17:36:38.7, 3852S×17501E, h308km, MG3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TUVZ	**Tukino**	**0.90**	**146**	*e*P		Pn	17 37 19.8	+0.4
MOVZ	**Moawhango**	**1.06**	**147**	P		Pn	17 37 20.0	-0.1
BKZ	**Black Stump Fm**	**1.33**	**120**	P		Pn	17 37 21.5	0.0
URZ	**Urewera**	**1.67**	**82**	P		Pn	17 37 23.3	-0.4
TSZ	**Takapari Road**	**1.71**	**155**	P		Pn	17 37 23.9	0.0
MWZ	**Matawai**	**1.99**	**85**	P		Pn	17 37 26.1	+0.1
KNZ	**Kokohu**	**2.14**	**104**	P		Pn	17 37 27.3	+0.1
KIW	**Kapiti Island**	**2.34**	**182**	P		Pn	17 37 28.7	-0.1
CAW	**Cannon Point**	**2.59**	**179**	P		Pn	17 37 30.9	-0.1
TCW	**Tory Channel**	**2.75**	**192**	P		Pn	17 37 32.9	+0.4
NNZ	**Nelson**	**2.97**	**204**	P		Pn	17 37 35.2	+0.6
QRZ	**Quartz Range**	**3.00**	**219**	P		Pn	17 37 35.3	+0.5
BSWZ	**Blackbirch Sta**	**3.31**	**195**	P		Pn	17 37 38.8	+0.9
THZ	**Tophouse**	**3.62**	**206**	P		Pn	17 37 41.9	+0.8

ISCJB ***12*** *17:49:13.6±0.7, 4169N±005×4201E±009, h32km±8km, Error ellipse: s-maj=13.1km s-min=6.4km az=32.9*
DDA ***12*** *17:49:13.6, 4158N×4224E, h7km±1km, Md2.8*
TIF ***12*** *17:49:13.7, 4154N×4248E, h20km±2km*
MOS ***12*** *17:49:33.7±0.6, 4263N×4345E, h11km, mb3.7/1, Error ellipse: s-maj=42.7km s-min=14.1km az=55.6*
ISC 12 17:49:14.0±0.8, 4168N±005×4198E±010, h32km±8km, n14, σ0§92/19, 2C-2D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DBOC	**Borcka**	**0.41**	**215**	⇑*i*P		**Pb**	**17 49 23.2**	**+0.1**
DBOC				*i* S		**Sb**	**17 49 30.9**	**+1.5**
ARTV	**Artvin**	**0.50**	**185**	*e*P		**Pb**	**17 49 22.9**	**-1.5**
ARTV				*e*S		**Sb**	**17 49 30.9**	**-0.7**
DBAD	**Bademkaya**	**0.70**	**198**	⇑*i*P		**Pn**	**17 49 27.1**	**-0.4**
DBAD				*i* S		**Sb**	**17 49 37.2**	**+0.2**
DDEM	**Demirkent**	**0.81**	**193**	⇓*i*P		**Pn**	**17 49 28.8**	**-0.3**
DDEM				*i* S		**Sn**	**17 49 40.0**	**+0.1**
ONI	**Oni**	**1.41**	**50**	P		**Pn**	**17 49 35.9**	**-1.6**
ONI				S		**Sn**	**17 49 53.4**	**-1.6**
GOR	**Gori**	**1.62**	**78**	S		**Sn**	**17 50 00.7**	**+0.7**
DIGR	**Digorskoe uzhe**	**1.70**	**44**	*e*PG		**Pn**	**17 49 40.4**	**-1.0**
ZEI	**Tsey**	**1.79**	**52**	⇓*i*PG		**Pn**	**17 49 42.5**	**-0.1**
LACR	**Lac**	**2.06**	**56**	*e*PG		**Pn**	**17 49 47.2**	**+0.8**
TBLG	**Delisi**	**2.06**	**88**	S		**Sn**	**17 50 11.6**	**+0.7**
KORR	**Kora**	**2.09**	**47**	*e*PG		**Pn**	**17 49 47.4**	**+0.7**
LSNR	**Lesken**	**2.09**	**40**	*e*PG		**Pn**	**17 49 48.6**	**+1.9**
MTA	**Mtatsminda**	**2.10**	**89**	S		**Sn**	**17 50 12.2**	**+0.2**
ARNR	**Ardon**	**2.27**	**48**	*e*PG		**Pn**	**17 49 49.4**	**+0.2**

IDC 12 18:12:04.6±6.5, 310N×12379E, h440km±89km, mb2.4/4, mb1 2.7/5, mb1mx2.6/17, mbtmp2.6/5, Error ellipse: s-maj=90.7km s-min=18.4km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KAPI	**Kappang**	**9.02**	**207**	P		P	18 14 10.8	-0.2
	1.6nm,0.3s,baz=194,slow=13,SNR=3.9							
BATI	**Baumata**	**13.22**	**181**	P		P	18 14 57.8	+0.9
	5.7nm,0.3s,baz=278,slow=14,SNR=21							
BATI				S		S	18 17 21.6	+2.3
	0.6nm,0.3s,baz=177,slow=20,SNR=3.6							
WRA	**Warramunga Arr**	**25.13**	**156**	P		P	18 16 52.6	-0.4
	0.2nm,0.3s,baz=335,slow=10,SNR=8.0							
ASAR	**Alice Springs**	**28.37**	**160**	P		P	18 17 21.8	+0.2
	0.1nm,0.4s,baz=337,slow=8.6,SNR=8.6							
SONM	**Songino Array**	**47.02**	**344**	P		P	18 19 54.8	+0.3
	0.3nm,0.6s,baz=166,slow=9.1,SNR=2.5							
MKAR	**Makanchi Array**	**56.44**	**327**	P		P	18 21 02.8	-0.2
	0.2nm,0.4s,baz=126,slow=8.3,SNR=4.2							

DJA ***12*** *18:11:59, 1523S×16852E, h15km, mb5.4/10*
LDG ***12*** *18:12:05.4±0.3, 1367S×167.19E, h10km, Mb5.2/4, Ms3.9/1, Error ellipse: s-maj=37.6km s-min=17.3km az=90.0*
NOU ***12*** *18:12:15.9±1.5, 1400S×16788E, h30km, MD4.1, ML3.4, MS3.5*
BGS ***12*** *18:12:16.8±2.6, 1441S×16729E, h142km, mb5.0(NEIC)*
GCMT ***12*** *18:12:20.2±0.3, 1448S×167.17E, h164km±2km, MW5.0/72, Moment Tensor Solution. s33,c38; s72,c104; Duration: 0 Moment tensor: Scale 10^16 Nm; Mr=3.80±.13; Mθθ=0.53±.16; Mφφ=-4.33±.15; Mrθ=0.66±.13; Mrφ=1.87±.19; Mθφ=-1.55±.14; Best double couple: Mo=4.69600×10^16 NP1:ϕs=344.00000°, δ35.00000°, λ94.00000°. NP2: ϕs=159.00000°, δ56.00000°, λ87.00000°. Principal axes: T 4.1150, Plg79.0000°, Azm59.0000°; N 1.1590, Plg2.0000°, Azm161.0000°; P -5.2770, Plg10.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***12*** *18:12:20.1±0.8, 1453S×16734E, h141km±5km, mb4.5/20, mb1 4.6/20, mb1mx4.6/22, mbtmp4.5/20, MS3.8/7, Ms1 3.8/7, ms1mx3.3/35 Error ellipse: s-maj=17.5km s-min=10.9km az=138.0*
NEIC ***12*** *18:12:20.2±0.2, 1441S×16729E, mb5.0/37, Error ellipse: s-maj=9.8km s-min=5.4km az=137.0*
ISCJB ***12*** *18:12:22.4±1.2, 1448S±005×16723E±003, h173km±11km, mb4.8/74, Error ellipse: s-maj=8.7km s-min=4.9km az=161.9*
MOS ***12*** *18:12:23.3±1.3, 1433S×16708E, h169km, mb4.8/20, Error ellipse: s-maj=9.6km s-min=9.1km az=117.9*
BJI ***12*** *18:12:24.0, 1415S×16735E, h182km, mB5.0, mb4.8*
ISC 12 18:12:23.8±1.0, 1451S±005×16730E±003, h174km±10km, h185km±3.4km; pP-P, n469, σ0§73/284, mb4.8/74, 66C-66D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DZM	**Mont Dzumac**	**7.56**	**186**	*e*P		**Pn**	**18 14 10.8**	**-0.5**
DZM				*e*S		**Sn**	**18 15 35.9**	**-0.3**
DZM				AMP			18 15 49.4	
	comp=Z,576nm,10.9s							
NOUC	**Port Laguerre**	**7.61**	**187**	*e*P		**Pn**	**18 14 10.8**	**-1.1**
NOUC				*e*S		**Sn**	**18 15 37.5**	**+0.2**
NOUC				AMP			18 15 50.4	
	comp=Z,37nm,1.3s							
NORM	**Noumea**	**7.71**	**186**	*e*P		**Pn**	**18 14 14.0**	**+0.6**
EIDS	**Eidsvold**	**18.67**	**232**	*e*P		**P**	**18 16 30.1**	**+1.4**
	comp=Z,228nm,0.6s							
AFI	**Afiamalu**	**20.29**	**91**	P		**P**	**18 16 49.7**	**+3.4**
	comp=Z,92nm,0.6s,baz=198,slow=2.0,SNR=9.2							
CTA	**Charters Tower**	**20.84**	**252**	*e*P		**P**	**18 16 52.0**	**-0.1**
	comp=Z,9.9nm,0.6s							
CTA				*e*S		**S**	**18 20 35.0**	**+0.1**
CTA	**Charters Tower**	**20.84**	**252**	P		**P**	**18 16 51.9**	**-0.2**
	comp=Z,15nm,0.7s,baz=81,slow=10,SNR=17							
CTA				S		**S**	**18 20 34.2**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=357,slow=15,SNR=2.0							
CTA	**Charters Tower**	**20.84**	**252**	*e*P		**P**	**18 16 52.0**	**-0.1**
CTA				*e*S		**S**	**18 20 35.0**	**+0.1**
CTA				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CTAO	**Charters Tower**	**20.84**	**252**	*e*P		**P**	**18 16 51.6**	**-0.5**
ARMA	**Armidale**	**21.42**	**220**	*e*P		**P**	**18 16 58.9**	**+0.8**
ARMA				*e*S		**S**	**18 20 48.0**	**+3.0**
CNB	**Canberra Magne**	**26.25**	**215**	*e*P		**P**	**18 17 44.0**	**+1.1**
CNB				*e*	pP		18 18 20.7	+2.2
CNB				*e*PCP	PcP		18 21 05.7	+0.9
STKA	**Stephens Creek**	**29.16**	**229**	*e*P		**P**	**18 18 09.5**	**+0.7**
	comp=Z,18nm,0.4s,mb5.2							
STKA				*e*			18 19 08.9	
STKA				*e*PCP	PcP		18 21 12.0	0.0
STKA	**Stephens Creek**	**29.16**	**229**	P		**P**	**18 18 09.7**	**+0.9**
	comp=Z,19nm,0.4s,mb5.2,baz=49,slow=8.8,SNR=100							
STKA				PcP	PcP		18 21 11.2	-0.8
	comp=Z,7.1nm,0.7s,baz=359,slow=2.5,SNR=5.8							
STKA				S		**S**	**18 22 48.9**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=320,slow=20,SNR=1.9							
STKA				LR	LR		18 29 51.1	
	comp=Z,200nm,18.4s,baz=37,slow=36							
TOO	**Toolangi**	**30.05**	**216**	*e*P		**P**	**18 18 17.5**	**+1.0**
TOO				*e*PCP	PcP		18 21 03.2	-11
WB2	**Warramunga Arr**	**31.90**	**256**	*e*P		**P**	**18 18 31.6**	**-1.4**
WB2				*e*S		**S**	**18 23 25.4**	**-5.8**
WRAB	**Tennant Creek**	**31.90**	**256**	P		**P**	**18 18 31.0**	**-2.0**
	comp=Z,61nm,0.5s,mb5.6,SNR=7.5							
WRAB	**Tennant Creek**	**31.90**	**256**	*e*P		**P**	**18 18 30.6**	**-2.4**
	comp=Z,5.6nm,0.6s,mb4.5							
WRAB	**Tennant Creek**	**31.90**	**256**	*e*P		**P**	**18 18 35.4**	**+2.4**
WRA	**Warramunga Arr**	**31.91**	**256**	P		**P**	**18 18 31.7**	**-1.5**
	comp=Z,2.5nm,0.5s,mb4.2,baz=84,slow=8.8,SNR=36							
WRA				pP	pP		18 19 01.9	-7.6
	comp=Z,0.8nm,0.5s,baz=79,slow=8.8,SNR=1.5							
WRA				PP	PP		18 19 43.6	-5.2
	comp=Z,1.4nm,0.6s,baz=82,slow=9.8,SNR=6.0							
WRA				PcP	PcP		18 21 19.0	-0.4
	comp=Z,1.6nm,0.9s,baz=88,slow=4.4,SNR=3.7							
WRA				S		**S**	**18 23 27.1**	**-4.3**
	comp=Z,3.8nm,1.1s,baz=86,slow=14,SNR=8.1							
WRA				ScP	ScP		18 24 49.1	+2.4
	comp=Z,1.9nm,0.9s,baz=79,slow=3.7,SNR=6.3							
WRA				PKiKP	PKiKP		18 28 46.1	-1.7
	comp=Z,0.4nm,0.8s,baz=2.5,slow=0.5,SNR=5.5							
WRA	**Warramunga Arr**	**31.91**	**256**	P		**P**	**18 18 31.7**	**-1.5**
WRA				pP	pP		18 19 01.9	-7.6
WRA				PP	PP		18 19 43.6	-5.2
WRA				PcP	PcP		18 21 19.0	-0.4
WRA				S	**S**		**18 23 27.1**	**-4.3**
WRA				ScP	ScP		18 24 49.1	+2.4
WRA	**Warramunga Arr**	**31.91**	**256**	P		**P**	**18 18 31.7**	**-1.4**
WRA							18 19 43.6	
WRA							18 21 19.0	
WRA				S		**S**	**18 23 27.1**	**-4.3**
ASAR	**Alice Springs**	**32.78**	**249**	P		**P**	**18 18 39.2**	**-1.4**
	comp=Z,4.1nm,0.3s,mb4.6,baz=73,slow=9.3,SNR=188							
ASAR				pP	pP		18 19 10.5	-6.6
	comp=Z,3.5nm,0.8s,baz=77,slow=9.6,SNR=1.8							
ASAR				PP	PP		18 19 50.5	-8.0
	comp=Z,5.2nm,0.7s,baz=72,slow=9.7,SNR=5.4							
ASAR				PcP	PcP		18 21 21.3	-0.5
	comp=Z,2.2nm,1.1s,baz=99,slow=2.9,SNR=4.1							
ASAR				S		**S**	**18 23 41.0**	**-3.8**
	comp=Z,3.4nm,1.1s,baz=77,slow=16,SNR=8.8							
ASAR				ScP	ScP		18 24 52.2	+2.7
	comp=Z,2.2nm,0.9s,baz=80,slow=3.3,SNR=9.2							
ASAR				PKiKP	PKiKP		18 28 46.7	-1.6
	comp=Z,0.2nm,0.9s,baz=86,slow=1.3,SNR=3.6							
ASAR	**Alice Springs**	**32.78**	**249**	P		**P**	**18 18 39.2**	**-1.4**
ASAR				pP	pP		18 19 10.5	-6.6
ASAR				PP	PP		18 19 50.5	-8.0
ASAR				PcP	PcP		18 21 21.3	-0.5
ASAR				S	**S**		**18 23 41.0**	**-3.8**
ASAR				ScP	ScP		18 24 52.2	+2.7
ASAR	**Alice Springs**	**32.78**	**249**	P		**P**	**18 18 39.3**	**-1.4**
ASAR				*PP	pP		18 19 10.5	-6.6
ASAR							18 19 50.5	
ASAR							18 21 21.3	
ASAR				S		**S**	**18 23 41.1**	**-3.7**
KAKA	**Kakadu**	**33.91**	**269**	*e*P		Px	18 18 38.4	
	comp=Z,6.4nm,0.7s							
KAKA	**Kakadu**	**33.91**	**269**	P		Px	18 18 41.9	
	comp=Z,19nm,0.8s,comp=Z,165nm							
GUMO	**Guam**	**35.67**	**320**	LR		LR	18 32 49.2	
	comp=Z,72nm,18.2s,baz=140,slow=34							
FORT	**Forrest**	**39.44**	**239**	*e*P		**P**	**18 19 37.1**	**0.0**
	comp=Z,15nm,0.5s,mb4.9							
PPT	**Papeete**	**41.49**	**100**	*e*LR		LR	18 31 31.3	
	comp=Z,116nm,27.8s							
TBI	**Tubuai**	**41.70**	**109**	*e*LQ			18 30 09.9	
	comp=Z,440nm,28.2s							
TBI				*e*LR		LR	18 32 04.5	
	comp=Z,146nm,36.8s							
BATI	**Baumata**	**42.80**	**271**	P		**P**	**18 20 06.2**	**+1.4**
	comp=Z,40nm,0.7s,mb5.1,baz=189,slow=1.5,SNR=27							
BATI				LR		LR	18 35 19.5	
	comp=Z,170nm,19.0s,baz=10,slow=32							
BATI	**Baumata**	**42.80**	**271**	P		**P**	**18 20 06.4**	**+1.7**
	comp=Z,42nm,1.1s,mb5.0							
BATI	**Baumata**	**42.80**	**271**	P		**P**	**18 20 06.2**	**+1.5**
	comp=Z,42nm,1.1s,mb5.0							
MBWA	**Marble Bar**	**45.63**	**255**	*e*P		**P**	**18 20 26.8**	**-0.4**
MBWA	**Marble Bar**	**45.63**	**255**	P		**P**	**18 20 26.1**	**-1.1**
KAPI	**Kappang**	**47.72**	**276**	P		**P**	**18 20 43.0**	**-0.4**
	comp=Z,11nm,0.7s,mb4.6,baz=132,slow=8.3,SNR=8.3							
KAPI				pP	pP		18 21 16.6	-5.5
	comp=Z,2.3nm,0.3s,baz=212,slow=15,SNR=1.3							
KAPI				S		**S**	**18 27 26.4**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=146,slow=15,SNR=2.4							
KAPI	**Kappang**	**47.72**	**276**	P		**P**	**18 20 43.5**	**0.0**
	comp=Z,33nm,1.5s,mb4.7							
KAPI	**Kappang**	**47.72**	**276**	P		**P**	**18 20 43.3**	**-0.2**
	comp=Z,33nm,1.5s,mb4.7							
KLBR	**Kellerberrin**	**48.24**	**241**	*e*P		**P**	**18 20 46.0**	**-1.2**
	comp=Z,7.5nm,0.5s,mb4.6							
PCI	**Palu**	**48.81**	**282**	P		**P**	**18 20 53.7**	**+1.9**
	comp=Z,103nm,1.2s,comp=Z,916nm,mb5.3							
PCI	**Palu**	**48.81**	**282**	P		**P**	**18 20 53.6**	**+1.8**
	comp=Z,103nm,1.2s,comp=Z,916nm,mb5.3							
NWAO	**Narrogin (SRO)**	**48.89**	**239**	P		**P**	**18 20 51.4**	**-0.8**
	comp=Z,4.9nm,0.4s,mb4.5,baz=74,slow=2.9,SNR=10							
NWAO	**Narrogin (SRO)**	**48.89**	**239**	*e*P		**P**	**18 20 51.4**	**-0.8**
MUN	**Mundaring**	**49.60**	**240**	*e*P		**P**	**18 20 56.7**	**-0.9**
IGBI	**Denpasar**	**51.31**	**270**	P		**P**	**18 21 11.7**	**+1.1**
	comp=Z,207nm,1.1s,mb5.7							
BBKI	**Banjar Baru**	**52.84**	**277**	P		**P**	**18 21 23.5**	**+1.5**
	comp=Z,51nm,1.6s,comp=Z,2um,mb5.0							
BBKI	**Banjar Baru**	**52.84**	**277**	P		**P**	**18 21 23.6**	**+1.6**
	comp=Z,51nm,1.6s,comp=Z,2um,mb5.0							
SJI	**Sawahan**	**54.80**	**271**	P		**P**	**18 21 36.9**	**+0.7**
BJII	**Banjamegara**	**56.88**	**271**	P		**P**	**18 21 51.4**	**+0.4**
STKI	**Sintang**	**57.06**	**280**	P		**P**	**18 21 53.5**	**+1.2**
STKI	**Sintang**	**57.06**	**280**	P		**P**	**18 21 54.1**	**+1.8**
	comp=Z,28nm,1.2s,mb5.0							
MJAR	**Matsushiro Arr**	**57.73**	**332**	P		**P**	**18 21 55.4**	**-1.0**
	comp=Z,5.6nm,0.5s,mb4.7,baz=172,slow=7.4,SNR=25							
MAJO	**Matsushiro**	**57.73**	**332**	*e*P		**P**	**18 21 55.7**	**-0.8**
	comp=Z,18nm,0.5s,mb5.2							
MAJO	**Matsushiro**	**57.73**	**332**	*e*P		**P**	**18 21 55.7**	**-0.7**
MAJO				pmax	pmax			
	comp=Z,18nm,0.5s,mb5.2							
MAT	**Matsushiro**	**57.73**	**332**	P		**P**	**18 21 55.1**	**-1.3**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LEM	**Lembang**	**59.01**	**271**	P		**P**	**18 22 06.9**	**+1.1**
	comp=Z,98nm,1.0s,mb5.6							
LEM	**Lembang**	**59.01**	**271**	P		**P**	**18 22 06.5**	**+0.7**
	comp=Z,98nm,1.0s,mb5.6							
YHNB	**Yeheng**	**59.37**	**311**	*e*P		**P**	**18 22 07.7**	**-0.3**
	comp=Z,25nm,0.6s,mb5.2							
DBJI	**Dramaga**	**59.91**	**271**	P		**P**	**18 22 12.8**	**+0.8**
	comp=Z,73nm,1.2s,mb5.4							
DBJI	**Dramaga**	**59.91**	**271**	P		**P**	**18 22 12.9**	**+0.9**
	comp=Z,73nm,1.2s,mb5.4							
ERM	**Erimo**	**60.49**	**339**	*e*P		**P**	**18 22 17.0**	**+1.7**
SBA	**Scott Base**	**63.35**	**180**	*e*P		**P**	**18 22 34.8**	**+0.8**
	comp=Z,33nm,1.2s,mb5.0							
SBA	**Scott Base**	**63.35**	**180**	*e*P		**P**	**18 22 34.8**	**+0.8**
SBA				pmax	pmax			
	comp=Z,33nm,1.2s,mb5.0							
KSRS	**Korea Array**	**63.58**	**326**	P		**P**	**18 22 35.9**	**-0.1**
	comp=Z,4.0nm,0.8s,mb4.3,baz=138,slow=7.6,SNR=14							
KSRS				pP	pP		18 23 10.0	-6.8
	comp=Z,2.8nm,1.1s,baz=142,slow=9.8,SNR=2.2							
YSS	**Yuzh-Sakhalins**	**65.03**	**342**	⇑*i*P		**P**	**18 22 46.0**	**+0.8**
YSS				*e*			18 23 18.1	
YSS				pmax	pmax			
	comp=Z,60nm,1.0s,mb5.4							
NJ2	**Nanjing**	**65.54**	**316**	*e*P		**P**	**18 22 49.2**	**+0.4**
NJ2				AMB	AMB			
	comp=Z,20nm,0.6s,mb5.1							
QIZ	**Qiongzhong**	**65.66**	**299**	P		**P**	**18 22 50.3**	**+0.4**
QIZ				S		S	18 31 20.8	-1.2
QIZ				LR		LR		
	comp=Z,374nm,19.5s							
PDSI	**Padang**	**67.37**	**275**	P		**P**	**18 23 01.1**	**+0.2**
	comp=Z,41nm,0.8s,mb5.3							
WHN	**Wuhan**	**67.82**	**312**	⇓P		**P**	**18 23 03.3**	**0.0**
PEA0B	**Petropavlovsk-**	**67.85**	**354**	*e*P		**P**	**18 23 03.4**	**+0.4**
PETK	**Petropavlovsk-**	**67.85**	**354**	P		**P**	**18 23 03.5**	**+0.6**
	comp=Z,54nm,0.8s,mb5.3,baz=145,slow=6.5,SNR=93							
MDJ	**Mudanjiang**	**68.10**	**332**	P		**P**	**18 23 04.5**	**-0.2**
MDJ				AP	pP		18 23 47.0	+0.9
MDJ				XP	sP		18 24 06.1	+1.3
MDJ				PP	PP		18 25 36.4	-1.2
MDJ				S	S		18 31 49.2	-1.1
MDJ				SCS	ScS		18 32 45.6	-1.6
MDJ				XS	sS		18 33 03.7	+1.5
MDJ				SS	SS		18 36 15.5	-1.4
MDJ				AMB	AMB			
	comp=Z,20nm,1.7s,mb4.6							
MDJ				AMB	AMB			
	comp=Z,153nm,4.8s							
MDJ	**Mudanjiang**	**68.10**	**332**	*e*P		**P**	**18 23 04.7**	**0.0**
	comp=Z,54nm,1.5s,mb5.1							
HABR	**Khabarovsk**	**68.95**	**338**	*e*P		**P**	**18 23 08.9**	**-1.0**
HABR				*e*			18 23 32.0	
HABR				*e*S		S	18 31 58.7	-1.4
HABR				*e*			18 32 49.9	
HABR				*e*SS		SS	18 36 29.2	-0.5
CN2	**Changchun**	**69.48**	**329**	⇑P		**P**	**18 23 13.6**	**+0.3**
CN2				AMB	AMB			
	comp=Z,20nm,0.7s,mb5.0							
KLR	**Kul'dur**	**70.82**	**336**	*e*P		**P**	**18 23 17.8**	**-3.5**
KLR				pmax	pmax			
	comp=E,28nm,1.6s							
KLR				pmax	pmax			
	comp=Z,80nm,1.6s,mb5.2							
GYA	**Guiyang**	**71.62**	**305**	⇑*i*P		**P**	**18 23 27.1**	**+0.5**
GYA				AP	pP		18 24 12.2	+3.8
GYA				XP	sP		18 24 32.6	+5.6
GYA				S	S		18 32 31.8	-0.3
GYA				SCS	ScS		18 33 11.4	-4.3
GYA				XS	sS		18 33 51.2	+6.7
GYA				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.6							
GYA				AMB	AMB			
	comp=Z,70nm,6.0s							
XAN	**Xi'an**	**73.57**	**313**	P		**P**	**18 23 37.8**	**-0.2**
XAN				AMB	AMB			
	comp=Z,14nm,1.0s,mb4.7							
XAN				AMB	AMB			
	comp=Z,59nm,16.2s							
BSI	**Banda Aceh**	**74.09**	**280**	P		**P**	**18 23 42.4**	**+0.9**
	comp=Z,68nm,1.5s,mb5.2							
BSI	**Banda Aceh**	**74.09**	**280**	P		**P**	**18 23 41.8**	**+0.3**
	comp=Z,68nm,1.5s,mb5.2							
KMI	**Kunming**	**74.22**	**302**	P		**P**	**18 23 43.2**	**+1.3**
KMI				AP	pP		18 24 27.4	+3.4
KMI

LZH AMB AMB
comp=Z,37nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,130nm,4.5s
LZH Lanzhou 78.20 312 *e*P **P 18 24 05.5 +1.3**
comp=Z,37nm,1.3s,mb4.8
LZH pP pP 18 24 51.0 +4.4
LZH sP sP 18 25 11.9 +6.8
LZH PP PP 18 27 06.3 +2.7
LZH S S 18 33 43.0 -1.5
LZH sS sS 18 34 58.4 +0.2
LZH SS SS 18 38 51.0 +0.1
LZH Lanzhou 78.20 312 *e*P **P 18 24 05.5 +1.3**
LZH *PP pP 18 24 51.0 +4.4
LZH 18 27 06.3
LZH S S 18 33 43.0 -1.5
LZH SS SS 18 38 51.0 +0.1
LZH pmax pmax
comp=Z,37nm,1.3s,mb4.8
CLNS Chul'man 79.34 338 *e*P **P 18 24 00.4 -9.5**
CLNS pmax pmax
comp=Z,17nm,1.0s,mb4.6
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,0.9s
YAK Yakutsk 81.83 343 *e*P **P 18 24 22.7 -0.3**
comp=E,121nm,1.0s,mb5.5
YAK Yakutsk 81.83 343 *e*P **P 18 24 22.2 -0.8**
YAK pmax pmax
comp=Z,91nm,1.1s,mb5.3
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,29nm,1.4s
ULN Ulaanbaatar 81.98 324 *e*P **P 18 24 24.7 +0.6**
comp=N,91nm,1.8s,mb5.1
ULN Ulaanbaatar 81.98 324*c i*P **P 18 24 24.6 +0.5**
MAW Mawson 82.10 202 *e*P **P 18 24 24.9 +0.4**
comp=N,4.5nm,0.9s,mb4.1
MAW Mawson 82.10 202 P **P 18 24 24.9 +0.4**
comp=N,4.4nm,0.5s,mb4.3,baz=126,slow=6.9,SNR=14
MAW Mawson 82.10 202 *e*P **P 18 24 24.9 +0.4**
MAW pmax pmax
comp=Z,5.0nm,0.9s
SLKM Skilak Lake 82.12 20 *e*P **P 18 24 23.8 -0.7**
BILL Bilibino 82.33 360 *e*P **P 18 24 24.8 -0.6**
comp=Z,53nm,1.2s,mb5.0
BILL Bilibino 82.33 360*α i*P **P 18 24 25.6 +0.1**
BILL pmax pmax
comp=Z,48nm,1.1s,mb5.0
SONM Songino Array 82.34 324 P **P 18 24 26.4 +0.4**
comp=Z,4.1nm,0.5s,mb4.3,baz=137,slow=4.1,SNR=34
SONM pP pP 18 25 01.3 -7.6
comp=Z,0.7nm,0.7s,baz=146,slow=4.5,SNR=1.0
GTA Gaotai 82.54 314 *e*P **P 18 24 28.3 +1.0**
GTA AP pP 18 25 09.4 -0.7
GTA XP sP 18 25 32.8 +4.3
GTA PP PP 18 27 43.1 +3.7
GTA S S 18 34 28.7 -0.9
GTA XS sS 18 35 49.6 +5.5
GTA AMB AMB
comp=Z,17nm,1.4s,mb4.6
GTA AMB AMB
comp=Z,134nm,4.5s
GTA LR LR
comp=N,197nm,16.2s
GTA LR LR
comp=E,128nm,16.2s
GTA LR LR
comp=Z,196nm,16.8s
PMR Palmer 83.28 19 *e*P **P 18 24 30.0 -0.6**
comp=Z,37nm,1.4s,mb4.9
PMR Palmer 83.28 19 *e*P **P 18 24 30.0 -0.5**
PMR pmax pmax
comp=Z,37nm,1.4s,mb4.9
KCPM Cahto Peak 83.80 46 *e*P **P 18 24 33.9 +0.2**
JRSC Jasper Ridge 83.83 49 ⇑P **P 18 24 33.9 -0.1**
baz=84
JCC Jacoby Creek 83.96 45 ⇓P **P 18 24 34.5 +0.1**
baz=84
V03C Hunter Liggett 84.04 51 ⇑P **P 18 24 34.3 -0.7**
baz=84
CHUM Lake Minchumin 84.07 17 *e*P **P 18 24 33.6 -0.9**
comp=Z,21μm,0.8s
KTH Kantishna Hill 84.22 17 *e*P **P 18 24 33.8 -1.5**
comp=Z,24nm,0.9s,mb4.9
BOD Bodaibo 84.29 334 *e*P **P 18 24 33.9 -1.8**
BOD pmax pmax
comp=Z,14nm,1.7s,mb4.4
TRF Thorofare Moun 84.32 18 *e*P **P 18 24 34.6 -1.2**
comp=Z,3μm,0.8s
BDM Black Diamond 84.32 49 ⇑P **P 18 24 36.2 -0.2**
baz=84
PACP Pacheco Peak 84.38 50 ⇑P **P 18 24 36.5 -0.2**
baz=84
GASB Alder Springs 84.39 47 ⇑P **P 18 24 36.6 -0.1**
baz=84
N02C Big Bar 84.46 46 ⇑P **P 18 24 37.6 +0.6**
baz=84
BPAW Bear Paw Mtn. 84.61 17 *e*P **P 18 24 35.5 -1.7**
comp=Z,17nm,1.3s,mb4.6
WDC Whiskeytown Da 84.89 46 ⇓P **P 18 24 39.7 +0.6**
baz=85
MCK McKinley 84.94 18 *e*P **P 18 24 36.9 -2.0**
comp=Z,18μm,1.2s
M02C Callahan 85.00 45 ⇓P **P 18 24 40.0 +0.3**
baz=85
ORV Oroville 85.22 47 ⇑P **P 18 24 40.2 -0.6**
baz=85,SNR=6.1
S05C Merced 85.22 50 ⇑P **P 18 24 40.6 -0.2**
baz=85
YBH Yreka Blue Hor 85.24 45 P **P 18 24 41.6 +0.8**
comp=Z,7.6nm,0.6s,mb4.6,baz=166,slow=0.4,SNR=16
YBH Yreka Blue Hor 85.24 45 ⇓P **P 18 24 41.7 +0.8**
baz=85
ZAK Zakamensk 85.39 325⇓*i*P **P 18 24 41.0 -0.4**
ZAK pmax pmax
comp=Z,13nm,1.4s,mb4.5
HUMO Hull Mountain 85.43 44 ⇑P **P 18 24 42.4 +0.6**
baz=86
IMA2 Indian Mountai 85.43 15 *e*P **P 18 24 41.1 -0.2**
CMB Columbia Colle 85.43 49 *e*P **P 18 24 41.9 -0.1**
comp=Z,6.6nm,0.8s,mb4.4
CMB Columbia Colle 85.43 49 *e*P **P 18 24 41.9 0.0**
CMB pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
CMB Columbia Colle 85.43 49 ⇓P **P 18 24 41.9 0.0**
baz=86,SNR=5.9
LAVA Lava Cap Winer 85.45 48 ⇓P **P 18 24 42.2 +0.2**
baz=86
M03C McCloud 85.46 45 ⇑P **P 18 24 41.8 -0.1**
baz=86
LSA Lhasa 85.47 302 *e*P **P 18 24 42.6 +0.2**
comp=Z,5.3nm,0.8s,mb4.3
LSA Lhasa 85.47 302 *e*P **P 18 24 42.6 +0.3**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
ARVC Arvin 85.53 52 ⇓P **P 18 24 42.8 +0.3**
baz=86
T06C Millerton Lake 85.55 50 ⇑P **P 18 24 42.4 -0.1**
baz=86,SNR=5.2
O04C Chester 85.81 47 ⇓P **P 18 24 44.2 +0.4**
baz=86,SNR=6.0
TLY Talaya 85.83 326 *e*P **P 18 24 43.5 0.0**
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.5
TLY MLR MLR
comp=Z,61nm,16.0s
KCC Kaiser Creek 85.95 50 ⇓P **P 18 24 44.6 +0.1**
baz=86,SNR=11
ISA Isabella 85.99 52 ⇑P **P 18 24 45.0 +0.3**
baz=86,SNR=6.2
EDW2 Edwards Air Fo 86.08 53 ⇑P **P 18 24 45.4 +0.2**
baz=86,SNR=5.7
COLA College 86.10 18 *e*P **P 18 24 43.5 -1.1**
comp=Z,11nm,0.8s,mb4.6
COLA College 86.10 18 *e*P **P 18 24 43.5 -1.1**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.6
BEKR Beckwourth 86.15 47 ⇑P **P 18 24 45.7 +0.3**
baz=86
MURC Murrieta 86.26 54 ⇓P **P 18 24 46.1 0.0**
baz=86
R06C Coleville 86.30 49 ⇓P **P 18 24 46.6 +0.4**
baz=86
LRMC Laurel Mountai 86.52 52 ⇑P **P 18 24 47.8 +0.4**
baz=87
MTUM Tungsten Hills 86.53 50 *e*P **P 18 24 48.1 +0.8**
G04A Mulino 86.81 42 ⇓P **P 18 24 49.8 +1.3**
baz=87
PFO Pinyon Flat Ob 86.84 54 P **P 18 24 49.3 +0.3**
comp=Z,4.8nm,0.7s,mb4.4,baz=154,slow=1.4,SNR=5.8
PFO LR LR 18 59 57.5
comp=Z,67nm,19.1s,baz=294,slow=33
PFO Pinyon Flat Ob 86.84 54 *e*P **P 18 24 49.1 +0.2**
comp=Z,4.5nm,0.9s,mb4.3
PFO Pinyon Flat Ob 86.84 54 *e*P **P 18 24 49.2 +0.2**
PFO pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
PFO Pinyon Flat Ob 86.84 54 ⇓P **P 18 24 48.8 -0.2**
baz=87
MPMC Manual Prospec 86.88 52 ⇓P **P 18 24 49.4 +0.3**
baz=87,SNR=6.0
NVAR Mina Array Bea 87.10 49 P **P 18 24 50.7 +0.6**
comp=Z,4.6nm,0.8s,mb4.3,baz=227,slow=6.1,SNR=19
NVAR Mina Array Bea 87.10 49 P **P 18 24 50.7 +0.6**
COLD Coldfoot 87.21 15 *e*P **P 18 24 50.6 +0.7**
comp=Z,10nm,0.9s,mb4.7
GRAC Grapevine Rang 87.29 51 ⇓P **P 18 24 51.4 +0.3**
baz=87,SNR=6.5
O07A Toulon 87.31 47 ⇓P **P 18 24 51.2 +0.1**
baz=87
BELC Belle Mtn. 87.33 54 ⇑P **P 18 24 51.5 +0.2**
baz=87,SNR=5.3
FURC Furnace Creek, 87.50 51 ⇑P **P 18 24 51.7 -0.4**
baz=88
Q08A Gabbs 87.53 49 ⇑P **P 18 24 51.4 -0.7**
baz=88
TAPN Taplejung 87.60 299 *e*P **P 18 24 52.9 +0.2**
comp=Z,20nm,0.8s,mb5.0
S09A Goldfield 87.65 50 ⇑P **P 18 24 52.3 -0.4**
baz=88,SNR=5.9
L07A Adell 87.67 46 ⇑P **P 18 24 52.6 -0.1**
baz=88
ODAN Odare 87.73 298 *e*P **P 18 24 52.5 -0.8**
comp=Z,38nm,0.8s,mb5.3
I06A Prineville 87.80 44 ⇓P **P 18 24 53.2 -0.1**
baz=88
IRM Iron Mountain 88.05 54 ⇓P **P 18 24 54.5 -0.2**
baz=88,SNR=8.9
EGAK Eagle 88.10 20 *e*P **P 18 24 52.7 -1.4**
comp=Z,4.5nm,0.8s,mb4.3
TPNV Topopah Spring 88.12 51 *e*P **P 18 24 55.1 +0.2**
comp=Z,3.8nm,0.6s,mb4.4
TPNV Topopah Spring 88.12 51 *e*P **P 18 24 55.2 +0.3**
TPNV pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
TPNV Topopah Spring 88.12 51 ⇑P **P 18 24 55.0 0.0**
baz=88,SNR=6.9
S10A Tonopah Range, 88.19 50 ⇑P **P 18 24 55.5 +0.3**
baz=88,SNR=8.4
E06A Yakima 88.31 41 ⇓P **P 18 24 56.1 +0.5**
baz=88
V11A Goodsprings 88.38 52 ⇑P **P 18 24 56.2 0.0**
baz=88,SNR=6.5
Y12C Blythe 88.41 55 ⇓P **P 18 24 56.4 0.0**
baz=88
RAMN Ramite 88.43 298 *e*P **P 18 24 55.7 -0.9**
comp=Z,13nm,0.7s,mb4.9
Q10A Clear Creek Ra 88.64 49 ⇑P **P 18 24 57.5 +0.2**
baz=89
D06A Cle Elum 88.65 40 ⇑P **P 18 24 57.6 +0.4**
baz=89
G07A Ruggs Ranch, H 88.66 43 ⇑P **P 18 24 57.6 +0.4**
baz=89
J08A Circle Bar Ran 88.75 45 ⇑P **P 18 24 57.8 0.0**
baz=89,SNR=5.9
JIRN Jiri 88.98 299 *e*P **P 18 24 59.6 +0.4**
comp=Z,21nm,0.7s,mb5.2
T11A Corn Creek, Al 88.99 51 ⇓P **P 18 24 59.6 +0.5**
baz=89
K09A Rome 89.03 45 ⇓P **P 18 24 59.2 +0.2**
baz=89
H08A Prairie City 89.04 43 ⇑P **P 18 24 59.1 0.0**
baz=89
LPIG La Paz 89.08 65 LR LR 19 01 27.1
comp=Z,50nm,18.5s,baz=60,slow=33
D07A Quincy 89.19 41 ⇓P **P 18 24 59.7 0.0**
baz=89
Q11A Duckwater 89.19 50 ⇑P **P 18 25 00.2 +0.3**
baz=89,SNR=6.5
X13A Yucca 89.22 54 ⇓P **P 18 25 00.5 +0.3**
baz=89,SNR=5.8
214A Organ Pipe Nat 89.23 57 ⇑P **P 18 24 60.0 -0.3**
baz=89
J09A Fry Pan Ranch, 89.24 45 ⇓P **P 18 25 00.3 +0.3**
baz=89,SNR=6.9
GUN Gumba 89.32 299 *e*P **P 18 25 00.6 -0.2**
W13A Hualapai Mount 89.34 54 ⇓P **P 18 25 00.8 +0.1**
baz=89,SNR=5.4
S12A Delmar Landin 89.39 51 ⇓P **P 18 25 01.7 +0.8**
baz=90,SNR=8.9
M10A I.L. Ranch, Tu 89.45 47 ⇓P **P 18 25 01.3 +0.3**
baz=90
I09A Lost Marbles R 89.47 44 ⇑P **P 18 25 01.4 +0.3**
baz=90
V13A Grand Canyon W 89.50 53 ⇑P **P 18 25 01.1 -0.3**
baz=90
E08A Dider Farm, El 89.51 42 ⇓P **P 18 25 01.4 +0.2**
baz=90
O11A Cowboy Ranch, 89.62 48 ⇑P **P 18 25 01.6 -0.3**
baz=90,SNR=7.9
PKI Pulchoki 89.62 298 *e*P **P 18 25 02.0 -0.2**
K10A MacKenzie Ranc 89.65 46 ⇑P **P 18 25 01.7 -0.2**
baz=90
L10A Juniper Basin 89.69 46 ⇓P **P 18 25 02.2 +0.1**
baz=90,SNR=5.6
TIXI Tiksi 89.76 349 *e*P **P 18 25 01.1 -0.8**
comp=Z,14nm,0.9s,mb4.9
TIXI Tiksi 89.76 349 *e*P **P 18 25 01.0 -0.8**
TIXI pmax pmax
comp=Z,14nm,0.9s,mb4.9
H09A Durkee 89.77 44 ⇓P **P 18 25 02.8 +0.3**
baz=90,SNR=5.1
KKN Kakani 89.79 299 *e*P **P 18 25 02.9 -0.1**
comp=Z,20nm,0.8s,mb5.1
KKN Kakani 89.79 299 *e*P **P 18 25 02.9 -0.1**
KKN pmax pmax
comp=Z,20nm,0.8s,mb5.1
R12A Pony Springs, 89.80 50 ⇑P **P 18 25 03.3 +0.5**
baz=90,SNR=5.0
Q12A Willow Creek R 89.87 50 ⇓P **P 18 25 03.1 +0.1**
baz=90,SNR=5.3
DMN Daman 89.89 298 *e*P **P 18 25 03.6 +0.1**
comp=Z,51nm,1.0s,mb5.4
T13A Saint George 89.92 52 ⇓P **P 18 25 03.6 +0.3**
baz=90,SNR=7.1
X14A Yava 89.92 54 ⇓P **P 18 25 03.5 +0.1**
baz=90,SNR=6.4
M11A Holland Ranch, 89.95 47 ⇓P **P 18 25 03.3 -0.1**
baz=90
W14A Seligman 90.00 54 ⇑P **P 18 25 04.1 +0.4**
baz=90,SNR=5.6
V14A Boquillas Ranc 90.11 53 ⇑P **P 18 25 04.2 -0.1**
baz=90,SNR=5.9
E09A Wood Farm, Sta 90.11 42 ⇑P **P 18 25 04.3 +0.3**
baz=90
ELK Elko 90.12 48 P **P 18 25 04.5 +0.3**
comp=Z,5.5nm,0.7s,mb4.6,baz=306,slow=2.9,SNR=10
ELK LR LR 19 00 20.0
comp=Z,79nm,18.0s,baz=282,slow=32
D09A Jones Farm, Ri 90.20 41 ⇓P **P 18 25 04.5 +0.1**
baz=90
Y15A Casa Rosa Ranc 90.21 55 ⇓P **P 18 25 04.6 -0.2**
baz=90,SNR=5.8
L11A Cat Creek Ranc 90.22 46 ⇓P **P 18 25 04.7 +0.1**
baz=90,SNR=8.5
R13A O'Grain Ranch, 90.23 51 ⇑P **P 18 25 04.9 +0.1**
baz=90
O12A Currie 90.32 48 ⇑P **P 18 25 05.3 +0.2**
baz=90
G10A Bishop Farm, J 90.35 43 ⇑P **P 18 25 05.4 +0.3**
baz=90
H10A Noah's Angus R 90.36 44 ⇓P **P 18 25 05.3 +0.1**
baz=90,SNR=13
GKN Gorkha 90.40 299 *e*P **P 18 25 05.0 -0.8**
X15A Humboldt 90.44 55 ⇓P **P 18 25 05.1 -0.8**
baz=90,SNR=7.0
F10A Beach Ranch, E 90.51 42 ⇓P **P 18 25 06.1 +0.2**
baz=91
P13A Bates Ranch, G 90.60 49 ⇑P **P 18 25 06.8 +0.3**
baz=91
A09A Danville 90.72 39 ⇓P **P 18 25 07.0 +0.2**
baz=91
L12A House Creek Ra 90.73 47 ⇑P **P 18 25 07.0 0.0**
baz=91,SNR=6.3
D10A Wagner Farm, O 90.86 41 ⇓P **P 18 25 07.5 0.0**
baz=91
G11A Walters Elk Ra 90.95 43 ⇓P **P 18 25 08.0 +0.1**
baz=91
K12A Draper Farm, C 90.97 46 ⇓P **P 18 25 08.0 -0.1**
baz=91
U15A North Rim 90.97 53 ⇓P **P 18 25 08.9 +0.6**
baz=91,SNR=5.6
J12A Stokes Ranch, 91.03 46 ⇓P **P 18 25 09.1 +0.7**
baz=91,SNR=8.8
W16A Flagstaff 91.18 54 ⇓P **P 18 25 09.2 -0.1**
baz=91
I12A Atlanta 91.19 45 ⇓P **P 18 25 09.0 0.0**
baz=91
KOLN Koldanda 91.22 298 *e*P **P 18 25 08.6 -1.0**
DANN Dangsing 91.24 299 *e*P **P 18 25 08.8 -0.9**
WUAZ Wupatki 91.42 54 *e*P **P 18 25 11.0 +0.7**
comp=Z,5.6nm,0.8s,mb4.7
D11A Klaveano Farm, 91.46 42 ⇓P **P 18 25 10.3 0.0**
baz=92
G12A Big Creek, Yel 91.49 44 ⇑P **P 18 25 10.4 -0.1**
baz=92
H12A Diamond D Ranc 91.62 44 ⇑P **P 18 25 10.6 -0.4**
baz=92
F12A Elk City 91.74 43 ⇓P **P 18 25 11.4 -0.2**
baz=92
C11A Tepee Creek (N 91.78 41 ⇑P **P 18 25 11.8 0.0**
baz=92
PYUN Piuthan 91.83 298 *e*P **P 18 25 11.3 -1.1**
comp=Z,12nm,1.0s,mb4.8
H13A Challis 92.03 44 ⇑P **P 18 25 12.7 -0.3**
baz=92
A11A Hall Mountain, 92.09 40 ⇑P **P 18 25 12.7 -0.4**
baz=92
D12A Red Ives Fores 92.10 42 ⇑P **P 18 25 13.0 -0.2**
baz=92
F13A Darby 92.36 43 ⇑P **P 18 25 14.2 -0.3**
baz=92
WMQ Urumqi 92.60 315 P **P 18 25 15.6 0.0**
WMQ AP pP 18 26 02.6 +3.4
WMQ XP sP 18 26 22.6 +5.2
WMQ PP PP 18 29 01.6 +1.8
WMQ SKS 18 35 28.6
WMQ S S 18 35 59.6 -5.4
WMQ SS SS 18 42 19.6 -2.2
WMQ AMB AMB
comp=Z,17nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,67nm,8.0s
WMQ LR LR
comp=N,154nm,19.0s
WMQ LR LR
comp=E,146nm,18.0s
WMQ LR LR
comp=Z,114nm,18.0s
T18A Mexican Hat 93.04 53 ⇓P **P 18 25 17.6 -0.2**
baz=93
HYB Hyderabad 93.09 287 *e*P **P 18 25 13.0 -5.5**
SNAA Sanae 93.77 183 *e*P **P 18 25 17.7 -2.9**
SNAA *e* 18 25 20.4
SNAA Sanae 93.77 183 *e*P **P 18 25 17.5 -3.1**
comp=Z,5.7nm,0.8s,mb4.8
SNAA Sanae 93.77 183 *e*P **P 18 25 17.5 -3.1**
SNAA pmax pmax
comp=Z,6.0nm,0.8s
VNA3 Neumayer Olymp 94.43 181 *e*P **P 18 25 22.4 -1.2**
VNA3 *e* 18 25 25.6
VNA3 *e* pP 18 26 09.7 +2.5
VNA2 Neumayer--Watz 94.70 182 *e*P **P 18 25 24.1 -0.7**
VNA2 *e* 18 25 27.8
VNA2 *e* pP 18 26 11.0 +2.6
PDAR Pinedale Array 94.78 47 PKKPbc PKKPbc 18 42 21.6 -1.8
comp=Z,0.5nm,0.7s,baz=107,slow=5.1,SNR=3.8
VNA1 Neumayer--Stat 95.00 181 *e*P **P 18 25 25.4 -0.8**
VNA1 *e* 18 25 28.1
ANMO Albuquerque 95.15 55 *e*P **P 18 25 22.5 -5.1**
MK31 Makanchi Array 97.07 316 *e*P **P 18 25 35.6 -0.4**
MKAR Makanchi Array 97.07 316 P **P 18 25 36.3 +0.3**
comp=Z,4.5nm,0.7s,mb4.9,baz=92,slow=6.3,SNR=35
MKAR pP pP 18 26 10.8 -8.9
comp=Z,0.8nm,0.6s,baz=85,slow=11,SNR=1.7
MKAR PKiKP PKiKP 18 30 10.6 -0.3
comp=Z,0.4nm,0.6s,baz=62,slow=1.8,SNR=3.7
MKAR S SKSac 18 35 57.9 +1.5
comp=Z,0.5nm,0.8s,baz=81,slow=4.8,SNR=4.3
MKAR Makanchi Array 97.07 316 P **P 18 25 36.3 +0.3**
MKAR pP pP 18 26 10.8 -8.9
ZAA0 Zalesovo Array 97.23 324 *e*P **P 18 25 35.4 -1.2**
ZALV Zalesovo Beam 97.23 324 P **P 18 25 35.7 -0.8**
comp=Z,3.7nm,0.7s,mb4.8,baz=117,slow=5.2,SNR=18
ZALV PKiKP PKiKP 18 30 11.6 +0.6
comp=Z,0.7nm,0.5s,baz=146,slow=2.1,SNR=3.2
ZALV LR LR 19 10 07.3
comp=Z,23nm,18.2s,baz=79,slow=36
YKA Yellowknife Ar 97.34 27 P **P 18 25 36.0 -0.8**
comp=Z,2.8nm,0.7s,mb4.7,baz=254,slow=4.7,SNR=8.5
NVS Novosibirsk 98.35 324 *e*P **P 18 25 39.9 -1.6**
NVS pmax pmax
comp=Z,12nm,1.5s,mb5.1
NVS pmax pmax
comp=E,9.0nm,1.6s
LPAZ La Paz 117.28 117 PKP PKPdf 18 30 50.2 +0.9
comp=E,0.6nm,0.5s,baz=198,slow=3.2,SNR=3.8
KEV Kevo 119.52 345 *ep* PKPdf 18 30 51.5 -0.6
comp=E,1.8nm,0.3s
KEV Kevo 119.52 345 *e*PKiKP PKPdf 18 30 51.5 -0.6
KEV pmax pmax
comp=Z,2.0nm,0.3s
ARCES ARCESS Array B 120.05 345 PKP PKPdf 18 30 53.1 -0.1
comp=Z,10.0nm,0.3s,baz=68,slow=1.8,SNR=411
JOF Joensuu 122.70 338 *ep* PKPdf 18 30 57.5 -0.9
comp=Z,2.7nm,0.3s
JOF Joensuu 122.70 338 *e*PKiKP PKPdf 18 30 57.5 -0.9
JOF pmax pmax
comp=Z,3.0nm,0.3s
BOSA Boshof 123.56 220 PKP PKPdf 18 31 01.1 0.0
comp=Z,4.4nm,0.7s,baz=79,slow=10.0,SNR=6.7
OBN Obninsk 124.53 328⇓*i* PKiKP PKPdf 18 31 02.3 +0.2
OBN pmax pmax
comp=Z,38nm,1.4s
KAF Kangasniemi 125.00 339 *ep* PKPdf 18 31 02.3 -0.5
comp=Z,2.6nm,0.3s
KAF Kangasniemi 125.00 339 *e*PKiKP PKPdf 18 31 02.3 -0.5
KAF pmax pmax
comp=Z,3.0nm,0.3s
NB2 NORSAR Subarra 130.42 345 PKPdf PKPdf 18 31 13.8 +0.6
comp=Z,6.2nm,0.9s,baz=31,slow=1.9
NB2 NORSAR Subarra 130.42 345 PKPdf PKPdf 18 31 13.8 +0.6
baz=31,slow=1.9
NOA NORSAR Array B 130.42 345 PKP PKPdf 18 31 13.8 +0.6
comp=Z,6.9nm,0.8s,baz=34,slow=2.0,SNR=28
NOA SKPbc SKPbc 18 34 23.7 +3.3
comp=Z,21nm,0.9s,baz=33,slow=2.8,SNR=30
NOA NORSAR Array B 130.42 345 PKP PKPdf 18 31 13.8 +0.6
NOA SKPbc SKPbc 18 34 23.7 +3.3
HFS Hagfors 130.53 343 SKPbc SKPbc 18 34 23.3 +2.5
comp=Z,15nm,0.9s,baz=100,slow=3.6,SNR=17
AKASG Malin Array Be 130.57 326 PKP PKPdf 18 31 13.8 -0.1
comp=Z,3.5nm,0.6s,baz=52,slow=1.7,SNR=6.7
AKASG SKPbc SKPbc 18 34 24.2 +2.9
comp=Z,8.0nm,0.7s,baz=46,slow=4.2,SNR=16
BDFB Brasilia 134.00 129 PKP PKPdf 18 31 22.2 +0.9
comp=Z,1.3nm,0.7s,baz=177,slow=17,SNR=3.0
BDFB SKPbc SKPbc 18 34 37.4 +3.0
comp=Z,1.6nm,0.7s,baz=183,slow=19,SNR=3.6
BURAR Bucovina Array 134.45 324⇑*i* PKPdf 18 31 23.4 +2.2
KWP Kalwaria 134.62 328⇓*i* PKPdf 18 31 23.5 +2.0
KOLS Kolonicke sedl 135.28 328 *e*PKP PKPdf 18 31 23.5 +0.8
KOLS *e*PP 18 34 42.2
KOLS Kolonicke sedl 135.28 328 *e*PKP PKPdf 18 31 23.5 +0.8
KOLS *e*SKP 18 34 42.1
STHS Stebnicka Huta 135.50 329 *e*PKP PKPdf 18 31 24.7 +1.6
STHS *e*SKP 18 34 47.5
CRVS Cervenica-Dubn 135.72 328 *e*PKP PKPdf 18 31 23.6 +0.1
CRVS *e*SKP 18 34 43.7
VOIR 135.73 322⇑*i* PKPdf 18 31 25.4 +1.7

DRGR		**136.33 325**	⇓*iP*		PKPdf	18 31 25.7	+1.0	0.0
BSEG	**Bad Segeberg**	**136.71 340**	*e*PP		PP	18 34 08.6	-0.3	
KSP	**Ksiaz**	**136.86 333**	*e*PKP		PKPdf	18 31 27.8	+2.2	
PSZ	**Piszkesteto**	**137.15 328**	⇓*iP*		PKPdf	18 31 27.3	+1.1	
DPC	**Dobruska-Polom**	**137.20 333**	*e*PKP		PKPdf	18 31 27.1	+0.9	
DPC			*ex*		x	18 31 28.8		
VYHS	**Vyhne**	**137.31 329**	*e*PKP		PKPdf	18 31 27.1	+0.6	
VYHS			*e*SKP			18 34 48.1		
KOLL	**Kolacno**	**137.47 330**	*e*PKP		PKPdf	18 31 27.5	+0.7	
BZS	**Buzias**	**137.63 324**	⇓*iP*		PKPdf	18 31 27.4	+0.2	
BRG	**Berggiesshubel**	**137.83 335**	*e*PKP		PKPdf	18 31 27.4	+0.1	
BRG			*i*			18 34 50.1		
BRG	**Berggiesshubel**	**137.83 335**	*e*PKPdf		PKPdf	18 31 27.3	-0.1	
BRG	**Berggiesshubel**	**137.83 335**	*e*PKP		PKPdf	18 31 27.4	+0.1	
	comp=Z,17nm,1.5s							
BRG			*i*			18 34 50.1		
	comp=Z,5.3nm,0.8s							
BRG			*e*			19 07 46.3		
	comp=Z,14nm,1.6s							
PVCC	**Panska Ves**	**137.83 334**	*e*PKP		PKPdf	18 31 28.2	+0.8	
PVCC			*ex*		x	18 31 30.3		
CLL	**Collm**	**137.87 336**	*e*PKIKP		PKPdf	18 31 27.0	-0.4	
CLL			pmax		pmax			
	comp=Z,15nm,1.2s							
CLL	**Collm**	**137.87 336**	*e*PKPdf		PKPdf	18 31 27.0	-0.4	
CLL			⇓*i*PKiKP		PKiKP	18 31 29.4	-0.1	
	comp=Z,14nm,1.2s							
CLL			*i*	SKPdf	SKPdf	18 34 50.2	+4.1	
MODS	**Modra-Piesok**	**138.16 330**	*e*PKP		PKPdf	18 31 28.9	+0.8	
PRU	**Pruhonice**	**138.25 334**	*e*PKP		PKPdf	18 31 28.8	+0.6	
PRU			*ex*		x	18 31 30.3		
CLZ	**Clausthal**	**138.43 339**	*e*PKPdf		PKPdf	18 31 29.0	+0.6	
CLZ			*e*PP		PP	18 34 17.1	-2.5	
EKA	**Eskdalemuir Ar**	**138.60 352**		SKPbc	SKPbc	18 34 49.8	+2.7	
	comp=Z,3.7nm,0.8s,baz=346,slow=2.1,SNR=7.5							
PKSM	**Moragy**	**138.90 327**	⇓*iP*		PKPdf	18 31 29.9	+0.4	
IBBN	**Ibbenburen**	**138.91 341**	*e*PKPdf		PKPdf	18 31 30.7	+1.4	
IBBN			*e*PP		PP	18 34 22.3	-0.3	
NKC	**Novy Kostel**	**138.93 335**	*e*PKP		PKPdf	18 31 30.8	+1.4	
NKC			*ex*		x	18 31 32.3		
CONA	**Conrad Observa**	**139.15 331**	⇑*i*PKPdf		PKPdf	18 31 28.8	-1.1	
	comp=Z,8.4nm,0.6s							
CSNA	**Conrad Observa**	**139.15 331**	⇑*i*PKPdf		PKPdf	18 31 28.7	-1.2	
	comp=Z,8.0nm,0.6s							
MANZ	**Manzenberg**	**139.26 335**	*e*PKPdf		PKPdf	18 31 31.1	+1.1	
KHC	**Kasperske Hory**	**139.30 334**	*e*PKP		PKPdf	18 31 30.9	+0.8	
KHC			*ex*		x	18 31 33.0		
GEC2	**GERESS Array S**	**139.47 333**	*e*PKPdf		PKPdf	18 31 30.9	+0.5	
GEC2			*e*PP		PP	18 34 26.0	-0.2	
WET	**Wettzell**	**139.59 334**	*e*PKPdf		PKPdf	18 31 30.0	-0.7	
GRA1	**Grafenberg Arr**	**139.84 336**	*e*PKPdf		PKPdf	18 31 28.8	-2.3	
GRA1			*e*PP		PP	18 34 29.9	+1.5	
GRF	**Grafenberg Arr**	**139.84 336**	*e*PKIKP		PKPdf	18 31 28.8	-2.3	
GRF			*e*			18 34 29.9		
GRF				MLR	MLR			
	comp=Z,2µm,18.8s							
GRF	**Grafenberg Arr**	**139.84 336**	*e*PKPdf		PKPdf	18 31 28.8	-2.3	
GRF			*e*PP		PP	18 34 29.9	+1.5	
MOA	**Molln**	**139.95 332**	⇓*i*PKPdf		PKPdf	18 31 29.0	-2.4	
	comp=Z,6.3nm,1.2s							
TNS	**Taunus Mts**	**140.45 339**	*e*PKPdf		PKPdf	18 31 30.1	-2.1	
TNS			*e*PP		PP	18 34 32.8	+0.8	
MEM	**Membach**	**140.93 341**	PKP		PKPdf	18 31 33.4	+0.3	
ABTA	**Abfaltersbach**	**141.57 332**	⇑*i*PKPdf		PKPdf	18 31 30.2	-4.1	
	comp=Z,10.0nm,0.8s							
WTTA	**Wattenberg**	**141.57 333**	⇑*i*PKPdf		PKPdf	18 31 31.2	-3.1	
	comp=Z,12nm,0.8s							
WLF	**Walferdange**	**141.71 340**	PKP		PKPdf	18 31 30.4	-4.0	
WLF	**Walferdange**	**141.71 340**	*e*PP		PP	18 34 39.8	+0.2	
MOTA	**Moosalm**	**141.74 334**	⇑*i*PKPdf		PKPdf	18 31 30.3	-4.2	
	comp=Z,6.5nm,0.7s							
HTR	**Trewern Hill**	**141.77 351**	*e*P		PKPdf	18 31 30.7	-3.8	
MCH1	**Michaelchurch**	**141.81 350**	*e*P		PKPdf	18 31 30.3	-4.2	
DOU	**Dourbes**	**141.82 342**	PKP		PKPdf	18 31 31.0	-3.6	
BFO	**Black Forest**	**142.07 337**	*e*PKPdf		PKPdf	18 31 30.8	-4.3	
BFO			*e*PP		PP	18 34 41.4	-0.5	
HGH	**Gray Hill**	**142.12 350**	*e*P		PKPdf	18 31 30.6	-4.5	
FETA	**Feichten**	**142.15 334**	⇑*i*PKPdf		PKPdf	18 31 29.8	-5.5	
	comp=Z,9.8nm,1.0s							
DAVA	**Damuels**	**142.30 335**	⇓*i*PKPdf		PKPdf	18 31 32.6	-3.0	
	comp=Z,19nm,1.5s							
CDF	**Champ du Feu**	**142.39 338**	*e*PKP1		PKPdf	18 31 31.6	-4.1	
	comp=Z,20nm,0.9s							
FELD	**Feldberg im Sc**	**142.56 337**	PKP		PKPdf	18 31 37.3	+1.3	
DAVOX	**Davos/Dischmat**	**142.70 334**	SKPbc		SKPbc	18 35 01.3	+3.2	
	comp=Z,5.1nm,0.8s,baz=70,slow=5.7,SNR=4.5							
HEX	**Exmoor**	**142.84 351**	*e*P		PKPdf	18 31 33.1	-3.3	
MOF	**Molkenrain**	**142.91 338**	PKP		PKPdf	18 31 36.4	-0.3	
THEF	**They Montfort**	**143.00 339**	PKP		PKPdf	18 31 35.8	-1.0	
HTL	**Hartland**	**143.01 351**	*e*P		PKPdf	18 31 33.1	-3.7	
HINF	**Hinteralfeld**	**143.04 338**	*e*PKP1		PKPdf	18 31 35.2	-1.7	
	comp=Z,10nm,0.6s							
HAU	**Haudompre**	**143.06 339**	*e*PKP1		PKPdf	18 31 33.8	-3.1	
	comp=Z,25nm,0.8s							
VAI	**Varese**	**143.89 334**	PKP		PKPdf	18 31 36.6	-1.9	
SNTG	**Esanatoglia**	**143.90 328**	PKP		PKPdf	18 31 37.4	-1.1	
BADI	**Badiali**	**144.07 328**	PKP		PKPdf	18 31 38.0	-0.8	
NRCA	**Norcia**	**144.10 327**	PKP		PKPdf	18 31 38.1	-0.8	
ASS	**Assisi**	**144.18 328**	PKP		PKPdf	18 31 37.7	-1.4	
GSCL	**Gusciola**	**144.26 331**	PKP		PKPdf	18 31 38.9	-0.2	
TIP	**Timpagrande**	**144.31 319**	*e*PKPdf		PKPdf	18 31 38.8	-0.6	
CABF	**La Chapelle**	**144.34 338**	*e*PKP1		PKPdf	18 31 39.0	-0.2	
	comp=Z,72nm,0.9s							
OG01	**Vacheresse**	**144.35 337**	PKP		PKPdf	18 31 41.1	+1.9	
OG01	**Vacheresse**	**144.35 337**	PKP		PKPdf	18 31 40.1	+0.9	
OG01			PKP		PKPdf	18 31 41.1	+1.9	
JSA	**Saint Aubin**	**144.36 348**	*e*P		PKPdf	18 31 35.7	-3.4	
SGO	**Sicignano**	**144.37 322**	PKP		PKPdf	18 31 38.5	-1.0	
FLN	**La Foliniere**	**144.39 346**	*e*PKP1		PKPdf	18 31 38.0	-1.2	
	comp=Z,73nm,0.8s							
ORO	**Oropa**	**144.41 335**	PKP		PKPdf	18 31 38.0	-1.4	
BOB	**Bobbio (Coli)**	**144.47 332**	PKP		PKPdf	18 31 39.1	-0.4	
LDF	**La Druitiere**	**144.47 346**	*e*PKP1		PKPdf	18 31 38.3	-1.1	
	comp=Z,101nm,0.9s							
SDI	**San Donato**	**144.49 325**	PKP		PKPdf	18 31 37.6	-2.0	
PTQR	**Pietraquaria**	**144.50 326**	PKP		PKPdf	18 31 39.0	-0.6	
LOR	**Lormes**	**144.54 340**	*e*PKP1		PKPdf	18 31 39.2	-0.3	
	comp=Z,147nm,1.2s							
TRAV	**Traversella**	**144.60 335**	PKP		PKPdf	18 31 38.4	-1.3	
PII	**Pisa**	**144.76 330**	PKP		PKPdf	18 31 38.5	-1.5	
GRR	**Gorron**	**144.83 346**	*e*PKP1		PKPdf	18 31 39.9	-0.1	
	comp=Z,232nm,0.7s							
SSF	**Saint Saulge**	**144.84 341**	*e*PKP1		PKPdf	18 31 40.3	+0.2	
	comp=Z,308nm,1.0s							
RSL	**Roselend**	**144.91 336**	PKP		PKPdf	18 31 40.5	+0.3	
HYF	**Humbligny**	**144.93 342**	*e*PKP1		PKPdf	18 31 40.8	+0.6	
LPL	**La Plagne**	**145.01 336**	*e*PKP1		PKPbc	18 31 41.3	+1.2	
LPG	**La Plagne**	**145.02 336**	*e*PKP1		PKPbc	18 31 41.4	+1.3	
OG05	**Jujurieux**	**145.05 338**	PKP		PKPdf	18 31 41.4	+0.9	
OG05	**Jujurieux**	**145.05 338**	PKP		PKPdf	18 31 41.2	+0.7	
OG05			PKP		PKPdf	18 31 41.4	+0.9	
RSP	**Reno Superiore**	**145.10 335**	PKP		PKPdf	18 31 40.9	+0.3	
SMF	**Signal de Mont**	**145.10 340**	*e*PKP1		PKPbc	18 31 40.9	+0.5	
	comp=Z,308nm,1.1s							
AVF	**Avril sur Loir**	**145.13 341**	*e*PKP1		PKPbc	18 31 41.0	+0.5	
	comp=Z,192nm,1.1s							
SGMF	**Saint Gilles**	**145.32 348**	*e*PKP1		PKPbc	18 31 41.4	+0.4	
	comp=Z,189nm,0.7s							
ROSF	**Rostrenen**	**145.38 349**	*e*PKP1		PKPbc	18 31 41.6	+0.4	
	comp=Z,296nm,1.1s							
BNI	**Bardonecchia**	**145.41 336**	*e*PKPdf		PKPbc	18 31 42.2	+0.8	
FIN	**Finale Ligure**	**145.45 333**	PKP		PKPdf	18 31 41.1	-0.1	
OG22	**Abries**	**145.49 335**	PKP		PKPdf	18 31 42.2	+0.9	
BGF	**Bois d'Agland**	**145.50 341**	*e*PKP1		PKPbc	18 31 42.3	+0.7	
	comp=Z,150nm,0.8s							
GDM	**Grand'Maison**	**145.51 336**	PKP		PKPbc	18 31 42.8	+1.1	
GRN	**Grenoble**	**145.62 337**	PKP		PKPbc	18 31 43.4	+1.4	
MBDF	**Montbardon**	**145.64 335**	*e*PKP1		PKPbc	18 31 42.7	+0.6	
	comp=Z,80nm,0.9s							
PZZ	**Stroppo**	**145.68 335**	PKP		PKPdf	18 31 41.7	+0.1	
PLDF	**La Plantade**	**145.76 340**	PKP		PKPbc	18 31 43.5	+1.1	
QUIF	**Quistinic**	**145.77 349**	*e*PKP1		PKPbc	18 31 42.5	+0.1	
	comp=Z,54nm,0.8s							
SURF	**Saint Ours**	**145.83 335**	PKP		PKPbc	18 31 43.9	+1.2	
ORIF	**Oris-en-Rattie**	**145.84 336**	*e*PKP1		PKPbc	18 31 43.6	+0.9	
	comp=Z,130nm,0.8s							
AGO	**Saint Agoulin**	**145.85 340**	PKP		PKPbc	18 31 43.6	+0.9	
SAOF	**Saorge**	**145.91 334**	PKP		PKPbc	18 31 43.3	+0.3	
TCF	**Toulx Ste Croi**	**145.94 341**	*e*PKP1		PKPbc	18 31 43.6	+0.7	
	comp=Z,87nm,0.8s							
AUTN	**L'Aution**	**145.96 334**	PKP		PKPbc	18 31 43.6	+0.5	
TOUF	**Mont Tournerai**	**146.02 334**	PKP		PKPbc	18 31 43.8	+0.5	
SSB	**Saint Sauveur**	**146.04 338**	PKP		PKPbc	18 31 44.3	+1.0	
SSB	**Saint Sauveur**	**146.04 338**	*e*PKP2		PKPab	18 31 44.1	0.0	
SBF	**Sospel**	**146.06 334**	*e*PKP1		PKPbc	18 31 43.6	+0.2	
	comp=Z,199nm,0.9s							
LUCF	**Luceram**	**146.08 334**	PKP		PKPbc	18 31 43.6	+0.1	
MVIF	**Mont Vial**	**146.16 334**	PKP		PKPbc	18 31 44.1	+0.4	
PYM	**Petit Puy Mans**	**146.16 340**	PKP		PKPbc	18 31 44.7	+1.1	
MFF	**Saint Martin d**	**146.32 344**	*e*PKP1		PKPbc	18 31 44.7	+0.6	
	comp=Z,192nm,0.8s							
VERF	**Verneugheol**	**146.33 341**	PKP		PKPbc	18 31 44.9	+0.8	
OCF	**Saint Nazaire**	**146.35 337**	PKP		PKPbc	18 31 45.4	+1.2	
OG26	**St-Nazaire-De**	**146.35 337**	PKP		PKPbc	18 31 45.4	+1.2	
VIVF	**Saint-Julien-l**	**146.35 337**	*e*PKP1		PKPbc	18 31 45.0	+0.8	
	comp=Z,85nm,1.0s							
PGF	**Pioggiola**	**146.38 330**	*e*PKP1		PKPbc	18 31 44.8	+0.4	
	comp=Z,148nm,0.9s							
CALN	**Calern**	**146.39 334**	PKP		PKPbc	18 31 44.9	+0.5	
LBL	**Lubilhac**	**146.53 339**	PKP		PKPbc	18 31 46.1	+1.4	
FRF	**La Foret Royal**	**146.65 334**	*e*PKP1		PKPbc	18 31 45.4	+0.3	
	comp=Z,148nm,0.9s							
SMRF	**Simiane la Rot**	**146.75 336**	*e*PKP1		PKPbc	18 31 46.4	+1.0	
	comp=Z,109nm,1.0s							
LMR	**La Mourre**	**146.89 334**	*e*PKP1		PKPbc	18 31 46.2	+0.4	
RJF	**Les Rejaudoux**	**147.03 341**	*e*PKP1		PKPbc	18 31 46.9	+0.8	
	comp=Z,125nm,1.0s							
CAF	**Calviac**	**147.20 340**	*e*PKP1		PKPbc	18 31 47.6	+1.0	
	comp=Z,118nm,1.1s							
LASF	**Ste Croix**	**147.32 338**	*e*PKP1		PKPbc	18 31 47.9	+0.9	
	comp=Z,201nm,1.2s							
LFF	**La Frestale**	**147.60 342**	*e*PKP1		PKPbc	18 31 48.5	+0.8	
	comp=Z,142nm,0.8s							
MTLF	**Montolieu**	**148.55 339**	*e*PKP1		PKPbc	18 31 51.1	+0.9	
	comp=Z,108nm,0.8s							
MLS	**Moulis**	**149.27 340**	PKP		PKPbc	18 31 52.7	+0.6	
EPF	**Esparros**	**149.45 341**	*e*PKP1		PKPbc	18 31 53.1	+0.6	
LABF	**Labassere**	**149.52 341**	PKP		PKPbc	18 31 53.2	+0.5	
REYF	**Montagne du Re**	**149.64 342**	PKP		PKPbc	18 31 55.0	+2.0	
RESF	**Ens**	**149.65 341**	PKP		PKPbc	18 31 54.8	+1.8	
EALK	**Alkurruntz**	**149.82 344**	PKP		PKPbc	18 31 54.5	+1.1	
EBIE	**Bielsa**	**149.82 341**	PKP		PKPbc	18 31 54.9	+1.5	
SJPF	**Ste Jean**	**149.84 343**	*e*PKP1		PKPbc	18 31 54.4	+1.0	
	comp=Z,88nm,1.0s							
LARF	**Larrau**	**149.84 343**	PKP		PKPbc	18 31 54.3	+0.9	
ETSF	**Etsaut**	**149.84 342**	*e*PKP1		PKPbc	18 31 54.7	+1.2	
	comp=Z,69nm,0.7s							
ELIZ	**Elizondo**	**149.88 344**	PKP		PKPbc	18 31 54.2	+0.7	
ELAN	**Lanestosa**	**150.29 346**	PKP		PKPbc	18 31 55.4	+0.9	
EARI	**Arriondas**	**150.60 349**	PKP		PKPbc	18 31 55.7	+0.5	
EPOB	**Poblet**	**150.70 339**	PKP		PKPbc	18 31 55.8	+0.3	
ESAC	**San Caprasio**	**150.89 341**	PKP		PKPbc	18 31 57.0	+1.1	
EPON	**Pontenova**	**150.89 352**	PKP		PKPbc	18 31 56.6	+0.6	
KEST	**Kesra**	**151.06 321**	PKPbc		PKPbc	18 31 57.5	+0.9	
	comp=Z,12nm,0.6s,baz=177,slow=0.6,SNR=68							
ERTA	**Horta de San J**	**151.31 339**	PKP		PKPbc	18 31 57.4	+0.4	
ETOS	**Mallorca**	**151.39 334**	PKP		PKPbc	18 31 58.0	+0.8	
EMAZ	**Mazaricos**	**151.48 354**	PKP		PKPbc	18 31 57.7	+0.4	
CMAH	**Djebel Manchou**	**151.58 324**	P		PKPbc	18 31 58.0	+0.3	
EMOS	**Mosqueruela**	**152.11 340**	PKP		PKPbc	18 32 00.2	+1.4	
ECAL	**Calabor**	**152.19 350**	PKP		PKPbc	18 31 57.8	-1.2	
ETOR	**Torete**	**152.15 343**	PKP		PKPbc	18 32 00.1	+1.1	
CASM	**Ain Smara**	**152.37 325**	P		PKPbc	18 32 00.0	+0.5	
ELOB	**Lobios**	**152.45 353**	PKP		PKPbc	18 31 59.9	+0.4	
DFRA	**Djebel Bou Aff**	**152.49 326**	P		PKPbc	18 32 01.5	+1.7	
EIBI	**Ibiza**	**152.62 336**	PKP		PKPbc	18 31 59.8	-0.2	
SET	**Setif**	**153.00 326**	P		PKPbc	18 32 02.0	+1.1	
ESDC	**Sonseca Array**	**153.78 345**	PKP		PKPdf	18 31 54.7	+0.2	
	comp=Z,0.2nm,0.3s,baz=27,slow=5.0,SNR=4.9							
ESDC			PKPbc		PKPbc	18 32 02.9	+0.3	
	comp=Z,3.9nm,0.7s,baz=9.6,slow=2.3,SNR=16							
ESDC			PKPab		PKPab	18 32 16.4	+0.4	
	comp=Z,6.8nm,0.8s,baz=22,slow=3.9,SNR=12							
ESDC	**Sonseca Array**	**153.78 345**	PKP		PKPdf	18 31 54.7	+0.2	
ESDC			PKPbc		PKPbc	18 32 02.9	+0.3	
ESDC			PKP		PKPbc	18 32 03.0	+0.5	
ESDC			PKPab		PKPab	18 32 16.4	+0.4	
ESLA	**Sonseca Array**	**153.78 345**	*e*PKPbc		PKPbc	18 32 01.6	-0.9	
MTE	**Manteigas**	**153.82 351**	*e*PKPdf		PKPdf	18 31 55.0	+0.4	
MTE			*e*PKPbc		PKPbc	18 32 03.0	+0.4	
PAB	**San Pablo**	**154.00 345**	*e*PKPbc		PKPbc	18 32 03.6	+0.6	
EVIA	**Vianos**	**154.34 341**	PKP		PKPbc	18 32 04.5	+0.8	
EBAN	**Banos Encina**	**155.15 343**	PKP		PKPdf	18 32 06.5	+10	
EQES	**Quesada**	**155.28 342**	PKP		PKPdf	18 32 07.6	+11	
EVO	**Evora**	**155.72 351**	*e*PKP2		PKPab	18 32 25.0	+0.7	
	comp=Z,48nm,1.1s							
EMIN	**Mina Concepcio**	**156.23 348**	PKP		PKPdf	18 32 07.7	+10	
TORD	**Torodi Ar. Bea**	**165.96 266**	PKP		PKPdf	18 32 08.3	-0.5	
	comp=Z,0.8nm,0.7s,baz=18,slow=2.9,SNR=6.9							
TORD			PKPab		PKPab	18 33 09.5	-0.4	
	comp=Z,3.1nm,0.8s,baz=105,slow=3.7,SNR=14							
DBIC	**Dimbokro**	**169.04 225**	PKP		PKPdf	18 32 10.4	-0.7	
	comp=Z,6.4nm,1.0s,baz=130,slow=5.3,SNR=3.9							

*ISCJB **12** 18:22:33.0±1.5,245N×0.1×109.3W×0.1,h10km, Error ellipse: s-maj=24.9km s-min=8.6km az=148.1*
*IDC **12** 18:22:34.4±1.6,2476N×1096.2W,h0km,mb1 3.9/4, mb1mx3.7/20,mbtmp3.5/4,ML3.3/3, Error ellipse: s-maj=37.7km s-min=9.3km az=129.0*
*NEIC **12** 18:22:35.7±1.4,2459N×1094.8W,h10km,mb3.9/1, Error ellipse: s-maj=25.4km s-min=10.1km az=134.0.*

ISC 12 18:22:35.7±1.5,246N±02×1095W±01,h13km±17km,n9, σ0999/11,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.91**	**238**		Pg	**Pg**	**18 22 53.1**	**-0.2**
	126nm,0.3s,baz=16,slow=3.2,SNR=48							
LPIG					Lg		18 23 03.7	
	281nm,0.3s,baz=229,slow=9.7,SNR=41							
TXAR	**Lajitas Array**	**7.01**	**46**	Pn		**Pn**	**18 24 18.4**	**+0.3**
	0.3nm,0.3s,baz=220,slow=14,SNR=12							
TXAR					Pg	**Pg**	**18 24 49.9**	**-0.1**
	0.4nm,0.3s,baz=234,slow=17,SNR=10.0							
TXAR					Sn	**Sn**	**18 25 37.1**	**-0.5**
	0.8nm,0.3s,baz=133,slow=27,SNR=9.2							
TXAR					Lg		18 26 14.7	
	0.3nm,0.3s,baz=258,slow=30,SNR=2.3							
TUC	**Tucson**	**7.78**	**352**	*e*P		**Pn**	**18 24 25.9**	**-2.8**
	5.7nm,0.9s							
ANMO	**Albuquerque**	**10.65**	**13**	Pn		**Pn**	**18 25 09.8**	**+1.8**
	0.1nm,0.3s,baz=198,slow=13,SNR=3.1							
NVAR	**Mina Array Bea**	**15.71**	**334**	Pn		**Pn**	**18 26 17.5**	**+0.7**
	0.1nm,0.3s,baz=153,slow=12,SNR=3.2							
NVAR	**Mina Array Bea**	**15.71**	**334**	Pn		**Pn**	**18 26 17.5**	**+0.7**
ELK	**Elko**	**16.82**	**345**	Pn		**Pn**	**18 26 30.7**	**-0.3**
	0.1nm,0.3s,baz=168,slow=20,SNR=1.5							
ELK	**Elko**	**16.82**	**345**	P		**Pn**	**18 26 31.3**	**+0.4**
	17nm,1.6s							
PDAR	**Pinedale Array**	**18.13**	**360**	P		**Pn**	**18 26 46.8**	**-0.5**
	baz=194,slow=11,SNR=1.9							

*ISCJB **12** 18:23:00.6±0.8,2250S±007×673W±02,h170km±18km, Error ellipse: s-maj=28.3km s-min=10.4km az=11.4*
*IDC **12** 18:23:01.7±1.1,2246S×6726W,h163km±19km,mb3.9/1, mb1 3.6/5,mb1mx3.4/17,mbtmp3.6/5, Error ellipse: s-maj=29.9km s-min=13.8km az=110.0*
*NEIC **12** 18:23:01.5±0.8,2250S×6723W,h162km±13km,mb3.8/1, Error ellipse: s-maj=22.9km s-min=11.2km az=114.0*

ISC 12 18:23:00.7±0.8,2251S±007×670W±01,h138km±16km,n10, σ1922/14,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.80**	**266**	P		**Pn**	**18 23 33.7**	**+1.0**
	122nm,0.3s,baz=72,slow=5.6,SNR=627							
LVC					S	**Sn**	**18 23 56.7**	**-0.5**
	51nm,0.3s,baz=290,slow=19,SNR=41							
LPAZ	**La Paz**	**6.29**	**350**	P		**Pn**	**18 24 33.3**	**+2.1**
	2.1nm,0.3s,baz=161,slow=7.3,SNR=32							
LPAZ					S	**Sn**	**18 25 41.1**	**-0.9**
	0.4nm,0.3s,baz=23,slow=21,SNR=7.9							
LPAZ	**La Paz**	**6.29**	**350**	*e*Pn		**Pn**	**18 24 31.5**	**+0.2**
LPAZ					S	**Sn**	**18 25 41.1**	**-0.9**
SIV	**San Ignacio**	**8.55**	**42**	P		**Pn**	**18 25 03.5**	**+1.9**
	14nm,0.3s,baz=224,slow=10,SNR=138							
SIV					S	**Sn**	**18 26 35.0**	**-1.6**
	0.9nm,0.3s,baz=137,slow=22,SNR=6.0							
CFAA	**Coronel Fontan**	**9.12**	**187**	P		**Pn**	**18 25 08.4**	**-0.8**
	0.1nm,0.3s,baz=6.7,slow=12,SNR=9.3							
CFAA					S	**Sn**	**18 26 45.0**	**-5.2**
	0.2nm,0.3s,baz=238,slow=22,SNR=8.4							
PLCA	**Paso Flores**	**18.41**	**189**	P		**P**	**18 27 04.8**	**-0.4**
	0.1nm,0.3s,baz=353,slow=9.7,SNR=5.4							
PLCA	**Paso Flores**	**18.41**	**189**	*e*P		**P**	**18 27 04.7**	**-0.5**
	5.4nm,1.1s							
BDFB	**Brasilia**	**19.17**	**72**	P		**P**	**18 27 16.8**	**+3.2**
	0.3nm,0.3s,baz=202,slow=17,SNR=3.4							
TORD	**Torodi Ar. Bea**	**76.02**	**69**	P		**P**	**18 34 32.8**	**-0.4**
	2.0nm,0.5s,baz=255,slow=5.9,SNR=18							
WRA	**Warramunga Arr**	**132.95**	**208**	PKP		PKPdf	18 41 58.0	-2.4
	0.2nm,0.6s,baz=145,slow=1.6,SNR=4.7							

NEIC 12 18:28:24.4,3669S×17734E,h209km,MG3.9(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.17**	**139**	P	P	Pn	18 28 55.9	-0.3
PUZ	**Puketiti**	**1.56**	**152**	P	P	Pn	18 28 59.2	-0.2
URZ	**Urewera**	**1.58**	**187**	P	P	Pn	18 28 59.8	+0.3
MWZ	**Matawai**	**1.65**	**175**	P	P	Pn	18 29 00.7	+0.6
MWZ					S	Sn	18 29 28.2	0.0
KNZ	**Kokohu**	**2.34**	**174**	P	P	Pn	18 29 07.0	0.0
BKZ	**Black Stump Fm**	**2.56**	**195**	P	P	Pn	18 29 09.6	+0.2
TCW	**Tory Channel**	**5.11**	**207**	P	P	Pn	18 29 38.2	-2.1

*IDC **12** 18:40:11.7±0.5,1526N×119.77E,h0km,mb4.2/16, mb1 4.3/16,mb1mx4.3/21,mbtmp4.2/16,MS3.4/5, Ms1 3.5/5,ms1mx3.0/26,Error ellipse: s-maj=31.1km s-min=11.0km az=70.0*
*ISCJB **12** 18:40:13.1±1.1,1532N±003×119.40E±004,h16km±8km, mb4.3/20,MS3.4/4,Error ellipse: s-maj=7.0km s-min=4.9km az=179.4*
*MAN **12** 18:40:14,1533N×11953E,h9km,mb4.9,ML3.8,MS3.9*
*NEIC **12** 18:40:24.3±4.1,1523N×11984E,h106km±38km,mb4.5/4, Error ellipse: s-maj=23.4km s-min=8.6km az=66.0*

ISC 12 18:40:12.8±1.1,1532N±003×11944E±004,h3km±6km,n47, σ1939/50,mb4.3/20,MS3.4/4,Luzon

| Code | Station Name | Δ° | AZ° | Phase | Op

STKA				LR	LR	19 12 17.9		
	comp=Z,85nm,20.1s,baz=204,slow=32							
ASAR	**Alice Springs**	**26.64**	**18**	P	P	19 06 26.4	+0.4	
	2.4nm,0.6s,baz=192,slow=9.2,SNR=61							
WRA	**Warramunga Arr**	**30.34**	**17**	P	P	19 06 58.6	-0.5	
	0.5nm,0.5s,baz=194,slow=8.1,SNR=14							
WRA				LR	LR	19 18 40.1		
	comp=Z,88nm,18.4s,baz=220,slow=35							
MAW	**Mawson**	**35.33**	**216**	LR	LR	19 19 29.7		
	comp=Z,30nm,18.2s,baz=228,slow=32							
SNAA	**Sanae**	**53.73**	**198**	*e*	P	19 10 03.9	-5.1	
SNAA				*e*		19 10 11.2		
SNAA				*e*		19 10 16.4		
VNA2	**Neumayer--Watz**	**55.22**	**197**	*e*	P	19 10 16.7	-3.1	
VNA2				*e*		19 10 23.1		
VNA2				*e*		19 10 28.1		
VNA3	**Neumayer Olymp**	**55.38**	**196**	*e*	P	19 10 17.4	-3.6	
VNA3				*e*		19 10 24.6		
VNA3				*e*		19 10 29.7		
CMAR	**Chiang Mai Arr**	**71.57**	**334**	P	P	19 12 09.1	+0.5	
	0.2nm,0.6s,baz=172,slow=5.4,SNR=3.6							
JHJ	**Hachijo jima 2**	**83.24**	**12**	LR	LR	19 44 53.6		
	comp=Z,272nm,20.2s,baz=92,slow=32							
YKA	**Yellowknife Ar**	**145.40**	**45**	PKPbc	PKPbc	19 20 22.9	-1.4	
	2.0nm,0.9s,baz=259,slow=3.1,SNR=3.8							

NIED ***12*** *19:05:00,35.70N×140.10E,h77km,Mw3.4 Best double couple: M₀1.58000×10¹⁴ NP1:φs7.00000°,δ89.00000°, λ83.00000°. NP2:φs273.00000°,δ7.00000°,λ176.00000°.*

IDC ***12*** *19:05:46.1±1.0,3484N×13799E,h0km,mb3.5/4, mb1 3.6/5,mb1mx3.4/20,mbtmp3.6/5,ML3.8/1,MS3.6/1, Ms1 3.6/1,ms1mx2.6/21,Error ellipse: s-maj=28.3km s-min=11.8km az=87.0*

ISCJB ***12*** *19:05:47.3±0.5,3559N±003×14002E±005,h80km±4km, mb3.5/4,Error ellipse: s-maj=8.1km s-min=4.7km az=149.4*

JMA ***12*** *19:05:47.9±0.2,3566N×14006E,h71km±2km,M3.5 Broadband fault plane solution: P waves. NP1: φs101.00000°,δ8.00000°,λ-37.00000°. NP2:φs227.00000°, δ85.00000°,λ-96.00000°. Principal axes: T Plg40.0000°, Azm323.0000°; N Plg6.0000°, Azm228.0000°; P Plg49.0000°, Azm131.0000°;*

JMA Felt I J1.

ISC 12 19:05:48.3±0.5,3560N±003×14003E±005,h74km±4km, n19,σ0°72/33,mb3.5/4,2C-5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.23**	**141**	⇑P	**Pn**	**19 05 59.6**	**+0.2**
JCN				S	**Sn**	**19 06 08.7**	**+1.1**
TOK	**Tokyo**	**0.23**	**293**	⇓P	**Pn**	**19 05 59.5**	**0.0**
TOK				S	**Sn**	**19 06 08.2**	**+0.5**
JYO	**Yokosk**	**0.47**	**218**	⇑P	**Pn**	**19 06 01.7**	**+0.5**
JYO				S	**Sn**	**19 06 11.9**	**+1.3**
JOD2	**Odawara 2**	**0.83**	**247**	⇓P	**Pn**	**19 06 04.7**	**-0.2**
JOD2				S	**Sn**	**19 06 16.3**	**-1.0**
BSO3	**Boso 3**	**0.89**	**153**	P	**Pn**	**19 06 05.0**	**-0.6**
BSO3				S	**Sn**	**19 06 19.2**	**+0.8**
JAG	**Ashikaga**	**0.95**	**331**	⇓P	**Pn**	**19 06 05.7**	**-0.6**
JAG				*e*S	**Sn**	**19 06 18.5**	**-1.2**
JIM2	**Oshima 3**	**1.00**	**209**	P	**Pn**	**19 06 06.3**	**-0.7**
JIM2				S	**Sn**	**19 06 20.2**	**-0.7**
JRY	**Ryogami san**	**1.00**	**295**	⇓P	**Pn**	**19 06 07.2**	**+0.2**
JRY				*e*S	**Sn**	**19 06 21.1**	**+0.1**
JYN	**Shimob**	**1.21**	**266**	⇓P	**Pn**	**19 06 09.7**	**+0.1**
JYN				S	**Sn**	**19 06 25.7**	**+0.1**
BSO1	**Boso 1**	**1.22**	**140**	P	**Pn**	**19 06 08.6**	**-1.1**
BSO1				*e*S	**Sn**	**19 06 25.6**	**-0.2**
JIZS	**Izushimoda**	**1.28**	**227**	P	**Pn**	**19 06 10.6**	**+0.1**
JIZS				S	**Sn**	**19 06 26.5**	**-0.7**
JKT	**Katashina**	**1.33**	**332**	P	**Pn**	**19 06 10.5**	**-0.6**
JKT				S	**Sn**	**19 06 27.1**	**-1.1**
MJAR	**Matsushiro Arr**	**1.75**	**303**	Pg	**Pn**	**19 06 16.8**	**+0.2**
	13nm,0.3s,baz=180,slow=21,SNR=71						
MJAR				Lg		19 06 39.0	
	20nm,0.3s,baz=52,slow=23,SNR=12						
MAT	**Matsushiro**	**1.75**	**303**	P	**Pn**	**19 06 16.9**	**+0.3**
MAT				S	**Sn**	**19 06 40.0**	**+1.9**
JHJ	**Hachijo jima 2**	**2.48**	**185**	Pn	**Pn**	**19 06 26.7**	**+0.3**
	52nm,0.3s,baz=242,slow=22,SNR=7.1						
JHJ				LR	LR	19 06 54.8	
	comp=Z,1μm,21.9s,baz=136,slow=30						
JHJ				Sn	**Sn**	**19 06 55.4**	**-0.3**
	58nm,0.3s,baz=275,slow=22,SNR=6.5						
ZALV	**Zalesovo Beam**	**42.07**	**314**	P	**P**	**19 13 33.4**	**+0.9**
	0.5nm,0.4s,mb3.6,baz=117,slow=8.3,SNR=3.3						
MKAR	**Makanchi Array**	**43.95**	**303**	P	**P**	**19 13 48.3**	**+0.5**
	0.4nm,0.5s,mb3.4,baz=82,slow=8.1,SNR=7.1						
WRA	**Warramunga Arr**	**55.49**	**186**	P	**P**	**19 15 15.2**	**-0.4**
	0.4nm,0.5s,mb3.7,baz=0.3,slow=7.5,SNR=16						
ASAR	**Alice Springs**	**59.22**	**187**	P	**P**	**19 15 42.6**	**+0.8**
	0.1nm,0.4s,mb3.2,baz=354,slow=5.9,SNR=5.3						

IDC 12 19:28:42.5±2.1,3542S×5385E,h0km,mb3.8/3,mb1 4.1/3, mb1mx3.7/17,mbtmp3.8/3,MS3.4/2,Ms1 3.4/2, ms1mx2.7/28,Error ellipse: s-maj=90.2km s-min=36.4km az=17.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**32.65**	**174**	LR	LR	19 46 18.7	
	comp=Z,58nm,18.4s,baz=96,slow=32						
QSPA	**South Pole Qui**	**54.77**	**180**	LR	LR	19 59 07.0	
	comp=Z,44nm,19.4s,baz=180,slow=33						
CMAR	**Chiang Mai Arr**	**68.54**	**46**	P	P	19 39 47.0	0.0
	0.7nm,0.9s,baz=228,slow=7.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**69.04**	**305**	P	P	19 39 50.3	+0.1
	1.3nm,1.0s,baz=125,slow=5.1,SNR=4.8						
WRA	**Warramunga Arr**	**71.18**	**101**	P	P	19 40 03.5	+0.1
	0.6nm,0.8s,baz=229,slow=4.7,SNR=6.2						

IDC ***12*** *19:52:01.4±1.1,2523S×17954W,h417km±11km,mb3.9/16, mb1 4.1/19,mb1mx4.0/22,mbtmp4.0/19,Error ellipse: s-maj=13.1km s-min=11.8km az=154.0*

ISCJB ***12*** *19:52:02.6±0.8,2541S±006×17960W±007,h439km±8km, mb4.3/28,Error ellipse: s-maj=10.1km s-min=9.4km az=157.3*

NEIC ***12*** *19:52:02.9±1.0,2532S×17950W,h441km±11km,mb4.5/9, Error ellipse: s-maj=13.8km s-min=9.8km az=151.0*

BJI ***12*** *19:52:03.2,2521S×17953W,h435km,mB5.0,mb4.5*

ISC 12 19:52:03.3±0.7,2543S±006×17953W±007,h436km±7km, h445km±3.0km:pP-P,n66,σ1§19/61,mb4.3/28,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.06**	**160**	P	**P**	**19 53 18.7**	**+0.7**
	300nm,0.3s,baz=78,slow=22,SNR=7.3						
RAO				S	**S**	**19 54 18.8**	**-0.1**
	150nm,0.3s,baz=90,slow=21,SNR=7.1						
RAO	**Raoul Island**	**4.06**	**160**	*e*P	**P**	**19 53 18.5**	**+0.5**
URZ	**Urewera**	**13.10**	**192**	P	**P**	**19 54 53.1**	**-1.0**
	14nm,0.3s,baz=308,slow=1.4,SNR=67						
URZ				S	**S**	**19 57 14.3**	**-1.0**
	14nm,0.3s,baz=234,slow=22,SNR=20						
DZM	**Mont Dzumac**	**13.28**	**282**	*e*P	**P**	**19 54 57.4**	**+1.1**
DZM	**Mont Dzumac**	**13.28**	**282**	*e*P	**P**	**19 54 58.1**	**+1.8**
NOUC	**Port Laguerre**	**13.39**	**281**	*e*P	**P**	**19 54 58.5**	**+1.0**
AFI	**Afiamalu**	**13.58**	**34**	P	**P**	**19 54 57.1**	**-2.5**
	5.4nm,0.3s,baz=323,slow=10,SNR=4.8						
AFI				S	**S**	**19 57 10.2**	**-15**
	11nm,0.3s,baz=224,slow=21,SNR=5.9						
RPZ	**Rata Peaks**	**19.80**	**201**	P	**P**	**19 56 03.5**	**0.0**
	6.6nm,0.3s,baz=29,slow=4.0,SNR=14						
ARMA	**Armidale**	**25.93**	**252**	*e*P	**P**	**19 57 00.6**	**+1.7**
CNB	**Canberra Magne**	**28.49**	**242**	*e*P	**P**	**19 57 22.9**	**+1.5**
CTA	**Charters Tower**	**31.94**	**273**	*e*P	**P**	**19 57 51.3**	**-0.3**
	19nm,0.6s,mb4.6						
CTA	**Charters Tower**	**31.94**	**273**	P	**P**	**19 57 51.5**	**-0.1**
	24nm,0.7s,mb4.7,baz=98,slow=9.8,SNR=35						
CTAO	**Charters Tower**	**31.94**	**273**	*e*P	**P**	**19 57 51.7**	**+0.1**
TOO	**Toolangi**	**32.01**	**239**	*e*P	**P**	**19 57 52.8**	**+0.9**
STKA	**Stephens Creek**	**34.58**	**250**	*e*P	**P**	**19 58 14.1**	**+0.2**
	8.3nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**34.58**	**250**	P	**P**	**19 58 14.3**	**+0.4**
	9.6nm,0.5s,mb4.4,baz=94,slow=10,SNR=87						
ASAR	**Alice Springs**	**42.23**	**262**	P	**P**	**19 59 16.2**	**-0.5**
	17nm,0.9s,mb4.4,baz=104,slow=8.2,SNR=114						
ASAR				ScP	ScP	20 04 11.8	+2.2
	1.0nm,0.7s,baz=112,slow=4.7,SNR=4.9						
ASAR				S	**S**	**20 05 03.5**	**-0.9**
	0.5nm,0.7s,baz=93,slow=15,SNR=5.6						
WB2	**Warramunga Arr**	**42.74**	**268**	*e*P	**P**	**19 59 19.5**	**-1.3**
WRAB	**Tennant Creek**	**42.75**	**268**	*e*P	**P**	**19 59 19.5**	**-1.3**
	32nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**42.75**	**268**	P	**P**	**19 59 19.6**	**-1.2**
	13nm,0.5s,mb4.5,baz=99,slow=6.9,SNR=627						
WRA				ScP	ScP	20 04 14.8	+3.0
	1.9nm,0.9s,baz=105,slow=4.3,SNR=6.4						
WRA				S	**S**	**20 05 09.7**	**-2.4**
	1.0nm,0.8s,baz=99,slow=14,SNR=6.3						
FORT	**Forrest**	**46.20**	**251**	*e*P	**P**	**19 59 46.3**	**-1.2**
	181nm,0.4s						
KAKA	**Kakadu**	**46.89**	**276**	*e*P	Px	19 59 39.7	
	5.3nm,0.9s						
SBA	**Scott Base**	**52.88**	**184**	*e*P	**P**	**20 00 38.5**	**+2.1**
	17nm,1.0s,mb4.2						
KLBR	**Kellerberrin**	**54.81**	**248**	*e*P	**P**	**20 00 49.7**	**-1.2**
	26nm,0.5s,mb4.7						
NWAO	**Narrogin (SRO)**	**55.01**	**246**	P	**P**	**20 00 51.4**	**-0.8**
	7.9nm,0.6s,mb4.1,baz=122,slow=11,SNR=13						
NWAO	**Narrogin (SRO)**	**55.01**	**246**	*e*P	**P**	**20 00 50.9**	**-1.3**
MBWA	**Marble Bar**	**55.55**	**261**	*e*P	**P**	**20 00 54.9**	**-1.3**
BATI	**Baumata**	**55.78**	**275**	P	**P**	**20 00 57.8**	**-0.1**
	7.9nm,0.6s,mb4.2,baz=181,slow=5.3,SNR=5.1						
MUN	**Mundaring**	**56.03**	**247**	*e*P	**P**	**20 00 58.5**	**-0.9**
QSPA	**South Pole Qui**	**64.66**	**180**	P	**P**	**20 01 58.1**	**+2.0**
	21nm,0.7s,mb4.9,baz=24,slow=1.7,SNR=60						
QSPA	**South Pole Qui**	**64.66**	**180**	P	**P**	**20 01 58.1**	**+2.0**
MJAR	**Matsushiro Arr**	**73.40**	**326**	P	**P**	**20 02 47.9**	**-1.8**
	1.4nm,0.8s,mb3.5,baz=216,slow=41,SNR=4.7						
MAW	**Mawson**	**76.47**	**200**	*e*P	**P**	**20 03 07.4**	**+0.9**
	6.8nm,0.6s,mb4.5						
MAW	**Mawson**	**76.47**	**200**	P	**P**	**20 03 07.6**	**+1.0**
	9.5nm,0.6s,mb4.6,baz=125,slow=7.2,SNR=26						
KSRS	**Korea Array**	**79.69**	**320**	P	**P**	**20 03 23.8**	**-0.6**
	1.4nm,0.6s,mb3.7,baz=129,slow=5.7,SNR=5.5						
PETK	**Petropavlovsk-**	**80.68**	**346**	P	**P**	**20 03 27.1**	**-2.1**
	5.8nm,0.9s,mb4.3,baz=148,slow=6.4,SNR=4.6						
SYO	**Syowa Base**	**81.63**	**193**	⇑*e*P	**P**	**20 03 32.4**	**-1.7**
SYO	**Syowa Base**	**81.63**	**193**	⇑*e*pP	pP	20 05 10.9	-0.3
NJ2	**Nanjing**	**81.99**	**311**	*e*P	**P**	**20 03 37.2**	**+0.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
SNAA	**Sanae**	**83.13**	**179**	*e*P	**P**	**20 03 39.9**	**-1.8**
SNAA				*e*		20 03 42.3	
SNAA				*e*		20 03 45.3	
SNAA	**Sanae**	**83.13**	**179**	*e*P	**P**	**20 03 39.8**	**-1.9**
	comp=Z,2.5nm,0.6s,mb4.1						
VNA3	**Neumayer Olymp**	**83.33**	**177**	*e*P	**P**	**20 03 43.2**	**+0.5**
VNA3				*e*		20 03 45.1	
VNA3				*e*		20 03 46.9	
VNA2	**Neumayer--Watz**	**83.75**	**177**	*e*P	**P**	**20 03 45.6**	**+0.8**
	baz=188,slow=5.0						
VNA2				*e*		20 03 47.3	
VNA2				*e*		20 03 48.8	
MDJ	**Mudanjiang**	**83.77**	**326**	P	**P**	**20 03 47.3**	**+2.1**
MDJ				AP	pP	20 05 26.0	+2.9
MDJ				XP	sP	20 06 11.7	+3.5
MDJ				PP	PP	20 07 08.4	+2.2
MDJ				S	S	20 13 34.5	+3.6
MDJ				AMB	AMB		
	comp=Z,7.0nm,2.5s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,190nm,4.6s						
PFO	**Pinyon Flat Ob**	**83.89**	**48**	P	**P**	**20 03 45.6**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.0,baz=220,slow=4.9,SNR=3.2						
VNA1	**Neumayer--Stat**	**83.99**	**177**	*e*P	**P**	**20 03 46.9**	**+0.9**
VNA1				*e*		20 03 49.3	
VNA1				*e*		20 03 51.3	
GSC	**Goldstone**	**84.65**	**47**	*e*P	**P**	**20 03 49.4**	**-0.4**
	comp=Z,15nm,1.4s,mb4.5						
CN2	**Changchun**	**85.37**	**323**	*e*P	**P**	**20 03 55.0**	**+1.9**
NVAR	**Mina Array Bea**	**85.55**	**44**	P	**P**	**20 03 53.8**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.0,baz=222,slow=7.5,SNR=15						
TUC	**Tucson**	**87.11**	**52**	*e*P	**P**	**20 04 02.2**	**+0.5**
	comp=Z,5.2nm,0.9s,mb4.3						
MSU	**Marysvale**	**89.52**	**46**	*e*P	**P**	**20 04 12.9**	**+0.1**
KMI	**Kunming**	**90.36**	**298**	P	**P**	**20 04 18.5**	**+1.5**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**90.46**	**290**	P	**P**	**20 04 18.9**	**+1.3**
	comp=Z,1.3nm,0.8s,mb3.8,baz=140,slow=3.5,SNR=11						
TXAR	**Lajitas Array**	**90.88**	**58**	P	**P**	**20 04 19.6**	**+0.2**
	comp=Z,1.2nm,0.7s,mb3.8,baz=211,slow=7.6,SNR=13						
HHC	**Hu-ho-hao-te**	**91.80**	**315**	*e*P	**P**	**20 04 25.0**	**+1.7**
HHC				AP	pP	20 06 07.5	+4.7
HHC				XP	sP	20 06 51.5	+4.0
HHC				PP	PP	20 08 13.6	+3.6
HHC				SKS		20 14 14.8	
HHC				S	S	20 14 46.1	+0.1
HHC				XS	sS	20 17 46.5	+2.4
HHC				SS	SS	20 21 11.1	+4.0
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,152nm,4.9s						
CD2	**Chengdu**	**92.28**	**303**	*e*P	**P**	**20 04 26.5**	**+0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,6.8s						
PDAR	**Pinedale Array**	**93.49**	**44**	P	**P**	**20 04 30.1**	**-0.9**
	comp=Z,0.8nm,0.9s,mb3.6,baz=204,slow=3.3,SNR=4.9						
LZH	**Lanzhou**	**94.65**	**308**	*e*P	**P**	**20 04 37.4**	**+0.9**
LZH				AP	pP	20 06 19.6	+3.5
LZH				XP	sP	20 07 02.1	+1.3
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,68nm,4.5s						
MKAR	**Makanchi Array**	**113.50**	**312**	PKiKP	PKiKP	20 09 48.8	-1.8
	comp=Z,0.1nm,0.4s,baz=216,slow=0.8,SNR=4.8						
ARCES	**ARCESS Array B**	**133.47**	**348**	PKP	PKPdf	20 10 25.1	-3.0
	comp=Z,1.1nm,0.7s,baz=85,slow=1.3,SNR=11						
ARCES				SKPbc	SKPbc	20 13 16.2	+1.1
	comp=Z,3.8nm,0.8s,baz=318,slow=1.6,SNR=4.4						
NB2	**NORSAR Subarra**	**143.66**	**351**	PKP	PKPdf	20 10 43.3	-3.6
	comp=Z,1.0nm,0.6s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**143.66**	**351**	PKP	PKPdf	20 10 43.8	-3.1
	comp=Z,1.9nm,0.7s,baz=11,slow=2.7,SNR=9.9						
AKASG	**Malin Array Be**	**146.48**	**326**	PKPbc	PKPbc	20 10 52.3	-2.0
	comp=Z,2.3nm,0.4s,baz=43,slow=4.6,SNR=13						
KSP	**Ksiaz**	**151.87**	**338**	*e*PKP	PKPbc	20 11 07.1	-0.4
ESDC	**Fonseca Array**	**165.32**	**14**	PKPab	PKPab	20 12 16.6	-0.7
	comp=Z,0.4nm,0.5s,baz=353,slow=2.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**167.72**	**186**	PKPab	PKPab	20 12 28.3	0.0
	comp=Z,1.2nm,0.6s,baz=169,slow=3.7,SNR=20						

MOS ***12*** *19:54:25.1±1.5,5200N×10632E,h18km,mb4.4/1,Error ellipse: s-maj=15.7km s-min=11.5km az=60.0*

BYKL 12 19:54:25.0±0.2,5201N×10628E,h27km±3km,10C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STDB	**Stepnoy Dvoret**	**0.17**	**18**	*e*Pg	Pb	19 54 31.0	+0.5
STDB				*e*Sg	Sb	19 54 35.6	+1.4
KAB	**Kabansk**	**0.23**	**80**	⇑*i*Pg	Pb	19 54 31.2	-0.1
KAB				*e*		19 54 35.1	
KAB				pmax	pmax		
	comp=Z,739nm,0.1s						
KAB				smax			
	comp=N,23μm,0.3s						
KAB	**Kabansk**	**0.23**	**80**	*e*Pg	Pb	19 54 30.9	-0.4
KAB				*e*Sg	Sb	19 54 35.1	-0.4
KAB				Pmax			
	comp=N,433nm,0.2s						
KAB				Smax			
	comp=N,6μm,0.5s						
FFNB	**Fofonovo**	**0.30**	**83**	⇑*i*Pg	Pb	19 54 31.5	-0.7
FFNB				*e*Sg	Sb	19 54 35.8	-1.3
FFNB				Pmax			
	comp=N,1μm,0.2s						
FFNB				Smax			
	comp=N,5μm,0.2s						
HRMR	**Khuramsha**	**0.57**	**132**	⇓*i*Pg	Pb	19 54 36.1	-0.3
	comp=N,1μm,0.4s						
HRMR				⇑*i*Pg	Pb	19 54 36.1	-0.3
	comp=N,730nm,0.4s						
HRMR				⇑*i*Pg	Pb	19 54 36.1	-0.3
	comp=N,1μm,0.4s						
HRMR				*e*Sg	Sb	19 54 44.2	+0.1
HRMR				*e*		19 54 49.0	
HRMR				Pmax			
	comp=N,1μm,0.3s						
HRMR				Smax			
	comp=N,7μm,0.2s						
TRG	**Tyrgan**	**0.75**	**3**	⇑*i*PG	Pb	19 54 38.8	-0.7
TRG				*e*		19 54 49.3	
TRG				pmax	pmax		
	comp=Z,228nm,0.2s						
TRG				smax			
	comp=N,3μm,0.2s						
TRG	**Tyrgan**	**0.75**	**3**	⇑*i*Pg	Pb	19 54 38.8	-0.7
TRG				*e*Pb	Pb	19 54 39.8	+0.3
TRG				*e*Sg	Sb	19 54 48.9	-0.5
TRG				max			
	comp=N,237nm,0.2s						
TRG				Smax			
	comp=N,3μm,0.2s						
ZRHB	**Zarechye**	**0.76**	**44**	*e*Pg	Pb	19 54 39.3	-0.4
ZRHB				*e*Pb	Pb	19 54 40.4	+0.7
ZRHB				*e*Sg	Sb	19 54 49.5	-0.2
ZRHB				max			
	comp=N,345nm,0.2s						
ZRHB				Smax			
	comp=N,2μm,0.4s						
UUDB	**Ulan-Yde**	**0.87**	**99**	⇓*i*Pg	Pn	19 54 40.9	-0.5
	comp=N,220nm,0.2s						
UUDB				⇑*i*Pg	Pn	19 54 40.9	-0.5
	comp=N,725nm,0.2s						
UUDB				⇑*i*Pg	Pn	19 54 40.9	-0.5
	comp=N,1μm,0.2s						
UUDB				*e*Sg	Sb	19 54 52.3	-0.3
UUDB				*e*Sb	Sb	19 54 55.8	+3.2
UUDB				Pmax			
	comp=N,548nm,0.3s						
UUDB				max			
	comp=N,922nm,0.3s						
LSTR	**Listvyanka**	**0.91**	**262**	*e*PG	Pn	19 54 41.7	-0.2
LSTR				*e*		19 54 54.5	
LSTR				pmax	pmax		
	comp=Z,183nm,0.4s						
LSTR				smax			
	comp=N,1μm,0.4s						
LSTR	**Listvyanka**	**0.91**	**262**	⇑*i*Pg	Pn	19 54 42.7	+0.8
LSTR				*e*Sg	Sb	19 54 55.0	+1.3
LSTR				Pmax			
	comp=N,204nm,0.5s						
LSTR				Smax			
	comp=N,1μm,0.3s						
IRK	**Irkutsk**	**1.26**	**281**	*e*PG	Pn	19 54 48.8	+2.0
IRK				*e*		19 55 05.7	
IRK				pmax	pmax		
	comp=Z,875nm,0.2s						
IRK				smax			
	comp=N,3μm,0.3s						
IRK	**Irkutsk**	**1.26**	**281**	⇑*i*Pg	Pn	19 54 48.8	+2.0
IRK				*e*Sg	Sn	19 55 05.5	+2.7
IRK				Pmax			
	comp=N,875nm,0.4s						
IRK				Smax			
	comp=N,3μm,0.6s						
TLY	**Talaya**	**1.67**	**260**	*e*PN	Pn	19 54 55.3	+2.9
TLY				*e*		19 55 16.5	
TLY				pmax	pmax		
	comp=Z,22nm,0.2s						
TLY				smax			
	comp=N,243nm,0.4s						
TLY	**Talaya**	**1.67**	**260**	*e*Pg	Pn	19 54 54.7	+2.3
TLY				*e*Pb	Pb	19 54 55.5	+0.5
TLY				*e*Sg	Sn	19 55 16.1	+3.2
TLY				max			
	comp=N,1μm,0.1s						
TLY				Smax			
	comp=N,243nm,0.4s						
OGRR	**Ongureny**	**1.82**	**25**	*e*PN	Pn	19 54 55.5	+1.0
OGRR				*e*		19 55 18.6	
OGRR				pmax	pmax		
	comp=Z,44nm,0.4s						
OGRR				smax			
	comp=E,352nm,0.3s						
OGRR	**Ongureny**	**1.82**	**25**	*e*Pn	Pn	19 54 55.5	+1.0
OGRR				*e*Pg	Pn	19 54 56.5	+2.0
OGRR				*e*		19 55 18.6	
OGRR				*e*Sg	Sn	19 55 20.1	+3.5
OGRR				Pmax			
	comp=E,28nm,0.1s						
OGRR				Smax			
	comp=E,353nm,0.5s						
MXMB	**Maximikha**	**1.96**	**49**	*e*Pg	Pn	19 55 00.1	+3.7
MXMB				*e*Sg	Sn	19 55 26.7	+6.7
MXMB				Pmax			
	comp=E,79nm,0.1s						
MXMB				Smax			
	comp=E,1μm,0.4s						
ARS	**Arshan**	**2.39**	**269**	*e*PN	Pn	19 55 07.6	+5.3
ARS				*e*		19 55 38.7	
ARS				pmax	pmax		
	comp=Z,99nm,0.4s						
ARS				smax			
	comp=E,809nm,0.5s						
ARS	**Arshan**	**2.39**	**269**	*e*	Pn	19 55 05.1	+2.8
ARS				*e*Pg	Pn	19 55 07.6	+5.3
ARS				*e*Sg	Sn	19 55 38.1	+7.5
ARS				Pmax			
	comp=E,100nm,0.5s						
ARS				Smax			
	comp=E,809nm,0.4s						
ZAK	**Zakamensk**	**2.49**	**230**	*e*	Pn	19 55 07.0	+3.3
ZAK				*e*Pg	Pn	19 55 10.3	+6.6
ZAK				*e*Sg	Sn	19 55 43.4	+10
ZAK				Pmax			
	comp=E,22nm,0.2s						
ZAK				Smax			
	comp=E,89nm,0.6s						
SYVR	**Suvo**	**2.79**	**52**	*e*PN	Pn	19 55 08.9	+1.0
SYVR				*e*		19 55 13.9	
SYVR				*e*		19 55 51.3	
SYVR				pmax	pmax		
	comp=Z,26nm,0.3s						
SYVR				smax			
	com

NIZ					*e*			19 56 17.3	
NIZ					*e*Sg	Sn		19 56 34.7	+19
NIZ					Smax				
	comp=N,73nm,1.0s								
CIT	**Chita**	**4.49**	**87**		*e*Pg	Pn		19 55 45.8	+15
CIT					*e*Sg	Sn		19 56 44.4	+22
CIT					Pmax				
	comp=N,25nm,0.3s								
CIT					Smax				
	comp=N,250nm,0.8s								
KPC	**Khapcheranga**	**4.50**	**118**		*e*PN	Pn		19 55 31.7	+0.4
KPC					*e*			19 55 44.8	
KPC					*e*			19 56 44.3	
KPC					pmax	pmax			
	comp=Z,21nm,0.2s								
KPC					smax				
	comp=N,70nm,0.5s								
KPC	**Khapcheranga**	**4.50**	**118**		*e*Pn	Pn		19 55 31.7	+0.4
KPC					*e*Pg	Pn		19 55 45.2	+14
KPC					*e*Sg	Sn		19 56 44.1	+21
KPC					Pmax				
	comp=N,24nm,0.4s								
KPC					Smax				
	comp=N,68nm,0.9s								
KMO	**Kumora**	**4.85**	**35**		*e*PN	Pn		19 55 37.8	+1.7
KMO					*e*S	Sn		19 56 27.9	-3.4
KMO	**Kumora**	**4.85**	**35**		*e*Pg	Pn		19 55 53.5	+17
KMO					*e*Sg	Sn		19 56 57.3	+26
KMO					Pmax				
	comp=N,32nm,0.8s								
KMO					Smax				
	comp=N,54nm,1.0s								
UKT	**Uakit**	**5.58**	**48**		*e*	Pn		19 55 51.9	+5.8
UKT					*e*Pg	Pn		19 56 05.5	+19
UKT					*e*			19 56 53.1	
UKT					*e*Sg	Sn		19 57 18.6	+29
UKT					Pmax				
	comp=N,2.0nm,0.6s								
UKT					Smax				
	comp=N,32nm,1.6s								
SVKR	**Severomuysk**	**5.94**	**43**		*e*	Sn		19 57 17.5	+19
SVKR					*e*Sg	Sn		19 57 32.3	+34
SVKR					Smax				
	comp=N,85nm,1.8s								
TDJR	**Todzha**	**6.27**	**278**		*e*Sg	Sn		19 57 37.8	+31
NLYR	**Nelyaty**	**7.11**	**47**		*e*	Pb		19 57 37.3	+70
NLYR					*e*Sg	Sn		19 58 06.3	+39
NLYR					Smax				
	comp=N,58nm,1.5s								
BOD	**Bodaibo**	**7.32**	**34**		*e*Sg	Sn		19 58 12.1	+40
BOD					Smax				
	comp=N,20nm,2.0s								
TUP	**Tupik**	**8.56**	**68**		*e*			19 58 36.2	
TUP					*e*Sg	Sn		19 58 48.3	+46
TUP					Smax				
	comp=N,56nm,1.2s								

PGC **12** *20:16:38.5±0.0, 53.19N×116.02W, h1km, ML3.6/9, 117km northwest of Rocky Mt. House, Alberta Alberta Province, Canada Possible blast - not a known site.*

NEIC 12 20:16:38.5, 53.19N×116.02W, h1km, ML3.6(PGC)**, 1C-9D, After PGC., Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDM	**Edmonton**	**1.61**	**88**	⇓*i*Pn	Pn	20 17 07.8	-0.1
EDM				*e*		20 17 12.8	
EDM				*e*Sn	Sn	20 17 28.1	-1.2
EDM	**Edmonton**	**1.61**	**88**	⇓Pn	Pn	20 17 07.8	-0.1
EDM				⇑Sg	Sg	20 17 28.6	-1.5
MNB	**Mounoet Dainar**	**1.75**	**236**	⇑Pn	Pn	20 17 10.7	+0.9
MNB				Sg	Sg	20 17 33.1	-1.4
DOWB	**Downie Slide**	**2.27**	**223**	⇑Pn	Pn	20 17 17.3	+0.3
DOWB				Pg	Pg	20 17 18.9	-3.0
DOWB				Sg	Sg	20 17 48.4	-2.9
DOWB	**Downie Slide**	**2.27**	**223**	⇑Pn	Pn	20 17 17.3	+0.3
DOWB				⇓Pg	Pg	20 17 18.9	-3.0
DOWB				⇓Sg	Sg	20 17 48.4	-2.9
SLEB	**Sale Mountain**	**2.41**	**213**	⇓Pn	Pn	20 17 18.7	-0.3
SLEB				Pg	Pg	20 17 21.9	-2.7
SLEB				Sg	Sg	20 17 52.9	-2.8
WALA	**Waterton Lakes**	**4.35**	**161**	Sn	Sn	20 18 33.8	-3.0
WALA				Sg	Sg	20 18 52.6	-5.4
LLLB	**Lillooet**	**4.46**	**237**	⇓Pn	Pn	20 17 46.3	-0.7
LLLB				Sg	Sg	20 18 56.4	-5.1
LLLB	**Lillooet**	**4.46**	**237**	⇑Pn	Pn	20 17 46.3	-0.7
LLLB				⇑Sg	Sg	20 18 56.4	-5.1
PNT	**Penticton**	**4.49**	**212**	Pn	Pn	20 17 46.3	-1.3
PNT				Pg	Pg	20 17 59.2	-5.2
PNT				Sg	Sg	20 18 57.6	-4.9
BMBC	**Bull Mountain**	**4.56**	**311**	⇓Pn	Pn	20 17 48.2	-0.2
FLLB	**Fletcher Lake**	**4.57**	**254**	⇑Pn	Pn	20 17 47.8	-0.9
FLLB				⇑Sg	Sg	20 19 00.8	-4.3
NEW	**Newport**	**4.98**	**188**	*e*Pn	Pn	20 17 54.5	+0.1
NEW				*e*Pg	Pg	20 18 11.1	-2.8
NEW				*e*Sg	Sg	20 19 16.6	-1.8
CHMT	**Chamberlain Mo**	**6.53**	**163**	*e*Pn	Pn	20 18 14.8	-0.8
FNBB	**Fort Nelson**	**6.92**	**328**	⇓Pn	Pn	20 18 18.8	-2.1

ISCJB **12** *20:57:27.0±0.5, 29.52N±005×68.65E±004, h10km, mb3.9/20, MS3.4/11, Error ellipse: s-maj=7.9km s-min=4.5km az=17.9*
IDC **12** *20:57:27.7±0.8, 29.57N×68.47E, h0km, mb3.9/15, mb1 4.1/15, mb1mx4.0/23, mbtmp4.0/15, MS3.4/11, Ms1 3.4/11, ms1mx3.1/40, Error ellipse: s-maj=18.9km s-min=17.6km az=1.0*
MOS **12** *20:57:30.8±1.4, 29.57N×68.71E, h33km, mb4.1/13, Error ellipse: s-maj=13.2km s-min=9.2km az=78.0*
NEIC **12** *20:57:31.2±0.6, 29.54N×68.60E, h25km, mb4.6/7, Error ellipse: s-maj=12.3km s-min=9.2km az=208.0*
NNC **12** *20:57:37.3±18.0, 30.10N×68.48E, h37km±134km, mb3.7, Error ellipse: s-maj=123.0km s-min=83.6km az=6.0*
BJI **12** *20:57:38.7, 29.97N×69.42E, h25km, mb4.5, Ms4.0, Msz3.8*

ISC 12 20:57:28.7±0.5, 29.51N±005×68.60E±004, h10km, n77, σ1°34/79, mb3.9/20, MS3.4/11, 3C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**5.03**	**4**	*e*P	Pn	20 58 46.2	+2.0
AJM	**Ajmer**	**6.13**	**118**	*e*P	Pn	20 59 01.0	+1.7
THN	**Thein Dam**	**6.77**	**63**	*e*P	Pn	20 59 08.7	+0.7
THN				*e*S	Sn	21 00 26.8	+1.6
SDNR	**Sundarnagar**	**7.49**	**73**	*e*P	Pn	20 59 20.0	+2.1
SDNR				*e*S	Sn	21 00 45.0	+2.1
SMLA	**Simla**	**7.58**	**76**	*i*P	Pn	20 59 21.1	+2.0
SMLA				*i*S	Sn	21 00 45.0	0.0
SMLA				*ex*	x	21 00 47.0	
	comp=N,369nm,0.4s						
SMLA				*ex*	x	21 00 48.2	
	comp=E,239nm,0.3s						
NDI	**New Delhi**	**7.58**	**94**	*e*P	Pn	20 59 20.0	+0.8
NDI				*ex*	x	21 00 42.0	
DDI	**Dehra Dun**	**8.24**	**82**	*ex*	x	21 00 03.0	
DDI				*ex*	x	21 02 06.0	
KLP	**Kalpa**	**8.56**	**74**	*e*P	Pn	20 59 34.0	+1.3
KLP				*e*S	Sn	21 01 09.7	+0.4
JOSI	**Joshimath**	**9.55**	**81**	*e*P	Pn	20 59 49.8	+3.6
JOSI				*e*S	Sn	21 01 31.3	-2.4
LGTI	**Lohaghat**	**10.15**	**87**	*ex*	x	21 00 06.5	
LGTI				*e*S	Sn	21 01 43.0	-5.3
PYUN	**Piuthan**	**12.70**	**93**	*e*P	Pn	21 00 28.5	-0.8
AML	**Almayashu**	**13.25**	**17**	*e*P	Pn	21 00 36.2	-0.6
	comp=E,19nm,0.5s						
KOLN	**Koldanda**	**13.29**	**94**	*e*P	Pn	21 00 36.2	-1.2
	comp=E,12nm,0.5s						
DANN	**Dangsing**	**13.33**	**91**	*e*P	Pn	21 00 37.0	-0.9
	comp=E,33nm,0.6s						
KK31	**Karatay Array**	**13.65**	**6**	P	Pn	21 00 40.5	-1.8
	comp=E,1.2nm,0.3s,baz=195,slow=14,SNR=39						
KK31				⇓S	Sn	21 03 05.8	-8.2
	comp=E,2.1nm,0.8s,baz=195,slow=22,SNR=5.5						
EKS2	**Erkin-Say**	**13.77**	**16**	*e*P	Pn	21 00 42.4	-1.5
	comp=E,7.1nm,0.6s						
GKN	**Gorkha**	**14.15**	**92**	*e*P	Pn	21 00 47.2	-1.9
TKM2	**Tokmak 2**	**14.52**	**21**	⇑P	Pn	21 00 53.1	-1.0
	comp=E,7.4nm,0.6s						
TKM2	**Tokmak 2**	**14.52**	**21**	*e*P	Pn	21 00 53.0	-1.1
	comp=E,10.0nm,0.7

SOF **12** *21:11:17.4, 37.72N×26.09E, h12km, MD3.2*
DDA **12** *21:11:28.8, 38.76N×25.10E, h32km±1km, Md3.4*
ISK **12** *21:11:31.6, 38.73N×25.36E, h15km, ML4.0*
IDC **12** *21:11:32.7±1.1, 38.63N×25.63E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.6/22, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=28.5km s-min=19.0km az=145.0*
ATH **12** *21:11:33.8, 38.76N×25.58E, h36km±3km, MD3.9/19, ML4.0*
NEIC **12** *21:11:33.9, 38.76N×25.59E, h38km, MD3.9(ATH), After ATH.*
CSEM **12** *21:11:34.1±0.0, 38.76N×25.55E, h20km, ML4.3/7, Error ellipse: s-maj=0.9km s-min=0.7km az=10.0*
ISCJB **12** *21:11:34.4±0.4, 3874N±001×2551E±002, h24km±4km, mb3.4/5, Error ellipse: s-maj=2.7km s-min=2.4km az=138.2*
THE **12** *21:11:35.3, 38.73N×25.59E, h23km±1km, ML4.3/7, Error ellipse: s-maj=1.6km s-min=0.4km az=93.0*

ISC 12 21:11:34.2±0.4, 3873N±001×2551E±002, h13km±3km, n171, σ0.85/215, mb3.4/5, 13C-2D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.55**	**129**	P	**Pg**	**21 11 45.0**	**+0.1**
CHOS				S	**Sg**	**21 11 52.9**	**+0.7**
PRK	**Paraskevi**	**0.79**	**49**	P	**Pg**	**21 11 48.7**	**-0.7**
PRK				S	**Sg**	**21 12 00.5**	**+0.8**
PRK	**Paraskevi**	**0.79**	**49**	*e*PN	**Pg**	**21 11 48.6**	**-0.8**
PRK				*e*SN	**Sg**	**21 11 58.8**	**-0.9**
PRK	**Paraskevi**	**0.79**	**49**	*e*Pn	**Pg**	**21 11 48.6**	**-0.8**
PRK				S	**Sg**	**21 12 00.5**	**+0.8**
URLA	**Izmir**	**0.93**	**113**	*i* P	**Pg**	**21 11 52.0**	**-0.2**
URLA				*i* S	**Sg**	**21 11 53.7**	**-1.4**
AYVA	**Ayvalik**	**1.08**	**58**	*i* P	**Pg**	**21 12 09.2**	**0.0**
AYVA				*i* S	**Sg**	**21 12 09.2**	**0.0**
LIA	**Limnos Island**	**1.19**	**348**	P	**Pn**	**21 11 55.8**	**-0.8**
LIA				S	**Sb**	**21 12 11.8**	**-0.2**
LIA	**Limnos Island**	**1.19**	**348**	*e*PN	**Pn**	**21 11 55.5**	**-1.1**
LIA				*e*SN	**Sn**	**21 12 11.0**	**-1.7**
BLCB	**Balcova**	**1.25**	**106**	PN	**Pn**	**21 11 57.3**	**-0.1**
BLCB				*e*SN	**Sn**	**21 12 15.2**	**+1.1**
BLCB	**Balcova**	**1.25**	**106**	Pn	**Pn**	**21 11 57.3**	**-0.1**
BLCB				Sg	**Sg**	**21 12 15.3**	**+0.8**
AOS	**Alonnisos**	**1.34**	**290**	P	**Pn**	**21 11 58.6**	**-0.1**
IZM	**Izmir**	**1.41**	**103**	*e*PN	**Pn**	**21 11 59.1**	**-0.5**
IZM				*e*SN	**Sn**	**21 12 18.9**	**+0.7**
IZM	**Izmir**	**1.41**	**103**	Pn	**Pn**	**21 11 59.3**	**-0.3**
IZM				Sg	**Sg**	**21 12 20.3**	**+0.6**
KDAG	**Bornova**	**1.42**	**103**	*i* P	**Pn**	**21 11 59.3**	**-0.4**
KDAG				*i* S	**Sn**	**21 12 20.1**	**+1.9**
SMG	**Samos**	**1.46**	**134**	*e*PN	**Pn**	**21 11 59.5**	**-0.8**
PTL	**Penteli**	**1.46**	**243**	*e*PB	**Pb**	**21 12 00.5**	**-0.8**
GADA	**Gvkgeada**	**1.49**	**12**	*e*PN	**Pn**	**21 11 58.6**	**-2.1**
GADA	**Gvkgeada**	**1.49**	**12**	Pn	**Pn**	**21 11 60.0**	**-0.7**
GADA				Sg	**Sg**	**21 12 23.0**	**+0.9**
GADA	**Gvkgeada**	**1.49**	**12**	Pn	**Pn**	**21 12 00.0**	**-0.7**
GADA				Sg	**Sg**	**21 12 23.0**	**+0.9**
ATH	**Athens Observa**	**1.60**	**242**	*e*PB	**Pb**	**21 12 02.8**	**-0.9**
KVR	**Kavouri**	**1.64**	**237**	*e*PN	**Pn**	**21 12 02.5**	**-0.3**
APE	**Apeiranthos**	**1.66**	**179**	P	**Pn**	**21 12 02.1**	**-0.9**
APE				S	**Sn**	**21 12 22.9**	**-1.3**
APE	**Apeiranthos**	**1.66**	**179**	*e*PN	**Pn**	**21 12 02.0**	**-1.0**
APE	**Apeiranthos**	**1.66**	**179**	*e*Pn	**Pn**	**21 12 01.8**	**-1.2**
APE				S	**Sn**	**21 12 22.9**	**-1.3**
APE	**Apeiranthos**	**1.66**	**179**	⇑*i* P	**Pn**	**21 12 01.8**	**-1.2**
GCAM	**G?zelcaml?**	**1.70**	**127**	*i* P	**Pn**	**21 12 03.0**	**-0.6**
GCAM				*i* S	**Sg**	**21 12 29.3**	**+0.3**
GCAM	**G?zelcaml?**	**1.70**	**127**	*i* P	**Pn**	**21 12 03.0**	**-0.6**
GCAM				*i* S	**Sg**	**21 12 29.3**	**+0.3**
AKHS	**Akhisar**	**1.81**	**85**	*i* P	**Pn**	**21 12 04.5**	**-0.5**
AKHS				*i* S	**Sg**	**21 12 33.1**	**+0.8**
AKS	**Akhisar**	**1.81**	**85**	*e*PN	**Pn**	**21 12 04.7**	**-0.3**
PAIG	**Paliouri**	**1.85**	**311**	P	**Pn**	**21 12 05.3**	**-0.4**
PAIG				S	**Sn**	**21 12 29.6**	**+0.5**
NAIG	**Nisos Aigina**	**1.86**	**239**	*e*PN	**Pn**	**21 12 06.0**	**+0.1**
NEO	**Neokhori**	**1.87**	**289**	*e*PN	**Pn**	**21 12 05.6**	**-0.4**
LPK	**Lapseki**	**1.90**	**30**	*e*PN	**Pn**	**21 12 05.3**	**-1.1**
LPK	**Lapseki**	**1.90**	**30**	Pn	**Pn**	**21 12 06.0**	**-0.4**
LPK	**Lapseki**	**1.90**	**30**	Pn	**Pn**	**21 12 06.0**	**-0.4**
XOR	**Xorichti**	**1.91**	**290**	P	**Pn**	**21 12 06.1**	**-0.4**
BALY	**Balya**	**1.92**	**58**	*i* P	**Pn**	**21 12 05.9**	**-0.7**
BALY				*i* S	**Sg**	**21 12 36.2**	**+0.2**
LKR	**Lokris**	**1.97**	**268**	P	**Pn**	**21 12 07.0**	**-0.3**
LKR				S	**Sn**	**21 12 32.7**	**+0.9**
LKR	**Lokris**	**1.97**	**268**	*e*Pn	**Pn**	**21 12 06.9**	**-0.4**
LKR				S	**Sn**	**21 12 32.7**	**+0.9**
OUR	**Ouranopolis**	**1.99**	**324**	P	**Pn**	**21 12 07.4**	**-0.2**
BALB	**Balikesir**	**2.05**	**63**	*e*PN	**Pn**	**21 12 07.6**	**-0.8**
BALB	**Balikesir**	**2.05**	**63**	Pn	**Pn**	**21 12 09.0**	**+0.6**
LTK	**Loutraki**	**2.12**	**251**	P	**Pn**	**21 12 09.5**	**+0.1**
LTK				S	**Sn**	**21 12 36.4**	**+0.8**
BODT	**Bodrum**	**2.19**	**139**	*e*PN	**Pn**	**21 12 09.7**	**-0.7**
BODT	**Bodrum**	**2.19**	**139**	Pn	**Pn**	**21 12 10.6**	**+0.2**
BODT	**Bodrum**	**2.19**	**139**	Pn	**Pn**	**21 12 10.6**	**+0.2**
ALN	**Alexandroupoli**	**2.20**	**11**	P	**Pn**	**21 12 09.4**	**-1.1**
ALN				S	**Sn**	**21 12 36.5**	**-1.1**
BDRM	**Kayabasi**	**2.26**	**137**	*i* P	**Pn**	**21 12 11.1**	**-0.2**
BDRM				*i* S	**Sg**	**21 12 46.4**	**-0.5**
THR4	**Thira Island,**	**2.27**	**182**	P	**Pn**	**21 12 10.6**	**-0.8**
PLG	**Polygyros**	**2.29**	**316**	P	**Pn**	**21 12 11.7**	**0.0**
PLG	**Polygyros**	**2.29**	**316**	*e*PN	**Pn**	**21 12 11.0**	**-0.7**
PLG	**Polygyros**	**2.29**	**316**	P	**Pn**	**21 12 11.7**	**0.0**
PLG	**Polygyros**	**2.29**	**316**	*e*Pb	**Pb**	**21 12 12.4**	**-3.0**
MLSB	**Milas**	**2.29**	**126**	*e*PN	**Pn**	**21 12 11.3**	**-0.4**
MLSB	**Milas**	**2.29**	**128**	Pn	**Pn**	**21 12 12.4**	**+0.7**
MLSB	**Milas**	**2.29**	**128**	Pn	**Pn**	**21 12 12.4**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.34**	**33**	*e*PN	**Pn**	**21 12 12.0**	**-0.4**
RKY	**Sarkoy-Tekirda**	**2.34**	**33**	Pn	**Pn**	**21 12 13.3**	**+1.0**
THR6	**Thira Island,**	**2.37**	**182**	P	**Pn**	**21 12 12.3**	**-0.5**
RDO	**Rodhopi**	**2.41**	**0**	*e*PN	**Pn**	**21 12 12.6**	**-0.8**
DURS	**Dursunbey**	**2.46**	**68**	*i* P	**Pn**	**21 12 13.5**	**-0.6**
DURS				*i* S	**Sg**	**21 12 52.9**	**-0.4**
MFT	**Murefte**	**2.46**	**33**	*e*PN	**Pn**	**21 12 13.8**	**-0.3**
MRMT	**Marmara Adasi**	**2.47**	**40**	*e*PN	**Pn**	**21 12 13.7**	**-0.5**
BNT	**Bandirma**	**2.47**	**48**	*e*PN	**Pn**	**21 12 13.4**	**-0.8**
BNT	**Bandirma**	**2.47**	**48**	Pn	**Pn**	**21 12 13.6**	**-0.5**
AGG	**Agios Georgios**	**2.50**	**278**	P	**Pn**	**21 12 14.9**	**+0.3**
AGG				S	**Sn**	**21 12 45.6**	**+0.7**
DEMI	**Demirci**	**2.52**	**82**	*i* P	**Pn**	**21 12 14.8**	**-0.1**
DEMI				*i* S	**Sg**	**21 12 55.1**	**-0.1**
DST	**Dursunbey**	**2.58**	**69**	*e*PN	**Pn**	**21 12 15.0**	**-0.1**
DST	**Dursunbey**	**2.58**	**69**	Pn	**Pn**	**21 12 16.7**	**+1.1**
DAT	**Datca**	**2.58**	**140**	*e*PN	**Pn**	**21 12 14.3**	**-1.4**
HORT	**Hortiatis**	**2.63**	**316**	P	**Pn**	**21 12 16.7**	**+0.3**
KCT	**Karacabey**	**2.68**	**54**	*e*PN	**Pn**	**21 12 17.0**	**-0.1**
LIT	**Litokhoron**	**2.71**	**301**	P	**Pn**	**21 12 17.7**	**+0.2**
YER	**Yerkesik**	**2.71**	**125**	*e*PN	**Pn**	**21 12 17.2**	**-0.3**
YER	**Yerkesik**	**2.71**	**125**	Pn	**Pn**	**21 12 17.5**	**0.0**
YER	**Yerkesik**	**2.71**	**125**	Pn	**Pn**	**21 12 17.5**	**0.0**
THE	**Thessaloniki**	**2.73**	**315**	P	**Pn**	**21 12 18.1**	**+0.3**
THL	**Klokotos Trika**	**2.84**	**288**	P	**Pn**	**21 12 19.9**	**+0.6**
THL				S	**Sn**	**21 12 54.0**	**+0.6**
THL	**Klokotos Trika**	**2.84**	**288**	*e*Pn	**Pn**	**21 12 20.0**	**+0.7**
THL				S	**Sn**	**21 12 54.0**	**+0.6**
VLI	**Veliai**	**2.86**	**226**	*e*PN	**Pn**	**21 12 19.5**	**-0.1**
VLI	**Veliai**	**2.86**	**226**	*e*Pn	**Pn**	**21 12 18.7**	**-0.9**
EVR	**Evrytania**	**2.90**	**275**	*e*PN	**Pn**	**21 12 19.5**	**-0.6**
EVR	**Evrytania**	**2.90**	**275**	*e*Pn	**Pn**	**21 12 21.8**	**+1.7**
NVR	**Nevrokopi**	**2.91**	**335**	*e*PN	**Pn**	**21 12 20.1**	**-0.1**
KDZ	**Kurdzhali**	**2.92**	**359**	P	**Pn**	**21 12 19.3**	**-1.0**
KDZ				S	**Sn**	**21 13 03.9**	**+8.7**
DENT	**Denizli**	**2.94**	**108**	*e*PN	**Pn**	**21 12 20.9**	**+0.2**
DENT	**Denizli**	**2.94**	**108**	Pn	**Pn**	**21 12 21.1**	**+0.5**
RZN	**Rozhen**	**3.02**	**349**	P	**Pn**	**21 12 21.4**	**-0.3**
RZN				*e*S	**Sg**	**21 13 09.8**	**-1.2**
KYTH	**Kithira**	**3.14**	**220**	*e*PN	**Pn**	**21 12 23.5**	**+0.1**
KNT	**Kendrikon**	**3.15**	**321**	P	**Pn**	**21 12 24.2**	**+0.7**
MMB	**Musomiste**	**3.16**	**335**	*i* P	**Pn**	**21 12 23.0**	**-0.7**
MMB				S	**Sg**	**21 13 16.8**	**+1.0**
KHL	**Karahalli**	**3.17**	**96**	*e*PN	**Pn**	**21 12 24.1**	**+0.2**
KHL	**Karahalli**	**3.17**	**96**	Pn	**Pn**	**21 12 24.6**	**+0.8**
ITM	**Ithomi**	**3.23**	**242**	*e*PN	**Pn**	**21 12 25.0**	**+0.4**
ITM	**Ithomi**	**3.23**	**242**	*e*Pn	**Pn**	**21 12 26.7**	**+2.1**
EDRB	**Edirne**	**3.25**	**16**	*e*PN	**Pn**	**21 12 23.8**	**-1.1**
EDRB	**Edirne**	**3.25**	**16**	Pn	**Pn**	**21 12 26.2**	**+1.3**
ARG	**Arkhangelos**	**3.26**	**140**	*e*PN	**Pn**	**21 12 25.3**	**+0.2**
GRG	**Griva**	**3.27**	**314**	P	**Pn**	**21 12 26.1**	**+1.0**
GRG				S	**Sn**	**21 13 04.2**	**+0.3**
KZN	**Kozani**	**3.29**	**300**	*e*PN	**Pn**	**21 12 26.2**	**+0.7**
DIM	**Dimitrovgrad**	**3.31**	**0**	P	**Pn**	**21 12 25.1**	**-0.7**
PLD	**Plovdiv**	**3.42**	**350**	P	**Pn**	**21 12 27.7**	**+0.4**
PLD	**Plovdiv**	**3.42**	**350**	P	**Pn**	**21 12 27.5**	**+0.2**
PLD				S	**Sg**	**21 13 23.6**	**-0.6**
VAY	**Valandovo**	**3.43**	**320**	*i* Pn	**Pn**	**21 12 28.5**	**+1.1**
VAY	**Valandovo**	**3.43**	**320**	*i* Pn	**Pn**	**21 12 28.6**	**+1.2**
KARP	**Karpathos**	**3.44**	**157**	*e*PN	**Pn**	**21 12 27.2**	**-0.3**
NPS	**Neapolis**	**3.46**	**179**	*e*PN	**Pn**	**21 12 27.6**	**-0.2**
IDI	**Anoyia**	**3.47**	**188**	Pn	**Pn**	**21 12 27.2**	**-0.8**
	3.7nm,0.3s,baz=13,slow=11,SNR=25						
IDI				Sn	**Sn**	**21 13 07.6**	**-1.3**
	7.6nm,0.3s,baz=24,slow=20,SNR=3.5						
IDI	**Anoyia**	**3.47**	**188**	Pn	**Pn**	**21 12 27.1**	**-0.9**
IDI				Sn	**Sn**	**21 13 07.6**	**-1.4**
VAM	**Vamos**	**3.48**	**198**	*e*PN	**Pn**	**21 12 29.6**	**+1.5**
YLV	**Yalova**	**3.50**	**57**	*e*PN	**Pn**	**21 12 27.8**	**-0.5**
FETY	**Fethiye**	**3.52**	**125**	*e*PN	**Pn**	**21 12 28.8**	**+0.2**
FETY	**Fethiye**	**3.52**	**125**	Pn	**Pn**	**21 12 28.5**	**-0.2**
KKB	**Krupnik**	**3.64**	**330**	P	**Pn**	**21 12 30.5**	**+0.2**
KKB				S	**Sg**	**21 13 26.2**	**-4.9**
ZKR	**Zakros**	**3.65**	**171**	P	**Pn**	**21 12 30.3**	**-0.2**
ZKR				S	**Sn**	**21 13 12.9**	**-0.5**
CAVI	**Cavuskoy**	**3.66**	**65**	*e*PN	**Pn**	**21 12 30.2**	**-0.3**
ADVT	**Abdulvahap**	**3.68**	**61**	*e*PN	**Pn**	**21 12 31.6**	**+0.8**
ADVT	**Abdulvahap**	**3.68**	**61**	Pn	**Pn**	**21 12 32.6**	**+1.8**
KLYT	**Kilyos**	**3.70**	**46**	*e*PN	**Pn**	**21 12 31.7**	**+0.6**
KLYT	**Kilyos**	**3.70**	**46**	Pn	**Pn**	**21 12 34.0**	**+2.9**
SIVA	**Sivas**	**3.75**	**189**	P	**Pn**	**21 12 31.6**	**-0.2**
JMB	**Yambol**	**3.82**	**12**	P	**Pn**	**21 12 32.3**	**-0.4**
JMB				S	**Sn**	**21 13 16.6**	**-0.9**
JMB	**Yambol**	**3.82**	**12**	P	**Pn**	**21 12 32.9**	**+0.2**
PGB	**Panagyurishte**	**3.95**	**345**	P	**Pn**	**21 12 34.2**	**-0.3**
SILT	**Sile**	**3.99**	**51**	*e*PN	**Pn**	**21 12 35.7**	**+0.6**
SILT	**Sile**	**3.99**	**51**	Pn	**Pn**	**21 12 37.4**	**+2.3**
KRUS	**Krusevo**	**4.20**	**310**	*i* Pn	**Pn**	**21 12 39.8**	**+1.9**
BCK	**Bucak**	**4.20**	**106**	*e*PN	**Pn**	**21 12 38.7**	**+0.7**
BCK	**Bucak**	**4.20**	**106**	Pn	**Pn**	**21 12 39.1**	**+1.1**
GULT	**Gulveren**	**4.22**	**65**	*e*PN	**Pn**	**21 12 39.0**	**+0.7**
GULT	**Gulveren**	**4.22**	**65**	Pn	**Pn**	**21 12 40.0**	**+1.7**
VTS	**Vitosha**	**4.24**	**336**	P	**Pn**	**21 12 40.7**	**+2.3**
PVL	**Pavlikeni**	**4.48**	**358**	P	**Pn**	**21 12 40.8**	**-1.0**
SZH	**Strazhica**	**4.54**	**4**	P	**Pn**	**21 12 42.1**	**-0.6**
PRD	**Provadia**	**4.69**	**17**	P	**Pn**	**21 12 43.3**	**-1.3**
MDU	**Mudurnu**	**4.73**	**67**	*e*PN	**Pn**	**21 12 46.0**	**+0.7**
MDU	**Mudurnu**	**4.73**	**67**	Pn	**Pn**	**21 12 46.4**	**+1.1**
BARS	**Barje**	**4.95**	**327**	⇑*i* Pn	**Pn**	**21 12 49.1**	**+0.8**
KIZT	**Kizilcal**	**4.98**	**86**	*e*PN	**Pn**	**21 12 49.5**	**+0.8**
KIZT	**Kizilcal**	**4.98**	**86**	Pn	**Pn**	**21 12 49.9**	**+1.2**
KIZT	**Kizilcal**	**4.98**	**86**	Pn	**Pn**	**21 12 49.9**	**+1.3**
TIRR	**Tirgusor**	**6.12**	**20**	P	**Pn**	**21 13 03.4**	**-0.9**
TIRR	**Tirgusor**	**6.12**	**20**	P	**Pn**	**21 13 03.4**	**-0.9**
TIRR	**Tirgusor**	**6.12**	**20**	⇑*i* P	**Pn**	**21 13 03.3**	**-1.0**
HARR	**Harsova**	**6.22**	**16**	P	**Pn**	**21 13 05.2**	**-0.5**
HARR	**Harsova**	**6.22**	**16**	⇓*i* P	**Pn**	**21 13 05.2**	**-0.5**
GRUS	**Gruza**	**6.29**	**327**	*e*Pn	**Pn**	**21 13 06.6**	**-0.1**
VOIR		**6.71**	**357**	P	**Pn**	**21 13 12.4**	**0.0**
VOIR		**6.71**	**357**	⇑*i* P	**Pn**	**21 13 12.5**	**+0.1**
GZR	**Gura Zlata**	**6.96**	**344**	P	**Pn**	**21 13 15.7**	**-0.1**
GZR	**Gura Zlata**	**6.96**	**344**	P	**Pn**	**21 13 15.7**	**-0.1**
GZR	**Gura Zlata**	**6.96**	**344**	⇑*i* P	**Pn**	**21 13 15.8**	**0.0**
ODB	**Odobesti**	**7.13**	**9**	⇑*i* P	**Pn**	**21 13 19.6**	**+1.4**
PLOR	**Plostina**	**7.17**	**6**	⇓*i* P	**Pn**	**21 13 20.1**	**+1.4**
VRI	**Vrincioaia**	**7.19**	**7**	⇑P	**Pn**	**21 13 20.0**	**+1.0**
VRI	**Vrincioaia**	**7.19**	**7**	⇑*i* P	**Pn**	**21 13 20.0**	**+1.0**
BZS	**Buzias**	**7.46**	**338**	P	**Pn**	**21 13 22.8**	**+0.1**
BZS	**Buzias**	**7.46**	**338**	P	**Pn**	**21 13 22.8**	**+0.1**
BZS	**Buzias**	**7.46**	**338**	⇑*i* P	**Pn**	**21 13 22.5**	**-0.2**
DRGR		**8.31**	**347**	⇑P	**Pn**	**21 13 35.4**	**+1.0**
DRGR		**8.31**	**347**	⇑*i* P	**Pn**	**21 13 35.4**	**+1.0**
BURAR	**Bucovina Array**	**8.88**	**359**	⇑P	**Pn**	**21 13 44.3**	**+2.1**
BURAR	**Bucovina Array**	**8.88**	**359**	⇑*i* P	**Pn**	**21 13 44.3**	**+2.1**
BUR08	**Bucovina Ar. S**	**8.91**	**359**	*e*Pn	**Pn**	**21 13 39.8**	**-2.8**
BUR08				*e*Sn	**Sn**	**21 15 16.4**	**-6.4**
MMAI	**Mount Meron Ar**	**9.84**	**122**	Pn	**Pn**	**21 13 54.1**	**-1.3**
	2.2nm,0.3s,baz=315,slow=12,SNR=10						
MMAI				Sn	**Sn**	**21 15 41.2**	**-4.6**
	0.8nm,0.3s,baz=305,slow=25,SNR=3.2						
ESDC	**Sonseca Array**	**22.82**	**282**	P	**P**	**21 16 38.5**	**+1.7**
	0.4nm,0.5s,mb3.1,baz=76,slow=10,SNR=3.7						
TORD	**Torodi Ar. Bea**	**33.09**	**226**	P	**P**	**21 18 10.2**	**+0.4**
	1.0nm,0.7s,mb3.9,baz=37,slow=9.1,SNR=8.9						
MKAR	**Makanchi Array**	**41.66**	**60**	P	**P**	**21 19 22.5**	**+0.3**
	0.4nm,0.7s,mb3.2,baz=269,slow=9.4,SNR=4.4						
MKAR	**Makanchi Array**	**41.66**	**60**	P	**P**	**21 19 22.5**	**+0.3**
ZALV	**Zalesovo Beam**	**42.39**	**49**	P	**P**	**21 19 28.2**	**+0.1**
	0.4nm,0.4s,mb3.4,baz=273,slow=8.2,SNR=2.1						
CMAR	**Chiang Mai Arr**	**65.94**	**85**	P	**P**	**21 22 20.4**	**+0.2**
	0.2nm,0.5s,mb3.4,baz=284,slow=8.8,SNR=4.4						

IDC **12** *21:14:04.1±4.1, 27.36N×54.03E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.7/4, Error ellipse: s-maj=176.9km s-min=24.6km az=150.0*
CSEM **12** *21:14:05.7±0.1, 27.73N×53.95E, h12km, mb3.2, Error ellipse: s-maj=2.9km s-min=2.3km az=47.0*
ISCJB **12** *21:14:06.1±0.6, 27.74N±004×5397E±007, h10km, mb3.6/4, Error ellipse: s-maj=8.4km s-min=5.2km az=8.0*
NEIC **12** *21:14:10.1, 27.74N×53.89E, h31km, MN3.2(TEH), After TEH.*

ISC 12 21:14:07.8±0.6, 2775N±004×5398E±007, h10km, n16, σ0.77/19, mb3.6/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mouk**	**1.70**	**319**	Pn	**Pn**	**21 14 37.3**	**-0.3**
IMOK				Sg	**Sg**	**21 15 02.8**	**+0.1**
ISRV	**Sarvestan**	**1.79**	**335**	Pn	**Pn**	**21 14 38.9**	**+0.1**
IPAR	**Pars**	**2.24**	**339**	Pn	**Pn**	**21 14 44.3**	**-0.6**
IPAR				Sg	**Sg**	**21 15 19.8**	**+0.1**
IMEH	**Mehriz**	**3.67**	**9**	Pn	**Pn**	**21 15 05.3**	**+0.7**
IBAF	**Bafgh**	**4.07**	**19**	Pn	**Pn**	**21 15 09.8**	**-0.3**
ISAD	**Sadrabad**	**4.15**	**357**	Pn	**Pn**	**21 15 11.6**	**+0.3**
BOQSS		**4.52**	**247**	P	**Pn**	**21 15 18.0**	**+1.6**
BTHS		**4.65**	**218**	P	**Pn**	**21 15 19.1**	**+1.0**
BTHS		**4.65**	**218**	P	**Pn**	**21 15 19.1**	**+1.0**
BTHS				S	**Sn**	**21 16 11.5**	**-0.6**
HRDDS		**6.31**	**221**	P	**Pn**	**21 15 41.7**	**+0.8**
LYLS		**8.35**	**229**	P	**Pn**	**21 16 08.0**	**-1.0**
MKAR	**Makanchi Array**	**29.23**	**42**	P	**P**	**21 20 09.8**	**0.0**
	0.3nm,0.7s,mb3.1,baz=239,slow=9.6,SNR=2.8						
KURK	**Kurchatov**	**29.58**	**32**	P	**P**	**21 20 13.1**	**+0.4**
	baz=238,slow=8.6						
ZALV	**Zalesovo Beam**	**34.57**	**32**	P	**P**	**21 20 56.4**	**-0.1**
	1.3nm,0.6s,mb4.1,baz=240,slow=7.5,SNR=5.4						
SONM	**Songino Array**	**45.05**	**49**	P	**P**	**21 22 23.6**	**-0.1**
	0.2nm,0.3s,mb3.4,baz=263,slow=7.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**50.74**	**264**	P	**P**	**21 23 06.1**	**-2.2**
	0.5nm,0.5s,mb3.7,baz=65,slow=7.9,SNR=12						

ISCJB **12** *21:14:05.3±0.9, 3326N±004×488E±0.1, h10km, Error ellipse: s-maj=13.0km s-min=5.1km az=175.4*
THR **12** *21:14:07.7±0.4, 3324N×4891E, h14km±4km, ML2.7*
CSEM **12** *21:14:08.1±0.2, 3320N×4897E, h30km, ML2.5, Error ellipse: s-maj=7.4km s-min=3.0km az=94.0*
KISR **12** *21:14:08.7, 3296N×4916E, h33km, ML2.5*

ISC 12 21:14:07.2±0.9, 3324N±004×489E±01, h12km±8km, n10, σ1.9/04/18, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.13**	**184**	*e*Pg	**Pg**	**21 14 28.8**	**-0.1**
SHGR				*e*Sg	**Sg**	**21 14 44.1**	**+0.5**
SHGR				AML	AML	21 14 48.7	
	comp=E,212nm,0.4s						
SHGR				AML	AML	21 14 55.9	
	comp=N,221nm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.13**	**184**	*e*Pg	**Pg**	**21 14 28.8**	**-0.1**
	SNR=90						
SHGR				*e*Sg	**Sg**	**21 14 44.1**	**+0.5**
	SNR=90						
ASAO	**Ashtian**	**1.61**	**35**	*e*Pg	**Pg**	**21 14 37.2**	**-0.8**
ASAO				AML	AML	21 15 07.5	
	comp=N,62nm,0.5s						
SNGE	**Sanandaj**	**2.25**	**326**	*e*Pn	**Pn**	**21 14 46.9**	**+2.6**
SNGE				*e*Sg	**Sg**	**21 15 18.7**	**-0.8**
SNGE				AML	AML	21 15 28.1	
	comp=E,31nm,0.7s						
SNGE				AML	AML	21 15 30.3	
	comp=N,34nm,0.6s						
SNGE	**Sanandaj**	**2.25**	**326**	*e*Pn	**Pn**	**21 14 46.9**	**+2.6**
	SNR=52						
SNGE				*e*Sg	**Sg**	**21 15 18.7**	**-0.9**
	SNR=90						
MIB	**Mutribah**	**3.67**	**202**	*e*P	**Pn**	**21 15 04.8**	**+0.9**
	baz=207						
MIB				AML	AML	21 15 48.9	
	comp=Z,12nm,0.6s,baz=207						
NAY	**Al-Naaiem**	**4.22**	**200**	*e*P	**Pn**	**21 15 11.8**	**+0.4**
NAY				*e*S	**Sn**	**21 15 59.8**	**-0.8**
	comp=Z,2.4nm,0.4s						
NAY	**Al-Naaiem**	**4.22**	**200**	*e*P	**Pn**	**21 15 11.8**	**+0.4**
	baz=204						
NAY				*e*S	**Sn**	**21 15 59.8**	**-0.8**
	baz=204						
NAY				AML	AML	21 16 02.5	
	comp=Z,2.0nm,0.4s,baz=204						
RDF	**Al-Radifah**	**4.45**	**195**	*e*P	**Pn**	**21 15 15.0**	**+0.5**
RDF				*e*S	**Sn**	**21 16 04.7**	**-1.6**
	comp=Z,14nm,0.4s						
RDF	**Al-Radifah**	**4.45**	**195**	*e*P	**Pn**	**21 15 15.0**	**+0.5**
	baz=199						
RDF				*e*S	**Sn**	**21 16 04.7**	**-1.6**
	baz=199						
RDF				AML	AML	21 16 07.8	
	comp=Z,14nm,0.4s,baz=199						

IDC **12** *21:20:59.9±0.9, 5.18S×15231E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, MS3.6/11, Ms1 3.6/11, ms1mx3.2/32, Error ellipse: s-maj=31.7km s-min=20.0km az=100.0*
ISCJB **12** *21:21:03.8±0.5, 5.16S±006×15207E±009, h33km, mb4.2/17, MS3.7/9, Error ellipse: s-maj=14.8km s-min=6.6km az=30.1*
NEIC **12** *21:21:05.9±1.5, 5.20S×152.14E, h40km±13km, mb4.6/8, Error ellipse: s-maj=12.2km s-min=7.1km az=100.0*

ISC 12 21:21:06.1±1.6, 520S±007×15213E±010, h40km±13km, n50, σ0.75/39, mb4.2/17, MS3.6/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.46**	**229**	*e*Pn	**Pn**	**21 22 38.3**	**-0.5**
	120nm,1.0s						
PMG				*e*Sn	**Sn**	**21 23 51.2**	**0.0**
CTA	**Charters Tower**	**15.86**	**201**	LR	LR	21 30 11.1	
	comp=Z,165nm,20.9s,ba

TAU	**Tasmania Unive**	**41.60**	**223**	*e*P	**P**	**21 33 48.8**	**-0.5**
STKA	**Stephens Creek**	**42.39**	**241**	*e*P	**P**	**21 33 55.6**	**-0.2**
	2.5nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**42.39**	**241**	P	**P**	**21 33 55.7**	**-0.1**
	4.2nm,0.5s,mb3.9,baz=92,slow=10.0,SNR=14						
STKA				LR	LR	21 50 42.5	
	comp=Z,59nm,18.9s,baz=221,slow=34						
STKA	**Stephens Creek**	**42.39**	**241**	*e*P	**P**	**21 33 56.0**	**+0.2**
	3.5nm,0.6s,mb3.8						
STKA				LR	LR	21 50 42.5	
MIDW	**Midway**	**44.67**	**357**	P	**P**	**21 34 13.9**	**+0.1**
WB2	**Warramunga Arr**	**48.40**	**258**	*e*P	**P**	**21 34 42.6**	**-0.2**
WRAB	**Tennant Creek**	**48.40**	**258**	*e*P	**P**	**21 34 42.8**	**-0.1**
	0.5nm,0.4s,mb3.2						
WRA	**Warramunga Arr**	**48.41**	**258**	P	**P**	**21 34 42.9**	**0.0**
	0.4nm,0.3s,mb3.2,baz=94,slow=7.0,SNR=20						
ASAR	**Alice Springs**	**48.60**	**253**	P	**P**	**21 34 44.3**	**0.0**
	5.4nm,0.5s,mb4.1,baz=87,slow=8.6,SNR=88						
MBWA	**Marble Bar**	**61.88**	**255**	*e*P	**P**	**21 36 18.8**	**+0.2**
	1.7nm,0.4s,mb4.0						
QSPA	**South Pole Qui**	**73.41**	**180**	P	**P**	**21 37 29.6**	**+0.4**
YSS	**Yuzh-Sakhalins**	**73.97**	**331**	P	**P**	**21 37 33.1**	**+0.2**
MCK	**McKinley**	**82.56**	**11**	P	**P**	**21 38 19.8**	**+0.5**
HIA	**Hailar**	**87.47**	**323**	P	**P**	**21 38 42.4**	**-1.5**
PLCA	**Paso Flores**	**89.56**	**133**	*e*P	**P**	**21 38 54.4**	**+0.4**

IDC ***12*** *21:36:52.9±2.8, 44.75N×80.76E, h0km, mb1 3.2/3, mb1mx3.1/22, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=25.5km s-min=15.4km az=173.0*

NNC ***12*** *21:36:58.0±0.6, 45.21N×80.02E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.5km s-min=3.6km az=135.0*

ISCJB ***12*** *21:36:58.5±0.7, 44.97N±0.04×80.50E±0.007, h85km±13km, Error ellipse: s-maj=9.6km s-min=5.0km az=38.2*

NEIC ***12*** *21:36:59.5±0.8, 44.91N×80.53E, h79km±19km, Error ellipse: s-maj=16.2km s-min=6.8km az=132.0*

ISC 12 21:36:59.7±0.7,**4495N**±005×**8056E**±008,**h80**km±16km, **n21**,σ1**0**7/31,**7C-7D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.20**	**33**	⇑Pn	**Pn**	**21 37 35.0**	**+0.8**
	3.9nm,0.2s,baz=207,slow=13,SNR=436						
MK31				⇑Sn	**Sn**	**21 38 06.5**	**+5.8**
	40nm,0.2s,baz=216,slow=33,SNR=9.6						
MK31	**Makanchi Array**	**2.20**	**33**	*e*Pn	**Pn**	**21 37 34.8**	**+0.5**
MK31				*e*Sn	**Sn**	**21 37 59.7**	**-1.0**
MKAR	**Makanchi Array**	**2.20**	**33**	Pg	**Pn**	**21 37 35.1**	**+0.8**
	3.6nm,0.3s,baz=207,slow=13,SNR=135						
MKAR				Lg		21 38 07.9	
	97nm,0.3s,baz=208,slow=24,SNR=63						
KNDC	**Almaty**	**3.12**	**237**	⇓Pn	**Pn**	**21 37 46.3**	**-0.3**
	37nm,0.8s						
KNDC				⇓Sn	**Sn**	**21 38 23.7**	**+1.0**
	121nm,0.3s						
TKM2	**Tokmak 2**	**4.12**	**242**	⇓Pn	**Pn**	**21 38 00.6**	**+0.4**
	9.1nm,0.5s						
TKM2				⇓Lg		21 38 59.7	
	30nm,0.3s						
TKM2	**Tokmak 2**	**4.12**	**242**	*e*Pn	**Pn**	**21 38 00.8**	**+0.7**
TKM2				*e*Sn	**Sn**	**21 38 52.6**	**+5.5**
UCH	**Uchtor**	**5.17**	**240**	*e*Pn	**Pn**	**21 38 12.2**	**-2.3**
UCH				*e*Sn	**Sn**	**21 39 22.5**	**+10**
EKS2	**Erkin-Say**	**5.41**	**247**	*e*Pn	**Pn**	**21 38 17.2**	**-0.6**
	4.4nm,0.5s						
EKS2				*e*Sn	**Sn**	**21 39 19.1**	**+0.3**
AML	**Almayashu**	**5.73**	**243**	*e*Pn	**Pn**	**21 38 22.5**	**+0.4**
	4.7nm,0.4s						
AML				*e*Sn	**Sn**	**21 39 27.2**	**+0.7**
KURBB	**Kurchatov Arra**	**5.83**	**347**	⇑Pn	**Pn**	**21 38 21.3**	**-2.2**
	0.4nm,0.3s						
KURBB				⇑Lg		21 39 52.5	
	3.2nm,0.7s						
KURK	**Kurchatov**	**5.91**	**348**	⇑Pn	**Pn**	**21 38 22.2**	**-2.4**
	2.4nm,0.5s						
KURK				⇑Lg		21 39 54.5	
	18nm,0.7s						
KURK	**Kurchatov**	**5.91**	**348**	Pn	**Pn**	**21 38 26.0**	**+1.4**
	baz=179,slow=16						
KURK				Lg		21 40 06.1	
	baz=175,slow=28						
KURK	**Kurchatov**	**5.91**	**348**	Pn	**Pn**	**21 38 24.1**	**-0.5**
	3.4nm,0.4s						
KURK				*e*Sn	**Sn**	**21 39 29.7**	**-1.1**
KURK				Lg		21 40 06.0	
KK31	**Karatay Array**	**7.47**	**259**	⇓Pn	**Pn**	**21 38 44.6**	**-1.3**
	0.1nm,0.3s,baz=72,slow=11,SNR=2.9						
KK31				⇑Pg	Pn	21 39 08.9	+23
	0.3nm,0.3s,baz=70,slow=17,SNR=8.0						
KK31				⇓Lg		21 40 44.9	
	6.0nm,0.5s,baz=74,slow=28,SNR=10						
ZALV	**Zalesovo Beam**	**9.42**	**16**	Pn	**Pn**	**21 39 13.1**	**+0.7**
	0.3nm,0.3s,baz=202,slow=14,SNR=5.7						
ZALV				Sn	**Sn**	**21 40 59.9**	**+3.4**
	1.9nm,0.3s,baz=212,slow=24,SNR=14						
ZALV				Lg		21 41 59.5	
	baz=194,slow=24,SNR=2.6						
VOSK	**Vostochnaya**	**10.01**	**324**	⇓Lg		21 42 01.4	
	8.8nm,0.9s						
BVAR	**Borovoye Array**	**10.47**	**324**	Pn	**Pn**	**21 39 26.1**	**-0.6**
	0.1nm,0.3s,baz=227,slow=34,SNR=3.0						
BVAR				Sn	**Sn**	**21 41 22.2**	**+0.1**
	0.1nm,0.3s,baz=127,slow=17,SNR=2.5						
BVAR				Lg		21 42 28.3	
	0.3nm,0.3s,baz=128,slow=28,SNR=4.6						
BRVK	**Borovoye**	**10.54**	**324**	*e*Pn	**Pn**	**21 39 29.4**	**+1.8**
BRVK				*e*Sn	**Sn**	**21 41 27.6**	**+3.8**
KBL	**Kabul**	**13.64**	**224**	*e*Pn	**Pn**	**21 40 09.5**	**-0.1**
	0.5nm,0.5s						
SONM	**Songino Array**	**18.03**	**72**	P	**Pn**	**21 41 04.3**	**-0.4**
	0.1nm,0.3s,baz=266,slow=12,SNR=4.0						
YHNB	**Yeheng**	**38.63**	**108**	P	**P**	**21 44 15.4**	**+0.2**
	5.3nm,0.7s						

NEIC ***12*** *21:58:58.0, 17.46N×97.09W, h85km, MD4.2(MEX), After MEX.*

MEX 12 21:58:58.3±0.9,**17.46N×97.10W, h82**km±7km,**MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**0.52**	**136**	*i* P	Pn	21 59 11.6	-0.8
OXX				*i* S	Sn	21 59 21.1	-1.8
VHO	**Vista Hermosa**	**0.52**	**137**	*i* P	Pn	21 59 11.3	-1.1
VHO				*i* S	Sn	21 59 20.8	-2.1
UTMO	**Huajuapan**	**0.77**	**299**	*i* P	Pn	21 59 14.2	-0.6
UTMO				*i* S	Sn	21 59 25.7	-1.4
TPIG	**Tehuac#an**	**0.99**	**346**	*i* P	Pn	21 59 16.3	-1.1
TPIG				*i* S	Sn	21 59 30.6	-0.9
PNIG	**Pinotepa**	**1.44**	**223**	*e*P	Pn	21 59 21.1	-1.9
PNIG				*i* S	Sn	21 59 40.2	-1.4
POHV	**Veracruz**	**1.61**	**354**	*i* P	Pn	21 59 24.5	-0.7
POHV				*i* S	Sn	21 59 47.3	+1.8
CMIG	**Matias Romero**	**2.15**	**99**	*e*P	Pn	21 59 31.5	-0.7
CMIG				*i* S	Sn	21 59 56.6	-1.5
PPM	**Popocatepetl**	**2.16**	**318**	*i* P	Pn	21 59 32.8	+0.5
PPM				*e*P		21 59 34.8	
PPM				*i* S	Sn	21 59 57.5	-0.9
PPM				*i* S	Sn	21 59 57.6	-0.8
PPM	**Popocatepetl**	**2.16**	**318**	*i* P	Pn	21 59 32.8	+0.5
PPM				*e*P		21 59 34.8	
PPM				*i* S	Sn	21 59 57.5	-0.9
PPM				*i* S	Sn	21 59 57.6	-0.8
YAIG	**Yautepec**	**2.33**	**307**	*e*P	Pn	21 59 33.9	-0.8
YAIG				*i* S	Sn	22 00 00.8	-1.8
LVIG	**Laguna Verde**	**2.35**	**16**	*i* P	Pn	21 59 33.1	-1.8
LVIG				*i* S	Sn	21 59 59.1	-3.8
MEIG	**Mezcala**	**2.44**	**281**	*i* P	Pn	21 59 36.8	+0.6
MEIG				*i* S	Sn	22 00 03.5	-1.8
PLIG	**Platanillo**	**2.47**	**293**	*i* P	Pn	21 59 37.6	+1.1
PLIG				*i* S	Sn	22 00 04.8	-1.0
ACX	**Acapulco**	**2.75**	**258**	*i* P	Pn	21 59 38.2	-2.1
ACX				*i* S	Sn	22 00 09.7	-3.1
CAIG	**El Cayaco**	**3.05**	**263**	*i* P	Pn	21 59 43.1	-1.3
CAIG				*i* S	Sn	22 00 19.5	-0.4
TGIG		**3.87**	**99**	*e*P	Pn	21 59 55.0	-0.5
TGIG				*i* S	Sn	22 00 36.7	-3.0
PCIG		**4.11**	**115**	*i* P	Pn	21 59 59.5	+0.7
PCIG				*i* S	Sn	22 00 43.9	-1.8
ZIIG	**Zihuatanejo**	**4.17**	**273**	*i* P	Pn	21 59 58.6	-0.9
ZIIG				*i* S	Sn	22 00 45.9	-1.1
MMIG	**Aquila**	**6.00**	**279**	*i* P	Pn	22 00 23.4	-1.1
MMIG				*i* S	Sn	22 01 32.4	+0.4

SOF ***12*** *22:05:20.5, 37.65N×26.31E, h2km, MD3.3*

ISK ***12*** *22:05:37.7, 38.70N×25.43E, h12km, MD3.7*

ISCJB ***12*** *22:05:38.5±0.7, 38.75N±0.002×25.51E±0.002, h10km±5km, Error ellipse: s-maj=2.9km s-min=2.6km az=29.3*

ATH ***12*** *22:05:39.5, 38.76N×25.55E, h39km±4km, MD3.8/11, ML3.7*

NEIC ***12*** *22:05:39.5, 38.76N×25.55E, h39km, MD3.8(ATH), After ATH.*

CSEM ***12*** *22:05:39.9±0.0, 38.75N×25.55E, h25km, ML4.2/5, Error ellipse: s-maj=1.2km s-min=1.0km az=21.0*

THE ***12*** *22:05:40.6, 38.73N×25.60E, h23km±2km, ML4.2/5, Error ellipse: s-maj=2.1km s-min=0.5km az=98.0*

DDA ***12*** *22:05:45.2, 38.79N×25.92E, h16km, Md3.5*

ISC 12 22:05:39.8±0.6,**3873N**±002×**2553E**±002,**h14**km±4km,**n91**, σ0**9**0/115,**9C-9D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.54**	**130**	P	**Pg**	**22 05 50.5**	**+0.2**
CHOS				S	**Sg**	**22 05 57.5**	**0.0**
PRK	**Paraskevi**	**0.77**	**48**	P	**Pg**	**22 05 54.2**	**-0.6**
PRK				S	**Sg**	**22 06 05.1**	**+0.1**
PRK	**Paraskevi**	**0.77**	**48**	*e*PN	**Pn**	**22 05 54.1**	**-2.1**
PRK				*e*SN	**Sn**	**22 05 57.5**	**-1.9**
URLA	**Izmir**	**0.92**	**114**	*i* P	**Pb**	**22 05 57.5**	**+0.1**
URLA				*i* S	**Sb**	**22 06 09.9**	**+0.5**
AYVA	**Ayvalik**	**1.07**	**57**	*i* P	**Pb**	**22 05 59.4**	**-0.7**
AYVA				*i* S	**Sb**	**22 06 12.2**	**-1.7**
LIA	**Limnos Island**	**1.20**	**347**	P	**Pn**	**22 06 01.3**	**-0.7**
LIA				S	**Sb**	**22 06 17.2**	**-0.3**
LIA	**Limnos Island**	**1.20**	**347**	*e*PN	**Pn**	**22 06 01.2**	**-0.8**
LIA				*e*SN	**Sn**	**22 06 16.0**	**-2.0**
LIA	**Limnos Island**	**1.20**	**347**	*e*Pn	**Pn**	**22 06 01.2**	**-0.8**
LIA				*e*Sn	**Sn**	**22 06 16.0**	**-2.0**
LIA				S	**Sb**	**22 06 17.2**	**-0.3**
BLCB	**Balcova**	**1.23**	**106**	*e*PN	**Pn**	**22 06 02.5**	**-0.1**
BLCB				*e*SN	**Sn**	**22 06 19.9**	**+0.9**
AOS	**Alonnisos**	**1.36**	**289**	P	**Pn**	**22 06 04.0**	**-0.2**
IZM	**Izmir**	**1.40**	**103**	*e*PN	**Pn**	**22 06 04.9**	**+0.1**
IZM				*e*SN	**Sn**	**22 06 24.5**	**+1.4**
SMG	**Samos**	**1.45**	**134**	*e*PB	**Pb**	**22 06 05.2**	**-1.3**
PTL	**Penteli**	**1.48**	**243**	*e*PB	**Pb**	**22 06 06.1**	**-0.9**
GADA	**Gvkgeada**	**1.48**	**11**	*e*PN	**Pn**	**22 06 05.0**	**-1.9**
ATH	**Athens Observa**	**1.61**	**243**	*e*PB	**Pb**	**22 06 08.4**	**-0.9**
KVR	**Kavouri**	**1.65**	**237**	*e*PN	**Pn**	**22 06 08.0**	**-0.3**
APE	**Apeiranthos**	**1.66**	**180**	P	**Pn**	**22 06 07.5**	**-0.9**
APE				S	**Sn**	**22 06 28.4**	**-1.1**
APE	**Apeiranthos**	**1.66**	**180**	*e*Pn	**Pn**	**22 06 07.6**	**-0.8**
APE				S	**Sn**	**22 06 28.4**	**-1.1**
APE	**Apeiranthos**	**1.66**	**180**	⇓*i*P	**Pn**	**22 06 07.5**	**-0.9**
GCAM	**G?zelcaml?**	**1.69**	**127**	*i* P	**Pn**	**22 06 08.1**	**-0.8**
AKS	**Akhisar**	**1.79**	**85**	*e*PN	**Pn**	**22 06 10.2**	**0.0**
AKHS	**Akhisar**	**1.79**	**85**	*i* P	**Pn**	**22 06 09.9**	**-0.3**
PAIG	**Paliouri**	**1.87**	**310**	P	**Pn**	**22 06 11.1**	**-0.1**
PAIG				S	**Sn**	**22 06 34.3**	**-0.3**
NEO	**Neokhori**	**1.89**	**288**	*e*PN	**Pn**	**22 06 10.7**	**-0.8**
LPK	**Lapseki**	**1.90**	**30**	*e*PN	**Pn**	**22 06 12.1**	**+0.5**
XOR	**Xorichti**	**1.93**	**290**	P	**Pn**	**22 06 11.9**	**-0.2**
XOR				S	**Sn**	**22 06 37.0**	**+0.9**
LKR	**Lokris**	**1.98**	**268**	P	**Pn**	**22 06 12.5**	**-0.3**
LKR				S	**Sn**	**22 06 37.3**	**-0.1**
LKR	**Lokris**	**1.98**	**268**	*e*Pn	**Pn**	**22 06 12.4**	**-0.4**
LKR				S	**Sn**	**22 06 37.3**	**-0.1**
OUR	**Ouranopolis**	**2.00**	**324**	P	**Pn**	**22 06 12.9**	**-0.2**
BALB	**Balikesir**	**2.04**	**63**	*e*PN	**Pn**	**22 06 13.3**	**-0.3**
LTK	**Loutraki**	**2.13**	**251**	P	**Pn**	**22 06 15.3**	**+0.4**
LTK				S	**Sn**	**22 06 41.7**	**+0.5**
BODT	**Bodrum**	**2.18**	**139**	*e*PN	**Pn**	**22 06 15.3**	**-0.3**
DID	**Didima**	**2.18**	**237**	P	**Pn**	**22 06 15.1**	**-0.5**
DID				S	**Sn**	**22 06 42.4**	**0.0**
ALN	**Alexandroupoli**	**2.20**	**10**	P	**Pn**	**22 06 14.9**	**-0.9**
ALN				S	**Sn**	**22 06 41.5**	**-1.3**
BDRM	**Kayabasi**	**2.25**	**137**	*i* P	**Pn**	**22 06 15.6**	**-0.9**
MLSB	**Milas**	**2.28**	**128**	*e*PN	**Pn**	**22 06 16.5**	**-0.5**
PLG	**Polygyros**	**2.30**	**316**	P	**Pn**	**22 06 20.9**	**+3.7**
RKY	**Sarkoy-Tekirda**	**2.33**	**33**	*e*PN	**Pn**	**22 06 17.3**	**-0.3**
THR6	**Thira Island,**	**2.37**	**185**	P	**Pn**	**22 06 18.2**	**0.0**
RDO	**Rodhopi**	**2.41**	**0**	*e*PN	**Pn**	**22 06 18.0**	**-0.7**
MFT	**Murefte**	**2.46**	**33**	*e*PN	**Pn**	**22 06 20.2**	**+0.9**
MRMT	**Marmara Adasi**	**2.46**	**40**	*e*PN	**Pn**	**22 06 20.2**	**+0.8**
KULA	**Kula-Manisa**	**2.46**	**94**	*e*PN	**Pn**	**22 06 19.3**	**-0.1**
DEMI	**Demirci**	**2.51**	**82**	*i* P	**Pn**	**22 06 20.0**	**0.0**
AGG	**Agios Georgios**	**2.51**	**278**	P	**Pn**	**22 06 20.0**	**-0.1**
AGG				S	**Sn**	**22 06 50.5**	**0.0**
DST	**Dursunbey**	**2.56**	**69**	*e*PN	**Pn**	**22 06 22.0**	**+1.2**
YER	**Yerkesik**	**2.70**	**125**	*e*PN	**Pn**	**22 06 23.0**	**+0.4**
LIT	**Litokhoron**	**2.72**	**301**	P	**Pn**	**22 06 23.2**	**+0.2**
LIT				S	**Sn**	**22 06 56.1**	**+0.4**
THL	**Klokotos Trika**	**2.86**	**288**	*e*PN	**Pn**	**22 06 25.3**	**+0.5**
VLI	**Veliai**	**2.88**	**226**	*e*PN	**Pn**	**22 06 24.5**	**-0.6**
VLI	**Veliai**	**2.88**	**226**	*e*Pn	**Pn**	**22 06 24.0**	**-1.1**
NVR	**Nevrokopi**	**2.91**	**334**	*e*PN	**Pn**	**22 06 25.8**	**+0.2**
KDZ	**Kurdzhali**	**2.92**	**358**	P	**Pn**	**22 06 24.9**	**-0.8**
RZN	**Rozhen**	**3.02**	**348**	*e*P	**Pn**	**22 06 27.4**	**+0.3**
MMB	**Musomiste**	**3.17**	**335**	P	**Pn**	**22 06 29.5**	**+0.3**
ITM	**Ithomi**	**3.24**	**243**	*e*PN	**Pn**	**22 06 30.6**	**+0.5**
ARG	**Arkhangelos**	**3.25**	**140**	*e*PN	**Pn**	**22 06 31.3**	**+1.0**
GRG	**Griva**	**3.28**	**314**	P	**Pn**	**22 06 31.2**	**+0.6**
GEMT	**Gemlik**	**3.30**	**58**	*e*PN	**Pn**	**22 06 32.3**	**+1.4**
DIM	**Dimitrovgrad**	**3.31**	**0**	P	**Pn**	**22 06 30.7**	**-0.4**
DIM				S	**Sg**	**22 07 27.0**	**+0.8**
KARP	**Karpathos**	**3.44**	**157**	*e*PN	**Pn**	**22 06 32.8**	**0.0**
IDI	**Anoyia**	**3.48**	**189**	P	**Pn**	**22 06 34.2**	**+0.8**
YLV	**Yalova**	**3.49**	**57**	*e*PN	**Pn**	**22 06 35.3**	**+1.8**
GOLH	**Golhisar**	**3.52**	**114**	*i* P	**Pn**	**22 06 35.5**	**+1.6**
CAVI	**Cavuskoy**	**3.65**	**65**	*e*PN	**Pn**	**22 06 37.7**	**+2.0**
KKB	**Krupnik**	**3.65**	**330**	P	**Pn**	**22 06 36.4**	**+0.7**
KKB				S	**Sg**	**22 07 33.3**	**-3.6**
ZKR	**Zakros**	**3.65**	**171**	P	**Pn**	**22 06 35.2**	**-0.6**
FNA	**Florina**	**3.80**	**304**	P	**Pn**	**22 06 38.3**	**+0.5**
JMB	**Yambol**	**3.82**	**12**	P	**Pn**	**22 06 37.5**	**-0.5**
VTS	**Vitosha**	**4.24**	**336**	P	**Pn**	**22 06 46.0**	**+2.1**
PVL	**Pavlikeni**	**4.48**	**358**	P	**Pn**	**22 06 46.0**	**-1.2**
SZH	**Strazhica**	**4.54**	**4**	P	**Pn**	**22 06 48.3**	**+0.3**
BARS	**Barje**	**4.96**	**327**	⇑*i*Pn	**Pn**	**22 06 54.3**	**+0.6**
TIRR	**Tirgusor**	**6.12**	**20**	⇓P	**Pn**	**22 07 08.8**	**-0.8**
TIRR	**Tirgusor**	**6.12**	**20**	⇑*i*P	**Pn**	**22 07 08.9**	**-0.7**
HARR	**Harsova**	**6.22**	**16**	⇓P	**Pn**	**22 07 10.7**	**-0.3**
HARR	**Harsova**	**6.22**	**16**	⇓*i*P	**Pn**	**22 07 10.7**	**-0.3**
GRUS	**Gruza**	**6.30**	**326**	*e*Pn	**Pn**	**22 07 13.8**	**+1.7**
VOIR		**6.71**	**357**	⇑P	**Pn**	**22 07 17.9**	**+0.1**
VOIR		**6.71**	**357**	⇑*i*P	**Pn**	**22 07 17.9**	**+0.1**
TLCR		**6.90**	**20**	⇑*i*P	**Pn**	**22 07 20.0**	**-0.3**
GZR	**Gura Zlata**	**6.96**	**344**	⇑P	**Pn**	**22 07 21.2**	**0.0**
GZR	**Gura Zlata**	**6.96**	**344**	⇑*i*P	**Pn**	**22 07 21.2**	**-0.1**
PLOR	**Plostina**	**7.16**	**6**	⇑*i*P	**Pn**	**22 07 25.7**	**+1.7**
VRI	**Vrincioaia**	**7.18**	**7**	⇑*i*P	**Pn**	**22 07 25.4**	**+1.1**
BZS	**Buzias**	**7.47**	**338**	⇓P	**Pn**	**22 07 28.8**	**+0.7**
BZS	**Buzias**	**7.47**	**338**	⇓*i*P	**Pn**	**22 07 28.8**	**+0.6**
DRGR		**8.32**	**346**	⇑*i*P	**Pn**	**22 07 41.3**	**+1.5**
BURAR	**Bucovina Array**	**8.88**	**359**	⇓P	**Pn**	**22 07 49.5**	**+1.9**
BURAR	**Bucovina Array**	**8.88**	**359**	⇓*i*P	**Pn**	**22 07 49.5**	**+1.9**
BUR08	**Bucovina Ar. S**	**8.91**	**359**	*e*Pn	**Pn**	**22 07 45.7**	**-2.3**

BJI ***12*** *22:14:21.9, 35.15S×141.70E, h44km, mB5.1, mb5.0, Ms4.8, Msz4.4*

IDC ***12*** *22:14:22.0±0.7, 29.55S×141.45E, h0km, mb4.4/10, mb1 4.6/12, mb1mx4.6/16, mbtmp4.6/12, ML5.0/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/22, Error ellipse: s-maj=25.9km s-min=12.1km az=95.0*

ISCJB ***12*** *22:14:22.8±1.2, 30.00S±0.03×141.46E±0.005, h19km±8km, mb4.9/60, MS4.1/11, Error ellipse: s-maj=8.0km s-min=5.0km az=158.2*

MOS ***12*** *22:14:25.2±1.1, 30.00S×141.29E, h33km, mb4.9/22, Error ellipse: s-maj=14.3km s-min=7.5km az=108.2*

NEIC ***12*** *22:14:28.2±1.1, 30.03S×141.33E, h45km±10km, mb5.0/31, Error ellipse: s-maj=7.8km s-min=5.2km az=73.0*

DJA ***12*** *22:14:28.5±0.0, 32.23S×141.26E, h30km, mb5.0/8, mB5.5/4, MLv5.0/1, Mw(mB)5.3/4, Mwp4.4/3*

ISC 12 22:14:28.6±0.9,**306S**±004×**14139E**±004,**h48**km±9km, **h34**km±5.4km:**pP-P, n163,** σ0**98**/159,**mb4.9**/60,**MS4.1**/11, **8C-3D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.87**	**308**	P	**Pn**	**22 14 38.6**	**-5.9**
MMPI	**Merauke**	**5.47**	**191**	P	**Pn**	**22 15 49.7**	**+2.2**
PMG	**Port Moresby**	**8.52**	**138**	*e*Pn	**Pn**	**22 16 30.8**	**+1.4**
PMG				Sn	**Sn**	**22 18 03.4**	**-0.9**
PMG	**Port Moresby**	**8.52**	**138**	P	**Pn**	**22 16 31.1**	**+1.7**
COEN	**Coen**	**10.97**	**171**	*e*Pn	**Pn**	**22 17 03.2**	**+0.2**
	8.3nm,0.7s						
COEN				*e*Sn	**Sn**	**22 19 03.5**	**-0.9**
KAKA	**Kakadu**	**13.06**	**222**	*e*P	Px	22 17 16.1	
	166nm,0.6s						
KAKA				*e*S	Sx	22 19 38.4	
KAKA	**Kakadu**	**13.06**	**222**	P	Px	22 17 17.2	
	437nm,0.6s,3µm						
AAI	**Ambon**	**13.19**	**267**	P	**Pn**	**22 17 32.9**	**-0.4**
	82nm,0.8s						
LBMI	**Labuha**	**14.09**	**280**	P	**Pn**	**22 17 50.8**	**+5.2**
LBMI	**Labuha**	**14.09**	**280**	P	**Pn**	**22 17 49.9**	**+4.3**
GUMO	**Guam**	**16.89**	**12**	LR	LR	22 24 26.4	
	comp=Z,130nm,18.5s,baz=252,slow=36						
CTAO	**Charters Tower**	**17.58**	**165**	*e*Pn	**Pn**	**22 18 31.1**	**+1.0**
	6.9nm,0.6s						
CTAO	**Charters Tower**	**17.58**	**165**	*e*P	**Pn**	**22 18 31.2**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRAB	**Tennant Creek**	**18.13**	**202**	*e*Pn	**Pn**	**22 18 35.0**	**-1.9**
	comp=Z,46nm,0.7s						
WRAB	**Tennant Creek**	**18.13**	**202**	*d* iP	**Pn**	**22 18 36.1**	**-0.8**
WRAB	**Tennant Creek**	**18.13**	**202**	P	**Pn**	**22 18 36.2**	**-0.7**
	comp=Z,90nm,0.8s,comp=Z,788nm						
WRAB	**Tennant Creek**	**18.13**	**202**	P	**Pn**	**22 18 36.2**	**-0.7**
	comp=Z,90nm,0.8s,comp=Z,788nm						
WB2	**Warramunga Arr**	**18.14**	**202**	*e*P	**Pn**	**22 18 35.3**	**-1.7**
WRA	**Warramunga Arr**	**18.14**	**202**	P	**Pn**	**22 18 35.1**	**-2.0**
	comp=Z,2.9nm,0.3s,baz=18,slow=13,SNR=46						
WRA				S	**S**	**22 21 49.3**	**-13**
	comp=Z,0.2nm,0.3s,baz=15,slow=22,SNR=5.9						
WRA				LR	LR	22 25 57.2	
	comp=Z,260nm,18.8s,baz=25,slow=38						
KDI	**Kendari**	**18.76**	**267**	P	**Pn**	**22 18 44.5**	**-0.1**
	comp=Z,38nm,1.1s						
KDI	**Kendari**	**18.76**	**267**	P	**Pn**	**22 18 44.2**	**-0.4**
	comp=Z,38nm,1.1s						
BATI	**Baumata**	**18.98**	**247**	P	**Pn**	**22 18 47.1**	**-0.1**
	comp=Z,13nm,0.3s,baz=137,slow=1.5,SNR=30						
BATI				S	**S**	**22 22 17.8**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=72,slow=20,SNR=2.7						
BATI	**Baumata**	**18.98**	**247**	P	**Pn**	**22 18 47.5**	**+0.2**
	comp=Z,77nm,1.0s						
PCI	**Palu**	**21.65**	**275**	P	**P**	**22 19 16.5**	**+1.4**
	comp=Z,171nm,1.0s,comp=Z,1µm,mb5.4						
PCI	**Palu**	**21.65**	**275**	P	**P**	**22 19 16.3**	**+1.2**
	comp=Z,171nm,1.0s,comp=Z,1µm,mb5.4						
KAPI	**Kappang**	**21.67**	**264**	P	**P**	**22 19 15.7**	**+0.2**
	comp=Z,9.4nm,0.8s,mb4.3,baz=138,slow=6.6,SNR=9.9						
KAPI	**Kappang**	**21.67**	**264**	*e*P	**P**	**22 19 15.8**	**+0.3**
KAPI	**Kappang**	**21.67**	**264**	P	**P**	**22 19 21.9**	**+6.5**
	comp=Z,27nm,1.1s,mb4.6						
KAPI	**Kappang**	**21.67**	**264**	P	**P**	**22 19 16.4**	**+1.0**
	comp=Z,27nm,1.1s,mb4.6						
ASAR	**Alice Springs**	**21.73**	**199**	P	**P**	**22 19 14.8**	**-1.0**

MDJ AMB AMB
comp=Z,10.0nm,2.1s,mb4.5
MDJ AMB AMB
comp=Z,150nm,4.8s
BJI Beijing 48.73 334 P **P** **22 23 09.3 +0.9**
BJI S **S** **22 30 10.3 +2.6**
BJI LR LR
comp=Z,66nm,17.4s,MS3.7
CN2 Changchun 48.80 345 *e*P **P** **22 23 11.6 +2.8**
CD2 Chengdu 49.26 316⇑ *i*P **P** **22 23 12.4 -0.2**
CD2 PP PP 22 25 09.4 +2.4
CD2 S **S** **22 30 17.9 +2.4**
CD2 SS SS 22 33 45.7 -1.9
CD2 AMB AMB
comp=Z,40nm,1.2s,mb5.3
CD2 AMB AMB
comp=Z,100nm,5.2s
CD2 LR LR
comp=N,180nm,10.8s,MS4.5
CD2 LR LR
comp=E,160nm,10.4s,MS4.5
CD2 LR LR
comp=Z,130nm,9.6s
YSS Yuzh-Sakhalins 49.81 1 P **P** **22 23 14.5 -2.0**
HHC Hu-ho-hao-te 51.49 331 *e*P **P** **22 23 31.9 +2.6**
HHC PP PP 22 25 32.6 +5.6
HHC PCS PcS 22 28 41.7 +0.9
HHC S **S** **22 30 48.9 +2.8**
HHC AMB AMB
comp=Z,9.0nm,0.6s,mb4.9
HHC AMB AMB
comp=Z,109nm,5.9s
HHC LR LR
comp=N,155nm,19.6s,MS4.2
HHC LR LR
comp=E,150nm,19.6s,MS4.2
HHC LR LR
comp=Z,129nm,19.6s,MS4.0
LZH Lanzhou 52.39 321 *e*P **P** **22 23 37.2 +1.1**
LZH PP PP 22 25 37.0 +1.7
LZH *e*S **S** **22 30 59.0 +0.3**
LZH SS SS 22 34 37.3 0.0
LZH AMB AMB
comp=Z,74nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,200nm,4.5s
LZH LR LR
comp=E,1μm,15.2s
LZH LR LR
comp=Z,1μm,16.8s,MS5.1
LZH Lanzhou 52.39 321 *e*P **P** **22 23 37.2 +1.1**
comp=Z,74nm,1.0s,mb5.6
LZH pP pP 22 23 45.8 -3.6
LZH sP sP 22 23 49.6 -5.4
LZH PP PP 22 25 37.0 +1.7
LZH *e*S **S** **22 30 59.0 +0.3**
LZH sS sS 22 31 17.0 -4.0
LZH SS SS 22 34 37.3 0.0
LZH LR LR
comp=Z,1μm,16.8s,MS5.1
LZH Lanzhou 52.39 321 *e*P **P** **22 23 37.2 +1.1**
LZH *PP pP 22 23 45.8 -3.6
LZH *SP sP 22 23 49.6 -5.4
LZH 22 25 37.0
LZH *e*S **S** **22 30 59.0 +0.3**
LZH *SS sS 22 31 17.0 -4.0
LZH SS SS 22 34 37.3 0.0
LZH pmax pmax
comp=Z,74nm,1.0s,mb5.6
LZH MLR MLR
comp=Z,1μm,16.8s,MS5.1
GTA Gaotai 56.96 322 ⇑P **P** **22 24 09.9 +0.7**
GTA AMB AMB
comp=Z,36nm,0.7s,mb5.5
PETK Petropavlovsk- 57.62 12 P **P** **22 24 13.9 +0.4**
comp=Z,1.3nm,0.6s,mb4.2,baz=133,slow=3.6,SNR=6.0
LSA Lhasa 58.02 308 *e*P **P** **22 24 16.9 +0.1**
comp=Z,15nm,1.2s,mb4.9
LSA Lhasa 58.02 308 *e*P **P** **22 24 16.9 +0.1**
LSA pmax pmax
comp=Z,15nm,1.2s,mb4.9
ULN Ulaanbaatar 58.93 334 *e*P **P** **22 24 23.4 +0.6**
comp=Z,7.0nm,0.7s,mb4.8
ULN Ulaanbaatar 58.93 334*c* *i*P **P** **22 24 22.4 -0.4**
SONM Songino Array 59.20 333 P **P** **22 24 25.1 +0.4**
comp=Z,2.3nm,0.7s,mb4.3,baz=155,slow=8.2,SNR=22
SONM LR LR 22 52 05.7
comp=Z,68nm,18.3s,MS3.8,baz=136,slow=38
SONM Songino Array 59.20 333 P **P** **22 24 25.1 +0.4**
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,68nm,18.3s
TAPN Taplejung 59.88 304 *e*P **P** **22 24 29.7 0.0**
comp=Z,29nm,0.8s,mb5.4
ODAN Odare 59.97 303 *e*P **P** **22 24 30.5 +0.1**
comp=Z,35nm,0.9s,mb5.4
RAMN Ramite 60.66 303 *e*P **P** **22 24 35.3 +0.2**
JIRN Jiri 61.25 304 *e*P **P** **22 24 39.4 +0.3**
GUN Gumba 61.59 304 *e*P **P** **22 24 41.8 +0.4**
PKI Pulchoki 61.87 303 *e*P **P** **22 24 43.1 -0.2**
comp=Z,61nm,1.3s,mb5.6
PKI Pulchoki 61.87 303 *e*P **P** **22 24 43.1 -0.2**
PKI pmax pmax
comp=Z,61nm,1.3s,mb5.6
KKN Kakani 62.05 304 *e*P **P** **22 24 44.5 0.0**
comp=Z,51nm,0.9s,mb5.7
KKN Kakani 62.05 304 *e*P **P** **22 24 44.5 0.0**
KKN pmax pmax
comp=Z,51nm,0.9s,mb5.7
DMN Daman 62.13 303 *e*P **P** **22 24 45.1 +0.1**
ZAK Zakamensk 62.46 334 *e*P **P** **22 24 46.3 -0.5**
ZAK pmax pmax
comp=Z,15nm,1.1s,mb5.0
GKN Gorkha 62.66 304 *e*P **P** **22 24 48.6 +0.1**
TLY Talaya 63.25 335 *e*P **P** **22 24 50.9 -1.1**
comp=Z,6.1nm,0.6s,mb4.9
TLY Talaya 63.25 335 *e*P **P** **22 24 51.5 -0.5**
TLY pmax pmax
comp=Z,15nm,1.1s,mb5.0
KOLN Koldanda 63.44 303 *e*P **P** **22 24 53.9 +0.1**
comp=Z,50nm,0.9s,mb5.7
DANN Dangsing 63.50 304 *e*P **P** **22 24 54.2 +0.1**
comp=Z,54nm,0.7s,mb5.7
PYUN Piuthan 64.06 303 *e*P **P** **22 24 57.8 0.0**
comp=Z,71nm,0.8s,mb5.7
MOY Mondy 64.39 333 *e*P **P** **22 25 00.4 +0.9**
BOD Bodaibo 64.55 344 *e*P **P** **22 24 59.0 -1.4**
BOD pmax pmax
comp=Z,4.0nm,1.8s,mb4.2
HYB Hyderabad 65.20 291 *e*P **P** **22 25 04.0 -1.4**
YAK Yakutsk 65.53 354 *e*P **P** **22 25 04.8 -1.9**
YAK pmax pmax
comp=Z,12nm,1.1s,mb4.8
CASY Casey 66.72 193 *e*P **P** **22 25 14.3 0.0**
comp=Z,46nm,1.1s,mb5.4
WMQ Urumqi 66.96 321 P **P** **22 25 17.0 +0.8**
WMQ PP PP 22 27 46.0 +1.7
WMQ S S 22 34 06.0 0.0
WMQ SCS ScS 22 35 08.0 -1.8
WMQ SS SS 22 38 26.0 +0.5
WMQ AMB AMB
comp=Z,25nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,105nm,5.0s
WMQ LR LR
comp=N,27nm,18.0s,MS3.6
WMQ LR LR
comp=E,24nm,18.0s,MS3.6
WMQ LR LR
comp=Z,25nm,18.0s,MS3.5
POO Poona 69.81 291 *e*P **P** **22 25 31.5 -3.0**
MK31 Makanchi Array 71.71 322 *i*P **P** **22 25 45.7 +0.2**
MK31 pmax pmax
comp=Z,17nm,0.9s,mb5.0
MK31 Makanchi Array 71.71 322 *e*P **P** **22 25 45.8 +0.3**
MKAR Makanchi Array 71.71 322 P **P** **22 25 45.7 +0.2**
comp=Z,7.3nm,0.7s,mb4.7,baz=105,slow=7.4,SNR=79
MKAR LR LR 23 00 55.0
comp=Z,30nm,19.3s,MS3.6,baz=22,slow=39
MKAR Makanchi Array 71.71 322 P **P** **22 25 45.7 +0.2**
MKAR LR LR 23 00 55.0
MKAR Makanchi Array 71.71 322⇑ *e*P **P** **22 25 45.7 +0.2**
BILL Bilibino 73.04 10 P **P** **22 25 53.0 0.0**
BILL *e* pP 22 26 02.3 -4.7
BILL pP 22 26 10.0 +3.0
BILL pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
ZAA0 Zalesovo Array 73.59 329 *e*P **P** **22 25 55.4 -1.2**
ZALV Zalesovo Beam 73.59 329 P **P** **22 25 55.8 -0.8**
comp=Z,5.6nm,0.8s,mb4.6,baz=104,slow=6.3,SNR=22
ZALV LR LR 22 59 21.2
comp=Z,32nm,18.1s,MS3.6,baz=23,slow=37
ZALV Zalesovo Beam 73.59 329 P **P** **22 25 55.8 -0.8**
ZALV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ZALV MLR MLR
comp=Z,32nm,18.1s,MS3.6
KZA Kyzart 74.61 315 P **P** **22 26 04.4 +1.6**
SNR=11
TKM2 Tokmak 2 74.64 316 *e*P **P** **22 26 03.5 +0.5**
comp=Z,4.4nm,0.6s,mb4.6
TKM2 Tokmak 2 74.64 316 *e*P **P** **22 26 03.5 +0.5**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TKM2 Tokmak 2 74.64 316 P **P** **22 26 03.5 +0.5**
SNR=12
CHMS Chumysh 75.26 316 P **P** **22 26 06.5 0.0**
SNR=5.5
USP Ospenovka 75.52 316 P **P** **22 26 08.2 +0.2**
SNR=13
KURK Kurchatov 75.55 324 *e*P **P** **22 26 07.7 -0.3**
comp=Z,14nm,1.1s,mb4.8
KURK Kurchatov 75.55 324*c* *i*P **P** **22 26 07.6 -0.4**
KURK pmax pmax
comp=Z,19nm,1.3s,mb4.9
AML Almayashu 75.73 315 *e*P **P** **22 26 09.5 +0.3**
comp=Z,13nm,1.0s,mb4.8
AML Almayashu 75.73 315 P **P** **22 26 10.4 +1.2**
SNR=8.1
EKS2 Erkin-Say 75.83 315 *e*P **P** **22 26 10.4 +0.6**
comp=Z,8.3nm,1.0s,mb4.6
EKS2 Erkin-Say 75.83 315 P **P** **22 26 10.6 +0.8**
SNR=6.7
SBA Scott Base 75.94 175 *e*P **P** **22 26 08.0 -1.8**
comp=Z,15nm,2.0s,mb4.6
SBA Scott Base 75.94 175 *e*P **P** **22 26 08.0 -1.8**
SBA pmax pmax
comp=Z,15nm,2.0s,mb4.6
KBL Kabul 77.29 306 *e*P **P** **22 26 17.6 -0.6**
comp=Z,2.8nm,0.6s,mb4.4
KBL Kabul 77.29 306 *e*P **P** **22 26 17.6 -0.6**
KBL pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KK31 Karatay Array 78.26 315 *i*P **P** **22 26 23.0 -0.4**
KK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VOSK Vostochnaya 80.70 325 P **P** **22 26 35.6 -0.9**
VOSK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BVA0 Borovoye Array 81.13 325 *i*P **P** **22 26 38.6 -0.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BRVK Borovoye 81.20 325 *e*P **P** **22 26 38.8 -0.3**
comp=Z,29nm,1.1s,mb5.1
BRVK Borovoye 81.20 325 *e*P **P** **22 26 38.8 -0.4**
BRVK pmax pmax
comp=Z,29nm,1.1s,mb5.1
CHUM Lake Minchumin 82.52 24 *e*P **P** **22 26 46.0 +0.1**
comp=Z,41nm,0.3s,mb5.9
MAW Mawson 82.81 202 P **P** **22 26 48.0 +0.7**
comp=Z,8.2nm,0.9s,mb4.8,baz=55,slow=4.8,SNR=14
MAW Mawson 82.81 202 P **P** **22 26 48.0 +0.6**
MAW pmax pmax
comp=Z,8.0nm,0.9s
IMA2 Indian Mountai 82.86 22 *e*P **P** **22 26 47.5 0.0**
KTH Kantishna Hill 82.97 25 *e*P **P** **22 26 47.2 -0.9**
comp=Z,5.1nm,0.8s,mb4.6
TRF Thorofare Moun 83.20 25 *e*P **P** **22 26 49.0 -0.4**
comp=Z,13nm,1.3s,mb4.8
MCK McKinley 83.86 25 *e*P **P** **22 26 51.8 -0.9**
COLA College 84.69 24 *e*P **P** **22 26 56.3 -0.7**
QSPA South Pole Qui 86.89 180 *e*P **P** **22 27 08.2 +0.6**
DAWY Dawson 88.02 26 *e*P **P** **22 27 13.4 +0.1**
AKTO Aktyubinsk 88.11 321 *i*P **P** **22 27 12.5 -1.5**
AKTO pmax pmax
comp=Z,1.0nm,1.0s,mb4.0
ARU Arti 88.56 327 P **P** **22 27 13.4 -2.6**
ARU Arti 88.56 327*c* *i*P **P** **22 27 14.2 -1.8**
ARU *e* 22 30 43.6
ARU *e*S SKSac 22 37 40.5 -0.6
ARU *e*SS SS 22 43 48.1 -1.8
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
ARU Arti 88.56 327 *e*P **P** **22 27 14.3 -1.7**
ARU pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
SYO Syowa Base 91.39 201⇓ *e*P **P** **22 27 29.0 0.0**
YBH Yreka Blue Hor 96.43 49 LR LR 23 11 02.9
comp=Z,156nm,18.6s,MS4.5,baz=355,slow=35
PLCA Paso Flores 127.56 150 PKP PKPdf 22 33 30.0 +1.3
comp=Z,2.9nm,0.9s,baz=148,slow=3.2,SNR=5.4
PLCA Paso Flores 127.56 150 PKIKP PKPdf 22 33 30.0 +1.3
PLCA pmax pmax
comp=Z,3.0nm,0.9s
TOA0 Torodi Ar. Sit 138.92 286 *e*PKPdf PKPdf 22 33 51.9 +1.1
TORD Torodi Ar. Bea 138.92 286 PKhKP 22 33 41.2
comp=Z,0.7nm,0.9s,baz=48,slow=2.3,SNR=7.1
TORD PKP PKPdf 22 33 51.2 +0.5
comp=Z,2.8nm,0.7s,baz=61,slow=2.0,SNR=17
TORD Torodi Ar. Bea 138.92 286 PKP 22 33 41.2
TORD PKP PKPdf 22 33 51.2 +0.5
ROSC El Rosal 144.32 86 PKP PKPdf 22 34 00.3 -0.2
comp=Z,9.4nm,0.8s,baz=281,slow=20,SNR=4.7
LPAZ La Paz 145.06 124 PKPbc PKPbc 22 34 02.7 +1.6
comp=Z,5.8nm,0.7s,baz=276,slow=3.2,SNR=24
LPAZ La Paz 145.06 124 PKIKP PKPdf 22 34 02.7 +1.1
LPAZ pmax pmax
comp=Z,6.0nm,0.7s
KIC Kosan Boka 146.09 277 *e*P PKPdf 22 34 02.8 -0.7
comp=Z,66nm,1.1s
DBIC Dimbokro 146.19 277 PKPbc PKPbc 22 34 04.6 -0.2
comp=Z,6.8nm,0.6s,baz=30,slow=4.6,SNR=18
DBIC Dimbokro 146.19 277 PKPbc PKPbc 22 34 04.6 -0.2
DBIC Dimbokro 146.19 277 PKP2 PKPab 22 34 04.6 -0.9
DBIC pmax pmax
comp=Z,7.0nm,0.6s
TIC Toumodi 146.35 277 *e*P PKPdf 22 34 04.8 +0.8
comp=Z,39nm,0.7s
LIC Lamto 146.39 277 *e*P PKPdf 22 34 04.9 +0.9
comp=Z,35nm,0.8s

*NEIC **12** 22:23:00.9, 1785N×6845W, h108km, MD3.5(RSPR), After RSPR.*

RSPR 12 22:23:00.9, 1785N×6845W, h108km±2km, MD3.6/12, MD3.6/12, 34C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMO	**Isla Mona**	**0.57**	**63**⇑	*e*P	Pn	22 23 16.8	-1.3
IMO	**Isla Mona**	**0.57**	**63**⇑	*e*P	Pn	22 23 16.9	-1.2
IMO				*e*S	Sn	22 23 31.0	+0.1
CRPR	**Cabo Rojo, PR**	**1.28**	**83**⇑	*e*P	Pn	22 23 24.9	-0.1
CRPR	**Cabo Rojo, PR**	**1.28**	**83**	*e*S	Sn	22 23 43.0	-0.3
CRPR	**Cabo Rojo, PR**	**1.28**	**83**⇑	*e*P	Pn	22 23 24.9	-0.1
CRPR	**Cabo Rojo, PR**	**1.28**	**83**	*e*S	Sn	22 23 43.1	-0.2
CRPR	**Cabo Rojo, PR**	**1.28**	**83**⇑	*e*P	Pn	22 23 24.9	-0.1
CRPR				*e*S	Sn	22 23 43.0	-0.3
LSP	**Las Mesas**	**1.33**	**76**⇑	*e*P	Pn	22 23 25.1	-0.6
LSP	**Las Mesas**	**1.33**	**76**	*e*S	Sn	22 23 44.0	-0.4
LSP	**Las Mesas**	**1.33**	**76**⇑	*e*P	Pn	22 23 25.2	-0.4
LSP	**Las Mesas**	**1.33**	**76**	*e*S	Sn	22 23 44.1	-0.3
LSP	**Las Mesas**	**1.33**	**76**⇑	*e*P	Pn	22 23 25.2	-0.4
LSP				*e*S	Sn	22 23 44.1	-0.3
AGPR	**Aguadilla, PR**	**1.41**	**64**⇑	*e*P	Pn	22 23 26.0	-0.6
AGPR	**Aguadilla, PR**	**1.41**	**64**	*e*S	Sn	22 23 46.5	+0.5
AGPR	**Aguadilla, PR**	**1.41**	**64**⇑	*e*P	Pn	22 23 25.9	-0.6
AGPR	**Aguadilla, PR**	**1.41**	**64**	*e*S	Sn	22 23 45.8	-0.2
AGPR	**Aguadilla, PR**	**1.41**	**64**⇑	*e*P	Pn	22 23 25.9	-0.6
AGPR				*e*S	Sn	22 23 45.8	-0.2
GBPR	**Guanica, Bosqu**	**1.50**	**85**⇑	*e*P	Pn	22 23 27.9	+0.4
GBPR	**Guanica, Bosqu**	**1.50**	**85**	*e*S	Sn	22 23 48.3	+0.5
GBPR	**Guanica, Bosqu**	**1.50**	**85**⇑	*e*P	Pn	22 23 28.1	+0.5
GBPR	**Guanica, Bosqu**	**1.50**	**85**	*e*S	Sn	22 23 48.1	+0.3
LRS	**Lares**	**1.58**	**74**⇑	*e*P	Pn	22 23 28.0	-0.6
LRS				*e*S	Sn	22 23 49.9	+0.2
LRS	**Lares**	**1.58**	**74**	*e*P	Pn	22 23 28.0	-0.6
LRS				*e*S	Sn	22 23 49.1	-0.6
LRS	**Lares**	**1.58**	**74**⇑	*e*P	Pn	22 23 28.0	-0.6
LRS				*e*S	Sn	22 23 49.9	+0.2
AOPR	**Arecibo Observ**	**1.68**	**73**⇑	*e*P	Pn	22 23 29.3	-0.5
AOPR	**Arecibo Observ**	**1.68**	**73**	*e*S	Sn	22 23 51.6	-0.3
AOPR	**Arecibo Observ**	**1.68**	**73**⇑	*e*P	Pn	22 23 29.3	-0.6
AOPR	**Arecibo Observ**	**1.68**	**73**	*e*S	Sn	22 23 51.8	0.0
AOPR	**Arecibo Observ**	**1.68**	**73**⇑	*e*P	Pn	22 23 29.3	-0.6
AOPR				*e*S	Sn	22 23 51.8	0.0
OBIP	**Obispado Ponce**	**1.76**	**83**⇑	*e*P	Pn	22 23 31.0	+0.2
OBIP	**Obispado Ponce**	**1.76**	**83**⇑	*e*P	Pn	22 23 30.9	+0.1
OBIP				*e*S	Sn	22 23 53.6	+0.1
CELP	**Cerrillos**	**1.79**	**82**⇑	*e*P	Pn	22 23 31.1	-0.1
CELP				*e*S	Sn	22 23 54.1	-0.1
CELP	**Cerrillos**	**1.79**	**82**⇑	*e*P	Pn	22 23 31.1	-0.1
CELP				*e*S	Sn	22 23 54.1	-0.1
CELP	**Cerrillos**	**1.79**	**82**⇑	*e*P	Pn	22 23 31.1	-0.1
CELP				*e*S	Sn	22 23 54.1	-0.1
ICM	**Isla Caja Muer**	**1.83**	**88**⇑	*e*P	Pn	22 23 31.9	+0.3
ICM	**Isla Caja Muer**	**1.83**	**88**	*e*S	Sn	22 23 55.1	-0.1
ICM	**Isla Caja Muer**	**1.83**	**88**⇑	*e*P	Pn	22 23 31.9	+0.2
ICM	**Isla Caja Muer**	**1.83**	**88**	*e*S	Sn	22 23 55.4	+0.2
ICM	**Isla Caja Muer**	**1.83**	**88**⇑	*e*P	Pn	22 23 31.9	+0.2
ICM				*e*S	Sn	22 23 55.1	-0.1
SJG	**San Juan**	**2.20**	**83**⇑	*e*P	Pn	22 23 36.5	+0.1
SJG				*e*S	Sn	22 24 04.2	+0.7
SJG	**San Juan**	**2.20**	**83**⇑	*e*P	Pn	22 23 36.5	+0.2
SJG	**San Juan**	**2.20**	**83**	*e*S	Sn	22 24 03.2	-0.3
SJG	**San Juan**	**2.20**	**83**	*e*S	Sn	22 24 03.6	+0.1
SJG	**San Juan**	**2.20**	**83**	*e*S	Sn	22 24 03.5	0.0
SJG	**San Juan**	**2.20**	**83**⇑	*e*P	Pn	22 23 36.5	+0.2
SJG				*e*S	Sn	22 24 03.2	-0.3
HUMP	**Col San Antoni**	**2.49**	**83**⇓	*e*P	Pn	22 23 39.9	-0.2
HUMP	**Col San Antoni**	**2.49**	**83**⇑	*e*P	Pn	22 23 39.9	-0.2
HUMP				*e*S	Sn	22 24 09.5	-0.7
STVI	**Saint Thomas**	**3.36**	**81**⇑	*e*P	Pn	22 23 51.5	-0.1
STVI	**Saint Thomas**	**3.36**	**81**	*e*S	Sn	22 24 30.6	-0.2
STVI	**Saint Thomas**	**3.36**	**81**⇑	*e*P	Pn	22 23 51.5	-0.1
STVI	**Saint Thomas**	**3.36**	**81**⇑	*e*P	Pn	22 23 51.5	-0.1
STVI				*e*S	Sn	22 24 30.6	-0.2

*ISCJB **12** 22:57:06.5±1.7, 1894N±008×1458E±02, h306km±16km, mb3.6/9, Error ellipse: s-maj=30.5km s-min=10.4km az=163.9*

*NEIC **12** 22:57:07.7±1.0, 1892N×14569E, h299km±10km, mb4.1/5, Error ellipse: s-maj=16.2km s-min=5.9km az=74.0*

*IDC **12** 22:57:08.2±6.0, 1889N×14565E, h301km±62km, mb3.1/5, mb1 3.3/7, mb1mx3.1/20, mbtmp3.2/7, Error ellipse: s-maj=68.0km s-min=14.2km az=78.0*

ISC 12 22:57:07.6±1.7, 1892N±008×1457E±02, h299km±16km, n22, σ0950/21, mb3.6/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.36**	**189**	*e*P	**Pn**	**22 58 29.3**	**-0.1**
JOW	**Kunigami**	**17.88**	**299**	P	**P**	**23 00 55.9**	**-0.2**
	3.0nm,0.3s,baz=136,slow=16,SNR=5.4						
MJAR	**Matsushiro Arr**	**18.75**	**341**	P	**P**	**23 01 06.3**	**+1.0**
	0.2nm,0.3s,baz=168,slow=10,SNR=3.6						
NACB	**Ninganchiao**	**23.02**	**287**	P	**P**	**23 01 47.2**	**+0.2**
TATO	**Taipei**	**23.24**	**289**	*e*P	**P**	**23 01 49.1**	**0.0**
	15nm,0.5s,mb4.6						
YHNB	**Yeheng**	**23.29**	**289**	*e*P	**P**	**23 01 49.5**	**-0.1**
YSS	**Yuzh-Sakhalins**	**28.06**	**356**	P	**P**	**23 02 31.8**	**-0.1**
BJT	**Baijiatuao**	**32.97**	**316**	*e*P	**P**	**23 03 15.2**	**+0.2**
	24nm,1.6s,mb4.5						
HIA	**Hailar**	**36.77**	**331**	P	**P**	**23 03 46.0**	**-1.1**
CTAO	**Charters Tower**	**38.77**	**179**	P	**P**	**23 04 03.9**	**-0.2**
WRAB	**Tennant Creek**	**40.19**	**197**	*e*P	**P**	**23 04 15.9**	**+0.3**
	4.4nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**40.20**	**197**	*e*P	**P**	**23 04 15.7**	**0.0**
WRA	**Warramunga Arr**	**40.20**	**197**	P	**P**	**23 04 15.8**	**+0.1**
	3.1nm,0.5s,mb3.9,baz=19,slow=9.1,SNR=20						
SONM	**Songino Array**	**42.98**	**321**	P	**P**	**23 04 37.1**	**-0.8**
	0.1nm,0.4s,mb2.4,baz=122,slow=6.1,SNR=2.7						
ASAR	**Alice Springs**	**43.87**	**196**	P	**P**	**23 04 45.4**	**+0.2**
	1.2nm,0.4s,mb3.4,baz=14,slow=7.5,SNR=20						
STKA	**Stephens Creek**	**50.66**	**185**	P	**P**	**23 05 36.6**	**-0.5**
	0.8nm,0.4s,mb3.4,baz=353,slow=8.1,SNR=4.0						
STKA	**Stephens Creek**	**50.66**	**185**	*e*P	**P**	**23 05 36.6**	**-0.5**
	0.8nm,0.4s,mb3.4						
MKAR	**Makanchi Array**	**58.32**	**314**	P	**P**	**23 06 32.9**	**+1.2**
	0.1nm,0.6s,mb2.4,baz=91,slow=5.8,SNR=2.5						
TAU	**Tasmania Unive**	**61.54**	**179**	P	**P**	**23 06 53.9**	**+0.5**
BRVK	**Borovoye**	**66.37**	**320**	P	**P**	**23 07 24.2**	**-0.5**
	1.3nm,0.5s,mb3.9						
KBL	**Kabul**	**68.77**	**300**	*e*P	**P**	**23 07 40.0**	**0.0**
GOGA	**Godfrey**	**109.94**	**42**	PKiKP	PKiKP	23 15 04.5	+0.5

KRSC 12 23:31:58.5±0.5, 5115N×15803E, h5km±5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.32**	**13**	*e*P	Pn	23 32 23.5	-0.1
RUS				*i*S	Sg	23 32 41.5	+0.6
PET	**Petropavlovsk**	**1.92**	**11**	P	Pn	23 32 32.3	+0.6
PET				*i*S	Sn	23 32 57.6	+1.4
AVH	**Avacha**	**2.16**	**11**	P	Pn	23 32 37.2	+2.1
NLC	**Nalytchevo**	**2.18**	**21**	*e*P	Pn	23 32 35.3	-0.1
NLC				*i*S	Sn	23 33 01.5	-1.2
SPN	**Mys Shipunski**	**2.31**	**31**	*e*P	Pn	23 32 38.2	+1.1
SPN				*i*S	Sn	23 33 06.5	+0.7
GNL	**Ganaly**	**2.55**	**359**	P	Pn	23 32 41.4	+1.0
MKZ	**Mys Kozlova**	**4.08**	**32**	P	Pn	23 33 02.6	+1.1
KBTR	**Krutoberegovo**	**5.81**	**27**	P	Pn	23 33 25.9	+0.7

IDC 12 23:33:43.3±55.0, 2215S×17971W, h0km, mb4.6/3, mb1 4.8/3, mb1mx4.1/15, mbtmp4.6/3, Error ellipse: s-maj=996.6km s-min=142.7km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.78**	**267**	*e*P	P	23 40 14.7	+5.2
	6.5nm,0.4s						
TOO	**Toolangi**	**33.64**	**235**	*e*P	P	23 40 24.9	-0.8
STKA	**Stephens Creek**	**35.65**	**246**	*e*P	P	23 40 43.2	+0.1
	3.3nm,0.5s						
STKA	**Stephens Creek**	**35.65**	**246**	P	P	23 40 43.2	+0.1
	3.9nm,0.4s,baz=94,slow=10.0,SNR=18						
ASAR	**Alice Springs**	**42.61**	**259**	P	P	23 41 41.2	-0.3
	4.3nm,0.6s,baz=95,slow=7.9,SNR=34						
WB2	**Warramunga Arr**	**42.80**	**264**	*e*P	P	23 41 43.1	0.0
WRA	**Warramunga Arr**	**42.82**	**264**	P	P	23 41 43.2	0.0
	5.6nm,0.6s,baz=101,slow=8.4,SNR=23						
KAKA	**Kakadu**	**46.44**	**273**	*e*P	Px	23 42 01.1	
	3.1nm,0.7s						
FORT	**Forrest**	**47.19**	**248**	*e*P	P	23 42 13.7	-4.2
	16nm,0.6s						

*IDC **12** 23:42:07.3±1.7, 3634N×9423E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.4/22, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=67.6km s-min=26.2km az=54.0*

*ISCJB **12** 23:42:08.9±0.7, 3655N±008×9441E±008, h10km, mb3.5/3, Error ellipse: s-maj=12.0km s-min=7.7km az=153.4*

*BJI **12** 23:42:11.3, 3646N×9443E, h17km, ML3.3*

*NEIC **12** 23:42:21.8±0.7, 3744N×9402E, h36km±10km, mb3.4/3, Error ellipse: s-maj=8.5km s-min=6.6km az=155.0*

ISC 12 23:42:10.3±0.7, 3654N±007×9434E±007, h10km±1, n17, σ1947/20, mb3.5/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**5.19**	**55**	PG	**Pg**	**23 43 43.8**	**-5.8**
GTA				S	**Sn**	**23 44 26.9**	**-0.9**
GTA				SG	**Sg**	**23 44 48.8**	**-8.1**
GTA				Smax			
	comp=N,12nm,0.7s						
GTA				Smax			
	comp=E,9.0nm,1.1s						
LSA	**Lhasa**	**7.33**	**202**	Pn	**Pb**	**23 44 17.2**	**-0.3**
MK31	**Makanchi Array**	**13.62**	**322**	*e*Pn	**Pn**	**23 45 20.5**	**-2.9**
MK31				Sn	**Sn**	**23 47 50.5**	**-4.2**
MKAR	**Makanchi Array**	**13.62**	**322**	Pn	**Pn**	**23 45 20.5**	**-2.9**
	comp=E,0.5nm,0.3s,baz=133,slow=14,SNR=20						
SONM	**Songino Array**	**14.38**	**35**	Pn	**Pn**	**23 45 35.0**	**+1.4**
	comp=E,0.1nm,0.3s,baz=222,slow=15,SNR=3.5						
ULN	**Ulaanbaatar**	**14.70**	**36**	*e*Pn	**Pn**	**23 45 39.3**	**+1.1**
TKM2	**Tokmak 2**	**15.75**	**300**	*e*Pn	**Pn**	**23 45 52.6**	**+0.6**

comp=E,1.2nm,0.6s

UCH	Uchtor	16.33	296	*e*Pn	Pn	23 46 00.9	+1.3
AML	Almayashu	16.90	296	Pn	Pn	23 46 08.4	+1.6
EKS2	Erkin-Say	16.97	297	*e*P	Pn	23 46 08.1	+0.5
KURK	Kurchatov	18.12	326	P	Pn	23 46 20.9	-0.9
	baz=140,slow=11						
KURK	Kurchatov	18.12	326	*e*P	Pn	23 46 19.6	-2.2
	comp=E,1.0nm,0.6s						
BVAR	Borovoye Array	23.50	322	P	P	23 47 19.7	-0.6
	comp=E,0.8nm,0.6s,mb3.3,baz=143,slow=7.0,SNR=7.1						
BRVK	Borovoye	23.58	322	*e*P	P	23 47 20.2	-0.8
	comp=E,1.8nm,0.6s,mb3.7						
YAK	Yakutsk	33.65	29	P	P	23 48 52.9	+2.2
PSZ	Piszkesteto	54.27	307	P	P	23 51 38.4	+2.1
ASAR	Alice Springs	70.57	142	P	P	23 53 23.8	-1.8
	comp=E,0.2nm,0.4s,mb3.4,baz=323,slow=6.0,SNR=4.1						

IDC 12 23:43:30.8±47.0, 1596S×17492W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=889.9km s-min=178.2km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	42.50	240	P	P	23 51 28.7	+0.7
	1.1nm,0.5s,baz=71,slow=9.3,SNR=4.5						
WRA	Warramunga Arr	48.30	257	P	P	23 52 13.5	-0.7
	0.4nm,0.6s,baz=97,slow=7.5,SNR=2.5						
ASAR	Alice Springs	48.55	252	P	P	23 52 16.1	0.0
	4.2nm,0.5s,baz=88,slow=8.1,SNR=74						

IDC 13 00:03:02.4±1.7, 1220N×125.37E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/17, mbtmp3.4/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/9, Error ellipse: s-maj=183.6km s-min=21.2km az=69.0

ISCJB 13 00:03:04.4±1.0, 1236N±007×12580E±009, h33km, mb3.4/4, MS3.1/1, Error ellipse: s-maj=12.5km s-min=9.0km az=160.5

ISC 13 00:03:06.4±1.0, 1234N±007×12577E±009, h35km, n8, σ1§13/9, mb3.4/4, MS3.1/1, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	2.01	309	*e*P	Pn	00 03 35.6	-2.2
SCPH	Surigao	2.56	186	*e*P	Pn	00 03 43.9	-1.6
SCPH				eS	Sn	00 04 15.2	-0.1
RCP	Roxas	3.06	256	*e*P	Pn	00 03 51.3	-0.9
RCP				eS	Sn	00 04 29.0	+1.4
WRA	Warramunga Arr	33.17	165	P	P	00 09 40.6	+0.8
	0.3nm,0.9s,mb3.2,baz=346,slow=9.6,SNR=2.6						
ASAR	Alice Springs	36.66	167	P	P	00 10 10.6	+0.7
	0.3nm,0.3s,mb3.6,baz=336,slow=7.0,SNR=6.8						
SONM	Songino Array	38.92	339	P	P	00 10 29.6	+0.9
	0.2nm,0.5s,mb3.1,baz=145,slow=10,SNR=2.5						
PETK	Petropavlovsk-	47.98	25	LR	LR	00 29 47.6	
	comp=Z,19nm,19.0s,MS3.1,baz=63,slow=33						
MKAR	Makanchi Array	50.10	322	P	P	00 11 58.5	+0.5
	0.7nm,0.9s,mb3.7,baz=128,slow=8.6,SNR=5.5						

IDC 13 02:05:50.2±4.7, 318S×10098E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/17, mbtmp3.4/4, Error ellipse: s-maj=194.3km s-min=24.7km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	36.56	120	P	P	02 12 56.2	-1.9
	0.2nm,0.4s,baz=295,slow=7.8,SNR=5.7						
ASAR	Alice Springs	37.77	126	P	P	02 13 09.9	+1.5
	0.2nm,0.5s,baz=303,slow=8.4,SNR=2.8						
SONM	Songino Array	51.03	5	P	P	02 14 54.9	+0.9
	0.5nm,0.6s,baz=203,slow=6.1,SNR=4.1						
MKAR	Makanchi Array	52.42	344	P	P	02 15 03.8	-0.6
	0.6nm,0.7s,baz=151,slow=7.9,SNR=5.2						

ISCJB 13 03:08:52.4±0.6, 3465N±007×13983E±007, h96km±5km, mb3.4/2, Error ellipse: s-maj=13.0km s-min=6.5km az=36.2

NEIC 13 03:08:52.9, 3472N×13986E, h94km, MG3.1(JMA), After JMA.

JMA 13 03:08:52.8±0.2, 3472N×13986E, h94km±2km, M3.1

IDC 13 03:08:53.5±3.4, 3442N×13941E, h72km±50km, mb3.2/3, mb1 3.4/4, mb1mx3.2/20, mbtmp3.2/4, ML3.1/1, Error ellipse: s-maj=120.9km s-min=27.2km az=62.0

ISC 13 03:08:53.6±0.6, 3467N±007×13983E±007, h91km±5km, n17, σ0§66/28, mb3.4/2, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIM2	Oshima 3	0.33	279	P	Pn	03 09 06.9	-0.3
JIM2				eS	Sn	03 09 17.2	-0.2
TATJ	Tateyama 2	0.37	8	P	Pn	03 09 07.1	-0.4
TATJ				eS	Sn	03 09 18.3	+0.5
BSO4	Boso 4	0.53	52	P	Pn	03 09 08.4	-0.2
BSO4				eS	Sn	03 09 20.9	+1.1
BSO3	Boso 3	0.58	76	P	Pn	03 09 08.6	-0.4
BSO3				eS	Sn	03 09 21.6	+1.1
KTR	Katsuura	0.62	40	P	Pn	03 09 08.7	-0.7
KTR				eS	Sn	03 09 20.9	-0.3
JIZS	Izushimoda	0.79	274	P	Pn	03 09 11.3	+0.3
JOD2	Odawara 2	0.85	315	P	Pn	03 09 10.9	-0.8
JOD2				eS	Sn	03 09 24.1	-1.1
BSO1	Boso 1	0.95	90	P	Pn	03 09 12.1	-0.6
JYN	Shimob	1.34	309	P	Pn	03 09 17.8	+0.4
JYN				eS	Sn	03 09 37.2	+1.9
JRY	Ryogami san	1.55	331	P	Pn	03 09 19.4	-0.5
JRY				eS	Sn	03 09 38.8	-1.1
MJAR	Matsushiro Arr	2.29	325	P	Pn	03 09 29.6	-0.1
	4.7nm,0.3s,baz=152,slow=11,SNR=25						
MJAR				S	Sn	03 09 57.3	+0.1
	9.1nm,0.3s,baz=287,slow=25,SNR=5.6						
MAJO	Matsushiro	2.29	325	*e*Pn	Pn	03 09 30.0	+0.4
MAJO				eSn	Sn	03 09 57.6	+0.4
MAT	Matsushiro	2.29	325	P	Pn	03 09 29.9	+0.3
MAT				S	Sn	03 09 56.9	-0.3
MKAR	Makanchi Array	44.33	304	P	P	03 16 55.1	+0.7
	0.3nm,0.6s,mb3.2,baz=80,slow=10,SNR=2.8						
MKAR	Makanchi Array	44.33	304	P	P	03 16 55.1	+0.7
WRA	Warramunga Arr	54.56	186	P	P	03 18 12.2	-0.1
	1.1nm,0.6s,baz=2.7,slow=7.6,SNR=24						
ASAR	Alice Springs	58.28	186	P	P	03 18 38.8	+0.1
	0.2nm,0.4s,mb3.5,baz=13,slow=14,SNR=4.4						

IDC 13 03:34:30.3±4.4, 607S×12785E, h392km±72km, mb3.2/1, mb1 3.6/3, mb1mx3.0/14, mbtmp3.4/3, Error ellipse: s-maj=109.2km s-min=63.2km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.16	156	P	P	03 37 45.3	+0.4
	1.3nm,0.3s,baz=334,slow=11,SNR=134						
WRA				S	S	03 40 25.3	-0.7
	0.2nm,0.3s,baz=336,slow=20,SNR=12						
ASAR	Alice Springs	18.44	162	P	P	03 38 19.9	+0.1
	1.7nm,0.3s,baz=344,slow=11,SNR=88						
ASAR				S	S	03 41 30.6	+0.9
	0.1nm,0.3s,baz=344,slow=19,SNR=5.1						
STKA	Stephens Creek	28.71	155	P	P	03 39 53.1	-0.2
	0.8nm,0.4s,baz=315,slow=10.0,SNR=4.0						

IDC 13 04:03:31.7±0.9, 1121N×8686W, h0km, mb4.0/7, mb1 4.3/8, mb1mx4.0/20, mbtmp4.1/8, ML3.9/1, MS3.8/7, Ms1 3.8/7, ms1mx3.3/29, Error ellipse: s-maj=46.7km s-min=18.1km az=53.0

ISCJB 13 04:03:35.6±0.7, 1111N±005×8701W±006, h53km±6km, mb4.4/29, MS3.9/9, Error ellipse: s-maj=11.8km s-min=5.1km az=144.8

CASC 13 04:03:35.5±2.5, 1111N×8706W, h38km±731km, MD4.2, ML3.6, mb4.5(NEIC)

BJI 13 04:03:42.8, 1160N×8710W, h67km, mB5.2, Ms4.5, Msz4.1

NEIC 13 04:03:42.9±0.4, 1160N×8713W, mb4.5/24, Error ellipse: s-maj=10.3km s-min=6.5km az=58.0

ISC 13 04:03:37.4±0.7, 1118N±005×8693W±006, h48km±5km, n97, σ0§72/76, mb4.4/29, MS3.9/9, 17C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	El Crucero	1.01	37	*e*P	Pn	04 03 56.0	+0.7
COPN	Copaltepe	1.05	18	*e*P	Pn	04 03 55.9	+0.1
TICN	Ticuantepe	1.09	39	*e*P	Pn	04 03 56.6	+0.2
CSAN		1.11	26	*e*P	Pn	04 03 56.6	-0.1
APON	Apoyo	1.12	49	*e*P	Pn	04 03 57.0	+0.3
XAVN	Gruta Xavier	1.13	31	*e*P	Pn	04 03 57.0	+0.1
TISN	Laguna Tiscapa	1.16	34	*e*P	Pn	04 03 57.4	+0.1
MGAN	Managua	1.17	34	*e*P	Pn	04 03 57.5	0.0
APYN	Apoyeque	1.19	28	*e*P	Pn	04 03 58.1	+0.4
WILN	Americas 2	1.22	36	*e*P	Pn	04 03 57.9	-0.2
MIRN	Miramar	1.27	9	*e*P	Pn	04 03 59.0	+0.2
MOMN	Momotombo	1.28	17	*e*P	Pn	04 03 59.4	+0.5
CONN	Concepcion	1.33	73	*e*P	Pn	04 03 59.2	-0.4
CNGN	Cerro Negro	1.33	10	*e*P	Pn	04 03 59.4	-0.2
CNGN				AML	AML	04 04 27.4	
	comp=E,1μm,0.3s						
HUEN		1.37	32	*e*P	Pn	04 04 00.1	-0.1
TEL3	Telica 3	1.39	3	*e*P	Pn	04 04 00.3	-0.1
CRIN	San Cristobal	1.52	355	*e*P	Pn	04 04 01.9	-0.2
CRIN				eS	Sn	04 04 20.1	-0.7
LIM1	Limonal	1.71	106	*e*P	Pn	04 04 02.9	-1.8
2RIO	Dos Rios de Up	1.78	111	*e*P	Pn	04 04 02.8	-3.0
CUI	Cuipilapa	1.79	106	*e*P	Pn	04 04 04.6	-1.3
CNCH	Conchagua	2.27	337	*e*P	x	04 04 11.6	
CNCH				eS	x	04 04 37.4	
FORC	Fortuna	2.33	107	*e*P	Pn	04 04 12.9	-0.3
BLLM	Bellamira	2.59	330	*e*P	x	04 04 15.7	
BLLM				eS	x	04 04 44.9	
VSM	San Miguel	2.60	330	*e*P	x	04 04 16.7	
VSM				eS	x	04 04 45.6	
CGA2	Cerro Gallo 2	2.68	115	*e*P	Pn	04 04 18.4	+0.3
PRS1	Puriscal	2.83	115	*e*P	Pn	04 04 21.2	+1.1
TGUH	Tegucigalpa,Un	2.88	353	*e*Pn	Pn	04 04 21.2	+0.3
TGUH	Tegucigalpa,Un	2.88	353	*e*P	Pn	04 04 21.3	+0.4
LFRS	El Faro	3.21	320	*e*P	x	04 04 24.4	
LFRS				eS	x	04 05 00.2	
QCR	Quepos	3.23	122	*e*P	Pn	04 04 25.4	-0.2
URSC	Urasca	3.37	113	*e*P	Pn	04 04 28.8	+1.2
BUS	Buena Vista	3.51	117	*e*P	Pn	04 04 30.1	+0.7
RTR	El Retiro	3.79	316	*e*P	x	04 04 32.8	
RTR				eS	x	04 05 13.7	
BAR1		4.04	118	*e*P	Pn	04 04 37.3	+0.5
ACR	Cerro Adams	4.47	124	*e*P	Pn	04 04 42.8	+0.1
CMIG	Matias Romero	9.70	308	Pn	Pn	04 05 53.8	-0.6
	comp=E,1.1nm,0.3s,baz=102,slow=11,SNR=18						
CMIG				Sn	Sn	04 07 42.2	+0.1
	comp=E,0.4nm,0.3s,baz=215,slow=17,SNR=2.8						
OTAV	Otavalo	13.75	142	*e*Pn	Pn	04 07 01.7	+12
ROSC	El Rosal	13.96	116	*e*Pn	Pn	04 07 03.9	+11
CHI2		14.58	115	*e*P	Px	04 04 00.9	
LAPE	La Pedrera	15.56	102	*e*P	Px	04 04 00.1	
DWPF	Disney	17.62	16	*e*Pn	Pn	04 07 39.5	0.0
	comp=E,119nm,1.5s						
ATAH	Atahualpa	19.95	154	LR	LR	04 14 52.7	
	comp=E,252nm,18.3s,baz=346,slow=34						
HKT	Hockley	20.44	337	*e*P	P	04 08 11.2	+0.4
	comp=E,38nm,1.3s						
LRAL	Lakeview Retre	21.75	360	*e*P	P	04 08 24.9	-0.1
	comp=E,14nm,0.9s,mb4.4						
GOGA	Godfrey	22.36	8	*e*P	P	04 08 31.0	-0.4
	comp=E,18nm,0.8s,mb4.5						
OXF	Oxford	23.34	355	*e*P	P	04 08 41.2	-0.4
	comp=E,11nm,0.8s,mb4.3						
JSC	Jenkinsville	23.57	12	*e*P	P	04 08 44.5	+0.7
JSC				epP		04 08 59.4	
TXAR	Lajitas Array	23.88	322	P	P	04 08 47.7	+1.1
	comp=E,3.8nm,0.8s,mb3.9,baz=140,slow=9.8,SNR=24						
TXAR				PcP	PcP	04 12 32.6	+4.0
	comp=E,1.7nm,0.9s,baz=134,slow=3.9,SNR=5.8						
TXAR				ScP	ScP	04 16 13.3	+10
	comp=E,1.0nm,1.1s,baz=120,slow=4.5,SNR=4.5						
SWET	Sewanee	23.95	2	*e*P	P	04 08 47.4	+0.2
SWET				epP		04 09 02.7	
MIAR	Mount Ida	24.04	346	*e*P	P	04 08 46.8	-1.3
	comp=E,11nm,0.8s,mb4.3						
TKL	Tuckaleechee C	24.54	6	P	P	04 08 52.7	+0.1
	comp=E,12nm,0.9s,mb4.4,baz=174,slow=11,SNR=12						
TKL	Tuckaleechee C	24.54	6	*e*P	P		
WVT	Waverly	24.86	358	*e*P	P	04 08 53.1	+0.6
	comp=E,6.7nm,1.1s,mb4.1					04 08 55.5	+0.1
TZTN	Tazewell	25.44	6	*e*P	P	04 09 00.9	+0.1
	comp=E,11nm,0.9s,mb4.4						
LPIG	La Paz	25.67	303	LR	LR	04 20 40.7	
	comp=E,115nm,18.4s,MS3.4,baz=330,slow=40						
SIUC	Southern Illin	26.50	356	*e*P	P	04 09 10.5	+0.1
	comp=E,5.3nm,0.5s,mb4.3						
ELN	Prospectdale	26.53	11	*e*P	P	04 09 11.2	+0.7
ELN				epP	pP	04 09 27.5	+4.4
ELN				esP	sP	04 09 35.4	+6.6
CCM	Cathedral Cave	27.04	352	*e*P	P	04 09 14.8	-0.4
	comp=E,6.9nm,0.9s,mb4.2						
CCM				epP	pP	04 09 31.0	+3.3
ACSO	Alum Creek Sta	29.15	6	*e*P	P	04 09 33.8	-0.2
	comp=E,17nm,1.2s,mb4.7						
SDMD	Soldier's Deli	29.51	16	*e*P	P	04 09 38.1	+0.9
	comp=E,14nm,0.9s,mb4.7						
LAZ	Lazo	29.57	325	*e*P	P	04 09 38.1	+0.3
ANMO	Albuquerque	29.60	326	P	P	04 09 37.1	-1.0
	comp=E,1.3nm,1.0s,mb3.6,baz=120,slow=5.2,SNR=4.2						
MVL	Millersville	30.20	16	*e*P	P	04 09 44.2	+0.9
	comp=E,10nm,0.9s,mb4.6						
SSPA	Standing Stone	30.41	14	*e*P	P	04 09 45.6	+0.5
	comp=E,14nm,1.0s,mb4.7						
SDCO	Great Sand Dun	31.27	331	*e*P	P	04 09 53.0	+0.3
	comp=E,1.2nm,0.7s,mb3.8						
BRNJ	Basking Ridge	31.35	18	*e*P	P	04 09 51.6	-1.7
	comp=E,18nm,0.6s,mb5.1						
ERPA	Erie	31.41	10	*e*P	P	04 09 54.5	+0.6
	comp=E,58nm,1.1s,mb5.3						
BINY	Binghamton	32.35	15	*e*P	P	04 10 02.6	+0.5
	comp=E,21nm,1.0s,mb4.9						
LPAZ	La Paz	33.02	145	LR	LR	04 25 07.3	
	comp=E,72nm,18.4s,MS3.4,baz=301,slow=39						
PV01	Paradox Valley	33.10	328	*e*P	P	04 10 08.7	-0.1
ECSD	EROS,Sioux Fal	33.51	347	*e*P	P	04 10 11.5	-0.8
PDAR	Pinedale Array	37.13	332	P	P	04 10 43.7	+0.3
	comp=E,1.3nm,0.9s,mb3.8,baz=129,slow=12,SNR=8.5						
HWUT	Hardware Ranch	37.22	329	*e*P	P	04 10 44.9	+0.6
	comp=E,5.4nm,0.8s,mb4.4						
ISA	Isabella	37.56	316	*e*P	P	04 10 46.6	-0.5
	comp=E,7.3nm,1.6s,mb4.2						
REDW	Red Top Meadow	38.19	331	*e*P	P	04 10 52.4	-0.1
	comp=E,7.6nm,1.0s,mb4.4						
LOHW	Long Hollow	38.27	332	*e*P	P	04 10 53.4	+0.3
	comp=E,1.5nm,0.8s,mb3.8						
NVAR	Mina Array Bea	39.00	319	P	P	04 11 00.7	+1.5
	comp=E,1.2nm,0.9s,mb3.6,baz=131,slow=6.8,SNR=6.2						
NVAR				PcP	PcP	04 13 10.8	+1.9
	comp=E,1.9nm,0.9s,baz=110,slow=5.2,SNR=5.1						
NVAR	Mina Array Bea	39.00	319	P	P	04 11 00.7	+1.5
NVAR				PcP	PcP	04 13 10.8	+1.9
ULM	Lac du Bonnet	39.65	351	P	P	04 11 02.3	-2.2
	comp=E,3.9nm,0.5s,mb4.4,baz=183,slow=9.0,SNR=2.8						
MCMT	McKenzie Canyo	40.24	331	*e*P	P	04 11 09.0	-0.5
BDFB	Brasilia	46.84	124	P	P	04 12 03.4	+0.4
	comp=E,3.3nm,1.0s,mb4.2,baz=288,slow=15,SNR=4.7						
BDFB				LR	LR	04 32 34.8	
	comp=E,78nm,18.1s,MS3.7,baz=316,slow=37						
PLCA	Paso Flores	53.82	165	P	P	04 12 55.4	0.0
	comp=E,2.0nm,0.9s,mb4.0,baz=25,slow=13,SNR=3.7						
PLCA	Paso Flores	53.82	165	*e*P	P	04 13 03.4	+8.0
	comp=E,6.8nm,1.2s,mb4.5						
PPT	Papeete	68.14	246	LR	LR	04 36 25.5	
	comp=E,193nm,18.2s,MS4.4,baz=161,slow=29						
ESK	Eskdalemuir	77.33	36	*e*P	P	04 15 25.1	-1.8
	comp=E,73nm,1.8s,mb5.3						
NOA	NORSAR Array B	84.23	29	LR	LR	04 50 32.0	
	comp=E,34nm,20.0s,MS3.7,baz=315,slow=34						
ARCES	ARCESS Array B	87.22	19	LR	LR	04 58 56.7	
	comp=E,45nm,19.9s,MS3.9,baz=72,slow=38						
LBTB	Lobatse	114.96	112	*e*PKPdf	PKiKP	04 22 16.0	+2.2
BJI	Beijing	124.72	339	PKP	PKPdf	04 22 33.0	+0.8
BJI				LR	LR		
	comp=Z,23nm,30.5s,MS3.7						
WMQ	Urumqi	125.05	5	*e*PKP	PKPdf	04 22 31.0	-1.7
WMQ				PP	PP	04 24 24.0	+3.5
WMQ				LR	LR		
	comp=N,35nm,24.0s,MS4.2						
WMQ				LR	LR		
	comp=E,47nm,22.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,34nm,20.0s,MS4.0						
HHC	Hu-ho-hao-te	125.49	343	*e*PKP	PKPdf	04 22 34.5	+0.9
HHC				XPKP		04 23 01.1	
HHC				PP	PP	04 24 28.1	+4.4
HHC				SKS	SKSdf	04 29 34.9	-6.8
HHC				SKKS	SKKSac	04 31 08.9	-10
HHC				SS	SS	04 41 12.1	-6.0
HHC				PP	PP		
	comp=Z,109nm,13.1s						
HHC				LR	LR		
	comp=Z,132nm,20.8s,MS4.6						
NJ2	Nanjing	130.44	331	*e*PKP	PKPdf	04 22 49.5	+6.2
CD2	Chengdu	136.92	347	*e*PKP	PKPdf	04 22 56.9	+1.4
WRA	Warramunga Arr	139.40	252	PKP	PKPdf	04 23 01.3	+1.0
	comp=Z,0.6nm,0.8s,baz=96,slow=2.3,SNR=5.0						
GYA	Guiyang	140.33	341	PDIF	Pdif	04 20 15.8	-0.8
GYA				PKP	PKPdf	04 23 02.4	+0.5
GYA				XPKP		04 23 29.3	
GYA				PP	PP	04 26 02.5	+3.8
GYA				PP	PP		
	comp=Z,80nm,7.9s						
KMI	Kunming	142.71	345	PKP	PKPdf	04 23 08.4	+2.2
CMAR	Chiang Mai Arr	149.99	349	PKPbc	PKPbc	04 23 24.6	+1.0
	comp=Z,2.4nm,0.8s,baz=340,slow=3.5,SNR=13						

NEIC 13 04:10:45.3, 3735S×17752E, h123km, MG3.9(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	0.93	141	P	Pn	04 11 06.9	0.0
PUZ				S	Sn	04 11 22.9	-0.4
URZ	Urewera	0.96	200	P	Pn	04 11 07.4	+0.2
MWZ	Matawai	0.98	180	P	Pn	04 11 07.6	+0.2
MWZ				S	Sn	04 11 24.2	0.0
KNZ	Kokohu	1.67	176	P	Pn	04 11 14.5	-0.4
BKZ	Black Stump Fm	1.99	204	P	Pn	04 11 18.5	-0.2
TWVZ	Taurewa	2.38	223	P	Pn	04 11 24.1	+0.5
MOVZ	Moawhango	2.48	214	P	Pn	04 11 24.0	-0.9
MRZ	Mangatainoka R	3.64	204	P	Pn	04 11 37.0	-3.0
KIW	Kapiti Island	4.05	209	P	Pn	04 11 42.5	-3.0
MTW	Mount Morrison	4.11	202	P	Pn	04 11 42.4	-3.9
CAW	Cannon Point	4.21	206	P	Pn	04 11 44.2	-3.4
MSWZ	Moikau Station	4.42	203	P	Pn	04 11 46.5	-4.0
SNZO	South Karori	4.52	208	P	Pn	04 11 47.9	-3.8
TCW	Tory Channel	4.61	212	P	Pn	04 11 49.2	-3.7
NNZ	Nelson	5.02	218	P	Pn	04 11 55.0	-3.5
BSWZ	Blackbirch Sta	5.19	212	P	Pn	04 11 57.5	-3.3
QRZ	Quartz Range	5.21	227	P	Pn	04 11 57.6	-3.4
THZ	Tophouse	5.67	218	P	Pn	04 12 03.2	-4.0

ISCJB 13 04:16:08.7±1.4, 4487S±004×167.11E±006, h8km±8km, mb3.8/6, MS3.2/3, Error ellipse: s-maj=7.5km s-min=6.5km az=163.5

NEIC 13 04:16:09.4, 4492S×16709E, h5km, ML4.8(WEL), After WEL.

IDC 13 04:16:14.8±5.1, 4474S×16734E, h35km±42km, mb3.7/6, mb1 3.9/7, mb1mx3.8/13, mbtmp3.8/7, ML4.3/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/23, Error ellipse: s-maj=34.5km s-min=20.1km az=32.0

ISC 13 04:16:09.8±1.1, 4491S±004×16718E±006, h2km±6km, n40, σ1§08/42, mb3.8/6, MS3.2/3, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	Milford Sound	0.58	66	P	Pg	04 16 21.7	+0.8
MSZ				S	Sg	04 16 28.9	+0.5
MLZ	Mavora Lakes	0.82	122	P	Pg	04 16 25.7	+0.2
MLZ				S	Sg	04 16 35.8	-0.4
WHZ	Wether Hill Ro	1.12	152	P	Pg	04 16 31.1	-0.1
WHZ				S	Sg	04 16 46.0	+0.3
WKZ	Wanaka	1.31	87	P	Pg	04 16 34.7	-0.1
JCZ	Jackson Bay	1.41	54	P	Pn	04 16 35.8	-0.6
EAZ	Earnscleugh	1.54	103	P	Pn	04 16 38.6	+0.4
EAZ				S	Sn	04 17 00.1	+1.3
TUZ	Tuapeka	2.02	122	P	Pn	04 16 44.8	+0.1
LBZ	Lake Benmore	2.21	77	P	Pn	04 16 48.1	+0.7
FOZ	Fox Glacier	2.25	54	P	Pn	04 16 48.4	+0.4
ODZ	Otahua Downs	2.46	94	P	Pn	04 16 51.3	+0.4
RPZ	Rata Peaks	3.02	68	Pn	Pn	04 16 58.4	-0.2
	180nm,0.3s,baz=229,slow=4.8,SNR=375						
RPZ				Sn	Sn	04 17 36.1	+0.7
	81nm,0.3s,baz=355,slow=18,SNR=8.2						
RPZ				LR	LR	04 17 39.1	
	comp=Z,396nm,21.1s,baz=196,slow=30						
RPZ				Lg		04 17 46.9	
	95nm,0.3s,baz=134,slow=21,SNR=4.2						
RPZ	Rata Peaks	3.02	68	P	Pn	04 16 58.4	-0.2
WVZ	Waitaha Valley	3.15	56	P	Pn	04 16 59.1	-1.3
MQZ	McQueen's Vall	4.11	75	P	Pn	04 17 13.2	-0.3
CRLZ	Canterbury Las	4.13	73	P	Pn	04 17 13.3	-0.5
LTZ	Lake Taylor	4.25	62	P	Pn	04 17 14.2	-1.3
DSZ	Denniston Nort	4.62	48	P	Pn	04 17 19.5	-1.1
THZ	Tophouse	5.23	55	P	Pn	04 17 27.4	-1.5
KHZ	Kahutara	5.24	64	P	Pn	04 17 28.1	-1.0
QRZ	Quartz Range	5.67	46	P	Pn	04 17 33.3	-1.6
NNZ	Nelson	5.85	53	P	Pn	04 17 37.1	-0.4
TCW	Tory Channel	6.38	57	P	Pn	04 17 45.5	+0.8
NEZ	North Egmont	7.63	45	P	Pn	04 18 04.4	+2.6
PKE	Pukeiti	7.63	44	P	Pn	04 18 03.1	+1.2
RAEZ	Rainy Point	7.76

TKM2	**Tokmak 2**	**7.09**	**332**	⇓Pn	Px	04 24 07.4	
	comp=E,3.5nm,0.5s						
TKM2				⇑Lg		04 25 39.8	
	comp=E,22nm,1.1s						
TKM2	**Tokmak 2**	**7.09**	**332**	*e*Pn	**Pn**	**04 23 44.1**	**-1.8**
	comp=E,5.5nm,0.4s						
TKM2				*e*Sn	**Sn**	**04 25 06.3**	**+0.3**
CEP	**Cherat**	**7.29**	**249**	P	**Pn**	**04 23 49.6**	**+0.8**
CEP				S	**Sn**	**04 25 10.0**	**-1.0**
AML	**Almayashu**	**7.33**	**319**	*e*Pn	**Pn**	**04 23 49.5**	**+0.3**
	comp=E,7.1nm,0.4s						
AML				*e*Pg	Pb	04 24 18.6	+8.7
EKS2	**Erkin-Say**	**7.67**	**323**	*e*Pn	**Pn**	**04 23 52.7**	**-1.3**
	comp=E,15nm,1.1s						
EKS2				Sn	**Sn**	**04 25 22.2**	**+2.0**
THW	**Thamme Wali**	**7.91**	**243**	P	**Pn**	**04 23 58.7**	**+1.4**
KBL	**Kabul**	**9.26**	**260**	*e*Pn	**Pn**	**04 24 13.4**	**-2.4**
MK31	**Makanchi Array**	**10.19**	**9**	Pn	**Pn**	**04 24 28.1**	**-0.4**
	comp=E,3.0nm,0.6s,baz=188,slow=12,SNR=63						
MK31				⇑Lg		04 26 17.9	
	comp=E,3.4nm,0.5s,baz=189,slow=24,SNR=6.6						
MK31	**Makanchi Array**	**10.19**	**9**	*e*Pn	**Pn**	**04 24 28.3**	**-0.2**
MK31				*e*Sn	**Sn**	**04 26 18.1**	**-4.0**
MKAR	**Makanchi Array**	**10.19**	**9**	Pn	**Pn**	**04 24 28.6**	**+0.1**
	comp=E,0.8nm,0.3s,baz=194,slow=13,SNR=46						
MKAR				Sn	**Sn**	**04 26 17.5**	**-4.6**
	comp=E,1.8nm,0.3s,baz=183,slow=23,SNR=8.2						
LSA	**Lhasa**	**11.60**	**124**	P	**Pn**	**04 24 48.1**	**+0.2**
KURK	**Kurchatov**	**14.03**	**356**	Pn	**Pn**	**04 25 17.6**	**-3.3**
	baz=180,slow=12						
KURK	**Kurchatov**	**14.03**	**356**	*e*Pn	**Pn**	**04 25 22.7**	**+1.9**
ZALV	**Zalesovo Beam**	**17.53**	**9**	P	**Pn**	**04 26 10.6**	**+4.1**
	comp=E,0.4nm,0.3s,baz=196,slow=10,SNR=4.7						
ZALV				LR	LR	04 33 30.9	
	comp=E,19nm,19.8s,baz=77,slow=39						
BVAR	**Borovoye Array**	**17.66**	**340**	P	**Pn**	**04 26 08.7**	**+0.6**
	comp=E,0.1nm,0.3s,baz=248,slow=35,SNR=4.1						
BRVK	**Borovoye**	**17.72**	**340**	P	**Pn**	**04 26 09.1**	**+0.3**
	comp=E,6.2nm,1.1s						
AKTK	**Aktyubinsk**	**20.96**	**318**	P	**P**	**04 26 45.5**	**+0.5**
AKTO	**Aktyubinsk**	**20.96**	**318**	P	**P**	**04 26 45.5**	**+0.5**
	comp=E,1.1nm,0.5s,baz=108,slow=10,SNR=4.1						
SONM	**Songino Array**	**22.29**	**52**	P	**P**	**04 27 02.1**	**+2.8**
	comp=E,0.9nm,0.6s,mb3.4,baz=242,slow=8.3,SNR=9.7						
ARCES	**ARCESS Array B**	**43.86**	**336**	P	**P**	**04 30 07.7**	**-0.2**
	comp=E,1.6nm,0.6s,mb3.9,baz=103,slow=8.5,SNR=14						
HFS	**Hagfors**	**47.44**	**321**	P	**P**	**04 30 35.9**	**-0.3**
	comp=E,1.1nm,0.5s,mb4.1,baz=101,slow=7.7,SNR=6.5						
NB2	**NORSAR Subarra**	**48.62**	**323**	P	**P**	**04 30 44.4**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=119,slow=5.1						
NOA	**NORSAR Array B**	**48.62**	**323**	P	**P**	**04 30 44.8**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.1,baz=89,slow=7.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**73.03**	**274**	P	**P**	**04 33 31.1**	**-1.1**
	comp=Z,1.8nm,0.5s,mb4.3,baz=45,slow=5.3,SNR=59						
WRA	**Warramunga Arr**	**76.12**	**128**	P	**P**	**04 33 49.0**	**-0.9**
	comp=Z,0.4nm,1.2s,mb3.2,baz=314,slow=7.0,SNR=3.0						

NIED ***13*** *04:29:00,2500N×12280E,h107km,Mw4.1 Best double couple: M0 1.60000×10^15 NP1:φ8 94.00000°,δ73.00000°, λ-76.00000°. NP2:φ8 234.00000°,δ22.00000°, λ-128.00000°.*

BJI ***13*** *04:29:29.4,2525N×12272E,h108km,mB4.5,mb4.2*

ISCJB ***13*** *04:29:29.6±0.2,2497N±003×12279E±002,h139km±2km, mb4.0/19,Error ellipse: s-maj=4.9km s-min=3.0km az=166.1*

NEIC ***13*** *04:29:29.9±0.5,2512N×12285E,h131km±5km,mb4.1/7, Error ellipse: s-maj=8.7km s-min=7.2km az=75.0*

JMA ***13*** *04:29:31.1±0.2,2497N×12280E,h129km×3km,M3.5*

TAP ***13*** *04:29:31.2,2495N×12276E,h128km,ML4.3,C*

IDC ***13*** *04:29:31.7±4.4,2517N×12300E,h149km±46km,mb3.6/10, mb1 3.7/11,mb1mx3.6/21,mbtmp3.6/11,MS3.0/1, Ms1 3.0/1,ms1mx2.0/22,Error ellipse: s-maj=42.0km s-min=13.6km az=64.0*

ISC 13 04:29:30.7±0.2, 2497N±003×12279E±002, h135km±2km, n84, σ0 93/129, mb4.0/19, 1C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOJ	**Yonaguni jima**	**0.54**	**158**	P		**Pn**	**04 29 50.4**	**-0.1**
YOJ				S		**Sn**	**04 30 05.1**	**-0.4**
TWB1	**Santiao Chiao**	**0.73**	**273**	⇓*i*P		**Pn**	**04 29 52.0**	**+0.2**
	baz=274							
TWB1				S		**Sn**	**04 30 07.1**	**-0.6**
	baz=274							
NWF	**Wu-fen Shan**	**0.92**	**277**	⇓*i*P		**Pn**	**04 29 53.7**	**+0.4**
	baz=277							
NWF				S		**Sn**	**04 30 10.4**	**0.0**
	baz=277							
PCYT	**Pengchaiyu**	**0.93**	**316**	⇓*i*P		**Pn**	**04 29 54.1**	**+0.8**
	baz=309							
PCYT				*e*S		**Sn**	**04 30 11.3**	**+0.7**
	baz=309							
TWC	**Suao**	**0.93**	**248**	P		**Pn**	**04 29 53.0**	**-0.4**
	baz=242							
TWC				S		**Sn**	**04 30 09.2**	**-1.4**
	baz=242							
ILA	**Ilan**	**0.97**	**258**	*e*S		**Sn**	**04 30 11.4**	**+0.2**
	baz=252							
TWE	**Neicheng**	**1.05**	**257**	*e*P		**Pn**	**04 29 54.9**	**+0.5**
	baz=253							
TWE				S		**Sn**	**04 30 12.0**	**-0.5**
	baz=253							
IRIF	**Iriomote-Funau**	**1.06**	**126**	P		**Pn**	**04 29 54.5**	**-0.1**
IRIF				S		**Sn**	**04 30 12.4**	**-0.3**
ENA	**Nanau**	**1.09**	**241**	*e*P		**Pn**	**04 29 55.0**	**+0.1**
	baz=234							
ENA				*e*S		**Sn**	**04 30 12.6**	**-0.7**
	baz=234							
TWA	**Mucha**	**1.09**	**271**	P		**Pn**	**04 29 55.3**	**+0.4**
	baz=265							
TWA				S		**Sn**	**04 30 13.3**	**0.0**
	baz=265							
TWY	**Chenhua**	**1.12**	**286**	P		**Pn**	**04 29 55.4**	**+0.2**
	baz=292							
TWY				*e*S		**Sn**	**04 30 12.8**	**-1.0**
	baz=292							
ENTT	**Nioudou**	**1.16**	**254**	P		**Pn**	**04 29 55.9**	**+0.4**
	baz=260							
TATO	**Taipei**	**1.18**	**271**	*e*Pn		**Pn**	**04 29 55.6**	**-0.1**
TATO				*e*Sn		**Sn**	**04 30 19.8**	**+5.0**
TWS1	**Kuangyinshan**	**1.25**	**276**	*e*P		**Pn**	**04 29 57.0**	**+0.6**
	baz=276							
TWS1				*e*S		**Sn**	**04 30 16.5**	**+0.5**
	baz=276							
HATJ	**Hateruma jima**	**1.30**	**134**	P		**Pn**	**04 29 56.9**	**0.0**
HATJ				*e*S		**Sn**	**04 30 17.3**	**+0.4**
YHNB	**Yeheng**	**1.32**	**257**	*e*Pn		**Pn**	**04 29 57.3**	**+0.1**
YHNB				*e*Sn		**Sn**	**04 30 18.0**	**+0.7**
JKRS	**Kuro-shima**	**1.33**	**123**	P		**Pn**	**04 29 57.7**	**+0.5**
JKRS				S		**Sn**	**04 30 17.9**	**+0.4**
NSK	**Sanguang**	**1.33**	**258**	P		**Pn**	**04 29 57.6**	**+0.4**
	baz=258							
NSK				*e*S		**Sn**	**04 30 17.0**	**-0.5**
	baz=258							
NACB	**Ninganchiao**	**1.34**	**234**	*e*Pn		**Pn**	**04 29 57.0**	**-0.4**
NACB				*e*Sn		**Sn**	**04 30 14.9**	**-2.9**
JIJ	**Ishigaki jima**	**1.37**	**116**	P		**Pn**	**04 29 57.6**	**-0.1**
JIJ				S		**Sn**	**04 30 17.1**	**-1.2**
NNS	**Nan Shan**	**1.39**	**248**	P		**Pn**	**04 29 58.3**	**+0.4**
	baz=241							
NNS				S		**Sn**	**04 30 18.3**	**-0.4**
	baz=241							
TWD	**Chiawan**	**1.40**	**231**	*e*P		**Pn**	**04 29 57.4**	**-0.6**
	baz=226							
TWD				S		**Sn**	**04 30 17.5**	**-1.3**
	baz=226							
HWA	**Hwalien**	**1.46**	**228**	*e*P		**Pn**	**04 29 58.4**	**-0.3**
	baz=223							
HWA				*e*S		**Sn**	**04 30 19.2**	**-0.8**
	baz=223							
WHF	**Hehuan Shan**	**1.61**	**240**	⇑*i*P		**Pn**	**04 30 00.7**	**+0.4**
	baz=239							
WHF				S		**Sn**	**04 30 22.4**	**-0.5**
	baz=239							
TWT	**Tachien**	**1.63**	**244**	*e*P		**Pn**	**04 30 01.6**	**+1.0**
	baz=239							
TWT				*e*S		**Sn**	**04 30 23.0**	**-0.4**
	baz=239							
NSTT	**Nanjuang**	**1.66**	**259**	*e*P		**Pn**	**04 30 01.1**	**+0.2**
	baz=258							
NSTT				*e*S		**Sn**	**04 30 22.8**	**-1.2**
	baz=258							
ESL	**Shilin**	**1.69**	**227**	*e*P		**Pn**	**04 30 00.2**	**-1.0**
	baz=224							
JTJ	**Tarama**	**1.77**	**100**	P		**Pn**	**04 30 02.9**	**+0.7**
JTJ				*e*S		**Sn**	**04 30 25.8**	**-0.4**
NSY	**Sanyi**	**1.93**	**254**	*e*P		**Pn**	**04 30 04.7**	**+0.7**
	baz=253							
NSY				*e*S		**Sn**	**04 30 29.2**	**-0.3**
	baz=253							
TWQ1	**Liyutan**	**1.94**	**252**	*e*P		**Pn**	**04 30 04.8**	**+0.6**
	baz=251							
TWQ1				*e*S		**Sn**	**04 30 29.4**	**-0.3**
	baz=251							
EHY	**Hungye**	**1.98**	**223**	P		**Pn**	**04 30 03.8**	**-0.9**
	baz=229							
SMLT	**Sun Moon Lake**	**2.03**	**238**	P		**Pn**	**04 30 06.3**	**+1.0**
	baz=235							
SMLT				*e*S		**Sn**	**04 30 33.0**	**+1.1**
	baz=235							
TYC	**Yuchr**	**2.06**	**239**	P		**Pn**	**04 30 06.9**	**+1.3**
	baz=237							
TYC				*e*S		**Sn**	**04 30 33.2**	**+0.9**
	baz=237							
TCU	**Taichung**	**2.09**	**247**	*e*P		**Pn**	**04 30 06.5**	**+0.5**
	baz=247							
TWF1	**Yuli**	**2.11**	**221**	P		**Pn**	**04 30 05.5**	**-0.8**
	baz=228							
TWF1				*e*S		**Sn**	**04 30 30.4**	**-3.1**
	baz=228							
YUS	**Yu-Shan**	**2.23**	**229**	P		**Pn**	**04 30 08.8**	**+1.1**
	baz=223							
YUS				*e*S		**Sn**	**04 30 35.7**	**-0.4**
	baz=223							
CHKT	**Chengkung**	**2.27**	**215**	P		**Pn**	**04 30 07.3**	**-1.0**
	baz=210							
CHKT				*e*S		**Sn**	**04 30 34.3**	**-2.8**
	baz=210							
JMJ	**Miyako jima 2**	**2.28**	**93**	*e*S		**Sn**	**04 30 37.6**	**+0.4**
ALS	**Alishan**	**2.32**	**232**	P		**Pn**	**04 30 10.0**	**+1.1**
	baz=225							
ALS				*e*S		**Sn**	**04 30 39.5**	**+1.4**
	baz=225							
CHN5	**Tsauling**	**2.36**	**235**	P		**Pn**	**04 30 10.3**	**+0.9**
	baz=243							
CHN5				*e*S		**Sn**	**04 30 39.5**	**+0.5**
	baz=243							
ELDTW	**Lidau**	**2.40**	**223**	P		**Pn**	**04 30 09.8**	**0.0**
	baz=221							
ELDTW				*e*S		**Sn**	**04 30 38.5**	**-1.4**
	baz=221							
CHN4	**Tsaushan**	**2.57**	**232**	*e*P		**Pn**	**04 30 13.2**	**+1.2**
	baz=231							
CHN4				*e*S		**Sn**	**04 30 44.5**	**+0.8**
	baz=231							
STYT	**Tauyuan**	**2.58**	**226**	*e*P		**Pn**	**04 30 13.2**	**+1.0**
	baz=226							
STYT				*e*S		**Sn**	**04 30 44.0**	**0.0**
	baz=226							
WTP	**Ta-pu**	**2.62**	**230**	P		**Pn**	**04 30 13.3**	**+0.7**
	baz=229							
WTP				S		**Sn**	**04 30 45.2**	**+0.2**
	baz=229							
TWG	**Pinlang**	**2.65**	**217**	*e*P		**Pn**	**04 30 12.3**	**-0.7**
	baz=221							
TWG				*e*S		**Sn**	**04 30 43.8**	**-1.9**
	baz=221							
CHN1	**Nanshi**	**2.72**	**230**	*e*P		**Pn**	**04 30 14.2**	**+0.3**
	baz=238							
CHN1				*e*S		**Sn**	**04 30 47.8**	**+0.6**
	baz=238							
SGST	**Jiashian**	**2.75**	**228**	*e*P		**Pn**	**04 30 15.9**	**+1.5**
	baz=227							
SGST				*e*S		**Sn**	**04 30 48.2**	**+0.3**
	baz=227							
ECL	**Taimali**	**2.90**	**216**	*e*P		**Pn**	**04 30 15.2**	**-0.9**
	baz=210							
ECL				*e*S		**Sn**	**04 30 47.6**	**-3.6**
	baz=210							
SSD	**Sandimen**	**2.96**	**222**	*e*P		**Pn**	**04 30 19.5**	**+2.4**
	baz=221							
SSD				*e*S		**Sn**	**04 30 53.5**	**+0.8**
	baz=221							
LAY	**Lan-yu**	**3.13**	**202**	*e*P		**Pn**	**04 30 18.3**	**-0.9**
	baz=197							
SCZT	**Fangliau**	**3.26**	**218**	*e*P		**Pn**	**04 30 23.7**	**+2.8**
	baz=227							
JKE	**Kume jima 2**	**3.85**	**69**	P		**Pn**	**04 30 29.4**	**+0.8**
JAGN	**Aguni-jima**	**4.33**	**67**	P		**Pn**	**04 30 35.4**	**+0.5**
JAGN				*e*S		**Sn**	**04 31 25.8**	**+1.1**
JOW	**Kunigami**	**5.28**	**68**	P		**Pn**	**04 30 46.9**	**-0.7**
	6.6nm,0.3s,baz=228,slow=13,SNR=13							
JOW				S		**Sn**	**04 31 42.7**	**-4.8**
	5.2nm,0.3s,baz=124,slow=23,SNR=5.7							
JOW	**Kunigami**	**5.28**	**68**	P		**Pn**	**04 30 47.2**	**-0.4**
JOW				*e*S		**Sn**	**04 31 44.9**	**-2.5**
JTK	**Tokunoshima**	**6.20**	**62**	P		**Pn**	**04 30 58.8**	**-1.1**
KS15	**Wonju Array Si**	**13.17**	**18**	Pn		**Pn**	**04 32 28.5**	**-4.0**
KSRS	**Korea Array**	**13.20**	**18**	P		**Pn**	**04 32 35.3**	**+2.4**
	0.3nm,0.3s,baz=200,slow=13,SNR=9.5							
QIZ	**Qiongzhong**	**13.38**	**246**	Pn		**Pn**	**04 32 36.4**	**+1.1**
LZH	**Lanzhou**	**19.69**	**309**	*e*P		**P**	**04 33 51.3**	**+1.9**
LZH				AMB		AMB		
	comp=Z,19nm,1.5s							
LZH				AMB		AMB		
	comp=Z,105nm,5.1s							
GUMO	**Guam**	**23.68**	**114**	LR		LR	04 42 39.6	
	comp=Z,37nm,21.0s,baz=72,slow=33							
GTA	**Gaotai**	**24.10**	**312**	*e*P		**P**	**04 34 33.8**	**0.0**
GTA				AMB		AMB		
	comp=Z,6.0nm,0.9s,mb4.1							
SONM	**Songino Array**	**26.25**	**335**	P		**P**	**04 34 53.0**	**-0.1**
	comp=Z,1.8nm,0.6s,mb3.9,baz=151,slow=9.1,SNR=16							
MKAR	**Makanchi Array**	**38.81**	**315**	P		**P**	**04 36 41.6**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.6,baz=103,slow=10,SNR=9.8							
PET	**Petropavlovsk**	**38.84**	**34**	*e*P		**P**	**04 36 39.2**	**-3.3**
	comp=Z,4.2nm,0.3s,mb4.5							
ZALV	**Zalesovo Beam**	**40.40**	**326**	P		**P**	**04 36 53.9**	**-1.4**
	comp=Z,2.5nm,0.4s,mb4.2,baz=110,slow=8.3,SNR=2.0							
KURK	**Kurchatov**	**42.45**	**319**	P		**P**	**04 37 11.1**	**-0.9**
	baz=113,slow=9.0							
KURK	**Kurchatov**	**42.45**	**319**	*e*P		**P**	**04 37 10.5**	**-1.5**
	comp=Z,1.4nm,0.4s,mb3.9							
TKM2	**Tokmak 2**	**42.45**	**307**	*e*P		**P**	**04 37 12.9**	**+0.7**
	comp=Z,3.0nm,1.0s,mb3.9							
WRAB	**Tennant Creek**	**46.02**	**165**	*e*P		**P**	**04 37 41.4**	**+0.6**
	comp=Z,2.8nm,0.8s,mb3.9							
WRA	**Warramunga Arr**	**46.03**	**165**	P		**P**	**04 37 41.2**	**+0.4**
	comp=Z,1.4nm,0.4s,mb4.0,baz=348,slow=8.9,SNR=28							
WB2	**Warramunga Arr**	**46.03**	**165**	*e*P		**P**	**04 37 41.6**	**+0.7**
BVAR	**Borovoye Array**	**48.01**	**320**	P		**P**	**04 37 55.1**	**-0.7**
	comp=Z,1.3nm,0.5s,mb3.8,baz=101,slow=8.6,SNR=6.8							
BRVK	**Borovoye**	**48.08**	**320**	*e*P		**P**	**04 37 55.5**	**-0.9**
	comp=Z,3.0nm,0.5s,mb4.2							
ASAR	**Alice Springs**	**49.53**	**167**	P		**P**	**04 38 09.1**	**+1.3**
	comp=Z,0.3nm,0.4s,mb3.3,baz=350,slow=7.8,SNR=5.4							
JOF	**Joensuu**	**68.75**	**331**	*e*p		**P**	**04 40 18.7**	**-0.9**
	comp=Z,0.8nm,0.3s,mb3.9							
ARCES	**ARCESS Array B**	**69.36**	**338**	P		**P**	**04 40 22.7**	**-0.6**
	comp=Z,3.4nm,0.9s,mb4.1,baz=72,slow=8.6,SNR=2.9							
KAF	**Kangasniemi**	**71.20**	**330**	*e*p		**P**	**04 40 33.4**	**-1.2**
	comp=Z,0.7nm,0.3s,mb3.9							
TAU	**Tasmania Unive**	**71.22**	**161**	*e*P		**P**	**04 40 34.7**	**-0.1**
	comp=Z,24nm,0.9s,mb4.9							
AKASG	**Malin Array Be**	**73.26**	**318**	P		**P**	**04 40 45.9**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.5,baz=70,slow=5.7,SNR=2.5							
HFS	**Hagfors**	**77.60**	**331**	P		**P**	**04 41 10.9**	**-0.7**
	comp=Z,1.8nm,0.7s,mb3.8,baz=91,slow=12,SNR=4.6							
NB2	**NORSAR Subarra**	**78.21**	**332**	P		**P**	**04 41 13.7**	**-1.3**
	comp=Z,0.9nm,0.6s,mb3.6,baz=56,slow=5.6							
NOA	**NORSAR Array B**	**78.21**	**332**	P		**P**	**04 41 13.8**	**-1.2**
	comp=Z,0.9nm,0.5s,mb3.6,baz=52,slow=5.5,SNR=3.4							
NOA	**NORSAR Array B**	**78.21**	**332**	P		**P**	**04 41 13.8**	**-1.2**

NEIC ***13*** *04:49:39.5,1701N×100.12W,h4km,MD4.0(MEX),After MEX.*

MEX 13 04:49:39.5±0.8, 1701N×10012W, h4km±8km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAIG	**El Cayaco**	**0.15**	**284**	*i* P		Pg	04 49 42.0	-0.4
CAIG				*i* S		Sg	04 49 44.7	+0.3
ACX	**Acapulco**	**0.24**	**127**	*e*P		Pg	04 49 44.4	+0.2
ACX				*i* S		Sg	04 49 47.1	-0.2
MEIG	**Mezcala**	**1.03**	**27**	*e*P		Pg	04 49 57.0	-2.2
MEIG				*i* S		Sg	04 50 10.3	-2.3
ZIIG	**Zihuatanejo**	**1.42**	**295**	*i* P		Pn	04 50 02.0	-4.1
ZIIG				*i* S		Sb	04 50 20.9	-4.0
PLIG	**Platanillo**	**1.49**	**23**	*e*P		Pn	04 50 04.0	-3.1
PLIG				*i* S		Sn	04 50 21.4	-5.7
PNIG	**Pinotepa**	**2.00**	**108**	*e*P		Pn	04 50 10.4	-3.8
PNIG				*i* S		Sn	04 50 34.8	-4.8
MZVM		**2.33**	**21**	*i* P		Pn	04 50 18.4	-0.2
MZVM				*i* S		Sn	04 50 50.0	+2.4
UTMO	**Huajuapan**	**2.35**	**69**	*e*P		Pn	04 50 17.0	-2.0
UTMO				*i* S		Sn	04 50 43.8	-4.5
PPM	**Popocatepetl**	**2.49**	**35**	*e*P		Pn	04 50 19.0	-1.8
PPM				*i* S		Sn	04 50 49.0	-2.6
PTVM	**Pico Tres Padr**	**2.74**	**20**	*i* P		Pn	04 50 25.0	+0.7
PTVM				*i* S		Sn	04 50 55.5	-2.4
MOIG	**Morelia**	**2.84**	**339**	*e*P		Pn	04 50 28.0	+2.3
MOIG				*e*S		Sn	04 51 01.7	+1.3
TPIG	**Tehuac#an**	**2.98**	**62**	*i* S		Sn	04 51 04.5	+0.9
VHO	**Vista Hermosa**	**3.24**	**88**	*i* P		Pn	04 50 30.7	-0.4
VHO				*i* S		Sn	04 51 04.3	-5.8
MMIG	**Aquila**	**3.33**	**293**	*i* P		Pn	04 50 30.0	-2.4
MMIG				*i* S		Sn	04 51 05.6	-6.8

IDC 13 04:51:38.1±10.0, 2216N×14420E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, Error ellipse: s-maj=405.5km s-min=26.1km az=75.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SONM	**Songino Array**	**39.59**	**320**	P		P	04 59 11.0	-0.1
	0.4nm,0.7s,baz=126,slow=7.3,SNR=3.1							
WRA	**Warramunga Arr**	**42.94**	**194**	P		P	04 59 38.7	-0.1
	0.7nm,1.1s,baz=16,slow=8.8,SNR=4.9							
ASAR	**Alice Springs**	**46.64**	**193**	P		P	05 00 08.3	0.0
	0.4nm,0.7s,baz=9.8,slow=8.2,SNR=5.1							
MKAR	**Makanchi Array**	**55.09**	**312**	P		P	05 01 12.0	+0.2
	0.5nm,0.9s,baz=98,slow=8.9,SNR=2.8							

CSEM ***13*** *05:09:25.9±0.1,3837N×3895E,h10km,MD2.8,Error ellipse: s-maj=2.5km s-min=2.1km az=123.0*

DDA ***13*** *05:09:26.8,3835N×3895E,h7km±4km,Md2.8*

ISK ***13*** *05:09:26.6,3835N×3897E,h7km,MD2.7*

ISCJB ***13*** *05:09:27.1±0.6,3835N±003×3899E±005,h9km±6km, Error ellipse: s-maj=6.3km s-min=5.6km az=148.7*

ISC 13 05:09:27.4±0.5, 3835N±003×3898E±004, h9km±6km, n10, σ0 90/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ELZG	**Elazig**	**0.15**	**2**	*i* P		**Pg**	**05 09 30.7**	**+0.1**
ELZG				*i* S		**Sg**	**05 09 33.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.26**	**84**	PG		**Pg**	**05 09 32.4**	**-0.2**
SVRC				*e*SG		**Sg**	**05 09 36.5**	**+0.5**
PTK	**Pertek**	**0.63**	**31**	*e*PG		**Pg**	**05 09 39.7**	**+0.2**
PTK				*e*SG		**Sg**	**05 09 48.1**	**+0.3**
AKCD	**Akcadag**	**0.83**	**267**	*i* P		**Pg**	**05 09 42.4**	**-1.0**
AKCD				*i* S		**Sg**	**05 09 54.0**	**-0.2**
URFA	**Urfa**	**0.92**	**188**	*e*PG		**Pg**	**05 09 44.5**	**-0.4**
KEMA	**Kemaliye**	**0.99**	**338**	*i* P		**Pg**	**05 09 45.5**	**-1.0**
KEMA				*i* S		**Sg**	**05 09 59.6**	**+0.2**
ATAB	**Bozova**	**1.03**	**212**	*i* P		**Pg**	**05 09 47.6**	**+0.4**
ATAB				*i* S		**Sg**	**05 10 01.4**	**+0.8**
DARE	**Darende-Malaty**	**1.10**	**304**	*e*PN		**Pn**	**05 09 49.8**	**+0.9**
GZT	**Gaziantep**	**1.50**	**229**	*i* P		**Pn**	**05 09 53.3**	**-1.1**
GZT				*i* S		**Sn**	**05 10 17.0**	**+3.0**
MARD	**Mardin**	**1.76**	**125**	*i* P		**Pn**	**05 09 55.7**	**-2.3**
MARD				*i* S		**Sn**	**05 10 21.1**	**+0.6**

ISCJB ***13*** *05:13:09.0±0.3,2387N±002×12187E±002,h36km±10km, Error ellipse: s-maj=4.3km s-min=3.1km az=145.9*

TAP ***13*** *05:13:08.7,2390N×12178E,h41km,ML3.4,D*

JMA ***13*** *05:13:10.2±0.6,2403N×12196E,h89km,M2.4*

ISC 13 05:13:09.4±0.4, 2388N±002×12185E±002, h34km±3km, n44, σ0 85/63, 4C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HWA	**Hwalien**	**0.25**	**294**	*e*P		**Pb**	**05 13 16.5**	**-0.2**
	baz=295							
HWA				*e*S		**Sb**	**05 13 23.2**	**+1.6**
	baz=295							
TWD	**Chiawan**	**0.31**	**311**	P		**Pb**	**05 13 16.9**	**-0.5**
	baz=316							
TWD				S		**Sb**	**05 13 22.9**	**+0.1**
	baz=316							
ESL	**Shilin**	**0.39**	**261**	P		**Pb**	**05 13 17.7**	**-0.8**
	baz=255							
ESL				S		**Sb**	**05 13 24.4**	**-0.2**
	baz=255							
ENA	**Nanau**	**0.56**	**349**	⇑P		**Pn**	**05 13 20.0**	**-0.9**
	baz=355							
WHF	**Hehuan Shan**	**0.60**	**296**	⇑*i*P		**Pn**	**05 13 20.6**	**-0.9**
	baz=297							
WHF				S		**Sn**	**05 13 28.9**	**-1.1**
	baz=297

CHN4					*e*S		**Sn**	05 13 48.1	+1.6
	baz=243								
TWG	**Pinlang**	**1.27**	**214**		*e*P		**Pn**	05 13 30.2	-0.6
	baz=211								
TWS1	**Kuangyinshan**	**1.28**	**342**		*e*P		**Pn**	05 13 30.9	+0.1
	baz=344								
WTP	**Ta-pu**	**1.30**	**241**		*e*P		**Pn**	05 13 31.4	+0.3
	baz=238								
TWK	**Hsinying**	**1.39**	**244**		*e*P		**Pn**	05 13 32.5	+0.1
	baz=242								
CHN1	**Nanshi**	**1.40**	**241**		*e*P		**Pn**	05 13 33.6	+1.2
	baz=238								
SGST	**Jiashian**	**1.41**	**236**		*e*P		**Pn**	05 13 33.4	+0.8
	baz=233								
WTCT	**Ta-ch'eng**	**1.44**	**270**		*e*S		**Sn**	05 13 52.5	+1.8
	baz=268								
WSF	**Szhu**	**1.51**	**261**		*e*S		**Sn**	05 13 54.2	+1.6
	baz=259								
ECL	**Taimali**	**1.52**	**213**		*e*P		**Pn**	05 13 33.3	-0.8
	baz=210								
SSD	**Sandimen**	**1.59**	**225**		*e*P		**Pn**	05 13 35.9	+0.8
	baz=222								
IRIF	**Iriomote-Funau**	**1.77**	**75**		*e*S		**Sn**	05 13 59.3	+0.3
HATJ	**Hateruma jima**	**1.79**	**84**		*e*S		**Sn**	05 13 59.9	+0.4
JKRS	**Kuro-shima**	**2.00**	**79**		P		**Pn**	05 13 41.6	+0.9
JKRS					*e*S		**Sn**	05 14 05.4	+0.8
JIJ	**Ishigaki jima**	**2.15**	**77**		P		**Pn**	05 13 42.7	**0.0**
JIJ					*e*S		**Sn**	05 14 07.2	**-1.0**
JTJ	**Tarama**	**2.71**	**73**		P		**Pn**	05 13 51.2	**+0.7**
JTJ					*e*S		**Sn**	05 14 21.5	**-0.5**

NEIC ***13*** *05:18:59.3, 1703N×9426W, h131km, MD4.1(MEX), After MEX.*

MEX 13 05:18:59.3±1.3, 1703N×9426W, h131km±21km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.12**	**103**	*i* P	Pn	05 19 21.8	-1.7
TGIG				*i* S	Sn	05 19 40.1	-1.7
PCIG		**1.65**	**143**	*i* P	Pn	05 19 27.9	-1.3
PCIG				*i* S	Sn	05 19 50.9	-1.2
VHO	**Vista Hermosa**	**2.36**	**271**	*i* P	Pn	05 19 37.9	+0.1
VHO				*i* S	Sn	05 20 05.5	-1.9
THIG		**2.85**	**137**	*i* P	Pn	05 19 41.6	-2.5
THIG				*i* S	Sn	05 20 17.2	-1.3
TPIG	**Tehuac#an**	**3.26**	**296**	*i* P	Pn	05 19 48.3	-1.1
TPIG				*i* S	Sn	05 20 27.1	-0.9
UTMO	**Huajuapan**	**3.47**	**284**	*i* P	Pn	05 19 51.7	-0.4
UTMO				*i* S	Sn	05 20 32.0	-1.0
PNIG	**Pinotepa**	**3.76**	**261**	*i* P	Pn	05 19 53.5	-2.4
PNIG				*i* S	Sn	05 20 34.9	-4.8
PPM	**Popocatepetl**	**4.62**	**297**	*e*P	Pn	05 20 07.5	+0.2
PPM				*i* S	Sn	05 20 59.4	-0.8
CAIG	**El Cayaco**	**5.74**	**271**	*e*P	Pn	05 20 20.4	-2.1
CAIG				*i* S	Sn	05 21 28.8	+1.5

IDC 13 05:27:09.2±2.0, 2097S×6748W, h239km±26km, mb3.4/1, mb1 2.9/4, mb1mx2.8/17, mbtmp2.8/4, Error ellipse: s-maj=37.0km s-min=21.1km az=107.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.70**	**352**	P	Pn	05 28 22.1	+1.2
	0.5nm,0.3s,baz=167,slow=11,SNR=8.9						
LPAZ				S	S	05 29 19.0	+1.0
	0.1nm,0.3s,baz=221,slow=19,SNR=2.7						
BDFB	**Brasilia**	**19.22**	**77**	P	P	05 31 16.2	+0.6
	0.2nm,0.3s,baz=219,slow=17,SNR=4.1						
PLCA	**Paso Flores**	**19.88**	**187**	P	P	05 31 22.3	-0.1
	0.1nm,0.3s,baz=353,slow=8.5,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.92**	**70**	P	P	05 38 29.7	-0.3
	0.5nm,0.4s,baz=260,slow=5.9,SNR=11						
MKAR	**Makanchi Array**	**144.42**	**36**	PKP	PKPdf	05 46 17.3	+0.6
	0.2nm,0.4s,baz=335,slow=4.6,SNR=4.2						

NEIC ***13*** *05:31:13.6±0.4, 924S×113.46E, h35km, mb4.7/14, Error ellipse: s-maj=12.5km s-min=6.4km az=220.0*
ISCJB ***13*** *05:31:16.0±0.8, 926S±007×11347E±004, h78km±6km, mb4.4/21, Error ellipse: s-maj=12.4km s-min=6.1km az=19.7*
IDC ***13*** *05:31:16.7±5.5, 9.18S×113.59E, h59km±45km, mb4.0/8, mb1 4.1/9, mb1mx3.9/16, mbtmp4.1/9, ML4.2/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/29, Error ellipse: s-maj=41.0km s-min=15.2km az=58.0*
DJA ***13*** *05:31:17, 921S×113.52E, h25km, MLv4.5/8*

ISC 13 05:31:16.5±0.8, 931S±006×11347E±004, h66km±6km, n52, σ0°82/49, mb4.4/21, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	**Negara**	**1.47**	**51**	P	**Pn**	05 31 40.8	**-0.1**
NBBI	**Negara**	**1.47**	**51**	S	**Sn**	05 31 59.6	**+0.3**
KRKI	**Karangkates**	**1.52**	**318**	P	**Pn**	05 31 42.1	**+0.4**
KRKI	**Karangkates**	**1.52**	**318**	S	**Sn**	05 31 59.7	**-1.0**
DNP	**Denpasar**	**1.82**	**70**	P	**Pn**	05 31 45.6	**-0.1**
DNP	**Denpasar**	**1.82**	**70**	S	**Sn**	05 32 08.7	**+0.8**
KMMI	**Kalianget**	**2.29**	**12**	P	**Pn**	05 31 53.8	**+1.7**
SJI	**Sawahan**	**2.30**	**313**	P	**Pn**	05 31 53.0	**+0.8**
KHKI	**Kahang-Kahang**	**2.31**	**66**	P	**Pn**	05 31 52.2	**-0.1**
KHKI	**Kahang-Kahang**	**2.31**	**66**	S	**Sn**	05 32 19.4	**-0.2**
BJII	**Banjarnegara**	**4.21**	**297**	P	**Pn**	05 32 22.1	**+3.9**
KAPI	**Kappang**	**7.55**	**56**	P	**Pn**	05 33 03.2	**-0.7**
	4.3nm,0.3s,baz=238,slow=6.7,SNR=11						
KAPI				S	**Sn**	05 34 25.4	**-2.7**
	1.8nm,0.3s,baz=264,slow=23,SNR=5.5						
KAPI				LR	LR	05 35 57.3	
	comp=Z,100nm,19.9s,baz=264,slow=38						
KAPI	**Kappang**	**7.55**	**56**	P	**Pn**	05 33 03.2	**-0.7**
KAPI				S	**Sn**	05 34 25.4	**-2.7**
KAPI				LR	LR	05 35 57.3	
XMIS	**Christmas Isla**	**7.79**	**261**	*e*Pn	**Pn**	05 33 05.8	**-1.6**
XMIS				*e*Sn	**Sn**	05 34 24.1	**-10**
MBWA	**Marble Bar**	**13.24**	**154**	*e*Pn	**Pn**	05 34 15.3	**-6.4**
	12nm,0.4s						
MBWA				*e*Sn	**Sn**	05 36 30.2	**-17**
WRA	**Warramunga Arr**	**22.76**	**120**	P	**P**	05 36 12.8	**-0.7**
	2.7nm,0.6s,mb3.7,baz=298,slow=11,SNR=45						
WRA				PcP	PcP	05 40 05.0	+1.7
	0.6nm,0.6s,baz=285,slow=1.8,SNR=7.5						
WRA				LR	LR	05 44 28.4	
	comp=Z,28nm,19.7s,baz=205,slow=35						
WRAB	**Tennant Creek**	**22.77**	**120**	*e*P	**P**	05 36 12.9	**-0.7**
	2.6nm,0.7s,mb3.7						
WB2	**Warramunga Arr**	**22.77**	**120**	*e*P	**P**	05 36 12.9	**-0.7**
ASAR	**Alice Springs**	**24.19**	**129**	P	**P**	05 36 27.3	**+0.3**
	1.5nm,0.6s,mb3.5,baz=303,slow=8.6,SNR=23						
ASAR				PcP	PcP	05 40 08.1	+1.8
	1.0nm,0.6s,baz=301,slow=1.6,SNR=12						
FORT	**Forrest**	**25.32**	**150**	*e*P	**P**	05 36 39.0	**+1.8**
	2.3nm,0.8s,mb3.7						
FORT				*e*	pP	05 36 56.9	+3.9
CMAR	**Chiang Mai Arr**	**31.09**	**333**	P	**P**	05 37 30.6	**+1.9**
	2.5nm,0.7s,mb4.0,baz=164,slow=8.8,SNR=12						
CMAR				LR	LR	05 50 29.5	
	comp=Z,16nm,19.0s,baz=155,slow=37						
STKA	**Stephens Creek**	**34.41**	**135**	P	**P**	05 37 59.0	**+1.3**
	1.2nm,0.4s,mb4.1,baz=300,slow=8.6,SNR=3.2						
STKA				LR	LR	05 51 45.0	
	comp=Z,75nm,18.6s,baz=24,slow=36						
STKA	**Stephens Creek**	**34.41**	**135**	*e*P	**P**	05 37 58.6	**+1.0**
	1.1nm,0.4s,mb4.0						
STKA				LR	LR	05 51 45.0	
ODAN	**Odare**	**43.97**	**326**	*e*P	**P**	05 39 17.5	**+0.1**
	22nm,0.5s,mb5.1						
TAPN	**Taplejung**	**44.17**	**326**	*e*P	**P**	05 39 19.7	**+0.7**
	18nm,0.6s,mb5.0						
JIRN	**Jiri**	**45.26**	**325**	*e*P	**P**	05 39 28.1	**+0.5**
	28nm,0.5s,mb5.2						
GUN	**Gumba**	**45.63**	**325**	*e*P	**P**	05 39 31.0	**+0.5**
	27nm,0.5s,mb5.2						
DMN	**Daman**	**45.84**	**324**	*e*P	**P**	05 39 32.1	**-0.1**
	18nm,0.5s,mb5.0						
KKN	**Kakani**	**45.88**	**324**	*e*P	**P**	05 39 32.5	**0.0**
GKN	**Gorkha**	**46.41**	**324**	*e*P	**P**	05 39 36.3	**-0.4**
KOLN	**Koldanda**	**46.85**	**323**	*e*P	**P**	05 39 39.9	**-0.2**
DANN	**Dangsing**	**47.18**	**323**	*e*P	**P**	05 39 42.5	**-0.2**
	20nm,0.6s,mb5.0						
PYUN	**Piuthan**	**47.45**	**323**	*e*P	**P**	05 39 44.8	**-0.1**
	5.6nm,0.5s,mb4.6						
ULN	**Ulaanbaatar**	**57.20**	**355**	*e*P	**P**	05 40 56.8	**+0.1**
	4.8nm,0.8s,mb4.6						
SONM	**Songino Array**	**57.23**	**354**	P	**P**	05 40 57.2	**+0.3**
	4.2nm,0.4s,mb4.8,baz=176,slow=8.3,SNR=45						
MK31	**Makanchi Array**	**62.39**	**336**	*e*P	**P**	05 41 32.2	**-0.1**
MKAR	**Makanchi Array**	**62.39**	**336**	P	**P**	05 41 32.2	**-0.1**
	4.2nm,0.5s,mb4.8,baz=150,slow=7.4,SNR=62						
MKAR	**Makanchi Array**	**62.39**	**336**	P	**P**	05 41 32.2	**-0.1**
TKM2	**Tokmak 2**	**62.40**	**329**	*e*P	**P**	05 41 32.9	**+0.4**
	1.4nm,0.9s,mb4.0						
KURK	**Kurchatov**	**66.99**	**337**	*e*P	**P**	05 42 02.1	**-0.1**
	2.1nm,0.8s,mb4.0						
KURK				*e*pP	pP	05 42 16.9	-3.0
MAW	**Mawson**	**67.14**	**199**	LR	LR	06 05 38.9	
	comp=Z,45nm,18.7s,baz=318,slow=31						
ZAA0	**Zalesovo Array**	**67.52**	**342**	*e*P	**P**	05 42 04.5	**-0.9**
ZALV	**Zalesovo Beam**	**67.52**	**342**	P	**P**	05 42 04.7	**-0.8**
	3.4nm,0.6s,mb4.4,baz=146,slow=4.9,SNR=13						
PETK	**Petropavlovsk-**	**72.65**	**26**	P	**P**	05 42 36.7	**-0.2**
	3.1nm,0.9s,mb4.2,baz=198,slow=9.2,SNR=3.8						
PETK	**Petropavlovsk-**	**72.65**	**26**	P	**P**	05 42 36.7	**-0.2**
TIXI	**Tiksi**	**81.43**	**5**	*e*P	**P**	05 43 24.7	**-1.1**
	3.8nm,0.7s,mb4.3						
YKA	**Yellowknife Ar**	**116.64**	**23**	PKP	PKPdf	05 49 52.2	-0.6
	1.4nm,0.8s,baz=309,slow=2.2,SNR=4.2						
NVAR	**Mina Array Bea**	**125.39**	**49**	PKP	PKPdf	05 50 12.5	+2.2
	0.4nm,0.7s,baz=0.3,slow=1.2,SNR=3.6						
NVAR	**Mina Array Bea**	**125.39**	**49**	PKP	PKPdf	05 50 12.5	+2.2
TXAR	**Lajitas Array**	**139.94**	**55**	PKhKP		05 50 32.5	
	0.3nm,0.8s,baz=225,slow=3.6,SNR=3.0						
TXAR				PKP	PKPdf	05 50 37.9	-0.1
	0.1nm,0.4s,baz=216,slow=2.9,SNR=3.0						
WVT	**Waverly**	**147.01**	**33**	*e*PKPdf	PKPbc	05 50 52.9	+0.6
OXF	**Oxford**	**147.30**	**36**	*e*PKPbc	PKPbc	05 50 53.6	+0.5

IDC 13 05:39:19.9±29.0, 2994S×17739W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.8/14, mbtmp3.8/3, Error ellipse: s-maj=525.1km s-min=155.5km az=96.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.10**	**256**	P	P	05 46 15.2	+0.2
	2.0nm,0.7s,baz=115,slow=9.5,SNR=5.4						
ASAR	**Alice Springs**	**43.67**	**266**	P	P	05 47 25.9	-0.6
	0.2nm,0.3s,baz=104,slow=7.7,SNR=5.3						
WRA	**Warramunga Arr**	**44.61**	**271**	P	P	05 47 34.4	+0.2
	0.4nm,0.3s,baz=113,slow=8.1,SNR=20						

ISCJB ***13*** *05:49:23.7±0.5, 3125S±003×6893W±006, h112km±6km, mb3.6/3, Error ellipse: s-maj=8.0km s-min=5.5km az=7.6*
GUC ***13*** *05:49:24.8±0.5, 3131S×6921W, h148km±11km, ML3.6*
IDC ***13*** *05:49:24.3±1.2, 3125S×6876W, h108km±9km, mb3.5/3, mb1 3.4/7, mb1mx3.3/18, mbtmp3.3/7, Error ellipse: s-maj=39.8km s-min=18.0km az=90.0*
NEIC ***13*** *05:49:24.8, 3131S×6921W, h148km, MG3.6(GUC), After GUC.*

ISC 13 05:49:24.8±0.5, 3124S±003×6893W±006, h105km±6km, n23, σ0°80/35, mb3.6/3, 3C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.70**	**122**	P	**Pn**	05 49 42.4	**-0.3**
	20nm,0.3s,baz=306,slow=7.6,SNR=4954						
CFAA				S	**Sn**	05 49 55.9	**-0.3**
	118nm,0.3s,baz=167,slow=21,SNR=325						
OVCH	**Ovalle**	**2.05**	**287**	↑*i*P	**Pn**	05 49 58.3	**+0.1**
OVCH				*i* S	**Sn**	05 50 23.9	**+0.2**
OVCH	**Ovalle**	**2.05**	**287**	↑*i*P	**Pn**	05 49 58.3	**+0.1**
OVCH				*i* S	**Sn**	05 50 23.9	**+0.2**
OVCH				AML	AML	05 50 28.7	
	comp=N,764nm,0.3s						
CHNG	**Los Chungos**	**2.28**	**253**	↑*i*P	**Pn**	05 50 00.4	**-0.8**
CHNG				*i* S	**Sn**	05 50 27.6	**-1.5**
CHNG				AML	AML	05 50 37.4	
	comp=N,296nm,0.3s						
FCH	**Farellones**	**2.38**	**209**	*e*P	**Pn**	05 50 03.4	**+0.9**
FCH				*i* S	**Sn**	05 50 32.9	**+1.6**
FCH				AML	AML	05 50 40.6	
	comp=E,181nm,0.3s						
PEL	**Peldehue**	**2.41**	**218**	*e*P	**Pn**	05 50 02.8	**-0.1**
PEL				*i* S	**Sn**	05 50 31.6	**-0.4**
PEL				AML	AML	05 50 34.4	
	comp=E,443nm,0.5s						
CLCH	**Cerro Calan**	**2.54**	**212**	*e*P	**Pn**	05 50 05.0	**+0.4**
CLCH				*e*S	**Sn**	05 50 35.0	**-0.1**
CLCH				AML	AML	05 50 43.5	
	comp=E,227nm,0.3s						
LCO	**Las Campanas**	**2.70**	**325**	*e*Pn	**Pn**	05 50 07.1	**+0.4**
LCO				*e*Sn	**Sn**	05 50 39.8	**+0.9**
ANTU	**Antumapu**	**2.73**	**211**	*e*P	**Pn**	05 50 07.0	**-0.1**
ANTU				*i* S	**Sn**	05 50 39.2	**-0.4**
ANTU	**Antumapu**	**2.73**	**211**	*e*P	**Pn**	05 50 07.0	**-0.1**
ANTU				*i* S	**Sn**	05 50 39.2	**-0.4**
ANTU				AML	AML	05 50 43.8	
	comp=N,212nm,0.3s						
RCDM	**Rinconada Maip**	**2.75**	**215**	*e*P	**Pn**	05 50 07.0	**-0.3**
RCDM				*i* S	**Sn**	05 50 39.2	**-0.8**
RCDM	**Rinconada Maip**	**2.75**	**215**	*e*P	**Pn**	05 50 07.0	**-0.3**
RCDM				*i* S	**Sn**	05 50 39.2	**-0.8**
RCDM				AML	AML	05 50 41.7	
	comp=E,453nm,0.1s						
LMEL	**Las Melosas**	**2.81**	**202**	*e*P	**Pn**	05 50 08.7	**+0.5**
LMEL				*i* S	**Sn**	05 50 41.9	**+0.4**
LMEL	**Las Melosas**	**2.81**	**202**	*e*P	**Pn**	05 50 08.7	**+0.5**
LMEL				*i* S	**Sn**	05 50 41.9	**+0.4**
LMEL				AML	AML	05 50 51.3	
	comp=N,170nm,0.1s						
LVC	**Limon Verde**	**8.59**	**0**	P	**Pn**	05 51 24.5	**-1.9**
	comp=N,0.8nm,0.3s,baz=85,slow=1.8,SNR=23						
PLCA	**Paso Flores**	**9.56**	**187**	P	**Pn**	05 51 40.4	**+1.0**
	comp=N,0.1nm,0.3s,baz=133,slow=9.8,SNR=2.0						
LPAZ	**La Paz**	**14.90**	**3**	P	**Pn**	05 52 51.7	**+1.6**
	comp=N,0.1nm,0.3s,baz=190,slow=9.1,SNR=5.0						
SIV	**San Ignacio**	**16.79**	**27**	P	**Pn**	05 53 13.5	**-0.1**
	comp=N,0.1nm,0.3s,baz=227,slow=12,SNR=5.6						
QSPA	**South Pole Qui**	**58.99**	**180**	P	**P**	05 59 12.6	**-0.2**
	comp=N,2.1nm,0.7s,mb4.2,baz=153,slow=2.4,SNR=9.4						
TXAR	**Lajitas Array**	**68.71**	**328**	P	**P**	06 00 17.6	**+0.5**
	comp=N,0.3nm,0.6s,mb3.3,baz=165,slow=11,SNR=3.1						
TORD	**Torodi Ar. Bea**	**80.79**	**69**	P	**P**	06 01 25.7	**-1.4**
	comp=N,0.4nm,0.7s,mb3.4,baz=254,slow=4.6,SNR=6.0						
WRA	**Warramunga Arr**	**124.42**	**207**	PKP	PKPdf	06 08 09.5	-2.6
	comp=N,0.3nm,0.4s,baz=154,slow=2.0,SNR=8.8						
ZALV	**Zalesovo Beam**	**150.50**	**32**	PKPbc	PKPbc	06 09 02.8	-0.9
	comp=N,1.5nm,0.4s,baz=311,slow=1.2,SNR=3.5						

HLW 13 05:57:22.6, 3430N×2805E, h33km, Mb3.6, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLUM		**3.68**	**221**	P	Pn	05 58 16.6	-0.6
SLUM				S	Sn	05 58 56.7	-2.7
KOT	**Kottamia**	**5.41**	**143**	P	Pn	05 58 39.8	-1.2
HSAF	**As Saff**	**5.54**	**147**	P	Pn	05 58 42.1	-0.6
GLL	**Jalalah**	**5.64**	**146**	P	Pn	05 58 43.4	-0.8
AMAG	**Maghara**	**5.68**	**129**	P	Pn	05 58 43.9	-0.7
SUZ		**6.02**	**136**	P	Pn	05 58 48.6	-0.7
HFRF	**Wahat Farafira**	**7.13**	**178**	P	Pn	05 59 04.1	-0.5
HFRF				S	Sn	06 00 18.4	-6.1
HKAT	**Jabal Katrina**	**7.68**	**137**	P	Pn	05 59 10.7	-1.4

LDG ***13*** *05:57:26.5±0.1, 3666N×8002E, h10km, Mb5.0/23, Ms3.9/7, Error ellipse: s-maj=6.9km s-min=4.7km az=63.0*
IDC ***13*** *05:57:31.6±0.5, 3671N×8000E, h25km±2km, mb4.0/15, mb1 4.2/17, mb1mx4.1/23, mbtmp4.1/17, ML4.3/2, MS3.8/16, Ms1 3.8/16, ms1mx3.6/30, Error ellipse: s-maj=17.3km s-min=10.7km az=41.0*
MOS ***13*** *05:57:31.0±0.9, 3669N×8001E, h33km, mb5.0/38, Error ellipse: s-maj=9.9km s-min=4.4km az=124.1*
ISCJB ***13*** *05:57:31.1±0.5, 3671N±002×80.10E±003, h37km±5km, mb4.6/72, MS3.9/26, Error ellipse: s-maj=4.6km s-min=3.5km az=171.5*
NEIC ***13*** *05:57:33.7±0.4, 3667N×8005E, h43km±4km, mb4.9/40, MS4.2/3, Error ellipse: s-maj=6.6km s-min=3.2km az=60.0*
BJI ***13*** *05:57:35.1, 37.13N×8035E, h15km, mB4.8, mb4.3, ML4.8, Ms4.4, Msz4.2*

NNC ***13*** *05:57:37.0±4.6, 3759N×7969E, h0km, mb4.5, mpv4.4, Error ellipse: s-maj=44.3km s-min=20.4km az=146.0*
SZGRF ***13*** *05:57:51.1, 4023N×7967E, h33km, mb4.9, Southern Xinjiang, China*

ISC 13 05:57:33.6±0.3, 3675N±002×8010E±003, h39km±4km, h28km±1.8km:pP-P, n267, σ1°08/278, mb4.6/72, MS3.9/26, 35C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.26**	**312**	⇓*i*P	**Pn**	05 58 37.8	**+1.9**
KSH				SG	**Sn**	05 59 42.0	**+18**
KSH				Smax			
	comp=N,1μm,0.4s						
KSH				Smax			
	comp=E,1μm,0.8s						
DLH	**Dalhousie**	**5.41**	**220**	*e*P	**Pn**	05 58 53.0	**+1.3**
DLH				*ex*	x	05 59 57.0	
KLP	**Kalpa**	**5.43**	**197**	*e*P	**Pn**	05 58 54.8	**+2.8**
KLP				*e*S	**Sn**	05 59 51.6	**-1.5**
THN	**Thein Dam**	**5.62**	**221**	*e*P	**Pn**	05 58 54.6	**0.0**
THN				*e*S	**Sn**	05 59 58.8	**+0.9**
SDNR	**Sundarnagar**	**5.85**	**207**	*e*P	**Pn**	05 59 03.6	**+5.9**
SDNR				*e*S	**Sn**	06 00 04.6	**+1.1**
SMLA	**Simla**	**6.12**	**204**	*i* P	**Pn**	05 59 03.6	**+2.2**
SMLA				*i* S	**Sn**	06 00 08.3	**-1.8**
BHK	**Bhakra**	**6.14**	**211**	*e*P	**Pn**	05 59 04.6	**+2.9**
BHK				*ex*	x	06 00 11.2	
JOSI	**Joshimath**	**6.20**	**184**	*e*P	**Pn**	05 59 03.7	**+1.1**
JOSI				*e*S	**Sn**	06 00 08.9	**-3.3**
CHCP	**Chirah Chowk**	**6.39**	**243**	P	**Pn**	05 59 06.5	**+1.4**
DDI	**Dehra Dun**	**6.64**	**195**	*ex*	**Pn**	05 59 07.4	**-1.2**
DDI				*ex*	**Sn**	06 00 22.5	**-0.4**
UCH	**Uchtor**	**6.96**	**323**	*e*Pn	**Pn**	05 59 15.2	**+2.2**
	comp=E,35nm,0.6s						
TKM2	**Tokmak 2**	**7.06**	**332**	⇑Pn	**Pn**	05 59 12.6	**-1.7**
	comp=E,46nm,0.7s						
TKM2	**Tokmak 2**	**7.06**	**332**	*e*Pn	**Pn**	05 59 16.0	**+1.6**
	comp=E,59nm,0.8s						
TKM2	**Tokmak 2**	**7.06**	**332**	*e*P	**Pn**	05 59 16.0	**+1.6**
TKM2				pmax	pmax		
	comp=Z,59nm,0.8s						
PTH	**Pithoragarh**	**7.18**	**179**	*ex*	x	05 59 32.0	
PTH				*ex*	x	06 00 37.5	
LGTI	**Lohaghat**	**7.29**	**179**	*e*P	**Pn**	05 59 20.1	**+2.6**
LGTI				*ex*	x	06 00 54.9	
AML	**Almayashu**	**7.30**	**319**	*e*Pn	**Pn**	05 59 19.6	**+2.0**
CEP	**Cherat**	**7.30**	**249**	P	**Pn**	05 59 17.2	**-0.5**
KALG	**Kalgarh**	**7.32**	**189**	*ex*	x	05 59 14.2	
KALG				*e*S	**Sn**	06 00 33.9	**-5.7**
EKS2	**Erkin-Say**	**7.65**	**322**	*e*Pn	**Pn**	05 59 25.0	**+2.7**
	comp=Z,51nm,0.8s						
THW	**Thamme Wali**	**7.92**	**243**	P	**Pn**	05 59 26.2	**0.0**
NDI	**New Delhi**	**8.40**	**198**	*e*P	**Pn**	05 59 33.0	**+0.2**
NDI				*e*S	**Sn**	06 01 00.0	**-6.4**
AYAN	**Aya Nagar**	**8.62**	**198**	*e*P	**Pn**	05 59 35.5	**-0.2**
SONA	**Sohna**	**8.85**	**198**	*e*P	**Pn**	05 59 38.9	**-0.1**
DANN	**Dangsing**	**8.93**	**159**	*e*P	**Pn**	05 59 39.2	**-0.8**
PYUN	**Piuthan**	**8.97**	**163**	*e*P	**Pn**	05 59 38.9	**-1.7**
	comp=Z,41nm,0.5s						
WMQ	**Urumqi**	**9.14**	**37**	P	**Pn**	05 59 42.5	**-0.3**
WMQ				S	**Sn**	06 01 24.3	**0.0**
WMQ				Smax			
	comp=N,257nm,0.8s						
WMQ				Smax			
	comp=E,264nm,0.8s						
KBL	**Kabul**	**9.26**	**259**	*e*Pn	**Pn**	05 59 43.1	**-1.4**
	comp=E,28nm,0.5s						
KBL				*e*Sn	**Sn**	06 01 31.3	**+3.8**
KBL	**Kabul**	**9.26**	**259**	*e*P	**Pn**	05 59 43.1	**-1.4**
KBL				*e*		06 01 31.3	
KBL				pmax	pmax		
	comp=Z,28nm,0.5s						
KHET	**Khetri**	**9.38**	**204**	*e*P	**Pn**	05 59 45.4	**-0.8**
KHET				*e*S	**Sn**	06 01 24.4	**-6.1**
KOLN	**Koldanda**	**9.44**	**161**	*e*P	**Pn**	05 59 45.8	**-1.1**
	comp=Z,24nm,0.6s						
GKN	**Gorkha**	**9.53**	**155**	*e*P	**Pn**	05 59 48.3	**0.0**
KK31	**Karatay Array**	**9.71**	**314**	⇑Pn	**Pn**	05 59 48.5	**-2.2**
	comp=Z,3.6nm,0.4s,baz=131,slow=14						
KK31				⇓Sn	**Sn**	06 01 35.0	**-3.3**
	comp=Z,14nm,0.5s,baz=130,slow=25,SNR=5.0						
KK31	**Karatay Array**	**9.71**	**314**	*i* P	**Pn**	05 59 51.9	**+1.3**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KKN	**Kakani**	**9.96**	**152**	*e*P	**Pn**	05 59 53.9	**-0.2**
	comp=Z,28nm,0.5s						
KKN	**Kakani**	**9.96**	**152**	*e*P	**Pn**	05 59 53.9	**-0.2**
KKN				pmax	pmax		
	comp=Z,28nm,0

comp=Z,9.0nm,2.5s
BVA0 Borovoye Array 17.64 340 P **Pn** **06 01 36.7 +0.6**
BVA0 pmax pmax
comp=Z,4.0nm,1.4s
BVAR Borovoye Array 17.64 340 P **Pn** **06 01 36.4 +0.4**
comp=Z,0.7nm,0.3s,baz=152,slow=10,SNR=23
BVAR Lg 06 06 44.8
comp=Z,0.2nm,0.3s,baz=120,slow=8.6,SNR=3.1
BVAR LR LR 06 08 20.4
comp=Z,108nm,19.3s,baz=324,slow=37
BRVK Borovoye 17.69 340 *eP* **Pn** **06 01 37.9 +1.1**
comp=Z,39nm,1.0s
BRVK Borovoye 17.69 340 *eP* **Pn** **06 01 37.9 +1.1**
BRVK pmax pmax
comp=Z,39nm,1.0s
NVS Novosibirsk 18.22 6 *eP* **Pn** **06 01 42.1 -1.1**
NVS *eS* **S** **06 05 05.8 -3.6**
NVS pmax pmax
comp=Z,36nm,1.7s
NVS pmax pmax
comp=N,78nm,2.0s
NVS smax
comp=N,96nm,1.9s
NVS smax
comp=E,74nm,2.0s
POO Poona 18.97 199 *ex* **Pn** **06 01 50.0 -2.5**
POO *i x* **S** **06 05 35.0 +10**
LZH Lanzhou 19.12 85 *eP* **Pn** **06 01 50.6 -3.6**
LZH pP pP 06 01 54.1 -8.8
LZH sP sP 06 01 55.6 -12
AB01 Akbulak array 19.25 317 ⇓Pn **Pn** **06 01 54.7 -1.0**
comp=E,4.9nm,0.6s
AB31 Akbulak array 19.25 317 P **Pn** **06 01 54.6 -1.1**
AB31 pmax pmax
comp=Z,5.0nm,0.5s
HYB Hyderabad 19.31 184 *i* P **Pn** **06 02 00.5 +3.9**
AKTK Aktyubinsk 20.93 318 P **P** **06 02 12.5 -0.2**
AKTO Aktyubinsk 20.93 318 P **P** **06 02 12.5 -0.2**
comp=Z,3.6nm,0.5s,baz=121,slow=20,SNR=12
AKTO Aktyubinsk 20.93 318 P **P** **06 02 12.5 -0.3**
AKTO pmax pmax
comp=Z,4.0nm,0.5s
ZAK Zakamensk 21.51 43 *eP* **P** **06 02 20.5 +1.5**
SONM Songino Array 22.28 52 P **P** **06 02 28.8 +1.7**
comp=Z,1.3nm,0.6s,mb3.6,baz=246,slow=11,SNR=9.4
SONM Lg 06 09 24.6
comp=Z,1.6nm,1.0s,baz=273,slow=33,SNR=3.8
SONM LR LR 06 12 24.4
comp=Z,550nm,19.5s,MS4.0,baz=42,slow=40
KMI Kunming 22.56 115 P **P** **06 02 39.6 +9.2**
KMI AMB AMB
comp=Z,9.0nm,0.8s,mb4.2
KMI LR LR
comp=Z,116nm,15.9s,MS3.4
ULN Ulaanbaatar 22.70 52 *eP* **P** **06 02 34.4 +2.7**
comp=Z,5.1nm,0.8s,mb4.0
ULN Ulaanbaatar 22.70 52 *eP* **P** **06 02 34.4 +2.7**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
XAN Xi'an 23.62 88 P **P** **06 02 41.3 +0.2**
XAN AP 06 02 46.6
XAN AMB AMB
comp=Z,4.0nm,1.0s,mb3.8
XAN AMB AMB
comp=Z,39nm,4.2s
XAN LR LR
comp=N,144nm,13.8s,MS4.0
XAN LR LR
comp=E,287nm,13.2s,MS4.0
XAN LR LR
comp=Z,451nm,15.6s,MS4.0
CHTO Chiang Mai 24.36 132 *eP* **P** **06 02 48.2 +0.2**
comp=Z,4.5nm,0.6s,mb4.1
CHTO Chiang Mai 24.36 132 *eP* **P** **06 02 48.2 +0.2**
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
ARU Arti 24.43 330 *c i* P **P** **06 02 48.0 -0.3**
ARU *e* PPP 06 03 25.5
ARU *eS* **S** **06 07 04.9 -0.6**
ARU pmax pmax
comp=Z,20nm,2.5s,mb4.1
ARU MLR MLR
comp=Z,194nm,19.0s,MS3.6
CMAR Chiang Mai Arr 24.64 133 P **P** **06 02 51.0 +0.4**
comp=Z,3.1nm,0.5s,mb4.1,baz=311,slow=11,SNR=16
CMAR Chiang Mai Arr 24.64 133 P **P** **06 02 51.0 +0.5**
CMAR pmax pmax
comp=Z,3.0nm,0.5s
GYA Guiyang 24.77 107 P **P** **06 02 59.4 +7.7**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
MAK Makhachkala 25.67 294 *eP* **P** **06 03 00.4 +0.7**
GNI Garni 27.78 288 P **P** **06 03 19.8 +1.1**
comp=Z,2.8nm,0.4s,mb4.3,baz=74,slow=14,SNR=3.1
GNI LR LR 06 16 03.6
comp=Z,110nm,21.0s,MS3.4,baz=331,slow=40
GNI Garni 27.78 288 *eP* **P** **06 03 19.9 +1.2**
GNI pmax pmax
comp=Z,28nm,1.4s
GNI MLR MLR
comp=Z,100nm,23.0s
WHN Wuhan 29.08 92 ⇓P **P** **06 03 32.0 +1.7**
KIV Kislovodsk 29.21 296 *eP* **P** **06 03 28.5 -2.9**
KIV *eS* **S** **06 08 17.5 -3.7**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KIV MLR MLR
comp=Z,100nm,14.0s,MS3.6
QIZ Qiongzhong 31.49 116 P **P** **06 03 54.8 +3.1**
QIZ S **S** **06 09 03.3 +6.0**
QIZ LR LR
comp=E,328nm,3.2s
QIZ LR LR
comp=Z,379nm,14.1s,MS4.2
NJ2 Nanjing 32.17 87 *eP* **P** **06 04 01.8 +4.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
OBN Obninsk 34.69 316 *eP* **P** **06 04 19.2 -0.1**
OBN *e* pP 06 04 29.4 -0.8
OBN *e* 06 09 47.6
OBN pmax pmax
comp=Z,25nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.1
KSRS Korea Array 37.83 74 P **P** **06 04 47.2 +0.9**
comp=Z,0.5nm,0.3s,mb3.7,baz=331,slow=15,SNR=3.3
KSRS LR LR 06 22 27.2
comp=Z,96nm,20.7s,MS3.6,baz=297,slow=40
KSRS Korea Array 37.83 74 P **P** **06 04 47.2 +0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
KSRS MLR MLR
comp=Z,96nm,20.7s,MS3.6
AKASG Malin Array Be 38.55 308 P **P** **06 04 51.7 -0.5**
comp=Z,0.7nm,0.3s,mb3.8,baz=87,slow=6.4,SNR=11
AKASG sP sP 06 05 01.2 -6.6
comp=Z,1.1nm,0.4s,baz=76,slow=7.9,SNR=6.2
AKASG Malin Array Be 38.55 308 P **P** **06 04 51.7 -0.5**
AKASG sP sP 06 05 01.2 -6.6
AKASG Malin Array Be 38.55 308 P **P** **06 04 51.7 -0.5**
AKASG *SP sP 06 05 01.2 -6.6
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 38.55 308 *eP* **P** **06 04 51.2 -1.1**
comp=Z,8.1nm,1.0s,mb4.4
KIEV Kiev 38.55 308 *eP* **P** **06 04 51.2 -1.1**
KIEV pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
JOF Joensuu 39.47 327 *ep* **P** **06 05 00.3 +0.5**
comp=Z,2.3nm,0.3s,mb4.4
JOF Joensuu 39.47 327 *eP* **P** **06 05 00.3 +0.5**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
TIXI Tiksi 42.88 20 *eP* **P** **06 05 28.8 +1.1**
TIXI pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
TIXI MLR MLR
comp=Z,225nm,11.0s,MS4.3
KOLS Kolonicke sedl 43.12 305 *eP* **P** **06 05 28.5 -1.4**
KEV Kevo 43.41 336 *ep* **P** **06 05 31.9 -0.1**
comp=Z,0.7nm,0.4s,mb3.7
KEV Kevo 43.41 336 *eP* **P** **06 05 31.9 -0.1**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
CRVS Cervenica-Dubn 43.65 305 *eP* **P** **06 05 33.2 -1.0**
CRVS Cervenica-Dubn 43.65 305 *eP* **P** **06 05 33.1 -1.1**

STHS Stebnicka Huta 43.74 306 *eP* **P** **06 05 40.1 +5.2**
comp=Z,3.9nm,1.3s,mb4.0
STHS *e* PP PP 06 07 12.9 -4.0
STHS Stebnicka Huta 43.74 306 *eP* **P** **06 05 40.1 +5.2**
STHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
STHS Stebnicka Huta 43.74 306 *eP* **P** **06 05 40.1 +5.2**
STHS *e* PP PP 06 07 12.8 -4.1
ARCES ARCESS Array B 43.83 336 P **P** **06 05 35.6 +0.3**
comp=Z,2.5nm,0.5s,mb4.2,baz=103,slow=8.4,SNR=33
ARCES LR LR 06 25 06.3
comp=Z,262nm,18.8s,MS4.2,baz=280,slow=38
ARCES ARCESS Array B 43.83 336 P **P** **06 05 35.7 +0.4**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES MLR MLR
comp=Z,262nm,18.8s
NIE Niedzica 44.34 306 *eP* **P** **06 05 40.8 +1.1**
OJC Ojcow 44.58 307 *eP* **P** **06 05 42.2 +0.6**
VYHS Vyhne 45.43 305 *eP* **P** **06 05 48.8 +0.4**
OKC Ostrava-Krasne 45.69 307 AMS AMS 06 27 00.0
comp=Z,300nm,17.1s
KOLL Kolacno 45.70 305 *eP* **P** **06 05 51.1 +0.6**
MODS Modra-Piesok 46.48 305 *eP* **P** **06 05 57.3 +0.7**
comp=Z,3.1nm,1.3s,mb4.1
MODS Modra-Piesok 46.48 305 *eP* **P** **06 05 57.3 +0.7**
MODS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
DPC Dobruska-Polom 46.78 308 *eP* **P** **06 05 59.6 +0.7**
DPC *ep* pP pP 06 06 07.6 -2.5
DPC AMS AMS 06 27 20.0
comp=Z,500nm,17.6s
UPC Upice 46.95 308 *eP* **P** **06 05 59.7 -0.6**
UPC *ep* pP 06 06 08.5 -2.9
TREC Trest 47.48 307 AMS AMS 06 27 50.0
comp=Z,300nm,16.8s
CONA Conrad Observa 47.49 305 ⇑*iP* **P** **06 06 05.1 +0.6**
comp=Z,13nm,1.0s,mb4.8
CSNA Conrad Observa 47.49 305 ⇑*iP* **P** **06 06 05.2 +0.6**
comp=Z,13nm,1.0s,mb4.8
ARSA Arzberg 47.85 304 ⇓*iP* **P** **06 06 08.0 +0.7**
comp=Z,5.0nm,0.9s,mb4.5
PVCC Panska Ves 47.85 308 AMS AMS 06 28 10.0
comp=Z,500nm,18.1s
PRU Pruhonice 47.96 308 *eP* **P** **06 06 09.3 +1.1**
PRU AMS AMS 06 28 10.0
comp=Z,400nm,15.8s
BRG Berggiesshubel 48.19 309 *eP* **P** **06 06 10.4 +0.5**
BRG *e* pP 06 06 19.1 -2.0
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BRG Berggiesshubel 48.19 309 *eP* **P** **06 06 10.4 +0.5**
comp=Z,11nm,1.3s,mb4.7
BRG *e* pP 06 06 19.1 -2.0
comp=Z,12nm,1.5s
BRG *e* 06 21 13.0
PERS Pernice 48.25 303 *eP* **P** **06 06 10.8 +0.4**
SOKA Soboth 48.30 303 ⇑*iP* **P** **06 06 11.2 +0.4**
comp=Z,18nm,1.0s,mb5.0
JHJ Hachijo jima 2 48.38 76 LR LR 06 30 55.5
comp=Z,113nm,18.2s,MS3.9,baz=342,slow=41
PDKS Podkum 48.46 302 *i* P **P** **06 06 12.5 +0.4**
FBE Freiberg 48.55 309 *eP* **P** **06 06 13.2 +0.5**
comp=Z,8.0nm,0.9s,mb4.8
NB2 NORSAR Subarra 48.60 323 P **P** **06 06 12.3 -0.6**
comp=Z,0.4nm,0.5s,mb3.7,baz=90,slow=7.9
NOA NORSAR Array B 48.60 323 P **P** **06 06 12.6 -0.3**
comp=Z,6.8nm,1.0s,mb4.7,baz=88,slow=7.6,SNR=12
NOA pP pP 06 06 19.9 -4.2
comp=Z,2.8nm,0.7s,baz=89,slow=7.6,SNR=5.9
NOA sP sP 06 06 23.1 -5.6
comp=Z,2.6nm,0.5s,baz=89,slow=7.6,SNR=5.9
NOA NORSAR Array B 48.60 323 P **P** **06 06 12.6 -0.3**
NOA *SP sP 06 06 23.1 -5.6
NOA pmax pmax
comp=Z,7.0nm,1.0s
VNDS Vrh nad Dolski 48.65 303 *eP* **P** **06 06 14.1 +0.5**
CLL Collm 48.70 310 *eP* **P** **06 06 12.9 -0.9**
comp=Z,6.0nm,0.9s,mb4.6
CLL Collm 48.70 310 *eP* **P** **06 06 14.0 +0.2**
comp=Z,6.0nm,0.9s,mb4.6
CLL LmV 06 30 00.0
comp=Z,200nm,19.4s
GEC2 GERESS Array S 48.72 306 *eP* **P** **06 06 14.8 +0.8**
GEC2 pmax pmax
comp=Z,20nm,1.3s,mb5.0
GEC2 GERESS Array S 48.72 306 *eP* **P** **06 06 14.8 +0.8**
comp=Z,20nm,1.3s,mb5.0
GERES GERESS Array B 48.72 306 P **P** **06 06 14.8 +0.8**
comp=Z,4.8nm,1.0s,mb4.5,baz=76,slow=6.2,SNR=20
GERES LR LR 06 30 45.0
comp=Z,100nm,18.8s,MS3.8,baz=92,slow=41
GERES GERESS Array B 48.72 306 P **P** **06 06 14.8 +0.8**
GERES pmax pmax
comp=Z,5.0nm,1.0s
GERES MLR MLR
comp=Z,100nm,18.8s
KHC Kasperske Hory 48.74 307 *eP* **P** **06 06 15.0 +0.8**
KHC *ep* pP 06 06 22.6 -2.8
KHC AMS AMS 06 28 30.0
comp=Z,300nm,16.3s
NAO01 NORSAR Array S 48.77 323 *eP* **P** **06 06 14.0 -0.2**
comp=Z,2.2nm,0.6s,mb4.4
WET Wettzell 49.19 307 *eP* **P** **06 06 18.6 +1.0**
WET pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
WET Wettzell 49.19 307 *eP* **P** **06 06 18.6 +1.0**
comp=Z,10.0nm,1.2s,mb4.7
TANN Tannenbergstha 49.20 309 *eP* **P** **06 06 18.1 +0.4**
comp=Z,17nm,1.6s,mb4.8
ROTZ Rotzenmuhle 49.49 308 *eP* **P** **06 06 21.2 +1.3**
comp=Z,24nm,1.6s,mb5.0
MOX Moxa 49.68 309 *eP* **P** **06 06 21.6 +0.2**
MOX
comp=Z,300nm,18.0s
MOX Moxa 49.68 309 *eP* **P** **06 06 21.6 +0.2**
comp=Z,15nm,1.4s,mb4.8
GRA1 Grafenberg Arr 50.13 308 *eP* **P** **06 06 25.4 +0.6**
comp=Z,22nm,1.3s,mb5.0
GRF Grafenberg Arr 50.13 308 *eP* **P** **06 06 25.4 +0.6**
GRF pmax pmax
comp=Z,22nm,1.3s,mb5.0
GRF Grafenberg Arr 50.13 308 *eP* **P** **06 06 25.4 +0.6**
GRF pmax pmax
comp=Z,22nm,1.3s,mb5.0
GRF Grafenberg Arr 50.13 308 *eP* **P** **06 06 25.4 +0.6**
comp=Z,22nm,1.3s,mb5.0
FETA Feichten 51.09 305 ⇑*iP* **P** **06 06 31.6 -0.4**
comp=Z,8.9nm,1.1s,mb4.6
DAVA Damuels 51.58 305 ⇑*iP* **P** **06 06 35.9 +0.2**
comp=Z,18nm,1.0s,mb5.0
CDF Champ du Feu 52.96 307 *eP* **P** **06 06 45.8 -0.1**
comp=Z,27nm,1.4s,mb4.7
CDF Champ du Feu 52.96 307 *eP* **P** **06 06 45.8 -0.1**
comp=Z,13nm,1.4s,mb4.7
CDF Champ du Feu 52.96 307 *eP* **P** **06 06 45.8 -0.1**
CDF pmax pmax
comp=Z,13nm,1.4s,mb4.7
HINF Hinteralfeld 53.40 306 ⇑*iP* **P** **06 06 48.9 -0.3**
comp=Z,52nm,1.4s,mb5.0
HINF Hinteralfeld 53.40 306 ⇑*iP* **P** **06 06 48.9 -0.3**
comp=Z,26nm,1.4s,mb5.0
HINF Hinteralfeld 53.40 306 ⇑*iP* **P** **06 06 48.9 -0.3**
HINF pmax pmax
comp=Z,26nm,1.4s,mb5.0
HAU Haudompre 53.67 307 *eP* **P** **06 06 50.9 -0.3**
comp=Z,59nm,1.4s,mb5.0
HAU *e* MLR MLR
comp=Z,322nm,17.5s,MS4.1
HAU Haudompre 53.67 307 *eP* **P** **06 06 50.9 -0.3**
comp=Z,29nm,1.4s,mb5.0
HAU LR LR
comp=Z,320nm,17.5s,MS4.4
HAU Haudompre 53.67 307 *eP* **P** **06 06 50.9 -0.3**
HAU pmax pmax
comp=Z,29nm,1.4s,mb5.0
HAU MLR MLR
comp=Z,320nm,17.5s,MS4.4
LPG La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.3 +0.5**
comp=Z,45nm,1.1s,mb5.0
LPG La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.3 +0.5**
comp=Z,23nm,1.1s,mb5.0
LPG La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.3 +0.5**
LPG pmax pmax
comp=Z,23nm,1.1s,mb5.0
LPL La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.2 +0.3**

comp=Z,65nm,1.0s,mb5.2
LPL La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.2 +0.3**
comp=Z,33nm,1.0s,mb5.2
LPL La Plagne 54.17 304 ⇑*iP* **P** **06 06 55.2 +0.3**
LPL pmax pmax
comp=Z,33nm,1.0s,mb5.2
SBF Sospel 54.23 302 *eP* **P** **06 06 55.1 -0.2**
comp=Z,35nm,0.8s,mb5.0
SBF Sospel 54.23 302 *eP* **P** **06 06 55.1 -0.2**
comp=Z,18nm,0.8s,mb5.0
SBF Sospel 54.23 302 *eP* **P** **06 06 55.1 -0.2**
SBF pmax pmax
comp=Z,18nm,0.8s,mb5.0
CABF La Chapelle 54.26 305 *eP* **P** **06 06 55.1 -0.4**
comp=Z,73nm,1.6s,mb5.1
CABF La Chapelle 54.26 305 *eP* **P** **06 06 55.1 -0.4**
comp=Z,37nm,1.5s,mb5.1
CABF La Chapelle 54.26 305 *eP* **P** **06 06 55.1 -0.4**
CABF pmax pmax
comp=Z,37nm,1.5s,mb5.1
BNI Bardonecchia 54.36 303 *eP* **P** **06 06 56.2 0.0**
comp=Z,32nm,1.6s,mb5.0
BNI Bardonecchia 54.36 303 *eP* **P** **06 06 56.3 +0.1**
BNI pmax pmax
comp=Z,32nm,1.6s,mb5.0
MBDF Montbardon 54.40 303 *eP* **P** **06 06 56.9 +0.4**
comp=Z,31nm,1.1s,mb4.8
MBDF Montbardon 54.40 303 *eP* **P** **06 06 56.9 +0.4**
comp=Z,15nm,1.1s,mb4.8
MBDF Montbardon 54.40 303 *eP* **P** **06 06 56.9 +0.4**
MBDF pmax pmax
comp=Z,15nm,1.1s,mb4.8
PETK Petropavlovsk- 54.60 46 LR LR 06 32 20.8
comp=Z,110nm,20.0s,MS3.9,baz=283,slow=38
ORIF Oris-en-Rattie 54.94 303 *eP* **P** **06 07 00.7 +0.3**
ORIF *e* MLR MLR
comp=Z,194nm,17.8s,MS3.9
BILL Bilibino 55.10 27 *eP* **P** **06 07 03.3 +2.1**
BILL *e* 06 08 03.1
BILL *e* 06 09 03.5
BILL *eSS* SS 06 18 25.1 +0.7
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.2
LOR Lormes 55.50 307 *eP* **P** **06 07 03.6 -0.8**
comp=Z,46nm,1.5s,mb5.0
LOR *e* MLR MLR
comp=Z,199nm,18.2s,MS3.9
LOR Lormes 55.50 307 *eP* **P** **06 07 03.6 -0.8**
comp=Z,23nm,1.5s,mb5.0
LOR LR LR
comp=Z,200nm,18.3s,MS4.2
LOR Lormes 55.50 307 *eP* **P** **06 07 03.6 -0.8**
LOR pmax pmax
comp=Z,23nm,1.5s,mb5.0
LOR MLR MLR
comp=Z,200nm,18.3s,MS4.2
KAPI Kappang 55.65 130 LR LR 06 33 20.8
comp=Z,56nm,19.1s,MS3.7,baz=140,slow=39
SMF Signal de Mont 55.72 306 *eP* **P** **06 07 05.4 -0.6**
comp=Z,63nm,1.4s,mb5.2
SMF Signal de Mont 55.72 306 *eP* **P** **06 07 05.4 -0.6**
comp=Z,32nm,1.4s,mb5.2
SMF Signal de Mont 55.72 306 *eP* **P** **06 07 05.4 -0.6**
SMF pmax pmax
comp=Z,32nm,1.4s,mb5.2
VIVF Saint-Julien-l 55.77 304 *eP* **P** **06 07 06.1 -0.3**
comp=Z,19nm,1.1s,mb4.7
VIVF Saint-Julien-l 55.77 304 *eP* **P** **06 07 06.1 -0.3**
comp=Z,9.6nm,1.1s,mb4.7
VIVF Saint-Julien-l 55.77 304 *eP* **P** **06 07 06.1 -0.3**
VIVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SSF Saint Saulge 55.80 306 *eP* **P** **06 07 05.8 -0.8**
comp=Z,39nm,1.3s,mb5.0
SSF Saint Saulge 55.80 306 *eP* **P** **06 07 05.8 -0.8**
comp=Z,19nm,1.3s,mb5.0
SSF Saint Saulge 55.80 306 *eP* **P** **06 07 05.8 -0.8**
SSF pmax pmax
comp=Z,19nm,1.3s,mb5.0
AVF Avril sur Loir 55.98 306 ⇑*iP* **P** **06 07 07.4 -0.5**
comp=Z,50nm,1.2s,mb5.1
AVF Avril sur Loir 55.98 306 ⇑*iP* **P** **06 07 07.4 -0.5**
comp=Z,25nm,1.2s,mb5.1
AVF Avril sur Loir 55.98 306 ⇑*iP* **P** **06 07 07.4 -0.5**
AVF pmax pmax
comp=Z,25nm,1.2s,mb5.1
BGF Bois d'Agland 56.39 306 *eP* **P** **06 07 10.4 -0.4**
LASF Ste Croix 56.59 303 *eP* **P** **06 07 12.1 -0.1**
comp=Z,65nm,1.3s,mb5.2
TCF Toulx Ste Croi 56.90 306 ⇑*iP* **P** **06 07 14.3 -0.1**
comp=Z,35nm,1.2s,mb5.0
TCF Toulx Ste Croi 56.90 306 ⇑*iP* **P** **06 07 14.3 -0.1**
comp=Z,17nm,1.2s,mb5.0
TCF Toulx Ste Croi 56.90 306 ⇑*iP* **P** **06 07 14.3 -0.1**
TCF pmax pmax
comp=Z,17nm,1.2s,mb5.0
CAF Calviac 57.48 304 *eP* **P** **06 07 18.5 0.0**
LDF La Druitiere 57.58 309 *eP* **P** **06 07 18.7 -0.5**
comp=Z,44nm,1.3s,mb5.0
LDF La Druitiere 57.58 309 *eP* **P** **06 07 18.7 -0.5**
comp=Z,22nm,1.3s,mb5.0
LDF La Druitiere 57.58 309 *eP* **P** **06 07 18.7 -0.5**
LDF pmax pmax
comp=Z,22nm,1.3s,mb5.0
RJF Les Rejaudoux 57.70 305 ⇑*iP* **P** **06 07 20.4 +0.3**
comp=Z,68nm,1.6s,mb5.1
RJF *e* MLR MLR
comp=Z,106nm,20.5s,MS3.6
RJF Les Rejaudoux 57.70 305 ⇑*iP* **P** **06 07 20.4 +0.3**
comp=Z,34nm,1.6s,mb5.1
RJF LR LR
comp=Z,110nm,20.5s,MS4.0
RJF Les Rejaudoux 57.70 305 ⇑*iP* **P** **06 07 20.4 +0.3**
RJF pmax pmax
comp=Z,34nm,1.6s,mb5.1
RJF MLR MLR
comp=Z,110nm,20.5s,MS4.0
EJON La Jonquera 57.84 302 P **P** **06 07 23.6 +2.5**
comp=Z,11nm,3.8s
MTLF Montolieu 57.96 303 *eP* **P** **06 07 23.1 +1.1**
comp=Z,15nm,1.1s,mb4.6
MTLF Montolieu 57.96 303 *eP* **P** **06 07 23.1 +1.1**
comp=Z,7.6nm,1.1s,mb4.6
MTLF Montolieu 57.96 303 *eP* **P** **06 07 23.1 +1.1**
MTLF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
GRR Gorron 58.11 309 ⇑*iP* **P** **06 07 22.2 -0.7**
comp=Z,46nm,1.2s,mb5.1
GRR Gorron 58.11 309 ⇑*iP* **P** **06 07 22.2 -0.7**
comp=Z,23nm,1.2s,mb5.1
GRR Gorron 58.11 309 ⇑*iP* **P** **06 07 22.2 -0.7**
GRR pmax pmax
comp=Z,23nm,1.2s,mb5.1
MFF Saint Martin d 58.30 307 *eP* **P** **06 07 23.6 -0.7**
LFF La Frestale 58.35 305 *eP* **P** **06 07 24.8 +0.2**
ETOS Mallorca 58.94 299 P **P** **06 07 33.0 +4.2**
comp=Z,48nm,3.1s
SGMF Saint Gilles 59.21 310 *eP* **P** **06 07 30.3 -0.3**
ROSF Rostrenen 59.62 310 *eP* **P** **06 07 33.3 -0.1**
comp=Z,57nm,1.4s,mb5.1
ROSF Rostrenen 59.62 310 *eP* **P** **06 07 33.3 -0.1**
comp=Z,28nm,1.4s,mb5.1
ROSF Rostrenen 59.62 310 *eP* **P** **06 07 33.3 -0.1**
ROSF pmax pmax
comp=Z,28nm,1.4s,mb5.1
QUIF Quistinic 59.72 309 ⇑*iP* **P** **06 07 33.6 -0.5**
comp=Z,31nm,1.0s,mb5.0
QUIF Quistinic 59.72 309 ⇑*iP* **P** **06 07 33.6 -0.5**
comp=Z,15nm,1.0s,mb5.0
QUIF Quistinic 59.72 309 ⇑*iP* **P** **06 07 33.6 -0.5**
QUIF pmax pmax
comp=Z,15nm,1.0s,mb5.0
EALK Alkurruntz 60.51 304 P **P** **06 07 37.4 -2.2**
comp=Z,54nm,8.4s
ELAN Lanestosa 61.78 304 P **P** **06 07 48.9 +0.6**
comp=Z,30nm,5.7s
GUD Guadarrama 63.40 302 P **P** **06 07 58.2 -0.9**
comp=Z,309nm,5.4s
GUD Guadarrama 63.40 302 P **P** **06 07 58.2 -0.8**
GUD pmax pmax
comp=Z,309nm,5.4s
EHUE Huescar 63.59 299 P **P** **06 08 00.6 +0.2**
comp=Z,301nm,6.5s
EHUE Huescar 63.59 299 P **P** **06 08 00.6 +0.2**
EHUE pmax pmax

comp=Z,301nm,6.5s
ESDC Sonseca Array 63.70 301 P **P** **06 08 00.5 -0.5**
comp=Z,0.4nm,0.4s,mb3.9,baz=62,slow=7.2,SNR=5.0
ESDC LR LR 06 38 24.2
comp=Z,69nm,20.8s,MS3.8,baz=355,slow=38
ESDC Sonseca Array 63.70 301 P **P** **06 08 00.7 -0.4**
comp=Z,0.4nm,0.4s,mb3.8
EGUA Guajares 64.74 298 P **P** **06 08 07.5 -0.4**
comp=Z,40nm,1.3s,mb5.3
EGUA Guajares 64.74 298 P **P** **06 08 07.5 -0.4**
EGUA pmax pmax
comp=Z,40nm,1.3s,mb5.3
EALB Alboran 64.78 297 P **P** **06 08 08.2 0.0**
comp=Z,1.1nm,2.9s,mb4.4
EPLA Plasencia 64.97 302 P **P** **06 08 07.2 -2.1**
comp=Z,12nm,0.8s,mb5.0
EPLA Plasencia 64.97 302 P **P** **06 08 07.2 -2.2**
EPLA pmax pmax
comp=Z,12nm,0.8s,mb5.0
EBAD Badajoz 66.23 301 P **P** **06 08 14.7 -2.8**
comp=Z,9.1nm,3.5s
EMIN Mina Concepcio 66.47 300 P **P** **06 08 18.0 -1.0**
comp=Z,18nm,4.0s
INK Inuvik 72.28 12 *e*P **P** **06 08 54.7 +0.3**
comp=Z,86nm,0.7s
TOA0 Torodi Ar. Sit 73.02 274 *e*P **P** **06 08 58.8 -0.9**
TORD Torodi Ar. Bea 73.02 274 P **P** **06 08 58.9 -0.8**
comp=Z,7.2nm,0.5s,mb4.9,baz=45,slow=5.3,SNR=66
TORD pP pP 06 09 06.9 -4.5
comp=Z,9.3nm,0.8s,baz=46,slow=5.2,SNR=14
TORD LR LR 06 43 25.7
comp=Z,74nm,19.2s,MS4.0,baz=10.0,slow=38
WRA Warramunga Arr 76.14 128 P **P** **06 09 17.0 -0.6**
comp=Z,0.6nm,0.5s,mb3.8,baz=326,slow=5.6,SNR=14
WRA sP sP 06 09 30.0 -3.8
comp=Z,2.2nm,0.8s,baz=326,slow=5.8,SNR=9.9
WRA LR LR 06 45 11.4
comp=Z,27nm,18.2s,MS3.6,baz=225,slow=38
WRA Warramunga Arr 76.14 128 P **P** **06 09 17.0 -0.6**
WRA *SP sP 06 09 30.0 -3.8
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRA MLR MLR
comp=Z,27nm,18.2s
ASAR Alice Springs 78.64 131 P **P** **06 09 30.5 -1.0**
comp=Z,0.6nm,0.5s,mb3.8,baz=314,slow=5.7,SNR=14
ASAR pP pP 06 09 39.0 -4.3
comp=Z,0.6nm,0.5s,baz=324,slow=5.5,SNR=5.0
ASAR sP sP 06 09 43.8 -3.9
comp=Z,1.6nm,0.8s,baz=324,slow=5.6,SNR=8.9
ASAR Alice Springs 78.64 131 P **P** **06 09 30.5 -1.0**
ASAR *PP pP 06 09 39.0 -4.3
ASAR *SP sP 06 09 43.8 -3.9
ASAR pmax pmax
comp=Z,1.0nm,0.5s
LBTB Lobatse 80.06 229 *e*P **P** **06 09 38.3 -0.9**
comp=Z,12nm,1.1s,mb4.7
LBTB Lobatse 80.06 229 *e*P **P** **06 09 38.3 -0.9**
LBTB pmax pmax
comp=Z,12nm,1.1s,mb4.7
YKA Yellowknife Ar 80.39 7 P **P** **06 09 40.4 0.0**
comp=Z,1.8nm,0.6s,mb4.2,baz=344,slow=5.8,SNR=2.5
YKA Yellowknife Ar 80.39 7 P **P** **06 09 40.4 -0.1**
YKA pmax pmax
comp=Z,2.0nm,0.6s
TSUM Tsumeb 81.05 238 *e*P **P** **06 09 44.7 +0.1**
comp=Z,9.3nm,1.0s,mb4.7
DBIC Dimbokro 82.01 272 P **P** **06 09 49.2 -0.7**
comp=Z,4.1nm,1.0s,mb4.3,baz=66,slow=4.8,SNR=2.7
DBIC LR LR 06 52 27.0
comp=Z,42nm,18.9s,MS3.8,baz=215,slow=40
BOSA Boshof 82.95 226 LR LR 06 49 21.0
comp=Z,73nm,18.4s,MS4.1,baz=170,slow=38
ULM Lac du Bonnet 93.30 357 LR LR 06 56 35.0
comp=Z,78nm,18.7s,MS4.2,baz=4.5,slow=38
LPAZ La Paz 145.26 297 PKPbc PKPbc 06 17 07.0 -0.3
comp=Z,0.6nm,0.3s,baz=27,slow=5.1,SNR=4.6
LPAZ La Paz 145.26 297 PKPbc PKPbc 06 17 07.0 -0.3
LPAZ *e*PKPdf PKPdf 06 17 07.3 -0.2
LPAZ La Paz 145.26 297 PKIKP PKPdf 06 17 07.0 -0.5
LPAZ pmax pmax
comp=Z,1.0nm,0.3s

IDC ***13*** *05:58:00.4±2.5, 605N×12632E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, Error ellipse: s-maj=158.7km s-min=16.9km az=60.0*
ISCJB ***13*** *05:58:03.8±1.0, 596N±009×12626E±010, h33km, mb3.6/3, Error ellipse: s-maj=16.9km s-min=8.8km az=139.1*
ISC 13 05:58:05.0±5.7, 599N±010×1262E±01, h31km±46km, n5, σ0§77/7, mb3.6/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DAV	**Davao City (W)**	**1.24**	**330**	Pn	**Pn**		**05 58 25.8**	**-0.4**
	78nm,0.3s,baz=154,slow=2.8,SNR=8.2							
DAV				Sn	**Sn**		**05 58 42.2**	**+0.2**
	73nm,0.3s,baz=254,slow=22,SNR=7.8							
GSPH	**General Santos**	**1.25**	**274**	*e*P	**Pn**		**05 58 26.8**	**+0.4**
GSPH				*i* S	**Sn**		**05 58 42.0**	**-0.2**
WRA	**Warramunga Arr**	**26.98**	**163**	P	**P**		**06 03 45.3**	**+1.0**
	0.8nm,0.5s,mb3.5,baz=344,slow=10,SNR=16							
ASAR	**Alice Springs**	**30.42**	**166**	P	**P**		**06 04 14.1**	**-0.7**
	0.5nm,0.5s,mb3.5,baz=344,slow=7.1,SNR=9.3							
STKA	**Stephens Creek**	**40.41**	**160**	P	**P**		**06 05 40.2**	**-0.3**
	1.2nm,0.8s,mb3.7,baz=324,slow=11,SNR=3.2							

IDC 13 06:07:37.5±44.0, 1540S×17407W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=848.2km s-min=171.2km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
STKA	**Stephens Creek**	**43.47**	**240**	P	P		06 15 43.4	+0.7
	0.7nm,0.4s,baz=84,slow=9.1,SNR=5.6							
WRA	**Warramunga Arr**	**49.21**	**257**	P	P		06 16 27.1	-0.9
	0.3nm,0.3s,baz=95,slow=8.2,SNR=18							
ASAR	**Alice Springs**	**49.49**	**252**	P	P		06 16 30.3	+0.2
	3.1nm,0.4s,baz=88,slow=8.0,SNR=53							

IDC ***13*** *06:24:56.5±4.7, 667S×12969E, h174km±45km, mb3.7/5, mb1 4.0/8, mb1mx3.8/14, mbtmp3.9/8, Error ellipse: s-maj=43.1km s-min=14.0km az=60.0*
ISCJB ***13*** *06:24:58.7±3.9, 695S±02×1296E±02, h221km±41km, mb3.9/5, Error ellipse: s-maj=41.2km s-min=11.7km az=136.4*
ISC 13 06:24:54.1±2.7, 658S±010×1298E±01, h150km±26km, n8, σ1§02/11, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BATI	**Baumata**	**7.05**	**239**	P	**Pn**		**06 26 37.5**	**+2.7**
	37nm,0.3s,baz=126,slow=0.7,SNR=22							
BATI				S	**Sn**		**06 27 53.2**	**-0.6**
	35nm,0.3s,baz=96,slow=18,SNR=8.3							
WRA	**Warramunga Arr**	**14.00**	**162**	P	**Pn**		**06 28 05.2**	**-0.8**
	0.8nm,0.3s,baz=342,slow=12,SNR=38							
WRA				S	**Sn**		**06 30 33.1**	**-8.1**
	4.4nm,0.3s,baz=334,slow=22,SNR=12							
ASAR	**Alice Springs**	**17.44**	**167**	P	**Pn**		**06 28 48.6**	**+0.3**
	4.7nm,0.3s,baz=343,slow=9.5,SNR=271							
ASAR				S	**S**		**06 32 01.4**	**+0.5**
	1.1nm,0.3s,baz=1.5,slow=26,SNR=7.2							
STKA	**Stephens Creek**	**27.48**	**158**	P	**P**		**06 30 25.6**	**-0.6**
	5.7nm,0.8s,mb4.2,baz=335,slow=9.3,SNR=9.1							
CMAR	**Chiang Mai Arr**	**39.30**	**310**	P	**P**		**06 32 07.6**	**-1.1**
	0.5nm,0.3s,mb3.6,baz=143,slow=9.4,SNR=5.5							
SONM	**Songino Array**	**57.98**	**342**	P	**P**		**06 34 32.0**	**+1.1**
	1.0nm,0.5s,mb3.9,baz=161,slow=5.8,SNR=6.5							
MKAR	**Makanchi Array**	**67.76**	**327**	P	**P**		**06 35 36.3**	**+0.7**
	4.2nm,0.4s,mb4.5,baz=122,slow=8.0,SNR=44							
ZALV	**Zalesovo Beam**	**71.12**	**334**	P	**P**		**06 35 55.1**	**-0.9**
	1.1nm,0.5s,mb3.8,baz=120,slow=5.3,SNR=5.8							

AUST ***13*** *06:59:35, 3768S×140.10E, h10km, ML3.9*
IDC 13 06:59:40.8±7.0, 3704S×13965E, h0km, mb1 3.4/3, mb1mx3.4/13, mbtmp3.2/3, ML3.4/3, Error ellipse: s-maj=69.1km s-min=48.1km az=46.0, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
STKA	**Stephens Creek**	**5.40**	**18**	Pn	Pn		07 01 02.6	+0.1
	1.3nm,0.3s,baz=175,slow=14,SNR=19							
STKA				Sn	Sn		07 02 08.9	+3.6
	1.9nm,0.3s,baz=270,slow=20,SNR=6.9							
ASAR	**Alice Springs**	**14.22**	**338**	Pn	Pn		07 03 04.9	+1.4
	0.2nm,0.3s,baz=163,slow=14,SNR=8.3							
ASAR				Sn	Sn		07 05 45.0	+3.0
	0.2nm,0.3s,baz=156,slow=22,SNR=6.0							
WRA	**Warramunga Arr**	**17.66**	**343**	P	Pn		07 03 47.4	-0.8
	0.1nm,0.3s,baz=162,slow=11,SNR=5.7							
WRA				S	Sn		07 07 06.3	+0.7
	0.1nm,0.3s,baz=166,slow=23,SNR=3.8							

IDC 13 07:05:14.4±2.9, 1750S×17651W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/17, mbtmp4.0/4, ML2.2/1, Error ellipse: s-maj=179.5km s-min=31.6km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AFI	**Afiamalu**	**5.79**	**53**	Pn	Pn		07 06 41.6	+0.1
	3.8nm,0.3s,baz=229,slow=9.3,SNR=7.3							
AFI				Sn	Sn		07 07 32.9	-16
	14nm,0.3s,baz=41,slow=21,SNR=11							
STKA	**Stephens Creek**	**40.41**	**241**	P	P		07 12 54.3	-0.2
	1.5nm,1.0s,baz=102,slow=14,SNR=2.7							
WRA	**Warramunga Arr**	**46.48**	**259**	P	P		07 13 43.4	-0.3
	0.4nm,0.5s,baz=95,slow=7.1,SNR=20							
ASAR	**Alice Springs**	**46.64**	**254**	P	P		07 13 45.1	+0.2
	3.4nm,0.6s,baz=89,slow=8.6,SNR=72							

NEIC 13 07:36:22.3, 3530S×17909E, h171km, MG4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MXZ	**Matakaoa Point**	**2.35**	**195**	P	Pn		07 37 03.4	+0.8
MXZ				S	Sn		07 37 33.8	-0.1
PUZ	**Puketiti**	**2.85**	**193**	P	Pn		07 37 08.4	-0.2
PUZ				S	Sn		07 37 45.3	+0.7
MWZ	**Matawai**	**3.28**	**202**	P	Pn		07 37 14.8	+0.9
URZ	**Urewera**	**3.35**	**208**	P	Pn		07 37 15.9	+1.0
KNZ	**Kokohu**	**3.88**	**197**	P	Pn		07 37 22.0	+0.5
BKZ	**Black Stump Fm**	**4.38**	**207**	P	Pn		07 37 28.4	+0.5
MRZ	**Mangatainoka R**	**6.03**	**206**	P	Pn		07 37 47.4	-2.0
KIW	**Kapiti Island**	**6.46**	**209**	P	Pn		07 37 52.8	-2.3
CAW	**Cannon Point**	**6.61**	**207**	P	Pn		07 37 54.4	-2.7
TCW	**Tory Channel**	**7.01**	**211**	P	Pn		07 37 59.6	-2.8
THZ	**Tophouse**	**8.07**	**215**	P	Pn		07 38 13.9	-2.5
KHZ	**Kahutara**	**8.32**	**210**	P	Pn		07 38 13.2	-6.5
LTZ	**Lake Taylor**	**9.16**	**213**	P	Pn		07 38 27.3	-3.5

IDC 13 07:59:05.4±3.4, 424S×15262E, h49km±24km, mb4.1/5, mb1 4.2/6, mb1mx3.8/16, mbtmp4.1/6, ML3.9/1, MS3.1/3, Ms1 3.1/3, ms1mx2.5/25, Error ellipse: s-maj=68.6km s-min=28.4km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CTA	**Charters Tower**	**16.93**	**201**	P	Pn		08 03 00.1	+1.1
	0.3nm,0.3s,baz=18,slow=16,SNR=3.6							
CTA				LR	LR		08 08 44.0	
	comp=Z,65nm,20.1s,baz=49,slow=34							
WRA	**Warramunga Arr**	**23.69**	**227**	P	P		08 04 13.1	+0.2
	6.7nm,0.4s,baz=53,slow=9.7,SNR=94							
WRA				ScP	ScP		08 11 30.6	-0.2
	0.3nm,0.8s,baz=57,slow=3.1,SNR=3.2							
WRA				LR	LR		08 13 24.2	
	comp=Z,29nm,20.2s,baz=340,slow=36							
ASAR	**Alice Springs**	**26.45**	**221**	P	P		08 04 38.0	+0.1
	1.9nm,0.3s,baz=55,slow=9.2,SNR=40							
ASAR				ScP	ScP		08 11 38.1	-0.4
	0.3nm,0.7s,baz=48,slow=5.5,SNR=3.4							
STKA	**Stephens Creek**	**29.38**	**199**	P	P		08 05 03.8	-0.2
	3.5nm,0.5s,baz=13,slow=9.5,SNR=20							
STKA				LR	LR		08 15 45.6	
	comp=Z,64nm,18.7s,baz=25,slow=34							
MAW	**Mawson**	**86.02**	**203**	P	P		08 11 40.1	-0.2
	1.2nm,0.6s,baz=81,slow=7.0,SNR=8.1							
NVAR	**Mina Array Bea**	**91.88**	**52**	P	P		08 12 09.2	+0.5
	0.2nm,0.3s,baz=255,slow=4.8,SNR=7.6							
TORD	**Torodi Ar. Bea**	**149.96**	**289**	PKPbc	PKPbc		08 18 51.0	-0.5
	0.6nm,0.4s,baz=72,slow=2.5,SNR=9.1							

NNC 13 08:05:48.6±2.6, 5406N×8740E, h0km, mb3.5, mpv3.1, 5C-4D, Error ellipse: s-maj=20.5km s-min=16.7km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KURK	**Kurchatov**	**6.33**	**242**	⇓*e*Pn	Pn		08 07 23.1	+0.1
	2.2nm,1.0s							
KURK				⇑Sn	Sn		08 08 37.7	+1.7
	1.7nm,0.7s							
KURK				⇓Lg			08 09 09.7	
	3.8nm,0.9s							
KURBB	**Kurchatov Arra**	**6.43**	**241**	⇑Pn	Pn		08 07 25.7	+1.3
	0.4nm,0.3s,baz=52,slow=14							
KURBB				⇑Sn	Sn		08 08 40.8	+2.3
	0.4nm,0.5s							
KURBB				⇓Lg			08 09 13.0	
	1.0nm,0.7s,baz=51,slow=37							
MK31	**Makanchi Array**	**7.97**	**206**	⇓Pn	Pn		08 07 48.6	+3.1
	baz=28,slow=14,SNR=29							
MK31				⇑Sn	Sn		08 09 22.2	+5.9
	1.2nm,0.7s							
MK31				Lg			08 09 58.4	
	2.4nm,0.8s,baz=31,slow=34,SNR=3.8							
VOSK	**Vostochnaya**	**9.90**	**269**	⇑Pn	Pn		08 08 09.4	-2.6
	1.2nm,0.7s							

MAN 13 08:08:44, 1387N×12253E, h8km, mb3.9, ML2.7, MS2.4, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GQP	**Guinayangan**	**0.09**	**293**	⇓*i*P	Pg		08 08 47.2	+1.0
GQP				*i* S	Sg		08 08 49.6	+1.9
AUQP	**San Andres**	**0.56**	**165**	*e*P	Pg		08 08 56.2	+1.3
AUQP				*e*S	Sg		08 09 08.4	+6.2
OTRP	**Odiongan**	**1.58**	**198**	*e*P	Pn		08 09 12.1	-0.2
OTRP				*e*S	Sn		08 09 33.6	+0.7
SJMP	**San Jose**	**1.96**	**225**	*e*P	Pn		08 09 19.8	+2.3
SJMP				*e*S	Sn		08 09 49.8	+7.4
BALP	**Baler**	**2.08**	**334**	*e*P	Pn		08 09 19.0	-0.1
BALP				*e*S	Sn		08 09 47.5	+2.2
PCPH	**Palayan**	**2.18**	**321**	⇓*e*P	Pn		08 09 20.8	+0.2
PCPH				*e*S	Sn		08 09 50.9	+3.1
CAUP	**Cauayan**	**3.13**	**348**	*e*P	Pn		08 09 34.1	+0.4
CAUP				*e*S	Sn		08 10 11.8	+0.5

ISCJB ***13*** *08:43:01.3±0.6, 5136N±003×16108E±003, h0km, Error ellipse: s-maj=4.7km s-min=2.4km az=17.7*
IPEC ***13*** *08:43:01.8±0.4, 5148N×1643E, h0km, ML2.3/3, Error ellipse: s-maj=3.4km s-min=2.2km az=95.0*
WAR ***13*** *08:43:02.9, 5146N×1610E, ML2.8, Mining Induced*
NEIC ***13*** *08:43:02.1, 5146N×1608E, h1km, ML2.9(SZGRF), After SZGRF.*
VIE ***13*** *08:43:03.8±0.5, 5127N×16.13E, h0km, mb2.5/4, ML2.8/4, Error ellipse: s-maj=3.4km s-min=3.1km az=14.0, Suspected Mining induced.*
PRU ***13*** *08:43:04.0, 5138N×1605E, h0km*
CSEM ***13*** *08:43:05.0±0.2, 5133N×1592E, h1km, ML3.3/5, Error ellipse: s-maj=3.1km s-min=1.7km az=13.0*
ISC 13 08:43:02.2±0.6, 5143N±003×1609E±003, h0km, n34, σ0§90/68, 4C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KSP	**Ksiaz**	**0.60**	**168**	*e*Pg	**Pg**		**08 43 14.2**	**+0.6**
KSP				*e*Sg	**Sg**		**08 43 22.9**	**+1.5**
KSP	**Ksiaz**	**0.60**	**168**	⇓*i*Pg	**Pg**		**08 43 14.3**	**+0.7**
KSP				*i* Sg	**Sg**		**08 43 22.8**	**+1.5**
KSP	**Ksiaz**	**0.60**	**168**	*e*Pg	**Pg**		**08 43 14.2**	**+0.6**
KSP				*e*Sg	**Sg**		**08 43 21.7**	**+0.4**
UPC	**Upice**	**0.92**	**183**	*e*Pg	**Pg**		**08 43 20.4**	**+0.6**
DPC	**Dobruska-Polom**	**1.09**	**172**	*e*Pg	**Pg**		**08 43 23.2**	**+0.2**
DPC				*e*Sg	**Sg**		**08 43 37.6**	**+0.6**
DPC	**Dobruska-Polom**	**1.09**	**172**	*e*PG	**Pg**		**08 43 23.2**	**+0.2**
DPC				*e*SG	**Sg**		**08 43 37.7**	**+0.7**
	comp=Z,40nm,0.3s							
PVCC	**Panska Ves**	**1.32**	**227**	*e*PG	**Pg**		**08 43 27.6**	**+0.2**
PVCC				*e*SG	**Sg**		**08 43 45.5**	**+1.1**
	comp=Z,244nm,0.3s							
BRG	**Berggiesshubel**	**1.46**	**249**	Pg	**Pg**		**08 43 30.2**	**+0.1**
BRG	**Berggiesshubel**	**1.46**	**249**	PN	**Pn**		**08 43 28.7**	**-1.0**
BRG				PG	**Pg**		**08 43 30.2**	**+0.1**
BRG				SG	**Sg**		**08 43 50.3**	**+1.3**
	comp=Z,113nm,0.3s							
PRU	**Pruhonice**	**1.74**	**215**	*e*Pg	**Pg**		**08 43 34.8**	**-0.7**
PRU	**Pruhonice**	**1.74**	**215**	*e*PN	**Pn**		**08 43 33.5**	**-0.1**
PRU				*e*PG	**Pg**		**08 43 34.8**	**-0.7**
PRU				*e*SG	**Sg**		**08 43 57.2**	**-0.9**
	comp=Z,42nm,0.5s							
MORC	**Moravsky Berou**	**1.89**	**150**	*e*Pn	**Pn**		**08 43 34.0**	**-1.6**
MORC				*e*Sn	**Sn**		**08 43 59.5**	**-0.7**
MORC	**Moravsky Berou**	**1.89**	**150**	*e*Pn	**Pn**		**08 43 35.3**	**-0.4**
MORC				*e*Sg	**Sg**		**08 43 59.4**	**-3.5**
CLL	**Collm**	**1.94**	**268**	*i* Pn	**Pn**		**08 43 35.2**	**-1.1**
CLL				*e*Pg	**Pg**		**08 43 38.0**	**-1.3**
CLL				*e*Sg	**Sg**		**08 44 04.0**	**-0.4**
CLL	**Collm**	**1.94**	**268**	*i* Pn	**Pn**		**08 43 35.2**	**-1.1**
	comp=Z,4.0nm,0.5s							
CLL				LmV			08 13 00.0	
	comp=Z,200nm,20.7s							
CLL				*e*Pg	**Pg**		**08 43 38.0**	**-1.3**
CLL				*e*x	x		08 43 43.0	
CLL				*e*Sn	**Sn**		**08 43 53.0**	**-8.3**
CLL				*e*Sg	**Sg**		**08 44 04.0**	**-0.4**
	comp=Z,19nm,0.3s							
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*PG	**Pg**		**08 43 40.6**	**-1.0**
OKC				*e*SG	**Sg**		**08 44 06.8**	**-1.5**
	comp=Z,43nm,0.6s							
KRUC	**Moravsky**	**2.38**	**175**	*e*Pn	**Pn**		**08 43 42.6**	**+0.3**
KRUC				*e*Sg	**Sg**		**08 44 18.3**	**-0.1**
	comp=Z,10nm,0.2s							
NKC	**Novy Kostel**	**2.60**	**244**	*e*Pg	**Pg**		**08 43 51.5**	**-0.4**
NKC	**Novy Kostel**	**2.60**	**244**	*e*PN	**Pn**		**08 43 45.3**	**-0.1**
NKC				*e*PG	**Pg**		**08 43 51.5**	**-0.4**
NKC				*e*SG	**Sg**		**08 44 27.4**	**+1.8**
	comp=Z,61nm,0.3s							
JAVC	**Velka Javorina**	**2.76**	**158**	*e*Sg	**Sg**		**08 44 31.5**	**+0.6**
	comp=Z,17nm,0.4s							
KHC	**Kasperske Hory**	**2.81**	**216**	*e*Pg	**Pg**		**08 43 54.4**	**-1.5**
KHC	**Kasperske Hory**	**2.81**	**216**	*e*PN	**Pn**		**08 43 48.4**	**+0.2**
KHC				*e*PG	**Pg**		**08 43 54.4**	**-1.5**
KHC				*e*SN	**Sn**		**08 44 22.2**	**-0.5**
KHC				*e*SG	**Sg**		**08 44 31.7**	**-0.6**
	comp=Z,15nm,0.3s							
MOX	**Moxa**	**2.93**	**256**	*e*PG	**Pg**		**08 43 57.9**	**-0.4**
MOX				*e*SG	**Sg**		**08 44 37.6**	**+1.4**
GEC2	**GERESS Array S**	**3.01**	**212**	*e*Pn	**Pn**		**08 43 52.0**	**+1.0**
WET	**Wettzell**	**3.08**	**223**	*e*Pn	**Pn**		**08 43 52.1**	**+0.2**
MODS	**Modra-Piesok**	**3.15**	**165**	*e*PG	**Pg**		**08 44 02.7**	**+0.2**
MODS				*e*SG	**Sg**		**08 44 42.3**	**-1.0**
KOLL	**Kolacno**	**3.22**	**151**	*e*SG	**Sg**		**08 44 44.8**	**-0.7**
VYHS	**Vyhne**	**3.43**	**148**	*e*PG	**Pg**		**08 44 08.1**	**+0.3**
VYHS				*e*SG	**Sg**		**08 44 55.9**	**+3.6**
CONA	**Conrad Observa**	**3.50**	**183**	⇑*i*Pn	**Pn**		**08 43 57.2**	**-0.6**
CONA				⇓*i*Sg	**Sg**		**08 44 53.5**	**-1.2**
	comp=Z,15nm,0.4s							
CSNA	**Conrad Observa**	**3.50**	**183**	⇑*i*Pn	**Pn**		**08 43 57.7**	**-0.1**
CSNA				⇑*i*Sg	**Sg**		**08 44 54.2**	**-0.4**
	comp=Z,10nm,0.3s							
CSNA	**Conrad Observa**	**3.50**	**183**	Pn	**Pn**		**08 43 57.7**	**-0.1**
CSNA				Sg	**Sg**		**08 44 54.2**	**-0.5**
	comp=Z,10nm,0.3s							
MOA	**Molln**	**3.77**	**199**	⇑*i*Pn	**Pn**		**08 44 01.7**	**+0.2**
MOA				⇓*i*Sg	**Sg**		**08 45 04.4**	**+1.1**
	comp=Z,15nm,0.5s							
STHS	**Stebnicka Huta**	**3.86**	**119**	*e*PN	**Pn**		**08 44 04.1**	**+1.4**
STHS				*e*PG	**Pg**		**08 44 17.1**	**+1.0**
STHS				*e*SG	**Sg**		**08 45 10.5**	**+4.4**
CRVS	**Cervenica-Dubn**	**4.28**	**124**	*e*PG	**Pg**		**08 44 24.7**	**+0.6**
CRVS				*e*SG	**Sg**		**08 45 21.0**	**+1.5**

NEIC ***13*** *08:44:13.7, 1626N×9793W, h10km, MD3.8(MEX), After MEX.*
MEX 13 08:44:13.7±0.6, 1626N×9793W, h10km±4km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PNIG	**Pinotepa**	**0.23**	**306**	*i* P	Pg		08 44 18.0	-0.5
PNIG				*i* S	Sg		08 44 21.5	-0.1
VHO	**Vista Hermosa**	**1.41**	**55**	*i* P	Pn		08 44 35.5	-3.9
VHO				*i* S	Sn		08 44 53.6	-4.5
UTMO	**Huajuapan**	**1.57**	**4**	*i* P	Pn		08 44 38.6	-3.1
UTMO				*i* S	Sn		08 44 57.5	-4.6
ACX	**Acapulco**	**2.00**	**288**	*e*P	Pn		08 44 44.8	-2.8
ACX				*i* S	Sn		08 45 07.6	-5.1
TPIG	**Tehuac#an**	**2.22**	**14**	*i* P	Pn		08 44 46.8	-3.8
TPIG				*i* S	Sn		08 45 13.8	-4.4
MEIG	**Mezcala**	**2.31**	**316**	*e*P	Pn		08 44 49.1	-2.9
MEIG				*i* S	Sn		08 45 15.5	-5.0
CAIG	**El Cayaco**	**2.37**	**290**	*e*P	Pn		08 44 49.4	-3.3
CAIG				*i* S	Sn		08 45 16.8	-5.1
PPM	**Popocatepetl**	**2.87**	**347**	*e*P	Pn		08 45 01.5	+1.9
PPM				*i* S	Sn		08 45 33.1	-1.2
MZVM		**3.17**	**337**	*i* P	Pn		08 45 08.6	+4.9
MZVM				*i* S	Sn		08 45 44.8	+3.2
ZIIG	**Zihuatanejo**	**3.64**	**292**	*e*P	Pn		08 45 11.9	+1.7
ZIIG				*i* S	Sn		08 45 53.0	-0.3

KRSC ***13*** *08:46:50.4±0.6, 5611N×162.35E, h60km±59km, ML4.0*
ISCJB ***13*** *08:46:51.8±1.0, 5610N±005×16241E±007, h60km±10km, Error ellipse: s-maj=9.1km s-min=5.9km az=28.5*
MOS ***13*** *08:46:51.5±0.8, 5610N×16251E, h50km, mb4.2/1, Error ellipse: s-maj=49.2km s-min=13.0km az=68.7*
ISC 13 08:46:52.5±1.0, 5614N±005×16241E±007, h56km±10km, n25, σ0§78/45, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KBTR	**Krutoberegovo**	**0.24**	**74**	*e*P	**Pn**		**08 47 01.3**	**-0.4**
KBTR				*i* S	**Sn

PET	**Petropavlovsk**	**3.81**	**217**	P		**Pn**	**08 47 49.5**	**+0.9**
PET				*i* S		**Sn**	**08 48 32.7**	**+0.5**
RUS	**Russkaya**	**4.36**	**213**	*e*P		**Pn**	**08 47 56.3**	**+0.2**
RUS				*i* S		**Sn**	**08 48 43.8**	**-1.8**
MIPR	**Malaya Ipel'ka**	**5.10**	**223**	P		**Pn**	**08 48 07.0**	**+0.8**

*ISCJB **13** 09:16:58.7±1.0, 16.15N±005×9799W±003, h19km±6km, mb3.9/7, MS3.2/2, Error ellipse: s-maj=8.0km s-min=4.5km az=0.7*
*NEIC **13** 09:17:00.2, 16.14N×9804W, h5km, mb4.1/5, MD4.5(MEX), After MEX.*
*MEX **13** 09:17:00.2±1.1, 16.14N×9804W, h5km, MD4.5*
*IDC **13** 09:17:06.2±1.8, 1663N×9769W, h25km±8km, mb3.5/3, mb1 3.8/6, mb1mx3.6/21, mbtmp3.5/6, ML3.5/3, MS3.3/2, Ms1 3.3/2, ms1mx2.8/18, Error ellipse: s-maj=31.0km s-min=14.8km az=10.0*

ISC 13 09:16:58.8±0.9, 1617N±005×9795W±003, h12km±5km, n42, σ1§43/63, mb3.9/7, MS3.2/2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.28**	**322**	*i* P	**Pg**	**09 17 05.0**	**+0.4**
PNIG				*i* S	**Sg**	**09 17 08.3**	**-0.2**
VHO	**Vista Hermosa**	**1.47**	**52**	*e*P	**Pn**	**09 17 24.7**	**-0.4**
VHO				*i* S	**Sn**	**09 17 44.8**	**+0.5**
OXX	**Oaxaca**	**1.48**	**52**	*e*P	**Pn**	**09 17 25.7**	**+0.3**
OXX				*i* S	**Sn**	**09 17 44.2**	**-0.4**
UTMO	**Huajuapan**	**1.66**	**5**	*i* P	**Pn**	**09 17 27.0**	**-0.7**
UTMO				*i* S	**Sn**	**09 17 48.3**	**-0.7**
ACX	**Acapulco**	**2.01**	**290**	*i* P	**Pn**	**09 17 30.6**	**-2.0**
ACX				*i* S	**Sn**	**09 17 55.3**	**-2.4**
TPIG	**Tehuac#an**	**2.31**	**14**	*i* P	**Pn**	**09 17 36.5**	**-0.2**
TPIG				*i* S	**Sn**	**09 18 05.6**	**+0.6**
MEIG	**Mezcala**	**2.37**	**318**	*e*P	**Pn**	**09 17 37.6**	**+0.1**
MEIG				*i* S	**Sn**	**09 18 05.5**	**-1.1**
CAIG	**El Cayaco**	**2.39**	**292**	*i* P	**Pn**	**09 17 36.3**	**-1.5**
CAIG				*i* S	**Sn**	**09 18 01.9**	**-5.1**
PLIG	**Platanillo**	**2.66**	**326**	*i* P	**Pn**	**09 17 42.2**	**+0.6**
PLIG				*i* S	**Sn**	**09 18 12.1**	**-1.7**
YAIG	**Yautepec**	**2.88**	**338**	*i* P	**Pn**	**09 17 48.4**	**+3.8**
YAIG				*i* S	**Sn**	**09 18 17.8**	**-1.4**
POHV	**Veracruz**	**2.95**	**12**	*i* P	**Pn**	**09 17 47.7**	**+2.1**
PPM	**Popocatepetl**	**2.95**	**347**	*e*P	**Pn**	**09 17 47.0**	**+1.5**
PPM				*i* P		09 17 47.7	
PPM				*i* S	**Sn**	**09 18 23.0**	**+2.0**
PPM				*i* S	**Sn**	**09 18 23.6**	**+2.6**
CMIG	**Matias Romero**	**3.08**	**72**	Pn	**Pn**	**09 17 46.9**	**-0.4**
	21nm,0.3s,baz=258,slow=11,SNR=362						
CMIG				Pg	**Pg**	**09 17 56.0**	**-1.8**
	49nm,0.3s,baz=246,slow=17,SNR=35						
CMIG				Lg		09 18 34.5	
	86nm,0.3s,baz=225,slow=20,SNR=12						
CMIG	**Matias Romero**	**3.08**	**72**	*i* P	**Pn**	**09 17 46.8**	**-0.5**
CMIG				Pn	**Pn**	**09 17 46.9**	**-0.4**
CMIG				Pg	**Pg**	**09 17 56.0**	**-1.8**
CMIG				*i* S	**Sn**	**09 18 24.8**	**+0.8**
CMIG				Lg		09 18 34.5	
CMIG	**Matias Romero**	**3.08**	**72**	*i* P	**Pn**	**09 17 46.8**	**-0.5**
CMIG				*i* S	**Sn**	**09 18 24.8**	**+0.8**
MZVM		**3.24**	**338**	*i* P	**Pn**	**09 17 55.4**	**+5.9**
UNM	**Universidad Na**	**3.35**	**340**	*i* P	**Pn**	**09 17 50.6**	**-0.5**
UNM				*i* S	**Sn**	**09 18 30.9**	**0.0**
ZIIG	**Zihuatanejo**	**3.66**	**293**	*i* P	**Pn**	**09 17 55.1**	**-0.2**
ZIIG				*i* S	**Sn**	**09 18 32.1**	**-6.3**
LVIG	**Laguna Verde**	**3.82**	**22**	*i* P	**Pn**	**09 17 54.8**	**-2.7**
LVIG				*i* S	**Sn**	**09 18 45.8**	**+3.4**
PCIG		**4.57**	**95**	*i* P	**Pn**	**09 18 03.4**	**-4.5**
PCIG				*i* S	**Sn**	**09 19 08.6**	**+7.6**
MOIG	**Morelia**	**4.66**	**319**	*i* P	**Pn**	**09 18 11.1**	**+2.1**
TGIG		**4.67**	**82**	*e*P	**Pn**	**09 18 11.7**	**+2.5**
TGIG				*i* S	**Sn**	**09 18 60.0**	**-3.4**
SCX	**San Cristobal**	**5.13**	**83**	*i* P	**Pn**	**09 18 26.3**	**+11**
SCX				*i* S	**Sn**	**09 19 21.1**	**+6.4**
MMIG	**Aquila**	**5.57**	**293**	*i* P	**Pn**	**09 18 21.6**	**0.0**
MMIG				*i* S	**Sn**	**09 19 26.2**	**+0.6**
EZ5V		**6.31**	**302**	*i* P	**Pn**	**09 18 34.9**	**+3.1**
R15V		**6.48**	**298**	*i* P	**Pn**	**09 18 36.7**	**+2.6**
TXAR	**Lajitas Array**	**14.12**	**339**	Pn	**Pn**	**09 20 21.6**	**+2.8**
	0.0nm,0.3s,baz=157,slow=15,SNR=2.7						
TXAR				Lg		09 24 25.8	
	0.0nm,0.3s,baz=169,slow=30,SNR=2.2						
MIAR	**Mount Ida**	**18.72**	**11**	*e*P	**Pn**	**09 21 17.0**	**-0.6**
	6.2nm,0.7s						
ANMO	**Albuquerque**	**20.20**	**339**	P	**P**	**09 21 35.3**	**+1.8**
	0.1nm,0.3s,baz=158,slow=11,SNR=4.4						
ANMO				pP		09 21 42.8	
	0.1nm,0.3s,baz=202,slow=4.9,SNR=4.5						
GOGA	**Godfrey**	**21.58**	**35**	*e*P	**P**	**09 21 46.3**	**-2.1**
	8.3nm,0.5s,mb4.4						
SWET	**Sewanee**	**21.80**	**27**	*e*P	**P**	**09 21 49.4**	**-1.5**
WVT	**Waverly**	**21.83**	**22**	*e*P	**P**	**09 21 49.5**	**-1.6**
	4.3nm,0.6s,mb4.1						
SIUC	**Southern Illin**	**22.80**	**18**	*e*P	**P**	**09 22 01.3**	**-0.1**
	6.4nm,0.7s,mb4.2						
MVCO	**Mesa Verde**	**22.95**	**338**	*e*P	**P**	**09 22 04.2**	**+1.2**
	5.5nm,0.9s,mb4.0						
TKL	**Tuckaleechee C**	**23.17**	**30**	P	**P**	**09 22 04.3**	**-1.0**
	2.5nm,0.6s,mb3.8,baz=203,slow=12,SNR=6.1						
TKL				pP		09 22 12.7	
	6.6nm,0.7s,baz=196,slow=14,SNR=7.1						
TKL				LR	LR	09 33 21.0	
	comp=Z,34nm,18.1s,MS2.8,baz=76,slow=43						
TKL	**Tuckaleechee C**	**23.17**	**30**	P	**P**	**09 22 04.3**	**-1.0**
TKL				pP		09 22 12.7	
TKL				LR	LR	09 33 20.9	
PDAR	**Pinedale Array**	**28.31**	**342**	P	**P**	**09 22 56.1**	**+3.8**
	0.5nm,0.7s,mb3.3,baz=152,slow=10,SNR=4.2						
NVAR	**Mina Array Bea**	**28.49**	**325**	P	**P**	**09 22 56.6**	**+2.7**
	0.7nm,0.9s,mb3.3,baz=127,slow=10,SNR=4.2						
NVAR				pP	pP	09 23 04.6	+7.0
	0.5nm,0.7s,baz=144,slow=9.2,SNR=3.8						
NVAR	**Mina Array Bea**	**28.49**	**325**	P	**P**	**09 22 56.6**	**+2.7**
NVAR				pP	pP	09 23 04.6	+6.9
PLCA	**Paso Flores**	**62.06**	**157**	LR	LR	09 49 21.5	
	comp=Z,39nm,19.0s,MS3.6,baz=234,slow=31						
WRA	**Warramunga Arr**	**130.30**	**257**	PKP	PKPdf	09 36 15.8	+5.8
	0.3nm,0.4s,baz=80,slow=3.2,SNR=12						
ASAR	**Alice Springs**	**130.90**	**253**	PKP	PKPdf	09 36 17.1	+6.1
	0.2nm,0.8s,baz=87,slow=2.0,SNR=3.1						

*SOF **13** 09:37:27.8, 41.17N×23.16E, h5km, MD2.7*
*SKO **13** 09:37:28.3, 4123N×2314E, h18km, M1.3, ML1.8*
*CSEM **13** 09:37:28.6±0.1, 41.18N×23.10E, h12km, ML2.8/4, Error ellipse: s-maj=2.4km s-min=1.7km az=65.0*
*ISCJB **13** 09:37:28.7±0.3, 4124N±002×23.13E±003, h7km±6km, Error ellipse: s-maj=3.9km s-min=3.0km az=13.2*
*THE **13** 09:37:29.1, 4122N×2313E, h11km±1km, ML2.8/4, Error ellipse: s-maj=1.9km s-min=0.4km az=231.0*
*BEO **13** 09:37:30.9±0.7, 4123N×2309E, ML2.0/5*

ISC 13 09:37:29.2±0.4, 4123N±002×2312E±003, h13km±6km, n25, σ0§87/49, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.18**	**249**	P	**Pg**	**09 37 33.4**	**+0.1**
KNT				S	**Sg**	**09 37 36.2**	**+0.2**
VAY	**Valandovo**	**0.42**	**283**	*e*Pn	**Pg**	**09 37 37.5**	**-0.1**
VAY				*e*Sg	**Sg**	**09 37 43.7**	**+0.4**
VAY	**Valandovo**	**0.42**	**283**	P	**Pg**	**09 37 37.4**	**-0.2**
VAY				S	**Sg**	**09 37 43.6**	**+0.3**
VAY	**Valandovo**	**0.42**	**283**	*i* Pg	**Pg**	**09 37 37.5**	**-0.1**
VAY				*e*Sg	**Sg**	**09 37 43.7**	**+0.4**
VAY	**Valandovo**	**0.42**	**283**	*i* Pg	**Pg**	**09 37 37.5**	**-0.1**
VAY				*i* Sg	**Sg**	**09 37 43.6**	**+0.4**
VAY				*e*Lg		09 37 43.6	
	comp=E,34nm,0.3s						
VAY				*e*Lg		09 37 43.7	
	comp=N,71nm,0.5s						
VAY	**Valandovo**	**0.42**	**283**	*i* Pg	**Pg**	**09 37 37.4**	**-0.2**
VAY				Sg	**Sg**	**09 37 43.4**	**+0.1**
SOH	**Sokhos**	**0.44**	**156**	P	**Pg**	**09 37 37.5**	**-0.5**
SOH				S	**Sg**	**09 37 43.6**	**-0.3**
SOH	**Sokhos**	**0.44**	**156**	*i* Pg	**Pg**	**09 37 38.8**	**+0.8**
SOH				Sg	**Sg**	**09 37 42.2**	**-1.7**
MMB	**Musomiste**	**0.59**	**52**	*i* Pg	**Pg**	**09 37 39.4**	**-1.3**
MMB				*i* Pg	**Pg**	**09 37 39.4**	**-1.3**
MMB				S	**Sg**	**09 37 48.0**	**-0.5**
GRG	**Griva**	**0.60**	**244**	P	**Pg**	**09 37 41.0**	**0.0**
GRG				S	**Sg**	**09 37 49.7**	**+0.8**

THE	**Thessaloniki**	**0.60**	**191**	P		**Pg**	**09 37 40.5**	**-0.5**
THE				S		**Sg**	**09 37 49.5**	**+0.5**
HORT	**Hortiatis**	**0.63**	**181**	P		**Pg**	**09 37 41.2**	**-0.3**
HORT				S		**Sg**	**09 37 49.9**	**+0.2**
KKB	**Krupnik**	**0.64**	**358**	*i* Pg		**Pg**	**09 37 41.3**	**-0.4**
KKB				Sg		**Sg**	**09 37 50.3**	**+0.1**
STIP	**Stip**	**0.84**	**304**	*e*Pg		**Pg**	**09 37 45.8**	**+0.3**
STIP				*e*Sg		**Sg**	**09 37 57.4**	**+0.9**
STIP	**Stip**	**0.84**	**304**	*e*Pg		**Pg**	**09 37 45.3**	**-0.2**
STIP				*i* Sg		**Sg**	**09 37 57.7**	**+1.2**
STIP	**Stip**	**0.84**	**304**	*e*Pg		**Pg**	**09 37 45.4**	**-0.1**
STIP				*i* Sg		**Sg**	**09 37 57.8**	**+1.3**
STIP				*e*Lg			09 37 58.5	
	comp=N,20nm,0.2s							
STIP				*e*Lg			09 37 58.9	
	comp=E,32nm,0.3s							
PLG	**Polygyros**	**0.89**	**163**	P		**Pg**	**09 37 45.4**	**-1.0**
PLG				S		**Sg**	**09 37 58.9**	**+0.9**
OUR	**Ouranopolis**	**1.11**	**143**	P		**Pb**	**09 37 49.5**	**-0.7**
RZN	**Rozhen**	**1.29**	**68**	P		**Pn**	**09 37 53.6**	**+0.6**
RZN				Sg		**Sg**	**09 38 12.3**	**+1.5**
PAIG	**Paliouri**	**1.37**	**161**	P		**Pn**	**09 37 53.2**	**-0.8**
VTS	**Vitosha**	**1.37**	**3**	*e*Pg		**Pg**	**09 37 55.7**	**+0.2**
VTS				*e*Sg		**Sg**	**09 38 14.0**	**+0.7**
VTS	**Vitosha**	**1.37**	**3**	*i* P		**Pn**	**09 37 55.6**	**+1.6**
VTS				Sg		**Sg**	**09 38 14.2**	**+0.9**
PLD	**Plovdiv**	**1.48**	**53**	*e*Pn		**Pg**	**09 37 58.8**	**+1.1**
PLD				*e*Sg		**Sg**	**09 38 17.6**	**+0.7**
BARS	**Barje**	**1.86**	**329**	*e*Pn		**Pg**	**09 38 04.4**	**-0.6**
BARS				*e*Sg		**Sg**	**09 38 28.8**	**-0.3**
ZAPS	**Zavoj**	**2.08**	**350**	*e*Pn		**Pg**	**09 38 06.6**	**-2.5**
ZAPS				*e*Sn		**Sg**	**09 38 34.2**	**-1.8**

*IDC **13** 09:40:27.5±2.1, 966S×11027E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/15, mbtmp3.7/6, MS3.4/1, Ms1 3.3/1, ms1mx2.4/28, Error ellipse: s-maj=83.1km s-min=20.7km az=50.0*
*ISCJB **13** 09:40:30.3±1.6, 9.40S±008×1108E±0.1, h11km±10km, mb3.7/7, Error ellipse: s-maj=26.9km s-min=8.7km az=153.7*
*NEIC **13** 09:40:32.2±1.9, 972S×110.18E, h35km, mb3.4/1, Error ellipse: s-maj=69.9km s-min=15.2km az=51.0*
*DJA **13** 09:40:39, 893S×11131E, h17km, MLv4.3/5*

ISC 13 09:40:32.5±1.6, 932S±009×1109E±01, h13km±9km, n18, σ1§51/15, mb3.7/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.46**	**344**	P	**Pg**	**09 41 01.8**	**+1.3**
UGM	**Wanagama**	**1.46**	**344**	S	**Sn**	**09 41 18.2**	**+0.7**
SJI	**Sawahan**	**1.78**	**28**	P	**Pn**	**09 41 01.9**	**-1.1**
SJI	**Sawahan**	**1.78**	**28**	S	Sx	09 41 19.1	
KRKI	**Karangkates**	**1.90**	**53**	P	**Pn**	**09 41 03.0**	**-1.6**
KRKI	**Karangkates**	**1.90**	**53**	S	Sx	09 41 21.1	
SMRI	**Semarang**	**2.31**	**348**	P	**Pn**	**09 41 13.2**	**+2.9**
SMRI	**Semarang**	**2.31**	**348**	S	**Sn**	**09 41 39.1**	**+0.5**
BJII	**Banjamegara**	**2.32**	**328**	P	**Pg**	**09 41 16.0**	**-1.0**
WRA	**Warramunga Arr**	**24.95**	**118**	P	**P**	**09 45 56.3**	**+0.4**
	0.5nm,0.5s,mb3.3,baz=293,slow=11,SNR=15						
WRAB	**Tennant Creek**	**24.96**	**118**	*e*P	**P**	**09 45 57.6**	**+1.8**
	0.5nm,0.5s,mb3.3						
ASAR	**Alice Springs**	**26.18**	**126**	P	**P**	**09 46 07.2**	**+0.3**
	0.4nm,0.5s,mb3.2,baz=304,slow=9.3,SNR=9.1						
STKA	**Stephens Creek**	**36.21**	**133**	LR	LR	10 02 22.3	
	comp=Z,50nm,19.3s,baz=205,slow=36						
MJAR	**Matsushiro Arr**	**52.33**	**28**	P	**P**	**09 49 46.6**	**+2.4**
	0.7nm,0.4s,mb3.9,baz=218,slow=7.7,SNR=5.2						
SONM	**Songino Array**	**57.05**	**356**	P	**P**	**09 50 16.0**	**-2.1**
	0.5nm,0.6s,mb3.7,baz=181,slow=7.4,SNR=4.8						
SONM				PcP	PcP	09 51 12.7	-0.3
	0.5nm,0.7s,baz=158,slow=0.8,SNR=3.2						
MKAR	**Makanchi Array**	**61.43**	**338**	P	**P**	**09 50 46.9**	**-1.6**
	0.8nm,0.5s,mb4.1,baz=145,slow=8.1,SNR=7.6						
MKAR	**Makanchi Array**	**61.43**	**338**	P	**P**	**09 50 46.9**	**-1.6**
ZALV	**Zalesovo Beam**	**66.79**	**344**	P	**P**	**09 51 20.6**	**-3.0**
	0.6nm,0.3s,mb4.1,baz=174,slow=7.0,SNR=2.8						

MAN 13 09:44:30.998N×12605E, h11km, mb4.0, ML2.8, MS2.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.58**	**250**	*e*P	Pg	09 44 41.7	+0.4
SCPH				*i* S	Sg	09 44 51.1	+2.0
BUTP	**Butuan**	**1.09**	**203**	*e*P	Pb	09 44 50.2	-0.7
BUTP				*e*S	Sb	09 45 06.5	+1.4
MSLP	**Maasin**	**1.18**	**277**	*e*P	Pb	09 44 51.0	-1.3
MSLP				*e*S	Sb	09 45 09.5	+1.9
PLP	**Palo**	**1.57**	**318**	*e*P	Pn	09 44 55.7	-2.2
PLP				*e*S	Sn	09 45 18.2	-0.1
BESP	**Borongan**	**1.72**	**340**	*e*P	Pn	09 44 60.0	+0.1
BESP				*e*S	Sn	09 45 23.2	+1.4
TBP	**Tagbilaran**	**2.17**	**263**	*e*P	Pn	09 45 05.9	-0.2
TBP				*e*S	Sn	09 45 32.2	-0.8

*NIED **13** 09:52:00, 4450N×14700E, h5km, Mw4.0 Best double couple: M0 1.13000×10^15 NP1:ϕ=130.00000°, δ64.00000°, λ-72.00000°. NP2:ϕ=273.00000°, δ32.00000°, λ-122.00000°.*
*JMA **13** 09:52:22.7±0.4, 4446N×14703E, h0km, M4.1*
*IDC **13** 09:52:22.2±0.7, 4447N×14708E, h0km, mb3.9/9, mb1 4.2/12, mb1mx4.1/20, mbtmp3.9/12, ML3.7/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/30, Error ellipse: s-maj=23.7km s-min=15.3km az=152.0*
*ISCJB **13** 09:52:24.2±1.7, 4458N±006×14707E±006, h26km±13km, mb4.0/14, MS3.5/4, Error ellipse: s-maj=10.7km s-min=5.2km az=148.6*
*NEIC **13** 09:52:25.7±3.4, 4454N×14699E, h23km±25km, mb4.5/1, Error ellipse: s-maj=16.0km s-min=9.9km az=128.0*
*MOS **13** 09:52:26.2±1.7, 4448N×14709E, h43km, mb4.4/7, Error ellipse: s-maj=14.4km s-min=10.4km az=65.1*

ISC 13 09:52:25.0±1.9, 4453N±006×14704E±006, h17km±12km, n60, σ1§02/59, mb4.0/14, MS3.5/4, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.92**	**40**	*e*PN	**Pn**	**09 52 36.2**	**-6.8**
KUR				pmax	pmax		
	comp=Z,5μm,1.6s						
KUR				pmax	pmax		
	comp=Z,1220μm,0.5s						
KUR				pmax	pmax		
	comp=N,460nm,0.5s						
KUR				pmax	pmax		
	comp=E,350nm,0.5s						
NEM2	**Nemuro 2**	**1.50**	**219**	P	**Pn**	**09 52 49.4**	**-1.6**
NEM2				*e*S	**Sn**	**09 53 08.9**	**-1.2**
JRA	**Rausu**	**1.50**	**247**	P	**Pn**	**09 52 50.1**	**-1.0**
JRA				*e*S	**Sn**	**09 53 10.2**	**0.0**
JNK	**Nakash**	**1.92**	**241**	P	**Pn**	**09 52 56.8**	**-0.1**
JNK				*e*S	**Sn**	**09 53 21.7**	**+1.1**
JAK	**Akkeshi**	**2.29**	**229**	P	**Pn**	**09 53 01.4**	**-0.5**
JTKR	**Abashiri--Toko**	**2.32**	**257**	P	**Pn**	**09 53 01.6**	**-0.7**
JTKR				*e*S	**Sn**	**09 53 29.9**	**-0.5**
JAR	**Ashorobuto**	**2.67**	**244**	P	**Pn**	**09 53 08.9**	**+1.8**
JMP	**Maruseppu**	**2.70**	**260**	P	**Pn**	**09 53 07.1**	**-0.4**
JMP				*e*S	**Sn**	**09 53 40.2**	**+0.5**
JOB	**Onbets**	**2.84**	**236**	P	**Pn**	**09 53 10.3**	**+0.9**
JKK2	**Kamakawa 2**	**3.16**	**259**	P	**Pn**	**09 53 13.9**	**+0.1**
JKK2				*e*S	**Sn**	**09 53 51.7**	**+0.6**
ASAJ	**Asahikawa**	**3.22**	**264**	Pn	**Pn**	**09 53 14.3**	**-0.3**
	comp=E,6.5nm,0.3s,baz=82,slow=21,SNR=62						
ASAJ				Sn	**Sn**	**09 53 52.9**	**+0.3**
	comp=E,0.6nm,0.3s,baz=66,slow=20,SNR=2.6						
ASAJ	**Asahikawa**	**3.22**	**264**	P	**Pn**	**09 53 14.6**	**-0.1**
ASAJ	**Asahikawa**	**3.22**	**264**	PN	**Pn**	**09 53 14.4**	**-0.3**
ASAJ						09 53 52.9	
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JCH	**Churui**	**3.29**	**236**	P	**Pn**	**09 53 16.1**	**+0.4**
ERM	**Erimo**	**3.79**	**230**	*e*P	**Pn**	**09 53 23.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**3.86**	**310**	*e*P	**Pn**	**09 53 21.5**	**-2.0**
YSS	**Yuzh-Sakhalins**	**3.86**	**310**	*e*PN	**Pn**	**09 53 21.0**	**-2.5**
MJAR	**Matsushiro Arr**	**10.43**	**223**	Pn	**Pn**	**09 54 52.0**	**-1.6**
	comp=N,0.4nm,0.3s,baz=26,slow=13,SNR=8.5						
MJAR				LR	LR	09 59 38.5	
	comp=N,104nm,18.6s,baz=40,slow=42						
MJAR	**Matsushiro Arr**	**10.43**	**223**	*e*PN	**Pn**	**09 54 55.0**	**+1.4**
PETK	**Petropavlovsk-**	**11.08**	**35**	Pn	**Pn**	**09 55 04.0**	**+1.6**
	baz=189,slow=12,SNR=5.1						
PETK				LR	LR	09 59 09.6	
	comp=N,66nm,18.6s,baz=68,slow=37						
KLR	**Kul'dur**	**11.47**	**300**	*e*PN	**Pn**	**09 55 14.0**	**+6.2**
JHJ	**Hachijo jima 2**	**12.71**	**209**	LR	LR	09 59 28.5	
	comp=N,103nm,19.2s,baz=273,slow=34						
KSRS	**Korea Array**	**16.05**	**250**	Pn	**Pn**	**09 56 13.0**	**+3.2**
	comp=N,0.1nm,0.3s,baz=39,slow=14,SNR=2.5						
KSRS				LR	LR	10 01 33.2	
	comp=N,50nm,18.6s,baz=65,slow=34						
YAK	**Yakutsk**	**20.25**	**336**	*e*P	**P**	**09 56 58.8**	**-0.3**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
BILL	**Bilibino**	**25.63**	**17**	*i* P	**P**	**09 57 56.7**	**+3.5**
BILL				*e*		10 01 19.2	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.3						
SONM	**Songino Array**	**28.11**	**291**	P	**P**	**09 58 17.5**	**+1.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=96,slow=7.6,SNR=2.7						
SONM	**Songino Array**	**28.11**	**291**	P	**P**	**09 58 17.5**	**+1.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
IMA2	**Indian Mountai**	**38.08**	**35**	*e*P	**P**	**09 59 42.1**	**-0.1**
KDAK	**Kodiak Island**	**38.78**	**48**	P	pP	10 00 03.9	+10
	comp=Z,5.8nm,0.8s,baz=277,slow=9.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**40.47**	**306**	PcP	PcP	10 02 04.6	-0.2
	comp=Z,1.3nm,0.7s,baz=64,slow=3.4,SNR=5.2						
COLA	**College**	**40.49**	**37**	*e*P	**P**	**10 00 01.8**	**-0.6**
MKAR	**Makanchi Array**	**44.16**	**297**	P	**P**	**10 00 32.5**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.3,baz=74,slow=7.8,SNR=3.3						
MKAR				PcP	PcP	10 02 16.9	-0.2
	comp=Z,0.7nm,0.8s,baz=54,slow=3.7,SNR=5.8						
MKAR	**Makanchi Array**	**44.16**	**297**	P	**P**	**10 00 32.5**	**0.0**
MKAR						10 02 17.0	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**45.03**	**303**	P	**P**	**10 00 39.4**	**0.0**
	baz=68,slow=8.0						
CMAR	**Chiang Mai Arr**	**47.68**	**253**	P	**P**	**10 01 01.6**	**+1.1**
	comp=Z,0.9nm,0.3s,mb4.2,baz=57,slow=8.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**47.68**	**253**	P	**P**	**10 01 01.6**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YKA	**Yellowknife Ar**	**55.20**	**34**	P	**P**	**10 01 55.9**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=301,slow=7.1,SNR=5.3						
YKA				LR	LR	10 30 42.9	
	comp=Z,25nm,18.2s,MS3.3,baz=255,slow=42						
YKA	**Yellowknife Ar**	**55.20**	**34**	P	**P**	**10 01 55.9**	**-0.3**
YKA				LR	LR	10 30 42.9	
YKA	**Yellowknife Ar**	**55.20**	**34**	P	**P**	**10 01 55.9**	**-0.4**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	**Obninsk**	**64.64**	**323**	*e*P	**P**	**10 03 00.9**	**-0.3**
OBN				*e*		10 05 21.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**65.19**	**193**	P	**P**	**10 03 04.4**	**-0.7**
	comp=Z,4.4nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	**65.19**	**193**	P	**P**	**10 03 04.4**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**65.20**	**193**	P	**P**	**10 03 04.4**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.1,baz=10.0,slow=6.6,SNR=9.8						
WRA	**Warramunga Arr**	**65.20**	**193**	*e*P	**P**	**10 03 04.5**	**-0.7**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**67.23**	**58**	P	**P**	**10 03 19.3**	**+1.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=299,slow=6.7,SNR=9.2						
ASAR	**Alice Springs**	**68.92**	**193**	P	**P**	**10 03 28.9**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=12,slow=6.9,SNR=6.0						
ASAR	**Alice Springs**	**68.92**	**193**	*e*P	**P**	**10 03 29.4**	**+0.7**
KIV	**Kislovodsk**	**69.19**	**312**	*e*P	**P**	**10 03 28.5**	**-1.9**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,29nm,18.0s,MS3.6						
PDAR	**Pinedale

0.7nm,0.4s,baz=91,slow=3.5,SNR=5.3
WRA S **S** **10 24 24.9 -5.0**
0.5nm,0.8s,baz=91,slow=14,SNR=3.9
ASAR **Alice Springs 45.07 255** P **P** **10 18 31.9 0.0**
20nm,0.6s,mb4.8,baz=90,slow=8.2,SNR=252
ASAR PcP PcP 10 19 59.8 -1.2
1.6nm,0.4s,baz=105,slow=3.9,SNR=7.9
ASAR S **S** **10 24 28.4 -2.9**
2.8nm,0.7s,baz=91,slow=16,SNR=17
MBWA **Marble Bar 58.37 256** *eP* **P** **10 20 06.9 -0.8**
QSPA **South Pole Qui 71.67 180** P **P** **10 21 31.4 +1.1**
4.9nm,0.5s,mb4.2,baz=329,slow=0.8,SNR=13
MAW **Mawson 83.56 200** P **P** **10 22 34.6 0.0**
1.4nm,0.5s,mb3.8,baz=143,slow=3.8,SNR=17
CMAR **Chiang Mai Arr 89.44 290** P **P** **10 23 04.2 +0.7**
0.4nm,0.3s,mb3.7,baz=133,slow=3.8,SNR=4.1
SNAA **Sanae 90.11 178** *e* **P** **10 23 03.0 -2.6**
VNA3 **Neumayer Olymp 90.24 176** *e* **P** **10 23 06.1 -0.1**
VNA2 **Neumayer--Watz 90.68 177** *e* **P** **10 23 08.7 +0.4**
baz=206,slow=4.1
VNA1 **Neumayer--Stat 90.91 177** *e* **P** **10 23 10.1 +0.8**
KURK **Kurchatov 112.46 318** *eP* PKiKP 10 28 39.5 +1.3
GERES **GERESS Array B 148.18 345** PKPbc PKPbc 10 29 47.0 -1.7
0.4nm,0.3s,baz=56,slow=2.5,SNR=4.1
TORD **Torodi Ar. Bea 174.78 176** PKP PKPdf 10 30 09.5 -2.7
1.0nm,1.1s,baz=172,slow=2.2,SNR=3.3
TORD PKPab PKPab 10 31 49.5 -0.6
0.3nm,0.8s,baz=175,slow=2.8,SNR=2.4

NEIC ***13*** *10:15:19.0±1.4,2963S×17776W,h74km±12km,mb4.0/1, Error ellipse: s-maj=35.0km s-min=27.4km az=189.0*

IDC 13 10:15:18.6±1.7,2973S×17770W,h71km±15km,mb3.8/4, mb1 4.0/4,mb1mx3.6/15,mbtmp3.8/4,Error ellipse: s-maj=40.5km s-min=32.7km az=24.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.51**	**338**	P		P	Pn	10 15 31.3	-0.2
	170nm,0.3s,baz=107,slow=17,SNR=10.0								
RAO				S			Sn	10 15 43.3	+2.2
	3µm,0.3s,baz=127,slow=20,SNR=32								
RAO	**Raoul Island**	**0.51**	**338**	P			Pn	10 15 31.3	-0.2
RAO				S			Sn	10 15 43.3	+2.2
STKA	**Stephens Creek**	**34.89**	**256**	P		P	P	10 22 04.8	+1.5
	2.8nm,0.6s,baz=91,slow=8.3,SNR=7.5								
ASAR	**Alice Springs**	**43.41**	**266**	P		P		10 23 13.4	-1.1
	0.6nm,0.4s,baz=104,slow=7.4,SNR=8.1								
ASAR	**Alice Springs**	**43.41**	**266**	P		P		10 23 13.4	-1.1
WRAB	**Tennant Creek**	**44.33**	**271**	*eP*		P		10 23 21.3	-0.5
	2.2nm,0.8s								
WRA	**Warramunga Arr**	**44.34**	**271**	P		P		10 23 21.2	-0.7
	0.9nm,0.3s,baz=110,slow=8.1,SNR=25								
QSPA	**South Pole Qui**	**60.38**	**180**	P		P		10 25 20.7	+0.9
	1.0nm,0.2s,baz=44,slow=3.3,SNR=4.3								
KURK	**Kurchatov**	**120.77**	**314**	PKP		PKPdf		10 34 01.7	-0.3
	baz=96,slow=1.8								
AKASG	**Malin Array Be**	**150.92**	**324**	PKPbc		PKPbc		10 35 03.2	+0.5
	0.5nm,0.4s,baz=56,slow=2.4,SNR=3.5								

NEIC ***13*** *10:18:35.0, 1580N×6140W, h35km, MD3.4(TRN), After TRN.*

TRN 13 10:18:33.5,1582N×6160W,h18km,MD3.5,M3.0(FDF)**, 3C-7D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HMG	**Houelmont**	**0.19**	**329**	⇓	*eP*		Pg	10 18 39.6	+1.2
HMG				⇓	*eS*		Sg	10 18 43.2	+1.5
DOG	**Dongo Capester**	**0.22**	**354**	⇓	*eP*		Pg	10 18 40.0	+1.3
SCG	**Saint Claude**	**0.23**	**339**	⇓	*iP*		Pg	10 18 40.2	+1.4
SCG				⇓	*eS*		Sg	10 18 43.6	+1.1
BCG	**Bois Riant Cap**	**0.27**	**355**	⇓	*eP*		Pg	10 18 40.8	+1.3
MGG	**Marie-Galante**	**0.29**	**69**	⇑	*iP*		Pg	10 18 41.4	+1.6
LZG	**Guadaloupe-1**	**0.37**	**332**	⇓	*iP*		Pg	10 18 42.5	+1.3
DWS	**Wesley**	**0.37**	**132**	⇑	*iP*		Pg	10 18 43.8	+2.6
DWS					*eS*		Sg	10 18 49.3	+2.9
MDN	**Morne-Daniel**	**0.53**	**158**		*eP*		Pg	10 18 47.0	+2.8
MDN					*eS*		Sg	10 18 54.6	+3.3
DPMT	**Pointe Michel**	**0.59**	**159**		*eP*		Pg	10 18 48.1	+2.8
DPMT					*eS*		Sg	10 18 56.1	+2.9
DPMT	**Pointe Michel**	**0.59**	**159**		*eP*		Pg	10 18 48.1	+2.8
DPMT					*eS*		Sg	10 18 56.9	+3.7
DBCT	**Belle View Cho**	**0.59**	**156**		*eP*		Pg	10 18 48.3	+3.0
DBCT					*eS*		Sg	10 18 56.4	+3.2
DSTT	**Stowe**	**0.63**	**154**		*eP*		Pg	10 18 48.9	+2.9
DSTT					*eS*		Sg	10 18 57.2	+2.8
DSHT	**Scott's Head**	**0.64**	**160**		*eP*		Pg	10 18 48.8	+2.7
DSHT					*eS*		Sg	10 18 57.0	+2.4
DSHT	**Scott's Head**	**0.64**	**160**		*eP*		Pg	10 18 48.8	+2.7
DSHT					*eS*		Sg	10 18 57.3	+2.7
DEG	**La Desirade**	**0.71**	**46**	⇑	*iP*		Pb	10 18 47.8	+0.4
FDF	**Fort de France**	**1.16**	**158**		*eP*		Pn	10 18 56.2	+1.4
FDF					*eS*		Sb	10 19 11.0	+1.3
BPA	**Boggy Peak**	**1.25**	**348**		*eP*		Pn	10 18 58.4	+2.4
BPA					*eS*		Sb	10 19 14.6	+2.3
BIM	**Bigot**	**1.39**	**159**		*eP*		Pn	10 18 59.4	+1.4
MVM	**Montagne Vaucl**	**1.42**	**152**		*eP*		Pn	10 19 00.4	+1.9
MVM					*eS*		Sn	10 19 19.2	+2.5
SKI	**Saint Kitts**	**1.86**	**324**		*eP*		Pn	10 19 07.7	+3.1
SKI					*eS*		Sn	10 19 33.1	+5.5

NNC 13 10:27:11.5±2.8,5379N×8717E,h0km,mb3.5,mpv3.0, 7C-3D,Error ellipse: s-maj=21.7km s-min=16.4km az=64.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.08**	**243**	⇑	Pn		Pn	10 28 42.5	0.0
	2.4nm,0.7s								
KURK				⇓	Sn		Sn	10 29 56.4	+3.6
	1.6nm,0.7s								
KURK				⇑	Lg			10 30 27.3	
	4.7nm,0.7s								
KURBB	**Kurchatov Arra**	**6.18**	**243**	⇑	Pn		Pn	10 28 44.1	+0.2
	0.4nm,0.5s,baz=55,slow=14								
KURBB				⇑	Sn		Sn	10 29 55.3	+0.1
	0.7nm,0.7s								
KURBB				⇓	Lg			10 30 28.0	
	1.0nm,0.7s,baz=55,slow=24								
MK31	**Makanchi Array**	**7.66**	**206**	⇑	Pn		Pn	10 29 07.7	+3.5
	0.4nm,0.6s,baz=27,slow=14,SNR=9.0								
MK31				⇑	Sn		Sn	10 30 37.6	+5.9
	0.4nm,0.5s								
MK31				⇑	Lg			10 31 14.3	
	5.7nm,1.2s,baz=30,slow=31,SNR=4.8								
VOSK	**Vostochnaya**	**9.76**	**270**	⇓	Pn		Pn	10 29 30.0	-3.0
	1.5nm,0.4s								

ISCJB ***13*** *10:36:54.6±0.5, 4406N±004×873E±003, h20km±5km, Error ellipse: s-maj=6.1km s-min=3.6km az=171.0*
LDG ***13*** *10:36:54.9±0.2, 4402N×870E, h16km±1km, Md2.5/1, Ml2.8/7, Error ellipse: s-maj=3.2km s-min=2.6km az=79.0*
CSEM ***13*** *10:36:54.3±0.1, 4411N×871E, h20km, ML2.8/6, Error ellipse: s-maj=2.2km s-min=1.3km az=172.0*
GEN ***13*** *10:36:54.2, 4403N×872E, h2km, ML1.0*
NEIC ***13*** *10:36:55.0, 4409N×867E, h10km, ML2.8(LDG), ML2.4(STR), ML1.8(ROM), After ROM.*
STR ***13*** *10:36:55.5±0.4, 4424N×860E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ROM ***13*** *10:36:55.0±0.5, 4409N×867E, h10km, Md2.1/3, Ml1.8/1, Error ellipse: s-maj=5.3km s-min=3.5km az=163.0*

ISC 13 10:36:53.8±0.5,4401N±003×872E±003,h19km±3km,n38, σ0s81/73,1D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.41**	**320**		Pg		**Pg**	**10 37 02.1**	**-0.3**
QLNO					Sg		**Sg**	**10 37 07.6**	**-0.6**
FIN	**Finale Ligure**	**0.42**	**299**	⇓	*iPg*		**Pg**	**10 37 02.4**	**-0.1**
FIN					Sg		**Sg**	**10 37 08.0**	**-0.3**
PCP	**Piancastagn**	**0.55**	**347**		Pg		**Pg**	**10 37 04.4**	**-0.4**
	59nm,0.3s								
PCP					S		**Sg**	**10 37 11.5**	**-0.7**
ROB	**Robourent**	**0.66**	**296**		P		**Pb**	**10 37 06.8**	**0.0**
ROB					S		**Sb**	**10 37 15.1**	**-0.5**
NEGI	**Seborga**	**0.75**	**258**		P		**Pb**	**10 37 08.8**	**+0.6**
NEGI					S		**Sb**	**10 37 18.5**	**+0.4**
SAOF	**Saorge**	**0.84**	**269**		Pg		**Pg**	**10 37 10.3**	**+0.1**
SAOF					Sg		**Sg**	**10 37 21.3**	**0.0**
AUTN	**L'Aution**	**0.93**	**270**		Pg		**Pg**	**10 37 12.1**	**+0.1**
AUTN					Sg		**Sg**	**10 37 24.3**	**+0.1**
SBF	**Sospel**	**0.94**	**262**	*e*	Pg		**Pg**	**10 37 12.9**	**+0.8**
	SNR=1.0								
SBF				*e*	Sg		**Sg**	**10 37 25.3**	**+0.9**
	130nm,0.3s,SNR=1.0								
SBF	**Sospel**	**0.94**	**262**	*e*	Pg		**Pg**	**10 37 12.9**	**+0.8**
	SNR=1.0								
SBF				*e*	Sg		**Sg**	**10 37 25.3**	**+0.9**
	65nm,0.3s,SNR=1.0								
ENR	**Entracque**	**0.96**	**284**		P		**Pb**	**10 37 12.3**	**+0.5**
ENR					S		**Sb**	**10 37 24.5**	**+0.4**
LUCF	**Luceram**	**1.00**	**264**		Pg		**Pg**	**10 37 13.6**	**+0.4**
BACM	**Baccana**	**1.01**	**74**		P		**Pb**	**10 37 13.1**	**+0.4**
BACM					S		**Sb**	**10 37 25.6**	**0.0**
STV	**Sant Anna di V**	**1.03**	**284**		P		**Pb**	**10 37 13.5**	**+0.5**
STV					S		**Sb**	**10 37 26.5**	**+0.4**
TOUF	**Mont Tournerai**	**1.06**	**271**		Pg		**Pg**	**10 37 14.1**	**-0.3**
TOUF					Sg		**Sg**	**10 37 28.6**	**+0.3**
GRAM	**Graiana**	**1.08**	**63**		P		**Pb**	**10 37 14.1**	**+0.2**
GRAM					S		**Sb**	**10 37 27.6**	**-0.1**
MVIF	**Mont Vial**	**1.14**	**265**		Pg		**Pg**	**10 37 16.4**	**+0.6**
MVIF					Sg		**Sg**	**10 37 31.6**	**+0.9**
PZZ	**Stroppo**	**1.25**	**294**		Pg		**Pg**	**10 37 17.4**	**-0.7**
PZZ					S		**Sb**	**10 37 32.4**	**-0.2**
CALN	**Calern**	**1.35**	**260**		Pg		**Pg**	**10 37 21.1**	**+1.3**
PGF	**Pioggiola**	**1.47**	**172**	*e*	Pn		**Pn**	**10 37 20.0**	**+0.7**
	SNR=1.0								
PGF				*e*	Sn		**Sn**	**10 37 36.6**	**-1.4**
	11nm,0.2s								
PGF	**Pioggiola**	**1.47**	**172**	*e*	Pn		**Pn**	**10 37 20.0**	**+0.7**
	SNR=1.0								
PGF				*e*	Sn		**Sn**	**10 37 36.6**	**-1.4**
	5.7nm,0.2s								
RSP	**Reno Superiore**	**1.54**	**318**		P		**Pn**	**10 37 21.2**	**+0.9**
RSP					S		**Sn**	**10 37 39.4**	**-0.3**
FRF	**La Foret Royal**	**1.56**	**254**	*e*	Pn		**Pn**	**10 37 20.2**	**-0.4**
FRF				*e*	Sn		**Sn**	**10 37 38.7**	**-1.6**
	13nm,0.2s								
FRF	**La Foret Royal**	**1.56**	**254**	*e*	Pn		**Pn**	**10 37 20.2**	**-0.4**
FRF				*e*	Sn		**Sn**	**10 37 38.7**	**-1.6**
	6.6nm,0.2s								
MBDF	**Montbardon**	**1.57**	**298**	*e*	Pg		**Pg**	**10 37 22.9**	**-1.2**
MBDF				*e*	Sn		**Sn**	**10 37 39.3**	**-1.1**
	9.5nm,0.3s								
MBDF	**Montbardon**	**1.57**	**298**	*e*	Pn		**Pn**	**10 37 20.6**	**-0.1**
MBDF				*e*	Pg		**Pg**	**10 37 22.9**	**-1.2**
MBDF				*e*	Sn		**Sn**	**10 37 39.3**	**-1.1**
MBDF	**Montbardon**	**1.57**	**298**	*e*	Pg		**Pg**	**10 37 22.9**	**-1.2**
MBDF				*e*	Sn		**Sn**	**10 37 39.3**	**-1.1**
	4.8nm,0.3s								
RRL	**Rocca Remolon**	**1.65**	**304**		P		**Pn**	**10 37 24.2**	**+2.4**
RRL					S		**Sn**	**10 37 44.8**	**+2.3**
LMR	**La Mourre**	**1.74**	**248**	*e*	Pn		**Pn**	**10 37 22.3**	**-0.7**
LMR				*e*	Sn		**Sn**	**10 37 42.5**	**-2.1**
	8.7nm,0.2s								
LMR				*e*	Sg		**Sg**	**10 37 49.7**	**-0.2**
	4.2nm,0.2s,SNR=1.0								
LMR	**La Mourre**	**1.74**	**248**	*e*	Pn		**Pn**	**10 37 22.3**	**-0.7**
LMR				*e*	Sg		**Sg**	**10 37 49.7**	**-0.2**
	2.1nm,0.2s,SNR=1.0								
LPL	**La Plagne**	**2.07**	**318**	*e*	Pg		**Pg**	**10 37 33.0**	**-0.5**
LPL	**La Plagne**	**2.07**	**318**	*e*	Pn		**Pn**	**10 37 27.6**	**+0.1**
LPL				*e*	Pg		**Pg**	**10 37 33.0**	**-0.5**
LPL	**La Plagne**	**2.07**	**318**	*e*	Pg		**Pg**	**10 37 33.0**	**-0.5**
ORIF	**Oris-en-Rattie**	**2.23**	**295**	*e*	Pg		**Pg**	**10 37 36.0**	**-0.6**
ORIF	**Oris-en-Rattie**	**2.23**	**295**	*e*	P		**Pn**	**10 37 31.8**	**+2.1**
ORIF				*e*	Pg		**Pg**	**10 37 36.0**	**-0.6**
ORIF	**Oris-en-Rattie**	**2.23**	**295**	*e*	Pg		**Pg**	**10 37 36.0**	**-0.6**
SMRF	**Simiane la Rot**	**2.27**	**270**	*e*	Pg		**Pg**	**10 37 36.6**	**-0.8**
SMRF				*e*	Sg		**Sg**	**10 38 06.0**	**-0.8**
	16nm,0.3s								
SMRF	**Simiane la Rot**	**2.27**	**270**	*e*	Pn		**Pn**	**10 37 30.0**	**-0.2**
SMRF				*e*	Pg		**Pg**	**10 37 36.6**	**-0.8**
SMRF				*e*	Sg		**Sg**	**10 38 06.0**	**-0.8**
SMRF	**Simiane la Rot**	**2.27**	**270**	*e*	Pg		**Pg**	**10 37 36.6**	**-0.8**
SMRF				*e*	Sg		**Sg**	**10 38 06.0**	**-0.8**
	8.1nm,0.3s								

IDC 13 10:41:13.2±4.8,1691S×17471W,h182km±57km,mb3.5/3, mb1 3.6/4,mb1mx3.3/17,mbtmp3.5/4,Error ellipse: s-maj=132.5km s-min=46.9km az=147.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.12**	**44**		P		Pn	10 42 17.3	+1.4
	8.1nm,0.3s,baz=210,slow=8.1,SNR=22								
AFI					S		Sn	10 43 04.8	0.0
	29nm,0.3s,baz=217,slow=20,SNR=20								
STKA	**Stephens Creek**	**42.20**	**241**		P		P	10 48 48.3	0.0
	0.9nm,0.7s,baz=73,slow=11,SNR=2.9								
WRA	**Warramunga Arr**	**48.29**	**258**		P		P	10 49 36.3	-0.1
	0.4nm,0.3s,baz=97,slow=7.0,SNR=28								
ASAR	**Alice Springs**	**48.46**	**253**		P		P	10 49 37.4	-0.3
	3.1nm,0.5s,baz=89,slow=8.4,SNR=62								
ASAR					PcP		PcP	10 51 01.1	+0.1
	0.3nm,0.4s,baz=103,slow=3.8,SNR=4.6								

NIED ***13*** *10:44:00,3320N×14130E,h17km,Mw3.7 Best double couple: M₀3.73000×10¹⁴ NP1:φs264.00000°,δ61.00000°, λ-114.00000°. NP2:φs126.00000°,δ37.00000°, λ-54.00000°.*
IDC ***13*** *10:44:13.7±1.5,3300N×14146E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.6/20,mbtmp3.8/5,ML3.4/2,MS2.8/4, Ms1 2.9/4,ms1mx2.5/22,Error ellipse: s-maj=31.6km s-min=18.9km az=56.0*
ISCJB ***13*** *10:44:17.0±1.2,3307N±006×14152E±009,h44km±13km, mb3.9/3,Error ellipse: s-maj=13.2km s-min=9.4km az=179.0*
JMA ***13*** *10:44:16.1±0.2,3321N×14134E,h0km,M3.6*
NEIC ***13*** *10:44:16.1,3321N×14134E,h0km,MG3.6(JMA), After JMA.*

ISC 13 10:44:17.5±2.0,3305N±005×14151E±009,h29km±18km, n22,σ0s79/27,mb3.9/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.42**	**273**		P		**Pn**	**10 44 40.7**	**-0.6**
JHJ	**Hachijo jima 2**	**1.45**	**273**		Pn		**Pn**	**10 44 40.9**	**-0.9**
	50nm,0.3s,baz=84,slow=19,SNR=13								
JHJ					Sn		**Sn**	**10 44 59.0**	**-0.7**
	122nm,0.3s,baz=58,slow=19,SNR=8.5								
BSO1	**Boso 1**	**1.66**	**345**		P		**Pn**	**10 44 43.9**	**-0.7**
BSO1					S		**Sn**	**10 45 04.3**	**-0.7**
BSO3	**Boso 3**	**1.94**	**335**		P		**Pn**	**10 44 47.7**	**-0.7**
BSO4	**Boso 4**	**2.17**	**334**		P		**Pn**	**10 44 51.7**	**+0.1**
JKO	**Kozu shima**	**2.28**	**300**		P		**Pn**	**10 44 52.9**	**-0.3**
JIM2	**Oshima 3**	**2.40**	**315**		P		**Pn**	**10 44 54.1**	**-0.7**
JIZS	**Izushimoda**	**2.75**	**308**		P		**Pn**	**10 45 00.0**	**+0.4**
JIZS					S		**Sn**	**10 45 32.7**	**+0.9**
JOD2	**Odawara 2**	**2.98**	**318**		P		**Pn**	**10 45 03.0**	**+0.2**
JOD2					S		**Sn**	**10 45 36.8**	**-0.8**
SHZ3	**Shizuoka 3**	**3.40**	**307**		P		**Pn**	**10 45 09.0**	**+0.5**
JRY	**Ryogami san**	**3.66**	**325**		P		**Pn**	**10 45 13.2**	**+1.1**
JRY					S		**Sn**	**10 45 55.9**	**+1.6**
JAG	**Ashikaga**	**3.77**	**334**		P		**Pn**	**10 45 13.8**	**+0.2**
MJAR	**Matsushiro Arr**	**4.42**	**323**		Pn		**Pn**	**10 45 23.2**	**+0.7**
	1.2nm,0.3s,baz=146,slow=10,SNR=9.3								
MJAR					Sn		**Sn**	**10 46 12.5**	**-0.4**
	1.8nm,0.3s,baz=145,slow=24,SNR=6.7								
MAJO	**Matsushiro**	**4.42**	**323**	*e*	P		**Pn**	**10 45 23.6**	**+1.1**
MAT	**Matsushiro**	**4.42**	**323**		P		**Pn**	**10 45 23.8**	**+1.3**
MAT					S		**Sn**	**10 46 12.2**	**-0.8**
ASAJ	**Asahikawa**	**11.08**	**4**		Pn		**Pn**	**10 46 52.5**	**-1.4**
	0.4nm,0.3s,baz=192,slow=9.3,SNR=3.8								
ASAJ					Sn		**Sn**	**10 48 47.9**	**-8.9**
	0.2nm,0.3s,baz=172,slow=19,SNR=2.4								
ASAJ					LR		LR	10 51 31.8	
	comp=Z,44nm,18.0s,baz=350,slow=39								
KSRS	**Korea Array**	**11.94**	**295**		LR		LR	10 51 26.1	
	comp=Z,39nm,21.5s,baz=105,slow=36								
JOW	**Kunigami**	**13.04**	**245**		LR		LR	10 52 04.8	
	comp=Z,48nm,18.7s,baz=119,slow=36								
CMAR	**Chiang Mai Arr**	**40.72**	**260**		LR		LR	11 09 35.6	
	comp=Z,13nm,18.4s,baz=250,slow=37								
MKAR	**Makanchi Array**	**46.39**	**305**		P		**P**	**10 52 41.9**	**+0.7**
	0.6nm,0.5s,mb3.8,baz=98,slow=8.9,SNR=4.9								
WRA	**Warramunga Arr**	**53.13**	**188**		P		**P**	**10 53 32.3**	**-0.4**
	1.8nm,0.5s,mb4.3,baz=5.6,slow=7.5,SNR=58								
ASAR	**Alice Springs**	**56.86**	**188**		P		**P**	**10 54 00.1**	**+0.6**
	0.5nm,0.6s,mb3.7,baz=7.8,slow=7.5,SNR=12								

NIED ***13*** *11:06:00,4450N×14700E,h5km,Mw3.4 Best double couple: M₀1.62000×10¹⁴ NP1:φs59.00000°,δ85.00000°, λ-51.00000°. NP2:φs154.00000°,δ39.00000°, λ-173.00000°.*

JMA 13 11:06:00.8±0.4,4450N×14703E,h0km,M3.6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.47**	**220**		P		Pn	11 06 27.7	-0.8
NEM2					*eS*		Sg	11 06 47.3	-0.6
JRA	**Rausu**	**1.48**	**248**		P		Pn	11 06 28.4	-0.3
JRA					*eS*		Sg	11 06 48.4	0.0
JNK	**Nakash**	**1.90**	**242**		P		Pn	11 06 35.4	+1.0
JNK					*eS*		Sn	11 06 59.9	+0.8
JAK	**Akkeshi**	**2.26**	**229**		P		Pn	11 06 39.5	+0.1
JTKR	**Abashiri--Toko**	**2.31**	**258**		P		Pn	11 06 39.6	-0.4
JAR	**Ashorobuto**	**2.65**	**244**		P		Pn	11 06 47.2	+2.5
JMP	**Maruseppu**	**2.68**	**261**		P		Pn	11 06 45.3	+0.1
JMP					*eS*		Sn	11 07 18.0	-0.4
JKK2	**Kamakawa 2**	**3.14**	**260**		P		Pn	11 06 52.1	+0.6
ASAJ	**Asahikawa**	**3.21**	**265**		P		Pn	11 06 52.9	+0.5
JCH	**Churui**	**3.27**	**236**		P		Pn	11 06 54.9	+1.7

IDC ***13*** *11:58:41.3±1.5,2425×12886E,h0km,mb4.3/1,mb1 4.3/3, mb1mx3.7/15,mbtmp4.1/3,ML3.7/2,MS3.1/2,Ms1 3.1/2, ms1mx2.6/21,Error ellipse: s-maj=54.7km s-min=25.5km az=68.0*
ISCJB ***13*** *11:58:45.9±1.2,2565±009×12871E±02,h33km,Error ellipse: s-maj=23.9km s-min=9.4km az=154.4*
DJA ***13*** *11:58:48.7±0.0,2695×12828E,h27km,MLv3.8/4*

ISC 13 11:58:46.2±1.1,2645±009×1289E±01,h35km,n10, σ0s98/10,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.70**	**175**			P	**Pn**	**11 59 05.4**	**+5.8**
AAI	**Ambon**	**1.23**	**213**			P	**Pn**	**11 59 06.4**	**-0.6**
AAI	**Ambon**	**1.23**	**213**			P	**Pn**	**11 59 06.5**	**-0.5**
LBMI	**Labuha**	**2.42**	**326**			P	**Pn**	**11 59 23.3**	**+0.1**
KAPI	**Kappang**	**9.39**	**255**			Pn	**Pn**	**12 00 59.6**	**+0.4**
	0.4nm,0.3s,baz=98,slow=7.1,SNR=3.0								
KAPI						LR	LR	12 04 32.4	
	comp=Z,61nm,19.2s,baz=141,slow=37								
WRA	**Warramunga Arr**	**18.00**	**163**			P	**Pn**	**12 02 54.7**	**+1.0**
	0.3nm,0.3s,baz=341,slow=12,SNR=18								
WRA						S	**S**	**12 06 17.3**	**-1.6**
	0.1nm,0.3s,baz=339,slow=22,SNR=5.2								
ASAR	**Alice Springs**	**21.46**	**167**			P	**P**	**12 03 33.2**	**+1.6**
	17nm,1.1s,baz=348,slow=12,SNR=86								
ASAR						S	**S**	**12 07 27.9**	**+0.1**
	2.8nm,0.8s,baz=350,slow=22,SNR=14								
STKA	**Stephens Creek**	**31.45**	**159**		LR		LR	12 19 09.3	
	comp=Z,66nm,18.7s,baz=24,slow=39								
KURK	**Kurchatov**	**68.24**	**328**		P		**P**	**12 09 42.2**	**-1.0**
	baz=133,slow=5.1								
TORD	**Torodi Ar. Bea**	**126.75**	**284**		PKP		PKPdf	12 17 49.0	+1.9
	0.4nm,0.8s,baz=68,slow=1.4,SNR=2.4								

IDC 13 12:13:16.6±6.1,819S×12882E,h64km±67km,mb3.6/1, mb1 3.6/4,mb1mx3.3/14,mbtmp3.4/4,ML3.6/2,Error ellipse: s-maj=53.3km s-min=20.6km az=25.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.47**	**248**		P		Pn	12 14 35.7	+0.2
	3.8nm,0.3s,baz=12,slow=20,SNR=6.4								
BATI					S		Sn	12 15 37.7	+0.5
	5.3nm,0.3s,baz=72,slow=22,SNR=8.1								
WRA	**Warramunga Arr**	**12.84**	**156**		P		Pn	12 16 16.5	+0.2
	0.3nm,0.3s,baz=336,slow=12,SNR=24								
WRA					S		Sn	12 18 37.6	-0.1
	1.0nm,0.3s,baz=334,slow=24,SNR=11								
ASAR	**Alice Springs**	**16.14**	**163**		P		Pn	12 17 00.4	+1.0
	0.1nm,0.3s,baz=334,slow=9.6,SNR=9.2								
ASAR					S		S	12 19 58.3	-9.3
	0.2nm,0.3s,baz=344,slow=25,SNR=6.3								
ZALV	**Zalesovo Beam**	**72.14**	**334**		P		P	12 24 34.2	0.0
	0.5nm,0.4s,baz=132,slow=7.0,SNR=2.6								

HLW ***13*** *12:36:53.6, 2995N×3676E, h15km, Mb3.1*
ISCJB ***13*** *12:

RPZ	**Rata Peaks**	**3.93**	**58**	Pn		**Pn**	**12 54 51.4**	**-0.2**
	16nm,0.3s,baz=197,slow=3.9,SNR=97							
RPZ				Sn		**Sn**	**12 55 36.6**	**-1.3**
	20nm,0.3s,baz=346,slow=16,SNR=8.7							
RPZ	**Rata Peaks**	**3.93**	**58**	P		**Pn**	**12 54 51.3**	**-0.3**
WVZ	**Waitaha Valley**	**4.16**	**49**	P		**Pn**	**12 54 56.6**	**+1.9**
MQZ	**McQueen's Vall**	**4.93**	**66**	P		**Pn**	**12 55 04.8**	**-0.5**
LTZ	**Lake Taylor**	**5.20**	**56**	P		**Pn**	**12 55 08.2**	**-0.9**
DSZ	**Denniston Nort**	**5.66**	**45**	P		**Pn**	**12 55 16.8**	**+1.4**
KHZ	**Kahutara**	**6.17**	**59**	P		**Pn**	**12 55 22.6**	**+0.3**
THZ	**Tophouse**	**6.22**	**51**	*e*P		**Pn**	**12 55 23.0**	**-0.1**
QRZ	**Quartz Range**	**6.72**	**44**	P		**Pn**	**12 55 30.7**	**+0.8**
NNZ	**Nelson**	**6.86**	**50**	P		**Pn**	**12 55 34.6**	**+2.8**
STKA	**Stephens Creek**	**23.73**	**297**	P		**P**	**12 59 03.4**	**-0.2**
	1.4nm,0.7s,mb3.5,baz=117,slow=12,SNR=4.9							
STKA				LR		LR	13 08 06.3	
	comp=Z,69nm,18.3s,MS3.2,baz=170,slow=36							
ASAR	**Alice Springs**	**34.34**	**299**	P		**P**	**13 00 37.1**	**-1.0**
	0.7nm,0.5s,mb3.9,baz=132,slow=8.0,SNR=16							
WRA	**Warramunga Arr**	**36.92**	**304**	P		**P**	**13 00 58.7**	**-1.6**
	1.5nm,0.8s,mb3.9,baz=138,slow=7.8,SNR=13							
WRA				LR		LR	13 15 33.2	
	comp=Z,33nm,19.9s,MS3.1,baz=275,slow=35							
NWAO	**Narrogin (SRO)**	**39.55**	**271**	LR		LR	13 13 39.3	
	comp=Z,89nm,19.8s,MS3.6,baz=63,slow=30							
TORD	**Torodi Ar. Bea**	**144.92**	**206**	PKPbc		PKPdf	13 13 26.7	-2.2
	0.9nm,0.6s,baz=165,slow=2.0,SNR=8.7							

*ISCJB **13** 13:22:21.5±0.9, 3654N±0.10×9435E±0.009, h10km, mb3.5/4, Error ellipse: s-maj=14.4km s-min=10.8km az=6.0*
*IDC **13** 13:22:22.0±1.1, 3625N×9398E, h0km, mb3.6/4, mb1 3.7/7, mb1mx3.6/22, mbtmp3.6/7, ML3.8/3, Error ellipse: s-maj=64.6km s-min=18.2km az=56.0*
*NEIC **13** 13:22:23.3±0.8, 3628N×9387E, h10km, mb3.3/1, Error ellipse: s-maj=19.1km s-min=10.2km az=50.0*
*BJI **13** 13:22:26.0, 3651N×9432E, h25km, ML3.6, Ms3.3, Msz3.2*
ISC 13 13:22:23.6±0.9, 3654N±010×9431E±009, h10km, n13, σ0§67/14, mb3.5/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GTA	**Gaotai**	**5.21**	**55**	PG		**Pg**	**13 23 57.6**	**-5.7**
GTA				S		**Sn**	**13 24 41.4**	**-0.2**
GTA				Smax				
	comp=N,17nm,1.0s							
GTA				Smax				
	comp=E,12nm,1.1s							
MK31	**Makanchi Array**	**13.61**	**323**	*e*P		**Pn**	**13 25 35.7**	**-0.9**
MKAR	**Makanchi Array**	**13.61**	**323**	Pn		**Pn**	**13 25 35.4**	**-1.2**
	comp=E,1.1nm,0.3s,baz=131,slow=14,SNR=31							
MKAR				Sn		Sx	13 27 55.8	
	baz=136,slow=26,SNR=2.2							
MKAR	**Makanchi Array**	**13.61**	**323**	Pn		**Pn**	**13 25 35.4**	**-1.2**
MKAR				Sn		Sx	13 27 55.8	
SONM	**Songino Array**	**14.39**	**35**	Pn		**Pn**	**13 25 52.8**	**+5.7**
	comp=E,0.2nm,0.3s,baz=238,slow=8.2,SNR=3.0							
KURK	**Kurchatov**	**18.11**	**326**	P		**Pn**	**13 26 35.4**	**+0.4**
	baz=139,slow=11							
KURK	**Kurchatov**	**18.11**	**326**	P		**Pn**	**13 26 35.5**	**+0.5**
	comp=E,1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**18.62**	**342**	P		**Pn**	**13 26 42.3**	**+1.1**
	comp=E,0.2nm,0.3s,baz=164,slow=12,SNR=3.6							
BVAR	**Borovoye Array**	**23.50**	**322**	P		**P**	**13 27 34.1**	**+0.6**
	comp=E,1.3nm,0.6s,mb3.5,baz=132,slow=8.9,SNR=8.1							
NOA	**NORSAR Array B**	**55.60**	**324**	P		**P**	**13 31 59.3**	**+0.3**
	comp=E,0.6nm,0.6s,mb3.8,baz=76,slow=8.3,SNR=2.8							
WRA	**Warramunga Arr**	**67.72**	**139**	P		**P**	**13 33 20.8**	**-0.4**
	comp=E,0.1nm,0.5s,mb3.1,baz=312,slow=8.6,SNR=3.0							
WRA	**Warramunga Arr**	**67.72**	**139**	P		**P**	**13 33 20.8**	**-0.4**
ASAR	**Alice Springs**	**70.58**	**142**	P		**P**	**13 33 39.1**	**+0.2**
	comp=E,0.3nm,0.5s,mb3.5,baz=324,slow=6.0,SNR=9.0							

*NNC **13** 13:52:13.6±3.2, 3854N×6909E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=26.2km s-min=22.9km az=174.0*
ISC 13 13:52:14.1±2.0, 381N±01×690E±01, h35km, n11, σ1§13/14, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**5.12**	**12**	Pn		**Pn**	**13 53 27.8**	**-0.3**
	1.0nm,0.3s,baz=199,slow=16,SNR=20							
KK31				Sn		**Sn**	**13 54 26.9**	**+1.0**
	4.9nm,0.4s,baz=194,slow=23,SNR=4.2							
AML	**Almayashu**	**5.38**	**40**	P		**Pn**	**13 53 32.5**	**+0.6**
	SNR=12							
EKS2	**Erkin-Say**	**5.82**	**37**	P		**Pn**	**13 53 37.7**	**-0.1**
	SNR=13							
AAK	**Ala-Archa**	**6.16**	**41**	P		**Pn**	**13 53 44.1**	**+1.6**
	SNR=9.2							
KZA	**Kyzart**	**6.21**	**48**	P		**Pn**	**13 53 42.3**	**-0.9**
	SNR=16							
KBK	**Karagaybulak**	**6.41**	**43**	P		**Pn**	**13 53 46.9**	**+1.0**
	SNR=9.9							
CHMS	**Chumysh**	**6.55**	**40**	P		**Pn**	**13 53 48.9**	**+1.1**
	SNR=7.0							
ULHL	**Ulahol**	**6.91**	**51**	P		**Pn**	**13 53 51.0**	**-1.7**
	SNR=8.2							
TKM2	**Tokmak 2**	**6.95**	**44**	⇑Pn		**Pn**	**13 53 51.4**	**-1.8**
TKM2	2.6nm,0.5s			⇓Sn		**Sn**	**13 55 10.4**	**-0.5**
	8.0nm,0.8s							
TKM2	**Tokmak 2**	**6.95**	**44**	P		**Pn**	**13 53 51.5**	**-1.8**
	SNR=7.0							
AB09	**Akbulak array**	**12.93**	**332**	⇑Pn		**Pn**	**13 55 16.3**	**+1.2**
	0.8nm,0.6s							
AB09				⇑Sn		**Sn**	**13 57 36.2**	**-1.4**
	1.4nm,0.8s							

*ISCJB **13** 14:05:06.9±0.7, 3885N±003×4270E±005, h10km, Error ellipse: s-maj=6.2km s-min=4.5km az=162.2*
*DDA **13** 14:05:06.6, 3886N×4270E, h7km±1km, Md2.9*
*CSEM **13** 14:05:06.0±0.3, 3886N×4270E, h2km, MD2.9, Error ellipse: s-maj=6.5km s-min=2.9km az=67.0*
*ISK **13** 14:05:07.2, 3887N×4271E, h8km, MD2.9*
ISC 13 14:05:07.1±1.1, 3884N±004×4265E±008, h1km±17km, n10, σ0§66/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TUTA	**Tutak**	**0.57**	**13**	*i* P		**Pg**	**14 05 17.8**	**-0.3**
TUTA				*i* S		**Sg**	**14 05 25.6**	**0.0**
TUTA	**Tutak**	**0.57**	**13**	*i* P		**Pg**	**14 05 17.8**	**-0.3**
TUTA				*i* S		**Sg**	**14 05 25.5**	**0.0**
VANB	**Van**	**0.63**	**113**	*e*PG		**Pg**	**14 05 18.7**	**-0.4**
VANB				*e*SG		**Sg**	**14 05 28.6**	**+1.4**
TVAN	**Van**	**0.67**	**118**	*i* P		**Pg**	**14 05 19.3**	**-0.6**
TVAN				*i* S		**Sg**	**14 05 28.7**	**+0.2**
VANT	**Van**	**0.70**	**124**	*e*PG		**Pg**	**14 05 19.3**	**-1.2**
AGRB	**Hanur-Agry**	**0.78**	**20**	*e*PG		**Pg**	**14 05 21.6**	**-0.5**
AGRB				*e*SG		**Sg**	**14 05 33.3**	**+1.2**
CLDR	**Caldiran**	**1.03**	**73**	*e*PG		**Pg**	**14 05 26.6**	**-0.2**
CLDR				*e*SG		**Sg**	**14 05 39.9**	**-0.3**
SIRT	**Sirnak**	**1.35**	**187**	*e*PN		**Pg**	**14 05 33.7**	**+0.8**
BEST	**Besiri**	**1.44**	**229**	*i* P		**Pn**	**14 05 34.5**	**+0.2**
EZM	**Erzurum**	**1.46**	**317**	*e*PN		**Pn**	**14 05 34.4**	**-0.1**

*ISCJB **13** 14:24:24.9±0.5, 3107S±005×17991E±0.10, h361km±5km, mb3.7/9, Error ellipse: s-maj=14.2km s-min=6.7km az=21.3*
*IDC **13** 14:24:26.3±1.2, 3103S×17991W, h367km±12km, mb3.4/7, mb1 3.6/9, mb1mx3.5/16, mbtmp3.5/9, Error ellipse: s-maj=20.6km s-min=16.4km az=144.0*
*NEIC **13** 14:24:26.0±0.7, 3107S×17995W, h367km±7km, mb4.1/2, Error ellipse: s-maj=14.9km s-min=9.0km az=105.0*
ISC 13 14:24:25.8±0.5, 3109S±005×1800W±01, h356km±5km, n60, σ1§17/51, mb3.7/9, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.55**	**45**	P		**Pn**	**14 25 22.0**	**+0.1**
	152nm,0.3s,baz=92,slow=20,SNR=11							
RAO				S		**S**	**14 26 05.4**	**-1.6**
	225nm,0.3s,baz=274,slow=23,SNR=13							
PUZ	**Puketiti**	**7.12**	**191**	P		**Pn**	**14 26 08.8**	**-0.8**
MWZ	**Matawai**	**7.51**	**195**	P		**Pn**	**14 26 16.1**	**+1.9**
MWZ				S		**S**	**14 27 40.9**	**-1.6**
URZ	**Urewera**	**7.54**	**198**	P		**Pn**	**14 26 15.9**	**+1.3**
	17nm,0.3s,baz=282,slow=3.1,SNR=67							
URZ				S		**S**	**14 27 41.7**	**-1.5**
	35nm,0.3s,baz=79,slow=22,SNR=16							
URZ	**Urewera**	**7.54**	**198**	P		**Pn**	**14 26 15.8**	**+1.2**
KNZ	**Kokohu**	**8.14**	**193**	P		**Pn**	**14 26 22.1**	**+0.5**
BKZ	**Black Stump Fm**	**8.56**	**199**	P		**Pn**	**14 26 26.9**	**+0.4**
FWVZ	**Far West T-bar**	**8.93**	**203**	P		**Pn**	**14 26 33.7**	**+2.8**
WNVZ	**Wahianoa**	**8.98**	**203**	P		**Pn**	**14 26 33.8**	**+2.3**
MOVZ	**Moawhango**	**9.00**	**202**	P		**Pn**	**14 26 33.3**	**+1.5**
TSZ	**Takapari Road**	**9.54**	**199**	P		**Pn**	**14 26 37.9**	**-0.3**
BFZ	**Birch Farm**	**10.05**	**197**	P		**Pn**	**14 26 46.1**	**+1.9**
MRZ	**Mangatainoka R**	**10.21**	**199**	P		**Pn**	**14 26 45.9**	**-0.2**
KIW	**Kapiti Island**	**10.59**	**202**	P		**Pn**	**14 26 50.2**	**-0.5**
MTW	**Mount Morrison**	**10.69**	**199**	P		**Pn**	**14 26 52.8**	**+1.0**
CAW	**Cannon Point**	**10.77**	**200**	P		**Pn**	**14 26 52.4**	**-0.3**
MSWZ	**Moikau Station**	**11.00**	**199**	P		**Pn**	**14 26 53.9**	**-1.6**
SNZO	**South Karori**	**11.06**	**201**	*e*P		**Pn**	**14 26 56.0**	**-0.2**
TCW	**Tory Channel**	**11.12**	**203**	P		**Pn**	**14 26 56.2**	**-0.7**
NNZ	**Nelson**	**11.44**	**206**	P		**Pn**	**14 26 59.8**	**-0.9**
QRZ	**Quartz Range**	**11.45**	**210**	P		**Pn**	**14 27 00.6**	**-0.3**
BSWZ	**Blackbirch Sta**	**11.70**	**203**	P		**Pn**	**14 27 04.0**	**+0.2**
THZ	**Tophouse**	**12.09**	**206**	P		**P**	**14 27 06.6**	**-1.4**
THZ				S		**S**	**14 29 15.9**	**-6.4**
KHZ	**Kahutara**	**12.44**	**203**	P		**P**	**14 27 11.1**	**-0.8**
DSZ	**Denniston Nort**	**12.52**	**210**	P		**P**	**14 27 13.2**	**+0.4**
LTZ	**Lake Taylor**	**13.21**	**206**	P		**P**	**14 27 20.4**	**+0.1**
RPZ	**Rata Peaks**	**14.47**	**207**	P		**P**	**14 27 35.1**	**+0.9**
	0.6nm,0.3s,baz=18,slow=3.2,SNR=3.6							
RPZ				S		**S**	**14 30 06.4**	**-3.8**
	1.7nm,0.3s,baz=189,slow=23,SNR=8.6							
DZM	**Mont Dzumac**	**15.10**	**303**	*e*P		**P**	**14 27 42.9**	**+1.6**
STKA	**Stephens Creek**	**32.67**	**258**	P		**P**	**14 30 27.9**	**+1.8**
	0.7nm,0.4s,mb3.3,baz=108,slow=9.9,SNR=5.5							
ASAR	**Alice Springs**	**41.38**	**269**	P		**P**	**14 31 38.5**	**-0.2**
	0.6nm,0.5s,mb3.1,baz=106,slow=7.6,SNR=10							
ASAR				PcP		PcP	14 33 27.9	-1.4
	0.7nm,0.4s,baz=106,slow=3.6,SNR=5.7							
ASAR				ScP		ScP	14 36 41.9	-2.7
	1.2nm,0.7s,baz=112,slow=4.0,SNR=9.8							
WB2	**Warramunga Arr**	**42.43**	**274**	*e*P		**P**	**14 31 46.2**	**-0.9**
WRAB	**Tennant Creek**	**42.43**	**274**	*e*P		**P**	**14 31 43.5**	**-3.6**
WRA	**Warramunga Arr**	**42.44**	**274**	P		**P**	**14 31 46.8**	**-0.4**
	1.2nm,0.3s,mb3.5,baz=111,slow=8.0,SNR=13							
WRA				S		**S**	**14 37 38.6**	**-3.3**
	0.3nm,0.6s,baz=109,slow=14,SNR=2.7							
SBA	**Scott Base**	**47.23**	**184**	P		**P**	**14 32 25.4**	**+1.6**
	3.4nm,0.7s,mb3.7							
MAW	**Mawson**	**71.06**	**201**	P		**P**	**14 35 04.7**	**-0.9**
	1.0nm,0.7s,mb3.7,baz=132,slow=16,SNR=5.5							
SYO	**Syowa Base**	**76.05**	**194**	*e*P		**P**	**14 35 32.0**	**-2.4**
SNAA	**Sanae**	**77.51**	**179**	*e*		**P**	**14 35 40.8**	**-1.6**
SNAA				*e*			14 35 43.2	
SNAA	**Sanae**	**77.51**	**179**	*e*P		**P**	**14 35 40.4**	**-2.0**
	9.3nm,1.3s,mb4.3							
VNA3	**Neumayer Olymp**	**77.72**	**177**	*e*		**P**	**14 35 43.6**	**0.0**
VNA3				*e*			14 35 46.0	
VNA2	**Neumayer--Watz**	**78.14**	**178**	*e*		**P**	**14 35 46.4**	**+0.6**
VNA2				*e*			14 35 48.9	
VNA1	**Neumayer--Stat**	**78.38**	**177**	*e*		**P**	**14 35 48.1**	**+0.9**
VNA1				*e*			14 35 50.4	
PLCA	**Paso Flores**	**83.27**	**134**	P		**P**	**14 36 14.6**	**+1.2**
	1.8nm,0.7s,mb4.0,baz=214,slow=6.8,SNR=4.4							
PETK	**Petropavlovsk-**	**86.07**	**347**	P		**P**	**14 36 26.2**	**-0.4**
	2.0nm,0.7s,mb4.1,baz=121,slow=6.6,SNR=15							
NVAR	**Mina Array Bea**	**89.90**	**44**	P		**P**	**14 36 45.2**	**+0.1**
	1.1nm,0.9s,mb3.8,baz=217,slow=6.8,SNR=6.4							
NVAR	**Mina Array Bea**	**89.90**	**44**	P		**P**	**14 36 45.2**	**+0.1**
MKAR	**Makanchi Array**	**116.92**	**310**	PKP		PKPdf	14 42 26.2	-2.0
	0.4nm,0.5s,baz=129,slow=1.4,SNR=6.4							
KURK	**Kurchatov**	**120.30**	**314**	PKP		PKPdf	14 42 32.8	-1.8
	baz=113,slow=2.0							
BVAR	**Borovoye Array**	**125.71**	**316**	PKP		PKPdf	14 42 43.5	-1.4
	1.2nm,0.6s,baz=139,slow=2.0,SNR=8.1							
AKTK	**Aktyubinsk**	**133.30**	**312**	PKP		PKPdf	14 42 59.5	+0.1
AKTO	**Aktyubinsk**	**133.30**	**312**	PKP		PKPdf	14 42 59.5	+0.1
	1.9nm,0.7s,baz=86,slow=4.9,SNR=5.4							
ARCES	**ARCESS Array B**	**138.88**	**347**	PKhKP			14 42 58.8	
	1.0nm,0.5s,baz=352,slow=2.5,SNR=8.6							
ARCES				PKP		PKPdf	14 43 07.3	-1.9
	1.2nm,0.6s,baz=87,slow=3.0,SNR=9.3							
JOF	**Joensuu**	**142.41**	**337**	*e*pkp		PKPdf	14 43 10.2	-5.5
	0.6nm,0.3s							
JOF	**Joensuu**	**142.41**	**337**	*e*PKP		PKPdf	14 43 10.0	-5.7
KAF	**Kangasniemi**	**144.60**	**339**	*e*pkp		PKPdf	14 43 16.4	-3.2
	2.3nm,0.3s,baz=42,slow=3.0							
NB2	**NORSAR Subarra1**	**149.15**	**349**	PKP		PKPbc	14 43 30.1	-1.7
	comp=Z,4.2nm,0.6s,baz=19,slow=2.6							
NOA	**NORSAR Array B**	**149.15**	**349**	PKPbc		PKPbc	14 43 30.4	-1.4
	comp=Z,4.0nm,0.6s,baz=15,slow=4.2,SNR=16							
NAO01	**NORSAR Array S**	**149.38**	**350**	*e*PKPbc		PKPbc	14 43 31.6	-0.8
NAO01				*e*PKPab		PKPab	14 43 36.9	-1.6
KONO	**Kongsberg**	**150.72**	**350**	*e*PKPdf		PKPdf	14 43 29.4	-0.2
KONO				*e*PKPbc		PKPbc	14 43 34.6	-1.0
AKASG	**Malin Array Be**	**150.78**	**321**	PKPbc		PKPbc	14 43 34.7	-1.4
	comp=Z,2.5nm,0.5s,baz=53,slow=3.0,SNR=6.4							
TORD	**Torodi Ar. Bea**	**162.08**	**185**	PKP		PKPdf	14 43 43.9	-1.7
	comp=Z,0.5nm,0.7s,baz=332,slow=0.6,SNR=4.6							
TORD				PKPab		PKPab	14 44 32.8	-1.2
	comp=Z,3.6nm,0.7s,baz=169,slow=4.0,SNR=17							

*NEIC **13** 14:38:19.1±1.4, 669S×107.19E, h74km±13km, mb4.8/13, Error ellipse: s-maj=12.3km s-min=6.0km az=58.0*
*ISCJB **13** 14:38:24.4±0.3, 664S±006×10731E±005, h141km±3km, mb4.5/30, Error ellipse: s-maj=11.8km s-min=4.9km az=32.5*
*DJA **13** 14:38:24, 717S×107.10E, h126km, Mw5.0/5*
*IDC **13** 14:38:25.9±2.1, 666S×10737E, h136km±18km, mb4.0/14, mb1 4.2/15, mb1mx4.0/21, mbtmp4.1/15, MS3.1/1, Ms1 3.1/1, ms1mx2.3/36, Error ellipse: s-maj=17.7km s-min=9.8km az=49.0*
ISC 13 14:38:25.6±0.3, 666S±006×10731E±004, h136km±2km, n77, σ1§00/78, mb4.5/30, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LEM	**Lembang**	**0.35**	**118**	P		**Pn**	**14 38 44.6**	**0.0**
LEM	**Lembang**	**0.35**	**118**	S		**Sn**	**14 39 00.0**	**+1.0**
LEM	**Lembang**	**0.35**	**118**	P		**Pn**	**14 38 44.5**	**-0.1**
CBJI	**Citeko**	**0.51**	**298**	P		**Pn**	**14 38 44.0**	**-1.4**
DBJI	**Dramaga**	**0.56**	**281**	P		**Pn**	**14 38 45.7**	**0.0**
DBJI	**Dramaga**	**0.56**	**281**	S		**Sn**	**14 39 01.4**	**+0.5**
DBJI	**Dramaga**	**0.56**	**281**	P		**Pn**	**14 38 45.7**	**0.0**
SKJI	**Sukabumi**	**0.82**	**245**	P		**Pn**	**14 38 45.0**	**-2.5**
SKJI	**Sukabumi**	**0.82**	**245**	S		**Sn**	**14 38 59.8**	**-4.3**
SKJI	**Sukabumi**	**0.82**	**245**	P		**Pn**	**14 38 44.7**	**-2.8**
JCJI	**Jatiwangi**	**0.97**	**80**	P		**Pn**	**14 38 49.3**	**+0.5**
JCJI	**Jatiwangi**	**0.97**	**80**	P		**Pn**	**14 38 49.5**	**+0.7**
SBJI	**Serang**	**1.29**	**295**	P		**Pn**	**14 38 52.8**	**+0.9**
CLJI	**Cilicap**	**2.00**	**122**	P		**Pn**	**14 38 58.6**	**-1.3**
	4µm,1.2s							
BJII	**Banjamegara**	**2.48**	**106**	P		**Pn**	**14 39 06.3**	**+0.5**
KLI	**Kotabumi**	**3.02**	**306**	P		**Pn**	**14 39 15.1**	**+2.3**
SMRI	**Semarang**	**3.14**	**97**	P		**Pn**	**14 39 15.0**	**+0.8**
UGM	**Wanagama**	**3.43**	**112**	P		**Pn**	**14 39 17.3**	**-0.7**
UGM	**Wanagama**	**3.43**	**112**	S		**Sn**	**14 39 57.2**	**-1.3**
TPI	**Tanjungpandan**	**3.89**	**5**	P		**Pn**	**14 39 29.5**	**+5.3**
XMIS	**Christmas Isla**	**4.13**	**203**	*e*Pn		**Pn**	**14 39 18.2**	**-9.1**
XMIS				*e*S		**Sn**	**14 39 53.6**	**-22**
PMBI	**Palembang**	**4.49**	**326**	P		**Pn**	**14 39 37.1**	**+5.1**
SJI	**Sawahan**	**4.55**	**104**	P		**Pn**	**14 39 33.8**	**+0.9**
PPBI	**Pangkal Pinang**	**4.62**	**345**	P		**Pn**	**14 39 39.1**	**+5.3**
	215nm,0.9s,2µm0.8nm							
KRKI	**Karangkates**	**5.32**	**107**	P		**Pn**	**14 39 46.4**	**+3.3**
KSI	**Kapahiang**	**5.56**	**302**	P		**Pn**	**14 39 48.1**	**+1.7**
PBKI	**Pangkalan Bun**	**5.86**	**48**	P		**Pn**	**14 39 55.4**	**+5.0**
	422nm,1.0s,3µm1.2nm							
KMMI	**Kalianget**	**6.62**	**94**	P		**Pn**	**14 40 02.6**	**+1.9**
	94nm,1.2s,980nm0.3nm							
KHKI	**Kahang-Kahang**	**8.40**	**102**	P		**Pn**	**14 40 24.1**	**-0.5**
PDSI	**Padang**	**8.90**	**310**	P		**Pn**	**14 40 30.2**	**-1.1**
PPI	**Padang Panjang**	**9.24**	**312**	P		**Pn**	**14 40 35.1**	**-0.8**
	56nm,0.8s							
GSI	**Gunungsitoli**	**12.53**	**309**	P		**Pn**	**14 41 16.2**	**-3.1**
	100nm,0.7s							
KDI	**Kendari**	**15.48**	**81**	P		**Pn**	**14 42 01.8**	**+5.0**
BATI	**Baumata**	**16.56**	**103**	P		**Pn**	**14 42 08.4**	**-1.6**
	16nm,0.3s,baz=288,slow=2.0,SNR=19							
BATI				S		**S**	**14 45 14.4**	**-0.3**
	2.7nm,0.3s,baz=253,slow=19,SNR=5.5							
BATI				LR		LR	14 51 20.2	
	comp=Z,56nm,18.5s,baz=268,slow=47							
MBWA	**Marble Bar**	**18.77**	**141**	*e*P		**P**	**14 42 33.8**	**-0.7**
	15nm,0.7s							
CMAR	**Chiang Mai Arr**	**26.29**	**342**	P		**P**	**14 43 48.9**	**+0.3**
	2.4nm,0.7s,mb3.9,baz=179,slow=8.9,SNR=22							
CHTO	**Chiang Mai**	**26.62**	**342**	*e*P		**P**	**14 43 51.6**	**0.0**
	5.0nm,1.1s,mb4.1							
WRA	**Warramunga Arr**	**29.37**	**119**	P		**P**	**14 44 16.2**	**+0.1**
	5.5nm,0.6s,mb4.4,baz=293,slow=10,SNR=26							
WRA				PcP		PcP	14 47 20.0	+0.8
	0.9nm,0.6s,baz=304,slow=2.0,SNR=4.1							
WRAB	**Tennant Creek**	**29.38**	**119**	*e*P		**P**	**14 44 16.0**	**-0.2**
	5.1nm,0.4s,mb4.6							
WB2	**Warramunga Arr**	**29.38**	**119**	*e*P		**P**	**14 44 16.1**	**-0.1**
ASAR	**Alice Springs**	**30.64**	**126**	P		**P**	**14 44 27.4**	**+0.1**
	7.0nm,0.7s,mb4.5,baz=305,slow=8.9,SNR=90							
ASAR				PcP		PcP	14 47 23.2	+0.8
	0.8nm,0.7s,baz=275,slow=2.4,SNR=5.3							
ASAR				S		**S**	**14 49 17.8**	**-2.0**
	3.2nm,0.8s,baz=291,slow=16,SNR=12							
ODAN	**Odare**	**38.51**	**331**	*e*P		**P**	**14 45 34.6**	**-0.2**
	11nm,0.5s,mb4.7							
TAPN	**Taplejung**	**38.76**	**332**	*e*P		**P**	**14 45 37.1**	**+0.1**
RAMN	**Ramite**	**38.97**	**330**	*e*P		**P**	**14 45 38.6**	**-0.1**
	5.7nm,0.3s,mb4.6							
JIRN	**Jiri**	**39.76**	**330**	*e*P		**P**	**14 45 45.1**	**-0.1**
	7.9nm,0.4s,mb4.7							
GUN	**Gumba**	**40.12**	**330**	*e*P		**P**	**14 45 47.8**	**-0.4**
	12nm,0.7s,mb4.6							
STKA	**Stephens Creek**	**40.64**	**133**	P		**P**	**14 45 53.1**	**+0.5**
	30nm,0.5s,mb5.2,baz=307,slow=8.1,SNR=174							
STKA				PcP		PcP	14 47 52.5	+0.6
	1.9nm,0.5s,baz=297,slow=4.5,SNR=3.0							
STKA	**Stephens Creek**	**40.64**	**133**	*e*P		**P**	**14 45 52.9**	**+0.3**
STKA				PcP		PcP	14 47 52.5	+0.6
GKN	**Gorkha**	**40.83**	**329**	*e*P		**P**	**14 45 53.4**	**-0.6**
	5.0nm,0.3s,mb4.6							
KOLN	**Koldanda**	**41.19**	**327**	*e*P		**P**	**14 45 56.1**	**-0.9**
	14nm,0.6s,mb4.8							
DANN	**Dangsing**	**41.56**	**328**	*e*P		**P**	**14 45 59.3**	**-0.8**
	15nm,0.6s,mb4.8							
PYUN	**Piuthan**	**41.78**	**327**	*e*P		**P**	**14 46 01.3**	**-0.5**
	7.5nm,0.5s,mb4.6							
SONM	**Songino Array**	**54.26**	**359**	P		**P**	**14 47 39.4**	**+2.0**
	2.1nm,0.7s,mb4.0,baz=171,slow=7.4,SNR=13							
ULN	**Ulaanbaatar**	**54.29**	**360**	*e*P		**P**	**14 47 39.5**	**+1.9**
TKM2	**Tokmak 2**	**57.14**	**333**	*e*P		**P**	**14 47 57.4**	**-0.7**
	1.2nm,0.4s,mb4.1							
MK31	**Makanchi Array**	**57.67**	**340**	*e*P		**P**	**14 48 01.3**	**-0.4**
MKAR	**Makanchi Array**	**57.67**	**340**	P		**P**	**14 48 01.4**	**-0.3**
	0.7nm,0.5s,mb3.8,baz=152,slow=8.5,SNR=11							
OPO	**Ambohidratompo**	**59.61**	**252**	P		**P**	**14 48 16.7**	**+0.9**
	3.3nm,0.8s,mb4.2,baz=89,slow=5.9,SNR=5.9							
ZALV	**Zalesovo Beam**	**63.28**	**345**	P		**P**	**14 48 38.2**	**-1.5**
	0.6nm,0.

baz=319
ESL Shilin 0.95 263 *e*P **Pb 14 46 14.0 -1.2**
baz=250
ESL *e*S **Sb 14 46 25.9 -1.8**
baz=250
ILA Ilan 1.05 322 P **Pb 14 46 17.2 +0.2**
baz=310
ILA S **Sb 14 46 31.2 +0.6**
baz=310
TWE Neicheng 1.06 317 P **Pb 14 46 17.1 -0.1**
baz=316
TWE S **Sb 14 46 31.5 +0.5**
baz=316
ENTT Nioudou 1.07 311 P **Pb 14 46 17.2 -0.3**
baz=309
ENTT *e*S **Sb 14 46 31.5 +0.1**
baz=309
NNS Nan Shan 1.11 297 ⇓*i*P **Pb 14 46 17.6 -0.5**
baz=285
NNS *e*S **Sb 14 46 31.7 -0.7**
baz=285
WHF Hehuan Shan 1.11 281 ⇓*i*P **Pb 14 46 17.2 -0.9**
baz=267
WHF *e*S **Sb 14 46 31.1 -1.3**
baz=267
EHY Hungye 1.13 248 P **Pb 14 46 17.4 -0.9**
baz=246
EHY S **Sb 14 46 31.8 -1.1**
baz=246
TWB1 Santiao Chiao 1.15 338 P **Pn 14 46 18.1 -0.6**
baz=354
TWB1 *e*S **Sb 14 46 34.8 +1.2**
baz=354
TWF1 Yuli 1.21 242 ⇑*i*P **Pn 14 46 18.7 -0.9**
baz=240
TWF1 S **Sb 14 46 34.1 -1.2**
baz=240
TWT Tachien 1.21 285 P **Pn 14 46 19.5 -0.1**
baz=272
TWT S **Sb 14 46 35.4 0.0**
baz=272
IRIF Iriomote-Funau 1.23 71 P **Pn 14 46 20.1 +0.3**
IRIF *e*S **Sb 14 46 35.8 0.0**
YHNB Yeheng 1.23 307 *e*P **Pn 14 46 19.1 -0.7**
HATJ Hateruma jima 1.24 84 P **Pn 14 46 20.6 +0.6**
HATJ *e*S **Sb 14 46 37.4 +1.4**
NSK Sanguang 1.25 306 P **Pn 14 46 19.6 -0.4**
baz=291
NSK *e*S **Sb 14 46 36.9 +0.6**
baz=291
NWF Wu-fen Shan 1.29 331 ⇓P **Pn 14 46 20.2 -0.4**
baz=331
NWF *e*S **Sb 14 46 38.9 +1.4**
baz=331
CHKT Chengkung 1.30 231 ⇑*i*P **Pn 14 46 19.3 -1.6**
baz=229
TWA Mucha 1.31 323 P **Pn 14 46 21.5 +0.5**
baz=321
TWA *e*S **Sb 14 46 39.0 +0.8**
baz=321
TATO Taipei 1.36 320 *e*P **Pn 14 46 22.0 +0.4**
TAP1 Taipei 1.39 322 *e*P **Pn 14 46 22.7 +0.7**
baz=321
TAP1 S **Sn 14 46 40.9 +0.6**
baz=321
SMLT Sun Moon Lake 1.43 268 P **Pn 14 46 22.5 -0.1**
baz=266
SMLT *e*S **Sn 14 46 39.4 -1.8**
baz=266
JKRS Kuro-shima 1.45 78 P **Pn 14 46 23.7 +0.8**
JKRS *e*S **Sn 14 46 42.4 +0.7**
YUS Yu-Shan 1.45 252 ⇑*i*P **Pn 14 46 23.1 +0.2**
baz=250
YUS *e*S **Sn 14 46 40.3 -1.4**
baz=250
TYC Yuchr 1.47 269 P **Pn 14 46 22.8 -0.3**
baz=267
TYC *e*S **Sn 14 46 41.0 -1.2**
baz=267
TWS1 Kuangyinshan 1.50 321 *e*P **Pn 14 46 24.0 +0.4**
baz=320
TWS1 *e*S **Sn 14 46 43.9 +0.9**
baz=320
NSTT Nanjuang 1.50 298 P **Pn 14 46 23.9 +0.3**
baz=296
NSTT S **Sn 14 46 42.3 -0.6**
baz=296
ELDTW Lidau 1.52 241 ⇑*i*P **Pn 14 46 22.9 -0.9**
baz=239
ELDTW *e*S **Sn 14 46 40.8 -2.6**
baz=239
TWY Chenhua 1.55 330 *e*P **Pn 14 46 25.4 +1.1**
baz=329
NCU National Centr 1.55 312 *e*P **Pn 14 46 24.6 +0.3**
baz=310
NCU *e*S **Sn 14 46 45.2 +0.9**
baz=310
ALS Alishan 1.57 255 *i*P **Pn 14 46 25.1 +0.5**
baz=253
ALS *e*S **Sn 14 46 44.0 -0.8**
baz=253
TWQ1 Liyutan 1.59 285 P **Pn 14 46 25.6 +0.8**
baz=283
TWQ1 *e*S **Sn 14 46 44.7 -0.6**
baz=283
JIJ Ishigaki jima 1.60 74 P **Pn 14 46 25.0 +0.1**
JIJ *e*S **Sn 14 46 44.7 -0.7**
HSN Hsinchu 1.61 303 *e*P **Pn 14 46 25.5 +0.5**
baz=302
HSN *e*S **Sn 14 46 45.5 -0.2**
baz=302
NSY Sanyi 1.62 287 *e*P **Pn 14 46 25.8 +0.5**
baz=285
NSY *e*S **Sn 14 46 45.7 -0.3**
baz=285
WNT Mingjian 1.62 268 *e*P **Pn 14 46 26.3 +1.0**
baz=266
WNT *e*S **Sn 14 46 46.3 +0.2**
baz=266
TCU Taichung 1.64 278 *e*P **Pn 14 46 26.5 +1.0**
baz=275
TCU *e*S **Sn 14 46 46.9 +0.3**
baz=275
CHN5 Tsauling 1.67 259 P **Pn 14 46 26.6 +0.7**
baz=257
CHN5 *e*S **Sn 14 46 47.2 +0.1**
baz=257
TTN Taitung 1.69 226 *e*P **Pn 14 46 25.9 -0.2**
baz=225
TTN *e*S **Sn 14 46 46.3 -1.2**
baz=225
TWG Pinlang 1.69 229 *e*P **Pn 14 46 25.7 -0.5**
baz=238
TWG *e*S **Sn 14 46 44.8 -2.8**
baz=238
PCYT Pengchaiyu 1.72 348 *e*P **Pn 14 46 25.8 -0.8**
baz=348
STYT Tauyuan 1.74 244 P **Pn 14 46 26.9 0.0**
baz=242
STYT *e*S **Sn 14 46 48.2 -0.7**
baz=242
WGK Gukeng 1.75 262 *e*P **Pn 14 46 27.5 +0.4**
baz=260
WGK *e*S **Sn 14 46 49.4 +0.2**
baz=260
CHN4 Tsaushan 1.81 252 *e*P **Pn 14 46 28.4 +0.6**
baz=250
CHN4 *e*S **Sn 14 46 51.1 +0.5**
baz=250
WTP Ta-pu 1.83 248 *e*P **Pn 14 46 28.8 +0.8**
baz=246
WTP *e*S **Sn 14 46 51.2 +0.1**
baz=246
CHN2 Minshiung 1.86 258 *e*P **Pn 14 46 30.1 +1.6**
baz=256
CHN2 *e*S **Sn 14 46 52.7 +0.8**
baz=256
CHY Chiayi 1.92 257 *e*P **Pn 14 46 30.5 +1.2**
baz=255
CHY *e*S **Sn 14 46 53.5 +0.3**
baz=255
SGST Jiashian 1.92 244 *e*P **Pn 14 46 30.0 +0.7**
baz=235
SGST *e*S **Sn 14 46 54.0 +0.6**
baz=235
ECL Taimali 1.92 226 *e*P **Pn 14 46 27.9 -1.5**
baz=234
CHN1 Nanshi 1.92 248 *e*P **Pn 14 46 30.7 +1.3**
baz=246
CHN1 *e*S **Sn 14 46 54.4 +0.9**
baz=246
TWK Hsinying 1.93 250 *e*P **Pn 14 46 30.6 +1.1**
baz=248
TWK *e*S **Sn 14 46 53.9 +0.4**
baz=248
WTCT Ta-ch'eng 2.00 268 *e*P **Pn 14 46 31.6 +1.2**
baz=280
WTCT *e*S **Sn 14 46 56.5 +1.3**
baz=280
SSD Sandimen 2.06 235 *e*P **Pn 14 46 31.8 +0.5**
baz=225
SSD *e*S **Sn 14 46 56.3 -0.3**
baz=225
LAY Lan-yu 2.07 204 *e*P **Pn 14 46 29.7 -1.7**
baz=203
WSF Szhu 2.07 262 *e*P **Pn 14 46 32.3 +0.9**
baz=260
WSF *e*S **Sn 14 46 58.2 +1.2**
baz=260
CHN8 Yiju 2.14 255 *e*P **Pn 14 46 33.1 +0.7**
baz=253
CHN8 *e*S **Sn 14 46 59.8 +0.9**
baz=253
JTJ Tarama 2.16 71 P **Pn 14 46 33.1 +0.4**
SGLT Touru 2.17 237 *e*P **Pn 14 46 34.3 +1.5**
baz=235
SGLT *e*S **Sn 14 47 00.0 +0.4**
baz=235
TWM1 Shoushan 2.17 240 *e*P **Pn 14 46 35.2 +2.4**
baz=238
SCLT Jiali 2.21 250 *e*P **Pn 14 46 34.6 +1.3**
baz=248
SCLT *e*S **Sn 14 47 02.2 +1.6**
baz=248
TAI1 Yung-k'ang 2.23 247 *e*P **Pn 14 46 34.6 +0.9**
baz=259
TAI1 *e*S **Sn 14 47 02.4 +1.3**
baz=259
SCZT Fangliau 2.30 228 *e*P **Pn 14 46 36.6 +2.0**
baz=221
SCZT *e*S **Sn 14 47 03.5 +0.8**
baz=221
TSEB Hengchuen, Pin 2.48 216 *e*P **Pn 14 46 38.5 +1.4**
baz=216
TSEB *e*S **Sn 14 47 06.8 -0.4**
baz=216
HEN Hengchun 2.49 220 *e*P **Pn 14 46 38.2 +1.0**
baz=219
HEN *e*S **Sn 14 47 06.7 -0.8**
baz=219
TWP Hsiaoliuchiu 2.50 231 *e*P **Pn 14 46 39.6 +2.3**
baz=244
TWP *e*S **Sn 14 47 11.1 +3.6**
baz=244
TWK1 Hengchun 2.50 218 *e*P **Pn 14 46 37.4 +0.1**
baz=217
TWK1 *e*S **Sn 14 47 07.2 -0.5**
baz=217
PNG Penghu 2.69 263 *e*P **Pn 14 46 39.9 0.0**
baz=260
PNG *e*S **Sn 14 47 12.1 -0.2**
baz=260
JOGS Gusukube 2.81 72 P **Pn 14 46 43.5 +1.9**
KNM Kinmen 3.71 278 *e*P **Pn 14 46 54.9 +1.0**
baz=275
KNM *e*S **Sn 14 47 37.3 -0.2**
baz=275
JKE Kume jima 2 4.59 58 P **Pn 14 47 05.8 -0.2**
JIH Iheya 5.86 57 P **Pn 14 47 22.5 -1.0**
JOW Kunigami 6.00 60 P **Pn 14 47 24.0 -1.4**
2.9nm,0.3s,baz=182,slow=13,SNR=9.9
JOW S **Sn 14 48 32.5 -1.5**
0.4nm,0.3s,baz=119,slow=19,SNR=2.2
JOW Kunigami 6.00 60 P **Pn 14 47 24.4 -1.0**
JTK Tokunoshima 6.99 55 P **Pn 14 47 37.0 -2.1**
JAM Amami Oshima 7.81 54 P **Pn 14 47 48.2 -2.2**
KSRS Korea Array 14.27 18 P **Pn 14 49 20.4 +1.7**
0.6nm,0.3s,baz=197,slow=11,SNR=21
KSRS LR LR 14 54 59.7
comp=Z,80nm,19.1s,baz=352,slow=38
ULN Ulaanbaatar 26.84 337 *e*P **P 14 51 34.6 -2.5**
SONM Songino Array 27.06 336 P **P 14 51 37.0 -2.0**
2.2nm,0.8s,mb3.8,baz=152,slow=9.4,SNR=8.9
SONM LR LR 15 03 31.2
comp=Z,110nm,18.1s,MS3.5,baz=353,slow=39
MK31 Makanchi Array 39.33 316 *e*P **P 14 53 24.5 -1.3**
MKAR Makanchi Array 39.33 316 P **P 14 53 24.6 -1.1**
1.8nm,0.6s,mb4.0,baz=103,slow=9.6,SNR=20
ZALV Zalesovo Beam 41.09 327 P **P 14 53 37.8 -2.4**
3.3nm,0.6s,mb4.1,baz=113,slow=8.3,SNR=14
TKM2 Tokmak 2 42.83 308 *e*P **P 14 53 54.5 -0.1**
4.0nm,0.8s,mb4.2
KURK Kurchatov 43.03 320 P **P 14 53 54.6 -1.6**
baz=112,slow=7.5
KURK Kurchatov 43.03 320 *e*P **P 14 53 54.1 -2.0**
WRAB Tennant Creek 45.12 164 *e*P **P 14 54 12.9 -0.2**
2.3nm,0.9s,mb4.0
WRA Warramunga Arr 45.12 164 P **P 14 54 12.9 -0.3**
1.2nm,0.7s,mb3.9,baz=348,slow=8.9,SNR=8.7
WB2 Warramunga Arr 45.13 164 *e*P **P 14 54 12.8 -0.4**
BVAR Borovoye Array 48.60 321 P **P 14 54 38.3 -1.8**
0.9nm,0.5s,mb4.1,baz=109,slow=8.5,SNR=9.1
ASAR Alice Springs 48.60 166 P **P 14 54 41.1 +0.8**
0.6nm,0.5s,mb3.9,baz=341,slow=6.9,SNR=16
NOA NORSAR Array B 78.98 332 P **P 14 57 57.6 -2.7**
0.6nm,0.7s,mb3.6,baz=55,slow=7.7,SNR=2.4
NOA LR LR 15 36 33.6
comp=Z,41nm,18.3s,MS3.8,baz=285,slow=38

*ISCJB **13** 15:14:00.3±0.7,296S±0.1×178.7W±0.1, h197km±8km, mb4.0/8, Error ellipse: s-maj=19.8km s-min=16.5km az=6.6*
*IDC **13** 15:14:04.7±0.9, 2974S×178.82W, h214km±11km, mb3.8/6, mb1 3.8/7, mb1mx3.6/16, mbtmp3.8/7, Error ellipse: s-maj=27.8km s-min=18.5km az=42.0*
*NEIC **13** 15:14:04.3±0.9, 2956S×178.78W, h218km±11km, mb4.4/3, Error ellipse: s-maj=21.5km s-min=15.3km az=107.0*
ISC 13 15:14:01.5±0.7, 296S±01×178.7W±01, h196km±8km, n21, σ0§93/25, mb4.0/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
RAO	**Raoul Island**	**0.74**	**62**	P		**Pn**	**15 14 35.6**	**+6.3**
	518nm,0.3s,baz=95,slow=21,SNR=24							
RAO				S		**Sn**	**15 14 51.0**	**+0.4**
	965nm,0.3s,baz=76,slow=24,SNR=11							
RAO	**Raoul Island**	**0.74**	**62**	*e*Pg		**Pn**	**15 14 35.4**	**+6.2**
RAO				S		**Sn**	**15 14 51.0**	**+0.4**
URZ	**Urewera**	**9.32**	**201**	P		**Pn**	**15 16 06.7**	**-5.1**
	1.2nm,0.3s,baz=243,slow=12,SNR=18							
URZ				S		**Sn**	**15 17 45.9**	**-10**
	17nm,0.3s,baz=264,slow=19,SNR=13							
RPZ	**Rata Peaks**	**16.30**	**207**	P		**Pn**	**15 17 38.2**	**-1.2**
	0.5nm,0.3s,baz=24,slow=20,SNR=3.1							
RPZ				S		**S**	**15 20 20.7**	**-19**
	2.0nm,0.3s,baz=333,slow=13,SNR=16							
AFI	**Afiamalu**	**16.87**	**24**	P		**Pn**	**15 17 45.3**	**-1.2**
	1.6nm,0.3s,baz=148,slow=19,SNR=4.7							
AFI				S		**S**	**15 20 38.3**	**-13**
	0.9nm,0.3s,baz=133,slow=19,SNR=2.4							
STKA	**Stephens Creek**	**34.10**	**256**	P		**P**	**15 20 28.4**	**+0.8**
	3.4nm,0.9s,mb3.9,baz=93,slow=9.5,SNR=7.1							
STKA	**Stephens Creek**	**34.10**	**256**	*e*P		**P**	**15 20 28.3**	**+0.7**
ASAR	**Alice Springs**	**42.58**	**266**	P		**P**	**15 21 38.4**	**0.0**
	0.8nm,0.5s,mb3.4,baz=105,slow=6.6,SNR=20							
ASAR				PcP		PcP	15 23 29.1	+2.2
	4.4nm,1.4s,baz=117,slow=3.8,SNR=5.9							
WB2	**Warramunga Arr**	**43.49**	**272**	*e*P		**P**	**15 21 45.5**	**-0.1**
WRAB	**Tennant Creek**	**43.49**	**272**	*e*P		**P**	**15 21 45.5**	**-0.1**
	2.6nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**43.50**	**272**	P		**P**	**15 21 45.6**	**-0.1**
	2.8nm,0.5s,mb4.0,baz=110,slow=8.0,SNR=26							
WRA				PcP		PcP	15 23 30.6	+0.5
	0.7nm,0.8s,baz=108,slow=3.6,SNR=3.3							
SBA	**Scott Base**	**48.78**	**184**	*e*P		**P**	**15 22 28.9**	**+2.8**
	7.3nm,0.3s,mb4.5							
QSPA	**South Pole Qui**	**60.50**	**180**	P		**P**	**15 23 51.5**	**+1.3**
	6.4nm,0.6s,mb4.4,baz=37,slow=1.1,SNR=16							
QSPA	**South Pole Qui**	**60.50**	**180**	*e*P		**P**	**15 23 51.3**	**+1.1**
	5.0nm,0.5s,mb4.4							
MAW	**Mawson**	**72.85**	**201**	P		**P**	**15 25 08.2**	**-0.2**
	3.6nm,0.8s,mb4.1,baz=146,slow=6.0,SNR=15							
SNAA	**Sanae**	**78.96**	**179**	*e*		**P**	**15 25 41.0**	**-1.9**
SNAA				*e*			15 25 43.0	
SNAA				*e*			15 25 46.4	
VNA3	**Neumayer Olymp**	**79.13**	**176**	*e*		**P**	**15 25 43.5**	**-0.3**
VNA3				*e*			15 25 45.7	
VNA3				*e*			15 25 49.4	
VNA2	**Neumayer--Watz**	**79.56**	**177**	*e*		**P**	**15 25 46.4**	**+0.3**
	baz=191,slow=5.5							
VNA2				*e*			15 25 48.4	
VNA2				*e*			15 25 52.3	
VNA1	**Neumayer--Stat**	**79.79**	**177**	*e*		**P**	**15 25 47.6**	**+0.2**
VNA1				*e*			15 25 49.7	
VNA1				*e*			15 25 53.5	
PETK	**Petropavlovsk-**	**84.90**	**346**	P		**P**	**15 26 14.8**	**+1.0**
	1.2nm,0.6s,mb3.8,baz=97,slow=9.5,SNR=4.4							
TORD	**Torodi Ar. Bea**	**163.62**	**181**	PKPab		PKPab	15 34 33.5	-0.5
	1.8nm,0.6s,baz=177,slow=3.7,SNR=14							

*CSEM **13** 15:39:08.6±0.1, 3886N×2677E, h12km, MD2.9, Error ellipse: s-maj=3.3km s-min=2.9km az=92.0*
*ISCJB **13** 15:39:10.1±0.9, 3890N±003×2678E±003, h13km±7km, Error ellipse: s-maj=5.0km s-min=4.2km az=36.6*
*DDA **13** 15:39:10.0, 3889N×2686E, h7km±5km, Md2.9*
*THE **13** 15:39:10.9, 3887N×2673E, h15km±1km, ML3.0/2, Error ellipse: s-maj=3.0km s-min=1.0km az=273.0*
ISC 13 15:39:10.2±0.5, 3889N±003×2679E±003, h13km±4km, n20, σ0§92/40, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AYVA	**Ayvalik**	**0.42**	**349**	*i* P		**Pg**	**15 39 18.6**	**0.0**
AYVA				*i* S		**Sg**	**15 39 24.7**	**+0.4**
PRK	**Paraskevi**	**0.54**	**311**	P		**Pg**	**15 39 20.6**	**-0.1**
PRK				S		**Sg**	**15 39 29.1**	**+1.3**
URLA	**Izmir**	**0.55**	**196**	*i* P		**Pg**	**15 39 20.2**	**-0.8**
URLA				*i* S		**Sg**	**15 39 30.7**	**+2.3**
URLA	**Izmir**	**0.55**	**196**	*i* P		**Pg**	**15 39 20.2**	**-0.8**
URLA				*i* S		**Sg**	**15 39 30.7**	**+2.3**
KDAG	**Bornova**	**0.62**	**143**	*i* P		**Pg**	**15 39 21.4**	**-0.8**
KDAG				*i* S		**Sg**	**15 39 30.0**	**-0.3**
CHOS	**Chios island**	**0.77**	**229**	P		**Pg**	**15 39 24.1**	**-0.9**
CHOS				S		**Sg**	**15 39 35.4**	**+0.3**
AKHS	**Akhisar**	**0.80**	**91**	*i* P		**Pg**	**15 39 24.7**	**-1.0**
AKHS				*i* S		**Sg**	**15 39 35.5**	**-0.7**
BALY	**Balya**	**1.06**	**37**	*i* P		**Pb**	**15 39 29.6**	**-0.9**
BALY				*i* S		**Sb**	**15 39 45.7**	**+1.4**
MANT	**Manisa**	**1.44**	**106**	*i* P		**Pn**	**15 39 36.8**	**+0.8**
MANT				*i* S		**Sn**	**15 39 55.2**	**+0.4**
DEMI	**Demirci**	**1.51**	**84**	*i* P		**Pn**	**15 39 38.7**	**+1.8**
DEMI				*i* S		**Sn**	**15 39 56.5**	**+0.1**
LIA	**Limnos Island**	**1.60**	**309**	P		**Pn**	**15 39 37.9**	**-0.3**
LIA				S		**Sn**	**15 39 57.5**	**-1.2**
ALN	**Alexandroupoli**	**2.08**	**344**	P		**Pn**	**15 39 44.6**	**-0.2**
ALN				S		**Sn**	**15 40 09.8**	**-0.8**

*ISCJB **13** 15:50:36.0±0.8, 5812S±007×645W±04, h6km, mb4.0/6, MS3.6/2, Error ellipse: s-maj=26.9km s-min=9.4km az=176.9*
*IDC **13** 15:50:36.7±2.2, 5810S×6434W, h0km, mb4.0/4, mb1 4.1/5, mb1mx4.0/12, mbtmp4.0/5, ML4.6/1, MS3.5/3, Ms1 3.5/3, ms1mx3.2/19, Error ellipse: s-maj=91.2km s-min=27.5km az=75.0*
*NEIC **13** 15:50:38.0±0.6, 5813S×6447W, h10km, mb4.1/4, Error ellipse: s-maj=22.5km s-min=7.6km az=90.0*
ISC 13 15:50:39.0±5.9, 5812S±007×646W±04, h14km±40km, n15, σ0§79/15, mb4.0/6, MS3.6/2, Drake Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PMSA	**Palmer Station**	**6.69**	**178**	*e*Pn		**Pn**	**15 52 16.0**	**-0.6**
EFI	**East Falkland**	**7.46**	**33**	*e*Pn		**Pn**	**15 52 27.1**	**-0.2**
PLCA	**Paso Flores**	**17.81**	**345**	P		**Pn**	**15 54 47.1**	**+0.9**
	0.5nm,0.3s,baz=174,slow=14,SNR=10							
PLCA				LR		LR	16 01 48.9	
	comp=Z,90nm,19.1s,baz=193,slow=38							
PLCA	**Paso Flores**	**17.81**	**345**	*e*P		**Pn**	**15 54 46.9**	**+0.6**
	4.9nm,0.8s							
PLCA				LR		LR	16 01 48.9	
VNA3	**Neumayer Olymp**	**25.76**	**142**	*e*		**P**	**15 56 09.8**	**+1.1**
VNA3				*e*		pP	15 56 11.8	-1.1
VNA3				*e*			15 56 17.4	
VNA1	**Neumayer--Stat**	**26.21**	**141**	*e*		**P**	**15 56 17.1**	**+4.3**
VNA1				*e*			15 56 18.7	
VNA1				*e*			15 56 25.0	
VNA2	**Neumayer--Watz**	**26.50**	**142**	*e*		**P**	**15 56 17.0**	**+1.6**
	baz=268,slow=11							
VNA2				*e*		pP	15 56 19.4	-0.2
VNA2				*e*			15 56 25.6	
SNAA	**Sanae**	**27.94**	**143**	*e*		**P**	**15 56 27.4**	**-0.9**
SNAA				*e*			15 56 28.8	
SNAA				*e*			15 56 35.0	
SNAA	**Sanae**	**27.94**	**143**	*e*P		**P**	**15 56 27.6**	**-0.7**
	3.5nm,0.9s,mb4.0							
QSPA	**South Pole Qui**	**32.12**	**180**	P		**P**	**15 57 05.2**	**0.0**
	6.1nm,1.0s,mb4.4							
LPAZ	**La Paz**	**41.84**	**355**	P		**P**	**15 58 28.5**	**+0.2**
	1.4nm,0.5s,mb3.8,baz=180,slow=5.9,SNR=7.1							
LPAZ				LR		LR	16 18 07.7	
	comp=Z,77nm,18.0s,MS3.6,baz=244,slow=40							
LPAZ	**La Paz**	**41.84**	**355**	*e*P		**P**	**15 58 28.3**	**0.0**
	2.9nm,0.9s,mb3.9							
LPAZ				LR		LR	16 18 07.7	
BDFB	**Brasilia**	**44.17**	**23**	P		**P**	**15 58 46.4**	**-0.9**
	1.5nm,0.7s,mb3.9,baz=146,slow=18,SNR=4.2							
MAW	**Mawson**	**48.77**	**156**	P		**P**	**15 59 22.1**	**-0.6**
	2.2nm,1.0s,mb4.1,baz=227,slow=4.9,SNR=3.9							
MAW				LR		LR	16 18 48.3	
	comp=Z,58nm,18.6s,MS3.6,baz=32,slow=35							
TORD	**Torodi Ar. Bea**	**89.06**	**63**	P		**P**	**16 03 33.1**	**-0.3**
	0.5nm,1.0s,mb3.8,baz=224,slow=6.0,SNR=2.8							

IDC 13 16:02:11.2±26.0, 2011S×17837W, h634km±262km, mb3.1/4, mb1 3.2/4, mb1mx2.9/16, mbtmp3.1/4, Error ellipse: s-maj=197.8km s-min=101.7km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CTA	**Charters Tower**	**33.19**	**264**	P		P	16 07 58.4	+0.2
	3.9nm,0.6s,baz=92,slow=11,SNR=3.1							
STKA	**Stephens Creek**	**37.65**	**244**	P		P	16 08 34.4	-0.3
	0.6nm,0.5s,baz=70,slow=12,SNR=4.9							
ASAR	**Alice Springs**	**44.27**	**256**	P		P	16 09 27.2	+0.3
	2.9nm,0.5s,baz=95,slow=7.5,SNR=61							
WRA	**Warramunga Arr**	**44.31**	**262**	P		P	16 09 27.4	0.0
	1.5nm,0.3s,baz=97,slow=7.5,SNR=81							
AKASG	**Malin Array Be**	**142.50**	**331**	PKP		PKPdf	16 20 32.5	-0.6
	0.7nm,0.5s,baz=40,slow=5.0,SNR=6.0							

ISC 13 16:07:57.3±1.8, 3651N±007×704E±02, h132km±19km, n20, σ1§02/23, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
THN	**Thein Dam**	**5.98**	**131**	*e*P		**Pn**	**16 09 23.8**	**+0.3**
THN				*e*S		**Sn**	**16 10 30.4**	**-0.4**
DLH	**Dalhousie**	**6.06**	**129**	*e*P		**Sn**	**16 10 32.0**	**-0.7**
AML	**Almayashu**	**6.17**	**23**	P		**Pn**	**16 09 27.1**	**+1.1**
	SNR=25							
KK31	**Karatay Array**	**6.59**	**1**	⇓P		**Pn**	**16 09 31.2**	**-0.5**
	2.3nm,0.4s,baz=166,slow=6.1,SNR=26							
KK31				⇓S		**Sn**	**16 10 43.2**	**-2.2**
	1.6nm,0.4s,baz=175,slow=16,SNR=3.9							
EKS2	**Erkin-Say**	**6.68**	**22**	P		**Pn**	**16 09 33.5**	**+0.7**
	SNR=5.5							
AAK	**Ala-Archa**	**6.88**	**26**	P		**Pn**	**16 09 36.2**	**+0.5**
	SNR=6.7							
USP	**Ospenovka**	**7.45**	**24**	P		**Pn**	**16 09 43.0**	**-0.2**
	SNR=7.5							
TKM2	**Tokmak 2**	**7.55**	**30**	⇑P		**Pn**	**16 09 45.0**	**+0.4**
	2.4nm,0.6s							
TKM2				⇓S		**Sn**	**16 11 08.9**	**+0.2**
	3.8nm,0.8s							
TKM2	**Tokmak 2**	**7.55**	**30**	P		**Pn**	**16 09 44.9**	**+0.3**
	SNR=9.9							
PYUN	**Piuthan**	**13.54**	**125**	*e*P		**Pn**	**16 11 05.5**	**+1.5**
DANN	**Dangsing**	**13.89**	**122**	*e*P		**Pn**	**16 11 09.9**	**+1.4**
	5.0nm,0.4s							
KOLN	**Koldanda**	**14.16**	**124**	*e*P		**Pn**	**16 11 13.0**	**+1.1**
GKN	**Gorkha**	**14.71**	**121**	*e*P		**Pn**	**16 11 20.0**	**+1.1**

7.2nm,0.4s
KKN Kakani 15.29 120 *e*P Pn 16 11 25.8 -0.3
4.2nm,0.2s
PKI Pulchoki 15.52 121 *e*P Pn 16 11 27.8 -1.1
GUN Gumba 15.64 119 *e*P Pn 16 11 28.9 -1.5
JIRN Jiri 16.01 119 *e*P Pn 16 11 34.2 -0.7
16nm,0.5s
RAMN Ramite 16.73 120 *e*P Pn 16 11 39.6 -4.2
17nm,0.7s
TAPN Taplejung 17.27 117 *e*P Pn 16 11 46.7 -3.7
ODAN Odare 17.34 119 *e*P Pn 16 11 46.4 -4.8

IDC 13 16:29:29.5±11.0, 250N×12759E, h75km±107km, mb3.2/5, mb1 3.3/5, mb1mx3.1/15, mbtmp3.2/5, Error ellipse: s-maj=149.3km s-min=19.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.26**	**164**	P	P	16 34 29.8	-0.9
	0.6nm,0.3s,baz=343,slow=9.3,SNR=14						
ASAR	**Alice Springs**	**26.72**	**167**	P	P	16 35 01.2	-0.7
	0.2nm,0.4s,baz=345,slow=7.5,SNR=14						
ASAR				PcP	PcP	16 38 24.6	+0.8
	0.3nm,0.9s,baz=4.1,slow=2.6,SNR=4.6						
STKA	**Stephens Creek**	**36.68**	**160**	P	P	16 36 29.4	+0.3
	0.7nm,0.7s,baz=343,slow=14,SNR=2.7						
MKAR	**Makanchi Array**	**59.05**	**325**	P	P	16 39 22.1	+0.3
	0.3nm,0.5s,baz=119,slow=7.6,SNR=5.5						
KURK	**Kurchatov**	**63.24**	**328**	P	P	16 39 50.6	+0.6
	baz=132,slow=5.3						
BVAR	**Borovoye Array**	**68.82**	**327**	P	P	16 40 25.2	-0.6
	0.3nm,0.5s,baz=116,slow=3.4,SNR=3.6						

*ISCJB **13** 16:54:39.0±0.6, 1080N±004×6241W±003, h94km±6km, Error ellipse: s-maj=6.5km s-min=4.1km az=179.1*
*FUNV **13** 16:54:39.7, 1091N×6230W, h86km, MW3.4*
*NEIC **13** 16:54:41.5, 1060N×6226W, h93km, MD3.1(TRN), After TRN.*
*TRN **13** 16:54:41.1, 1066N×6230W, h92km, MD3.1*
ISC 13 16:54:40.0±0.6, 1082N±004×6241W±003, h88km±6km, n27, σ0§80/46, 3C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.25**	**133**	↑*i*P	**Pn**	**16 54 52.9**	**0.0**
GUIV				*e*S	**Sn**	**16 55 01.9**	**-0.5**
TCE	**Chacachacare**	**0.65**	**100**	↑*i*P	**Pn**	**16 54 56.6**	**+0.8**
TCE				*e*S	**Sn**	**16 55 07.8**	**+0.1**
CRUV	**Carupano**	**0.83**	**260**	‖*i*P	**Pn**	**16 54 57.8**	**+0.2**
CRUV				*e*S	**Sn**	**16 55 10.8**	**0.0**
GUNV	**Guanoco**	**0.84**	**219**	‖*e*P	**Pn**	**16 54 58.7**	**+1.0**
GUNV				*e*S	**Sn**	**16 55 12.3**	**+1.3**
ITEV	**Isla Los Testi**	**0.89**	**307**	‖*i*P	**Pn**	**16 54 57.8**	**-0.4**
ITEV				*e*S	**Sn**	**16 55 10.8**	**-1.2**
TRN	**Trinidad (W)**	**1.00**	**100**	↑*i*P	**Pn**	**16 54 59.4**	**-0.1**
TRN				*e*S	**Sn**	**16 55 13.6**	**-0.6**
TPP	**Pointe-a-Pierr**	**1.06**	**118**	*e*P	**Pn**	**16 54 59.8**	**-0.5**
TPP				*e*S	**Sn**	**16 55 17.0**	**+1.6**
TPP				*e*S	**Sn**	**16 55 19.9**	**+4.4**
TPP	**Pointe-a-Pierr**	**1.06**	**118**	*e*P	**Pn**	**16 54 59.8**	**-0.5**
TPP				*e*S	**Sn**	**16 55 13.4**	**-2.1**
TBH	**Brigand Hill**	**1.36**	**104**	*e*P	**Pn**	**16 55 04.8**	**+1.0**
TBH				*e*S	**Sn**	**16 55 22.7**	**+0.8**
TBH	**Brigand Hill**	**1.36**	**104**	*e*P	**Pn**	**16 55 03.8**	**0.0**
TBH				*e*S	**Sn**	**16 55 20.2**	**-1.7**
GRGR	**Grenville**	**1.50**	**29**	*e*Pn	**Pn**	**16 55 04.7**	**-0.9**
GRW	**Mount Saint Ca**	**1.52**	**29**	*e*P	**Pn**	**16 55 10.2**	**+4.3**
GRW				*e*S	**Sn**	**16 55 26.1**	**+0.6**
GRW	**Mount Saint Ca**	**1.52**	**29**	*e*P	**Pn**	**16 55 09.4**	**+3.5**
GRW				*e*S	**Sn**	**16 55 28.2**	**+2.7**
TPR	**Prospect**	**1.64**	**77**	*e*P	**Pn**	**16 55 08.0**	**+0.6**
TPR				*e*S	**Sn**	**16 55 28.4**	**+0.2**
BOT	**Bacolet**	**1.69**	**78**	*e*P	**Pn**	**16 55 08.4**	**+0.3**
PCRV	**Puerto La Cruz**	**2.28**	**254**	*e*P	**Pn**	**16 55 16.9**	**+1.0**
PCRV				*e*S	**Sn**	**16 55 43.5**	**+0.2**
IBAV	**Isla La Blanqu**	**2.35**	**295**	*e*P	**Pn**	**16 55 16.3**	**-0.5**
IBAV				*e*S	**Sn**	**16 55 44.0**	**-0.9**
RIOV	**Rio Grande**	**2.79**	**168**	*e*P	**Pn**	**16 55 23.2**	**+0.5**
RIOV				*e*S	**Sn**	**16 55 53.9**	**-1.6**
PRGV	**PARIAGUAN**	**3.01**	**227**	*e*P	**Pn**	**16 55 26.5**	**+0.9**
PRGV				*e*S	**Sn**	**16 56 00.8**	**0.0**
GURV	**El Guri**	**3.11**	**192**	*e*P	**Pn**	**16 55 26.7**	**-0.3**
CUPV	**Cœpira**	**3.41**	**258**	*e*P	**Pn**	**16 55 31.9**	**+0.9**
CUPV				*e*S	**Sn**	**16 56 10.3**	**-0.2**
BIRV	**Birongo**	**3.81**	**265**	*e*P	**Pn**	**16 55 36.7**	**+0.3**
MERV	**Las Mercedes**	**4.14**	**248**	‖*e*P	**Pn**	**16 55 41.1**	**+0.2**
LUEV	**Luepa**	**5.03**	**169**	*e*P	**Pn**	**16 55 52.0**	**-1.0**
CAOV	**Caicara del Or**	**5.20**	**228**	*e*P	**Pn**	**16 55 55.4**	**+0.1**
TURV	**Turiamo**	**5.35**	**267**	*e*P	**Pn**	**16 56 56.6**	**-0.8**
BAUV	**El Baul**	**5.86**	**252**	*e*P	**Pn**	**16 56 03.4**	**-0.8**

IDC 13 17:19:49.0±1.8, 203N×12366E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/14, mbtmp3.1/3, Error ellipse: s-maj=206.6km s-min=26.5km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.22**	**155**	P	P	17 25 07.5	-0.1
	0.2nm,0.3s,baz=333,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**27.42**	**159**	P	P	17 25 37.3	+0.7
	0.3nm,1.0s,baz=339,slow=9.1,SNR=4.0						
MKAR	**Makanchi Array**	**57.26**	**327**	P	P	17 29 38.0	-0.3
	0.2nm,0.4s,baz=116,slow=8.3,SNR=5.6						

IDC 13 17:27:14.9±3.2, 141N×9730E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/16, mbtmp3.4/5, Error ellipse: s-maj=121.9km s-min=23.1km az=61.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.02**	**5**	P	Pn	17 31 15.0	+0.5
	baz=197,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**42.06**	**122**	P	P	17 35 08.8	+0.1
	0.6nm,0.9s,baz=301,slow=9.1,SNR=7.1						
ASAR	**Alice Springs**	**43.44**	**127**	P	P	17 35 19.8	-0.1
	0.2nm,0.7s,baz=303,slow=8.1,SNR=5.4						
SONM	**Songino Array**	**46.91**	**8**	P	P	17 35 47.1	0.0
	0.7nm,0.7s,baz=179,slow=3.1,SNR=4.1						
MKAR	**Makanchi Array**	**47.06**	**346**	P	P	17 35 48.2	-0.1
	0.3nm,0.4s,baz=158,slow=9.1,SNR=12						

*IDC **13** 17:50:57.1±1.9, 3015N×8345E, h0km, mb3.3/4, mb1 3.6/6, mb1mx3.5/20, mbtmp3.4/6, ML3.8/2, Error ellipse: s-maj=66.3km s-min=20.9km az=66.0*
*NEIC **13** 17:51:00.1±0.9, 3008N×8327E, h35km, mb4.2/2, Error ellipse: s-maj=23.8km s-min=12.9km az=51.0*
*ISCJB **13** 17:51:05.0±1.4, 3040N±009×838E±0.1, h79km±20km, mb3.5/5, Error ellipse: s-maj=17.6km s-min=13.1km az=143.6*
*NDI **13** 17:51:08.2±3.0, 3037N×8361E, h35km, ML3.8, mb4.2(NEIC)*
ISC 13 17:51:05.4±1.0, 3041N±009×8377E±008, h58km±15km, n21, σ1§46/23, mb3.6/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**3.20**	**255**	*e*P	**Pn**	**17 51 55.7**	**+2.5**
PTH				*ex*	x	17 52 29.8	
LGTI	**Lohaghat**	**3.21**	**253**	*e*P	**Pn**	**17 51 54.9**	**+1.6**
JOSI	**Joshimath**	**3.64**	**273**	*e*P	**Pn**	**17 51 59.7**	**+0.5**
JOSI				*e*S	**Sn**	**17 52 39.3**	**-1.5**
JOSI				*e*S	**Sn**	**17 52 55.6**	**+15**
JOSI				AML	AML	17 53 05.5	
	comp=N,462nm,0.8s						
JOSI				AML	AML	17 53 09.6	
	comp=E,438nm,0.8s						
KLP	**Kalpa**	**4.87**	**285**	*e*P	**Pn**	**17 52 18.8**	**+2.8**
KLP				*e*S	**Sn**	**17 53 07.8**	**-3.3**
DDI	**Dehra Dun**	**4.94**	**270**	*ex*	x	17 52 28.0	
DDI				*ex*	x	17 53 33.5	
SMLA	**Simla**	**5.73**	**279**	*e*P	**Pn**	**17 52 27.9**	**+0.1**
SMLA				*e*S	**Sn**	**17 53 27.0**	**-5.1**
NDI	**New Delhi**	**5.96**	**255**	*ex*	x	17 52 48.0	
NDI				*ex*	x	17 54 12.0	
LSA	**Lhasa**	**6.44**	**94**	*e*Pn	**Pn**	**17 52 36.7**	**-0.9**
	comp=E,20nm,0.8s						
KBL	**Kabul**	**13.09**	**292**	P	**Pn**	**17 54 07.0**	**-1.5**
	comp=E,2.8nm,0.7s						
MK31	**Makanchi Array**	**16.39**	**356**	*e*P	**Pn**	**17 54 52.7**	**+1.2**
MKAR	**Makanchi Array**	**16.39**	**356**	Pn	**Pn**	**17 54 51.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=179,slow=11,SNR=13						
CHTO	**Chiang Mai**	**17.97**	**127**	P	**Pn**	**17 55 07.5**	**-3.7**
	comp=E,6.1nm,1.4s						
CMAR	**Chiang Mai Arr**	**18.21**	**127**	P	**Pn**	**17 55 13.2**	**-0.9**
	comp=E,0.4nm,0.3s,baz=324,slow=12,SNR=4.0						
KURK	**Kurchatov**	**20.64**	**351**	P	**P**	**17 55 37.9**	**-2.1**
	baz=173,slow=10						
KURK	**Kurchatov**	**20.64**	**351**	P	**P**	**17 55 37.9**	**-2.1**
KURK				*e*P		17 55 38.3	
SONM	**Songino Array**	**24.57**	**39**	P	**P**	**17 56 22.7**	**+3.1**
	comp=E,0.7nm,0.7s,mb3.3,baz=236,slow=9.4,SNR=5.0						
BVAR	**Borovoye Array**	**24.62**	**340**	P	**P**	**17 56 21.1**	**+1.0**
	comp=E,0.4nm,0.6s,mb3.1,baz=154,slow=8.0,SNR=3.8						
GNI	**Garni**	**33.08**	**298**	P	**P**	**17 57 30.9**	**-4.6**
	comp=E,18nm,1.2s,mb4.9						
WRA	**Warramunga Arr**	**69.80**	**129**	P	**P**	**18 02 09.7**	**-0.1**
	comp=E,0.4nm,0.7s,mb3.4,baz=324,slow=6.3,SNR=6.4						
ASAR	**Alice Springs**	**72.14**	**132**	P	**P**	**18 02 23.6**	**-0.3**
	comp=E,0.2nm,0.8s,mb3.1,baz=316,slow=7.8,SNR=3.3						
TOA0	**Torodi Ar. Sit**	**76.71**	**278**	*e*P	**P**	**18 02 44.3**	**-6.4**

*ISK **13** 18:00:50.8, 3755N×2701E, h2km, ML3.1*
*ATH **13** 18:00:51.3, 3753N×2699E, h21km±3km, MD3.5/4*
*DDA **13** 18:00:51.3, 3757N×2709E, h28km±2km, Md3.2*
*ISCJB **13** 18:00:51.7±0.5, 3754N±002×2701E±003, h11km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=177.3*
*NEIC **13** 18:00:51.3, 3753N×2698E, h21km, MD3.5(ATH), After ATH.*
*CSEM **13** 18:00:51.0±0.1, 3756N×2702E, h12km, MD3.2, Error ellipse: s-maj=1.7km s-min=1.2km az=82.0*
*THE **13** 18:00:53.6, 3759N×2687E, h8km±3km, ML4.0/1, Error ellipse: s-maj=4.2km s-min=1.2km az=92.0*
ISC 13 18:00:52.1±0.4, 3754N±002×2700E±003, h13km±3km, n35, σ0§93/54, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.21**	**322**	‖*i*Pb	**Pg**	**18 00 56.7**	**0.0**
SMG				Pb	**Pg**	**18 00 57.0**	**+0.3**
SMG				Sb	**Sg**	**18 01 00.6**	**+0.7**
GCAM	**G?zelcaml?**	**0.24**	**49**	*i*P	**Pg**	**18 00 57.0**	**-0.2**
GCAM				*i*S	**Sg**	**18 01 00.4**	**-0.3**
BODT	**Bodrum**	**0.54**	**153**	PG	**Pg**	**18 01 02.2**	**-0.4**
BODT				SG	**Sg**	**18 01 10.5**	**+0.7**
BDRM	**Kayabasi**	**0.59**	**143**	*i*P	**Pg**	**18 01 02.9**	**-0.7**
BDRM				*i*S	**Sg**	**18 01 11.2**	**-0.2**
MLSB	**Milas**	**0.66**	**112**	PG	**Pg**	**18 01 04.1**	**-0.9**
MLSB				SG	**Sg**	**18 01 14.6**	**+0.9**
BLCB	**Balcova**	**0.84**	**2**	PG	**Pg**	**18 01 07.9**	**-0.4**
BLCB				*e*SG	**Sg**	**18 01 19.8**	**+0.4**
URLA	**Izmir**	**0.88**	**339**	*i*P	**Pg**	**18 01 08.5**	**-0.5**
URLA				*i*S	**Sg**	**18 01 20.4**	**-0.1**
KDAG	**Bornova**	**0.88**	**14**	*i*P	**Pg**	**18 01 08.5**	**-0.6**
KDAG				*i*S	**Sg**	**18 01 21.6**	**+0.8**
DAT	**Datca**	**0.93**	**150**	PG	**Pg**	**18 01 09.7**	**-0.4**
YER	**Yerkesik**	**1.10**	**111**	*e*PN	**Pn**	**18 01 12.4**	**-0.7**
CHOS	**Chios island**	**1.13**	**319**	P	**Pb**	**18 01 13.2**	**-0.2**
CHOS				S	**Sb**	**18 01 26.8**	**-1.2**
APE	**Apeiranthos**	**1.27**	**249**	P	**Pn**	**18 01 15.8**	**+0.4**
APE				S	**Sb**	**18 01 32.1**	**+0.2**
APE	**Apeiranthos**	**1.27**	**249**	*e*PN	**Pn**	**18 01 15.9**	**+0.5**
APE	**Apeiranthos**	**1.27**	**249**	Pn	**Pn**	**18 01 15.9**	**+0.5**
APE				S	**Sb**	**18 01 32.1**	**+0.2**
TURN	**Turunc**	**1.44**	**117**	*i*P	**Pn**	**18 01 14.6**	**-3.2**
TURN				*i*S	**Sn**	**18 01 30.8**	**-5.9**
AKS	**Akhisar**	**1.48**	**25**	*e*PN	**Pn**	**18 01 19.5**	**+1.2**
AKHS	**Akhisar**	**1.48**	**25**	*i*P	**Pn**	**18 01 17.9**	**-0.5**
AKHS				*i*S	**Sn**	**18 01 36.8**	**-0.8**
MANT	**Manisa**	**1.55**	**52**	*i*P	**Pn**	**18 01 21.1**	**+1.8**
MANT				*i*S	**Sn**	**18 01 38.3**	**-1.0**
ARG	**Arkhangelos**	**1.60**	**145**	*e*PN	**Pn**	**18 01 20.9**	**+0.9**
DENT	**Denizli**	**1.62**	**82**	*e*PN	**Pn**	**18 01 21.2**	**+0.8**
KULA	**Kula-Manisa**	**1.63**	**53**	*e*PN	**Pn**	**18 01 21.5**	**+1.1**
THR4	**Thira Island,**	**1.68**	**230**	P	**Pn**	**18 01 20.9**	**-0.2**
THR1	**Thera Island**	**1.70**	**227**	P	**Pn**	**18 01 21.0**	**-0.4**
THR3	**Thira Island,**	**1.71**	**229**	P	**Pn**	**18 01 21.2**	**-0.3**
THR6	**Thira Island,**	**1.75**	**228**	P	**Pn**	**18 01 22.2**	**+0.1**
AYVA	**Ayvalik**	**1.78**	**352**	*i*P	**Pn**	**18 01 25.8**	**+3.3**
AYVA				*i*S	**Sn**	**18 01 49.0**	**+4.0**
PRK	**Paraskevi**	**1.80**	**342**	P	**Pn**	**18 01 21.8**	**-0.9**
PRK				S	**Sn**	**18 01 45.2**	**-0.2**
PRK	**Paraskevi**	**1.80**	**342**	*e*PN	**Pn**	**18 01 23.4**	**+0.7**
FETY	**Fethiye**	**1.89**	**118**	*e*PN	**Pn**	**18 01 25.0**	**+0.9**
KARP	**Karpathos**	**2.00**	**176**	*e*PB	**Pb**	**18 01 25.5**	**-2.7**
DEMI	**Demirci**	**2.02**	**41**	*i*P	**Pn**	**18 01 26.3**	**+0.5**
DEMI				*i*S	**Sn**	**18 01 48.9**	**-2.0**
BALY	**Balya**	**2.25**	**12**	*i*P	**Pn**	**18 01 28.6**	**-0.4**
BALY				*i*S	**Sn**	**18 01 58.0**	**+1.5**
ZKR	**Zakros**	**2.50**	**195**	P	**Pn**	**18 01 34.6**	**+2.1**
LIA	**Limnos Island**	**2.75**	**329**	P	**Pn**	**18 01 35.8**	**0.0**
ALN	**Alexandroupoli**	**3.43**	**348**	P	**Pn**	**18 01 45.0**	**-0.2**

*DDA **13** 18:07:51.0, 3757N×2708E, h29km±1km, Md3.3*
*ISK **13** 18:07:50.9, 3755N×2703E, h3km, ML3.1*
*NEIC **13** 18:07:51.6, 3759N×2701E, h21km, MD3.5(ATH), MD3.1(ISK), After ATH.*
*ATH **13** 18:07:51.6, 3759N×2701E, h21km±1km, MD3.5/6*
*CSEM **13** 18:07:51.1±0.1, 3754N×2704E, h12km, MD3.3, Error ellipse: s-maj=2.4km s-min=1.8km az=79.0*
*ISCJB **13** 18:07:51.5±0.5, 3755N±002×2700E±003, h9km±4km, Error ellipse: s-maj=4.4km s-min=3.1km az=6.6*
*THE **13** 18:07:55.0, 3758N×2679E, h14km±7km, ML4.1/1, Error ellipse: s-maj=8.5km s-min=1.6km az=104.0*
ISC 13 18:07:52.0±0.4, 3754N±002×2700E±003, h12km±3km, n64, σ0§99/92, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.21**	**322**	‖*i*PB	**Pg**	**18 07 56.7**	**+0.2**
SMG				SB	**Sg**	**18 08 00.2**	**+0.6**
GCAM	**G?zelcaml?**	**0.24**	**49**	*i*P	**Pg**	**18 07 57.0**	**0.0**
GCAM				*i*S	**Sg**	**18 08 00.8**	**+0.4**
BODT	**Bodrum**	**0.54**	**153**	PG	**Pg**	**18 08 02.1**	**-0.4**
BODT				eSG	**Sg**	**18 08 10.3**	**+0.7**
BDRM	**Kayabasi**	**0.59**	**143**	*i*P	**Pg**	**18 08 02.8**	**-0.7**
BDRM				*i*S	**Sg**	**18 08 11.5**	**+0.2**
MLSB	**Milas**	**0.66**	**112**	ePG	**Pg**	**18 08 03.9**	**-1.0**
MLSB				eSG	**Sg**	**18 08 14.0**	**+0.4**
BLCB	**Balcova**	**0.84**	**2**	ePG	**Pg**	**18 08 07.8**	**-0.5**
BLCB				eSG	**Sg**	**18 08 19.6**	**+0.3**
URLA	**Izmir**	**0.88**	**339**	*i*P	**Pg**	**18 08 08.1**	**-0.8**
URLA				*i*S	**Sg**	**18 08 20.2**	**-0.2**
KDAG	**Bornova**	**0.88**	**14**	*i*P	**Pg**	**18 08 08.5**	**-0.5**
KDAG				*i*S	**Sg**	**18 08 20.9**	**+0.3**
DAT	**Datca**	**0.93**	**150**	ePG	**Pg**	**18 08 09.6**	**-0.4**
YER	**Yerkesik**	**1.10**	**111**	*e*PN	**Pn**	**18 08 12.1**	**-1.1**
CHOS	**Chios island**	**1.13**	**319**	P	**Pb**	**18 08 13.4**	**-0.1**
CHOS				S	**Sb**	**18 08 27.9**	**-0.2**
APE	**Apeiranthos**	**1.27**	**249**	P	**Pn**	**18 08 15.7**	**+0.2**
APE				S	**Sb**	**18 08 30.1**	**-1.9**
APE	**Apeiranthos**	**1.27**	**249**	*e*PN	**Pn**	**18 08 15.7**	**+0.2**
APE				SN	**Sn**	**18 08 35.0**	**+2.5**
APE	**Apeiranthos**	**1.27**	**249**	Pn	**Pn**	**18 08 15.7**	**+0.2**
APE				S	**Sb**	**18 08 30.1**	**-1.9**
APE				Sn	**Sn**	**18 08 35.0**	**+2.5**
TURN	**Turunc**	**1.44**	**117**	*i*P	**Pn**	**18 08 14.6**	**-3.4**
TURN				*i*S	**Sn**	**18 08 31.2**	**-5.6**
AKHS	**Akhisar**	**1.48**	**25**	*i*P	**Pn**	**18 08 16.4**	**-2.0**
AKHS				*i*S	**Sn**	**18 08 36.8**	**-1.0**
AKS	**Akhisar**	**1.48**	**25**	*e*PN	**Pn**	**18 08 19.3**	**+0.8**
MANT	**Manisa**	**1.55**	**52**	*i*P	**Pn**	**18 08 19.2**	**-0.2**
MANT				*i*S	**Sn**	**18 08 38.3**	**-1.3**
ARG	**Arkhangelos**	**1.60**	**145**	*e*PN	**Pn**	**18 08 21.5**	**+1.4**
DENT	**Denizli**	**1.63**	**82**	*e*PN	**Pn**	**18 08 21.7**	**+1.2**
KULA	**Kula-Manisa**	**1.63**	**53**	*e*PN	**Pn**	**18 08 21.2**	**+0.6**
THR4	**Thira Island,**	**1.68**	**230**	P	**Pn**	**18 08 20.7**	**-0.5**
THR1	**Thera Island**	**1.70**	**227**	P	**Pn**	**18 08 20.8**	**-0.7**
THR3	**Thira Island,**	**1.71**	**229**	P	**Pn**	**18 08 21.4**	**-0.2**
THR6	**Thira Island,**	**1.75**	**228**	P	**Pn**	**18 08 21.9**	**-0.2**
AYVA	**Ayvalik**	**1.78**	**352**	*i*P	**Pn**	**18 08 25.3**	**+2.7**
AYVA				*i*S	**Sn**	**18 08 49.0**	**+3.8**
PRK	**Paraskevi**	**1.80**	**342**	P	**Pn**	**18 08 22.6**	**-0.2**
PRK				S	**Sn**	**18 08 45.4**	**-0.2**
PRK	**Paraskevi**	**1.80**	**342**	*e*PN	**Pn**	**18 08 22.8**	**0.0**
PRK				SN	**Sn**	**18 08 45.8**	**+0.2**
FETY	**Fethiye**	**1.89**	**118**	*e*PN	**Pn**	**18 08 24.9**	**+0.7**
KARP	**Karpathos**	**2.00**	**176**	*e*PB	**Pb**	**18 08 26.5**	**-1.7**
DEMI	**Demirci**	**2.02**	**41**	*i*P	**Pn**	**18 08 28.8**	**+3.0**
DEMI				*i*S	**Sn**	**18 08 55.9**	**+4.9**
BALB	**Balikesir**	**2.21**	**18**	*e*PN	**Pn**	**18 08 29.5**	**+1.1**
BALY	**Balya**	**2.25**	**12**	*i*P	**Pn**	**18 08 28.1**	**-0.9**
BALY				*i*S	**Sn**	**18 08 55.7**	**-1.0**
BALY	**Balya**	**2.25**	**12**	*i*P	**Pn**	**18 08 28.1**	**-0.9**
BALY				*i*S	**Sn**	**18 08 55.7**	**-1.0**
ZKR	**Zakros**	**2.50**	**195**	P	**Pn**	**18 08 35.9**	**+3.3**
NPS	**Neapolis**	**2.54**	**207**	*e*PN	**Pn**	**18 08 34.5**	**+1.5**
LIA	**Limnos Island**	**2.75**	**329**	P	**Pn**	**18 08 36.1**	**+0.2**
BNT	**Bandirma**	**2.90**	**14**	*e*PN	**Pn**	**18 08 38.8**	**+0.8**
KCT	**Karacabey**	**2.92**	**21**	*e*PN	**Pn**	**18 08 39.2**	**+0.9**
DID	**Didima**	**2.99**	**270**	P	**Pn**	**18 08 39.2**	**-0.1**
ALN	**Alexandroupoli**	**3.43**	**348**	P	**Pn**	**18 08 45.0**	**-0.3**
RDO	**Rodhopi**	**3.77**	**343**	*e*PN	**Pn**	**18 08 50.3**	**+0.3**

*CSEM **13** 18:48:16.3±0.8, 3746N×2540W, h5km, ML2.5, Error ellipse: s-maj=9.6km s-min=4.0km az=50.0, After PDA*
PDA 13 18:48:16.3±0.8, 3746N×2540W, h5km, MD3.8, ML2.5, Error ellipse: s-maj=9.6km s-min=4.0km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDA	**Ponta Delgada**	**0.35**	**323**	*e*P	**Pg**	**18 48 21.5**	**-1.7**
PDA				*e*S	Sg	18 48 26.7	-1.1
PSMN	**Pico do Norte,**	**0.53**	**150**	*e*P	**Pg**	**18 48 23.7**	**-2.8**
PSMN				*e*S	Sg	18 48 30.8	-2.5
PSCM	**Serra do Cume**	**1.84**	**313**	*e*P	**Pn**	**18 48 43.5**	**-5.0**
PSCM				*e*S	Sn	18 49 04.3	-7.8
PSCM				A		18 49 08.0	
	9.0nm,0.1s						
PSCM	**Serra do Cume**	**1.84**	**313**	*e*P	Pn	18 48 43.5	-5.0
PSCM				*e*S	Sn	18 49 04.3	-7.8
PID	**Ribeirinha**	**2.36**	**295**	*e*P	Pn	18 48 51.4	-4.3
PID				*e*S	Sn	18 49 17.0	-8.1
PMAN	**Manadas**	**2.43**	**300**	*e*P	Pn	18 48 51.6	-5.0
PMAN				*e*S	Sn	18 49 18.5	-8.1
PMAN				A		18 49 21.8	
	21nm,0.2s						
PMAN	**Manadas**	**2.43**	**300**	*e*P	Pn	18 48 51.6	-5.0
PMAN				*e*S	Sn	18 49 18.5	-8.1
ROSA	**Rosais**	**2.57**	**300**	*e*P	Pn	18 48 54.3	-4.3
ROSA				*e*S	Sn	18 49 22.6	-7.6
PICO	**Pico**	**2.61**	**294**	*e*P	Pn	18 48 54.8	-4.3
PICO				*e*S	Sn	18 49 23.3	-7.8
HOR	**Horta**	**2.77**	**294**	*e*P	Pn	18 48 56.9	-4.4
HOR				*e*S	Sn	18 49 26.8	-8.2
CALA	**Caldeira**	**2.84**	**294**	*e*P	Pn	18 48 57.6	-4.7
CALA				*e*S	Sn	18 49 28.7	-8.1

*BJI **13** 18:48:33.5, 1778N×147.13E, h85km, mB5.2, mb5.0, Ms4.8, Msz4.7*
*ISCJB **13** 18:48:35.2±0.8, 1813N±003×14645E±002, h52km±7km, mb5.2/156, MS4.7/47, Error ellipse: s-maj=4.5km s-min=3.5km az=176.2*
*MOS **13** 18:48:35.9±1.1, 1809N×14645E, h65km, mb5.3/46, MS4.7/16, Error ellipse: s-maj=9.0km s-min=5.5km az=102.9*
*IDC **13** 18:48:37.4±1.3, 1809N×14649E, h64km±10km, mb4.6/19, mb1 4.8/24, mb1mx4.8/25, mbtmp4.7/24, MS4.7/19, Ms1 4.7/19, ms1mx4.7/20, Error ellipse: s-maj=16.3km s-min=7.5km az=90.0*
*NEIC **13** 18:48:39.5±1.2, 1804N×14647E, h85km±11km, mb5.2/86, Error ellipse: s-maj=5.0km s-min=4.7km az=101.0*
*GCMT **13** 18:48:39.5±0.2, 1803N×14705E, h47km, MW5.3/91, Moment Tensor Solution. s71,c119; s91,c168; Duration: 1§1 Moment tensor: Scale 10^{17}Nm; M_rr0.76±.02; $M_{\theta\theta}$0.18±.02; $M_{\phi\phi}$-0.94±.02; $M_{r\theta}$0.08±.01; $M_{\theta\phi}$-0.16±.01; $M_{\phi r}$0.60±.02; Best double couple: M_o1.05300×10^{17} NP1,φ§189.00000°, δ27.00000°, λ91.00000°. NP2,φ§7.00000°, δ63.00000°, λ89.00000°. Principal axes: T 0.9490, Plg72.0000°, Azm276.0000°; N 0.2060, Plg0.0000°, Azm8.0000°; P -1.1560, Plg18.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **13** 18:48:39, 1799N×14690E, h78km, Mw5.5/8*
**ISC 13 18:48:38.0±0.7, 1811N±003×14649E±002, h64km±6km, h80km±2.9km§P-pP, n627, σ0§80/609, mb5.2

SSE AMB AMB
comp=Z,260nm,9.9s
SSE LR LR
comp=N,665nm,28.0s
SSE LR LR
comp=E,1µm,28.0s
SSE LR LR
comp=Z,1µm,29.3s
SSE Sheshan 26.32 304 P **P** **18 54 07.2 -0.6**
comp=Z,30nm,1.0s,mb4.8
SSE pP pP 18 54 25.6 +2.4
SSE S **S** **18 58 34.3 -1.9**
SSE LR LR
comp=Z,1µm,29.3s
LBMI Labuha 26.38 227 P **P** **18 54 09.6 +1.0**
comp=Z,72nm,0.9s,comp=Z,734nm,mb5.2
QZH Quanzhou 26.79 290 *e*P **P** **18 54 12.0 -0.2**
QZH S **S** **18 58 40.8 -3.1**
QZH LR LR
comp=Z,4µm,23.0s
PMG Port Moresby 27.34 179 *e*P **P** **18 54 14.5 -2.7**
comp=Z,46nm,0.8s,mb5.1
PMG Port Moresby 27.34 179⇑ *e*P **P** **18 54 15.3 -1.9**
AAI Ambon 28.18 222 P **P** **18 54 24.7 0.0**
comp=Z,86nm,1.0s,mb5.3
NJ2 Nanjing 28.52 304 *e*P **P** **18 54 29.1 +1.5**
NJ2 AP pP 18 54 46.3 +3.2
NJ2 PP PP 18 55 24.0 -8.9
NJ2 S **S** **18 59 11.0 0.0**
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
NJ2 AMB AMB
comp=Z,60nm,3.8s
NJ2 LR LR
comp=N,360nm,20.0s
NJ2 LR LR
comp=E,750nm,22.6s
NJ2 LR LR
comp=Z,8µm,25.9s
YSS Yuzh-Sakhalins 28.93 355 *e*P **P** **18 54 31.1 +0.1**
comp=Z,34nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 28.93 355 *e*P **P** **18 54 30.0 -1.0**
YSS *e*S **S** **18 59 21.0 +3.9**
YSS *e*SS SS 19 00 46.0 -36
YSS MLR MLR
comp=Z,700nm,20.0s
YSS MLR MLR
comp=N,500nm,18.0s
YSS MLR MLR
comp=E,1µm,20.0s
DL2 Dalian 29.94 319 *e*P **P** **18 54 43.8 +3.7**
DL2 *e*S **S** **18 59 39.4 +6.3**
DL2 AMB AMB
comp=Z,120nm,3.3s
DL2 LR LR
comp=N,370nm,19.8s
DL2 LR LR
comp=Z,620nm,22.2s
MDJ Mudanjiang 29.98 335 P **P** **18 54 41.3 +0.9**
MDJ AP pP 18 54 59.6 +3.7
MDJ XP sP 18 55 09.4 +5.9
MDJ PCP PcP 18 57 39.8 -1.6
MDJ S **S** **18 59 34.3 +0.6**
MDJ XS sS 19 00 07.9 +7.7
MDJ SCP ScP 19 01 13.1 -5.1
MDJ AMB AMB
comp=Z,16nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,143nm,4.7s
MDJ LR LR
comp=N,1µm,22.6s
MDJ LR LR
comp=E,788nm,23.1s
MDJ LR LR
comp=Z,2µm,23.4s
MDJ Mudanjiang 29.98 335 *e*P **P** **18 54 41.4 +1.0**
comp=Z,13nm,0.6s,mb4.8
MDJ *e*PcP PcP 18 57 41.3 0.0
CN2 Changchun 31.15 330 *e*P **P** **18 54 52.1 +1.4**
CN2 *e*AP pP 18 55 13.1 +6.8
CN2 *e*S **S** **18 59 51.6 -0.3**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1µm,19.0s
CN2 LR LR
comp=E,1µm,19.0s
CN2 LR LR
comp=Z,2µm,22.0s
WHN Wuhan 31.68 299 P **P** **18 54 53.5 -2.0**
WHN S **S** **18 59 54.8 -5.7**
WHN LR LR
comp=N,897nm,9.7s
WHN LR LR
comp=E,1µm,10.8s
WHN LR LR
comp=Z,4µm,21.6s
HABR Khabarovsk 31.69 345⇑ *i*P **P** **18 54 56.1 +0.8**
HABR *e**SP sP 18 55 19.8 +1.4
HABR *e* 18 56 01.1
HABR *e* 18 57 43.5
HABR *e*S **S** **19 00 02.5 +2.3**
HABR *e**SS sS 19 00 31.8 +5.0
HABR *e*SS SS 19 01 55.0 -23
HABR *e* 19 05 19.2
HABR pmax pmax
comp=Z,224nm,1.3s,mb5.8
PCI Palu 32.32 237 P **P** **18 55 05.7 +4.4**
comp=Z,37nm,0.9s,mb5.2
KLR Kul'dur 33.26 342 *e*P **P** **18 55 05.2 -3.8**
KLR *e*S **S** **19 00 29.5 +5.0**
KLR pmax pmax
comp=N,48nm,1.4s
KLR pmax pmax
comp=E,120nm,1.4s
KLR pmax pmax
comp=Z,300nm,1.4s,mb6.0
KLR MLR MLR
comp=N,900nm,14.0s
KLR MLR MLR
comp=Z,1µm,14.0s
BJT Baijiatuan 34.07 316 P **P** **18 55 14.6 -1.7**
comp=Z,36nm,0.4s,mb5.7
BJT Baijiatuan 34.07 316 P **P** **18 55 14.6 -1.7**
BJT pmax pmax
comp=Z,36nm,0.4s
BJI Beijing 34.08 316 P **P** **18 55 15.8 -0.5**
BJI S **S** **19 00 30.4 -7.1**
BJI AMB AMB
comp=Z,52nm,0.6s,mb5.6
BJI AMB AMB
comp=Z,331nm,4.4s
BJI LR LR
comp=N,962nm,22.0s
BJI LR LR
comp=E,1µm,22.4s
BJI LR LR
comp=Z,2µm,23.4s
BJI Beijing 34.08 316 P **P** **18 55 15.8 -0.5**
comp=Z,52nm,0.6s,mb5.6
BJI S **S** **19 00 30.4 -7.1**
BJI LR LR
comp=Z,2µm,23.4s
QIZ Qiongzhong 34.71 277 P **P** **18 55 20.8 -1.3**
QIZ AP pP 18 55 39.8 +2.0
QIZ PP PP 18 56 40.8 -1.0
QIZ S **S** **19 00 44.8 -3.0**
QIZ LR LR
comp=E,954nm,21.5s
QIZ LR LR
comp=Z,1µm,25.3s
KAPI Kappang 34.98 231 P **P** **18 55 24.3 -0.1**
comp=Z,282nm,0.8s,mb6.2,SNR=16
KAPI Kappang 34.98 231 P **P** **18 55 24.0 -0.4**
SNR=12
KAPI Kappang 34.98 231 *e*P **P** **18 55 23.4 -1.0**
comp=Z,31nm,0.8s,mb5.3
KAPI Kappang 34.98 231 P **P** **18 55 23.5 -0.9**
comp=Z,62nm,1.1s,comp=Z,649nm,mb5.5
BATI Baumata 36.05 220 P **P** **18 55 32.1 -1.4**
comp=Z,24nm,0.6s,mb5.3,baz=139,slow=4.1,SNR=20
PET Petropavlovsk 36.12 12 *e*P **P** **18 55 32.8 -0.8**
comp=Z,45nm,1.1s,mb5.3
PET Petropavlovsk 36.12 12 *e*P **P** **18 55 34.6 +0.9**
PET *e* 18 56 56.0
PET *e*S **S** **19 01 10.5 +2.0**
PET *e*SS SS 19 03 31.7 -17
PET pmax pmax
comp=Z,40nm,1.4s,mb5.2
PET pmax pmax
comp=Z,200nm,5.0s
PET smax
comp=E,200nm,9.5s
PET MLR MLR
comp=Z,300nm,19.0s
HHC Hu-ho-hao-te 37.55 315 *e*P **P** **18 55 47.5 +1.5**
HHC AP pP 18 56 07.9 +6.0
HHC XP sP 18 56 17.4 +8.1
HHC PP PP 18 57 19.3 +6.5
HHC PCP PcP 18 58 04.4 +1.5
HHC S **S** **19 01 31.4 +0.7**
HHC SCS ScS 19 05 50.6 -2.7
HHC AMB AMB
comp=Z,23nm,0.5s,mb5.2
HHC AMB AMB
comp=Z,237nm,5.5s
HHC LR LR
comp=N,825nm,19.0s
HHC LR LR
comp=E,834nm,22.6s
HHC LR LR
comp=Z,1µm,20.2s
GYA Guiyang 37.66 290 P **P** **18 55 49.3 +2.2**
GYA AP pP 18 56 07.8 +4.8
GYA XP sP 18 56 17.3 +6.9
GYA PP PP 18 57 22.3 +8.2
GYA PCP PcP 18 58 03.9 +0.3
GYA S **S** **19 01 35.1 +2.4**
GYA SCP ScP 19 01 45.0 -0.6
GYA PCS PcS 19 01 51.3 -1.1
GYA XS sS 19 02 06.4 +6.8
GYA SS SS 19 04 18.3 -1.1
GYA AMB AMB
comp=Z,20nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,160nm,5.4s
GYA LR LR
comp=N,620nm,16.0s
GYA LR LR
comp=E,540nm,16.5s
GYA LR LR
comp=Z,1µm,16.8s
HIA Hailar 37.84 331 *e*P **P** **18 55 47.1 -1.2**
comp=Z,50nm,1.0s,mb5.2
HIA *e*PcP PcP 18 58 02.3 -1.3
HIA Hailar 37.84 331⇓ *e*P **P** **18 55 48.7 +0.4**
PLKI Palangkaraya 37.88 241 P **P** **18 55 55.6 +6.4**
comp=Z,69nm,1.0s,mb5.3
CTA Charters Tower 37.96 180 P **P** **18 55 49.2 -0.4**
comp=Z,6.6nm,0.6s,mb4.6,baz=18,slow=7.5,SNR=10
CTAO Charters Tower 37.96 180 *e*P **P** **18 55 49.1 -0.5**
comp=Z,31nm,1.1s,mb5.0
CTAO Charters Tower 37.96 180 *e*P **P** **18 55 49.1 -0.5**
CTAO pmax pmax
comp=Z,31nm,1.1s,mb5.0
STKI Sintang 38.80 246 P **P** **18 55 58.2 +1.3**
comp=Z,38nm,0.8s,comp=Z,698nm,mb5.2
WRAB Tennant Creek 39.63 198 P **P** **18 56 02.0 -1.7**
comp=Z,188nm,0.9s,mb5.8,SNR=18
WRAB Tennant Creek 39.63 198 *e*P **P** **18 56 01.3 -2.3**
comp=Z,26nm,0.8s,mb5.0
WRAB Tennant Creek 39.63 198⇑ *e*P **P** **18 56 01.9 -1.8**
WB2 Warramunga Arr 39.64 198 *e*P **P** **18 56 01.7 -2.0**
WRA Warramunga Arr 39.65 198 P **P** **18 56 01.6 -2.2**
comp=Z,20nm,0.8s,mb4.9,baz=19,slow=9.2,SNR=33
WRA PcP PcP 18 58 09.8 0.0
comp=Z,4.7nm,0.6s,baz=18,slow=3.4,SNR=6.6
WRA ScP ScP 19 01 52.7 -0.4
comp=Z,0.9nm,0.7s,baz=17,slow=4.3,SNR=4.9
KHKI Kahang-Kahang 40.27 232 P **P** **18 56 09.2 +0.2**
CD2 Chengdu 40.68 297 *e*P **P** **18 56 13.4 +1.1**
CD2 AP pP 18 56 33.9 +5.6
CD2 XP sP 18 56 44.3 +8.6
CD2 PP PP 18 57 51.6 +4.5
CD2 PCP PcP 18 58 14.9 +1.9
CD2 PCS PcS 19 02 04.4 +0.5
CD2 S **S** **19 02 17.3 -0.7**
CD2 SCS ScS 19 06 09.3 -2.7
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.1
CD2 AMB AMB
comp=Z,130nm,4.8s
CD2 LR LR
comp=N,730nm,15.4s
CD2 LR LR
comp=E,1µm,22.6s
CD2 LR LR
comp=Z,2µm,22.6s
KMMI Kalianget 40.69 235 P **P** **18 56 16.0 +3.5**
comp=Z,63nm,1.4s,mb5.0
KMI Kunming 41.13 288 P **P** **18 56 17.3 +1.2**
KMI AP pP 18 56 36.5 +4.4
KMI XP sP 18 56 46.3 +6.8
KMI PP PP 18 57 54.6 +2.6
KMI PCP PcP 18 58 14.3 -0.3
KMI S **S** **19 02 20.5 -4.3**
KMI AMB AMB
comp=Z,3.0nm,1.4s,mb3.7
KMI AMB AMB
comp=Z,133nm,4.8s
KMI LR LR
comp=N,421nm,17.3s
KMI LR LR
comp=E,533nm,19.7s
KMI LR LR
comp=Z,748nm,22.8s
KMI Kunming 41.13 288 P **P** **18 56 17.2 +1.1**
comp=Z,3.0nm,1.4s,mb3.7
KMI pP pP 18 56 36.5 +4.4
KMI sP sP 18 56 46.3 +6.8
KMI PP PP 18 57 54.6 +2.6
KMI PcP PcP 18 58 14.3 -0.3
KMI PPP 18 58 25.8
KMI S **S** **19 02 20.5 -4.3**
KMI sS sS 19 02 55.8 +3.8
KMI SS SS 19 05 19.5 -10
KMI SSS 19 06 03.5
KMI LR LR
comp=Z,750nm,22.8s
KMI Kunming 41.13 288 P **P** **18 56 17.2 +1.1**
KMI *PP pP 18 56 36.5 +4.4
KMI *SP sP 18 56 46.3 +6.8
KMI 18 57 54.6
KMI 18 58 14.3
KMI PPP 18 58 25.8
KMI S **S** **19 02 20.5 -4.3**
KMI SS SS 19 05 19.5 -10
KMI SSS 19 06 03.5
KMI MLR MLR
comp=Z,750nm,22.8s
LZH Lanzhou 41.60 304 *e*P **P** **18 56 20.1 +0.3**
LZH AP pP 18 56 37.5 +1.7
LZH XP sP 18 56 47.5 +4.3
LZH PP PP 18 58 00.3 +3.4
LZH *e*S **S** **19 02 24.6 -6.9**
LZH AMB AMB
comp=Z,28nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,180nm,6.2s
LZH LR LR
comp=E,260nm,13.0s
LZH LR LR
comp=Z,413nm,14.1s
LZH Lanzhou 41.60 304 *e*P **P** **18 56 20.1 +0.3**
comp=Z,28nm,1.5s,mb4.7
LZH pP pP 18 56 37.5 +1.7
LZH sP sP 18 56 47.5 +4.3
LZH PP PP 18 58 00.2 +3.3
LZH *e*S **S** **19 02 24.6 -6.9**
LZH sS sS 19 03 04.0 +5.3
LZH SS SS 19 05 32.3 -6.2
LZH LR LR
comp=Z,410nm,14.1s
LZH Lanzhou 41.60 304 *e*P **P** **18 56 20.1 +0.3**
LZH *PP pP 18 56 37.5 +1.7
LZH *SP sP 18 56 47.5 +4.3
LZH 18 58 00.2
LZH *e*S **S** **19 02 24.6 -6.9**
LZH SS SS 19 05 32.3 -6.2
LZH pmax pmax
comp=Z,28nm,1.5s,mb4.7
LZH MLR MLR
comp=Z,410nm,14.1s
CLNS Chul'man 41.92 342 *e*P **P** **18 56 22.9 +0.8**
CLNS *e* 18 57 57.9
CLNS *e* 18 58 13.6
CLNS *e*PPP 18 58 29.1
CLNS *e*S **S** **19 02 41.2 +5.6**
CLNS pmax pmax
comp=Z,52nm,0.7s,mb5.3
CLNS pmax pmax
comp=N,47nm,1.0s
CLNS pmax pmax
comp=E,15nm,1.2s
CLNS pmax pmax
comp=Z,13nm,0.9s,mb4.6
CLNS pmax pmax
comp=N,21nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS smax
comp=N,79nm,15.0s
CLNS smax
comp=E,68nm,11.6s
CLNS MLR MLR
comp=Z,365nm,15.0s
CLNS MLR MLR
comp=E,92nm,15.0s
CLNS MLR MLR
comp=N,359nm,14.0s
SJI Sawahan 42.83 236 P **P** **18 56 30.2 +0.2**
ASAR Alice Springs 43.30 197 P **P** **18 56 31.7 -1.9**
comp=N,4.6nm,0.6s,mb4.4,baz=15,slow=5.9,SNR=47
ASAR PcP PcP 18 58 21.7 +0.1
comp=N,2.4nm,0.6s,baz=42,slow=3.1,SNR=4.4
ASAR ScP ScP 19 02 06.2 -1.3
comp=N,1.5nm,0.8s,baz=20,slow=3.9,SNR=5.1
ASAR S **S** **19 02 57.1 +0.6**
comp=N,1.4nm,0.8s,baz=23,slow=17,SNR=5.2
ASAR Alice Springs 43.30 197 P **P** **18 56 31.7 -1.9**
ASAR 18 58 21.7
ASAR S **S** **19 02 57.1 +0.6**
TPI Tanjungpandan 43.51 245 P **P** **18 56 36.4 +0.8**
comp=N,65nm,0.9s,comp=N,574nm,mb5.4
ULN Ulaanbaatar 43.70 322 *e*P **P** **18 56 35.4 -1.2**
comp=N,13nm,0.7s,mb4.8
ULN *e*ScP ScP 19 02 06.7 -2.2
ULN Ulaanbaatar 43.70 322 *e*P **P** **18 56 35.4 -1.2**
ULN pmax pmax
comp=Z,13nm,0.7s,mb4.8
ULN Ulaanbaatar 43.70 322 P **P** **18 56 37.2 +0.6**
comp=Z,25nm,0.8s,mb5.0
SONM Songino Array 44.07 321 P **P** **18 56 38.7 -0.9**
comp=Z,12nm,0.7s,mb4.7,baz=135,slow=9.1,SNR=64
SONM PcP PcP 18 58 23.5 -0.4
comp=Z,5.6nm,0.6s,baz=131,slow=3.3,SNR=5.7
SONM ScP ScP 19 02 09.5 -0.9
comp=Z,1.3nm,0.7s,baz=132,slow=3.3,SNR=4.1
SONM LR LR 19 16 24.1
comp=Z,2µm,18.1s,baz=137,slow=38
SONM Songino Array 44.07 321 P **P** **18 56 38.7 -0.9**
SONM 18 58 23.5
BJII Banjamegara 44.24 238 P **P** **18 56 46.7 +5.3**
NST Nakhon Sawan 44.34 274 P **P** **18 56 37.6 -4.6**
comp=Z,42nm,0.7s,mb5.3
DZM Mont Dzumac 44.45 153 *e*P **P** **18 56 41.6 -1.2**
CHTO Chiang Mai 45.00 279 *e*P **P** **18 56 46.4 -1.0**
comp=Z,15nm,1.3s,mb4.7
CHTO Chiang Mai 45.00 279 *e*P **P** **18 56 46.4 -1.0**
CHTO pmax pmax
comp=Z,15nm,1.3s,mb4.7
CM31 Chiang Mai Arr 45.04 278 *e*P **P** **18 56 48.7 +0.9**
comp=Z,6.2nm,0.6s,mb4.6
CMAR Chiang Mai Arr 45.04 278 P **P** **18 56 48.4 +0.6**
comp=Z,3.9nm,0.6s,mb4.4,baz=67,slow=8.1,SNR=41
CMAR PcP PcP 18 58 28.7 +0.9
comp=Z,2.2nm,0.7s,baz=85,slow=1.9,SNR=5.3
CMAR LR LR 19 13 50.4
comp=Z,552nm,20.3s,baz=81,slow=34
CMAR Chiang Mai Arr 45.04 278 P **P** **18 56 48.4 +0.6**
CMAR 18 58 28.7
YAK Yakutsk 45.44 349 *e*P **P** **18 56 49.9 -0.4**
comp=Z,116nm,0.7s,mb5.8
YAK Yakutsk 45.44 349*c i*P **P** **18 56 50.1 -0.2**
YAK *e**PP pP 18 57 13.0 +6.5
YAK *e* 18 58 21.6
YAK *e* 18 58 40.8
YAK *e*PPP 18 59 27.5
YAK *e*S **S** **19 03 31.3 +4.5**
YAK *e**SS sS 19 03 56.1 +1.8
YAK *e* 19 06 38.0
YAK pmax pmax
comp=Z,130nm,1.4s,mb5.6
YAK pmax pmax
comp=N,98nm,1.7s
YAK pmax pmax
comp=E,29nm,1.5s
YAK pmax pmax
comp=Z,369nm,4.7s
YAK smax
comp=E,69nm,1.5s
YAK smax
comp=N,349nm,2.5s
GTA Gaotai 45.50 308 *e*P **P** **18 56 51.9 +0.8**
GTA AP pP 18 57 12.8 +5.4
GTA XP sP 18 57 24.3 +10
GTA PCP PcP 18 58 29.5 +0.4
GTA PP PP 18 58 40.1 +1.5
GTA S **S** **19 03 27.3 -1.1**
GTA AMB AMB
comp=Z,6.0nm,0.7s,mb4.6
GTA AMB AMB
comp=Z,94nm,3.9s
GTA LR LR
comp=N,677nm,18.9s
GTA LR LR
comp=E,877nm,18.9s
GTA LR LR
comp=Z,1µm,18.6s
LEM Lembang 45.67 241 P **P** **18 56 53.8 +1.1**
comp=Z,80nm,1.1s,comp=Z,1µm,mb5.5
CBJI Citeko 46.09 242 P **P** **18 57 03.7 +7.7**
comp=Z,119nm,0.5s,mb6.1
DBJI Dramaga 46.24 242 P **P** **18 56 59.3 +2.0**
comp=Z,55nm,0.8s,mb5.5
BOD Bodaibo 46.35 337 *e*P **P** **18 56 56.0 -1.5**
BOD pmax pmax
comp=Z,19nm,1.5s,mb4.8
KLI Kotabumi 46.97 245 P **P** **18 57 04.0 +1.0**
comp=Z,148nm,1.1s,mb5.8
MBWA Marble Bar 47.01 215 *e*P **P** **18 57 02.0 -1.1**
comp=Z,12nm,0.6s,mb5.0
MBWA Marble Bar 47.01 215 P **P** **18 57 03.7 +0.6**
comp=Z,32nm,1.5s,mb5.0
ZAK Zakamensk 47.07 323⇓ *i*P **P** **18 57 03.7 +0.5**
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TLY Talaya 47.48 325 *e*P **P** **18 57 06.7 +0.3**
comp=Z,7.0nm,0.5s,mb4.8
TLY Talaya 47.48 325 *e*P **P** **18 57 07.7 +1.3**
TLY *e*S **S** **19 04 05.5 +9.3**
TLY *e* 19 06 50.3
TLY pmax pmax
comp=Z,12nm,1.2s,mb4.7
TLY MLR MLR
comp=Z,1µm,20.0s
KSI Kapahiang 48.36 248 P **P** **18 57 13.6 -0.2**
comp=Z,258nm,0.8s,mb6.3
PPI Padang Panjang 48.92 253 P **P** **18 57 20.9 +2.8**
comp=Z,21nm,1.2s,mb5.0
PDSI Padang 49.05 252 P **P** **18 57 19.4 +0.3**
comp=Z,59nm,0.9s,mb5.6
XMIS Christmas Isla 49.31 238 *e*P **P** **18 57 19.3 -1.7**
XMIS Christmas Isla 49.31 238 P **P** **18 57 20.7 -0.3**
STKA Stephens Creek 49.92 185 P **P** **18 57 24.1 -1.2**
comp=Z,24nm,0.7s,mb5.3,baz=354,slow=7.8,SNR=68
STKA LR LR 19 18 36.4
comp=Z,762nm,21.7s,baz=5.7,slow=36
STKA Stephens Creek 49.92 185 *e*P **P** **18 57 24.0 -1.3**
comp=Z,22nm,0.7s,mb5.3
UNV Unalaska Valle 50.72 34 *e*P **P** **18 57 29.4 -1.7**
LSA Lhasa 51.47 294 *e*P **P** **18 57 39.3 +2.1**
comp=Z,8.9nm,0.5s,mb5.0
LSA Lhasa 51.47 294 *e*P **P** **18 57 39.3 +2.1**

LSA pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
BILL Bilibino 51.48 9 *e*P **P 18 57 36.1 -0.4**
BILL Bilibino 51.48 9⇑ *e*P **P 18 57 37.1 +0.5**
BILL *e**PP pP 18 57 53.0 -0.1
BILL *e**SP sP 18 58 02.9 +2.5
BILL pmax pmax
comp=Z,36nm,0.8s,mb5.3
BILL MLR MLR
comp=Z,6µm,21.0s
FORT Forrest 51.73 200 *e*P **P 18 57 36.5 -2.4**
comp=Z,2.9nm,0.6s,mb4.4
AFI Afiamalu 52.02 125 LR LR 19 15 54.7
comp=Z,550nm,18.6s,baz=294,slow=32
CAN Canberra 53.19 177 *e*P **P 18 57 49.2 -0.4**
SDPT Sand Point 54.53 34 *e*P **P 18 57 58.6 -0.7**
comp=Z,136nm,0.9s,mb6.0
TIXI Tiksi 54.54 353 *e*P **P 18 57 58.0 -1.1**
comp=Z,6.9nm,0.5s,mb4.9
TIXI Tiksi 54.54 353 *i* P **P 18 57 58.4 -0.7**
TIXI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
TAPN Taplejung 54.57 291 *e*P **P 18 58 01.5 +1.4**
comp=Z,9.8nm,0.4s,mb5.2
ODAN Odare 54.89 290 *e*P **P 18 58 04.0 +1.6**
comp=Z,26nm,0.5s,mb5.5
KRAR Krasnoyarsk 55.08 327⇑ *e*P **P 18 58 03.2 0.0**
KRAR pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KRAR MLR MLR
comp=Z,400nm,22.0s
WMQ Urumqi 55.26 311 P **P 18 58 06.0 +1.2**
WMQ AP pP 18 58 25.0 +3.6
WMQ XP sP 18 58 34.0 +5.3
WMQ PP PP 19 00 12.0 +3.2
WMQ S **S 19 05 42.0 -1.8**
WMQ SCS ScS 19 07 44.0 -4.2
WMQ SS SS 19 09 27.0 -1.7
WMQ AMB AMB
comp=Z,41nm,1.0s,mb5.4
WMQ AMB AMB
comp=Z,89nm,5.0s
WMQ LR LR
comp=N,485nm,20.0s
WMQ LR LR
comp=E,436nm,20.0s
WMQ LR LR
comp=Z,557nm,20.0s
RAMN Ramite 55.59 291 *e*P **P 18 58 09.4 +2.0**
comp=Z,21nm,0.6s,mb5.4
JIRN Jiri 55.90 291 *e*P **P 18 58 10.6 +1.0**
comp=Z,51nm,0.6s,mb5.7
GUN Gumba 56.16 292 *e*P **P 18 58 13.1 +1.7**
comp=Z,20nm,0.4s,mb5.5
PKI Pulchoki 56.60 291 *e*P **P 18 58 15.8 +1.2**
KKN Kakani 56.70 292 *e*P **P 18 58 16.7 +1.4**
comp=Z,12nm,0.7s,mb5.1
KKN Kakani 56.70 292 *e*P **P 18 58 16.7 +1.4**
KKN pmax pmax
comp=Z,12nm,0.7s,mb5.0
DMN Daman 56.86 292 *e*P **P 18 58 17.7 +1.2**
comp=Z,13nm,0.4s,mb5.3
GKN Gorkha 57.25 292 *e*P **P 18 58 21.0 +1.8**
comp=Z,17nm,0.4s,mb5.5
NWAO Narrogin (SRO) 57.94 209 *e*P **P 18 58 22.2 -1.6**
comp=Z,14nm,0.8s,mb5.0
NWAO Narrogin (SRO) 57.94 209 *e*P **P 18 58 22.2 -1.6**
NWAO pmax pmax
comp=Z,14nm,0.8s
DANN Dangsing 57.99 293 *e*P **P 18 58 25.1 +0.7**
comp=Z,98nm,0.6s,mb6.0
KOLN Koldanda 58.18 292 *e*P **P 18 58 27.2 +1.5**
comp=Z,20nm,0.7s,mb5.2
PYUN Piuthan 58.69 292 *e*P **P 18 58 30.6 +1.3**
comp=Z,18nm,0.6s,mb5.3
SVW2 Sparrevohn 58.98 29 *e*P **P 18 58 30.6 -0.1**
MK31 Makanchi Array 59.41 314 *e*P **P 18 58 32.7 -1.2**
MK31 Makanchi Array 59.41 314 *i* P **P 18 58 33.3 -0.6**
MK31 pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
MKAR Makanchi Array 59.41 314 P **P 18 58 33.0 -1.0**
comp=E,11nm,0.5s,mb5.1,baz=89,slow=6.6,SNR=130
MKAR ScP ScP 19 03 17.1 +0.6
comp=Z,0.6nm,0.6s,baz=78,slow=6.6,SNR=3.2
MKAR LR LR 19 24 25.6
comp=Z,566nm,21.5s,baz=224,slow=36
MKAR Makanchi Array 59.41 314 *i* P **P 18 58 33.0 -0.9**
MKAR pmax pmax
comp=Z,11nm,0.5s
KDAK Kodiak Island 59.44 33 P pP 18 58 47.7 -3.1
comp=Z,17nm,0.7s,baz=274,slow=4.3,SNR=13
NVS Novosibirsk 60.03 323 *i* P **P 18 58 37.5 -0.5**
NVS *e*S **S 19 06 55.6 +10**
NVS pmax pmax
comp=N,6.0nm,0.4s
NVS pmax pmax
comp=Z,18nm,0.4s,mb5.5
NVS pmax pmax
comp=E,19nm,0.5s
TAU Tasmania Unive 60.72 179 *e*P **P 18 58 42.0 -0.8**
PPLA Purkeypile 61.08 27 *e*P **P 18 58 45.0 -0.1**
comp=E,190nm,2.0s,mb5.9
CHUM Lake Minchumin 61.33 26 *e*P **P 18 58 47.0 +0.3**
comp=E,27nm,0.8s,mb5.4
IMA2 Indian Mountai 61.51 24 *e*P **P 18 58 48.5 +0.6**
RC01 Rabbit Creek A 61.69 30 *e*P **P 18 58 49.0 -0.1**
comp=E,33nm,0.8s,mb5.5
KTH Kantishna Hill 61.82 27 *e*P **P 18 58 49.4 -0.6**
comp=E,62nm,1.2s,mb5.6
BPAW Bear Paw Mtn. 61.95 26 *e*P **P 18 58 50.6 -0.3**
comp=E,43nm,0.9s,mb5.6
TRF Thorofare Moun 62.06 27 *e*P **P 18 58 50.4 -1.2**
comp=E,52nm,1.2s,mb5.5
PMR Palmer 62.10 29 *e*P **P 18 58 52.0 +0.1**
comp=E,18nm,0.7s,mb5.3
PMR Palmer 62.10 29 *e*P **P 18 58 52.0 +0.1**
PMR pmax pmax
comp=Z,18nm,0.7s,mb5.3
KURK Kurchatov 62.21 318 P **P 18 58 52.8 -0.1**
comp=Z,228nm,0.8s,mb6.3,SNR=12
KURK Kurchatov 62.21 318 P **P 18 58 52.8 0.0**
SNR=18
KURK Kurchatov 62.21 318 *e*P **P 18 58 51.8 -1.0**
comp=Z,69nm,1.1s,mb5.7
KURK Kurchatov 62.21 318 P **P 18 58 52.5 -0.4**
KURK pmax pmax
comp=Z,55nm,1.5s,mb5.5
MCK McKinley 62.72 27 *e*P **P 18 58 55.4 -0.7**
comp=Z,19nm,0.9s,mb5.2
MCK McKinley 62.72 27 *e*P **P 18 58 55.4 -0.6**
MCK pmax pmax
comp=Z,19nm,0.9s,mb5.2
URZ Urewera 63.01 153 LR LR 19 22 34.6
comp=Z,924nm,19.5s,baz=149,slow=32
COLD Coldfoot 63.20 23 *e*P **P 18 58 59.4 +0.2**
comp=Z,25nm,1.2s,mb5.2
COLA College 63.47 26 *e*P **P 18 59 00.2 -0.7**
comp=Z,14nm,0.8s,mb5.1
COLA College 63.47 26⇑ *e*P **P 18 59 01.5 +0.5**
TKM2 Tokmak 2 64.00 309 *e*P **P 18 59 04.9 0.0**
comp=Z,13nm,0.8s,mb5.0
TKM2 Tokmak 2 64.00 309 *e*P **P 18 59 04.9 0.0**
TKM2 pmax pmax
comp=Z,13nm,0.8s,mb5.0
HYB Hyderabad 64.34 281 *e*P **P 18 59 08.5 +1.0**
HYB Hyderabad 64.34 281 *i* P **P 18 59 08.5 +1.0**
UCH Uchtor 64.82 309 P **P 18 59 10.5 +0.2**
EKS2 Erkin-Say 65.35 309 *e*P **P 18 59 14.8 +1.1**
comp=Z,11nm,1.2s,mb4.8
AML Almayashu 65.44 309 *e*P **P 18 59 14.8 +0.6**
comp=Z,9.0nm,0.8s,mb4.8
RPZ Rata Peaks 65.51 161 LR LR 19 24 35.9
comp=Z,426nm,18.6s,baz=328,slow=33
RAR Rarotonga 65.56 124 LR LR 19 20 30.8
comp=Z,612nm,21.7s,baz=300,slow=29
EGAK Eagle 66.26 26 *e*P **P 18 59 18.6 -0.5**
comp=Z,21nm,1.1s,mb5.1
DAWY Dawson 66.93 27 *e*P **P 18 59 23.4 0.0**
VOSK Vostochnaya 67.05 320 P **P 18 59 22.7 -1.7**
VOSK pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
BVA0 Borovoye Array 67.41 321 *i* P **P 18 59 25.4 -1.2**
BVA0 pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
BRVK Borovoye 67.47 321 P **P 18 59 26.2 -0.8**
comp=Z,195nm,0.5s,mb6.4,SNR=31
BRVK Borovoye 67.47 321 P **P 18 59 27.1 0.0**
SNR=13
BRVK Borovoye 67.47 321 *e*P **P 18 59 25.4 -1.6**
comp=Z,34nm,0.6s,mb5.5
BRVK Borovoye 67.47 321 *e*P **P 18 59 25.4 -1.6**
BRVK pmax pmax
comp=Z,34nm,0.6s,mb5.5
HYT Haines Junctio 67.55 31 *e*P **P 18 59 27.9 +0.6**
KK31 Karatay Array 67.72 310 *i* P **P 18 59 28.5 -0.3**
KK31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
INK Inuvik 69.62 23 *e*P **P 18 59 39.1 -1.0**
comp=Z,416nm,0.7s,mb6.5
KBL Kabul 69.82 301 P **P 18 59 40.9 -1.1**
comp=Z,7.3nm,0.6s,mb4.8
KBL Kabul 69.82 301 P **P 18 59 40.9 -1.1**
KBL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
DLBC Dease Lake 71.37 33 *e*P **P 18 59 51.5 +0.5**
PPT Papeete 72.18 116 *e*S S 19 09 21.2 +6.7
comp=Z,252nm,29.0s
PPT Papeete 72.18 116 *e*LR LR 19 21 51.3
comp=Z,2µm,24.2s,baz=298
PPT Papeete 72.18 116 LR LR 19 25 38.2
comp=Z,877nm,19.3s,baz=259,slow=31
SVE Sverdlovsk 72.79 325⇑ *e*P **P 18 59 59.7 +0.2**
SVE pmax pmax
comp=Z,23nm,1.0s,mb5.1
SVE MLR MLR
comp=Z,548nm,20.0s
ARU Arti 73.98 325 P **P 19 00 06.2 -0.3**
comp=Z,218nm,0.6s,mb6.3,SNR=15
ARU Arti 73.98 325 *e*P **P 19 00 04.6 -1.9**
comp=Z,20nm,0.6s,mb5.2
ARU Arti 73.98 325 *c* iP **P 19 00 06.0 -0.5**
ARU *e* pP 19 00 19.6 -4.3
ARU *e**PP pP 19 00 24.6 +0.7
ARU *e*S S 19 09 33.5 -0.2
ARU *e*SS SS 19 14 14.8 -4.1
ARU *e*SSS 19 17 35.9
ARU pmax pmax
comp=Z,17nm,0.6s,mb5.2
ARU MLR MLR
comp=Z,560nm,22.0s
AB31 Akbulak array 74.28 317 P **P 19 00 06.9 -1.5**
AB31 pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
SOKR Solikamsk 74.43 328⇑ *i* P **P 19 00 09.9 +0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SOKR MLR MLR
comp=Z,820nm,24.0s
TBI Tubuai 74.89 121 *e*S S 19 09 56.8 +12
comp=Z,652nm,32.0s
TBI Tubuai 74.89 121 *e*LR LR 19 22 52.0
comp=Z,540nm,26.0s,baz=303
AKTO Aktyubinsk 75.30 319 P **P 19 00 12.1 -2.2**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HDW Hoodsport 77.15 44 P **P 19 00 25.3 +0.5**
TAOE Nuku Hiva Isla 77.18 104 *e*LR LR 19 23 51.6
comp=Z,3µm,22.1s
E04A Onalaska 77.61 45⇑P **P 19 00 27.8 +0.4**
baz=78
H03A Soap Creek Ran 77.65 47⇓P **P 19 00 28.7 +1.0**
baz=78
JCW Jim Creek 77.76 43 *e*P **P 19 00 28.2 0.0**
A06A Chilliwack 77.84 42⇓P **P 19 00 28.7 0.0**
baz=78
D05A Enumclaw 77.96 44⇓P **P 19 00 29.5 +0.1**
baz=78
RPW Rockport 77.97 43 *e*P **P 19 00 29.3 -0.1**
YKA Yellowknife Ar 78.16 28 P **P 19 00 29.5 -0.6**
comp=Z,9.2nm,0.5s,mb4.9,baz=286,slow=5.4,SNR=30
YKA LR LR 19 33 55.2
comp=Z,200nm,20.2s,baz=160,slow=35
E05A Randle 78.26 45⇓P **P 19 00 31.1 +0.1**
baz=78
O01C Eel River Cons 78.33 52⇓P **P 19 00 32.1 +0.6**
baz=78
HUMO Hull Mountain 78.37 49⇓P **P 19 00 32.1 +0.3**
baz=78
H04A Detroit Lake 78.42 47⇑P **P 19 00 32.0 +0.1**
baz=78
N02C Big Bar 78.55 51⇓P **P 19 00 32.8 0.0**
baz=78
A07A Ashnola River, 78.55 42⇑P **P 19 00 33.0 +0.4**
baz=78
VLL Laurance Lake 78.58 46 P **P 19 00 33.2 +0.4**
ALE Alert 78.65 4 P **P 19 00 33.0 +0.4**
comp=Z,161nm,1.0s,mb5.9,SNR=14
D06A Cle Elum 78.71 44⇓P **P 19 00 33.7 +0.2**
baz=79
M02C Callahan 78.74 50⇑P **P 19 00 33.9 +0.1**
baz=79
YBH Yreka Blue Hor 78.76 50⇑P **P 19 00 33.8 -0.1**
baz=79
E06A Yakima 78.78 45⇑P **P 19 00 33.9 0.0**
baz=79
B07A Winthrop 78.87 43⇑P **P 19 00 34.3 0.0**
baz=79
TBM Table Mountain 78.88 44 P **P 19 00 34.9 +0.4**
ETW Entiat 78.95 44 *e*P **P 19 00 34.5 -0.3**
EBG Ellensburg 78.97 44 P **P 19 00 35.7 +0.8**
H05A Madras 79.09 47⇑P **P 19 00 35.8 +0.2**
baz=79
C07A Waterville 79.10 43⇑P **P 19 00 35.5 -0.2**
baz=79
CROR Criterion Ridg 79.17 46 P **P 19 00 36.4 +0.4**
WDC Whiskeytown Da 79.17 51⇑P **P 19 00 36.1 -0.1**
baz=79
A08A Turner Farm, O 79.28 42⇓P **P 19 00 36.7 +0.1**
baz=79
D07A Quincy 79.29 44⇑P **P 19 00 36.9 +0.2**
baz=79
M03C McCloud 79.30 50⇓P **P 19 00 36.9 0.0**
baz=79
G06A Carlson Farm, 79.35 46⇓P **P 19 00 36.8 -0.2**
baz=79
B08A Colville Reser 79.40 43⇓P **P 19 00 37.2 0.0**
baz=79
MCCM Marconi Confer 79.53 53⇓P **P 19 00 38.2 +0.1**
baz=80
E07A Sunnyside 79.53 44⇓P **P 19 00 37.9 -0.1**
baz=80
NSHM Saint Helena R 79.64 53 *e*P **P 19 00 39.2 +0.4**
MNRC McLaughlin Nat 79.67 52⇓P **P 19 00 39.3 +0.4**
baz=80
H06A Lindquist Farm 79.68 46⇑P **P 19 00 38.6 -0.2**
baz=80
A09A Danville 79.72 42⇓P **P 19 00 38.9 0.0**
baz=80
C08A Higginbotham F 79.74 43⇓P **P 19 00 39.0 0.0**
baz=80
RSW Rattlesnake Hi 79.75 45 *e*P **P 19 00 39.1 0.0**
CVS Carmenet Viney 79.80 53⇑P **P 19 00 39.8 +0.2**
baz=80
K05A Summer Lake 79.82 48⇑P **P 19 00 39.8 +0.1**
baz=80
RES Resolute Bay 79.82 14 *e*P **P 19 00 39.0 0.0**
comp=Z,1µm,0.8s
I06A Prineville 79.98 47⇓P **P 19 00 40.9 +0.4**
baz=80
LBCM Butte Creek Ri 79.98 50 P **P 19 00 40.5 0.0**
G07A Ruggs Ranch, H 80.00 46⇓P **P 19 00 40.6 0.0**
baz=80
D08A Wollman Farm, 80.02 44⇓P **P 19 00 40.8 +0.2**
baz=80
OD2 Odessa Site #2 80.06 43 *e*P **P 19 00 40.5 -0.4**
B09A Rice 80.14 42⇑P **P 19 00 41.3 +0.1**
baz=80
J06A Christmas Vall 80.20 48⇓P **P 19 00 41.8 +0.1**
baz=80
ORV Oroville 80.21 52⇓P **P 19 00 41.2 -0.5**
baz=80,SNR=5.6
OHCM Honcut 80.28 52 *e*P **P 19 00 42.0 -0.1**
A10A Northport 80.36 42⇑P **P 19 00 42.6 +0.2**
baz=80
D09A Jones Farm, Ri 80.42 44⇑P **P 19 00 42.8 0.0**
baz=80
F08A Pendleton 80.46 45⇓P **P 19 00 43.0 0.0**
baz=80
MOD Modoc 80.46 49⇓P **P 19 00 43.3 +0.2**
baz=80
G08A Pilot Rock 80.47 46⇓P **P 19 00 43.2 +0.1**
baz=80
WENL Wente Vineyard 80.52 54⇑P **P 19 00 44.0 +0.5**
baz=80
E09A Wood Farm, Sta 80.68 44⇑P **P 19 00 44.3 +0.2**
baz=81
J07A Hines 80.76 47⇓P **P 19 00 44.9 +0.2**
baz=81
NEW Newport 80.85 42 *e*P **P 19 00 44.5 -0.5**
comp=Z,10nm,0.7s,mb4.9
NEW Newport 80.85 42 *e*P **P 19 00 44.5 -0.5**
NEW pmax pmax
comp=Z,10.0nm,0.7s
BEKR Beckwourth 80.97 51⇓P **P 19 00 45.6 -0.2**
baz=81,SNR=12
LAVA Lava Cap Winer 80.99 52⇑P **P 19 00 45.9 -0.1**
baz=81
K07A Rock Creek Ran 80.99 48⇑P **P 19 00 45.9 0.0**
baz=81
PACP Pacheco Peak 81.05 54⇓P **P 19 00 46.8 +0.4**
baz=81
N06A Buffalo Meadow 81.11 50⇑P **P 19 00 46.8 +0.2**
baz=81
L07A Adell 81.12 49⇑P **P 19 00 46.9 +0.3**
baz=81
A11A Hall Mountain, 81.12 41⇓P **P 19 00 46.7 +0.2**
baz=81
I08A Drewsey 81.13 47⇓P **P 19 00 46.5 -0.1**
baz=81
G09A Cove 81.28 45⇓P **P 19 00 47.7 +0.4**
baz=81
B11A Sandpoint 81.28 42⇑P **P 19 00 47.8 +0.5**
baz=81
O06A Flanigan 81.28 51⇑P **P 19 00 47.4 -0.1**
baz=81
J08A Circle Bar Ran 81.35 47⇓P **P 19 00 48.3 +0.5**
baz=81
V03C Hunter Liggett 81.36 55⇓P **P 19 00 48.0 0.0**
baz=81
M07A Soldier Meadow 81.41 49⇑P **P 19 00 48.1 -0.1**
baz=81
CMB Columbia Colle 81.45 53 *e*P **P 19 00 47.8 -0.7**
comp=Z,24nm,1.1s,mb5.0
CMB Columbia Colle 81.45 53 *e*P **P 19 00 47.8 -0.7**
CMB pmax pmax
comp=Z,24nm,1.1s,mb5.0
CMB Columbia Colle 81.45 53⇑P **P 19 00 48.1 -0.3**
baz=81,SNR=6.4
WVOR Wild Horse Val 81.50 48 *e*P **P 19 00 47.9 -0.7**
comp=Z,37nm,1.3s,mb5.2
WVOR Wild Horse Val 81.50 48 *e*P **P 19 00 47.9 -0.7**
WVOR pmax pmax
comp=Z,37nm,1.3s,mb5.2
K08A Mann Creek Ran 81.52 48⇓P **P 19 00 48.7 0.0**
baz=82
C11A Tepee Creek (N 81.53 43⇓P **P 19 00 48.7 0.0**
baz=82
WCN Washoe City 81.57 52⇑P **P 19 00 49.0 0.0**
baz=82
U04C Hernandez Rese 81.62 55⇑P **P 19 00 49.0 -0.4**
baz=82
I09A Lost Marbles R 81.68 47⇑P **P 19 00 49.5 0.0**
baz=82
SMDO Samad 81.71 291⇑P **P 19 00 50.1 0.0**
SNR=5.2
D11A Klaveano Farm, 81.71 43⇑P **P 19 00 49.3 -0.4**
baz=82
G10A Bishop Farm, J 81.72 45⇓P **P 19 00 49.4 -0.3**
baz=82
BMO Blue Mountains 81.72 46 *e*P **P 19 00 49.2 -0.6**
comp=Z,30nm,1.3s,mb5.1
N07B Gerlach 81.73 50⇓P **P 19 00 49.7 -0.2**
baz=82
L08A Fields 81.78 48⇓P **P 19 00 50.3 +0.2**
baz=82
APA Apatity 81.83 339⇑ iP **P 19 00 50.4 +0.6**
APA pmax pmax
comp=Z,29nm,1.0s,mb5.2
APA MLR MLR
comp=Z,800nm,17.0s
J09A Fry Pan Ranch, 81.86 47⇑P **P 19 00 50.4 0.0**
baz=82
PKD Parkfield 81.92 55⇑P **P 19 00 51.0 0.0**
baz=82
M08A Happy Creek Ra 81.97 49⇓P **P 19 00 50.9 -0.2**
baz=82
O07A Toulon 81.98 50⇓P **P 19 00 51.4 +0.2**
baz=82
E11A Bogner Ranch, 82.01 44⇓P **P 19 00 51.6 +0.4**
baz=82
R06C Coleville 82.02 52⇑P **P 19 00 51.7 +0.3**
baz=82
K09A Rome 82.07 48⇑P **P 19 00 51.8 +0.2**
baz=82
H10A Noah's Angus R 82.18 46⇓P **P 19 00 51.7 -0.4**
baz=82
T06C Millerton Lake 82.26 54⇓P **P 19 00 52.7 0.0**
baz=82
N08A GE Springer Mi 82.34 50⇓P **P 19 00 53.2 +0.2**
baz=82
A13A Flathead Natio 82.36 41⇓P **P 19 00 53.5 +0.5**
baz=82
E12A Beaver Dam Sad 82.41 44⇑P **P 19 00 53.7 +0.3**
baz=82
BSMT Bassoo Peak 82.46 42 P **P 19 00 53.8 +0.3**
KCC Kaiser Creek 82.47 53⇓P **P 19 00 53.7 -0.1**
baz=82,SNR=9.1
B13A Whitefish 82.50 42⇓P **P 19 00 54.0 +0.2**
baz=82
M09A Marrel Ranch, 82.64 49⇓P **P 19 00 54.8 +0.2**
baz=83
K10A MacKenzie Ranc 82.64 48⇓P **P 19 00 54.5 -0.1**
baz=83
C13A Hot Springs 82.66 42⇑P **P 19 00 54.7 +0.1**
baz=83
KEV Kevo 82.72 342 *ep* **P 19 00 53.2 -1.3**
comp=Z,6.8nm,0.4s,mb5.0
KEV Kevo 82.72 342 *e*P **P 19 00 53.2 -1.3**
KEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
N09A Rock Creek Ran 82.76 50⇓P **P 19 00 55.0 -0.2**
baz=83
PKM Peak Mountain 82.79 56⇑P **P 19 00 56.0 +0.5**
baz=83
F12A Elk City 82.82 44⇓P **P 19 00 55.9 +0.5**
baz=83
HATD Hatta, Dubai 82.90 294⇑P **P 19 00 56.0 -0.3**
SNR=6.3
NVAR Mina Array Bea 82.91 52 P **P 19 00 56.1 0.0**
comp=Z,9.4nm,0.7s,mb5.0,baz=269,slow=5.2,SNR=66
D13A Huson 82.92 43⇓P **P 19 00 55.9 0.0**
baz=83
A14A Double T Ranch 82.96 41⇑P **P 19 00 56.1 0.0**
baz=83
G12A Big Creek, Yel 82.97 45⇓P **P 19 00 56.3 +0.1**
baz=83
ARQ Araqi 82.98 292⇑P **P 19 00 56.6 -0.1**
SNR=5.7
MTUM Tungsten Hills 83.04 53 P **P 19 00 56.5 -0.3**
Q08A Gabbs 83.06 52⇑P **P 19 00 57.0 +0.1**
baz=83
R08A Mina 83.08 52⇓P **P 19 00 57.4 +0.4**
baz=83
VES Vestal, Richgr 83.08 55⇑P **P 19 00 56.6 -0.5**
baz=83
L10A Juniper Basin 83.14 48⇓P **P 19 00 57.2 0.0**
baz=83
C14A Swan Lake 83.15 42⇓P **P 19 00 57.2 +0.1**
baz=83
MFID Camas Ranch 83.17 47⇑P **P 19 00 57.4 0.0**
baz=83
BSC Santa Cruz Isl 83.20 57⇓P **P 19 00 58.0 +0.3**
baz=83
O09A Fish Creek Ran 83.21 50⇑P **P 19 00 57.7 +0.1**
baz=83
K11A Parker Ranch, 83.23 47⇑P **P 19 00 57.8 +0.2**
baz=83
B14A Marquette Ranc 83.26 41⇓P **P 19 00 57.6 0.0**
baz=83
M10A I.L. Ranch, Tu 83.26 49⇑P **P 19 00 57.9 0.0**
baz=83
ARCES ARCESS Array B 83.28 342 P **P 19 00 57.0 -0.4**
comp=Z,37nm,0.6s,mb5.6,baz=62,slow=6.2,SNR=219
ARCES LR LR 19 41 29.3
comp=Z,542nm,20.4s,baz=57,slow=38
ARE0 ARCESS Array S 83.28 342 *e*P **P 19 00 56.9 -0.5**
E13A Victor 83.31 43⇑P **P 19 00 58.0 +0.1**
baz=83
A15A Johnson Ranch, 83.39 41⇑P **P 19 00 58.5 +0.2**
baz=83
F13A Darby 83.42 44⇑P **P 19 00 58.3 -0.3**

baz=83
H12A Diamond D Ranc 83.48 45 ⇓P P 19 00 59.2 +0.3
baz=83
N10A Dunphy 83.54 49 ⇓P P 19 00 59.3 0.0
baz=84
ISA Isabella 83.61 55 *e*P P 19 00 58.5 -1.2
comp=Z,14nm,1.2s,mb5.0
ISA Isabella 83.61 55 *e*P P 19 00 58.5 -1.3
ISA pmax pmax
comp=Z,14nm,1.2s,mb5.0
ISA Isabella 83.61 55 ⇓P P 19 00 59.3 -0.5
baz=84
L11A Cat Creek Ranc 83.62 48 ⇓P P 19 00 59.8 +0.1
baz=84
O10A Cortez Mining, 83.67 50 ⇓P P 19 01 00.1 +0.1
baz=84
G13A Cobalt 83.72 45 ⇓P P 19 01 00.0 -0.1
baz=84
B15A Bradely Ranch, 83.72 41 ⇓P P 19 01 00.1 +0.1
baz=84
J12A Stokes Ranch, 83.73 47 ⇑P P 19 01 00.6 +0.4
baz=84
CHMT Chamberlain Mo 83.76 43 *e*P P 19 01 00.7 +0.4
C15A Salmond Ranch, 83.88 42 ⇑P P 19 01 01.0 +0.2
baz=84
H13A Challis 83.88 45 ⇑P P 19 01 01.2 +0.3
baz=84
R09A Tonopah 83.89 52 ⇑P P 19 01 01.4 +0.2
baz=84
P10A Eureka 83.91 50 ⇓P P 19 01 01.4 +0.2
baz=84
S09A Goldfield 83.94 52 ⇑P P 19 01 01.5 +0.1
baz=84
GRAC Grapevine Rang 84.05 53 ⇑P P 19 01 01.8 -0.2
baz=84
K12A Draper Farm, C 84.06 47 ⇓P P 19 01 02.0 +0.1
baz=84
A16A West Butte Ran 84.10 40 ⇑P P 19 01 02.0 +0.1
baz=84
HLID Hailey 84.10 46 *e*P P 19 01 01.8 -0.3
comp=Z,8.7nm,1.0s,mb4.8
HLID Hailey 84.10 46 ⇓P P 19 01 02.4 +0.4
baz=84
L12A House Creek Ra 84.14 48 ⇓P P 19 01 02.6 +0.2
baz=84
D15A Lincoln 84.18 42 ⇑P P 19 01 02.6 +0.2
baz=84
I13A Wildhorse Cree 84.19 46 ⇑P P 19 01 02.8 +0.3
baz=84
Q10A Clear Creek Ra 84.21 51 ⇑P P 19 01 02.6 -0.2
baz=84
MAK Makhachkala 84.22 313 *e*P P 19 01 00.8 -1.9
MAK MLR MLR
comp=Z,1μm,20.0s
EDW2 Edwards Air Fo 84.23 55 ⇓P P 19 01 02.9 0.0
baz=84
KTK1 Kautokeino 84.25 342 *e*P P 19 01 02.4 +0.1
KTK1 AMb AMB 19 01 08.3
comp=N,23nm,1.3s
MPMC Manual Prospec 84.25 54 P P 19 01 03.1 +0.1
baz=84,SNR=9.8
LRMC Laurel Mountai 84.28 55 ⇓P P 19 01 03.0 -0.1
baz=84,SNR=8.2
E15A Deer Lodge 84.32 43 ⇓P P 19 01 03.0 -0.1
baz=84
J13A Cove Ranch, Pi 84.32 46 ⇑P P 19 01 03.2 0.0
baz=84
O11A Cowboy Ranch, 84.34 50 ⇓P P 19 01 03.2 -0.1
baz=84
S10A Tonopah Range, 84.35 52 ⇓P P 19 01 03.4 -0.1
baz=84
ELK Elko 84.44 49 *e*P P 19 01 02.1 -1.8
comp=N,20nm,0.9s,mb5.2
ELK Elko 84.44 49 *e*P P 19 01 02.1 -1.8
ELK pmax pmax
comp=Z,20nm,0.9s
R10A Warm Springs 84.45 52 ⇑P P 19 01 04.3 +0.3
baz=84
P11A Circle Ranch, 84.45 50 ⇓P P 19 01 03.9 0.0
baz=84
M12A Wells 84.45 48 ⇑P P 19 01 04.0 +0.1
baz=84
H14A Leadore 84.46 45 ⇓P P 19 01 03.6 -0.2
baz=84
N12A Clover Valley, 84.55 49 ⇑P P 19 01 04.8 +0.3
baz=84
FURC Furnace Creek, 84.61 54 ⇓P P 19 01 05.0 +0.2
baz=85
F15A Butte 84.62 44 ⇑P P 19 01 05.0 +0.4
baz=85
I14A Mackay 84.64 46 ⇓P P 19 01 05.5 +0.7
baz=85
DRV Dumont d'Urvil 84.66 183 S S 19 10 57.0 -29
DRV SS SS 19 17 11.0 +12
DRV L 19 24 00.0
DRV R 19 30 00.0
MCMT McKenzie Canyo 84.73 45 *e*P P 19 01 05.7 +0.5
J14A Carey 84.80 46 ⇑P P 19 01 05.8 +0.2
baz=85
D16A Dana Ranch, Ca 84.81 42 ⇑P P 19 01 06.0 +0.4
baz=85
G15A Dillon 84.86 44 ⇓P P 19 01 05.7 -0.1
baz=85
JOF Joensuu 84.87 335 *e*p P 19 01 03.2 -2.3
comp=Z,15nm,0.3s,mb5.6
JOF Joensuu 84.87 335 *e*P P 19 01 03.2 -2.3
JOF pmax pmax
comp=Z,15nm,0.3s,mb5.6
DAG Danmarks Havn 84.90 357 ⇓*e*P P 19 01 05.2 -0.3
comp=Z,13nm,0.8s,mb5.1
DAG Danmarks Havn 84.90 357 ⇓*e*P P 19 01 05.2 -0.3
DAG pmax pmax
comp=Z,13nm,0.8s,mb5.1
DAG Danmarks Havn 84.90 357 ⇓*i*P P 19 01 05.2 -0.3
comp=Z,13nm,0.8s,mb5.1
E16A East Helena 84.91 43 ⇓P P 19 01 06.0 -0.1
baz=85
L13A Double Diamond 84.92 47 ⇓P P 19 01 06.7 +0.5
baz=85
TPNV Topopah Spring 84.92 53 *e*P P 19 01 06.1 -0.2
comp=Z,8.1nm,0.7s,mb5.0
TPNV Topopah Spring 84.92 53 *e*P P 19 01 06.1 -0.3
TPNV pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
TPNV Topopah Spring 84.92 53 ⇓P P 19 01 06.5 +0.2
baz=85
H15A Lima 84.94 45 ⇑P P 19 01 06.6 +0.2
baz=85
O12A Currie 84.95 49 ⇑P P 19 01 06.4 -0.1
baz=85
R11A Troy Canyon, C 84.97 51 ⇓P P 19 01 06.5 -0.1
baz=85
GSC Goldstone 85.02 55 *e*P P 19 01 06.8 -0.1
comp=Z,17nm,1.1s,mb5.1
GSC Goldstone 85.02 55 *e*P P 19 01 06.8 -0.1
GSC pmax pmax
comp=Z,17nm,1.1s,mb5.1
GSC Goldstone 85.02 55 ⇑P P 19 01 07.1 +0.2
baz=85
U10A Ash Meadows, A 85.03 53 ⇑P P 19 01 06.7 -0.2
baz=85
TRO Tromso 85.05 344 *e*P P 19 01 05.6 -0.7
TRO AMb AMB 19 01 06.1
comp=Z,59nm,0.8s,mb5.8
P12A McGill 85.10 50 ⇓P P 19 01 07.1 -0.1
baz=85
N13A Wendover, West 85.15 49 ⇑P P 19 01 07.4 -0.1
baz=85
F16A Kennard Place, 85.20 43 ⇑P P 19 01 08.0 +0.4
baz=85
MURC Murrieta 85.25 56 ⇓P P 19 01 07.8 -0.3
baz=85
BOZ Bozeman (W) 85.25 44 *e*P P 19 01 07.7 -0.1
comp=Z,8.5nm,0.8s,mb4.9
BOZ Bozeman (W) 85.25 44 *e*P P 19 01 07.7 -0.1
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
BOZ Bozeman (W) 85.25 44 ⇓P P 19 01 08.3 +0.5
baz=85
G16A Moss Hill, Enn 85.29 44 ⇑P P 19 01 08.3 +0.2
baz=85
K14A Jones Ranch, D 85.30 47 ⇓P P 19 01 08.5 +0.3
baz=85
D17A Six Diamond Ra 85.31 42 ⇓P P 19 01 08.3 +0.1
baz=85
L14A Malta 85.43 47 ⇑P P 19 01 09.1 +0.3
baz=85
E17A Martinsdale 85.46 43 ⇑P P 19 01 08.7 -0.1
baz=85
J15A Blackfoot 85.51 46 ⇑P P 19 01 09.5 +0.3
baz=86
M14A Sheep Mountain 85.54 48 ⇑P P 19 01 09.4 +0.1
baz=86
HEC Hector,Ludlow 85.54 55 ⇓P P 19 01 08.9 -0.6
baz=86
EGMT Eagleton 85.58 41 ⇑P P 19 01 09.3 -0.1
baz=86
T11A Corn Creek, Al 85.60 52 ⇑P P 19 01 09.7 -0.1
baz=86
K15A Arbon 85.69 47 ⇑P P 19 01 10.4 +0.3
baz=86
R12A Pony Springs, 85.70 51 ⇓P P 19 01 09.8 -0.4
baz=86
P13A Bates Ranch, G 85.75 50 ⇑P P 19 01 10.8 +0.3
baz=86
F17A Fitzpatrick Pl 85.79 43 ⇓P P 19 01 10.7 +0.2
baz=86
PFO Pinyon Flat Ob 85.83 56 *e*P P 19 01 09.9 -1.1
comp=Z,9.4nm,1.1s,mb4.9
PFO Pinyon Flat Ob 85.83 56 *e*P P 19 01 09.9 -1.1
PFO pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
PFO Pinyon Flat Ob 85.83 56 ⇑P P 19 01 10.8 -0.2
baz=86
HVU Hansel Valley 85.84 47 *e*P P 19 01 10.8 -0.1
comp=Z,31nm,1.3s,mb5.4
HVU Hansel Valley 85.84 47 *e*P P 19 01 10.8 -0.1
HVU pmax pmax
comp=Z,31nm,1.3s,mb5.4
H16A Russell Place, 85.84 44 ⇓P P 19 01 11.1 +0.3
baz=86
N14A Grayback Hills 85.87 48 ⇓P P 19 01 11.3 +0.3
baz=86
G17A Pierce Place, 85.95 44 ⇑P P 19 01 11.7 +0.3
baz=86
I16A Newdale 85.98 45 ⇑P P 19 01 11.8 +0.3
baz=86
E18A Harlowton 86.03 42 ⇓P P 19 01 11.8 +0.1
baz=86
L15A Malad City 86.03 47 ⇑P P 19 01 11.2 -0.6
baz=86
BELC Belle Mtn. 86.07 56 P P 19 01 11.9 -0.2
baz=86,SNR=6.0
GMRC Granite Mounta 86.08 55 ⇑P P 19 01 12.1 -0.1
baz=86
MONP Monument Peak 86.09 57 P P 19 01 12.4 +0.2
baz=86,SNR=6.1
J16A Bone 86.12 46 P P 19 01 12.2 +0.1
baz=86
OBN Obninsk 86.18 327 *i* P P 19 01 11.7 -0.5
OBN *e**PP pP 19 01 28.2 -1.8
OBN *e*S SKSac 19 11 30.6 -2.2
OBN *e*SS SS 19 17 20.1 -0.9
OBN pmax pmax
comp=Z,5.0nm,0.4s,mb5.1
OBN MLR MLR
comp=Z,800nm,22.0s
M15A Larsen Ranch, 86.18 48 ⇓P P 19 01 12.6 0.0
baz=86
YFT Old Faithful 86.21 44 *e*P P 19 01 14.3 +1.7
YNR Norris Junctio 86.22 44 *e*P P 19 01 13.2 +0.5
R13A O'Grain Ranch, 86.22 51 ⇑P P 19 01 13.3 +0.5
baz=86
SPUT South Promonto 86.24 48 *e*P P 19 01 12.7 -0.1
K16A Soda Springs 86.29 46 ⇓P P 19 01 13.7 +0.7
baz=86
DUG Dugway 86.37 49 *e*P P 19 01 12.9 -0.6
comp=Z,25nm,1.1s,mb5.4
DUG Dugway 86.37 49 *e*P P 19 01 12.9 -0.6
DUG pmax pmax
comp=Z,25nm,1.1s,mb5.4
DUG Dugway 86.37 49 ⇓P P 19 01 13.3 -0.2
baz=86
P14A Drum Mountains 86.40 50 ⇓P P 19 01 13.8 +0.1
baz=86
F18A Big Timber 86.40 43 ⇓P P 19 01 13.9 +0.3
baz=86
Q14A Sevier Lake (B 86.45 50 ⇓P P 19 01 13.9 0.0
baz=86
BC3 Big Chuckw Mtn 86.61 56 ⇓P P 19 01 14.6 -0.2
baz=87,SNR=7.5
AHID Auburn Hatcher 86.65 46 *e*P P 19 01 14.6 -0.2
comp=Z,14nm,0.9s,mb5.2
IRM Iron Mountain 86.68 55 ⇓P P 19 01 14.6 -0.5
baz=87,SNR=6.0
G18A Lazy EL Ranch, 86.72 43 ⇓P P 19 01 14.9 -0.2
baz=87
HWUT Hardware Ranch 86.75 47 *e*P P 19 01 15.3 0.0
comp=Z,19nm,0.9s,mb5.3
RBK Rabkut 86.78 287 P P 19 01 15.0 -0.9
SNR=8.8
M16A Huntsville 86.81 48 ⇓P P 19 01 15.4 -0.2
baz=87
RKT Rikitea 86.94 115 *e*S S 19 11 56.9 +6.6
comp=Z,505nm,31.5s
RKT Rikitea 86.94 115 *e*LR LR 19 28 28.1
comp=Z,1μm,33.2s,baz=289
RLMT Red Lodge 86.99 43 *e*P P 19 01 17.0 +0.6
comp=Z,23nm,0.8s,mb5.5
RLMT Red Lodge 86.99 43 ⇓P P 19 01 16.8 +0.4
baz=87
V13A Grand Canyon W 87.01 53 ⇓P P 19 01 16.9 +0.2
baz=87
WHFO Wadi Hawf 87.05 288 P P 19 01 16.4 -0.8
SNR=5.1
Q15A Fillmore 87.11 50 ⇓P P 19 01 17.1 0.0
baz=87
KIV Kislovodsk 87.15 315 *e*P P 19 01 20.6 +3.4
KIV pmax pmax
comp=Z,15nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,503nm,19.0s
I18A Diamond G Ranc 87.17 45 ⇓P P 19 01 17.5 +0.2
baz=87
FFC Flin Flon 87.19 33 P P 19 01 17.0 -0.1
comp=Z,160nm,0.7s,mb6.4,SNR=5.2
FFC Flin Flon 87.19 33 *e*P P 19 01 16.6 -0.6
comp=Z,32nm,1.0s,mb5.5
FFC Flin Flon 87.19 33 *e*P P 19 01 16.6 -0.5
FFC pmax pmax
comp=Z,32nm,1.0s,mb5.5
JLU Jordanelle 87.20 48 *e*P P 19 01 16.9 -0.6
KAF Kangasniemi 87.26 336 *e*p P 19 01 15.0 -2.4
comp=Z,3.3nm,0.4s,mb4.9,baz=54,slow=4.6
KAF Kangasniemi 87.26 336 *e*P P 19 01 15.0 -2.4
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.9
GLA Glamis 87.30 56 ⇑P P 19 01 18.3 +0.1
baz=87
O16A Springville 87.30 49 ⇑P P 19 01 17.8 -0.2
baz=87
Y12C Blythe 87.31 55 ⇓P P 19 01 18.5 +0.3
baz=87
W13A Hualapai Mount 87.34 54 ⇑P P 19 01 18.3 0.0
baz=87
DAU Daniels Canyon 87.40 48 *e*P P 19 01 18.3 -0.2
PDMCI Parker Dam,Lak 87.42 55 ⇑P P 19 01 18.4 -0.3
baz=87
MSU Marysvale 87.43 50 *e*P P 19 01 18.9 +0.2
LOF Lofoten 87.50 344 *e*P P 19 01 20.2 +1.8
X13A Yucca 87.56 54 ⇓P P 19 01 19.4 0.0
baz=88
ABTO Aybut 87.65 287 P P 19 01 19.7 -0.4
SNR=9.1
BW06 Boulder Array 87.70 46 ⇑P P 19 01 19.6 -0.3
baz=88
PDAR Pinedale Array 87.70 46 P P 19 01 19.4 -0.5
comp=Z,3.3nm,0.6s,mb4.7,baz=254,slow=2.3,SNR=29
V14A Boquillas Ranc 87.75 53 ⇑P P 19 01 20.6 +0.3
baz=88
T15A Red Dirt Ranch 87.81 52 ⇑P P 19 01 20.2 -0.3
baz=88
TMUT Trail Mountain 87.85 49 *e*P P 19 01 21.4 +0.8
O17A Robinson Place 87.85 48 ⇑P P 19 01 20.8 +0.1
baz=88
M18A Lyman 87.86 47 ⇑P P 19 01 19.9 -0.8
baz=88
W14A Seligman 87.92 54 ⇓P P 19 01 21.3 +0.2
baz=88
U15A North Rim 88.09 52 ⇓P P 19 01 21.3 -0.6
baz=88
L19A Farson 88.09 46 ⇑P P 19 01 21.4 -0.4
baz=88
P17A Butcher Ranch, 88.12 49 ⇑P P 19 01 21.7 -0.3
baz=88
113A Mohawk Valley, 88.24 56 ⇓P P 19 01 22.5 -0.2
baz=88
N18A Larsen Ranch, 88.31 47 ⇓P P 19 01 22.4 -0.4
baz=88
X14A Yava 88.33 54 ⇓P P 19 01 23.7 +0.7
baz=88
V15A Kaibab Nationa 88.40 53 ⇓P P 19 01 24.1 +0.8
baz=88
SRU San Rafael 88.41 49 ⇑P P 19 01 23.0 -0.3
baz=88
P18A Preston Nutter 88.42 49 ⇓P P 19 01 22.8 -0.5
baz=88
Y14A Wickenburg 88.43 55 ⇓P P 19 01 23.7 +0.2
baz=88
T16A Glen Canyon Da 88.47 52 ⇑P P 19 01 24.1 +0.4
baz=88
R17A Hanksville Air 88.53 50 ⇓P P 19 01 24.1 +0.2
baz=88
W15A Williams 88.56 53 ⇓P P 19 01 24.9 +0.8
baz=88
MOR8 Moi Rana 88.66 342 *e*P P 19 01 21.4 -2.5
MOR8 AMb AMB 19 01 23.7
comp=Z,24nm,1.0s,mb5.5
N19A John Jarvie Ra 88.69 47 ⇑P P 19 01 24.7 +0.1
baz=89
Q18A Rafter H Ranch 88.69 49 ⇑P P 19 01 24.2 -0.4
baz=89
MIB Mutribah 88.78 301 *e*P P 19 01 23.1 -2.1
baz=301
MIB AMb AMB 19 01 25.1
comp=Z,43nm,0.7s,mb5.9,baz=301
X15A Humboldt 88.83 54 ⇑P P 19 01 26.1 +0.7
baz=89
FCC Fort Churchill 88.85 27 P P 19 01 24.3 -0.7
comp=Z,29nm,0.8s,mb5.7
FCC Fort Churchill 88.85 27 P P 19 01 24.3 -0.7
FCC pmax pmax
comp=Z,29nm,0.8s,mb5.7
RDF Al-Radifah 88.91 300 *e*P P 19 01 23.9 -2.0
baz=300
RDF AMb AMB 19 01 28.1
comp=Z,35nm,1.3s,mb5.5,baz=300
STOK Stokkvaagen 88.94 343 *e*P P 19 01 24.4 -0.9
STOK AMb AMB 19 01 26.6
comp=Z,23nm,0.9s,mb5.5
Y15A Casa Rosa Ranc 88.94 55 ⇑P P 19 01 26.4 +0.4
baz=89
O19A Miners Draw (B 88.95 48 ⇓P P 19 01 26.0 +0.1
baz=89
T17A Navajo Res., N 88.99 51 ⇑P P 19 01 26.4 +0.3
baz=89
NAY Al-Naaiem 89.05 300 *e*P P 19 01 24.3 -2.2
baz=300
NAY AMb AMB 19 01 26.3
comp=Z,26nm,0.7s,mb5.7,baz=300
U16A Tuba City 89.07 52 ⇑P P 19 01 26.5 0.0
baz=89
WUAZ Wupatki 89.11 53 ⇓P P 19 01 26.9 +0.2
baz=89
W16A Flagstaff 89.15 53 ⇑P P 19 01 27.8 +0.9
baz=89
214A Organ Pipe Nat 89.28 57 ⇑P P 19 01 27.9 +0.4
baz=89
P19A Cripple Cowboy 89.31 48 ⇓P P 19 01 27.4 -0.2
baz=89
X16A Lo Mia Camp, P 89.46 54 ⇓P P 19 01 28.5 +0.2
baz=89
115A Sonoran Desert 89.47 56 ⇓P P 19 01 29.1 +0.6
baz=89
Y16A Circle Bar Ran 89.63 54 ⇑P P 19 01 29.9 +0.7
baz=90
R19A Curley Farm, L 89.64 50 ⇑P P 19 01 28.9 -0.2
baz=90
U18A Rough Rock, Ch 89.91 52 ⇑P P 19 01 30.4 0.0
baz=90
X17A Forest Lakes 89.98 54 ⇑P P 19 01 30.9 +0.1
baz=90
V18A Ganado 90.13 52 ⇑P P 19 01 31.8 +0.4
baz=90
Y17A Roosevelt 90.19 54 ⇓P P 19 01 32.1 +0.3
baz=90
PV01 Paradox Valley 90.20 50 *e*P P 19 01 31.0 -0.8
ANN Anapa 90.24 318 *e*P P 19 01 28.0 -3.8
ANN *e**PP pP 19 01 53.2 +3.5
ANN *e*S SKSac 19 11 51.8 -5.7
ANN pmax pmax
comp=Z,89nm,1.6s,mb5.8
ANN MLR MLR
comp=Z,772nm,22.0s
216A Three Points, 90.33 56 ⇓P P 19 01 33.1 +0.6
baz=90
T19A Beclabito 90.37 51 ⇑P P 19 01 33.0 +0.4
baz=90
NSS Namsos 90.56 342 *e*P P 19 01 29.4 -3.5
NSS AMb AMB 19 01 30.0
comp=Z,38nm,2.4s,mb5.3
X18A Snowflake 90.56 53 ⇓P P 19 01 34.0 +0.5
baz=90
MVCO Mesa Verde 90.61 50 *e*P P 19 01 34.9 +1.2
comp=Z,30nm,1.3s,mb5.5
MVCO Mesa Verde 90.61 50 ⇓P P 19 01 34.0 +0.3
baz=91
117A Oracle 90.69 55 ⇑P P 19 01 34.6 +0.4
baz=91
RSSD Black Hills 90.81 43 *e*P P 19 01 33.8 -0.7
comp=Z,7.9nm,0.6s,mb5.2
RSSD Black Hills 90.81 43 *e*P P 19 01 33.8 -0.6
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb5.2
SMCO Snowmass 90.92 48 *e*P P 19 01 35.6 +0.6
comp=Z,13nm,0.9s,mb5.3
217A Green Valley 90.93 56 ⇑P P 19 01 36.0 +0.7
baz=91
X19A St. Johns 91.11 53 ⇓P P 19 01 36.1 0.0
baz=91
118A Homack Ranch, 91.27 55 ⇑P P 19 01 37.5 +0.7
baz=91
Y19A Nutrioso 91.32 54 ⇓P P 19 01 37.5 +0.5
baz=91
218A Dragoon 91.46 56 ⇑P P 19 01 38.4 +0.7
baz=91
ISCO Idaho Springs 91.62 47 *e*P P 19 01 38.9 +0.6
comp=Z,7.1nm,0.9s,mb5.0
ISCO Idaho Springs 91.62 47 *e*P P 19 01 38.9 +0.6
ISCO pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
318A Bisbee 91.70 56 ⇓P P 19 01 39.2 +0.3
baz=92
119A Ashpeak Ranch, 91.74 55 ⇑P P 19 01 39.3 +0.3
baz=92
219A White Tail Can 92.07 55 ⇓P P 19 01 41.1 +0.5
baz=92
AKASG Malin Array Be 92.22 326 P P 19 01 38.6 -2.2
comp=Z,2.1nm,0.5s,mb4.7,baz=51,slow=5.3,SNR=16
AKASG LR LR 19 46 45.1
comp=Z,443nm,20.0s,baz=45,slow=38
AKASG Malin Array Be 92.22 326 *i* P P 19 01 39.0 -1.8
AKASG pmax pmax
comp=Z,2.0nm,0.5s
319A Douglas 92.29 56 ⇑P P 19 01 42.2 +0.7
baz=92
SDCO Great Sand Dun 92.57 49 *e*P P 19 01 42.7 0.0
comp=Z,5.7nm,1.0s,mb5.0
ULM Lac du Bonnet 92.66 35 P P 19 01 42.0 -0.9
comp=Z,11nm,0.8s,mb5.3,baz=322,slow=6.5,SNR=6.3
ULM LR LR 19 42 12.8
comp=Z,423nm,18.9s,baz=273,slow=35
LAZ Ladron 92.75 53 *e*P P 19 01 43.9 +0.2
ANMO Albuquerque 93.03 52 P P 19 01 44.0 -1.0
comp=Z,6.8nm,1.1s,mb5.0
ANMO Albuquerque 93.03 52 P P 19 01 44.0 -0.9
ANMO pmax pmax
comp=Z,7.0nm,1.1s
DOMB Dombas 93.30 341 *e*P P 19 01 45.8 +0.2
DOMB AMb AMB 19 01 46.6
comp=Z,4.6nm,0.7s,mb5.0
SUW Suwalki 93.38 330 P P 19 01 43.6 -2.5
comp=Z,30nm,1.1s,mb5.6
SUW Suwalki 93.38 330 P P 19 01 43.6 -2.5
SUW pmax pmax
comp=Z,30nm,1.1s,mb5.6
NB2 NORSAR Subarra 93.39 340 P P 19 01 44.1 -1.9
comp=Z,1.4nm,0.5s,mb4.7,baz=39,slow=4.6
NOA NORSAR Array B 93.39 340 P P 19 01 43.8 -2.1
comp=Z,1.3nm,0.6s,mb4.5,baz=35,slow=4.7,SNR=12
NOA PP PP 19 05 29.2 -0.8
comp=Z,2.9nm,0.9s,baz=39,slow=7.6,SNR=5.5
NOA LR LR 19 47 40.9

comp=Z,264nm,20.4s,baz=30,slow=38
NOA NORSAR Array B 93.39 340 P P 19 01 43.8 -2.2
NOA 19 05 29.2
BRTR Keskin Array B 95.06 314 P P 19 01 52.1 -2.0
comp=Z,1.5nm,0.6s,mb4.6
BUR08 Bucovina Ar. S 96.11 324 *e*P **P 19 01 56.4 -2.3**
TXAR Lajitas Array 97.55 56 P P 19 02 05.9 +0.3
comp=Z,0.6nm,0.7s,mb4.3,baz=257,slow=5.0,SNR=5.3
TXAR PKKP PKKPbc 19 18 42.6 +0.3
comp=Z,0.6nm,0.8s,baz=130,slow=5.1,SNR=5.6
TXAR LR LR 19 43 45.1
comp=Z,332nm,18.9s,baz=290,slow=34
OKC Ostrava-Krasne 98.43 329 AMS AMS 19 49 30.0
comp=Z,400nm,18.0s
DPC Dobruska-Polom 98.97 330 *e*PP PP 19 06 05.7 -7.6
DPC AMS AMS 19 47 00.0
comp=Z,500nm,26.3s
PVCC Panska Ves 99.66 331 AMS AMS 19 47 20.0
comp=Z,500nm,26.6s
BRG Berggiesshubel 99.70 332 *e*PP PP 19 06 17.9 -1.0
BRG Berggiesshubel 99.70 332 *e*P P 19 06 13.8 -5.1
comp=Z,17nm,1.7s
BRG *e* 19 06 18.6
comp=Z,45nm,2.2s
BRG *e* 19 12 31.0
BRG
comp=N,421nm,14.7s
BRG
comp=E,239nm,18.5s
BRG
comp=Z,523nm,20.3s
CLL Collm 99.81 332 *e*PP PP 19 06 19.6 -0.1
CLL Collm 99.81 332 *e*PP PP 19 06 17.0 -2.7
CLL Lm 19 51 00.0
comp=N,300nm,21.9s
CLL Lm 19 51 00.0
comp=E,400nm,20.0s
CLL Lm 19 51 00.0
comp=Z,500nm,18.7s
PRU Pruhonice 100.05 331 *e*PP PP 19 06 17.2 -4.3
PRU AMS AMS 19 47 30.0
comp=Z,500nm,23.0s
TREC Trest 100.08 330 AMS AMS 19 47 50.0
comp=Z,600nm,18.3s
TANN Tannenbergstha 100.69 332 *e*PP PP 19 06 26.5 +0.1
GUNZ Gunzen 100.78 332 *e*PP PP 19 06 27.0 -0.1
KHC Kasperske Hory 101.09 331 *e*PP PP 19 06 20.7 -8.8
KHC *ex* x 19 06 24.5
KHC AMS AMS 19 51 20.0
comp=Z,600nm,19.4s
MANZ Manzenberg 101.16 332 *e*PP PP 19 06 29.7 -0.2
GEC2 GERESS Array S 101.24 330 *e*PP PP 19 06 30.7 +0.1
GERES GERESS Array B 101.24 330 P Pdif 19 02 19.8 -1.8
comp=Z,0.5nm,0.6s,baz=27,slow=6.1,SNR=3.8
GERES PP PP 19 06 31.2 +0.7
comp=Z,0.5nm,0.6s,baz=46,slow=7.6,SNR=3.7
WET Wettzell 101.41 331 *e*PP PP 19 06 32.7 +0.9
GRF Grafenberg Arr 101.77 332 *e*PP PP 19 06 34.1 -0.4
ESDC Sonseca Array 116.24 335 PP PP 19 08 19.6 +0.1
comp=Z,3.6nm,0.8s,baz=28,slow=8.1,SNR=6.6
LSZ Lusaka 121.07 263 *e*PKPdf PKPdf 19 07 24.1 -0.2
SNAA Sanae 123.49 191 *e*PKPdf PKPdf 19 07 25.2 -2.1
SNAA *e* 19 07 32.4
SNAA *e* 19 07 47.2
SNAA *e* 19 07 51.2
SNAA Sanae 123.49 191 *e*PKIKP PKPdf 19 07 24.2 -3.1
VNA2 Neumayer--Watz 124.92 190 *e*PKPdf PKPdf 19 07 29.7 -0.4
baz=298,slow=0.2
VNA2 *e* 19 07 38.4
VNA2 *e* 19 07 52.1
VNA2 *e* 19 07 56.2
VNA3 Neumayer Olymp 125.01 189 *e*PKPdf PKPdf 19 07 29.4 -0.8
VNA3 *e* 19 07 38.0
VNA3 *e* 19 07 52.0
VNA3 *e* 19 07 56.0
VNA3 *e* 20 23 29.3
VNA1 Neumayer--Stat 125.31 190 *e*PKPdf PKPdf 19 07 31.2 +0.4
VNA1 *e* 19 07 39.0
VNA1 *e* 19 07 53.1
VNA1 *e* 19 07 57.1
VNA1 *e* 20 23 21.7
VNA1 *e* 20 23 28.0
BOSA Boshof 125.50 247 PKP PKPdf 19 07 32.0 -0.4
comp=Z,2.7nm,0.9s,baz=161,slow=6.4,SNR=5.1
TORD Torodi Ar. Bea 133.41 309 PKhKP 19 07 29.9
comp=Z,0.2nm,0.7s,baz=90,slow=1.8,SNR=3.7
TORD PKP PKPdf 19 07 46.5 -1.4
comp=Z,1.1nm,0.6s,baz=356,slow=1.4,SNR=6.0
TORD PP PP 19 10 16.5 +1.1
comp=Z,0.7nm,0.6s,baz=28,slow=5.5,SNR=3.5
TORD SKPbc SKPbc 19 11 08.4 -2.4
comp=Z,2.8nm,1.0s,baz=33,slow=2.9,SNR=6.6
TORD Torodi Ar. Bea 133.41 309 PKP PKPdf 19 07 46.5 -1.4
TORD PP PP 19 10 16.5 +1.1
TORD SKPbc SKPbc 19 11 08.4 -2.4
PLCA Paso Flores 141.05 133 PKP PKPdf 19 08 01.9 +0.7
comp=Z,5.3nm,0.7s,baz=202,slow=6.5,SNR=15
PLCA Paso Flores 141.05 133 *e*PKIKP PKPdf 19 08 01.2 0.0
DBIC Dimbokro 142.50 309 PKhKP 19 07 59.7
comp=Z,10nm,0.7s,baz=19,slow=4.5,SNR=24
DBIC Dimbokro 142.50 309 *e*PKHKP 19 07 58.4
KIC Kosan Boka 142.62 308 *e*PKP1 PKPdf 19 08 00.6 -4.3
comp=Z,38nm,0.6s
TIC Toumodi 142.64 309 *e*PKP1 PKPdf 19 08 00.5 -4.4
comp=Z,22nm,0.5s
LIC Lamto 142.92 308 *e*PKP1 PKPdf 19 08 01.6 -3.8
comp=Z,45nm,0.6s
LCO Las Campanas 144.36 115 *e*PKPdf PKPdf 19 08 06.1 -1.3
LVC Limon Verde 146.56 104 *e*PKPbc PKPbc 19 08 13.4 +0.4
LPAZ La Paz 146.91 92 PKPbc PKPbc 19 08 13.1 -1.0
comp=Z,8.5nm,0.6s,baz=245,slow=5.0,SNR=17
LPAZ La Paz 146.91 92 *e*PKP2 PKPbc 19 08 13.0 -1.1
BDFB Brasilia 165.90 82 PKP PKPdf 19 08 37.0 +0.5
comp=Z,1.6nm,0.6s,baz=253,slow=17,SNR=4.9

DDA ***13*** *19:14:51.0,3808N×4288E,h8km±5km, Md2.9*
ISCJB ***13*** *19:14:52.1±0.6,3811N±004×4301E±005,h10km, Error ellipse: s-maj=6.4km s-min=4.1km az=138.3*
CSEM ***13*** *19:14:52.8±0.6,3816N×4324E,h15km, MD2.9, Error ellipse: s-maj=26.7km s-min=7.4km az=76.0*
ISC 13 19:14:52.4±0.6,3811N±004×4300E±004,h10km,n10,
σ1§17/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VANT	**Van**	**0.46**	**43**	*e*PG		**Pg**	**19 14 59.7**	**-1.6**
VANT				*e*SG		**Sg**	**19 15 06.5**	**-0.8**
TVAN	**Van**	**0.53**	**38**	*i* P		**Pg**	**19 15 02.7**	**+0.1**
TVAN				*i* S		**Sg**	**19 15 11.4**	**+1.9**
TVAN	**Van**	**0.53**	**38**	*i* P		**Pg**	**19 15 02.7**	**+0.1**
TVAN				*i* S		**Sg**	**19 15 11.4**	**+1.8**
VANB	**Van**	**0.57**	**32**	*e*PG		**Pg**	**19 15 01.9**	**-1.6**
SIRT	**Sirnak**	**0.75**	**216**	*e*PG		**Pg**	**19 15 05.2**	**-1.7**
HAKT	**HAKKARI**	**0.79**	**134**	*i* P		**Pg**	**19 15 07.9**	**+0.4**
HAKT				*i* S		**Sg**	**19 15 19.3**	**+1.5**
TUTA	**Tutak**	**1.30**	**354**	*i* P		**Pn**	**19 15 15.9**	**-0.6**
TUTA				*i* S		**Sb**	**19 15 35.4**	**+1.9**
TUTA	**Tutak**	**1.30**	**354**	*i* P		**Pn**	**19 15 15.9**	**-0.6**
TUTA				*i* S		**Sb**	**19 15 35.4**	**+1.9**
BEST	**Besiri**	**1.38**	**261**	*i* P		**Pn**	**19 15 17.5**	**-0.1**
BEST				*i* S		**Sb**	**19 15 37.0**	**+1.0**
MARD	**Mardin**	**1.93**	**246**	*i* P		**Pn**	**19 15 24.5**	**-0.7**
MARD				*i* S		**Sn**	**19 15 50.0**	**+0.6**

IDC 13 19:16:16.6±54.0,1664S×17858W,h0km,mb4.0/3,
mb1 4.1/3,mb1mx3.7/15,mbtmp4.0/3,Error ellipse:
s-maj=998.9km s-min=167.8km az=77.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.12**	**240**	P		P	19 23 45.8	-0.1
	1.3nm,0.7s,baz=101,slow=10,SNR=2.9							
WRA	**Warramunga Arr**	**44.72**	**258**	P		P	19 24 31.9	0.0
	0.7nm,0.6s,baz=92,slow=7.3,SNR=6.7							
ASAR	**Alice Springs**	**44.99**	**253**	P		P	19 24 33.9	-0.1
	2.6nm,0.5s,baz=87,slow=8.9,SNR=73							

ISCJB ***13*** *19:19:03.7±0.9,3809N±004×4297E±008,h3km±14km, Error ellipse: s-maj=10.1km s-min=6.0km az=2.7*

DDA ***13*** *19:19:04.0,3809N×4295E,h7km±5km, Md3.1*
CSEM ***13*** *19:19:04.3±0.3,3815N×4314E,h22km±2km, MD3.1, Error ellipse: s-maj=12.6km s-min=3.8km az=75.0*
ISC 13 19:19:04.4±0.8,3810N±004×4299E±008,h10km±12km,n8,
σ1§22/14,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VANT	**Van**	**0.47**	**42**	*e*PG		**Pg**	**19 19 11.8**	**-1.8**
VANT				*e*SG		**Sg**	**19 19 19.1**	**-0.7**
TVAN	**Van**	**0.54**	**37**	*i* P		**Pg**	**19 19 14.4**	**-0.6**
TVAN				*i* S		**Sg**	**19 19 24.2**	**+2.1**
VANB	**Van**	**0.59**	**32**	*e*PG		**Pg**	**19 19 15.1**	**-0.7**
SIRT	**Sirnak**	**0.73**	**216**	*e*PG		**Pg**	**19 19 17.2**	**-1.4**
HAKT	**HAKKARI**	**0.78**	**133**	*i* P		**Pg**	**19 19 19.6**	**+0.1**
HAKT				*i* S		**Sg**	**19 19 31.4**	**+1.7**
TUTA	**Tutak**	**1.31**	**354**	*i* P		**Pn**	**19 19 27.5**	**-1.2**
TUTA				*i* S		**Sg**	**19 19 48.5**	**+1.8**
BEST	**Besiri**	**1.37**	**262**	*i* P		**Pn**	**19 19 29.6**	**+0.1**
BEST				*i* S		**Sb**	**19 19 48.7**	**+1.0**
MARD	**Mardin**	**1.92**	**247**	*e*P		**Pn**	**19 19 33.1**	**-4.0**
MARD				*e*S		**Sn**	**19 20 01.4**	**+0.2**

HLW ***13*** *19:45:16.6,3239N×3106E,h25km,Mb4.2*
ISCJB ***13*** *19:45:18.7±0.6,3218N±003×3128E±005,h33km, Error ellipse: s-maj=6.2km s-min=4.1km az=31.4*
CSEM ***13*** *19:45:18.1±0.3,3204N×3138E,h2km,ML4.2, Error ellipse: s-maj=6.4km s-min=3.2km az=124.0*
GII ***13*** *19:45:21.1±0.0,3218N×3133E,h30km,ML2.9/5*
ISC 13 19:45:19.7±0.6,3218N±003×3122E±005,h35km,n48,
σ0§60/60,2C-1D,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AANS		**1.89**	**175**	P		**Pn**	**19 45 48.9**	**-0.6**
AMAG	**Maghara**	**2.29**	**132**	P		**Pn**	**19 45 54.8**	**-0.2**
SQR		**2.29**	**181**	P		**Pn**	**19 45 54.4**	**-0.7**
KOT	**Kottamia**	**2.31**	**167**	⇑P		**Pn**	**19 45 55.2**	**0.0**
KOT				S		**Sn**	**19 46 23.2**	**+0.9**
KOT	**Kottamia**	**2.31**	**167**	P		**Pn**	**19 45 55.2**	**0.0**
KOT				S		**Sn**	**19 46 23.2**	**+0.8**
HHAG	**Hagoal**	**2.35**	**161**	⇑P		**Pn**	**19 45 56.0**	**+0.3**
HHAG				S		**Sn**	**19 46 24.5**	**+1.2**
HMYD	**Mayadein**	**2.41**	**189**	P		**Pn**	**19 45 56.6**	**0.0**
RSH		**2.46**	**119**	P		**Pn**	**19 45 57.5**	**+0.2**
AYT	**Al 'Ayyat**	**2.47**	**181**	P		**Pn**	**19 45 58.0**	**+0.6**
AYT	**Al 'Ayyat**	**2.47**	**181**	P		**Pn**	**19 45 58.0**	**+0.5**
HSAF	**As Saff**	**2.57**	**173**	P		**Pn**	**19 45 59.4**	**+0.5**
GLL	**Jalalah**	**2.63**	**171**	P		**Pn**	**19 45 59.9**	**+0.2**
KZIT	**Kziot**	**3.00**	**114**	Pn		**Pn**	**19 46 05.1**	**+0.4**
KZIT				Sn		**Sn**	**19 46 39.7**	**+0.3**
OFRI	**'Ofer**	**3.21**	**81**	Pn		**Pn**	**19 46 06.6**	**-1.1**
SLTI	**Sal'it**	**3.24**	**88**	Pn		**Pn**	**19 46 07.7**	**-0.4**
HNKL	**Nakhl**	**3.27**	**133**	P		**Pn**	**19 46 08.5**	**+0.2**
HNKL				S		**Sn**	**19 46 46.4**	**+0.4**
RMNI	**Mount Ramon**	**3.42**	**117**	Sn		**Sn**	**19 46 49.1**	**-0.7**
HNTI	**Hanita**	**3.46**	**74**	Pn		**Pn**	**19 46 10.9**	**0.0**
MMLI	**Mount Malkishu**	**3.57**	**85**	Pn		**Pn**	**19 46 12.3**	**-0.3**
MMLI				Sn		**Sn**	**19 46 52.4**	**-1.0**
DSI	**Dead Sea**	**3.59**	**99**	Pn		**Pn**	**19 46 13.0**	**+0.1**
DSI				Sn		**Sn**	**19 46 54.4**	**+0.3**
MMA3	**Mount Meron ar**	**3.62**	**76**	Pn		**Pn**	**19 46 13.4**	**+0.1**
MMA0B	**Mount Meron ar**	**3.63**	**76**	Pn		**Pn**	**19 46 13.5**	**+0.2**
MMB4	**Mount Meron ar**	**3.63**	**76**	Pn		**Pn**	**19 46 13.8**	**+0.4**
MMA2	**Mount Meron ar**	**3.63**	**76**	Pn		**Pn**	**19 46 13.8**	**+0.5**
MZDA	**Masada**	**3.64**	**103**	Pn		**Pn**	**19 46 13.3**	**-0.1**
MZDA				Sn		**Sn**	**19 46 55.1**	**-0.1**
KRMI	**Paran Flat**	**3.64**	**123**	Pn		**Pn**	**19 46 13.9**	**+0.3**
KRMI				Sn		**Sn**	**19 46 54.7**	**-0.7**
HMDT	**Nahal Hemdat**	**3.65**	**88**	Pn		**Pn**	**19 46 13.6**	**-0.1**
MATL	**Matirih**	**3.70**	**68**	*e*Pn		**Pn**	**19 46 14.4**	**+0.1**
PRNI	**Paran**	**3.72**	**118**	Pn		**Pn**	**19 46 14.8**	**+0.2**
KSDI	**Kefar Szold**	**3.88**	**74**	Pn		**Pn**	**19 46 16.9**	**+0.1**
HRFI	**Mount Harif**	**3.91**	**122**	Pn		**Pn**	**19 46 17.4**	**+0.2**
HRI	**Mount Hermon**	**3.96**	**73**	Pn		**Pn**	**19 46 18.1**	**+0.2**
KSHT	**Keshet**	**3.96**	**77**	Pn		**Pn**	**19 46 18.9**	**+1.0**
EIL	**Elat**	**4.07**	**127**	Pn		**Pn**	**19 46 20.0**	**+0.6**
EIL				Sn		**Sn**	**19 47 06.7**	**-0.2**
RCY	**Rachaya**	**4.08**	**70**	*e*Pn		**Pn**	**19 46 20.0**	**+0.4**
BHL	**Bhannes**	**4.10**	**64**	*e*Pn		**Pn**	**19 46 20.6**	**+0.7**
AWBH		**4.34**	**208**	P		**Pn**	**19 46 21.9**	**-1.3**
TR2		**4.36**	**150**	P		**Pn**	**19 46 23.8**	**+0.4**
HKAT	**Jabal Katrina**	**4.36**	**146**	P		**Pn**	**19 46 24.0**	**+0.5**
HQLS		**4.38**	**130**	P		**Pn**	**19 46 24.1**	**+0.4**
HQLS				S		**Sn**	**19 47 12.5**	**-1.1**
HWQ	**Hawqa**	**4.48**	**61**	*e*Pn		**Pn**	**19 46 24.2**	**-0.8**
FKH	**Fakeheh**	**4.80**	**63**	*e*Pn		**Pn**	**19 46 29.3**	**-0.2**
BDAS	**Al Bad'**	**5.02**	**137**	P		**Pn**	**19 46 32.6**	**0.0**
JLOS		**5.04**	**132**	P		**Pn**	**19 46 32.9**	**+0.1**
JLOS		**5.04**	**132**	P		**Pn**	**19 46 32.9**	**+0.1**
JLOS				S		**Sn**	**19 47 28.5**	**-1.3**
SLUM		**5.16**	**264**	⇓P		**Pn**	**19 46 30.1**	**-4.3**
HFRF	**Wahat Farafira**	**5.62**	**208**	P		**Pn**	**19 46 39.4**	**-1.3**
TBKS	**Tabuk**	**6.07**	**129**	P		**Pn**	**19 46 50.6**	**+3.7**

ROM ***13*** *20:13:26.8±0.2, 4436N×723E,h10km±1km, Md2.7/8, Ml2.6/8, Error ellipse: s-maj=4.4km s-min=1.5km az=64.0*
NEIC ***13*** *20:13:26.8±0.2,4439N±001×728E±002,h22km±2km, Error ellipse: s-maj=2.9km s-min=2.2km az=147.8*
STR ***13*** *20:13:27.7±0.1,4436N×723E,h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
CSEM ***13*** *20:13:27.0±0.1,4438N×734E,h10km, ML2.8/19, Error ellipse: s-maj=1.9km s-min=1.2km az=63.0*
GEN ***13*** *20:13:27.2, 4437N×724E,h11km, ML2.0*
LDG ***13*** *20:13:27.8±0.1,4437N×728E,h9km, Md3.1/3, Ml2.9/21, Error ellipse: s-maj=1.8km s-min=1.0km az=70.0*
ISC 13 20:13:27.0±0.2,4438N±001×727E±002,h18km±1km,n92,
σ0§89/176,1C-3D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.12**	**354**	⇓*i*Pg		**Pg**	**20 13 30.8**	**0.0**
DOI				Sg		**Sg**	**20 13 33.2**	**-0.2**
	3μm,0.2s							
STV	**Sant Anna di V**	**0.14**	**162**	⇓*i*Pg		**Pg**	**20 13 30.8**	**-0.2**
STV				Sg		**Sg**	**20 13 32.8**	**-1.0**
	1μm,0.1s							
PZZ	**Stroppo**	**0.16**	**319**	⇓*i*Pg		**Pg**	**20 13 31.2**	**-0.1**
PZZ				Sg		**Sg**	**20 13 33.8**	**-0.5**
	3μm,0.2s							
ENR	**Entracque**	**0.19**	**144**	P		**Pg**	**20 13 31.4**	**-0.3**
SURF	**Saint Ours**	**0.34**	**287**	Pg		**Pg**	**20 13 34.0**	**-0.1**
SURF				Sg		**Sg**	**20 13 38.7**	**-0.2**
TOUF	**Mont Tournerai**	**0.37**	**182**	Pg		**Pg**	**20 13 34.6**	**0.0**
AUTN	**L'Aution**	**0.41**	**163**	Pg		**Pg**	**20 13 35.5**	**+0.2**
AUTN				Sg		**Sg**	**20 13 40.7**	**-0.1**
SAOF	**Saorge**	**0.45**	**152**	Pg		**Pg**	**20 13 36.1**	**0.0**
SAOF				Sg		**Sg**	**20 13 42.1**	**0.0**
ROB	**Robourent**	**0.45**	**101**	P		**Pg**	**20 13 36.3**	**+0.1**
ROB				S		**Sg**	**20 13 42.4**	**+0.1**
MBDF	**Montbardon**	**0.49**	**314**	*e*Pg		**Pg**	**20 13 36.8**	**-0.1**
	SNR=1.0							
MBDF				*e*Sg		**Sg**	**20 13 43.5**	**0.0**
	346nm,0.3s,SNR=1.0							
MBDF	**Montbardon**	**0.49**	**314**	*e*Pg		**Pg**	**20 13 36.8**	**-0.1**
	SNR=1.0							
MBDF				*e*Sg		**Sg**	**20 13 43.5**	**0.0**
	173nm,0.3s,SNR=1.0							
MVIF	**Mont Vial**	**0.49**	**190**	Pg		**Pg**	**20 13 36.8**	**-0.1**
MVIF				Sg		**Sg**	**20 13 43.2**	**-0.3**
LUCF	**Luceram**	**0.49**	**173**	Pg		**Pg**	**20 13 36.9**	**0.0**
LUCF				Sg		**Sg**	**20 13 43.5**	**0.0**
OG22	**Abries**	**0.49**	**333**	Pg		**Pg**	**20 13 36.9**	**0.0**
OG22				Sg		**Sg**	**20 13 43.4**	**-0.2**
SBF	**Sospel**	**0.53**	**167**	*e*Pg		**Pg**	**20 13 37.9**	**+0.3**
SBF				*e*Sg		**Sg**	**20 13 44.8**	**0.0**
	232nm,0.2s,SNR=1.0							
SBF	**Sospel**	**0.53**	**167**	*e*Pg		**Pg**	**20 13 37.9**	**+0.3**
SBF				*e*Sg		**Sg**	**20 13 44.8**	**0.0**
	116nm,0.2s,SNR=1.0							
NEGI	**Seborga**	**0.62**	**149**	P		**Pg**	**20 13 39.1**	**-0.1**
NEGI				S		**Sg**	**20 13 47.0**	**-0.5**
RRL	**Rocca Remolon**	**0.64**	**328**	P		**Pg**	**20 13 39.6**	**+0.1**
REVF	**Revere**	**0.65**	**173**	Pg		**Pg**	**20 13 40.2**	**+0.5**
REVF				Sg		**Sg**	**20 13 49.3**	**+1.0**
CALN	**Calern**	**0.69**	**203**	Pg		**Pg**	**20 13 40.5**	**+0.1**
CALN				Sg		**Sg**	**20 13 49.3**	**-0.3**
FIN	**Finale Ligure**	**0.70**	**104**	⇑*i*Pg		**Pg**	**20 13 40.7**	**0.0**
FIN				S		**Sb**	**20 13 50.0**	**+0.1**
RSP	**Reno Superiore**	**0.77**	**0**	Pg		**Pg**	**20 13 40.7**	**-1.2**
	79nm,0.3s							
QLNO	**Quiliano**	**0.78**	**94**	Pg		**Pg**	**20 13 42.1**	**-0.1**
	162nm,0.3s							
BNI	**Bardonecchia**	**0.79**	**328**	Pg		**Pg**	**20 13 42.3**	**-0.1**
	26nm,0.4s							
MONC	**Moncucco Torin**	**0.84**	**34**	Pg		**Pg**	**20 13 43.6**	**+0.3**
	219nm,0.4s							
PCP	**Piancastagn**	**0.93**	**80**	Pg		**Pg**	**20 13 44.8**	**-0.2**
	117nm,0.2s							
PCP				S		**Sb**	**20 13 56.7**	**+0.1**
FRF	**La Foret Royal**	**0.94**	**209**	*e*Pg		**Pg**	**20 13 44.5**	**-0.6**
	SNR=1.0							
FRF				*e*Sg		**Sg**	**20 13 56.7**	**-0.7**
	165nm,0.2s,SNR=1.0							
FRF	**La Foret Royal**	**0.94**	**209**	*e*Pg		**Pg**	**20 13 44.5**	**-0.6**
	SNR=1.0							
FRF				*e*Sg		**Sg**	**20 13 56.7**	**-0.7**
	83nm,0.2s,SNR=1.0							
LSD	**Lago del Serru**	**1.08**	**355**	P		**Pb**	**20 13 46.5**	**-0.6**
ORIF	**Oris-en-Rattie**	**1.12**	**299**	*e*Pg		**Pg**	**20 13 49.1**	**+0.4**
ORIF				*e*Sn		**Sn**	**20 14 02.7**	**-0.1**
	71nm,0.3s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**1.12**	**299**	*e*Pn		**Pn**	**20 13 48.3**	**+0.5**
ORIF				*e*Pg		**Pg**	**20 13 49.1**	**+0.4**
ORIF				*e*Sn		**Sn**	**20 14 02.7**	**-0.1**
ORIF	**Oris-en-Rattie**	**1.12**	**299**	*e*Pg		**Pg**	**20 13 49.1**	**+0.4**
ORIF				*e*Sn		**Sn**	**20 14 02.7**	**-0.1**
	35nm,0.3s,SNR=1.0							
LPG	**La Plagne**	**1.17**	**342**	*e*Pg		**Pg**	**20 13 50.4**	**+0.8**
LPG				*e*Sn		**Sn**	**20 14 04.7**	**+0.7**
	SNR=1.0							
LPG	**La Plagne**	**1.17**	**342**	*e*Pn		**Pn**	**20 13 49.0**	**+0.5**
LPG				*e*Pg		**Pg**	**20 13 50.4**	**+0.8**
LPG				*e*Sn		**Sn**	**20 14 04.7**	**+0.7**
LPG	**La Plagne**	**1.17**	**342**	*e*Pg		**Pg**	**20 13 50.4**	**+0.8**
LPG				*e*Sn		**Sn**	**20 14 04.7**	**+0.7**
	SNR=1.0							
LMR	**La Mourre**	**1.18**	**208**	*e*Pg		**Pg**	**20 13 49.7**	**-0.1**
LMR				*e*Sn		**Sn**	**20 14 03.8**	**-0.5**
	276nm,0.2s,SNR=1.0							
LMR	**La Mourre**	**1.18**	**208**	*e*Pn		**Pn**	**20 13 48.8**	**+0.2**
LMR				*e*Pg		**Pg**	**20 13 49.7**	**-0.1**
LMR				*e*Sn		**Sn**	**20 14 03.8**	**-0.5**
LMR	**La Mourre**	**1.18**	**208**	*e*Pg		**Pg**	**20 13 49.7**	**-0.1**
LMR				*e*Sn		**Sn**	**20 14 03.8**	**-0.5**
	138nm,0.2s,SNR=1.0							
LPL	**La Plagne**	**1.20**	**342**	*e*Pn		**Pn**	**20 13 49.2**	**+0.4**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**20 14 04.8**	**+0.2**
	31nm,0.3s							
LPL	**La Plagne**	**1.20**	**342**	*e*Pn		**Pn**	**20 13 49.2**	**+0.4**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**20 14 04.8**	**+0.2**
	15nm,0.3s							
SMRF	**Simiane la Rot**	**1.28**	**252**	*e*Pg		**Pg**	**20 13 51.9**	**+0.2**
SMRF				*e*Sn		**Sn**	**20 14 06.7**	**0.0**
	SNR=1.0							
SMRF				*e*Sg		**Sg**	**20 14 09.4**	**+1.0**
	179nm,0.3s,SNR=1.0							
SMRF	**Simiane la Rot**	**1.28**	**252**	*e*Pg		**Pg**	**20 13 51.9**	**+0.2**
SMRF				*e*Sn		**Sn**	**20 14 06.7**	**0.0**
	SNR=1.0							
SMRF				*e*Sg		**Sg**	**20 14 09.4**	**+1.0**
	89nm,0.3s,SNR=1.0							
GRN	**Grenoble**	**1.38**	**309**	Pg		**Pg**	**20 13 53.6**	**0.0**
RSL	**Roselend**	**1.38**	**341**	Pg		**Pg**	**20 13 54.5**	**+0.9**
RSL				Sg		**Sg**	**20 14 19.4**	**+3.3**
OCF	**Saint Nazaire**	**1.42**	**279**	Pg		**Pg**	**20 13 54.6**	**+0.3**
OG26	**St.-Nazaire-De**	**1.42**	**279**	Pg		**Pg**	**20 13 54.6**	**+0.3**
SC2M	**Scurtabo**	**1.63**	**88**	P		**Pn**	**20 13 55.2**	**+0.5**
VIVF	**Saint-Julien-l**	**1.91**	**285**	*e*Pn		**Pn**	**20 14 00.2**	**+1.6**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**20 14 22.9**	**+0.7**
	25nm,0.4s,SNR=1.0							
VIVF	**Saint-Julien-l**	**1.91**	**285**	*e*Pn		**Pn**	**20 14 00.2**	**+1.6**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**20 14 22.9**	**+0.7**
	12nm,0.4s,SNR=1.0							
GRAM	**Graiana**	**2.01**	**86**	P		**Pn**	**20 14 00.4**	**+0.4**
GRAM				S		**Sn**	**20 14 23.1**	**-1.6**
BACM	**Baccana**	**2.02**	**92**	P		**Pn**	**20 14 00.4**	**+0.3**
BACM				S		**Sn**	**20 14 23.1**	**-1.8**
PGF	**Pioggiola**	**2.23**	**145**	*e*Pn		**Pn**	**20 14 03.1**	**+0.1**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**20 14 28.0**	**-2.0**
	8.8nm,0.2s,SNR=1.0							
PGF	**Pioggiola**	**2.23**	**145**	*e*Pn		**Pn**	**20 14 03.1**	**+0.1**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**20 14 28.0**	**-2.0**
	4.4nm,0.2s,SNR=1.0							
CABF	**La Chapelle**	**2.38**	**340**	*e*Pg		**Pg**	**20 14 12.6**	**0.0**
	SNR=1.0							
CABF				*e*Sg		**Sg**	**20 14 43.3**	**-0.1**
	6.8nm,0.4s,SNR=1.0							
CABF	**La Chapelle**	**2.38**	**340**	*e*Pn		**Pn**	**20 14 05.9**	**+0.8**
CABF				*e*Pg		**Pg**	**20 14 12.6**	**0.0**
CABF				*e*Sg		**Sg**	**20 14 43.3**	**-0.1**
CABF	**La Chapelle**	**2.38**	**340**	*e*Pg		**Pg**	**20 14 12.6**	**0.0**
	SNR=1.0							
CABF				*e*Sg		**Sg**	**20 14 43.3**	**-0.1**
	3.4nm,0.4s,SNR=1.0							
LASF	**Ste Croix**	**2.47**	**264**	*e*Pn		**Pn**	**20 14 07.1**	**+0.8**
	SNR=1.0							
LASF				*e*Sn		**Sn**	**20 14 35.5

SSF				*e*Sn	**Sn**	**20 15 06.3**	**-1.4**
	SNR=1.0								
SSF				*e*Sg	**Sg**	**20 15 25.9**	**-1.6**
	4.5nm,0.5s,SNR=1.0								
SSF	**Saint Saulge**	**3.76**	**317**	*e*P	**Pn**	**20 14 26.5**	**+2.5**
	SNR=1.0								
SSF				*e*Sn	**Sn**	**20 15 06.3**	**-1.4**
	SNR=1.0								
SSF				*e*Sg	**Sg**	**20 15 25.9**	**-1.6**
	2.2nm,0.5s,SNR=1.0								
BGF	**Bois d'Agland**	**3.79**	**307**	*e*P	**Pn**	**20 14 26.9**	**+2.4**
BGF				*e*Sg	**Sg**	**20 15 27.8**	**-0.9**
	10nm,0.4s,SNR=1.0								
BGF	**Bois d'Agland**	**3.79**	**307**	*e*Pn	**Pn**	**20 14 25.0**	**+0.5**
BGF				*e*P		20 14 26.9	
BGF				*e*Sg	**Sg**	**20 15 27.8**	**-0.9**
BGF	**Bois d'Agland**	**3.79**	**307**	*e*P	**Pn**	**20 14 26.9**	**+2.4**
BGF				*e*Sg	**Sg**	**20 15 27.8**	**-0.9**
	5.2nm,0.4s,SNR=1.0								
MTLF	**Montolieu**	**3.80**	**256**	*e*Pn	**Pn**	**20 14 25.9**	**+1.3**
	SNR=1.0								
MTLF				*e*Sn	**Sn**	**20 15 07.6**	**-1.1**
	SNR=1.0								
MTLF				*e*Sg	**Sg**	**20 15 26.6**	**-2.2**
	2.3nm,0.3s,SNR=1.0								
MTLF	**Montolieu**	**3.80**	**256**	*e*Pn	**Pn**	**20 14 25.9**	**+1.3**
	SNR=1.0								
MTLF				*e*Sn	**Sn**	**20 15 07.6**	**-1.1**
	SNR=1.0								
MTLF				*e*Sg	**Sg**	**20 15 26.6**	**-2.2**
	1.1nm,0.3s,SNR=1.0								
CDF	**Champ du Feu**	**4.03**	**0**	*e*Pn	**Pn**	**20 14 28.5**	**+0.7**
	SNR=1.0								
CDF				*e*Sn	**Sn**	**20 15 12.7**	**-1.8**
	2.8nm,0.3s								
CDF	**Champ du Feu**	**4.03**	**0**	*e*Pn	**Pn**	**20 14 28.5**	**+0.7**
	SNR=1.0								
CDF				*e*Sn	**Sn**	**20 15 12.7**	**-1.8**
	1.4nm,0.3s								
TCF	**Toulx Ste Croi**	**4.04**	**300**	*e*Pn	**Pn**	**20 14 28.0**	**+0.1**
	SNR=1.0								
TCF				*e*Sn	**Sn**	**20 15 12.9**	**-1.9**
	1.9nm,0.3s,SNR=1.0								
TCF	**Toulx Ste Croi**	**4.04**	**300**	*e*Pn	**Pn**	**20 14 28.0**	**+0.1**
	SNR=1.0								
TCF				*e*Sn	**Sn**	**20 15 12.9**	**-1.9**
	0.9nm,0.3s,SNR=1.0								
SFTF	**Sexfontaines**	**4.12**	**339**	*e*Pn	**Pn**	**20 14 29.4**	**+0.4**
	baz=152								
SFTF	**Sexfontaines**	**4.12**	**339**	*e*P	**Pn**	**20 14 32.7**	**+3.7**
	baz=150								
SFTF				*e*Sn	**Sn**	**20 15 15.2**	**-1.6**
	5.4nm,0.2s								
SFTF	**Sexfontaines**	**4.12**	**339**	*e*Pn	**Pn**	**20 14 29.4**	**+0.4**
SFTF				*e*P		20 14 32.7	
SFTF				*e*Sn	**Sn**	**20 15 15.2**	**-1.6**
SFTF	**Sexfontaines**	**4.12**	**339**	*e*P	**Pn**	**20 14 32.7**	**+3.7**
SFTF				*e*Sn	**Sn**	**20 15 15.2**	**-1.6**
	2.7nm,0.2s								
LFF	**La Frestale**	**4.69**	**279**	*e*Pn	**Pn**	**20 14 38.3**	**+1.5**
	SNR=1.0								
EPF	**Esparros**	**5.20**	**257**	*e*Pn	**Pn**	**20 14 45.5**	**+1.7**
MFF	**Saint Martin d**	**5.66**	**296**	*e*Pn	**Pn**	**20 14 50.8**	**+0.6**
	SNR=1.0								
GIVF	**Givet**	**5.96**	**345**	*e*Pn	**Pn**	**20 14 55.5**	**+1.3**
BAIF	**Baives**	**6.05**	**341**	*e*Pn	**Pn**	**20 14 57.0**	**+1.5**
	SNR=1.0								
FLN	**La Foliniere**	**6.91**	**312**	*e*Pn	**Pn**	**20 15 07.8**	**+0.6**

ISCJB ***13*** *20:20:18.5±0.8, 584S±02×114W±04, h10km, mb4.1/7, Error ellipse: s-maj=33.7km s-min=14.4km az=146.4*
IDC ***13*** *20:20:18.9±1.1, 581.7S×11.19W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/14, mbtmp3.9/5, Error ellipse: s-maj=57.2km s-min=29.8km az=50.0*
NEIC ***13*** *20:20:20.0±0.6, 5830S×1142W, h10km, mb4.3/4, Error ellipse: s-maj=25.5km s-min=12.6km az=58.0*

ISC 13 20:20:20.2±0.8, 583S±01×113W±04, h10km, n12, σ0°91/11, mb4.1/7, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**13.83**	**169**	*e*Pn	**Pn**	**20 23 36.1**	**+0.2**
	39nm,0.4s						
MAIT	**Maitri**	**15.75**	**152**	*e*P	**Pn**	**20 24 00.4**	**-1.3**
MAW	**Mawson**	**32.86**	**137**	P	**P**	**20 26 56.1**	**+2.6**
	1.5nm,0.9s,mb3.9,baz=263,slow=8.1,SNR=3.6						
MAW	**Mawson**	**32.86**	**137**	P	**P**	**20 26 55.1**	**+1.6**
	3.9nm,1.1s,mb4.2						
LVC	**Limon Verde**	**54.15**	**286**	P	**P**	**20 29 44.5**	**-0.8**
	3.0nm,0.7s,mb4.3						
LPAZ	**La Paz**	**59.09**	**290**	P	**P**	**20 30 21.9**	**+1.4**
	1.2nm,0.7s,mb4.0,baz=143,slow=9.0,SNR=4.3						
LPAZ	**La Paz**	**59.09**	**290**	*e*P	**P**	**20 30 21.3**	**+0.8**
	1.5nm,0.8s,mb4.1						
TORD	**Torodi Ar. Bea**	**72.02**	**13**	P	**P**	**20 31 43.4**	**-0.6**
	0.4nm,0.9s,mb3.3,baz=202,slow=6.1,SNR=4.1						
STKA	**Stephens Creek**	**87.30**	**157**	P	**P**	**20 33 06.7**	**-0.2**
	2.8nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**93.32**	**148**	P	**P**	**20 33 35.4**	**+0.2**
	0.6nm,0.7s,mb4.2,baz=193,slow=4.4,SNR=5.6						
WRA	**Warramunga Arr**	**96.97**	**148**	P	**P**	**20 33 51.6**	**-0.2**
	0.5nm,0.8s,mb4.0,baz=196,slow=3.9,SNR=3.7						
MJAR	**Matsushiro Arr**	**150.41**	**124**	PKPbc	PKPbc	20 40 11.4	+0.4
	0.9nm,0.7s,baz=192,slow=2.1,SNR=2.9						

ISCJB ***13*** *20:27:00.6±0.8, 3645N±003×702E±02, h125km±21km, Error ellipse: s-maj=20.5km s-min=5.7km az=1.7*
NEIC ***13*** *20:27:01.9±0.9, 3639N×7060E, h35km, mb4.5/1, Error ellipse: s-maj=13.5km s-min=7.4km az=80.0*

ISC 13 20:27:01.5±0.8, 3644N±004×701E±01, h129km±16km, n24, σ0°73/34, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.08**	**205**	*e*Pn	**Pn**	**20 27 36.5**	**+0.2**
KBL				*e*Sn	**Sn**	**20 28 03.0**	**0.0**
AML	**Almayashu**	**6.33**	**25**	*e*Pn	**Pn**	**20 28 32.8**	**+0.4**
	13nm,0.5s						
AML				*e*Sn	**Sn**	**20 29 32.6**	**-11**
AML				*e*Sg	**Sn**	**20 29 43.6**	**+0.2**
AML	**Almayashu**	**6.33**	**25**	P	**Pn**	**20 28 33.2**	**+0.8**
	SNR=12						
KK31	**Karatay Array**	**6.67**	**3**	⇑Pn	**Pn**	**20 28 35.2**	**-1.6**
	1.1nm,0.4s,baz=178,slow=14,SNR=72						
KK31				⇓Sn	**Sn**	**20 29 45.8**	**-5.5**
	5.2nm,0.6s,baz=188,slow=22,SNR=12						
UCH	**Uchtor**	**6.72**	**29**	*e*Pn	**Pn**	**20 28 34.1**	**-3.5**
UCH				*e*Sn	**Sn**	**20 29 52.9**	**+0.2**
EKS2	**Erkin-Say**	**6.84**	**24**	*e*Pn	**Pn**	**20 28 39.1**	**0.0**
	1.9nm,0.6s						
EKS2				*e*Sn	**Sn**	**20 29 37.2**	**-18**
EKS2	**Erkin-Say**	**6.84**	**24**	P	**Pn**	**20 28 40.6**	**+1.5**
	SNR=10						
KZA	**Kyzart**	**6.91**	**34**	P	**Pn**	**20 28 41.1**	**+1.0**
	SNR=5.5						
AAK	**Ala-Archa**	**7.06**	**27**	P	**Pn**	**20 28 43.3**	**+1.1**
	SNR=7.4						
USP	**Ospenovka**	**7.62**	**25**	P	**Pn**	**20 28 49.6**	**-0.1**
	SNR=6.4						
TKM2	**Tokmak 2**	**7.74**	**32**	⇓Pn	**Pn**	**20 28 51.7**	**+0.3**
	1.9nm,0.5s						
TKM2				⇓Sn	**Sn**	**20 30 15.8**	**-1.6**
	2.9nm,0.7s						
TKM2	**Tokmak 2**	**7.74**	**32**	*e*Pn	**Pn**	**20 28 50.4**	**-1.0**
	1.8nm,0.4s						
TKM2				*e*Sn	**Sn**	**20 30 03.4**	**-14**
SMLA	**Simla**	**7.92**	**130**	*i* P	**Pn**	**20 28 53.8**	**-0.1**
SMLA				*i* S	**Sn**	**20 30 21.5**	**-0.4**
SMLA				*i* S	**Sn**	**20 30 22.0**	**+0.1**
SMLA				*ex*	x	20 30 24.9	
	comp=E,87nm,0.3s						
SMLA				*ex*	x	20 30 27.0	
	comp=N,84nm,0.3s						
PYUN	**Piuthan**	**13.71**	**124**	*e*P	**Pn**	**20 30 10.2**	**-0.3**
MK31	**Makanchi Array**	**13.78**	**38**	*e*Pn	**Pn**	**20 30 15.6**	**+4.3**
DANN	**Dangsing**	**14.08**	**121**	*e*P	**Pn**	**20 30 14.9**	**-0.3**
GKN	**Gorkha**	**14.90**	**120**	*e*P	**Pn**	**20 30 24.9**	**-0.7**
DMN	**Daman**	**15.47**	**120**	*e*P	**Pn**	**20 30 32.2**	**-0.5**
KKN	**Kakani**	**15.48**	**120**	*e*P	**Pn**	**20 30 33.0**	**+0.2**
	comp=N,15nm,0.5s						
PKI	**Pulchoki**	**15.70**	**120**	*e*P	**Pn**	**20 30 35.0**	**-0.6**
GUN	**Gumba**	**15.83**	**118**	*e*P	**Pn**	**20 30 37.7**	**+0.6**
JIRN	**Jiri**	**16.20**	**118**	*e*P	**Pn**	**20 30 42.2**	**+0.5**
RAMN	**Ramite**	**16.92**	**119**	*e*P	**Pn**	**20 30 50.6**	**+0.1**
TAPN	**Taplejung**	**17.47**	**116**	*e*P	**Pn**	**20 30 57.8**	**+0.7**

IDC 13 20:50:50.9±6.8, 2205N×14335E, h300km±71km, mb3.2/5, mb1 3.2/6, mb1mx3.0/21, mbtmp3.1/6, Error ellipse: s-maj=139.9km s-min=21.8km az=76.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.12**	**344**	P	P	20 54 08.9	-0.2
	1.1nm,0.3s,baz=169,slow=9.5,SNR=10.0						
MAT	**Matsushiro**	**15.12**	**344**	P	P	20 54 10.4	+1.3
KSRS	**Korea Array**	**20.33**	**322**	P	P	20 55 05.2	+0.1
	6.6nm,0.6s,baz=145,slow=8.8,SNR=25						
SONM	**Songino Array**	**39.17**	**320**	P	P	20 57 50.4	+0.2
	0.9nm,0.4s,baz=126,slow=6.7,SNR=18						
WRA	**Warramunga Arr**	**42.66**	**193**	P	P	20 58 18.7	-0.1
	0.2nm,0.5s,baz=16,slow=8.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**54.03**	**321**	P	P	20 59 44.5	-0.1
	1.3nm,0.6s,baz=100,slow=7.7,SNR=6.3						
MKAR	**Makanchi Array**	**54.58**	**312**	P	P	20 59 48.6	-0.1
	1.0nm,1.0s,baz=86,slow=9.8,SNR=3.1						

NEIC ***13*** *20:53:27.0, 3696N×2862E, h10km, ML3.1(ATH), After ATH.*
ISCJB ***13*** *20:53:39.2±2.3, 3623N±004×2600E±006, h10km±17km, Error ellipse: s-maj=8.8km s-min=5.2km az=23.7*
ISK ***13*** *20:53:40.0, 3607N×2598E, h36km, MD3.5*
CSEM ***13*** *20:53:41.5±0.3, 3616N×2644E, h0km±2km, MD3.5, Error ellipse: s-maj=4.1km s-min=3.1km az=97.0*
HLW ***13*** *20:53:46.0, 3634N×2680E, h33km, Mb3.6*
DDA ***13*** *20:53:59.9, 3744N×2769E, h8km±4km, Md3.0*

ISC 13 20:53:39.1±1.3, 3620N±004×260E±01, h7km±17km, n21, σ1°15/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APE	**Apeiranthos**	**0.95**	**336**	P	**Sg**	**20 54 08.4**	**-1.3**
ZKR	**Zakros**	**1.10**	**172**	P	**Sg**	**20 54 13.8**	**-0.5**
LAST	**Lasithi**	**1.13**	**203**	P	**Sg**	**20 54 16.6**	**+1.3**
IDI	**Anoyia**	**1.29**	**226**	P	**Sb**	**20 54 17.5**	**-3.0**
BODT	**Bodrum**	**1.35**	**50**	*e*PN	**Pn**	**20 54 05.5**	**+1.2**
BODT				*e*SN	**Sn**	**20 54 22.5**	**+0.2**
DAT	**Datca**	**1.36**	**67**	*e*PN	**Pn**	**20 54 04.9**	**+0.5**
DAT				*e*SN	**Sn**	**20 54 22.2**	**-0.5**
BDRM	**Kayabasi**	**1.43**	**53**	*i* P	**Pn**	**20 54 08.1**	**+2.7**
GCAM	**G?zelcaml?**	**1.78**	**33**	*i* P	**Pn**	**20 54 09.4**	**-0.8**
MLSB	**Milas**	**1.78**	**52**	*e*PN	**Pn**	**20 54 11.2**	**+1.0**
YER	**Yerkesik**	**2.04**	**62**	*e*PN	**Pn**	**20 54 14.8**	**+1.0**
TURN	**Turunc**	**2.19**	**71**	*i* P	**Pn**	**20 54 12.9**	**-2.9**
TURN				*i* S	**Sn**	**20 54 31.4**	**-12**
BLCB	**Balcova**	**2.33**	**20**	*e*PN	**Pn**	**20 54 17.9**	**+0.2**
KDAG	**Bornova**	**2.41**	**24**	*i* P	**Pn**	**20 54 19.1**	**+0.2**
FETY	**Fethiye**	**2.51**	**79**	*e*PN	**Pn**	**20 54 20.2**	**0.0**
PTL	**Penteli**	**2.52**	**318**	P	**Pn**	**20 54 28.4**	**+8.0**
GOLH	**Golhisar**	**3.03**	**69**	*i* P	**Pn**	**20 54 27.3**	**0.0**
GOLH				*i* S	**Sn**	**20 54 54.2**	**-10**
ELL	**Elmali**	**3.18**	**79**	*e*PN	**Pn**	**20 54 29.1**	**-0.4**
SLUM		**4.75**	**188**	P	**Pn**	**20 54 59.2**	**+8.3**
SLUM				S	**Sn**	**20 55 52.7**	**+6.4**
RSH		**8.28**	**127**	P	**Pn**	**20 55 39.2**	**-0.3**
HRSH	**Kfar Ka'horesh**	**8.41**	**112**	P	**Pn**	**20 55 39.1**	**-2.1**
HFRF	**Wahat Farafira**	**9.23**	**167**	P	**Pn**	**20 55 57.5**	**+4.9**

ISCJB ***13*** *21:06:33.0±0.6, 2075S±005×676W±0.1, h168km±7km, mb3.9/8, Error ellipse: s-maj=15.8km s-min=6.9km az=13.0*
IDC ***13*** *21:06:33.3±0.9, 2074S×6769W, h158km±9km, mb3.6/7, mb1 3.9/10, mb1mx3.7/18, mbtmp3.7/10, Error ellipse: s-maj=20.9km s-min=9.6km az=102.0*
NEIC ***13*** *21:06:33.9±0.6, 2073S×6763W, h164km±6km, mb3.9/3, Error ellipse: s-maj=12.1km s-min=7.4km az=107.0*
GUC ***13*** *21:06:34.4±0.4, 2122S×6795W, h216km±4km, ML4.6*

ISC 13 21:06:34.0±0.6, 2074S±005×677W±01, h161km±7km, n30, σ0°92/29, mb3.9/8, 1C-1D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.21**	**212**	P	**Pn**	**21 07 12.7**	**+0.5**
	32nm,0.3s,baz=14,slow=7.9,SNR=116						
LVC				S	**Sn**	**21 07 40.9**	**-0.8**
	145nm,0.3s,baz=358,slow=9.9,SNR=18						
LVC	**Limon Verde**	**2.21**	**212**	⇑*i*P	**Pn**	**21 07 12.6**	**+0.4**
LVC				*i* S	**Sn**	**21 07 41.5**	**-0.2**
CEN1	**Los Morros**	**3.55**	**221**	⇓*i*P	**Pn**	**21 07 29.6**	**+0.9**
CEN1				*i* S	**Sn**	**21 08 11.3**	**+0.1**
CEN1				AML	AML	21 08 14.1	
	comp=N,588nm,0.3s						
ANCH	**Antofagasta**	**3.89**	**221**	*i* P	**Pn**	**21 07 34.5**	**+1.3**
ANCH				*i* S	**Sn**	**21 08 14.0**	**-5.2**
LPAZ	**La Paz**	**4.45**	**354**	P	**Pn**	**21 07 41.5**	**+1.0**
	comp=N,4.7nm,0.3s,baz=170,slow=6.9,SNR=63						
LPAZ				S	**Sn**	**21 08 32.5**	**+0.2**
	comp=N,0.5nm,0.3s,baz=8.3,slow=23,SNR=3.2						
CPN1	**Cerro Paranal**	**4.63**	**213**	*e*P	**Pn**	**21 07 40.9**	**-1.8**
CPN1				*i* S	**Sn**	**21 08 31.7**	**-4.8**
SIV	**San Ignacio**	**7.83**	**54**	P	**Pn**	**21 08 24.3**	**-0.8**
	baz=251,slow=13						
CFAA	**Coronel Fontan**	**10.84**	**183**	P	**Pn**	**21 09 02.9**	**-1.9**
	comp=N,0.1nm,0.3s,baz=350,slow=16,SNR=4.7						
CFAA				S	**Sn**	**21 10 56.4**	**-8.4**
	comp=N,0.1nm,0.3s,baz=243,slow=17,SNR=7.8						
PLCA	**Paso Flores**	**20.09**	**186**	P	**P**	**21 10 55.3**	**+0.3**
	comp=N,3.4nm,1.0s,baz=4.3,slow=4,SNR=3.3						
PLCA	**Paso Flores**	**20.09**	**186**	*e*P	**P**	**21 10 55.1**	**+0.2**
	comp=N,2.8nm,0.8s						
OTAV	**Otavalo**	**23.37**	**332**	P	**P**	**21 11 27.8**	**-0.5**
	comp=N,0.6nm,0.4s,mb3.4						
RCBR	**Riachuelo**	**34.17**	**69**	*e*P	**P**	**21 13 04.6**	**+0.5**
	comp=N,18nm,1.0s,mb4.8						
VNA3	**Neumayer Olymp**	**60.42**	**162**	*e*	**P**	**21 16 27.6**	**+1.6**
VNA3				*e*		21 16 29.8	
VNA3				*e*		21 16 33.6	
TXAR	**Lajitas Array**	**60.69**	**324**	P	**P**	**21 16 27.4**	**-1.1**
	comp=N,0.3nm,0.6s,mb3.3,baz=139,slow=7.7,SNR=3.8						
VNA2	**Neumayer--Watz**	**60.98**	**161**	*e*	**P**	**21 16 31.3**	**+1.5**
	baz=292,slow=5.0						
VNA2				*e*		21 16 34.0	
VNA2				*e*		21 16 38.0	
SNAA	**Sanae**	**62.61**	**161**	*e*	**P**	**21 16 40.5**	**-0.2**
SNAA				*e*		21 16 46.6	
DBIC	**Dimbokro**	**67.39**	**73**	P	**P**	**21 17 12.0**	**-0.5**
	comp=N,2.0nm,0.6s,mb4.2,baz=231,slow=4.9,SNR=5.4						
PDAR	**Pinedale Array**	**74.05**	**329**	P	**P**	**21 17 52.2**	**+0.1**
	comp=N,0.6nm,0.5s,mb3.5,baz=125,slow=8.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**75.99**	**70**	P	**P**	**21 18 03.6**	**-0.3**
	comp=N,3.8nm,0.5s,mb4.3,baz=254,slow=5.5,SNR=90						
MAW	**Mawson**	**84.72**	**163**	P	**P**	**21 18 49.9**	**+0.4**
	comp=N,1.3nm,0.7s,mb3.8,baz=263,slow=23,SNR=3.6						
YKA	**Yellowknife Ar**	**90.87**	**340**	P	**P**	**21 19 17.9**	**-0.8**
	comp=N,1.7nm,0.6s,mb4.3,baz=131,slow=4.6,SNR=7.1						
YKA	**Yellowknife Ar**	**90.87**	**340**	P	**P**	**21 19 17.9**	**-0.8**
STKA	**Stephens Creek**	**120.66**	**209**	PKP	PKPdf	21 25 04.2	-3.0
	comp=N,1.0nm,0.5s,baz=150,slow=8.1,SNR=3.7						
STKA	**Stephens Creek**	**120.66**	**209**	PKP	PKPdf	21 25 04.2	-3.0
ASAR	**Alice Springs**	**131.13**	**207**	PKP	PKPdf	21 25 27.0	-0.4
	comp=N,0.4nm,0.7s,baz=140,slow=1.6,SNR=4.2						
WRA	**Warramunga Arr**	**134.20**	**209**	PKP	PKPdf	21 25 33.3	0.0
	comp=N,0.4nm,0.5s,baz=151,slow=1.6,SNR=8.9						
ZALV	**Zalesovo Beam**	**140.76**	**26**	PKP	PKPdf	21 25 43.2	-1.1
	comp=N,0.7nm,0.5s,baz=270,slow=1.4,SNR=4.1						
MKAR	**Makanchi Array**	**144.33**	**36**	PKP	PKPdf	21 25 50.2	-0.7
	comp=N,1.7nm,0.6s,baz=322,slow=2.6,SNR=24						
MKAR	**Makanchi Array**	**144.33**	**36**	PKP	PKPdf	21 25 50.2	-0.7
SONM	**Songino Array**	**152.54**	**9**	PKPbc	PKPbc	21 26 11.8	+0.6
	comp=N,0.8nm,0.4s,baz=287,slow=1.5,SNR=11						

THE ***13*** *21:26:31.6, 3631N×2174E, h10km±1km, ML3.8/2, Error ellipse: s-maj=2.7km s-min=1.4km az=279.0*
ISCJB ***13*** *21:26:32.3±1.5, 3633N±007×2165E±008, h18km±10km, Error ellipse: s-maj=12.9km s-min=10.1km az=35.7*
CSEM ***13*** *21:26:32.7±0.6, 3634N×2171E, h25km, MD3.5*
NEIC ***13*** *21:26:38.0, 3669N×2208E, h5km, MD3.5(ATH), After ATH.*
ATH ***13*** *21:26:38.2, 3669N×2209E, h5km, MD3.5/9*

ISC 13 21:26:33.3±1.2, 3639N±006×2175E±007, h13km±7km, n40, σ1°29/49, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.51**	**359**	P	**Pg**	**21 26 43.1**	**-0.2**
PYL				S	**Sg**	**21 26 51.0**	**+1.0**
ITM	**Ithomi**	**0.80**	**10**	*e*PB	**Pb**	**21 26 48.1**	**-0.9**
VLI	**Veliai**	**1.01**	**71**	*e*PB	**Pb**	**21 26 52.0**	**-0.6**
KYTH	**Kithira**	**1.04**	**96**	*e*PB	**Pb**	**21 26 54.0**	**+0.9**
VLX	**Vlachokerasia**	**1.10**	**27**	P	**Pb**	**21 26 53.2**	**-0.9**
VLX				S	**Sb**	**21 27 09.8**	**+1.4**
DID	**Didima**	**1.63**	**46**	P	**Pn**	**21 27 00.6**	**-1.0**
RLS	**Riolos of Patr**	**1.68**	**352**	P	**Pn**	**21 27 04.4**	**+2.1**
LTK	**Loutraki**	**1.90**	**30**	P	**Pn**	**21 27 04.5**	**-0.8**
LTK				S	**Sn**	**21 27 30.2**	**+1.2**
NAIG	**Nisos Aigina**	**1.95**	**45**	*e*PG	**Pg**	**21 27 07.0**	**-3.7**
VLS	**Valsamata**	**2.01**	**333**	*e*PN	**Pn**	**21 27 14.5**	**+7.6**
VLS	**Valsamata**	**2.01**	**333**	P	**Pn**	**21 27 06.1**	**-0.8**
KVR	**Kavouri**	**2.16**	**48**	*e*PN	**Pn**	**21 27 12.0**	**+3.1**
VAM	**Vamos**	**2.21**	**116**	*e*PG	**Pg**	**21 27 18.0**	**+2.2**
PTL	**Penteli**	**2.36**	**45**	*e*PG	**Pg**	**21 27 15.0**	**-3.6**
LKR	**Lokris**	**2.46**	**23**	P	**Pn**	**21 27 11.7**	**-1.4**
EVR	**Evrytania**	**2.52**	**1**	Pn	**Pn**	**21 27 17.5**	**+3.6**
EVR	**Evrytania**	**2.52**	**1**	*e*Pn	**Pn**	**21 27 18.5**	**+4.6**
APE	**Apeiranthos**	**3.11**	**76**	P	**Pn**	**21 27 20.5**	**-1.5**
NEO	**Neokhori**	**3.14**	**21**	P	**Pn**	**21 27 23.3**	**+1.0**
THL	**Klokotos Trika**	**3.18**	**4**	P	**Pn**	**21 27 22.7**	**-0.2**
IGT	**Igoumenitsa**	**3.33**	**341**	P	**Pn**	**21 27 23.9**	**-1.1**
TIP	**Timpagrande**	**4.84**	**307**	P	**Pn**	**21 27 46.5**	**+0.8**

KRSC 13 21:28:57.1±0.3, 5103N×15794E, h86km±85km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**1.45**	**330**	*e*P	Pn	21 29 23.2	+1.2
MIPR				*i* S	Sn	21 29 42.2	+1.5
RUS	**Russkaya**	**1.45**	**14**	*e*P	Pn	21 29 25.6	+3.6
RUS				*i* S	Sn	21 29 46.1	+5.3
GRL	**Gorelyy**	**1.53**	**3**	*e*P	Pn	21 29 26.2	+3.3
GRL				*i* S	Sn	21 29 47.6	+5.1
PET	**Petropavlovsk**	**2.04**	**12**	*e*P	Pn	21 29 32.4	+2.7
AVH	**Avacha**	**2.29**	**12**	*e*P	Pn	21 29 36.6	+3.6
AVH				*i* S	Sn	21 30 04.5	+4.1
NLC	**Nalytchevo**	**2.31**	**21**	*e*P	Pn	21 29 35.8	+2.6
NLC				*i* S	Sn	21 30 03.8	+2.9
SPN	**Mys Shipunski**	**2.44**	**31**	*e*P	Pn	21 29 38.8	+3.9
SPN				*i* S	Sn	21 30 08.5	+4.6

GNL	**Ganaly**	**2.67**	**0**	*e*P		Pn	21 29 40.0	+2.0
GNL				*i* S		Sn	21 30 11.2	+1.8
KII	**Karymskiy**	**3.15**	**16**	*e*P		Pn	21 29 48.3	+3.8
MKZ	**Mys Kozlova**	**4.21**	**32**	*e*P		Pn	21 30 01.2	+2.3
MKZ				*i* S		Sn	21 30 49.2	+2.4
TUMR	**Tumrok**	**4.46**	**16**	*e*P		Pn	21 30 05.2	+3.0
KMNR	**Kamenistaya**	**4.93**	**15**	*e*P		Pn	21 30 11.6	+3.0
ZLN	**Zelenaya**	**5.28**	**18**	*e*P		Pn	21 30 16.6	+3.3
ZLN				*e*S		Sn	21 31 16.7	+3.9
KBTR	**Krutoberegovo**	**5.94**	**27**	*e*P		Pn	21 30 23.9	+1.5

NEIC ***13*** *21:30:30.4, 3336S×7289W, h28km, ML2.8(GUC), After GUC.*

GUC 13 21:30:30.4±0.8, 3336S×7289W, h28km±3km, MD3.5, ML2.8, 4C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCCH	**Las Cruces**	**1.11**	**96**	⇓*i*P	Pn	21 30 50.4	+0.3
LCCH				*i* S	Sn	21 31 05.2	+0.7
ROCH	**El Roble**	**1.62**	**77**	*e*P	Pn	21 30 58.4	+1.3
ROCH				*i* S	Sn	21 31 19.7	+2.6
TACH	**Talagante**	**1.66**	**101**	⇑*i*P	Pn	21 30 58.3	+0.7
TACH				*i* S	Sn	21 31 19.8	+1.8
PEL	**Peldehue**	**1.86**	**84**	*e*P	Pn	21 31 01.9	+1.5
PEL				*i* S	Sn	21 31 25.9	+2.9
PEL				AML	AML	21 31 30.9	
	comp=E,121nm,0.6s						
PCH	**Pirque**	**2.00**	**98**	⇑*i*P	Pn	21 31 03.8	+1.4
PCH				*i* S	Sn	21 31 29.9	+3.3
JACH	**Jahuel**	**2.05**	**71**	*e*P	Pn	21 31 04.3	+1.4
JACH				*i* S	Sn	21 31 30.3	+2.7
FCH	**Farellones**	**2.18**	**90**	⇓*i*P	Pn	21 31 07.2	+2.5
FCH				*i* S	Sn	21 31 34.5	+3.7
FCH				AML	AML	21 31 36.1	
	comp=N,70nm,0.3s						
LMEL	**Las Melosas**	**2.30**	**103**	⇑*i*P	Pn	21 31 07.9	+1.5
LMEL				*i* S	Sn	21 31 36.4	+2.6
LMEL	**Las Melosas**	**2.30**	**103**	⇑*i*P	Pn	21 31 07.9	+1.5
LMEL				*i* S	Sn	21 31 36.4	+2.6
LMEL				AML	AML	21 31 39.8	
	comp=N,94nm,0.2s						

IDC ***13*** *21:50:48.7±1.6, 3.15S×101.03E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, ML4.0/1, Error ellipse: s-maj=66.8km s-min=15.7km az=54.0*
MOS ***13*** *21:50:51.7±1.0, 3.20S×101.09E, h33km, mb4.5/5, Error ellipse: s-maj=21.4km s-min=10.0km az=106.9*
DJA ***13*** *21:50:51, 3.27S×100.94E, h0km, MLv4.3/4*
ISCJB ***13*** *21:50:54.7±0.9, 3.29S±0.06×101.08E±0.07, h61km±8km, mb4.5/22, Error ellipse: s-maj=14.1km s-min=6.3km az=148.2*
NEIC ***13*** *21:50:54.3±0.3, 3.17S×101.16E, h35km, mb4.6/14, Error ellipse: s-maj=9.5km s-min=4.9km az=60.0*

ISC 13 21:50:56.0±0.8, 3.26S±0.05×101.14E±0.07, h53km±8km, n58, σ0§82/57, mb4.5/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.51**	**105**	P	**Pn**	**21 51 20.6**	**-0.1**
KSI	**Kapahiang**	**1.51**	**105**	P	**Pn**	**21 51 20.8**	**+0.1**
PDSI	**Padang**	**2.42**	**344**	P	**Pn**	21 51 31.9	-1.3
PDSI	**Padang**	**2.42**	**344**	S	**Sn**	**21 52 02.7**	**+1.0**
PDSI	**Padang**	**2.42**	**344**	P	**Pn**	21 51 32.2	-1.0
PDSI	**Padang**	**2.42**	**344**	S	**Sn**	**21 52 02.3**	**+0.6**
PPI	**Padang Panjang**	**2.88**	**345**	P	**Pn**	**21 51 41.0**	**+1.6**
PPI	**Padang Panjang**	**2.88**	**345**	S	**Sn**	**21 52 16.1**	**+3.3**
PPI	**Padang Panjang**	**2.88**	**345**	P	**Pn**	**21 51 40.5**	**+1.1**
PPI	**Padang Panjang**	**2.88**	**345**	S	**Sn**	**21 52 14.9**	**+2.1**
GSI	**Gunungsitoli**	**5.76**	**322**	P	**Pn**	**21 52 18.5**	**-0.5**
GSI	**Gunungsitoli**	**5.76**	**322**	P	**Pn**	**21 52 17.1**	**-1.9**
COCO	**West Island**	**9.84**	**205**	Pn	**Pn**	**21 53 13.8**	**-1.2**
KAPI	**Kappang**	**18.65**	**96**	P	**Pn**	**21 55 10.5**	**0.0**
	0.5nm,0.3s,baz=274,slow=12,SNR=4.9						
CM31	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**21 55 41.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**21 55 38.6**	**-3.9**
	1.2nm,0.8s,mb3.4,baz=188,slow=8.6,SNR=9.5						
QIZ	**Qiongzhong**	**23.75**	**21**	*e*P	**P**	**21 56 02.5**	**-1.1**
	41nm,1.2s,mb4.7						
MBWA	**Marble Bar**	**25.38**	**136**	*e*P	**P**	**21 56 19.0**	**+0.4**
DAV	**Davao City (W)**	**26.47**	**67**	P	**P**	**21 56 28.9**	**+0.4**
ODAN	**Odare**	**32.75**	**337**	*e*P	**P**	**21 57 24.4**	**+0.4**
	12nm,0.7s,mb4.9						
TAPN	**Taplejung**	**33.07**	**338**	*e*P	**P**	**21 57 27.5**	**+0.7**
	30nm,1.0s,mb5.2						
NWAO	**Narrogin (SRO)**	**33.15**	**155**	*e*P	**P**	**21 57 27.9**	**+0.5**
	6.3nm,0.9s,mb4.5						
NWAO	**Narrogin (SRO)**	**33.15**	**155**	*e*P	**P**	**21 57 27.9**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JIRN	**Jiri**	**33.95**	**336**	*e*P	**P**	**21 57 35.0**	**+0.6**
YHNB	**Yeheng**	**34.02**	**34**	P	**P**	**21 57 33.3**	**-1.8**
LSA	**Lhasa**	**34.14**	**344**	*e*P	**P**	**21 57 35.7**	**-0.3**
GUN	**Gumba**	**34.29**	**336**	*e*P	**P**	**21 57 37.4**	**0.0**
	comp=Z,23nm,0.7s,mb5.2						
KKN	**Kakani**	**34.44**	**335**	*e*P	**P**	**21 57 38.9**	**+0.2**
GKN	**Gorkha**	**34.90**	**334**	*e*P	**P**	**21 57 43.0**	**+0.3**
KOLN	**Koldanda**	**35.17**	**332**	*e*P	**P**	**21 57 45.3**	**+0.3**
	comp=Z,13nm,0.8s,mb4.9						
DANN	**Dangsing**	**35.59**	**333**	*e*P	**P**	**21 57 48.9**	**+0.3**
	comp=Z,18nm,0.4s,mb5.3						
PYUN	**Piuthan**	**35.73**	**332**	*e*P	**P**	**21 57 50.4**	**+0.6**
	comp=Z,4.9nm,0.3s,mb4.9						
WRA	**Warramunga Arr**	**36.39**	**120**	P	**P**	**21 57 55.4**	**-0.2**
	comp=Z,2.0nm,0.4s,mb4.4,baz=303,slow=8.9,SNR=56						
WRAB	**Tennant Creek**	**36.39**	**120**	*e*P	**P**	**21 57 55.2**	**-0.4**
	comp=Z,1.7nm,0.4s,mb4.3						
WRAB	**Tennant Creek**	**36.39**	**120**	*e*P	**P**	**21 57 55.2**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
WB2	**Warramunga Arr**	**36.40**	**120**	*e*P	**P**	**21 57 55.6**	**0.0**
ASAR	**Alice Springs**	**37.60**	**126**	P	**P**	**21 58 06.5**	**+0.7**
	comp=Z,1.3nm,0.5s,mb3.9,baz=301,slow=8.4,SNR=32						
BJT	**Baijiatuau**	**45.22**	**16**	P	**P**	**21 59 07.9**	**-0.1**
STKA	**Stephens Creek**	**47.47**	**131**	P	**P**	**21 59 27.7**	**+1.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=322,slow=9.7,SNR=4.4						
STKA	**Stephens Creek**	**47.47**	**131**	*e*P	**P**	**21 59 26.9**	**+1.1**
	comp=Z,0.8nm,0.5s,mb3.9						
KBL	**Kabul**	**48.21**	**324**	P	**P**	**21 59 31.4**	**-0.1**
	comp=Z,0.9nm,0.4s,mb4.2						
KBL	**Kabul**	**48.21**	**324**	P	**P**	**21 59 31.4**	**-0.1**
KBL				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
SONM	**Songino Array**	**51.09**	**5**	P	**P**	**21 59 53.1**	**0.0**
	comp=Z,1.5nm,0.5s,mb4.1,baz=186,slow=10,SNR=20						
TKM2	**Tokmak 2**	**51.43**	**336**	*e*P	**P**	**21 59 56.2**	**+0.4**
	comp=Z,2.7nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**51.43**	**336**	*e*P	**P**	**21 59 56.2**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**51.98**	**335**	*e*P	**P**	**22 00 00.4**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**52.54**	**344**	P	**P**	**22 00 03.5**	**-0.4**
	comp=Z,1.7nm,0.4s,mb4.3,baz=152,slow=9.1,SNR=6.8						
KURK	**Kurchatov**	**57.13**	**343**	*e*P	**P**	**22 00 36.5**	**-0.5**
	comp=Z,1.8nm,0.6s,mb4.3						
KURK				*e*	pP	22 00 48.5	-3.1
KURK	**Kurchatov**	**57.13**	**343**	*e*P	**P**	**22 00 36.6**	**-0.5**
KURK				*e*	pP	22 00 48.5	-3.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ZALV	**Zalesovo Beam**	**58.61**	**349**	P	**P**	**22 00 46.3**	**-1.1**
	comp=Z,5.0nm,0.5s,mb4.8,baz=163,slow=5.6,SNR=34						
BVAR	**Borovoye Array**	**61.75**	**339**	P	**P**	**22 01 07.7**	**-1.2**
	comp=Z,0.7nm,0.5s,mb4.1,baz=141,slow=9.3,SNR=6.6						
BRVK	**Borovoye**	**61.81**	**339**	P	**P**	**22 01 08.8**	**-0.5**
CASY	**Casey**	**63.25**	**176**	P	**P**	**22 01 19.9**	**+1.2**
KIV	**Kislovodsk**	**70.23**	**319**	P	**P**	**22 02 04.0**	**+0.4**
KIV	**Kislovodsk**	**70.23**	**319**	P	**P**	**22 02 04.0**	**+0.4**
OBN	**Obninsk**	**78.45**	**328**	*e*P	**P**	**22 03 00.3**	**+9.1**
ARCES	**ARCESS Array B**	**88.03**	**340**	P	**P**	**22 03 40.1**	**0.0**
	comp=Z,2.3nm,1.0s,mb4.3,baz=104,slow=5.7,SNR=3.5						
TXAR	**Lajitas Array**	**144.97**	**40**	PKP	PKPdf	22 10 27.9	-0.2
	comp=Z,1.2nm,0.6s,baz=280,slow=1.2,SNR=22						

NEIC ***13*** *22:06:22.9, 1569N×9396W, h60km, MD3.9(MEX), After MEX.*

MEX 13 22:06:22.9±0.9, 1569N×9396W, h60km±21km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.72**	**89**	*i* P	Pn	22 06 35.5	-1.8
PCIG				*i* S	Sn	22 06 46.8	-1.1
TGIG		**1.35**	**37**	*i* P	Pn	22 06 44.1	-1.5
TGIG				*i* S	Sn	22 07 00.8	-1.8
SCX	**San Cristobal**	**1.65**	**51**	*e*P	Pn	22 06 48.4	-1.1
SCX				*i* S	Sn	22 07 09.3	-0.4
THIG		**1.81**	**115**	*i* P	Pn	22 06 47.4	-4.5
THIG				*i* S	Sn	22 07 07.9	-5.9
VHO	**Vista Hermosa**	**2.99**	**298**	*i* P	Pn	22 07 06.3	-1.6
VHO				*i* S	Sn	22 07 41.3	-1.4
PNIG	**Pinotepa**	**4.07**	**280**	*i* P	Pn	22 07 23.5	+0.9
PNIG				*i* S	Sn	22 08 08.2	-0.7
UTMO	**Huajuapan**	**4.25**	**301**	*e*P	Pn	22 07 24.9	-0.2
UTMO				*i* S	Sn	22 08 12.5	-1.0
PPM	**Popocatepetl**	**5.58**	**308**	*e*P	Pn	22 07 45.7	+2.4
PPM				*i* S	Sn	22 08 48.6	+2.5

NIC ***13*** *22:21:54.0±0.2, 3653N×3109E, h15km, mb4.1, ML3.7, MW3.5*
ISCJB ***13*** *22:21:57.6±0.2, 3606N±002×31.15E±003, h10km, mb3.6/3, Error ellipse: s-maj=3.7km s-min=1.7km az=141.4*
CSEM ***13*** *22:21:57.5±0.0, 3607N×3122E, h15km, Mw3.5, Error ellipse: s-maj=1.7km s-min=0.9km az=66.0*
DDA ***13*** *22:21:57.6, 3624N×3125E, h7km±6km, Md3.6*
ISK ***13*** *22:21:58.8, 3620N×3120E, h12km, ML3.7*
NEIC ***13*** *22:21:59.2, 3620N×3122E, h12km, ML3.8(ISK), After ISK.*
IDC ***13*** *22:21:59.9±6.0, 3629N×3103E, h29km±52km, mb3.4/3, mb1 3.7/9, mb1mx3.5/25, mbtmp3.6/9, ML3.8/5, Error ellipse: s-maj=23.8km s-min=20.5km az=46.0*
HLW ***13*** *22:22:01.2, 3606N×3113E, h33km, Mb4.2*
GII ***13*** *22:22:04.2±0.8, 3589N×3118E, h50km±1km, mb4.0/2, ML3.5/5*

ISC 13 22:21:59.2±0.2, 3612N±002×3119E±003, h10km, n158, σ1§06/198, mb3.6/3, 3C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTB	**Antalya**	**0.89**	**331**	*e*PG	**Pg**	**22 22 15.9**	**-0.4**
ANTB				*e*SG	**Sg**	**22 22 27.1**	**-1.0**
ELL	**Elmali**	**1.21**	**302**	*e*PN	**Pn**	**22 22 22.5**	**+0.4**
ELL				*e*SN	**Sn**	**22 22 39.1**	**+0.5**
ELL	**Elmali**	**1.21**	**302**	Pn	**Pg**	**22 22 23.5**	**+1.1**
ELL				Sg	**Sg**	**22 22 40.5**	**+2.4**
ELL	**Elmali**	**1.21**	**302**	*e*Pn	**Pn**	**22 22 22.5**	**+0.4**
ELL				*e*Sn	**Sn**	**22 22 39.1**	**+0.5**
ELL				Sg	**Sg**	**22 22 40.5**	**+2.4**
HDMB	**Hadim**	**1.35**	**51**	*e*PN	**Pn**	**22 22 24.2**	**+0.2**
BCK	**Bucak**	**1.43**	**341**	*e*PN	**Pn**	**22 22 24.0**	**-1.1**
BCK	**Bucak**	**1.43**	**341**	Pn	**Pn**	**22 22 24.5**	**-0.6**
AKMC	**Akamas**	**1.43**	**139**	P	**Pn**	**22 22 24.2**	**-1.0**
AKMC				S	**Sg**	**22 22 48.2**	**+3.0**
ALFC	**Alevga**	**1.50**	**129**	⇓P	**Pn**	**22 22 24.3**	**-1.8**
	55nm,0.4s						
ALFC				S	**Sg**	**22 22 48.0**	**+0.7**
PPCY	**Paphos**	**1.55**	**142**	P	**Pg**	**22 22 27.7**	**-1.2**
PPCY				S	**Sg**	**22 22 51.6**	**+2.6**
GOLH	**Golhisar**	**1.72**	**311**	*i* P	**Pg**	**22 22 31.6**	**-0.6**
GOLH				*i* S	**Sg**	**22 22 54.8**	**+0.3**
FETY	**Fethiye**	**1.77**	**288**	*e*PN	**Pn**	**22 22 30.5**	**+0.6**
FETY	**Fethiye**	**1.77**	**288**	Pn	**Pn**	**22 22 31.2**	**+1.3**
ISP	**Isparta**	**1.81**	**343**	*e*PN	**Pn**	**22 22 28.8**	**-1.5**
ISP	**Isparta**	**1.81**	**343**	Pn	**Pn**	**22 22 30.9**	**+0.5**
MAMC	**Mammari**	**1.90**	**119**	P	**Pn**	**22 22 29.8**	**-1.9**
SZAC	**Souni-Zanaja**	**1.94**	**134**	P	**Pn**	**22 22 33.7**	**+1.5**
	18nm,0.4s						
SZAC				S	**Sg**	**22 23 04.0**	**+2.5**
IKL	**Isikli**	**2.02**	**86**	*e*PN	**Pn**	**22 22 34.5**	**+1.1**
IKL	**Isikli**	**2.02**	**86**	Pn	**Pn**	**22 22 34.9**	**+1.6**
KONT	**Konya--Tatoy**	**2.05**	**27**	*e*PN	**Pn**	**22 22 33.8**	**+0.1**
KONT	**Konya--Tatoy**	**2.05**	**27**	Pn	**Pn**	**22 22 34.5**	**+0.7**
LFK	**Lefkose**	**2.08**	**113**	*e*PN	**Pn**	**22 22 34.1**	**0.0**
LFK	**Lefkose**	**2.08**	**113**	Pn	**Pn**	**22 22 33.9**	**-0.3**
LFK	**Lefkose**	**2.08**	**113**	Pn	**Pn**	**22 22 33.9**	**-0.3**
CSS	**Prodhromos**	**2.09**	**123**	P	**Pn**	**22 22 32.1**	**-2.2**
	9.8nm,0.3s						
CSS				S	**Sn**	**22 23 02.1**	**+1.7**
TURN	**Turunc**	**2.21**	**291**	*i* P	**Pn**	**22 22 39.5**	**+3.6**
TURN				*i* S	**Sn**	**22 22 57.2**	**+3.9**
LADK	**Ladik-KONYA**	**2.28**	**24**	*e*PN	**Pn**	**22 22 36.9**	**0.0**
DENT	**Denizli**	**2.38**	**314**	*e*PN	**Pn**	**22 22 37.3**	**-0.9**
DENT	**Denizli**	**2.38**	**314**	Pn	**Pn**	**22 22 39.7**	**+1.5**
SHUT	**Suhut-Afyon**	**2.48**	**348**	*e*PN	**Pn**	**22 22 40.1**	**+0.4**
EREN	**Erenkoy**	**2.49**	**103**	*e*PN	**Pn**	**22 22 40.3**	**+0.5**
EREN	**Erenkoy**	**2.49**	**103**	Pn	**Pn**	**22 22 41.2**	**+1.4**
KDHN	**Kadinhani**	**2.51**	**17**	*i* P	**Pn**	**22 22 39.5**	**-0.5**
KDHN				*i* S	**Sn**	**22 23 05.8**	**-4.9**
YER	**Yerkesik**	**2.55**	**294**	*e*PN	**Pn**	**22 22 41.2**	**+0.7**
YER	**Yerkesik**	**2.55**	**294**	Pn	**Pn**	**22 22 41.8**	**+1.3**
PHNC	**Paralimni**	**2.57**	**115**	P	**Pn**	**22 22 40.4**	**-0.5**
PHNC				S	**Sg**	**22 23 18.9**	**-2.9**
KHL	**Karahalli**	**2.57**	**329**	*e*PN	**Pn**	**22 22 40.6**	**-0.3**
BOLV	**Bolvadin**	**2.60**	**356**	*i* P	**Pn**	**22 22 41.6**	**+0.2**
BOLV				*i* S	**Sn**	**22 23 09.0**	**-4.0**
KIZT	**Kizilcal**	**2.81**	**11**	*e*PN	**Pn**	**22 22 43.9**	**-0.3**
KIZT	**Kizilcal**	**2.81**	**11**	Pn	**Pn**	**22 22 44.4**	**-0.2**
KIZT	**Kizilcal**	**2.81**	**11**	Pn	**Pn**	**22 22 45.0**	**+0.2**
DAT	**Datca**	**2.97**	**283**	*e*PN	**Pn**	**22 22 46.9**	**+0.5**
MLSB	**Milas**	**2.98**	**294**	*e*PN	**Pn**	**22 22 46.5**	**0.0**
MLSB	**Milas**	**2.98**	**294**	Pn	**Pn**	**22 22 46.9**	**+0.4**
MLSB	**Milas**	**2.98**	**294**	Pn	**Pn**	**22 22 46.9**	**+0.4**
GULE	**Gulek**	**3.11**	**67**	*i* P	Px	22 22 29.9	
GULE				*i* S	Sx	22 23 08.2	
KULA	**Kula-Manisa**	**3.13**	**321**	*e*PN	**Pn**	**22 22 49.3**	**+0.7**
BDRM	**Kayabasi**	**3.16**	**289**	*i* P	**Pn**	**22 22 49.5**	**+0.6**
BDRM				*i* S	**Sn**	**22 23 21.4**	**-5.3**
MANT	**Manisa**	**3.17**	**319**	*i* P	**Pn**	**22 22 49.1**	**+0.1**
MANT				*i* S	**Sn**	**22 23 24.5**	**-2.3**
BODT	**Bodrum**	**3.26**	**288**	*e*PN	**Pn**	**22 22 50.4**	**+0.1**
BODT	**Bodrum**	**3.26**	**288**	Pn	**Pn**	**22 22 50.7**	**+0.4**
BODT	**Bodrum**	**3.26**	**288**	Pn	**Pn**	**22 22 50.7**	**+0.4**
GDZ	**Gediz**	**3.26**	**336**	*i* P	**Pn**	**22 22 50.6**	**+0.2**
GDZ				*i* S	**Sn**	**22 23 25.3**	**-3.9**
KARA	**Karaisali**	**3.31**	**69**	*e*PN	**Pn**	**22 22 52.2**	**+1.2**
ESKT	**Eskisehir**	**3.41**	**356**	*i* P	**Pn**	**22 22 51.8**	**-0.6**
ESKT				*i* S	**Sn**	**22 23 28.7**	**-4.2**
SEYT	**Eskypehyr**	**3.41**	**356**	*i* P	**Pn**	**22 22 51.8**	**-0.6**
SEYT				*i* S	**Sn**	**22 23 28.7**	**-4.2**
DEMI	**Demirci**	**3.52**	**327**	*i* P	**Pn**	**22 22 54.0**	**+0.1**
DEMI				*i* S	**Sn**	**22 22 32.3**	**-3.3**
GCAM	**G?zelcaml?**	**3.54**	**298**	*i* P	**Pn**	**22 22 54.0**	**-0.2**
GCAM				*i* S	**Sn**	**22 23 30.2**	**-5.9**
YURE	**YUREGIR**	**3.65**	**77**	*i* P	Px	22 22 39.7	
CEYT	**Ceyhan**	**3.78**	**75**	*e*PN	**Pn**	**22 22 57.8**	**+0.3**
CEYT	**Ceyhan**	**3.78**	**75**	Pn	**Pn**	**22 22 58.3**	**+0.9**
BORA	**Eskisehir**	**3.80**	**351**	*i* P	**Pn**	**22 22 57.3**	**-0.5**
BORA				*i* S	**Sn**	**22 23 37.1**	**-5.5**
KAMT	**Kaman**	**3.82**	**31**	*e*PN	**Pn**	**22 22 57.8**	**-0.2**
KAMT	**Kaman**	**3.82**	**31**	Pn	**Pn**	**22 22 58.3**	**+0.4**
KAMT	**Kaman**	**3.82**	**31**	Pn	**Pn**	**22 22 58.3**	**+0.3**
AKHS	**Akhisar**	**3.85**	**317**	*i* P	**Pn**	**22 22 58.5**	**+0.2**
AKHS				*i* S	**Sn**	**22 23 38.3**	**-5.4**
AKHS	**Akhisar**	**3.85**	**317**	*i* P	**Pn**	**22 22 58.5**	**+0.1**
AKHS				*i* S	**Sn**	**22 23 38.3**	**-5.3**
AKS	**Akhisar**	**3.85**	**317**	*e*PN	**Pn**	**22 22 58.7**	**+0.3**
KDAG	**Bornova**	**3.87**	**307**	*i* P	**Pn**	**22 22 58.7**	**-0.1**
KDAG				*i* S	**Sn**	**22 23 37.6**	**-6.6**
ANTO	**Ankara**	**3.96**	**18**	*e*PN	**Pn**	**22 22 59.3**	**-0.6**
ANTO	**Ankara**	**3.96**	**18**	Pn	**Pn**	**22 22 58.8**	**-1.1**
ANTO	**Ankara**	**3.96**	**18**	⇑*i*P	**Pn**	**22 22 59.8**	**-0.1**
ANTO	**Ankara**	**3.96**	**18**	⇑*i*P	**Pn**	**22 22 59.8**	**-0.1**
LOD	**Lodumlu**	**3.97**	**18**	Pn	**Pn**	**22 22 59.9**	**-0.2**
LOD	**Lodumlu**	**3.97**	**18**	Pn	**Pn**	**22 22 59.9**	**-0.2**
BLCB	**Balcova**	**4.01**	**306**	*e*PN	**Pn**	**22 23 00.8**	**+0.2**
BLCB	**Balcova**	**4.01**	**306**	Pn	**Pn**	**22 23 01.5**	**+0.8**
HTY	**Hatay**	**4.01**	**88**	*e*PN	**Pn**	**22 23 02.2**	**+1.6**
DST	**Dursunbey**	**4.03**	**331**	*e*PN	**Pn**	**22 23 01.3**	**+0.4**
BRTR	**Keskin Array B**	**4.09**	**28**	Pn	**Pn**	**22 23 00.7**	**-1.0**
BRTR				Sn	**Sn**	**22 23 47.9**	**-1.7**
COBT	**Iskenderun**	**4.11**	**83**	*i* P	**Pn**	**22 23 03.1**	**+1.1**
COBT				*i* S	**Sn**	**22 23 40.9**	**-9.4**
CAVI	**Cavuskoy**	**4.22**	**346**	*e*PN	**Pn**	**22 23 03.5**	**0.0**
GPA	**Golpazari**	**4.22**	**351**	*e*PN	**Pn**	**22 23 03.2**	**-0.4**
GPA	**Golpazari**	**4.22**	**351**	Pn	**Pn**	**22 23 04.0**	**+0.4**
GPA	**Golpazari**	**4.22**	**351**	Pn	**Pn**	**22 23 04.0**	**+0.4**
BHL	**Bhannes**	**4.28**	**120**	*e*Pn	**Pn**	**22 23 04.4**	**+0.1**
HWQ	**Hawqa**	**4.31**	**114**	*e*Pn	**Pn**	**22 23 06.8**	**+2.0**
GULT	**Gulveren**	**4.34**	**353**	*e*PN	**Pn**	**22 23 05.6**	**+0.4**
GULT	**Gulveren**	**4.34**	**353**	Pn	**Pn**	**22 23 05.8**	**+0.6**
GULT	**Gulveren**	**4.34**	**353**	Pn	**Pn**	**22 23 05.8**	**+0.6**
MDU	**Mudurnu**	**4.34**	**0**	*e*PN	**Pn**	**22 23 05.0**	**-0.2**
MDU	**Mudurnu**	**4.34**	**0**	Pn	**Pn**	**22 23 05.5**	**+0.2**
MDU	**Mudurnu**	**4.34**	**0**	Pn	**Pn**	**22 23 05.5**	**+0.3**
BALB	**Balikesir**	**4.38**	**324**	*e*PN	**Pn**	**22 23 06.4**	**+0.6**
BALB	**Balikesir**	**4.38**	**324**	Pn	**Pn**	**22 23 07.0**	**+1.2**
ADVT	**Abdulvahap**	**4.46**	**346**	*e*PN	**Pn**	**22 23 06.5**	**-0.3**
ADVT	**Abdulvahap**	**4.46**	**346**	Pn	**Pn**	**22 23 07.7**	**+0.9**
ADVT	**Abdulvahap**	**4.46**	**346**	Pn	**Pn**	**22 23 07.7**	**+0.9**
HNTI	**Hanita**	**4.47**	**131**	Pn	**Pn**	**22 23 07.7**	**+0.7**
HNTI				Sn	**Sn**	**22 23 57.5**	**-1.5**
BALY	**Balya**	**4.59**	**323**	*i* P	**Pn**	**22 23 06.4**	**-2.2**
BALY				*i* S	**Sn**	**22 23 58.3**	**-3.6**
GEMT	**Gemlik**	**4.59**	**341**	*e*PN	**Pn**	**22 23 08.4**	**-0.2**
GEMT	**Gemlik**	**4.59**	**341**	Pn	**Pn**	**22 23 09.1**	**+0.5**
GEMT	**Gemlik**	**4.59**	**341**	Pn	**Pn**	**22 23 09.1**	**+0.5**
RCY	**Rachaya**	**4.63**	**123**	*e*Pn	**Pn**	**22 23 09.7**	**+0.5**
RCY	**Rachaya**	**4.63**	**123**	*e*Pn	**Pn**	**22 23 09.6**	**+0.5**
MMA0	**Mount Meron ar**	**4.65**	**130**	Pn	**Pn**	**22 23 09.7**	**+0.2**
MMAI	**Mount Meron Ar**	**4.65**	**130**	Pn	**Pn**	**22 23 09.8**	**+0.3**
	13nm,0.3s,baz=319,slow=11,SNR=57						
MMAI				Sn	**Sn**	**22 24 03.4**	**-0.2**
	23nm,0.3s,baz=309,slow=28,SNR=6.7						
YLV	**Yalova**	**4.67**	**343**	*e*PN	**Pn**	**22 23 09.4**	**-0.3**
OFRI	**'Ofer**	**4.69**	**137**	Pn	**Pn**	**22 23 11.4**	**+1.4**
KSDI	**Kefar Szold**	**4.70**	**127**	Pn	**Pn**	**22 23 10.4**	**+0.2**
HRI	**Mount Hermon**	**4.70**	**126**	Pn	**Pn**	**22 23 10.8**	**+0.6**
KCT	**Karacabey**	**4.71**	**333**	*e*PN	**Pn**	**22 23 10.1**	**-0.1**
KCT	**Karacabey**	**4.71**	**333**	Pn	**Pn**	**22 23 11.2**	**+1.1**
KCT	**Karacabey**	**4.71**	**333**	Pn	**Pn**	**22 23 11.2**	**+1.0**
HRSH	**Kfar Ka'horesh**	**4.80**	**134**	P	**Pg**	**22 23 22.0**	**-9.1**
KSHT	**Keshet**	**4.93**	**128**	Pn	**Pn**	**22 23 13.7**	**+0.4**
BNT	**Bandirma**	**4.95**	**330**	*e*PN	**Pn**	**22 23 14.5**	**+0.9**
BNT	**Bandirma**	**4.95**	**330**	Pn	**Pn**	**22 23 14.8**	**+1.2**
MMLI	**Mount Malkishu**	**5.07**	**135**	Pn	**Pn**	**22 23 16.1**	**+0.8**
IDI	**Anoyia**	**5.19**	**263**	Pn	**Pn**	**22 23 16.0**	**-0.8**
	2.1nm,0.3s,baz=54,slow=19,SNR=59			

IDC 13 22:57:36.6±2.0, 472N×12647E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/17, mbtmp3.4/3, Error ellipse: s-maj=163.6km s-min=25.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.70**	**163**	P	P	23 03 09.6	+0.8
	0.5nm,0.3s,baz=343,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**29.14**	**166**	P	P	23 03 38.6	-0.9
	0.1nm,0.3s,baz=347,slow=7.6,SNR=3.1						
MKAR	**Makanchi Array**	**56.59**	**325**	P	P	23 07 21.3	0.0
	0.5nm,0.4s,baz=116,slow=7.6,SNR=18						

GUC 13 23:15:58.7±0.5, 2404S×6746W, h200km, ML3.6, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.95**	**317**	*e*P	Pn	23 16 38.2	+1.5
LVC				*i* S	Sn	23 17 08.6	+2.3
CEN1	**Los Morros**	**2.59**	**284**	⇓*i*P	Pn	23 16 47.4	+3.8
CEN1				*i* S	Sn	23 17 23.5	+4.8
CEN1				AML	AML	23 17 25.7	
	comp=E,38nm,0.6s						
ANCH	**Antofagasta**	**2.72**	**277**	⇑*i*P	Pn	23 16 47.8	+2.7
ANCH				*i* S	Sn	23 17 24.3	+3.0
ANCH				AML	AML	23 17 26.6	
	comp=N,259nm,0.1s						
CPN1	**Cerro Paranal**	**2.75**	**257**	⇑*i*P	Pn	23 16 48.1	+2.7
CPN1				*i* S	Sn	23 17 24.6	+2.8
CPN1				AML	AML	23 17 26.6	
	comp=E,132nm,0.7s						

*NEIC **13** 23:51:36.0, 5926N×13701W, h15km, ML3.8(PGC), ML3.4(AEIC), After PGC.*

PGC 13 23:51:36.2±1.3, 5926N×13701W, h15km, ML3.8/5, 3D, 102km west of Haines, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.38**	**59**	P	Pg	23 51 43.3	-0.6
PLBC				S	Sg	23 51 49.4	+0.2
SKAG	**Skagway**	**0.88**	**76**	P	Pb	23 51 52.0	-1.1
SKAG				S	Sb	23 52 04.1	-0.6
PNL	**Peninsula**	**1.29**	**290**	P	Pn	23 51 56.9	-2.7
PNL				S	Sb	23 52 14.2	-2.1
YKU2	**Yakutat**	**1.39**	**282**	P	Pn	23 51 59.6	-1.3
HYT	**Haines Junctio**	**1.59**	**351**	Pn	Pn	23 52 03.7	0.0
HYT				Sg	Sg	23 52 24.8	-2.5
WHY	**Whitehorse**	**1.76**	**36**	P	Pn	23 52 06.5	+0.4
WHY				S	Sn	23 52 30.1	+1.8
WHY	**Whitehorse**	**1.76**	**36**	⇑Pn	Pn	23 52 07.0	+0.9
WHY				⇑Sg	Sg	23 52 31.0	-1.8
SIT	**Sitka**	**2.38**	**157**	*e*P	Pn	23 52 17.5	+2.9
DLBC	**Dease Lake**	**3.72**	**100**	P	Pn	23 52 33.0	+0.1
DLBC	**Dease Lake**	**3.72**	**100**	⇓Pn	Pn	23 52 31.9	-1.0
DLBC				⇑Pg	Pg	23 52 42.6	-4.7
DLBC				⇓Sg	Sg	23 53 31.0	-4.5
CRAG	**Craig**	**4.34**	**149**	*e*Pn	Pn	23 52 41.4	-0.2
CRAG				*e*Pg	Pg	23 52 51.1	-8.2
CRAG				*e*Sn	Sn	23 53 31.4	-0.4
CRAG				*e*Sg	Sg	23 53 51.8	-3.7
BCA3	**Beaver Creek A**	**4.46**	**331**	P	Pn	23 52 42.6	-0.5
DAWY	**Dawson**	**4.95**	**348**	P	Pn	23 52 50.5	+0.6
DAWY	**Dawson**	**4.95**	**348**	⇓Pn	Pn	23 52 50.9	+1.0
DAWY				⇑Sg	Sg	23 53 09.9	-5.1
EGAK	**Eagle**	**5.87**	**342**	P	Pn	23 53 03.1	+0.6
RC01	**Rabbit Creek A**	**6.61**	**292**	*e*Pn	Pn	23 53 12.2	-0.4
RC01				*e*Sn	Sn	23 54 26.9	-0.7
KTH	**Kantishna Hill**	**7.94**	**309**	*e*Pn	Pn	23 53 32.0	+1.3
KTH				*e*Sn	Sn	23 54 59.5	-0.7
CHUM	**Lake Minchumin**	**8.64**	**309**	*e*Pn	Pn	23 53 40.6	+0.2
	9.4nm,0.6s						
CHUM				*e*Sn	Sn	23 55 15.8	-1.6
SVW2	**Sparrevohn**	**9.43**	**289**	*e*P	Pn	23 53 51.0	-0.3
IMA2	**Indian Mountai**	**10.24**	**319**	*e*Pn	Pn	23 54 03.3	+1.0

*ISCJB **14** 00:12:01.3±0.9, 213S±0.1×683W±0.2, h149km±11km, mb3.5/2, Error ellipse: s-maj=33.9km s-min=12.9km az=26.1*
*IDC **14** 00:12:01.8±1.1, 2117S×6826W, h130km±14km, mb3.3/2, mb1 3.4/4, mb1mx3.2/15, mbtmp3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx1.8/9, Error ellipse: s-maj=33.0km s-min=17.6km az=114.0*
*NEIC **14** 00:12:03.2, 2135S×6873W, h150km, MG3.2(GUC), After GUC.*
*GUC **14** 00:12:03.2±0.6, 2135S×6873W, h150km, ML3.2*

ISC 14 00:12:02.3±0.9, 213S±0.1×683W±0.2, h142km±11km, n11, σ1§35/13, mb3.5/2, 2C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.45**	**202**	P	**Pn**	**00 12 31.2**	**+0.6**
	22nm,0.3s,baz=19,slow=9.7,SNR=220						
LVC				S	**Sn**	**00 12 52.9**	**+0.4**
	25nm,0.3s,baz=106,slow=22,SNR=75						
LVC	**Limon Verde**	**1.45**	**202**	⇑*i*P	**Pn**	**00 12 31.3**	**+0.6**
LVC				*i* S	**Sn**	**00 12 53.3**	**+0.9**
LVC				AML	AML	00 12 54.3	
	comp=E,288nm,0.4s						
CEN1	**Los Morros**	**2.74**	**219**	⇑*i*P	**Pn**	**00 12 47.8**	**+1.7**
CEN1				*i* S	**Sn**	**00 13 21.3**	**+1.5**
CEN1				AML	AML	00 13 22.5	
	comp=N,89nm,0.3s						
ANCH	**Antofagasta**	**3.09**	**219**	*i* P	**Pn**	**00 12 49.0**	**-1.5**
ANCH				*i* S	**Sn**	**00 13 24.1**	**-3.6**
CPN1	**Cerro Paranal**	**3.86**	**210**	*i* S	**Sn**	**00 13 43.8**	**-1.9**
LPAZ	**La Paz**	**4.96**	**2**	P	**Pn**	**00 13 14.4**	**-0.5**
	comp=N,1.1nm,0.3s,baz=194,slow=8.3,SNR=12						
SIV	**San Ignacio**	**8.64**	**54**	P	**Pn**	**00 14 01.2**	**-3.1**
	comp=N,1.1nm,0.3s,baz=255,slow=10,SNR=15						
ATAH	**Atahualpa**	**17.21**	**324**	LR	LR	00 23 09.2	
	comp=N,27nm,20.1s,baz=192,slow=39						
NVAR	**Mina Array Bea**	**75.66**	**322**	P	**P**	**00 23 32.2**	**+0.4**
	comp=N,0.4nm,0.5s,mb3.3,baz=64,slow=2.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	**P**	**00 23 39.0**	**+0.5**
	comp=N,1.3nm,0.7s,mb3.7,baz=254,slow=5.3,SNR=28						
MKAR	**Makanchi Array**	**145.12**	**36**	PKP	PKPdf	00 31 24.3	+1.6
	comp=N,0.4nm,0.6s,baz=353,slow=2.5,SNR=5.3						

IDC 14 00:18:41.1±1.0, 1813N×14664E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/19, mbtmp3.7/8, Error ellipse: s-maj=42.0km s-min=19.3km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.72**	**198**	P	P	00 26 14.5	-0.9
	0.3nm,0.4s,baz=23,slow=8.7,SNR=8.1						
ASAR	**Alice Springs**	**43.36**	**197**	P	P	00 26 46.6	+1.3
	0.3nm,0.6s,baz=9.3,slow=6.0,SNR=3.1						
SONM	**Songino Array**	**44.14**	**321**	P	P	00 26 51.8	+0.4
	0.3nm,0.6s,baz=148,slow=8.8,SNR=4.7						
STKA	**Stephens Creek**	**49.95**	**186**	P	P	00 27 36.4	-0.5
	0.4nm,0.3s,baz=21,slow=8.6,SNR=2.2						
ZALV	**Zalesovo Beam**	**59.01**	**323**	P	P	00 28 42.1	-0.5
	0.8nm,0.6s,baz=95,slow=8.8,SNR=4.7						
MKAR	**Makanchi Array**	**59.50**	**314**	P	P	00 28 46.6	+0.5
	0.3nm,0.5s,baz=98,slow=7.2,SNR=4.4						
NVAR	**Mina Array Bea**	**82.78**	**52**	P	P	00 31 08.0	+0.6
	0.3nm,0.6s,baz=256,slow=3.6,SNR=3.3						
ARCES	**ARCESS Array B**	**83.31**	**342**	P	P	00 31 09.2	-0.3
	2.2nm,0.7s,baz=56,slow=6.7,SNR=6.9						

*IDC **14** 01:03:55.0±5.6, 3203S×17980W, h337km±47km, mb3.6/4, mb1 3.7/5, mb1mx3.5/16, mbtmp3.6/5, Error ellipse: s-maj=59.1km s-min=24.8km az=34.0*
*NEIC **14** 01:03:56.2±3.7, 3205S×17981W, h353km±30km, mb3.8/2, Error ellipse: s-maj=51.9km s-min=19.1km az=212.0*

ISC 14 01:03:59.9±4.9, 323S±0.3×1797E±0.4, h359km±34km, n16, σ0§77/13, mb3.7/6, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.34**	**199**	P	**Pn**	**01 05 34.9**	**+0.2**
	14nm,0.3s,baz=283,slow=2.9,SNR=38						
URZ				S	**S**	**01 06 51.6**	**-0.2**
	7.6nm,0.3s,baz=79,slow=18,SNR=13						
STKA	**Stephens Creek**	**32.20**	**260**	P	**P**	**01 09 57.1**	**+1.4**
	1.0nm,0.3s,mb3.5,baz=115,slow=11,SNR=5.4						
CTA	**Charters Tower**	**32.26**	**284**	P	**P**	**01 09 57.0**	**+0.7**
	2.6nm,0.4s,mb3.8,baz=115,slow=9.5,SNR=3.2						
ASAR	**Alice Springs**	**41.11**	**270**	P	**P**	**01 11 10.2**	**-0.1**
	1.2nm,0.4s,mb3.4,baz=107,slow=7.6,SNR=36						
WB2	**Warramunga Arr**	**42.26**	**275**	⇓*i*P	**P**	**01 11 19.0**	**-0.5**
WRAB	**Tennant Creek**	**42.27**	**275**	*e*P	**P**	**01 11 18.7**	**-0.8**
	2.9nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**42.27**	**275**	P	**P**	**01 11 19.0**	**-0.6**
	3.2nm,0.4s,mb3.8,baz=113,slow=8.0,SNR=163						
SNAA	**Sanae**	**76.33**	**179**	*e*	**P**	**01 15 08.0**	**-1.6**
SNAA				*e*		01 15 11.4	
SNAA	**Sanae**	**76.33**	**179**	*e*P	**P**	**01 15 08.0**	**-1.6**
	0.8nm,0.5s,mb3.7						
VNA3	**Neumayer Olymp**	**76.56**	**177**	*e*	**P**	**01 15 11.0**	**+0.2**
VNA3				*e*		01 15 14.2	
VNA2	**Neumayer--Watz**	**76.97**	**178**	*e*	**P**	**01 15 13.7**	**+0.6**
	baz=189,slow=5.4						
VNA2				*e*		01 15 16.8	
VNA1	**Neumayer--Stat**	**77.21**	**177**	*e*	**P**	**01 15 15.2**	**+0.8**
VNA1				*e*		01 15 17.9	
KURK	**Kurchatov**	**120.92**	**313**	PKP	PKPdf	01 22 06.6	-2.8
	baz=114,slow=2.3						
BVAR	**Borovoye Array**	**126.36**	**315**	PKP	PKPdf	01 22 17.3	-2.5
	0.2nm,0.5s,baz=26,slow=3.7,SNR=2.7						
BRTR	**Keskin Array B**	**151.69**	**295**	PKPbc	PKPbc	01 23 10.2	-1.9
TORD	**Torodi Ar. Bea**	**160.87**	**186**	PKPab	PKPab	01 24 01.4	-1.0
	0.2nm,0.5s,baz=193,slow=5.5,SNR=5.0						

IDC 14 01:09:28.9±4.1, 1050S×16037E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.8/15, mbtmp3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/21, Error ellipse: s-maj=121.7km s-min=30.9km az=111.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.78**	**246**	P	P	01 15 11.5	+0.6
	1.8nm,0.8s,baz=74,slow=10,SNR=9.6						
STKA	**Stephens Creek**	**27.46**	**216**	P	P	01 15 17.1	+0.2
	1.5nm,0.8s,baz=22,slow=10,SNR=4.4						
STKA				LR	LR	01 24 07.7	
	comp=Z,53nm,19.4s,baz=26,slow=32						
ASAR	**Alice Springs**	**28.42**	**239**	P	P	01 15 24.9	-0.6
	0.2nm,0.5s,baz=66,slow=9.7,SNR=3.0						
SONM	**Songino Array**	**75.17**	**326**	P	P	01 21 14.0	+0.8
	0.7nm,0.7s,baz=143,slow=5.9,SNR=5.5						
MKAR	**Makanchi Array**	**89.54**	**318**	P	P	01 22 27.6	-0.6
	0.4nm,0.5s,baz=99,slow=4.9,SNR=2.0						

*ISCJB **14** 01:47:33.8±1.4, 1748S±0.008×714W±0.2, h81km±11km, mb4.0/2, Error ellipse: s-maj=36.4km s-min=10.7km az=167.8*
*NEIC **14** 01:47:35.9±1.4, 1746S×7124W, h66km±12km, mb4.0/1, Error ellipse: s-maj=26.1km s-min=17.1km az=71.0*
*IDC **14** 01:47:43.0±6.1, 1731S×7072W, h112km±38km, mb4.0/2, mb1 3.8/3, mb1mx3.2/16, mbtmp3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.2/21, Error ellipse: s-maj=113.2km s-min=57.5km az=2.0*

ISC 14 01:47:35.1±1.5, 1744S±0.008×715W±0.2, h78km±11km, n10, σ0§46/8, mb4.0/2, 1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.98**	**357**	⇓*i*P	**Pn**	**01 47 54.2**	**+0.5**
ARE				*i* S	**Sn**	**01 48 07.4**	**-0.2**
LPAZ	**La Paz**	**3.38**	**71**	P	**Pn**	**01 48 25.4**	**0.0**
	3.8nm,0.3s,baz=251,slow=11,SNR=64						
LVC	**Limon Verde**	**5.67**	**156**	*e*Pn	**Pn**	**01 48 56.1**	**-0.6**
	11nm,0.6s						
LVC				*e*Sn	**Sn**	**01 50 00.8**	**+0.3**
PMSA	**Palmer Station**	**47.56**	**176**	LR	LR	02 15 44.7	
	comp=Z,41nm,19.1s,baz=81,slow=35						
DBIC	**Dimbokro**	**69.98**	**76**	P	**P**	**01 58 39.0**	**+0.2**
	4.0nm,1.0s,mb4.2,baz=247,slow=7.4,SNR=3.9						
DBIC	**Dimbokro**	**69.98**	**76**	*e*P	**P**	**01 58 38.7**	**-0.1**
	1.1nm,0.5s,mb3.9						
TORD	**Torodi Ar. Bea**	**78.33**	**72**	P	**P**	**01 59 27.3**	**0.0**
	1.6nm,0.6s,mb3.9,baz=257,slow=5.4,SNR=26						
WRA	**Warramunga Arr**	**135.04**	**215**	PKP	PKPdf	02 06 50.0	+3.9
	0.4nm,1.0s,baz=125,slow=2.1,SNR=2.9						
WRA	**Warramunga Arr**	**135.04**	**215**	PKP	PKPdf	02 06 50.0	+3.9
SONM	**Songino Array**	**149.64**	**3**	PKPbc	PKPbc	02 07 19.0	+3.3
	0.4nm,0.6s,baz=313,slow=0.9,SNR=3.0						

*NEIC **14** 01:54:16.8, 1631N×9600W, h36km, MD4.1(MEX), After MEX.*

MEX 14 01:54:16.8±0.6, 1631N×9600W, h36km±94km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.03**	**317**	*i* P	Pn	01 54 33.3	-1.4
VHO				*i* S	Sn	01 54 46.0	-2.0
CMIG	**Matias Romero**	**1.32**	**54**	*i* P	Pn	01 54 37.1	-1.7
CMIG				*i* S	Sn	01 54 52.8	-2.4
PNIG	**Pinotepa**	**2.04**	**273**	*e*P	Pn	01 54 47.4	-1.2
PNIG				*i* S	Sn	01 55 10.5	-2.4
UTMO	**Huajuapan**	**2.29**	**311**	*i* P	Pn	01 54 51.3	-0.8
UTMO				*i* S	Sn	01 55 17.5	-1.6
TPIG	**Tehuac#an**	**2.46**	**328**	*i* P	Pn	01 54 55.6	+1.1
TPIG				*i* S	Sn	01 55 20.9	-2.5
PCIG		**2.74**	**102**	*e*P	Pn	01 54 57.3	-1.0
PCIG				*i* S	Sn	01 55 28.4	-1.9
CAIG	**El Cayaco**	**4.15**	**281**	*i* P	Pn	01 55 16.3	-1.4
CAIG				*i* S	Sn	01 56 01.1	-3.9
CAIG	**El Cayaco**	**4.15**	**281**	*i* P	Pn	01 55 16.3	-1.4
CAIG				*i* S	Sn	01 56 03.0	-2.1

*TEH **14** 02:00:11.3, 3110N×5672E, h17km, ML3.8*
*IDC **14** 02:00:24.7±6.5, 3131N×5649E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.6/3, Error ellipse: s-maj=292.8km s-min=26.1km az=148.0*
*THR **14** 02:00:27.1±0.5, 3121N×5675E, h14km±6km, ML3.6*
*CSEM **14** 02:00:27.7±0.1, 3123N×5672E, h20km, ML3.8, Error ellipse: s-maj=2.4km s-min=1.9km az=172.0*
*ISCJB **14** 02:00:28.3±0.9, 3126N±004×5669E±003, h25km±9km, mb3.4/3, Error ellipse: s-maj=6.4km s-min=3.6km az=172.6*

ISC 14 02:00:27.8±0.9, 3123N±004×5669E±003, h10km±6km, n60, σ1§23/81, mb3.4/3, 1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**1.02**	**291**	*e*Pg	**Pg**	**02 00 45.3**	**-2.2**
IBAF				*e*Sg	**Sg**	**02 00 59.6**	**-1.2**
IBAF	**Bafgh**	**1.02**	**291**	*e*Pg	**Pg**	**02 00 45.3**	**-2.2**
IBAF				*e*Sg	**Sg**	**02 00 59.6**	**-1.2**
IBAF				*e*		02 01 02.9	
KRBR	**Kerman**	**1.25**	**177**	*e*Pg	**Pg**	**02 00 49.9**	**-1.8**
KRBR				AML	AML	02 01 11.7	
	comp=N,921nm,0.3s						
KRBR				AML	AML	02 01 15.9	
	comp=E,911nm,0.4s						
IMEH	**Mehriz**	**1.78**	**276**	*e*Sn	**Sn**	**02 01 22.6**	**+1.2**
IMEH	**Mehriz**	**1.78**	**276**	*e*Pn	**Pn**	**02 00 58.9**	**+0.2**
IMEH				*e*Sn	**Sn**	**02 01 22.6**	**+1.2**
IMEH				*e*		02 01 25.3	
ICHK	**Chekchek**	**2.19**	**298**	*e*Pn	**Pn**	**02 01 04.6**	**+0.3**
ICHK				*e*Sn	**Sn**	**02 01 31.7**	**+0.2**
ICHK	**Chekchek**	**2.19**	**298**	*e*Pn	**Pn**	**02 01 04.6**	**+0.3**
ICHK				*e*		02 01 07.1	
ICHK				*e*Sn	**Sn**	**02 01 31.7**	**+0.2**
IKOO	**Kooshah**	**2.30**	**58**	*e*Pn	**Pn**	**02 01 04.4**	**-1.5**
IKOO				*e*Sn	**Sn**	**02 01 34.3**	**0.0**
IKOO	**Kooshah**	**2.30**	**58**	*e*Pn	**Pn**	**02 01 04.4**	**-1.5**
IKOO				*e*Sn	**Sn**	**02 01 34.7**	**+0.4**
IKOO				*e*		02 01 41.7	
ITEG	**Tejag**	**2.41**	**46**	*e*Sn	**Sn**	**02 01 37.1**	**+0.1**
ITEG	**Tejag**	**2.41**	**46**	*e*Pn	**Pn**	**02 01 05.9**	**-1.5**
ITEG				*e*Sn	**Sn**	**02 01 37.1**	**+0.1**
ITEG				*e*		02 01 45.3	
ISAD	**Sadrabad**	**2.65**	**286**	*e*Sn	**Sn**	**02 01 43.3**	**+0.4**
ISAD	**Sadrabad**	**2.65**	**286**	*e*Pn	**Pn**	**02 01 11.7**	**+1.0**
ISAD				*e*Sn	**Sn**	**02 01 43.3**	**+0.4**
ISAD				*e*		02 01 56.2	
IDAH	**Dahanechah**	**3.09**	**60**	*e*Pn	**Pn**	**02 01 16.5**	**-0.2**
IDAH				*e*Sn	**Sn**	**02 01 53.1**	**-0.7**
IDAH	**Dahanechah**	**3.09**	**60**	*e*Pn	**Pn**	**02 01 16.5**	**-0.2**
IDAH				*e*		02 01 27.2	
IDAH				*e*Sn	**Sn**	**02 01 53.1**	**-0.7**
IMON	**Monand**	**3.19**	**51**	*e*Pn	**Pn**	**02 01 17.7**	**-0.4**
IMON	**Monand**	**3.19**	**51**	*e*Pn	**Pn**	**02 01 17.8**	**-0.3**
IMON				*e*		02 02 15.5	
IPAR	**Pars**	**3.43**	**247**	*e*Pn	**Pn**	**02 01 23.4**	**+2.0**
IPAR				*e*Sn	**Sn**	**02 01 59.7**	**-2.4**
IPAR	**Pars**	**3.43**	**247**	*e*Pn	**Pn**	**02 01 24.0**	**+2.6**
IPAR				*e*Sn	**Sn**	**02 01 59.7**	**-2.4**
IPAR				*e*		02 02 35.6	
ISRV	**Sarvestan**	**3.60**	**240**	*e*Pn	**Pn**	**02 01 24.6**	**+0.9**
ISRV				*e*		02 02 29.6	
NASN	**Na'in**	**3.65**	**296**	*e*Pn	**Pn**	**02 01 26.1**	**+1.7**
NASN				AML	AML	02 02 26.5	
	comp=N,110nm,0.7s						
NASN				AML	AML	02 02 34.5	
	comp=E,129nm,0.6s						
BNDS	**Bandar-Abbas**	**3.84**	**187**	*e*Pn	**Pn**	**02 01 28.0**	**+1.0**
BNDS				AML	AML	02 02 47.7	
	comp=N,65nm,0.9s						
ZHSF	**Zahedan**	**3.88**	**114**	*e*Pn	**Pn**	**02 01 27.8**	**+0.2**
IZEF	**Zefreh**	**4.06**	**295**	*e*Sn	**Sn**	**02 02 17.0**	**-0.5**
IZEF	**Zefreh**	**4.06**	**295**	*e*Pn	**Pn**	**02 01 30.5**	**+0.5**
IZEF				*e*		02 01 47.6	
IZEF				*e*Sn	**Sn**	**02 02 17.0**	**-0.5**
IGAR	**Gharneh**	**4.12**	**288**	*e*Pn	**Pn**	**02 01 30.4**	**-0.5**
IGAR				*e*Sn	**Sn**	**02 02 17.7**	**-1.5**
IGAR	**Gharneh**	**4.12**	**288**	*e*Pn	**Pn**	**02 01 30.4**	**-0.5**
IGAR				*e*Sn	**Sn**	**02 02 17.7**	**-1.5**
IGAR				*e*		02 02 49.8	
GHIR	**Ghir-Karzin**	**4.36**	**229**	*e*Pn	**Pn**	**02 01 35.5**	**+1.4**
IKLH	**Kolahrood**	**4.80**	**297**	*e*Pn	**Pn**	**02 01 42.0**	**+1.8**
IKLH				*e*Sn	**Sn**	**02 02 34.4**	**-1.5**
IKLH	**Kolahrood**	**4.80**	**297**	*e*Pn	**Pn**	**02 01 42.0**	**+1.8**
IKLH				*e*		02 01 58.0	
IKLH				*e*Sn	**Sn**	**02 02 34.4**	**-1.5**
IANJ	**Anjilo**	**4.82**	**332**	*e*Pn	**Pn**	**02 01 40.2**	**-0.3**
IANJ	**Anjilo**	**4.82**	**332**	*e*Pn	**Pn**	**02 01 40.2**	**-0.3**
IANJ				*e*		02 03 07.9	
ISFB	**Sefidab**	**4.87**	**311**	*e*Sn	**Sn**	**02 02 36.7**	**-0.9**
ISFB	**Sefidab**	**4.87**	**311**	*e*Pn	**Pn**	**02 01 42.0**	**+0.9**
ISFB				*e*Sn	**Sn**	**02 02 36.7**	**-0.9**
ISFB				*e*		02 03 06.5	
IPIR	**Pirpir**	**5.13**	**288**	*e*Pn	**Pn**	**02 01 48.1**	**+3.3**
IPIR				*e*Sn	**Sn**	**02 02 41.9**	**-2.3**
IPIR	**Pirpir**	**5.13**	**288**	*e*Pn	**Pn**	**02 01 48.1**	**+3.3**
IPIR				*e*		02 02 09.2	
IPIR				*e*Sn	**Sn**	**02 02 41.9**	**-2.3**
IMOG	**Moghan**	**5.34**	**24**	*e*Pn	**Pn**	**02 01 48.2**	**+0.5**
IMOG	**Moghan**	**5.34**	**24**	*e*Pn	**Pn**	**02 01 48.2**	**+0.5**
IMOG				*e*		02 01 53.2	
ISHM	**Shahmirzad**	**5.37**	**329**	*e*Pn	**Pn**	**02 01 48.3**	**+0.2**
ISHM	**Shahmirzad**	**5.37**	**329**	*e*Pn	**Pn**	**02 01 48.3**	**+0.2**
ISHM				*e*		02 03 33.0	
IFIR	**Firoozkooh**	**5.49**	**324**	*e*Pn	**Pn**	**02 01 50.7**	**+1.0**
IFIR	**Firoozkooh**	**5.49**	**324**	*e*Pn	**Pn**	**02 01 50.7**	**+1.0**
IFIR				*e*		02 02 16.5	
IPAY	**Payeh**	**5.55**	**20**	⇓*e*Pn	**Pn**	**02 01 51.4**	**+0.9**
IPAY	**Payeh**	**5.55**	**20**	*e*Pn	**Pn**	**02 01 51.6**	**+1.1**
IPAY				*e*		02 02 18.0	
IVRN	**Varamin**	**5.61**	**313**	*e*Pn	**Pn**	**02 01 52.1**	**+0.8**
IVRN	**Varamin**	**5.61**	**313**	*e*Pn	**Pn**	**02 01 52.8**	**+1.5**
IVRN				*e*		02 03 55.4	
IAKL	**Akhelmad**	**5.63**	**17**	*e*Pn	**Pn**	**02 01 52.2**	**+0.6**
IAKL	**Akhelmad**	**5.63**	**17**	*e*Pn	**Pn**	**02 01 52.2**	**+0.6**
IAKL				*e*		02 03 46.5	
IKRD	**Kardeh**	**5.74**	**15**	*e*Pn	**Pn**	**02 01 57.4**	**+4.4**
IKRD				*e*		02 03 45.2	
IDMV	**Damavand**	**5.83**	**319**	*e*Pn	**Pn**	**02 01 55.2**	**+0.9**
IDMV	**Damavand**	**5.83**	**319**	*e*Pn	**Pn**	**02 01 55.2**	**+0.9**
IDMV				*e*		02 03 54.2	
IMYA	**Miami**	**5.84**	**28**	*e*Pn	**Pn**	**02 01 54.8**	**+0.4**
IMYA				*e*		02 04 02.6	
ISFR	**Sfrayin**	**5.91**	**10**	*e*Pn	**Pn**	**02 01 56.1**	**+0.7**
ISFR				*e*		02 02 32.8	
IEMG	**Emamgholi**	**6.38**	**14**	*e*Pn	**Pn**	**02 02 03.0**	**+1.1**
IEMG	**Emamgholi**	**6.38**	**14**	*e*Pn	**Pn**	**02 02 03.0**	**+1.1**
IEMG				*e*		02 04 04.8	
IRAZ	**Razeghan**	**7.02**	**308**	*e*Pn	**Pn**	**02 02 14.0**	**+3.3**
IRAZ				*e*		02 02 48.0	
MKAR	**Makanchi Array**	**25.09**	**44**	P	**P**	**02 05 51.7**	**-0.8**
	comp=N,0.5nm,0.5s,mb3.3,baz=230,slow=10,SNR=4.0						
KURK	**Kurchatov**	**25.39**	**34**	P	**P**	**02 05 53.2**	**-2.0**
	baz=233,slow=9.4						
ZALV	**Zalesovo Beam**	**30.38**	**33**	P	**P**	**02 06 38.1**	**-1.7**
	comp=N,0.8nm,0.6s,mb3.6,baz=244,slow=7.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**53.47**	**263**	P	**P**	**02 09 45.7**	**-2.8**
	comp=N,0.3nm,0.7s,mb3.3,baz=68,slow=5.8,SNR=3.1

SKO				Sg		Sg	02 01 53.4	+0.1
FNA	**Florina**	**0.72**	**152**	P		Pg	02 01 43.5	-2.1
FNA				S		Sg	02 01 54.8	-0.2
TIR	**Tirane**	**0.81**	**265**	P		Pg	02 01 44.7	-2.4
TIR				S		Sg	02 01 57.0	-0.6
TIR	**Tirane**	**0.81**	**265**	P		Pg	02 01 44.8	-2.3
TIR	**Tirane**	**0.81**	**265**	*e*PG		Pg	02 01 45.0	-2.1
TIR				*i* SG		Sg	02 01 56.5	-1.1
TIR	**Tirane**	**0.81**	**265**	*e*Pg		Pg	02 01 44.7	-2.4
TIR				*e*Sg		Sg	02 01 54.9	-2.7
KBN	**Korca**	**0.81**	**188**	*e*PG		Pg	02 01 44.6	-2.6
KBN				*i* SG		Sg	02 01 56.3	-1.4
PUK	**Puka**	**0.99**	**309**	*e*PG		Pg	02 01 47.8	-2.9
PUK				*i* SG		Sg	02 01 57.3	-0.9
BCI	**Bajram Curri**	**1.14**	**326**	*e*PG		Pg	02 01 50.9	-2.7
BCI				*i* SG		Sg	02 02 08.3	-0.1
GRG	**Griva**	**1.21**	**112**	P		Sg	02 01 53.1	-1.7
GRG				S		Sg	02 02 10.6	+0.2
VAY	**Valandovo**	**1.24**	**94**	P		Pn	02 01 53.4	-1.6
VAY	**Valandovo**	**1.24**	**94**	⇑*i*Pg		Pn	02 01 53.4	-1.6
VAY				*e*Sg		Sg	02 02 10.2	-1.3
VAY	**Valandovo**	**1.24**	**94**	⇑*i*Pg		Pn	02 01 53.5	-1.5
VAY				*i* Sg		Sg	02 02 10.2	-1.3
VAY				*e*Lg			02 02 10.3	
	comp=N,296nm,0.5s							
VAY				*e*Lg			02 02 10.9	
	comp=E,173nm,0.4s							
VAY	**Valandovo**	**1.24**	**94**	*i* P		Pn	02 01 53.4	-1.6
VAY				Sg		Sg	02 02 09.6	-1.9
KZN	**Kozani**	**1.28**	**150**	PG		Pn	02 01 54.5	-1.1
KZN				SB		Sb	02 02 14.2	+1.8
ULC	**Ulcinj**	**1.37**	**294**	⇓*i*Pg		Pn	02 01 54.9	-1.9
ULC				*e*Sg		Sg	02 02 17.4	+1.7
PVY	**Plav**	**1.37**	**329**	⇑*i*Pg		Pg	02 01 56.0	-1.9
PVY				*e*Sg		Sg	02 02 18.8	+3.1
PVY	**Plav**	**1.37**	**329**	*i* PG		Pg	02 01 56.0	-1.9
PVY				*i* SG		Sg	02 02 18.8	+3.1
KNT	**Kendrikon**	**1.51**	**99**	P		Pn	02 01 58.1	-0.6
KNT				S		Sn	02 02 18.9	+0.6
BARS	**Barje**	**1.54**	**25**	⇑*i*Pg		Pg	02 01 59.1	-2.1
BARS				*e*Sg		Sg	02 02 20.4	-0.8
PDG	**Podgorica**	**1.60**	**309**	*i* PG		Pn	02 01 59.3	-0.7
PDG				*i* SG		Sg	02 02 24.5	+1.4
TTG	**Podgorica**	**1.60**	**309**	⇓*i*Pn		Pn	02 01 59.3	-0.7
TTG				*i* Sn		Sg	02 02 24.5	+1.4
BEY	**Berane**	**1.64**	**332**	*i* PG		Pn	02 02 00.5	0.0
BEY				*i* SG		Sg	02 02 26.1	+1.8
BEY	**Berane**	**1.64**	**332**	⇓*i*Pn		Pn	02 02 00.5	0.0
BEY				*e*Sn		Sg	02 02 26.1	+1.8
IVA	**Berane**	**1.64**	**332**	⇓*i*Pn		Pn	02 02 00.5	0.0
IVA				*e*Sn		Sg	02 02 26.1	+1.8
KKB	**Krupnik**	**1.67**	**74**	*i* P		Pn	02 02 01.6	+0.6
KKB				Sg		Sg	02 02 24.5	-0.9
SRN	**Sarande**	**1.70**	**205**	*e*PN		Pn	02 02 02.1	+0.8
THE	**Thessaloniki**	**1.73**	**117**	P		Pn	02 02 01.1	-0.6
THE				S		Sn	02 02 25.0	+1.1
BUM	**Brajici-Budva**	**1.75**	**301**	⇓*i*Pn		Pn	02 02 01.8	-0.2
BUM				*e*Sn		Sg	02 02 28.4	+0.4
BUM	**Brajici-Budva**	**1.75**	**301**	*i* PG		Pn	02 02 01.8	-0.2
BUM				*i* SG		Sg	02 02 28.4	+0.4
JAN	**Janina**	**1.77**	**182**	PN		Pn	02 02 02.8	+0.6
JAN				SN		Sn	02 02 27.0	+2.3
LIT	**Litokhoron**	**1.77**	**138**	P		Pn	02 02 01.6	-0.7
LIT				S		Sn	02 02 25.9	+1.0
HORT	**Hortiatis**	**1.84**	**116**	P		Pn	02 02 02.4	-0.8
HORT				S		Sn	02 02 27.4	+0.9
KEK	**Kerkira**	**1.91**	**207**	PN		Pn	02 02 04.5	+0.2
SOH	**Sokhos**	**1.93**	**107**	P		Pn	02 02 03.7	-0.7
SOH				S		Sn	02 02 30.2	+1.5
IGT	**Igoumenitsa**	**1.94**	**194**	P		Pn	02 02 05.9	+1.2
IGT				S		Sn	02 02 31.6	+2.5
SJES	**Sjenica**	**1.97**	**339**	*e*Pn		Pn	02 02 04.9	-0.1
SJES				*e*Sg		Sg	02 02 33.7	-1.2
SJES	**Sjenica**	**1.97**	**339**	*e*Pn		Pn	02 02 05.1	+0.1
SJES				*e*Sg		Sg	02 02 33.7	-1.2
NKY	**Niksic**	**2.00**	**315**	⇑*i*Pn		Pn	02 02 07.2	+1.8
NKY				*e*Sn		Sg	02 02 35.0	-0.8
NKY	**Niksic**	**2.00**	**315**	*i* PG		Pn	02 02 07.2	+1.8
NKY				*i* SG		Sg	02 02 35.0	-0.8
THL	**Klokotos Trika**	**2.03**	**156**	P		Pn	02 02 05.3	-0.6
THL				S		Sn	02 02 31.9	+0.6
THL	**Klokotos Trika**	**2.03**	**156**	Pb		Pb	02 02 05.7	-2.9
THL				S		Sn	02 02 31.9	+0.6
THL				Sn		Sn	02 02 33.1	+1.8
VTS	**Vitosha**	**2.06**	**55**	⇑*i*Pn		Pn	02 02 07.1	+0.8
VTS				*e*Sn		Sn	02 02 34.0	+2.0
VTS	**Vitosha**	**2.06**	**55**	*i* P		Pn	02 02 07.2	+0.9
VTS				*i* P			02 02 07.2	
VTS				S		Sn	02 02 34.2	+2.2
HCY	**Herceg Novi**	**2.08**	**300**	⇑*i*Pn		Pn	02 02 07.2	+0.6
HCY				*e*Sn		Sn	02 02 36.8	+4.2
MMB	**Musomiste**	**2.11**	**85**	*i* P		Pn	02 02 07.8	+0.9
MMB				S		Sn	02 02 39.2	+6.0
PLG	**Polygyros**	**2.18**	**118**	P		Pn	02 02 07.4	-0.5
PLG				S		Sn	02 02 35.5	+0.6
PLG	**Polygyros**	**2.18**	**118**	Pn		Pn	02 02 07.8	-0.1
PLG				S		Sn	02 02 35.5	+0.6
NVR	**Nevrokopi**	**2.21**	**91**	PN		Pn	02 02 09.0	+0.7
NVR				SN		Sn	02 02 36.2	+1.2
PLE	**Pljevlja**	**2.22**	**330**	⇓*i*Pn		Pn	02 02 09.4	+0.9
PLE				*e*Sn		Sn	02 02 41.0	+5.1
BRY	**Bratogost**	**2.31**	**311**	⇓*i*Pn		Pn	02 02 09.9	+0.2
BRY				*e*Sn		Sn	02 02 42.2	+4.1
TREB	**Trebinje**	**2.31**	**305**	*e*Pn		Pn	02 02 09.9	+0.1
TREB				*e*Sg		Sg	02 02 42.9	-3.1
TREB	**Trebinje**	**2.31**	**305**	*e*Pn		Pn	02 02 09.9	+0.1
TREB				*e*Sn		Sn	02 02 43.1	+4.8
UPM	**Unac-Piva**	**2.33**	**321**	⇓*i*Pn		Pn	02 02 11.1	+1.2
UPM				*i* Sn		Sn	02 02 43.3	+4.8
GRUS	**Gruza**	**2.47**	**356**	*e*Pn		Pn	02 02 11.8	-0.1
GRUS				*e*Sg		Sg	02 02 49.8	-1.1
BOLS	**Boljevac**	**2.52**	**17**	*e*Pn		Pn	02 02 12.0	-0.6
BOLS				*e*Sg		Sg	02 02 51.1	-1.5
OUR	**Ouranopolis**	**2.56**	**114**	P		Pn	02 02 12.5	-0.6
PAIG	**Paliouri**	**2.57**	**125**	P		Pn	02 02 12.8	-0.5
EVR	**Evrytania**	**2.59**	**165**	PB		Pb	02 02 14.9	-3.3
EVR				SN		Sn	02 02 46.5	+1.4
AGG	**Agios Georgios**	**2.63**	**155**	P		Pn	02 02 12.9	-1.2
AGG				S		Sn	02 02 47.2	+1.2
XOR	**Xorichti**	**2.69**	**139**	P		Pn	02 02 14.3	-0.6
BBLS	**Lazići**	**2.69**	**336**	*e*Pn		Pn	02 02 14.9	0.0
NEO	**Neokhori**	**2.75**	**140**	P		Pn	02 02 16.5	+0.8
STON	**Ston**	**2.80**	**302**	*e*Pn		Pn	02 02 17.5	+1.0
STON				Sn		Sn	02 02 51.4	+1.1
SVIS	**Svilajnac**	**2.85**	**4**	*e*Pn		Pn	02 02 17.3	+0.2
SVIS				*e*Sg		Sg	02 03 02.0	-1.1
RZN	**Rozhen**	**2.85**	**83**	*i* P		Pn	02 02 18.3	+1.1
RZN				Sg		Sg	02 02 54.7	-8.6
LKR	**Lokris**	**3.19**	**149**	P		Pn	02 02 21.3	-0.5
LTRZ	**Laterza**	**3.22**	**257**	Pn		Pn	02 02 21.6	-0.6
VLS	**Valsamata**	**3.25**	**185**	P		Pn	02 02 22.2	-0.5
VLS	**Valsamata**	**3.25**	**185**	Pn		Pn	02 02 24.0	+1.3
KFL	**Anninata**	**3.31**	**182**	P		Pn	02 02 23.4	-0.1
KDZ	**Kurdzhali**	**3.38**	**85**	P		Pn	02 02 23.5	-0.9
RDO	**Rodhopi**	**3.48**	**93**	PN		Pn	02 02 26.3	+0.5
FGSL	**Fruska Gora**	**3.82**	**348**	*e*Pn		Pn	02 02 29.6	-0.9
FGSL				*e*Sn		Sn	02 03 11.7	-3.7
ALN	**Alexandroupoli**	**3.90**	**96**	P		Pn	02 02 31.9	+0.4
TIP	**Timpagrande**	**3.90**	**236**	P		Pn	02 02 31.5	0.0
RGNG	**Rignano Grg**	**4.02**	**275**	Pn		Pn	02 02 32.5	-0.7
MRLC	**Muro Lucano**	**4.17**	**263**	Pn		Pn	02 02 36.0	+0.8
BZS	**Buzias**	**4.22**	**7**	*e*Pn		Pn	02 02 34.6	-1.4
FG5	**Orsara di Pugl**	**4.26**	**270**	Pn		Pn	02 02 38.3	+1.7
BLY	**Banja Luka**	**4.31**	**322**	*e*Pn		Pn	02 02 37.7	+0.5
SGO	**Sicignano**	**4.34**	**260**	Pn		Pn	02 02 37.3	-0.3
CSSN	**Cassano Irpino**	**4.50**	**265**	Pn		Pn	02 02 39.5	-0.2
SGG	**Gregorio Mates**	**4.93**	**272**	Pn		Pn	02 02 46.0	+0.3
PKSM	**Moragy**	**5.07**	**342**	⇓*e*Pn		Pn	02 02 48.2	+0.6
PKSM				*e*Sn		Sn	02 03 43.4	-2.7
SDI	**San Donato**	**5.35**	**275**	Pn		Pn	02 02 51.4	-0.1
	comp=E,3.9nm,0.4s							
NVLJ	**Novalja**	**5.44**	**307**	*e*Pn		Pn	02 02 52.0	-0.7
NVLJ				Sn		Sn	02 03 53.8	-1.5
APE	**Apeiranthos**	**5.63**	**139**	P		Pn	02 02 57.1	+1.8
PTQR	**Pietraquaria**	**5.67**	**279**	Pn		Pn	02 02 57.3	+1.5
	comp=E,9.8nm,0.4s							
CRES	**Cresnjev**	**5.93**	**320**	*i* Pn		Pn	02 03 00.9	+1.5
NRCA	**Norcia**	**5.98**	**286**	Pn		Pn	02 03 00.3	+0.2
	comp=E,6.4nm,0.5s							
BUD	**Budapest**	**6.21**	**348**	*e*Pn		Pn	02 03 02.0	-1.3
BUD				*e*Sn		Sn	02 04 14.5	+0.2
ASS	**Assisi**	**6.36**	**288**	Pn		Pn	02 03 06.8	+1.5
	comp=E,3.8nm,0.3s							
FSSB	**Fossombrone**	**6.43**	**293**	Pn		Pn	02 03 06.2	-0.1
PSZ	**Piszkesteto**	**6.54**	**354**	*e*Pn		Pn	02 03 08.7	+1.0
PSZ				*e*Sn		Sn	02 04 24.8	+2.5
SOKA	**Soboth**	**6.75**	**323**	⇓*i*Pn		Pn	02 03 11.8	+1.1
VOY	**Vojsko**	**6.87**	**314**	*e*Pn		Pn	02 03 13.5	+1.2
VOY				*e*			02 03 14.5	
VOY				*e*Sn		Sn	02 04 30.4	-0.1
ARSA	**Arzberg**	**7.00**	**328**	⇓*i*Pn		Pn	02 03 15.9	+1.8
ARSA				⇓*i*Sn		Sn	02 04 35.5	+1.9
VYHS	**Vyhne**	**7.22**	**349**	*e*PN		Pn	02 03 17.7	+0.5
VYHS				*e*SN		Sn	02 04 38.6	-0.6
KOLL	**Kolacno**	**7.38**	**347**	*e*SN		Sn	02 04 46.1	+3.2
PTCC	**Patocco-Chiusa**	**7.40**	**315**	Pn		Pn	02 03 23.3	+3.8
MODS	**Modra-Piesok**	**7.42**	**341**	*e*PN		Pn	02 03 23.0	+3.2

IDC 14 02:25:32.9±9.5, 158N×12252E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/17, mbtmp3.7/3, Error ellipse: s-maj=274.0km s-min=153.8km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.34**	**152**	P	P	02 30 51.7	-0.9
	1.0nm,0.8s,baz=331,slow=9.7,SNR=7.5						
ASAR	**Alice Springs**	**27.43**	**157**	P	P	02 31 20.2	-0.5
	0.4nm,0.5s,baz=334,slow=10,SNR=10						
STKA	**Stephens Creek**	**37.88**	**153**	P	P	02 32 53.4	+1.6
	0.8nm,0.8s,baz=342,slow=9.6,SNR=3.6						

IDC 14 02:35:18.7±4.5, 448S×13163E, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=311.0km s-min=29.6km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.60**	**170**	Pn	Pn	02 38 58.1	-2.0
	0.1nm,0.3s,baz=352,slow=13,SNR=6.9						
WRA				Sn	Sn	02 41 46.1	-7.7
	0.0nm,0.3s,baz=353,slow=25,SNR=3.1						
WB2	**Warramunga Arr**	**15.60**	**170**	*e*P	PKiKP	02 51 59.2	+2.0
ASAR	**Alice Springs**	**19.21**	**174**	P	Pn	02 39 45.1	-0.1
	0.1nm,0.3s,baz=354,slow=8.6,SNR=13						
MKAR	**Makanchi Array**	**67.04**	**326**	P	P	02 46 13.9	+0.2
	0.3nm,0.5s,baz=126,slow=7.5,SNR=6.4						

IDC 14 03:14:05.2±3.6, 547S×15168E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.6/13, mbtmp3.8/2, Error ellipse: s-maj=146.6km s-min=47.5km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.17**	**228**	P	P	03 19 02.7	-0.3
	2.7nm,0.7s,baz=52,slow=9.7,SNR=27						
ASAR	**Alice Springs**	**24.91**	**222**	P	P	03 19 30.4	+0.3
	1.8nm,0.8s,baz=56,slow=9.3,SNR=18						
TORD	**Torodi Ar. Bea**	**149.44**	**287**	PKPbc	PKPbc	03 33 57.0	-0.4
	0.2nm,0.7s,baz=81,slow=3.8,SNR=3.2						

IDC 14 03:33:28.2±3.8, 1076S×16071E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.1/5, MS3.2/2, Ms1 3.2/2, ms1mx2.5/24, Error ellipse: s-maj=112.4km s-min=29.1km az=111.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.73**	**235**	LR	LR	03 43 03.9	
	comp=Z,44nm,19.0s,baz=228,slow=34						
WB2	**Warramunga Arr**	**26.98**	**247**	*e*P	P	03 39 12.6	+0.8
WRA	**Warramunga Arr**	**26.99**	**247**	P	P	03 39 12.4	+0.5
	5.0nm,0.9s,baz=75,slow=10,SNR=15						
STKA	**Stephens Creek**	**27.46**	**217**	P	P	03 39 16.9	+0.9
	3.5nm,0.8s,baz=11,slow=13,SNR=10						
STKA				LR	LR	03 49 58.0	
	comp=Z,100nm,18.8s,baz=26,slow=36						
ASAR	**Alice Springs**	**28.58**	**240**	P	P	03 39 24.9	-1.2
	0.6nm,0.6s,baz=72,slow=9.1,SNR=7.6						
SONM	**Songino Array**	**75.57**	**326**	P	P	03 45 15.4	+0.7
	1.6nm,0.7s,baz=142,slow=5.2,SNR=11						
MKAR	**Makanchi Array**	**89.95**	**318**	P	P	03 46 28.6	-0.8
	0.4nm,0.5s,baz=88,slow=5.8,SNR=5.0						

IDC 14 03:37:31.3±2.2, 646S×12901E, h0km, mb3.8/1, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=146.1km s-min=31.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.08**	**152**	*e*P	Pn	03 39 10.3	-5.9
	9.6nm,0.6s						
WRA	**Warramunga Arr**	**14.37**	**159**	Pn	Pn	03 40 57.1	+0.9
	0.3nm,0.3s,baz=342,slow=12,SNR=13						
WRA				Sn	Sn	03 43 23.8	-13
	0.2nm,0.3s,baz=338,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**17.75**	**165**	P	Pn	03 41 39.4	-0.6
	0.4nm,0.3s,baz=346,slow=11,SNR=13						
MKAR	**Makanchi Array**	**67.24**	**327**	P	P	03 48 27.7	+0.2
	0.4nm,0.4s,baz=119,slow=8.6,SNR=5.7						

*IDC **14** 03:40:26.5±1.3, 031S×133.47E, h0km, mb4.1/5, mb1 4.2/7, mb1mx4.0/17, mbtmp4.1/7, ML3.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/24, Error ellipse: s-maj=53.6km s-min=19.9km az=69.0*

*ISCJB **14** 03:40:29.1±0.8, 033S×009.1336E±0.1, h33km, mb4.2/8, Error ellipse: s-maj=20.7km s-min=11.2km az=154.3*

*NEIC **14** 03:40:31.3±0.7, 033S×13355E, h35km, mb4.2/5, Error ellipse: s-maj=17.9km s-min=9.7km az=60.0*

ISC 14 03:40:31.2±0.8, 037S±009×1336E±01, h35km, n14, σ0s85/14, mb4.2/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**13.87**	**225**	LR	LR	03 49 31.5	
	comp=Z,113nm,18.1s,baz=98,slow=39						
KAPI	**Kappang**	**14.54**	**251**	Pn	Pn	03 43 54.4	-0.2
	0.6nm,0.3s,baz=65,slow=16,SNR=3.6						
COEN	**Coen**	**16.52**	**145**	*e*P	Pn	03 44 18.6	-1.8
	6.6nm,0.6s						
WRAB	**Tennant Creek**	**19.46**	**178**	*e*P	Pn	03 44 56.6	+0.2
	7.6nm,0.8s						
WRA	**Warramunga Arr**	**19.47**	**178**	P	Pn	03 44 55.9	-0.6
	0.2nm,0.3s,baz=355,slow=12,SNR=23						
WRA				S	S	03 48 24.3	-9.1
	0.2nm,0.3s,baz=356,slow=22,SNR=7.1						
ASAR	**Alice Springs**	**23.16**	**179**	P	P	03 45 35.9	+1.1
	17nm,1.0s,mb4.4,baz=2.6,slow=10,SNR=62						
CTA	**Charters Tower**	**23.21**	**148**	P	P	03 45 36.4	+1.1
	3.0nm,0.6s,mb3.9,baz=342,slow=3.2,SNR=2.2						
CTA				LR	LR	03 56 00.6	
	comp=Z,132nm,18.8s,baz=233,slow=40						
CTAO	**Charters Tower**	**23.21**	**148**	*e*P	P	03 45 36.9	+1.5
MBWA	**Marble Bar**	**24.68**	**212**	*e*P	P	03 45 48.6	-0.4
	9.1nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**32.25**	**167**	P	P	03 46 56.8	+0.3
	3.0nm,0.7s,mb4.3,baz=335,slow=9.0,SNR=7.9						
MKAR	**Makanchi Array**	**64.83**	**324**	P	P	03 51 07.0	+0.4
	0.9nm,0.8s,mb3.9,baz=116,slow=5.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**67.38**	**331**	P	P	03 51 22.5	-0.3
	0.4nm,0.4s,mb3.8,baz=112,slow=6.4,SNR=3.9						
KURK	**Kurchatov**	**68.88**	**326**	*e*P	P	03 51 31.3	-1.0
	5.6nm,1.4s,mb4.3						
BRVK	**Borovoye**	**74.55**	**326**	*e*P	P	03 52 07.3	+0.9
	6.9nm,0.9s,mb4.6						

*IDC **14** 03:54:05.0±1.3, 633S×104.63E, h0km, mb3.9/6, Error ellipse: s-maj=64.3km s-min=18.1km az=54.0*

*ISCJB **14** 03:54:07.5±0.9, 680S±007×104.09E±0.09, h50km, mb4.0/7, Error ellipse: s-maj=13.4km s-min=9.2km az=162.5*

*DJA **14** 03:54:13, 662S×104.66E, h20km, MLv4.5/6*

*NEIC **14** 03:54:15.1±6.5, 629S×104.74E, h79km±58km, mb4.3/1, Error ellipse: s-maj=42.6km s-min=13.6km az=61.0*

ISC 14 03:54:10.3±0.9, 672S±008×10423E±010, h50km, n25, σ1s20/18, mb4.0/7, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**1.94**	**19**	P	Pn	03 54 41.5	+0.6
KLI	**Kotabumi**	**1.94**	**19**	S	Sn	03 55 06.0	+1.9
SBJI	**Serang**	**1.98**	**73**	P	Pn	03 54 38.9	-2.5
SBJI	**Serang**	**1.98**	**73**	S	Sn	03 54 58.0	-7.1
DBJI	**Dramaga**	**2.51**	**86**	P	Pn	03 54 47.5	-1.2
CBJI	**Citeko**	**2.62**	**84**	P	Pn	03 54 50.3	+0.1
LEM	**Lembang**	**3.37**	**92**	P	Pn	03 55 02.4	+1.9
KSI	**Kapahiang**	**3.45**	**332**	P	Pn	03 55 06.7	+5.2
MBWA	**Marble Bar**	**20.77**	**135**	*e*P	P	03 58 50.1	+2.9
WRA	**Warramunga Arr**	**32.04**	**117**	P	P	04 00 31.8	-0.7
	0.9nm,0.7s,mb3.7,baz=287,slow=12,SNR=16						
WRA	**Warramunga Arr**	**32.04**	**117**	P	pP	04 00 47.4	+2.0
	3.2nm,0.8s,baz=291,slow=10,SNR=7.1						
WRAB	**Tennant Creek**	**32.05**	**117**	*e*P	P	04 00 32.0	-0.5
	4.0nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**33.12**	**124**	P	P	04 00 42.1	+0.3
	0.6nm,0.9s,mb3.5,baz=295,slow=7.9,SNR=5.4						
ASAR	**Alice Springs**	**33.12**	**124**	P	pP	04 00 57.5	+2.7
	1.3nm,0.8s,baz=293,slow=8.6,SNR=9.2						
STKA	**Stephens Creek**	**42.90**	**131**	P	P	04 02 05.0	+1.0
	1.7nm,0.4s,mb4.1,baz=316,slow=9.6,SNR=9.2						
STKA	**Stephens Creek**	**42.90**	**131**	P	pP	04 02 20.1	+2.7
	5.4nm,0.8s,baz=307,slow=9.2,SNR=12						
SONM	**Songino Array**	**54.35**	**2**	P	P	04 03 31.4	-0.3
	0.6nm,0.8s,mb3.6,baz=178,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**56.73**	**342**	P	P	04 03 49.2	+0.4
	1.1nm,0.6s,mb4.1,baz=160,slow=7.8,SNR=6.5						
KURK	**Kurchatov**	**61.33**	**342**	P	P	04 04 19.9	-0.7
	baz=159,slow=6.6						
KURK	**Kurchatov**	**61.33**	**342**	P	P	04 04 19.9	-0.7
ZALV	**Zalesovo Beam**	**62.61**	**347**	P	P	04 04 28.1	-1.0
	1.1nm,0.4s,mb4.4,baz=157,slow=4.2,SNR=5.5						
BDFB	**Brasilia**	**144.65**	**231**	PKPbc	PKPdf	04 13 44.8	+2.3
	1.0nm,0.7s,baz=167,slow=18,SNR=3.4						
TXAR	**Lajitas Array**	**145.40**	**46**	PKP	PKPdf	04 13 44.7	+1.3
	0.4nm,0.6s,baz=262,slow=1.1,SNR=6.9						
TXAR	**Lajitas Array**	**145.40**	**46**	PKP	pPKPdf	04 13 56.4	-2.2
	0.6nm,0.8s,baz=270,slow=1.7,SNR=3.4						
TXAR	**Lajitas Array**	**145.40**	**46**	PKP	PKPdf	04 13 44.7	+1.3

IDC 14 04:01:30.6±50.0, 1659S×17792W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/16, mbtmp4.3/3, Error ellipse: s-maj=916.9km s-min=149.2km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.68**	**240**	P	P	04 09 04.5	-0.2
	2.2nm,0.5s,baz=102,slow=12,SNR=11						
WRA	**Warramunga Arr**	**45.35**	**258**	P	P	04 09 51.0	+0.1
	0.9nm,0.5s,baz=91,slow=7.7,SNR=30						
ASAR	**Alice Springs**	**45.61**	**253**	P	P	04 09 52.9	-0.1
	5.9nm,0.5s,baz=88,slow=8.3,SNR=78						

*IDC **14** 04:12:17.7±0.7, 265N×9588E, h0km, mb4.4/18, mb1 4.6/19, mb1mx4.4/24, mbtmp4.4/19, ML5.0/1, MS3.7/2, Ms1 3.8/2, ms1mx2.7/39, Error ellipse: s-maj=30.3km s-min=13.8km az=49.0*

*DJA **14** 04:12:19, 256N×9532E, h10km, MLv4.9/4*

*BJI **14** 04:12:20.0, 270N×9603E, h25km, mB5.2, mb5.0, Ms4.4, Msz4.3*

*ISCJB **14** 04:12:20.2±0.3, 268N±005×9594E±006, h25km, mb4.8/59, MS3.9/2, Error ellipse: s-maj=9.7km s-min=5.5km az=146.7*

*NEIC **14** 04:12:22.0±3.1, 267N×9593E, h26km±21km, mb4.8/20, Error ellipse: s-maj=11.0km s-min=4.9km az=57.0*

*MOS **14** 04:12:21.1±0.9, 269N×9593E, h33km, mb5.0/20, Error ellipse: s-maj=13.5km s-min=6.8km az=98.3*

ISC 14 04:12:22.4±0.3, 268N±005×9593E±006, h27km, h27km±4.5km: pP-P, n118, σ0s85/106, mb4.8/59, MS3.9/2, 4C-3D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.87**	**347**	P	Pn	04 13 04.8	-1.7
TRSI	**Tarutung**	**3.10

WHN LR LR
comp=Z,462nm,13.1s
MBWA Marble Bar 33.23 137 *e*P **P** **04 18 57.2 -0.3**
comp=Z,5.9nm,0.9s,mb4.5
XAN Xi'an 33.48 20 P **P** **04 18 57.8 -1.6**
XAN AP pP 04 19 05.3 -2.1
XAN AMB AMB
comp=Z,23nm,1.1s,mb5.0
XAN AMB AMB
comp=Z,64nm,7.3s
LZH Lanzhou 34.04 11 *e*P **P** **04 19 03.5 -0.8**
LZH AP pP 04 19 13.6 +1.3
LZH XP sP 04 19 18.3 +2.7
LZH AMB AMB
comp=Z,50nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,170nm,4.0s
LZH Lanzhou 34.04 11 *e*P **P** **04 19 03.5 -0.8**
comp=Z,50nm,1.2s,mb5.3
LZH pP pP 04 19 13.6 +1.3
LZH sP sP 04 19 18.2 +2.6
LZH Lanzhou 34.04 11 *e*P **P** **04 19 03.5 -0.8**
LZH *PP pP 04 19 13.6 +1.3
LZH *SP sP 04 19 18.2 +2.6
LZH pmax pmax
comp=Z,50nm,1.2s,mb5.3
GTA Gaotai 36.73 5 *e*P **P** **04 19 27.3 -0.1**
GTA AP pP 04 19 33.0 -2.5
GTA XP sP 04 19 36.3 -2.5
GTA AMB AMB
comp=Z,31nm,0.8s,mb5.2
TIA Tai'an 38.69 28 *e*P **P** **04 19 43.4 -0.7**
BJT Baijiatuan 41.45 24 *e*P **P** **04 20 08.2 +1.3**
comp=Z,90nm,0.7s,mb5.5
WMQ Urumqi 41.62 351 P **P** **04 20 09.0 +0.8**
WMQ AMB AMB
comp=Z,17nm,1.0s,mb4.6
WRA Warramunga Arr 43.89 123 P **P** **04 20 26.5 -0.6**
comp=Z,3.1nm,0.7s,mb4.2,baz=301,slow=9.3,SNR=20
WRAB Tennant Creek 43.90 123 *e*P **P** **04 20 26.6 -0.5**
comp=Z,12nm,1.1s,mb4.5
WRAB Tennant Creek 43.90 123⇓*e*P **P** **04 20 26.7 -0.4**
WRAB Tennant Creek 43.90 123 P **P** **04 20 28.7 +1.6**
comp=Z,17nm,1.4s,mb4.6
WB2 Warramunga Arr 43.90 123 *e*P **P** **04 20 26.7 -0.4**
TKM2 Tokmak 2 43.98 338 *e*P **P** **04 20 27.9 +0.5**
comp=Z,5.5nm,0.8s,mb4.3
TKM2 Tokmak 2 43.98 338 *e*P **P** **04 20 27.9 +0.5**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
AML Almayashu 44.04 336 *e*P **P** **04 20 29.0 +1.1**
EKS2 Erkin-Say 44.46 337 *e*P **P** **04 20 31.7 +0.5**
comp=Z,4.7nm,0.6s,mb4.4
FORT Forrest 45.22 140 *e*P **P** **04 20 37.9 +0.4**
FORT *e*pP pP 04 20 45.1 -0.6
ASAR Alice Springs 45.29 127 P **P** **04 20 37.6 -0.5**
comp=Z,1.6nm,0.6s,mb4.0,baz=299,slow=8.0,SNR=22
KSRS Korea Array 45.39 36 P **P** **04 20 37.4 -1.3**
comp=Z,4.6nm,0.8s,mb4.4,baz=229,slow=8.5,SNR=17
KSRS Korea Array 45.39 36 P **P** **04 20 37.4 -1.3**
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
MK31 Makanchi Array 45.52 347 *e*P **P** **04 20 39.7 +0.2**
MKAR Makanchi Array 45.52 347 P **P** **04 20 39.7 +0.1**
comp=Z,7.9nm,0.5s,mb4.9,baz=158,slow=8.8,SNR=72
MKAR LR LR 04 40 47.9
comp=Z,95nm,20.1s,MS3.7,baz=356,slow=38
SONM Songino Array 45.88 10 P **P** **04 20 42.2 -0.2**
comp=Z,12nm,0.7s,mb4.9,baz=190,slow=9.4,SNR=57
SONM PcP PcP 04 22 19.8 +0.5
comp=Z,0.6nm,0.5s,baz=185,slow=3.8,SNR=3.5
ULN Ulaanbaatar 46.03 10 *e*P **P** **04 20 43.4 -0.1**
comp=Z,10nm,0.9s,mb4.8
ULN Ulaanbaatar 46.03 10⇑*e*P **P** **04 20 43.9 +0.3**
KK31 Karatay Array 46.18 334 *i* P **P** **04 20 45.2 +0.3**
KK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
ZAK Zakamensk 47.94 6 *e*P **P** **04 20 58.2 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
KURK Kurchatov 50.05 346 *e*P **P** **04 21 14.6 -0.1**
comp=Z,22nm,1.3s,mb5.0
KURK Kurchatov 50.05 346 *e*P **P** **04 21 14.6 -0.1**
KURK pmax pmax
comp=Z,22nm,1.3s,mb5.0
HIA Hailar 50.68 20 *e*P **P** **04 21 19.5 +0.1**
comp=Z,5.0nm,0.6s,mb4.6
HIA Hailar 50.68 20 *e*P **P** **04 21 19.5 +0.1**
HIA pmax pmax
comp=Z,5.0nm,0.6s
MJAR Matsushiro Arr 51.49 44 PcP PcP 04 22 40.5 +0.7
comp=Z,0.9nm,0.6s,baz=258,slow=3.7,SNR=4.7
ZALV Zalesovo Beam 51.91 352 P **P** **04 21 28.4 -0.2**
comp=Z,15nm,0.7s,mb5.0,baz=182,slow=7.1,SNR=70
KRAR Krasnoyarsk 53.23 358 *i* P **P** **04 21 38.6 +0.3**
CTA Charters Tower 54.30 117 P **P** **04 21 46.6 -0.2**
comp=Z,8.2nm,0.9s,mb4.7,baz=321,slow=12,SNR=4.1
CTAO Charters Tower 54.30 117 *e*P **P** **04 21 46.5 -0.3**
comp=Z,6.7nm,0.8s,mb4.6
CTAO Charters Tower 54.30 117 *e*P **P** **04 21 46.5 -0.3**
CTAO pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BRVK Borovoye 54.51 341 *e*P **P** **04 21 47.3 -0.5**
comp=Z,9.7nm,0.7s,mb4.9
BRVK Borovoye 54.51 341 *e*P **P** **04 21 47.3 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
STKA Stephens Creek 55.28 132 P **P** **04 21 53.5 -0.3**
comp=Z,5.0nm,0.7s,mb4.7,baz=314,slow=7.0,SNR=12
AB31 Akbulak array 55.62 332 P **P** **04 21 55.0 -0.8**
AB31 pmax pmax
comp=Z,12nm,0.8s,mb5.0
BOD Bodaibo 56.81 11 *e*P **P** **04 22 04.0 -0.2**
BOD pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AKTK Aktyubinsk 57.34 332 P **P** **04 22 07.6 -0.4**
AKTO Aktyubinsk 57.34 332 P **P** **04 22 07.6 -0.4**
comp=Z,5.6nm,1.0s,mb4.5,baz=119,slow=14,SNR=10
SVE Sverdlovsk 60.86 339⇑*e*P **P** **04 22 32.4 +0.1**
SVE *e*S S 04 31 11.2 +23
SVE pmax pmax
comp=Z,20nm,1.0s,mb5.2
ARU Arti 61.34 337 *e*P **P** **04 22 34.4 -1.2**
comp=Z,7.4nm,0.3s,mb5.3
ARU Arti 61.34 337 *d i*P **P** **04 22 34.6 -1.0**
ARU *e* 04 24 52.6
ARU S **S** **04 30 55.8 +1.5**
ARU *e*SS SS 04 34 56.5 +1.3
ARU pmax pmax
comp=Z,12nm,1.0s,mb5.0
YAK Yakutsk 64.38 17 *e*P **P** **04 22 54.0 -1.6**
comp=Z,19nm,0.5s,mb5.4
YAK Yakutsk 64.38 17 *e*P **P** **04 22 53.9 -1.8**
YAK pmax pmax
comp=Z,42nm,1.1s,mb5.4
YAK pmax pmax
comp=N,12nm,1.5s
YAK pmax pmax
comp=E,12nm,1.2s
BRTR Keskin Array B 67.19 312 P **P** **04 23 12.8 -1.5**
comp=E,1.1nm,0.8s,mb3.9
OBN Obninsk 70.70 328⇑*e*P **P** **04 23 35.2 -0.6**
OBN *i* 04 23 48.6
OBN pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
TIXI Tiksi 71.97 10 *e*P **P** **04 23 41.4 -1.7**
comp=Z,7.3nm,0.8s,mb4.7
TIXI Tiksi 71.97 10 *e*P **P** **04 23 41.2 -2.0**
TIXI pmax pmax
comp=Z,33nm,2.3s,mb4.9
AKASG Malin Array Be 73.32 322 P **P** **04 23 50.3 -1.3**
comp=Z,2.1nm,0.7s,mb4.2,baz=92,slow=4.6,SNR=7.8
LBTB Lobatse 73.41 243 *e*P **P** **04 23 52.8 +0.1**
comp=Z,4.1nm,0.7s,mb4.5
LBTB Lobatse 73.41 243 *e*P **P** **04 23 52.8 +0.1**
LBTB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MLR Muntele Rosu 74.13 317 P **P** **04 23 56.7 +0.2**
comp=Z,2.9nm,0.9s,mb4.1,baz=116,slow=10,SNR=3.3
BOSA Boshof 74.42 239 *e*P **P** **04 23 58.1 -0.4**
comp=Z,16nm,1.3s,mb4.8
BOSA Boshof 74.42 239 *e*P **P** **04 23 58.1 -0.4**
BOSA pmax pmax
comp=Z,16nm,1.3s,mb4.8
PSZ Piszkesteto 78.67 318 *e*P **P** **04 24 21.9 -0.2**
comp=Z,2.4nm,0.7s,mb4.2
PSZ Piszkesteto 78.67 318 *e*P **P** **04 24 21.9 -0.3**
PSZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ARCES ARCESS Array B 80.73 340 P **P** **04 24 32.9 0.0**
comp=Z,3.4nm,0.7s,mb4.4,baz=96,slow=5.0,SNR=33
GERES GERESS Array B 82.87 319 P **P** **04 24 45.0 +0.4**
comp=Z,1.9nm,0.9s,mb4.1,baz=104,slow=5.6,SNR=12
NOA NORSAR Array B 85.11 331 P **P** **04 24 55.1 -0.7**
comp=Z,2.5nm,0.9s,mb4.3,baz=97,slow=5.4,SNR=3.3
SPITS Spitsbergen Ar 85.25 348 P **P** **04 24 55.5 -0.8**
comp=Z,12nm,0.9s,mb5.0,baz=160,slow=6.2,SNR=2.7
DAVOX Davos/Dischmat 85.35 317 P **P** **04 24 57.4 +0.1**
comp=Z,3.3nm,0.9s,mb4.5,baz=0.0,slow=20,SNR=3.5
DAVOS Davos 85.41 317 P **P** **04 24 57.4 -0.2**
TORD Torodi Ar. Bea 93.52 283 P **P** **04 25 36.8 +0.2**
comp=Z,0.3nm,0.9s,mb3.7,baz=88,slow=5.3,SNR=2.8
FFC Flin Flon 120.91 12 *e*PKPdf PKPdf 04 31 13.3 +1.1
WVOR Wild Horse Val 125.30 31 *e*PKPdf PKPdf 04 31 20.8 -0.3
BOZ Bozeman (W) 126.03 24 *e*PKPdf PKPdf 04 31 22.3 -0.1
ULM Lac du Bonnet 126.31 9 *e*PKPdf PKPdf 04 31 22.4 -0.4
ELK Elko 128.26 30 *e*PKPdf PKPdf 04 31 28.3 +1.5
NVAR Mina Array Bea 128.31 34 PKP PKPdf 04 31 26.7 -0.3
comp=Z,1.0nm,0.9s,baz=241,slow=1.1,SNR=5.8
NVAR Mina Array Bea 128.31 34 PKP PKPdf 04 31 26.7 -0.3
BW06 Boulder Array 129.25 24 *e*PKPdf PKPdf 04 31 29.0 +0.3
HWUT Hardware Ranch 129.33 27 *e*PKPdf PKPdf 04 31 29.2 +0.4
ANMO Albuquerque 137.08 27 *e*PKPdf PKPdf 04 31 43.5 -0.1
TXAR Lajitas Array 143.05 29 PKhKP 04 31 50.9
comp=Z,0.6nm,0.8s,baz=254,slow=1.9,SNR=6.9
TXAR PKP PKPdf 04 31 53.9 -0.6
comp=Z,0.6nm,0.8s,baz=305,slow=3.2,SNR=6.9
TXAR Lajitas Array 143.05 29 PKP PKPdf 04 31 50.9 -3.6
TXAR PKP PKPdf 04 31 53.9 -0.6
JCT Junction City 143.77 23 *e*PKPdf PKPdf 04 31 54.1 -1.7

*SZGRF **14** 04:29:30.8, 031S×128.99E, h33km, mb5.1, Halmahera, Indonesia*
*BJI **14** 04:29:51.5, 127N×127.25E, h100km, mB5.5, mb5.7*
*MOS **14** 04:29:53.8±1.0, 153N×126.95E, h99km, mb5.7/48, MS4.0/11, Error ellipse: s-maj=12.1km s-min=5.1km az=112.8*
*ISCJB **14** 04:29:54.3±0.4, 153N±002×12701E±003, h105km±3km, mb5.8/135, Error ellipse: s-maj=5.8km s-min=3.0km az=164.7*
*GCMT **14** 04:29:55.7±0.1, 149N×12701E, h121km±1km, MW5.3/84, Moment Tensor Solution. s72,c117; s84,c186; Duration: 1ꜛ1 Moment tensor: Scale 10^17 Nm; Mrr-0.03±.02; Mθθ 0.84±.02; Mϕϕ-0.81±.03; Mrθ-0.72±.01; Mθϕ-0.33±.03; Mϕr-0.55±.02; Best double couple: M0 1.26900×10^17 NP1:ϕs 325.00000°, δ45.00000°, λ-2.00000°. NP2:ϕs 56.00000°, δ89.00000°, λ-135.00000°. Principal axes: T 1.2470, Plg29.0000°, Azm181.0000°; N 0.0440, Plg45.0000°, Azm57.0000°; P -1.2910, Plg31.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **14** 04:29:55.7±1.0, 149N×12704E, h106km±8km, mb5.7/57 Error ellipse: s-maj=7.2km s-min=3.7km az=70.0*
NEIC Felt [IV] on Ternate and [III] at Manado.
*IDC **14** 04:29:56.1±0.9, 152N×12703E, h108km±7km, mb5.4/24, mb1 5.4/26, mb1mx5.4/27, mbtmp5.4/26, MS4.1/14, Ms1 4.1/14, ms1mx3.7/29, Error ellipse: s-maj=15.7km s-min=7.1km az=73.0*
*DJA **14** 04:29:57, 154N×126.93E, h50km, Mw6.0/8*
ISC 14 04:29:55.8±0.3, **153N**±002×**12704E**±003, **h104**km±2km, **h103**km±3.6km; **pP-P, n483,** σ1ꜛ10/406, **mb5.7**/135, **40C-52D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.20**	**168**	P		**Pn**	**04 30 32.5**	**+1.3**
SWI	**Sorong**	**4.85**	**119**	P		**Pn**	**04 31 08.4**	**+1.9**
MSAI	**Masohi**	**5.20**	**159**	P		**Pn**	**04 31 14.6**	**+3.3**
	435nm,0.7s,8μm1.7nm							
AAI	**Ambon**	**5.31**	**167**	P		**Pn**	**04 31 13.7**	**+0.9**
	2μm,0.7s,9.9nm							
AAI	**Ambon**	**5.31**	**167**	P		**Pn**	**04 31 14.1**	**+1.3**
	2μm,0.7s,9.9nm							
MATI	**Mati**	**5.44**	**352**	*e*P		**Pn**	**04 31 14.5**	**0.0**
MATI				*e*S		**Sn**	**04 32 14.2**	**-1.6**
DAV	**Davao City (W)**	**5.69**	**345**	P		**Pn**	**04 31 18.8**	**+0.9**
	SNR=36							
DAV	**Davao City (W)**	**5.69**	**345**	P		**Pn**	**04 31 18.3**	**+0.3**
	96nm,0.3s,baz=186,slow=0.9,SNR=17							
DAV				S		**Sn**	**04 32 22.6**	**+0.6**
	626nm,0.3s,baz=210,slow=20,SNR=5.0							
DAV				LR		LR	04 33 55.9	
	comp=Z,3μm,18.6s,baz=159,slow=42							
DAV	**Davao City (W)**	**5.69**	**345**	*e*Pn		**Pn**	**04 31 19.0**	**+1.0**
	3μm,0.8s							
DAV				*e*Sn		**Sn**	**04 32 21.0**	**-1.0**
DAV	**Davao City (W)**	**5.69**	**345**⇑	*e*P		**Pn**	**04 31 16.0**	**-2.0**
DAV	**Davao City (W)**	**5.69**	**345**	P		**Pn**	**04 31 18.9**	**+0.9**
	3μm,0.8s,49nm							
DMPH	**Davao City--Mi**	**5.72**	**345**⇓	*i*P		**Pn**	**04 31 19.1**	**+0.7**
DMPH				*i* S		**Sn**	**04 32 27.1**	**+4.3**
KCP	**Kidapawan**	**5.78**	**340**⇓	*i*P		**Pn**	**04 31 19.9**	**+0.8**
KCP				*i* S		**Sn**	**04 32 24.1**	**-0.1**
CTBH	**Cotabato--PC H**	**6.30**	**334**⇓	*i*P		**Pn**	**04 31 26.2**	**-0.1**
CTBH				*i* S		**Sn**	**04 32 34.6**	**-2.2**
BUKP	**Musuan**	**6.61**	**343**	*e*P		**Pn**	**04 31 31.2**	**+0.8**
BUKP				*e*S		**Sn**	**04 32 46.7**	**+2.4**
KDI	**Kendari**	**7.01**	**219**	P		**Pn**	**04 31 35.3**	**-0.6**
	2μm,0.9s							
PAGZ	**Pagadian**	**7.26**	**330**	*e*P		**Pn**	**04 31 38.0**	**-1.2**
PAGZ				*e*S		**Sn**	**04 32 58.2**	**-1.8**
CGP	**Cagayan de Oro**	**7.26**	**341**⇑	*e*P		**Pn**	**04 31 38.9**	**-0.4**
CGP				*i* S		**Sn**	**04 32 58.5**	**-1.8**
ZMPH	**Zamboanga City**	**7.32**	**318**⇓	*i*P		**Pn**	**04 31 40.0**	**-0.1**
ZMPH				*i* S		Sn	04 32 41.1	-21
BUTP	**Butuan**	**7.52**	**349**	*e*P		**Pn**	**04 31 43.7**	**+0.9**
BUTP				*e*S		**Sn**	**04 33 12.3**	**+5.7**
PCI	**Palu**	**7.59**	**251**	P		**Pn**	**04 31 44.6**	**+0.8**
	1μm,1.0s,7μm							
SCPH	**Surigao**	**8.34**	**349**	*e*P		**Pn**	**04 31 54.5**	**+0.5**
SCPH				*e*S		Sn	04 33 00.0	-26
TBP	**Tagbilaran**	**8.70**	**339**	*e*P		**Pn**	**04 31 59.2**	**+0.3**
TBP				*e*S		**Sn**	**04 33 32.2**	**-3.1**
MSLP	**Maasin**	**8.82**	**346**	*e*P		**Pn**	**04 32 01.0**	**+0.5**
MSLP				*e*S		**Sn**	**04 33 41.8**	**+3.7**
LLP	**Lapu-Lapu**	**9.25**	**341**	*e*P		**Pn**	**04 32 05.6**	**-0.7**
LLP				*e*S		**Sn**	**04 33 44.4**	**-4.2**
OCLP	**Ormoc**	**9.76**	**346**	*e*P		**Pn**	**04 32 12.3**	**-1.0**
PLP	**Palo**	**9.79**	**348**⇓	*e*P		**Pn**	**04 32 14.0**	**+0.4**
SMKI	**Samarinda**	**10.02**	**259**	P		**Pn**	**04 32 16.7**	**-0.1**
	412nm,0.8s,3μm							
GUIM	**Jordan**	**10.06**	**334**	*e*P		**Pn**	**04 32 15.2**	**-2.1**
BESP	**Borongan**	**10.13**	**351**	*e*P		**Pn**	**04 32 22.0**	**+3.7**
RCP	**Roxas**	**10.84**	**337**⇑	*e*P		**Pn**	**04 32 28.9**	**+1.0**
CUYO	**Cuyo Island**	**11.02**	**327**	*e*P		**Pn**	**04 32 29.2**	**-1.1**
PPR	**Puerto Princes**	**11.63**	**315**⇓	*i*P		**Pn**	**04 32 29.5**	**-9.0**
BATP	**Bataraza**	**11.69**	**308**	*e*P		**Pn**	**04 32 36.7**	**-2.6**
OTRP	**Odiongan**	**11.86**	**335**	*e*P		**Pn**	**04 32 43.6**	**+2.2**
BATI	**Baumata**	**12.13**	**196**	P		**Pn**	**04 32 47.0**	**+1.8**
	16nm,0.3s,baz=154,slow=0.6,SNR=35							
BATI	**Baumata**	**12.13**	**196**	P		**Pn**	**04 32 47.5**	**+2.3**
	379nm,1.0s							
ENPP	**El Nido**	**12.23**	**322**	*e*P		**Pn**	**04 32 45.3**	**-1.1**
PVCP	**Virac**	**12.32**	**347**	*e*P		**Pn**	**04 32 50.4**	**+2.7**
SJMP	**San Jose**	**12.34**	**332**	*e*P		**Pn**	**04 32 47.7**	**-0.2**
BUSP	**Coron**	**12.42**	**327**	*e*P		**Pn**	**04 32 48.5**	**-0.5**
BBKI	**Banjar Baru**	**13.16**	**248**	P		**Pn**	**04 32 59.6**	**+0.9**
	418nm,1.6s							
LUBP	**Lubang**	**13.86**	**331**	*e*P		**Pn**	**04 33 06.8**	**-1.0**
POLP	**Polilio Island**	**14.05**	**339**	*e*P		**Pn**	**04 33 09.2**	**-1.0**
JAY	**Jayapura**	**14.24**	**106**	P		**Pn**	**04 33 18.0**	**+5.2**
KHKI	**Kahang-Kahang**	**15.05**	**229**	P		**Pn**	**04 33 25.7**	**+2.7**
BALP	**Baler**	**15.11**	**339**	*e*P		**Pn**	**04 33 23.6**	**-0.3**
KAKA	**Kakadu**	**15.13**	**159**⇑	*i*P		Px	04 33 09.2	
	274nm,0.8s							
KAKA				*e*			04 33 15.3	
DNP	**Denpasar**	**15.55**	**229**	P		**Pn**	**04 33 32.1**	**+2.8**
	2μm,1.3s							
SCZP	**Santa Cruz**	**15.80**	**334**	*e*P		**Pn**	**04 33 30.7**	**-1.8**
PALP	**Palanan**	**16.09**	**344**	*e*P		**Pn**	**04 33 36.9**	**+0.9**
CAUP	**Cauayan**	**16.15**	**342**	*e*P		**Pn**	**04 33 37.2**	**+0.4**
BOLP	**Bolinao**	**16.34**	**335**	*e*P		**Pn**	**04 33 38.5**	**-0.7**
ABRA	**Dolores**	**17.18**	**339**	*e*P		**Pn**	**04 33 47.0**	**-2.5**
APYP	**Conner 17.20 341**			*e*P		**Pn**	**04 33 48.5**	**-1.1**
SGCP	**Mt. Cagua 17.32 344**			*e*P		**Pn**	**04 33 50.3**	**-0.8**
COEN	**Coen 22.19 134**			*e*P		**P**	**04 34 41.9**	**-1.9**
	78nm,0.7s,mb5.2							
WRAB	**Tennant Creek 22.50 162**			P		**P**	**04 34 45.0**	**-1.9**
	8μm,0.8s							
WRAB	**Tennant Creek 22.50 162**			*e*P		**P**	**04 34 44.1**	**-2.8**
	1μm,0.9s,mb6.2							
WRAB	**Tennant Creek 22.50 162**			*c i*P		**P**	**04 34 45.7**	**-1.2**
WRA	**Warramunga Arr 22.51 162**			P		**P**	**04 34 45.7**	**-1.3**
	469nm,0.6s,mb6.0,baz=341,slow=11,SNR=2706							
WRA				S		**S**	**04 38 42.2**	**-4.2**
	131nm,0.9s,baz=339,slow=17,SNR=6.6							
WRA				ScP		ScP	04 42 03.8	-1.8
	11nm,0.5s,baz=334,slow=2.6,SNR=20							
WRA				P3KPbc			05 08 23.3	
	1.4nm,0.8s,baz=158,slow=3.7,SNR=11							
WRA	**Warramunga Arr 22.51 162**			P		**P**	**04 34 45.7**	**-1.3**
WRA				S		**S**	**04 38 42.2**	**-4.2**
WRA				ScP		ScP	04 42 03.8	-1.8
WB2	**Warramunga Arr 22.51 162**⇑			*i*P		**P**	**04 34 45.7**	**-1.3**
WB2				*e*			04 34 52.1	
WB2				*e*S		**S**	**04 38 43.8**	**-2.6**
WB2				*e*SCP		ScP	04 42 03.8	-1.9
WB2				*e*SCS		ScS	04 45 46.4	-4.8
PMG	**Port Moresby 22.80 119**			*e*P		**P**	**04 34 49.6**	**-0.4**
PMG	**Port Moresby 22.80 119**⇓			*e*P		**P**	**04 34 49.8**	**-0.3**
NACB	**Ninganchiao 23.12 347**			*e*P		**P**	**04 34 51.1**	**-1.8**
	271nm,0.7s,mb5.7							
YHNB	**Yeheng 23.65 347**			*e*P		**P**	**04 34 56.3**	**-1.4**
	616nm,1.0s,mb5.9							
MBWA	**Marble Bar 23.66 197**			*e*P		**P**	**04 34 56.6**	**-1.1**
	359nm,0.8s,mb5.8							
TATO	**Taipei 23.92 347**			*e*P		**P**	**04 35 00.0**	**-0.1**
	227nm,0.9s,mb5.5							
QIZ	**Qiongzhong 24.21 317**			P		**P**	**04 35 03.0**	**+0.1**
QIZ				AP			04 35 23.8	
QIZ				XP		sP	04 35 34.8	-3.1
QIZ				S		**S**	**04 39 17.3**	**+3.3**
QIZ				AMB		AMB		
	comp=Z,562nm,1.0s,mb5.8							
QIZ				LR		LR		
	comp=N,2μm,15.7s							
QIZ				LR		LR		
	comp=E,1μm,17.6s							
QIZ				LR		LR		
	comp=Z,809nm,21.9s							
QIZ	**Qiongzhong 24.21 317**⇓			*i*P		**P**	**04 35 02.7**	**-0.2**
	comp=Z,482nm,0.8s,mb5.9							
XMIS	**Christmas Isla 24.40 240**			*e*P		**P**	**04 35 04.8**	**+0.1**
QZH	**Quanzhou 24.66 341**⇓			*i*P		**P**	**04 35 06.8**	**-0.1**
QZH				S		**S**	**04 39 19.3**	**-1.8**
QZH				SS			04 40 24.0	
QZH				AMB		AMB		
	comp=Z,270nm,1.0s,mb5.6							
QZH				AMB		AMB		
	comp=Z,2μm,4.0s							
JOW	**Kunigami 25.18 3**			P		**P**	**04 35 12.6**	**+1.0**
	comp=Z,248nm,0.8s,mb5.7,baz=196,slow=7.4,SNR=46							
GZH	**Guangzhou 25.21 329**			P		**P**	**04 35 14.6**	**+2.6**
GZH				S		**S**	**04 39 34.3**	**+4.4**
GZH				LR		LR		
	comp=N,298nm,19.7s							
GZH				LR		LR		
	comp=E,356nm,19.4s							
FRIM	**Kepong 25.45 274**			⇓P		**P**	**04 35 13.8**	**-0.4**
ASAR	**Alice Springs 25.92 165**			P		**P**	**04 35 17.4**	**-0.9**
	comp=E,65nm,0.8s,mb5.1,baz=346,slow=6.6,SNR=347							
ASAR				S		**S**	**04 39 48.8**	**+7.9**
	comp=E,149nm,1.2s,baz=344,slow=20,SNR=10							
ASAR				ScP		ScP	04 42 13.4	-1.6
	comp=E,14nm,0.5s,baz=343,slow=2.9,SNR=24							
ASAR				P3KPbc			05 08 09.2	
	comp=E,0.4nm,0.8s,baz=166,slow=4.4,SNR=4.4							
ASAR	**Alice Springs 25.92 165**			P		**P**	**04 35 17.4**	**-0.9**
ASAR				S		**S**	**04 39 48.8**	**+7.9**
ASAR				ScP		ScP	04 42 13.4	-1.6
ASAR				*e*			05 08 09.2	
SNG	**Songkhla 26.92 283**			P		**P**	**04 35 27.0**	**-0.5**
	comp=E,400nm,1.1s,mb5.9							
KKTK	**Khon Kaen 28.02 303**			P		**P**	**04 35 36.7**	**-0.6**
	comp=E,1μm,0.5s,mb6.8							
CTA	**Charters Tower 28.58 140**⇑			*i*P		**P**	**04 35 42.8**	**+0.6**
	comp=E,62nm,0.9s,mb5.2							
CTA				*e*			04 35 47.8	
CTA				*e*SCP		ScP	04 42 23.1	0.0
CTA	**Charters Tower 28.58 140**			P		**P**	**04 35 42.9**	**+0.7**
	comp=E,128nm,0.8s,mb5.6,baz=320,slow=10,SNR=41							
CTA				ScP		ScP	04 42 23.1	0.0
	comp=E,42nm,0.9s,baz=295,slow=3.3,SNR=9.5							
CTA				LR		LR	04 47 43.6	
	comp=E,440nm,18.3s,baz=316,slow=37							
CTA	**Charters Tower 28.58 140**			P		**P**	**04 35 42.9**	**+0.7**
CTA				pmax		pmax		
	comp=Z,128nm,0.8s							
CTA				pmax		pmax		
	comp=N,42nm,0.9s							
CTA				MLR		MLR		
	comp=Z,440nm,18.3s							
CTAO	**Charters Tower 28.58 140**			*e*P		**P**	**04 35 42.9**	**+0.7**
	comp=Z,193nm,0.7s,mb5.8							
CTAO	**Charters Tower 28.58 140**			*e*P		**P**	**04 35 42.9**	**+0.7**
CTAO				pmax		pmax		
	comp=Z,190nm,0.7s,mb5.8							
CBIJ	**Chichi jima 29.28 28**			P		**P**	**04 35 48.3**	**0.0**
	comp=Z,99nm,0.9s,mb5.4,baz=288,slow=18,SNR=3.8							
CBIJ				LR		LR	04 48 12.3	
	comp=Z,242nm,18.2s,baz=5.0,slow=37							
SSE	**Sheshan 29.92 350**			P		**P**	**04 35 55.3**	**+1.4**
SSE				XP		sP	04 36 29.5	+0.2
SSE				S		**S**	**04 40 48.3**	**+4.5**
SSE				AMB		AMB		
	comp=Z,41nm,1.0s,mb5.0							
SSE				AMB		AMB		
	comp=Z,180nm,5.3s							
SSE				LR		LR		
	comp=N,386nm,24.5s							
SSE				LR		LR		
	comp=E,527nm,24.5s							
SSE				LR		LR		
	comp=Z,351nm,17.9s							
SSE	**Sheshan 29.92 350**			P		**P**	**04 35 55.2**	**+1.3**
	comp=Z,41nm,1.0s,mb5.0							
SSE				sP		sP	04 36 29.5	+0.2
SSE				S		**S**	**04 40 48.3**	**+4.5**
SSE				LR		LR		
	comp=Z,350nm,17.9s							
NST	**Nakhon Sawan 30.02 299**			⇑P		**P**	**04 35 55.2**	**+0.2**
	comp=Z,133nm,1.0s,mb5.5							
WHN	**Wuhan 31.26 339**			P		**P**	**04 36 06.3**	**+0.5**
WHN				S		**S**	**04 41 02.0**	**-2.8**
WHN				LR		LR		
	comp=E,1μm,29.9s							
WHN				LR		LR		
	comp=Z,1μm,20.6s							
NJ2	**Nanjing 31.32 347**			*e*P		**P**	**04 36 08.3**	**+2.0**
NJ2				AP		pP	04 36 30.5	+0.9
NJ2				XP		sP	04 36 41.8	+0.1
NJ2				PP	

GYA LR LR
comp=N,573nm,17.8s
GYA LR LR
comp=E,821nm,18.3s
GYA LR LR
comp=Z,652nm,18.2s
BDT Bhumibol Dam 31.68 301 ⇑P **P 04 36 09.5 -0.1**
comp=Z,49nm,0.8s,mb5.3
FORT Forrest 32.14 178⇑*iP* **P 04 36 12.5 -1.0**
comp=Z,368nm,0.6s,mb6.3
FORT *e*PCP PcP 04 39 00.6 +0.3
FORT *e*SCP ScP 04 42 33.8 -0.8
FORT *e*ScS ScS 04 46 31.0 -2.6
CM31 Chiang Mai Arr 32.28 303 *eP* **P 04 36 15.6 +0.7**
comp=Z,24nm,0.6s,mb5.1
CMAR Chiang Mai Arr 32.28 303 P **P 04 36 14.8 -0.1**
comp=Z,33nm,0.9s,mb5.0,baz=123,slow=7.2,SNR=101
CMAR PcP PcP 04 39 02.4 +1.4
comp=Z,4.6nm,0.7s,baz=148,slow=2.2,SNR=4.3
CMAR ScP ScP 04 42 34.9 -0.4
comp=Z,6.2nm,0.8s,baz=154,slow=2.4,SNR=13
CMAR LR LR 04 49 58.0
comp=Z,317nm,18.9s,baz=204,slow=37
CHG Chiang Mai 32.45 304 ⇓P **P 04 36 16.4 0.0**
comp=Z,86nm,1.0s,mb5.4
CHTO Chiang Mai 32.45 304 P **P 04 36 16.6 +0.3**
SNR=24
CHTO Chiang Mai 32.45 304 *eP* **P 04 36 16.4 0.0**
KMI Kunming 33.16 317 ⇓P **P 04 36 23.8 +1.3**
KMI AP pP 04 36 47.1 +1.2
KMI XP sP 04 36 59.5 +1.6
KMI PP PP 04 37 39.8 +0.3
KMI S **S 04 41 35.3 +0.7**
KMI XS sS 04 42 15.9 +0.7
KMI SS SS 04 43 43.8 -18
KMI AMB AMB
comp=Z,89nm,1.1s,mb5.5
KMI AMB AMB
comp=Z,374nm,3.1s
KMI LR LR
comp=N,989nm,16.3s
KMI LR LR
comp=E,882nm,17.2s
KMI LR LR
comp=Z,451nm,24.2s
KMI Kunming 33.16 317 ⇓P **P 04 36 23.7 +1.2**
comp=Z,89nm,1.1s,mb5.5
KMI pP pP 04 36 47.1 +1.2
KMI sP sP 04 36 59.5 +1.6
KMI PP PP 04 37 39.8 +0.3
KMI PPP 04 37 57.3
KMI S **S 04 41 35.3 +0.7**
KMI sS sS 04 42 15.9 +0.7
KMI SS SS 04 43 43.7 -18
KMI SSS 04 44 14.2
KMI LR LR
comp=Z,450nm,24.2s
KMI Kunming 33.16 317 ⇓P **P 04 36 23.7 +1.2**
KMI *PP pP 04 36 47.1 +1.2
KMI *SP sP 04 36 59.5 +1.6
KMI 04 37 39.8
KMI PPP 04 37 57.3
KMI S **S 04 41 35.3 +0.7**
KMI *SS sS 04 42 15.9 +0.7
KMI SS SS 04 43 43.7 -18
KMI SSS 04 44 14.2
KMI pmax pmax
comp=Z,89nm,1.1s,mb5.5
KMI MLR MLR
comp=Z,450nm,24.2s
KLBR Kellerberrin 34.10 194⇑*iP* **P 04 36 29.9 -0.6**
comp=Z,499nm,0.6s,mb6.5
KLBR *e*PCP PcP 04 39 05.7 0.0
KLBR *e*S **S 04 41 42.3 -6.5**
MUN Mundaring 34.87 196⇑*iP* **P 04 36 36.6 -0.5**
EIDS Eidsvold 35.45 141 *eP* **P 04 36 41.0 -1.2**
comp=Z,734nm,0.9s,mb6.5
NWAO Narrogin (SRO) 35.50 194 P **P 04 36 42.8 +0.3**
SNR=16
NWAO Narrogin (SRO) 35.50 194 P **P 04 36 42.4 -0.2**
comp=Z,257nm,0.8s,mb6.1,baz=20,slow=10,SNR=146
NWAO LR LR 04 49 49.3
comp=Z,228nm,21.8s,baz=179,slow=34
NWAO Narrogin (SRO) 35.50 194 *eP* **P 04 36 42.4 -0.1**
comp=Z,215nm,0.7s,mb6.1
NWAO Narrogin (SRO) 35.50 194 *eP* **P 04 36 42.4 -0.1**
NWAO pmax pmax
comp=Z,220nm,0.7s
TIA Tai'an 35.71 346 *eP* **P 04 36 45.1 +0.8**
TIA AMB AMB
comp=Z,68nm,0.8s,mb5.6
KS15 Wonju Array Si 35.74 1 *eP* **P 04 36 45.6 +1.1**
KSRS Korea Array 35.76 1 P **P 04 36 45.5 +0.8**
comp=Z,56nm,0.7s,mb5.6,baz=178,slow=9.7,SNR=211
KSRS PcP PcP 04 39 11.8 +1.3
comp=Z,4.1nm,0.7s,baz=184,slow=2.6,SNR=4.7
KSRS ScP ScP 04 42 46.2 -1.0
comp=Z,15nm,0.8s,baz=188,slow=3.8,SNR=29
STKA Stephens Creek 35.98 159⇑*iP* **P 04 36 46.2 -0.4**
comp=Z,240nm,0.7s,mb6.2
STKA *e* 04 38 07.9
STKA *e*SCS ScS 04 46 48.8 -5.1
STKA Stephens Creek 35.98 159 P **P 04 36 46.1 -0.5**
comp=Z,249nm,0.7s,mb6.2,baz=331,slow=8.5,SNR=629
STKA PP PP 04 38 08.1 -2.5
comp=Z,178nm,0.9s,baz=328,slow=11,SNR=7.3
STKA ScP ScP 04 42 47.6 -0.5
comp=Z,11nm,0.7s,baz=26,slow=20,SNR=3.0
STKA LR LR 04 52 09.8
comp=Z,292nm,20.9s,baz=156,slow=37
MAJO Matsushiro 36.34 15 *eP* **P 04 36 48.9 -0.8**
MAT Matsushiro 36.34 15 P **P 04 36 48.6 -1.1**
MJAR Matsushiro Arr 36.34 15 P **P 04 36 48.5 -1.2**
comp=Z,18nm,0.5s,mb5.3,baz=188,slow=9.0,SNR=58
MJAR ScP ScP 04 42 47.7 -1.6
comp=Z,4.8nm,0.7s,baz=213,slow=4.2,SNR=9.2
MJAR LR LR 04 49 14.2
comp=Z,232nm,20.6s,baz=180,slow=32
XAN Xi'an 36.51 334 P **P 04 36 51.3 +0.1**
XAN S **S 04 42 22.8 -3.0**
XAN SS SS 04 44 57.3 -10
XAN AMB AMB
comp=Z,192nm,1.2s,mb5.9
XAN AMB AMB
comp=Z,238nm,5.6s
XAN LR LR
comp=N,196nm,13.4s
XAN LR LR
comp=E,356nm,28.3s
CD2 Chengdu 36.60 325 ⇓P **P 04 36 52.3 +0.3**
CD2 AP pP 04 37 16.5 +0.9
CD2 XP sP 04 37 28.1 +0.5
CD2 PP PP 04 38 19.4 +2.0
CD2 PCP PcP 04 39 12.4 -0.7
CD2 S **S 04 42 27.5 +0.3**
CD2 PCS PcS 04 43 00.5 -0.7
CD2 XS sS 04 43 09.9 +1.7
CD2 SS SS 04 45 01.8 -8.1
CD2 SCS ScS 04 46 55.3 -2.1
CD2 AMB AMB
comp=Z,140nm,1.3s,mb5.7
CD2 AMB AMB
comp=Z,660nm,4.5s
CD2 LR LR
comp=N,560nm,15.2s
CD2 LR LR
comp=E,880nm,17.2s
CD2 LR LR
comp=Z,430nm,14.2s
DL2 Dalian 37.53 353 P **P 04 37 00.6 +0.9**
DL2 XP sP 04 37 31.8 -3.6
DL2 *e*S **S 04 42 41.5 +0.5**
DL2 AMB AMB
comp=Z,60nm,0.8s,mb5.5
DL2 AMB AMB
comp=Z,140nm,6.2s
DL2 LR LR
comp=N,320nm,14.9s
DL2 LR LR
comp=Z,380nm,14.7s
ARMA Armidale 39.48 146⇑*iP* **P 04 37 16.6 +0.4**
ARMA *e*S **S 04 43 10.2 -0.5**
BJT Baijiatuau 39.56 347⇓*iP* **P 04 37 17.4 +0.7**
comp=Z,248nm,0.6s,mb6.2
BJT Baijiatuau 39.56 347⇓*iP* **P 04 37 17.4 +0.7**
BJT pmax pmax
comp=Z,248nm,0.6s
BJI Beijing 39.58 347 P **P 04 37 17.5 +0.6**
BJI S **S 04 43 12.3 +0.3**
BJI AMB AMB
comp=Z,301nm,0.6s,mb6.3
BJI AMB AMB
comp=Z,565nm,3.6s
BJI LR LR
comp=N,229nm,28.5s
BJI LR LR
comp=E,303nm,28.9s
BJI LR LR
comp=Z,328nm,30.7s
BJI Beijing 39.58 347 P **P 04 37 17.5 +0.6**
comp=Z,301nm,0.6s,mb6.3
BJI S **S 04 43 12.3 +0.3**
BJI LR LR
comp=Z,330nm,30.7s
LZH Lanzhou 40.55 331 ⇑P **P 04 37 26.5 +1.6**
LZH AP pP 04 37 45.1 -3.8
LZH XP sP 04 37 57.8 -3.0
LZH PP PP 04 39 05.3 +4.9
LZH PCP PcP 04 39 27.0 +1.6
LZH SCP ScP 04 43 05.3 -0.2
LZH PCS PcS 04 43 15.8 -0.3
LZH S **S 04 43 29.3 +2.8**
LZH XS sS 04 44 08.5 +0.5
LZH SS SS 04 46 29.0 -1.5
LZH AMB AMB
comp=Z,401nm,1.0s,mb6.2
LZH AMB AMB
comp=Z,1μm,4.5s
LZH Lanzhou 40.55 331 ⇑P **P 04 37 26.5 +1.6**
comp=Z,401nm,1.0s,mb6.2
LZH pP pP 04 37 45.1 -3.8
LZH sP sP 04 37 57.7 -3.1
LZH PP PP 04 39 05.3 +4.9
LZH PcP PcP 04 39 27.0 +1.6
LZH ScP ScP 04 43 05.2 -0.3
LZH PcS PcS 04 43 15.7 -0.5
LZH S **S 04 43 29.2 +2.7**
LZH sS sS 04 44 08.5 +0.5
LZH SS SS 04 46 29.0 -1.5
LZH Lanzhou 40.55 331 ⇑P **P 04 37 26.5 +1.6**
LZH *PP pP 04 37 45.1 -3.8
LZH *SP sP 04 37 57.7 -3.1
LZH 04 39 05.3
LZH 04 39 27.0
LZH S **S 04 43 29.2 +2.7**
LZH *SS sS 04 44 08.5 +0.5
LZH SS SS 04 46 29.0 -1.5
LZH pmax pmax
comp=Z,401nm,1.0s,mb6.2
SHL Shillong 41.44 308⇓*iP* **P 04 37 32.5 +0.1**
SHL AMb AMB 04 37 34.6
comp=Z,102nm,0.8s,mb5.7
SHL *ex* x 04 43 08.5
HHC Hu-ho-hao-te 41.57 342 *eP* **P 04 37 34.8 +1.6**
HHC AP pP 04 37 58.1 +0.8
HHC XP sP 04 38 09.9 +0.7
HHC PP PP 04 39 17.8 +6.4
HHC PCP PcP 04 39 29.6 +1.0
HHC S **S 04 43 42.9 +1.4**
HHC XS sS 04 44 27.0 +3.9
HHC SS SS 04 46 46.1 -4.4
HHC SCS ScS 04 47 24.3 -1.7
HHC AMB AMB
comp=Z,97nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,594nm,4.6s
HHC LR LR
comp=N,251nm,17.2s
HHC LR LR
comp=E,1μm,19.0s
HHC LR LR
comp=Z,124nm,20.8s
BTO Baotou 41.84 340 *eP* **P 04 37 35.5 +0.1**
CAN Canberra 42.02 153 *eP* **P 04 37 37.1 +0.2**
CN2 Changchun 42.11 358 *eP* **P 04 37 37.3 -0.3**
CN2 *e*AP pP 04 38 00.5 -1.2
CN2 *e*S **S 04 43 50.5 +1.1**
CN2 AMB AMB
comp=Z,30nm,0.6s,mb5.2
CN2 AMB AMB
comp=Z,370nm,4.0s
CNB Canberra Magne 42.19 152 *eP* **P 04 37 38.6 +0.3**
CNB *e* 04 39 17.7
TOO Toolangi 42.49 158⇑*iP* **P 04 37 41.5 +0.7**
MDJ Mudanjiang 42.96 3 P **P 04 37 44.6 +0.2**
MDJ AP pP 04 38 04.4 -4.3
MDJ PP PP 04 39 25.8 -0.5
MDJ SCP ScP 04 43 16.3 +1.4
MDJ PCS PcS 04 43 25.9 +0.5
MDJ S **S 04 44 00.9 -0.9**
MDJ AMB AMB
comp=Z,116nm,0.9s,mb5.6
MDJ AMB AMB
comp=Z,82nm,3.5s
MDJ LR LR
comp=N,188nm,34.0s
MDJ LR LR
comp=E,160nm,30.9s
MDJ LR LR
comp=Z,160nm,24.7s
MDJ Mudanjiang 42.96 3 *eP* **P 04 37 43.3 -1.1**
comp=Z,119nm,1.0s,mb5.6
LSA Lhasa 44.13 313 P **P 04 37 55.3 +1.2**
LSA AMB AMB
comp=Z,30nm,0.9s,mb5.0
LSA Lhasa 44.13 313⇓*iP* **P 04 37 55.6 +1.5**
comp=Z,179nm,0.8s,mb5.8
LSA Lhasa 44.13 313⇓*iP* **P 04 37 55.6 +1.5**
LSA pmax pmax
comp=Z,179nm,0.8s,mb5.8
GTA Gaotai 45.14 330 ⇓P **P 04 38 03.4 +1.5**
GTA AP pP 04 38 28.8 +2.5
GTA XP sP 04 38 39.3 +1.2
GTA PCP PcP 04 39 42.3 +1.6
GTA PP PP 04 39 51.3 +1.8
GTA SCP ScP 04 43 23.4 -0.5
GTA S **S 04 44 34.6 +1.0**
GTA XS sS 04 45 16.5 +0.9
GTA SCS ScS 04 47 47.0 -1.4
GTA SS SS 04 47 51.1 -7.2
GTA AMB AMB
comp=Z,217nm,0.9s,mb5.9
GTA AMB AMB
comp=Z,616nm,3.9s
GTA LR LR
comp=N,227nm,19.2s
GTA LR LR
comp=E,313nm,17.4s
GTA LR LR
comp=Z,289nm,20.1s
TAPN Taplejung 45.58 308 *eP* **P 04 38 06.0 +0.4**
comp=Z,398nm,0.8s,mb6.2
ODAN Odare 45.61 307 *eP* **P 04 38 06.1 +0.2**
comp=Z,493nm,0.7s,mb6.3
VIS Vishakhapatnam 45.83 293 *eP* **P 04 38 07.8 +0.1**
RAMN Ramite 46.28 307 *eP* **P 04 38 11.6 +0.5**
comp=Z,981nm,1.0s,mb6.5
JIRN Jiri 46.92 307 *eP* **P 04 38 16.7 +0.6**
comp=Z,756nm,1.0s,mb6.4
YSS Yuzh-Sakhalins 47.27 15 *eP* **P 04 38 18.6 +0.1**
comp=Z,23nm,0.6s,mb5.1
YSS Yuzh-Sakhalins 47.27 15⇑*eP* **P 04 38 18.6 +0.1**
YSS pmax pmax
comp=Z,84nm,1.3s,mb5.3
GUN Gumba 47.28 308 *eP* **P 04 38 19.4 +0.5**
comp=Z,1μm,0.9s,mb6.5
PKI Pulchoki 47.51 307 *eP* **P 04 38 20.6 -0.1**
KKN Kakani 47.70 307 *eP* **P 04 38 22.3 +0.1**
comp=Z,620nm,1.1s,mb6.3
DMN Daman 47.76 307 *eP* **P 04 38 22.9 +0.2**
comp=Z,484nm,0.9s,mb6.3
HIA Hailar 47.97 354 *eP* **P 04 38 23.8 0.0**
comp=Z,92nm,1.3s,mb5.5
HIA Hailar 47.97 354 *i* P **P 04 38 24.5 +0.7**
GKN Gorkha 48.31 307 *eP* **P 04 38 26.8 -0.1**
comp=Z,466nm,1.0s,mb6.3
KOLN Koldanda 49.04 306 *eP* **P 04 38 33.0 +0.5**
comp=Z,1μm,0.9s,mb6.8
DANN Dangsing 49.16 307 *eP* **P 04 38 33.7 +0.4**
comp=Z,726nm,0.8s,mb6.7
ULN Ulaanbaatar 49.29 342 P **P 04 38 35.7 +1.7**
SNR=32
ULN Ulaanbaatar 49.29 342 *eP* **P 04 38 35.1 +1.1**
comp=Z,153nm,0.8s,mb6.0
ULN Ulaanbaatar 49.29 342 *eP* **P 04 38 35.1 +1.1**
ULN pmax pmax
comp=Z,153nm,0.8s,mb6.0
SONM Songino Array 49.47 342 P **P 04 38 36.4 +1.1**
comp=Z,96nm,0.7s,mb5.8,baz=154,slow=8.5,SNR=294
SONM ScP ScP 04 43 40.0 -2.0
comp=Z,3.7nm,0.8s,baz=158,slow=5.2,SNR=4.9
SONM LR LR 04 59 05.8
comp=Z,276nm,21.8s,baz=170,slow=35
PYUN Piuthan 49.67 306 *eP* **P 04 38 38.0 +0.8**
comp=Z,845nm,0.9s,mb6.7
KOD Kodaikanal 50.00 282 *eP* **P 04 38 39.5 -0.5**
KOD AMb AMB 04 38 41.4
comp=Z,60nm,1.1s,mb5.4
HYB Hyderabad 50.17 291 *eP* **P 04 38 40.5 -0.7**
comp=Z,255nm,1.0s,mb6.1
HYB *e*S **S 04 45 47.0 +1.5**
HYB Hyderabad 50.17 291 *eP* **P 04 38 40.5 -0.7**
HYB *e*S **S 04 45 47.0 +1.5**
HYB pmax pmax
comp=Z,255nm,1.0s,mb6.1
HYB Hyderabad 50.17 291 *i* P **P 04 38 40.5 -0.7**
comp=Z,255nm,1.0s,mb6.1
NGP Nagpur 50.65 296 *ex* x 04 38 39.2
NGP AMb AMB 04 38 41.0
comp=Z,100nm,1.1s,mb5.8
LATR Latur 52.24 292 *eP* **P 04 38 56.0 -0.7**
LATR *ex* x 04 40 03.0
AKL Akola 52.37 295 *eP* **P 04 38 57.4 -0.1**
AKL AMb AMB 04 38 59.1
comp=Z,379nm,1.2s,mb6.3
LGTI Lohaghat 52.41 307 *eP* **P 04 38 58.2 +0.4**
LGTI *ex* x 04 40 02.5
BHPL Bhopal 52.69 298 *eP* **P 04 38 59.8 -0.1**
BHPL AMb AMB 04 39 01.4
comp=Z,210nm,0.9s,mb6.2
ZAK Zakamensk 52.69 341⇑*iP* **P 04 38 59.6 +0.2**
ZAK pmax pmax
comp=Z,41nm,0.8s,mb5.5
TLY Talaya 53.70 342 P **P 04 39 08.0 +1.2**
comp=Z,920nm,0.6s,mb7.0,SNR=5.6
TLY Talaya 53.70 342 P **P 04 39 08.3 +1.5**
SNR=15
TLY Talaya 53.70 342 *eP* **P 04 39 08.0 +1.2**
comp=Z,109nm,0.8s,mb5.9
TLY Talaya 53.70 342 *eP* **P 04 39 07.9 +1.1**
TLY *e*S **S 04 46 33.1 +0.3**
TLY *e* 04 52 07.5
TLY pmax pmax
comp=Z,95nm,0.7s,mb5.9
TLY MLR MLR
comp=Z,178nm,19.0s
IRK Irkutsk 54.01 343 *eP* **P 04 39 09.2 +0.2**
IRK *e* pP 04 39 36.6 +2.4
IRK pmax pmax
comp=Z,104nm,2.1s,mb5.5
KAD Karad 54.23 290 *eP* **P 04 39 10.1 -1.2**
GOA Goa 54.25 288 *eP* **P 04 39 10.7 -0.8**
DDI Dehra Dun 54.51 307⇓*ix* x 04 39 08.6
WMQ Urumqi 54.70 326⇓*iP* **P 04 39 15.8 +1.6**
WMQ AP pP 04 39 42.8 +3.4
WMQ XP sP 04 39 54.8 +3.8
WMQ PP PP 04 41 21.8 +3.9
WMQ S **S 04 46 46.0 -0.5**
WMQ SCS ScS 04 48 50.0 -3.3
WMQ SS SS 04 50 30.0 -1.0
WMQ AMB AMB
comp=Z,619nm,1.0s,mb6.6
WMQ AMB AMB
comp=Z,985nm,4.0s
WMQ LR LR
comp=N,845nm,16.0s
WMQ LR LR
comp=E,346nm,16.0s
WMQ LR LR
comp=Z,315nm,16.0s
POO Poona 54.78 292⇓*ix* x 04 39 12.0
comp=Z,240nm,1.0s
CLNS Chul'man 55.17 359 *eP* **P 04 39 18.3 +1.0**
CLNS pmax pmax
comp=E,10.0nm,0.8s
CLNS pmax pmax
comp=Z,33nm,0.8s,mb5.4
CLNS pmax pmax
comp=N,23nm,0.8s
SMLA Simla 55.52 307 *i* P **P 04 39 20.9 +0.6**
SMLA AMb AMB 04 39 22.0
comp=Z,335nm,0.5s,mb6.6
SDNR Sundarnagar 55.81 308 *eP* **P 04 39 23.6 +1.2**
AJM Ajmer 56.05 301 *eP* **P 04 39 23.4 -0.8**
DLH Dalhousie 56.99 308 *eP* **P 04 39 30.0 -0.8**
DLH *ex* x 04 39 33.0
BOD Bodaibo 57.07 352⇑*iP* **P 04 39 30.9 +0.1**
BOD pmax pmax
comp=Z,69nm,1.1s,mb5.6
THN Thein Dam 57.15 308 *eP* **P 04 39 30.4 -1.5**
PETK Petropavlovsk- 57.34 21 P **P 04 39 33.6 +0.8**
comp=Z,22nm,0.6s,mb5.3,baz=178,slow=3.5,SNR=42
PET Petropavlovsk 57.63 22⇑*eP* **P 04 39 35.6 +0.7**
PET Petropavlovsk 57.63 22⇑*iP* **P 04 39 36.0 +1.1**
PET *e* 04 40 26.2
PET *e*S **S 04 47 31.9 +6.9**
PET pmax pmax
comp=Z,40nm,1.2s,mb5.3
PET MLR MLR
comp=Z,100nm,15.0s
MK31 Makanchi Array 59.53 326 *eP* **P 04 39 49.2 +1.1**
MK31 *e*ScP ScP 04 44 24.3 -1.8
MKAR Makanchi Array 59.53 326 P **P 04 39 49.0 +0.8**
comp=Z,186nm,0.4s,mb6.5,baz=120,slow=7.6,SNR=773
MKAR ScP ScP 04 44 24.3 -1.7
comp=Z,8.0nm,0.7s,baz=131,slow=5.2,SNR=5.7
MKAR S **S 04 47 50.8 +1.0**
comp=Z,5.2nm,1.1s,baz=146,slow=13,SNR=6.5
MKAR LR LR 05 05 13.2
comp=Z,141nm,20.1s,baz=239,slow=36
MKAR Makanchi Array 59.53 326 P **P 04 39 49.0 +0.8**
MKAR S **S 04 47 50.8 +1.0**
MKAR pmax pmax
comp=Z,186nm,0.4s
MKAR pmax pmax
comp=N,8.0nm,0.7s
MKAR smax
comp=N,5.0nm,1.1s
MKAR MLR MLR
comp=Z,141nm,20.1s
BHJ Bhuj 59.60 296 *eP* **P 04 39 48.8 -0.4**
RPZ Rata Peaks 59.80 144 P **P 04 39 50.0 -0.1**
comp=Z,82nm,0.9s,mb5.8,baz=271,slow=3.2,SNR=17
RPZ LR LR 05 03 25.4
comp=Z,287nm,20.0s,baz=303,slow=34
KSH Kashi 59.82 316 P **P 04 39 52.8 +2.5**
KSH AP pP 04 40 16.8 +0.9
KSH XP sP 04 40 28.0 +0.6
KSH PCP PcP 04 40 35.9 0.0
KSH PP PP 04 42 08.9 +5.4
KSH SCP ScP 04 44 27.0 -0.5
KSH PCS PcS 04 44 37.0 -1.2
KSH S **S 04 47 53.4 -0.4**
KSH XS sS 04 48 40.1 +2.4
KSH SCS ScS 04 49 30.3 -0.7
KSH SS SS 04 51 58.9 +7.2
KSH AMB AMB
comp=Z,673nm,2.4s,mb6.2
KSH LR LR
comp=N,704nm,4.6s
KSH LR LR
comp=E,680nm,4.4s
KSH LR LR
comp=Z,714nm,4.6s
YAK Yakutsk 60.38 1 *eP* **P 04 39 53.8 +0.1**
comp=Z,230nm,0.8s,mb6.3
YAK Yakutsk 60.38 1*d iP* **P 04 39 53.9 +0.2**
YAK *e* 04 40 32.3
YAK *e*S **S 04 48 02.3 +2.1**
YAK pmax pmax
comp=Z,150nm,0.8s,mb6.1
YAK pmax pmax
comp=N,43nm,1.0s
YAK pmax pmax

comp=E,9.0nm,1.0s
YAK smax
comp=N,978nm,3.7s
YAK smax
comp=E,884nm,3.5s
URZ Urewera 60.74 136 P **P** 04 39 55.2 -1.4
comp=E,44nm,0.7s,mb5.6,baz=343,slow=3.2,SNR=19
ULHL Ulahol 60.86 319 P **P** 04 39 59.0 +1.7
SNR=18
KRAR Krasnoyarsk 60.89 339⇓ *e*P **P** 04 39 58.3 +1.0
KRAR pmax pmax
comp=Z,42nm,0.6s,mb5.7
KZA Kyzart 61.44 318 P **P** 04 40 03.5 +2.2
SNR=71
TKM2 Tokmak 2 61.59 319 *e*P **P** 04 40 03.5 +1.2
comp=Z,174nm,0.6s,mb6.3
TKM2 Tokmak 2 61.59 319 *e*P **P** 04 40 03.5 +1.2
TKM2 pmax pmax
comp=Z,174nm,0.6s,mb6.3
TKM2 Tokmak 2 61.59 319 P **P** 04 40 03.7 +1.4
SNR=181
KBK Karagaybulak 61.90 319 P **P** 04 40 06.1 +1.7
SNR=50
UCH Uchtor 62.00 318 *e*P **P** 04 40 06.8 +1.8
comp=Z,173nm,1.1s,mb6.0
UCH Uchtor 62.00 318 P **P** 04 40 03.0 -2.0
SNR=36
CHMS Chumysh 62.18 319 P **P** 04 40 07.1 +0.9
SNR=40
AAK Ala-Archa 62.19 319 P **P** 04 40 07.0 +0.7
comp=Z,604nm,0.8s,mb6.7,SNR=48
AAK Ala-Archa 62.19 319 P **P** 04 40 03.0 -3.3
SNR=51
FRU Bishkek 62.20 319⇓ *i*P **P** 04 40 08.0 +1.7
FRU pmax pmax
comp=Z,220nm,2.2s,mb5.8
USP Ospenovka 62.47 319 P **P** 04 40 09.2 +1.1
SNR=143
AML Almayashu 62.51 318 *e*P **P** 04 40 10.0 +1.6
comp=Z,303nm,0.9s,mb6.2
AML Almayashu 62.51 318 P **P** 04 40 10.5 +2.1
SNR=58
EKS2 Erkin-Say 62.68 318 *e*P **P** 04 40 11.0 +1.4
comp=Z,151nm,0.7s,mb6.0
EKS2 Erkin-Say 62.68 318 P **P** 04 40 11.3 +1.7
SNR=130
ZAA0 Zalesovo Array 62.68 333 *e*P **P** 04 40 08.6 -0.7
ZALV Zalesovo Beam 62.68 333 P **P** 04 40 08.8 -0.5
comp=Z,68nm,0.7s,mb5.7,baz=112,slow=6.6,SNR=86
ZALV LR LR 05 08 53.9
comp=Z,97nm,19.9s,baz=334,slow=37
ZALV PKP2bc 05 09 14.7
comp=Z,2.4nm,0.8s,baz=290,slow=4.3,SNR=8.7
ZALV Zalesovo Beam 62.68 333 P **P** 04 40 08.8 -0.5
ZALV LR LR 05 08 53.9
ZALV ⇑ *e* 05 09 14.7
KBL Kabul 63.11 308⇓ *i*P **P** 04 40 13.2 +0.6
comp=Z,348nm,0.8s,mb6.3
KBL Kabul 63.11 308⇓ *i*P **P** 04 40 13.2 +0.7
KBL pmax pmax
comp=Z,348nm,0.8s,mb6.3
KURK Kurchatov 63.75 328 P **P** 04 40 17.5 +1.0
comp=Z,5μm,0.6s
KURK Kurchatov 63.75 328 P **P** 04 40 17.2 +0.8
SNR=126
KURK Kurchatov 63.75 328 P **P** 04 40 17.0 +0.5
baz=129,slow=6.2
KURK Kurchatov 63.75 328⇓ *i*P **P** 04 40 16.9 +0.5
comp=Z,622nm,0.8s,mb6.5
NVS Novosibirsk 63.96 334 *i*P **P** 04 40 16.5 -1.2
NVS *i* 04 40 50.1
NVS *e*S **S** 04 48 43.2 -2.2
NVS pmax pmax
comp=Z,127nm,0.9s,mb5.8
NVS pmax pmax
comp=N,135nm,1.2s
NVS pmax pmax
comp=E,140nm,1.5s
NVS smax
comp=N,9.0nm,0.6s
NVS smax
comp=E,4.0nm,0.7s
KK31 Karatay Array 65.05 318 *i*P **P** 04 40 25.6 +0.5
DRV Dumont d'Urvil 68.67 174 P **P** 04 41 01.0 +13
DRV S S 04 49 33.0 -9.0
DRV SS SS 04 54 27.0 +18
DRV R 05 03 00.0
CASY Casey 68.68 187 *e*P **P** 04 40 47.7 +0.1
BVA0 Borovoye Array 69.32 327 *i*P **P** 04 40 51.7 -0.2
BVA0 pmax pmax
comp=Z,25nm,0.9s,mb5.0
BVAR Borovoye Array 69.32 327 P **P** 04 40 52.0 +0.2
comp=Z,51nm,0.7s,mb5.5,baz=130,slow=8.0,SNR=251
BVAR Borovoye Array 69.32 327 P **P** 04 40 52.0 +0.1
BVAR pmax pmax
comp=Z,51nm,0.7s
BRVK Borovoye 69.39 327 P **P** 04 40 52.3 0.0
comp=Z,780nm,1.0s,mb6.5,SNR=57
BRVK Borovoye 69.39 327 P **P** 04 40 52.9 +0.5
SNR=47
BRVK Borovoye 69.39 327⇓ *i*P **P** 04 40 52.5 +0.2
comp=Z,191nm,0.9s,mb5.9
BRVK Borovoye 69.39 327⇓ *i*P **P** 04 40 52.5 +0.2
BRVK pmax pmax
comp=Z,191nm,0.9s,mb5.9
TIXI Tiksi 70.02 1 *e*P **P** 04 40 54.8 -1.1
comp=Z,52nm,1.0s,mb5.3
TIXI Tiksi 70.02 1 *e*P **P** 04 40 54.8 -1.0
TIXI pmax pmax
comp=Z,80nm,1.6s,mb5.3
BIDO Bidbid 70.08 294 P **P** 04 40 57.6 +0.5
SNR=39
SMDO Samad 70.09 294 P **P** 04 40 57.5 +0.2
SNR=31
BILL Bilibino 71.59 15 *e*P **P** 04 41 05.4 +0.1
comp=Z,8.8nm,0.4s,mb4.9
BILL Bilibino 71.59 15⇑ *e*P **P** 04 41 05.6 +0.2
BILL pmax pmax
comp=Z,16nm,0.8s,mb4.9
BANOM Banah 72.03 297 P **P** 04 41 09.5 +0.6
SNR=18
HATD Hatta, Dubai 72.05 295 P **P** 04 41 09.6 +0.6
SNR=34
MIR Mirnyy 72.11 194⇑ *i*P **P** 04 41 09.0 +0.5
MIR pmax pmax
comp=Z,600nm,1.0s,mb6.4
ABKT Ailbek 72.51 309 P **P** 04 41 12.7 +1.2
comp=Z,908nm,0.7s,mb6.7,SNR=25
RBK Rabkut 73.17 288 P **P** 04 41 15.7 -0.1
SNR=22
WHFO Wadi Hawf 73.61 288 P **P** 04 41 17.9 -0.4
SNR=79
AB31 Akbulak array 74.04 321 P **P** 04 41 20.0 -0.2
AB31 pmax pmax
comp=Z,46nm,0.5s,mb5.5
RAR Rarotonga 74.92 112 LR LR 05 09 12.3
comp=Z,202nm,21.1s,baz=276,slow=31
AKTK Aktyubinsk 75.56 322 P **P** 04 41 29.0 0.0
AKTO Aktyubinsk 75.56 322 P **P** 04 41 29.0 0.0
comp=Z,86nm,0.6s,mb5.7,baz=104,slow=7.5,SNR=184
AKTO Aktyubinsk 75.56 322 P **P** 04 41 29.0 0.0
AKTO pmax pmax
comp=Z,86nm,0.6s,mb5.7
SVE Sverdlovsk 75.98 329⇑ *e*P **P** 04 41 31.1 -0.2
SVE pmax pmax
comp=Z,166nm,0.8s,mb5.8
ARU Arti 76.95 328 P **P** 04 41 36.1 -0.6
comp=Z,940nm,0.6s,mb6.7,SNR=7.3
ARU Arti 76.95 328 *e*P **P** 04 41 35.9 -0.8
comp=Z,97nm,0.6s,mb5.7
ARU Arti 76.95 328 *d i*P **P** 04 41 36.0 -0.7
ARU *e* 04 44 28.2
ARU *e*S S 04 51 22.1 +5.8
ARU SS SS 04 56 22.4 +7.3
ARU pmax pmax
comp=Z,144nm,1.0s,mb5.7
SOKR Solikamsk 78.77 331 *d i*P **P** 04 41 46.4 -0.3
SOKR pmax pmax
comp=Z,70nm,1.3s,mb5.3
KBD Kabd 79.95 299 *e*P **P** 04 41 52.9 -0.9
baz=299
KBD AMb AMB 04 41 56.4
comp=Z,209nm,0.9s,mb6.0,baz=299
UMR Umm Al-Rimmam 79.95 300 *e*P **P** 04 41 52.7 -1.1
baz=300
UMR AMb AMB 04 41 56.5
comp=Z,423nm,0.8s,mb6.3,baz=300

RDF Al-Radifah 80.06 299 *e*P **P** 04 41 52.9 -1.5
baz=299
RDF AMb AMB 04 41 56.9
comp=Z,356nm,1.2s,mb6.1,baz=299
MIB Mutribah 80.30 300 *e*P **P** 04 41 54.8 -0.9
baz=300
MIB AMb AMB 04 41 58.3
comp=Z,568nm,0.8s,mb6.5,baz=300
NAY Al-Naaiem 80.35 299 *e*P **P** 04 41 55.0 -0.9
baz=299
NAY AMb AMB 04 41 58.4
comp=Z,263nm,0.8s,mb6.1,baz=299
ABPO Ambohimpanom 80.87 251 *e*P **P** 04 41 59.3 +0.4
comp=Z,20nm,1.0s,mb4.9
OPO Ambohidratompo 80.87 251 P **P** 04 41 59.1 +0.2
comp=Z,2.9nm,0.6s,baz=81,slow=3.6,SNR=2.7
MAW Mawson 81.81 200⇑ *i*P **P** 04 42 03.2 +0.3
comp=Z,54nm,0.6s,mb5.5
MAW Mawson 81.81 200 P **P** 04 42 03.3 +0.4
comp=Z,64nm,0.6s,mb5.6,baz=70,slow=5.8,SNR=219
MAW LR LR 05 13 29.1
comp=Z,60nm,20.1s,baz=235,slow=32
SBA Scott Base 82.13 172⇑ *i*P **P** 04 42 04.8 +0.4
comp=Z,48nm,1.1s,mb5.2
SBA Scott Base 82.13 172⇑ *i*P **P** 04 42 04.8 +0.4
SBA pmax pmax
comp=Z,48nm,1.1s,mb5.2
SVW2 Sparrevohn 82.57 29 *e*P **P** 04 42 09.6 +2.6
DGRG David-gareji 82.74 311 P **P** 04 42 09.6 +1.4
GNI Garni 83.12 310 *e*P **P** 04 42 13.3 +3.0
comp=Z,61nm,0.7s,mb5.5
GNI Garni 83.12 310 *e*P **P** 04 42 13.3 +3.0
GNI pmax pmax
comp=Z,61nm,0.7s
TBLG Delisi 83.23 312 P **P** 04 42 11.0 +0.2
HAKT HAKKARI 83.78 307 *i*P **P** 04 42 16.3 +2.6
DYDN Diyadin 83.89 309 *i*P **P** 04 42 16.1 +1.9
PPT Papeete 84.15 108 *e*LR LR 05 08 59.0
comp=Z,226nm,29.8s
ONI Oni 84.24 312 P **P** 04 42 17.1 +1.2
IMA2 Indian Mountai 84.26 24 *e*P **P** 04 42 16.9 +1.4
PPLA Purkeypile 84.44 27 *e*P **P** 04 42 17.5 +1.0
comp=Z,12nm,0.8s,mb4.8
CHUM Lake Minchumin 84.51 26 *e*P **P** 04 42 16.1 -0.7
comp=Z,44nm,1.1s,mb5.3
TUTA Tutak 84.56 309 *i*P **P** 04 42 18.5 +0.8
TBI Tubuai 84.63 113 *e*LR LR 05 09 13.9
comp=Z,299nm,37.2s
KIV Kislovodsk 84.87 314 P **P** 04 42 19.2 +0.1
comp=Z,394nm,0.7s,mb6.5,SNR=5.6
KIV Kislovodsk 84.87 314 *i*P **P** 04 42 18.0 -1.1
KIV Kislovodsk 84.87 314 *e*P **P** 04 42 18.9 -0.2
KIV *e* 04 52 40.8
KIV pmax pmax
comp=Z,42nm,0.7s,mb5.5
KIV pmax pmax
comp=Z,65nm,5.5s
KIV MLR MLR
comp=Z,66nm,19.0s
SLKM Skilak Lake 85.09 30 *e*P **P** 04 42 20.3 +0.5
ARTV Artvin 85.31 311 *i*P **P** 04 42 20.8 -0.6
DBOC Borcka 85.51 311 *i*P **P** 04 42 22.8 +0.4
ERZM Erzurum 85.70 310 *i*P **P** 04 42 24.2 +0.9
PMR Palmer 85.72 28 *e*P **P** 04 42 23.5 +0.6
comp=Z,27nm,1.4s,mb5.0
PMR Palmer 85.72 28 *e*P **P** 04 42 23.5 +0.6
PMR pmax pmax
comp=Z,27nm,1.4s,mb5.0
BEST Besiri 85.72 308 *i*P **P** 04 42 21.9 -1.6
COLD Coldfoot 85.79 23 *e*P **P** 04 42 24.1 +0.9
comp=Z,17nm,0.9s,mb5.0
VRHR Novokhopersk 85.93 321 *e*P **P** 04 42 23.5 -0.7
VRHR pmax pmax
comp=Z,40nm,0.4s,mb5.7
VRHR pmax pmax
comp=N,70nm,1.3s
VRHR pmax pmax
comp=E,60nm,0.5s
MCK McKinley 85.98 26 *e*P **P** 04 42 23.8 -0.4
comp=E,20nm,1.0s,mb5.0
MCK McKinley 85.98 26 *e*P **P** 04 42 23.8 -0.4
MCK pmax pmax
comp=Z,20nm,1.0s,mb5.0
COLA College 86.54 25 *i*P **P** 04 42 30.2 +3.3
SOC Sochi 87.01 313 *e*P **P** 04 42 31.8 +2.2
SOC *e* 04 45 59.3
SOC *e*S S 04 52 55.2 -4.8
SOC pmax pmax
comp=Z,51nm,0.7s,mb5.6
VORD Divnogorie 87.40 321 *e*P **P** 04 42 30.0 -1.3
VORD pmax pmax
comp=Z,30nm,0.7s,mb5.3
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 87.48 321 *e*P **P** 04 42 30.6 -1.1
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.9s
ELZG Elazig 87.53 308 *i*P **P** 04 42 33.4 +1.1
ANN Anapa 88.65 315 *e*P **P** 04 42 36.0 -1.4
ANN pmax pmax
comp=Z,104nm,0.9s,mb5.9
GZT Gaziantep 88.66 307 *i*P **P** 04 42 36.9 -0.8
OBN Obninsk 89.03 325 *e*P **P** 04 42 37.8 -1.1
comp=Z,27nm,0.5s,mb5.5
OBN Obninsk 89.03 325⇓ *i*P **P** 04 42 37.8 -1.1
OBN pmax pmax
comp=Z,63nm,0.9s,mb5.7
OBN MLR MLR
comp=Z,100nm,14.0s
EGAK Eagle 89.40 25 *e*P **P** 04 42 40.4 -0.1
comp=Z,3.8nm,0.7s,mb4.5
APA Apatity 89.99 337⇓ *e*P **P** 04 42 42.0 -1.2
APA *i* 04 43 20.4
APA pmax pmax
comp=Z,32nm,1.2s,mb5.3
DAWY Dawson 90.20 26 *e*P **P** 04 42 44.7 +0.4
SYO Syowa Base 90.50 201⇓ *i*P **P** 04 42 44.0 -1.5
SYO Syowa Base 90.50 201⇓ *e*PcP PcP 04 42 45.8 -0.8
JOF Joensuu 91.26 333 *ep* **P** 04 42 47.1 -2.1
comp=Z,12nm,0.8s,mb5.1
JOF Joensuu 91.26 333 *e*P **P** 04 42 47.1 -2.1
JOF pmax pmax
comp=Z,12nm,0.8s,mb5.1
BRTR Keskin Array B 91.65 310 P **P** 04 42 50.2 -1.3
comp=Z,7.5nm,0.8s,mb5.0
BRTR Keskin Array B 91.65 310 P **P** 04 42 50.2 -1.3
BRTR pmax pmax
comp=Z,8.0nm,0.9s
BALT Daday 91.73 311 *i*P **P** 04 42 50.0 -1.8
KEV Kevo 92.05 340 *ep* **P** 04 42 51.0 -1.7
INK Inuvik 92.08 22 *e*P **P** 04 42 52.0 -0.9
ARCES ARCESS Array B 92.61 340 P **P** 04 42 53.7 -1.6
comp=Z,29nm,0.8s,mb5.7,baz=77,slow=5.5,SNR=62
ARCES PP PP 04 46 39.8 +1.9
comp=Z,1.6nm,0.8s,baz=72,slow=4.0,SNR=4.0
ARCES PKKPbc PKKPbc 05 00 06.8 -3.6
comp=Z,0.9nm,0.6s,baz=268,slow=3.6,SNR=8.5
ARCES ARCESS Array B 92.61 340 P **P** 04 42 53.7 -1.6
ARCES PP PP 04 46 39.8 +1.9
ARCES PKKPbc PKKPbc 05 00 06.8 -3.6
ARCES ARCESS Array B 92.61 340 P **P** 04 42 53.7 -1.6
ARCES 04 46 39.8
ARCES 05 00 06.9
ARCES pmax pmax
comp=Z,29nm,0.8s
ARE0 ARCESS Array S 92.61 340 *e*P **P** 04 42 53.9 -1.4
SPITS Spitsbergen Ar 92.68 349 P **P** 04 42 54.5 -1.0
comp=Z,19nm,0.7s,mb5.5,baz=8.5,slow=6.7,SNR=11
SPITS Spitsbergen Ar 92.68 349 P **P** 04 42 54.5 -1.0
SPITS pmax pmax
comp=Z,19nm,0.7s
KAF Kangasniemi 93.68 332 *ep* **P** 04 42 58.1 -2.3
comp=Z,9.6nm,0.8s,mb5.2,baz=76,slow=4.2
KAF Kangasniemi 93.68 332 *e*P **P** 04 42 58.1 -2.3
KAF pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
AKASG Malin Array Be 93.78 321 P **P** 04 42 59.2 -1.9
comp=Z,2.0nm,0.5s,mb4.7,baz=75,slow=3.9,SNR=13
AKASG PP PP 04 46 47.9 +0.3
comp=Z,10nm,1.0s,baz=70,slow=8.2,SNR=5.7

AKASG LR LR 05 27 31.9
comp=Z,52nm,18.0s,baz=0.0,slow=37
AKASG Malin Array Be 93.78 321 *i*P **P** 04 42 59.7 -1.4
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 93.78 321 *e*P **P** 04 42 59.3 -1.8
KIEV Kiev 93.79 321 *e*P **P** 04 42 59.2 -1.9
comp=Z,7.5nm,0.8s,mb5.1
KIEV *e*PP PP 04 46 45.1 -2.6
KIEV Kiev 93.79 321 *e*P **P** 04 42 59.2 -1.9
KIEV *e* 04 46 45.1
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
BOLV Bolvadin 93.81 309 *i*P **P** 04 42 59.8 -1.7
ESKT Eskisehir 93.81 310 *i*P **P** 04 42 59.4 -2.1
ULDT Uludag 95.07 310 *i*P **P** 04 43 04.7 -2.6
TIRR Tirgusor 95.10 315⇑ *i*P **P** 04 43 06.3 -1.0
HARR Harsova 95.41 315⇓ *i*P **P** 04 43 08.2 -0.5
MANT Manisa 95.69 309 *i*P **P** 04 43 09.3 -0.8
VRI Vrincioaia 96.09 316⇓ *i*P **P** 04 43 11.8 0.0
PLOR Plostina 96.14 316⇓ *i*P **P** 04 43 11.6 -0.4
MLR Muntele Rosu 96.69 316 P **P** 04 43 13.8 -0.7
comp=Z,12nm,0.6s,mb5.5,baz=305,slow=1.8,SNR=36
MLR PP PP 04 47 08.3 -2.0
comp=Z,8.1nm,0.9s,baz=18,slow=5.5,SNR=3.9
MLR Muntele Rosu 96.69 316 P **P** 04 43 13.8 -0.7
MLR 04 47 08.3
MLR pmax pmax
comp=Z,12nm,0.6s
MLR pmax pmax
comp=Z,8.0nm,0.9s
BURAR Bucovina Array 96.83 318⇓ *i*P **P** 04 43 14.7 -0.4
BUR08 Bucovina Ar. S 96.84 318 *e*P **P** 04 43 14.8 -0.3
SUW Suwalki 96.89 325 *e*P **P** 04 43 14.1 -1.1
SUW *e* 04 43 20.6
SUW Suwalki 96.89 325 *e*P **P** 04 43 14.1 -1.1
SUW *e* 04 43 20.6
VOIR 97.32 316⇓ *i*P **P** 04 43 16.6 -0.7
VOIR 97.32 316⇑ *i*P PP 04 47 14.6 -0.5
RKT Rikitea 97.95 113 *e*LR LR 05 15 27.6
comp=Z,330nm,35.2s
KWP Kalwaria 98.09 320 *e*P **P** 04 43 20.6 -0.1
KWP *e* 04 43 29.4
KWP Kalwaria 98.09 320 *e*P **P** 04 43 20.6 -0.1
KWP *e* 04 43 29.4
APE Apeiranthos 98.25 308⇓ *i*P PP 04 47 15.0 -7.6
KOLS Kolonicke sedl 98.51 320 *e*P **P** 04 43 22.2 -0.4
KOLS Kolonicke sedl 98.51 320 PDIF **P** 04 43 22.2 -0.4
LSZ Lusaka 98.94 255 *e*P **P** 04 43 26.3 +1.0
comp=Z,2.7nm,0.6s,mb5.0
LSZ Lusaka 98.94 255 *e*P **P** 04 43 26.3 +1.1
LSZ pmax pmax
comp=Z,3.0nm,0.6s,mb5.0
CRVS Cervenica-Dubn 99.04 320 *e*P **P** 04 43 24.1 -0.9
CRVS Cervenica-Dubn 99.04 320 PDIF **P** 04 43 24.1 -0.9
STHS Stebnicka Huta 99.07 320 *e*P **P** 04 43 24.8 -0.3
comp=Z,4.7nm,0.8s,mb5.1
STHS Stebnicka Huta 99.07 320 *e*P **P** 04 43 24.8 -0.3
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
STHS Stebnicka Huta 99.07 320 PDIF **P** 04 43 24.8 -0.3
VTS Vitosha 99.12 313⇓ *i*P **P** 04 43 24.4 -1.1
DAG Danmarks Havn 99.46 352⇓ *i*P Pdif 04 43 27.5 +0.8
DAG pmax pmax
comp=Z,20nm,0.4s,mb6.0
DAG Danmarks Havn 99.46 352⇓ *i*P Pdif 04 43 27.5 +0.8
comp=Z,20nm,0.4s
RES Resolute Bay 99.91 10 *e*Pdif Pdif 04 43 28.4 -0.2
HFS Hagfors 100.09 332 P Pdif 04 43 27.7 -1.8
comp=Z,4.0nm,0.7s,baz=108,slow=4.8,SNR=8.4
HFS PP PP 04 47 33.4 -2.3
comp=Z,8.7nm,1.0s,baz=100,slow=8.1,SNR=4.0
HFS Hagfors 100.09 332 P Pdif 04 43 27.7 -1.8
HFS 04 47 33.4
HFS pmax pmax
comp=Z,4.0nm,0.7s
HFS pmax pmax
comp=Z,9.0nm,1.0s
PSZ Piszkesteto 100.29 319 *e*Pdif Pdif 04 43 29.8 -0.6
comp=Z,8.8nm,1.1s
PSZ Piszkesteto 100.29 319 *e*P Pdif 04 43 29.8 -0.6
PSZ pmax pmax
comp=Z,9.0nm,1.1s
PSZ Piszkesteto 100.29 319⇓ *i*P Pdif 04 43 29.9 -0.5
VYHS Vyhne 100.83 320 *e*P Pdif 04 43 34.6 +1.8
VYHS *e*PP PP 04 47 32.8 -8.9
VYHS Vyhne 100.83 320 PDIF Pdif 04 43 34.6 +1.8
VYHS *e*PP PP 04 47 32.8 -8.9
NOA NORSAR Array B 100.88 334 P Pdif 04 43 30.9 -2.1
comp=Z,6.5nm,0.8s,baz=68,slow=4.6,SNR=20
NOA PP PP 04 47 37.6 -4.1
comp=Z,4.6nm,0.9s,baz=64,slow=6.7,SNR=5.5
NOA NORSAR Array B 100.88 334 P Pdif 04 43 31.0 -2.0
NOA pmax pmax
comp=Z,7.0nm,0.8s
NOA pmax pmax
comp=Z,5.0nm,0.9s
OKC Ostrava-Krasne 100.91 321 *e*PP PP 04 47 42.2 -0.1
KOLL Kolacno 101.09 320 *e*PP PP 04 47 39.9 -3.7
MORC Moravsky Berou 101.31 321⇑ *i*P PP 04 47 46.3 +1.0
YKA Yellowknife Ar 101.36 25 P Pdif 04 43 35.9 +0.7
comp=Z,0.9nm,0.6s,baz=294,slow=4.4,SNR=3.5
YKA Yellowknife Ar 101.36 25 P Pdif 04 43 35.9 +0.8
YKA pmax pmax
comp=Z,1.0nm,0.6s
PKSM Moragy 101.54 318⇑ *i*P Pdif 04 43 36.0 +0.1
PKSM Moragy 101.54 318⇑ *i*P PP 04 47 43.1 -4.0
KSP Ksiaz 101.77 323 *e*P Pdif 04 43 37.3 +0.3
MODS Modra-Piesok 101.86 320 *e*PP PP 04 47 45.0 -4.5
MODS SDIF Sdif 04 55 47.8 +37
DPC Dobruska-Polom 101.90 322 *e*PDIF Pdif 04 43 37.3 -0.2
DPC *ep*P 04 43 47.6
DPC *e*PP PP 04 47 50.0 +0.3
UPC Upice 102.04 322 *e*PDIF Pdif 04 43 38.5 +0.3
UPC *e*PP PP 04 47 48.2 -2.5
TREC Trest 102.73 321 *e*PP PP 04 47 58.9 +3.0
CONA Conrad Observa 102.90 320⇓ *i*PKiKP PKiKP 04 47 59.8 -2.2
comp=Z,20nm,1.2s
CSNA Conrad Observa 102.90 320⇓ *i*PKiKP PKiKP 04 47 59.7 -2.3
comp=Z,18nm,1.3s
PVCC Panska Ves 102.91 323 *e*PP PP 04 47 58.9 +1.7
PRU Pruhonice 103.10 322 *e*PP PP 04 48 00.4 +1.8
BRG Berggiesshubel 103.17 323 *e*P Pdif 04 43 43.0 -0.2
BRG 04 48 02.0
BRG pmax pmax
comp=Z,3.0nm,0.9s
BRG Berggiesshubel 103.17 323 *e*PP PP 04 48 01.7 +2.5
comp=Z,25nm,1.2s
BRG Berggiesshubel 103.17 323 *e*PDIF Pdif 04 43 43.0 -0.3
comp=Z,5.7nm,0.9s
BRG *e*P 04 43 52.5
comp=Z,9.9nm,1.2s
BRG PP PP 04 48 02.0 +2.8
comp=Z,33nm,1.4s
BRG *e* 04 59 58.7
comp=Z,4.8nm,1.2s
BRG *e* 05 07 07.3
comp=Z,2.7nm,0.7s
SNAA Sanae 103.17 194 *e*Pdiff Pdif 04 43 41.5 -1.7
SNAA *e* 04 43 45.6
SNAA *e* 04 43 56.9
SNAA *e* 04 44 05.3
SNAA Sanae 103.17 194 *e*Pdif Pdif 04 43 41.9 -1.3
comp=Z,5.0nm,1.0s
SNAA Sanae 103.17 194 *e*P Pdif 04 43 41.9 -1.3
SNAA pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 103.59 324 *e*PP PP 04 48 04.9 +2.7
comp=Z,27nm,1.2s
CLL Collm 103.59 324 *e*Pdif Pdif 04 43 45.0 0.0
CLL LmV 04 36 00.0
comp=Z,100nm,19.0s
CLL *e*PP PP 04 48 05.0 +2.8
comp=Z,27nm,1.2s
CLL *ep*PP 04 48 25.0
KHC Kasperske Hory 103.97 322 *e*PDIF Pdif 04 43 41.1 -5.6
KHC *ex* x 04 43 47.2
KHC *ex* x 04 47 03.5
KHC *ex* x 04 47 30.0
KHC *e*PP PP 04 48 02.8 -2.3
GEC2 GERESS Array S 103.98 321 *e*PP PP 04 48 07.1 +1.8
comp=Z,21nm,1.5s
TANN Tannenbergstha 104.22 323 *e*PP PP 04 48 09.7 +2.8
comp=Z,14nm,1.1s

NKC	**Novy Kostel**	**104.29**	**323**	*e*PP	PP	04 48 01.6	-5.9
ROTZ	**Rotzenmuhle**	**104.60**	**323**	*e*PP	PP	04 48 11.0	+1.2
	comp=Z,35nm,1.4s						
MOX	**Moxa**	**104.64**	**324**	*e*(P)	PKiKP	04 48 05.0	-0.1
	comp=Z,10.0nm,1.3s						
MOX	**Moxa**	**104.64**	**324**	*e*PP	PP	04 48 12.0	+1.9
	comp=Z,10.0nm,1.0s						
VNA2	**Neumayer--Watz**	**104.78**	**194**	*e*Pdiff	Pdif	04 43 50.6	+0.3
VNA2				*e*		04 43 58.4	
VNA2				*e*		04 44 04.3	
VNA2				*e*		04 44 13.2	
VNA2				*e*		04 48 09.4	
VNA2				*e*		04 48 14.4	
CLZ	**Clausthal**	**104.92**	**325**	*e*PP	PP	04 48 14.1	+2.0
	comp=Z,64nm,2.2s						
VNA3	**Neumayer Olymp**	**105.10**	**193**	*e*Pdiff	Pdif	04 43 51.0	-0.8
VNA3				*e*		04 44 04.8	
VNA3				*e*		04 48 12.8	
VNA3				*e*		04 48 17.6	
VNA1	**Neumayer--Stat**	**105.18**	**194**	*e*Pdiff	Pdif	04 43 52.1	0.0
VNA1				*e*		04 44 00.0	
VNA1				*e*		04 44 06.7	
VNA1				*e*		04 48 10.5	
GRF	**Grafenberg Arr**	**105.22**	**323**	*e*PP	PP	04 48 17.5	+3.1
	comp=Z,41nm,1.2s						
FUR	**Furstenfeldbru**	**105.73**	**321**	*e*PP	PP	04 48 21.2	+3.0
	comp=Z,60nm,1.1s						
WTTA	**Wattenberg**	**105.82**	**320**⇑	*i*PP	PP	04 48 19.9	+1.0
	comp=Z,30nm,1.1s						
MOTA	**Moosalm**	**106.13**	**320**⇑	*i*PP	PP	04 48 23.4	+2.2
	comp=Z,29nm,1.0s						
RETA	**Reutte**	**106.30**	**321**⇑	*i*PP	PP	04 48 24.8	+2.4
	comp=Z,43nm,1.1s						
FETA	**Feichten**	**106.49**	**320**⇑	*i*PP	PP	04 48 26.0	+2.2
	comp=Z,21nm,1.1s						
STU	**Stuttgart**	**106.80**	**322**	*e*PP	PP	04 48 27.6	+1.6
	comp=Z,18nm,0.8s						
DAVA	**Damuels**	**106.93**	**321**⇑	*i*PP	PP	04 48 29.5	+2.5
	comp=Z,34nm,1.2s						
CDF	**Champ du Feu**	**108.11**	**323**	*e*PP	PP	04 48 33.7	-1.9
	comp=Z,46nm,1.1s						
NVAR	**Mina Array Bea**	**108.13**	**49**	PP	PP	04 48 42.1	+6.0
	comp=Z,0.9nm,0.8s,baz=250,slow=7.8,SNR=4.2						
ECH	**Echery**	**108.26**	**322**	*e*P	PP	04 48 40.8	+4.1
MOF	**Molkenrain**	**108.42**	**322**	*e*P	PP	04 48 42.3	+4.4
HINF	**Hinteralfeld**	**108.61**	**322**	*e*PP	PP	04 48 37.9	-1.4
	comp=Z,26nm,1.0s						
LOMF	**Lomont**	**108.82**	**322**	*e*P	PP	04 48 44.3	+3.5
LPG	**La Plagne**	**109.62**	**320**	*e*PP	PP	04 48 45.5	-1.1
	comp=Z,162nm,1.2s						
LPL	**La Plagne**	**109.62**	**320**	*e*PP	PP	04 48 45.4	-1.2
	comp=Z,134nm,1.1s						
RSL	**Roselend**	**109.62**	**320**	*e*P	PP	04 48 50.4	+3.8
SAOF	**Saorge**	**109.68**	**318**	*e*P	PP	04 48 51.0	+3.9
AUTN	**L'Aution**	**109.76**	**318**	*e*P	PP	04 48 51.9	+4.2
LUCF	**Luceram**	**109.86**	**318**	*e*P	PP	04 48 51.9	+3.5
TOUF	**Mont Tournerai**	**109.87**	**318**	*e*P	PP	04 48 52.5	+4.0
MVIF	**Mont Vial**	**109.98**	**318**	*e*P	PP	04 48 52.7	+3.4
CALN	**Calern**	**110.22**	**318**	*e*P	PP	04 48 54.7	+3.7
SMF	**Signal de Mont**	**110.97**	**322**	*e*PP	PP	04 48 54.8	-1.5
	comp=Z,37nm,1.1s						
AVF	**Avril sur Loir**	**111.20**	**322**	*e*PP	PP	04 48 56.4	-1.6
	comp=Z,43nm,1.0s						
VIVF	**Saint-Julien-l**	**111.22**	**320**	*e*PP	PP	04 48 57.7	-0.5
	comp=Z,40nm,1.1s						
KEST	**Kesra**	**111.26**	**309**	PP	PP	04 48 59.7	+0.9
	comp=Z,7.2nm,1.0s,baz=22,slow=2.6,SNR=7.3						
PLDF	**La Plantade**	**111.41**	**321**	*e*P	PP	04 49 05.9	+6.5
AGO	**Saint Agoulin**	**111.67**	**322**	*e*P	PP	04 49 04.1	+2.8
LOHW	**Long Hollow**	**111.74**	**41**	*e*PKP	PKiKP	04 48 19.3	+0.7
PYM	**Petit Puy Mans**	**111.89**	**321**	*e*P	PP	04 49 02.9	0.0
LASF	**Ste Croix**	**112.08**	**319**	*e*PP	PP	04 49 03.0	-1.3
	comp=Z,103nm,1.4s						
TCF	**Toulx Ste Croi**	**112.14**	**322**	*e*PP	PP	04 49 03.4	-1.2
	comp=Z,84nm,1.4s						
PDAR	**Pinedale Array**	**112.79**	**42**	PKiKP	PKiKP	04 48 20.2	-0.4
	comp=Z,0.3nm,0.7s,baz=258,slow=2.6,SNR=3.0						
PDAR				SKP		04 51 45.8	
	comp=Z,0.5nm,0.5s,baz=242,slow=1.9,SNR=4.4						
PDAR				PKKPbc	PKKPbc	04 59 08.4	-1.7
	comp=Z,1.1nm,0.7s,baz=119,slow=5.8,SNR=9.1						
PDAR				PKKPab	PKKPab	04 59 17.9	+0.3
	comp=Z,1.2nm,0.7s,baz=116,slow=6.8,SNR=3.8						
RJF	**Les Rejaudoux**	**113.02**	**321**	*e*PP	PP	04 49 09.1	-1.9
	comp=Z,47nm,1.1s						
RSSD	**Black Hills**	**115.72**	**38**	*e*PKPdf	PKPdf	04 48 25.8	-0.4
TUC	**Tucson**	**115.89**	**53**	*e*PKPdf	PKPdf	04 48 27.4	+0.5
ANMO	**Albuquerque**	**118.25**	**49**	*e*PKPdf	PKPdf	04 48 31.8	+0.5
ANMO	**Albuquerque**	**118.25**	**49**⇓	*i*PKIKP	PKPdf	04 48 33.0	+1.6
ESDC	**Sonseca Array**	**119.30**	**318**	PP	PP	04 49 48.0	-7.0
	comp=Z,2.2nm,0.8s,baz=53,slow=9.0,SNR=5.0						
ECSD	**EROS,Sioux Fal**	**120.40**	**35**	*e*PKPdf	PKPdf	04 48 34.6	-0.6
ECSD				*e*SKPdf	SKPdf	04 52 00.1	-1.2
TXAR	**Lajitas Array**	**122.68**	**53**	PKP	PKPdf	04 48 40.0	0.0
	comp=Z,2.1nm,0.7s,baz=214,slow=0.9,SNR=31						
TXAR				PKKPbc	PKKPbc	04 58 34.6	+0.3
	comp=Z,0.9nm,0.8s,baz=122,slow=6.5,SNR=11						
TOA0	**Torodi Ar. Sit**	**123.87**	**287**	*e*PKPdf	PKPdf	04 48 42.5	-0.2
TORD	**Torodi Ar. Bea**	**123.87**	**287**	PKP	PKPdf	04 48 42.6	-0.1
	comp=Z,5.0nm,0.7s,baz=62,slow=2.0,SNR=31						
TORD				PP	PP	04 50 20.4	-6.8
	comp=Z,4.1nm,0.7s,baz=60,slow=6.5,SNR=5.1						
TORD				PKKPbc	PKKPbc	04 58 29.1	-0.2
	comp=Z,2.0nm,0.9s,baz=242,slow=2.7,SNR=9.6						
JCT	**Junction City**	**125.24**	**50**	*e*PKPdf	PKPdf	04 48 45.2	+0.3
CCM	**Cathedral Cave**	**127.10**	**38**	*e*PKPdf	PKPdf	04 48 48.1	-0.1
MIAR	**Mount Ida**	**127.70**	**43**	*e*PKPdf	PKPdf	04 48 50.7	+1.2
HKT	**Hockley**	**128.51**	**49**	*e*PKPdf	PKPdf	04 48 50.7	-0.5
WVT	**Waverly**	**130.42**	**37**	*e*PKPdf	PKPdf	04 48 54.4	-0.2
DBIC	**Dimbokro**	**131.30**	**280**	PKP	PKPdf	04 48 57.4	+0.5
	comp=Z,2.6nm,0.5s,baz=111,slow=3.1,SNR=8.4						
DBIC				SKPbc	SKPbc	04 52 11.4	-1.3
	comp=Z,29nm,0.8s,baz=63,slow=4.1,SNR=24						
DBIC	**Dimbokro**	**131.30**	**280**	*e*PKPdf	PKPdf	04 48 56.6	-0.3
DBIC	**Dimbokro**	**131.30**	**280**	PKIKP	PKPdf	04 48 57.4	+0.5
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DBIC				pmax	pmax		
	comp=N,29nm,0.8s						
TKL	**Tuckaleechee C**	**133.14**	**35**	*e*PKPdf	PKPdf	04 49 00.8	+1.0
TKL				*e*SKPbc	SKPbc	04 52 16.9	-1.5
TKL				*e*SKPdf	SKPdf	04 52 26.2	+0.5
PLCA	**Paso Flores**	**137.85**	**160**	PKhKP		04 48 58.1	
	comp=N,2.1nm,0.7s,baz=195,slow=1.7,SNR=6.7						
PLCA				PKP	PKPdf	04 49 09.7	+1.3
	comp=N,12nm,0.7s,baz=162,slow=1.8,SNR=23						
PLCA				SKPbc	SKPbc	04 52 32.5	-0.6
	comp=N,5.8nm,0.7s,baz=217,slow=2.1,SNR=12						
PLCA	**Paso Flores**	**137.85**	**160**	PKP		04 48 58.1	
PLCA				*e*PKPdf	PKPdf	04 49 08.9	+0.5
PLCA				*e*SKPbc	SKPbc	04 52 32.5	-0.5
PLCA				*e*SKPdf	SKPdf	04 52 40.0	+6.0
CFAA	**Coronel Pontan**	**146.79**	**156**	PKPbc	PKPbc	04 49 25.0	-1.4
	comp=N,9.1nm,0.6s,baz=213,slow=3.0,SNR=62						
CFAA				SKPbc	SKPbc	04 52 54.8	-0.8
	comp=N,0.9nm,0.8s,baz=239,slow=2.3,SNR=4.0						
CFAA	**Coronel Pontan**	**146.79**	**156**	PKPbc	PKPbc	04 49 25.0	-1.4
CFAA				SKPbc	SKPbc	04 52 54.8	-0.8
LCO	**Las Campanas**	**147.86**	**150**	*e*PKPbc	PKPbc	04 49 29.8	+0.4
BCIP	**Isla Barro Col**	**151.19**	**68**	*e*PKPbc	PKPbc	04 49 37.2	-0.9
LVC	**Limon Verde**	**153.94**	**145**	*e*PKPdf	PKPdf	04 49 36.9	+1.1
LVC				*e*PKPbc	PKPbc	04 49 45.0	+1.1
LVC				*e*PKPab	PKPab	04 49 58.6	+1.3
ATAH	**Atahualpa**	**154.07**	**103**	PKP	PKPdf	04 49 36.9	+0.6
	comp=N,6.9nm,0.9s,baz=321,slow=0.9,SNR=4.9						
ATAH				PKPbc	PKPbc	04 49 46.8	+2.3
	comp=N,22nm,0.8s,baz=220,slow=2.2,SNR=13						
ATAH				PKPab	PKPab	04 49 55.5	-2.9
	comp=N,12nm,0.7s,baz=185,slow=7.4,SNR=6.2						
NNA	**Nana**	**154.14**	**115**	PKP	PKPdf	04 49 37.3	+0.9
	comp=N,2.8nm,0.3s,baz=348,slow=3.4,SNR=3.7						
NNA				PKPbc	PKPbc	04 49 45.2	+0.7
	comp=N,6.7nm,0.8s,baz=255,slow=4.6,SNR=7.0						
NNA	**Nana**	**154.14**	**115**	*e*PKPdf	PKPdf	04 49 36.2	-0.2
NNA				*e*PKPbc	PKPbc	04 49 44.8	+0.2
OTAV	**Otavalo**	**154.46**	**86**	*e*PKPdf	PKPdf	04 49 37.5	+0.6
ROSC	**El Rosal**	**157.73**	**73**	PKP	PKPdf	04 49 42.0	+0.9
	comp=N,5.8nm,0.7s,baz=112,slow=2.4,SNR=6.2						
ROSC	**El Rosal**	**157.73**	**73**	*e*PKPdf	PKPdf	04 49 42.1	+1.0
LPAZ	**La Paz**	**159.06**	**135**	PKP	PKPdf	04 49 43.4	+0.7
	comp=N,6.5nm,0.9s,baz=246,slow=0.2,SNR=20						
LPAZ				PKPab	PKPab	04 50 20.5	+0.9
	comp=N,6.3nm,1.0s,baz=323,slow=1.5,SNR=7.0						
LPAZ	**La Paz**	**159.06**	**135**	*e*PKPdf	PKPdf	04 49 43.6	+1.0
LPAZ				*e*PKPab	PKPab	04 50 20.4	+0.8
LPAZ	**La Paz**	**159.06**	**135**	PKIKP	PKPdf	04 49 43.4	+0.7
LPAZ				pmax	pmax	04 50 20.5	
	comp=Z,7.0nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SIV	**San Ignacio**	**163.56**	**151**	PKP	PKPdf	04 49 46.9	-0.5
	comp=Z,7.7nm,0.9s,baz=196,slow=2.0,SNR=32						
SIV				PKPab	PKPab	04 50 38.7	-0.4
	comp=Z,14nm,0.8s,baz=215,slow=4.8,SNR=21						
BDFB	**Brasilia**	**165.15**	**199**	PKP	PKPdf	04 49 49.4	+0.5
	comp=Z,2.1nm,0.9s,baz=101,slow=12,SNR=6.4						
BDFB				PKPab	PKPab	04 50 46.6	+0.5
	comp=Z,10nm,0.8s,baz=162,slow=5.2,SNR=17						
BDFB	**Brasilia**	**165.15**	**199**	PKIKP	PKPdf	04 49 49.4	+0.6
BDFB						04 50 46.6	
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.9s						

ISCJB ***14*** *04:49:59.6±0.6, 2228S±007×682W±0.1, h121km±11km, mb4.0/2, Error ellipse: s-maj=19.7km s-min=8.6km az=23.7*
IDC ***14*** *04:50:00.2±0.8, 2222S×68.05W, h97km±14km, mb3.7/3, mb1 3.4/6, mb1mx3.3/17, mbtmp3.4/6, Error ellipse: s-maj=31.8km s-min=16.9km az=120.0*
NEIC ***14*** *04:50:01.4, 22.10S×68.69W, h118km, MG4.0(GUC), After GUC.*
GUC ***14*** *04:50:01.4±1.0, 22.10S×68.69W, h118km±9km, ML4.0*

ISC 14 04:50:00.7±0.6, 2227S±007×682W±01, h114km±10km, n18, σ1§14/28, mb4.0/2, 6C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.64**	**178**	⇑*i*	P		**Pn**	**04 50 23.4**	**+4.4**
SPCH				*i*	S		**Sn**	**04 50 40.4**	**+7.5**
SPCH	**San Pedro de A**	**0.64**	**178**	⇑*i*	P		**Pn**	**04 50 23.4**	**+4.4**
SPCH				*i*	S		**Sn**	**04 50 40.4**	**+7.5**
SPCH					AML	AML		04 50 40.9	
	comp=E,3μm,0.4s								
LVC	**Limon Verde**	**0.72**	**241**		P		**Pn**	**04 50 20.5**	**+0.9**
	comp=E,170nm,0.3s,baz=34,slow=11,SNR=497								
LVC					S		**Sn**	**04 50 34.6**	**+0.6**
	baz=107,slow=19								
LVC	**Limon Verde**	**0.72**	**241**	⇑*i*	P		**Pn**	**04 50 20.2**	**+0.6**
LVC				*i*	S		**Sn**	**04 50 34.7**	**+0.8**
LVC					AML	AML		04 50 36.2	
	comp=E,20μm,0.1s								
CEN1	**Los Morros**	**2.14**	**238**	⇑*i*	P		**Pn**	**04 50 37.2**	**+1.6**
CEN1				*i*	S		**Sn**	**04 51 04.0**	**+1.6**
CEN1					AML	AML		04 51 15.1	
	comp=E,472nm,0.5s								
ANCH	**Antofagasta**	**2.46**	**235**	⇑*i*	P		**Pn**	**04 50 38.4**	**-1.3**
ANCH				*i*	S		**Sn**	**04 51 07.3**	**-2.4**
ANCH	**Antofagasta**	**2.46**	**235**	⇑*i*	P		**Pn**	**04 50 38.4**	**-1.3**
ANCH				*i*	S		**Sn**	**04 51 07.3**	**-2.4**
ANCH					AML	AML		04 51 09.6	
	comp=E,837nm,0.5s								
CPN1	**Cerro Paranal**	**3.09**	**220**	*e*P			**Pn**	**04 50 47.7**	**-0.3**
CPN1				*i*	S		**Sn**	**04 51 23.4**	**-1.0**
CPN1					AML	AML		04 51 35.8	
	comp=N,329nm,0.6s								
LPAZ	**La Paz**	**5.95**	**1**	P			**Pn**	**04 51 25.6**	**-0.8**
	comp=N,0.2nm,0.3s,baz=184,slow=17,SNR=3.5								
ARE	**Arequipa**	**6.54**	**331**	P			**Pn**	**04 51 39.0**	**+4.5**
ARE				*e*S			**Sn**	**04 52 32.0**	**-16**
SIV	**San Ignacio**	**9.20**	**49**	P			**Pn**	**04 52 09.0**	**-1.5**
	comp=N,1.0nm,0.3s,baz=239,slow=12,SNR=16								
SIV					S		**Sn**	**04 53 45.5**	**-6.7**
	comp=N,0.3nm,0.3s,baz=307,slow=20,SNR=4.4								
SIV	**San Ignacio**	**9.20**	**49**	P			**Pn**	**04 52 09.0**	**-1.5**
SIV					S		**Sn**	**04 53 45.5**	**-6.7**
CFAA	**Coronel Fontan**	**9.30**	**180**	P			**Pn**	**04 52 13.1**	**+1.3**
	comp=N,0.0nm,0.3s,baz=351,slow=7.4,SNR=5.8								
CFAA					S		**Sn**	**04 53 53.7**	**-0.8**
	comp=N,0.0nm,0.3s,baz=260,slow=18,SNR=2.5								
BDFB	**Brasilia**	**20.21**	**74**	P			**P**	**04 54 26.9**	**+0.3**
	comp=N,2.3nm,0.9s,baz=257,slow=24,SNR=4.4								
DBIC	**Dimbokro**	**68.35**	**73**	P			**P**	**05 00 50.9**	**+0.6**
	comp=N,1.8nm,0.6s,mb4.1,baz=223,slow=10,SNR=4.6								
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P			**P**	**05 01 42.1**	**+0.6**
	comp=N,1.1nm,0.4s,mb3.9,baz=255,slow=5.6,SNR=34								
MKAR	**Makanchi Array**	**145.87**	**37**	PKPbc	PKPbc			05 09 26.4	-0.2
	comp=N,0.8nm,0.7s,baz=318,slow=3.3,SNR=4.2								
MKAR	**Makanchi Array**	**145.87**	**37**	PKPbc	PKPbc			05 09 26.4	-0.2

ISCJB ***14*** *05:11:57.8±1.2, 3257N±005×357W±008, h10km, Error ellipse: s-maj=10.2km s-min=6.4km az=25.2*
MDD ***14*** *05:12:00.2±1.5, 3257N×368W, h0km, mb3.6/5, Error ellipse: s-maj=13.6km s-min=7.1km az=106.0, PRIMO*
CNRM ***14*** *05:12:00.4, 3242N×345W, h30km, MD3.9*
CSEM ***14*** *05:12:00.0±0.3, 3249N×379W, h10km, MD3.9, Error ellipse: s-maj=6.4km s-min=3.3km az=96.0*

ISC 14 05:11:59.5±1.1, 3256N±005×366W±008, h10km, n13, σ1§13/23, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZFT	**Errachidia**	**0.79**	**228**	*i*	P		**Pg**	**05 12 14.0**	**-0.7**
ZFT				*i*	S		**Sg**	**05 12 26.0**	**+1.0**
CZD	**Col de Zad**	**1.25**	**292**	*i*	P		**Pn**	**05 12 23.0**	**-0.1**
CZD				*i*	S		**Sb**	**05 12 41.0**	**+1.5**
IFR	**Ifrane**	**1.56**	**308**	*i*	P		**Pn**	**05 12 27.6**	**+0.4**
IFR				*i*	S		**Sn**	**05 12 47.9**	**+0.4**
MIF	**Mishlifen**	**1.56**	**303**	*i*	P		**Pn**	**05 12 27.0**	**-0.4**
MIF				*i*	S		**Sn**	**05 12 48.0**	**+0.4**
KIB	**El Ksiba**	**2.01**	**271**	*i*	P		**Pn**	**05 12 35.0**	**+1.6**
KIB				*i*	S		**Sn**	**05 12 58.0**	**-0.6**
TZC	**Tazercounte**	**2.43**	**261**	*i*	P		**Pn**	**05 12 39.0**	**-0.2**
TZC				*i*	S		**Sn**	**05 13 08.0**	**-1.0**
RSA	**Sarsar**	**2.93**	**323**	*e*P			**Pn**	**05 12 48.0**	**+1.9**
RSA				*e*S			**Sn**	**05 13 21.0**	**-0.4**
EJIF	**Jimena Fronter**	**4.16**	**339**	P			**Pn**	**05 13 02.1**	**-0.9**
	2.1nm,0.1s,SNR=7.9								
CIA	**Chichaoua**	**4.44**	**258**	*e*P			**Pn**	**05 13 08.0**	**+1.1**
CIA				*e*S			**Sn**	**05 13 57.0**	**-1.6**
EQES	**Quesada**	**5.25**	**5**	P			**Pn**	**05 13 20.1**	**+2.1**
	0.2nm,0.2s,SNR=7.9								
EMIN	**Mina Concepcio**	**5.75**	**335**	P			**Pn**	**05 13 24.5**	**-0.4**
	0.4nm,0.1s,SNR=7.9								
EGRO	**El Granado**	**5.87**	**329**	P			**Pn**	**05 13 24.5**	**-2.0**
	0.2nm,0.1s,SNR=7.9								
EGRO				S			**Sn**	**05 14 28.1**	**-5.7**
	0.2nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**6.75**	**337**	P			**Pn**	**05 13 37.0**	**-1.7**
	0.2nm,0.1s,SNR=7.9								
EBAD				S			**Sn**	**05 14 48.1**	**-7.5**
	0.2nm,0.1s,SNR=7.9								

ISCJB ***14*** *05:12:28.9±1.5, 069N±009×122.55E±008, h64km±15km, mb3.7/6, Error ellipse: s-maj=16.6km s-min=12.3km az=152.5*
IDC ***14*** *05:12:33.1±1.0, 055N×122.30E, h93km±10km, mb3.3/5, mb1 3.4/5, mb1mx3.3/17, mbtmp3.3/5, Error ellipse: s-maj=57.4km s-min=15.5km az=67.0*
NEIC ***14*** *05:12:33.4±0.9, 054N×122.45E, mb4.1/1, Error ellipse: s-maj=58.9km s-min=12.9km az=69.0*
DJA ***14*** *05:12:44, 030S×121.93E, h62km, MLv3.9/1*

ISC 14 05:12:30.1±1.4, 062N±010×122.59E±008, h58km±15km, n10, σ0§67/10, mb3.7/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.39**	**70**	P			**Sn**	**05 13 35.1**	**-0.1**
PCI	**Palu**	**3.14**	**241**	P			**Pn**	**05 13 17.3**	**+0.1**
PCI	**Palu**	**3.14**	**241**	S			**Sn**	**05 13 46.4**	**-7.2**
WRAB	**Tennant Creek**	**23.46**	**151**	P			**P**	**05 17 35.7**	**+1.1**
	16nm,1.8s,mb4.1								
WRA	**Warramunga Arr**	**23.46**	**151**	P			**P**	**05 17 33.4**	**-1.3**
	0.4nm,0.5s,mb3.1,baz=329,slow=8.9,SNR=9.3								
WRA				pP				05 17 55.0	
	2.5nm,0.7s,baz=332,slow=9.9,SNR=10.0								
WB2	**Warramunga Arr**	**23.46**	**151**	*e*P			**P**	**05 17 34.1**	**-0.6**
ASAR	**Alice Springs**	**26.53**	**156**	P			**P**	**05 18 03.2**	**+0.7**
	0.4nm,0.4s,mb3.3,baz=344,slow=15,SNR=9.3								
ASAR				pP		pP		05 18 24.1	+7.2
	0.2nm,0.4s,baz=340,slow=10,SNR=2.1								
SONM	**Songino Array**	**49.08**	**346**	P			**P**	**05 21 11.6**	**0.0**
	0.5nm,0.6s,mb3.7,baz=164,slow=8.6,SNR=3.7								
MKAR	**Makanchi Array**	**57.87**	**328**	P			**P**	**05 22 15.4**	**-0.5**
	0.5nm,0.3s,mb4.0,baz=121,slow=7.6,SNR=5.8								
MKAR				pP		pP		05 22 37.3	+5.7
	0.5nm,0.3s,baz=111,slow=7.9,SNR=2.2								
PETK	**Petropavlovsk-**	**59.88**	**24**	P			**P**	**05 22 30.3**	**+0.5**
	2.5nm,0.9s,mb4.2,baz=184,slow=5.2,SNR=3.4								

SKHL 14 05:14:55.3±0.2, 5376N×12555E, h7km±1km, mb3.7/5, 1C-2D, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	**1.01**	**91**	⇑*i*	P		Pg	05 15 14.4	-0.3
ZEA					AMB	AMB		05 15 14.7	
	50nm,0.3s								
ZEA					pPg			05 15 16.3	
ZEA					*e*Sg		Sg	05 15 28.3	+0.6
ZEA					A			05 15 28.4	
	88nm,0.4s								
ZEA					A			05 15 28.4	
	130nm,0.4s								
KROS	**Kirovskiy**	**1.07**	**51**	⇑⇓	*i*Pg		Pg	05 15 14.4	-1.5
KROS					AMB	AMB		05 15 14.6	
	15nm,0.4s								
KROS					*e*Sg		Sg	05 15 28.6	-1.2
KROS					A			05 15 30.4	
	94nm,0.5s								
YASR	**Yasnyy**	**1.52**	**107**	⇓⇓	*e*Pg		Pg	05 15 23.0	-1.5
YASR					AMB	AMB		05 15 24.7	
	16nm,0.2s								
YASR					pPg			05 15 25.6	
YASR					*e*Sg		Sg	05 15 43.2	-1.1
YASR					A			05 15 44.8	
	120nm,0.5s								
BMKR	**Bomnak**	**2.15**	**62**	*e*Pn			Pn	05 15 30.8	-0.8
BMKR				pPn				05 15 33.2	
BMKR				*e*Pg			Pg	05 15 34.0	-2.6
BMKR				AMB		AMB		05 15 34.2	
	16nm,0.4s								
BMKR				*e*Sg			Sg	05 16 02.7	-1.8
BMKR				A				05 16 05.0	
	54nm,0.4s								
CLNS	**Chul'man**	**3.11**	**353**	*e*Sg			Sg	05 16 36.3	+1.3
TUP	**Tupik**	**3.36**	**284**	*e*Pn			Pn	05 15 52.2	+4.0
TUP				*e*Pg			Pg	05 15 59.0	-0.7
TUP				*e*Sg			Sg	05 16 41.1	-2.1
EKMR	**Ekimchan**	**4.48**	**96**	*e*Pn			Pn	05 16 06.0	+2.5
EKMR				*e*Pg			Pg	05 16 16.5	-4.6
EKMR				AMB		AMB		05 16 17.9	
	2.0nm,0.2s								
EKMR				*e*Sg			Sg	05 17 16.1	-3.0
EKMR				A				05 17 23.8	
	13nm,0.6s								
EKMR				A				05 17 23.8	
	4.0nm,0.6s								
EKMR				A				05 17 23.8	
	7.0nm,0.6s								

NEIC ***14*** *06:17:01.8, 16.16N×98.42W, h3km, MD4.1(MEX), After MEX.*

MEX 14 06:17:01.8±1.0, 1616N×9842W, h3km±11km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.36**	**51**	*i*	P		Pg	06 17 09.0	+0.2
PNIG				*i*	S		Sg	06 17 13.0	-0.4
ACX	**Acapulco**	**1.60**	**296**	*i*	P		Pn	06 17 26.5	-4.5
ACX				*i*	S		Sn	06 17 46.8	-5.4
UTMO	**Huajuapan**	**1.76**	**19**	*e*	P		Pn	06 17 29.7	-3.5
UTMO				*i*	S		Sn	06 17 51.3	-4.8
VHO	**Vista Hermosa**	**1.85**	**61**	*i*	P		Pn	06 17 32.2	-2.2
VHO		

Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.32**	**148**	*e*P	Pg	07 04 58.5	+0.4
BUTP				*e*S	Sg	07 05 05.2	+3.0
SCPH	**Surigao**	**0.54**	**4**	*e*P	Pg	07 05 02.6	+0.2
SCPH				*e*S	Sg	07 05 10.6	+1.2
MSLP	**Maasin**	**1.06**	**327**	*e*P	Pg	07 05 13.0	+0.6
MSLP				*e*S	Sg	07 05 29.7	+3.4
CGP	**Cagayan de Oro**	**1.08**	**224**	*e*P	Pg	07 05 13.6	+0.8
CGP				*i* S	Sg	07 05 30.1	+3.3
BUKP	**Musuan**	**1.41**	**196**	*e*P	Pn	07 05 19.3	+0.5
BUKP				*e*S	Sg	07 05 40.7	+3.4
TBP	**Tagbilaran**	**1.63**	**286**	*e*P	Pn	07 05 23.3	+1.4
PLP	**Palo**	**1.97**	**346**↓	*e*P	Pn	07 05 27.1	+0.5
PLP				*e*S	Sn	07 05 54.6	+2.7
BESP	**Borongan**	**2.35**	**360**	*e*P	Pn	07 05 35.1	+3.4
BESP				*e*S	Sn	07 06 08.4	+7.3
MATI	**Mati**	**2.42**	**161**	*e*P	Sn	07 06 06.3	+3.4
PAGZ	**Pagadian**	**2.47**	**236**	*e*P	Pn	07 05 35.8	+2.3

IDC 14 07:57:39.1±2.3, 212S×6799E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.6/3, MS3.6/4, Ms1 3.6/4, ms1mx3.1/20, Error ellipse: s-maj=97.7km s-min=32.9km az=54.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**36.68**	**55**	LR	LR	08 19 28.2	
	comp=Z,42nm,18.0s,baz=58,slow=36						
ZALV	**Zalesovo Beam**	**57.60**	**12**	P	P	08 07 30.8	+0.1
	0.3nm,0.3s,baz=201,slow=7.7,SNR=2.9						
ZALV				LR	LR	08 31 19.8	
	comp=Z,35nm,18.2s,baz=345,slow=35						
SONM	**Songino Array**	**59.97**	**29**	LR	LR	08 33 07.4	
	comp=Z,48nm,19.5s,baz=202,slow=36						
WRA	**Warramunga Arr**	**67.07**	**111**	P	P	08 08 34.7	-0.1
	0.7nm,0.8s,baz=286,slow=5.9,SNR=5.2						
ASAR	**Alice Springs**	**67.13**	**115**	P	P	08 08 35.4	+0.2
	0.3nm,0.6s,baz=290,slow=4.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**67.48**	**285**	LR	LR	08 35 15.3	
	comp=Z,80nm,21.5s,baz=190,slow=33						
TXAR	**Lajitas Array**	**151.80**	**344**	PKPbc	PKPbc	08 17 37.0	+0.4
	0.4nm,0.9s,baz=36,slow=2.3,SNR=3.9						
TXAR				PKPab	PKPab	08 17 44.5	-0.8
	0.7nm,1.0s,baz=23,slow=2.9,SNR=5.1						

IDC 14 08:06:12.7±1.7, 725S×12082E, h484km±16km, mb3.0/4, mb1 2.9/6, mb1mx2.8/16, mbtmp2.9/6, Error ellipse: s-maj=176.9km s-min=13.9km az=57.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.47**	**334**	P	P	08 07 19.0	0.0
	1.1nm,0.3s,baz=103,slow=4.1,SNR=5.0						
BATI	**Baumata**	**4.06**	**136**	P	P	08 07 30.6	0.0
	25nm,0.3s,baz=4.5,slow=0.5,SNR=16						
WRA	**Warramunga Arr**	**18.19**	**135**	P	P	08 09 55.4	-0.3
	0.2nm,0.3s,baz=311,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**20.59**	**144**	P	P	08 10 17.8	+0.1
	0.5nm,0.4s,baz=318,slow=8.2,SNR=11						
STKA	**Stephens Creek**	**31.23**	**144**	P	P	08 11 51.8	+0.1
	2.3nm,1.1s,baz=318,slow=12,SNR=3.4						
MKAR	**Makanchi Array**	**63.76**	**332**	P	P	08 15 56.7	+0.5
	1.0nm,0.5s,baz=142,slow=7.5,SNR=14						
ZALV	**Zalesovo Beam**	**68.08**	**338**	P	P	08 16 22.6	-0.5
	0.7nm,0.4s,baz=136,slow=4.8,SNR=3.5						

CSEM 14 08:24:54.0, 43.13N×46.22E, h15km, mb3.8, After OBN
MOS 14 08:24:54.5±0.3, 43.13N×46.22E, h15km, mb3.8/1, Error ellipse: s-maj=50.5km s-min=14.8km az=5.7, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.46**	**103**	*e*PG	Pg	08 25 05.0	+1.4
DBC				*i* S	Sg	08 25 15.0	+5.2
SNJR	**Sundja**	**1.03**	**267**	*e*Pg	Pg	08 25 14.1	-0.4
SNJR				*e*Sg	Sg	08 25 27.0	-1.0
BTKR	**Batakoyurt**	**1.25**	**282**	*e*Pg	Pg	08 25 17.7	-0.9
BTKR				*e*Sg	Sg	08 25 33.3	-1.6
ARNR	**Ardon**	**1.42**	**273**	*e*Pg	Pg	08 25 20.1	-1.8
ARNR				*e*Sg	Sg	08 25 37.5	-2.9
LACR	**Lac**	**1.45**	**259**	*i* Pg	Pg	08 25 20.3	-2.0
LACR				*i* Sg	Sg	08 25 38.0	-3.1
PRTR	**Priterechnaya**	**1.54**	**294**	*e*Pg	Pg	08 25 21.5	-2.7
ZEI	**Tsey**	**1.74**	**259**	*i* Pn	Pn	08 25 24.5	+0.3

ISCJB 14 08:32:32.8±0.7, 36.13N±004×2565E±005, h119km±6km, Error ellipse: s-maj=6.9km s-min=5.9km az=143.0
ATH 14 08:32:33.8, 36.15N×2561E, h108km±4km
CSEM 14 08:32:34.9±0.1, 36.16N×2562E, h94km±1km, Error ellipse: s-maj=2.1km s-min=1.5km az=70.0
THE 14 08:32:36.5, 36.16N×2562E, h99km±2km, Error ellipse: s-maj=2.4km s-min=0.9km az=76.0
HLW 14 08:32:39.2, 3569N×2621E, h33km, Mb3.9
ISC 14 08:32:33.7±0.7, 3613N±004×2566E±005, h114km±6km, n23, σ0§95/33, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR1	**Thera Island**	**0.29**	**326**	P	**Pn**	**08 32 49.8**	**-0.1**
THR6	**Thira Island,**	**0.31**	**317**	P	**Pn**	**08 32 50.1**	**+0.1**
THR6				S	**Sn**	**08 33 00.1**	**-2.1**
THR3	**Thira Island,**	**0.35**	**323**	P	**Pn**	**08 32 50.2**	**+0.1**
NPS	**Neapolis**	**0.87**	**182**	*e*P	**Pn**	**08 32 54.3**	**+0.3**
NPS				*e*S	**Sn**	**08 33 08.8**	**-0.4**
APE	**Apeiranthos**	**0.94**	**354**	P	**Pn**	**08 32 54.9**	**+0.3**
APE				S	**Sn**	**08 33 09.5**	**-1.0**
APE	**Apeiranthos**	**0.94**	**354**	*e*P	**Pn**	**08 32 55.1**	**+0.5**
LAST	**Lasithi**	**0.98**	**189**	P	**Pn**	**08 32 55.4**	**+0.3**
LAST				S	**Sn**	**08 33 10.9**	**-0.2**
ZKR	**Zakros**	**1.11**	**156**	P	**Pn**	**08 32 57.5**	**+1.1**
ZKR				S	**Sn**	**08 33 14.1**	**+0.5**
SIVA	**Sivas**	**1.31**	**212**	P	**Pn**	**08 32 59.3**	**+0.7**
SIVA				S	**Sn**	**08 33 18.3**	**+0.9**
KARP	**Karpathos**	**1.35**	**115**↓	*i* P	**Pn**	**08 33 00.1**	**+1.1**
KARP				*e*S	**Sn**	**08 33 18.6**	**+0.3**
VAM	**Vamos**	**1.39**	**239**	*e*P	**Pn**	**08 32 59.2**	**-0.3**
VAM				*e*S	**Sn**	**08 33 18.5**	**-0.5**
GVD	**Gavdhos**	**1.82**	**225**	*e*P	**Pn**	**08 33 05.5**	**+0.9**
GVD				*e*S	**Sn**	**08 33 28.5**	**+0.3**
SMG	**Samos**	**1.83**	**31**	*e*P	**Pn**	**08 33 05.7**	**+0.9**
ARG	**Arkhangelos**	**2.00**	**87**	*e*P	**Pn**	**08 33 08.5**	**+1.7**
VLI	**Veliai**	**2.27**	**286**	*e*P	**Pn**	**08 33 10.5**	**+0.2**
VLI				*e*S	**Sn**	**08 33 37.5**	**-0.8**
DID	**Didima**	**2.38**	**306**	P	**Pn**	**08 33 12.4**	**+0.7**
ITM	**Ithomi**	**3.18**	**290**	*e*P	**Pn**	**08 33 22.5**	**+0.4**
SLUM		**4.64**	**185**	P	**Pn**	**08 33 42.1**	**+0.3**
HSAF	**As Saff**	**8.17**	**141**	P	**Pn**	**08 34 27.1**	**-2.4**
GLL	**Jalalah**	**8.28**	**140**	P	**Pn**	**08 34 29.2**	**-1.8**
HRSH	**Kfar Ka'horesh**	**8.65**	**111**	P	**Pn**	**08 34 32.2**	**-3.8**
SUZ		**8.70**	**134**	P	**Pn**	**08 34 35.0**	**-1.6**
HFRF	**Wahat Farafira**	**9.24**	**165**	P	**Pn**	**08 34 42.9**	**-1.1**

IDC 14 08:46:47.5±1.0, 4993N×2895W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/25, mbtmp3.7/5, MS3.2/4, Ms1 3.2/4, ms1mx2.9/33, Error ellipse: s-maj=42.0km s-min=23.5km az=11.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**20.32**	**335**	LR	LR	08 57 36.4	
	comp=Z,55nm,20.8s,baz=158,slow=32						
NOA	**NORSAR Array B**	**24.91**	**48**	LR	LR	09 00 21.5	
	comp=Z,47nm,18.3s,baz=270,slow=33						
GERES	**GERESS Array B**	**27.52**	**76**	P	P	08 52 35.8	+0.3
	0.2nm,0.2s,baz=296,slow=7.5,SNR=3.7						
GERES				LR	LR	09 03 06.1	
	comp=Z,41nm,21.0s,baz=76,slow=36						
SADO	**Sadowa**	**33.87**	**281**	LR	LR	09 06 21.6	
	comp=Z,76nm,20.0s,baz=217,slow=35						
TORD	**Torodi Ar. Bea**	**44.43**	**135**	P	P	08 54 59.9	-0.3
	1.0nm,0.6s,baz=336,slow=7.5,SNR=7.7						
PDAR	**Pinedale Array**	**53.56**	**295**	P	P	08 56 09.7	-0.2
	0.8nm,0.9s,baz=61,slow=7.3,SNR=5.7						
TXAR	**Lajitas Array**	**58.62**	**279**	P	P	08 56 46.9	+0.6
	0.3nm,0.7s,baz=69,slow=6.1,SNR=6.3						
MKAR	**Makanchi Array**	**66.82**	**44**	P	P	08 57 41.0	+0.3
	1.4nm,0.8s,baz=325,slow=5.9,SNR=6.9						
MAW	**Mawson**	**135.46**	**147**	PKP	PKPdf	09 06 08.1	+0.2
	1.4nm,0.7s,baz=248,slow=5.4,SNR=4.0						
ASAR	**Alice Springs**	**150.55**	**33**	PKPbc	PKPbc	09 06 40.4	-0.7
	0.3nm,0.8s,baz=334,slow=2.4,SNR=4.5						

IDC 14 08:54:28.9±1.8, 2876S×17737W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.8/14, mbtmp3.7/4, Error ellipse: s-maj=54.8km s-min=18.5km az=131.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.68**	**224**	Pn	Pg	08 54 45.9	+3.9
	428nm,0.3s,baz=222,slow=21,SNR=18						
RAO				Sn	Sg	08 54 57.3	+6.4
	3μm,0.3s,baz=256,slow=23,SNR=29						
STKA	**Stephens Creek**	**35.41**	**255**	P	P	09 01 28.3	+1.6
	1.5nm,0.9s,baz=73,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**43.77**	**265**	P	P	09 02 35.8	-0.7
	0.5nm,0.8s,baz=96,slow=7.7,SNR=5.8						
WRA	**Warramunga Arr**	**44.61**	**270**	P	P	09 02 43.0	-0.2
	0.4nm,0.3s,baz=110,slow=7.9,SNR=14						
NVAR	**Mina Array Bea**	**86.67**	**42**	P	P	09 07 14.5	+0.1
	0.5nm,0.8s,baz=208,slow=5.1,SNR=5.4						

ISCJB 14 09:10:06.6±0.5, 2921S±004×6944W±007, h114km±6km, mb4.3/5, Error ellipse: s-maj=10.5km s-min=6.4km az=173.1
NEIC 14 09:10:07.4, 2917S×6963W, h123km, mb4.3/6, After GUC.
GUC 14 09:10:07.4±1.3, 2917S×6963W, h123km±24km, ML4.5
IDC 14 09:10:09.2±0.6, 2932S×6945W, h119km±4km, mb3.8/6, mb1 4.0/7, mb1mx3.9/14, mbtmp3.7/7, Error ellipse: s-maj=29.2km s-min=8.9km az=69.0
ISC 14 09:10:07.3±0.5, 2917S±003×6940W±007, h103km±6km, n47, σ0§01/48, mb4.3/15, 7C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.15**	**278**	*e*P	**Pn**	**09 10 30.4**	**+0.9**
LCO				*i* S	**Sn**	**09 10 47.2**	**+0.9**
TLL	**Tololo Astrono**	**1.57**	**230**↑	*i* P	**Pn**	**09 10 35.5**	**+0.9**
TLL				*i* S	**Sn**	**09 10 56.1**	**+0.8**
TLL	**Tololo Astrono**	**1.57**	**230**↑	*i* P	**Pn**	**09 10 35.5**	**+0.9**
TLL				*i* S	**Sn**	**09 10 56.1**	**+0.8**
TLL				AML	AML	09 10 57.6	
	comp=N,3μm,0.7s						
LSCH	**La Serena**	**1.77**	**245**↑	*i* P	Px	09 11 52.7	
LSCH				*i* S	Sx	09 12 14.3	
OVCH	**Ovalle**	**2.12**	**227**↑	*i* P	**Pn**	**09 10 41.0**	**-0.5**
OVCH				*i* S	**Sn**	**09 11 06.3**	**-1.5**
OVCH	**Ovalle**	**2.12**	**227**↑	*i* P	**Pn**	**09 10 41.0**	**-0.5**
OVCH				*i* S	**Sn**	**09 11 06.3**	**-1.5**
OVCH				AML	AML	09 11 06.6	
	comp=N,6μm,0.4s						
CDCH	**Caldera**	**2.44**	**329**	*e*P	Px	09 12 21.3	
CDCH				*i* S	Sx	09 12 49.7	
CFAA	**Coronel Fontan**	**2.63**	**158**	P	**Pn**	**09 10 49.5**	**+1.3**
	comp=N,2.5nm,0.3s,baz=332,slow=13,SNR=124						
CFAA				S	**Sn**	**09 11 20.1**	**+0.6**
	comp=N,12nm,0.3s,baz=162,slow=20,SNR=30						
CHNG	**Los Chungos**	**3.25**	**213**	*e*P	**Pn**	**09 10 55.8**	**-0.7**
CHNG				*i* S	**Sn**	**09 11 33.4**	**-1.1**
CHNG				AML	AML	09 11 40.4	
	comp=E,545nm,0.7s						
PEL	**Peldehue**	**4.11**	**195**	*e*P	**Pn**	**09 11 08.9**	**+0.9**
PEL				*i* S	**Sn**	**09 11 55.3**	**+0.2**
PEL				AML	AML	09 11 56.3	
	comp=N,414nm,0.7s						
FCH	**Farellones**	**4.21**	**190**	*e*P	**Pn**	**09 11 10.5**	**+1.1**
RCDM	**Rinconada Maip**	**4.47**	**195**↑	*i* P	**Pn**	**09 11 12.0**	**-0.8**
RCDM				*i* S	**Sn**	**09 12 01.8**	**-2.0**
RCDM	**Rinconada Maip**	**4.47**	**195**↑	*i* P	**Pn**	**09 11 12.0**	**-0.8**
RCDM				*i* S	**Sn**	**09 12 01.8**	**-2.0**
RCDM				AML	AML	09 12 03.2	
	comp=E,283nm,0.2s						
LVC	**Limon Verde**	**6.54**	**4**	P	**Pn**	**09 11 40.6**	**-0.4**
	comp=E,1.7nm,0.3s,baz=181,slow=9.2,SNR=17						
LVC				S	**Sn**	**09 12 51.6**	**-2.6**
	comp=E,4.3nm,0.3s,baz=2.5,slow=21,SNR=6.1						
LVC	**Limon Verde**	**6.54**	**4**	*e*Pn	**Pn**	**09 11 40.5**	**-0.5**
	comp=E,31nm,0.7s						
LVC	**Limon Verde**	**6.54**	**4**	*e*P	**Pn**	**09 11 40.3**	**-0.7**
LVC				*i* S	**Sn**	**09 12 52.3**	**-1.9**
LPAZ	**La Paz**	**12.87**	**5**	P	**Pn**	**09 13 09.8**	**+3.4**
	comp=E,0.2nm,0.3s,baz=194,slow=9.4,SNR=9.8						
LPAZ	**La Paz**	**12.87**	**5**	*e*Pn	**Pn**	**09 13 07.8**	**+1.3**
SIV	**San Ignacio**	**15.20**	**32**	P	**Pn**	**09 13 35.3**	**-1.1**
	comp=E,0.1nm,0.3s,baz=235,slow=10,SNR=7.7						
BDFB	**Brasilia**	**23.87**	**60**	P	**P**	**09 15 09.6**	**-1.7**
	comp=E,1.2nm,0.4s,mb3.5,baz=235,slow=19,SNR=3.8						
OTAV	**Otavalo**	**30.49**	**342**	*e*P	**P**	**09 16 06.3**	**-4.3**
	comp=E,1.8nm,0.5s,mb4.0						
VNA3	**Neumayer Olymp**	**53.03**	**160**	*e*	**P**	**09 19 13.4**	**+0.3**
VNA3				*e*		09 19 17.0	
VNA2	**Neumayer--Watz**	**53.64**	**159**	*e*	**P**	**09 19 17.9**	**+0.3**
	baz=286,slow=9.0						
VNA2				*e*		09 19 21.5	
SNAA	**Sanae**	**55.25**	**159**	*e*	**P**	**09 19 27.5**	**-1.7**
SNAA				*e*		09 19 30.9	
SNAA	**Sanae**	**55.25**	**159**	*e*P	**P**	**09 19 27.4**	**-1.8**
	comp=E,2.4nm,0.6s,mb4.4						
TXAR	**Lajitas Array**	**66.75**	**328**	P	**P**	**09 20 48.4**	**+1.0**
	comp=E,0.6nm,0.7s,mb3.5,baz=147,slow=9.0,SNR=8.5						
TXAR	**Lajitas Array**	**66.75**	**328**	P	**P**	**09 20 48.4**	**+1.0**
WVT	**Waverly**	**67.23**	**344**	*e*P	**P**	**09 20 49.7**	**-0.6**
	comp=E,2.6nm,0.6s,mb4.2						
FVM	**French Village**	**69.64**	**342**	*e*P	**P**	**09 21 05.6**	**+0.3**
	comp=E,3.0nm,0.7s,mb4.2						
LIC	**Lamto**	**71.11**	**71**	*e*PKP2	**P**	**09 21 18.0**	**+3.1**
	comp=E,45nm,1.2s,mb5.2						
TIC	**Toumodi**	**71.34**	**71**	*e*PKP2	**P**	**09 21 16.5**	**+0.2**
	comp=E,28nm,0.2s,mb5.7						
KIC	**Kosan Boka**	**71.42**	**71**	*e*PKP2	**P**	**09 21 17.2**	**+0.5**
	comp=E,62nm,1.3s,mb5.3						
MAW	**Mawson**	**77.15**	**163**	P	**P**	**09 21 49.2**	**+0.1**
	comp=E,1.9nm,0.8s,mb3.9,baz=243,slow=9.0,SNR=5.2						
BOSA	**Boshof**	**80.30**	**117**	P	**P**	**09 22 06.9**	**-0.2**
	comp=E,4.3nm,0.8s,mb4.3,baz=194,slow=5.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**80.42**	**69**	P	**P**	**09 22 08.4**	**+0.5**
	comp=E,3.1nm,0.6s,mb4.3,baz=255,slow=5.3,SNR=26						
TORD				pP	pP	09 22 37.8	+3.2
	comp=E,1.2nm,0.6s,baz=271,slow=5.0,SNR=3.6						
PDAR	**Pinedale Array**	**80.55**	**331**	P	**P**	**09 22 08.7**	**+0.8**
	comp=E,0.9nm,0.9s,mb3.6,baz=131,slow=5.6,SNR=6.0						
NVAR	**Mina Array Bea**	**81.29**	**323**	P	**P**	**09 22 12.3**	**+0.4**
	comp=E,0.5nm,0.6s,mb3.5,baz=114,slow=6.0,SNR=3.3						
NVAR				pP	pP	09 22 43.5	+4.8
	comp=E,0.4nm,0.6s,baz=170,slow=5.5,SNR=2.4						
LBTB	**Lobatse**	**82.25**	**114**	*e*P	**P**	**09 22 17.4**	**-0.1**
	comp=E,2.0nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**122.88**	**206**	PKP	PKPdf	09 28 50.4	-1.4
	comp=E,0.4nm,0.8s,baz=153,slow=2.9,SNR=5.2						
WRA	**Warramunga Arr**	**126.07**	**208**	PKP	PKPdf	09 28 57.3	-0.7
	comp=E,1.5nm,0.8s,baz=165,slow=1.7,SNR=13						
WRA				pPKP	pPKPdf	09 29 29.8	+3.5
	comp=E,0.2nm,0.6s,baz=169,slow=1.8,SNR=2.5						
KURK	**Kurchatov**	**147.77**	**39**	PKP	PKPdf	09 29 37.0	+0.4
	baz=302,slow=3.1						
KURK				PKPbc	PKPbc	09 29 40.4	+0.7
	baz=302,slow=3.1						
KURK				pPKPbc	pPKPbc	09 30 11.9	+4.2
	baz=298,slow=3.0						
ZAA0	**Zalesovo Array**	**148.94**	**30**	*e*PKPbc	PKPbc	09 29 42.4	-0.2
ZALV	**Zalesovo Beam**	**148.94**	**30**	PKPbc	PKPbc	09 29 43.0	+0.5
	comp=E,6.0nm,0.7s,baz=306,slow=2.9,SNR=20						
ZALV				pPKPbc	pPKPbc	09 30 14.8	+4.1
	comp=E,2.2nm,0.6s,baz=273,slow=4.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**148.94**	**30**	PKPbc	PKPbc	09 29 43.0	+0.5
ZALV				pPKPbc	pPKPbc	09 30 14.8	+4.1
MKAR	**Makanchi Array**	**151.81**	**44**	PKPbc	PKPbc	09 29 49.7	+0.1
	comp=E,2.0nm,0.7s,baz=317,slow=2.1,SNR=11						
MKAR				PKPab	PKPab	09 29 59.5	+0.5
	comp=E,1.4nm,0.8s,baz=328,slow=4.3,SNR=4.7						
MKAR				pPKPbc	pPKPbc	09 30 21.6	+3.7
	comp=E,1.6nm,0.6s,baz=310,slow=2.1,SNR=6.7						
MKAR	**Makanchi Array**	**151.81**	**44**	PKPbc	PKPbc	09 29 49.7	+0.1
MKAR				PKPab	PKPab	09 29 59.5	+0.5
MKAR				pPKPbc	pPKPbc	09 30 21.6	+3.7
SONM	**Songino Array**	**161.08**	**9**	PKPab	PKPab	09 30 38.5	-0.2
	comp=E,0.2nm,0.4s,baz=330,slow=2.0,SNR=3.0						

IDC 14 09:21:11.5±1.4, 37.37N×2896E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=45.5km s-min=23.4km az=134.0
NEIC 14 09:21:11.9, 3701N×2931E, h6km, ML3.6(ISK), After ISK.
HLW 14 09:21:12.6, 3704N×2916E, h33km, Mb3.7
MOS 14 09:21:12.6±0.8, 3704N×2934E, h10km, mb4.0/2, Error ellipse: s-maj=13.6km s-min=10.7km az=149.6
ISK 14 09:21:12.0, 3701N×2931E, h6km, ML3.7
CSEM 14 09:21:12.5±0.1, 3707N×2935E, h5km, mb4.0, Error ellipse: s-maj=1.7km s-min=1.3km az=12.0
ISCJB 14 09:21:12.1±0.2, 3693N±002×2938E±002, h10km, mb3.7/4, Error ellipse: s-maj=3.0km s-min=2.3km az=35.3
GII 14 09:21:16.4±0.0, 3673N×2934E, h15km, ML3.6/2
THE 14 09:21:16.5, 3704N×2937E, h14km±3km, ML4.6/1, Error ellipse: s-maj=3.4km s-min=0.9km az=192.0
DDA 14 09:21:16.1, 37.13N×2931E, h14km, Md3.5
ISC 14 09:21:13.5±0.6, 3697N±002×2936E±002, h10km±4km, n148, σ0§98/182, mb3.7/4, 2C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.40**	**213**	PG	**Pg**	**09 21 20.2**	**-1.0**
FETY				*e*SG	**Sg**	**09 21 26.5**	**0.0**
FETY	**Fethiye**	**0.40**	**213**	Pg	**Pg**	**09 21 20.2**	**-1.0**
FETY				Sg	**Sg**	**09 21 26.2**	**-0.3**
FETY	**Fethiye**	**0.40**	**213**	*i* Pg	**Pg**	**09 21 20.2**	**-1.1**
FETY				Sg	**Sg**	**09 21 26.2**	**-0.3**
ELL	**Elmali**	**0.50**	**116**	*e*PG	**Pg**	**09 21 22.9**	**-0.2**
ELL				*e*SG	**Sg**	**09 21 31.5**	**+1.9**
ELL	**Elmali**	**0.50**	**116**	Pg	**Pg**	**09 21 23.1**	**0.0**
ELL				Sg	**Sg**	**09 21 31.1**	**+1.5**
ELL	**Elmali**	**0.50**	**116**	Pg	**Pg**	**09 21 23.1**	**0.0**
ELL				*e*Sg	**Sg**	**09 21 31.5**	**+1.9**
TURN	**Turunc**	**0.61**	**261**	*i* P	**Pg**	**09 21 29.0**	**+3.7**
DENT	**Denizli**	**0.82**	**342**	*e*PG	**Pg**	**09 21 27.2**	**-2.2**
DENT	**Denizli**	**0.82**	**342**	Pg	**Pg**	**09 21 27.0**	**-2.3**
DENT	**Denizli**	**0.82**	**342**	Pg	**Pg**	**09 21 27.0**	**-2.4**
KSL	**Kastellorizon**	**0.84**	**167**	*e*P	**Pg**	**09 21 30.0**	**+0.4**
YER	**Yerkesik**	**0.87**	**281**	*e*PG	**Pg**	**09 21 28.7**	**-1.5**
YER	**Yerkesik**	**0.87**	**281**	P	**Pg**	**09 21 28.5**	**-1.8**
ANTB	**Antalya**	**1.04**	**93**	*e*PN	**Pn**	**09 21 32.9**	**-1.2**
BCK	**Bucak**	**1.10**	**63**	*e*PN	**Pn**	**09 21 33.3**	**-1.7**
ARG	**Arkhangelos**	**1.24**	**233**	*e*P	**Pn**	**09 21 35.9**	**-1.0**
ARG	**Arkhangelos**	**1.24**	**233**	P	**Pn**	**09 21 37.0**	**+0.1**
ISP	**Isparta**	**1.27**	**46**	P	**Pn**	**09 21 37.2**	**-0.1**
ISP				S	**Sb**	**09 21 53.9**	**+0.1**
ISP	**Isparta**	**1.27**	**46**	*e*P	**Pn**	**09 21 37.2**	**-0.1**
ISP	**Isparta**	**1.27**	**46**	*e*Pn	**Pn**	**09 21 37.0**	**-0.3**
ISP				S	**Sb**	**09 21 53.9**	**+0.1**
ISP	**Isparta**	**1.27**	**46**↓	*i* P	**Pn**	**09 21 37.6**	**+0.3**
ISP				S	**Sb**	**09 21 56.4**	**+2.6**
MLSB	**Milas**	**1.30**	**285**	*e*PN	**Pn**	**09 21 36.6**	**-1.2**
KHL	**Karahalli**	**1.36**	**6**	*e*PN	**Pn**	**09 21 37.0**	**-1.5**
DAT	**Datca**	**1.45**	**261**	*e*PN	**Pn**	**09 21 39.2**	**-0.5**
BDRM	**Kayabasi**	**1.53**	**274**	*i* P	**Pn**	**09 21 41.5**	**+0.6**
KULA	**Kula-Manisa**	**1.64**	**341**	*e*PN	**Pn**	**09 21 41.1**	**-1.3**
BODT	**Bodrum**	**1.64**	**274**	*e*PN	**Pn**	**09 21 41.7**	**-0.7**
MANT	**Manisa**	**1.65**	**338**	*i* P	**Pn**	**09 21 42.0**	**-0.5**
MANT				*i* S	**Sn**	**09 22 05.1**	**+1.4**
NISR	**Nisiros**	**1.82**	**259**	*e*P	**Pn**	**09 21 47.0**	**+2.1**
GCAM	**G?zelcaml?**	**1.84**	**294**	*i* P	**Pn**	**09 21 45.5**	**+0.4**
GCAM				*i* S	**Sn**	**09 22 07.8**	**-0.7**
SHUT	**Suhut-Afyon**	**1.84**	**31**	*e*PN	**Pn**	**09 21 44.4**	**-0.8**
GDZ	**Gediz**	**2.12**	**3**	*i* P	**Pn**	**09 21 49.3**	**+0.3**
DEMI	**Demirci**	**2.13**	**346**	*i* P	**Pn**	**09 21 49.5**	**+0.4**
SMG	**Samos**	**2.14**	**291**	*e*P	**Pn**	**09 21 49.3**	**+0.1**
SMG	**Samos**	**2.14**	**291**	P	**Pn**	**09 21 49.7**	**+0.5**
BOLV	**Bolvadin**	**2.15**	**35**	*i* P	**Pn**	**09 21 49.9**	**+0.5**
AKHS	**Akhisar**	**2.26**	**328**	*i* P	**Pn**	**09 21 50.3**	**-0.6**

MLR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MLR	**Muntele Rosu**	**8.89**	**344**	⇓*i*P	**Pn**	**09 23 24.0**	**+2.0**
HKAT	**Jabal Katrina**	**9.28**	**154**	P	**Pn**	**09 23 26.8**	**-0.6**
TR2		**9.32**	**156**	P	**Pn**	**09 23 27.0**	**-0.9**
HFRF	**Wahat Farafira**	**9.83**	**185**	P	**Pn**	**09 23 33.1**	**-1.8**
HHRG	**Al Ghardaqah**	**10.36**	**159**	P	**Pn**	**09 23 41.4**	**-0.7**
KIV	**Kislovodsk**	**12.31**	**51**	*e*P	**Pn**	**09 24 00.5**	**-8.3**
AKASG	**Malin Array Be**	**13.73**	**360**	Pn	**Pn**	**09 24 21.6**	**-6.5**
	comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=2.6							
AKTK	**Aktyubinsk**	**24.53**	**48**	P	**P**	**09 26 32.6**	**-0.4**
	comp=Z,1.0nm,0.3s,mb3.8							
AKTO	**Aktyubinsk**	**24.53**	**48**	P	**P**	**09 26 32.6**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.5,baz=240,slow=6.4,SNR=3.7							
AKTO	**Aktyubinsk**	**24.53**	**48**	P	**P**	**09 26 32.6**	**-0.4**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb3.8							
TORD	**Torodi Ar. Bea**	**34.27**	**233**	P	**P**	**09 27 59.3**	**-0.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=34,slow=9.5,SNR=7.1							
KURK	**Kurchatov**	**37.39**	**52**	P	**P**	**09 28 25.2**	**-1.2**
	baz=271,slow=8.7							
MKAR	**Makanchi Array**	**39.94**	**59**	P	**P**	**09 28 47.7**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.5,baz=273,slow=8.3,SNR=4.5							
MKAR	**Makanchi Array**	**39.94**	**59**	P	**P**	**09 28 47.7**	**0.0**
MKAR	**Makanchi Array**	**39.94**	**59**	P	**P**	**09 28 47.7**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							

*ISCJB **14** 09:51:11.1±0.6,29.10S±.005×179.3W±0.1, h339km±6km, mb4.0/15, Error ellipse: s-maj=15.1km s-min=7.0km az=15.3*

*IDC **14** 09:51:11.7±0.5,2889Sx17908W, h341km±5km, mb3.8/10, mb1 3.9/12, mb1mx3.8/17, mbtmp3.8/12, Error ellipse: s-maj=17.8km s-min=14.1km az=164.0*

*NEIC **14** 09:51:11.1±0.8,2912Sx17885W, h350km±8km, mb4.2/9, Error ellipse: s-maj=16.1km s-min=8.8km az=107.0*

ISC 14 09:51:12.3±0.6,2917S±.005×1793W±0.1, h336km±6km, n58, σ1§24/60, mb4.0/15, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.19**	**94**	P	**Pn**	**09 51 57.4**	**-0.1**
	668nm,0.3s,baz=120,slow=7.3,SNR=16						
RAO				S	**S**	**09 52 32.9**	**-0.6**
	460nm,0.3s,baz=127,slow=20,SNR=4.0						
RAO	**Raoul Island**	**1.19**	**94**	*e*Pn	**Pn**	**09 51 56.5**	**-0.9**
RAO				S	**S**	**09 52 32.9**	**-0.6**
MXZ	**Matakaoa Point**	**8.61**	**193**	P	**Pn**	**09 53 16.9**	**+3.4**
MXZ				S	**S**	**09 54 51.6**	**-0.7**
MWZ	**Matawai**	**9.52**	**195**	*e*P	**Pn**	**09 53 26.5**	**+2.1**
URZ	**Urewera**	**9.55**	**197**	P	**Pn**	**09 53 26.9**	**+2.1**
	19nm,0.3s,baz=274,slow=3.6,SNR=89						
URZ				S	**S**	**09 55 13.3**	**+0.2**
	12nm,0.3s,baz=345,slow=6.9,SNR=12						
URZ	**Urewera**	**9.55**	**197**	P	**Pn**	**09 53 24.2**	**-0.6**
KNZ	**Kokohu**	**10.15**	**194**	P	**Pn**	**09 53 33.8**	**+1.9**
BKZ	**Black Stump Fm**	**10.57**	**198**	P	**Pn**	**09 53 37.6**	**+0.6**
WNVZ	**Wahianoa**	**10.98**	**201**	P	**Pn**	**09 53 43.6**	**+1.7**
MOVZ	**Moawhango**	**11.01**	**201**	P	**Pn**	**09 53 43.1**	**+0.9**
TSZ	**Takapari Road**	**11.55**	**199**	P	**Pn**	**09 53 48.0**	**-0.7**
WAZ	**Wanganui**	**11.57**	**203**	P	**Pn**	**09 53 49.7**	**+0.7**
MRZ	**Mangatainoka R**	**12.22**	**199**	P	**Pn**	**09 53 54.8**	**-1.8**
MRZ				S	**S**	**09 56 08.0**	**-4.2**
KIW	**Kapiti Island**	**12.60**	**201**	P	**Pn**	**09 54 00.2**	**-1.0**
MTW	**Mount Morrison**	**12.70**	**198**	P	**Pn**	**09 54 00.8**	**-1.6**
CAW	**Cannon Point**	**12.78**	**200**	P	**Pn**	**09 54 02.1**	**-1.2**
TCW	**Tory Channel**	**13.12**	**202**	P	**Pn**	**09 54 06.5**	**-0.8**
QRZ	**Quartz Range**	**13.42**	**208**	P	**Pn**	**09 54 11.1**	**+0.1**
NNZ	**Nelson**	**13.43**	**205**	P	**Pn**	**09 54 08.4**	**-2.6**
NNZ				S	**S**	**09 56 35.9**	**-1.7**
THZ	**Tophouse**	**14.08**	**205**	P	**P**	**09 54 17.3**	**0.0**
KHZ	**Kahutara**	**14.44**	**202**	P	**P**	**09 54 22.5**	**+1.3**
KHZ				S	**S**	**09 56 54.5**	**-3.4**
LTZ	**Lake Taylor**	**15.20**	**204**	P	**P**	**09 54 30.1**	**+0.6**
RPZ	**Rata Peaks**	**16.45**	**205**	S	**S**	**09 57 37.6**	**-0.5**
	0.8nm,0.3s,baz=81,slow=8.6,SNR=11						
AFI	**Afiamalu**	**16.70**	**26**	P	**P**	**09 54 40.6**	**-5.5**
	2.8nm,0.3s,baz=316,slow=7.1,SNR=5.9						
AFI				S	**S**	**09 57 28.4**	**-15**
	1.2nm,0.3s,baz=47,slow=19,SNR=3.7						
AFI	**Afiamalu**	**16.70**	**26**	P	**P**	**09 54 40.6**	**-5.5**
AFI				S	**S**	**09 57 28.4**	**-15**
ARMA	**Armidale**	**25.25**	**260**	*e*P	**P**	**09 56 11.5**	**+2.6**
CTA	**Charters Tower**	**32.52**	**278**	*e*P	**P**	**09 57 14.7**	**+1.8**
	6.6nm,0.4s,mb4.2						
CTA	**Charters Tower**	**32.52**	**278**	P	**P**	**09 57 14.3**	**+1.4**
	10nm,0.5s,mb4.3,baz=104,slow=10,SNR=18						
CTAO	**Charters Tower**	**32.52**	**278**	*e*P	**P**	**09 57 14.6**	**+1.8**
	8.4nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**33.69**	**255**	*e*P	**P**	**09 57 24.6**	**+1.7**
	2.2nm,0.4s,mb3.7						
STKA	**Stephens Creek**	**33.69**	**255**	P	**P**	**09 57 24.7**	**+1.8**
	2.6nm,0.4s,mb3.8,baz=96,slow=10,SNR=21						
ASAR	**Alice Springs**	**42.08**	**266**	P	**P**	**09 58 33.0**	**+0.6**
	4.5nm,0.5s,mb3.9,baz=98,slow=6.5,SNR=152						
WB2	**Warramunga Arr**	**42.94**	**272**	*e*P	**P**	**09 58 39.5**	**+0.2**
WRAB	**Tennant Creek**	**42.94**	**272**	*e*P	**P**	**09 58 39.2**	**-0.1**
	13nm,1.1s,mb4.0						
WRA	**Warramunga Arr**	**42.95**	**272**	P	**P**	**09 58 39.6**	**+0.2**
	4.3nm,0.4s,mb3.9,baz=109,slow=7.9,SNR=109						
WRA				PcP	PcP	10 00 21.7	-1.4
	1.6nm,0.8s,baz=105,slow=3.5,SNR=6.0						
WRA				S	**S**	**10 04 37.3**	**-1.5**
	1.0nm,1.0s,baz=106,slow=14,SNR=3.3						
FORT	**Forrest**	**45.30**	**254**	*e*P	**P**	**09 58 57.7**	**-0.1**
	15nm,0.5s,mb4.4						
SBA	**Scott Base**	**49.18**	**184**	*e*P	**P**	**09 59 30.6**	**+3.9**
	11nm,1.1s,mb4.0						
MBWA	**Marble Bar**	**55.26**	**263**	*e*P	**P**	**10 00 11.1**	**-0.8**
	12nm,0.9s,mb4.2						
MAW	**Mawson**	**73.06**	**201**	P	**P**	**10 02 06.6**	**+0.8**
	2.4nm,0.7s,mb4.0,baz=114,slow=7.8,SNR=6.8						
MAW	**Mawson**	**73.06**	**201**	*e*P	**P**	**10 02 06.9**	**+1.1**
	3.2nm,0.8s,mb4.1						
MJAR	**Matsushiro Arr**	**76.60**	**326**	P	**P**	**10 02 24.6**	**-1.7**
	2.1nm,0.7s,mb4.0,baz=162,slow=4.6,SNR=5.2						
SNAA	**Sanae**	**79.41**	**179**	*e*	**P**	**10 02 40.0**	**-1.2**
SNAA				*e*		10 02 45.8	
SNAA	**Sanae**	**79.41**	**179**	*e*P	**P**	**10 02 40.1**	**-1.1**
	1.7nm,0.6s,mb4.0						
VNA3	**Neumayer Olymp**	**79.60**	**177**	*e*	**P**	**10 02 42.9**	**+0.7**
VNA3				*e*		10 02 48.6	
VNA2	**Neumayer--Watz**	**80.02**	**177**	*e*	**P**	**10 02 45.5**	**+1.0**
	baz=195,slow=6.5						
VNA2				*e*		10 02 50.7	
VNA1	**Neumayer--Stat**	**80.26**	**177**	*e*	**P**	**10 02 46.9**	**+1.2**
VNA1				*e*		10 02 53.0	
KSRS	**Korea Array**	**82.69**	**320**	P	**P**	**10 02 58.4**	**-0.4**
	2.0nm,0.8s,mb4.0,baz=149,slow=5.6,SNR=7.7						
PLCA	**Paso Flores**	**84.16**	**134**	P	**P**	**10 03 07.2**	**+0.8**
	1.8nm,1.0s,mb3.9,baz=225,slow=4.3,SNR=2.1						
PETK	**Petropavlovsk-**	**84.35**	**346**	P	**P**	**10 03 05.2**	**-1.6**
	3.6nm,0.6s,mb4.4,baz=112,slow=7.9,SNR=17						
CMAR	**Chiang Mai Arr**	**91.94**	**290**	P	**P**	**10 03 41.5**	**-2.0**
	1.0nm,0.5s,mb4.0,baz=108,slow=2.9,SNR=5.6						
MKAR	**Makanchi Array**	**116.13**	**311**	PKP	PKPdf	10 09 13.1	-2.3
	0.2nm,0.4s,baz=232,slow=1.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**116.38**	**319**	PKP	PKPdf	10 09 12.7	-3.0
	0.3nm,0.3s,baz=170,slow=4.4,SNR=2.8						
ARCES	**ARCESS Array B**	**137.15**	**347**	PKhKP		10 09 45.4	
	1.0nm,0.8s,baz=50,slow=1.5,SNR=6.4						
ARCES				PKP	PKPdf	10 09 52.6	-2.1
	0.8nm,0.5s,baz=28,slow=3.4,SNR=7.2						
ARCES	**ARCESS Array B**	**137.15**	**347**	PKP		10 09 45.4	
ARCES				PKP	PKPdf	10 09 52.6	-2.1
NB2	**NORSAR Subarra**	**147.37**	**351**	PKP	PKPdf	10 10 13.4	+0.4
	comp=Z,5.2nm,1.0s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**147.37**	**351**	PKPbc	PKPbc	10 10 13.2	-2.8
	comp=Z,6.7nm,0.9s,baz=15,slow=4.3,SNR=10						
AKASG	**Malin Array Be**	**149.65**	**323**	PKPbc	PKPbc	10 10 20.4	-1.7
	comp=Z,4.3nm,0.5s,baz=44,slow=2.6,SNR=12						
TORD	**Torodi Ar. Bea**	**164.03**	**183**	PKP	PKPdf	10 10 34.4	-1.8
	comp=Z,1.1nm,1.1s,baz=243,slow=2.3,SNR=3.9						
TORD				PKPab	PKPab	10 11 30.9	-0.3
	comp=Z,1.4nm,0.6s,baz=178,slow=3.1,SNR=12						

IDC 14 10:12:31.5±1.2,1291N×14469E, h200km±25km, mb3.0/4, mb1 3.1/4, mb1mx2.9/19, mbtmp3.0/4, Error ellipse: s-maj=132.2km s-min=19.8km az=78.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.69**	**15**	P	Pn	10 12 59.7	+0.2
	77nm,0.3s,baz=82,slow=4.7,SNR=36						
GUMO				S	Sn	10 13 18.5	-2.7
	85nm,0.3s,baz=5.7,slow=23,SNR=26						
WRA	**Warramunga Arr**	**34.20**	**197**	P	P	10 18 59.9	+1.8
	0.5nm,0.6s,baz=12,slow=9.3,SNR=7.1						
ASAR	**Alice Springs**	**37.85**	**196**	P	P	10 19 29.2	+0.1
	0.1nm,0.4s,baz=15,slow=7.9,SNR=6.8						
STKA	**Stephens Creek**	**44.63**	**184**	P	P	10 20 22.3	-1.8
	1.2nm,0.9s,baz=355,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**61.85**	**316**	P	P	10 22 29.6	+0.1
	0.4nm,0.6s,baz=112,slow=6.4,SNR=1.9						

*ISCJB **14** 10:16:41.7±0.6, 8.1N±0.1×3885W±009, h10km, mb4.1/10, MS3.7/14, Error ellipse: s-maj=16.7km s-min=13.0km az=19.0*

*IDC **14** 10:16:42.2±1.0, 8.14Nx3887W, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, MS3.7/14, Ms1 3.7/14, ms1mx3.6/23, Error ellipse: s-maj=41.7km s-min=19.8km az=172.0*

*NEIC **14** 10:16:43.4±0.5, 8.12N×3885W, h10km, mb4.6/4, Error ellipse: s-maj=14.5km s-min=10.7km az=209.0*

ISC 14 10:16:43.7±0.6, 81N±0.1×3884W±009, h10km, n25, σ0§62/14, mb4.1/10, MS3.7/14, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**14.17**	**168**	*e*Pn	**Pn**	**10 20 04.2**	**-0.4**
BDFB	**Brasilia**	**25.30**	**201**	LR	LR	10 31 56.2	
	comp=Z,99nm,19.4s,MS3.3,baz=197,slow=36						
DBIC	**Dimbokro**	**33.73**	**90**	P	**P**	**10 23 26.4**	**+0.8**
	2.3nm,0.8s,mb4.2,baz=257,slow=15,SNR=2.8						
ROSC	**El Rosal**	**35.40**	**267**	LR	LR	10 37 39.7	
	comp=Z,76nm,20.5s,MS3.4,baz=5.9,slow=36						
LPAZ	**La Paz**	**37.80**	**230**	P	**P**	**10 24 01.0**	**+0.5**
	2.5nm,0.8s,mb4.0,baz=50,slow=7.4,SNR=8.0						
LPAZ				LR	LR	10 38 48.9	
	comp=Z,85nm,21.2s,MS3.5,baz=63,slow=35						
LPAZ	**La Paz**	**37.80**	**230**	P	**P**	**10 24 01.0**	**+0.5**
TOA0	**Torodi Ar. Sit**	**40.12**	**79**	*e*P	**P**	**10 24 19.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**40.12**	**79**	P	**P**	**10 24 19.7**	**-0.3**
	2.4nm,0.7s,mb4.0,baz=273,slow=8.7,SNR=14						
TORD				LR	LR	10 38 20.4	
	comp=Z,105nm,20.4s,MS3.7,baz=275,slow=32						
TORD	**Torodi Ar. Bea**	**40.12**	**79**	P	**P**	**10 24 19.7**	**-0.3**
LVC	**Limon Verde**	**42.43**	**223**	LR	LR	10 42 38.6	
	comp=Z,85nm,19.7s,MS3.6,baz=212,slow=37						
NNA	**Nana**	**42.74**	**249**	LR	LR	10 43 10.9	
	comp=Z,89nm,19.4s,MS3.7,baz=137,slow=37						
LRAL	**Lakeview Retre**	**50.88**	**306**	*e*P	**P**	**10 25 45.0**	**0.0**
	4.5nm,0.9s,mb4.4						
KEST	**Kesra**	**51.78**	**51**	P	**P**	**10 25 52.0**	**+0.2**
	1.3nm,0.5s,mb4.1,baz=259,slow=16,SNR=7.4						
KEST				LR	LR	10 47 21.6	
	comp=Z,54nm,18.8s,MS3.6,baz=160,slow=36						
CMIG	**Matias Romero**	**55.25**	**285**	LR	LR	10 49 52.3	
	comp=Z,59nm,18.3s,MS3.7,baz=154,slow=36						
PLCA	**Paso Flores**	**56.71**	**209**	LR	LR	10 53 48.3	
	comp=Z,81nm,18.4s,MS3.9,baz=16,slow=39						
ULM	**Lac du Bonnet**	**63.03**	**323**	LR	LR	10 48 30.9	
	comp=Z,71nm,20.1s,MS3.8,baz=345,slow=30						
TXAR	**Lajitas Array**	**64.14**	**299**	P	**P**	**10 27 17.9**	**-0.8**
	0.4nm,0.5s,mb3.7,baz=101,slow=6.5,SNR=6.7						
NOA	**NORSAR Array B**	**64.40**	**24**	LR	LR	10 52 28.7	
	comp=Z,58nm,20.1s,MS3.8,baz=245,slow=33						
LSZ	**Lusaka**	**70.36**	**109**	LR	LR	10 57 04.0	
	comp=Z,62nm,18.0s,MS3.9,baz=175,slow=34						
PDAR	**Pinedale Array**	**70.38**	**312**	LR	LR	10 54 54.2	
	comp=Z,103nm,20.5s,MS4.1,baz=92,slow=33						
WUAZ	**Wupatki**	**71.12**	**305**	*e*P	**P**	**10 28 02.8**	**+0.2**
	4.0nm,0.8s,mb4.4						
HWUT	**Hardware Ranch**	**71.74**	**311**	*e*P	**P**	**10 28 06.4**	**+0.2**
	4.8nm,1.0s,mb4.4						
DLMT	**Dillon**	**72.85**	**315**	*e*P	**P**	**10 28 11.8**	**-1.0**
	13nm,1.5s,mb4.6						
ARCES	**ARCESS Array B**	**73.61**	**19**	LR	LR	10 55 27.4	
	comp=Z,67nm,18.4s,MS4.0,baz=30,slow=32						
NVAR	**Mina Array Bea**	**76.75**	**308**	P	**P**	**10 28 36.8**	**+1.2**
	0.2nm,0.3s,mb3.5,baz=99,slow=11,SNR=2.6						

*ISCJB **14** 10:17:32.3±3.8, 52S±.02×147.1E±0.3, h68km±38km, mb3.8/5, Error ellipse: s-maj=59.0km s-min=16.4km az=21.8*

*IDC **14** 10:17:42.5±3.3, 529Sx146.85E, h143km±32km, mb3.4/4, mb1 3.8/5, mb1mx3.5/14, mbtmp3.6/5, Error ellipse: s-maj=54.0km s-min=13.9km az=106.0*

ISC 14 10:17:41.6±3.1, 53S±.02×1469E±.04, h134km±31km, n9, σ0§67/10, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**16.04**	**242**	*e*P	**Pn**	**10 21 09.8**	**-10**
	10nm,0.3s						
WB2	**Warramunga Arr**	**18.99**	**219**	*e*P	**P**	**10 21 53.6**	**+0.6**
WRA	**Warramunga Arr**	**19.00**	**219**	P	**P**	**10 21 53.2**	**+0.2**
	4.4nm,0.3s,baz=43,slow=12,SNR=123						
WRA				S	**S**	**10 25 21.7**	**0.0**
	0.1nm,0.3s,baz=38,slow=21,SNR=3.2						
ASAR	**Alice Springs**	**22.14**	**213**	P	**P**	**10 22 26.5**	**-0.1**
	5.9nm,0.4s,mb4.4,baz=50,slow=8.7,SNR=157						
ASAR				S	**S**	**10 26 21.7**	**+0.4**
	1.5nm,0.8s,baz=31,slow=22,SNR=8.0						
STKA	**Stephens Creek**	**26.92**	**190**	P	**P**	**10 23 10.6**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=27,slow=11,SNR=2.4						
KLBR	**Kellerberrin**	**37.80**	**223**	*e*P	**P**	**10 24 43.7**	**-1.4**
	19nm,1.4s,mb4.5						
MKAR	**Makanchi Array**	**76.86**	**320**	P	**P**	**10 29 19.8**	**+0.9**
	0.3nm,0.6s,mb3.1,baz=108,slow=7.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**78.33**	**328**	P	**P**	**10 29 26.3**	**-0.6**
	0.5nm,0.5s,mb3.5,baz=97,slow=7.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**144.77**	**285**	PKP	PKPdf	10 37 01.9	-1.8
	0.4nm,0.7s,baz=81,slow=3.2,SNR=4.2						

*ISCJB **14** 10:17:40.9±0.6, 1070N±004×62.33W±003, h86km±6km, Error ellipse: s-maj=6.0km s-min=4.3km az=5.2*

*NEIC **14** 10:17:43.8, 1086Nx62.11W, h83km, MD2.6(CAR), After TRN.*

*TRN **14** 10:17:44.0, 1086Nx62.13W, h79km, MD2.9*

*FUNV **14** 10:17:43.0, 1076Nx6226W, h76km, MW3.1*

ISC 14 10:17:41.8±0.6, 1071N±004×6233W±003, h80km±7km, n23, σ1§03/42, 6C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.12**	**121**	⇑*i*P	**Pn**	**10 17 54.0**	**+0.6**
GUIV				*e*S	**Sn**	**10 18 01.8**	**-0.2**
TCE	**Chacachacare**	**0.56**	**91**	⇑*e*P	**Pn**	**10 17 56.8**	**+0.6**
TCE				*e*S	**Sn**	**10 18 06.3**	**-0.5**
CRUV	**Carupano**	**0.89**	**268**	⇑*e*P	**Pn**	**10 18 00.8**	**+1.2**
CRUV				*e*S	**Sn**	**10 18 13.2**	**+0.2**
TRN	**Trinidad (W)**	**0.91**	**94**	⇑*i*P	**Pn**	**10 18 00.3**	**+0.5**
TRN				*e*S	**Sn**	**10 18 11.8**	**-1.5**
TPP	**Pointe-a-Pierr**	**0.95**	**114**	*e*P	**Pn**	**10 18 01.9**	**+1.7**
TPP				*e*S	**Sn**	**10 18 14.7**	**+0.7**
ITEV	**Isla Los Testi**	**1.02**	**309**	⇓*e*P	**Pn**	**10 18 01.8**	**+0.7**
ITEV				*e*S	**Sn**	**10 18 15.5**	**0.0**
TBH	**Brigand Hill**	**1.26**	**100**	*e*P	**Pn**	**10 18 03.6**	**-0.5**
TBH				*e*S	**Sn**	**10 18 21.6**	**+0.8**
TBH	**Brigand Hill**	**1.26**	**100**	*e*P	**Pn**	**10 18 03.6**	**-0.5**
TBH				*e*S	**Sn**	**10 18 19.9**	**-0.9**
GRGR	**Grenville**	**1.56**	**25**	*e*P	**Pn**	**10 18 07.7**	**-0.3**
GRGR				*e*S	**Sn**	**10 18 26.7**	**-1.1**
GRW	**Mount Saint Ca**	**1.58**	**24**	*e*P	**Pn**	**10 18 08.4**	**+0.1**
TPR	**Prospect**	**1.59**	**73**	*e*P	**Pn**	**10 18 06.1**	**-2.3**
TPR				*e*S	**Sn**	**10 18 28.9**	**+0.4**
TPR	**Prospect**	**1.59**	**73**	*e*P	**Pn**	**10 18 07.0**	**-1.4**
BOT	**Bacolet**	**1.65**	**74**	*e*S	**Sn**	**10 18 26.5**	**-3.2**
PCRV	**Puerto La Cruz**	**2.33**	**257**	*e*P	**Pn**	**10 18 19.1**	**+1.0**
PCRV				*e*S	**Sn**	**10 18 45.9**	**-0.1**
IBAV	**Isla La Blanqu**	**2.47**	**297**	⇑*e*P	**Pn**	**10 18 21.0**	**+1.0**
IBAV				*e*S	**Sn**	**10 18 49.2**	**0.0**
RIOV	**Rio Grande**	**2.67**	**169**	*e*P	**Pn**	**10 18 24.1**	**+1.4**
RIOV				*e*S	**Sn**	**10 18 54.6**	**+0.4**
GURV	**El Guri**	**3.02**	**194**	⇑*e*P	**Pn**	**10 18 28.6**	**+1.0**
GURV				*e*S	**Sn**	**10 19 01.9**	**-0.9**
CUPV	**Cœpira**	**3.46**	**260**	*e*P	**Pn**	**10 18 34.1**	**+0.6**
CUPV				*e*S	**Sn**	**10 19 12.7**	**-0.8**
BIRV	**Birongo**	**3.88**	**267**	*e*P	**Pn**	**10 18 40.9**	**+1.7**
MERV	**Las Mercedes**	**4.17**	**250**	*e*P	**Pn**	**10 18 43.1**	**0.0**
MERV				*e*S	**Sn**	**10 19 28.5**	**-2.1**
LUEV	**Luepa**	**4.91**	**170**	*e*P	**Pn**	**10 18 53.0**	**-0.2**
LUEV				*e*S	**Sn**	**10 19 44.9**	**-3.9**
CAOV	**Caicara del Or**	**5.18**	**230**	*e*P	**Pn**	**10 18 57.1**	**+0.2**
CAOV				*e*S	**Sn**	**10 19 53.2**	**-2.2**
BAUV	**El Baul**	**5.90**	**253**	*e*P	**Pn**	**10 19 07.1**	**+0.4**
BAUV				*e*S	**Sn**	**10 20 10.2**	**-2.7**

*BJI **14** 10:37:15.0, 228Sx9960E, h35km, mB5.1, mb5.0, Ms4.7, Msz4.5*

*DJA **14** 10:37:17.2±0.0, 188Sx99.19E, h10km, mB5.9/2, Mjma4.5/7, MLv5.2/7, Mw(mB)5.5/2, Mwp4.4/3*

*ISCJB **14** 10:37:17.5±0.3, 191S±.004×9933E±.004, h31km, mb4.9/62, MS4.2/24, Error ellipse: s-maj=7.3km s-min=4.7km az=139.5*

*MOS **14** 10:37:18.4±1.1, 175Sx9946E, h33km, mb5.1/20, MS4.0/4, Error ellipse: s-maj=16.4km s-min=7.3km az=94.4*

*NEIC **14** 10:37:19.9±0.2, 188Sx9944E, h35km, mb4.8/23, Error ellipse: s-maj=8.1km s-min=5.0km az=58.0*

NEIC Felt [II] at Padang, Sumatra.

*IDC **14** 10:37:23.3±0.7, 1835x9946E, h63km±5km, mb4.3/18, mb1 4.3/18, mb1mx4.2/23, mbtmp4.3/18, MS4.1/11, Ms1 4.1/11, ms1mx3.9/26, Error ellipse: s-maj=20.2km s-min=9.1km az=51.0*

ISC 14 10:37:19.9±0.3, 190S±004×9934E±004, h33km, h33km±1.3km:pP-P, n140, σ1§02/133, mb4.9/62, MS4.2/24, 4C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.49**	**49**	P	**Pn**	**10 37 44.4**	**0.0**
PDSI	**Padang**	**1.49**	**49**	S	**Sn**	**10 38 05.4**	**+2.7**
PPI	**Padang Panjang**	**1.78**	**36**	P	**Pn**	**10 37 48.7**	**+0.3**
RGRI	**Rengat**	**3.37**	**63**	P	**Pn**	**10 38 12.3**	**+2.1**
GSI	**Gunungsitoli**	**3.64**	**331**	P	**Pn**	**10 38 12.3**	**-1.6**
KSI	**Kapahiang**	**3.69**	**118**	P	**Pn**	**10 38 16.0**	**+1.4**
TRSI	**Tarutung**	**3.92**	**354**	P	**Pn**	**10 38 26.7**	**+9.0**
KLI	**Kotabumi**	**6.25**	**118**	P	**Pn**	**10 38 51.0**	**+1.2**
PPBI	**Pangkal Pinang**	**6.80**	**92**	P	**Pn**	**10 38 58.7**	**+1.3**
	458nm,0.7s,1.9nm						
TPI	**Tanjungpandan**	**8.35**	**96**	P	**Pn**	**10 39 19.7**	**+1.0**
BSI	**Banda Aceh**	**8.38**	**331**	P	**Pn**	**10 39 16.9**	**-2.2**
SNG	**Songkhla**	**9.11**	**8**	P	**Pn**	**10 39 35.0**	**+5.9**
	180nm,1.1s						
CM31	**Chiang Mai Arr**	**20.23**	**359**	*e*P	**P**	**10 41 52.6**	**+0.3**
	4.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**20.23**	**359**	P	**P**	**10 41 50.9**	**-1.4**
	7.1nm,0.6s,baz=187,slow=10.0,SNR=39						
CMAR				LR	LR	10 50 34.5	
	comp=Z,932nm,18.2s,MS4.2,baz=316,slow=39						
CHG	**Chiang Mai**	**20.59**	**359**	⇓P	**P**	**10 41 57.1**	**+0.9**
	28nm,1.2s						
CHTO	**Chiang Mai**	**20.59**	**359**	*e*P	**P**	**10 41 56.2**	**+0.1**
	26nm,1.0s						
CHTO	**Chiang Mai**	**20.59**	**359**	*e*P	**P**	**10 41 56.2**	**0.0**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s						
KAPI	**Kappang**	**20.61**	**99**	P	**P**	**10 41 54.5**	**-2.0**
	comp=Z,7.4nm,0.4s,baz=272,slow=5.6,SNR=6.2						
KAPI	**Kappang**	**20.61**	**99**	*e*P	**P**	**10 41 54.3**	**-2.2**
	comp=Z,13nm,0.7s						
QIZ	**Qiongzhong**	**23.22**	**26**	P	**P**	**10 42 24.3**	**0.0**
QIZ				XP	sP	10 42 36.4	-1.1
QIZ				S	**S**	**10 46 34.6**	**+0.6**
QIZ				AMB	AMB		
	comp=Z

CD2 LR LR
comp=Z,650nm,18.0s,MS4.4
GKN Gorkha 32.92 336 *eP* **P 10 43 51.7 +0.4**
KOLN Koldanda 33.16 334 *eP* **P 10 43 54.1 +0.8**
comp=Z,50nm,0.8s,mb5.5
DANN Dangsing 33.59 335 *eP* **P 10 43 57.8 +0.7**
comp=Z,35nm,0.9s,mb5.3
PYUN Piuthan 33.71 333 *eP* **P 10 43 58.7 +0.5**
comp=Z,28nm,0.9s,mb5.2
KAKA Kakadu 34.49 110 P **P 10 44 03.6 -1.6**
KAKA *eP* pP 10 44 13.0 -1.8
NWAO Narrogin (SRO) 35.14 153 LR LR 10 59 10.1
comp=Z,307nm,18.2s,MS4.1,baz=308,slow=37
WHN Wuhan 35.30 23 P **P 10 44 11.5 -0.3**
WHN S **S 10 49 44.8 +1.0**
WHN LR LR
comp=N,997nm,19.8s,MS4.6
WHN LR LR
comp=E,473nm,19.0s,MS4.6
WHN LR LR
comp=Z,848nm,17.0s,MS4.6
XAN Xi'an 36.87 13 P **P 10 44 23.3 -2.0**
XAN AP pP 10 44 32.9 -2.1
XAN PP PP 10 45 49.1 -0.6
XAN S **S 10 50 05.3 -2.5**
XAN AMB AMB
comp=Z,19nm,0.7s,mb5.0
XAN AMB AMB
comp=Z,55nm,5.3s
XAN LR LR
comp=N,240nm,14.6s,MS4.5
XAN LR LR
comp=E,517nm,17.0s,MS4.5
XAN LR LR
comp=Z,889nm,16.0s,MS4.7
LZH Lanzhou 38.02 6 *eP* **P 10 44 34.1 -0.9**
LZH AMB AMB
comp=Z,19nm,1.3s,mb4.7
LZH AMB AMB
comp=Z,85nm,4.0s
LZH Lanzhou 38.02 6 *eP* **P 10 44 34.1 -0.9**
comp=Z,19nm,1.3s,mb4.7
LZH pP pP 10 44 40.5 -4.3
LZH sP sP 10 44 43.1 -5.7
NJ2 Nanjing 38.51 27 *eP* **P 10 44 40.6 +1.5**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
WRA Warramunga Arr 38.61 120 P **P 10 44 39.3 -0.9**
comp=Z,8.6nm,0.5s,mb4.7,baz=302,slow=9.1,SNR=114
WRA pP pP 10 44 55.3 +5.3
comp=Z,13nm,0.8s,baz=302,slow=9.1,SNR=9.9
WRA PcP PcP 10 46 52.5 +0.2
comp=Z,0.9nm,0.8s,baz=306,slow=3.1,SNR=3.1
WRA S **S 10 50 30.6 -4.0**
comp=Z,1.3nm,1.0s,baz=300,slow=17,SNR=6.6
WRAB Tennant Creek 38.62 120 *eP* **P 10 44 39.2 -1.1**
comp=Z,19nm,0.9s,mb4.8
WRAB Tennant Creek 38.62 120 *eP* **P 10 44 39.5 -0.8**
WB2 Warramunga Arr 38.62 120 *eP* **P 10 44 39.4 -0.9**
ASAR Alice Springs 39.85 126 P **P 10 44 50.5 0.0**
comp=Z,2.8nm,0.4s,mb4.4,baz=299,slow=7.4,SNR=91
ASAR pP pP 10 45 06.3 +6.0
comp=Z,16nm,0.9s,baz=300,slow=8.1,SNR=14
ASAR PcP PcP 10 46 56.4 +0.2
comp=Z,1.7nm,0.8s,baz=305,slow=4.7,SNR=4.1
ASAR S **S 10 50 51.4 -1.8**
comp=Z,1.1nm,0.7s,baz=299,slow=16,SNR=8.5
JOW Kunigami 39.94 42 P **P 10 44 51.8 +0.6**
comp=Z,14nm,0.9s,mb4.7,baz=252,slow=9.6,SNR=4.5
GTA Gaotai 41.11 1 ⇑P **P 10 45 00.9 +0.2**
GTA AP pP 10 45 10.8 +0.3
GTA XP sP 10 45 14.8 +0.3
GTA PP PP 10 46 39.8 +3.8
GTA PCP PcP 10 47 00.9 +1.1
GTA S **S 10 51 11.3 -0.2**
GTA SS SS 10 54 10.6 -4.4
GTA AMB AMB
comp=Z,25nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,120nm,4.5s
GTA LR LR
comp=N,281nm,19.5s,MS4.3
GTA LR LR
comp=E,242nm,16.5s,MS4.3
GTA LR LR
comp=Z,329nm,20.4s,MS4.2
HHC Hu-ho-hao-te 43.98 13 *eP* **P 10 45 26.6 +2.6**
HHC AP pP 10 45 36.9 +3.0
HHC XP sP 10 45 40.5 +2.6
HHC PP PP 10 47 12.1 +5.2
HHC PCS PcS 10 51 04.0 +1.7
HHC S **S 10 51 57.5 +3.8**
HHC XS sS 10 52 14.1 +4.0
HHC SS SS 10 55 07.4 -4.1
HHC AMB AMB
comp=Z,14nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,177nm,4.6s
HHC LR LR
comp=N,597nm,16.6s,MS4.7
HHC LR LR
comp=E,765nm,21.4s,MS4.7
HHC LR LR
comp=Z,560nm,17.8s,MS4.5
BJI Beijing 44.50 18 P **P 10 45 27.5 -0.6**
BJI S **S 10 52 02.4 +1.2**
BJI AMB AMB
comp=Z,27nm,0.9s,mb5.0
BJI AMB AMB
comp=Z,212nm,4.8s
BJI LR LR
comp=N,288nm,15.1s,MS4.5
BJI LR LR
comp=E,227nm,11.4s,MS4.5
BJI LR LR
comp=Z,161nm,23.2s
BJI Beijing 44.50 18 P **P 10 45 27.5 -0.6**
comp=Z,27nm,0.9s,mb5.0
BJI S **S 10 52 02.4 +1.2**
BJI SS SS 10 55 22.0 +0.5
BJI LR LR
comp=Z,160nm,23.2s,MS3.9
WMQ Urumqi 46.70 348 P **P 10 45 46.0 +0.5**
WMQ AP pP 10 45 56.0 +0.5
WMQ XP sP 10 46 00.0 +0.6
WMQ PP PP 10 47 36.0 +0.3
WMQ S **S 10 52 32.0 -0.9**
WMQ SS SS 10 55 51.0 -8.6
WMQ AMB AMB
comp=Z,41nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,89nm,4.0s
WMQ LR LR
comp=N,78nm,15.0s,MS4.0
WMQ LR LR
comp=E,89nm,14.0s,MS4.0
WMQ LR LR
comp=Z,106nm,15.0s,MS3.9
KS15 Wonju Array Si 47.25 31 *eP* **P 10 45 49.1 -0.8**
KSRS Korea Array 47.27 31 P **P 10 45 49.4 -0.8**
comp=Z,7.8nm,0.9s,mb4.7,baz=222,slow=8.4,SNR=28
KSRS LR LR 11 06 14.1
comp=Z,79nm,18.1s,MS3.7,baz=357,slow=37
PMG Port Moresby 48.12 101⇑*eP* **P 10 45 52.7 -4.4**
TKM2 Tokmak 2 49.48 337 *eP* **P 10 46 07.6 +0.6**
comp=Z,8.5nm,0.8s,mb4.8
TKM2 Tokmak 2 49.48 337 *eP* **P 10 46 07.6 +0.6**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
AML Almayashu 49.59 335 *eP* **P 10 46 08.2 +0.3**
comp=Z,9.3nm,0.7s,mb4.9
AML *ep*P pP 10 46 18.0 +0.1
STKA Stephens Creek 49.71 131 *eP* **P 10 46 09.7 +0.7**
comp=Z,14nm,1.6s,mb4.8
STKA Stephens Creek 49.71 131 P **P 10 46 09.8 +0.8**
comp=Z,7.7nm,0.8s,mb4.8,baz=310,slow=7.6,SNR=17
STKA pP pP 10 46 25.6 +6.5
comp=Z,9.1nm,0.6s,baz=328,slow=6.9,SNR=6.1
STKA LR LR 11 08 16.0
comp=Z,207nm,20.9s,MS4.1,baz=115,slow=37
SONM Songino Array 49.91 6 P **P 10 46 10.9 +0.7**
comp=Z,32nm,0.8s,mb5.4,baz=188,slow=8.9,SNR=228
SONM PcP PcP 10 47 30.7 +0.5
comp=Z,4.4nm,0.8s,baz=190,slow=4.0,SNR=5.4
EKS2 Erkin-Say 50.00 335 *eP* **P 10 46 11.8 +0.9**
comp=Z,12nm,0.8s,mb5.0

EKS2 *ep*P pP 10 46 21.0 0.0
ULN Ulaanbaatar 50.02 7 *eP* **P 10 46 11.5 +0.5**
comp=Z,31nm,0.9s,mb5.3
ULN Ulaanbaatar 50.02 7 *eP* **P 10 46 11.5 +0.5**
ULN pmax pmax
comp=Z,31nm,0.9s,mb5.3
MK31 Makanchi Array 50.76 345 *eP* **P 10 46 16.6 0.0**
MKAR Makanchi Array 50.76 345 P **P 10 46 16.7 +0.1**
comp=Z,5.0nm,0.5s,mb4.8,baz=154,slow=7.7,SNR=38
CN2 Changchun 51.16 24 *eP* **P 10 46 18.8 -0.9**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
ZAK Zakamensk 52.19 3 *eP* **P 10 46 27.3 0.0**
ZAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MAJO Matsushiro 52.62 39 *eP* **P 10 46 29.6 -1.1**
comp=Z,5.7nm,0.7s,mb4.6
MAJO Matsushiro 52.62 39 *eP* **P 10 46 29.6 -1.1**
MAJO pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MAT Matsushiro 52.62 39 P **P 10 46 29.3 -1.4**
MJAR Matsushiro Arr 52.62 39 P **P 10 46 29.5 -1.2**
comp=Z,4.1nm,0.7s,mb4.5,baz=223,slow=7.5,SNR=16
MJAR LR LR 11 07 45.7
comp=Z,70nm,20.2s,MS3.7,baz=230,slow=35
TLY Talaya 53.51 3 *eP* **P 10 46 37.2 +0.2**
comp=Z,14nm,0.8s,mb4.9
TLY Talaya 53.51 3 *eP* **P 10 46 37.6 +0.6**
TLY *e* pP 10 46 45.3 -1.8
TLY pmax pmax
comp=Z,18nm,1.0s,mb5.0
TLY MLR MLR
comp=Z,174nm,15.0s,MS4.2
MDJ Mudanjiang 53.59 27 P **P 10 46 37.3 -0.4**
MDJ AP pP 10 46 46.3 -1.5
MDJ PP PP 10 48 36.3 -2.5
MDJ S **S 10 54 08.4 -0.5**
MDJ AMB AMB
comp=Z,9.0nm,1.0s,mb4.7
MDJ AMB AMB
comp=Z,114nm,4.0s
MDJ LR LR
comp=N,175nm,16.6s
MDJ LR LR
comp=Z,207nm,16.6s,MS4.3
OPO Ambohidratompo 53.69 248 P **P 10 46 40.0 +1.1**
comp=Z,1.3nm,0.3s,mb4.3,baz=82,slow=6.8,SNR=3.5
IRK Irkutsk 54.10 4 *eP* **P 10 46 41.2 -0.1**
IRK *e* 10 46 59.6
IRK pmax pmax
comp=Z,46nm,3.7s
KURK Kurchatov 55.33 344 *eP* **P 10 46 50.2 0.0**
comp=Z,19nm,0.9s,mb5.1
KURK Kurchatov 55.33 344 *eP* **P 10 46 50.2 0.0**
KURK pmax pmax
comp=Z,19nm,0.9s,mb5.1
ZAA0 Zalesovo Array 56.95 350 *eP* **P 10 47 01.8 0.0**
ZALV Zalesovo Beam 56.95 350 P **P 10 47 01.8 0.0**
comp=Z,33nm,0.9s,mb5.4,baz=177,slow=5.9,SNR=84
ZALV LR LR 11 17 17.3
comp=Z,70nm,18.3s,MS3.8,baz=105,slow=42
ZALV Zalesovo Beam 56.95 350 P **P 10 47 01.8 0.0**
ZALV LR LR 11 17 17.3
NVS Novosibirsk 58.09 349 *i* P **P 10 47 08.4 -1.4**
NVS *i* S **S 10 55 08.4 0.0**
NVS pmax pmax
comp=Z,31nm,1.8s,mb5.0
NVS pmax pmax
comp=N,8.0nm,0.8s
NVS pmax pmax
comp=E,7.0nm,0.8s
NVS smax
comp=N,9.0nm,1.4s
NVS smax
comp=E,7.0nm,1.4s
BVAR Borovoye Array 59.87 340 P **P 10 47 21.2 -0.9**
comp=E,5.0nm,0.8s,mb4.6,baz=141,slow=7.6,SNR=23
BVAR pP pP 10 47 38.6 +6.3
comp=E,4.6nm,0.6s,baz=141,slow=9.0,SNR=5.8
ASAJ Asahikawa 59.91 35 P **P 10 47 22.9 +0.3**
comp=E,6.7nm,0.6s,mb4.9,baz=234,slow=3.5,SNR=9.3
BRVK Borovoye 59.93 340 *eP* **P 10 47 21.8 -0.8**
comp=E,8.7nm,0.7s,mb4.9
BRVK Borovoye 59.93 340 *eP* **P 10 47 21.8 -0.7**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
BOD Bodaibo 60.69 9 *eP* **P 10 47 27.7 +0.1**
BOD pmax pmax
comp=Z,23nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 61.75 32 *eP* **P 10 47 33.3 -1.7**
comp=Z,39nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 61.75 32⇑*eP* **P 10 47 34.5 -0.6**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
SVE Sverdlovsk 66.34 338⇑*eP* **P 10 48 04.7 -0.3**
SVE pmax pmax
comp=Z,27nm,1.0s,mb5.2
ARU Arti 66.85 337 *eP* **P 10 48 07.5 -0.8**
comp=Z,17nm,1.3s,mb4.9
ARU Arti 66.85 337 *eP* **P 10 48 07.5 -0.8**
ARU pmax pmax
comp=Z,17nm,1.3s,mb4.9
YAK Yakutsk 67.81 15 *eP* **P 10 48 12.7 -1.6**
comp=Z,43nm,0.9s,mb5.5
YAK *ep*P pP 10 48 21.5 -3.1
YAK Yakutsk 67.81 15 *eP* **P 10 48 12.1 -2.2**
YAK *e* pP 10 48 20.3 -4.3
YAK pmax pmax
comp=Z,61nm,1.1s,mb5.5
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=E,21nm,1.5s
MAW Mawson 70.22 194 LR LR 11 14 24.4
comp=E,150nm,19.1s,MS4.3,baz=321,slow=32
MAW Mawson 70.22 194 *eP* **P 10 48 29.5 +0.3**
comp=E,4.6nm,1.1s,mb4.3
MAW *ep*P pP 10 48 41.0 +1.4
MAW Mawson 70.22 194 *eP* **P 10 48 29.5 +0.4**
MAW *e**PP pP 10 48 41.0 +1.5
MAW pmax pmax
comp=Z,5.0nm,1.1s
ANN Anapa 71.82 319 *eP* **P** 10 48 56.7 +7.0
ANN pmax pmax
comp=Z,71nm,1.4s,mb5.4
PETK Petropavlovsk- 73.16 32 P **P 10 48 46.1 -1.0**
comp=Z,4.7nm,0.6s,mb4.6,baz=220,slow=1.0,SNR=14
PET Petropavlovsk 73.63 33 *eP* **P 10 48 49.6 -0.3**
PET Petropavlovsk 73.63 33⇓*iP* **P 10 48 49.8 -0.1**
PET *eS* S 10 58 17.5 -0.4
PET pmax pmax
comp=Z,38nm,1.1s,mb5.2
PET MLR MLR
comp=Z,100nm,16.0s,MS4.2
RPZ Rata Peaks 75.52 135 LR LR 11 22 16.5
comp=Z,329nm,19.4s,MS4.7,baz=212,slow=36
TIXI Tiksi 75.86 9 *eP* **P 10 48 59.3 -3.2**
TIXI pmax pmax
comp=Z,15nm,1.7s,mb4.7
OBN Obninsk 76.36 328⇓*eP* **P 10 49 05.6 0.0**
OBN *e* pP 10 49 15.6 -0.5
OBN pmax pmax
comp=Z,12nm,1.2s,mb4.7
AKASG Malin Array Be 79.00 322 P **P 10 49 18.9 -1.5**
comp=Z,0.2nm,0.3s,mb3.5,baz=103,slow=4.2,SNR=4.0
AKASG LR LR 11 28 29.8
comp=Z,48nm,21.6s,MS3.8,baz=300,slow=39
URZ Urewera 79.22 128 LR LR 11 23 56.0
comp=Z,259nm,18.6s,MS4.6,baz=270,slow=35
BUR08 Bucovina Ar. S 80.77 319 *eP* **P 10 49 30.8 +0.8**
TSUM Tsumeb 81.59 251 *eP* **P 10 49 35.7 +0.6**
comp=Z,1.1nm,0.3s,mb4.3
LVV L'vov 82.00 321 *eP* pP 10 49 54.4 +7.3
BILL Bilibino 83.30 20 *eP* **P 10 49 45.6 +2.7**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
ARCES ARCESS Array B 86.16 340 P **P 10 49 57.4 +0.1**
comp=Z,3.7nm,0.8s,mb4.6,baz=48,slow=1.8,SNR=8.4
GERES GERESS Array B 88.54 319 P **P 10 50 09.3 +0.1**
comp=Z,0.3nm,0.4s,mb4.0,baz=79,slow=5.1,SNR=6.4
BRG Berggiesshubel 88.55 321 *eP* **P 10 50 10.7 +1.5**
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
BRG Berggiesshubel 88.55 321 *eP* **P 10 50 10.7 +1.5**
comp=Z,8.7nm,1.2s,mb5.0
CLL Collm 89.17 321 *eP* **P 10 50 11.0 -1.1**

NOA NORSAR Array B 90.74 331 LR LR 11 34 17.1
comp=Z,65nm,19.4s,MS4.1,baz=260,slow=38
SNAA Sanae 92.03 198 *eP* **P 10 50 25.9 +0.8**
NVAR Mina Array Bea 129.94 39 PKP PKPdf 10 56 26.5 0.0
comp=Z,0.7nm,0.8s,baz=243,slow=1.3,SNR=3.1
PDAR Pinedale Array 131.81 29 PKP PKPdf 10 56 30.0 +0.1
comp=Z,0.4nm,0.6s,baz=208,slow=2.9,SNR=4.1
PDAR pPKP pPKPdf 10 56 47.8 +6.9
comp=Z,0.5nm,0.7s,baz=183,slow=3.0,SNR=3.5
ELN Prospectdale 144.85 0 *e*PKPdf PKPdf 10 56 51.9 -2.0
GNAR Gosnell 145.01 13 *e*PKPdf PKPdf 10 56 54.1 -0.2
TXAR Lajitas Array 145.02 37 PKP PKPdf 10 56 54.7 +0.2
comp=Z,19nm,0.8s,baz=260,slow=0.9,SNR=217
WVT Waverly 145.30 10 *e*PKPbc PKPbc 10 56 54.2 -0.3
MIAR Mount Ida 145.36 19 *e*PKPbc PKPbc 10 56 54.6 -0.1
TZTN Tazewell 145.43 4 *e*PKPbc PKPbc 10 56 54.4 -0.5
UALR University of 145.53 17 *e*PKPbc PKPbc 10 56 54.9 -0.4
JCT Junction City 146.28 31 *e*PKPbc PKPbc 10 56 58.0 +0.3
TKL Tuckaleechee C 146.29 5 *e*PKPbc PKPbc 10 56 56.7 -0.8
CPCT Cooper Cave 146.43 6 *e*PKPbc PKPbc 10 56 57.4 -0.6
SWET Sewanee 146.49 8 *e*PKPbc PKPbc 10 56 57.3 -0.9
OXF Oxford 146.55 13 *e*PKPbc PKPbc 10 56 57.7 -0.6
JSC Jenkinsville 147.78 1 *e*PKPbc PKPbc 10 57 01.2 -0.6
GOGA Godfrey 148.54 4 *e*PKPbc PKPbc 10 57 03.5 -0.4
GOGA *e*PKPab PKPab 10 57 06.7 -0.6
HKT Hockley 148.60 26 *e*PKPbc PKPbc 10 57 04.1 -0.1

NEIC 14 10:37:37.3, 929N×8449W, h5km, MD4.3(CASC), **2C-8D, After CASC., Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QCR	**Quepos**	**0.34**	**68**	⇓*eP*		Pg 10 37 44.9	+0.9
PRS1	**Puriscal**	**0.71**	**14**	⇓*iP*		Pg 10 37 49.0	-2.0
CGA2	**Cerro Gallo 2**	**0.72**	**2**	⇓*eP*		Pg 10 37 51.1	-0.1
BUS	**Buena Vista**	**0.77**	**70**	⇓*eP*		Pg 10 37 52.0	-0.1
SJS	**Escuela Geolog**	**0.77**	**34**	⇓*eP*		Pg 10 37 51.9	-0.3
SJS				*eS*		Sg 10 38 03.7	+1.5
JCR	**Jicaral**	**0.83**	**312**	⇑*eP*		Pg 10 37 53.5	+0.3
URSC	**Urasca**	**0.88**	**52**	⇓*iP*		Pg 10 37 54.0	-0.3
FORC	**Fortuna**	**1.19**	**351**	⇓*eP*		Pg 10 37 59.4	-0.6
ACR	**Cerro Adams**	**1.45**	**116**	⇓*eP*		Pn 10 38 02.6	-1.6
LIO	**Limon**	**1.60**	**64**	⇑*eP*		Pn 10 38 05.9	-0.3
LIO				*eS*		Sn 10 38 26.7	-0.5
BCIP	**Isla Barro Col**	**4.59**	**91**	*e*Pn		Pn 10 38 47.2	-0.2

ISCJB ***14*** *10:39:51.3±0.8, 7.07N±0.08×72.95W±0.09, h178km±9km, Error ellipse: s-maj=17.2km s-min=7.7km az=39.1*
IDC ***14*** *10:39:51.3±0.8, 6.84N×72.76W, h181km±9km, mb2.6/1, mb1 3.1/3, mb1mx2.9/19, mbtmp2.9/3, Error ellipse: s-maj=46.8km s-min=7.7km az=132.0*
FUNV ***14*** *10:39:51.6, 7.01N×73.02W, h188km, MW3.4*

ISC 14 10:39:52.3±0.8, 7.06N±0.08×72.94W±0.09, h174km±9km, n12, σ0°91/16, 2C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.01**	**38**	⇓*iP*	**Pn**	**10 40 20.5**	**+1.0**
CAPV				*eS*	**Sn**	**10 40 41.3**	**+0.8**
VIGV	**El Vigia**	**2.36**	**41**	⇓*iP*	**Pn**	**10 40 34.0**	**+0.9**
VIGV				*eS*	**Sn**	**10 41 03.8**	**-0.8**
SOCV	**Socops**	**2.40**	**59**	⇓*iP*	**Pn**	**10 40 34.1**	**+0.7**
SOCV				*eS*	**Sn**	**10 41 05.5**	**+0.2**
ROSC	**El Rosal**	**2.59**	**212**	P	**Pn**	**10 40 35.6**	**-0.1**
	3.8nm,0.3s,baz=87,slow=20,SNR=9.1						
ROSC				S	**Sn**	**10 41 08.7**	**-0.7**
	17nm,0.3s,baz=270,slow=23,SNR=14						
SDV	**Santo Domingo**	**2.92**	**51**	P	**Pn**	**10 40 40.6**	**+0.9**
	10nm,0.3s,baz=245,slow=8.8,SNR=55						
SDV				S	**Sn**	**10 41 16.6**	**+0.1**
	7.5nm,0.3s,baz=75,slow=21,SNR=16						
ELOV	**Elorza**	**3.43**	**91**	⇓*iP*	**Pn**	**10 40 45.5**	**-0.5**
VIRV	**Villa del Rosa**	**3.46**	**9**	⇑*iP*	**Pn**	**10 40 45.9**	**-0.5**
VIRV				*eS*	**Sn**	**10 41 25.8**	**-2.9**
CURV	**Curarigua**	**4.16**	**45**	⇓*iP*	**Pn**	**10 40 55.2**	**-0.1**
BAUV	**El Baul**	**5.20**	**69**	⇑*iP*	**Pn**	**10 41 07.1**	**-1.7**
TXAR	**Lajitas Array**	**36.44**	**311**	P	**P**	**10 46 41.3**	**+0.9**
	0.2nm,0.7s,baz=120,slow=8.4,SNR=2.5						
ASAR	**Alice Springs**	**149.39**	**234**	PKPbc	PKPbc	10 59 19.2	-2.2
	0.2nm,0.5s,baz=110,slow=3.4,SNR=4.9						
WRA	**Warramunga Arr**	**150.60**	**241**	PKPbc	PKPbc	10 59 22.7	-1.8
	0.3nm,0.4s,baz=110,slow=2.4,SNR=5.9						

IDC ***14*** *10:50:28.3±4.0, 2.13S×12.15W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/20, mbtmp4.0/3, ML3.9/1, MS3.6/10, Ms1 3.6/10, ms1mx3.4/20, Error ellipse: s-maj=147.7km s-min=64.0km az=131.0*

ISC 14 10:50:32.7±2.9, 17S±07×123W±07, h10km, n15, σ0°57/8, mb3.6/1, MS3.6/8, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**10.69**	**43**	*eP*	**Pn**	**10 53 07.0**	**+1.0**
	94nm,1.5s						
LIC	**Lamto**	**10.69**	**43**	*eP*	**Sn**	**10 55 06.0**	**+0.1**
	50nm,0.9s						
KIC	**Kosan Boka**	**10.99**	**43**	*eP*	**Pn**	**10 53 09.6**	**-0.5**
	130nm,1.4s						
TIC	**Toumodi**	**11.01**	**41**	*eP*	**Pn**	**10 53 10.5**	**+0.2**
	108nm,1.0s						
DBIC	**Dimbokro**	**11.13**	**42**	Pn	**Pn**	**10 53 11.1**	**-1.0**
	0.8nm,0.3s,baz=219,slow=13,SNR=11						
DBIC				Sn	**Sn**	**10 55 08.0**	**-8.7**
	1.2nm,0.3s,baz=318,slow=20,SNR=6.9						
DBIC				LR	LR	10 56 41.0	
	comp=Z,582nm,21.2s,baz=201,slow=33						
BBTS	**Babate**	**16.77**	**346**	LR	LR	10 59 17.7	
	comp=Z,84nm,20.7s,baz=162,slow=31						
TORD	**Torodi Ar. Bea**	**20.24**	**43**	P	**P**	**10 55 08.5**	**+0.2**
	8.4nm,0.6s,baz=231,slow=11,SNR=44						
TORD				LR	LR	11 02 08.6	
	comp=Z,336nm,20.7s,MS3.7,baz=230,slow=34						
BDFB	**Brasilia**	**37.84**	**246**	LR	LR	11 11 07.0	
	comp=Z,26nm,18.6s,MS3.1,baz=248,slow=33						
KEST	**Kesra**	**42.35**	**26**	LR	LR	11 17 15.8	
	comp=Z,43nm,19.8s,MS3.3,baz=257,slow=38						
GERES	**GERESS Array B**	**55.14**	**21**	P	**P**	**11 00 05.2**	**0.0**
	0.4nm,0.6s,mb3.6,baz=184,slow=7.7,SNR=2.6						
GERES				LR	LR	11 27 04.1	
	comp=Z,27nm,18.7s,MS3.4,baz=98,slow=40						
LPAZ	**La Paz**	**56.82**	**252**	LR	LR	11 23 08.2	
	comp=Z,105nm,18.6s,MS4.0,baz=118,slow=34						
ROSC	**El Rosal**	**62.31**	**276**	LR	LR	11 24 17.7	
	comp=Z,86nm,21.6s,MS3.9,baz=57,slow=32						
PLCA	**Paso Flores**	**65.25**	**225**	LR	LR	11 24 52.8	
	comp=Z,45nm,19.6s,MS3.7,baz=151,slow=32						
MAW	**Mawson**	**82.82**	**158**	LR	LR	11 33 29.0	
	comp=Z,51nm,18.5s,MS3.9,baz=62,slow=31						
ASAR	**Alice Springs**	**138.59**	**130**	PKP	PKPdf	11 09 55.5	-4.2
	0.2nm,0.6s,baz=225,slow=2.5,SNR=4.5						

SGS ***14*** *11:12:45.9, 30.13N×3621E, h10km*
ISCJB ***14*** *11:12:46.1±0.9, 2986N±004×3626E±005, h0km, Error ellipse: s-maj=7.0km s-min=5.5km az=158.2*
GII ***14*** *11:12:46.1±0.0, 2987N×3626E, h0km, ML2.4/2, EXPLOSION*
HLW ***14*** *11:12:48.7, 2963N×3643E, h15km, Mb3.0*
CSEM ***14*** *11:12:49.3±0.6, 2963N×3614E, h2km, ML3.0, Error ellipse: s-maj=14.7km s-min=6.7km az=75.0*

ISC 14 11:12:46.2±0.9, 2985N±004×3630E±005, h0km, n22, σ0°98/27, 1C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.09**	**264**	Pg	**Pg**	**11 13 06.4**	**-0.7**
HRFI	**Mount Harif**	**1.11**	**280**	Pg	**Pg**	**11 13 06.4**	**-1.0**
EIL	**Elat**	**1.18**	**261**	Pg	**Pg**	**11 13 08.3**	**-0.6**
EIL				Sg	**Sg**	**11 13 25.1**	**+0.9**
MBRI	**Mt Berech**	**1.20**	**268**	Pg	**Pg**	**11 13 08.1**	**-1.1**
MBRI				Sg	**Sg**	**11 13 24.4**	**-0.4**
HQLS		**1.21**	**243**	S	**Sg**	**11 13 24.9**	**0.0**
HQLS		**1.21**	**243**	P	**Pg**	**11 13 08.2**	**-1.1**
HQLS				S	**Sg**	**11 13 25.0**	**0.0**
PRNI	**Paran**	**1.22**	**294**	Pg	**Pg**	**11 13 09.1**	**-0.6**
PRNI				Sg	**Sg**	**11 13 26.1**	**+0.5**
JLOS		**1.32**	**212**	P	**Pg**	**11 13 11.3**	**-0.1**
KRMI	**Paran Flat**	**1.39**	**281**	Pn	**Pn**	**11 13 11.4**	**-1.4**
HBST	**Basata**	**1.50**	**245**	P	**Pn**	**11 13 14.8**	**+0.4**
RMNI	**Mount Ramon**	**1.52**	**300**	Sn	**Sn**	**11 13 33.8**	**-1.3**

TBKS	**Tabuk**	**1.64**	**172**	P	**Pn**	**11 13 16.8 +0.5**
MZDA	**Masada**	**1.66**	**331**	Pn	**Pn**	**11 13 16.1 -0.5**
BDAS	**Al Bad'**	**1.76**	**217**	P	**Pn**	**11 13 17.3 -0.6**
YTIR	**Yattir**	**1.82**	**326**	Sn	**Sn**	**11 13 42.7 +0.3**
DSI	**Dead Sea**	**1.88**	**336**	Pn	**Pn**	**11 13 19.6 -0.1**
KZIT	**Kziot**	**1.95**	**303**	Sn	**Sn**	**11 13 46.1 +0.5**
HNKL	**Nakhl**	**2.01**	**273**	*i*P	**Pn**	**11 13 22.9 +1.5**
HNKL				S	**Sn**	**11 13 48.9 +1.6**
HKAT	**Jabal Katrina**	**2.41**	**237**	*e*P	**Pn**	**11 13 27.1 +0.2**
TR2		**2.68**	**238**	P	**Pn**	**11 13 30.7 +0.1**
AMAG	**Maghara**	**2.78**	**287**	P	**Pn**	**11 13 35.0 +2.9**
SUZ		**3.01**	**271**	P	**Pn**	**11 13 37.6 +2.5**

BJI ***14*** *11:41:27.5,259S×9977E,h21km,mB5.0,mb4.8,Ms5.0, Ms2.4*
ISCJB ***14*** *11:41:32.6±0.5, 198S±005×9925E±005,h22km,mb4.7/29, MS3.6/3,Error ellipse: s-maj=7.9km s-min=7.1km az=18.9*
NEIC ***14*** *11:41:34.9±0.6, 194S×9930E,mb4.6/8,Error ellipse: s-maj=20.7km s-min=6.6km az=55.0*
MOS ***14*** *11:41:34.8±1.0, 180S×9936E,h33km,mb4.8/10,Error ellipse: s-maj=20.1km s-min=9.5km az=96.4*
IDC ***14*** *11:41:39.4±4.0, 179S×9950E,h50km±33km,mb4.1/12, mb1 4.2/12,mb1mx4.0/19,mbtmp4.1/12,MS3.6/3, Ms1 3.5/3,ms1mx3.1/25,Error ellipse: s-maj=39.8km s-min=13.3km az=56.0*
DJA ***14*** *11:41:43, 187S×9996E,h23km,MLv4.4/4*
ISC 14 11:41:35.1±0.5,**196S**±005×**9933E**±005,**h24**km, **h24**km±1.7km**:pP-P,n60,**σ**0§98**/56,**mb4.7**/29,**MS3.6**/3,3C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.54**	**48**	P	**Pn**	**11 42 01.5**	**+0.4**
PDSI	**Padang**	**1.54**	**48**	S	**Sn**	**11 42 20.5**	**+0.1**
PPI	**Padang Panjang**	**1.83**	**36**	P	**Pn**	**11 42 05.8**	**+0.6**
PPI	**Padang Panjang**	**1.83**	**36**	S	**Sn**	**11 42 27.0**	**-0.7**
RGRI	**Rengat**	**3.40**	**62**	P	**Pn**	**11 42 29.1**	**+2.3**
RGRI	**Rengat**	**3.40**	**62**	S	**Sn**	**11 42 59.4**	**-7.1**
CMAR	**Chiang Mai Arr**	**20.29**	**359**	P	**P**	**11 46 08.9**	**-0.4**
	comp=Z,8.0nm,0.6s,baz=187,slow=10.0,SNR=19						
KAPI	**Kappang**	**20.61**	**99**	P	**P**	**11 46 14.3**	**+1.4**
	comp=Z,7.1nm,0.7s,baz=264,slow=15,SNR=4.2						
CHTO	**Chiang Mai**	**20.64**	**359**	*e*P	**P**	**11 46 12.5**	**-0.7**
	6.1nm,0.9s						
CHTO	**Chiang Mai**	**20.64**	**359**	*e*P	**P**	**11 46 12.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ODAN	**Odare**	**30.88**	**339**	*e*P	**P**	**11 47 50.8**	**+1.0**
TAPN	**Taplejung**	**31.21**	**340**	*e*P	**P**	**11 47 53.9**	**+1.1**
	comp=Z,26nm,0.9s,mb5.1						
RAMN	**Ramite**	**31.25**	**338**	*e*P	**P**	**11 47 54.5**	**+1.4**
	comp=Z,15nm,0.7s,mb4.9						
JIRN	**Jiri**	**32.05**	**338**	*e*P	**P**	**11 48 01.5**	**+1.4**
	comp=Z,25nm,0.7s,mb5.2						
GUN	**Gumba**	**32.39**	**337**	*e*P	**P**	**11 48 04.1**	**+1.0**
	comp=Z,24nm,0.6s,mb5.2						
KKN	**Kakani**	**32.52**	**336**	*e*P	**P**	**11 48 04.8**	**+0.5**
KOLN	**Koldanda**	**33.20**	**334**	*e*P	**P**	**11 48 11.3**	**+1.0**
	comp=Z,24nm,0.7s,mb5.2						
DANN	**Dangsing**	**33.64**	**335**	*e*P	**P**	**11 48 14.6**	**+0.5**
	comp=Z,13nm,0.8s,mb4.9						
PYUN	**Piuthan**	**33.76**	**333**	*e*P	**P**	**11 48 16.0**	**+0.9**
XAN	**Xi'an**	**36.93**	**13**	P	**P**	**11 48 40.8**	**-1.5**
XAN				AP	pP	11 48 48.8	-0.7
XAN				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**38.59**	**120**	P	**P**	**11 48 56.3**	**-0.3**
	comp=Z,5.6nm,0.8s,mb4.4,baz=302,slow=9.1,SNR=40						
WRA				PcP	PcP	11 51 09.7	+0.7
	comp=Z,0.4nm,0.6s,baz=314,slow=2.5,SNR=4.9						
WRA				LR	LR	12 06 21.8	
	comp=Z,34nm,18.4s,MS3.2,baz=225,slow=38						
WRA	**Warramunga Arr**	**38.59**	**120**	P	**P**	**11 48 56.3**	**-0.3**
WRA						11 51 09.7	
WRAB	**Tennant Creek**	**38.60**	**120**	*e*P	**P**	**11 48 57.0**	**+0.3**
	comp=Z,4.3nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**38.60**	**120**	*e*P	**P**	**11 48 57.0**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	**38.60**	**120**	*e*P	**P**	**11 48 56.4**	**-0.3**
ASAR	**Alice Springs**	**39.82**	**126**	P	**P**	**11 49 07.1**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.0,baz=299,slow=7.4,SNR=15						
ASAR				PcP	PcP	11 51 14.1	+1.3
	comp=Z,0.7nm,0.7s,baz=294,slow=3.1,SNR=4.4						
ASAR				S	**S**	**11 55 08.8**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=297,slow=14,SNR=3.3						
GTA	**Gaotai**	**41.17**	**1**	*e*P	**P**	**11 49 18.1**	**+0.4**
GTA				AP	pP	11 49 24.5	-0.5
GTA				XP	sP	11 49 28.1	+0.2
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
KSRS	**Korea Array**	**47.33**	**31**	P	**P**	**11 50 06.2**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.2,baz=219,slow=8.8,SNR=11						
STKA	**Stephens Creek**	**49.68**	**131**	*e*P	**P**	**11 50 26.7**	**+1.3**
	comp=Z,2.9nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**49.68**	**131**	P	**P**	**11 50 26.8**	**+1.4**
	comp=Z,3.7nm,0.8s,mb4.5,baz=305,slow=8.3,SNR=10						
STKA				LR	LR	12 12 09.5	
	comp=Z,93nm,18.9s,MS3.8,baz=14,slow=37						
SONM	**Songino Array**	**49.97**	**6**	P	**P**	**11 50 28.0**	**+0.7**
	comp=Z,9.3nm,0.6s,mb5.0,baz=189,slow=9.2,SNR=78						
SONM				PcP	PcP	11 51 47.9	+0.7
	comp=Z,1.9nm,0.7s,baz=197,slow=3.9,SNR=3.7						
EKS2	**Erkin-Say**	**50.04**	**335**	*e*P	**P**	**11 50 28.7**	**+0.9**
	comp=Z,6.7nm,0.8s,mb4.7						
EKS2				*e*pP	pP	11 50 34.6	-0.7
ULN	**Ulaanbaatar**	**50.08**	**7**	*e*P	**P**	**11 50 28.0**	**0.0**
	comp=Z,11nm,1.0s,mb4.8						
ULN				*e*pP	pP	11 50 34.0	-1.4
ULN	**Ulaanbaatar**	**50.08**	**7**	*e*P	**P**	**11 50 28.0**	**0.0**
ULN				*e**PP	pP	11 50 34.0	-1.4
ULN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
MK31	**Makanchi Array**	**50.81**	**345**	*e*P	**P**	**11 50 33.8**	**+0.2**
MKAR	**Makanchi Array**	**50.81**	**345**	P	**P**	**11 50 33.8**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.4,baz=150,slow=8.2,SNR=20						
ZAK	**Zakamensk**	**52.25**	**3**	*e*P	**P**	**11 50 44.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MJAR	**Matsushiro Arr**	**52.67**	**39**	P	**P**	**11 50 46.7**	**-1.0**
	comp=Z,1.9nm,0.8s,mb4.1,baz=221,slow=8.6,SNR=5.1						
TLY	**Talaya**	**53.56**	**3**	*e*P	**P**	**11 50 55.1**	**+1.2**
	comp=Z,5.0nm,0.7s,mb4.5						
TLY				*e*pP	pP	11 51 02.9	+1.5
TLY	**Talaya**	**53.56**	**3**	*e*P	**P**	**11 50 54.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
HIA	**Hailar**	**53.99**	**16**	*e*P	**P**	**11 50 56.5**	**-0.6**
KURK	**Kurchatov**	**55.38**	**344**	*e*P	**P**	**11 51 07.0**	**-0.2**
	comp=Z,5.1nm,0.8s,mb4.6						
KURK	**Kurchatov**	**55.38**	**344**	*e*P	**P**	**11 51 07.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZAA0	**Zalesovo Array**	**57.01**	**350**	*e*P	**P**	**11 51 18.4**	**-0.4**
ZALV	**Zalesovo Beam**	**57.01**	**350**	P	**P**	**11 51 18.3**	**-0.4**
	comp=Z,11nm,0.8s,mb5.0,baz=179,slow=5.9,SNR=39						
NVS	**Novosibirsk**	**58.14**	**349**	*e*P	**P**	**11 51 24.3**	**-2.5**
YSS	**Yuzh-Sakhalins**	**61.80**	**32**	*e*P	**P**	**11 51 51.9**	**-0.2**
	comp=Z,21nm,0.8s,mb5.3						
YSS	**Yuzh-Sakhalins**	**61.80**	**32**	*e*P	**P**	**11 51 51.6**	**-0.5**
YSS				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.2						
ARU	**Arti**	**66.90**	**337**	*e*P	**P**	**11 52 24.0**	**-1.3**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
YAK	**Yakutsk**	**67.87**	**15**	*e*P	**P**	**11 52 30.0**	**-1.3**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
KIV	**Kislovodsk**	**68.07**	**319**	*e*P	**P**	**11 52 32.0**	**-0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
MAW	**Mawson**	**70.16**	**194**	LR	LR	12 18 24.4	
	comp=Z,47nm,18.3s,MS3.8,baz=120,slow=31						
PETK	**Petropavlovsk-**	**73.21**	**32**	P	**P**	**11 53 03.5**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.3,baz=293,slow=2.9,SNR=7.7						
TIXI	**Tiksi**	**75.92**	**9**	*e*P	**P**	**11 53 17.2**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						

ARCES	**ARCESS Array B**	**86.20**	**340**	P	**P**	**11 54 13.6**	**-0.6**
	comp=Z,2.8nm,0.8s,mb4.5,baz=64,slow=6.1,SNR=4.8						
KONO	**Kongsberg**	**91.54**	**329**	*e*P	**P**	**11 54 37.7**	**-2.0**
TXAR	**Lajitas Array**	**145.07**	**37**	PKP	PKPdf	12 01 11.7	+0.3
	comp=Z,8.0nm,0.7s,baz=196,slow=1.4,SNR=103						
WVT	**Waverly**	**145.36**	**10**	*e*PKPdf	PKPdf	12 01 10.7	-1.0
MIAR	**Mount Ida**	**145.42**	**19**	*e*PKPdf	PKPdf	12 01 11.3	-0.4
JCT	**Junction City**	**146.33**	**31**	*e*PKPbc	PKPbc	12 01 15.1	+0.5

IDC 14 11:45:15.7±4.2,**216S**×**1243W,h0**km,**mb3.7**/2,**mb1 4.0**/3, **mb1mx3.6**/20,**mbtmp3.9**/3,**ML3.6**/1,**MS3.5**/5,**Ms1 3.5**/5, **ms1mx3.2**/22,**Error ellipse: s-maj=155.5km s-min=66.6km az=132.0,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**11.13**	**42**	*e*P	Pn	11 47 59.0	+2.7
	50nm,1.3s						
KIC	**Kosan Boka**	**11.43**	**42**	*e*P	Pn	11 47 57.5	-2.8
	96nm,1.6s						
TIC	**Toumodi**	**11.45**	**40**	*e*P	Pn	11 47 59.9	-0.8
	7.6nm,0.2s						
DBIC	**Dimbokro**	**11.58**	**41**	Pn	Pn	11 48 02.1	-0.3
	0.4nm,0.3s,baz=214,slow=15,SNR=4.8						
DBIC				Sn	Sn	11 49 56.5	-16
	0.1nm,0.3s,baz=317,slow=19,SNR=2.4						
DBIC				LR	LR	11 51 28.6	
	comp=Z,218nm,21.3s,baz=208,slow=32						
TORD	**Torodi Ar. Bea**	**20.68**	**42**	P		11 49 57.6	+0.1
	2.6nm,0.7s,baz=230,slow=10,SNR=15						
TORD				LR	LR	11 56 56.9	
	comp=Z,128nm,21.4s,baz=225,slow=34						
BOSA	**Boshof**	**44.51**	**130**	LR	LR	12 09 10.8	
	comp=Z,65nm,20.3s,baz=210,slow=32						
GERES	**GERESS Array B**	**55.63**	**21**	P	P	11 54 53.4	+0.1
	0.7nm,0.7s,baz=203,slow=9.6,SNR=4.5						
LPAZ	**La Paz**	**56.55**	**252**	LR	LR	12 17 47.8	
	comp=Z,38nm,19.4s,baz=215,slow=34						
PLCA	**Paso Flores**	**64.83**	**225**	LR	LR	12 22 40.9	
	comp=Z,26nm,18.1s,baz=2.8,slow=35						
ASAR	**Alice Springs**	**138.38**	**130**	PKP	PKPdf	12 04 43.6	-0.5
	0.1nm,0.4s,baz=212,slow=3.3,SNR=2.9						

CSEM ***14*** *11:51:21.4±0.1,3694N×2930E,h20km,MD2.9,Error ellipse: s-maj=2.1km s-min=1.8km az=46.0*
ISK ***14*** *11:51:21.7,3693N×2931E,h22km,MD2.9*
ISCJB ***14*** *11:51:22.2±0.7,3696N±005×2930E±007,h22km±11km, Error ellipse: s-maj=9.6km s-min=7.1km az=37.4*
DDA ***14*** *11:51:24.6,3733N×2940E,h7km±5km,Md2.7*
ISC 14 11:51:22.2±0.7,**3696N**±005×**2930E**±006,**h18**km±8km,**n9,** σ**0§49**/13,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**38**	*i* P	**Pg**	**11 51 28.5**	**-1.0**
GOLH				*i* S	**Sg**	**11 51 34.9**	**+0.3**
FETY	**Fethiye**	**0.37**	**207**	*e*PG	**Pg**	**11 51 29.3**	**-0.6**
FETY				*e*SG	**Sg**	**11 51 35.3**	**+0.1**
ELL	**Elmali**	**0.54**	**113**	*e*PG	**Pg**	**11 51 32.6**	**-0.3**
ELL				*e*SG	**Sg**	**11 51 40.9**	**+0.7**
TURN	**Turunc**	**0.56**	**261**	*i* P	**Pg**	**11 51 38.7**	**+5.3**
TURN				*i* S	**Sg**	**11 51 51.9**	**+11**
DENT	**Denizli**	**0.82**	**345**	*e*PG	**Pg**	**11 51 38.4**	**+0.2**
YER	**Yerkesik**	**0.83**	**282**	*e*PG	**Pg**	**11 51 39.0**	**+0.6**
DAT	**Datca**	**1.40**	**261**	*e*PN	**Pn**	**11 51 46.9**	**+0.2**
BODT	**Bodrum**	**1.59**	**274**	*e*PN	**Pn**	**11 51 49.2**	**-0.2**
KULA	**Kula-Manisa**	**1.63**	**342**	*e*PN	**Pn**	**11 51 50.0**	**0.0**

IDC ***14*** *12:13:14.7±4.1,2081N×12152E,h0km,mb3.4/3, mb1 3.5/3,mb1mx3.3/17,mbtmp3.4/3,Error ellipse: s-maj=326.1km s-min=26.3km az=60.0*
TAP ***14*** *12:13:28.3,2124N×12178E,h136km,ML3.6,C*
ISCJB ***14*** *12:13:29.8±1.0,2135N±007×1218E±01,h134km±7km, mb3.1/3,Error ellipse: s-maj=17.0km s-min=10.6km az=164.8*
ISC 14 12:13:29.3±0.8,**2128N**±006×**1218E**±01,**h134**km±7km,**n27,** σ**0§89**/47,**mb3.1**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.78**	**345**	P	**Pn**	**12 13 50.0**	**-0.8**
LAY	baz=345			*e*S	**Sn**	**12 14 06.0**	**-0.9**
TSEB	**Hengchuen, Pin**	**1.02**	**307**	P	**Pn**	**12 13 53.4**	**+0.6**
TSEB	baz=304			*e*S	**Sn**	**12 14 11.2**	**+0.6**
TWK1	**Hengchun**	**1.11**	**306**	*e*P	**Pn**	**12 13 54.3**	**+0.6**
TWK1	baz=305			*e*S	**Sn**	**12 14 13.1**	**+1.0**
HEN	**Hengchun**	**1.20**	**307**	*e*P	**Pn**	**12 13 54.8**	**+0.3**
HEN	baz=300			*e*S	**Sn**	**12 14 14.6**	**+0.9**
ECL	**Taimali**	**1.51**	**330**	P	**Pn**	**12 13 56.9**	**-0.9**
ECL	baz=330			*e*S	**Sn**	**12 14 18.0**	**-1.6**
SCZT	**Fangliau**	**1.52**	**316**	P	**Pn**	**12 13 57.9**	**0.0**
SCZT	baz=322			*e*S	**Sn**	**12 14 19.6**	**-0.2**
TWG	**Pinlang**	**1.66**	**337**	*e*P	**Pn**	**12 13 58.6**	**-0.9**
TWG	baz=332			*e*S	**Sn**	**12 14 22.4**	**-0.3**
SSD	**Sandimen**	**1.80**	**324**	P	**Pn**	**12 14 01.1**	**-0.1**
SSD	baz=325			*e*S	**Sn**	**12 14 24.2**	**-1.3**
TWM1	**Shoushan**	**1.98**	**321**	P	**Pn**	**12 14 04.3**	**+1.1**
TWM1	baz=327			*e*S	**Sn**	**12 14 30.3**	**+1.0**
ELDTW	**Lidau**	**2.02**	**340**	*e*P	**Pn**	**12 14 04.8**	**+1.0**
ELDTW	baz=340			*e*S	**Sn**	**12 14 31.0**	**+0.8**
STYT	**Tauyuan**	**2.10**	**334**	P	**Pn**	**12 14 04.9**	**+0.3**
STYT	baz=334			S	**Sn**	**12 14 31.3**	**-0.5**
SGST	**Jiashian**	**2.10**	**329**	P	**Pn**	**12 14 05.1**	**+0.3**
SGST	baz=329			*e*S	**Sn**	**12 14 31.9**	**0.0**
TWF1	**Yuli**	**2.11**	**348**	P	**Pn**	**12 14 05.3**	**+0.5**
	baz=342						
CHN1	**Nanshi**	**2.22**	**329**	P	**Pn**	**12 14 06.2**	**+0.1**
CHN1	baz=337			*e*S	**Sn**	**12 14 33.5**	**-1.0**
WTP	**Ta-pu**	**2.23**	**331**	P	**Pn**	**12 14 06.3**	**0.0**
WTP	baz=332			*e*S	**Sn**	**12 14 34.6**	**-0.2**
TWK	**Hsinying**	**2.31**	**329**	*e*P	**Pn**	**12 14 07.2**	**0.0**
TWK	baz=337			*e*S	**Sn**	**12 14 36.0**	**-0.4**
YUS	**Yu-Shan**	**2.33**	**341**	*e*P	**Pn**	**12 14 08.6**	**+1.1**
YUS	baz=333			*e*S	**Sn**	**12 14 37.9**	**+1.1**
CHN4	**Tsaushan**	**2.33**	**332**	P	**Pn**	**12 14 07.6**	**0.0**
CHN4	baz=332			S	**Sn**	**12 14 36.6**	**-0.4**
ALS	**Alishan**	**2.39**	**338**	P	**Pn**	**12 14 08.9**	**+0.6**
ALS	baz=330			S	**Sn**	**12 14 38.3**	**-0.1**
CHN5	**Tsauling**	**2.52**	**336**	P	**Pn**	**12 14 09.8**	**-0.1**
CHN5	baz=330			S	**Sn**	**12 14 40.7**	**-0.4**
SMLT	**Sun Moon Lake**	**2.71**	**343**	*e*P	**Pn**	**12 14 13.1**	**+0.7**
	baz=334						
TYC	**Yuchr**	**2.74**	**342**	*e*P	**Pn**	**12 14 12.3**	**-0.5**
	baz=342						

WHF	**Hehuan Shan**	**2.89**	**351**	*e*P	**Pn**	**12 14 16.0**	**+1.4**
	baz=357						
PNG	**Penghu**	**3.06**	**318**	P	**Pn**	**12 14 16.2**	**-0.7**
	baz=324						
PNG				*e*S	**Sn**	**12 14 51.3**	**-2.4**
	baz=324						
MKAR	**Makanchi Array**	**40.82**	**318**	P	**P**	**12 20 59.4**	**+1.8**
	0.9nm,0.5s,mb3.6,baz=114,slow=9.4,SNR=6.7						
WRA	**Warramunga Arr**	**42.77**	**162**	P	**P**	**12 21 10.7**	**-3.0**
	0.2nm,0.8s,mb2.8,baz=343,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**46.21**	**165**	P	**P**	**12 21 39.0**	**-2.0**
	0.2nm,0.9s,mb2.7,baz=340,slow=6.8,SNR=5.6						

ISCJB ***14*** *12:18:21.4±0.9,2989N±004×3627E±006,h0km,Error ellipse: s-maj=8.1km s-min=6.2km az=172.3*
GII ***14*** *12:18:22.8±0.0,2991N×3624E,h0km,ML2.1/4, EXPLOSION*
SGS ***14*** *12:18:22.1,3011N×3627E,h13km*
CSEM ***14*** *12:18:22.8±0.5,2979N×3618E,h2km,ML3.1,Error ellipse: s-maj=11.4km s-min=5.6km az=55.0*
HLW ***14*** *12:18:23.7,2980N×3634E,h15km,Mb3.1*
ISC 14 12:18:21.6±0.9,**2989N**±004×**3630E**±006,**h0**km,**n22,** σ**0§83**/27,**1D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**262**	Pg	**Pg**	**12 18 42.5**	**0.0**
HRFI	**Mount Harif**	**1.10**	**278**	Pg	**Pg**	**12 18 42.5**	**-0.3**
ZFRI	**Zfri**	**1.17**	**305**	Pg	**Pg**	**12 18 43.8**	**-0.3**
EIL	**Elat**	**1.19**	**260**	Pg	**Pg**	**12 18 44.4**	**0.0**
EIL				Sg	**Sg**	**12 19 02.2**	**+2.4**
MBRI	**Mt Berech**	**1.20**	**266**	Pg	**Pg**	**12 18 44.5**	**-0.2**
PRNI	**Paran**	**1.21**	**293**	Pg	**Pg**	**12 18 44.4**	**-0.4**
HQLS		**1.23**	**242**	P	**Pg**	**12 18 44.4**	**-0.7**
HQLS		**1.23**	**242**	P	**Pg**	**12 18 44.4**	**-0.7**
HQLS				S	**Sg**	**12 19 01.2**	**+0.2**
JLOS		**1.35**	**212**	P	**Pg**	**12 18 47.1**	**-0.3**
JLOS		**1.35**	**212**	P	**Pg**	**12 18 47.1**	**-0.4**
JLOS				S	**Sg**	**12 19 06.7**	**+1.7**
KRMI	**Paran Flat**	**1.38**	**280**	Pn	**Pn**	**12 18 47.3**	**-0.8**
KRMI				Sn	**Sn**	**12 19 06.2**	**-0.8**
RMNI	**Mount Ramon**	**1.50**	**298**	Pn	**Pn**	**12 18 50.1**	**+0.4**
MZDA	**Masada**	**1.62**	**331**	Pn	**Pn**	**12 18 52.5**	**+1.0**
TBKS	**Tabuk**	**1.68**	**173**	P	**Pn**	**12 18 52.3**	**+0.1**
BDAS	**Al Bad'**	**1.79**	**216**	P	**Pn**	**12 18 53.4**	**-0.4**
DSI	**Dead Sea**	**1.85**	**335**	Pn	**Pn**	**12 18 56.5**	**+1.9**
HNKL	**Nakhl**	**2.01**	**272**	P	**Pn**	**12 18 57.1**	**+0.3**
HNKL				S	**Sn**	**12 19 21.4**	**-1.2**
RSHS		**2.06**	**220**	P	**Pn**	**12 18 56.4**	**-1.1**
HKAT	**Jabal Katrina**	**2.43**	**236**	*i*P	**Pn**	**12 19 02.5**	**-0.1**
TR2		**2.71**	**237**	P	**Pn**	**12 19 06.0**	**-0.3**
SUZ		**3.01**	**270**	P	**Pn**	**12 19 10.9**	**+0.4**
GRB	**Gharib**	**3.47**	**243**	P	**Pn**	**12 19 16.1**	**-0.7**

NEIC ***14*** *12:27:51.2, 1623N×9838W,h9km,MD3.9(MEX),After MEX.*
MEX 14 12:27:51.2±1.2,**1623N×9838W,h9**km±14km,**MD3.9,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.29**	**57**	*i* P	Pg	12 27 56.4	-0.6
PNIG				*i* S	Sg	12 28 01.1	+0.2
ACX	**Acapulco**	**1.60**	**293**	*i* P	Pn	12 28 15.9	-3.9
ACX				*i* S	Sn	12 28 34.5	-6.2
VHO	**Vista Hermosa**	**1.79**	**62**	*i* P	Pn	12 28 19.2	-3.1
VHO				*i* S	Sn	12 28 40.8	-4.3
CAIG	**El Cayaco**	**1.98**	**294**	*i* P	Pn	12 28 22.7	-2.3
CAIG				*i* S	Sn	12 28 46.5	-3.5
MEIG	**Mezcala**	**2.06**	**325**	*i* P	Pn	12 28 24.7	-1.4
MEIG				*i* S	Sn	12 28 46.4	-5.5
TPIG	**Tehuac#an**	**2.38**	**24**	*e*P	Pn	12 28 27.3	-3.2
TPIG				*i* S	Sn	12 28 54.5	-5.4
PLIG	**Platanillo**	**2.40**	**334**	*e*P	Pn	12 28 29.0	-1.8
PLIG				*i* S	Sn	12 28 56.3	-4.0
PPM	**Popocatepetl**	**2.83**	**355**	*e*P	Pn	12 28 34.8	-1.9
PPM				*i* S	Sn	12 29 09.4	-1.5
ZIIG	**Zihuatanejo**	**3.25**	**295**	*i* P	Pn	12 28 40.1	-2.4
ZIIG				*i* S	Sn	12 29 18.7	-2.7

NEIC ***14*** *12:41:41.8,4016N×1976E,h24km,MD3.4(ATH),After ATH.*
ATH ***14*** *12:41:41.6,4017N×1976E,h23km±2km,MD3.4/6*
CSEM ***14*** *12:41:41.1±0.4,4021N×1977E,h2km,MD3.4,Error ellipse: s-maj=9.7km s-min=4.4km az=114.0*
ISCJB ***14*** *12:41:45.2±0.6,4001N±004×2005E±008,h10km,Error ellipse: s-maj=8.8km s-min=5.1km az=10.0*
ISC 14 12:41:45.3±0.7,**4004N**±004×**2001E**±009,**h10**km,**n13,** σ**1§10**/16,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.37**	**207**	*e*PB	**Sg**	**12 41 51.1**	**-1.4**
KEK				*e*SB	**Sg**	**12 41 58.0**	**+0.6**
JAN	**Janina**	**0.75**	**121**	*e*PN	**Pg**	**12 42 00.6**	**+0.8**
JAN				*e*SN	**Sg**	**12 42 13.9**	**+4.3**
KBN	**Korca**	**0.83**	**45**	*e*PN	**Pg**	**12 42 08.6**	**+7.3**
OHR	**Ohrid**	**1.23**	**29**	*i* Pn	**Pn**	**12 42 05.6**	**-2.9**
OHR	**Ohrid**	**1.23**	**29**	*i* Pn	**Pn**	**12 42 05.7**	**-2.8**
TIR	**Tirane**	**1.31**	**355**	*e*PN	**Pn**	**12 42 10.5**	**+0.9**
KZN	**Kozani**	**1.37**	**78**	*e*PN	**Pn**	**12 42 09.5**	**-1.0**
BIA	**Bitola**	**1.40**	**45**	*i* Pn	**Pn**	**12 42 09.3**	**-1.5**
QSH	**Qafa e Shtames**	**1.48**	**357**	*e*PN	**Pn**	**12 42 13.0**	**+1.0**
QSH				*i* SN	**Sg**	**12 42 37.0**	**+4.1**
THL	**Klokotos Trika**	**1.61**	**107**	*e*PN	**Pn**	**12 42 14.1**	**+0.3**
KRUS	**Krusevo**	**1.62**	**35**	*i* Pn	**Pn**	**12 42 13.6**	**-0.4**
EVR	**Evrytania**	**1.79**	**128**	*e*PN	**Pn**	**12 42 17.0**	**+

PNIG	**Pinotepa**	**0.28**	**54**	*i* P	Pg	13 04 35.9	-0.7
PNIG				*i* S	Sg	13 04 40.5	+0.1
ACX	**Acapulco**	**1.62**	**293**	*i* P	Pn	13 04 55.5	-4.0
ACX				*i* S	Sn	13 05 14.7	-5.8
UTMO	**Huajuapan**	**1.68**	**18**	*i* P	Pn	13 04 57.7	-2.7
UTMO				*i* S	Sn	13 05 17.5	-4.5
VHO	**Vista Hermosa**	**1.77**	**62**	*i* P	Pn	13 04 59.5	-2.2
VHO				*i* S	Sn	13 05 19.1	-5.2
OXX	**Oaxaca**	**1.79**	**61**	*e*P	Pn	13 04 59.1	-2.7
OXX				*i* S	Sn	13 05 19.5	-5.1
CAIG	**El Cayaco**	**2.00**	**294**	*i* P	Pn	13 05 02.4	-2.3
CAIG				*i* S	Sn	13 05 23.7	-6.2
MEIG	**Mezcala**	**2.07**	**325**	*e*P	Pn	13 05 03.3	-2.5
MEIG				*i* S	Sn	13 05 25.6	-6.0
TPIG	**Tehuac#an**	**2.38**	**24**	*e*P	Pn	13 05 06.6	-3.4
TPIG				*i* S	Sn	13 05 37.9	-1.3
PLIG	**Platanillo**	**2.41**	**333**	*i* P	Pn	13 05 08.0	-2.4
PLIG				*i* S	Sn	13 05 36.1	-3.9
YAIG	**Yautepec**	**2.70**	**346**	*e*P	Pn	13 05 12.6	-1.9
YAIG				*i* S	Sn	13 05 44.2	-3.0
PPM	**Popocatepetl**	**2.83**	**355**	*e*P	Pn	13 05 17.5	+1.2
PPM				*i* S	Sn	13 05 48.2	-2.3
PPM				*i* S	Sn	13 05 48.7	-1.7
PPM	**Popocatepetl**	**2.83**	**355**	*i* P	Pn	13 05 14.2	-2.0
PPM				*e*P		13 05 17.5	
PPM				*i* S	Sn	13 05 48.2	-2.3
PPM				*i* S	Sn	13 05 48.7	-1.7
PBVM	**Pinon**	**3.27**	**348**	*e*P	Pn	13 05 26.7	+4.5
PBVM				*i* S	Sn	13 06 06.6	+5.4
ZIIG	**Zihuatanejo**	**3.27**	**295**	*i* P	Pn	13 05 19.4	-2.8
ZIIG				*i* S	Sn	13 05 59.5	-1.8
DEIG	**Demacu**	**4.10**	**351**	*i* S	Sn	13 06 20.1	-1.7
MOIG	**Morelia**	**4.36**	**322**	*i* S	Sn	13 06 25.8	-2.3
EZ5V		**5.95**	**304**	*e*P	Pn	13 06 41.9	+43
R15V		**6.10**	**299**	*e*P	Pn	13 06 47.3	+46

*IDC **14** 13:11:10.9±1.9, 1162S×16697E, h0km, mb4.0/8, mb1 4.1/8, mb1mx4.0/16, mbtmp4.0/8, Error ellipse: s-maj=60.3km s-min=27.1km az=116.0*
*ISCJB **14** 13:11:25.1±1.3, 115S±0.1×1663E±0.3, h100km, mb3.9/9, Error ellipse: s-maj=36.3km s-min=17.3km az=16.2*
*NEIC **14** 13:11:37.8±0.9, 1159S×166.16E, h200km, mb3.8/1, Error ellipse: s-maj=28.8km s-min=15.2km az=112.0*

ISC 14 13:11:26.7±1.3, 114S±01×1663E±02, h100km, n13, σ0°73/12, mb3.9/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
EIDS	**Eidsvold**	**20.01**	**224**	*e*P	**P**		**13 15 53.2**	**+1.6**
STKA	**Stephens Creek**	**30.57**	**224**	P	**P**		**13 17 30.9**	**-0.1**
	0.5nm,0.3s,mb3.7,baz=60,slow=8.1,SNR=3.5							
WB2	**Warramunga Arr**	**31.89**	**251**	*e*P	**P**		**13 17 42.5**	**-0.3**
WRA	**Warramunga Arr**	**31.90**	**251**	P	**P**		**13 17 41.9**	**-1.0**
	0.9nm,0.7s,mb3.6,baz=84,slow=8.7,SNR=12							
WRA				PcP	PcP		13 20 30.7	-0.6
	0.6nm,0.8s,baz=79,slow=3.6,SNR=5.2							
ASAR	**Alice Springs**	**33.15**	**244**	P	**P**		**13 17 52.9**	**-0.8**
	1.5nm,0.7s,mb3.9,baz=70,slow=9.5,SNR=14							
ASAR				PcP	PcP		13 20 33.5	-1.2
	0.6nm,0.8s,baz=79,slow=2.3,SNR=5.7							
KSRS	**Korea Array**	**60.53**	**325**	P	**P**		**13 21 27.1**	**+0.6**
	0.7nm,0.7s,mb3.8,baz=130,slow=6.8,SNR=3.9							
SBA	**Scott Base**	**66.41**	**180**	*e*P	**P**		**13 22 04.4**	**-0.2**
	1.2nm,0.6s,mb3.9							
CMAR	**Chiang Mai Arr**	**72.81**	**293**	P	**P**		**13 22 46.2**	**+1.3**
	1.4nm,0.7s,mb3.9,baz=118,slow=4.9,SNR=11							
SONM	**Songino Array**	**79.33**	**324**	P	**P**		**13 23 21.4**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=132,slow=5.6,SNR=4.2							
MK31	**Makanchi Array**	**94.21**	**317**	*e*P	**P**		**13 24 34.0**	**-0.4**
MKAR	**Makanchi Array**	**94.21**	**317**	P	**P**		**13 24 34.3**	**-0.2**
	1.3nm,0.6s,mb4.5,baz=87,slow=6.0,SNR=18							
ZALV	**Zalesovo Beam**	**94.22**	**324**	P	**P**		**13 24 33.9**	**-0.4**
	0.3nm,0.4s,mb4.0,baz=160,slow=4.6,SNR=2.7							
ARCES	**ARCESS Array B**	**116.86**	**346**	PKP	PKPdf		13 29 56.6	-2.3
	3.1nm,1.0s,baz=64,slow=2.1,SNR=3.0							

*ATH **14** 13:12:40.9, 3791N×2298E, h21km±3km, MD2.9/6, ML2.6*
*ISCJB **14** 13:12:41.1±0.6, 3788N±003×2310E±004, h11km±4km, Error ellipse: s-maj=4.9km s-min=4.2km az=175.5*
*THE **14** 13:12:41.7, 3787N×2303E, h4km±1km, ML2.5/1, Error ellipse: s-maj=1.6km s-min=0.6km az=92.0*
*NEIC **14** 13:12:41.0, 3790N×2299E, h21km, ML2.6(ATH), After ATH.*
*CSEM **14** 13:12:41.1±0.1, 3790N×2295E, h5km, ML2.5/1, Error ellipse: s-maj=2.0km s-min=1.8km az=173.0*

ISC 14 13:12:41.8±0.4, 3788N±002×2301E±004, h12km±4km, n36, σ1°03/60, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LTK	**Loutraki**	**0.15**	**347**	P	**Pg**		**13 12 44.8**	**-0.6**
LTK				S	**Sg**		**13 12 47.3**	**-0.6**
NAIG	**Nisos Aigina**	**0.40**	**107**	*e*PB	**Pg**		**13 12 49.5**	**-0.2**
NAIG				*e*SB	**Sg**		**13 12 56.5**	**+1.5**
DID	**Didima**	**0.41**	**154**	P	**Pg**		**13 12 49.0**	**-0.9**
DID				S	**Sg**		**13 12 55.6**	**+0.2**
ATH	**Athens Observa**	**0.57**	**80**	*e*PN	**Pg**		**13 12 52.5**	**-0.3**
ATH				*e*SN	**Sg**		**13 13 01.2**	**+0.9**
KVR	**Kavouri**	**0.60**	**94**	*e*PN	**Pg**		**13 12 54.0**	**+0.5**
KVR				*e*SN	**Sg**		**13 13 01.5**	**0.0**
KVR	**Kavouri**	**0.60**	**94**	*e*Pb	**Pb**		**13 12 52.0**	**-2.2**
KVR				*e*Sn	**Sg**		**13 13 01.5**	**0.0**
VLX	**Vlachokerasia**	**0.71**	**225**	P	**Pg**		**13 12 55.2**	**-0.4**
VLX				S	**Sg**		**13 13 05.5**	**+0.6**
LKR	**Lokris**	**0.77**	**359**	P	**Pg**		**13 12 56.8**	**0.0**
LKR				S	**Sg**		**13 13 08.6**	**+1.7**
LKR	**Lokris**	**0.77**	**359**	*e*Pn	**Pn**		**13 12 55.4**	**-3.1**
LKR	**Lokris**	**0.77**	**359**	P	**Pg**		**13 12 56.8**	**0.0**
LKR				S	**Sg**		**13 13 08.6**	**+1.7**
ITM	**Ithomi**	**1.11**	**231**	*e*PN	**Pn**		**13 13 01.5**	**-1.5**
VLI	**Veliai**	**1.16**	**183**	*e*PN	**Pn**		**13 13 03.0**	**-0.7**
VLI				*e*SN	**Sn**		**13 13 20.5**	**+1.1**
RLS	**Riolos of Patr**	**1.23**	**279**	*e*PN	**Pn**		**13 13 04.2**	**-0.6**
AGG	**Agios Georgios**	**1.26**	**335**	P	**Pn**		**13 13 04.9**	**-0.3**
AGG				S	**Sb**		**13 13 24.3**	**+2.6**
EVR	**Evrytania**	**1.40**	**318**	*e*PN	**Pn**		**13 13 07.1**	**0.0**
EVR	**Evrytania**	**1.40**	**318**	*e*Pn	**Pn**		**13 13 08.1**	**+1.0**
PYL	**PYLOS**	**1.41**	**226**	P	**Pn**		**13 13 07.1**	**-0.1**
PYL				S	**Sn**		**13 13 27.6**	**+2.0**
NEO	**Neokhori**	**1.44**	**7**	*e*PN	**Pn**		**13 13 07.3**	**-0.3**
AOS	**Alonnisos**	**1.46**	**28**	P	**Pn**		**13 13 07.4**	**-0.5**
XOR	**Xorichti**	**1.50**	**5**	P	**Pn**		**13 13 08.4**	**0.0**

*MOS **14** 13:36:21.2±1.3, 4555N×14838E, h104km, mb4.0/5, Error ellipse: s-maj=16.4km s-min=13.9km az=79.7*
*ISCJB **14** 13:36:24.7±0.8, 4467N±008×1483E±0.1, h167km±7km, mb3.7/13, Error ellipse: s-maj=14.5km s-min=10.4km az=44.9*
*IDC **14** 13:36:24.8±2.5, 4512N×14837E, h140km±23km, mb3.4/10, mb1 3.5/12, mb1mx3.4/22, mbtmp3.3/12, Error ellipse: s-maj=24.3km s-min=16.1km az=175.0*
*NEIC **14** 13:36:24.6±1.2, 4506N×14844E, h141km±10km, mb4.0/1, Error ellipse: s-maj=15.9km s-min=11.1km az=152.0*
*JMA **14** 13:36:25.1±0.5, 4457N×14849E, h129km, M3.8*

ISC 14 13:36:25.5±0.9, 4469N±008×1483E±01, h158km±8km, n60, σ1°06/67, mb3.7/13, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KUR	**Kuril'sk**	**0.63**	**329**	⇓*i* PN	**Pn**		**13 36 38.5**	**-10**
KUR				*e*S	**Sn**		**13 36 53.0**	**-13**
YUK	**Yuzh-Kuril'sk**	**1.88**	**250**	⇑*i* PN	**Pn**		**13 36 59.0**	**-0.8**
YUK				*i* S	**Sn**		**13 37 25.5**	**-0.6**
YUK				pmax	pmax			
	comp=Z,900nm,0.3s							
YUK				smax				
	comp=N,2μm,0.4s							
YUK				smax				
	comp=E,2μm,0.4s							
YUK				smax				
	comp=N,1μm,0.4s							
YUK				smax				
	comp=E,1μm,0.5s							
NEM2	**Nemuro 2**	**2.28**	**235**	P		**Pn**	**13 37 03.3**	**-1.1**
NEM2				*e*S		**Sn**	**13 37 32.7**	**-1.7**
JRA	**Rausu**	**2.42**	**253**	P		**Pn**	**13 37 06.0**	**0.0**
JNK	**Nakash**	**2.82**	**248**	P		**Pn**	**13 37 11.1**	**+0.2**
JAK	**Akkeshi**	**3.12**	**238**	P		**Pn**	**13 37 14.2**	**-0.5**
JAK				*e*S		**Sn**	**13 37 52.2**	**-0.6**
JTKR	**Abashiri--Toko**	**3.25**	**259**	P		**Pn**	**13 37 16.5**	**+0.2**
JAR	**Ashorobuto**	**3.57**	**249**	P		**Pn**	**13 37 21.5**	**+1.1**
JMP	**Maruseppu**	**3.62**	**261**	P		**Pn**	**13 37 21.6**	**+0.5**
JOB	**Onbets**	**3.71**	**243**	P		**Pn**	**13 37 22.6**	**+0.4**
JOB				*e*S		**Sn**	**13 38 06.8**	**+0.6**
JKK2	**Kamakawa 2**	**4.08**	**260**	P		**Pn**	**13 37 28.2**	**+1.2**
JSE	**Soyaes**	**4.09**	**276**	P		**Pn**	**13 37 27.1**	**0.0**
ASAJ	**Asahikawa**	**4.14**	**264**	P		**Pn**	**13 37 28.6**	**+0.8**
	comp=E,2.1nm,0.3s,baz=154,slow=30,SNR=20							
ASAJ	**Asahikawa**	**4.14**	**264**	P		**Pn**	**13 37 28.8**	**+1.0**
ASAJ	**Asahikawa**	**4.14**	**264**	PN		**Pn**	**13 37 28.6**	**+0.8**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
JCH	**Churui**	**4.15**	**242**	P		**Pn**	**13 37 27.9**	**-0.1**
JCH				*e*S		**Sn**	**13 38 15.8**	**-0.7**
JFR	**Furan**	**4.41**	**252**	P		**Pn**	**13 37 33.0**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.50**	**302**	*e*Pn		**Pn**	**13 37 31.3**	**-1.1**
YSS	**Yuzh-Sakhalins**	**4.50**	**302**	*e*PN		**Pn**	**13 37 33.5**	**+1.1**
JAB	**Ashibetsu**	**4.55**	**257**	P		**Pn**	**13 37 35.2**	**+2.1**
ERM	**Erimo**	**4.62**	**236**	*e*Pn		**Pn**	**13 37 35.9**	**+1.9**
ERM	**Erimo**	**4.62**	**236**	*e*PN		**Pn**	**13 37 36.2**	**+2.2**
JNBK	**Urakawa-nobuka**	**4.71**	**241**	P		**Pn**	**13 37 34.8**	**-0.5**
JBT2	**Biratori 2**	**4.72**	**248**	P		**Pn**	**13 37 35.7**	**+0.3**
JNB	**Noboribetsu**	**5.74**	**250**	P		**Pn**	**13 37 49.1**	**+0.4**
JNB				*e*S		**Sn**	**13 38 54.7**	**+0.8**
JKB	**Kayabe**	**6.01**	**245**	P		**Pn**	**13 37 52.1**	**-0.3**
JKB				*e*S		**Sn**	**13 38 58.9**	**-1.5**
JYM2	**Yakumo 2**	**6.34**	**249**	P		**Pn**	**13 37 56.9**	**+0.2**
JANG	**Nango**	**6.62**	**232**	*e*S		**Sn**	**13 39 11.2**	**-3.9**
JOSM	**Okushiri--Mats**	**6.95**	**251**	P		**Pn**	**13 38 05.0**	**+0.1**
OFUJ	**Ofunato**	**7.49**	**224**	P		**Pn**	**13 38 11.6**	**-0.4**
JIO	**Ouri**	**8.13**	**222**	P		**Pn**	**13 38 19.3**	**-1.3**
JIO				*e*S		**Sn**	**13 39 47.9**	**-3.3**
PETK	**Petropavlovsk-**	**10.43**	**33**	P		**Pn**	**13 38 44.0**	**-6.9**
	comp=Z,0.3nm,0.3s,baz=193,slow=11,SNR=12							
ULN	**Ulaanbaatar**	**28.45**	**291**	*e*P		**P**	**13 42 05.1**	**-0.2**
TIXI	**Tiksi**	**28.61**	**347**	*e*P		**P**	**13 42 00.1**	**-6.4**
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.6							
SONM	**Songino Array**	**28.90**	**291**	P		**P**	**13 42 10.4**	**+1.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=77,slow=7.1,SNR=5.7							
SONM	**Songino Array**	**28.90**	**291**	*e*P		**P**	**13 42 11.1**	**+1.9**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**41.11**	**306**	P		**P**	**13 43 53.2**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.5,baz=79,slow=7.5,SNR=2.7							
ZALV	**Zalesovo Beam**	**41.11**	**306**	P		**P**	**13 43 53.2**	**-0.3**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.8							
MK31	**Makanchi Array**	**44.90**	**297**	*e*P		**P**	**13 44 24.0**	**0.0**
MKAR	**Makanchi Array**	**44.90**	**297**	P		**P**	**13 44 24.2**	**+0.2**
	comp=Z,1.8nm,0.6s,mb3.9,baz=75,slow=8.0,SNR=13							
MKAR	**Makanchi Array**	**44.90**	**297**	P		**P**	**13 44 24.2**	**+0.2**
MKAR	**Makanchi Array**	**44.90**	**297**	*e*P		**P**	**13 44 24.8**	**+0.8**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
INK	**Inuvik**	**45.16**	**31**	*e*P		**P**	**13 44 25.1**	**-0.7**
KURK	**Kurchatov**	**45.70**	**304**	P		**P**	**13 44 29.7**	**-0.6**
	baz=74,slow=8.4							
KURK	**Kurchatov**	**45.70**	**304**	*e*P		**P**	**13 44 29.1**	**-1.2**
	comp=Z,1.7nm,0.4s,mb4.0							
ARCES	**ARCESS Array B**	**58.65**	**340**	P		**P**	**13 46 03.6**	**-1.9**
	comp=Z,0.4nm,0.5s,mb3.5,baz=41,slow=8.4,SNR=4.8							
WRA	**Warramunga Arr**	**65.58**	**194**	P		**P**	**13 46 54.8**	**+2.7**
	comp=Z,0.2nm,0.7s,mb3.1,baz=6.9,slow=6.8,SNR=2.6							
NVAR	**Mina Array Bea**	**66.37**	**59**	P		**P**	**13 46 57.9**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.5,baz=298,slow=6.1,SNR=5.5							
PDAR	**Pinedale Array**	**68.66**	**51**	P		**P**	**13 47 11.7**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=308,slow=4.4,SNR=3.5							
NB2	**NORSAR Subarra**	**69.02**	**339**	P		**P**	**13 47 11.4**	**-2.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=39,slow=5.3							
NOA	**NORSAR Array B**	**69.02**	**339**	P		**P**	**13 47 11.7**	**-1.6**
	comp=Z,0.6nm,0.5s,mb3.6,baz=29,slow=6.5,SNR=5.5							
NOA	**NORSAR Array B**	**69.02**	**339**	*e*P		**P**	**13 47 11.7**	**-1.7**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
HFS	**Hagfors**	**69.14**	**338**	P		**P**	**13 47 12.1**	**-2.0**
	comp=Z,1.2nm,0.5s,mb3.9,baz=29,slow=3.3,SNR=6.9							
HFS	**Hagfors**	**69.14**	**338**	P		**P**	**13 47 12.1**	**-2.0**
HFS				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KIV	**Kislovodsk**	**69.76**	**312**	*e*P		**P**	**13 47 19.5**	**+1.3**
KIV				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.6							
AKASG	**Malin Array Be**	**71.31**	**324**	*i* P		**P**	**13 47 26.2**	**-1.3**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
TXAR	**Lajitas Array**	**81.43**	**57**	P		**P**	**13 48 25.5**	**+0.6**
	comp=Z,0.8nm,0.5s,mb3.6,baz=297,slow=3.7,SNR=14							
TXAR	**Lajitas Array**	**81.43**	**57**	P		**P**	**13 48 25.5**	**+0.7**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
PLCA	**Paso Flores**	**151.35**	**96**	PKPbc	PKPbc		13 56 01.1	+1.3
	comp=Z,1.6nm,0.7s,baz=270,slow=5.2,SNR=4.1							
PLCA	**Paso Flores**	**151.35**	**96**	PKIKP	PKPbc		13 56 01.1	+1.2
PLCA				pmax	pmax			
	comp=Z,2.0nm,0.7s							

*CSEM **14** 13:43:36.3±0.5, 1241N×4660E, h10km, Mc4.5, Error ellipse: s-maj=17.6km s-min=6.6km az=17.0*
*ISCJB **14** 13:43:38.9±1.9, 123N±0.1×4655E±0.1, h41km±19km, mb3.7/7, MS3.4/2, Error ellipse: s-maj=21.1km s-min=14.0km az=39.6*
*IDC **14** 13:43:38.9±2.0, 1241N×4725E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.6/20, mbtmp3.7/6, MS3.4/2, Ms1 3.4/2, ms1mx2.5/30, Error ellipse: s-maj=59.6km s-min=27.1km az=163.0*
*NEIC **14** 13:43:40.4±1.5, 1246N×4722E, h10km, mb4.1/1, Error ellipse: s-maj=44.4km s-min=20.1km az=162.0*
*DHMR **14** 13:43:40.9±0.4, 1253N×4617E, h7km±4km, MD4.5, ML4.4*

ISC 14 13:43:39.6±3.1, 123N±01×4653E±007, h30km±25km, n19, σ1°00/24, mb3.7/7, MS3.4/2, 2C-3D, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BDHA	**Al Bayda'**	**1.89**	**330**	⇓*i* P		**Pn**	**13 44 09.3**	**-0.6**
BDHA				*i* S		**Sn**	**13 44 31.7**	**-1.0**
	3μm,0.6s							
BDHA	**Al Bayda'**	**1.89**	**330**	⇓*i* P		**Pn**	**13 44 09.3**	**-0.6**
BDHA				*i* S		**Sn**	**13 44 31.7**	**-1.1**
BDHA				AML	AML		13 44 34.0	
	comp=E,6μm,0.6s							
LBOS		**1.98**	**321**	⇑*i* P		**Pn**	**13 44 10.2**	**-0.9**
LBOS				*i* S		**Sn**	**13 44 33.3**	**-1.7**
TRBA	**At Turbah**	**2.52**	**291**	⇑*i* P		**Pn**	**13 44 18.3**	**-0.3**
TRBA				*i* S		**Sn**	**13 44 47.8**	**-0.5**
UDYN	**Al 'Udayn**	**2.98**	**304**	⇓*i* P		**Pn**	**13 44 25.5**	**+0.6**
UDYN				*i* S		**Sn**	**13 44 59.6**	**-0.1**
DHBB	**Dhamar BB**	**3.05**	**317**	*i* P		**Pn**	**13 44 27.2**	**+1.3**
DHBB				*i* S		**Sn**	**13 45 03.2**	**+1.7**
MUKL	**Al Mukalla**	**3.25**	**48**	*i* P		**Pn**	**13 44 36.8**	**+8.2**
HAJJ	**Hajjah**	**4.40**	**320**	*i* S		**Sn**	**13 45 35.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**43.70**	**276**	P		**P**	**13 51 51.6**	**+9.3**
	comp=E,0.4nm,0.7s,mb3.2,baz=102,slow=5.4,SNR=3.0							
BVAR	**Borovoye Array**	**44.86**	**20**	P		**P**	**13 51 52.2**	**+1.2**
	comp=E,0.8nm,0.6s,mb3.7,baz=213,slow=7.7,SNR=3.9							
BVAR				LR		LR	14 14 26.0	
	comp=E,46nm,18.0s,MS3.5,baz=266,slow=42							
BOSA	**Boshof**	**45.60**	**207**	LR		LR	14 13 38.3	
	comp=E,45nm,19.4s,MS3.4,baz=175,slow=39							
MK31	**Makanchi Array**	**45.66**	**34**	*e*P		**P**	**13 51 57.9**	**+0.4**
MK31	**Makanchi Array**	**45.66**	**34**	*e*P		**P**	**13 51 57.9**	**+0.4**
MKAR	**Makanchi Array**	**45.66**	**34**	P		**P**	**13 51 58.1**	**+0.6**
	comp=E,0.8nm,0.7s,mb3.8,baz=224,slow=6.0,SNR=4.9							
KURK	**Kurchatov**	**46.37**	**28**	P		**P**	**13 52 02.8**	**-0.2**
	baz=227,slow=8.4							
KURK	**Kurchatov**	**46.37**	**28**	*e*P		**P**	**13 52 02.1**	**-0.9**
	comp=E,1.5nm,0.8s,mb4.0							
CMAR	**Chiang Mai Arr**	**50.76**	**76**	P		**P**	**13 52 35.6**	**-1.8**
	comp=E,0.4nm,0.6s,mb3.5,baz=270,slow=8.1,SNR=4.3							
ZALV	**Zalesovo Beam**	**51.36**	**28**	P		**P**	**13 52 40.7**	**-0.6**
	comp=E,1.0nm,0.4s,mb4.1,baz=224,slow=8.1,SNR=4.4							
SONM	**Songino Array**	**60.84**	**42**	P		**P**	**13 53 50.2**	**+1.1**
	comp=E,0.5nm,0.8s,mb3.7,baz=260,slow=5.7,SNR=3.4							

*CSEM **14** 13:46:30.9, 3781N×2008E, h20km, MD3.5/6, After ATH*
*NEIC **14** 13:46:30.9, 3781N×2008E, h20km, MD3.5(ATH), After ATH.*

ATH 14 13:46:32.4, 3779N×2012E, h33km±12km, MD3.5/6, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VLS	**Valsamata**	**0.54**	**44**	*e*PN		**Pn**	**13 46 42.5**	**-1.2**
VLS				*e*SN		Sn	**13 46 52.5**	**+0.9**
VLS	**Valsamata**	**0.54**	**44**	*e*Pn		**Pn**	**13 46 40.4**	**-3.3**
RLS	**Riolos of Patr**	**1.10**	**75**	*e*PN		**Pn**	**13 46 53.3**	**+1.9**
ITM	**Ithomi**	**1.56**	**112**	*e*PN		**Pn**	**13 46 59.7**	**+1.9**
EVR	**Evrytania**	**1.74**	**49**	*e*PB		**Pb**	**13 47 02.7**	**-1.0**
KEK	**Kerkira**	**1.94**	**353**	*e*PN		**Pn**	**13 47 05.3**	**+2.3**
THL	**Klokotos Trika**	**2.31**	**39**	*e*PN		**Pn**	**13 47 09.3**	**+1.2**

*TAP **14** 13:51:08.7, 23.16N×120.20E, h14km, ML3.9, B*
*ISCJB **14** 13:51:09.4±0.4, 2315N±002×12016E±002, h12km±2km, Error ellipse: s-maj=3.7km s-min=2.6km az=173.2*

ISC 14 13:51:09.7±0.4, 2315N±002×12016E±002, h16km±1km, n56, σ0°72/92, 15C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SCLT	**Jiali**	**0.04**	**49**	⇓*i* P		**Pg**	**13 51 11.5**	**-1.0**
	baz=336							
SCLT				S		**Sg**	**13 51 14.2**	**-0.3**
	baz=336							
TAI1	**Yung-k'ang**	**0.12**	**150**	⇓*i* P		**Pg**	**13 51 12.8**	**-0.5**
	baz=169							
TAI1				S		**Sg**	**13 51 15.9**	**+0.2**
	baz=169							
CHN8	**Yiju**	**0.20**	**13**	⇓*i* P		**Pg**	**13 51 14.1**	**-0.4**
	baz=12							
CHN8				*e*S		**Sg**	**13 51 18.6**	**+0.9**
	baz=12							
TWK	**Hsinying**	**0.32**	**69**	⇑*i* P		**Pg**	**13 51 16.0**	**-0.4**
	baz=66							
TWK				S		**Sg**	**13 51 21.4**	**+0.4**
	baz=66							
CHN1	**Nanshi**	**0.34**	**84**	⇑*i* P		**Pg**	**13 51 16.0**	**-0.8**
	baz=75							
CHN1				S		**Sg**	**13 51 21.9**	**+0.4**
	baz=75							
SGST	**Jiashian**	**0.39**	**100**	⇑P		**Pg**	**13 51 17.3**	**-0.4**
	baz=101							
SGST				S		**Sg**	**13 51 24.2**	**+1.1**
	baz=101							
TWM1	**Shoushan**	**0.40**	**143**	*e*P		**Pg**	**13 51 18.4**	**+0.5**
	baz=148							
CHY	**Chiayi**	**0.42**	**35**	*e*P		**Pg**	**13 51 17.7**	**-0.5**
	baz=30							
CHY				*e*S		**Sg**	**13 51 24.6**	**+0.6**
	baz=30							
WTP	**Ta-pu**	**0.43**	**77**	⇑*i* P		**Pg**	**13 51 17.5**	**-0.8**
	baz=76							
WTP				S		**Sg**	**13 51 24.5**	**+0.3**
	baz=76							
CHN4	**Tsaushan**	**0.45**	**63**	⇑P		**Pg**	**13 51 17.8**	**-0.8**
	baz=61							
CHN4				*e*S		**Sg**	**13 51 24.8**	**+0.1**
	baz=61							
CHN2	**Minshiung**	**0.48**	**37**	*e*P		**Pg**	**13 51 18.9**	**-0.4**
	baz=32							
CHN2				*e*S		**Sg**	**13 51 26.8**	**+1.1**
	baz=32							
WSF	**Szhu**	**0.49**	**7**	*e*P		**Pg**	**13 51 19.0**	**-0.5**
	baz=3.0							
WSF				*e*S		**Sg**	**13 51 27.3**	**+1.2**
	baz=3.0							
SGLT	**Jiouru**	**0.52**	**144**	*e*P		**Pg**	**13 51 20.8**	**+0.8**
	baz=147							
SSD	**Sandimen**	**0.59**	**133**	⇓*i* P		**Pg**	**13 51 21.0**	**-0.3**
	baz=123							
SSD				*e*S		**Sg**	**13 51 29.9**	**+0.7**
	baz=123							
KAU	**Kaohsiung**	**0.59**	**167**	*e*P		**Pg**	**13 51 22.4**	**+1.1**

	baz=43									
WHF					*e*S		**Sn**		13 51 53.9	**+0.9**
	baz=43									
TWT	**Tachien**	**1.44**	**40**	*e*P			**Pn**		13 51 34.6	**-0.4**
	baz=36									
TWT					*e*S		**Sn**		13 51 54.1	**+0.5**
	baz=36									
HWA	**Hwalien**	**1.56**	**58**	*e*P			**Pn**		13 51 37.3	**+0.6**
	baz=56									
TWD	**Chiawan**	**1.61**	**55**	*e*P			**Pn**		13 51 36.6	**-0.8**
	baz=51									
TWD					*e*S		**Sn**		13 51 58.0	**+0.2**
	baz=51									
NSTT	**Nanjuang**	**1.66**	**27**	*e*P			**Pn**		13 51 37.8	**-0.4**
	baz=25									
LAY	**Lan-yu**	**1.69**	**130**	*e*P			**Pn**		13 51 37.6	**-0.9**
	baz=130									
NNS	**Nan Shan**	**1.70**	**41**	*e*P			**Pn**		13 51 38.8	**+0.2**
	baz=38									
NSK	**Sanguang**	**1.87**	**36**	*e*P			**Pn**		13 51 41.1	**+0.1**
	baz=33									
ENA	**Nanau**	**1.93**	**48**	*e*P			**Pn**		13 51 41.9	**+0.2**
	baz=64									
ENTT	**Nioudou**	**1.96**	**41**	*e*P			**Pn**		13 51 42.8	**+0.6**
	baz=23									
KNM	**Kinmen**	**2.02**	**309**	*e*P			**Pn**		13 51 44.4	**+1.2**
	baz=307									
TWE	**Neicheng**	**2.08**	**41**	*e*P			**Pn**		13 51 45.1	**+1.2**
	baz=20									
TWC	**Suao**	**2.12**	**46**	*e*P			**Pn**		13 51 45.6	**+1.1**
	baz=43									
TWA	**Mucha**	**2.24**	**35**	*e*P			**Pn**		13 51 46.5	**+0.4**
	baz=17									
TWS1	**Kuangyinshan**	**2.26**	**30**	*e*P			**Pn**		13 51 47.6	**+1.3**
	baz=27									
NWF	**Wu-fen Shan**	**2.42**	**37**	*e*P			**Pn**		13 51 49.1	**+0.6**
	baz=34									
TWB1	**Santiao Chiao**	**2.49**	**42**	*e*P			**Pn**		13 51 49.3	**-0.3**
	baz=23									

IDC ***14*** *13:54:35.2±2.5, 4.73S×100.88E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/18, mbtmp3.8/7, Error ellipse: s-maj=106.8km s-min=19.3km az=54.0*

ISCJB ***14*** *13:54:36.9±2.2, 49S×04×1007E±0.5, h33km, mb3.8/8, Error ellipse: s-maj=90.3km s-min=13.0km az=143.2*

NEIC ***14*** *13:54:40.6±1.5, 466S×101.00E, h35km, mb3.7/1, Error ellipse: s-maj=62.7km s-min=9.4km az=54.0*

ISC 14 13:54:40.4±2.1, 47S±.04×1010E±.05, h35km, n12, σ0$ 46/11, mb3.8/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.09**	**355**	P	**P**	**13 59 42.9**	**-0.4**
	1.8nm,0.7s,mb3.6,baz=183,slow=7.5,SNR=4.5						
WRA	**Warramunga Arr**	**35.85**	**118**	P	**P**	**14 01 36.6**	**-0.5**
	0.4nm,0.5s,mb3.6,baz=305,slow=9.3,SNR=5.5						
WRAB	**Tennant Creek**	**35.86**	**118**	P	**P**	**14 01 37.5**	**+0.4**
	0.6nm,0.5s,mb3.8						
WB2	**Warramunga Arr**	**35.86**	**118**	*e*P	**P**	**14 01 36.7**	**-0.5**
ASAR	**Alice Springs**	**36.93**	**124**	P	**P**	**14 01 46.8**	**+0.5**
	0.6nm,1.0s,mb3.4,baz=67,slow=11,SNR=3.5						
SONM	**Songino Array**	**52.53**	**5**	P	**P**	**14 03 50.6**	**+0.5**
	2.0nm,0.8s,mb4.1,baz=182,slow=9.2,SNR=15						
MKAR	**Makanchi Array**	**53.87**	**344**	P	**P**	**14 04 00.6**	**+0.6**
	1.2nm,0.8s,mb3.9,baz=150,slow=8.4,SNR=6.8						
MKAR	**Makanchi Array**	**53.87**	**344**	P	**P**	**14 04 00.6**	**+0.6**
KURK	**Kurchatov**	**58.45**	**344**	P	**P**	**14 04 32.6**	**0.0**
ZALV	**Zalesovo Beam**	**59.98**	**349**	P	**P**	**14 04 43.0**	**-0.1**
	0.5nm,0.3s,mb4.0,baz=189,slow=6.8,SNR=4.5						
BVAR	**Borovoye Array**	**63.03**	**340**	P	**P**	**14 05 03.1**	**-0.6**
	0.7nm,0.7s,mb3.9,baz=158,slow=9.6,SNR=5.4						
TXAR	**Lajitas Array**	**146.18**	**41**	PKPbc	PKPbc	14 14 19.0	+1.3
	0.4nm,0.5s,baz=298,slow=2.7,SNR=5.8						

IDC 14 13:59:15.7±2.2, 2463N×9565E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.5/3, Error ellipse: s-maj=320.5km s-min=18.6km az=62.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.57**	**276**	*i* P	Pn	13 59 52.0	+7.2
SHL	**Shillong**	**3.54**	**286**	*e*P	Pn	14 00 20.0	+8.1
CMAR	**Chiang Mai Arr**	**6.87**	**153**	Pg	Pg	14 01 20.1	-7.2
	0.2nm,0.3s,baz=338,slow=16,SNR=3.4						
CMAR				Lg		14 02 53.4	
	0.1nm,0.3s,baz=345,slow=29,SNR=2.9						
MKAR	**Makanchi Array**	**24.56**	**338**	P	P	14 04 37.2	+0.1
	1.2nm,0.7s,baz=160,slow=9.3,SNR=5.9						
KURK	**Kurchatov**	**29.18**	**338**	P	P	14 05 17.6	-0.9
	baz=142,slow=10						
BVAR	**Borovoye Array**	**34.16**	**333**	P	P	14 06 02.9	+0.5
	0.3nm,0.4s,baz=125,slow=7.6,SNR=2.7						
ASAR	**Alice Springs**	**60.67**	**139**	P	P	14 09 29.3	+0.4
	0.2nm,0.7s,baz=335,slow=8.7,SNR=3.4						

IDC 14 14:18:43.5±1.9, 235N×12526E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.3/3, Error ellipse: s-maj=187.1km s-min=24.8km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**158**	P	P	14 23 58.3	-0.6
	0.6nm,0.5s,baz=338,slow=11,SNR=11						
ASAR	**Alice Springs**	**27.19**	**162**	P	P	14 24 30.4	+1.5
	0.2nm,0.7s,baz=332,slow=6.8,SNR=5.5						
MKAR	**Makanchi Array**	**57.87**	**326**	P	P	14 28 36.6	-0.5
	0.3nm,0.5s,baz=140,slow=7.6,SNR=3.5						

NIED ***14*** *14:22:00, 46.50N×153.10E, h35km, Mw4.1 Best double couple: M0 1.62000×10^15 NP1:φ=98.00000°, δ65.00000°, λ-68.00000°. NP2:φ=233.00000°, δ33.00000°, λ-129.00000°.*

IDC ***14*** *14:22:39.1±1.9, 46.08N×153.28E, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx1.9/34, Error ellipse: s-maj=61.4km s-min=23.0km az=144.0*

ISCJB ***14*** *14:22:40.8±1.3, 460N±0.1×153.1E±0.2, h33km, Error ellipse: s-maj=27.0km s-min=6.3km az=44.0*

MOS ***14*** *14:22:42.3±1.5, 46.44N×152.77E, h33km, mb3.9/1, Error ellipse: s-maj=42.6km s-min=17.2km az=51.2*

ISC 14 14:22:42.9±1.3, 460N±.01×1533E±.02, h35km, n25, σ1$31/26, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.85**	**261**	*i* PN	**Pn**	**14 23 34.9**	**-4.6**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,60nm,0.5s						
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR	**Severo-Kuril's**	**5.11**	**21**	*e*PN	**Pn**	**14 23 53.5**	**-3.3**
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
NEM2	**Nemuro 2**	**5.95**	**247**	P	**Pn**	**14 24 07.5**	**-0.9**
NEM2				eS	Sx	14 25 11.1	
JNK	**Nakash**	**6.52**	**252**	P	**Pn**	**14 24 16.4**	**+0.2**
JAK	**Akkeshi**	**6.79**	**247**	P	**Pn**	**14 24 19.0**	**-1.0**
JAK				eS	Sx	14 25 32.7	
JTKR	**Abashiri--Toko**	**6.92**	**257**	P	**Pn**	**14 24 22.2**	**+0.5**
JAR	**Ashorobuto**	**7.26**	**252**	P	**Pn**	**14 24 26.6**	**+0.1**
JOB	**Onbets**	**7.40**	**249**	P	**Pn**	**14 24 28.3**	**0.0**
JOB				eS	Sx	14 25 47.8	
JSE	**Soyaes**	**7.57**	**266**	P	**Pn**	**14 24 32.6**	**+2.0**
PETK	**Petropavlovsk-**	**7.72**	**20**	Pn	**Pn**	**14 24 30.4**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=16						
PETK				Sn	**Sn**	**14 26 01.0**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=202,slow=34,SNR=2.4						
JKK2	**Kamakawa 2**	**7.74**	**258**	P	**Pn**	**14 24 33.7**	**+0.7**
ASAJ	**Asahikawa**	**7.77**	**260**	Pn	**Pn**	**14 24 34.5**	**+1.1**
	comp=Z,1.6nm,0.3s,baz=74,slow=10,SNR=12						
ASAJ				LR	LR	14 27 10.0	
	comp=Z,92nm,19.5s,baz=151,slow=35						
ASAJ	**Asahikawa**	**7.77**	**260**	P	**Pn**	**14 24 34.3**	**+1.0**
JCH	**Churui**	**7.84**	**248**	P	**Pn**	**14 24 33.4**	**-0.9**
JCH				eS	Sx	14 25 57.1	
JEM	**Erimo**	**8.27**	**245**	P	**Pn**	**14 24 41.3**	**+1.0**
JNBK	**Urakawa-nobuka**	**8.39**	**248**	P	**Pn**	**14 24 41.1**	**-0.9**
JNBK				eS	Sx	14 26 10.0	
JBT2	**Biratori 2**	**8.42**	**252**	P	**Pn**	**14 24 42.6**	**+0.3**
JNB	**Noboribetsu**	**9.43**	**253**	P	**Pn**	**14 24 55.1**	**-1.1**
JNB				eS	Sx	14 26 35.7	
JKB	**Kayabe**	**9.70**	**250**	P	**Pn**	**14 24 58.0**	**-1.9**
JKB				eS	Sx	14 26 40.1	
JOSM	**Okushiri--Mats**	**10.65**	**254**	P	**Pn**	**14 25 10.8**	**-2.0**
MJAR	**Matsushiro Arr**	**14.69**	**236**	Pn	**Pn**	**14 26 09.7**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=38,slow=16,SNR=3.3						
KSRS	**Korea Array**	**20.66**	**255**	P	**P**	**14 27 20.9**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=52,slow=11,SNR=6.2						
KSRS	**Korea Array**	**20.66**	**255**	P	**P**	**14 27 20.9**	**+1.4**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**77.80**	**60**	P	**P**	**14 34 38.0**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=328,slow=4.4,SNR=3.8						
TXAR	**Lajitas Array**	**77.80**	**60**	P	**P**	**14 34 38.0**	**+1.4**

ISCJB ***14*** *14:27:08.1±0.8, 35S±0.1×1010E±0.2, h27km, mb4.4/16, Error ellipse: s-maj=31.8km s-min=8.8km az=140.8*

NEIC ***14*** *14:27:10.0±0.8, 352S×100.94E, mb4.4/4, Error ellipse: s-maj=31.7km s-min=7.5km az=56.0*

IDC ***14*** *14:27:10.2±1.2, 361S×100.84E, h28km±.3km, mb4.0/10, mb1 4.1/10, mb1mx3.9/18, mbtmp4.0/10, MS3.6/1, Ms1 3.5/1, ms1mx2.5/30, Error ellipse: s-maj=43.4km s-min=12.9km az=59.0*

ISC 14 14:27:10.5±0.8, 35S±.01×1010E±.02, h28km, h28km±.8km:pP-P, n34, σ0$ 74/31, mb4.4/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.93**	**355**	P	**P**	**14 32 00.5**	**-1.4**
	2.5nm,0.6s,mb3.8,baz=185,slow=8.4,SNR=15						
CHTO	**Chiang Mai**	**22.29**	**355**	*e*P	**P**	**14 32 04.8**	**-0.9**
ODAN	**Odare**	**32.95**	**337**	*e*P	**P**	**14 33 43.2**	**+0.4**
	20nm,0.9s,mb5.1						
TAPN	**Taplejung**	**33.27**	**338**	*e*P	**P**	**14 33 46.8**	**+1.2**
	47nm,1.0s						
RAMN	**Ramite**	**33.34**	**336**	*e*P	**P**	**14 33 47.3**	**+1.1**
JIRN	**Jiri**	**34.13**	**336**	*e*P	**P**	**14 33 54.0**	**+0.9**
GUN	**Gumba**	**34.48**	**336**	*e*P	**P**	**14 33 57.0**	**+0.8**
	12nm,0.4s,mb5.2						
GKN	**Gorkha**	**35.08**	**334**	*e*P	**P**	**14 34 01.7**	**+0.3**
KOLN	**Koldanda**	**35.34**	**333**	*e*P	**P**	**14 34 03.0**	**-0.6**
DANN	**Dangsing**	**35.77**	**333**	*e*P	**P**	**14 34 07.5**	**+0.2**
	12nm,0.5s,mb5.1						
PYUN	**Piuthan**	**35.91**	**332**	*e*P	**P**	**14 34 07.8**	**-0.6**
WRA	**Warramunga Arr**	**36.37**	**119**	P	**P**	**14 34 12.8**	**+0.3**
	1.0nm,0.4s,mb4.1,baz=304,slow=9.1,SNR=18						
WRA				pP	pP	14 34 21.3	+0.4
	1.1nm,0.5s,baz=303,slow=9.1,SNR=7.9						
WRAB	**Tennant Creek**	**36.37**	**119**	*e*P	**P**	**14 34 12.6**	**0.0**
WB2	**Warramunga Arr**	**36.38**	**119**	*e*P	**P**	**14 34 11.5**	**-1.1**
ASAR	**Alice Springs**	**37.55**	**125**	P	**P**	**14 34 22.8**	**+0.2**
	0.5nm,0.3s,mb3.8,baz=299,slow=8.2,SNR=14						
ASAR				PcP	PcP	14 36 40.4	0.0
	0.5nm,0.6s,baz=321,slow=4.0,SNR=4.0						
STKA	**Stephens Creek**	**47.40**	**131**	*e*P	**P**	**14 35 42.8**	**+0.3**
	1.5nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**47.40**	**131**	P	**P**	**14 35 42.6**	**+0.1**
	1.2nm,0.8s,mb3.9,baz=315,slow=8.7,SNR=3.6						
STKA				pP	pP	14 35 50.0	-1.0
	1.4nm,0.4s,baz=315,slow=8.2,SNR=3.8						
STKA				LR	LR	14 54 46.9	
	comp=Z,54nm,18.2s,baz=30,slow=35						
KSRS	**Korea Array**	**47.83**	**29**	P	**P**	**14 35 46.4**	**+0.7**
	4.4nm,1.0s,mb4.5,baz=220,slow=8.1,SNR=15						
KSRS				pP	pP	14 35 54.9	+0.6
	4.0nm,1.0s,baz=221,slow=8.0,SNR=6.6						
SONM	**Songino Array**	**51.36**	**5**	P	**P**	**14 36 13.8**	**+1.3**
	3.5nm,0.7s,mb4.4,baz=188,slow=9.8,SNR=24						
SONM				pP	pP	14 36 21.7	+0.7
	3.9nm,0.8s,baz=187,slow=8.9,SNR=12						
ULN	**Ulaanbaatar**	**51.44**	**5**	*e*P	**P**	**14 36 12.6**	**-0.5**
	2.0nm,0.4s,mb4.4						
TKM2	**Tokmak 2**	**51.62**	**336**	*e*P	**P**	**14 36 14.5**	**0.0**
	2.0nm,0.4s,mb4.4						
MK31	**Makanchi Array**	**52.76**	**344**	*e*P	**P**	**14 36 22.7**	**-0.1**
MKAR	**Makanchi Array**	**52.76**	**344**	P	**P**	**14 36 22.9**	**0.0**
	3.2nm,0.8s,mb4.3,baz=147,slow=8.1,SNR=17						
MKAR				pP	pP	14 36 30.8	-0.7
	1.2nm,0.6s,baz=159,slow=7.3,SNR=4.5						
MKAR	**Makanchi Array**	**52.76**	**344**	P	**P**	**14 36 22.9**	**0.0**
MKAR				pP	pP	14 36 30.8	-0.7
MJAR	**Matsushiro Arr**	**52.84**	**38**	P	**P**	**14 36 24.5**	**+0.8**
	1.7nm,0.7s,mb4.1,baz=207,slow=7.7,SNR=4.3						
KURK	**Kurchatov**	**57.34**	**343**	P	**P**	**14 36 54.9**	**-1.0**
	baz=121,slow=5.5						
KURK	**Kurchatov**	**57.34**	**343**	*e*P	**P**	**14 36 54.6**	**-1.3**
ZAA0	**Zalesovo Array**	**58.84**	**349**	*e*P	**P**	**14 37 05.8**	**-0.6**
ZALV	**Zalesovo Beam**	**58.84**	**349**	P	**P**	**14 37 06.0**	**-0.3**
	6.1nm,0.9s,mb4.6,baz=159,slow=4.6,SNR=18						
BRVK	**Borovoye**	**62.01**	**340**	*e*P	**P**	**14 37 26.9**	**-1.1**
	3.2nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**88.24**	**340**	P	**P**	**14 39 58.7**	**0.0**
	2.3nm,0.8s,mb4.5,baz=94,slow=7.3,SNR=3.9						
TXAR	**Lajitas Array**	**145.26**	**40**	PKPbc	PKPbc	14 46 47.2	+1.2
	2.5nm,0.5s,baz=260,slow=0.7,SNR=48						
TXAR				pPKPbc	pPKPbc	14 46 55.5	+0.2
	2.6nm,0.6s,baz=327,slow=2.1,SNR=15						
TXAR	**Lajitas Array**	**145.26**	**40**	PKPbc	PKPbc	14 46 47.2	+1.2
TXAR				pPKPbc	pPKPbc	14 46 55.5	+0.2
JCT	**Junction City**	**146.75**	**34**	PKPbc	PKPbc	14 46 50.8	+0.3

ISCJB ***14*** *14:30:12.1±1.7, 38S±0.3×1005E±0.4, h33km, mb3.8/9, Error ellipse: s-maj=61.7km s-min=12.1km az=144.7*

NEIC ***14*** *14:30:13.1±1.4, 388S×100.51E, mb4.0/2, Error ellipse: s-maj=59.2km s-min=8.3km az=54.0*

IDC ***14*** *14:30:14.2±1.8, 370S×100.71E, h27km±.4km, mb3.6/7, mb1 3.7/7, mb1mx3.6/18, mbtmp3.6/7, Error ellipse: s-maj=60.7km s-min=19.3km az=56.0*

ISC 14 14:30:14.8±1.6, 38S±.02×1007E±.03, h35km, (h25km±1.6km:pP-P), n15, σ0$ 43/13, mb3.8/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.16**	**356**	P	**P**	**14 35 08.6**	**+0.8**
	1.0nm,0.6s,mb3.4,baz=189,slow=8.8,SNR=6.5						
WRA	**Warramunga Arr**	**36.55**	**119**	P	**P**	**14 37 17.1**	**-0.3**
	0.2nm,0.5s,mb3.2,baz=303,slow=9.1,SNR=4.7						
WRAB	**Tennant Creek**	**36.56**	**119**	*e*P	**P**	**14 37 17.6**	**0.0**
	0.8nm,0.5s,mb3.8						
WB2	**Warramunga Arr**	**36.57**	**119**	*e*P	**P**	**14 37 17.9**	**+0.3**
ASAR	**Alice Springs**	**37.70**	**125**	P	**P**	**14 37 27.4**	**+0.3**
	0.2nm,0.4s,mb3.2,baz=300,slow=7.9,SNR=3.3						
KSRS	**Korea Array**	**48.23**	**29**	P	**P**	**14 38 51.5**	**-0.6**
	2.4nm,1.0s,mb4.2,baz=230,slow=8.8,SNR=5.8						
KSRS				pP	pP	14 38 59.2	-3.4
	1.4nm,0.8s,baz=214,slow=9.4,SNR=4.6						
SONM	**Songino Array**	**51.65**	**5**	P	**P**	**14 39 18.2**	**+0.2**
	1.5nm,0.7s,mb4.1,baz=190,slow=9.6,SNR=8.2						
SONM				pP	pP	14 39 26.0	-2.4
	1.5nm,0.8s,baz=189,slow=8.7,SNR=7.1						
MK31	**Makanchi Array**	**52.91**	**344**	P	**P**	**14 39 27.8**	**+0.5**
MKAR	**Makanchi Array**	**52.91**	**344**	P	**P**	**14 39 27.2**	**-0.1**
	1.4nm,0.7s,mb4.0,baz=149,slow=7.7,SNR=5.6						
MKAR				pP	pP	14 39 35.2	-2.6
	0.8nm,0.7s,baz=166,slow=7.0,SNR=3.1						
KURK	**Kurchatov**	**57.49**	**344**	P	**P**	**14 39 59.4**	**-0.9**
	baz=161,slow=6.7						
KURK	**Kurchatov**	**57.49**	**344**	*e*P	**P**	**14 40 00.1**	**-0.2**
	2.4nm,0.9s,mb4.2						
ZAA0	**Zalesovo Array**	**59.03**	**349**	*e*P	**P**	**14 40 10.9**	**-0.1**
ZALV	**Zalesovo Beam**	**59.03**	**349**	P	**P**	**14 40 10.5**	**-0.5**
	3.7nm,1.0s,mb4.4,baz=178,slow=5.3,SNR=6.2						
TXAR	**Lajitas Array**	**145.69**	**40**	PKPbc	PKPbc	14 49 51.7	+1.1
	0.9nm,0.5s,baz=234,slow=1.0,SNR=12						
TXAR				pPKPbc	pPKPbc	14 49 59.8	-2.2
	1.5nm,0.7s,baz=280,slow=1.1,SNR=11						
TXAR	**Lajitas Array**	**145.69**	**40**	PKPbc	PKPbc	14 49 51.7	+1.1
TXAR				pPKPbc	pPKPbc	14 49 59.8	-2.2

NEIC ***14*** *14:30:49.9, 40.12N×1977E, h12km, MD3.4(ATH), After ATH.*

ISCJB ***14*** *14:30:50.1±1.4, 4007N±007×198E±0.1, h10km, Error ellipse: s-maj=14.6km s-min=9.2km az=160.8*

ATH ***14*** *14:30:50.8, 4005N×1978E, h20km±6km, MD3.4/5*

CSEM ***14*** *14:30:50.0±0.4, 4015N×1979E, h8km, MD3.4, Error ellipse: s-maj=8.2km s-min=5.9km az=102.0*

ISC 14 14:30:51.3±1.5, 4005N±008×199E±02, h9km±13km, n9, σ1$02/11, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.34**	**194**	*e*PB	**Pg**	**14 30 58.1**	**0.0**
JAN	**Janina**	**0.82**	**118**	*e*PB	**Pn**	**14 31 07.4**	**-1.7**
JAN				*e*SN	**Sn**	**14 31 21.0**	**-0.4**
OHR	**Ohrid**	**1.26**	**32**	*e*Pn	**Pn**	**14 31 14.1**	**-1.0**
OHR	**Ohrid**	**1.26**	**32**	*e*Pn	**Pn**	**14 31 14.2**	**-1.0**
KZN	**Kozani**	**1.45**	**79**	*e*PN	**Pn**	**14 31 19.4**	**+1.7**
KRUS	**Krusevo**	**1.67**	**37**	*e*Pn	**Pn**	**14 31 20.9**	**+0.2**
KRUS	**Krusevo**	**1.67**	**37**	*e*Pn	**Pn**	**14 31 21.0**	**+0.3**
THL	**Klokotos Trika**	**1.69**	**106**	*e*PN	**Pg**	**14 31 23.6**	**-0.2**
EVR	**Evrytania**	**1.85**	**127**	*e*Pn	**Pn**	**14 31 24.6**	**+1.3**
EVR				*e*Sn	**Sg**	**14 31 57.0**	**+6.1**

NIED ***14*** *14:37:00, 3130N×14180E, h17km, Mw4.6 Best double couple: M0 7.69000×10^15 NP1:φ=147.00000°, δ67.00000°, λ-77.00000°. NP2:φ=296.00000°, δ26.00000°, λ-119.00000°.*

BJI ***14*** *14:37:05.9, 31.15N×142.04E, h19km, mB4.9, mb4.7, Ms4.3, Msz4.1*

IDC ***14*** *14:37:07.7±0.4, 31.17N×141.78E, h0km, mb4.7/22, mb1 4.9/26, mb1mx4.8/29, mbtmp4.7/26, ML4.5/4, MS3.7/16, Ms1 3.7/16, ms1mx3.4/34, Error ellipse: s-maj=13.8km s-min=10.9km az=89.0*

NEIC ***14*** *14:37:08.2±2.6, 31.19N×141.76E, h4km±15km, mb5.0/74, MW4.5(NIED), Error ellipse: s-maj=6.1km s-min=4.1km az=151.0*

ISCJB ***14*** *14:37:09.2±0.9, 3121N±002×14169E±002, h19km±6km, mb5.0/126, MS4.0/25, Error ellipse: s-maj=4.2km s-min=2.9km az=14.4*

MOS ***14*** *14:37:10.9±0.9, 3120N×14169E, h33km, mb5.2/53, Error ellipse: s-maj=10.0km s-min=5.9km az=116.7*

JMA ***14*** *14:37:11.3±0.3, 3132N×14181E, h44km, M4.8*

ISC 14 14:37:11.8±1.0, 3121N±003×14170E±002, h26km±7km, h27km±1.3km:pP-P, n646, σ0$ 65/669, mb5.0/126, MS4.0/25, 186C-164D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.48**	**320**	P	**Pn**	**14 37 50.2**	**-0.2**
JHJ2				*e*S	**Sn**	**14 38 19.4**	**-0.4**
JHJ	**Hachijo jima 2**	**2.50**	**320**	Pn	**Pn**	**14 37 50.4**	**-0.4**
	63nm,0.3s,baz=85,slow=20,SNR=19						
JHJ				Sn	**Sn**	**14 38 16.4**	**-4.0**
	230nm,0.3s,baz=69,slow=20,SNR=8.9						
JHJ				LR	LR	14 38 21.3	
	comp=Z,454nm,19.3s,baz=133,slow=29						
JMY	**Miyakejima3**	**3.39**	**328**	P	**Pn**	**14 38 02.9**	**-0.2**
BSO1	**Boso 1**	**3.48**	**350**	P	**Pn**	**14 38 03.1**	**-1.2**
BSO1				S	**Sn**	**14 38 42.8**	**-1.9**
JKO	**Kozu shima**	**3.67**	**325**	P	**Pn**	**14 38 07.1**	**+0.3**
JKO				S	**Sn**	**14 38 48.8**	**-0.4**
BSO3	**Boso 3**	**3.71**	**345**	P	**Pn**	**14 38 06.9**	**-0.6**
CBIJ	**Chichi jima**	**4.13**	**174**	Pn	**Pn**	**14 38 11.6**	**-1.5**
	104nm,0.3s,baz=225,slow=21,SNR=69						
CBIJ				Sn	**Sn**	**14 38 56.4**	**-4.2**
	72nm,0.3s,baz=289,slow=22,SNR=3.7						
CBIJ				LR	LR	14 38 57.2	
	comp=Z,107nm,20.0s,baz=266,slow=27						
CBIJ	**Chichi jima**	**4.13**	**174**	P	**Pn**	**14 38 11.6**	**-1.5**
CBIJ				S	**Sn**	**14 38 59.0**	**-1.6**
JOD2	**Odawara 2**	**4.59**	**332**	P	**Pn**	**14 38 19.4**	**-0.1**
JIE	**Ise**	**5.26**	**308**	P	**Pn**	**14 38 30.6**	**+1.9**
JRY	**Ryogami san**	**5.33**	**335**	P	**Pn**	**14 38 31.1**	**+1.5**
JRY				S	**Sn**	**14 39 30.0**	**-0.1**
JWZ	**Kozaga**	**5.56**	**296**	P	**Pn**	**14 38 34.7**	**+1.8**
MJAR	**Matsushiro Arr**	**6.05**	**332**	Pn	**Pn**	**14 38 41.2**	**+1.6**
	17nm,0.3s,baz=155,slow=11,SNR=107						
MJAR				Sn	**Sn**	**14 39 48.0**	**0.0**
	5.4nm,0.3s,baz=139,slow=9.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**6.05**	**332**	P	**Pn**	**14 38 41.2**	**+1.6**
MJAR						14 39 48.0	
MJAR				pmax	pmax		
	comp=Z,17nm,0.3s						
MJAR				smax			
	comp=N,5.0nm,0.3s						
MAJO	**Matsushiro**	**6.06**	**332**	*e*Pn	**Pn**	**14 38 41.2**	**+1.6**
	comp=N,96nm,0.6s						
MAJO	**Matsushiro**	**6.06**	**332**	*e*P	**Pn**	**14 38 41.2**	**+1.6**
MAJO				pmax	pmax		
	comp=Z,95nm,0.6s						
MAT	**Matsushiro**	**6.06**	**332**	P	**Pn**	**14 38 41.0**	**+1.4**
MAT				S	**Sn**	**14 39 47.6**	**-0.5**
**

GUMO Guam 17.78 170 LR LR 14 47 15.4
comp=Z,214nm,20.9s,baz=44,slow=34
CN2 Changchun 17.96 319 *eP* **Pn** **14 41 18.1 -1.5**
CN2 *eXP* sP 14 41 28.3 -1.9
CN2 *eS* **Sn** **14 44 35.5 -3.6**
CN2 AMB AMB
comp=Z,20nm,1.1s
CN2 AMB AMB
comp=Z,310nm,4.0s
CN2 LR LR
comp=N,310nm,15.0s
CN2 LR LR
comp=E,270nm,15.0s
CN2 LR LR
comp=Z,250nm,17.0s
HABR Khabarovsk 17.96 346 *eP* **Pn** **14 41 17.8 -1.8**
HABR *eS* **Sn** **14 44 36.7 -2.4**
SNY Shenyang 17.97 311 ⇓P **Pn** **14 41 20.0 +0.3**
SNY S **Sn** **14 44 30.8 -8.6**
SNY AMB AMB
comp=Z,50nm,0.6s
SNY AMB AMB
comp=Z,108nm,5.2s
SNY LR LR
comp=N,495nm,18.5s
SNY LR LR
comp=E,431nm,15.4s
SNY LR LR
comp=Z,358nm,16.4s
YHNB Yeheng 19.09 255 *eP* **Pn** **14 41 33.5 0.0**
comp=Z,65nm,0.9s
NACB Ninganchiao 19.12 253 *eP* **Pn** **14 41 32.7 -1.2**
comp=Z,279nm,0.8s
NJ2 Nanjing 19.47 278 *eP* **Pn** **14 41 40.5 +2.6**
NJ2 AP pP 14 41 47.3 +3.7
NJ2 XP sP 14 41 50.6 +3.7
NJ2 PP 14 41 58.9
NJ2 S **Sn** **14 45 13.5 -2.2**
NJ2 XS sS 14 45 23.0 -3.6
NJ2 AMB AMB
comp=Z,20nm,0.6s
NJ2 AMB AMB
comp=Z,120nm,8.3s
NJ2 LR LR
comp=N,120nm,15.2s
NJ2 LR LR
comp=E,380nm,18.8s
NJ2 LR LR
comp=Z,380nm,18.8s
KLR Kul'dur 19.50 340 *eP* **Pn** **14 41 32.8 -5.4**
BJT Baijiatuan 22.48 300 *eP* **P** **14 42 06.1 -3.0**
comp=Z,54nm,0.4s,mb5.3
BJT Baijiatuan 22.48 300 *eP* **P** **14 42 06.1 -2.9**
BJT pmax pmax
comp=Z,54nm,0.4s
BJI Beijing 22.48 300 P **P** **14 42 07.3 -1.7**
BJI AMB AMB
comp=Z,50nm,0.9s,mb4.9
BJI AMB AMB
comp=Z,290nm,5.0s
BJI LR LR
comp=N,337nm,17.7s,MS4.1
BJI LR LR
comp=E,487nm,18.8s,MS4.1
BJI LR LR
comp=Z,400nm,20.6s,MS3.8
BJI Beijing 22.48 300 P **P** **14 42 07.2 -1.8**
comp=Z,50nm,0.9s,mb4.9
BJI S **S** **14 45 56.4 -18**
BJI LR LR
comp=Z,400nm,20.6s,MS3.8
BJI Beijing 22.48 300 P **P** **14 42 07.2 -1.8**
BJI S **S** **14 45 56.4 -18**
BJI pmax pmax
comp=Z,50nm,0.9s,mb4.9
BJI MLR MLR
comp=Z,400nm,20.6s,MS3.8
WHN Wuhan 23.46 275 P **P** **14 42 19.3 -0.2**
WHN LR LR
comp=N,526nm,16.6s,MS4.4
WHN LR LR
comp=E,789nm,13.6s,MS4.4
WHN LR LR
comp=Z,1μm,15.6s,MS4.4
HIA Hailar 24.47 324 *eP* **P** **14 42 27.9 -0.6**
comp=Z,30nm,0.7s,mb4.8
HIA Hailar 24.47 324 *eP* **P** **14 42 27.9 -0.6**
HIA pmax pmax
comp=Z,30nm,0.7s
PEA0B Petropavlovsk- 24.77 23 *eP* **P** **14 42 32.2 +1.0**
PETK Petropavlovsk- 24.77 23 P **P** **14 42 31.4 +0.2**
comp=Z,5.2nm,0.8s,mb4.1,baz=198,slow=7.6,SNR=12
PETK LR LR 14 52 49.1
comp=Z,103nm,18.6s,MS3.4,baz=201,slow=38
PET Petropavlovsk 25.04 25 *eP* **P** **14 42 40.2 +6.6**
PET MLR MLR
comp=Z,200nm,16.0s,MS3.7
HHC Hu-ho-hao-te 26.09 300 *eP* **P** **14 42 43.3 0.0**
HHC AP pP 14 42 50.5 -0.4
HHC XP sP 14 42 54.1 +0.1
HHC PP 14 43 25.6
HHC PCP PcP 14 46 10.9 +0.4
HHC S **S** **14 47 11.6 -1.5**
HHC XS sS 14 47 24.0 -1.6
HHC SS 14 48 21.0
HHC PCS PcS 14 49 50.8 -0.5
HHC AMB AMB
comp=Z,30nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,164nm,4.8s
HHC LR LR
comp=N,258nm,19.0s,MS4.2
HHC LR LR
comp=E,691nm,22.6s,MS4.2
HHC LR LR
comp=Z,593nm,18.4s,MS4.2
XAN Xi'an 27.69 285 P **P** **14 42 56.4 -1.4**
XAN AP pP 14 43 03.5 -1.8
XAN XP sP 14 43 08.0 -0.5
XAN PP 14 43 44.0
XAN AMB AMB
comp=Z,28nm,0.7s,mb5.0
XAN AMB AMB
comp=Z,33nm,3.2s
XAN LR LR
comp=N,152nm,18.3s,MS3.8
XAN LR LR
comp=E,135nm,14.7s,MS3.8
XAN LR LR
comp=Z,246nm,17.4s,MS3.8
DAV Davao City (W) 28.36 215 LR LR 14 52 17.5
comp=Z,106nm,21.0s,MS3.4,baz=250,slow=32
GYA Guiyang 30.97 270⇑ *iP* **P** **14 43 26.9 -0.1**
GYA AP pP 14 43 34.3 -0.3
GYA XP sP 14 43 38.0 +0.2
GYA PP PP 14 44 28.3 -8.8
GYA PCP PcP 14 46 24.0 +1.1
GYA S **S** **14 48 27.9 -2.3**
GYA XS sS 14 48 40.0 -2.7
GYA SCP ScP 14 50 04.0 0.0
GYA PCS PcS 14 50 07.0 0.0
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
GYA AMB AMB
comp=Z,150nm,5.4s
GYA LR LR
comp=N,530nm,13.1s,MS4.5
GYA LR LR
comp=E,430nm,13.6s,MS4.5
GYA LR LR
comp=Z,710nm,12.8s,MS4.5
ULN Ulaanbaatar 31.14 312 P **P** **14 43 30.0 +1.7**
SNR=12
ULN Ulaanbaatar 31.14 312 *eP* **P** **14 43 29.2 +0.9**
comp=Z,38nm,1.0s,mb5.2
ULN Ulaanbaatar 31.14 312 *eP* **P** **14 43 29.2 +0.9**
ULN pmax pmax
comp=Z,38nm,1.0s,mb5.2
QIZ Qiongzhong 31.18 255 *eP* **P** **14 43 29.6 +0.8**
QIZ *eS* **S** **14 48 35.5 +2.1**
QIZ LR LR
comp=Z,301nm,19.5s,MS4.0
SONM Songino Array 31.55 312 P **P** **14 43 33.0 +1.1**
comp=Z,26nm,0.9s,mb5.1,baz=114,slow=7.9,SNR=120
SONM PcP PcP 14 46 24.9 +0.9
comp=Z,0.9nm,0.6s,baz=101,slow=1.9,SNR=4.4
SONM LR LR 14 56 51.5
comp=Z,174nm,19.6s,MS3.7,baz=101,slow=37
SONM Songino Array 31.55 312 P **P** **14 43 33.0 +1.2**
SONM 14 46 24.9
SONM pmax pmax
comp=Z,26nm,0.9s
SONM MLR MLR
comp=Z,174nm,19.6s
LZH Lanzhou 31.75 289 *eP* **P** **14 43 32.4 -1.3**
LZH AP pP 14 43 39.5 -1.8
LZH XP sP 14 43 42.4 -2.1
LZH PP PP 14 44 37.5 -8.1
LZH S **S** **14 48 39.5 -2.6**
LZH XS sS 14 48 51.5 -3.2
LZH AMB AMB
comp=Z,23nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,77nm,4.0s
LZH LR LR
comp=N,578nm,15.8s
LZH LR LR
comp=Z,949nm,16.7s,MS4.5
LZH Lanzhou 31.75 289 *eP* **P** **14 43 32.4 -1.3**
comp=Z,23nm,1.0s,mb5.0
LZH pP pP 14 43 39.5 -1.8
LZH sP sP 14 43 42.4 -2.1
LZH PP PP 14 44 37.5 -8.1
LZH S **S** **14 48 39.5 -2.6**
LZH sS sS 14 48 51.5 -3.2
LZH SS SS 14 50 30.5 -28
LZH LR LR
comp=Z,950nm,16.7s,MS4.5
LZH Lanzhou 31.75 289 *eP* **P** **14 43 32.4 -1.3**
LZH *SP sP 14 43 42.4 -2.1
LZH 14 44 37.5
LZH S **S** **14 48 39.5 -2.6**
LZH *SS sS 14 48 51.5 -3.2
LZH SS SS 14 50 30.5 -28
LZH pmax pmax
comp=Z,23nm,1.0s,mb5.0
LZH MLR MLR
comp=Z,950nm,16.7s,MS4.5
YAK Yakutsk 31.80 349 *eP* **P** **14 43 30.8 -3.1**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.8
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.3s
CD2 Chengdu 32.40 279 *eP* **P** **14 43 39.8 +0.3**
CD2 AP pP 14 43 47.1 0.0
CD2 XP sP 14 43 51.3 +1.0
CD2 PP PP 14 44 50.6 -2.2
CD2 S **S** **14 48 52.5 +0.1**
CD2 XS sS 14 49 04.6 -0.3
CD2 SS SS 14 50 48.3 -24
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,330nm,14.2s,MS4.3
CD2 LR LR
comp=E,430nm,17.8s,MS4.3
CD2 LR LR
comp=Z,440nm,14.2s,MS4.3
BOD Bodaibo 32.69 333 *eP* **P** **14 43 42.2 +0.5**
BOD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ZAK Zakamensk 34.32 315⇑ *iP* **P** **14 43 56.8 +0.8**
ZAK pmax pmax
comp=Z,11nm,1.6s,mb4.5
TLY Talaya 34.55 317 *eP* **P** **14 43 59.7 +1.7**
comp=Z,4.8nm,0.6s,mb4.6
TLY Talaya 34.55 317 *eP* **P** **14 44 00.4 +2.4**
TLY *e* 14 44 15.8
TLY pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,244nm,16.0s,MS4.0
KMI Kunming 34.75 270 P **P** **14 44 01.9 +1.9**
KMI AP pP 14 44 09.5 +1.8
KMI XP sP 14 44 12.3 +1.5
KMI PP PP 14 45 19.3 +0.3
KMI S **S** **14 49 30.0 +1.1**
KMI XS sS 14 49 42.6 +1.1
KMI SS SS 14 51 42.9 -17
KMI AMB AMB
comp=Z,3.0nm,0.6s,mb4.4
KMI AMB AMB
comp=Z,116nm,6.6s
KMI LR LR
comp=N,187nm,15.8s,MS4.2
KMI LR LR
comp=E,198nm,11.8s,MS4.2
KMI LR LR
comp=Z,160nm,15.8s,MS3.9
KMI Kunming 34.75 270 P **P** **14 44 01.9 +1.9**
comp=Z,3.0nm,0.6s,mb4.4
KMI pP pP 14 44 09.5 +1.8
KMI sP sP 14 44 12.2 +1.4
KMI PP PP 14 45 19.3 +0.3
KMI S **S** **14 49 30.0 +1.1**
KMI sS sS 14 49 42.6 +1.1
KMI SS SS 14 51 42.9 -17
KMI SSS 14 52 09.6
KMI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KMI MLR MLR
comp=Z,160nm,15.8s,MS3.9
KMI Kunming 34.75 270 P **P** **14 44 01.9 +1.9**
KMI *SP sP 14 44 12.2 +1.4
KMI 14 45 19.3
KMI S **S** **14 49 30.0 +1.1**
KMI *SS sS 14 49 42.6 +1.1
KMI SS SS 14 51 42.9 -17
KMI SSS 14 52 09.6
KMI LR LR
comp=Z,160nm,15.8s,MS3.9
GTA Gaotai 34.89 295 *eP* **P** **14 43 59.8 -1.3**
GTA AP pP 14 44 07.6 -1.1
GTA XP sP 14 44 11.0 -0.9
GTA S **S** **14 49 27.1 -3.7**
GTA AMB AMB
comp=Z,11nm,0.9s,mb4.8
GTA AMB AMB
comp=Z,85nm,3.9s
GTA LR LR
comp=N,175nm,16.2s,MS4.2
GTA LR LR
comp=E,353nm,17.7s,MS4.2
GTA LR LR
comp=Z,349nm,17.4s,MS4.2
CMAR Chiang Mai Arr 40.59 262 P **P** **14 44 49.0 -0.5**
comp=Z,3.3nm,0.7s,mb4.1,baz=57,slow=6.8,SNR=25
CMAR LR LR 15 02 42.0
comp=Z,167nm,18.9s,MS3.9,baz=88,slow=38
CMAR Chiang Mai Arr 40.59 262 P **P** **14 44 49.0 -0.5**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
CMAR MLR MLR
comp=Z,167nm,18.9s
TIXI Tiksi 41.08 354 *eP* **P** **14 44 51.8 -1.1**
comp=Z,3.5nm,0.6s,mb4.2
TIXI Tiksi 41.08 354 *eP* **P** **14 44 50.9 -2.0**
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
KAPI Kappang 41.68 214 P **P** **14 44 56.7 -1.6**
comp=Z,8.7nm,0.8s,mb4.4,baz=36,slow=10,SNR=5.3
KAPI LR LR 15 01 30.7
comp=Z,59nm,18.4s,MS3.5,baz=237,slow=35
WMQ Urumqi 43.92 302 P **P** **14 45 17.0 +0.7**
WMQ AP pP 14 45 25.0 +0.9
WMQ XP sP 14 45 28.0 +0.8
WMQ PP PP 14 47 01.0 +2.3
WMQ S **S** **14 51 46.0 -0.2**
WMQ SS SS 14 54 54.0 -9.0
WMQ AMB AMB
comp=Z,25nm,1.0s,mb4.9
WMQ LR LR
comp=N,117nm,15.0s,MS4.1
WMQ LR LR
comp=E,118nm,15.0s,MS4.1
WMQ LR LR
comp=Z,113nm,15.0s,MS3.9
KAKA Kakadu 44.57 193 *eP* Px 14 45 08.9
comp=Z,8.7nm,0.9s
BATI Baumata 44.67 206 P **P** **14 45 22.7 +0.2**
comp=Z,17nm,0.5s,mb5.1,baz=22,slow=4.1,SNR=8.3
ZAA0 Zalesovo Array 46.16 317 *eP* **P** **14 45 33.8 -0.1**
ZALV Zalesovo Beam 46.16 317 P **P** **14 45 34.3 +0.3**
comp=Z,6.4nm,0.5s,mb4.8,baz=101,slow=7.7,SNR=33
ZALV PcP PcP 14 47 09.6 0.0
comp=Z,9.7nm,0.6s,baz=105,slow=3.2,SNR=11
ZALV Zalesovo Beam 46.16 317 P **P** **14 45 34.3 +0.3**
ZALV PcP PcP 14 47 09.6 0.0
ZALV Zalesovo Beam 46.16 317 P **P** **14 45 34.3 +0.4**
ZALV 14 47 09.6
ZALV pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
TAPN Taplejung 46.87 280 *eP* **P** **14 45 38.7 -1.2**
comp=Z,12nm,0.4s,mb5.2
NVS Novosibirsk 47.17 318 *eP* **P** **14 45 40.4 -1.4**
NVS *eS* **S** **14 52 34.5 +1.8**
NVS pmax pmax
comp=N,8.0nm,1.2s
NVS pmax pmax
comp=E,32nm,1.2s
NVS pmax pmax
comp=Z,40nm,1.2s,mb5.2
NVS smax
comp=N,33nm,2.8s
NVS smax
comp=E,14nm,2.0s
ODAN Odare 47.29 279 *eP* **P** **14 45 42.5 -0.7**
comp=E,38nm,0.7s,mb5.4
MK31 Makanchi Array 47.60 307 *eP* **P** **14 45 45.5 +0.1**
MKAR Makanchi Array 47.60 307 P **P** **14 45 45.6 +0.3**
comp=E,8.2nm,0.4s,mb5.1,baz=86,slow=9.7,SNR=92
MKAR PcP PcP 14 47 15.6 +0.8
comp=E,0.9nm,0.4s,baz=104,slow=3.7,SNR=3.6
MKAR ScP ScP 14 51 15.4 +8.1
comp=E,1.5nm,0.9s,baz=107,slow=3.1,SNR=3.3
MKAR LR LR 15 07 35.2
comp=E,114nm,18.1s,MS3.9,baz=254,slow=38
RAMN Ramite 47.93 280 *eP* **P** **14 45 47.7 -0.5**
comp=E,58nm,0.8s,mb5.6
JIRN Jiri 48.05 281 *eP* **P** **14 45 49.2 +0.1**
comp=E,37nm,0.3s,mb5.8
GUN Gumba 48.23 281 *eP* **P** **14 45 50.6 +0.1**
comp=E,68nm,0.7s,mb5.8
PKI Pulchoki 48.74 281 *eP* **P** **14 45 53.5 -0.9**
KKN Kakani 48.78 281 *eP* **P** **14 45 54.5 -0.2**
DMN Daman 48.98 281 *eP* **P** **14 45 55.9 -0.4**
GKN Gorkha 49.25 282 *eP* **P** **14 45 57.8 -0.5**
comp=E,32nm,0.7s,mb5.5
KURK Kurchatov 49.86 312 P **P** **14 46 03.2 +0.6**
comp=E,182nm,0.7s,mb6.2,SNR=34
KURK Kurchatov 49.86 312 P **P** **14 46 03.5 +0.8**
SNR=8.9
KURK Kurchatov 49.86 312 P **P** **14 46 03.4 +0.8**
KURK Kurchatov 49.86 312 *eP* **P** **14 46 02.4 -0.2**
comp=E,24nm,0.8s,mb5.3
KURK Kurchatov 49.86 312 P **P** **14 46 03.4 +0.8**
DANN Dangsing 49.88 282 *eP* **P** **14 46 03.4 +0.3**
comp=E,47nm,0.6s,mb5.7
SVW2 Sparrevohn 50.09 34 *eP* **P** **14 46 04.0 -0.2**
KOLN Koldanda 50.19 282 *eP* **P** **14 46 05.4 -0.1**
comp=E,30nm,0.6s,mb5.5
PYUN Piuthan 50.60 282 *eP* **P** **14 46 08.6 0.0**
comp=E,52nm,0.4s,mb5.8
CTA Charters Tower 51.20 175 P **P** **14 46 12.8 -0.1**
comp=E,3.2nm,0.5s,mb4.5,baz=327,slow=14,SNR=5.6
CTA Charters Tower 51.20 175 P **P** **14 46 12.8 -0.1**
CTA Charters Tower 51.20 175 P **P** **14 46 12.8 -0.1**
CTA pmax pmax
comp=Z,3.0nm,0.5s
WRAB Tennant Creek 51.34 189 P **P** **14 46 13.0 -1.0**
comp=Z,122nm,0.4s,mb6.2,SNR=40
WRAB Tennant Creek 51.34 189*c iP* **P** **14 46 13.3 -0.7**
WB2 Warramunga Arr 51.35 189 *eP* **P** **14 46 13.2 -0.9**
WRA Warramunga Arr 51.35 189 P **P** **14 46 13.6 -0.5**
comp=Z,13nm,0.3s,mb5.3,baz=6.0,slow=7.6,SNR=391
WRA PcP PcP 14 47 29.9 +1.2
comp=Z,4.1nm,0.6s,baz=4.7,slow=4.1,SNR=5.5
WRA ScP ScP 14 51 29.8 +6.3
comp=Z,0.5nm,0.5s,baz=359,slow=4.6,SNR=7.4
WRA S **S** **14 53 27.3 -4.7**
comp=Z,3.5nm,0.9s,baz=3.2,slow=13,SNR=5.4
WRA Warramunga Arr 51.35 189 P **P** **14 46 13.6 -0.5**
WRA 14 47 29.9
WRA S **S** **14 53 27.3 -4.7**
WRA pmax pmax
comp=Z,13nm,0.3s
WRA smax
comp=N,4.0nm,0.9s
KDAK Kodiak Island 51.38 39 P **P** **14 46 13.0 -1.0**
comp=N,299nm,1.2s,mb6.1,SNR=12
KDAK Kodiak Island 51.38 39 P pP 14 46 27.1 +5.3
comp=N,22nm,0.5s,baz=278,slow=2.3,SNR=53
CHUM Lake Minchumin 51.92 31 *eP* **P** **14 46 18.5 +0.6**
comp=N,19nm,1.2s,mb4.9
KTH Kantishna Hill 52.51 31 *eP* **P** **14 46 22.3 0.0**
comp=N,82nm,1.9s,mb5.3
BPAW Bear Paw Mtn. 52.53 31 *eP* **P** **14 46 22.4 0.0**
comp=N,6.3nm,0.9s,mb4.5
SLKM Skilak Lake 52.67 35 *eP* **P** **14 46 22.5 -1.0**
TKM2 Tokmak 2 52.78 303 *eP* **P** **14 46 25.9 +1.2**
comp=N,5.2nm,0.6s,mb4.6
TKM2 Tokmak 2 52.78 303 *eP* **P** **14 46 25.9 +1.2**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
TRF Thorofare Moun 52.78 32 *eP* **P** **14 46 24.4 0.0**
comp=Z,9.1nm,0.8s,mb4.8
MCK McKinley 53.40 31 *eP* **P** **14 46 28.2 -0.7**
comp=Z,12nm,1.0s,mb4.8
MCK McKinley 53.40 31 *eP* **P** **14 46 28.2 -0.7**
MCK pmax pmax
comp=Z,12nm,1.0s,mb4.8
COLA College 53.93 30 *eP* **P** **14 46 32.6 -0.1**
comp=Z,5.0nm,0.7s,mb4.5
COLA College 53.93 30 *eP* **P** **14 46 29.0 -3.8**
EKS2 Erkin-Say 54.15 303 *eP* **P** **14 46 35.6 +0.9**
comp=Z,4.6nm,0.8s,mb4.5
BVA0 Borovoye Array 54.77 316 *i* P **P** **14 46 39.2 +0.1**
BVAR Borovoye Array 54.77 316 LR LR 15 13 08.0
comp=Z,111nm,18.5s,MS4.0,baz=319,slow=39
BRVK Borovoye 54.83 316 P **P** **14 46 40.1 +0.6**
comp=Z,81nm,0.6s,mb5.9,SNR=8.2
BRVK Borovoye 54.83 316 *eP* **P** **14 46 39.8 +0.3**
comp=Z,11nm,0.6s,mb5.1
BRVK Borovoye 54.83 316 *eP* **P** **14 46 39.8 +0.3**
BRVK pmax pmax
comp=Z,11nm,0.6s,mb5.1
ASAR Alice Springs 55.08 189 P **P** **14 46 41.1 -0.3**
comp=Z,4.9nm,0.4s,mb4.9,baz=12,slow=6.6,SNR=152
ASAR S **S** **14 54 19.2 -3.3**
comp=Z,1.4nm,1.0s,baz=13,slow=17,SNR=4.4
ASAR Alice Springs 55.08 189 P **P** **14 46 41.2 -0.3**
ASAR S **S** **14 54 19.3 -3.3**
ASAR pmax pmax
comp=Z,5.0nm,0.4s
ASAR smax
comp=N,1.0nm,1.0s
MBWA Marble Bar 56.18 205 *eP* **P** **14 46 49.0 -0.5**
KK31 Karatay Array 56.40 304 *i* P **P** **14 46 51.3 +0.4**
KK31 pmax pmax
comp=Z,18nm,0.6s,mb5.3
EGAK Eagle 56.80 30 *eP* **P** **14 46 52.3 -1.1**
comp=Z,5.1nm,0.8s,mb4.6
DAWY Dawson 57.61 31 *eP* **P** **14 46 59.2 0.0**
INK Inuvik 59.49 25 *eP* **P** **14 47 11.7 -0.5**
comp=Z,294nm,0.9s,mb6.3
SVE Sverdlovsk 59.74 321⇑ *eP* **P** **14 47 15.3 +1.2**
SVE pmax pmax
comp=Z,31nm,0.9s,mb5.3
ARU Arti 60.94 321 P **P** **14 47 22.1 -0.2**
comp=Z,227nm,0.6s,SNR=15
ARU Arti 60.94 321 *eP* **P** **14 47 22.5 +0.2**
comp=Z,23nm,0.6s,mb5.5
ARU Arti 60.94 321*d iP* **P** **14 47 22.4 +0.1**
ARU *e**PP pP 14 47 35.3 +5.0
ARU *e* 14 49 37.2
ARU *e*PPP 14 51 03.5
ARU *eS* **S** **14 55 42.2 +3.5**
ARU SS SS 14 59 39.8 +2.1
ARU pmax pmax
comp=Z,37nm,1.0s,mb5.5
AB31 Akbulak array 61.96 313 P **P** **14 47 29.7 +0.4**
AB31 pmax pmax
comp=Z,18nm,0.6s,mb5.4

STKA **Stephens Creek** 62.75 180 eP P 14 47 34.3 -0.3
comp=Z,3.9nm,0.6s,mb4.7
STKA Stephens Creek 62.75 180 P P 14 47 34.3 -0.3
comp=Z,3.5nm,0.6s,mb4.7,baz=344,slow=7.3,SNR=10
STKA LR LR 15 13 14.6
comp=Z,96nm,19.5s,MS4.0,baz=24,slow=35
AKTO Aktyubinsk 62.82 314 LR LR 15 16 06.1
comp=Z,107nm,18.7s,MS4.0,baz=302,slow=37
FORT Forrest 63.00 193 eP P 14 47 36.3 0.0
comp=Z,19nm,0.6s,mb5.4
DLBC Dease Lake 63.12 36 P P 14 47 37.8 +1.0
comp=Z,7.5nm,0.9s,mb4.8,baz=298,slow=5.2,SNR=11
ABKT Ailbek 66.96 301 P P 14 48 03.4 +1.2
comp=Z,95nm,0.8s,mb5.9,SNR=5.1
APA Apatity 68.10 337‖ eP P 14 48 02.7 -6.2
APA pmax pmax
comp=Z,14nm,1.2s,mb4.9
YKA Yellowknife Ar 68.74 29 P P 14 48 12.4 -0.6
comp=Z,4.4nm,0.6s,mb4.6,baz=297,slow=6.4,SNR=19
YKA LR LR 15 18 13.0
comp=Z,25nm,18.8s,MS3.5,baz=50,slow=36
YKA Yellowknife Ar 68.74 29 P P 14 48 12.4 -0.6
YKA pmax pmax
comp=Z,4.0nm,0.6s
YKA MLR MLR
comp=Z,25nm,18.8s
ARCES ARCESS Array B 69.53 340 P P 14 48 18.1 +0.4
comp=Z,7.2nm,0.8s,mb4.7,baz=50,slow=8.0,SNR=16
ARCES ARCESS Array B 69.53 340 P P 14 48 18.1 +0.3
ARCES pmax pmax
comp=Z,7.0nm,0.8s
B04A Port Angeles 70.47 45 ⇑P P 14 48 24.4 +0.5
baz=70
C04A Brinnon 70.94 45 ⇑P P 14 48 26.6 -0.1
baz=71
E03A Lebam 71.08 47 ⇑P P 14 48 27.9 +0.3
baz=71
JOF Joensuu 71.22 333 ep P 14 48 27.8 -0.4
comp=Z,1.8nm,0.4s,mb4.3
JOF Joensuu 71.22 333 eP P 14 48 27.8 -0.4
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
B05A Bryant 71.23 45 ⇑P P 14 48 28.9 +0.4
baz=71
JCW Jim Creek 71.36 45 P P 14 48 29.7 +0.4
RPW Rockport 71.50 44 eP P 14 48 30.1 -0.1
DAG Danmarks Havn 71.58 355‖ eP P 14 48 28.8 -1.4
comp=Z,22nm,1.2s,mb5.0
DAG Danmarks Havn 71.58 355‖ eP P 14 48 28.8 -1.4
DAG pmax pmax
comp=Z,22nm,1.2s,mb5.0
DAG Danmarks Havn 71.58 355 ⇑iP P 14 48 28.8 -1.4
comp=Z,22nm,1.2s,mb5.0
H02A Toledo 71.61 49 ⇓P P 14 48 31.6 +0.7
baz=71
G03A Yamhill 71.79 48 ⇓P P 14 48 32.6 +0.6
baz=72
A07A Ashnola River, 71.90 43 ⇓P P 14 48 32.5 -0.1
baz=72,SNR=8.4
TDL Tradedollar La 72.00 46 P P 14 48 34.0 +0.8
F04A Amboy 72.06 47 ⇓P P 14 48 33.5 0.0
baz=72
K01A Sixes 72.12 50 ⇑P P 14 48 34.2 +0.2
baz=72
B07A Winthrop 72.32 44 ⇑P P 14 48 34.9 -0.2
baz=72,SNR=5.7
G04A Mulino 72.34 48 ⇓P P 14 48 35.5 +0.2
baz=72
I03A Eugene 72.38 49 ⇑P P 14 48 36.0 +0.5
baz=72
J02A Umpqua 72.46 50 ⇑P P 14 48 36.5 +0.5
baz=72
D06A Cle Elum 72.46 45 ⇑P P 14 48 36.1 +0.1
baz=72
ETW Entiat 72.59 45 eP P 14 48 36.5 -0.2
A08A Turner Farm, O 72.59 43 ⇓P P 14 48 36.3 -0.3
baz=72,SNR=6.8
E06A Yakima 72.68 46 ⇓P P 14 48 37.6 +0.4
baz=72
C07A Waterville 72.71 44 ⇑P P 14 48 36.7 -0.7
baz=72,SNR=5.8
EBG Ellensburg 72.76 45 P P 14 48 38.1 +0.4
H04A Detroit Lake 72.77 48 ⇑P P 14 48 37.5 -0.3
baz=72,SNR=5.1
M01C Crescent City 72.78 51 ⇑P P 14 48 38.2 +0.3
baz=73
K02A Glendale 72.78 50 ⇓P P 14 48 38.3 +0.3
baz=73
B08A Colville Reser 72.83 44 ⇓P P 14 48 37.9 -0.2
baz=73,SNR=5.7
OBN Obninsk 72.93 325 eP P 14 48 37.2 -1.3
OBN i pP 14 48 44.4 -2.3
OBN pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.5
A09A Danville 72.98 43 ⇓P P 14 48 38.9 -0.1
baz=73,SNR=7.7
L02A Cave Junction 72.98 51 ⇑P P 14 48 39.6 +0.5
baz=73
D07A Quincy 72.99 45 ⇑P P 14 48 39.4 +0.4
baz=73
G05A Wamic 73.06 47 ⇑P P 14 48 39.9 +0.3
baz=73
HUMO Hull Mountain 73.21 50 ⇓P P 14 48 40.5 +0.1
baz=73
BKCOR Black Crater 73.25 48 P P 14 48 41.2 +0.5
C08A Higginbotham F 73.27 44 ⇓P P 14 48 40.5 -0.3
baz=73
JCC Jacoby Creek 73.30 52 ⇓P P 14 48 41.5 +0.4
baz=73
E07A Sunnyside 73.36 45 ⇓P P 14 48 41.1 -0.1
baz=73,SNR=5.3
H05A Madras 73.39 48 ⇑P P 14 48 41.5 0.0
baz=73
G06A Carlson Farm, 73.49 47 ⇑P P 14 48 41.9 -0.1
baz=73,SNR=5.3
B09A Rice 73.50 43 ⇑P P 14 48 41.7 -0.4
baz=73,SNR=6.9
A10A Northport 73.58 42 ⇓P P 14 48 42.4 -0.1
baz=73,SNR=13
I05A Bend 73.59 48 ⇑P P 14 48 42.6 0.0
baz=73
KAF Kangasniemi 73.60 334 ep P 14 48 42.1 -0.3
comp=Z,3.1nm,0.4s,mb4.6,baz=52,slow=5.6
KAF Kangasniemi 73.60 334 eP P 14 48 42.1 -0.3
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
HOQ Hoqain 73.62 288 P P 14 48 44.4 +1.2
SNR=6.5
OD2 Odessa Site #2 73.66 44 eP P 14 48 42.7 -0.3
D08A Wollman Farm, 73.69 45 ⇓P P 14 48 42.8 -0.4
baz=74,SNR=6.7
C09A Chrisman Ranch 73.72 44 ⇑P P 14 48 43.7 +0.4
baz=74
O01C Eel River Cons 73.75 53 ⇑P P 14 48 44.1 +0.4
baz=74
YBH Yreka Blue Hor 73.77 51 P P 14 48 44.2 +0.4
comp=Z,8.0nm,0.7s,mb4.7,baz=351,slow=3.7,SNR=24
YBH Yreka Blue Hor 73.77 51 eP P 14 48 43.8 +0.1
comp=Z,8.7nm,1.0s,mb4.6
YBH Yreka Blue Hor 73.77 51 eP P 14 48 43.8 0.0
YBH pmax pmax
comp=Z,9.0nm,1.0s
YBH Yreka Blue Hor 73.77 51 P P 14 48 44.2 +0.4
YBH pmax pmax
comp=Z,8.0nm,0.7s
YBH Yreka Blue Hor 73.77 51 ⇑P P 14 48 44.0 +0.2
baz=74,SNR=7.8
N02C Big Bar 73.79 52 ⇓P P 14 48 44.1 +0.2
baz=74,SNR=6.8
EDM Edmonton 73.79 37 eP P 14 48 43.3 -0.4
M02C Callahan 73.83 51 ⇓P P 14 48 44.5 +0.3
baz=74,SNR=7.2
E08A Dider Farm, El 73.87 45 ⇓P P 14 48 44.3 0.0
baz=74
LAMM Antelope Mount 73.88 51 P P 14 48 45.0 +0.6
H06A Lindquist Farm 73.91 47 ⇑P P 14 48 44.7 +0.1
baz=74
HATD Hatta, Dubai 74.01 290 ⇑P P 14 48 46.4 +0.9
SNR=6.3
D09A Jones Farm, Ri 74.06 44 ⇑P P 14 48 45.3 0.0
baz=74,SNR=5.2
G07A Ruggs Ranch, H 74.08 47 ⇓P P 14 48 45.7 +0.2
baz=74
BSY Bisya 74.09 287 P P 14 48 47.2 +1.2
SNR=10

KCPM Cahto Peak 74.12 53 eP P 14 48 46.1 +0.3
NEW Newport 74.18 43 eP P 14 48 46.0 -0.1
comp=Z,20nm,1.0s,mb5.0
NEW Newport 74.18 43 eP P 14 48 46.0 0.0
NEW pmax pmax
comp=Z,20nm,1.0s
A11A Hall Mountain, 74.28 42 ⇑P P 14 48 47.1 +0.5
baz=74,SNR=12
I06A Prineville 74.36 48 ⇓P P 14 48 47.1 -0.1
baz=74,SNR=6.6
ARQ Araqi 74.38 288 P P 14 48 48.6 +1.0
SNR=11
F08A Pendleton 74.38 46 ⇓P P 14 48 47.4 +0.1
baz=74,SNR=8.0
WDC Whiskeytown Da 74.42 52 eP P 14 48 47.4 -0.1
comp=Z,7.0nm,0.9s,mb4.6
WDC Whiskeytown Da 74.42 52 eP P 14 48 47.4 -0.2
WDC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WDC Whiskeytown Da 74.42 52 ⇓P P 14 48 47.2 -0.4
baz=74,SNR=5.8
E09A Wood Farm, Sta 74.42 45 ⇓P P 14 48 47.3 -0.1
baz=74,SNR=14
K05A Summer Lake 74.50 49 ⇓P P 14 48 48.4 +0.3
baz=74,SNR=11
G08A Pilot Rock 74.51 46 ⇓P P 14 48 48.1 +0.1
baz=74
B11A Sandpoint 74.53 43 ⇓P P 14 48 48.1 0.0
baz=74,SNR=5.8
D10A Wagner Farm, O 74.68 44 ⇑P P 14 48 48.9 0.0
baz=74
A12A Yaak River Ran 74.69 42 ⇓P P 14 48 49.5 +0.5
baz=74
GASB Alder Springs 74.73 53 ⇑P P 14 48 49.8 +0.4
baz=74
J06A Christmas Vall 74.73 49 ⇑P P 14 48 49.2 -0.2
baz=74,SNR=9.7
I07A Izee 74.75 48 ⇓P P 14 48 49.8 +0.3
baz=74
HOPS Hopland 74.79 54 eP P 14 48 49.9 +0.1
HOPS Hopland 74.79 54 ⇓P P 14 48 50.0 +0.2
baz=75
C11A Tepee Creek (N 74.89 43 ⇑P P 14 48 50.3 +0.1
baz=75,SNR=31
KIV Kislovodsk 74.94 312 eP P 14 48 50.2 -0.4
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,83nm,18.0s,MS4.1
F09A S2 Ranch, Elgi 74.95 46 ⇑P P 14 48 51.0 +0.5
baz=75
B12A Libby 74.96 42 ⇓P P 14 48 50.8 +0.2
baz=75
E10A Myers Farm, Un 75.06 45 ⇓P P 14 48 51.0 -0.2
baz=75
H08A Prairie City 75.06 47 ⇓P P 14 48 51.2 0.0
baz=75,SNR=6.8
LBCM Butte Creek Ri 75.09 51 P P 14 48 51.5 0.0
J07A Hines 75.21 48 ⇓P P 14 48 52.6 +0.5
baz=75,SNR=6.2
F10A Beach Ranch, E 75.24 45 ⇓P P 14 48 52.5 +0.2
baz=75,SNR=6.2
D11A Klaveano Farm, 75.24 44 ⇓P P 14 48 51.8 -0.4
baz=75,SNR=18
G09A Cove 75.24 46 ⇓P P 14 48 52.1 -0.1
baz=75,SNR=12
MOD Modoc 75.28 50 ⇓P P 14 48 52.0 -0.5
baz=75,SNR=6.8
MNRC McLaughlin Nat 75.28 53 ⇓P P 14 48 52.9 +0.3
baz=75
C12B Naegeli Ranch, 75.41 43 ⇓P P 14 48 53.5 +0.3
baz=75
GNI Garni 75.42 308 eP P 14 48 53.9 +0.5
GNI pmax pmax
comp=Z,6.0nm,1.0s
FARB Farallon Islan 75.45 55 ⇑P P 14 48 53.3 -0.3
baz=75
O04C Chester 75.52 52 ⇓P P 14 48 53.9 0.0
baz=75,SNR=7.6
CVS Carmenet Viney 75.52 54 ⇑P P 14 48 53.9 -0.1
baz=75
K07A Rock Creek Ran 75.58 49 ⇓P P 14 48 54.1 -0.2
baz=75,SNR=13
ORV Oroville 75.60 52 ⇓P P 14 48 53.5 -0.9
baz=75,SNR=7.3
H09A Dunke 75.62 46 ⇓P P 14 48 54.9 +0.4
baz=75
WALA Waterton Lakes 75.62 41 eP P 14 48 54.6 +0.3
comp=Z,31nm,0.7s,mb5.3
G10A Bishop Farm, J 75.64 46 ⇓P P 14 48 54.4 -0.1
baz=75,SNR=17
B13A Whitefish 75.66 42 ⇓P P 14 48 55.0 +0.4
baz=75,SNR=14
E11A Bogner Ranch, 75.66 44 ⇑P P 14 48 54.0 -0.6
baz=75,SNR=8.9
OHCM Honcut 75.72 53 eP P 14 48 54.1 -1.0
BMO Blue Mountains 75.75 46 eP P 14 48 55.1 -0.1
comp=Z,12nm,0.8s,mb4.9
BMO Blue Mountains 75.75 46 eP P 14 48 55.1 -0.1
BMO pmax pmax
comp=Z,12nm,0.8s,mb4.9
J08A Circle Bar Ran 75.75 48 ⇓P P 14 48 55.4 +0.2
baz=76,SNR=16
O05C Quincy 75.80 52 ⇓P P 14 48 55.5 -0.1
baz=76
L07A Adell 75.85 49 ⇑P P 14 48 56.3 +0.5
baz=76,SNR=20
F11A Grangeville 75.93 45 ⇓P P 14 48 55.9 -0.3
baz=76,SNR=11
A14A Double T Ranch 75.94 41 ⇑P P 14 48 56.2 0.0
baz=76,SNR=14
C13A Hot Springs 75.95 43 ⇓P P 14 48 56.3 0.0
baz=76,SNR=27
K08A Mann Creek Ran 76.05 48 ⇑P P 14 48 57.0 +0.1
baz=76,SNR=11
WVOR Wild Horse Val 76.10 49 eP P 14 48 56.9 -0.4
comp=Z,12nm,1.2s,mb4.7
WVOR Wild Horse Val 76.10 49 eP P 14 48 56.9 -0.3
WVOR pmax pmax
comp=Z,12nm,1.2s,mb4.7
G11A Walters Elk Ra 76.11 45 ⇓P P 14 48 56.7 -0.5
baz=76,SNR=39
BDM Black Diamond 76.12 54 ⇑P P 14 48 57.3 -0.1
baz=76
JRSC Jasper Ridge 76.12 55 ⇑P P 14 48 57.2 -0.2
baz=76
N06A Buffalo Meadow 76.14 51 ⇑P P 14 48 57.2 -0.3
baz=76,SNR=7.8
J09A Fry Pan Ranch, 76.21 48 ⇓P P 14 48 57.8 0.0
baz=76,SNR=13
H10A Noah's Angus R 76.22 46 ⇓P P 14 48 57.5 -0.4
baz=76,SNR=22
BEKR Beckwourth 76.22 52 ⇓P P 14 48 57.8 -0.2
baz=76,SNR=27
D13A Huson 76.32 43 ⇑P P 14 48 58.0 -0.4
baz=76,SNR=12
A15A Johnson Ranch, 76.32 41 ⇑P P 14 48 58.0 -0.4
baz=76,SNR=24
B14A Marquette Ranc 76.34 42 ⇓P P 14 48 58.9 +0.4
baz=76,SNR=39
L08A Fields 76.41 49 ⇓P P 14 48 59.1 +0.1
baz=76,SNR=23
O06A Flanigan 76.43 51 ⇓P P 14 48 59.2 0.0
baz=76
I10A Payette 76.44 47 ⇓P P 14 48 59.2 +0.1
baz=76
SUMG Summit 76.49 0 eP P 14 48 59.9 +1.0
comp=Z,8.0nm,1.1s,mb4.6
LAVA Lava Cap Winer 76.51 53 ⇑P P 14 48 59.2 -0.4
baz=76,SNR=9.7
K09A Rome 76.56 48 ⇑P P 14 48 59.4 -0.4
baz=76,SNR=8.1
H11A Donnelly 76.62 46 ⇑P P 14 48 59.6 -0.5
baz=76,SNR=14
N07B Gerlach 76.70 50 ⇑P P 14 49 00.6 -0.1
baz=76,SNR=8.4
M08A Happy Creek Ra 76.76 50 ⇑P P 14 49 00.8 -0.2
baz=76
MSO Missoula 76.76 43 eP P 14 49 00.2 -0.7
comp=Z,7.9nm,0.8s,mb4.7
B15A Bradely Ranch, 76.77 41 ⇑P P 14 49 00.9 0.0
baz=76,SNR=34
E13A Victor 76.82 44 ⇑P P 14 49 00.6 -0.6
baz=77,SNR=7.3
D14A Greenough 76.88 43 ⇑P P 14 49 01.3 -0.3
baz=77,SNR=14
WCN Washoe City 76.91 52 ⇓P P 14 49 01.9 0.0
baz=77

L09A Wilkinson Ranc 76.93 49 ⇑P P 14 49 02.4 +0.4
baz=77
A16A West Butte Ran 76.97 40 ⇑P P 14 49 02.2 +0.1
baz=77,SNR=29
PACP Pacheco Peak 76.98 55 ⇑P P 14 49 02.4 +0.1
baz=77,SNR=6.0
C15A Salmond Ranch, 77.03 42 ⇑P P 14 49 02.6 +0.2
baz=77,SNR=52
K10A MacKenzie Ranc 77.06 48 ⇓P P 14 49 03.0 +0.3
baz=77,SNR=12
O07A Toulon 77.07 51 ⇑P P 14 49 02.3 -0.4
baz=77,SNR=10
F13A Darby 77.07 44 ⇓P P 14 49 01.8 -0.9
baz=77,SNR=20
CMB Columbia Colle 77.10 53 eP P 14 49 02.9 -0.1
comp=Z,17nm,0.8s,mb5.0
CMB Columbia Colle 77.10 53 eP P 14 49 02.9 -0.1
CMB pmax pmax
comp=Z,17nm,0.8s,mb5.0
CMB Columbia Colle 77.10 53 ⇓P P 14 49 02.7 -0.3
baz=77,SNR=13
CHMT Chamberlain Mo 77.12 43 eP P 14 49 02.5 -0.4
B16A M & M Farms, S 77.20 41 ⇑P P 14 49 03.1 -0.3
baz=77,SNR=24
E14A Clinton 77.24 43 ⇓P P 14 49 03.2 -0.4
baz=77,SNR=8.7
N08A GE Springer Mi 77.25 50 ⇑P P 14 49 03.7 -0.1
baz=77,SNR=6.7
MFID Camas Ranch 77.39 47 ⇑P P 14 49 04.4 -0.1
baz=77,SNR=19
H12A Diamond D Ranc 77.40 45 ⇓P P 14 49 04.1 -0.4
baz=77,SNR=18
D15A Lincoln 77.47 42 ⇓P P 14 49 04.4 -0.5
baz=77,SNR=7.4
S05C Merced 77.48 54 ⇓P P 14 49 04.5 -0.6
baz=77,SNR=9.4
O08A Rochester Mine 77.48 50 ⇓P P 14 49 05.4 +0.3
baz=77,SNR=13
V03C Hunter Liggett 77.50 55 ⇑P P 14 49 05.3 0.0
baz=77
G13A Cobalt 77.50 45 ⇑P P 14 49 04.5 -0.5
baz=77,SNR=24
R06C Coleville 77.50 53 ⇑P P 14 49 05.4 +0.2
baz=77,SNR=7.5
C16A Fuhringer Ranc 77.51 41 ⇓P P 14 49 04.9 -0.1
baz=77,SNR=31
K11A Parker Ranch, 77.59 47 ⇑P P 14 49 05.7 +0.1
baz=77,SNR=13
N09A Rock Creek Ran 77.61 50 ⇓P P 14 49 05.6 -0.2
baz=77,SNR=5.8
I12A Atlanta 77.63 46 ⇓P P 14 49 05.6 -0.2
baz=77,SNR=17
F14A Wisdom 77.63 44 ⇑P P 14 49 05.4 -0.4
baz=77,SNR=7.9
U04C Hernandez Rese 77.65 55 ⇑P P 14 49 06.0 -0.1
baz=77
L10A Juniper Basin 77.67 48 ⇑P P 14 49 06.0 -0.1
baz=77,SNR=9.3
E15A Deer Lodge 77.74 43 ⇓P P 14 49 06.1 -0.3
baz=78,SNR=19
H13A Challis 77.76 45 ⇑P P 14 49 06.4 -0.2
baz=78,SNR=27
J12A Stokes Ranch, 77.93 47 ⇑P P 14 49 07.3 -0.2
baz=78,SNR=7.7
PKD Parkfield 78.02 55 ⇑P P 14 49 08.0 -0.2
baz=78,SNR=7.0
D16A Dana Ranch, Ca 78.04 42 ⇓P P 14 49 07.9 -0.2
baz=78,SNR=19
HRY Holter Researc 78.05 42 eP P 14 49 08.3 +0.1
T06C Millerton Lake 78.08 54 ⇑P P 14 49 07.9 -0.6
baz=78,SNR=9.2
L11A Cat Creek Ranc 78.08 48 ⇑P P 14 49 08.7 +0.3
baz=78,SNR=26
F15A Butte 78.14 43 ⇑P P 14 49 08.7 +0.1
baz=78,SNR=78
C17A Wharram Farm, 78.16 41 ⇑P P 14 49 08.0 -0.7
baz=78,SNR=9.5
O09A Fish Creek Ran 78.18 50 ⇑P P 14 49 09.3 +0.3
baz=78,SNR=11
I13A Wildhorse Cree 78.19 46 ⇓P P 14 49 09.5 +0.6
baz=78,SNR=22
KCC Kaiser Creek 78.19 54 ⇓P P 14 49 08.5 -0.6
baz=78,SNR=11
HLID Hailey 78.19 46 eP P 14 49 09.3 +0.3
comp=Z,10nm,0.9s,mb4.8
HLID Hailey 78.19 46 ⇓P P 14 49 08.8 -0.2
baz=78,SNR=17
E16A East Helena 78.24 43 ⇓P P 14 49 09.0 -0.2
baz=78,SNR=14
H14A Leadore 78.27 45 ⇑P P 14 49 08.9 -0.4
baz=78,SNR=12
NVAR Mina Array Bea 78.32 52 P P 14 49 10.0 +0.2
comp=Z,18nm,0.7s,mb5.1,baz=296,slow=5.4,SNR=150
DLMT Dillon 78.33 44 eP P 14 49 09.8 +0.1
comp=Z,25nm,0.6s,mb5.3
Q08A Gabbs 78.36 52 ⇑P P 14 49 09.6 -0.3
baz=78,SNR=5.7
K12A Draper Farm, C 78.37 47 ⇑P P 14 49 10.2 +0.2
baz=78,SNR=5.7
UMR Umm Al-Rimmam 78.39 297 eP P 14 49 10.7 +0.3
baz=297
UMR AMb AMB 14 49 17.1
comp=Z,31nm,0.8s,mb5.3,baz=297
J13A Cove Ranch, Pi 78.43 46 ⇑P P 14 49 10.6 +0.3
baz=78,SNR=13
M11A Holland Ranch, 78.44 49 ⇓P P 14 49 10.9 +0.6
baz=78,SNR=8.2
D17A Six Diamond Ra 78.47 42 ⇓P P 14 49 10.7 +0.3
baz=78,SNR=19
MCMT McKenzie Canyo 78.47 44 eP P 14 49 10.2 -0.3
FFC Flin Flon 78.48 32 P P 14 49 10.4 +0.1
comp=Z,139nm,0.8s,mb5.9,SNR=5.2
FFC Flin Flon 78.48 32 eP P 14 49 09.8 -0.5
comp=Z,18nm,0.8s,mb5.1
FFC Flin Flon 78.48 32 eP P 14 49 09.8 -0.5
FFC pmax pmax
comp=Z,18nm,0.8s,mb5.0
R08A Mina 78.50 52 ⇑P P 14 49 09.8 -0.9
baz=78,SNR=12
G15A Dillon 78.50 44 ⇓P P 14 49 10.7 +0.1
baz=78,SNR=11
EGMT Eagleton 78.50 41 eP P 14 49 10.2 -0.4
comp=Z,18nm,1.0s,mb5.0
EGMT Eagleton 78.50 41 ⇓P P 14 49 10.2 -0.4
baz=78,SNR=6.9
MIB Mutribah 78.56 298 eP P 14 49 11.7 +0.5
baz=298
MIB AMb AMB 14 49 22.7
comp=Z,33nm,1.1s,mb5.2,baz=298
L12A House Creek Ra 78.56 48 ⇑P P 14 49 11.7 +0.7
baz=78,SNR=12
I14A Mackay 78.59 45 ⇓P P 14 49 11.9 +0.8
baz=78,SNR=88
KBD Kabd 78.59 297 eP P 14 49 11.5 +0.1
baz=297
KBD AMb AMB 14 49 16.5
comp=Z,18nm,0.7s,mb5.1,baz=297
F16A Kennard Place, 78.68 43 ⇑P P 14 49 11.9 +0.3
baz=78,SNR=28
H15A Lima 78.71 45 ⇑P P 14 49 11.7 -0.1
baz=78,SNR=5.4
BOZ Bozeman (W) 78.75 43 eP P 14 49 12.2 +0.2
comp=Z,13nm,0.6s,mb5.0
BOZ Bozeman (W) 78.75 43 eP P 14 49 12.2 +0.2
BOZ pmax pmax
comp=Z,13nm,0.6s,mb5.0
BOZ Bozeman (W) 78.75 43 ⇑P P 14 49 12.2 +0.2
baz=78,SNR=26
E17A Martinsdale 78.75 42 ⇓P P 14 49 12.5 +0.6
baz=78,SNR=15
RDF Al-Radifah 78.83 297 eP P 14 49 12.5 -0.3
baz=297
RDF AMb AMB 14 49 16.9
comp=Z,55nm,1.2s,mb5.4,baz=297
J14A Carey 78.87 46 ⇑P P 14 49 13.8 +1.1
baz=79,SNR=35
G16A Moss Hill, Enn 78.88 44 ⇓P P 14 49 12.5 -0.2
baz=79,SNR=22
K13A Stover Farm, H 78.88 47 ⇑P P 14 49 13.4 +0.7
baz=79
NAY Al-Naaiem 78.90 297 eP P 14 49 13.3 +0.2
baz=297
NAY AMb AMB 14 49 24.8
comp=Z,28nm,1.1s,mb5.1,baz=297
M12A Wells 79.01 48 ⇑P P 14 49 14.0 +0.5
baz=79,SNR=31
PKM Peak Mountain 79.06 56 ⇓P P 14 49 14.3 +0.4
baz=79

AKASG **Malin Array Be** 79.06 323 P P 14 49 13.6 0.0
comp=Z,2.4nm,0.3s,mb4.6,baz=51,slow=5.8,SNR=14
AKASG **Malin Array Be** 79.06 323 P P 14 49 13.6 0.0
AKASG pmax pmax
comp=Z,2.0nm,0.3s
KIEV **Kiev** 79.08 323 eP P 14 49 12.9 -0.8
comp=Z,8.5nm,0.7s,mb4.8
KIEV **Kiev** 79.08 323 eP P 14 49 12.9 -0.8
KIEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
VES **Vestal, Richgr** 79.10 55 ⇓P P 14 49 13.7 -0.4
baz=79
I15A **Monteview** 79.14 45 ⇑P P 14 49 14.7 +0.5
baz=79
ELK **Elko** 79.16 49 eP P 14 49 14.1 -0.2
comp=Z,12nm,0.9s,mb4.8
ELK **Elko** 79.16 49 eP P 14 49 14.1 -0.2
ELK pmax pmax
comp=Z,12nm,0.9s
F17A **Fitzpatrick Pl** 79.17 43 ⇑P P 14 49 14.5 +0.2
baz=79,SNR=14
O11A **Cowboy Ranch,** 79.21 50 ⇑P P 14 49 14.6 0.0
baz=79,SNR=5.4
WHFO **Wadi Hawf** 79.21 284 ⇓P P 14 49 15.0 0.0
SNR=10
N12A **Clover Valley,** 79.23 49 ⇑P P 14 49 14.9 +0.2
baz=79,SNR=11
E18A **Harlowton** 79.23 42 ⇓P P 14 49 14.9 +0.3
baz=79,SNR=12
R09A **Tonopah** 79.25 52 ⇑P P 14 49 14.6 -0.3
baz=79,SNR=34
L13A **Double Diamond** 79.27 47 ⇑P P 14 49 15.4 +0.5
baz=79,SNR=12
QLMT **Earthquake Lak** 79.32 44 eP P 14 49 15.9 +0.8
Q10A **Clear Creek Ra** 79.40 51 ⇓P P 14 49 15.5 -0.2
baz=79,SNR=9.7
S09A **Goldfield** 79.42 52 ⇓P P 14 49 15.8 0.0
baz=79,SNR=24
P11A **Circle Ranch,** 79.45 50 ⇓P P 14 49 16.4 +0.5
baz=79
G17A **Pierce Place,** 79.45 43 ⇑P P 14 49 16.3 +0.4
baz=79,SNR=7.4
CWC **Cottonwood Cre** 79.49 54 ⇓P P 14 49 15.8 -0.5
baz=79,SNR=6.1
H16A **Russell Place,** 79.49 44 ⇓P P 14 49 16.6 +0.6
baz=79,SNR=27
J15A **Blackfoot** 79.50 45 ⇑P P 14 49 16.9 +0.8
baz=79,SNR=20
K14A **Jones Ranch, D** 79.50 47 ⇑P P 14 49 16.7 +0.5
baz=79,SNR=11
M13A **Montello** 79.52 48 ⇓P P 14 49 16.6 +0.3
baz=79,SNR=13
ISA **Isabella** 79.62 55 eP P 14 49 15.9 -1.0
comp=Z,2.2nm,0.6s,mb4.3
ISA **Isabella** 79.62 55 eP P 14 49 15.9 -1.0
ISA pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ISA **Isabella** 79.62 55 ⇑P P 14 49 15.7 -1.2
baz=79,SNR=5.3
ARVC **Arvin** 79.64 55 ⇓P P 14 49 16.7 -0.4
baz=79
NB2 **NORSAR Subarra** 79.64 338 P P 14 49 16.1 -0.5
comp=Z,8.0nm,0.8s,mb4.7,baz=42,slow=5.9
NOA **NORSAR Array B** 79.64 338 P P 14 49 16.5 0.0
comp=Z,4.8nm,0.9s,mb4.4,baz=41,slow=5.3,SNR=12
NOA **NORSAR Array B** 79.64 338 P P 14 49 16.5 -0.1
NOA **NORSAR Array B** 79.64 338 P P 14 49 16.5 -0.1
NOA pmax pmax
comp=Z,5.0nm,0.9s
BSC **Santa Cruz Isl** 79.65 57 ⇑P P 14 49 16.6 -0.5
baz=79
GRAC **Grapevine Rang** 79.69 53 ⇑P P 14 49 17.0 -0.3
baz=80,SNR=9.5
F18A **Big Timber** 79.72 42 ⇓P P 14 49 17.7 +0.4
baz=80,SNR=22
O12A **Currie** 79.73 49 ⇑P P 14 49 17.5 0.0
baz=80,SNR=20
L14A **Malta** 79.74 47 ⇑P P 14 49 17.6 +0.2
baz=80,SNR=13
S10A **Tonopah Range,** 79.74 52 ⇑P P 14 49 17.5 -0.1
baz=80,SNR=20
R10A **Warm Springs** 79.74 51 ⇑P P 14 49 17.6 0.0
baz=80,SNR=5.2
N13A **Wendover, West** 79.76 48 ⇓P P 14 49 18.0 +0.4
baz=80
I16A **Newdale** 79.81 45 ⇓P P 14 49 18.8 +1.0
baz=80,SNR=20
GCMT **Greycliff** 79.81 42 eP P 14 49 18.3 +0.5
K15A **Arbon** 79.83 46 ⇑P P 14 49 18.7 +0.8
baz=80,SNR=9.8
ABTO **Aybut** 79.88 284 P P 14 49 19.3 +0.7
SNR=5.9
Q11A **Duckwater** 79.88 51 ⇑P P 14 49 18.3 0.0
baz=80
M14A **Sheep Mountain** 79.96 47 ⇓P P 14 49 19.3 +0.7
baz=80,SNR=24
H17A **Grant Village** 80.06 44 ⇓P P 14 49 21.2 +2.0
baz=80,SNR=11
J16A **Bone** 80.06 45 ⇑P P 14 49 19.9 +0.7
baz=80,SNR=18
MPMC **Manual Prospec** 80.10 54 ⇑P P 14 49 19.1 -0.5
baz=80,SNR=11
IMW **Indian Meadow** 80.13 44 eP P 14 49 20.6 +1.0
comp=Z,20nm,0.8s,mb5.1
DCID1 **Drake Creek** 80.15 45 eP P 14 49 20.7 +1.0
comp=Z,33nm,0.9s,mb5.3
R11A **Troy Canyon, C** 80.19 51 ⇑P P 14 49 20.1 +0.1
baz=80,SNR=15
RRI2 **Red Ridge** 80.20 45 eP P 14 49 20.7 +0.8
comp=Z,22nm,0.7s,mb5.2
LRMC **Laurel Mountai** 80.26 54 ⇑P P 14 49 20.2 -0.2
baz=80
L15A **Malad City** 80.29 47 ⇓P P 14 49 20.7 +0.3
baz=80,SNR=14
O13A **Hicks Ranch, I** 80.29 49 ⇓P P 14 49 20.8 +0.3
baz=80,SNR=6.7
FURC **Furnace Creek,** 80.32 53 ⇓P P 14 49 20.3 -0.4
baz=80,SNR=5.7
K16A **Soda Springs** 80.32 46 ⇑P P 14 49 21.6 +1.0
baz=80,SNR=23
Q12A **Willow Creek R** 80.33 50 ⇑P P 14 49 20.6 -0.1
baz=80,SNR=8.0
MOOW **Moose Ponds** 80.33 45 eP P 14 49 21.3 +0.7
comp=Z,7.8nm,0.8s,mb4.7
I17A **Pilgram Creek** 80.33 44 ⇓P P 14 49 22.2 +1.5
baz=80,SNR=13
TPAW **Teton Pass** 80.35 45 eP P 14 49 21.5 +0.8
comp=Z,24nm,0.7s,mb5.2
EDW2 **Edwards Air Fo** 80.36 55 ⇑P P 14 49 20.5 -0.5
baz=80,SNR=10
N14A **Grayback Hills** 80.41 48 ⇓P P 14 49 21.3 +0.1
baz=80,SNR=7.5
RLMT **Red Lodge** 80.42 43 eP P 14 49 21.5 +0.4
comp=Z,9.8nm,0.6s,mb4.9
RLMT **Red Lodge** 80.42 43 ⇓P P 14 49 21.4 +0.3
baz=80,SNR=11
S11A **Rachel** 80.46 52 ⇓P P 14 49 21.3 -0.1
baz=80,SNR=5.5
REDW **Red Top Meadow** 80.48 45 eP P 14 49 22.0 +0.6
comp=Z,7.8nm,0.9s,mb4.6
SNOW **Snow King Moun** 80.48 45 eP P 14 49 22.4 +0.9
comp=Z,6.2nm,0.6s,mb4.7
TPNV **Topopah Spring** 80.48 53 eP P 14 49 21.4 -0.2
comp=Z,22nm,0.8s,mb5.2
TPNV **Topopah Spring** 80.48 53 eP P 14 49 21.4 -0.2
TPNV pmax pmax
comp=Z,23nm,0.8s,mb5.2
TPNV **Topopah Spring** 80.48 53 ⇓P P 14 49 21.4 -0.2
baz=80,SNR=23
LOHW **Long Hollow** 80.49 45 eP P 14 49 22.0 +0.5
comp=Z,8.6nm,0.8s,mb4.7
J17A **Brown Place, J** 80.56 45 ⇑P P 14 49 22.4 +0.5
baz=80,SNR=10
P13A **Bates Ranch, G** 80.64 50 ⇓P P 14 49 22.3 -0.1
baz=80,SNR=9.8
N15A **Stansbury Isla** 80.81 48 ⇓P P 14 49 23.8 +0.5
baz=81
CIS **Catalina Islan** 80.83 57 ⇑P P 14 49 23.2 -0.3
baz=81
R12A **Pony Springs,** 80.85 51 ⇓P P 14 49 23.6 0.0
baz=81,SNR=17
L16A **Fish Haven** 80.87 46 ⇑P P 14 49 23.7 +0.1
baz=81,SNR=6.4
Q13A **Wheeler Ranch,** 80.90 50 ⇓P P 14 49 23.9 +0.1
baz=81,SNR=6.1
I18A **Diamond G Ranc** 80.91 44 ⇑P P 14 49 24.4 +0.6
baz=81
BFSC **Mount Baldy St** 80.92 56 ⇑P P 14 49 24.0 0.0
baz=81
SCI **San Clemente I** 80.94 57 ⇑P P 14 49 23.6 -0.5
baz=81
GSC **Goldstone** 80.97 54 eP P 14 49 24.0 -0.2
comp=Z,7.0nm,0.3s,mb5.1
GSC **Goldstone** 80.97 54 eP P 14 49 24.0 -0.2
GSC pmax pmax
comp=Z,7.0nm,0.3s,mb5.1
GSC **Goldstone** 80.97 54 ⇑P P 14 49 24.3 +0.1
baz=81
DUG **Dugway** 81.01 48 eP P 14 49 24.7 +0.4
comp=Z,20nm,0.6s,mb5.2
DUG **Dugway** 81.01 48 eP P 14 49 24.7 +0.4
DUG pmax pmax
comp=Z,20nm,0.6s,mb5.2
DUG **Dugway** 81.01 48 ⇓P P 14 49 24.4 0.0
baz=81,SNR=13
SHOC **Shoshone** 81.02 54 ⇓P P 14 49 24.0 -0.5
baz=81
HWUT **Hardware Ranch** 81.02 47 eP P 14 49 24.6 +0.3
comp=Z,22nm,0.9s,mb5.1
T11A **Corn Creek, Al** 81.03 52 ⇑P P 14 49 24.2 -0.2
baz=81,SNR=17
S12A **Delamar Landin** 81.08 51 ⇑P P 14 49 24.7 0.0
baz=81
M16A **Huntsville** 81.14 47 ⇑P P 14 49 25.0 0.0
baz=81,SNR=11
P14A **Drum Mountains** 81.18 49 ⇓P P 14 49 25.4 +0.1
baz=81,SNR=31
DGMT **Dagmar** 81.25 38 ⇑P P 14 49 25.5 0.0
baz=81
R13A **O'Grain Ranch,** 81.36 51 ⇑P P 14 49 26.4 +0.1
baz=81,SNR=7.7
Q14A **Sevier Lake (B** 81.37 50 ⇓P P 14 49 26.4 +0.1
baz=81,SNR=42
BBRC **Big Bear Sol-O** 81.43 55 ⇓P P 14 49 26.4 -0.3
baz=81
N16A **Rees Ranch, Co** 81.50 47 ⇓P P 14 49 27.0 +0.1
baz=81
TUQ **Turquoise Moun** 81.51 54 ⇑P P 14 49 26.7 -0.4
baz=81,SNR=6.8
HEC **Hector,Ludlow** 81.55 54 ⇑P P 14 49 27.0 -0.3
baz=81,SNR=14
BW06 **Boulder Array** 81.60 45 ⇑P P 14 49 26.9 -0.5
baz=81,SNR=15
PDAR **Pinedale Array** 81.60 45 P P 14 49 27.1 -0.3
comp=Z,11nm,0.6s,mb5.0,baz=264,slow=2.3,SNR=95
V11A **Goodsprings** 81.63 53 ⇓P P 14 49 27.7 0.0
baz=81
M17A **Scullys Gap (B** 81.65 46 ⇓P P 14 49 27.6 -0.1
baz=81,SNR=19
P15A **Leamington** 81.70 49 ⇓P P 14 49 28.1 +0.1
baz=82,SNR=10
S13A **Holt Ranch, En** 81.75 51 ⇑P P 14 49 28.6 +0.2
baz=82,SNR=9.6
O16A **Springville** 81.84 48 ⇓P P 14 49 29.0 +0.2
baz=82
N17A **Moffit Pass** 81.85 47 ⇑P P 14 49 29.0 +0.2
baz=82,SNR=13
R14A **James Farms, M** 81.92 50 ⇑P P 14 49 29.8 +0.6
baz=82
U12A **Valley of Fire** 81.92 52 ⇑P P 14 49 29.5 +0.2
baz=82
Q15A **Fillmore** 81.95 49 ⇑P P 14 49 29.8 +0.5
baz=82
T13A **Saint George** 82.03 52 ⇑P P 14 49 29.9 +0.1
baz=82,SNR=8.0
GMRC **Granite Mounta** 82.04 54 ⇓P P 14 49 29.5 -0.4
baz=82,SNR=13
M18A **Lyman** 82.05 46 ⇓P P 14 49 29.9 +0.1
baz=82,SNR=9.9
P16A **Fountain Green** 82.07 48 ⇑P P 14 49 30.4 +0.5
baz=82
L19A **Farson** 82.10 45 ⇑P P 14 49 30.2 +0.1
baz=82,SNR=21
PFO **Pinyon Flat Ob** 82.11 56 P P 14 49 30.0 -0.3
comp=Z,151nm,0.7s,mb6.0,SNR=8.3
PFO **Pinyon Flat Ob** 82.11 56 P P 14 49 29.9 -0.4
comp=Z,16nm,0.7s,mb5.1,baz=313,slow=4.8,SNR=22
PFO **Pinyon Flat Ob** 82.11 56 eP P 14 49 29.4 -0.8
comp=Z,25nm,1.0s,mb5.1
PFO **Pinyon Flat Ob** 82.11 56 eP P 14 49 29.4 -0.9
PFO pmax pmax
comp=Z,25nm,1.0s,mb5.1
PFO **Pinyon Flat Ob** 82.11 56 ⇑P P 14 49 29.6 -0.6
baz=82,SNR=11
BELC **Belle Mtn.** 82.22 55 ⇑P P 14 49 30.1 -0.8
baz=82,SNR=14
LDFC **Landfair** 82.26 54 eP P 14 49 30.7 -0.3
O17A **Robinson Place** 82.33 47 ⇓P P 14 49 31.6 +0.2
baz=82,SNR=35
R15A **Junction** 82.45 50 ⇓P P 14 49 32.2 +0.2
baz=82
MONP **Monument Peak** 82.51 56 ⇑P P 14 49 31.8 -0.6
baz=82,SNR=12
N18A **Larsen Ranch,** 82.55 46 ⇑P P 14 49 32.6 +0.1
baz=82,SNR=24
T14A **Hurricane** 82.56 51 ⇑P P 14 49 32.6 +0.1
baz=82
M19A **Rock Springs** 82.56 46 ⇓P P 14 49 32.5 0.0
baz=82
V13A **Grand Canyon W** 82.61 53 ⇓P P 14 49 33.0 +0.1
baz=82,SNR=20
S15A **Panguitch** 82.69 50 ⇑P P 14 49 33.6 +0.3
baz=82
IRM **Iron Mountain** 82.73 54 ⇑P P 14 49 33.3 -0.2
baz=82,SNR=13
P17A **Butcher Ranch,** 82.74 48 ⇑P P 14 49 33.7 +0.2
baz=82,SNR=17
O18A **Roosevelt** 82.75 47 ⇑P P 14 49 33.9 +0.4
baz=82,SNR=5.3
Q16A **Castle Valley** 82.78 49 ⇓P P 14 49 33.9 +0.2
baz=82,SNR=11
BC3 **Big Chuckw Mtn** 82.79 55 ⇑P P 14 49 33.3 -0.5
baz=83,SNR=17
DVTC **Desert V Tower** 82.86 56 ⇓P P 14 49 33.7 -0.5
baz=83,SNR=8.0
SWSC **Sam W. Stewart** 82.93 56 ⇓P P 14 49 33.9 -0.7
baz=83
P18A **Preston Nutter** 82.96 48 ⇓P P 14 49 35.0 +0.4
baz=83,SNR=32
KWP **Kalwaria** 83.01 325 eP P 14 49 35.3 +0.7
comp=Z,9.7nm,0.5s,mb5.1
KWP **Kalwaria** 83.01 325 eP P 14 49 35.3 +0.7
KWP pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
BUR08 **Bucovina Ar. S** 83.03 322 eP P 14 49 35.4 +0.7
T15A **Red Dirt Ranch** 83.05 51 ⇓P P 14 49 35.1 0.0
baz=83,SNR=9.0
SRU **San Rafael** 83.08 48 ⇑P P 14 49 35.1 -0.1
baz=83,SNR=36
W13A **Hualapai Mount** 83.09 53 ⇑P P 14 49 35.0 -0.4
baz=83,SNR=9.1
S16A **Weppner Ranch,** 83.17 50 ⇓P P 14 49 35.9 +0.2
baz=83
O19A **Miners Draw (B** 83.28 47 ⇓P P 14 49 35.7 -0.5
baz=83,SNR=7.4
V14A **Boquillas Ranc** 83.33 52 ⇓P P 14 49 36.7 +0.1
baz=83,SNR=24
Q18A **Parker H Ranch** 83.33 48 ⇓P P 14 49 35.8 -0.8
baz=83,SNR=7.2
PDMCI **Parker Dam,Lak** 83.35 54 ⇓P P 14 49 35.9 -0.8
baz=83
R17A **Hanksville Air** 83.35 49 ⇓P P 14 49 36.4 -0.3
baz=83,SNR=16
L21A **Rawlins** 83.38 45 ⇑P P 14 49 36.5 -0.3
baz=83,SNR=11
Y12C **Blythe** 83.39 55 ⇓P P 14 49 36.5 -0.4
baz=83
X13A **Yucca** 83.41 54 ⇓P P 14 49 36.5 -0.5
baz=83,SNR=15
U15A **North Rim** 83.44 51 ⇑P P 14 49 37.2 +0.1
baz=83,SNR=12
GLA **Glamis** 83.55 55 ⇑P P 14 49 37.4 -0.4
baz=83,SNR=5.1
W14A **Seligman** 83.58 53 ⇑P P 14 49 37.7 -0.2
baz=83,SNR=19
RWWY **Rawlins** 83.64 45 eP P 14 49 38.2 +0.1
comp=Z,10nm,0.9s,mb5.0
T16A **Glen Canyon Da** 83.65 50 ⇓P P 14 49 37.8 -0.4
baz=83
S17A **Black Ridge (B** 83.74 50 ⇑P P 14 49 37.9 -0.8
baz=84,SNR=9.2
P19A **Cripple Cowboy** 83.76 47 ⇑P P 14 49 39.3 +0.6
baz=84,SNR=39
Y13A **Salome** 83.84 54 ⇑P P 14 49 39.0 -0.2
baz=84
V15A **Kaibab Nationa** 83.86 52 ⇓P P 14 49 39.4 +0.1
baz=84,SNR=14
R18A **Canyonlands Na** 83.90 49 ⇑P P 14 49 38.8 -0.7
baz=84,SNR=10.0
Q19A **Hogan Spring (** 83.97 48 ⇑P P 14 49 39.4 -0.4
baz=84,SNR=11
OJC **Ojcow** 84.01 327 eP P 14 49 39.8 0.0
T17A **Navajo Res., N** 84.10 50 ⇑P P 14 49 40.0 -0.6
baz=84
X14A **Yava** 84.12 53 ⇑P P 14 49 40.8 +0.1
baz=84,SNR=12
W15A **Williams** 84.15 52 ⇑P P 14 49 41.1 +0.3
baz=84,SNR=5.9
S18A **Hurst Farm, Bl** 84.23 49 ⇑P P 14 49 40.6 -0.5
baz=84,SNR=19
Y14A **Wickenburg** 84.34 54 ⇑P P 14 49 41.5 -0.3
baz=84,SNR=7.3
R19A **Curley Farm, L** 84.36 48 ⇑P P 14 49 41.5 -0.3
baz=84
U16A **Tuba City** 84.37 51 ⇑P P 14 49 42.1 +0.2
baz=84,SNR=14
U17A **Shonto** 84.42 50 ⇑P P 14 49 42.2 +0.1
baz=84,SNR=19
PV10 **Paradox Valley** 84.45 48 eP P 14 49 42.8 +0.5
113A **Mohawk Valley,** 84.45 55 ⇑P P 14 49 41.9 -0.5
baz=84,SNR=5.6
X15A **Humboldt** 84.56 53 ⇓P P 14 49 43.1 +0.2
baz=84,SNR=17
WUAZ **Wupatki** 84.56 52 eP P 14 49 43.0 +0.1
comp=Z,25nm,1.0s,mb5.3
WUAZ **Wupatki** 84.56 52 ⇓P P 14 49 43.2 +0.3
baz=84,SNR=14
T18A **Mexican Hat** 84.63 50 ⇑P P 14 49 42.3 -0.9
baz=84,SNR=17
W16A **Flagstaff** 84.70 52 ⇑P P 14 49 43.6 +0.1
baz=84,SNR=5.8
S19A **Harvey Farm, M** 84.76 49 ⇓P P 14 49 43.4 -0.4
baz=84,SNR=8.0
Y15A **Casa Rosa Ranc** 84.79 53 ⇓P P 14 49 44.3 +0.2
baz=85,SNR=15
PV01 **Paradox Valley** 84.89 48 eP P 14 49 44.5 0.0
ASF **Jabal al Asfar** 84.97 305 P P 14 49 47.5 +2.5
comp=Z,1.9nm,0.7s,mb4.4,baz=348,slow=7.9,SNR=3.3
ASF **Jabal al Asfar** 84.97 305 P P 14 49 47.5 +2.5
ASF pmax pmax
comp=Z,2.0nm,0.7s
U18A **Rough Rock, Ch** 85.05 50 ⇓P P 14 49 45.9 +0.6
baz=85,SNR=15
X16A **Lo Mia Camp, P** 85.14 53 ⇓P P 14 49 46.0 +0.2
baz=85,SNR=7.2
W17A **Winslow** 85.26 52 ⇓P P 14 49 46.2 -0.2
baz=85
SMCO **Snowmass** 85.28 47 eP P 14 49 47.0 +0.5
comp=Z,18nm,1.1s,mb5.1
T19A **Beclabito** 85.36 49 ⇓P P 14 49 46.8 -0.1
baz=85,SNR=16
V18A **Ganado** 85.42 51 ⇑P P 14 49 47.2 +0.1
baz=85,SNR=12
Y16A **Circle Bar Ran** 85.42 53 ⇑P P 14 49 47.0 -0.2
baz=85,SNR=11
MVCO **Mesa Verde** 85.48 49 eP P 14 49 47.3 -0.1
comp=Z,10nm,0.8s,mb5.0
MVCO **Mesa Verde** 85.48 49 ⇑P P 14 49 47.2 -0.3
baz=85,SNR=7.5
115A **Sonoran Desert** 85.57 54 ⇓P P 14 49 47.9 -0.1
baz=85,SNR=7.4
214A **Organ Pipe Nat** 85.58 55 ⇓P P 14 49 48.0 -0.1
baz=85,SNR=11
X17A **Forest Lakes** 85.62 52 ⇑P P 14 49 48.4 +0.2
baz=85,SNR=9.6
ISCO **Idaho Springs** 85.75 45 eP P 14 49 49.4 +0.6
comp=Z,4.9nm,0.8s,mb4.8
ISCO **Idaho Springs** 85.75 45 eP P 14 49 49.4 +0.7
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
Z16A **Peralta Trail,** 85.76 53 ⇓P P 14 49 48.7 -0.2
baz=86
W18A **Petrified Fore** 85.89 51 ⇓P P 14 49 49.3 -0.2
baz=86
Y17A **Roosevelt** 85.96 53 ⇑P P 14 49 49.6 -0.3
baz=86,SNR=12
V19A **Window Rock** 86.00 50 ⇓P P 14 49 50.3 +0.2
baz=86,SNR=5.8
X18A **Snowflake** 86.09 52 ⇑P P 14 49 50.3 -0.2
baz=86
W19A **Sanders** 86.12 51 ⇓P P 14 49 50.9 +0.2
baz=86,SNR=10.0
BRG **Berggiesshubel** 86.18 330 iP P 14 49 53.4 +2.7
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.4
BRG **Berggiesshubel** 86.18 330 iP P 14 49 53.4 +2.7
comp=Z,5.5nm,1.2s,mb4.7
CLL **Collm** 86.26 331 eP P 14 49 51.0 0.0
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
CLL **Collm** 86.26 331 eP P 14 49 51.0 0.0
comp=Z,7.0nm,0.9s,mb4.9
Y18A **Canyon Day Jun** 86.46 52 ⇑P P 14 49 52.5 +0.2
baz=86
216A **Three Points,** 86.50 55 ⇑P P 14 49 52.7 +0.1
baz=86,SNR=7.0
X19A **St. Johns** 86.59 52 ⇓P P 14 49 53.2 +0.2
baz=86,SNR=14
117A **Oracle** 86.67 54 ⇓P P 14 49 53.4 -0.1
baz=86
TUC **Tucson** 86.79 54 eP P 14 49 54.2 +0.1
comp=Z,3.2nm,1.0s,mb4.5
TUC **Tucson** 86.79 54 eP P 14 49 54.2 +0.2
TUC pmax pmax
comp=Z,3.0nm,1.0s,mb4.5
Y19A **Nutrioso** 86.89 52 ⇓P P 14 49 54.7 +0.3
baz=87
SDCO **Great Sand Dun** 87.07 47 eP P 14 49 55.6 +0.4
comp=Z,2.2nm,0.7s,mb4.5
217A **Green Valley** 87.08 54 ⇑P P 14 49 55.6 +0.2
baz=87,SNR=9.8
118A **Homack Ranch,** 87.17 53 ⇑P P 14 49 56.0 +0.2
baz=87,SNR=8.1
218A **Dragoon** 87.50 54 ⇓P P 14 49 57.5 0.0
baz=87,SNR=8.8
119A **Ashpeak Ranch,** 87.55 53 ⇑P P 14 49 57.7 0.0
baz=87
KHC **Kasperske Hory** 87.63 329 eP P 14 50 05.5 +7.8
GERES **GERESS Array B** 87.78 329 P P 14 49 59.7 +1.3
comp=Z,0.4nm,0.4s,mb4.0,baz=38,slow=6.5,SNR=5.0
318A **Bisbee** 87.85 54 ⇓P P 14 49 59.1 -0.1
baz=88,SNR=6.3
219A **White Tail Can** 88.03 53 ⇑P P 14 49 59.9 -0.1
baz=88
ECSD **EROS,Sioux Fal** 88.34 38 eP P 14 50 00.5 -0.7
comp=Z,10nm,1.0s,mb5.0
ECSD e 14 50 14.8
319A **Douglas** 88.38 54 ⇑P P 14 50 01.7 0.0
baz=88
LOR **Lormes** 93.15 333 eP P 14 50 22.0 -1.5
LPL **La Plagne** 93.38 330 eP P 14 50 24.3 -0.4
comp=Z,30nm,1.1s,mb5.3
LPL **La Plagne** 93.38 330 eP P 14 50 24.3 -0.4
comp=Z,15nm,1.1s,mb5.3
LPL **La Plagne** 93.38 330 eP P 14 50 24.3 -0.4
LPL pmax pmax
comp=Z,15nm,1.1s,mb5.3
LPG **La Plagne** 93.39 330 eP P 14 50 24.3 -0.4
comp=Z,12nm,0.8s,mb5.1
LPG **La Plagne** 93.39 330 eP P 14 50 24.3 -0.4
comp=Z,6.1nm,0.8s,mb5.1
LPG **La Plagne** 93.39 330 eP P 14 50 24.3 -0.4
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
SSF **Saint Saulge** 93.46 333 eP P 14 50 24.3 -0.7
TXAR **Lajitas Array** 93.47 53 P P 14 50 25.6 +0.2
comp=Z,19nm,0.7s,mb5.6,baz=299,slow=3.0,SNR=99
TXAR **Lajitas Array** 93.47 53 P P 14 50 25.6 +0.2
TXAR pmax pmax
comp=Z,19nm,0.7s
SMF **Signal de Mont** 93.67 332 eP P 14 50 25.2 -0.7
AVF **Avril sur Loir** 93.74 333 eP P 14 50 25.6 -0.7
comp=Z,16nm,0.8s,mb5.2
AVF **Avril sur Loir** 93.74 333 eP P 14 50 25.6 -0.7
comp=Z,7.8nm,0.8s,mb5.2
AVF **Avril sur Loir** 93.74 333 eP P 14 50 25.6 -0.7
AVF pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
JCT **Junction City** 95.32 50 eP P 14 50 33.2 -0.7
comp=Z,4.9nm,0.3s,mb5.4
JCT **Junction City** 95.32 50 eP P 14 50 33.2 -0.6
JCT pmax pmax
comp=Z,5.0nm,0.3s,mb5.4

MIAR	**Mount Ida**	**96.42**	**43**	*e*P		**P**	**14 50 38.0**	**-0.8**
	comp=Z,8.9nm,0.8s,mb5.2								
MIAR	**Mount Ida**	**96.42**	**43**	*e*P		**P**	**14 50 38.0**	**-0.8**
MIAR				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.2								
TOA0	**Torodi Ar. Sit**	**121.52**	**313**	*e*PKPdf		PKPdf	14 56 03.0	-0.6	
TORD	**Torodi Ar. Bea**	**121.52**	**313**	PKP		PKPdf	14 56 03.1	-0.5	
	comp=Z,1.2nm,0.5s,baz=41,slow=1.3,SNR=18								
TORD				PP		PP	14 57 27.4	-7.4	
	comp=Z,0.4nm,0.8s,baz=35,slow=5.4,SNR=4.0								
DBIC	**Dimbokro**	**130.59**	**314**	PKP		PKPdf	14 56 21.4	+0.4	
	comp=Z,1.4nm,0.6s,baz=53,slow=5.4,SNR=4.0								
DBIC	**Dimbokro**	**130.59**	**314**	PKIKP		PKPdf	14 56 21.5	+0.4	
DBIC				pmax	pmax				
	comp=Z,1.0nm,0.6s								
VNA2	**Neumayer--Watz**	**136.78**	**194**	*e*PKPdf		PKPdf	14 56 33.0	+2.1	
	baz=359,slow=0.9								
VNA2				*e*			14 56 38.6		
VNA2				*e*			14 56 43.8		
VNA3	**Neumayer Olymp**	**136.99**	**193**	*e*PKPdf		PKPdf	14 56 34.0	+2.7	
VNA3				*e*			14 56 39.9		
VNA3				*e*			14 56 44.8		
LPAZ	**La Paz**	**149.04**	**68**	PKP		PKPdf	14 56 55.3	+1.2	
	comp=Z,12nm,0.7s,baz=345,slow=2.9,SNR=35								
LPAZ				PKPbc	PKPbc		14 56 59.5	+1.4	
	comp=Z,12nm,0.7s,baz=353,slow=3.8,SNR=37								
LPAZ	**La Paz**	**149.04**	**68**	*e*PKPdf		PKPdf	14 56 54.5	+0.4	
LPAZ	**La Paz**	**149.04**	**68**	PKIKP		PKPdf	14 56 55.3	+1.3	
LPAZ							14 56 59.5		
LPAZ				pmax	pmax				
	comp=Z,12nm,0.7s								
LPAZ				pmax	pmax				
	comp=Z,12nm,0.7s								
SIV	**San Ignacio**	**154.29**	**59**	PKP		PKPdf	14 57 01.9	-0.1	
	comp=Z,1.8nm,0.9s,baz=8.9,slow=3.4,SNR=8.9								
SIV				PKPbc	PKPbc		14 57 10.0	-0.2	
	comp=Z,4.0nm,0.8s,baz=206,slow=0.7,SNR=16								
SIV				PKPab	PKPab		14 57 22.7	-1.5	
	comp=Z,5.8nm,0.8s,baz=317,slow=5.5,SNR=12								

ISCJB ***14*** *14:53:54.8±1.7, 3177S±006×678W±0.1, h19km±13km, mb4.5/11, Error ellipse: s-maj=16.9km s-min=10.2km az=166.4*

NEIC ***14*** *14:53:55.0±1.8, 3185S×6789W, h12km±11km, mb4.5/2, MD4.5(SJA), Error ellipse: s-maj=13.9km s-min=11.2km az=79.0*

NEIC Felt [IV] at San Juan.

IDC ***14*** *14:53:56.7±0.6, 3176S×68.13W, h22km±3km, mb4. 1/6, mb1 4.3/9, mb1mx4.2/15, mbtmp4.2/9, ML4. 1/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=24.3km s-min=7.6km az=58.0*

ISC 14 14:53:55.0±1.6**, 3181S**±007×**678W**±01**, h10**km±10km**, n38, σ0°88/33, mb4.5/11, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.41**	**300**	Pg	**Pg**	**14 54 02.7**	**-0.5**
	152nm,0.3s,baz=131,slow=11						
CFAA				Lg		14 54 06.5	
	3µm,0.3s,baz=139,slow=16,SNR=743						
CFAA	**Coronel Fontan**	**0.41**	**300**	Pg	**Pg**	**14 54 02.7**	**-0.5**
CFAA				Lg		14 54 06.5	
LCO	**Las Campanas**	**3.74**	**317**	*e*Pn	**Pn**	**14 54 54.3**	**+1.5**
LCO				*e*Pg	**Pg**	**14 55 00.8**	**-6.0**
LCO				*e*Sn	**Sn**	**14 55 38.0**	**+1.1**
LCO				*e*Sg	**Sg**	**14 55 45.4**	**-10**
PLCA	**Paso Flores**	**9.17**	**193**	Pn	**Pn**	**14 56 11.8**	**+4.5**
	0.1nm,0.3s,baz=311,slow=12,SNR=3.0						
PLCA				Lg		14 58 43.1	
	1.0nm,0.3s,baz=96,slow=19,SNR=3.1						
PLCA				LR	LR	15 00 17.3	
	comp=Z,257nm,19.2s,baz=0.7,slow=42						
PLCA	**Paso Flores**	**9.17**	**193**	*e*P	**Pn**	**14 56 11.9**	**+4.5**
PLCA				Lg		14 58 43.1	
PLCA				LR	LR	15 00 17.3	
LVC	**Limon Verde**	**9.21**	**354**	Pn	**Pn**	**14 56 08.4**	**+0.4**
	9.4nm,0.3s,baz=196,slow=8.0,SNR=63						
LVC				Sn	**Sn**	**14 57 48.0**	**-3.7**
	1.2nm,0.3s,baz=138,slow=22,SNR=2.2						
LVC				Lg		14 58 46.5	
	1.6nm,0.3s,baz=101,slow=24,SNR=4.6						
LVC				LR	LR	15 00 05.4	
	comp=Z,253nm,21.5s,baz=194,slow=40						
LVC	**Limon Verde**	**9.21**	**354**	*e*Pn	**Pn**	**14 56 07.9**	**0.0**
LVC				Sn	**Sn**	**14 57 48.0**	**-3.7**
LVC				Lg		14 58 46.5	
LVC				LR	LR	15 00 05.4	
LPAZ	**La Paz**	**15.46**	**359**	Pn	**Pn**	**14 57 33.2**	**0.0**
	0.2nm,0.3s,baz=346,slow=13,SNR=2.0						
LPAZ				LR	LR	15 02 35.8	
	comp=Z,16nm,21.6s,baz=35,slow=34						
LPAZ	**La Paz**	**15.46**	**359**	Pn	**Pn**	**14 57 33.2**	**0.0**
LPAZ				LR	LR	15 02 35.8	
SIV	**San Ignacio**	**16.90**	**23**	Pn	**Pn**	**14 57 52.2**	**+0.4**
	0.5nm,0.3s,baz=237,slow=10,SNR=3.8						
SIV				Lg		15 02 56.1	
	0.2nm,0.3s,baz=267,slow=21,SNR=2.3						
BDFB	**Brasilia**	**24.18**	**53**	Lg		15 06 51.6	
	0.6nm,0.4s,baz=104,slow=26,SNR=2.7						
BDFB				LR	LR	15 09 43.2	
	comp=Z,96nm,19.8s,baz=44,slow=39						
VNA3	**Neumayer Olymp**	**50.08**	**159**	*e*	**P**	**15 02 48.1**	**-1.5**
VNA3				*e*		15 02 56.1	
VNA3				*e*		15 03 07.1	
VNA2	**Neumayer--Watz**	**50.69**	**158**	*e*	**P**	**15 02 55.5**	**+1.3**
	baz=290,slow=8.7						
VNA2				*e*		15 03 02.8	
VNA2				*e*		15 03 11.9	
SNAA	**Sanae**	**52.30**	**159**	*e*	**P**	**15 03 05.3**	**-1.0**
SNAA				*e*		15 03 12.8	
SNAA	**Sanae**	**52.30**	**159**	*e*P	**P**	**15 03 04.8**	**-1.4**
	3.4nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**69.70**	**327**	P	**P**	**15 05 04.4**	**-0.6**
	0.9nm,0.6s,mb3.9,baz=153,slow=7.6,SNR=8.7						
WVT	**Waverly**	**70.14**	**343**	*e*P	**P**	**15 05 05.6**	**-1.9**
	6.3nm,0.8s,mb4.6						
LIC	**Lamto**	**70.70**	**70**	*e*P	**P**	**15 05 12.1**	**+0.6**
	30nm,1.2s,mb5.1						
TIC	**Toumodi**	**70.95**	**69**	*e*P	**P**	**15 05 13.8**	**+0.8**
	7.4nm,0.3s,mb5.2						
KIC	**Kosan Boka**	**71.01**	**70**	*e*P	**P**	**15 05 13.7**	**+0.4**
	18nm,0.6s,mb5.2						
DBIC	**Dimbokro**	**71.10**	**69**	P	**P**	**15 05 14.3**	**+0.4**
	5.5nm,0.7s,mb4.6,baz=213,slow=6.8,SNR=9.0						
DBIC	**Dimbokro**	**71.10**	**69**	*e*P	**P**	**15 05 14.2**	**+0.3**
MAW	**Mawson**	**74.23**	**162**	P	**P**	**15 05 31.8**	**+0.1**
	1.8nm,0.8s,mb4.1,baz=240,slow=9.5,SNR=3.5						
MAW				pP	pP	15 05 38.8	+3.8
	1.7nm,0.6s,baz=212,slow=3.1,SNR=3.9						
TOA0	**Torodi Ar. Sit**	**80.11**	**68**	*e*P	**P**	**15 06 05.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**80.11**	**68**	P	**P**	**15 06 06.0**	**+0.5**
	6.3nm,0.7s,mb4.6,baz=271,slow=5.4,SNR=37						
TORD	**Torodi Ar. Bea**	**80.11**	**68**	P	**P**	**15 06 06.0**	**+0.5**
PDAR	**Pinedale Array**	**83.52**	**330**	P	**P**	**15 06 22.1**	**-0.7**
	1.2nm,0.8s,mb4.1,baz=128,slow=7.0,SNR=9.3						
NVAR	**Mina Array Bea**	**84.22**	**322**	P	**P**	**15 06 26.5**	**0.0**
	0.8nm,0.8s,mb3.9,baz=148,slow=6.5,SNR=5.2						
MCMT	**McKenzie Canyo**	**86.58**	**330**	*e*P	**P**	**15 06 38.4**	**+0.2**
ASAR	**Alice Springs**	**121.05**	**203**	PKP	PKPdf	15 12 46.7	-1.7
	0.2nm,0.4s,baz=115,slow=1.4,SNR=5.0						
ASAR				pPKP	pPKPdf	15 12 53.8	+1.9
	0.3nm,0.8s,baz=158,slow=2.2,SNR=2.9						
WRA	**Warramunga Arr**	**124.33**	**205**	PKP	PKPdf	15 12 53.4	-1.3
	0.8nm,0.5s,baz=161,slow=1.7,SNR=25						
WRA				pPKP	pPKPdf	15 13 00.8	+2.6
	0.7nm,0.5s,baz=160,slow=1.7,SNR=5.8						
BVAR	**Borovoye Array**	**143.27**	**42**	PKP	PKPdf	15 13 26.1	-2.9
	0.4nm,0.5s,baz=318,slow=1.9,SNR=2.5						
KURK	**Kurchatov**	**148.86**	**43**	PKPbc	PKPbc	15 13 42.9	+0.4
KURK				pPKPbc	pPKPbc	15 13 50.2	+4.3
KURK				sPKPbc		15 13 53.8	
ZALV	**Zalesovo Beam**	**150.46**	**33**	PKPbc	PKPbc	15 13 46.3	0.0
	9.5nm,0.7s,baz=299,slow=3.0,SNR=38						
ZALV				pPKPbc	pPKPbc	15 13 53.8	+4.0
	3.4nm,0.4s,baz=298,slow=3.2,SNR=10						
MKAR	**Makanchi Array**	**152.66**	**48**	PKP	PKPdf	15 13 43.7	-0.9
	1.3nm,0.9s,baz=208,slow=33,SNR=3.5						
MKAR				PKPbc	PKPbc	15 13 51.5	0.0
	3.2nm,0.7s,baz=296,slow=1.8,SNR=19						
MKAR				pPKPbc	pPKPbc	15 13 59.0	+4.0
	4.0nm,0.8s,baz=285,slow=2.2,SNR=10						
MKAR				sPKPbc		15 14 01.8	
	4.0nm,0.8s,baz=290,slow=4.1,SNR=9.6						
MKAR	**Makanchi Array**	**152.66**	**48**	PKP	PKPdf	15 13 43.7	-0.9
MKAR				PKPbc	PKPbc	15 13 51.5	0.0
MKAR				pPKPbc	pPKPbc	15 13 59.0	+4.0
MKAR				sPKPbc		15 14 01.8	
MJAR	**Matsushiro Arr**	**157.99**	**289**	PKP	PKPdf	15 13 53.9	+1.8
	14nm,0.3s,baz=202,slow=1.5,SNR=112						
SONM	**Songino Array**	**163.40**	**14**	PKPab	PKPab	15 14 47.8	-0.7
	0.5nm,0.7s,baz=309,slow=7.1,SNR=3.7						
SONM				pPKPab	pPKPab	15 14 55.1	+3.3
	0.1nm,0.4s,baz=2.1,slow=40,SNR=1.4						

IDC 14 15:15:22.8±10.0**, 1600S**×**17664W, h309**km±241**km, mb3.2/3, mb1 3.4/4, mb1mx3.1/17, mbtmp3.2/4, Error ellipse: s-maj=225.7km s-min=128.2km az=100.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.14**	**67**	P	Pn	15 16 43.5	+1.1
	6.6nm,0.3s,baz=286,slow=1.9,SNR=18						
AFI				S	S	15 17 46.0	-0.3
	0.5nm,0.3s,baz=254,slow=20,SNR=2.4						
STKA	**Stephens Creek**	**41.04**	**240**	P	P	15 22 36.9	0.0
	1.0nm,0.8s,baz=73,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**46.67**	**258**	P	P	15 23 21.4	-0.1
	0.2nm,0.3s,baz=94,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**46.96**	**252**	P	P	15 23 23.6	-0.1
	1.8nm,0.4s,baz=90,slow=7.8,SNR=72						

ISCJB ***14*** *15:31:16.4±1.5, 3.05S±009×12924E±009, h33km±9km, Error ellipse: s-maj=15.6km s-min=14.5km az=13.5*

DJA ***14*** *15:31:18.4±0.0, 299S×12903E, h10km, MLv3.4/2*

IDC ***14*** *15:31:23.6±5.6, 281S×12991E, h99km±56km, mb3.5/3, mb1 3.6/4, mb1mx3.3/14, mbtmp3.4/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/22, Error ellipse: s-maj=98.8km s-min=17.2km az=72.0*

ISC 14 15:31:18.0±1.5**, 306S**±008×**12917E**±009**, h30**km±8km**, n10, σ0°75/10, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.37**	**220**	P	**Pb**	**15 31 26.3**	**-0.1**
MSAI	**Masohi**	**0.37**	**220**	S	**Sb**	**15 31 31.9**	**-0.2**
AAI	**Ambon**	**1.15**	**237**	P	**Pn**	**15 31 38.1**	**0.0**
AAI	**Ambon**	**1.15**	**237**	S	**Sn**	**15 31 52.9**	**+0.1**
LBMI	**Labuha**	**2.93**	**325**	P	**Pn**	**15 32 02.9**	**+0.4**
KAPI	**Kappang**	**9.59**	**258**	LR	LR	15 39 06.3	
	comp=Z,36nm,18.0s,baz=246,slow=45						
WRA	**Warramunga Arr**	**17.52**	**164**	P	**Pn**	**15 35 21.2**	**+1.0**
	0.3nm,0.3s,baz=345,slow=12,SNR=14						
ASAR	**Alice Springs**	**20.99**	**168**	P	**P**	**15 35 60.0**	**+0.9**
	2.8nm,0.5s,baz=352,slow=12,SNR=90						
ASAR				S	**S**	**15 39 51.1**	**-0.3**
	1.0nm,1.0s,baz=351,slow=23,SNR=4.1						
STKA	**Stephens Creek**	**30.96**	**159**	P	**P**	**15 37 30.7**	**-1.8**
	1.7nm,0.9s,baz=326,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**64.50**	**326**	P	**P**	**15 41 51.6**	**-0.4**
	0.5nm,0.7s,baz=115,slow=8.5,SNR=4.9						

ISK ***14*** *15:31:19.9, 3889N×2681E, h8km, MD3.5*

CSEM ***14*** *15:31:20.4±0.1, 3885N×2684E, h10km, ML3.6, Error ellipse: s-maj=2.0km s-min=1.5km az=84.0*

DDA ***14*** *15:31:20.7, 3889N×2684E, h7km±3km, Md3.5, Ml3.6*

ISCJB ***14*** *15:31:20.4±0.6, 3888N±002×2678E±004, h11km±4km, Error ellipse: s-maj=5.0km s-min=3.4km az=165.3*

NEIC ***14*** *15:31:21.6, 3878N×2651E, h28km, MD3.5(ATH), MD3.4(ISK), After ATH.*

ATH ***14*** *15:31:21.8, 3872N×2628E, h19km±12km, MD3.5/6*

ISC 14 15:31:21.2±0.4**, 3887N**±002×**2682E**±003**, h13**km±3km**, n30, σ0°67/40, 3C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.45**	**348**	↑*i*P	**Pg**	**15 31 29.6**	**-0.4**
AYVA				*i* S	**Sg**	**15 31 35.8**	**-0.2**
BLCB	**Balcova**	**0.52**	**160**	*e*PG	**Pg**	**15 31 31.0**	**-0.3**
BLCB				*e*SG	**Sg**	**15 31 38.2**	**+0.1**
URLA	**Izmir**	**0.54**	**199**	↑*i*P	**Pg**	**15 31 31.6**	**-0.1**
URLA				*i* S	**Sg**	**15 31 40.3**	**+1.5**
PRK	**Paraskevi**	**0.56**	**312**	↓*i*PN	**Pg**	**15 31 32.0**	**-0.2**
PRK				*e*SN	**Sg**	**15 31 40.3**	**+0.6**
KDAG	**Bornova**	**0.59**	**143**	*i* P	**Pg**	**15 31 32.6**	**0.0**
KDAG				*i* S	**Sg**	**15 31 40.4**	**+0.1**
AKS	**Akhisar**	**0.78**	**89**	*e*PG	**Pg**	**15 31 35.9**	**-0.3**
AKS				*e*SG	**Sg**	**15 31 46.0**	**-0.5**
AKHS	**Akhisar**	**0.78**	**89**	*e*P	**Pg**	**15 31 35.9**	**-0.4**
AKHS				*e*S	**Sg**	**15 31 46.3**	**-0.2**
BALB	**Balikesir**	**1.13**	**47**	*e*PN	**Pn**	**15 31 41.9**	**-0.8**
SMG	**Samos**	**1.16**	**179**	↑*i*PN	**Pn**	**15 31 42.2**	**-0.9**
SMG				*e*SN	**Sn**	**15 31 58.4**	**-0.4**
GCAM	**G?zelcaml?**	**1.21**	**164**	*e*P	**Pn**	**15 31 43.9**	**0.0**
GCAM				*e*S	**Sb**	**15 31 59.1**	**-0.5**
KULA	**Kula-Manisa**	**1.49**	**103**	*e*PN	**Pn**	**15 31 48.0**	**+0.3**
DEMI	**Demirci**	**1.49**	**83**	*e*P	**Pn**	**15 31 48.5**	**+0.8**
DEMI				*e*S	**Sn**	**15 32 07.3**	**+0.3**
LPK	**Lapseki**	**1.50**	**358**	*e*PN	**Pn**	**15 31 46.8**	**-1.0**
DST	**Dursunbey**	**1.59**	**62**	*e*PN	**Pn**	**15 31 49.3**	**+0.3**
LIA	**Limnos Island**	**1.63**	**310**	*e*PN	**Pn**	**15 31 49.6**	**0.0**
BNT	**Bandirma**	**1.71**	**30**	*e*PN	**Pn**	**15 31 49.9**	**-0.8**
MLSB	**Milas**	**1.75**	**154**	*e*PN	**Pn**	**15 31 52.4**	**+1.2**
MRMT	**Marmara Adasi**	**1.83**	**19**	*e*PN	**Pn**	**15 31 52.7**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.84**	**9**	*e*PN	**Pn**	**15 31 51.3**	**-1.1**
BODT	**Bodrum**	**1.85**	**168**	*e*PN	**Pn**	**15 31 52.6**	**0.0**
ENEZ	**Enez**	**1.93**	**345**	*e*PN	**Pn**	**15 31 53.1**	**-0.6**
MFT	**Murefte**	**1.95**	**10**	*e*PN	**Pn**	**15 31 54.4**	**+0.4**
APE	**Apeiranthos**	**2.06**	**210**	*e*PN	**Pn**	**15 31 53.6**	**-2.0**
GEMT	**Gemlik**	**2.41**	**49**	*e*PN	**Pn**	**15 32 01.2**	**+0.9**
RDO	**Rodhopi**	**2.48**	**337**	*e*PN	**Pn**	**15 32 01.8**	**+0.6**
SLVT	**Silivri**	**2.59**	**24**	*e*PN	**Pn**	**15 32 03.7**	**+0.9**
YLV	**Yalova**	**2.60**	**49**	*e*PN	**Pn**	**15 32 04.0**	**+1.0**
CAVI	**Cavuskoy**	**2.69**	**59**	*e*PN	**Pn**	**15 32 04.4**	**+0.2**
ADVT	**Abdulvahap**	**2.74**	**54**	*e*PN	**Pn**	**15 32 05.3**	**+0.4**
NVR	**Nevrokopi**	**3.36**	**319**	*e*PN	**Pn**	**15 32 13.6**	**+0.3**

ISCJB ***14*** *15:31:47.9±0.6, 107S±008×126W±0.1, h10km, mb4.3/11, Error ellipse: s-maj=17.9km s-min=8.4km az=31.0*

IDC ***14*** *15:31:48.3±1.0, 106S×1261W, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, ML3.7/1, MS3.8/3, Ms1 3.8/3, ms1mx3.8/39, Error ellipse: s-maj=29.3km s-min=20.9km az=99.0*

NEIC ***14*** *15:31:49.7±0.5, 1.12S×1266W, h10km, mb4.8/3, Error ellipse: s-maj=16.8km s-min=8.6km az=119.0*

ISC 14 15:31:49.6±0.6**, 115S**±008×**126W**±01**, h10**km**, n31, σ0°92/32, mb4.3/11, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.55**	**46**	*e*PKP2	**Pn**	**15 34 23.7**	**+2.6**
	81nm,1.7s						
TIC	**Toumodi**	**10.85**	**44**	*e*PKP2	**Pn**	**15 34 25.0**	**-0.2**
	14nm,0.2s						
KIC	**Kosan Boka**	**10.86**	**47**	*e*PKP2	**Pn**	**15 34 24.8**	**-0.4**
	93nm,1.1s						
DBIC	**Dimbokro**	**10.99**	**45**	Pn	**Pn**	**15 34 25.9**	**-1.1**
	0.6nm,0.3s,baz=240,slow=14,SNR=7.0						
DBIC				Sn	**Sn**	**15 36 22.4**	**-7.7**
	0.4nm,0.3s,baz=317,slow=19,SNR=3.0						
DBIC				LR	LR	15 37 54.9	
	comp=Z,998nm,21.0s,baz=201,slow=34						
DBIC	**Dimbokro**	**10.99**	**45**	*e*P	**Pn**	**15 34 26.2**	**-0.8**
	29nm,1.4s						
DBIC				Sn	**Sn**	**15 36 22.4**	**-7.7**
DBIC				LR	LR	15 37 54.9	
BBTS	**Babate**	**16.17**	**346**	LR	LR	15 40 45.0	
	comp=Z,107nm,20.9s,baz=205,slow=33						
TOA0	**Torodi Ar. Sit**	**20.10**	**45**	*e*P	**P**	**15 36 23.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**20.10**	**45**	P	**P**	**15 36 23.8**	**+0.1**
	9.7nm,1.0s,baz=231,slow=9.0,SNR=31						
TORD				S	**S**	**15 40 00.5**	**-9.1**
	2.7nm,1.0s,baz=226,slow=23,SNR=5.6						
TORD				LR	LR	15 43 22.2	
	comp=Z,594nm,20.1s,baz=225,slow=35						
TORD	**Torodi Ar. Bea**	**20.10**	**45**	P	**P**	**15 36 23.8**	**+0.1**
TORD				S	**S**	**15 40 00.5**	**-9.1**
TORD				LR	LR	15 43 22.2	
MDT	**Midelt**	**34.62**	**12**	P	**P**	**15 38 39.0**	**0.0**
	1.6nm,0.8s,mb4.0,baz=214,slow=7.3,SNR=3.5						
TRIS	**Tristan da Cun**	**35.74**	**180**	*e*P	**P**	**15 38 49.7**	**+1.0**
LSZ	**Lusaka**	**42.67**	**111**	P	**P**	**15 39 48.0**	**+1.1**
	2.4nm,0.8s,mb4.0,baz=297,slow=4.5,SNR=4.0						
LSZ	**Lusaka**	**42.67**	**111**	*e*P	**P**	**15 39 48.1**	**+1.2**
	4.4nm,1.1s,mb4.1						
BOSA	**Boshof**	**45.32**	**131**	P	**P**	**15 40 08.0**	**0.0**
	3.7nm,1.0s,mb4.2,baz=336,slow=5.2,SNR=2.3						
BOSA	**Boshof**	**45.32**	**131**	P	**P**	**15 40 08.0**	**0.0**
SIV	**San Ignacio**	**49.95**	**250**	P	**P**	**15 40 45.6**	**+1.4**
	2.6nm,1.2s,mb4.1,baz=74,slow=14,SNR=4.4						
GERES	**GERESS Array B**	**54.76**	**21**	P	**P**	**15 41 19.3**	**-0.1**
	4.1nm,0.9s,mb4.5,baz=191,slow=6.5,SNR=19						
VYHS	**Vyhne**	**56.47**	**25**	*e*P	**P**	**15 41 31.9**	**+0.2**
CRVS	**Cervenica-Dubn**	**57.91**	**26**	*e*P	**P**	**15 41 41.9**	**+0.1**
STHS	**Stebnicka Huta**	**58.20**	**25**	*e*P	**P**	**15 41 44.3**	**+0.4**
KOLS	**Kolonicke sedl**	**58.28**	**26**	*e*P	**P**	**15 41 45.1**	**+0.6**
AKASG	**Malin Array Be**	**62.73**	**29**	P	**P**	**15 42 14.2**	**-0.6**
	0.7nm,0.4s,mb4.1,baz=230,slow=8.7,SNR=7.2						
NOA	**NORSAR Array B**	**64.68**	**13**	P	**P**	**15 42 27.2**	**-0.3**
	1.1nm,0.8s,mb3.9,baz=192,slow=9.5,SNR=3.6						
VNA2	**Neumayer--Watz**	**69.75**	**178**	*e*	**P**	**15 42 57.7**	**-1.8**
	baz=346,slow=4.8						
VNA2				*e*		15 43 03.9	
VNA2				*e*		15 43 10.1	
SNAA	**Sanae**	**70.70**	**177**	*e*P	**P**	**15 43 01.7**	**-3.6**
ARCES	**ARCESS Array B**	**75.05**	**13**	P	**P**	**15 43 30.1**	**-1.1**
	3.0nm,0.9s,mb4.2,baz=210,slow=5.2,SNR=7.3						
MAW	**Mawson**	**83.44**	**158**	P	**P**	**15 44 17.3**	**+0.3**
	1.9nm,0.7s,mb4.2,baz=272,slow=7.0,SNR=5.1						
EKS2	**Erkin-Say**	**88.13**	**47**	*e*P	**P**	**15 44 41.3**	**+0.4**
	7.5nm,1.4s,mb4.7						
QSPA	**South Pole Qui**	**88.93**	**180**	*e*P	**P**	**15 44 42.3**	**-1.5**
	17nm,1.1s,mb5.3						
ASAR	**Alice Springs**	**139.19**	**129**	PKhKP		15 51 06.7	
	0.4nm,0.7s,baz=221,slow=2.5,SNR=11						
WRA	**Warramunga Arr**	**141.44**	**125**	PKhKP		15 51 14.4	
	0.3nm,0.5s,baz=237,slow=2.0,SNR=3.3						

CASC ***14*** *15:40:26.6±2.9, 2428S×6848W, h0km±183km, mb7.2, MS7.1, mb6.7(NEIC)*

SZGRF ***14*** *15:40:35.4, 2400S×6920W, h33km, mb7.6, Northern Chile*

IDC ***14*** *15:40:44.0±0.3, 2228S×7005W, h0km, mb5.9/24, mb1 5.9/27, mb1mx5.9/27, mbtmp5.8/27, ML5.3/4, MS7.5/22, Ms1 7.4/22, ms1mx7.2/26, Error ellipse: s-maj=11.6km s-min=8.4km az=88.0*

LDG ***14*** *15:40:43.2±0.2, 2225S×7020W, h10km, Mb6.8/48, Ms7.5/9, Error ellipse: s-maj=13.7km s-min=9.9km az=114.0*

ISCJB ***14*** *15:40:46.5±0.9, 2226S±002×6983W±002, h22km±6km, mb6.6/349, MS7.5/257, Error ellipse: s-maj=3.7km s-min=2.8km az=35.0*

MOS ***14*** *15:40:47.8±1.2, 2221S×6982W, h33km, mb6.9/113, MS7.4/88, Error ellipse: s-maj=9.2km s-min=5.3km az=101.6 Broadband fault plane solution: P waves. NP1:φs9.00000°, δ22.00000°, λ119.00000°. NP2: φs158.00000°, δ71.00000°, λ79.00000°. Principal axes: T Plg62.0000°, Azm51.0000°; N Plg11.0000°, Azm162.0000°; P Plg25.0000°, Azm257.0000°;*

GUC ***14*** *15:40:49.9±0.7, 2231S×7008W, h48km±1km, MS7.5, MW7.7(NEIC)*

NEIC ***14*** *15:40:50.5±0.1, 2225S×6989W, h40km, mb6.7/280, ME7.5, MS7.4/203, Error ellipse: s-maj=4.0km s-min=3.2km az=216.0, Complex earthquake, with at least two larger events occurring about 3 and 8 seconds after the onset observed on broadband displacement seismograms. Depth from synthetics of broadband displacement seismograms based on second event. Energy computed from CMT mechanism.*

*NEIC Two people killed, at least 45 injured and buildings damaged [VIII] at Tocopilla. Twenty people injured and buildings damaged [VII] at Maria Elena. Several thousand homes destroyed or damaged, displacing about 15,000 people in the Maria Elena-Tocopilla area. Buildings damaged [VII] at Antofagasta and Calama. Power and telephone outages occurred at Antofagasta and Iquique. Felt [VIII] at Quillagua; [VII] at Baquedano and Mejillones; [VI] at Alto Hospicio, Arica, Huara, Iquique and Taltal; [V] at Caldera, Chanaral, Copiapo and Tierra Amarilla; [III] at Alto del Carmen, Coquimbo, Freirina, Huasco, La Higuera, La Serena and Vallenar; [II] at Santiago, Valparaiso and Vina del Mar. Felt from Arica to Santiago. Felt [IV] at Arequipa and Tacna; felt at Lima and in Moquegua, Peru. Felt [III] at La Paz; felt at Cochabamba and in other parts of Bolivia. Felt at San Juan, Argentina. Also felt at Sao Paulo, Brazil. Tsunami wave heights in centimeters [peak

SIV San Ignacio 10.36 54 Pn **Pn 15 43 18.0 +1.9**
comp=N,64nm,0.3s,baz=246,slow=13,SNR=436
SIV Sn **Sn 15 45 19.3 +8.3**
baz=79,slow=16,SNR=1.8
PEL Peldehue 10.81 184 *eP* **Pn 15 43 19.5 -2.7**
FCH Farellones 10.97 182 *eP* **Pn 15 43 21.6 -2.8**
FCH AMS AMS 15 48 04.6
comp=Z,5555µm,20.4s
CLCH Cerro Calan 11.05 183 *eP* **Pn 15 43 25.9 +0.4**
CLCH AMS AMS 15 48 22.8
comp=Z,4896µm,20.8s
RCDM Rinconada Maip 11.16 184 P **Pn 15 43 26.0 -1.0**
RCDM Rinconada Maip 11.16 184 *eP* **Pn 15 43 25.9 -1.1**
RCDM AMS AMS 15 48 24.1
comp=Z,6279µm,20.8s
ANTU Antumapu 11.23 184 *eP* **Pn 15 43 37.1 +9.2**
YECH El Yeso 11.30 181 *eP* **Pn 15 43 28.0 -1.0**
YECH AMS AMS 15 48 18.0
comp=Z,6674µm,20.9s
LMEL Las Melosas 11.49 182 P **Pn 15 43 29.2 -2.3**
LMEL Las Melosas 11.49 182 *eP* **Pn 15 43 28.4 -3.1**
LMEL AMS AMS 15 48 21.1
comp=Z,4589µm,20.5s
NNA Nana 12.29 326 Pn **Pn 15 43 39.7 -2.8**
comp=Z,19nm,0.3s,baz=172,slow=15,SNR=23
NNA Sn **Sn 15 45 57.5 -0.8**
comp=Z,106nm,0.3s,baz=234,slow=19,SNR=3.0
NNA Nana 12.29 326 Pn **Pn 15 43 43.0 +0.5**
comp=Z,5µm,0.8s,SNR=14
NNA Nana 12.29 326⇓ *eP* **Pn 15 43 39.5 -3.0**
comp=Z,1µm,0.8s
LPA La Plata 16.28 143 *ceP* **Pn 15 44 36.0 +0.2**
LPA La Plata 16.28 143⇓ *eP* **Pn 15 44 40.7 +4.9**
comp=Z,2µm,1.0s
LPA *epP* pP 15 44 45.0 -2.3
LPA La Plata 16.28 143⇑ *eP* **Pn 15 44 36.0 +0.2**
LPA ⇓*eP* 15 44 40.7
LPA *epP* pP 15 44 45.0 -2.3
ATAH Atahualpa 17.35 330 P **Pn 15 44 46.1 -3.3**
comp=Z,0.3nm,0.3s,baz=135,slow=7.1,SNR=6.5
ATAH S **Sn 15 48 00.2 -1.4**
comp=Z,2.6nm,0.3s,baz=102,slow=20,SNR=1.5
PLCA Paso Flores 18.37 182 P **Pn 15 45 00.3 -1.5**
comp=Z,2.9nm,0.3s,baz=1.6,slow=14,SNR=46
PLCA S **Sn 15 48 30.6 +4.7**
comp=Z,3.3nm,0.3s,baz=180,slow=20,SNR=1.6
PLCA Paso Flores 18.37 182⇓ *eP* **Pn 15 45 00.2 -1.6**
comp=Z,78nm,1.1s
PLCA Paso Flores 18.37 182 P **Pn 15 45 00.3 -1.5**
PLCA S **Sn 15 48 30.6 +4.7**
PLCA pmax pmax
comp=Z,3.0nm,0.3s
PLCA smax
comp=N,3.0nm,0.3s
SPB Sao Paulo 20.62 98⇑ *eP* **P 15 45 26.3 0.0**
BDFB Brasilia 21.61 76 P **P 15 45 37.7 +0.6**
comp=N,329nm,0.8s,mb5.8,baz=234,slow=19,SNR=75
BDFB S **S 15 49 36.9 +2.0**
comp=N,315nm,0.9s,baz=217,slow=20,SNR=1.6
BDFB LR LR 15 55 54.8
comp=N,850µm,21.6s,MS7.1,baz=246,slow=42
BDFB Brasilia 21.61 76 P **P 15 45 37.7 +0.6**
BDFB S **S 15 49 36.9 +2.1**
BDFB pmax pmax
comp=Z,329nm,0.8s
BDFB smax
comp=N,315nm,0.9s
BDFB MLR MLR
comp=Z,850µm,21.6s
COYC Coyhaique 23.27 184 *eP* **P 15 45 51.8 -2.6**
COYC AMS AMS 15 55 40.2
comp=Z,2045µm,19.8s,MS7.6
OTAV Otavalo 23.96 338⇑ *eP* **P 15 46 01.7 +0.5**
comp=Z,4µm,1.3s,mb6.7
OTAV LR LR
comp=Z,522µm,20.0s,MS7.0
OTAV Otavalo 23.96 338 AMb AMB 15 46 42.3
comp=Z,9µm,2.2s,mb6.8
OTAV *eS* Sx 15 50 38.2
OTAV AMS AMS 15 55 27.9
comp=Z,684µm,27.1s,MS7.0
CAM4 Nova Friburgo 25.16 95 *eP* **P 15 46 12.5 +0.4**
CAM4 *i* 15 46 14.1
CAM4 *i* 15 46 16.5
CAM4 *i* pP 15 46 18.8 -2.9
CAM4 *i* 15 46 26.0
CAM3 Guarapari 27.25 92 *eP* **P 15 46 30.0 -1.0**
CAM3 *i* 15 46 32.6
CAM3 *i* 15 46 34.4
CAM3 *i* 15 46 36.1
CAM3 *i* pP 15 46 38.5 -2.1
ROSC El Rosal 27.37 350 P **P 15 46 31.4 -0.7**
comp=Z,155nm,1.0s,mb5.5,baz=267,slow=21,SNR=18
ROSC S **S 15 51 10.6 +0.5**
comp=Z,124nm,0.9s,baz=108,slow=20,SNR=1.6
ROSC LR LR 15 59 05.4
comp=Z,1298µm,20.2s,MS7.5,baz=188,slow=40
ROSC El Rosal 27.37 350⇑ *eP* **P 15 46 32.1 0.0**
PAYG Puerto Ayora 29.35 314 *eP* **P 15 46 50.8 +1.0**
comp=Z,3µm,1.8s,mb6.7
PAYG LR LR
comp=Z,567µm,22.0s,MS7.2
PAYG Puerto Ayora 29.35 314 *eP* **P 15 46 51.0 +1.2**
EFI East Falkland 30.68 166 P **P 15 47 01.3 +0.2**
comp=Z,7µm,1.2s,mb7.4,SNR=11
EFI East Falkland 30.68 166⇑ *eP* **P 15 47 00.3 -0.8**
comp=Z,1µm,0.9s,mb6.7
EFI LR LR
comp=Z,4026µm,22.0s,MS8.0
EFI East Falkland 30.68 166 P **P 15 47 00.8 -0.3**
EFI pmax pmax
comp=Z,1µm,0.9s,mb6.7
ICCO Coco Island 32.45 327⇑ *eP* **P 15 47 17.8 +0.7**
USHA Ushuaia 32.48 179 P **P 15 47 15.2 -1.7**
comp=Z,323nm,1.1s,mb6.1,baz=343,slow=5.8,SNR=17
USHA S **S 15 52 28.0 -1.4**
comp=Z,118nm,1.1s,baz=54,slow=14,SNR=1.4
USHA LR LR 16 01 49.3
comp=Z,2990µm,19.0s,MS8.0,baz=349,slow=39
PCRV Puerto La Cruz 32.69 9 P **P 15 47 18.9 -0.2**
comp=Z,108nm,0.5s,mb6.1,baz=178,slow=3.8,SNR=50
PCRV S **S 15 52 28.0 -5.4**
comp=Z,152nm,1.0s,baz=146,slow=3.6,SNR=1.6
PCRV LR LR 16 02 24.4
comp=Z,1290µm,19.5s,MS7.6,baz=54,slow=40
BCIP Isla Barro Col 32.81 341 *eP* **P 15 47 20.5 +0.3**
comp=Z,3µm,1.5s,mb7.0
BCIP LR LR
comp=Z,544µm,22.0s,MS7.2
BCIP Isla Barro Col 32.81 341 *eP* **P 15 47 20.7 +0.5**
BUAY Buenos Aires 33.19 15 *eP* **P 15 47 27.4 +3.9**
ALNG Atlantic LNG 33.26 15 *eP* **P 15 47 26.5 +2.4**
SIPA Siparia 33.27 15 *eP* **P 15 47 27.0 +2.8**
TPP Pointe-a-Pierr 33.45 15 *eP* **P 15 47 28.9 +3.2**
ACR Cerro Adams 33.46 335 *eP* **P 15 47 27.7 +1.8**
TBH Brigand Hill 33.70 16 *eP* **P 15 47 27.9 -0.1**
TCE Chacachacare 33.74 14 *eP* **P 15 47 26.9 -1.5**
TRN Trinidad (W) 33.78 15 *eP* **P 15 47 29.2 +0.5**
BAR1 34.06 336 *eP* **P 15 47 33.4 +2.3**
BOT Bacolet 34.45 16 *eP* **P 15 47 33.6 -0.8**
TPR Prospect 34.45 16 *eP* **P 15 47 34.0 -0.5**
BUS Buena Vista 34.52 335 *eP* **P 15 47 36.3 +1.2**
QCR Quepos 34.56 334 *eP* **P 15 47 35.6 +0.2**
LIO Limon 34.65 337 *eP* **P 15 47 38.9 +2.6**
URSC Urasca 34.78 335 *eP* **P 15 47 38.2 +0.9**
SJS Escuela Geolog 34.98 335⇑ *eP* **P 15 47 40.5 +1.4**
PRS1 Puriscal 35.12 335 *eP* **P 15 47 42.2 +1.9**
GRGR Grenville 35.15 14 *eP* **P 15 47 38.6 -2.0**
comp=Z,4µm,1.0s,mb7.3
GRGR LR LR
comp=Z,1031µm,19.0s,MS7.6
GRW Mount Saint Ca 35.18 14 *eP* **P 15 47 40.0 -0.7**
CGA2 Cerro Gallo 2 35.22 334 *eP* **P 15 47 44.0 +3.0**
GRHS Sauteurs 35.24 14 *eP* **P 15 47 41.9 +0.6**
GRHS Sauteurs 35.24 14 *e* **P 15 47 41.9 +0.6**
GRSS Sisters 35.32 14 *eP* **P 15 47 43.3 +1.3**
GRSS Sisters 35.32 14 *e* **P 15 47 43.3 +1.3**
JCR Jicaral 35.33 333 *eP* **P 15 47 44.1 +2.1**
GRCU Cariacou 35.53 14 *eP* **P 15 47 44.2 +0.4**
GRCU Cariacou 35.53 14 *e* **P 15 47 44.2 +0.4**
FORC Fortuna 35.70 334 *eP* **P 15 47 45.7 +0.4**
VCR Vista de Mar 35.80 333 *eP* **P 15 47 45.2 -0.9**
RPN Rapa Nui 36.14 254 P **P 15 47 49.0 0.0**
comp=Z,6µm,1.5s,mb7.3,SNR=5.1
RPN Rapa Nui 36.14 254 P **P 15 47 46.5 -2.6**
comp=Z,125nm,1.1s,mb5.8,baz=68,slow=19,SNR=4.7
RPN S **S 15 53 24.8 -2.0**
comp=Z,58nm,1.1s,baz=232,slow=18,SNR=1.8
RPN LR LR 15 57 08.4
comp=Z,272µm,21.4s,MS7.0,baz=123,slow=27
RPN Rapa Nui 36.14 254 *eP* **P 15 47 48.0 -1.0**
comp=Z,5µm,1.5s,mb7.2
RPN LR LR
comp=Z,953µm,20.0s,MS7.6
FCV Fort Charlotte 36.24 14 *eP* **P 15 47 48.3 -1.5**
BHS Barnard House 36.40 14 *eP* **P 15 47 43.0 -8.2**
SVV Soufriere Volc 36.40 14 *eP* **P 15 47 52.8 +1.6**
SSV Crater Summit 36.41 14 *eP* **P 15 47 51.3 -0.1**
RCBR Riachuelo 36.59 68 *eP* **P 15 47 53.6 +0.7**
comp=Z,6µm,1.3s,mb7.3
RCBR LR LR
comp=Z,600µm,20.0s,MS7.4
BBSP Saint Philip 36.63 17 *eP* **P 15 47 54.0 +0.8**
BBSP Saint Philip 36.63 17 *e* **P 15 47 54.0 +0.8**
BBGH Gun Hill 36.64 17 *eP* **P 15 47 53.9 +0.6**
comp=Z,8µm,1.6s,mb7.3
BBGH LR LR
comp=Z,1204µm,22.0s,MS7.6
BBGH Gun Hill 36.64 17 *eP* **P 15 47 54.6 +1.3**
SLB Belfond 36.93 14 *eP* **P 15 47 54.6 -1.2**
CONN Concepcion 37.09 334 *eP* **P 15 47 59.2 +2.1**
CONN *eP* 15 47 59.3
BIM Bigot 37.59 14 *eP* **P 15 48 00.3 -1.0**
MASN Masaya 37.69 333 *eP* **P 15 48 02.9 +0.8**
CRUN El Crucero 37.74 333 *eP* **P 15 48 03.7 +1.0**
FDF Fort de France 37.78 14 *eP* **P 15 47 60.0 -3.0**
FDF Fort de France 37.78 14 P **P 15 48 00.2 -2.8**
FDF Fort de France 37.78 14 *eP* **P 15 47 60.0 -3.0**
WILN Americas 2 37.86 333 *eP* **P 15 48 06.5 +2.9**
MGAN Managua 37.87 333 *eP* **P 15 48 03.7 -0.1**
TISN Laguna Tiscapa 37.87 333 *eP* **P 15 48 04.2 +0.4**
CSAN 37.98 333 *eP* **P 15 48 04.8 +0.2**
APYN Apoyeque 37.99 333 *eP* **P 15 48 05.9 +1.2**
HUEN 38.01 333 *eP* **P 15 48 05.9 +1.0**
COPN Copaltepe 38.04 333 *eP* **P 15 48 06.2 +1.0**
MOMN Momotombo 38.23 333 *eP* **P 15 48 07.4 +0.7**
CNGN Cerro Negro 38.38 333 *eP* **P 15 48 07.2 -0.8**
TEL3 Telica 3 38.50 333 *eP* **P 15 48 09.4 +0.3**
DWS Wesley 38.56 13 *eP* **P 15 48 07.0 -2.5**
DWS Wesley 38.56 13 *e* **P 15 48 07.0 -2.5**
CRIN San Cristobal 38.70 332 *eP* **P 15 48 10.0 -0.7**
CNCH Conchagua 39.56 332 *eP* x 15 48 17.4
BPA Boggy Peak 39.88 12 *eP* **P 15 48 17.1 -3.5**
BPA Boggy Peak 39.88 12 *e* **P 15 48 17.1 -3.5**
VSM San Miguel 39.89 331 *eP* x 15 48 22.1
TGUH Tegucigalpa,Un 40.01 333 *eP* **P 15 48 20.4 -1.2**
comp=Z,2µm,1.2s,mb6.8
TGUH LR LR
comp=Z,304µm,22.0s,MS7.1
TGUH Tegucigalpa,Un 40.01 333 *eP* **P 15 48 20.9 -0.7**
CAHU Cacacuatique 40.16 332 *eP* x 15 48 24.3
SNVI San Vicente 40.30 331 *eP* x 15 48 25.8
SJG San Juan 40.34 5 *eP* **P 15 48 20.9 -3.4**
comp=Z,2µm,0.8s,mb6.9
SJG LR LR
comp=Z,717µm,20.0s,MS7.5
SJG San Juan 40.34 5 P **P 15 48 21.5 -2.8**
SJG pmax pmax
comp=Z,2µm,0.8s
SJG San Juan 40.34 5 *eP* **P 15 48 22.1 -2.2**
MTP Monte Pirata 40.38 6 *eP* **P 15 48 21.0 -3.6**
PCJ Portland Cotta 40.46 349⇑ *eP* **P 15 48 24.3 -1.0**
ANWB Willy Bob 40.51 12 *eP* **P 15 48 21.3 -4.4**
BOQS Boqueron 40.61 330 *eP* x 15 48 27.9
AGPR Aguadilla, PR 40.62 4⇑ *eP* **P 15 48 23.7 -2.9**
HOJ Hope 40.65 350⇑ *eP* **P 15 48 26.1 -0.8**
GWJ Greenwich 40.72 350⇑ *eP* **P 15 48 26.7 -0.7**
STH Stony Hill 40.73 350⇓ *eP* **P 15 48 26.6 -1.0**
SBLS San Blas 40.86 330 *eP* x 15 48 30.7
BNJ Bonny Gate 41.00 350⇑ *eP* **P 15 48 30.7 +1.0**
CVJ Coleyville 41.01 349⇑ *eP* **P 15 48 32.6 +2.8**
MASC Masc 42.46 354 *eP* **P 15 48 40.9 -0.8**
PMSA Palmer Station 42.61 176 P **P 15 48 42.9 +0.5**
comp=Z,494nm,1.0s,mb6.2,baz=355,slow=9.4,SNR=26
PMSA S **S 15 55 02.4 -0.4**
comp=Z,34nm,1.1s,baz=6.3,slow=18,SNR=2.3
PMSA LR LR 16 06 52.3
comp=Z,1452µm,19.2s,MS7.9,baz=341,slow=37
PMSA Palmer Station 42.61 176 *eP* **P 15 48 43.1 +0.7**
comp=Z,814nm,0.9s,mb6.5
PMSA LR LR
comp=Z,1459µm,20.0s,MS7.9
LMGC Las Mercedes 42.71 350 *i* P **P 15 48 44.5 +0.8**
LMGC *i* S **S 15 54 50.0 -15**
comp=N,24nm,19.6s
LMGC *i*
comp=E,23nm,19.6s
MOAC Moa 43.02 353 *eP* **P 15 48 45.7 -0.5**
CCCC Cccc 43.95 349 *eP* **P 15 48 53.0 -0.7**
SCX San Cristobal 44.80 328 *eP* **P 15 49 04.3 +3.6**
CMIG Matias Romero 46.24 326⇑ *iP* **P 15 49 11.3 -0.7**
VHO Vista Hermosa 47.21 324⇑ *iP* **P 15 49 19.6 0.0**
OXX Oaxaca 47.21 324 *iP* **P 15 49 24.9 +5.2**
PNIG Pinotepa 47.44 322⇑ *iP* **P 15 49 21.0 -0.5**
ACX Acapulco 48.86 320 *iP* **P 15 49 35.6 +3.2**
CAIG El Cayaco 49.21 320⇑ *iP* **P 15 49 35.0 -0.1**
LVIG Laguna Verde 49.23 326⇑ *iP* **P 15 49 33.8 -1.3**
PLIG Platanillo 49.82 322⇑ *iP* **P 15 49 40.0 +0.3**
PPM Popocatepetl 49.87 323⇑ *iP* **P 15 49 41.3 +1.3**
YAIG Yautepec 49.95 323⇑ *iP* **P 15 49 41.6 +0.9**
UNM Universidad Na 50.39 323⇑ *iP* **P 15 49 45.5 +1.5**
PBVM Pinon 50.43 323 *iP* **P 15 49 45.2 +0.9**
TRIS Tristan da Cun 51.32 120 *eP* **P 15 49 52.2 +1.3**
comp=E,2µm,0.9s,mb7.1
TRIS LR LR
comp=Z,193µm,20.0s,MS7.1
DWPF Disney 51.38 347 *eP* **P 15 49 50.4 -1.0**
comp=Z,1µm,1.0s,mb6.8
DWPF LR LR
comp=Z,186µm,21.0s,MS7.1
MOIG Morelia 51.81 321⇑ *iP* **P 15 49 55.1 +0.4**
SFJM Santa Fe 53.52 320 *iP* **P 15 50 06.1 -1.2**
CJM Chamela 53.99 318 *iP* **P 15 50 10.3 -0.5**
BBSR BB Station 54.60 5 *eP* **P 15 50 13.1 -1.9**
comp=Z,2µm,1.3s,mb6.9
BBSR LR LR
comp=Z,129µm,20.0s,MS7.0
PTCN Pitcairn Islan 54.90 254 P **P 15 50 17.4 -0.1**
comp=Z,4µm,1.4s,mb7.2
PTCN LR LR
comp=Z,583µm,20.0s,MS7.7
ZAIG Zacatecas 55.03 322⇑ *iP* **P 15 50 18.7 +0.5**
ASCN Ascension 55.09 84⇑ *eP* **P 15 50 18.1 -0.9**
comp=Z,4µm,1.4s,mb7.3
ASCN LR LR
comp=Z,513µm,22.0s,MS7.6
BRAL Brewton 55.56 342 *eP* **P 15 50 20.9 -1.0**
comp=Z,3µm,1.0s,mb7.2
BRAL LR LR
comp=Z,164µm,20.0s,MS7.1
NHSC New Hope 56.00 349 *eP* **P 15 50 24.7 -0.3**
comp=Z,4µm,1.1s,mb7.4
NHSC LR LR
comp=Z,230µm,20.0s,MS7.3
COW Cow Castle Cre 56.36 349 *eP* **P 15 50 26.7 -0.9**
KVTX Kingsville 56.53 330⇑ *eP* **P 15 50 28.2 -0.8**
comp=Z,2µm,1.3s,mb7.0
KVTX LR LR
comp=Z,166µm,22.0s,MS7.1
GOGA Godfrey 56.94 346⇑ *eP* **P 15 50 29.6 -2.1**
comp=Z,204nm,0.4s,mb6.5
GOGA LR LR
comp=Z,417µm,21.0s,MS7.5
GOGA Godfrey 56.94 346⇑ *eP* **P 15 50 29.6 -2.1**
GOGA pmax pmax
comp=Z,204nm,0.4s,mb6.5
GOGA MLR MLR
comp=Z,417µm,21.0s,MS7.5
JSC Jenkinsville 57.34 349 *eP* **P 15 50 32.9 -1.7**
JSC Jenkinsville 57.34 349 P **P 15 50 33.2 -1.3**
LRAL Lakeview Retre 57.45 343⇑ *eP* **P 15 50 33.0 -2.3**
comp=Z,288nm,0.1s,mb7.3
LRAL LR LR
comp=Z,264µm,20.0s,MS7.3
LHS Liberty Hill 57.45 349 *eP* **P 15 50 41.2 +5.9**
MAIG Mazatlaan 57.60 319⇑ *iP* **P 15 50 36.7 +0.1**
HKT Hockley 57.70 333⇑ *eP* **P 15 50 35.8 -1.3**
comp=Z,968nm,1.4s,mb6.6
HKT LR LR
comp=Z,143µm,21.0s,MS7.1
HKT Hockley 57.70 333⇑ *eP* **P 15 50 35.8 -1.3**
HKT pmax pmax
comp=Z,968nm,1.4s,mb6.6
HKT MLR MLR
comp=Z,143µm,21.0s,MS7.1
VBMS Vicksburg 57.74 339 PFAKE 15 50 50.0 +13
VBMS LR LR
comp=Z,256µm,20.0s,MS7.3
CNNC Cliffs of the 57.76 352⇑ *eP* **P 15 50 36.2 -1.3**
comp=Z,7µm,1.8s,mb7.4
CNNC LR LR
comp=Z,339µm,21.0s,MS7.4
NATX Nacogdoches 58.82 335⇑ *eP* **P 15 50 44.0 -0.9**
comp=Z,2µm,1.3s,mb7.1
NATX LR LR
comp=Z,78µm,20.0s,MS6.8
CPCT Cooper Cave 59.13 346⇑ *eP* **P 15 50 44.6 -2.4**
TKL Tuckaleechee C 59.17 347 S **S 15 58 49.6 -2.9**
baz=100,slow=18
TKL Tuckaleechee C 59.17 347⇑ *eP* **P 15 50 44.9 -2.4**
SWET Sewanee 59.24 345⇑ *eP* **P 15 50 45.4 -2.4**
OXF Oxford 59.52 341⇑ *eP* **P 15 50 46.0 -3.8**
comp=Z,852nm,1.7s,mb6.5
OXF LR LR
comp=Z,199µm,21.0s,MS7.2
OXF Oxford 59.52 341 P **P 15 50 47.6 -2.1**
OXF pmax pmax
comp=Z,3µm,1.1s,mb7.2
VNA3 Neumayer Olymp 59.56 161 *eP* **P 15 50 49.8 +0.2**
VNA3 *e* 15 50 54.7
VNA3 *e* 15 51 06.3
VNA3 *e* 15 51 12.0
VNA3 *e* 15 51 26.9
VNA3 *e* 15 51 37.6
RKT Rikitea 59.66 256 *eP* **P 15 50 51.9 +0.8**
comp=Z,2µm,1.4s,mb7.0
RKT *eS* **S 15 58 53.0 -6.7**
comp=Z,1056µm,34.2s
RKT *e*LR LR 16 08 10.4
comp=Z,2230µm,28.8s,baz=106
RKT Rikitea 59.66 256 *eP* **P 15 50 51.9 +0.8**
comp=Z,2µm,1.4s,mb7.0
RKT *eS* **S 15 58 53.0 -6.7**
VNA1 Neumayer--Stat 59.79 160 *eP* **P 15 50 52.3 +1.1**
VNA1 *e* 15 50 56.6
VNA1 *e* 15 51 09.3
VNA1 *e* 15 51 15.6
VNA1 *e* 15 51 27.3
VNA1 *e* 15 51 39.6
JCT Junction City 59.90 330⇑ *eP* **P 15 50 50.6 -1.9**
comp=Z,84nm,0.4s,mb6.1
JCT LR LR
comp=Z,64µm,21.0s,MS6.7
JCT Junction City 59.90 330 P **P 15 50 50.9 -1.5**
JCT pmax pmax
comp=Z,910nm,0.8s,mb6.9
TZTN Tazewell 59.97 347⇑ *eP* **P 15 50 50.6 -2.2**
comp=Z,138nm,1.6s,mb5.7
TZTN LR LR
comp=Z,300µm,22.0s,MS7.4
URVA University of 60.02 353⇑ *eP* **P 15 50 52.0 -1.1**
BLA Blacksburg 60.05 350⇑ *eP* **P 15 50 52.3 -1.1**
comp=Z,464nm,0.4s,mb6.9
BLA LR LR
comp=Z,280µm,20.0s,MS7.4
BLA Blacksburg 60.05 350 P **P 15 50 52.8 -0.6**
BLA pmax pmax
comp=Z,3µm,1.3s,mb7.2
ELN Prospectdale 60.12 350 *eP* **P 15 50 52.4 -1.4**
VNA2 Neumayer--Watz 60.15 160 *eP* **P 15 50 54.1 +0.4**
VNA2 *e* 15 50 58.9
VNA2 *e* 15 51 10.6
VNA2 *e* 15 51 16.1
VNA2 *e* 15 51 29.1
VNA2 *e* 15 51 40.6
MET Memphis--Engin 60.24 341⇑ *eP* **P 15 50 52.5 -2.3**
SHEL Horse Pasture 60.45 96 P **P 15 51 00.6 +4.0**
comp=Z,13µm,0.8s,mb8.0,SNR=12
SHEL Horse Pasture 60.45 96⇑ *eP* **P 15 50 58.2 +1.5**
comp=Z,2µm,2.6s,mb6.7
SHEL LR LR
comp=Z,273µm,22.0s,MS7.3
WVT Waverly 60.59 343⇑ *eP* **P 15 50 54.1 -3.0**
comp=Z,1µm,1.3s,mb6.9
WVT LR LR
comp=Z,93µm,20.0s,MS6.9
WVT Waverly 60.59 343 *eP* **P 15 50 54.3 -2.7**
WVT pmax pmax
comp=Z,1µm,1.2s,mb6.9
CBN Corbin 60.62 353⇑ *eP* **P 15 50 56.3 -0.9**
comp=Z,3µm,1.3s,mb7.2
CBN LR LR
comp=Z,391µm,21.0s,MS7.5
LPIG La Paz 60.67 317⇑ *iP* **P 15 50 57.8 -0.1**
UALR University of 60.69 339 *eP* **P 15 50 55.6 -2.2**
comp=Z,2µm,1.3s,mb7.0
TXAR Lajitas Array 60.85 326 P **P 15 50 57.6 -1.3**
comp=Z,52nm,0.9s,mb5.7,baz=146,slow=7.6,SNR=88
TXAR S **S 15 59 15.0 +0.6**
comp=Z,6.1nm,1.0s,baz=86,slow=14,SNR=2.3
TXAR LR LR 16 14 08.4
comp=Z,160µm,20.5s,MS7.2,baz=25,slow=33
TXAR PKPPKP 16 20 09.4
comp=Z,6.8nm,1.2s,baz=37,slow=0.6,SNR=4.1
TXAR PKP2bc 16 20 28.8
comp=Z,7.7nm,0.9s,baz=272,slow=2.3,SNR=8.1
TXAR Lajitas Array 60.85 326 P **P 15 50 57.6 -1.3**
TXAR S **S 15 59 15.0 +0.6**
TXAR LR LR 16 14 08.4
TXAR P'P' 16 20 09.4
TXAR ⇑*e* 16 20 28.8
TXAR Lajitas Array 60.85 326 P **P 15 50 57.6 -1.3**
TXAR S **S 15 59 15.0 +0.6**
TXAR smax
comp=N,6.0nm,1.0s
MIAR Mount Ida 60.91 338⇑ *eP* **P 15 50 57.0 -2.2**
comp=N,464nm,0.4s,mb7.0
MIAR LR LR
comp=Z,167µm,20.0s,MS7.2
MIAR Mount Ida 60.91 338 P **P 15 50 57.4 -1.8**
MIAR pmax pmax
comp=Z,1µm,1.0s,mb7.0
GNAR Gosnell 61.05 341⇑ *eP* **P 15 50 58.6 -1.6**
comp=Z,46µm,1.3s
UTMT University of 61.07 342⇑ *eP* **P 15 50 58.5 -1.9**
comp=Z,3µm,1.0s,mb7.3
PVMO Portageville 61.38 342 P **P 15 51 00.5 -1.9**
comp=Z,5µm,1.0s,mb7.6
PARMO Parma 61.62 342⇑ *eP* **P 15 51 02.0 -2.0**
SDMD Soldier's Deli 61.76 354 *eP* **P 15 51 04.0 -0.9**
comp=Z,80nm,0.5s,mb6.1
SNAA Sanae 61.77 161 *eP* **P 15 51 02.8 -1.9**
SNAA *e* 15 51 08.0
SNAA *e* 15 51 19.5
SNAA *e* 15 51 25.2
SNAA *e* 15 51 38.7
SNAA *e* 15 51 46.7
SNAA Sanae 61.77 161 *eP* **P 15 51 03.0 -1.7**
comp=Z,3µm,1.4s,mb7.2
SNAA Sanae 61.77 161 *eP* **P 15 51 03.5 -1.2**
SNAA pmax pmax
comp=Z,251nm,1.0s
SNAA MLR MLR
comp=Z,316µm,16.0s
WCI Wyandotte Cave 62.19 345 *eP* **P 15 51 04.9 -3.0**
comp=Z,578nm,0.8s,mb6.8
WCI LR LR
comp=Z,280µm,20.0s,MS7.4
WCI Wyandotte Cave 62.19 345 *eP* **P 15 51 05.0 -2.8**
WCI pmax pmax
comp=Z,580nm,0.8s,mb6.8
USIN University of 62.28 344⇑ *eP* **P 15 51 05.6 -2.9**
comp=Z,1µm,1.3s,mb6.9
MVL Millersville 62.30 354 *eP* **P 15 51 07.8 -0.7**
comp=Z,112nm,0.8s,mb6.0
MCWV Mont Chateau 62.37 351 *eP* **P 15 51 07.7 -1.3**
comp=Z,901nm,0.8s,mb7.0
MCWV LR LR
comp=Z,333µm,22.0s,MS7.5
SIUC Southern Illin 62.45 343 *eP* **P 15 51 07.4 -2.2**
comp=Z,2µm,1.0s,mb7.1
LUPA Lehigh Univers 62.81 355⇑ *eP* **P 15 51 10.8 -1.1**
BRNJ Basking Ridge 62.84 356 *eP* **P 15 51 11.2 -0.8**
comp=Z,2µm,1.3s,mb7.1
CPNY Central Park 62.91 356⇑ *eP* **P 15 51 11.4 -1.1**

comp=Z,1μm,1.2s,mb6.8
FVM French Village 63.05 342⇑ *eP* **P 15 51 11.2 -2.3**
comp=Z,1μm,1.0s,mb7.1
FVM French Village 63.05 342 *eP* **P 15 51 11.3 -2.2**
FVM pmax pmax
comp=Z,2μm,1.0s,mb7.1
SSPA Standing Stone 63.08 353⇑ *eP* **P 15 51 13.0 -0.7**
comp=Z,1μm,1.2s,mb6.9
SSPA LR LR
comp=Z,378μm,21.0s,MS7.5
OLIL Olney 63.11 344⇑ *eP* **P 15 51 11.1 -2.9**
comp=Z,3μm,1.7s,mb7.2
PAL Palisades 63.12 356⇑ *eP* **P 15 51 13.0 -0.9**
comp=Z,942nm,1.2s,mb6.8
PAL Palisades 63.12 356 P **P 15 51 14.4 +0.5**
PAL pmax pmax
comp=Z,940nm,1.2s,mb6.8
BLO Bloomington 63.15 345⇑ *eP* **P 15 51 11.5 -2.7**
comp=Z,583nm,0.6s,mb6.9
BLO Bloomington 63.15 345 *eP* **P 15 51 11.7 -2.5**
BLO pmax pmax
comp=Z,580nm,0.6s,mb6.9
CCM Cathedral Cave 63.35 341⇑ *eP* **P 15 51 13.3 -2.3**
comp=Z,816nm,1.0s,mb6.8
CCM LR LR
comp=Z,129μm,21.0s,MS7.1
CCM Cathedral Cave 63.35 341 *eP* **P 15 51 13.5 -2.1**
CCM pmax pmax
comp=Z,820nm,1.0s,mb6.8
ACSO Alum Creek Sta 63.43 349⇑ *eP* **P 15 51 13.8 -2.3**
comp=Z,1μm,1.0s,mb7.0
ACSO LR LR
comp=Z,124μm,20.0s,MS7.1
SLM Saint Louis 63.60 342⇑ *eP* **P 15 51 14.9 -2.3**
comp=Z,1μm,1.2s,mb6.8
SLM Saint Louis 63.60 342 P **P 15 51 17.3 +0.1**
SLM pmax pmax
comp=Z,1μm,1.2s,mb6.8
BBTS Babate 63.81 60 P **P 15 51 19.3 +0.2**
comp=Z,211nm,1.0s,mb6.1,baz=267,slow=0.8,SNR=54
BBTS LR LR 16 18 21.2
comp=Z,506μm,21.1s,MS7.7,baz=244,slow=35
BBTS Babate 63.81 60 P **P 15 51 19.3 +0.2**
BBTS LR LR 16 18 21.2
BRYW Bryant College 63.93 359⇑ *eP* **P 15 51 18.6 -0.8**
comp=Z,10μm,1.3s,mb7.7
QUA2 Belchertown 64.32 358⇑ *eP* **P 15 51 20.7 -1.2**
comp=Z,3μm,1.3s,mb7.1
ALLY Alegheny Colle 64.36 351 *eP* **P 15 51 20.5 -1.6**
comp=Z,2μm,1.2s,mb7.0
WES Weston 64.39 359⇑ *eP* **P 15 51 21.7 -0.7**
WES comp=Z,3μm,1.3s,mb7.1 LR LR
comp=Z,133μm,22.0s,MS7.1
WES Weston 64.39 359 P **P 15 51 22.1 -0.2**
WES pmax pmax
comp=Z,3μm,1.3s,mb7.1
BINY Binghamton 64.45 355⇑ *eP* **P 15 51 22.0 -0.7**
comp=Z,2μm,1.3s,mb6.9
BINY LR LR
comp=Z,409μm,21.0s,MS7.6
AMTX Amarillo 64.45 331⇑ *eP* **P 15 51 21.1 -1.7**
comp=Z,1μm,1.4s,mb6.8
AMTX LR LR
comp=Z,96μm,20.0s,MS7.0
ERPA Erie 64.80 352 *eP* **P 15 51 23.4 -1.6**
comp=Z,1μm,1.0s,mb6.9
ERPA LR LR
comp=Z,583μm,21.0s,MS7.8
HDIL Hopedale 65.14 344 *eP* **P 15 51 24.3 -2.9**
comp=Z,914nm,0.9s,mb6.8
HDIL LR LR
comp=Z,203μm,20.0s,MS7.3
319A Douglas 65.45 323 ⇓P **P 15 51 29.5 0.0**
baz=66,SNR=104
319A ⇓S S 16 00 11.0 -0.9
baz=66
ACCN Adirondack Com 65.47 357⇑ *eP* **P 15 51 28.8 -0.6**
comp=Z,4μm,1.8s,mb7.2
FFD Franklin Falls 65.48 359⇑ *eP* **P 15 51 29.3 -0.1**
comp=Z,10μm,1.7s,mb7.6
AAM Ann Arbor 65.56 349⇑ *eP* **P 15 51 28.0 -1.9**
comp=Z,372nm,0.8s,mb6.5
AAM LR LR
comp=Z,287μm,20.0s,MS7.5
AAM Ann Arbor 65.56 349 P **P 15 51 30.5 +0.6**
AAM pmax pmax
comp=Z,370nm,0.8s,mb6.5
HNH Hanover 65.74 358⇑ *eP* **P 15 51 31.2 +0.2**
comp=Z,7μm,1.4s,mb7.5
318A Bisbee 65.89 323 ⇑P **P 15 51 32.6 +0.2**
baz=66,SNR=215
318A ⇓S S 16 00 15.5 -1.8
baz=66
219A White Tail Can 65.91 324 ⇑P **P 15 51 32.6 +0.1**
baz=66,SNR=122
219A ⇓S S 16 00 18.3 +0.8
baz=66
KSU1 Kansas State U 66.06 337⇑ *eP* **P 15 51 31.6 -1.6**
comp=Z,622nm,0.8s,mb6.7
KSU1 LR LR
comp=Z,170μm,21.0s,MS7.2
MDV Middlebury 66.06 357⇑ *eP* **P 15 51 32.5 -0.6**
NCB Newcomb 66.09 356⇑ *eP* **P 15 51 32.5 -0.8**
comp=Z,3μm,1.6s,mb7.0
NCB LR LR
comp=Z,362μm,22.0s,MS7.5
BNM Barren Site 66.20 327 *eP* **P 15 51 34.0 -0.3**
LBNH Lisbon 66.26 358⇑ *eP* **P 15 51 34.0 -0.4**
comp=Z,370nm,0.6s,mb6.6
LBNH LR LR
comp=Z,217μm,22.0s,MS7.3
LBNH Lisbon 66.26 358 P **P 15 51 34.7 +0.3**
LBNH pmax pmax
comp=Z,3μm,1.5s,mb7.1
Y22D IRIS PASSCAL I 66.29 327 ⇑P **P 15 51 35.5 +0.7**
baz=66
MAIT Maitri 66.33 159⇑ *iP* **P 15 51 32.8 -1.8**
MAIT *eE* 15 51 39.5
218A Dragoon 66.33 323 ⇓P **P 15 51 35.7 +0.6**
baz=66
218A ⇑S S 16 00 22.5 -0.1
baz=66
LPM Los Pinos Moun 66.33 327 *eP* **P 15 51 34.7 -0.4**
NVL N'lazarevskaya 66.36 159*c* *iP* **P 15 51 35.8 +1.0**
NVL *eS* S 16 00 22.8 +0.8
NVL SS SS 16 04 40.8 +2.6
NVL pmax pmax
comp=Z,2μm,1.8s,mb6.7
LENM Lemitar 66.39 327 *eP* **P 15 51 35.7 +0.2**
119A Ashpeak Ranch, 66.52 324 ⇓P **P 15 51 36.4 0.0**
baz=67,SNR=70
119A ⇓S S 16 00 24.3 -0.6
baz=67
217A Green Valley 66.61 322 ⇓P **P 15 51 37.0 +0.1**
baz=67,SNR=102
217A ⇑S S 16 00 25.3 -0.6
baz=67
LAZ Ladron 66.66 327 *eP* **P 15 51 37.3 +0.1**
ANMO Albuquerque 66.75 328⇑ *eP* **P 15 51 37.6 -0.1**
comp=Z,86nm,0.8s,mb5.8
ANMO LR LR
comp=Z,207μm,22.0s,MS7.3
ANMO Albuquerque 66.75 328⇑ *eP* **P 15 51 37.7 -0.1**
ANMO pmax pmax
comp=Z,86nm,0.8s
ANMO MLR MLR
comp=Z,207μm,22.0s
LONY Lake Ozonia 66.76 356⇑ *eP* **P 15 51 36.7 -0.8**
comp=Z,84nm,0.4s,mb6.1
LONY LR LR
comp=Z,410μm,22.0s,MS7.6
118A Homack Ranch, 66.79 324 ⇑P **P 15 51 38.3 +0.3**
baz=67,SNR=132
118A ⇑S S 16 00 27.6 -0.5
baz=67
Z19A T-Link Ranch, 66.90 325 ⇓P **P 15 51 38.9 +0.2**
baz=67,SNR=69
Z19A ⇑S S 16 00 29.4 -0.1
baz=67
FRNY Flat Rock 66.92 357 *eP* **P 15 51 37.7 -0.9**
comp=Z,4μm,1.7s,mb7.1
CBKS Cedar Bluff 66.98 335 *eP* **P 15 51 37.8 -1.3**
comp=Z,3μm,1.1s,mb7.2
CBKS LR LR
comp=Z,85μm,22.0s,MS6.9
CBKS Cedar Bluff 66.98 335 P **P 15 51 38.4 -0.7**
CBKS pmax pmax
comp=Z,3μm,1.0s,mb7.2
TUC Tucson 66.99 323 *eP* **P 15 51 39.0 -0.3**
comp=Z,1μm,1.4s,mb6.7
TUC LR LR
comp=Z,225μm,22.0s,MS7.3
TUC Tucson 66.99 323 *eP* **P 15 51 39.0 -0.3**
TUC pmax pmax
comp=Z,1μm,1.4s,mb6.7
TUC MLR MLR
comp=Z,225μm,22.0s,MS7.3
216A Three Points, 67.14 322 ⇓P **P 15 51 40.8 +0.5**
baz=67,SNR=99
216A ⇑S S 16 00 30.8 -1.6
baz=67
117A Oracle 67.16 323 ⇑P **P 15 51 40.7 +0.3**
baz=67,SNR=155
117A ⇓S S 16 00 32.1 -0.6
baz=67
Z18A Geronimo 67.16 324 ⇓P **P 15 51 40.7 +0.3**
baz=67,SNR=9.2
Z18A ⇑S S 16 00 32.1 -0.5
baz=67
PKME Peaks-Kenny Pk 67.26 0⇑ *eP* **P 15 51 40.1 -0.6**
comp=Z,4μm,1.5s,mb7.2
PKME LR LR
comp=Z,257μm,21.0s,MS7.4
SADO Sadowa 67.31 353 S S 16 00 29.3 -4.6
baz=114,slow=18
Y19A Nutrioso 67.41 325 ⇑P **P 15 51 42.4 +0.5**
baz=68,SNR=134
Y19A ⇑S S 16 00 36.3 +0.8
baz=68
SCIA State Center 67.48 341⇑ *eP* **P 15 51 40.6 -1.6**
comp=Z,728nm,0.8s,mb6.8
SCIA LR LR
comp=Z,154μm,21.0s,MS7.2
Z17A San Carlos Hig 67.56 324 ⇓P **P 15 51 43.0 0.0**
baz=68,SNR=45
Z17A ⇓S S 16 00 36.7 -0.7
baz=68
JFWS Jewell Farm 67.60 344 *eP* **P 15 51 40.9 -2.0**
comp=Z,742nm,0.8s,mb6.8
JFWS LR LR
comp=Z,294μm,20.0s,MS7.5
JFWS Jewell Farm 67.60 344 P **P 15 51 41.2 -1.7**
JFWS pmax pmax
comp=Z,740nm,0.8s,mb6.8
Y18A Canyon Day Jun 67.69 324 ⇑P **P 15 51 44.1 +0.4**
baz=68,SNR=33
Y18A ⇑S S 16 00 39.7 +0.8
baz=68
116A Eloy 67.70 322 ⇓P **P 15 51 44.0 +0.2**
baz=68,SNR=49
116A ⇑S S 16 00 38.6 -0.4
baz=68
X19A St. Johns 67.79 325 ⇓P **P 15 51 44.7 +0.4**
baz=68,SNR=52
X19A ⇑S S 16 00 40.9 +0.8
baz=68
QSPA South Pole Qui 67.87 180 PKP2bc 16 20 07.7
comp=Z,28nm,1.0s,baz=297,slow=3.2,SNR=4.8
QSPA South Pole Qui 67.87 180 *eP* **P 15 51 44.4 +0.1**
comp=Z,2μm,1.1s,mb7.0
QSPA LR LR
comp=Z,680μm,22.0s,MS7.8
214A Organ Pipe Nat 67.88 321 ⇑P **P 15 51 45.3 +0.3**
baz=68,SNR=88
214A ⇓S S 16 00 41.3 0.0
baz=68
Y17A Roosevelt 68.06 324 ⇓P **P 15 51 46.5 +0.4**
baz=68,SNR=203
Y17A ⇓S S 16 00 43.1 -0.3
baz=68
115A Sonoran Desert 68.09 322 ⇓P **P 15 51 46.5 +0.2**
baz=68,SNR=59
Z16A Peralta Trail, 68.12 323 ⇓P **P 15 51 46.6 +0.1**
baz=68,SNR=36
GLMI Grayling 68.18 349 *eP* **P 15 51 46.8 +0.2**
comp=Z,554nm,0.8s,mb6.6
GLMI LR LR
comp=Z,207μm,21.0s,MS7.3
X18A Snowflake 68.22 325 ⇓P **P 15 51 47.4 +0.3**
baz=68,SNR=29
W19A Sanders 68.37 326 ⇑P **P 15 51 48.5 +0.5**
baz=68,SNR=46
Z15A Gila River Ind 68.49 323 ⇑P **P 15 51 49.4 +0.6**
baz=69
X17A Forest Lakes 68.53 324 ⇓P **P 15 51 49.4 +0.4**
baz=69,SNR=69
SDCO Great Sand Dun 68.55 330 *eP* **P 15 51 48.6 -0.4**
comp=Z,24nm,0.3s,mb5.6
SDCO LR LR
comp=Z,186μm,21.0s,MS7.3
Y16A Circle Bar Ran 68.55 324 ⇓P **P 15 51 49.5 +0.4**
baz=69,SNR=116
W18A Petrified Fore 68.55 326 ⇓P **P 15 51 49.5 +0.4**
baz=69,SNR=26
V19A Window Rock 68.66 326 ⇓P **P 15 51 50.1 +0.4**
baz=69,SNR=70
X16A Lo Mia Camp, P 68.93 324 ⇑P **P 15 51 52.1 +0.6**
baz=69,SNR=93
Z14A Wintersburg 68.99 322 ⇑P **P 15 51 52.0 +0.1**
baz=69
113A Mohawk Valley, 69.03 321 ⇓P **P 15 51 52.3 +0.2**
baz=69,SNR=32
W17A Winslow 69.04 325 ⇓P **P 15 51 52.6 +0.5**
baz=69,SNR=23
Y15A Casa Rosa Ranc 69.08 323 ⇑P **P 15 51 52.6 +0.1**
baz=69,SNR=88
V18A Ganado 69.11 326 ⇓P **P 15 51 52.7 +0.1**
baz=69
112A Yuma 69.34 320 ⇑P **P 15 51 54.2 +0.2**
baz=70,SNR=5.5
LIC Lamto 69.39 74 *eP* **P 15 51 55.1 +0.3**
comp=Z,5μm,1.7s,mb7.1
LIC Lamto 69.39 74⇑ *iP* **P 15 51 54.3 -0.5**
comp=Z,2μm,1.1s,mb6.7
LIC *e*MLR MLR
comp=Z,1119μm,23.0s,MS7.7
LIC Lamto 69.39 74⇑ *iP* **P 15 51 54.3 -0.5**
comp=Z,1μm,1.1s,mb6.7
LIC LR LR
comp=Z,559μm,23.0s,MS7.7
X15A Humboldt 69.42 323 ⇓P **P 15 51 55.3 +0.8**
baz=70,SNR=125
Y14A Wickenburg 69.44 323 ⇓P **P 15 51 55.1 +0.4**
baz=70,SNR=40
W16A Flagstaff 69.49 324 ⇑P **P 15 51 56.0 +1.1**
baz=70,SNR=96
T19A Beclabito 69.51 327 ⇓P **P 15 51 55.2 +0.2**
baz=70
MVCO Mesa Verde 69.55 328 *eP* **P 15 51 55.2 0.0**
comp=Z,163nm,0.4s,mb6.3
MVCO LR LR
comp=Z,195μm,22.0s,MS7.3
MVCO Mesa Verde 69.55 328 ⇑P **P 15 51 54.9 -0.3**
baz=70
TIC Toumodi 69.58 73 *eP* **P 15 51 56.6 +0.6**
comp=Z,4μm,1.2s,mb7.2
TIC Toumodi 69.58 73 *eP* **P 15 51 56.6 +0.6**
TIC pmax pmax
comp=Z,4μm,1.2s,mb7.3
U18A Rough Rock, Ch 69.62 326 ⇓P **P 15 51 56.4 +0.6**
baz=70
KIC Kosan Boka 69.71 74 *eP* **P 15 51 56.7 -0.1**
comp=Z,2μm,0.9s,mb7.1
OGNE Ogallala 69.71 334 *eP* **P 15 51 55.4 -0.7**
comp=Z,2μm,1.1s,mb7.0
OGNE LR LR
comp=Z,98μm,22.0s,MS7.0
WUAZ Wupatki 69.72 325 *eP* **P 15 51 56.2 -0.1**
comp=Z,26μm,1.8s,mb7.8
WUAZ LR LR
comp=Z,169μm,20.0s,MS7.3
WUAZ Wupatki 69.72 325 ⇓P **P 15 51 56.8 +0.5**
baz=70
DBIC Dimbokro 69.74 74 P **P 15 51 56.6 -0.4**
comp=Z,616nm,0.8s,mb6.6,baz=218,slow=6.1,SNR=257
DBIC S S 16 01 09.1 +5.0
comp=Z,14nm,0.9s,baz=114,slow=20,SNR=1.3
DBIC PKP2bc 16 20 00.6
comp=Z,5.6nm,0.9s,baz=147,slow=2.0,SNR=3.0
DBIC LR LR 16 21 10.4
comp=Z,597μm,21.8s,MS7.8,baz=218,slow=35
DBIC Dimbokro 69.74 74 *eP* **P 15 51 56.7 -0.3**
comp=Z,95nm,1.1s,mb5.6
DBIC LR LR
comp=Z,661μm,22.0s,MS7.8
X14A Yava 69.77 323 ⇓P **P 15 51 57.3 +0.6**
baz=70,SNR=99
Y13A Salome 69.82 322 ⇓P **P 15 51 57.1 +0.1**
baz=70
GLA Glamis 69.85 321 *eP* **P 15 51 57.5 +0.3**
comp=Z,2μm,1.5s,mb6.9
GLA LR LR
comp=Z,86μm,20.0s,MS7.0
GLA Glamis 69.85 321 *eP* **P 15 51 57.5 +0.3**
GLA pmax pmax
comp=Z,2μm,1.5s,mb6.9
GLA MLR MLR
comp=Z,86μm,20.0s,MS7.0
GLA Glamis 69.85 321 ⇑P **P 15 51 57.7 +0.5**
baz=70,SNR=42
W15A Williams 69.95 324 ⇑P **P 15 51 58.7 +0.9**
baz=70,SNR=37
U16A Tuba City 70.07 325 ⇓P **P 15 51 59.2 +0.7**
baz=70,SNR=157
U17A Shonto 70.17 326 ⇓P **P 15 51 59.1 0.0**
baz=70,SNR=101
Y12C Blythe 70.17 321 ⇑P **P 15 51 59.8 +0.6**
baz=70,SNR=33
T18A Mexican Hat 70.18 327 ⇑P **P 15 51 59.2 0.0**
baz=70
ECSD EROS,Sioux Fal 70.19 340⇑ *eP* **P 15 51 57.0 -2.1**
comp=Z,3μm,1.5s,mb6.9
ECSD LR LR
comp=Z,120μm,20.0s,MS7.1
ISCO Idaho Springs 70.27 331 *eP* **P 15 51 58.9 -0.7**
comp=Z,84nm,0.4s,mb6.0
ISCO LR LR
comp=Z,109μm,19.0s,MS7.1
ISCO Idaho Springs 70.27 331 P **P 15 51 59.3 -0.3**
ISCO pmax pmax
comp=Z,2μm,1.5s,mb6.8
S19A Harvey Farm, M 70.28 328 ⇓P **P 15 51 59.8 +0.1**
baz=70
PV01 Paradox Valley 70.31 328 *eP* **P 15 51 59.6 -0.3**
DVTC Desert V Tower 70.33 320 ⇓P **P 15 52 00.5 +0.4**
baz=70,SNR=29
SWSC Sam W. Stewart 70.34 320 ⇓P **P 15 52 00.2 0.0**
baz=70,SNR=28
PDMCI Parker Dam,Lak 70.35 322 ⇑P **P 15 52 00.4 +0.1**
baz=70,SNR=50
V15A Kaibab Nationa 70.38 324 ⇑P **P 15 52 01.3 +1.0**
baz=70,SNR=205
SMCO Snowmass 70.38 330 *eP* **P 15 52 00.3 0.0**
comp=Z,854nm,0.7s,mb6.8
X13A Yucca 70.39 322 ⇓P **P 15 52 00.5 0.0**
baz=70,SNR=132
W14A Seligman 70.42 323 ⇑P **P 15 52 02.0 +1.3**
baz=71
T17A Navajo Res., N 70.55 326 ⇑P **P 15 52 02.3 +0.9**
baz=71,SNR=65
CHIE El Hierro 70.57 48 P **P 15 52 03.3 +1.6**
comp=Z,44nm,0.7s,mb5.5
BC3 Big Chuckw Mtn 70.65 321 ⇓P **P 15 52 02.5 +0.4**
baz=71,SNR=150
S18A Hurst Farm, Bl 70.67 327 ⇓P **P 15 52 02.5 +0.4**
baz=71,SNR=223
MONP Monument Peak 70.68 320 ⇑P **P 15 52 02.3 0.0**
baz=71,SNR=88
PV10 Paradox Valley 70.73 328 *eP* **P 15 52 01.9 -0.6**
V14A Boquillas Ranc 70.75 324 ⇓P **P 15 52 03.3 +0.7**
baz=71,SNR=180
R19A Curley Farm, L 70.77 328 ⇓P **P 15 52 02.8 +0.1**
baz=71
W13A Hualapai Mount 70.79 323 ⇓P **P 15 52 03.3 +0.4**
baz=71,SNR=146
IRM Iron Mountain 70.83 321 ⇓P **P 15 52 03.5 +0.3**
baz=71,SNR=238
U15A North Rim 70.90 325 ⇑P **P 15 52 04.4 +0.8**
baz=71,SNR=210
T16A Glen Canyon Da 70.90 326 ⇓P **P 15 52 04.2 +0.6**
baz=71,SNR=50
NEE2 Needles Airpor 70.96 322 ⇓P **P 15 52 03.9 0.0**
baz=71
S17A Black Ridge (B 71.03 327 ⇓P **P 15 52 05.1 +0.8**
baz=71
R18A Canyonlands Na 71.16 328 ⇓P **P 15 52 05.1 +0.1**
baz=71
EHIG Higuera 71.20 47 P **P 15 52 07.6 +2.0**
comp=Z,441nm,1.2s,mb6.3
PFO Pinyon Flat Ob 71.20 320 P **P 15 52 06.9 +1.4**
comp=Z,3μm,1.3s,mb7.0,SNR=58
PFO Pinyon Flat Ob 71.20 320 *eP* **P 15 52 05.9 +0.4**
comp=Z,952nm,1.4s,mb6.5
PFO LR LR
comp=Z,145μm,20.0s,MS7.2
PFO Pinyon Flat Ob 71.20 320 *eP* **P 15 52 05.9 +0.4**
PFO pmax pmax
comp=Z,953nm,1.4s,mb6.5
PFO MLR MLR
comp=Z,145μm,20.0s,MS7.2
PFO Pinyon Flat Ob 71.20 320 ⇑P **P 15 52 06.0 +0.5**
baz=71,SNR=45
BELC Belle Mtn. 71.21 321 ⇓P **P 15 52 05.8 +0.3**
baz=71,SNR=45
Q19A Hogan Spring (71.29 328 ⇑P **P 15 52 06.3 +0.5**
baz=71
EGOM La Gomera 71.36 48 P **P 15 52 08.0 +1.5**
comp=Z,269nm,0.9s,mb6.2
T15A Red Dirt Ranch 71.39 325 ⇓P **P 15 52 07.2 +0.7**
baz=72,SNR=118
V13A Grand Canyon W 71.39 323 ⇓P **P 15 52 07.2 +0.7**
baz=72,SNR=301
PHWY Pilot Hill 71.43 332⇑ *eP* **P 15 52 06.0 -0.6**
comp=Z,1μm,1.3s,mb6.7
LDFC Landfair 71.46 322 *eP* **P 15 52 07.6 +0.6**
comp=Z,2μm,1.1s,mb6.9
W12A Cal Nev Ari 71.49 322 ⇓P **P 15 52 07.3 +0.1**
baz=72,SNR=38
S16A Weppner Ranch, 71.51 326 ⇑P **P 15 52 07.3 +0.2**
baz=72,SNR=22
GMRC Granite Mounta 71.57 321 ⇓P **P 15 52 08.2 +0.6**
baz=72,SNR=191
R17A Hanksville Air 71.59 327 ⇓P **P 15 52 08.1 +0.5**
baz=72,SNR=259
MURC Murrieta 71.64 320 ⇓P **P 15 52 08.2 +0.1**
baz=72,SNR=20
P19A Cripple Cowboy 71.69 329 ⇑P **P 15 52 08.7 +0.5**
baz=72,SNR=182
CALA Caldeira 71.79 33 *eP* **P 15 52 11.2 +2.4**
T14A Hurricane 71.79 325 ⇓P **P 15 52 09.8 +0.8**
baz=72,SNR=59
CCAN Las Canadas 71.81 48 P **P 15 52 10.9 +1.6**
comp=Z,58nm,0.8s,mb5.6
Q18A Rafter H Ranch 71.83 328 ⇓P **P 15 52 09.5 +0.5**
baz=72
PICO Pico 71.86 33 *eP* **P 15 52 14.2 +4.9**
S15A Panguitch 71.87 326 ⇓P **P 15 52 10.1 +0.8**
baz=72,SNR=47
BBRC Big Bear Sol-O 71.94 320 ⇓P **P 15 52 10.5 +0.7**
baz=72,SNR=13
PID Ribeirinha 71.97 33 *eP* **P 15 52 12.2 +2.2**
HEC Hector,Ludlow 71.99 321 ⇓P **P 15 52 10.9 +0.7**
baz=72,SNR=126
SRU San Rafael 72.03 328 ⇓P **P 15 52 10.6 +0.3**
baz=72
SCI San Clemente I 72.03 318 P **P 15 52 10.6 +0.1**
baz=72,SNR=18
U12A Valley of Fire 72.12 323 ⇓P **P 15 52 11.6 +0.7**
baz=72,SNR=117
PMAN Manadas 72.14 33 *eP* **P 15 52 11.7 +0.8**
comp=Z,1μm,1.5s,mb6.6
TUQ Turquoise Moun 72.19 322 ⇑P **P 15 52 12.0 +0.7**
baz=72,SNR=53
EBAJ Bajamar 72.19 48 P **P 15 52 13.7 +2.2**
comp=Z,81nm,0.9s,mb5.7
V11A Goodsprings 72.19 322 ⇑P **P 15 52 12.0 +0.6**
baz=72,SNR=36
Q16A Castle Valley 72.20 327 ⇓P **P 15 52 11.5 +0.2**
baz=72,SNR=92
T13A Saint George 72.21 324 ⇑P **P 15 52 12.2 +0.8**
baz=72,SNR=53
R15A Junction 72.23 326 ⇓P **P 15 52 12.3 +0.8**
baz=72,SNR=33
CIS Catalina Islan 72.24 319 ⇓P **P 15 52 12.3 +0.6**
baz=72,SNR=22
O19A Miners Draw (B 72.28 329 ⇑P **P 15 52 12.1 +0.4**
baz=72
P18A Preston Nutter 72.29 328 ⇓P **P 15 52 12.5 +0.6**
baz=72,SNR=204
S14A Cedar City 72.36 325 ⇑P **P 15 52 13.5 +1.2**
baz=72
BFSC Mount Baldy St 72.36 320 ⇑P **P 15 52 12.9 +0.5**

baz=72,SNR=81
FMP Fort Macarthur 72.38 319 ⇓P P 15 52 12.8 +0.2
baz=72,SNR=5.6
P17A Butcher Ranch, 72.41 328 ⇓P P 15 52 12.8 +0.2
baz=73
MVU Marysvale 72.42 326 PFAKE 15 52 20.0 +7.4
MVU LR LR
comp=Z,225µm,19.0s,MS7.5
RRX Edison Barstow 72.42 321 ⇓P P 15 52 13.1 +0.4
baz=72
T12A Moapa 72.43 323 ⇓P P 15 52 13.2 +0.4
baz=73
EOSO Osorio 72.45 49 P P 15 52 15.5 +2.4
comp=Z,180nm,1.1s,mb5.9
TBI Tubuai 72.47 251 eP P 15 52 14.9 +1.5
comp=Z,5µm,1.5s,mb7.2
TBI eS S 16 01 32.2 -3.3
comp=Z,623µm,40.5s
TBI eLQ 16 11 25.3
comp=Z,186µm,41.0s
TBI eLR LR 16 14 28.9
comp=Z,739µm,29.5s,baz=110
TBI Tubuai 72.47 251 eP P 15 52 14.9 +1.5
comp=Z,5µm,1.5s,mb7.2
TBI eS S 16 01 32.2 -3.3
TBI eLQ 16 11 25.3
RWWY Rawlins 72.51 331⇑ eP P 15 52 13.1 0.0
comp=Z,244nm,0.6s,mb6.3
PSMN Pico do Norte, 72.51 36 eP P 15 52 13.9 +0.7
U11A Corn Creek 72.58 323 ⇑P P 15 52 14.6 +0.9
baz=73,SNR=16
MWC Mount Wilson 72.59 320⇑ eP P 15 52 14.1 +0.3
comp=Z,565nm,0.9s,mb6.5
MWC LR LR
comp=Z,77µm,20.0s,MS7.0
MWC Mount Wilson 72.59 320⇑ eP P 15 52 14.1 +0.3
MWC pmax pmax
comp=Z,565nm,0.9s,mb6.5
MWC MLR MLR
comp=Z,77µm,20.0s,MS7.0
S13A Holt Ranch, En 72.59 325 ⇑P P 15 52 14.7 +1.0
baz=73,SNR=107
GSC Goldstone 72.60 321⇓ eP P 15 52 14.0 +0.2
comp=Z,328nm,0.6s,mb6.4
GSC LR LR
comp=Z,152µm,21.0s,MS7.2
GSC Goldstone 72.60 321⇓ eP P 15 52 14.0 +0.2
GSC pmax pmax
comp=Z,328nm,0.6s,mb6.4
GSC MLR MLR
comp=Z,152µm,21.0s,MS7.2
GSC Goldstone 72.60 321 ⇑P P 15 52 14.0 +0.2
baz=73,SNR=83
EYMN Ely 72.61 345⇑ eP P 15 52 11.8 -1.7
comp=Z,982nm,1.1s,mb6.7
EYMN LR LR
comp=Z,253µm,22.0s,MS7.5
O18A Roosevelt 72.67 329 ⇑P P 15 52 14.2 +0.1
baz=73,SNR=38
R14A James Farms, M 72.68 326 ⇑P P 15 52 14.7 +0.5
baz=73,SNR=7.1
PSCM Serra do Cume 72.68 34 eP P 15 52 15.7 +1.5
comp=Z,298nm,1.4s,mb6.0
PSCM eSS SS 16 02 05.6 +11
SHOC Shoshone 72.72 322 ⇑P P 15 52 14.6 +0.1
baz=73,SNR=41
PDA Ponta Delgada 72.73 35 eP P 15 52 17.1 +2.6
PDA eS S 16 01 56.0 +18
PDA eSS SS 16 06 18.0 -0.5
PDA eLQ 16 11 00.8
PDA eLR LR 16 14 36.0
PSET Sete Cidades 72.76 35 eP P 15 52 15.7 +1.0
comp=Z,376nm,1.5s,mb6.1
PSET eSS SS 16 02 02.7 +7.3
N19A John Jarvie Ra 72.77 330 ⇑P P 15 52 14.5 -0.2
baz=73,SNR=22
DECC Green Verdugo 72.77 319 ⇑P P 15 52 14.4 -0.5
baz=73,SNR=8.3
L21A Rawlins 72.80 332 ⇓P P 15 52 14.9 +0.1
baz=73
SNCC San Nicolas Is 72.82 318 eP P 15 52 15.2 +0.1
comp=Z,634nm,1.1s,mb6.5
SNCC LR LR
comp=Z,72µm,20.0s,MS7.0
SNCC San Nicolas Is 72.82 318 ⇓P P 15 52 15.4 +0.2
baz=73
Q15A Fillmore 72.88 327 ⇑P P 15 52 15.9 +0.5
baz=73
MEH Mehetia 72.89 257 eP P 15 52 17.6 +1.6
comp=Z,16µm,1.2s,mb7.8
O17A Robinson Place 72.97 328 ⇓P P 15 52 16.9 +1.0
baz=73,SNR=206
P16A Fountain Green 72.97 327 ⇓P P 15 52 16.2 +0.3
baz=73,SNR=35
EDW2 Edwards Air Fo 73.00 320 ⇓P P 15 52 16.4 +0.2
baz=73
N18A Larsen Ranch, 73.07 329 ⇑P P 15 52 16.4 0.0
baz=73
T11A Corn Creek, Al 73.08 324 ⇑P P 15 52 17.3 +0.7
baz=73,SNR=163
R13A O'Grain Ranch, 73.09 325 ⇑P P 15 52 17.4 +0.7
baz=73,SNR=106
U10A Ash Meadows, A 73.11 322 ⇑P P 15 52 17.2 +0.4
baz=73,SNR=42
BLG Laguna Peak 73.12 319 ⇑P P 15 52 16.9 0.0
baz=73,SNR=6.8
S12A Delamar Landin 73.15 324 ⇑P P 15 52 17.9 +0.9
baz=73,SNR=29
RSSD Black Hills 73.19 335 eP P 15 52 16.6 -0.4
comp=Z,562nm,0.9s,mb6.5
RSSD LR LR
comp=Z,117µm,21.0s,MS7.1
LRMC Laurel Mountai 73.24 321 ⇓P P 15 52 17.4 -0.2
baz=73,SNR=68
M19A Rock Springs 73.24 330 ⇑P P 15 52 17.0 -0.4
baz=73,SNR=26
P15A Leamington 73.25 327 ⇑P P 15 52 17.8 +0.2
baz=73,SNR=67
L20A Wamsutter 73.27 331 ⇑P P 15 52 17.5 -0.1
baz=73
Q14A Sevier Lake (B 73.33 326 ⇑P P 15 52 18.8 +0.8
baz=74,SNR=124
VAH Vaihoa 73.33 260 eP P 15 52 19.9 +1.3
comp=Z,929nm,1.4s,mb6.5
O16A Springville 73.35 328 ⇓P P 15 52 18.5 +0.4
baz=74,SNR=53
BSC Santa Cruz Isl 73.39 318 ⇓P P 15 52 17.8 -0.6
baz=74,SNR=17
TPNV Topopah Spring 73.45 323 eP P 15 52 18.9 +0.2
comp=Z,361nm,0.6s,mb6.5
TPNV LR LR
comp=Z,105µm,19.0s,MS7.1
TPNV Topopah Spring 73.45 323 P P 15 52 19.1 +0.3
TPNV pmax pmax
comp=Z,1µm,1.1s,mb6.8
TPNV Topopah Spring 73.45 323 ⇓P P 15 52 19.4 +0.6
baz=74
FURC Furnace Creek, 73.45 322 ⇑P P 15 52 19.3 +0.5
baz=74,SNR=55
MPMC Manual Prospec 73.53 321 ⇓P P 15 52 19.5 +0.2
baz=74,SNR=141
R12A Pony Springs, 73.54 325 ⇑P P 15 52 20.3 +1.0
baz=74,SNR=156
N17A Moffit Pass 73.59 329 ⇓P P 15 52 20.3 +0.8
baz=74,SNR=126
M18A Lyman 73.60 330 ⇓P P 15 52 19.3 -0.2
baz=74
PMOR Pomariorio Ree 73.65 260 eP P 15 52 22.0 +1.5
comp=Z,487nm,1.0s,mb6.4
S11A Rachel 73.67 324 ⇑P P 15 52 21.2 +1.2
baz=74,SNR=77
ARVC Arvin 73.67 320 ⇓P P 15 52 20.7 +0.5
baz=74
P14A Drum Mountains 73.67 326 ⇓P P 15 52 21.2 +1.2
baz=74,SNR=236
CFTV Fuerteventura 73.68 49 P P 15 52 22.1 +1.7
comp=Z,144nm,0.7s,mb6.0
Q13A Wheeler Ranch, 73.69 325 ⇑P P 15 52 20.5 +0.4
baz=74,SNR=51
DAC Darwin (Calif) 73.74 321 PFAKE 15 52 30.0 +10
DAC LR LR
comp=Z,176µm,20.0s,MS7.3
SBC Santa Barbara 73.74 319 ⇓P P 15 52 20.3 -0.3
baz=74
L19A Farson 73.80 330 ⇑P P 15 52 21.2 +0.4
baz=74
ISA Isabella 73.83 320 eP P 15 52 20.9 -0.1
comp=Z,1µm,1.2s,mb6.6
ISA LR LR
comp=Z,108µm,21.0s,MS7.1
ISA Isabella 73.83 320 P P 15 52 21.0 0.0
ISA pmax pmax
comp=Z,1µm,1.2s,mb6.6
ISA Isabella 73.83 320 ⇓P P 15 52 21.8 +0.8
baz=74,SNR=178
N16A Rees Ranch, Co 73.84 328 ⇑P P 15 52 21.5 +0.5
baz=74,SNR=50
M17A Scullys Gap (B 73.92 329 ⇑P P 15 52 21.0 -0.5
baz=74
TVO Taravao 73.99 257 eP P 15 52 24.2 +1.7
comp=Z,10µm,1.5s,mb7.5
DUG Dugway 74.00 327⇑ eP P 15 52 21.9 -0.1
comp=Z,887nm,1.1s,mb6.6
DUG LR LR
comp=Z,144µm,19.0s,MS7.3
DUG Dugway 74.00 327 eP P 15 52 22.1 +0.2
DUG pmax pmax
comp=Z,890nm,1.1s,mb6.6
DUG Dugway 74.00 327 ⇓P P 15 52 22.2 +0.3
baz=74
P13A Bates Ranch, G 74.06 326 ⇓P P 15 52 23.2 +0.9
baz=74,SNR=117
AGMN Agassiz Refuge 74.08 342 eP P 15 52 19.6 -2.6
comp=Z,873nm,1.0s,mb6.6
AGMN LR LR
comp=Z,235µm,21.0s,MS7.5
R11A Troy Canyon, C 74.08 324 ⇑P P 15 52 23.5 +1.1
baz=74,SNR=197
PKM Peak Mountain 74.11 319 ⇑P P 15 52 23.5 +0.8
baz=74,SNR=69
GRAC Grapevine Rang 74.12 322 ⇓P P 15 52 23.3 +0.6
baz=74,SNR=40
CWC Cottonwood Cre 74.13 321 ⇓P P 15 52 23.6 +0.8
baz=74,SNR=158
TIAR Tiarei 74.14 257 eP P 15 52 25.1 +1.7
comp=Z,2µm,1.0s,mb6.9
Q12A Willow Creek R 74.18 325 ⇑P P 15 52 23.5 +0.5
baz=74,SNR=51
M16A Huntsville 74.26 329 ⇑P P 15 52 23.4 0.0
baz=74
VES Vestal, Richgr 74.31 320 ⇓P P 15 52 24.0 +0.2
baz=74,SNR=40
PAE Paea 74.32 257 eP P 15 52 25.8 +1.4
comp=Z,6µm,1.1s,mb7.4
PAE Paea 74.32 257 eP P 15 52 25.8 +1.4
PAE pmax pmax
comp=Z,6µm,1.1s,mb7.4
S10A Tonopah Range, 74.33 323 ⇓P P 15 52 24.5 +0.5
baz=74,SNR=199
PPT Papeete 74.35 257 eP P 15 52 26.4 +1.8
comp=Z,704nm,1.3s,mb6.4
PPT eS S 16 01 52.9 -4.1
comp=Z,1180µm,34.2s
PPT Papeete 74.35 257 eLQ 16 12 14.5
comp=Z,237µm,27.8s
PPT eLR LR 16 15 24.2
comp=Z,1931µm,29.5s,baz=110
PPT Papeete 74.35 257 P P 15 52 26.7 +2.1
comp=Z,247nm,1.2s,mb6.0,baz=124,slow=13,SNR=7.5
PPT LR LR 16 17 49.7
comp=Z,168µm,20.1s,MS7.3,baz=93,slow=30
N15A Stansbury Isla 74.37 328 ⇑P P 15 52 24.2 +0.1
baz=74
BW06 Boulder Array 74.42 331⇑ eP P 15 52 23.5 -0.8
comp=Z,430nm,0.5s,mb6.6
BW06 LR LR
comp=Z,89µm,19.0s,MS7.1
BW06 Boulder Array 74.42 331 ⇓P P 15 52 24.1 -0.2
baz=75
PDAR Pinedale Array 74.42 331 P P 15 52 22.9 -1.4
comp=Z,10.0nm,0.6s,baz=106,slow=11,SNR=70
PDAR S S 16 01 54.9 -1.7
comp=Z,5.1nm,0.9s,baz=106,slow=2.9,SNR=2.3
PDAR PKPPKP 16 19 52.0
comp=Z,6.3nm,1.2s,baz=309,slow=0.9,SNR=5.3
PDAR LR LR 16 28 44.3
comp=Z,69µm,18.0s,MS7.0,baz=144,slow=39
PDAR Pinedale Array 74.42 331 P P 15 52 22.9 -1.4
PDAR S S 16 01 54.9 -1.7
PDAR P'P' 16 19 52.0
PDAR LR LR 16 28 44.3
R10A Warm Springs 74.43 324 ⇓P P 15 52 25.2 +0.7
baz=75,SNR=139
HWUT Hardware Ranch 74.45 329⇑ eP P 15 52 23.6 -0.9
comp=Z,1µm,0.5s,mb7.0
HWUT LR LR
comp=Z,223µm,21.0s,MS7.4
Q11A Duckwater 74.48 324 ⇓P P 15 52 25.0 +0.2
baz=75,SNR=145
SMMC Simmler 74.50 319 ⇓P P 15 52 25.4 +0.5
baz=75,SNR=59
EFAM Famara 74.50 49 P P 15 52 24.5 -0.6
comp=Z,485nm,0.8s,mb6.5
O13A Hicks Ranch, I 74.54 326 ⇑P P 15 52 25.6 +0.5
baz=75,SNR=45
S09A Goldfield 74.54 323 ⇓P P 15 52 25.6 +0.4
baz=75,SNR=134
TIN Tinemaha 74.64 322 ⇑P P 15 52 26.6 +0.8
baz=75,SNR=37
N14A Grayback Hills 74.68 327 ⇑P P 15 52 26.3 +0.4
baz=75
L16A Fish Haven 74.70 329 ⇑P P 15 52 25.9 -0.1
baz=75,SNR=121
RCTC Rector, Farmer 74.72 320 ⇑P P 15 52 26.2 -0.1
baz=75
M15A Larsen Ranch, 74.77 328 ⇓P P 15 52 26.4 0.0
baz=75,SNR=23
TPH Tonopah 74.79 323⇑ eP P 15 52 27.0 +0.4
comp=Z,2µm,1.7s,mb6.8
TPH LR LR
comp=Z,110µm,21.0s,MS7.1
TPH Tonopah 74.79 323⇑ eP P 15 52 27.0 +0.4
TPH pmax pmax
comp=Z,2µm,1.7s,mb6.8
TPH MLR MLR
comp=Z,110µm,21.0s,MS7.1
V05C Boulder Hill, 74.81 320 ⇓P P 15 52 26.8 0.0
baz=75
R09A Tonopah 74.82 323 ⇓P P 15 52 27.2 +0.4
baz=75,SNR=82
PTRM Twissleman Ran 74.86 319 eP P 15 52 28.2 +1.2
Q10A Clear Creek Ra 74.87 324 ⇑P P 15 52 27.6 +0.6
baz=75,SNR=106
SBA Scott Base 74.88 191⇑ eP P 15 52 26.9 +0.3
comp=Z,65nm,1.0s,mb5.5
SBA LR LR
comp=Z,315µm,20.0s,MS7.6
SBA Scott Base 74.88 191⇑ eP P 15 52 26.9 +0.3
SBA pmax pmax
comp=Z,65nm,1.0s,mb5.5
SBA MLR MLR
comp=Z,315µm,20.0s,MS7.6
O12A Currie 75.04 326 ⇑P P 15 52 28.1 +0.2
baz=75,SNR=169
MTUM Tungsten Hills 75.05 322 eP P 15 52 28.0 -0.1
P11A Circle Ranch, 75.05 325 ⇑P P 15 52 28.4 +0.4
baz=75,SNR=23
AHID Auburn Hatcher 75.13 330⇑ eP P 15 52 27.7 -0.7
comp=Z,1µm,1.1s,mb6.8
AHID LR LR
comp=Z,155µm,21.0s,MS7.3
L15A Malad City 75.15 329 ⇑P P 15 52 28.6 0.0
baz=75
N13A Wendover, West 75.19 327 ⇑P P 15 52 28.8 -0.1
baz=75,SNR=29
M14A Sheep Mountain 75.25 328 ⇓P P 15 52 29.3 +0.2
baz=75
PKD Parkfield 75.25 319 ⇑P P 15 52 29.4 +0.1
baz=75,SNR=37
U05C Westside ANR, 75.26 320 ⇓P P 15 52 29.4 0.0
baz=75
I18A Diamond G Ranc 75.27 331 ⇑P P 15 52 29.4 +0.2
baz=75
Q09A Carvers 75.30 324 ⇑P P 15 52 30.0 +0.4
baz=75,SNR=50
MLAC Mammoth Lakes 75.39 322 ⇑P P 15 52 30.5 +0.5
baz=76,SNR=18
K16A Soda Springs 75.41 330 ⇓P P 15 52 30.2 +0.2
baz=76,SNR=175
J17A Brown Place, J 75.41 330 ⇑P P 15 52 30.4 +0.4
baz=76
O11A Cowboy Ranch, 75.41 325 ⇓P P 15 52 30.5 +0.4
baz=76,SNR=94
KCC Kaiser Creek 75.46 321 ⇑P P 15 52 30.2 -0.3
baz=76
T06C Millerton Lake 75.47 321 ⇓P P 15 52 29.6 -0.9
baz=76,SNR=33
P10A Eureka 75.47 325 ⇑P P 15 52 31.1 +0.6
baz=76,SNR=34
REDW Red Top Meadow 75.48 330⇑ eP P 15 52 29.6 -0.8
comp=Z,167nm,0.6s,mb6.2
R08A Mina 75.48 323 ⇓P P 15 52 30.7 +0.1
baz=76,SNR=11
SNOW Snow King Moun 75.51 330 eP P 15 52 30.9 +0.3
comp=Z,753nm,1.0s,mb6.6
M13A Montello 75.55 327 ⇑P P 15 52 30.8 -0.1
baz=76
LOHW Long Hollow 75.56 331⇑ eP P 15 52 30.5 -0.3
comp=Z,860nm,0.7s,mb6.8
L14A Malta 75.59 328 ⇓P P 15 52 30.8 -0.3
baz=76
N12A Clover Valley, 75.62 326 ⇑P P 15 52 31.2 -0.1
baz=76
TPAW Teton Pass 75.62 330⇑ eP P 15 52 31.2 0.0
comp=Z,2µm,1.3s,mb6.8
ELK Elko 75.64 326⇑ eP P 15 52 31.2 -0.2
comp=Z,32nm,1.1s,mb5.2
ELK LR LR
comp=Z,164µm,21.0s,MS7.3
NVAR Mina Array Bea 75.64 323 P P 15 52 31.3 -0.2
comp=Z,23nm,0.8s,mb5.2,baz=147,slow=5.6,SNR=105
NVAR PKPPKP 16 19 53.5
comp=Z,1.8nm,0.8s,baz=305,slow=3.2,SNR=3.6
NVAR Mina Array Bea 75.64 323 P P 15 52 31.3 -0.2
NVAR P'P' 16 19 53.5
U04C Hernandez Rese 75.67 320 ⇓P P 15 52 32.0 +0.3
baz=76,SNR=20
RRI2 Red Ridge 75.68 330⇑ eP P 15 52 31.4 -0.2
comp=Z,353nm,0.5s,mb6.5
V03C Hunter Liggett 75.72 319 ⇑P P 15 52 32.7 +0.7
baz=76,SNR=15
MOOW Moose Ponds 75.73 331⇑ eP P 15 52 31.6 -0.3
comp=Z,1µm,1.2s,mb6.8
Q08A Gabbs 75.74 323 ⇓P P 15 52 32.1 0.0
baz=76,SNR=96
K15A Arbon 75.74 329 ⇑P P 15 52 31.8 -0.1
baz=76
J16A Bone 75.76 330 ⇑P P 15 52 32.2 +0.1
baz=76
I17A Pilgram Creek 75.78 331 ⇓P P 15 52 32.9 +0.7
baz=76,SNR=159
P09A Austin 75.79 324 ⇑P P 15 52 32.5 +0.2
baz=76
ULM Lac du Bonnet 75.86 343 P P 15 52 30.4 -2.0
comp=Z,87nm,0.9s,mb5.7,baz=157,slow=6.3,SNR=26
ULM S S 16 02 05.5 -6.7
comp=Z,13nm,0.9s,baz=225,slow=16,SNR=1.6
ULM LR LR 16 29 21.0
comp=Z,251µm,21.9s,MS7.5,baz=290,slow=38
ULM Lac du Bonnet 75.86 343 eP P 15 52 30.1 -2.3
comp=Z,63nm,0.6s,mb5.7
ULM LR LR
comp=Z,325µm,22.0s,MS7.6
IMW Indian Meadow 75.93 331⇑ eP P 15 52 33.0 +0.1
comp=Z,349nm,0.5s,mb6.5
K14A Jones Ranch, D 75.95 328 ⇓P P 15 52 32.8 -0.3
baz=76
N11A Elko Archery C 75.95 326 ⇑P P 15 52 32.8 -0.4
baz=76
M12A Wells 75.97 327 ⇑P P 15 52 33.5 +0.3
baz=76
O10A Cortez Mining, 75.97 325 ⇓P P 15 52 33.6 +0.2
baz=76,SNR=9.2
L13A Double Diamond 75.98 328 ⇑P P 15 52 33.7 +0.3
baz=76,SNR=80
SYO Syowa Base 76.02 159⇓ iP P 15 52 31.6 -1.7
SYO Syowa Base 76.02 159 eSH S 16 02 10.6 -3.3
S05C Merced 76.06 321 ⇓P P 15 52 34.2 +0.3
baz=76,SNR=70
H17A Grant Village 76.16 331 ⇓P P 15 52 35.2 +1.0
baz=76,SNR=60
RLMT Red Lodge 76.16 332⇑ eP P 15 52 34.4 +0.2
comp=Z,1µm,1.4s,mb6.6
RLMT LR LR
comp=Z,144µm,22.0s,MS7.2
RLMT Red Lodge 76.16 332 ⇑P P 15 52 34.3 +0.1
baz=76
I16A Newdale 76.17 330 ⇑P P 15 52 34.8 +0.5
baz=76,SNR=48
LAO LASA Array 76.18 335⇑ eP P 15 52 33.7 -0.6
comp=Z,2µm,1.2s,mb7.0
LAO LR LR
comp=Z,105µm,22.0s,MS7.1
LKWY Lake 76.21 331⇑ eP P 15 52 35.3 +0.7
comp=Z,814nm,1.1s,mb6.6
LKWY LR LR
comp=Z,236µm,22.0s,MS7.5
LKWY Lake 76.21 331 P P 15 52 35.9 +1.3
LKWY pmax pmax
comp=Z,810nm,1.0s,mb6.6
J15A Blackfoot 76.24 329 ⇑P P 15 52 35.0 +0.2
baz=76
O09A Fish Creek Ran 76.26 324 ⇓P P 15 52 34.8 -0.2
baz=76,SNR=38
Q07A Schurz 76.28 323 ⇑P P 15 52 35.6 +0.5
baz=76
N10A Dunphy 76.29 325 ⇓P P 15 52 35.6 +0.5
baz=76,SNR=12
SAO San Andreas Ge 76.34 320 eP P 15 52 35.3 -0.2
comp=Z,515nm,1.2s,mb6.3
SAO LR LR
comp=Z,94µm,22.0s,MS7.0
SAO San Andreas Ge 76.34 320 P P 15 52 36.1 +0.6
SAO pmax pmax
comp=Z,520nm,1.2s,mb6.3
R06C Coleville 76.36 322 ⇑P P 15 52 36.2 +0.6
baz=76,SNR=23
P08A Dixie Valley 76.40 324 ⇑P P 15 52 36.1 +0.3
baz=76,SNR=37
PACP Pacheco Peak 76.41 320 ⇑P P 15 52 36.1 +0.3
baz=76,SNR=18
M11A Holland Ranch, 76.43 326 ⇓P P 15 52 36.4 +0.5
baz=77,SNR=69
G18A Lazy EL Ranch, 76.44 332 ⇓P P 15 52 35.7 -0.2
baz=77
BMN Battle Mountai 76.46 325⇑ eP P 15 52 35.0 -1.1
comp=Z,278nm,1.0s,mb6.1
BMN LR LR
comp=Z,115µm,21.0s,MS7.2
BMN Battle Mountai 76.46 325⇑ eP P 15 52 35.0 -1.1
BMN pmax pmax
comp=Z,278nm,1.0s,mb6.1
BMN MLR MLR
comp=Z,115µm,21.0s,MS7.2
K13A Stover Farm, H 76.47 328 ⇓P P 15 52 36.4 +0.4
baz=77,SNR=43
L12A House Creek Ra 76.56 327 ⇑P P 15 52 37.0 +0.4
baz=77,SNR=13
CMB Columbia Colle 76.56 321⇑ eP P 15 52 36.2 -0.6
comp=Z,672nm,1.4s,mb6.4
CMB LR LR
comp=Z,77µm,19.0s,MS7.0
CMB Columbia Colle 76.56 321 P P 15 52 36.4 -0.3
CMB pmax pmax
comp=Z,670nm,1.3s,mb6.4
CMB Columbia Colle 76.56 321 ⇓P P 15 52 36.6 -0.2
baz=77
J14A Carey 76.70 329 ⇓P P 15 52 37.4 0.0
baz=77,SNR=125
H16A Russell Place, 76.70 331 ⇓P P 15 52 37.6 +0.2
baz=77,SNR=242
I15A Monteview 76.72 330 ⇓P P 15 52 38.0 +0.6
baz=77,SNR=83
P07A Fallon 76.74 323 ⇑P P 15 52 37.7 0.0
baz=77
GCMT Greycliff 76.86 333 eP P 15 52 37.3 -0.9
K12A Draper Farm, C 76.86 328 ⇓P P 15 52 38.9 +0.6
baz=77,SNR=143
O08A Rochester Mine 76.86 324 ⇓P P 15 52 38.1 -0.3
baz=77,SNR=70
QLMT Earthquake Lak 76.88 331 eP P 15 52 38.6 +0.3
DGMT Dagmar 76.91 337 eP P 15 52 37.9 -0.5
comp=Z,3µm,1.3s,mb7.1
DGMT LR LR
comp=Z,124µm,22.0s,MS7.2
DGMT Dagmar 76.91 337 ⇓P P 15 52 38.5 +0.1
baz=77
N09A Rock Creek Ran 76.92 325 ⇑P P 15 52 38.0 -0.7
baz=77
L11A Cat Creek Ranc 76.94 327 ⇓P P 15 52 39.1 +0.3
baz=77,SNR=139
G17A Pierce Place, 76.95 332 ⇓P P 15 52 39.2 +0.5
baz=77,SNR=56
F18A Big Timber 76.97 333 ⇑P P 15 52 38.9 +0.1

R04C Big Horse Ranc 77.03 321 ⇑P P 15 52 39.6 +0.2
baz=77,SNR=34
WCN Washoe City 77.06 322 ⇑P P 15 52 39.8 +0.3
baz=77,SNR=21
J13A Cove Ranch, Pi 77.07 328 ⇓P P 15 52 39.8 +0.4
baz=77,SNR=140
WENL Wente Vineyard 77.09 320 ⇓P P 15 52 40.3 +0.5
baz=77
I14A Mackay 77.12 329 ⇑P P 15 52 40.3 +0.5
baz=77,SNR=164
PAHR Pah Rah Range 77.14 323 eP P 15 52 40.1 +0.2
comp=Z,1μm,1.1s,mb6.8
O07A Toulon 77.17 324 ⇓P P 15 52 40.0 -0.1
baz=77
N08A GE Springer Mi 77.20 324 ⇓P P 15 52 39.8 -0.4
baz=77,SNR=13
JRSC Jasper Ridge 77.24 320 ⇓P P 15 52 40.4 -0.1
baz=77,SNR=6.7
L10A Juniper Basin 77.25 326 ⇓P P 15 52 40.9 +0.4
baz=77,SNR=218
LAVA Lava Cap Winer 77.25 321 ⇓P P 15 52 40.6 0.0
baz=77
H15A Lima 77.27 330 ⇑P P 15 52 40.8 +0.3
baz=77,SNR=71
M09A Marrel Ranch, 77.29 325 ⇑P P 15 52 40.8 +0.1
baz=77,SNR=55
HLID Hailey 77.31 328 eP P 15 52 40.9 +0.1
comp=Z,3μm,1.7s,mb6.9
HLID LR LR
comp=Z,110μm,22.0s,MS7.1
HLID Hailey 77.31 328 ⇓P P 15 52 41.2 +0.5
baz=78
G16A Moss Hill, Enn 77.35 331 ⇓P P 15 52 41.2 +0.2
baz=78
F17A Fitzpatrick Pl 77.38 332 ⇓P P 15 52 41.3 +0.2
baz=78
BDM Black Diamond 77.38 320 ⇓P P 15 52 42.2 +0.9
baz=78
P06A Stead Airport, 77.40 323 ⇓P P 15 52 41.8 +0.4
baz=78
J12A Stokes Ranch, 77.41 328 ⇓P P 15 52 41.8 +0.4
baz=78
I13A Wildhorse Cree 77.43 329 ⇑P P 15 52 42.2 +0.8
baz=78,SNR=177
MCMT McKenzie Canyo 77.52 330 eP P 15 52 42.1 +0.2
K11A Parker Ranch, 77.53 327 ⇑P P 15 52 42.1 0.0
baz=78
E18A Harlowton 77.58 333 ⇓P P 15 52 42.4 +0.2
baz=78
BOZ Bozeman (W) 77.60 331⇑eP P 15 52 41.7 -0.7
comp=Z,543nm,1.2s,mb6.4
BOZ LR LR
comp=Z,126μm,21.0s,MS7.2
BOZ Bozeman (W) 77.60 331⇑eP P 15 52 41.7 -0.7
BOZ pmax pmax
comp=Z,543nm,1.2s,mb6.4
BOZ MLR MLR
comp=Z,126μm,21.0s,MS7.2
BOZ Bozeman (W) 77.60 331 ⇓P P 15 52 42.3 -0.1
baz=78
H14A Leadore 77.60 330 ⇑P P 15 52 42.8 +0.4
baz=78,SNR=104
G15A Dillon 77.61 331 ⇑P P 15 52 42.6 +0.2
baz=78
N07B Gerlach 77.65 324 ⇓P P 15 52 43.0 +0.2
baz=78,SNR=29
O06A Flanigan 77.70 323 ⇓P P 15 52 43.1 0.0
baz=78,SNR=15
F16A Kennard Place, 77.70 331 ⇓P P 15 52 43.1 +0.2
baz=78
BEKR Beckwourth 77.79 323 ⇓P P 15 52 43.5 -0.1
baz=78,SNR=146
M08A Happy Creek Ra 77.80 325 ⇑P P 15 52 43.3 -0.3
baz=78,SNR=61
DLMT Dillon 77.81 331 eP P 15 52 43.9 +0.3
comp=Z,826nm,0.9s,mb6.7
L09A Wilkinson Ranc 77.83 326 ⇓P P 15 52 43.5 -0.2
baz=78,SNR=74
I12A Atlanta 77.83 328 ⇑P P 15 52 43.7 0.0
baz=78,SNR=178
FARB Farallon Islan 77.89 319 ⇓P P 15 52 43.7 -0.5
baz=78
MFID Camas Ranch 77.89 328 ⇓P P 15 52 44.2 +0.2
baz=78
E17A Martinsdale 77.90 332 ⇓P P 15 52 43.9 -0.1
baz=78,SNR=152
Q03C Winters 77.91 321 ⇓P P 15 52 44.5 +0.2
baz=78,SNR=25
K10A MacKenzie Ranc 77.96 327 ⇓P P 15 52 44.3 -0.1
baz=78
H13A Challis 77.98 329 ⇑P P 15 52 45.2 +0.6
baz=78,SNR=287
CVS Carmenet Viney 77.99 320 ⇑P P 15 52 44.7 0.0
baz=78,SNR=28
OHCM Honcut 78.07 322 eP P 15 52 44.4 -0.8
N06A Buffalo Meadow 78.10 323 ⇑P P 15 52 45.4 +0.2
baz=78
MCCM Marconi Confer 78.11 320 eP P 15 52 45.2 -0.2
comp=Z,981nm,1.1s,mb6.7
MCCM LR LR
comp=Z,87μm,20.0s,MS7.1
MCCM Marconi Confer 78.11 320 ⇑P P 15 52 45.1 -0.2
baz=78
F15A Butte 78.13 331 ⇓P P 15 52 45.9 +0.5
baz=78
O05C Quincy 78.17 322 ⇑P P 15 52 45.6 -0.1
baz=78,SNR=32
NSHM Saint Helena R 78.19 320 eP P 15 52 45.5 -0.4
ORV Oroville 78.23 322 ⇓P P 15 52 46.0 0.0
baz=78,SNR=183
H12A Diamond D Ranc 78.25 329 ⇑P P 15 52 46.3 +0.3
baz=78,SNR=112
L08A Fields 78.30 325 ⇓P P 15 52 46.2 -0.2
baz=78
E16A East Helena 78.31 332 ⇑P P 15 52 46.5 +0.2
baz=78,SNR=19
I11A Placerville 78.32 328 ⇓P P 15 52 46.2 -0.2
baz=78
MNRC McLaughlin Nat 78.33 321 ⇑P P 15 52 46.6 +0.1
baz=78,SNR=25
K09A Rome 78.34 326 ⇑P P 15 52 46.7 +0.1
baz=78
D17A Six Diamond Ra 78.37 333 ⇓P P 15 52 46.4 -0.2
baz=78
G13A Cobalt 78.37 330 ⇓P P 15 52 47.2 +0.5
baz=78,SNR=767
J10A Berg Farm, Mel 78.37 327 ⇑P P 15 52 46.6 -0.1
baz=78
TOA0 Torodi Ar. Sit 78.39 71 eP P 15 52 46.6 -0.8
TORD Torodi Ar. Bea 78.39 71 P P 15 52 46.8 -0.6
comp=Z,654nm,0.8s,mb6.6,baz=252,slow=5.3,SNR=481
TORD S SKSac 16 02 57.6 -2.5
comp=Z,38nm,1.0s,baz=260,slow=9.2,SNR=6.8
TORD PKKPbc PKKPbc 16 11 47.2 +2.9
comp=Z,5.1nm,1.0s,baz=28,slow=1.9,SNR=3.9
TORD LR LR 16 29 59.8
comp=Z,261μm,18.1s,MS7.6,baz=240,slow=38
O04C Chester 78.51 322 ⇑P P 15 52 47.3 -0.2
baz=79,SNR=33
F14A Wisdom 78.51 331 ⇓P P 15 52 48.0 +0.6
baz=79,SNR=205
HRY Holter Researc 78.51 332 eP P 15 52 47.1 -0.3
WVOR Wild Horse Val 78.63 325 eP P 15 52 47.7 -0.5
comp=Z,3μm,1.7s,mb6.9
WVOR LR LR
comp=Z,149μm,22.0s,MS7.3
WVOR Wild Horse Val 78.63 325 P P 15 52 48.1 -0.1
WVOR pmax pmax
comp=Z,580nm,1.3s,mb6.3
D16A Dana Ranch, Ca 78.64 332 ⇓P P 15 52 48.5 +0.4
baz=79
E15A Deer Lodge 78.65 331 ⇓P P 15 52 48.5 +0.3
baz=79
EGMT Eagleton 78.67 334 eP P 15 52 47.1 -1.1
comp=Z,26μm,1.8s,mb7.8
EGMT LR LR
comp=Z,155μm,22.0s,MS7.3
EGMT Eagleton 78.67 334 ⇓P P 15 52 47.5 -0.7
baz=79
L07A Adell 78.71 325 ⇓P P 15 52 49.0 +0.3
baz=79,SNR=147
K08A Mann Creek Ran 78.76 326 ⇑P P 15 52 48.6 -0.3
baz=79
HOPS Hopland 78.77 320 eP P 15 52 49.1 +0.1
comp=Z,1μm,1.5s,mb6.7
HOPS LR LR
comp=Z,129μm,20.0s,MS7.3
HOPS Hopland 78.77 320 ⇑P P 15 52 49.2 +0.2
baz=79,SNR=18
C17A Wharram Farm, 78.78 333 ⇓P P 15 52 48.3 -0.5
baz=79
J09A Fry Pan Ranch, 78.82 326 ⇑P P 15 52 49.1 -0.1
baz=79,SNR=37
SUR Sutherland 78.86 120 P P 15 52 52.4 +2.5
comp=Z,5μm,1.3s,mb7.2,SNR=29
SUR Sutherland 78.86 120 P P 15 52 52.7 +2.9
SNR=34
SUR Sutherland 78.86 120 LR LR 16 26 34.9
comp=Z,226μm,18.5s,MS7.5,baz=238,slow=35
SUR Sutherland 78.86 120 eP P 15 52 50.9 +1.0
comp=Z,1μm,1.0s,mb6.8
SUR LR LR
comp=Z,225μm,20.0s,MS7.5
I10A Payette 78.87 327 ⇓P P 15 52 49.7 +0.3
baz=79,SNR=11
H11A Donnelly 78.93 328 ⇓P P 15 52 49.7 0.0
baz=79,SNR=50
F13A Darby 78.93 330 ⇑P P 15 52 49.9 +0.1
baz=79
GASB Alder Springs 79.00 321 ⇑P P 15 52 50.6 +0.3
baz=79,SNR=88
LBCM Butte Creek Ri 79.00 323 P P 15 52 49.4 -0.9
E14A Clinton 79.02 331 ⇑P P 15 52 50.5 +0.3
baz=79
D15A Lincoln 79.07 332 ⇑P P 15 52 50.9 +0.4
baz=79
K07A Rock Creek Ran 79.13 325 ⇓P P 15 52 51.1 +0.2
baz=79,SNR=101
MOD Modoc 79.15 324 eP P 15 52 50.4 -0.7
comp=Z,622nm,1.2s,mb6.4
MOD LR LR
comp=Z,124μm,20.0s,MS7.2
MOD Modoc 79.15 324 ⇓P P 15 52 50.9 -0.1
baz=79
J08A Circle Bar Ran 79.19 326 ⇑P P 15 52 51.1 -0.1
baz=79
H10A Noah's Angus R 79.20 328 ⇑P P 15 52 51.0 -0.3
baz=79,SNR=135
I09A Lost Marbles R 79.26 327 ⇓P P 15 52 51.7 +0.2
baz=79,SNR=24
CHMT Chamberlain Mo 79.29 331 eP P 15 52 51.3 -0.4
C16A Fuhringer Ranc 79.32 333 ⇑P P 15 52 51.5 -0.3
baz=80
E13A Victor 79.36 331 ⇑P P 15 52 52.2 +0.2
baz=80,SNR=115
WDC Whiskeytown Da 79.51 322 eP P 15 52 50.9 -2.2
comp=Z,519nm,1.0s,mb6.4
WDC LR LR
comp=Z,76μm,20.0s,MS7.0
WDC Whiskeytown Da 79.51 322 eP P 15 52 50.9 -2.1
WDC pmax pmax
comp=Z,519nm,1.0s,mb6.4
WDC MLR MLR
comp=Z,76μm,20.0s,MS7.0
WDC Whiskeytown Da 79.51 322 ⇑P P 15 52 51.5 -1.5
baz=80
KCPM Cahto Peak 79.52 321 eP P 15 52 53.7 +0.6
D14A Greenough 79.53 331 ⇑P P 15 52 53.0 0.0
baz=80
MSO Missoula 79.54 331⇑eP P 15 52 52.9 -0.2
comp=Z,430nm,0.5s,mb6.6
MSO LR LR
comp=Z,92μm,22.0s,MS7.1
KIPM Iron Peak 79.54 321 eP P 15 52 53.4 +0.2
G11A Walters Elk Ra 79.56 329 ⇑P P 15 52 53.4 +0.2
baz=80
I08A Drewsey 79.63 326 ⇓P P 15 52 54.0 +0.4
baz=80,SNR=52
J07A Hines 79.64 326 ⇓P P 15 52 53.9 +0.2
baz=80,SNR=78
BMO Blue Mountains 79.67 328⇑eP P 15 52 53.2 -0.6
comp=Z,716nm,0.5s,mb6.9
BMO LR LR
comp=Z,98μm,20.0s,MS7.2
C15A Salmond Ranch, 79.67 332 ⇑P P 15 52 54.0 +0.3
baz=80
H09A Durkee 79.71 327 ⇑P P 15 52 53.8 -0.2
baz=80,SNR=35
B16A M & M Farms, S 79.78 333 ⇑P P 15 52 53.6 -0.7
baz=80
F11A Grangeville 79.86 329 ⇓P P 15 52 54.3 -0.5
baz=80
G10A Bishop Farm, J 79.89 328 ⇑P P 15 52 55.3 +0.3
baz=80,SNR=281
O01C Eel River Cons 79.96 321 ⇓P P 15 52 56.1 +0.7
baz=80,SNR=15
D13A Huson 79.97 331 ⇑P P 15 52 55.7 +0.4
baz=80
J06A Christmas Vall 80.00 325 ⇓P P 15 52 55.8 +0.2
baz=80
K05A Summer Lake 80.03 324 ⇑P P 15 52 56.5 +0.7
baz=80,SNR=143
B15A Bradely Ranch, 80.06 333 ⇓P P 15 52 55.3 -0.6
baz=80
N02C Big Bar 80.10 322 ⇓P P 15 52 56.2 -0.1
baz=80
H08A Prairie City 80.11 327 ⇓P P 15 52 56.4 +0.2
baz=80,SNR=74
A16A West Butte Ran 80.15 334 ⇓P P 15 52 56.1 -0.2
baz=80
G09A Cove 80.21 328 ⇓P P 15 52 57.1 +0.4
baz=80
M02C Callahan 80.22 322 ⇑P P 15 52 56.3 -0.5
baz=80
E11A Bogner Ranch, 80.23 329 ⇓P P 15 52 56.2 -0.5
baz=80
I07A Izee 80.23 326 ⇑P P 15 52 56.9 0.0
baz=80,SNR=124
D12A Red Ives Fores 80.35 330 ⇓P P 15 52 57.5 +0.1
baz=80
YBH Yreka Blue Hor 80.36 323 eP P 15 52 55.9 -1.7
comp=Z,397nm,1.2s,mb6.2
YBH LR LR
comp=Z,99μm,22.0s,MS7.1
YBH Yreka Blue Hor 80.36 323 ⇓P P 15 52 56.6 -1.0
baz=80
B14A Marquette Ranc 80.41 332 ⇑P P 15 52 57.3 -0.3
baz=81
F10A Beach Ranch, E 80.44 329 ⇑P P 15 52 58.1 +0.2
baz=81
C13A Hot Springs 80.46 331 ⇓P P 15 52 58.5 +0.5
baz=81
I06A Prineville 80.50 326 ⇓P P 15 52 58.5 +0.2
baz=81,SNR=120
JCC Jacoby Creek 80.52 321 ⇑P P 15 52 58.9 +0.4
baz=81,SNR=19
TSUM Tsunba 80.58 107 PKKPbc PKKPbc 16 11 44.5 +5.5
comp=Z,4.8nm,0.9s,baz=50,slow=5.0,SNR=4.4
TSUM LR LR 16 26 45.9
comp=Z,291μm,20.5s,MS7.6,baz=240,slow=34
TSUM Tsumeb 80.58 107 eP P 15 52 59.8 +0.4
comp=Z,1μm,1.0s,mb6.8
TSUM LR LR
comp=Z,283μm,20.0s,MS7.6
F09A S2 Ranch, Elgi 80.58 328 ⇑P P 15 52 58.6 -0.1
baz=81
H07A Lands Inn, Kim 80.62 326 ⇓P P 15 52 58.9 0.0
baz=81,SNR=62
A15A Johnson Ranch, 80.65 333 ⇑P P 15 52 58.3 -0.7
baz=81
E10A Myers Farm, Un 80.75 329 ⇑P P 15 52 59.5 -0.1
baz=81
D11A Klaveano Farm, 80.80 330 ⇑P P 15 52 59.3 -0.5
baz=81
G08A Pilot Rock 80.80 327 ⇓P P 15 53 00.1 +0.2
baz=81
LNOR Lincton Mounta 80.88 328 eP P 15 52 58.5 -1.8
LNOR Lincton Mounta 80.88 328 P P 15 52 59.2 -1.1
C12B Naegeli Ranch, 80.89 331 ⇓P P 15 53 00.6 +0.4
baz=81
KRMB Red Mountain 80.91 322 eP P 15 53 00.4 -0.1
B13A Whitefish 80.94 332 ⇓P P 15 53 00.3 -0.2
baz=81
A14A Double T Ranch 80.94 333 ⇑P P 15 53 00.2 -0.3
baz=81
F08A Pendleton 81.07 328 ⇓P P 15 53 00.7 -0.6
baz=81
HUMO Hull Mountain 81.08 323 eP P 15 53 00.3 -1.1
comp=Z,3μm,1.2s,mb7.1
HUMO LR LR
comp=Z,123μm,21.0s,MS7.2
HUMO Hull Mountain 81.08 323 ⇑P P 15 53 01.2 -0.3
baz=81
VIPM Ingram Point 81.11 326 P P 15 53 01.5 0.0
BBOR Butler Butte 81.11 324 P P 15 53 00.4 -1.2
H06A Lindquist Farm 81.11 326 ⇑P P 15 53 02.0 +0.5
baz=81
G07A Ruggs Ranch, H 81.14 327 ⇑P P 15 53 02.2 +0.5
baz=81,SNR=157
L02A Cave Junction 81.14 323 ⇑P P 15 53 02.2 +0.5
baz=81
I05A Bend 81.21 325 ⇑P P 15 53 02.5 +0.5
baz=81,SNR=46
WALA Waterton Lakes 81.21 332 eP P 15 53 01.4 -0.6
comp=Z,6.7nm,0.7s
M01C Crescent City 81.24 322 ⇓P P 15 53 02.5 +0.2
baz=81,SNR=20
D10A Wagner Farm, O 81.24 329 ⇓P P 15 53 01.7 -0.4
baz=81
E09A Wood Farm, Sta 81.27 329 ⇑P P 15 53 01.9 -0.5
baz=81
A13A Flathead Natio 81.33 332 ⇑P P 15 53 03.0 +0.4
baz=82
C11A Tepee Creek (N 81.34 330 ⇓P P 15 53 02.5 -0.2
baz=82
K02A Glendale 81.48 323 ⇑P P 15 53 03.2 -0.4
baz=82,SNR=68
B12A Libby 81.50 331 ⇑P P 15 53 03.5 0.0
baz=82
H05A Madras 81.52 326 ⇓P P 15 53 03.7 0.0
baz=82,SNR=24
BKCOR Black Crater 81.53 325 P P 15 53 04.1 +0.4
KBO Bosley Butte 81.53 322 eP P 15 53 04.0 +0.2
FFC Flin Flon 81.55 342 P P 15 53 04.5 +0.9
comp=Z,2μm,1.4s,mb6.8,SNR=27
FFC Flin Flon 81.55 342 eP P 15 53 01.8 -1.8
comp=Z,864nm,1.3s,mb6.5
FFC LR LR
comp=Z,201μm,20.0s,MS7.5
FFC Flin Flon 81.55 342 P P 15 53 02.4 -1.2
FFC pmax pmax
comp=Z,860nm,1.3s,mb6.5
G06A Carlson Farm, 81.61 326 ⇑P P 15 53 04.7 +0.5
baz=82,SNR=66
E08A Dider Farm, El 81.70 328 ⇑P P 15 53 04.2 -0.4
baz=82
F07A Phinny Hill Vi 81.71 327 ⇓P P 15 53 05.2 +0.5
baz=82
D09A Jones Farm, Ri 81.74 329 ⇑P P 15 53 04.6 -0.2
baz=82
C10A Spilker Farm, 81.81 330 ⇓P P 15 53 05.0 -0.2
baz=82
B11A Sandpoint 81.83 331 ⇑P P 15 53 05.0 -0.3
baz=82
HAWA Hanford 81.86 328 eP P 15 53 04.9 -0.5
comp=Z,1μm,1.1s,mb6.7
HAWA LR LR
comp=Z,120μm,21.0s,MS7.2
A12A Yaak River Ran 81.88 331 ⇑P P 15 53 05.4 -0.1
baz=82
RSW Rattlesnake Hi 81.89 328 P P 15 53 05.2 -0.4
J02A Umpqua 81.92 324 ⇑P P 15 53 05.8 0.0
baz=82
G05A Wamic 81.97 326 ⇓P P 15 53 06.4 +0.3
baz=82,SNR=69
KEBM Edson Butte 82.02 323 eP P 15 53 06.7 +0.3
D08A Wollman Farm, 82.03 329 ⇓P P 15 53 06.1 -0.2
baz=82
H04A Detroit Lake 82.05 325 ⇓P P 15 53 06.0 -0.5
baz=82
NEW Newport 82.05 330 eP P 15 53 05.3 -1.1
comp=Z,774nm,1.4s,mb6.4
NEW LR LR
comp=Z,148μm,21.0s,MS7.3
F06A Goldendale 82.05 327 ⇑P P 15 53 06.7 +0.2
baz=82
K01A Sixes 82.06 323 ⇓P P 15 53 06.4 -0.2
baz=82,SNR=8.2
B10A Chitwood Farm, 82.12 330 ⇑P P 15 53 06.0 -0.8
baz=82
E07A Sunnyside 82.14 328 ⇑P P 15 53 07.0 0.0
baz=82,SNR=54
I03A Eugene 82.16 324 ⇑P P 15 53 07.0 -0.1
baz=82,SNR=23
OD2 Odessa Site #2 82.17 329 P P 15 53 06.4 -0.6
RAR Rarotonga 82.19 250 P P 15 53 09.2 +1.3
comp=Z,906nm,1.5s,mb6.5
RAR LR LR
comp=Z,139μm,20.0s,MS7.3
RAR Rarotonga 82.19 250 P P 15 53 09.2 +1.3
RAR pmax pmax
comp=Z,907nm,1.5s
RAR MLR MLR
comp=Z,139μm,20.0s
HOOD Mount Hood Mea 82.20 326 eP P 15 53 06.9 -0.4
comp=Z,2μm,1.1s,mb6.9
A11A Hall Mountain, 82.21 331 ⇑P P 15 53 07.0 -0.3
baz=82
C09A Chrisman Ranch 82.25 329 ⇓P P 15 53 07.3 -0.2
baz=82
I02A Mapleton 82.48 324 ⇑P P 15 53 08.7 -0.1
baz=83,SNR=14
F05A White Salmon 82.48 326 ⇑P P 15 53 08.8 +0.1
baz=83,SNR=25
G04A Mulino 82.55 325 ⇓P P 15 53 08.9 -0.2
baz=83,SNR=24
COR Corvallis 82.58 325 eP P 15 53 09.3 0.0
comp=Z,1μm,1.0s,mb6.9
COR LR LR
comp=Z,80μm,22.0s,MS7.0
COR Corvallis 82.58 325 eP P 15 53 09.3 0.0
COR pmax pmax
comp=Z,1μm,1.0s,mb6.9
COR MLR MLR
comp=Z,80μm,22.0s,MS7.0
C08A Higginbotham F 82.61 329 ⇓P P 15 53 09.0 -0.4
baz=83
H03A Soap Creek Ran 82.63 325 ⇑P P 15 53 09.8 +0.3
baz=83,SNR=42
B09A Rice 82.64 330 ⇓P P 15 53 09.0 -0.4
baz=83
D07A Quincy 82.64 328 ⇑P P 15 53 09.8 +0.2
baz=83
E06A Yakima 82.69 327 ⇓P P 15 53 09.3 -0.5
baz=83
A10A Northport 82.77 331 ⇑P P 15 53 09.2 -0.9
baz=83
MDT Midelt 82.89 50 P P 15 53 12.3 +1.1
comp=Z,142nm,1.0s,mb6.0,baz=244,slow=5.3,SNR=171
MDT S S 16 03 36.8 +9.1
comp=Z,14nm,1.1s,baz=236,slow=3.6,SNR=2.1
F04A Amboy 83.01 326 ⇓P P 15 53 10.9 -0.6
baz=83
H02A Toledo 83.01 324 ⇓P P 15 53 11.9 +0.4
baz=83
C07A Waterville 83.03 328 ⇓P P 15 53 11.3 -0.3
baz=83
G03A Yamhill 83.05 325 ⇓P P 15 53 12.1 +0.4
baz=83,SNR=41
D06A Cle Elum 83.07 328 ⇑P P 15 53 11.6 -0.2
baz=83
E05A Randle 83.09 327 ⇓P P 15 53 11.3 -0.6
baz=83
E05A ⇑S S 16 03 25.9 -3.2
baz=83
ETW Entiat 83.10 328 eP P 15 53 10.6 -1.3
LIS Lisbon 83.11 43 eP P 15 53 12.0 -0.1
LIS eS S 16 03 27.9 -1.7
LIS eS S 16 03 28.1 -1.5
LIS AMS AMS 16 26 58.3
comp=Z,169μm,23.8s,MS7.3
B08A Colville Reser 83.15 329 ⇑P P 15 53 11.5 -0.7
baz=83,SNR=36
B08A ⇓S S 16 03 27.3 -2.3
baz=83
HEBO Mount Hebo 83.23 325 eP P 15 53 13.2 +0.6
comp=Z,3μm,1.4s,mb7.1
A09A Danville 83.23 330 ⇑P P 15 53 11.7 -0.8
baz=83
A09A ⇑S S 16 03 29.9 -0.5
baz=83
FCC Fort Churchill 83.25 348 eP P 15 53 11.3 -1.1
comp=Z,2μm,1.4s,mb6.9
FCC Fort Churchill 83.25 348 P P 15 53 11.9 -0.5
FCC pmax pmax
comp=Z,2μm,1.4s,mb6.9
EGRO El Granado 83.50 45 P P 15 53 13.6 -0.6
comp=Z,127nm,0.9s,mb6.0
A08A Turner Farm, O 83.54 330 ⇑P P 15 53 13.7 -0.5
baz=84
A08A ⇑S S 16 03 33.0 -0.5
baz=84
B07A Winthrop 83.59 329 ⇓P P 15 53 13.3 -1.1

baz=84
B07A ⇑S S 16 03 33.3 -0.8
baz=84
C06A Tall Timber Ra 83.59 328 ⇑P **P 15 53 13.8 -0.6**
baz=84,SNR=11
C06A ⇓S S 16 03 32.2 -1.9
baz=84
F03A Seaside 83.60 325 ⇑P **P 15 53 14.4 -0.1**
baz=84
F03A ⇑S S 16 03 33.2 -1.0
baz=84
E04A Onalaska 83.61 326 ⇑P **P 15 53 14.4 -0.1**
baz=84
E04A ⇓S S 16 03 32.2 -2.0
baz=84
D05A Enumclaw 83.63 327 ⇑P **P 15 53 14.3 -0.4**
baz=84,SNR=27
D05A ⇓S S 16 03 34.0 -0.5
baz=84
ALMR Almeirim 83.72 43 *e*P **P 15 53 15.6 +0.2**
EVO Evora 83.73 44 *e*P **P 15 53 15.5 +0.1**
comp=Z,5µm,1.8s,mb7.1
EVO *e*MLR MLR
comp=Z,434µm,23.0s,MS7.5
SFS San Fernando 83.76 47⇑*e*P **P 15 53 16.6 +1.0**
comp=Z,6µm,1.7s,mb7.4
SFS LR LR
comp=Z,302µm,22.0s,MS7.6
SFS San Fernando 83.76 47⇑*e*P **P 15 53 16.6 +1.0**
SFS pmax pmax
comp=Z,6µm,1.7s,mb7.4
SFS MLR MLR
comp=Z,302µm,22.0s,MS7.6
BOSA Boshof 83.78 118 P **P 15 53 15.7 -0.3**
comp=Z,376nm,0.9s,mb6.5,baz=250,slow=4.2,SNR=227
BOSA S S 16 03 40.9 +3.9
comp=Z,4.8nm,0.9s,baz=39,slow=14,SNR=1.3
BOSA PKKPbc PKKPbc 16 11 32.9 +0.9
comp=Z,3.4nm,0.8s,baz=117,slow=2.3,SNR=4.0
BOSA LR LR 16 28 19.9
comp=Z,353µm,20.4s,MS7.7,baz=246,slow=34
BOSA Boshof 83.78 118 *e*P **P 15 53 15.9 -0.1**
comp=Z,62nm,1.4s,mb5.5
BOSA LR LR
comp=Z,360µm,20.0s,MS7.8
BOSA Boshof 83.78 118 P **P 15 53 15.7 -0.3**
BOSA S S 16 03 40.9 +3.8
BOSA pmax pmax
comp=Z,376nm,0.9s,mb6.5
BOSA smax
comp=N,5.0nm,0.9s
BOSA MLR MLR
comp=Z,353µm,20.4s,MS7.7
MAW Mawson 83.78 164 *e*P **P 15 53 15.1 -0.1**
comp=Z,401nm,1.0s,mb6.5
MAW Mawson 83.78 164 P **P 15 53 14.8 -0.5**
comp=Z,206nm,0.9s,mb6.2,baz=210,slow=7.4,SNR=132
MAW S S 16 03 36.0 +0.4
comp=Z,3.4nm,0.9s,baz=342,slow=18,SNR=1.4
MAW PKKPbc PKKPbc 16 11 34.1 +1.0
comp=Z,7.7nm,0.9s,baz=323,slow=6.0,SNR=4.2
MAW LR LR 16 30 29.3
comp=Z,953µm,20.9s,MS8.2,baz=229,slow=36
MAW Mawson 83.78 164 P **P 15 53 14.8 -0.4**
MAW S S 16 03 36.0 +0.3
MAW pmax pmax
comp=Z,206nm,0.9s
MAW smax
comp=N,3.0nm,0.9s
MAW MLR MLR
comp=Z,953µm,21.0s
BMW Boistfort Moun 83.79 326 *e*P **P 15 53 15.3 -0.2**
BMW Boistfort Moun 83.79 326 P **P 15 53 15.9 +0.4**
C05A Tolt Reservoir 83.83 328 ⇓P **P 15 53 14.2 -1.4**
baz=84
C05A ⇓S S 16 03 35.5 -1.0
baz=84
D04A Dobbs Creek Ra 83.99 327 ⇓P **P 15 53 16.2 -0.3**
baz=84
E03A Lebam 84.01 326 ⇑P **P 15 53 15.9 -0.7**
baz=84
E03A ⇑S S 16 03 35.3 -3.0
baz=84
A07A Ashnola River, 84.13 329 ⇑P **P 15 53 17.0 -0.1**
baz=84
A07A ⇑S S 16 03 36.5 -2.9
baz=84
EDM Edmonton 84.16 335 *e*P **P 15 53 15.0 -2.2**
EDM Edmonton 84.16 335 P **P 15 53 15.1 -2.1**
EMIN Mina Concepcio 84.17 45 P **P 15 53 17.2 -0.4**
comp=Z,164nm,1.0s,mb6.1
ESPR Espera 84.21 46 P **P 15 53 18.0 +0.1**
comp=Z,222nm,1.0s,mb6.2
EJIF Jimena Fronter 84.25 47 P **P 15 53 19.2 +1.1**
comp=Z,1µm,1.5s,mb6.8
EJIF Jimena Fronter 84.25 47 P **P 15 53 19.2 +1.1**
EJIF pmax pmax
comp=Z,1µm,1.5s,mb6.8
RPW Rockport 84.26 328 *e*P **P 15 53 15.7 -2.1**
JCW Jim Creek 84.29 328 *e*P **P 15 53 16.0 -2.0**
B06A Marblemount 84.29 328 ⇑P **P 15 53 16.6 -1.4**
baz=84
B06A ⇑S S 16 03 37.9 -3.2
baz=84
B05A Bryant 84.42 328 ⇓P **P 15 53 17.4 -1.2**
baz=85
B05A ⇑S S 16 03 38.5 -3.8
baz=85
C04A Brinnon 84.48 327 ⇓P **P 15 53 18.4 -0.6**
baz=85
C04A ⇓S S 16 03 40.9 -2.1
baz=85
EBAD Badajoz 84.50 44 P **P 15 53 20.5 +1.2**
comp=Z,3µm,2.3s,mb7.0
EMIJ Mijas 84.78 47 P **P 15 53 21.6 +0.9**
comp=Z,348nm,1.2s,mb6.4
A05A Maple Falls 84.91 328 ⇑P **P 15 53 20.2 -0.9**
baz=85
A05A ⇓S S 16 03 43.6 -3.6
baz=85
B04A Port Angeles 84.98 327 ⇓P **P 15 53 21.2 -0.2**
baz=85
B04A ⇓S S 16 03 43.9 -4.0
baz=85
A04A Legoe Bay, Lum 85.02 328 ⇑P **P 15 53 21.1 -0.6**
baz=85
A04A ⇓S S 16 03 44.2 -4.2
baz=85
MTE Manteigas 85.09 43⇑*e*P **P 15 53 22.1 -0.1**
comp=Z,1µm,1.1s,mb6.9
MTE LR LR
comp=Z,319µm,22.0s,MS7.7
ECAB El Cabril 85.16 46 P **P 15 53 23.6 +0.9**
comp=Z,132nm,1.1s,mb6.0
PGC Sidney 85.34 328 *e*P **P 15 53 22.4 -0.8**
comp=Z,2µm,1.1s,mb7.1
EZAM Zamans 85.38 41 P **P 15 53 24.2 +0.6**
comp=Z,39nm,0.9s,mb5.5
EZAM Zamans 85.38 41 P **P 15 53 24.2 +0.6**
EZAM pmax pmax
comp=Z,39nm,0.9s,mb5.5
LBTB Lobatse 85.41 115 PKKPbc PKKPbc 16 11 31.9 +3.9
comp=Z,6.5nm,0.7s,baz=147,slow=2.5,SNR=6.2
LBTB LR LR 16 29 01.5
comp=Z,276µm,21.8s,MS7.6,baz=258,slow=34
LBTB Lobatse 85.41 115⇑*e*P **P 15 53 24.6 +0.3**
comp=Z,63nm,0.7s,mb5.8
LBTB LR LR
comp=Z,251µm,21.0s,MS7.6
LBTB Lobatse 85.41 115⇑*e*P **P 15 53 24.6 +0.3**
LBTB pmax pmax
comp=Z,63nm,0.7s,mb5.8
LBTB MLR MLR
comp=Z,251µm,21.0s,MS7.6
C03A Quillayute Air 85.44 327 ⇑P **P 15 53 24.4 +0.6**
baz=86
C03A ⇑S S 16 03 52.1 -0.5
baz=86
ELOJ Sierra Loja 85.51 47 P **P 15 53 25.3 +0.9**
comp=Z,271nm,1.0s,mb6.4
ELOJ Sierra Loja 85.51 47 P **P 15 53 25.3 +0.9**
ELOJ pmax pmax
comp=Z,271nm,1.0s,mb6.4
ELOB Lobios 85.61 41 P **P 15 53 23.6 -1.2**
comp=Z,2µm,2.2s,mb6.9
EALB Alboran 85.64 48 P **P 15 53 25.0 -0.1**
comp=Z,327nm,0.9s,mb6.6
ELUQ Luque 85.65 46 P **P 15 53 25.8 +0.6**
comp=Z,2µm,1.2s,mb7.2
ELUQ Luque 85.65 46 P **P 15 53 25.8 +0.7**
ELUQ pmax pmax
comp=Z,2µm,1.2s,mb7.2
ERON Agron 85.68 47 P **P 15 53 25.4 +0.2**
comp=Z,92nm,0.7s,mb6.1
EMAZ Mazaricos 85.68 40 P **P 15 53 24.4 -0.7**
comp=Z,83nm,0.8s,mb6.0
EGUA Guajares 85.74 47 P **P 15 53 25.3 -0.2**
comp=Z,914nm,1.0s,mb7.0
EGUA Guajares 85.74 47 P **P 15 53 25.3 -0.3**
EGUA pmax pmax
comp=Z,914nm,1.0s,mb7.0
EADA Adamuz 85.77 46 P **P 15 53 25.5 -0.1**
comp=Z,2µm,2.2s,mb6.8
EPLA Plasencia 85.83 44 P **P 15 53 25.8 -0.1**
comp=Z,348nm,1.2s,mb6.5
EPLA Plasencia 85.83 44 P **P 15 53 25.8 -0.1**
EPLA pmax pmax
comp=Z,348nm,1.2s,mb6.5
STS Santiago 85.90 40 P **P 15 53 26.2 0.0**
comp=Z,52nm,0.8s,mb5.8
STS Santiago 85.90 40 P **P 15 53 26.2 0.0**
STS pmax pmax
comp=Z,52nm,0.8s,mb5.8
TAM Tamanrasset 85.91 64⇑*e*P **P 15 53 27.0 +0.3**
ECOG Cogollos-Vega 85.98 47 P **P 15 53 26.6 -0.1**
comp=Z,64nm,0.5s,mb6.1
ECOG Cogollos-Vega 85.98 47 P **P 15 53 26.6 -0.1**
ECOG pmax pmax
comp=Z,64nm,0.5s,mb6.1
EBER Berja 86.24 48 P **P 15 53 28.0 -0.1**
comp=Z,212nm,1.0s,mb6.3
EBAN Banos Encina 86.30 46 P **P 15 53 28.1 -0.2**
comp=Z,1µm,1.5s,mb7.0
EBAN Banos Encina 86.30 46 P **P 15 53 28.1 -0.2**
EBAN pmax pmax
comp=Z,1µm,1.5s,mb7.0
ECAL Calabor 86.46 42 P **P 15 53 29.0 0.0**
comp=Z,47nm,0.5s,mb6.0
ERUA La Rua 86.47 41 P **P 15 53 29.0 0.0**
comp=Z,311nm,1.7s,mb6.3
ERUA La Rua 86.47 41 P **P 15 53 29.0 0.0**
ERUA pmax pmax
comp=Z,311nm,1.7s,mb6.3
ODZI Dziouia 86.57 50 P **P 15 53 33.0 +3.3**
EQES Quesada 86.59 47 P **P 15 53 28.3 -1.4**
comp=Z,968nm,1.8s,mb6.7
PAB San Pablo 86.66 45⇑*e*P **P 15 53 29.9 -0.1**
comp=Z,1µm,1.3s,mb6.9
PAB LR LR
comp=Z,169µm,21.0s,MS7.4
PAB San Pablo 86.66 45 P **P 15 53 30.2 +0.2**
PAB pmax pmax
comp=Z,1µm,1.3s,mb6.9
ENIJ Nijar 86.74 48 P **P 15 53 28.9 -1.6**
comp=Z,374nm,1.2s,mb6.5
ENIJ Nijar 86.74 48 P **P 15 53 28.9 -1.6**
ENIJ pmax pmax
comp=Z,374nm,1.2s,mb6.5
EHUE Huescar 86.92 47 P **P 15 53 29.8 -1.5**
comp=Z,186nm,1.2s,mb6.2
EHUE Huescar 86.92 47 P **P 15 53 29.8 -1.5**
EHUE pmax pmax
comp=Z,186nm,1.2s,mb6.2
ESDC Sonseca Array 86.98 45 P **P 15 53 32.5 +0.9**
comp=Z,32nm,0.8s,mb5.6,baz=234,slow=4.4,SNR=123
ESDC S S 16 04 13.0 +5.0
comp=Z,0.3nm,0.3s,baz=188,slow=27,SNR=2.7
ESDC PKKPbc PKKPbc 16 11 28.3 +2.5
comp=Z,1.5nm,0.6s,baz=22,slow=5.6,SNR=4.3
ESDC LR LR 16 30 43.0
comp=Z,136µm,21.2s,MS7.3,baz=245,slow=34
ESDC Sonseca Array 86.98 45 P **P 15 53 30.1 -1.4**
comp=Z,479nm,1.7s,mb6.5
ESLA Sonseca Array 86.98 45⇑*e*P **P 15 53 31.5 -0.1**
comp=Z,952nm,1.8s,mb6.7
ESLA LR LR
comp=Z,1160µm,22.0s,MS8.2
EPON Pontenova 86.99 40 P **P 15 53 30.2 -1.3**
comp=Z,1µm,2.0s,mb6.8
USTO Oran 87.27 50 P **P 15 53 39.0 +5.9**
ODJA Bouhanifia 87.35 50 P **P 15 53 37.0 +3.5**
GUD Guadarrama 87.38 44 P **P 15 53 32.1 -1.3**
comp=Z,224nm,1.6s,mb6.2
GUD Guadarrama 87.38 44 P **P 15 53 32.1 -1.4**
GUD pmax pmax
comp=Z,224nm,1.6s,mb6.2
EVIA Vianos 87.40 46 P **P 15 53 32.2 -1.5**
comp=Z,117nm,1.1s,mb6.0
EVIA Vianos 87.40 46 P **P 15 53 32.2 -1.5**
EVIA pmax pmax
comp=Z,117nm,1.1s,mb6.0
OJBR Djebel Berber 87.83 50 P **P 15 53 32.0 -3.8**
EMUR La Murta 87.85 48 P **P 15 53 34.2 -1.6**
comp=Z,32nm,0.7s,mb5.7
CART Cartagena 87.89 48 *e*P **P 15 53 34.6 -1.4**
comp=Z,621nm,1.3s,mb6.7
ETOB Tobarra 88.05 47 P **P 15 53 35.2 -1.5**
comp=Z,177nm,0.9s,mb6.3
OJGS Djebel Guires 88.08 50 P **P 15 53 34.0 -3.0**
EARI Arriondas 88.15 41 P **P 15 53 35.8 -1.3**
comp=Z,74nm,0.8s,mb6.0
ETRT Tiaret 88.42 51 P **P 15 53 41.6 +3.0**
DRV Dumont d'Urvil 88.50 191 P **P 15 53 48.0 +10**
DRV S S 16 04 16.0 -5.7
DRV SS SS 16 10 13.0 +1.8
DRV L 16 17 00.0
DRV R 16 23 00.0
EANR 'Ain N'Sour 88.55 50 P **P 15 53 41.9 +2.7**
XMAS Kiritimati 88.61 273 P **P 15 53 39.6 -0.4**
comp=Z,439nm,1.4s,mb6.6
XMAS LR LR
comp=Z,503µm,21.0s,MS7.9
ETOR Torete 88.83 45 P **P 15 53 40.0 -0.4**
comp=Z,172nm,1.2s,mb6.3
ETOR Torete 88.83 45 P **P 15 53 40.0 -0.4**
ETOR pmax pmax
comp=Z,172nm,1.2s,mb6.3
ECHA Ech Chlef 88.83 50 P **P 15 53 43.0 +2.5**
ECHE Chera 88.92 46 P **P 15 53 40.3 -0.5**
comp=Z,160nm,0.9s,mb6.3
ECHE Chera 88.92 46 P **P 15 53 40.3 -0.5**
ECHE pmax pmax
comp=Z,160nm,0.9s,mb6.3
EBEN Beniarda 88.97 47 P **P 15 53 40.0 -1.1**
comp=Z,126nm,0.8s,mb6.3
EBNR Beni Rached 89.01 50 P **P 15 53 44.6 +3.2**
ELAN Lanestosa 89.21 42 P **P 15 53 41.2 -0.9**
comp=Z,80nm,1.0s,mb6.0
ECRI Cripan 89.46 43 P **P 15 53 42.4 -0.9**
comp=Z,42nm,0.7s,mb5.9
ECRI Cripan 89.46 43 P **P 15 53 42.4 -0.9**
ECRI pmax pmax
comp=Z,42nm,0.7s,mb5.9
EMOS Mosqueruela 89.63 46 P **P 15 53 44.1 -0.1**
comp=Z,420nm,1.5s,mb6.5
EMHD Djebel Mahouad 89.98 51 P **P 15 53 48.5 +2.6**
SFJD Kangerlussuaq 90.20 7 P **P 15 53 45.7 -0.4**
comp=Z,32nm,1.1s,mb5.6,baz=247,slow=2.7,SNR=13
SFJD Kangerlussuaq 90.20 7 P **P 15 53 45.7 -0.4**
SFJD pmax pmax
comp=Z,32nm,1.1s,mb5.6
SFJD Kangerlussuaq 90.20 7⇑*i*P **P 15 53 45.4 -0.7**
SFJD *e*S SKSac 16 04 18.4 +4.2
SFJD *i* S S 16 04 34.6 -2.5
SFJD
comp=Z,93µm,21.0s
EIBI Ibiza 90.20 47 P **P 15 53 46.4 -0.4**
comp=Z,552nm,2.0s,mb6.5
ADJB Djebel Djouab 90.31 51 P **P 15 53 46.2 -1.2**
ESAC San Caprasio 90.31 44 P **P 15 53 47.1 -0.2**
comp=Z,1µm,1.9s,mb6.8
ABA Alger-Bouzarea 90.32 50 P **P 15 53 50.1 +2.6**
ELIZ Elizondo 90.36 43 P **P 15 53 47.3 -0.2**
comp=Z,116nm,1.2s,mb6.1
ELIZ Elizondo 90.36 43 P **P 15 53 47.3 -0.2**
ELIZ pmax pmax
comp=Z,116nm,1.2s,mb6.1
EALK Alkurruntz 90.41 43 P **P 15 53 47.6 -0.1**
comp=Z,594nm,2.0s,mb6.6
MIR Mirnyy 90.45 173⇑*i*P **P 15 53 47.0 -0.7**
MIR *i* 15 54 03.0
MIR *i* S SKSac 16 04 20.0 +3.7
MIR *i* 16 04 44.0
MIR pmax pmax
comp=Z,800nm,2.5s,mb6.6
ERTA Horta de San J 90.46 45 P **P 15 53 48.2 +0.2**
comp=Z,236nm,0.9s,mb6.5
SJPF Ste Jean 90.53 43 *e*P **P 15 53 48.4 +0.1**
comp=Z,2µm,1.6s,mb6.8
SJPF Ste Jean 90.53 43 *e*P **P 15 53 48.4 +0.1**
comp=Z,920nm,1.6s,mb6.9
SJPF Ste Jean 90.53 43 *e*P **P 15 53 48.4 +0.1**
SJPF pmax pmax
comp=Z,920nm,1.6s,mb6.9
OSSF Osses 90.58 43 *e*P **P 15 53 48.7 +0.2**
AKET Djebel Ketaf 90.58 51 P **P 15 53 50.0 +1.3**
LARF Larrau 90.64 43 *e*P **P 15 53 50.0 +1.2**
ORDF Ordiarp 90.76 43 *e*P **P 15 53 50.4 +1.0**
ATAF Djebel Tarf 90.79 51 P **P 15 53 48.0 -1.7**
ETSF Etsaut 90.84 43 *e*P **P 15 53 49.9 +0.2**
comp=Z,2µm,1.7s,mb6.9
ETSF Etsaut 90.84 43 *e*P **P 15 53 49.9 +0.2**
comp=Z,1µm,1.7s,mb6.9
ETSF Etsaut 90.84 43 *e*P **P 15 53 49.9 +0.2**
ETSF pmax pmax
comp=Z,1µm,1.7s,mb6.9
ATE Arette 90.85 43 *e*P **P 15 53 50.4 +0.6**
REYF Montagne du Re 91.03 43 *e*P **P 15 53 51.7 +1.1**
EPOB Poblet 91.14 45 P **P 15 53 49.9 -1.3**
comp=Z,69nm,0.9s,mb6.0
EBIE Bielsa 91.19 44 P **P 15 53 50.3 -1.0**
comp=Z,61nm,0.8s,mb6.0
LABF Labassere 91.32 44 *e*P **P 15 53 52.8 +0.8**
AKF Akfadou 91.34 51 P **P 15 53 52.9 +0.7**
RESF Ens 91.37 44 *e*P **P 15 53 53.2 +1.0**
LSZ Lusaka 91.43 107 ⇑P **P 15 53 55.4 +2.2**
SNR=108
LSZ Lusaka 91.43 107⇑*e*P **P 15 53 54.7 +1.5**
comp=Z,333nm,1.0s,mb6.6
LSZ *e*PP PP 15 57 31.9 +0.9
LSZ LR LR
comp=Z,270µm,20.0s,MS7.7
LSZ Lusaka 91.43 107⇑*e*P **P 15 53 54.7 +1.5**
LSZ *e* 15 57 32.0
LSZ pmax pmax
comp=Z,333nm,1.0s,mb6.6
LSZ MLR MLR
comp=Z,270µm,20.0s,MS7.7
EPF Esparros 91.48 44 *e*P **P 15 53 52.7 0.0**
comp=Z,2µm,1.6s,mb6.8
EPF Esparros 91.48 44 *e*P **P 15 53 52.7 0.0**
comp=Z,794nm,1.6s,mb6.8
EPF Esparros 91.48 44 *e*P **P 15 53 52.7 0.0**
EPF pmax pmax
comp=Z,794nm,1.6s,mb6.8
ETOS Mallorca 91.55 47 P **P 15 53 51.7 -1.4**
comp=Z,68nm,0.8s,mb6.0
MELF Melles 91.67 44 *e*P **P 15 53 54.8 +1.2**
CASY Casey 91.68 180 *e*P **P 15 53 53.9 +0.6**
YKA Yellowknife Ar 91.69 341 P **P 15 53 51.5 -1.6**
comp=Z,71nm,0.7s,mb6.1,baz=138,slow=4.3,SNR=127
YKA PKKPbc PKKPbc 16 11 12.0 -2.9
comp=Z,3.5nm,1.1s,baz=345,slow=3.2,SNR=4.1
YKA PKPPKP 16 19 32.3
comp=Z,1.5nm,0.8s,baz=330,slow=2.6,SNR=3.8
YKA LR LR 16 38 46.8
comp=Z,122µm,21.4s,MS7.3,baz=135,slow=38
YKA Yellowknife Ar 91.69 341 P **P 15 53 51.5 -1.6**
YKA PKKPbc PKKPbc 16 11 12.1 -2.9
YKA P'P' 16 19 32.4
YKA LR LR 16 38 46.8
YKA Yellowknife Ar 91.69 341 P **P 15 53 51.5 -1.7**
YKA 16 11 12.0
YKA pmax pmax
comp=Z,71nm,0.7s
YKA MLR MLR
comp=Z,122µm,21.4s
EMIR Miracle 91.71 45 P **P 15 53 54.5 +0.7**
comp=Z,37nm,0.8s,mb5.8
CKHR Kef el Ahmar 91.75 52 P **P 15 53 56.5 +2.4**
SET Setif 91.75 51 P **P 15 53 57.0 +2.9**
QUIF Quistinic 91.84 38 *e*P **P 15 53 53.0 -1.2**
comp=Z,888nm,1.4s,mb6.6
QUIF Quistinic 91.84 38 *e*P **P 15 53 53.0 -1.2**
comp=Z,444nm,1.4s,mb6.6
QUIF Quistinic 91.84 38 *e*P **P 15 53 53.0 -1.2**
QUIF pmax pmax
comp=Z,444nm,1.4s,mb6.6
MLS Moulis 91.93 44 *e*P **P 15 53 55.6 +0.8**
ROSF Rostrenen 92.00 38 *e*P **P 15 53 53.8 -1.2**
comp=Z,899nm,1.2s,mb6.7
ROSF Rostrenen 92.00 38 *e*P **P 15 53 53.8 -1.2**
comp=Z,449nm,1.2s,mb6.7
ROSF Rostrenen 92.00 38 *e*P **P 15 53 53.8 -1.2**
ROSF pmax pmax
comp=Z,449nm,1.2s,mb6.7
DFRA Djebel Bou Aff 92.24 51 P **P 15 53 58.5 +2.1**
SGMF Saint Gilles 92.37 38 *e*P **P 15 53 55.3 -1.4**
comp=Z,1µm,1.7s,mb6.7
SGMF Saint Gilles 92.37 38 *e*P **P 15 53 55.3 -1.4**
comp=Z,642nm,1.7s,mb6.7
SGMF Saint Gilles 92.37 38 *e*P **P 15 53 55.3 -1.4**
SGMF pmax pmax
comp=Z,642nm,1.7s,mb6.7
CTEI Djebel Teioual 92.42 52 P **P 15 53 59.0 +1.8**
CARF Carcanieres 92.47 45 *e*P **P 15 53 58.7 +1.4**
CASM Ain Smara 92.56 52 P **P 15 53 59.0 +1.1**
LFF La Frestale 92.67 42 *e*P **P 15 53 57.5 -0.6**
comp=Z,2µm,1.2s,mb7.0
LFF La Frestale 92.67 42 *e*P **P 15 53 57.5 -0.6**
comp=Z,828nm,1.2s,mb7.0
LFF La Frestale 92.67 42 *e*P **P 15 53 57.5 -0.6**
LFF pmax pmax
comp=Z,829nm,1.2s,mb7.0
FILF Fillols 92.69 45 *e*P **P 15 53 58.7 +0.4**
DYA Yadsworthy 92.75 36 *e*P **P 15 53 56.7 -1.6**
DYA AMb AMB 15 54 02.2
comp=Z,535nm,1.7s,mb6.7
DYA *e* 15 57 35.7
DYA AMS AMS 16 32 06.4
comp=Z,293µm,20.8s,MS7.7
HTL Hartland 92.76 35 *e*P **P 15 53 56.7 -1.7**
HTL AMb AMB 15 54 02.4
comp=Z,428nm,1.7s,mb6.6
HTL *e* 15 57 50.1
HTL AMS AMS 16 31 55.2
comp=Z,289µm,21.3s,MS7.7
CKFL Kef-Lekhel 92.79 52 P **P 15 54 01.0 +2.1**
MTLF Montolieu 92.83 44 *e*P **P 15 53 58.2 -0.8**
comp=Z,2µm,1.8s,mb6.8
MTLF Montolieu 92.83 44 *e*P **P 15 53 58.2 -0.8**
comp=Z,786nm,1.8s,mb6.8
MTLF Montolieu 92.83 44 *e*P **P 15 53 58.2 -0.8**
MTLF pmax pmax
comp=Z,786nm,1.8s,mb6.8
EJON La Jonquera 92.85 45 P **P 15 53 57.7 -1.4**
comp=Z,43nm,0.8s,mb5.9
LRDF Laroque-de-Fa 92.85 44 *e*P **P 15 53 59.6 +0.6**
SJAF Saint Jean de 92.86 45 *e*P **P 15 53 59.3 +0.2**
MFF Saint Martin d 92.94 40 *e*P **P 15 53 58.6 -0.8**
comp=Z,3µm,1.7s,mb7.1
MFF Saint Martin d 92.94 40 *e*P **P 15 53 58.6 -0.8**
comp=Z,1µm,1.7s,mb7.1
MFF Saint Martin d 92.94 40 *e*P **P 15 53 58.6 -0.8**
MFF pmax pmax
comp=Z,1µm,1.7s,mb7.1
DLF Lyons Farm 92.97 32⇑*i*P **P 15 53 58.8 -0.5**
SNZO South Karori 92.99 223 PFAKE 15 54 10.0 +10
SNZO LR LR
comp=Z,848µm,21.0s,MS8.2
DSB Dublin 93.02 33 *e*P **P 15 53 58.5 -1.0**
comp=Z,337nm,1.2s,mb6.7
CAEH 'Ain El Ouahch 93.05 51 P **P 15 54 01.0 +0.9**
URZ Urewera 93.05 226 P **P 15 54 01.4 +1.1**
comp=Z,20nm,0.8s,mb5.6,baz=77,slow=9.9,SNR=6.3
JVM Valle D.L. Mar 93.06 37 *e*P **P 15 53 57.2 -2.6**
JSA Saint Aubin 93.07 37 *e*P **P 15 53 58.0 -1.9**
JSA AMb AMB 15 54 03.9
comp=Z,383nm,1.7s,mb6.6
KHZ Kahutara 93.10 222 *e*P **P 15 54 01.6 +1.2**
JRS Jersey 93.12 37 *e*P **P 15 53 58.5 -1.6**
DMUB Kingscourt 93.12 32⇑*i*P **P 15 53 59.1 -0.9**
JLP Les Platons 93.14 37⇑*e*P **P 15 53 57.9 -2.3**
JQE Queens East 93.15 37⇑*e*P **P 15 53 57.5 -2.8**
ABSA Djebel Ababsia 93.29 52 P **P 15 54 03.0 +1.8**
RJF Les Rejaudoux 93.32 42 *e*P **P 15 54 00.3 -0.9**
comp=Z,2µm,1.6s,mb7.0
RJF *e*MLR MLR
comp=Z,289µm,21.8s,MS7.4

RJF Les Rejaudoux 93.32 42 *e*P **P 15 54 00.3 -0.9**
comp=Z,936nm,1.6s,mb7.0
RJF LR LR
comp=Z,289µm,21.8s,MS7.7
RJF Les Rejaudoux 93.32 42 *e*P **P 15 54 00.3 -0.9**
RJF pmax pmax
comp=Z,936nm,1.6s,mb7.0
RJF MLR MLR
comp=Z,289µm,21.8s,MS7.7
CMAH Djebel Manchou 93.40 52 P **P 15 54 03.5 +1.8**
GRR Gorron 93.41 39 *e*P **P 15 54 00.1 -1.4**
comp=Z,792nm,1.2s,mb6.7
GRR Gorron 93.41 39 *e*P **P 15 54 00.1 -1.4**
comp=Z,396nm,1.2s,mb6.7
GRR Gorron 93.41 39 *e*P **P 15 54 00.1 -1.4**
GRR pmax pmax
comp=Z,396nm,1.2s,mb6.7
CAF Calviac 93.48 43 *e*P **P 15 54 01.4 -0.5**
comp=Z,952nm,1.4s,mb6.7
CAF Calviac 93.48 43 *e*P **P 15 54 01.4 -0.5**
comp=Z,476nm,1.4s,mb6.7
CAF Calviac 93.48 43 *e*P **P 15 54 01.4 -0.5**
CAF pmax pmax
comp=Z,476nm,1.4s,mb6.7
POHA Pohakuloa 93.57 290 PFAKE 15 54 10.0 +7.1
POHA LR LR
comp=Z,411µm,21.0s,MS7.9
LTZ Lake Taylor 93.67 221 P **P 15 54 04.9 +1.9**
GMM Mts of Mourne 93.78 32⇑*e*P **P 15 54 02.4 -0.6**
FLN La Foliniere 93.81 38 *e*P **P 15 54 02.2 -1.1**
comp=Z,886nm,1.3s,mb6.8,baz=234
FLN eMLR MLR
comp=Z,119µm,21.2s,MS7.0
FLN La Foliniere 93.81 38 *e*P **P 15 54 02.2 -1.1**
comp=Z,443nm,1.3s,mb6.7
FLN LR LR
comp=Z,119µm,21.3s,MS7.3
FLN La Foliniere 93.81 38 *e*P **P 15 54 02.2 -1.1**
FLN pmax pmax
comp=Z,443nm,1.3s,mb6.7
FLN MLR MLR
comp=Z,119µm,21.3s,MS7.3
RPZ Rata Peaks 93.85 219 P **P 15 54 05.4 +1.6**
comp=Z,43nm,1.0s,mb5.8,baz=60,slow=4.5,SNR=7.4
THZ Tophouse 93.86 222 *e*P **P 15 54 04.8 +0.9**
TGRZ Tauranga 93.90 227 *e*P **P 15 54 06.9 +2.7**
RAO Raoul Island 93.92 236 PFAKE 15 54 20.0 +16
RAO LR LR
comp=Z,167µm,22.0s,MS7.5
LDF La Druitiere 93.94 39 *e*P **P 15 54 02.6 -1.3**
comp=Z,732nm,1.3s,mb6.7
LDF La Druitiere 93.94 39 *e*P **P 15 54 02.6 -1.3**
comp=Z,366nm,1.3s,mb6.7
LDF La Druitiere 93.94 39 *e*P **P 15 54 02.6 -1.3**
LDF pmax pmax
comp=Z,366nm,1.3s,mb6.7
HTR Trewern Hill 93.98 35 *e*P **P 15 54 02.8 -1.2**
HGH Gray Hill 93.99 35 *e*P **P 15 54 02.0 -2.0**
MCH1 Michaelchurch 94.08 35 *e*P **P 15 54 03.9 -0.6**
MCH1 AMb AMB 15 54 08.0
comp=Z,393nm,1.8s,mb6.5
MCH1 *e* 15 57 50.9
MCH1 AMS AMS 16 32 45.7
comp=Z,320µm,21.8s,MS7.7
VERF Verneugheol 94.13 42 *e*P **P 15 54 04.8 -0.1**
TCF Toulx Ste Croi 94.22 41 *e*P **P 15 54 04.2 -1.0**
comp=Z,598nm,1.3s,mb6.6
TCF Toulx Ste Croi 94.22 41 *e*P **P 15 54 04.2 -1.0**
comp=Z,299nm,1.3s,mb6.6
TCF Toulx Ste Croi 94.22 41 *e*P **P 15 54 04.2 -1.0**
TCF pmax pmax
comp=Z,299nm,1.3s,mb6.6
LASF Ste Croix 94.23 44 *e*P **P 15 54 05.0 -0.4**
comp=Z,667nm,1.5s,mb6.6
CRAG Craig 94.23 329 *e*P **P 15 54 06.6 +1.5**
comp=Z,295nm,2.0s,mb6.4
CRAG LR LR
comp=Z,158µm,23.0s,MS7.4
LBL Lubilhac 94.37 43 *e*P **P 15 54 06.8 +0.8**
WRAK Wrangell Islan 94.41 330 *e*P **P 15 54 06.4 +0.6**
comp=Z,285nm,1.1s,mb6.6
WRAK LR LR
comp=Z,101µm,21.0s,MS7.3
HLM1 Long Mynd 94.41 34 *e*P **P 15 54 04.6 -1.4**
SBD1 Bryn Du 94.42 34 *e*P **P 15 54 04.8 -1.1**
KEST Kesra 94.44 53 P **P 15 54 06.9 +0.4**
comp=Z,37nm,0.9s,mb5.8,baz=196,slow=1.8,SNR=52
KEST LR LR 16 38 52.4
comp=Z,87µm,21.0s,MS7.2,baz=210,slow=37
BORG Borgarnes 94.45 19 P **P 15 54 08.2 +2.3**
comp=Z,1µm,1.7s,mb7.0,SNR=6.8
BORG Borgarnes 94.45 19 P **P 15 54 05.4 -0.5**
comp=Z,36nm,0.8s,mb5.9,baz=280,slow=1.6,SNR=12
BORG Borgarnes 94.45 19 P **P 15 54 05.4 -0.5**
BORG LR LR
comp=Z,103µm,22.0s,MS7.2
PYM Petit Puy Mans 94.46 42 *e*P **P 15 54 07.1 +0.7**
SWN1 Swindon 94.47 36 P **P 15 54 05.0 -1.3**
SWN1 AMb AMB 15 54 09.9
comp=Z,551nm,2.0s,mb6.7
SWN1 15 57 41.1
SWN1 AMS AMS 16 33 09.3
SWN1 Swindon 94.47 36 *e*P **P 15 54 05.0 -1.3**
SWN1 AMb AMB 15 54 09.9
comp=Z,551nm,2.0s,mb6.7
SWN1 *e* 15 57 41.1
SWN1 AMS AMS 16 33 09.3
comp=Z,251µm,21.1s,MS7.7
DLBC Dease Lake 94.56 333 *e*P **P 15 54 05.3 -1.2**
AGO Saint Agoulin 94.67 42 *e*P **P 15 54 07.6 +0.3**
WOL Wolverton 94.67 36 *e*P **P 15 54 05.4 -1.8**
WOL AMb AMB 15 54 11.5
comp=Z,678nm,1.8s,mb6.8
GAL1 Galloway 94.73 32⇑*e*P **P 15 54 06.2 -1.2**
GAL1 AMb AMB 15 54 10.9
comp=Z,352nm,1.7s,mb6.5
GAL1 *e* 15 57 55.0
GAL1 AMS AMS 16 33 45.0
comp=Z,156µm,19.5s,MS7.5
BGF Bois d'Agland 94.73 41 *e*P **P 15 54 06.6 -1.0**
comp=Z,863nm,1.2s,mb6.8
BGF Bois d'Agland 94.73 41 *e*P **P 15 54 06.6 -1.0**
comp=Z,431nm,1.2s,mb6.8
BGF Bois d'Agland 94.73 41 *e*P **P 15 54 06.6 -1.0**
BGF pmax pmax
comp=Z,431nm,1.2s,mb6.8
COLF Collangettes 94.78 43 *e*P **P 15 54 08.2 +0.3**
COLF Collangettes 94.78 43 *e*P **P 15 54 08.8 +0.9**
HYF Humbligny 94.94 41 *e*P **P 15 54 07.7 -0.8**
PLDF La Plantade 94.94 42 *e*P **P 15 54 09.2 +0.6**
STNC Stoke 95.06 34 *e*P **P 15 54 06.8 -2.1**
STNC AMb AMB 15 54 14.0
comp=Z,638nm,2.1s,mb6.7
STNC *e* 15 57 57.1
STNC AMS AMS 16 33 28.9
comp=Z,196µm,21.6s,MS7.5
VIVF Saint-Julien-l 95.10 43 *e*P **P 15 54 09.1 -0.2**
comp=Z,1µm,1.8s,mb6.7
VIVF Saint-Julien-l 95.10 43 *e*P **P 15 54 09.1 -0.2**
comp=Z,624nm,1.8s,mb6.7
VIVF Saint-Julien-l 95.10 43 *e*P **P 15 54 09.1 -0.2**
VIVF pmax pmax
comp=Z,624nm,1.8s,mb6.7
GCD Castle Douglas 95.11 32⇑*e*P **P 15 54 07.7 -1.4**
AVF Avril sur Loir 95.15 41 *e*P **P 15 54 08.4 -1.1**
comp=Z,565nm,1.2s,mb6.6
AVF Avril sur Loir 95.15 41 *e*P **P 15 54 08.4 -1.1**
comp=Z,282nm,1.2s,mb6.6
AVF Avril sur Loir 95.15 41 *e*P **P 15 54 08.4 -1.1**
AVF pmax pmax
comp=Z,283nm,1.2s,mb6.6
SSB Saint Sauveur 95.21 43 *e*P **P 15 54 10.0 +0.2**
SSB Saint Sauveur 95.21 43 *e*P **P 15 54 10.2 +0.4**
SSB *e* 15 57 53.8
KWE Weaver Farm 95.21 34⇑*e*P **P 15 54 08.4 -1.2**
PMSU Muirshiel 95.24 31 *e*P **P 15 54 09.4 -0.3**
SMRF Simiane la Rot 95.29 45 *e*P **P 15 54 10.4 +0.2**
comp=Z,994nm,1.6s,mb6.7
SMRF Simiane la Rot 95.29 45 *e*P **P 15 54 10.4 +0.2**
comp=Z,994nm,1.6s,mb6.7
KAR1 Arisaig 95.32 30⇑*e*P **P 15 54 09.1 -1.0**
CWF Charnwood Fore 95.35 35 *e*P **P 15 54 08.9 -1.4**
CWF AMb AMB 15 54 14.2
comp=Z,312nm,1.8s,mb6.4
CWF *e* 15 57 53.9
CWF AMS AMS 16 33 23.4
comp=Z,185µm,22.2s,MS7.5
PGBU Glenifferbraes 95.35 31 *e*P **P 15 54 09.5 -0.7**
PGBU AMb AMB 15 54 15.0
comp=Z,598nm,1.9s,mb6.7
PGBU *e* 15 57 56.3
PGBU AMS AMS 16 32 59.1
comp=Z,275µm,20.9s,MS7.7
SSF Saint Saulge 95.37 41 *e*P **P 15 54 09.1 -1.4**
comp=Z,483nm,1.2s,mb6.5
SSF Saint Saulge 95.37 41 *e*P **P 15 54 09.1 -1.4**
comp=Z,241nm,1.2s,mb6.5
SSF Saint Saulge 95.37 41 *e*P **P 15 54 09.1 -1.4**
SSF pmax pmax
comp=Z,241nm,1.2s,mb6.5
OCF Saint Nazaire 95.38 44 *e*P **P 15 54 12.4 +1.8**
OG26 St.-Nazaire-De 95.38 44 *e*P **P 15 54 12.4 +1.8**
SMF Signal de Mont 95.38 42 *e*P **P 15 54 09.7 -0.9**
comp=Z,1µm,1.2s,mb6.9
SMF Signal de Mont 95.38 42 *e*P **P 15 54 09.7 -0.9**
comp=Z,620nm,1.2s,mb6.9
SMF Signal de Mont 95.38 42 *e*P **P 15 54 09.7 -0.9**
SMF pmax pmax
comp=Z,620nm,1.2s,mb6.9
PCA1 Carrot 95.40 31⇑*e*P **P 15 54 09.4 -1.0**
PCA1 *e* 15 57 36.4
LHO Holmfirth 95.47 34 *e*P **P 15 54 09.2 -1.6**
LHO *e* 15 58 00.2
KBI1 Birley Grange 95.49 34⇑*e*P **P 15 54 10.0 -0.9**
RRH Rhenigidale 95.49 29⇑*e*P **P 15 54 10.9 +0.1**
AFI Afiamalu 95.55 253 P **P 15 54 13.0 +0.9**
comp=Z,76nm,1.3s,mb6.0
AFI LR LR
comp=Z,301µm,20.0s,MS7.8
AFI Afiamalu 95.55 253 P **P 15 54 16.2 +4.1**
AFI pmax pmax
comp=Z,76nm,1.3s,mb6.0
EAB Aberfoyle 95.62 31⇑*e*P **P 15 54 11.1 -0.3**
LMR La Mourre 95.63 45 *e*P **P 15 54 11.6 -0.2**
comp=Z,2µm,1.8s,mb7.0
LMR La Mourre 95.63 45 *e*P **P 15 54 11.6 -0.2**
comp=Z,1µm,1.8s,mb7.0
LMR La Mourre 95.63 45 *e*P **P 15 54 11.6 -0.2**
LMR pmax pmax
comp=Z,1µm,1.8s,mb7.0
KPL Plockton 95.63 29 *e*P **P 15 54 10.8 -0.7**
KPL AMb AMB 15 54 15.0
comp=Z,272nm,1.6s,mb6.4
KPL *e* 15 58 00.7
KPL AMS AMS 16 33 09.7
comp=Z,280µm,21.3s,MS7.7
KSB Sheil Bridge 95.67 30 *e*P **P 15 54 11.6 0.0**
ECK Cauldkaine Hil 95.67 32 *e*P **P 15 54 11.4 -0.3**
LOR Lormes 95.67 41 *e*P **P 15 54 10.6 -1.3**
comp=Z,368nm,1.1s,mb6.4,baz=247
LOR eMLR MLR
comp=Z,335µm,23.0s,MS7.5
LOR Lormes 95.67 41 *e*P **P 15 54 10.6 -1.3**
comp=Z,184nm,1.1s,mb6.4
LOR LR LR
comp=Z,335µm,23.0s,MS7.8
LOR Lormes 95.67 41 *e*P **P 15 54 10.6 -1.3**
LOR pmax pmax
comp=Z,184nm,1.1s,mb6.4
LOR MLR MLR
comp=Z,335µm,23.0s,MS7.8
ESK Eskdalemuir 95.70 32 P **P 15 54 12.5 +0.7**
comp=Z,570nm,1.8s,mb6.7,SNR=13
ESK Eskdalemuir 95.70 32 *e*P **P 15 54 10.3 -1.5**
comp=Z,333nm,1.4s,mb6.6
ESK LR LR
comp=Z,171µm,21.0s,MS7.5
ESK Eskdalemuir 95.70 32 *e*P **P 15 54 10.5 -1.3**
ESK AMb AMB 15 54 15.6
comp=Z,388nm,1.7s,mb6.6
ESK *e* 15 58 01.0
ESK AMS AMS 16 34 22.7
comp=Z,149µm,20.0s,MS7.5
ESK Eskdalemuir 95.70 32 *e*P **P 15 54 10.3 -1.5**
ESK pmax pmax
comp=Z,333nm,1.4s,mb6.6
ESK MLR MLR
comp=Z,171µm,21.0s,MS7.5
EKA Eskdalemuir Ar 95.74 32 P **P 15 54 12.6 +0.6**
comp=Z,28nm,0.9s,mb5.7,baz=237,slow=4.6,SNR=28
EKA Eskdalemuir Ar 95.74 32 P **P 15 54 12.6 +0.6**
EKA pmax pmax
comp=Z,28nm,0.9s
OG25 Le Caire 95.79 44 *e*P **P 15 54 13.9 +1.4**
HPK Haverah Park 95.80 33 *e*P **P 15 54 10.8 -1.4**
HPK AMb AMB 15 54 16.3
comp=Z,494nm,1.8s,mb6.6
HPK *e* 15 58 01.9
HPK AMS AMS 16 33 43.9
comp=Z,283µm,21.6s,MS7.7
FRF La Foret Royal 95.81 45 *e*P **P 15 54 12.4 -0.2**
comp=Z,2µm,1.7s,mb6.9
FRF La Foret Royal 95.81 45 *e*P **P 15 54 12.4 -0.2**
comp=Z,904nm,1.7s,mb6.9
FRF La Foret Royal 95.81 45 *e*P **P 15 54 12.4 -0.2**
FRF pmax pmax
comp=Z,904nm,1.7s,mb6.9
RRR Rubha Reidh 95.85 29⇑*e*P **P 15 54 11.8 -0.6**
EAU Auchinoon 95.86 31 *e*P **P 15 54 12.3 -0.2**
TFO1 Folkestone 95.88 37 *e*P **P 15 54 10.4 -2.3**
TFO1 AMb AMB 15 54 16.9
comp=Z,511nm,1.3s,mb6.8
TFO1 *e* 15 58 01.1
TFO1 AMS AMS 16 34 36.2
comp=Z,152µm,19.2s,MS7.5
KAC Achnashellach 95.88 29⇑*e*P **P 15 54 12.8 +0.2**
ORIF Oris-en-Rattie 95.90 44 *e*P **P 15 54 13.1 +0.1**
comp=Z,514nm,1.1s,mb6.6
ORIF eMLR MLR
comp=Z,827µm,22.2s,MS7.9
ORIF Oris-en-Rattie 95.90 44 *e*P **P 15 54 13.1 +0.1**
comp=Z,257nm,1.1s,mb6.6
ORIF Oris-en-Rattie 95.90 44 *e*P **P 15 54 13.1 +0.1**
ORIF pmax pmax
comp=Z,257nm,1.1s,mb6.6
GRN Grenoble 95.95 43 *e*P **P 15 54 14.7 +1.5**
XAL Allendale 95.96 32 *e*P **P 15 54 12.1 -0.9**
VSL Villasalto 95.99 50 *e*P **P 15 54 15.4 +1.8**
comp=Z,2µm,1.9s,mb7.2
VSL LR LR
comp=Z,206µm,22.0s,MS7.6
EDI Edinburgh 96.03 31 *e*P **P 15 54 12.4 -0.9**
EDI AMb AMB 15 54 17.0
comp=Z,274nm,1.9s,mb6.3
EDI *e* 15 58 03.5
EDI AMS AMS 16 33 20.4
comp=Z,221µm,20.8s,MS7.6
EBH Black Hill 96.05 31⇑*e*P **P 15 54 12.3 -1.1**
CALN Calern 96.06 45 *e*P **P 15 54 15.4 +1.7**
OG05 Jujurieux 96.12 43 *e*P **P 15 54 14.8 +0.9**
SIT Sitka 96.13 330 PFAKE 15 54 20.0 +6.3
SIT LR LR
comp=Z,157µm,20.0s,MS7.5
GDM Grand'Maison 96.17 44 *e*P **P 15 54 15.3 +1.1**
MENF Mencas 96.18 38 *e*P **P 15 54 14.4 +0.3**
XSO Sourhope Farm 96.26 32 *e*P **P 15 54 13.4 -1.0**
MDO Dochfour 96.28 30⇑*e*P **P 15 54 13.4 -1.0**
MVIF Mont Vial 96.29 45 *e*P **P 15 54 16.4 +1.6**
ESY Stoneypath 96.30 31⇑*e*P **P 15 54 14.4 -0.1**
SURF Saint Ours 96.31 44 *e*P **P 15 54 16.8 +1.9**
KIP Kipapa 96.35 290 PFAKE 15 54 30.0 +14
KIP LR LR
comp=Z,347µm,22.0s,MS7.8
KIP Kipapa 96.35 290 *i* P **P 15 54 16.2 +0.6**
REVF Revere 96.36 45 *e*P **P 15 54 16.2 +1.1**
MBDF Montbardon 96.39 44 *e*P **P 15 54 15.3 +0.1**
comp=Z,1µm,1.5s,mb6.7
MBDF Montbardon 96.39 44 *e*P **P 15 54 15.3 +0.1**
comp=Z,512nm,1.5s,mb6.7
MBDF Montbardon 96.39 44 *e*P **P 15 54 15.3 +0.1**
MBDF pmax pmax
comp=Z,512nm,1.5s,mb6.7
RSC Scourie 96.40 29 *e*P **P 15 54 14.8 -0.1**
TOUF Mont Tournerai 96.40 45 *e*P **P 15 54 16.5 +1.2**
LUCF Luceram 96.42 45 *e*P **P 15 54 16.2 +0.8**
SBF Sospel 96.46 45 *e*P **P 15 54 15.4 -0.2**
comp=Z,1µm,1.4s,mb6.9
SBF Sospel 96.46 45 *e*P **P 15 54 15.4 -0.2**
comp=Z,732nm,1.4s,mb6.9
SBF Sospel 96.46 45 *e*P **P 15 54 15.4 -0.2**
SBF pmax pmax
comp=Z,732nm,1.4s,mb6.9
BNI Bardonecchia 96.47 44 *e*P **P 15 54 16.1 +0.5**
comp=Z,173nm,1.2s,mb6.4
BNI LR LR
comp=Z,833µm,22.0s,MS8.2
AUTN L'Aution 96.51 45 *e*P **P 15 54 17.3 +1.5**
SAOF Saorge 96.59 45 *e*P **P 15 54 17.3 +1.2**
DOI San Damiano 96.61 45 P **P 15 54 16.5 +0.3**
comp=Z,749nm,2.1s,mb6.8
DOI San Damiano 96.61 45 P **P 15 54 16.5 +0.3**
DOI pmax pmax
comp=Z,749nm,2.1s,mb6.8
MVH1 Achvaich 96.62 29 *e*P **P 15 54 14.9 -1.0**
AEU East Anglia Un 96.64 35 *e*P **P 15 54 15.2 -1.0**
LPL La Plagne 96.70 44 *e*P **P 15 54 17.0 +0.4**
comp=Z,840nm,1.3s,mb6.7
LPL La Plagne 96.70 44 *e*P **P 15 54 17.0 +0.4**
comp=Z,420nm,1.3s,mb6.7
LPL La Plagne 96.70 44 *e*P **P 15 54 17.0 +0.4**
LPL pmax pmax
comp=Z,420nm,1.3s,mb6.7
LPG La Plagne 96.70 44 *e*P **P 15 54 17.1 +0.5**
comp=Z,435nm,1.0s,mb6.5
LPG La Plagne 96.70 44 *e*P **P 15 54 17.1 +0.5**
comp=Z,217nm,1.0s,mb6.5
LPG La Plagne 96.70 44 *e*P **P 15 54 17.1 +0.5**
LPG pmax pmax
comp=Z,217nm,1.0s,mb6.5
RSL Rosslend 96.70 43 *e*P **P 15 54 17.9 +1.3**
OSPF L'Ospedale 96.74 48 *e*P **P 15 54 17.8 +0.9**
CABF La Chapelle 96.76 42 *e*P **P 15 54 16.3 -0.5**
comp=Z,908nm,1.5s,mb6.7
CABF La Chapelle 96.76 42 *e*P **P 15 54 16.3 -0.5**
comp=Z,454nm,1.5s,mb6.7
CABF La Chapelle 96.76 42 *e*P **P 15 54 16.3 -0.5**
CABF pmax pmax
comp=Z,454nm,1.5s,mb6.7
PTS Pantelleria 96.83 53 P **P 15 54 20.3 +2.9**
comp=Z,1µm,1.4s,mb7.2
PTS Pantelleria 96.83 53 P **P 15 54 20.3 +2.9**
PTS pmax pmax
comp=Z,1µm,1.4s,mb7.2
GIMEL St. Georges / 96.84 42⇑*i*P **P 15 54 17.7 +0.5**
comp=Z,390nm,2.1s,mb6.5
MCD Coleburn Disti 96.86 30 *e*P **P 15 54 17.2 +0.2**
MEZF Maizieres J'vi 96.94 40 *e*P **P 15 54 16.7 -0.9**
comp=Z,990nm,1.4s,mb6.7,baz=215
MEZF Maizieres J'vi 96.94 40 *e*P **P 15 54 16.7 -0.9**
comp=Z,990nm,1.4s,mb7.0
PGF Pioggiola 96.97 47 *e*P **P 15 54 17.7 -0.2**
comp=Z,860nm,1.4s,mb6.7
PGF Pioggiola 96.97 47 *e*P **P 15 54 17.7 -0.2**
comp=Z,430nm,1.4s,mb6.7
PGF Pioggiola 96.97 47 *e*P **P 15 54 17.7 -0.2**
PGF pmax pmax
comp=Z,430nm,1.4s,mb6.7
OG01 Vacheresse 97.01 43 *e*P **P 15 54 19.4 +1.4**
EMV Vieux Emosson 97.03 43⇑*i*P **P 15 54 19.0 +0.9**
comp=Z,658nm,2.3s,mb6.7
FIN Finale Ligure 97.11 45 P **P 15 54 19.7 +1.2**
BAIF Baives 97.13 39 *e*P **P 15 54 17.2 -1.2**
comp=Z,1µm,1.9s,mb6.7
BAIF Baives 97.13 39 *e*P **P 15 54 17.2 -1.2**
comp=Z,556nm,1.9s,mb6.7
BAIF Baives 97.13 39 *e*P **P 15 54 17.2 -1.2**
BAIF pmax pmax
comp=Z,556nm,1.9s,mb6.7
BRANT Les Verrieres 97.14 42⇑*i*P **P 15 54 19.1 +0.6**
comp=Z,658nm,2.1s,mb6.7
AIGLE Aigle 97.19 43⇑*i*P **P 15 54 19.2 +0.4**
comp=Z,559nm,2.1s,mb6.6
MLA1 Latheron 97.19 29⇑*e*P **P 15 54 17.6 -0.8**
DIX Grande Dixence 97.36 43⇑*i*P **P 15 54 20.1 +0.5**
comp=Z,464nm,2.2s,mb6.5
DOU Dourbes 97.37 39 P **P 15 54 19.2 -0.3**
comp=Z,166nm,2.5s,mb6.0
SNF Seneffe 97.37 38 P **P 15 54 20.4 +0.9**
comp=Z,178nm,2.3s,mb6.1
TORNY Torny/Romont 97.37 42⇑*i*P **P 15 54 20.7 +1.1**
comp=Z,637nm,2.1s,mb6.7
THEF They Montfort 97.39 41 *e*P **P 15 54 19.3 -0.3**
SKAG Skagway 97.41 332 *e*P **P 15 54 20.4 +1.0**
comp=Z,167nm,2.0s,mb6.1
SKAG LR LR
comp=Z,119µm,22.0s,MS7.3
SENIN Lac Senin/Sane 97.41 43⇑*i*P **P 15 54 20.8 +1.0**
comp=Z,594nm,2.3s,mb6.6
GIVF Givet 97.50 39 *e*P **P 15 54 19.1 -1.0**
comp=Z,1µm,1.3s,mb7.0
GIVF Givet 97.50 39 *e*P **P 15 54 19.1 -1.0**
comp=Z,696nm,1.3s,mb7.0
GIVF Givet 97.50 39 *e*P **P 15 54 19.1 -1.0**
GIVF pmax pmax
comp=Z,696nm,1.3s,mb7.0
HAU Haudompre 97.51 41 *e*P **P 15 54 19.1 -1.1**
comp=Z,747nm,1.7s,mb6.6
HAU eMLR MLR
comp=Z,342µm,21.5s,MS7.5
HAU Haudompre 97.51 41 *e*P **P 15 54 19.1 -1.1**
comp=Z,373nm,1.7s,mb6.6
HAU LR LR
comp=Z,342µm,21.5s,MS7.8
HAU Haudompre 97.51 41 *e*P **P 15 54 19.1 -1.1**
HAU pmax pmax
comp=Z,373nm,1.7s,mb6.6
HAU MLR MLR
comp=Z,342µm,21.5s,MS7.8
LOMF Lomont 97.53 42 *e*P **P 15 54 20.2 -0.1**
UCC Uccle 97.54 38 P **P 15 54 19.8 -0.4**
ORO Oropa 97.54 44 P **P 15 54 21.1 +0.7**
HINF Hinteralfeld 97.74 41 *e*P **P 15 54 19.9 -1.3**
comp=Z,483nm,1.5s,mb6.5
HINF Hinteralfeld 97.74 41 *e*P **P 15 54 19.9 -1.3**
comp=Z,242nm,1.5s,mb6.5
HINF Hinteralfeld 97.74 41 *e*P **P 15 54 19.9 -1.3**
HINF pmax pmax
comp=Z,242nm,1.5s,mb6.5
WIMIS Wimmis 97.74 43⇑*i*P **P 15 54 21.7 +0.4**
comp=Z,388nm,2.5s,mb6.5
BOURR Bourrignon 97.80 42⇑*i*P **P 15 54 21.9 +0.4**
comp=Z,484nm,2.3s,mb6.6
BCLA Clavier 97.92 39 P **P 15 54 21.5 -0.5**
comp=Z,146nm,2.4s,mb6.1
MOF Molkenrain 97.93 41 *e*P **P 15 54 21.3 -0.8**
BBS Basel-Blauen 98.00 42 *e*P **P 15 54 22.4 0.0**
BALST Balsthal 98.06 42⇑*i*P **P 15 54 23.0 +0.3**
comp=Z,589nm,2.2s,mb6.7
ECH Echery 98.09 41 *e*P **P 15 54 22.8 0.0**
ECH Echery 98.09 41 *e*P **P 15 54 23.3 +0.5**
WLF Walferdange 98.09 40 P **P 15 54 23.2 +0.4**
comp=Z,296nm,2.2s,mb6.4
WLF Walferdange 98.09 40 *e*P **P 15 54 22.3 -0.5**
comp=Z,757nm,1.3s,mb7.1
WLF LR LR
comp=Z,241µm,22.0s,MS7.7
WLF Walferdange 98.09 40 *e*P **P 15 54 22.3 -0.5**
WLF pmax pmax
comp=Z,757nm,1.3s,mb7.1
WLF MLR MLR
comp=Z,241µm,22.0s,MS7.7
WLF Walferdange 98.09 40 *e*Pdiff **P 15 54 23.1 +0.3**
WLF *e*PP PP 15 58 11.8 -11
WLF *e*PS SKKSac 16 05 22.0 -4.8
WLF *e*SKSac PS 16 07 27.7 +12
WLF *e*SS SS 16 12 40.5 +10
HASLI Hasliberg/Brie 98.11 43⇑*i*P **P 15 54 23.5 +0.6**
comp=Z,739nm,2.2s,mb6.8
RES Resolute Bay 98.12 353 *e*P **P 15 54 21.3 -1.1**
comp=Z,7.1nm,1.1s,mb5.1
RES Resolute Bay 98.12 353 P **P 15 54 23.1 +0.7**
VAI Varese 98.14 44 P **P 15 54 23.9 +0.8**
BOB Bobbio (Coli) 98.15 45 P **P 15 54 24.3 +1.1**
CDF Champ du Feu 98.24 41 *e*P **P 15 54 22.4 -1.1**
comp=Z,635nm,1.4s,mb6.6
CDF Champ du Feu 98.24 41 *e*P **P 15 54 22.4 -1.1**
comp=Z,317nm,1.4s,mb6.7
CDF Champ du Feu 98.24 41 *e*P **P 15 54 22.4 -1.1**
CDF pmax pmax
comp=Z,317nm,1.4s,mb6.7
BEBN Eben Emael 98.29 38 P **P 15 54 23.3 -0.3**
FUSIO Fusio 98.31 43⇑*i*Pdiff **P 15 54 23.6 -0.2**
comp=Z,637nm,2.0s,mb6.8
LIBD Limburg 98.34 41 *e*P **P 15 54 24.3 +0.4**
MUGIO Muggio 98.34 44⇑*i*Pdiff **P 15 54 24.5 +0.5**
comp=Z,412nm,2.0s,mb6.6

WDD Wield Dalam 98.37 55 PFAKE 15 54 40.0 +16
WDD LR LR
comp=Z,336µm,22.0s,MS7.8
SULZ Cheisacher 98.40 42⇑*i*Pdiff **P** **15 54 24.6 +0.4**
comp=Z,466nm,2.1s,mb6.6
MEM Membach 98.41 39 P **P** **15 54 24.0 -0.1**
comp=Z,74nm,1.3s,mb6.1
HGN Heimansgroeve 98.43 38⇑*e*P **P** **15 54 23.7 -0.6**
comp=Z,221nm,1.8s,mb6.4
HGN Heimansgroeve 98.43 38 *e*PP PP 15 58 24.2 -0.9
HGN Heimansgroeve 98.43 38 *e*S S 16 05 51.0 +0.9
KIZ Kirchzarten 98.45 42 P **P** **15 54 25.6 +1.2**
FELD Feldberg im Sc 98.47 42 *e*P **P** **15 54 24.7 +0.2**
MUO Muotathal 98.50 43⇑*i*Pdiff **P** **15 54 25.5 +0.8**
comp=Z,544nm,2.0s,mb6.7
VLC Villacollemand 98.53 46 *e*P **P** **15 54 24.4 -0.5**
comp=Z,352nm,1.3s,mb6.7
VLC LR LR
comp=Z,151µm,22.0s,MS7.5
ZUR Degenried 98.62 42⇑*i*Pdiff **P** **15 54 25.8 +0.6**
comp=Z,617nm,2.1s,mb6.8
RUP Ruppelstein 98.64 40 *e*P **P** **15 54 26.3 +1.1**
LLS Linth-Limmern 98.69 43⇑*i*Pdiff **P** **15 54 25.8 +0.3**
comp=Z,338nm,2.2s,mb6.5
SLE Schleitheim 98.73 42⇑*i*Pdiff **P** **15 54 26.3 +0.6**
comp=Z,431nm,2.1s,mb6.6
CSLB Castelbuono 98.78 53 P **P** **15 54 22.5 -3.7**
LANF Langenberg 98.80 41 *e*P **P** **15 54 26.3 +0.4**
VDL Val di Lei 98.82 43⇑*i*Pdiff **P** **15 54 26.8 +0.7**
comp=Z,515nm,2.4s,mb6.6
WILA Wila 98.85 42⇑*i*Pdiff **P** **15 54 26.8 +0.6**
comp=Z,525nm,2.0s,mb6.7
BFO Black Forest 98.85 41 *e*Pdiff **P** **15 54 26.3 +0.1**
BFO *e*PP PP 15 58 15.3 -13
BFO *e*PS SKKSac 16 05 25.5 -6.9
BFO *e*SKSac PS 16 07 34.8 +11
BFO *e*SS SS 16 12 44.5 +2.9
VAE Valguarnera 98.87 53 P **P** **15 54 28.1 +1.5**
comp=Z,53nm,0.9s,mb6.1,baz=274,slow=8.3,SNR=6.4
HMDC Modica 98.96 54 P **P** **15 54 28.5 +1.5**
SISB Singen-Schiene 98.99 42 P **P** **15 54 28.8 +2.0**
PLONS Plons/SG 99.00 43⇑*i*Pdiff **P** **15 54 27.4 +0.5**
comp=Z,450nm,2.1s,mb6.6
ABH Alteburg 99.01 40 *e*P **P** **15 54 28.0 +1.1**
FNVD Fontana Vidola 99.02 46 P **P** **15 54 27.4 +0.3**
SPAK Spaichingen-Ko 99.04 42 *e*P **P** **15 54 27.5 +0.4**
LRW Lerwick 99.08 28 *e*P **P** **15 54 26.6 -0.4**
LRW AMb AMB 15 54 31.7
comp=Z,198nm,2.0s,mb6.3
LRW *e* 15 58 28.6
LRW AMS AMS 16 35 10.9
comp=Z,317µm,20.9s,MS7.8
KTD Kalmit 99.10 40 *e*P **P** **15 54 27.5 +0.2**
BERNI Berninapass 99.16 44⇑*i*Pdiff **P** **15 54 28.3 +0.7**
comp=Z,707nm,2.2s,mb6.8
LIENZ Kamor/St.Gall 99.17 43⇑*i*Pdiff **P** **15 54 28.4 +0.8**
comp=Z,469nm,2.1s,mb6.7
DAVOS Davos 99.18 43 P **P** **15 54 28.8 +1.1**
DAVOX Davos/Dischmat 99.21 43 P **P** **15 54 28.8 +1.0**
comp=Z,27nm,0.8s,mb5.8,baz=232,slow=6.0,SNR=28
DAVOX Davos/Dischmat 99.21 43⇑*i*Pdiff **P** **15 54 28.8 +0.9**
comp=Z,366nm,2.1s,mb6.5
VMG Vicchio 99.23 46 P **P** **15 54 28.6 +0.6**
comp=Z,191nm,1.1s,mb6.5
GUT Gutenstein 99.23 42 P **P** **15 54 29.6 +1.7**
LBG Lerchenberg 99.27 41 P **P** **15 54 29.6 +1.5**
PNL Peninsula 99.30 331 *e*P **P** **15 54 26.9 -1.1**
FUORN Ofenpass-Fuorn 99.39 43⇑*i*Pdiff **P** **15 54 29.5 +0.8**
comp=Z,404nm,2.1s,mb6.6
DAVA Damuels 99.41 43⇑*i*Pdiff **P** **15 54 29.0 +0.3**
comp=Z,6µm,5.0s,SNR=6.2
DAVA Damuels 99.41 43 P **P** **15 54 30.4 +1.7**
WTSB Winterswijk 99.42 38⇑*e*P **P** **15 54 28.3 -0.3**
comp=Z,310nm,1.9s,mb6.5
CERT Cerreto 99.47 49 P **P** **15 54 29.9 +0.8**
BUG Bochum--Univer 99.47 38 *e*Pdiff **P** **15 54 29.8 +0.9**
BUG *e*PP PP 15 58 26.9 -6.1
BUG *e*PS SKKSac 16 05 28.6 -8.2
BUG *e*SKSac PS 16 07 40.9 +10
BUG *e*SS SS 16 12 52.9 +2.8
BUCH Bad Urach 99.53 42 P **P** **15 54 31.1 +1.9**
STU Stuttgart 99.56 41 *e*P **P** **15 54 28.6 -0.7**
comp=Z,214nm,1.0s,mb6.5
STU Stuttgart 99.56 41 *e*P **P** **15 54 28.6 -0.7**
STU pmax pmax
comp=Z,214nm,1.0s,mb6.5
STU Stuttgart 99.56 41 *e*Pdiff **P** **15 54 30.2 +0.9**
STU *e*PP PP 15 58 21.1 -13
STU *e*PS SKKSac 16 05 29.6 -7.9
STU *e*SKSac PS 16 07 42.2 +11
STU *e*SS SS 16 12 55.0 +3.6
ASS Assisi 99.64 47 P Pdif 15 54 31.0 +1.1
comp=Z,157nm,1.6s
ASS Assisi 99.64 47 P Pdif 15 54 31.0 +1.1
ASS pmax pmax
comp=Z,157nm,1.6s,mb6.2
TOD Tromm 99.64 40 *e*P Pdif 15 54 30.1 +0.2
TNS Taunus Mts 99.67 40 *e*Pdiff Pdif 15 54 30.8 +0.8
TNS *e*PP PP 15 58 24.1 -10
TNS *e*PS SKKSac 16 05 31.5 -6.8
TNS *e*SKSac PS 16 07 44.1 +11
TNS *e*SS SS 16 12 56.5 +3.5
UBR Ueberruh 99.70 42 P Pdif 15 54 31.9 +1.8
FETA Feichten 99.84 43⇑*i*Pdiff Pdif 15 54 31.1 +0.4
comp=Z,5µm,5.3s,SNR=22
AQU L'Aquila 99.90 48 *e*Pdif Pdif 15 54 31.3 +0.3
comp=Z,418nm,1.3s
AQU LR LR
comp=Z,134µm,20.0s,MS7.5
AQU L'Aquila 99.90 48 *e*P Pdif 15 54 31.3 +0.3
AQU pmax pmax
comp=Z,418nm,1.3s,mb6.7
AQU MLR MLR
comp=Z,134µm,20.0s,MS7.5
AQU L'Aquila 99.90 48⇓*i*P Pdif 15 54 33.7 +2.7
SNTG Esanatoglia 99.91 47 P Pdif 15 54 32.2 +1.1
comp=Z,214nm,1.9s
SIND Sindeldorf 100.03 41 P Pdif 15 54 32.8 +1.2
RETA Reutte 100.04 43⇑*i*Pdiff Pdif 15 54 31.7 +0.1
comp=Z,2µm,4.0s,SNR=8.6
CTI Castel Tesino 100.07 44 P Pdif 15 54 32.1 +0.3
IBBN Ibbenburen 100.10 38 *e*Pdiff Pdif 15 54 33.0 +1.1
IBBN *e*PP PP 15 58 30.4 -7.4
IBBN *e*PS SKKSac 16 05 32.0 -9.2
IBBN *e*SKSac PS 16 07 46.0 +8.7
IBBN *e*SS SS 16 13 00.3 +1.5
HDH Heidenheim-Cha 100.10 42 P Pdif 15 54 33.4 +1.5
MOTA Moosalm 100.20 43⇓*i*Pdiff Pdif 15 54 32.5 +0.1
comp=Z,351nm,1.4s,SNR=14
MOTA Moosalm 100.20 43 P Pdif 15 54 33.8 +1.4
CEL Celeste 100.25 53 PFAKE 15 54 40.0 +7.4
CEL LR LR
comp=Z,258µm,20.0s,MS7.7
WATA Walderalm 100.50 43⇑*i*Pdiff Pdif 15 54 34.7 +1.0
comp=Z,798nm,1.9s,SNR=9.6
WATA Walderalm 100.50 43 P Pdif 15 54 35.1 +1.4
WTTA Wattenberg 100.51 43⇑*i*Pdiff Pdif 15 54 34.3 +0.6
comp=Z,4µm,4.5s,SNR=13
WTTA Wattenberg 100.51 43 P Pdif 15 54 35.4 +1.7
FUR Furstenfeldbru 100.61 42 *e*Pdiff Pdif 15 54 35.6 +1.4
FUR *e*PP PP 15 58 27.8 -14
FUR *e*PS SKKSac 16 05 34.0 -11
FUR *e*SKSac PS 16 07 52.9 +10
FUR *e*SS SS 16 13 08.9 +2.8
CUC Castrocucco 100.78 51 Pdif Pdif 15 54 32.9 -2.0
comp=Z,100nm,1.0s
CUC LR LR
comp=Z,304µm,21.0s,MS7.8
UBBA Unterbreizbach 100.82 39 *e*Pdiff Pdif 15 54 35.2 +0.1
ABTA Abfaltersbach 100.88 44⇑*i*Pdiff Pdif 15 54 35.8 +0.4
comp=Z,2µm,4.4s,SNR=14
HLG Helgoland 100.91 36 *e*Pdiff Pdif 15 54 37.7 +2.2
HLG *e*PS SKKSac 16 05 36.1 -11
HLG *e*SKSac PS 16 07 54.7 +8.8
GRFO Grafenberg 101.13 41 *e*PP PP 15 58 33.8 -12
GRFO *e*PS SKKSac 16 05 38.5 -10
GRFO *e*SKSac PS 16 07 59.3 +11
GRFO *e*SS SS 16 13 16.8 +3.5
GRA1 Grafenberg Arr 101.13 41 *e*Pdif Pdif 15 54 36.8 +0.3
GRA1 *e*PP PP 15 58 33.9 -12
GRA1 *e*P'P' 16 19 04.0
GRA1 LR LR
comp=Z,211µm,21.8s,MS7.6
GRF Grafenberg Arr 101.13 41 *e*Pdif Pdif 15 54 36.8 +0.3
GRF *e*PP PP 15 58 33.9 -12
GRF Grafenberg Arr 101.13 41 *e*Pdiff Pdif 15 54 36.8 +0.3
GRF *e*PP PP 15 58 33.9 -12
GRF *e*PKPPKPdf 16 19 04.0
GRF *e*L 16 37 19.7
comp=Z,211µm,21.8s
GMNA Gemona 101.18 45 P Pdif 15 54 38.1 +1.4
TIP Timpagrande 101.19 52 *e*Pdif Pdif 15 54 37.6 +0.8
comp=Z,56nm,0.9s
TIP LR LR
comp=Z,346µm,22.0s,MS7.8
PTCC Patocco-Chiusa 101.30 44 P Pdif 15 54 38.7 +1.4
DAWY Dawson 101.38 335 *e*Pdif Pdif 15 54 35.0 -2.6
RJOB Jochberg 101.41 43 *e*Pdiff Pdif 15 54 38.4 +0.7
RJOB *e*PP PP 15 58 33.1 -15
RJOB *e*PS SKKSac 16 05 36.7 -14
RJOB *e*SKSac PS 16 08 00.6 +9.1
RJOB *e*SS SS 16 13 18.3 +1.0
CLZ Clausthal 101.41 39 *e*Pdiff Pdif 15 54 38.1 +0.3
CLZ *e*PP PP 15 58 39.1 -8.6
CLZ *e*PS SKKSac 16 05 40.4 -10
CLZ *e*SKSac PS 16 08 01.4 +10
VOY Vojsko 101.53 45 *e*Pdiff Pdif 15 54 38.7 +0.5
VOY *e* 15 58 48.0
KBA Koelnbreinsper 101.53 44⇑*i*Pdiff Pdif 15 54 38.6 +0.3
comp=Z,3µm,8.4s
MYKA Terra Mystica 101.57 44⇑*i*Pdiff Pdif 15 54 38.9 +0.5
comp=Z,4µm,4.9s
KMY Karmoy 101.58 30 *e*P Pdif 15 54 37.1 -1.4
comp=Z,110nm,1.6s
KMY Karmoy 101.58 30 *e*P Pdif 15 54 37.1 -1.4
KMY AMb AMB 15 54 43.3
comp=Z,110nm,1.6s
JAVS Javornik 101.59 45 *e*Pdiff Pdif 15 54 39.3 +0.8
NVLJ Novalja 101.67 47 P Pdif 15 54 39.0 0.0
LTRZ Laterza 101.71 51 P Pdif 15 54 40.3 +1.2
MOX Moxa 101.71 40 *e*Pdif Pdif 15 54 40.4 +1.3
comp=Z,149nm,1.8s
MOX *e* 15 58 48.7
MOX Moxa 101.71 40 *e*P Pdif 15 54 40.4 +1.3
MOX *e* 15 58 48.7
MOX pmax pmax
comp=Z,149nm,1.8s
MOX Moxa 101.71 40 *e*Pdiff Pdif 15 54 39.4 +0.3
MOX *e*PP PP 15 58 39.4 -11
MOX *e*PS SKKSac 16 05 42.2 -11
MOX *e*SKSac PS 16 08 05.7 +11
MOX *e*SS SS 16 13 24.9 +3.6
MOX *e* PP 15 58 48.7 -1.3
MOX Moxa 101.71 40 *e*PDIFF Pdif 15 54 40.4 +1.3
comp=Z,149nm,1.8s
ROTZ Rotzenmuhle 101.76 41 *e*Pdiff Pdif 15 54 39.5 +0.2
ROTZ *e*PP PP 15 58 38.5 -12
ROTZ *e*PS SKKSac 16 05 42.1 -11
ROTZ *e*SKSac PS 16 08 06.2 +11
ROTZ *e*SS SS 16 13 25.7 +3.7
MANZ Manzenberg 101.77 41 *e*Pdiff Pdif 15 54 39.5 +0.1
MANZ *e*PP PP 15 58 38.9 -12
MANZ *e*PS SKKSac 16 05 42.3 -11
MANZ *e*SKSac PS 16 08 06.5 +11
MANZ *e*SS SS 16 13 25.6 +3.4
LJU Ljubljana 101.94 45 *e*P Pdif 15 54 40.3 +0.2
LJU *e* 15 58 49.2
LJU *e* 16 05 12.4
LJU Ljubljana 101.94 45 *e*Pdiff Pdif 15 54 40.3 +0.2
LJU *ep*Pdiff 15 54 54.9
LJU *e*PP PP 15 58 49.2 -2.7
LJU *e*SKSac SKSac 16 05 12.4 -4.5
LJU *e*Sdiff SKKSac 16 05 55.4 +0.6
LJU *e*PS PS 16 08 04.5 +7.2
WET Wettzell 101.95 42 *e*Pdiff Pdif 15 54 40.9 +0.8
WET *e*PP PP 15 58 39.6 -12
WET *e*PS SKKSac 16 05 41.7 -13
WET *e*SKSac PS 16 08 07.1 +10
WET *e*SS SS 16 13 27.3 +2.6
WERN Wernitzgruen 102.04 41 *e*Pdiff Pdif 15 54 40.9 +0.4
WERN *e*PP PP 15 58 40.1 -12
WERD Werda 102.06 40 *e*Pdiff Pdif 15 54 41.0 +0.4
WERD *e*PP PP 15 58 42.3 -10
NKC Novy Kostel 102.06 41 *e*Pdif Pdif 15 54 42.7 +2.1
NKC *ep*P 15 55 04.9
NKC *e*PP PP 15 58 50.1 -2.6
NKC *e* 16 06 01.8
NKC *e* 16 08 11.9
NKC *e* 16 11 12.9
NKC *e* 16 11 26.7
NKC *e* 16 11 44.1
NKC *e* 16 13 50.3
NKC Novy Kostel 102.06 41 *e*P Pdif 15 54 42.7 +2.1
NKC *e* 15 58 50.1
NKC *e* 16 06 01.8
NKC *e* 16 11 12.9
comp=Z,223µm,21.8s,MS7.7
NKC Novy Kostel 102.06 41 *e*PDIF Pdif 15 54 42.7 +2.1
NKC *ep*P 15 55 04.9
NKC *e*PP PP 15 58 50.1 -2.6
NKC *ex* x 16 06 01.8
NKC *ex* x 16 08 11.9
NKC *ex* x 16 11 12.9
NKC *ex* x 16 11 26.7
NKC *ex* x 16 11 44.1
NKC *ex* x 16 13 50.3
NKC *ex* x 16 18 52.7
NKC AMS AMS 16 37 30.0
comp=Z,223µm,21.8s
ASK Askoy 102.08 29 *e*P Pdif 15 54 39.4 -1.2
BER Bergen 102.10 29 *e*P Pdif 15 54 40.4 -0.4
BER *e*P 15 54 40.8
BER *e*PP PP 15 58 50.8 -1.8
BER *e*SS SS 16 13 24.5 -1.6
BER Bergen 102.10 29 *e*P Pdif 15 54 40.8 0.0
OBKA Obir 102.11 45⇑*i*Pdiff Pdif 15 54 41.6 +0.7
comp=Z,5µm,5.2s,SNR=12
OBKA Obir 102.11 45 P Pdif 15 54 42.8 +1.9
TANN Tannenbergstha 102.14 40 *e*Pdiff Pdif 15 54 40.6 -0.4
TANN *e*PP PP 15 58 42.2 -11
TANN *e*PS SKKSac 16 05 44.2 -12
TANN *e*SKSac PS 16 08 10.3 +11
TANN *e*SS SS 16 13 30.8 +3.6
BSEG Bad Segeberg 102.14 37 *e*P Pdif 15 54 41.4 +0.4
BSEG *e* 15 58 47.8
BSEG Bad Segeberg 102.14 37 *e*Pdiff Pdif 15 54 41.4 +0.4
BSEG *e*PP PP 15 58 47.8 -5.4
BSEG *e*PS SKKSac 16 05 42.5 -13
BSEG *e*SKSac PS 16 08 07.4 +8.4
JMIC Jan Mayen 102.17 17 *e*P Pdif 15 54 44.4 +3.3
JMIC *e*PP PP 15 58 54.0 +1.1
JMIC AMS AMS 16 37 19.8
comp=Z,96µm,20.2s,MS7.3
BLS5 Blasjo 102.23 31 *e*P Pdif 15 54 43.5 +2.1
comp=Z,65nm,2.1s
BLS5 Blasjo 102.23 31 *e*P Pdif 15 54 43.5 +2.1
BLS5 AMb AMB 15 55 00.4
comp=Z,65nm,2.1s
BOJS Bojanci 102.24 46 *e*Pdiff Pdif 15 54 42.2 +0.8
BOJS *ep*Pdiff 15 54 56.5
BOJS *e*PP PP 15 58 56.4 +2.2
BOJS *e*SKSac SKSac 16 05 20.5 +2.1
BOJS *e*Sdiff SKKSac 16 05 57.9 +0.9
BOJS *e*PS PS 16 08 07.7 +7.3
GEC2 GERESS Array S 102.36 42 *e*Pdiff Pdif 15 54 41.8 -0.2
GEC2 *e*PP PP 15 58 41.5 -13
GEC2 *e*PS SKKSac 16 05 42.6 -15
GEC2 *e*SKSac PS 16 08 10.6 +9.1
GEC2 *e*SS SS 16 13 32.1 +1.7
GERES GERESS Array B 102.36 42 Pdiff Pdif 15 54 41.5 -0.5
comp=Z,4.8nm,0.9s,baz=242,slow=2.9,SNR=28
GERES PKiKP PKiKP 15 59 02.1 -1.3
comp=Z,20nm,1.0s,baz=235,slow=4.7,SNR=4.4
GERES PKKPbc PKKPbc 16 10 47.4 +2.5
comp=Z,3.2nm,0.8s,baz=74,slow=1.9,SNR=4.3
GERES PKPPKP 16 19 10.4
comp=Z,1.9nm,0.9s,baz=53,slow=0.7,SNR=4.6
GERES GERESS Array B 102.36 42 P Pdif 15 54 41.5 -0.5
GERES *i* 15 59 02.1
GERES pmax pmax
comp=Z,5.0nm,0.9s
KHC Kasperske Hory 102.38 42 *e*Pdif Pdif 15 54 43.4 +1.4
KHC *e* 15 54 51.5
KHC *ep*P 15 55 05.4
KHC *e*PP PP 15 58 54.7 -0.4
KHC *e* 15 59 11.5
KHC *e*SKKS SKKSac 16 05 57.5 -0.3
KHC *e* 16 08 22.5
KHC *e*PKKP PKKPbc 16 10 59.0 +14
KHC *e* 16 11 22.8
KHC *e* 16 13 43.2
KHC LR LR
comp=Z,241µm,21.4s,MS7.7
KHC Kasperske Hory 102.38 42 *e*P Pdif 15 54 43.4 +1.4
KHC *e* 15 58 54.7
KHC *e* 16 13 43.2
KHC MLR MLR
comp=Z,241µm,21.4s,MS7.7
KHC Kasperske Hory 102.38 42 *e*PDIF Pdif 15 54 43.4 +1.4
KHC *ex* x 15 54 51.5
KHC *es*P 15 55 05.4
KHC *e*PP PP 15 58 54.7 -0.4
KHC *ex* x 15 59 11.5
KHC *e*SKKS SKKSac 16 05 57.5 -0.3
KHC *ex* x 16 08 22.5
KHC *e*PKKP PKKPbc 16 10 59.0 +14
KHC *ex* x 16 11 22.8
KHC *ex* x 16 13 43.2
KHC *e*PKPPKP 16 19 08.0
KHC AMS AMS 16 38 40.0
comp=Z,241µm,21.4s
MOA Molln 102.38 43⇑*i*Pdiff Pdif 15 54 42.0 -0.1
comp=Z,9µm,12.4s,SNR=18
EGAK Eagle 102.39 335 *e*Pdif Pdif 15 54 39.6 -2.4
comp=Z,231nm,0.8s
EGAK LR LR
comp=Z,134µm,22.0s,MS7.4
MUD Monsted U'grnd 102.45 34⇑*i*P Pdif 15 54 42.1 -0.3
MUD Monsted U'grnd 102.45 34 *i* P PP 15 58 51.4 -4.0
MUD *e* 16 05 48.5
MUD *i* 16 05 59.8
MUD *i* 16 13 29.1
MUD
comp=Z,358µm,22.0s
SOKA Soboth 102.49 45⇓*i*Pdiff Pdif 15 54 41.9 -0.6
comp=Z,9µm,9.7s
ODD1 Odda 102.50 30 *e*P Pdif 15 54 42.8 +0.2
comp=Z,128nm,2.1s
ODD1 Odda 102.50 30 *e*P Pdif 15 54 42.8 +0.2
ODD1 AMb AMB 15 54 57.6
comp=Z,128nm,2.1s
PERS Pernice 102.53 45 *e*Pdiff Pdif 15 54 42.8 +0.1
DOBS Dobrina 102.60 45 *i* Pdiff Pdif 15 54 43.4 +0.4
CLL Collm 102.76 40⇑*i*Pdif Pdif 15 54 44.8 +1.0
comp=Z,271nm,2.1s
CLL *e*P'P' 16 19 01.0
CLL LR LR
comp=Z,176µm,21.9s,MS7.5
CLL Collm 102.76 40⇑*i*P Pdif 15 54 44.8 +1.0
CLL *e*PS PS 16 08 11.0 +5.3
CLL pmax pmax
comp=Z,271nm,2.1s
CLL MLR MLR
comp=Z,176µm,21.9s,MS7.5
CLL Collm 102.76 40 *e*Pdiff Pdif 15 54 44.1 +0.3
CLL *e*PP PP 15 58 48.0 -10
CLL *e*PS SKKSac 16 05 45.7 -15
CLL *e*SKSac PS 16 08 16.3 +11
CLL *e*SS SS 16 13 38.6 +2.8
CLL *e*L 16 37 08.8
comp=Z,176µm,21.9s
CLL Collm 102.76 40⇑*i*Pdif Pdif 15 54 44.8 +1.0
comp=Z,271nm,2.1s
CLL *e*Pmax 15 54 50.0
CLL *e*(pPdif) 15 54 53.0
CLL *es*Pdif 15 55 02.0
CLL *i* x x 15 55 07.7
CLL *ex* x x 15 55 12.0
CLL *e*PP PP 15 58 58.0 +0.1
CLL *ep*PP 15 59 11.0
CLL *e*PPlp 15 59 18.0
comp=N,10µm,23.6s
CLL *e*PPlp 15 59 18.0
comp=E,26µm,27.2s
CLL *e*PPlp 15 59 18.0
comp=Z,42µm,22.7s
CLL *i* x x 15 59 22.1
CLL *e*PPP 16 01 18.0
CLL *e*SKKSac SKKSac 16 05 57.0 -3.4
CLL *e*PS PS 16 08 11.0 +5.3
CLL *e*PPS 16 09 01.0
CLL *ep*PKKPdf 16 11 03.0
CLL *ex* x 16 11 20.0
CLL *e*SS SS 16 13 40.0 +4.2
CLL *e*PKPPKPdf 16 19 01.0
CLL *ex* x 16 19 15.0
CLL LmV 16 37 00.0
comp=Z,176µm,21.9s
HYA Hoyanger 102.79 29 *e*P Pdif 15 54 44.2 +0.3
FBE Freiberg 102.84 40 *e*Pdiff Pdif 15 54 44.9 +0.8
SISC Sisak 102.98 46 P Pdif 15 54 46.2 +1.5
ARSA Arzberg 102.99 44⇑*i*Pdiff Pdif 15 54 44.8 +0.1
comp=Z,8µm,12.6s,SNR=12
ARSA Arzberg 102.99 44 P Pdif 15 54 46.2 +1.4
STON Ston 103.06 49 P Pdif 15 54 45.5 +0.4
BRG Berggiesshubel 103.18 40 *i* Pdif Pdif 15 54 46.5 +0.9
comp=Z,127nm,2.0s
BRG *i* 15 55 09.3
BRG PP PP 15 59 06.0 +5.0
BRG Sdif SKKSac 16 06 04.0 +0.6
BRG PS PS 16 08 01.0 -9.1
BRG *i* PKKP PKKPbc 16 10 46.3 +3.8
BRG *i* 16 11 17.9
BRG *i* 16 11 34.3
BRG SS SS 16 13 16.0 -26
BRG *i* P'P' 16 18 55.7
BRG *i* 16 19 20.3
BRG LR LR
comp=Z,122µm,26.9s,MS7.3
BRG Berggiesshubel 103.18 40 *i* P Pdif 15 54 46.5 +0.9
BRG 15 59 06.0
BRG S SKKSac 16 06 04.0 +0.6
BRG PS PS 16 08 01.0 -9.1
BRG pmax pmax
comp=Z,127nm,2.0s
BRG MLR MLR
comp=Z,122µm,22.9s,MS7.4
BRG Berggiesshubel 103.18 40 *e*Pdiff Pdif 15 54 46.3 +0.7
BRG *e*PP PP 15 58 50.4 -11
BRG *e*PS SKKSac 16 05 48.4 -15
BRG *e*SKSac PS 16 08 16.1 +6.0
BRG *e*SS SS 16 13 44.7 +3.1
BRG Berggiesshubel 103.18 40 *i* PDIF Pdif 15 54 46.5 +0.9
comp=Z,212nm,2.0s
BRG *i* 15 55 09.3
comp=Z,133nm,1.6s
BRG PP PP 15 59 06.0 +5.0
BRG SDIF SKKSac 16 06 04.0 +0.6
BRG PS PS 16 08 01.0 -9.1
BRG *i* PKKP PKKPbc 16 10 46.3 +3.8
comp=Z,53nm,1.5s
BRG *i* 16 11 17.9
comp=Z,164nm,1.9s
BRG *i* 16 11 34.3
comp=Z,155nm,1.7s
BRG SS SS 16 13 16.0 -26
BRG *i* PKPPKP 16 18 55.7
BRG *i* 16 19 20.3
comp=Z,95nm,1.8s
BRG
comp=N,123µm,27.8s
BRG
comp=E,189µm,29.3s
BRG
comp=Z,204µm,26.9s
PRU Pruhonice 103.25 41 *e*Pdif Pdif 15 54 47.8 +1.9
PRU *ep*P 15 55 10.9
PRU *e*PP PP 15 58 50.4 -11
PRU *e*SKKS SKKSac 16 06 06.4 +2.4
PRU *e*PS PS 16 08 28.0 +17
PRU *e* 16 10 51.9
PRU *e* 16 11 17.2
PRU *e* 16 11 35.9
PRU *e* 16 14 04.3
PRU LR LR
comp=Z,215µm,21.3s,MS7.7
PRU Pruhonice 103.25 41 *e*P Pdif 15 54 47.8 +1.9
PRU *e* 16 06 06.4

PRU MLR MLR
comp=Z,215µm,21.3s,MS7.7
PRU Pruhonice 103.25 41 *e*PDIF Pdif 15 54 47.8 +1.9
PRU *e*pP 15 55 10.9
PRU *e*x x 15 58 50.4
PRU *e*SKKS SKKSac 16 06 06.4 +2.4
PRU *e*PS PS 16 08 28.0 +17
PRU *e*PKKP PKKPbc 16 10 51.9 +10
PRU *e*x x 16 11 17.2
PRU *e*x x 16 11 35.9
PRU *e*x x 16 14 04.3
PRU *e*PKPPKP 16 18 57.8
PRU AMS AMS 16 38 50.0
comp=Z,215µm,21.3s
CSNA Conrad Observa 103.42 44⇑ *i*Pdiff Pdif 15 54 47.2 +0.6
comp=Z,5µm,6.5s
CONA Conrad Observa 103.42 44⇑ *i*Pdiff Pdif 15 54 47.2 +0.5
comp=Z,5µm,6.5s,SNR=7.2
PVCC Panska Ves 103.44 41 *e*Pdif Pdif 15 54 48.7 +1.9
PVCC *e*pP 15 55 12.2
PVCC *e*PP PP 15 58 58.0 -5.0
PVCC *e*SKKS SKKSac 16 06 07.3 +2.0
PVCC *e* 16 08 35.9
PVCC *e* 16 11 04.8
PVCC *e* 16 11 20.5
PVCC *e* 16 11 34.6
PVCC *e*SKKP 16 14 10.2
PVCC LR LR
comp=Z,220µm,20.9s,MS7.7
PVCC Panska Ves 103.44 41 *e*P Pdif 15 54 48.7 +1.9
PVCC *e* 15 58 58.0
PVCC *e* 16 06 07.3
PVCC MLR MLR
comp=Z,220µm,20.9s,MS7.7
PVCC Panska Ves 103.44 41 *e*PDIF Pdif 15 54 48.7 +1.9
PVCC *e*pP 15 55 12.2
PVCC *e*PP PP 15 58 58.0 -5.0
PVCC *e*SKKS SKKSac 16 06 07.3 +2.0
PVCC *e*x x 16 08 35.9
PVCC *e*x x 16 11 04.8
PVCC *e*x x 16 11 20.5
PVCC *e*x x 16 11 34.6
PVCC *e*SKKP 16 14 10.2
PVCC *e*PKPPKP 16 18 52.1
PVCC AMS AMS 16 39 50.0
comp=Z,220µm,20.9s
DAG Danmarks Havn 103.51 11 *i* P Pdif 15 54 47.1 0.0
comp=Z,27nm,1.3s
DAG Danmarks Havn 103.51 11α *i*P Pdif 15 54 47.1 0.0
DAG pmax pmax
comp=Z,27nm,1.3s
DAG Danmarks Havn 103.51 11α *i*P Pdif 15 54 47.1 0.0
comp=Z,27nm,1.3s
RUE Ruedersdorf 103.61 39 *e*Pdiff Pdif 15 54 49.1 +1.6
RUE *e*PP PP 15 58 55.8 -8.3
RUE *e*PS SKKSac 16 05 48.7 -18
RUE *e*SKSac PS 16 08 24.1 +10
RUE *e*SS SS 16 13 45.1 -2.3
TREC Trest 103.62 42 *e*P Pdif 15 54 49.4 +1.9
TREC *e* 15 59 00.7
TREC *e* 16 06 08.2
TREC MLR MLR
comp=Z,193µm,21.2s,MS7.6
TREC Trest 103.62 42 *e*PDIF Pdif 15 54 49.4 +1.9
TREC *e*pP 15 55 11.9
TREC *e*PP PP 15 59 00.7 -3.6
TREC *e*SKKS SKKSac 16 06 08.2 +1.6
TREC *e*x x 16 08 36.5
TREC *e*PKKP PKKPbc 16 10 54.0 +13
TREC *e*x x 16 11 13.9
TREC *e*x x 16 11 38.4
TREC *e*SKKP 16 14 11.4
TREC *e*PKPPKP 16 19 04.4
TREC AMS AMS 16 39 40.0
comp=Z,193µm,21.2s
KONO Kongsberg 103.81 31⇑ *e*P Pdif 15 54 47.4 -1.0
KONO *i* 15 59 07.0
COP Copenhagen 103.90 35⇑ *i*P Pdif 15 54 49.6 +0.8
COP Copenhagen 103.90 35 *i* P PKiKP 15 59 05.2 -0.8
COP *e* 16 05 38.0
COP *e* 16 05 57.0
COP
comp=Z,38µm,20.0s
MOL Molde 103.92 28 *e*P Pdif 15 54 51.3 +2.4
MOL *e*PP PP 15 59 05.8 -0.4
RGN Rugen 104.01 37 *e*PP PP 15 58 54.5 -13
RGN *e*PS SKKSac 16 05 51.8 -17
RGN *e*SKSac PS 16 08 28.4 +10
TIR Tirane 104.13 51 PFAKE 15 55 00.0 +10
TIR LR LR
comp=Z,210µm,21.0s,MS7.7
ZST Bratislava 104.30 44 *e*Pdif Pdif 15 54 50.0 -0.6
ZST *e* 15 55 13.2
ZST *e*PP PP 15 59 05.1 -4.3
ZST *e* 15 59 27.6
ZST *e*S SKSac 16 05 30.9 +3.1
ZST *e*SP SP 16 08 23.4 +6.0
ZST LR LR
comp=Z,89µm,18.8s,MS7.3
ZST Bratislava 104.30 44 *e*P Pdif 15 54 50.0 -0.6
ZST *e* 15 59 05.1
ZST *e*S SKSac 16 05 30.9 +3.1
ZST *e*SP SP 16 08 23.4 +6.0
ZST Bratislava 104.30 44 PDIF Pdif 15 54 50.0 -0.6
ZST *e* 15 55 13.2
ZST *e*PP PP 15 59 05.1 -4.3
ZST *e* 15 59 27.6
VRAC Vranov 104.31 42 Pdiff Pdif 15 54 50.9 +0.3
comp=Z,8.9nm,0.8s,baz=238,slow=7.3,SNR=13
VRAC Vranov 104.31 42 ⇓P Pdif 15 54 48.7 -1.9
VRAC Vranov 104.31 42 P Pdif 15 54 50.9 +0.3
VRAC pmax pmax
comp=Z,9.0nm,0.8s
VRAC Vranov 104.31 42⇓ *i*P Pdif 15 54 48.7 -1.9
UPC Upice 104.31 41 *e*Pdif Pdif 15 54 52.6 +2.0
UPC *e*pP 15 55 16.7
UPC *e*PP PP 15 59 04.8 -4.7
UPC *e* 16 11 00.2
UPC *e* 16 11 14.1
UPC *e* 16 11 34.5
UPC Upice 104.31 41 *e*P Pdif 15 54 52.6 +2.0
UPC *e* 15 59 04.8
UPC Upice 104.31 41 *e*PDIF Pdif 15 54 52.6 +2.0
UPC *e*pP 15 55 16.7
UPC *e*PP PP 15 59 04.8 -4.7
UPC *e*x x 16 11 00.2
UPC *e*x x 16 11 14.1
UPC *e*x x 16 11 34.5
UPC *e*PKPPKP 16 19 01.2
DPC Dobruska-Polom 104.45 41 *e*Pdif Pdif 15 54 53.5 +2.2
DPC *e*pP 15 55 17.4
DPC *e*PP PP 15 59 07.9 -2.6
DPC *e*SKKS SKKSac 16 06 12.5 0.0
DPC *e* 16 08 39.2
DPC *e* 16 10 53.2
DPC *e* 16 11 13.2
DPC *e* 16 11 34.5
DPC *e*SKKP 16 14 15.9
DPC LR LR
comp=Z,222µm,21.9s,MS7.7
DPC Dobruska-Polom 104.45 41 *e*P Pdif 15 54 53.5 +2.2
DPC *e* 15 59 07.9
DPC *e* 16 06 12.5
DPC *e* 16 14 15.9
DPC MLR MLR
comp=Z,222µm,21.9s,MS7.7
DPC Dobruska-Polom 104.45 41 *e*PDIF Pdif 15 54 53.5 +2.2
DPC *e*sP 15 55 17.4
DPC *e*PP PP 15 59 07.9 -2.6
DPC *e*SKKS SKKSac 16 06 12.5 0.0
DPC *e*x x 16 08 39.2
DPC *e*PKKP PKKPbc 16 10 53.2 +15
DPC *e*x x 16 11 13.2
DPC *e*x x 16 11 34.5
DPC *e*SKKP 16 14 15.9
DPC *e*PKPPKP 16 19 03.5
DPC AMS AMS 16 39 30.0
comp=Z,222µm,21.9s
MODS Modra-Piesok 104.46 43 *e*Pdif Pdif 15 54 51.6 +0.3
MODS *e* 15 55 13.0
MODS *e*PP PP 15 59 07.2 -3.4
MODS *e*S SKKSac 16 05 58.0 -15
MODS *e*SP SP 16 08 29.5 +10
MODS *e*SS SS 16 14 01.3 +2.0
MODS Modra-Piesok 104.46 43 *e*P Pdif 15 54 51.6 +0.3
MODS *e* 15 59 07.2
MODS *e*SS SS 16 14 01.3 +2.0
MODS Modra-Piesok 104.46 43 PDIF Pdif 15 54 51.6 +0.3
MODS *e* 15 55 13.0
MODS *e*PP PP 15 59 07.2 -3.4
MODS *e*SKS 16 05 58.0
MODS *e*PS PS 16 08 29.5 +5.8
MODS *e*SS SS 16 14 01.3 +2.0
PMR Palmer 104.47 331 *e*P Pdif 15 54 51.3 0.0
comp=Z,2.4nm,0.5s
PMR LR LR
comp=Z,154µm,22.0s,MS7.5
PMR Palmer 104.47 331 *e*P Pdif 15 54 51.3 0.0
PMR pmax pmax
comp=Z,2.0nm,0.5s
PMR MLR MLR
comp=Z,154µm,22.0s,MS7.5
KSP Ksiaz 104.58 41 *e*Pdiff Pdif 15 54 53.1 +1.3
KSP *e*PKiKP PKiKP 15 59 06.6 -0.8
KSP *e*PP PP 15 59 12.5 +1.0
KSP *e*SKS 16 05 32.9
KSP *e*PS PS 16 08 48.6 +24
KSP *e*SS SS 16 14 22.4 +21
KSP LMZ 16 35 19.9
comp=Z,417µm,31.5s
KSP Ksiaz 104.58 41 *e*Pdif Pdif 15 54 52.6 +0.8
KSP *e*PP PP 15 59 09.0 -2.5
KSP *e*SKS 16 05 31.0
KSP *e*PS PS 16 08 38.0 +13
KSP *e*SS SS 16 13 52.0 -8.9
KSP LR LR
comp=Z,482µm,31.5s,MS7.8
KSP Ksiaz 104.58 41 *e*P Pdif 15 54 52.6 +0.8
KSP *e* 15 59 09.0
KSP *e* 16 05 31.0
KSP *e*SS SS 16 13 52.0 -8.9
SLKM Skilak Lake 104.60 330 Pdif Pdif 15 54 49.9 -2.0
SMOL Smolenice 104.60 43 *e*Pdif Pdif 15 54 52.0 +0.1
SMOL *e*PP PP 15 59 14.4 +2.7
SMOL Smolenice 104.60 43 PDIF Pdif 15 54 52.0 +0.1
SMOL *e* 15 47 09.2
SMOL *e*PP PP 15 59 14.4 +2.7
PKSM Moragy 104.71 46⇑ P Pdif 15 54 54.5 +2.1
PKSM Moragy 104.71 46⇑ *i*P Pdif 15 54 54.5 +2.1
NAO01 NORSAR Array S 104.81 30 PFAKE 15 55 00.0 +7.1
NAO01 LR LR
comp=Z,230µm,21.0s,MS7.7
KDAK Kodiak Island 104.88 327 PFAKE 15 55 00.0 +6.9
KDAK LR LR
comp=Z,84µm,20.0s,MS7.3
NB2 NORSAR Subarra 105.03 30 PP PP 15 59 14.2 -0.3
comp=Z,1µm,2.0s,baz=252,slow=7.4
NB2 NORSAR Subarra 105.03 30 PP PP 15 59 14.2 -0.3
baz=252,slow=7.4
NOA NORSAR Array B 105.03 30 Pdiff Pdif 15 54 53.5 -0.3
comp=Z,11nm,1.3s,baz=251,slow=4.3,SNR=4.4
NOA PKiKP PKiKP 15 59 08.8 +0.9
comp=Z,10nm,1.0s,baz=291,slow=2.7,SNR=3.2
NOA PKKPbc PKKPbc 16 10 40.5 +3.3
comp=Z,1.6nm,0.7s,baz=259,slow=3.1,SNR=4.1
NOA PKKPab PKKPab 16 10 51.6 +0.3
comp=Z,3.4nm,0.7s,baz=48,slow=1.3,SNR=4.1
NOA NORSAR Array B 105.03 30 Pdif Pdif 15 54 53.5 -0.3
NOA PKPdf PKiKP 15 59 08.8 +0.9
NOA PKKPbc PKKPbc 16 10 40.5 +3.3
NOA PKKPab PKKPab 16 10 51.6 +0.3
NOA NORSAR Array B 105.03 30 P Pdif 15 54 53.6 -0.2
NOA *i* 15 59 08.8
NOA pmax pmax
comp=Z,11nm,1.3s
MORC Moravsky Berou 105.04 42 *e*Pdif Pdif 15 54 53.2 -0.7
comp=Z,146nm,1.7s
MORC Moravsky Berou 105.04 42 *e*P Pdif 15 54 53.2 -0.7
MORC pmax pmax
comp=Z,146nm,1.7s
MORC Moravsky Berou 105.04 42⇓ *i*P Pdif 15 54 56.0 +2.1
COLA College 105.05 334 *e*Pdif Pdif 15 54 51.6 -2.3
comp=Z,46nm,0.9s
COLA LR LR
comp=Z,115µm,22.0s,MS7.4
COLA College 105.05 334 *e*P Pdif 15 54 51.6 -2.3
COLA pmax pmax
comp=Z,46nm,0.9s
COLA MLR MLR
comp=Z,115µm,22.0s,MS7.4
OHAK Old Harbor 105.06 326 *e*P Pdif 15 54 53.9 -0.1
comp=Z,265nm,2.0s
OHAK LR LR
comp=Z,84µm,21.0s,MS7.3
MCK McKinley 105.11 333 *e*Pdif Pdif 15 54 52.7 -1.4
comp=Z,2µm,0.4s
MCK McKinley 105.11 333 *e*P Pdif 15 54 52.7 -1.5
MCK pmax pmax
comp=Z,2µm,0.4s
KOLL Kolacno 105.24 43 *e*Pdif Pdif 15 54 56.1 +1.4
KOLL *e* 15 55 18.7
KOLL *e* 15 59 45.6
KOLL Kolacno 105.24 43 PDIF Pdif 15 54 56.1 +1.4
KOLL *e* 15 55 18.7
KOLL *e*PP PP 15 59 45.6 +29
BUD Budapest 105.33 45⇑ *e*P Pdif 15 54 55.7 +0.5
OKC Ostrava-Krasne 105.43 42 *e*Pdif Pdif 15 54 57.6 +2.0
OKC *e*pP 15 55 20.0
OKC *e*PP PP 15 59 15.6 -2.2
OKC *e*SKKS SKKSac 16 06 21.5 +2.1
OKC *e* 16 08 21.5 +18
OKC *e*PKKP PKKPbc 16 10 52.4 +17
OKC *e* 16 11 08.9
OKC *e* 16 11 26.9
OKC *e* 16 14 28.0
OKC Ostrava-Krasne 105.43 42 *e*P Pdif 15 54 57.6 +2.0
OKC *e* 15 59 15.6
OKC *e* 16 06 21.5
OKC *e* 16 14 28.0
OKC MLR MLR
comp=Z,126µm,21.3s,MS7.4
OKC Ostrava-Krasne 105.43 42 *e*PDIF Pdif 15 54 57.6 +2.0
OKC *e*pP 15 55 20.0
OKC *e*PP PP 15 59 15.6 -2.2
OKC *e*SKKS SKKSac 16 06 21.5 +2.1
OKC *e*PS PS 16 08 51.5 +18
OKC *e*PKKP PKKPbc 16 10 52.4 +17
OKC *e*x x 16 11 08.9
OKC *e*x x 16 11 26.9
OKC *e*PKKS 16 14 28.0
OKC *e*PKPPKP 16 19 04.2
OKC AMS AMS 16 40 50.0
comp=Z,126µm,21.3s
VYHS Vyhne 105.49 44 *e*Pdif Pdif 15 54 57.3 +1.4
VYHS *e* 15 55 17.9
VYHS *e*PP PP 15 59 14.0 -4.3
VYHS *e*S SKSac 16 05 34.9 +1.7
VYHS *e*SP SP 16 08 41.6 +12
VYHS *e*SS SS 16 14 15.3 +1.9
VYHS Vyhne 105.49 44 *e*P Pdif 15 54 57.3 +1.4
VYHS *e* 15 59 14.0
VYHS *e*S SKSac 16 05 34.9 +1.7
VYHS *e*SS SS 16 14 15.3 +1.9
VYHS Vyhne 105.49 44 PDIF Pdif 15 54 57.3 +1.4
VYHS *e* 15 55 17.9
VYHS *e*PP PP 15 59 14.0 -4.3
RAC Raciborz 105.53 42 *e*Pdif Pdif 15 54 57.7 +1.7
RAC *e*PP PP 15 59 17.0 -1.5
RAC *e*SKSac SKSac 16 05 30.5 -2.8
RAC *e*S SKSdf 16 06 16.1 -2.2
RAC *e*SP SP 16 08 26.5 -3.6
RAC *e*SS SS 16 14 12.0 -1.8
RAC LR LR
comp=Z,280µm,22.0s,MS7.8
RAC Raciborz 105.53 42 *e*P Pdif 15 54 57.7 +1.7
RAC *e* 15 59 17.0
RAC *e* 16 05 30.5
RAC *e*S SKSdf 16 06 16.1 -2.2
RAC *e*SP SP 16 08 26.5 -3.6
RAC *e*SS SS 16 14 12.0 -1.8
RAC MLR MLR
comp=E,305µm,22.0s,MS7.9
RAC MLR MLR
comp=Z,280µm,22.0s,MS7.8
RAC MLR MLR
TRF Thorofare Moun 105.59 333 *e*Pdif Pdif 15 54 54.7 -1.6
comp=N,3µm,1.6s
FUNA Funafuti 105.84 254 PFAKE 15 59 20.0 +9.1
FUNA LR LR
comp=Z,99µm,21.0s,MS7.3
GKP Gorka Klasztor 105.84 39 *e*Pdiff Pdif 15 54 58.4 +0.9
GKP *e*PP PP 15 59 19.0 -1.7
GKP *e*SKS SKSac 16 05 37.2 +2.7
GKP *e*PS PS 16 08 57.5 +20
GKP LMZ 16 35 29.9
comp=Z,320µm,31.6s
GKP Gorka Klasztor 105.84 39 *e*Pdif Pdif 15 54 58.3 +0.9
GKP *e*PP PP 15 59 19.0 -1.7
GKP *e*SKS SKSac 16 05 37.2 +2.7
GKP *e*PS PS 16 08 57.5 +20
GKP LR LR
comp=Z,320µm,31.6s,MS7.7
GKP Gorka Klasztor 105.84 39 *e*P Pdif 15 54 58.3 +0.9
GKP *e* 15 59 19.0
GKP *e* 16 05 37.2
KTH Kantishna Hill 105.89 333 *e*Pdif Pdif 15 54 56.4 -1.3
comp=Z,50nm,1.1s
HFS Hagfors 105.92 31 Pdiff Pdif 15 54 58.4 +0.6
comp=Z,2.9nm,1.1s,baz=56,slow=47,SNR=2.8
HFS PKiKP PKiKP 15 59 09.7 +0.1
comp=Z,18nm,0.9s,baz=151,slow=3.3,SNR=2.6
HFS PP PP 15 59 20.2 -0.9
comp=Z,23nm,1.0s,baz=234,slow=5.1,SNR=7.3
HFS Hagfors 105.92 31 P Pdif 15 54 58.4 +0.6
HFS 15 59 20.2
HFS pmax pmax
comp=Z,3.0nm,1.1s
ABPO Ambohimpanom 105.99 119 *e*Pdif Pdif 15 54 56.6 -1.6
comp=Z,32nm,1.0s
ABPO LR LR
comp=Z,162µm,20.0s,MS7.6
PSZ Piszkesteto 106.01 44 *e*Pdif Pdif 15 54 58.3 +0.1
comp=Z,83nm,1.8s
PSZ LR LR
comp=Z,158µm,22.0s,MS7.5
PSZ Piszkesteto 106.01 44 *e*P Pdif 15 54 58.3 +0.1
PSZ pmax pmax
comp=Z,83nm,1.8s
PSZ MLR MLR
comp=Z,158µm,22.0s,MS7.5
PSZ Piszkesteto 106.01 44⇑ *e* Pdif 15 54 55.0 -3.2
PSZ Piszkesteto 106.01 44⇑ *i*P Pdif 15 54 59.8 +1.6
BPAW Bear Paw Mtn. 106.08 333 *e*Pdif Pdif 15 54 56.1 -2.5
comp=Z,132nm,1.0s
OPO Ambohidratompo 106.19 118 PKKP PKKPbc 16 10 40.7 +8.4
comp=Z,5.0nm,0.9s,baz=30,slow=0.5,SNR=5.1
PPLA Purkeypile 106.24 332 *e*Pdif Pdif 15 54 58.2 -0.9
comp=Z,1µm,0.6s
NSS Namsos 106.44 26 *e*P Pdif 15 55 02.0 +1.9
NSS *e*PP PP 15 59 25.4 +0.6
NSS AMS AMS 16 41 09.9
comp=Z,141µm,20.6s,MS7.5
BZS Buzias 106.55 47⇓P Pdif 15 55 03.3 +2.8
BZS Buzias 106.55 47⇓ *i*P Pdif 15 55 03.3 +2.7
OJC Ojcow 106.56 42 *e*Pdiff Pdif 15 55 01.2 +0.6
OJC *e*PP PP 15 59 26.4 +0.3
OJC *e*SKSac SKSdf 16 06 24.1 +3.8
OJC *e*SP SP 16 08 41.3 +0.5
OJC *e*SS SS 16 14 31.6 +3.7
OJC L 16 41 47.1
comp=Z,270nm,21.9s
OJC Ojcow 106.56 42 *e*P Pdif 15 55 01.2 +0.6
OJC *e* 15 59 26.4
OJC *e*SP SP 16 08 41.3 +0.5
OJC *e*SS SS 16 14 31.6 +3.7
CHUM Lake Minchumin 106.58 333 *e*Pdif Pdif 15 54 58.8 -1.9
comp=Z,11nm,0.4s
KKB Krupnik 106.60 51 *i* P Pdif 15 55 02.2 +1.4
TAU Tasmania Unive 106.65 208 PFAKE 15 59 20.0 +8.4
TAU LR LR
comp=Z,254µm,20.0s,MS7.8
NIE Niedzica 106.67 43 *e*Pdiff Pdif 15 55 04.0 +2.9
NIE *e*PP PP 15 59 30.4 +3.4
COLD Coldfoot 106.73 336 Pdif Pdif 15 55 00.2 -1.2
comp=Z,1µm,0.6s
MRKH Merkhyat 106.81 80 *i* Pp PP 15 59 27.8 -0.9
MRKH *i* Ss SS 16 14 32.9 +0.2
VTS Vitosha 106.87 50⇓P Pdif 15 55 09.6 +7.5
VTS Vitosha 106.87 50 *i* P Pdif 15 55 03.2 +1.2
VTS Vitosha 106.87 50⇓ *i*P Pdif 15 55 09.6 +7.6
MMB Musomiste 106.99 52 *i* P Pdif 15 55 03.2 +0.7
STHS Stebnicka Huta 107.26 43 *e*Pdif Pdif 15 55 02.8 -1.0
STHS *e*PP PP 15 59 30.3 -1.0
STHS Stebnicka Huta 107.26 43 PDIF Pdif 15 55 02.8 -1.0
STHS *e*PP PP 15 59 30.3 -1.0
CRVS Cervenica-Dubn 107.28 44 *e*Pdif Pdif 15 55 07.4 +3.6
CRVS *e* 15 55 31.4
CRVS *e*PP PP 15 59 31.1 -0.3
CRVS *e*S SKSac 16 05 53.3 +12
CRVS *e*SP SP 16 09 02.7 +15
CRVS *e*SS SS 16 14 39.5 +1.8
CRVS Cervenica-Dubn 107.28 44 *e*P Pdif 15 55 07.4 +3.6
CRVS *e* 15 59 31.1
CRVS *e*SS SS 16 14 39.5 +1.8
CRVS Cervenica-Dubn 107.28 44 PDIF Pdif 15 55 07.4 +3.6
CRVS *e* 15 55 31.4
CRVS *e*PP PP 15 59 31.1 -0.3
SVW2 Sparrevohn 107.28 330 *e*P Pdif 15 55 03.6 -0.2
PGB Panagyurishte 107.55 51 *i* P Pdif 15 55 06.2 +1.2
RZN Rozhen 107.73 52 *i* P Pdif 15 55 06.3 +0.5
IMA2 Indian Mountai 107.74 335 *e*P Pdif 15 55 06.3 +0.5
TRPA Tarpa 107.78 45⇑ *i*P Pdif 15 55 05.5 -0.6
KOLS *e*SKSDF 16 06 20.2
KOLS *e*PS PS 16 09 01.2 +3.0
KOLS *e*SS SS 16 14 46.0 +1.2
KOLS Kolonicke sedl 107.80 44 *e*PP PP 15 59 34.3 -1.0
WAR Warsaw 107.80 40 *e*Pdiff Pdif 15 55 07.8 +1.6
WAR *e*PP PP 15 59 34.8 -0.3
WAR *e*SKS SKSac 16 05 49.9 +6.8
WAR *e*PS PS 16 09 19.7 +22
WAR *e*SS SS 16 15 09.1 +24
WAR LMZ 16 37 40.9
comp=Z,226µm,28.3s
WAR Warsaw 107.80 40 *e*Pdif Pdif 15 55 07.8 +1.6
WAR *e*PP PP 15 59 34.8 -0.4
WAR *e*SKS SKSac 16 05 49.9 +6.7
WAR *e*PS PS 16 09 19.7 +22
WAR *e*SS SS 16 15 09.1 +24
WAR LR LR
comp=Z,226µm,28.3s,MS7.6
WAR Warsaw 107.80 40 *e*P Pdif 15 55 07.8 +1.6
WAR *e* 15 59 34.8
PLD Plovdiv 107.83 51 *i* P Pdif 15 55 06.3 0.0
KDZ Kurdzhali 108.23 52 *i* P Pdif 15 55 07.9 -0.2
KWP Kalwaria 108.24 43 *e*Pdiff Pdif 15 55 09.4 +1.3
KWP *e*PP PP 15 59 41.4 +2.9
KWP *e*SKS SKSdf 16 06 06.7 -17
KWP *e*PS PS 16 09 19.6 +17
KWP *e*SS SS 16 15 09.6 +19
KWP LMZ 16 37 41.5
comp=Z,532µm,30.4s
KWP Kalwaria 108.24 43 *e*Pdif Pdif 15 55 09.4 +1.3
KWP *e*PP PP 15 59 41.4 +3.0
KWP *e*SKS SKSdf 16 06 06.7 -17
KWP *e*PS PS 16 09 19.6 +17
KWP *e*SS SS 16 15 09.6 +19
KWP Kalwaria 108.24 43⇓ *i*P Pdif 15 55 10.3 +2.2
URLA Izmir 108.31 55⇑ *i*P Pdif 15 55 09.9 +1.5
PVL Pavlikeni 108.54 50 *i* P Pdif 15 55 08.9 -0.5
GCAM G?zelcaml? 108.64 56⇑ *i*P Pdif 15 55 11.7 +1.8
VOIR 108.85 48⇓P Pdif 15 55 15.8 +5.0
VOIR 108.85 48⇓ *i*P Pdif 15 55 15.8 +5.0
SZH Strazhica 108.98 50 *i* P Pdif 15 55 12.5 +1.1
LVV L'vov 109.12 43 *e*P Pdif 15 55 13.0 +1.0
LVV *e* 16 05 53.2
LVV *e* 16 15 11.4
LVV pmax pmax
comp=Z,40nm,2.4s
LVV MLR MLR
comp=N,28µm,20.0s,MS7.2
LVV MLR MLR
comp=E,60µm,20.0s,MS7.2
LVV MLR MLR
comp=Z,79µm,20.0s,MS7.3
JMB Yambol 109.27 51 *i* P Pdif 15 55 12.4 -0.3

AKHS	**Akhisar**	**109.36**	**55**	⇑	*i*P	Pdif	15 55 13.4	+0.3	
BUR08	**Bucovina Ar. S**	**109.42**	**46**		*e*Pdif	Pdif	15 55 13.4	+0.1	
BURAR	**Bucovina Array**	**109.43**	**46**	⇓	P	Pdif	15 55 16.2	+2.9	
BURAR	**Bucovina Array**	**109.43**	**46**	⇓	*i*P	Pdif	15 55 16.2	+2.8	
SUW	**Suwalki**	**109.45**	**39**		*e*Pdiff	Pdif	15 55 14.6	+1.1	
SUW					*e*PP	PP	15 59 48.0	+0.9	
SUW					*e*SKS	SKSdf	16 06 32.5	+6.9	
SUW					*e*PS	PS	16 09 28.8	+14	
SUW					*e*SP		16 10 26.2		
SUW					*e*SS	SS	16 15 18.4	+12	
SUW					LMZ		16 37 55.1		
	comp=Z,356μm,29.4s								
SUW	**Suwalki**	**109.45**	**39**		*e*Pdif	Pdif	15 55 14.6	+1.1	
SUW					*e*PKiKP	PKiKP	15 59 16.1	-0.2	
SUW					*e*PP	PP	15 59 48.0	+0.9	
SUW					*e*SKS	SKSdf	16 06 32.5	+6.9	
SUW					*e*PS	PS	16 09 28.7	+14	
SUW					*e*SP		16 10 26.2		
SUW					*e*SS	SS	16 15 18.4	+12	
SUW	**Suwalki**	**109.45**	**39**		*e*P	Pdif	15 55 14.6	+1.1	
SUW					*e*		15 59 48.0		
SUW					*e*SS	SS	16 15 18.4	+12	
SUW					MLR	MLR			
	comp=Z,356μm,29.4s,MS7.8								
MLR	**Muntele Rosu**	**109.47**	**48**		Pdiff	Pdif	15 55 15.0	+1.4	
	comp=Z,3.0nm,0.7s,baz=121,slow=3.5,SNR=4.0								
MLR					PKiKP	PKiKP	15 59 17.2	+0.5	
	baz=180,slow=0.0								
MLR					PKKP	PKKPbc	16 10 36.3	+14	
	comp=Z,15nm,1.0s,baz=138,slow=4.6,SNR=2.9								
MLR	**Muntele Rosu**	**109.47**	**48**	⇑	P	Pdif	15 55 16.2	+2.6	
MLR					PKPdf	PKiKP	15 59 17.2	+0.6	
MLR					PKKP	PKKPbc	16 10 36.3	+14	
MLR	**Muntele Rosu**	**109.47**	**48**		P	Pdif	15 55 15.0	+1.4	
MLR					pmax	pmax			
	comp=Z,3.0nm,0.7s								
MLR					pmax	pmax			
	comp=Z,15nm,1.0s								
MLR	**Muntele Rosu**	**109.47**	**48**	⇑	*i*P	Pdif	15 55 16.2	+2.6	
TURN	**Turunc**	**109.50**	**57**	⇑	*i*P	Pdif	15 55 12.5	-1.2	
PRD	**Provadia**	**110.01**	**51**		*i* P	Pdif	15 55 09.0	-7.0	
DURS	**Dursunbey**	**110.03**	**54**	⇑	*i*P	Pdif	15 55 16.9	+0.9	
DEMI	**Demirci**	**110.09**	**55**	⇑	*i*P	Pdif	15 55 16.9	+0.6	
VRI	**Vrincioaia**	**110.09**	**48**	⇓	P	Pdif	15 55 31.0	+15	
VRI	**Vrincioaia**	**110.09**	**48**	⇓	*i*P	Pdif	15 55 31.0	+15	
KBS	**Kingsbay**	**110.16**	**12**		*e*P	Pdif	15 55 20.4	+3.8	
KBS					*e*PP	PP	15 59 51.0	-0.7	
KBS					*e*		16 15 02.0		
KBS	**Kingsbay**	**110.16**	**12**		*e*P	Pdif	15 55 20.4	+3.7	
KBS					MLR	MLR			
	comp=Z,72μm,21.0s,MS7.2								
TRO	**Tromso**	**110.27**	**22**		*e*P	Pdif	15 55 20.8	+3.7	
TRO					*e*PP	PP	15 59 51.2	-1.3	
TRO					*e*SS	SS	16 15 23.6	+6.7	
ELBA	**Catalca**	**110.33**	**53**	⇑	*i*P	Pdif	15 55 18.6	+1.3	
GOLH	**Golhisar**	**110.33**	**57**	⇑	*i*P	Pdif	15 55 19.5	+2.1	
PSN	**Preselentsi**	**110.67**	**50**		*i* P	Pdif	15 55 18.1	-0.8	
GDZ	**Gediz**	**110.68**	**55**	⇑	*i*P	Pdif	15 55 21.3	+2.3	
TIRR	**Tirgusor**	**110.98**	**49**		*e*PKiKP	PKiKP	15 59 19.1	-0.5	
TIRR	**Tirgusor**	**110.98**	**49**	⇓	*i*P	Pdif	15 55 30.4	+10	
BJO1	**Bjornoya**	**111.00**	**17**		*e*P	Pdif	15 55 23.5	+3.1	
BJO1					LR	LR			
	comp=Z,60μm,24.8s,MS7.1								
BJO	**Bjornoya**	**111.05**	**17**		*e*P	Pdif	15 55 23.5	+2.9	
BJO					*e*PP	PP	15 59 55.9	-2.2	
BJO					AMS	AMS	16 38 59.8		
	comp=Z,60μm,24.8s,MS7.1								
ISP	**Isparta**	**111.20**	**57**		PFAKE		15 59 30.0	+10	
ISP					LR	LR			
	comp=Z,236μm,22.0s,MS7.7								
ISP	**Isparta**	**111.20**	**57**	*c*	*i*P	Pdif	15 55 23.3	+2.0	
ISP					MLR	MLR			
	comp=Z,234μm,21.0s,MS7.7								
KTK1	**Kautokeino**	**111.70**	**23**		*e*P	Pdif	15 55 24.3	+0.8	
KTK1					*e*		16 00 17.5		
KTK1					*i*		16 09 50.2		
KTK1	**Kautokeino**	**111.70**	**23**		*e*P	Pdif	15 55 24.3	+0.8	
KTK1					*e*		16 00 12.9		
KTK1					*i*		16 09 50.2		
KIS	**Kishinev**	**111.72**	**47**		*e*P	Pdif	15 55 25.0	+1.4	
KIS					*i*		15 59 20.0		
KIS					pmax	pmax			
	comp=Z,8μm,20.0s								
KIS					pmax	pmax			
	comp=Z,9μm,22.0s								
KIS	**Kishinev**	**111.72**	**47**		*e*P	Pdif	15 55 25.0	+1.4	
	comp=Z,8μm,20.0s								
KIS	**Kishinev**	**111.72**	**47**		*i* PKP	PKiKP	15 59 20.0	-0.9	
KIS	**Kishinev**	**111.72**	**47**		*i* PP	PP	16 00 14.0	+10	
	comp=Z,38μm,16.0s								
KIS					*i* SKS	SKSdf	16 06 16.0	-14	
KIS					*i* SKKS	SKKSac	16 07 40.0	+37	
KIS	**Kishinev**	**111.72**	**47**		*i* PS	PS	16 09 58.0	+22	
BOLV	**Bolvadin**	**111.72**	**56**	⇑	*i*P	Pdif	15 55 25.6	+2.1	
VSU	**Vasula**	**112.11**	**34**		*e*PKP	PKiKP	15 59 21.3	+0.1	
KIEV	**Kiev**	**112.55**	**43**		*e*PKiKP	PKiKP	15 59 20.0	-2.3	
KIEV					LR	LR			
	comp=Z,133μm,21.0s,MS7.5								
ARCES	**ARCESS Array B**	**112.55**	**22**		Pdiff	Pdif	15 55 32.2	+4.9	
	comp=Z,2.6nm,1.0s,baz=258,slow=6.1,SNR=4.0								
ARCES					PP	PP	16 00 04.3	-4.6	
	comp=Z,28nm,1.0s,baz=298,slow=2.6,SNR=4.1								
ARCES					PKKPbc	PKKPbc	16 10 11.2	-2.2	
	comp=Z,9.0nm,0.9s,baz=107,slow=5.8,SNR=7.1								
ARCES					PKKP	PKKPbc	16 10 29.2	+16	
	comp=Z,14nm,0.8s,baz=90,slow=3.6,SNR=5.9								
ARCES	**ARCESS Array B**	**112.55**	**22**		Pdif	Pdif	15 55 32.2	+4.9	
ARCES					PP	PP	16 00 04.3	-4.6	
ARCES					PKKPbc	PKKPbc	16 10 11.2	-2.2	
ARCES					PKKP	PKKPbc	16 10 29.2	+16	
ARCES	**ARCESS Array B**	**112.55**	**22**		P	Pdif	15 55 32.2	+4.9	
ARCES							16 00 04.4		
ARCES					pmax	pmax			
	comp=Z,3.0nm,1.0s								
AKASG	**Malin Array Be**	**112.56**	**43**		Pdiff	Pdif	15 55 28.9	+1.6	
	comp=Z,1.2nm,0.6s,baz=253,slow=4.4,SNR=4.0								
AKASG					PKiKP	PKiKP	15 59 20.7	-1.7	
	comp=Z,10nm,0.5s,baz=269,slow=2.9,SNR=17								
AKASG					PP	PP	16 00 04.5	-5.0	
	comp=Z,30nm,0.8s,baz=265,slow=3.2,SNR=6.8								
AKASG					PKKPbc	PKKPbc	16 10 13.3	+0.5	
	comp=Z,2.2nm,0.6s,baz=76,slow=3.6,SNR=6.2								
AKASG					PKKP	PKKPbc	16 10 28.2	+15	
	comp=Z,7.1nm,0.8s,baz=72,slow=3.6,SNR=5.4								
AKASG	**Malin Array Be**	**112.56**	**43**		Pdif	Pdif	15 55 28.9	+1.6	
AKASG					PKPdf	PKiKP	15 59 20.7	-1.7	
AKASG					PP	PP	16 00 04.5	-5.0	
AKASG					PKKPbc	PKKPbc	16 10 13.3	+0.5	
AKASG					PKKP	PKKPbc	16 10 28.2	+15	
AKASG	**Malin Array Be**	**112.56**	**43**		P	Pdif	15 55 28.9	+1.6	
AKASG				*i*			15 59 20.7		
AKASG							16 00 04.6		
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.6s								
AKBB	**Malin Array Si**	**112.56**	**43**		*e*PKiKP	PKiKP	15 59 21.7	-0.7	
KDHN	**Kadinhani**	**112.58**	**56**	⇑	*i*P	Pdif	15 55 29.1	+1.7	
CSS	**Prodhromos**	**112.83**	**60**		*e*PKiKP	PKiKP	15 59 23.1	-0.3	
CSS					LR	LR			
	comp=Z,170μm,22.0s,MS7.6								
EIL	**Elat**	**113.01**	**66**		PKiKP	PKiKP	15 59 24.6	+0.7	
	baz=180,slow=0.0								
KEV	**Kevo**	**113.08**	**22**		PFAKE		15 59 30.0	+7.2	
KEV					LR	LR			
	comp=Z,118μm,22.0s,MS7.4								
ANTO	**Ankara**	**113.34**	**55**		*e*PKiKP	PKiKP	15 59 24.3	+0.1	
ANTO					LR	LR			
	comp=Z,151μm,21.0s,MS7.6								
ANTO	**Ankara**	**113.34**	**55**	⇓	*i*P	PKiKP	15 59 24.2	0.0	
ELDT	**Eldivan**	**113.93**	**54**	⇑	*i*P	Pdif	15 55 32.6	-0.8	
MMAI	**Mount Meron Ar**	**114.11**	**63**		PKP	PKiKP	15 59 25.9	0.0	
	comp=Z,14nm,0.5s,baz=0.0,slow=1.6								
MMAI					PKKPab	PKKPab	16 10 17.1	+4.7	
	comp=Z,10nm,0.9s,baz=11,slow=1.7,SNR=4.7								
ILGA	**Ilgaz**	**114.23**	**54**	⇑	*i*P	Pdif	15 55 35.2	+0.5	
BHL	**Bhannes**	**114.49**	**62**		*e*P	Pdif	15 55 37.6	+1.7	
CDAG	**Cicekdag**	**114.50**	**55**		*i* P	Pdif	15 55 37.9	+1.9	
YURE	**YUREGIR**	**115.01**	**59**	⇑	*i*P	Px	15 55 26.5		
MIDW	**Midway**	**115.12**	**292**		PFAKE		15 59 40.0	+12	
MIDW					LR	LR			
	comp=Z,345μm,22.0s,MS7.9								
ASF	**Jabal al Asfar**	**115.18**	**64**		PKP	PKiKP	15 59 28.6	+0.6	
	comp=Z,28nm,0.8s								
ASF	**Jabal al Asfar**	**115.18**	**64**		PKIKP	PKiKP	15 59 28.6	+0.6	
ASF					pmax	pmax			
	comp=Z,28nm,0.8s								
APA	**Apatity**	**115.45**	**24**	⇑	*e*P	Pdif	15 55 40.0	-0.2	
APA					*i*		15 59 28.0		
APA					*i*		15 59 41.0		
APA					*i*		16 00 39.2		
APA					*i* PPS		16 10 09.0		
APA					*i* SS	SS	16 16 31.0	+5.4	
APA					pmax	pmax			
	comp=Z,160nm,1.8s								
TARA	**Tarawa**	**115.68**	**260**		PFAKE		15 59 40.0	+10	
TARA					LR	LR			
	comp=Z,402μm,20.0s,MS8.0								
LVZ	**Lovozero**	**115.90**	**24**	*i*	PKP	PKPdf	15 59 28.1	-0.2	
LVZ					LR	LR			
	comp=Z,179μm,21.0s,MS7.7								
PINB	**Pinarbasi**	**115.91**	**57**	⇑	*i*P	Pdif	15 55 44.0	+1.8	
AKCD	**Akcadag**	**117.04**	**57**	⇑	*i*P	Pdif	15 55 48.4	+1.1	
OBN	**Obninsk**	**117.31**	**38**		*e*PKPdf	PKPdf	15 59 30.5	-0.8	
OBN					LR	LR			
	comp=Z,152μm,22.0s,MS7.6								
OBN	**Obninsk**	**117.31**	**38**	⇓	*e*P	Pdif	15 55 41.1	-7.3	
OBN					*i*		15 59 31.8		
OBN					*i*		15 59 46.0		
OBN					*i*		16 00 44.3		
OBN					*e*		16 06 21.4		
OBN					*i* PPS		16 11 52.0		
OBN					*i* SS	SS	16 17 03.6	+13	
OBN					pmax	pmax			
	comp=Z,208nm,2.0s								
OBN					pmax	pmax			
	comp=Z,520μm,2.1s								
OBN					MLR	MLR			
	comp=Z,168μm,20.0s,MS7.7								
ANN	**Anapa**	**117.40**	**50**		*e*P	Pdif	15 55 47.9	-0.9	
ANN					*i*		15 59 31.0		
ANN					*e*		16 00 48.8		
ANN					*e*		16 06 18.5		
ANN					pmax	pmax			
	comp=Z,4μm,17.1s								
ANN					pmax	pmax			
	comp=Z,196nm,1.9s								
ADK	**Adak**	**117.59**	**318**		PFAKE		15 59 40.0	+8.0	
ADK					LR	LR			
	comp=Z,107μm,22.0s,MS7.4								
KEMA	**Kemaliye**	**117.61**	**56**	⇑	*i*P	Pdif	15 55 51.0	+1.2	
ELZG	**Elazig**	**117.89**	**57**	⇑	*i*P	Pdif	15 55 53.6	+2.6	
MOS	**Moscow**	**117.91**	**38**		*e*P	Pdif	15 55 52.3	+1.2	
MOS					*e*		15 59 29.5		
MOS					*e*		15 59 45.0		
MOS					*e*		16 06 21.6		
MOS					*e*SS	SS	16 16 50.0	-8.3	
MOS					pmax	pmax			
	comp=Z,228nm,1.6s								
MOS					MLR	MLR			
	comp=Z,172μm,19.0s,MS7.7								
STKA	**Stephens Creek**	**118.30**	**210**		*e*P	PKPdf	15 59 33.1	-1.0	
	comp=Z,17nm,0.6s								
STKA					*e*PP	PP	16 01 01.9	+13	
STKA					*e*PKKP	PKKPbc	16 09 51.4	-1.1	
STKA	**Stephens Creek**	**118.30**	**210**		PKP	PKPdf	15 59 33.8	-0.3	
	comp=Z,8.5nm,0.6s,baz=93,slow=2.5,SNR=13								
STKA					PKKPbc	PKKPbc	16 09 53.4	+0.8	
	comp=Z,15nm,0.9s,baz=291,slow=4.7,SNR=5.4								
STKA					PKKP	PKKPdf	16 10 15.2	-5.6	
	comp=Z,21nm,0.8s,baz=328,slow=3.0,SNR=6.3								
DIYA	**Diyarbakir**	**118.71**	**58**	⇑	*i*P	Pdif	15 55 55.3	+0.7	
MACK	**Trabzon**	**118.77**	**55**	⇑	*i*P	Pdif	15 55 55.3	+0.5	
VSR	**Storozhevoye**	**118.86**	**43**	*d*	*i*PKIKP	PKPdf	15 59 34.8	+0.4	
VSR					*e*		16 00 51.6		
VSR					*e*SP	SP	16 10 35.4	-1.2	
VSR					*e*SS	SS	16 17 32.9	+22	
VSR					pmax	pmax			
	comp=Z,20nm,0.9s								
VSR					pmax	pmax			
	comp=N,10.0nm,1.4s								
VSR					pmax	pmax			
	comp=E,6.0nm,0.6s								
VSR					pmax	pmax			
	comp=Z,2μm,8.3s								
VSR					pmax	pmax			
	comp=N,650nm,7.7s								
VSR					pmax	pmax			
	comp=E,4μm,9.1s								
VSR					MLR	MLR			
	comp=N,49μm,21.0s,MS7.4								
VSR					MLR	MLR			
	comp=Z,63μm,21.0s,MS7.2								
VSR					MLR	MLR			
	comp=E,86μm,20.0s,MS7.4								
VOR	**Voronezh**	**118.88**	**42**		*e*PKIKP	PKPdf	15 59 34.5	0.0	
VOR					pmax	pmax			
	comp=Z,300nm,2.0s								
VORD	**Divnogorie**	**118.94**	**43**	*d*	*i*PKIKP	PKPdf	15 59 34.9	+0.3	
VORD					*e*		16 00 54.5		
VORD					*e*SP	SP	16 10 28.7	-8.6	
VORD					pmax	pmax			
	comp=N,10.0nm,0.9s								
VORD					pmax	pmax			
	comp=Z,40nm,0.9s								
VORD					pmax	pmax			
	comp=E,10.0nm,0.6s								
VORD					pmax	pmax			
	comp=Z,9μm,10.5s								
VORD					pmax	pmax			
	comp=N,2μm,7.4s								
VORD					pmax	pmax			
	comp=E,4μm,8.7s								
VORD					MLR	MLR			
	comp=Z,87μm,21.0s,MS7.4								
VORD					MLR	MLR			
	comp=N,72μm,20.0s,MS7.5								
VORD					MLR	MLR			
	comp=E,79μm,19.0s,MS7.5								
SOC	**Sochi**	**118.95**	**52**	*c*	*i*P	Pdif	15 55 57.0	+1.3	
SOC					*i*		15 59 34.3		
SOC					*i*		16 00 53.0		
SOC					*e*		16 06 25.3		
SOC					*i* SS	SS	16 17 27.4	+15	
SOC					*i* SSS		16 21 33.3		
SOC					pmax	pmax			
	comp=Z,12nm,0.9s								
SOC					pmax	pmax			
	comp=Z,106nm,0.9s								
SOC					MLR	MLR			
	comp=Z,117μm,23.0s,MS7.5								
MARD	**Mardin**	**119.16**	**59**	⇑	*i*P	Pdif	15 55 59.7	+3.1	
BNGL	**BINGOL**	**119.63**	**57**	⇑	*i*P	Pdif	15 55 59.7	+1.0	
MSEY	**Mahe Island**	**120.15**	**110**		*e*PKPdf	PKPdf	15 59 37.8	-0.3	
MSEY					LR	LR			
	comp=Z,200μm,20.0s,MS7.8								
DBAD	**Bademkaya**	**120.22**	**55**	⇑	*i*P	Pdif	15 56 03.2	+1.8	
DBOC	**Borcka**	**120.23**	**54**	⇑	*i*P	Pdif	15 56 02.3	+0.9	
DDEM	**Demirkent**	**120.26**	**55**	⇑	*i*P	Pdif	15 56 04.1	+2.6	
HOMI	**Horasan**	**120.31**	**56**	⇑	*i*P	Pdif	15 56 04.1	+2.3	
DAGI	**Agillar**	**120.39**	**55**	⇑	*i*P	Pdif	15 56 05.0	+2.8	
VRHR	**Novokhopersk**	**120.41**	**43**	*i*	PKIKP	PKPdf	15 59 38.0	+0.6	
VRHR					*e*PPP		16 03 38.8		
VRHR					*e*SS	SS	16 17 52.0	+21	
VRHR					pmax	pmax			
	comp=Z,40nm,0.6s								
VRHR					pmax	pmax			
	comp=N,20nm,0.5s								
VRHR					pmax	pmax			
	comp=E,20nm,0.8s								
VRHR					MLR	MLR			
	comp=E,126μm,21.0s,MS7.6								
VRHR					MLR	MLR			
	comp=Z,212μm,21.0s,MS7.8								
VRHR					MLR	MLR			
	comp=N,71μm,22.0s,MS7.6								
ARTV	**Artvin**	**120.41**	**54**	⇑	*i*P	Pdif	15 56 05.8	+3.6	
TATV	**Tatvan**	**120.45**	**58**	⇑	*i*P	Pdif	15 56 05.8	+3.4	
MSL	**Mosul**	**120.91**	**60**		*ex*	x	15 56 05.0		
MSL					*ex*	x	15 59 41.0		
MSL					*ex*	x	16 03 08.0		
MSL					*ex*	x	16 03 12.0		
MSL					*ex*	x	16 06 33.0		
MSL					*ex*	x	16 10 55.0		
TUTA	**Tutak**	**120.95**	**57**	⇑	*i*P	Pdif	15 56 07.6	+2.9	
KIV	**Kislovodsk**	**121.11**	**51**		P	PKPdf	15 59 40.6	+1.6	
	SNR=12								
KIV	**Kislovodsk**	**121.11**	**51**		*e*PKPdf	PKPdf	15 59 39.6	+0.6	
KIV					LR	LR			
	comp=Z,62μm,21.0s,MS7.2								
KIV	**Kislovodsk**	**121.11**	**51**		*e*P	Pdif	15 56 06.6	+1.3	
KIV					*i*		15 59 40.1		
KIV					*e*		16 01 09.7		
KIV					*e*PPP		16 03 46.1		
KIV					*e*		16 06 33.1		
KIV					*e*PS	PS	16 11 04.8	+2.9	
KIV					*e*SS	SS	16 17 40.5	+0.2	
KIV					*e*SSS		16 22 15.1		
KIV					pmax	pmax			
	comp=Z,145nm,1.1s								
KIV					MLR	MLR			
	comp=Z,117μm,22.0s,MS7.5								
KIV	**Kislovodsk**	**121.11**	**51**	⇑	*i*P	PKPdf	15 59 38.8	-0.2	
BHD	**Baghdad**	**121.58**	**64**		*ex*	x	15 59 43.0		
BHD					*ex*	x	16 01 12.0		
BHD					*ex*	x	16 03 11.0		
BHD					*ex*	x	16 03 17.0		
BHD					*ex*	x	16 06 38.0		
ONI	**Oni**	**121.62**	**53**		P	PKPdf	15 59 44.9	+4.8	
DYDN	**Diyadin**	**121.64**	**56**	⇑	*i*P	Pdif	15 56 11.9	+4.3	
GOR	**Gori**	**122.09**	**54**		P	PKPdf	15 59 42.0	+1.1	
GNI	**Garni**	**122.49**	**56**		P	PKPdf	15 59 43.6	+1.8	
	SNR=10								
GNI	**Garni**	**122.49**	**56**		*e*PKIKP	PKPdf	15 59 42.5	+0.7	
GNI					MLR	MLR			
	comp=Z,61μm,21.0s								
TBLG	**Delisi**	**122.55**	**54**		*e*PKIKP	PKPdf	15 59 42.7	+0.9	
TBLG	**Delisi**	**122.55**	**54**		P	PKPdf	15 59 42.7	+0.9	
MTA	**Mtatsminda**	**122.59**	**54**		P	PKPdf	15 59 43.1	+1.2	
BILL	**Bilibino**	**122.98**	**338**		*e*PKPdf	PKPdf	15 59 41.6	-0.2	
BILL					LR	LR			
	comp=Z,116μm,20.0s,MS7.5								
BILL	**Bilibino**	**122.98**	**338**	⇓	*i*PKIKP	PKPdf	15 59 40.5	-1.4	
BILL					*i*		16 06 34.5		
BILL					pmax	pmax			
	comp=Z,331μm,2.1s								
BILL					pmax	pmax			
	comp=Z,134nm,1.9s								
BILL					MLR	MLR			
	comp=Z,229μm,24.0s,MS7.8								
SMY	**Shemya**	**123.21**	**319**		PKPdf	PKPdf	15 59 41.7	-1.0	
SMY					LR	LR			
	comp=Z,54μm,21.0s,MS7.2								
NAY	**Al-Naaiem**	**123.45**	**69**		*e*P	PKPdf	15 59 44.9	+0.9	
	baz=69								
NAY					AMb	AMB	15 59 51.9		
	comp=Z,144nm,1.1s,baz=69								
MIB	**Mutribah**	**123.61**	**68**		*e*P	PKPdf	15 59 45.5	+1.2	
	baz=68								
MIB					AMb	AMB	15 59 52.2		
	comp=Z,300nm,1.3s,baz=68								
RDF	**Al-Radifah**	**123.67**	**69**		*e*P	PKPdf	15 59 45.0	+0.7	
	baz=69								
RDF					AMb	AMB	16 00 12.0		
	comp=Z,309nm,1.7s,baz=69								
KBD	**Kabd**	**123.83**	**69**		*e*P	PKPdf	15 59 45.7	+1.0	
	baz=69								
KBD					AMb	AMB	15 59 52.1		
	comp=Z,96nm,1.2s,baz=69								
UMR	**Umm Al-Rimmam**	**123.90**	**69**		*e*P	PKPdf	15 59 45.8	+1.0	
	baz=69								
UMR					AMb	AMB	16 00 12.7		
	comp=Z,567nm,1.1s,baz=69								
QRN	**Al-Qurain**	**123.96**	**70**		*e*P	PKPdf	15 59 45.8	+0.8	
	baz=70								
QRN					AMb	AMB	15 59 53.0		
	comp=Z,460nm,1.3s,baz=70								
FORT	**Forrest**	**124.50**	**199**		*e*PKP	PKPdf	15 59 43.9	-2.2	
	comp=Z,221nm,0.4s								
MAK	**Makhachkala**	**124.61**	**52**		*e*P	Pdif	15 56 19.2	-1.7	
MAK					*i*		15 59 46.4		
MAK					*i*		16 01 30.4		
MAK					*i* PPP		16 04 21.7		
MAK					*e*SP	SP	16 11 36.6	+8.3	
MAK					*i* SS	SS	16 18 27.8	+3.0	
MAK					pmax	pmax			
	comp=Z,375nm,1.5s								
MAK					MLR	MLR			
	comp=Z,155μm,24.0s,MS7.6								
MAK					MLR	MLR			
	comp=N,88μm,25.0s,MS7.6								
MAK					MLR	MLR			
	comp=E,120μm,23.0s,MS7.6								
NWAO	**Narrogin (SRO)**	**124.66**	**187**		P	PKPdf	15 59 47.5	+1.1	
	SNR=11								
NWAO	**Narrogin (SRO)**	**124.66**	**187**		PKP	PKPdf	15 59 45.5	-0.9	
	comp=E,32nm,1.1s,baz=180,slow=0.0								
NWAO					SKKPbc		16 13 23.9		
	comp=E,16nm,1.1s,baz=333,slow=3.1,SNR=4.5								
NWAO	**Narrogin (SRO)**	**124.66**	**187**		*e*PKIKP	PKPdf	15 59 46.2	-0.1	
NWAO					MLR	MLR			
	comp=Z,300μm,22.0s								
CTA	**Charters Tower**	**125.09**	**223**		*e*P	PKPdf	15 59 46.3	-1.1	
	comp=Z,50nm,0.8s								
CTA					*e*PP	PP	16 01 48.1	+12	
CTA	**Charters Tower**	**125.09**	**223**		PKP	PKPdf	15 59 46.8	-0.7	
	comp=Z,26nm,0.8s,baz=0.0,slow=0.0								
CTA					SKKPbc		16 13 25.8		
	comp=Z,50nm,1.1s,baz=328,slow=4.6,SNR=4.7								
CTA	**

AKTK **Aktyubinsk** 130.78 42 PKP PKPdf 15 59 57.4 +0.1
AKTO **Aktyubinsk** 130.78 42 PKP PKPdf 15 59 57.4 +0.1
BANOM **Banah** 130.94 74 P PKPdf 15 59 59.8 +1.4
SNR=20
BSY **Bisya** 131.25 79 P PKPdf 16 00 00.1 +1.1
SNR=26
HOQ **Hoqain** 131.50 78 P PKPdf 15 59 59.9 +0.5
SNR=14
WB2 **Warramunga Arr** 131.83 211 *e*PKP PKPdf 15 59 59.6 -0.7
WB2 *e*PP PP 16 02 30.2 +11
WB2 *e*PKS 16 03 28.0
WRA **Warramunga Arr** 131.84 211 PKhKP 15 59 49.4
comp=Z,2.8nm,0.6s,baz=150,slow=3.9,SNR=7.5
WRA PKP PKPdf 15 59 59.7 -0.6
comp=Z,39nm,0.6s,baz=155,slow=1.7,SNR=45
WRA SKKPbc 16 12 51.0
comp=Z,37nm,1.1s,baz=329,slow=5.6,SNR=4.5
WRA **Warramunga Arr** 131.84 211 PKHKP 15 59 49.4
WRA 15 59 59.7
WRA pmax pmax
comp=Z,3.0nm,0.6s
WRA pmax pmax
comp=Z,39nm,0.6s
WRAB **Tennant Creek** 131.84 211 *e*PKPdf PKPdf 15 59 60.0 -0.3
WRAB LR LR
comp=Z,486μm,22.0s,MS8.2
WRAB **Tennant Creek** 131.84 211 P PKPdf 16 00 00.0 -0.3
PMG **Port Moresby** 131.99 233 *e*PKPdf PKPdf 16 00 01.3 +0.6
PMG LR LR
comp=Z,180μm,22.0s,MS7.7
PMG **Port Moresby** 131.99 233 P PKPdf 16 00 05.9 +5.2
JMDO **Jabal Madar** 132.01 79 P PKPdf 16 00 01.6 +1.1
SNR=31
SMDO **Samad** 132.08 79 P PKPdf 16 00 01.0 +0.4
SNR=40
BIDO **Bidbid** 132.22 78 P PKPdf 16 00 01.0 +0.2
SNR=38
PET **Petropavlovsk** 132.22 322 *e*PKPdf PKPdf 16 00 00.3 +0.4
PET LR LR
comp=Z,77μm,22.0s,MS7.4
PET **Petropavlovsk** 132.22 322 *e*P Pdif 15 56 59.2 +4.5
PET *e* 15 59 43.4
PET *e* 16 00 00.5
PET *i* 16 00 13.0
PET pmax pmax
comp=Z,83nm,2.0s
PET MLR MLR
comp=Z,53μm,20.0s,MS7.2
AB31 **Akbulak array** 132.30 43 PKIKP PKPdf 16 00 01.5 +1.3
AB31 pmax pmax
comp=Z,641nm,1.6s
PEA0B **Petropavlovsk-** 132.73 323 *e*PKPdf PKPdf 16 00 02.1 +1.3
PETK **Petropavlovsk-** 132.73 323 PKhKP 15 59 46.9
comp=Z,4.4nm,0.6s,baz=71,slow=6.1,SNR=9.9
PETK PKP PKPdf 16 00 00.6 -0.3
comp=Z,24nm,0.8s,baz=81,slow=2.1,SNR=24
PETK **Petropavlovsk-** 132.73 323 PKP 15 59 46.9
PETK PKP PKPdf 16 00 00.6 -0.3
WBK **Wadi Bani Khal** 132.84 79 P PKPdf 16 00 03.2 +1.2
SNR=42
SKR **Severo-Kuril's** 134.53 320 *i* PKIKP PKPdf 16 00 01.2 -3.1
SKR *e* 16 02 40.0
SKR pmax pmax
comp=N,980nm,2.0s
SKR pmax pmax
comp=E,980nm,2.0s
SKR pmax pmax
comp=Z,1μm,2.0s
SKR pmax pmax
comp=Z,14μm,16.0s
SKR pmax pmax
comp=N,3μm,4.0s
SKR pmax pmax
comp=E,4μm,4.0s
MBWA **Marble Bar** 135.80 193 P PKPdf 16 00 08.7 +1.0
SNR=17
MBWA **Marble Bar** 135.80 193 *e*PKPpre 15 59 56.7
MBWA *e*PKPdf PKPdf 16 00 07.5 -0.2
MBWA LR LR
comp=Z,284μm,20.0s,MS8.0
MBWA **Marble Bar** 135.80 193 P PKPdf 16 00 08.2 +0.5
BRVK **Borovoye** 136.85 35 ⇑P PKPdf 16 00 09.6 +1.0
SNR=20
BRVK **Borovoye** 136.85 35 *e*PKPdf PKPdf 16 00 09.4 +0.8
BRVK LR LR
comp=Z,323μm,21.0s,MS8.0
BVA0 **Borovoye Array** 136.93 35 PKIKP PKPdf 16 00 09.6 +0.9
BVA0 pmax pmax
comp=Z,400nm,3.0s
YAK **Yakutsk** 138.13 346 *e*PKPpre 15 59 59.9
YAK *i* PKP PKPdf 16 00 10.5 -0.2
YAK LR LR
comp=Z,95μm,20.0s,MS7.5
YAK **Yakutsk** 138.13 346 *e*PKIKP PKPdf 16 00 11.5 +0.8
YAK *e* 16 02 42.2
YAK *e*SS SS 16 20 49.5 -18
YAK pmax pmax
comp=Z,113nm,1.0s
YAK pmax pmax
comp=N,87nm,1.2s
YAK MLR MLR
comp=N,104μm,21.0s
YAK MLR MLR
comp=E,84μm,28.0s
KAKA **Kakadu** 138.93 214 *e*PKP Px 15 59 55.0
comp=E,86nm,0.8s
NVS **Novosibirsk** 141.75 25 *e*PKHKP 16 00 11.7
NVS pmax pmax
comp=N,179nm,1.7s
NVS pmax pmax
comp=E,272nm,1.7s
NVS pmax pmax
comp=Z,1μm,1.7s
KBL **Kabul** 142.04 62 *e*PKPpre PKPdf 16 00 14.0 -4.7
KURK **Kurchatov** 142.45 33 *e*PKPpre PKPdf 16 00 14.3 -4.5
KURK LR LR
comp=Z,163μm,21.0s,MS7.8
KURK **Kurchatov** 142.45 33*c* *i*PKIKP PKPdf 16 00 15.5 -3.4
KURK MLR MLR
comp=Z,160μm,20.0s,MS7.8
BHJ **Bhuj** 142.67 81 *e*P PKPdf 16 00 17.2 -2.9
ZAA0 **Zalesovo Array** 143.04 25 *e*PKPpre 16 00 15.7
ZALV **Zalesovo Beam** 143.04 25 PKhKP 16 00 14.3
comp=Z,11nm,0.4s,baz=327,slow=3.8,SNR=38
ZALV PKP PKPdf 16 00 16.6 -3.1
comp=Z,208nm,0.8s,baz=300,slow=2.7,SNR=57
ZALV **Zalesovo Beam** 143.04 25 PKP 16 00 14.3
ZALV PKP PKPdf 16 00 16.6 -3.1
ZALV **Zalesovo Beam** 143.04 25 PKHKP 16 00 14.3
ZALV 16 00 16.7
ZALV pmax pmax
comp=Z,11nm,0.4s
COCO **West Island** 143.28 158 PFAKE 16 00 30.0 +8.5
COCO LR LR
comp=Z,101μm,22.0s,MS7.5
EKS2 **Erkin-Say** 143.56 48 *e*PKPpre 16 00 18.6
EKS2 LR LR
comp=Z,175μm,21.0s,MS7.8
EKS2 **Erkin-Say** 143.56 48 P PKPdf 16 00 21.0 -0.1
SNR=105
AML **Almayashu** 143.69 48 *e*PKPdf PKPdf 16 00 21.8 +0.4
AML **Almayashu** 143.69 48 P PKPdf 16 00 21.9 +0.6
SNR=186
USP **Ospenovka** 143.81 46 P PKPdf 16 00 21.1 -0.4
SNR=46
CLNS **Chul'man** 143.88 346 *i* PKIKP PKPdf 16 00 17.4 -3.8
CLNS pmax pmax
comp=Z,295nm,1.8s
CLNS pmax pmax
comp=N,63nm,1.7s
CLNS pmax pmax
comp=E,40nm,1.5s
KRAR **Krasnoyarsk** 143.98 17*c* *i*PKIKP PKPdf 16 00 17.8 -3.6
FRU **Bishkek** 144.06 47 *i* PKIKP PKPdf 16 00 20.0 -1.9
FRU *i* 16 00 30.0
FRU *i* 16 22 51.0
FRU pmax pmax
comp=Z,14μm,4.0s
FRU MLR MLR
comp=Z,120μm,20.0s,MS7.7
YSS **Yuzh-Sakhalins** 144.08 321 *e*PKPpre PKPdf 16 00 18.6 -3.3
YSS LR LR
comp=Z,39μm,21.0s,MS7.2
YSS **Yuzh-Sakhalins** 144.08 321*oe*PKIKP PKPdf 16 00 18.0 -3.9
YSS *e* 16 07 30.0
YSS *e*SS SS 16 22 13.0 -5.4
YSS pmax pmax
comp=E,1μm,2.0s
YSS pmax pmax
comp=Z,3μm,2.0s
YSS pmax pmax
comp=Z,20μm,11.0s
CHMS **Chumysh** 144.08 47 P PKPdf 16 00 22.6 +0.6
SNR=101
UCH **Uchtor** 144.22 48 P PKiKP 16 00 26.0 +0.2
SNR=8.8
KBK **Karagaybulak** 144.35 47 P PKPdf 16 00 21.4 -1.0
SNR=266
BOD **Bodaibo** 144.43 357 *e*PKIKP PKPdf 16 00 18.9 -3.2
BOD pmax pmax
comp=Z,852nm,1.0s
TKM2 **Tokmak 2** 144.68 46 *e*PKP PKPdf 16 00 22.4 -0.7
TKM2 LR LR
comp=Z,129μm,22.0s,MS7.7
TKM2 **Tokmak 2** 144.68 46 P PKPdf 16 00 22.2 -0.8
SNR=289
KZA **Kyzart** 144.79 48 P PKPdf 16 00 23.9 +0.6
SNR=206
GOA **Goa** 144.97 95⇑ *i*P PKPdf 16 00 23.3 -1.0
GOA *i* x x 16 10 58.5
MNGI **Mangalore** 145.08 99 *i* P PKPbc 16 00 22.3 -1.7
MNGI *i* x x 16 09 53.4
BATI **Baumata** 145.09 204 PKPbc PKPbc 16 00 22.9 -1.2
comp=Z,406nm,0.9s,baz=210,slow=1.0
BATI **Baumata** 145.09 204 P PKPbc 16 00 23.9 -0.1
TRD **Trivandrum** 145.22 108 *e*P PKPbc 16 00 24.8 +0.3
ULHL **Ulahol** 145.39 47 P PKPbc 16 00 25.0 +0.8
SNR=206
AAA **Alma-Ata** 145.42 45 *i* PKIKP PKPdf 16 00 24.7 +0.4
AAA pmax pmax
comp=Z,167μm,21.0s
AAA MLR MLR
comp=Z,101μm,22.0s,MS7.5
POO **Poona** 145.76 90 *e*P PKPdf 16 00 25.3 -0.3
POO AMS AMS 16 47 37.0
comp=Z,17μm,14.3s,MS7.0
KAD **Karad** 145.79 92 *e*P PKPdf 16 00 25.3 -0.4
GUMO **Guam** 145.98 261 PKPbc PKPbc 16 00 25.3 -1.5
baz=184,slow=4.6
GUMO **Guam** 145.98 261 *e*PKPdf PKPdf 16 00 25.4 -0.7
GUMO LR LR
comp=Z,144μm,20.0s,MS7.8
GUMO **Guam** 145.98 261 P PKPdf 16 00 27.9 +1.8
ERM **Erimo** 146.19 313 *e*PKPbc PKPbc 16 00 27.1 +0.4
ERM LR LR
comp=Z,205μm,21.0s,MS7.9
KSH **Kashi** 146.24 52 *i* PKP PKPdf 16 00 26.5 +0.7
KSH *e*PKS 16 04 00.5
KSH SKS SKSdf 16 07 25.1 -7.2
KSH LR LR
comp=N,134μm,18.8s,MS7.8
KSH LR LR
comp=E,77μm,15.7s,MS7.8
KSH LR LR
comp=Z,141μm,16.7s,MS7.8
KOD **Kodaikanal** 146.43 106 *e*P PKPdf 16 00 28.4 +1.5
MK31 **Makanchi Array** 146.77 36 *e*PKPdf PKPdf 16 00 26.0 -0.4
MKAR **Makanchi Array** 146.77 36 PKP PKPdf 16 00 25.6 -0.9
comp=Z,166nm,0.9s,baz=322,slow=1.5,SNR=152
MKAR PKPbc PKPbc 16 00 27.8 -0.4
comp=Z,166nm,1.0s,baz=338,slow=1.4,SNR=159
XMIS **Christmas Isla** 147.10 172 *e*P PKPdf 16 00 28.6 +0.6
XMIS **Christmas Isla** 147.10 172 P PKPab 16 00 31.1 -0.5
HABR **Khabarovsk** 147.26 329⇑ *i*PKP2 PKPab 16 00 30.4 -0.9
HABR *e* 16 03 54.1
HABR *e*PPP 16 07 10.0
HABR *e* 16 07 28.5
HABR *e* 16 16 31.0
HABR *e*SS SS 16 22 52.1 -1.9
HABR *e*SSS 16 28 24.1
AJM **Ajmer** 147.40 75 *e*P PKPdf 16 00 28.8 +0.6
THN **Thein Dam** 147.87 64 *e*P PKPdf 16 00 26.9 -1.9
THN *ex* x 16 07 45.2
DLH **Dalhousie** 148.06 64 *ex* PKPbc 16 00 32.0 -0.3
DLH *ex* x 16 01 09.0
KLR **Kul'dur** 148.19 333 *e*PKHKP 16 00 24.0
KLR *e* 16 07 32.0
LATR **Latur** 148.25 91 *i* P PKPdf 16 00 30.6 +0.8
BHK **Bhakra** 148.62 66 *ex* PKPab 16 00 37.8 +0.4
BHK *ex* x 16 03 28.2
AAI **Ambon** 148.74 216 P PKPdf 16 00 31.2 +0.4
DNP **Denpasar** 148.81 190 P PKPab 16 00 37.3 -1.1
KHKI **Kahang-Kahang** 149.05 190 P PKPbc 16 00 34.5 -0.9
SDNR **Sundarnagar** 149.07 66 *ex* PKPdf 16 00 32.6 +1.8
AKL **Akola** 149.10 87 *e*P PKPdf 16 00 32.2 +1.1
SMLA **Simla** 149.29 66 *i* P PKPdf 16 00 30.4 -0.7
NDI **New Delhi** 149.61 71 *e*P PKPdf 16 00 30.0 -1.7
NDI *ex* x 16 11 41.0
KRKI **Karangkates** 149.63 184 P PKPbc 16 00 35.7 -1.1
IRK **Irkutsk** 149.78 7⇓ *i*PKHKP PKPdf 16 00 32.9 +1.7
IRK *e* 16 04 17.9
IRK pmax pmax
comp=Z,3μm,2.3s
BHPL **Bhopal** 149.78 82 *e*P PKPdf 16 00 31.9 -0.2
BHPL AMb AMB 16 00 41.2
comp=Z,1μm,2.3s
HYB **Hyderabad** 149.85 94 *e*PKP PKPdf 16 00 32.0 -0.4
HYB *e*PP PP 16 04 16.0 +4.5
SJI **Sawahan** 150.09 183 P PKPdf 16 00 33.6 +0.7
DDI **Dehra Dun** 150.16 68 *e*P PKPdf 16 00 29.2 -3.3
DDI *ex* x 16 11 34.0
CIT **Chita** 150.24 356 *e*PKIKP PKPdf 16 00 34.3 +2.4
CIT pmax pmax
comp=Z,4μm,2.1s
TLY **Talaya** 150.25 8 ⇑P PKPdf 16 00 32.5 +0.5
SNR=155
TLY **Talaya** 150.25 8 *e*PKPbc PKPbc 16 00 34.1 -3.0
TLY LR LR
comp=Z,114μm,22.0s,MS7.6
TLY **Talaya** 150.25 8*c* *i*PKIKP PKPdf 16 00 32.6 +0.6
TLY *e* 16 04 20.1
TLY *e*PPS 16 17 10.9
TLY *e*SS SS 16 23 26.9 +0.3
TLY pmax pmax
comp=Z,1μm,2.4s
BJII **Banjamegara** 150.53 179 P PKPbc 16 00 40.2 +1.2
KMMI **Kalianget** 150.58 188 P PKPbc 16 00 37.5 -1.6
LEM **Lembang** 150.92 175 P PKPdf 16 00 35.7 +1.5
NGP **Nagpur** 151.05 86⇑ *i*P PKPdf 16 00 32.5 -1.6
NGP *ex* x 16 23 50.1
NGP AMP 17 10 44.9
comp=Z,165μm,16.3s
KDI **Kendari** 151.21 206 P PKPdf 16 00 36.3 +1.6
CBJI **Citeko** 151.25 173 P PKPdf 16 00 35.3 +0.6
KAPI **Kappang** 151.28 200 P PKPdf 16 00 35.6 +0.9
SNR=195
KAPI **Kappang** 151.28 200 PKP PKPdf 16 00 33.6 -1.2
comp=Z,130nm,1.0s,baz=41,slow=1.1,SNR=32
KAPI PKPbc PKPbc 16 00 39.7 -1.1
comp=Z,171nm,0.9s,baz=224,slow=2.4,SNR=38
KAPI **Kappang** 151.28 200 *e*PKPdf PKPdf 16 00 35.1 +0.3
KAPI LR LR
comp=Z,131μm,22.0s,MS7.7
JCJI **Jatiwangi** 151.30 176 P PKPbc 16 00 41.0 +0.2
SBJI **Serang** 151.45 171 P PKPbc 16 00 41.9 +0.7
ZAK **Zakamensk** 151.47 9 *e*PKIKP PKPdf 16 00 33.9 0.0
ZAK pmax pmax
comp=Z,325nm,1.2s
WMQ **Urumqi** 151.60 36 PKP PKPdf 16 00 35.0 +0.7
WMQ PP PP 16 04 26.0 +5.9
WMQ SKS SKSdf 16 07 34.0 -5.3
WMQ SKKS SKKSac 16 11 05.0 -3.5
WMQ SS SS 16 23 42.0 -0.8
WMQ PP PP
comp=Z,56μm,10.0s
WMQ LR LR
comp=N,215μm,25.0s,MS8.1
WMQ LR LR
comp=E,269μm,25.0s,MS8.1
WMQ LR LR
comp=Z,199μm,25.0s,MS7.8
MJAR **Matsushiro Arr** 151.93 307 PKP PKPdf 16 00 34.1 -0.9
comp=Z,23nm,0.7s,baz=115,slow=1.1,SNR=27
MJAR PKPbc PKPbc 16 00 40.7 -0.8
comp=Z,87nm,0.8s,baz=115,slow=2.0,SNR=40
MJAR **Matsushiro Arr** 151.93 307 PKIKP PKPdf 16 00 34.1 -0.9
MJAR 16 00 40.7
MJAR pmax pmax
comp=Z,23nm,0.7s
MAJO **Matsushiro** 151.93 307 *e*PKPdf PKPdf 16 00 35.1 +0.1
MAJO *e*PKPbc PKPbc 16 00 40.0 -1.5
MAJO LR LR
comp=Z,280μm,22.0s,MS8.0
MAT **Matsushiro** 151.93 307 PKP PKPdf 16 00 34.0 -1.1
HIA **Hailar** 152.07 347 *e*PKPdf PKPdf 16 00 33.8 -1.1
HIA *e*PKPbc PKPbc 16 00 39.8 -1.6
HIA LR LR
comp=Z,147μm,22.0s,MS7.8
PTH **Pithoragarh** 152.13 69 *e*P PKPdf 16 00 37.2 +1.6
PTH *ex* x 16 06 38.9
LGTI **Lohaghat** 152.17 69 *ex* PKPdf 16 00 37.1 +1.5
LGTI *ex* x 16 04 35.1
KLI **Kotabumi** 152.48 168 P PKPbc 16 00 43.7 +0.2
MDJ **Mudanjiang** 152.65 329 PKP PKPdf 16 00 34.5 -1.3
MDJ APKP 16 00 46.8
MDJ PKS 16 04 08.6
MDJ PP PP 16 04 26.8 +1.0
MDJ SKS SKSdf 16 07 38.3 -2.2
MDJ SS SS 16 23 51.8 -2.2
MDJ PP PP
comp=Z,53μm,18.8s
MDJ LR LR
comp=N,91μm,24.4s,MS7.7
MDJ LR LR
comp=E,124μm,23.4s,MS7.7
MDJ LR LR
comp=Z,218μm,23.9s,MS7.9
MDJ **Mudanjiang** 152.65 329 *e*PKPdf PKPdf 16 00 34.9 -1.0
MDJ LR LR
comp=Z,111μm,20.0s,MS7.7
KSI **Kapahiang** 153.13 163 P PKPdf 16 00 38.5 +0.9
ALBI **Allahabad** 153.86 78 *ex* PKPab 16 01 02.0 +2.7
BBKI **Banjar Baru** 153.98 191 P PKPbc 16 00 46.8 0.0
VIS **Vishakhapatnam** 154.34 95 *e*P PKPdf 16 00 37.7 -1.4
VIS AMb AMB 16 01 05.6
comp=Z,878nm,1.8s
VIS *i* x x 16 04 31.4
VIS AMS AMS 16 43 17.4
comp=Z,33μm,18.8s,MS7.2
SONM **Songino Array** 154.36 6 PKP PKPdf 16 00 38.2 0.0
comp=Z,33nm,0.7s,baz=300,slow=0.9,SNR=70
SONM **Songino Array** 154.36 6 PKIKP PKPdf 16 00 38.2 0.0
SONM pmax pmax
comp=Z,33nm,0.7s
ULN **Ulaanbaatar** 154.39 5 P PKPdf 16 00 39.0 +0.8
SNR=68
ULN **Ulaanbaatar** 154.39 5 *e*PKIKP PKPdf 16 00 37.6 -0.6
ULN MLR MLR
comp=Z,130μm,21.0s,MS7.7
ULN **Ulaanbaatar** 154.39 5 P PKPdf 16 00 38.2 0.0
PYUN **Piuthan** 154.73 71 *e*P PKPdf 16 00 38.9 -0.5
MNI **Manado** 154.84 216 P PKPbc 16 00 46.5 -2.1
TPI **Tanjungpandan** 154.95 174 P PKPdf 16 00 43.5 +3.4
PDSI **Padang** 155.02 156 P PKPdf 16 00 46.8 +6.6
PCI **Palu** 155.08 203 P PKPdf 16 00 43.5 +3.2
PBKI **Pangkalan Bun** 155.09 183 P PKPdf 16 00 47.4 +7.1
CN2 **Changchun** 155.14 333 PKP PKPdf 16 00 35.8 -3.6
CN2 PP PP 16 04 41.3 +1.5
CN2 SS SS 16 24 17.8 -3.2
CN2 PP PP
comp=Z,15μm,10.0s
CN2 LR LR
comp=N,82μm,22.0s,MS7.7
CN2 LR LR
comp=E,87μm,22.0s,MS7.7
CN2 LR LR
comp=Z,91μm,25.0s,MS7.5
KOLN **Koldanda** 155.31 72 *e*P PKPdf 16 00 39.9 -0.2
comp=Z,2μm,1.3s
PPBI **Pangkal Pinang** 155.34 170 P PKPdf 16 00 41.8 +1.1
DANN **Dangsing** 155.37 70 *e*P PKPdf 16 00 40.3 +0.1
comp=Z,1μm,0.7s
PPI **Padang Panjang** 155.42 156 P PKPdf 16 00 41.5 +0.7
GKN **Gorkha** 156.19 71 *e*P PKPdf 16 00 40.9 -0.4
comp=Z,3μm,1.5s
DMN **Daman** 156.65 72 *e*P PKPdf 16 00 42.4 +0.5
comp=Z,2μm,1.1s
KKN **Kakani** 156.78 71 *e*P PKPdf 16 00 41.6 -0.5
comp=Z,983nm,0.9s
PKIN **Phulchoki** 156.91 72 *e*P PKPdf 16 00 41.7 -0.6
comp=Z,2μm,1.4s
PKI **Pulchoki** 156.92 72 *e*P PKPdf 16 00 41.8 -0.5
comp=Z,3μm,1.5s
BWNR **Bhubaneshwar** 157.17 91 *ex* x 16 00 20.0
GUN **Gumba** 157.29 71 *e*P PKPdf 16 00 42.4 -0.3
comp=Z,6μm,1.6s
SNY **Shenyang** 157.55 333 ⇑PKP PKPdf 16 00 42.1 -0.5
SNY APKP 16 00 56.4
SNY PP PP 16 04 55.0 +1.9
SNY LR LR
comp=N,77μm,19.2s,MS7.8
SNY LR LR
comp=E,110μm,22.0s,MS7.8
SNY LR LR
comp=Z,187μm,25.2s,MS7.8
BOK **Bokaro** 157.57 82 *e*P PKPdf 16 00 41.7 -1.5
BOK AMb AMB 16 00 51.7
comp=Z,439nm,1.7s
BOK *i* x x 16 05 21.9
BOK AMS AMS 16 46 53.5
comp=Z,14μm,10.1s,MS7.1
JIRN **Jiri** 157.60 71 *e*P PKPdf 16 00 42.5 -0.6
comp=Z,540nm,0.9s
RAMN **Ramite** 158.05 73 *e*P PKPdf 16 00 43.5 -0.2
comp=Z,1000nm,0.8s
MATI **Mati** 158.26 228 *e*P PKPdf 16 00 42.5 -1.8
KSRS **Korea Array** 158.54 319 PKP PKPdf 16 00 42.6 -1.3
comp=Z,52nm,1.1s,baz=54,slow=0.4,SNR=66
KSRS PKPab PKPab 16 01 19.5 +0.5
comp=Z,184nm,1.0s,baz=352,slow=0.9,SNR=10
KSRS **Korea Array** 158.54 319 PKIKP PKPdf 16 00 42.7 -1.3
KSRS 16 01 19.5
KSRS pmax pmax
comp=Z,52nm,1.1s
ODAN **Odare** 158.76 73 *e*P PKPdf 16 00 44.3 -0.3
comp=Z,1μm,1.0s
DAV **Davao City (W)** 158.81 227 PKP PKPdf 16 00 45.0 0.0
comp=Z,77nm,0.3s,baz=225,slow=19,SNR=1.9
DAV **Davao City (W)** 158.81 227 PKP PKPdf 16 00 45.0 0.0
DAV LR LR
comp=Z,156μm,21.0s,MS7.8
DAV **Davao City (W)** 158.81 227⇑ *e*P PKPdf 16 00 41.7 -3.4
TAPN **Taplejung** 158.98 72 *e*P PKPdf 16 00 43.7 -1.1
comp=Z,5μm,1.9s
SHBG **Sahibganj** 159.16 78 *ex* x 16 00 40.0
FRIM **Kepong** 159.28 155 ⇓P PKPdf 16 00 46.7 +1.1
BUKP **Musuan** 159.74 227 *e*P PKPdf 16 00 44.6 -1.5
CAL **Calcutta** 159.76 85 *e*P PKPdf 16 00 45.1 -0.7
CAL *ex* x 16 11 59.9
CAL AMP 16 34 49.1
comp=Z,40μm,21.3s
CTBH **Cotabato--PC H** 159.80 224⇓ *e*P PKPdf 16 00 46.1 -0.1
CTBH *i* S 16 02 22.5
CTBH **Cotabato--PC H** 159.80 224⇓ *e*P PKPdf 16 00 46.1 -0.1
CTBH *i* S 16 02 22.5
GTA **Gaotai** 160.79 25 PKP PKPdf 16 00 46.5 0.0
GTA APKP 16 01 05.9
GTA PKS 16 04 18.8
GTA PP PP 16 05 17.3 +6.6
GTA SKS SKSdf 16 07 45.8 -3.4
GTA SS SS 16 25 21.5 +0.4
GTA PP PP
comp=Z,55μm,21.6s
GTA LR LR
comp=N,74μm,26.4s
GTA LR LR
comp=E,87μm,27.6s
GTA LR LR
comp=Z,141μm,30.6s
DL2 **Dalian** 160.80 332 PKP PKPdf 16 00 46.4 -0.1
DL2 PP PP
comp=Z,36μm,21.6s
DL2 LR LR
comp=N,41μm,22.1s
DL2 LR LR
comp=Z,89μm,26.5s
PAGZ **Pagadian** 160.83 223 *e*P PKPdf 16 00 46.2 -1.1
LSA **Lhasa** 161.37 63 PKP PKPdf 16 00 49.8 +2.4
LSA APKP 16 00 59.8
LSA XPKP 16 01 08.1
LSA PP PP
comp=Z,57μm,25.0s
LSA LR LR
comp=N,76μm,23.0s

LSA					LR	LR			
	comp=E,200µm,30.0s								
LSA					LR	LR			
	comp=Z,200µm,30.0s								
LSA	**Lhasa**	**161.37**	**63**	*e*PKIKP	PKPdf	16 00 47.8	+0.4		
LSA				MLR	MLR				
	comp=Z,202µm,22.0s								
MSLP	**Maasin**	**161.46**	**232**	*e*P	PKPdf	16 00 44.3	-3.6		
HHC	**Hu-ho-hao-te**	**161.49**	**357**	*e*PKP	PKPdf	16 00 47.3	+0.1		
HHC				APKP		16 01 05.4			
HHC				XPKP		16 01 12.5			
HHC				PKS		16 04 19.3			
HHC				PP	PP	16 05 16.3	+2.3		
HHC				SKS	SKSdf	16 07 41.4	-8.3		
HHC				SKKS	SKKSac	16 11 58.3	-2.5		
HHC				SS	SS	16 25 23.5	-4.2		
HHC				PP	PP				
	comp=Z,77µm,17.8s								
HHC				LR	LR				
	comp=N,116µm,26.2s								
HHC				LR	LR				
	comp=E,69µm,21.4s								
HHC				LR	LR				
	comp=Z,217µm,22.6s								
BJI	**Beijing**	**161.62**	**345**	PKP	PKPdf	16 00 47.3	-0.1		
BJI				PP	PP	16 05 14.3	-0.6		
BJI				SKS	SKSdf	16 07 43.0	-6.8		
BJI				PP	PP				
	comp=E,50µm,28.1s								
BJI				LR	LR				
	comp=N,55µm,30.4s								
BJI				LR	LR				
	comp=E,140µm,29.1s								
BJI				LR	LR				
	comp=Z,206µm,28.4s								
BJT	**Baijiatuau**	**161.65**	**345**	*e*PKPdf	PKPdf	16 00 47.2	-0.2		
BJT				LR	LR				
	comp=Z,228µm,21.0s								
BTO	**Baotou**	**161.77**	**0**	*e*PKP	PKPdf	16 00 46.8	-0.7		
BTO				LR	LR				
	comp=N,15µm,22.5s								
BTO				LR	LR				
	comp=E,12µm,14.7s								
TBP	**Tagbilaran**	**161.86**	**228**	*e*P	PKPdf	16 00 48.1	-0.3		
LLP	**Lapu-Lapu**	**162.23**	**230**	*e*P	PKPdf	16 00 48.8	0.0		
OCLP	**Ormoc**	**162.25**	**233**	*e*P	PKPdf	16 00 47.7	-1.1		
SNG	**Songkhla**	**162.33**	**147**	P	PKPdf	16 00 49.0	+0.1		
	comp=E,600nm,1.1s								
SHL	**Shillong**	**162.93**	**75**	*e*PKP	PKPdf	16 00 49.2	+0.1		
SHL				*ex*	x	16 05 26.0			
JOW	**Kunigami**	**162.98**	**289**	PKP	PKPdf	16 00 48.2	-0.9		
	comp=E,22nm,1.0s,baz=0.7,slow=0.8								
GUIM	**Jordan**	**163.40**	**228**	*e*P	PKPdf	16 00 47.7	-2.2		
RCP	**Roxas**	**163.95**	**230**⇓	*e*P	PKPdf	16 00 57.2	+6.9		
PVCP	**Virac**	**164.17**	**239**	*e*P	PKPdf	16 00 52.2	+1.7		
CUYO	**Cuyo Island**	**164.61**	**224**	*e*P	PKPdf	16 00 53.5	+2.5		
BATP	**Batataraza**	**164.71**	**210**	*e*P	PKPdf	16 00 51.3	+0.2		
IMP	**Imphal**	**164.86**	**77**	*i* x	PKPdf	16 00 52.0	+1.1		
IMP				*j* x	x	16 01 50.0			
TIA	**Tai'an**	**164.91**	**338**	⇑PKP	PKPdf	16 00 50.0	-0.6		
TIA				APKP		16 01 02.0			
TIA				XPKP		16 01 09.0			
TIA				LR	LR				
	comp=E,79µm,20.0s								
OTRP	**Odiongan**	**165.01**	**231**	*e*P	PKPdf	16 00 51.3	0.0		
PPR	**Puerto Princes**	**165.09**	**215**	*e*P	PKPdf	16 00 50.5	-0.9		
LZH	**Lanzhou**	**165.20**	**21**	⇑PKP	PKPdf	16 00 52.3	+1.4		
LZH				APKP		16 01 03.1			
LZH				PP	PP	16 05 40.1	+6.2		
LZH				*e*SKKS	SKKSac	16 12 19.0	-0.9		
LZH				SS	SS	16 26 08.0	+1.5		
LZH				PP	PP				
	comp=Z,57µm,9.8s								
LZH				LR	LR				
	comp=N,185µm,21.7s								
LZH				LR	LR				
	comp=Z,302µm,22.0s								
LZH	**Lanzhou**	**165.20**	**21**	⇑PKP	PKPdf	16 00 52.3	+1.4		
LZH				pPKP	pPKPdf	16 01 03.1	+1.2		
LZH				sPKP		16 01 08.1			
LZH				PP	PP	16 05 40.1	+6.2		
LZH				SKS	SKSdf	16 07 52.0	-0.7		
LZH				*e*SKKS	SKKSac	16 12 19.0	-0.9		
LZH				SS	SS	16 26 08.0	+1.5		
LZH				LR	LR				
	comp=Z,302µm,22.0s								
LZH	**Lanzhou**	**165.20**	**21**	⇑PKIKP	PKPdf	16 00 52.3	+1.4		
LZH						16 01 03.1			
LZH						16 05 40.1			
LZH						16 07 52.0			
LZH				SS	SS	16 26 08.0	+1.5		
LZH				MLR	MLR				
	comp=Z,302µm,22.0s								
GQP	**Guinayangan**	**165.69**	**236**⇓	*e*P	PKPdf	16 00 51.4	-0.4		
SJMP	**San Jose**	**165.71**	**228**	*e*P	PKPdf	16 00 52.5	+0.6		
ENPP	**El Nido**	**165.87**	**220**	*e*P	PKPdf	16 00 52.6	+0.6		
BUSP	**Coron**	**166.00**	**224**	*e*P	PKPdf	16 00 51.8	-0.4		
NNT	**Nongplab**	**166.09**	**132**	P	PKPdf	16 00 53.5	+1.3		
POLP	**Polillo Island**	**166.57**	**238**	*e*P	PKPdf	16 00 54.1	+1.5		
SSE	**Sheshan**	**166.88**	**314**	PKP	PKPdf	16 00 50.0	-2.3		
SSE				PP	PP	16 05 44.6	+1.1		
SSE				SS	SS	16 26 17.3	-7.9		
SSE				PP	PP				
	comp=Z,44µm,12.0s								
SSE				LR	LR				
	comp=N,84µm,25.4s								
SSE				LR	LR				
	comp=E,226µm,25.4s								
SSE				LR	LR				
	comp=Z,235µm,24.0s								
SSE	**Sheshan**	**166.88**	**314**	PKP	PKPdf	16 00 50.5	-1.8		
SSE				PP	PP	16 05 44.6	+1.1		
SSE				SS	SS	16 26 17.3	-7.9		
SSE				LR	LR				
	comp=Z,235µm,24.0s								
LUBP	**Lubang**	**167.21**	**230**	*e*P	PKPdf	16 00 50.9	-2.2		
PALP	**Palanan**	**167.37**	**248**	*e*P	PKPdf	16 00 55.6	+2.6		
BALP	**Baler**	**167.43**	**241**	*e*P	PKPdf	16 00 54.6	+1.5		
NJ2	**Nanjing**	**167.64**	**323**	*e*PKP	PKPdf	16 00 53.9	+1.0		
NJ2				APKP		16 01 04.9			
NJ2				PKP2	PKPab	16 02 01.6	+2.6		
NJ2				PP	PP	16 05 50.0	+3.0		
NJ2				PP	PP				
	comp=Z,42µm,23.5s								
NJ2				LR	LR				
	comp=N,82µm,27.8s								
NJ2				LR	LR				
	comp=E,74µm,30.8s								
NJ2				LR	LR				
	comp=Z,74µm,30.8s								
PCPH	**Palayan**	**167.71**	**239**⇓	*e*P	PKPdf	16 00 54.0	+0.7		
CVP	**Callao Caves**	**168.17**	**249**⇓	*e*P	PKPdf	16 00 55.0	+1.4		
XAN	**Xi'an**	**168.27**	**5**	PKP	PKPdf	16 00 52.5	-0.7		
XAN				PP	PP	16 05 53.8	+4.4		
XAN				SS	SS	16 26 28.1	-8.9		
XAN				PP	PP				
	comp=Z,84µm,21.9s								
XAN				LR	LR				
	comp=N,27µm,29.8s								
XAN				LR	LR				
	comp=E,78µm,29.0s								
XAN				LR	LR				
	comp=Z,258µm,24.3s								
BDT	**Bhumibol Dam**	**168.30**	**114**	P	PKPdf	16 00 54.0	+0.3		
	comp=Z,113nm,1.0s								
NST	**Nakhon Sawan**	**168.40**	**123**	⇑P	PKPdf	16 00 55.0	+1.2		
CM31	**Chiang Mai Arr**	**168.75**	**108**	PFAKE		16 01 00.0	+6.0		
CM31				LR	LR				
	comp=Z,133µm,20.0s								
CMAR	**Chiang Mai Arr**	**168.75**	**108**	PKP	PKPdf	16 00 53.6	-0.3		
	comp=Z,16nm,0.8s,baz=272,slow=1.8,SNR=75								
CMAR				PKPab	PKPab	16 02 05.8	+1.4		
	comp=Z,48nm,0.9s,baz=245,slow=4.1,SNR=7.6								
CMAR				PP	PP	16 06 08.2	+14		
	comp=Z,101nm,1.1s,baz=267,slow=6.1,SNR=7.2								
SCZP	**Santa Cruz**	**168.76**	**236**	*e*P	PKPdf	16 00 55.3	+1.3		
CHG	**Chiang Mai**	**168.88**	**106**	P	PKPdf	16 00 54.4	+0.3		
	comp=Z,276nm,1.5s								
CHG				SG	PP	16 05 56.2	+1.6		
CHTO	**Chiang Mai**	**168.88**	**106**	P	PKPdf	16 00 54.5	+0.5		
	SNR=48								
CHTO	**Chiang Mai**	**168.88**	**106**	*e*PKIKP	PKPdf	16 00 52.5	-1.6		
CHTO				MLR	MLR				
	comp=Z,229µm,22.0s								

ABRA	**Dolores**	**169.10**	**247**	*e*P	PKPdf	16 00 53.7	-0.5		
BOLP	**Bolinao**	**169.11**	**239**	*e*P	PKPdf	16 00 52.5	-1.8		
TATO	**Taipei**	**169.34**	**287**	PFAKE		16 01 00.0	+5.8		
TATO				LR	LR				
	comp=Z,303µm,22.0s								
NACB	**Ninganchiao**	**169.38**	**282**	*e*PKPdf	PKPdf	16 00 54.6	+0.4		
YHNB	**Yeheng**	**169.50**	**285**	*e*PKPdf	PKPdf	16 00 55.8	+1.5		
YHNB				LR	LR				
	comp=Z,358µm,22.0s								
CD2	**Chengdu**	**169.68**	**33**	PKP	PKPdf	16 00 53.8	-0.4		
CD2				APKP		16 01 09.5			
CD2				PKP2	PKPab	16 02 09.0	+1.0		
CD2				PP	PP	16 06 00.5	+3.3		
CD2				SKS	SKSdf	16 07 52.5	-3.0		
CD2				SKKS	SKKSac	16 12 42.3	-0.1		
CD2				SS	SS	16 26 52.4	+0.1		
CD2				PP	PP				
	comp=Z,71µm,11.8s								
CD2				LR	LR				
	comp=N,167µm,24.5s								
CD2				LR	LR				
	comp=E,174µm,32.8s								
CD2				LR	LR				
	comp=Z,326µm,32.8s								
KKTK	**Khon Kaen**	**170.83**	**129**	PN	PKPdf	16 00 56.5	+1.2		
WHN	**Wuhan**	**171.01**	**337**	*i* PKP	PKPdf	16 00 54.0	-1.0		
WHN				APKP		16 01 09.6			
WHN				PKS		16 04 18.5			
WHN				PP	PP	16 06 05.9	+2.3		
WHN				LR	LR				
	comp=N,339µm,21.2s								
WHN				LR	LR				
	comp=E,194µm,21.1s								
WHN				LR	LR				
	comp=Z,586µm,25.0s								
QZH	**Quanzhou**	**171.89**	**290**	*i* PKP	PKPdf	16 00 55.4	-0.2		
QZH				PP	PP				
	comp=Z,46µm,8.1s								
QZH				LR	LR				
	comp=N,196µm,22.6s								
QZH				LR	LR				
	comp=E,447µm,21.4s								
QZH				LR	LR				
	comp=Z,712µm,23.4s								
KMI	**Kunming**	**172.60**	**66**	PKP	PKPdf	16 00 55.3	-0.6		
KMI				pPKP	pPKPdf	16 01 12.6	+5.6		
KMI				sPKP		16 01 19.1			
GYA	**Guiyang**	**174.76**	**37**	PKP	PKPdf	16 00 56.4	-0.2		
GYA				PKP2	PKPab	16 02 27.9	-2.8		
GYA				PKS		16 04 27.3			
GYA				PP	PP	16 06 20.6	-1.8		
GYA				SKKS	SKKSac	16 13 03.1	-4.0		
GYA				PP	PP				
	comp=Z,82µm,19.0s								
GYA				LR	LR				
	comp=N,104µm,22.2s								
GYA				LR	LR				
	comp=E,106µm,20.7s								
GYA				LR	LR				
	comp=Z,115µm,21.0s								
HKC	**Hong Kong Obse**	**176.34**	**270**	PKPdf	PKPdf	16 00 58.0	+0.8		
QIZ	**Qiongzhong**	**176.71**	**174**	PKP	PKPdf	16 00 57.3	0.0		
QIZ				PKP2	PKPab	16 02 40.8	+1.5		
QIZ				PP	PP	16 06 33.1	+2.2		
QIZ				LR	LR				
	comp=N,159µm,23.6s								
QIZ				LR	LR				
	comp=Z,349µm,24.4s								
QIZ	**Qiongzhong**	**176.71**	**174**	*e*PKPdf	PKPdf	16 00 57.3	0.0		
QIZ				LR	LR				
	comp=Z,255µm,22.0s								
GZH	**Guangzhou**	**177.02**	**285**	PKP	PKPdf	16 00 57.6	+0.3		
GZH				LR	LR				
	comp=N,64µm,27.0s								
GZH				LR	LR				
	comp=E,155µm,29.4s								
GZH				LR	LR				
	comp=Z,411µm,23.5s								

*ISCJB **14** 15:43:24.5±0.1, 49.354N±0.009×675E±0.01, h0km, Error ellipse: s-maj=1.4km s-min=1.3km az=38.7*
*NEIC **14** 15:43:26.1±0.3, 49.39N×6.78E, h5km, MD3.4(LDG), ML3.6(STR), ML3.3(SZGRF), Error ellipse: s-maj=3.8km s-min=2.6km az=155.0*
*STR **14** 15:43:26.7±0.3, 49.38N×6.77E, h1km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **14** 15:43:27.2±0.2, 49.38N×6.88E, h1km, ML3.5/15, Error ellipse: s-maj=3.3km s-min=2.2km az=119.0*
*LEDBW **14** 15:43:27.5±0.2, 49.380N±0.009×6.84E±0.02, h1km, ML3.4, Error ellipse: s-maj=4.0km s-min=2.0km az=103.0*
*CSEM **14** 15:43:27.1±0.0, 49.39N×6.80E, h1km, ML3.9/39, Ms3.4, Error ellipse: s-maj=0.6km s-min=0.6km az=151.0*
*PRU **14** 15:43:27.8, 49.28N×6.79E, h0km*
*LDG **14** 15:43:27.3±0.1, 49.37N×6.81E, h2km, Md3.4/3, Ml3.9/35, Error ellipse: s-maj=0.9km s-min=0.7km az=173.0*
*BNS **14** 15:43:27.2±1.4, 49.39N×6.89E, h1km, ML2.9*
*VIE **14** 15:43:28.6±0.4, 49.37N×6.99E, h1km, mb3.3/10, ML3.3/10, Ms3.4/1, Error ellipse: s-maj=3.1km s-min=2.2km az=37.0*

ISC 14 15:43:25.8±0.1, 49366N±0008×673E±001, h0km, n230, σ1§21/454, 23C-23D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.40**	**33**⇓	*e*P*	**Pg**	**15 43 34.5**	**+1.1**
RUP	**Ruppelstein**	**0.40**	**33**	Pg	**Pg**	**15 43 34.3**	**+0.9**
RUP				Sg	**Sg**	**15 43 39.1**	**+0.5**
WLF	**Walferdange**	**0.48**	**309**	*e*Pg	**Pg**	**15 43 37.7**	**+2.8**
	SNR=33						
WLF				*e*Sg	**Sg**	**15 43 43.2**	**+2.1**
	SNR=3.9						
WLF	**Walferdange**	**0.48**	**309**	P	**Pg**	**15 43 37.7**	**+2.8**
ABH	**Alteburg**	**0.74**	**46**⇓	*e*P*	**Pb**	**15 43 40.2**	**-1.4**
ABH	**Alteburg**	**0.74**	**46**	Pg	**Pg**	**15 43 40.2**	**+0.2**
ABH				Sg	**Sg**	**15 43 50.1**	**+0.5**
LANF	**Langenberg**	**0.81**	**118**	Pg	**Pg**	**15 43 41.6**	**+0.4**
LANF				Sg	**Sg**	**15 43 51.8**	**+0.2**
LANF	**Langenberg**	**0.81**	**118**⇓	*e*Pg	**Pg**	**15 43 41.6**	**+0.4**
KTD	**Kalmit**	**0.89**	**92**⇓	*e*P*	**Pb**	**15 43 42.9**	**-1.1**
KTD	**Kalmit**	**0.89**	**92**	Pg	**Pg**	**15 43 43.2**	**+0.4**
KTD				Sg	**Sg**	**15 43 55.5**	**+1.2**
HILG	**Hillesheim**	**0.93**	**358**	*e*Pg	**Pg**	**15 43 45.0**	**+1.5**
HILG				*i* Sg	**Sg**	**15 43 58.1**	**+2.6**
	709nm,0.4s						
BGG	**Burgeitz**	**0.93**	**25**	*e*Pg	**Pg**	**15 43 43.7**	**+0.1**
BGG				*e*Sg	**Sg**	**15 43 55.9**	**+0.3**
	217nm,0.6s						
CDF	**Champ du Feu**	**1.02**	**159**	*e*Pg	**Pg**	**15 43 46.0**	**+0.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**15 44 00.8**	**-1.5**
	739nm,0.5s,SNR=1.0						
CDF	**Champ du Feu**	**1.02**	**159**	*e*Pg	**Pg**	**15 43 46.0**	**+0.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**15 44 00.8**	**-1.5**
	370nm,0.5s,SNR=1.0						
STR	**Strasbourg**	**1.04**	**138**	Pg	**Pg**	**15 43 46.7**	**+1.1**
RFYF	**Reffroy**	**1.11**	**229**	*e*Pg	**Pg**	**15 43 49.2**	**+2.3**
	baz=51						
RFYF	**Reffroy**	**1.11**	**229**	*e*P	**Pg**	**15 43 50.0**	**+3.1**
	baz=45						
RFYF				*e*Sg	**Sg**	**15 44 03.7**	**+2.4**
	764nm,0.3s						
RFYF	**Reffroy**	**1.11**	**229**	*e*Pg	**Pg**	**15 43 49.2**	**+2.3**
RFYF				*e*P		15 43 50.0	
RFYF				*e*Sg	**Sg**	**15 44 03.7**	**+2.4**
RFYF	**Reffroy**	**1.11**	**229**	*e*Pg	**Pg**	**15 43 49.2**	**+2.3**
RFYF				*e*Sg	**Sg**	**15 44 03.7**	**+2.4**
	382nm,0.3s						
ECH	**Echery**	**1.19**	**166**	Pg	**Pg**	**15 43 49.8**	**+1.4**
ECH				Sg	**Sg**	**15 44 05.3**	**+1.5**
ECH	**Echery**	**1.19**	**166**	*e*Pg	**Pg**	**15 43 49.0**	**+0.5**
ECH				*e*Sg	**Sg**	**15 44 04.7**	**+0.9**
ECH	**Echery**	**1.19**	**166**⇓	*e*Pn	**Pn**	**15 43 49.2**	**-0.3**
ECH	**Echery**	**1.19**	**166**	Pg	**Pg**	**15 43 49.8**	**+1.4**
ECH				*e*Sg	**Sg**	**15 44 04.7**	**+0.9**
STB	**Steinbach**	**1.23**	**3**	*e*Pg	**Pg**	**15 43 49.6**	**+0.2**
STB				*e*Sg	**Sg**	**15 44 05.8**	**+0.5**
	144nm,0.5s						
THEF	**They Montfort**	**1.24**	**204**	Pg	**Pg**	**15 43 51.1**	**+1.6**
THEF				Sg	**Sg**	**15 44 07.8**	**+2.2**
THEF	**They Montfort**	**1.24**	**204**⇑	*e*P	**Pg**	**15 43 51.2**	**+1.7**
KOE	**Koeppel**	**1.24**	**31**	*e*Pg	**Pg**	**15 43 49.2**	**-0.4**
KOE				*i* Sg	**Sg**	**15 44 04.6**	**-1.1**
	439nm,0.3s						
SWS	**Schriesheim-Wi**	**1.29**	**84**	⇓P	**Pg**	**15 43 49.6**	**-0.9**
SWS				Sg	**Sg**	**15 44 07.0**	**-0.3**
KLL	**Kalltalsperre**	**1.31**	**348**	*e*Pg	**Pg**	**15 43 51.0**	**+0.1**
KLL				*e*Sg	**Sg**	**15 44 07.2**	**-0.6**
	103nm,0.5s						
KLL	**Kalltalsperre**	**1.31**	**348**	Pg	**Pg**	**15 43 51.0**	**+0.1**
KLL				Sg	**Sg**	**15 44 07.2**	**-0.6**
	103nm,0.5s						
MEM	**Membach**	**1.33**	**340**	P	**Pg**	**15 43 51.8**	**+0.5**
MEM	**Membach**	**1.33**	**340**	P	**Pg**	**15 43 51.7**	**+0.5**
DREG	**Dreilaegerbach**	**1.34**	**346**	*e*Pg	**Pg**	**15 43 51.1**	**-0.3**
DREG				*e*Sg	**Sg**	**15 44 08.6**	**-0.1**
	226nm,0.7s						
LIBD	**Limburg**	**1.35**	**154**⇑	*e*P*	**Pb**	**15 43 53.1**	**+1.3**
LIBD	**Limburg**	**1.35**	**154**⇑	*e*P	**Pb**	**15 43 53.1**	**+1.3**
LIBD	**Limburg**	**1.35**	**154**	Pg	**Pg**	**15 43 53.0**	**+1.5**
LIBD				Sg	**Sg**	**15 44 10.2**	**+1.2**
TOD	**Tromm**	**1.38**	**79**⇓	*e*P	**Pg**	**15 43 50.9**	**-1.2**
TOD				Sg	**Sg**	**15 44 09.6**	**-0.3**
TOD	**Tromm**	**1.38**	**79**	Pg	**Pg**	**15 43 51.4**	**-0.7**
TOD				Sg	**Sg**	**15 44 10.0**	**+0.1**
TOD	**Tromm**	**1.38**	**79**	Pg	**Pg**	**15 43 51.4**	**-0.7**
TOD				Sg	**Sg**	**15 44 10.0**	**+0.1**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**15 43 53.4**	**+1.1**
HAU				*e*Sn	**Sn**	**15 44 10.0**	**-1.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**15 44 11.6**	**+1.4**
	500nm,0.3s						
HAU	**Haudompre**	**1.38**	**191**	*e*Pn	**Pn**	**15 43 52.4**	**+0.1**
HAU				*e*Pg	**Pg**	**15 43 53.4**	**+1.1**
HAU				*e*Sn	**Sn**	**15 44 10.0**	**-1.2**
HAU				*e*Sg	**Sg**	**15 44 11.6**	**+1.4**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**15 43 53.4**	**+1.1**
HAU				*e*Sn	**Sn**	**15 44 10.0**	**-1.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**15 44 11.6**	**+1.4**
	250nm,0.3s						
BCLA	**Clavier**	**1.40**	**319**	P	**Pn**	**15 43 53.1**	**+0.6**
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pn	**Pn**	**15 43 52.7**	**+0.2**
	baz=48,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pg	**Pg**	**15 43 54.2**	**+1.6**
	baz=48						
MEZF				*e*Sn	**Sn**	**15 44 11.0**	**-0.7**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**15 44 13.0**	**+2.2**
	327nm,0.5s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pn	**Pn**	**15 43 52.7**	**+0.2**
MEZF				*e*Pg	**Pg**	**15 43 54.2**	**+1.6**
MEZF				*e*Sn	**Sn**	**15 44 11.0**	**-0.7**
MEZF				*e*Sg	**Sg**	**15 44 13.0**	**+2.2**
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pg	**Pg**	**15 43 54.2**	**+1.6**
MEZF				*e*Sn	**Sn**	**15 44 11.0**	**-0.7**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**15 44 13.0**	**+2.2**
	164nm,0.5s,SNR=1.0						
TNS	**Taunus Mts**	**1.41**	**52**⇓	*e*P	**Pn**	**15 43 51.5**	**-1.1**
TNS				*e*Sg	**Sg**	**15 44 10.5**	**-0.5**
	SNR=10						
TNS	**Taunus Mts**	**1.41**	**52**	*e*Pg	**Pg**	**15 43 51.4**	**-1.3**
TNS				*e*Sg	**Sg**	**15 44 10.9**	**0.0**
TNS	**Taunus Mts**	**1.41**	**52**⇓	*e*Pn	**Pn**	**15 43 51.5**	**-1.1**
TNS	**Taunus Mts**	**1.41**	**52**	P	**Pn**	**15 43 51.5**	**-1.1**
TNS				Sg	**Sg**	**15 44 10.5**	**-0.4**
	SNR=10						
GIVF	**Givet**	**1.44**	**302**	*e*Pg	**Pg**	**15 43 54.2**	**+0.9**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**15 44 14.1**	**+2.2**
	730nm,0.7s,SNR=1.0						
GIVF	**Givet**	**1.44**	**302**	*e*Pn	**Pn**	**15 43 53.2**	**+0.2**
GIVF				*e*Pg	**Pg**	**15 43 54.2**	**+0.9**
GIVF				*e*Sg	**Sg**	**15 44 14.1**	**+2.2**
GIVF	**Givet**	**1.44**	**302**	*e*Pg	**Pg**	**15 43 54.2**	**+0.9**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**15 44 14.1**	**+2.2**
	365nm,0.7s,SNR=1.0						
BFO	**Black Forest**	**1.48**	**134**⇓	*e*P	**Pn**	**15 43 53.0**	**-0.7**
BFO				*e*Sg	**Sg**	**15 44 11.6**	**-1.7**
	SNR=3.9						
BFO	**Black Forest**	**1.48**	**134**	*e*Pg	**Pn**	**15 43 53.0**	**-0.6**
BFO				*e*Sg	**Sg**	**15 44 12.0**	**-1.3**
BFO	**Black Forest**	**1.48**	**134**	P	**Pn**	**15 43 53.0**	**-0.6**
BFO				*e*Sg	**Sg**	**15 44 12.0**	**-1.3**
HGN	**Heimansgroeve**	**1.49**	**340**	*e*Pg	**Pg**	**15 43 54.1**	**-0.2**
	129nm,0.7s						
HGN				*e*Sg	**Sg**	**15 44 13.7**	**+0.1**
HGN	**Heimansgroeve**	**1.49**	**340**	*e*Pg		15 44 33.3	
LBG	**Lerchenberg**	**1.53**	**116**⇑	*e*Pg	**Pg**	**15 43 55.4**	**+0.3**
LBG	**Lerchenberg**	**1.53**	**116**⇑	*e*P	**Pg**	**15 43 55.4**	**+0.3**
MOF	**Molkenrain**	**1.54**	**170**	*e*Pn	**Pn**	**15 43 54.6**	**+0.2**
	SNR=3.3						
MOF			⇑	*i*Pg	**Pg**	**15 43 56.5**	**+1.3**
MOF				Sg	**Sg**	**15 44 16.7**	**+1.6**
MOF	**Molkenrain**	**1.54**	**170**⇑	*i*P	**Pg**	**15 43 56.3**	**+1.3**
MOF				S	**Sg**	**15 44 16.7**	**+1.6**
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pg	**Pg**	**15 43 56.2**	**+0.7**
HINF				*e*Sn	**Sn**	**15 44 13.9**	**-1.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**15 44 16.8**	**+1.2**
	719nm,0.3s						
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pn	**Pn**	**15 43 54.4**	**-0.2**
HINF				*e*Pg	**Pg**	**15 43 56.2**	**+0.7**
HINF				*e*Sn	**Sn**	**15 44 13.9**	**-1.5**
HINF				*e*Sg	**Sg**	**15 44 16.8**	**+1.2**
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pg	**Pg**	**15 43 56.2**	**+0.7**
HINF				*e*Sn	**Sn**	**15 44 13.9**	**-1.

BBS	**Basel-Blauen**	**1.97**	**164**	*e*Pn	**Pn**	**15 44 00.9**	**+0.5**
	SNR=2.5						
BBS				Pg	**Pg**	**15 44 05.7**	**+2.2**
BBS	**Basel-Blauen**	**1.97**	**164**	Pn	**Pn**	**15 44 00.8**	**+0.4**
BBS				Pg	**Pg**	**15 44 03.5**	**0.0**
BBS	**Basel-Blauen**	**1.97**	**164**	P	**Pg**	**15 44 05.7**	**+2.2**
BBS	**Basel-Blauen**	**1.97**	**164**	Pg	**Pg**	**15 44 03.5**	**0.0**
LOMF	**Lomont**	**2.02**	**178**	*e*Pn	**Pn**	**15 44 01.2**	**+0.3**
	SNR=3.0						
LOMF				Pg	**Pg**	**15 44 05.3**	**+0.9**
LOMF	**Lomont**	**2.02**	**178**	Pn	**Pn**	**15 44 01.1**	**+0.1**
LOMF				Pg	**Pg**	**15 44 05.4**	**+1.0**
GUT	**Gutenstein**	**2.04**	**128**	P	**Pn**	**15 44 00.8**	**-0.6**
GUT				⇑*e*Pg	**Pg**	**15 44 05.0**	**+0.1**
GUT	**Gutenstein**	**2.04**	**128**	⇑*e*P	**Pg**	**15 44 05.0**	**+0.1**
GUT	**Gutenstein**	**2.04**	**128**	Pg	**Pg**	**15 44 05.0**	**+0.1**
UCC	**Uccle**	**2.09**	**314**	P	**Pn**	**15 44 07.0**	**+5.0**
UCC	**Uccle**	**2.09**	**314**	P	**Pn**	**15 44 07.0**	**+5.0**
BUG	**Bochum--Univer**	**2.11**	**9**	*e*Pg	**Pg**	**15 44 07.5**	**+1.4**
BUG				*e*Sg	**Sg**	**15 44 33.3**	**-0.1**
	SNR=5.8						
SISB	**Singen-Schiene**	**2.24**	**138**	P	**Pn**	**15 44 05.3**	**+1.2**
HDH	**Heidenheim-Cha**	**2.42**	**108**	Pg	**Pg**	**15 44 11.4**	**-0.7**
UBBA	**Unterbreizbach**	**2.56**	**54**	*e*Sg	**Sg**	**15 44 46.1**	**-1.9**
	SNR=3.4						
WTSB	**Winterswijk**	**2.60**	**1**	*e*Pn	**Pn**	**15 44 15.7**	**+6.7**
	74nm,1.5s						
WTSB	**Winterswijk**	**2.60**	**1**	*e*Sn	**Sn**	**15 44 48.0**	**+6.7**
CABF	**La Chapelle**	**2.79**	**189**	*e*Pg	**Pg**	**15 44 19.6**	**+0.4**
CABF				*e*Sg	**Sg**	**15 44 55.0**	**-0.3**
	299nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**2.79**	**189**	*e*Pn	**Pn**	**15 44 11.3**	**-0.3**
CABF				*e*Pg	**Pg**	**15 44 19.6**	**+0.4**
CABF				*e*Sg	**Sg**	**15 44 55.0**	**-0.3**
CABF	**La Chapelle**	**2.79**	**189**	*e*Pg	**Pg**	**15 44 19.6**	**+0.4**
CABF				*e*Sg	**Sg**	**15 44 55.0**	**-0.3**
	150nm,0.6s,SNR=1.0						
UBR	**Ueberruh**	**2.81**	**126**	P	**Pn**	**15 44 12.8**	**+0.9**
LOR	**Lormes**	**2.84**	**223**	*e*Pn	**Pn**	**15 44 12.5**	**+0.2**
	baz=45,SNR=1.0						
LOR	**Lormes**	**2.84**	**223**	*e*Pg	**Pg**	**15 44 20.7**	**+0.5**
	baz=47						
LOR				*e*Sn	**Sn**	**15 44 45.9**	**-1.3**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**15 44 57.6**	**+0.6**
	194nm,0.4s,baz=41,SNR=1.0						
LOR	**Lormes**	**2.84**	**223**	*e*Pn	**Pn**	**15 44 12.5**	**+0.2**
LOR				*e*Pg	**Pg**	**15 44 20.7**	**+0.5**
LOR				*e*Sn	**Sn**	**15 44 45.9**	**-1.3**
LOR				*e*Sg	**Sg**	**15 44 57.6**	**+0.6**
LOR	**Lormes**	**2.84**	**223**	*e*Pg	**Pg**	**15 44 20.7**	**+0.5**
LOR				*e*Sn	**Sn**	**15 44 45.9**	**-1.3**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**15 44 57.6**	**+0.6**
	97nm,0.4s,SNR=1.0						
GRA1	**Grafenberg Arr**	**2.95**	**82**	*e*Pg	**Pg**	**15 44 19.6**	**-2.6**
GRA1				*e*Sg	**Sg**	**15 44 58.6**	**-1.8**
GRA1	**Grafenberg Arr**	**2.95**	**82**	Pg	**Pg**	**15 44 19.6**	**-2.6**
GRA1				Sg	**Sg**	**15 44 58.6**	**-1.8**
GRF	**Grafenberg Arr**	**2.95**	**82**	*e*Pg	**Pg**	**15 44 19.6**	**-2.5**
GRF				*e*Sg	**Sg**	**15 44 58.6**	**-1.8**
GRF	**Grafenberg Arr**	**2.95**	**82**	*e*Pg	**Pg**	**15 44 19.6**	**-2.6**
GRF				*e*Sg	**Sg**	**15 44 58.6**	**-1.8**
DAVA	**Damuels**	**2.96**	**133**	⇑*e*Pn	**Pn**	**15 44 14.8**	**+0.9**
	SNR=11						
DAVA				⇓*i*Pg	**Pg**	**15 44 23.2**	**+0.8**
DAVA				⇓*i*Sn	**Sn**	**15 44 51.3**	**+1.2**
DAVA				⇓*i*Sg	**Sg**	**15 45 03.1**	**+2.3**
	213nm,0.8s						
GTTG	**Gvttingen**	**3.01**	**42**	*e*Sg	**Sg**	**15 45 00.4**	**-1.9**
	SNR=4.1						
OBER	**Oberstdorf**	**3.08**	**128**	⇑*i*Pn	**Pn**	**15 44 16.9**	**+1.3**
SSF	**Saint Saulge**	**3.15**	**224**	*e*Pg	**Pg**	**15 44 26.6**	**+0.4**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**15 44 53.4**	**-1.5**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**15 45 07.1**	**0.0**
	143nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**3.15**	**224**	*e*Pn	**Pn**	**15 44 16.3**	**-0.3**
SSF				*e*Pg	**Pg**	**15 44 26.6**	**+0.4**
SSF				*e*Sn	**Sn**	**15 44 53.4**	**-1.5**
SSF				*e*Sg	**Sg**	**15 45 07.1**	**0.0**
SSF	**Saint Saulge**	**3.15**	**224**	*e*Pg	**Pg**	**15 44 26.6**	**+0.4**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**15 44 53.4**	**-1.5**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**15 45 07.1**	**0.0**
	72nm,0.5s,SNR=1.0						
RETA	**Reutte**	**3.28**	**123**	⇓*i*Pn	**Pn**	**15 44 19.2**	**+0.9**
	SNR=11						
RETA				⇓*i*Sg	**Sg**	**15 45 11.5**	**+0.4**
	40nm,0.6s						
SMF	**Signal de Mont**	**3.34**	**217**	*e*Pg	**Pg**	**15 44 29.8**	**+0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**15 44 57.5**	**-2.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**15 45 12.9**	**-0.1**
	136nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**3.34**	**217**	*e*Pn	**Pn**	**15 44 18.9**	**-0.3**
SMF				*e*Pg	**Pg**	**15 44 29.8**	**+0.1**
SMF				*e*Sn	**Sn**	**15 44 57.5**	**-2.0**
SMF				*e*Sg	**Sg**	**15 45 12.9**	**-0.1**
SMF	**Signal de Mont**	**3.34**	**217**	*e*Pg	**Pg**	**15 44 29.8**	**+0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**15 44 57.5**	**-2.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**15 45 12.9**	**-0.1**
	68nm,0.4s,SNR=1.0						
MOX	**Moxa**	**3.40**	**66**	*e*Pn	**Pn**	**15 44 20.7**	**+0.7**
MOX				*e*Pg	**Pg**	**15 44 28.2**	**-2.7**
	SNR=8.9						
MOX				*e*Sn	**Sn**	**15 44 59.8**	**-1.3**
MOX				*e*Sg	**Sg**	**15 45 13.7**	**-1.3**
MOX	**Moxa**	**3.40**	**66**	*e*PN	**Pn**	**15 44 20.7**	**+0.7**
MOX				*e*PG	**Pg**	**15 44 28.8**	**-2.1**
MOX				*e*SN	**Sn**	**15 44 59.8**	**-1.3**
MOX				*e*SG	**Sg**	**15 45 13.7**	**-1.3**
MOX	**Moxa**	**3.40**	**66**	*e*Pn	**Pn**	**15 44 20.7**	**+0.7**
MOX				*e*Pg	**Pg**	**15 44 28.8**	**-2.1**
MOX				*e*Sn	**Sn**	**15 44 59.8**	**-1.3**
MOX				*e*Sg	**Sg**	**15 45 13.7**	**-1.3**
AVF	**Avril sur Loir**	**3.43**	**223**	*e*Pn	**Pn**	**15 44 20.3**	**-0.1**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**15 45 00.0**	**-1.7**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**15 45 16.5**	**+0.7**
	82nm,0.5s,SNR=1.0						
AVF	**Avril sur Loir**	**3.43**	**223**	*e*Pn	**Pn**	**15 44 20.3**	**-0.1**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**15 45 00.0**	**-1.7**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**15 45 16.5**	**+0.7**
	41nm,0.5s,SNR=1.0						
HYF	**Humbligny**	**3.44**	**234**	*e*Pg	**Pg**	**15 44 31.1**	**-0.6**
HYF				*e*Sg	**Sg**	**15 45 16.6**	**+0.3**
MOTA	**Moosalm**	**3.55**	**123**	⇑*i*Pn	**Pn**	**15 44 23.5**	**+1.4**
	SNR=8.5						
MOTA				⇓*i*Sn	**Sn**	**15 45 04.8**	**+0.1**
MOTA				⇓*i*Sg	**Sg**	**15 45 21.1**	**+1.4**
	42nm,0.6s						
FETA	**Feichten**	**3.56**	**130**	⇓*i*Pn	**Pn**	**15 44 23.8**	**+1.6**
	SNR=31						
FETA				⇑*i*Sn	**Sn**	**15 45 05.5**	**+0.6**
FETA				⇑*i*Sg	**Sg**	**15 45 23.2**	**+3.2**
	28nm,0.8s						
GUNZ	**Gunzen**	**3.76**	**72**	*e*Pn	**Pn**	**15 44 24.4**	**-0.5**
	SNR=2.8						
GUNZ				*e*Pg	**Pg**	**15 44 35.4**	**-2.4**
	SNR=3.8						
GUNZ				*e*Sg	**Sg**	**15 45 22.1**	**-4.5**
	SNR=6.3						
VAI	**Varese**	**3.76**	**158**	Pn	**Pn**	**15 44 26.6**	**+1.6**
WERD	**Werda**	**3.77**	**71**	*e*Pg	**Pg**	**15 44 36.3**	**-1.6**
	SNR=4.0						
WERD				*e*Sg	**Sg**	**15 45 22.5**	**-4.2**
	SNR=3.3						
BRMO	**Bormio**	**3.79**	**138**	Pn	**Pn**	**15 44 27.8**	**+2.4**
NKC	**Novy Kostel**	**3.81**	**75**	*e*PG	**Pg**	**15 44 36.4**	**-2.3**
NKC				*e*SG	**Sg**	**15 45 26.4**	**-1.6**
	comp=Z,116nm,0.7s						
BGF	**Bois d'Agland**	**3.83**	**224**	*e*Pg	**Pg**	**15 44 38.8**	**-0.4**
BGF				*e*Sn	**Sn**	**15 45 09.9**	**-1.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**15 45 28.6**	**-0.2**
	comp=Z,352nm,0.5s,SNR=1.0						
BGF	**Bois d'Agland**	**3.83**	**224**	*e*Pn	**Pn**	**15 44 26.1**	**+0.2**
BGF				*e*Pg	**Pg**	**15 44 38.8**	**-0.4**
BGF				*e*Sn	**Sn**	**15 45 09.9**	**-1.7**
BGF				*e*Sg	**Sg**	**15 45 28.6**	**-0.2**
BGF	**Bois d'Agland**	**3.83**	**224**	*e*Pg	**Pg**	**15 44 38.8**	**-0.4**
BGF				*e*Sn	**Sn**	**15 45 09.9**	**-1.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**15 45 28.6**	**-0.2**
	comp=Z,176nm,0.5s,SNR=1.0						
ORO	**Oropa**	**3.84**	**167**	Pn	**Pn**	**15 44 28.0**	**+2.0**
LPL	**La Plagne**	**3.85**	**180**	*e*Pg	**Pg**	**15 44 39.0**	**-0.5**
LPL				*e*Sg	**Sg**	**15 45 28.3**	**-1.1**
	comp=Z,44nm,0.6s						
LPL	**La Plagne**	**3.85**	**180**	*e*Pn	**Pn**	**15 44 27.2**	**+1.0**
LPL				*e*Pg	**Pg**	**15 44 39.0**	**-0.5**
LPL				*e*Sg	**Sg**	**15 45 28.3**	**-1.1**
LPL	**La Plagne**	**3.85**	**180**	*e*Pg	**Pg**	**15 44 39.0**	**-0.5**
LPL				*e*Sg	**Sg**	**15 45 28.3**	**-1.1**
	comp=Z,22nm,0.6s						
TANN	**Tannenbergstha**	**3.85**	**72**	*e*Pg	**Pg**	**15 44 36.7**	**-2.9**
	SNR=5.4						
LPG	**La Plagne**	**3.87**	**180**	*e*Pg	**Pg**	**15 44 39.2**	**-0.7**
LPG				*e*Sn	**Sn**	**15 45 09.8**	**-2.8**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**15 45 28.6**	**-1.4**
	comp=Z,54nm,0.6s,SNR=1.0						
LPG	**La Plagne**	**3.87**	**180**	*e*Pn	**Pn**	**15 44 26.0**	**-0.4**
LPG				*e*Pg	**Pg**	**15 44 39.2**	**-0.7**
LPG				*e*Sn	**Sn**	**15 45 09.8**	**-2.8**
LPG				*e*Sg	**Sg**	**15 45 28.6**	**-1.4**
LPG	**La Plagne**	**3.87**	**180**	*e*Pg	**Pg**	**15 44 39.2**	**-0.7**
LPG				*e*Sn	**Sn**	**15 45 09.8**	**-2.8**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**15 45 28.6**	**-1.4**
	comp=Z,27nm,0.6s,SNR=1.0						
WTTA	**Wattenberg**	**3.89**	**121**	⇑*i*Pn	**Pn**	**15 44 27.0**	**+0.3**
WTTA				⇑*i*Sg	**Sg**	**15 45 32.6**	**+1.9**
	comp=Z,34nm,0.8s						
WTTA	**Wattenberg**	**3.89**	**121**	Pn	**Pn**	**15 44 27.0**	**+0.2**
WTTA				Sg	**Sg**	**15 45 32.6**	**+1.9**
	comp=Z,34nm,0.8s						
PLDF	**La Plantade**	**3.99**	**213**	Pn	**Pn**	**15 44 28.5**	**+0.4**
WET	**Wettzell**	**4.04**	**91**	*e*Pn	**Pn**	**15 44 29.1**	**+0.4**
	SNR=13						
AGO	**Saint Agoulin**	**4.11**	**218**	Pn	**Pn**	**15 44 28.3**	**-1.4**
MABI	**Malga Bissina**	**4.18**	**141**	Pn	**Pn**	**15 44 33.6**	**+2.8**
TCF	**Toulx Ste Croi**	**4.33**	**226**	*e*Pn	**Pn**	**15 44 32.6**	**-0.1**
TCF				*e*Sg	**Sg**	**15 45 44.2**	**-0.5**
	comp=Z,115nm,0.6s						
TCF	**Toulx Ste Croi**	**4.33**	**226**	*e*Pn	**Pn**	**15 44 32.6**	**-0.1**
TCF				*e*Sg	**Sg**	**15 45 44.2**	**-0.5**
	comp=Z,58nm,0.6s						
SSB	**Saint Sauveur**	**4.35**	**201**	*e*P	**Pg**	**15 44 49.0**	**-0.1**
SSB				*e*Sg	**Sg**	**15 45 43.6**	**-1.8**
PYM	**Petit Puy Mans**	**4.41**	**216**	Pn	**Pn**	**15 44 30.2**	**-3.6**
CLL	**Collm**	**4.46**	**62**	*e*Pg	**Pg**	**15 44 49.1**	**-2.2**
	SNR=3.0						
CLL				*e*Sg	**Sg**	**15 45 46.1**	**-3.0**
	SNR=3.0						
CLL	**Collm**	**4.46**	**62**	*i* Pg	**Pg**	**15 44 49.0**	**-2.3**
CLL				*e*Sg	**Sg**	**15 45 47.0**	**-2.1**
CLL	**Collm**	**4.46**	**62**	*e*(Pn)	**Pn**	**15 44 38.0**	**+3.4**
CLL				*i* Pg	**Pg**	**15 44 49.0**	**-2.3**
CLL				*e*Sg	**Sg**	**15 45 47.0**	**-2.1**
	comp=Z,40nm,0.7s						
CLL	**Collm**	**4.46**	**62**	Pg	**Pg**	**15 44 49.1**	**-2.2**
	SNR=3.0						
CLL				*e*Sg	**Sg**	**15 45 47.0**	**-2.1**
ORIF	**Oris-en-Rattie**	**4.49**	**188**	*e*Pg	**Pg**	**15 44 50.6**	**-1.1**
ORIF				*e*Sg	**Sg**	**15 45 49.0**	**-0.8**
	comp=Z,64nm,0.6s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.49**	**188**	*e*Pn	**Pn**	**15 44 34.5**	**-0.4**
ORIF				*e*Pg	**Pg**	**15 44 50.6**	**-1.1**
ORIF				*e*Sg	**Sg**	**15 45 49.0**	**-0.8**
ORIF	**Oris-en-Rattie**	**4.49**	**188**	*e*Pg	**Pg**	**15 44 50.6**	**-1.1**
ORIF				*e*Sg	**Sg**	**15 45 49.0**	**-0.8**
	comp=Z,32nm,0.6s,SNR=1.0						
KHC	**Kasperske Hory**	**4.49**	**90**	*e*PN	**Pn**	**15 44 35.2**	**+0.2**
KHC				*e*PG	**Pg**	**15 44 51.0**	**-0.8**
KHC				*e*SN	**Sn**	**15 45 23.4**	**-4.5**
KHC				*e*SG	**Sg**	**15 45 48.3**	**-1.7**
	comp=Z,21nm,0.6s						
LDF	**La Druitiere**	**4.58**	**263**	*e*Pg	**Pg**	**15 44 53.1**	**-0.3**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**15 45 52.1**	**-0.6**
	comp=Z,52nm,0.6s						
LDF	**La Druitiere**	**4.58**	**263**	*e*Pn	**Pn**	**15 44 36.7**	**+0.6**
LDF				*e*Pg	**Pg**	**15 44 53.1**	**-0.3**
LDF				*e*Sg	**Sg**	**15 45 52.1**	**-0.6**
LDF	**La Druitiere**	**4.58**	**263**	*e*Pg	**Pg**	**15 44 53.1**	**-0.3**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**15 45 52.1**	**-0.6**
	comp=Z,26nm,0.6s						
GEC2	**GERESS Array S**	**4.61**	**94**	*e*Pn	**Pn**	**15 44 36.9**	**+0.3**
	SNR=24						
MBDF	**Montbardon**	**4.64**	**180**	*e*Pg	**Pg**	**15 44 53.6**	**-1.0**
MBDF				*e*Sn	**Sn**	**15 45 27.6**	**-4.0**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**15 45 53.2**	**-1.6**
	comp=Z,31nm,0.6s,SNR=1.0						
MBDF	**Montbardon**	**4.64**	**180**	*e*Pn	**Pn**	**15 44 38.1**	**+1.1**
MBDF				*e*Pg	**Pg**	**15 44 53.6**	**-1.0**
MBDF				*e*Sn	**Sn**	**15 45 27.6**	**-4.0**
MBDF				*e*Sg	**Sg**	**15 45 53.2**	**-1.6**
MBDF	**Montbardon**	**4.64**	**180**	*e*Pg	**Pg**	**15 44 53.6**	**-1.0**
MBDF				*e*Sn	**Sn**	**15 45 27.6**	**-4.0**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**15 45 53.2**	**-1.6**
	comp=Z,15nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pg	**Pg**	**15 44 55.2**	**-1.0**
VIVF				*e*Sg	**Sg**	**15 45 55.2**	**-2.2**
	comp=Z,65nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pn	**Pn**	**15 44 37.7**	**-0.5**
VIVF				*e*Pg	**Pg**	**15 44 55.2**	**-1.0**
VIVF				*e*Sg	**Sg**	**15 45 55.2**	**-2.2**
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pg	**Pg**	**15 44 55.2**	**-1.0**
VIVF				*e*Sg	**Sg**	**15 45 55.2**	**-2.2**
	comp=Z,32nm,0.6s,SNR=1.0						
FLN	**La Foliniere**	**4.78**	**265**	*e*Pn	**Pn**	**15 44 38.9**	**0.0**
	baz=80,SNR=1.0						
FLN	**La Foliniere**	**4.78**	**265**	*e*Pg	**Pg**	**15 44 56.4**	**-0.9**
	baz=77,SNR=1.0						
FLN				*e*Sn	**Sn**	**15 45 31.6**	**-3.3**
	SNR=1.0						
FLN				*e*Sg	**Sg**	**15 45 57.2**	**-1.9**
	comp=Z,33nm,0.4s,SNR=1.0						
FLN	**La Foliniere**	**4.78**	**265**	*e*Pn	**Pn**	**15 44 38.9**	**0.0**
FLN				*e*Pg	**Pg**	**15 44 56.4**	**-0.9**
FLN				*e*Sn	**Sn**	**15 45 31.6**	**-3.3**
FLN				*e*Sg	**Sg**	**15 45 57.2**	**-1.9**
FLN	**La Foliniere**	**4.78**	**265**	*e*Pg	**Pg**	**15 44 56.4**	**-0.9**
	SNR=1.0						
FLN				*e*Sn	**Sn**	**15 45 31.6**	**-3.3**
	SNR=1.0						
FLN				*e*Sg	**Sg**	**15 45 57.2**	**-1.9**
	comp=Z,17nm,0.4s,SNR=1.0						
BRG	**Berggiesshubel**	**4.88**	**69**	*e*Pg	**Pg**	**15 44 55.9**	**-3.3**
	SNR=2.7						
BRG				*e*Sg	**Sg**	**15 45 58.5**	**-4.0**
	SNR=3.7						
BRG	**Berggiesshubel**	**4.88**	**69**	Pg	**Pg**	**15 44 56.1**	**-3.1**
BRG				Sg	**Sg**	**15 45 58.5**	**-4.0**
	SNR=3.7						
BRG	**Berggiesshubel**	**4.88**	**69**	PN	**Pn**	**15 44 41.6**	**+1.3**
BRG				PG	**Pg**	**15 44 56.1**	**-3.1**
BRG				SG	**Sg**	**15 45 58.3**	**-4.2**
	comp=Z,26nm,0.8s						
GRR	**Gorron**	**5.10**	**262**	*e*Pn	**Pn**	**15 44 44.1**	**+0.8**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**15 46 08.7**	**-0.8**
	comp=Z,18nm,0.4s						
GRR	**Gorron**	**5.10**	**262**	*e*Pn	**Pn**	**15 44 44.1**	**+0.8**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**15 46 08.7**	**-0.8**
	comp=Z,8.9nm,0.4s						
PRU	**Pruhonice**	**5.11**	**80**	*e*Pg	**Pg**	**15 45 00.3**	**-3.4**
	comp=Z,61nm,1.1s						
PRU				*e*Sg	**Sg**	**15 46 11.1**	**+1.2**
PRU	**Pruhonice**	**5.11**	**80**	*e*PG	**Pg**	**15 45 00.3**	**-3.4**
PRU				*e*SG	**Sg**	**15 46 11.1**	**+1.2**
	comp=Z,61nm,1.1s						
MOA	**Molln**	**5.23**	**104**	⇑*i*Pn	**Pn**	**15 44 45.8**	**+0.7**
	SNR=27						
MOA				⇑*i*Pg	**Pg**	**15 45 05.1**	**-0.8**
MOA				⇓*i*Sg	**Sg**	**15 46 16.5**	**+2.9**
	comp=Z,10.0nm,0.5s						
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pn	**Pn**	**15 44 47.4**	**+0.2**
MFF				*e*Sg	**Sg**	**15 46 17.3**	**-1.1**
	comp=Z,45nm,0.7s						
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pn	**Pn**	**15 44 47.4**	**+0.2**
MFF				*e*Sg	**Sg**	**15 46 17.3**	**-1.1**
	comp=Z,23nm,0.7s						
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pn	**Pn**	**15 44 46.9**	**-0.4**
RJF				*e*Sg	**Sg**	**15 46 17.3**	**-1.5**
	comp=Z,80nm,0.7s						
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pn	**Pn**	**15 44 46.9**	**-0.4**
RJF				*e*Sg	**Sg**	**15 46 17.3**	**-1.5**
	comp=Z,40nm,0.7s						
SMRF	**Simiane la Rot**	**5.45**	**189**	*e*Sg	**Sg**	**15 46 18.9**	**-1.8**
	comp=Z,31nm,0.7s						
SMRF	**Simiane la Rot**	**5.45**	**189**	*e*Sg	**Sg**	**15 46 18.9**	**-1.8**
	comp=Z,15nm,0.7s						
CAF	**Calviac**	**5.46**	**217**	*e*Pn	**Pn**	**15 44 48.0**	**-0.3**
CAF				*e*Sg	**Sg**	**15 46 19.6**	**-1.5**
	comp=Z,32nm,0.5s						
CAF	**Calviac**	**5.46**	**217**	*e*Pn	**Pn**	**15 44 48.0**	**-0.3**
CAF				*e*Sg	**Sg**	**15 46 19.6**	**-1.5**
	comp=Z,16nm,0.5s						
LASF	**Ste Croix**	**5.65**	**202**	*e*Sg	**Sg**	**15 46 26.1**	**-0.9**
	comp=Z,73nm,0.7s						
LASF	**Ste Croix**	**5.65**	**202**	*e*Sg	**Sg**	**15 46 26.1**	**-0.9**
	comp=Z,36nm,0.7s						
LFF	**La Frestale**	**6.02**	**225**	*e*Sg	**Sg**	**15 46 35.9**	**-3.2**
	comp=Z,51nm,0.5s						
LFF	**La Frestale**	**6.02**	**225**	*e*Sg	**Sg**	**15 46 35.9**	**-3.2**
	comp=Z,25nm,0.5s						
UPC	**Upice**	**6.10**	**76**	*e*PG	**Pg**	**15 45 18.0**	**-4.6**
CSNA	**Conrad Observa**	**6.22**	**100**	⇑*i*Pn	**Pn**	**15 44 59.1**	**+0.3**
CSNA				⇑*i*Sg	**Sg**	**15 46 48.7**	**+3.2**
	comp=Z,20nm,0.8s						
CONA	**Conrad Observa**	**6.22**	**100**	⇑*i*Pn	**Pn**	**15 44 59.0**	**+0.3**
	SNR=9.4						
CONA				⇓*i*Sg	**Sg**	**15 46 47.8**	**+2.3**
	comp=Z,25nm,0.7s						
SGMF	**Saint Gilles**	**6.23**	**263**	*e*Pn	**Pn**	**15 44 59.0**	**+0.1**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**15 46 44.7**	**-1.1**
	comp=Z,36nm,0.6s						
SGMF	**Saint Gilles**	**6.23**	**263**	*e*Pn	**Pn**	**15 44 59.0**	**+0.1**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**15 46 44.7**	**-1.1**
	comp=Z,18nm,0.6s						
DPC	**Dobruska-Polom**	**6.28**	**77**	*e*Pg	**Pg**	**15 45 20.6**	**-5.5**
	comp=Z,58nm,1.8s						
DPC				*e*Sg	**Sg**	**15 46 48.3**	**+0.9**
DPC	**Dobruska-Polom**	**6.28**	**77**	*e*PG	**Pg**	**15 45 20.6**	**-5.5**
DPC				*e*SG	**Sg**	**15 46 48.3**	**+0.9**
	comp=Z,58nm,1.8s						
ROSF	**Rostrenen**	**6.68**	**265**	*e*Pn	**Pn**	**15 45 05.1**	**+0.1**
	SNR=1.0						
ROSF				*e*Sg	**Sg**	**15 46 58.5**	**-1.7**
	comp=Z,25nm,0.5s						
ROSF	**Rostrenen**	**6.68**	**265**	*e*Pn	**Pn**	**15 45 05.1**	**+0.1**
	SNR=1.0						
ROSF				*e*Sg	**Sg**	**15 46 58.5**	**-1.7**
	comp=Z,12nm,0.5s						
QUIF	**Quistinic**	**6.71**	**261**	*e*Pn	**Pn**	**15 45 05.3**	**-0.2**
QUIF				*e*Sg	**Sg**	**15 47 00.0**	**-1.3**
	comp=Z,24nm,0.6s						
QUIF	**Quistinic**	**6.71**	**261**	*e*Pn	**Pn**	**15 45 05.3**	**-0.2**
QUIF				*e*Sg	**Sg**	**15 47 00.0**	**-1.3**
	comp=Z,12nm,0.6s						
MTLF	**Montolieu**	**6.79**	**209**	*e*Sg	**Sg**	**15 47 00.7**	**-2.8**
	comp=Z,13nm,0.5s						
MTLF	**Montolieu**	**6.79**	**209**	*e*Sg	**Sg**	**15 47 00.7**	**-2.8**
	comp=Z,6.4nm,0.5s						
ZST	**Bratislava**	**6.96**	**96**	*e*PN	**Pn**	**15 45 08.6**	**-0.2**
ZST				*e*		15 47 02.9

2µm,0.3s,baz=41,slow=0.0,SNR=89
LVC Lg 16 03 52.8
6µm,0.3s,SNR=32
LVC Limon Verde 1.70 73 *e*Pn **Pn 16 03 29.4 -1.2**
LVC Pg **Pn 16 03 31.8 +1.2**
LVC *e*Sn **Sn 16 03 52.5 +1.0**
LVC Lg 16 03 52.8
LCO Las Campanas 5.87 180 Pn **Pn 16 04 23.9 -4.1**
130nm,0.6s
LPAZ La Paz 7.20 20 Pn **Pn 16 04 49.1 +2.8**
2.7nm,0.3s,baz=238,slow=17,SNR=8.7
LPAZ La Paz 7.20 20 *e*P **Pn 16 04 49.4 +3.1**
69nm,0.7s
LPAZ *e*S Sn 16 06 27.4 +20
LPAZ La Paz 7.20 20 *e*P **Pn 16 04 49.4 +3.1**
LPAZ pmax pmax
comp=Z,69nm,0.7s
CFAA Coronel Fontan 8.73 166 Pn **Pn 16 05 07.3 +0.2**
comp=Z,0.3nm,0.3s,baz=345,slow=16,SNR=5.3
CFAA Sn **Sn 16 06 51.9 +7.1**
comp=Z,0.2nm,0.3s,baz=38,slow=19,SNR=2.4
SIV San Ignacio 11.49 54 Pn **Pn 16 05 42.8 -2.2**
comp=Z,7.6nm,0.3s,baz=236,slow=11,SNR=20
PLCA Paso Flores 17.57 180 P **Pn 16 07 07.0 +1.4**
comp=Z,0.3nm,0.3s,baz=356,slow=14,SNR=5.7
PLCA Paso Flores 17.57 180 *e*P **Pn 16 07 07.6 +2.0**
comp=Z,22nm,0.9s
PLCA Paso Flores 17.57 180 *e*P **Pn 16 07 07.6 +2.0**
PLCA pmax pmax
comp=Z,22nm,0.9s
EFI East Falkland 30.13 164 *e*P **P 16 09 09.2 -0.8**
PCRV Puerto La Cruz 33.61 11 P **P 16 09 41.2 +0.2**
comp=Z,8.5nm,0.7s,mb4.8,baz=259,slow=5.2,SNR=4.9
SJG San Juan 41.21 7 *e*P **P 16 10 43.5 -1.8**
comp=Z,101nm,0.8s,mb5.5
SJG San Juan 41.21 7 *e*P **P 16 10 43.6 -1.7**
SJG pmax pmax
comp=Z,101nm,0.8s
VNA1 Neumayer--Stat 59.33 160 *e* **P 16 13 02.3 +0.4**
VNA1 *e* pP 16 13 10.5 +0.2
VNA2 Neumayer--Watz 59.69 160 *e* **P 16 13 03.9 -0.4**
baz=294,slow=8.0
VNA2 *e* pP 16 13 12.6 -0.2
CPCT Cooper Cave 59.70 347 *e*P **P 16 13 04.5 -0.3**
SWET Sewanee 59.79 346 *e*P **P 16 13 04.7 -0.7**
TXAR Lajitas Array 61.05 327 P **P 16 13 14.9 +0.7**
comp=Z,1.1nm,0.6s,mb4.2,baz=150,slow=9.2,SNR=4.2
WVT Waverly 61.12 344 *e*P **P 16 13 13.9 -0.6**
comp=Z,30nm,1.4s,mb5.2
WVT Waverly 61.12 344 *e*P **P 16 13 13.9 -0.6**
WVT pmax pmax
comp=Z,30nm,1.4s,mb5.2
SNAA Sanae 61.30 160 *e* **P 16 13 13.8 -1.6**
SNAA *e* pP 16 13 22.0 -1.8
SNAA Sanae 61.30 160 *e*P **P 16 13 13.6 -1.8**
DBIC Dimbokro 70.75 74 P **P 16 14 16.5 -0.5**
comp=Z,22nm,0.8s,mb5.2,baz=215,slow=5.9,SNR=16
DBIC Dimbokro 70.75 74 *e*P **P 16 14 16.0 -1.0**
comp=Z,27nm,0.8s,mb5.2
DBIC Dimbokro 70.75 74 *e*P **P 16 14 16.0 -1.0**
DBIC pmax pmax
comp=Z,27nm,0.8s
AGMN Agassiz Refuge 74.59 343 *e*P **P 16 14 39.6 +0.6**
PDAR Pinedale Array 74.71 331 P **P 16 14 40.2 +0.3**
comp=Z,1.4nm,0.9s,mb3.9,baz=157,slow=2.9,SNR=4.0
SUR Sutherland 79.17 121 P **P 16 15 06.4 +0.9**
comp=Z,11nm,0.7s,mb4.9,baz=242,slow=7.5
TOA0 Torodi Ar. Sit 79.43 71 *e*P **P 16 15 06.2 -0.8**
TOA0 *e* pP 16 15 14.5 -1.2
TORD Torodi Ar. Bea 79.43 71 P **P 16 15 06.3 -0.7**
comp=Z,28nm,0.8s,mb5.3,baz=256,slow=5.1,SNR=62
TORD pP pP 16 15 13.8 -2.0
comp=Z,16nm,0.8s,baz=256,slow=5.1,SNR=6.3
TSUM Tsumeb 81.13 107 P **P 16 15 16.4 +0.1**
comp=Z,13nm,0.8s,mb4.9,baz=241,slow=5.4,SNR=11
TSUM Tsumeb 81.13 107 *e*P **P 16 15 16.7 +0.4**
TSUM *e* pP 16 15 24.8 -0.2
WALA Waterton Lakes 81.54 333 *e*P **P 16 15 18.9 +1.4**
comp=Z,11nm,0.7s,mb4.9
MAW Mawson 83.25 164 P **P 16 15 26.9 +0.4**
comp=Z,13nm,0.8s,mb5.0,baz=221,slow=6.1,SNR=12
MAW pP pP 16 15 34.8 -0.4
comp=Z,6.5nm,0.5s,baz=208,slow=6.6,SNR=5.4
MDT Midelt 84.03 51 P **P 16 15 31.6 +0.7**
comp=Z,7.5nm,0.8s,mb4.9,baz=225,slow=5.5,SNR=8.2
BOSA Boshof 84.12 118 P **P 16 15 31.2 -0.4**
comp=Z,13nm,0.8s,mb5.1,baz=260,slow=3.8,SNR=12
BOSA pP pP 16 15 39.6 -0.8
comp=Z,6.0nm,0.5s,baz=281,slow=4.5,SNR=3.4
YKA Yellowknife Ar 92.17 341 P **P 16 16 09.6 +0.3**
comp=Z,3.7nm,0.7s,mb4.8,baz=139,slow=3.8,SNR=15
YKA pP pP 16 16 17.3 -0.8
comp=Z,1.2nm,0.6s,baz=146,slow=5.0,SNR=3.4
ASAR Alice Springs 127.73 209 PKP PKPdf 16 22 06.3 0.0
comp=Z,2.4nm,0.8s,baz=135,slow=1.8,SNR=18
ASAR pPKP pPKPdf 16 22 16.1 +0.7
comp=Z,2.6nm,0.7s,baz=141,slow=1.8,SNR=7.5
WRA Warramunga Arr 130.74 212 PKP PKPdf 16 22 12.5 +0.3
comp=Z,8.0nm,1.2s,baz=153,slow=1.6,SNR=6.8
WRA pPKP pPKPdf 16 22 22.3 +1.1
comp=Z,3.4nm,0.9s,baz=161,slow=1.5,SNR=6.8
PETK Petropavlovsk- 132.86 322 PKP PKPdf 16 22 16.1 +1.0
comp=Z,4.2nm,0.9s,baz=75,slow=3.5,SNR=4.1
KURK Kurchatov 143.56 33 PKP PKPdf 16 22 32.6 -2.2
baz=305,slow=3.1
ZAA0 Zalesovo Array 144.10 25 *e*PKPdf PKPdf 16 22 33.6 -2.0
ZALV Zalesovo Beam 144.10 25 PKP PKPdf 16 22 34.1 -1.4
comp=Z,10nm,0.7s,baz=305,slow=2.3,SNR=27
EKS2 Erkin-Say 144.69 48 *e*PKP PKPdf 16 22 37.0 0.0
EKS2 Erkin-Say 144.69 48 P PKPdf 16 22 37.2 +0.2
SNR=9.2
USP Ospenovka 144.95 47 P PKPdf 16 22 37.5 +0.1
SNR=5.8
BOD Bodaibo 145.17 356 *e*PKP2 PKPab 16 22 36.0 -0.9
BOD pmax pmax
comp=Z,33nm,1.3s
CHMS Chumysh 145.22 47 P PKPbc 16 22 38.9 +1.3
SNR=10
UCH Uchtor 145.36 48 *e*PKPbc PKPbc 16 22 39.5 +1.4
KBK Karagaybulak 145.49 47 P PKPdf 16 22 39.9 +1.6
SNR=25
TKM2 Tokmak 2 145.82 47 *e*PKP PKPdf 16 22 40.4 +1.5
TKM2 Tokmak 2 145.82 47 P PKPdf 16 22 40.6 +1.7
SNR=13
KZA Kyzart 145.93 48 P PKPdf 16 22 41.6 +2.5
SNR=6.5
MK31 Makanchi Array 147.89 36 *e*PKPdf PKPdf 16 22 43.1 +0.9
MKAR Makanchi Array 147.89 36 PKP PKPdf 16 22 42.8 +0.5
comp=Z,12nm,0.7s,baz=304,slow=3.3,SNR=42
MKAR PKPbc PKPbc 16 22 45.5 +0.3
comp=Z,12nm,0.7s,baz=324,slow=3.0,SNR=30
MKAR pPKPbc pPKPbc 16 22 53.1 -1.2
comp=Z,5.2nm,0.7s,baz=311,slow=2.8,SNR=7.4
KAPI Kappang 150.25 201 PKPbc PKPbc 16 22 52.0 -0.2
comp=Z,3.7nm,0.6s,baz=134,slow=3.3,SNR=3.8
KAPI pPKPbc pPKPbc 16 23 01.5 +0.2
comp=Z,7.1nm,0.7s,baz=178,slow=7.8,SNR=4.6
KAPI Kappang 150.25 201 PKPbc PKPbc 16 22 52.0 -0.2
KAPI pPKPbc pPKPbc 16 23 01.5 +0.2
HYB Hyderabad 150.61 95 *i* PKP PKPbc 16 22 53.0 +0.1
MJAR Matsushiro Arr 151.72 305 PKPbc PKPbc 16 22 55.6 +0.6
comp=Z,4.6nm,0.7s,baz=116,slow=1.5,SNR=13
MJAR pPKPbc pPKPbc 16 23 03.6 -0.4
comp=Z,2.3nm,0.7s,baz=118,slow=2.2,SNR=4.3
MAJO Matsushiro 151.72 305 *e*PKPbc PKPbc 16 22 55.5 +0.5
ZAK Zakamensk 152.38 8 *e*PKIKP PKPbc 16 22 53.8 -2.2
ZAK pmax pmax
comp=Z,5.0nm,1.4s
SONM Songino Array 155.22 5 PKP PKPdf 16 22 54.6 +1.3
comp=Z,1.6nm,0.8s,baz=313,slow=1.6,SNR=7.7
SONM pPKP pPKPdf 16 23 03.0 +0.6
comp=Z,1.7nm,0.9s,baz=326,slow=1.1,SNR=4.4
SONM PKPab PKPab 16 23 18.9 +0.7
comp=Z,1.8nm,0.7s,baz=322,slow=3.1,SNR=5.0
KSRS Korea Array 158.56 316 PKP PKPdf 16 22 58.1 +0.2
comp=Z,4.3nm,1.2s,baz=53,slow=1.6,SNR=5.0
CMAR Chiang Mai Arr 169.24 114 PKP PKPdf 16 23 08.9 +0.7
comp=Z,0.9nm,0.9s,baz=330,slow=2.8,SNR=5.3
CMAR PKPab PKPab 16 24 19.9 -0.6
comp=Z,1.1nm,0.9s,baz=254,slow=4.4,SNR=5.4

*MOS **14** 16:04:48.2± 1.3, 22.16S× 70.05W, h33km, mb5.4/4, Error ellipse: s-maj=21.8km s-min=18.1km az=92.6*
*IDC **14** 16:04:51.0± 0.4, 2221S× 70.10W, h45km± 3km, mb4.6/17, mb1 4.7/20, mb1mx4.7/22, mbtmp4.6/20, Error ellipse: s-maj=15.3km s-min=5.5km az=25.0*
*NEIC **14** 16:04:50.6± 0.2, 2223S× 7006W, mb5.3/7, Error ellipse: s-maj=8.3km s-min=6.9km az=61.0*
*ISCJB **14** 16:04:51.3± 1.3, 2226S± 007× 7005W± 0.10, h64km± 10km, mb4.9/24, Error ellipse: s-maj=15.4km s-min=11.0km az=160.6*

ISC 14 16:04:52.4± 1.1, 2230S± 006× 7004W± 009, h59km± 9km, h46km± 7km: pP-P, n61, σ 0§97/44, mb4.9/24, 3C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.09**	**107**	P		**Pn**	**16 05 11.6**	**0.0**
	6µm,0.3s,baz=45,slow=0.0,SNR=134							
LVC				S		**Sn**	**16 05 26.5**	**+0.7**
	5µm,0.3s							
LVC	**Limon Verde**	**1.09**	**107**	*e*P		**Pn**	**16 05 11.7**	**+0.1**
LVC				*e*S		**Sn**	**16 05 26.4**	**+0.6**
LVC				S		**Sn**	**16 05 26.5**	**+0.7**
LPAZ	**La Paz**	**6.25**	**17**	P		**Pn**	**16 06 24.3**	**+2.2**
	20nm,0.3s,baz=204,slow=7.5,SNR=17							
CFAA	**Coronel Fontan**	**9.41**	**171**	P		**Pn**	**16 07 04.1**	**-1.1**
	1.7nm,0.3s,baz=342,slow=3.2,SNR=7.6							
CFAA				S		**Sn**	**16 08 59.1**	**+10**
	0.3nm,0.3s,baz=262,slow=18,SNR=2.5							
SIV	**San Ignacio**	**10.54**	**55**	P		**Pn**	**16 07 19.7**	**-1.2**
	20nm,0.3s,baz=242,slow=12,SNR=22							
PLCA	**Paso Flores**	**18.38**	**181**	P		**Pn**	**16 09 02.5**	**-0.5**
	1.2nm,0.3s,baz=0.8,slow=13,SNR=10							
BDFB	**Brasilia**	**21.84**	**76**	P		**P**	**16 09 40.4**	**+0.3**
	3.9nm,0.3s,mb4.2,baz=248,slow=18,SNR=4.3							
PMSA	**Palmer Station**	**42.64**	**176**	P		**P**	**16 12 43.7**	**+1.0**
	34nm,1.0s,mb5.0,baz=16,slow=3.2,SNR=4.3							
TXAR	**Lajitas Array**	**60.70**	**326**	P		**P**	**16 14 57.4**	**-0.3**
	2.0nm,0.7s,mb4.4,baz=151,slow=10,SNR=5.2							
FVM	**French Village**	**62.95**	**342**	*e*P		**P**	**16 15 11.3**	**-1.4**
	11nm,0.9s,mb5.0							
FVM	**French Village**	**62.95**	**342**	*e*P		**P**	**16 15 11.3**	**-1.4**
FVM				pmax		pmax		
	comp=Z,11nm,0.9s,mb5.0							
ACSO	**Alum Creek Sta**	**63.37**	**349**	*e*P		**P**	**16 15 13.7**	**-1.7**
	comp=Z,18nm,1.0s,mb5.2							
ACSO				*e*		pP	16 15 26.3	-5.1
LIC	**Lamto**	**69.61**	**74**	*e*P		**P**	**16 15 54.6**	**-1.3**
	comp=Z,55nm,0.9s,mb5.5							
TIC	**Toumodi**	**69.81**	**74**	*e*P		**P**	**16 15 55.9**	**-1.2**
	comp=Z,115nm,1.0s,mb5.7							
TIC	**Toumodi**	**69.81**	**74**	*e*P		**P**	**16 15 55.9**	**-1.2**
TIC				pmax		pmax		
	comp=Z,115nm,1.0s,mb5.8							
KIC	**Kosan Boka**	**69.93**	**74**	*e*P		**P**	**16 15 56.9**	**-1.0**
	comp=Z,120nm,0.8s,mb5.9							
DBIC	**Dimbokro**	**69.9**	**74**	P		**P**	**16 15 57.3**	**-0.8**
	comp=Z,34nm,0.8s,mb5.3,baz=216,slow=6.3,SNR=13							
PDAR	**Pinedale Array**	**74.28**	**331**	P		**P**	**16 16 23.8**	**+0.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=137,slow=6.8,SNR=4.4							
PDAR				pP		pP	16 16 35.9	-3.8
	comp=Z,2.9nm,0.9s,baz=130,slow=6.0,SNR=4.4							
NVAR	**Mina Array Bea**	**75.48**	**323**	P		**P**	**16 16 31.4**	**+1.1**
	comp=Z,3.6nm,0.8s,mb4.3,baz=155,slow=6.8,SNR=7.4							
NVAR				pP		pP	16 16 44.2	-2.5
	comp=Z,5.1nm,0.9s,baz=150,slow=5.9,SNR=7.4							
NVAR	**Mina Array Bea**	**75.48**	**323**	P		**P**	**16 16 31.4**	**+1.1**
NVAR				pP		pP	16 16 44.2	-2.5
ULM	**Lac du Bonnet**	**75.77**	**343**	P		**P**	**16 16 31.1**	**-0.5**
	comp=Z,3.9nm,0.6s,mb4.5,baz=181,slow=8.9,SNR=3.3							
SYO	**Syowa Base**	**76.12**	**160**	⇑*e*P		**P**	**16 16 32.8**	**-0.7**
MCMT	**McKenzie Canyo**	**77.39**	**330**	*e*P		**P**	**16 16 42.1**	**+1.2**
TOA0	**Torodi Ar. Sit**	**78.61**	**71**	*e*P		**P**	**16 16 47.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.61**	**71**	P		**P**	**16 16 47.5**	**-0.8**
	comp=Z,35nm,0.8s,mb5.4,baz=258,slow=5.5,SNR=18							
SUR	**Sutherland**	**79.08**	**120**	P		**P**	**16 16 52.2**	**+1.5**
	comp=Z,15nm,0.7s,mb5.0,baz=240,slow=6.5,SNR=8.7							
BMO	**Blue Mountains**	**79.52**	**328**	*e*P		**P**	**16 16 52.9**	**+0.3**
	comp=Z,2nm,1.4s,mb4.9							
BMO	**Blue Mountains**	**79.52**	**328**	*e*P		**P**	**16 16 52.9**	**+0.3**
BMO				pmax		pmax		
	comp=Z,22nm,1.4s,mb4.9							
TSUM	**Tsumeb**	**80.81**	**107**	P		**P**	**16 17 01.1**	**+0.8**
	comp=Z,25nm,0.8s,mb5.2,baz=242,slow=4.6,SNR=16							
TSUM				pP		pP	16 17 14.1	-2.7
	comp=Z,9.9nm,0.8s,baz=225,slow=2.9,SNR=5.6							
TSUM	**Tsumeb**	**80.81**	**107**	*e*P		**P**	**16 17 01.3**	**+1.0**
TSUM				pP		pP	16 17 14.2	-2.7
HAWA	**Hanford**	**81.72**	**328**	*e*P		**P**	**16 17 05.0**	**+0.6**
	comp=Z,5.3nm,0.7s,mb4.6							
HAWA				*e*		pP	16 17 17.8	-3.2
MDT	**Midelt**	**83.06**	**50**	P		**P**	**16 17 12.7**	**+1.0**
	comp=Z,6.2nm,0.8s,mb4.7,baz=252,slow=3.9,SNR=6.9							
MAW	**Mawson**	**83.87**	**164**	P		**P**	**16 17 16.1**	**+0.8**
	comp=Z,32nm,0.8s,mb5.5,baz=216,slow=6.4,SNR=21							
BOSA	**Boshof**	**84.00**	**118**	P		**P**	**16 17 17.1**	**+0.4**
	comp=Z,27nm,0.8s,mb5.4,baz=255,slow=4.2,SNR=18							
BOSA				pP		pP	16 17 30.9	-2.6
	comp=Z,9.3nm,0.8s,baz=241,slow=6.5,SNR=2.5							
LBTB	**Lobatse**	**85.63**	**115**	P		**P**	**16 17 25.4**	**+0.4**
	comp=Z,9.2nm,0.8s,mb5.1,baz=275,slow=6.8,SNR=6.6							
TAM	**Tamanrasset**	**86.11**	**64**	*e*P		**P**	**16 17 27.7**	**+0.4**
ESDC	**Sonseca Array**	**87.14**	**45**	P		**P**	**16 17 32.5**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.8,baz=226,slow=4.4,SNR=4.8							
YKA	**Yellowknife Ar**	**91.59**	**341**	P		**P**	**16 17 51.1**	**-1.2**
	comp=Z,8.1nm,0.8s,mb5.1,baz=138,slow=4.4,SNR=14							
YKA				pP		pP	16 18 04.6	-4.5
	comp=Z,6.0nm,1.0s,baz=139,slow=4.8,SNR=4.7							
YKA	**Yellowknife Ar**	**91.59**	**341**	P		**P**	**16 17 51.2**	**-1.1**
YKA				*PP		pP	16 18 04.6	-4.6
KEST	**Kesra**	**94.62**	**53**	P		**P**	**16 18 08.3**	**+1.3**
	comp=Z,3.0nm,0.9s,mb4.7,baz=57,slow=2.9,SNR=4.5							
STKA	**Stephens Creek**	**118.20**	**210**	PKP		PKPdf	16 23 33.4	+0.1
	comp=Z,1.6nm,0.7s,baz=22,slow=1.3,SNR=4.0							
STKA				pPKP		pPKPdf	16 23 47.3	-3.5
	comp=Z,1.1nm,0.7s,baz=178,slow=6.2,SNR=2.0							
STKA	**Stephens Creek**	**118.20**	**210**	PKP		PKPdf	16 23 33.4	+0.1
STKA				pPKP		pPKPdf	16 23 47.3	-3.5
ASAR	**Alice Springs**	**128.72**	**208**	PKP		PKPdf	16 23 53.5	-0.2
	comp=Z,5.0nm,0.7s,baz=131,slow=1.8,SNR=20							
ASAR				pPKP		pPKPdf	16 24 06.9	-4.3
	comp=Z,4.6nm,0.8s,baz=142,slow=2.2,SNR=8.9							
WRA	**Warramunga Arr**	**131.73**	**211**	PKP		PKPdf	16 23 59.9	+0.4
	comp=Z,4.4nm,0.5s,baz=154,slow=1.8,SNR=26							
WRA				pPKP		pPKPdf	16 24 13.6	-3.4
	comp=Z,5.5nm,0.9s,baz=163,slow=1.6,SNR=8.7							
PETK	**Petropavlovsk-**	**132.57**	**323**	PKP		PKPdf	16 24 01.0	+1.0
	comp=Z,3.5nm,0.8s,baz=54,slow=2.7,SNR=5.6							
KK31	**Karatay Array**	**141.32**	**48**	⇑Pn		PKPdf	16 24 16.1	-0.4
	comp=Z,0.4nm,0.5s,baz=143,slow=16,SNR=3.8							
KK31				⇑Lg			16 24 58.9	
	comp=Z,0.5nm,0.3s,baz=138,slow=30							
KURK	**Kurchatov**	**142.57**	**33**	PKP		PKPdf	16 24 18.9	+0.4
	baz=307,slow=2.7							
ZAA0	**Zalesovo Array**	**143.12**	**25**	*e*PKPpre			16 24 16.0	
ZALV	**Zalesovo Beam**	**143.12**	**25**	PKhKP			16 24 16.4	
	comp=Z,8.8nm,0.7s,baz=313,slow=4.1,SNR=6.5							
ZALV				PKP		PKPdf	16 24 20.2	+0.9
	comp=Z,15nm,0.8s,baz=303,slow=2.6,SNR=8.9							
ZALV	**Zalesovo Beam**	**143.12**	**25**	PKP		PKPdf	16 24 16.4	-2.9
ZALV				PKP		PKPdf	16 24 20.2	+0.9
BOD	**Bodaibo**	**144.40**	**356**	*e*PKIKP		PKPdf	16 24 19.1	-2.4
BOD				pmax		pmax		
	comp=Z,25nm,0.9s							
TKM2	**Tokmak 2**	**144.84**	**46**	*e*PKPdf		PKPdf	16 24 22.6	-0.1
BATI	**Baumata**	**145.01**	**204**	PKPbc		PKPbc	16 24 24.5	+1.3
	comp=Z,60nm,0.7s,baz=201,slow=1.6,SNR=19							
MK31	**Makanchi Array**	**146.89**	**36**	*e*PKPdf		PKPdf	16 24 26.2	+0.1
MKAR	**Makanchi Array**	**146.89**	**36**	PKPbc		PKPbc	16 24 26.6	-1.5
	comp=Z,19nm,0.7s,baz=309,slow=1.9,SNR=16							
KAPI	**Kappang**	**151.21**	**201**	PKPbc		PKPbc	16 24 39.9	-0.1
	comp=Z,24nm,0.9s,baz=195,slow=2.9,SNR=11							
KAPI				pPKPab		PKPab	16 24 47.7	-0.2
	comp=Z,33nm,0.8s,baz=234,slow=7.1,SNR=10							
MJAR	**Matsushiro Arr**	**151.72**	**306**	PKPbc		PKPbc	16 24 40.5	0.0
	comp=Z,9.3nm,0.8s,baz=101,slow=1.0,SNR=14							
MJAR				pPKPab		PKPab	16 24 49.5	0.0
	comp=Z,8.2nm,0.8s,baz=87,slow=2.7,SNR=4.9							
MJAR				pPKPbc		pPKPbc	16 24 54.4	-3.6
	comp=Z,10nm,0.9s,baz=99,slow=1.3,SNR=8.1							
HIA	**Hailar**	**151.99**	**346**	*e*PKPbc		PKPbc	16 24 40.0	-0.7
SONM	**Songino Array**	**154.36**	**6**	PKP		PKPdf	16 24 38.5	+0.9
	comp=Z,3.0nm,0.8s,baz=278,slow=0.9,SNR=7.1							
SONM				PKPbc		PKPbc	16 24 46.3	+0.4
	comp=Z,3.2nm,0.8s,baz=274,slow=1.3,SNR=8.0							
SONM				PKPab		PKPab	16 24 59.8	-0.4
	comp=Z,5.3nm,1.1s,baz=339,slow=2.9,SNR=5.2							
KSRS	**Korea Array**	**158.36**	**318**	PKP		PKPdf	16 24 43.5	+0.3
	comp=Z,3.5nm,1.0s,baz=136,slow=0.5,SNR=8.5							
KSRS				pPKP		pPKPdf	16 24 57.5	-3.3
	comp=Z,5.4nm,1.1s,baz=76,slow=1.3,SNR=6.3							
KSRS				PKPab		PKPab	16 25 17.6	-0.1
	comp=Z,1.6nm,0.9s,baz=54,slow=6.6,SNR=4.4							
CMAR	**Chiang Mai Arr**	**168.98**	**108**	PKP		PKPdf	16 24 53.6	+0.1
	comp=Z,1.8nm,0.8s,baz=279,slow=2.3,SNR=7.7							
CMAR				pPKP		pPKPdf	16 25 07.2	-3.9
	comp=Z,2.0nm,0.9s,baz=264,slow=2.5,SNR=4.9							
CMAR				PKPab		PKPab	16 26 05.0	-0.1
	comp=Z,2.4nm,0.7s,baz=257,slow=5.4,SNR=12							

NEIC 14 16:09:35.7, 3795S× 17691E, h125km, MG4.0(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.19**	**259**	P		Pn	16 09 53.0	+0.1
MARZ				S		Sn	16 10 06.5	+0.7
EDRZ	**Edgecumbe**	**0.21**	**221**	P		Pn	16 09 52.9	0.0
URZ	**Urewera**	**0.35**	**153**	P		Pn	16 09 53.1	-0.3
LIRZ	**Lichensteins R**	**0.42**	**262**	P		Pn	16 09 53.8	+0.1
TAZ	**Tarawera**	**0.42**	**228**	P		Pn	16 09 54.2	+0.4
KARZ	**Kaharoa**	**0.53**	**262**	P		Pn	16 09 54.4	+0.1
TGRZ	**Tauranga**	**0.56**	**293**	P		Pn	16 09 54.5	0.0
MWZ	**Matawai**	**0.62**	**129**	P		Pn	16 09 54.9	0.0
PUZ	**Puketiti**	**1.07**	**97**	P		Pn	16 09 58.7	-0.1
TOZ	**Tahuroa Road**	**1.14**	**281**	P		Pn	16 09 59.6	+0.1
KNZ	**Kokohu**	**1.23**	**151**	P		Pn	16 10 00.5	+0.1
BKZ	**Black Stump Fm**	**1.26**	**195**	P		Pn	16 10 00.2	-0.6
KUZ	**Kuaotunu**	**1.53**	**321**	P		Pn	16 10 03.1	-0.7
WTVZ	**West Tongariro**	**1.56**	**221**	P		Pn	16 10 04.6	+0.5
NGZ	**Ngauruhoe**	**1.60**	**220**	P		Pn	16 10 05.2	+0.7
TWVZ	**Taurewa**	**1.61**	**225**	P		Pn	16 10 04.7	0.0
MKAZ	**Moumakai**	**1.62**	**301**	P		Pn	16 10 04.7	-0.1
TUVZ	**Tukino**	**1.64**	**216**	P		Pn	16 10 05.2	+0.1
FWVZ	**Far West T-bar**	**1.68**	**219**	P		Pn	16 10 05.7	+0.2
HIZ	**Hauiti**	**1.71**	**250**	P		Pn	16 10 06.0	+0.1
MOVZ	**Moawhango**	**1.71**	**212**	P		Pn	16 10 05.0	-0.9
WNVZ	**Wahianoa**	**1.72**	**216**	P		Pn	16 10 06.0	+0.1
OTAZ	**Otara**	**1.87**	**302**	P		Pn	16 10 08.3	+0.5
TSZ	**Takapari Road**	**2.23**	**199**	P		Pn	16 10 10.5	-1.8
WAZ	**Wanganui**	**2.35**	**219**	P		Pn	16 10 13.1	-0.6
BFZ	**Birch Farm**	**2.78**	**190**	P		Pn	16 10 17.1	-2.1
MRZ	**Mangatainoka R**	**2.90**	**200**	P		Pn	16 10 18.2	-2.6
KIW	**Kapiti Island**	**3.30**	**207**	P		Pn	16 10 23.0	-3.0
MTW	**Mount Morrison**	**3.38**	**198**	P		Pn	16 10 23.8	-3.3
CAW	**Cannon Point**	**3.46**	**204**	P		Pn	16 10 24.8	-3.3
MSWZ	**Moikau Station**	**3.69**	**200**	P		Pn	16 10 27.2	-4.0
WEL	**Wellington**	**3.72**	**206**	P		Pn	16 10 28.1	-3.5
SNZO	**South Karori**	**3.76**	**206**	P		Pn	16 10 28.4	-3.7
TCW	**Tory Channel**	**3.84**	**211**	P		Pn	16 10 29.4	-3.8
BSWZ	**Blackbirch Sta**	**4.43**	**211**	P		Pn	16 10 37.8	-3.2
QRZ	**Quartz Range**	**4.45**	**228**	P		Pn	16 10 37.3	-3.9
THZ	**Tophouse**	**4.90**	**218**	P		Pn	16 10 43.7	-3.6
KHZ	**Kahutara**	**5.16**	**209**	P		Pn	16 10 46.2	-4.5
DSZ	**Denniston Nort**	**5.46**	**224**	P		Pn	16 10 49.7	-5.1

*IDC **14** 16:12:37.4± 5.9, 2241S× 6997W, h33km± 37km, mb4.1/1, mb1 4.1/3, mb1mx3.8/16, mbtmp4.0/3, ML3.9/2, Error ellipse: s-maj=60.5km s-min=38.8km az=95.0*
*NEIC **14** 16:12:37.3± 0.9, 2248S× 7005W, h35km, Error ellipse: s-maj=20.2km s-min=16.8km az=134.0*

ISC 14 16:12:39.6± 6.0, 224S± 03× 699W± 06, h49km± 28km, n10, σ 0§42/7, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.94**	**103**	Pg		**Pn**	**16 12 56.6**	**+0.1**
	81nm,0.3s,SNR=4.7							
LVC	**Limon Verde**	**0.94**	**103**	*e*P		**Pn**	**16 12 56.4**	**-0.1**
LPAZ	**La Paz**	**6.30**	**16**	Pn		**Pn**	**16 14 09.3**	**-0.7**
	0.6nm,0.3s,baz=200,slow=4.2,SNR=5.0							
LPAZ	**La Paz**	**6.30**	**16**	*e*P		**Pn**	**16 14 10.6**	**+0.7**
SIV	**San Ignacio**	**10.49**	**54**	Pn		**Pn**	**16 15 07.4**	**0.0**
	1.3nm,0.3s,baz=239,slow=12,SNR=6.9							
TOA0	**Torodi Ar. Sit**	**78.52**	**71**	*e*P		**P**	**16 24 36.1**	**0.0**
**TOR

comp=Z,14nm,0.9s,mb4.9,baz=186,slow=6.2,SNR=3.5
TOA0 Torodi Ar. Sit 78.99 71 *e*P **P 16 25 22.3 -0.9**
TOA0 *e* pP 16 25 34.5 -2.5
TORD Torodi Ar. Bea 78.99 71 P **P 16 25 22.5 -0.7**
comp=Z,17nm,0.8s,mb5.0,baz=252,slow=5.2,SNR=27
TORD pP pP 16 25 34.5 -2.5
comp=Z,17nm,0.9s,baz=253,slow=5.0,SNR=11
TORD sP sP 16 25 39.9 -2.3
comp=Z,20nm,0.9s,baz=253,slow=5.2,SNR=8.5
TORD Torodi Ar. Bea 78.99 71 P **P 16 25 22.5 -0.7**
TORD pP pP 16 25 34.5 -2.5
TORD sP sP 16 25 39.9 -2.3
TSUM Tsumeb 80.65 107 P **P 16 25 33.1 +0.9**
comp=Z,12nm,0.9s,mb4.8,baz=240,slow=2.4,SNR=11
TSUM pP pP 16 25 45.2 -0.8
comp=Z,12nm,0.9s,baz=201,slow=4.1,SNR=7.2
TSUM Tsumeb 80.65 107 *e*P **P 16 25 32.8 +0.6**
comp=Z,20nm,1.0s,mb5.0
TSUM pP pP 16 25 45.2 -0.8
OD2 Odessa Site #2 82.73 329 *e*P **P 16 25 42.8 +0.4**
MAW Mawson 83.05 164 P **P 16 25 44.2 +0.3**
comp=Z,12nm,0.9s,mb4.9,baz=228,slow=8.9,SNR=13
MAW pP pP 16 25 56.5 -1.3
comp=Z,11nm,0.8s,baz=184,slow=8.6,SNR=4.6
MAW sP sP 16 26 01.3 -1.8
comp=Z,12nm,0.8s,baz=189,slow=6.5,SNR=6.5
MAW Mawson 83.05 164 P **P 16 25 44.2 +0.3**
MAW *PP pP 16 25 56.5 -1.3
BOSA Boshof 83.66 118 P **P 16 25 47.5 -0.3**
comp=Z,8.6nm,0.8s,mb4.9,baz=249,slow=3.7,SNR=11
BOSA pP pP 16 26 00.1 -1.7
comp=Z,2.9nm,0.4s,baz=239,slow=7.1,SNR=3.6
BOSA sP sP 16 26 04.5 -2.5
comp=Z,7.0nm,0.8s,baz=235,slow=7.3,SNR=4.5
BOSA Boshof 83.66 118 *e*P **P 16 25 47.6 -0.2**
comp=Z,11nm,0.8s,mb5.0
BOSA pP pP 16 26 00.1 -1.7
BOSA sP sP 16 26 04.5 -2.5
BOSA Boshof 83.66 118 *e*P **P 16 25 47.6 -0.2**
BOSA *PP pP 16 26 00.1 -1.6
BOSA pmax pmax
comp=Z,11nm,0.8s,mb5.0
LBTB Lobatse 85.35 115 P **P 16 25 56.1 -0.3**
comp=Z,3.7nm,0.9s,mb4.5,baz=281,slow=5.2,SNR=3.3
ESDC Sonseca Array 87.83 45 P **P 16 26 07.9 -0.2**
comp=Z,0.5nm,0.3s,mb4.2,baz=241,slow=6.1,SNR=4.2
YKA Yellowknife Ar 92.39 341 P **P 16 26 27.8 -1.0**
comp=Z,1.4nm,0.6s,mb4.4,baz=138,slow=4.1,SNR=7.2
YKA pP pP 16 26 39.2 -3.6
comp=Z,1.2nm,0.5s,baz=142,slow=4.8,SNR=5.3
YKA Yellowknife Ar 92.39 341 P **P 16 26 27.8 -1.0**
YKA *PP pP 16 26 39.2 -3.6
ASAR Alice Springs 127.90 208 PKP PKPdf 16 32 24.9 -0.1
comp=Z,3.5nm,0.8s,baz=138,slow=2.0,SNR=20
ASAR pPKP pPKPdf 16 32 37.2 -2.3
comp=Z,1.6nm,0.7s,baz=138,slow=1.8,SNR=6.2
WRA Warramunga Arr 130.93 211 PKP PKPdf 16 32 31.3 +0.4
comp=Z,2.8nm,0.8s,baz=164,slow=1.7,SNR=11
WRA pPKP pPKPdf 16 32 44.0 -1.3
comp=Z,1.5nm,0.7s,baz=153,slow=1.7,SNR=4.4
ZALV Zalesovo Beam 143.96 25 PKP PKPdf 16 32 51.3 -2.4
comp=Z,5.8nm,0.8s,baz=299,slow=3.1,SNR=16
BATI Baumata 144.17 204 PKP PKPdf 16 32 53.1 -2.2
comp=Z,7.0nm,0.9s,baz=121,slow=12,SNR=2.7
EKS2 Erkin-Say 144.38 48 *e*PKPdf PKPdf 16 32 54.0 -0.8
BOD Bodaibo 145.27 356 *e*PKP2 PKPab 16 32 54.2 -1.6
BOD pmax pmax
comp=Z,19nm,1.0s
TKM2 Tokmak 2 145.51 47 *e*PKP PKPdf 16 32 57.6 +0.9
MK31 Makanchi Array 147.66 36 *e*PKPbc PKPbc 16 33 02.9 -0.1
MKAR Makanchi Array 147.66 36 PKP PKPdf 16 33 00.2 0.0
comp=Z,11nm,0.9s,baz=298,slow=2.6,SNR=26
MKAR PKPbc PKPbc 16 33 03.0 -0.1
comp=Z,11nm,0.9s,baz=326,slow=2.9,SNR=28
MKAR pPKPbc pPKPbc 16 33 14.3 -3.1
comp=Z,3.8nm,0.7s,baz=8.8,slow=2.3,SNR=5.0
KAPI Kappang 150.35 200 PKPbc PKPbc 16 33 10.3 -0.6
comp=Z,15nm,0.9s,baz=194,slow=3.4,SNR=8.8
KAPI PKPab PKPab 16 33 16.4 -0.7
comp=Z,13nm,0.9s,baz=258,slow=8.7,SNR=7.0
KAPI Kappang 150.35 200 PKPbc PKPbc 16 33 10.3 -0.6
KAPI PKPab PKPab 16 33 16.4 -0.7
MJAR Matsushiro Arr 152.16 305 PKPbc PKPbc 16 33 14.5 +0.1
comp=Z,3.7nm,0.9s,baz=143,slow=0.7,SNR=7.9
ZAK Zakamensk 152.37 9 *e*PKIKP PKPdf 16 33 07.2 -0.3
SONM Songino Array 155.25 6 PKP PKPdf 16 33 12.3 +0.6
comp=Z,1.2nm,0.9s,baz=280,slow=0.9,SNR=5.8
SONM PKPab PKPab 16 33 34.2 -2.6
comp=Z,1.3nm,0.9s,baz=331,slow=0.5,SNR=3.9
CMAR Chiang Mai Arr 168.76 113 PKP PKPdf 16 33 26.1 -0.2
comp=Z,1.0nm,0.9s,baz=282,slow=2.5,SNR=5.5
CMAR PKPab PKPab 16 34 36.5 -0.3
comp=Z,1.5nm,1.0s,baz=244,slow=4.3,SNR=5.4
CMAR pPKPab pPKPab 16 34 48.6 -2.2
comp=Z,1.2nm,1.0s,baz=245,slow=5.8,SNR=4.6
CMAR Chiang Mai Arr 168.76 113 PKIKP PKPdf 16 33 26.1 -0.2
CMAR 16 34 36.5

*ISCJB **14** 16:16:45.5±3.5,2322S×006×705W±0.1,h22km±24km, mb4.7/24, Error ellipse: s-maj=16.5km s-min=9.3km az=161.9*
*IDC **14** 16:16:47.8±0.7,2321S×7051W,h25km±4km,mb4.5/12, mb1 4.6/15,mb1mx4.5/20,mbtmp4.5/15,ML4.3/2, Error ellipse: s-maj=17.1km s-min=12.1km az=159.0*
*MOS **14** 16:16:47.6±1.1,2309S×7057W,h33km,mb5.3/4, Error ellipse: s-maj=22.9km s-min=14.7km az=87.7*
*NEIC **14** 16:16:50.5±1.0,2321S×7045W,h48km±8km,mb4.8/13, Error ellipse: s-maj=10.1km s-min=6.8km az=67.0*

ISC 14 16:16:50.7±1.3,2322S±006×7044W±010,h48km±11km, h29km±3.8km:pP-P,n72,σ0:95/53,mb4.7/24,1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.53**	**67**	Pg		**Pn**	**16 17 17.3**	**+1.7**
	1µm,0.3s,SNR=33							
LVC				Lg			16 17 39.5	
	4µm,0.3s,SNR=62							
LVC	**Limon Verde**	**1.53**	**67**	*e*P		**Pn**	**16 17 17.0**	**+1.4**
LVC				*e*S		**Sn**	**16 17 39.4**	**+4.9**
LVC				Lg			16 17 39.5	
LPAZ	**La Paz**	**7.23**	**18**	Pn		**Pn**	**16 18 34.7**	**+0.9**
	1.7nm,0.3s,baz=208,slow=15,SNR=3.6							
LPAZ	**La Paz**	**7.23**	**18**	*e*P		**Pn**	**16 18 34.8**	**+0.9**
	91nm,1.0s							
LPAZ	**La Paz**	**7.23**	**18**	*e*P		**Pn**	**16 18 34.8**	**+1.0**
LPAZ				pmax	pmax			
	comp=Z,91nm,1.0s							
CFAA	**Coronel Fontan**	**8.58**	**167**	Pn		**Pn**	**16 18 51.3**	**-1.1**
	baz=338,slow=5.4,SNR=1.9							
CFAA				Sn		**Sn**	**16 20 37.1**	**+9.3**
	comp=Z,0.4nm,0.3s,baz=20,slow=12,SNR=3.6							
SIV	**San Ignacio**	**11.38**	**53**	Pn		**Pn**	**16 19 29.3**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=254,slow=13,SNR=3.6							
BDFB	**Brasilia**	**22.43**	**74**	P		**P**	**16 21 45.3**	**-0.4**
	comp=Z,12nm,0.8s,mb4.3,baz=228,slow=14,SNR=4.1							
RCBR	**Riachuelo**	**37.49**	**68**	*e*P		**P**	**16 24 00.7**	**+0.6**
	comp=Z,2µm,2.8s,mb6.5							
SJG	**San Juan**	**41.29**	**6**	*e*P		**P**	**16 24 29.0**	**-2.6**
	comp=Z,38nm,0.7s,mb5.1							
SJG	**San Juan**	**41.29**	**6**	*e*P		**P**	**16 24 29.0**	**-2.6**
SJG				pmax	pmax			
	comp=Z,38nm,0.7s							
VNA3	**Neumayer Olymp**	**58.92**	**161**	*e*		**P**	**16 26 45.3**	**+0.7**
VNA3				*e*			16 26 52.3	
VNA1	**Neumayer--Stat**	**59.16**	**160**	*e*		**P**	**16 26 47.6**	**+1.4**
VNA1				*e*			16 26 54.0	
VNA2	**Neumayer--Watz**	**59.52**	**160**	*e*		**P**	**16 26 48.5**	**-0.2**
	baz=295,slow=8.9							
VNA2				*e*		pP	16 26 56.6	-5.5
SWET	**Sewanee**	**59.94**	**345**	*e*P		**P**	**16 26 50.6**	**-1.4**
SNAA	**Sanae**	**61.14**	**160**	*e*		**P**	**16 26 58.1**	**-1.6**
SNAA				*e*		pP	16 27 06.1	-7.1
TXAR	**Lajitas Array**	**61.25**	**327**	P		**P**	**16 27 00.7**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=153,slow=10,SNR=4.7							
FVM	**French Village**	**63.71**	**342**	*e*P		**P**	**16 27 16.3**	**-0.9**
	comp=Z,7.0nm,0.6s,mb4.9							
FVM	**French Village**	**63.71**	**342**	*e*P		**P**	**16 27 16.3**	**-1.0**
FVM				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.9							
CCM	**Cathedral Cave**	**64.00**	**342**	*e*P		**P**	**16 27 17.8**	**-1.4**
QSPA	**South Pole Qui**	**66.98**	**180**	P		**P**	**16 27 38.6**	**+0.7**
	comp=Z,11nm,0.8s,mb4.9,baz=153,slow=2.8,SNR=11							
QSPA	**South Pole Qui**	**66.98**	**180**	P		**P**	**16 27 38.6**	**+0.7**
SDCO	**Great Sand Dun**	**69.02**	**331**	*e*P		**P**	**16 27 51.7**	**+0.4**
	comp=Z,8.7nm,1.1s,mb4.6							
WUAZ	**Wupatki**	**70.10**	**325**	*e*P		**P**	**16 27 59.5**	**+1.5**
	comp=Z,47nm,2.0s,mb5.1							
DBIC	**Dimbokro**	**70.58**	**74**	P		**P**	**16 28 01.4**	**-0.1**
	comp=Z,21nm,0.8s,mb5.1,baz=223,slow=5.9,SNR=18							
DBIC	**Dimbokro**	**70.58**	**74**	*e*P		**P**	**16 28 01.0**	**-0.4**
	comp=Z,16nm,0.6s,mb5.1							
DBIC	**Dimbokro**	**70.58**	**74**	*e*P		**P**	**16 28 01.0**	**-0.4**
DBIC				pmax	pmax			
	comp=Z,16nm,0.6s							
PDAR	**Pinedale Array**	**74.90**	**331**	P		**P**	**16 28 26.5**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=139,slow=7.1,SNR=4.2							
SYO	**Syowa Base**	**75.40**	**160**	*e*P		**P**	**16 28 27.7**	**-1.3**
NVAR	**Mina Array Bea**	**75.99**	**323**	P		**P**	**16 28 33.5**	**+0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=139,slow=5.7,SNR=5.1							
TPAW	**Teton Pass**	**76.10**	**331**	*e*P		**P**	**16 28 33.2**	**0.0**
	comp=Z,12nm,1.4s,mb4.6							
IMW	**Indian Meadow**	**76.41**	**331**	*e*P		**P**	**16 28 35.6**	**+0.6**
	comp=Z,8.1nm,1.3s,mb4.5							
DGMT	**Dagmar**	**77.50**	**338**	*e*P		**P**	**16 28 41.5**	**+0.5**
	comp=Z,20nm,0.9s,mb5.1							
HLID	**Hailey**	**77.75**	**329**	*e*P		**P**	**16 28 43.6**	**+1.0**
	comp=Z,6.4nm,1.1s,mb4.5							
HLID				*e*		pP	16 28 55.5	-0.9
MCMT	**McKenzie Canyo**	**78.00**	**331**	*e*P		**P**	**16 28 45.1**	**+1.3**
BOZ	**Bozeman (W)**	**78.09**	**332**	*e*P		**P**	**16 28 44.4**	**0.0**
	comp=Z,21nm,1.0s,mb4.0							
SUR	**Sutherland**	**78.94**	**120**	P		**P**	**16 28 50.2**	**+0.7**
	comp=Z,5.9nm,0.7s,mb4.6,baz=207,slow=10,SNR=3.2							
TOA0	**Torodi Ar. Sit**	**79.26**	**71**	*e*P		**P**	**16 28 51.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**79.26**	**71**	P		**P**	**16 28 51.4**	**-0.1**
	comp=Z,26nm,0.8s,mb5.2,baz=253,slow=5.1,SNR=29							
TORD				pP	pP		16 28 59.5	-5.9
	comp=Z,10nm,0.9s,baz=251,slow=4.9,SNR=5.6							
TORD	**Torodi Ar. Bea**	**79.26**	**71**	P		**P**	**16 28 51.4**	**-0.1**
TORD				pP	pP		16 28 59.5	-5.9
BMO	**Blue Mountains**	**80.10**	**328**	*e*P		**P**	**16 28 55.7**	**+0.3**
	comp=Z,8.1nm,1.3s,mb4.5							
TSUM	**Tsumeb**	**80.90**	**107**	P		**P**	**16 29 01.3**	**+0.9**
	baz=232,slow=5.5							
TSUM	**Tsumeb**	**80.90**	**107**	*e*P		**P**	**16 29 01.1**	**+0.7**
	comp=Z,16nm,0.9s,mb4.9							
OD2	**Odessa Site #2**	**82.62**	**329**	*e*P		**P**	**16 29 09.2**	**+0.5**
MAW	**Mawson**	**83.10**	**164**	*e*P		**P**	**16 29 11.1**	**+0.1**
	comp=Z,16nm,1.0s,mb5.0							
MAW	**Mawson**	**83.10**	**164**	P		**P**	**16 29 11.6**	**+0.6**
	comp=Z,14nm,0.8s,mb5.0,baz=212,slow=6.8,SNR=15							
MAW	**Mawson**	**83.10**	**164**	*e*P		**P**	**16 29 11.1**	**+0.1**
MAW				pmax	pmax			
	comp=Z,17nm,1.0s							
BOSA	**Boshof**	**83.89**	**118**	P		**P**	**16 29 16.0**	**+0.2**
	comp=Z,10nm,0.8s,mb5.0,baz=254,slow=4.0,SNR=13							
EDM	**Edmonton**	**84.72**	**336**	*e*P		**P**	**16 29 17.7**	**-1.6**
LBTB	**Lobatse**	**85.58**	**115**	P		**P**	**16 29 24.7**	**+0.2**
	comp=Z,3.5nm,0.9s,mb4.6,baz=185,slow=5.7,SNR=3.2							
YKA	**Yellowknife Ar**	**92.33**	**341**	P		**P**	**16 29 54.4**	**-1.0**
	comp=Z,9nm,0.7s,mb4.7,baz=137,slow=4.3,SNR=12							
AKASG	**Malin Array Be**	**113.62**	**43**	PKiKP	PKiKP		16 35 22.8	-0.7
	comp=Z,0.7nm,0.6s,baz=255,slow=2.8,SNR=4.4							
AKASG	**Malin Array Be**	**113.62**	**43**	PKPdf	PKiKP		16 35 22.8	-0.7
ASAR	**Alice Springs**	**127.74**	**209**	PKP	PKPdf		16 35 51.0	-0.6
	comp=Z,1.8nm,0.9s,baz=138,slow=1.8,SNR=11							
ASAR				pPKP	pPKPdf		16 35 59.5	-6.6
	comp=Z,1.9nm,0.7s,baz=130,slow=2.2,SNR=7.9							
WRA	**Warramunga Arr**	**130.76**	**211**	PKP	PKPdf		16 35 57.5	+0.1
	comp=Z,2.4nm,1.0s,baz=163,slow=2.2,SNR=7.8							
WRA				pPKP	pPKPdf		16 36 05.5	-6.5
	comp=Z,1.9nm,0.9s,baz=185,slow=1.8,SNR=2.6							
KURK	**Kurchatov**	**143.53**	**33**	*e*PKPpre			16 36 18.0	
ZALV	**Zalesovo Beam**	**144.10**	**25**	PKP	PKPdf		16 36 19.5	-1.3
	comp=Z,11nm,0.8s,baz=303,slow=4.4,SNR=17							
EKS2	**Erkin-Say**	**144.61**	**48**	*e*PKP	PKPdf		16 36 22.3	+0.2
EKS2	**Erkin-Say**	**144.61**	**48**	P	PKPdf		16 36 22.7	+0.6
	SNR=9.0							
USP	**Ospenovka**	**144.86**	**47**	P	PKPdf		16 36 23.0	+0.6
	SNR=7.1							
CHMS	**Chmerysh**	**145.14**	**47**	P	PKPbc		16 36 24.0	+1.4
	SNR=9.5							
BOD	**Bodaibo**	**145.28**	**356**	*e*PKIKP	PKPdf		16 36 21.4	-1.3
BOD				pmax	pmax			
	comp=Z,26nm,1.0s							
KBK	**Karagaybulak**	**145.41**	**48**	P	PKPdf		16 36 25.6	+2.1
	SNR=18							
TKM2	**Tokmak 2**	**145.74**	**47**	*e*PKP	PKPdf		16 36 24.2	+0.2
TKM2	**Tokmak 2**	**145.74**	**47**	P	PKPdf		16 36 25.1	+1.1
	SNR=12							
KZA	**Kyzart**	**145.84**	**48**	P	PKPdf		16 36 25.6	+1.4
	SNR=5.8							
MK31	**Makanchi Array**	**147.85**	**36**	*e*PKPbc	PKPbc		16 36 30.6	+0.2
MKAR	**Makanchi Array**	**147.85**	**36**	PKP	PKPdf		16 36 27.4	0.0
	comp=Z,9.3nm,0.7s,baz=336,slow=2.7,SNR=22							
MKAR				PKPbc	PKPbc		16 36 30.6	+0.2
	comp=Z,9.4nm,0.7s,baz=327,slow=2.9,SNR=30							
MKAR				pPKPbc	pPKPbc		16 36 39.1	-5.8
	comp=Z,4.6nm,0.7s,baz=318,slow=2.4,SNR=5.9							
KAPI	**Kappang**	**150.23**	**201**	PKPbc	PKPbc		16 36 36.6	-0.8
	comp=Z,3.1nm,0.5s,baz=207,slow=6.8,SNR=3.9							
MJAR	**Matsushiro Arr**	**151.95**	**305**	PKPbc	PKPbc		16 36 40.2	-0.6
	comp=Z,4.0nm,0.9s,baz=100,slow=1.1,SNR=7.4							
ZAK	**Zakamensk**	**152.44**	**9**	*e*PKIKP	PKPdf		16 36 33.6	-0.9
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**169.00**	**114**	PKP	PKPdf		16 36 53.4	+0.1
	comp=Z,0.8nm,0.9s,baz=241,slow=3.4,SNR=4.1							
CMAR				PKPab	PKPab		16 38 04.8	+0.1
	comp=Z,1.3nm,0.9s,baz=254,slow=5.4,SNR=5.5							

*IDC **14** 16:19:35.8±0.8,2322S×7047W,h27km±4km,mb4.3/8, mb1 4.4/10,mb1mx4.2/17,mbtmp4.3/10,ML4.1/2, Error ellipse: s-maj=24.9km s-min=12.9km az=151.0*
*NEIC **14** 16:19:35.0±0.5,2333S×7059W,mb4.8/3, Error ellipse: s-maj=17.1km s-min=11.5km az=131.0*
*MOS **14** 16:19:35.1±0.9,2332S×7042W,h33km,mb5.0/2, Error ellipse: s-maj=34.5km s-min=21.7km az=64.0*
*ISCJB **14** 16:19:37.6±2.4,232S±01×706W±02,h63km±18km, mb4.4/9, Error ellipse: s-maj=24.2km s-min=18.7km az=158.2*

ISC 14 16:19:39.3±2.2,232S±01×705W±01,h61km±18km,n30, σ0:92/24,mb4.4/9,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.57**	**69**	Pg		**Pn**	**16 20 04.5**	**-0.6**
	596nm,0.3s,SNR=14							
LVC				Lg			16 20 25.9	
	1µm,0.3s,SNR=29							
LVC	**Limon Verde**	**1.57**	**69**	Pg		**Pn**	**16 20 04.5**	**-0.6**
LVC				*e*S		**Sn**	**16 20 25.8**	**+1.3**
LVC				Lg			16 20 25.9	
LPAZ	**La Paz**	**7.21**	**18**	Pn		**Pn**	**16 21 22.3**	**+0.2**
	0.8nm,0.3s,baz=207,slow=16,SNR=3.7							
LPAZ	**La Paz**	**7.21**	**18**	P		**Pn**	**16 21 22.6**	**+0.5**
CFAA	**Coronel Fontan**	**8.63**	**167**	Sn		**Sn**	**16 23 28.7**	**+11**
	0.2nm,0.3s,baz=211,slow=13,SNR=5.1							
SIV	**San Ignacio**	**11.40**	**53**	Pn		**Pn**	**16 22 18.1**	**-1.4**
	2.2nm,0.3s,baz=200,slow=12,SNR=6.7							
BDFB	**Brasilia**	**22.48**	**75**	P		**P**	**16 24 33.0**	**-0.8**
	6.3nm,0.9s,mb4.0,baz=239,slow=17,SNR=3.5							
VNA2	**Neumayer--Watz**	**59.58**	**160**	*e*		**P**	**16 29 37.2**	**+0.9**
VNA2				*e*			16 29 44.9	
SNAA	**Sanae**	**61.19**	**160**	*e*		**P**	**16 29 46.0**	**-1.3**
SNAA				*e*			16 29 54.1	
QSPA	**South Pole Qui**	**67.02**	**180**	P		**P**	**16 30 26.2**	**+0.9**
	2.9nm,0.6s,mb4.5,baz=340,slow=1.8,SNR=7.7							
DBIC	**Dimbokro**	**70.63**	**74**	P		**P**	**16 30 48.4**	**-0.4**
	7.6nm,0.7s,mb4.7,baz=229,slow=6.0,SNR=6.4							
DBIC	**Dimbokro**	**70.63**	**74**	*e*P		**P**	**16 30 48.6**	**-0.3**
	7.4nm,0.8s,mb4.7							
DBIC	**Dimbokro**	**70.63**	**74**	*e*P		**P**	**16 30 48.6**	**-0.2**
DBIC				pmax	pmax			
	comp=Z,7.0nm,0.8s							
PDAR	**Pinedale Array**	**74.84**	**331**	P		**P**	**16 31 13.8**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.5,baz=165,slow=7.2,SNR=2.2							
TOA0	**Torodi Ar. Sit**	**79.31**	**71**	*e*P		**P**	**16 31 38.1**	**-0.7**
TOA0				*e*			16 31 47.0	
TORD	**Torodi Ar. Bea**	**79.31**	**71**	P		**P**	**16 31 38.9**	**+0.1**
	comp=Z,9.4nm,0.8s,mb4.8,baz=255,slow=4.9,SNR=6.7							
TORD				pP	pP		16 31 47.3	-8.5
	comp=Z,5.2nm,0.7s,baz=253,slow=5.3,SNR=6.0							
TORD	**Torodi Ar. Bea**	**79.31**	**71**	P		**P**	**16 31 38.9**	**+0.1**
TORD				pP	pP		16 31 47.3	-8.4
TSUM	**Tsumeb**	**80.97**	**107**	*e*P		**P**	**16 31 49.3**	**+1.4**
	comp=Z,2.4nm,0.7s,mb4.2							
MAW	**Mawson**	**83.15**	**164**	*e*P		**P**	**16 31 56.3**	**-2.1**
	comp=Z,16nm,0.7s,mb5.2							
MAW	**Mawson**	**83.15**	**164**	P		**P**	**16 31 59.1**	**+0.7**
	comp=Z,5.8nm,0.8s,mb4.6,baz=235,slow=8.0,SNR=5.2							
MAW	**Mawson**	**83.15**	**164**	*e*P		**P**	**16 31 56.3**	**-2.1**
MAW				pmax	pmax			
	comp=Z,6.0nm,0.7s							
BOSA	**Boshof**	**83.96**	**118**	P		**P**	**16 32 03.6**	**+0.3**
	comp=Z,5.5nm,0.8s,mb4.7,baz=79,slow=2.2,SNR=5.4							
BOSA				pP	pP		16 32 12.4	-7.9
	comp=Z,3.2nm,0.7s,baz=278,slow=8.0,SNR=2.5							
YKA	**Yellowknife Ar**	**92.28**	**341**	P		**P**	**16 32 42.4**	**+0.2**
	comp=Z,0.8nm,0.7s,mb4.2,baz=129,slow=4.8,SNR=3.7							
ASAR	**Alice Springs**	**127.75**	**209**	PKP	PKPdf		16 38 39.2	+0.6
	comp=Z,1.0nm,1.0s,baz=125,slow=1.8,SNR=5.0							
ASAR				pPKP	pPKPdf		16 38 47.1	-9.3
	comp=Z,0.8nm,1.0s,baz=150,slow=1.7,SNR=2.7							
WRA	**Warramunga Arr**	**130.76**	**211**	PKP	PKPdf		16 38 44.5	+0.1
	comp=Z,0.6nm,0.8s,baz=150,slow=2.2,SNR=3.1							
ZALV	**Zalesovo Beam**	**144.09**	**25**	PKP	PKPdf		16 39 06.9	-0.8
	comp=Z,3.7nm,0.8s,baz=280,slow=2.5,SNR=6.5							
ZALV				pPKP	pPKPdf		16 39 17.8	-7.8
	comp=Z,3.0nm,0.7s,baz=338,slow=3.1,SNR=4.9							
BOD	**Bodaibo**	**145.24**	**356**	*e*PKIKP	PKPdf		16 39 09.3	-0.3
BOD				pmax	pmax			
	comp=Z,9.0nm,1.0s							
MK31	**Makanchi Array**	**147.85**	**36**	*e*PKPbc	PKPbc		16 39 18.0	+0.6
MKAR	**Makanchi Array**	**147.85**	**36**	PKP	PKPdf		16 39 14.6	+0.2
	comp=Z,3.9nm,0.7s,baz=327,slow=2.8,SNR=8.3							
MKAR				PKPbc	PKPbc		16 39 18.2	+0.8
	comp=Z,3.9nm,0.7s,baz=324,slow=2.7,SNR=12							
MKAR				pPKPbc	pPKPbc		16 39 27.5	-7.6
	comp=Z,3.2nm,0.8s,baz=298,slow=2.6,SNR=5.1							
CMAR	**Chiang Mai Arr**	**169.07**	**114**	PKPab	PKPab		16 40 53.5	+1.4
	comp=Z,0.4nm,1.0s,baz=223,slow=4.9,SNR=4.2							

IDC 14 16:21:26.8±5.5,176S×10035E,h0km,mb3.7/3,mb1 3.9/3, mb1mx3.4/18,mbtmp3.7/3,Error ellipse: s-maj=393.3km s-min=32.7km az=47.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**37.81**	**121**	P		P	16 28 46.2	+0.8
	0.3nm,0.4s,baz=302,slow=8.7,SNR=5.0							
ASAR	**Alice Springs**	**39.11**	**127**	P		P	16 28 55.4	-0.8
	0.1nm,0.3s,baz=301,slow=7.8,SNR=6.6							
ARCES	**ARCESS Array B**	**86.37**	**340**	P		P	16 34 10.7	+0.1
	4.0nm,1.1s,baz=99,slow=4.7,SNR=7.0							

*ISCJB **14** 16:24:54.9±0.6,2279S±006×703W±0.1,h33km,mb4.1/6, Error ellipse: s-maj=16.3km s-min=8.0km az=2.1*
*IDC **14** 16:24:56.2±4.2,2275S×7019W,h33km±32km,mb3.7/3, ML3.5/4, Error ellipse: s-maj=37.7km s-min=22.2km az=97.0*
*NEIC **14** 16:24:57.5±1.0,2282S×7006W,h45km±12km,mb4.3/3, Error ellipse: s-maj=18.0km s-min=7.6km az=103.0*

ISC 14 16:24:57.4±1.4,2281S±007×701W±02,h40km±16km,n15, σ0:73/15,mb4.1/6,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.11**	**80**	Pg		**Pn**	**16 25 17.4**	**+0.9**
	101nm,0.3s,SNR=10							
LVC				Lg			16 25 36.3	
	316nm,0.3s,SNR=29							
LVC	**Limon Verde**	**1.11**	**80**	*e*P		**Pn**	**16 25 17.0**	**+0.6**
LVC				Lg			16 25 36.3	
LCO	**Las Campanas**	**6.20**	**185**	*e*P		**Pn**	**16 26 25.8**	**-0.7**
LPAZ	**La Paz**	**6.75**	**16**	Pn		**Pn**	**16 26 34.1**	**+0.1**
	0.6nm,0.3s,baz=180,slow=5.1,SNR=7.8							
LPAZ	**La Paz**	**6.75**	**16**	P		**Pn**	**16 26 35.4**	**+1.4**
CFAA	**Coronel Fontan**	**8.91**	**170**	Pn		**Pn**	**16 27 04.2**	**+0.5**
	0.1nm,0.3s,baz=349,slow=14,SNR=4.7							
CFAA				Sn		**Sn**	**16 28 49.3**	**+6.5**
	0.2nm,0.

baz=10.0
SGST Jiashian 1.57 343 *eP* **Pn 16 36 22.0 +0.2**
baz=344
SGST *eS* **Sn 16 36 42.1 +0.8**
baz=344
ELDTW Lidau 1.61 358 *eP* **Pn 16 36 21.2 -1.0**
baz=358
STYT Tauyuan 1.61 349 *eP* **Pn 16 36 22.5 +0.2**
baz=350
STYT *eS* **Sn 16 36 42.1 -0.2**
baz=350
CHN1 Nanshi 1.69 342 *eP* **Pn 16 36 23.2 -0.1**
baz=343
CHN1 *eS* **Sn 16 36 43.6 -0.5**
baz=343
WTP Ta-pu 1.72 346 *eP* **Pn 16 36 23.7 -0.1**
baz=346
WTP *eS* **Sn 16 36 45.0 0.0**
baz=346
TWK Hsinying 1.77 342 *eP* **Pn 16 36 24.4 -0.1**
baz=343
TWF1 Yuli 1.78 6 *eP* **Pn 16 36 24.3 -0.4**
baz=7.0
TWF1 *eS* **Sn 16 36 46.7 +0.1**
baz=7.0
CHN4 Tsaushan 1.83 346 *eP* **Pn 16 36 26.4 +1.1**
baz=346
YUS Yu-Shan 1.91 356 *eP* **Pn 16 36 26.8 +0.3**
baz=357
EHY Hungye 1.94 7 *eP* **Pn 16 36 26.6 -0.2**
baz=7.0
ALS Alishan 1.95 353 *eP* **Pn 16 36 27.5 +0.6**
baz=353
CHN5 Tsauling 2.05 350 *eP* **Pn 16 36 28.1 -0.3**
baz=350
CHN5 *eS* **Sn 16 36 53.2 +0.1**
baz=350
ESL Shilin 2.25 8 *eP* **Pn 16 36 31.4 +0.3**
baz=8.0
ESL *eS* **Sn 16 36 57.4 -0.8**
baz=8.0
SMLT Sun Moon Lake 2.31 356 *eP* **Pn 16 36 32.2 +0.3**
baz=356
TYC Yuchr 2.33 355 *eP* **Pn 16 36 32.3 +0.1**
baz=355
TYC *eS* **Sn 16 37 01.0 +1.0**
baz=355
WHF Hehuan Shan 2.57 4 *eP* **Pn 16 36 35.7 +0.3**
baz=4.0
WHF *eS* **Sn 16 37 05.9 0.0**
baz=4.0
TWQ1 Liyutan 2.78 354 *eP* **Pn 16 36 41.0 +2.7**
baz=354
NNS Nan Shan 2.87 5 *eP* **Pn 16 36 41.2 +1.6**
baz=5.0
NNS *eS* **Sn 16 37 13.1 -0.2**
baz=5.0
ENA Nanau 2.91 12 *eP* **Pn 16 36 40.8 +0.7**
baz=12
ENA *eS* **Sn 16 37 13.7 -0.6**
baz=12
ENTT Nioudou 3.09 8 *eP* **Pn 16 36 43.6 +1.0**
baz=8.0
ENTT *eS* **Sn 16 37 17.5 -1.2**
baz=8.0
NSK Sanguang 3.10 5 *eP* **Pn 16 36 43.7 +0.9**
baz=5.0
NSK *eS* **Sn 16 37 18.6 -0.5**
baz=5.0
TWE Neicheng 3.18 10 *eP* **Pn 16 36 44.1 +0.3**
baz=10.0
TWE *eS* **Sn 16 37 20.6 -0.5**
baz=10.0
MKAR Makanchi Array 40.18 318 P x 16 44 30.0
2.1nm,0.9s,baz=113,slow=6.6,SNR=6.4
WRA Warramunga Arr 43.25 162 P **P 16 43 54.6 -0.3**
0.6nm,0.5s,mb3.5,baz=343,slow=9.1,SNR=8.0
ASAR Alice Springs 46.67 164 P **P 16 44 22.3 +0.2**
0.2nm,0.3s,mb3.5,baz=343,slow=7.2,SNR=16
STKA Stephens Creek 56.66 159 P **P 16 45 37.1 +0.5**
1.4nm,0.6s,mb4.1,baz=331,slow=10,SNR=4.0

*ISCJB **14** 16:36:33.3±1.8,2303S×006×7058W±007,h13km±11km, mb4.2/12, Error ellipse: s-maj=11.4km s-min=9.9km az=44.4*
*IDC **14** 16:36:37.4±0.7,2303S×7044W,h28km±4km,mb4.0/9, mb1 4.1/13,mb1mx4.0/19,mbtmp3.9/13,ML3.8/3, Error ellipse: s-maj=17.3km s-min=12.0km az=170.0*
*NEIC **14** 16:36:37.4±0.4,2303S×7053W,mb4.6/3, Error ellipse: s-maj=12.0km s-min=9.1km az=93.0*
ISC 14 16:36:39.1±1.3,2304S±006×7049W±010,h41km±12km, h31km±2.1km:pP-P,n32,σ1$00/27,mb4.2/12,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.52**	**74**	Pg		**Pn**	**16 37 04.9**	**+1.2**
	282nm,0.3s,SNR=39							
LVC				Lg			16 37 25.0	
	440nm,0.3s,SNR=34							
LVC	**Limon Verde**	**1.52**	**74**	*eP*		**Pn**	**16 37 04.4**	**+0.6**
LVC				*eS*		**Sn**	**16 37 22.3**	**0.0**
LVC				Lg			16 37 25.0	
LCO	**Las Campanas**	**5.95**	**182**	P		**Pn**	**16 37 55.8**	**-8.9**
LPAZ	**La Paz**	**7.07**	**19**	Pn		**Pn**	**16 38 21.4**	**+1.2**
	0.8nm,0.3s,baz=215,slow=4.5,SNR=8.1							
LPAZ	**La Paz**	**7.07**	**19**	*eP*		**Pn**	**16 38 21.3**	**+1.1**
CFAA	**Coronel Fontan**	**8.77**	**167**	Pn		**Pn**	**16 38 43.5**	**+0.2**
	0.1nm,0.3s,baz=342,slow=15,SNR=3.5							
CFAA				Sn		**Sn**	**16 40 34.6**	**+14**
	0.2nm,0.3s,baz=202,slow=16,SNR=2.7							
SIV	**San Ignacio**	**11.31**	**53**	Pn		**Pn**	**16 39 16.4**	**-1.8**
	1.0nm,0.3s,baz=246,slow=13,SNR=25							
PLCA	**Paso Flores**	**17.64**	**180**	P		**Pn**	**16 40 40.0**	**-1.7**
	0.0nm,0.3s,baz=323,slow=5.1,SNR=2.4							
RCBR	**Riachuelo**	**37.46**	**68**	*eP*		**P**	**16 43 49.3**	**+0.4**
CMIG	**Matias Romero**	**46.47**	**327**	P		**P**	**16 45 00.8**	**-1.5**
	2.3nm,0.7s,mb4.2,baz=151,slow=5.3,SNR=2.8							
VNA2	**Neumayer--Watz**	**59.70**	**160**	*e*		**P**	**16 46 40.7**	**+1.7**
	baz=297,slow=9.8							
VNA2				*e*			16 46 48.3	
TXAR	**Lajitas Array**	**61.08**	**327**	P		**P**	**16 46 49.0**	**+0.1**
	0.4nm,0.6s,mb3.7,baz=151,slow=7.4,SNR=6.6							
TXAR				pP		pP	16 46 58.3	-2.6
	0.6nm,0.6s,baz=126,slow=6.4,SNR=6.4							
SNAA	**Sanae**	**61.32**	**161**	*e*		**P**	**16 46 49.6**	**-0.4**
SNAA				*e*			16 46 57.7	
FVM	**French Village**	**63.52**	**342**	*eP*		**P**	**16 47 04.4**	**-0.7**
	3.4nm,0.6s,mb4.5							
QSPA	**South Pole Qui**	**67.16**	**180**	*eP*		**P**	**16 47 29.9**	**+1.7**
	3.5nm,0.7s,mb4.5							
QSPA				*e*			16 47 38.5	
SDCO	**Great Sand Dun**	**68.84**	**331**	*eP*		**P**	**16 47 40.0**	**+0.8**
	5.8nm,1.3s,mb4.3							
DBIC	**Dimbokro**	**70.57**	**74**	P		**P**	**16 47 50.2**	**-0.2**
	2.1nm,0.6s,mb4.2,baz=210,slow=8.1,SNR=2.9							
PDAR	**Pinedale Array**	**74.73**	**331**	P		**P**	**16 48 15.1**	**+0.6**
	0.3nm,0.3s,mb3.7,baz=179,slow=9.8,SNR=4.4							
NVAR	**Mina Array Bea**	**75.82**	**323**	P		**P**	**16 48 22.1**	**+1.3**
	0.4nm,0.7s,mb3.5,baz=164,slow=6.3,SNR=4.1							
TOA0	**Torodi Ar. Sit**	**79.25**	**71**	*eP*		**P**	**16 48 39.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**79.25**	**71**	P		**P**	**16 48 40.1**	**-0.4**
	4.4nm,0.7s,mb4.5,baz=254,slow=5.1,SNR=24							
TORD				pP		pP	16 48 48.5	-4.5
	1.6nm,0.5s,baz=251,slow=5.1,SNR=5.0							
MAW	**Mawson**	**83.28**	**164**	P		**P**	**16 49 00.3**	**-0.8**
	2.4nm,0.9s,mb4.2,baz=267,slow=8.2,SNR=4.1							
MAW				pP		pP	16 49 10.6	-3.0
	2.7nm,0.9s,baz=260,slow=12,SNR=3.6							
BOSA	**Boshof**	**84.02**	**118**	P		**P**	**16 49 06.3**	**+0.7**
	2.9nm,0.9s,mb4.4,baz=68,slow=4.2,SNR=3.6							
BOSA	**Boshof**	**84.02**	**118**	P		**P**	**16 49 06.3**	**+0.7**
YKA	**Yellowknife Ar**	**92.15**	**341**	P		**P**	**16 49 42.6**	**-1.1**
	0.4nm,0.6s,mb3.9,baz=164,slow=9.3,SNR=3.5							
ASAR	**Alice Springs**	**127.87**	**209**	PKP		PKPdf	16 55 41.3	+0.3
	0.8nm,0.7s,baz=136,slow=2.0,SNR=16							
ASAR				pPKP		pPKPdf	16 55 50.2	-3.7
	0.9nm,0.8s,baz=115,slow=2.2,SNR=6.1							
WRA	**Warramunga Arr**	**130.89**	**212**	PKP		PKPdf	16 55 47.7	+0.9
	0.4nm,0.5s,baz=154,slow=1.7,SNR=8.8							
WRA				pPKP		pPKPdf	16 55 55.9	-3.9
	0.5nm,0.5s,baz=150,slow=1.6,SNR=3.9							
BVAR	**Borovoye Array**	**137.89**	**35**	PKP		PKPdf	16 56 00.5	+1.7
	0.7nm,0.9s,baz=299,slow=1.5,SNR=3.5							
KURK	**Kurchatov**	**143.41**	**33**	PKP		PKPdf	16 56 07.0	-1.8
	baz=309,slow=3.8							
ZALV	**Zalesovo Beam**	**143.96**	**25**	PKP		PKPdf	16 56 07.9	-1.8
	1.0nm,0.6s,baz=264,slow=3.0,SNR=6.0							
MKAR	**Makanchi Array**	**147.73**	**36**	PKP		PKPdf	16 56 15.7	-0.7
	2.0nm,0.8s,baz=325,slow=3.5,SNR=8.4							
MKAR				PKPbc		PKPbc	16 56 19.6	+0.4
	2.0nm,0.8s,baz=327,slow=3.0,SNR=8.5							
SONM	**Songino Array**	**155.13**	**5**	PKPab		PKPab	16 56 52.2	0.0
	0.6nm,0.9s,baz=325,slow=2.3,SNR=3.3							

*ISCJB **14** 16:37:20.7±2.7,2265S×02×704W±0.1,h2km±15km, Error ellipse: s-maj=27.0km s-min=15.6km az=13.7*
*IDC **14** 16:37:21.9±1.3,2264S×7037W,h0km,mb4.1/2,mb1 4.3/4, mb1mx3.9/16,mbtmp4.3/4,ML4.6/2,Error ellipse: s-maj=38.0km s-min=17.6km az=171.0*
*NEIC **14** 16:37:27.1±1.1,2249S×7031W,h35km,Error ellipse: s-maj=25.8km s-min=18.3km az=126.0*
ISC 14 16:37:23.1±3.0,226S±01×703W±01,h7km±16km,n8, σ1$70/7,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.31**	**90**	Pg		**Pg**	**16 37 48.1**	**-0.1**
	212nm,0.3s,SNR=3.1							
LVC				Lg			16 38 05.3	
	537nm,0.3s,SNR=5.3							
LVC	**Limon Verde**	**1.31**	**90**	P		**Pn**	**16 37 49.9**	**+2.0**
LVC				*eS*		**Sb**	**16 38 04.7**	**-0.3**
LVC				Lg			16 38 05.3	
LPAZ	**La Paz**	**6.63**	**19**	Pn		**Pn**	**16 39 01.4**	**+0.4**
	5.6nm,0.3s,baz=198,slow=4.4,SNR=6.2							
SIV	**San Ignacio**	**10.94**	**55**	Pn		**Pn**	**16 39 58.4**	**-1.9**
	2.0nm,0.3s,baz=241,slow=11,SNR=13							
TORD	**Torodi Ar. Bea**	**78.96**	**71**	P		**P**	**16 49 29.3**	**+1.2**
	0.8nm,0.5s,baz=254,slow=4.9,SNR=2.4							
MAW	**Mawson**	**83.64**	**164**	P		**P**	**16 49 50.9**	**-1.2**
	1.3nm,0.8s,baz=194,slow=8.3,SNR=2.3							
ASAR	**Alice Springs**	**128.31**	**209**	PKP		PKPdf	16 56 30.7	-0.6
	0.2nm,0.7s,baz=128,slow=1.6,SNR=2.5							
WRA	**Warramunga Arr**	**131.32**	**212**	PKP		PKPdf	16 56 37.3	+0.3
	0.3nm,0.5s,baz=153,slow=1.6,SNR=5.0							

MAN 14 16:42:58,1733N×11976E,h6km,mb4.5,ML3.4,MS3.2, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.89**	**48**	*eP*		Pg	16 43 15.4	+0.3
SIPP				*i* S		Sg	16 43 26.2	-0.5
BOLP	**Bolinao**	**0.95**	**171**	*eP*		Pg	16 43 17.0	+0.7
ABRA	**Dolores**	**0.96**	**71**	*eP*		Pg	16 43 16.5	-0.1
ABRA				*eS*		Sg	16 43 28.8	-0.3
SCZP	**Santa Cruz**	**1.55**	**175**	*eP*		Pn	16 43 26.0	-0.1
SCZP				*eS*		Sn	16 43 46.5	-0.1
CAUP	**Cauayan**	**2.01**	**101**	*eP*		Pn	16 43 34.0	+1.6
PCPH	**Palayan**	**2.17**	**144**	*eP*		Pn	16 43 34.4	-0.4
PCPH				*eS*		Sn	16 44 01.6	-0.4
BALP	**Baler**	**2.35**	**132**	*eP*		Pn	16 43 37.6	+0.4
BALP				*eS*		Sn	16 44 07.7	+1.4
SGCP	**Mt. Cagua**	**2.36**	**67**	*eP*		Sn	16 44 14.8	+8.1
PALP	**Palanan**	**2.56**	**96**	*eP*		Pn	16 43 40.4	+0.3

*IDC **14** 16:51:19.1±7.3,2261S×70.13W,h34km±48km,mb3.7/1, mb1 3.4/3,mb1mx3.2/16,mbtmp3.4/3,ML3.1/2,Error ellipse: s-maj=75.6km s-min=32.8km az=126.0*
*NEIC **14** 16:51:19.7±1.1,2271S×7025W,h35km,Error ellipse: s-maj=25.4km s-min=14.7km az=110.0*
ISC 14 16:51:20.7±1.8,227S±01×702W±02,h35km,n9,σ1$27/7, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**1.16**	**84**	Pg		**Pn**	**16 51 41.5**	**+1.1**
	157nm,0.3s,baz=272,slow=9.1,SNR=29							
LVC				Lg			16 51 55.8	
	182nm,0.3s,baz=62,slow=17,SNR=7.7							
LVC	**Limon Verde**	**1.16**	**84**	*eP*		**Pn**	**16 51 41.3**	**+0.9**
LVC				Lg			16 51 55.8	
LPAZ	**La Paz**	**6.69**	**17**	P		**Pn**	**16 52 57.8**	**+1.3**
CFAA	**Coronel Fontan**	**9.00**	**169**	Pn		**Pn**	**16 53 28.7**	**+0.5**
	0.0nm,0.3s,baz=323,slow=5.0,SNR=3.2							
CFAA	**Coronel Fontan**	**9.00**	**169**	Pn		**Pn**	**16 53 28.7**	**+0.5**
SIV	**San Ignacio**	**10.88**	**54**	Pn		**Pn**	**16 53 53.1**	**-0.9**
	0.3nm,0.3s,baz=238,slow=13,SNR=6.2							
TORD	**Torodi Ar. Bea**	**78.86**	**71**	P		**P**	**17 03 18.5**	**-2.3**
	0.5nm,0.4s,baz=254,slow=5.4,SNR=11							
ASAR	**Alice Springs**	**128.28**	**208**	PKP		PKPdf	17 10 22.4	-1.8
	0.4nm,1.0s,baz=175,slow=3.1,SNR=4.7							
WRA	**Warramunga Arr**	**131.31**	**211**	PKP		PKPdf	17 10 29.2	-0.8
	0.2nm,0.6s,baz=156,slow=1.8,SNR=3.9							

*JMA **14** 17:09:09.8±0.4,2318N×12164E,h0km,M2.8*
*ISCJB **14** 17:09:10.2±0.3,2315N±001×12147E±002,h22km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=14.3*
*TAP **14** 17:09:11.0,2321N×12137E,h17km,ML3.5,C*
ISC 14 17:09:10.3±0.4,2316N±001×12145E±002,h17km±2km, n59,σ0$79/105,13C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CHKT	**Chengkung**	**0.10**	**233**	⇓*iP*		**Pg**	**17 09 15.1**	**+1.3**
	baz=173							
CHKT				*i* S		**Sg**	**17 09 18.1**	**+1.9**
	baz=173							
TWF1	**Yuli**	**0.24**	**324**	⇑*iP*		**Pg**	**17 09 15.9**	**+0.1**
	baz=334							
TWF1				*i* S		**Sg**	**17 09 19.5**	**0.0**
	baz=334							
EHY	**Hungye**	**0.37**	**341**	⇑*iP*		**Pg**	**17 09 17.9**	**0.0**
	baz=339							
EHY				*eS*		**Sg**	**17 09 23.3**	**+0.2**
	baz=339							
ELDTW	**Lidau**	**0.40**	**275**	⇑*iP*		**Pg**	**17 09 17.9**	**-0.6**
	baz=265							
ELDTW				*i* S		**Sg**	**17 09 22.8**	**-1.2**
	baz=265							
TWG	**Pinlang**	**0.48**	**226**	P		**Pg**	**17 09 20.1**	**+0.1**
	baz=227							
TWG				S		**Sg**	**17 09 27.0**	**+0.4**
	baz=227							
TTN	**Taitung**	**0.49**	**215**	*eP*		**Pg**	**17 09 21.1**	**+1.0**
	baz=219							
TTN				*eS*		**Sg**	**17 09 28.9**	**+2.2**
	baz=219							
YUS	**Yu-Shan**	**0.56**	**306**	⇑*iP*		**Pg**	**17 09 21.1**	**-0.4**
	baz=296							
YUS				S		**Sg**	**17 09 28.2**	**-0.9**
	baz=296							
STYT	**Tauyuan**	**0.64**	**271**	⇑P		**Pg**	**17 09 22.2**	**-0.7**
	baz=264							
STYT				S		**Sg**	**17 09 29.8**	**-1.6**
	baz=264							
ESL	**Shilin**	**0.65**	**359**	*eP*		**Pg**	**17 09 22.1**	**-1.1**
	baz=4.0							
ALS	**Alishan**	**0.69**	**301**	⇑P		**Pg**	**17 09 23.4**	**-0.4**
	baz=291							
ALS				*eS*		**Sg**	**17 09 32.0**	**-1.0**
	baz=291							
ECL	**Taimali**	**0.72**	**219**	*eP*		**Pb**	**17 09 23.3**	**-1.0**
	baz=214							
ECL				*eS*		**Sb**	**17 09 33.0**	**-1.0**
	baz=214							
WTP	**Ta-pu**	**0.77**	**277**	⇑*iP*		**Pb**	**17 09 25.1**	**-0.1**
	baz=272							
WTP				*eS*		**Sb**	**17 09 34.5**	**-1.0**
	baz=272							
SGST	**Jiashian**	**0.80**	**265**	⇑P		**Pb**	**17 09 25.8**	**+0.1**
	baz=261							
CHN4	**Tsaushan**	**0.81**	**284**	⇑P		**Pb**	**17 09 25.8**	**-0.1**
	baz=279							
CHN4				*eS*		**Sb**	**17 09 37.2**	**+0.7**
	baz=279							
HWA	**Hwalien**	**0.83**	**10**	*eP*		**Pb**	**17 09 25.8**	**-0.4**
	baz=355							
CHN5	**Tsauling**	**0.83**	**302**	⇑P		**Pb**	**17 09 26.2**	**0.0**
	baz=291							
CHN5				*eS*		**Sb**	**17 09 37.3**	**+0.1**
	baz=291							
CHN1	**Nanshi**	**0.85**	**272**	⇑P		**Pb**	**17 09 26.7**	**+0.2**
	baz=267							
CHN1				*eS*		**Sb**	**17 09 38.0**	**+0.4**
	baz=267							
SSD	**Sandimen**	**0.86**	**242**	P		**Pb**	**17 09 26.2**	**-0.5**
	baz=236							
SMLT	**Sun Moon Lake**	**0.88**	**325**	⇑*iP*		**Pb**	**17 09 26.6**	**-0.5**
	baz=330							
SMLT				S		**Sb**	**17 09 38.4**	**-0.2**
	baz=330							
TWK	**Hsinying**	**0.89**	**277**	P		**Pb**	**17 09 27.2**	**-0.1**
	baz=272							
TWK				*eS*		**Sb**	**17 09 39.0**	**+0.2**
	baz=272							
TYC	**Yuchr**	**0.92**	**324**	⇑P		**Pb**	**17 09 27.2**	**-0.5**
	baz=335							
TYC				*eS*		**Sb**	**17 09 39.6**	**-0.1**
	baz=335							
TWD	**Chiawan**	**0.93**	**8**	*eP*		**Pb**	**17 09 26.6**	**-1.3**
	baz=359							
TWD				*eS*		**Sb**	**17 09 40.2**	**+0.3**
	baz=359							
TAW	**Tawu**	**0.95**	**213**	*eP*		**Pb**	**17 09 27.3**	**-0.9**
	baz=210							
TAW				*eS*		**Sb**	**17 09 38.6**	**-1.8**
	baz=210							
CHN2	**Minshiung**	**0.97**	**293**	*eP*		**Pb**	**17 09 27.8**	**-0.8**
	baz=289							
CHN2				*eS*		**Sb**	**17 09 42.5**	**+1.4**
	baz=289							
WGK	**Gukeng**	**0.97**	**303**	*eP*		**Pb**	**17 09 28.7**	**+0.1**
	baz=300							
WGK				*eS*		**Sb**	**17 09 41.0**	**-0.1**
	baz=300							
SGLT	**Jiouru**	**0.98**	**244**	*eP*		**Pb**	**17 09 30.3**	**+1.5**
	baz=246							
SGLT				*eS*		**Sb**	**17 09 46.6**	**+5.1**
	baz=246							
WHF	**Hehuan Shan**	**1.00**	**350**	*eP*		**Pb**	**17 09 28.2**	**-0.9**
	baz=4.0							
WHF				*eS*		**Sb**	**17 09 42.2**	**+0.3**
	baz=4.0							
CHY	**Chiayi**	**1.00**	**290**	P		**Pb**	**17 09 29.2**	**+0.1**
	baz=286							
CHY				*eS*		**Sb**	**17 09 42.5**	**+0.5**
	baz=286							
TWM1	**Shoushan**	**1.00**	**251**	*eP*		**Pb**	**17 09 30.2**	**+1.0**
	baz=249							
WNT	**Mingjian**	**1.00**	**316**	*eP*		**Pb**	**17 09 29.6**	**+0.4**
	baz=313							
WNT				*eS*		**Sb**	**17 09 43.1**	**+1.0**
	baz=313							
SCZT	**Fangliau**	**1.09**	**225**	*eP*		**Pb**	**17 09 30.6**	**-0.2**
	baz=220							
LAY	**Lan-yu**	**1.12**	**175**	*eP*		**Pn**	**17 09 29.9**	**-1.2**
	baz=163							
LAY				*eS*		**Sb**	**17 09 44.8**	**-0.6**
	baz=163							
TWT	**Tachien**	**1.12**	**347**	P		**Pn**	**17 09 31.2**	**+0.1**
	baz=346							
TWT				*eS*		**Sb**	**17 09 45.7**	**+0.3**
	baz=346							
CHN8	**Yiju**	**1.15**	**280**	*eP*		**Pn**	**17 09 31.2**	**-0.4**
	baz=275							
CHN8				*eS*		**Sb**	**17 09 47.3**	**+0.9**
	baz=275							
SCLT	**Jiali**	**1.16**	**271**	*eP*		**Pn**	**17 09 30.9**	**-0.7**
	baz=266							
SCLT				*eS*		**Sb**	**17 09 47.0**	**+0.5**
	baz=266							
TCU	**Taichung**	**1.21**	**324**	*eP*		**Pn**	**17 09 32.8**	**+0.3**
	baz=321							
TCU				*eS*		**Sb**	**17 09 48.1**	**-0.1**
	baz=321							
WSF	**Szhu**	**1.23**	**293**	*eP*		**Pn**	**17 09 32.7**	**+0.1**
	baz=289							
WSF				*eS*		**Sb**	**17 09 48.9**	**+0.5**
	baz=289							
NNS	**Nan Shan**	**1.28**	**357**	*eP*		**Pn**	**17 09 33.9**	**+0.6**
	baz=9.0							
NNS				*eS*		**Sb**	**17 09 49.4**	**-0.6**
	baz=9.0							
WTCT	**Ta-ch'eng**	**1.28**	**303**	*eP*		**Pn**	**17 09 33.3**	**0.0**
	baz=299							
WTCT				*eS*		**Sb**	**17 09 50.5**	**+0.4**
	baz=299							
ENA	**Nanau**	**1.29**	**12**	*eP*		**Pn**	**17 09 32.2**	**-1.3**
	baz=359							
ENA				*eS*		**Sb**	**17 09 50.4**	**0.0**
	baz=359							
HEN	**Hengchun**	**1.32**	**210**	*eP*		**Pn**	**17 09 35.8**	**+1.9**
	baz=205							
TWQ1	**Liyutan**	**1.34**	**333**	*eP*		**Pn**	**17 09 35.4**	**+1.3**
	baz=330							
TWQ1				*eS*		**Sn**	**17 09 52.9**	**+1.4**
	baz=330							
TWK1	**Hengchun**	**1.35**	**206**	*eP*		**Pn**	**17 09 33.7**	**-0.6**
	baz=198							
TWK1				*eS*		**Sn**	**17 09 52.8**	**+1.1**
	baz=198							
NSY	**Sanyi**	**1.40**	**333**	*eP*		**Pn**	**17 09 35.0**	**0.0**
	baz=331							
NSY				*eS*		**Sn**	**17 09 53.5**	**+0.5**
	baz=331							
ENTT	**Nioudou**	**1.48**	**4**	*eP*		**Pn**	**17 09 35.0**	**-1.1**
	baz=1.0							
TWC	**Suao**	**1.49**	**14**	*eP*		**Pn**	**17 09 36.8**	**+0.6**
	baz=2.0							
TWC				*eS*		**Sn**	**17 09 56.7**	**+1.5**
	baz=2.0							
NSK	**Sanguang**	**1.51**	**357**	*eP*		**Pn**	**17 09 36.6**	**0.0**
	baz=11							
NSK				*eS*		**Sn**	**17 09 55.6**	**-0.3**
	baz=11							
NSTT	**Nanjuang**	**1.52**	**344**	*eP*		**Pn**	**17 09 36.2**	**-0.4**
	baz=342							
NSTT				*eS*		**Sn**	**17 09 55.6**	**-0.4**
	baz=342							
TWE	**Neicheng**	**1.57**	**7**	*eP*		**Pn**	**17 09 38.4**	**+1.1**
	baz=7.0							
TWE				*eS*		**Sn**	**17 09 57.7**	**+0.5**
	baz=7.0							
PNG	**Penghu**	**1.79**	**284**	*eP*		**Pn**	**17 09 40.0**	**-0.3**
	baz=279							
PNG				*eS*		**Sn**	**17 10 00.8**	**-1.8**
	baz=279							
NWF	**Wu-fen Shan**	**1.93**	**9**	*eP*		**Pn**	**17 09 41.9**	**-0.3**
	baz=4.0							
YOJ	**Yonaguni jima**	**1.93**	**47**	P		**Pn**	**17 09 42.4**	**+0.1**
YOJ				*eS*		**Sn**	**17 10 06.4**	**+0.3**
TWS1	**Kuangyinshan**	**1.93**	**359**	*eP*		**Pn**	**17 09 45.8**	**+3.5**
	baz=11							
HATJ	**Hateruma jima**	**2.34**	**67**	*eS*		**Sn**	**17 10 15.2**	**-1.0**
IRIF	**Iriomote-Funau**	**2.40**	**60**	P		**Pn**	**17 09 48.9**	**+0.2**
IRIF				*eS*		**Sn**	**17 10 17.2**	**-0.4**
JKRS	**Kuro-shima**	**2.58**	**65**	P		**Pn**	**17 09 51.9**	**+0.7**
JKRS				*eS*		**Sn**	**17 10 22.6**	**+0.4**
JIJ	**Ishigaki jima**	**2.74**	**64**	P		**Pn**	**17 09 53.7**	**+0.2**
JIJ				*eS*		**Sn**	**17 10 25.9**	**-0.3**
KNM	**Kinmen**	**3.03**	**295**	*eP*		**Pn**	**17 09 57.3**	**-0.2**
	baz=292							
JTJ	**Tarama**	**3.32**	**63**	*eS*		**Sn**	**17 10 40.6**	**+0.1**

IDC 14 17:10:13.2±3.5,2014S×17565W,h0km,mb4.0/3, mb1 4.3/4,mb1mx3.9/17,mbtmp4.3/4,Error ellipse: s-maj=75.2km s-min=46.9km az=55.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**19.12**	**198**	P		Pn

ISC 14 17:17:24.0±1.8, 220N±01×1430E±04, h259km±20km, n10, σ0≤51/11, mb3.2/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CBIJ	**Chichi jima**	**5.18**	**352**	P		**Pn**	**17 18 43.1**	**+0.9**
	28nm,0.3s,baz=272,slow=22,SNR=4.3							
CBIJ				S		**S**	**17 19 43.9**	**-0.9**
	4.9nm,0.3s,baz=270,slow=23,SNR=1.6							
MJAR	**Matsushiro Arr**	**15.13**	**345**	P		**Pn**	**17 20 45.2**	**-0.1**
	0.4nm,0.3s,baz=296,slow=4.7,SNR=4.1							
KSRS	**Korea Array**	**20.23**	**323**	P		**P**	**17 21 40.7**	**+0.9**
	5.5nm,0.6s,baz=146,slow=8.8,SNR=34							
SONM	**Songino Array**	**39.05**	**320**	P		**P**	**17 24 26.0**	**+0.1**
	1.1nm,0.4s,mb3.6,baz=130,slow=7.1,SNR=28							
CMAR	**Chiang Mai Arr**	**41.42**	**273**	P		**P**	**17 24 45.3**	**-0.4**
	0.3nm,0.5s,mb2.8,baz=72,slow=7.3,SNR=3.4							
WRA	**Warramunga Arr**	**42.49**	**192**	P		**P**	**17 24 53.8**	**-0.4**
	1.3nm,0.6s,mb3.3,baz=9.8,slow=7.8,SNR=22							
WRA				pP		pP	17 25 40.8	-7.3
	0.2nm,0.3s,baz=11,slow=8.2,SNR=1.6							
ASAR	**Alice Springs**	**46.20**	**192**	P		**P**	**17 25 23.6**	**+0.2**
	0.2nm,0.5s,mb2.7,baz=16,slow=12,SNR=11							
ZALV	**Zalesovo Beam**	**53.92**	**322**	P		**P**	**17 26 20.5**	**-0.4**
	1.4nm,0.6s,mb3.5,baz=112,slow=6.9,SNR=6.7							
MKAR	**Makanchi Array**	**54.42**	**313**	P		**P**	**17 26 24.6**	**0.0**
	0.3nm,0.5s,mb2.9,baz=98,slow=7.2,SNR=2.1							
ARCES	**ARCESS Array B**	**78.64**	**341**	P		**P**	**17 28 56.9**	**0.0**
	0.6nm,0.4s,mb3.7,baz=71,slow=8.1,SNR=10							

*MOS **14** 17:18:43.0±1.3, 2302S×7007W, h33km, mb5.3/22, Error ellipse: s-maj=15.1km s-min=8.8km az=93.5*

*ISCJB **14** 17:18:44.3±0.2, 2316S±003×7003W±003, h46km, mb5.1/60, Error ellipse: s-maj=4.7km s-min=4.3km az=146.9*

*NEIC **14** 17:18:45.5, 2315S×7001W, h46km, mb5.1/47, After GUC.*

*IDC **14** 17:18:45.8±0.4, 2309S×7008W, h46km±3km, mb4.6/13, mb1 4.7/16, mb1mx4.6/18, mbtmp4.5/16, Error ellipse: s-maj=11.9km s-min=6.2km az=161.0*

*GUC **14** 17:18:45.4±1.0, 2316S×6998W, h46km±4km, ML5.0*

*BJI **14** 17:18:46.5, 2310S×7000W, h46km, mB4.9, Ms4.9, Msz4.9*

*DJA **14** 17:19:46, 2572S×6789W, h477km, mb4.9/4*

ISC 14 17:18:46.4±0.2, 2312S±003×6994W±003, h48km, h48km±.3km: pP-P, n483, σ0≤61/423, mb5.1/60, 158C-137D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PB06	**Plate Boundary**	**0.53**	**40**	⇓*iP*		**Pn**	**17 18 57.7**	**-0.2**
PB06				*i*S		**Sn**	**17 19 06.8**	**+0.7**
LVC	**Limon Verde**	**1.07**	**62**	P		**Pn**	**17 19 06.6**	**+1.6**
	2µm,0.3s,baz=249,slow=12,SNR=601							
LVC				S		**Sn**	**17 19 21.7**	**+2.8**
	2µm,0.3s,baz=234,slow=14,SNR=12							
LVC	**Limon Verde**	**1.07**	**62**	*e*P		**Pn**	**17 19 06.1**	**+1.0**
LVC				*e*S		**Sn**	**17 19 17.8**	**-1.1**
LVC	**Limon Verde**	**1.07**	**62**	⇓*iP*		**Pn**	**17 19 06.7**	**+1.6**
LVC				*i*S		**Sn**	**17 19 21.5**	**+2.7**
CPN1	**Cerro Paranal**	**1.56**	**196**	*e*P		**Pn**	**17 19 11.5**	**-0.2**
CPN1				*i*S		**Sn**	**17 19 31.8**	**+1.0**
CPN1				AML		AML	17 19 36.5	
	comp=E,34µm,0.8s							
SPCH	**San Pedro de A**	**1.62**	**83**	*e*P		**Pn**	**17 19 16.7**	**+4.3**
SPCH				*i*S		**Sn**	**17 19 38.4**	**+6.3**
PB01	**Plate Boundary**	**2.11**	**12**	*e*P		**Pn**	**17 19 18.8**	**-0.3**
PB01				*i*S		**Sn**	**17 19 44.6**	**+0.5**
PB01				AML		AML	17 19 48.8	
	comp=E,14µm,0.4s							
LCO	**Las Campanas**	**5.91**	**186**	*e*P		**Pn**	**17 20 08.7**	**-2.7**
	comp=E,253nm,0.6s							
ARE	**Arequipa**	**6.78**	**347**	⇓*iP*		**Pn**	**17 20 20.1**	**-3.2**
ARE				*e*S		**Sn**	**17 21 32.0**	**-7.2**
LPAZ	**La Paz**	**7.00**	**14**	P		**Pn**	**17 20 27.9**	**+1.4**
	comp=E,6.1nm,0.3s,baz=205,slow=6.6,SNR=90							
LPAZ	**La Paz**	**7.00**	**14**	*e*P		**Pn**	**17 20 27.4**	**+1.0**
	comp=E,0.8nm,0.5s							
LPAZ				*e*			17 20 34.3	
LPAZ	**La Paz**	**7.00**	**14**	*e*P		**Pn**	**17 20 27.4**	**+1.0**
LPAZ				pmax		pmax		
	comp=Z,1.0nm,0.5s							
CFAA	**Coronel Fontan**	**8.59**	**170**	P		**Pn**	**17 20 47.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=355,slow=15,SNR=17							
SIV	**San Ignacio**	**10.96**	**51**	P		**Pn**	**17 21 18.7**	**-1.9**
	comp=Z,5.4nm,0.3s,baz=248,slow=12,SNR=88							
PLCA	**Paso Flores**	**17.57**	**182**	P		**Pn**	**17 22 47.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=353,slow=12,SNR=11							
PLCA				PcP		PcP	17 27 26.3	+1.0
	comp=Z,0.1nm,0.3s,baz=329,slow=6.6,SNR=3.0							
ATAH	**Atahualpa**	**17.97**	**332**	P		**Pn**	**17 22 52.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=160,slow=15,SNR=3.7							
SPB	**Sao Paulo**	**20.67**	**96**	*e*P		**P**	**17 23 22.3**	**0.0**
BDFB	**Brasilia**	**21.96**	**74**	P		**P**	**17 23 35.2**	**-1.0**
	comp=Z,6.5nm,0.5s,mb4.3,baz=239,slow=17,SNR=16							
OTAV	**Otavalo**	**24.64**	**339**	*e*P		**P**	**17 24 03.1**	**+0.5**
	comp=Z,48nm,1.3s,mb4.9							
USHA	**Ushuaia**	**31.69**	**178**	P		**P**	**17 25 05.5**	**+0.3**
	comp=Z,4.9nm,0.5s,mb4.6,baz=338,slow=5.4,SNR=3.8							
RCBR	**Riachuelo**	**37.02**	**68**	*e*P		**P**	**17 25 51.5**	**-0.3**
	comp=Z,73nm,1.1s,mb5.4							
RCBR				*e*pP		pP	17 26 04.3	-0.3
VNA3	**Neumayer Olymp**	**58.86**	**161**	*e*P		**P**	**17 28 40.7**	**+0.9**
VNA3				*e*			17 28 47.6	
VNA3				*e*		pP	17 28 54.0	+0.8
VNA3				*e*			17 29 00.1	
VNA1	**Neumayer--Stat**	**59.09**	**160**	*e*P		**P**	**17 28 42.4**	**+1.0**
VNA1				*e*			17 28 49.1	
VNA1				*e*		pP	17 28 55.9	+1.1
VNA1				*e*			17 29 02.0	
VNA2	**Neumayer--Watz**	**59.45**	**160**	*e*P		**P**	**17 28 44.7**	**+0.8**
	baz=287,slow=9.4							
VNA2				*e*			17 28 50.8	
VNA2				*e*		pP	17 28 58.1	+0.8
VNA2				*e*			17 29 04.3	
JCT	**Junction City**	**60.51**	**330**	*e*P		**P**	**17 28 50.5**	**-1.1**
	comp=Z,23nm,0.8s,mb5.4							
JCT				*e*pP		pP	17 29 03.3	-1.8
JCT	**Junction City**	**60.51**	**330**	*e*P		**P**	**17 28 50.5**	**-1.1**
JCT				*e**PP		pP	17 29 03.3	-1.8
JCT				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.4							
SNAA	**Sanae**	**61.08**	**161**	*e*P		**P**	**17 28 53.7**	**-1.2**
SNAA				*e*			17 28 59.9	
SNAA				*e*		pP	17 29 07.7	-0.7
SNAA				*e*			17 29 13.5	
SNAA	**Sanae**	**61.08**	**161**	*e*P		**P**	**17 28 53.7**	**-1.2**
	comp=Z,67nm,1.1s,mb5.7							
SNAA				*e*pP		pP	17 29 07.2	-1.2
SNAA				*e*sP		sP	17 29 13.1	-0.8
SNAA	**Sanae**	**61.08**	**161**	*e*P		**P**	**17 28 53.7**	**-1.2**
SNAA				*e**PP		pP	17 29 07.2	-1.2
SNAA				pmax		pmax		
	comp=Z,67nm,1.1s							
TXAR	**Lajitas Array**	**61.42**	**326**	P		**P**	**17 28 57.0**	**-0.8**
	comp=Z,2.3nm,0.7s,mb4.4,baz=150,slow=8.2,SNR=29							
TXAR				pP		pP	17 29 10.1	-1.3
	comp=Z,1.6nm,0.6s,baz=149,slow=10,SNR=11							
MIAR	**Mount Ida**	**61.58**	**338**	*e*P		**P**	**17 28 57.1**	**-1.7**
	comp=Z,26nm,1.1s,mb5.3							
MIAR				*e*pP		pP	17 29 10.8	-1.5
MIAR	**Mount Ida**	**61.58**	**338**	*e*P		**P**	**17 28 57.1**	**-1.7**
MIAR				*e**PP		pP	17 29 10.8	-1.5
MIAR				pmax		pmax		
	comp=Z,26nm,1.1s,mb5.3							
SDMD	**Soldier's Deli**	**62.53**	**354**	*e*P		**P**	**17 29 04.4**	**-0.6**
	comp=Z,23nm,0.7s,mb5.4							
SDMD				*e*pP		pP	17 29 16.6	-2.0
CCM	**Cathedral Cave**	**64.06**	**341**	*e*P		**P**	**17 29 12.9**	**-2.3**
	comp=Z,14nm,0.8s,mb5.0							
CCM				*e*pP		pP	17 29 25.6	-3.2
CCM	**Cathedral Cave**	**64.06**	**341**	*e*P		**P**	**17 29 12.9**	**-2.2**
CCM				*e**PP		pP	17 29 25.6	-3.2
CCM				pmax		pmax		
	comp=Z,14nm,0.8s,mb5.0							
ACSO	**Alum Creek Sta**	**64.18**	**349**	*e*P		**P**	**17 29 13.6**	**-2.3**
	comp=Z,77nm,0.6s,mb5.9							
BRYW	**Bryant College**	**64.72**	**359**	*e*P		**P**	**17 29 18.9**	**-0.5**
	comp=Z,8.5nm,0.6s,mb5.0							
BRYW				*e*pP		pP	17 29 32.1	-1.0
MAIT	**Maitri**	**65.64**	**159**	*e*P		**P**	**17 29 23.5**	**-1.6**
MAIT				*e*pP		pP	17 29 36.7	-2.0
NVL	**N'lazarevskaya**	**65.67**	**159**	*e*P		pP	17 29 39.8	+0.8
NVL				pmax		pmax		
	comp=Z,73nm,1.2s,mb5.6							
319A	**Douglas**	**66.00**	**324**	⇓P		**P**	**17 29 28.3**	**+0.4**
	baz=86,SNR=6.4							
318A	**Bisbee**	**66.44**	**323**	⇓P		**P**	**17 29 30.8**	**+0.1**
	baz=67,SNR=11							
219A	**White Tail Can**	**66.46**	**324**	⇑P		**P**	**17 29 31.0**	**+0.1**
	baz=67,SNR=6.2							
BNM	**Barren Site**	**66.79**	**327**	*e*P		**P**	**17 29 33.1**	**+0.2**
MDV	**Middlebury**	**66.85**	**357**	*e*P		**P**	**17 29 32.1**	**-1.0**
218A	**Dragoon**	**66.87**	**323**	⇑P		**P**	**17 29 34.1**	**+0.6**
	baz=67,SNR=8.6							
LPM	**Los Pinos Moun**	**66.92**	**327**	*e*P		**P**	**17 29 34.1**	**+0.3**
LPM				*e*pP		pP	17 29 47.2	-0.2
LENM	**Lemitar**	**66.97**	**327**	*e*P		**P**	**17 29 33.8**	**-0.3**
119A	**Ashpeak Ranch,**	**67.08**	**325**	⇑P		**P**	**17 29 35.4**	**+0.6**
	baz=67							
QSPA	**South Pole Qui**	**67.08**	**180**	*e*P		**P**	**17 29 35.2**	**+1.0**
	comp=Z,37nm,0.6s,mb5.6							
QSPA				*e*pP		pP	17 29 47.8	0.0
217A	**Green Valley**	**67.15**	**323**	⇑P		**P**	**17 29 35.6**	**+0.3**
	baz=67,SNR=9.9							
LAZ	**Ladron**	**67.24**	**327**	*e*P		**P**	**17 29 36.1**	**+0.3**
LAZ				*e*pP		pP	17 29 49.6	+0.1
118A	**Homack Ranch,**	**67.34**	**324**	⇑P		**P**	**17 29 36.6**	**+0.2**
	baz=68,SNR=8.5							
ANMO	**Albuquerque**	**67.34**	**328**	*e*P		**P**	**17 29 36.4**	**0.0**
	comp=Z,8.7nm,1.1s,mb4.7							
ANMO				*e*pP		pP	17 29 49.3	-0.8
ANMO	**Albuquerque**	**67.34**	**328**	⇑*e*P		**P**	**17 29 36.8**	**+0.4**
Z19A	**T-Link Ranch,**	**67.47**	**325**	⇓P		**P**	**17 29 38.0**	**+0.8**
	baz=68							
TUC	**Tucson**	**67.53**	**323**	*e*P		**P**	**17 29 37.6**	**-0.1**
	comp=Z,36nm,2.0s,mb5.0							
TUC	**Tucson**	**67.53**	**323**	*e*P		**P**	**17 29 37.6**	**-0.1**
TUC				pmax		pmax		
	comp=Z,36nm,2.0s,mb5.1							
216A	**Three Points,**	**67.68**	**322**	⇓P		**P**	**17 29 38.9**	**+0.3**
	baz=68							
117A	**Oracle**	**67.71**	**323**	⇓P		**P**	**17 29 39.1**	**+0.3**
	baz=68,SNR=11							
Z18A	**Geronimo**	**67.72**	**324**	⇑P		**P**	**17 29 39.1**	**+0.3**
	baz=68							
Y19A	**Nutrioso**	**67.97**	**325**	⇑P		**P**	**17 29 41.6**	**+1.2**
	baz=68							
Z17A	**San Carlos Hig**	**68.11**	**324**	⇑P		**P**	**17 29 41.9**	**+0.6**
	baz=68							
116A	**Eloy**	**68.23**	**323**	⇑P		**P**	**17 29 42.5**	**+0.4**
	baz=68							
Y18A	**Canyon Day Jun**	**68.25**	**325**	⇓P		**P**	**17 29 42.4**	**+0.3**
	baz=68							
214A	**Organ Pipe Nat**	**68.41**	**322**	⇓P		**P**	**17 29 43.3**	**+0.1**
	baz=69,SNR=7.4							
Y17A	**Roosevelt**	**68.62**	**324**	⇑P		**P**	**17 29 44.9**	**+0.5**
	baz=69,SNR=12							
115A	**Sonoran Desert**	**68.63**	**322**	⇑P		**P**	**17 29 44.9**	**+0.3**
	baz=69							
X18A	**Snowflake**	**68.78**	**325**	⇓P		**P**	**17 29 45.8**	**+0.4**
	baz=69							
X17A	**Forest Lakes**	**69.09**	**325**	⇓P		**P**	**17 29 48.0**	**+0.6**
	baz=69							
Y16A	**Circle Bar Ran**	**69.10**	**324**	⇓P		**P**	**17 29 48.0**	**+0.5**
	baz=69							
W18A	**Petrified Fore**	**69.12**	**326**	⇓P		**P**	**17 29 47.7**	**+0.1**
	baz=69							
V19A	**Window Rock**	**69.23**	**327**	⇑P		**P**	**17 29 48.6**	**+0.3**
	baz=70,SNR=5.2							
X16A	**Lo Mia Camp, P**	**69.49**	**324**	⇑P		**P**	**17 29 50.4**	**+0.5**
	baz=70,SNR=7.3							
113A	**Mohawk Valley,**	**69.55**	**321**	⇓P		**P**	**17 29 50.3**	**0.0**
	baz=70							
W17A	**Winslow**	**69.60**	**325**	⇑P		**P**	**17 29 50.8**	**+0.2**
	baz=70							
Y15A	**Casa Rosa Ranc**	**69.62**	**323**	⇓P		**P**	**17 29 51.0**	**+0.3**
	baz=70,SNR=6.4							
V18A	**Ganado**	**69.69**	**326**	⇑P		**P**	**17 29 50.9**	**-0.1**
	baz=70							
LIC	**Lamto**	**69.75**	**74**	*e*P		**P**	**17 29 50.9**	**-1.1**
	comp=Z,54nm,1.1s,mb5.4							
TIC	**Toumodi**	**69.95**	**73**	*e*P		**P**	**17 29 52.4**	**-0.8**
	comp=Z,125nm,1.2s,mb5.7							
TIC	**Toumodi**	**69.95**	**73**	*e*P		**P**	**17 29 52.4**	**-0.8**
TIC				pmax		pmax		
	comp=Z,125nm,1.2s,mb5.7							
X15A	**Humboldt**	**69.97**	**324**	⇓P		**P**	**17 29 53.3**	**+0.5**
	baz=70,SNR=9.0							
Y14A	**Wickenburg**	**69.98**	**323**	⇑P		**P**	**17 29 53.3**	**+0.4**
	baz=70							
W16A	**Flagstaff**	**70.05**	**325**	⇑P		**P**	**17 29 53.8**	**+0.5**
	baz=70,SNR=6.7							
KIC	**Kosan Boka**	**70.07**	**74**	*e*P		**P**	**17 29 53.2**	**-0.7**
	comp=Z,182nm,1.0s,mb6.0							
DBIC	**Dimbokro**	**70.11**	**73**	P		**P**	**17 29 53.5**	**-0.7**
	comp=Z,18nm,0.6s,mb5.2,baz=222,slow=6.4,SNR=38							
DBIC				pP		pP	17 30 07.0	-0.9
	comp=Z,32nm,1.0s,baz=204,slow=6.4,SNR=10							
DBIC				sP		sP	17 30 12.3	-1.0
	comp=Z,23nm,0.7s,baz=224,slow=6.8,SNR=8.2							
MVCO	**Mesa Verde**	**70.14**	**328**	*e*P		**P**	**17 29 53.9**	**+0.2**
	comp=Z,9.0nm,0.7s,mb4.8							
MVCO	**Mesa Verde**	**70.14**	**328**	⇑P		**P**	**17 29 54.2**	**+0.5**
	baz=70							
U18A	**Rough Rock, Ch**	**70.20**	**327**	⇑P		**P**	**17 29 54.1**	**-0.1**
	baz=70							
WUAZ	**Wupatki**	**70.29**	**325**	*e*P		**P**	**17 29 55.3**	**+0.6**
	comp=Z,20nm,1.0s,mb5.0							
WUAZ				*e*pP		pP	17 30 08.8	+0.3
WUAZ	**Wupatki**	**70.29**	**325**	⇓P		**P**	**17 29 55.2**	**+0.5**
	baz=70							
X14A	**Yava**	**70.32**	**323**	⇑P		**P**	**17 29 55.3**	**+0.4**
	baz=70,SNR=5.8							
W15A	**Williams**	**70.51**	**324**	⇓P		**P**	**17 29 56.9**	**+0.8**
	baz=71							
U16A	**Tuba City**	**70.64**	**326**	⇑P		**P**	**17 29 57.2**	**+0.3**
	baz=71,SNR=7.4							
Y12C	**Blythe**	**70.70**	**322**	⇓P		**P**	**17 29 57.5**	**+0.2**
	baz=71							
U17A	**Shonto**	**70.75**	**326**	⇑P		**P**	**17 29 58.1**	**+0.6**
	baz=71,SNR=7.1							
T18A	**Mexican Hat**	**70.76**	**327**	⇓P		**P**	**17 29 57.6**	**0.0**
	baz=71,SNR=14							
DVTC	**Desert V Tower**	**70.84**	**320**	⇑P		**P**	**17 29 58.6**	**+0.5**
	baz=71							
SWSC	**Sam W. Stewart**	**70.86**	**320**	⇑P		**P**	**17 29 59.0**	**+0.7**
	baz=71							
S19A	**Harvey Farm, M**	**70.87**	**328**	⇑P		**P**	**17 29 58.1**	**-0.2**
	baz=71,SNR=5.3							
PDMCI	**Parker Dam,Lak**	**70.89**	**322**	⇑P		**P**	**17 29 58.5**	**+0.1**
	baz=71							
ECSD	**EROS,Sioux Fal**	**70.89**	**340**	*e*P		**P**	**17 29 56.6**	**-1.6**
	comp=Z,15nm,1.0s,mb4.9							
ECSD				*e*pP		pP	17 30 08.8	-3.1
ISCO	**Idaho Springs**	**70.89**	**332**	*e*P		**P**	**17 29 58.3**	**0.0**
	comp=Z,16nm,1.4s,mb4.8							
ISCO				*e*pP		pP	17 30 11.7	-0.4
ISCO	**Idaho Springs**	**70.89**	**332**	*e*P		**P**	**17 29 58.3**	**0.0**
ISCO				*e**PP		pP	17 30 11.7	-0.4
ISCO				pmax		pmax		
	comp=Z,16nm,1.4s,mb4.8							
PV01	**Paradox Valley**	**70.91**	**329**	*e*P		**P**	**17 29 58.9**	**+0.4**
PV01				*e*pP		pP	17 30 12.2	0.0
X13A	**Yucca**	**70.93**	**323**	⇓P		**P**	**17 29 58.7**	**+0.1**
	baz=71,SNR=8.4							
V15A	**Kaibab Nationa**	**70.94**	**325**	⇑P		**P**	**17 29 59.3**	**+0.6**
	baz=71,SNR=14							
W14A	**Seligman**	**70.97**	**324**	⇓P		**P**	**17 29 59.2**	**+0.3**
	baz=71							
T17A	**Navajo Res., N**	**71.12**	**326**	⇑P		**P**	**17 30 00.2**	**+0.4**
	baz=71							
BC3	**Big Chuckw Mtn**	**71.17**	**321**	⇓P		**P**	**17 30 00.1**	**0.0**
	baz=71,SNR=5.6							
MONP	**Monument Peak**	**71.19**	**320**	⇓P		**P**	**17 30 00.5**	**+0.2**
	baz=71							
S18A	**Hurst Farm, BI**	**71.25**	**327**	⇓P		**P**	**17 30 01.1**	**+0.6**
	baz=72,SNR=18							
V14A	**Boquillas Ranc**	**71.30**	**324**	⇑P		**P**	**17 30 01.3**	**+0.4**
	baz=72,SNR=15							
W13A	**Hualapai Mount**	**71.33**	**323**	⇓P		**P**	**17 30 01.1**	**+0.1**
	baz=72,SNR=9.6							
IRM	**Iron Mountain**	**71.36**	**322**	⇓P		**P**	**17 30 01.4**	**+0.2**
	baz=72,SNR=8.1							
R19A	**Curley Farm, L**	**71.36**	**328**	⇑P		**P**	**17 30 01.4**	**+0.2**
	baz=72							
U15A	**North Rim**	**71.46**	**325**	⇓P		**P**	**17 30 02.1**	**+0.3**
	baz=72,SNR=12							
T16A	**Glen Canyon Da**	**71.47**	**326**	⇓P		**P**	**17 30 02.3**	**+0.4**
	baz=72							
S17A	**Black Ridge (B**	**71.61**	**327**	⇑P		**P**	**17 30 02.9**	**+0.2**
	baz=72,SNR=7.4							
PFO	**Pinyon Flat Ob**	**71.72**	**320**	⇑P		**P**	**17 30 03.4**	**0.0**
	baz=72							
BELC	**Belle Mtn.**	**71.73**	**321**	⇓P		**P**	**17 30 03.8**	**+0.3**
	baz=72							
R18A	**Canyonlands Na**	**71.75**	**328**	⇓P		**P**	**17 30 03.2**	**-0.3**
	baz=72,SNR=6.1							
Q19A	**Hogan Spring (**	**71.89**	**329**	⇓P		**P**	**17 30 04.4**	**0.0**
	baz=72,SNR=6.0							
V13A	**Grand Canyon W**	**71.94**	**324**	⇓P		**P**	**17 30 04.9**	**+0.1**
	baz=72,SNR=9.6							
T15A	**Red Dirt Ranch**	**71.95**	**325**	⇑P		**P**	**17 30 05.2**	**+0.4**
	baz=72,SNR=6.1							
S16A	**Weppner Ranch,**	**72.08**	**326**	⇓P		**P**	**17 30 05.4**	**-0.1**
	baz=72							
GMRC	**Granite Mounta**	**72.09**	**322**	⇓P		**P**	**17 30 06.1**	**+0.4**
	baz=72,SNR=11							
R17A	**Hanksville Air**	**72.17**	**327**	⇑P		**P**	**17 30 06.2**	**+0.1**
	baz=72,SNR=13							
P19A	**Cripple Cowboy**	**72.29**	**329**	⇑P		**P**	**17 30 07.1**	**+0.4**
	baz=73,SNR=18							
T14A	**Hurricane**	**72.36**	**325**	⇑P		**P**	**17 30 07.6**	**+0.4**
	baz=73							
Q18A	**Rafter H Ranch**	**72.42**	**328**	⇓P		**P**	**17 30 07.5**	**0.0**
	baz=73,SNR=5.6							
HEC	**Hector,Ludlow**	**72.52**	**321**	⇓P		**P**	**17 30 08.6**	**+0.4**
	baz=73,SNR=6.4							
SRU	**San Rafael**	**72.62**	**328**	⇓P		**P**	**17 30 08.7**	**0.0**
	baz=73,SNR=17							
U12A	**Valley of Fire**	**72.67**	**324**	⇑P		**P**	**17 30 09.6**	**+0.5**
	baz=73							
TUQ	**Turquoise Moun**	**72.72**	**322**	⇑P		**P**	**17 30 09.4**	**0.0**
	baz=73							
T13A	**Saint George**	**72.76**	**324**	⇑P		**P**	**17 30 09.9**	**+0.3**
	baz=73							
Q16A	**Castle Valley**	**72.79**	**327**	⇓P		**P**	**17 30 10.1**	**+0.4**
	baz=73							
BFSC	**Mount Baldy St**	**72.87**	**320**	⇑P		**P**	**17 30 10.6**	**+0.3**
	baz=73							
O19A	**Miners Draw (B**	**72.88**	**330**	⇑P		**P**	**17 30 10.4**	**+0.1**
	baz=73,SNR=6.6							
P18A	**Preston Nutter**	**72.89**	**328**	⇓P		**P**	**17 30 11.0**	**+0.7**
	baz=73,SNR=10.0							
MSU	**Marysvale**	**72.98**	**327**	*e*P		**P**	**17 30 11.7**	**+0.8**
MSU				*e*pP		pP	17 30 25.2	+0.5
P17A	**Butcher Ranch,**	**73.00**	**328**	⇓P		**P**	**17 30 11.2**	**+0.2**
	baz=73,SNR=5.1							
S13A	**Holt Ranch, En**	**73.15**	**325**	⇓P		**P**	**17 30 12.4**	**+0.5**
	baz=73							
SHOC	**Shoshone**	**73.25**	**322**	⇓P		**P**	**17 30 12.5**	**0.0**
	baz=74							
O18A	**Roosevelt**	**73.27**	**329**	⇑P		**P**	**17 30 12.8**	**+0.2**
	baz=74							
L21A	**Rawlins**	**73.43**	**332**	⇑P		**P**	**17 30 13.0**	**-0.4**
	baz=74,SNR=12							
EDW2	**Edwards Air Fo**	**73.51**	**320**	⇓P		**P**	**17 30 13.7**	**-0.4**
	baz=74							
O17A	**Robinson Place**	**73.56**	**329**	⇓P		**P**	**17 30 14.6**	**+0.3**
	baz=74,SNR=16							
T11A	**Corn Creek, Al**	**73.63**	**324**	⇓P		**P**	**17 30 15.3**	**+0.5**
	baz=74,SNR=11							
R13A	**O'Grain Ranch,**	**73.66**	**325**	⇑P		**P**	**17 30 15.5**	**+0.6**
	baz=74							
N18A	**Larsen Ranch,**	**73.67**	**330**	⇓P		**P**	**17 30 15.1**	**+0.2**
	baz=74							
LRMC	**Laurel Mountai**	**73.76**	**321**	⇑P		**P**	**17 30 15.6**	**+0.1**
	baz=74							
RSSD	**Black Hills**	**73.84**	**335**	*e*P		**P**	**17 30 15.4**	**-0.4**
	comp=Z,12nm,1.0s,mb4.8							
RSSD				*e*pP		pP	17 30 29.0	-0.6
RSSD	**Black Hills**	**73.84**	**335**	*e*P		**P**	**17 30 15.4**	**-0.4**
RSSD				*e**PP		pP	17 30 29.0	-0.7
RSSD				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.8							
L20A	**Wamsutter**	**73.89**	**331**	⇑P		**P**	**17 30 16.2**	**+

M13A **Montello** 76.13 327 ⇓P P 17 30 29.0 -0.1
baz=76
U04C **Hernandez Rese** 76.18 320 ⇑P P 17 30 29.5 0.0
baz=76
NVAR **Mina Array Bea** 76.18 323 P P 17 30 29.8 +0.3
comp=Z,4.3nm,0.8s,mb4.4,baz=148,slow=6.4,SNR=24
NVAR pP pP 17 30 43.2 -0.2
comp=Z,4.3nm,1.0s,baz=137,slow=7.1,SNR=6.3
NVAR **Mina Array Bea** 76.18 323 P P 17 30 29.8 +0.3
NVAR pP pP 17 30 43.2 -0.2
L14A **Malta** 76.19 328 ⇑P P 17 30 29.1 -0.3
baz=76,SNR=5.3
N12A **Clover Valley,** 76.19 326 ⇓P P 17 30 29.4 0.0
baz=76
ELK **Elko** 76.22 326 *e*P P 17 30 29.5 -0.1
comp=Z,5.0nm,0.9s,mb4.4
ELK *e*pP pP 17 30 42.9 -0.6
ELK **Elko** 76.22 326 *e*P P 17 30 29.5 -0.1
ELK e*PP pP 17 30 42.9 -0.6
ELK pmax pmax
comp=Z,5.0nm,0.9s
Q08A **Gabbs** 76.28 323 ⇓P P 17 30 30.0 0.0
baz=76
K15A **Arbon** 76.34 329 ⇓P P 17 30 30.2 0.0
baz=77
J16A **Bone** 76.37 330 ⇓P P 17 30 30.5 +0.1
baz=77
I17A **Pilgram Creek** 76.41 331 ⇓P P 17 30 31.0 +0.4
baz=77,SNR=9.6
K14A **Jones Ranch, D** 76.54 329 ⇓P P 17 30 31.4 0.0
baz=77
M12A **Wells** 76.55 327 ⇑P P 17 30 31.3 -0.1
baz=77,SNR=6.0
L13A **Double Diamond** 76.57 328 ⇓P P 17 30 31.6 0.0
baz=77,SNR=6.6
ULM **Lac du Bonnet** 76.57 343 P P 17 30 29.4 -1.9
comp=Z,7.2nm,0.6s,mb4.8,baz=164,slow=5.3,SNR=5.6
ULM pP pP 17 30 43.0 -2.3
comp=Z,9.6nm,0.5s,baz=137,slow=4.6,SNR=4.1
ULM **Lac du Bonnet** 76.57 343 P P 17 30 29.4 -1.9
ULM pP pP 17 30 43.0 -2.3
S05C **Merced** 76.58 321 ⇓P P 17 30 32.4 +0.6
baz=77
RLMT **Red Lodge** 76.79 333 *e*P P 17 30 32.7 -0.1
comp=Z,8.7nm,1.0s,mb4.6
RLMT *e*pP pP 17 30 46.0 -0.6
RLMT **Red Lodge** 76.79 333 ⇓P P 17 30 32.9 +0.2
baz=77
O09A **Fish Creek Ran** 76.82 325 ⇑P P 17 30 33.0 0.0
baz=77
J15A **Blackfoot** 76.85 330 ⇑P P 17 30 33.1 0.0
baz=77,SNR=8.7
R06C **Coleville** 76.89 322 ⇑P P 17 30 34.2 +0.7
baz=77
P08A **Dixie Valley** 76.96 324 ⇓P P 17 30 34.1 +0.4
baz=77
M11A **Holland Ranch,** 77.00 326 ⇑P P 17 30 34.0 0.0
baz=77
G18A **Lazy EL Ranch,** 77.07 333 ⇑P P 17 30 34.1 -0.2
baz=77,SNR=8.9
L12A **House Creek Ra** 77.14 327 ⇓P P 17 30 34.8 +0.1
baz=77
J14A **Carey** 77.30 329 ⇑P P 17 30 35.9 +0.2
baz=78,SNR=6.6
H16A **Russell Place,** 77.32 331 ⇑P P 17 30 36.0 +0.3
baz=78,SNR=7.4
K12A **Draper Farm, C** 77.45 328 ⇑P P 17 30 36.7 +0.2
baz=78,SNR=9.5
GCMT **Greycliff** 77.49 333 *e*P P 17 30 36.4 -0.3
GCMT *e*pP pP 17 30 48.4 -2.2
QLMT **Earthquake Lak** 77.50 331 *e*P P 17 30 37.3 +0.6
QLMT *e*pP pP 17 30 50.8 +0.1
L11A **Cat Creek Ranc** 77.53 327 ⇓P P 17 30 37.0 +0.1
baz=78,SNR=5.4
R04C **Big Horse Ranc** 77.56 321 ⇑P P 17 30 37.7 +0.5
baz=78
DGMT **Dagmar** 77.58 337 *e*P P 17 30 36.9 -0.1
DGMT **Dagmar** 77.58 337 ⇓P P 17 30 37.0 -0.1
baz=78
G17A **Pierce Place,** 77.58 332 ⇑P P 17 30 37.4 +0.3
baz=78
WCN **Washoe City** 77.60 323 ⇓P P 17 30 37.5 +0.1
baz=78
F18A **Big Timber** 77.61 333 ⇑P P 17 30 37.0 -0.2
baz=78,SNR=13
J13A **Cove Ranch, Pi** 77.67 329 ⇓P P 17 30 37.7 +0.1
baz=78
O07A **Toulon** 77.72 324 ⇑P P 17 30 37.9 -0.2
baz=78,SNR=5.1
I14A **Mackay** 77.73 329 ⇓P P 17 30 38.3 +0.3
baz=78,SNR=8.3
LAVA **Lava Cap Winer** 77.78 322 ⇑P P 17 30 38.4 0.0
baz=78
L10A **Juniper Basin** 77.82 326 ⇓P P 17 30 38.7 +0.1
baz=78,SNR=24
H15A **Lima** 77.88 330 ⇓P P 17 30 39.2 +0.4
baz=78
HLID **Hailey** 77.91 329 *e*P P 17 30 39.2 +0.2
comp=Z,30nm,1.4s,mb5.0
HLID *e*pP pP 17 30 52.9 -0.1
HLID **Hailey** 77.91 329 ⇓P P 17 30 39.1 +0.1
baz=78,SNR=16
G16A **Moss Hill, Enn** 77.98 331 ⇓P P 17 30 39.3 0.0
baz=78
J12A **Stokes Ranch,** 78.00 328 ⇓P P 17 30 39.5 0.0
baz=78,SNR=11
F17A **Fitzpatrick Pl** 78.01 332 ⇑P P 17 30 39.6 +0.1
baz=78,SNR=8.5
I13A **Wildhorse Cree** 78.03 329 ⇑P P 17 30 39.9 +0.2
baz=78,SNR=8.1
K11A **Parker Ranch,** 78.11 327 ⇓P P 17 30 40.0 -0.2
baz=78,SNR=6.1
MCMT **McKenzie Canyo** 78.14 330 *e*P P 17 30 40.6 +0.4
MCMT *e*pP pP 17 30 54.0 -0.2
N07B **Gerlach** 78.20 324 ⇑P P 17 30 40.4 -0.3
baz=78,SNR=12
H14A **Leadore** 78.21 330 ⇑P P 17 30 41.0 +0.3
baz=78,SNR=6.9
E18A **Harlowton** 78.22 333 ⇑P P 17 30 40.5 -0.1
baz=78
BOZ **Bozeman (W)** 78.22 332 ⇓P P 17 30 40.3 -0.4
baz=78
G15A **Dillon** 78.23 331 ⇑P P 17 30 40.8 0.0
baz=78
BEKR **Beckwourth** 78.33 323 ⇓P P 17 30 41.6 +0.2
baz=79,SNR=8.6
M08A **Happy Creek Ra** 78.36 325 ⇓P P 17 30 42.0 +0.4
baz=79
I12A **Atlanta** 78.43 328 ⇑P P 17 30 42.3 +0.4
baz=79,SNR=11
MFID **Camas Ranch** 78.48 328 ⇑P P 17 30 42.4 +0.2
baz=79,SNR=5.5
CVS **Carmenet Viney** 78.50 320 ⇑P P 17 30 42.7 +0.3
baz=79
E17A **Martinsdale** 78.53 332 ⇑P P 17 30 42.6 +0.3
baz=79
K10A **MacKenzie Ranc** 78.54 327 ⇓P P 17 30 42.2 -0.3
baz=79,SNR=12
H13A **Challis** 78.58 329 ⇑P P 17 30 43.0 +0.3
baz=79,SNR=16
N06A **Buffalo Meadow** 78.65 324 ⇓P P 17 30 43.1 -0.1
baz=79,SNR=9.9
NSHM **Saint Helena R** 78.70 321 *e*P P 17 30 43.3 -0.2
O05C **Quincy** 78.71 322 ⇓P P 17 30 43.4 -0.1
baz=79
F15A **Butte** 78.76 331 ⇓P P 17 30 43.6 -0.1
baz=79,SNR=8.4
ORV **Oroville** 78.76 322 ⇑P P 17 30 43.7 -0.1
baz=79,SNR=9.6
TORD **Torodi Ar. Bea** 78.79 70 P P 17 30 43.8 -0.8
comp=Z,40nm,0.8s,mb5.4,baz=254,slow=5.1,SNR=172
TORD pP pP 17 30 57.3 -1.2
comp=Z,26nm,0.9s,baz=252,slow=4.0,SNR=11
H12A **Diamond D Ranc** 78.86 329 ⇑P P 17 30 44.3 0.0
baz=79,SNR=7.3
L08A **Fields** 78.87 325 ⇑P P 17 30 43.8 -0.6
baz=79,SNR=7.7
K09A **Rome** 78.92 326 ⇓P P 17 30 44.5 -0.1
baz=79,SNR=7.0
E16A **East Helena** 78.94 332 ⇓P P 17 30 44.7 +0.1
baz=79
G13A **Cobalt** 78.97 330 ⇑P P 17 30 45.0 +0.2
baz=79,SNR=47
D17A **Six Diamond Ra** 79.00 333 ⇓P P 17 30 44.7 -0.3
baz=79,SNR=9.8
O04C **Chester** 79.05 323 ⇓P P 17 30 45.3 -0.1
baz=79

F14A **Wisdom** 79.13 331 ⇑P P 17 30 46.1 +0.4
baz=79,SNR=7.0
HRY **Holter Researc** 79.14 332 *e*P P 17 30 45.9 +0.1
HRY *e*pP pP 17 30 59.2 -0.5
D16A **Dana Ranch, Ca** 79.27 332 ⇑P P 17 30 46.6 +0.2
baz=80,SNR=10.0
L07A **Adell** 79.27 325 ⇑P P 17 30 46.7 +0.1
baz=80,SNR=8.3
E15A **Deer Lodge** 79.27 331 ⇓P P 17 30 46.5 0.0
baz=80,SNR=7.2
EGMT **Eagleton** 79.31 334 *e*P P 17 30 45.9 -0.7
comp=Z,3.8nm,0.7s,mb4.4
EGMT *e*pP pP 17 30 59.3 -1.3
EGMT **Eagleton** 79.31 334 ⇑P P 17 30 46.2 -0.4
baz=80
J09A **Fry Pan Ranch,** 79.39 327 ⇑P P 17 30 47.1 -0.1
baz=80
C17A **Wharram Farm,** 79.42 333 ⇑P P 17 30 46.7 -0.5
baz=80,SNR=5.4
GASB **Alder Springs** 79.52 321 ⇑P P 17 30 48.2 +0.3
baz=80
H11A **Donnelly** 79.52 329 ⇑P P 17 30 47.7 -0.1
baz=80
F13A **Darby** 79.55 330 ⇑P P 17 30 48.0 0.0
baz=80,SNR=37
E14A **Clinton** 79.64 331 ⇑P P 17 30 48.7 +0.3
baz=80,SNR=5.1
K07A **Rock Creek Ran** 79.70 325 ⇓P P 17 30 48.8 0.0
baz=80
D15A **Lincoln** 79.70 332 ⇓P P 17 30 48.8 0.0
baz=80,SNR=5.5
MOD **Modoc** 79.71 324 ⇑P P 17 30 48.9 0.0
baz=80,SNR=5.2
J08A **Circle Bar Ran** 79.77 326 ⇑P P 17 30 49.3 +0.1
baz=80
H10A **Noah's Angus R** 79.80 328 ⇓P P 17 30 49.2 -0.2
baz=80,SNR=8.3
I09A **Lost Marbles R** 79.84 327 ⇑P P 17 30 49.7 +0.1
baz=80,SNR=7.0
F12A **Elk City** 79.95 330 ⇑P P 17 30 50.3 +0.2
baz=80
C16A **Fuhringer Ranc** 79.96 333 ⇓P P 17 30 49.9 -0.2
baz=80,SNR=7.9
E13A **Victor** 79.97 331 ⇓P P 17 30 50.2 0.0
baz=80,SNR=7.2
WDC **Whiskeytown Da** 80.04 322 ⇓P P 17 30 49.5 -1.3
baz=80,SNR=5.6
D14A **Greenough** 80.16 331 ⇑P P 17 30 51.2 -0.1
baz=80
G11A **Walters Elk Ra** 80.16 329 ⇓P P 17 30 51.4 +0.1
baz=80,SNR=18
J07A **Hines** 80.21 326 ⇓P P 17 30 51.8 +0.2
baz=80,SNR=5.3
I08A **Drewsey** 80.21 327 ⇑P P 17 30 51.5 -0.1
baz=80,SNR=5.7
BMO **Blue Mountains** 80.26 328 *e*P P 17 30 51.0 -0.9
comp=Z,36nm,1.4s,mb5.1
BMO *e*pP pP 17 31 04.0 -1.8
BMO **Blue Mountains** 80.26 328 *e*P P 17 30 51.0 -0.8
BMO e*PP pP 17 31 04.0 -1.8
BMO pmax pmax
comp=Z,36nm,1.4s,mb5.1
C15A **Salmond Ranch,** 80.30 332 ⇑P P 17 30 52.2 +0.2
baz=81,SNR=12
B16A **M & M Farms, S** 80.42 333 ⇓P P 17 30 52.4 -0.2
baz=81
F11A **Grangeville** 80.47 329 ⇑P P 17 30 52.5 -0.4
baz=81,SNR=8.3
G10A **Bishop Farm, J** 80.49 328 ⇓P P 17 30 53.5 +0.4
baz=81,SNR=17
TSUM **Tsumeb** 80.49 107 *e*P P 17 30 53.8 0.0
comp=Z,27nm,1.1s,mb5.1
TSUM *e*pP pP 17 31 07.4 -0.3
J06A **Christmas Vall** 80.56 325 ⇓P P 17 30 53.1 -0.5
baz=81,SNR=9.3
E12A **Beaver Dam Sad** 80.59 330 ⇑P P 17 30 52.9 -0.7
baz=81,SNR=6.2
D13A **Huson** 80.59 331 ⇑P P 17 30 53.5 0.0
baz=81,SNR=14
K05A **Summer Lake** 80.59 325 ⇓P P 17 30 54.2 +0.5
baz=81,SNR=9.8
N02C **Big Bar** 80.64 322 ⇑P P 17 30 54.0 0.0
baz=81,SNR=12
H08A **Prairie City** 80.70 327 ⇓P P 17 30 53.7 -0.4
baz=81
B15A **Bradely Ranch,** 80.70 333 ⇑P P 17 30 53.5 -0.7
baz=81,SNR=10
A16A **West Butte Ran** 80.80 334 ⇑P P 17 30 54.3 -0.3
baz=81,SNR=24
G09A **Cove** 80.80 328 ⇓P P 17 30 54.8 0.0
baz=81,SNR=21
I07A **Izee** 80.81 326 ⇓P P 17 30 55.1 +0.3
baz=81,SNR=8.9
E11A **Bogner Ranch,** 80.84 330 ⇓P P 17 30 54.4 -0.5
baz=81
YBH **Yreka Blue Hor** 80.91 323 ⇑P P 17 30 54.2 -1.2
baz=81,SNR=5.3
F10A **Beach Ranch, E** 81.04 329 ⇑P P 17 30 55.6 -0.3
baz=81,SNR=9.6
B14A **Marquette Ranc** 81.04 332 ⇓P P 17 30 55.5 -0.4
baz=81,SNR=5.1
I06A **Prineville** 81.08 326 ⇑P P 17 30 56.4 +0.1
baz=81,SNR=8.3
C13A **Hot Springs** 81.08 331 ⇑P P 17 30 55.7 -0.4
baz=81,SNR=7.0
F09A **S2 Ranch, Elgi** 81.17 328 ⇑P P 17 30 56.6 -0.1
baz=81
H07A **Lands Inn, Kim** 81.20 327 ⇑P P 17 30 56.8 -0.1
baz=81
A15A **Johnson Ranch,** 81.29 333 ⇑P P 17 30 56.5 -0.7
baz=82
E10A **Myers Farm, Un** 81.36 329 ⇑P P 17 30 57.5 -0.1
baz=82
G08A **Pilot Rock** 81.39 327 ⇓P P 17 30 57.5 -0.4
baz=82,SNR=8.5
D11A **Klaveano Farm,** 81.41 330 ⇓P P 17 30 57.2 -0.7
baz=82
LNOR **Lincton Mounta** 81.47 328 P P 17 30 56.4 -1.9
B13A **Whitefish** 81.56 332 ⇑P P 17 30 58.4 -0.3
baz=82,SNR=6.8
A14A **Double T Ranch** 81.57 333 ⇓P P 17 30 58.2 -0.5
baz=82
HUMO **Hull Mountain** 81.63 323 ⇑P P 17 30 58.1 -1.1
baz=82
F08A **Pendleton** 81.66 328 ⇓P P 17 30 59.2 -0.1
baz=82
L02A **Cave Junction** 81.68 323 ⇓P P 17 30 59.4 -0.1
baz=82
H06A **Lindquist Farm** 81.69 326 ⇑P P 17 30 59.9 +0.5
baz=82,SNR=7.4
G07A **Ruggs Ranch, H** 81.73 327 ⇓P P 17 30 59.5 -0.1
baz=82,SNR=8.8
I05A **Bend** 81.78 325 ⇑P P 17 31 00.1 +0.1
baz=82
D10A **Wagner Farm, O** 81.85 329 ⇑P P 17 30 59.7 -0.5
baz=82,SNR=7.3
E09A **Wood Farm, Sta** 81.87 329 ⇑P P 17 30 59.4 -1.0
baz=82
C11A **Tepee Creek (N** 81.96 331 ⇑P P 17 31 00.5 -0.3
baz=82,SNR=13
K02A **Glendale** 82.03 323 ⇑P P 17 31 01.5 +0.3
baz=82
H05A **Madras** 82.09 326 ⇓P P 17 31 01.9 +0.4
baz=82
G06A **Carlson Farm,** 82.19 327 ⇑P P 17 31 02.2 +0.1
baz=82
D09A **Jones Farm, Ri** 82.34 329 ⇑P P 17 31 02.5 -0.3
baz=83
C10A **Spilker Farm,** 82.42 330 ⇓P P 17 31 02.8 -0.4
baz=83
B11A **Sandpoint** 82.45 331 ⇓P P 17 31 02.7 -0.7
baz=83
HAWA **Hanford** 82.45 328 *e*P P 17 31 03.0 -0.4
comp=Z,12nm,1.0s,mb4.8
HAWA *e*pP pP 17 31 16.8 -0.7
J02A **Umpqua** 82.47 324 ⇑P P 17 31 03.6 0.0
baz=83
RSW **Rattlesnake Hi** 82.48 328 *e*P P 17 31 03.2 -0.4
RSW *e*pP pP 17 31 17.1 -0.6
A12A **Yaak River Ran** 82.50 332 ⇓P P 17 31 03.6 0.0
baz=83,SNR=11
K01A **Sixes** 82.60 323 ⇑P P 17 31 04.0 -0.3
baz=83
H04A **Detroit Lake** 82.61 325 ⇓P P 17 31 03.5 -0.8
baz=83
D08A **Wollman Farm,** 82.63 329 ⇓P P 17 31 03.5 -0.8
baz=83
F06A **Goldendale** 82.64 327 ⇑P P 17 31 03.9 -0.5
baz=83

NEW **Newport** 82.66 330 P P 17 31 03.0 -1.5
comp=Z,2.3nm,0.6s,mb4.4
NEW **Newport** 82.66 330 P P 17 31 03.0 -1.5
NEW pmax pmax
comp=Z,2.0nm,0.6s
I03A **Eugene** 82.71 324 ⇑P P 17 31 04.4 -0.4
baz=83
OD2 **Odessa Site #2** 82.77 329 *e*P P 17 31 04.4 -0.6
OD2 *e*pP pP 17 31 18.1 -1.0
A11A **Hall Mountain,** 82.83 331 ⇑P P 17 31 04.8 -0.5
baz=83,SNR=13
C09A **Chrisman Ranch** 82.86 329 ⇓P P 17 31 05.1 -0.4
baz=83,SNR=5.1
MAW **Mawson** 83.06 164 P P 17 31 06.9 +0.5
comp=Z,11nm,0.6s,mb5.0,baz=206,slow=6.3,SNR=31
MAW pP pP 17 31 20.6 +0.1
comp=Z,29nm,1.0s,baz=228,slow=6.8,SNR=15
G04A **Mulino** 83.12 326 ⇓P P 17 31 06.4 -0.6
baz=83
H03A **Soap Creek Ran** 83.19 325 ⇓P P 17 31 07.1 -0.2
baz=83
D07A **Quincy** 83.23 328 ⇑P P 17 31 07.0 -0.4
baz=84
B09A **Rice** 83.25 330 ⇑P P 17 31 06.7 -0.8
baz=84
E06A **Yakima** 83.27 327 ⇑P P 17 31 07.4 -0.3
baz=84
A10A **Northport** 83.39 331 ⇑P P 17 31 07.7 -0.5
baz=84
BOSA **Boshof** 83.53 118 P P 17 31 09.6 0.0
comp=Z,24nm,0.8s,mb5.4,baz=259,slow=3.9,SNR=35
BOSA pP pP 17 31 23.6 -0.1
comp=Z,15nm,0.5s,baz=254,slow=4.0,SNR=11
G03A **Yamhill** 83.61 325 ⇓P P 17 31 09.2 -0.2
baz=84
C07A **Waterville** 83.63 329 ⇑P P 17 31 09.0 -0.5
baz=84,SNR=5.4
ETW **Entiat** 83.70 328 *e*P P 17 31 09.3 -0.5
ETW *e*pP pP 17 31 22.7 -1.2
B08A **Colville Reser** 83.75 329 ⇑P P 17 31 09.4 -0.7
baz=84
A09A **Danville** 83.85 330 ⇑P P 17 31 09.8 -0.7
baz=84
A08A **Turner Farm, O** 84.15 330 ⇑P P 17 31 11.5 -0.6
baz=84,SNR=8.5
EGRO **El Granado** 84.17 45 P P 17 31 13.8 +1.4
comp=Z,16nm,0.9s,mb5.1
B07A **Winthrop** 84.20 329 ⇓P P 17 31 11.7 -0.6
baz=84
A07A **Ashnola River,** 84.73 329 ⇑P P 17 31 14.5 -0.5
baz=85,SNR=7.3
EDM **Edmonton** 84.82 335 *e*P P 17 31 13.1 -2.3
EDM *e*pP pP 17 31 27.3 -2.2
EMIN **Mina Concepcio** 84.83 45 P P 17 31 16.9 +1.0
comp=Z,22nm,0.7s,mb5.4
ESPR **Espera** 84.87 46 P P 17 31 16.6 +0.6
comp=Z,31nm,0.9s,mb5.4
B06A **Marblemount** 84.89 328 ⇓P P 17 31 14.7 -1.1
baz=85
EJIF **Jimena Fronter** 84.89 47 P P 17 31 17.4 +1.2
comp=Z,23nm,0.8s,mb5.4
EJIF **Jimena Fronter** 84.89 47 P P 17 31 17.4 +1.2
EJIF pmax pmax
comp=Z,23nm,0.8s,mb5.4
EBAD **Badajoz** 85.17 44 P P 17 31 18.3 +0.8
comp=Z,21nm,0.9s,mb5.3
EMIJ **Mijas** 85.43 47 P P 17 31 19.3 +0.5
comp=Z,28nm,1.0s,mb5.3
ECAB **El Cabril** 85.82 46 P P 17 31 22.5 +1.7
comp=Z,4.0nm,0.6s,mb4.8
ELOJ **Sierra Loja** 86.16 47 P P 17 31 23.5 +1.0
comp=Z,28nm,1.0s,mb5.4
ELOJ **Sierra Loja** 86.16 47 P P 17 31 23.5 +1.0
ELOJ pmax pmax
comp=Z,28nm,1.0s,mb5.5
ELUQ **Luque** 86.31 47 P P 17 31 22.5 -0.7
comp=Z,66nm,1.1s,mb5.8
ELUQ **Luque** 86.31 47 P P 17 31 22.5 -0.7
ELUQ pmax pmax
comp=Z,66nm,1.1s,mb5.8
TAM **Tamanrasset** 86.39 64 *e*P P 17 31 24.0 +0.1
TAM *e*pP pP 17 31 38.0 -0.1
EADA **Adamuz** 86.43 46 P P 17 31 24.1 +0.3
comp=Z,20nm,0.8s,mb5.4
EPLA **Plasencia** 86.50 44 P P 17 31 26.3 +2.3
comp=Z,5.5nm,0.5s,mb5.0
EPLA **Plasencia** 86.50 44 P P 17 31 26.3 +2.2
EPLA pmax pmax
comp=Z,6.0nm,0.5s,mb5.1
ECOG **Cogollos-Vega** 86.62 47 P P 17 31 24.6 -0.1
comp=Z,4.0nm,0.4s,mb5.0
ECOG **Cogollos-Vega** 86.62 47 P P 17 31 24.6 -0.1
ECOG pmax pmax
comp=Z,4.0nm,0.4s,mb5.0
EBAN **Banos Encina** 86.95 46 P P 17 31 27.0 +0.6
comp=Z,19nm,0.9s,mb5.3
EBAN **Banos Encina** 86.95 46 P P 17 31 27.0 +0.7
EBAN pmax pmax
comp=Z,19nm,0.9s,mb5.3
ECAL **Calabor** 87.15 42 P P 17 31 27.6 +0.4
EQES **Quesada** 87.24 47 P P 17 31 26.9 -0.8
comp=Z,12nm,1.1s,mb5.1
EHUE **Huescar** 87.56 47 P P 17 31 28.3 -1.0
ESDC **Sonseca Array** 87.65 45 P P 17 31 29.4 -0.3
comp=Z,3.2nm,0.8s,mb4.6,baz=252,slow=4.0,SNR=13
ESDC **Sonseca Array** 87.65 45 P P 17 31 28.3 -1.4
comp=Z,2.9nm,0.8s,mb4.6
ETOB **Tobarra** 88.70 47 P P 17 31 34.7 0.0
comp=Z,15nm,0.9s,mb5.3
ECHE **Chera** 89.57 46 P P 17 31 39.5 +0.7
comp=Z,7.4nm,0.7s,mb5.1
ECHE **Chera** 89.57 46 P P 17 31 39.5 +0.8
ECHE pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
YKA **Yellowknife Ar** 92.39 341 P P 17 31 49.7 -1.5
comp=Z,5.9nm,0.7s,mb5.1,baz=140,slow=4.3,SNR=37
YKA pP pP 17 32 03.6 -1.8
comp=Z,14nm,0.7s,baz=138,slow=4.3,SNR=35
YKA **Yellowknife Ar** 92.39 341 P P 17 31 49.7 -1.5
YKA *PP pP 17 32 03.6 -1.9
KEST **Kesra** 95.03 53 P P 17 32 05.7 +1.6
comp=Z,2.2nm,0.9s,mb4.6,baz=262,slow=2.7,SNR=3.8
KEST PKKP PKKPbc 17 48 57.5 -2.2
comp=Z,1.9nm,0.8s,baz=264,slow=7.6,SNR=3.8
WLF **Walferdange** 98.80 40 P P 17 32 20.8 0.0
CLL **Collm** 103.47 40 *e*Pdif Pdif 17 32 37.0 -4.7
OBN **Obninsk** 118.02 39 *i*PKIKP PKPdf 17 37 25.9 -1.5
OBN *e* 17 37 39.9
OBN pmax pmax
comp=Z,4.0nm,0.7s
ANN **Anapa** 118.03 50 *e*PKIKP PKPdf 17 37 32.6 +4.8
ANN pmax pmax
comp=Z,76nm,1.0s
KIV **Kislovodsk** 121.72 52 *e*PKIKP PKPdf 17 37 32.0 -2.9
KIV pmax pmax
comp=Z,8.0nm,1.2s
GNI **Garni** 123.05 56 ⇑*i*PKIKP PKPdf 17 37 37.3 -0.3
ASAR **Alice Springs** 128.04 208 PKP PKPdf 17 37 47.0 -0.7
comp=Z,4.9nm,0.8s,baz=139,slow=1.6,SNR=11
ASAR pPKP pPKPdf 17 38 00.8 -1.6
comp=Z,3.2nm,0.7s,baz=154,slow=2.1,SNR=12
ARU **Arti** 130.02 35 *e*PKPdf PKPdf 17 37 50.2 -0.2
ARU *e*pPKPdf pPKPdf 17 38 04.7 -0.3
ARU **Arti** 130.02 35 *i* PKIKP PKPdf 17 37 49.1 -1.3
ARU 17 40 01.4
TIXI **Tiksi** 130.26 352 *e*PKIKP pPKPdf 17 38 01.1 -4.0
TIXI pmax pmax
comp=Z,9.0nm,1.1s
SVE **Sverdlovsk** 130.94 34 *e*PKIKP pPKPdf 17 38 05.8 -1.0
SVE pmax pmax
comp=Z,10.0nm,1.3s
WB2 **Warramunga Arr** 131.08 211 *e*P PKPdf 17 37 52.4 -1.2
WRA **Warramunga Arr** 131.08 211 PKP PKPdf 17 37 53.1 -0.5
comp=Z,3.8nm,0.7s,baz=150,slow=1.7,SNR=35
WRA pPKP pPKPdf 17 38 07.6 -0.7
comp=Z,2.2nm,0.4s,baz=152,slow=1.7,SNR=10
AKTK **Aktyubinsk** 131.47 42 PKP PKPdf 17 37 53.4 +0.1
AKTO **Aktyubinsk** 131.47 42 PKP PKPdf 17 37 53.4 +0.1
comp=Z,2.1nm,0.9s,baz=10.0,slow=5.4,SNR=4.7
PETK **Petropavlovsk-** 133.27 322 PKP PKPdf 17 37 56.8 +0.2
comp=Z,1.8nm,0.5s,baz=62,slow=5.2,SNR=11
PETK pPKP pPKPdf 17 38 11.0 -0.3
comp=Z,7.2nm,0.9s,baz=64,slow=5.4,SNR=2.9
BVAR **Borovoye Array** 137.66 35 PKP PKPdf 17 38 05.3 +0.5
comp=Z,3.2nm,0.8s,baz=279,slow=3.0,SNR=18

BVAR				pPKP	pPKPdf	17 38 19.5	0.0		
	comp=Z,3.9nm,0.9s,baz=279,slow=2.9,SNR=12								
YAK	**Yakutsk**	**138.86**	**346**	*e*PKIKP	pPKPdf	17 38 18.6	-2.8		
YAK				pmax	pmax				
	comp=Z,15nm,1.0s								
YAK				pmax	pmax				
	comp=N,2.0nm,1.1s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.3s								
NVS	**Novosibirsk**	**142.53**	**25**	*e*PKIKP	PKPdf	17 38 10.6	-3.0		
NVS				pmax	pmax				
	comp=N,11nm,1.9s								
NVS				pmax	pmax				
	comp=Z,23nm,1.9s								
NVS				pmax	pmax				
	comp=E,9.0nm,1.7s								
ZALV	**Zalesovo Beam**	**143.81**	**25**	PKhKP		17 38 12.6			
	comp=E,12nm,0.8s,baz=309,slow=3.7,SNR=31								
ZALV				PKP	PKPdf	17 38 14.6	-1.3		
	comp=E,12nm,0.8s,baz=298,slow=3.7,SNR=37								
ZALV				pPKP	pPKPdf	17 38 28.9	-1.6		
	comp=E,14nm,0.8s,baz=303,slow=4.5,SNR=12								
ZALV	**Zalesovo Beam**	**143.81**	**25**	PKP		17 38 12.6			
ZALV				PKP	PKPdf	17 38 14.6	-1.3		
ZALV				pPKP	pPKPdf	17 38 28.9	-1.6		
EKS2	**Erkin-Say**	**144.19**	**48**	*e*PKPdf	PKPdf	17 38 15.7	-1.2		
EKS2	**Erkin-Say**	**144.19**	**48**	P	PKPdf	17 38 16.3	-0.6		
	SNR=11								
AML	**Almayashu**	**144.33**	**49**	P	PKPdf	17 38 16.6	-0.5		
	SNR=16								
USP	**Ospenovka**	**144.46**	**47**	P	PKPdf	17 38 16.5	-0.9		
	SNR=9.0								
CHMS	**Chumysh**	**144.73**	**47**	P	PKPdf	17 38 17.6	-0.3		
	SNR=10								
KBK	**Karagaybulak**	**145.00**	**48**	P	PKPdf	17 38 18.9	+0.6		
	SNR=36								
BOD	**Bodaibo**	**145.22**	**356**	*e*PKP2	PKPab	17 38 16.1	-1.9		
BOD				pmax	pmax				
	comp=Z,46nm,0.8s								
BOD				pmax	pmax				
	comp=Z,84nm,0.9s								
TKM2	**Tokmak 2**	**145.33**	**47**	*e*PKPdf	PKPdf	17 38 19.3	+0.4		
TKM2				*ep*PKPdf	pPKPdf	17 38 33.6	0.0		
TKM2				*ep*P		17 38 34.0			
TKM2	**Tokmak 2**	**145.33**	**47**	P	PKPbc	17 38 19.6	+0.8		
	SNR=28								
KZA	**Kyzart**	**145.43**	**48**	P	PKPdf	17 38 20.8	+1.7		
	SNR=8.1								
POO	**Poona**	**145.91**	**91**	*e*P	PKPdf	17 38 19.0	-1.6		
ULHL	**Ulahol**	**146.04**	**48**	P	PKPdf	17 38 21.1	+0.9		
	SNR=6.2								
ASAJ	**Asahikawa**	**146.08**	**316**	PKP	PKPdf	17 38 20.4	+0.3		
	comp=Z,8.7nm,0.7s,baz=201,slow=6.7,SNR=7.6								
MK31	**Makanchi Array**	**147.50**	**37**	*e*PKPdf	PKPdf	17 38 22.0	-0.4		
MK31				*ep*PKPdf	pPKPdf	17 38 36.3	-0.8		
MKAR	**Makanchi Array**	**147.50**	**37**	PKP	PKPdf	17 38 22.4	0.0		
	comp=Z,14nm,0.7s,baz=257,slow=2.2,SNR=51								
MKAR				pPKP	PKPbc	17 38 24.6	-0.4		
	comp=Z,15nm,0.7s,baz=327,slow=3.0,SNR=52								
MKAR				pPKP	pPKPdf	17 38 36.6	-0.5		
	comp=Z,24nm,0.8s,baz=306,slow=2.9,SNR=16								
HABR	**Khabarovsk**	**147.85**	**328**	*i* PKP2	PKPbc	17 38 25.7	-0.2		
HABR				*e*		17 45 24.3			
HABR				*e*SS	SS	18 00 53.5	-0.9		
HABR				*e*SSS		18 06 28.0			
THN	**Thein Dam**	**148.34**	**65**	*ex*	PKPdf	17 38 23.6	-0.7		
KLR	**Kul'dur**	**148.82**	**332**	*e*PKHKP		17 38 20.7			
HYB	**Hyderabad**	**149.94**	**95**	*e*PKP	PKPdf	17 38 27.0	-0.2		
HYB				*e*		17 38 32.0			
HYB	**Hyderabad**	**149.94**	**95**	*i* PKP	PKPdf	17 38 27.0	-0.2		
HYB				*e*		17 38 32.0			
HYB				*e*		17 38 37.5			
HYB				*e*		17 38 46.0			
LEM	**Lembang**	**150.15**	**175**	P	PKPbc	17 38 33.6	+0.8		
KAPI	**Kappang**	**150.48**	**200**	*e*PKPbc	PKPbc	17 38 32.8	-0.8		
TLY	**Talaya**	**151.06**	**8**	*e*PKIKP	PKPab	17 38 41.6	+0.2		
TLY				*e*		17 38 48.1			
TLY				*e*		17 38 54.9			
TLY				pmax	pmax				
	comp=Z,12nm,0.8s								
MJAR	**Matsushiro Arr**	**152.27**	**305**	PKPbc	PKPbc	17 38 36.5	-0.6		
	comp=Z,5.4nm,0.8s,baz=90,slow=1.7,SNR=14								
MJAR				pPKPbc	pPKPbc	17 38 50.4	-1.3		
	comp=Z,6.4nm,0.6s,baz=134,slow=0.4,SNR=11								
MAJO	**Matsushiro**	**152.27**	**305**	*e*PKPbc	PKPbc	17 38 35.7	-1.4		
MAT	**Matsushiro**	**152.27**	**305**	PKP	PKPbc	17 38 35.8	-1.3		
ZAK	**Zakamensk**	**152.27**	**9**	*e*PKIKP	PKPbc	17 38 36.3	-0.3		
ZAK				pmax	pmax				
	comp=Z,11nm,1.1s								
WMQ	**Urumqi**	**152.33**	**36**	*e*PKP	PKPdf	17 38 31.4	+1.3		
WMQ				PP	PP	17 42 23.4	+4.3		
WMQ				SKS	SKSdf	17 45 33.4	0.0		
WMQ				SKKS	SKKSac	17 49 09.4	+3.6		
WMQ				PP	PP				
	comp=Z,87nm,10.0s								
LGTI	**Lohaghat**	**152.58**	**70**	*ex*	PKPbc	17 38 37.8	-0.2		
SONM	**Songino Array**	**155.16**	**6**	PKP	PKPdf	17 38 34.4	+0.4		
	comp=Z,2.3nm,0.9s,baz=237,slow=0.8,SNR=12								
SONM				pPKP	pPKPdf	17 38 48.7	-0.1		
	comp=Z,4.0nm,0.9s,baz=33,slow=1.3,SNR=11								
SONM				PKPab	PKPab	17 38 56.8	-2.1		
	comp=Z,3.7nm,0.9s,baz=355,slow=3.1,SNR=8.2								
SONM				pPKPab	pPKPab	17 39 12.7	-0.4		
	comp=Z,6.1nm,0.9s,baz=328,slow=3.1,SNR=6.2								
SONM	**Songino Array**	**155.16**	**6**	PKIKP	PKPdf	17 38 34.4	+0.4		
SONM						17 38 48.7			
SONM						17 38 56.8			
ULN	**Ulaanbaatar**	**155.19**	**5**⇑	*i* PKP2	PKPab	17 38 58.1	-0.8		
CN2	**Changchun**	**155.78**	**332**	*e*PKP	PKPdf	17 38 35.1	+0.1		
KSRS	**Korea Array**	**159.03**	**317**	PKP	PKPdf	17 38 39.2	0.0		
	comp=Z,2.7nm,1.0s,baz=101,slow=1.3,SNR=7.9								
KSRS				pPKP	pPKPdf	17 38 53.4	-0.7		
	comp=Z,3.9nm,1.0s,baz=78,slow=2.3,SNR=7.2								
KSRS				pPKPab	pPKPab	17 39 29.5	-0.7		
	comp=Z,2.9nm,0.9s,baz=55,slow=5.0,SNR=3.6								
GTA	**Gaotai**	**161.57**	**26**	PKP	PKPdf	17 38 42.8	+0.8		
GTA				APKP		17 38 56.9			
GTA				PKP2	PKPab	17 39 27.0	+0.1		
GTA				PP	PP	17 43 12.3	+2.6		
HHC	**Hu-ho-hao-te**	**162.27**	**356**	*e*PKP	PKPdf	17 38 42.5	-0.2		
HHC				APKP		17 38 53.3			
HHC				XPKP		17 38 56.9			
HHC				PKS		17 42 14.3			
HHC				PP	PP	17 43 17.4	+4.3		
HHC				SKS	SKSdf	17 45 42.5	-1.1		
HHC				SKKS	SKKSac	17 49 59.4	+1.3		
BJI	**Beijing**	**162.35**	**344**	PKP	PKPdf	17 38 42.4	-0.4		
LZH	**Lanzhou**	**166.00**	**21**	*e*PKP	PKPdf	17 38 46.6	+0.4		
LZH				APKP		17 39 01.8			
LZH				XPKP		17 39 06.8			
LZH	**Lanzhou**	**166.00**	**21**	*e*PKP	PKPdf	17 38 46.6	+0.4		
LZH				pPKP	pPKPdf	17 39 01.7	+0.7		
LZH				sPKP		17 39 06.7			
LZH	**Lanzhou**	**166.00**	**21**	*e*PKIKP	PKPdf	17 38 46.6	+0.4		
LZH						17 39 01.7			
NJ2	**Nanjing**	**168.17**	**321**	*e*PKP	PKPdf	17 38 47.3	-0.7		
CMAR	**Chiang Mai Arr**	**168.62**	**112**	PKP	PKPdf	17 38 48.2	-0.4		
	comp=Z,1.0nm,0.8s,baz=270,slow=1.5,SNR=8.6								
CMAR				pPKP	pPKPdf	17 39 02.8	-0.6		
	comp=Z,2.7nm,1.0s,baz=258,slow=1.7,SNR=4.8								
CMAR				PKPab	PKPab	17 39 58.1	-0.5		
	comp=Z,1.5nm,0.9s,baz=250,slow=4.9,SNR=5.5								
CMAR				pPKPab	pPKPab	17 40 12.7	-0.2		
	comp=Z,2.1nm,0.9s,baz=254,slow=5.5,SNR=5.3								
CMAR	**Chiang Mai Arr**	**168.62**	**112**	PKIKP	PKPdf	17 38 48.3	-0.3		
CMAR						17 39 02.8			
CMAR						17 39 58.2			
CD2	**Chengdu**	**170.42**	**35**	*e*PKP	PKPdf	17 38 49.8	+0.4		
CD2				APKP		17 39 01.3			
CD2				XPKP		17 39 11.3			
CD2				PKP2	PKPab	17 40 05.8	-0.3		
CD2				PP	PP	17 43 56.8	+1.0		
CD2				SKS	SKSdf	17 45 48.3	-0.8		
CD2				SKKS	SKKSac	17 50 39.6	+0.2		
CD2				PP	PP				
	comp=Z,150nm,10.8s								
KMI	**Kunming**	**173.02**	**72**	PKP	PKPdf	17 38 49.9	-0.9		
GYA	**Guiyang**	**175.46**	**42**	PKP	PKPdf	17 38 51.6	0.0		
GYA				APKP		17 39 05.6			
GYA				XPKP		17 39 10.5			
GYA				PKP2	PKPab	17 40 25.0	-3.7		
GYA				PKS		17 42 22.4			
GYA				SKKS	SKKSac	17 51 01.3	-2.5		
GYA				PP	PP				
	comp=Z,110nm,8.2s								
GYA				LR	LR				
	comp=N,150nm,21.6s								
GYA				LR	LR				
	comp=E,90nm,19.8s								
GYA				LR	LR				
	comp=Z,160nm,21.0s								

ISCJB ***14*** *17:20:26.9±1.0, 3490N±006×2582E±005, h4km±7km, Error ellipse: s-maj=9.9km s-min=6.0km az=167.0*
CSEM ***14*** *17:20:26.9±0.3, 3488N×2586E, h10km, MD3.4, Error ellipse: s-maj=6.6km s-min=3.1km az=115.0*
THE ***14*** *17:20:26.0, 3485N×2582E, h0km±2km, Error ellipse: s-maj=5.2km s-min=1.4km az=169.0*
NEIC ***14*** *17:20:27.3, 3490N×2586E, h5km, MD3.4(ATH), After ATH.*
ATH ***14*** *17:20:27.5, 3491N×2587E, h5km, MD3.4/5*
ISC 14 17:20:27.0±1.1, 3487N±006×2585E±004, h5km±6km, n24, σ0 96/43, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.39**	**51**	P			**Pg**	**17 20 34.7**	**+0.3**
ZKR				S			**Sg**	**17 20 41.3**	**+1.9**
LAST	**Lasithi**	**0.42**	**313**	P			**Pg**	**17 20 34.7**	**-0.3**
LAST				S			**Sg**	**17 20 40.9**	**+0.4**
NPS	**Neapolis**	**0.43**	**333**	*e*PG			**Pg**	**17 20 35.0**	**-0.3**
NPS				*e*SB			**Sg**	**17 20 41.0**	**0.0**
SIVA	**Sivas**	**0.87**	**280**	P			**Pg**	**17 20 41.6**	**-2.0**
SIVA				S			**Sg**	**17 20 56.1**	**+1.3**
SIVA	**Sivas**	**0.87**	**280**	P			**Pg**	**17 20 44.6**	**+1.0**
SIVA				S			**Sg**	**17 20 56.1**	**+1.3**
IDI	**Anoyia**	**0.89**	**298**	P			**Pg**	**17 20 43.5**	**-0.5**
KARP	**Karpathos**	**1.27**	**58**	*e*PB			**Pb**	**17 20 51.0**	**-0.3**
GVD	**Gavdhos**	**1.45**	**269**	*e*PB			**Pb**	**17 20 55.5**	**+1.1**
VAM	**Vamos**	**1.45**	**292**	*e*PG			**Pg**	**17 20 54.0**	**-0.8**
VAM				*e*SB			**Sb**	**17 21 16.0**	**+2.7**
VAM	**Vamos**	**1.45**	**292**	*e*Pn			**Pn**	**17 20 53.5**	**-0.4**
VAM				*e*Sb			**Sb**	**17 21 16.0**	**+2.7**
THR1	**Thera Island**	**1.53**	**348**	P			**Pn**	**17 20 54.5**	**-0.4**
THR1				S			**Sn**	**17 21 15.5**	**+0.3**
THR3	**Thira Island,**	**1.57**	**347**	P			**Pn**	**17 20 55.0**	**-0.6**
THR3				S			**Sn**	**17 21 15.9**	**-0.4**
APE	**Apeiranthos**	**2.21**	**353**	*e*PG			**Pg**	**17 21 08.0**	**-1.2**
VLI	**Veliai**	**3.00**	**309**	*e*Pb			**Pb**	**17 21 16.0**	**-4.9**

NEIC ***14*** *17:24:26.9, 18.11N×6867W, h153km, MD3.6(RSPR), After RSPR.*
RSPR 14 17:24:26.9, 1811N×6867W, h153km±3km, MD3.6/9, MD3.6/9, 8C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.73**	**90**	⇓	*e*P		Pn	17 24 48.7	-1.2
CRPR	**Cabo Rojo, PR**	**1.49**	**94**	⇓	*e*P		Pn	17 24 56.1	-0.5
LSP	**Las Mesas**	**1.51**	**87**	⇑	*e*P		Pn	17 24 57.1	+0.3
LSP					*e*S		Sn	17 25 21.7	+2.0
AGPR	**Aguadilla, PR**	**1.52**	**76**	⇑	*e*P		Pn	17 24 56.5	-0.5
AGPR					*e*S		Sn	17 25 20.4	+0.4
LRS	**Lares**	**1.75**	**84**	⇑	*e*P		Pn	17 24 59.4	0.0
LRS					*e*S		Sn	17 25 24.5	+0.3
AOPR	**Arecibo Observ**	**1.84**	**82**	⇑	*e*P		Pn	17 25 00.6	+0.2
AOPR					*e*S		Sn	17 25 26.6	+0.6
CELP	**Cerrillos**	**1.99**	**91**	⇑	*e*P		Pn	17 25 02.4	+0.3
CELP					*e*S		Sn	17 25 29.3	+0.1
SJG	**San Juan**	**2.40**	**90**	⇓	*e*P		Pn	17 25 07.5	+0.6
SJG					*e*S		Sn	17 25 38.0	+0.2
CPD	**Cerro la Pandu**	**2.62**	**91**	⇓	*e*P		Pn	17 25 09.8	+0.1
CPD					*e*S		Sn	17 25 44.1	+1.4
HUMP	**Col San Antoni**	**2.68**	**89**	⇑	*e*P		Pn	17 25 10.7	+0.2
HUMP					*e*S		Sn	17 25 44.4	+0.4
MTP	**Monte Pirata**	**2.97**	**90**	⇑	*e*P		Pn	17 25 14.3	+0.3
STVI	**Saint Thomas**	**3.54**	**85**	⇓	*e*P		Pn	17 25 21.8	+0.5
STVI					*e*S		Sn	17 26 02.8	-0.7

NEIC ***14*** *17:25:50.3, 1843N×6893W, h173km, MD3.9(RSPR), After RSPR.*
RSPR 14 17:25:50.3, 1843N×6893W, h173km±7km, MD3.9/8, MD3.9/8, 6C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.73**	**89**	⇑	*e*P		Pn	17 26 23.7	-0.2
AGPR					*e*S		Sn	17 26 50.7	+0.8
LSP	**Las Mesas**	**1.77**	**98**	⇑	*e*P		Pn	17 26 25.1	+0.6
LSP					*e*S		Sn	17 26 51.2	+0.5
CRPR	**Cabo Rojo, PR**	**1.78**	**103**	⇑	*e*P		Pn	17 26 24.1	-0.5
CRPR					*e*S		Sn	17 26 52.0	+1.1
LRS	**Lares**	**1.98**	**94**	⇑	*e*P		Pn	17 26 26.7	0.0
LRS					*e*S		Sn	17 26 56.1	+1.3
AOPR	**Arecibo Observ**	**2.07**	**92**	⇓	*e*P		Pn	17 26 28.0	+0.3
AOPR					*e*S		Sn	17 26 56.5	+0.1
CELP	**Cerrillos**	**2.26**	**99**	⇓	*e*P		Pn	17 26 29.9	+0.1
CELP					*e*S		Sn	17 27 00.5	+0.1
HUMP	**Col San Antoni**	**2.94**	**95**	⇑	*e*P		Pn	17 26 38.8	+0.8
MTP	**Monte Pirata**	**3.23**	**95**	⇑	*e*P		Pn	17 26 42.7	+1.3

MOS ***14*** *17:35:36.6±1.3, 1378N×9052W, h33km, mb5.3/24, Error ellipse: s-maj=10.8km s-min=5.2km az=102.9*
SZGRF ***14*** *17:35:36.4, 1413N×9119W, h33km, mb4.9, Guatemala*
ISCJB ***14*** *17:35:40.5±0.2, 1381N±003×9080W±002, h56km, mb5.2/84, MS5.9/4, Error ellipse: s-maj=4.7km s-min=1.8km az=32.0*
BJI ***14*** *17:35:41.2, 1380N×9070W, h57km, mB5.1, Ms5.5, Msz5.4*
IDC ***14*** *17:35:41.0±0.5, 1402N×9032W, h55km±3km, mb4.6/20, mb1 4.8/21, mb1mx4.7/25, mbtmp4.6/21, Error ellipse: s-maj=19.5km s-min=9.2km az=58.0*
NEIC ***14*** *17:35:41.2±0.3, 1380N×9075W, mb5.2/68, MD5.6(SNET), MD5.2(MEX), Error ellipse: s-maj=7.3km s-min=4.0km az=219.0*
NEIC Felt [IV] at San Salvador, El Salvador. Felt [III] at Guatemala City and [II] at Antigua Guatemala. Felt at Fraijanes, Palencia, Petapa, Santa Catarina Pinula, Santa Cruz la Laguna, Santiago Sacatepequez, Solola and Villa Nueva. Also felt at Antiguo Cuscatlan, El Salvador.
MEX ***14*** *17:35:41.4±1.0, 1363N×9091W, h41km±158km, MD5.2*
CASC ***14*** *17:35:42.3±1.9, 1367N×9083W, h48km±21km, MD4.9, ML5.1, mb5.2(NEIC)*
ISC 14 17:35:42.8±0.2, 1386N±003×9076W±002, h57km, h57km±1.0km:pP-P, n743, σ0 99/690, mb5.2/84, MS5.9/4, 204C-219D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.55**	**15**	⇓	*i*P		**Pn**	**17 35 56.5**	**+1.4**
FUG	**Fuego 3**	**0.59**	**352**	⇓	*i*P		**Pn**	**17 35 56.3**	**+0.6**
FG6		**0.71**	**350**	⇓	*i*P		**Pn**	**17 35 57.9**	**+0.9**
GCG	**Guatemala City**	**0.76**	**17**	⇓	*e*P		**Pn**	**17 35 59.9**	**+2.3**
GCG				⇓	*e*P			17 36 00.7	
GCG					*e*S		**Sn**	**17 36 14.7**	**+6.2**
GCG				AML	AML			17 36 19.8	
	comp=E,137μm,0.6s								
GCG				AML	AML			17 36 22.7	
	comp=N,98μm,0.5s								
NBG	**Las Nubes**	**0.83**	**29**	⇓	*i*P		**Pn**	**17 36 01.4**	**+2.9**
SONS		**1.02**	**97**	⇓	*e*P		x	17 36 00.5	
SONS					*e*S		x	17 36 14.9	
SONS					*i*			17 36 16.9	
	comp=Z,80μm,0.3s								
RBDL	**Robledal**	**1.07**	**76**	⇓	*i*P		x	17 36 03.1	
RTR	**El Retiro**	**1.08**	**88**	⇓	*i*P		x	17 36 02.8	
BOQS	**Boqueron**	**1.44**	**95**	⇑	*i*P		x	17 36 07.2	
SNET	**Serv Nac Est T**	**1.49**	**96**	⇓	*e*P		x	17 36 07.5	
SNET					*e*P		x	17 36 07.7	
SNET					*e*P		x	17 36 07.8	
SNET					*e*S		x	17 36 28.2	
SNET					*e*S		x	17 36 28.2	
SNET					*e*			17 36 32.0	
	comp=Z,81μm,0.6s								
MRL	**Marmol**	**1.58**	**40**	⇑	*e*P		**Pn**	**17 36 12.1**	**+3.5**
LBRS	**Las Brisas**	**1.67**	**94**	⇓	*i*P		x	17 36 10.6	
AIES		**1.70**	**103**	⇓	*e*P		x	17 36 10.1	
AIES					*e*S		x	17 36 31.6	
AIES					*e*			17 36 41.5	
	comp=Z,71μm,0.7s								
THIG		**1.80**	**306**	*e*P			**Pn**	**17 36 08.6**	**-2.9**
THIG				*i* S			**Sn**	**17 36 30.3**	**-2.9**
SNVI	**San Vicente**	**1.88**	**97**	⇓	*e*P		x	17 36 13.4	
VSM	**San Miguel**	**2.45**	**100**	⇑	*e*P		x	17 36 21.3	
CAHU	**Cacacuatique**	**2.47**	**92**	⇓	*e*P		x	17 36 21.5	
BLLM	**Bellamira**	**2.48**	**99**	*e*P			x	17 36 21.5	
CNCH	**Conchagua**	**2.90**	**101**	⇓	*e*P		x	17 36 27.0	
CNCH				*e*P			x	17 36 27.1	
PCIG		**3.01**	**308**	*i* P			**Pn**	**17 36 26.2**	**-1.8**
PCIG				*i* S			**Sn**	**17 36 59.5**	**-3.4**
TGUH	**Tegucigalpa,Un**	**3.39**	**86**	*e*P			**Pn**	**17 36 33.9**	**+0.7**
TGUH	**Tegucigalpa,Un**	**3.39**	**86**	*e*P			**Pn**	**17 36 34.0**	**+0.9**
TGUH				⇓	*e*P			17 36 34.1	
SCX	**San Cristobal**	**3.39**	**328**	*i* P			**Pn**	**17 36 33.2**	**0.0**
SCX				*i* S			**Sn**	**17 37 12.8**	**+0.6**
TGIG		**3.69**	**322**	*e*P			**Pn**	**17 36 36.1**	**-1.3**
TGIG				*e*S			**Sn**	**17 37 19.5**	**-0.2**
CRIN	**San Cristobal**	**3.79**	**107**	⇑	*e*P		**Pn**	**17 36 38.6**	**0.0**
CRIN				AML	AML			17 37 43.9	
	comp=Z,9μm,0.5s								
TEL3	**Telica 3**	**4.02**	**108**	⇓	*e*P		**Pn**	**17 36 41.2**	**-0.7**
TEL3				AML	AML			17 37 42.6	
	comp=Z,3μm,0.6s								
CNGN	**Cerro Negro**	**4.17**	**108**	*e*P			**Pn**	**17 36 43.0**	**-0.9**
CNGN				⇓	*e*P			17 36 43.3	
CNGN				AML	AML			17 37 48.8	
	comp=Z,3μm,0.6s								
MIRN	**Miramar**	**4.18**	**109**	⇓	*e*P		**Pn**	**17 36 43.1**	**-1.0**
MOMN	**Momotombo**	**4.35**	**109**	*e*P			**Pn**	**17 36 46.1**	**-0.3**
CSAN		**4.54**	**111**	⇑	*e*P		**Pn**	**17 36 49.0**	**0.0**
APYN	**Apoyeque**	**4.59**	**110**	⇓	*e*P		**Pn**	**17 36 48.9**	**-0.8**
XAVN	**Gruta Xavier**	**4.64**	**111**	⇓	*e*P		**Pn**	**17 36 50.5**	**+0.1**
TISN	**Laguna Tiscapa**	**4.69**	**111**	⇓	*e*P		**Pn**	**17 36 51.3**	**+0.2**
TISN				AML	AML			17 37 59.3	
	comp=Z,5μm,0.4s								
MGAN	**Managua**	**4.71**	**111**	⇑	*e*P		**Pn**	**17 36 51.3**	**-0.1**
HUEN		**4.71**	**108**	⇓	*e*P		**Pn**	**17 36 51.5**	**+0.1**
HUEN				AML	AML			17 38 04.0	
	comp=Z,641nm,0.6s								
CRUN	**El Crucero**	**4.73**	**113**	⇓	*e*P		**Pn**	**17 36 53.1**	**+1.5**
WILN	**Americas 2**	**4.76**	**110**	*e*P			**Pn**	**17 36 52.9**	**+0.9**
WILN				AML	AML			17 38 06.3	
	comp=Z,2μm,0.7s								
TICN	**Ticuantepe**	**4.77**	**112**	⇓	*e*P		**Pn**	**17 36 52.4**	**+0.2**
MASN	**Masaya**	**4.86**	**112**	*e*P			**Pn**	**17 36 53.6**	**+0.3**
APON	**Apoyo**	**4.96**	**112**	⇓	*e*P		**Pn**	**17 36 55.3**	**+0.5**
SCIG	**Sabancuy**	**5.10**	**355**	*i* P			**Pn**	**17 36 57.1**	**+0.5**
SCIG				*i* S			**Sn**	**17 37 58.0**	**+3.7**
CMIG	**Matias Romero**	**5.12**	**309**	P			**Pn**	**17 36 56.0**	**-0.9**
	comp=Z,20nm,0.3s,baz=122,slow=11,SNR=102								
CMIG				S			**Sn**	**17 37 52.1**	**-2.6**
	comp=Z,54nm,0.3s,baz=289,slow=17,SNR=5.4								
CMIG	**Matias Romero**	**5.12**	**309**	P			**Pn**	**17 36 56.0**	**-0.9**
CMIG				S			**Sn**	**17 37 52.1**	**-2.6**
CMIG				*i* S			**Sn**	**17 37 53.1**	**-1.5**
CMIG	**Matias Romero**	**5.12**	**309**	*e*P			**Pn**	**17 36 55.2**	**-1.7**
CMIG				*i* S			**Sn**	**17 37 53.1**	**-1.5**
CONN	**Concepcion**	**5.50**	**114**	⇓	*e*P		**Pn**	**17 37 03.1**	**+1.0**
VCR	**Vista de Mar**	**6.24**	**126**	*e*P			**Pn**	**17 37 12.6**	**+0.3**
OXX	**Oaxaca**	**6.59**	**300**	*e*P			**Pn**	**17 37 17.1**	**0.0**
OXX				*i* S			**Sn**	**17 38 30.0**	**-0.8**
VHO	**Vista Hermosa**	**6.59**	**300**	*i* P			**Pn**	**17 37 16.6**	**-0.5**
VHO				*i* S			**Sn**	**17 38 28.5**	**-2.4**
JCR	**Jicaral**	**6.81**	**125**	*e*P			**Pn**	**17 37 20.9**	**+0.7**
FORC	**Fortuna**	**6.84**	**119**	*e*P			**Pn**	**17 37 21.1**	**+0.6**
CGA2	**Cerro Gallo 2**	**7.24**	**121**	⇑	*e*P		**Pn**	**17 37 27.6**	**+1.5**
CGA2					*e*S		**Sn**	**17 38 41.7**	**-5.3**
PNIG	**Pinotepa**	**7.55**	**290**	*i* P			**Pn**	**17 37 27.6**	**-2.7**
PNIG				*i* S			**Sn**	**17 38 50.8**	**-3.7**
TPIG	**Tehuac#an**	**7.80**	**306**	*e*P			**Pn**	**17 37 31.0**	**-2.7**
TPIG				*i* S			**Sn**	**17 38 59.6**	**-1.1**
QCR	**Quepos**	**7.81**	**124**	⇓	*e*P		**

OXF Oxford 20.60 3 *e*P P 17 40 16.4 -0.7
comp=Z,547nm,1.0s
OXF Oxford 20.60 3 *e*P P 17 40 16.5 -0.7
OXF pmax pmax
comp=Z,547nm,1.0s
MIAR Mount Ida 20.76 353 *e*P P 17 40 18.0 -0.8
comp=Z,290nm,1.1s
MIAR Mount Ida 20.76 353 *e*P P 17 40 18.0 -0.8
MIAR pmax pmax
comp=Z,290nm,1.1s
UALR University of 20.88 356 *e*P P 17 40 19.6 -0.5
comp=Z,218nm,0.8s
UALR *e*pP 17 40 34.5
LPIG La Paz 21.09 302 P P 17 40 23.6 +1.0
comp=Z,158nm,1.2s,mb5.2,baz=147,slow=1.0,SNR=10
NHSC New Hope 21.45 25 *e*P P 17 40 28.0 +1.6
comp=Z,342nm,1.0s,mb5.6
COW Cow Castle Cre 21.48 24 *e*P P 17 40 26.7 0.0
HBAR Harrisburg 21.61 0 *e*P P 17 40 27.9 -0.1
SWET Sewanee 21.71 11 *e*P P 17 40 29.4 +0.4
SWET *e*pP 17 40 44.8
WMOK Wichita Mounta 22.02 342 *e*P P 17 40 30.3 -2.1
comp=Z,79nm,1.0s,mb5.1
WMOK Wichita Mounta 22.02 342 *e*P P 17 40 30.3 -2.1
WMOK pmax pmax
comp=Z,79nm,1.0s,mb5.1
GNAR Gosnell 22.02 2 *e*P P 17 40 31.5 -0.9
comp=Z,2µm,1.1s
JSC Jenkinsville 22.08 21 *e*P P 17 40 33.2 +0.2
CPCT Cooper Cave 22.22 14 *e*P P 17 40 34.5 0.0
CPCT *e*pP 17 40 49.6
WVT Waverly 22.33 6 *e*P P 17 40 34.1 -1.6
comp=Z,43nm,1.7s,mb4.6
WVT Waverly 22.33 6 *e*P P 17 40 34.2 -1.5
WVT pmax pmax
comp=Z,43nm,1.7s,mb4.6
TKL Tuckaleechee C 22.60 15 P P 17 40 38.9 +0.4
comp=Z,132nm,0.8s,mb5.5,baz=188,slow=11,SNR=123
TKL sP sP 17 40 54.1 -4.5
comp=Z,459nm,1.1s,baz=189,slow=10,SNR=24
TKL Tuckaleechee C 22.60 15 *e*P P 17 40 38.5 0.0
TKL *e**PP 17 40 54.2
PARMO Parma 22.73 2 *e*P P 17 40 38.5 -1.4
PARMO *e*pP 17 40 53.9
CGIG 22.85 319 *i*P pP 17 40 51.9 -2.2
AMTX Amarillo 23.15 337 *e*P P 17 40 43.5 -0.8
comp=Z,85nm,0.7s,mb5.3
TZTN Tazewell 23.50 15 *e*P P 17 40 47.0 -0.6
comp=Z,249nm,0.8s,mb5.7
TZTN *e*pP 17 41 02.7
SIUC Southern Illin 23.80 3 *e*P P 17 40 49.0 -1.3
comp=Z,195nm,0.9s,mb5.5
FVM French Village 24.03 1 *e*P P 17 40 50.8 -1.6
comp=Z,34nm,0.8s,mb4.8
FVM French Village 24.03 1 *e*P P 17 40 50.8 -1.6
FVM pmax pmax
comp=Z,34nm,0.8s,mb4.8
HSIG 24.05 312 *e*P pP 17 41 02.8 -4.0
ATAH Atahualpa 24.08 149 P P 17 40 54.0 +1.0
comp=Z,43nm,0.7s,mb5.0,baz=59,slow=6.4,SNR=27
CCM Cathedral Cave 24.11 359 *e*P P 17 40 50.5 -2.6
comp=Z,7.5nm,1.6s
CCM Cathedral Cave 24.11 359 *e*P P 17 40 50.5 -2.6
CCM pmax pmax
comp=Z,7.0nm,1.6s
CCM Cathedral Cave 24.11 359 *e*pP pP 17 41 05.3 -1.9
USIN University of 24.17 6 *e*P P 17 40 52.3 -1.4
comp=Z,258nm,1.0s,mb5.6
319A Douglas 24.36 319 ⇑P P 17 40 56.1 +0.7
baz=24,SNR=41
MTP Monte Pirata 24.58 77 *e*P P 17 40 53.3 -4.3
WCI Wyandotte Cave 24.60 8 *e*P P 17 40 56.3 -1.2
comp=Z,247nm,0.8s,mb5.8
WCI *e*pP 17 41 13.2
WCI Wyandotte Cave 24.60 8 *e*P P 17 40 56.3 -1.2
WCI *e**PP 17 41 13.2
WCI pmax pmax
comp=Z,247nm,0.8s,mb5.8
SLM Saint Louis 24.68 1 P P 17 40 59.4 +1.1
comp=Z,171nm,0.8s,mb5.6
SLM *e*pP 17 41 11.8
SLM Saint Louis 24.68 1 P P 17 40 59.4 +1.1
SLM *e**PP 17 41 11.8
SLM pmax pmax
comp=Z,171nm,0.8s,mb5.6
219A White Tail Can 24.76 320 ⇓P P 17 40 59.7 +0.6
baz=25,SNR=187
BNM Barren Site 24.80 327 *e*P P 17 41 00.1 +0.7
BNM *e*pP 17 41 14.3
318A Bisbee 24.86 318 ⇑P P 17 41 00.8 +0.8
baz=25,SNR=106
OLIL Olney 24.89 5 *e*P P 17 40 59.1 -1.1
comp=Z,113nm,0.8s,mb5.5
Y22D IRIS PASSCAL I 24.90 327 ⇓P P 17 41 00.7 +0.4
baz=25,SNR=7.2
ELN Prospectdale 24.93 19 *e*P P 17 40 59.9 -0.6
ELN *e*pP 17 41 16.3
LPM Los Pinos Moun 24.93 328 *e*P P 17 41 01.3 +0.7
LENM Lemitar 25.00 327 *e*P P 17 41 01.9 +0.6
LENM *e*pP 17 41 16.2
BLA Blacksburg 25.02 20 *e*P P 17 41 00.1 -1.3
comp=Z,163nm,1.2s,mb5.4
BLA Blacksburg 25.02 20 *e*P P 17 41 00.1 -1.3
BLA pmax pmax
comp=Z,163nm,1.2s,mb5.4
218A Dragoon 25.24 319 ⇓P P 17 41 03.8 +0.3
baz=25,SNR=53
LAZ Ladron 25.27 327 *e*P P 17 41 04.3 +0.6
119A Ashpeak Ranch, 25.31 321 ⇓P P 17 41 04.6 +0.5
baz=25,SNR=91
ANMO Albuquerque 25.34 329 P P 17 41 04.6 +0.2
comp=Z,14nm,0.8s,mb4.5,baz=150,slow=12,SNR=31
ANMO PcP PcP 17 44 35.5 -0.4
comp=Z,9.7nm,0.9s,baz=184,slow=5.9,SNR=4.5
ANMO pPcP 17 44 51.3
comp=Z,9.8nm,0.8s,baz=162,slow=7.9,SNR=5.0
ANMO Albuquerque 25.34 329 *e*P P 17 41 04.5 +0.2
comp=Z,15nm,0.8s,mb4.6
ANMO Albuquerque 25.34 329 *e*P P 17 41 04.5 +0.1
ANMO pmax pmax
comp=Z,15nm,0.8s
BLO Bloomington 25.49 8 *e*P P 17 41 04.4 -1.3
comp=Z,23nm,0.6s,mb4.9
BLO Bloomington 25.49 8 *e*P P 17 41 04.4 -1.3
BLO pmax pmax
comp=Z,23nm,0.6s,mb4.9
217A Green Valley 25.61 317 ⇓P P 17 41 07.5 +0.6
baz=26,SNR=53
118A Homack Ranch, 25.63 320 ⇓P P 17 41 07.8 +0.7
baz=26,SNR=102
Z19A T-Link Ranch, 25.65 322 ⇓P P 17 41 07.7 +0.5
baz=26,SNR=11
KSU1 Kansas State U 25.67 349 *e*P P 17 41 06.5 -0.8
comp=Z,134nm,0.9s,mb5.5
PCRV Puerto La Cruz 25.80 95 P P 17 41 06.8 -2.0
comp=Z,9.3nm,0.7s,mb4.4,baz=135,slow=7.8,SNR=3.6
TUC Tucson 25.93 318 *e*P P 17 41 09.9 +0.1
comp=Z,57nm,0.9s,mb5.1
TUC *e*pP pP 17 41 21.6 -2.3
TUC Tucson 25.93 318 *e*P P 17 41 09.9 +0.1
TUC *e**PP pP 17 41 21.6 -2.4
TUC pmax pmax
comp=Z,57nm,0.9s,mb5.1
Z18A Geronimo 25.98 321 ⇓P P 17 41 11.0 +0.8
baz=26,SNR=12
117A Oracle 26.07 319 ⇓P P 17 41 11.6 +0.5
baz=26,SNR=29
216A Three Points, 26.18 317 ⇓P P 17 41 11.8 -0.1
baz=26,SNR=44
Z17A San Carlos Hig 26.39 321 ⇓P P 17 41 14.2 +0.3
baz=26,SNR=11
Y18A Canyon Day Jun 26.45 322 ⇑P P 17 41 15.2 +0.8
baz=27,SNR=65
X19A St. Johns 26.47 324 ⇓P P 17 41 15.3 +0.7
baz=27,SNR=25
116A Eloy 26.69 318 ⇓P P 17 41 16.9 +0.3
baz=27,SNR=15
Y17A Roosevelt 26.89 321 ⇑P P 17 41 18.4 +0.1
baz=27,SNR=13
X18A Snowflake 26.93 323 ⇓P P 17 41 19.4 +0.7
baz=27,SNR=15
Z16A Peralta Trail, 27.01 319 ⇓P P 17 41 19.6 +0.1
baz=27
W19A Sanders 27.02 325 ⇑P P 17 41 20.2 +0.6
baz=27,SNR=29
214A Organ Pipe Nat 27.06 315 ⇑P P 17 41 20.0 0.0
baz=27,SNR=23
115A Sonoran Desert 27.12 317 ⇑P P 17 41 20.8 +0.4
baz=27,SNR=9.7
ACSO Alum Creek Sta 27.15 13 *e*P P 17 41 19.6 -1.0
comp=Z,266nm,1.0s,mb5.7
ACSO *e*pP pP 17 41 34.9 +0.1
W18A Petrified Fore 27.22 324 ⇓P P 17 41 21.8 +0.5
baz=27,SNR=12
V19A Window Rock 27.28 326 ⇑P P 17 41 22.5 +0.7
baz=27,SNR=6.4
X17A Forest Lakes 27.30 322 ⇑P P 17 41 22.9 +0.9
baz=27,SNR=6.3
Y16A Circle Bar Ran 27.40 320 ⇓P P 17 41 23.4 +0.5
baz=28,SNR=30
X16A Lo Mia Camp, P 27.74 321 ⇑P P 17 41 26.8 +0.9
baz=28,SNR=51
W17A Winslow 27.76 323 ⇑P P 17 41 26.8 +0.7
baz=28,SNR=7.6
V18A Ganado 27.76 325 ⇓P P 17 41 26.5 +0.4
baz=28,SNR=17
Y15A Casa Rosa Ranc 27.99 319 ⇓P P 17 41 28.4 +0.2
baz=28,SNR=20
Z14A Wintersburg 28.00 318 ⇑P P 17 41 28.9 +0.5
baz=28,SNR=6.7
MVCO Mesa Verde 28.13 329 *e*P P 17 41 29.8 +0.3
comp=Z,36nm,0.8s,mb5.0
MVCO Mesa Verde 28.13 329 ⇑P P 17 41 29.8 +0.4
baz=28
113A Mohawk Valley, 28.19 316 ⇑P P 17 41 30.3 +0.3
baz=28,SNR=16
U18A Rough Rock, Ch 28.25 326 ⇑P P 17 41 30.6 +0.2
baz=28,SNR=11
W16A Flagstaff 28.25 322 ⇓P P 17 41 31.4 +0.9
baz=28,SNR=16
X15A Humboldt 28.27 320 ⇓P P 17 41 31.4 +0.7
baz=28,SNR=26
Y14A Wickenburg 28.40 319 ⇑P P 17 41 32.1 +0.2
baz=28,SNR=13
WUAZ Wupatki 28.45 323 *e*P P 17 41 32.9 +0.6
comp=Z,64nm,0.8s,mb5.3
WUAZ Wupatki 28.45 323 ⇓P P 17 41 33.6 +1.3
baz=29
X14A Yava 28.67 320 ⇓P P 17 41 35.1 +0.8
baz=29,SNR=27
U16A Tuba City 28.75 324 ⇓P P 17 41 35.8 +0.8
baz=29,SNR=60
W15A Williams 28.75 321 ⇑P P 17 41 36.0 +1.0
baz=29,SNR=8.6
T18A Mexican Hat 28.79 327 ⇑P P 17 41 35.7 +0.4
baz=29,SNR=28
U17A Shonto 28.82 325 ⇓P P 17 41 36.3 +0.8
baz=29,SNR=42
Y13A Salome 28.86 317 ⇑P P 17 41 36.2 +0.2
baz=29,SNR=12
S19A Harvey Farm, M 28.87 329 ⇓P P 17 41 36.5 +0.5
baz=29,SNR=10
PV01 Paradox Valley 28.89 330 *e*P P 17 41 37.2 +1.1
ISCO Idaho Springs 28.96 336 *e*P P 17 41 37.9 +1.2
comp=Z,5.7nm,0.8s,mb4.3
ISCO Idaho Springs 28.96 336 *e*P P 17 41 37.9 +1.2
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GLA Glamis 29.08 315 ⇓P P 17 41 38.1 +0.2
baz=29,SNR=7.3
V15A Kaibab Nationa 29.13 322 ⇓P P 17 41 39.5 +1.2
baz=29,SNR=87
NNA Nana 29.15 151 P P 17 41 37.1 -1.5
comp=Z,15nm,0.8s,mb4.8,baz=318,slow=7.9,SNR=8.7
NNA PcP PcP 17 44 44.1 -1.2
comp=Z,5.7nm,0.4s,baz=216,slow=7.3,SNR=3.8
NNA Nana 29.15 151 *e*P P 17 41 36.6 -2.0
comp=Z,10nm,0.6s,mb4.7
T17A Navajo Res., N 29.18 326 ⇑P P 17 41 39.7 +0.9
baz=29,SNR=46
S18A Hurst Farm, Bl 29.27 328 ⇓P P 17 41 40.0 +0.5
baz=29,SNR=16
W14A Seligman 29.27 320 ⇑P P 17 41 40.2 +0.6
baz=29,SNR=25
Y12C Blythe 29.28 317 ⇑P P 17 41 40.1 +0.3
baz=29,SNR=5.9
PV10 Paradox Valley 29.31 330 *e*P P 17 41 39.4 -0.5
X13A Yucca 29.35 319 ⇓P P 17 41 40.7 +0.4
baz=30,SNR=29
R19A Curley Farm, L 29.35 329 ⇓P P 17 41 41.0 +0.8
baz=30,SNR=8.3
PDMCI Parker Dam,Lak 29.36 318 ⇑P P 17 41 40.8 +0.4
baz=30,SNR=23
T16A Glen Canyon Da 29.56 325 ⇓P P 17 41 42.9 +0.7
baz=30,SNR=12
V14A Boquillas Ranc 29.57 321 ⇑P P 17 41 43.3 +1.1
baz=30,SNR=93
U15A North Rim 29.62 323 ⇓P P 17 41 44.1 +1.4
baz=30,SNR=57
S17A Black Ridge (B 29.65 327 ⇓P P 17 41 43.7 +0.8
baz=30,SNR=29
SWSC Sam W. Stewart 29.68 314 ⇑P P 17 41 43.5 +0.2
baz=30
W13A Hualapai Mount 29.70 319 ⇑P P 17 41 44.6 +1.2
baz=30,SNR=40
R18A Canyonlands Na 29.74 329 ⇑P P 17 41 44.2 +0.5
baz=30,SNR=9.0
DVTC Desert V Tower 29.74 313 ⇑P P 17 41 44.5 +0.7
baz=30,SNR=11
BC3 Big Chuckw Mtn 29.85 316 ⇑P P 17 41 45.3 +0.5
baz=30,SNR=28
Q19A Hogan Spring (29.87 330 ⇑P P 17 41 45.4 +0.5
baz=30,SNR=7.9
IRM Iron Mountain 29.95 317 ⇑P P 17 41 45.9 +0.3
baz=30,SNR=22
NEE2 Needles Airpor 29.96 318 ⇑P P 17 41 46.2 +0.5
baz=30
T15A Red Dirt Ranch 30.08 324 ⇓P P 17 41 47.7 +0.9
baz=30,SNR=32
MONP Monument Peak 30.09 313 ⇑P P 17 41 47.5 +0.6
baz=30,SNR=14
BBSR BB Station 30.10 48 *e*P P 17 41 45.5 -1.5
comp=Z,37nm,0.8s,mb5.2
BBSR *e*pP pP 17 42 00.4 -0.9
S16A Weppner Ranch, 30.14 326 ⇓P P 17 41 48.1 +0.9
baz=30,SNR=26
R17A Hanksville Air 30.18 328 ⇑P P 17 41 48.2 +0.6
baz=30,SNR=11
ECSD EROS,Sioux Fal 30.20 352 *e*P P 17 41 45.5 -2.2
V13A Grand Canyon W 30.25 321 ⇓P P 17 41 49.2 +1.0
baz=30,SNR=41
P19A Cripple Cowboy 30.27 331 ⇑P P 17 41 48.6 +0.2
baz=30
BELC Belle Mtn. 30.42 316 ⇑P P 17 41 50.3 +0.5
baz=30,SNR=8.8
W12A Cal New Ari 30.45 319 ⇓P P 17 41 50.8 +0.8
baz=31,SNR=11
T14A Hurricane 30.51 323 ⇓P P 17 41 51.6 +1.0
baz=31,SNR=18
PFO Pinyon Flat Ob 30.52 315 *e*P P 17 41 51.2 +0.6
comp=Z,29nm,0.9s,mb5.1
PFO *e*pP pP 17 42 05.4 +0.4
PFO Pinyon Flat Ob 30.52 315 *e*P P 17 41 51.2 +0.6
PFO *e**PP pP 17 42 05.4 +0.4
PFO pmax pmax
comp=Z,29nm,0.9s,mb5.1
PFO Pinyon Flat Ob 30.52 315 ⇓P P 17 41 50.9 +0.3
baz=31,SNR=6.0
S15A Panguitch 30.53 325 ⇑P P 17 41 52.2 +1.5
baz=31,SNR=30
GMRC Granite Mounta 30.65 317 ⇑P P 17 41 52.4 +0.6
baz=31,SNR=26
Q16A Castle Valley 30.80 328 ⇑P P 17 41 54.5 +1.4
baz=31
R15A Junction 30.87 326 ⇑P P 17 41 54.7 +1.0
baz=31,SNR=6.6
O19A Miners Draw (B 30.87 332 ⇓P P 17 41 54.5 +0.8
baz=31
U12A Valley of Fire 30.96 321 ⇓P P 17 41 55.4 +0.8
baz=31,SNR=13
T13A Saint George 30.97 322 ⇑P P 17 41 55.7 +1.1
baz=31,SNR=19
P17A Butcher Ranch, 31.00 329 ⇑P P 17 41 55.5 +0.7
baz=31,SNR=8.7
MURC Murrieta 31.03 314 ⇑P P 17 41 55.2 +0.1
baz=31
S14A Cedar City 31.05 324 ⇑P P 17 41 56.3 +1.1
baz=31,SNR=17
HEC Hector,Ludlow 31.13 317 ⇓P P 17 41 57.2 +1.2
baz=31,SNR=16
V11A Goodsprings 31.15 319 ⇓P P 17 41 56.8 +0.6
baz=31,SNR=13
TUQ Turquoise Moun 31.22 318 ⇑P P 17 41 57.6 +0.8
baz=31,SNR=8.4
O18A Roosevelt 31.26 331 ⇓P P 17 41 58.2 +1.2
baz=31,SNR=5.5
T12A Moapa 31.26 321 ⇑P P 17 41 58.0 +0.8
baz=31
S13A Holt Ranch, En 31.32 323 ⇓P P 17 41 58.8 +1.2
baz=32,SNR=52
N19A John Jarvie Ra 31.37 333 ⇑P P 17 41 59.1 +1.0
baz=32
U11A Corn Creek 31.48 320 ⇑P P 17 42 00.1 +1.0
baz=32
Q15A Fillmore 31.49 327 ⇑P P 17 41 59.6 +0.4
baz=32,SNR=8.7
L21A Rawlins 31.50 336 ⇓P P 17 41 58.7 -0.4
baz=32,SNR=9.2
O17A Robinson Place 31.55 330 ⇑P P 17 42 01.0 +1.4
baz=32,SNR=13
P16A Fountain Green 31.57 328 ⇑P P 17 42 00.5 +0.7
baz=32
N18A Larsen Ranch, 31.66 332 ⇑P P 17 42 01.1 +0.4
baz=32,SNR=7.0
BFSC Mount Baldy St 31.70 314 ⇑P P 17 42 01.1 +0.1
baz=32,SNR=7.3
GSC Goldstone 31.72 317 ⇓P P 17 42 01.8 +0.6
baz=32,SNR=6.2
SHOC Shoshone 31.73 318 ⇓P P 17 42 02.0 +0.7
baz=32
CIS Catalina Islan 31.78 313 ⇓P P 17 42 02.3 +0.6
baz=32,SNR=6.5
R13A O'Grain Ranch, 31.79 324 ⇑P P 17 42 03.8 +2.0
baz=32,SNR=55
P15A Leamington 31.86 328 ⇑P P 17 42 03.1 +0.8
baz=32,SNR=12
T11A Corn Creek, Al 31.90 321 ⇑P P 17 42 03.5 +0.7
baz=32,SNR=18
S12A Delamar Landin 31.92 322 ⇑P P 17 42 04.2 +1.2
baz=32,SNR=12
O16A Springville 31.94 329 ⇓P P 17 42 03.8 +0.7
baz=32,SNR=22
Q14A Sevier Lake (B 31.97 326 ⇓P P 17 42 04.6 +1.2
baz=32,SNR=49
U10A Ash Meadows, A 32.08 319 ⇑P P 17 42 05.3 +1.0
baz=32,SNR=22
DECC Green Verdugo 32.17 314 ⇓P P 17 42 05.7 +0.5
baz=32
N17A Moffit Pass 32.18 331 ⇓P P 17 42 06.2 +1.0
baz=32,SNR=9.6
RSSD Black Hills 32.23 342 *e*P P 17 42 04.8 -0.7
comp=Z,5.8nm,0.8s,mb4.5
RSSD Black Hills 32.23 342 *e*P P 17 42 04.8 -0.8
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
R12A Pony Springs, 32.26 323 ⇑P P 17 42 07.3 +1.4
baz=32,SNR=36
EDW2 Edwards Air Fo 32.28 315 ⇑P P 17 42 06.6 +0.5
baz=32,SNR=10
P14A Drum Mountains 32.29 327 ⇓P P 17 42 07.3 +1.1
baz=32,SNR=27
TPNV Topopah Spring 32.35 320 ⇓P P 17 42 08.0 +1.3
baz=32
Q13A Wheeler Ranch, 32.36 325 ⇑P P 17 42 08.1 +1.3
baz=32,SNR=30
SADO Sadowa 32.36 16 P P 17 42 04.4 -2.3
comp=Z,62nm,0.6s,mb5.6,baz=222,slow=8.9,SNR=54
LRMC Laurel Mountai 32.41 316 ⇓P P 17 42 07.7 +0.5
baz=32,SNR=20
N16A Rees Ranch, Co 32.42 330 ⇑P P 17 42 08.2 +0.9
baz=33,SNR=11
L19A Farson 32.43 334 ⇓P P 17 42 08.2 +0.9
baz=33
FURC Furnace Creek, 32.45 319 ⇑P P 17 42 07.8 +0.2
baz=33
S11A Rachel 32.48 321 ⇓P P 17 42 09.1 +1.2
baz=33,SNR=10
SNCC San Nicolas Is 32.51 311 ⇑P P 17 42 08.2 +0.1
baz=33
M17A Scullys Gap (B 32.51 332 ⇓P P 17 42 08.0 -0.1
baz=33,SNR=13
DUG Dugway 32.59 328 *e*P P 17 42 09.7 +0.9
comp=Z,18nm,0.9s,mb5.0
DUG Dugway 32.59 328 *e*P P 17 42 09.7 +0.9
DUG pmax pmax
comp=Z,18nm,0.9s,mb5.0
DUG Dugway 32.59 328 ⇓P P 17 42 09.5 +0.7
baz=33
MPMC Manual Prospec 32.61 317 ⇓P P 17 42 09.6 +0.5
baz=33,SNR=37
BLG Laguna Peak 32.61 313 ⇑P P 17 42 09.2 +0.1
baz=33
P13A Bates Ranch, G 32.70 326 ⇓P P 17 42 11.5 +1.7
baz=33,SNR=67
M16A Huntsville 32.84 330 ⇓P P 17 42 11.8 +0.9
baz=33,SNR=7.0
R11A Troy Canyon, C 32.85 323 ⇑P P 17 42 12.3 +1.2
baz=33,SNR=43
Q12A Willow Creek R 32.87 324 ⇑P P 17 42 12.0 +0.8
baz=33,SNR=9.8
BSC Santa Cruz Isl 32.96 312 ⇓P P 17 42 12.5 +0.4
baz=33,SNR=5.7
N15A Stansbury Isla 32.96 329 ⇓P P 17 42 12.7 +0.7
baz=33,SNR=5.9
ARVC Arvin 32.99 315 ⇑P P 17 42 13.0 +0.7
baz=33
ISA Isabella 33.04 316 ⇓P P 17 42 13.5 +0.7
baz=33,SNR=9.1
BW06 Boulder Array 33.06 334 ⇓P P 17 42 13.2 +0.4
baz=33
PDAR Pinedale Array 33.06 334 P P 17 42 12.0 -0.8
comp=Z,4.9nm,0.7s,mb4.6,baz=140,slow=9.2,SNR=16
PDAR PcP PcP 17 44 54.0 -1.4
comp=Z,8.8nm,1.0s,baz=151,slow=3.4,SNR=9.5
PDAR pPcP 17 45 09.8
comp=Z,4.8nm,0.8s,baz=124,slow=5.2,SNR=6.4
GRAC Grapevine Rang 33.09 319 ⇑P P 17 42 14.4 +1.2
baz=33,SNR=20
O13A Hicks Ranch, I 33.16 326 ⇓P P 17 42 14.9 +1.1
baz=33,SNR=7.0
S10A Tonopah Range, 33.18 321 ⇑P P 17 42 15.2 +1.3
baz=33,SNR=56
Q11A Duckwater 33.22 323 ⇑P P 17 42 15.4 +1.1
baz=33,SNR=49
CWC Cottonwood Cre 33.22 317 ⇓P P 17 42 14.5 +0.2
baz=33
R10A Warm Springs 33.23 322 ⇓P P 17 42 16.2 +1.8
baz=33,SNR=42
N14A Grayback Hills 33.27 328 ⇑P P 17 42 15.5 +0.8
baz=33,SNR=29
L16A Fish Haven 33.29 331 ⇑P P 17 42 14.9 0.0
baz=34,SNR=25
M15A Larsen Ranch, 33.35 330 ⇓P P 17 42 16.0 +0.6
baz=34
S09A Goldfield 33.44 320 ⇓P P 17 42 16.9 +0.6
baz=34,SNR=40
VES Vestal, Richgr 33.55 316 ⇑P P 17 42 18.3 +1.1
baz=34
PKM Peak Mountain 33.55 314 ⇓P P 17 42 17.7 +0.4
baz=34,SNR=8.5
MDV Middlebury 33.59 23 *e*P P 17 42 17.0 -0.5
LONY Lake Ozonia 33.62 21 *e*P P 17 42 15.7 -2.0
comp=Z,154nm,1.2s,mb5.8
LONY *e*pP pP 17 42 31.3 -0.8
Q10A Clear Creek Ra 33.64 322 ⇓P P 17 42 19.6 +1.7
baz=34,SNR=59
R09A Tonopah 33.67 321 ⇓P P 17 42 19.2 +1.0
baz=34,SNR=44
O12A Currie 33.67 326 ⇓P P 17 42 19.4 +1.2
baz=34,SNR=42
L15A Malad City 33.74 330 ⇑P P 17 42 18.7 0.0
baz=34,SNR=34
P11A Circle Ranch, 33.75 324 ⇑P P 17 42 19.6 +0.8
baz=34,SNR=8.2
N13A Wendover, West 33.80 327 ⇓P P 17 42 20.2 +0.9
baz=34,SNR=13
M14A Sheep Mountain 33.83 329 ⇓P P 17 42 20.1 +0.5
baz=34,SNR=78
SMMC Simmler 33.90 314 ⇓P P 17 42 20.5 +0.3
baz=34,SNR=5.1
RCTC Rector, Farmer 33.92 316 ⇓P P 17 42 21.1 +0.7
baz=34
K16A Soda Springs 34.01 332 ⇑P P 17 42 22.5 +1.4
baz=34
J17A Brown Place, J 34.04 334 ⇑P P 17 42 21.4 +0.1
baz=34
MTUM Tungsten Hills 34.07 318 *e*P P 17 42 22.4 +0.7
MTUM *e*pP pP 17 42 36.8 +0.7
O11A Cowboy Ranch, 34.08 325 ⇓P P 17 42 22.7 +0.9
baz=34,SNR=6.0
Q09A Carvers 34.11 322 ⇑P P 17 42 23.1 +1.0
baz=34

M13A **Montello** 34.15 328 ⇓P P 17 42 22.9 +0.6
baz=34,SNR=81
L14A **Malta** 34.17 330 ⇑P P 17 42 22.9 +0.3
baz=34,SNR=47
P10A **Eureka** 34.20 323 ⇑P P 17 42 23.9 +1.1
baz=34,SNR=13
N12A **Clover Valley,** 34.24 326 ⇓P P 17 42 24.1 +0.9
baz=34,SNR=22
ELK **Elko** 34.28 326 *e*P P 17 42 24.1 +0.7
comp=Z,35nm,0.8s,mb5.3
ELK *e*pP pP 17 42 38.8 +0.9
ELK *e*pP PcP 17 45 14.4 +16
ELK Elko 34.28 326 *e*P **P 17 42 24.2 +0.7**
ELK *e**PP pP 17 42 38.8 +0.9
ELK pmax pmax
comp=Z,35nm,0.8s
K15A **Arbon** 34.33 331 ⇓P P 17 42 23.6 -0.3
baz=34,SNR=15
J16A **Bone** 34.37 333 ⇑P P 17 42 24.3 +0.1
baz=34,SNR=8.0
R08A **Mina** 34.38 320 ⇓P P 17 42 25.4 +1.1
baz=34,SNR=6.9
I17A **Pilgram Creek** 34.43 334 ⇓P P 17 42 24.9 +0.2
baz=35,SNR=8.5
K14A **Jones Ranch, D** 34.53 330 ⇓P P 17 42 25.6 -0.1
baz=35,SNR=31
KCC **Kaiser Creek** 34.54 318 ⇑P P 17 42 26.3 +0.5
baz=35,SNR=31
NVAR **Mina Array Bea** 34.55 320 P P 17 42 27.0 +1.2
comp=Z,79nm,0.8s,mb5.7,baz=131,slow=8.3,SNR=309
NVAR pP pP 17 42 40.8 +0.4
comp=Z,44nm,0.6s,baz=79,slow=31,SNR=22
NVAR PcP PcP 17 44 58.8 -0.9
comp=Z,17nm,0.8s,baz=125,slow=3.1,SNR=9.6
NVAR pPcP 17 45 15.3
comp=Z,24nm,0.9s,baz=124,slow=4.6,SNR=8.4
NVAR Mina Array Bea 34.55 320 P **P 17 42 27.0 +1.2**
NVAR pP pP 17 42 40.8 +0.4
NVAR PcP PcP 17 44 58.8 -0.8
NVAR pPcP 17 45 15.3
L13A **Double Diamond** 34.57 329 ⇑P P 17 42 26.3 +0.4
baz=35,SNR=11
M12A **Wells** 34.58 327 ⇑P P 17 42 26.5 +0.5
baz=35,SNR=69
Q08A **Gabbs** 34.58 321 ⇑P P 17 42 26.6 +0.5
baz=35,SNR=20
N11A **Elko Archery C** 34.60 326 ⇓P P 17 42 27.4 +1.2
baz=35
PKD **Parkfield** 34.60 315 ⇓P P 17 42 26.4 0.0
baz=35,SNR=12
T06C **Millerton Lake** 34.62 317 ⇓P P 17 42 26.0 -0.5
baz=35
O10A **Cortez Mining,** 34.67 324 ⇑P P 17 42 28.1 +1.2
baz=35,SNR=12
I16A **Newdale** 34.79 333 ⇑P P 17 42 28.8 +1.0
baz=35
H17A **Grant Village** 34.82 335 ⇑P P 17 42 28.3 +0.2
baz=35
J15A **Blackfoot** 34.84 332 ⇑P P 17 42 28.2 0.0
baz=35,SNR=8.3
RLMT **Red Lodge** 34.90 337 *e*P P 17 42 27.9 -0.9
comp=Z,7.1nm,0.7s,mb4.7
RLMT *e*pP PcP 17 45 14.8 +14
RLMT Red Lodge 34.90 337 ⇓P **P 17 42 28.8 0.0**
baz=35
N10A **Dunphy** 34.96 325 ⇓P P 17 42 29.6 +0.3
baz=35
O09A **Fish Creek Ran** 34.98 323 ⇓P P 17 42 30.6 +1.1
baz=35,SNR=28
U04C **Hernandez Rese** 34.99 315 ⇓P P 17 42 30.2 +0.5
baz=35,SNR=8.4
K13A **Stover Farm, H** 35.05 329 ⇓P P 17 42 30.4 +0.3
baz=35
M11A **Holland Ranch,** 35.05 326 ⇓P P 17 42 31.0 +0.8
baz=35,SNR=12
V03C **Hunter Liggett** 35.12 314 ⇓P P 17 42 31.2 +0.4
baz=35,SNR=6.2
L12A **House Creek Ra** 35.15 328 ⇓P P 17 42 31.2 +0.2
baz=35,SNR=18
G18A **Lazy EL Ranch,** 35.18 337 ⇑P P 17 42 30.2 -1.0
baz=35,SNR=7.7
P08A **Dixie Valley** 35.20 322 ⇓P P 17 42 32.3 +0.9
baz=35
S05C **Merced** 35.22 317 ⇑P P 17 42 32.1 +0.5
baz=35,SNR=8.0
J14A **Carey** 35.28 331 ⇑P P 17 42 31.8 -0.3
baz=35,SNR=24
R06C **Coleville** 35.32 319 ⇓P P 17 42 33.4 +0.9
baz=35,SNR=6.4
H16A **Russell Place,** 35.35 334 ⇓P P 17 42 33.0 +0.3
baz=36,SNR=9.7
K12A **Draper Farm, C** 35.45 329 ⇓P P 17 42 33.8 +0.3
baz=36,SNR=23
M10A **I.L. Ranch, Tu** 35.52 326 ⇑P P 17 42 35.1 +0.9
baz=36
QLMT **Earthquake Lak** 35.53 334 *e*P P 17 42 34.7 +0.5
L11A **Cat Creek Ranc** 35.55 327 ⇑P P 17 42 34.6 +0.2
baz=36,SNR=13
P07A **Fallon** 35.59 321 ⇑P P 17 42 35.4 +0.6
baz=36
GCMT **Greycliff** 35.62 337 *e*P P 17 42 33.6 -1.3
O08A **Rochester Mine** 35.62 323 ⇑P P 17 42 35.8 +0.8
baz=36
N09A **Rock Creek Ran** 35.62 324 ⇑P P 17 42 35.8 +0.7
baz=36,SNR=15
CMB **Columbia Colle** 35.64 318 ⇓P P 17 42 35.6 +0.4
baz=36,SNR=16
G17A **Pierce Place,** 35.65 336 ⇑P P 17 42 36.9 +1.7
baz=36
J13A **Cove Ranch, Pi** 35.65 330 ⇓P P 17 42 35.2 -0.1
baz=36,SNR=8.6
PACP **Pacheco Peak** 35.68 316 ⇓P P 17 42 35.1 -0.5
baz=36,SNR=7.1
I14A **Mackay** 35.71 331 ⇓P P 17 42 36.2 +0.5
baz=36,SNR=19
F18A **Big Timber** 35.73 337 ⇑P P 17 42 35.3 -0.6
baz=36,SNR=9.4
L10A **Juniper Basin** 35.87 327 ⇑P P 17 42 37.2 0.0
baz=36,SNR=34
H15A **Lima** 35.88 333 ⇑P P 17 42 37.6 +0.4
baz=36,SNR=6.3
HLID **Hailey** 35.89 330 *e*P P 17 42 37.3 0.0
comp=Z,26nm,0.8s,mb5.2
HLID *e*pP pP 17 42 52.0 +0.1
HLID Hailey 35.89 330 ⇓P **P 17 42 37.5 +0.2**
baz=36
N08A **GE Springer Mi** 35.92 323 ⇓P P 17 42 37.8 +0.2
baz=36,SNR=12
M09A **Marrel Ranch,** 35.96 325 ⇑P P 17 42 38.9 +1.0
baz=36,SNR=31
O07A **Toulon** 35.97 322 ⇑P P 17 42 38.6 +0.6
baz=36,SNR=33
WCN **Washoe City** 35.98 320 ⇓P P 17 42 38.9 +0.8
baz=36,SNR=5.2
J12A **Stokes Ranch,** 36.00 329 ⇑P P 17 42 38.3 +0.1
baz=36,SNR=15
G16A **Moss Hill, Enn** 36.01 334 ⇑P P 17 42 39.1 +0.8
baz=36,SNR=16
I13A **Wildhorse Cree** 36.01 331 ⇓P P 17 42 38.8 +0.4
baz=36,SNR=5.7
F17A **Fitzpatrick Pl** 36.09 336 ⇓P P 17 42 39.2 +0.2
baz=36,SNR=13
K11A **Parker Ranch,** 36.12 328 ⇓P P 17 42 39.3 0.0
baz=36,SNR=21
R04C **Big Horse Ranc** 36.12 318 ⇓P P 17 42 40.1 +0.7
baz=36,SNR=7.2
MCMT **McKenzie Canyo** 36.14 333 *e*P P 17 42 39.9 +0.5
H14A **Leadore** 36.20 332 ⇑P P 17 42 40.7 +0.7
baz=36,SNR=20
G15A **Dillon** 36.25 334 ⇑P P 17 42 40.8 +0.5
baz=36,SNR=13
DGMT **Dagmar** 36.26 345 ⇓P P 17 42 40.7 +0.3
baz=36,SNR=5.8
BOZ **Bozeman (W)** 36.27 335 ⇓P P 17 42 40.2 -0.3
baz=36
LAVA **Lava Cap Winer** 36.28 319 ⇑P P 17 42 40.8 +0.1
baz=36,SNR=8.2
WENL **Wente Vineyard** 36.32 316 ⇓P P 17 42 42.1 +1.0
baz=36,SNR=6.1
E18A **Harlowton** 36.36 338 ⇓P P 17 42 40.8 -0.5
baz=36
F16A **Kennard Place,** 36.38 335 ⇓P P 17 42 41.9 +0.4
baz=37
N07B **Gerlach** 36.41 323 ⇓P P 17 42 42.5 +0.7
baz=36,SNR=11
I12A **Atlanta** 36.41 330 ⇓P P 17 42 42.4 +0.6
baz=37,SNR=84
L09A **Wilkinson Ranc** 36.48 325 ⇓P P 17 42 42.5 +0.1
baz=37,SNR=10.0
MFID **Camas Ranch** 36.48 329 ⇑P P 17 42 42.3 0.0
baz=37,SNR=14
M08A **Happy Creek Ra** 36.50 324 ⇑P P 17 42 42.7 +0.2
baz=37,SNR=33
JRSC **Jasper Ridge** 36.53 316 ⇑P P 17 42 43.1 +0.3
baz=37
ULM **Lac du Bonnet** 36.53 354 P P 17 42 40.0 -2.7
comp=Z,40nm,0.8s,mb5.3,baz=173,slow=9.6,SNR=19
ULM pP pP 17 42 54.7 -2.5
comp=Z,29nm,0.8s,baz=183,slow=11,SNR=6.4
ULM PcP PcP 17 45 03.2 -2.0
comp=Z,19nm,0.8s,baz=160,slow=8.8,SNR=4.9
O06A **Flanigan** 36.54 321 ⇑P P 17 42 43.9 +1.0
baz=37,SNR=28
K10A **MacKenzie Ranc** 36.57 327 ⇑P P 17 42 43.2 +0.1
baz=37,SNR=31
BDM **Black Diamond** 36.57 317 ⇓P P 17 42 44.1 +0.9
baz=37
H13A **Challis** 36.57 331 ⇑P P 17 42 43.0 -0.1
baz=37,SNR=30
E17A **Martinsdale** 36.63 337 ⇑P P 17 42 43.7 +0.1
baz=37,SNR=8.2
BEKR **Beckwourth** 36.69 320 ⇓P P 17 42 45.2 +1.1
baz=37,SNR=59
F15A **Butte** 36.79 334 ⇑P P 17 42 44.9 0.0
baz=37,SNR=20
H12A **Diamond D Ranc** 36.84 331 ⇑P P 17 42 45.7 +0.3
baz=37,SNR=20
N06A **Buffalo Meadow** 36.90 322 ⇓P P 17 42 46.2 +0.2
baz=37,SNR=69
I11A **Placerville** 36.91 329 ⇓P P 17 42 46.4 +0.5
baz=37,SNR=74
G13A **Cobalt** 36.96 332 ⇓P P 17 42 46.5 +0.1
baz=37,SNR=14
L08A **Fields** 36.97 325 ⇑P P 17 42 46.9 +0.3
baz=37,SNR=87
J10A **Berg Farm, Mel** 36.97 328 ⇑P P 17 42 46.5 -0.1
baz=37
K09A **Rome** 36.97 326 ⇓P P 17 42 47.0 +0.5
baz=37,SNR=184
E16A **East Helena** 37.01 336 ⇓P P 17 42 46.6 -0.2
baz=37,SNR=14
O05C **Quincy** 37.09 320 ⇑P P 17 42 48.8 +1.2
baz=37,SNR=15
D17A **Six Diamond Ra** 37.14 337 ⇑P P 17 42 47.7 -0.3
baz=37,SNR=13
CVS **Carmenet Viney** 37.17 317 ⇓P P 17 42 48.6 +0.3
baz=37,SNR=6.0
HRY **Holter Researc** 37.22 336 *e*P P 17 42 48.3 -0.3
ORV **Oroville** 37.22 319 ⇓P P 17 42 49.0 +0.3
baz=37,SNR=12
WVOR **Wild Horse Val** 37.29 325 *e*P P 17 42 49.1 -0.1
comp=Z,49nm,0.8s,mb5.4
WVOR *e*pP PcP 17 45 22.8 +15
WVOR Wild Horse Val 37.29 325 *e*P **P 17 42 49.1 -0.2**
WVOR pmax pmax
comp=Z,49nm,0.8s,mb5.4
E15A **Deer Lodge** 37.32 335 ⇓P P 17 42 49.2 -0.2
baz=38,SNR=17
MCCM **Marconi Confer** 37.35 316 ⇑P P 17 42 50.0 +0.1
baz=38
NSHM **Saint Helena R** 37.37 317 *e*P P 17 42 50.3 +0.3
D16A **Dana Ranch, Ca** 37.37 336 ⇓P P 17 42 49.8 0.0
baz=38
K08A **Mann Creek Ran** 37.41 326 ⇓P P 17 42 51.0 +0.7
baz=38,SNR=128
O04C **Chester** 37.41 321 ⇑P P 17 42 50.8 +0.6
baz=38,SNR=24
L07A **Adell** 37.42 324 ⇓P P 17 42 50.7 +0.4
baz=38,SNR=92
J09A **Fry Pan Ranch,** 37.43 327 ⇓P P 17 42 50.7 +0.3
baz=38,SNR=67
MNRC **McLaughlin Nat** 37.45 318 ⇑P P 17 42 51.2 +0.6
baz=38,SNR=8.3
I10A **Payette** 37.45 329 ⇓P P 17 42 50.7 +0.1
baz=38
H11A **Donnelly** 37.51 330 ⇑P P 17 42 50.9 -0.1
baz=38,SNR=31
F13A **Darby** 37.54 333 ⇑P P 17 42 50.8 -0.5
baz=38,SNR=34
EGMT **Eagleton** 37.54 339 ⇓P P 17 42 51.1 -0.2
baz=38
C17A **Wharam Farm,** 37.57 338 ⇓P P 17 42 51.0 -0.5
baz=38,SNR=8.1
E14A **Clinton** 37.67 334 ⇓P P 17 42 52.5 +0.1
baz=38,SNR=15
D15A **Lincoln** 37.77 336 ⇓P P 17 42 53.1 -0.1
baz=38,SNR=20
H10A **Noah's Angus R** 37.79 329 ⇓P P 17 42 52.8 -0.6
baz=38,SNR=13
K07A **Rock Creek Ran** 37.80 325 ⇑P P 17 42 54.0 +0.5
baz=38,SNR=125
J08A **Circle Bar Ran** 37.82 326 ⇓P P 17 42 54.0 +0.3
baz=38,SNR=89
I09A **Lost Marbles R** 37.86 328 ⇑P P 17 42 54.0 +0.1
baz=38,SNR=45
LBCM **Butte Creek Ri** 37.87 321 P P 17 42 54.3 +0.1
MOD **Modoc** 37.90 323 ⇑P P 17 42 54.1 -0.2
baz=38,SNR=15
HOPS **Hopland** 37.93 317 ⇓P P 17 42 54.7 +0.1
baz=38
F12A **Elk City** 37.94 332 ⇑P P 17 42 54.1 -0.6
baz=38
CHMT **Chamberlain Mo** 37.96 335 *e*P P 17 42 53.9 -0.9
E13A **Victor** 37.99 333 ⇑P P 17 42 54.5 -0.5
baz=38,SNR=27
GASB **Alder Springs** 38.05 318 ⇑P P 17 42 57.4 +1.7
baz=38,SNR=21
C16A **Fuhringer Ranc** 38.08 337 ⇑P P 17 42 55.3 -0.5
baz=38,SNR=22
G11A **Walters Elk Ra** 38.14 331 ⇓P P 17 42 55.7 -0.7
baz=38,SNR=36
D14A **Greenough** 38.20 335 ⇑P P 17 42 56.2 -0.6
baz=38,SNR=21
I08A **Drewsey** 38.25 327 ⇑P P 17 42 56.9 -0.4
baz=38,SNR=7.7
BMO **Blue Mountains** 38.25 329 *e*P P 17 42 56.1 -1.2
comp=Z,16nm,0.9s,mb4.7
J07A **Hines** 38.28 326 ⇑P P 17 42 57.2 -0.4
baz=38,SNR=7.5
H09A **Durkee** 38.30 329 ⇓P P 17 42 57.3 -0.4
baz=38
C15A **Salmond Ranch,** 38.39 336 ⇑P P 17 42 58.3 -0.2
baz=39,SNR=15
F11A **Grangeville** 38.45 331 ⇓P P 17 42 58.4 -0.6
baz=39
WDC **Whiskeytown Da** 38.46 320 ⇑P P 17 42 56.9 -2.2
baz=39,SNR=10
G10A **Bishop Farm, J** 38.48 330 ⇓P P 17 42 58.6 -0.6
baz=39,SNR=22
B16A **M & M Farms, S** 38.58 338 ⇓P P 17 42 59.1 -0.9
baz=39
E12A **Beaver Dam Sad** 38.58 332 ⇑P P 17 42 59.0 -1.1
baz=39,SNR=40
D13A **Huson** 38.61 334 ⇓P P 17 42 59.8 -0.5
baz=39,SNR=33
KIPM **Iron Peak** 38.63 318 *e*P P 17 43 01.3 +0.7
KIPM *e*pP pP 17 43 14.9 -0.4
KIPM *e*pP PcP 17 45 28.0 +16
J06A **Christmas Vall** 38.67 325 ⇑P P 17 43 00.0 -0.8
baz=39,SNR=38
H08A **Prairie City** 38.72 328 ⇑P P 17 43 00.9 -0.3
baz=39,SNR=21
K05A **Summer Lake** 38.75 324 ⇑P P 17 43 01.1 -0.5
baz=39,SNR=9.5
G09A **Cove** 38.79 329 ⇑P P 17 43 00.6 -1.3
baz=39,SNR=22
B15A **Bradeley Ranch,** 38.81 337 ⇓P P 17 43 01.2 -0.8
baz=39,SNR=10
E11A **Bogner Ranch,** 38.83 332 ⇑P P 17 43 00.8 -1.3
baz=39,SNR=18
I07A **Izee** 38.86 326 ⇓P P 17 43 02.1 -0.4
baz=39,SNR=44
A16A **West Butte Ran** 38.98 338 ⇑P P 17 43 02.5 -0.9
baz=39,SNR=9.5
F10A **Beach Ranch, E** 39.02 330 ⇑P P 17 43 03.1 -0.6
baz=39,SNR=68
O01C **Eel River Cons** 39.03 318 ⇓P P 17 43 03.7 -0.2
baz=39,SNR=12
N02C **Big Bar** 39.08 320 ⇑P P 17 43 03.5 -0.8
baz=39,SNR=20
C13A **Hot Springs** 39.12 334 ⇓P P 17 43 03.6 -0.9
baz=39,SNR=8.1
B14A **Marquette Ranc** 39.13 336 ⇑P P 17 43 04.0 -0.6
baz=39
VSP **Spence Mountai** 39.13 323 P P 17 43 04.9 +0.2
I06A **Prineville** 39.15 326 ⇓P P 17 43 04.3 -0.5
baz=39,SNR=26
F09A **S2 Ranch, Elgi** 39.16 330 ⇑P P 17 43 04.4 -0.5
baz=39,SNR=10
YBH **Yreka Blue Hor** 39.23 321 ⇓P P 17 43 04.0 -1.6
baz=39,SNR=27
H07A **Lands Inn, Kim** 39.23 327 ⇓P P 17 43 04.8 -0.7
baz=39,SNR=32
E10A **Myers Farm, Un** 39.34 331 ⇑P P 17 43 05.0 -1.4
baz=40
G08A **Pilot Rock** 39.40 328 ⇓P P 17 43 05.8 -1.1
baz=40,SNR=16
D11A **Klaveano Farm,** 39.40 332 ⇑P P 17 43 05.5 -1.4
baz=40,SNR=6.2
A15A **Johnson Ranch,** 39.42 337 ⇓P P 17 43 06.4 -0.7
baz=40,SNR=28
LNOR **Lincton Mounta** 39.46 329 *e*P P 17 43 05.0 -2.4
C12B **Naegeli Ranch,** 39.52 334 ⇓P P 17 43 07.0 -0.9
baz=40
JCC **Jacoby Creek** 39.53 319 ⇑P P 17 43 08.1 0.0
baz=40,SNR=9.1
B13A **Whitefish** 39.62 335 ⇑P P 17 43 08.2 -0.5
baz=40,SNR=17
F08A **Pendleton** 39.66 329 ⇑P P 17 43 07.5 -1.6
baz=40,SNR=11
A14A **Double T Ranch** 39.68 337 ⇑P P 17 43 08.8 -0.5
baz=40,SNR=36
H06A **Lindquist Farm** 39.74 327 ⇓P P 17 43 09.2 -0.5
baz=40,SNR=13
VIPM **Ingram Point** 39.74 326 P P 17 43 09.5 -0.3
G07A **Ruggs Ranch, H** 39.74 328 ⇑P P 17 43 08.8 -1.0
baz=40,SNR=16
D10A **Wagner Farm, O** 39.84 332 ⇑P P 17 43 09.0 -1.5
baz=40
E09A **Wood Farm, Sta** 39.85 330 ⇑P P 17 43 09.3 -1.4
baz=40,SNR=6.4
I05A **Bend** 39.88 325 ⇓P P 17 43 11.1 +0.2
baz=40,SNR=7.4
HUMO **Hull Mountain** 39.89 322 ⇓P P 17 43 09.4 -1.7
baz=40,SNR=6.7
C11A **Tepee Creek (N** 39.96 333 ⇓P P 17 43 10.8 -0.8
baz=40,SNR=28
L02A **Cave Junction** 40.02 321 ⇑P P 17 43 11.0 -1.1
baz=40
B12A **Libby** 40.16 334 ⇓P P 17 43 13.1 0.0
baz=40,SNR=7.8
M01C **Crescent City** 40.16 320 ⇓P P 17 43 13.4 +0.1
baz=40,SNR=8.8
H05A **Madras** 40.16 326 ⇓P P 17 43 13.0 -0.3
baz=40
G06A **Carlson Farm,** 40.23 327 ⇑P P 17 43 13.4 -0.4
baz=40,SNR=17
E08A **Dider Farm, El** 40.28 330 ⇑P P 17 43 12.9 -1.3
baz=40
K02A **Glendale** 40.30 322 ⇑P P 17 43 13.8 -0.7
baz=40
D09A **Jones Farm, Ri** 40.33 331 ⇓P P 17 43 13.8 -0.8
baz=40,SNR=20
IRO **Indian Ridge** 40.33 324 P P 17 43 14.0 -0.6
C10A **Spilker Farm,** 40.42 332 ⇓P P 17 43 14.3 -1.0
baz=41
B11A **Sandpoint** 40.47 334 ⇑P P 17 43 14.9 -0.8
baz=41,SNR=11
RSW **Rattlesnake Hi** 40.48 329 *e*P P 17 43 14.3 -1.6
A12A **Yaak River Ran** 40.55 335 ⇑P P 17 43 16.1 -0.3
baz=41,SNR=14
G05A **Wamic** 40.60 326 ⇓P P 17 43 17.4 +0.6
baz=41,SNR=32
BROR **Big Rock Looko** 40.60 325 P P 17 43 16.4 -0.5
D08A **Wollman Farm,** 40.62 330 ⇑P P 17 43 16.1 -0.9
baz=41,SNR=9.2
F06A **Goldendale** 40.66 327 ⇓P P 17 43 17.7 +0.4
baz=41,SNR=50
NEW **Newport** 40.66 333 *e*P P 17 43 16.1 -1.2
comp=Z,8.0nm,0.6s,mb4.5
NEW Newport 40.66 333 *e*P **P 17 43 16.1 -1.3**
NEW pmax pmax
comp=Z,8.0nm,0.6s
J02A **Umpqua** 40.70 323 ⇑P P 17 43 17.6 -0.2
baz=41,SNR=27
H04A **Detroit Lake** 40.71 325 ⇑P P 17 43 17.6 -0.2
baz=41,SNR=43
E07A **Sunnyside** 40.72 329 ⇓P P 17 43 17.5 -0.3
baz=41,SNR=7.7
OD2 **Odessa Site #2** 40.75 331 P P 17 43 17.4 -0.7
HOOD **Mount Hood Mea** 40.83 326 *e*P P 17 43 19.4 +0.6
comp=Z,808nm,0.9s,mb6.3
HOOD *e*pP pP 17 43 31.7 -1.8
C09A **Chrisman Ranch** 40.84 332 ⇓P P 17 43 18.6 -0.2
baz=41,SNR=22
A11A **Hall Mountain,** 40.86 334 ⇑P P 17 43 18.7 -0.3
baz=41
KEBM **Edson Butte** 40.87 322 *e*P P 17 43 19.4 +0.2
KEBM *e*pP pP 17 43 34.1 +0.2
I03A **Eugene** 40.89 324 ⇑P P 17 43 18.9 -0.4
baz=41,SNR=26
K01A **Sixes** 40.91 321 ⇑P P 17 43 20.0 +0.5
baz=41,SNR=9.2
MXC **Moxie City** 40.96 329 P P 17 43 20.0 +0.2
SSOR **Sweet Springs** 40.97 325 P P 17 43 19.4 -0.6
F05A **White Salmon** 41.09 327 ⇓P P 17 43 21.4 +0.5
baz=41
C08A **Higginbotham F** 41.19 331 ⇓P P 17 43 21.6 -0.1
baz=41,SNR=13
G04A **Mulino** 41.20 326 ⇑P P 17 43 21.9 0.0
baz=41,SNR=9.2
D07A **Quincy** 41.22 330 ⇑P P 17 43 21.5 -0.4
baz=41,SNR=8.5
I02A **Mapleton** 41.23 323 ⇑P P 17 43 22.5 +0.5
baz=41,SNR=10
B09A **Rice** 41.24 332 ⇓P P 17 43 21.0 -1.1
baz=41,SNR=14
COR **Corvallis** 41.28 324 *e*P P 17 43 22.0 -0.4
comp=Z,105nm,1.0s,mb5.4
COR *e*pP pP 17 43 36.5 -0.7
COR Corvallis 41.28 324 *e*P **P 17 43 22.0 -0.5**
COR *e**PP pP 17 43 36.5 -0.7
COR pmax pmax
comp=Z,105nm,1.0s,mb5.4
E06A **Yakima** 41.28 328 ⇑P P 17 43 22.6 +0.1
baz=41
H03A **Soap Creek Ran** 41.33 324 ⇓P P 17 43 22.9 0.0
baz=42,SNR=18
A10A **Northport** 41.40 333 ⇓P P 17 43 22.4 -0.9
baz=42
C07A **Waterville** 41.61 330 ⇑P P 17 43 24.9 -0.2
baz=42,SNR=12
F04A **Amboy** 41.63 327 ⇑P P 17 43 25.6 +0.2
baz=42,SNR=6.1
D06A **Cle Elum** 41.65 329 ⇓P P 17 43 25.1 -0.3
baz=42
WPW **White Pass** 41.68 328 P P 17 43 26.1 +0.4
ETW **Entiat** 41.68 330 *e*P P 17 43 25.7 0.0
ETW *e*pP pP 17 43 40.2 -0.3
E05A **Randle** 41.70 328 ⇓P P 17 43 26.1 +0.2
baz=42,SNR=29
FFC **Flin Flon** 41.71 350 P P 17 43 24.7 -1.1
comp=Z,193nm,0.7s,mb5.8,SNR=7.6
FFC **Flin Flon** 41.71 350 *e*P P 17 43 23.8 -2.0
comp=Z,13nm,0.6s,mb4.7
FFC *e*pP pP 17 43 38.3 -2.4
FFC Flin Flon 41.71 350 *e*P **P 17 43 23.8 -2.0**
FFC *e**PP pP 17 43 38.3 -2.3
FFC pmax pmax
comp=Z,13nm,0.6s,mb4.7
G03A **Yamhill** 41.72 325 ⇑P P 17 43 26.2 +0.1
baz=42,SNR=31
SIV **San Ignacio** 41.72 134 P P 17 43 24.6 -1.8
comp=Z,96nm,0.8s,mb5.5,baz=307,slow=9.1,SNR=20
H02A **Toledo** 41.73 324 ⇓P P 17 43 26.5 +0.3
baz=42
B08A **Colville Reser** 41.74 331 ⇑P P 17 43 25.3 -0.9
baz=42
A09A **Danville** 41.84 333 ⇑P P 17 43 25.9 -1.1
baz=42
HEBO **Mount Hebo** 41.92 325 *e*P P 17 43 27.4 -0.2
comp=Z,156nm,0.9s,mb5.6
LVC **Limon Verde** 42.09 149 *e*P P 17 43 26.8 -2.5
A08A **Turner Farm, O** 42.14 332 ⇓P P 17 43 28.5 -0.9
baz=42,SNR=6.3
C06A **Tall Timber Ra** 42.18 330 ⇑P P 17 43 29.3 -0.5
baz=42
B07A **Winthrop** 42.18 331 ⇓P P 17 43 29.6 -0.2
baz=42
E04A **Onalaska** 42.22 327 ⇑P P 17 43 29.8 -0.3
baz=42
D05A **Enumclaw** 42.23 328 ⇓P P 17 43 29.7 -0.5
baz=42,SNR=5.9

F03A Seaside 42.25 326 ⇓P P 17 43 31.4 +1.0
baz=42
BMW Boistfort Moun 42.41 327 *e*P P 17 43 31.4 -0.3
BMW *e*pP pP 17 43 45.9 -0.7
C05A Tolt Reservoir 42.41 329 ⇓P P 17 43 31.0 -0.7
baz=43
E03A Lebam 42.64 326 ⇑P P 17 43 33.3 -0.2
baz=43
A07A Ashnola River, 42.72 331 ⇑P P 17 43 33.7 -0.4
baz=43
RPW Rockport 42.84 330 *e*P P 17 43 33.7 -1.4
RPW *e*pP pP 17 43 47.3 -2.7
JCW Jim Creek 42.87 329 *e*P P 17 43 33.9 -1.5
JCW *e*pP pP 17 43 47.8 -2.4
JCW *e*pP PcP 17 45 36.9 +11
B06A Marblemount 42.87 330 ⇓P P 17 43 34.3 -1.1
baz=43,SNR=5.7
B05A Bryant 43.00 329 ⇑P P 17 43 35.2 -1.2
baz=43
C04A Brinnon 43.08 328 ⇑P P 17 43 36.2 -0.9
baz=43
D03A Wishkah Elem. 43.11 327 ⇑P P 17 43 37.5 +0.2
baz=43
EDM Edmonton 43.17 340 *e*P P 17 43 35.7 -2.0
EDM *e*pP pP 17 43 50.3 -2.2
A05A Maple Falls 43.49 330 ⇑P P 17 43 39.2 -1.2
baz=44
B04A Port Angeles 43.57 328 ⇓P P 17 43 40.8 -0.3
baz=44
A04A Legoe Bay, Lum 43.61 329 ⇑P P 17 43 41.2 -0.1
baz=44
CFAA Coronel Fontan 50.10 155 P P 17 44 30.2 -1.9
comp=Z,5.6nm,0.7s,mb4.7,baz=342,slow=7.7,SNR=3.4
BDFB Brasilia 51.43 123 P P 17 44 39.9 -2.5
comp=Z,7.5nm,0.7s,mb4.7,baz=299,slow=18,SNR=15
BDFB PcP PcP 17 45 55.7 -0.7
comp=Z,5.6nm,0.7s,baz=200,slow=13,SNR=4.4
YKA Yellowknife Ar 51.45 346 P P 17 44 39.2 -2.7
comp=Z,5.8nm,0.7s,mb4.6,baz=149,slow=7.3,SNR=22
YKA pP pP 17 44 54.9 -2.2
comp=Z,18nm,0.7s,baz=150,slow=-7.4,SNR=23
YKA PcP PcP 17 45 53.2 -2.4
comp=Z,12nm,0.8s,baz=147,slow=4.0,SNR=13
YKA pPcP 17 46 08.7
comp=Z,13nm,0.9s,baz=154,slow=3.7,SNR=7.8
YKA Yellowknife Ar 51.45 346 P P 17 44 39.2 -2.7
YKA pP pP 17 44 54.9 -2.2
YKA PcP PcP 17 45 53.2 -2.4
YKA pPcP 17 46 08.7
YKA Yellowknife Ar 51.45 346 P P 17 44 39.2 -2.7
YKA *PP pP 17 44 54.9 -2.2
YKA 17 45 53.2
DLBC Dease Lake 53.28 335 P P 17 44 54.9 -0.7
comp=Z,16nm,0.7s,mb5.1,baz=137,slow=4.8,SNR=33
DLBC pP pP 17 45 10.4 -0.4
comp=Z,19nm,0.6s,baz=143,slow=5.8,SNR=13
PLCA Paso Flores 57.45 162 P P 17 45 23.6 -2.2
comp=Z,14nm,1.0s,mb4.9,baz=343,slow=10,SNR=8.0
CAM3 Guarapari 60.14 124 ⇑*i*P P 17 45 42.8 -2.1
CAM3 *i* 17 45 46.0
CAM3 *i* pP 17 45 56.8 -3.5
CAM3 *i* pP 17 46 00.7 +0.4
EGAK Eagle 61.30 338 *e*P P 17 45 48.8 -3.2
comp=Z,5.9nm,0.8s,mb4.8
MENT Mentasta 61.37 335 *e*P P 17 45 51.2 -1.3
PMR Palmer 63.09 333 *e*P P 17 46 03.1 -0.9
comp=Z,17nm,0.6s,mb5.3
PMR Palmer 63.09 333 *e*P P 17 46 03.1 -0.9
PMR pmax pmax
comp=Z,17nm,0.6s,mb5.3
SLKM Skilak Lake 63.19 331 *e*P P 17 46 03.7 -1.0
SLKM *e*pP pP 17 46 17.2 -3.1
KDAK Kodiak Island 63.48 328 P P 17 46 05.0 -1.6
comp=Z,438nm,0.8s,SNR=8.5
KDAK Kodiak Island 63.48 328 P pP 17 46 19.9 -2.3
comp=Z,32nm,0.7s,baz=104,slow=3.2,SNR=22
KDAK pP sP 17 46 34.5 +5.8
comp=Z,50nm,0.7s,baz=109,slow=5.6,SNR=14
KDAK Kodiak Island 63.48 328 *e*P P 17 46 05.3 -1.3
comp=Z,51nm,0.8s,mb5.7
KDAK *e*pP pP 17 46 20.5 -1.8
KDAK Kodiak Island 63.48 328 *e*P P 17 46 05.3 -1.3
KDAK *e**PP pP 17 46 20.5 -1.8
KDAK pmax pmax
comp=Z,51nm,0.8s,mb5.7
OHAK Old Harbor 63.68 327 *e*P P 17 46 07.1 -0.9
comp=Z,60nm,1.0s,mb5.6
COLA College 63.87 336 *e*P P 17 46 06.7 -2.4
comp=Z,7.4nm,0.7s,mb4.8
COLA College 63.87 336 *e*P P 17 46 07.9 -1.2
BPAW Bear Paw Mtn. 64.81 335 *e*P P 17 46 12.7 -2.6
comp=Z,26nm,0.8s,mb5.3
BPAW *e*pP pP 17 46 27.0 -4.0
PPLA Purkeypile 64.89 334 *e*P P 17 46 13.4 -2.4
comp=Z,17nm,0.7s,mb5.2
COLD Coldfoot 65.71 338 *e*P P 17 46 19.6 -1.4
comp=Z,184nm,1.2s,mb6.0
SVW2 Sparrevohn 65.88 331 *e*P P 17 46 20.7 -1.5
SUMG Summit 66.06 15 *e*P P 17 46 20.7 -2.5
comp=Z,3.0nm,0.6s,mb4.5
SUMG *e*pP pP 17 46 32.4 -6.5
CHGN Chignik 66.21 326 *e*P P 17 46 22.8 -1.7
IMA2 Indian Mountai 66.57 337 *e*P P 17 46 23.5 -3.1
IMA2 *e*pP pP 17 46 39.4 -3.0
SDPT Sand Point 67.19 324 *e*P P 17 46 27.5 -3.2
SDPT *e*pP pP 17 46 44.3 -2.2
ALE Alert 69.63 4 P P 17 46 42.6 -3.0
comp=Z,122nm,0.9s,mb5.8,SNR=7.6
AKUT Akutan 70.11 323 *e*P P 17 46 46.8 -2.1
UNV Unalaska Valle 70.53 322 *e*P P 17 46 50.1 -1.4
comp=Z,292nm,0.9s,mb6.2
UNV *e*pP pP 17 47 05.2 -2.1
EVO Evora 75.89 53 *e*P P 17 47 19.4 -4.0
comp=Z,20nm,0.8s,mb4.8
ESDC Sonseca Array 78.86 52 P P 17 47 34.7 -5.3
comp=Z,2.3nm,0.6s,mb4.3,baz=285,slow=5.7,SNR=8.4
ESDC pP pP 17 47 53.0 -3.1
comp=Z,4.5nm,0.7s,baz=283,slow=6.2,SNR=6.1
AMKA Amchitka 79.28 320 *e*P P 17 47 41.1 -0.9
AMKA *e*pP pP 17 47 56.1 -2.0
GRR Gorron 79.72 43 *e*P P 17 47 40.9 -3.6
FLN La Foliniere 79.90 42 *e*P P 17 47 42.0 -3.5
comp=Z,35nm,1.1s,mb4.9
FLN La Foliniere 79.90 42 *e*P P 17 47 42.0 -3.5
comp=Z,18nm,1.0s,mb4.9
FLN La Foliniere 79.90 42 *e*P P 17 47 42.0 -3.5
FLN pmax pmax
comp=Z,17nm,1.0s,mb4.9
LDF La Druitiere 80.16 42 *e*P P 17 47 43.5 -3.4
BILL Bilibino 82.04 338 *e*P P 17 47 53.6 -2.9
BILL *i* pP 17 48 10.8 -1.9
BILL pmax pmax
comp=Z,17nm,1.0s,mb4.9
BGF Bois d'Agland 82.52 44 *e*P P 17 47 55.6 -3.9
SSF Saint Saulge 82.86 43 *e*P P 17 47 57.1 -4.1
MEZF Maizieres J'vi 83.55 42 *e*P P 17 48 00.6 -4.1
comp=Z,15nm,0.7s,mb5.0
MEZF Maizieres J'vi 83.55 42 *e*P P 17 48 00.6 -4.1
comp=Z,15nm,0.7s,mb5.2
NOA NORSAR Array B 83.69 29 P P 17 48 02.6 -2.6
comp=Z,4.2nm,0.8s,mb4.6,baz=290,slow=4.6,SNR=10
TIC Toumodi 84.31 85 *e*P P 17 48 05.0 -4.3
comp=Z,83nm,0.8s,mb5.9
TIC Toumodi 84.31 85 *e*P P 17 48 05.0 -4.3
TIC pmax pmax
comp=Z,83nm,0.8s,mb5.9
LIC Lamto 84.40 85 *e*P P 17 48 05.6 -4.1
comp=Z,85nm,0.7s,mb6.0
LIC Lamto 84.40 85 *e*P P 17 48 05.5 -4.2
comp=Z,52nm,0.7s,mb5.5
LIC Lamto 84.40 85 ⇑*i*P P 17 48 05.5 -4.2
comp=Z,26nm,0.7s,mb5.5
DBIC Dimbokro 84.47 85 P P 17 48 05.8 -4.2
comp=Z,22nm,0.9s,mb5.3,baz=255,slow=5.1,SNR=22
HAU Haudompre 84.51 42 *e*P P 17 48 05.6 -4.0
comp=Z,11nm,0.8s,mb4.8
HAU Haudompre 84.51 42 *e*P P 17 48 05.6 -4.0
comp=Z,5.4nm,0.8s,mb4.7
HAU Haudompre 84.51 42 *e*P P 17 48 05.6 -4.0
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KIC Kosan Boka 84.65 85 *e*P P 17 48 06.6 -4.4
comp=Z,141nm,0.8s,mb6.2
HINF Hinteralfeld 84.89 42 *e*P P 17 48 07.8 -3.7
comp=Z,3.8nm,0.6s,mb4.4
HINF Hinteralfeld 84.89 42 *e*P P 17 48 07.8 -3.7
comp=Z,1.9nm,0.6s,mb4.4
HINF Hinteralfeld 84.89 42 *e*P P 17 48 07.8 -3.7
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
CDF Champ du Feu 85.01 41 *e*P P 17 48 08.7 -3.4
comp=Z,6.8nm,0.8s,mb4.5
CDF Champ du Feu 85.01 41 *e*P P 17 48 08.7 -3.4
comp=Z,3.4nm,0.8s,mb4.5
CDF Champ du Feu 85.01 41 *e*P P 17 48 08.7 -3.4
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
ARCES ARCESS Array B 85.89 18 P P 17 48 12.4 -3.7
comp=Z,4.3nm,0.7s,mb4.8,baz=294,slow=4.1,SNR=16
ARCES pP pP 17 48 30.4 -2.0
comp=Z,3.8nm,0.7s,baz=302,slow=2.7,SNR=4.2
MOX Moxa 87.08 39 *e*P pP 17 48 35.3 -3.3
comp=Z,12nm,1.3s
GRA1 Grafenberg Arr 87.13 40 *e*P P 17 48 19.0 -3.6
comp=Z,10.0nm,1.1s,mb5.0
GRF Grafenberg Arr 87.13 40 *e*P P 17 48 19.0 -3.6
comp=Z,10.0nm,1.1s,mb5.0
GRF Grafenberg Arr 87.13 40 *e*P P 17 48 19.0 -3.6
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
GRF Grafenberg Arr 87.13 40 *e*P P 17 48 19.0 -3.6
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
CLL Collm 87.69 38 *e*P P 17 48 22.0 -3.2
comp=Z,3.0nm,0.6s,mb4.7
CLL *e*pP pP 17 48 38.0 -3.6
CLL Collm 87.69 38 *e*P P 17 48 22.0 -3.2
CLL *e*PP pP 17 48 38.0 -3.6
CLL pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
CLL Collm 87.69 38 *e*P P 17 48 22.0 -3.2
comp=Z,3.0nm,0.6s,mb4.7
CLL *e*pP pP 17 48 38.0 -3.6
comp=Z,6.0nm,0.8s
CLL *ex* x 17 48 49.0
NKC Novy Kostel 87.71 39 *e*P P 17 48 22.2 -3.1
NKC *e* pP 17 48 38.4 -3.3
NKC Novy Kostel 87.71 39 *e*P P 17 48 22.2 -3.1
NKC *e*pP pP 17 48 38.4 -3.3
NKC *ex* x 17 48 49.5
BRG Berggiesshubel 88.40 38 *e*P sP 17 48 52.6 +1.3
comp=Z,16nm,1.3s
KHC Kasperske Hory 88.77 40 *e*P P 17 48 27.9 -2.5
KHC *e* pP 17 48 43.5 -3.2
KHC Kasperske Hory 88.77 40 *e*P P 17 48 27.9 -2.5
KHC *e*pP pP 17 48 43.5 -3.2
KHC *ex* x 17 48 55.9
PVCC Panska Ves 88.89 38 *es*P sP 17 48 52.5 -1.1
GERES GERESS Array B 88.94 40 P P 17 48 27.6 -3.5
comp=Z,0.9nm,0.7s,mb4.2,baz=286,slow=5.0,SNR=5.6
PRU Pruhonice 89.06 39 *e*P P 17 48 26.6 -5.1
PRU *ex* x 17 48 56.3
TORD Torodi Ar. Bea 89.24 77 P P 17 48 27.8 -5.4
comp=Z,2.8nm,0.8s,mb4.7,baz=293,slow=4.6,SNR=17
TORD pP pP 17 48 45.1 -4.5
comp=Z,1.9nm,0.8s,baz=289,slow=5.1,SNR=5.4
APA Apatity 89.40 19 ⇓*e*P P 17 48 36.0 +3.1
APA pmax pmax
comp=Z,38nm,1.4s,mb5.5
APA MLR MLR
comp=Z,9μm,19.0s,MS6.2
UPC Upice 89.76 38 *e*P P 17 48 34.6 -0.4
DPC Dobruska-Polom 90.00 38 *e*P P 17 48 30.0 -6.1
DPC *ex* x 17 49 01.2
TIXI Tiksi 90.64 348 *e*P P 17 48 35.5 -3.2
comp=Z,48nm,1.5s,mb5.6
TIXI *e*pP pP 17 48 49.9 -5.2
TIXI Tiksi 90.64 348 *e*P P 17 48 34.4 -4.3
TIXI pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
PET Petropavlovsk 90.96 326 *e*P P 17 48 38.3 -2.2
PET pmax pmax
comp=Z,28nm,1.3s,mb5.4
PETK Petropavlovsk- 91.44 326 P P 17 48 41.9 -0.9
comp=Z,19nm,0.8s,mb5.5,baz=72,slow=10.0,SNR=17
PETK pP pP 17 48 56.0 -3.1
comp=Z,12nm,0.8s,baz=82,slow=12,SNR=6.1
OBN Obninsk 98.25 27 *e*P P 17 49 12.4 -1.4
OBN pmax pmax
comp=Z,6.0nm,0.9s,mb5.1
VNA3 Neumayer Olymp 100.17 161 *e*Pdiff Pdif 17 49 19.4 -2.9
VNA3 *e* 17 49 34.2
VNA3 *e* 17 49 36.4
VNA2 Neumayer--Watz 100.83 161 *e*Pdiff Pdif 17 49 23.5 -1.8
baz=316,slow=7.0
VNA2 *e* 17 49 38.0
VNA2 *e* 17 49 59.3
SNAA Sanae 102.39 161 *e*Pdiff Pdif 17 49 27.7 -4.5
SNAA *e* 17 49 46.7
SNAA *e* 17 50 08.0
QSPA South Pole Qui 103.81 180 Pdiff Pdif 17 49 37.3 -1.3
comp=Z,1.5nm,0.6s,baz=178,slow=1.6,SNR=5.6
QSPA South Pole Qui 103.81 180 Pdif Pdif 17 49 37.3 -1.3
CN2 Changchun 113.79 332 *e*PKP PKiKP 17 54 16.1 +0.9
SONM Songino Array 116.71 347 PKP PKPdf 17 54 18.8 -1.9
comp=Z,3.7nm,0.8s,baz=333,slow=1.5,SNR=24
SONM pPKP pPKPdf 17 54 35.2 -2.5
comp=Z,2.9nm,0.8s,baz=349,slow=0.7,SNR=8.8
KSRS Korea Array 117.34 326 PKP PKPdf 17 54 20.2 -2.0
comp=Z,6.2nm,0.9s,baz=10,slow=1.3,SNR=14
KSRS pPKP pPKPdf 17 54 36.4 -2.9
comp=Z,9.2nm,0.8s,baz=352,slow=1.0,SNR=13
MK31 Makanchi Array 119.31 5 *e*PKPdf PKPdf 17 54 22.6 -3.2
MKAR Makanchi Array 119.31 5 PKP PKPdf 17 54 22.8 -3.0
comp=Z,4.7nm,0.7s,baz=4.8,slow=2.3,SNR=29
MKAR pPKP pPKPdf 17 54 38.5 -4.2
comp=Z,2.9nm,0.7s,baz=3.0,slow=3.4,SNR=7.9
LSZ Lusaka 121.06 100 PKP PKPdf 17 54 28.4 -1.4
comp=Z,12nm,0.9s,baz=330,slow=0.5,SNR=21
LSZ pPKP pPKPdf 17 54 44.5 -2.3
comp=Z,8.3nm,0.9s,baz=318,slow=1.5,SNR=5.6
LSZ Lusaka 121.06 100 *e*P PKPdf 17 54 28.5 -1.4
LSZ *e*pP 17 54 44.0
HHC Hu-ho-hao-te 121.77 340 *e*PKP PKPdf 17 54 30.0 -0.7
HHC XPKP 17 54 47.4
HHC PP PP 17 56 05.9 +2.8
HHC PKS 17 58 04.8
HHC SKS SKSdf 18 01 36.5 -1.5
HHC SKKS SKKSac 18 02 55.0 -3.7
HHC LR LR
comp=N,4μm,23.8s,MS6.1
HHC LR LR
comp=E,3μm,22.6s,MS6.1
HHC LR LR
comp=Z,4μm,22.6s,MS6.0
EKS2 Erkin-Say 121.99 13 *e*PKPdf PKPdf 17 54 29.4 -1.6
EKS2 *e*pPKPdf pPKPdf 17 54 44.9 -3.2
TKM2 Tokmak 2 122.13 12 *e*PKPdf PKPdf 17 54 28.9 -2.4
CNB Canberra Magne 122.19 237 *e*PKP PKPdf 17 54 30.4 -1.1
AML Almayashu 122.48 14 *e*PKPdf PKPdf 17 54 31.2 -0.8
WMQ Urumqi 122.59 1 *e*PKP PKPdf 17 54 32.0 -0.2
WMQ PP PP 17 56 14.0 +5.7
WMQ SKS SKSdf 18 01 39.0 -0.4
MAW Mawson 123.59 168 PKP PKPdf 17 54 31.2 -2.1
comp=Z,3.7nm,0.7s,baz=98,slow=2.0,SNR=8.2
TOO Toolangi 124.98 234 *e*PKP PKPdf 17 54 35.3 -1.5
CTA Charters Tower 125.33 255 *e*P PKPdf 17 54 36.4 -1.6
comp=Z,5.5nm,1.0s
CTAO Charters Tower 125.33 255 *e*PKPdf PKPdf 17 54 36.3 -1.7
KSH Kashi 125.48 13 *e*PKP PKPdf 17 54 36.9 -0.9
KSH *e*PKS 17 58 12.3
KSH *e*SKS SKSdf 18 01 44.0 -1.0
GTA Gaotai 126.10 350 PKP PKPdf 17 54 38.0 -1.0
NJ2 Nanjing 126.26 329 *e*PKP PKPdf 17 54 40.3 +0.8
LZH Lanzhou 128.45 345 *e*PKP PKPdf 17 54 43.3 -0.3
LZH XPKP 17 55 04.5
LZH Lanzhou 128.45 345 *e*PKP PKPdf 17 54 43.2 -0.4
LZH pPKP pPKPdf 17 54 59.0 -1.6
LZH sPKP 17 55 04.5
LZH Lanzhou 128.45 345 *e*PKIKP PKPdf 17 54 43.2 -0.4
LZH 17 54 59.0
XAN Xi'an 128.82 339 PKP PKPdf 17 54 42.4 -2.0
STKA Stephens Creek 129.04 240 *e*PKP PKPdf 17 54 42.9 -1.9
comp=Z,9.6nm,0.8s
STKA Stephens Creek 129.04 240 PKP PKPdf 17 54 43.1 -1.7
comp=Z,11nm,0.8s,baz=47,slow=1.9,SNR=29
STKA pPKP pPKPdf 17 54 58.6 -3.1
comp=Z,5.1nm,0.9s,baz=167,slow=5.0,SNR=3.7
WHN Wuhan 129.68 332 PKP PKPdf 17 54 44.5 -1.6
WHN PP PP 17 56 56.5 +0.6
CD2 Chengdu 133.36 343 *e*PKP PKPdf 17 54 50.9 -2.2
CD2 XPKP 17 55 09.4
CD2 PP PP 17 57 17.6 -1.7
CD2 PKS 17 58 25.8
CD2 SKS SKSdf 18 01 57.0 -2.8
CD2 SKKS SKKSac 18 04 02.4 -9.3
CD2 PP PP
comp=Z,130nm,10.2s
GYA Guiyang 136.50 337 PDIF Pdif 17 52 00.5 -3.4
GYA PKP PKPdf 17 54 57.4 -1.6
GYA PKS 17 58 31.9
GYA PP PP
comp=Z,170nm,8.0s
GYA LR LR
comp=N,180nm,18.0s,MS5.0
GYA LR LR
comp=E,190nm,19.8s,MS5.0
GYA LR LR
comp=Z,280nm,16.2s,MS5.1
WB2 Warramunga Arr 136.52 256 *e*PKP PKPdf 17 54 57.4 -1.8
WRAB Tennant Creek 136.52 256 *e*P PKPdf 17 54 57.4 -1.8
WRA Warramunga Arr 136.53 256 PKhKP 17 54 42.5
comp=Z,0.3nm,0.4s,baz=12,slow=29,SNR=9.0
WRA PKP PKPdf 17 54 57.6 -1.6
comp=Z,12nm,0.8s,baz=86,slow=1.8,SNR=45
LSA Lhasa 136.66 358 *e*PKPdf PKPdf 17 54 58.8 -0.5
ASAR Alice Springs 136.75 250 PKhKP 17 54 47.2
comp=Z,1.1nm,0.7s,baz=104,slow=3.9,SNR=20
ASAR PKP PKPdf 17 54 57.6 -1.9
comp=Z,3.8nm,0.7s,baz=110,slow=2.6,SNR=21
ASAR pPKP pPKPdf 17 55 15.1 -1.4
comp=Z,2.6nm,0.9s,baz=102,slow=2.8,SNR=2.9
ASAR Alice Springs 136.75 250 PKHKP 17 54 47.2
ASAR 17 54 57.7
KAKA Kakadu 137.99 266 *e*PKP Px 17 54 48.2
comp=Z,14nm,0.7s
KMI Kunming 139.08 341 PKP PKPdf 17 55 02.4 -1.4
KMI sPKP 17 55 20.4
KMI PP PP 17 57 57.7 +2.4
KMI PPP 18 01 01.7
KMI SKS SKSdf 18 02 04.3 -5.6
KMI SS SS 18 16 02.6 -4.5
KMI LR LR
comp=Z,14μm,44.7s,MS6.3
KMI Kunming 139.08 341 PKIKP PKPdf 17 55 02.4 -1.4
KMI 17 57 57.7
KMI PPP 18 01 01.7
KMI 18 02 04.3
KMI SS SS 18 16 02.6 -4.5
OPO Ambohidratompo 139.41 102 PKP PKPdf 17 54 56.2 -8.3
comp=Z,2.3nm,0.9s,baz=215,slow=6.4,SNR=3.8
ABPO Ambohimpanom 139.44 103 *e*PKPdf PKPdf 17 55 04.0 -0.6
ABPO *ep*PKPdf pPKPdf 17 55 20.1 -1.5
FORT Forrest 140.58 238 *e*PKP PKPdf 17 54 59.1 -7.2
comp=Z,19nm,0.8s
SHL Shillong 140.73 356 *e*P PKPdf 17 55 06.0 -0.8
CHG Chiang Mai 146.16 343 ⇑P PKPdf 17 55 14.5 -2.0
comp=Z,74nm,0.9s
CHTO Chiang Mai 146.16 343 *e*PKPdf PKPdf 17 55 14.6 -2.0
CMAR Chiang Mai Arr 146.50 343 PKPbc PKPdf 17 55 15.9 -1.1
comp=Z,76nm,0.7s,baz=339,slow=3.2,SNR=460
CMAR pPKPbc pPKPbc 17 55 32.0 -3.3
comp=Z,51nm,0.7s,baz=334,slow=3.1,SNR=15
KKTK Khon Kaen 147.14 335 P PKPdf 17 55 17.4 -0.8
comp=Z,2μm,0.5s
HYB Hyderabad 147.18 19 *e*PKP PKPdf 17 55 16.0 -2.2
HYB Hyderabad 147.18 19 *i* PKP PKPdf 17 55 16.0 -2.2
HYB *e* 17 55 32.5
BDT Bhumibol Dam 147.63 342 P PKPdf 17 55 18.0 -1.0
comp=Z,76nm,0.8s
KLBR Kellerberrin 148.47 231 *e*PKP PKPdf 17 55 18.3 -1.7
comp=Z,139nm,2.0s
KAPI Kappang 148.68 283 *e*PKPbc PKPdf 17 55 21.8 +1.0
NST Nakhon Sawan 148.75 339 ⇓P PKPbc 17 55 24.0 -0.7
comp=Z,167nm,0.5s
MUN Mundaring 149.44 229 *e*PKP PKPdf 17 55 20.0 -1.5
MBWA Marble Bar 150.07 252 *e*PKPbc PKPbc 17 55 25.4 -2.4

IDC **14** *17:39:35.1±0.6,2235S×7004W,h50km±4km,mb4.1/8, mb1 4.1/11,mb1mx3.9/18,mbtmp4.0/11,Error ellipse: s-maj=17.3km s-min=7.4km az=15.0*
NEIC **14** *17:39:35.5±0.5,2243S×7000W,mb4.6/2,Error ellipse: s-maj=12.8km s-min=9.4km az=102.0*
ISCJB **14** *17:39:36.1±1.4,2242S±007×699W±0.1,h72km±12km, mb4.1/8,Error ellipse: s-maj=21.0km s-min=12.3km az=4.9*
ISC 14 17:39:37.6±1.3,2244S±007×699W±01,h69km±11km, h51km±1.3km:pP-P,n27,σ0s77/22,mb4.1/8,1C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.93**	**101**	P		**Pn**		**17 39 54.6**	**-0.5**
LVC	2μm,0.3s,baz=278,slow=9.6,SNR=94			S		**Sn**		**17 40 08.8**	**+0.6**
LVC	2μm,0.3s,baz=264,slow=8.7,SNR=11 **Limon Verde**	**0.93**	**101**	*e*P		**Pn**		**17 39 54.3**	**-0.8**
LVC				*e*S		**Sn**		**17 40 08.7**	**+0.6**
LPAZ	**La Paz**	**6.34**	**16**	*e*P		**Pn**		**17 41 09.4**	**+0.9**
LPAZ	2.2nm,0.3s,baz=190,slow=7.1,SNR=16 **La Paz**	**6.34**	**16**	*e*P		**Pn**		**17 41 09.3**	**+0.8**
CFAA	27nm,0.6s **Coronel Fontan**	**9.25**	**171**	P		**Pn**		**17 41 47.0**	**-1.1**
SIV	0.2nm,0.3s,baz=2.7,slow=18,SNR=3.3 **San Ignacio**	**10.52**	**54**	P		**Pn**		**17 42 04.7**	**-0.8**
PLCA	3.4nm,0.3s,baz=248,slow=12,SNR=23 **Paso Flores**	**18.25**	**182**	P		**Pn**		**17 43 46.7**	**+0.7**
PLCA	0.1nm,0.3s,baz=32,slow=18,SNR=2.8 **Paso Flores**	**18.25**	**182**	P		**Pn**		**17 43 46.7**	**+0.7**
BDFB	**Brasilia**	**21.75**	**76**	P		**P**		**17 44 24.7**	**+1.1**
LPM	1.3nm,0.5s,mb3.5,baz=255,slow=22,SNR=3.7 **Los Pinos Moun**	**66.37**	**327**	*e*P		**P**		**17 50 19.6**	**+0.4**
QSPA	**South Pole Qui**	**67.76**	**180**	P		**P**		**17 50 28.5**	**+1.1**
QSPA	1.6nm,0.5s,mb4.1,baz=168,slow=3.7,SNR=3.8			P		pP		17 50 41.6	-4.0
QSPA	2.5nm,0.6s,baz=154,slow=2.1,SNR=3.8			sP		sP		17 50 48.2	-5.2
QSPA	1.9nm,0.6s,baz=174,slow=2.7,SNR=2.5 **South Pole Qui**	**67.76**	**180**	P		**P**		**17 50 28.5**	**+1.1**
QSPA				P		pP		17 50 41.6	-4.0
QSPA				sP		sP		17 50 48.2	-5.2
DBIC	**Dimbokro**	**69.88**	**74**	P		**P**		**17 50 40.6**	**-1.0**
DBIC	6.4nm,0.8s,mb4.5,baz=223,slow=4.0,SNR=3.9			PcP		PcP		17 51 02.0	-1.7
NVAR	4.6nm,0.6s,baz=220,slow=7.3,SNR=4.9 **Mina Array Bea**	**75.67**	**323**	P		**P**		**17 51 15.1**	**-0.3**
NVAR	0.5nm,0.6s,mb3.4,baz=139,slow=5.6,SNR=2.9			pP		pP		17 51 30.0	-4.0
SYO	1.2nm,0.7s,baz=146,slow=5.1,SNR=4.7 **Syowa Base**	**75.95**	**160** ⇑	*e*P		PcP		17 51 29.2	+0.5
TORD	**Torodi Ar. Bea**	**78.53**	**71**	P		**P**		**17 51 31.3**	**-0.7**
TORD	4.6nm,0.4s,mb4.7,baz=253,slow=5.3,SNR=48			P		pP		17 51 45.7	-5.0
MAW	7.4nm,0.9s,baz=252,slow=5.2,SNR=11 **Mawson**	**83.70**	**164**	P		**P**		**17 51 58.9**	**+0.5**
MAW	1.7nm,0.8s,mb3.9,baz=242,slow=8.7,SNR=4.4			pP		pP		17 52 13.1	-4.3
MAW	1.6nm,0.7s,baz=240,slow=11,SNR=2.2 **Mawson**	**83.70**	**164**	*e*P		**P**		**17 51 58.5**	**0.0**
MAW	3.1nm,0.8s,mb4.2			pP		pP		17 52 13.1	-4.3
BOSA	**Boshof**	**83.82**	**118**	P		**P**		**17 52 00.1**	**+0.2**
BOSA	5.5nm,0.8s,mb4.4,baz=270,slow=3.4,SNR=6.9			pP		pP		17 52 14.4	-4.3
BOSA	5.4nm,0.8s,baz=236,slow=1.5,SNR=5.1 **Boshof**	**83.82**	**118**	*e*P		**P**		**17 51 59.7**	**-0.2**
BOSA	8.5nm,1.0s,mb4.5			*ep*P		pP		17 52 14.2	-4.5
YKA	**Yellowknife Ar**	**91.77**	**341**	P		**P**		**17 52 36.5**	**-0.6**
YKA	0.9nm,0.7s,mb4.1,baz=137,slow=3.6,SNR=4.3			sP		sP		17 52 56.1	-7.5
ASAR	1.0nm,0.7s,baz=143,slow=4.9,SNR=4.1 **Alice Springs**	**128.66**	**208**	PKP		PKPdf		17 58 37.0	-0.5
WRA	1.4nm,0.9s,baz=114,slow=2.2,SNR=4.2 **Warramunga Arr**	**131.68**	**211**	PKP		PKPdf		17 58 43.3	-0.1
ZALV	0.8nm,0.7s,baz=155,slow=1.8,SNR=7.2 **Zalesovo Beam**	**143.19**	**25**	PKP		PKPdf		17 59 03.8	+0.4
ZALV	1.6nm,0.7s,baz=299,slow=3.1,SNR=5.1			pPKP		pPKPdf		17 59 18.2	-5.0
ZALV	2.4nm,0.8s,baz=327,slow=2.6,SNR=4.2			sPKP				17 59 26.3	
MKAR	2.4nm,0.7s,baz=268,slow=1.9,SNR=3.7 **Makanchi Array**	**146.93**	**36**	PKPbc		PKPbc		17 59 12.3	+0.1

3.4nm,0.7s,baz=320,slow=2.4,SNR=13
MKAR pPKPbc pPKPbc 17 59 27.0 -4.8
2.6nm,0.7s,baz=298,slow=2.2,SNR=6.1
MKAR sPKPbc 17 59 34.0
3.2nm,0.8s,baz=306,slow=3.8,SNR=4.8
MKAR Makanchi Array 146.93 36 PKPbc PKPbc 17 59 12.3 +0.1
MKAR pPKPbc pPKPbc 17 59 27.0 -4.8
MKAR sPKPbc 17 59 34.0
SONM Songino Array 154.49 6 PKP PKPdf 17 59 22.8 +1.1
1.1nm,0.9s,baz=259,slow=4.9,SNR=6.2

LDG **14** *17:44:00.9±0.2, 2232S×7067W, h10km, Mb5.7/26, Error ellipse: s-maj=22.6km s-min=8.1km az=171.0*
IDC **14** *17:44:03.2±0.5, 2321S×7049W, h28km±3km, mb5.2/26, mb1 5.2/29, mb1mx5.2/30, mbtmp5.1/29, ML4.2/4, MS5.2/3, Ms1 5.2/3, ms1mx4.4/32, Error ellipse: s-maj=10.2km s-min=9.7km az=25.0*
DJA **14** *17:44:03, 21.13S×6801W, h0km, mb5.7/7*
ISCJB **14** *17:44:03.7±0.6, 2329S±003×7047W±003, h45km±4km, mb5.6/123, MS5.8/5, Error ellipse: s-maj=5.0km s-min=4.4km az=135.9*
MOS **14** *17:44:03.2±1.1, 2297S×7054W, h33km, mb5.9/63, Error ellipse: s-maj=10.7km s-min=6.6km az=85.2*
GUC **14** *17:44:03.3±1.6, 2333S×7051W, h27km±19km, ML5.5*
BJI **14** *17:44:03.0, 2308S×7121W, h32km, mB6.4, Ms6.1, Msz5.9*
NEIC **14** *17:44:04.3, 2322S×7053W, h38km, mb5.7/99, After GUC.*
ISC 14 17:44:05.1±0.5, 2329S±003×7042W±003, h43km±4km, h34km±2.0km:pP-P, n797, σ0s73/666, mb5.6/123, MS5.8/5, 239C-179D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB06	**Plate Boundary**	**0.98**	**53**	⇓*iP*		**Pn**	**17 44 22.0**	**-0.4**
PB06				*i* S		**Sn**	**17 44 36.6**	**+1.5**
CPN1	**Cerro Paranal**	**1.32**	**179**	*eP*		**Pn**	**17 44 25.7**	**-1.5**
CPN1				*e* S		**Sn**	**17 44 43.7**	**+0.1**
CPN1				AML		AML	17 44 47.4	
	comp=E,131μm,0.6s							
LVC	**Limon Verde**	**1.55**	**64**	Pg		**Pn**	**17 44 32.2**	**+2.0**
	comp=E,2μm,0.3s,baz=253,slow=14,SNR=229							
LVC				Lg			17 44 54.1	
	comp=E,9μm,0.3s,baz=3.4,slow=15,SNR=36							
LVC				LR		LR	17 45 11.9	
	comp=E,101μm,20.8s,baz=220,slow=44							
LVC	**Limon Verde**	**1.55**	**64**	*eP*		**Pn**	**17 44 32.1**	**+1.8**
LVC				*eS*		**Sn**	**17 44 53.7**	**+4.6**
LVC	**Limon Verde**	**1.55**	**64**	*eP*		**Pn**	**17 44 31.6**	**+1.4**
LVC				*eS*		**Sn**	**17 44 53.1**	**+4.0**
LVC				AML		AML	17 44 55.8	
	comp=N,69μm,0.6s							
PB07	**Plate Boundary**	**1.64**	**18**	*eP*		**Pn**	**17 44 31.2**	**-0.2**
PB07				*i* S		**Sn**	**17 44 52.1**	**+0.8**
PB01	**Plate Boundary**	**2.40**	**21**	*eP*		**Pn**	**17 44 43.6**	**+1.6**
PB01				*i* S		**Sn**	**17 45 14.7**	**+4.5**
PB01				AML		AML	17 45 20.7	
	comp=E,46μm,0.7s							
LCO	**Las Campanas**	**5.70**	**182**	*eP*		**Pn**	**17 45 27.4**	**+0.1**
LCO				*eS*		**Sn**	**17 46 40.7**	**+9.4**
ARE	**Arequipa**	**6.87**	**351**	*eP*		**Pn**	**17 45 40.0**	**-3.4**
LPAZ	**La Paz**	**7.30**	**18**	Pn		**Pn**	**17 45 49.3**	**+0.1**
	comp=E,4.1nm,0.3s,baz=196,slow=11,SNR=13							
LPAZ				LR		LR	17 48 50.9	
	comp=E,15μm,19.1s,baz=281,slow=40							
LPAZ	**La Paz**	**7.30**	**18**	*eP*		**Pn**	**17 45 49.7**	**+0.5**
	comp=E,9.8nm,0.7s							
CFAA	**Coronel Fontan**	**8.50**	**167**	Pn		**Pn**	**17 46 04.6**	**-1.1**
	comp=E,0.6nm,0.3s,baz=348,slow=14,SNR=3.7							
SIV	**San Ignacio**	**11.41**	**52**	Pn		**Pn**	**17 46 43.0**	**-2.6**
	comp=E,2.9nm,0.3s,baz=249,slow=13,SNR=17							
SIV				Sn		**Sn**	**17 48 54.0**	**+2.2**
	baz=150,slow=22,SNR=1.0							
SIV				LR		LR	17 50 54.3	
	comp=E,9μm,19.2s,baz=272,slow=36							
PLCA	**Paso Flores**	**17.39**	**180**	P		**Pn**	**17 48 02.5**	**-2.0**
	comp=E,0.4nm,0.3s,baz=3.4,slow=14,SNR=16							
PLCA	**Paso Flores**	**17.39**	**180**	*eP*		**Pn**	**17 48 02.4**	**-2.2**
	comp=E,254nm,1.3s							
PLCA	**Paso Flores**	**17.39**	**180**	*eP*		**Pn**	**17 48 02.4**	**-2.1**
PLCA				pmax		pmax		
	comp=Z,250nm,1.3s							
ATAH	**Atahualpa**	**17.92**	**333**	P		**Pn**	**17 48 09.5**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=164,slow=4.6,SNR=13							
SPB	**Sao Paulo**	**21.09**	**95**	*eP*		**P**	**17 48 46.4**	**+0.3**
BDFB	**Brasilia**	**22.44**	**74**	P		**P**	**17 49 00.2**	**-0.3**
	comp=Z,69nm,1.0s,mb5.0,baz=244,slow=18,SNR=23							
BDFB				LR		LR	17 59 12.9	
	comp=Z,6μm,18.3s,MS5.1,baz=322,slow=40							
OTAV	**Otavalo**	**24.66**	**340**	*eP*		**P**	**17 49 21.7**	**-0.3**
	comp=Z,156nm,1.4s,mb5.3							
CAM4	**Nova Friburgo**	**25.68**	**93**	⇑*iP*		**P**	**17 49 31.1**	**-0.2**
CAM4				*i*			17 49 38.4	
CAM4				*i*		pP	17 49 41.8	-0.9
CAM4				*i*			17 50 03.7	
CAM4				*i*			17 50 09.6	
CAM3	**Guarapari**	**27.81**	**91**	*eP*		**P**	**17 49 47.4**	**-3.1**
CAM3				*i*			17 49 50.0	
CAM3				*i*			17 49 50.5	
CAM3				*i*		pP	17 49 57.2	-4.8
ROSC	**El Rosal**	**28.24**	**352**	P		**P**	**17 49 54.1**	**-0.1**
	comp=Z,42nm,1.0s,mb5.0,baz=128,slow=3.9,SNR=13							
ROSC	**El Rosal**	**28.24**	**352**	*eP*		**P**	**17 49 54.3**	**0.0**
EFI	**East Falkland**	**29.89**	**164**	*eP*		**P**	**17 50 07.8**	**-0.8**
USHA	**Ushuaia**	**31.53**	**178**	P		**P**	**17 50 23.1**	**+0.1**
	comp=Z,39nm,1.1s,mb5.1,baz=328,slow=7.2,SNR=5.3							
SDV	**Santo Domingo**	**31.98**	**360**	P		**P**	**17 50 25.2**	**-2.2**
	comp=Z,12nm,0.9s,mb4.8,baz=207,slow=7.2,SNR=8.7							
PCRV	**Puerto La Cruz**	**39.74**	**10**	P		**P**	**17 50 41.2**	**-1.5**
	comp=Z,37nm,1.0s,mb5.3,baz=195,slow=2.0,SNR=12							
RCBR	**Riachuelo**	**37.50**	**68**	*eP*		**P**	**17 51 15.8**	**+0.7**
	comp=Z,482nm,1.1s,mb6.2							
TGUH	**Tegucigalpa,Un**	**40.62**	**334**	*eP*		**P**	**17 51 40.4**	**-0.7**
	comp=Z,133nm,1.1s,mb5.5							
SJG	**San Juan**	**41.36**	**6**	*eP*		**P**	**17 51 43.8**	**-3.3**
	comp=Z,399nm,0.9s,mb6.0							
SJG	**San Juan**	**41.36**	**6**	*eP*		**P**	**17 51 43.8**	**-3.3**
SJG				pmax		pmax		
	comp=Z,400nm,0.9s							
MTP	**Monte Pirata**	**41.41**	**7**	*eP*		**P**	**17 51 43.8**	**-3.7**
PMSA	**Palmer Station**	**41.68**	**176**	P		**P**	**17 51 50.3**	**+1.1**
	comp=Z,62nm,1.2s,mb5.1,baz=60,slow=4.7,SNR=4.0							
PMSA	**Palmer Station**	**41.68**	**176**	*eP*		**P**	**17 51 50.0**	**+0.8**
	comp=Z,66nm,1.3s,mb5.1							
CMIG	**Matias Romero**	**46.72**	**327**	P		**P**	**17 52 29.1**	**-1.0**
	comp=Z,13nm,1.1s,mb4.8,baz=146,slow=5.3,SNR=6.8							
TRIS	**Tristan da Cun**	**51.35**	**120**	*eP*		**P**	**17 53 07.3**	**+1.9**
	comp=Z,107nm,0.3s,mb6.2							
BBSR	**BB Station**	**55.62**	**6**	*eP*		**P**	**17 53 35.2**	**-1.4**
	comp=Z,67nm,0.9s,mb5.7							
NHSC	**New Hope**	**56.85**	**350**	*eP*		**P**	**17 53 45.0**	**-0.5**
	comp=Z,152nm,1.1s,mb5.9							
GOGA	**Godfrey**	**57.74**	**347**	*eP*		**P**	**17 53 49.3**	**-2.4**
	comp=Z,77nm,1.6s,mb5.5							
GOGA	**Godfrey**	**57.74**	**347**	*eP*		**P**	**17 53 49.3**	**-2.4**
GOGA				pmax		pmax		
	comp=Z,77nm,1.6s,mb5.5							
JSC	**Jenkinsville**	**58.18**	**349**	*eP*		**P**	**17 53 53.1**	**-1.6**
HKT	**Hockley**	**58.30**	**334**	*eP*		**P**	**17 53 54.5**	**-1.2**
	comp=Z,89nm,1.6s,mb5.5							
HKT	**Hockley**	**58.30**	**334**	*eP*		**P**	**17 53 54.5**	**-1.2**
HKT				pmax		pmax		
	comp=Z,89nm,1.6s,mb5.5							
TKL	**Tuckaleechee C**	**59.98**	**347**	P		**P**	**17 54 05.2**	**-1.9**
	comp=Z,67nm,0.9s,mb5.7,baz=160,slow=7.9,SNR=39							
TKL	**Tuckaleechee C**	**59.98**	**347**	*eP*		**P**	**17 54 04.9**	**-2.3**
SWET	**Sewanee**	**60.02**	**345**	*eP*		**P**	**17 54 05.3**	**-2.1**
OXF	**Oxford**	**60.25**	**342**	*eP*		**P**	**17 54 06.3**	**-2.7**
	comp=Z,231nm,1.1s,mb6.1							
OXF	**Oxford**	**60.25**	**342**	P		**P**	**17 54 06.8**	**-2.3**
OXF				pmax		pmax		
	comp=Z,230nm,1.1s,mb6.1							
JCT	**Junction City**	**60.45**	**331**	*eP*		**P**	**17 54 09.2**	**-1.3**
	comp=Z,71nm,1.0s,mb5.7							
JCT	**Junction City**	**60.45**	**331**	P		**P**	**17 54 09.2**	**-1.3**
JCT				pmax		pmax		
	comp=Z,71nm,1.0s,mb5.7							
MET	**Memphis--Engin**	**60.97**	**342**	*eP*		**P**	**17 54 12.4**	**-1.6**
ELN	**Prospectdale**	**60.98**	**351**	*eP*		**P**	**17 54 12.8**	**-1.2**
LPIG	**La Paz**	**60.98**	**318**	P		**P**	**17 54 13.6**	**-0.7**
	comp=Z,20nm,0.3s,mb5.7,baz=132,slow=7.3,SNR=3.9							
SNAA	**Sanae**	**61.06**	**160**	*eP*	KiKP	**P**	**17 54 13.2**	**-0.9**
SNAA				*e*			17 54 21.0	
SNAA				*e*			17 54 36.5	
SNAA				*e*			17 54 55.5	
SNAA	**Sanae**	**61.06**	**160**	*eP*		**P**	**17 54 13.0**	**-1.2**
	comp=Z,128nm,1.1s,mb6.0							
SNAA	**Sanae**	**61.06**	**160**	⇑*eP*		**P**	**17 54 13.0**	**-1.1**
SNAA				pmax		pmax		
	comp=Z,195nm,1.5s							
TXAR	**Lajitas Array**	**61.33**	**327**	P		**P**	**17 54 15.4**	**-1.1**
	comp=Z,9.7nm,0.9s,mb4.9,baz=143,slow=8.6,SNR=56							
TXAR				PcP		PcP	17 54 58.8	+0.2
	comp=Z,5.2nm,1.1s,baz=142,slow=6.3,SNR=6.2							
TXAR				PKP2bc			18 23 38.0	
	comp=Z,1.0nm,1.0s,baz=93,slow=3.6,SNR=3.9							
TXAR	**Lajitas Array**	**61.33**	**327**	P		**P**	**17 54 15.4**	**-1.1**
TXAR				PcP		PcP	17 54 58.8	+0.2
TXAR				⇑*e*			18 23 38.0	
TXAR	**Lajitas Array**	**61.33**	**327**	P		**P**	**17 54 15.4**	**-1.1**
TXAR							17 54 58.8	
WVT	**Waverly**	**61.35**	**344**	*eP*		**P**	**17 54 13.8**	**-2.7**
	comp=Z,109nm,1.0s,mb5.9							
WVT	**Waverly**	**61.35**	**344**	P		**P**	**17 54 14.1**	**-2.4**
WVT				pmax		pmax		
	comp=Z,110nm,1.0s,mb5.9							
CBN	**Corbin**	**61.52**	**354**	*eP*		**P**	**17 54 16.9**	**-0.7**
	comp=Z,21nm,0.4s,mb5.6							
MIAR	**Mount Ida**	**61.58**	**338**	*eP*		**P**	**17 54 16.4**	**-1.7**
	comp=Z,83nm,1.0s,mb5.8							
MIAR	**Mount Ida**	**61.58**	**338**	P		**P**	**17 54 16.5**	**-1.6**
MIAR				pmax		pmax		
	comp=Z,83nm,1.0s,mb5.8							
GNAR	**Gosnell**	**61.78**	**342**	*eP*		**P**	**17 54 18.0**	**-1.4**
	comp=Z,4μm,1.3s							
WCI	**Wyandotte Cave**	**62.99**	**346**	*eP*		**P**	**17 54 25.0**	**-2.4**
	comp=Z,223nm,1.5s,mb6.1							
WCI	**Wyandotte Cave**	**62.99**	**346**	P		**P**	**17 54 25.2**	**-2.2**
WCI				pmax		pmax		
	comp=Z,220nm,1.5s,mb6.1							
USIN	**University of**	**63.05**	**345**	*eP*		**P**	**17 54 25.6**	**-2.3**
	comp=Z,147nm,1.1s,mb6.0							
LUPA	**Lehigh Univers**	**63.73**	**356**	*eP*		**P**	**17 54 27.9**	**-4.3**
FVM	**French Village**	**63.79**	**342**	*eP*		**P**	**17 54 30.8**	**-1.9**
	comp=Z,138nm,1.1s,mb5.9							
FVM				*e*		pP	17 54 42.5	-2.6
FVM	**French Village**	**63.79**	**342**	*eP*		**P**	**17 54 30.8**	**-1.9**
FVM				*e**PP		pP	17 54 42.5	-2.7
FVM				pmax		pmax		
	comp=Z,140nm,1.1s,mb5.9							
BLO	**Bloomington**	**63.94**	**346**	*eP*		**P**	**17 54 31.2**	**-2.5**
	comp=Z,61nm,1.1s,mb5.5							
BLO	**Bloomington**	**63.94**	**346**	*eP*		**P**	**17 54 31.2**	**-2.5**
BLO				pmax		pmax		
	comp=Z,61nm,1.1s,mb5.5							
CCM	**Cathedral Cave**	**64.08**	**342**	*eP*		**P**	**17 54 32.3**	**-2.3**
	comp=Z,96nm,1.1s,mb5.7							
CCM	**Cathedral Cave**	**64.08**	**342**	*eP*		**P**	**17 54 32.3**	**-2.4**
CCM				pmax		pmax		
	comp=Z,96nm,1.1s,mb5.7							
ACSO	**Alum Creek Sta**	**64.27**	**349**	*eP*		**P**	**17 54 33.8**	**-2.1**
	comp=Z,121nm,1.1s,mb5.8							
BBTS	**Babate**	**64.81**	**60**	P		**P**	**17 54 39.9**	**-0.1**
	comp=Z,93nm,1.1s,mb5.7,baz=224,slow=0.7,SNR=14							
MAIT	**Maitri**	**65.63**	**159**	⇑*iP*		**P**	**17 54 43.6**	**-0.8**
NVL	**N'lazarevskaya**	**65.67**	**159**	*eP*		**P**	**17 54 45.5**	**+0.9**
NVL				*e*			17 54 53.2	
NVL				pmax		pmax		
	comp=Z,174nm,1.4s,mb5.9							
319A	**Douglas**	**65.88**	**324**	⇑P		**P**	**17 54 46.8**	**+0.3**
	baz=66,SNR=22							
318A	**Bisbee**	**66.31**	**324**	⇓P		**P**	**17 54 49.6**	**+0.3**
	baz=66,SNR=34							
219A	**White Tail Can**	**66.35**	**324**	⇑P		**P**	**17 54 49.7**	**+0.2**
	baz=66,SNR=24							
BNM	**Barren Site**	**66.70**	**328**	*eP*		**P**	**17 54 51.9**	**+0.2**
KSU1	**Kansas State U**	**66.73**	**338**	*eP*		**P**	**17 54 49.8**	**-2.0**
	comp=Z,36nm,0.9s,mb5.4							
218A	**Dragoon**	**66.75**	**324**	⇓P		**P**	**17 54 52.4**	**+0.3**
	baz=67,SNR=11							
LPM	**Los Pinos Moun**	**66.83**	**328**	*eP*		**P**	**17 54 52.6**	**+0.1**
LENM	**Lemitar**	**66.88**	**328**	*eP*		**P**	**17 54 52.7**	**-0.1**
QSPA	**South Pole Qui**	**66.91**	**180**	P		**P**	**17 54 53.6**	**+1.2**
	comp=Z,66nm,0.9s,mb5.7,baz=149,slow=2.7,SNR=99							
QSPA	**South Pole Qui**	**66.91**	**180**	*eP*		**P**	**17 54 53.4**	**+1.0**
	comp=Z,118nm,1.1s,mb5.8							
119A	**Ashpak Ranch,**	**66.97**	**325**	⇑P		**P**	**17 54 53.6**	**+0.1**
	baz=67,SNR=11							
MDV	**Middlebury**	**67.01**	**358**	*eP*		**P**	**17 54 53.0**	**-0.4**
217A	**Green Valley**	**67.02**	**323**	⇑P		**P**	**17 54 53.8**	**0.0**
	baz=67,SNR=24							
LAZ	**Ladron**	**67.15**	**328**	*eP*		**P**	**17 54 54.9**	**+0.3**
118A	**Homack Ranch,**	**67.23**	**324**	⇓P		**P**	**17 54 55.3**	**+0.2**
	baz=67,SNR=27							
ANMO	**Albuquerque**	**67.26**	**328**	P		**P**	**17 54 55.4**	**+0.1**
	comp=Z,15nm,0.8s,mb5.0,baz=146,slow=7.8,SNR=37							
ANMO	**Albuquerque**	**67.26**	**328**	*eP*		**P**	**17 54 55.0**	**-0.2**
	comp=Z,69nm,1.4s,mb5.5							
ANMO	**Albuquerque**	**67.26**	**328**	P		**P**	**17 54 55.2**	**-0.1**
ANMO				pmax		pmax		
	comp=Z,69nm,1.4s							
Z19A	**T-Link Ranch,**	**67.36**	**325**	⇓P		**P**	**17 54 56.4**	**+0.5**
	baz=68,SNR=9.4							
TUC	**Tucson**	**67.41**	**324**	*eP*		**P**	**17 54 56.2**	**0.0**
	comp=Z,35nm,1.3s,mb5.2							
TUC	**Tucson**	**67.41**	**324**	P		**P**	**17 54 58.8**	**+2.5**
TUC				pmax		pmax		
	comp=Z,35nm,1.2s,mb5.3							
216A	**Three Points,**	**67.55**	**323**	⇑P		**P**	**17 54 57.6**	**+0.4**
	baz=68,SNR=15							
117A	**Oracle**	**67.59**	**324**	⇑P		**P**	**17 54 57.5**	**+0.1**
	baz=68,SNR=37							
Z18A	**Geronimo**	**67.60**	**325**	⇑P		**P**	**17 54 58.0**	**+0.5**
	baz=68							
CBKS	**Cedar Bluff**	**67.61**	**336**	*eP*		**P**	**17 54 55.3**	**-2.1**
	comp=Z,194nm,1.1s,mb6.0							
CBKS	**Cedar Bluff**	**67.61**	**336**	P		**P**	**17 54 55.8**	**-1.6**
CBKS				pmax		pmax		
	comp=Z,190nm,1.1s,mb6.0							
Y19A	**Nutrioso**	**67.87**	**326**	⇓P		**P**	**17 54 59.9**	**+0.8**
	baz=68,SNR=61							
Z17A	**San Carlos Hig**	**68.00**	**324**	⇓P		**P**	**17 55 00.8**	**+0.9**
	baz=68							
116A	**Eloy**	**68.11**	**323**	⇑P		**P**	**17 55 01.1**	**+0.5**
	baz=68							
Y18A	**Canyon Day Jun**	**68.14**	**325**	⇑P		**P**	**17 55 01.1**	**+0.3**
	baz=68,SNR=16							
X19A	**St. Johns**	**68.26**	**326**	⇓P		**P**	**17 55 01.9**	**+0.3**
	baz=68,SNR=5.3							
214A	**Organ Pipe Nat**	**68.28**	**322**	⇓P		**P**	**17 55 02.3**	**+0.5**
	baz=68,SNR=26							
115A	**Sonoran Desert**	**68.50**	**323**	⇓P		**P**	**17 55 03.6**	**+0.5**
	baz=69							
Y17A	**Roosevelt**	**68.50**	**324**	⇑P		**P**	**17 55 03.6**	**+0.5**
	baz=69,SNR=48							
Z16A	**Peralta Trail,**	**68.55**	**324**	⇑P		**P**	**17 55 03.8**	**+0.4**
	baz=69							
X18A	**Snowflake**	**68.68**	**326**	⇓P		**P**	**17 55 04.5**	**+0.3**
	baz=69,SNR=7.2							
W19A	**Sanders**	**68.84**	**326**	⇑P		**P**	**17 55 05.4**	**+0.2**
	baz=69,SNR=14							
X17A	**Forest Lakes**	**68.98**	**325**	⇑P		**P**	**17 55 06.8**	**+0.8**
	baz=69							
Y16A	**Circle Bar Ran**	**68.98**	**324**	⇓P		**P**	**17 55 06.6**	**+0.5**
	baz=69,SNR=22							
W18A	**Petrified Fore**	**69.02**	**326**	⇑P		**P**	**17 55 07.3**	**+1.0**
	baz=69							
V19A	**Window Rock**	**69.14**	**327**	⇑P		**P**	**17 55 07.4**	**+0.4**
	baz=69,SNR=15							
X16A	**Lo Mia Camp, P**	**69.38**	**325**	⇑P		**P**	**17 55 09.2**	**+0.7**
	baz=70,SNR=22							
113A	**Mohawk Valley,**	**69.42**	**322**	⇓P		**P**	**17 55 08.9**	**+0.1**
	baz=70,SNR=16							
W17A	**Winslow**	**69.50**	**326**	⇓P		**P**	**17 55 09.7**	**+0.5**
	baz=70,SNR=5.7							
Y15A	**Casa Rosa Ranc**	**69.50**	**324**	⇑P		**P**	**17 55 09.4**	**+0.1**
	baz=70,SNR=22							
V18A	**Ganado**	**69.59**	**326**	⇑P		**P**	**17 55 09.9**	**+0.1**
	baz=70,SNR=8.3							
112A	**Yuma**	**69.71**	**321**	⇓P		**P**	**17 55 11.4**	**+0.8**
	baz=70							
X15A	**Humboldt**	**69.85**	**324**	⇓P		**P**	**17 55 11.7**	**+0.3**
	baz=70,SNR=26							
Y14A	**Wickenburg**	**69.86**	**323**	⇑P		**P**	**17 55 11.6**	**+0.1**
	baz=70,SNR=8.9							
W16A	**Flagstaff**	**69.94**	**325**	⇑P		**P**	**17 55 12.9**	**+0.9**
	baz=70,SNR=29							
MVCO	**Mesa Verde**	**70.06**	**328**	*eP*		**P**	**17 55 12.1**	**-0.5**
	comp=Z,82nm,1.3s,mb5.5							
MVCO	**Mesa Verde**	**70.06**	**328**	⇓P		**P**	**17 55 13.1**	**+0.4**
	baz=70,SNR=21							
U18A	**Rough Rock, Ch**	**70.11**	**327**	⇓P		**P**	**17 55 13.5**	**+0.5**
	baz=70,SNR=31							
WUAZ	**Wupatki**	**70.18**	**325**	*eP*		**P**	**17 55 14.0**	**+0.6**
	comp=Z,74nm,1.1s,mb5.5							
WUAZ	**Wupatki**	**70.18**	**325**	⇑P		**P**	**17 55 14.1**	**+0.7**
	baz=70,SNR=34							
X14A	**Yava**	**70.19**	**324**	⇑P		**P**	**17 55 14.2**	**+0.6**
	baz=70,SNR=23							
Y13A	**Salome**	**70.22**	**323**	⇓P		**P**	**17 55 14.1**	**+0.4**
	baz=70							
LIC	**Lamto**	**70.23**	**74**	*eP*		**P**	**17 55 13.3**	**-0.9**
	comp=Z,175nm,1.1s,mb5.9							
LIC	**Lamto**	**70.23**	**74**	⇑*iP*		**P**	**17 55 13.9**	**-0.3**
	comp=Z,143nm,1.1s,mb5.5							
LIC	**Lamto**	**70.23**	**74**	⇑*iP*		**P**	**17 55 13.9**	**-0.3**
	comp=Z,72nm,1.1s,mb5.5							
GLA	**Glamis**	**70.23**	**321**	⇑P		**P**	**17 55 14.1**	**+0.3**
	baz=70,SNR=5.8							
W15A	**Williams**	**70.39**	**325**	⇑P		**P**	**17 55 15.5**	**+0.8**
	baz=70,SNR=15							
TIC	**Toumodi**	**70.43**	**73**	*eP*		**P**	**17 55 14.7**	**-0.7**
	comp=Z,670nm,1.2s,mb6.4							
TIC	**Toumodi**	**70.43**	**73**	*eP*		**P**	**17 55 14.7**	**-0.7**
TIC				pmax		pmax		
	comp=Z,670nm,1.2s,mb6.5							
U16A	**Tuba City**	**70.53**	**326**	⇓P		**P**	**17 55 16.2**	**+0.6**
	baz=71,SNR=19							
KIC	**Kosan Boka**	**70.54**	**74**	*eP*		**P**	**17 55 15.2**	**-1.0**
	comp=Z,600nm,1.0s,mb6.5							
Y12C	**Blythe**	**70.57**	**322**	⇓P		**P**	**17 55 16.1**	**+0.2**
	baz=71,SNR=6.9							
DBIC	**Dimbokro**	**70.58**	**74**	P		**P**	**17 55 16.3**	**-0.1**
	comp=Z,129nm,1.0s,mb5.8,baz=222,slow=6.0,SNR=76							
DBIC	**Dimbokro**	**70.58**	**74**	*eP*		**P**	**17 55 16.1**	**-0.3**
	comp=Z,176nm,1.0s,mb6.0							
DBIC	**Dimbokro**	**70.58**	**74**	P		**P**	**17 55 16.2**	**-0.2**
DBIC				pmax		pmax		
	comp=Z,180nm,1.0s							
U17A	**Shonto**	**70.65**	**327**	⇑P		**P**	**17 55 16.9**	**+0.6**
	baz=71,SNR=22							
T18A	**Mexican Hat**	**70.67**	**327**	⇑P		**P**	**17 55 16.7**	**+0.3**
	baz=71,SNR=58							
DVTC	**Desert V Tower**	**70.69**	**320**	⇓P		**P**	**17 55 16.7**	**+0.1**
	baz=71,SNR=8.7							
SWSC	**Sam W. Stewart**	**70.71**	**321**	⇑P		**P**	**17 55 16.8**	**0.0**
	baz=71,SNR=7.6							
PDMCI	**Parker Dam,Lak**	**70.76**	**323**	⇑P		**P**	**17 55 17.2**	**+0.3**
	baz=71,SNR=5.0							
S19A	**Harvey Farm, M**	**70.79**	**328**	⇓P		**P**	**17 55 17.4**	**+0.3**
	baz=71,SNR=25							
X13A	**Yucca**	**70.80**	**323**	⇑P		**P**	**17 55 17.4**	**+0.1**
	baz=71,SNR=30							
PV01	**Paradox Valley**	**70.83**	**329**	*eP*		**P**	**17 55 17.6**	**+0.3**
V15A	**Kaibab Nationa**	**70.83**	**325**	⇑P		**P**	**17 55 18.2**	**+0.8**
	baz=71,SNR=32							
ISCO	**Idaho Springs**	**70.84**	**332**	*eP*		**P**	**17 55 17.4**	**0.0**
	comp=Z,37nm,1.1s,mb5.2							
ISCO	**Idaho Springs**	**70.84**	**332**	P		**P**	**17 55 17.6**	**+0.2**
ISCO				pmax		pmax		
	comp=Z,37nm,1.1s,mb5.2							
W14A	**Seligman**	**70.86**	**324**	⇓P		**P**	**17 55 18.0**	**+0.4**
	baz=71,SNR=18							
ECSD	**EROS,Sioux Fal**	**70.90**	**340**	*eP*		**P**	**17 55 16.2**	**-1.5**
T17A	**Navajo Res., N**	**71.03**	**327**	⇓P		**P**	**17 55 19.2**	**+0.6**
	baz=71,SNR=24							
BC3	**Big Chuckw Mtn**	**71.03**	**321**	⇓P		**P**	**17 55 19.0**	**+0.3**
	baz=71,SNR=26							
MONP	**Monument Peak**	**71.04**	**320**	⇑P		**P**	**17 55 19.0**	**+0.3**

baz=74,SNR=6.3
EDW2 Edwards Air Fo 73.37 321 ⇑P P 17 55 32.6 0.0
baz=74,SNR=11
L21A Rawlins 73.38 332 ⇓P P 17 55 32.6 +0.1
baz=74,SNR=45
BLG Laguna Peak 73.47 319 ⇑P P 17 55 33.3 +0.2
baz=74
O17A Robinson Place 73.49 329 ⇑P P 17 55 33.9 +0.7
baz=74,SNR=48
T11A Corn Creek, Al 73.52 324 ⇓P P 17 55 34.2 +0.8
baz=74,SNR=38
U10A Ash Meadows, A 73.53 323 ⇑P P 17 55 34.3 +0.8
baz=74,SNR=16
EOSO Osorio 73.53 49 P P 17 55 35.1 +1.4
comp=Z,504nm,1.6s,mb6.2
R13A O'Grain Ranch, 73.55 326 ⇑P P 17 55 34.3 +0.7
baz=74,SNR=17
S12A Delamar Landin 73.59 325 ⇓P P 17 55 34.7 +0.8
baz=74,SNR=7.9
N18A Larsen Ranch, 73.61 330 ⇑P P 17 55 34.5 +0.7
baz=74,SNR=21
LRMC Laurel Mountai 73.62 321 ⇓P P 17 55 34.5 +0.5
baz=74,SNR=17
BSC Santa Cruz Isl 73.73 319 ⇓P P 17 55 34.8 0.0
baz=74
P15A Leamington 73.75 328 ⇓P P 17 55 35.2 +0.4
baz=74
M19A Rock Springs 73.79 331 ⇑P P 17 55 35.4 +0.4
baz=74,SNR=5.8
Q14A Sevier Lake (B 73.81 326 ⇑P P 17 55 35.8 +0.8
baz=74,SNR=29
SBA Scott Base 73.82 191 eP P 17 55 35.9 +1.3
comp=Z,49nm,1.3s,mb5.3
SBA Scott Base 73.82 191 P P 17 55 36.2 +1.5
pmax pmax
comp=Z,49nm,1.2s,mb5.3
RSSD Black Hills 73.82 335 eP P 17 55 34.5 -0.5
comp=Z,51nm,1.2s,mb5.3
RSSD Black Hills 73.82 335 eP P 17 55 34.5 -0.5
RSSD pmax pmax
comp=Z,51nm,1.2s,mb5.3
L20A Wamsutter 73.83 332 ⇑P P 17 55 35.4 +0.2
baz=74,SNR=16
FURC Furnace Creek, 73.86 323 ⇓P P 17 55 35.7 +0.3
baz=74,SNR=9.0
O16A Springville 73.86 328 ⇓P P 17 55 35.8 +0.5
baz=74,SNR=13
TPNV Topopah Spring 73.86 323 eP P 17 55 36.0 +0.6
comp=Z,67nm,1.4s,mb5.4
TPNV Topopah Spring 73.86 323 P P 17 55 36.2 +0.7
TPNV pmax pmax
comp=Z,67nm,1.3s,mb5.4
TPNV Topopah Spring 73.86 323 ⇓P P 17 55 36.1 +0.7
baz=74,SNR=22
MPMC Manual Prospec 73.92 322 ⇑P P 17 55 35.8 0.0
baz=74,SNR=9.3
R12A Pony Springs, 74.00 325 ⇓P P 17 55 36.8 +0.6
baz=74,SNR=32
S11A Rachel 74.10 324 ⇑P P 17 55 37.4 +0.6
baz=74,SNR=8.8
N17A Moffit Pass 74.12 329 ⇓P P 17 55 37.2 +0.4
baz=74,SNR=40
M18A Lyman 74.14 330 ⇓P P 17 55 36.9 -0.1
baz=74,SNR=7.4
P14A Drum Mountains 74.16 327 ⇑P P 17 55 37.5 +0.4
baz=74,SNR=31
Q13A Wheeler Ranch, 74.16 326 ⇑P P 17 55 37.5 +0.4
baz=74,SNR=6.2
ISA Isabella 74.20 321 ⇑P P 17 55 37.8 +0.3
baz=74,SNR=23
L19A Farson 74.36 331 ⇓P P 17 55 38.3 +0.1
baz=74,SNR=22
N16A Rees Ranch, Co 74.36 329 ⇓P P 17 55 38.5 +0.2
baz=74,SNR=11
M17A Scullys Gap (B 74.46 330 ⇓P P 17 55 38.5 -0.3
baz=75,SNR=13
PKM Peak Mountain 74.46 320 ⇓P P 17 55 39.5 +0.5
baz=75,SNR=19
DUG Dugway 74.49 328 eP P 17 55 39.3 +0.3
comp=Z,50nm,1.1s,mb5.4
DUG Dugway 74.49 328 P P 17 55 39.6 +0.6
DUG pmax pmax
comp=Z,50nm,1.1s,mb5.4
DUG Dugway 74.49 328 ⇓P P 17 55 39.2 +0.2
baz=75,SNR=22
GRAC Grapevine Rang 74.52 323 ⇑P P 17 55 39.5 +0.2
baz=75,SNR=5.1
CWC Cottonwood Cre 74.52 322 ⇑P P 17 55 39.6 +0.2
baz=75,SNR=23
R11A Troy Canyon, C 74.53 325 ⇓P P 17 55 39.8 +0.5
baz=75,SNR=36
P13A Bates Ranch, G 74.53 326 ⇑P P 17 55 39.8 +0.5
baz=75,SNR=12
Q12A Willow Creek R 74.64 326 ⇑P P 17 55 40.6 +0.6
baz=75
VES Vestal, Richgr 74.68 321 ⇓P P 17 55 40.2 0.0
baz=75,SNR=6.0
S10A Tonopah Range, 74.76 324 ⇓P P 17 55 40.9 +0.2
baz=75,SNR=32
CFTV Fuerteventura 74.76 49 P P 17 55 41.1 +0.2
comp=Z,50nm,1.1s,mb5.4
M16A Huntsville 74.78 329 ⇑P P 17 55 40.3 -0.4
baz=75,SNR=9.1
SMMC Simmler 74.85 320 ⇓P P 17 55 41.4 +0.2
baz=75,SNR=12
R10A Warm Springs 74.87 324 ⇑P P 17 55 42.6 +1.3
baz=75,SNR=43
N15A Stansbury Isla 74.88 328 ⇑P P 17 55 41.3 0.0
baz=75
S09A Goldfield 74.96 323 ⇑P P 17 55 42.2 +0.4
baz=75,SNR=18
BW06 Boulder Array 74.98 331 ⇓P P 17 55 41.4 -0.4
baz=75,SNR=16
PDAR Pinedale Array 74.98 331 P P 17 55 40.7 -1.1
comp=Z,7.9nm,1.0s,mb4.6,baz=145,slow=5.4,SNR=35
PDAR pP pP 17 55 50.9 -3.6
comp=Z,8.2nm,1.0s,baz=134,slow=8.5,SNR=9.2
N14A Grayback Hills 75.18 328 ⇑P P 17 55 43.2 +0.2
baz=75,SNR=15
L16A Fish Haven 75.24 330 ⇓P P 17 55 43.7 +0.4
baz=75,SNR=11
R09A Tonopah 75.25 324 ⇓P P 17 55 43.7 +0.2
baz=75,SNR=21
M15A Larsen Ranch, 75.29 329 ⇑P P 17 55 43.7 +0.1
baz=75
Q10A Clear Creek Ra 75.31 325 ⇑P P 17 55 44.5 +0.7
baz=75,SNR=28
SYO Syowa Base 75.32 160 ⇓/P P 17 55 42.5 -1.0
SYO Syowa Base 75.32 160 ⇓/pP pP 17 55 51.6 -4.6
MTUM Tungsten Hills 75.44 322 eP P 17 55 44.9 +0.3
P11A Circle Ranch, 75.50 325 ⇓P P 17 55 45.4 +0.5
baz=76
O12A Currie 75.51 326 ⇑P P 17 55 45.5 +0.5
baz=76,SNR=25
PKD Parkfield 75.61 320 ⇑P P 17 55 45.5 -0.1
baz=76,SNR=5.8
L15A Malad City 75.68 329 ⇓P P 17 55 45.7 -0.1
baz=76,SNR=34
N13A Wendover, West 75.68 327 ⇓P P 17 55 46.1 +0.2
baz=76
Q09A Carvers 75.74 324 ⇓P P 17 55 47.2 +1.0
baz=76
M14A Sheep Mountain 75.75 328 ⇑P P 17 55 46.3 0.0
baz=76,SNR=24
MLAC Mammoth Lakes 75.79 322 ⇑P P 17 55 46.9 +0.3
baz=76
KCC Kaiser Creek 75.85 322 ⇓P P 17 55 46.4 -0.5
baz=76,SNR=16
T06C Millerton Lake 75.85 321 ⇓P P 17 55 46.6 -0.4
baz=76
O11A Cowboy Ranch, 75.88 326 ⇓P P 17 55 47.1 0.0
baz=76,SNR=8.4
P10A Eureka 75.92 325 ⇓P P 17 55 47.8 +0.5
baz=76,SNR=12
K16A Soda Springs 75.95 330 ⇓P P 17 55 48.1 +0.8
baz=76,SNR=56
J17A Brown Place, J 75.97 331 ⇑P P 17 55 47.9 +0.5
baz=76,SNR=26
REDW Red Top Meadow 76.03 331 eP P 17 55 47.7 -0.1
comp=Z,50nm,1.2s,mb5.3
M13A Montello 76.04 328 ⇓P P 17 55 47.8 -0.2
baz=76,SNR=6.5
NVAR Mina Array Bea 76.06 323 P P 17 55 48.2 +0.1
comp=Z,9.5nm,0.9s,mb4.7,baz=143,slow=6.2,SNR=47
NVAR pP pP 17 55 57.7 -3.1
comp=Z,1.3nm,0.3s,baz=229,slow=20,SNR=11
NVAR Mina Array Bea 76.06 323 P P 17 55 48.2 +0.1
NVAR pP pP 17 55 57.7 -3.1
V03C Hunter Liggett 76.07 320 ⇓P P 17 55 48.3 +0.1
baz=76
N12A Clover Valley, 76.10 327 ⇓P P 17 55 48.1 -0.2
baz=76,SNR=6.5
L14A Malta 76.11 329 ⇓P P 17 55 47.9 -0.4
baz=76,SNR=30
ELK Elko 76.12 327 eP P 17 55 48.3 -0.1
comp=Z,30nm,1.1s,mb5.1
ELK Elko 76.12 327 P P 17 55 48.6 +0.2
ELK pmax pmax
comp=Z,30nm,1.1s
Q08A Gabbs 76.16 324 ⇑P P 17 55 48.5 -0.2
baz=76,SNR=7.0
K15A Arbon 76.27 329 ⇑P P 17 55 49.0 -0.2
baz=76,SNR=18
J16A Bone 76.30 330 ⇓P P 17 55 49.4 +0.1
baz=76,SNR=11
I17A Pilgram Creek 76.35 331 ⇑P P 17 55 50.4 +0.8
baz=76,SNR=39
O10A Cortez Mining, 76.43 325 ⇑P P 17 55 50.5 +0.3
baz=77,SNR=8.2
S05C Merced 76.44 321 ⇑P P 17 55 50.7 +0.4
baz=77,SNR=10.0
M12A Wells 76.46 327 ⇑P P 17 55 50.4 +0.1
baz=77
K14A Jones Ranch, D 76.47 329 ⇓P P 17 55 50.1 -0.2
baz=77,SNR=8.8
L13A Double Diamond 76.49 328 ⇑P P 17 55 50.7 +0.2
baz=77,SNR=18
ULM Lac du Bonnet 76.61 344 P P 17 55 49.2 -1.7
comp=Z,72nm,1.2s,mb5.5,baz=161,slow=5.4,SNR=15
O09A Fish Creek Ran 76.71 325 ⇑P P 17 55 52.0 +0.3
baz=77,SNR=6.5
I16A Newdale 76.72 331 ⇓P P 17 55 52.1 +0.5
baz=77,SNR=5.4
H17A Grant Village 76.72 332 ⇓P P 17 55 52.1 +0.4
baz=77,SNR=12
RLMT Red Lodge 76.75 333 eP P 17 55 51.9 +0.1
comp=Z,70nm,1.2s,mb5.5
RLMT Red Lodge 76.75 333 ⇑P P 17 55 52.2 +0.4
baz=77,SNR=23
N10A Dunphy 76.75 326 ⇑P P 17 55 52.1 +0.2
baz=77
R06C Coleville 76.76 323 ⇑P P 17 55 52.5 +0.4
baz=77,SNR=9.4
PACP Pacheco Peak 76.77 320 ⇑P P 17 55 52.1 0.0
baz=77
J15A Blackfoot 76.78 330 ⇑P P 17 55 52.5 +0.4
baz=77,SNR=26
LKWY Lake 76.78 332 eP P 17 55 53.2 +1.1
comp=Z,56nm,1.4s,mb5.3
LKWY Lake 76.78 332 P P 17 55 53.4 +1.4
LKWY pmax pmax
comp=Z,55nm,1.3s,mb5.3
M11A Holland Ranch, 76.91 327 ⇓P P 17 55 53.0 +0.2
baz=77,SNR=8.8
CMB Columbia Colle 76.95 322 ⇓P P 17 55 53.2 0.0
baz=77,SNR=5.8
K13A Stover Farm, H 76.98 328 ⇓P P 17 55 53.3 +0.1
baz=77,SNR=5.7
G18A Lazy EL Ranch, 77.03 333 ⇓P P 17 55 53.3 -0.1
baz=77,SNR=35
L12A House Creek Ra 77.05 328 ⇑P P 17 55 53.7 +0.1
baz=77,SNR=17
J14A Carey 77.22 329 ⇓P P 17 55 54.8 +0.3
baz=77,SNR=20
H16A Russell Place, 77.26 331 ⇑P P 17 55 55.3 +0.6
baz=77,SNR=35
I15A Monteview 77.27 330 ⇓P P 17 55 55.3 +0.6
baz=77,SNR=6.1
O08A Rochester Mine 77.31 325 ⇓P P 17 55 54.8 -0.3
baz=77
M10A I.L. Ranch, Tu 77.36 326 ⇑P P 17 55 55.4 +0.1
baz=78,SNR=8.5
K12A Draper Farm, C 77.37 328 ⇓P P 17 55 55.7 +0.4
baz=78,SNR=30
N09A Rock Creek Ran 77.38 325 ⇓P P 17 55 55.4 -0.1
baz=78
L11A Cat Creek Ranc 77.44 327 ⇑P P 17 55 55.7 0.0
baz=78,SNR=25
QLMT Earthquake Lak 77.44 331 eP P 17 55 56.3 +0.5
GCMT Greycliff 77.45 333 eP P 17 55 55.5 -0.2
WCN Washoe City 77.48 323 ⇓P P 17 55 56.1 +0.1
baz=78
G17A Pierce Place, 77.53 332 ⇑P P 17 55 56.6 +0.4
baz=78
F18A Big Timber 77.56 333 ⇑P P 17 55 56.4 0.0
baz=78,SNR=44
DGMT Dagmar 77.58 338 eP P 17 55 56.3 -0.1
comp=Z,175nm,1.1s,mb5.9
DGMT Dagmar 77.58 338 ⇑P P 17 55 56.4 0.0
baz=78,SNR=16
J13A Conrad, Pi 77.59 329 ⇑P P 17 55 56.9 +0.3
baz=78,SNR=15
O07A Toulon 77.60 324 ⇓P P 17 55 56.4 -0.4
baz=78,SNR=17
N08A GE Springer Mi 77.65 325 ⇓P P 17 55 56.7 -0.2
baz=78,SNR=7.4
LAVA Lava Cap Winer 77.65 322 ⇓P P 17 55 56.7 -0.3
baz=78,SNR=7.2
I14A Mackay 77.66 330 ⇑P P 17 55 57.5 +0.5
baz=78,SNR=27
L10A Juniper Basin 77.73 327 ⇓P P 17 55 57.7 +0.3
baz=78,SNR=40
BDM Black Diamond 77.75 321 ⇓P P 17 55 58.4 +0.7
baz=78
M09A Marrel Ranch, 77.75 326 ⇓P P 17 55 57.8 +0.3
baz=78,SNR=5.8
H15A Lima 77.82 331 ⇓P P 17 55 58.0 +0.2
baz=78,SNR=10.0
HLID Haley 77.83 329 eP P 17 55 58.5 +0.5
comp=Z,59nm,1.1s,mb5.4
HLID Hailey 77.83 329 ⇓P P 17 55 58.4 +0.5
baz=78,SNR=60
G16A Moss Hill, Enn 77.92 331 ⇑P P 17 55 58.6 +0.2
baz=78,SNR=12
J12A Stokes Ranch, 77.92 328 ⇓P P 17 55 58.7 +0.2
baz=78,SNR=32
I13A Wildhorse Cree 77.96 329 ⇓P P 17 55 59.0 +0.4
baz=78,SNR=46
F17A Fitzpatrick Pl 77.96 333 ⇑P P 17 55 59.1 +0.5
baz=78,SNR=26
K11A Parker Ranch, 78.02 327 ⇓P P 17 55 59.0 0.0
baz=78,SNR=20
MCMT McKenzie Canyo 78.07 331 eP P 17 55 59.8 +0.6
N07B Gerlach 78.09 324 ⇑P P 17 55 59.3 -0.1
baz=78,SNR=34
H14A Leadore 78.14 330 ⇓P P 17 56 00.1 +0.4
baz=78,SNR=25
BOZ Bozeman (W) 78.17 332 ⇑P P 17 55 59.4 -0.4
baz=78,SNR=27
G15A Dillon 78.17 331 ⇓P P 17 55 59.9 +0.1
baz=78,SNR=16
E18A Harlowton 78.17 333 ⇓P P 17 55 59.4 -0.3
baz=78,SNR=14
BEKR Beckwourth 78.20 323 ⇓P P 17 56 00.1 -0.1
baz=78,SNR=23
M08A Happy Creek Ra 78.25 325 ⇓P P 17 56 00.2 -0.1
baz=78,SNR=13
F16A Kennard Place, 78.28 332 ⇓P P 17 56 00.2 -0.1
baz=78,SNR=10
L09A Wilkinson Ranc 78.30 326 ⇑P P 17 56 00.7 +0.2
baz=78
I12A Atlanta 78.35 329 ⇑P P 17 56 01.1 +0.3
baz=78,SNR=29
CVS Carmenet Viney 78.36 321 ⇓P P 17 56 00.4 -0.6
baz=78,SNR=6.1
MFID Camas Ranch 78.40 328 ⇑P P 17 56 01.0 -0.1
baz=78,SNR=24
K10A MacKenzie Ranc 78.44 327 ⇑P P 17 56 01.4 +0.1
baz=79
OHCM Honcut 78.47 322 eP P 17 56 01.5 -0.1
MCCM Marconi Confer 78.47 320 ⇓P P 17 56 01.2 -0.4
baz=79
E17A Martinsdale 78.48 333 ⇑P P 17 56 01.8 +0.3
baz=79,SNR=22
H13A Challis 78.51 330 ⇑P P 17 56 02.2 +0.5
baz=79,SNR=60
N06A Buffalo Meadow 78.53 324 ⇑P P 17 56 02.1 +0.2
baz=79,SNR=31
NSHM Saint Helena R 78.56 321 eP P 17 56 01.6 -0.5
O05C Quincy 78.58 323 ⇓P P 17 56 02.4 +0.2
baz=79
ORV Oroville 78.63 322 ⇓P P 17 56 02.7 +0.3
baz=79,SNR=33
F15A Butte 78.70 331 ⇓P P 17 56 03.2 +0.5
baz=79,SNR=35
MNRC McLaughlin Nat 78.71 321 ⇑P P 17 56 03.2 +0.2
baz=79,SNR=5.7
L08A Fields 78.77 326 ⇓P P 17 56 03.1 -0.1
baz=79,SNR=19
H12A Diamond D Ranc 78.78 329 ⇑P P 17 56 03.7 +0.5
baz=79,SNR=28
K09A Rome 78.82 326 ⇑P P 17 56 03.5 +0.1
baz=79,SNR=20
I11A Placerville 78.83 328 ⇓P P 17 56 03.2 -0.3
baz=79,SNR=7.6
SUR Sutherland 78.88 120 eP P 17 56 05.8 +1.5
comp=Z,136nm,1.4s,mb5.7
E16A East Helena 78.89 332 ⇓P P 17 56 03.8 +0.1
baz=79,SNR=20
G13A Cobalt 78.91 330 ⇓P P 17 56 04.4 +0.5
baz=79,SNR=150
O04C Chester 78.92 323 ⇓P P 17 56 04.0 -0.1
baz=79,SNR=8.7
D17A Six Diamond Ra 78.96 333 ⇑P P 17 56 04.2 +0.2
baz=79,SNR=82
F14A Wisdom 79.07 331 ⇑P P 17 56 05.0 +0.3
baz=79,SNR=37
WVOR Wild Horse Val 79.09 326 eP P 17 56 04.4 -0.5
comp=Z,24nm,1.3s,mb5.0
WVOR Wild Horse Val 79.09 326 P P 17 56 04.8 -0.1
WVOR pmax pmax
comp=Z,24nm,1.3s,mb5.0
HRY Holter Researc 79.09 332 eP P 17 56 04.6 -0.2
HOPS Hopland 79.15 321 ⇓P P 17 56 05.3 0.0
baz=79
L07A Adell 79.16 325 ⇑P P 17 56 05.5 +0.1
baz=79,SNR=20
E15A Deer Lodge 79.22 332 ⇑P P 17 56 05.7 +0.2
baz=79,SNR=34
D16A Dana Ranch, Ca 79.23 333 ⇑P P 17 56 05.9 +0.4
baz=79,SNR=36
K08A Mann Creek Ran 79.23 326 ⇑P P 17 56 05.8 +0.2
baz=79
TOA0 Torodi Ar. Sit 79.27 71 eP P 17 56 06.2 -0.4
TORD Torodi Ar. Bea 79.27 71 P P 17 56 06.3 -0.2
comp=Z,184nm,1.0s,mb6.0,baz=253,slow=1.9,SNR=9.6
EGMT Eagleton 79.28 334 ⇑P P 17 56 05.4 -0.4
baz=80,SNR=25
J09A Fry Pan Ranch, 79.30 327 ⇓P P 17 56 05.9 -0.2
baz=79,SNR=11
I10A Payette 79.37 328 ⇑P P 17 56 06.3 -0.1
baz=80
C17A Wharram Farm, 79.38 334 ⇓P P 17 56 06.3 -0.1
baz=80,SNR=27
GASB Alder Springs 79.39 322 ⇓P P 17 56 06.9 +0.3
baz=80,SNR=14
H11A Donnelly 79.45 329 ⇓P P 17 56 06.9 +0.1
baz=80,SNR=12
F13A Darby 79.48 330 ⇓P P 17 56 07.3 +0.3
baz=80,SNR=99
E14A Clinton 79.58 331 ⇓P P 17 56 07.7 +0.2
baz=80,SNR=16
K07A Rock Creek Ran 79.59 326 ⇑P P 17 56 07.7 0.0
baz=80,SNR=19
MOD Modoc 79.59 325 ⇑P P 17 56 07.7 0.0
baz=80,SNR=13
D15A Lincoln 79.65 332 ⇑P P 17 56 08.0 +0.1
baz=80,SNR=25
J08A Circle Bar Ran 79.67 327 ⇑P P 17 56 07.9 -0.2
baz=80,SNR=12
H10A Noah's Angus R 79.71 328 ⇑P P 17 56 07.9 -0.4
baz=80,SNR=15
LTIM Timbered Crate 79.73 323 P P 17 56 08.1 -0.3
I09A Lost Marbles R 79.75 327 ⇓P P 17 56 08.4 0.0
baz=80,SNR=13
CHMT Chamberlain Mo 79.86 332 eP P 17 56 09.2 +0.1
F12A Elk City 79.88 330 ⇑P P 17 56 09.2 0.0
baz=80,SNR=19
WDC Whiskeytown Da 79.91 322 ⇑P P 17 56 07.8 -1.6
baz=80,SNR=9.0
E13A Victor 79.91 331 ⇓P P 17 56 09.4 +0.1
baz=80,SNR=34
C16A Fuhringer Ranc 79.92 333 ⇓P P 17 56 09.0 -0.2
baz=80,SNR=34
KIPM Iron Peak 79.93 321 eP P 17 56 09.6 +0.1
LASM Arnica Sink 80.07 324 P P 17 56 10.1 -0.2
G11A Walters Elk Ra 80.08 329 ⇑P P 17 56 10.5 +0.3
baz=80,SNR=83
D14A Greenough 80.10 332 ⇓P P 17 56 10.4 +0.1
baz=80,SNR=22
J07A Hines 80.11 326 ⇓P P 17 56 10.6 +0.2
baz=80,SNR=8.6
I08A Drewsey 80.12 327 ⇑P P 17 56 10.8 +0.3
baz=80,SNR=17
BMO Blue Mountains 80.18 328 eP P 17 56 10.5 -0.3
comp=Z,78nm,1.3s,mb5.5
H09A Durkee 80.22 328 ⇓P P 17 56 10.7 -0.3
baz=80,SNR=8.2
C15A Salmon Ranch, 80.26 333 ⇑P P 17 56 11.6 +0.5
baz=80,SNR=58
O01C Eel River Cons 80.34 321 ⇑P P 17 56 12.1 +0.4
baz=80
B16A M & M Farms, S 80.38 334 ⇓P P 17 56 11.5 -0.2
baz=80,SNR=6.6
F11A Grangeville 80.39 330 ⇑P P 17 56 11.8 -0.1
baz=80,SNR=29
G10A Bishop Farm, J 80.41 329 ⇑P P 17 56 12.4 +0.4
baz=81,SNR=26
J06A Christmas Vall 80.46 326 ⇓P P 17 56 12.3 0.0
baz=81,SNR=42
K05A Summer Lake 80.48 325 ⇓P P 17 56 12.8 +0.4
baz=81,SNR=34
N02C Big Bar 80.50 322 ⇑P P 17 56 12.4 -0.2
baz=81,SNR=22
E12A Beaver Dam Sad 80.52 330 ⇓P P 17 56 12.5 -0.1
baz=81,SNR=23
D13A Huson 80.53 331 ⇑P P 17 56 12.9 +0.3
baz=81,SNR=38
H08A Prairie City 80.61 327 ⇑P P 17 56 13.3 +0.2
baz=81,SNR=9.8
B15A Bradely Ranch, 80.66 333 ⇑P P 17 56 12.8 -0.5
baz=81,SNR=60
I07A Izee 80.71 327 ⇓P P 17 56 13.7 0.0
baz=81,SNR=29
G09A Cove 80.72 328 ⇑P P 17 56 13.8 +0.1
baz=81,SNR=88
A16A West Butte Ran 80.76 334 ⇓P P 17 56 13.6 -0.2
baz=81,SNR=57
E11A Bogner Ranch, 80.77 330 ⇑P P 17 56 13.3 -0.6
baz=81,SNR=19
YBH Yreka Blue Hor 80.78 323 ⇓P P 17 56 13.2 -0.9
baz=81,SNR=6.5
TSUM Tsumeb 80.86 107 P P 17 56 16.5 +1.4
comp=Z,92nm,0.9s,mb5.7,baz=236,slow=5.8,SNR=65
TSUM Tsumeb 80.86 107 eP P 17 56 16.4 +1.3
comp=Z,127nm,1.0s,mb5.8
JCC Jacoby Creek 80.91 322 ⇑P P 17 56 15.4 +0.6
baz=81
F10A Beach Ranch, E 80.96 329 ⇑P P 17 56 15.1 +0.1
baz=81,SNR=33
I06A Prineville 80.97 326 ⇓P P 17 56 15.3 +0.3
baz=81,SNR=9.5
B14A Marquette Ranc 80.99 333 ⇑P P 17 56 14.9 -0.1
baz=81,SNR=32
C13A Hot Springs 81.03 332 ⇑P P 17 56 15.2 0.0
baz=81,SNR=36
F09A S2 Ranch, Elgi 81.09 328 ⇓P P 17 56 15.1 -0.5
baz=81,SNR=12
H07A Lands Inn, Kim 81.10 327 ⇓P P 17 56 15.5 -0.2
baz=81,SNR=7.4
A15A Johnson Ranch, 81.25 333 ⇑P P 17 56 15.6 -0.7
baz=81,SNR=20
BSMT Bassoo Peak 81.25 332 P P 17 56 16.7 +0.3
KTRM Thompson Ridge 81.27 323 P P 17 56 16.9 +0.2
E10A Myers Farm, Un 81.28 329 ⇓P P 17 56 16.3 -0.4
baz=81,SNR=31
G08A Pilot Rock 81.30 328 ⇑P P 17 56 16.4 -0.4
baz=81,SNR=18
D11A Klaveano Farm, 81.34 330 ⇓P P 17 56 16.2 -0.7
baz=82,SNR=7.6
LNOR Lincton Mounta 81.39 328 eP P 17 56 15.5 -1.8
C12B Naegeli Ranch, 81.45 331 ⇓P P 17 56 17.7 +0.2
baz=82,SNR=10
HUMO Hull Mountain 81.51 324 ⇓P P 17 56 16.9 -1.0
baz=82
B13A Whitefish 81.51 332 ⇑P P 17 56 17.6 -0.2
baz=82,SNR=28
A14A Double T Ranch 81.53 333 ⇓P P 17 56 17.1 -0.7
baz=82,SNR=28
L02A Cave Junction 81.56 323 ⇓P P 17 56 17.8 -0.4
baz=82,SNR=9.2
F08A Pendleton 81.58 328 ⇓P P 17 56 17.7 -0.5
baz=82,SNR=9.7
H06A Lindquist Farm 81.59 327 ⇓P P 17 56 18.4 0.0

baz=82,SNR=26
G07A Ruggs Ranch, H 81.64 327 ⇑P P **P 17 56 18.7 +0.2**
baz=82,SNR=26
I05A Bend 81.67 326 ⇓P P **P 17 56 19.1 +0.4**
baz=82
D10A Wagner Farm, O 81.78 330 ⇑P P **P 17 56 18.5 -0.7**
baz=82,SNR=31
E09A Wood Farm, Sta 81.79 329 ⇓P P **P 17 56 18.8 -0.5**
baz=82,SNR=8.3
C11A Tepee Creek (N 81.89 331 ⇑P P **P 17 56 19.5 -0.3**
baz=82,SNR=58
K02A Glendale 81.91 324 ⇓P P **P 17 56 19.8 -0.2**
baz=82,SNR=13
H05A Madras 81.99 326 ⇓P P **P 17 56 20.6 +0.1**
baz=82
B12A Libby 82.07 332 ⇑P P **P 17 56 21.1 +0.3**
baz=82,SNR=14
G06A Carlson Farm, 82.10 327 ⇑P P **P 17 56 21.1 +0.2**
baz=82,SNR=11
CROR Criterion Ridg 82.10 326 P P **P 17 56 21.5 +0.6**
E08A Dider Farm, El 82.21 328 ⇓P P **P 17 56 21.6 +0.1**
baz=82
D09A Jones Farm, Ri 82.27 329 ⇑P P **P 17 56 21.4 -0.4**
baz=82,SNR=23
FFC Flin Flon 82.29 342 P P **P 17 56 20.4 -1.3**
comp=Z,266nm,1.3s,mb6.0,SNR=7.9
J02A Umpqua 82.35 324 ⇑P P **P 17 56 22.4 +0.1**
baz=82,SNR=7.4
C10A Spilker Farm, 82.36 330 ⇓P P **P 17 56 21.9 -0.3**
baz=82
B11A Sandpoint 82.39 331 ⇓P P **P 17 56 22.1 -0.3**
baz=82,SNR=9.8
RSW Rattlesnake Hi 82.40 328 *e*P P **P 17 56 22.6 +0.1**
G05A Wamic 82.45 326 ⇓P P **P 17 56 22.8 0.0**
baz=83,SNR=8.7
A12A Yaak River Ran 82.45 332 ⇓P P **P 17 56 22.7 0.0**
baz=83,SNR=42
K01A Sixes 82.47 323 ⇑P P **P 17 56 22.8 -0.2**
baz=83
H04A Detroit Lake 82.51 326 ⇑P P **P 17 56 22.5 -0.6**
baz=83,SNR=6.0
F06A Goldendale 82.54 327 ⇓P P **P 17 56 23.1 -0.2**
baz=83,SNR=6.2
D08A Wollman Farm, 82.55 329 ⇑P P **P 17 56 22.8 -0.5**
baz=83,SNR=12
I03A Eugene 82.60 325 ⇑P P **P 17 56 23.5 -0.2**
baz=83,SNR=7.0
NEW Newport 82.60 331 *e*P P **P 17 56 22.4 -1.1**
comp=Z,49nm,1.5s,mb5.3
NEW Newport 82.60 331 *e*P P **P 17 56 22.4 -1.1**
NEW pmax pmax
comp=Z,49nm,1.5s
E07A Sunnyside 82.64 328 ⇑P P **P 17 56 24.0 +0.2**
baz=83
OD2 Odessa Site #2 82.69 329 P P **P 17 56 23.8 -0.3**
A11A Hall Mountain, 82.78 331 ⇓P P **P 17 56 24.2 -0.2**
baz=83,SNR=33
C09A Chrisman Ranch 82.79 330 ⇑P P **P 17 56 24.4 -0.1**
baz=83,SNR=19
MXC Moxie City 82.87 328 P P **P 17 56 25.4 +0.4**
F05A White Salmon 82.97 327 ⇑P P **P 17 56 25.5 0.0**
baz=83
MAW Mawson 83.02 164 *e*PKP P **P 17 56 26.0 +0.5**
comp=Z,76nm,1.0s,mb5.7
MAW Mawson 83.02 164 P P **P 17 56 26.2 +0.7**
comp=Z,85nm,0.9s,mb5.8,baz=219,slow=6.5,SNR=75
MAW pP pP 17 56 34.5 -3.9
comp=Z,43nm,1.1s,baz=221,slow=12,SNR=8.2
MAW Mawson 83.02 164 *e*P P **P 17 56 26.2 +0.7**
MAW pmax pmax
comp=Z,130nm,1.0s
G04A Mulino 83.02 326 ⇓P P **P 17 56 25.8 0.0**
baz=83
H03A Soap Creek Ran 83.08 325 ⇑P P **P 17 56 26.1 0.0**
baz=83,SNR=5.7
EPH Ephrata 83.09 329 P P **P 17 56 26.0 0.0**
C08A Higginbotham F 83.14 329 ⇑P P **P 17 56 25.8 -0.5**
baz=83,SNR=5.7
D07A Quincy 83.15 328 ⇑P P **P 17 56 26.1 -0.3**
baz=83,SNR=8.1
B09A Rice 83.18 330 ⇑P P **P 17 56 25.9 -0.6**
baz=83,SNR=16
E06A Yakima 83.19 328 ⇓P P **P 17 56 26.4 -0.2**
baz=83,SNR=6.8
A10A Northport 83.33 331 ⇑P P **P 17 56 26.8 -0.5**
baz=84,SNR=11
TBM Table Mountain 83.44 328 P P **P 17 56 28.2 +0.3**
F04A Amboy 83.48 326 ⇑P P **P 17 56 27.4 -0.7**
baz=84,SNR=6.8
G03A Yamhill 83.51 326 ⇑P P **P 17 56 28.1 -0.1**
baz=84
C07A Waterville 83.55 329 ⇑P P **P 17 56 27.8 -0.6**
baz=84,SNR=21
D06A Cle Elum 83.57 328 ⇑P P **P 17 56 28.3 -0.3**
baz=84
E05A Randle 83.58 327 ⇓P P **P 17 56 28.2 -0.5**
baz=84,SNR=5.7
ETW Entiat 83.62 329 *e*P P **P 17 56 28.4 -0.3**
B08A Colville Reser 83.68 330 ⇓P P **P 17 56 28.2 -0.9**
baz=84,SNR=9.3
A09A Danville 83.78 330 ⇑P P **P 17 56 28.7 -0.9**
baz=84,SNR=21
BOSA Boshof 83.84 118 P P **P 17 56 30.9 +0.4**
comp=Z,53nm,0.9s,mb5.7,baz=255,slow=5.1,SNR=24
NLW Nelson Butte 83.95 329 P P **P 17 56 30.1 -0.4**
MDT Midelt 83.96 51 P P **P 17 56 32.4 +1.5**
comp=Z,53nm,1.0s,mb5.6,baz=245,slow=5.2,SNR=64
A08A Turner Farm, O 84.08 330 ⇑P P **P 17 56 30.9 -0.2**
baz=84,SNR=34
B07A Winthrop 84.12 329 ⇑P P **P 17 56 30.8 -0.5**
baz=84,SNR=21
D05A Enumclaw 84.13 328 ⇑P P **P 17 56 31.1 -0.3**
baz=84
C05A Tolt Reservoir 84.33 328 ⇑P P **P 17 56 31.9 -0.6**
baz=84
E03A Lebam 84.48 326 ⇑P P **P 17 56 33.2 0.0**
baz=85
EGRO El Granado 84.61 45 P P **P 17 56 35.3 +1.2**
comp=Z,396nm,1.3s,mb6.4
A07A Ashnola River, 84.66 330 ⇓P P **P 17 56 34.0 0.0**
baz=85,SNR=30
RPW Rockport 84.77 329 *e*P P **P 17 56 32.8 -1.9**
RPW *ep*P pP 17 56 43.7 -3.8
JCW Jim Creek 84.80 328 P P **P 17 56 33.4 -1.3**
EDM Edmonton 84.80 336 *e*P P **P 17 56 32.8 -1.8**
EDM *ep*P pP 17 56 41.5 -6.0
B06A Marblemount 84.81 329 ⇓P P **P 17 56 34.0 -0.8**
baz=85
EVO Evora 84.83 44⇑*i*P P **P 17 56 35.7 +0.5**
comp=Z,332nm,1.3s,mb6.0
B05A Bryant 84.93 328 ⇓P P **P 17 56 34.6 -0.8**
baz=85,SNR=6.0
C04A Brinnon 84.98 327 ⇓P P **P 17 56 35.5 -0.2**
baz=85
CMW Cultus Mountai 85.05 328 P P **P 17 56 35.0 -1.0**
EMIN Mina Concepcio 85.27 45 P P **P 17 56 38.5 +1.1**
comp=Z,95nm,0.9s,mb5.9
ESPR Espera 85.31 47 P P **P 17 56 39.0 +1.4**
comp=Z,162nm,1.0s,mb6.1
A05A Maple Falls 85.43 329 ⇓P P **P 17 56 37.8 -0.1**
baz=86
LBTB Lobatse 85.53 115 *e*P P **P 17 56 39.5 +0.3**
LBTB Lobatse 85.53 115 *e*P P **P 17 56 40.1 +0.9**
EBAD Badajoz 85.60 45 P P **P 17 56 40.0 +0.9**
comp=Z,72nm,1.0s,mb5.9
EMIJ Mijas 85.87 47 P P **P 17 56 41.1 +0.6**
comp=Z,87nm,0.9s,mb6.0
MTE Manteigas 86.20 43 *e*P P **P 17 56 42.1 +0.2**
comp=Z,63nm,1.1s,mb5.8
ECAB El Cabril 86.26 46 P P **P 17 56 43.3 +1.0**
comp=Z,62nm,1.3s,mb5.7
ELOJ Sierra Loja 86.60 47 P P **P 17 56 45.7 +1.6**
comp=Z,222nm,1.4s,mb6.2
ELOJ Sierra Loja 86.60 47 P P **P 17 56 45.7 +1.7**
ELOJ pmax pmax
comp=Z,222nm,1.4s,mb6.2
ELOB Lobios 86.72 42 P P **P 17 56 43.0 -1.4**
comp=Z,22nm,1.0s,mb5.3
ELUQ Luque 86.75 47 P P **P 17 56 45.5 +0.8**
comp=Z,110nm,1.1s,mb6.0
ELUQ Luque 86.75 47 P P **P 17 56 45.5 +0.8**
ELUQ pmax pmax
comp=Z,110nm,1.1s,mb6.0
ERON Agron 86.77 47 P P **P 17 56 44.6 -0.2**
TAM Tamanrasset 86.87 64 *e*P P **P 17 56 46.2 +0.6**
EADA Adamuz 86.87 46 P P **P 17 56 43.9 -1.4**
comp=Z,27nm,0.9s,mb5.5

EPLA Plasencia 86.94 44 P P **P 17 56 46.6 +1.1**
comp=Z,36nm,1.0s,mb5.6
EPLA Plasencia 86.94 44 P P **P 17 56 46.6 +1.0**
EPLA pmax pmax
comp=Z,36nm,1.0s,mb5.6
ECOG Cogollos-Vega 87.07 47 P P **P 17 56 47.0 +0.7**
comp=Z,5.3nm,0.4s,mb5.1
ECOG Cogollos-Vega 87.07 47 P P **P 17 56 47.0 +0.7**
ECOG pmax pmax
comp=Z,5.0nm,0.4s,mb5.1
EBER Berja 87.33 48 P P **P 17 56 49.9 +2.3**
comp=Z,15nm,0.9s,mb5.2
EBAN Banos Encina 87.39 46 P P **P 17 56 48.9 +1.0**
comp=Z,67nm,1.2s,mb5.8
EBAN Banos Encina 87.39 46 P P **P 17 56 48.9 +1.1**
EBAN pmax pmax
comp=Z,67nm,1.2s,mb5.8
ECAL Calabor 87.58 42 P P **P 17 56 49.3 +0.7**
comp=Z,31nm,1.0s,mb5.5
ERUA La Rua 87.58 41 P P **P 17 56 48.6 0.0**
EQES Quesada 87.68 47 P P **P 17 56 46.9 -2.3**
PAB San Pablo 87.77 45 *e*P P **P 17 56 49.5 -0.1**
comp=Z,90nm,1.6s,mb5.8
PAB *ep*P pP 17 57 00.8 -1.7
PAB San Pablo 87.77 45 *e*P P **P 17 56 49.5 -0.1**
PAB *e**PP pP 17 57 00.9 -1.6
PAB pmax pmax
comp=Z,90nm,1.6s,mb5.8
PAB San Pablo 87.77 45 P P **P 17 56 49.8 +0.2**
PAB pmax pmax
comp=Z,90nm,1.6s,mb5.8
ENIJ Nijar 87.83 48 P P **P 17 56 52.6 +2.7**
comp=Z,8.9nm,0.4s,mb5.3
ENIJ Nijar 87.83 48 P P **P 17 56 52.6 +2.6**
ENIJ pmax pmax
comp=Z,9.0nm,0.4s,mb5.3
EHUE Huescar 88.01 47 P P **P 17 56 50.0 -0.8**
ESDC Sonseca Array 88.08 45 P P **P 17 56 51.4 +0.3**
comp=Z,9.1nm,1.0s,mb5.0,baz=249,slow=4.4,SNR=15
ESDC pP pP 17 57 00.9 -3.2
comp=Z,1.1nm,0.5s,baz=227,slow=5.0,SNR=3.8
ESDC Sonseca Array 88.08 45 P P **P 17 56 52.0 +0.9**
comp=Z,7.5nm,1.0s,mb4.9
GUD Guadarrama 88.48 44 P P **P 17 56 52.9 -0.1**
EVIA Vianos 88.50 47 P P **P 17 56 53.2 +0.1**
ETOB Tobarra 89.14 47 P P **P 17 56 56.6 +0.5**
comp=Z,21nm,1.0s,mb5.4
ETOR Torete 89.93 45 P P **P 17 57 00.3 +0.6**
LSZ Lusaka 91.71 107 P P **P 17 57 10.3 +1.7**
comp=Z,9.6nm,0.9s,mb5.1,baz=248,slow=3.3,SNR=9.2
LSZ PP PP 18 00 46.4 -1.2
comp=Z,2.2nm,0.8s,baz=263,slow=6.3,SNR=3.8
LSZ Lusaka 91.71 107 *e*P P **P 17 57 10.9 +2.3**
comp=Z,306nm,2.5s,mb6.2
LSZ Lusaka 91.71 107 *e*P P **P 17 57 11.1 +2.4**
LSZ pmax pmax
comp=Z,310nm,2.5s,mb6.2
ETSF Etsaut 91.95 44⇑*i*P P **P 17 57 11.0 +1.9**
comp=Z,57nm,1.3s,mb5.4
ETSF Etsaut 91.95 44⇑*i*P P **P 17 57 11.0 +1.9**
comp=Z,29nm,1.3s,mb5.4
ETSF Etsaut 91.95 44⇑*i*P P **P 17 57 11.0 +1.9**
ETSF pmax pmax
comp=Z,29nm,1.3s,mb5.5
YKA Yellowknife Ar 92.41 341 P P **P 17 57 09.2 -1.5**
comp=Z,16nm,0.8s,mb5.4,baz=137,slow=4.5,SNR=54
LFF La Frestade 93.78 42⇑*i*P P **P 17 57 17.1 -0.4**
comp=Z,73nm,1.1s,mb5.7
LFF La Frestade 93.78 42⇑*i*P P **P 17 57 17.1 -0.4**
comp=Z,36nm,1.1s,mb5.7
LFF La Frestade 93.78 42⇑*i*P P **P 17 57 17.1 -0.4**
LFF pmax pmax
comp=Z,36nm,1.1s,mb5.7
MTLF Montolieu 93.94 44 *e*P P **P 17 57 17.7 -0.6**
comp=Z,68nm,1.6s,mb5.5
MTLF Montolieu 93.94 44 *e*P P **P 17 57 17.7 -0.6**
comp=Z,34nm,1.6s,mb5.5
MTLF Montolieu 93.94 44 *e*P P **P 17 57 17.7 -0.6**
MTLF pmax pmax
comp=Z,34nm,1.6s,mb5.5
MFF Saint Martin d 94.06 41⇑*i*P P **P 17 57 18.0 -0.7**
comp=Z,209nm,1.7s,mb6.0
MFF Saint Martin d 94.06 41⇑*i*P P **P 17 57 18.0 -0.7**
comp=Z,104nm,1.7s,mb6.0
MFF Saint Martin d 94.06 41⇑*i*P P **P 17 57 18.0 -0.7**
MFF pmax pmax
comp=Z,104nm,1.7s,mb6.0
RJF Les Rejaudoux 94.44 42⇑*i*P P **P 17 57 19.9 -0.6**
comp=Z,80nm,1.4s,mb5.7
RJF Les Rejaudoux 94.44 42⇑*i*P P **P 17 57 19.9 -0.6**
comp=Z,40nm,1.4s,mb5.7
RJF Les Rejaudoux 94.44 42⇑*i*P P **P 17 57 19.9 -0.6**
RJF pmax pmax
comp=Z,40nm,1.4s,mb5.7
LDF La Druitiere 95.06 39 *e*P P **P 17 57 22.1 -1.2**
comp=Z,60nm,1.2s,mb5.6
LDF La Druitiere 95.06 39 *e*P P **P 17 57 22.1 -1.2**
comp=Z,30nm,1.2s,mb5.6
LDF La Druitiere 95.06 39 *e*P P **P 17 57 22.1 -1.2**
LDF pmax pmax
comp=Z,30nm,1.2s,mb5.6
TCF Toulx Ste Croi 95.33 42⇑*i*P P **P 17 57 23.8 -0.8**
comp=Z,33nm,1.1s,mb5.4
TCF Toulx Ste Croi 95.33 42⇑*i*P P **P 17 57 23.8 -0.8**
comp=Z,17nm,1.1s,mb5.4
TCF Toulx Ste Croi 95.33 42⇑*i*P P **P 17 57 23.8 -0.8**
TCF pmax pmax
comp=Z,17nm,1.1s,mb5.4
LASF Ste Croix 95.34 44⇑*i*P P **P 17 57 24.5 -0.1**
comp=Z,113nm,1.4s,mb5.8
KEST Kesra 95.49 54 P P **P 17 57 23.9 -1.7**
comp=Z,4.6nm,1.0s,mb4.9,baz=338,slow=1.8,SNR=6.5
BGF Bois d'Agland 95.85 42⇑*i*P P **P 17 57 26.2 -0.7**
comp=Z,45nm,1.0s,mb5.5
BGF Bois d'Agland 95.85 42⇑*i*P P **P 17 57 26.2 -0.7**
comp=Z,23nm,1.0s,mb5.6
BGF Bois d'Agland 95.85 42⇑*i*P P **P 17 57 26.2 -0.7**
BGF pmax pmax
comp=Z,23nm,1.0s,mb5.6
HYF Humbligny 96.06 41 *e*P P **P 17 57 27.1 -0.7**
AVF Avril sur Loir 96.27 42⇑*i*P P **P 17 57 27.8 -1.0**
comp=Z,18nm,1.0s,mb5.2
AVF Avril sur Loir 96.27 42⇑*i*P P **P 17 57 27.8 -1.0**
comp=Z,9.1nm,1.0s,mb5.2
AVF Avril sur Loir 96.27 42⇑*i*P P **P 17 57 27.8 -1.0**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
SMRF Simiane la Rot 96.40 45 *e*P P **P 17 57 29.9 +0.4**
SSF Saint Saulge 96.48 41⇑*i*P P **P 17 57 28.7 -1.1**
SMF Signal de Mont 96.50 42⇑*i*P P **P 17 57 29.2 -0.7**
comp=Z,83nm,1.2s,mb5.7
SMF Signal de Mont 96.50 42⇑*i*P P **P 17 57 29.2 -0.7**
comp=Z,41nm,1.2s,mb5.7
SMF Signal de Mont 96.50 42⇑*i*P P **P 17 57 29.2 -0.7**
SMF pmax pmax
comp=Z,41nm,1.2s,mb5.7
LMR La Mourre 96.73 46⇑*i*P P **P 17 57 29.8 -1.2**
comp=Z,174nm,1.7s,mb5.9
LMR La Mourre 96.73 46⇑*i*P P **P 17 57 29.8 -1.2**
comp=Z,87nm,1.7s,mb5.9
LMR La Mourre 96.73 46⇑*i*P P **P 17 57 29.8 -1.2**
LMR pmax pmax
comp=Z,87nm,1.7s,mb5.9
LOR Lormes 96.79 41⇑*i*P P **P 17 57 30.0 -1.2**
comp=Z,35nm,1.2s,mb5.4
LOR Lormes 96.79 41⇑*i*P P **P 17 57 30.0 -1.2**
comp=Z,18nm,1.2s,mb5.4
LOR Lormes 96.79 41⇑*i*P P **P 17 57 30.0 -1.2**
LOR pmax pmax
comp=Z,18nm,1.2s,mb5.4
FRF La Foret Royal 96.92 46⇑*i*P P **P 17 57 29.5 -2.3**
comp=Z,59nm,1.1s,mb5.6
FRF La Foret Royal 96.92 46⇑*i*P P **P 17 57 29.5 -2.3**
comp=Z,29nm,1.1s,mb5.6
FRF La Foret Royal 96.92 46⇑*i*P P **P 17 57 29.5 -2.3**
FRF pmax pmax
comp=Z,29nm,1.1s,mb5.6
ORIF Oris-en-Rattie 97.01 44 *e*P P **P 17 57 31.5 -0.7**
comp=Z,63nm,1.3s,mb5.6
ORIF Oris-en-Rattie 97.01 44 *e*P P **P 17 57 31.5 -0.7**
comp=Z,32nm,1.3s,mb5.6
ORIF Oris-en-Rattie 97.01 44 *e*P P **P 17 57 31.5 -0.7**
ORIF pmax pmax
comp=Z,32nm,1.3s,mb5.6
MBDF Montbardon 97.50 45⇑*i*P P **P 17 57 34.7 +0.3**
SBF Sospel 97.56 46 *e*P P **P 17 57 34.7 0.0**
comp=Z,157nm,1.4s,mb6.0

SBF Sospel 97.56 46 *e*P P **P 17 57 34.7 0.0**
comp=Z,79nm,1.4s,mb6.0
SBF Sospel 97.56 46 *e*P P **P 17 57 34.7 0.0**
SBF pmax pmax
comp=Z,79nm,1.4s,mb6.0
LPL La Plagne 97.81 44 *e*P P **P 17 57 36.2 +0.4**
comp=Z,45nm,1.6s,mb5.5
LPL La Plagne 97.81 44 *e*P P **P 17 57 36.2 +0.4**
comp=Z,23nm,1.5s,mb5.5
LPL La Plagne 97.81 44 *e*P P **P 17 57 36.2 +0.4**
LPL pmax pmax
comp=Z,23nm,1.5s,mb5.5
LPG La Plagne 97.81 44 *e*P P **P 17 57 35.6 -0.2**
comp=Z,54nm,1.5s,mb5.5
LPG La Plagne 97.81 44 *e*P P **P 17 57 35.6 -0.2**
comp=Z,27nm,1.5s,mb5.6
LPG La Plagne 97.81 44 *e*P P **P 17 57 35.6 -0.2**
LPG pmax pmax
comp=Z,27nm,1.5s,mb5.6
CABF La Chapelle 97.87 43 *e*P P **P 17 57 35.7 -0.4**
PGF Pioggiola 98.06 47⇑*i*P P **P 17 57 37.1 +0.1**
comp=Z,170nm,1.3s,mb6.1
PGF Pioggiola 98.06 47⇑*i*P P **P 17 57 37.1 +0.1**
comp=Z,85nm,1.3s,mb6.1
PGF Pioggiola 98.06 47⇑*i*P P **P 17 57 37.1 +0.1**
PGF pmax pmax
comp=Z,85nm,1.3s,mb6.1
MEZF Maizieres J'vi 98.06 41 *e*P P **P 17 57 36.1 -0.8**
DOU Dourbes 98.49 39 P P **P 17 57 38.1 -0.6**
comp=Z,10.0nm,1.3s,mb5.2
GIVF Givet 98.63 39 *e*P P **P 17 57 38.7 -0.7**
comp=Z,67nm,1.3s,mb5.7
GIVF Givet 98.63 39 *e*P P **P 17 57 38.7 -0.7**
comp=Z,34nm,1.3s,mb5.7
GIVF Givet 98.63 39 *e*P P **P 17 57 38.7 -0.7**
GIVF pmax pmax
comp=Z,34nm,1.3s,mb5.7
HAU Haudompre 98.63 41⇑*i*P P **P 17 57 38.5 -0.9**
comp=Z,15nm,1.0s,mb5.2
HAU Haudompre 98.63 41⇑*i*P P **P 17 57 38.5 -0.9**
comp=Z,7.6nm,1.0s,mb5.2
HAU Haudompre 98.63 41⇑*i*P P **P 17 57 38.5 -0.9**
HAU pmax pmax
comp=Z,8.0nm,1.0s,mb5.2
HINF Hinteralfeld 98.86 42 *e*P P **P 17 57 39.6 -0.8**
BCLA Clavier 99.04 39 P P **P 17 57 41.0 -0.2**
comp=Z,15nm,1.8s,mb5.2
WLF Walferdange 99.22 40 P P **P 17 57 42.4 +0.4**
comp=Z,32nm,1.5s,mb5.6
CDF Champ du Feu 99.36 41 *e*P P **P 17 57 41.8 -0.9**
comp=Z,40nm,1.4s,mb5.5
CDF Champ du Feu 99.36 41 *e*P P **P 17 57 41.8 -0.9**
comp=Z,20nm,1.4s,mb5.5
CDF Champ du Feu 99.36 41 *e*P P **P 17 57 41.8 -0.9**
CDF pmax pmax
comp=Z,20nm,1.4s,mb5.5
GRF Grafenberg Arr 102.25 41 *e*PP PP 18 02 12.2 +3.8
KHC Kasperske Hory 103.49 42 *e*PP PP 18 02 04.0 -14
KIEV Kiev 113.66 43 *e*PKiKP PKiKP 18 02 37.4 -1.2
ASF Jabal al Asfar 116.13 64 PKiKP PKiKP 18 02 45.1 +1.1
comp=Z,8.8nm,1.0s,baz=193,slow=1.9,SNR=7.4
APA Apatity 116.58 25⇑*i*PKIKP PKPdf 18 02 43.0 -0.7
APA pmax pmax
comp=Z,14nm,1.2s
APA MLR MLR
comp=Z,4μm,23.0s,MS6.0
STKA Stephens Creek 117.17 210 *e*PKP PKPdf 18 02 43.9 -2.2
comp=Z,2.2nm,0.9s
STKA Stephens Creek 117.17 210 PKiKP PKiKP 18 02 46.0 -0.1
comp=Z,2.3nm,1.0s,baz=42,slow=6.0,SNR=4.4
OBN Obninsk 118.44 39⇑*e*PKP PKPdf 18 02 47.4 -0.2
OBN Obninsk 118.44 39⇓*i*PKIKP PKPdf 18 02 47.4 -0.2
OBN *e* 18 04 00.9
OBN pmax pmax
comp=Z,38nm,1.2s
ANN Anapa 118.48 50 *e*PKIKP PKPdf 18 02 40.7 -7.3
ANN pmax pmax
comp=Z,47nm,1.0s
SOC Sochi 120.01 52 *i* PKP PKPdf 18 02 51.8 +0.8
SOC Sochi 120.01 52 *i* PKIKP PKPdf 18 02 50.1 -0.9
SOC *e* 18 04 16.5
SOC *e*PS PS 18 14 00.1 -6.3
SOC pmax pmax
comp=Z,22nm,0.9s
KIV Kislovodsk 122.18 52 *e*PKPdf PKPdf 18 02 55.3 +0.1
KIV Kislovodsk 122.18 52 *e*PKIKP PKPdf 18 02 54.4 -0.8
KIV pmax pmax
comp=Z,34nm,1.2s
GNI Garni 123.52 56⇑*e*PKP PKPdf 18 02 58.2 +0.3
GNI Garni 123.52 56⇑*i*PKIKP PKPdf 18 02 58.2 +0.3
BILL Bilibino 123.66 338 *i* PKIKP PKPdf 18 02 56.9 -0.4
BILL *e* 18 04 38.0
BILL pmax pmax
comp=Z,15nm,1.2s
KLBR Kellerberrin 124.87 189 *e*PKP PKPdf 18 03 00.7 -0.2
comp=Z,36nm,1.2s
ASAR Alice Springs 127.68 209 PKP PKPdf 18 03 05.8 -0.6
comp=Z,13nm,0.9s,baz=148,slow=2.2,SNR=53
ASAR pPKP pPKPdf 18 03 14.0 -5.8
comp=Z,6.6nm,0.9s,baz=128,slow=1.5,SNR=9.0
TIXI Tiksi 130.38 352 *e*PKPdf PKPdf 18 03 09.1 -1.0
TIXI Tiksi 130.38 352 *i* PKIKP PKPdf 18 03 08.0 -2.1
TIXI pmax pmax
comp=Z,24nm,1.4s
ARU Arti 130.41 35 *e*PKPdf PKPdf 18 03 10.6 +0.1
ARU Arti 130.41 35 *i* PKIKP PKPdf 18 03 10.9 +0.4
ARU *e* 18 05 23.9
WB2 Warramunga Arr 130.70 211 *e*PKP PKPdf 18 03 10.8 -1.5
WRA Warramunga Arr 130.70 211 PKhKP 18 03 06.8
comp=Z,6.2nm,1.2s,baz=161,slow=1.0,SNR=6.1
WRA PKP PKPdf 18 03 12.0 -0.3
comp=Z,22nm,1.1s,baz=160,slow=1.6,SNR=51
WRA pPKP pPKPdf 18 03 20.8 -4.9
comp=Z,6.8nm,0.9s,baz=153,slow=1.7,SNR=6.7
WRA SKPab 18 06 33.6
comp=Z,8.1nm,1.2s,baz=145,slow=4.2,SNR=9.7
WRA Warramunga Arr 130.70 211 PKIKP 18 03 06.8
WRA 18 03 12.0
WRA 18 03 20.8
WRAB Tennant Creek 130.71 211 *e*PKPdf PKPdf 18 03 11.4 -0.9
WRAB Tennant Creek 130.71 211 *i* PKIKP PKPdf 18 03 12.3 0.0
SVE Sverdlovsk 131.34 34 *e*PKIKP PKPdf 18 03 13.0 +0.7
SVE pmax pmax
comp=Z,38nm,1.3s
PETK Petropavlovsk- 133.14 322 PKP PKPdf 18 03 16.1 +0.3
comp=Z,12nm,1.0s,baz=138,slow=7.2,SNR=5.3
AB31 Akbulak array 133.41 43 PKIKP PKPdf 18 03 16.7 +0.3
AB31 pmax pmax
comp=Z,66nm,1.4s
MBWA Marble Bar 134.72 193 *e*PKPdf PKPdf 18 03 19.1 -0.7
KAKA Kakadu 137.80 214 *e*PKP Px 18 03 12.6
comp=Z,16nm,1.0s
BRVK Borovoye 137.99 35 *e*PKPdf PKPdf 18 03 25.4 +0.6
BVA0 Borovoye Array 138.06 35 *i* PKIKP PKPdf 18 03 25.3 +0.3
BVA0 pmax pmax
comp=Z,4.0nm,1.0s
YAK Yakutsk 138.93 346 *e*PKPdf PKPdf 18 03 25.8 -0.5
YAK Yakutsk 138.93 346 *e*PKIKP PKPdf 18 03 25.1 -1.2
YAK pmax pmax
comp=Z,47nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.4s
KK31 Karatay Array 142.24 49 *i* PKHKP 18 03 28.3
KK31 pmax pmax
comp=Z,4.0nm,0.9s
NVS Novosibirsk 142.88 25 *e*PKHKP 18 03 28.4
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=E,17nm,1.4s
NVS pmax pmax
comp=Z,73nm,1.4s
KURK Kurchatov 143.59 33 *e*PKPpre 18 03 32.6
KURK Kurchatov 143.59 33 PKIKP PKPdf 18 03 32.2 -2.8
KURK pmax pmax
comp=Z,45nm,1.3s
ZALV Zalesovo Beam 144.16 25 PKP PKPdf 18 03 34.2 -1.7
comp=Z,59nm,0.9s,baz=316,slow=4.1,SNR=68
YSS Yuzh-Sakhalins 144.45 320⇑*e*PKP PKPdf 18 03 35.8 -0.8
YSS Yuzh-Sakhalins 144.45 320 *e*PKIKP PKPdf 18 03 34.0 -2.6
YSS *e* 18 03 43.1
EKS2 Erkin-Say 144.64 48 *e*PKPdf PKPdf 18 03 36.8 -0.3
EKS2 Erkin-Say 144.64 48 P PKPdf 18 03 36.8 -0.3

	SNR=41								
CLNS	**Chul'man**	**144.68**	**345**	*e*PKIKP	PKPdf	18 03 35.4	-1.3		
CLNS				pmax	pmax				
	comp=Z,61nm,1.0s								
CLNS				pmax	pmax				
	comp=E,16nm,1.1s								
CLNS				pmax	pmax				
	comp=N,21nm,1.0s								
USP	**Ospenovka**	**144.90**	**47**	P	PKPdf	18 03 37.4	-0.1		
	SNR=64								
FRU	**Bishkek**	**145.15**	**48**	*i* PKIKP	PKPdf	18 03 38.5	+0.5		
FRU				pmax	pmax				
	comp=Z,510nm,2.2s								
CHMS	**Chumysh**	**145.18**	**47**	P	PKPbc	18 03 38.6	+1.0		
	SNR=68								
GUMO	**Guam**	**145.24**	**260**	PKP	PKPdf	18 03 38.4	-0.5		
	comp=Z,232nm,1.1s,baz=211,slow=5.2,SNR=4.0								
BOD	**Bodaibo**	**145.36**	**356**	⇓*i* PKIKP	PKPdf	18 03 36.5	-1.4		
BOD				pmax	pmax				
	comp=Z,210nm,1.1s								
KBK	**Karagaybulak**	**145.44**	**48**	P	PKPdf	18 03 40.0	+1.5		
	SNR=137								
TKM2	**Tokmak 2**	**145.78**	**47**	*e*PKPdf	PKPdf	18 03 39.9	+0.8		
TKM2	**Tokmak 2**	**145.78**	**47**	P	PKPdf	18 03 39.8	+0.7		
	SNR=72								
KZA	**Kyzart**	**145.87**	**48**	P	PKiKP	18 03 43.5	+0.1		
	SNR=39								
KAD	**Karad**	**146.33**	**94**	*e*P	PKPdf	18 03 41.9	+1.2		
POO	**Poona**	**146.34**	**91**	⇑*i* P	PKPdf	18 03 39.5	-1.2		
	comp=Z,150nm,1.0s								
ERM	**Erimo**	**146.41**	**312**	*e*PKPbc	PKPbc	18 03 42.1	+0.6		
ULHL	**Ulahol**	**146.49**	**48**	P	PKPdf	18 03 37.0	-3.3		
	SNR=5.4								
KSH	**Kashi**	**147.30**	**52**	*e*PKP	PKPdf	18 03 43.1	+1.4		
KSH				*e*PKS		18 07 17.3			
KSH				PP	PP				
	comp=Z,14μm,15.3s								
KSH				LR	LR				
	comp=N,2μm,13.3s,MS6.2								
KSH				LR	LR				
	comp=E,2μm,13.8s,MS6.2								
KSH				LR	LR				
	comp=Z,3μm,14.2s,MS6.2								
HABR	**Khabarovsk**	**147.77**	**328**	*e*PKP2	PKPbc	18 03 44.6	-0.5		
HABR				*e*		18 07 14.9			
HABR				*e*		18 19 46.0			
MK31	**Makanchi Array**	**147.90**	**36**	*i* PKIKP	PKPdf	18 03 42.4	-0.1		
MK31				pmax	pmax				
	comp=Z,126nm,1.1s								
MKAR	**Makanchi Array**	**147.90**	**36**	PKP	PKPdf	18 03 42.5	0.0		
	comp=Z,48nm,0.8s,baz=314,slow=2.1,SNR=58								
MKAR				PKPbc	PKPbc	18 03 45.6	+0.1		
	comp=Z,49nm,0.8s,baz=323,slow=3.1,SNR=59								
MKAR	**Makanchi Array**	**147.90**	**36**	⇑*i* PKIKP	PKPdf	18 03 42.7	+0.2		
KHKI	**Kahang-Kahang**	**147.99**	**191**	P	PKPdf	18 03 37.2	-6.5		
KRKI	**Karangkates**	**148.62**	**185**	P	PKPdf	18 03 46.2	+1.5		
KLR	**Kul'dur**	**148.77**	**332**	*e*PKHKP		18 03 39.3			
KLR				pmax	pmax				
	comp=E,35nm,1.8s								
KLR				pmax	pmax				
	comp=Z,100nm,1.8s								
LATR	**Latur**	**148.81**	**93**	*i* P	PKPdf	18 03 44.5	-0.3		
THN	**Thein Dam**	**148.82**	**66**	*e*P	PKPdf	18 03 43.5	-1.0		
SJI	**Sawahan**	**149.09**	**184**	P	PKPdf	18 03 45.5	0.0		
KMMI	**Kalianget**	**149.54**	**189**	P	PKPbc	18 03 49.4	-1.3		
BJII	**Banjamegara**	**149.56**	**180**	P	PKPdf	18 03 41.5	-4.7		
SDNR	**Sundarnagar**	**150.00**	**67**	*ex*	PKPbc	18 03 53.0	+1.7		
LEM	**Lembang**	**150.00**	**176**	P	PKPdf	18 03 47.1	+0.2		
KDI	**Kendari**	**150.07**	**207**	P	PKPdf	18 03 47.0	-0.1		
KAPI	**Kappang**	**150.16**	**201**	*e*PKPdf	PKPdf	18 03 46.7	-0.5		
DBJI	**Dramaga**	**150.21**	**174**	P	PKPbc	18 03 52.7	+0.3		
SMLA	**Simla**	**150.22**	**68**	*i* P	PKPdf	18 03 46.7	0.0		
CBJI	**Citeko**	**150.35**	**175**	P	PKPdf	18 03 47.8	+0.3		
HYB	**Hyderabad**	**150.37**	**96**	*e*PKP	PKPdf	18 03 47.5	+0.2		
HYB				*e*		18 03 53.0			
HYB	**Hyderabad**	**150.37**	**96**	*i* PKP	PKPdf	18 03 47.5	+0.2		
HYB				*e*		18 03 53.0			
HYB				*e*		18 03 58.5			
JCJI	**Jatiwangi**	**150.37**	**177**	P	PKPbc	18 03 52.4	-0.4		
NDI	**New Delhi**	**150.47**	**73**	*ex*	PKPbc	18 03 50.0	-2.6		
LBMI	**Labuha**	**150.51**	**219**	P	PKPab	18 03 56.8	-2.9		
IRK	**Irkutsk**	**150.81**	**7**	*e*PKIKP	PKPdf	18 03 47.6	+0.6		
IRK				*e*		18 03 59.8			
IRK				pmax	pmax				
	comp=Z,104nm,1.5s								
DDI	**Dehra Dun**	**151.07**	**69**	*e*P	PKPdf	18 03 44.2	-3.9		
TLY	**Talaya**	**151.29**	**8**	*e*PKPbc	PKPbc	18 03 54.1	+0.3		
TLY	**Talaya**	**151.29**	**8**	*e*PKIKP	PKPbc	18 03 53.9	+0.2		
TLY				pmax	pmax				
	comp=Z,43nm,1.1s								
KLI	**Kotabumi**	**151.64**	**170**	P	PKPbc	18 03 56.5	+0.8		
MJAR	**Matsushiro Arr**	**152.01**	**305**	PKP	PKPdf	18 03 48.1	-1.3		
	comp=Z,2.4nm,0.8s,baz=282,slow=0.7,SNR=5.4								
MJAR				PKPbc	PKPbc	18 03 55.4	-0.5		
	comp=Z,29nm,1.0s,baz=85,slow=0.5,SNR=43								
MJAR				PKPab	PKPab	18 04 05.6	+0.2		
	comp=Z,13nm,0.8s,baz=107,slow=1.7,SNR=9.2								
MJAR	**Matsushiro Arr**	**152.01**	**305**	PKIKP	PKPdf	18 03 48.1	-1.2		
MJAR						18 03 55.4			
MAJO	**Matsushiro**	**152.01**	**305**	*e*PKPbc	PKPbc	18 03 55.2	-0.7		
MAT	**Matsushiro**	**152.01**	**305**	PKP	PKPbc	18 03 55.2	-0.7		
KSI	**Kapahiang**	**152.37**	**165**	P	PKPbc	18 03 57.9	+0.5		
ZAK	**Zakamensk**	**152.52**	**9**	*e*PKIKP	PKPdf	18 03 49.6	0.0		
ZAK				pmax	pmax				
	comp=Z,25nm,1.3s								
WMQ	**Urumqi**	**152.73**	**36**	PKP	PKPdf	18 03 50.0	-0.1		
WMQ				PP	PP	18 07 43.0	+2.2		
WMQ				SKS	SKSdf	18 10 52.0	-1.9		
WMQ				PP	PP				
	comp=Z,3μm,10.0s								
WMQ				LR	LR				
	comp=N,4μm,25.0s,MS6.2								
WMQ				LR	LR				
	comp=E,3μm,25.0s,MS6.2								
WMQ				LR	LR				
	comp=Z,2μm,24.0s,MS5.9								
BBKI	**Banjar Baru**	**152.92**	**192**	P	PKPbc	18 04 02.9	+4.3		
PTH	**Pithoragarh**	**153.02**	**70**	*ex*	PKPbc	18 03 59.8	+1.4		
PTH				*ex*	x	18 07 43.0			
LGTI	**Lohaghat**	**153.06**	**71**	*ex*	PKPbc	18 03 59.2	+0.8		
MDJ	**Mudanjiang**	**153.16**	**327**	PKP	PKPdf	18 03 50.4	-0.3		
MDJ				APKP		18 03 57.4			
MDJ				PP	PP				
	comp=Z,10μm,14.4s								
TPI	**Tanjungpandan**	**154.04**	**176**	P	PKPbc	18 04 02.2	+1.1		
PBKI	**Pangkalan Bun**	**154.08**	**185**	P	PKPbc	18 04 03.3	+2.2		
PDSI	**Padang**	**154.36**	**159**	P	PKPbc	18 04 02.5	+0.8		
PPBI	**Pangkal Pinang**	**154.48**	**172**	P	PKPdf	18 03 55.0	+1.4		
PPI	**Padang Panjang**	**154.76**	**158**	P	PKPbc	18 04 02.7	+0.1		
SONM	**Songino Array**	**155.38**	**5**	PKP	PKPdf	18 03 54.2	+0.5		
	comp=Z,9.7nm,1.0s,baz=301,slow=0.4,SNR=38								
SONM				PKPbc	PKPdf	18 04 02.2	+8.5		
	comp=Z,6.9nm,1.1s,baz=316,slow=1.4,SNR=12								
SONM				PKPab	PKPab	18 04 19.4	+0.3		
	comp=Z,11nm,1.0s,baz=336,slow=3.1,SNR=12								
SONM				pPKPab	pPKPab	18 04 26.3	-5.9		
	comp=Z,2.6nm,0.8s,baz=291,slow=1.5,SNR=1.7								
SONM				PP	PP	18 07 53.2	-1.7		
	comp=Z,4.5nm,1.2s,baz=343,slow=5.2,SNR=5.0								
SONM	**Songino Array**	**155.38**	**5**	PKIKP	PKPdf	18 03 54.2	+0.5		
SONM						18 04 02.2			
SONM						18 07 53.2			
ULN	**Ulaanbaatar**	**155.40**	**4**	*e*PKPdf	PKPdf	18 03 54.3	+0.5		
PYUN	**Piuthan**	**155.59**	**73**	*e*P	PKPdf	18 03 54.7	0.0		
	comp=Z,23nm,0.9s								
CN2	**Changchun**	**155.72**	**331**	*e*PKP	PKPdf	18 03 53.1	-1.2		
CN2				PKP2	PKPab	18 04 19.9	-0.9		
CN2				PP	PP	18 07 57.1	-0.2		
CN2				SS	SS	18 27 35.1	-5.7		
CN2				PP	PP				
	comp=Z,810nm,6.0s								
CN2				LR	LR				
	comp=N,1μm,22.0s,MS5.9								
CN2				LR	LR				
	comp=E,2μm,22.0s,MS5.9								
CN2				LR	LR				
	comp=Z,1μm,23.0s,MS5.7								
KOLN	**Koldanda**	**156.16**	**74**	*e*P	PKPdf	18 03 55.2	-0.2		
	comp=Z,53nm,1.3s								
DANN	**Dangsing**	**156.24**	**72**	*e*P	PKPdf	18 03 56.0	+0.5		
	comp=Z,111nm,1.1s								
GKN	**Gorkha**	**157.05**	**73**	*e*P	PKPdf	18 03 56.1	-0.5		
	comp=Z,86nm,1.5s								
DMN	**Daman**	**157.50**	**74**	*e*P	PKPdf	18 03 56.5	-0.7		
	comp=Z,89nm,1.4s								
KKN	**Kakani**	**157.64**	**73**	*e*P	PKPdf	18 03 57.1	-0.2		
	comp=Z,34nm,1.1s								
PKI	**Pulchoki**	**157.77**	**74**	*e*P	PKPdf	18 03 57.2	-0.3		
GUN	**Gumba**	**158.15**	**73**	*e*P	PKPdf	18 03 57.8	-0.1		
	comp=Z,158nm,1.8s								
JIRN	**Jiri**	**158.45**	**73**	*e*P	PKPdf	18 03 58.2	-0.1		
KSRS	**Korea Array**	**158.85**	**316**	PKP	PKPdf	18 03 58.3	-0.2		
	comp=Z,11nm,1.0s,baz=100,slow=0.9,SNR=32								
KSRS				PKPab	PKPab	18 04 34.5	0.0		
	comp=Z,4.7nm,1.0s,baz=37,slow=3.4,SNR=4.9								
RAMN	**Ramite**	**158.88**	**75**	*e*P	PKPdf	18 03 59.0	+0.1		
	comp=Z,138nm,1.3s								
ODAN	**Odare**	**159.59**	**75**	*e*P	PKPdf	18 03 59.8	+0.1		
	comp=Z,86nm,1.2s								
TAPN	**Taplejung**	**159.83**	**74**	*e*P	PKPdf	18 04 00.1	+0.2		
	comp=Z,67nm,1.3s								
GTA	**Gaotai**	**161.92**	**25**	PKP	PKPdf	18 04 02.8	+1.0		
GTA				PKP2	PKPab	18 04 47.8	0.0		
GTA				PP	PP	18 08 33.1	+2.2		
GTA				LR	LR				
	comp=N,2μm,18.0s								
GTA				LR	LR				
	comp=E,2μm,18.6s								
GTA				LR	LR				
	comp=Z,3μm,31.2s								
LSA	**Lhasa**	**162.32**	**65**	PKP	PKPdf	18 04 04.5	+2.0		
BJI	**Beijing**	**162.40**	**343**	PKP	PKPdf	18 04 01.9	-0.4		
BJI				LR	LR				
	comp=N,2μm,16.7s								
BJI				LR	LR				
	comp=E,1μm,21.1s								
BJI				LR	LR				
	comp=Z,2μm,28.9s								
HHC	**Hu-ho-hao-te**	**162.42**	**355**	*e*PKP	PKPdf	18 04 03.1	+0.8		
HHC				PKS		18 07 35.1			
HHC				PP	PP	18 08 36.9	+3.7		
HHC				SKS	SKSdf	18 11 03.3	-0.3		
HHC				PP	PP				
	comp=Z,15μm,8.3s								
HHC				LR	LR				
	comp=N,1μm,22.6s								
HHC				LR	LR				
	comp=E,1μm,22.6s								
HHC				LR	LR				
	comp=Z,5μm,25.0s								
SHL	**Shillong**	**163.72**	**78**	*e*P	PKPdf	18 04 04.0	0.0		
LZH	**Lanzhou**	**166.32**	**20**	*e*PKP	PKPdf	18 04 04.6	-1.3		
LZH				PP	PP	18 08 59.3	+5.4		
LZH				PP	PP				
	comp=Z,4μm,9.3s								
LZH				LR	LR				
	comp=E,2μm,17.2s								
LZH				LR	LR				
	comp=Z,3μm,22.0s								
NJ2	**Nanjing**	**168.02**	**319**	*e*PKP	PKPdf	18 04 06.6	-0.7		
CMAR	**Chiang Mai Arr**	**168.96**	**114**	PKP	PKPdf	18 04 07.9	-0.4		
	comp=Z,5.7nm,1.0s,baz=268,slow=2.0,SNR=30								
CMAR				pPKP	pPKPdf	18 04 16.4	-5.3		
	comp=Z,2.2nm,1.0s,baz=318,slow=2.9,SNR=4.3								
CMAR				PKPab	PKPab	18 05 19.6	+0.1		
	comp=Z,11nm,1.0s,baz=249,slow=4.6,SNR=21								
CMAR				pPKPab	pPKPab	18 05 27.1	-5.5		
	comp=Z,0.5nm,0.8s,baz=121,slow=34,SNR=2.8								
CMAR				PP	PP	18 09 08.8	-0.2		
	comp=Z,5.5nm,1.1s,baz=248,slow=5.6,SNR=10								
CMAR	**Chiang Mai Arr**	**168.96**	**114**	PKIKP	PKPdf	18 04 07.9	-0.4		
CMAR						18 04 16.4			
CMAR						18 05 19.7			
CMAR						18 09 08.8			
CHTO	**Chiang Mai**	**169.12**	**112**	*e*PKPdf	PKPdf	18 04 08.1	-0.3		
XAN	**Xi'an**	**169.28**	**3**	PKP	PKPdf	18 04 08.4	+0.4		
XAN				APKP		18 04 16.3			
CD2	**Chengdu**	**170.81**	**33**	PKP	PKPdf	18 04 09.3	+0.3		
CD2				PKP2	PKPab	18 05 29.3	+2.1		
CD2				PP	PP	18 09 19.9	+2.8		
CD2				SKS	SKSdf	18 11 07.1	-2.1		
CD2				PP	PP				
	comp=Z,10μm,11.2s								
CD2				LR	LR				
	comp=N,1μm,27.4s								
CD2				LR	LR				
	comp=E,1μm,19.6s								
CD2				LR	LR				
	comp=Z,2μm,26.0s								
WHN	**Wuhan**	**171.62**	**331**	PKP	PKPdf	18 04 09.3	-0.1		
WHN				PKP2	PKPab	18 05 28.5	-2.3		
WHN				PP	PP	18 09 16.5	-4.5		
KMI	**Kunming**	**173.50**	**72**	PKP	PKPdf	18 04 10.8	+0.4		
KMI				sPKP		18 04 25.6			
GYA	**Guiyang**	**175.88**	**39**	PKP	PKPdf	18 04 10.9	-0.2		
GYA				PKP2	PKPab	18 05 49.6	-0.3		
GYA				PKS		18 07 41.3			
GYA				PP	PP	18 09 46.1	+4.0		
GYA				PP	PP				
	comp=Z,450nm,8.4s								
GYA				LR	LR				
	comp=N,800nm,23.5s								
GYA				LR	LR				
	comp=E,610nm,23.0s								
GYA				LR	LR				
	comp=Z,820nm,25.0s								

DHMR 14 17:48:40.8±1.2, 1230N×4081E, h2km±60km, ML4.3, 1C-3D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**3.36**	**74**	*i* P	Pn	17 49 37.0	+2.7
TRBA				*i* S	Sn	17 50 20.6	+5.9
	706nm,0.7s						
TRBA	**At Turbah**	**3.36**	**74**	*i* P	Pn	17 49 37.0	+2.7
TRBA				*i* S	Sn	17 50 20.6	+5.8
TRBA				AML	AML	17 50 34.6	
	comp=E,1μm,0.7s						
KAMRY	**Kamaran Island**	**3.49**	**30**	*i* P	Pn	17 49 38.9	+2.7
KAMRY				*i* S	Sn	17 50 23.7	+5.6
KAMRY				AML	AML	17 50 56.1	
	comp=E,2μm,0.7s						
UDYN	**Al 'Udayn**	**3.50**	**61**	⇓*i* P	Pn	17 49 38.7	+2.5
UDYN				*i* S	Sn	17 50 25.4	+7.3
UDYN				AML	AML	17 50 50.8	
	comp=Z,1μm,0.8s						
DHBB	**Dhamar BB**	**4.16**	**57**	*i* P	Pn	17 49 47.8	+2.5
DHBB				*i* S	Sn	17 50 40.7	+6.3
HAJJ	**Hajjah**	**4.33**	**38**	⇓*i* P	Pn	17 49 49.8	+2.1
HAJJ				*i* S	Sn	17 50 44.0	+5.1
	comp=Z,445nm,0.7s						
HAJJ	**Hajjah**	**4.33**	**38**	⇓*i* P	Pn	17 49 49.8	+2.1
HAJJ				*i* S	Sn	17 50 44.0	+5.2
HAJJ				AML	AML	17 51 18.6	
	comp=Z,890nm,0.7s						
LBOS		**4.60**	**70**	*i* P	Pn	17 49 52.1	+0.7
LBOS				*i* S	Sn	17 50 46.6	+1.2
BDHA	**Al Bayda'**	**4.93**	**70**	⇑*i* P	Pn	17 49 56.7	+0.8
BDHA				*i* S	Sn	17 50 54.7	+1.2

*ISCJB **14** 17:49:20.2±2.2, 234S±0.1×708W±0.2, h43km±20km, mb4.6/2, Error ellipse: s-maj=28.3km s-min=16.1km az=25.3*
*NEIC **14** 17:49:23.8±1.8, 2334S×7046W, h42km±13km, mb4.7/1, Error ellipse: s-maj=32.4km s-min=11.9km az=101.0*
*IDC **14** 17:49:23.4±4.9, 2336S×7035W, h34km±30km, mb4.5/2, mb1 4.3/5, mb1mx3.9/17, mbtmp4.3/5, ML4.0/2, Error ellipse: s-maj=51.7km s-min=28.4km az=117.0*

ISC 14 17:49:22.9±1.9, 233S±01×707W±02, h44km±17km, n10, σ0°82/10, mb4.6/2, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.78**	**66**	Pg	**Pn**	**17 49 51.2**	**0.0**
	313nm,0.3s,baz=250,slow=12,SNR=16						
LVC				Lg		17 50 13.5	
	3μm,0.3s,baz=10,slow=9.5,SNR=34						
LVC	**Limon Verde**	**1.78**	**66**	*e*P	**Pn**	**17 49 50.6**	**-0.6**
LVC				*e*S	**Sn**	**17 50 13.3**	**+0.7**
LPAZ	**La Paz**	**7.41**	**19**	Pn	**Pn**	**17 51 09.3**	**+0.8**
	0.5nm,0.3s,baz=158,slow=5.4,SNR=5.4						
LPAZ	**La Paz**	**7.41**	**19**	Pn	**Pn**	**17 51 09.3**	**+0.8**
CFAA	**Coronel Fontan**	**8.52**	**166**	Pn	**Pn**	**17 51 23.8**	**+0.2**
	baz=330,slow=8.1,SNR=5.0						
SIV	**San Ignacio**	**11.62**	**53**	Pn	**Pn**	**17 52 04.4**	**-1.9**
	1.4nm,0.3s,baz=248,slow=13,SNR=2.0						
DBIC	**Dimbokro**	**70.82**	**74**	P	**P**	**18 00 35.0**	**-0.4**
	5.1nm,0.9s,mb4.5,baz=183,slow=9.3,SNR=3.2						
DBIC	**Dimbokro**	**70.82**	**74**	*e*P	**P**	**18 00 35.6**	**+0.2**
	9.5nm,1.0s,mb4.7						
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P	**P**	**18 01 25.6**	**+0.2**
	7.2nm,0.9s,mb4.6,baz=254,slow=5.3,SNR=8.5						
MKAR	**Makanchi Array**	**148.07**	**36**	PKPbc	PKPbc	18 09 04.6	+1.1
	1.2nm,0.7s,baz=336,slow=2.8,SNR=4.1						

*ISCJB **14** 17:53:27.2±0.2, 2323S×004×7035W±007, h26km, mb4.8/33, Error ellipse: s-maj=9.4km s-min=5.2km az=153.4*
*NEIC **14** 17:53:28.7±0.2, 2317S×7048W, mb5.0/22, Error ellipse: s-maj=8.7km s-min=6.0km az=75.0*
*MOS **14** 17:53:28.6±1.3, 2306S×7056W, h33km, mb5.1/10, Error ellipse: s-maj=17.9km s-min=9.2km az=96.3*
*IDC **14** 17:53:29.0±0.6, 2311S×7047W, h26km±3km, mb4.6/13, mb1 4.7/15, mb1mx4.6/20, mbtmp4.6/15, ML4.1/3, Error ellipse: s-maj=14.4km s-min=11.1km az=171.0*
*BJI **14** 17:53:29.7, 2320S×7050W, h25km, mB5.0, Ms5.8, Msz5.4*

ISC 14 17:53:29.4±0.2, 2323S±004×7035W±006, h27km, h27km±.4km:pP-P, n329, σ0°62/292, mb4.8/33, 109C-104D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.46**	**66**	Pg	**Pn**	**17 53 57.1**	**+3.1**
	1μm,0.3s,baz=252,slow=13,SNR=100						
LVC				Lg		17 54 18.2	
	2μm,0.3s,baz=343,slow=15,SNR=19						
LVC	**Limon Verde**	**1.46**	**66**	*e*P	**Pn**	**17 53 56.8**	**+2.8**
LVC				*e*S	**Sn**	**17 54 18.4**	**+6.1**
LCO	**Las Campanas**	**5.77**	**183**	*e*P	**Pn**	**17 54 52.1**	**-1.1**
	239nm,0.6s						
ARE	**Arequipa**	**6.81**	**351**	*e*P	**Pn**	**17 55 04.0**	**-3.7**
ARE				*e*S	**Sn**	**17 56 18.0**	**-6.4**
LPAZ	**La Paz**	**7.21**	**17**	Pn	**Pn**	**17 55 15.4**	**+2.3**
	1.5nm,0.3s,baz=203,slow=8.5,SNR=8.7						
LPAZ	**La Paz**	**7.21**	**17**	*e*P	**Pn**	**17 55 15.3**	**+2.2**
	3μm,0.6s						
LPAZ	**La Paz**	**7.21**	**17**	*e*P	**Pn**	**17 55 15.3**	**+2.2**
LPAZ				pmax	pmax		
	comp=Z,3μm,0.6s						
CFAA	**Coronel Fontan**	**8.55**	**168**	Pn	**Pn**	**17 55 31.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=336,slow=14,SNR=8.0						
SIV	**San Ignacio**	**11.32**	**52**	Pn	**Pn**	**17 56 08.7**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=258,slow=11,SNR=17						
PLCA	**Paso Flores**	**17.45**	**181**	Pn	**Pn**	**17 57 30.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=4.6						
BDFB	**Brasilia**	**22.36**	**74**	P	**P**	**17 58 26.4**	**+0.9**
	comp=Z,10nm,0.8s,mb4.3,baz=225,slow=14,SNR=5.3						
USHA	**Ushuaia**	**31.59**	**178**	P	**P**	**17 59 52.3**	**+2.7**
	comp=Z,6.4nm,0.8s,mb4.5,baz=325,slow=12,SNR=2.5						
SJG	**San Juan**	**41.29**	**6**	*e*P	**P**	**18 01 09.2**	**-3.4**
	comp=Z,54nm,0.7s,mb5.3						
SJG	**San Juan**	**41.29**	**6**	*e*P	**P**	**18 01 09.2**	**-3.4**
SJG				pmax	pmax		
	comp=Z,54nm,0.7s						
LRAL	**Lakeview Retre**	**58.16**	**344**	*e*P	**P**	**18 03 17.9**	**-2.9**
	comp=Z,5.0nm,0.9s,mb4.5						
VNA3	**Neumayer Olymp**	**58.88**	**161**	*e*P	**P**	**18 03 25.8**	**+0.4**
VNA3				*e*	pP	18 03 34.0	0.0
VNA3				*e*		18 03 45.7	
VNA3				*e*		18 03 57.5	
VNA3				*e*		18 04 15.0	
VNA1	**Neumayer--Stat**	**59.12**	**160**	*e*P	**P**	**18 03 28.1**	**+1.0**
VNA1				*e*	pP	18 03 36.1	+0.5
VNA1				*e*		18 03 46.3	
VNA1				*e*		18 04 16.4	
VNA2	**Neumayer--Watz**	**59.48**	**160**	*e*P	**P**	**18 03 30.1**	**+0.5**
	baz=298,slow=8.3						
VNA2				*e*	pP	18 03 38.2	+0.1
VNA2				*e*		18 03 44.1	
VNA2				*e*		18 04 02.2	
VNA2				*e*		18 04 17.5	
JCT	**Junction City**	**60.42**	**331**	*e*P	**P**	**18 03 35.0**	**-1.5**
	comp=Z,8.8nm,0.7s,mb4.9						
JCT	**Junction City**	**60.42**	**331**	*e*P	**P**	**18 03 35.0**	**-1.5**
JCT				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
ELN	**Prospectdale**	**60.92**	**351**	*e*P	**P**	**18 03 38.8**	**-1.0**
SNAA	**Sanae**	**61.10**	**160**	*e*P	**P**	**18 03 39.2**	**-1.4**
SNAA				*e*	pP	18 03 47.4	-1.8
SNAA				*e*		18 03 53.7	
SNAA				*e*		18 04 23.5	
SNAA	**Sanae**	**61.10**	**160**	*e*P	**P**	**18 03 39.0**	**-1.7**
SNAA	**Sanae**	**61.10**	**160**	*e*P	**P**	**18 03 39.1**	**-1.5**
SNAA				pmax	pmax		
	comp=Z,33nm,1.7s						
TXAR	**Lajitas Array**	**61.31**	**327**	P	**P**	**18 03 41.4**	**-1.2**
	comp=Z,1.1nm,0.7s,mb4.1,baz=148,slow=7.8,SNR=13						
TXAR				pP	pP	18 03 48.8	-2.3
	comp=Z,1.7nm,0.9s,baz=126,slow=6.4,SNR=6.4						
MIAR	**Mount Ida**	**61.55**	**338**	*e*P	**P**	**18 03 42.2**	**-1.9**
	comp=Z,11nm,0.8s,mb5.0

baz=70
U18A **Rough Rock, Ch** 70.09 327 ⇑P P 18 04 39.5 +0.4
baz=70
LIC **Lamto** 70.15 74 eP P 18 04 39.3 -0.7
comp=Z,106nm,1.7s,mb5.5
WUAZ **Wupatki** 70.16 325 eP P 18 04 38.9 -0.6
comp=Z,25nm,1.3s,mb5.0
WUAZ **Wupatki** 70.16 325 ⇓P P 18 04 40.0 +0.4
baz=70
X14A **Yava** 70.18 324 ⇓P P 18 04 40.1 +0.4
baz=70
GLA **Glamis** 70.22 321 ⇑P P 18 04 40.3 +0.3
baz=70
TIC **Toumodi** 70.35 73 eP P 18 04 40.6 -0.6
comp=Z,123nm,1.1s,mb5.8
TIC **Toumodi** 70.35 73 eP P 18 04 40.6 -0.6
TIC pmax pmax
comp=Z,123nm,1.1s,mb5.8
KIC **Kosan Boka** 70.46 74 eP P 18 04 41.3 -0.6
comp=Z,112nm,0.9s,mb5.8
DBIC **Dimbokro** 70.50 74 P P 18 04 42.1 0.0
comp=Z,23nm,0.8s,mb5.2,baz=225,slow=5.6,SNR=23
DBIC sP sP 18 04 55.9 +1.9
comp=Z,11nm,0.9s,baz=203,slow=5.8,SNR=4.7
U16A **Tuba City** 70.51 326 ⇑P P 18 04 42.2 +0.5
baz=71
Y12C **Blythe** 70.56 322 ⇑P P 18 04 42.2 +0.1
baz=71
U17A **Shonto** 70.63 327 ⇓P P 18 04 43.0 +0.6
baz=71
T18A **Mexican Hat** 70.65 327 ⇑P P 18 04 42.6 +0.1
baz=71,SNR=6.2
S19A **Harvey Farm, M** 70.77 328 ⇑P P 18 04 43.3 +0.1
baz=71
X13A **Yucca** 70.79 323 ⇑P P 18 04 43.9 +0.5
baz=71
PV01 **Paradox Valley** 70.81 329 eP P 18 04 42.8 -0.7
V15A **Kaibab Nationa** 70.81 325 ⇑P P 18 04 43.8 +0.3
baz=71
ISCO **Idaho Springs** 70.81 332 eP P 18 04 42.5 -1.0
comp=Z,2.0nm,0.6s,mb4.2
ISCO **Idaho Springs** 70.81 332 eP P 18 04 42.5 -0.9
ISCO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ECSD **EROS,Sioux Fal** 70.86 340 eP P 18 04 41.4 -2.2
comp=Z,22nm,1.3s,mb4.9
BC3 **Big Chuckw Mtn** 71.02 321 ⇓P P 18 04 44.8 0.0
baz=71
MONP **Monument Peak** 71.03 320 ⇓P P 18 04 45.4 +0.4
baz=71
S18A **Hurst Farm, Bl** 71.14 328 ⇓P P 18 04 45.8 +0.3
baz=71,SNR=12
W13A **Hualapai Mount** 71.19 323 ⇓P P 18 04 45.8 0.0
baz=71
IRM **Iron Mountain** 71.21 322 ⇓P P 18 04 46.0 0.0
baz=71
R19A **Curley Farm, L** 71.26 329 ⇓P P 18 04 46.6 +0.4
baz=72
U15A **North Rim** 71.34 325 ⇓P P 18 04 47.0 +0.3
baz=72,SNR=5.4
T16A **Glen Canyon Da** 71.35 326 ⇑P P 18 04 47.2 +0.4
baz=72
S17A **Black Ridge (B** 71.50 327 ⇑P P 18 04 48.1 +0.4
baz=72
PFO **Pinyon Flat Ob** 71.56 321 ⇓P P 18 04 48.2 +0.1
baz=72
BELC **Belle Mtn.** 71.58 321 ⇑P P 18 04 48.1 -0.1
baz=72
R18A **Canyonlands Na** 71.64 328 ⇓P P 18 04 48.6 +0.1
baz=72
Q19A **Hogan Spring (** 71.79 329 ⇓P P 18 04 49.8 +0.4
baz=72
T15A **Red Dirt Ranch** 71.83 326 ⇑P P 18 04 50.4 +0.7
baz=72
GMRC **Granite Mounta** 71.95 322 ⇑P P 18 04 50.9 +0.4
baz=72
S16A **Weppner Ranch,** 71.97 327 ⇓P P 18 04 50.6 +0.2
baz=72
R17A **Hanksville Air** 72.06 328 ⇑P P 18 04 51.2 +0.2
baz=72,SNR=9.7
P19A **Cripple Cowboy** 72.19 330 ⇓P P 18 04 52.1 +0.3
baz=72,SNR=12
Q18A **Rafter H Ranch** 72.32 328 ⇑P P 18 04 52.7 +0.1
baz=72
SRU **San Rafael** 72.51 328 ⇑P P 18 04 53.7 0.0
baz=73,SNR=9.5
U12A **Valley of Fire** 72.54 324 ⇓P P 18 04 53.9 0.0
baz=73
Q16A **Castle Valley** 72.68 328 ⇑P P 18 04 54.9 +0.2
baz=73
P18A **Preston Nutter** 72.78 329 ⇑P P 18 04 55.8 +0.5
baz=73,SNR=7.0
O19A **Miners Draw (B** 72.79 330 ⇑P P 18 04 55.4 +0.1
baz=73,SNR=5.3
P17A **Butcher Ranch,** 72.90 328 ⇑P P 18 04 56.2 +0.2
baz=73
GSC **Goldstone** 72.98 322 ⇓P P 18 04 56.6 0.0
baz=73
S13A **Holt Ranch, En** 73.03 325 ⇓P P 18 04 57.4 +0.6
baz=73
L21A **Rawlins** 73.35 332 ⇑P P 18 04 58.5 -0.1
baz=74,SNR=8.7
EDW2 **Edwards Air Fo** 73.36 321 ⇑P P 18 04 58.6 -0.3
baz=74
O17A **Robinson Place** 73.46 329 ⇑P P 18 05 00.1 +0.8
baz=74,SNR=11
T11A **Corn Creek, Al** 73.50 324 ⇓P P 18 05 00.2 +0.6
baz=74
R13A **O'Grain Ranch,** 73.53 325 ⇑P P 18 05 00.1 +0.3
baz=74
S12A **Delamar Landin** 73.57 325 ⇑P P 18 05 00.3 +0.3
baz=74
N18A **Larsen Ranch,** 73.58 330 ⇑P P 18 05 00.4 +0.5
baz=74
LRMC **Laurel Mountai** 73.61 321 ⇑P P 18 04 60.0 -0.3
baz=74
Q14A **Sevier Lake (B** 73.78 326 ⇓P P 18 05 01.4 +0.1
baz=74
RSSD **Black Hills** 73.79 335 eP P 18 05 00.5 -0.6
L20A **Wamsutter** 73.81 331 ⇓P P 18 05 01.6 +0.3
baz=74
O16A **Springville** 73.84 328 ⇓P P 18 05 01.9 +0.4
baz=74
TPNV **Topopah Spring** 73.85 323 eP P 18 05 02.0 +0.3
comp=Z,16nm,1.3s,mb4.8
TPNV **Topopah Spring** 73.85 323 eP P 18 05 02.0 +0.3
TPNV pmax pmax
comp=Z,16nm,1.3s,mb4.8
SBA **Scott Base** 73.89 191 eP P 18 05 02.5 +1.1
comp=Z,5.8nm,1.3s,mb4.3
SBA e pP 18 05 10.8 +0.7
SBA **Scott Base** 73.89 191 eP P 18 05 02.5 +1.1
SBA e pP 18 05 10.8 +0.7
SBA pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
MPMC **Manual Prospec** 73.91 322 ⇓P P 18 05 02.0 0.0
baz=74
R12A **Pony Springs,** 73.98 325 ⇓P P 18 05 02.8 +0.5
baz=74
N17A **Moffit Pass** 74.09 329 ⇓P P 18 05 03.5 +0.5
baz=74,SNR=6.0
P14A **Drum Mountains** 74.14 327 ⇑P P 18 05 03.7 +0.4
baz=74
ISA **Isabella** 74.19 321 ⇑P P 18 05 03.8 +0.1
baz=74
L19A **Farson** 74.33 331 ⇑P P 18 05 04.7 +0.4
baz=74
N16A **Rees Ranch, Co** 74.34 329 ⇓P P 18 05 04.8 +0.4
baz=74
M17A **Scullys Gap (B** 74.43 330 ⇑P P 18 05 04.9 -0.1
baz=75
DUG **Dugway** 74.47 328 ⇑P P 18 05 05.4 +0.2
baz=75
R11A **Troy Canyon, C** 74.51 325 ⇓P P 18 05 05.9 +0.4
baz=75,SNR=5.9
S10A **Tonopah Range,** 74.74 324 ⇓P P 18 05 07.2 +0.4
baz=75
M16A **Huntsville** 74.76 329 ⇑P P 18 05 06.8 -0.1
baz=75
R10A **Warm Springs** 74.85 324 ⇑P P 18 05 08.1 +0.7
baz=75
S09A **Goldfield** 74.95 323 ⇑P P 18 05 08.2 +0.2
baz=75
BW06 **Boulder Array** 74.95 331 ⇑P P 18 05 07.6 -0.4
baz=75
PDAR **Pinedale Array** 74.95 331 P P 18 05 07.1 -0.8
comp=Z,0.8nm,0.6s,mb3.8,baz=129,slow=12,SNR=7.3
N14A **Grayback Hills** 75.16 328 ⇑P P 18 05 09.0 -0.2
baz=75
L16A **Fish Haven** 75.21 330 ⇓P P 18 05 09.8 +0.3
baz=75
R09A **Tonopah** 75.23 324 ⇓P P 18 05 09.7 0.0
baz=75
Q10A **Clear Creek Ra** 75.29 324 ⇓P P 18 05 10.2 +0.2
baz=76
SYO **Syowa Base** 75.36 160 ⇓eP P 18 05 08.6 -1.4
O12A **Currie** 75.49 326 ⇑P P 18 05 11.3 +0.2
baz=76
L15A **Malad City** 75.65 329 ⇓P P 18 05 11.9 -0.1
baz=76
M14A **Sheep Mountain** 75.73 328 ⇓P P 18 05 12.4 0.0
baz=76
KCC **Kaiser Creek** 75.84 322 ⇓P P 18 05 12.9 -0.2
baz=76
K16A **Soda Springs** 75.92 330 ⇑P P 18 05 13.8 +0.3
baz=76,SNR=5.9
J17A **Brown Place, J** 75.94 331 ⇓P P 18 05 14.0 +0.4
baz=76
NVAR **Mina Array Bea** 76.05 323 P P 18 05 14.6 +0.2
comp=Z,1.3nm,0.8s,mb3.9,baz=146,slow=6.1,SNR=6.2
L14A **Malta** 76.08 329 ⇓P P 18 05 14.6 +0.1
baz=76
ELK **Elko** 76.10 326 eP P 18 05 14.3 -0.3
Q08A **Gabbs** 76.15 324 ⇑P P 18 05 14.6 -0.2
baz=76
K15A **Arbon** 76.25 329 ⇑P P 18 05 15.5 +0.2
baz=76
J16A **Bone** 76.28 330 ⇓P P 18 05 15.2 -0.3
baz=76
I17A **Pilgram Creek** 76.32 331 ⇑P P 18 05 16.5 +0.8
baz=76,SNR=6.4
S05C **Merced** 76.43 321 ⇓P P 18 05 17.2 +0.6
baz=77
M12A **Wells** 76.44 327 ⇓P P 18 05 17.3 +0.8
baz=77
L13A **Double Diamond** 76.47 328 ⇓P P 18 05 16.8 +0.2
baz=77
I16A **Newdale** 76.69 331 ⇑P P 18 05 18.3 +0.5
baz=77
H17A **Grant Village** 76.70 332 ⇑P P 18 05 18.5 +0.7
baz=77
RLMT **Red Lodge** 76.72 333 eP P 18 05 17.5 -0.4
comp=Z,15nm,1.3s,mb4.8
RLMT **Red Lodge** 76.72 333 ⇑P P 18 05 18.1 +0.2
baz=77
J15A **Blackfoot** 76.75 330 ⇓P P 18 05 18.1 -0.1
baz=77
M11A **Holland Ranch,** 76.89 327 ⇓P P 18 05 19.7 +0.7
baz=77
G18A **Lazy EL Ranch,** 77.00 333 ⇑P P 18 05 19.7 +0.2
baz=77,SNR=5.6
L12A **House Creek Ra** 77.03 328 ⇓P P 18 05 20.0 +0.2
baz=77
J14A **Carey** 77.20 329 ⇑P P 18 05 21.2 +0.5
baz=77
H16A **Russell Place,** 77.23 331 ⇓P P 18 05 21.5 +0.6
baz=77
O08A **Rochester Mine** 77.29 324 ⇓P P 18 05 22.0 +0.7
baz=78
K12A **Draper Farm, C** 77.34 328 ⇑P P 18 05 22.3 +0.7
baz=78
L11A **Cat Creek Ranc** 77.41 327 ⇓P P 18 05 21.9 -0.1
baz=78
F18A **Big Timber** 77.53 333 ⇓P P 18 05 22.6 +0.1
baz=78,SNR=9.5
DGMT **Dagmar** 77.54 338 ⇓P P 18 05 23.0 +0.5
baz=78
J13A **Cove Ranch, Pi** 77.57 329 ⇓P P 18 05 22.9 +0.1
baz=78
O07A **Toulon** 77.59 324 ⇓P P 18 05 22.6 -0.4
baz=78
N08A **GE Springer Mi** 77.63 325 ⇑P P 18 05 23.0 -0.2
baz=78
I14A **Mackay** 77.63 330 ⇑P P 18 05 23.5 +0.4
baz=78
L10A **Juniper Basin** 77.71 327 ⇑P P 18 05 23.6 0.0
baz=78,SNR=7.8
M09A **Marrel Ranch,** 77.73 326 ⇓P P 18 05 24.0 +0.2
baz=78
H15A **Lima** 77.79 331 ⇑P P 18 05 24.7 +0.7
baz=78
HLID **Hailey** 77.81 329 eP P 18 05 24.1 0.0
comp=Z,14nm,1.3s,mb4.7
HLID e 18 08 54.4
HLID **Hailey** 77.81 329 ⇓P P 18 05 24.5 +0.4
baz=78,SNR=8.1
P06A **Stead Airport,** 77.81 323 ⇑P P 18 05 24.4 +0.2
baz=78
G16A **Moss Hill, Enn** 77.89 331 ⇑P P 18 05 24.9 +0.4
baz=78
J12A **Stokes Ranch,** 77.90 328 ⇑P P 18 05 25.0 +0.4
baz=78
F17A **Fitzpatrick Pl** 77.93 332 ⇓P P 18 05 25.0 +0.3
baz=78
I13A **Wildhorse Cree** 77.93 329 ⇓P P 18 05 25.2 +0.4
baz=78
K11A **Parker Ranch,** 78.00 327 ⇓P P 18 05 25.5 +0.3
baz=78
MCMT **McKenzie Canyo** 78.05 331 eP P 18 05 25.8 +0.4
N07B **Gerlach** 78.07 324 ⇓P P 18 05 25.7 0.0
baz=78
H14A **Leadore** 78.12 330 ⇓P P 18 05 26.3 +0.5
baz=78
BOZ **Bozeman (W)** 78.14 332 ⇑P P 18 05 26.2 +0.3
baz=78
E18A **Harlowton** 78.14 333 ⇓P P 18 05 26.2 +0.4
baz=78
G15A **Dillon** 78.15 331 ⇓P P 18 05 26.3 +0.4
baz=78
BEKR **Beckwourth** 78.19 323 ⇑P P 18 05 26.7 +0.3
baz=78
M08A **Happy Creek Ra** 78.24 325 ⇓P P 18 05 27.0 +0.5
baz=78
I12A **Atlanta** 78.32 329 ⇑P P 18 05 27.2 +0.2
baz=78
MFID **Camas Ranch** 78.38 328 ⇑P P 18 05 27.6 +0.3
baz=79
K10A **MacKenzie Ranc** 78.42 327 ⇑P P 18 05 27.5 -0.1
baz=79
E17A **Martinsdale** 78.45 333 ⇓P P 18 05 27.8 +0.2
baz=79
H13A **Challis** 78.49 330 ⇑P P 18 05 27.9 0.0
baz=79,SNR=7.5
N06A **Buffalo Meadow** 78.52 324 ⇓P P 18 05 28.0 -0.1
baz=79
ORV **Oroville** 78.61 322 ⇑P P 18 05 28.7 0.0
baz=79
F15A **Butte** 78.67 331 ⇑P P 18 05 28.5 -0.4
baz=79
L08A **Fields** 78.75 326 ⇑P P 18 05 28.7 -0.6
baz=79
H12A **Diamond D Ranc** 78.76 329 ⇑P P 18 05 29.2 -0.1
baz=79
K09A **Rome** 78.80 326 ⇓P P 18 05 29.4 -0.2
baz=79
G13A **Cobalt** 78.88 330 ⇑P P 18 05 30.2 +0.2
baz=79,SNR=18
D17A **Six Diamond Ra** 78.93 333 ⇓P P 18 05 30.2 0.0
baz=79,SNR=9.1
F14A **Wisdom** 79.04 331 ⇑P P 18 05 31.0 +0.1
baz=79,SNR=6.0
HRY **Holter Researc** 79.06 332 eP P 18 05 30.9 -0.1
L07A **Adell** 79.15 325 ⇑P P 18 05 31.7 +0.2
baz=79
TORD **Torodi Ar. Bea** 79.19 71 P P 18 05 31.8 -0.6
comp=Z,29nm,0.8s,mb5.2,baz=254,slow=5.0,SNR=90
TORD pP pP 18 05 40.3 -0.9
comp=Z,11nm,0.8s,baz=255,slow=5.3,SNR=9.0
E15A **Deer Lodge** 79.19 332 ⇓P P 18 05 31.8 +0.1
baz=79
D16A **Dana Ranch, Ca** 79.20 333 ⇑P P 18 05 32.0 +0.3
baz=79,SNR=6.6
EGMT **Eagleton** 79.25 334 ⇑P P 18 05 32.0 0.0
baz=80
C17A **Wharram Farm,** 79.34 334 ⇓P P 18 05 32.1 -0.4
baz=80
GASB **Alder Springs** 79.37 322 ⇓P P 18 05 33.3 +0.5
baz=80
F13A **Darby** 79.45 330 ⇑P P 18 05 33.2 +0.1
baz=80,SNR=15
E14A **Clinton** 79.56 331 ⇑P P 18 05 34.0 +0.4
baz=80
K07A **Rock Creek Ran** 79.57 326 ⇑P P 18 05 33.8 0.0
baz=80
MOD **Modoc** 79.58 324 ⇑P P 18 05 33.9 0.0
baz=80
D15A **Lincoln** 79.62 332 ⇓P P 18 05 34.5 +0.5
baz=80
J08A **Circle Bar Ran** 79.65 326 ⇓P P 18 05 34.3 0.0
baz=80
H10A **Noah's Angus R** 79.69 328 ⇓P P 18 05 34.8 +0.3
baz=80
I09A **Lost Marbles R** 79.73 327 ⇑P P 18 05 34.7 0.0
baz=80
F12A **Elk City** 79.85 330 ⇓P P 18 05 35.5 +0.2
baz=80
C16A **Fuhringer Ranc** 79.89 333 ⇑P P 18 05 35.0 -0.4
baz=80
E13A **Victor** 79.89 331 ⇑P P 18 05 35.5 +0.1
baz=80
G11A **Walters Elk Ra** 80.06 329 ⇑P P 18 05 36.4 0.0
baz=80,SNR=9.9
D14A **Greenough** 80.08 332 ⇓P P 18 05 36.3 -0.1
baz=80
BMO **Blue Mountains** 80.16 328 eP P 18 05 36.6 -0.3
comp=Z,16nm,1.4s,mb4.8
C15A **Salmond Ranch,** 80.23 333 ⇓P P 18 05 37.3 0.0
baz=80,SNR=11
F11A **Grangeville** 80.37 329 ⇓P P 18 05 37.7 -0.4
baz=81
G10A **Bishop Farm, J** 80.39 329 ⇓P P 18 05 38.2 0.0
baz=81,SNR=8.5
J06A **Christmas Vall** 80.44 326 ⇑P P 18 05 38.2 -0.3
baz=81
K05A **Summer Lake** 80.46 325 ⇓P P 18 05 38.8 +0.2
baz=81
N02C **Big Bar** 80.49 322 ⇑P P 18 05 38.9 0.0
baz=81
E12A **Beaver Dam Sad** 80.49 330 ⇓P P 18 05 38.5 -0.2
baz=81
D13A **Huson** 80.50 331 ⇑P P 18 05 38.9 +0.1
baz=81
H08A **Prairie City** 80.58 327 ⇓P P 18 05 39.4 +0.2
baz=81
B15A **Bradely Ranch,** 80.63 333 ⇓P P 18 05 38.8 -0.6
baz=81,SNR=5.5
I07A **Izee** 80.69 326 ⇑P P 18 05 40.0 +0.1
baz=81
G09A **Cove** 80.69 328 ⇓P P 18 05 39.9 +0.1
baz=81
A16A **West Butte Ran** 80.73 334 ⇑P P 18 05 39.6 -0.3
baz=81,SNR=15
E11A **Bogner Ranch,** 80.74 330 ⇓P P 18 05 39.6 -0.5
baz=81
TSUM **Tsumeb** 80.82 107 P P 18 05 42.4 +1.2
comp=Z,18nm,0.9s,mb5.0,baz=232,slow=5.6,SNR=21
F10A **Beach Ranch, E** 80.94 329 ⇓P P 18 05 41.0 -0.1
baz=81
I06A **Prineville** 80.96 326 ⇑P P 18 05 41.3 +0.1
baz=81
B14A **Marquette Ranc** 80.96 333 ⇓P P 18 05 40.7 -0.5
baz=81
C13A **Hot Springs** 81.00 331 ⇓P P 18 05 41.3 -0.1
baz=81,SNR=5.8
F09A **S2 Ranch, Elgi** 81.07 328 ⇓P P 18 05 41.5 -0.3
baz=81
A15A **Johnson Ranch,** 81.22 333 ⇑P P 18 05 41.5 -1.1
baz=81
E10A **Myers Farm, Un** 81.26 329 ⇑P P 18 05 42.3 -0.5
baz=81
G08A **Pilot Rock** 81.28 328 ⇑P P 18 05 42.9 -0.1
baz=82
LNOR **Lincton Mounta** 81.37 328 P P 18 05 41.8 -1.7
B13A **Whitefish** 81.48 332 ⇓P P 18 05 43.6 -0.4
baz=82
A14A **Double T Ranch** 81.50 333 ⇑P P 18 05 43.2 -0.8
baz=82
F08A **Pendleton** 81.55 328 ⇑P P 18 05 43.6 -0.8
baz=82
G07A **Ruggs Ranch, H** 81.61 327 ⇑P P 18 05 44.7 0.0
baz=82
D10A **Wagner Farm, O** 81.75 330 ⇑P P 18 05 44.9 -0.5
baz=82
C11A **Tepee Creek (N** 81.87 331 ⇓P P 18 05 45.7 -0.3
baz=82,SNR=10
B12A **Libby** 82.04 332 ⇓P P 18 05 46.4 -0.5
baz=82
D09A **Jones Farm, Ri** 82.24 329 ⇓P P 18 05 47.7 -0.3
baz=82
RSW **Rattlesnake Hi** 82.38 328 eP P 18 05 48.2 -0.5
A12A **Yaak River Ran** 82.42 332 ⇓P P 18 05 48.7 -0.2
baz=83,SNR=6.6
OD2 **Odessa Site #2** 82.67 329 eP P 18 05 49.5 -0.7
A11A **Hall Mountain,** 82.75 331 ⇑P P 18 05 50.4 -0.2
baz=83,SNR=8.0
C09A **Chrisman Ranch** 82.76 330 ⇑P P 18 05 50.2 -0.5
baz=83
MAW **Mawson** 83.06 164 eP P 18 05 52.2 +0.1
comp=Z,16nm,0.9s,mb5.0
MAW **Mawson** 83.06 164 P P 18 05 52.7 +0.6
comp=Z,19nm,0.8s,mb5.2,baz=223,slow=6.6,SNR=27
MAW **Mawson** 83.06 164 eP P 18 05 52.2 +0.1
MAW pmax pmax
comp=Z,16nm,0.9s
B09A **Rice** 83.16 330 ⇓P P 18 05 52.5 -0.2
baz=83
A10A **Northport** 83.30 331 ⇓P P 18 05 53.2 -0.2
baz=84
C07A **Waterville** 83.52 329 ⇓P P 18 05 53.9 -0.7
baz=84
ETW **Entiat** 83.59 329 eP P 18 05 54.3 -0.7
B08A **Colville Reser** 83.66 330 ⇑P P 18 05 54.5 -0.8
baz=84
A09A **Danville** 83.76 330 ⇓P P 18 05 54.9 -0.9
baz=84
BOSA **Boshof** 83.81 118 P P 18 05 57.1 +0.4
comp=Z,16nm,0.8s,mb5.2,baz=257,slow=6.1,SNR=21
MDT **Midelt** 83.87 51 P P 18 05 58.3 +1.5
comp=Z,7.4nm,0.9s,mb4.8,baz=254,slow=4.5,SNR=10
A08A **Turner Farm, O** 84.06 330 ⇓P P 18 05 56.3 -1.0
baz=84
B07A **Winthrop** 84.10 329 ⇑P P 18 05 56.5 -1.1
baz=84
A07A **Ashnola River,** 84.64 330 ⇑P P 18 05 59.4 -0.8
baz=85
EDM **Edmonton** 84.77 336 eP P 18 05 58.7 -2.1
TAM **Tamanrasset** 86.78 64 eP P 18 06 11.7 +0.1
YKA **Yellowknife Ar** 92.37 341 P P 18 06 35.2 -1.6
comp=Z,3.4nm,0.7s,mb4.8,baz=136,slow=4.3,SNR=19
YKA pP pP 18 06 43.4 -2.3
comp=Z,1.5nm,0.7s,baz=139,slow=4.4,SNR=4.6
YKA **Yellowknife Ar** 92.37 341 P P 18 06 35.2 -1.7
YKA *PP pP 18 06 43.4 -2.4
KIV **Kislovodsk** 122.09 52 ePKIKP PKPdf 18 12 21.6 +0.2
KIV pmax pmax
comp=Z,9.0nm,1.1s
ASAR **Alice Springs** 127.77 208 PKP PKPdf 18 12 32.1 -1.0
comp=Z,2.7nm,0.8s,baz=130,slow=1.9,SNR=25
ARU **Arti** 130.32 35 PKIKP PKPdf 18 12 37.0 +0.2
WRA **Warramunga Arr** 130.79 211 PKP PKPdf 18 12 37.5 -1.4
comp=Z,2.5nm,0.9s,baz=152,slow=1.7,SNR=19
WRA pPKP pPKPdf 18 12 47.6 -0.5
comp=Z,1.9nm,0.8s,baz=149,slow=1.6,SNR=6.9
NVS **Novosibirsk** 142.79 25 ePKIKP PKPdf 18 12 59.1 -0.8
NVS pmax pmax
comp=N,7.0nm,1.8s
NVS pmax pmax
comp=E,11nm,1.8s
NVS pmax pmax
comp=Z,17nm,1.8s
KURK **Kurchatov** 143.50 33 ePKPpre 18 12 57.8
KURK **Kurchatov** 143.50 33 i PKIKP PKPdf 18 12 58.3 -3.0
ZALV **Zalesovo Beam** 144.08 25 PKP PKPdf 18 12 59.7 -2.4
comp=Z,10nm,0.8s,baz=306,slow=4.4,SNR=26
EKS2 **Erkin-Say** 144.55 48 P PKPdf 18 13 03.3 -0.1
SNR=9.1
AML **Almayashu** 144.69 49 ePKPdf PKPdf 18 13 03.9 +0.2
AML **Almayashu** 144.69 49 P PKPdf 18 13 03.5 -0.1
SNR=17
USP **Ospenovka** 144.81 47 P PKPdf 18 13 03.7 -0.1
SNR=7.7
CHMS **Chumysh** 145.08 47 P PKPbc 18 13 04.6 +0.8
SNR=11
BOD **Bodaibo** 145.30 356 ⇓i PKIKP PKPdf 18 13 02.1 -2.1
BOD pmax pmax
comp=Z,32nm,1.3s
KBK **Karagaybulak** 145.35 48 P PKPbc 18 13 05.8 +1.1
SNR=22
TKM2 **Tokmak 2** 145.68 47 ePKPdf PKPdf 18 13 05.9 +0.5
TKM2 **Tokmak 2** 145.68 47 P PKPdf 18 13 05.9 +0.6
SNR=12
KZA **Kyzart** 145.78 48 P PKPdf 18 13 07.8 +2.2
SNR=8.9

ULHL	**Ulahol**	**146.39**	**48**	P		PKPdf	18 13 09.5	+3.0	
	SNR=8.5								
MK31	**Makanchi Array**	**147.81**	**36**	*e*PKPdf		PKPdf	18 13 08.4	-0.4	
MKAR	**Makanchi Array**	**147.81**	**36**	PKP		PKPdf	18 13 08.8	+0.1	
	comp=Z,11nm,0.7s,baz=298,slow=2.6,SNR=50								
MKAR				PKPbc		PKPbc	18 13 11.3	-0.3	
	comp=Z,11nm,0.7s,baz=324,slow=3.0,SNR=41								
THN	**Thein Dam**	**148.73**	**65**	*e*P		PKPdf	18 13 09.9	-0.8	
HYB	**Hyderabad**	**150.31**	**95**	*e*P		PKPbc	18 13 18.0	-0.9	
HYB	**Hyderabad**	**150.31**	**95**	/ PKP		PKPbc	18 13 18.0	-0.9	
NDI	**New Delhi**	**150.39**	**73**	*e*P		PKPdf	18 13 16.0	+2.5	
MJAR	**Matsushiro Arr**	**152.03**	**305**	PKPbc		PKPbc	18 13 21.2	-1.1	
	comp=Z,5.0nm,0.8s,baz=108,slow=1.1,SNR=12								
MJAR				PKPab		PKPab	18 13 31.9	+0.1	
	comp=Z,7.7nm,1.0s,baz=77,slow=1.1,SNR=8.1								
MAT	**Matsushiro**	**152.03**	**305**	PKP		PKPbc	18 13 21.0	-1.3	
ZAK	**Zakamensk**	**152.44**	**9**	*e*PKIKP		PKPdf	18 13 15.1	-0.8	
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.1s								
WMQ	**Urumqi**	**152.64**	**36**	*e*PKP		PKPdf	18 13 16.0	-0.4	
SONM	**Songino Array**	**155.31**	**5**	PKP		PKPdf	18 13 20.6	+0.5	
	comp=Z,1.4nm,0.8s,baz=348,slow=2.0,SNR=6.5								
SONM				PKPbc		PKPdf	18 13 28.6	+8.5	
	comp=Z,1.3nm,0.9s,baz=330,slow=1.5,SNR=3.7								
SONM				PKPab		PKPab	18 13 43.6	-1.6	
	comp=Z,1.5nm,0.9s,baz=346,slow=1.2,SNR=4.1								
KSRS	**Korea Array**	**158.85**	**316**	PKP		PKPdf	18 13 24.6	-0.3	
	comp=Z,1.7nm,0.8s,baz=125,slow=1.2,SNR=6.0								
BJI	**Beijing**	**162.35**	**343**	PKP		PKPdf	18 13 27.9	-0.8	
HHC	**Hu-ho-hao-te**	**162.36**	**355**	*e*PKP		PKPdf	18 13 26.6	-2.0	
HHC				APKP			18 13 36.9		
HHC				XPKP			18 13 40.5		
HHC				PP		PP			
	comp=Z,9μm,13.1s								
HHC				LR		LR			
	comp=N,930nm,20.2s								
HHC				LR		LR			
	comp=E,1μm,22.6s								
HHC				LR		LR			
	comp=Z,3μm,23.8s								
LZH	**Lanzhou**	**166.23**	**20**	*e*PKP		PKPdf	18 13 30.8	-1.5	
LZH				APKP			18 13 40.5		
LZH				XPKP			18 13 44.8		
NJ2	**Nanjing**	**168.01**	**319**	*e*PKP		PKPdf	18 13 32.3	-1.4	
CMAR	**Chiang Mai Arr**	**168.92**	**113**	PKP		PKPdf	18 13 34.2	-0.4	
	comp=Z,0.8nm,0.8s,baz=270,slow=2.1,SNR=4.3								
CMAR				PKPab		PKPab	18 14 45.3	-0.4	
	comp=Z,1.7nm,0.9s,baz=257,slow=4.1,SNR=6.0								
CD2	**Chengdu**	**170.72**	**33**	*e*PKP		PKPdf	18 13 33.0	-2.4	
CD2				XPKP			18 13 47.4		
CD2				PKP2		PKPab	18 14 53.3	+0.1	
CD2				PP		PP			
	comp=Z,120nm,10.8s								
CD2				LR		LR			
	comp=N,230nm,18.2s								
CD2				LR		LR			
	comp=Z,260nm,19.2s								
KMI	**Kunming**	**173.41**	**72**	PKP		PKPdf	18 13 34.8	-2.0	
GYA	**Guiyang**	**175.79**	**40**	PKP		PKPdf	18 13 35.3	-2.2	
GYA				APKP			18 13 45.6		
GYA				XPKP			18 13 50.3		
GYA				PKP2		PKPab	18 15 15.6	-0.2	
GYA				PP		PP			
	comp=Z,130nm,7.0s								
GYA				LR		LR			
	comp=N,129nm,18.0s								
GYA				LR		LR			
	comp=E,134nm,19.5s								
GYA				LR		LR			
	comp=Z,115nm,20.1s								

ISCJB ***14*** *17:56:44.3±1.7,2332S±005×7052W±005, h9km±10km, mb4.7/20, Error ellipse: s-maj=8.7km s-min=7.5km az=155.3*

IDC ***14*** *17:56:47.0±3.6, 2329S×7056W, h16km±20km, mb4.7/11, mb1 4.7/15, mb1mx4.7/20, mbtmp4.6/15, ML4.1/4, Error ellipse: s-maj=21.0km s-min=18.6km az=91.0*

NEIC ***14*** *17:56:48.5±2.3, 2331S×7057W, h28km±16km, mb4.8/11, Error ellipse: s-maj=10.4km s-min=6.7km az=81.0*

MOS ***14*** *17:56:48.0±1.6, 2327S×7059W, h33km, mb5.0/4, Error ellipse: s-maj=22.7km s-min=12.1km az=89.9*

BJI ***14*** *17:56:49.9, 2330S×7060W, h27km, mB4.7*

ISC 14 17:56:45.3±1.7, 2335S±005×7059W±004, h3km±10km, n277, σ0≥58/244, mb4.7/20, 99C-94D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.71**	**65**	Pg	**Pg**	**17 57 17.6**	**-0.6**
	2μm,0.3s,baz=247,slow=12,SNR=18						
LVC				Lg		17 57 40.3	
	5μm,0.3s,baz=347,slow=12,SNR=32						
LVC	**Limon Verde**	**1.71**	**65**	*e*P	**Pn**	**17 57 17.8**	**+1.7**
LVC				*e*S	**Sn**	**17 57 39.9**	**+1.5**
LPAZ	**La Paz**	**7.39**	**19**	Pn	**Pn**	**17 58 36.0**	**+1.8**
	2.1nm,0.3s,baz=194,slow=13,SNR=6.6						
CFAA	**Coronel Fontan**	**8.49**	**166**	Pn	**Pn**	**17 58 50.3**	**+1.1**
	0.3nm,0.3s,baz=348,slow=14,SNR=1.9						
SIV	**San Ignacio**	**11.57**	**52**	Pn	**Pn**	**17 59 30.1**	**-1.3**
	3.4nm,0.3s,baz=246,slow=14,SNR=8.7						
SIV				Sn	**Sn**	**18 01 41.8**	**+0.6**
	baz=302,slow=19,SNR=3.0						
PLCA	**Paso Flores**	**17.34**	**180**	Pn	**Pn**	**18 00 48.2**	**-0.1**
	0.2nm,0.3s,baz=353,slow=13,SNR=3.7						
PLCA				PKKP		18 28 33.1	
	0.0nm,0.3s,baz=86,slow=5.1,SNR=2.9						
BDFB	**Brasilia**	**22.60**	**74**	P	**P**	**18 01 46.2**	**-1.0**
	16nm,1.0s,mb4.4,baz=214,slow=16,SNR=6.4						
SJG	**San Juan**	**41.43**	**6**	*e*P	**P**	**18 04 30.2**	**-3.1**
	206nm,1.0s,mb5.7						
SJG	**San Juan**	**41.43**	**6**	*e*P	**P**	**18 04 30.2**	**-3.1**
SJG				pmax	pmax		
	comp=Z,206nm,1.0s						
VNA3	**Neumayer Olymp**	**58.85**	**161**	*e*P	**P**	**18 06 45.3**	**+0.4**
VNA3				*e*		18 06 53.1	
VNA3				*e*		18 06 57.4	
VNA3				*e*		18 07 15.7	
VNA3				*e*		18 07 28.1	
VNA3				*e*		18 07 34.5	
VNA1	**Neumayer--Stat**	**59.09**	**160**	*e*P	**P**	**18 06 48.0**	**+1.5**
VNA1				*e*		18 06 55.9	
VNA1				*e*		18 07 00.3	
VNA1				*e*		18 07 35.9	
VNA2	**Neumayer--Watz**	**59.44**	**160**	*e*P	**P**	**18 06 49.3**	**+0.3**
VNA2				*e*		18 06 57.2	
VNA2				*e*		18 07 01.6	
VNA2				*e*		18 07 19.9	
VNA2				*e*		18 07 29.9	
VNA2				*e*		18 07 36.9	
ELN	**Prospectdale**	**61.00**	**351**	*e*P	**P**	**18 06 58.8**	**-1.2**
SNAA	**Sanae**	**61.06**	**160**	*e*P	**P**	**18 06 58.6**	**-1.5**
SNAA				*e*		18 07 06.4	
SNAA				*e*		18 07 10.8	
SNAA				*e*		18 07 41.6	
SNAA	**Sanae**	**61.06**	**160**	*e*P	**P**	**18 06 58.0**	**-2.1**
MIAR	**Mount Ida**	**61.57**	**338**	*e*P	**P**	**18 07 01.8**	**-2.2**
	comp=Z,13nm,1.0s,mb5.0						
MIAR	**Mount Ida**	**61.57**	**338**	*e*P	**P**	**18 07 01.8**	**-2.1**
MIAR				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
CCM	**Cathedral Cave**	**64.08**	**342**	*e*P	**P**	**18 07 18.8**	**-1.8**
	comp=Z,13nm,1.2s,mb4.8						
319A	**Douglas**	**65.83**	**324**	⇑P	**P**	**18 07 32.5**	**+0.4**
	baz=66						
318A	**Bisbee**	**66.26**	**324**	⇓P	**P**	**18 07 34.8**	**-0.1**
	baz=66						
219A	**White Tail Can**	**66.30**	**325**	⇓P	**P**	**18 07 35.3**	**+0.2**
	baz=66						
BNM	**Barren Site**	**66.66**	**328**	*e*P	**P**	**18 07 37.3**	**-0.1**
218A	**Dragoon**	**66.70**	**324**	⇑P	**P**	**18 07 38.1**	**+0.4**
	baz=67						
LPM	**Los Pinos Moun**	**66.79**	**328**	*e*P	**P**	**18 07 36.1**	**-2.1**
QSPA	**South Pole Qui**	**66.85**	**180**	*e*P	**P**	**18 07 39.2**	**+1.1**
119A	**Ashpeak Ranch,**	**66.92**	**325**	⇑P	**P**	**18 07 39.3**	**+0.2**
	baz=67						
217A	**Green Valley**	**66.97**	**323**	⇑P	**P**	**18 07 39.8**	**+0.4**
	baz=67						
118A	**Homack Ranch,**	**67.18**	**324**	⇓P	**P**	**18 07 41.0**	**+0.3**
	baz=67						
ANMO	**Albuquerque**	**67.22**	**329**	*e*P	**P**	**18 07 40.7**	**-0.3**
Z19A	**T-Link Ranch,**	**67.31**	**325**	⇓P	**P**	**18 07 42.0**	**+0.5**
	baz=68						
TUC	**Tucson**	**67.36**	**324**	*e*P	**P**	**18 07 41.6**	**-0.4**
	comp=Z,2.8nm,0.9s,mb4.3						
TUC	**Tucson**	**67.36**	**324**	*e*P	**P**	**18 07 41.6**	**-0.3**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
216A	**Three Points,**	**67.50**	**323**	⇓P	**P**	**18 07 42.8**	**0.0**
	baz=68						
117A	**Oracle**	**67.54**	**324**	⇓P	**P**	**18 07 43.1**	**0.0**
	baz=68						
Y19A	**Nutrioso**	**67.83**	**326**	⇑P	**P**	**18 07 45.4**	**+0.6**
	baz=68,SNR=7.9						
214A	**Organ Pipe Nat**	**68.22**	**322**	⇓P	**P**	**18 07 47.3**	**0.0**
	baz=68						
115A	**Sonoran Desert**	**68.45**	**323**	⇓P	**P**	**18 07 49.0**	**+0.3**
	baz=69						
Y17A	**Roosevelt**	**68.45**	**325**	⇓P	**P**	**18 07 48.7**	**-0.1**
	baz=69,SNR=6.7						
W19A	**Sanders**	**68.80**	**327**	⇓P	**P**	**18 07 51.0**	**+0.1**
	baz=69						
Y16A	**Circle Bar Ran**	**68.94**	**324**	⇑P	**P**	**18 07 52.2**	**+0.4**
	baz=69						
W18A	**Petrified Fore**	**68.98**	**326**	⇓P	**P**	**18 07 52.2**	**+0.2**
	baz=69						
Y15A	**Casa Rosa Ranc**	**69.45**	**324**	⇑P	**P**	**18 07 55.4**	**+0.4**
	baz=70						
X15A	**Humboldt**	**69.80**	**324**	⇑P	**P**	**18 07 57.6**	**+0.4**
	baz=70						
Y14A	**Wickenburg**	**69.81**	**323**	⇑P	**P**	**18 07 57.3**	**+0.2**
	baz=70						
W16A	**Flagstaff**	**69.89**	**325**	⇑P	**P**	**18 07 57.9**	**+0.2**
	baz=70						
MVCO	**Mesa Verde**	**70.02**	**329**	*e*P	**P**	**18 07 58.5**	**+0.1**
	comp=Z,6.0nm,0.9s,mb4.5						
MVCO	**Mesa Verde**	**70.02**	**329**	⇑P	**P**	**18 07 58.7**	**+0.3**
	baz=70						
U18A	**Rough Rock, Ch**	**70.07**	**327**	⇑P	**P**	**18 07 59.0**	**+0.3**
	baz=70						
WUAZ	**Wupatki**	**70.13**	**325**	*e*P	**P**	**18 07 59.3**	**+0.2**
	comp=Z,9.5nm,1.2s,mb4.6						
WUAZ	**Wupatki**	**70.13**	**325**	⇓P	**P**	**18 07 59.5**	**+0.3**
	baz=70						
X14A	**Yava**	**70.14**	**324**	⇓P	**P**	**18 07 59.5**	**+0.3**
	baz=70						
W15A	**Williams**	**70.34**	**325**	⇑P	**P**	**18 08 01.0**	**+0.6**
	baz=70						
U16A	**Tuba City**	**70.49**	**326**	⇑P	**P**	**18 08 02.0**	**+0.7**
	baz=71						
Y12C	**Blythe**	**70.51**	**322**	⇑P	**P**	**18 08 01.6**	**+0.1**
	baz=71						
U17A	**Shonto**	**70.60**	**327**	⇓P	**P**	**18 08 02.6**	**+0.6**
	baz=71						
T18A	**Mexican Hat**	**70.63**	**328**	⇓P	**P**	**18 08 02.3**	**+0.1**
	baz=71,SNR=6.4						
DBIC	**Dimbokro**	**70.75**	**74**	P	**P**	**18 08 02.2**	**-1.2**
	comp=Z,32nm,0.9s,mb5.2,baz=224,slow=5.9,SNR=20						
S19A	**Harvey Farm, M**	**70.75**	**328**	⇓P	**P**	**18 08 02.9**	**0.0**
	baz=71						
ECSD	**EROS,Sioux Fal**	**70.90**	**340**	P	**P**	**18 08 02.1**	**-1.5**
BC3	**Big Chuckw Mtn**	**70.97**	**322**	⇓P	**P**	**18 08 04.5**	**+0.2**
	baz=71						
MONP	**Monument Peak**	**70.98**	**320**	⇑P	**P**	**18 08 05.1**	**+0.7**
	baz=71						
T17A	**Navajo Res., N**	**70.98**	**327**	⇓P	**P**	**18 08 04.9**	**+0.6**
	baz=71						
S18A	**Hurst Farm, Bl**	**71.12**	**328**	⇑P	**P**	**18 08 05.9**	**+0.8**
	baz=71,SNR=11						
V14A	**Boquillas Ranc**	**71.14**	**324**	⇓P	**P**	**18 08 05.9**	**+0.7**
	baz=71,SNR=5.7						
IRM	**Iron Mountain**	**71.17**	**322**	⇑P	**P**	**18 08 05.7**	**+0.2**
	baz=71						
U15A	**North Rim**	**71.31**	**326**	⇑P	**P**	**18 08 06.9**	**+0.6**
	baz=72						
T16A	**Glen Canyon Da**	**71.33**	**326**	⇓P	**P**	**18 08 06.9**	**+0.5**
	baz=72						
PFO	**Pinyon Flat Ob**	**71.52**	**321**	⇓P	**P**	**18 08 08.3**	**+0.7**
	baz=72						
BELC	**Belle Mtn.**	**71.53**	**321**	⇑P	**P**	**18 08 07.3**	**-0.4**
	baz=72						
R18A	**Canyonlands Na**	**71.62**	**328**	⇑P	**P**	**18 08 08.2**	**0.0**
	baz=72						
Q19A	**Hogan Spring (**	**71.77**	**329**	⇑P	**P**	**18 08 09.1**	**+0.1**
	baz=72						
T15A	**Red Dirt Ranch**	**71.81**	**326**	⇑P	**P**	**18 08 09.2**	**0.0**
	baz=72						
GMRC	**Granite Mounta**	**71.91**	**322**	⇑P	**P**	**18 08 09.9**	**0.0**
	baz=72						
R17A	**Hanksville Air**	**72.05**	**328**	⇑P	**P**	**18 08 11.0**	**+0.3**
	baz=72						
P19A	**Cripple Cowboy**	**72.18**	**330**	⇓P	**P**	**18 08 11.7**	**+0.2**
	baz=72,SNR=8.3						
Q18A	**Rafter H Ranch**	**72.30**	**329**	⇑P	**P**	**18 08 12.5**	**+0.3**
	baz=72						
HEC	**Hector,Ludlow**	**72.32**	**322**	⇓P	**P**	**18 08 12.9**	**+0.5**
	baz=72						
SRU	**San Rafael**	**72.50**	**328**	⇓P	**P**	**18 08 13.5**	**+0.2**
	baz=73						
U12A	**Valley of Fire**	**72.50**	**324**	⇑P	**P**	**18 08 13.6**	**+0.2**
	baz=73						
T13A	**Saint George**	**72.60**	**325**	⇓P	**P**	**18 08 14.4**	**+0.3**
	baz=73						
Q16A	**Castle Valley**	**72.66**	**328**	⇑P	**P**	**18 08 14.9**	**+0.5**
	baz=73						
P18A	**Preston Nutter**	**72.77**	**329**	⇓P	**P**	**18 08 15.3**	**+0.3**
	baz=73,SNR=7.0						
O19A	**Miners Draw (B**	**72.78**	**330**	⇓P	**P**	**18 08 15.3**	**+0.3**
	baz=73						
P17A	**Butcher Ranch,**	**72.89**	**329**	⇑P	**P**	**18 08 16.1**	**+0.4**
	baz=73						
GSC	**Goldstone**	**72.93**	**322**	⇓P	**P**	**18 08 16.3**	**+0.2**
	baz=73						
EDW2	**Edwards Air Fo**	**73.31**	**321**	⇑P	**P**	**18 08 18.5**	**+0.2**
	baz=74						
L21A	**Rawlins**	**73.35**	**332**	⇓P	**P**	**18 08 18.5**	**+0.1**
	baz=74,SNR=6.3						
O17A	**Robinson Place**	**73.45**	**329**	⇑P	**P**	**18 08 19.4**	**+0.4**
	baz=74,SNR=9.3						
T11A	**Corn Creek, Al**	**73.47**	**324**	⇑P	**P**	**18 08 19.6**	**+0.4**
	baz=74						
LRMC	**Laurel Mountai**	**73.56**	**321**	⇓P	**P**	**18 08 20.1**	**+0.3**
	baz=74						
N18A	**Larsen Ranch,**	**73.57**	**330**	⇓P	**P**	**18 08 20.6**	**+1.0**
	baz=74						
Q14A	**Sevier Lake (B**	**73.76**	**327**	⇓P	**P**	**18 08 21.5**	**+0.6**
	baz=74						
RSSD	**Black Hills**	**73.80**	**336**	*e*P	**P**	**18 08 20.7**	**-0.3**
	comp=Z,4.8nm,1.0s,mb4.4						
RSSD	**Black Hills**	**73.80**	**336**	*e*P	**P**	**18 08 20.7**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TPNV	**Topopah Spring**	**73.81**	**323**	⇓P	**P**	**18 08 21.8**	**+0.7**
	baz=74						
O16A	**Springville**	**73.82**	**329**	⇑P	**P**	**18 08 21.6**	**+0.4**
	baz=74						
MPMC	**Manual Prospec**	**73.86**	**322**	⇑P	**P**	**18 08 21.7**	**+0.2**
	baz=74						
R12A	**Pony Springs,**	**73.95**	**325**	⇓P	**P**	**18 08 22.5**	**+0.6**
	baz=74,SNR=5.5						
N17A	**Moffit Pass**	**74.08**	**329**	⇓P	**P**	**18 08 23.1**	**+0.4**
	baz=74,SNR=8.4						
M18A	**Lyman**	**74.11**	**330**	⇑P	**P**	**18 08 22.7**	**-0.2**
	baz=74						
P14A	**Drum Mountains**	**74.12**	**327**	⇓P	**P**	**18 08 23.8**	**+0.9**
	baz=74						
ISA	**Isabella**	**74.14**	**321**	⇓P	**P**	**18 08 23.3**	**+0.1**
	baz=74						
L19A	**Farson**	**74.33**	**331**	⇑P	**P**	**18 08 24.6**	**+0.5**
	baz=74						
M17A	**Scullys Gap (B**	**74.42**	**330**	⇑P	**P**	**18 08 25.2**	**+0.6**
	baz=75						
R11A	**Troy Canyon, C**	**74.48**	**325**	⇑P	**P**	**18 08 25.4**	**+0.3**
	baz=75						
P13A	**Bates Ranch, G**	**74.49**	**326**	⇓P	**P**	**18 08 25.6**	**+0.5**
	baz=75						
S10A	**Tonopah Range,**	**74.71**	**324**	⇑P	**P**	**18 08 26.2**	**-0.2**
	baz=75						
R10A	**Warm Springs**	**74.82**	**324**	⇓P	**P**	**18 08 27.3**	**+0.3**
	baz=75,SNR=5.4						
N15A	**Stansbury Isla**	**74.84**	**328**	⇑P	**P**	**18 08 27.3**	**+0.2**
	baz=75						
S09A	**Goldfield**	**74.91**	**323**	⇑P	**P**	**18 08 27.5**	**-0.1**
	baz=75						
PDAR	**Pinedale Array**	**74.95**	**331**	P	**P**	**18 08 27.0**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.8,baz=129,slow=7.2,SNR=4.4						
R09A	**Tonopah**	**75.20**	**324**	⇓P	**P**	**18 08 29.4**	**+0.2**
	baz=75						
Q10A	**Clear Creek Ra**	**75.26**	**325**	⇓P	**P**	**18 08 30.1**	**+0.6**
	baz=76						
SYO	**Syowa Base**	**75.33**	**160**	⇑*i*P	**P**	**18 08 28.5**	**-1.1**
SYO	**Syowa Base**	**75.33**	**160**	⇑*e*PcP	PcP	18 08 38.7	-4.2
O12A	**Currie**	**75.47**	**327**	⇑P	**P**	**18 08 31.2**	**+0.5**
	baz=76						
L15A	**Malad City**	**75.64**	**329**	⇓P	**P**	**18 08 31.7**	**+0.1**
	baz=76						
M14A	**Sheep Mountain**	**75.71**	**328**	⇑P	**P**	**18 08 32.1**	**0.0**
	baz=76						
KCC	**Kaiser Creek**	**75.79**	**322**	⇑P	**P**	**18 08 32.0**	**-0.6**
	baz=76						
K16A	**Soda Springs**	**75.91**	**330**	⇑P	**P**	**18 08 33.8**	**+0.6**
	baz=76,SNR=6.9						
J17A	**Brown Place, J**	**75.94**	**331**	⇓P	**P**	**18 08 33.3**	**0.0**
	baz=76						
U04C	**Hernandez Rese**	**75.97**	**320**	⇓P	**P**	**18 08 33.9**	**+0.2**
	baz=76						
NVAR	**Mina Array Bea**	**76.01**	**323**	P	**P**	**18 08 33.8**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=144,slow=6.4,SNR=5.4						
L14A	**Malta**	**76.07**	**329**	⇓P	**P**	**18 08 34.2**	**0.0**
	baz=76						
Q08A	**Gabbs**	**76.11**	**324**	⇓P	**P**	**18 08 34.6**	**+0.2**
	baz=76						
K15A	**Arbon**	**76.23**	**330**	⇑P	**P**	**18 08 35.2**	**+0.2**
	baz=76						
I17A	**Pilgram Creek**	**76.32**	**331**	⇑P	**P**	**18 08 35.8**	**+0.4**
	baz=76,SNR=5.5						
L13A	**Double Diamond**	**76.45**	**328**	⇑P	**P**	**18 08 36.6**	**+0.3**
	baz=77						
RLMT	**Red Lodge**	**76.72**	**333**	*e*P	**P**	**18 08 37.2**	**-0.5**
RLMT	**Red Lodge**	**76.72**	**333**	⇑P	**P**	**18 08 37.8**	**0.0**
	baz=77						
J15A	**Blackfoot**	**76.74**	**330**	⇑P	**P**	**18 08 38.0**	**+0.1**
	baz=77						
G18A	**Lazy EL Ranch,**	**77.00**	**333**	⇓P	**P**	**18 08 39.0**	**-0.4**
	baz=77						
J14A	**Carey**	**77.19**	**329**	⇓P	**P**	**18 08 40.7**	**+0.3**
	baz=77						
H16A	**Russell Place,**	**77.23**	**332**	⇑P	**P**	**18 08 41.0**	**+0.4**
	baz=77						
O08A	**Rochester Mine**	**77.26**	**325**	⇓P	**P**	**18 08 40.9**	**+0.1**
	baz=78						
K12A	**Draper Farm, C**	**77.33**	**328**	⇑P	**P**	**18 08 41.4**	**+0.1**
	baz=78						
L11A	**Cat Creek Ranc**	**77.39**	**327**	⇓P	**P**	**18 08 41.7**	**+0.1**
	baz=78						
F18A	**Big Timber**	**77.54**	**333**	⇓P	**P**	**18 08 42.0**	**-0.4**
	baz=78,SNR=6.0						
O07A	**Toulon**	**77.55**	**324**	⇑P	**P**	**18 08 42.2**	**-0.3**
	baz=78						
J13A	**Cove Ranch, Pi**	**77.55**	**329**	⇓P	**P**	**18 08 42.6**	**+0.2**
	baz=78						
DGMT	**Dagmar**	**77.56**	**338**	⇓P	**P**	**18 08 42.1**	**-0.3**
	baz=78						
I14A	**Mackay**	**77.62**	**330**	⇑P	**P**	**18 08 43.1**	**+0.3**
	baz=78						
L10A	**Juniper Basin**	**77.69**	**327**	⇓P	**P**	**18 08 43.3**	**+0.1**
	baz=78,SNR=5.7						
HLID	**Hailey**	**77.79**	**329**	*e*P	**P**	**18 08 44.1**	**+0.3**
	comp=Z,6.4nm,1.0s,mb4.5						
HLID	**Hailey**	**77.79**	**329**	⇑P	**P**	**18 08 44.2**	**+0.4**
	baz=78						
J12A	**Stokes Ranch,**	**77.88**	**328**	⇓P	**P**	**18 08 44.3**	**0.0**
	baz=78						
G16A	**Moss Hill, Enn**	**77.89**	**332**	⇓P	**P**	**18 08 44.8**	**+0.5**
	baz=78						
I13A	**Wildhorse Cree**	**77.92**	**329**	⇓P	**P**	**18 08 44.8**	**+0.3**
	baz=78						
F17A	**Fitzpatrick Pl**	**77.93**	**333**	⇑P	**P**	**18 08 44.8**	**+0.2**
	baz=78						
K11A	**Parker Ranch,**	**77.98**	**328**	⇑P	**P**	**18 08 45.1**	**+0.2**
	baz=78						
MCMT	**McKenzie Canyo**	**78.04**	**331**	*e*P	**P**	**18 08 45.7**	**+0.5**
N07B	**Gerlach**	**78.04**	**325**	⇓P	**P**	**18 08 45.5**	**+0.3**
	baz=78						
H14A	**Leadore**	**78.11**	**330**	⇓P	**P**	**18 08 46.1**	**+0.6**
	baz=78						
G15A	**Dillon**	**78.14**	**331**	⇓P	**P**	**18 08 45.9**	**+0.2**
	baz=78						
BOZ	**Bozeman (W)**	**78.14**	**332**	⇑P	**P**	**18 08 45.2**	**-0.5**
	baz=78						
BEKR	**Beckwourth**	**78.15**	**323**	⇑P	**P**	**18 08 46.0**	**+0.1**
	baz=78						
I12A	**Atlanta**	**78.31**	**329**	⇑P	**P**	**18 08 46.9**	**+0.3**
	baz=78						
MFID	**Camas Ranch**	**78.36**	**328**	⇑P	**P**	**18 08 47.3**	**+0.4**
	baz=79						
K10A	**MacKenzie Ranc**	**78.40**	**327**	⇓P	**P**	**18 08 47.3**	**+0.1**
	baz=79						
E17A	**Martinsdale**	**78.46**	**333**	⇓P	**P**	**18 08 47.7**	**+0.2**
	baz=79						
H13A	**Challis**	**78.48**	**330**	⇑P	**P**	**18 08 47.8**	**+0.2**
	baz=79,SNR=6.5						
N06A	**Buffalo Meadow**	**78.48**	**324**	⇑P	**P**	**18 08 47.6**	**-0.1**
	baz=79						
ORV	**Oroville**	**78.57**	**322**	⇑P	**P**	**18 08 48.1**	**-0.2**
	baz=79						
F15A	**Butte**	**78.67**	**332**	⇑P	**P**	**18 08 48.7**	**+0.1**
	baz=79						
L08A	**Fields**	**78.72**	**326**	⇓P	**P**	**18 08 48.6**	**-0.4**
	baz=79						
H12A	**Diamond D Ranc**	**78.75**	**329**	⇓P	**P**	**18 08 48.7**	**-0.3**
	baz=79						
K09A	**Rome**	**78.77**	**327**	⇓P	**P**	**18 08 49.1**	**-0.2**
	baz=79						
G13A	**Cobalt**	**78.87**	**330**	⇑P	**P**	**18 08 49.8**	**0.0**
	baz=79,SNR=18						
D17A	**Six Diamond Ra**	**78.94**	**333**	⇓P	**P**	**18 08 49.9**	**-0.1**
	baz=79,SNR=8.4						
F14A	**Wisdom**	**79.03**	**331**	⇓P	**P**	**18 08 50.9**	**+0.3**
	baz=79						
HRY	**Holter Researc**	**79.07**	**332**	*e*P	**P**	**18 08 49.8**	**-1.0**
E15A	**Deer Lodge**	**79.19**	**332**	⇑P	**P**	**18 08 51.4**	**0.0**
	baz=79			

A16A	West Butte Ran	80.74	334	⇓P		P		18 08 59.2	-0.5
	baz=81,SNR=12								
JCC	Jacoby Creek	80.85	322	⇑P		P		18 09 00.3	-0.3
	baz=81								
I06A	Prineville	80.93	326	⇑P		P		18 09 01.1	+0.2
	baz=81								
B14A	Marquette Ranc	80.97	333	⇑P		P		18 09 00.6	-0.4
	baz=81								
TSUM	Tsumeb	81.00	107	P		P		18 09 02.4	+0.5
	comp=Z,19nm,0.9s,mb5.0,baz=234,slow=5.8,SNR=20								
TSUM	Tsumeb	81.00	107	*eP*		P		18 09 01.8	-0.2
	comp=Z,22nm,0.9s,mb5.1								
C13A	Hot Springs	81.00	332	⇑P		P		18 09 00.9	-0.3
	baz=81								
F09A	S2 Ranch, Elgi	81.06	329	⇑P		P		18 09 01.1	-0.4
	baz=81								
H07A	Lands Inn, Kim	81.06	327	⇑P		P		18 09 01.5	-0.1
	baz=81								
A15A	Johnson Ranch,	81.22	333	⇑P		P		18 09 01.8	-0.5
	baz=81								
E10A	Myers Farm, Un	81.25	330	⇓P		P		18 09 02.0	-0.5
	baz=82								
G08A	Pilot Rock	81.26	328	⇑P		P		18 09 02.4	-0.3
	baz=82								
C12B	Naegeli Ranch,	81.42	331	⇓P		P		18 09 03.2	-0.2
	baz=82								
B13A	Whitefish	81.48	332	⇑P		P		18 09 03.4	-0.3
	baz=82								
A14A	Double T Ranch	81.50	333	⇑P		P		18 09 03.3	-0.5
	baz=82								
F08A	Pendleton	81.54	328	⇓P		P		18 09 03.9	-0.2
	baz=82								
H06A	Lindquist Farm	81.55	327	⇓P		P		18 09 04.5	+0.3
	baz=82								
G07A	Ruggs Ranch, H	81.59	327	⇓P		P		18 09 04.2	-0.2
	baz=82								
D10A	Wagner Farm, O	81.75	330	⇓P		P		18 09 04.2	-1.0
	baz=82,SNR=5.9								
C11A	Tepee Creek (N	81.86	331	⇑P		P		18 09 05.4	-0.4
	baz=82								
B12A	Libby	82.04	332	⇑P		P		18 09 06.6	-0.1
	baz=82								
G06A	Carlson Farm,	82.06	327	⇑P		P		18 09 06.8	-0.1
	baz=82								
D09A	Jones Farm, Ri	82.23	329	⇓P		P		18 09 07.4	-0.3
	baz=82								
RSW	Rattlesnake Hi	82.36	328	*eP*		P		18 09 08.5	+0.1
A12A	Yaak River Ran	82.42	332	⇓P		P		18 09 08.5	-0.2
	baz=83								
OD2	Odessa Site #2	82.66	329	*eP*		P		18 09 09.2	-0.7
A11A	Hall Mountain,	82.75	332	⇓P		P		18 09 10.3	-0.1
	baz=83								
C09A	Chrisman Ranch	82.75	330	⇑P		P		18 09 10.3	-0.1
	baz=83								
MAW	Mawson	83.01	164	*eP*		P		18 09 11.9	+0.2
	comp=Z,11nm,0.6s,mb5.1								
MAW	Mawson	83.01	164	P		P		18 09 12.1	+0.4
	comp=Z,25nm,0.9s,mb5.2,baz=215,slow=6.6,SNR=22								
MAW	Mawson	83.01	164	*eP*		P		18 09 11.9	+0.2
MAW					pmax	pmax			
	comp=Z,11nm,0.6s								
B09A	Rice	83.15	330	⇓P		P		18 09 11.7	-0.8
	baz=83								
A10A	Northport	83.29	331	⇓P		P		18 09 12.4	-0.8
	baz=84								
G03A	Yamhill	83.46	326	⇑P		P		18 09 13.6	-0.5
	baz=84								
C07A	Waterville	83.51	329	⇓P		P		18 09 14.0	-0.3
	baz=84								
A09A	Danville	83.75	330	⇑P		P		18 09 14.8	-0.8
	baz=84								
BOSA	Boshof	83.95	118	P		P		18 09 16.9	-0.3
	comp=Z,15nm,0.8s,mb5.2,baz=242,slow=4.0,SNR=18								
A08A	Turner Farm, O	84.05	330	⇓P		P		18 09 16.4	-0.7
	baz=84								
MDT	Midelt	84.11	51	P		P		18 09 18.0	+0.1
	comp=Z,9,4nm,1.0s,mb4.9,baz=255,slow=5.4,SNR=8.6								
A07A	Ashnola River,	84.63	330	⇓P		P		18 09 19.3	-0.7
	baz=85								
EDM	Edmonton	84.78	336	*eP*		P		18 09 18.5	-2.2
ESDC	Sonseca Array	88.23	45	P		P		18 09 37.8	-0.2
	comp=Z,0.4nm,0.3s,mb4.1,baz=242,slow=5.2,SNR=3.4								
YKA	Yellowknife Ar	92.41	341	P		P		18 09 55.4	-1.5
	comp=Z,3.3nm,0.7s,mb4.8,baz=137,slow=4.2,SNR=12								
ASAR	Alice Springs	127.56	209	PKP		PKPdf		18 15 51.5	-1.2
	comp=Z,2.6nm,0.8s,baz=132,slow=1.4,SNR=19								
ARU	Arti	130.54	35	*e*PKPdf		PKPdf		18 15 57.2	+0.1
ARU	Arti	130.54	35	*e*PKIKP		PKPdf		18 15 57.2	+0.1
WRA	Warramunga Arr	130.58	211	PKP		PKPdf		18 15 57.9	-0.5
	comp=Z,2.0nm,0.6s,baz=156,slow=1.7,SNR=16								
NVS	Novosibirsk	142.99	25	*e*PKIKP		PKPdf		18 16 17.1	-3.1
NVS					pmax	pmax			
	comp=Z,11nm,1.3s								
NVS					pmax	pmax			
	comp=N,7.0nm,1.6s								
NVS					pmax	pmax			
	comp=E,3.0nm,1.3s								
KURK	Kurchatov	143.72	33	*e*PKPpre				18 16 16.6	
ZALV	Zalesovo Beam	144.28	25	PKP		PKPdf		18 16 19.9	-2.5
	comp=E,12nm,0.8s,baz=291,slow=4.4,SNR=15								
EKS2	Erkin-Say	144.79	48	P		PKPdf		18 16 22.7	-1.0
	SNR=10								
AML	Almayashu	144.93	49	*e*PKPdf		PKPdf		18 16 23.0	-1.0
USP	Ospenovka	145.05	47	P		PKPbc		18 16 23.6	0.0
	SNR=9.1								
CHMS	Chumysh	145.33	47	P		PKPbc		18 16 24.6	+0.2
	SNR=11								
BOD	Bodaibo	145.40	356	*e*PKIKP		PKPdf		18 16 22.0	-2.3
BOD					pmax	pmax			
	comp=Z,27nm,1.0s								
KBK	Karagaybulak	145.59	48	P		PKPdf		18 16 25.6	+0.5
	SNR=16								
TKM2	Tokmak 2	145.93	47	*e*PKPdf		PKPdf		18 16 25.9	+0.2
TKM2	Tokmak 2	145.93	47	P		PKPdf		18 16 26.2	+0.5
	SNR=11								
KZA	Kyzart	146.02	48	P		PKPdf		18 16 27.5	+1.6
	SNR=7.5								
ULHL	Ulahol	146.63	48	P		PKPab		18 16 29.5	-0.1
	SNR=7.5								
MK31	Makanchi Array	148.03	36	*e*PKPdf		PKPdf		18 16 28.1	-0.9
MKAR	Makanchi Array	148.03	36	PKP		PKPdf		18 16 28.6	-0.5
	comp=Z,11nm,0.7s,baz=297,slow=1.5,SNR=35								
MKAR						PKPbc		18 16 31.3	-0.9
	comp=Z,12nm,0.7s,baz=322,slow=3.0,SNR=24								
HYB	Hyderabad	150.52	96	*eP*		PKPbc		18 16 38.0	-1.3
HYB	Hyderabad	150.52	96	*i* PKP		PKPbc		18 16 38.0	-1.3
MJAR	Matsushiro Arr	151.91	305	PKPbc		PKPbc		18 16 40.9	-1.1
	comp=Z,7.4nm,1.0s,baz=105,slow=1.5,SNR=10								
MAT	Matsushiro	151.91	305	PKP		PKPbc		18 16 41.3	-0.7
ZAK	Zakamensk	152.59	9	*e*PKIKP		PKPdf		18 16 29.5	-6.6
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.4s								
WMQ	Urumqi	152.87	36	*e*PKP		PKPdf		18 16 38.0	+1.3
SONM	Songino Array	155.44	5	PKP		PKPdf		18 16 40.0	-0.2
	comp=Z,1.8nm,0.9s,baz=278,slow=1.7,SNR=6.9								
SONM					PKPab	PKPab		18 17 04.7	-0.9
	comp=Z,1.2nm,0.9s,baz=352,slow=3.2,SNR=3.7								
KSRS	Korea Array	158.78	316	PKP		PKPdf		18 16 44.8	0.0
	comp=Z,1.8nm,1.1s,baz=132,slow=1.8,SNR=4.8								
GTA	Gaotai	162.03	25	*e*PKP		PKPdf		18 16 48.8	+0.5
GTA					PKP2	PKPab		18 17 34.8	+0.3
GTA					PP	PP		18 21 22.0	+4.4
HHC	Hu-ho-hao-te	162.45	355	*e*PKP		PKPdf		18 16 48.1	-0.6
HHC					APKP			18 16 59.9	
HHC					XPKP			18 17 04.6	
HHC					PKS			18 20 20.9	
HHC					PP	PP		18 21 21.5	+2.0
HHC					SKS	SKSdf		18 23 49.0	-5.4
HHC					SKKS	SKKSac		18 28 04.8	-4.8
HHC					SS	SS		18 41 36.9	-4.3
LZH	Lanzhou	166.42	20	*e*PKP		PKPdf		18 16 52.6	+0.2
CMAR	Chiang Mai Arr	169.08	114	PKP		PKPdf		18 16 54.2	-0.5
	comp=Z,0.4nm,0.3s,baz=294,slow=2.5,SNR=4.9								
CMAR					PKPab	PKPab		18 05.0	-1.2
	comp=Z,1.9nm,0.9s,baz=248,slow=4.7,SNR=8.7								
CD2	Chengdu	170.94	33	*e*PKP		PKPdf		18 16 54.8	-0.7
KMI	Kunming	173.66	72	PKP		PKPdf		18 16 55.3	-1.6
GYA	Guiyang	176.02	38	PKP		PKPdf		18 16 53.8	-3.7
GYA					APKP			18 17 08.9	
GYA					PKP2	PKPab		18 18 35.8	-0.9
GYA					PKS			18 20 25.5	
GYA					PP	PP		18 22 30.4	+1.5
GYA					PP	PP			
	comp=Z,60nm,8.4s								

IDC 14 17:58:57.4±6.7, 1879S×17641W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, MS4.8/1, Ms1 4.8/1, ms1mx3.8/33, Error ellipse: s-maj=176.3km s-min=107.2km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.58	43	LR	LR	18 02 54.4	
	comp=Z,9μm,21.3s,baz=285,slow=36						
STKA	Stephens Creek	39.89	243	P	P	18 06 33.1	-0.1
	0.6nm,0.4s,baz=103,slow=15,SNR=3.5						
WRA	Warramunga Arr	46.35	260	P	P	18 07 25.8	+0.3
	0.7nm,0.5s,baz=97,slow=7.5,SNR=9.9						
ASAR	Alice Springs	46.39	255	P	P	18 07 25.5	-0.4
	0.9nm,0.4s,baz=88,slow=8.0,SNR=28						
AKASG	Malin Array Be	142.21	333	PKP	PKPdf	18 18 31.1	-0.5
	1.2nm,0.6s,baz=38,slow=3.6,SNR=4.4						

NEIC 14 18:00:26.6±0.7, 2253S×7018W, h35km, mb4.8/1, Error ellipse: s-maj=22.1km s-min=20.2km az=54.0
ISCJB 14 18:00:30.3±2.5, 223S±01×698W±03, h76km±20km, mb4.1/5, Error ellipse: s-maj=47.3km s-min=15.4km az=161.5
IDC 14 18:00:31.1±2.0, 2223S×6979W, h69km±16km, mb4.0/5, mb1 4.2/5, mb1mx3.8/14, mbtmp4.0/5, MS5.5/1, Ms1 5.5/1, ms1mx4.2/36, Error ellipse: s-maj=43.1km s-min=26.8km az=41.0
ISC 14 18:00:31.8±2.3, 223S±01×698W±03, h73km±18km, n21, σ0§84/15, mb4.1/5, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.86	109	P	Pn	18 00 48.2	-0.5
	1μm,0.3s,baz=290,slow=9.9,SNR=22						
LVC				S	Sn	18 01 02.4	+1.0
	819nm,0.3s,baz=169,slow=20,SNR=22						
LVC	Limon Verde	0.86	109	*eP*	Pn	18 00 47.7	-1.1
LVC				*eS*	Sn	18 01 00.4	-0.9
LPAZ	La Paz	6.21	15	*eP*	Pn	18 02 01.9	+1.0
RPN	Rapa Nui	36.13	254	LR	LR	18 17 12.8	
	comp=Z,8μm,20.8s,baz=314,slow=28						
VNA3	Neumayer Olymp	59.56	161	*e*	P	18 10 29.0	+1.7
VNA3				*e*		18 10 31.3	
VNA2	Neumayer--Watz	60.15	160	*e*	P	18 10 31.9	+0.6
VNA2				*e*		18 10 34.1	
SNAA	Sanae	61.77	161	*e*	P	18 10 41.5	-0.8
SNAA				*e*		18 10 43.6	
NVAR	Mina Array Bea	75.65	323	P	P	18 12 08.6	-0.4
	0.5nm,0.5s,mb3.5,baz=105,slow=4.8,SNR=3.3						
TORD	Torodi Ar. Bea	78.40	71	P	P	18 12 24.6	-0.4
	6.1nm,0.9s,mb4.3,baz=257,slow=5.6,SNR=12						
MAW	Mawson	83.77	164	P	P	18 12 52.4	-0.1
	2.8nm,0.6s,mb4.2,baz=18,slow=18,SNR=4.3						
MAW	Mawson	83.77	164	*eP*	P	18 12 52.8	+0.2
BOSA	Boshof	83.78	118	P	P	18 12 53.5	+0.1
	2.6nm,0.8s,mb4.1,baz=266,slow=11,SNR=3.3						
BOSA	Boshof	83.78	118	*eP*	P	18 12 53.4	0.0
	8.8nm,1.1s,mb4.5						
YKA	Yellowknife Ar	91.70	341	P	P	18 13 29.5	-1.0
	0.8nm,0.6s,mb4.2,baz=142,slow=4.8,SNR=5.9						
ASAR	Alice Springs	128.80	208	PKP	PKPdf	18 19 31.2	-0.3
	0.8nm,0.8s,baz=119,slow=1.9,SNR=4.9						
WRA	Warramunga Arr	131.83	211	PKP	PKPdf	18 19 37.5	+0.1
	0.9nm,0.7s,baz=161,slow=1.7,SNR=5.6						
ZALV	Zalesovo Beam	143.05	25	PKP	PKPdf	18 19 56.6	-0.2
	1.9nm,0.8s,baz=323,slow=3.7,SNR=3.6						
MKAR	Makanchi Array	146.78	36	PKPbc	PKPbc	18 20 03.7	-1.7
	2.2nm,0.8s,baz=311,slow=3.6,SNR=6.1						
MKAR	Makanchi Array	146.78	36	PKPbc	PKPbc	18 20 03.7	-1.7
SONM	Songino Array	154.37	6	PKPbc	PKPbc	18 20 23.9	+0.3
	0.4nm,0.6s,baz=327,slow=2.4,SNR=3.6						
KSRS	Korea Array	158.54	319	PKPab	PKPab	18 20 55.7	-0.5
	0.5nm,0.4s,baz=4.6,slow=32,SNR=6.6						

IDC 14 18:08:06.4±1.6, 2156S×17626W, h0km, mb3.8/5, mb1 4.2/6, mb1mx4.0/16, mbtmp3.9/6, ML2.9/1, MS5.1/1, Ms1 5.1/1, ms1mx3.1/37, Error ellipse: s-maj=77.9km s-min=20.6km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.73	30	Pn	Pn	18 10 16.2	+2.3
	8.3nm,0.3s,baz=126,slow=9.5,SNR=5.5						
AFI				Sn	Sn	18 11 54.9	+1.8
	3.4nm,0.3s,baz=342,slow=20,SNR=4.3						
AFI				LR	LR	18 12 56.8	
	comp=Z,12μm,21.2s,baz=290,slow=3						
STKA	Stephens Creek	38.81	246	P	P	18 15 33.8	+0.7
	0.8nm,0.5s,baz=88,slow=9.1,SNR=5.1						
ASAR	Alice Springs	45.87	257	P	P	18 16 30.8	0.0
	0.3nm,0.3s,baz=103,slow=7.0,SNR=12						
WRA	Warramunga Arr	46.07	263	P	P	18 16 31.9	-0.5
	0.3nm,0.3s,baz=96,slow=7.9,SNR=11						
TXAR	Lajitas Array	86.27	57	P	P	18 20 50.1	-0.2
	0.6nm,0.8s,baz=206,slow=8.2,SNR=6.6						
PDAR	Pinedale Array	88.63	43	P	P	18 21 01.2	-0.2
	0.2nm,0.3s,baz=219,slow=2.3,SNR=4.2						

IDC 14 18:13:09.6±3.2, 2351S×7003W, h28km±20km, mb4.2/1, mb1 4.1/3, mb1mx3.7/16, mbtmp4.1/3, ML3.7/3, Error ellipse: s-maj=26.8km s-min=6.8km az=18.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.36	49	Pg	Pn	18 13 35.8	+3.0
	188nm,0.3s,baz=255,slow=12,SNR=23						
LVC				Lg		18 13 53.3	
	477nm,0.3s,baz=15,slow=10.0,SNR=52						
LPAZ	La Paz	7.40	14	Pn	Pn	18 14 54.3	-1.6
	0.9nm,0.3s,baz=216,slow=7.4,SNR=9.2						
CFAA	Coronel Fontan	8.22	169	Pn	Pn	18 15 05.9	-1.1
	0.1nm,0.3s,baz=68,slow=15,SNR=6.3						
CFAA				Sn	Sn	18 17 01.2	+22
	0.1nm,0.3s,baz=357,slow=19,SNR=2.2						
SIV	San Ignacio	11.27	50	Pn	Pn	18 15 49.1	+0.3
	1.2nm,0.3s,baz=250,slow=12,SNR=16						
SIV				Sn	Sn	18 17 55.4	+1.4
	0.1nm,0.3s,baz=318,slow=22,SNR=4.7						
TORD	Torodi Ar. Bea	79.00	70	P	P	18 25 11.7	+0.2
	1.7nm,0.5s,baz=256,slow=5.4,SNR=18						
MKAR	Makanchi Array	147.86	37	PKPbc	PKPbc	18 32 51.4	-0.6
	1.3nm,1.1s,baz=316,slow=3.1,SNR=6.0						

ISCJB 14 18:26:30.9±2.0, 225S±01×7032W±009, h8km±13km, mb3.8/5, Error ellipse: s-maj=20.9km s-min=13.6km az=166.5
IDC 14 18:26:31.2±0.9, 2247S×7033W, h0km, mb4.0/5, mb1 4.2/6, mb1mx4.0/15, mbtmp4.0/6, ML4.5/1, Error ellipse: s-maj=32.3km s-min=13.8km az=11.0
NEIC 14 18:26:36.6±0.6, 2245S×7025W, h35km, Error ellipse: s-maj=14.9km s-min=11.8km az=210.0
ISC 14 18:26:31.2±2.3, 226S±01×7038W±009, h1km±15km, n13, σ0§74/9, mb3.9/5, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.36	91	Pg	Pg	18 26 57.0	-0.2
	149nm,0.3s,baz=258,slow=14,SNR=11						
LVC				Lg		18 27 13.7	
	271nm,0.3s,baz=52,slow=22,SNR=9.9						
ARE	Arequipa	6.19	350	*eP*	Pn	18 28 04.0	+0.3
SIV	San Ignacio	10.96	55	Pn	Pn	18 29 09.8	+0.4
	1.9nm,0.3s,baz=247,slow=12,SNR=23						
SIV				Sn	Sn	18 31 12.8	+0.1
	baz=188,slow=17,SNR=3.4						
TXAR	Lajitas Array	60.76	327	P	P	18 36 45.3	+0.5
	0.1nm,0.3s,mb3.4,baz=313,slow=29,SNR=4.1						
NVAR	Mina Array Bea	75.52	323	P	P	18 38 17.7	+0.3
	0.5nm,0.8s,mb3.7,baz=158,slow=5.6,SNR=3.7						
TORD	Torodi Ar. Bea	79.00	71	P	P	18 38 36.7	-0.7
	1.4nm,0.5s,mb4.3,baz=255,slow=5.3,SNR=18						
MAW	Mawson	83.68	164	P	P	18 39 02.2	+0.9
	2.4nm,0.9s,mb4.4,baz=269,slow=6.4,SNR=3.7						
YKA	Yellowknife Ar	91.76	341	P	P	18 39 38.3	-1.8
	0.3nm,0.7s,mb3.7,baz=338,slow=5.0,SNR=3.6						
ASAR	Alice Springs	128.31	209	PKP	PKPdf	18 45 40.8	+0.4
	0.3nm,0.7s,baz=129,slow=1.7,SNR=6.7						
WRA	Warramunga Arr	131.32	212	PKP	PKPdf	18 45 46.6	+0.5
	0.4nm,0.8s,baz=149,slow=1.6,SNR=3.4						
ZALV	Zalesovo Beam	143.51	25	PKP	PKPdf	18 46 08.1	+0.7
	0.6nm,0.5s,baz=335,slow=2.1,SNR=4.5						
MKAR	Makanchi Array	147.31	36	PKPbc	PKPbc	18 46 14.9	-1.6
	1.3nm,0.7s,baz=355,slow=2.7,SNR=7.8						
SONM	Songino Array	154.68	5	PKPab	PKPab	18 46 48.6	0.0
	0.4nm,0.9s,baz=34,slow=6.1,SNR=3.6						

IDC 14 18:31:58.6±0.7, 2297S×7063W, h0km, mb4.2/8, mb1 4.3/11, mb1mx4.2/19, mbtmp4.2/11, ML3.5/4, Error ellipse: s-maj=19.7km s-min=12.8km az=168.0
ISCJB 14 18:31:59.1±1.8, 2296S±006×7053W±009, h13km±11km, mb4.2/8, Error ellipse: s-maj=14.4km s-min=9.2km az=20.8
NEIC 14 18:32:01.2±2.6, 2298S×7052W, h17km±15km, mb4.7/1, Error ellipse: s-maj=18.6km s-min=10.0km az=90.0
ISC 14 18:32:00.2±2.0, 2298S±006×7057W±009, h7km±12km, n25, σ0§95/20, mb4.2/8, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.57	77	Pg	Pg	18 32 30.0	-0.3
	490nm,0.3s,baz=255,slow=12,SNR=43						
LVC				Lg		18 32 50.0	
	2μm,0.3s,baz=238,slow=13,SNR=33						
ARE	Arequipa	6.54	352	*eP*	Pn	18 33 37.0	+0.1
LPAZ	La Paz	7.04	19	Pn	Pn	18 33 45.5	+1.6
	0.5nm,0.3s,baz=220,slow=12,SNR=6.0						
CFAA	Coronel Fontan	8.84	167	Pn	Pn	18 34 09.5	+1.1
	0.1nm,0.3s,baz=342,slow=14,SNR=3.4						
CFAA	Coronel Fontan	8.84	167	Pn	Pn	18 34 09.5	+1.1
SIV	San Ignacio	11.33	54	Pn	Pn	18 34 42.3	-0.3
	0.6nm,0.3s,baz=249,slow=14,SNR=15						
SIV				Sn	Sn	18 36 50.1	+0.4
	0.1nm,0.3s,baz=152,slow=22,SNR=5.5						
PLCA	Paso Flores	17.70	180	P	Pn	18 36 06.2	-1.1
	0.1nm,0.3s,baz=271,slow=13,SNR=2.1						
BDFB	Brasilia	22.48	75	P	P	18 36 59.7	-0.6
	2.0nm,0.6s,mb3.7,baz=220,slow=19,SNR=5.3						
VNA3	Neumayer Olymp	59.18	161	*e*	P	18 42 03.1	+1.6
VNA3				*e*		18 42 08.5	
TKL	Tuckaleechee C	59.64	348	P	P	18 42 03.9	-1.1
	4.0nm,0.9s,mb4.4,baz=198,slow=6.4,SNR=3.3						
VNA2	Neumayer--Watz	59.78	160	*e*	P	18 42 06.9	+1.3
	baz=291,slow=8.2						
VNA2				*e*		18 42 11.6	
TXAR	Lajitas Array	60.99	327	P	P	18 42 15.4	+1.0
	0.5nm,0.9s,mb3.6,baz=159,slow=5.8,SNR=3.0						
SNAA	Sanae	61.40	161	*e*	P	18 42 15.8	-0.8
SNAA				*e*		18 42 21.0	
TORD	Torodi Ar. Bea	79.30	71	P	P	18 44 06.2	-0.8
	6.7nm,0.7s,mb4.7,baz=259,slow=5.4,SNR=8.2						
MAW	Mawson	83.35	164	P	P	18 44 27.8	+0.1
	3.1nm,0.8s,mb4.4,baz=213,slow=2.0,SNR=4.7						
MAW	Mawson	83.35	164	*eP*	P	18 44 27.5	-0.2
	5.9nm,1.0s,mb4.6						
MDT	Midelt	83.87	51	P	P	18 44 31.3	+0.5
	2.9nm,0.9s,mb4.4,baz=268,slow=6.9,SNR=5.5						
BOSA	Boshof	84.11	118	P	P	18 44 31.5	-0.8
	4.2nm,0.9s,mb4.6,baz=38,slow=5.2,SNR=3.6						
YKA	Yellowknife Ar	92.07	341	P	P	18 45 08.2	-1.4
	0.6nm,0.7s,mb4.0,baz=98,slow=21,SNR=4.7						
ASAR	Alice Springs	127.89	209	PKP	PKPdf	18 51 07.2	-0.3
	0.6nm,0.7s,baz=131,slow=1.7,SNR=9.5						
WRA	Warramunga Arr	130.90	212	PKP	PKPdf	18 51 13.4	+0.1
	0.3nm,0.6s,baz=160,slow=1.8,SNR=5.1						
PETK	Petropavlovsk-	132.81	322	PKP	PKPdf	18 51 13.2	-2.6
	10nm,1.0s,baz=299,slow=6.1,SNR=3.8						
ZALV	Zalesovo Beam	143.94	25	PKP	PKPdf	18 51 34.8	-1.4
	0.7nm,0.5s,baz=259,slow=1.5,SNR=5.9						
MKAR	Makanchi Array	147.73	36	PKPbc	PKPdf	18 51 42.1	-0.7
	2.7nm,0.9s,baz=321,slow=2.0,SNR=9.1						
SONM	Songino Array	155.08	5	PKP	PKPdf	18 51 54.8	+0.8
	0.5nm,0.9s,baz=5.7,slow=2.0,SNR=3.2						

ISK 14 18:36:51.2, 3905N×4050E, h5km, MD3.0
ISCJB 14 18:36:52.7±0.9, 3893N±004×4049E±004, h0km±8km, Error ellipse: s-maj=6.7km s-min=5.2km az=164.2
CSEM 14 18:36:52.0±0.2, 3904N×4042E, h8km, MD3.0, Error ellipse: s-maj=9.2km s-min=4.4km az=153.0
DDA 14 18:36:53.5, 3888N×4052E, h7km±5km, Md3.0
ISC 14 18:36:53.5±0.7, 3890N±004×4049E±004, h2km±8km, n9, σ1§02/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNGL	BINGOL	0.52	84	*i* P	Pg	18 37 01.5	-1.9
BNGL				*i* S	Sg	18 37 11.3	+1.1
PTK	Pertek	0.85	270	*e*PG	Pg	18 37 08.3	-1.6
PTK				*e*SG	Sg	18 37 22.4	+1.4
EZC	Erzincan	0.99	329	*e*PN	Pn	18 37 14.4	0.0
SVRC	Sivrice-ELAZID	1.06	241	*e*PN

h51km≙1.7km**:pP-P,n451,**☌**0°73**/393**,mb5.5**/91**,MS5.4**/52**,**
119C-111D,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.40**	**180**	*eP*	**Pn**	**18 50 19.3**	**+1.3**
DZM				*eS*	**Sn**	**18 52 11.2**	**-1.9**
DZM				AMP		18 52 40.5	
	comp=Z,426nm,4.6s						
NOUC	**Port Laguerre**	**10.43**	**180**	*eP*	**Pn**	**18 50 20.8**	**+2.3**
NOUC				*eS*	**Sn**	**18 52 11.3**	**-2.6**
NOUC				AMP		18 52 43.8	
	comp=Z,21nm,2.7s						
PLUM	**Mont Dore**	**10.60**	**179**	*eS*	**Sn**	**18 52 17.3**	**-0.9**
FUNA	**Funafuti**	**13.00**	**78**	*eP*	**Pn**	**18 50 55.5**	**+1.9**
	comp=Z,242nm,1.1s						
TARA	**Tarawa**	**14.44**	**27**	*eP*	**Pn**	**18 51 15.2**	**+2.1**
	comp=Z,1μm,1.0s						
PMG	**Port Moresby**	**19.02**	**275**⇑	*eP*	**Pn**	**18 52 10.0**	**-0.5**
EIDS	**Eidsvold**	**19.91**	**224**	*eP*	**Pn**	**18 52 20.5**	**-0.5**
	comp=Z,152nm,0.9s						
CTA	**Charters Tower**	**21.09**	**244**	*eP*	**P**	**18 52 32.0**	**+0.2**
	comp=Z,73nm,1.5s,mb4.8						
CTA				*eS*	**S**	**18 56 24.6**	**+0.8**
CTA	**Charters Tower**	**21.09**	**244**	P	**P**	**18 52 32.1**	**+0.3**
	comp=Z,31nm,0.8s,mb4.7,baz=77,slow=10,SNR=16						
CTA				LR	LR	18 59 49.1	
	comp=Z,3μm,18.9s,MS4.6,baz=56,slow=34						
CTA	**Charters Tower**	**21.09**	**244**	*eP*	**P**	**18 52 32.0**	**+0.2**
CTA				*eS*	**S**	**18 56 24.6**	**+0.8**
CTA				pmax	pmax		
	comp=Z,73nm,1.5s						
CTAO	**Charters Tower**	**21.09**	**244**	*eP*	**P**	**18 52 31.8**	**-0.1**
	comp=Z,157nm,1.3s,mb5.2						
CTAO				LR	LR		
	comp=Z,4μm,21.0s,MS4.7						
CTAO	**Charters Tower**	**21.09**	**244**	*eP*	**P**	**18 52 31.8**	**0.0**
CTAO				pmax	pmax		
	comp=Z,157nm,1.3s,mb5.2						
CTAO				MLR	MLR		
	comp=Z,4μm,21.0s,MS4.7						
CTAO	**Charters Tower**	**21.09**	**244**	P	**P**	**18 52 33.7**	**+1.9**
	comp=Z,110nm,2.4s,comp=Z,2μm,mb4.8						
AFI	**Afiamalu**	**21.43**	**98**	P	**P**	**18 52 37.5**	**+1.9**
	comp=Z,97nm,1.0s,mb5.1,baz=32,slow=0.2,SNR=14						
AFI	**Afiamalu**	**21.43**	**98**	*eP*	**P**	**18 52 39.1**	**+3.5**
	comp=Z,134nm,1.1s,mb5.2						
AFI	**Afiamalu**	**21.43**	**98**	*eP*	**P**	**18 52 39.1**	**+3.5**
AFI				pmax	pmax		
	comp=Z,134nm,1.1s,mb5.2						
RAO	**Raoul Island**	**22.86**	**142**	LR	LR	18 59 12.5	
	comp=Z,2μm,20.8s,MS4.5,baz=269,slow=30						
RAO	**Raoul Island**	**22.86**	**142**	PFAKE		18 53 00.0	+9.4
RAO				LR	LR		
	comp=Z,4μm,19.0s,MS4.9						
ARMA	**Armidale**	**23.18**	**214**	*eP*	**P**	**18 52 54.8**	**+0.9**
ARMA				*eS*	**S**	**18 57 05.5**	**+3.8**
CNB	**Canberra Magne**	**28.19**	**210**	*eP*	**P**	**18 53 40.5**	**+1.1**
CNB				*e*pP	pP	18 53 55.9	+3.4
CNB				*e*PCP	PcP	18 56 53.3	+1.1
URZ	**Urewera**	**28.22**	**162**	P	**P**	**18 53 40.4**	**+0.8**
	comp=Z,11nm,0.7s,mb4.6,baz=346,slow=6.7,SNR=6.2						
STKA	**Stephens Creek**	**30.46**	**225**	*eP*	**P**	**18 54 00.0**	**+0.5**
	comp=Z,32nm,0.8s,mb5.1						
STKA				*e*PCP	PcP	18 56 57.6	-0.4
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**18 54 00.2**	**+0.7**
	comp=Z,42nm,0.9s,mb5.2,baz=39,slow=8.0,SNR=93						
STKA				PcP	PcP	18 56 57.7	-0.3
	comp=Z,16nm,0.8s,baz=13,slow=4.3,SNR=6.7						
STKA				LR	LR	19 05 49.0	
	comp=Z,4μm,19.7s,MS5.0,baz=309,slow=35						
WB2	**Warramunga Arr**	**31.86**	**251**⇑	*iP*	**P**	**18 54 11.3**	**-0.7**
WB2				*e*	pP	18 54 25.1	-0.1
WB2				*e*PCP	PcP	18 57 02.3	+0.3
WB2				*eS*	**S**	**18 59 16.1**	**-3.2**
WRAB	**Tennant Creek**	**31.86**	**251**	P	**P**	**18 54 11.0**	**-1.0**
	comp=Z,331nm,1.2s,mb6.0,SNR=27						
WRAB	**Tennant Creek**	**31.86**	**251**	*eP*	**P**	**18 54 11.1**	**-0.9**
	comp=Z,110nm,1.3s,mb5.5						
WRAB				LR	LR		
	comp=Z,2μm,22.0s,MS4.8						
WRAB	**Tennant Creek**	**31.86**	**251**	*eP*	**P**	**18 54 11.1**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,2μm,22.0s,MS4.8						
WRAB	**Tennant Creek**	**31.86**	**251**	P	**P**	**18 54 11.2**	**-0.8**
	comp=Z,77nm,1.2s,mb5.4						
WRA	**Warramunga Arr**	**31.87**	**251**	P	**P**	**18 54 10.7**	**-1.4**
	comp=Z,48nm,1.0s,mb5.3,baz=82,slow=9.2,SNR=119						
WRA				pP	pP	18 54 24.8	-0.5
	comp=Z,37nm,1.0s,baz=83,slow=8.6,SNR=12						
WRA				PcP	PcP	18 57 02.5	+0.4
	comp=Z,13nm,0.9s,baz=79,slow=2.9,SNR=13						
WRA				ScP	ScP	19 00 42.1	+0.7
	comp=Z,3.2nm,1.1s,baz=76,slow=3.5,SNR=5.0						
WRA	**Warramunga Arr**	**31.87**	**251**	P	**P**	**18 54 10.7**	**-1.4**
WRA				*PP	pP	18 54 24.8	-0.5
WRA						18 57 02.5	
TOO	**Toolangi**	**31.91**	**212**	*eP*	**P**	**18 54 13.2**	**+0.9**
TOO				*e*pP	pP	18 54 25.5	+0.1
TOO				*e*PCP	PcP	18 57 02.6	+0.8
RPZ	**Rata Peaks**	**32.24**	**174**	P	**P**	**18 54 15.6**	**+0.6**
	comp=Z,29nm,0.7s,mb5.2,baz=0.5,slow=1.3,SNR=18						
RPZ				pP	pP	18 54 27.9	-0.3
	comp=Z,27nm,0.7s,baz=44,slow=3.8,SNR=4.8						
ASAR	**Alice Springs**	**33.09**	**244**	P	**P**	**18 54 21.7**	**-1.1**
	comp=Z,30nm,0.8s,mb5.3,baz=69,slow=9.7,SNR=287						
ASAR				pP	pP	18 54 35.2	-0.7
	comp=Z,32nm,0.7s,baz=69,slow=9.4,SNR=24						
ASAR				PcP	PcP	18 57 05.5	+0.1
	comp=Z,15nm,0.9s,baz=76,slow=3.1,SNR=14						
ASAR				ScP	ScP	19 00 47.6	+2.1
	comp=Z,3.3nm,1.1s,baz=85,slow=3.5,SNR=4.8						
ASAR	**Alice Springs**	**33.09**	**244**	P	**P**	**18 54 21.7**	**-1.1**
ASAR				*PP	pP	18 54 35.3	-0.7
ASAR						18 57 05.5	
KAKA	**Kakadu**	**33.17**	**265**⇑	*iP*	Px	18 54 10.8	
	comp=Z,63nm,0.8s						
KAKA				*e*pP		18 54 25.2	
KAKA				*e*PCP		18 56 53.7	
TAU	**Tasmania Unive**	**35.30**	**205**	*eP*	**P**	**18 54 42.3**	**+0.6**
	comp=Z,62nm,1.3s,mb5.4						
TAU				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
TAU	**Tasmania Unive**	**35.30**	**205**	*eP*	**P**	**18 54 42.3**	**+0.7**
TAU				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.4						
TAU				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.1						
AAI	**Ambon**	**38.61**	**279**	P	**P**	**18 55 09.9**	**-0.2**
	comp=Z,42nm,1.2s,comp=Z,2μm,mb5.0						
LBMI	**Labuha**	**40.09**	**283**	P	**P**	**18 55 21.0**	**-1.5**
	comp=Z,139nm,1.0s,comp=Z,2μm,mb5.6						
FORT	**Forrest**	**40.22**	**236**	*eP*	**P**	**18 55 23.5**	**+0.1**
	comp=Z,61nm,0.8s,mb5.4						
FORT				*e*pP	pP	18 55 36.7	-0.1
FORT				*e*PCP	PcP	18 57 26.3	-0.4
BATI	**Baumata**	**41.93**	**268**	P	**P**	**18 55 38.8**	**+1.2**
	comp=Z,127nm,0.9s,mb5.5,baz=143,slow=2.2,SNR=38						
BATI				pP	pP	18 55 51.0	-0.2
	comp=Z,107nm,0.8s,baz=28,slow=0.9,SNR=9.5						
BATI	**Baumata**	**41.93**	**268**	P	**P**	**18 55 36.0**	**-1.6**
	comp=Z,105nm,1.3s,comp=Z,2μm,mb5.3						
DAV	**Davao City (W)**	**44.62**	**293**	PFAKE		18 56 10.0	+11
DAV				LR	LR		
	comp=Z,3μm,22.0s,MS5.1						
MBWA	**Marble Bar**	**45.60**	**252**	*eP*	**P**	**18 56 07.2**	**+0.1**
	comp=Z,116nm,1.0s,mb5.8						
MBWA				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
MBWA	**Marble Bar**	**45.60**	**252**	P	**P**	**18 56 07.3**	**+0.3**
	comp=Z,171nm,1.0s,mb5.9						
KAPI	**Kappang**	**46.54**	**274**	P	**P**	**18 56 14.4**	**-0.2**
	comp=Z,519nm,1.1s,mb6.4,SNR=6.3						
KAPI	**Kappang**	**46.54**	**274**	P	**P**	**18 56 14.3**	**-0.3**
	comp=Z,22nm,0.8s,mb5.1,baz=139,slow=8.0,SNR=16						
KAPI				pP	pP	18 56 25.5	-2.8
	comp=Z,67nm,0.9s,baz=118,slow=4.7,SNR=9.9						
KAPI				PcP	PcP	18 57 47.9	-0.4
	comp=Z,27nm,0.8s,baz=94,slow=2.0,SNR=4.9						
KAPI	**Kappang**	**46.54**	**274**	*eP*	**P**	**18 56 13.5**	**-1.1**
	comp=Z,48nm,1.0s,mb5.4						
KAPI				*e*	pP	18 56 24.9	-3.4
KAPI				*e*PcP	PcP	18 57 48.0	-0.3
PCI	**Palu**	**47.38**	**280**	P	**P**	**18 56 22.9**	**+1.8**
	comp=Z,258nm,1.2s,comp=Z,2μm,mb6.0						
PVCP	**Virac**	**48.79**	**300**⇓	*eP*	**P**	**18 56 32.7**	**+0.8**
KLBR	**Kellerberrin**	**48.92**	**238**	*eP*	**P**	**18 56 32.3**	**-0.5**
	comp=Z,62nm,1.0s,mb5.6						
NWAO	**Narrogin (SRO)**	**49.66**	**237**	P	**P**	**18 56 38.4**	**0.0**
	comp=Z,66nm,1.0s,mb5.6,baz=82,slow=6.5,SNR=20						
NWAO	**Narrogin (SRO)**	**49.66**	**237**	*eP*	**P**	**18 56 38.1**	**-0.3**
	comp=Z,88nm,1.2s,mb5.7						
NWAO				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
NWAO	**Narrogin (SRO)**	**49.66**	**237**	*eP*	**P**	**18 56 38.1**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,88nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,3μm,20.0s						
KHKI	**Kahang-Kahang**	**50.05**	**269**	P	**P**	**18 56 41.0**	**-0.6**
MUN	**Mundaring**	**50.29**	**238**	*eP*	**P**	**18 56 43.1**	**-0.1**
BBKI	**Banjar Baru**	**51.65**	**275**	P	**P**	**18 56 54.8**	**+1.1**
	comp=Z,97nm,1.7s,mb5.5						
PALP	**Palanan**	**51.94**	**303**⇓	*iP*	**P**	**18 56 55.8**	**+0.1**
KRKI	**Karangkates**	**53.17**	**268**	P	**P**	**18 57 08.0**	**+3.1**
SJI	**Sawahan**	**53.90**	**269**	P	**P**	**18 57 10.4**	**+0.1**
MJAR	**Matsushiro Arr**	**54.76**	**332**	P	**P**	**18 57 14.6**	**-1.5**
	comp=Z,14nm,0.8s,mb5.0,baz=167,slow=8.8,SNR=36						
MAJO	**Matsushiro**	**54.76**	**332**	*eP*	**P**	**18 57 14.4**	**-1.6**
	comp=Z,23nm,1.0s,mb5.2						
MAJO				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
MAJO	**Matsushiro**	**54.76**	**332**	*eP*	**P**	**18 57 14.4**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.0						
MAT	**Matsushiro**	**54.76**	**332**	P	**P**	**18 57 14.6**	**-1.4**
BJII	**Banjamegara**	**55.98**	**269**	P	**P**	**18 57 31.6**	**+6.3**
YHNB	**Yeheng**	**56.81**	**310**	*eP*	**P**	**18 57 30.8**	**-0.2**
	comp=Z,38nm,0.8s,mb5.5						
LEM	**Lembang**	**58.11**	**269**	P	**P**	**18 57 41.1**	**+0.7**
	comp=Z,158nm,0.8s,mb6.1						
TPI	**Tanjungpandan**	**58.82**	**274**	P	**P**	**18 57 47.7**	**+2.3**
	comp=Z,31nm,1.3s,mb5.2						
CBJI	**Ciko**	**58.93**	**269**	P	**P**	**18 57 46.0**	**-0.1**
	comp=Z,214nm,1.1s,mb6.1						
DBJI	**Dramaga**	**59.00**	**269**	P	**P**	**18 57 46.9**	**+0.3**
	comp=Z,74nm,1.4s,mb5.5						
QZH	**Quanzhou**	**59.08**	**308**	*eP*	**P**	**18 57 47.1**	**+0.2**
QZH				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.8						
PPBI	**Pangkal Pinang**	**60.42**	**274**	P	**P**	**18 57 57.0**	**+0.6**
	comp=Z,44nm,1.1s,mb5.4						
SSE	**Sheshan**	**60.68**	**316**	P	**P**	**18 57 57.5**	**-0.3**
SSE				AMB	AMB		
	comp=Z,79nm,0.7s,mb6.0						
SSE				AMB	AMB		
	comp=Z,2μm,12.0s						
SSE	**Sheshan**	**60.68**	**316**	P	**P**	**18 57 57.5**	**-0.3**
	comp=Z,79nm,0.7s,mb6.0						
KSRS	**Korea Array**	**60.69**	**325**	P	**P**	**18 57 57.5**	**-0.2**
	comp=Z,7.6nm,0.7s,mb5.0,baz=136,slow=7.1,SNR=23						
YSS	**Yuzh-Sakhalins**	**62.01**	**342**	*eP*	**P**	**18 58 06.1**	**-0.3**
YSS				LR	LR		
	comp=Z,925nm,22.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**62.01**	**342**⇑	*eP*	**P**	**18 58 05.9**	**-0.5**
YSS				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
NJ2	**Nanjing**	**62.85**	**315**	*eP*	**P**	**18 58 14.3**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
QIZ	**Qiongzhong**	**63.49**	**298**	PFAKE		18 58 30.0	+13
QIZ				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
KSI	**Kapahiang**	**63.59**	**272**	P	**P**	**18 58 17.6**	**-0.1**
	comp=Z,79nm,1.7s,mb5.5						
RGRI	**Rengat**	**64.52**	**275**	P	**P**	**18 58 25.4**	**+1.6**
	comp=Z,210nm,1.2s,mb6.1						
PETK	**Petropavlovsk-**	**64.89**	**354**	P	**P**	**18 58 24.9**	**-0.3**
	comp=Z,8.2nm,0.8s,mb4.8,baz=149,slow=5.7,SNR=11						
PETK				pP	pP	18 58 38.7	-0.9
	comp=Z,5.1nm,0.9s,baz=162,slow=6.2,SNR=3.3						
MDJ	**Mudanjiang**	**65.14**	**332**	P	**P**	**18 58 26.8**	**-0.3**
MDJ				AMB	AMB		
	comp=Z,25nm,1.1s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,391nm,11.4s						
MDJ	**Mudanjiang**	**65.14**	**332**	PFAKE		18 58 40.0	+13
MDJ				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
WHN	**Wuhan**	**65.23**	**312**	P	**P**	**18 58 27.5**	**-0.5**
HABR	**Khabarovsk**	**65.94**	**338**	*eP*	**P**	**18 58 30.2**	**-2.0**
HABR				*e*PP	pP	18 58 44.0	-2.5
HABR				*e*		18 59 01.0	
HABR				*e*SS	sS	19 07 37.9	-1.9
HABR				*e*		19 08 21.0	
HABR				*e*SS	SS	19 11 32.0	0.0
SBA	**Scott Base**	**66.23**	**180**	*eP*	**P**	**18 58 34.5**	**+0.8**
	comp=Z,39nm,1.1s,mb5.3						
SBA	**Scott Base**	**66.23**	**180**	*eP*	**P**	**18 58 34.5**	**+0.8**
SBA				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.3						
PPI	**Padang Panjang**	**66.39**	**275**	P	**P**	**18 58 36.2**	**+0.3**
	comp=Z,48nm,1.1s,comp=Z,2μm,mb5.4						
CN2	**Changchun**	**66.54**	**329**⇑	P	**P**	**18 58 36.0**	**-0.2**
CN2				*e*XP	sP	18 58 59.5	+3.2
CN2				*e*S	S	19 07 21.3	-2.0
CN2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.5						
CN2				AMB	AMB		
	comp=Z,130nm,4.0s						
CN2				LR	LR		
	comp=N,310nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,330nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,300nm,18.0s,MS4.5						
KLR	**Kul'dur**	**67.82**	**336**	*eP*	**P**	**18 58 40.0**	**-4.1**
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.3						
COCO	**West Island**	**67.86**	**261**	PFAKE		18 59 00.0	+15
COCO				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
GYA	**Guiyang**	**69.24**	**304**⇑	*iP*	**P**	**18 58 54.1**	**+0.6**
GYA				AP	pP	18 59 10.8	+2.9
GYA				XP	sP	18 59 18.3	+4.6
GYA				PP	PP	19 01 30.3	+3.1
GYA				SCP		19 03 15.3	
GYA				PCS		19 03 22.3	
GYA				S	S	19 07 53.3	-3.0
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,900nm,21.8s,MS5.1						
GYA				LR	LR		
	comp=E,810nm,22.2s,MS5.1						
GYA				LR	LR		
	comp=Z,2μm,22.0s,MS5.2						
BJT	**Baijiatuan**	**69.30**	**321**	*eP*	**P**	**18 58 53.6**	**0.0**
	comp=Z,26nm,0.5s,mb5.4						
BJT				*e*	pP	18 59 07.1	-0.8
BJT				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
BJT	**Baijiatuan**	**69.30**	**321**	*eP*	**P**	**18 58 53.6**	**0.0**
BJT				*e*	pP	18 59 07.1	-0.9
BJT				pmax	pmax		
	comp=Z,26nm,0.5s						
BJT				MLR	MLR		
	comp=Z,2μm,20.0s						
BJI	**Beijing**	**69.31**	**321**	P	**P**	**18 58 53.5**	**-0.1**
BJI				S	S	19 07 56.8	+0.3
BJI				AMB	AMB		
	comp=Z,55nm,0.9s,mb5.5						
BJI				AMB	AMB		
	comp=Z,985nm,13.5s						
BJI				LR	LR		
	comp=N,1μm,18.1s,MS5.3						
BJI				LR	LR		
	comp=E,1μm,22.1s,MS5.3						
BJI				LR	LR		
	comp=Z,4μm,26.0s,MS5.5						
BJI	**Beijing**	**69.31**	**321**	P	**P**	**18 58 53.5**	**-0.1**
	comp=Z,55nm,0.9s,mb5.5						
BJI				S	S	19 07 56.7	+0.2
BJI				LR	LR		
	comp=Z,4μm,26.0s,MS5.5						
NST	**Nakhon Sawan**	**70.94**	**291**	⇓P	**P**	**18 59 05.6**	**+1.5**
	comp=Z,75nm,0.7s,mb5.7						
XAN	**Xi'an**	**70.95**	**312**	P	**P**	**18 59 03.9**	**0.0**
XAN				AP	pP	18 59 15.8	-2.5
XAN				AMB	AMB		
	comp=Z,59nm,0.9s,mb5.5						
XAN				AMB	AMB		
	comp=Z,6μm,6.7s						
KMI	**Kunming**	**71.94**	**301**	⇑P	**P**	**18 59 11.3**	**+1.3**
KMI				AP	pP	18 59 28.6	+4.1
KMI				XP	sP	18 59 35.3	+5.1
KMI				PP	PP	19 01 53.0	+2.5
KMI				S	S	19 08 24.4	-3.3
KMI				SS	SS	19 13 04.6	-0.9
KMI				AMB	AMB		
	comp=Z,76nm,1.3s,mb5.5						
KMI				AMB	AMB		
	comp=Z,258nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,29.2s						
KMI				LR	LR		
	comp=E,1μm,21.4s						
KMI				LR	LR		
	comp=Z,4μm,22.3s						
KMI	**Kunming**	**71.94**	**301**	⇑P	**P**	**18 59 11.3**	**+1.3**
	comp=Z,76nm,1.3s,mb5.5						
KMI				pP	pP	18 59 28.6	+4.1
KMI				sP	sP	18 59 35.3	+5.1
KMI				PP	PP	19 01 53.0	+2.5
KMI				S	S	19 08 24.4	-3.3
KMI				SS	SS	19 13 04.6	-0.9
KMI				LR	LR		
	comp=Z,4μm,22.3s,MS5.6						
KMI	**Kunming**	**71.94**	**301**	⇑P	**P**	**18 59 11.3**	**+1.3**
KMI				*PP	pP	18 59 28.6	+4.1
KMI						19 01 53.0	
KMI				S	S	19 08 24.4	-3.3
KMI				SS	SS	19 13 04.6	-0.9
KMI				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.5						
KMI				MLR	MLR		
	comp=Z,4μm,22.3s,MS5.6						
SDPT	**Sand Point**	**72.28**	**19**	*eP*	**P**	**18 59 14.8**	**+3.4**
	comp=Z,184nm,1.5s,mb5.8						
BDT	**Bhumibol Dam**	**72.46**	**292**	P	**P**	**18 59 14.0**	**+0.8**
HHC	**Hu-ho-hao-te**	**72.66**	**320**	*eP*	**P**	**18 59 14.6**	**+0.7**
HHC				AP	pP	18 59 31.5	+3.1
HHC				XP	sP	18 59 38.6	+4.4
HHC				PP	PP	19 01 59.0	+2.7
HHC				S	S	19 08 33.8	-1.5
HHC				SCS	ScS	19 09 14.3	-2.8
HHC				AMB	AMB		
	comp=Z,29nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,3μm,9.5s						
HHC				LR	LR		
	comp=N,940nm,19.0s,MS5.2						
HHC				LR	LR		
	comp=E,1μm,19.0s,MS5.2						
HHC				LR	LR		
	comp=Z,3μm,23.8s,MS5.5						
BSI	**Banda Aceh**	**72.70**	**280**	P	**P**	**18 59 15.8**	**+1.0**
	comp=Z,50nm,1.2s,mb5.3						
MIR	**Mirnyy**	**72.80**	**204**⇑	*iP*	**P**	**18 59 14.0**	**-0.4**
MIR				pmax	pmax		
	comp=Z,200nm,1.5s,mb5.8						
CM31	**Chiang Mai Arr**	**72.90**	**294**	PFAKE		18 59 30.0	+14
CM31				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
CMAR	**Chiang Mai Arr**	**72.90**	**294**	P	**P**	**18 59 16.8**	**+1.0**
	comp=Z,56nm,0.9s,mb5.5,baz=120,slow=4.5,SNR=310						
CHG	**Chiang Mai**	**73.01**	**294**	⇑P	**P**	**18 59 17.3**	**+0.8**
	comp=Z,73nm,1.0s,mb5.6						
HIA	**Hailar**	**73.16**	**330**	PFAKE		18 59 30.0	+13
HIA				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
HIA	**Hailar**	**73.16**	**330**	*eP*	**P**	**18 59 14.5**	**-2.2**
CD2	**Chengdu**	**73.43**	**307**	P	**P**	**18 59 19.3**	**+0.5**
CD2				AP	pP	18 59 35.8	+2.5
CD2				XP	sP	18 59 42.6	+3.6
CD2				PP	PP	19 02 05.3	+2.2
CD2				S	S	19 08 42.3	-2.2
CD2				SCS	ScS	19 09 21.9	-1.8
CD2				SS	SS	19 13 27.8	-0.3
CD2				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.6						
CD2				AMB	AMB		
	comp=Z,2μm,10.4s						
CD2				LR	LR		
	comp=N,1μm,33.3s						
CD2				LR	LR		
	comp=E,1μm,23.5s						
CD2				LR	LR		
	comp=Z,2μm,22.3s						
LZH	**Lanzhou**	**75.59**	**312**	⇓P	**P**	**18 59 32.5**	**+1.3**
LZH				AP	pP	18 59 45.3	-0.4
LZH				PP	PP	19 02 24.5	+3.2
LZH				S	S	19 09 06.1	-2.4
LZH				SS	SS	19 14 01.1	+0.3
LZH				AMB	AMB		
	comp=Z,156nm,1.2s,mb5.8						
LZH				AMB	AMB		
	comp=Z,420nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,16.9s						
LZH				LR	LR		
	comp=Z,2μm,18.5s,MS5.5						
LZH	**Lanzhou**	**75.59**	**312**	⇓P	**P**	**18 59 32.5**	**+1.3**
	comp=Z,156nm,1.2s,mb5.8						
LZH				pP	pP	18 59 45.2	-0.5
LZH				sP	sP	18 59 54.0	+2.5
LZH				PP	PP	19 02 24.5	+3.2
LZH				S	S	19 09 06.1	-2.4
LZH				sS	sS	19 09 35.1	+2.2
LZH				SS	SS	19 14 01.1	+0.3
LZH				LR	LR		
	comp=Z,2μm,18.5s,MS5.5						
LZH	**Lanzhou**	**75.59**	**312**	⇓P	**P**	**18 59 32.5**	**+1.3**
LZH				*PP	pP	18 59 45.2	-0.5
LZH						19 02 24.5	
LZH				S	S	19 09 06.1	-2.4
LZH				*SS	sS	19 09 35.1	+2.2
LZH				SS	SS	19 14 01.1	+0.3
LZH				pmax	pmax		
	comp=Z,156nm,1.2s,mb5.8

GTA AMB AMB
comp=Z,73nm,1.0s,mb5.6
GTA AMB AMB
comp=Z,295nm,6.9s
GTA LR LR
comp=N,954nm,23.4s,MS5.3
GTA LR LR
comp=E,1µm,20.4s,MS5.3
PMR Palmer 80.88 20 PFAKE 19 00 10.0 +10
PMR LR LR
comp=Z,3µm,21.0s,MS5.7
BOD Bodaibo 81.30 335 *eP* **P 19 00 01.2 -1.0**
BOD pmax pmax
comp=Z,13nm,1.3s,mb4.7
SHL Shillong 81.32 298 *ex* x 19 00 03.0
ZAK Zakamensk 82.52 325 *eP* **P 19 00 08.3 -0.4**
ZAK pmax pmax
comp=Z,27nm,1.0s,mb5.2
KIPM Iron Peak 82.60 47 *eP* **P 19 00 11.2 +1.7**
TLY Talaya 82.93 326 *eP* **P 19 00 10.5 -0.3**
comp=Z,21nm,0.8s,mb5.2
TLY LR LR
comp=Z,2µm,21.0s,MS5.4
TLY Talaya 82.93 326 *eP* **P 19 00 10.7 -0.1**
TLY pmax pmax
comp=Z,32nm,0.9s,mb5.3
MNRC McLaughlin Nat 83.02 48 ⇓P **P 19 00 12.2 +0.6**
baz=83
GASB Alder Springs 83.10 47 ⇓P **P 19 00 12.4 +0.4**
baz=83
N02C Big Bar 83.10 46 ⇓P **P 19 00 12.2 +0.2**
baz=83
LSA Lhasa 83.17 302 *eP* **P 19 00 14.5 +1.9**
LSA Lhasa 83.17 302 PFAKE 19 00 20.0 +7.4
LSA LR LR
comp=Z,1µm,22.0s,MS5.2
PACP Pacheco Peak 83.22 50 ⇓P **P 19 00 13.0 +0.3**
baz=83
SNCC San Nicolas Is 83.36 54 ⇑P **P 19 00 13.3 -0.2**
baz=84
U04C Hernandez Rese 83.39 51 ⇓P **P 19 00 13.5 -0.1**
baz=84
L02A Cave Junction 83.39 45 ⇓P **P 19 00 12.9 -0.6**
baz=84
PKD Parkfield 83.43 51 ⇑P **P 19 00 14.3 +0.5**
baz=84
BSC Santa Cruz Isl 83.51 53 ⇓P **P 19 00 13.7 -0.6**
baz=84
COLA College 83.63 18 *eP* **P 19 00 12.7 -1.5**
comp=Z,9.6nm,0.8s,mb5.0
COLA College 83.63 18 *eP* **P 19 00 12.9 -1.3**
MENT Mentasta 83.64 21 *eP* **P 19 00 14.6 +0.4**
PKM Peak Mountain 83.65 53 ⇓P **P 19 00 15.4 +0.4**
baz=84
K02A Glendale 83.70 44 ⇑P **P 19 00 15.4 +0.4**
baz=84
YBH Yreka Blue Hor 83.85 45 P **P 19 00 16.7 +0.9**
comp=Z,5.5nm,0.7s,mb4.8,baz=22,slow=0.6,SNR=15
YBH pP pP 19 00 30.4 -0.2
comp=Z,10nm,1.0s,baz=240,slow=4.3,SNR=9.1
YBH Yreka Blue Hor 83.85 45 ⇓P **P 19 00 15.4 -0.5**
baz=84
J02A Umpqua 83.86 44 ⇓P **P 19 00 16.5 +0.7**
baz=84
OHCM Honcut 83.88 48 *eP* **P 19 00 17.7 +1.7**
ORV Oroville 83.94 48 ⇑P **P 19 00 15.9 -0.5**
baz=84
HUMO Hull Mountain 84.00 44 ⇓P **P 19 00 16.3 -0.3**
baz=84
LAVA Lava Cap Winer 84.22 49 ⇓P **P 19 00 18.0 +0.2**
baz=84
CMB Columbia Colle 84.24 49 ⇑P **P 19 00 18.2 +0.3**
baz=84
T06C Millerton Lake 84.41 51 ⇑P **P 19 00 19.0 +0.2**
baz=85
MAW Mawson 84.43 202 *eP* **P 19 00 17.9 -0.4**
comp=Z,15nm,1.0s,mb5.1
MAW Mawson 84.43 202 P **P 19 00 18.2 -0.1**
comp=Z,23nm,1.1s,mb5.2,baz=110,slow=6.4,SNR=19
MAW Mawson 84.43 202 *eP* **P 19 00 17.9 -0.4**
MAW pmax pmax
comp=Z,15nm,1.0s
O05C Quincy 84.50 47 ⇓P **P 19 00 19.8 +0.6**
baz=85
O04C Chester 84.50 47 ⇑P **P 19 00 19.5 +0.3**
baz=85
H03A Soap Creek Ran 84.55 42 ⇓P **P 19 00 19.7 +0.4**
baz=85
KCC Kaiser Creek 84.81 50 ⇓P **P 19 00 21.2 +0.4**
baz=85
BEKR Beckwourth 84.87 48 ⇑P **P 19 00 21.0 -0.1**
baz=85
ISA Isabella 84.94 52 ⇑P **P 19 00 22.0 +0.5**
baz=85
EDW2 Edwards Air Fo 85.07 53 ⇓P **P 19 00 22.5 +0.4**
baz=85
BFSC Mount Baldy St 85.14 54 ⇓P **P 19 00 23.3 +0.8**
baz=85
MTUM Tungsten Hills 85.39 51 *eP* **P 19 00 24.1 +0.4**
TAPN Taplejung 85.41 299 *eP* **P 19 00 24.6 +0.6**
comp=Z,235nm,1.2s,mb6.2
K05A Summer Lake 85.47 45 ⇑P **P 19 00 23.5 -0.4**
baz=86
CWC Cottonwood Cre 85.48 52 ⇓P **P 19 00 23.8 -0.3**
baz=86
LRMC Laurel Mountai 85.49 53 ⇑P **P 19 00 24.4 +0.2**
baz=86
ODAN Odare 85.56 298 *eP* **P 19 00 25.2 +0.4**
comp=Z,361nm,1.1s,mb6.5
MOD Modoc 85.60 46 ⇑P **P 19 00 24.3 -0.3**
baz=86
EGAK Eagle 85.70 20 *eP* **P 19 00 24.4 -0.1**
comp=Z,27nm,1.1s,mb5.4
MONP Monument Peak 85.73 55 ⇓P **P 19 00 25.6 +0.1**
baz=86
MPMC Manual Prospec 85.82 52 ⇑P **P 19 00 26.0 +0.2**
baz=86
C04A Brinnon 85.89 40 ⇑P **P 19 00 26.1 +0.2**
baz=86
PFO Pinyon Flat Ob 85.91 55 P **P 19 00 27.5 +1.1**
comp=Z,2.2nm,0.4s,mb4.8,baz=293,slow=9.6,SNR=3.9
PFO pP pP 19 00 40.1 -1.1
comp=Z,5.1nm,0.8s,baz=283,slow=3.6,SNR=4.1
PFO Pinyon Flat Ob 85.91 55 ⇓P **P 19 00 26.9 +0.5**
baz=86
NVAR Mina Array Bea 85.92 50 P **P 19 00 26.7 +0.4**
comp=Z,3.0nm,0.8s,mb4.6,baz=232,slow=6.8,SNR=15
NVAR pP pP 19 00 40.0 -1.1
comp=Z,8.2nm,1.0s,baz=232,slow=7.5,SNR=10
NVAR Mina Array Bea 85.92 50 P **P 19 00 26.7 +0.4**
NVAR pP pP 19 00 40.0 -1.1
O07A Toulon 86.05 48 ⇓P **P 19 00 26.7 -0.2**
baz=86
GSC Goldstone 86.12 53 ⇑P **P 19 00 27.0 -0.4**
baz=86
J06A Christmas Vall 86.16 45 ⇑P **P 19 00 26.9 -0.5**
baz=86
N07B Gerlach 86.18 47 ⇓P **P 19 00 27.5 0.0**
baz=86
GRAC Grapevine Rang 86.19 51 ⇓P **P 19 00 27.8 +0.2**
baz=86
M07A Soldier Meadow 86.23 47 ⇓P **P 19 00 27.5 -0.2**
baz=86
E05A Randle 86.24 41 ⇑P **P 19 00 27.2 -0.5**
baz=86
SWSC Sam W. Stewart 86.25 55 ⇓P **P 19 00 28.5 +0.4**
baz=86
RAMN Ramite 86.26 298 *eP* **P 19 00 28.3 +0.1**
comp=Z,257nm,1.3s,mb6.3
L07A Adell 86.31 46 ⇑P **P 19 00 27.3 -0.8**
baz=86
Q08A Gabbs 86.33 49 ⇓P **P 19 00 28.1 -0.2**
baz=86
I06A Prineville 86.35 44 ⇑P **P 19 00 28.3 0.0**
baz=86
HEC Hector,Ludlow 86.36 54 ⇑P **P 19 00 28.1 -0.4**
baz=86
BELC Belle Mtn. 86.39 54 ⇑P **P 19 00 28.2 -0.5**
baz=87
G06A Carlson Farm, 86.51 43 ⇑P **P 19 00 28.3 -0.7**
baz=87
S09A Goldfield 86.52 51 ⇑P **P 19 00 29.2 0.0**
baz=87
H06A Lindquist Farm 86.54 43 ⇓P **P 19 00 29.0 -0.1**
baz=87
F06A Goldendale 86.59 42 ⇓P **P 19 00 29.1 -0.4**
baz=87
K07A Rock Creek Ran 86.60 45 ⇓P **P 19 00 29.4 -0.1**
baz=87
BC3 Big Chuckw Mtn 86.73 55 ⇓P **P 19 00 30.7 +0.3**
baz=87
E06A Yakima 86.74 41 ⇑P **P 19 00 30.5 +0.4**
baz=87
TIXI Tiksi 86.76 349 *eP* **P 19 00 28.2 -1.5**
comp=Z,16nm,1.3s,mb5.1
TIXI Tiksi 86.76 349 *eP* **P 19 00 26.8 -2.9**
TIXI pmax pmax
comp=Z,15nm,1.4s,mb5.0
N08A GE Springer Mi 86.78 47 ⇓P **P 19 00 30.6 +0.1**
baz=87
R09A Tonopah 86.79 50 ⇓P **P 19 00 30.8 +0.2**
baz=87
JIRN Jiri 86.80 299 *eP* **P 19 00 31.6 +0.7**
comp=Z,243nm,1.2s,mb6.3
M08A Happy Creek Ra 86.81 47 ⇑P **P 19 00 30.5 -0.1**
baz=87
GMRC Granite Mounta 86.88 54 ⇓P **P 19 00 30.7 -0.4**
baz=87
I07A Izee 86.88 44 ⇑P **P 19 00 30.9 +0.1**
baz=87
H07A Lands Inn, Kim 87.01 43 ⇓P **P 19 00 31.3 -0.2**
baz=87
TPNV Topopah Spring 87.03 52 ⇑P **P 19 00 31.4 -0.4**
baz=87
L08A Fields 87.07 46 ⇓P **P 19 00 31.9 0.0**
baz=87
IRM Iron Mountain 87.11 54 ⇑P **P 19 00 32.0 -0.2**
baz=87,SNR=5.5
GUN Gumba 87.13 299 *eP* **P 19 00 32.7 +0.2**
comp=Z,176nm,1.2s,mb6.2
G07A Ruggs Ranch, H 87.16 43 ⇓P **P 19 00 31.7 -0.5**
baz=87
O09A Fish Creek Ran 87.28 48 ⇓P **P 19 00 33.0 +0.1**
baz=87
J08A Circle Bar Ran 87.35 45 ⇑P **P 19 00 32.6 -0.5**
baz=88
LDFC Landfair 87.39 54 P **P 19 00 37.2 +3.6**
PKI Pulchoki 87.45 299 *eP* **P 19 00 34.1 +0.1**
comp=Z,231nm,1.1s,mb6.3
I08A Drewsey 87.46 44 ⇑P **P 19 00 33.4 -0.3**
baz=88
Q10A Clear Creek Ra 87.46 50 ⇑P **P 19 00 33.3 -0.5**
baz=88
Y12C Blythe 87.50 55 ⇑P **P 19 00 33.8 -0.3**
baz=88
ETW Entiat 87.52 40 *eP* **P 19 00 32.5 -1.4**
H08A Prairie City 87.59 44 ⇑P **P 19 00 34.2 -0.1**
baz=88
KKN Kakani 87.61 299 *eP* **P 19 00 35.0 +0.2**
G08A Pilot Rock 87.64 43 ⇓P **P 19 00 34.4 -0.1**
baz=88
K09A Rome 87.67 46 ⇓P **P 19 00 34.1 -0.5**
baz=88
DMN Daman 87.72 299 *eP* **P 19 00 35.5 +0.2**
comp=Z,352nm,1.1s,mb6.5
C07A Waterville 87.72 40 ⇓P **P 19 00 34.6 -0.2**
baz=88
113A Mohawk Valley, 87.85 56 ⇑P **P 19 00 35.5 -0.3**
baz=88
T11A Corn Creek, Al 87.91 51 ⇑P **P 19 00 35.7 -0.3**
baz=88
F08A Pendleton 87.93 43 ⇓P **P 19 00 35.2 -0.6**
baz=88
R11A Troy Canyon, C 87.94 50 ⇑P **P 19 00 35.7 -0.4**
baz=88
B07A Winthrop 87.95 40 ⇓P **P 19 00 35.8 0.0**
baz=88
PDMCI Parker Dam,Lak 87.95 55 ⇑P **P 19 00 35.7 -0.6**
baz=88
A07A Ashnola River, 87.98 39 ⇑P **P 19 00 35.5 -0.6**
baz=88
I09A Lost Marbles R 88.05 44 ⇑P **P 19 00 36.3 -0.2**
baz=88
M10A I.L. Ranch, Tu 88.15 47 ⇑P **P 19 00 36.8 -0.2**
baz=88
P11A Circle Ranch, 88.15 49 ⇑P **P 19 00 36.7 -0.4**
baz=88
GKN Gorkha 88.22 299 *eP* **P 19 00 37.4 -0.2**
comp=Z,196nm,0.9s,mb6.3
X13A Yucca 88.28 54 ⇑P **P 19 00 37.3 -0.5**
baz=88
K10A MacKenzie Ranc 88.29 46 ⇑P **P 19 00 37.6 0.0**
baz=88
S12A Delamar Landin 88.29 51 ⇑P **P 19 00 37.7 0.0**
baz=88
L10A Juniper Basin 88.36 47 ⇓P **P 19 00 37.7 -0.3**
baz=88
W13A Hualapai Mount 88.36 54 ⇑P **P 19 00 38.1 -0.1**
baz=88
O11A Cowboy Ranch, 88.39 49 ⇓P **P 19 00 37.6 -0.6**
baz=89
B08A Colville Reser 88.41 40 ⇑P **P 19 00 37.6 -0.4**
baz=89
214A Organ Pipe Nat 88.42 57 ⇑P **P 19 00 38.9 +0.3**
baz=89
E09A Wood Farm, Sta 88.57 42 ⇑P **P 19 00 38.9 0.0**
baz=89
D09A Jones Farm, Ri 88.64 41 ⇓P **P 19 00 39.4 +0.2**
baz=89
A08A Turner Farm, O 88.64 39 ⇑P **P 19 00 38.9 -0.2**
baz=89
M11A Holland Ranch, 88.66 47 ⇑P **P 19 00 39.6 +0.2**
baz=89
R12A Pony Springs, 88.67 51 ⇓P **P 19 00 40.4 +0.8**
baz=89
P12A McGill 88.76 49 ⇓P **P 19 00 40.1 +0.1**
baz=89
T13A Saint George 88.86 52 ⇑P **P 19 00 41.0 +0.5**
baz=89
ELK Elko 88.87 48 *eP* **P 19 00 41.5 +1.1**
comp=Z,21nm,1.4s,mb5.3
ELK *e* pP 19 00 55.0 -0.3
ELK Elko 88.87 48 *eP* **P 19 00 41.5 +1.1**
ELK *e* pP 19 00 55.0 -0.3
ELK pmax pmax
comp=Z,21nm,1.4s
G10A Bishop Farm, J 88.87 43 ⇓P **P 19 00 39.9 -0.4**
baz=89
K11A Parker Ranch, 88.88 46 ⇓P **P 19 00 40.0 -0.4**
baz=89
L11A Cat Creek Ranc 88.90 47 ⇓P **P 19 00 40.7 +0.1**
baz=89
H10A Noah's Angus R 88.92 44 ⇓P **P 19 00 40.0 -0.5**
baz=89
X14A Yava 88.99 55 ⇑P **P 19 00 40.9 -0.3**
baz=89
F10A Beach Ranch, E 89.01 43 ⇑P **P 19 00 40.8 -0.2**
baz=89
W14A Seligman 89.03 54 ⇑P **P 19 00 41.7 +0.4**
baz=89
S13A Holt Ranch, En 89.04 51 ⇓P **P 19 00 41.4 +0.1**
baz=89
N12A Clover Valley, 89.05 48 ⇓P **P 19 00 41.5 +0.2**
baz=89
DANN Dangsing 89.05 299 *eP* **P 19 00 41.2 -0.4**
comp=Z,172nm,0.8s,mb6.4
KOLN Koldanda 89.05 298 *eP* **P 19 00 41.1 -0.5**
comp=Z,132nm,0.9s,mb6.2
115A Sonoran Desert 89.09 56 ⇑P **P 19 00 41.9 +0.2**
baz=89
O12A Currie 89.10 49 ⇓P **P 19 00 42.2 +0.7**
baz=89
R13A O'Grain Ranch, 89.11 51 ⇓P **P 19 00 42.1 +0.4**
baz=89
V14A Boquillas Ranc 89.12 53 ⇓P **P 19 00 42.0 +0.3**
baz=89,SNR=7.4
B09A Rice 89.17 40 ⇓P **P 19 00 41.4 -0.3**
baz=89
I11A Placerville 89.26 45 ⇑P **P 19 00 42.2 +0.1**
baz=89
Q13A Wheeler Ranch, 89.28 50 ⇑P **P 19 00 42.2 -0.2**
baz=89
M12A Wells 89.29 48 ⇑P **P 19 00 42.4 0.0**
baz=90
D10A Wagner Farm, O 89.31 42 ⇓P **P 19 00 42.4 +0.1**
baz=90
P13A Bates Ranch, G 89.42 50 ⇓P **P 19 00 43.8 +0.8**
baz=90
L12A House Creek Ra 89.42 47 ⇓P **P 19 00 43.5 +0.5**
baz=90
G11A Walters Elk Ra 89.48 43 ⇑P **P 19 00 43.4 +0.2**
baz=90
116A Eloy 89.48 57 ⇑P **P 19 00 45.1 +1.6**
baz=90
X15A Humboldt 89.52 55 ⇑P **P 19 00 44.8 +1.1**
baz=90,SNR=5.1
216A Three Points, 89.55 57 ⇑P **P 19 00 45.0 +1.1**
baz=90
O13A Hicks Ranch, I 89.62 49 ⇑P **P 19 00 44.7 +0.7**
baz=90
K12A Draper Farm, C 89.64 46 ⇓P **P 19 00 44.5 +0.5**
baz=90
PYUN Piuthan 89.65 299 *eP* **P 19 00 43.6 -0.8**
comp=Z,107nm,0.9s,mb6.2
J12A Stokes Ranch, 89.67 46 ⇑P **P 19 00 44.4 +0.2**
baz=90
F11A Grangeville 89.70 43 ⇓P **P 19 00 44.4 +0.2**
baz=90
A10A Northport 89.72 40 ⇓P **P 19 00 44.5 +0.3**
baz=90
I12A Atlanta 89.80 45 ⇓P **P 19 00 44.3 -0.4**
baz=90
E11A Bogner Ranch, 89.80 43 ⇑P **P 19 00 44.8 +0.2**
baz=90
M13A Montello 89.82 48 ⇓P **P 19 00 44.9 0.0**
baz=90,SNR=5.7
Q14A Sevier Lake (B 89.85 50 ⇓P **P 19 00 45.0 -0.1**
baz=90,SNR=16
V15A Kaibab Nationa 89.90 53 ⇑P **P 19 00 46.5 +1.1**
baz=90
WMQ Urumqi 89.93 315 P **P 19 00 45.5 +0.2**
WMQ AP pP 19 01 02.5 +2.3
WMQ XP sP 19 01 09.5 +3.6
WMQ PP PP 19 04 21.0 +2.2
WMQ SKS 19 11 09.0
WMQ S S 19 11 30.0 -4.1
WMQ AMB AMB
comp=Z,57nm,1.1s,mb5.8
WMQ AMB AMB
comp=Z,126nm,6.0s
WMQ LR LR
comp=N,2µm,20.0s,MS5.6
WMQ LR LR
comp=E,1µm,20.0s,MS5.6
WMQ LR LR
comp=Z,1µm,20.0s,MS5.4
U15A North Rim 89.96 53 ⇓P **P 19 00 45.9 +0.2**
baz=90,SNR=6.3
Y16A Circle Bar Ran 89.98 56 ⇑P **P 19 00 46.7 +0.9**
baz=90
217A Green Valley 90.03 58 ⇓P **P 19 00 47.0 +0.9**
baz=90
T15A Red Dirt Ranch 90.03 52 ⇑P **P 19 00 46.3 +0.3**
baz=90
G12A Big Creek, Yel 90.04 44 ⇓P **P 19 00 46.2 +0.4**
baz=90
X16A Lo Mia Camp, P 90.14 55 ⇑P **P 19 00 46.8 +0.2**
baz=90
P14A Drum Mountains 90.16 50 ⇓P **P 19 00 47.0 +0.4**
baz=90,SNR=6.2
L13A Double Diamond 90.17 47 ⇑P **P 19 00 46.3 -0.2**
baz=90
H12A Diamond D Ranc 90.20 45 ⇑P **P 19 00 46.4 -0.2**
baz=90
C11A Tepee Creek (N 90.20 41 ⇓P **P 19 00 46.3 -0.2**
baz=90,SNR=5.9
HLID Hailey 90.23 46 ⇑P **P 19 00 46.3 -0.4**
baz=90
E12A Beaver Dam Sad 90.24 43 ⇑P **P 19 00 46.4 -0.3**
baz=90
F12A Elk City 90.26 43 ⇓P **P 19 00 46.8 0.0**
baz=90
117A Oracle 90.28 57 ⇑P **P 19 00 46.8 -0.5**
baz=90
B11A Sandpoint 90.31 41 ⇓P **P 19 00 46.3 -0.7**
baz=90
J13A Cove Ranch, Pi 90.36 46 ⇓P **P 19 00 47.3 0.0**
baz=90
M14A Sheep Mountain 90.45 48 ⇑P **P 19 00 47.2 -0.6**
baz=91,SNR=6.0
WUAZ Wupatki 90.46 54 ⇓P **P 19 00 47.5 -0.5**
baz=91
A11A Hall Mountain, 90.46 40 ⇓P **P 19 00 47.3 -0.4**
baz=91,SNR=5.1
I13A Wildhorse Cree 90.54 45 ⇑P **P 19 00 48.1 -0.1**
baz=91
D12A Red Ives Fores 90.56 42 ⇓P **P 19 00 47.8 -0.4**
baz=91
H13A Challis 90.62 45 ⇓P **P 19 00 48.1 -0.4**
baz=91
318A Bisbee 90.63 58 ⇓P **P 19 00 48.9 0.0**
baz=91
X17A Forest Lakes 90.63 55 ⇑P **P 19 00 48.5 -0.3**
baz=91
218A Dragoon 90.71 58 ⇓P **P 19 00 49.1 -0.1**
baz=91
G13A Cobalt 90.77 44 ⇓P **P 19 00 48.6 -0.6**
baz=91,SNR=5.2
U16A Tuba City 90.80 53 ⇓P **P 19 00 49.4 -0.1**
baz=91
J14A Carey 90.80 46 ⇑P **P 19 00 49.0 -0.4**
baz=91
F13A Darby 90.89 43 ⇓P **P 19 00 49.2 -0.6**
baz=91,SNR=12
118A Homack Ranch, 90.92 57 ⇑P **P 19 00 50.0 -0.2**
baz=91
I14A Mackay 91.00 45 ⇓P **P 19 00 50.1 -0.2**
baz=91
D13A Huson 91.16 42 ⇓P **P 19 00 50.7 -0.3**
baz=91
319A Douglas 91.21 58 ⇑P **P 19 00 51.1 -0.5**
baz=91
H14A Leadore 91.24 45 ⇑P **P 19 00 51.3 -0.1**
baz=91
C13A Hot Springs 91.25 42 ⇓P **P 19 00 51.3 -0.1**
baz=91
L15A Malad City 91.27 47 ⇑P **P 19 00 51.5 -0.2**
baz=91
K15A Arbon 91.34 47 ⇑P **P 19 00 52.0 +0.1**
baz=92
219A White Tail Can 91.37 58 ⇓P **P 19 00 52.1 -0.2**
baz=92
HYB Hyderabad 91.37 287 *eP* **P 19 00 52.0 -0.6**
comp=Z,80nm,1.0s,mb6.0
HYB Hyderabad 91.37 287 *eP* **P 19 00 52.0 -0.6**
HYB pmax pmax
comp=Z,80nm,1.0s,mb6.0
HYB Hyderabad 91.37 287 *i* P **P 19 00 52.0 -0.6**
comp=Z,80nm,1.0s,mb6.0
HYB *e* pP 19 01 04.0 -3.5
S17A Black Ridge (B 91.41 52 ⇓P **P 19 00 52.5 +0.2**
baz=92
SYO Syowa Base 91.42 197 ⇓*e*P **P 19 00 49.8 -2.0**
119A Ashpeak Ranch, 91.50 57 ⇓P **P 19 00 52.5 -0.4**
baz=92
B13A Whitefish 91.50 41 ⇓P **P 19 00 52.4 -0.1**
baz=92
J15A Blackfoot 91.58 46 ⇓P **P 19 00 52.5 -0.5**
baz=92
E14A Clinton 91.62 43 ⇑P **P 19 00 52.8 -0.3**
baz=92
MCMT McKenzie Canyo 91.65 45 *eP* **P 19 00 56.0 +2.6**
R17A Hanksville Air 91.66 51 ⇑P **P 19 00 53.6 +0.1**
baz=92
N16A Rees Ranch, Co 91.69 49 ⇑P **P 19 00 53.8 +0.2**
baz=92
H15A Lima 91.74 45 ⇓P **P 19 00 53.4 -0.3**
baz=92,SNR=5.9
Y19A Nutrioso 91.80 56 ⇑P **P 19 00 54.8 +0.5**
baz=92
C14A Swan Lake 91.81 42 ⇑P **P 19 00 54.3 +0.3**
baz=92
U18A Rough Rock, Ch 91.85 53 ⇑P **P 19 00 54.5 +0.1**
baz=92
CHMT Chamberlain Mo 91.91 43 *eP* **P 19 00 54.8 +0.3**
G15A Dillon 91.98 44 ⇑P **P 19 00 54.9 0.0**
baz=92
T18A Mexican Hat 92.01 53 ⇑P **P 19 00 56.0 +0.8**
baz=92
S18A Hurst Farm, Bl 92.04 52 ⇓P **P 19 00 55.3 0.0**
baz=92
K16A Soda Springs 92.05 47 ⇓P **P 19 00 55.0 -0.1**
baz=92
J16A Bone 92.14 46 ⇓P **P 19 00 55.5 -0.1**
baz=92
F15A Butte 92.15 44 ⇓P **P 19 00 54.7 -0.9**
baz=92
E15A Deer Lodge 92.19 43 ⇑P **P 19 00 55.1 -0.7**
baz=92
Q18A Rafter H Ranch 92.25 51 ⇑P **P 19 00 55.7 -0.5**
baz=92
R18A Canyonlands Na 92.28 51 ⇑P **P 19 00 56.2 -0.1**
baz=92
P18A Preston Nutter 92.29 50 ⇓P **P 19 00 56.3 -0.1**

	baz=92								
LGTI	**Lohaghat**	**92.30**	**299**	*ex*		x		19 00 57.5	
I16A	**Newdale**	**92.37**	**46**	⇑P		**P**		**19 00 56.4**	**-0.2**
	baz=92								
D15A	**Lincoln**	**92.43**	**43**	⇑P		**P**		**19 00 57.1**	**+0.3**
	baz=93								
G16A	**Moss Hill, Enn**	**92.47**	**44**	⇓P		**P**		**19 00 56.9**	**-0.1**
	baz=93								
C15A	**Salmond Ranch,**	**92.55**	**42**	⇑P		**P**		**19 00 57.1**	**-0.3**
	baz=93								
BOZ	**Bozeman (W)**	**92.69**	**44**	⇑P		**P**		**19 00 57.7**	**-0.4**
	baz=93								
B15A	**Bradely Ranch,**	**92.72**	**41**	⇓P		**P**		**19 00 58.1**	**0.0**
	baz=93								
F16A	**Kennard Place,**	**92.72**	**44**	⇓P		**P**		**19 00 57.9**	**-0.4**
	baz=93								
H16A	**Russell Place,**	**92.73**	**45**	⇓P		**P**		**19 00 58.2**	**-0.1**
	baz=93								
A15A	**Johnson Ranch,**	**92.77**	**41**	⇑P		**P**		**19 00 58.0**	**-0.3**
	baz=93								
C16A	**Fuhringer Ranc**	**93.12**	**42**	⇓P		**P**		**19 00 59.8**	**-0.2**
	baz=93								
E17A	**Martinsdale**	**93.40**	**43**	⇓P		**P**		**19 01 01.0**	**-0.4**
	baz=94								
F17A	**Fitzpatrick Pl**	**93.41**	**44**	⇑P		**P**		**19 01 01.6**	**+0.2**
	baz=94								
BW06	**Boulder Array**	**93.49**	**47**	⇑P		**P**		**19 01 01.9**	**0.0**
	baz=94								
PDAR	**Pinedale Array**	**93.49**	**47**	P		**P**		**19 01 02.0**	**+0.2**
	comp=Z,1.5nm,0.9s,mb4.4,baz=240,slow=3.3,SNR=7.6								
PDAR				PKKP		PKKPbc		19 18 07.8	-1.7
	comp=Z,1.1nm,0.7s,baz=94,slow=5.6,SNR=8.7								
A16A	**West Butte Ran**	**93.49**	**41**	⇑P		**P**		**19 01 01.4**	**-0.3**
	baz=94								
C17A	**Wharram Farm,**	**93.73**	**42**	⇑P		**P**		**19 01 02.6**	**-0.2**
	baz=94								
MKAR	**Makanchi Array**	**94.35**	**317**	P		**P**		**19 01 05.6**	**-0.1**
	comp=Z,43nm,0.8s,mb6.0,baz=100,slow=6.0,SNR=214								
MKAR				pP		pP		19 01 17.9	-2.8
	comp=Z,22nm,0.7s,baz=101,slow=4.0,SNR=12								
ZAA0	**Zalesovo Array**	**94.37**	**324**	*eP*		**P**		**19 01 04.0**	**-1.6**
ZAA0				*e*		pP		19 01 16.2	-4.3
ZALV	**Zalesovo Beam**	**94.37**	**324**	P		**P**		**19 01 04.5**	**-1.2**
	comp=Z,14nm,0.9s,mb5.4,baz=108,slow=4.8,SNR=53								
ZALV				pP		pP		19 01 17.6	-2.9
	comp=Z,5.4nm,0.7s,baz=125,slow=3.6,SNR=6.4								
EGMT	**Eagleton**	**94.48**	**42**	⇓P		**P**		**19 01 05.5**	**-0.7**
	baz=95								
YKA	**Yellowknife Ar**	**95.20**	**27**	P		**P**		**19 01 07.9**	**-1.3**
	comp=Z,0.9nm,0.4s,mb4.5,baz=258,slow=4.9,SNR=22								
NVS	**Novosibirsk**	**95.48**	**325**	*eP*		**P**		**19 01 07.4**	**-3.3**
NVS				pmax		pmax			
	comp=Z,15nm,1.4s,mb5.2								
NVS				pmax		pmax			
	comp=N,8.0nm,1.7s								
NVS				pmax		pmax			
	comp=E,12nm,1.4s								
TXAR	**Lajitas Array**	**95.56**	**61**	P		**P**		**19 01 10.7**	**-1.0**
	comp=E,0.7nm,0.7s,baz=181,slow=4.2,SNR=6.1								
TXAR				pP		pP		19 01 25.2	-1.4
	comp=E,1.9nm,1.0s,baz=243,slow=5.5,SNR=7.2								
TXAR				PKKP		PKKPbc		19 18 03.6	+0.3
	comp=E,0.9nm,0.9s,baz=76,slow=5.3,SNR=5.3								
TXAR	**Lajitas Array**	**95.56**	**61**	P		**P**		**19 01 10.7**	**-1.0**
TXAR				*PP		pP		19 01 25.2	-1.4
SNAA	**Sanae**	**96.59**	**183**	*eP*		**P**		**19 01 13.4**	**-2.1**
SNAA	**Sanae**	**96.59**	**183**	*eP*		**P**		**19 01 13.4**	**-2.1**
SNAA				*e*				19 01 17.8	
VNA3	**Neumayer Olymp**	**97.29**	**181**	*eP*		**P**		**19 01 18.0**	**-0.7**
VNA3	**Neumayer Olymp**	**97.29**	**181**	*eP*		**P**		**19 01 18.0**	**-0.7**
VNA3				*e*				19 01 22.8	
KURK	**Kurchatov**	**97.47**	**320**	P		**P**		**19 01 18.2**	**-1.6**
	comp=E,38nm,1.0s,mb5.8,SNR=5.7								
KURK	**Kurchatov**	**97.47**	**320**	PFAKE				19 01 30.0	+10
KURK				LR		LR			
	comp=Z,2μm,21.0s,MS5.6								
KURK	**Kurchatov**	**97.47**	**320⇑**	*eP*		**P**		**19 01 18.1**	**-1.7**
KURK				pmax		pmax			
	comp=Z,14nm,1.8s,mb5.1								
VNA2	**Neumayer--Watz**	**97.55**	**182**	*eP*		**P**		**19 01 20.9**	**+1.1**
	baz=297,slow=8.8								
VNA2	**Neumayer--Watz**	**97.55**	**182**	*eP*		**P**		**19 01 20.9**	**+1.1**
VNA2				*e*				19 01 25.7	
KSH	**Kashi**	**97.59**	**309**	*eP*		**P**		**19 01 21.9**	**+1.3**
KSH				*eAP*		pP		19 01 39.3	+3.7
KSH				*eXP*		sP		19 01 45.9	+4.7
KSH				*ePP*		PP		19 05 20.9	+2.1
KSH				*e*SKS				19 11 52.4	
KSH				*e*S		S		19 12 36.5	-5.4
KSH				*e*SS		SS		19 19 17.3	-5.4
KSH				AMB		AMB			
	comp=Z,46nm,0.5s,mb6.3								
KSH				AMB		AMB			
	comp=Z,969nm,5.7s								
TKM2	**Tokmak 2**	**98.36**	**312**	PFAKE				19 01 40.0	+16
TKM2				LR		LR			
	comp=Z,2μm,21.0s,MS5.5								
EKS2	**Erkin-Say**	**99.66**	**312**	PFAKE				19 01 40.0	+10
EKS2				LR		LR			
	comp=Z,1μm,20.0s,MS5.4								
BRVK	**Borovoye**	**102.84**	**322**	*e*Pdif		Pdif		19 01 42.6	-1.2
	comp=Z,4.0nm,0.8s								
BRVK				LR		LR			
	comp=Z,3μm,22.0s,MS5.8								
BRVK	**Borovoye**	**102.84**	**322**	*eP*		Pdif		19 01 42.6	-1.1
BRVK				pmax		pmax			
	comp=Z,4.0nm,0.8s								
BRVK				MLR		MLR			
	comp=Z,3μm,22.0s,MS5.8								
ARU	**Arti**	**109.44**	**326**	PFAKE				19 06 30.0	+14
ARU				LR		LR			
	comp=Z,2μm,22.0s,MS5.7								
LVC	**Limon Verde**	**116.05**	**122**	*eP*		Pdif		19 02 41.7	-0.8
ARCES	**ARCESS Array B**	**117.04**	**346**	PKP		PKPdf		19 06 28.4	-1.8
	comp=Z,2.8nm,0.5s,baz=84,slow=2.3,SNR=34								
JOF	**Joensuu**	**119.69**	**338**	*ep*		PKPdf		19 06 37.3	+1.8
	comp=Z,0.8nm,0.3s								
JOF	**Joensuu**	**119.69**	**338**	*e*PKIKP		PKPdf		19 06 37.3	+1.8
JOF				pmax		pmax			
	comp=Z,1.0nm,0.3s								
GNI	**Garni**	**121.49**	**310**	PFAKE				19 06 50.0	+10
GNI				LR		LR			
	comp=Z,1μm,22.0s,MS5.5								
OBN	**Obninsk**	**121.61**	**329**	PFAKE				19 06 50.0	+11
OBN				LR		LR			
	comp=Z,2μm,21.0s,MS5.6								
KAF	**Kangasniemi**	**121.99**	**339**	*ep*		PKPdf		19 06 41.4	+1.5
	comp=Z,1.2nm,0.3s								
KAF	**Kangasniemi**	**121.99**	**339**	*e*PKIKP		PKPdf		19 06 41.4	+1.5
KAF				pmax		pmax			
	comp=Z,1.0nm,0.3s								
KIV	**Kislovodsk**	**122.06**	**315**	PFAKE				19 06 50.0	+9.4
KIV				LR		LR			
	comp=Z,682nm,19.0s,MS5.3								
BOSA	**Boshof**	**125.12**	**222**	PKP		PKPdf		19 06 46.9	-0.2
	comp=Z,13nm,0.9s,baz=83,slow=1.6,SNR=13								
BOSA	**Boshof**	**125.12**	**222**	PKIKP		PKPdf		19 06 46.9	-0.1
BOSA				MLR		MLR			
	comp=Z,3μm,22.0s,MS5.8								
SUR	**Sutherland**	**125.25**	**216**	PFAKE				19 07 00.0	+13
SUR				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
LBTB	**Lobatse**	**127.19**	**226**	PFAKE				19 07 00.0	+8.9
LBTB				LR		LR			
	comp=Z,1μm,21.0s,MS5.6								
NB2	**NORSAR Subarra**	**127.41**	**345**	PKPdf		PKPdf		19 06 49.5	-0.8
	comp=Z,1.2nm,0.7s,baz=31,slow=1.9								
NOA	**NORSAR Array B**	**127.41**	**345**	PKP		PKPdf		19 06 49.6	-0.7
	comp=Z,1.9nm,0.8s,baz=32,slow=2.0,SNR=7.3								
AKASG	**Malin Array Be**	**127.67**	**327**	PKP		PKPdf		19 06 49.5	-1.7
	comp=Z,0.8nm,0.6s,baz=93,slow=0.7,SNR=6.7								
CSS	**Prodhromos**	**131.56**	**307**	PFAKE				19 07 10.0	+11
CSS				LR		LR			
	comp=Z,889nm,20.0s,MS5.5								
KWP	**Kalwaria**	**131.70**	**329**	PFAKE				19 07 10.0	+11
KWP				LR		LR			
	comp=Z,2μm,21.0s,MS5.7								
ISP	**Isparta**	**132.76**	**311**	PFAKE				19 07 10.0	+8.8
ISP				LR		LR			
	comp=Z,1μm,21.0s,MS5.7								
PSZ	**Piszkesteto**	**134.22**	**329**	PFAKE				19 07 20.0	+16
PSZ				LR		LR			
	comp=Z,1μm,20.0s,MS5.5								
CLL	**Collm**	**134.87**	**337**	*e*PKIKP		PKPdf		19 07 05.0	+0.3
CLL				pmax		pmax			
	comp=Z,6.0nm,1.2s								
CLL	**Collm**	**134.87**	**337**	*e*PKPdf		PKPdf		19 07 05.0	+0.3
	comp=Z,6.0nm,1.2s								
CLL				*i* SKPdf		SKPdf		19 10 36.6	+0.8
ESK	**Eskdalemuir**	**135.64**	**351**	PFAKE				19 07 20.0	+14
ESK				LR		LR			
	comp=Z,1μm,21.0s,MS5.6								
KHC	**Kasperske Hory**	**136.32**	**334⇑**	*i*PKIKP		PKPdf		19 07 07.8	+0.3
KHC	**Kasperske Hory**	**136.32**	**334**	*e*PKP		PKPdf		19 07 03.5	-4.0
KHC				*ex*		x		19 07 07.5	
KHC				*ep*PKP		pPKPdf		19 07 21.0	-1.9
WLF	**Walferdange**	**138.69**	**341**	PFAKE				19 07 20.0	+8.1
WLF				LR		LR			
	comp=Z,2μm,21.0s,MS5.7								
AQU	**L'Aquila**	**141.37**	**327**	PFAKE				19 07 30.0	+13
AQU				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
TIP	**Timpagrande**	**141.52**	**321**	PFAKE				19 07 30.0	+13
TIP				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
VLC	**Villacollemand**	**141.54**	**332**	PFAKE				19 07 30.0	+13
VLC				LR		LR			
	comp=Z,1μm,20.0s,MS5.6								
MBDF	**Montbardon**	**142.65**	**336**	*e*PKP1		PKPdf		19 07 15.0	-4.2
ORIF	**Oris-en-Rattie**	**142.84**	**337**	*e*PKP1		PKPdf		19 07 16.0	-3.5
	comp=Z,18nm,0.9s								
MFF	**Saint Martin d**	**143.31**	**344**	*e*PKP1		PKPdf		19 07 19.8	-0.5
VIVF	**Saint-Julien-l**	**143.34**	**338**	*e*PKP1		PKPdf		19 07 17.2	-3.2
	comp=Z,15nm,1.0s								
CAF	**Calviac**	**144.18**	**341**	*e*PKP1		PKPdf		19 07 20.0	-1.9
LASF	**Ste Croix**	**144.31**	**338**	*e*PKP1		PKPdf		19 07 20.6	-1.5
LFF	**La Frestale**	**144.58**	**342**	*e*PKP1		PKPdf		19 07 21.0	-1.6
	comp=Z,33nm,0.9s								
MTLF	**Montolieu**	**145.53**	**339**	*e*PKP1		PKPbc		19 07 24.4	0.0
	comp=Z,30nm,0.9s								
VSL	**Villasalto**	**145.54**	**328**	PFAKE				19 07 40.0	+16
VSL				LR		LR			
	comp=Z,2μm,22.0s,MS5.8								
SJPF	**Ste Jean**	**146.82**	**343**	*e*PKP1		PKPbc		19 07 26.4	-1.9
ETSF	**Etsaut**	**146.82**	**342**	*e*PKP1		PKPbc		19 07 25.5	-2.8
KEST	**Kesra**	**148.24**	**323**	PKPbc		PKPbc		19 07 32.1	-0.3
	comp=Z,8.7nm,1.0s,baz=347,slow=0.7,SNR=11								
ESDC	**Sonseca Array**	**150.77**	**345**	PKPbc		PKPbc		19 07 37.7	-0.8
	comp=Z,1.7nm,0.6s,baz=27,slow=1.8,SNR=12								
SFS	**San Fernando**	**154.37**	**346**	PFAKE				19 07 50.0	+12
SFS				LR		LR			
	comp=Z,2μm,22.0s,MS5.8								
LIC	**Lamto**	**169.96**	**239**	*e*PKP2		PKPab		19 09 09.7	0.0
	comp=Z,137nm,1.3s								

TIR ***14*** *18:48:50.9±2.4, 40.14N×1975E, h4km±851km*
NEIC ***14*** *18:48:52.7, 40.12N×1980E, h15km, MD3.6(ATH), After ATH.*
ATH ***14*** *18:48:53.3, 4008N×1985E, h15km±2km, MD3.6/8*
THE ***14*** *18:48:53.2, 4007N×1977E, h0km±7km, ML3.9/6, Error ellipse: s-maj=11.7km s-min=1.6km az=255.0*
ISCJB ***14*** *18:48:53.3±0.4, 40.10N×003.9×1979E±004, h10km, Error ellipse: s-maj=4.3km s-min=3.5km az=156.1*
CSEM ***14*** *18:48:56.7±0.2, 3993N×20.14E, h0km±1km, MD3.6, Error ellipse: s-maj=3.4km s-min=2.9km az=131.0*

ISC 14 18:48:54.5±0.5**, 4008N**±002×**1981E**±004**, h10**km**, n35, σ1s21d48, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.24**	**144**	*e*PG	**Pg**	**18 49 05.5**	**-0.9**
SRN				*i* SG	**Sg**	**18 49 02.8**	**0.0**
TPE	**Tepelena**	**0.27**	**35**	*e*PG	**Pg**	**18 48 56.3**	**-3.5**
TPE				*i* SG	**Sg**	**18 49 00.2**	**-3.2**
KEK	**Kerkira**	**0.36**	**182**	*e*PB	**Pg**	**18 49 00.8**	**-0.8**
IGT	**Igoumenitsa**	**0.68**	**144**	P	**Pg**	**18 49 05.6**	**-1.9**
IGT				S	**Sg**	**18 49 16.2**	**-0.1**
JAN	**Janina**	**0.90**	**117**	*e*PN	**Pg**	**18 49 10.1**	**-1.7**
KBN	**Korca**	**0.92**	**53**	*e*PG	**Pg**	**18 49 10.7**	**-1.5**
KBN				*i* SG	**Sg**	**18 49 25.3**	**+1.1**
TIR	**Tirane**	**1.27**	**2**	P	**Pn**	**18 49 17.2**	**-1.0**
TIR				S	**Sb**	**18 49 36.5**	**+1.7**
TIR	**Tirane**	**1.27**	**2**	*e*P	**Pn**	**18 49 18.2**	**0.0**
TIR	**Tirane**	**1.27**	**2**	*e*PG	**Pg**	**18 49 17.8**	**-1.0**
FNA	**Florina**	**1.39**	**59**	P	**Pn**	**18 49 16.7**	**-3.1**
FNA				S	**Sb**	**18 49 39.4**	**+1.2**
KZN	**Kozani**	**1.52**	**81**	*e*PN	**Pn**	**18 49 21.6**	**0.0**
THL	**Klokotos Trika**	**1.77**	**106**	P	**Pn**	**18 49 25.7**	**+0.6**
THL				S	**Sn**	**18 49 49.7**	**+2.0**
THL	**Klokotos Trika**	**1.77**	**106**	*e*Pn	**Pn**	**18 49 24.9**	**-0.2**
THL	**Klokotos Trika**	**1.77**	**106**	P	**Pn**	**18 49 25.7**	**+0.6**
THL				S	**Sn**	**18 49 49.7**	**+2.0**
EVR	**Evrytania**	**1.93**	**126**	*e*PN	**Pn**	**18 49 27.9**	**+0.6**
PE1	**Pezze di Greco**	**1.96**	**292**	*e*Pn	**Pg**	**18 49 37.6**	**+5.5**
PE1				*e*Sn	**Sg**	**18 50 02.2**	**+4.6**
PUK	**Puka**	**1.96**	**2**	*e*PG	**Pg**	**18 49 28.8**	**-3.3**
VLS	**Valsamata**	**1.99**	**162**	*e*PN	**Pn**	**18 49 28.6**	**+0.4**
LIT	**Litokhoron**	**2.05**	**89**	P	**Pn**	**18 49 29.7**	**+0.7**
LIT				S	**Sn**	**18 49 57.0**	**+2.3**
GRG	**Griva**	**2.16**	**65**	P	**Pn**	**18 49 30.2**	**-0.3**
GRG				S	**Sn**	**18 49 58.9**	**+1.6**
AGG	**Agios Georgios**	**2.21**	**118**	P	**Pn**	**18 49 30.8**	**-0.4**
AGG				S	**Sn**	**18 50 00.6**	**+2.0**
RLS	**Riolos of Patr**	**2.39**	**147**	*e*PN	**Pn**	**18 49 34.7**	**+1.0**
SG1	**Sgolgore (BA)**	**2.51**	**289**	*e*Pn	**Pg**	**18 49 44.1**	**+1.5**
SG1				*e*Sn	**Sg**	**18 50 17.0**	**+1.9**
KNT	**Kendrikon**	**2.58**	**64**	P	**Pn**	**18 49 36.5**	**+0.2**
NEO	**Neokhori**	**2.74**	**105**	*e*PN	**Pn**	**18 49 38.1**	**-0.4**
PLG	**Polygyros**	**2.80**	**83**	P	**Pn**	**18 49 40.0**	**+0.8**
PAIG	**Paliouri**	**2.97**	**92**	P	**Pn**	**18 49 41.2**	**-0.5**
KKB	**Krupnik**	**3.05**	**53**	*e*P	**Pn**	**18 49 42.0**	**-0.8**
BARS	**Barje**	**3.12**	**28⇑**	*i*Pn	**Pn**	**18 49 43.2**	**-0.5**
SJES	**Sjenica**	**3.18**	**2**	*e*Pn	**Pg**	**18 49 52.1**	**-3.3**
MMB	**Musomiste**	**3.33**	**62**	*e*P	**Pn**	**18 49 46.3**	**-0.3**
VTS	**Vitosha**	**3.58**	**44**	*e*P	**Pn**	**18 49 49.7**	**-0.3**
DID	**Didima**	**3.71**	**133**	P	**Pn**	**18 49 51.7**	**-0.1**
RZN	**Rozhen**	**4.05**	**65**	*e*P	**Pn**	**18 49 55.6**	**-0.9**
BOLS	**Boljevac**	**4.07**	**22**	*e*Pn	**Pn**	**18 49 56.4**	**-0.4**

IDC ***14*** *18:49:40.8±14.0, 558N×8401W, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/15, mbtmp4.0/3, Error ellipse: s-maj=583.9km s-min=34.2km az=32.0*
ISCJB ***14*** *18:50:34.3±1.9, 1098N±004×8653W±007, h4km±16km, mb3.5/2, Error ellipse: s-maj=12.2km s-min=4.8km az=154.1*
CASC ***14*** *18:50:36.9±2.7, 1103N×8643W, h15km±10km, MD4.0, ML3.4*

ISC 14 18:50:36.1±2.3**, 1100N**±004×**8650W**±007**, h19**km±16km**, n29, σ1s08/33, mb3.5/2, 12C-8D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.99**	**11⇑**	*e*P	**Pb**	**18 50 55.6**	**+0.9**
APON	**Apoyo**	**1.00**	**25⇑**	*e*P	**Pb**	**18 50 54.9**	**0.0**
CONN	**Concepcion**	**1.02**	**57⇓**	*e*P	**Pb**	**18 50 54.0**	**-1.1**
MASN	**Masaya**	**1.04**	**19⇑**	*e*P	**Pb**	**18 50 54.8**	**-0.6**
MASN				*e*S	**Sb**	**18 51 10.7**	**+2.0**
TICN	**Ticuantepe**	**1.06**	**14⇑**	*e*P	**Pb**	**18 50 55.6**	**-0.2**
XAVN	**Gruta Xavier**	**1.15**	**8⇑**	*e*P	**Pn**	**18 50 57.0**	**-0.2**
TISN	**Laguna Tiscapa**	**1.16**	**11**	*e*P	**Pn**	**18 50 56.8**	**-0.5**
MGAN	**Managua**	**1.16**	**12⇓**	*e*P	**Pn**	**18 50 57.0**	**-0.4**
MGAN				⇑*e*P		18 50 57.1	
MGAN				*e*S	**Sb**	**18 51 12.6**	**+0.3**
COPN	**Copaltepe**	**1.18**	**355⇑**	*e*P	**Pn**	**18 50 57.4**	**-0.1**
CSAN		**1.18**	**4⇓**	*e*P	**Pn**	**18 50 57.5**	**-0.1**
WILN	**Americas 2**	**1.19**	**15⇑**	*e*P	**Pn**	**18 50 57.3**	**-0.5**
WILN				*e*S	**Sb**	**18 51 13.4**	**+0.3**
APYN	**Apoyeque**	**1.23**	**7⇓**	*e*P	**Pn**	**18 50 58.5**	**+0.1**
LIM1	**Limonal**	**1.26**	**104⇑**	*e*P	**Pn**	**18 50 56.9**	**-1.8**
LIM1				*e*S	**Sb**	**18 51 13.2**	**-1.9**
2RIO	**Dos Rios de Up**	**1.33**	**111⇓**	*e*P	**Pn**	**18 50 56.0**	**-3.6**
CUI	**Cuipilapa**	**1.35**	**105⇓**	*e*P	**Pn**	**18 50 58.6**	**-1.3**
HUEN		**1.36**	**13⇑**	*e*P	**Pn**	**18 50 59.8**	**-0.3**
MOMN	**Momotombo**	**1.40**	**358**	*e*P	**Pn**	**18 51 00.6**	**0.0**
MIRN	**Miramar**	**1.45**	**352⇑**	*e*P	**Pn**	**18 51 01.3**	**+0.1**
CNGN	**Cerro Negro**	**1.50**	**352⇓**	*e*P	**Pn**	**18 51 02.0**	**0.0**
CNGN				*e*S	**Sn**	**18 51 21.3**	**+0.2**
CNGN				AML	AML	18 51 37.3	
	comp=E,1μm,0.2s						
TEL3	**Telica 3**	**1.60**	**348⇓**	*e*P	**Pn**	**18 51 03.6**	**+0.2**
JCR	**Jicaral**	**1.78**	**130**	*e*P	**Pn**	**18 51 07.9**	**+2.0**
JCR				*e*S	**Sn**	**18 51 32.1**	**+4.2**
FORC	**Fortuna**	**1.87**	**106**	*e*P	**Pn**	**18 51 07.8**	**+0.7**
CGA2	**Cerro Gallo 2**	**2.23**	**116**	*e*P	**Pn**	**18 51 13.5**	**+1.5**
CNCH	**Conchagua**	**2.61**	**330**	*e*P	x	18 51 18.0	
URSC	**Urasca**	**2.92**	**113**	*e*P	**Pn**	**18 51 23.2**	**+1.7**
BUS	**Buena Vista**	**3.05**	**118**	*e*P	**Pn**	**18 51 25.9**	**+2.5**
LAPE	**La Pedrera**	**15.12**	**102⇑**	*e*P	x	18 50 53.9	
LAPE				*e*S	x	18 51 08.5	
TXAR	**Lajitas Array**	**24.28**	**321**	P	**P**	**18 55 51.7**	**-0.5**
	comp=E,1.6nm,0.7s,mb3.5,baz=137,slow=9.8,SNR=17						
PDAR	**Pinedale Array**	**37.48**	**332**	P	**P**	**18 57 45.7**	**-2.9**
	comp=E,0.5nm,0.8s,mb3.4,baz=139,slow=9.2,SNR=4.0						

GUC ***14*** *18:55:47.8±2.1, 2266S×7043W, h41km±9km, ML4.8*
MOS ***14*** *18:55:48.6±1.2, 2239S×7020W, h33km, mb5.3/13, Error ellipse: s-maj=21.5km s-min=10.5km az=106.3*
NEIC ***14*** *18:55:49.3±0.3, 2267S×7029W, mb5.1/22, Error ellipse: s-maj=8.9km s-min=6.4km az=51.0*
BJI ***14*** *18:55:49.2, 2270S×7030W, h31km, mB5.4, Ms5.8, Msz5.7*
ISCJB ***14*** *18:55:52.3±0.6, 2257S±004×7007W±005, h65km±4km, mb4.7/33, Error ellipse: s-maj=8.9km s-min=5.6km az=151.0*
IDC ***14*** *18:55:54.4±1.3, 2251S×7012W, h72km±10km, mb4.4/15, mb1 4.5/19, mb1mx4.4/24, mbtmp4.4/19, Error ellipse: s-maj=17.5km s-min=11.0km az=48.0*

ISC 14 18:55:52.2±0.5**, 2269S**±003×**7015W**±005**, h51**km±5km**, h40**km±4.1km**: pP-P, n409, σ0s64/376, mb4.9/33, 146C-134D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**Plate Boundary**	**0.53**	**92**	*e*P	**Pn**	**18 56 03.5**	**-0.4**
PB06				*i* S	**Sn**	**18 56 13.6**	**+1.3**
PB07	**Plate Boundary**	**0.99**	**14**	*e*P	**Pn**	**18 56 07.4**	**-2.4**
PB07				*i* S	**Sn**	**18 56 20.7**	**-2.0**
LVC	**Limon Verde**	**1.14**	**86**	P	**Pn**	**18 56 13.4**	**+1.5**
	2μm,0.3s,baz=264,slow=12,SNR=222						
LVC				S	**Sn**	**18 56 30.4**	**+3.9**
	5μm,0.3s,baz=90,slow=16,SNR=21						
LVC	**Limon Verde**	**1.14**	**86**	*e*P	**Pn**	**18 56 12.8**	**+1.0**
LVC				*i* S	**Sn**	**18 56 30.4**	**+3.9**
LVC	**Limon Verde**	**1.14**	**86⇓**	*i*P	**Pn**	**18 56 13.3**	**+1.4**
LVC				*i* S	**Sn**	**18 56 30.8**	**+4.4**
LVC				AML	AML	18 56 38.8	
	comp=N,14μm,0.5s						
PB01	**Plate Boundary**	**1.75**	**21**	*e*P	**Pn**	**18 56 19.2**	**-1.0**
PB01				*i* S	**Sn**	**18 56 42.6**	**+1.4**
PB01				AML	AML	18 56 46.4	
	comp=E,23μm,0.4s						
SPCH	**San Pedro de A**	**1.81**	**97**	P	**Pn**	**18 56 25.9**	**+4.9**
SPCH				*i* S	**Sn**	**18 56 51.9**	**+9.2**
SPCH	**San Pedro de A**	**1.81**	**97**	*e*P	**Pn**	**18 56 26.6**	**+5.6**
SPCH				*i* S	**Sn**	**18 56 54.1**	**+11**
CPN1	**Cerro Paranal**	**1.94**	**187⇓**	*i*P	**Pn**	**18 56 20.9**	**-1.9**
CPN1				*i* S	**Sn**	**18 56 45.3**	**-0.7**
LCO	**Las Campanas**	**6.32**	**184**	*e*P	**Pn**	**18 57 20.5**	**-2.2**
ARE	**Arequipa**	**6.32**	**348**	*e*P	**Pn**	**18 57 18.0**	**-4.9**
ARE				*e*S	**Sn**	**18 58 21.0**	**-13**
LPAZ	**La Paz**	**6.64**	**17**	P	**Pn**	**18 57 28.8**	**+1.5**
	comp=E,12nm,0.3s,baz=218,slow=6.4,SNR=74						
LPAZ	**La Paz**	**6.64**	**17**	*e*P	**Pn**	**18 57 28.4**	**+1.1**
	comp=E,85nm,0.8s						
LPAZ	**La Paz**	**6.64**	**17**	*e*P	**Pn**	**18 57 28.5**	**+1.2**
LPAZ				pmax	pmax		
	comp=Z,85nm,0.8s						
CFAA	**Coronel Fontan**	**9.04**	**170**	P	**Pn**	**18 58 04.9**	**+4.8**
	comp=Z,0.9nm,0.3s,baz=352,slow=14,SNR=4.9						
CFAA				S	**Sn**	**18 59 49.2**	**+8.7**
	com

baz=68
214A **Organ Pipe Nat** 67.96 322 ⇑P P 19 06 45.9 0.0
baz=68,SNR=5.4
Y17A **Roosevelt** 68.16 324 ⇓P P 19 06 47.6 +0.5
baz=68,SNR=10
X17A **Forest Lakes** 68.63 325 ⇑P P 19 06 50.6 +0.6
baz=69
Y16A **Circle Bar Ran** 68.65 324 ⇑P P 19 06 50.4 +0.2
baz=69
X16A **Lo Mia Camp, P** 69.03 324 ⇓P P 19 06 53.0 +0.4
baz=69,SNR=7.0
113A **Mohawk Valley,** 69.10 322 ⇑P P 19 06 53.5 +0.5
baz=69
W17A **Winslow** 69.15 325 ⇑P P 19 06 53.5 +0.3
baz=69
Y15A **Casa Rosa Ranc** 69.17 323 ⇓P P 19 06 53.6 +0.1
baz=69
X15A **Humboldt** 69.52 324 ⇓P P 19 06 56.0 +0.4
baz=70,SNR=6.5
Y14A **Wickenburg** 69.53 323 ⇑P P 19 06 56.2 +0.6
baz=70
W16A **Flagstaff** 69.59 325 ⇓P P 19 06 56.9 +0.8
baz=70
T19A **Beclabito** 69.64 328 ⇑P P 19 06 56.2 -0.1
baz=70
MVCO **Mesa Verde** 69.68 328 ⇑P P 19 06 56.8 +0.3
baz=70
U18A **Rough Rock, Ch** 69.74 327 ⇓P P 19 06 57.3 +0.4
baz=70
LIC **Lamto** 69.82 74 eP P 19 06 57.1 -0.8
comp=Z,90nm,2.0s,mb5.3
WUAZ **Wupatki** 69.83 325 ⇑P P 19 06 58.2 +0.7
baz=70
TIC **Toumodi** 70.01 74 eP P 19 06 58.6 -0.5
comp=Z,11nm,0.2s,mb5.4
TIC **Toumodi** 70.01 74 eP P 19 06 58.6 -0.5
TIC pmax pmax
comp=Z,11nm,0.2s,mb5.4
W15A **Williams** 70.05 324 ⇓P P 19 06 59.6 +0.8
baz=70
KIC **Kosan Boka** 70.13 74 eP P 19 06 59.5 -0.3
comp=Z,119nm,1.0s,mb5.8
DBIC **Dimbokro** 70.17 74 P P 19 06 59.8 -0.3
comp=Z,22nm,0.8s,mb5.1,baz=212,slow=5.5,SNR=26
DBIC **Dimbokro** 70.17 74 eP P 19 06 59.7 -0.3
comp=Z,28nm,0.9s,mb5.2
DBIC **Dimbokro** 70.17 74 eP P 19 06 59.7 -0.4
DBIC pmax pmax
comp=Z,28nm,0.9s
U16A **Tuba City** 70.18 326 ⇓P P 19 06 59.9 +0.3
baz=70,SNR=5.1
U17A **Shonto** 70.28 326 ⇓P P 19 07 00.7 +0.4
baz=70,SNR=5.7
T18A **Mexican Hat** 70.30 327 ⇑P P 19 07 00.5 +0.2
baz=70,SNR=13
S19A **Harvey Farm, M** 70.41 328 ⇑P P 19 07 01.2 +0.2
baz=71,SNR=6.6
ECSD **EROS,Sioux Fal** 70.42 340 eP P 19 06 59.0 -1.9
comp=Z,6.1nm,0.9s,mb4.5
PV01 **Paradox Valley** 70.44 329 eP P 19 07 01.4 +0.3
X13A **Yucca** 70.47 323 ⇑P P 19 07 01.6 +0.2
baz=71,SNR=6.9
V15A **Kaibab Nationa** 70.48 325 ⇑P P 19 07 02.0 +0.6
baz=71,SNR=7.4
W14A **Seligman** 70.52 324 ⇓P P 19 07 02.0 +0.3
baz=71,SNR=5.3
T17A **Navajo Res., N** 70.66 326 ⇓P P 19 07 03.4 +0.9
baz=71,SNR=5.9
BC3 **Big Chuckw Mtn** 70.72 321 ⇓P P 19 07 03.0 +0.1
baz=71,SNR=5.1
MONP **Monument Peak** 70.74 320 ⇑P P 19 07 03.1 0.0
baz=71
S18A **Hurst Farm, Bl** 70.79 327 ⇑P P 19 07 03.8 +0.5
baz=71,SNR=21
V14A **Boquillas Ranc** 70.84 324 ⇑P P 19 07 04.3 +0.6
baz=71,SNR=9.7
W13A **Hualapai Mount** 70.88 323 ⇑P P 19 07 04.6 +0.7
baz=71
R19A **Curley Farm, L** 70.90 328 ⇑P P 19 07 04.1 +0.1
baz=71
IRM **Iron Mountain** 70.91 322 ⇓P P 19 07 03.9 -0.2
baz=71
U15A **North Rim** 71.00 325 ⇑P P 19 07 05.3 +0.7
baz=71,SNR=10
T16A **Glen Canyon Da** 71.01 326 ⇑P P 19 07 05.1 +0.4
baz=71
S17A **Black Ridge (B** 71.15 327 ⇓P P 19 07 05.7 +0.2
baz=71,SNR=5.4
PFO **Pinyon Flat Ob** 71.27 320 ⇑P P 19 07 06.7 +0.4
baz=71
BELC **Belle Mtn.** 71.28 321 ⇑P P 19 07 06.7 +0.3
baz=71
R18A **Canyonlands Na** 71.28 328 ⇓P P 19 07 06.4 +0.1
baz=72,SNR=7.8
Q19A **Hogan Spring (** 71.42 329 ⇑P P 19 07 07.5 +0.4
baz=72,SNR=9.8
V13A **Grand Canyon W** 71.48 324 ⇓P P 19 07 07.8 +0.3
baz=72,SNR=7.9
T15A **Red Dirt Ranch** 71.50 325 ⇓P P 19 07 08.5 +1.0
baz=72,SNR=5.2
S16A **Wepgner Ranch,** 71.62 326 ⇑P P 19 07 08.4 +0.1
baz=72,SNR=6.0
GMRC **Granite Mounta** 71.64 322 ⇓P P 19 07 09.2 +0.6
baz=72,SNR=7.9
R17A **Hanksville Air** 71.71 327 ⇑P P 19 07 09.1 +0.2
baz=72,SNR=12
P19A **Cripple Cowboy** 71.83 329 ⇑P P 19 07 09.7 +0.2
baz=72,SNR=18
T14A **Hurricane** 71.90 325 ⇓P P 19 07 10.5 +0.5
baz=72
Q18A **Rafter H Ranch** 71.96 328 ⇑P P 19 07 10.2 -0.2
baz=72
HEC **Hector,Ludlow** 72.06 321 ⇑P P 19 07 11.8 +0.8
baz=72
SRU **San Rafael** 72.16 328 ⇑P P 19 07 11.7 +0.2
baz=72
U12A **Valley of Fire** 72.22 324 ⇑P P 19 07 12.4 +0.4
baz=72
TUQ **Turquoise Moun** 72.27 322 ⇓P P 19 07 12.7 +0.5
baz=72
CIS **Catalina Islan** 72.29 319 ⇑P P 19 07 12.3 -0.1
baz=72
Q16A **Castle Valley** 72.33 327 ⇓P P 19 07 12.9 +0.4
baz=72
R15A **Junction** 72.34 326 ⇑P P 19 07 12.9 +0.2
baz=72
O19A **Miners Draw (B** 72.42 330 ⇓P P 19 07 12.8 -0.2
baz=73,SNR=8.8
BFSC **Mount Baldy St** 72.42 320 ⇓P P 19 07 13.4 +0.1
baz=73
P18A **Preston Nutter** 72.42 329 ⇓P P 19 07 13.3 +0.2
baz=73,SNR=12
P17A **Butcher Ranch,** 72.54 328 ⇓P P 19 07 13.9 +0.1
baz=73,SNR=5.5
GSC **Goldstone** 72.67 321 ⇑P P 19 07 14.8 +0.1
baz=73
S13A **Holt Ranch, En** 72.70 325 ⇑P P 19 07 15.5 +0.7
baz=73,SNR=6.2
O18A **Roosevelt** 72.81 329 ⇓P P 19 07 15.5 +0.2
baz=73
N19A **John Jarvie Ra** 72.92 330 ⇓P P 19 07 16.1 +0.1
baz=73
L21A **Rawlins** 72.96 332 ⇑P P 19 07 15.7 -0.5
baz=73,SNR=10
O17A **Robinson Place** 73.10 329 ⇓P P 19 07 17.5 +0.4
baz=73,SNR=13
T11A **Corn Creek, Al** 73.18 324 ⇓P P 19 07 18.5 +0.9
baz=73,SNR=9.7
R13A **O'Grain Ranch,** 73.20 325 ⇑P P 19 07 18.3 +0.6
baz=73,SNR=5.1
N18A **Larsen Ranch,** 73.21 330 ⇑P P 19 07 18.3 +0.6
baz=73
RSSD **Black Hills** 73.38 335 eP P 19 07 18.5 -0.1
comp=Z,9.1nm,0.8s,mb4.8
RSSD **Black Hills** 73.38 335 eP P 19 07 18.5 -0.1
RSSD pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
P15A **Leamington** 73.38 327 ⇑P P 19 07 18.9 +0.2
baz=74
L20A **Wamsutter** 73.43 331 ⇓P P 19 07 19.3 +0.3
baz=74
Q14A **Sevier Lake (B** 73.44 326 ⇓P P 19 07 19.6 +0.4
baz=74,SNR=6.7
O16A **Springville** 73.48 328 ⇓P P 19 07 19.5 +0.1
baz=74
TPNV **Topopah Spring** 73.53 323 ⇑P P 19 07 20.3 +0.6
baz=74
MPMC **Manual Prospec** 73.60 322 ⇑P P 19 07 20.2 +0.1
baz=74
R12A **Pony Springs,** 73.65 325 ⇓P P 19 07 21.4 +1.1
baz=74,SNR=6.5
N17A **Moffit Pass** 73.73 329 ⇓P P 19 07 21.1 +0.4
baz=74,SNR=18
M18A **Lyman** 73.75 330 ⇑P P 19 07 20.4 -0.5
baz=74
P14A **Drum Mountains** 73.79 327 ⇑P P 19 07 21.4 +0.2
baz=74,SNR=9.1
ISA **Isabella** 73.89 321 ⇓P P 19 07 22.4 +0.6
baz=74
L19A **Farson** 73.96 331 ⇓P P 19 07 22.6 +0.5
baz=74,SNR=8.0
N16A **Rees Ranch, Co** 73.98 329 ⇑P P 19 07 21.9 -0.3
baz=74
M17A **Scullys Gap (B** 74.06 329 ⇓P P 19 07 22.8 +0.1
baz=74
DUG **Dugway** 74.12 327 ⇓P P 19 07 23.2 +0.1
baz=74
L18A **Fontenelle, Gr** 74.13 330 ⇑P P 19 07 23.3 +0.3
baz=74
PKM **Peak Mountain** 74.17 319 ⇑P P 19 07 24.0 +0.5
baz=74
P13A **Bates Ranch, G** 74.17 326 ⇑P P 19 07 23.9 +0.5
baz=74
R11A **Troy Canyon, C** 74.18 324 ⇑P P 19 07 23.9 +0.4
baz=74,SNR=6.6
GRAC **Grapevine Rang** 74.20 322 ⇓P P 19 07 24.1 +0.5
baz=74
CWC **Cottonwood Cre** 74.21 322 ⇑P P 19 07 24.0 +0.4
baz=74
Q12A **Willow Creek R** 74.29 325 ⇓P P 19 07 24.5 +0.4
baz=74
VES **Vestal, Richgr** 74.38 320 ⇑P P 19 07 25.0 +0.3
baz=74
M16A **Huntsville** 74.40 329 ⇓P P 19 07 24.5 -0.2
baz=75
S10A **Tonopah Range,** 74.42 323 ⇑P P 19 07 25.7 +0.8
baz=75
R10A **Warm Springs** 74.53 324 ⇓P P 19 07 26.4 +0.9
baz=75,SNR=8.7
BW06 **Boulder Array** 74.58 331 ⇑P P 19 07 25.5 -0.2
baz=75
PDAR **Pinedale Array** 74.58 331 P P 19 07 25.1 -0.5
comp=Z,1.1nm,0.6s,mb4.0,baz=143,slow=7.1,SNR=9.7
S09A **Goldfield** 74.63 323 ⇓P P 19 07 26.5 +0.4
baz=75
P12A **McGill** 74.65 326 ⇑P P 19 07 26.8 +0.6
baz=75
O13A **Hicks Ranch, I** 74.66 327 ⇓P P 19 07 26.5 +0.3
baz=75
N14A **Grayback Hills** 74.80 328 ⇓P P 19 07 27.1 +0.1
baz=75
L16A **Fish Haven** 74.85 329 ⇑P P 19 07 27.8 +0.5
baz=75
R09A **Tonopah** 74.91 323 ⇑P P 19 07 28.1 +0.4
baz=75,SNR=5.4
Q10A **Clear Creek Ra** 74.97 324 ⇑P P 19 07 28.7 +0.7
baz=75,SNR=5.4
O12A **Currie** 75.15 326 ⇑P P 19 07 29.3 +0.2
baz=75,SNR=8.0
L15A **Malad City** 75.29 329 ⇑P P 19 07 29.2 -0.6
baz=76,SNR=6.0
M14A **Sheep Mountain** 75.38 328 ⇓P P 19 07 30.0 -0.3
baz=76,SNR=6.5
I18A **Diamond G Ranc** 75.43 331 ⇑P P 19 07 30.7 +0.1
baz=76,SNR=7.6
KCC **Kaiser Creek** 75.53 321 ⇓P P 19 07 31.0 -0.3
baz=76
K16A **Soda Springs** 75.55 330 ⇓P P 19 07 31.5 +0.2
baz=76,SNR=12
J17A **Brm Place, J** 75.56 331 ⇑P P 19 07 31.3 0.0
baz=76
M13A **Montello** 75.67 327 ⇓P P 19 07 32.1 +0.1
baz=76
L14A **Malta** 75.72 328 ⇑P P 19 07 31.5 -0.8
baz=76,SNR=6.0
NVAR **Mina Array Bea** 75.73 323 P P 19 07 32.0 -0.4
comp=Z,2.9nm,0.8s,mb4.3,baz=152,slow=6.3,SNR=17
N12A **Clover Valley,** 75.73 326 ⇑P P 19 07 32.3 -0.1
baz=76
U04C **Hernandez Rese** 75.73 320 ⇑P P 19 07 33.1 +0.6
baz=76
SYO **Syowa Base** 75.80 160 ⇓eP P 19 07 31.2 -1.2
SYO **Syowa Base** 75.80 160 ⇑epP pP 19 07 40.0 -7.0
SYO **Syowa Base** 75.80 160 ⇑esP sP 19 07 45.1 -7.6
Q08A **Gabbs** 75.83 323 ⇑P P 19 07 32.9 -0.1
baz=76,SNR=5.4
RRI2 **Red Ridge** 75.83 330 eP P 19 07 32.7 -0.1
comp=Z,10nm,0.8s,mb4.8
K15A **Arbon** 75.88 329 ⇓P P 19 07 33.3 +0.2
baz=76
J16A **Bone** 75.91 330 ⇑P P 19 07 33.1 -0.2
baz=76,SNR=6.1
I17A **Pilgram Creek** 75.94 331 ⇓P P 19 07 33.8 +0.4
baz=76,SNR=7.9
M12A **Wells** 76.09 327 ⇑P P 19 07 34.3 0.0
baz=76
L13A **Double Diamond** 76.11 328 ⇓P P 19 07 34.4 -0.1
baz=76,SNR=5.7
S05C **Merced** 76.14 321 ⇑P P 19 07 35.6 +0.9
baz=76
H17A **Grant Village** 76.31 331 ⇑P P 19 07 36.0 +0.4
baz=76
I16A **Newdale** 76.32 331 ⇑P P 19 07 35.3 -0.3
baz=76
RLMT **Red Lodge** 76.33 333 eP P 19 07 35.6 -0.1
comp=Z,8.8nm,0.9s,mb4.7
RLMT **Red Lodge** 76.33 333 ⇓P P 19 07 35.8 +0.1
baz=77
J15A **Blackfoot** 76.38 330 ⇑P P 19 07 36.1 +0.1
baz=77
M11A **Holland Ranch,** 76.55 326 ⇑P P 19 07 37.9 +0.9
baz=77
K13A **Stover Farm, H** 76.60 328 ⇓P P 19 07 37.6 +0.3
baz=77
G18A **Lazy EL Ranch,** 76.61 333 ⇑P P 19 07 37.1 -0.1
baz=77,SNR=12
L12A **House Creek Ra** 76.68 327 ⇓P P 19 07 38.4 +0.6
baz=77
J14A **Carey** 76.84 329 ⇑P P 19 07 38.7 +0.1
baz=77,SNR=8.7
H16A **Russell Place,** 76.86 331 ⇑P P 19 07 39.1 +0.5
baz=77,SNR=6.3
K12A **Draper Farm, C** 76.99 328 ⇑P P 19 07 39.9 +0.4
baz=77,SNR=7.0
N09A **Rock Creek Ran** 77.03 325 ⇓P P 19 07 39.7 0.0
baz=77
QLMT **Earthquake Lak** 77.03 331 eP P 19 07 40.5 +0.9
L11A **Cat Creek Ranc** 77.07 327 ⇑P P 19 07 40.2 +0.4
baz=77
DGMT **Dagmar** 77.11 338 ⇑P P 19 07 39.9 -0.1
baz=77
F18A **Big Timber** 77.14 333 ⇑P P 19 07 39.8 -0.4
baz=77,SNR=12
WENL **Wente Vineyard** 77.16 320 ⇑P P 19 07 41.4 +0.9
baz=77
J13A **Corn Ranch, Pi** 77.21 329 ⇓P P 19 07 40.9 +0.3
baz=77,SNR=5.7
PAHR **Pah Rah Range** 77.22 323 eP P 19 07 41.2 +0.4
comp=Z,16nm,0.9s,mb5.0
O07A **Toulon** 77.26 324 ⇓P P 19 07 40.8 -0.3
baz=77,SNR=5.2
I14A **Mackay** 77.26 329 ⇑P P 19 07 41.3 +0.4
baz=78,SNR=7.6
LAVA **Lava Cap Winer** 77.33 322 ⇑P P 19 07 41.4 -0.1
baz=78
L10A **Juniper Basin** 77.36 327 ⇑P P 19 07 41.6 +0.1
baz=78,SNR=14
M09A **Marrel Ranch,** 77.40 326 ⇑P P 19 07 42.1 +0.4
baz=78
H15A **Lima** 77.42 330 ⇓P P 19 07 42.5 +0.7
baz=78
HLID **Hailey** 77.44 329 ⇑P P 19 07 42.2 +0.2
baz=78,SNR=17
G16A **Moss Hill, Enn** 77.51 331 ⇑P P 19 07 42.7 +0.4
baz=78
F17A **Fitzpatrick Pl** 77.54 332 ⇓P P 19 07 42.7 +0.3
baz=78,SNR=5.4
J12A **Stokes Ranch,** 77.54 328 ⇓P P 19 07 42.7 +0.2
baz=78,SNR=8.5
I13A **Wildhorse Cree** 77.57 329 ⇓P P 19 07 43.1 +0.5
baz=78,SNR=5.8
K11A **Parker Ranch,** 77.65 327 ⇓P P 19 07 43.0 -0.2
baz=78
MCMT **McKenzie Canyo** 77.67 330 eP P 19 07 43.4 +0.2
N07B **Gerlach** 77.75 324 ⇑P P 19 07 43.8 +0.1
baz=78
H14A **Leadore** 77.75 330 ⇓P P 19 07 44.1 +0.5
baz=78
E18A **Harlowton** 77.75 333 ⇓P P 19 07 43.0 -0.6
baz=78
BOZ **Bozeman (W)** 77.76 332 eP P 19 07 42.8 -0.8
comp=Z,3.3nm,1.0s,mb4.2
BOZ **Bozeman (W)** 77.76 332 eP P 19 07 42.8 -0.9
BOZ pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BOZ **Bozeman (W)** 77.76 332 ⇓P P 19 07 43.1 -0.5
baz=78
G15A **Dillon** 77.77 331 ⇓P P 19 07 43.8 +0.1
baz=78,SNR=5.4
F16A **Kennard Place,** 77.87 332 ⇑P P 19 07 44.5 +0.2
baz=78
BEKR **Beckwourth** 77.88 323 ⇓P P 19 07 44.6 +0.1
baz=78
M08A **Happy Creek Ra** 77.90 325 ⇑P P 19 07 45.1 +0.5
baz=78
I12A **Atlanta** 77.96 328 ⇑P P 19 07 44.6 -0.2
baz=78,SNR=6.6
MFID **Camas Ranch** 78.02 328 ⇑P P 19 07 45.2 0.0
baz=78
CVS **Carmenet Viney** 78.05 321 ⇓P P 19 07 45.6 +0.1
baz=78
E17A **Martinsdale** 78.06 333 ⇑P P 19 07 45.5 +0.2
baz=78
K10A **MacKenzie Ranc** 78.08 327 ⇓P P 19 07 45.4 -0.1
baz=78,SNR=5.1
H13A **Challis** 78.12 329 ⇓P P 19 07 45.9 +0.2
baz=78,SNR=8.7
N06A **Buffalo Meadow** 78.20 324 ⇑P P 19 07 46.2 -0.1
baz=78,SNR=5.4
D18A **Linhart Farms,** 78.21 334 ⇑P P 19 07 45.9 -0.2
baz=78
O05C **Quincy** 78.25 323 ⇓P P 19 07 46.8 +0.2
baz=78
M07A **Soldier Meadow** 78.28 325 ⇑P P 19 07 46.6 0.0
baz=78
F15A **Butte** 78.29 331 ⇑P P 19 07 47.1 +0.4
baz=78,SNR=6.6
ORV **Oroville** 78.31 322 ⇓P P 19 07 47.0 +0.1
baz=78,SNR=6.8
H12A **Diamond D Ranc** 78.39 329 ⇓P P 19 07 47.6 +0.3
baz=79,SNR=7.2
L08A **Fields** 78.41 326 ⇓P P 19 07 47.4 +0.1
baz=79
K09A **Rome** 78.45 326 ⇑P P 19 07 47.6 0.0
baz=79
E16A **East Helena** 78.47 332 ⇑P P 19 07 47.5 -0.1
baz=79
G13A **Cobalt** 78.51 330 ⇓P P 19 07 48.7 +0.9
baz=79,SNR=45
D17A **Six Diamond Ra** 78.54 333 ⇑P P 19 07 47.9 -0.1
baz=79,SNR=6.6
O04C **Chester** 78.59 323 ⇓P P 19 07 49.1 +0.7
baz=79
F14A **Wisdom** 78.66 331 ⇑P P 19 07 48.8 +0.2
baz=79,SNR=5.6
HRY **Holter Researc** 78.68 332 eP P 19 07 48.7 -0.1
D16A **Dana Ranch, Ca** 78.81 333 ⇑P P 19 07 49.2 -0.2
baz=79,SNR=8.5
E15A **Deer Lodge** 78.81 332 ⇑P P 19 07 49.8 +0.4
baz=79
L07A **Adell** 78.81 325 ⇓P P 19 07 49.6 0.0
baz=79
TOA0 **Torodi Ar. Sit** 78.83 71 eP P 19 07 49.5 -0.8
TORD **Torodi Ar. Bea** 78.83 71 P P 19 07 49.9 -0.4
comp=Z,20nm,0.5s,mb5.3,baz=254,slow=5.2,SNR=314
TORD PKKP PKKPdf 19 26 27.8 -4.9
comp=Z,0.5nm,1.0s,baz=260,slow=5.0,SNR=4.1
TORD **Torodi Ar. Bea** 78.83 71 P P 19 07 49.9 -0.4
TORD PKKP PKKPdf 19 26 27.8 -4.9
EGMT **Eagleton** 78.85 334 ⇓P P 19 07 49.4 -0.3
baz=79
C17A **Wharram Farm,** 78.95 333 ⇑P P 19 07 49.4 -0.7
baz=79
SUR **Sutherland** 78.97 120 P P 19 07 51.5 +0.6
comp=Z,7.8nm,1.0s,mb4.6,baz=286,slow=3.2,SNR=5.3
G12A **Big Creek, Yel** 79.05 329 ⇓P P 19 07 50.8 0.0
baz=79
H11A **Donnelly** 79.06 329 ⇑P P 19 07 50.8 -0.1
baz=79
GASB **Alder Springs** 79.07 321 ⇑P P 19 07 52.0 +1.0
baz=79
F13A **Darby** 79.08 330 ⇓P P 19 07 51.2 +0.2
baz=79,SNR=29
E14A **Clinton** 79.18 331 ⇑P P 19 07 51.9 +0.5
baz=79
D15A **Lincoln** 79.23 332 ⇓P P 19 07 51.9 +0.1
baz=80
K07A **Rock Creek Ran** 79.24 325 ⇓P P 19 07 51.9 0.0
baz=79
MOD **Modoc** 79.25 324 ⇓P P 19 07 52.0 0.0
baz=79
J08A **Circle Bar Ran** 79.31 326 ⇑P P 19 07 52.5 +0.2
baz=80
H10A **Noah's Angus R** 79.33 328 ⇑P P 19 07 51.6 -0.7
baz=80
I09A **Lost Marbles R** 79.38 327 ⇓P P 19 07 52.4 -0.2
baz=80
F12A **Elk City** 79.48 330 ⇓P P 19 07 53.2 0.0
baz=80
C16A **Fuhringer Ranc** 79.49 333 ⇓P P 19 07 52.7 -0.4
baz=80,SNR=5.4
E13A **Victor** 79.51 331 ⇑P P 19 07 53.5 +0.2
baz=80,SNR=5.2
WDC **Whiskeytown Da** 79.59 322 ⇓P P 19 07 52.2 -1.6
baz=80
KIPM **Iron Peak** 79.62 321 eP P 19 07 54.3 +0.3
D14A **Greenough** 79.69 332 ⇑P P 19 07 54.6 +0.3
baz=80
G11A **Walters Elk Ra** 79.70 329 ⇑P P 19 07 54.4 +0.1
baz=80,SNR=15
I08A **Drewsey** 79.75 327 ⇑P P 19 07 55.4 +0.8
baz=80
J07A **Hines** 79.75 326 ⇑P P 19 07 55.5 +0.9
baz=80
C15A **Salmond Ranch,** 79.84 332 ⇑P P 19 07 54.9 -0.1
baz=80,SNR=11
G10A **Bishop Farm, J** 80.03 328 ⇑P P 19 07 56.4 +0.3
baz=80,SNR=12
J06A **Christmas Vall** 80.11 325 ⇓P P 19 07 56.7 +0.1
baz=80,SNR=9.0
E12A **Beaver Dam Sad** 80.12 330 ⇓P P 19 07 55.9 -0.7
baz=80,SNR=5.7
D13A **Huson** 80.13 331 ⇓P P 19 07 56.5 -0.1
baz=80,SNR=12
K05A **Summer Lake** 80.13 325 ⇓P P 19 07 57.2 +0.4
baz=80,SNR=5.3
N02C **Big Bar** 80.18 322 ⇑P P 19 07 57.1 +0.1
baz=80,SNR=5.3
B15A **Bradely Ranch,** 80.23 333 ⇓P P 19 07 56.1 -1.0
baz=80,SNR=9.2
H08A **Prairie City** 80.24 327 ⇑P P 19 07 57.3 0.0
baz=80
C14A **Swan Lake** 80.32 332 ⇓P P 19 07 57.7 +0.1
baz=80
A16A **West Butte Ran** 80.33 334 ⇓P P 19 07 57.8 +0.1
baz=81
G09A **Cove** 80.34 328 ⇑P P 19 07 57.8 0.0
baz=80,SNR=16
I07A **Izee** 80.35 326 ⇑P P 19 07 57.7 -0.2
baz=80,SNR=6.0
E11A **Bogner Ranch,** 80.38 330 ⇓P P 19 07 57.3 -0.6
baz=81
YBH **Yreka Blue Hor** 80.45 323 P P 19 07 57.1 -1.4
comp=Z,2.6nm,0.8s,mb4.2,baz=123,slow=4.2,SNR=8.2
YBH **Yreka Blue Hor** 80.45 323 ⇑P P 19 07 57.4 -1.1
baz=81
D12A **Red Ives Fores** 80.50 331 ⇑P P 19 07 58.6 0.0
baz=81
B14A **Marquette Ranc** 80.57 332 ⇓P P 19 07 57.5 -1.4
baz=81
F10A **Beach Ranch, E** 80.58 329 ⇓P P 19 07 58.6 -0.4
baz=81,SNR=13
I06A **Prineville** 80.62 326 ⇓P P 19 07 59.8 +0.5
baz=81
C13A **Hot Springs** 80.62 331 ⇑P P 19 07 59.1 -0.1
baz=81
F09A **S2 Ranch, Elgi** 80.71 328 ⇓P P 19 07 59.7 -0.1
baz=81
TSUM **Tsumeb** 80.80 107 P P 19 07 59.6 -1.3
comp=Z,14nm,0.9s,mb4.9,baz=235,slow=4.7,SNR=12
TSUM **Tsumeb** 80.80 107 eP P 19 08 02.0 +1.0
comp=Z,18nm,0.9s,mb5.0
TSUM epP pP 19 08 15.7 +0.1
E10A **Myers Farm, Un** 80.89 329 ⇓P P 19 08 00.4 -0.4

baz=81,SNR=5.7
G08A Pilot Rock 80.93 327 ⇑P **P** 19 08 00.4 -0.6
baz=81,SNR=5.8
D11A Klaveano Farm, 80.94 330 ⇑P **P** 19 08 00.1 -0.9
baz=81
C12B Naegeli Ranch, 81.04 331 ⇓P **P** 19 08 00.9 -0.7
baz=81
B13A Whitefish 81.10 332 ⇓P **P** 19 08 01.2 -0.5
baz=81
A14A Double T Ranch 81.11 333 ⇑P **P** 19 08 00.8 -1.0
baz=81
F08A Pendleton 81.20 328 ⇓P **P** 19 08 02.0 -0.3
baz=81
H06A Lindquist Farm 81.23 326 ⇑P **P** 19 08 02.9 +0.3
baz=81,SNR=5.2
L02A Cave Junction 81.23 323 ⇑P **P** 19 08 02.5 -0.1
baz=81
G07A Ruggs Ranch, H 81.27 327 ⇑P **P** 19 08 03.1 +0.3
baz=82,SNR=6.1
WALA Waterton Lakes 81.38 333 *e*P **P** 19 08 02.2 -1.0
comp=Z,9.8nm,0.9s,mb4.7
D10A Wagner Farm, O 81.39 330 ⇑P **P** 19 08 02.5 -0.8
baz=82,SNR=7.1
C11A Tepee Creek (N 81.49 331 ⇓P **P** 19 08 03.5 -0.4
baz=82,SNR=14
K02A Glendale 81.57 323 ⇑P **P** 19 08 04.3 -0.1
baz=82
B12A Libby 81.66 331 ⇓P **P** 19 08 04.4 -0.4
baz=82
G06A Carlson Farm, 81.73 327 ⇑P **P** 19 08 05.7 +0.5
baz=82
E08A Dider Farm, El 81.83 328 ⇑P **P** 19 08 05.3 -0.4
baz=82
D09A Jones Farm, Ri 81.88 329 ⇓P **P** 19 08 05.8 -0.1
baz=82
B11A Sandpoint 81.99 331 ⇓P **P** 19 08 06.1 -0.4
baz=82
J02A Umpqua 82.02 324 ⇓P **P** 19 08 06.8 +0.1
baz=82
RSW Rattlesnake Hi 82.02 328 *e*P **P** 19 08 06.8 0.0
RSW *e*pP pP 19 08 16.6 -4.8
A12A Yaak River Ran 82.04 332 ⇓P **P** 19 08 06.4 -0.3
baz=82,SNR=7.0
H04A Detroit Lake 82.16 325 ⇓P **P** 19 08 05.8 -1.6
baz=82
D08A Wollman Farm, 82.17 329 ⇓P **P** 19 08 07.3 -0.2
baz=82
I03A Eugene 82.26 324 ⇓P **P** 19 08 08.5 +0.5
baz=82
OD2 Odessa Site #2 82.31 329 *e*P **P** 19 08 07.8 -0.4
OD2 *e*pP pP 19 08 17.6 -5.3
A11A Hall Mountain, 82.37 331 ⇓P **P** 19 08 08.1 -0.3
baz=83,SNR=12
C09A Chrisman Ranch 82.39 330 ⇓P **P** 19 08 08.2 -0.4
baz=83,SNR=6.2
H03A Soap Creek Ran 82.73 325 ⇓P **P** 19 08 10.9 +0.4
baz=83
D07A Quincy 82.77 328 ⇑P **P** 19 08 10.5 -0.1
baz=83
B09A Rice 82.78 330 ⇑P **P** 19 08 10.0 -0.6
baz=83
E06A Yakima 82.81 327 ⇓P **P** 19 08 10.9 0.0
baz=83
A10A Northport 82.92 331 ⇓P **P** 19 08 10.1 -1.2
baz=83
F04A Amboy 83.12 326 ⇑P **P** 19 08 12.3 -0.2
baz=83
C07A Waterville 83.16 329 ⇑P **P** 19 08 12.3 -0.3
baz=83
D06A Cle Elum 83.20 328 ⇓P **P** 19 08 12.7 -0.1
baz=83
E05A Randle 83.22 327 ⇓P **P** 19 08 12.6 -0.3
baz=83
ETW Entiat 83.23 328 *e*P **P** 19 08 12.3 -0.7
ETW *e*pP pP 19 08 22.5 -5.2
B08A Colville Reser 83.29 329 ⇑P **P** 19 08 12.7 -0.5
baz=84
A09A Danville 83.38 330 ⇑P **P** 19 08 12.7 -1.0
baz=84
MAW Mawson 83.52 164 P **P** 19 08 14.7 +0.4
comp=Z,10.0nm,0.9s,mb5.0,baz=225,slow=6.6,SNR=12
MAW Mawson 83.52 164 *e*P **P** 19 08 14.3 0.0
comp=Z,11nm,0.9s,mb5.0
MAW Mawson 83.52 164 *e*P **P** 19 08 14.3 0.0
MAW pmax pmax
comp=Z,11nm,0.9s
A08A Turner Farm, O 83.69 330 ⇓P **P** 19 08 14.5 -0.8
baz=84,SNR=7.3
B07A Winthrop 83.73 329 ⇓P **P** 19 08 14.6 -0.9
baz=84
D05A Enumclaw 83.76 327 ⇓P **P** 19 08 14.9 -0.8
baz=84
BOSA Boshof 83.90 118 P **P** 19 08 17.6 +0.6
comp=Z,11nm,0.9s,mb5.0,baz=248,slow=3.4,SNR=14
A07A Ashnola River, 84.27 329 ⇓P **P** 19 08 18.0 -0.3
baz=84,SNR=6.5
EDM Edmonton 84.36 336 *e*P **P** 19 08 16.9 -1.6
B06A Marblemount 84.42 329 ⇓P **P** 19 08 18.3 -0.8
baz=85
B05A Bryant 84.55 328 ⇑P **P** 19 08 18.6 -1.1
baz=85
YKA Yellowknife Ar 91.93 341 P **P** 19 08 53.3 -1.3
comp=Z,4.6nm,0.7s,mb4.9,baz=136,slow=4.5,SNR=29
APA Apatity 115.92 25 ⇑*i*PKIKP PKPdf 19 14 27.0 -1.6
APA pmax pmax
comp=Z,22nm,1.4s
APA MLR MLR
comp=Z,2μm,22.0s
ASAR Alice Springs 128.33 208 PKP PKPdf 19 14 53.2 -0.6
comp=Z,2.8nm,0.8s,baz=151,slow=2.9,SNR=15
TIXI Tiksi 129.82 352 *e*PKIKP PKPdf 19 14 53.2 -1.9
TIXI pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 131.35 211 PKP PKPdf 19 14 58.8 -0.8
comp=Z,1.8nm,0.8s,baz=150,slow=1.8,SNR=5.2
PETK Petropavlovsk- 132.82 322 PKP PKPdf 19 15 01.4 +0.1
comp=Z,3.4nm,0.9s,baz=279,slow=2.9,SNR=3.6
NVS Novosibirsk 142.23 25 *e*PKIKP PKPdf 19 15 16.0 -2.6
NVS pmax pmax
comp=Z,4.0nm,0.7s
NVS pmax pmax
comp=N,1.0nm,1.0s
NVS pmax pmax
comp=E,3.0nm,0.7s
ZAA0 Zalesovo Array 143.51 25 *e*P PKPdf 19 15 17.3 -3.6
ZALV Zalesovo Beam 143.51 25 PKP PKPdf 19 15 17.7 -3.2
comp=E,10.0nm,0.8s,baz=326,slow=3.9,SNR=17
EKS2 Erkin-Say 144.05 48 *e*P PKPdf 19 15 21.0 -1.1
EKS2 Erkin-Say 144.05 48 P PKPdf 19 15 21.7 -0.5
SNR=6.9
AML Almayashu 144.19 49 P PKPdf 19 15 22.5 0.0
SNR=11
CHMS Chumysh 144.58 47 P PKPdf 19 15 22.9 -0.2
SNR=10
BATI Baumata 144.62 204 PKP PKPdf 19 15 22.4 -1.6
comp=E,7.7nm,0.7s,baz=84,slow=9.2,SNR=4.1
BOD Bodaibo 144.78 356 *e*PKIKP PKPdf 19 15 19.7 -3.3
BOD pmax pmax
comp=Z,22nm,0.8s
KBK Karagaybulak 144.85 47 P PKPdf 19 15 24.3 +0.7
SNR=23
TKM2 Tokmak 2 145.18 46 *e*P PKPbc 19 15 24.3 +0.4
TKM2 Tokmak 2 145.18 46 P PKPbc 19 15 24.9 +1.1
SNR=13
ASAJ Asahikawa 145.64 316 PKPbc PKPbc 19 15 24.9 -0.3
comp=Z,16nm,0.9s,baz=98,slow=31,SNR=4.7
MK31 Makanchi Array 147.26 36 *e*PKPdf PKPdf 19 15 27.5 0.0
MKAR Makanchi Array 147.26 36 PKPbc PKPdf 19 15 27.6 0.0
comp=Z,15nm,0.7s,baz=326,slow=3.0,SNR=50
HYB Hyderabad 150.17 94 *e*P PKPdf 19 15 33.0 -0.1
HYB Hyderabad 150.17 94 *i* PKP PKPdf 19 15 33.0 -0.1
TLY Talaya 150.66 8 *e*PKIKP PKPbc 19 15 38.4 0.0
TLY *e* 19 15 45.4
TLY pmax pmax
comp=Z,8.0nm,0.7s
KAPI Kappang 150.82 201 *e*PKPdf PKPdf 19 15 32.5 -1.8
MAJO Matsushiro 151.87 306 *e*PKPbc PKPbc 19 15 40.8 -0.8
MAT Matsushiro 151.87 306 PKP PKPbc 19 15 40.7 -1.0
ZAK Zakamensk 151.88 9 *e*PKIKP PKPdf 19 15 26.4 -8.4
ZAK pmax pmax
comp=Z,6.0nm,1.0s
WMQ Urumqi 152.09 36 *e*PKP PKPdf 19 15 34.0 -1.3
SONM Songino Array 154.76 5 PKP PKPdf 19 15 39.2 +0.2
comp=Z,1.8nm,0.8s,baz=282,slow=0.5,SNR=12
SONM PKPbc PKPbc 19 15 46.8 -0.8
comp=Z,1.5nm,0.5s,baz=325,slow=1.3,SNR=8.6
SONM PKPab PKPab 19 16 02.8 +0.2
comp=Z,3.0nm,0.8s,baz=333,slow=3.2,SNR=7.4
SONM Songino Array 154.78 5 PKIKP PKPdf 19 15 39.2 +0.2
SONM 19 15 46.8
ULN Ulaanbaatar 154.78 4 *e*PKPab PKPab 19 16 03.1 +0.4
CN2 Changchun 155.31 332 *e*PKP PKPdf 19 15 38.1 -1.8
GTA Gaotai 161.27 25 *e*PKP PKPdf 19 15 48.0 +0.8
HHC Hu-ho-hao-te 161.84 356 *e*PKP PKPdf 19 15 46.1 -1.7
HHC APKP 19 15 57.3
HHC XPKP 19 16 00.8
HHC PKS 19 19 18.1
HHC PP PP 19 20 20.0 +3.7
HHC SKS SKSdf 19 22 46.3 -2.2
HHC SKKS SKKSac 19 27 02.0 +0.9
HHC PP PP
comp=Z,2μm,10.7s
HHC LR LR
comp=N,1μm,25.0s
HHC LR LR
comp=E,827nm,23.8s
HHC LR LR
comp=Z,2μm,25.0s
BJI Beijing 161.89 344 PKP PKPdf 19 15 46.6 -1.3
BJI LR LR
comp=N,835nm,20.7s
BJI LR LR
comp=E,681nm,22.2s
BJI LR LR
comp=Z,2μm,38.1s
LZH Lanzhou 165.66 20 *e*PKP PKPdf 19 15 52.8 +1.3
LZH APKP 19 16 04.3
LZH XPKP 19 16 07.5
LZH Lanzhou 165.66 20 *e*PKP PKPdf 19 15 52.7 +1.2
LZH pPKP pPKPdf 19 16 04.3 -2.6
LZH sPKP 19 16 07.5
LZH Lanzhou 165.66 20 *e*PKIKP PKPdf 19 15 52.7 +1.2
LZH 19 16 04.3
NJ2 Nanjing 167.72 321 *e*PKP PKPdf 19 15 49.3 -3.9
CMAR Chiang Mai Arr 168.95 110 PKP PKPdf 19 15 54.2 -0.1
comp=Z,1.1nm,1.0s,baz=247,slow=2.9,SNR=6.3
CMAR PKPab PKPab 19 17 05.6 0.0
comp=Z,1.2nm,0.8s,baz=255,slow=5.1,SNR=8.8
CD2 Chengdu 170.17 32 *e*PKP PKPdf 19 15 52.8 -1.9
CD2 APKP 19 16 02.8
CD2 XPKP 19 16 08.1
CD2 PKP2 PKPab 19 17 11.5 +1.0
CD2 PP PP 19 21 02.8 +2.8
CD2 SKS SKSdf 19 22 51.1 -3.1
CD2 SKKS SKKSac 19 27 45.3 +1.9
CD2 PP PP
comp=Z,130nm,10.8s
CD2 LR LR
comp=N,160nm,21.2s
CD2 LR LR
comp=Z,150nm,18.2s
KMI Kunming 173.05 68 PKP PKPdf 19 15 54.3 -2.0
KMI Kunming 173.05 68 PKIKP PKPdf 19 15 54.2 -2.1
GYA Guiyang 175.25 37 PKP PKPdf 19 15 56.0 -1.0
GYA APKP 19 16 06.8
GYA XPKP 19 16 10.3
GYA PKP2 PKPab 19 17 33.3 +0.1
GYA PKS 19 19 26.8
GYA PP PP 19 21 26.8 +1.6
GYA PP PP
comp=Z,130nm,7.5s
GYA LR LR
comp=N,110nm,22.1s
GYA LR LR
comp=E,100nm,22.0s

IDC 14 19:04:52.0±0.8, 2380S×6943W, h32km±4km, mb3.9/2, mb1 4.1/5, mb1mx3.8/17, mbtmp4.0/5, ML3.9/3, Error ellipse: s-maj=34.3km s-min=12.5km az=108.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.28**	**22**	Pg	Pn	19 05 16.4	+2.8
	196nm,0.3s,baz=246,slow=12,SNR=10						
LVC				Lg		19 05 32.8	
	528nm,0.3s,baz=78,slow=7.6,SNR=34						
LPAZ	**La Paz**	**7.58**	**9**	Pn	Pn	19 06 39.2	-1.0
	1.5nm,0.3s,baz=154,slow=6.7,SNR=6.2						
CFAA	**Coronel Fontan**	**7.84**	**173**	Pn	Pn	19 06 42.4	-1.4
	0.2nm,0.3s,baz=132,slow=13,SNR=9.3						
SIV	**San Ignacio**	**11.05**	**47**	Pn	Pn	19 07 28.0	+0.1
	1.5nm,0.3s,baz=234,slow=13,SNR=8.7						
TXAR	**Lajitas Array**	**62.25**	**326**	P	P	19 15 12.5	+1.7
	0.3nm,0.8s,baz=116,slow=7.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**78.58**	**70**	P	P	19 16 51.8	+0.9
	3.6nm,0.7s,baz=254,slow=4.8,SNR=14						
TORD				pP	pP	19 17 01.8	+0.7
	5.6nm,0.8s,baz=250,slow=5.2,SNR=12						
TORD				sP	sP	19 17 05.5	+0.7
	5.6nm,0.8s,baz=250,slow=5.2,SNR=14						
ASAR	**Alice Springs**	**127.66**	**207**	PKP	PKPdf	19 23 54.0	-0.6
	0.2nm,0.7s,baz=157,slow=3.2,SNR=4.1						
ASAR				pPKP	pPKPdf	19 24 04.8	-0.4
	0.3nm,0.8s,baz=168,slow=2.2,SNR=5.5						
WRA	**Warramunga Arr**	**130.73**	**210**	PKP	PKPdf	19 23 59.9	-0.7
	0.7nm,0.9s,baz=156,slow=2.0,SNR=5.5						
WRA				pPKP	pPKPdf	19 24 09.9	-1.3
	0.5nm,0.8s,baz=153,slow=1.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**144.23**	**26**	PKP	PKPdf	19 24 21.9	-2.3
	0.4nm,0.3s,baz=270,slow=1.4,SNR=3.6						
MKAR	**Makanchi Array**	**147.76**	**38**	PKPbc	PKPbc	19 24 31.6	-1.8
	2.4nm,0.9s,baz=304,slow=2.8,SNR=7.2						
MKAR				pPKPbc	pPKPbc	19 24 42.9	-1.0
	1.3nm,0.8s,baz=309,slow=3.9,SNR=4.2						

IDC 14 19:06:48.0±1.6, 730S×13006E, h0km, mb4.5/1, mb1 4.1/5, mb1mx3.7/15, mbtmp4.0/5, ML3.7/3, MS4.2/1, Ms1 4.2/1, ms1mx3.0/19, Error ellipse: s-maj=28.5km s-min=24.6km az=104.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.95**	**245**	Pn	Pn	19 08 31.6	+0.4
	8.3nm,0.3s,baz=103,slow=2.5,SNR=28						
BATI				Sn	Sn	19 09 52.8	+1.8
	8.6nm,0.3s,baz=94,slow=17,SNR=8.5						
KAPI	**Kappang**	**10.49**	**282**	Pn	Pn	19 09 19.5	-0.3
	0.5nm,0.3s,baz=64,slow=6.8,SNR=2.4						
KAPI				LR	LR	19 13 43.2	
	comp=Z,1μm,21.9s,baz=14,slow=40						
WRA	**Warramunga Arr**	**13.23**	**162**	Pn	Pn	19 09 58.9	+1.6
	0.2nm,0.3s,baz=343,slow=11,SNR=6.9						
WRA				Sn	Sn	19 12 28.7	+3.4
	0.2nm,0.3s,baz=334,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**16.69**	**168**	Pn	Pn	19 10 41.5	-1.8
	0.3nm,0.3s,baz=351,slow=11,SNR=14						
ASAR				Sn	Sn	19 13 49.0	-0.4
	0.1nm,0.3s,baz=353,slow=21,SNR=11						
PETK	**Petropavlovsk-**	**64.59**	**18**	P	P	19 17 27.1	+0.1
	2.6nm,0.8s,baz=161,slow=9.8,SNR=6.3						

*MOS **14** 19:17:21.6±1.2, 2223S×6975W, h33km, mb4.8/5, Error ellipse: s-maj=22.7km s-min=13.3km az=102.2*
*ISCJB **14** 19:17:23.4±0.3, 2224S±004×6983W±008, h52km, mb4.7/17, Error ellipse: s-maj=11.0km s-min=6.2km az=170.7*
*BJI **14** 19:17:24.7, 2230S×6980W, h48km, mB5.4, Ms4.9, Msz4.9*
*NEIC **14** 19:17:24.8±0.3, 2232S×6984W, mb5.0/8, Error ellipse: s-maj=10.6km s-min=6.9km az=72.0*
*IDC **14** 19:17:25.7±0.5, 2231S×6992W, h59km±4km, mb4.1/9, mb1 4.3/13, mb1mx4.2/18, mbtmp4.1/13, MS4.6/1, Ms1 4.6/1, ms1mx3.6/27, Error ellipse: s-maj=16.0km s-min=6.3km az=22.0*

ISC 14 19:17:25.6±0.3, 2224S±005×6984W±007, h54km, h54km±2.3km: pP-P, n70, σ1§17/51, mb4.7/17, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.94**	**114**	P	**Pn**	**19 17 44.5**	**+1.8**
	8μm,0.3s,baz=291,slow=9.5,SNR=1372						
LVC				S	**Sn**	**19 17 57.7**	**+2.5**
	884nm,0.3s,baz=265,slow=18,SNR=64						
LVC	**Limon Verde**	**0.94**	**114**	*e*P	**Pn**	**19 17 43.8**	**+1.1**
LVC				*e*S	**Sn**	**19 17 58.1**	**+2.9**
ARE	**Arequipa**	**5.95**	**345**	*e*P	**Pn**	**19 18 50.0**	**-1.2**
ARE				*e*S	**Sn**	**19 19 51.0**	**-7.0**

LPAZ La Paz 6.13 16 P **Pn** **19 18 57.3 +3.6**
12nm,0.3s,baz=189,slow=7.2,SNR=139
LPAZ La Paz 6.13 16 *e*P **Pn** **19 18 57.3 +3.6**
144nm,0.6s
LPAZ La Paz 6.13 16 *e*P **Pn** **19 18 57.3 +3.6**
LPAZ pmax pmax
comp=Z,144nm,0.6s
LCO Las Campanas 6.79 186 P **Pn** **19 18 60.0 -2.7**
comp=Z,143nm,0.6s
LCO *e*S **Sn** **19 20 21.4 +2.7**
CFAA Coronel Fontan 9.44 172 P **Pn** **19 19 37.8 -1.2**
comp=Z,0.4nm,0.3s,baz=356,slow=12,SNR=15
CFAA S **Sn** **19 21 31.6 +8.0**
comp=Z,0.5nm,0.3s,baz=323,slow=0.8,SNR=3.5
SIV San Ignacio 10.35 55 LR LR 19 24 28.3
comp=Z,4μm,21.0s,baz=177,slow=40
NNA Nana 12.19 326 P **Pn** **19 20 18.8 +2.2**
comp=Z,1.4nm,0.3s,baz=143,slow=11,SNR=2.3
PLCA Paso Flores 18.45 182 P **Pn** **19 21 37.4 0.0**
comp=Z,0.1nm,0.3s,baz=358,slow=14,SNR=5.2
PLCA pP pP 19 21 48.9 +0.1
comp=Z,0.3nm,0.3s,baz=2.2,slow=12,SNR=14
PLCA Paso Flores 18.45 182 P **Pn** **19 21 37.4 0.0**
PLCA pP pP 19 21 48.9 +0.1
BDFB Brasilia 21.65 76 P **P** **19 22 12.7 +1.0**
comp=Z,2.7nm,0.4s,mb4.0,baz=223,slow=17,SNR=6.9
BDFB Brasilia 21.65 76 *e*P **P** **19 22 11.2 -0.5**
OTAV Otavalo 23.86 338 *e*P **P** **19 22 35.8 +1.6**
RCBR Riachuelo 36.61 69 *e*P **P** **19 24 27.5 +0.5**
VNA3 Neumayer Olymp 59.66 161 *e*P **P** **19 27 24.0 +0.1**
VNA3 *e* pP 19 27 38.2 -0.5
VNA3 *e* 19 27 45.7
VNA3 *e* 19 27 50.4
JCT Junction City 59.80 330 P **P** **19 27 25.2 -0.2**
comp=Z,5.9nm,0.8s,mb4.7
JCT Junction City 59.80 330 P **P** **19 27 25.2 -0.1**
JCT pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ELN Prospectdale 60.03 350 *e*P **P** **19 27 27.0 +0.2**
VNA2 Neumayer--Watz 60.25 160 *e*P **P** **19 27 28.4 +0.5**
baz=283,slow=7.9
VNA2 *e* pP 19 27 42.5 -0.2
VNA2 *e* 19 27 49.9
VNA2 *e* 19 27 55.4
TXAR Lajitas Array 60.74 326 P **P** **19 27 31.9 0.0**
comp=Z,0.4nm,0.6s,mb3.7,baz=132,slow=11,SNR=5.7
TXAR pP pP 19 27 48.6 +2.0
comp=Z,0.7nm,0.6s,baz=150,slow=8.6,SNR=4.2
SNAA Sanae 61.87 161 *e*P **P** **19 27 37.3 -1.6**
SNAA *e* pP 19 27 51.7 -2.1
SNAA *e* 19 27 58.0
SNAA *e* 19 28 01.3
SNAA Sanae 61.87 161 *e*P **P** **19 27 37.0 -1.9**
comp=Z,4.5nm,0.8s,mb4.7
SNAA *e*pP pP 19 27 49.7 -4.0
SNAA Sanae 61.87 161 *e*P **P** **19 27 37.0 -1.9**
SNAA *e**PP pP 19 27 49.7 -4.1
SNAA pmax pmax
comp=Z,5.0nm,0.8s
LAZ Ladron 66.56 327 P **P** **19 28 08.8 -1.3**
LAZ *e*pP pP 19 28 21.6 -3.4
QSPA South Pole Qui 67.96 180 *e*P **P** **19 28 18.9 +0.6**
comp=Z,27nm,1.3s,mb5.1
QSPA *e*pP pP 19 28 32.9 -0.5
LIC Lamto 69.42 74 *e*P **P** **19 28 27.7 -0.8**
comp=Z,55nm,1.4s,mb5.3
TIC Toumodi 69.61 74 *e*P **P** **19 28 28.1 -1.6**
comp=Z,11nm,0.2s,mb5.4
TIC Toumodi 69.61 74 *e*P **P** **19 28 28.1 -1.6**
TIC pmax pmax
comp=Z,11nm,0.2s,mb5.4
KIC Kosan Boka 69.73 74 *e*P **P** **19 28 30.0 -0.5**
comp=Z,45nm,0.6s,mb5.6
DBIC Dimbokro 69.77 74 P **P** **19 28 30.4 -0.3**
comp=Z,11nm,0.6s,mb4.9,baz=220,slow=7.0,SNR=24
PV01 Paradox Valley 70.21 328 *e*P **P** **19 28 34.0 +1.2**
ISA Isabella 73.72 320 *e*P **P** **19 28 55.6 +1.6**
comp=Z,1.8nm,0.6s,mb4.2
ISA *e*pP pP 19 29 09.0 -0.1
ISA Isabella 73.72 320 *e*P **P** **19 28 55.6 +1.7**
ISA *e**PP pP 19 29 09.0 -0.1
ISA pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
PDAR Pinedale Array 74.32 331 P **P** **19 28 56.8 -0.4**
comp=Z,0.6nm,0.6s,mb3.7,baz=131,slow=5.1,SNR=5.4
PDAR pP pP 19 29 12.2 -0.3
comp=Z,0.7nm,0.6s,baz=139,slow=7.7,SNR=3.6
SBA Scott Base 74.95 191 *e*P **P** **19 29 00.4 -0.1**
comp=Z,22nm,1.4s,mb4.9
SBA *e* pP 19 29 15.6 -0.1
SBA Scott Base 74.95 191 *e*P **P** **19 29 00.4 -0.1**
SBA *e* pP 19 29 15.6 -0.1
SBA pmax pmax
comp=Z,22nm,1.4s,mb4.9
NVAR Mina Array Bea 75.54 323 P **P** **19 29 05.5 +1.1**
comp=Z,1.0nm,0.7s,mb3.9,baz=130,slow=5.1,SNR=6.8
NVAR Mina Array Bea 75.54 323 P **P** **19 29 05.5 +1.1**
SYO Syowa Base 76.12 160 ||*e*P **P** **19 29 06.0 -1.3**
TOA0 Torodi Ar. Sit 78.41 71 *e*P **P** **19 29 20.2 -0.8**
TORD Torodi Ar. Bea 78.41 71 P **P** **19 29 20.6 -0.5**
comp=Z,9.1nm,0.4s,mb5.1,baz=254,slow=5.2,SNR=341
BOSA Boshof 83.86 118 P **P** **19 29 49.2 -0.7**
comp=Z,4.5nm,0.7s,mb4.7,baz=304,slow=3.1,SNR=11
BOSA pP pP 19 30 06.5 +1.1
comp=Z,6.7nm,0.8s,baz=192,slow=3.7,SNR=5.6
MAW Mawson 83.88 164 P **P** **19 29 48.6 -0.6**
comp=Z,2.7nm,0.5s,mb4.6,baz=207,slow=8.1,SNR=14
YKA Yellowknife Ar 91.59 341 P **P** **19 30 25.9 -0.2**
comp=Z,3.5nm,0.6s,mb4.9,baz=140,slow=4.3,SNR=47
YKA Yellowknife Ar 91.59 341 P **P** **19 30 25.9 -0.2**
STKA Stephens Creek 118.35 210 *e*P pPKPdf 19 36 21.5 -2.1
comp=Z,1.4nm,0.8s
ASAR Alice Springs 128.86 208 PKP PKPdf 19 36 27.2 -0.6
comp=Z,1.1nm,0.7s,baz=132,slow=1.8,SNR=22
ASAR pPKP pPKPdf 19 36 42.9 -1.1
comp=Z,8.1nm,0.8s,baz=146,slow=2.3,SNR=39
WB2 Warramunga Arr 131.88 211 *e*P pPKPdf 19 36 49.0 -0.8
WRA Warramunga Arr 131.88 211 PKP PKPdf 19 36 33.1 -0.5
comp=Z,1.0nm,0.6s,baz=153,slow=1.9,SNR=15
WRA pPKP pPKPdf 19 36 49.0 -0.8
comp=Z,7.7nm,1.0s,baz=156,slow=1.6,SNR=23
PETK Petropavlovsk- 132.63 323 PKP PKPdf 19 36 34.0 0.0
comp=Z,3.2nm,0.9s,baz=77,slow=2.2,SNR=5.8
ZALV Zalesovo Beam 142.98 25 PKP PKPdf 19 36 49.9 -3.1
comp=Z,1.5nm,0.4s,baz=300,slow=3.2,SNR=7.3
ZALV pPKP pPKPdf 19 37 09.1 -0.1
comp=Z,2.0nm,0.7s,baz=307,slow=3.2,SNR=4.1
ZALV Zalesovo Beam 142.98 25 PKP PKPdf 19 36 49.9 -3.1
ZALV pPKP pPKPdf 19 37 09.1 -0.1
BOD Bodaibo 144.34 356 *e*PKIKP PKPdf 19 36 52.8 -2.4
BOD pmax pmax
comp=Z,7.0nm,0.8s
TKM2 Tokmak 2 144.66 46 *e*PKPdf PKPdf 19 36 56.2 0.0
BATI Baumata 145.15 204 PKPbc PKPbc 19 36 54.8 -2.8
comp=Z,9.8nm,0.6s,baz=265,slow=4.0,SNR=5.9
BATI pPKPbc pPKPbc 19 37 13.8 +0.3
comp=Z,64nm,0.9s,baz=239,slow=1.8,SNR=11
MK31 Makanchi Array 146.73 36 *e*PKPdf PKPdf 19 36 59.9 +0.2
MKAR Makanchi Array 146.73 36 PKPbc PKPbc 19 37 00.1 -1.3
comp=Z,4.0nm,0.6s,baz=323,slow=1.7,SNR=24
WMQ Urumqi 151.56 36 *e*PKP PKPdf 19 37 08.0 +0.5
MJAR Matsushiro Arr 151.83 307 PKPbc PKPbc 19 37 13.8 -0.8
comp=Z,2.1nm,0.5s,baz=123,slow=1.5,SNR=7.5
MJAR pPKPbc pPKPbc 19 37 30.1 -0.6
comp=Z,4.5nm,1.0s,baz=57,slow=1.7,SNR=5.6
MAT Matsushiro 151.83 307 PKP PKPbc 19 37 14.5 -0.1
SONM Songino Array 154.28 6 PKP PKPdf 19 37 11.6 +0.2
comp=Z,0.7nm,0.7s,baz=339,slow=2.5,SNR=4.9
SONM PKPbc PKPbc 19 37 19.6 -0.1
comp=Z,0.6nm,0.5s,baz=303,slow=0.3,SNR=6.9
SONM PKPab PKPab 19 37 34.1 +0.5
comp=Z,0.9nm,0.7s,baz=340,slow=3.5,SNR=4.8
CN2 Changchun 155.04 333 *e*PKP PKPdf 19 37 14.1 +1.5
HHC Hu-ho-hao-te 161.40 357 *e*PKP PKPdf 19 37 21.1 +0.7
HHC APKP 19 37 33.3
HHC XPKP 19 37 37.9
HHC PKS 19 40 53.0
HHC PP PP 19 41 53.6 +6.6
HHC SKS SKSdf 19 44 21.1 +0.2
HHC SKKS SKKSac 19 48 36.8 +5.1
HHC SS SS 20 02 04.4 +6.0
HHC PP PP
comp=Z,3μm,15.5s
BJI Beijing 161.53 345 PKP PKPdf 19 37 20.8 +0.3
LZH Lanzhou 165.14 20 *e*PKP PKPdf 19 37 24.0 -0.1

LZH				APKP		19 37 36.3		
LZH				XPKP		19 37 41.3		
CD2	**Chengdu**	**169.64**	**32**	*e*PKP	PKPdf	19 37 25.4	-2.1	
CD2				PKP2	PKPab	19 38 41.3	+0.1	
CD2				PP	PP	19 42 31.8	+1.4	
CD2				SKS	SKSdf	19 44 24.0	-2.7	
CD2				SKKS	SKKSac	19 49 12.9	-0.7	
CD2				SS	SS	20 03 22.0	-1.5	
CD2				PP	PP			
	comp=Z,130nm,10.8s							
CD2				LR	LR			
	comp=N,120nm,16.8s							
CD2				LR	LR			
	comp=Z,160nm,18.2s							
KMI	**Kunming**	**172.62**	**66**	PKP	PKPdf	19 37 28.8	-0.4	
GYA	**Guiyang**	**174.72**	**36**	PKP	PKPdf	19 37 28.3	-1.6	
GYA				APKP		19 37 42.6		
GYA				XPKP		19 37 48.0		
GYA				PKP2	PKPab	19 39 04.6	+0.7	
GYA				PKS		19 41 01.3		
GYA				PP	PP	19 42 58.6	+2.9	

*IDC **14** 19:26:24.0±1.3, 2234S×6977W, h0km, mb4.4/3, mb1 4.3/4, mb1mx4.0/15, mbtmp4.3/4, ML2.7/1, Error ellipse: s-maj=25.8km s-min=12.9km az=27.0*
*ISCJB **14** 19:26:25.7±1.2, 2254S±0.007×696W±0.02, h33km, mb4.3/3, Error ellipse: s-maj=26.3km s-min=9.4km az=6.9*

ISC 14 19:26:30.1±1.1, 2258S±0.007×693W±0.02, h35km, n10, σ1§44/10, mb4.3/3, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.34**	**95**	Pg		**Pn**	**19 26 38.1**	**-0.5**
	139nm,0.3s,baz=279,slow=11,SNR=40							
LVC				Lg			19 26 53.4	
	236nm,0.3s,baz=283,slow=8.5,SNR=10.0							
LPAZ	**La Paz**	**6.36**	**10**	Pn		**Pn**	**19 27 55.5**	**-5.8**
	1.5nm,0.3s,baz=192,slow=7.2,SNR=7.0							
LPAZ				Sn		**Sn**	**19 29 12.2**	**-0.6**
	0.3nm,0.3s,baz=359,slow=14,SNR=3.8							
CFAA	**Coronel Fontan**	**9.03**	**174**	Pn		**Pn**	**19 28 38.5**	**+0.5**
	0.1nm,0.3s,baz=1.0,slow=14,SNR=2.9							
VNA3	**Neumayer Olymp**	**59.17**	**161**	*e*		**P**	**19 36 25.1**	**-1.9**
VNA2	**Neumayer--Watz**	**59.75**	**160**	*e*		**P**	**19 36 30.9**	**-0.2**
	baz=281,slow=8.0							
VNA2				*e*		pP	19 36 39.0	-2.7
SNAA	**Sanae**	**61.38**	**161**	*e*		**P**	**19 36 40.0**	**-2.1**
SNAA				*e*		pP	19 36 48.4	-4.4
DBIC	**Dimbokro**	**69.37**	**73**	P		**P**	**19 37 35.9**	**+1.1**
	4.2nm,0.9s,mb4.3,baz=233,slow=10,SNR=4.1							
TORD	**Torodi Ar. Bea**	**78.04**	**70**	P		**P**	**19 38 28.4**	**+2.7**
	2.0nm,0.5s,mb4.3,baz=256,slow=5.7,SNR=25							
MAW	**Mawson**	**83.40**	**163**	P		**P**	**19 38 55.5**	**+2.0**
	1.7nm,0.6s,mb4.3,baz=234,slow=9.7,SNR=4.8							
CMAR	**Chiang Mai Arr**	**168.23**	**108**	PKPab	PKPab	19 47 43.0	+0.7	
	0.6nm,0.7s,baz=280,slow=5.2,SNR=5.4							

*HLW **14** 19:39:16.5, 37.10N×2913E, h33km, Mb3.6*
*ISK **14** 19:39:17.3, 3698N×2931E, h3km, MD3.5*
*CSEM **14** 19:39:18.1±0.1, 3699N×2934E, h5km, MD3.4, Error ellipse: s-maj=2.7km s-min=1.3km az=4.0*
*ISCJB **14** 19:39:19.0±0.4, 3688N±0.002×2940E±0.003, h23km±4km, Error ellipse: s-maj=4.5km s-min=3.2km az=29.5*
*NEIC **14** 19:39:20.0, 3696N×2928E, h10km, MD3.6(ISK), ML3.2(ATH), After ATH.*
*DDA **14** 19:39:21.5, 37.16N×2927E, h8km±5km, Md3.4*
*GII **14** 19:39:23.3±1.3, 3676N×2929E, h50km, mb4.0/1, ML3.7/2*

ISC 14 19:39:19.3±0.5, 3693N±0.002×2935E±0.003, h12km±3km, n60, σ1§08/74, 3C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**29**	⇑*i*P		**Pg**	**19 39 25.1**	**-1.2**
GOLH				*i* S		**Sg**	**19 39 31.4**	**+0.3**
FETY	**Fethiye**	**0.36**	**216**	PG		**Pg**	**19 39 25.0**	**-1.5**
FETY				*e*SG		**Sg**	**19 39 31.4**	**+0.1**
ELL	**Elmali**	**0.48**	**111**	*e*PG		**Pg**	**19 39 28.6**	**-0.1**
ELL				*e*SG		**Sg**	**19 39 36.7**	**+1.6**
TURN	**Turunc**	**0.60**	**265**	⇓*i*P		**Pg**	**19 39 34.1**	**+3.2**
TURN				*i* S		**Sg**	**19 39 43.0**	**+4.2**
TURN	**Turunc**	**0.60**	**265**	*i* S		**Sg**	**19 39 43.0**	**+4.2**
KSL	**Kastellorizon**	**0.80**	**166**	*e*P		**Pg**	**19 39 35.0**	**+0.3**
DENT	**Denizli**	**0.86**	**343**	*e*PG		**Pg**	**19 39 33.0**	**-3.0**
YER	**Yerkesik**	**0.88**	**284**	*e*PG		**Pg**	**19 39 35.0**	**-1.2**
ANTB	**Antalya**	**1.05**	**91**	*e*PN		**Pn**	**19 39 39.4**	**-0.4**
BCK	**Bucak**	**1.12**	**61**	*e*PN		**Pn**	**19 39 38.8**	**-2.1**
ARG	**Arkhangelos**	**1.21**	**235**	*e*P		**Pn**	**19 39 40.5**	**-1.5**
ARG	**Arkhangelos**	**1.21**	**235**	P		**Pn**	**19 39 41.2**	**-0.8**
ISP	**Isparta**	**1.30**	**45**	*e*PN		**Pn**	**19 39 42.0**	**-1.2**
ISP	**Isparta**	**1.30**	**45**	P		**Pn**	**19 39 43.7**	**+0.4**
MLSB	**Milas**	**1.31**	**287**	*e*PN		**Pn**	**19 39 43.2**	**-0.2**
AYDN	**Tasoluk**	**1.38**	**302**	⇓*i*P		**Pn**	**19 39 44.0**	**-0.4**
AYDN				*i* S		**Sn**	**19 40 01.9**	**-0.7**
KHL	**Karahalli**	**1.40**	**6**	*e*PN		**Pn**	**19 39 43.4**	**-1.3**
DAT	**Datca**	**1.43**	**263**	*e*PN		**Pn**	**19 39 45.1**	**0.0**
BDRM	**Kayabasi**	**1.53**	**276**	*e*P		**Pn**	**19 39 46.1**	**-0.3**
BDRM				*i* S		**Sn**	**19 40 07.0**	**+0.7**
BODT	**Bodrum**	**1.64**	**275**	*e*PN		**Pn**	**19 39 48.2**	**+0.3**
KULA	**Kula-Manisa**	**1.68**	**341**	*e*PN		**Pn**	**19 39 47.3**	**-1.1**
NISR	**Nisiros**	**1.81**	**261**	*e*P		**Pn**	**19 39 52.0**	**+1.7**
SHUT	**Suhut-Afyon**	**1.88**	**30**	*e*PN		**Pn**	**19 39 51.1**	**-0.2**
SMG	**Samos**	**2.15**	**292**	⇓*i*P		**Pn**	**19 39 54.6**	**-0.3**
KARP	**Karpathos**	**2.24**	**233**	⇑*i*P		**Pn**	**19 39 57.4**	**+1.2**
KARP	**Karpathos**	**2.24**	**233**	P		**Pn**	**19 39 58.0**	**+1.8**
AKS	**Akhisar**	**2.30**	**329**	*e*PN		**Pn**	**19 39 56.4**	**-0.6**
BLCB	**Balcova**	**2.34**	**309**	*e*PN		**Pn**	**19 39 57.0**	**-0.6**
HDMB	**Hadim**	**2.51**	**88**	*e*PN		**Pn**	**19 40 01.2**	**+1.3**
KONT	**Konya--Tatoy**	**2.60**	**66**	*e*PN		**Pn**	**19 40 02.7**	**+1.5**
LADK	**Ladik-KONYA**	**2.71**	**61**	*e*PN		**Pn**	**19 40 03.3**	**+0.6**
KIZT	**Kizilcal**	**2.79**	**45**	*e*PN		**Pn**	**19 40 04.9**	**+1.1**
APE	**Apeiranthos**	**3.06**	**274**	*e*P		**Pn**	**19 40 08.3**	**+0.9**
CAVI	**Cavuskoy**	**3.29**	**7**	*e*PN		**Pn**	**19 40 10.0**	**-0.7**
PRK	**Paraskevi**	**3.35**	**315**	*e*P		**Pn**	**19 40 11.4**	**-0.1**
LEF	**Lefka**	**3.39**	**121**	*e*PN		**Pn**	**19 40 13.4**	**+1.4**
NPS	**Neapolis**	**3.45**	**242**	*e*P		**Pn**	**19 40 13.7**	**+0.9**
NPS	**Neapolis**	**3.45**	**242**	P		**Pn**	**19 40 14.1**	**+1.3**
IKL	**Isikli**	**3.56**	**100**	*e*PN		**Pn**	**19 40 16.4**	**+2.1**
LFK	**Lefkose**	**3.77**	**115**	*e*PN		**Pn**	**19 40 18.5**	**+1.4**
IDI	**Anoyia**	**3.96**	**247**	P		**Pn**	**19 40 22.0**	**+2.1**
LIA	**Limnos Island**	**4.42**	**313**	P		**Pn**	**19 40 27.2**	**+1.1**
NVR	**Nevrokopi**	**6.11**	**318**	P		**Pn**	**19 40 51.3**	**+1.6**
MMC2	**Mount Meron ar**	**6.32**	**126**	Pn		**Pn**	**19 40 52.3**	**+0.1**
MMA0	**Mount Meron ar**	**6.32**	**126**	Pn		**Pn**	**19 40 52.2**	**-0.1**
MMA0				Sn		**Sn**	**19 42 04.2**	**-0.2**
MMA1	**Mount Meron ar**	**6.32**	**126**	Pn		**Pn**	**19 40 52.3**	**+0.1**
MMLI	**Mount Malkishu**	**6.71**	**130**	Pn		**Pn**	**19 40 58.2**	**+0.5**
MMLI				Sn		**Sn**	**19 42 13.3**	**-0.8**
HMDT	**Nahal Hemdat**	**6.91**	**131**	Pn		**Pn**	**19 41 01.2**	**+0.9**
HMDT				Sn		**Sn**	**19 42 18.2**	**-0.6**
AMAG	**Maghara**	**7.04**	**152**	P		**Pn**	**19 41 01.3**	**-0.9**
DSI	**Dead Sea**	**7.31**	**135**	Pn		**Pn**	**19 41 06.4**	**+0.5**
GLL	**Jalalah**	**7.59**	**164**	P		**Pn**	**19 41 09.2**	**-0.5**
HNKL	**Nakhl**	**7.98**	**150**	P		**Pn**	**19 41 14.2**	**-0.8**
HNKL				S		**Sn**	**19 42 40.2**	**-5.1**
HNKL	**Nakhl**	**7.98**	**150**	P		**Pn**	**19 41 14.2**	**-0.9**
HNKL				S		**Sn**	**19 42 40.2**	**-5.1**
PRNI	**Paran**	**8.07**	**143**	Pn		**Pn**	**19 41 16.8**	**+0.4**
PRNI				Sn		**Sn**	**19 42 45.2**	**-2.5**
MBRI	**Mt Berech**	**8.50**	**145**	Pn		**Pn**	**19 41 23.0**	**+0.8**
EIL	**Elat**	**8.62**	**145**	Pn		**Pn**	**19 41 24.1**	**+0.2**
EIL				Sn		**Sn**	**19 42 57.5**	**-3.5**
HKAT	**Jabal Katrina**	**9.25**	**154**	P		**Pn**	**19 41 31.6**	**-0.9**
TR2		**9.28**	**155**	P		**Pn**	**19 41 31.9**	**-1.0**
TR2				S		**Sn**	**19 43 11.3**	**-5.9**
HFRF	**Wahat Farafira**	**9.79**	**185**	P		**Pn**	**19 41 37.9**	**-2.0**
HHRG	**Al Ghardaqah**	**10.32**	**159**	P		**Pn**	**19 41 46.0**	**-1.1**

IDC 14 19:56:34.6±6.8, 200S×13934E, h0km, mb3.8/2, mb1 4.2/4, mb1mx3.7/14, mbtmp4.1/4, ML4.2/2, Error ellipse: s-maj=96.8km s-min=63.4km az=16.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**17.58**	**242**	P		Pn	20 00 41.2	0.0
	1.2nm,0.3s,baz=209,slow=3.7,SNR=5.7							
WRA	**Warramunga Arr**	**18.49**	**195**	P		Pn	20 00 51.9	-0.5
	0.6nm,0.3s,baz=19,slow=12,SNR=26							

ASAR	**Alice Springs**	**22.17**	**193**	P		**P**	20 01 32.2	-0.1
	2.5nm,0.8s,baz=11,slow=10,SNR=31							
STKA	**Stephens Creek**	**29.79**	**176**	P		**P**	20 02 43.6	+0.4
	0.6nm,0.5s,baz=332,slow=19,SNR=3.5							

*IDC **14** 20:03:27.7±1.9, 4305N×10493W, h0km, mb3.8/5, mb1 3.9/9, mb1mx3.7/24, mbtmp3.7/9, ML3.6/4, Error ellipse: s-maj=49.5km s-min=9.8km az=152.0*
*ISCJB **14** 20:03:30.5±0.4, 4374N±0.004×10522W±0.005, h0km, mb3.9/3, Error ellipse: s-maj=5.4km s-min=5.1km az=157.2*
*NEIC **14** 20:03:32.1±0.3, 4373N×10524W, h0km, ML3.3, Error ellipse: s-maj=4.3km s-min=4.1km az=180.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 14 20:03:32.1±0.4, 4374N±0.004×10521W±0.005, h0km, n46, σ0§88/48, mb3.9/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**65**	*e*P		**Pg**	**20 03 50.0**	**+0.1**
PHWY	**Pilot Hill**	**2.44**	**184**	*e*P		**Pn**	**20 04 13.3**	**+0.1**
RWWY	**Rawlins**	**2.52**	**216**	*e*P		**Pn**	**20 04 14.3**	**0.0**
LAO	**LASA Array**	**3.03**	**347**	*e*P		**Pn**	**20 04 21.5**	**+0.2**
RLMT	**Red Lodge**	**3.22**	**297**	*e*P		**Pn**	**20 04 23.3**	**-0.5**
BW06	**Boulder Array**	**3.32**	**254**	*e*P		**Pn**	**20 04 24.2**	**-1.1**
PDAR	**Pinedale Array**	**3.32**	**254**	Pn		**Pn**	**20 04 24.6**	**-0.6**
	4.8nm,0.3s,baz=70,slow=15,SNR=61							
PDAR				Sn		**Sn**	**20 05 09.5**	**+4.2**
	21nm,0.3s,baz=256,slow=12,SNR=9.7							
PDAR	**Pinedale Array**	**3.32**	**254**	Pn		**Pn**	**20 04 24.6**	**-0.6**
PDAR				Sn		**Sn**	**20 05 09.5**	**+4.2**
OGNE	**Ogallala**	**3.66**	**139**	*e*P		**Pn**	**20 04 30.4**	**+0.6**
GCMT	**Greycliff**	**3.78**	**304**	*e*P		**Pn**	**20 04 31.8**	**+0.3**
LKWY	**Lake**	**3.82**	**284**	*e*P		**Pn**	**20 04 34.1**	**+1.9**
LOHW	**Long Hollow**	**3.91**	**270**	*e*P		**Pn**	**20 04 33.4**	**0.0**
ISCO	**Idaho Springs**	**3.95**	**184**	*e*P		**Pn**	**20 04 33.7**	**-0.2**
MOOW	**Moose Ponds**	**4.01**	**272**	*e*P		**Pn**	**20 04 34.8**	**+0.1**
SNOW	**Snow King Moun**	**4.04**	**268**	*e*P		**Pn**	**20 04 37.2**	**+2.1**
REDW	**Red Top Meadow**	**4.12**	**267**	*e*P		**Pn**	**20 04 36.0**	**-0.2**
IMW	**Indian Meadow**	**4.15**	**274**	*e*P		**Pn**	**20 04 36.7**	**+0.1**
TPAW	**Teton Pass**	**4.17**	**269**	*e*P		**Pn**	**20 04 37.0**	**+0.1**
DCID1	**Drake Creek**	**4.34**	**270**	*e*P		**Pn**	**20 04 39.5**	**+0.3**
AHID	**Auburn Hatcher**	**4.41**	**259**	P		**Pn**	**20 04 42.0**	**+1.8**
RRI2	**Red Ridge**	**4.46**	**267**	*e*P		**Pn**	**20 04 40.5**	**-0.4**
QLMT	**Earthquake Lak**	**4.60**	**286**	*e*P		**Pn**	**20 04 42.5**	**-0.2**
SMCO	**Snowmass**	**4.75**	**197**	*e*P		**Pn**	**20 04 45.1**	**+0.3**
DGMT	**Dagmar**	**4.78**	**8**	*e*P		**Pn**	**20 04 47.1**	**+1.8**
BOZ	**Bozeman (W)**	**4.96**	**295**	*e*P		**Pn**	**20 04 46.7**	**-1.0**
HWUT	**Hardware Ranch**	**5.15**	**248**	*e*P		**Pn**	**20 04 49.3**	**-1.1**
	15nm,0.4s							
EGMT	**Eagleton**	**5.33**	**325**	*e*P		**Pn**	**20 04 52.6**	**-0.3**
	22nm,0.5s							
DLMT	**Dillon**	**5.52**	**290**	*e*P		**Pn**	**20 04 54.8**	**-0.6**
	14nm,0.4s							
MCMT	**McKenzie Canyo**	**5.59**	**284**	P		**Pn**	**20 04 58.1**	**+1.7**
SDCO	**Great Sand Dun**	**5.99**	**182**	*e*P		**Pn**	**20 05 02.5**	**+0.5**
	2.3nm,0.4s							
PV01	**Paradox Valley**	**6.15**	**206**	*e*P		**Pn**	**20 05 04.5**	**+0.4**
ECSD	**EROS,Sioux Fal**	**6.23**	**87**	*e*P		**Pn**	**20 05 05.2**	**0.0**
	6.7nm,0.4s							
CHMT	**Chamberlain Mo**	**6.50**	**302**	*e*P		**Pn**	**20 05 07.8**	**-1.0**
HLID	**Hailey**	**6.68**	**272**	*e*P		**Pn**	**20 05 12.3**	**+0.9**
	2.3nm,0.6s							
DUG	**Dugway**	**6.68**	**241**	*e*P		**Pn**	**20 05 10.9**	**-0.5**
	6.3nm,0.4s							
ELK	**Elko**	**8.02**	**252**	Pn		**Pn**	**20 05 28.8**	**-0.9**
	0.2nm,0.3s,baz=69,slow=14,SNR=3.3							
ELK	**Elko**	**8.02**	**252**	Pn		**Pn**	**20 05 28.8**	**-0.9**
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn		**Pn**	**20 05 44.0**	**-0.7**
	2.6nm,0.3s,baz=231,slow=11,SNR=8.8							
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn		**Pn**	**20 05 44.0**	**-0.7**
WUAZ	**Wupatki**	**9.49**	**212**	*e*P		**Pn**	**20 05 49.9**	**0.0**
	6.6nm,0.5s							
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn		**Pn**	**20 06 10.5**	**-3.0**
	0.2nm,0.3s,baz=50,slow=14,SNR=6.1							
YKA	**Yellowknife Ar**	**19.57**	**347**	P		**Pn**	**20 08 02.8**	**+0.4**
	0.6nm,0.5s,baz=154,slow=8.4,SNR=6.1							
ARCES	**ARCESS Array B**	**61.40**	**18**	P		**P**	**20 13 48.0**	**-1.3**
	2.4nm,0.8s,baz=339,slow=6.5,SNR=12							
ZALV	**Zalesovo Beam**	**82.31**	**354**	P		**P**	**20 15 54.1**	**-1.1**
	0.7nm,0.5s,mb4.1,baz=35,slow=7.9,SNR=4.3							
SONM	**Songino Array**	**84.65**	**339**	P		**P**	**20 16 07.8**	**+0.5**
	0.3nm,0.5s,mb3.8,baz=46,slow=6.2,SNR=2.8							
MKAR	**Makanchi Array**	**89.61**	**355**	P		**P**	**20 16 30.9**	**-0.4**
	0.5nm,0.6s,mb3.9,baz=352,slow=4.4,SNR=3.2							

*IDC **14** 20:22:11.1±1.3, 6.13S×130.40E, h0km, mb3.8/4, mb1 4.1/7, mb1mx3.9/13, mbtmp3.9/7, ML4.1/3, Error ellipse: s-maj=49.9km s-min=20.7km az=69.0*
*NEIC **14** 20:22:16.4±1.4, 6.20S×130.24E, h35km, mb3.6/1, Error ellipse: s-maj=93.8km s-min=11.1km az=66.0*
*ISCJB **14** 20:22:30.9±3.0, 7.2S±0.1×129.4E±0.1, h198km±32km, mb3.5/4, Error ellipse: s-maj=32.5km s-min=9.6km az=44.3*

ISC 14 20:22:26.7±3.0, 7.0S±0.1×129.6E±0.1, h137km±31km, n12, σ1§39/15, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.35**	**154**	*e*P		Px	20 23 51.1	
	5.8nm,0.2s							
KAKA				*e*S		Sx	20 24 58.7	
BATI	**Baumata**	**6.66**	**241**	Pn		**Pn**	**20 24 06.2**	**+4.1**
	2.8nm,0.3s,baz=74,slow=1.3,SNR=9.2							
BATI				Sn		**Sn**	**20 25 16.8**	**+0.1**
	10nm,0.3s,baz=132,slow=15,SNR=13							
WRAB	**Tennant Creek**	**13.68**	**161**	*e*P		**Pn**	**20 25 33.9**	**-1.1**
WRA	**Warramunga Arr**	**13.68**	**161**	Pn		**Pn**	**20 25 36.1**	**+0.9**
	0.9nm,0.3s,baz=336,slow=12,SNR=27							
WRA				Sn		**Sn**	**20 28 03.3**	**-3.2**
	1.4nm,0.3s,baz=29,slow=20,SNR=8.1							
WB2	**Warramunga Arr**	**13.69**	**161**	*e*P		**Pn**	**20 25 37.1**	**+1.9**
WB2				*e*S		**Sn**	**20 28 02.5**	**-4.1**
ASAR	**Alice Springs**	**17.10**	**166**	P		**Pn**	**20 26 21.1**	**+3.6**
	0.9nm,0.3s,baz=345,slow=9.9,SNR=116							
ASAR				S		**S**	**20 29 27.6**	**-0.3**
	0.4nm,0.3s,baz=13,slow=5.8,SNR=7.6							
STKA	**Stephens Creek**	**27.19**	**157**	*e*P		**P**	**20 27 59.9**	**+2.4**
	2.6nm,2.0s,mb3.5							
STKA	**Stephens Creek**	**27.19**	**157**	P		**P**	**20 27 59.7**	**+2.2**
	0.8nm,0.4s,mb3.7,baz=1.2,slow=8.1,SNR=4.6							
CMAR	**Chiang Mai Arr**	**39.40**	**310**	P		**P**	**20 29 42.5**	**-0.7**
	0.5nm,0.4s,mb3.5,baz=140,slow=6.7,SNR=5.1							
MKAR	**Makanchi Array**	**67.98**	**327**	P		**P**	**20 33 11.2**	**+0.3**
	0.8nm,0.4s,mb3.8,baz=116,slow=8.4,SNR=22							
ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	**20 33 30.3**	**-1.3**
	0.3nm,0.4s,mb3.4,baz=176,slow=6.6,SNR=2.4							
ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	**20 33 30.3**	**-1.3**

*HLW **14** 20:30:25.0, 1965N×3837E, h20km, Mb3.0*
*ISCJB **14** 20:30:28.0±1.6, 203N±0.1×3842E±0.06, h10km, Error ellipse: s-maj=19.3km s-min=7.4km az=13.4*
*CSEM **14** 20:30:30.4±0.5, 2027N×3840E, h35km, ML3.1, Error ellipse: s-maj=17.3km s-min=4.2km az=6.0*
*SGS **14** 20:30:31.0, 2010N×3851E, h27km*

ISC 14 20:30:29.0±1.6, 203N±0.1×3849E±0.06, h10km, n9, σ0§90/11, 1D, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHBS		**1.35**	**56**	P		**Pn**	**20 30 53.3**	**-0.5**
SHMS		**1.64**	**43**	P		**Pn**	**20 30 58.1**	**+0.2**
SHMS				S		**Sn**	**20 31 18.2**	**-0.8**
LTHS	**Al Lith**	**1.80**	**89**	P		**Pn**	**20 30 58.8**	**-1.3**
FRAS	**Faraa**	**2.06**	**67**	P		**Pn**	**20 31 04.6**	**+0.9**
FDAS		**2.35**	**47**	P		**Pn**	**20 31 09.9**	**+2.2**
HSHL	**Bi'r Shalatayn**	**4.05**	**315**	P		**Pn**	**20 31 30.0**	**-1.0**
HAGS	**Hagol**	**5.24**	**322**	P		**Pn**	**20 31 47.8**	**+0.4**
EMRS	**Mersa Alam**	**5.82**	**325**	P		**Pn**	**20 31 55.6**	**+0.2**
HADB		**6.21**	**326**	⇓*i*P		**Pn**	**20 32 01.1**	**+0.4**
HADB				S		**Sn**	**20 33 11.5**	**-0.2**

*NEIC **14** 20:47:33.9, 41.13N×2014E, h3km, MD3.5(ATH), ML3.1(PDG), After PDG.*
*PDG **14** 20:47:33.9±0.5, 41.13N×2014E, h3km±1km, MD3.2/1, ML3.1/10, Error ellipse: s-maj=2.3km s-min=3.1km az=0.0*
*THE **14** 20:47:34.9, 4142N×2033E, h0km±3km, ML3.4/5, Error ellipse: s-maj=4.2km s-min=1.2km az=357.0*
*ATH **14** 20:47:34.3, 4158N×2029E, h45km, MD3.5/4*
*TIR **14** 20:47:34.3±3.4, 4125N×2025E, h8km±50km, ML3.1*
*CSEM **14** 20:47:34.7±0.1, 4137N×2033E, h2km, ML3.0, Error ellipse: s-maj=2.3km s-min=1.7km az=44.0*
*BEO **14** 20:47:35.6±0.6, 4130N×2033E, h3km±3km, ML3.0/10*
*ISCJB **14** 20:47:36.1±0.3, 4135N±0.002×2031E±0.003, h10km, Error ellipse: s-maj=3.5km s-min=2.1km az=137.1*

ISC 14 20:47:36.6±0.3, 4133N±0.002×2031E±0.003, h10km, n45, σ1§24/81, 4C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**273**	P		**Pg**	**20 47 41.3**	**-1.9**
TIR				S		**Sg**	**20 47 47.1**	**-0.6**
TIR	**Tirane**	**0.33**	**273**	*e*P		**Pg**	**20 47 41.4**	**-1.9**
TIR	**Tirane**	**0.33**	**273**	*e*PG		**Pg**	**20 47 41.5**	**-1.7**
TIR				*i* SG		**Sg**	**20 47 46.3**	**-1.4**
TIR	**Tirane**	**0.33**	**273**	*e*Pg		**Pg**	**20 47 41.4**	**-1.8**
TIR				*e*Sg		**Sg**	**20 47 47.1**	**-0.6**
PHP	**Peshkopia**	**0.37**	**16**	*e*PG		**Pg**	**20 47 42.5**	**-1.4**
LACI	**Lac**	**0.55**	**305**	*e*PG		**Pg**	**20 47 45.2**	**-2.0**
LACI				*i* SG		**Sg**	**20 47 53.2**	**-1.2**
PUK	**Puka**	**0.78**	**337**	*e*PG		**Pg**	**20 47 50.0**	**-1.6**
PUK				*i* SG		**Sg**	**20 48 02.5**	**+0.7**
KBN	**Korca**	**0.79**	**153**	*e*PG		**Pg**	**20 47 50.9**	**-1.0**
FNA	**Florina**	**0.97**	**124**	P		**Pg**	**20 47 53.0**	**-2.4**
FNA				S		**Sg**	**20 48 07.9**	**-0.1**
ULC	**Ulcinj**	**1.02**	**309**	⇑*i*Pg		**Pg**	**20 47 53.4**	**-2.8**
ULC				*e*Sg		**Sg**	**20 48 10.7**	**+1.3**
ULC	**Ulcinj**	**1.02**	**309**	*i* PG		**Pg**	**20 47 53.4**	**-2.8**
ULC				*i* SG		**Sg**	**20 48 10.7**	**+1.3**
PVY	**Plav**	**1.29**	**349**	⇓*i*Pg		**Pg**	**20 48 02.0**	**+0.6**
PVY				*e*Sg		**Sg**	**20 48 19.4**	**+5.8**
PDG	**Podgorica**	**1.35**	**325**	*i* PG		**Pg**	**20 47 59.8**	**-2.7**
PDG				*i* SG		**Sg**	**20 48 23.8**	**+3.7**
TTG	**Podgorica**	**1.35**	**325**	⇑*i*Pg		**Pg**	**20 47 59.8**	**-2.7**
TTG				*e*Sg		**Sg**	**20 48 23.8**	**+3.7**
BUM	**Brajici-Budva**	**1.43**	**313**	⇓*i*Pg		**Pg**	**20 48 01.5**	**-2.6**
BUM				*e*Sg		**Sg**	**20 48 24.8**	**+2.1**
BUM	**Brajici-Budva**	**1.43**	**313**	*i* PG		**Pg**	**20 48 01.5**	**-2.6**
BUM				*i* SG		**Sg**	**20 48 24.8**	**+2.1**
KZN	**Kozani**	**1.51**	**132**	*e*P		**Pn**	**20 48 03.1**	**-0.6**
KZN				*e*S		**Sn**	**20 48 23.6**	**+0.2**
BEY	**Berane**	**1.57**	**349**	*i* PG		**Pg**	**20 48 06.4**	**-0.4**
BEY				*i* SG		**Sg**	**20 48 31.4**	**+4.2**
IVA	**Berane**	**1.57**	**349**	⇓*i*Pn		**Pg**	**20 48 06.4**	**-0.4**
IVA				*e*Sn		**Sg**	**20 48 31.4**	**+4.2**
GRG	**Griva**	**1.62**	**103**	P		**Pn**	**20 48 04.2**	**-1.1**
GRG				S		**Sn**	**20 48 26.9**	**+0.7**
KEK	**Kerkira**	**1.66**	**194**	*e*P		**Pn**	**20 48 05.3**	**-0.5**
KEK				*e*S		**Sn**	**20 48 28.5**	**+1.4**
JAN	**Janina**	**1.72**	**166**	*e*P		**Pn**	**20 48 07.0**	**-0.4**
JAN	**Janina**	**1.72**	**166**	*e*P		**

CHOS	**Chios island**	**1.59**	**116**	P		**Pn**	**20 53 31.6**	**+0.5**
CHOS				S		**Sn**	**20 53 51.6**	**+0.2**
LIT	**Litokhoron**	**1.68**	**307**	P		**Pn**	**20 53 31.9**	**-0.4**
LIT				S		**Sn**	**20 53 53.4**	**-0.2**
HORT	**Hortiatis**	**1.73**	**330**	P		**Pn**	**20 53 33.3**	**+0.3**
HORT				S		**Sn**	**20 53 54.3**	**-0.5**
DID	**Didima**	**1.79**	**207**	P		**Pn**	**20 53 33.1**	**-0.6**
DID				S		**Sn**	**20 53 56.5**	**+0.3**
THL	**Klokotos Trika**	**1.79**	**285**	P		**Pn**	**20 53 33.6**	**-0.2**
THL	**Klokotos Trika**	**1.79**	**285**	*e*PN		**Pn**	**20 53 33.5**	**-0.3**
THE	**Thessaloniki**	**1.81**	**328**	P		**Pn**	**20 53 34.4**	**+0.3**
SOH	**Sokhos**	**1.84**	**339**	P		**Pn**	**20 53 34.7**	**+0.2**
SOH				S		**Sn**	**20 53 58.3**	**+0.7**
EVR	**Evrytania**	**1.91**	**265**	*e*PB		**Pb**	**20 53 36.0**	**-1.9**
KZN	**Kozani**	**2.25**	**303**	*e*PN		**Pn**	**20 53 40.5**	**+0.4**
NVR	**Nevrokopi**	**2.26**	**353**	*e*PN		**Pn**	**20 53 40.2**	**0.0**
NVR				*e*SN		**Sn**	**20 54 06.7**	**-1.2**
ALN	**Alexandroupoli**	**2.26**	**37**	P		**Pn**	**20 53 39.6**	**-0.7**
ALN				S		**Sn**	**20 54 08.8**	**+0.8**
RDO	**Rodhopi**	**2.26**	**26**	*e*PN		**Pn**	**20 53 39.9**	**-0.4**
APE	**Apeiranthos**	**2.28**	**153**	P		**Pn**	**20 53 40.6**	**+0.1**
APE				S		**Sn**	**20 54 09.5**	**+1.2**
APE	**Apeiranthos**	**2.28**	**153**	*e*Pn		**Pn**	**20 53 40.6**	**+0.1**
APE				S		**Sn**	**20 54 09.5**	**+1.2**
KNT	**Kendrikon**	**2.29**	**334**	P		**Pn**	**20 53 41.8**	**+1.1**
GRG	**Griva**	**2.33**	**323**	P		**Pn**	**20 53 40.9**	**-0.3**
GRG				S		**Sn**	**20 54 09.9**	**+0.4**
RLS	**Riolos of Patr**	**2.42**	**245**	*e*PN		**Pn**	**20 53 43.0**	**+0.6**
SMG	**Samos**	**2.47**	**124**	*e*PN		**Pn**	**20 53 43.7**	**+0.5**
VLI	**Veliai**	**2.60**	**204**	*e*PN		**Pn**	**20 53 44.5**	**-0.4**
ITM	**Ithomi**	**2.65**	**224**	*e*PN		**Pn**	**20 53 46.7**	**+1.0**
JAN	**Janina**	**2.69**	**283**	*e*Pb		**Pb**	**20 53 50.5**	**-0.6**
FNA	**Florina**	**2.77**	**308**	P		**Pn**	**20 53 48.0**	**+0.8**
THR3	**Thira Island,**	**2.85**	**161**	P		**Pn**	**20 53 49.3**	**+1.0**
PYL	**PYLOS**	**2.96**	**223**	P		**Pn**	**20 53 51.6**	**+1.7**
VLS	**Valsamata**	**3.01**	**253**	*e*Pb		**Pb**	**20 53 52.6**	**-4.0**
PLD	**Plovdiv**	**3.01**	**7**	P		**Pn**	**20 53 51.6**	**+1.0**
IGT	**Igoumenitsa**	**3.06**	**279**	P		**Pn**	**20 53 53.8**	**+2.5**
IGT				S		**Sn**	**20 54 29.3**	**+1.6**
KEK	**Kerkira**	**3.49**	**281**	*e*PN		**Pn**	**20 53 57.0**	**-0.2**

ISK ***14*** *20:55:15.9, 3697N×2931E, h11km, MD3.0*
CSEM ***14*** *20:55:15.7±0.2, 3696N×2934E, h5km, MD2.9, Error ellipse: s-maj=5.2km s-min=4.2km az=16.0*
ISCJB ***14*** *20:55:16.7±0.6, 3695N±004×2935E±004, h10km, Error ellipse: s-maj=5.6km s-min=4.6km az=170.4*
DDA ***14*** *20:55:19.7, 3720N×2929E, h6km±7km, Md2.9*

ISC 14 20:55:17.0±0.6, 3697N±004×2930E±006, h3km±9km, n11, σ0§96/17, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**38**	⇑*iP*	**Pg**	**20 55 23.0**	**-0.5**
GOLH				*i* S	**Sg**	**20 55 29.1**	**+1.1**
FETY	**Fethiye**	**0.37**	**208**	*e*PG	**Pg**	**20 55 23.1**	**-1.0**
FETY				*e*SG	**Sg**	**20 55 30.2**	**+1.2**
ELL	**Elmali**	**0.53**	**114**	*e*PG	**Pg**	**20 55 26.2**	**-1.0**
ELL				*e*SG	**Sg**	**20 55 35.1**	**+1.0**
TURN	**Turunc**	**0.57**	**261**	*e*P	**Pg**	**20 55 33.2**	**+5.3**
TURN				*e*S	**Sg**	**20 55 41.6**	**+6.4**
TURN	**Turunc**	**0.57**	**261**	*e*S	**Sg**	**20 55 41.6**	**+6.4**
DENT	**Denizli**	**0.81**	**345**	*e*PG	**Pg**	**20 55 32.2**	**-0.4**
YER	**Yerkesik**	**0.83**	**282**	*e*PG	**Pg**	**20 55 32.8**	**-0.2**
MLSB	**Milas**	**1.26**	**286**	*e*PN	**Pn**	**20 55 40.4**	**-1.1**
AYDN	**Tasoluk**	**1.33**	**302**	*e*P	**Pn**	**20 55 42.2**	**-0.2**
AYDN				*e*S	**Sb**	**20 56 00.9**	**+1.0**
BDRM	**Kayabasi**	**1.49**	**274**	*e*P	**Pn**	**20 55 45.0**	**+0.4**
BDRM				*e*S	**Sn**	**20 56 05.9**	**+1.3**
BODT	**Bodrum**	**1.60**	**274**	*e*PN	**Pn**	**20 55 44.5**	**-1.6**

IDC 14 20:56:23.3±2.0, 228N×12741E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/14, mbtmp3.4/3, MS3.9/1, Ms1 4.1/1, ms1mx2.2/9, Error ellipse: s-maj=148.6km s-min=24.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.11**	**163**	P	P	21 01 31.1	+0.1
	0.8nm,0.6s,baz=343,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**26.55**	**167**	P	P	21 02 02.6	-0.4
	0.3nm,0.3s,baz=343,slow=7.3,SNR=6.6						
CMAR	**Chiang Mai Arr**	**32.20**	**302**	LR	LR	21 15 07.7	
	comp=Z,183nm,19.7s,baz=205,slow=35						
MKAR	**Makanchi Array**	**59.13**	**325**	P	P	21 06 26.0	+0.3
	0.3nm,0.7s,baz=134,slow=8.2,SNR=3.1						

NEIC ***14*** *21:08:01.6, 1632N×9848W, h6km, MD3.6(MEX), After MEX.*

MEX 14 21:08:01.6±0.5, 1632N×9848W, h6km±11km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.34**	**78**	*i* P	Pg	21 08 08.0	-0.3
PNIG				*i* S	Sg	21 08 12.9	+0.1
ACX	**Acapulco**	**1.48**	**292**	*i* P	Pn	21 08 25.2	-3.6
ACX				*i* S	Sn	21 08 42.5	-6.0
UTMO	**Huajuapan**	**1.64**	**23**	*e*P	Pn	21 08 27.9	-3.0
UTMO				*i* S	Sn	21 08 47.2	-5.0
VHO	**Vista Hermosa**	**1.83**	**66**	*i* P	Pn	21 08 30.1	-3.5
VHO				*i* S	Sn	21 08 52.9	-4.3
CAIG	**El Cayaco**	**1.86**	**293**	*i* P	Pn	21 08 30.6	-3.5
CAIG				*i* S	Sn	21 08 53.6	-4.2
MEIG	**Mezcala**	**1.94**	**326**	*e*P	Pn	21 08 31.4	-3.6
MEIG				*i* S	Sn	21 08 53.9	-5.8
PPM	**Popocatepetl**	**2.74**	**357**	*e*P	Pn	21 08 41.9	-4.2
PPM				*i* S	Sn	21 09 17.9	-1.6

IDC 14 21:36:30.0±3.4, 351S×15057E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.8/15, mbtmp3.7/6, Error ellipse: s-maj=117.8km s-min=22.5km az=97.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**22.74**	**223**	*e*P	P	21 41 37.9	+4.0
WRA	**Warramunga Arr**	**22.75**	**223**	P	P	21 41 34.5	+0.6
	2.6nm,0.8s,baz=50,slow=9.4,SNR=5.0						
ASAR	**Alice Springs**	**25.71**	**217**	P	P	21 42 01.4	-0.7
	1.8nm,0.7s,baz=52,slow=8.6,SNR=13						
STKA	**Stephens Creek**	**29.45**	**196**	P	P	21 42 36.3	+0.7
	1.8nm,0.8s,baz=25,slow=12,SNR=3.4						
SONM	**Songino Array**	**64.06**	**329**	P	P	21 47 06.6	+0.9
	0.8nm,0.8s,baz=147,slow=6.3,SNR=4.9						
MKAR	**Makanchi Array**	**77.90**	**319**	P	P	21 48 30.7	+0.9
	0.5nm,0.8s,baz=132,slow=3.2,SNR=2.4						
ZALV	**Zalesovo Beam**	**78.85**	**327**	P	P	21 48 33.7	-1.2
	0.3nm,0.4s,baz=117,slow=5.5,SNR=2.9						

NNC ***14*** *21:44:39.0±3.3, 3738N×7038E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=28.8km s-min=17.4km az=165.0*
ISCJB ***14*** *21:44:57.5±0.7, 3869N±004×7056E±007, h76km±10km, mb3.6/3, Error ellipse: s-maj=10.1km s-min=5.7km az=18.7*
BJI ***14*** *21:44:58.2, 3860N×7060E, h64km, ML3.3*
NEIC ***14*** *21:44:58.2±0.8, 3862N×7057E, h65km±10km, mb3.7/2, Error ellipse: s-maj=10.4km s-min=8.1km az=137.0*
IDC ***14*** *21:45:00.0±9.9, 3875N×7061E, h76km±94km, mb3.1/2, mb1 3.4/4, mb1mx3.1/21, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=80.9km s-min=36.2km az=6.0*

ISC 14 21:44:58.6±0.6, 3866N±004×7052E±007, h69km±9km, n30, σ1§13/38, mb3.6/3, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.23**	**34**	*e*Pn	**Pn**	**21 46 01.0**	**+0.5**
AML				Sn	**Sn**	**21 46 49.3**	**+0.7**
KBL	**Kabul**	**4.28**	**197**	*e*Pn	**Pn**	**21 45 59.6**	**-1.6**
KBL				*e*Sn	**Sn**	**21 46 53.9**	**+4.1**
KSH	**Kashi**	**4.33**	**77**	*e*P	**Pn**	**21 46 04.3**	**+2.4**
KSH				S	**Sn**	**21 46 57.3**	**+6.3**
KK31	**Karatay Array**	**4.44**	**360**	⇑Pn	**Pn**	**21 46 05.4**	**+2.1**
	5.3nm,0.5s,baz=182,slow=13,SNR=116						
KK31				⇓Sn	**Sn**	**21 47 13.6**	**+20**
	13nm,0.6s,baz=182,slow=27,SNR=4.9						

UCH	**Uchtor**	**4.69**	**39**	*e*Pn		**Pn**	**21 46 06.4**	**-0.3**
EKS2	**Erkin-Say**	**4.70**	**31**	*e*Pn		**Pn**	**21 46 09.2**	**+2.3**
EKS2				*e*Sn		**Sn**	**21 46 59.2**	**-1.0**
CEP	**Cherat**	**4.96**	**166**	P		**Pn**	**21 46 09.7**	**-0.8**
CEP				S		**Sn**	**21 47 12.0**	**+5.6**
CHCP	**Chirah Chowk**	**5.46**	**155**	P		**Pn**	**21 46 18.6**	**+1.2**
TKM2	**Tokmak 2**	**5.74**	**41**	⇑Pn		**Pn**	**21 46 21.2**	**+0.1**
	14nm,0.9s							
TKM2				⇑Sn		**Sn**	**21 47 39.1**	**+14**
	14nm,0.8s							
TKM2	**Tokmak 2**	**5.74**	**41**	*e*Pn		**Pn**	**21 46 21.8**	**+0.6**
	14nm,0.8s							
TKM2				*e*Sn		**Sn**	**21 47 23.9**	**-1.6**
THW	**Thamme Wali**	**5.94**	**170**	P		**Pn**	**21 46 22.7**	**-1.2**
MK31	**Makanchi Array**	**11.86**	**43**	*e*Pn		**Pn**	**21 47 43.8**	**-0.9**
MKAR	**Makanchi Array**	**11.86**	**43**	P		**Pn**	**21 47 45.0**	**+0.2**
	0.2nm,0.3s,baz=230,slow=15,SNR=8.8							
AB09	**Akbulak array**	**13.05**	**328**	⇓P		**Pn**	**21 47 59.1**	**-1.7**
	2.9nm,0.5s							
KURK	**Kurchatov**	**13.35**	**23**	Pn		**Pn**	**21 48 03.7**	**-1.1**
BVA0	**Borovoye Array**	**14.37**	**360**	⇓P		**Pn**	**21 48 21.8**	**+3.5**
	0.3nm,0.8s,baz=166,slow=11,SNR=8.2							
BRVK	**Borovoye**	**14.40**	**359**	*e*Pn		**Pn**	**21 48 18.8**	**+0.1**
	1.5nm,0.4s							
AKTO	**Aktyubinsk**	**14.74**	**327**	⇓P		**Pn**	**21 48 21.5**	**-1.6**
	0.2nm,0.8s							
ZALV	**Zalesovo Beam**	**18.15**	**28**	P		**Pn**	**21 49 04.6**	**-1.0**
	0.2nm,0.3s,baz=214,slow=12,SNR=6.8							
LSA	**Lhasa**	**19.23**	**111**	*e*P		**Pn**	**21 49 17.7**	**-1.1**
	1.0nm,0.7s							
GNI	**Garni**	**19.96**	**282**	P		**Pn**	**21 49 27.2**	**0.0**
KIV	**Kislovodsk**	**21.52**	**293**	*e*P		**P**	**21 49 41.6**	**-0.1**
ULN	**Ulaanbaatar**	**27.93**	**59**	*e*P		**P**	**21 50 41.1**	**-0.9**
OBN	**Obninsk**	**28.08**	**317**	P		**P**	**21 50 43.4**	**+0.1**
TIRR	**Tirgusor**	**31.77**	**294**	P		**P**	**21 51 17.0**	**+1.0**
PSZ	**Piszkesteto**	**37.40**	**301**	P		**P**	**21 52 05.0**	**+0.5**
TIXI	**Tiksi**	**43.93**	**23**	*e*P		**P**	**21 52 58.0**	**0.0**
	4.2nm,0.9s,mb4.2							
TORD	**Torodi Ar. Bea**	**65.41**	**267**	P		**P**	**21 55 35.4**	**+1.2**
	0.2nm,0.5s,mb3.2,baz=48,slow=4.8,SNR=4.8							
WRA	**Warramunga Arr**	**83.45**	**122**	P		**P**	**21 57 19.3**	**+0.7**
	0.2nm,0.3s,mb3.4,baz=324,slow=4.9,SNR=2.6							
WRA	**Warramunga Arr**	**83.45**	**122**	P		**P**	**21 57 19.3**	**+0.7**

ISCJB ***14*** *21:46:45.8±0.6, 4714N±005×15278E±006, h65km±5km, mb4.1/30, Error ellipse: s-maj=9.3km s-min=3.9km az=140.7*
MOS ***14*** *21:46:46.2±1.0, 4717N×15271E, h70km, mb4.5/14, Error ellipse: s-maj=13.2km s-min=7.9km az=63.6*
IDC ***14*** *21:46:48.0±0.8, 4719N×15267E, h68km±6km, mb3.7/19, mb1 3.9/20, mb1mx3.9/25, mbtmp3.7/20, Error ellipse: s-maj=17.2km s-min=12.2km az=160.0*
NEIC ***14*** *21:46:48.6±0.8, 4721N×15265E, h74km±6km, mb4.4/10, Error ellipse: s-maj=8.3km s-min=4.6km az=147.0*

ISC 14 21:46:48.0±0.5, 4711N±005×15281E±006, h67km±4km, h66km±2.5km: pP-P, n111, σ1§06/121, mb4.1/30, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.91**	**243**	*e*PN	**Pn**	**21 47 43.0**	**-2.6**
KUR				*e*S	**Sn**	**21 48 32.0**	**+1.8**
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax			
	comp=N,300nm,0.7s						
KUR				smax			
	comp=E,240nm,0.7s						
SKR	**Severo-Kuril's**	**4.19**	**30**	*e*PN	**Pn**	**21 47 49.0**	**-0.3**
SKR				*e*S	**Sn**	**21 48 32.5**	**-4.3**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,140nm,0.7s						
SKR				smax			
	comp=E,230nm,0.7s						
SKR				smax			
	comp=Z,90nm,0.7s						
NEM2	**Nemuro 2**	**6.24**	**236**	P	**Pn**	**21 48 16.2**	**-1.1**
NEM2				*e*S	**Sn**	**21 49 22.1**	**-5.1**
JNK	**Nakash**	**6.70**	**241**	P	**Pn**	**21 48 24.3**	**+0.6**
PEA0B	**Petropavlovsk-**	**6.78**	**26**	*e*Pn	**Pn**	**21 48 24.4**	**-0.2**
PEA0B				*e*Sn	**Sn**	**21 49 40.8**	**+0.6**
PETK	**Petropavlovsk-**	**6.78**	**26**	P	**Pn**	**21 48 26.1**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=191,slow=8.5,SNR=10						
PETK				S	**Sn**	**21 49 45.8**	**+5.6**
	comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=2.4						
YSS	**Yuzh-Sakhalins**	**6.88**	**272**	*e*Pn	**Pn**	**21 48 25.4**	**-0.7**
	comp=Z,38nm,0.9s						
YSS	**Yuzh-Sakhalins**	**6.88**	**272**	⇑*e*PN	**Pn**	**21 48 29.4**	**+3.4**
YSS				*e*S	**Sn**	**21 49 42.0**	**-0.7**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
JTKR	**Abashiri--Toko**	**7.00**	**247**	P	**Pn**	**21 48 29.7**	**+2.0**
PET	**Petropavlovsk**	**7.01**	**30**	*e*Pn	**Pn**	**21 48 26.8**	**-1.0**
PET				Sn	**Sn**	**21 49 45.1**	**-0.8**
JAK	**Akkeshi**	**7.07**	**237**	P	**Pn**	**21 48 27.2**	**-1.4**
JAK				*e*S	**Sn**	**21 49 44.0**	**-3.5**
JMP	**Maruseppu**	**7.32**	**248**	P	**Pn**	**21 48 35.2**	**+3.0**
JAR	**Ashorobuto**	**7.44**	**242**	P	**Pn**	**21 48 34.6**	**+0.9**
JAR				*e*S	**Sn**	**21 49 57.5**	**+1.0**
JOB	**Onbets**	**7.62**	**240**	P	**Pn**	**21 48 36.1**	**-0.2**
ASAJ	**Asahikawa**	**7.76**	**251**	P	**Pn**	**21 48 41.9**	**+3.8**
	comp=Z,1.2nm,0.3s,baz=86,slow=13,SNR=7.8						
ASAJ	**Asahikawa**	**7.76**	**251**	P	**Pn**	**21 48 42.1**	**+4.0**
ASAJ	**Asahikawa**	**7.76**	**251**	PN	**Pn**	**21 48 41.9**	**+3.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JKK2	**Kamakawa 2**	**7.78**	**249**	P	**Pn**	**21 48 40.8**	**+2.5**
JCH	**Churui**	**8.08**	**240**	P	**Pn**	**21 48 41.5**	**-1.0**
ERM	**Erimo**	**8.57**	**237**	*e*PN	**Pn**	**21 48 49.2**	**0.0**
JBT2	**Biratori 2**	**8.58**	**243**	P	**Pn**	**21 48 49.3**	**-0.1**
JBT2				*e*S	**Sn**	**21 50 23.7**	**-0.8**
JNBK	**Urakawa-nobuka**	**8.64**	**240**	P	**Pn**	**21 48 48.6**	**-1.5**
JNB	**Noboribetsu**	**9.57**	**245**	P	**Pn**	**21 49 02.7**	**-0.1**
JKB	**Kayabe**	**9.90**	**242**	*e*S	**Sn**	**21 50 50.8**	**-6.0**
JYM2	**Yakumo 2**	**10.18**	**245**	P	**Pn**	**21 49 10.3**	**-0.8**
JANG	**Nango**	**10.58**	**235**	P	**Pn**	**21 49 12.4**	**-4.3**
JANG				*e*S	**Sn**	**21 51 02.9**	**-11**
JRG	**Rokugo**	**11.75**	**233**	P	**Pn**	**21 49 29.1**	**-3.5**
HABR	**Khabarovsk**	**12.03**	**283**	*e*PN	**Pn**	**21 49 37.8**	**+1.5**
HABR				*e*S	**Sn**	**21 51 50.1**	**+1.6**
MAJO	**Matsushiro**	**15.14**	**231**	*e*Pn	**Pn**	**21 50 17.9**	**+0.1**
	comp=Z,11nm,0.8s						
MAJO	**Matsushiro**	**15.14**	**231**	*e*P	**Pn**	**21 50 17.9**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s						
MJAR	**Matsushiro Arr**	**15.14**	**231**	P	**Pn**	**21 50 22.2**	**+4.5**
	comp=Z,0.7nm,0.3s,baz=44,slow=9.2,SNR=9.9						
MJAR	**Matsushiro Arr**	**15.14**	**231**	*e*P	**Pn**	**21 50 16.1**	**-1.7**
MDJ	**Mudanjiang**	**16.35**	**270**	Pn	**Pn**	**21 50 32.6**	**-0.4**
YAK	**Yakutsk**	**19.90**	**327**	P	**Pn**	**21 51 10.3**	**-5.5**
YAK	**Yakutsk**	**19.90**	**327**	*e*P	**Pn**	**21 51 17.0**	**+1.1**
KSRS	**Korea Array**	**20.71**	**251**	P	**P**	**21 51 24.1**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=48,slow=12,SNR=5.8						
KSRS	**Korea Array**	**20.71**	**251**	*e*P	**P**	**21 51 24.0**	**+1.4**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	**31.02**	**289**	P	**P**	**21 52 58.0**	**-0.9**
	comp=Z,0.3nm,0.7s,mb3.1,baz=51,slow=9.8,SNR=3.2						
YHNB	**Yeheng**	**33.55**	**239**	P	**P**	**21 53 19.9**	**-1.4**
IMA2	**Indian Mountai**	**34.63**	**36**	*e*P	**P**	**21 53 21.2**	**-0.3**
KTH	**Kantishna Hill**	**34.62**	**41**	*e*P	**P**	**21 53 30.9**	**+0.8**
	comp=Z,14nm,1.2s,mb4.7						
KTH				*e*	pP	21 53 47.3	+0.8
MCK	**McKinley**	**35.51**	**41**	*e*P	**P**	**21 53 38.1**	**+0.3**
	comp=Z,8.9nm,1.0s,mb4.7						
MCK	**McKinley**	**35.51**	**41**	*e*P	**P**	**21 53 38.1**	**+0.3**
MCK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
COLA	**College**	**35.98**	**39**	*e*P	**P**	**21 53 41.2**	**-0.6**
	comp=Z,7.6nm,0.9s,mb4.6						
COLA				*e*	pP	21 53 58.2	-0.1
COLA	**College**	**35.98**	**39**	*e*P	**P**	**21 53 41.2**	**-0.6**
COLA				*e*	pP	21 53 58.2	0.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
INK	**Inuvik**	**41.46**	**33**	*e*P	**P**	**21 54 28.1**	**+0.5**
	comp=Z,95nm,0.8s						
INK	**Inuvik**	**41.46**	**33**	*e*P	**P**	**21 54 28.1**	**+0.6**
INK				pmax	pmax		
	comp=Z,95nm,0.8s						

ZALV	**Zalesovo Beam**	**42.23**	**305**	P		**P**	**21 54 33.2**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.6,baz=51,slow=9.8,SNR=2.8							
ZALV				PcP	PcP		21 56 26.5	-0.3
	comp=Z,2.6nm,0.7s,baz=90,slow=3.0,SNR=11							
ZALV	**Zalesovo Beam**	**42.23**	**305**	P		**P**	**21 54 33.2**	**-0.8**
ZALV							21 56 26.5	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.9							
DLBC	**Dease Lake**	**45.49**	**46**	P		**P**	**21 55 01.7**	**+1.6**
	comp=Z,2.8nm,0.9s,mb4.0,baz=314,slow=11,SNR=4.3							
MKAR	**Makanchi Array**	**46.59**	**297**	P		**P**	**21 55 07.3**	**-1.6**
	comp=Z,0.2nm,0.4s,mb3.2,baz=60,slow=6.2,SNR=6.0							
MKAR				PcP	PcP		21 56 41.6	-0.2
	comp=Z,1.0nm,0.5s,baz=71,slow=2.2,SNR=14							
KURK	**Kurchatov**	**46.99**	**303**	P		**P**	**21 55 11.2**	**-0.8**
	baz=69,slow=8.6							
KURK	**Kurchatov**	**46.99**	**303**	*e*P		**P**	**21 55 09.9**	**-2.0**
	comp=Z,1.3nm,0.5s,mb3.9							
LSA	**Lhasa**	**50.05**	**273**	*e*P		**P**	**21 55 36.6**	**+0.9**
	comp=Z,1.9nm,0.7s,mb4.1							
LSA	**Lhasa**	**50.05**	**273**	*e*P		**P**	**21 55 36.6**	**+0.9**
LSA				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
BVAR	**Borovoye Array**	**50.47**	**309**	P		**P**	**21 55 36.9**	**-1.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=46,slow=8.6,SNR=4.0							
BVAR				PcP	PcP		21 56 55.3	-0.4
	comp=Z,1.1nm,0.5s,baz=52,slow=1.2,SNR=7.5							
RES	**Resolute Bay**	**50.56**	**19**	*e*P		**P**	**21 55 38.7**	**-0.2**
	comp=Z,169nm,1.1s							
YKA	**Yellowknife Ar**	**50.76**	**37**	P		**P**	**21 55 40.8**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=300,slow=7.1,SNR=7.6							
YKA				pP	pP		21 55 58.0	+0.2
	comp=Z,2.0nm,0.7s,baz=296,slow=7.1,SNR=9.3							
YKA	**Yellowknife Ar**	**50.76**	**37**	P		**P**	**21 55 40.8**	**+0.2**
YKA				pP	pP		21 55 58.0	+0.2
YKA	**Yellowknife Ar**	**50.76**	**37**	P		**P**	**21 55 40.8**	**+0.2**
YKA				*PP	pP		21 55 58.0	+0.2
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
CHTO	**Chiang Mai**	**52.00**	**256**	*e*P		**P**	**21 55 51.4**	**+1.0**
	comp=Z,3.4nm,0.6s,mb4.5							
CHTO	**Chiang Mai**	**52.00**	**256**	*e*P		**P**	**21 55 51.4**	**+0.9**
CHTO				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.5							
CMAR	**Chiang Mai Arr**	**52.26**	**256**	P		**P**	**21 55 52.9**	**+0.5**
	comp=Z,1.5nm,0.8s,mb4.1,baz=33,slow=7.5,SNR=14							
CMAR	**Chiang Mai Arr**	**52.26**	**256**	P		**P**	**21 55 52.9**	**+0.6**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
TAPN	**Taplejung**	**53.87**	**273**	*e*P		**P**	**21 56 04.7**	**+0.5**
EKS2	**Erkin-Say**	**53.91**	**296**	*e*P		**P**	**21 56 03.4**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.9							
AML	**Almayashu**	**54.26**	**296**	P		**P**	**21 56 06.4**	**-0.4**
ARU	**Arti**	**54.60**	**317**	P		**P**	**21 56 08.7**	**-0.4**
ARU	**Arti**	**54.60**	**317**	*d*P		**P**	**21 56 08.4**	**-0.7**
ARU				*e*			21 58 09.8	
ARU				S		**S**	**22 03 40.0**	**-3.3**
ARU				*e*SS		SS	22 07 30.5	+4.4
ARU				pmax	pmax			
	comp=Z,9.0nm,1.7s,mb4.5							
JIRN	**Jiri**	**54.71**	**274**	*e*P		**P**	**21 56 10.9**	**+0.6**
	comp=Z,8.4nm,0.5s,mb5.0							
GUN	**Gumba**	**54.76**	**275**	*e*P		**P**	**21 56 11.2**	**+0.6**
RAMN	**Ramite**	**54.89**	**273**	*e*P		**P**	**21 56 12.0**	**+0.5**
KKN	**Kakani**	**55.25**	**275**	*e*P		**P**	**21 56 14.9**	**+0.8**
DMN	**Daman**	**55.48**	**275**	*e*P		**P**	**21 56 16.9**	**+1.1**
GKN	**Gorkha**	**55.55**	**275**	*e*P		**P**	**21 56 16.6**	**+0.3**
DANN	**Dangsing**	**55.92**	**276**	*e*P		**P**	**21 56 20.1**	**+1.1**
	comp=Z,6.3nm,0.5s,mb4.9	

ISC 14 22:14:55.0±0.7, 1309N±007×8860W±006, h68km±9km, n36, σ0§96/25, mb3.4/4, 1C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.46**	**43**	⇓*i*P	x	22 15 08.0	
BLLM	**Bellamira**	**0.50**	**45**	⇓*i*P	x	22 15 08.1	
SNVI	**San Vicente**	**0.57**	**336**	⇓*i*P	x	22 15 07.4	
SNVI				*e*S	x	22 15 17.6	
LFRS	**El Faro**	**0.69**	**320**	⇓*e*P	x	22 15 07.8	
CNCH	**Conchagua**	**0.77**	**76**	⇓*e*P	x	22 15 11.3	
CNCH				*e*S	x	22 15 25.6	
CAHU	**Cacacuatique**	**0.78**	**29**	⇓*e*P	x	22 15 11.8	
LBRS	**Las Brisas**	**0.78**	**326**	*e*P	x	22 15 09.5	
SNET	**Serv Nac Est T**	**0.85**	**314**	*e*P	x	22 15 09.6	
SNET				*e*S	x	22 15 21.4	
BOQS	**Boqueron**	**0.92**	**314**	⇑*e*P	x	22 15 10.9	
BOQS				*e*S	x	22 15 23.8	
SBLS	**San Blas**	**1.24**	**307**	*e*P	x	22 15 14.9	
SNJE	**San Jose**	**1.25**	**308**	*e*P	x	22 15 14.9	
RTR	**El Retiro**	**1.30**	**308**	*e*P	x	22 15 15.9	
RTR				*e*S	x	22 15 31.7	
RBDL	**Robledal**	**1.47**	**314**	*e*P	x	22 15 18.1	
MTO2	**Montecristo 2**	**1.50**	**331**	⇓*e*P	x	22 15 19.5	
CRIN	**San Cristobal**	**1.56**	**104**	*e*P	**Pn**	**22 15 21.4**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.61**	**53**	*e*Pn	**Pn**	**22 15 23.2**	**+1.9**
TGUH				*e*Sn	**Sn**	**22 15 39.7**	**-1.6**
TGUH	**Tegucigalpa,Un**	**1.61**	**53**	*e*P	**Pn**	**22 15 23.3**	**+2.0**
TGUH				⇓*i*P		22 15 23.3	
TEL3	**Telica 3**	**1.79**	**107**	*e*P	**Pn**	**22 15 23.9**	**+0.2**
MIRN	**Miramar**	**1.95**	**109**	*e*P	**Pn**	**22 15 25.7**	**-0.3**
MOMN	**Momotombo**	**2.12**	**108**	*e*P	**Pn**	**22 15 28.6**	**+0.4**
COPN	**Copaltepe**	**2.16**	**115**	*e*P	**Pn**	**22 15 27.8**	**-0.9**
CSAN		**2.31**	**113**	*e*P	**Pn**	**22 15 30.9**	**+0.2**
CSAN				*e*S	**Sn**	**22 15 58.4**	**+0.3**
APYN	**Apoyeque**	**2.35**	**111**	*e*P	**Pn**	**22 15 31.4**	**+0.1**
APYN				*e*S	**Sn**	**22 15 59.6**	**+0.3**
TICN	**Ticuantepe**	**2.54**	**114**	*e*P	**Pn**	**22 15 34.6**	**+0.8**
CMIG	**Matias Romero**	**7.26**	**304**	P	**Pn**	**22 16 38.5**	**+0.2**
	0.6nm,0.3s,baz=126,slow=8.7,SNR=7.2						
CMIG				S	**Sn**	**22 17 58.3**	**-1.0**
	1.1nm,0.3s,baz=53,slow=20,SNR=3.3						
OTAV	**Otavalo**	**16.25**	**141**	*e*P	**Pn**	**22 18 38.0**	**-1.1**
	1.2nm,0.5s						
ROSC	**El Rosal**	**16.29**	**119**	Pn	**Pn**	**22 18 37.3**	**-2.2**
VBMS	**Vicksburg**	**19.12**	**355**	P	**Pn**	**22 19 12.7**	**-1.3**
TXAR	**Lajitas Array**	**21.37**	**321**	P	**P**	**22 19 38.0**	**+1.1**
	0.7nm,0.6s,mb3.2,baz=142,slow=11,SNR=12						
TXAR				pP		22 19 52.1	
	0.5nm,0.7s,baz=144,slow=13,SNR=4.5						
SJG	**San Juan**	**22.18**	**74**	*e*P	**P**	**22 19 46.0**	**+0.3**
TKL	**Tuckaleechee C**	**22.89**	**10**	P	**P**	**22 19 53.5**	**+0.7**
	1.3nm,0.4s,mb3.6,baz=177,slow=11,SNR=3.2						
BBGH	**Gun Hill**	**28.28**	**87**	*e*P	**P**	**22 20 42.2**	**0.0**
PDAR	**Pinedale Array**	**34.69**	**332**	P	**P**	**22 21 38.9**	**+0.8**
	0.4nm,0.5s,mb3.5,baz=128,slow=11,SNR=4.4						
NVAR	**Mina Array Bea**	**36.49**	**319**	P	**P**	**22 21 54.9**	**+1.3**
	0.3nm,0.5s,mb3.5,baz=133,slow=7.6,SNR=3.2						
YKA	**Yellowknife Ar**	**52.71**	**345**	P	**P**	**22 24 01.0**	**-1.3**
	1.0nm,0.5s,baz=146,slow=6.9,SNR=14						
YKA				pP	pP	22 24 18.2	-1.5
	0.7nm,0.8s,baz=130,slow=8.8,SNR=2.5						
WRA	**Warramunga Arr**	**138.36**	**255**	PKP	PKPdf	22 34 13.2	-0.2
	0.2nm,0.5s,baz=92,slow=2.4,SNR=2.7						
WRA				pPKP	pPKPdf	22 34 00.8	-2.3
	0.3nm,0.8s,baz=92,slow=3.2,SNR=1.8						

ISCJB 14 22:15:49.8±0.3, 4095N±002×11637W±002, h0km, Error ellipse: s-maj=2.7km s-min=2.5km az=3.6
NEIC 14 22:15:52.3±0.6, 4070N×11627W, h0km, Error ellipse: s-maj=13.7km s-min=6.7km az=152.0, Suspected Mining explosion.
NEIC 45 km [30 miles] WSW of Elko.

ISC 14 22:15:50.3±0.3, 4095N±002×11635W±002, h0km, n42, σ1§19/69, 18C-18D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N10A	**Dunphy**	**0.26**	**207**	⇑P	**Pg**	**22 15 55.6**	**+0.3**
	baz=0.3,SNR=11						
N10A				⇑S	**Sg**	**22 16 00.2**	**+1.6**
	baz=0.3						
M10A	**I.L. Ranch, Tu**	**0.59**	**346**	⇓P	**Pg**	**22 16 01.1**	**-0.5**
	baz=0.6,SNR=220						
M10A				⇑S	**Sg**	**22 16 09.5**	**+0.3**
	baz=0.6						
O10A	**Cortez Mining,**	**0.67**	**190**	⇑P	**Pg**	**22 16 03.2**	**+0.2**
	baz=0.7						
O10A				⇑S	**Sg**	**22 16 12.6**	**+0.9**
	baz=0.7						
BMN	**Battle Mountai**	**0.84**	**232**	*e*P	**Pg**	**22 16 05.7**	**-0.7**
N09A	**Rock Creek Ran**	**0.89**	**264**	⇓P	**Pg**	**22 16 07.3**	**-0.1**
	baz=0.9,SNR=56						
N09A				⇑S	**Sg**	**22 16 20.3**	**+1.2**
	baz=0.9						
M09A	**Marrel Ranch,**	**0.95**	**300**	P	**Pg**	**22 16 08.7**	**0.0**
	baz=0.9,SNR=32						
M09A				⇓S	**Sg**	**22 16 21.7**	**+0.7**
	baz=0.9						
O11A	**Cowboy Ranch,**	**0.97**	**147**	⇓P	**Pg**	**22 16 08.9**	**-0.1**
	baz=1.0,SNR=14						
N12A	**Clover Valley,**	**1.00**	**95**	⇓P	**Pg**	**22 16 08.9**	**-0.5**
	baz=1.0						
O09A	**Fish Creek Ran**	**1.01**	**220**	⇓P	**Pg**	**22 16 09.4**	**-0.2**
	baz=1.0,SNR=34						
L10A	**Juniper Basin**	**1.13**	**355**	⇑P	**Pg**	**22 16 11.1**	**-0.9**
	baz=1.1,SNR=87						
L10A				⇓S	**Sg**	**22 16 26.6**	**0.0**
	baz=1.1						
M12A	**Wells**	**1.18**	**66**	⇑P	**Pg**	**22 16 12.3**	**-0.7**
	baz=1.2						
L11A	**Cat Creek Ranc**	**1.30**	**20**	⇓P	**Pg**	**22 16 14.2**	**-1.0**
	baz=1.3,SNR=18						
N08A	**GE Springer Mi**	**1.36**	**263**	⇑S	**Sg**	**22 16 33.8**	**-0.3**
	baz=1.4						
O12A	**Currie**	**1.40**	**119**	⇓P	**Pn**	**22 16 15.9**	**-1.2**
	baz=1.4,SNR=17						
L09A	**Wilkinson Ranc**	**1.46**	**318**	⇑P	**Pn**	**22 16 16.1**	**-1.8**
	baz=1.4,SNR=6.2						
L09A				⇑S	**Sg**	**22 16 36.3**	**-0.8**
	baz=1.4						
P11A	**Circle Ranch,**	**1.47**	**162**	⇓P	**Pn**	**22 16 16.9**	**-1.1**
	baz=1.5,SNR=11						
M08A	**Happy Creek Ra**	**1.61**	**289**	⇓P	**Pn**	**22 16 18.7**	**-1.2**
	baz=1.6,SNR=82						
M08A				⇑S	**Sn**	**22 16 42.5**	**+1.1**
	baz=1.6						
P12A	**McGill**	**1.84**	**143**	⇓P	**Pn**	**22 16 22.2**	**-1.0**
	baz=1.9,SNR=8.6						
K10A	**MacKenzie Ranc**	**1.87**	**348**	⇑P	**Pn**	**22 16 22.7**	**-0.8**
	baz=1.9,SNR=16						
K10A				⇑S	**Sn**	**22 16 48.5**	**+0.7**
	baz=1.9						
L08A	**Fields**	**1.94**	**310**	⇓P	**Pn**	**22 16 23.8**	**-0.7**
	baz=1.9,SNR=10						
N07B	**Gerlach**	**1.99**	**266**	⇓P	**Pn**	**22 16 24.0**	**-1.2**
	baz=2.0,SNR=12						
N07B				⇑S	**Sn**	**22 16 52.6**	**+1.7**
	baz=2.0						
K12A	**Draper Farm, C**	**2.00**	**32**	⇑P	**Pn**	**22 16 24.4**	**-1.0**
	baz=2.0,SNR=32						
K09A	**Rome**	**2.03**	**330**	⇑P	**Pn**	**22 16 25.1**	**-0.6**
	baz=2.0,SNR=13						
O07A	**Toulon**	**2.08**	**249**	⇓S	**Sn**	**22 16 55.0**	**+2.0**
	baz=2.1						
WVOR	**Wild Horse Val**	**2.27**	**312**	*e*Pn	**Pn**	**22 16 29.9**	**+0.9**
WVOR				*e*Sn	**Sn**	**22 17 02.2**	**+4.6**
WVOR				*e*Sg	**Sg**	**22 17 09.6**	**+6.5**
M14A	**Sheep Mountain**	**2.33**	**75**	⇓P	**Pn**	**22 16 28.8**	**-1.1**
	baz=2.3,SNR=7.7						
K13A	**Stover Farm, H**	**2.40**	**44**	⇓P	**Pn**	**22 16 30.5**	**-0.3**
	baz=2.4,SNR=7.2						
PAHR	**Pah Rah Range**	**2.63**	**243**	*e*Pn	**Pn**	**22 16 32.1**	**-1.9**
PAHR				Pg	**Pg**	**22 16 38.7**	**-2.0**
PAHR				*e*Sn	**Sn**	**22 17 00.9**	**-5.7**
PAHR				*e*Sg	**Sg**	**22 17 13.2**	**-1.6**
DUG	**Dugway**	**2.80**	**104**	Pn	**Pn**	**22 16 36.4**	**+0.1**
DUG				Sn	**Sn**	**22 17 13.4**	**+2.6**
P14A	**Drum Mountains**	**2.85**	**117**	⇑P	**Pn**	**22 16 37.0**	**-0.1**
	baz=2.9,SNR=6.8						
TPH	**Tonopah**	**2.95**	**193**	*e*Pn	**Pn**	**22 16 38.6**	**+0.3**
TPH				*e*Pg	**Pg**	**22 16 47.4**	**+0.5**
TPH				Sn	**Sn**	**22 17 11.3**	**-3.1**
TPH				*e*Sg	**Sg**	**22 17 20.3**	**-4.8**
HLID	**Hailey**	**2.98**	**28**	*e*Pn	**Pn**	**22 16 39.1**	**+0.3**
HLID				*e*Pg	**Pg**	**22 16 46.5**	**-1.0**
HLID				*e*Sn	**Sn**	**22 17 25.6**	**+10**
MOD	**Modoc**	**3.12**	**289**	*e*Pn	**Pn**	**22 16 45.8**	**+5.0**
MOD				Pg	**Pg**	**22 16 51.7**	**+1.6**
MOD				Sn	**Sn**	**22 17 19.3**	**+0.6**
MOD				Sg	**Sg**	**22 17 31.0**	**+0.5**
J14A	**Carey**	**3.17**	**41**	⇓P	**Pn**	**22 16 41.7**	**+0.2**
	baz=3.2,SNR=11						
HWUT	**Hardware Ranch**	**3.67**	**78**	*e*Pn	**Pn**	**22 16 50.3**	**+2.0**
HWUT				*e*Pg	**Pg**	**22 17 05.2**	**+4.6**
HWUT				Sn	**Sn**	**22 17 40.2**	**+8.0**
RRI2	**Red Ridge**	**4.44**	**56**	Pn	**Pn**	**22 17 01.6**	**+2.7**
REDW	**Red Top Meadow**	**4.75**	**58**	Pn	**Pn**	**22 17 06.6**	**+3.5**
TPAW	**Teton Pass**	**4.75**	**56**	*e*Pn	**Pn**	**22 17 05.8**	**+2.7**
IMW	**Indian Meadow**	**4.97**	**52**	*e*Pn	**Pn**	**22 17 11.2**	**+5.0**
	5.1nm,0.5s						
MOOW	**Moose Ponds**	**5.01**	**54**	*e*Pn	**Pn**	**22 17 08.9**	**+2.3**
	2.7nm,0.5s						
LOHW	**Long Hollow**	**5.03**	**56**	*e*Pn	**Pn**	**22 17 10.4**	**+3.5**
	4.2nm,0.6s						
DLMT	**Dillon**	**5.20**	**31**	*e*Pn	**Pn**	**22 17 14.6**	**+5.4**
	3.9nm,0.8s						
DLMT				*e*Pg	**Pg**	**22 17 26.5**	**-3.3**

NEIC 14 22:30:12.9, 3732S×17857E, h33km, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.32**	**221**	P	Pb	22 30 21.0	+0.1
MXZ				S	Sb	22 30 25.9	-0.5
PUZ	**Puketiti**	**0.79**	**198**	P	Pn	22 30 27.8	+0.1
PUZ				S	Sn	22 30 38.2	-0.2
MWZ	**Matawai**	**1.31**	**219**	P	Pn	22 30 35.0	+0.2
URZ	**Urewera**	**1.49**	**230**	P	Pn	22 30 37.0	-0.3
KNZ	**Kokohu**	**1.84**	**202**	P	Pn	22 30 40.8	-1.3
TAZ	**Tarawera**	**1.87**	**240**	P	Pn	22 30 42.9	+0.3
KUZ	**Kuaotunu**	**2.35**	**283**	P	Pn	22 30 49.3	+0.1
BKZ	**Black Stump Fm**	**2.46**	**221**	P	Pn	22 30 50.2	-0.5
MKAZ	**Moumakai**	**2.73**	**273**	P	Pn	22 30 54.6	+0.3
NGZ	**Ngauruhoe**	**2.98**	**231**	P	Pn	22 30 57.6	-0.3
TUVZ	**Tukino**	**3.01**	**229**	P	Pn	22 30 57.7	-0.5
MOVZ	**Moawhango**	**3.04**	**226**	P	Pn	22 30 57.5	-1.2
FWVZ	**Far West T-bar**	**3.06**	**230**	P	Pn	22 30 58.5	-0.4
WNVZ	**Wahianoa**	**3.08**	**228**	P	Pn	22 30 58.6	-0.6
WAZ	**Wanganui**	**3.72**	**228**	P	Pn	22 31 07.5	-0.4
MRZ	**Mangatainoka R**	**4.07**	**214**	P	Pn	22 31 09.0	-3.8
OUZ	**Omahuta**	**4.53**	**296**	P	Pn	22 31 21.2	+2.0
TCW	**Tory Channel**	**5.12**	**219**	P	Pn	22 31 22.8	-4.4
THZ	**Tophouse**	**6.23**	**223**	P	Pn	22 31 38.2	-4.3

ISCJB 14 22:31:57.0±0.3, 7835S×10684E±004, h37km, mb4.7/50, MS4.2/6, Error ellipse: s-maj=5.2km s-min=4.6km az=160.2
MOS 14 22:31:57.0±1.5, 7575S×10699E, h33km, mb4.9/22, Error ellipse: s-maj=11.0km s-min=7.7km az=109.2
BJI 14 22:31:58.8, 7605S×10700E, h35km, mB5.2, mb4.7, Ms4.7, Msz4.6
NEIC 14 22:31:58.9±0.2, 7635S×10695E, h35km, mb4.7/17, Error ellipse: s-maj=8.1km s-min=6.4km az=65.0
IDC 14 22:31:58.7±4.0, 7555S×10705E, h32km±28km, mb4.3/13, mb1 4.4/14, mb1mx4.4/16, mbtmp4.3/14, ML5.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.1/10, Error ellipse: s-maj=24.5km s-min=13.7km az=63.0
DJA 14 22:32:02, 7785S×10706E, h25km, Mw5.2/6

ISC 14 22:31:59.2±0.3, 7795S±003×10687E±004, h39km, h39km±1.6km:pP-P, n153, σ1§42/141, mb4.7/50, MS4.2/6, 4C-1D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.84**	**338**	P	**Pn**	**22 32 19.1**	**+4.5**
SKJI	**Sukabumi**	**0.84**	**338**	S	**Sn**	**22 32 31.8**	**+6.1**
LEM	**Lembang**	**1.21**	**38**	P	**Pn**	**22 32 22.4**	**+2.7**
LEM	**Lembang**	**1.21**	**38**	S	**Sn**	**22 32 35.4**	**+0.6**
DBJI	**Dramaga**	**1.23**	**354**	P	**Pn**	**22 32 24.8**	**+4.8**
DBJI	**Dramaga**	**1.23**	**354**	S	**Sn**	**22 32 40.4**	**+5.0**
CBJI	**Citeko**	**1.36**	**359**	P	**Pn**	**22 32 22.3**	**+0.6**
CBJI	**Citeko**	**1.36**	**359**	S	**Sn**	**22 32 39.4**	**+0.9**
SBJI	**Serang**	**1.81**	**336**	P	**Pn**	**22 32 33.6**	**+5.6**
SBJI	**Serang**	**1.81**	**336**	S	**Sn**	**22 32 52.8**	**+3.1**
JCJI	**Jatiwangi**	**1.90**	**47**	P	**Pn**	**22 32 29.7**	**+0.6**
JCJI	**Jatiwangi**	**1.90**	**47**	S	**Sn**	**22 32 52.3**	**+0.5**
BJII	**Banjamegara**	**2.85**	**81**	P	**Pn**	**22 32 42.0**	**-0.3**
XMIS	**Christmas Isla**	**2.93**	**204**	⇓*i*P	**Pn**	**22 32 43.2**	**-0.2**
XMIS	**Christmas Isla**	**2.93**	**204**	P	**Pn**	**22 32 43.1**	**-0.3**
KLI	**Kotabumi**	**3.53**	**325**	P	**Pn**	**22 32 59.7**	**+8.2**
SJI	**Sawahan**	**4.85**	**90**	P	**Pn**	**22 33 10.3**	**+0.5**
TPI	**Tanjungpandan**	**5.06**	**9**	P	**Pn**	**22 33 16.2**	**+3.6**
	115nm,0.4s,2μm0.6nm						
PPBI	**Pangkal Pinang**	**5.64**	**353**	P	**Pn**	**22 33 26.0**	**+5.4**
	89nm,0.7s,1μm0.4nm						
KSI	**Kapahiang**	**5.91**	**314**	P	**Pn**	**22 33 29.8**	**+5.4**
	221nm,0.6s,9μm1.4nm						
KHKI	**Kahang-Kahang**	**8.67**	**94**	P	**Pn**	**22 34 03.8**	**+1.5**
BBKI	**Banjar Baru**	**9.02**	**62**	P	**Pn**	**22 34 12.5**	**+5.5**
	46nm,1.0s						
PDSI	**Padang**	**9.35**	**317**	P	**Pn**	**22 34 20.2**	**+8.7**
	46nm,0.5s,1μm						
COCO	**West Island**	**10.81**	**245**	*e*Pn	**Pn**	**22 34 33.2**	**+1.8**
KAPI	**Kappang**	**13.10**	**79**	Pn	**Pn**	**22 35 02.7**	**-0.2**
	0.4nm,0.3s,baz=240,slow=16,SNR=4.1						
KAPI	**Kappang**	**13.10**	**79**	Pn	**Pn**	**22 35 02.6**	**-0.2**
BATI	**Baumata**	**16.76**	**100**	Pn	**Pn**	**22 35 51.5**	**+0.3**
	10nm,0.3s,baz=294,slow=3.9,SNR=9.5						
BATI				Sn	**Sn**	**22 38 48.9**	**-7.7**
	1.9nm,0.3s,baz=329,slow=18,SNR=3.9						
MBWA	**Marble Bar**	**18.20**	**138**	*e*P	**Pn**	**22 36 06.9**	**-2.0**
	5.3nm,0.3s						
MBWA				*e*Sn	**Sn**	**22 39 11.3**	**-20**
KAKA	**Kakadu**	**25.62**	**103**	*e*P	Px	22 37 10.9	
	21nm,0.6s						
NWAO	**Narrogin (SRO)**	**26.80**	**160**	LR	LR	22 48 05.2	
	comp=Z,123nm,20.4s,MS3.5,baz=183,slow=36						
NWAO	**Narrogin (SRO)**	**26.80**	**160**	P	**P**	**22 37 38.3**	**+2.6**
CMAR	**Chiang Mai Arr**	**27.23**	**343**	P	**P**	**22 37 38.5**	**-1.2**
	3.5nm,0.7s,mb4.0,baz=179,slow=8.8,SNR=19						
CMAR				PcP	PcP	22 41 00.8	+1.5
	1.8nm,0.7s,baz=200,slow=4.0,SNR=5.7						
CHTO	**Chiang Mai**	**27.56**	**344**	*e*P	**P**	**22 37 41.3**	**-1.4**
	3.9nm,0.9s,mb4.0						
CHTO	**Chiang Mai**	**27.56**	**344**	*e*P	**P**	**22 37 41.3**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
WRA	**Warramunga Arr**	**29.22**	**117**	P	**P**	**22 37 56.3**	**-1.2**
	comp=Z,7.2nm,0.8s,mb4.4,baz=291,slow=10,SNR=23						
WRA				PcP	PcP	22 41 04.0	-0.3
	comp=Z,0.5nm,0.4s,baz=307,slow=2.2,SNR=6.8						
WRAB	**Tennant Creek**	**29.23**	**117**	*e*P	**P**	**22 37 56.7**	**-0.8**
	comp=Z,14nm,1.3s,mb4.5						
WRAB	**Tennant Creek**	**29.23**	**117**	*e*P	**P**	**22 37 56.7**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
WB2	**Warramunga Arr**	**29.23**	**117**	*e*P	**P**	**22 37 56.7**	**-0.9**
ASAR	**Alice Springs**	**30.35**	**124**	P	**P**	**22 38 06.7**	**-0.7**
	comp=Z,4.4nm,0.9s,mb4.2,baz=306,slow=8.6,SNR=32						
ASAR				PcP	PcP	22 41 07.5	+0.4
	comp=Z,1.5nm,0.8s,baz=309,slow=2.7,SNR=8.5						
KMI	**Kunming**	**32.96**	**353**	P	**P**	**22 38 34.1**	**+3.8**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
KMI	**Kunming**	**32.96**	**353**	P	**P**	**22 38 34.1**	**+3.8**
	comp=Z,5.0nm,0.9s,mb4.4						
GYA	**Guiyang**	**34.04**	**360**	*e*P	**P**	**22 38 41.9**	**+2.2**
GYA				AP	pP	22 38 51.8	+1.1
GYA				XP	sP	22 38 58.0	+2.6
GYA				PP	PP	22 39 58.0	+0.6
GYA				S	**S**	**22 44 04.6**	**+1.9**
GYA				XS	sS	22 44 21.9	+1.0
GYA				SCP	ScP	22 45 01.3	+2.3
GYA				SCS	ScS	22 49 02.0	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,4.5s						
GYA				LR	LR		
	comp=N,490nm,12.5s,MS4.5						
GYA				LR	LR		
	comp=E,380nm,13.0s,MS4.5						
GYA				LR	LR		
	comp=Z,650nm,12.6s,MS4.6						
NACB	**Ninganchiao**	**34.87**	**24**	P	**P**	**22 38 45.3**	**-1.6**
YHNB	**Yeheng**	**35.22**	**23**	*e*P	**P**	**22 38 47.7**	**-2.3**
	comp=Z,8.4nm,0.7s,mb4.8						
CD2	**Chengdu**	**38.59**	**356**	*e*P	**P**	**22 39 20.8**	**+2.3**
CD2				AP	pP	22 39 30.5	+0.9
CD2				XP	sP	22 39 34.8	+0.5
CD2				S	**S**	**22 45 15.8**	**+3.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,3.8s						
CD2				LR	LR		
	comp=N,120nm,12.2s						
CD2				LR	LR		
	comp=Z,100nm,13.2s,MS3.8						
WHN	**Wuhan**	**38.78**	**10**	P	**P**	**22 39 23.5**	**+3.4**
ODAN	**Odare**	**39.28**	**332**	*e*P	**P**	**22 39 22.7**	**-1.7**
	comp=Z,21nm,0.9s,mb4.9						
TAPN	**Taplejung**	**39.55**	**333**	*e*P	**P**	**22 39 26.0**	**-0.6**
	comp=Z,11nm,0.7s,mb4.7						
RAMN	**Ramite**	**39.73**	**331**	*e*P	**P**	**22 39 27.2**	**-0.9**
	comp=Z,24nm,1.1s,mb4.8						
PMG	**Port Moresby**	**39.86**	**95**	P	**P**	**22 39 28.5**	**-0.9**
CTAO	**Charters Tower**	**40.02**	**112**	*e*P	**P**	**22 39 30.8**	**+0.1**
	comp=Z,9.5nm,0.6s,mb4.7						
CTAO	**Charters Tower**	**40.02**	**112**	*e*P	**P**	**22 39 30.8**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**40.22**	**131**	*e*P	**P**	**22 39 32.5**	**+0.3**
	comp=Z,32nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**40.22**	**131**	P	**P**	**22 39 32.5**	**+0.3**
	comp=Z,33nm,0.7s,mb5.2,baz=305,slow=8.0,SNR=96						
LSA	**Lhasa**	**40.22**	**339**	*e*P	**P**	**22 39 31.6**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.2						
LSA				*e*	pP	22 39 42.8	-0.4
LSA	**Lhasa**	**40.22**	**339**	*e*P	**P**	**22 39 31.6**	**-0.6**
LSA				*e*	pP	22 39 42.8	-0.5
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
JIRN	**Jiri**	**40.52**	**331**	*e*P	**P**	**22 39 33.7**	**-1.0**
	comp=Z,8.0nm,0.4s,mb4.8						
GUN	**Gumba**	**40.88**	**331**	*e*P	**P**	**22 39 36.6**	**-1.1**
NJ2	**Nanjing**	**41.23**	**16**	*e*P	**P**	**22 39 41.4**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
GKN	**Gorkha**	**41.57**	**330**	*e*P	**P**	**22 39 41.8**	**-1.5**
	comp=Z,7.2nm,0.3s,mb4.8						
KOLN	**Koldanda**	**41.91**	**328**	*e*P	**P**	**22 39 45.0**	**-1.1**
	comp=Z,20nm,0.7s,mb4.8						
DANN	**Dangsing**	**42.29**	**329**	*e*P	**P**	**22 39 47.9**	**-1.3**
	comp=Z,17nm,0.5s,mb4.9						
PYUN	**Piuthan**	**42.49**	**328**	*e*P	**P**	**22 39 50.2**	**-0.6**
	comp=Z,6.9nm,0.4s,mb4.7						
GUMO	**Guam**	**43.30**	**61**	P	**P**	**22 39 56.5**	**-1.1**
LZH	**Lanzhou**	**43.73**	**356**	*e*P	**P**	**22 40 02.5**	**+1.8**
LZH				AP	pP	22 40 13.0	+1.1
LZH				XP	sP	22 40 17.5	+1.0
LZH				PP	PP	22 41 46.5	+3.4
LZH				*e*S	**S**	**22 46 28.4**	**0.0**
LZH				XS	sS	22 46 47.2	+0.3
LZH				SS	SS	22 49 37.0	-8.2
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,81nm,4.0s						
LZH				LR	LR		
	comp=E,310nm,13.2s						
LZH				LR	LR		
	comp=Z,560nm,14.7s,MS4.6						
LZH	**Lanzhou**	**43.73**	**356**	*e*P	**P**	**22 40 02.5**	**+1.8**
	comp=Z,13nm,1.0s,mb4.6						
LZH				pP	pP	22 40 13.0	+1.1
LZH				sP	sP	22 40 17.5	+1.0
LZH				PP	PP	22 41 46.5	+3.4
LZH				*e*S	**S**	**22 46 28.4**	**0.0**
LZH				sS	sS	22 46 47.2	+0.3
LZH				SS	SS	22 49 37.0	-8.2
LZH				LR	LR		
	comp=Z,560nm,14.7s,MS4.6						
LZH	**Lanzhou**	**43.73**	**356**	*e*P	**P**	**22 40 02.5**	**+1.8**
LZH				*PP	pP	22 40 13.0	+1.1
LZH				*SP	sP	22 40 17.5	+1.0
LZH						22 41 46.5	
LZH				*e*S	**S**	**22 46 28.4**	**0.0**
LZH				*SS	sS	22 46 47.2	+0.3
LZH				SS	SS

CASY	**Casey**	**58.46**	**178**	P		**P**	**22 41 53.4**	**+2.5**
EKS2	**Erkin-Say**	**58.57**	**332**	*e*P		**P**	**22 41 51.4**	**-0.6**
	comp=Z,1.9nm,0.6s,mb4.3							
EKS2				*e*			22 42 05.9	
MK31	**Makanchi Array**	**58.58**	**340**	*e*P		**P**	**22 41 50.1**	**-1.8**
MK31				*e*		pP	22 42 02.7	-0.8
MKAR	**Makanchi Array**	**58.58**	**340**	P		**P**	**22 41 50.2**	**-1.8**
	comp=Z,2.7nm,0.5s,mb4.5,baz=150,slow=7.1,SNR=24							
MKAR	**Makanchi Array**	**58.58**	**340**	P		**P**	**22 41 50.2**	**-1.8**
MKAR	**Makanchi Array**	**58.58**	**340**	*i* P		**P**	**22 41 50.5**	**-1.5**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.5s							
HABR	**Khabarovsk**	**61.26**	**21**	*e*P		**P**	**22 42 06.5**	**-3.9**
HABR				*e**PP		pP	22 42 16.0	-6.0
HABR				*e**SP		sP	22 42 20.4	-6.1
HABR				*e*			22 42 49.8	
HABR				*e*S		**S**	**22 50 22.8**	**-4.8**
HABR				*e*			22 51 54.7	
HABR				*e*SS		SS	22 54 23.3	-5.4
YSS	**Yuzh-Sakhalins**	**63.13**	**27**	*e*P		**P**	**22 42 20.9**	**-2.0**
KURK	**Kurchatov**	**63.19**	**340**	*e*P		**P**	**22 42 22.2**	**-1.0**
	comp=Z,8.5nm,0.8s,mb4.9							
KURK	**Kurchatov**	**63.19**	**340**⇑	*e*P		**P**	**22 42 23.1**	**-0.1**
KURK				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb5.0							
ZAA0	**Zalesovo Array**	**64.26**	**346**	*e*P		**P**	**22 42 28.8**	**-1.4**
ZALV	**Zalesovo Beam**	**64.26**	**346**	P		**P**	**22 42 28.0**	**-2.2**
	comp=Z,1.4nm,0.3s,mb4.5,baz=163,slow=4.5,SNR=9.4							
ZALV				PcP		PcP	22 43 02.9	-1.8
	comp=Z,0.7nm,0.5s,baz=132,slow=4.2,SNR=3.5							
MAW	**Mawson**	**66.58**	**197**	P		**P**	**22 42 46.4**	**+1.3**
	comp=Z,1.7nm,0.8s,mb4.1,baz=52,slow=2.4,SNR=4.2							
MAW	**Mawson**	**66.58**	**197**	P		**P**	**22 42 46.4**	**+1.3**
MAW				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BRVK	**Borovoye**	**68.10**	**337**	*e*P		**P**	**22 42 54.0**	**-0.8**
	comp=Z,9.1nm,0.7s,mb4.9							
BRVK	**Borovoye**	**68.10**	**337**	*e*P		**P**	**22 42 54.0**	**-0.9**
BRVK				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.9							
YAK	**Yakutsk**	**71.82**	**11**	*e*P		**P**	**22 43 11.8**	**-5.7**
YAK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
YAK				pmax	pmax			
	comp=E,3.0nm,1.1s							
PETK	**Petropavlovsk-**	**74.34**	**29**	P		**P**	**22 43 30.9**	**-1.8**
	comp=E,7.0nm,1.1s,mb4.5,baz=191,slow=1.0,SNR=4.1							
SVE	**Sverdlovsk**	**74.67**	**336**⇑	*e*P		**P**	**22 43 35.5**	**+1.1**
SVE				pmax	pmax			
	comp=Z,17nm,0.8s,mb5.0							
ARU	**Arti**	**75.27**	**335**	*e*P		**P**	**22 43 37.8**	**-0.1**
ARU	**Arti**	**75.27**	**335**	*c i*P		**P**	**22 43 38.2**	**+0.3**
ARU				*e*			22 46 24.9	
ARU				*e*S		S	22 53 16.7	+2.5
ARU				*e*SS		SS	22 58 02.8	-2.0
ARU				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
LSZ	**Lusaka**	**77.12**	**256**	*e*P		**P**	**22 43 52.1**	**+2.7**
KIV	**Kislovodsk**	**77.38**	**318**	*e*P		**P**	**22 43 50.3**	**+0.1**
	comp=Z,6.9nm,0.7s,mb4.7							
KIV	**Kislovodsk**	**77.38**	**318**	*e*P		**P**	**22 43 51.1**	**+0.9**
KIV				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
LBTB	**Lobatse**	**78.87**	**246**	*e*P		**P**	**22 44 00.7**	**+1.8**
BOSA	**Boshof**	**78.98**	**242**	P		**P**	**22 44 01.9**	**+2.5**
	comp=Z,2.7nm,0.9s,mb4.2,baz=91,slow=4.3,SNR=3.6							
BOSA	**Boshof**	**78.98**	**242**	*e*P		**P**	**22 44 00.2**	**+0.7**
BOSA	**Boshof**	**78.98**	**242**	P		**P**	**22 44 01.9**	**+2.5**
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2							
TIXI	**Tiksi**	**80.60**	**7**	*e*P		**P**	**22 44 05.3**	**-2.0**
TIXI	**Tiksi**	**80.60**	**7**	*e*P		**P**	**22 44 01.8**	**-5.4**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
VRHR	**Novokhopersk**	**80.96**	**325**	*e*P		**P**	**22 44 10.0**	**+0.4**
VRHR				pmax	pmax			
	comp=Z,20nm,0.6s,mb5.2							
VRHR				pmax	pmax			
	comp=N,30nm,0.8s							
VRHR				pmax	pmax			
	comp=E,20nm,0.8s							
ANN	**Anapa**	**81.18**	**318**	*e*P		**P**	**22 44 08.8**	**-2.1**
ANN				*e*S		S	22 54 19.0	+0.8
ANN				pmax	pmax			
	comp=Z,72nm,1.0s,mb5.6							
QSPA	**South Pole Qui**	**82.21**	**180**	*e*P		**P**	**22 44 18.1**	**+2.3**
VSR	**Storozhevoye**	**82.42**	**324**	*e*P		**P**	**22 44 17.3**	**0.0**
VSR				pmax	pmax			
	comp=Z,5.0nm,0.5s,mb4.7							
VSR				pmax	pmax			
	comp=N,4.0nm,0.7s							
VSR				pmax	pmax			
	comp=E,3.0nm,0.4s							
OBN	**Obninsk**	**85.31**	**327**	P		**P**	**22 44 29.7**	**-2.2**
OBN	**Obninsk**	**85.31**	**327**⇑	*e*P		**P**	**22 44 31.8**	**-0.2**
OBN				pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.7							
BILL	**Bilibino**	**86.27**	**19**	*e*P		**P**	**22 44 35.7**	**-0.8**
BILL				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.8							
AKASG	**Malin Array Be**	**88.23**	**322**	P		**P**	**22 44 46.2**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.6,baz=87,slow=4.8,SNR=9.3							
AKASG	**Malin Array Be**	**88.23**	**322**	P		**P**	**22 44 46.2**	**0.0**
AKASG	**Malin Array Be**	**88.23**	**322**	*i* P		**P**	**22 44 47.5**	**+1.2**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
SNAA	**Sanae**	**88.74**	**197**	*e*P		**P**	**22 44 49.2**	**+0.8**
SNAA				*e*			22 44 51.4	
SNAA				*e*		pP	22 45 01.7	+1.2
SNAA				*e*			22 45 07.7	
SNAA	**Sanae**	**88.74**	**197**	*e*P		**P**	**22 44 49.5**	**+1.1**
BUR08	**Bucovina Ar. S**	**90.12**	**318**	*e*P		**P**	**22 44 56.4**	**+1.2**
VNA2	**Neumayer--Watz**	**90.39**	**197**	*e*P		**P**	**22 44 59.1**	**+3.0**
	baz=110,slow=4.5							
VNA2				*e*			22 45 01.3	
VNA2				*e*		pP	22 45 13.1	+4.9
VNA2				*e*			22 45 19.7	
VNA3	**Neumayer Olymp**	**90.91**	**197**	*e*P		**P**	**22 45 02.4**	**+3.9**
VNA3				*e*			22 45 04.4	
VNA3				*e*		pP	22 45 14.3	+3.7
ARCES	**ARCESS Array B**	**94.22**	**340**	P		**P**	**22 45 12.4**	**-1.3**
	comp=Z,6.7nm,1.0s,mb5.0,baz=101,slow=6.3,SNR=12							
CLL	**Collm**	**98.44**	**321**	*e*Pdif		**P**	**22 45 30.0**	**-3.3**
MCK	**McKinley**	**103.22**	**26**	*e*Pdif		Pdif	22 45 53.6	-0.9
YKA	**Yellowknife Ar**	**117.64**	**20**	PKP		PKPdf	22 50 40.1	-0.6
	comp=Z,0.7nm,0.6s,baz=328,slow=1.7,SNR=9.1							
NVAR	**Mina Array Bea**	**129.20**	**46**	PKP		PKPdf	22 51 05.8	+2.1
	comp=Z,0.8nm,0.7s,baz=268,slow=2.4,SNR=5.3							
ELK	**Elko**	**130.25**	**42**	PKP		PKPdf	22 51 07.2	+1.6
	comp=Z,0.8nm,0.5s,baz=315,slow=10.0,SNR=4.4							
PDAR	**Pinedale Array**	**132.70**	**37**	PKP		PKPdf	22 51 11.4	+1.3
	comp=Z,0.5nm,0.7s,baz=270,slow=3.0,SNR=4.9							
TXAR	**Lajitas Array**	**144.18**	**49**	PKP		PKPdf	22 51 30.5	-1.1
	comp=Z,1.2nm,0.5s,baz=248,slow=1.5,SNR=22							
CCM	**Cathedral Cave**	**145.70**	**26**	*e*PKPdf		PKPdf	22 51 33.9	0.0
BDFB	**Brasilia**	**145.93**	**227**	PKPbc		PKPbc	22 51 37.6	+2.0
	comp=Z,2.5nm,0.6s,baz=108,slow=6.4,SNR=7.2							
JCT	**Junction City**	**146.34**	**44**	*e*PKP		PKPdf	22 51 35.9	+0.6
OLIL	**Olney**	**146.36**	**21**	*e*PKPdf		PKPab	22 51 36.3	-0.9
ACSO	**Alum Creek Sta**	**146.51**	**14**	*e*PKPdf		PKPdf	22 51 35.8	+0.6
SSPA	**Standing Stone**	**147.02**	**7**	*e*PKPdf		PKPdf	22 51 36.0	-0.1
MIAR	**Mount Ida**	**147.40**	**32**	*e*PKPbc		PKPbc	22 51 39.1	-0.3
MVL	**Millersville**	**147.80**	**5**	*e*PKPbc		PKPbc	22 51 39.6	-0.7
TZTN	**Tazewell**	**149.84**	**17**	*e*PKPbc		PKPbc	22 51 45.3	-0.3
SWET	**Sewanee**	**150.28**	**21**	*e*PKPbc		PKPbc	22 51 46.3	-0.5
CPCT	**Cooper Cave**	**150.55**	**19**	*e*PKPbc		PKPbc	22 51 46.9	-0.5
TKL	**Tuckaleechee C**	**150.60**	**18**	*e*PKPbc		PKPbc	22 51 47.5	+0.1
LRAL	**Lakeview Retre**	**151.78**	**25**	*e*PKPbc		PKPbc	22 51 49.6	-0.7
JSC	**Jenkinsville**	**152.59**	**15**	*e*PKPbc		PKPbc	22 51 51.8	-0.2
GOGA	**Godfrey**	**152.77**	**19**	*e*PKPbc		PKPbc	22 51 52.7	+0.2

IDC 14 22:48:23.8±2.9, 490S×15305E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, Error ellipse: s-maj=89.9km s-min=31.9km az=107.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.57**	**229**	P	P	22 53 36.2	-0.3
	1.4nm,0.6s,baz=52,slow=9.5,SNR=7.8						
ASAR	**Alice Springs**	**26.25**	**223**	P	P	22 54 01.4	+0.5
	0.3nm,0.4s,baz=57,slow=9.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**58.14**	**295**	P	P	22 58 19.2	-0.7
	0.6nm,0.3s,baz=116,slow=6.3,SNR=4.5						
MKAR	**Makanchi Array**	**80.56**	**319**	P	P	23 00 39.8	+1.6
	0.4nm,0.7s,baz=96,slow=8.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**150.57**	**288**	PKPbc	PKPbc	23 08 18.0	-0.9
	0.4nm,0.4s,baz=75,slow=2.0,SNR=12						
TORD				PKPab	PKPab	23 08 24.2	-1.3
	0.9nm,0.5s,baz=64,slow=3.0,SNR=10						

ISCJB ***14*** *22:56:52.2±1.8, 591S±007×1278E±0.1, h389km±26km, mb3.4/3, Error ellipse: s-maj=20.8km s-min=9.3km az=162.6*
IDC ***14*** *22:56:54.5±3.7, 592S×12789E, h400km±45km, mb2.9/2, mb1 3.4/4, mb1mx3.1/14, mbtmp3.2/4, Error ellipse: s-maj=101.6km s-min=13.4km az=67.0*
NEIC ***14*** *22:56:55.3±0.9, 595S×12787E, h410km±15km, mb3.9/3, Error ellipse: s-maj=11.5km s-min=6.7km az=72.0*

ISC 14 22:56:54.8±1.4, 593S±006×1279E±01, h401km±18km, n18, σ0s51/19, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.09**	**147**	*e*P	Px	22 58 39.2	
	1.2nm,0.2s						
FITZ	**Fitzroy Crossi**	**12.29**	**190**	P	**P**	**22 59 37.4**	**-0.3**
DAV	**Davao City (W)**	**13.12**	**350**	*e*P	**P**	**22 59 47.3**	**+0.5**
WRAB	**Tennant Creek**	**15.27**	**156**	*e*P	**P**	**23 00 10.5**	**+0.4**
	7.5nm,0.2s						
WRA	**Warramunga Arr**	**15.27**	**156**	P	**P**	**23 00 10.3**	**+0.2**
	2.3nm,0.3s,baz=335,slow=11,SNR=68						
WRA				S	**S**	**23 02 50.3**	**-1.5**
	0.2nm,0.3s,baz=333,slow=21,SNR=7.4						
WB2	**Warramunga Arr**	**15.27**	**156**	*e*P	**P**	**23 00 10.4**	**+0.2**
MBWA	**Marble Bar**	**17.08**	**207**	P	**P**	**23 00 29.4**	**-0.1**
ASAR	**Alice Springs**	**18.55**	**162**	P	**P**	**23 00 45.1**	**+0.1**
	1.2nm,0.3s,baz=344,slow=12,SNR=44						
ASAR				S	**S**	**23 03 56.2**	**+1.1**
	0.1nm,0.3s,baz=345,slow=17,SNR=5.2						
PMG	**Port Moresby**	**19.40**	**101**	*e*P	**P**	**23 00 53.6**	**-0.1**
GUMO	**Guam**	**25.70**	**41**	P	**P**	**23 01 50.7**	**+0.1**
STKA	**Stephens Creek**	**28.82**	**155**	P	**P**	**23 02 18.3**	**+0.3**
	1.1nm,0.5s,mb3.5,baz=324,slow=10.0,SNR=5.9						
STKA	**Stephens Creek**	**28.82**	**155**	*e*P	**P**	**23 02 18.4**	**+0.4**
	0.8nm,0.5s,mb3.3						
QIZ	**Qiongzhong**	**30.52**	**325**	P	**P**	**23 02 33.2**	**+0.1**
ENH	**Enshi**	**40.09**	**335**	*e*P	**P**	**23 03 53.3**	**-0.1**
YSS	**Yuzh-Sakhalins**	**54.28**	**12**	P	**P**	**23 05 40.6**	**-0.5**
MKAR	**Makanchi Array**	**66.20**	**328**	P	**P**	**23 07 00.7**	**-0.3**
	0.2nm,0.5s,mb3.0,baz=121,slow=9.0,SNR=5.6						
KURK	**Kurchatov**	**70.53**	**329**	P	**P**	**23 07 27.3**	**-0.1**
	baz=127,slow=4.9						
KURK	**Kurchatov**	**70.53**	**329**	*e*P	**P**	**23 07 27.0**	**-0.3**
	5.6nm,1.8s,mb3.8						

ISCJB ***14*** *23:10:15.7±1.0, 4196N±003×2306E±005, h6km±11km, Error ellipse: s-maj=7.0km s-min=5.6km az=20.0*
CSEM ***14*** *23:10:16.0±0.1, 4195N×2311E, h12km, ML2.1, Error ellipse: s-maj=3.0km s-min=1.8km az=78.0*
THE ***14*** *23:10:17.5, 4186N×2319E, h4km±1km, ML2.8/2, Error ellipse: s-maj=2.0km s-min=0.6km az=138.0*
BEO ***14*** *23:10:19.1±0.9, 4208N×2318E, h21km±5km, ML2.1/5*

ISC 14 23:10:16.2±0.5, 4195N±002×2311E±005, h8km±6km, n36, σ0s74/57, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.65**	**7**	*e*Pg	**Pg**	**23 10 29.1**	**+0.3**
VTS				*e*Sg	**Sg**	**23 10 38.0**	**+0.7**
KNT	**Kendrikon**	**0.80**	**191**	P	**Pg**	**23 10 31.5**	**-0.1**
KNT				S	**Sg**	**23 10 42.2**	**+0.2**
GRG	**Griva**	**1.12**	**208**	P	**Pg**	**23 10 37.6**	**-0.2**
GRG				S	**Sg**	**23 10 53.0**	**+0.7**
SOH	**Sokhos**	**1.14**	**171**	P	**Pg**	**23 10 37.4**	**-0.7**
SOH				S	**Sg**	**23 10 52.1**	**-0.8**
PLD	**Plovdiv**	**1.20**	**82**	P	**Pg**	**23 10 38.9**	**-0.4**
PLD				S	**Sg**	**23 10 56.1**	**+1.3**
BARS	**Barje**	**1.29**	**313**	*e*Pg	**Pg**	**23 10 41.1**	**0.0**
BARS				*e*Sg	**Sg**	**23 10 58.2**	**+0.4**
THE	**Thessaloniki**	**1.32**	**185**	P	**Pn**	**23 10 40.7**	**-0.1**
THE				S	**Sb**	**23 10 58.8**	**+0.7**
HORT	**Hortiatis**	**1.35**	**180**	P	**Pn**	**23 10 41.7**	**+0.5**
ZAPS	**Zavoj**	**1.37**	**345**	*e*Pg	**Pg**	**23 10 42.7**	**+0.1**
ZAPS				*e*Sg	**Sg**	**23 10 59.4**	**-1.0**
PLG	**Polygyros**	**1.59**	**171**	P	**Pn**	**23 10 44.2**	**-0.4**
OUR	**Ouranopolis**	**1.74**	**157**	P	**Pn**	**23 10 46.0**	**-0.7**
LIT	**Litokhoron**	**1.90**	**191**	P	**Pn**	**23 10 49.2**	**+0.3**
PAIG	**Paliouri**	**2.06**	**168**	P	**Pn**	**23 10 50.3**	**-0.8**
BOLS	**Boljevac**	**2.06**	**336**	*e*Pn	**Pn**	**23 10 50.6**	**-0.5**
BOLS				*e*Sg	**Sg**	**23 11 22.1**	**-0.5**
GRUS	**Gruza**	**2.62**	**319**	*e*Pn	**Pn**	**23 11 00.6**	**+1.9**
GRUS				*e*Sg	**Sg**	**23 11 40.9**	**+0.6**
BZS	**Buzias**	**3.83**	**344**	*e*Pn	**Pn**	**23 11 14.9**	**-0.4**
BZS				*e*Sg	**Sg**	**23 12 15.9**	**-3.1**

ISCJB ***14*** *23:12:10.3±0.7, 3811N±009×12049E±009, h10km, mb3.8/2, Error ellipse: s-maj=14.9km s-min=6.5km az=147.0*
IDC ***14*** *23:12:11.2±1.3, 3804N×12038E, h0km, mb3.8/2, mb1 3.8/4, mb1mx3.5/18, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=31.7km s-min=18.3km az=27.0*
BJI ***14*** *23:12:12.5, 3844N×12026E, h15km, ML3.7*

ISC 14 23:12:12.3±0.7, 3815N±009×12052E±009, h10km, n8, σ1s03/12, mb3.8/2, 1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DL2	**Dalian**	**1.15**	**49**	PG	**Pg**	**23 12 32.5**	**-1.8**
DL2				Smax			
	comp=N,1μm,0.5s						
DL2				Smax			
	comp=E,2μm,0.5s						
TIA	**Tai'an**	**3.33**	**235**	P	**Pn**	**23 13 04.8**	**+0.4**
TIA				PG	**Pg**	**23 13 15.8**	**-0.4**
TIA				SG	**Sg**	**23 13 58.8**	**-0.6**
TIA				Smax			
	comp=N,66nm,0.4s						
TIA				Smax			
	comp=E,62nm,0.4s						
SNY	**Shenyang**	**4.36**	**32**	⇑PG	**Pg**	**23 13 29.4**	**-6.3**
SNY				SG	**Sg**	**23 14 23.8**	**-8.3**
SNY				Smax			
	comp=N,267nm,0.9s						
SNY				Smax			
	comp=E,234nm,0.9s						
KSRS	**Korea Array**	**5.90**	**95**	Pn	**Pn**	**23 13 40.6**	**+0.8**
	comp=E,0.6nm,0.3s,baz=279,slow=14,SNR=4.1						
KSRS				Pg	**Pg**	**23 14 00.1**	**-5.2**
	comp=E,0.8nm,0.3s,baz=278,slow=17,SNR=4.2						
KSRS				Lg		23 15 19.3	
	comp=E,2.5nm,0.3s,baz=281,slow=30,SNR=9.5						
SONM	**Songino Array**	**14.14**	**318**	Pn	**Pn**	**23 15 33.0**	**+0.6**
	comp=E,0.1nm,0.3s,baz=129,slow=12,SNR=3.0						
SONM				Lg		23 19 40.1	
	comp=E,0.1nm,0.3s,baz=138,slow=33,SNR=2.7						
KURK	**Kurchatov**	**32.02**	**307**	P	**P**	**23 18 38.5**	**-0.1**
	baz=94,slow=8.9						
WRA	**Warramunga Arr**	**59.23**	**165**	P	**P**	**23 22 13.6**	**-0.1**
	comp=E,0.7nm,0.7s,mb3.8,baz=349,slow=7.7,SNR=3.4						
YKA	**Yellowknife Ar**	**70.39**	**24**	P	**P**	**23 23 28.7**	**+2.7**
	comp=E,0.9nm,0.8s,mb3.8,baz=314,slow=5.7,SNR=4.3						

MAN 14 23:17:25, 1192N×12421E, h26km, mb3.6, ML2.3, MS1.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.73**	**37**	*e*P	Pb	23 17 40.3	+1.1
CNP				*e*S	Sb	23 17 51.0	+2.1
OCLP	**Ormoc**	**0.95**	**156**	*e*P	Pn	23 17 42.1	-0.5
OCLP				*e*S	Sb	23 17 51.7	-3.2
PLP	**Palo**	**1.06**	**135**⇓	*e*P	Pn	23 17 44.8	+0.5
PLP				*e*S	Sn	23 17 55.4	-2.8

JSN 14 23:20:42.8±0.8, 1810N×7663W, h7km±6km, MD3.6, 5D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.10**	**252**	⇓*i*P	Pg	23 20 44.9	-0.1
HOJ	**Hope**	**0.15**	**229**	⇓*i*P	Pg	23 20 46.2	+0.3
STH	**Stony Hill**	**0.17**	**261**	⇓*i*P	Pg	23 20 46.2	-0.2
STH				*i* S	Sg	23 20 48.6	-0.1
STH				*i* S	Sg	23 20 50.5	+1.8
BNJ	**Bonny Gate**	**0.37**	**305**	⇓*i*P	Pg	23 20 49.2	-0.9
BNJ				*i* S	Sg	23 20 55.4	+0.3
PCJ	**Portland Cotta**	**0.62**	**234**	⇓*e*P	Pg	23 20 54.2	-0.5
PCJ				*e*S	Sg	23 21 02.3	-0.5

IDC 14 23:52:59.2±3.4, 363S×15196E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/15, mbtmp3.3/2, Error ellipse: s-maj=162.5km s-min=42.1km az=119.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**21.31**	**244**	*e*P	Px	23 57 44.2	
	4.1nm,0.5s						
WB2	**Warramunga Arr**	**23.62**	**225**	*e*P	P	23 58 13.8	+1.5
WRA	**Warramunga Arr**	**23.62**	**225**	P	P	23 58 13.0	+0.7
	0.6nm,0.5s,baz=54,slow=10.0,SNR=10						
ASAR	**Alice Springs**	**26.48**	**220**	P	P	23 58 38.5	+0.3
	0.2nm,0.4s,baz=48,slow=9.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**149.14**	**290**	PKPbc	PKPbc	00 12 49.5	-1.2
	0.5nm,0.7s,baz=77,slow=2.6,SNR=14						

IDC 15 00:25:11.7±9.3, 1075S×7000W, h107km±84km, mb3.9/2, mb1 3.7/3, mb1mx3.3/17, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=72.4km s-min=71.8km az=22.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.80**	**162**	P	Pn	00 26 36.2	+0.9
	0.7nm,0.3s,baz=336,slow=12,SNR=12						
LPAZ				S	Sn	00 27 42.1	+1.4
	0.4nm,0.3s,baz=0.0,slow=15,SNR=4.7						
DBIC	**Dimbokro**	**67.12**	**78**	P	P	00 35 53.1	-1.3
	2.9nm,0.9s,baz=265,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**75.01**	**73**	P	P	00 36 43.3	+1.2
	2.1nm,0.8s,baz=255,slow=5.4,SNR=16						
ZALV	**Zalesovo Beam**	**132.46**	**20**	PKP	PKPdf	00 44 12.0	-1.4
	0.3nm,0.3s,baz=302,slow=3.2,SNR=4.3						
MKAR	**Makanchi Array**	**137.09**	**28**	PKP	PKPdf	00 44 22.6	+0.4
	1.1nm,0.7s,baz=312,slow=3.0,SNR=7.9						

ISCJB ***15*** *00:38:45.6±0.6, 2039S±004×6850W±007, h130km±7km, mb3.8/5, Error ellipse: s-maj=11.5km s-min=7.2km az=12.0*
NEIC ***15*** *00:38:45.4±0.8, 2048S×6862W, h117km±9km, mb3.6/5, Error ellipse: s-maj=14.9km s-min=9.1km az=88.0*
IDC ***15*** *00:38:46.5±0.7, 2039S×6854W, h123km±7km, mb3.7/5, mb1 3.8/8, mb1mx3.6/18, mbtmp3.7/8, Error ellipse: s-maj=22.6km s-min=7.9km az=103.0*

ISC 15 00:38:46.7±0.6, 2039S±004×6853W±007, h124km±7km, n25, σ0s74/30, mb3.9/5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.25**	**189**	P	**Pn**	**00 39 23.2**	**-0.2**
	67nm,0.3s,baz=18,slow=12,SNR=29						
LVC				S	**Sn**	**00 39 51.9**	**+0.3**
	78nm,0.3s,baz=95,slow=23,SNR=12						
LVC	**Limon Verde**	**2.25**	**189**	*e*Pn	**Pn**	**00 39 23.1**	**-0.2**
LVC				*e*Sn	**Sn**	**00 39 50.7**	**-0.9**
LPAZ	**La Paz**	**4.09**	**5**	P	**Pn**	**00 39 49.5**	**+1.9**
	12nm,0.3s,baz=191,slow=4.7,SNR=124						
LPAZ				S	**Sn**	**00 40 35.1**	**+0.3**
	baz=321,slow=10,SNR=1.4						
SIV	**San Ignacio**	**8.33**	**60**	P	**Pn**	**00 40 44.1**	**-0.6**
	1.4nm,0.3s,baz=254,slow=12,SNR=27						
SIV				S	**Sn**	**00 42 16.1**	**-1.0**
	baz=330,slow=20,SNR=4.0						
LCO	**Las Campanas**	**8.81**	**192**	*e*Pn	**Pn**	**00 40 45.7**	**-5.4**
LCO				*e*Sn	**Sn**	**00 42 17.8**	**-11**
CFAA	**Coronel Fontan**	**11.18**	**179**	P	**Pn**	**00 41 18.1**	**-4.6**
	0.1nm,0.3s,baz=11,slow=14,SNR=15						
CFAA				S	**Sn**	**00 43 19.4**	**-6.4**
	0.0nm,0.3s,baz=171,slow=15,SNR=3.7						
CFAA	**Coronel Fontan**	**11.18**	**179**	P	**Pn**	**00 41 18.1**	**-4.6**
CFAA				S	**Sn**	**00 43 19.4**	**-6.4**
NNA	**Nana**	**11.55**	**315**	*e*Pn	**Pn**	**00 41 27.3**	**-0.5**
BDFB	**Brasilia**	**20.07**	**80**	P	**P**	**00 43 11.3**	**+0.9**
	1.8nm,0.6s,baz=254,slow=18,SNR=6.1						
BDFB	**Brasilia**	**20.07**	**80**	*e*P	**P**	**00 43 11.2**	**+0.8**
	2.2nm,0.6s						
PLCA	**Paso Flores**	**20.36**	**184**	P	**P**	**00 43 14.0**	**+0.8**
	3.0nm,0.9s,baz=4.6,slow=14,SNR=4.5						
PLCA	**Paso Flores**	**20.36**	**184**

NWAO	**Narrogin (SRO)**	**35.72**	**154**	*e*P		**P**	**00 47 15.5**	**-4.4**
	13nm,1.2s,mb4.7								
WRA	**Warramunga Arr**	**38.79**	**121**	P		**P**	**00 47 45.1**	**-1.1**
	5.0nm,0.7s,mb4.4,baz=301,slow=9.2,SNR=46								
WRA				pP		pP	00 47 56.8	-1.4	
	2.1nm,0.5s,baz=303,slow=9.1,SNR=6.9								
WRA				S		**S**	**00 53 35.1**	**-5.8**	
	1.3nm,1.0s,baz=297,slow=16,SNR=3.5								
WRA	**Warramunga Arr**	**38.79**	**121**	P		**P**	**00 47 45.1**	**-1.1**	
WRA				pP		pP	00 47 56.8	-1.4	
WRA				S		**S**	**00 53 35.1**	**-5.8**	
WRAB	**Tennant Creek**	**38.79**	**121**	*e*P		**P**	**00 47 45.2**	**-1.1**	
	6.3nm,0.7s,mb4.5								
WRAB				*e*		pP	00 47 56.4	-1.9	
WB2	**Warramunga Arr**	**38.80**	**121**	*e*P		**P**	**00 47 45.5**	**-0.8**	
WB2	**Warramunga Arr**	**38.80**	**121**	*e*P		**P**	**00 47 45.5**	**-0.7**	
ASAR	**Alice Springs**	**40.09**	**127**	P		**P**	**00 47 57.1**	**+0.1**	
	6.3nm,0.8s,mb4.4,baz=304,slow=8.0,SNR=60								
ASAR				pP		pP	00 48 07.8	-1.3	
	1.5nm,0.6s,baz=301,slow=7.9,SNR=4.6								
ASAR				sP		sP	00 48 12.6	-1.8	
	3.4nm,0.8s,baz=309,slow=8.4,SNR=7.3								
ASAR				S		**S**	**00 53 54.9**	**-5.5**	
	1.0nm,1.0s,baz=297,slow=14,SNR=7.1								
KSRS	**Korea Array**	**46.48**	**31**	P		**P**	**00 48 47.2**	**-1.1**	
	2.0nm,0.9s,mb4.1,baz=224,slow=8.5,SNR=7.9								
GUMO	**Guam**	**47.19**	**70**	P		**P**	**00 48 55.3**	**+1.0**	
TKM2	**Tokmak 2**	**48.87**	**337**	*e*P		**P**	**00 49 07.4**	**+0.6**	
	2.2nm,0.7s,mb4.3								
TKM2				*e*		pP	00 49 19.1	-0.1	
SONM	**Songino Array**	**49.12**	**6**	P		**P**	**00 49 08.4**	**-0.2**	
	4.2nm,0.7s,mb4.5,baz=184,slow=9.2,SNR=33								
SONM				pP		pP	00 49 18.3	-2.7	
	1.3nm,0.7s,baz=188,slow=9.8,SNR=4.5								
ULN	**Ulaanbaatar**	**49.22**	**7**	*e*P		**P**	**00 49 09.1**	**-0.3**	
	3.5nm,0.8s,mb4.4								
EKS2	**Erkin-Say**	**49.40**	**335**	*e*P		**P**	**00 49 12.2**	**+1.4**	
	6.5nm,0.7s,mb4.8								
EKS2				*e*		pP	00 49 23.5	+0.3	
STKA	**Stephens Creek**	**50.03**	**132**	P		**P**	**00 49 17.5**	**+1.7**	
	2.3nm,0.8s,mb4.2,baz=310,slow=17,SNR=2.5								
STKA				pP		pP	00 49 28.1	-0.2	
	4.3nm,0.7s,baz=323,slow=9.5,SNR=4.4								
STKA	**Stephens Creek**	**50.03**	**132**	*e*P		**P**	**00 49 15.2**	**-0.7**	
STKA				*e*		pP	00 49 27.5	-0.8	
STKA				pP		pP	00 49 28.1	-0.2	
MK31	**Makanchi Array**	**50.08**	**345**	*e*P		**P**	**00 49 15.8**	**-0.1**	
MK31				*e*		pP	00 49 28.1	-0.2	
MKAR	**Makanchi Array**	**50.08**	**345**	P		**P**	**00 49 16.0**	**+0.1**	
	4.1nm,0.5s,mb4.7,baz=158,slow=7.3,SNR=59								
MKAR				pP		pP	00 49 28.1	-0.2	
	4.4nm,0.5s,baz=148,slow=8.0,SNR=13								
MKAR				sP		sP	00 49 32.1	-1.4	
	3.1nm,0.5s,baz=153,slow=8.4,SNR=8.2								
MKAR	**Makanchi Array**	**50.08**	**345**	P		**P**	**00 49 16.0**	**+0.1**	
MKAR				pP		pP	00 49 28.1	-0.2	
MKAR				sP		sP	00 49 32.1	-1.4	
TLY	**Talaya**	**52.72**	**3**	P		**P**	**00 49 35.4**	**-0.2**	
KURK	**Kurchatov**	**54.66**	**344**	*e*P		**P**	**00 49 49.9**	**0.0**	
	3.7nm,0.8s,mb4.5								
KURK				*e*		pP	00 50 01.0	-1.3	
ZAA0	**Zalesovo Array**	**56.24**	**350**	*e*P		**P**	**00 50 00.8**	**-0.3**	
ZAA0				*e*		pP	00 50 12.9	-0.7	
ZALV	**Zalesovo Beam**	**56.24**	**350**	P		**P**	**00 50 00.8**	**-0.3**	
	15nm,0.8s,mb5.1,baz=165,slow=6.2,SNR=70								
ZALV				pP		pP	00 50 13.3	-0.4	
	10.0nm,0.7s,baz=153,slow=6.3,SNR=11								
ZALV	**Zalesovo Beam**	**56.24**	**350**	P		**P**	**00 50 00.8**	**-0.3**	
ZALV				pP		pP	00 50 13.3	-0.4	
BRVK	**Borovoye**	**59.29**	**340**	P		**P**	**00 50 22.3**	**-0.2**	
BRVK				*e*		pP	00 50 31.9	-3.2	
ARU	**Arti**	**66.25**	**337**	P		**P**	**00 51 07.7**	**-1.1**	
MAW	**Mawson**	**71.03**	**194**	P		**P**	**00 51 31.6**	**-6.8**	
ARCES	**ARCESS Array B**	**85.52**	**340**	P		**P**	**00 53 00.1**	**+1.7**	
	1.7nm,0.7s,mb4.4,baz=90,slow=5.5,SNR=7.0								
TXAR	**Lajitas Array**	**144.25**	**36**	PKP		PKPdf	00 59 56.2	-1.2	
	0.7nm,0.7s,baz=218,slow=2.2,SNR=3.3								
TXAR				pPKP		pPKPdf	01 00 08.7	-2.4	
	0.7nm,0.5s,baz=200,slow=1.5,SNR=4.3								
JCT	**Junction City**	**145.49**	**30**	*e*PKPdf		PKPdf	00 59 59.8	+0.3	

IDC ***15*** *00:59:22.4±0.7, 1954N×12133E, h0km, mb4.1/12, mb1 4.3/14, mb1mx4.2/19, mbtmp4.2/14, ML4.3/2, MS3.3/3, Ms1 3.4/3, ms1mx2.8/23, Error ellipse: s-maj=22.0km s-min=14.8km az=73.0*
MAN ***15*** *00:59:23, 1952N×12059E, h13km, mb4.8, ML3.7, MS3.7*
NEIC ***15*** *00:59:24.0±2.3, 1953N×12130E, h12km±15km, mb4.3/10, Error ellipse: s-maj=5.2km s-min=4.4km az=79.0*
BJI ***15*** *00:59:24.7, 1996N×12121E, h5km, mB4.8, mb4.6, ML3.9*
MOS ***15*** *00:59:25.2±0.6, 1953N×12128E, h33km, mb4.6/9, Error ellipse: s-maj=13.3km s-min=8.3km az=106.4*
ISCJB ***15*** *00:59:26.3±0.6, 1964N±003×12129E±006, h39km±7km, mb4.1/22, Error ellipse: s-maj=9.6km s-min=4.9km az=7.4*

ISC 15 00:59:27.7±0.6, 1961N±003×12128E±006, h35km±6km, n67, σ0 95/73, mb4.1/22, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PIP	**Pasuquin**	**1.42**	**206**	⇓*i*P	**Pn**	**00**	**59**	**50.3**	**-0.8**
PIP				*e*S	**Sn**	**01**	**00**	**07.3**	**-1.3**
SGCP	**Mt. Cagua**	**1.54**	**152**	*e*P	**Pn**	**00**	**59**	**55.2**	**+2.5**
SIPP	**Brgy, Tapao**	**1.85**	**205**	⇓*e*P	**Pn**	**00**	**59**	**57.4**	**+0.4**
SIPP				*i* S	**Sn**	**01**	**00**	**19.6**	**+0.5**
CVP	**Callao Caves**	**1.96**	**165**	*e*P	**Pn**	**01**	**00**	**00.2**	**+1.7**
CAUP	**Cauayan**	**2.70**	**169**	*e*P	**Pn**	**01**	**00**	**10.0**	**+1.3**
CAUP				*e*S	**Sn**	**01**	**00**	**23.0**	**-17**
PALP	**Palanan**	**2.75**	**157**	*e*P	**Pn**	**01**	**00**	**13.9**	**+4.5**
PALP				*e*S	**Sn**	**01**	**00**	**52.6**	**+11**
PALP	**Palanan**	**2.75**	**157**	*e*P	**Pn**	**01**	**00**	**14.4**	**+5.0**
BOLP	**Bolinao**	**3.46**	**202**	*e*P	**Pn**	**01**	**00**	**14.3**	**-4.8**
BALP	**Baler**	**3.86**	**176**	*e*P	**Pn**	**01**	**00**	**29.2**	**+4.6**
NACB	**Ninganchiao**	**4.55**	**4**	*e*Pn	**Pn**	**01**	**00**	**33.5**	**-0.7**
NACB				*e*Sn	**Sn**	**01**	**01**	**22.1**	**-3.7**
YHNB	**Yeheng**	**5.04**	**1**	*e*Pn	**Pn**	**01**	**00**	**41.5**	**+0.7**
	103nm,0.6s								
YHNB				*e*Sn	**Sn**	**01**	**01**	**36.7**	**-1.1**
TATO	**Taipei**	**5.34**	**2**	*e*Pn	**Pn**	**01**	**00**	**43.9**	**-1.1**
JOW	**Kunigami**	**9.64**	**40**	Pn	**Pn**	**01**	**01**	**44.0**	**0.0**
	5.8nm,0.3s,baz=204,slow=11,SNR=13								
QIZ	**Qiongzhong**	**10.82**	**269**	Pn	**Pn**	**01**	**01**	**58.2**	**-2.0**
QIZ				*e*Sn	**Sn**	**01**	**03**	**49.4**	**-11**
DAV	**Davao City (W)**	**13.14**	**161**	LR	LR	01	08	10.2	
	comp=Z,147nm,19.2s,baz=22,slow=40								
KSRS	**Korea Array**	**18.70**	**17**	P	**Pn**	**01**	**03**	**43.0**	**-0.6**
	1.5nm,0.3s,baz=200,slow=13,SNR=20								
KSRS				LR	LR	01	11	24.3	
	comp=Z,62nm,18.1s,baz=210,slow=38								
BJT	**Baijiatuao**	**20.81**	**349**	*e*P	**P**	**01**	**04**	**07.0**	**+0.9**
	36nm,0.6s								
BJT	**Baijiatuao**	**20.81**	**349**	*e*P	**P**	**01**	**04**	**07.0**	**+1.0**
BJT				pmax	pmax				
	comp=Z,36nm,0.6s								
BJI	**Beijing**	**20.83**	**349**	P	**P**	**01**	**04**	**05.8**	**-0.4**
BJI				AMB	AMB				
	comp=Z,24nm,0.9s								
BJI				AMB	AMB				
	comp=Z,181nm,3.4s								
BJI	**Beijing**	**20.83**	**349**	P	**P**	**01**	**04**	**05.8**	**-0.4**
	comp=Z,24nm,0.9s								
CHTO	**Chiang Mai**	**21.11**	**272**	*e*P	**P**	**01**	**04**	**09.7**	**+0.3**
	comp=Z,22nm,1.5s,mb4.3								
CHTO	**Chiang Mai**	**21.11**	**272**	*e*P	**P**	**01**	**04**	**09.7**	**+0.2**
CHTO				pmax	pmax				
	comp=Z,22nm,1.5s,mb4.3								
CMAR	**Chiang Mai Arr**	**21.15**	**271**	P	**P**	**01**	**04**	**10.3**	**+0.4**
	comp=Z,3.5nm,0.8s,mb3.8,baz=75,slow=8.5,SNR=19								
CMAR				LR	LR	01	11	26.1	
	comp=Z,90nm,18.2s,baz=147,slow=34								
MAJO	**Matsushiro**	**22.47**	**38**	*e*P	**P**	**01**	**04**	**23.9**	**+0.1**
	comp=Z,12nm,0.9s,mb4.3								
MAJO	**Matsushiro**	**22.47**	**38**	*e*P	**P**	**01**	**04**	**23.9**	**+0.1**
MAJO				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.3								
MJAR	**Matsushiro Arr**	**22.47**	**38**	P	**P**	**01**	**04**	**24.4**	**+0.6**
	comp=Z,5.0nm,0.7s,mb4.0,baz=228,slow=9.3,SNR=6.9								
GUMO	**Guam**	**23.37**	**101**	P	**P**	**01**	**04**	**31.9**	**-1.6**
MDJ	**Mudanjiang**	**25.88**	**14**	*e*P	**P**	**01**	**04**	**57.5**	**+1.4**
ULN	**Ulaanbaatar**	**30.46**	**341**	*e*P	**P**	**01**	**05**	**37.7**	**+0.7**
	comp=Z,2.6nm,0.6s,mb4.1								
ULN	**Ulaanbaatar**	**30.46**	**341**	*e*P	**P**	**01**	**05**	**37.7**	**+0.7**
ULN				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.2								

SONM	**Songino Array**	**30.64**	**340**	P		**P**	**01 05 38.7**	**+0.1**	
	comp=Z,3.4nm,0.8s,mb4.2,baz=158,slow=9.8,SNR=20								
MBWA	**Marble Bar**	**40.55**	**182**	*e*P		**P**	**01 07 03.4**	**-0.3**	
	comp=Z,4.1nm,0.9s,mb4.1								
WRAB	**Tennant Creek**	**41.33**	**161**	*e*P		**P**	**01 07 08.9**	**-1.3**	
	comp=Z,1.7nm,0.5s,mb3.9								
WRAB	**Tennant Creek**	**41.33**	**161**	*e*P		**P**	**01 07 08.9**	**-1.3**	
WRAB				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.0								
WRA	**Warramunga Arr**	**41.34**	**161**	P		**P**	**01 07 08.5**	**-1.8**	
	comp=Z,1.9nm,0.6s,mb3.9,baz=348,slow=8.6,SNR=40								
WRA				PcP	PcP		01 09 08.7	+0.3	
	comp=Z,0.8nm,0.7s,baz=342,slow=3.5,SNR=4.8								
WB2	**Warramunga Arr**	**41.34**	**161**	*e*P		**P**	**01 07 09.5**	**-0.8**	
MK31	**Makanchi Array**	**41.77**	**320**	*e*P		**P**	**01 07 14.6**	**+1.0**	
MKAR	**Makanchi Array**	**41.77**	**320**	P		**P**	**01 07 14.4**	**+0.8**	
	comp=Z,1.5nm,0.6s,mb3.8,baz=113,slow=8.7,SNR=17								
YAK	**Yakutsk**	**42.79**	**6**	P		**P**	**01 07 22.4**	**+0.8**	
PETK	**Petropavlovsk-**	**43.65**	**31**	P		**P**	**01 07 29.0**	**+0.2**	
	comp=Z,6.1nm,1.0s,mb4.3,baz=237,slow=7.9,SNR=3.0								
PET	**Petropavlovsk**	**44.08**	**32**	P		**P**	**01 07 32.2**	**+0.1**	
ZAA0	**Zalesovo Array**	**44.17**	**330**	*e*P		**P**	**01 07 33.2**	**+0.3**	
ZALV	**Zalesovo Beam**	**44.17**	**330**	P		**P**	**01 07 32.9**	**-0.1**	
	comp=Z,2.1nm,0.7s,mb4.0,baz=118,slow=7.2,SNR=11								
ASAR	**Alice Springs**	**44.74**	**163**	P		**P**	**01 07 37.5**	**-0.3**	
	comp=Z,3.0nm,0.9s,mb4.1,baz=338,slow=7.1,SNR=25								
ASAR				PcP	PcP		01 09 20.0	+0.3	
	comp=Z,0.5nm,0.8s,baz=327,slow=4.6,SNR=2.7								
TKM2	**Tokmak 2**	**44.76**	**312**	P		**P**	**01 07 37.5**	**-0.2**	
UCH	**Uchtor**	**45.34**	**310**	*e*P		**P**	**01 07 41.9**	**-0.5**	
KURK	**Kurchatov**	**45.72**	**323**	P		**P**	**01 07 46.0**	**+0.7**	
KURK	**Kurchatov**	**45.72**	**323**	*e*P		**P**	**01 07 45.4**	**+0.2**	
	comp=Z,3.2nm,0.8s,mb4.3								
KURK	**Kurchatov**	**45.72**	**323**	*e*P		**P**	**01 07 45.4**	**+0.1**	
KURK				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.2								
EKS2	**Erkin-Say**	**45.97**	**311**	P		**P**	**01 07 47.7**	**+0.3**	
KBL	**Kabul**	**48.33**	**299**	P		**P**	**01 08 06.5**	**+0.6**	
BVAR	**Borovoye Array**	**51.31**	**323**	P		**P**	**01 08 28.9**	**+0.6**	
	comp=Z,1.1nm,0.8s,mb3.9,baz=117,slow=10,SNR=9.4								
BRVK	**Borovoye**	**51.39**	**323**	*e*P		**P**	**01 08 29.2**	**+0.3**	
	comp=Z,3.4nm,0.9s,mb4.3								
BRVK	**Borovoye**	**51.39**	**323**	*e*P		**P**	**01 08 29.2**	**+0.4**	
BRVK				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.2								
TIXI	**Tiksi**	**52.23**	**3**	*e*P		**P**	**01 08 32.4**	**-2.5**	
TIXI				pmax	pmax				
	comp=Z,9.0nm,1.6s,mb4.5								
NWAO	**Narrogin (SRO)**	**52.38**	**184**	*e*P		**P**	**01 08 35.7**	**-0.7**	
STKA	**Stephens Creek**	**54.77**	**159**	P		**P**	**01 08 56.7**	**+2.7**	
	comp=Z,0.7nm,0.4s,mb4.0,baz=326,slow=8.7,SNR=1.7								
STKA	**Stephens Creek**	**54.77**	**159**	*e*P		**P**	**01 08 53.4**	**-0.6**	
	comp=Z,1.4nm,0.6s,mb4.2								
BILL	**Bilibino**	**55.95**	**19**	P		**P**	**01 09 02.2**	**+0.1**	
BILL	**Bilibino**	**55.95**	**19**	P		**P**	**01 09 02.2**	**+0.2**	
TAU	**Tasmania Unive**	**66.67**	**159**	P		**P**	**01 10 13.8**	**-1.0**	
ARCES	**ARCESS Array B**	**73.81**	**339**	P		**P**	**01 10 58.6**	**+0.4**	
	comp=Z,1.8nm,0.8s,mb4.1,baz=68,slow=8.0,SNR=4.1								
INK	**Inuvik**	**77.42**	**22**	P		**P**	**01 11 18.6**	**-0.3**	
HFS	**Hagfors**	**81.59**	**331**	P		**P**	**01 11 42.9**	**+1.2**	
	comp=Z,1.7nm,0.8s,mb4.0,baz=100,slow=7.7,SNR=4.1								
NOA	**NORSAR Array B**	**82.30**	**333**	P		**P**	**01 11 49.4**	**+4.0**	
	comp=Z,0.9nm,0.8s,mb3.8,baz=64,slow=5.0,SNR=2.6								
YKA	**Yellowknife Ar**	**87.14**	**23**	P		**P**	**01 12 09.4**	**-0.3**	
	comp=Z,0.5nm,0.5s,mb4.0,baz=310,slow=4.9,SNR=7.2								
YKA	**Yellowknife Ar**	**87.14**	**23**	P		**P**	**01 12 09.4**	**-0.4**	

ISCJB ***15*** *01:04:01.0±0.6, 3042N±005×5041E±006, h10km, Error ellipse: s-maj=8.3km s-min=6.0km az=40.5*
THR ***15*** *01:04:00.5±0.4, 3043N×5035E, h14km±6km, ML2.8*
CSEM ***15*** *01:04:01.7±0.1, 3043N×5043E, h18km, ML2.8, Error ellipse: s-maj=4.5km s-min=2.3km az=157.0*
KISR ***15*** *01:04:03.4, 3049N×5021E, h33km, ML2.8*

ISC 15 01:04:02.3±0.6, 3047N±004×5036E±006, h10km, n16, σ0 81/22, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SHGR	**Shooshtar-Gavs**	**2.11**	**321**	*e*Pn	**Pn**	**01**	**04**	**37.8**	**+0.2**
SHGR				*e*Sg	**Sg**	**01**	**05**	**07.6**	**-2.5**
SHGR				AML	AML	01	05	10.8	
	comp=E,75nm,0.4s								
SHGR				AML	AML	01	05	16.1	
	comp=N,86nm,0.6s								
UMR	**Umm Al-Rimmam**	**2.46**	**249**	*e*P	**Pn**	**01**	**04**	**42.9**	**+0.5**
	baz=247								
UMR				AML	AML	01	05	17.6	
	comp=Z,62nm,0.4s,baz=247								
KBD	**Kabd**	**2.65**	**242**	*e*P	**Pn**	**01**	**04**	**45.8**	**+0.8**
KBD				*e*S	**Sn**	**01**	**05**	**16.7**	**-0.4**
KBD	**Kabd**	**2.65**	**242**	*e*P	**Pn**	**01**	**04**	**45.8**	**+0.8**
	baz=240								
KBD				*e*S	**Sn**	**01**	**05**	**16.7**	**-0.4**
	baz=240								
KBD				AML	AML	01	05	21.0	
	comp=Z,30nm,0.3s,baz=240								
MIB	**Mutribah**	**2.69**	**257**	*e*P	**Pn**	**01**	**04**	**46.0**	**+0.3**
	baz=255								
MIB				AML	AML	01	05	24.3	
	comp=Z,28nm,0.5s,baz=255								
QRN	**Al-Qurain**	**2.73**	**232**	*e*P	**Pn**	**01**	**04**	**46.8**	**+0.6**
	baz=230								
QRN				*e*S	**Sn**	**01**	**05**	**19.7**	**+0.5**
	baz=230								
QRN				AML	AML	01	05	23.1	
	comp=Z,65nm,0.3s,baz=230								
RDF	**Al-Radifah**	**2.88**	**239**	*e*P	**Pn**	**01**	**04**	**48.5**	**+0.3**
RDF				*e*S	**Sn**	**01**	**05**	**23.1**	**+0.1**
RDF	**Al-Radifah**	**2.88**	**239**	*e*P	**Pn**	**01**	**04**	**48.5**	**+0.3**
	baz=237								
RDF				*e*S	**Sn**	**01**	**05**	**23.1**	**+0.1**
	baz=237								
RDF				AML	AML	01	05	29.2	
	comp=Z,33nm,0.3s,baz=237								
KFJS		**3.10**	**223**	P	**Pn**	**01**	**04**	**50.8**	**-0.5**
NASN	**Na'in**	**3.13**	**41**	*e*Pn	**Pn**	**01**	**04**	**52.2**	**+0.6**
GHIR	**Ghir-Karzin**	**3.16**	**133**	*e*Pn	**Pn**	**01**	**04**	**51.6**	**-0.5**
GHIR				AML	AML	01	05	52.9	
	comp=N,24nm,0.6s								
GHIR				AML	AML	01	05	56.6	
	comp=E,23nm,0.6s								
ASAO	**Ashtian**	**4.08**	**356**	*e*Pn	**Pn**	**01**	**05**	**05.3**	**+0.6**
BOQSS		**4.66**	**191**	P	**Pn**	**01**	**05**	**10.6**	**-2.1**
SNGE	**Sanandaj**	**5.26**	**332**	*e*Pn	**Pn**	**01**	**05**	**21.4**	**+0.5**
SLWS		**5.65**	**177**	P	**Pn**	**01**	**05**	**26.5**	**+0.2**
BTHS		**6.41**	**176**	P	**Pn**	**01**	**05**	**36.2**	**-0.5**

NOU ***15*** *01:38:40.8±0.8, 1892S×16941E, h30km, MD3.2, ML3.5*
ISCJB ***15*** *01:38:43.0±3.1, 204S±01×16999E±008, h11km±19km, mb4.3/13, MS4.0/5, Error ellipse: s-maj=18.0km s-min=10.2km az=155.4*
IDC ***15*** *01:38:43.7±1.1, 2038S×16991E, h0km, mb4.4/7, mb1 4.6/8, mb1mx4.4/15, mbtmp4.4/8, ML4.0/1, MS4.0/8, Ms1 4.0/8, ms1mx3.5/25, Error ellipse: s-maj=29.4km s-min=28.2km az=163.0*
NEIC ***15*** *01:38:47.1±6.1, 2040S×16991E, h23km±41km, mb4.5/7, Error ellipse: s-maj=20.9km s-min=12.3km az=212.0*

ISC 15 01:38:43.8±3.7, 2045±01×17001E±008, h6km±23km, n37, σ0 80/30, mb4.3/13, MS4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DZM	**Mont Dzumac**	**3.72**	**243**	*e*P	**Pn**	**01**	**39**	**41.9**	**0.0**
DZM				*e*S	**Sn**	**01**	**40**	**27.1**	**+1.0**
DZM				AMP		01	40	30.1	
	comp=Z,902nm,4.7s								
DZM	**Mont Dzumac**	**3.72**	**243**	*e*Pn	**Pn**	**01**	**39**	**41.6**	**-0.3**
DZM				*e*Sn	**Sn**	**01**	**40**	**23.2**	**-2.9**
NORM	**Noumea**	**3.76**	**240**	*e*P	**Pn**	**01**	**39**	**42.4**	**-0.1**
NOUC	**Port Laguerre**	**3.85**	**243**	*e*P	**Pn**	**01**	**39**	**44.0**	**+0.3**
NOUC				*e*S	**Sn**	**01**	**40**	**29.9**	**+0.6**
NOUC				AMP		01	40	40.5	
	comp=Z,47nm,1.7s								
RAO	**Raoul Island**	**14.06**	**131**	LR	LR	01	46	16.2	
	comp=Z,418nm,19.1s,baz=35,slow=32								
AFI	**Afiamalu**	**18.55**	**73**	LR	LR	01	48	41.5	
	comp=Z,480nm,18.7s,baz=247,slow=32								
URZ	**Urewera**	**18.84**	**162**	P	**Pn**	**01**	**43**	**05.1**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=328,slow=5.7,SNR=5.2								
URZ				LR	LR	01	48	23.8	
	comp=Z,482nm,21.0s,baz=327,slow=31								
ARMA	**Armidale**	**19.35**	**235**	*e*P	**Pn**	**01**	**43**	**11.7**	**+0.5**

CTAO	**Charters Tower**	**22.29**	**267**	*e*P		**P**	**01 43 40.9**	**-1.1**	
	comp=Z,30nm,1.0s,mb4.7								
RPZ	**Rata Peaks**	**23.27**	**178**	LR		LR	01 50 58.4		
	comp=Z,369nm,19.5s,MS3.9,baz=13,slow=32								
STKA	**Stephens Creek**	**27.87**	**240**	*e*P		**P**	**01 44 35.7**	**+1.2**	
	comp=Z,5.2nm,0.6s,mb4.3								
STKA	**Stephens Creek**	**27.87**	**240**	P		**P**	**01 44 35.8**	**+1.3**	
	comp=Z,10.0nm,0.8s,mb4.5,baz=82,slow=9.3,SNR=24								
STKA				LR		LR	01 55 09.5		
	comp=Z,524nm,19.1s,MS4.1,baz=47,slow=36								
RAR	**Rarotonga**	**28.24**	**97**	LR		LR	01 52 54.0		
	comp=Z,305nm,21.9s,MS3.9,baz=40,slow=30								
WB2	**Warramunga Arr**	**33.44**	**264**	*e*P		**P**	**01 45 23.6**	**-0.2**	
WRAB	**Tennant Creek**	**33.44**	**264**	*e*P		**P**	**01 45 23.2**	**-0.6**	
	comp=Z,2.9nm,0.6s,mb4.4								
WRA	**Warramunga Arr**	**33.45**	**264**	P		**P**	**01 45 23.5**	**-0.4**	
	comp=Z,2.3nm,0.5s,mb4.3,baz=92,slow=8.5,SNR=56								
WRA				LR		LR	01 59 00.8		
	comp=Z,242nm,19.1s,MS3.9,baz=85,slow=36								
ASAR	**Alice Springs**	**33.58**	**258**	P		**P**	**01 45 25.2**	**+0.3**	
	comp=Z,16nm,0.8s,mb5.0,baz=81,slow=9.1,SNR=131								
KAKA	**Kakadu**	**36.75**	**276**	*e*P		Px	01 45 40.5		
	comp=Z,4.1nm,0.7s								
TBI	**Tubuai**	**37.64**	**102**	*e*LQ			01 54 31.9		
	comp=Z,499nm,29.6s								
TBI				*e*LR		LR	01 56 07.1		
	comp=Z,272nm,31.8s								
PPT	**Papeete**	**38.25**	**93**	*e*LQ			01 54 45.1		
	comp=Z,492nm,31.4s								
PPT				*e*LR		LR	01 56 25.1		
	comp=Z,401nm,26.5s,baz=252								
FORT	**Forrest**	**39.03**	**246**	*e*P		**P**	**01 46 11.6**	**+0.1**	
	comp=Z,1.2nm,0.7s,mb3.7								
MBWA	**Marble Bar**	**46.86**	**260**	*e*P		**P**	**01 47 15.0**	**0.0**	
	comp=Z,14nm,0.8s,mb4.9								
KAPI	**Kappang**	**51.13**	**280**	P		**P**	**01 47 47.9**	**-0.1**	
	baz=146,slow=5.5								
PETK	**Petropavlovsk-**	**73.97**	**352**	LR		LR	02 17 48.8		
	comp=Z,90nm,19.9s,MS4.1,baz=338,slow=32								
MAW	**Mawson**	**77.64**	**202**	P		**P**	**01 50 40.9**	**+0.1**	
	comp=Z,1.5nm,0.7s,mb4.0,baz=108,slow=3.2,SNR=2.3								
MAW	**Mawson**	**77.64**	**202**	P		**P**	**01 50 40.9**	**+0.1**	
CMAR	**Chiang Mai Arr**	**79.64**	**294**	P		**P**	**01 50 52.4**	**-0.2**	
	comp=Z,0.9nm,0.3s,mb4.2,baz=107,slow=4.8,SNR=6.3								
SNAA	**Sanae**	**88.05**	**182**	*e*		**P**	**01 51 38.5**	**+3.8**	
S

PLCA pmax pmax
comp=Z,39nm,1.4s
ATAH Atahualpa 17.91 344 P **Pn 01 50 45.9 +1.3**
comp=Z,0.3nm,0.3s,baz=109,slow=20,SNR=3.7
SPB Sao Paulo 21.12 95 *eP* **P 01 51 21.9 +1.6**
BDFB Brasilia 22.47 74 P **P 01 51 34.5 -0.2**
comp=Z,12nm,0.8s,mb4.4,baz=232,slow=16,SNR=21
BDFB LR LR 02 01 48.2
comp=Z,2µm,18.1s,MS4.5,baz=61,slow=40
OTAV Otavalo 24.65 341 *eP* **P 01 51 55.9 -0.2**
comp=Z,30nm,1.2s,mb4.7
CAM4 Nova Friburgo 25.71 93⇑*iP* **P 01 52 06.1 +0.3**
CAM4 *i* pP 01 52 09.3 -1.5
CAM4 *i* 01 52 20.0
ROSC El Rosal 28.23 352 P **P 01 52 28.9 +0.4**
comp=Z,4.5nm,0.3s,mb4.5,baz=97,slow=18,SNR=5.0
ROSC LR LR 02 04 12.2
comp=Z,1µm,19.4s,MS4.5,baz=187,slow=37
RPN Rapa Nui 35.29 256 LR LR 02 04 22.9
comp=Z,1µm,18.4s,MS4.7,baz=124,slow=30
RCBR Riachuelo 37.53 68⇑*iP* **P 01 53 50.0 +0.3**
comp=Z,64nm,0.8s,mb5.4
SJG San Juan 41.37 6 *eP* **P 01 54 18.3 -3.2**
comp=Z,67nm,0.7s,mb5.4
SJG San Juan 41.37 6 *eP* **P 01 54 18.3 -3.2**
SJG pmax pmax
comp=Z,67nm,0.7s
MTP Monte Pirata 41.42 7 *eP* **P 01 54 19.0 -2.9**
HUMP Col San Antoni 41.43 7 *eP* **P 01 54 20.2 -1.8**
comp=Z,31nm,0.9s,mb4.9
PMSA Palmer Station 41.68 176 *eP* **P 01 54 22.4 -1.2**
comp=Z,64nm,1.3s,mb5.1
BBSR BB Station 55.62 6 *eP* **P 01 56 08.4 -2.7**
comp=Z,14nm,0.7s,mb5.1
RKT Rikitea 58.82 256 *e*S **S 02 04 39.5 +0.3**
comp=Z,559nm,31.0s
RKT *e*LR LR 02 14 03.8
comp=Z,2µm,26.2s
VNA3 Neumayer Olymp 58.85 161 *eP* **P 01 56 34.3 +0.8**
VNA3 *e* 01 56 43.8
VNA3 *e* 01 56 48.3
VNA1 Neumayer--Stat 59.09 160 *eP* **P 01 56 36.4 +1.2**
VNA1 *e* 01 56 46.0
VNA1 *e* 01 56 50.8
VNA2 Neumayer--Watz 59.45 160 *eP* **P 01 56 38.6 +0.9**
baz=292,slow=7.5
VNA2 *e* 01 56 47.8
VNA2 *e* 01 56 52.6
CPCT Cooper Cave 59.92 347 *eP* **P 01 56 38.2 -3.1**
TKL Tuckaleechee C 59.97 347⇑*iP* **P 01 56 39.5 -2.1**
SWET Sewanee 60.01 345⇑*iP* **P 01 56 39.8 -2.2**
JCT Junction City 60.43 331 *eP* **P 01 56 44.3 -0.6**
comp=Z,12nm,0.8s,mb5.0
JCT Junction City 60.43 331 *eP* **P 01 56 44.3 -0.6**
JCT pmax pmax
comp=Z,12nm,0.8s,mb5.0
ELN Prospectdale 60.97 351 *eP* **P 01 56 47.3 -1.2**
SNAA Sanae 61.07 160 *eP* **P 01 56 47.8 -0.9**
SNAA *e* 01 56 56.5
SNAA *e* 01 57 01.5
SNAA Sanae 61.07 160⇑*iP* **P 01 56 47.8 -1.0**
comp=Z,20nm,1.0s,mb5.2
SNAA Sanae 61.07 160⇑*iP* **P 01 56 47.8 -0.9**
SNAA pmax pmax
comp=Z,20nm,1.0s
TXAR Lajitas Array 61.31 327 P **P 01 56 50.4 -0.6**
comp=Z,1.1nm,0.8s,mb4.0,baz=122,slow=6.1,SNR=4.8
TXAR LR LR 02 19 55.9
comp=Z,335nm,20.4s,MS4.5,baz=125,slow=33
WVT Waverly 61.34 344⇑*iP* **P 01 56 48.4 -2.6**
comp=Z,16nm,0.7s,mb5.2
WVT Waverly 61.34 344⇑*iP* **P 01 56 48.4 -2.6**
WVT pmax pmax
comp=Z,16nm,0.7s,mb5.3
MIAR Mount Ida 61.57 338 *eP* **P 01 56 50.7 -1.9**
comp=Z,8.2nm,0.7s,mb5.0
MIAR Mount Ida 61.57 338 *eP* **P 01 56 50.7 -1.9**
MIAR pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
WCI Wyandotte Cave 62.98 346 *eP* **P 01 56 59.4 -2.5**
comp=Z,14nm,0.7s,mb5.2
WCI Wyandotte Cave 62.98 346 *eP* **P 01 56 59.4 -2.5**
WCI pmax pmax
comp=Z,14nm,0.7s,mb5.2
WMOK Wichita Mounta 63.67 334 *eP* **P 01 57 05.7 -0.9**
comp=Z,2.1nm,0.7s,mb4.3
WMOK Wichita Mounta 63.67 334 *eP* **P 01 57 05.7 -0.9**
WMOK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
FVM French Village 63.78 342 *eP* **P 01 57 05.2 -2.0**
comp=Z,13nm,0.6s,mb5.1
FVM French Village 63.78 342 *eP* **P 01 57 05.2 -2.0**
FVM pmax pmax
comp=Z,13nm,0.6s,mb5.1
GDL2 Guadalupe Moun 64.00 328 *eP* **P 01 57 08.1 -0.7**
CCM Cathedral Cave 64.08 342 *eP* **P 01 57 06.6 -2.6**
comp=Z,9.3nm,0.8s,mb4.9
CCM Cathedral Cave 64.08 342 *eP* **P 01 57 06.6 -2.6**
CCM pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ACSO Alum Creek Sta 64.27 349 *eP* **P 01 57 08.8 -1.5**
MAIT Maitri 65.64 159 *eP* **P 01 57 28.3 +9.2**
319A Douglas 65.86 324⇑**P P 01 57 21.1 +0.2**
baz=66
318A Bisbee 66.30 324⇑**P P 01 57 23.8 +0.1**
baz=66,SNR=7.2
219A White Tail Can 66.33 324⇑**P P 01 57 24.2 +0.3**
baz=66
BNM Barren Site 66.68 328 *eP* **P 01 57 25.9 -0.2**
218A Dragoon 66.74 324⇑**P P 01 57 26.8 +0.2**
baz=67
Y22D IRIS PASSCAL I 66.77 328⇑**P P 01 57 27.2 +0.5**
baz=67
119A Ashpeak Ranch, 66.95 325⇓**P P 01 57 28.3 +0.4**
baz=67
217A Green Valley 67.00 323⇓**P P 01 57 28.6 +0.3**
baz=67
LAZ Ladron 67.14 328 *eP* **P 01 57 28.7 -0.3**
118A Homack Ranch, 67.21 324⇑**P P 01 57 29.9 +0.4**
baz=67
ANMO Albuquerque 67.25 328 *eP* **P 01 57 29.2 -0.5**
comp=Z,35nm,1.7s,mb5.1
ANMO Albuquerque 67.25 328 *eP* **P 01 57 29.2 -0.5**
ANMO pmax pmax
comp=Z,35nm,1.7s
Z19A T-Link Ranch, 67.34 325⇓**P P 01 57 30.8 +0.4**
baz=68
TUC Tucson 67.39 324 *eP* **P 01 57 28.4 -2.4**
comp=Z,15nm,1.5s,mb4.8
TUC Tucson 67.39 324 *eP* **P 01 57 28.4 -2.3**
TUC pmax pmax
comp=Z,15nm,1.5s,mb4.8
216A Three Points, 67.53 323⇓**P P 01 57 31.7 +0.1**
baz=68
117A Oracle 67.57 324⇓**P P 01 57 32.0 +0.2**
baz=68,SNR=8.7
CBKS Cedar Bluff 67.60 336 *eP* **P 01 57 31.2 -0.6**
comp=Z,14nm,0.8s,mb5.0
CBKS Cedar Bluff 67.60 336 *eP* **P 01 57 31.3 -0.6**
CBKS pmax pmax
comp=Z,14nm,0.8s,mb5.0
Y19A Nutrioso 67.85 326⇑**P P 01 57 34.5 +0.9**
baz=68,SNR=6.6
TAOE Nuku Hiva Isla 67.95 270 *e*LR LR 02 18 06.4
comp=Z,3µm,24.9s,baz=122
116A Eloy 68.09 323⇓**P P 01 57 35.5 +0.4**
baz=68
Y18A Canyon Day Jun 68.12 325⇑**P P 01 57 35.7 +0.4**
baz=68
X19A St. Johns 68.24 326⇓**P P 01 57 36.5 +0.5**
baz=68
214A Organ Pipe Nat 68.26 322⇑**P P 01 57 36.5 +0.3**
baz=68
JFWS Jewell Farm 68.36 344 *eP* **P 01 57 34.2 -2.4**
comp=Z,17nm,0.6s,mb5.2
JFWS Jewell Farm 68.36 344 *eP* **P 01 57 34.2 -2.4**
JFWS pmax pmax
comp=Z,17nm,0.6s,mb5.2
115A Sonoran Desert 68.48 323⇓**P P 01 57 38.0 +0.4**
baz=69
Y17A Roosevelt 68.49 325⇓**P P 01 57 38.0 +0.4**
baz=69,SNR=7.8
Z16A Peralta Trail, 68.53 324⇓**P P 01 57 38.4 +0.5**
baz=69
X18A Snowflake 68.66 326⇓**P P 01 57 38.9 +0.2**
baz=69
X17A Forest Lakes 68.96 325⇑**P P 01 57 41.4 +0.9**
baz=69,SNR=5.3
Y16A Circle Bar Ran 68.97 324⇑**P P 01 57 41.2 +0.7**
baz=69,SNR=7.4
SDCO Great Sand Dun 69.08 331 *eP* **P 01 57 41.4 +0.2**
comp=Z,23nm,1.3s,mb4.9
V19A Window Rock 69.13 327⇓**P P 01 57 42.2 +0.7**
baz=69
X16A Lo Mia Camp, P 69.36 325⇓**P P 01 57 43.7 +0.7**
baz=70
Z14A Wintersburg 69.38 323⇓**P P 01 57 43.6 +0.5**
baz=70
113A Mohawk Valley, 69.40 322⇑**P P 01 57 43.9 +0.6**
baz=70
Y15A Casa Rosa Ranc 69.48 324⇓**P P 01 57 44.1 +0.3**
baz=70
V18A Ganado 69.57 326⇓**P P 01 57 44.7 +0.5**
baz=70
X15A Humboldt 69.83 324⇓**P P 01 57 46.3 +0.4**
baz=70,SNR=6.1
Y14A Wickenburg 69.84 323⇑**P P 01 57 46.2 +0.3**
baz=70
W16A Flagstaff 69.92 325⇑**P P 01 57 47.1 +0.6**
baz=70
MVCO Mesa Verde 70.04 328 *eP* **P 01 57 46.2 -1.0**
comp=Z,17nm,1.1s,mb4.9
MVCO Mesa Verde 70.04 328⇑**P P 01 57 47.2 +0.1**
baz=70
U18A Rough Rock, Ch 70.09 327⇑**P P 01 57 47.8 +0.3**
baz=70
WUAZ Wupatki 70.16 325 *eP* **P 01 57 47.8 -0.1**
comp=Z,17nm,1.2s,mb4.8
WUAZ Wupatki 70.16 325⇓**P P 01 57 48.4 +0.5**
baz=70,SNR=5.9
X14A Yava 70.18 324⇑**P P 01 57 48.4 +0.3**
baz=70
Y13A Salome 70.21 323⇑**P P 01 57 48.4 +0.1**
baz=70
LIC Lamto 70.26 74 *eP* **P 01 57 48.5 -0.5**
comp=Z,28nm,0.7s,mb5.3
TIC Toumodi 70.46 73 *eP* **P 01 57 49.8 -0.4**
comp=Z,86nm,1.1s,mb5.6
TIC Toumodi 70.46 73 *eP* **P 01 57 49.8 -0.4**
TIC pmax pmax
comp=Z,86nm,1.1s,mb5.6
U16A Tuba City 70.52 326⇑**P P 01 57 50.2 +0.1**
baz=71,SNR=5.9
Y12C Blythe 70.55 322⇓**P P 01 57 50.5 +0.1**
baz=71
KIC Kosan Boka 70.57 74 *eP* **P 01 57 50.6 -0.3**
comp=Z,128nm,0.8s,mb5.9
DBIC Dimbokro 70.61 74 P **P 01 57 51.0 -0.2**
comp=Z,30nm,0.8s,mb5.3,baz=222,slow=5.9,SNR=46
DBIC LR LR 02 28 54.7
comp=Z,1µm,18.2s,MS5.1,baz=201,slow=36
DBIC Dimbokro 70.61 74⇑*iP* **P 01 57 50.8 -0.4**
comp=Z,30nm,0.8s,mb5.3
DBIC Dimbokro 70.61 74⇑*iP* **P 01 57 50.8 -0.4**
DBIC pmax pmax
comp=Z,30nm,0.8s
U17A Shonto 70.63 327⇑**P P 01 57 51.4 +0.6**
baz=71
T18A Mexican Hat 70.66 327⇑**P P 01 57 51.0 +0.1**
baz=71,SNR=7.6
S19A Harvey Farm, M 70.78 328⇑**P P 01 57 51.9 +0.3**
baz=71,SNR=8.2
X13A Yucca 70.78 323⇓**P P 01 57 51.9 +0.2**
baz=71
V15A Kaibab Nationa 70.81 325⇓**P P 01 57 52.4 +0.6**
baz=71,SNR=6.8
PV01 Paradox Valley 70.81 329 *eP* **P 01 57 51.5 -0.3**
ISCO Idaho Springs 70.83 332 *eP* **P 01 57 52.1 +0.2**
W14A Seligman 70.84 324⇓**P P 01 57 52.3 +0.2**
baz=71
ECSD EROS,Sioux Fal 70.89 340 *eP* **P 01 57 51.1 -1.0**
SMCO Snowmass 70.92 331 *eP* **P 01 57 53.2 +0.8**
BC3 Big Chuckw Mtn 71.01 321⇓**P P 01 57 52.9 -0.2**
baz=71
T17A Navajo Res., N 71.01 327⇑**P P 01 57 53.8 +0.7**
baz=71,SNR=9.6
MONP Monument Peak 71.02 320⇓**P P 01 57 53.5 +0.3**
baz=71
S18A Hurst Farm, Bl 71.15 328⇓**P P 01 57 54.6 +0.7**
baz=71,SNR=13
V14A Boquillas Ranc 71.17 324⇓**P P 01 57 55.0 +0.9**
baz=71,SNR=5.6
W13A Hualapai Mount 71.19 323⇑**P P 01 57 54.2 0.0**
baz=71
IRM Iron Mountain 71.20 322⇑**P P 01 57 54.4 +0.1**
baz=71
R19A Curley Farm, L 71.27 329⇑**P P 01 57 54.7 +0.1**
baz=71
U15A North Rim 71.34 325⇓**P P 01 57 55.9 +0.9**
baz=72,SNR=7.4
T16A Glen Canyon Da 71.36 326⇓**P P 01 57 55.6 +0.5**
baz=72
S17A Black Ridge (B 71.50 327⇓**P P 01 57 56.1 0.0**
baz=72
PFO Pinyon Flat Ob 71.56 321⇑**P P 01 57 56.9 +0.4**
baz=72
TBI Tubuai 71.57 252 *e*S S 02 07 14.7 -1.0
comp=Z,491nm,30.0s
TBI Tubuai 71.57 252 *e*LR LR 02 19 58.9
comp=Z,812nm,22.8s,baz=113
R18A Canyonlands Na 71.65 328⇑**P P 01 57 56.8 -0.1**
baz=72
Q19A Hogan Spring (71.79 329⇓**P P 01 57 58.6 +0.9**
baz=72
V13A Grand Canyon W 71.80 324⇓**P P 01 57 58.2 +0.3**
baz=72,SNR=6.7
T15A Red Dirt Ranch 71.83 326⇑**P P 01 57 58.3 +0.3**
baz=72
GMRC Granite Mounta 71.94 322⇑**P P 01 57 59.2 +0.5**
baz=72
S16A Weppner Ranch, 71.97 327⇑**P P 01 57 59.1 +0.3**
baz=72
R17A Hanksville Air 72.07 328⇑**P P 01 57 59.8 +0.4**
baz=72
P19A Cripple Cowboy 72.20 330⇑**P P 01 58 00.5 +0.3**
baz=72,SNR=16
T14A Hurricane 72.23 325⇑**P P 01 58 01.1 +0.7**
baz=72
S15A Panguitch 72.32 326⇑**P P 01 58 01.4 +0.5**
baz=72
Q18A Rafter H Ranch 72.33 329⇑**P P 01 58 01.5 +0.5**
baz=72
SRU San Rafael 72.52 328⇓**P P 01 58 02.2 +0.1**
baz=73,SNR=13
U12A Valley of Fire 72.53 324⇓**P P 01 58 02.6 +0.4**
baz=73
R15A Junction 72.69 327⇑**P P 01 58 03.3 +0.2**
baz=73
P18A Preston Nutter 72.79 329⇑**P P 01 58 04.3 +0.7**
baz=73,SNR=9.1
O19A Miners Draw (B 72.80 330⇓**P P 01 58 04.0 +0.2**
baz=73,SNR=5.8
P17A Butcher Ranch, 72.91 328⇑**P P 01 58 04.5 +0.1**
baz=73
GSC Goldstone 72.97 322⇑**P P 01 58 05.0 +0.1**
baz=73
S13A Holt Ranch, En 73.03 325⇓**P P 01 58 06.0 +0.8**
baz=73,SNR=6.8
R14A James Farms, M 73.14 326⇑**P P 01 58 06.4 +0.6**
baz=73
O18A Roosevelt 73.18 329⇑**P P 01 58 06.3 +0.3**
baz=73
N19A John Jarvie Ra 73.30 330⇑**P P 01 58 06.5 -0.1**
baz=73,SNR=7.7
M20A Sweetwater, Wa 73.33 331⇓**P P 01 58 07.1 +0.2**
baz=74
EDW2 Edwards Air Fo 73.35 321⇓**P P 01 58 06.9 -0.2**
baz=74
L21A Rawlins 73.36 332⇑**P P 01 58 06.9 -0.1**
baz=74,SNR=7.0
O17A Robinson Place 73.47 329⇓**P P 01 58 08.4 +0.7**
baz=74,SNR=15
T11A Corn Creek, Al 73.50 324⇓**P P 01 58 08.8 +0.8**
baz=74,SNR=6.1
U10A Ash Meadows, A 73.51 323⇑**P P 01 58 08.4 +0.4**
baz=74
PPT Papeete 73.53 258 *e*S S 02 07 36.0 -2.2
comp=Z,1µm,28.0s
PPT Papeete 73.53 258 *e*LR LR 02 20 48.4
comp=Z,1µm,25.8s,baz=106
PPT Papeete 73.53 258 LR LR 02 22 04.0
comp=Z,605nm,18.6s,MS4.9,baz=106,slow=29
R13A O'Grain Ranch, 73.53 326⇓**P P 01 58 08.5 +0.4**
baz=74
N18A Larsen Ranch, 73.59 330⇑**P P 01 58 08.8 +0.5**
baz=74
LRMC Laurel Mountai 73.60 321⇑**P P 01 58 08.7 +0.1**
baz=74
P15A Leamington 73.73 328⇓**P P 01 58 09.5 +0.2**
baz=74
Q14A Sevier Lake (B 73.79 327⇑**P P 01 58 09.5 -0.1**
baz=74
RSSD Black Hills 73.81 335 *eP* **P 01 58 09.9 +0.3**
SBA Scott Base 73.81 191 *eP* **P 01 58 08.7 -0.6**
comp=Z,3.1nm,0.8s,mb4.3
SBA Scott Base 73.81 191 *eP* **P 01 58 08.7 -0.6**
SBA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
L20A Wamsutter 73.82 332⇑**P P 01 58 09.6 -0.1**
baz=74
FURC Furnace Creek, 73.84 323⇓**P P 01 58 10.0 0.0**
baz=74
O16A Springville 73.85 328⇑**P P 01 58 10.2 +0.2**
baz=74
TPNV Topopah Spring 73.85 323 *eP* **P 01 58 10.2 +0.2**
comp=Z,7.0nm,0.9s,mb4.6
TPNV Topopah Spring 73.85 323 *eP* **P 01 58 10.2 +0.2**
TPNV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TPNV Topopah Spring 73.85 323⇑**P P 01 58 10.2 +0.2**
baz=74
MPMC Manual Prospec 73.90 322⇓**P P 01 58 10.4 +0.1**
baz=74
R12A Pony Springs, 73.98 325⇑**P P 01 58 11.5 +0.7**
baz=74,SNR=6.1
N17A Moffit Pass 74.10 329⇓**P P 01 58 11.9 +0.5**
baz=74,SNR=12
M18A Lyman 74.13 330⇓**P P 01 58 11.5 0.0**
baz=74
P14A Drum Mountains 74.14 327⇑**P P 01 58 12.3 +0.7**
baz=74,SNR=6.7
Q13A Wheeler Ranch, 74.14 326⇑**P P 01 58 11.8 +0.2**
baz=74
ISA Isabella 74.18 321 *eP* **P 01 58 12.8 +0.8**
ISA Isabella 74.18 321⇑**P P 01 58 12.1 +0.1**
baz=74
L19A Farson 74.34 331⇓**P P 01 58 12.7 -0.1**
baz=74
O15A The Old Anders 74.37 328⇓**P P 01 58 13.5 +0.5**
baz=74
DUG Dugway 74.47 328 *eP* **P 01 58 12.7 -0.9**
comp=Z,11nm,1.4s,mb4.6
DUG Dugway 74.47 328 *eP* **P 01 58 12.7 -0.9**
DUG pmax pmax
comp=Z,11nm,1.4s,mb4.6
DUG Dugway 74.47 328⇓**P P 01 58 13.8 +0.2**
baz=75
CWC Cottonwood Cre 74.50 322⇓**P P 01 58 14.0 +0.1**
baz=75
L18A Fontenelle, Gr 74.51 330⇑**P P 01 58 13.6 -0.1**
baz=75,SNR=8.9
R11A Troy Canyon, C 74.51 325⇑**P P 01 58 14.6 +0.8**
baz=75,SNR=5.5
P13A Bates Ranch, G 74.52 326⇓**P P 01 58 14.6 +0.8**
baz=75
Q12A Willow Creek R 74.62 326⇓**P P 01 58 14.5 0.0**
baz=75
S10A Tonopah Range, 74.74 324⇑**P P 01 58 15.5 +0.4**
baz=75
M16A Huntsville 74.77 329⇑**P P 01 58 15.2 0.0**
baz=75
AGMN Agassiz Refuge 74.82 343 *eP* **P 01 58 14.4 -1.0**
R10A Warm Springs 74.85 324⇑**P P 01 58 16.3 +0.5**
baz=75
Q11A Duckwater 74.91 325⇓**P P 01 58 16.4 +0.3**
baz=75
S09A Goldfield 74.94 323⇑**P P 01 58 16.5 +0.2**
baz=75
HWUT Hardware Ranch 74.97 329 *eP* **P 01 58 14.3 -2.1**
comp=Z,13nm,1.1s,mb4.8
BW06 Boulder Array 74.97 331 *eP* **P 01 58 15.6 -0.8**
comp=Z,5.4nm,1.2s,mb4.3
PDAR Pinedale Array 74.97 331 P **P 01 58 15.8 -0.6**
comp=Z,0.5nm,0.6s,baz=127,slow=7.0,SNR=6.3
PDAR LR LR 02 33 36.7
comp=Z,210nm,18.7s,MS4.5,baz=47,slow=38
N14A Grayback Hills 75.16 328⇑**P P 01 58 17.6 +0.1**
baz=75
L16A Fish Haven 75.22 330⇓**P P 01 58 18.2 +0.4**
baz=75,SNR=6.2
M15A Larsen Ranch, 75.27 329⇑**P P 01 58 18.0 -0.2**
baz=75,SNR=5.4
Q10A Clear Creek Ra 75.29 325⇑**P P 01 58 18.7 +0.4**
baz=75
SYO Syowa Base 75.33 160⇓*eP* **P 01 58 17.4 -0.8**
O12A Currie 75.50 327⇑**P P 01 58 19.5 0.0**
baz=76,SNR=5.8
PKD Parkfield 75.59 320⇓**P P 01 58 19.9 -0.2**
baz=76
L15A Malad City 75.66 329⇑**P P 01 58 20.1 -0.2**
baz=76,SNR=5.1
M14A Sheep Mountain 75.74 328⇑**P P 01 58 20.8 -0.1**
baz=76
I18A Diamond G Ranc 75.83 332⇓**P P 01 58 21.5 +0.2**
baz=76
O11A Cowboy Ranch, 75.86 326⇓**P P 01 58 21.9 +0.3**
baz=76
K16A Soda Springs 75.93 330⇑**P P 01 58 22.4 +0.5**
baz=76,SNR=10
J17A Brown Place, J 75.95 331⇓**P P 01 58 22.1 0.0**
baz=76
NVAR Mina Array Bea 76.04 323 P **P 01 58 23.1 +0.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=149,slow=6.6,SNR=9.2
SNOW Snow King Moun 76.05 331 *eP* **P 01 58 22.2 -0.3**
comp=Z,3.7nm,0.6s,mb4.5
L14A Malta 76.09 329⇓**P P 01 58 22.6 -0.3**
baz=76
LOHW Long Hollow 76.10 331 *eP* **P 01 58 22.9 0.0**
ELK Elko 76.10 327 *eP* **P 01 58 22.7 -0.2**
comp=Z,4.7nm,0.9s,mb4.4
ELK Elko 76.10 327 *eP* **P 01 58 22.7 -0.2**
ELK pmax pmax
comp=Z,5.0nm,0.9s
Q08A Gabbs 76.14 324⇑**P P 01 58 23.0 -0.2**
baz=76
TPAW Teton Pass 76.16 331 *eP* **P 01 58 23.8 +0.6**
comp=Z,7.0nm,1.0s,mb4.5
RRI2 Red Ridge 76.21 331 *eP* **P 01 58 23.7 +0.2**
comp=Z,12nm,1.0s,mb4.8
K15A Arbon 76.25 329⇓**P P 01 58 23.3 -0.5**
baz=76
MOOW Moose Ponds 76.27 331 *eP* **P 01 58 22.7 -1.1**
comp=Z,19nm,1.6s,mb4.8
J16A Bone 76.29 330⇑**P P 01 58 23.8 -0.1**
baz=76
I17A Pilgram Creek 76.33 331⇓**P P 01 58 24.5 +0.4**
baz=76
M12A Wells 76.44 327⇓**P P 01 58 24.4 -0.4**
baz=77
K14A Jones Ranch, D 76.45 329⇑**P P 01 58 24.1 -0.8**
baz=77
L13A Double Diamond 76.47 328⇑**P P 01 58 25.1 +0.1**
baz=77
IMW Indian Meadow 76.47 331 *eP* **P 01 58 25.2 +0.3**
comp=Z,24nm,1.7s,mb4.8
ULM Lac du Bonnet 76.61 344 P **P 01 58 23.9 -1.6**
comp=Z,4.6nm,0.6s,mb4.6,baz=172,slow=6.3,SNR=3.0
ULM LR LR 02 33 58.9
comp=Z,345nm,21.1s,MS4.6,baz=228,slow=37
ULM Lac du Bonnet 76.61 344 *eP* **P 01 58 23.9 -1.7**
comp=Z,6.2nm,0.7s,mb4.7
I16A Newdale 76.70 331⇑**P P 01 58 26.4 +0.2**
baz=77
RLMT Red Lodge 76.73 333 *eP* **P 01 58 25.4 -1.0**
comp=Z,24nm,1.6s,mb4.9
RLMT Red Lodge 76.73 333⇑**P P 01 58 26.4 +0.1**
baz=77,SNR=5.3
R06C Coleville 76.74 323⇓**P P 01 58 26.6 0.0**
baz=77
J15A Blackfoot 76.76 330⇓**P P 01 58 26.8 +0.2**
baz=77
LAO LASA Array 76.80 336 *eP* **P 01 58 26.5 -0.2**
comp=Z,13nm,0.9s,mb4.9
M11A Holland Ranch, 76.89 327⇑**P P 01 58 27.6 +0.2**
baz=77
G18A Lazy EL Ranch, 77.01 333⇑**P P 01 58 28.1 +0.1**
baz=77,SNR=6.4
L12A House Creek Ra 77.04 328⇑**P P 01 58 28.0 -0.2**
baz=77
J14A Carey 77.21 329⇓**P P 01 58 29.4 +0.3**
baz=77
H16A Russell Place, 77.25 331⇑**P P 01 58 29.8 +0.5**

baz=77,SNR=5.9
O08A Rochester Mine 77.29 325 ⇓P P 01 58 29.6 -0.1
baz=77
K12A Draper Farm, C 77.35 328 ⇑P P 01 58 30.0 +0.1
baz=78,SNR=7.1
L11A Cat Creek Ranc 77.42 327 ⇓P P 01 58 30.5 +0.2
baz=78
GCMT Greycliff 77.44 333 eP P 01 58 30.0 -0.4
PAHR Pah Rah Range 77.54 323 eP P 01 58 31.6 +0.5
comp=Z,8.7nm,0.7s,mb4.8
F18A Big Timber 77.55 333 ⇑P P 01 58 30.8 -0.2
baz=78,SNR=9.6
DGMT Dagmar 77.56 338 eP P 01 58 30.0 -1.0
comp=Z,42nm,1.1s,mb5.3
DGMT Dagmar 77.56 338 ⇑P P 01 58 31.1 +0.1
baz=78
J13A Cove Ranch, Pi 77.57 329 ⇑P P 01 58 31.4 +0.3
baz=78
O07A Toulon 77.58 324 ⇑P P 01 58 30.9 -0.4
baz=78
N08A GE Springer Mi 77.63 325 ⇓P P 01 58 31.4 -0.2
baz=78
I14A Mackay 77.64 330 ⇓P P 01 58 31.8 +0.3
baz=78
L10A Juniper Basin 77.71 327 ⇑P P 01 58 32.1 +0.1
baz=78,SNR=8.6
M09A Marrel Ranch, 77.73 326 ⇑P P 01 58 32.0 -0.2
baz=78
H15A Lima 77.80 331 ⇓P P 01 58 33.0 +0.6
baz=78
HLID Hailey 77.81 329 eP P 01 58 32.8 +0.3
comp=Z,5.6nm,0.9s,mb4.5
HLID Hailey 77.81 329 ⇓P P 01 58 32.9 +0.4
baz=78,SNR=8.0
G16A Moss Hill, Enn 77.91 331 ⇑P P 01 58 33.3 +0.4
baz=78
J12A Stokes Ranch, 77.91 328 ⇑P P 01 58 33.1 +0.1
baz=78
I13A Wildhorse Cree 77.94 329 ⇓P P 01 58 33.6 +0.4
baz=78
F17A Fitzpatrick Pl 77.94 333 ⇓P P 01 58 33.3 +0.1
baz=78
K11A Parker Ranch, 78.00 327 ⇑P P 01 58 33.8 +0.2
baz=78
MCMT McKenzie Canyo 78.06 331 eP P 01 58 34.3 +0.4
N07B Gerlach 78.07 324 ⇑P P 01 58 33.9 -0.1
baz=78
H14A Leadore 78.13 330 ⇓P P 01 58 34.1 -0.1
baz=78
BOZ Bozeman (W) 78.16 332 eP P 01 58 33.1 -1.3
comp=Z,8.7nm,1.4s,mb4.5
BOZ Bozeman (W) 78.16 332 eP P 01 58 33.1 -1.3
BOZ pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
BOZ Bozeman (W) 78.16 332 ⇑P P 01 58 34.1 -0.2
baz=78
G15A Dillon 78.16 331 ⇓P P 01 58 34.9 +0.5
baz=78,SNR=6.2
E18A Harlowton 78.16 333 ⇓P P 01 58 34.3 -0.1
baz=78
BEKR Beckwourth 78.19 323 ⇑P P 01 58 34.9 +0.3
baz=78
L09A Wilkinson Ranc 78.28 326 ⇓P P 01 58 35.1 -0.1
baz=78
I12A Atlanta 78.33 329 ⇓P P 01 58 35.8 +0.4
baz=78,SNR=6.4
MFID Camas Ranch 78.38 328 ⇑P P 01 58 35.4 -0.2
baz=78
K10A MacKenzie Ranc 78.43 327 ⇓P P 01 58 35.8 -0.1
baz=79
E17A Martinsdale 78.47 333 ⇓P P 01 58 36.1 0.0
baz=79,SNR=5.4
H13A Challis 78.50 330 ⇓P P 01 58 36.8 +0.5
baz=79,SNR=9.3
N06A Buffalo Meadow 78.52 324 ⇓P P 01 58 36.4 -0.1
baz=79
ORV Oroville 78.61 322 ⇑P P 01 58 37.1 +0.1
baz=79
D18A Linhart Farms, 78.62 334 ⇑P P 01 58 36.4 -0.5
baz=79
LRM Limekiln Ridge 78.65 331 eP P 01 58 37.7 +0.7
F15A Butte 78.69 331 ⇑P P 01 58 37.5 +0.2
baz=79,SNR=7.8
L08A Fields 78.75 326 ⇑P P 01 58 37.3 -0.5
baz=79
H12A Diamond D Ranc 78.77 329 ⇓P P 01 58 38.0 +0.3
baz=79
K09A Rome 78.80 326 ⇑P P 01 58 37.8 -0.1
baz=79
G13A Cobalt 78.89 330 ⇑P P 01 58 39.0 +0.5
baz=79,SNR=21
O04C Chester 78.90 323 ⇓P P 01 58 38.5 -0.1
baz=79
SUR Sutherland 78.91 120 eP P 01 58 40.5 +1.5
comp=Z,23nm,0.9s,mb5.1
D17A Six Diamond Ra 78.95 333 ⇓P P 01 58 38.7 0.0
baz=79,SNR=6.5
F14A Wisdom 79.05 331 ⇑P P 01 58 39.5 +0.2
baz=79
L07A Adell 79.15 325 ⇑P P 01 58 40.0 +0.1
baz=79
E15A Deer Lodge 79.20 332 ⇓P P 01 58 40.2 +0.1
baz=79,SNR=5.5
D16A Dana Ranch, Ca 79.21 333 ⇓P P 01 58 40.5 +0.4
baz=79
TOA0 Torodi Ar. Sit 79.30 71 ⇑iP P 01 58 40.9 -0.4
TORD Torodi Ar. Bea 79.30 71 P P 01 58 41.0 -0.4
comp=Z,36nm,0.8s,mb5.4,baz=254,slow=5.1,SNR=175
TORD LR LR 02 33 40.7
comp=Z,420nm,19.6s,MS4.8,baz=235,slow=36
TORD Torodi Ar. Bea 79.30 71 P P 01 58 41.0 -0.4
TORD LR LR 02 33 40.8
C17A Wharram Farm, 79.36 334 ⇑P P 01 58 40.7 -0.2
baz=80
GASB Alder Springs 79.37 322 ⇓P P 01 58 41.1 -0.1
baz=80
H11A Donnelly 79.43 329 ⇓P P 01 58 41.3 -0.1
baz=80
F13A Darby 79.47 330 ⇑P P 01 58 41.6 +0.1
baz=80,SNR=14
E14A Clinton 79.57 331 ⇑P P 01 58 42.7 +0.6
baz=80
MOD Modoc 79.57 325 ⇓P P 01 58 42.5 +0.2
baz=80
K07A Rock Creek Ran 79.58 326 ⇓P P 01 58 42.5 +0.3
baz=80
D15A Lincoln 79.63 332 ⇓P P 01 58 42.9 +0.5
baz=80
H10A Noah's Angus R 79.70 328 ⇓P P 01 58 43.1 +0.2
baz=80
CHMT Chamberlain Mo 79.85 332 eP P 01 58 42.7 -0.9
F12A Elk City 79.86 330 ⇓P P 01 58 43.8 +0.1
baz=80
E13A Victor 79.90 331 ⇑P P 01 58 44.1 +0.3
baz=80,SNR=7.9
C16A Fuhringer Ranc 79.90 333 ⇓P P 01 58 43.4 -0.5
baz=80
G11A Walters Elk Ra 80.07 329 ⇑P P 01 58 44.9 0.0
baz=80,SNR=9.6
D14A Greenough 80.09 332 ⇓P P 01 58 44.6 -0.3
baz=80
J07A Hines 80.09 326 ⇓P P 01 58 44.9 -0.2
baz=80
I08A Drewsey 80.10 327 ⇑P P 01 58 44.9 -0.1
baz=80
BMO Blue Mountains 80.16 328 eP P 01 58 44.9 -0.4
comp=Z,22nm,1.5s,mb4.9
C15A Salmond Ranch, 80.24 333 ⇑P P 01 58 45.9 +0.2
baz=80,SNR=10
F11A Grangeville 80.38 330 ⇑P P 01 58 46.2 -0.3
baz=80
G10A Bishop Farm, J 80.39 329 ⇑P P 01 58 46.8 +0.2
baz=80
J06A Christmas Vall 80.44 326 ⇓P P 01 58 46.7 -0.2
baz=81
K05A Summer Lake 80.46 325 ⇓P P 01 58 47.1 +0.1
baz=81
N02C Big Bar 80.48 322 ⇓P P 01 58 46.4 -0.8
baz=81
E12A Beaver Dam Sad 80.50 330 ⇑P P 01 58 46.7 -0.5
baz=81
D13A Huson 80.52 331 ⇓P P 01 58 47.2 0.0
baz=81
H08A Prairie City 80.59 327 ⇓P P 01 58 47.5 -0.1
baz=81
B15A Bradely Ranch, 80.64 333 ⇓P P 01 58 47.1 -0.7
baz=81,SNR=7.3
I07A Izee 80.69 327 ⇑P P 01 58 48.4 +0.1
baz=81
G09A Cove 80.70 328 ⇓P P 01 58 48.3 +0.1
baz=81
C14A Swan Lake 80.72 332 ⇓P P 01 58 48.3 0.0
baz=81
A16A West Butte Ran 80.75 334 ⇓P P 01 58 48.2 -0.2
baz=81,SNR=13
E11A Bogner Ranch, 80.75 330 ⇑P P 01 58 48.2 -0.3
baz=81
YBH Yreka Blue Hor 80.76 323 ⇓P P 01 58 47.8 -0.9
baz=81
D12A Red Ives Fores 80.88 331 ⇓P P 01 58 48.9 -0.3
baz=81
TSUM Tsumeb 80.89 107 ⇑iP P 01 58 51.0 +1.1
comp=Z,23nm,0.8s,mb5.2
F10A Beach Ranch, E 80.95 329 ⇓P P 01 58 49.6 +0.1
baz=81
I06A Prineville 80.96 326 ⇓P P 01 58 49.8 +0.1
baz=81
B14A Marquette Ranc 80.98 333 ⇓P P 01 58 49.2 -0.4
baz=81
C13A Hot Springs 81.01 332 ⇓P P 01 58 50.0 +0.2
baz=81,SNR=5.8
A15A Johnson Ranch, 81.23 333 ⇑P P 01 58 49.6 -1.4
baz=81
E10A Myers Farm, Un 81.27 329 ⇑P P 01 58 51.0 -0.2
baz=81,SNR=5.4
D11A Klaveano Farm, 81.33 330 ⇑P P 01 58 51.5 0.0
baz=82
C12B Naegeli Ranch, 81.43 331 ⇓P P 01 58 51.8 -0.3
baz=82
B13A Whitefish 81.50 332 ⇑P P 01 58 52.0 -0.4
baz=82
A14A Double T Ranch 81.52 333 ⇑P P 01 58 51.9 -0.5
baz=82
H06A Lindquist Farm 81.58 327 ⇑P P 01 58 52.9 0.0
baz=82
G07A Ruggs Ranch, H 81.62 327 ⇑P P 01 58 53.1 0.0
baz=82
D10A Wagner Farm, O 81.76 330 ⇑P P 01 58 53.0 -0.8
baz=82,SNR=7.0
E09A Wood Farm, Sta 81.78 329 ⇓P P 01 58 53.2 -0.7
baz=82
WALA Waterton Lakes 81.79 333 eP P 01 58 53.5 -0.5
comp=Z,26nm,1.3s,mb5.0
C11A Tepee Creek (N 81.88 331 ⇓P P 01 58 54.1 -0.4
baz=82,SNR=9.0
A13A Flathead Natio 81.90 332 ⇓P P 01 58 54.7 +0.2
baz=82
A12A Yaak River Ran 82.44 332 ⇑P P 01 58 57.2 -0.1
baz=83
A11A Hall Mountain, 82.76 331 ⇑P P 01 58 58.7 -0.3
baz=83,SNR=7.0
C09A Chrisman Ranch 82.77 330 ⇑P P 01 58 58.6 -0.5
baz=83
MAW Mawson 83.03 164 ⇑iP P 01 59 01.0 +0.7
comp=Z,20nm,0.9s,mb5.1
MAW Mawson 83.03 164 P P 01 59 00.8 +0.5
comp=Z,22nm,0.8s,mb5.2,baz=229,slow=5.8,SNR=28
MAW LR LR 02 39 22.7
comp=Z,538nm,18.0s,MS5.0,baz=232,slow=38
MAW Mawson 83.03 164 ⇑iP P 01 59 01.0 +0.7
MAW pmax pmax
comp=Z,20nm,0.9s
ETW Entiat 83.60 329 eP P 01 59 03.3 -0.1
A09A Danville 83.77 330 ⇓P P 01 59 03.8 -0.4
baz=84
BOSA Boshof 83.86 118 P P 01 59 05.7 +0.3
comp=Z,15nm,0.8s,mb5.2,baz=248,slow=4.0,SNR=30
BOSA LR LR 02 34 22.7
comp=Z,720nm,18.0s,MS5.1,baz=248,slow=34
BOSA Boshof 83.86 118 eP P 01 59 05.4 0.0
comp=Z,13nm,0.7s,mb5.2
BOSA Boshof 83.86 118 eP P 01 59 05.4 0.0
BOSA pmax pmax
comp=Z,13nm,0.7s,mb5.2
LBTB Lobatse 85.56 115 eP P 01 59 14.7 +0.7
comp=Z,6.9nm,0.9s,mb4.9
LBTB Lobatse 85.56 115 eP P 01 59 14.7 +0.7
LBTB pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
TAM Tamanrasset 86.90 64 eP P 01 59 20.5 0.0
ESDC Sonseca Array 88.11 45 P P 01 59 27.7 +1.8
comp=Z,1.2nm,0.8s,mb4.2,baz=249,slow=4.7,SNR=5.1
ESDC LR LR 02 35 28.7
comp=Z,283nm,20.4s,MS4.7,baz=250,slow=33
LSZ Lusaka 91.74 107 eP P 01 59 45.4 +1.8
comp=Z,4.8nm,1.0s,mb4.8
LSZ Lusaka 91.74 107 eP P 01 59 45.4 +1.8
LSZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
YKA Yellowknife Ar 92.40 341 P P 01 59 44.3 -1.1
comp=Z,3.5nm,0.7s,mb4.8,baz=136,slow=4.3,SNR=23
KEST Kesra 95.52 54 LR LR 02 47 07.2
comp=Z,388nm,18.2s,MS4.9,baz=198,slow=38
PRU Pruhonice 104.39 42 AMS AMS 02 49 30.0
comp=Z,200nm,17.0s
PSZ Piszkesteto 107.14 45 ePKP PKiKP 02 05 01.6 +0.3
CAN Canberra 110.75 214 ePKP PKiKP 02 05 10.0 +1.4
CSS Prodhromos 113.84 61 ePKP PKiKP 02 05 14.6 +0.3
KIV Kislovodsk 122.20 52 i PKIKP PKPdf 02 05 29.9 -0.2
KIV e 02 17 01.2
KIV pmax pmax
comp=Z,8.0nm,0.8s
KIV MLR MLR
comp=Z,116nm,20.0s,MS4.5
ASAR Alice Springs 127.66 209 PKP PKPdf 02 05 40.6 -0.7
comp=Z,2.5nm,0.8s,baz=254,slow=2.1,SNR=26
TIXI Tiksi 130.38 352 i PKIKP PKPdf 02 05 42.6 -2.3
TIXI pmax pmax
comp=Z,10.0nm,2.0s
ARU Arti 130.43 35 ePKPdf PKPdf 02 05 45.7 +0.3
ARU Arti 130.43 35 ePKIKP PKPdf 02 05 45.7 +0.3
WB2 Warramunga Arr 130.68 211 eP PKPdf 02 05 45.5 -1.6
WRA Warramunga Arr 130.69 211 PKP PKPdf 02 05 46.6 -0.5
comp=Z,6nm,0.8s,baz=153,slow=1.7,SNR=35
WRAB Tennant Creek 130.69 211 ePKPdf PKPdf 02 05 47.1 0.0
WRAB Tennant Creek 130.69 211 i PKIKP PKPdf 02 05 46.2 -0.9
PETK Petropavlovsk- 133.12 322 PKP PKPdf 02 05 49.7 -0.9
comp=Z,6.0nm,0.9s,baz=285,slow=5.7,SNR=2.8
BRVK Borovoye 138.00 35 ePKPdf PKPdf 02 06 00.1 +0.3
NVS Novosibirsk 142.89 25 ePKHKP 02 06 03.3
NVS pmax pmax
comp=Z,24nm,1.9s
NVS pmax pmax
comp=N,22nm,2.4s
NVS pmax pmax
comp=E,7.0nm,1.4s
KURK Kurchatov 143.61 33 ePKPdf PKPdf 02 06 06.9 -3.0
ZAA0 Zalesovo Array 144.18 25 ePKPdf PKPdf 02 06 08.4 -2.4
ZALV Zalesovo Beam 144.18 25 PKP PKPdf 02 06 08.4 -2.4
comp=E,13nm,0.8s,baz=300,slow=4.4,SNR=31
EKS2 Erkin-Say 144.67 48 ePKPdf PKPdf 02 06 11.3 -0.7
EKS2 Erkin-Say 144.67 48 P PKPdf 02 06 11.8 -0.2
SNR=19
AML Almayashu 144.80 49 ePKPdf PKPdf 02 06 12.1 -0.2
AML Almayashu 144.80 49 P PKPdf 02 06 12.7 +0.4
SNR=21
USP Ospenovka 144.93 47 P PKPdf 02 06 12.1 -0.4
SNR=17
AAK Ala-Archa 145.17 48 P PKPbc 02 06 13.8 +1.3
SNR=46
FRU Bishkek 145.17 48 ⇑iPKIKP PKPdf 02 06 13.0 +0.1
FRU i 02 06 21.0
FRU pmax pmax
comp=Z,157nm,2.0s
CHMS Chumysh 145.20 47 P PKPbc 02 06 13.2 +0.6
SNR=14
UCH Uchtor 145.33 49 ePKPbc PKPbc 02 06 14.9 +1.9
BOD Bodaibo 145.36 356 ⇓iPKIKP PKPdf 02 06 11.0 -1.7
BOD pmax pmax
comp=Z,34nm,0.9s
KBK Karagaybulak 145.47 48 P PKPdf 02 06 14.5 +1.1
SNR=25
TKM2 Tokmak 2 145.80 47 ePKPbc PKPbc 02 06 15.2 +0.7
TKM2 Tokmak 2 145.80 47 P PKPdf 02 06 14.9 +1.0
SNR=21
KSH Kashi 147.33 52 ePKP PKPbc 02 06 19.9 +0.8
KSH ePKS 02 09 53.5
KSH eSKS SKSdf 02 13 23.1 -1.6
KSH PP PP
comp=Z,705nm,5.6s
KSH LR LR
comp=N,236nm,5.4s
KSH LR LR
comp=E,360nm,5.8s
KSH LR LR
comp=Z,644nm,4.9s
HABR Khabarovsk 147.75 328 PKHKP 02 06 13.7
HABR e 02 13 19.6
HABR eSSS 02 34 22.2
MK31 Makanchi Array 147.92 36 ePKPdf PKPdf 02 06 16.7 -0.7
MK31 ePKPbc PKPbc 02 06 19.8 -0.6
MKAR Makanchi Array 147.92 36 PKPbc PKPdf 02 06 17.5 +0.1
comp=Z,16nm,0.8s,baz=336,slow=2.7,SNR=36
KAPI Kappang 150.15 201 PKPbc PKPbc 02 06 25.9 -1.2
comp=Z,6.5nm,0.7s,baz=232,slow=3.1,SNR=4.9
KAPI PKPab PKPab 02 06 33.9 +1.1
comp=Z,4.6nm,0.4s,baz=303,slow=8.9,SNR=4.8
KAPI Kappang 150.15 201 ePKPbc PKPbc 02 06 26.3 -0.8
KAPI ePKPab PKPab 02 06 32.3 -0.6
HYB Hyderabad 150.40 96 eP PKPbc 02 06 28.0 +0.5
HYB Hyderabad 150.40 96 i PKP PKPbc 02 06 28.0 +0.5
MJAR Matsushiro Arr 151.99 305 PKPbc PKPbc 02 06 30.2 -0.5
comp=Z,4.2nm,0.8s,baz=103,slow=1.2,SNR=9.8
MJAR PKPab PKPab 02 06 40.8 +0.7
comp=Z,6.1nm,0.9s,baz=91,slow=1.2,SNR=6.7
MAJO Matsushiro 151.99 305 ePKPbc PKPbc 02 06 30.3 -0.4
MAT Matsushiro 151.99 305 PKP PKPbc 02 06 30.1 -0.6
ZAK Zakamensk 152.52 9 ePKIKP PKPdf 02 06 22.6 -1.9
ZAK e 02 06 31.3
WMQ Urumqi 152.75 36 ePKP PKPdf 02 06 26.0 +1.0
WMQ PP PP 02 10 20.0 +4.5
WMQ SKS SKSdf 02 13 32.0 +0.5
WMQ SKKS SKKSac 02 17 08.0 +2.5
WMQ SS SS 02 29 50.0 +4.0
WMQ PP PP
comp=Z,154nm,10.0s
WMQ LR LR
comp=N,189nm,20.0s,MS5.1
WMQ LR LR
comp=E,204nm,20.0s,MS5.1
WMQ LR LR
comp=Z,238nm,22.0s,MS5.0
MDJ Mudanjiang 153.14 327 PKP PKPdf 02 06 25.0 -0.6
MDJ PP PP 02 10 17.0 -0.6
MDJ SS SS 02 29 49.3 -0.7
MDJ PP PP
comp=Z,94nm,5.2s
SONM Songino Array 155.38 5 PKP PKPdf 02 06 28.8 +0.2
comp=Z,1.5nm,0.8s,baz=325,slow=1.4,SNR=12
SONM PKPab PKPab 02 06 53.9 0.0
comp=Z,1.0nm,0.8s,baz=323,slow=2.1,SNR=4.0
ULN Ulaanbaatar 155.40 4 ePKPdf PKPdf 02 06 28.6 0.0
ULN ePKPbc PKPdf 02 06 37.8 +9.2
KSRS Korea Array 158.83 316 PKP PKPdf 02 06 33.3 0.0
comp=Z,1.3nm,0.7s,baz=64,slow=33,SNR=3.8
GTA Gaotai 161.93 25 ePKP PKPdf 02 06 37.5 +0.8
HHC Hu-ho-hao-te 162.41 355 ePKP PKPdf 02 06 36.4 -0.7
HHC PKS 02 10 08.9
HHC PP PP 02 11 10.8 +2.9
HHC SKS SKSdf 02 13 37.0 -4.2
HHC SKKS SKKSac 02 17 55.1 -1.2
HHC SS SS 02 31 27.6 -0.3
HHC PP PP
comp=Z,217nm,10.7s
HHC LR LR
comp=N,283nm,19.6s
HHC LR LR
comp=E,164nm,21.4s
HHC LR LR
comp=Z,368nm,19.0s
LZH Lanzhou 166.33 20 ePKP PKPdf 02 06 37.0 -3.8
LZH APKP 02 06 47.8
LZH ePP PP 02 11 28.5 -0.1
LZH eSS SS 02 32 03.9 -4.6
LZH PP PP
comp=Z,117nm,8.0s
LZH LR LR
comp=E,158nm,18.1s
LZH LR LR
comp=Z,237nm,20.5s
NJ2 Nanjing 168.00 319 ePKP PKPdf 02 06 37.5 -4.6
CMAR Chiang Mai Arr 168.98 114 PKP PKPdf 02 06 43.1 -0.1
comp=Z,0.5nm,0.3s,baz=271,slow=0.9,SNR=4.7
CMAR PKPab PKPab 02 07 54.9 +0.5
comp=Z,1.4nm,0.5s,baz=251,slow=4.4,SNR=6.8
CD2 Chengdu 170.83 33 ePKP PKPdf 02 06 43.0 -0.9
CD2 PKP2 PKPab 02 08 03.3 +1.2
CD2 PP PP 02 11 54.8 +2.9
CD2 SKS SKSdf 02 13 41.3 -5.5
CD2 SKKS SKKSac 02 18 36.6 -2.2
CD2 SS SS 02 32 51.9 -2.4
CD2 PP PP
comp=Z,120nm,10.8s
CD2 LR LR
comp=N,180nm,18.8s
CD2 LR LR
comp=Z,150nm,16.8s
KMI Kunming 173.53 72 PKP PKPdf 02 06 44.9 -0.4
GYA Guiyang 175.91 39 PKP PKPdf 02 06 46.3 +0.3
GYA PKP2 PKPab 02 08 24.0 -0.7
GYA PKS 02 10 17.1
GYA PP PP 02 12 19.0 +2.1
GYA SKKS SKKSac 02 18 58.0 -5.3
GYA SS SS 02 33 42.3 -1.7
GYA PP PP
comp=Z,110nm,6.9s
GYA LR LR
comp=N,100nm,22.5s
GYA LR LR
comp=E,120nm,23.4s
GYA LR LR
comp=Z,110nm,22.0s

NEIC ***15*** *01:49:11.9, 3740N×2094E, h22km, MD3.5(ATH), After ATH.*
CSEM ***15*** *01:49:12.5±0.2, 3741N×2095E, h8km, MD3.5, Error ellipse: s-maj=4.3km s-min=2.3km az=25.0*

ATH 15 01:49:11.9, 3740N×2094E, h22km±1km, MD3.5/8, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.78**	**32**	*e*PN	Pb	01 49 27.0	+0.3
ITM	**Ithomi**	**0.82**	**105**	*e*PN	Pb	01 49 27.8	+0.4
VLS	**Valsamata**	**0.82**	**340**	*e*PN	Pb	01 49 28.1	+0.6
EVR	**Evrytania**	**1.66**	**24**	*e*PN	Pn	01 49 42.5	+2.8
EVR	**Evrytania**	**1.66**	**24**	*e*Pn	Pn	01 49 43.0	+3.3
LKR	**Lokris**	**2.05**	**52**	*e*PN	Pn	01 49 47.3	+2.3
JAN	**Janina**	**2.25**	**358**	*e*PN	Pn	01 49 49.8	+2.0
THL	**Klokotos Trika**	**2.32**	**21**	*e*PB	Pb	01 49 51.5	-1.5
NEO	**Neokhori**	**2.62**	**43**	*e*PN	Pn	01 49 55.1	+2.3
TIP	**Timpagrande**	**3.74**	**300**	P	Pn	01 50 12.1	+3.9

NIED ***15*** *01:50:00, 2450N×12150E, h125km, Mw4.8 Best double couple: M0 1.97000×10^16 NP1:φs255.00000°, δ76.00000°, λ56.00000°. NP2:φs145.00000°, δ36.00000°, λ156.00000°.*
NEIC ***15*** *01:50:28.7±1.3, 2410N×12192E, h17km±7km, mb4.2/10, ML4.8(TAP), Error ellipse: s-maj=12.1km s-min=5.7km az=67.0*
NEIC Recorded [3 TAP] in Hua-lien, I-lan, Nan-t'ou and T'ai-chung: [1 TAP] in Chang-hua, Hsin-chu, T'ai-pei, T'ao-yuan and Yun-lin Counties.
BJI ***15*** *01:50:29.7, 2431N×12145E, h5km, mB4.5, mb4.3, ML4.1, Ms4.0, Msz3.8*
TAP ***15*** *01:50:31.2, 2406N×12148E, h22km, ML4.5, B*
JMA ***15*** *01:50:31.3±0.3, 2445N×12153E, h83km, M3.7*
ISCJB ***15*** *01:50:31.1±0.2, 2406N±001×12159E±002, h26km±1km, mb4.1/18, Error ellipse: s-maj=2.8km s-min=1.8km az=39.8*
IDC ***15*** *01:50:34.3±3.7, 2409N×12181E, h64km±37km, mb3.8/9, mb1 3.9/10, mb1mx3.8/20, mbtmp3.8/10, ML4.1/1, Error ellipse: s-maj=26.0km s-min=14.5km az=63.0*

ISC 15 01:50:31.3±0.2, 2406N±001×12158E±002, h22km±1km, n110, σ1s11/165, mb4.1/18, 17C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan** baz=80	**0.03**	**33**	⇑*i*P	**Pb**	**01 50 35.5**	**+0.4**
TWD				*i* S	**Sb**	**01 50 38.4**	**+0.7**
HWA	**Hwalien** baz=126	**0.08**	**162**	⇑*i*P	**Pb**	**01 50 36.0**	**+0.6**
NACB	**Ninganchiao**	**0.12**	**7**	*e*Pg	**Pb**	**01 50 35.3**	**-0.4**

NACB				*e*Sg		**Sb**	01 50 38.6	-0.1
ESF	**Shoufeng Towns**	**0.19**	**200**	P		**Pb**	01 50 36.3	-0.2
	baz=178							
ESF				*e*S		**Sb**	01 50 40.3	+0.2
	baz=178							
ESL	**Shilin**	**0.27**	**209**	⇑*i*P		**Pb**	01 50 37.0	-0.7
	baz=196							
ESL				*e*S		**Sb**	01 50 40.5	-1.5
	baz=196							
EHP	**Heping Village**	**0.29**	**30**	*e*P		**Pb**	01 50 38.4	+0.3
	baz=52							
EHP				*e*S		**Sb**	01 50 43.9	+1.2
	baz=52							
WHF	**Hehuan Shan**	**0.30**	**288**	⇓*i*P		**Pb**	01 50 37.5	-0.6
	baz=293							
TEGC	**Jichi Village**	**0.35**	**186**	*e*P		**Pb**	01 50 38.6	-0.2
	baz=169							
ENA	**Nanau**	**0.40**	**22**	⇓*i*P		**Pb**	01 50 39.8	+0.1
	baz=36							
TWT	**Tachien**	**0.42**	**298**	⇑*i*P		**Pb**	01 50 39.7	-0.3
	baz=302							
TWT				S		**Sb**	01 50 45.0	-0.9
	baz=302							
NNS	**Nan Shan**	**0.43**	**334**	⇑*i*P		**Pb**	01 50 39.9	-0.3
	baz=345							
NNS				S		**Sb**	01 50 45.5	-0.8
	baz=345							
ENTT	**Nioudou**	**0.58**	**359**	⇑P		**Pb**	01 50 42.6	-0.2
	baz=18							
EHY	**Hungye**	**0.59**	**203**	*e*P		**Pb**	01 50 42.0	-1.0
	baz=184							
TWC	**Suao**	**0.60**	**24**	⇓P		**Pb**	01 50 43.1	-0.1
	baz=37							
TWC				*e*S		**Sb**	01 50 51.8	+0.5
	baz=37							
YHNB	**Yeheng**	**0.64**	**343**	*e*Pn		**Pn**	01 50 43.0	-2.1
YHNB				*e*Sn		**Sb**	01 50 50.6	-1.7
SMLT	**Sun Moon Lake**	**0.64**	**255**	⇓P		**Pb**	01 50 43.0	-0.9
	baz=246							
SMLT				*e*S		**Sb**	01 50 50.5	-1.9
	baz=246							
NSK	**Sanguang**	**0.65**	**342**	⇑*i*P		**Pb**	01 50 43.9	-0.1
	baz=341							
NSK				S		**Sb**	01 50 52.5	-0.1
	baz=341							
TWE	**Neicheng**	**0.67**	**7**	⇓P		**Pb**	01 50 44.1	-0.2
	baz=15							
TWE				S		**Sb**	01 50 53.0	-0.2
	baz=15							
TYC	**Yuchr**	**0.68**	**257**	⇑P		**Pb**	01 50 43.3	-1.1
	baz=249							
TYC				S		**Sb**	01 50 51.2	-2.1
	baz=249							
ILA	**Ilan**	**0.72**	**12**	*e*P		**Pb**	01 50 45.3	+0.1
	baz=14							
ILA				*e*S		**Sb**	01 50 55.9	+1.1
	baz=14							
TWF1	**Yuli**	**0.74**	**200**	*e*P		**Pb**	01 50 43.2	-2.4
	baz=193							
TWF1				*e*S		**Sb**	01 50 55.8	+0.5
	baz=193							
NSTT	**Nanjuang**	**0.78**	**318**	⇑*i*P		**Pb**	01 50 46.0	-0.2
	baz=314							
NSTT				S		**Sb**	01 50 55.3	-1.0
	baz=314							
TWQ1	**Liyutan**	**0.79**	**292**	⇑*i*P		**Pb**	01 50 46.2	-0.1
	baz=300							
TWQ1				*e*S		**Sb**	01 50 55.7	-0.9
	baz=300							
YUS	**Yu-Shan**	**0.80**	**226**	⇑*i*P		**Pb**	01 50 46.4	-0.2
	baz=213							
YUS				*e*S		**Sb**	01 50 56.5	-0.5
	baz=213							
NSY	**Sanyi**	**0.83**	**296**	⇑*i*P		**Pb**	01 50 47.3	+0.3
	baz=304							
NSY				*e*S		**Sb**	01 50 57.8	+0.1
	baz=304							
TCU	**Taichung**	**0.83**	**277**	*i* P		**Pb**	01 50 47.2	+0.2
	baz=276							
TCU				S		**Sb**	01 50 58.5	+0.8
	baz=276							
WNT	**Mingjian**	**0.84**	**258**	P		**Pb**	01 50 47.1	0.0
	baz=255							
WNT				*e*S		**Sb**	01 50 58.6	+0.6
	baz=255							
ALS	**Alishan**	**0.89**	**233**	P		**Pb**	01 50 47.9	-0.2
	baz=220							
ALS				*e*S		**Sb**	01 50 59.0	-0.6
	baz=220							
TATO	**Taipei**	**0.92**	**355**	*e*Pn		**Pn**	01 50 48.4	-0.6
TATO				*e*Sn		**Sn**	01 50 59.9	-1.6
TWA	**Mucha**	**0.92**	**0**	*e*P		**Pb**	01 50 48.5	0.0
	baz=6.0							
TWA				*e*S		**Sb**	01 51 01.5	+1.1
	baz=6.0							
HSN	**Hsinchu**	**0.93**	**323**	*e*P		**Pb**	01 50 49.5	+0.8
	baz=331							
HSN				*e*S		**Sb**	01 51 02.9	+2.3
	baz=331							
CHN5	**Tsauling**	**0.94**	**241**	⇑P		**Pb**	01 50 48.8	-0.1
	baz=237							
CHN5				*e*S		**Sb**	01 51 01.0	+0.1
	baz=237							
CHKT	**Chengkung**	**0.97**	**192**	*e*P		**Pb**	01 50 47.3	-2.2
	baz=182							
NCU	**National Centr**	**0.98**	**339**	P		**Pb**	01 50 50.1	+0.5
	baz=327							
NCU				*e*S		**Sb**	01 51 04.4	+2.4
	baz=327							
TAP1	**Taipei**	**0.98**	**357**	*e*P		**Pb**	01 50 49.4	-0.2
	baz=3.0							
TAP1				*e*S		**Sb**	01 51 03.3	+1.1
	baz=3.0							
WGK	**Gukeng**	**1.00**	**249**	*e*P		**Pb**	01 50 49.9	0.0
	baz=245							
WGK				*e*S		**Sb**	01 51 03.2	+0.5
	baz=245							
ELDTW	**Lidau**	**1.00**	**211**	*e*P		**Pb**	01 50 47.5	-2.5
	baz=205							
ELDTW				*e*S		**Sb**	01 51 01.7	-1.1
	baz=205							
TWB1	**Santiao Chiao**	**1.02**	**21**	*e*P		**Pn**	01 50 50.2	-0.1
	baz=20							
TWB1				*e*S		**Sb**	01 51 04.1	+0.9
	baz=20							
NWF	**Wu-fen Shan**	**1.03**	**10**	⇓P		**Pn**	01 50 50.3	-0.1
	baz=23							
NWF				*e*S		**Sb**	01 51 04.3	+0.8
	baz=23							
TWS1	**Kuangyinshan**	**1.05**	**352**	P		**Pn**	01 50 51.3	+0.6
	baz=358							
TWS1				S		**Sb**	01 51 06.8	+2.7
	baz=358							
CHN2	**Minshiung**	**1.14**	**243**	*e*P		**Pn**	01 50 52.8	+0.9
	baz=239							
CHN2				*e*S		**Sb**	01 51 08.0	+1.5
	baz=239							
CHN4	**Tsaushan**	**1.14**	**232**	P		**Pn**	01 50 52.5	+0.6
	baz=228							
CHN4				*e*S		**Sb**	01 51 08.1	+1.3
	baz=228							
STYT	**Tauyuan**	**1.16**	**220**	⇑P		**Pn**	01 50 51.8	-0.5
	baz=206							
STYT				*e*S		**Sb**	01 51 08.7	+1.3
	baz=206							
CHY	**Chiayi**	**1.19**	**243**	*e*P		**Pn**	01 50 52.9	+0.2
	baz=239							
CHY				*e*S		**Sn**	01 51 09.1	+0.9
	baz=239							
WTP	**Ta-pu**	**1.20**	**228**	⇑P		**Pn**	01 50 52.9	+0.2
	baz=214							
WTP				*e*S		**Sn**	01 51 09.2	+1.0
	baz=214							
WTCT	**Ta-ch'eng**	**1.20**	**261**	P		**Pn**	01 50 52.8	+0.1
	baz=259							
WTCT				*e*S		**Sn**	01 51 09.1	+0.7
	baz=259							
TWY	**Chenhua**	**1.22**	**1**	*e*P		**Pn**	01 50 52.3	-0.7
	baz=10.0							
TWK	**Hsinying**	**1.27**	**232**	P		**Pn**	01 50 54.5	+0.8
	baz=236							
CHN1	**Nanshi**	**1.29**	**228**	⇑P		**Pn**	01 50 54.9	+0.8
	baz=224							
CHN1				*e*S		**Sn**	01 51 12.6	+1.9
	baz=224							
WSF	**Szhu**	**1.31**	**252**	*e*P		**Pn**	01 50 54.2	0.0
	baz=249							
WSF				*e*S		**Sn**	01 51 11.8	+0.8
	baz=249							
TWG	**Pinlang**	**1.31**	**201**	*e*P		**Pn**	01 50 52.6	-1.7
	baz=178							
SGST	**Jiashian**	**1.33**	**224**	*e*P		**Pn**	01 50 55.8	+1.3
	baz=219							
SGST				S		**Sn**	01 51 13.7	+2.1
	baz=219							
YOJ	**Yonaguni jima**	**1.37**	**72**	P		**Pn**	01 50 55.1	0.0
YOJ				*e*S		**Sn**	01 51 13.1	+0.6
YOJ	**Yonaguni jima**	**1.37**	**72**	*e*P		**Pn**	01 50 55.2	+0.1
	baz=76							
YOJ				*e*S		**Sn**	01 51 13.7	+1.2
	baz=76							
CHN8	**Yiju**	**1.44**	**241**	*e*P		**Pn**	01 50 56.8	+0.8
	baz=223							
CHN8				*e*S		**Sn**	01 51 15.7	+1.4
	baz=223							
SCLT	**Jiali**	**1.54**	**236**	*e*P		**Pn**	01 50 57.8	+0.3
	baz=232							
SCLT				*e*S		**Sn**	01 51 18.7	+1.9
	baz=232							
ECL	**Taimali**	**1.56**	**202**	*e*P		**Pn**	01 50 56.4	-1.3
	baz=182							
SSD	**Sandimen**	**1.57**	**214**	*e*P		**Pn**	01 50 58.8	+1.1
	baz=204							
TAI1	**Yung-k'ang**	**1.60**	**231**	*e*P		**Pn**	01 50 59.2	+1.0
	baz=221							
TWM1	**Shoushan**	**1.62**	**221**	*e*P		**Pn**	01 51 00.7	+2.2
	baz=211							
TAW	**Tawu**	**1.80**	**201**	*e*P		**Pn**	01 51 02.7	+1.7
	baz=179							
SCZT	**Fangliau**	**1.89**	**208**	*e*P		**Pn**	01 51 03.6	+1.3
	baz=183							
PNG	**Penghu**	**1.92**	**256**	*e*P		**Pn**	01 51 01.8	-0.8
	baz=253							
PNG				*e*S		**Sn**	01 51 25.4	-0.7
	baz=253							
IRIF	**Iriomote-Funau**	**1.98**	**81**	P		**Pn**	01 51 03.7	+0.2
IRIF				*e*S		**Sn**	01 51 28.7	+1.0
LAY	**Lan-yu**	**2.01**	**181**	*e*P		**Pn**	01 51 02.0	-1.8
	baz=166							
TWP	**Hsiaoliuchiu**	**2.04**	**214**	*e*P		**Pn**	01 51 06.7	+2.5
	baz=200							
HATJ	**Hateruma jima**	**2.04**	**89**	P		**Pn**	01 51 05.7	+1.5
HATJ				S		**Sn**	01 51 30.1	+1.1
HEN	**Hengchun**	**2.18**	**201**	*e*P		**Pn**	01 51 08.1	+1.8
	baz=179							
TWK1	**Hengchun**	**2.22**	**199**	*e*P		**Pn**	01 51 07.7	+1.0
	baz=180							
JKRS	**Kuro-shima**	**2.23**	**85**	P		**Pn**	01 51 07.7	+0.8
JKRS				*e*S		**Sn**	01 51 35.1	+1.3
JIJ	**Ishigaki jima**	**2.36**	**82**	P		**Pn**	01 51 08.9	+0.2
JIJ				*e*S		**Sn**	01 51 37.1	0.0
QZH	**Quanzhou**	**2.86**	**289**	P		**Pn**	01 51 14.3	-1.3
QZH				S		**Sn**	01 51 45.8	-3.6
QZH				Smax				
	comp=N,620nm,0.8s							
QZH				Smax				
	comp=E,410nm,0.6s							
KNM	**Kinmen**	**2.89**	**278**	*e*P		**Pn**	01 51 16.2	+0.1
	baz=276							
JTJ	**Tarama**	**2.91**	**78**	P		**Pn**	01 51 16.8	+0.5
JTJ				*e*S		**Sn**	01 51 51.0	+0.5
JKE	**Kume jima 2**	**5.23**	**63**	P		**Pn**	01 51 48.9	+0.7
JIH	**Iheya**	**6.49**	**61**	P		**Pn**	01 52 05.5	0.0
JOW	**Kunigami**	**6.66**	**64**	P		**Pn**	01 52 06.8	-0.9
	comp=E,9.9nm,0.3s,baz=207,slow=10,SNR=21							
JOW	**Kunigami**	**6.66**	**64**	P		**Pn**	01 52 07.0	-0.8
JOW	**Kunigami**	**6.66**	**64**	*e*P		**Pn**	01 52 06.9	-0.9
	baz=71							
JTK	**Tokunoshima**	**7.61**	**59**	P		**Pn**	01 52 19.9	-0.9
NJ2	**Nanjing**	**8.32**	**344**	*e*P		**Pn**	01 52 28.9	-1.7
NJ2				AP			01 52 32.6	
NJ2				XP			01 52 36.9	
NJ2				S		**Sn**	01 53 58.6	-5.3
NJ2				AMB	AMB			
	comp=Z,50nm,0.8s							
JAM	**Amami Oshima**	**8.41**	**57**	P		**Pn**	01 52 30.4	-1.5
WHN	**Wuhan**	**9.11**	**317**	⇑P		**Pn**	01 52 40.8	-0.7
WHN				S		**Sn**	01 54 13.6	-10
WHN				LR	LR			
	comp=N,516nm,5.1s							
WHN				LR	LR			
	comp=E,597nm,4.6s							
WHN				LR	LR			
	comp=Z,1μm,10.0s							
KSRS	**Korea Array**	**14.42**	**21**	P		**Pn**	01 54 00.2	+6.1
	comp=Z,0.9nm,0.3s,baz=200,slow=12,SNR=14							
LZH	**Lanzhou**	**19.44**	**312**	*e*P		**Pn**	01 54 58.0	+0.5
LZH				AP	pP		01 55 04.3	+1.9
LZH				XP	sP		01 55 07.0	+1.7
LZH				AMB	AMB			
	comp=Z,19nm,1.5s							
LZH				AMB	AMB			
	comp=Z,86nm,4.4s							
LZH	**Lanzhou**	**19.44**	**312**	*e*P		**Pn**	01 54 58.0	+0.5
	comp=Z,19nm,1.5s							
LZH				pP	pP		01 55 04.3	+1.9
LZH				sP	sP		01 55 07.0	+1.7
CHTO	**Chiang Mai**	**21.70**	**260**	*e*P		**P**	01 55 22.4	+1.5
	comp=Z,3.9nm,0.6s,mb4.0							
CMAR	**Chiang Mai Arr**	**21.81**	**260**	P		**P**	01 55 23.6	+1.6
	comp=Z,3.5nm,0.9s,mb3.8,baz=60,slow=8.4,SNR=13							
GTA	**Gaotai**	**23.93**	**315**	*e*P		**P**	01 55 44.8	+1.1
GTA				AP			01 55 51.8	
GTA				XP	sP		01 55 55.4	+2.3
GTA				AMB	AMB			
	comp=Z,7.0nm,1.3s,mb3.9							
GTA				AMB	AMB			
	comp=Z,92nm,5.1s							
GTA				LR	LR			
	comp=N,110nm,13.5s							
GTA				LR	LR			
	comp=E,225nm,11.4s							
GTA				LR	LR			
	comp=Z,270nm,12.3s							
ULN	**Ulaanbaatar**	**26.42**	**338**	*e*P		**P**	01 56 05.3	-0.9
	comp=Z,2.6nm,0.6s,mb3.9							
SONM	**Songino Array**	**26.63**	**337**	P		**P**	01 56 07.6	-0.5
	comp=Z,3.9nm,0.7s,mb4.0,baz=165,slow=9.4,SNR=29							
LSA	**Lhasa**	**27.67**	**288**	*e*P		**P**	01 56 19.7	+2.0
	comp=Z,9.9nm,0.6s,mb4.6							
MK31	**Makanchi Array**	**38.68**	**316**	*e*P		**P**	01 57 53.0	-0.3
MKAR	**Makanchi Array**	**38.68**	**316**	P		**P**	01 57 53.0	-0.3
	comp=Z,6.4nm,0.7s,mb4.5,baz=108,slow=9.8,SNR=42							
ZAA0	**Zalesovo Array**	**40.55**	**327**	*e*P		**P**	01 58 07.5	-1.2
ZALV	**Zalesovo Beam**	**40.55**	**327**	P		**P**	01 58 07.0	-1.7
	comp=Z,2.9nm,0.6s,mb4.1,baz=111,slow=8.1,SNR=16							
TKM2	**Tokmak 2**	**42.13**	**308**	*e*P		**P**	01 58 21.8	-0.1
	comp=Z,2.1nm,0.8s,mb3.8							
KURK	**Kurchatov**	**42.42**	**320**	*e*P		**P**	01 58 23.5	-0.7
	comp=Z,2.4nm,0.6s,mb4.0							
WRAB	**Tennant Creek**	**45.46**	**163**	*e*P		**P**	01 58 46.3	-2.5
	comp=Z,1.5nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**45.46**	**163**	P		**P**	01 58 46.5	-2.4
	comp=Z,1.6nm,0.5s,mb4.1,baz=345,slow=8.8,SNR=44							
WB2	**Warramunga Arr**	**45.47**	**163**	*e*P		**P**	01 58 46.6	-2.3
BRVK	**Borovoye**	**48.07**	**321**	*e*P		**P**	01 59 08.4	-0.6
	comp=Z,5.1nm,0.8s,mb4.6							
ASAR	**Alice Springs**	**48.92**	**165**	P		**P**	01 59 13.9	-1.9
	comp=Z,0.6nm,0.6s,mb3.8,baz=337,slow=6.9,SNR=12							
FORT	**Forrest**	**54.87**	**173**	*e*P		**P**	01 59 58.0	-2.0
	comp=Z,6.4nm,1.4s,mb4.5							
STKA	**Stephens Creek**	**58.82**	**160**	P		**P**	02 00 26.2	-1.8
	comp=Z,0.9nm,0.5s,mb4.0,baz=312,slow=7.3,SNR=5.8							
STKA	**Stephens Creek**	**58.82**	**160**	*e*P		**P**	02 00 26.4	-1.7
	comp=Z,1.1nm,0.6s,mb4.1							
INK	**Inuvik**	**73.21**	**22**	*e*P		**P**	02 01 58.0	-2.2
NOA	**NORSAR Array B**	**78.51**	**332**	P		**P**	02 02 28.9	-1.5
	comp=Z,0.7nm,0.8s,mb3.7,baz=63,slow=4.1,SNR=2.9							
YKA	**Yellowknife Ar**	**82.95**	**23**	P		**P**	02 02 51.4	-2.8
	comp=Z,0.6nm,0.6s,mb3.8,baz=314,slow=4.9,SNR=6.3							
YKA	**Yellowknife Ar**	**82.95**	**23**	P		**P**	02 02 51.4	-2.8

*ISCJB **15** 02:33:44.9±0.5, 896S±007×11658E±005, h112km±7km, mb3.9/10, Error ellipse: s-maj=11.7km s-min=8.4km az=165.2*
*DJA **15** 02:33:47, 904S×11656E, h67km, MLv4.3/5*
*IDC **15** 02:33:48.8±2.1, 889S×11680E, h137km±18km, mb3.5/8, mb1 3.6/10, mb1mx3.5/17, mbtmp3.5/10, MS3.4/2, Ms1 3.4/2, ms1mx3.1/13, Error ellipse: s-maj=19.7km s-min=9.9km az=48.0*
*NEIC **15** 02:33:50.3±2.7, 877S×11678E, h157km±27km, mb3.8/3,*

Error ellipse: s-maj=31.1km s-min=9.2km az=60.0
ISC 15 02:33:46.2±0.5, 892S±006×11653E±005, h112km±6km, n38,σ1902/44, mb3.9/10, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**1.07**	**301**	P	**Pn**	**02 34 07.8**	**-0.4**
KHKI	**Kahang-Kahang**	**1.07**	**301**	P	**Pn**	**02 34 08.1**	**-0.1**
KHKI	**Kahang-Kahang**	**1.07**	**301**	S	**Sn**	**02 34 23.6**	**-1.2**
KHKI	**Kahang-Kahang**	**1.07**	**301**	P	**Pn**	**02 34 08.1**	**-0.1**
DNP	**Denpasar**	**1.33**	**281**	P	**Pn**	**02 34 13.2**	**+2.1**
DNP	**Denpasar**	**1.33**	**281**	P	**Pn**	**02 34 13.2**	**+2.1**
DNP	**Denpasar**	**1.33**	**281**	S	**Sn**	**02 34 30.6**	**+0.7**
IGBI	**Denpasar**	**1.37**	**274**	P	**Pn**	**02 34 11.3**	**-0.3**
IGBI	**Denpasar**	**1.37**	**274**	P	**Pn**	**02 34 11.3**	**-0.3**
IGBI	**Denpasar**	**1.37**	**274**	S	**Sn**	**02 34 29.8**	**-1.1**
NBBI	**Negara**	**1.97**	**286**	P	**Pn**	**02 34 17.4**	**-1.4**
NBBI	**Negara**	**1.97**	**286**	P	**Pn**	**02 34 17.4**	**-1.4**
NBBI	**Negara**	**1.97**	**286**	P	**Pn**	**02 34 22.1**	**+3.3**
	1μm,0.5s,4.4nm						
KMMI	**Kalianget**	**3.15**	**306**	P	**Pn**	**02 34 37.2**	**+3.0**
	147nm,0.9s						
KAPI	**Kappang**	**5.03**	**40**	P	**Pn**	**02 35 00.7**	**+1.2**
	12nm,0.3s,baz=212,slow=6.4,SNR=77						
KAPI				S	**Sn**	**02 35 56.8**	**+0.2**
	11nm,0.3s,baz=237,slow=23,SNR=15						
KAPI				LR	LR	02 37 23.3	
	comp=Z,73nm,19.9s,baz=235,slow=44						
KAPI	**Kappang**	**5.03**	**40**	P	**Pn**	**02 35 00.7**	**+1.2**
KAPI				S	**Sn**	**02 35 56.8**	**+0.2**
KAPI				LR	LR	02 37 23.3	
KAPI	**Kappang**	**5.03**	**40**	P	Px	02 35 00.5	
	34nm,0.7s,432nm						
BBKI	**Banjar Baru**	**5.68**	**343**	P	**Pn**	**02 35 20.5**	**+12**
	90nm,0.8s,2μm						
BATI	**Baumata**	**7.15**	**101**	P	**Pn**	**02 35 27.9**	**-0.3**
	3.0nm,0.3s,baz=279,slow=19,SNR=3.8						
BATI				S	**Sn**	**02 36 42.3**	**-5.6**
	2.1nm,0.3s,baz=317,slow=12,SNR=3.3						
MBWA	**Marble Bar**	**12.55**	**166**	*e*Pn	**Pn**	**02 36 34.8**	**-6.0**
	24nm,0.3s						
MBWA				*e*Sn	**Sn**	**02 38 40.3**	**-19**
WRA	**Warramunga Arr**	**20.41**	**124**	P	**P**	**02 38 14.1**	**-0.4**
	0.7nm,0.4s,baz=296,slow=12,SNR=24						
WRA				S	**S**	**02 41 49.8**	**-7.3**
	0.4nm,0.6s,baz=288,slow=23,SNR=4.0						
WRAB	**Tennant Creek**	**20.41**	**124**	*e*P	**P**	**02 38 13.7**	**-0.9**
	2.8nm,0.7s						
WB2	**Warramunga Arr**	**20.42**	**124**	*e*P	**P**	**02 38 14.3**	**-0.3**
WB2				*e*S	**S**	**02 41 50.2**	**-7.1**
WB2	**Warramunga Arr**	**20.42**	**124**	*e*P	**P**	**02 38 14.3**	**-0.3**
WB2				*e*S	**S**	**02 41 50.2**	**-7.1**
ASAR	**Alice Springs**	**22.16**	**133**	P	**P**	**02 38 33.0**	**-0.2**
	1.1nm,0.6s,mb3.4,baz=306,slow=9.1,SNR=15						
ASAR				S	**S**	**02 42 29.9**	**0.0**
	0.2nm,0.4s,baz=320,slow=14,SNR=3.0						
KLBR	**Kellerberrin**	**22.58**	**177**	*e*P	**P**	**02 38 49.3**	**+12**
	6.4nm,0.8s,mb4.0						
KLBR				*e*S	**S**	**02 42 36.8**	**+0.2**
FORT	**Forrest**	**24.26**	**155**	*e*P	pP	02 39 13.2	-3.6
	7.2nm,0.5s						
STKA	**Stephens Creek**	**32.60**	**138**	P	**P**	**02 40 07.4**	**+0.1**
	0.6nm,0.4s,mb3.8,baz=313,slow=12,SNR=4.2						
KSRS	**Korea Array**	**47.35**	**12**	P	**P**	**02 42 09.2**	**+0.4**
	1.6nm,0.8s,mb3.8,baz=194,slow=8.8,SNR=3.3						
MJAR	**Matsushiro Arr**	**49.60**	**23**	LR	LR	03 03 08.0	
	comp=Z,201nm,22.0s,baz=105,slow=36						
SONM	**Songino Array**	**57.22**	**352**	P	**P**	**02 43 21.3**	**-0.3**
	0.5nm,0.4s,mb3.9,baz=169,slow=9.1,SNR=6.9						
MKAR	**Makanchi Array**	**63.30**	**334**	P	**P**	**02 44 01.9**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=145,slow=6.6,SNR=7.4						
KURK	**Kurchatov**	**67.87**	**335**	*e*P	**P**	**02 44 30.4**	**-2.0**
	0.9nm,0.6s,mb3.8						
MAW	**Mawson**	**68.49**	**199**	P	**P**	**02 44 36.5**	**+0.4**
	2.0nm,0.6s,mb4.1,baz=75,slow=16,SNR=3.0						
BOSA	**Boshof**	**86.90**	**242**	P	**P**	**02 46 20.2**	**+1.2**
	2.1nm,0.8s,mb4.1,baz=122,slow=22,SNR=3.8						
SNAA	**Sanae**	**90.41**	**196**	*e*	**P**	**02 46 34.5**	**-0.2**
SNAA	**Sanae**	**90.41**	**196**	*e*P	**P**	**02 46 34.3**	**-0.3**
	0.8nm,0.6s,mb4.0						
VNA2	**Neumayer--Watz**	**92.05**	**196**	*e*	**P**	**02 46 43.8**	**+1.5**
	baz=109,slow=3.8						

*ISCJB **15** 02:37:38.0±0.7, 2936N±005×5233E±007, h10km, Error ellipse: s-maj=9.0km s-min=6.7km az=160.6*
*CSEM **15** 02:37:39.5±0.0, 2938N×5226E, h25km, ML3.4, Error ellipse: s-maj=1.1km s-min=0.7km az=73.0*
*THR **15** 02:37:41.1±1.2, 2936N×5247E, h46km±12km, ML3.4*
ISC 15 02:37:39.9±0.7, 2937N±005×5242E±007, h10km, n14, σ095/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**1.19**	**155**	*e*Pg	**Pg**	**02 38 02.7**	**0.0**
GHIR				*e*Sg	**Sg**	**02 38 19.6**	**+1.4**
GHIR				AML	AML	02 38 24.1	
	comp=E,1μm,0.4s						
GHIR	**Ghir-Karzin**	**1.19**	**155**	*e*Pg	**Pg**	**02 38 02.7**	**0.0**
	SNR=92						
GHIR				*e*Sg	**Sg**	**02 38 19.6**	**+1.5**
	SNR=92						
NASN	**Na'in**	**3.44**	**6**	*e*Pn	**Pn**	**02 38 33.8**	**+0.3**
KRBR	**Kerman**	**3.83**	**80**	*e*Pn	**Pn**	**02 38 38.9**	**-0.1**
KRBR				*e*Sg	**Sg**	**02 39 36.1**	**-6.9**
KRBR				AML	AML	02 39 47.2	
	comp=E,62nm,0.7s						
KRBR				AML	AML	02 39 48.5	
	comp=N,56nm,0.5s						
KRBR	**Kerman**	**3.83**	**80**	*e*Pn	**Pn**	**02 38 38.9**	**0.0**
	SNR=52						
KRBR				*e*Sg	**Sg**	**02 39 36.1**	**-6.9**
	SNR=91						

TORD Torodi Ar. Bea 79.51 71 P P 02 58 14.8 -0.5
1.5nm,0.5s,baz=255,slow=5.4,SNR=21
MKAR Makanchi Array 148.11 36 PKPbc PKPbc 03 05 54.1 +0.4
0.5nm,0.6s,baz=332,slow=3.0,SNR=4.4

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*ISCJB **15** 03:06:35.7±0.5, 881S±006×296E±0.1, h10km, mb4.1/8, MS3.6/3, Error ellipse: s-maj=20.2km s-min=7.5km az=10.4*
*IDC **15** 03:06:36.1±1.0, 875S×2962E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.9/20, mbtmp4.0/9, ML2.4/1, MS3.7/4, Ms1 3.7/4, ms1mx3.3/19, Error ellipse: s-maj=32.6km s-min=16.9km az=107.0*
*NEIC **15** 03:06:37.7±0.6, 879S×2958E, h10km, mb4.4/3, Error ellipse: s-maj=20.0km s-min=9.1km az=104.0*
ISC 15 03:06:37.8±0.5, **882S**±006×**296E**±01, **h10**km, **n21**, σ1°**07**/24, **mb4.1/8, MS3.6/3, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.56**	**192**	Pn	**Pn**	**03 08 16.7**	**+2.3**
	5.5nm,0.3s,baz=14,slow=12,SNR=47						
LSZ				Sn	**Sn**	**03 09 27.7**	**-1.7**
	10nm,0.3s,baz=111,slow=19,SNR=6.9						
LSZ				Lg		03 10 04.9	
	16nm,0.3s,baz=94,slow=16,SNR=8.0						
TSUM	**Tsumeb**	**15.55**	**227**	Pn	**Pn**	**03 10 17.1**	**-0.1**
	0.8nm,0.3s,baz=30,slow=15,SNR=12						
TSUM				Sn	**Sn**	**03 13 04.4**	**-5.4**
	0.6nm,0.3s,baz=299,slow=19,SNR=4.1						
TSUM				Lg		03 14 53.4	
	0.6nm,0.3s,baz=123,slow=17,SNR=2.7						
LBTB	**Lobatse**	**16.55**	**193**	Pn	**Pn**	**03 10 28.3**	**-1.8**
	1.0nm,0.3s,baz=24,slow=14,SNR=12						
LBTB				Sn	**Sn**	**03 13 23.8**	**-10**
	0.8nm,0.3s,baz=299,slow=19,SNR=3.7						
LBTB				Lg		03 15 14.7	
	0.3nm,0.3s,baz=299,slow=19,SNR=2.7						
LBTB				LR	LR	03 16 57.4	
	comp=Z,249nm,18.2s,baz=219,slow=37						
LBTB	**Lobatse**	**16.55**	**193**	Pn	**Pn**	**03 10 28.3**	**-1.8**
LBTB				Sn	**Sn**	**03 13 23.8**	**-10**
LBTB				Lg		03 15 14.7	
LBTB				LR	LR	03 16 57.4	
LBTB	**Lobatse**	**16.55**	**193**	*eP*	**Pn**	**03 10 30.3**	**+0.2**
LBTB				AMb	AMB	03 11 40.1	
	comp=Z,19nm,1.9s						
PRYS	**Parys**	**18.13**	**186**	*eP*	**Pn**	**03 10 51.2**	**+1.4**
PRYS				AMb	AMB	03 11 03.8	
	comp=Z,24nm,1.6s						
BOSA	**Boshof**	**20.11**	**191**	P	**P**	**03 11 12.6**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=144,slow=21,SNR=3.2						
BOSA				LR	LR	03 19 13.7	
	comp=Z,122nm,21.3s,MS3.2,baz=318,slow=38						
BOSA	**Boshof**	**20.11**	**191**	*eP*	**P**	**03 11 12.7**	**+0.9**
	comp=Z,8.5nm,0.7s						
BOSA				LR	LR	03 19 13.7	
BOSA	**Boshof**	**20.11**	**191**	*eP*	**P**	**03 11 15.3**	**+3.5**
BOSA				AMb	AMB	03 11 19.3	
	comp=Z,30nm,2.4s						
SUR	**Sutherland**	**24.82**	**198**	LR	LR	03 22 02.7	
	comp=Z,255nm,19.9s,MS3.7,baz=239,slow=37						
TOA0	**Torodi Ar. Sit**	**35.27**	**308**	*eP*	**P**	**03 13 33.8**	**+0.8**
TORD	**Torodi Ar. Bea**	**35.27**	**308**	P	**P**	**03 13 34.0**	**+0.9**
	comp=Z,2.0nm,0.8s,mb4.1,baz=118,slow=8.5,SNR=15						
TORD				LR	LR	03 28 34.4	
	comp=Z,178nm,18.3s,MS3.9,baz=140,slow=37						
ESDC	**Sonseca Array**	**57.40**	**330**	P	**P**	**03 16 25.0**	**-1.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=154,slow=6.9,SNR=3.0						
AKASG	**Malin Array Be**	**59.27**	**360**	P	**P**	**03 16 38.9**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=190,slow=8.4,SNR=3.7						
AKASG	**Malin Array Be**	**59.27**	**360**	P	**P**	**03 16 38.9**	**-0.5**
MORC	**Moravsky Berou**	**59.29**	**351**	*eP*	**P**	**03 16 39.4**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**72.49**	**35**	*eP*	**P**	**03 18 04.9**	**+0.2**
MKAR	**Makanchi Array**	**72.49**	**35**	P	**P**	**03 18 05.2**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.3,baz=238,slow=6.1,SNR=18						
KURK	**Kurchatov**	**72.88**	**30**	*eP*	**P**	**03 18 07.1**	**+0.3**
	comp=Z,2.9nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**77.86**	**30**	P	**P**	**03 18 34.8**	**-0.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=240,slow=5.0,SNR=4.2						
ARCES	**ARCESS Array B**	**78.22**	**359**	P	**P**	**03 18 36.1**	**-1.0**
	comp=Z,4.5nm,0.9s,mb4.4,baz=165,slow=5.0,SNR=8.6						

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*NEIC **15** 03:25:14.1±0.6, 2228S×7031W, h35km, mb4.1/4, Error ellipse: s-maj=16.7km s-min=12.4km az=215.0*
*ISCJB **15** 03:25:18.0±1.3, 2226S±007×701W±0.1, h79km±11km, mb3.8/10, Error ellipse: s-maj=16.1km s-min=11.4km az=16.5*
*IDC **15** 03:25:18.5±2.2, 2231S×7013W, h70km±16km, mb3.6/6, mb1 3.8/8, mb1mx3.7/16, mbtmp3.7/8, MS3.4/1, Ms1 3.4/1, ms1mx2.7/14, Error ellipse: s-maj=27.7km s-min=21.2km az=50.0*
ISC 15 03:25:19.8±1.2, **2225S**±007×**700W**±01, **h78**km±10km, **n28**, σ1°**00**/27, **mb3.8**/10, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.10**	**109**	P	**Pn**	**03 25 38.3**	**-1.7**
	165nm,0.3s,baz=274,slow=12,SNR=294						
LVC				S	**Sn**	**03 25 55.3**	**+0.2**
	209nm,0.3s,baz=131,slow=9.3,SNR=22						
LVC	**Limon Verde**	**1.10**	**109**	P	**Pn**	**03 25 38.3**	**-1.7**
LVC				S	**Sn**	**03 25 55.3**	**+0.2**
ARE	**Arequipa**	**5.92**	**346**	*eP*	**Pn**	**03 26 39.0**	**-6.0**
LPAZ	**La Paz**	**6.20**	**17**	P	**Pn**	**03 26 49.6**	**+0.8**
	0.8nm,0.3s,baz=209,slow=7.8,SNR=12						
CFAA	**Coronel Fontan**	**9.45**	**171**	P	**Pn**	**03 27 34.7**	**+1.5**
	0.1nm,0.3s,baz=352,slow=14,SNR=7.3						
CFAA				S	**Sn**	**03 29 25.4**	**+7.7**
	0.3nm,0.3s,baz=152,slow=13,SNR=3.9						
CFAA	**Coronel Fontan**	**9.45**	**171**	P	**Pn**	**03 27 34.7**	**+1.5**
CFAA				S	**Sn**	**03 29 25.4**	**+7.7**
SIV	**San Ignacio**	**10.51**	**55**	P	**Pn**	**03 27 46.3**	**-1.4**
	2.5nm,0.3s,baz=252,slow=12,SNR=44						
SIV				S	**Sn**	**03 29 46.8**	**+3.1**
	baz=246,slow=20,SNR=4.4						
SIV				LR	LR	03 32 35.2	
	comp=Z,173nm,18.7s,baz=286,slow=41						
BDFB	**Brasilia**	**21.83**	**76**	P	**P**	**03 30 06.1**	**+0.1**
	1.3nm,0.8s,mb3.3,baz=251,slow=22,SNR=3.7						
PCRV	**Puerto La Cruz**	**32.66**	**10**	P	**P**	**03 31 41.2**	**-3.5**
	14nm,1.0s,mb4.7,baz=229,slow=2.6,SNR=2.7						
VNA2	**Neumayer--Watz**	**60.30**	**160**	*e*	**P**	**03 35 20.4**	**+0.5**
	baz=287,slow=9.0						
VNA2				*e*		03 35 29.6	
SNAA	**Sanae**	**61.92**	**161**	*e*	**P**	**03 35 29.3**	**-1.6**
SNAA				*e*		03 35 38.7	
SNAA	**Sanae**	**61.92**	**161**	*eP*	**P**	**03 35 29.2**	**-1.7**
	1.4nm,0.6s,mb4.2						
SDCO	**Great Sand Dun**	**68.37**	**330**	*eP*	**P**	**03 36 12.9**	**0.0**
	1.2nm,0.8s,mb3.8						
DBIC	**Dimbokro**	**69.95**	**74**	P	**P**	**03 36 23.1**	**-0.3**
	1.9nm,0.9s,mb3.9,baz=204,slow=11,SNR=4.7						
DBIC	**Dimbokro**	**69.95**	**74**	*eP*	**P**	**03 36 23.4**	**+0.1**
	2.2nm,0.7s,mb4.1						
PDAR	**Pinedale Array**	**74.24**	**331**	P	**P**	**03 36 48.3**	**0.0**
	0.1nm,0.4s,mb2.9,baz=162,slow=10,SNR=3.6						
NVAR	**Mina Array Bea**	**75.44**	**323**	P	**P**	**03 36 55.8**	**+0.5**
	0.2nm,0.5s,mb3.1,baz=181,slow=3.2,SNR=3.7						
HLID	**Hailey**	**77.12**	**329**	*eP*	**P**	**03 37 04.5**	**-0.2**
	1.0nm,0.8s,mb3.6						
TOA0	**Torodi Ar. Sit**	**78.59**	**71**	*eP*	**P**	**03 37 13.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**78.59**	**71**	P	**P**	**03 37 13.7**	**+0.2**
	3.2nm,0.8s,mb4.2,baz=254,slow=5.1,SNR=27						
TORD				pP	pP	03 37 27.5	-6.7
	1.5nm,0.6s,baz=256,slow=5.3,SNR=7.1						
TORD	**Torodi Ar. Bea**	**78.59**	**71**	P	**P**	**03 37 13.7**	**+0.2**
TORD				pP	pP	03 37 27.5	-6.7
BOSA	**Boshof**	**84.02**	**118**	P	**P**	**03 37 42.8**	**+0.7**
	2.3nm,0.8s,mb4.1,baz=270,slow=2.0,SNR=3.1						
ASAR	**Alice Springs**	**128.76**	**208**	PKP	PKPdf	03 44 17.9	-1.0
	0.2nm,0.6s,baz=112,slow=2.5,SNR=4.1						
WRA	**Warramunga Arr**	**131.78**	**211**	PKP	PKPdf	03 44 23.9	-0.8
	0.3nm,0.6s,baz=148,slow=1.8,SNR=8.5						
ZALV	**Zalesovo Beam**	**143.07**	**25**	PKP	PKPdf	03 44 44.9	+0.5
	1.4nm,0.7s,baz=220,slow=1.2,SNR=5.1						
MKAR	**Makanchi Array**	**146.85**	**36**	PKPbc	PKPbc	03 44 52.2	-0.8
	2.7nm,0.7s,baz=311,slow=2.4,SNR=14						
SONM	**Songino Array**	**154.31**	**6**	PKP	PKPdf	03 45 00.9	-1.8
	0.4nm,0.8s,baz=326,slow=7.5,SNR=3.1						
SONM				PKPab	PKPab	03 45 26.0	+0.8
	0.6nm,0.9s,baz=348,slow=4.9,SNR=3.6						
SONM	**Songino Array**	**154.31**	**6**	PKP	PKPdf	03 45 00.9	-1.8
SONM				PKPab	PKPab	03 45 26.0	+0.8

IDC 15 03:27:13.3±3.9, **2601S**×**13226E**, **h0**km, **mb1 3.3**/2, **mb1mx3.2**/12, **mbtmp3.1**/2, **ML3.1**/2, **Error ellipse: s-maj=33.1km s-min=22.8km az=80.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**2.77**	**33**	Pn	Pn	03 28 00.7	+1.8
	0.2nm,0.3s,baz=213,slow=12,SNR=5.6						
ASAR				Pg	Pg	03 28 08.0	+1.6
	0.3nm,0.3s,baz=210,slow=15,SNR=8.1						
ASAR				Sn	Sn	03 28 33.6	+0.6
	0.4nm,0.3s,baz=211,slow=14,SNR=4.5						
ASAR				Lg		03 28 42.0	
	1.4nm,0.3s,baz=212,slow=26,SNR=17						
WRA	**Warramunga Arr**	**6.33**	**18**	Pn	Pn	03 28 49.0	+1.1
	0.2nm,0.3s,baz=199,slow=14,SNR=25						
WRA				Sn	Sn	03 29 59.7	-1.4
	0.3nm,0.3s,baz=196,slow=24,SNR=11						
WRA				Lg		03 30 30.8	
	0.2nm,0.3s,baz=199,slow=30,SNR=3.6						
STKA	**Stephens Creek**	**10.05**	**128**	Pn	Pn	03 29 37.3	-1.6
	0.2nm,0.3s,baz=305,slow=13,SNR=3.6						

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*ISCJB **15** 03:27:27.6±0.7, 231S±01×7057W±009, h33km, mb4.2/12, Error ellipse: s-maj=18.5km s-min=10.4km az=158.3*
*NEIC **15** 03:27:28.9±0.6, 2338S×7057W, h35km, mb4.1/6, Error ellipse: s-maj=14.1km s-min=12.4km az=146.0*
*IDC **15** 03:27:33.1±3.7, 2315S×7047W, h66km±27km, mb4.0/6, mb1 3.9/8, mb1mx3.7/16, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=34.0km s-min=27.9km az=17.0*
ISC 15 03:27:33.0±2.0, **233S**±01×**704W**±01, **h67**km±16km, **n21**, σ0°**84**/21, **mb4.1**/12, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.52**	**66**	P	**Pn**	**03 27 57.7**	**-0.5**
	358nm,0.3s,baz=250,slow=11,SNR=14						
LVC				S	**Sn**	**03 28 17.9**	**+0.8**
	646nm,0.3s,baz=26,slow=12,SNR=43						
LVC	**Limon Verde**	**1.52**	**66**	P	**Pn**	**03 27 57.7**	**-0.5**
LVC				S	**Sn**	**03 28 17.9**	**+0.8**
LPAZ	**La Paz**	**7.25**	**18**	P	**Pn**	**03 29 17.1**	**+0.8**
	0.2nm,0.3s,baz=233,slow=10,SNR=2.3						
CFAA	**Coronel Fontan**	**8.54**	**167**	S	**Sn**	**03 31 18.2**	**+9.4**
	0.2nm,0.3s,baz=201,slow=14,SNR=2.8						
SIV	**San Ignacio**	**11.38**	**52**	P	**Pn**	**03 30 11.6**	**-1.1**
	0.9nm,0.3s,baz=281,slow=19,SNR=7.3						
SIV				S	**Sn**	**03 32 18.3**	**0.0**
	0.1nm,0.3s,baz=325,slow=18,SNR=2.0						
BDFB	**Brasilia**	**22.42**	**74**	P	**P**	**03 32 26.2**	**0.0**
	1.5nm,0.8s,mb3.4,baz=243,slow=18,SNR=4.6						
RCBR	**Riachuelo**	**37.48**	**68**	*eP*	**P**	**03 34 39.6**	**-0.8**
	28nm,1.2s,mb5.1						
SNAA	**Sanae**	**61.10**	**160**	*eP*	**P**	**03 37 38.5**	**-1.2**
	1.0nm,0.7s,mb4.0						
WVT	**Waverly**	**61.31**	**344**	*eP*	**P**	**03 37 39.7**	**-1.8**
	3.9nm,0.9s,mb4.4						
SDCO	**Great Sand Dun**	**69.06**	**331**	*eP*	**P**	**03 38 32.8**	**+1.2**
	0.8nm,0.7s,mb3.7						
DBIC	**Dimbokro**	**70.57**	**74**	P	**P**	**03 38 41.6**	**+0.1**
	3.1nm,0.8s,mb4.2,baz=140,slow=5.9,SNR=4.1						
ULM	**Lac du Bonnet**	**76.57**	**344**	P	**P**	**03 39 14.9**	**-0.9**
	1.8nm,0.4s,mb4.2,baz=217,slow=5.1,SNR=2.7						
HLID	**Hailey**	**77.79**	**329**	*eP*	**P**	**03 39 23.9**	**+1.1**
	2.0nm,1.1s,mb3.8						
BOZ	**Bozeman (W)**	**78.13**	**332**	*eP*	**P**	**03 39 24.6**	**-0.1**
	1.4nm,0.7s,mb3.8						
TOA0	**Torodi Ar. Sit**	**79.25**	**71**	*eP*	**P**	**03 39 31.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**79.25**	**71**	P	**P**	**03 39 31.7**	**+0.2**
	4.4nm,0.8s,mb4.3,baz=256,slow=4.5,SNR=15						
MAW	**Mawson**	**83.06**	**164**	P	**P**	**03 39 51.7**	**+0.8**
	2.8nm,0.8s,mb4.1,baz=213,slow=7.2,SNR=3.6						
BOSA	**Boshof**	**83.85**	**118**	P	**P**	**03 39 56.8**	**+1.0**
	1.3nm,0.4s,mb4.1,baz=222,slow=7.7,SNR=3.6						
WRA	**Warramunga Arr**	**130.75**	**211**	PKP	PKPdf	03 46 37.4	+0.1
	0.3nm,0.7s,baz=154,slow=1.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**144.12**	**25**	PKP	PKPdf	03 47 00.2	-0.5
	0.9nm,0.4s,baz=302,slow=2.8,SNR=6.7						
MKAR	**Makanchi Array**	**147.86**	**36**	PKPbc	PKPbc	03 47 10.8	+0.4
	1.4nm,0.7s,baz=310,slow=2.8,SNR=6.4						

IDC 15 04:00:07.5±5.1, **3915N**×**11039E**, **h0**km, **mb3.6**/2, **mb1 3.8**/3, **mb1mx3.4**/20, **mbtmp3.6**/3, **Error ellipse: s-maj=106.9km s-min=22.6km az=85.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.16**	**343**	Pn	Pn	04 02 21.0	+0.2
	baz=161,slow=14,SNR=7.9						
SONM				Sn	Sn	04 04 07.4	+3.0
	0.1nm,0.3s,baz=176,slow=22,SNR=3.6						
SONM				Lg		04 04 57.3	
	0.2nm,0.3s,baz=161,slow=29,SNR=6.5						
MKAR	**Makanchi Array**	**21.85**	**300**	P	P	04 05 01.8	+0.2
	2.2nm,0.9s,baz=99,slow=13,SNR=11						
CMAR	**Chiang Mai Arr**	**22.89**	**209**	P	P	04 05 12.7	0.0
	2.6nm,0.7s,baz=12,slow=9.5,SNR=14						
KURK	**Kurchatov**	**25.09**	**308**	P	P	04 05 34.0	+0.3
	baz=107,slow=10						

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*DDA **15** 04:11:11.3, 3905N×4198E, h4km±5km, Md4.0, Ml4.0*
*CSEM **15** 04:11:11.5±0.1, 3909N×4203E, h2km, ML4.0, Error ellipse: s-maj=2.7km s-min=1.9km az=161.0*
*ISK **15** 04:11:11.3, 3910N×4201E, h5km, MD3.4*
*ISCJB **15** 04:11:12.4±0.3, 3908N±002×4202E±003, h10km, Error ellipse: s-maj=3.1km s-min=2.9km az=161.7*
ISC 15 04:11:12.5±0.4, **3907N**±002×**4199E**±003, **h2**km±4km, **n27**, σ0°**94**/40, **2C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.60**	**159**	⇓*iP*	**Pg**	**04 11 23.6**	**-0.4**
TATV				*i* S	**Sg**	**04 11 32.9**	**+1.0**
BNGL	**BINGOL**	**0.66**	**260**	⇑*iP*	**Pg**	**04 11 24.3**	**-0.9**
BNGL				*i* S	**Sg**	**04 11 33.8**	**0.0**
TUTA	**Tutak**	**0.72**	**63**	⇓*iP*	**Pg**	**04 11 25.6**	**-0.7**
TUTA				*i* S	**Sg**	**04 11 36.5**	**+0.9**
AGRB	**Hanur-Agry**	**0.93**	**57**	*e*PG	**Pg**	**04 11 29.6**	**-0.7**
AGRB				*e*SG	**Sg**	**04 11 43.4**	**+1.1**
ERZM	**Erzurum**	**0.96**	**330**	⇑*iP*	**Pg**	**04 11 30.8**	**-0.2**
ERZM				*i* S	**Sg**	**04 11 42.8**	**-0.6**
EZM	**Erzurum**	**0.96**	**330**	*e*PG	**Pg**	**04 11 30.8**	**-0.1**
EZM				*e*SG	**Sg**	**04 11 44.3**	**+0.9**
HOMI	**Horasan**	**0.97**	**356**	⇓*iP*	**Pg**	**04 11 30.6**	**-0.5**
HOMI				*i* S	**Sn**	**04 11 46.1**	**-1.5**
VANB	**Van**	**1.19**	**113**	*e*PN	**Pn**	**04 11 35.0**	**-1.2**
VANB				*e*SN	**Sn**	**04 11 52.7**	**-0.2**
BEST	**Besiri**	**1.31**	**206**	*i*P	**Pg**	**04 11 37.1**	**-0.4**
BEST				*i* S	**Sg**	**04 11 54.5**	**+0.1**
DYDN	**Diyadin**	**1.40**	**70**	⇓*iP*	**Pg**	**04 11 38.9**	**-0.5**
DYDN				*i* S	**Sg**	**04 11 57.3**	**-0.2**
CLDR	**Caldiran**	**1.50**	**87**	*e*PN	**Pg**	**04 11 40.1**	**-1.2**
CLDR				*e*SN	**Sg**	**04 12 01.5**	**+0.8**
SIRT	**Sirnak**	**1.61**	**167**	*e*PN	**Pg**	**04 11 42.4**	**-0.9**
KARS	**Kars**	**1.76**	**29**	*e*PN	**Pn**	**04 11 44.3**	**+0.3**
EZC	**Erzincan**	**1.81**	**293**	*e*PN	**Pg**	**04 11 49.9**	**+2.7**
DIYA	**Diyarbakir**	**1.86**	**233**	*e*P	**Pn**	**04 11 43.8**	**-1.6**
DIYA				*e*S	**Sg**	**04 12 11.1**	**-1.1**
MARD	**Mardin**	**2.00**	**209**	*e*P	**Pn**	**04 11 47.0**	**-0.2**
MARD				*e*S	**Sn**	**04 12 13.2**	**+0.5**
HAKT	**HAKKARI**	**2.03**	**138**	*e*P	**Pg**	**04 11 53.8**	**+2.5**
HAKT				*e*S	**Sg**	**04 12 23.5**	**+5.9**
HKR	**Hakkari**	**2.03**	**137**	*e*PN	**Pn**	**04 11 47.6**	**-0.1**
PTK	**Pertek**	**2.03**	**266**	*e*PN	**Pn**	**04 11 48.4**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.21**	**253**	*e*PN	**Pn**	**04 11 51.3**	**+1.2**
PZAR	**Pazar-Rize**	**2.26**	**339**	*e*PN	**Pn**	**04 11 51.4**	**+0.6**
GUMT	**Gumushane**	**2.38**	**306**	*e*PN	**Pn**	**04 11 54.0**	**+1.5**
GNI	**Garni**	**2.38**	**62**	*e*PN	**Pn**	**04 11 51.8**	**-0.7**
BCA	**Borcka**	**2.39**	**353**	*e*PN	**Pn**	**04 11 52.6**	**0.0**
KEMA	**Kemaliye**	**2.72**	**275**	*e*P	**Pg**	**04 12 00.9**	**-3.8**
MSL	**Mosul**	**2.81**	**161**	*ex*	x	04 12 06.0	
MSL				*ex*	x	04 12 36.0	
URFA	**Urfa**	**2.98**	**238**	*e*PN	**Pn**	**04 12 02.0**	**+1.3**

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*IDC **15** 04:27:29.4±3.5, 157N×12633E, h29km±23km, mb4.3/11, mb1 4.4/12, mb1mx4.2/17, mbtmp4.3/12, ML4.2/1, Error ellipse: s-maj=27.7km s-min=11.1km az=77.0*
*ISCJB **15** 04:27:31.8±1.0, 151N±005×12619E±006, h72km±10km, mb4.4/20, Error ellipse: s-maj=10.5km s-min=8.4km az=161.8*
*NEIC **15** 04:27:31.7±1.7, 153N×12636E, h56km±16km, mb4.5/11, Error ellipse: s-maj=13.2km s-min=6.3km az=70.0*
*DJA **15** 04:27:39, 098N×12637E, h62km, MLv4.3/4*
ISC 15 04:27:32.8±0.9, **152N**±005×**12624E**±006, **h64**km±9km, **n39**, σ0°**95**/41, **mb4.5**/20, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.40**	**267**	P	**Pn**	**04 27 55.2**	**-1.1**
LBMI	**Labuha**	**2.48**	**150**	P	**Pn**	**04 28 10.4**	**-0.5**
SWI	**Sorong**	**5.55**	**115**	P	**Pn**	**04 28 54.6**	**+1.8**
	41nm,1.1s,0.1nm						
KDI	**Kendari**	**6.53**	**214**	P	**Pn**	**04 29 07.5**	**+1.2**
	67nm,0.8s,2µm0.2nm						
PCI	**Palu**	**6.84**	**249**	P	**Pn**	**04 29 23.1**	**+13**
KAPI	**Kappang**	**9.17**	**225**	Pn	**Pn**	**04 29 43.1**	**+0.6**
	2.5nm,0.3s,baz=13,slow=5.5,SNR=13						
KAPI				Sn	**Sn**	**04 31 23.6**	**-0.6**
	baz=240,slow=20,SNR=1.8						
KAPI	**Kappang**	**9.17**	**225**	P	**Pn**	**04 29 44.6**	**+2.1**
	14nm,0.6s,0.0nm						
KAKA	**Kakadu**	**15.42**	**157**	*eP*	**Pn**	**04 30 57.9**	**-8.7**
	26nm,0.6s						
WRAB	**Tennant Creek**	**22.75**	**160**	*eP*	**P**	**04 32 28.3**	**-1.5**
	26nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**22.75**	**160**	P	**P**	**04 32 29.8**	**0.0**
	42nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**22.76**	**160**	P	**P**	**04 32 28.3**	**-1.6**
	16nm,0.6s,mb4.6,baz=336,slow=11,SNR=103						
WRA				S	**S**	**04 36 36.8**	**+2.6**
	1.5nm,0.9s,baz=333,slow=18,SNR=6.0						
COEN	**Coen**	**22.76**	**133**	*eP*	**P**	**04 32 28.5**	**-1.5**
	3.7nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**22.76**	**160**	*eP*	**P**	**04 32 28.4**	**-1.5**
WB2				*eS*	**S**	**04 36 34.4**	**+0.2**
WB2	**Warramunga Arr**	**22.76**	**160**	*eP*	**P**	**04 32 28.1**	**-1.7**
WB2				*eS*	**S**	**04 36 34.4**	**+0.2**
MBWA	**Marble Bar**	**23.42**	**195**	*eP*	**P**	**04 32 35.4**	**-1.0**
	9.2nm,0.7s,mb4.3						
JOW	**Kunigami**	**25.25**	**4**	P	**P**	**04 32 53.5**	**+0.6**
	23nm,0.9s,mb4.7,baz=268,slow=22,SNR=5.3						
ASAR	**Alice Springs**	**26.12**	**164**	P	**P**	**04 33 01.1**	**+0.2**
	3.1nm,0.5s,mb4.1,baz=345,slow=7.0,SNR=57						
ASAR				PcP	PcP	04 36 27.6	+0.5
	1.2nm,0.7s,baz=349,slow=2.2,SNR=6.6						
ASAR				S	**S**	**04 37 33.0**	**+5.0**
	0.7nm,0.7s,baz=350,slow=21,SNR=3.6						
CMAR	**Chiang Mai Arr**	**31.63**	**304**	P	**P**	**04 33 51.1**	**+1.2**
	0.5nm,0.3s,mb3.8,baz=126,slow=9.0,SNR=2.9						
CMAR				PcP	PcP	04 36 43.5	+2.5
	0.8nm,0.3s,baz=189,slow=1.2,SNR=5.0						
FORT	**Forrest**	**32.16**	**177**	*eP*	**P**	**04 33 55.2**	**+0.7**
	8.0nm,0.6s,mb4.7						
KLBR	**Kellerberrin**	**33.90**	**193**	*eP*	**P**	**04 34 10.5**	**+0.8**
	11nm,0.5s,mb5.0						
MUN	**Mundaring**	**34.65**	**195**	*eP*	**P**	**04 34 16.6**	**+0.5**
NWAO	**Narrogin (SRO)**	**35.30**	**193**	P	**P**	**04 34 22.7**	**+1.0**
	8.0nm,0.6s,mb4.8,baz=9.1,slow=8.1,SNR=9.7						
NWAO				PcP	PcP	04 36 52.3	+1.2
	4.3nm,0.6s,baz=14,slow=3.2,SNR=3.7						
STKA	**Stephens Creek**	**36.27**	**158**	*eP*	**P**	**04 34 29.6**	**-0.4**
	5.6nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**04 34 30.4**	**+0.4**
	8.4nm,0.8s,mb4.8,baz=324,slow=8.9,SNR=20						
ULN	**Ulaanbaatar**	**49.07**	**343**	*eP*	**P**	**04 36 13.3**	**-0.2**
	1.3nm,0.5s,mb4.2						
SONM	**Songino Array**	**49.23**	**342**	P	**P**	**04 36 14.8**	**+0.1**
	2.5nm,1.1s,mb4.1,baz=156,slow=8.5,SNR=5.0						
SONM

38nm,1.4s,mb5.1
TIC Toumodi 69.69 74 *e*P P **04 40 57.2 -1.8**
6.9nm,0.2s,mb5.2
KIC Kosan Boka 69.81 74 *e*P P **04 40 59.2 -0.6**
42nm,0.9s,mb5.4
DBIC Dimbokro 69.84 74 P P **04 40 59.3 -0.7**
7.3nm,0.8s,mb4.7,baz=242,slow=8.7,SNR=8.9
DBIC Dimbokro 69.84 74 *e*P P **04 40 59.4 -0.6**
8.5nm,0.8s,mb4.7
PDAR Pinedale Array 74.30 331 P P **04 41 26.9 +0.9**
0.6nm,1.0s,mb3.5,baz=102,slow=3.5,SNR=3.8
HWUT Hardware Ranch 74.33 329 *e*P P **04 41 27.2 +1.1**
2.5nm,0.9s,mb4.1
TPAW Teton Pass 75.50 330 *e*P P **04 41 34.0 +1.2**
2.2nm,0.9s,mb4.1
NVAR Mina Array Bea 75.51 323 P P **04 41 34.0 +1.0**
0.5nm,0.7s,mb3.5,baz=142,slow=6.3,SNR=3.6
NVAR pP pP 04 41 47.4 -2.5
0.6nm,0.8s,baz=132,slow=6.9,SNR=3.3
NVAR Mina Array Bea 75.51 323 P P **04 41 34.0 +1.0**
NVAR pP pP 04 41 47.4 -2.5
HLID Hailey 77.18 328 *e*P P **04 41 44.4 +2.0**
1.5nm,0.8s,mb4.0
TOA0 Torodi Ar. Sit 78.49 71 *e*P P **04 41 49.4 -0.9**
TORD Torodi Ar. Bea 78.49 71 P P **04 41 49.8 -0.5**
4.4nm,0.5s,mb4.7,baz=255,slow=5.3,SNR=146
TORD pP pP 04 42 04.9 -2.3
2.5nm,0.5s,baz=253,slow=5.9,SNR=5.6
TORD sP sP 04 42 10.1 -3.9
4.6nm,0.5s,baz=251,slow=5.6,SNR=7.1
TSUM Tsumeb 80.72 107 LR LR 05 12 11.5
comp=Z,69nm,20.9s,baz=304,slow=31
TSUM Tsumeb 80.72 107 *e*P P **04 42 03.0 +0.5**
3.8nm,0.8s,mb4.4
MAW Mawson 83.88 164 P P **04 42 18.1 +0.1**
2.3nm,0.7s,mb4.4,baz=299,slow=10,SNR=3.0
BOSA Boshof 83.92 118 P P **04 42 18.1 -0.9**
6.1nm,0.9s,mb4.8,baz=276,slow=7.6,SNR=5.8
BOSA Boshof 83.92 118 *e*P P **04 42 18.6 -0.4**
12nm,1.1s,mb4.9
TAM Tamanrasset 85.99 64 *e*P P **04 42 29.7 +0.3**
ESDC Sonseca Array 87.02 45 LR LR 05 17 07.5
comp=Z,34nm,19.1s,baz=110,slow=33
YKA Yellowknife Ar 91.58 341 P P **04 42 54.6 -0.3**
1.9nm,0.7s,mb4.5,baz=118,slow=4.0,SNR=6.3
CTA Charters Tower 125.06 223 PKP PKPdf 04 48 49.1 -0.4
7.8nm,1.1s,baz=40,slow=8.8,SNR=3.3
CTAO Charters Tower 125.06 223 *e*PKPdf PKPdf 04 48 49.1 -0.3
ASAR Alice Springs 128.82 208 PKP PKPdf 04 48 56.6 +0.1
0.8nm,0.9s,baz=166,slow=2.2,SNR=6.0
ASAR pPKP pPKPdf 04 49 11.3 -3.1
3.2nm,0.8s,baz=143,slow=2.2,SNR=23
WRA Warramunga Arr 131.84 211 PKP PKPdf 04 49 01.9 -0.4
0.3nm,0.4s,baz=150,slow=1.8,SNR=8.1
WRA pPKP pPKPdf 04 49 17.6 -2.6
2.7nm,0.7s,baz=155,slow=1.8,SNR=18
ZALV Zalesovo Beam 143.02 25 PKP PKPdf 04 49 21.2 -0.6
1.8nm,0.7s,baz=318,slow=2.0,SNR=8.2
MK31 Makanchi Array 146.79 36 *e*PKPbc PKPbc 04 49 29.5 -0.8
MKAR Makanchi Array 146.79 36 PKPbc PKPbc 04 49 29.2 -1.2
3.2nm,0.8s,baz=318,slow=2.4,SNR=23
MKAR pPKPbc pPKPbc 04 49 44.8 -3.4
1.4nm,0.6s,baz=322,slow=2.8,SNR=6.3

NNC 15 04:31:43.4±3.0, 3720N×6905E, h0km, mb3.5, mpv3.2, 4C-2D, Error ellipse: s-maj=27.6km s-min=23.0km az=106.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.01**	**10**	⇑Pn		Pn	04 33 16.8	+3.3
	0.5nm,0.4s,baz=197,slow=13,SNR=15							
KK31				⇓Sn		Sn	04 34 29.6	+6.7
	1.6nm,0.2s,baz=194,slow=25,SNR=4.6							
TKM2	**Tokmak 2**	**7.61**	**39**	⇑Pn		Pn	04 33 34.3	-1.1
	3.8nm,1.1s							
TKM2				⇓Sn		Sn	04 35 03.4	+1.0
	1.0nm,0.5s							
AB09	**Akbulak array**	**13.76**	**334**	⇑Pn		Pn	04 34 58.6	-1.1
	0.4nm,0.5s							
AB09				⇑Sn		Sn	04 37 32.4	-0.7
	1.0nm,0.7s							

IDC 15 04:57:03.3±2.7, 950S×15217E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.6/14, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.3/16, Error ellipse: s-maj=88.6km s-min=33.3km az=109.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.11**	**237**	P		P	05 01 37.8	-1.0
	1.7nm,1.0s,baz=61,slow=11,SNR=8.0							
ASAR	**Alice Springs**	**22.43**	**229**	P		P	05 02 04.2	+0.4
	0.7nm,0.7s,baz=63,slow=9.2,SNR=7.7							
STKA	**Stephens Creek**	**24.33**	**202**	P		P	05 02 23.2	+0.4
	1.0nm,0.8s,baz=4.1,slow=14,SNR=3.0							
STKA				LR		LR	05 11 07.4	
	comp=Z,82nm,21.1s,baz=89,slow=35							
MKAR	**Makanchi Array**	**83.45**	**320**	P		P	05 09 33.0	+0.3
	0.7nm,0.7s,baz=104,slow=6.4,SNR=7.4							
TORD	**Torodi Ar. Bea**	**150.83**	**280**	PKPbc		PKPbc	05 16 58.5	-0.3
	2.1nm,1.3s,baz=106,slow=3.2,SNR=4.1							

ISCJB ***15*** *05:10:08.9±0.3, 3102S±005×5926E±007, h12km, mb4.7/47, MS4.2/26, Error ellipse: s-maj=8.5km s-min=7.8km az=161.3*

IDC ***15*** *05:10:08.1±0.5, 3086S×5928E, h0km, mb4.5/19, mb1 4.5/20, mb1mx4.5/26, mbtmp4.5/20, ML4.2/1, MS4.0/20, Ms1 4.0/20, ms1mx3.8/32, Error ellipse: s-maj=17.5km s-min=13.9km az=19.0*

MOS ***15*** *05:10:08.3±1.1, 3105S×5931E, h10km, mb5.1/17, Error ellipse: s-maj=14.8km s-min=9.7km az=104.1*

BJI ***15*** *05:10:09.8, 3100S×5930E, h10km, mB5.3, mb5.0, Ms4.9, Msz4.6*

NEIC ***15*** *05:10:09.8±0.3, 3096S×5931E, h10km, mb4.8/19, Error ellipse: s-maj=10.9km s-min=8.6km az=214.0*

ISC 15 05:10:09.3±6.0, 3097S±006×5927E±008, h3km±36km, h13km±1.8km: pP-P, n126, σ1§01/108, mb4.7/47, MS4.2/26, 15C-5D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABPO	**Ambohimpanom**	**16.13**	**315**	*e*P		**Pn**	**05 13 57.6**	**+0.6**
	60nm,1.4s							
ABPO	**Ambohimpanom**	**16.13**	**315**	*e*P		**Pn**	**05 13 57.7**	**+0.6**
ABPO				pmax		pmax		
	comp=Z,61nm,1.4s							
OPO	**Ambohidratompo**	**16.50**	**316**	Pn		**Pn**	**05 14 01.0**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=148,slow=11,SNR=8.4							
OPO				Sn		**Sn**	**05 16 52.0**	**-13**
	comp=Z,2.1nm,0.3s,baz=201,slow=18,SNR=7.4							
BOSA	**Boshof**	**29.54**	**266**	P		**P**	**05 16 14.7**	**-0.5**
	comp=Z,2.7nm,0.8s,mb4.0,baz=116,slow=12,SNR=4.0							
BOSA				LR		LR	05 25 02.5	
	comp=Z,153nm,19.3s,MS3.6,baz=158,slow=30							
BOSA	**Boshof**	**29.54**	**266**	*e*P		**P**	**05 16 15.4**	**+0.2**
LBTB	**Lobatse**	**30.24**	**273**	P		**P**	**05 16 20.2**	**-1.2**
	comp=Z,4.4nm,0.9s,mb4.2,baz=140,slow=5.9,SNR=5.8							
LBTB				LR		LR	05 26 23.5	
	comp=Z,191nm,18.7s,MS3.8,baz=353,slow=32							
LBTB	**Lobatse**	**30.24**	**273**	*e*P		**P**	**05 16 20.2**	**-1.2**
	comp=Z,13nm,1.1s,mb4.6							
LBTB	**Lobatse**	**30.24**	**273**	*e*P		**P**	**05 16 20.2**	**-1.2**
LBTB				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.6							
LSZ	**Lusaka**	**32.43**	**292**	P		**P**	**05 16 41.2**	**+0.5**
	comp=Z,9.5nm,0.9s,mb4.6,baz=134,slow=8.2,SNR=13							
LSZ	**Lusaka**	**32.43**	**292**	*e*P		**P**	**05 16 41.7**	**+1.0**
	comp=Z,14nm,0.9s,mb4.8							
LSZ	**Lusaka**	**32.43**	**292**	*e*P		**P**	**05 16 41.7**	**+1.0**
LSZ				pmax		pmax		
	comp=Z,14nm,0.9s,mb4.8							
MAW	**Mawson**	**36.73**	**178**	P		**P**	**05 17 18.4**	**+1.1**
	comp=Z,8.3nm,0.7s,mb4.7,baz=346,slow=9.6,SNR=12							
MAW				LR		LR	05 28 49.5	
	comp=Z,309nm,20.1s,MS4.1,baz=311,slow=30							
TSUM	**Tsumeb**	**39.32**	**277**	P		**P**	**05 17 39.1**	**-0.7**
	comp=Z,10nm,0.9s,mb4.5,baz=111,slow=8.7,SNR=9.2							
TSUM	**Tsumeb**	**39.32**	**277**	*e*P		**P**	**05 17 40.9**	**+1.2**
	comp=Z,16nm,1.1s,mb4.7							
SYO	**Syowa Base**	**39.73**	**191**	⇓*e*P		**P**	**05 17 42.8**	**+0.2**
SYO	**Syowa Base**	**39.73**	**191**	⇑*e*sP		sP	05 17 47.0	+2.9
HYB	**Hyderabad**	**51.56**	**24**	*e*P		**P**	**05 19 16.5**	**-0.2**
HYB	**Hyderabad**	**51.56**	**24**	*i* P		**P**	**05 19 16.5**	**-0.2**
SNAA	**Sanae**	**52.20**	**201**	*e*P		**P**	**05 19 19.2**	**-1.7**
SNAA				*e*		pP	05 19 22.0	0.0
SNAA				*e*			05 19 27.4	
SNAA				*e*			05 19 33.7	
SNAA	**Sanae**	**52.20**	**201**	*e*P		**P**	**05 19 19.1**	**-1.8**
	comp=Z,11nm,0.9s,mb4.8							
SNAA	**Sanae**	**52.20**	**201**	*e*P		**P**	**05 19 19.1**	**-1.8**
SNAA				pmax		pmax		
	comp=Z,11nm,0.9s							
VNA2	**Neumayer--Watz**	**53.45**	**202**	*e*P		**P**	**05 19 30.9**	**+0.7**
	baz=80,slow=5.9							
VNA2				*e*		pP	05 19 33.3	+2.1
VNA2				*e*			05 19 38.9	
VNA2				*e*			05 19 43.9	
VNA1	**Neumayer--Stat**	**53.69**	**202**	*e*P		**P**	**05 19 32.1**	**+0.2**
VNA1				*e*		pP	05 19 34.9	+1.9
VNA1				*e*			05 19 39.6	
VNA1				*e*			05 19 45.3	
VNA3	**Neumayer Olymp**	**54.24**	**202**	*e*P		**P**	**05 19 35.9**	**0.0**
VNA3				*e*		pP	05 19 38.4	+1.4
VNA3				*e*			05 19 43.3	
VNA3				*e*			05 19 48.5	
QSPA	**South Pole Qui**	**59.19**	**180**	P		**P**	**05 20 11.6**	**+0.6**
	comp=Z,17nm,0.9s,mb5.1,baz=268,slow=3.1,SNR=41							
QSPA				LR		LR	05 43 04.6	
	comp=Z,217nm,18.7s,MS4.3,baz=346,slow=33							
CMAR	**Chiang Mai Arr**	**62.20**	**43**	P		**P**	**05 20 31.6**	**-0.7**
	comp=Z,9.2nm,0.6s,mb5.1,baz=230,slow=7.2,SNR=25							
CMAR				LR		LR	05 42 25.8	
	comp=Z,107nm,18.1s,MS4.0,baz=227,slow=31							
CMAR	**Chiang Mai Arr**	**62.20**	**43**	⇑*e*P		**P**	**05 20 31.8**	**-0.5**
SBA	**Scott Base**	**63.53**	**167**	*e*P		**P**	**05 20 41.1**	**+0.8**
	comp=Z,38nm,1.7s,mb5.2							
SBA	**Scott Base**	**63.53**	**167**	*e*P		**P**	**05 20 41.2**	**+0.8**
SBA				pmax		pmax		
	comp=Z,38nm,1.7s,mb5.2							
SHL	**Shillong**	**64.30**	**33**	*e*P		**P**	**05 20 48.0**	**+1.9**
ASAR	**Alice Springs**	**65.61**	**104**	P		**P**	**05 20 53.9**	**-0.9**
	comp=Z,3.2nm,0.8s,mb4.4,baz=238,slow=6.3,SNR=31							
ASF	**Jabal al Asfar**	**66.28**	**339**	LR		LR	05 47 23.7	
	comp=Z,76nm,18.1s,MS4.0,baz=189,slow=34							
WRA	**Warramunga Arr**	**67.56**	**100**	P		**P**	**05 21 06.0**	**-1.4**
	comp=Z,4.9nm,0.7s,mb4.6,baz=242,slow=5.5,SNR=30							
WRA				LR		LR	05 47 55.4	
	comp=Z,103nm,18.5s,MS4.1,baz=275,slow=34							
WB2	**Warramunga Arr**	**67.57**	**100**	*e*P		**P**	**05 21 06.1**	**-1.3**
WRAB	**Tennant Creek**	**67.57**	**100**	*e*P		**P**	**05 21 06.6**	**-0.9**
	comp=Z,23nm,1.4s,mb5.0							
WRAB	**Tennant Creek**	**67.57**	**100**	*e*P		**P**	**05 21 07.7**	**+0.3**
STKA	**Stephens Creek**	**68.49**	**115**	P		**P**	**05 21 13.5**	**+0.4**
	comp=Z,1.4nm,0.7s,mb4.1,baz=143,slow=3.5,SNR=3.9							
STKA				LR		LR	05 43 16.2	
	comp=Z,91nm,19.8s,MS4.0,baz=206,slow=29							
KMI	**Kunming**	**69.58**	**42**	P		**P**	**05 21 20.9**	**+1.2**
KMI				AP		pP	05 21 26.3	+5.4
KMI				XP		sP	05 21 28.0	+6.7
KMI				PP		PP	05 23 59.3	+5.4
KMI				S		S	05 30 31.0	+2.3
KMI				SS		SS	05 35 01.5	+4.5
KMI				AMB		AMB		
	comp=Z,7.0nm,1.1s,mb4.5							
KMI				AMB		AMB		
	comp=Z,125nm,4.6s							
KMI				LR		LR		
	comp=N,172nm,20.7s,MS4.5							
KMI				LR		LR		
	comp=E,163nm,17.4s,MS4.5							
KMI				LR		LR		
	comp=Z,172nm,15.3s,MS4.4							
KMI	**Kunming**	**69.58**	**42**	P		**P**	**05 21 20.9**	**+1.2**
	comp=Z,7.0nm,1.1s,mb4.5							
KMI				pP		pP	05 21 26.3	+5.4
KMI				sP		sP	05 21 28.0	+6.7
KMI				PP		PP	05 23 59.3	+5.4
KMI				S		S	05 30 31.0	+2.3
KMI				SS		SS	05 35 01.5	+4.5
KMI				SSS			05 38 02.7	
KMI				LR		LR		
	comp=Z,170nm,15.3s,MS4.4							
KMI	**Kunming**	**69.58**	**42**	P		**P**	**05 21 20.9**	**+1.2**
KMI				*PP		pP	05 21 26.3	+5.4
KMI				*SP		sP	05 21 28.0	+6.7
KMI							05 23 59.3	
KMI				S		S	05 30 31.0	+2.3
KMI				SS		SS	05 35 01.5	+4.5
KMI				SSS			05 38 02.7	
KMI				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.5							
KMI				MLR		MLR		
	comp=Z,170nm,15.3s,MS4.4							
TOA0	**Torodi Ar. Sit**	**70.55**	**299**	*e*P		**P**	**05 21 25.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**70.55**	**299**	P		**P**	**05 21 24.8**	**-1.1**
	comp=Z,2.2nm,0.8s,mb4.1,baz=128,slow=4.5,SNR=12							
TORD				PP		PP	05 23 56.6	-5.7
	comp=Z,1.1nm,0.9s,baz=132,slow=8.9,SNR=4.3							
TORD				LR		LR	05 52 23.0	
	comp=Z,201nm,18.2s,MS4.4,baz=100,slow=36							
TORD	**Torodi Ar. Bea**	**70.55**	**299**	P		**P**	**05 21 24.8**	**-1.1**
TORD				PP		PP	05 23 56.6	-5.7
TORD				LR		LR	05 52 23.0	
DBIC	**Dimbokro**	**71.74**	**290**	P		**P**	**05 21 31.1**	**-2.0**
	comp=Z,6.3nm,1.1s,mb4.5,baz=90,slow=13,SNR=2.4							
DBIC				LR		LR	05 49 56.0	
	comp=Z,115nm,20.7s,MS4.1,baz=125,slow=33							
DBIC	**Dimbokro**	**71.74**	**290**	P		**P**	**05 21 31.1**	**-2.0**
DBIC				LR		LR	05 49 56.0	
GNI	**Garni**	**72.03**	**348**	⇑*e*P		**P**	**05 21 36.9**	**+2.6**
GNI				pmax		pmax		
	comp=Z,20nm,1.2s							
GYA	**Guiyang**	**72.89**	**44**	*e*P		**P**	**05 21 41.8**	**+2.1**
GYA				PCP		PcP	05 21 58.6	+1.8
GYA				PP		PP	05 24 26.0	+3.8
GYA				S		S	05 31 07.4	+0.5
GYA				SKS			05 31 42.3	
GYA				SS		SS	05 35 52.8	+5.2
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
GYA				AMB		AMB		
	comp=Z,80nm,5.8s							
GYA				LR		LR		
	comp=N,438nm,19.6s,MS4.9							
GYA				LR		LR		
	comp=E,495nm,20.3s,MS4.9							
GYA				LR		LR		
	comp=Z,425nm,18.6s,MS4.8							
TAM	**Tamanrasset**	**74.24**	**309**	*e*P		**P**	**05 21 48.8**	**+1.0**
EKS2	**Erkin-Say**	**74.48**	**11**	*e*P		**P**	**05 21 48.7**	**+0.1**
	comp=Z,6.3nm,1.0s,mb4.5							
CD2	**Chengdu**	**74.64**	**39**	*e*P		**P**	**05 21 51.3**	**+1.4**
CD2				AP		pP	05 21 56.3	+5.3
CD2				XP		sP	05 21 58.5	+7.0
CD2				PP		PP	05 24 40.8	+3.7
CD2				S		S	05 31 26.3	-0.2
CD2				XS		sS	05 31 34.3	+5.9
CD2				SS		SS	05 36 16.3	+2.0
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB		AMB		
	comp=Z,30nm,4.2s							
CD2				LR		LR		
	comp=N,160nm,14.2s							
CD2				LR		LR		
	comp=Z,130nm,15.2s,MS4.3							
TKM2	**Tokmak 2**	**75.05**	**12**	*e*P		**P**	**05 21 53.2**	**+1.2**
	comp=Z,9.4nm,1.2s,mb4.6							
TKM2	**Tokmak 2**	**75.05**	**12**	*e*P		**P**	**05 21 53.2**	**+1.2**
TKM2				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.6							
KIV	**Kislovodsk**	**76.09**	**348**	*e*P		**P**	**05 21 59.3**	**+1.4**
KIV				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.8							
ANN	**Anapa**	**77.99**	**344**	*e*P		**P**	**05 22 09.2**	**+0.6**
ANN				pmax		pmax		
	comp=Z,87nm,1.3s,mb5.5							
LZH	**Lanzhou**	**78.74**	**35**	*e*P		**P**	**05 22 12.5**	**-0.5**
LZH				AP		pP	05 22 16.0	+1.9
LZH				AMB		AMB		
	comp=Z,19nm,1.5s,mb4.8							
LZH				AMB		AMB		
	comp=Z,86nm,4.5s							
LZH	**Lanzhou**	**78.74**	**35**	*e*P		**P**	**05 22 12.5**	**-0.5**
	comp=Z,19nm,1.5s,mb4.8							
LZH				pP		pP	05 22 16.0	+1.9
LZH				sP		sP	05 22 18.5	+4.0
WMQ	**Urumqi**	**78.85**	**21**	*e*P		**P**	**05 22 13.0**	**-0.4**
WMQ				XP		sP	05 22 20.0	+5.1
WMQ				PP		PP	05 25 13.0	+0.7
WMQ				S		S	05 32 09.0	-2.9
WMQ				SS		SS	05 37 17.0	-0.5
WMQ				AMB		AMB		
	comp=Z,21nm,1.0s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,84nm,4.0s							
WMQ				LR		LR		
	comp=N,114nm,18.0s,MS4.5							
WMQ				LR		LR		
	comp=E,189nm,18.0s,MS4.5							
WMQ				LR		LR		
	comp=Z,98nm,18.0s,MS4.2							
GTA	**Gaotai**	**79.52**	**31**	⇑P		**P**	**05 22 17.0**	**-0.2**
GTA				AP		pP	05 22 20.8	+2.5
GTA				XP		sP	05 22 23.8	+5.1
GTA				PP		PP	05 25 18.0	0.0
GTA				S		S	05 32 17.4	-2.0
GTA				XS		sS	05 32 29.0	+7.8
GTA				SS		SS	05 37 30.0	+2.2
GTA				AMB		AMB		
	comp=Z,8.0nm,1.0s,mb4.6							
GTA				AMB		AMB		
	comp=Z,77nm,5.1s							
GTA				LR		LR		
	comp=N,102nm,19.5s,MS4.4							
GTA				LR		LR		
	comp=E,127nm,17.1s,MS4.4							
GTA				LR		LR		
	comp=Z,172nm,18.9s,MS4.4							
XAN	**Xi'an**	**79.84**	**40**	P		**P**	**05 22 17.9**	**-1.1**
XAN				AP		pP	05 22 26.9	+6.7
XAN				AMB		AMB		
	comp=Z,8.0nm,1.0s,mb4.6							
MKAR	**Makanchi Array**	**80.15**	**16**	P		**P**	**05 22 19.2**	**-1.2**
	comp=Z,1.8nm,0.9s,mb4.0,baz=188,slow=4.8,SNR=9.5							
MKAR				LR		LR	05 54 54.7	
	comp=Z,53nm,21.4s,MS3.9,baz=172,slow=34							
AKTK	**Aktyubinsk**	**81.06**	**359**	P		**P**	**05 22 23.8**	**-1.4**
AKTO	**Aktyubinsk**	**81.06**	**359**	P		**P**	**05 22 23.8**	**-1.4**
	comp=Z,2.6nm,0.8s,mb4.2,baz=262,slow=4.3,SNR=5.3							
KEST	**Kesra**	**81.24**	**321**	LR		LR	05 58 32.6	
	comp=Z,81nm,18.1s,MS4.1,baz=225,slow=36							
MLR	**Muntele Rosu**	**81.90**	**337**	⇓*i*P		**P**	**05 22 29.5**	**-0.3**
VRI	**Vrincioaia**	**81.97**	**338**	⇓*i*P		**P**	**05 22 30.1**	**0.0**
PLOR	**Plostina**	**81.98**	**338**	⇑*i*P		**P**	**05 22 30.0**	**-0.2**
RPZ	**Rata Peaks**	**83.02**	**137**	LR		LR	05 50 11.0	
	comp=Z,266nm,18.5s,MS4.6,baz=358,slow=29							
KURK	**Kurchatov**	**83.11**	**12**	P		**P**	**05 22 35.1**	**-0.8**
	baz=213,slow=6.2							
KURK	**Kurchatov**	**83.11**	**12**	*e*P		**P**	**05 22 35.2**	**-0.7**
	comp=Z,18nm,1.5s,mb4.9							
KURK	**Kurchatov**	**83.11**	**12**	⇑*e*P		**P**	**05 22 36.4**	**+0.4**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
BZS	**Buzias**	**83.54**	**334**	⇑*i*P		**P**	**05 22 30.6**	**-7.7**
BURAR	**Bucovina Array**	**84.00**	**338**	⇓*i*P		**P**	**05 22 41.1**	**+0.5**
DRGR		**84.14**	**336**	⇑*i*P		**P**	**05 22 40.6**	**-0.7**
BVAR	**Borovoye Array**	**84.20**	**7**	P		**P**	**05 22 40.2**	**-1.3**
	comp=Z,2.1nm,0.8s,mb4.3,baz=174,slow=6.0,SNR=8.2							
NJ2	**Nanjing**	**84.33**	**47**	*e*P		**P**	**05 22 42.6**	**-0.1**
NJ2				AMB		AMB		
	comp=Z,40nm,0.9s,mb5.5							
PKSM	**Moragy**	**85.17**	**333**	⇑*i*P		**P**	**05 22 45.7**	**-0.8**
AKASG	**Malin Array Be**	**85.55**	**341**	P		**P**	**05 22 47.0**	**-1.3**
	comp=Z,2.0nm,0.7s,mb4.4,baz=176,slow=5.4,SNR=6.5							
AKASG	**Malin Array Be**	**85.55**	**341**	P		**P**	**05 22 47.0**	**-1.3**
AKASG	**Malin Array Be**	**85.55**	**341**	*i* P		**P**	**05 22 47.2**	**-1.1**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KOLS	**Kolonicke sedl**	**86.13**	**337**	*e*P		**P**	**05 22 51.7**	**+0.4**
HHC	**Hu-ho-hao-te**	**86.28**	**37**	*e*P		**P**	**05 22 52.6**	**+0.4**
HHC				AP		pP	05 22 57.3	+3.9
HHC				XP		sP	05 22 59.6	+5.8
HHC				PP		PP	05 26 17.0	+3.5
HHC				SKS			05 33 16.3	
HHC				S		S	05 33 27.5	-0.6
HHC				XS		sS	05 33 36.4	+6.4
HHC				SS		SS	05 39 10.6	+2.4
HHC				AMB		AMB		
	comp=Z,19nm,0.5s,mb5.6							
HHC				AMB		AMB		
	comp=Z,162nm,5.2s							
HHC				LR		LR		
	comp=N,171nm,17.8s,MS4.7							
HHC				LR		LR		
	comp=E,238nm,16.7s,MS4.7							
HHC				LR		LR		
	comp=Z,181nm,16.6s,MS4.5							
CRVS	**Cervenica-Dubn**	**86.39**	**336**	*e*P		**P**	**05 22 52.5**	**0.0**
STHS	**Stebnicka Huta**	**86.90**	**336**	*e*P		**P**	**05 22 54.7**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.3							
STHS	**Stebnicka Huta**	**86.90**	**336**	*e*P		**P**	**05 22 54.7**	**-0.3**
STHS				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.3							
VYHS	**Vyhne**	**86.99**	**334**	*e*P		**P**	**05 22 55.9**	**+0.4**
ARU	**Arti**	**87.06**	**360**	*e*P		**P**	**05 22 54.0**	**-1.6**
	comp=Z,8.8nm,0.3s,mb5.5							
ARU	**Arti**	**87.06**	**360**	*d*P		**P**	**05 22 55.6**	**0.0**
ARU				*e*			05 26 17.6	
ARU				pmax		pmax		
	comp=Z,14nm,1.2s,mb5.1							
ZST	**Bratislava**	**87.40**	**333**	*e*P		**P**	**05 22 57.1**	**-0.4**
	comp=Z,9.7nm,1.1s,mb5.0							
ZST	**Bratislava**	**87.40**	**333**	*e*P		**P**	**05 22 57.1**	**-0.4**
ZST				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb5.0							
ZALV	**Zalesovo Beam**	**87.42**	**15**	P		**P**	**05 22 56.0**	**-1.5**
	comp=Z,1.5nm,0.3s,mb4.7,baz=204,slow=3.3,SNR=7.2							
ZALV				LR		LR	05 58 48.6	
	comp=Z,35nm,20.1s,MS3.8,baz=152,slow=34							
MODS	**Modra-Piesok**	**87.47**	**333**	*e*P		**P**	**05 22

CN2	**Changchun**	**95.86**	**42**	*e*P		**P**	**05 23 38.3**	**+1.4**
HIA	**Hailar**	**96.30**	**35**	*e*P		**P**	**05 23 32.3**	**-6.5**
MDJ	**Mudanjiang**	**98.74**	**43**	P		**P**	**05 23 50.5**	**+0.6**
MDJ	comp=Z,12nm,2.1s,mb5.1			AMB	AMB			
MDJ	comp=Z,97nm,3.9s			AMB	AMB			
NOA	**NORSAR Array B**	**99.66**	**338**	LR		LR	06 10 47.1	
	comp=Z,15nm,18.5s,MS3.5,baz=205,slow=36							
RES	**Resolute Bay**	**134.36**	**351**	*e*PKPdf		PKPdf	05 29 26.5	-1.0
URVA	**University of**	**143.94**	**292**	*e*PKPdf		PKPdf	05 29 44.0	-2.2
PMR	**Palmer**	**144.20**	**23**	*e*PKPbc		PKPdf	05 29 42.7	-3.1
DAWY	**Dawson**	**144.86**	**14**	*e*PKPdf		PKPdf	05 29 44.6	-2.3
TGUH	**Tegucigalpa,Un**	**144.98**	**249**	*e*PKPdf		PKPdf	05 29 47.5	-1.1
ELN	**Prospectdale**	**146.49**	**292**	*e*PKPbc		PKPbc	05 29 51.5	-0.4
JSC	**Jenkinsville**	**146.73**	**286**	*e*PKPbc		PKPbc	05 29 52.8	+0.1
YKA	**Yellowknife Ar**	**148.22**	**355**	PKPbc		PKPdf	05 29 53.9	+1.3
	comp=Z,4.6nm,0.8s,baz=357,slow=2.3,SNR=12							
YKA	**Yellowknife Ar**	**148.22**	**355**	⇑*i*PKP2		PKPdf	05 29 54.4	+1.8
ULM	**Lac du Bonnet**	**153.25**	**323**	PKPbc		PKPbc	05 30 07.0	-1.2
	comp=Z,4.5nm,0.8s,baz=25,slow=3.3,SNR=3.6							
PDAR	**Pinedale Array**	**165.23**	**326**	PKP		PKPdf	05 30 14.8	-0.1
	comp=Z,0.3nm,0.7s,baz=98,slow=3.3,SNR=3.9							
PDAR	comp=Z,0.6nm,0.9s,baz=64,slow=3.4,SNR=3.6			PKPab		PKPab	05 31 11.3	-0.9

KRSC 15 05:12:20.8±1.3, 5206N×16302E, h5km±5km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**2.10**	**301**	P	Pn	05 12 57.4	+0.8
SPN				*i* S	Sn	05 13 23.9	+0.8
NLC	**Nalytchevo**	**2.50**	**298**	*e*P	Pn	05 13 02.0	-0.1
NLC				*i* S	Sn	05 13 32.3	-0.6
MKZ	**Mys Kozlova**	**2.62**	**343**	*e*P	Pn	05 13 04.8	+1.1
MKZ				*i* S	Sn	05 13 37.3	+1.5
PET	**Petropavlovsk**	**2.84**	**292**	*e*P	Pn	05 13 08.1	+1.4
PET				*i* S	Sn	05 13 42.9	+1.7

ISC 15 05:15:16.1±1.2, 3552N±007×734E±02, h35km, n16, σ1°83/22, 3C-1D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.64**	**147**	*e*P	**Pn**	**05 16 11.8**	**+1.9**
THN				*ex*	**Sn**	**05 17 02.6**	**+11**
SMLA	**Simla**	**5.41**	**143**	*e*P	**Pn**	**05 16 35.1**	**+0.9**
SMLA				*i* S	**Sn**	**05 17 36.1**	**+0.9**
SMLA	comp=N,173nm,0.3s			*ex*	x	05 17 41.9	
SMLA	comp=E,314nm,0.3s			*ex*	x	05 17 43.5	
KLP	**Kalpa**	**5.69**	**133**	*e*P	**Pn**	**05 16 40.2**	**+2.1**
KLP				*e*S	**Sn**	**05 17 44.7**	**+2.6**
KLP	comp=N,48nm,0.8s			AML	AML	05 18 14.9	
KLP	comp=E,60nm,0.5s			AML	AML	05 18 16.8	
JOSI	**Joshimath**	**7.17**	**132**	*e*P	**Pn**	**05 17 01.1**	**+2.7**
JOSI				*e*S	**Sn**	**05 18 18.8**	**+0.1**
JOSI	comp=N,48nm,0.7s			AML	AML	05 19 05.0	
JOSI	comp=E,36nm,1.2s			AML	AML	05 19 08.6	
TKM2	**Tokmak 2**	**7.59**	**12**	⇑Pn	**Pn**	**05 17 07.1**	**+2.9**
TKM2	comp=E,1.0nm,0.5s			⇑Sn	**Sn**	**05 18 30.2**	**+1.3**
KK31	**Karatay Array**	**7.89**	**345**	⇓Pn	**Pn**	**05 17 09.2**	**+0.9**
	comp=E,1.4nm,0.2s,baz=158,slow=12						
KK31	comp=E,1.3nm,0.2s,baz=160,slow=23,SNR=2.5			⇑Sn	**Sn**	**05 18 34.6**	**-1.7**
PYUN	**Piuthan**	**11.02**	**129**	*e*P	**Pn**	**05 17 49.3**	**-1.9**
	comp=E,15nm,0.4s						
DANN	**Dangsing**	**11.35**	**126**	*e*P	**Pn**	**05 17 54.6**	**-1.1**
	comp=E,6.1nm,0.3s						
KOLN	**Koldanda**	**11.64**	**129**	*e*P	**Pn**	**05 17 57.6**	**-2.1**
GKN	**Gorkha**	**12.16**	**125**	*e*P	**Pn**	**05 18 04.8**	**-2.0**
DMN	**Daman**	**12.73**	**125**	*e*P	**Pn**	**05 18 12.3**	**-2.3**
GUN	**Gumba**	**13.06**	**122**	*e*P	**Pn**	**05 18 15.5**	**-3.6**
JIRN	**Jiri**	**13.42**	**122**	*e*P	**Pn**	**05 18 20.6**	**-3.6**
RAMN	**Ramite**	**14.17**	**123**	*e*P	**Pn**	**05 18 30.8**	**-3.4**
TAPN	**Taplejung**	**14.69**	**120**	*e*P	**Pn**	**05 18 36.1**	**-5.2**
ODAN	**Odare**	**14.77**	**122**	*e*P	**Pn**	**05 18 37.8**	**-4.6**

IDC 15 05:25:30.2±2.6, 703S×14887E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/14, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=75.9km s-min=29.7km az=98.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.06**	**226**	P	Pn	05 29 54.2	-0.7
	0.4nm,0.3s,baz=52,slow=11,SNR=14						
ASAR	**Alice Springs**	**21.91**	**219**	P	P	05 30 25.4	+0.2
	0.6nm,0.6s,baz=52,slow=9.9,SNR=11						
STKA	**Stephens Creek**	**25.63**	**194**	P	P	05 31 01.4	-0.1
	0.9nm,0.8s,baz=29,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**79.47**	**320**	P	P	05 37 38.8	+0.2
	0.3nm,0.6s,baz=120,slow=10,SNR=3.4						

IDC 15 05:50:34.2±5.3, 695S×15504E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.5/15, mbtmp3.5/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/20, Error ellipse: s-maj=160.3km s-min=40.0km az=113.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.45**	**117**	LR	LR	05 53 50.8	
	comp=Z,84nm,20.2s,baz=311,slow=36						
WRA	**Warramunga Arr**	**23.88**	**235**	P	P	05 55 48.7	-1.0
	1.1nm,0.8s,baz=59,slow=9.0,SNR=10						
ASAR	**Alice Springs**	**26.23**	**228**	P	P	05 56 11.7	+0.5
	0.3nm,0.6s,baz=64,slow=8.6,SNR=3.8						
STKA	**Stephens Creek**	**27.80**	**205**	LR	LR	06 07 00.9	
	comp=Z,74nm,21.7s,baz=151,slow=36						
CBIJ	**Chichi jima**	**36.06**	**340**	LR	LR	06 09 38.7	
	comp=Z,317nm,21.1s,baz=97,slow=32						
MKAR	**Makanchi Array**	**83.39**	**319**	P	P	06 03 04.0	+0.5
	0.5nm,0.7s,baz=102,slow=6.6,SNR=5.1						

IDC 15 06:00:44.1±1.4, 838S×15904E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.7/15, mbtmp3.7/4, Error ellipse: s-maj=35.6km s-min=24.3km az=50.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.38**	**140**	Pn	Pn	06 01 10.7	+0.1
	97nm,0.3s,baz=209,slow=6.8,SNR=54						
HNR	847nm,0.3s,baz=37,slow=22,SNR=33			Sn	Sn	06 01 25.6	-4.0
WRA	**Warramunga Arr**	**26.52**	**242**	P	P	06 06 24.3	+0.6
	0.7nm,0.5s,baz=69,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**28.47**	**235**	P	P	06 06 40.5	-0.6
	0.4nm,0.7s,baz=63,slow=10,SNR=5.3						
SONM	**Songino Array**	**72.69**	**326**	P	P	06 12 14.7	+0.9
	0.7nm,0.9s,baz=122,slow=7.0,SNR=2.9						
MKAR	**Makanchi Array**	**87.10**	**318**	P	P	06 13 30.8	-1.1
	0.2nm,0.5s,baz=108,slow=3.2,SNR=3.9						

MAN 15 06:17:01, 691N×12565E, h19km, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.22**	**321**	⇓*i*P	Pg	06 17 07.5	+1.0
DMPH				*i* S	Sg	06 17 11.7	+1.6
MATI	**Mati**	**0.60**	**86**	*e*P	Pb	06 17 14.2	+1.3
MATI				*e*S	Sb	06 17 24.7	+3.6
BUKP	**Musuan**	**1.13**	**329**	*e*P	Pn	06 17 21.6	-0.1
BUKP				*e*S	Sb	06 17 37.7	+1.5
CGP	**Cagayan de Oro**	**1.81**	**328**	*e*P	Pn	06 17 34.6	+3.5
CGP	**Cagayan de Oro**	**1.81**	**328**	*e*P	Pn	06 17 34.6	+3.5

IDC 15 07:07:01.4±2.8, 2274S×7039W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/15, mbtmp4.1/3, ML4.1/1, MS3.4/2, Ms1 3.5/2, ms1mx2.9/16, Error ellipse: s-maj=63.8km s-min=59.9km az=67.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.76**	**19**	Pn	Pn	07 08 42.4	+0.4
	1.7nm,0.3s,baz=187,slow=8.2,SNR=30						
LPAZ	comp=Z,86nm,21.8s,baz=33,slow=39			LR	LR	07 11 23.9	
BDFB	**Brasilia**	**22.26**	**75**	P	P	07 12 01.3	+1.1
	0.3nm,0.3s,baz=277,slow=19,SNR=4.3						
PPT	**Papeete**	**73.71**	**257**	LR	LR	07 40 24.6	
	comp=Z,126nm,21.9s,baz=109,slow=27						
TORD	**Torodi Ar. Bea**	**79.06**	**71**	P	P	07 19 07.7	-0.4
	3.2nm,0.9s,baz=255,slow=5.6,SNR=16						
MKAR	**Makanchi Array**	**147.43**	**36**	PKPbc	PKPbc	07 26 46.9	-0.4
	1.1nm,0.8s,baz=306,slow=2.8,SNR=8.4						

*ISCJB **15** 07:22:24.3±1.1, 3154S×003×716W±02, h78km±7km, Error ellipse: s-maj=28.4km s-min=4.7km az=179.8*
*GUC **15** 07:22:25.4±0.9, 3153S×7138W, h68km±9km, MD3.1, ML3.6*
ISC 15 07:22:25.5±1.0, 3155S±003×715W±02, h71km±7km, n14, σ0°54/23, 4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.34**	**175**	⇓*i*P	**Pn**	**07 22 37.1**	**+0.1**
CHNG				*i* S	**Sn**	**07 22 45.5**	**+0.1**
CHNG	comp=E,9μm,0.6s			AML	AML	07 22 46.9	
OVCH	**Ovalle**	**0.98**	**17**	*e*P	**Pn**	**07 22 43.6**	**-0.1**
OVCH				*i* S	**Sn**	**07 22 57.2**	**0.0**
OVCH	comp=N,3μm,0.5s			AML	AML	07 22 59.2	
TLL	**Tololo Astrono**	**1.51**	**25**	*e*P	**Pn**	**07 22 50.6**	**0.0**
TLL				*i* S	**Sn**	**07 23 09.1**	**-0.4**
TLL	comp=E,664nm,0.1s			AML	AML	07 23 10.1	
TLL	comp=N,513nm,0.4s			AML	AML	07 23 14.2	
PEL	**Peldehue**	**1.75**	**156**	*e*P	**Pn**	**07 22 52.5**	**-1.2**
PEL				*i* S	**Sn**	**07 23 07.3**	**-7.8**
CLCH	**Cerro Calan**	**2.03**	**156**	*e*P	**Pn**	**07 22 57.0**	**-0.5**
CLCH				AML	AML	07 23 40.9	
CLCH	comp=E,1μm,0.7s			AML	AML	07 23 42.6	
RCDM	**Rinconada Maip**	**2.03**	**163**	*e*P	**Pn**	**07 22 57.4**	**-0.2**
RCDM	comp=N,597nm,1.0s			*i* S	**Sn**	**07 23 21.3**	**-0.7**
ANTU	**Antumapu**	**2.16**	**160**	⇓*i*P	**Pn**	**07 22 59.4**	**+0.2**
ANTU				*e*S	**Sn**	**07 23 24.9**	**-0.1**
ANTU	comp=N,497nm,0.5s			AML	AML	07 23 26.5	
ANTU	comp=E,404nm,0.2s			AML	AML	07 23 29.8	
TACH	**Talagante**	**2.16**	**167**	⇓*i*P	**Pn**	**07 22 59.4**	**+0.1**
TACH				*i* S	**Sn**	**07 23 25.4**	**+0.3**
PCH	**Pirque**	**2.24**	**158**	*e*P	**Pn**	**07 23 00.4**	**0.0**
YECH	**El Yeso**	**2.44**	**150**	*e*P	**Pn**	**07 23 03.5**	**+0.4**
YECH	comp=N,590nm,0.4s			AML	AML	07 23 38.2	
YECH	comp=E,351nm,0.8s			AML	AML	07 23 39.0	
LMEL	**Las Melosas**	**2.56**	**154**	*e*P	**Pn**	**07 23 05.6**	**+1.0**
LMEL				*i* S	**Sn**	**07 23 35.2**	**+0.6**
LMEL	comp=E,344nm,0.2s			AML	AML	07 23 38.2	
LMEL	comp=N,650nm,0.2s			AML	AML	07 23 38.4	
LCO	**Las Campanas**	**2.63**	**16**	⇓*i*P	**Pn**	**07 23 05.8**	**+0.2**
LCO				*i* S	**Sn**	**07 23 36.7**	**+0.3**
VNA2	**Neumayer--Watz**	**52.12**	**158**	*e*	**P**	**07 31 29.0**	**+1.1**
	baz=286,slow=9.9						
VNA2				*e*		07 31 37.1	
VNA2				*e*	pP	07 31 43.8	-2.1
SNAA	**Sanae**	**53.70**	**159**	*e*	**P**	**07 31 38.5**	**-1.1**
SNAA				*e*		07 31 47.3	

*THE **15** 07:27:03.3, 3821N×2255E, h5km±3km, ML2.8/1, Error ellipse: s-maj=3.2km s-min=0.6km az=118.0*
*CSEM **15** 07:27:03.5±0.4, 3821N×2275E, h25km, ML2.8/1, Error ellipse: s-maj=18.2km s-min=8.7km az=78.0*
*ISCJB **15** 07:27:04.1±0.7, 3821N±003×2261E±007, h19km±18km, Error ellipse: s-maj=9.7km s-min=5.2km az=172.1*
*ATH **15** 07:27:04.1, 3808N×2251E, h10km, MD3.1/3*
ISC 15 07:27:03.6±0.6, 3820N±003×2257E±006, h14km±8km, n21, σ0°59/36, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.36**	**120**	P	**Pg**	**07 27 10.7**	**-0.1**
LTK				S	**Sg**	**07 27 16.4**	**+0.7**
LKR	**Lokris**	**0.56**	**37**	P	**Pg**	**07 27 14.0**	**-0.6**
LKR				S	**Sg**	**07 27 22.0**	**0.0**
AGG	**Agios Georgios**	**0.84**	**347**	P	**Pg**	**07 27 19.3**	**-0.6**
AGG				S	**Sg**	**07 27 31.0**	**+0.1**
VLX	**Vlachokerasia**	**0.84**	**190**	P	**Pg**	**07 27 19.2**	**-0.7**
VLX				S	**Sg**	**07 27 31.2**	**+0.3**
NAIG	**Nisos Aigina**	**0.85**	**121**	*e*PB	**Pb**	**07 27 20.0**	**-0.1**
DID	**Didima**	**0.87**	**143**	P	**Pg**	**07 27 20.4**	**0.0**
DID				S	**Sg**	**07 27 32.2**	**+0.4**
EVR	**Evrytania**	**0.93**	**320**	*e*PB	**Pb**	**07 27 23.1**	**+1.6**
XOR	**Xorichti**	**1.26**	**22**	P	**Pn**	**07 27 26.7**	**-0.1**
VLI	**Veliai**	**1.51**	**169**	*e*PB	**Pb**	**07 27 30.5**	**-0.8**

*DDA **15** 07:35:04.7, 3969N×2913E, h6km±2km, Md3.0*
*ISK **15** 07:35:04.4, 3971N×2914E, h9km, MD3.0*
*CSEM **15** 07:35:04.1±0.1, 3971N×2914E, h5km, MD3.0, Error ellipse: s-maj=1.7km s-min=1.5km az=141.0*
*ISCJB **15** 07:35:05.0±0.3, 3972N±002×2913E±003, h10km, Error ellipse: s-maj=3.6km s-min=2.8km az=31.9*
ISC 15 07:35:05.1±0.4, 3971N±002×2913E±003, h6km±4km, n38, σ0°82/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.41**	**255**	PG	**Pg**	**07 35 13.0**	**0.0**
DST				*e*SG	**Sg**	**07 35 19.3**	**+1.1**
ULDT	**Uludag**	**0.43**	**0**	*i* P	**Pg**	**07 35 13.5**	**+0.1**
ULDT				*i* S	**Sg**	**07 35 20.1**	**+1.1**
GDZ	**Gediz**	**0.68**	**157**	*i* P	**Pg**	**07 35 17.4**	**-0.8**
GDZ				*i* S	**Sg**	**07 35 26.8**	**-0.2**
GEMT	**Gemlik**	**0.72**	**3**	PG	**Pg**	**07 35 19.1**	**+0.1**
CAVI	**Cavuskoy**	**0.73**	**48**	PG	**Pg**	**07 35 19.1**	**-0.1**
CAVI				*e*SG	**Sg**	**07 35 29.1**	**+0.5**
DEMI	**Demirci**	**0.74**	**206**	*i* P	**Pg**	**07 35 18.6**	**-0.8**
DEMI				*i* S	**Sg**	**07 35 28.4**	**-0.6**
KCT	**Karacabey**	**0.81**	**313**	PG	**Pg**	**07 35 20.5**	**-0.2**
ADVT	**Abdulvahap**	**0.86**	**33**	PG	**Pg**	**07 35 20.9**	**-0.7**
YLV	**Yalova**	**0.87**	**12**	PG	**Pg**	**07 35 21.8**	**-0.1**
BALB	**Balikesir**	**0.97**	**266**	PG	**Pg**	**07 35 24.1**	**+0.4**
BORA	**Eskisehir**	**1.03**	**80**	*i* P	**Pg**	**07 35 24.4**	**-0.5**
BORA				*i* S	**Sg**	**07 35 42.0**	**+3.8**
GPA	**Golpazari**	**1.07**	**57**	*e*PG	**Pg**	**07 35 25.9**	**+0.2**
BNT	**Bandirma**	**1.13**	**305**	*e*PN	**Pn**	**07 35 26.4**	**-1.1**
EYL	**Eskiyayla**	**1.16**	**42**	*e*PN	**Pn**	**07 35 26.6**	**-1.2**
HRT	**Hereke**	**1.18**	**20**	*e*PN	**Pn**	**07 35 27.1**	**-1.0**
KULA	**Kula-Manisa**	**1.25**	**197**	*e*PN	**Pn**	**07 35 28.1**	**-1.1**
GULT	**Gulveren**	**1.28**	**55**	*e*PN	**Pn**	**07 35 29.9**	**+0.3**
MANT	**Manisa**	**1.30**	**200**	*i* P	**Pn**	**07 35 28.9**	**-0.8**
MANT				*i* S	**Sb**	**07 35 47.9**	**+1.0**
AKHS	**Akhisar**	**1.32**	**231**	*i* P	**Pn**	**07 35 30.0**	**-0.1**
AKHS				*i* S	**Sb**	**07 35 49.6**	**+2.1**
AKS	**Akhisar**	**1.32**	**231**	*e*PN	**Pn**	**07 35 29.1**	**-0.9**
ESKT	**Eskisehir**	**1.34**	**98**	*i* P	**Pn**	**07 35 30.5**	**+0.2**
ESKT				*i* S	**Sb**	**07 35 49.4**	**+1.4**
SEYT	**Eskypehyr**	**1.34**	**98**	*i* P	**Pn**	**07 35 30.5**	**+0.2**
SEYT				*i* S	**Sb**	**07 35 49.4**	**+1.4**
ISK	**Istanbul-Kandi**	**1.35**	**358**	*e*PN	**Pn**	**07 35 30.2**	**-0.3**
KHL	**Karahalli**	**1.42**	**168**	*e*PN	**Pn**	**07 35 30.6**	**-0.9**
SILT	**Sile**	**1.49**	**15**	*e*PN	**Pn**	**07 35 32.0**	**-0.4**
BGKT	**Bogazkoy**	**1.49**	**349**	*e*PN	**Pn**	**07 35 31.9**	**-0.6**
KLYT	**Kilyos**	**1.54**	**357**	*e*PN	**Pn**	**07 35 32.7**	**-0.4**
SHUT	**Suhut-Afyon**	**1.60**	**136**	*e*PN	**Pn**	**07 35 33.9**	**+0.1**
SLVT	**Silivri**	**1.67**	**335**	*e*PN	**Pn**	**07 35 34.9**	**0.0**
BOLV	**Bolvadin**	**1.73**	**125**	*i* P	**Pn**	**07 35 36.3**	**+0.7**
BOLV				*i* S	**Sn**	**07 36 02.5**	**+4.5**

HENT	**Hendek**	**1.75**	**50**	*i* P		**Pn**	**07 35 38.5**	**+2.6**
HENT				*i* S		**Sn**	**07 36 02.6**	**+4.1**
MDU	**Mudurnu**	**1.76**	**64**	*e*PN		**Pn**	**07 35 36.3**	**+0.2**
MFT	**Murefte**	**1.78**	**308**	*e*PN		**Pn**	**07 35 36.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.79**	**304**	*e*PN		**Pn**	**07 35 36.3**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.87**	**340**	*e*PN		**Pn**	**07 35 37.0**	**-0.6**
AYVA	**Ayvalik**	**1.93**	**259**	*i* P		**Pn**	**07 35 40.3**	**+1.8**
AYVA				*i* S		**Sn**	**07 36 07.7**	**+4.6**
LPK	**Lapseki**	**1.94**	**291**	*e*PN		**Pn**	**07 35 38.8**	**+0.3**
KIZT	**Kizilcal**	**2.29**	**110**	*e*PN		**Pn**	**07 35 43.5**	**+0.2**

*NIED **15** 08:22:00, 26.10N×12870E, h20km, Mw3.8 Best double couple: M0 6.59000×10^14 NP1:φs=44.00000°, δ63.00000°, λ100.00000°. NP2:φs=203.00000°, δ29.00000°, λ71.00000°.*
*IDC **15** 08:22:17.5±1.4, 26.12N×12850E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.8/18, mbtmp3.8/6, Error ellipse: s-maj=77.0km s-min=13.7km az=75.0*
*NEIC **15** 08:22:18.1±8.3, 2622N×12881E, h8km±54km, MG3.5(JMA), Error ellipse: s-maj=25.3km s-min=14.5km az=54.0*
*ISCJB **15** 08:22:19.5±1.3, 2609N±005×12873E±004, h32km±10km, mb3.7/6, Error ellipse: s-maj=8.3km s-min=6.1km az=10.5*
*JMA **15** 08:22:19.5±0.2, 2608N×12873E, h45km, M3.5*
ISC 15 08:22:19.3±2.1, 2614N±005×12873E±004, h19km±14km, n19, σ0°91/26, mb3.7/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.81**	**330**	P	**Pn**	**08 22 35.4**	**-0.2**
	375nm,0.3s,baz=140,slow=18,SNR=1732						
JOW	431nm,0.3s,baz=335,slow=19,SNR=28			Sn	**Sn**	**08 22 47.2**	**+0.2**
JOW	**Kunigami**	**0.81**	**330**	P	**Pn**	**08 22 35.3**	**-0.3**
JJT2	**Tamagusuku 2**	**0.88**	**270**	P	**Pb**	**08 22 35.8**	**-0.2**
JJT2				*e*S	**Sb**	**08 22 47.8**	**+0.4**
NAH1	**Naha**	**0.94**	**274**	P	**Pb**	**08 22 36.4**	**-0.5**
NAH1				*e*S	**Sb**	**08 22 48.7**	**-0.2**
JIH	**Iheya**	**1.13**	**323**	P	**Pn**	**08 22 40.2**	**+0.2**
JIH				*e*S	**Sb**	**08 22 54.5**	**+0.1**
JAGN	**Aguni-jima**	**1.41**	**289**	P	**Pn**	**08 22 43.8**	**-0.1**
JTK	**Tokunoshima**	**1.65**	**7**	P	**Pn**	**08 22 48.0**	**+0.8**
JTK				*e*S	**Sn**	**08 23 07.8**	**-0.1**
JKE	**Kume jima 2**	**1.76**	**277**	P	**Pn**	**08 22 47.7**	**-1.0**
JKE				*e*S	**Sn**	**08 23 08.7**	**-1.8**
JMZ	**Minamidaito 2**	**2.26**	**97**	P	**Pn**	**08 22 55.5**	**-0.1**
JMZ				*e*S	**Sn**	**08 23 21.2**	**-1.7**
JAM	**Amami Oshima**	**2.40**	**19**	P	**Pn**	**08 22 58.1**	**+0.7**
MAJO	**Matsushiro**	**13.15**	**36**	*e*Pn	**Pn**	**08 25 23.5**	**-1.4**
SONM	**Songino Array**	**27.88**	**327**	P	**P**	**08 28 09.9**	**+2.2**
	1.7nm,0.9s,mb3.7,baz=141,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**41.93**	**312**	P	**P**	**08 30 08.5**	**-0.1**
	0.7nm,0.6s,mb3.5,baz=97,slow=10,SNR=6.9						
ZALV	**Zalesovo Beam**	**42.59**	**323**	P	**P**	**08 30 12.9**	**-0.9**
	0.8nm,0.4s,mb3.7,baz=101,slow=7.5,SNR=2.3						
KURK	**Kurchatov**	**45.20**	**317**	P	**P**	**08 30 35.5**	**+0.7**
	baz=108,slow=7.9						
KURK	**Kurchatov**	**45.20**	**317**	P	**P**	**08 30 35.5**	**+0.7**
WRA	**Warramunga Arr**	**46.12**	**173**	P	**P**	**08 30 43.4**	**+0.9**
	0.5nm,0.6s,mb3.6,baz=353,slow=8.5,SNR=13						
ASAR	**Alice Springs**	**49.76**	**174**	P	**P**	**08 31 12.1**	**+1.6**
	0.5nm,0.6s,mb3.7,baz=9.7,slow=13,SNR=12						
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**08 34 05.1**	**+0.7**
	0.5nm,0.3s,mb3.9,baz=59,slow=6.4,SNR=4.2						

IDC 15 08:40:18.2±3.0, 1848S×17774W, h608km±351km, mb3.4/3, mb1 3.6/4, mb1mx3.2/17, mbtmp3.4/4, Error ellipse: s-maj=373.2km s-min=69.2km az=102.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.31**	**52**	P	P	08 42 10.8	-0.6
	7.6nm,0.3s,baz=248,slow=5.4,SNR=15						
STKA	**Stephens Creek**	**38.92**	**242**	*e*P	P	08 46 53.1	-0.5
	2.3nm,0.4s						
STKA	**Stephens Creek**	**38.92**	**242**	P	P	08 46 53.2	-0.4
	3.1nm,0.5s,baz=93,slow=8.0,SNR=10						
WB2	**Warramunga Arr**	**45.16**	**260**	*e*P	P	08 47 42.8	+0.4
WRA	**Warramunga Arr**	**45.16**	**260**	P	P	08 47 42.9	+0.4
	1.9nm,0.4s,baz=96,slow=8.1,SNR=105						
WRA	0.2nm,0.6s,baz=100,slow=12,SNR=2.9			S	S	08 53 39.2	0.0
ASAR	**Alice Springs**	**45.25**	**255**	P	P	08 47 43.5	+0.4
	2.8nm,0.4s,baz=88,slow=8.6,SNR=72						
ASAR	0.4nm,0.7s,baz=90,slow=17,SNR=4.1			S	S	08 53 40.8	+0.2
KAKA	**Kakadu**	**48.21**	**269**	*e*P	Px	08 47 54.7	
	3.6nm,0.4s						
FORT	**Forrest**	**50.34**	**245**	*e*P	P	08 48 19.6	-1.3
	6.8nm,0.6s						

*MOS **15** 08:53:39.6±1.3, 637N×12709E, h42km, mb5.2/21, Error ellipse: s-maj=13.8km s-min=7.3km az=115.7*
*IDC **15** 08:53:43.5±1.4, 630N×12713E, h63km±11km, mb4.3/22, mb1 4.4/22, mb1mx4.3/26, mbtmp4.3/22, MS3.9/17, Ms1 3.9/17, ms1mx3.6/25, Error ellipse: s-maj=14.5km s-min=8.9km az=61.0*
*ISCJB **15** 08:53:43.6±0.5, 624N±002×12706E±004, h77km±4km, mb4.8/76, Error ellipse: s-maj=6.4km s-min=3.6km az=169.9*
*MAN **15** 08:53:46, 621N×12662E, h29km, mb5.5, ML4.5, MS4.9*
*NEIC **15** 08:53:47.3±1.5, 6.10N×12674E, h91km±13km, mb4.9/25, Error ellipse: s-maj=16.2km s-min=7.1km az=74.0*
*BJI **15** 08:53:47.3, 6.10N×12670E, h91km, mB5.1, mb4.7*
*DJA **15** 08:53:51, 579N×12687E, h104km, Mw5.2/13*
**ISC 15 08:53:45.6±0.

OTRP **Odiongan** 7.82 321 *e*P Pn **08 55 38.8 +2.0**
PVCP **Virac** 7.83 339 *e*P Pn **08 55 41.6 +4.8**
SWI **Sorong** 8.24 149 P Pn **08 55 42.2 -0.2**
122nm,0.7s,1µm0.4nm
SWI **Sorong** 8.24 149 S Sx 08 57 08.6
122nm,0.7s,1µm0.4nm
MYLDM **Lahad Datu** 8.54 263 ⇓P Pn **08 55 46.7 +0.1**
MYLDM **Lahad Datu** 8.54 263 P Pn **08 55 49.3 +2.7**
ENPP **El Nido** 8.97 304 *e*P Pn **08 55 52.2 -0.3**
TSM **Tawau** 9.31 258 ⇑P Pn **08 55 57.2 0.0**
SDKM **Sandakan** 9.79 267 ⇑P Pn **08 56 04.8 +1.2**
PCI **Palu** 10.09 225 P Pn **08 56 09.6 +1.8**
204nm,1.3s,2µm
KDM **Kudat** 10.14 274 ⇑P Pn **08 56 10.9 +2.5**
KKM **Kota Kinabalu** 10.74 270 *e*Pn Pn **08 56 16.1 -0.6**
KKM **Kota Kinabalu** 10.74 270 ⇓P Pn **08 56 18.3 +1.6**
KKM **Kota Kinabalu** 10.74 270 P Pn **08 56 17.9 +1.2**
77nm,1.2s,1µm
KDI **Kendari** 11.05 204 P Pn **08 56 22.1 +1.3**
KDI **Kendari** 11.05 204 S Sn **08 58 14.0 -8.7**
SMKI **Samarinda** 11.83 236 P Pn **08 56 33.5 +1.9**
300nm,1.1s
KAPI **Kappang** 13.33 213 P Pn **08 56 48.1 -3.6**
1.9nm,0.3s,baz=25,slow=8.2,SNR=39
KAPI LR LR 09 02 44.7
comp=Z,151nm,18.1s,baz=47,slow=40
KAPI **Kappang** 13.33 213 *e*Pn Pn **08 56 47.5 -4.2**
102nm,1.3s
KAPI **Kappang** 13.33 213 P Pn **08 56 48.1 -3.6**
74nm,1.1s,448nm
BTM **Bintulu** 14.21 258 ⇓P Pn **08 57 03.6 +0.3**
SBUM **Sibu** 15.23 256 ⇓P Pn **08 57 17.0 +0.6**
SBUM **Sibu** 15.23 256 P Pn **08 57 16.4 0.0**
BBKI **Banjar Baru** 15.52 232 P Pn **08 57 19.8 -0.3**
104nm,1.3s,5µm
PLKI **Palangkaraya** 15.53 238 P Pn **08 57 23.6 +3.4**
STKI **Sintang** 16.68 249 P Pn **08 57 34.5 -0.1**
68nm,1.1s
BATI **Baumata** 16.68 192 P Pn **08 57 36.9 +2.3**
10.0nm,0.3s,baz=59,slow=1.4,SNR=5.7
BATI S **S** **09 00 47.9 +1.8**
2.0nm,0.3s,baz=75,slow=20,SNR=4.1
BATI LR LR 09 05 23.1
comp=Z,286nm,18.1s,baz=18,slow=42
KSM **Kuching** 17.33 255 Pn Pn **08 57 41.3 -1.4**
KSM **Kuching** 17.33 255 ⇓P Pn **08 57 43.3 +0.7**
KSM **Kuching** 17.33 255 P Pn **08 57 42.6 0.0**
50nm,1.1s,1µm
GUMO **Guam** 19.03 66 LR LR 09 03 54.3
comp=Z,428nm,18.3s,baz=147,slow=32
GUMO **Guam** 19.03 66 *e*P Pn **08 57 57.1 -6.0**
YHNB **Yeheng** 19.10 344 *e*P Pn **08 58 05.3 +1.4**
KAKA **Kakadu** 19.59 164 *e*P Px 08 57 54.9
32nm,0.7s
QZH **Quanzhou** 20.27 337 P P **08 58 19.4 +4.4**
QZH AMB AMB
comp=Z,60nm,0.6s
JOW **Kunigami** 20.51 3 P P **08 58 16.1 -1.4**
comp=Z,16nm,0.7s,baz=204,slow=14,SNR=7.6
JOW LR LR 09 05 40.5
comp=Z,318nm,21.9s,baz=160,slow=35
SJI **Sawahan** 20.60 228 P P **08 58 17.3 -1.3**
QIZ **Qiongzhong** 21.00 309 P P **08 58 22.8 -0.1**
QIZ AP 08 58 38.8
QIZ S **S** **09 02 12.4 -0.2**
QIZ LR LR
comp=Z,363nm,18.1s
TPI **Tanjungpandan** 21.30 246 P P **08 58 25.7 -0.5**
comp=Z,73nm,1.2s,comp=Z,635nm,mb4.9
BJII **Banjamegara** 21.91 232 P P **08 58 32.2 -0.5**
PPBI **Pangkal Pinang** 22.46 249 P P **08 58 36.5 -2.0**
comp=Z,44nm,1.1s,comp=Z,2µm,mb4.7
LEM **Lembang** 23.31 236 P P **08 58 48.5 +1.5**
comp=Z,111nm,1.0s,mb5.1
MYKOM **Kota Tinggi** 23.52 260 ⇑P P **08 58 48.2 -0.8**
MYKOM **Kota Tinggi** 23.52 260 P P **08 58 48.9 -0.1**
KTGM **Kuala Trenggan** 23.78 269 ⇑P P **08 58 51.5 +0.1**
KGM **Kluang** 24.00 261 ⇑P P **08 58 53.3 -0.1**
CBIJ **Chichi jima** 25.26 33 P P **08 59 04.8 +0.1**
comp=Z,84nm,0.7s,mb5.3,baz=265,slow=10,SNR=8.3
CBIJ LR LR 09 07 13.0
comp=Z,412nm,19.5s,baz=128,slow=32
SSE **Sheshan** 25.32 348 P P **08 59 08.8 +3.7**
SSE XP sP 08 59 39.8 +7.5
SSE S **S** **09 03 28.3 +2.6**
SSE XS sS 09 04 05.0 +8.2
SSE AMB AMB
comp=Z,28nm,0.7s,mb4.8
SSE AMB AMB
comp=Z,107nm,3.7s
SSE LR LR
comp=N,117nm,14.5s
SSE LR LR
comp=E,48nm,14.5s
SSE LR LR
comp=Z,134nm,14.0s
SSE **Sheshan** 25.32 348 P P **08 59 08.8 +3.7**
comp=Z,28nm,0.7s,mb4.8
SSE sP sP 08 59 39.8 +7.5
SSE S **S** **09 03 28.3 +2.6**
SSE sS sS 09 04 05.0 +8.2
SSE LR LR
comp=Z,130nm,14.0s
PMG **Port Moresby** 25.39 128 *i*P P **08 59 06.1 +0.1**
FRIM **Kepong** 25.48 264 ⇑P P **08 59 07.8 +1.0**
RGRI **Rengat** 25.49 256 P P **08 59 03.4 -3.6**
IPM **Ipoh** 25.93 267 ⇓P P **08 59 11.8 +0.8**
IPM **Ipoh** 25.93 267 P P **08 59 11.9 +0.9**
comp=Z,26nm,0.8s,mb4.8
KULM **Kulim** 26.25 269 ⇑P P **08 59 16.0 +2.2**
KSI **Kapahiang** 26.30 249 P P **08 59 16.2 +2.0**
comp=Z,185nm,1.1s,mb5.4
WRAB **Tennant Creek** 27.00 165 P P **08 59 19.8 -0.6**
comp=Z,177nm,0.5s,mb5.8,SNR=16
WRAB **Tennant Creek** 27.00 165 *e*P P **08 59 19.2 -1.2**
comp=Z,26nm,0.8s,mb4.8
WRAB **Tennant Creek** 27.00 165 ⇓*e*P P **08 59 19.8 -0.6**
WRAB **Tennant Creek** 27.00 165 P P **08 59 22.7 +2.3**
WRA **Warramunga Arr** 27.00 165 P P **08 59 19.1 -1.4**
comp=Z,2.8nm,0.3s,mb4.2,baz=339,slow=11,SNR=44
WRA S **S** **09 03 54.1 +1.6**
comp=Z,1.1nm,1.0s,baz=359,slow=17,SNR=3.1
WRA ScP ScP 09 06 15.1 +1.2
comp=Z,1.0nm,0.6s,baz=340,slow=3.1,SNR=5.3
WRA **Warramunga Arr** 27.00 165 P P **08 59 19.1 -1.3**
WRA S **S** **09 03 54.1 +1.6**
WB2 **Warramunga Arr** 27.01 165 *e*P P **08 59 20.0 -0.5**
PPI **Padang Panjang** 27.39 257 P P **08 59 23.3 -0.8**
comp=Z,44nm,0.6s,mb5.2
PDSI **Padang** 27.45 256 P P **08 59 26.5 +1.9**
comp=Z,116nm,1.2s,comp=Z,2µm,mb5.3
GYA **Guiyang** 27.94 318 P P **08 59 31.4 +2.6**
GYA AP pP 08 59 53.4 +6.5
GYA XP sP 09 00 01.8 +5.8
GYA PP PP 09 00 24.4 -8.8
GYA PCP PcP 09 02 43.3 +0.7
GYA S **S** **09 04 08.0 +0.8**
GYA XS sS 09 04 42.3 +3.8
GYA SCP ScP 09 06 14.3 -2.4
GYA PCS PcS 09 06 24.4 -0.4
GYA SCS ScS 09 10 06.3 -3.0
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
GYA AMB AMB
comp=Z,100nm,4.5s
GYA LR LR
comp=N,650nm,13.6s
GYA LR LR
comp=E,540nm,12.5s
GYA LR LR
comp=Z,830nm,12.2s
MBWA **Marble Bar** 28.16 195 *e*P P **08 59 29.5 -1.2**
comp=Z,24nm,0.8s,mb4.8
MBWA **Marble Bar** 28.16 195 P P **08 59 30.6 -0.1**
comp=Z,43nm,1.0s,mb4.9
JHJ **Hachijo jima 2** 29.25 22 LR LR 09 09 33.4
comp=Z,383nm,20.1s,baz=53,slow=33
KMI **Kunming** 29.87 312 P P **08 59 47.5 +1.5**
KMI AP pP 09 00 07.0 +2.8
KMI XP sP 09 00 17.5 +4.2
KMI PP PP 09 00 48.3 -6.5
KMI S **S** **09 04 37.1 -0.5**
KMI SS SS 09 06 19.3 -28
KMI AMB AMB
comp=Z,12nm,1.0s,mb4.5
KMI AMB AMB
comp=Z,197nm,4.0s
KMI LR LR
comp=N,202nm,27.3s
KMI LR LR
comp=E,221nm,22.9s
KMI LR LR
comp=Z,185nm,22.9s
KMI **Kunming** 29.87 312 P P **08 59 47.5 +1.5**
comp=Z,12nm,1.0s,mb4.5
KMI pP pP 09 00 07.0 +2.8
KMI sP sP 09 00 17.5 +4.2
KMI PP PP 09 00 48.2 -6.6
KMI S **S** **09 04 37.1 -0.5**
KMI SS SS 09 06 19.2 -28
KMI SSS 09 06 42.2
KMI LR LR
comp=Z,190nm,22.9s
KMI **Kunming** 29.87 312 P P **08 59 47.5 +1.5**
*PP pP 09 00 07.0 +2.8
KMI 09 00 48.2
S **S** **09 04 37.1 -0.5**
KMI SS SS 09 06 19.2 -28
KMI SSS 09 06 42.2
KMI pmax pmax
comp=Z,12nm,1.0s,mb4.5
CMAR **Chiang Mai Arr** 29.93 296 P P **08 59 47.1 +0.5**
comp=Z,1.4nm,0.3s,mb4.0,baz=100,slow=7.4,SNR=7.6
CMAR PcP PcP 09 02 49.8 +2.0
comp=Z,1.2nm,0.3s,baz=127,slow=1.4,SNR=4.9
CMAR ScP ScP 09 06 25.9 +2.7
comp=Z,0.5nm,0.4s,baz=126,slow=1.2,SNR=5.9
CMAR LR LR 09 13 44.7
comp=Z,142nm,18.5s,baz=124,slow=40
CMAR **Chiang Mai Arr** 29.93 296 P P **08 59 47.1 +0.5**
CMAR 09 02 49.8
CHTO **Chiang Mai** 30.05 297 *e*P P **08 59 46.9 -0.8**
comp=Z,2.7nm,0.6s,mb4.0
CHTO **Chiang Mai** 30.05 297 *e*P P **08 59 46.9 -0.8**
CHTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
ASAR **Alice Springs** 30.48 167 P P **08 59 50.2 -1.1**
comp=Z,3.4nm,0.3s,mb4.4,baz=344,slow=7.1,SNR=65
ASAR ScP ScP 09 06 25.9 +1.1
comp=Z,0.7nm,0.8s,baz=349,slow=2.6,SNR=4.6
KSRS **Korea Array** 31.07 1 P P **08 59 53.8 -2.6**
comp=Z,0.9nm,0.5s,mb3.7,baz=179,slow=9.3,SNR=3.2
KSRS LR LR 09 11 39.8
comp=Z,151nm,18.1s,baz=181,slow=35
MJAR **Matsushiro Arr** 31.84 17 P P **09 00 00.7 -2.5**
comp=Z,1.6nm,0.8s,mb3.8,baz=153,slow=8.5,SNR=3.1
MJAR LR LR 09 11 39.9
comp=Z,218nm,21.1s,baz=220,slow=34
CTA **Charters Tower** 32.29 145 *e*P P **09 00 10.0 +2.7**
comp=Z,8.1nm,0.7s,mb4.6
CTA **Charters Tower** 32.29 145 P P **09 00 07.5 +0.2**
comp=Z,2.8nm,0.6s,mb4.2,baz=307,slow=10,SNR=3.9
CTA LR LR 09 12 41.5
comp=Z,140nm,19.5s,baz=233,slow=35
CTA **Charters Tower** 32.29 145 *e*P P **09 00 10.0 +2.7**
CTA pmax pmax
comp=Z,8.0nm,0.7s
XAN **Xi'an** 32.34 331 P P **09 00 06.3 -1.2**
XAN AMB AMB
comp=Z,6.0nm,0.6s,mb4.5
CD2 **Chengdu** 32.83 321 *e*P P **09 00 15.5 +3.6**
CD2 AP pP 09 00 33.8 +3.6
CD2 XP sP 09 00 43.5 +4.2
CD2 PP PP 09 01 28.5 +1.0
CD2 S **S** **09 05 27.0 +3.3**
CD2 XS sS 09 05 58.3 +3.1
CD2 SS SS 09 07 29.6 -18
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,120nm,4.2s
CD2 LR LR
comp=N,210nm,13.1s
CD2 LR LR
comp=E,270nm,13.2s
CD2 LR LR
comp=Z,240nm,12.0s
BJT **Baijiatuau** 35.01 345 *e*P P **09 00 33.3 +2.7**
comp=Z,56nm,0.8s,mb5.5
BJT *e*pP pP 09 00 45.9 -3.2
BJT **Baijiatuau** 35.01 345 *e*P P **09 00 33.3 +2.6**
BJT *e**PP pP 09 00 45.9 -3.2
BJT pmax pmax
comp=Z,56nm,0.8s
BJI **Beijing** 35.03 345 P P **09 00 33.9 +3.1**
BJI S **S** **09 06 08.0 +11**
BJI AMB AMB
comp=Z,63nm,1.0s,mb5.4
BJI LR LR
comp=N,153nm,25.9s
BJI LR LR
comp=E,141nm,30.4s
BJI LR LR
comp=Z,97nm,37.8s
BJI **Beijing** 35.03 345 P P **09 00 33.9 +3.1**
comp=Z,63nm,1.0s,mb5.4
BJI S **S** **09 06 08.0 +11**
BJI LR LR
comp=Z,100nm,37.8s
LZH **Lanzhou** 36.52 328 *e*P P **09 00 48.5 +4.9**
LZH PP PP 09 02 14.8 +6.6
LZH *e*S **S** **09 06 28.3 +8.0**
LZH *e*SS SS 09 08 48.6 -14
LZH AMB AMB
comp=Z,39nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,157nm,5.3s
LZH LR LR
comp=E,512nm,13.2s
LZH LR LR
comp=Z,765nm,15.9s
LZH **Lanzhou** 36.52 328 *e*P P **09 00 48.5 +4.9**
comp=Z,39nm,1.5s,mb5.1
LZH pP pP 09 00 50.6 -12
LZH sP sP 09 01 06.0 -5.2
LZH PP PP 09 02 14.7 +6.5
LZH *e*S **S** **09 06 28.2 +7.9**
LZH sS sS 09 06 49.3 -2.8
LZH *e*SS SS 09 08 48.6 -14
LZH LR LR
comp=Z,770nm,15.9s
LZH **Lanzhou** 36.52 328 *e*P P **09 00 48.5 +4.9**
LZH *SP sP 09 01 06.0 -5.2
LZH *e*S **S** **09 06 28.2 +7.9**
LZH *SS sS 09 06 49.3 -2.8
LZH *e*SS SS 09 08 48.6 -14
LZH pmax pmax
comp=Z,39nm,1.5s,mb5.1
LZH MLR MLR
comp=Z,770nm,15.9s
FORT **Forrest** 36.83 179 *e*P P **09 00 45.6 -0.7**
comp=Z,24nm,0.6s,mb5.3
HHC **Hu-ho-hao-te** 37.12 340 *e*P P **09 00 52.1 +3.4**
HHC AP pP 09 01 10.3 +3.0
HHC XP sP 09 01 19.8 +3.5
HHC PP PP 09 02 22.8 +8.0
HHC PCP PcP 09 03 10.3 +2.7
HHC S **S** **09 06 34.8 +5.4**
HHC XS sS 09 07 05.8 +4.6
HHC SS SS 09 09 09.4 -4.1
HHC SCS ScS 09 10 56.5 +1.0
HHC AMB AMB
comp=Z,28nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,95nm,4.9s
HHC LR LR
comp=N,172nm,17.2s
HHC LR LR
comp=E,183nm,18.4s
HHC LR LR
comp=Z,155nm,15.5s
CN2 **Changchun** 37.43 358 *e*P P **09 00 55.8 +4.6**
CN2 *eXP sP 09 01 23.3 +4.5
CN2 *eS **S** **09 06 40.3 +6.4**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
MDJ **Mudanjiang** 38.28 3 P P **09 01 01.3 +2.9**
MDJ AP pP 09 01 19.4 +2.3
MDJ S **S** **09 06 52.3 +5.5**
MDJ AMB AMB
comp=Z,7.0nm,1.5s,mb4.3
MDJ AMB AMB
comp=Z,61nm,4.0s
MDJ LR LR
comp=N,152nm,28.4s
MDJ LR LR
comp=Z,183nm,30.9s
KLBR **Kellerberrin** 38.65 193 *e*P P **09 01 01.0 -0.7**
comp=Z,7.5nm,0.4s,mb4.9
MUN **Mundaring** 39.38 195 *e*P P **09 01 07.4 -0.4**
NWAO **Narrogin (SRO)** 40.05 193 P P **09 01 13.0 -0.3**
comp=Z,23nm,0.5s,mb5.2,baz=26,slow=7.5,SNR=32
NWAO **Narrogin (SRO)** 40.05 193 *e*P P **09 01 12.5 -0.8**
comp=Z,36nm,0.9s,mb5.2
NWAO *epP pP 09 01 28.7 -3.3
NWAO **Narrogin (SRO)** 40.05 193 *e*P P **09 01 12.5 -0.8**
NWAO *e*PP pP 09 01 28.7 -3.3
NWAO pmax pmax
comp=Z,36nm,0.9s
ASAJ **Asahikawa** 40.12 17 P P **09 01 12.8 -0.9**
comp=Z,6.2nm,0.7s,mb4.6,baz=219,slow=13,SNR=2.5
ASAJ LR LR 09 16 17.0
comp=Z,226nm,19.7s,baz=176,slow=34
STKA **Stephens Creek** 40.38 161 *e*P P **09 01 15.3 -0.7**
comp=Z,12nm,0.6s,mb4.9
STKA **Stephens Creek** 40.38 161 P P **09 01 15.4 -0.6**
comp=Z,4.2nm,0.3s,mb4.7,baz=343,slow=7.4,SNR=52
STKA LR LR 09 19 11.5
comp=Z,142nm,19.6s,baz=2.9,slow=38
GTA **Gaotai** 41.12 327 P P **09 01 22.1 0.0**
GTA AP pP 09 01 42.4 +1.5
GTA XP sP 09 01 52.3 +2.5
GTA PP PP 09 03 03.3 +4.9
GTA SCP ScP 09 07 04.8 +1.4
GTA S **S** **09 07 28.3 -1.2**
GTA XS sS 09 08 07.3 +5.7
GTA SS SS 09 10 31.9 -3.1
GTA AMB AMB
comp=Z,9.0nm,0.7s,mb4.7
GTA AMB AMB
comp=Z,196nm,4.5s
GTA LR LR
comp=N,204nm,20.4s
GTA LR LR
comp=E,258nm,17.4s
GTA LR LR
comp=Z,394nm,27.0s
HABR **Khabarovsk** 42.63 8 *e*P P **09 01 33.6 -0.6**
HABR *e* 09 03 22.8
HABR *e*S **S** **09 07 52.0 +0.6**
HABR *e* 09 11 26.3
HABR *e*SSS 09 11 41.2
TAPN **Taplejung** 42.81 304 *e*P P **09 01 35.9 -0.1**
ARMA **Armidale** 43.42 148 *e*P P **09 01 45.3 +4.4**
JIRN **Jiri** 44.18 304 *e*P P **09 01 46.8 -0.2**
comp=Z,18nm,0.4s,mb5.2
GUN **Gumba** 44.52 304 *e*P P **09 01 49.5 -0.3**
comp=Z,29nm,0.4s,mb5.3
ULN **Ulaanbaatar** 44.84 341 *e*P P **09 01 52.5 +0.6**
comp=Z,23nm,1.0s,mb4.9
ULN *epP pP 09 02 07.4 -3.6
ULN **Ulaanbaatar** 44.84 341 ⇓*e*P P **09 01 53.5 +1.6**
SONM **Songino Array** 45.03 340 P P **09 01 52.3 -1.1**
comp=Z,5.0nm,0.7s,mb4.4,baz=171,slow=8.2,SNR=4.7
SONM ScP ScP 09 07 19.7 +0.7
comp=Z,0.2nm,0.4s,baz=145,slow=5.3,SNR=1.9
SONM LR LR 09 20 36.4
comp=Z,107nm,19.3s,baz=140,slow=36
SONM **Songino Array** 45.03 340 P P **09 01 52.3 -1.1**
SONM ScP ScP 09 07 19.7 +0.7
SONM LR LR 09 20 36.5
KOLN **Koldanda** 46.37 303 *e*P P **09 02 03.9 -0.5**
comp=Z,14nm,0.3s,mb5.2
CNB **Canberra Magne** 46.39 155 *e*P P **09 02 10.4 +6.1**
DANN **Dangsing** 46.43 304 *e*P P **09 02 04.0 -0.9**
comp=Z,40nm,0.7s,mb5.3
TOO **Toolangi** 46.88 160 *e*P P **09 02 10.8 +2.7**
PYUN **Piuthan** 46.99 303 *e*P P **09 02 08.8 -0.4**
comp=Z,18nm,0.5s,mb5.0
ZAK **Zakamensk** 48.27 340 *e*P P **09 02 22.0 +3.3**
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
TLY **Talaya** 49.25 341 P P **09 02 30.0 +3.8**
comp=Z,75nm,0.7s,mb5.7,SNR=5.2
TLY **Talaya** 49.25 341 *e*P P **09 02 27.0 +0.7**
comp=Z,10nm,0.8s,mb4.8
TLY **Talaya** 49.25 341 *e*P P **09 02 30.0 +3.8**
TLY *e* 09 04 21.4
TLY pmax pmax
comp=Z,12nm,0.8s,mb4.9
WMQ **Urumqi** 50.86 324 *e*P P **09 02 39.0 +0.5**
WMQ AP pP 09 03 02.0 +4.1
WMQ XP sP 09 03 13.0 +6.2
WMQ PP PP 09 04 38.0 +2.5
WMQ S **S** **09 09 46.0 -3.0**
WMQ SCS ScS 09 12 16.0 -5.9
WMQ SS SS 09 13 19.0 -5.6
WMQ AMB AMB
comp=Z,27nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,69nm,3.0s
WMQ LR LR
comp=N,175nm,16.0s
WMQ LR LR
comp=E,197nm,17.0s
WMQ LR LR
comp=Z,224nm,18.0s
PETK **Petropavlovsk-** 53.01 23 LR LR 09 21 59.4
comp=Z,90nm,21.0s,baz=215,slow=32
MKAR **Makanchi Array** 55.68 324 P P **09 03 13.3 -0.5**
comp=Z,7.1nm,0.4s,mb5.0,baz=117,slow=7.2,SNR=46
MKAR ScP ScP 09 08 04.5 -0.2
comp=Z,1.5nm,0.9s,baz=116,slow=5.5,SNR=4.5
MKAR LR LR 09 28 23.2
comp=Z,122nm,21.6s,baz=118,slow=37
MKAR **Makanchi Array** 55.68 324 P P **09 03 13.3 -0.5**
MKAR ScP ScP 09 08 04.5 -0.2
MKAR LR LR 09 28 23.2
YAK **Yakutsk** 55.70 2 *e*P P **09 03 14.2 +0.5**
TKM2 **Tokmak 2** 58.08 317 *e*P P **09 03 30.0 -0.9**
comp=Z,4.9nm,0.8s,mb4.6
TKM2 **Tokmak 2** 58.08 317 *e*P P **09 03 30.0 -0.9**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ZAA0 **Zalesovo Array** 58.50 332 P P **09 03 32.2 -1.4**
ZALV **Zalesovo Beam** 58.50 332 P P **09 03 32.0 -1.6**
comp=Z,2.6nm,0.3s,mb4.7,baz=136,slow=6.9,SNR=11
AML **Almayashu** 59.07 316 *e*P P **09 03 38.0 +0.1**
comp=Z,5.1nm,0.6s,mb4.7
EKS2 **Erkin-Say** 59.21 317 *e*P P **09 03 38.5 -0.4**
comp=Z,6.2nm,0.6s,mb4.8
NVS **Novosibirsk** 59.78 332 *e*P P **09 03 40.4 -2.0**
NVS pmax pmax
comp=N,5.0nm,0.5s
NVS pmax pmax
comp=E,10.0nm,0.5s
NVS pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
KURK **Kurchatov** 59.80 327 P P **09 03 42.4 -0.3**
comp=Z,116nm,0.5s,mb6.2,SNR=12
KURK **Kurchatov** 59.80 327 P P **09 03 41.9 -0.8**
baz=126,slow=7.2
KURK **Kurchatov** 59.80 327 *e*P P **09 03 41.9 -0.7**
comp=Z,12nm,0.7s,mb5.0
KURK **Kurchatov** 59.80 327 *e*P P **09 03 41.9 -0.8**
KURK pmax pmax
comp=Z,12nm,0.7s,mb5.0
TIXI **Tiksi** 65.34 1 ⇑*i*P P **09 04 18.2 -1.0**
TIXI pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
BVAR **Borovoye Array** 65.39 326 P P **09 04 19.0 -0.8**
comp=Z,2.7nm,0.3s,mb4.5,baz=129,slow=8.9,SNR=23
BRVK **Borovoye** 65.46 326 P P **09 04 19.3 -1.0**
comp=Z,80nm,0.8s,mb5.6,SNR=5.6
BRVK **Borovoye** 65.46 326 *e*P P **09 04 19.4 -0.9**
comp=Z,20nm,0.9s,mb4.9
BRVK **Borovoye** 65.46 326 *e*P P **09 04 19.4 -0.9**
BRVK pmax pmax
comp=Z,20nm,0.9s,mb5.0
AKTK **Aktyubinsk** 71.88 321 P P **09 04 60.0 -0.4**
AKTO **Aktyubinsk** 71.88 321 P P **09 04 60.0 -0.4**
comp=Z,3.3nm,0.5s,mb4.5,baz=98,slow=8.4,SNR=11
SVE **Sverdlovsk** 71.98 328 *e*P P **09 04 59.9 -0.9**
SVE pmax pmax
comp=Z,19nm,0.6s,mb5.1
ARU **Arti** 72.98 327 *e*P P **09 05 05.6 -1.1**

comp=Z,15nm,0.5s,mb5.1
ARU Arti 72.98 327 *d* iP **P** 09 05 05.3 **-1.4**
ARU *e*S S 09 14 27.0 -0.4
ARU *e*SS SS 09 19 10.2 +0.9
ARU pmax pmax
comp=Z,11nm,0.6s,mb4.9
KIP Kipapa 73.77 70 *e*P **P** **09 05 11.1 -1.0**
MIR Mirnyy 76.66 193 *i* iP **P** **09 05 30.0 +2.3**
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.5
KDAK Kodiak Island 79.62 32 P pP 09 05 59.8 -5.3
comp=Z,6.7nm,0.4s,baz=288,slow=7.1,SNR=21
GNI Garni 80.10 310 *e*P **P** **09 05 47.4 +0.1**
GNI pmax pmax
comp=Z,30nm,1.7s
PPLA Purkeypile 80.28 27 *e*P **P** **09 05 49.9 +2.2**
comp=Z,8.5nm,0.5s,mb4.8
BPAW Bear Paw Mtn. 80.92 26 *e*P **P** **09 05 53.6 +2.5**
comp=Z,11nm,1.0s,mb4.7
COLD Coldfoot 81.48 23 *e*P **P** **09 05 57.4 +3.3**
comp=Z,12nm,0.9s,mb4.7
PMR Palmer 81.61 29 *e*P **P** **09 05 55.5 +0.6**
comp=Z,82nm,1.9s,mb5.2
PMR Palmer 81.61 29 *e*P **P** **09 05 55.5 +0.6**
PMR pmax pmax
comp=Z,82nm,1.9s,mb5.2
KIV Kislovodsk 81.62 313 *e*P **P** **09 05 53.2 -2.1**
KIV *e*S S 09 15 56.9 -4.6
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.6
KIV MLR MLR
comp=Z,48nm,19.0s
MCK McKinley 81.80 27 *e*P **P** **09 05 57.8 +2.0**
comp=Z,20nm,0.9s,mb4.9
MCK McKinley 81.80 27 *e*P **P** **09 05 57.8 +2.0**
MCK pmax pmax
comp=Z,20nm,0.9s,mb5.0
VRHR Novokhopersk 82.28 321 *e*P **P** **09 05 58.9 +0.3**
VRHR pmax pmax
comp=N,20nm,0.4s
VRHR pmax pmax
comp=Z,30nm,0.4s,mb5.5
VRHR pmax pmax
comp=E,10.0nm,0.3s
KLMR Klimovskoe 83.37 331 *e*P **P** **09 06 02.6 -1.4**
KLMR pmax pmax
comp=Z,34nm,1.6s,mb4.9
VORD Divnogorie 83.76 321 *e*P **P** **09 06 05.4 -0.8**
VORD pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,20nm,0.3s
VSR Storozhevoye 83.83 321 *e*P **P** **09 06 06.0 -0.6**
VSR pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.6s
OBN Obninsk 85.18 325 *i* iP **P** **09 06 12.4 -0.9**
OBN *e*S S 09 16 34.6 -2.4
OBN pmax pmax
comp=Z,40nm,1.6s,mb5.1
ANN Anapa 85.35 314 *e*P **P** **09 06 12.1 -2.3**
ANN pmax pmax
comp=Z,59nm,1.0s,mb5.5
PPT Papeete 85.61 108 *e*LR LR 09 33 35.3
comp=Z,158nm,28.0s
PPT Papeete 85.61 108 LR LR 09 38 24.1
comp=Z,78nm,18.5s,baz=284,slow=31
TBI Tubuai 86.53 114 *e*LR LR 09 33 52.1
comp=Z,136nm,26.8s
ASF Jabal al Asfar 86.82 302 P **P** **09 06 22.4 +0.5**
comp=Z,5.7nm,1.0s,mb4.5,baz=353,slow=5.9,SNR=5.5
MMAI Mount Meron Ar 87.99 303 P **P** **09 06 27.8 +0.2**
comp=Z,2.2nm,0.6s,mb4.4,baz=81,slow=8.9,SNR=2.7
SPITS Spitsbergen Ar 88.08 349 P **P** **09 06 26.6 -0.5**
comp=Z,12nm,1.0s,mb4.9,baz=34,slow=8.0,SNR=3.8
ARCES ARCESS Array B 88.20 340 P **P** **09 06 26.5 -1.2**
comp=Z,7.2nm,0.7s,mb4.8,baz=89,slow=5.6,SNR=20
AKASG Malin Array Be 90.13 321 P **P** **09 06 35.6 -1.5**
comp=Z,1.9nm,0.6s,mb4.4,baz=71,slow=4.2,SNR=5.9
AKASG Malin Array Be 90.13 321 *i* P **P** **09 06 35.9 -1.3**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 96.67 334 P **P** **09 07 09.0 +2.0**
comp=Z,1.5nm,0.8s,mb4.5,baz=66,slow=4.8
NOA NORSAR Array B 96.67 334 P **P** **09 07 08.2 +1.2**
comp=Z,2.5nm,0.8s,mb4.7,baz=67,slow=4.6,SNR=6.6
NOA LR LR 09 54 50.9
comp=Z,60nm,18.0s,baz=30,slow=38
JCT Junction City 122.19 48 *e*PKPdf PKPdf 09 12 36.5 +4.3
TORD Torodi Ar. Bea 122.38 290 PKP PKPdf 09 12 32.0 -0.9
comp=Z,1.3nm,0.6s,baz=24,slow=1.4,SNR=8.7
MIV Mineville/With 126.58 18 *e*PKPdf PKPdf 09 12 44.5 +4.3
PLCA Paso Flores 142.23 158 PKP PKPdf 09 13 08.6 -0.8
comp=Z,1.9nm,0.9s,baz=100,slow=7.4,SNR=3.1

SGS ***15*** *09:03:59.2, 29.08N×32.80E, h13km*
ISCJB ***15*** *09:04:00.2±1.0, 30.73N±0.003×36.13E±0.007, h0km, Error ellipse: s-maj=8.1km s-min=4.0km az=5.2*
GII ***15*** *09:04:00.6±0.9, 30.76N×35.99E, h0km, ML2.2/2, EXPLOSION*
ISC 15 09:04:00.3±1.1, 30.72N±0.003×36.17E±0.007, h0km, n14, σ0$58/20, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFRI	**Zfri**	**0.87**	**259**	Sg	**Sg**	**09 04 28.2**	**-0.1**
MZDA	**Masada**	**0.91**	**311**	Pg	**Pg**	**09 04 17.4**	**-0.3**
MZDA				Sg	**Sg**	**09 04 29.3**	**-0.2**
PRNI	**Paran**	**1.07**	**250**	Pg	**Pg**	**09 04 20.3**	**-0.5**
PRNI				Sg	**Sg**	**09 04 34.6**	**0.0**
DSI	**Dead Sea**	**1.08**	**322**	Pg	**Pg**	**09 04 20.7**	**-0.4**
DSI				Sg	**Sg**	**09 04 35.7**	**+0.5**
HRFI	**Mount Harif**	**1.19**	**235**	Pg	**Pg**	**09 04 22.5**	**-0.6**
KRMI	**Paran Flat**	**1.38**	**245**	Pg	**Pg**	**09 04 25.8**	**-1.1**
KRMI				Sg	**Sg**	**09 04 44.9**	**+0.1**
MBRI	**Mt Berech**	**1.42**	**230**	Pn	**Pn**	**09 04 27.6**	**+0.2**
MBRI				Sn	**Sn**	**09 04 47.5**	**+0.7**
EIL	**Elat**	**1.48**	**225**	Pn	**Pn**	**09 04 28.4**	**+0.2**
EIL				Sn	**Sn**	**09 04 49.5**	**+1.2**
HMDT	**Nahal Hemdat**	**1.62**	**340**	Sn	**Sn**	**09 04 51.5**	**-0.3**
HQLS		**1.71**	**214**	S	**Sn**	**09 04 54.3**	**+0.4**
HQLS		**1.71**	**214**	P	**Pn**	**09 04 30.7**	**-0.6**
MMLI	**Mount Malkishu**	**1.83**	**340**	Sn	**Sn**	**09 04 58.0**	**+1.2**
JLOS		**2.06**	**197**	P	**Pn**	**09 04 36.1**	**-0.1**
BDAS	**Al Bad'**	**2.46**	**202**	P	**Pn**	**09 04 32.5**	**-9.2**

ISCJB ***15*** *09:04:25.9±1.2, 46.8N±0.1×152.0E±0.2, h99km±11km, mb3.5/6, Error ellipse: s-maj=26.0km s-min=9.3km az=136.4*
MOS ***15*** *09:04:25.4±1.7, 46.86N×151.95E, h61km, mb4.2/21, Error ellipse: s-maj=22.0km s-min=11.2km az=53.8*
IDC ***15*** *09:04:31.1±2.6, 46.90N×152.10E, h136km±24km, mb3.2/6, mb1 3.4/9, mb1mx3.3/23, mbtmp3.2/9, MS3.3/1, Ms1 3.3/1, ms1mx2.2/15, Error ellipse: s-maj=28.4km s-min=19.0km az=111.0*
ISC 15 09:04:27.7±1.1, 46.8N±0.1×152.0E±0.2, h97km±10km, n20, σ1$53/20, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.25**	**243**	*e*PN	**Pn**	**09 05 14.3**	**-2.3**
KUR				*i* S	**Sn**	**09 05 53.4**	**-1.0**
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
KUR				smax			
	comp=N,360nm,0.5s						
KUR				smax			
	comp=E,230nm,0.5s						
SKR	**Severo-Kuril's**	**4.77**	**34**	*e*PN	**Pn**	**09 05 36.7**	**-0.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.30**	**275**	*e*PN	**Pn**	**09 05 59.0**	**+1.0**
ASAJ	**Asahikawa**	**7.10**	**251**	P	**Pn**	**09 06 12.8**	**+3.9**
	comp=Z,0.7nm,0.3s,baz=240,slow=16,SNR=4.6						
ASAJ	**Asahikawa**	**7.10**	**251**	PN	**Pn**	**09 06 12.8**	**+3.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**7.32**	**28**	P	**Pn**	**09 06 13.7**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=201,slow=12,SNR=14						
ERM	**Erimo**	**7.90**	**236**	*e*PN	**Pn**	**09 06 20.1**	**+0.3**
MJAR	**Matsushiro Arr**	**14.48**	**230**	P	**Pn**	**09 07 53.0**	**+5.1**
	comp=Z,0.4nm,0.3s,baz=46,slow=8.9,SNR=4.7						
KSRS	**Korea Array**	**20.05**	**251**	P	**P**	**09 08 55.5**	**+2.5**
	comp=Z,1.3nm,0.6s,baz=53,slow=11,SNR=3.9						
KSRS	**Korea Array**	**20.05**	**251**	P	**P**	**09 08 55.5**	**+2.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	**22.53**	**14**	*e*P	**P**	**09 09 16.1**	**-3.0**
BILL				pmax	pmax		
	comp=Z,32nm,2.5s,mb4.2						
SONM	**Songino Array**	**30.56**	**289**	P	**P**	**09 10 34.0**	**+2.2**
	comp=Z,0.2nm,0.3s,mb3.4,baz=70,slow=9.6,SNR=3.5						
ZALV	**Zalesovo Beam**	**41.93**	**305**	LR	LR	09 29 56.0	
	comp=Z,33nm,18.9s,baz=183,slow=36						
MKAR	**Makanchi Array**	**46.21**	**297**	P	**P**	**09 12 40.9**	**-1.7**
	comp=Z,0.4nm,0.5s,mb3.4,baz=70,slow=7.9,SNR=5.4						
YKA	**Yellowknife Ar**	**51.36**	**36**	*e*P	**P**	**09 13 12.4**	**-9.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**09 15 14.2**	**-1.2**
	comp=Z,0.6nm,0.4s,mb3.8,baz=28,slow=6.4,SNR=3.4						
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**09 15 14.2**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**68.30**	**198**	P	**P**	**09 15 17.4**	**-0.8**
	comp=Z,0.1nm,0.3s,mb3.1,baz=13,slow=6.6,SNR=5.3						
WRA	**Warramunga Arr**	**68.30**	**198**	*e*P	**P**	**09 15 18.9**	**+0.7**
ASAR	**Alice Springs**	**72.01**	**197**	P	**P**	**09 15 41.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=7.9,slow=5.5,SNR=8.7						

IGQ 15 09:17:06.8, 125S×8042W, h11km±7km, Mb4.3, Ms4.1, 3D, Error ellipse: s-maj=4.9km s-min=2.9km az=160.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**0.37**	**302**	⇓P	Pg	09 17 13.8	-0.3
JAMA	**Jama**	**1.00**	**12**	P	Pg	09 17 26.4	+0.2
JAMA	**Jama**	**1.00**	**12**	S	Sg	09 17 40.3	+1.2
QIL2	**Quilotoa**	**1.54**	**76**	P	Pn	09 17 35.8	+1.4
IGUA	**Igualata**	**1.79**	**98**	P	Pn	09 17 40.9	+3.1
JUI6	**Juive**	**1.95**	**95**	P	Pn	09 17 43.4	+3.4
ARRY	**Arrayan**	**1.98**	**98**	P	Pn	09 17 43.0	+2.7
ARRY	**Arrayan**	**1.98**	**98**	S	Sn	09 18 09.7	+4.6
CAMI	**Rancho Maria**	**1.99**	**74**	P	Pn	09 17 42.7	+2.2
PATA	**Patacocha**	**2.00**	**97**	P	Pn	09 17 43.7	+3.1
RUN5	**Runtun**	**2.00**	**95**	P	Pn	09 17 43.5	+2.9
ULBA	**Ulba**	**2.02**	**96**	P	Pn	09 17 44.5	+3.7
PISA	**Pisayambo**	**2.04**	**85**	P	Pn	09 17 44.1	+3.0
JUA2	**San Juan 2**	**2.08**	**61**	P	Pn	09 17 42.9	+1.2
TERV	**Terraza Guagua**	**2.10**	**60**	P	Pn	09 17 44.4	+2.4
VC1	**Cotopaxi 1**	**2.10**	**73**	P	Pn	09 17 45.8	+3.8
PINO	**Pino**	**2.11**	**59**	⇓P	Pn	09 17 43.5	+1.4
PINO	**Pino**	**2.11**	**59**	⇓S	Sn	09 18 13.5	+5.3
GGP	**Refugio Guagua**	**2.11**	**60**	P	Pn	09 17 43.5	+1.4
TAMB	**Tambo**	**2.12**	**75**	P	Pn	09 17 45.8	+3.5
YANA	**Yana**	**2.16**	**59**	P	Pn	09 17 44.2	+1.4
ANTI	**Antisana**	**2.39**	**71**	P	Pn	09 17 49.5	+3.6
COTA	**Cotacachi**	**2.60**	**53**	P	Pn	09 17 52.4	+3.4
CAYA	**Cayambe**	**2.75**	**62**	P	Pn	09 17 55.6	+4.6
CAYA	**Cayambe**	**2.75**	**62**	S	Sn	09 18 37.2	+13

IDC 15 09:17:31.9±2.3, 2304S×7059W, h0km, mb3.9/2, mb1 3.8/3, mb1mx3.7/15, mbtmp3.8/3, ML3.5/1, MS2.7/1, Ms1 2.8/1, ms1mx2.4/22, Error ellipse: s-maj=63.4km s-min=56.3km az=148.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.11**	**19**	Pn	Pn	09 19 17.6	+0.4
	0.4nm,0.3s,baz=207,slow=14,SNR=7.2						
LPAZ				LR	LR	09 22 06.8	
	comp=Z,60nm,20.6s,baz=159,slow=39						
BDFB	**Brasilia**	**22.52**	**75**	P	P	09 22 33.9	+0.6
	1.0nm,0.5s,baz=264,slow=18,SNR=4.2						
VNA3	**Neumayer Olymp**	**59.13**	**161**	*e*	P	09 27 38.1	+4.3
VNA3				*e*		09 27 43.0	
VNA2	**Neumayer--Watz**	**59.73**	**160**	*e*	P	09 27 42.5	+4.5
	baz=298,slow=9.2						
VNA2				*e*		09 27 47.4	
TORD	**Torodi Ar. Bea**	**79.33**	**71**	P	P	09 29 39.7	-0.3
	1.6nm,0.7s,baz=247,slow=5.5,SNR=12						
MKAR	**Makanchi Array**	**147.79**	**36**	PKP	PKPdf	09 37 14.7	-1.1
	0.8nm,0.7s,baz=318,slow=1.9,SNR=4.6						
MKAR				PKPbc	PKPbc	09 37 18.7	+0.1
	0.8nm,0.7s,baz=327,slow=4.6,SNR=7.0						

MAN 15 09:22:55, 1887N×12090E, h32km, mb4.7, ML3.6, MS3.5, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.61**	**206**	⇓*i* P	Pb	09 23 06.2	-1.1
PIP				*e*S	Sb	09 23 13.5	-2.1
SIPP	**Brgy, Tapao**	**1.03**	**204**	⇑*e* P	Pn	09 23 12.9	-0.4
SIPP				*i* S	Sn	09 23 28.0	+1.4
ABRA	**Dolores**	**1.23**	**189**	*e*P	Pn	09 23 17.2	+1.3
SGCP	**Mt. Cagua**	**1.25**	**120**	*e*P	Pn	09 23 17.0	+0.7
CVP	**Callao Caves**	**1.45**	**143**	*i* P	Pn	09 23 19.6	+0.6
CVP				*i* S	Sn	09 23 37.5	+0.5
CAUP	**Cauayan**	**2.11**	**155**	*e*P	Pn	09 23 30.1	+2.1
CAUP				*e*S	Sn	09 23 56.5	+3.4
PALP	**Palanan**	**2.31**	**141**	*e*P	Pn	09 23 34.0	+3.1
PALP				*e*S	Sn	09 24 05.7	+7.5
BOLP	**Bolinao**	**2.65**	**201**	*e*P	Pn	09 23 36.0	+0.5
BOLP				*e*S	Sn	09 24 13.9	+7.3
SCZP	**Santa Cruz**	**3.22**	**197**	*e*P	Pn	09 23 45.7	+2.3
SCZP				*e*S	Sn	09 24 22.8	+2.1

ISCJB ***15*** *09:31:24.4±1.7, 2332S±0.005×7062W±0.008, h12km±10km, mb4.6/13, MS3.7/3, Error ellipse: s-maj=13.4km s-min=7.1km az=15.1*
IDC ***15*** *09:31:25.0±0.8, 2335S×7064W, h0km, mb4.5/7, mb1 4.5/9, mb1mx4.3/17, mbtmp4.4/9, ML3.7/3, MS3.5/7, Ms1 3.5/7, ms1mx3.2/24, Error ellipse: s-maj=25.2km s-min=12.7km az=146.0*
NEIC ***15*** *09:31:29.8±0.4, 2331S×7061W, h35km, mb5.0/6, Error ellipse: s-maj=13.8km s-min=9.0km az=97.0*
MOS ***15*** *09:31:29.5±1.8, 2312S×7042W, h33km, mb5.0/3, Error ellipse: s-maj=24.6km s-min=14.6km az=84.2*
ISC 15 09:31:25.6±1.9, 2332S±0.005×7065W±0.008, h6km±11km, n49, σ0$97/34, mb4.6/13, MS3.7/3, 1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.75**	**67**	Pg	**Pg**	**09 31 59.0**	**-0.1**
	447nm,0.3s,baz=250,slow=14,SNR=605						
LVC				Lg		09 32 21.0	
	2µm,0.3s,baz=1.1,slow=12,SNR=54						
LCO	**Las Campanas**	**5.67**	**180**	*e*Pn	**Pn**	**09 32 49.8**	**-0.5**
	43nm,0.6s						
LCO				*e*Sn	**Sn**	**09 33 55.0**	**-0.8**
ARE	**Arequipa**	**6.87**	**353**	*e*P	**Pn**	**09 33 06.0**	**-0.8**
ARE				*e*S	**Sn**	**09 34 19.0**	**-6.3**
LPAZ	**La Paz**	**7.38**	**19**	Pn	**Pn**	**09 33 16.5**	**+2.6**
	0.6nm,0.3s,baz=209,slow=8.0,SNR=11						
LPAZ				LR	LR	09 36 18.4	
	comp=Z,429nm,19.2s,baz=207,slow=40						
LPAZ	**La Paz**	**7.38**	**19**	*e*Pn	**Pn**	**09 33 15.9**	**+2.0**
LPAZ				LR	LR	09 36 18.4	
CFAA	**Coronel Fontan**	**8.53**	**166**	Pn	**Pn**	**09 33 30.6**	**+1.1**
	0.1nm,0.3s,baz=352,slow=14,SNR=8.3						
CFAA				LR	LR	09 37 01.5	
	comp=Z,55nm,19.8s,baz=336,slow=40						
SIV	**San Ignacio**	**11.59**	**53**	Pn	**Pn**	**09 34 11.1**	**-0.5**
	2.1nm,0.3s,baz=247,slow=11,SNR=35						
SIV				Sn	**Sn**	**09 36 22.1**	**+0.7**
	0.2nm,0.3s,baz=173,slow=18,SNR=2.6						
SIV				LR	LR	09 39 25.8	
	comp=Z,513nm,20.2s,baz=265,slow=41						
SIV	**San Ignacio**	**11.59**	**53**	Pn	**Pn**	**09 34 11.1**	**-0.5**
SIV				Sn	**Sn**	**09 36 22.1**	**+0.7**
ATAH	**Atahualpa**	**17.85**	**334**	LR	LR	09 43 05.8	
	comp=Z,59nm,18.1s,baz=252,slow=40						
BDFB	**Brasilia**	**22.64**	**74**	P	**P**	**09 36 26.6**	**-0.8**
	3.2nm,0.7s,mb3.8,baz=232,slow=18,SNR=7.3						
BDFB				LR	LR	09 47 05.7	
	comp=Z,78nm,18.3s,MS3.2,baz=238,slow=42						
USHA	**Ushuaia**	**31.52**	**178**	P	**P**	**09 37 46.9**	**-1.2**
	5.1nm,0.9s,mb4.4,baz=1.3,slow=2.8,SNR=3.0						
VNA3	**Neumayer Olymp**	**58.89**	**161**	*e*	**P**	**09 41 26.4**	**+1.6**
VNA3				*e*		09 41 34.2	
VNA2	**Neumayer--Watz**	**59.49**	**160**	*e*	**P**	**09 41 30.7**	**+1.7**
VNA2				*e*		09 41 37.6	
VNA2				*e*		09 41 42.8	
SWET	**Sewanee**	**59.99**	**346**	*e*P	**P**	**09 41 32.3**	**-0.6**
SNAA	**Sanae**	**61.10**	**160**	*e*	**P**	**09 41 39.7**	**-0.3**
SNAA				*e*		09 41 47.6	
SNAA				*e*		09 41 52.1	
SNAA	**Sanae**	**61.10**	**160**	*e*P	**P**	**09 41 39.8**	**-0.2**
	2.9nm,0.8s,mb4.5						
SNAA	**Sanae**	**61.10**	**160**	*e*P	**P**	**09 41 39.8**	**-0.2**
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WVT	**Waverly**	**61.32**	**344**	*e*P	**P**	**09 41 40.4**	**-1.4**
	comp=Z,8.9nm,1.2s,mb4.8						
WVT	**Waverly**	**61.32**	**344**	*e*P	**P**	**09 41 40.4**	**-1.4**
WVT				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
SDCO	**Great Sand Dun**	**69.02**	**331**	*e*P	**P**	**09 42 33.5**	**+1.7**
	comp=Z,1.9nm,0.8s,mb4.1						
SDCO				*e*PP	PP	09 44 55.9	-8.8
LIC	**Lamto**	**70.44**	**74**	*e*P	**P**	**09 42 39.9**	**-1.3**
	comp=Z,28nm,1.1s,mb5.1						
TIC	**Toumodi**	**70.63**	**74**	*e*P	**P**	**09 42 41.4**	**-1.0**
	comp=Z,5.6nm,0.2s,mb5.2						
TIC	**Toumodi**	**70.63**	**74**	*e*P	**P**	**09 42 41.4**	**-1.0**
TIC				pmax	pmax		
	comp=Z,6.0nm,0.2s,mb5.2						
KIC	**Kosan Boka**	**70.75**	**74**	*e*P	**P**	**09 42 42.8**	**-0.3**
	comp=Z,49nm,0.9s,mb5.4						
DBIC	**Dimbokro**	**70.79**	**74**	P	**P**	**09 42 43.2**	**-0.1**
	comp=Z,8.7nm,0.8s,mb4.7,baz=219,slow=7.0,SNR=9.8						
PPT	**Papeete**	**73.35**	**258**	LR	LR	10 06 50.6	
	comp=Z,63nm,19.2s,MS3.9,baz=182,slow=29						
SYO	**Syowa Base**	**75.37**	**160**	*e*P	**P**	**09 43 09.6**	**+0.1**
NVAR	**Mina Array Bea**	**75.95**	**323**	P	**P**	**09 43 13.3**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=149,slow=7.2,SNR=3.3						
TOA0	**Torodi Ar. Sit**	**79.47**	**71**	*e*P	**P**	**09 43 33.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**79.47**	**71**	P	**P**	**09 43 33.2**	**-0.2**
	comp=Z,11nm,0.8s,mb4.8,baz=254,slow=5.0,SNR=53						
MAW	**Mawson**	**83.05**	**164**	P	**P**	**09 43 53.0**	**+1.4**
	comp=Z,6.7nm,0.8s,mb4.7,baz=238,slow=9.5,SNR=5.6						
MAW				LR	LR	10 21 22.2	
	comp=Z,74nm,18.1s,MS4.1,baz=294,slow=36						
BOSA	**Boshof**	**84.01**	**118**	P	**P**	**09 43 57.5**	**+0.3**
	comp=Z,2.6nm,0.9s,mb4.3,baz=197,slow=3.3,SNR=6.5						
ASAR	**Alice Springs**	**127.56**	**209**	PKP	PKPdf	09 50 32.7	+0.5
	comp=Z,0.7nm,0.6s,baz=144,slow=2.0,SNR=9.5						
WRA	**Warramunga Arr**	**130.58**	**212**	PKP	PKPdf	09 50 39.0	+0.9
	comp=Z,1.0nm,0.9s,baz=155,slow=1.7,SNR=8.3						
BVAR	**Borovoye Array**	**138.20**	**35**	PKP	PKPdf	09 50 52.7	+1.5
	comp=Z,0.6nm,0.4s,baz=251,slow=4.4,SNR=3.5						
ZAA0	**Zalesovo Array**	**144.27**	**25**	*e*PKPdf	PKPdf	09 51 01.3	-0.8
ZALV	**Zalesovo Beam**	**144.27**	**25**	PKP	PKPdf	09 51 01.2	-0.9
	comp=Z,2.4nm,0.8s,baz=316,slow=6.2,SNR=14						
EKS2	**Erkin-Say**	**144.81**	**48**	*e*PKPdf	PKPdf	09 51 04.0	+0.6
AML	**Almayashu**	**144.95**	**49**	*e*PKPdf	PKPdf	09 51 04.8	+1.1
AML	**Almayashu**	**144.95**	**49**	P	PKPdf	09 51 05.0	+1.3
	SNR=8.7						
USP	**Ospenovka**	**145.07**	**47**	P	PKPbc	09 51 04.8	+1.6
	SNR=5.4						
AAK	**Ala-Archa**	**145.31**	**48**	P	PKPbc	09 51 06.2	+2.1
	SNR=12						
BOD	**Bodaibo**	**145.37**	**356**	*e*PKP2	PKPab	09 51 03.0	-0.9
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBK	**Karagaybulak**	**145.61**	**48**	P	PKPdf	09 51 07.2	+2.4
	SNR=5.2						
TKM2	**Tokmak 2**	**145.94**	**47**	*e*PKPbc	PKPbc	09 51 07.2	+1.1
TKM2	**Tokmak 2**	**145.94**	**47**	P	PKPdf	09 51 07.0	+1.6
	SNR=5.8						
MKAR	**Makanchi Array**	**148.04**	**36**	PKP	PKPdf	09 51 09.3	+0.5
	comp=Z,3.7nm,0.7s,baz=327,slow=2.8,SNR=29						
MKAR				PKPbc	PKPbc	09 51 12.1	+0.2
	comp=Z,3.7nm,0.7s,baz=327,slow=3.0,SNR=30						
SONM	**Songino Array**	**155.42**	**5**	PKP	PKPdf	09 51 22.3	+2.4
	comp=Z,0.3nm,0.6s,baz=38,slow=1.6,SNR=3.6						
ULN	**Ulaanbaatar**	**155.44**	**4**	*e*PKPbc	PKPdf	09 51 26.6	+6.7

ISK ***15*** *09:46:04.4, 41.39N×33.70E, h5km, MD2.9*
CSEM ***15*** *09:46:04.3±0.1, 41.38N×33.73E, h0km, MD2.9, Error ellipse: s-maj=1.9km s-min=1.5km az=134.0*
ISCJB ***15*** *09:46:05.5±0.4, 41.38N±0.003×33.70E±0.004, h10km, Error ellipse: s-maj=4.4km s-min=3.9km az=170.7*
DDA ***15*** *09:46:05.1, 41.36N×33.66E, h7km±2km, Md2.9*
ISC 15 09:46:05.9±0.4, 4138N±0.003×3369E±0.004, h10km, n17, σ0$94/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALT	**Daday**	**0.28**	**304**	*i* P	**Pg**	**09 46 10.9**	**-0.7**
BALT				*i* S	**Sg**	**09 46 14.8**	**-0.6**
ILGA	**Ilgaz**	**0.33**	**177**	*i* P	**Pg**	**09 46 11.8**	**-0.6**
ILGA				*i* S	**Sg**	**09 46 16.1**	**-0.6**
TOS	**Tosya**	**0.42**	**144**	PG	**Pg**	**09 46 13.7**	**-0.5**
BZK	**Bozkurt**	**0.62**	**22**	*e*PG	**Pg**	**09 46 17.5**	**-0.6**
BZK				*e*SG	**Sg**	**09 46 26.8**	**+0.6**
SAFT	**Safranbolu**	**0.77**	**260**	*e*PG	**Pg**	**09 46 19.7**	**-1.1**
CANT	**Cankiri**	**0.77**	**184**	*e*PG	**Pg**	**09 46 20.3**	**-0.5**
BYBT	**Boyabat**	**0.81**	**83**	*e*PG	**Pg**	**09 46 20.7**	**-0.9**
BYBT				*e*SG	**Sg**	**09 46 32.5**	**+0.3**
BOYT	**Boyabat**	**0.91**	**87**	*i* P	**Pg**	**09 46 21.6**	**-1.8**
BOYT				*i* S	**Sg**	**09 46 36.8**	**+1.5**
CTKT	**Corum**	**1.12**	**132**	*i* P	**Pb**	**09 46 26.4**	**-1.1**
DIKM	**Dikmen**	**1.21**	**77**	*e*PN	**Pn**	**09 46 28.5**	**-0.3**
CORM	**

mb4.4/25, Error ellipse: s-maj=30.7km s-min=10.0km az=136.8

*IDC **15** 10:31:29.1±1.1, 266N×9592E, h60km±5km, mb3.7/9, mb1 3.8/10, mb1mx3.6/21, mbtmp3.7/10, MS4.0/1, Ms1 4.0/1, ms1mx2.4/35, Error ellipse: s-maj=41.3km s-min=12.7km az=54.0*

*NEIC **15** 10:31:29.2±0.7, 271N×9597E, mb4.4/4, Error ellipse: s-maj=20.0km s-min=7.8km az=55.0*

ISC 15 10:31:30.2±4.3, 27N±01×960E±01, h64km±38km, h60km±3.1km:pP-P, n33, σ0≈66/31, mb4.5/25, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.90**	**10**	P	**Pn**	**10 35 08.7**	**-1.3**
	0.2nm,0.3s,baz=197,slow=11,SNR=13						
KKM	**Kota Kinabalu**	**20.38**	**80**	*e*P	**P**	**10 36 02.6**	**+0.6**
KAPI	**Kappang**	**24.90**	**108**	P	**P**	**10 36 46.7**	**-0.7**
	7.5nm,0.7s,mb4.3,baz=327,slow=12,SNR=3.5						
GYA	**Guiyang**	**25.71**	**22**	P	**P**	**10 36 54.9**	**+0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
RAMN	**Ramite**	**25.74**	**340**	*e*P	**P**	**10 36 56.0**	**+1.2**
	comp=Z,34nm,0.8s,mb4.9						
TAPN	**Taplejung**	**25.76**	**343**	*e*P	**P**	**10 36 55.9**	**+0.9**
	comp=Z,74nm,1.2s,mb5.1						
JIRN	**Jiri**	**26.53**	**340**	*e*P	**P**	**10 37 02.4**	**+0.4**
	comp=Z,64nm,0.7s,mb5.2						
PKI	**Pulchoki**	**26.72**	**339**	*e*P	**P**	**10 37 03.8**	**+0.1**
	comp=Z,14nm,0.4s,mb4.8						
GUN	**Gumba**	**26.87**	**340**	*e*P	**P**	**10 37 05.6**	**+0.6**
	comp=Z,29nm,0.6s,mb5.0						
DMN	**Daman**	**26.87**	**338**	*e*P	**P**	**10 37 05.3**	**+0.3**
	comp=Z,20nm,0.7s,mb4.8						
KKN	**Kakani**	**26.97**	**339**	*e*P	**P**	**10 37 06.8**	**+0.9**
	comp=Z,50nm,0.9s,mb5.0						
GKN	**Gorkha**	**27.40**	**338**	*e*P	**P**	**10 37 09.8**	**0.0**
	comp=Z,26nm,0.6s,mb4.9						
KOLN	**Koldanda**	**27.60**	**336**	*e*P	**P**	**10 37 12.1**	**+0.5**
	comp=Z,22nm,0.7s,mb4.9						
DANN	**Dangsing**	**28.05**	**337**	*e*P	**P**	**10 37 15.4**	**-0.2**
	comp=Z,20nm,0.6s,mb4.9						
BATI	**Baumata**	**30.35**	**115**	LR	LR	10 53 15.4	
	comp=Z,269nm,18.2s,baz=280,slow=43						
LZH	**Lanzhou**	**33.98**	**11**	*e*P	**P**	**10 38 07.0**	**-0.7**
LZH				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.9						
LZH				AMB	AMB		
	comp=Z,72nm,4.1s						
LZH	**Lanzhou**	**33.98**	**11**	*e*P	**P**	**10 38 07.0**	**-0.7**
	comp=Z,18nm,1.1s,mb4.9						
LZH				pP	pP	10 38 11.5	-12
LZH				sP	sP	10 38 14.2	-17
GTA	**Gaotai**	**36.68**	**5**	P	**P**	**10 38 30.4**	**-0.5**
GTA				AP	pP	10 38 39.4	-7.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
GTA				LR	LR		
	comp=N,130nm,13.5s						
GTA				LR	LR		
	comp=E,100nm,17.4s						
GTA				LR	LR		
	comp=Z,95nm,15.0s						
BJI	**Beijing**	**41.39**	**24**	P	**P**	**10 39 11.5**	**+1.3**
WRA	**Warramunga Arr**	**43.82**	**123**	P	**P**	**10 39 30.3**	**+0.1**
	comp=Z,0.7nm,0.4s,mb3.8,baz=301,slow=9.3,SNR=20						
WRA				pP	pP	10 39 45.8	-0.5
	comp=Z,0.6nm,0.4s,baz=300,slow=9.6,SNR=4.8						
WRAB	**Tennant Creek**	**43.82**	**123**	*e*P	**P**	**10 39 30.5**	**+0.3**
	comp=Z,2.1nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**43.83**	**123**	*e*P	**P**	**10 39 30.3**	**0.0**
ASAR	**Alice Springs**	**45.23**	**128**	P	**P**	**10 39 41.5**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.4,baz=301,slow=8.0,SNR=16						
ASAR				sP	sP	10 40 03.5	-1.4
	comp=Z,0.7nm,0.5s,baz=300,slow=7.9,SNR=5.8						
KSRS	**Korea Array**	**45.29**	**36**	P	**P**	**10 39 41.4**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.8,baz=226,slow=9.0,SNR=3.0						
MKAR	**Makanchi Array**	**45.50**	**347**	P	**P**	**10 39 43.1**	**0.0**
	comp=Z,1.4nm,0.3s,mb4.3,baz=162,slow=8.8,SNR=38						
MKAR				pP	pP	10 39 58.6	-0.8
	comp=Z,3.4nm,0.4s,baz=161,slow=8.8,SNR=15						
MKAR				sP	sP	10 40 05.2	-1.6
	comp=Z,1.4nm,0.4s,baz=163,slow=8.5,SNR=3.6						
SONM	**Songino Array**	**45.82**	**10**	P	**P**	**10 39 46.1**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.4,baz=188,slow=9.2,SNR=25						
SONM				pP	pP	10 40 01.8	-0.2
	comp=Z,3.7nm,0.7s,baz=189,slow=9.7,SNR=11						
KURK	**Kurchatov**	**50.04**	**346**	*e*P	**P**	**10 40 18.2**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**51.89**	**352**	pP	pP	10 40 47.6	-1.0
	comp=Z,6.4nm,0.6s,baz=171,slow=9.9,SNR=4.1						
BVAR	**Borovoye Array**	**54.45**	**341**	P	**P**	**10 40 49.8**	**-1.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=147,slow=8.3,SNR=6.9						
BVAR				pP	pP	10 41 05.6	-2.0
	comp=Z,2.0nm,0.6s,baz=154,slow=8.2,SNR=7.0						
AKTK	**Aktyubinsk**	**57.36**	**332**	P	**P**	**10 41 10.6**	**-1.2**
AKTO	**Aktyubinsk**	**57.36**	**332**	P	**P**	**10 41 10.6**	**-1.2**
	comp=Z,0.6nm,0.4s,mb4.0,baz=92,slow=11,SNR=3.2						
TIXI	**Tiksi**	**71.91**	**10**	*e*P	**P**	**10 42 45.5**	**-0.6**
	comp=Z,4.6nm,1.0s,mb4.4						
ARCES	**ARCESS Array B**	**80.73**	**340**	P	**P**	**10 43 36.1**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=93,slow=5.4,SNR=10.0						
ARCES				pP	pP	10 43 51.8	-2.0
	comp=Z,1.0nm,0.4s,baz=90,slow=3.8,SNR=1.8						

*ISCJB **15** 10:53:01.2±1.6, 117S±02×166.1E±02, h50km, mb4.0/8, MS3.7/2, Error ellipse: s-maj=29.5km s-min=22.3km az=144.0*

*IDC **15** 10:53:01.6±1.9, 1162S×16636E, h47km±10km, mb3.8/6, mb1 3.9/7, mb1mx3.7/18, mbtmp3.9/7, ML4.6/1, MS3.7/2, Ms1 3.8/2, ms1mx2.8/26, Error ellipse: s-maj=38.7km s-min=31.5km az=92.0*

*NEIC **15** 10:53:02.5±1.6, 1167S×16623E, mb4.7/2, Error ellipse: s-maj=30.9km s-min=24.1km az=56.0*

ISC 15 10:53:02.9±1.6, 117S±02×166.2E±02, h52km, h52km±4.4km:pP-P, n11, σ1≈03/11, mb4.0/8, MS3.7/2, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.54**	**289**	P	**Pn**	**10 54 37.8**	**+1.2**
	12nm,0.3s,baz=107,slow=5.7,SNR=4.9						
CTAO	**Charters Tower**	**20.91**	**244**	*e*P	**P**	**10 57 40.4**	**-0.7**
	38nm,1.5s						
STKA	**Stephens Creek**	**30.30**	**225**	P	**P**	**10 59 11.1**	**+1.8**
	1.9nm,0.7s,mb4.0,baz=39,slow=6.5,SNR=5.1						
STKA				LR	LR	11 08 46.7	
	comp=Z,63nm,20.6s,MS3.2,baz=26,slow=31						
WB2	**Warramunga Arr**	**31.68**	**251**	*e*P	**P**	**10 59 21.9**	**+0.2**
WRAB	**Tennant Creek**	**31.68**	**251**	*e*P	**P**	**10 59 21.2**	**-0.5**
	0.3nm,0.5s,mb3.4						
WRA	**Warramunga Arr**	**31.69**	**251**	P	**P**	**10 59 21.4**	**-0.3**
	1.0nm,0.8s,mb3.7,baz=85,slow=9.1,SNR=11						
WRA				pP	pP	10 59 35.5	+0.4
	0.4nm,0.6s,baz=84,slow=9.2,SNR=2.7						
ASAR	**Alice Springs**	**32.91**	**244**	P	**P**	**10 59 32.0**	**-0.5**
	0.9nm,0.7s,mb3.8,baz=69,slow=9.4,SNR=21						
ASAR				pP	pP	10 59 46.4	+0.5
	0.5nm,0.7s,baz=67,slow=9.7,SNR=4.0						
KAPI	**Kappang**	**46.38**	**274**	*e*P	**P**	**11 01 21.8**	**-2.7**
	4.3nm,0.3s,mb4.9						
CMAR	**Chiang Mai Arr**	**72.78**	**294**	P	**P**	**11 04 27.2**	**+0.9**
	0.8nm,0.7s,mb3.8,baz=130,slow=3.6,SNR=5.4						
CMAR				LR	LR	11 35 07.6	
	comp=Z,122nm,18.4s,MS4.2,baz=31,slow=35						
QSPA	**South Pole Qui**	**78.32**	**180**	P	**P**	**11 04 57.3**	**+0.3**
	1.2nm,0.5s,mb4.1,baz=78,slow=2.8,SNR=3.9						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**11 06 16.1**	**-0.6**
	0.5nm,0.6s,mb4.1,baz=107,slow=6.3,SNR=4.8						
MKAR				pP	pP	11 06 28.8	-3.0
	0.5nm,0.6s,baz=90,slow=7.3,SNR=3.7						

IDC 15 11:08:16.1±3.9, 2200N×14307E, h43km±36km, mb3.6/11, mb1 3.9/12, mb1mx3.8/20, mbtmp3.7/12, ML3.7/1, MS3.1/1, Ms1 3.1/1, ms1mx1.9/35, Error ellipse: s-maj=29.2km s-min=15.6km az=87.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.14**	**351**	P	Pn	11 09 30.4	-0.1
	6.0nm,0.3s,baz=270,slow=20,SNR=4.2						
JOW	**Kunigami**	**14.31**	**293**	LR	LR	11 15 36.1	
	comp=Z,87nm,20.6s,baz=135,slow=31						
KSRS	**Korea Array**	**20.21**	**323**	P	P	11 12 48.0	+0.7
	1.3nm,0.8s,baz=116,slow=15,SNR=3.5						
SONM	**Songino Array**	**39.04**	**320**	P	P	11 15 38.6	0.0
	0.8nm,0.5s,baz=133,slow=6.0,SNR=7.2						
WRA	**Warramunga Arr**	**42.55**	**192**	P	P	11 16 07.7	-0.1
	0.9nm,0.6s,baz=13,slow=8.6,SNR=21						
ASAR	**Alice Springs**	**46.26**	**192**	P	P	11 16 37.0	-0.3
	0.5nm,0.6s,baz=17,slow=11,SNR=23						
STKA	**Stephens Creek**	**53.59**	**182**	P	P	11 17 32.9	0.0
	1.2nm,0.7s,baz=342,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**53.91**	**322**	P	P	11 17 34.7	-0.3
	1.0nm,0.6s,baz=100,slow=7.7,SNR=5.9						
MKAR	**Makanchi Array**	**54.42**	**312**	P	P	11 17 39.4	+0.5
	0.5nm,0.7s,baz=92,slow=8.4,SNR=5.1						
MKAR				PcP	PcP	11 18 42.0	-0.1
	0.8nm,0.9s,baz=76,slow=2.7,SNR=3.7						
YKA	**Yellowknife Ar**	**76.24**	**28**	P	P	11 19 59.0	-0.9
	2.0nm,0.8s,baz=297,slow=5.5,SNR=3.6						
ARCES	**ARCESS Array B**	**78.60**	**341**	P	P	11 20 12.6	-0.4
	1.7nm,0.8s,baz=313,slow=16,SNR=4.2						
NVAR	**Mina Array Bea**	**83.04**	**51**	P	P	11 20 38.4	+1.1
	1.3nm,0.8s,baz=274,slow=4.1,SNR=9.7						
PDAR	**Pinedale Array**	**87.25**	**45**	P	P	11 20 58.8	+0.5
	0.4nm,0.9s,baz=279,slow=1.7,SNR=3.6						
LPAZ	**La Paz**	**150.01**	**85**	PKPbc	PKPbc	11 28 03.5	+0.8
	1.7nm,0.6s,baz=270,slow=3.0,SNR=4.9						

*GUC **15** 11:14:44.7±8.3, 2341S×7106W, h73km±388km, ML5.4*

*IDC **15** 11:14:47.2±0.5, 2307S×7088W, h0km, mb4.4/12, mb1 4.6/16, mb1mx4.5/20, mbtmp4.4/16, ML4.4/4, MS4.2/15, Ms1 4.2/15, ms1mx4.1/21, Error ellipse: s-maj=16.3km s-min=12.4km az=1.0*

*MOS **15** 11:14:50.5±1.7, 2309S×7075W, h33km, mb5.1/18, Error ellipse: s-maj=17.5km s-min=7.7km az=100.1*

*GCMT **15** 11:14:50.2±0.3, 2303S×71.12W, h20km±1km, MW5.3/66, Moment Tensor Solution. s27,c33; s66,c98; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.69±.04; $M_{\theta\theta}$-0.09±.02; $M_{\phi\phi}$-0.59±.03; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$0.16±.01; $M_{\phi r}$-0.69±.05; Best double couple: M0.96100×10^{17} NP1:φs339.00000°, δ22.00000°, λ81.00000°. NP2: φs170.00000°, δ68.00000°, λ94.00000°. Principal axes: T 0.9880, Plg66.0000°, Azm86.0000°; N -0.0530, Plg4.0000°, Azm348.0000°; P -0.9340, Plg23.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 11:14:50.2±2.7, 2316S×7072W, h19km±16km, mb5.0/39 Error ellipse: s-maj=8.5km s-min=6.0km az=74.0*

*ISCJB **15** 11:14:50.8±0.2, 2322S±004×7081W±004, h33km, mb4.8/50, MS4.5/14, Error ellipse: s-maj=5.6km s-min=4.8km az=143.5*

*BJI **15** 11:14:52.1, 2320S×7070W, h19km, mB5.0, Ms5.1, Msz4.9*

ISC 15 11:14:48.5±1.4, 2317S±004×7074W±005, h5km±9km, n353, σ0≈73/297, mb4.8/50, MS4.5/14, 94C-95D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB06	**Plate Boundary**	**1.17**	**67**	*e*P	**Pg**	**11 15 12.5**	**+1.5**
PB06				*i* S	**Sg**	**11 15 30.2**	**+4.0**
PB07	**Plate Boundary**	**1.64**	**29**	*e*P	**Pn**	**11 15 19.0**	**+1.0**
PB07				*i* S	**Sn**	**11 15 41.0**	**+1.6**
LVC	**Limon Verde**	**1.78**	**72**	Pg	**Pg**	**11 15 21.9**	**-0.7**
	8.4nm,0.3s,baz=248,slow=17,SNR=3.1						
LVC				Lg		11 15 48.2	
	3μm,0.3s,baz=122,slow=9.6,SNR=47						
LVC	**Limon Verde**	**1.78**	**72**	*e*Pn	**Pn**	**11 15 22.3**	**+2.5**
LVC				*e*Sn	**Sn**	**11 15 48.5**	**+5.7**
PB01	**Plate Boundary**	**2.41**	**29**	AML	AML	11 16 15.4	
	comp=E,12μm,0.5s						
LCO	**Las Campanas**	**5.82**	**180**	*e*Pn	**Pn**	**11 16 15.6**	**+0.1**
	comp=E,120nm,0.6s						
ARE	**Arequipa**	**6.71**	**354**	*i*P	**Pn**	**11 16 24.7**	**-3.0**
ARE				*e*S	**Sn**	**11 17 40.0**	**-4.5**
TLL	**Tololo Astrono**	**6.97**	**180**	*e*P	**Pn**	**11 16 29.9**	**-1.4**
LPAZ	**La Paz**	**7.27**	**20**	Pn	**Pn**	**11 16 36.4**	**+1.0**
	comp=E,6.5nm,0.3s,baz=217,slow=5.7,SNR=40						
LPAZ				LR	LR	11 18 59.9	
	comp=E,309nm,21.4s,baz=41,slow=35						
LPAZ	**La Paz**	**7.27**	**20**	*e*Pn	**Pn**	**11 16 36.9**	**+1.5**
	comp=E,95nm,0.9s						
LPAZ	**La Paz**	**7.27**	**20**	*e*P	**Pn**	**11 16 36.9**	**+1.5**
LPAZ				pmax	pmax		
	comp=Z,95nm,0.9s						
CFAA	**Coronel Fontan**	**8.69**	**166**	Pn	**Pn**	**11 16 55.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=342,slow=15,SNR=6.3						
CFAA				Sn	**Sn**	**11 18 45.9**	**+13**
	comp=Z,0.3nm,0.3s,baz=80,slow=5.4,SNR=3.3						
CFAA				LR	LR	11 20 04.3	
	comp=Z,308nm,19.1s,baz=330,slow=36						
SIV	**San Ignacio**	**11.57**	**54**	Pn	**Pn**	**11 17 33.5**	**-1.0**
	comp=E,3.1nm,0.3s,baz=244,slow=12,SNR=83						
NNA	**Nana**	**12.54**	**331**	Sn	**Sn**	**11 19 58.2**	**-10**
	comp=Z,3.9nm,0.3s,baz=187,slow=17,SNR=4.6						
NNA				LR	LR	11 21 43.3	
	comp=Z,804nm,19.0s,baz=160,slow=34						
PLCA	**Paso Flores**	**17.52**	**180**	P	**Pn**	**11 18 53.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=0.1,slow=14,SNR=7.9						
PLCA				LR	LR	11 25 24.3	
	comp=Z,1μm,21.4s,baz=359,slow=36						
PLCA	**Paso Flores**	**17.52**	**180**	*e*Pn	**Pn**	**11 18 53.5**	**+0.1**
	comp=Z,104nm,1.4s						
PLCA	**Paso Flores**	**17.52**	**180**	*e*P	**Pn**	**11 18 53.5**	**+0.1**
PLCA				pmax	pmax		
	comp=Z,104nm,1.4s						
ATAH	**Atahualpa**	**17.68**	**334**	P	**Pn**	**11 18 53.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=94,slow=13,SNR=4.1						
BDFB	**Brasilia**	**22.69**	**75**	P	**P**	**11 19 50.3**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.0,baz=248,slow=19,SNR=8.3						
BDFB				LR	LR	11 29 38.8	
	comp=Z,753nm,21.9s,MS4.1,baz=51,slow=39						
BDFB	**Brasilia**	**22.69**	**75**	*e*P	**P**	**11 19 49.5**	**-1.5**
	comp=Z,17nm,1.0s,mb4.4						
BDFB				LR	LR	11 29 38.8	
BDFB	**Brasilia**	**22.69**	**75**	*e*P	**P**	**11 19 49.5**	**-1.5**
BDFB				pmax	pmax		
	comp=Z,17nm,1.0s						
OTAV	**Otavalo**	**24.44**	**341**	*e*P	**P**	**11 20 09.8**	**+1.5**
	comp=Z,17nm,1.2s,mb4.3						
EFI	**East Falkland**	**30.10**	**164**	*e*P	**P**	**11 20 56.7**	**-2.0**
RPN	**Rapa Nui**	**35.06**	**255**	LR	LR	11 32 11.5	
	comp=Z,557nm,19.9s,MS4.4,baz=138,slow=30						
RCBR	**Riachuelo**	**37.73**	**68**	*e*P	**P**	**11 22 05.0**	**-0.4**
	comp=Z,48nm,1.1s,mb5.1						
LRAL	**Lakeview Retre**	**58.00**	**344**	*e*P	**P**	**11 24 40.3**	**-1.8**
RKT	**Rikitea**	**58.59**	**256**	*e*S	**S**	**11 32 54.4**	**+2.8**
	comp=Z,241nm,28.0s						
RKT				*e*LR	LR	11 42 20.2	
	comp=Z,1μm,27.0s						
VNA3	**Neumayer Olymp**	**59.06**	**161**	*e*P	**P**	**11 24 49.9**	**+0.8**
VNA3				*e*		11 25 00.5	
VNA3				*e*		11 25 04.7	
VNA1	**Neumayer--Stat**	**59.30**	**160**	*e*P	**P**	**11 24 53.1**	**+2.3**
VNA1				*e*		11 25 03.2	
VNA1				*e*		11 25 08.0	
VNA2	**Neumayer--Watz**	**59.66**	**160**	*e*P	**P**	**11 24 54.1**	**+0.8**
	baz=291,slow=8.6						
VNA2				*e*		11 25 04.8	
VNA2				*e*		11 25 09.5	
CPCT	**Cooper Cave**	**59.74**	**347**	*e*P	**P**	**11 24 52.5**	**-1.7**
TKL	**Tuckaleechee C**	**59.79**	**348**	P	**P**	**11 24 52.7**	**-1.9**
	comp=Z,5.3nm,0.8s,mb4.6,baz=141,slow=7.4,SNR=4.8						
TKL	**Tuckaleechee C**	**59.79**	**348**	*e*P	**P**	**11 24 52.8**	**-1.8**
SWET	**Sewanee**	**59.82**	**346**	*e*P	**P**	**11 24 52.8**	**-2.0**
JCT	**Junction City**	**60.19**	**331**	*e*P	**P**	**11 24 55.8**	**-1.6**
	comp=Z,12nm,0.8s,mb5.0						
JCT				*e*		11 25 11.7	
JCT	**Junction City**	**60.19**	**331**	*e*P	**P**	**11 24 55.8**	**-1.6**
JCT				*e*		11 25 11.7	
JCT				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
TXAR	**Lajitas Array**	**61.06**	**327**	P	**P**	**11 25 01.2**	**-2.2**
	comp=Z,0.6nm,0.6s,mb3.9,baz=152,slow=8.1,SNR=5.3						
TXAR				LR	LR	11 47 50.5	
	comp=Z,138nm,19.8s,MS4.1,baz=255,slow=33						
WVT	**Waverly**	**61.15**	**344**	*e*P	**P**	**11 25 00.4**	**-3.4**
	comp=Z,31nm,1.5s,mb5.2						
WVT	**Waverly**	**61.15**	**344**	*e*P	**P**	**11 25 00.4**	**-3.4**
WVT				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.2						
SNAA	**Sanae**	**61.27**	**160**	*e*P	**P**	**11 25 02.9**	**-1.4**
SNAA				*e*		11 25 12.7	
SNAA				*e*		11 25 17.5	
SNAA	**Sanae**	**61.27**	**160**	*e*P	**P**	**11 25 03.2**	**-1.1**
	comp=Z,33nm,1.3s,mb5.3						
SNAA	**Sanae**	**61.27**	**160**	*c i*P	**P**	**11 25 03.3**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,40nm,1.7s						
MIAR	**Mount Ida**	**61.36**	**339**	*e*P	**P**	**11 25 04.1**	**-1.2**
	comp=Z,15nm,1.0s,mb5.1						
MIAR	**Mount Ida**	**61.36**	**339**	*e*P	**P**	**11 25 04.1**	**-1.2**
MIAR				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
SIUC	**Southern Illin**	**63.00**	**344**	*e*P	**P**	**11 25 14.0**	**-2.3**
	comp=Z,29nm,1.2s,mb5.3						
FVM	**French Village**	**63.58**	**343**	*e*P	**P**	**11 25 18.2**	**-1.8**
	comp=Z,11nm,0.9s,mb4.9						
FVM	**French Village**	**63.58**	**343**	*e*P	**P**	**11 25 18.2**	**-1.9**
FVM				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
CCM	**Cathedral Cave**	**63.87**	**342**	*e*P	**P**	**11 25 20.6**	**-1.4**
	comp=Z,25nm,1.5s,mb5.0						
CCM	**Cathedral Cave**	**63.87**	**342**	*e*P	**P**	**11 25 20.6**	**-1.4**
CCM				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
ACSO	**Alum Creek Sta**	**64.09**	**350**	*e*P	**P**	**11 25 21.8**	**-1.6**
	comp=Z,39nm,1.3s,mb5.3						
319A	**Douglas**	**65.60**	**324**	↑P	**P**	**11 25 33.4**	**-0.1**
	baz=66						
NVL	**N'lazarevskaya**	**65.89**	**159**	*e*P	**P**	**11 25 36.1**	**+1.3**
NVL				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.2						
318A	**Bisbee**	**66.04**	**324**	↑P	**P**	**11 25 36.3**	**0.0**
	baz=66,SNR=6.3						
219A	**White Tail Can**	**66.07**	**325**	↓P	**P**	**11 25 36.4**	**0.0**
	baz=66						
BNM	**Barren Site**	**66.43**	**328**	*e*P	**P**	**11 25 39.0**	**+0.2**
218A	**Dragoon**	**66.48**	**324**	↓P	**P**	**11 25 39.3**	**+0.2**
	baz=67						
LPM	**Los Pinos Moun**	**66.58**	**328**	*e*P	**P**	**11 25 37.9**	**-1.7**
217A	**Green Valley**	**66.74**	**323**	↓P	**P**	**11 25 40.6**	**-0.2**
	baz=67						
LAZ	**Ladron**	**66.89**	**328**	*e*P	**P**	**11 25 42.6**	**+0.9**
118A	**Homack Ranch,**	**66.95**	**325**	↑P	**P**	**11 25 42.0**	**0.0**
	baz=67						
ANMO	**Albuquerque**	**67.00**	**329**	*e*P	**P**	**11 25 42.5**	**+0.2**
	comp=Z,20nm,1.7s,mb4.9						
ANMO	**Albuquerque**	**67.00**	**329**	*c i*P	**P**	**11 25 42.4**	**+0.1**
TUC	**Tucson**	**67.14**	**324**	*e*P	**P**	**11 25 43.1**	**-0.1**
	comp=Z,16nm,1.6s,mb4.8						
TUC	**Tucson**	**67.14**	**324**	*e*P	**P**	**11 25 43.1**	**-0.2**
TUC				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.8						
216A	**Three Points,**	**67.27**	**323**	↑P	**P**	**11 25 43.4**	**-0.7**
	baz=68						
117A	**Oracle**	**67.31**	**324**	↓P	**P**	**11 25 44.4**	**+0.1**
	baz=68,SNR=5.3						
CBKS	**Cedar Bluff**	**67.38**	**336**	*e*P	**P**	**11 25 44.0**	**-0.6**
Y19A	**Nutrioso**	**67.60**	**326**	↑P	**P**	**11 25 46.6**	**+0.4**
	baz=68						
Y18A	**Canyon Day Jun**	**67.86**	**325**	↑P	**P**	**11 25 48.0**	**+0.1**
	baz=68						
Y17A	**Roosevelt**	**68.23**	**325**	↓P	**P**	**11 25 50.8**	**+0.7**
	baz=68,SNR=7.1						
X17A	**Forest Lakes**	**68.70**	**325**	↓P	**P**	**11 25 53.3**	**+0.2**
	baz=69						
Y16A	**Circle Bar Ran**	**68.71**	**324**	↓P	**P**	**11 25 53.1**	**-0.1**
	baz=69						
SDCO	**Great Sand Dun**	**68.84**	**331**	*e*P	**P**	**11 25 53.7**	**-0.2**
	comp=Z,12nm,1.1s,mb4.8						
V19A	**Window Rock**	**68.88**	**327**	↑P	**P**	**11 25 54.5**	**+0.3**
	baz=69						
X16A	**Lo Mia Camp, P**	**69.10**	**325**	↓P	**P**	**11 25 55.6**	**+0.1**
	baz=69						
Y15A	**Casa Rosa Ranc**	**69.22**	**324**	↓P	**P**	**11 25 56.5**	**+0.2**
	baz=70						
X15A	**Humboldt**	**69.58**	**324**	↑P	**P**	**11 25 58.5**	**-0.1**
	baz=70						
Y14A	**Wickenburg**	**69.58**	**323**	↓P	**P**	**11 25 58.5**	**-0.1**
	baz=70						
W16A	**Flagstaff**	**69.67**	**325**	↓P	**P**	**11 25 59.7**	**+0.6**
	baz=70,SNR=5.9						
T19A	**Beclabito**	**69.75**	**328**	↓P	**P**	**11 25 59.5**	**0.0**
	baz=70						
MVCO	**Mesa Verde**	**69.80**	**329**	*e*P	**P**	**11 25 60.0**	**+0.2**
	comp=Z,34nm,1.8s,mb5.0						
MVCO	**Mesa Verde**	**69.80**	**329**	↓P	**P**	**11 26 00.3**	**+0.5**
	baz=70						
U18A	**Rough Rock, Ch**	**69.84**	**327**	↑P	**P**	**11 26 00.3**	**+0.2**
	baz=70						
WUAZ	**Wupatki**	**69

GMRC **Granite Mounta** 71.68 322 ⇓P P 11 26 11.5 +0.1
baz=72
S16A **Weppner Ranch,** 71.72 327 ⇓P P 11 26 11.9 +0.4
baz=72
PHWY **Pilot Hill** 71.77 333 *e*P P 11 26 12.1 +0.4
R17A **Hanksville Air** 71.82 328 ⇑P P 11 26 12.6 +0.5
baz=72,SNR=6.4
P19A **Cripple Cowboy** 71.96 330 ⇓P P 11 26 13.2 +0.3
baz=72
T14A **Hurricane** 71.97 325 ⇓P P 11 26 13.3 +0.2
baz=72
Q18A **Rafter H Ranch** 72.08 329 ⇓P P 11 26 13.9 +0.2
baz=72
SRU **San Rafael** 72.27 328 ⇓P P 11 26 14.9 +0.1
baz=72
TUQ **Turquoise Moun** 72.30 323 ⇑P P 11 26 15.4 +0.4
baz=72
T13A **Saint George** 72.38 325 ⇓P P 11 26 15.7 +0.2
baz=73
Q16A **Castle Valley** 72.44 328 ⇓P P 11 26 16.1 +0.3
baz=73
R15A **Junction** 72.44 327 ⇓P P 11 26 16.2 +0.4
baz=73
BFSC **Mount Baldy St** 72.44 321 ⇑P P 11 26 15.8 -0.1
baz=73
P18A **Preston Nutter** 72.55 329 ⇑P P 11 26 16.7 +0.2
baz=73,SNR=6.1
O19A **Miners Draw (B** 72.56 330 ⇓P P 11 26 16.5 0.0
baz=73
P17A **Butcher Ranch,** 72.66 329 ⇓P P 11 26 17.0 -0.1
baz=73
SHPR **Sheep Range** 72.67 324 *e*P P 11 26 18.1 +0.9
GSC **Goldstone** 72.70 322 *e*P P 11 26 17.4 -0.1
comp=Z,25nm,1.8s,mb4.8
GSC **Goldstone** 72.70 322 *e*P P 11 26 17.4 -0.1
GSC pmax pmax
comp=Z,25nm,1.8s,mb4.8
S13A **Holt Ranch, En** 72.77 325 ⇓P P 11 26 18.3 +0.5
baz=73,SNR=8.3
R14A **James Farms, M** 72.88 326 ⇓P P 11 26 18.5 0.0
baz=73
O18A **Roosevelt** 72.94 330 ⇓P P 11 26 19.4 +0.6
baz=73
N19A **John Jarvie Ra** 73.06 330 ⇓P P 11 26 19.3 -0.1
baz=73
EDW2 **Edwards Air Fo** 73.08 321 ⇑P P 11 26 19.7 -0.1
baz=73
Q15A **Fillmore** 73.09 327 ⇑P P 11 26 19.5 -0.2
baz=73
M20A **Sweetwater, Wa** 73.09 331 ⇑P P 11 26 19.7 +0.1
baz=73
L21A **Rawlins** 73.13 332 ⇓P P 11 26 20.1 +0.2
baz=73
P16A **Fountain Green** 73.21 328 ⇓P P 11 26 20.6 +0.2
baz=74
O17A **Robinson Place** 73.22 329 ⇑P P 11 26 20.7 +0.2
baz=74,SNR=5.4
T11A **Corn Creek, Al** 73.24 324 ⇓P P 11 26 20.9 +0.3
baz=74,SNR=7.4
U10A **Ash Meadows, A** 73.24 323 ⇓P P 11 26 20.8 +0.1
baz=74
R13A **O'Grain Ranch,** 73.28 326 ⇓P P 11 26 21.2 +0.4
baz=74
PPT **Papeete** 73.30 258 *e*S S 11 35 52.5 +1.5
comp=Z,630nm,27.2s
PPT **Papeete** 73.30 258 *e*LR LR 11 49 05.5
comp=Z,847nm,26.8s,baz=112
PPT **Papeete** 73.30 258 LR LR 11 50 12.1
comp=Z,249nm,19.9s,MS4.5,baz=106,slow=29
N18A **Larsen Ranch,** 73.35 330 ⇑P P 11 26 21.3 +0.2
baz=74
Q14A **Sevier Lake (B** 73.53 327 ⇑P P 11 26 22.1 -0.2
baz=74
FURC **Furnace Creek,** 73.58 323 ⇓P P 11 26 22.3 -0.3
baz=74
RSSD **Black Hills** 73.58 336 *e*P P 11 26 29.3 +6.9
comp=Z,9.6nm,1.4s,mb4.5
RSSD **Black Hills** 73.58 336 *e*P P 11 26 29.3 +6.9
RSSD pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
TPNV **Topopah Spring** 73.58 323 *e*P P 11 26 23.9 +1.2
comp=Z,13nm,1.3s,mb4.7
TPNV **Topopah Spring** 73.58 323 *e*P P 11 26 23.9 +1.3
TPNV pmax pmax
comp=Z,13nm,1.3s,mb4.7
TPNV **Topopah Spring** 73.58 323 ⇓P P 11 26 22.7 0.0
baz=74
O16A **Springville** 73.60 329 ⇑P P 11 26 23.1 +0.5
baz=74
MPMC **Manual Prospec** 73.64 322 ⇓P P 11 26 23.0 +0.1
baz=74
R12A **Pony Springs,** 73.72 325 ⇓P P 11 26 23.5 +0.1
baz=74
S11A **Rachel** 73.82 324 ⇓P P 11 26 24.2 +0.2
baz=74
N17A **Moffit Pass** 73.86 329 ⇑P P 11 26 24.3 +0.1
baz=74
Q13A **Wheeler Ranch,** 73.89 326 ⇓P P 11 26 24.4 0.0
baz=74
P14A **Drum Mountains** 73.89 327 ⇓P P 11 26 24.8 +0.4
baz=74,SNR=6.4
ISA **Isabella** 73.92 321 *e*P P 11 26 25.5 +0.9
comp=Z,13nm,1.4s,mb4.7
ISA **Isabella** 73.92 321 *e*P P 11 26 25.5 +0.9
ISA pmax pmax
comp=Z,13nm,1.4s,mb4.7
ISA **Isabella** 73.92 321 ⇓P P 11 26 24.7 0.0
baz=74
L19A **Farson** 74.11 331 ⇑P P 11 26 25.4 -0.2
baz=74
O15A **The Old Anders** 74.12 328 ⇑P P 11 26 25.9 +0.2
baz=74
PKM **Peak Mountain** 74.17 320 ⇓P P 11 26 26.3 +0.2
baz=74
DUG **Dugway** 74.23 328 *e*P P 11 26 24.1 -2.2
comp=Z,22nm,1.6s,mb4.8
DUG **Dugway** 74.23 328 *e*P P 11 26 24.1 -2.2
DUG pmax pmax
comp=Z,23nm,1.6s,mb4.9
DUG **Dugway** 74.23 328 ⇓P P 11 26 26.6 +0.3
baz=74
R11A **Troy Canyon, C** 74.25 325 ⇑P P 11 26 26.3 -0.2
baz=74
L18A **Fontenelle, Gr** 74.27 331 ⇑P P 11 26 26.7 +0.2
baz=74
VES **Vestal, Richgr** 74.39 321 ⇓P P 11 26 27.8 +0.4
baz=75
S10A **Tonopah Range,** 74.48 324 ⇓P P 11 26 28.1 +0.3
baz=75
R10A **Warm Springs** 74.59 324 ⇑P P 11 26 28.8 +0.3
baz=75,SNR=5.4
Q11A **Duckwater** 74.66 325 ⇓P P 11 26 28.7 -0.2
baz=75
S09A **Goldfield** 74.68 323 ⇑P P 11 26 29.0 0.0
baz=75
HWUT **Hardware Ranch** 74.72 329 *e*P P 11 26 29.3 +0.2
comp=Z,10nm,1.1s,mb4.7
BW06 **Boulder Array** 74.73 331 ⇓P P 11 26 29.2 +0.1
baz=75
PDAR **Pinedale Array** 74.73 331 P P 11 26 28.2 -1.0
comp=Z,0.4nm,0.5s,mb3.6,baz=140,slow=7.7,SNR=4.4
N14A **Grayback Hills** 74.91 328 ⇓P P 11 26 30.2 -0.1
baz=75
L16A **Fish Haven** 74.98 330 ⇓P P 11 26 30.6 0.0
baz=75
M15A **Larsen Ranch,** 75.03 329 ⇓P P 11 26 30.7 -0.3
baz=75
Q10A **Clear Creek Ra** 75.03 325 ⇓P P 11 26 31.4 +0.3
baz=75
MTUM **Tungsten Hills** 75.16 322 *e*P P 11 26 32.1 +0.3
O12A **Currie** 75.24 327 ⇑P P 11 26 32.2 0.0
baz=76
L15A **Malad City** 75.42 329 ⇑P P 11 26 33.1 0.0
baz=76
M14A **Sheep Mountain** 75.49 328 ⇓P P 11 26 33.5 -0.1
baz=76
SYO **Syowa Base** 75.54 160 ⇓*e*P P 11 26 32.4 -1.2
SYO **Syowa Base** 75.54 160 ⇓*e*pP pP 11 26 40.0 +4.6
KCC **Kaiser Creek** 75.57 322 ⇑P P 11 26 34.1 -0.1
baz=76
I18A **Diamond G Ranc** 75.59 332 ⇑P P 11 26 34.4 +0.3
baz=76
O11A **Cowboy Ranch,** 75.61 326 ⇑P P 11 26 34.7 +0.4
baz=76
K16A **Soda Springs** 75.69 330 ⇑P P 11 26 35.0 +0.3
baz=76,SNR=5.5
J17A **Brown Place, J** 75.71 331 ⇓P P 11 26 35.4 +0.5
baz=76

REDW **Red Top Meadow** 75.77 331 *e*P P 11 26 35.7 +0.5
comp=Z,16nm,1.4s,mb4.8
NVAR **Mina Array Bea** 75.78 323 P P 11 26 34.9 -0.4
comp=Z,0.4nm,0.6s,mb3.5,baz=123,slow=5.5,SNR=6.4
NVAR **Mina Array Bea** 75.78 323 P P 11 26 34.9 -0.4
SNOW **Snow King Moun** 75.81 331 *e*P P 11 26 36.5 +1.1
comp=Z,52nm,2.3s,mb5.0
TPAW **Teton Pass** 75.92 331 *e*P P 11 26 43.8 +7.8
comp=Z,8.6nm,1.0s,mb4.6
I17A **Pilgram Creek** 76.09 332 ⇓P P 11 26 37.2 +0.2
baz=76
M12A **Wells** 76.19 327 ⇑P P 11 26 37.9 +0.3
baz=76
L13A **Double Diamond** 76.22 328 ⇑P P 11 26 38.2 +0.4
baz=76
IMW **Indian Meadow** 76.24 331 *e*P P 11 26 38.7 +0.9
comp=Z,20nm,1.6s,mb4.8
ULM **Lac du Bonnet** 76.41 344 P P 11 26 37.3 -1.4
comp=Z,5.8nm,0.7s,mb4.6,baz=131,slow=3.8,SNR=4.2
I16A **Newdale** 76.46 331 ⇑P P 11 26 39.1 0.0
baz=77
J15A **Blackfoot** 76.52 330 ⇓P P 11 26 39.6 +0.1
baz=77
LAO **LASA Array** 76.57 336 *e*P P 11 26 40.2 +0.5
comp=Z,27nm,1.4s,mb5.0
M11A **Holland Ranch,** 76.64 327 ⇑P P 11 26 39.7 -0.5
baz=77
G18A **Lazy EL Ranch,** 76.78 333 ⇑P P 11 26 41.2 +0.4
baz=77
L12A **House Creek Ra** 76.79 328 ⇓P P 11 26 41.0 0.0
baz=77
H16A **Russell Place,** 77.01 332 ⇑P P 11 26 42.1 -0.1
baz=77
I15A **Monteview** 77.01 330 ⇓P P 11 26 42.4 +0.3
baz=77
O08A **Rochester Mine** 77.03 325 ⇑P P 11 26 42.4 0.0
baz=77
K12A **Draper Farm, C** 77.10 328 ⇑P P 11 26 42.8 +0.1
baz=77
L11A **Cat Creek Ranc** 77.17 327 ⇑P P 11 26 42.9 -0.2
baz=77
WCN **Washoe City** 77.20 323 ⇓P P 11 26 43.0 -0.4
baz=77
PAHR **Pah Rah Range** 77.28 324 *e*P P 11 26 44.3 +0.5
comp=Z,10nm,0.9s,mb4.8
PAHR *e* 11 26 59.7
F18A **Big Timber** 77.31 333 ⇓P P 11 26 44.0 +0.1
baz=78
O07A **Toulon** 77.33 324 ⇑P P 11 26 43.7 -0.4
baz=78
J13A **Cove Ranch, Pi** 77.33 329 ⇑P P 11 26 43.9 0.0
baz=78
DGMT **Dagmar** 77.35 338 ⇓P P 11 26 44.3 +0.4
baz=78
LAVA **Lava Cap Winer** 77.37 322 ⇓P P 11 26 44.1 -0.2
baz=78
I14A **Mackay** 77.40 330 ⇑P P 11 26 44.2 -0.1
baz=78
L10A **Juniper Basin** 77.46 327 ⇑P P 11 26 44.6 -0.1
baz=78,SNR=5.4
HLID **Hailey** 77.57 329 *e*P P 11 26 46.3 +1.0
comp=Z,5.8nm,1.0s,mb4.5
HLID **Hailey** 77.57 329 ⇑P P 11 26 45.8 +0.5
baz=78,SNR=6.3
J12A **Stokes Ranch,** 77.66 328 ⇑P P 11 26 45.9 +0.1
baz=78
I13A **Wildhorse Cree** 77.69 329 ⇑P P 11 26 46.0 0.0
baz=78
F17A **Fitzpatrick Pl** 77.71 333 ⇓P P 11 26 46.1 +0.1
baz=78
N07B **Gerlach** 77.81 325 ⇓P P 11 26 46.7 -0.1
baz=78
MCMT **McKenzie Canyo** 77.82 331 *e*P P 11 26 47.4 +0.7
MCMT *e* 11 27 02.5
H14A **Leadore** 77.89 330 ⇓P P 11 26 47.0 -0.1
baz=78
G15A **Dillon** 77.92 331 ⇓P P 11 26 47.5 +0.3
baz=78
BEKR **Beckwourth** 77.92 323 ⇑P P 11 26 47.2 -0.2
baz=78
E18A **Harlowton** 77.93 334 ⇓P P 11 26 47.1 -0.1
baz=78
H13A **Challis** 78.25 330 ⇓P P 11 26 49.5 +0.3
baz=78
N06A **Buffalo Meadow** 78.26 324 ⇑P P 11 26 48.7 -0.5
baz=78
ORV **Oroville** 78.34 322 ⇑P P 11 26 49.5 -0.2
baz=79
D18A **Linhart Farms,** 78.39 334 ⇑P P 11 26 50.3 +0.5
baz=79
F15A **Butte** 78.45 332 ⇓P P 11 26 50.7 +0.5
baz=79
L08A **Fields** 78.50 326 ⇑P P 11 26 50.3 -0.2
baz=79
H12A **Diamond D Ranc** 78.52 329 ⇓P P 11 26 50.8 +0.2
baz=79
K09A **Rome** 78.55 327 ⇓P P 11 26 50.9 +0.1
baz=79
G13A **Cobalt** 78.65 330 ⇑P P 11 26 51.6 +0.3
baz=79,SNR=9.5
D17A **Six Diamond Ra** 78.72 333 ⇓P P 11 26 52.2 +0.6
baz=79
F14A **Wisdom** 78.81 331 ⇑P P 11 26 52.2 0.0
baz=79
E15A **Deer Lodge** 78.97 332 ⇑P P 11 26 53.0 0.0
baz=79
D16A **Dana Ranch, Ca** 78.98 333 ⇑P P 11 26 53.1 +0.1
baz=79
GASB **Alder Springs** 79.10 322 ⇑P P 11 26 54.0 +0.1
baz=79
C17A **Wham Farm,** 79.13 334 ⇓P P 11 26 54.3 +0.5
baz=79
H11A **Donnelly** 79.18 329 ⇑P P 11 26 54.2 -0.1
baz=79
SUR **Sutherland** 79.20 121 P P 11 26 56.1 +1.3
comp=Z,8.2nm,0.7s,mb4.8,baz=206,slow=3.5,SNR=6.4
F13A **Darby** 79.22 331 ⇑P P 11 26 54.8 +0.3
baz=80,SNR=7.7
MOD **Modoc** 79.32 325 ⇓P P 11 26 55.0 0.0
baz=80
H10A **Noah's Angus R** 79.45 328 ⇑P P 11 26 55.2 -0.5
baz=80
TOA0 **Torodi Ar. Sit** 79.51 71 *e*P P 11 26 55.6 -1.1
TOA0 *e* 11 27 02.2
TORD **Torodi Ar. Bea** 79.51 71 P P 11 26 55.9 -0.8
comp=Z,15nm,1.0s,mb4.9,baz=254,slow=4.0,SNR=50
TORD LR LR 12 01 03.6
comp=Z,217nm,19.5s,MS4.5,baz=220,slow=35
F12A **Elk City** 79.62 330 ⇓P P 11 26 56.4 -0.2
baz=80
WDC **Whiskeytown Da** 79.63 323 ⇓P P 11 26 56.3 -0.5
baz=80
E13A **Victor** 79.66 331 ⇑P P 11 26 56.9 +0.1
baz=80
C16A **Fuhringer Ranc** 79.67 333 ⇑P P 11 26 56.5 -0.3
baz=80
G11A **Walters Elk Ra** 79.82 329 ⇑P P 11 26 57.9 +0.2
baz=80,SNR=5.8
J07A **Hines** 79.84 326 ⇓P P 11 26 57.8 -0.1
baz=80
I08A **Drewsey** 79.85 327 ⇑P P 11 26 57.6 -0.3
baz=80
D14A **Greenough** 79.85 332 ⇑P P 11 26 57.7 -0.1
baz=80
BMO **Blue Mountains** 79.91 328 *e*P P 11 26 58.0 -0.2
comp=Z,30nm,1.9s,mb4.9
C15A **Salmond Ranch,** 80.01 333 ⇓P P 11 26 58.5 -0.1
baz=80
F11A **Grangeville** 80.14 330 ⇑P P 11 26 59.3 -0.1
baz=80
J06A **Christmas Vall** 80.19 326 ⇑P P 11 26 59.4 -0.4
baz=80
N02C **Big Bar** 80.22 322 ⇓P P 11 26 59.7 -0.2
baz=80
D13A **Huson** 80.28 331 ⇑P P 11 27 00.1 0.0
baz=80
B15A **Bradely Ranch,** 80.41 333 ⇓P P 11 27 00.5 -0.3
baz=81
I07A **Izee** 80.44 327 ⇑P P 11 27 00.8 -0.3
baz=81
C14A **Swan Lake** 80.49 332 ⇓P P 11 27 01.2 0.0
baz=81
E11A **Bogner Ranch,** 80.51 330 ⇓P P 11 27 00.9 -0.5
baz=81
A16A **West Butte Ran** 80.52 334 ⇓P P 11 27 01.4 +0.1
baz=81,SNR=5.9
D12A **Red Ives Fores** 80.64 331 ⇓P P 11 27 02.3 +0.2
baz=81

F10A **Beach Ranch, E** 80.70 329 ⇓P P 11 27 02.1 -0.4
baz=81
I06A **Prineville** 80.70 326 ⇑P P 11 27 02.5 0.0
baz=81
C13A **Hot Springs** 80.78 332 ⇓P P 11 27 03.0 +0.2
baz=81,SNR=6.6
A15A **Johnson Ranch,** 81.00 333 ⇑P P 11 27 03.5 -0.5
baz=81
TSUM **Tsumeb** 81.18 107 *e*P P 11 27 06.4 +0.7
comp=Z,15nm,1.1s,mb4.8
D10A **Wagner Farm, O** 81.52 330 ⇓P P 11 27 06.2 -0.6
baz=82
C11A **Tepee Creek (N** 81.64 331 ⇑P P 11 27 06.8 -0.6
baz=82
B12A **Libby** 81.82 332 ⇑P P 11 27 08.4 +0.1
baz=82
OD2 **Odessa Site #2** 82.43 329 *e*P P 11 27 10.8 -0.7
A11A **Hall Mountain,** 82.53 332 ⇑P P 11 27 11.6 -0.4
baz=83
MAW **Mawson** 83.22 164 P P 11 27 16.4 +0.9
comp=Z,2.7nm,0.4s,mb4.6,baz=222,slow=17,SNR=8.1
MAW LR LR 12 03 01.6
comp=Z,298nm,20.6s,MS4.7,baz=250,slow=35
BOSA **Boshof** 84.16 118 P P 11 27 21.7 +0.6
comp=Z,3.6nm,0.4s,mb4.9,baz=240,slow=4.1,SNR=19
EDM **Edmonton** 84.56 336 *e*P P 11 27 20.5 -1.8
ESDC **Sonseca Array** 88.21 45 LR LR 12 02 21.4
comp=Z,100nm,21.0s,MS4.2,baz=245,slow=32
URZ **Urewera** 91.83 227 LR LR 12 00 03.5
comp=Z,309nm,18.3s,MS4.8,baz=102,slow=30
YKA **Yellowknife Ar** 92.20 341 P P 11 27 57.0 -1.7
comp=Z,1.6nm,0.5s,mb4.6,baz=147,slow=4.8,SNR=10.0
KEST **Kesra** 95.66 54 LR LR 12 15 55.3
comp=Z,191nm,18.0s,MS4.6,baz=181,slow=38
VSU **Vasula** 113.31 35 *i* PKIKP PKiKP 11 33 23.8 -3.0
OBN **Obninsk** 118.52 39 *i* PKIKP PKPdf 11 33 34.3 -2.6
OBN pmax pmax
comp=Z,10.0nm,1.8s
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.8
KIV **Kislovodsk** 122.33 52 *i* PKIKP PKPdf 11 33 42.2 -2.4
KIV *e* 11 35 16.4
KIV *e*PS PS 11 45 13.2 -2.3
KIV *e*SS SS 11 51 57.4 -4.3
KIV pmax pmax
comp=Z,10.0nm,1.2s
KIV MLR MLR
comp=Z,92nm,18.0s,MS4.5
GNI **Garni** 123.69 56 *i* PKIKP PKPdf 11 33 43.0 -4.4
ASAR **Alice Springs** 127.65 209 PKP PKPdf 11 33 55.1 -0.4
comp=Z,1.1nm,0.5s,baz=137,slow=1.8,SNR=26
ARU **Arti** 130.48 34 *i* PKIKP PKPdf 11 33 57.6 -2.2
ARU 11 36 09.2
ARU SS SS 11 53 35.8 -6.5
WB2 **Warramunga Arr** 130.65 212 *e*P PKPdf 11 34 00.7 -0.6
WRA **Warramunga Arr** 130.66 212 PKP PKPdf 11 34 01.2 -0.1
comp=Z,1.4nm,0.5s,baz=149,slow=1.6,SNR=51
PETK **Petropavlovsk-** 132.86 322 PKP PKPdf 11 34 04.8 +0.4
comp=Z,2.5nm,0.8s,baz=73,slow=3.4,SNR=4.8
NVS **Novosibirsk** 142.89 25 *i* PKIKP PKPdf 11 34 21.6 -1.2
NVS pmax pmax
comp=Z,13nm,1.6s
NVS pmax pmax
comp=E,7.0nm,1.5s
ZAA0 **Zalesovo Array** 144.17 25 *e*PKPdf PKPdf 11 34 23.1 -2.0
ZALV **Zalesovo Beam** 144.17 25 PKP PKPdf 11 34 22.9 -2.2
comp=E,1.5nm,0.4s,baz=308,slow=3.6,SNR=9.7
EKS2 **Erkin-Say** 144.78 48 *e*PKPdf PKPdf 11 34 26.3 -0.2
EKS2 **Erkin-Say** 144.78 48 P PKPdf 11 34 26.7 +0.2
SNR=5.8
AML **Almayashu** 144.92 49 *e*PKPdf PKPdf 11 34 26.5 -0.2
AML **Almayashu** 144.92 49 P PKPdf 11 34 27.5 +0.8
SNR=12
USP **Ospenovka** 145.03 47 P PKPbc 11 34 27.0 +0.7
SNR=8.4
BOD **Bodaibo** 145.21 356 *e*PKIKP PKPdf 11 34 24.2 -2.5
BOD pmax pmax
comp=Z,27nm,1.1s
AAK **Ala-Archa** 145.28 48 P PKPbc 11 34 28.2 +1.1
SNR=9.5
FRU **Bishkek** 145.28 47 ⇑*i* PKIKP PKPdf 11 34 28.0 +0.6
FRU pmax pmax
comp=Z,98nm,1.8s
UCH **Uchtor** 145.45 48 *e*PKPdf PKPdf 11 34 29.4 +1.7
KBK **Karagaybulak** 145.58 47 P PKPdf 11 34 29.6 +1.7
SNR=5.1
TKM2 **Tokmak 2** 145.91 47 *e*PKPdf PKPdf 11 34 28.7 +0.3
TKM2 **Tokmak 2** 145.91 47 P PKPab 11 34 30.8 +1.3
SNR=9.5
KZA **Kyzart** 146.01 48 P PKPdf 11 34 32.4 +3.7
SNR=6.8
POO **Poona** 146.64 91 ⇑*i* P PKPdf 11 34 29.0 -1.4
comp=Z,30nm,1.0s
MKAR **Makanchi Array** 147.97 36 PKP PKPdf 11 34 30.9 -0.9
comp=Z,2.9nm,0.5s,baz=313,slow=3.3,SNR=20
MKAR PKPbc PKPbc 11 34 34.7 -0.1
comp=Z,4.4nm,0.7s,baz=312,slow=3.4,SNR=22
KAPI **Kappang** 150.17 201 PKPbc PKPbc 11 34 41.4 -0.1
comp=Z,6.7nm,0.8s,baz=326,slow=5.1,SNR=6.4
HYB **Hyderabad** 150.68 96 *e*P PKPbc 11 34 42.5 +0.1
HYB **Hyderabad** 150.68 96 *i* PKP PKPbc 11 34 42.5 +0.1
NDI **New Delhi** 150.72 72 *e*P PKPbc 11 34 40.0 -2.3
TLY **Talaya** 151.21 7 *e*PKPdf PKPbc 11 34 42.6 0.0
TLY **Talaya** 151.21 7 *i* PKIKP PKPbc 11 34 42.7 +0.1
TLY pmax pmax
comp=Z,5.0nm,0.9s
MJAR **Matsushiro Arr** 151.69 305 PKPbc PKPbc 11 34 44.3 0.0
comp=Z,2.5nm,0.6s,baz=116,slow=1.5,SNR=9.8
MAT **Matsushiro** 151.69 305 PKP PKPbc 11 34 42.0 -2.3
ZAK **Zakamensk** 152.44 8 *e*PKIKP PKPbc 11 34 45.4 -0.1
ZAK pmax pmax
comp=Z,5.0nm,1.5s
WMQ **Urumqi** 152.80 36 *e*PKP PKPdf 11 34 37.0 -2.4
WMQ PP PP 11 38 32.0 +2.0
WMQ SKS SKSdf 11 41 39.0 -8.2
WMQ SKKS SKKSac 11 45 16.0 -5.3
WMQ SS SS 11 57 58.0 -4.0
WMQ PP PP
comp=Z,56nm,10.0s
WMQ LR LR
comp=N,102nm,22.0s,MS4.8
WMQ LR LR
comp=E,113nm,22.0s,MS4.8
WMQ LR LR
comp=Z,106nm,22.0s,MS4.6
MDJ **Mudanjiang** 152.89 327 PKP PKPdf 11 34 39.8 +0.3
SONM **Songino Array** 155.28 5 PKP PKPdf 11 34 40.9 -1.8
comp=Z,1.1nm,1.0s,baz=290,slow=1.0,SNR=5.0
SONM PKPab PKPab 11 35 07.5 -0.2
comp=Z,1.5nm,0.9s,baz=9.5,slow=3.1,SNR=3.7
CN2 **Changchun** 155.47 331 *e*PKP PKPdf 11 34 40.1 -3.1
GTA **Gaotai** 161.93 24 *e*PKP PKPdf 11 34 51.9 +0.9
GTA APKP 11 35 01.4
GTA XPKP 11 35 04.8
HHC **Hu-ho-hao-te** 162.26 354 *e*PKP PKPdf 11 34 48.8 -2.5
HHC APKP 11 34 59.9
HHC XPKP 11 35 02.3
HHC PKS 11 38 20.9
HHC PP PP 11 39 22.8 +1.5
HHC SKS SKSdf 11 41 49.0 -7.8
HHC LR LR
comp=N,157nm,20.2s
HHC LR LR
comp=E,175nm,19.0s
HHC LR LR
comp=Z,160nm,20.2s
LZH **Lanzhou** 166.30 19 *e*PKP PKPdf 11 34 53.5 -1.5
LZH APKP 11 35 04.3
LZH XPKP 11 35 08.0
LZH *e*PP PP 11 39 45.3 +2.7
LZH SKKS SKKSac 11 46 27.3 -4.4
LZH *e*SS SS 12 00 20.5 -3.1
LZH PP PP
comp=Z,115nm,8.9s
LZH LR LR
comp=N,149nm,18.3s
LZH LR LR
comp=Z,218nm,20.6s
NJ2 **Nanjing** 167.73 318 *e*PKP PKPdf 11 34 53.5 -2.7
CMAR **Chiang Mai Arr** 169.28 114 PKP PKPdf 11 34 57.2 -0.4
comp=Z,0.4nm,0.3s,baz=245,slow=2.2,SNR=5.2
CMAR PKPab PKPab 11 36 09.2 -0.7
comp=Z,0.7nm,0.6s,baz=257,slow=4.8,SNR=6.0
CMAR **Chiang Mai Arr** 169.28 114 PKP PKPdf 11 34 57.2 -0.4
CMAR PKPab PKPab 11 36 09.2 -0.7

CD2	**Chengdu**	**170.86**	**31**	*e*PKP	PKPdf	11 34 55.8	-2.4
CD2				APKP		11 35 04.3	
CD2				XPKP		11 35 08.4	
CD2				PKP2	PKPab	11 36 16.8	+0.4
CD2				SKS	SKSdf	11 41 54.3	-8.1
CD2				SS	SS	12 01 06.3	-3.7
CD2				PP	PP		
	comp=Z,150nm,10.2s						
CD2				LR	LR		
	comp=N,210nm,18.2s						
CD2				LR	LR		
	comp=Z,180nm,16.2s						
KMI	**Kunming**	**173.74**	**71**	PKP	PKPdf	11 34 59.3	-0.3
KMI				APKP		11 35 09.0	
GYA	**Guiyang**	**175.96**	**35**	PKP	PKPdf	11 34 57.1	-3.2
GYA				APKP		11 35 08.4	
GYA				PKP2	PKPab	11 36 38.9	-0.3
GYA				PKS		11 38 28.0	
GYA				PP	PP	11 40 33.4	+2.1
GYA				SKKS	SKKSac	11 47 14.0	-5.1
GYA				SS	SS	12 01 55.3	-4.4
GYA				PP	PP		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,120nm,22.5s						
GYA				LR	LR		
	comp=E,100nm,21.8s						
GYA				LR	LR		
	comp=Z,130nm,23.0s						

ISCJB ***15*** *11:21:35.7±4.4, 301S±009×100.1E±0.1, h18km±30km, mb4.5/11, MS4.0/3, Error ellipse: s-maj=24.5km s-min=10.3km az=153.1*

IDC ***15*** *11:21:39.6±1.8, 278S×10027E, h26km±4km, mb4.0/7, mb1 4.1/8, mb1mx3.9/19, mbtmp4.0/8, ML4.0/1, MS4.0/3, Ms1 4.0/3, ms1mx3.1/24, Error ellipse: s-maj=67.9km s-min=13.9km az=56.0*

DJA ***15*** *11:21:46.6±0.0, 238S×9990E, h84km, mB6.2/1, MLv4.5/6, Mw(mB)5.9/1*

ISC 15 11:21:37.3±4.3, 297S±007×1002E±01, h14km±27km, h26km±1.4km; pP-P, n30, σ1§10/25, mb4.5/11, MS4.0/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**2.06**	**8**	P	**Pn**	**11 22 09.9**	**-1.7**
PDSI	**Padang**	**2.06**	**8**	S	**Sn**	**11 22 37.2**	**+0.1**
PPI	**Padang Panjang**	**2.51**	**5**	P	**Pn**	**11 22 17.0**	**-0.7**
PPI	**Padang Panjang**	**2.51**	**5**	S	**Sn**	**11 22 40.9**	**-7.2**
RGRI	**Rengat**	**3.38**	**40**	P	**Pn**	**11 22 30.8**	**+1.1**
MYKOM	**Kota Tinggi**	**5.99**	**38**	P	**Pn**	**11 23 06.8**	**+1.2**
IPM	**Ipoh**	**7.45**	**7**	P	**Pn**	**11 23 26.9**	**+1.3**
	31nm,1.3s,0.1nm						
CBJI	**Citeko**	**7.48**	**117**	P	Px	11 23 40.4	
	202nm,0.9s,2.6nm						
LEM	**Lembang**	**8.35**	**118**	P	Px	11 24 00.5	
KAPI	**Kappang**	**19.64**	**97**	P	**Pn**	**11 26 05.3**	**-1.9**
	0.4nm,0.3s,baz=305,slow=18,SNR=2.7						
CMAR	**Chiang Mai Arr**	**21.33**	**357**	P	**P**	**11 26 21.6**	**-2.4**
	3.5nm,0.6s,mb3.9,baz=185,slow=10.0,SNR=9.2						
TAPN	**Taplejung**	**32.45**	**339**	*e*P	**P**	**11 28 07.6**	**+0.3**
	36nm,1.1s,mb5.1						
RAMN	**Ramite**	**32.51**	**337**	*e*P	**P**	**11 28 12.8**	**+5.1**
JIRN	**Jiri**	**33.30**	**337**	*e*P	**P**	**11 28 15.0**	**+0.3**
	14nm,0.6s,mb5.1						
GUN	**Gumba**	**33.65**	**337**	*e*P	**P**	**11 28 18.2**	**+0.5**
NWAO	**Narrogin (SRO)**	**33.82**	**154**	LR	LR	11 41 15.7	
	comp=Z,139nm,19.5s,MS3.7,baz=109,slow=35						
GKN	**Gorkha**	**34.23**	**335**	*e*P	**P**	**11 28 26.6**	**+3.8**
	9.6nm,0.3s,mb5.2						
KOLN	**Koldanda**	**34.48**	**333**	*e*P	**P**	**11 28 30.7**	**+5.8**
DANN	**Dangsing**	**34.91**	**334**	*e*P	**P**	**11 28 32.3**	**+3.6**
	17nm,0.5s,mb5.2						
PYUN	**Piuthan**	**35.04**	**333**	*e*P	**P**	**11 28 36.3**	**+6.5**
WRA	**Warramunga Arr**	**37.36**	**119**	P	**P**	**11 28 50.0**	**+0.2**
	0.5nm,0.5s,mb3.6,baz=302,slow=8.2,SNR=17						
WRA				pP	pP	11 28 58.1	+4.0
	0.8nm,0.4s,baz=302,slow=8.9,SNR=7.0						
WB2	**Warramunga Arr**	**37.37**	**119**	*e*P	**P**	**11 28 49.4**	**-0.5**
ASAR	**Alice Springs**	**38.55**	**125**	P	**P**	**11 29 00.3**	**+0.6**
	0.7nm,0.5s,mb3.7,baz=302,slow=7.8,SNR=15						
STKA	**Stephens Creek**	**48.38**	**131**	*e*P	**P**	**11 30 20.2**	**+1.2**
	2.4nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**48.38**	**131**	P	**P**	**11 30 19.5**	**+0.5**
	0.7nm,0.3s,mb4.2,baz=8.6,slow=3.2,SNR=5.4						
STKA				LR	LR	11 53 24.6	
	comp=Z,95nm,19.7s,MS3.8,baz=26,slow=39						
SONM	**Songino Array**	**50.89**	**5**	P	**P**	**11 30 37.9**	**+0.2**
	5.5nm,0.8s,mb4.5,baz=188,slow=8.9,SNR=36						
SONM				pP	pP	11 30 44.7	+2.5
	3.4nm,0.6s,baz=185,slow=8.3,SNR=9.0						
MKAR	**Makanchi Array**	**52.00**	**344**	P	**P**	**11 30 45.5**	**-0.7**
	6.0nm,0.7s,mb4.7,baz=150,slow=8.3,SNR=52						
MKAR				pP	pP	11 30 53.0	+2.4
	7.2nm,0.7s,baz=160,slow=7.5,SNR=18						
ZALV	**Zalesovo Beam**	**58.15**	**349**	P	**P**	**11 31 29.1**	**-1.3**
	3.9nm,0.8s,mb4.5,baz=180,slow=7.3,SNR=13						
ARCES	**ARCESS Array B**	**87.44**	**340**	LR	LR	12 17 19.3	
	comp=Z,177nm,18.3s,MS4.5,baz=84,slow=38						
TXAR	**Lajitas Array**	**145.36**	**38**	PKPbc	PKPbc	11 41 15.1	-0.3
	1.4nm,0.5s,baz=238,slow=1.2,SNR=12						
TXAR				pPKPbc	pPKPbc	11 41 23.9	+3.8
	1.8nm,0.6s,baz=272,slow=1.1,SNR=9.1						

IDC 15 11:33:06.7±1.4, 1442S×17347W, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=188.3km s-min=19.0km az=162.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.72**	**73**	Pn	Pn	11 33 38.7	+0.9
	11nm,0.3s,baz=190,slow=2.1,SNR=34						
AFI				Sn	Sn	11 33 59.7	-0.9
	39nm,0.3s,baz=81,slow=21,SNR=11						
STKA	**Stephens Creek**	**44.47**	**239**	P	P	11 41 20.3	+0.4
	0.8nm,0.1s,baz=97,slow=16,SNR=3.1						
WRA	**Warramunga Arr**	**50.01**	**256**	P	P	11 42 03.0	-0.2
	0.3nm,0.6s,baz=93,slow=6.7,SNR=12						
ASAR	**Alice Springs**	**50.35**	**251**	P	P	11 42 05.5	-0.4
	0.3nm,0.5s,baz=88,slow=7.9,SNR=11						

ATH ***15*** *11:47:56.5, 3768N×2678E, h17km, MD3.3/4*

CSEM ***15*** *11:47:56.7±0.1, 3763N×2677E, h8km, MD2.8, Error ellipse: s-maj=1.6km s-min=1.5km az=91.0*

NEIC ***15*** *11:47:56.5, 3768N×2678E, h17km, MD3.3(ATH), After ATH.*

ISCJB ***15*** *11:47:57.7±0.3, 3768N±002×2676E±003, h10km, Error ellipse: s-maj=3.1km s-min=2.8km az=161.8*

DDA ***15*** *11:47:57.4, 3772N×2679E, h5km±1km, Md2.8*

ISK ***15*** *11:47:58.1, 3772N×2692E, h5km, MD3.2, ML3.1*

THE ***15*** *11:48:01.3, 3800N×2534E, h0km±1km, ML4.1/1, Error ellipse: s-maj=2.5km s-min=0.6km az=287.0*

ISC 15 11:47:57.3±0.5, 3767N±002×2673E±003, h1km±3km, n48, σ1§17/74, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.09**	**66**	*e*PB	**Pg**	**11 47 59.7**	**+0.6**
GCAM	**G?zelcaml?**	**0.40**	**86**	⇓*i*P	**Pg**	**11 48 04.9**	**0.0**
GCAM				*i* S	**Sg**	**11 48 11.7**	**+1.6**
URLA	**Izmir**	**0.70**	**351**	*i* P	**Pg**	**11 48 10.5**	**-0.2**
URLA				*i* S	**Sg**	**11 48 20.2**	**+0.5**
BLCB	**Balcova**	**0.75**	**19**	*e*PG	**Pg**	**11 48 11.4**	**-0.4**
BLCB				*e*SG	**Sg**	**11 48 20.4**	**-1.1**
BODT	**Bodrum**	**0.76**	**143**	*e*PG	**Pg**	**11 48 12.3**	**+0.4**
BODT				*e*SG	**Sg**	**11 48 22.8**	**+1.0**
BDRM	**Kayabasi**	**0.83**	**137**	*i* P	**Pg**	**11 48 13.2**	**0.0**
BDRM				*i* S	**Sg**	**11 48 26.1**	**+2.2**
KDAG	**Bornova**	**0.84**	**30**	*i* P	**Pg**	**11 48 12.4**	**-1.0**
KDAG				*i* S	**Sg**	**11 48 24.4**	**0.0**
KDAG	**Bornova**	**0.84**	**30**	*i* P	**Pg**	**11 48 12.4**	**-1.1**
CHOS	**Chios island**	**0.89**	**323**	P	**Pg**	**11 48 14.6**	**+0.1**
CHOS				S	**Sg**	**11 48 25.0**	**-1.0**
AYDN	**Tasoluk**	**0.91**	**90**	*i* P	**Pg**	**11 48 14.3**	**-0.5**
AYDN				*i* S	**Sg**	**11 48 26.3**	**-0.2**
MLSB	**Milas**	**0.91**	**114**	*e*PG	**Pg**	**11 48 13.8**	**-0.9**
MLSB				*e*SG	**Sg**	**11 48 25.9**	**-0.7**
NISR	**Nisiros**	**1.10**	**163**	*e*PN	**Pn**	**11 48 17.5**	**-2.5**
APE	**Apeiranthos**	**1.13**	**238**	P	**Pg**	**11 48 18.8**	**-0.2**
APE				S	**Sg**	**11 48 33.4**	**-0.3**
APE	**Apeiranthos**	**1.13**	**238**	*e*Pn	**Pn**	**11 48 19.0**	**-1.3**
APE				*S*	**Sg**	**11 48 33.4**	**-0.3**
APE				*e*Sn	**Sn**	**11 48 35.0**	**-1.5**
DAT	**Datca**	**1.16**	**144**	*e*PN	**Pn**	**11 48 20.8**	**+0.1**
DAT				*e*SN	**Sn**	**11 48 35.7**	**-1.5**
YER	**Yerkesik**	**1.34**	**113**	*e*PN	**Pn**	**11 48 21.8**	**-1.5**
AKS	**Akhisar**	**1.47**	**35**	*e*PN	**Pn**	**11 48 24.1**	**-0.9**
AKHS	**Akhisar**	**1.48**	**35**	*i* P	**Pn**	**11 48 24.1**	**-1.0**
AKHS				*i* S	**Sg**	**11 48 44.4**	**-0.4**
AKHS	**Akhisar**	**1.48**	**35**	*i* P	**Pn**	**11 48 24.1**	**-1.0**
AKHS				*i* S	**Sg**	**11 48 44.3**	**-0.4**
PRK	**Paraskevi**	**1.61**	**347**	P	**Pn**	**11 48 27.2**	**+0.2**
PRK				S	**Sn**	**11 48 48.6**	**+0.1**
PRK	**Paraskevi**	**1.61**	**347**	*e*Pn	**Pn**	**11 48 26.3**	**-0.7**
PRK	**Paraskevi**	**1.61**	**347**	P	**Pn**	**11 48 27.2**	**+0.2**
PRK				S	**Sn**	**11 48 48.6**	**+0.1**
THR4	**Thira Island,**	**1.61**	**222**	P	**Pn**	**11 48 29.4**	**+2.4**
AYVA	**Ayvalik**	**1.63**	**359**	*e*P	**Pn**	**11 48 28.3**	**+1.0**
AYVA				*i* S	**Sn**	**11 48 51.8**	**+2.8**
THR3	**Thira Island,**	**1.65**	**221**	P	**Pn**	**11 48 29.8**	**+2.3**
MANT	**Manisa**	**1.66**	**60**	*i* P	**Pn**	**11 48 29.5**	**+1.9**
MANT				*i* S	**Sn**	**11 48 47.8**	**-1.7**
THR6	**Thira Island,**	**1.69**	**220**	P	**Pn**	**11 48 30.6**	**+2.5**
KULA	**Kula-Manisa**	**1.74**	**60**	*e*PN	**Pn**	**11 48 27.9**	**-0.8**
DENT	**Denizli**	**1.82**	**87**	*e*PN	**Pn**	**11 48 29.6**	**-0.3**
DEMI	**Demirci**	**2.07**	**48**	*i* P	**Pn**	**11 48 36.0**	**+2.6**
DEMI				*i* S	**Sn**	**11 49 01.5**	**+1.7**
FETY	**Fethiye**	**2.14**	**118**	*e*PN	**Pn**	**11 48 33.6**	**-0.6**
BALB	**Balikesir**	**2.16**	**24**	*e*PN	**Pn**	**11 48 34.6**	**+0.1**
KHL	**Karahalli**	**2.30**	**73**	*e*PN	**Pn**	**11 48 35.3**	**-1.1**
DST	**Dursunbey**	**2.44**	**37**	*e*PN	**Pn**	**11 48 38.0**	**-0.2**
GADA	**Gvkgeada**	**2.60**	**346**	*e*PN	**Pn**	**11 48 42.1**	**+1.6**
YLV	**Yalova**	**3.54**	**35**	*e*PN	**Pn**	**11 48 54.3**	**+0.8**

ISCJB ***15*** *12:02:43.1±1.3, 236S±02×665W±0.2, h220km±17km, mb3.2/2, Error ellipse: s-maj=29.2km s-min=18.7km az=139.6*

IDC ***15*** *12:02:43.7±1.3, 2350S×6652W, h216km±13km, mb3.1/2, mb1 3.6/3, mb1mx3.2/17, mbtmp3.2/6, Error ellipse: s-maj=23.3km s-min=17.5km az=162.0*

ISC 15 12:02:44.6±1.2, 235S±02×665W±02, h215km±16km, n9, σ1§27/7, mb3.2/2, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.37**	**291**	P	**Pn**	**12 03 27.9**	**-0.1**
	20nm,0.3s,baz=119,slow=6.1,SNR=5.6						
LVC				S	**S**	**12 04 01.7**	**-0.3**
	23nm,0.3s,baz=308,slow=20,SNR=11						
SIV	**San Ignacio**	**9.05**	**35**	P	**Pn**	**12 04 52.0**	**+0.5**
	0.7nm,0.3s,baz=224,slow=13,SNR=12						
PLCA	**Paso Flores**	**17.52**	**190**	P	**P**	**12 06 34.5**	**+0.5**
	0.3nm,0.3s,baz=4.6,slow=11,SNR=7.4						
BDFB	**Brasilia**	**19.09**	**69**	P	**P**	**12 06 51.5**	**+0.2**
	0.3nm,0.3s,baz=224,slow=19,SNR=5.7						
TORD	**Torodi Ar. Bea**	**75.97**	**69**	P	**P**	**12 14 06.0**	**-2.3**
	0.5nm,0.5s,mb3.4,baz=260,slow=5.6,SNR=11						
PDAR	**Pinedale Array**	**76.94**	**329**	P	**P**	**12 14 14.0**	**+0.9**
	0.2nm,0.4s,mb3.1,baz=125,slow=7.8,SNR=2.8						
ASAR	**Alice Springs**	**129.10**	**204**	PKP	PKPdf	12 21 25.3	-2.3
	0.4nm,0.8s,baz=155,slow=2.0,SNR=5.9						
WRA	**Warramunga Arr**	**132.28**	**207**	PKP	PKPdf	12 21 31.1	-2.6
	0.3nm,0.5s,baz=153,slow=1.8,SNR=9.1						
MKAR	**Makanchi Array**	**145.85**	**39**	PKPbc	PKPbc	12 21 56.3	-2.1
	0.5nm,0.5s,baz=325,slow=2.3,SNR=7.1						

HLW ***15*** *12:09:35.4, 2991N×3676E, h22km, Mb2.8*

ISCJB ***15*** *12:09:37.9±0.7, 2986N±003×3621E±005, h0km, Error ellipse: s-maj=6.5km s-min=3.9km az=160.5*

SGS ***15*** *12:09:38.3, 3005N×3614E, h7km*

CSEM ***15*** *12:09:38.3±0.7, 2987N×3618E, h10km, ML2.7, Error ellipse: s-maj=17.1km s-min=8.0km az=77.0*

GII ***15*** *12:09:38.1±1.0, 2987N×3612E, h0km, ML2.5/5, EXPLOSION*

ISC 15 12:09:38.0±0.8, 2985N±003×3625E±005, h0km, n21, σ0§72/29, 2C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.05**	**264**	Pg	**Pg**	**12 09 57.4**	**-0.8**
HRFI	**Mount Harif**	**1.07**	**280**	Pg	**Pg**	**12 09 58.0**	**-0.5**
HRFI				Sg	**Sg**	**12 10 13.4**	**+1.0**
MBRI	**Mt Berech**	**1.16**	**268**	Pg	**Pg**	**12 09 59.7**	**-0.6**
MBRI				Sg	**Sg**	**12 10 16.1**	**+0.7**
ZFRI	**Zfri**	**1.16**	**307**	Pg	**Pg**	**12 09 59.7**	**-0.6**
ZFRI				Sg	**Sg**	**12 10 16.4**	**+1.0**
HQLS		**1.17**	**242**	P	**Pg**	**12 09 59.7**	**-0.8**
HQLS		**1.17**	**242**	P	**Pg**	**12 09 59.7**	**-0.8**
HQLS				S	**Sg**	**12 10 15.6**	**-0.1**
PRNI	**Paran**	**1.19**	**295**	Pg	**Pg**	**12 10 00.0**	**-0.8**
PRNI				Sg	**Sg**	**12 10 16.4**	**+0.1**
JLOS		**1.29**	**211**	P	**Pg**	**12 10 02.7**	**-0.1**
JLOS		**1.29**	**211**	P	**Pg**	**12 10 02.7**	**-0.1**
JLOS				S	**Sg**	**12 10 21.1**	**+1.5**
HBST	**Basata**	**1.47**	**245**	⇓P	**Pn**	**12 10 05.3**	**-0.4**
HBST	**Basata**	**1.47**	**245**	P	**Pn**	**12 10 05.3**	**-0.4**
MZDA	**Masada**	**1.64**	**333**	Pn	**Pn**	**12 10 08.4**	**+0.2**
MZDA				Sn	**Sn**	**12 10 30.4**	**+0.4**
TBKS	**Tabuk**	**1.64**	**171**	S	**Sn**	**12 10 31.4**	**+1.4**
TBKS	**Tabuk**	**1.64**	**171**	P	**Pn**	**12 10 08.8**	**+0.6**
BDAS	**Al Bad'**	**1.74**	**216**	P	**Pn**	**12 10 09.0**	**-0.4**
DSI	**Dead Sea**	**1.87**	**337**	Pn	**Pn**	**12 10 11.7**	**+0.4**
DSI				Sn	**Sn**	**12 10 36.4**	**+0.8**
HNKL	**Nakhl**	**1.97**	**273**	P	**Pn**	**12 10 12.8**	**+0.1**
RSHS		**2.00**	**220**	P	**Pn**	**12 10 11.9**	**-1.2**
HKAT	**Jabal Katrina**	**2.38**	**237**	P	**Pn**	**12 10 17.8**	**-0.5**
TR2		**2.65**	**237**	⇑*i*P	**Pn**	**12 10 21.5**	**-0.5**
AMAG	**Maghara**	**2.75**	**287**	⇑*i*P	**Pn**	**12 10 22.7**	**-0.7**

IDC 15 12:17:30.8±2.4, 299N×12841E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=178.3km s-min=24.2km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.52**	**166**	P	P	12 22 40.9	-2.0
	0.4nm,0.6s,baz=343,slow=10.0,SNR=8.7						
ASAR	**Alice Springs**	**27.03**	**169**	P	P	12 23 15.2	+0.4
	0.2nm,0.6s,baz=345,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**59.12**	**325**	P	P	12 27 34.1	+1.1
	0.2nm,0.4s,baz=109,slow=8.7,SNR=6.2						

ISCJB ***15*** *12:31:22.4±1.5, 148S±02×753W±0.1, h108km±18km, mb3.6/2, Error ellipse: s-maj=32.9km s-min=8.6km az=37.4*

NEIC ***15*** *12:31:22.6±1.4, 1474S×7524W, h93km±17km, mb3.7/1, Error ellipse: s-maj=34.2km s-min=13.7km az=222.0*

NEIC Felt [III] at Nazca and [II] at Palpa.

IDC ***15*** *12:31:24.3±9.7, 1471S×7525W, h108km±71km, mb3.6/2, mb1 3.7/3, mb1mx3.4/15, mbtmp3.6/3, ML4.2/1, Error ellipse: s-maj=79.6km s-min=36.5km az=129.0*

ISC 15 12:31:23.8±1.5, 148S±02×754W±01, h105km±18km, n7, σ1§08/10, mb3.6/2, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.13**	**332**	*e*Pn	**Pn**	**12 32 10.3**	**-1.2**
NNA				*e*Sn	**Sn**	**12 32 49.5**	**+1.2**
ARE	**Arequipa**	**4.08**	**115**	*e*P	**Pn**	**12 32 21.0**	**-3.1**
ARE				*e*S	**Sn**	**12 33 12.0**	**+1.1**
LPAZ	**La Paz**	**7.12**	**103**	P	**Pn**	**12 33 05.4**	**0.0**
	2.0nm,0.3s,baz=275,slow=10,SNR=24						
LPAZ				S	**Sn**	**12 34 25.0**	**+0.2**
	baz=1.4,slow=24,SNR=3.0						
LPAZ	**La Paz**	**7.12**	**103**	*e*Pn	**Pn**	**12 33 04.3**	**-1.1**
PLCA	**Paso Flores**	**26.19**	**172**	P	**P**	**12 36 49.5**	**+1.0**
	1.3nm,0.6s,mb3.6,baz=338,slow=8.4,SNR=6.4						
PLCA	**Paso Flores**	**26.19**	**172**	*e*P	**P**	**12 36 49.1**	**+0.5**
	1.6nm,0.6s,mb3.6						
TORD	**Torodi Ar. Bea**	**81.15**	**74**	P	**P**	**12 43 27.9**	**-0.3**
	0.6nm,0.7s,mb3.5,baz=256,slow=5.6,SNR=4.1						

IDC 15 12:40:04.6±1.9, 261N×12808E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, MS3.9/1, Ms1 3.9/1, ms1mx2.9/22, Error ellipse: s-maj=136.4km s-min=23.4km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.23**	**165**	P	P	12 45 12.9	-0.7
	0.6nm,0.3s,baz=344,slow=10,SNR=28						
ASAR	**Alice Springs**	**26.72**	**168**	P	P	12 45 45.9	+0.1
	0.2nm,0.5s,baz=1.5,slow=9.6,SNR=6.0						
CBIJ	**Chichi jima**	**27.85**	**28**	LR	LR	12 55 30.1	
	comp=Z,202nm,18.1s,baz=163,slow=33						
STKA	**Stephens Creek**	**36.62**	**161**	P	P	12 47 12.9	+0.2
	0.5nm,0.4s,baz=340,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**59.24**	**325**	P	P	12 50 08.2	+0.4
	0.6nm,1.0s,baz=124,slow=7.3,SNR=3.2						

MAN 15 12:40:18, 1904N×12068E, h5km, mb4.5, ML3.3, MS3.2, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.71**	**185**	⇓*i*P	Pg	12 40 35.0	+3.3
SIPP	**Brgy, Tapao**	**1.13**	**191**	⇑*e*P	Pg	12 40 41.5	+1.8
SIPP				*i* S	Sg	12 40 58.1	+3.8
ABRA	**Dolores**	**1.38**	**179**	*e*P	Pn	12 40 43.2	-0.7
ABRA				*e*S	Sb	12 41 01.0	-1.3
SGCP	**Mt. Cagua**	**1.52**	**121**	*e*P	Pn	12 40 45.7	-0.1
CVP	**Callao Caves**	**1.71**	**141**	*e*P	Pn	12 40 48.1	-0.4
CVP				*i* S	Sn	12 41 06.0	-4.8
CAUP	**Cauayan**	**2.35**	**152**	*e*P	Pn	12 40 59.7	+2.5
CAUP				*e*S	Sn	12 41 25.2	-1.3
PALP	**Palanan**	**2.57**	**140**	*e*P	Pn	12 41 02.4	+2.1
PALP				*e*S	Sn	12 41 34.1	+2.1

ISCJB ***15*** *12:42:34.8±2.6, 5623S±007×266W±0.1, h70km±24km, mb4.8/25, Error ellipse: s-maj=13.4km s-min=9.7km az=43.3*

NEIC ***15*** *12:42:36.1±1.9, 5631S×2664W, h71km±16km, mb5.0/16, Error ellipse: s-maj=8.6km s-min=6.8km az=49.0*

IDC ***15*** *12:42:37.3±2.4, 5628S×2665W, h78km±20km, mb4.6/16, mb1 4.6/17, mb1mx4.5/21, mbtmp4.6/17, MS4.0/14, Ms1 4.0/14, ms1mx3.9/20, Error ellipse: s-maj=15.9km s-min=12.6km az=50.0*

ISC 15 12:42:36.5±2.2, 5631S±007×267W±01, h70km±21km, n89, σ0§99/45, mb4.8/25, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.45**	**158**	*e*	**Pn**	**12 46 24.4**	**+2.0**
VNA1				*e*		12 46 25.9	
VNA3	**Neumayer Olymp**	**16.66**	**161**	*e*	**Pn**	**12 46 25.2**	**+0.2**
VNA3				*e*		12 46 27.3	
VNA2	**Neumayer--Watz**	**16.85**	**158**	*e*	**Pn**	**12 46 27.7**	**+0.3**
VNA2				*e*		12 46 29.3	
SNAA	**Sanae**	**18.39**	**156**	*e*	**Pn**	**12 46 42.5**	**-3.7**
SNAA				*e*		12 46 44.6	
SNAA	**Sanae**	**18.39**	**156**	*e*P	**Pn**	**12 46 42.2**	**-4.0**
	19nm,0.7s						
SNAA				*e*PcP	PcP	12 51 11.1	-1.9
SNAA				*e*ScP	ScP	12 54 41.4	-0.5
EFI	**East Falkland**	**18.91**	**271**	*e*P	**Pn**	**12 46 51.4**	**-1.1**
	46nm,0.8s						
PMSA	**Palmer Station**	**19.94**	**230**	P	**Pn**	**12 47 04.4**	**-0.1**
	6.2nm,0.3s,baz=87,slow=4.6,SNR=15						
PMSA				LR	LR	12 53 08.2	
	comp=Z,636nm,21.4s,baz=139,slow=32						
PMSA	**Palmer Station**	**19.94**	**230**	*e*P	**Pn**	**12 47 04.3**	**-0.2**
	91nm,0.6s						
PMSA				LR	LR	12 53 08.2	
MAIT	**Maitri**	**21.87**	**146**	*e*P	**P**	**12 47 20.1**	**-2.9**
USHA	**Ushuaia**	**23.39**	**256**	P	**P**	**12 47 39.1**	**+0.5**
	21nm,0.8s,mb4.5,baz=95,slow=7.9,SNR=9.2						
USHA				LR	LR	12 54 34.0	
	comp=Z,548nm,21.2s,baz=38,slow=31						
PLCA	**Paso Flores**	**32.31**	**280**	P	**P**	**12 48 57.9**	**-0.6**
	4.5nm,0.8s,mb4.3,baz=141,slow=9.5,SNR=12						
PLCA				PcP	PcP	12 51 44.9	+0.1
	2.9nm,0.7s,baz=134,slow=2.1,SNR=6.7						
PLCA				ScP	ScP	12 55 19.9	-2.1
	1.9nm,0.5s,baz=11,slow=10,SNR=9.6						
PLCA				LR	LR	13 01 35.7	
	comp=Z,210nm,20.1s,baz=138,slow=35						
PLCA	**Paso Flores**	**32.31**	**280**	*e*P	**P**	**12 48 56.0**	**-2.5**
	3.6nm,0.7s,mb4.2						
PLCA				PcP	PcP	12 51 44.9	+0.1
PLCA				ScP	ScP	12 55 19.9	-2.1
PLCA				LR	LR	13 01 35.7	
QSPA	**South Pole Qui**	**33.94**	**180**	P	**P**	**12 49 12.6**	**+0.4**
	42nm,0.6s,mb5.5,baz=197,slow=3.1,SNR=77						
QSPA				PcP	PcP	12 51 48.9	+0.1
	7.5nm,0.5s,baz=319,slow=0.6,SNR=7.8						
QSPA				ScP	ScP	12 55 27.9	+0.9
	6.8nm,0.6s,baz=150,slow=0.6,SNR=11						
QSPA	**South Pole Qui**	**33.94**	**180**	P	**P**	**12 49 12.6**	**+0.4**
QSPA				PcP	PcP

comp=Z,116nm,18.3s,baz=55,slow=33
TAU Tasmania Unive 81.02 176 *e*P **P 12 54 42.3 -0.9**
45nm,1.2s,mb5.2
URZ Urewera 83.65 199 LR LR 13 24 58.0
comp=Z,124nm,20.3s,baz=207,slow=30
TOO Toolangi 86.25 174 *e*P **P 12 55 09.8 -0.2**
MUN Mundaring 86.57 149 *e*P **P 12 55 11.6 -0.1**
KLBR Kellerberrin 87.37 150 *e*P **P 12 55 14.6 -1.0**
8.1nm,0.7s,mb4.8
MDT Midelt 90.75 18 P **P 12 55 34.2 +3.1**
baz=230,slow=4.7
STKA Stephens Creek 91.60 170 *e*P **P 12 55 35.7 +0.3**
4.0nm,0.6s,mb4.8
STKA Stephens Creek 91.60 170 P **P 12 55 37.1 +1.7**
4.4nm,0.6s,mb4.8,baz=185,slow=2.9,SNR=15
STKA LR LR 13 38 05.8
comp=Z,141nm,20.1s,baz=26,slow=36
PPT Papeete 92.26 233 LR LR 13 27 47.5
comp=Z,88nm,21.3s,baz=72,slow=29
ASAR Alice Springs 98.66 162 P **P 12 56 06.8 -1.0**
3.1nm,0.8s,mb4.9,baz=192,slow=3.4,SNR=17
ASAR PP PP 13 00 08.2 -0.1
0.5nm,0.6s,baz=190,slow=6.3,SNR=4.5
ASAR PKKPbc PKKPbc 13 12 34.8 +1.5
0.9nm,0.8s,baz=20,slow=2.2,SNR=19
WRA Warramunga Arr 102.38 162 P Pdif 12 56 23.0 -1.4
1.1nm,0.8s,baz=197,slow=4.2,SNR=5.6
WRA PKKPbc PKKPbc 13 12 24.5 +1.8
0.9nm,0.5s,baz=354,slow=2.8,SNR=28
AKASG Malin Array Be 116.25 36 PKP PKPdf 13 01 10.0 -0.5
0.3nm,0.3s,baz=160,slow=1.4,SNR=4.1
DUG Dugway 120.32 298 *e*PKPdf PKPdf 13 01 18.2 -0.5
HFS Hagfors 120.42 22 PKP PKPdf 13 01 17.1 -1.1
1.2nm,0.6s,baz=148,slow=8.7,SNR=4.3
HFS PKKPbc PKKPbc 13 11 23.8 -0.7
2.0nm,0.6s,baz=74,slow=6.3,SNR=5.3
ULM Lac du Bonnet 120.62 316 PKP PKPdf 13 01 17.3 -1.6
7.8nm,0.8s,baz=207,slow=0.8,SNR=3.7
ULM Lac du Bonnet 120.62 316 PKP PKPdf 13 01 17.3 -1.6
PDAR Pinedale Array 120.71 302 PKP PKPdf 13 01 18.2 -1.1
1.1nm,0.4s,baz=132,slow=4.8,SNR=17
NOA NORSAR Array B 120.75 20 PKP PKPdf 13 01 18.7 -0.2
0.7nm,0.6s,baz=204,slow=2.0,SNR=3.3
HWUT Hardware Ranch 120.79 300 *e*PKPdf PKPdf 13 01 19.0 -0.5
NVAR Mina Array Bea 121.75 293 PKP PKPdf 13 01 21.6 +0.1
0.7nm,0.6s,baz=132,slow=2.7,SNR=6.9
LOHW Long Hollow 121.85 302 *e*PKPdf PKPdf 13 01 21.2 -0.3
TPAW Teton Pass 121.92 301 *e*PKPdf PKPdf 13 01 21.8 +0.2
MOOW Moose Ponds 122.02 302 *e*PKPdf PKPdf 13 01 21.6 -0.2
IMW Indian Meadow 122.22 302 *e*PKPdf PKPdf 13 01 22.4 +0.2
CMAR Chiang Mai Arr 124.72 110 PKP PKPdf 13 01 27.6 -0.2
1.8nm,0.7s,baz=231,slow=3.4,SNR=8.1
KAF Kangasniemi 125.11 27 *e*p PKPdf 13 01 26.2 -0.9
1.7nm,0.4s
BMO Blue Mountains 126.00 298 *e*PKPdf PKPdf 13 01 29.1 -0.3
JOF Joensuu 127.09 29 *e*p PKPdf 13 01 33.9 +3.0
2.9nm,0.3s
EDM Edmonton 130.08 308 *e*PKPdf PKPdf 13 01 36.0 -0.9
ARCES ARCESS Array B 131.08 22 PKP PKPdf 13 01 38.0 -0.3
3.6nm,0.6s,baz=205,slow=2.6,SNR=9.4
YKA Yellowknife Ar 136.54 318 PKP PKPdf 13 01 48.3 -0.4
4.7nm,0.6s,baz=126,slow=2.4,SNR=19
MKAR Makanchi Array 136.71 71 PKP PKPdf 13 01 49.4 -0.2
0.5nm,0.6s,baz=208,slow=2.3,SNR=3.6
DLBC Dease Lake 140.69 306 PKhKP 13 01 50.3
DLBC PKP PKPdf 13 01 56.9 +0.4
1.5nm,0.5s,baz=207,slow=2.3,SNR=4.4
ZALV Zalesovo Beam 142.24 64 PKhKP 13 01 53.6
1.5nm,0.6s,baz=258,slow=4.3,SNR=3.0
ZALV PKP PKPdf 13 01 59.0 -0.4
1.3nm,0.4s,baz=224,slow=5.2,SNR=4.5
INK Inuvik 146.18 320 *e*PKPdf PKPdf 13 02 06.3 +0.4
DAWY Dawson 147.17 312 *e*PKPbc PKPbc 13 02 09.4 -0.6
EGAK Eagle 148.11 312 *e*PKPbc PKPbc 13 02 11.8 -0.7
CBIJ Chichi jima 149.73 160 PKPbc PKPbc 13 02 17.4 -0.4
34nm,0.4s,baz=277,slow=20,SNR=10
SONM Songino Array 150.47 87 PKPbc PKPbc 13 02 18.7 -0.2
7.9nm,0.6s,baz=224,slow=3.3,SNR=50
PMR Palmer 150.71 304 *e*PKPbc PKPbc 13 02 19.0 0.0
RC01 Rabbit Creek A 150.85 303 *e*PKPbc PKPbc 13 02 19.5 +0.2
RC01 *e*PKPab PKPab 13 02 27.3 +0.4
ULN Ulaanbaatar 150.85 87 *e*PKPbc PKPbc 13 02 19.1 -0.7
KDAK Kodiak Island 151.18 296 *e*PKPbc PKPbc 13 02 20.1 -0.1
OHAK Old Harbor 151.33 294 *e*PKPbc PKPbc 13 02 20.1 -0.5
COLD Coldfoot 152.20 316 *e*PKPbc PKPbc 13 02 22.4 +0.1
COLD *e*PKPab PKPab 13 02 33.2 +0.8
PPLA Purkeypile 152.41 306 *e*PKPbc PKPbc 13 02 22.5 -0.3
PPLA *e*PKPab PKPab 13 02 33.2 -0.2
CHUM Lake Minchumin 152.65 308 *e*PKPbc PKPbc 13 02 22.5 -0.9
CHUM *e*PKPab PKPab 13 02 34.1 -0.3
IMA2 Indian Mountai 153.49 313 *e*PKPbc PKPbc 13 02 25.2 0.0
IMA2 *e*PKPab PKPab 13 02 38.1 +0.2
MJAR Matsushiro Arr 157.75 146 PKPab PKPab 13 02 56.5 -0.5
1.4nm,0.9s,baz=156,slow=6.4,SNR=4.0

*IDC **15** 12:44:00.8±1.6, 7825×12744E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.7/13, mbtmp3.7/4, ML4.0/2, Error ellipse: s-maj=267.2km s-min=24.9km az=62.0*
*ISCJB **15** 12:44:01.4±1.5, 685±02×1298E±04, h33km, mb3.4/2, Error ellipse: s-maj=57.1km s-min=17.0km az=161.9*
ISC 15 12:44:03.5±1.5, 68S±02×1300E±04, h35km, n7, σ1°14/6, mb3.4/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.38**	**158**	*e*P		P	Px	12 45 29.8	
KAKA	14nm,0.2s			*e*S		S	Sx	12 46 31.4	
KNA	**Kununurra**	**9.01**	**188**	*e*P		**Pn**		**12 46 11.4**	**+0.3**
KNA	15nm,0.2s			*e*S		S	Sx	12 47 37.9	
WRA	**Warramunga Arr**	**13.76**	**163**	Pn		**Pn**		**12 47 15.7**	**-0.4**
WRA	0.8nm,0.3s,baz=327,slow=14,SNR=34			Sn		S	Sx	12 49 38.1	
WB2	**Warramunga Arr**	**13.76**	**163**	*e*P		**Pn**		**12 47 16.1**	**-0.1**
WB2	2.1nm,0.3s,baz=331,slow=22,SNR=13			*e*S		S	Sx	12 49 34.9	
ASAR	**Alice Springs**	**17.22**	**168**	Pn		**Pn**		**12 48 00.8**	**-0.5**
ASAR	0.7nm,0.3s,baz=341,slow=9.8,SNR=29			Sn		S	Sx	12 50 59.8	
STKA	**Stephens Creek**	**27.23**	**158**	P		**P**		**12 49 47.5**	**+3.3**
MKAR	0.6nm,0.8s,mb3.3,baz=339,slow=12,SNR=2.5 **Makanchi Array**	**68.03**	**327**	P		**P**		**12 54 59.1**	**-0.2**
	0.2nm,0.4s,mb3.5,baz=117,slow=7.7,SNR=8.1								

*CSEM **15** 12:48:08.5±0.1, 3803N×3799E, h2km, MD2.9, Error ellipse: s-maj=3.9km s-min=3.2km az=6.0*
*ISCJB **15** 12:48:09.4±0.7, 3803N±003×3803E±005, h1km±10km, Error ellipse: s-maj=6.5km s-min=5.4km az=15.9*
*DDA **15** 12:48:09.5, 3804N×3799E, h8km±3km, Md2.9*
*ISK **15** 12:48:09.0, 3802N×3795E, h9km, MD2.8*
ISC 15 12:48:10.1±0.6, 3804N±003×3801E±005, h10km±8km, n11, σ0°68/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.26**	**345**	*i* P		**Pg**		**12 48 15.2**	**-0.2**
AKCD				*i* S		**Sg**		**12 48 19.8**	**+0.8**
AKCD	**Akcadag**	**0.26**	**345**	*i* P		**Pg**		**12 48 15.2**	**-0.2**
AKCD				*i* S		**Sg**		**12 48 19.8**	**+0.8**
GZT	**Gaziantep**	**0.77**	**208**	*i* P		**Pg**		**12 48 24.5**	**-0.4**
GZT				*i* S		**Sg**		**12 48 35.7**	**+0.8**
URFA	**Urfa**	**0.88**	**133**	*e*PG		**Pg**		**12 48 26.9**	**0.0**
URFA				*e*SG		**Sg**		**12 48 38.8**	**+0.4**
ELZG	**Elazig**	**0.89**	**59**	*i* P		**Pg**		**12 48 26.7**	**-0.5**
ELZG				*i* S		**Sg**		**12 48 38.3**	**-0.5**
DARE	**Darende-Malaty**	**0.92**	**350**	*e*PG		**Pg**		**12 48 21.6**	**-6.3**
DARE				*e*SG		**Sg**		**12 48 32.0**	**-7.9**
KMRS	**Kahramanmaras**	**1.03**	**239**	*e*PG		**Pg**		**12 48 28.7**	**-1.2**
SVRC	**Sivrice-ELAZID**	**1.07**	**71**	*e*PN		**Pn**		**12 48 31.8**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.21**	**302**	*e*PN		**Pn**		**12 48 33.5**	**+0.4**
KEMA	**Kemaliye**	**1.28**	**17**	*i* P		**Pn**		**12 48 32.7**	**-1.4**
KEMA				*i* S		**Sg**		**12 48 51.7**	**+0.3**
PTK	**Pertek**	**1.38**	**51**	*e*PN		**Pn**		**12 48 36.0**	**+0.6**

*ISCJB **15** 12:49:06.3±2.0, 1813N±005×1464E±02, h68km±17km, mb4.1/13, Error ellipse: s-maj=29.7km s-min=7.8km az=175.8*

*IDC **15** 12:49:08.1±2.5, 1809N×14651E, h71km±22km, mb4.0/13, mb1 4.1/16, mb1mx4.0/23, mbtmp4.0/16, MS3.4/6, Ms1 3.4/6, ms1mx3.1/36, Error ellipse: s-maj=27.6km s-min=11.0km az=87.0*
ISC 15 12:49:07.5±1.7, 1813N±005×1465E±02, h67km±14km, n22, σ0°98/20, mb4.1/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.79**	**200**	P		**Pn**		**12 50 17.4**	**+0.2**
GUMO	22nm,0.3s,baz=31,slow=7.0,SNR=11			S		**Sn**		**12 51 12.0**	**+0.5**
CBIJ	52nm,0.3s,baz=192,slow=23,SNR=7.6 **Chichi jima**	**9.79**	**337**	P		**Pn**		**12 51 25.4**	**-0.1**
CBIJ	6.6nm,0.3s,baz=276,slow=20,SNR=7.1			S		**Sn**		**12 53 13.6**	**-0.3**
JOW	4.6nm,0.3s,baz=310,slow=23,SNR=3.4 **Kunigami**	**18.96**	**300**	LR		LR		12 59 37.5	
MJAR	comp=Z,118nm,19.1s,baz=159,slow=33 **Matsushiro Arr**	**19.76**	**340**	P		**Pn**		**12 53 32.6**	**-1.4**
MJAR	1.6nm,0.3s,baz=167,slow=10,SNR=14			LR		LR		13 00 38.4	
MAT	comp=Z,49nm,18.1s,baz=165,slow=35 **Matsushiro**	**19.76**	**340**	P		**Pn**		**12 53 34.1**	**0.0**
MAT				S		pP		12 53 51.6	+5.5
KSRS	**Korea Array**	**25.25**	**323**	P		**P**		**12 54 28.1**	**+0.8**
KSRS	3.3nm,0.8s,mb3.8,baz=144,slow=9.2,SNR=7.7			LR		LR		13 03 53.7	
ASAJ	comp=Z,136nm,19.8s,baz=37,slow=35 **Asahikawa**	**26.12**	**354**	P		**P**		**12 54 36.7**	**+1.6**
WRA	8.1nm,0.7s,mb4.3,baz=183,slow=28,SNR=7.1 **Warramunga Arr**	**39.69**	**198**	P		**P**		**12 56 31.6**	**-1.7**
ASAR	0.2nm,0.3s,mb3.4,baz=32,slow=8.9,SNR=4.6 **Alice Springs**	**43.33**	**197**	P		**P**		**12 57 03.0**	**-0.1**
SONM	0.6nm,0.5s,mb3.6,baz=11,slow=7.0,SNR=5.7 **Songino Array**	**44.09**	**321**	P		**P**		**12 57 09.1**	**+0.2**
CMAR	1.7nm,0.4s,mb4.1,baz=138,slow=9.7,SNR=14 **Chiang Mai Arr**	**45.09**	**278**	P		**P**		**12 57 18.6**	**+1.3**
CMAR	0.5nm,0.4s,mb3.6,baz=66,slow=8.7,SNR=3.5			LR		LR		13 14 33.3	
STKA	comp=Z,42nm,18.2s,baz=100,slow=34 **Stephens Creek**	**49.95**	**186**	*e*P		**P**		**12 57 54.1**	**-0.5**
STKA	1.4nm,0.5s,mb4.2 **Stephens Creek**	**49.95**	**186**	P		**P**		**12 57 53.9**	**-0.7**
AFI	1.8nm,0.5s,mb4.3,baz=13,slow=12,SNR=4.6 **Afiamalu**	**51.99**	**125**	LR		LR		13 17 03.8	
ZALV	comp=Z,38nm,18.7s,baz=330,slow=32 **Zalesovo Beam**	**58.95**	**323**	P		**P**		**12 58 59.3**	**-0.5**
MKAR	5.4nm,0.5s,mb4.9,baz=107,slow=8.4,SNR=28 **Makanchi Array**	**59.43**	**314**	P		**P**		**12 59 03.2**	**0.0**
MKAR	3.0nm,0.7s,mb4.4,baz=88,slow=7.4,SNR=26			LR		LR		13 24 45.3	
YKA	comp=Z,34nm,18.7s,baz=233,slow=36 **Yellowknife Ar**	**78.11**	**28**	P		**P**		**13 00 58.2**	**-0.8**
NVAR	0.8nm,0.4s,mb3.8,baz=283,slow=5.5,SNR=4.6 **Mina Array Bea**	**82.86**	**52**	P		**P**		**13 01 27.3**	**+2.4**
ARCES	1.0nm,0.7s,mb3.8,baz=268,slow=4.3,SNR=6.2 **ARCESS Array B**	**83.28**	**342**	P		**P**		**13 01 27.2**	**+0.7**
HFS	6.6nm,0.6s,mb4.6,baz=64,slow=8.2,SNR=12 **Hagfors**	**93.21**	**338**	P		**P**		**13 02 12.8**	**-1.5**
TORD	1.1nm,0.5s,mb4.5,baz=96,slow=6.7,SNR=7.2 **Torodi Ar. Bea**	**133.44**	**309**	PKP		PKPdf		13 08 17.2	+0.2
DBIC	0.1nm,0.5s,baz=0.5,slow=1.7,SNR=2.6 **Dimbokro**	**142.53**	**309**	PKhKP				13 08 29.1	
	3.9nm,1.1s,baz=12,slow=6.0,SNR=3.7								

*ISCJB **15** 12:51:20.5±0.7, 2350S±007×668W±0.1, h218km±16km, mb3.9/2, Error ellipse: s-maj=23.0km s-min=8.9km az=17.6*
*IDC **15** 12:51:21.1±1.1, 2339S×6669W, h200km±14km, mb3.8/2, mb1 3.6/8, mb1mx3.5/19, mbtmp3.6/8, Error ellipse: s-maj=22.9km s-min=16.4km az=130.0*
ISC 15 12:51:21.6±0.8, 2346S±010×667W±01, h207km±16km, n11, σ1°16/12, mb3.9/2, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.17**	**292**	P		**Pn**		**12 52 03.5**	**+1.1**
LVC	71nm,0.3s,baz=100,slow=6.2,SNR=71			S		**Sn**		**12 52 33.7**	**-0.5**
LPAZ	23nm,0.3s,baz=114,slow=23,SNR=22 **La Paz**	**7.25**	**349**	P		**Pn**		**12 53 05.3**	**+0.1**
LPAZ	1.0nm,0.3s,baz=192,slow=6.1,SNR=5.8			S		**Sn**		**12 54 22.9**	**-4.7**
CFAA	0.2nm,0.3s,baz=326,slow=19,SNR=2.4 **Coronel Fontan**	**8.23**	**189**	P		**Pn**		**12 53 16.9**	**-0.8**
CFAA	0.3nm,0.3s,baz=208,slow=22,SNR=36			S		**Sn**		**12 54 45.9**	**-4.6**
SIV	0.5nm,0.3s,baz=258,slow=22,SNR=10 **San Ignacio**	**9.14**	**37**	P		**Pn**		**12 53 27.7**	**-2.0**
SIV	2.5nm,0.3s,baz=232,slow=11,SNR=20			S		**Sn**		**12 55 13.1**	**+0.8**
PLCA	0.1nm,0.3s,baz=137,slow=23,SNR=3.6 **Paso Flores**	**17.52**	**190**	P		**P**		**12 55 14.2**	**+2.7**
BDFB	0.1nm,0.3s,baz=360,slow=11,SNR=4.6 **Brasilia**	**19.27**	**70**	P		**P**		**12 55 31.8**	**+1.1**
DBIC	1.4nm,0.3s,baz=231,slow=17,SNR=34 **Dimbokro**	**67.40**	**72**	P		**P**		**13 01 54.5**	**-0.7**
TORD	1.7nm,0.5s,mb4.0,baz=209,slow=8.2,SNR=6.0 **Torodi Ar. Bea**	**76.15**	**69**	P		**P**		**13 02 46.6**	**-0.5**
ASAR	1.3nm,0.4s,mb3.9,baz=261,slow=6.0,SNR=22 **Alice Springs**	**129.05**	**205**	PKP		PKPdf		13 10 06.2	+0.9
WRA	0.2nm,0.3s,baz=166,slow=1.9,SNR=8.2 **Warramunga Arr**	**132.22**	**207**	PKP		PKPdf		13 10 12.3	+0.8
MKAR	0.3nm,0.4s,baz=154,slow=1.8,SNR=9.7 **Makanchi Array**	**145.95**	**39**	PKPbc		PKPbc		13 10 36.4	-0.2
	1.0nm,0.6s,baz=308,slow=2.8,SNR=11								

*ISCJB **15** 13:09:04.8±2.1, 2858S±009×713W±03, h62km±12km, mb4.1/4, Error ellipse: s-maj=40.1km s-min=12.0km az=165.9*
*NEIC **15** 13:09:06.6±2.2, 2853S×7124W, h55km±15km, mb4.1/3, Error ellipse: s-maj=40.8km s-min=12.8km az=88.0*
*IDC **15** 13:09:08.6±4.3, 2850S×7098W, h61km±32km, mb3.6/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.6/4, ML3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/19, Error ellipse: s-maj=60.4km s-min=18.6km az=77.0*
ISC 15 13:09:06.0±2.3, 2857S±009×713W±03, h55km±14km, n13, σ0°96/11, mb4.1/4, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.67**	**130**	*e*Pn		**Pn**		**13 09 20.1**	**+0.4**
LCO				*e*Sn		**Sn**		**13 09 28.0**	**-1.6**
CFAA	**Coronel Fontan**	**4.01**	**140**	P		**Pn**		**13 10 07.0**	**+2.1**
CFAA	3.3nm,0.3s,baz=321,slow=12,SNR=196			S		**Sn**		**13 10 51.0**	**+0.3**
LVC	3.4nm,0.3s,baz=182,slow=15,SNR=9.6 **Limon Verde**	**6.31**	**20**	P		**Pn**		**13 10 36.1**	**-0.4**
LVC	1.0nm,0.3s,baz=169,slow=9.2,SNR=7.4			LR		LR		13 12 37.3	
LVC	comp=Z,96nm,21.4s,baz=46,slow=34 **Limon Verde**	**6.31**	**20**	*e*Pn		**Pn**		**13 10 35.7**	**-0.8**
LVC	14nm,0.5s			LR		LR		13 12 37.3	
SIV	**San Ignacio**	**15.68**	**39**	P		**Pn**		**13 12 44.7**	**+1.2**
SNAA	0.1nm,0.3s,baz=232,slow=19,SNR=4.7 **Sanae**	**56.39**	**159**	*e*P		**P**		**13 18 40.5**	**-0.7**
SNAA	1.1nm,0.7s,mb4.0			*e*		pP		13 18 54.9	-1.2
SSPA	**Standing Stone**	**69.13**	**355**	P		**P**		**13 20 06.4**	**+0.1**
DBIC	4.5nm,0.9s,mb4.4 **Dimbokro**	**72.88**	**72**	P		**P**		**13 20 28.9**	**-0.7**
TORD	1.8nm,0.7s,mb4.1 **Torodi Ar. Bea**	**81.77**	**70**	P		**P**		**13 21 19.1**	**-0.2**
WRA	0.7nm,0.5s,mb3.8,baz=266,slow=4.8,SNR=5.1 **Warramunga Arr**	**125.78**	**210**	PKP		PKPdf		13 28 03.7	+1.5
ZALV	0.4nm,0.6s,baz=159,slow=1.6,SNR=6.3 **Zalesovo Beam**	**149.22**	**28**	PKPbc		PKPbc		13 28 49.6	+1.7
MKAR	1.5nm,0.5s,baz=314,slow=4.4,SNR=7.7 **Makanchi Array**	**152.49**	**41**	PKPbc		PKPbc		13 28 57.1	+1.2
JIE	0.4nm,0.6s,baz=323,slow=0.9,SNR=7.5 **Ise**	**155.47**	**291**	P		PKPdf		13 28 50.2	-3.4

*NIED **15** 13:25:00, 4670N×153.10E, h5km, Mw4.3 Best double couple: M0 2.75000×10^15 NP1:φs307.00000°, δ65.00000°, λ-104.00000°. NP2:φs159.00000°, δ28.00000°, λ-61.00000°.*
*BJI **15** 13:25:45.1, 4640N×15278E, h10km, mB4.9, mb4.5, Ms4.5, Msz4.0*
*ISCJB **15** 13:25:46.7±1.0, 4650N±005×15275E±005, h18km±7km, mb4.6/42, MS3.9/8, Error ellipse: s-maj=9.9km s-min=3.7km az=148.8*
*JMA **15** 13:25:46.8±0.8, 4669N×153.11E, h30km, M4.7*
*NEIC **15** 13:25:47.4±0.3, 4658N×15270E, h10km, mb4.7/14, Error ellipse: s-maj=11.7km s-min=5.4km az=137.0*
*MOS **15** 13:25:48.9±2.0, 4661N×15279E, h49km, mb4.9/10, Error ellipse: s-maj=11.2km s-min=7.2km az=55.4*
*SKHL **15** 13:25:48.8±1.9, 4656N×15293E, h71km±20km, mb5.4/3*
*IDC **15** 13:25:51.0±0.5, 4664N×15275E, h32km±3km, mb3.9/14, mb1 4.2/15, mb1mx4.1/22, mbtmp3.9/15, ML4.3/1, MS3.3/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=19.3km s-min=12.4km az=151.0*
ISC 15 13:25:50.1±1.0, 4651N±005×15278E±006, h26km±7km, h30km±2.3km: pP-P, n136, σ1°9⅓34/152, mb4.6/42, MS3.9/8, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.66**	**251**	∥ *i*P		**Pn**		**13 26 42.3**	**-2.6**
KUR				*e*S		**Sn**		**13 27 24.5**	**-2.7**
KUR				pmax		pmax			
KUR	comp=N,90nm,0.7s			pmax		pmax			
KUR	comp=E,90nm,0.7s			pmax		pmax			
KUR	comp=Z,290nm,0.7s			smax					
KUR	comp=N,1μm,0.8s			smax					
KUR	comp=E,590nm,0.8s								
KUR	**Kuril'sk**	**3.66**	**251**	∥ *i*P		**Pn**		**13 26 42.3**	**-2.6**
KUR				AMB		AMB		13 26 43.5	
KUR	comp=E,90nm,0.7s			AMB		AMB		13 26 43.5	
KUR	comp=E,290nm,0.7s			*e*S		**Sn**		**13 27 24.5**	**-2.7**
KUR				A				13 27 31.0	
KUR	comp=E,1μm,0.8s			A				13 27 31.0	
KUR	comp=E,590nm,0.8s								
SKR	**Severo-Kuril's**	**4.72**	**27**	*e*P		**Pn**		**13 26 58.0**	**-1.5**
SKR				AMB		AMB		13 26 59.0	
SKR	comp=E,150nm,0.5s			AMB		AMB		13 26 59.0	
SKR	comp=E,80nm,0.5s			AMB		AMB		13 26 59.0	
SKR	comp=E,230nm,0.5s			*e*S		**Sn**		**13 27 46.0**	**-7.4**
SKR				A				13 28 08.0	
SKR	comp=E,230nm,0.5s			A				13 28 08.0	
SKR	comp=E,110nm,0.5s			A				13 28 08.0	
SKR	comp=E,80nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**5.47**	**246**	*e*P		**Pn**		**13 27 10.8**	**+1.0**
YUK				AMB		AMB		13 27 13.0	
YUK	comp=E,390nm,0.2s			*e*S		**Sn**		**13 28 12.1**	**+0.2**
YUK				A				13 28 18.0	
YUK	comp=E,600nm,0.5s			A				13 28 18.0	
YUK	comp=E,330nm,0.5s								
NEM2	**Nemuro 2**	**5.90**	**240**	P		**Pn**		**13 27 15.3**	**-0.4**
NEM2				*e*S		**Sn**		**13 28 24.0**	**-2.0**
JRA	**Rausu**	**5.99**	**247**	P		**Pn**		**13 27 19.5**	**+2.6**
JNK	**Nakash**	**6.41**	**246**	P		**Pn**		**13 27 24.1**	**+1.4**
JNK				*e*S		**Sn**		**13 28 35.6**	**+0.6**
JAK	**Akkeshi**	**6.74**	**241**	P		**Pn**		**13 27 26.8**	**-0.4**
JAK				*e*S		**Sn**		**13 28 41.5**	**-1.6**
JTKR	**Abashiri--Toko**	**6.76**	**251**	P		**Pn**		**13 27 30.2**	**+2.8**
YSS	**Yuzh-Sakhalins**	**6.90**	**277**	Pn		**Pn**		**13 27 31.6**	**+2.1**
YSS	comp=E,56nm,1.5s **Yuzh-Sakhalins**	**6.90**	**277**	*e*PN		**Pn**		**13 27 33.0**	**+3.6**
YSS				*i* S		**Sn**		**13 28 50.0**	**+3.0**
YSS	comp=N,30nm,0.6s			smax					
YSS	comp=E,50nm,0.7s			smax					
YSS	comp=E,400nm,15.0s			MLR		MLR			
YSS	comp=Z,400nm,15.0s			MLR		MLR			
YSS	**Yuzh-Sakhalins**	**6.90**	**277**	*e*P		**Pn**		**13 27 33.0**	**+3.6**
YSS				*i* S		**Sn**		**13 28 50.0**	**+3.0**
YSS				A				13 28 52.0	
YSS	comp=Z,30nm,0.6s			A				13 28 52.0	
YSS	comp=Z,50nm,0.7s			*e*LQ				13 29 20.0	
YSS				AMS		AMS		13 30 26.0	
YSS	comp=Z,400nm,15.0s			AMS		AMS		13 30 26.0	
JMP	comp=Z,400nm,15.0s **Maruseppu**	**7.10**	**253**	P		**Pn**		**13 27 34.1**	**+1.9**
JAR	**Ashorobuto**	**7.16**	**247**	P		**Pn**		**13 27 34.8**	**+1.9**
PETK	**Petropavlovsk-**	**7.33**	**24**	Pn		**Pn**		**13 27 34.6**	**-0.6**
PETK	comp=Z,4.9nm,0.3s,baz=177,slow=12,SNR=79			LR		LR		13 30 33.2	
PET	comp=Z,208nm,18.2s,baz=320,slow=39 **Petropavlovsk**	**7.54**	**28**	*e*Pn		**Pn**		**13 27 36.2**	**-2.0**
PET				*e*Sn		**Sn**		**13 28 53.6**	**-9.2**
PET	**Petropavlovsk**	**7.54**	**28**	*e*PN		**Pn**		**13 27 38.3**	**+0.1**
PET	**Petropavlovsk**	**7.54**	**28**	*e*P		**Pn**		**13 27 36.8**	**-1.4**
JKK2	**Kamakawa 2**	**7.56**	**253**	P		**Pn**		**13 27 42.2**	**+3.7**
ASAJ	**Asahikawa**	**7.56**	**255**	Pn		**Pn**		**13 27 42.1**	**+3.6**
ASAJ	comp=Z,3.9nm,0.3s,baz=99,slow=13,SNR=31			LR		LR		13 31 26.7	
ASAJ	comp=Z,137nm,18.2s,baz=251,slow=44 **Asahikawa**	**7.56**	**255**	P		**Pn**		**13 27 43.0**	**+4.5**
ASAJ	**Asahikawa**	**7.56**	**255**	P		**Pn**		**13 27 42.4**	**+3.9**
ASAJ				S		Sn		13 29 25.7	+22
JWK2	**Keihoku**	**7.68**	**265**	P		**Pn**		**13 27 45.7**	**+5.6**
JCH	**Churui**	**7.77**	**243**	P		**Pn**		**13 27 41.2**	**-0.1**
JCH				*e*S		**Sn**		**13 29 07.0**	**-1.4**
JFR	**Furan**	**7.97**	**249**	P		**Pn**		**13 27 46.1**	**+2.0**
ERM	**Erimo**	**8.24**	**240**	*e*Pn		**Pn**		**13 27 47.7**	**-0.1**
ERM	comp=Z,48nm,0.5s			*e*Sn		**Sn**		**13 29 11.9**	**-8.0**
ERM	**Erimo**	**8.24**	**240**	*e*PN		**Pn**		**13 27 49.5**	**+1.7**
JEM	**Erimo**	**8.24**	**240**	*e*S		**Sn**		**13 29 16.7**	**-3.2**
JEM	**Erimo**	**8.24**	**240**	P		**Pn**		**13 27 49.1**	**+1.4**
JEM				S		**Sn**		**13 29 17.6**	**-2.3**
JBT2	**Biratori 2**	**8.31**	**247**	P		**Pn**		**13 27 49.3**	**+0.6**
JNBK	**Urakawa-nobuka**	**8.33**	**243**	P		**Pn**		**13 27 48.5**	**-0.5**
JEW	**Eniwo**	**8.87**	**250**	P		**Pn**		**13 27 58.5**	**+2.1**
JEW				S		**Sn**		**13 29 43.3**	**+8.0**

YAK Yakutsk 20.40 328 P **P** **13 30 19.1 -5.6**
KSRS Korea Array 20.50 253 P **P** **13 30 27.6 +1.6**
comp=Z,4.3nm,0.7s,baz=55,slow=9.6,SNR=4.6
KSRS Korea Array 20.50 253 P **P** **13 30 27.6 +1.6**
KSRS pmax pmax
comp=Z,4.0nm,0.7s
BILL Bilibino 22.68 13 P **P** **13 30 46.4 -2.6**
BILL Bilibino 22.68 13 *eP* **P** **13 30 46.6 -2.4**
BILL *e* 13 31 08.7
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb3.9
NJ2 Nanjing 29.71 253 *eP* **P** **13 31 53.8 0.0**
HHC Hu-ho-hao-te 30.08 274 *eP* **P** **13 31 56.5 -0.5**
HHC XP sP 13 32 02.8 -5.3
HHC PP PP 13 32 55.1 -10
HHC PCP PcP 13 34 58.8 +0.6
HHC S **S** **13 36 51.8 -2.0**
HHC SS SS 13 38 29.3 -33
HHC PCS PcS 13 38 41.3 -0.2
HHC SCS ScS 13 42 31.9 -2.0
HHC AMB AMB
comp=Z,14nm,0.5s,mb5.0
HHC AMB AMB
comp=Z,83nm,4.9s
HHC LR LR
comp=N,266nm,16.6s,MS4.1
HHC LR LR
comp=E,229nm,14.3s,MS4.1
HHC LR LR
comp=Z,284nm,16.1s,MS4.0
ULN Ulaanbaatar 30.76 289 *eP* **P** **13 32 03.1 +0.2**
SONM Songino Array 31.19 290 P **P** **13 32 06.0 -0.7**
comp=Z,0.2nm,0.3s,baz=64,slow=11,SNR=3.3
SONM LR LR 13 45 21.2
comp=Z,76nm,18.1s,MS3.4,baz=134,slow=38
IMA2 Indian Mountai 34.13 36 *eP* **P** **13 32 32.1 -0.2**
KDAK Kodiak Island 34.43 51 P pP 13 32 48.1 +5.3
comp=Z,17nm,0.8s,baz=274,slow=4.4,SNR=5.6
BPAW Bear Paw Mtn. 35.09 39 *eP* **P** **13 32 41.8 +1.3**
comp=Z,22nm,0.3s,mb5.6
XAN Xi'an 35.26 265 P **P** **13 32 42.4 0.0**
XAN AP pP 13 32 51.1 +0.8
XAN AMB AMB
comp=Z,5.0nm,0.8s,mb4.5
COLD Coldfoot 35.66 34 *eP* **P** **13 32 45.4 -0.1**
comp=Z,6.0nm,0.8s,mb4.6
COLD *e* pP 13 32 54.5 +1.2
MCK McKinley 35.98 40 *eP* **P** **13 32 47.3 -0.9**
comp=Z,8.3nm,1.0s,mb4.6
MCK McKinley 35.98 40 *eP* **P** **13 32 47.3 -0.9**
MCK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
COLA College 36.47 38 *eP* **P** **13 32 52.2 -0.1**
comp=Z,8.4nm,0.8s,mb4.7
COLA College 36.47 38 *eP* **P** **13 32 52.2 -0.1**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LZH Lanzhou 37.66 272 *eP* **P** **13 33 03.0 +0.1**
LZH AP pP 13 33 07.8 -3.0
LZH XP sP 13 33 10.3 -3.7
LZH *e*PP PP 13 34 31.3 +2.4
LZH AMB AMB
comp=Z,22nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,121nm,5.8s
LZH LR LR
comp=E,438nm,13.4s
LZH LR LR
comp=Z,593nm,17.6s,MS4.4
LZH Lanzhou 37.66 272 *eP* **P** **13 33 03.0 +0.1**
comp=Z,22nm,1.5s,mb4.7
LZH pP pP 13 33 07.8 -3.0
LZH sP sP 13 33 10.2 -3.8
LZH *e*PP PP 13 34 31.3 +2.4
LZH LR LR
comp=Z,590nm,17.6s,MS4.4
LZH Lanzhou 37.66 272 *eP* **P** **13 33 03.0 +0.1**
LZH *e* 13 34 31.3
LZH pmax pmax
comp=Z,22nm,1.5s,mb4.7
LZH MLR MLR
comp=Z,590nm,17.6s,MS4.4
EGAK Eagle 39.33 38 *eP* **P** **13 33 15.6 -0.9**
comp=Z,4.6nm,0.8s,mb4.3
CD2 Chengdu 40.63 265 *eP* **P** **13 33 28.8 +1.1**
CD2 AP pP 13 33 33.3 -2.3
CD2 XP sP 13 33 36.0 -2.9
CD2 PP PP 13 35 06.0 +4.6
CD2 S **S** **13 39 27.0 -8.8**
CD2 XS sS 13 39 44.5 -4.4
CD2 SS SS 13 42 31.3 -4.9
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,30nm,3.8s
CD2 LR LR
comp=N,130nm,15.2s,MS4.2
CD2 LR LR
comp=E,210nm,14.6s,MS4.2
CD2 LR LR
comp=Z,180nm,16.2s,MS4.0
GYA Guiyang 41.44 257 P **P** **13 33 35.1 +0.7**
GYA PP PP 13 35 13.0 +2.8
GYA PCP PcP 13 35 33.0 +1.1
GYA SCP ScP 13 39 21.8 +1.8
GYA S **S** **13 39 48.5 +0.7**
GYA SS SS 13 42 46.5 -5.9
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
GYA AMB AMB
comp=Z,150nm,6.5s
GYA LR LR
comp=N,450nm,12.3s,MS4.7
GYA LR LR
comp=E,330nm,11.7s,MS4.7
GYA LR LR
comp=Z,510nm,12.3s,MS4.6
INK Inuvik 41.98 32 *eP* **P** **13 33 38.2 0.0**
comp=Z,282nm,0.8s
INK *e* pP 13 33 48.0 +1.7
ZALV Zalesovo Beam 42.56 306 P **P** **13 33 41.3 -1.9**
comp=Z,0.8nm,0.4s,mb3.8,baz=55,slow=7.5,SNR=5.5
ZALV PcP PcP 13 35 35.4 +0.2
comp=Z,1.0nm,0.6s,baz=52,slow=2.4,SNR=6.4
ZALV pPcP 13 35 45.4
comp=Z,0.6nm,0.4s,baz=107,slow=5.1,SNR=4.8
ZALV Zalesovo Beam 42.56 306 P **P** **13 33 41.3 -1.9**
ZALV 13 35 35.4
WMQ Urumqi 44.80 291 *eP* **P** **13 34 01.0 -0.3**
WMQ XP sP 13 34 08.0 -4.6
WMQ PP PP 13 35 46.0 0.0
WMQ S **S** **13 40 36.0 -0.7**
WMQ SS SS 13 43 47.0 -11
WMQ AMB AMB
comp=Z,16nm,1.0s,mb4.8
WMQ LR LR
comp=N,65nm,15.0s,MS3.8
WMQ LR LR
comp=E,58nm,15.0s,MS3.8
WMQ LR LR
comp=Z,59nm,15.0s,MS3.6
KMI Kunming 44.97 259 P **P** **13 34 03.6 +0.7**
KMI AP pP 13 34 06.8 -4.2
KMI XP sP 13 34 08.3 -5.9
KMI PP PP 13 35 48.4 +0.2
KMI S **S** **13 40 39.1 -0.6**
KMI SS SS 13 43 51.5 -10
KMI AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
KMI LR LR
comp=Z,47nm,20.9s,MS3.4
KMI Kunming 44.97 259 P **P** **13 34 03.6 +0.7**
comp=Z,7.0nm,1.0s,mb4.5
KMI pP pP 13 34 06.8 -4.2
KMI sP sP 13 34 08.2 -6.0
KMI PP PP 13 35 48.4 +0.2
KMI S **S** **13 40 39.1 -0.6**
KMI SS SS 13 43 51.5 -10
KMI LR LR
comp=Z,50nm,20.9s,MS3.4
DLBC Dease Lake 45.93 46 P **P** **13 34 08.4 -1.6**
comp=Z,2.9nm,0.7s,mb4.3,baz=330,slow=14,SNR=5.0
MKAR Makanchi Array 46.84 297 P **P** **13 34 16.3 -1.2**
comp=Z,0.5nm,0.6s,mb3.7,baz=69,slow=6.1,SNR=12
MKAR PcP PcP 13 35 50.0 0.0
comp=Z,1.0nm,0.8s,baz=85,slow=0.8,SNR=5.6
MKAR Makanchi Array 46.84 297 P **P** **13 34 16.3 -1.2**
MKAR PcP PcP 13 35 50.0 0.0
MKAR Makanchi Array 46.84 297 *eP* **P** **13 34 16.6 -0.9**
KURK Kurchatov 47.30 304 *eP* **P** **13 34 18.2 -2.7**
KURK Kurchatov 47.30 304 *eP* **P** **13 34 19.8 -1.2**
KURK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
LSA Lhasa 50.05 273 P **P** **13 34 44.2 +1.8**
comp=Z,9.6nm,0.8s,mb4.9
LSA Lhasa 50.05 273 P **P** **13 34 44.2 +1.8**
LSA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BVAR Borovoye Array 50.83 309 PcP PcP 13 36 04.5 +0.2
comp=Z,0.8nm,0.5s,baz=85,slow=3.4,SNR=4.0
YKA Yellowknife Ar 51.25 36 P **P** **13 34 50.9 0.0**
comp=Z,3.4nm,0.8s,mb4.3,baz=302,slow=7.6,SNR=5.6
YKA pP pP 13 35 00.4 +1.3
comp=Z,3.4nm,0.8s,baz=294,slow=7.2,SNR=5.4
YKA Yellowknife Ar 51.25 36 P **P** **13 34 50.9 -0.1**
YKA *PP pP 13 35 00.4 +1.3
CHTO Chiang Mai 51.84 257 *eP* **P** **13 34 57.4 +1.5**
comp=Z,8.3nm,0.8s,mb4.7
CHTO Chiang Mai 51.84 257 *eP* **P** **13 34 57.4 +1.5**
CHTO pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CMAR Chiang Mai Arr 52.09 256 P **P** **13 34 59.5 +1.8**
comp=Z,4.3nm,0.7s,mb4.5,baz=38,slow=7.4,SNR=32
CMAR pP pP 13 35 08.7 +2.7
comp=Z,2.3nm,0.8s,baz=39,slow=7.2,SNR=6.7
CMAR LR LR 13 59 42.5
comp=Z,39nm,19.1s,MS3.5,baz=355,slow=39
CMAR Chiang Mai Arr 52.09 256 P **P** **13 34 59.6 +1.8**
CMAR *PP pP 13 35 08.7 +2.8
TAPN Taplejung 53.88 273 *eP* **P** **13 35 12.2 +1.3**
comp=Z,18nm,1.0s,mb5.0
JIRN Jiri 54.73 274 *eP* **P** **13 35 18.3 +1.2**
comp=Z,27nm,0.8s,mb5.3
GUN Gumba 54.79 275 *eP* **P** **13 35 18.6 +1.0**
comp=Z,26nm,1.0s,mb5.2
RAMN Ramite 54.90 274 *eP* **P** **13 35 19.4 +1.1**
comp=Z,38nm,0.9s,mb5.4
KKN Kakani 55.28 275 *eP* **P** **13 35 22.2 +1.1**
comp=Z,23nm,0.8s,mb5.3
DMN Daman 55.51 275 *eP* **P** **13 35 24.0 +1.2**
comp=Z,224nm,1.5s
GKN Gorkha 55.59 276 *eP* **P** **13 35 24.2 +0.9**
comp=Z,30nm,0.8s,mb5.4
DANN Dangsing 55.97 277 *eP* **P** **13 35 27.5 +1.5**
comp=Z,27nm,0.6s,mb5.5
KOLN Koldanda 56.45 276 *eP* **P** **13 35 30.7 +1.3**
comp=Z,25nm,0.8s,mb5.3
PYUN Piuthan 56.66 277 *eP* **P** **13 35 32.0 +1.1**
comp=Z,23nm,0.9s,mb5.2
SUMG Summit 60.95 4 P **P** **13 35 59.7 -0.4**
comp=Z,5.1nm,0.9s,mb4.7
FFC Flin Flon 61.07 40 *eP* **P** **13 36 00.9 -0.3**
comp=Z,5.9nm,0.8s,mb4.8
FFC *e* pP 13 36 10.4 +1.0
FFC Flin Flon 61.07 40 *eP* **P** **13 36 00.9 -0.3**
FFC *e* pP 13 36 10.4 +1.0
FFC pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
NVAR Mina Array Bea 62.75 62 P **P** **13 36 13.5 +0.8**
comp=Z,1.1nm,0.7s,mb4.1,baz=302,slow=7.5,SNR=9.8
NVAR pP pP 13 36 22.9 +1.9
comp=Z,1.4nm,0.6s,baz=298,slow=7.1,SNR=10
NVAR Mina Array Bea 62.75 62 P **P** **13 36 13.5 +0.8**
NVAR pP pP 13 36 22.9 +1.9
PDAR Pinedale Array 65.08 54 P **P** **13 36 28.1 +0.1**
comp=Z,0.8nm,0.8s,mb3.8,baz=299,slow=2.8,SNR=7.9
PDAR pP pP 13 36 38.0 +1.7
comp=Z,2.4nm,0.8s,baz=294,slow=2.2,SNR=14
CTAO Charters Tower 66.55 187 P **P** **13 36 37.0 -0.6**
comp=Z,24nm,1.3s,mb5.1
CTAO Charters Tower 66.55 187 P **P** **13 36 37.0 -0.5**
CTAO pmax pmax
comp=Z,24nm,1.3s,mb5.1
WRAB Tennant Creek 68.20 199 *eP* **P** **13 36 47.7 -0.3**
comp=Z,2.8nm,0.8s,mb4.3
WRAB Tennant Creek 68.20 199 *eP* **P** **13 36 47.7 -0.3**
WRAB pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
WB2 Warramunga Arr 68.21 199 *eP* **P** **13 36 47.6 -0.4**
WRA Warramunga Arr 68.21 199 P **P** **13 36 47.4 -0.6**
comp=Z,2.6nm,0.8s,mb4.3,baz=18,slow=6.6,SNR=22
PV10 Paradox Valley 68.29 57 *eP* **P** **13 36 49.4 +0.8**
PV10 *e* pP 13 36 59.1 +2.1
NB2 NORSAR Subarra 68.38 341 P **P** **13 36 48.0 -0.7**
comp=Z,2.7nm,0.7s,mb4.4,baz=31,slow=6.5
NOA NORSAR Array B 68.38 341 P **P** **13 36 47.8 -0.9**
comp=Z,1.2nm,0.5s,mb4.2,baz=28,slow=6.3,SNR=7.0
PV01 Paradox Valley 68.73 57 P **P** **13 36 53.0 +1.7**
AKASG Malin Array Be 71.61 326 P **P** **13 37 07.5 -1.2**
comp=Z,0.8nm,0.3s,mb4.1,baz=34,slow=5.7,SNR=3.8
ASAR Alice Springs 71.91 198 P **P** **13 37 11.6 +0.9**
comp=Z,2.2nm,0.6s,mb4.3,baz=12,slow=5.7,SNR=24
TXAR Lajitas Array 77.81 60 P **P** **13 37 44.9 -0.1**
comp=Z,1.0nm,0.7s,mb3.9,baz=288,slow=4.1,SNR=8.3
TXAR pP pP 13 37 54.8 +1.3
comp=Z,2.2nm,0.5s,baz=301,slow=4.4,SNR=14
NWAO Narrogin (SRO) 85.33 209 P **P** **13 38 24.4 +0.1**
comp=Z,6.8nm,0.8s,mb4.8
NWAO Narrogin (SRO) 85.33 209 P **P** **13 38 24.4 0.0**
NWAO pmax pmax
comp=Z,7.0nm,0.8s
CFAA Coronel Fontan 145.26 79 PKPbc PKPbc 13 45 25.6 +0.8
comp=Z,0.4nm,0.6s,baz=306,slow=3.4,SNR=5.8
CFAA pPKPbc pPKPbc 13 45 34.2 +0.6
comp=Z,1.0nm,0.7s,baz=272,slow=5.4,SNR=7.0
CFAA Coronel Fontan 145.26 79 PKPbc PKPbc 13 45 25.6 +0.8
CFAA pPKPbc pPKPbc 13 45 34.2 +0.6
PLCA Paso Flores 148.42 95 PKPbc PKPbc 13 45 32.9 -0.7
comp=Z,1.3nm,0.6s,baz=255,slow=16,SNR=2.9
PLCA pPKPbc pPKPbc 13 45 43.4 +1.1
comp=Z,3.9nm,0.9s,baz=201,slow=4.1,SNR=4.9
PLCA Paso Flores 148.42 95 PKPbc PKPbc 13 45 32.9 -0.7
PLCA pPKPbc pPKPbc 13 45 43.4 +1.1
SNAA Sanae 152.26 196 *e*PKPdf PKPbc 13 45 40.0 -1.8
SNAA *e* 13 45 50.1
SNAA *e* 13 45 56.3
VNA2 Neumayer--Watz 153.72 195 *e*PKPdf PKPbc 13 45 45.3 +0.3
baz=318,slow=1.7
VNA2 *e* 13 45 58.3
VNA2 *e* 13 46 03.1
VNA3 Neumayer Olymp 153.81 193 *e*PKPdf PKPbc 13 45 46.4 +1.2
VNA3 *e* 13 45 58.4
VNA3 *e* 13 46 04.2
VNA1 Neumayer--Stat 154.10 194 *e*PKPdf PKPbc 13 45 46.3 +0.4
VNA1 *e* 13 46 00.3
VNA1 *e* 13 46 06.0

ISCJB ***15*** *13:47:32.9±0.2, 43.180N±0.0009×000E±0.001, h7km±1km, Error ellipse: s-maj=1.7km s-min=1.4km az=139.8*
NEIC ***15*** *13:47:35.8, 4304N×003E, h5km, ML4.5(LDG), ML4.3(STR), MN3.8(MDD), After STR.*
NEIC Felt at Lourdes and Tarbes.
MDD ***15*** *13:47:35.9±0.2, 4304N×000E, h0km, mbLg3.8/66, Error ellipse: s-maj=1.8km s-min=1.2km az=3.0, PRIMO*
MDD EMS:II INTENSIDAD MIMA ESPA.
LDG ***15*** *13:47:35.7±0.1, 4301N×000W, h3km, Md3.8/7, Ml4.5/45, Error ellipse: s-maj=1.3km s-min=1.0km az=143.0*
CSEM ***15*** *13:47:35.8±0.0, 4301N×001W, h8km, ML4.5/46, Error ellipse: s-maj=0.7km s-min=0.5km az=139.0*
STR ***15*** *13:47:35.8±0.3, 4304N×003E, h5km, Ml4.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
MRB ***15*** *13:47:37.3±0.7, 4297N×003E, h0km±6km, ML3.9, Error ellipse: s-maj=2.9km s-min=2.1km az=35.0*
ISC 15 13:47:34.7±0.2, 43111N±0008×002E±001, h8km±1km, n312, σ1§18/641, 12C-5D, France
INMG 15 13:47:37.5±1.6, 4300N×004W, h14km±3km, ML3.5, Error ellipse: s-maj=4.0km s-min=2.2km az=45.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.08**	**147**	Pg	**Pg**	**13 47 37.4**	**+0.7**
LABF	**Labassere**	**0.08**	**147**	P	**Pg**	**13 47 37.5**	**+0.8**
LABF				S	**Sg**	**13 47 38.8**	**+0.7**
VIEF	**Viey**	**0.23**	**179**	Pg	**Pg**	**13 47 38.6**	**-0.7**
VIEF	**Viey**	**0.23**	**179**	P	**Pg**	**13 47 38.7**	**-0.6**
VIEF				S	**Sg**	**13 47 40.8**	**-1.5**
EPF	**Esparros**	**0.25**	**109**	*e*Pg	**Pg**	**13 47 40.7**	**+1.0**
				*e*Sg	**Sg**	**13 47 44.0**	**+1.0**
EPF	**Esparros**	**0.25**	**109**	*e*Pg	**Pg**	**13 47 40.7**	**+1.0**
EPF				*e*Sg	**Sg**	**13 47 44.0**	**+1.0**
REYF	**Montagne du Re**	**0.30**	**262**	Pg	**Pg**	**13 47 41.0**	**+0.3**
REYF	**Montagne du Re**	**0.30**	**262**	P	**Pg**	**13 47 41.1**	**+0.5**
REYF				S	**Sg**	**13 47 45.7**	**+1.0**
RESF	**Ens**	**0.38**	**142**	Pg	**Pg**	**13 47 42.0**	**-0.2**
RESF	**Ens**	**0.38**	**142**	P	**Pg**	**13 47 42.0**	**-0.2**
RESF				S	**Sg**	**13 47 46.8**	**-0.4**
EBIE	**Bielsa**	**0.43**	**168**	Pg	**Pg**	**13 47 42.4**	**-0.7**
EBIE				Lg		13 47 47.1	
EBIE	**Bielsa**	**0.43**	**168**	⇑Pg	**Pg**	**13 47 42.4**	**-0.7**
EBIE				Lg		13 47 47.1	
ETSF	**Etsaut**	**0.47**	**244**	*e*Pg	**Pg**	**13 47 43.7**	**-0.2**
ETSF				*e*Sg	**Sg**	**13 47 49.6**	**-0.5**
ETSF	**Etsaut**	**0.47**	**244**	*e*Pg	**Pg**	**13 47 43.7**	**-0.2**
ETSF				*e*Sg	**Sg**	**13 47 49.6**	**-0.5**
FDAF	**Les Forges d'A**	**0.52**	**236**	P	**Pg**	**13 47 44.5**	**-0.2**
FDAF				S	**Sg**	**13 47 50.9**	**-0.6**
ATE	**Arette**	**0.53**	**268**	Pg	**Pg**	**13 47 45.1**	**+0.2**
ATE	**Arette**	**0.53**	**268**	P	**Pg**	**13 47 45.3**	**+0.4**
ATE				S	**Sg**	**13 47 52.8**	**+1.1**
MELF	**Melles**	**0.59**	**113**	Pg	**Pg**	**13 47 45.9**	**-0.3**
MELF	**Melles**	**0.59**	**113**	P	**Pg**	**13 47 46.1**	**0.0**
MELF				S	**Sg**	**13 47 54.4**	**+0.5**
ORDF	**Ordiarp**	**0.70**	**279**	Pg	**Pg**	**13 47 48.9**	**+0.6**
ORDF	**Ordiarp**	**0.70**	**279**	P	**Pg**	**13 47 48.8**	**+0.5**
ORDF				S	**Sg**	**13 47 59.3**	**+1.9**
LARF	**Larrau**	**0.74**	**265**	Pg	**Pg**	**13 47 49.3**	**+0.4**
LARF	**Larrau**	**0.74**	**265**	P	**Pg**	**13 47 49.2**	**+0.3**
LARF				S	**Sg**	**13 47 58.5**	**0.0**
MLS	**Moulis**	**0.81**	**101**	Pg	**Pg**	**13 47 50.8**	**+0.6**
MLS				Sg	**Sg**	**13 48 02.3**	**+1.7**
MLS	**Moulis**	**0.81**	**101**	P	**Pg**	**13 47 50.1**	**-0.1**
MLS				S	**Sg**	**13 48 02.3**	**+1.6**
SJPF	**Ste Jean**	**0.91**	**271**	*e*Pg	**Pg**	**13 47 52.2**	**0.0**
SJPF				*e*Sg	**Sg**	**13 48 04.6**	**+0.6**
SJPF	**Ste Jean**	**0.91**	**271**	*e*Pg	**Pg**	**13 47 52.2**	**0.0**
SJPF				*e*Sg	**Sg**	**13 48 04.6**	**+0.6**
OSSF	**Osses**	**0.95**	**279**	Pg	**Pg**	**13 47 53.0**	**+0.1**
OSSF	**Osses**	**0.95**	**279**	P	**Pg**	**13 47 52.7**	**-0.2**
OSSF				S	**Sg**	**13 48 07.3**	**+2.1**
CTRE	**Tremp**	**0.96**	**144**	P	**Pg**	**13 47 52.7**	**-0.5**
CTRE				S	**Sg**	**13 48 05.1**	**-0.6**
EORO	**Oroz-Betelu**	**1.00**	**258**	Pg	**Pg**	**13 47 53.8**	**0.0**
EORO	**Oroz-Betelu**	**1.00**	**258**	⇓Pg	**Pg**	**13 47 53.8**	**0.0**
EORO				Lg		13 48 07.6	
CEST	**Esterri de Car**	**1.04**	**119**	P	**Pg**	**13 47 54.4**	**-0.3**
CEST	**Esterri de Car**	**1.04**	**119**	P	**Pg**	**13 47 54.3**	**-0.4**
CEST				S	**Sg**	**13 48 08.7**	**+0.4**
IPRE	**Itoiz**	**1.05**	**254**	Pg	**Pg**	**13 47 54.8**	**-0.1**
IPRE	**Itoiz**	**1.05**	**254**	Pg	**Pg**	**13 47 54.8**	**-0.2**
IPRE				Lg		13 48 09.4	
CSOR	**Sort**	**1.10**	**131**	P	**Pg**	**13 47 55.2**	**-0.7**
IZUN	**Zunzarren**	**1.11**	**257**	Pg	**Pg**	**13 47 55.8**	**-0.2**
IZUN	**Zunzarren**	**1.11**	**257**	Pg	**Pg**	**13 47 55.8**	**-0.2**
IZUN				Lg		13 48 11.2	
EALK	**Alkurruntz**	**1.12**	**276**	Pg	**Pg**	**13 47 55.4**	**-0.8**
EALK				Lg		13 48 12.3	
ELIZ	**Elizondo**	**1.13**	**273**	Pg	**Pg**	**13 47 56.3**	**-0.2**
ELIZ				Lg		13 48 13.2	
ELIZ	**Elizondo**	**1.13**	**273**	Pg	**Pg**	**13 47 56.3**	**-0.2**
ELIZ				Lg		13 48 13.2	
IUSE	**Utxeti**	**1.16**	**262**	Pg	**Pg**	**13 47 56.7**	**-0.2**
IUSE	**Utxeti**	**1.16**	**262**	⇑Pg	**Pg**	**13 47 56.7**	**-0.2**
IUSE				Lg		13 48 14.2	
IUNC	**Unciti**	**1.17**	**253**	Pg	**Pg**	**13 47 57.5**	**+0.4**
IUNC	**Unciti**	**1.17**	**253**	Pg	**Pg**	**13 47 57.5**	**+0.4**
IUNC				Lg		13 48 13.4	
EARA	**Aranguren**	**1.22**	**254**	⇓Pg	**Pg**	**13 47 58.5**	**+0.4**
EARA				Lg		13 48 14.5	
PAND	**Andorre**	**1.27**	**117**	P	**Pn**	**13 47 58.4**	**-0.3**
PAND				S	**Sb**	**13 48 13.7**	**-1.6**
CORG	**Organya**	**1.30**	**132**	P	**Pn**	**13 47 59.1**	**0.0**
CORG				S	**Sb**	**13 48 15.6**	**-0.6**
CAVN	**Les Avellanes**	**1.34**	**156**	P	**Pn**	**13 47 59.6**	**-0.1**
CAVN				S	**Sb**	**13 48 16.9**	**-0.5**
LPEF	**Le Peyrat**	**1.40**	**96**	P	**Pn**	**13 48 02.3**	**+1.8**
LPEF				S	**Sb**	**13 48 21.4**	**+2.5**
ESAC	**San Caprasio**	**1.43**	**195**	Pg	**Pg**	**13 48 01.4**	**-0.8**
ESAC	**San Caprasio**	**1.43**	**195**	⇑Pg	**Pg**	**13 48 01.4**	**-0.8**
ESAC				Lg		13 48 20.3	
CLLI	**Llivia**	**1.57**	**113**	S	**Sn**	**13 48 25.6**	**+2.2**
CARF	**Carcanieres**	**1.58**	**104**	Pg	**Pg**	**13 48 05.1**	**0.0**
CARF				Sg	**Sg**	**13 48 26.3**	**+0.7**
CARF	**Carcanieres**	**1.58**	**104**	P	**Pn**	**13 48 05.1**	**+2.1**
CARF				S	**Sn**	**13 48 26.1**	**+2.5**
MTLF	**Montolieu**	**1.62**	**81**	*e*Pg	**Pg**	**13 48 06.6**	**+0.8**
MTLF				*e*Sn	**Sn**	**13 48 24.7**	**0.0**
MTLF				*e*Sg	**Sg**	**13 48 27.6**	**+0.7**
MTLF	**Montolieu**	**1.62**	**81**	*e*Pn	**Pn**	**13 48 03.8**	**+0.2**
MTLF				*e*Pg	**Pg**	**13 48 06.6**	**+0.8**
MTLF				*e*Sn	**Sn**	**13 48 24.7**	**0.0**
MTLF				*e*Sg	**Sg**	**13 48 27.6**	**+0.7**
MTLF	**Montolieu**	**1.62**	**81**	*e*Pg	**Pg**	**13 48 06.6**	**+0.8**
MTLF				*e*Sn	**Sn**	**13 48 24.7**	**0.0**
MTLF				*e*Sg	**Sg**	**13 48 27.6**	**+0.7**
MTLF	**Montolieu**	**1.62**	**81**	Pn	**Pn**	**13 48 03.8**	**+0.2**
MTLF				Pg	**Pg**	**13 48 06.6**	**+0.8**
MTLF				Sn	**Sn**	**13 48 24.7**	**0.0**
MTLF				Lg		13 48 27.6	
EMIR	**Miracle**	**1.64**	**136**	Pg	**Pg**	**13 48 05.5**	**-0.5**
EMIR	**Miracle**	**1.64**	**136**	Pg	**Pg**	**13 48 05.5**	**-0.6**
EMIR				Lg		13 48 27.3	
VALF	**Valcebollere**	**1.64**	**115**	P	**Pn**	**13 48 05.3**	**+1.6**
VALF				S	**Sn**	**13 48 28.1**	**+3.3**
CBRU	**Bruguera**	**1.79**	**117**	S	**Sn**	**13 48 34.1**	**+5.2**
CBRU	**Bruguera**	**1.79**	**117**	P	**Pn**	**13 48 09.2**	**+3.3**
CBRU				S	**Sn**	**13 48 34.1**	**+5.2**
LRDF	**Laroque-de-Fa**	**1.86**	**94**	Pg	**Pg**	**13 48 10.4**	**+0.1**

LRDF Sg **Sg** 13 48 34.7 +0.3
LRDF Laroque-de-Fa 1.86 94 P **Pn** 13 48 10.7 +3.9
LRDF S **Sn** 13 48 34.5 +4.1
CORI Orista 1.88 126 S **Sn** 13 48 34.7 +3.7
1µm,0.4s
CORI Orista 1.88 126 P **Pn** 13 48 09.6 +2.5
CORI S **Sn** 13 48 34.7 +3.7
705nm,0.4s
LFF La Frestale 1.90 16 *e*Pg **Pg** 13 48 12.9 +1.8
LFF *e*Sn **Sn** 13 48 31.6 +0.1
SNR=1.0
LFF *e*Sg **Sg** 13 48 38.8 +3.0
2µm,0.3s
LFF La Frestale 1.90 16 *e*Pn **Pn** 13 48 08.3 +0.9
LFF *e*Pg **Pg** 13 48 12.9 +1.8
LFF *e*Sn **Sn** 13 48 31.6 +0.1
LFF *e*Sg **Sg** 13 48 38.8 +3.0
LFF La Frestale 1.90 16 *e*Pg **Pg** 13 48 12.9 +1.8
LFF *e*Sn **Sn** 13 48 31.6 +0.1
SNR=1.0
LFF *e*Sg **Sg** 13 48 38.8 +3.0
990nm,0.3s
LFF La Frestale 1.90 16 Pn **Pn** 13 48 08.3 +0.9
LFF Pg **Pg** 13 48 12.9 +1.8
LFF Sn **Sn** 13 48 31.6 +0.1
LFF Lg 13 48 38.8
990nm,0.3s
ECRI Cripan 1.93 256 ⇑Pg **Pg** 13 48 10.0 -1.6
20nm,0.1s,SNR=18
ECRI Lg 13 48 37.4
247nm,0.2s,SNR=7.9
EPOB Poblet 1.93 155 Pn **Pn** 13 48 07.9 +0.2
1.5nm,0.2s,SNR=265
EPOB Poblet 1.93 155 Pg **Pg** 13 48 09.8 -1.8
78nm,0.2s,SNR=7.9
EPOB Poblet 1.93 155 Pn **Pn** 13 48 07.9 +0.2
1.5nm,0.2s,SNR=265
EPOB Pg **Pg** 13 48 09.8 -1.8
78nm,0.2s,SNR=7.9
EPOB Lg 13 48 34.0
1µm,0.6s,SNR=47
FILF Fillols 1.95 106 P **Pn** 13 48 09.7 +1.7
FILF S **Sn** 13 48 31.5 -1.2
ERTA Horta de San J 2.17 174 Pn **Pn** 13 48 11.0 0.0
1.9nm,0.1s,SNR=102
ERTA Horta de San J 2.17 174 ⇓Pg **Pg** 13 48 14.1 -2.1
ERTA Horta de San J 2.17 174 Pn **Pn** 13 48 11.0 0.0
1.9nm,0.1s,SNR=102
ERTA ⇓Pg **Pg** 13 48 14.0 -2.1
141nm,0.3s,SNR=18
ERTA Lg 13 48 41.1
742nm,0.5s,SNR=21
SJAF Saint Jean de 2.20 106 P **Pn** 13 48 14.3 +2.9
SJAF S **Sn** 13 48 44.8 +6.0
EJON La Jonquera 2.21 106 Pg **Pg** 13 48 14.6 -2.5
31nm,0.3s,SNR=18
EJON La Jonquera 2.21 106 ⇓Pg **Pg** 13 48 14.6 -2.5
31nm,0.3s,SNR=18
EJON Lg 13 48 45.3
235nm,0.3s,SNR=12
CFON Fontmartina 2.24 126 P **Pn** 13 48 14.1 +2.1
CAF Calviac 2.34 38 *e*Pg **Pg** 13 48 20.4 +0.9
CAF *e*Sn **Sn** 13 48 41.5 -0.8
SNR=1.0
CAF *e*Sg **Sg** 13 48 51.8 +2.0
681nm,0.2s
CAF Calviac 2.34 38 *e*Pn **Pn** 13 48 13.2 -0.2
CAF *e*Pg **Pg** 13 48 20.4 +0.9
CAF *e*Sn **Sn** 13 48 41.5 -0.8
CAF *e*Sg **Sg** 13 48 51.8 +2.0
CAF Calviac 2.34 38 *e*Pg **Pg** 13 48 20.4 +0.9
CAF *e*Sn **Sn** 13 48 41.5 -0.8
SNR=1.0
CAF *e*Sg **Sg** 13 48 51.8 +2.0
340nm,0.2s
CAF Calviac 2.34 38 Pn **Pn** 13 48 13.2 -0.2
CAF Pg **Pg** 13 48 20.4 +0.9
CAF Sn **Sn** 13 48 41.5 -0.8
CAF Lg 13 48 51.8
340nm,0.2s
RJF Les Rejaudoux 2.44 26 *e*Pg **Pg** 13 48 22.7 +1.2
RJF *e*Sn **Sn** 13 48 43.4 -1.5
SNR=1.0
RJF *e*Sg **Sg** 13 48 56.0 +2.8
732nm,0.2s
RJF Les Rejaudoux 2.44 26 *e*Pn **Pn** 13 48 15.5 +0.7
RJF *e*Pg **Pg** 13 48 22.7 +1.2
RJF *e*Sn **Sn** 13 48 43.4 -1.5
RJF *e*Sg **Sg** 13 48 56.0 +2.8
RJF Les Rejaudoux 2.44 26 *e*Pg **Pg** 13 48 22.7 +1.2
RJF *e*Sn **Sn** 13 48 43.4 -1.5
SNR=1.0
RJF *e*Sg **Sg** 13 48 56.0 +2.8
366nm,0.2s
RJF Les Rejaudoux 2.44 26 Pn **Pn** 13 48 15.5 +0.7
RJF Pg **Pg** 13 48 22.7 +1.2
RJF Sn **Sn** 13 48 43.4 -1.5
RJF Lg 13 48 56.0
366nm,0.2s
ELAN Lanestosa 2.53 274 Pn **Pn** 13 48 18.6 +2.6
13nm,0.3s,SNR=27
ELAN Sn **Sn** 13 48 48.2 +1.3
82nm,0.2s,SNR=7.9
ELAN Lanestosa 2.53 274 Pn **Pn** 13 48 18.6 +2.6
13nm,0.3s,SNR=27
ELAN Sn **Sn** 13 48 48.2 +1.3
82nm,0.2s,SNR=7.9
ETOR Torete 2.76 215 ⇑Pn **Pn** 13 48 20.2 +1.0
ETOR Torete 2.76 215 ⇑Pn **Pn** 13 48 20.2 +1.0
300nm,0.2s,SNR=18
ETOR Pg **Pg** 13 48 24.5 -3.1
447nm,0.3s,SNR=7.9
ETOR Sn **Sn** 13 48 52.2 -0.5
670nm,0.3s,SNR=7.9
ETOR Lg 13 49 02.8
821nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.77 188 Pn **Pn** 13 48 19.7 +0.4
1.8nm,0.1s,SNR=56
EMOS Mosqueruela 2.77 188 Pg **Pg** 13 48 24.6 -3.1
9.5nm,0.1s,SNR=7.9
EMOS Sn **Sn** 13 48 51.9 -1.0
112nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.77 188 Pn **Pn** 13 48 19.7 +0.4
1.8nm,0.1s,SNR=56
EMOS Pg **Pg** 13 48 24.6 -3.1
9.5nm,0.1s,SNR=7.9
EMOS Sn **Sn** 13 48 51.9 -1.0
112nm,0.2s,SNR=7.9
EMOS Lg 13 49 02.5
201nm,0.3s,SNR=7.9
FRNF Fournols 2.92 38 Pn **Pn** 13 48 22.4 +1.0
LASF Ste Croix 2.95 70 *e*P **Pn** 13 48 25.4 +3.6
LASF Ste Croix 2.95 70 *e*Pg **Pg** 13 48 31.5 +0.3
LASF *e*Sn **Sn** 13 48 55.6 -1.8
569nm,0.3s,SNR=1.0
LASF *e*Sg **Sg** 13 49 09.2 -0.3
586nm,0.3s
LASF Ste Croix 2.95 70 *e*Pn **Pn** 13 48 21.2 -0.6
LASF *e*P 13 48 25.4
LASF *e*Pg **Pg** 13 48 31.5 +0.3
LASF *e*Sn **Sn** 13 48 55.6 -1.8
LASF *e*Sg **Sg** 13 49 09.2 -0.3
LASF Ste Croix 2.95 70 *e*P **Pn** 13 48 25.4 +3.6
LASF Ste Croix 2.95 70 *e*Pg **Pg** 13 48 31.5 +0.3
LASF *e*Sn **Sn** 13 48 55.6 -1.8
285nm,0.3s,SNR=1.0
LASF *e*Sg **Sg** 13 49 09.2 -0.3
293nm,0.3s
LASF Ste Croix 2.95 70 Pn **Pn** 13 48 21.2 -0.6
LASF P 13 48 25.4
LASF Pg **Pg** 13 48 31.5 +0.3
LASF Sn **Sn** 13 48 55.6 -1.8
285nm,0.3s
LASF Lg 13 49 09.2
293nm,0.3s
LBL Lubilhac 3.15 47 Pn **Pn** 13 48 25.8 +1.3
LBL Sg **Sg** 13 49 17.5 +1.8
VERF Verneugheol 3.17 33 Pn **Pn** 13 48 24.8 -0.1
PYM Petit Puy Mans 3.40 38 Pn **Pn** 13 48 32.4 +4.4
MFF Saint Martin d 3.49 358 *e*Pg **Pg** 13 48 41.9 +0.3
SNR=1.0
MFF *e*Sn **Sn** 13 49 09.7 -1.0
MFF *e*Sg **Sg** 13 49 27.1 +0.3
316nm,0.3s
MFF Saint Martin d 3.49 358 *e*Pn **Pn** 13 48 30.0 +0.7
MFF *e*Pg **Pg** 13 48 41.9 +0.3
MFF *e*Sn **Sn** 13 49 09.7 -1.0
MFF *e*Sg **Sg** 13 49 27.1 +0.3
158nm,0.3s
MFF Saint Martin d 3.49 358 Pn **Pn** 13 48 30.0 +0.7
MFF Pg **Pg** 13 48 41.9 +0.3
MFF Sn **Sn** 13 49 09.7 -1.0
MFF Lg 13 49 27.1
158nm,0.3s
TCF Toulx Ste Croi 3.54 25 *e*Pg **Pg** 13 48 42.8 +0.3
TCF *e*Sn **Sn** 13 49 12.2 +0.3
SNR=1.0
TCF *e*Sg **Sg** 13 49 30.1 +1.7
334nm,0.3s
TCF Toulx Ste Croi 3.54 25 *e*Pn **Pn** 13 48 30.9 +1.0
TCF *e*Pg **Pg** 13 48 42.8 +0.3
TCF *e*Sn **Sn** 13 49 12.2 +0.3
TCF *e*Sg **Sg** 13 49 30.1 +1.7
TCF Toulx Ste Croi 3.54 25 *e*Pg **Pg** 13 48 42.8 +0.3
TCF *e*Sn **Sn** 13 49 12.2 +0.3
SNR=1.0
TCF *e*Sg **Sg** 13 49 30.1 +1.7
167nm,0.3s
TCF Toulx Ste Croi 3.54 25 Pn **Pn** 13 48 30.9 +1.0
TCF Pg **Pg** 13 48 42.8 +0.3
TCF Sn **Sn** 13 49 12.2 +0.3
TCF Lg 13 49 30.1
167nm,0.3s
COLF Collangettes 3.57 46 Pn **Pn** 13 48 30.2 -0.1
ECHE Chera 3.59 192 Pn **Pn** 13 48 30.8 +0.1
5.4nm,0.2s,SNR=24
ECHE Pg **Pg** 13 48 39.9 -3.6
18nm,0.2s,SNR=7.9
ECHE Lg 13 49 27.2
171nm,0.8s,SNR=7.6
AGO Saint Agoulin 3.69 36 Pn **Pn** 13 48 33.4 +1.5
VIVF Saint-Julien-l 3.79 61 *e*Pg **Pg** 13 48 46.4 -0.8
SNR=1.0
VIVF *e*Sg **Sg** 13 49 36.2 0.0
383nm,0.4s
VIVF Saint-Julien-l 3.79 61 *e*Pn **Pn** 13 48 33.9 +0.6
VIVF *e*Pg **Pg** 13 48 46.4 -0.8
VIVF *e*Sg **Sg** 13 49 36.2 0.0
VIVF Saint-Julien-l 3.79 61 *e*Pg **Pg** 13 48 46.4 -0.8
SNR=1.0
VIVF *e*Sg **Sg** 13 49 36.2 0.0
192nm,0.4s
VIVF Saint-Julien-l 3.79 61 Pn **Pn** 13 48 33.9 +0.6
VIVF Pg **Pg** 13 48 46.4 -0.8
VIVF Lg 13 49 36.2
192nm,0.4s
PRAF Pradon 3.81 78 Pn **Pn** 13 48 35.8 +2.1
PRAF Sg **Sg** 13 49 38.2 +1.0
EARI Arriondas 3.83 275 Pn **Pn** 13 48 36.0 +2.2
2.8nm,0.2s,SNR=38
EARI Sn **Sn** 13 49 19.8 +0.8
SNR=7.9
EARI Arriondas 3.83 275 Pn **Pn** 13 48 36.0 +2.2
2.8nm,0.2s,SNR=38
EARI Sn **Sn** 13 49 19.8 +0.9
15nm,0.2s,SNR=7.9
PLDF La Plantade 3.85 41 Pn **Pn** 13 48 35.0 +0.9
SSB Saint Sauveur 3.91 55 *e*Pn **Pn** 13 48 34.9 -0.1
SSB *e*Pg **Pg** 13 48 49.8 +0.3
SSB *e*Sg **Sg** 13 49 39.3 -0.9
SSB Saint Sauveur 3.91 55 *e*Pn **Pn** 13 48 34.9 -0.1
SSB Saint Sauveur 3.91 55 *e*Pg **Pg** 13 48 49.8 +0.2
ETOS Mallorca 3.95 147 Pn **Pn** 13 48 36.3 +0.8
5.9nm,0.2s,SNR=7.5
ETOS Sn **Sn** 13 49 19.7 -2.2
49nm,0.3s,SNR=7.9
ETOS Mallorca 3.95 147 Pn **Pn** 13 48 36.3 +0.8
5.9nm,0.2s,SNR=7.5
ETOS Sn **Sn** 13 49 19.7 -2.3
28nm,0.2s,SNR=7.9
TREF Trevaresse 3.95 81 Pn **Pn** 13 48 36.9 +1.4
TREF Sg **Sg** 13 49 43.1 +1.7
GELF Grande-Etoile 3.96 84 Pn **Pn** 13 48 37.8 +2.1
GUD Guadarrama 3.97 233 ⇑Pn **Pn** 13 48 36.9 +1.1
GUD Sn **Sn** 13 49 22.6 0.0
GUD Lg 13 49 38.7
GUD Guadarrama 3.97 233 Pn **Pn** 13 48 36.9 +1.1
11nm,0.2s,SNR=18
GUD Sn **Sn** 13 49 22.5 -0.1
GUD Guadarrama 3.97 233 ⇑Pn **Pn** 13 48 36.9 +1.1
11nm,0.2s,SNR=18
GUD Sn **Sn** 13 49 22.6 0.0
66nm,0.3s,SNR=7.9
GUD Lg 13 49 38.7
78nm,0.4s,SNR=7.9
BGF Bois d'Agland 3.99 29 *e*Pg **Pg** 13 48 50.9 -0.2
BGF *e*Sn **Sn** 13 49 23.1 +0.1
BGF *e*Sg **Sg** 13 49 43.4 +0.6
1µm,0.4s
BGF Bois d'Agland 3.99 29 *e*Pn **Pn** 13 48 36.8 +0.7
BGF *e*Pg **Pg** 13 48 50.9 -0.2
BGF *e*Sn **Sn** 13 49 23.1 +0.1
BGF *e*Sg **Sg** 13 49 43.4 +0.6
BGF Bois d'Agland 3.99 29 *e*Pg **Pg** 13 48 50.9 -0.2
BGF *e*Sn **Sn** 13 49 23.1 +0.1
BGF *e*Sg **Sg** 13 49 43.4 +0.6
743nm,0.4s
BGF Bois d'Agland 3.99 29 Pn **Pn** 13 48 36.8 +0.7
BGF Pg **Pg** 13 48 50.9 -0.2
BGF Sn **Sn** 13 49 23.1 +0.1
BGF Lg 13 49 43.4
743nm,0.4s
SMRF Simiane la Rot 4.13 76 *e*Pg **Pg** 13 48 53.9 +0.1
SNR=1.0
SMRF *e*Sg **Sg** 13 49 46.0 -1.3
200nm,0.5s
SMRF Simiane la Rot 4.13 76 *e*Pn **Pn** 13 48 38.0 0.0
SMRF *e*Pg **Pg** 13 48 53.9 +0.1
SMRF *e*Sg **Sg** 13 49 46.0 -1.3
SMRF Simiane la Rot 4.13 76 *e*Pg **Pg** 13 48 53.9 +0.1
SNR=1.0
SMRF *e*Sg **Sg** 13 49 46.0 -1.3
100nm,0.5s
SMRF Simiane la Rot 4.13 76 Pn **Pn** 13 48 38.0 0.0
SMRF Pg **Pg** 13 48 53.9 +0.1
SMRF Lg 13 49 46.0
200nm,0.5s
PUYF Puyloubier 4.17 82 Pn **Pn** 13 48 40.4 +1.9
EIBI Ibiza 4.20 166 Pn **Pn** 13 48 38.5 -0.5
EIBI Sn **Sn** 13 49 23.7 -4.5
SNR=7.9
EIBI Ibiza 4.20 166 Pn **Pn** 13 48 38.6 -0.4
4.0nm,0.2s,SNR=7.9
EIBI Sn **Sn** 13 49 23.7 -4.5
40nm,0.3s,SNR=7.9
AVF Avril sur Loir 4.38 32 *e*Pg **Pg** 13 48 59.0 +0.5
AVF *e*Sn **Sn** 13 49 32.1 -0.4
AVF *e*Sg **Sg** 13 49 55.7 +0.6
287nm,0.4s
AVF Avril sur Loir 4.38 32 *e*Pn **Pn** 13 48 41.0 -0.4
AVF *e*Pg **Pg** 13 48 59.0 +0.5
AVF *e*Sn **Sn** 13 49 32.1 -0.4
AVF *e*Sg **Sg** 13 49 55.7 +0.6
AVF Avril sur Loir 4.38 32 *e*Pg **Pg** 13 48 59.0 +0.5
AVF *e*Sn **Sn** 13 49 32.1 -0.4
AVF *e*Sg **Sg** 13 49 55.7 +0.6
143nm,0.4s
AVF Avril sur Loir 4.38 32 Pn **Pn** 13 48 41.0 -0.4
AVF Pg **Pg** 13 48 59.0 +0.5
AVF Sn **Sn** 13 49 32.1 -0.4
AVF Lg 13 49 55.7
143nm,0.4s
EBEN Beniarda 4.41 182 Pn **Pn** 13 48 41.7 -0.1
12nm,0.2s,SNR=44
EBEN Sn **Sn** 13 49 29.8 -3.5
SNR=7.9
EBEN Beniarda 4.41 182 Pn **Pn** 13 48 41.7 -0.1
12nm,0.2s,SNR=44
EBEN Sn **Sn** 13 49 29.8 -3.5
5.1nm,0.2s,SNR=7.9
TAVF Tavernes 4.43 81 Pn **Pn** 13 48 46.8 +4.6
SMF Signal de Mont 4.46 36 *e*Pg **Pg** 13 49 00.4 +0.3
SMF *e*Sn **Sn** 13 49 34.6 +0.1
SNR=1.0
SMF *e*Sg **Sg** 13 49 58.5 +0.7
272nm,0.4s
SMF Signal de Mont 4.46 36 *e*Pn **Pn** 13 48 42.7 +0.2
SMF *e*Pg **Pg** 13 49 00.4 +0.3
SMF *e*Sn **Sn** 13 49 34.6 +0.1
SMF *e*Sg **Sg** 13 49 58.5 +0.7
SMF Signal de Mont 4.46 36 *e*Pg **Pg** 13 49 00.4 +0.3
SMF *e*Sn **Sn** 13 49 34.6 +0.1
SNR=1.0
SMF *e*Sg **Sg** 13 49 58.5 +0.7
136nm,0.4s
SMF Signal de Mont 4.46 36 Pn **Pn** 13 48 42.7 +0.2
SMF Pg **Pg** 13 49 00.4 +0.3
SMF Sn **Sn** 13 49 34.6 +0.1
SMF Lg 13 49 58.5
136nm,0.4s
HYF Humbligny 4.55 23 *e*Pn **Pn** 13 48 44.7 +0.9
HYF *e*Pg **Pg** 13 49 02.9 +1.0
HYF *e*Sg **Sg** 13 50 02.6 +1.8
ESDC Sonseca Array 4.55 222 ⇑Pn **Pn** 13 48 43.6 -0.3
ESDC Sn **Sn** 13 49 32.3 -4.7
ESDC Lg 13 49 57.8
ESDC Sonseca Array 4.55 222 Pn **Pn** 13 48 43.6 -0.3
9.2nm,0.3s,SNR=18
ESDC Sn **Sn** 13 49 32.3 -4.6
110nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.55 222 ⇑Pn **Pn** 13 48 43.6 -0.3
9.2nm,0.3s,baz=43,slow=14,SNR=18
ESDC Sn **Sn** 13 49 32.3 -4.7
110nm,0.2s,baz=44,slow=24,SNR=18
ESDC Lg 13 49 57.8
33nm,0.4s,baz=40,slow=29,SNR=7.9
ESLA Sonseca Array 4.55 222 *e*Pn **Pn** 13 48 43.3 -0.6
ESLA *e*Pg **Pg** 13 49 00.4 -1.5
ESLA *e*Sn **Sn** 13 49 33.1 -3.9
ESLA Sonseca Array 4.55 222 *e*Pn **Pn** 13 48 43.3 -0.6
ESLA Sonseca Array 4.55 222 *e*Pg **Pg** 13 49 00.4 -1.5
ORIF Oris-en-Rattie 4.60 65 *e*Pg **Pg** 13 49 01.5 -1.3
SNR=1.0
ORIF *e*Sg **Sg** 13 50 00.7 -1.6
93nm,0.6s
ORIF Oris-en-Rattie 4.60 65 *e*Pn **Pn** 13 48 45.6 +1.2
ORIF *e*Pg **Pg** 13 49 01.5 -1.3
ORIF *e*Sg **Sg** 13 50 00.7 -1.6
ORIF Oris-en-Rattie 4.60 65 *e*Pg **Pg** 13 49 01.5 -1.3
SNR=1.0
ORIF *e*Sg **Sg** 13 50 00.7 -1.6
46nm,0.6s
ORIF Oris-en-Rattie 4.60 65 Pn **Pn** 13 48 45.6 +1.2
ORIF Pg **Pg** 13 49 01.5 -1.3
ORIF Lg 13 50 00.7
46nm,0.6s
ETOB Tobarra 4.62 195 Pn **Pn** 13 48 44.2 -0.5
18nm,0.3s,SNR=62
ETOB Sn **Sn** 13 49 34.5 -4.0
14nm,0.2s,SNR=7.9
ETOB Tobarra 4.62 195 Pn **Pn** 13 48 44.2 -0.5
18nm,0.3s,SNR=62
ETOB Sn **Sn** 13 49 34.5 -4.0
14nm,0.2s,SNR=7.9
ETOB Lg 13 50 02.5
9.7nm,0.8s,SNR=7.9
SSF Saint Saulge 4.66 31 *e*Pg **Pg** 13 49 03.5 -0.4
SNR=1.0
SSF *e*Sn **Sn** 13 49 36.6 -2.9
SSF *e*Sg **Sg** 13 50 05.0 +0.8
164nm,0.3s
SSF Saint Saulge 4.66 31 *e*Pn **Pn** 13 48 45.9 +0.6
SSF *e*Pg **Pg** 13 49 03.5 -0.4
SSF *e*Sn **Sn** 13 49 36.6 -2.9
SSF *e*Sg **Sg** 13 50 05.0 +0.8
SSF Saint Saulge 4.66 31 *e*Pg **Pg** 13 49 03.5 -0.4
SNR=1.0
SSF *e*Sn **Sn** 13 49 36.6 -2.9
SSF *e*Sg **Sg** 13 50 05.0 +0.8
82nm,0.3s
SSF Saint Saulge 4.66 31 Pn **Pn** 13 48 45.9 +0.6
SSF Pg **Pg** 13 49 03.5 -0.4
SSF Sn **Sn** 13 49 36.6 -2.9
SSF Lg 13 50 05.0
82nm,0.3s
LMR La Mourre 4.75 85 *e*Pg **Pg** 13 49 04.0 -1.7
SNR=1.0
LMR *e*Sg **Sg** 13 50 05.3 -1.9
63nm,0.4s
LMR La Mourre 4.75 85 *e*Pn **Pn** 13 48 46.6 +0.1
LMR *e*Pg **Pg** 13 49 04.0 -1.7
LMR *e*Sg **Sg** 13 50 05.3 -1.9
LMR La Mourre 4.75 85 *e*Pg **Pg** 13 49 04.0 -1.7
SNR=1.0
LMR *e*Sg **Sg** 13 50 05.3 -1.9
32nm,0.4s
LMR La Mourre 4.75 85 Pn **Pn** 13 48 46.6 +0.1
LMR Pg **Pg** 13 49 04.0 -1.7
LMR Lg 13 50 05.3
32nm,0.4s
PAB San Pablo 4.85 224 *e*Pn **Pn** 13 48 47.6 -0.2
PAB San Pablo 4.85 224 *e*Pn **Pn** 13 48 47.6 -0.3
FRF La Foret Royal 4.86 82 *e*P **Pn** 13 48 52.2 +4.2
FRF La Foret Royal 4.86 82 *e*Pg **Pg** 13 49 06.3 -1.4
FRF *e*Sg **Sg** 13 50 06.2 -4.4
87nm,0.4s
FRF La Foret Royal 4.86 82 *e*Pn **Pn** 13 48 48.0 0.0
FRF *e*P 13 48 52.2
FRF *e*Pg **Pg** 13 49 06.3 -1.4
FRF *e*Sg **Sg** 13 50 06.2 -4.4
FRF La Foret Royal 4.86 82 *e*P **Pn** 13 48 52.2 +4.2
FRF La Foret Royal 4.86 82 *e*Pg **Pg** 13 49 06.3 -1.4
FRF *e*Sg **Sg** 13 50 06.2 -4.4
43nm,0.4s
FRF La Foret Royal 4.86 82 Pn **Pn** 13 48 48.0 0.0
FRF P 13 48 52.2
FRF Pg **Pg** 13 49 06.3 -1.4
FRF Lg 13 50 06.2
43nm,0.4s
EVIA Vianos 4.86 204 Pn **Pn** 13 48 48.6 +0.6
28nm,0.6s,SNR=12
EVIA Sn **Sn** 13 49 40.3 -4.1
SNR=7.9
EVIA Vianos 4.86 204 Pn **Pn** 13 48 48.6 +0.6
28nm,0.6s,SNR=12
EVIA Sn **Sn** 13 49 40.3 -4.1
7.0nm,0.4s,SNR=7.9
EVIA Lg 13 50 08.3
24nm,0.4s,SNR=7.9
LOR Lormes 4.96 32 *e*Pn **Pn** 13 48 49.9 +0.4
baz=218,SNR=1.0
LOR Lormes 4.96 32 *e*Pg **Pg** 13 49 08.9 -0.9
baz=213
LOR *e*Sn **Sn** 13 49 47.1 +0.1
38nm,0.2s,baz=220,SNR=1.0
LOR *e*Sg **Sg** 13 50 15.1 +1.1
254nm,0.5s,baz=210
LOR Lormes 4.96 32 *e*Pn **Pn** 13 48 49.9 +0.4
LOR *e*Pg **Pg** 13 49 08.9 -0.9
LOR *e*Sn **Sn** 13 49 47.1 +0.1
LOR *e*Sg **Sg** 13 50 15.1 +1.1
LOR Lormes 4.96 32 *e*Pg **Pg** 13 49 08.9 -0.9
LOR *e*Sn **Sn** 13 49 47.1 +0.1
19nm,0.2s,SNR=1.0
LOR *e*Sg **Sg** 13 50 15.1 +1.1
127nm,0.5s
LOR Lormes 4.96 32 Pn **Pn** 13 48 49.9 +0.4
LOR Pg **Pg** 13 49 08.9 -0.9
LOR Sn **Sn** 13 49 47.1 +0.1
19nm,0.2s
LOR Lg 13 50 15.1
127nm,0.5s
ECAL Calabor 5.13 259 Pn **Pn** 13 48 52.9 +1.2
25nm,0.3s,SNR=18
ECAL Sn **Sn** 13 49 47.9 -3.1
124nm,0.4s,SNR=7.9
ECAL Calabor 5.13 259 ⇑Pn **Pn** 13 48 52.9 +1.2
25nm,0.3s,SNR=18
ECAL Sn **Sn** 13 49 47.9 -3.1
42nm,0.3s,SNR=7.9
ECAL Lg 13 50 16.2
50nm,0.3s,SNR=7.9
MBDF Montbardon 5.14 69 *e*Pg **Pg** 13 49 12.0 -1.1
MBDF *e*Sg **Sg** 13 50 17.0 -2.7
66nm,0.8s
MBDF Montbardon 5.14 69 *e*P **Pn** 13 48 56.3 +4.4
MBDF *e*Pg **Pg** 13 49 12.0 -1.1
MBDF *e*Sg **Sg** 13 50 17.0 -2.7
MBDF Montbardon 5.14 69 *e*Pg **Pg** 13 49 12.0 -1.1
MBDF *e*Sg **Sg** 13 50 17.0 -2.7

	33nm,0.8s								
MBDF	**Montbardon**	**5.14**	**69**	P	**Pn**	**13 48 56.3**	**+4.4**		
MBDF				Pg	**Pg**	**13 49 12.0**	**-1.1**		
MBDF				Lg		13 50 17.0			
	33nm,0.8s								
BNI	**Bardonecchia**	**5.18**	**66**	*e*Pn	**Pn**	**13 48 56.5**	**+4.1**		
	13nm,0.4s								
BNI				*e*Pg	**Pg**	**13 49 13.9**	**0.0**		
BNI	**Bardonecchia**	**5.18**	**66**	*e*Pn	**Pn**	**13 48 56.5**	**+4.1**		
	13nm,0.4s								
BNI	**Bardonecchia**	**5.18**	**66**	*e*Pg	**Pg**	**13 49 13.9**	**+0.1**		
EPON	**Pontenova**	**5.24**	**275**	Pn	**Pn**	**13 48 54.5**	**+1.2**		
	3.9nm,0.2s,SNR=7.9								
EPON				Sn	**Sn**	**13 49 53.4**	**-0.5**		
	23nm,0.2s,SNR=7.9								
EPON	**Pontenova**	**5.24**	**275**	Pn	**Pn**	**13 48 54.5**	**+1.2**		
	3.9nm,0.2s,SNR=7.9								
EPON				Sn	**Sn**	**13 49 53.4**	**-0.4**		
	4.9nm,0.2s,SNR=7.9								
QUIF	**Quistinic**	**5.30**	**336**	*e*Pg	**Pg**	**13 49 14.6**	**-1.6**		
	SNR=1.0								
QUIF				*e*Sn	**Sn**	**13 49 53.1**	**-2.2**		
QUIF				*e*Sg	**Sg**	**13 50 24.3**	**-0.5**		
	84nm,0.3s								
QUIF	**Quistinic**	**5.30**	**336**	*e*Pn	**Pn**	**13 48 54.4**	**+0.3**		
QUIF				*e*Pg	**Pg**	**13 49 14.6**	**-1.6**		
QUIF				*e*Sn	**Sn**	**13 49 53.1**	**-2.2**		
QUIF				*e*Sg	**Sg**	**13 50 24.3**	**-0.5**		
QUIF	**Quistinic**	**5.30**	**336**	*e*Pg	**Pg**	**13 49 14.6**	**-1.6**		
	SNR=1.0								
QUIF				*e*Sn	**Sn**	**13 49 53.1**	**-2.2**		
QUIF				*e*Sg	**Sg**	**13 50 24.3**	**-0.5**		
	42nm,0.3s								
QUIF	**Quistinic**	**5.30**	**336**	Pn	**Pn**	**13 48 54.4**	**+0.3**		
QUIF				Pg	**Pg**	**13 49 14.6**	**-1.6**		
QUIF				Sn	**Sn**	**13 49 53.1**	**-2.2**		
QUIF				Lg		13 50 24.3			
	42nm,0.3s								
GRR	**Gorron**	**5.31**	**354**	*e*Pg	**Pg**	**13 49 15.0**	**-1.4**		
	SNR=1.0								
GRR				*e*Sn	**Sn**	**13 49 53.4**	**-2.2**		
	44nm,0.3s,SNR=1.0								
GRR				*e*Sg	**Sg**	**13 50 25.6**	**+0.4**		
	95nm,0.2s								
GRR	**Gorron**	**5.31**	**354**	*e*Pn	**Pn**	**13 48 53.8**	**-0.5**		
GRR				*e*Pg	**Pg**	**13 49 15.0**	**-1.4**		
GRR				*e*Sn	**Sn**	**13 49 53.4**	**-2.2**		
GRR				*e*Sg	**Sg**	**13 50 25.6**	**+0.4**		
GRR	**Gorron**	**5.31**	**354**	*e*Pg	**Pg**	**13 49 15.0**	**-1.4**		
	SNR=1.0								
GRR				*e*Sn	**Sn**	**13 49 53.4**	**-2.2**		
	22nm,0.3s,SNR=1.0								
GRR				*e*Sg	**Sg**	**13 50 25.6**	**+0.4**		
	48nm,0.2s								
GRR	**Gorron**	**5.31**	**354**	Pn	**Pn**	**13 48 53.8**	**-0.5**		
GRR				Pg	**Pg**	**13 49 15.0**	**-1.4**		
GRR				Sn	**Sn**	**13 49 53.4**	**-2.2**		
	0.0nm,0.3s								
GRR				Lg		13 50 25.6			
	48nm,0.2s								
ERUA	**La Rua**	**5.32**	**265**	Pn	**Pn**	**13 48 55.7**	**+1.3**		
	3.3nm,0.2s,SNR=7.9								
ERUA				Sn	**Sn**	**13 49 55.2**	**-0.6**		
	17nm,0.2s,SNR=7.9								
EMUR	**La Murta**	**5.35**	**191**	Pn	**Pn**	**13 48 55.3**	**+0.5**		
	19nm,0.3s,SNR=18								
EMUR	**La Murta**	**5.35**	**191**	Pg	**Pg**	**13 49 10.2**	**-6.9**		
	21nm,0.4s,SNR=7.9								
EMUR				Sn	**Sn**	**13 49 54.0**	**-2.5**		
	24nm,0.4s,SNR=7.9								
EMUR	**La Murta**	**5.35**	**191**	⇑Pn	**Pn**	**13 48 55.3**	**+0.5**		
	19nm,0.3s,SNR=18								
EMUR				Pg	**Pg**	**13 49 10.2**	**-6.9**		
	21nm,0.4s,SNR=7.9								
EMUR				Sn	**Sn**	**13 49 54.0**	**-2.6**		
	18nm,0.4s,SNR=7.9								
LPL	**La Plagne**	**5.38**	**61**	*e*Pg	**Pg**	**13 49 16.6**	**-1.2**		
LPL				*e*Sg	**Sg**	**13 50 26.0**	**-1.5**		
	60nm,0.5s								
LPL	**La Plagne**	**5.38**	**61**	*e*Pn	**Pn**	**13 48 56.6**	**+1.4**		
LPL				*e*Pg	**Pg**	**13 49 16.6**	**-1.2**		
LPL				*e*Sg	**Sg**	**13 50 26.0**	**-1.5**		
LPL	**La Plagne**	**5.38**	**61**	Pn	**Pn**	**13 48 56.6**	**+1.4**		
LPL				Pg	**Pg**	**13 49 16.6**	**-1.2**		
LPL				Lg		13 50 26.0			
	30nm,0.5s								
LPG	**La Plagne**	**5.39**	**61**	*e*Pg	**Pg**	**13 49 17.6**	**-0.3**		
LPG				*e*Sg	**Sg**	**13 50 25.8**	**-1.9**		
	112nm,0.6s								
LPG	**La Plagne**	**5.39**	**61**	*e*P	**Pn**	**13 48 59.6**	**+4.3**		
LPG				*e*Pg	**Pg**	**13 49 17.6**	**-0.3**		
LPG				*e*Sg	**Sg**	**13 50 25.8**	**-1.9**		
LPG	**La Plagne**	**5.39**	**61**	P	**Pn**	**13 48 59.6**	**+4.3**		
LPG				Pg	**Pg**	**13 49 17.6**	**-0.3**		
LPG				Lg		13 50 25.8			
	56nm,0.6s								
SBF	**Sospel**	**5.45**	**80**	*e*Pg	**Pg**	**13 49 17.7**	**-1.3**		
SBF				*e*Sg	**Sg**	**13 50 27.7**	**-1.9**		
	107nm,0.6s								
SBF	**Sospel**	**5.45**	**80**	*e*Pn	**Pn**	**13 48 55.9**	**-0.2**		
SBF				*e*Pg	**Pg**	**13 49 17.7**	**-1.3**		
SBF				*e*Sg	**Sg**	**13 50 27.7**	**-1.9**		
SBF	**Sospel**	**5.45**	**80**	Pn	**Pn**	**13 48 55.9**	**-0.2**		
SBF				Pg	**Pg**	**13 49 17.7**	**-1.3**		
SBF				Lg		13 50 27.7			
	54nm,0.6s								
SGMF	**Saint Gilles**	**5.45**	**342**	*e*Pg	**Pg**	**13 49 18.8**	**-0.2**		
	SNR=1.0								
SGMF				*e*Sn	**Sn**	**13 49 56.7**	**-2.3**		
SGMF				*e*Sg	**Sg**	**13 50 29.0**	**-0.6**		
	187nm,0.4s								
SGMF	**Saint Gilles**	**5.45**	**342**	*e*Pn	**Pn**	**13 48 56.2**	**+0.1**		
SGMF				*e*Pg	**Pg**	**13 49 18.8**	**-0.2**		
SGMF				*e*Sn	**Sn**	**13 49 56.7**	**-2.3**		
SGMF				*e*Sg	**Sg**	**13 50 29.0**	**-0.6**		
SGMF	**Saint Gilles**	**5.45**	**342**	*e*Pg	**Pg**	**13 49 18.8**	**-0.2**		
	SNR=1.0								
SGMF				*e*Sn	**Sn**	**13 49 56.7**	**-2.3**		
SGMF				*e*Sg	**Sg**	**13 50 29.0**	**-0.6**		
	94nm,0.4s								
SGMF	**Saint Gilles**	**5.45**	**342**	Pn	**Pn**	**13 48 56.2**	**+0.1**		
SGMF				Pg	**Pg**	**13 49 18.8**	**-0.2**		
SGMF				Sn	**Sn**	**13 49 56.7**	**-2.3**		
SGMF				Lg		13 50 29.0			
	94nm,0.4s								
LDF	**La Druitiere**	**5.49**	**359**	*e*Pg	**Pg**	**13 49 18.8**	**-0.9**		
	SNR=1.0								
LDF				*e*Sn	**Sn**	**13 49 56.5**	**-3.3**		
LDF				*e*Sg	**Sg**	**13 50 28.9**	**-1.8**		
	96nm,0.3s								
LDF	**La Druitiere**	**5.49**	**359**	*e*Pn	**Pn**	**13 48 55.6**	**-1.0**		
LDF				*e*Pg	**Pg**	**13 49 18.8**	**-0.9**		
LDF				*e*Sn	**Sn**	**13 49 56.5**	**-3.3**		
LDF				*e*Sg	**Sg**	**13 50 28.9**	**-1.8**		
LDF	**La Druitiere**	**5.49**	**359**	*e*Pg	**Pg**	**13 49 18.8**	**-0.9**		
	SNR=1.0								
LDF				*e*Sn	**Sn**	**13 49 56.5**	**-3.3**		
LDF				*e*Sg	**Sg**	**13 50 28.9**	**-1.8**		
	48nm,0.3s								
EPLA	**Plasencia**	**5.49**	**238**	Pn	**Pn**	**13 48 57.1**	**+0.4**		
	13nm,0.1s,SNR=18								
EPLA				Sn	**Sn**	**13 49 57.3**	**-2.7**		
	SNR=7.9								
EPLA	**Plasencia**	**5.49**	**238**	Pn	**Pn**	**13 48 57.1**	**+0.4**		
	13nm,0.1s,SNR=18								
EPLA				Sn	**Sn**	**13 49 57.3**	**-2.7**		
	9.7nm,0.1s,SNR=7.9								
EPLA				Lg		13 50 27.2			
	51nm,0.3s,SNR=7.9								
CABF	**La Chapelle**	**5.55**	**49**	*e*Pg	**Pg**	**13 49 19.6**	**-1.4**		
CABF				*e*Sg	**Sg**	**13 50 32.7**	**-0.3**		
	270nm,0.7s								
CABF	**La Chapelle**	**5.55**	**49**	*e*Pg	**Pg**	**13 49 19.6**	**-1.4**		
CABF				*e*Sg	**Sg**	**13 50 32.7**	**-0.3**		
	135nm,0.7s								
CART	**Cartagena**	**5.57**	**188**	*e*Pn	**Pn**	**13 48 54.3**	**-3.6**		
EHUE	**Huescar**	**5.65**	**201**	Pn	**Pn**	**13 48 59.3**	**+0.4**		
	1.7nm,0.2s,SNR=7.9								
EHUE				Sn	**Sn**	**13 49 59.2**	**-4.8**		
	2.0nm,0.1s,SNR=7.9								
EHUE	**Huescar**	**5.65**	**201**	Pn	**Pn**	**13 48 59.3**	**+0.3**		
	1.7nm,0.2s,SNR=7.9								
EHUE				Sn	**Sn**	**13 49 59.2**	**-4.8**		
	1.8nm,0.3s,SNR=7.9								
EHUE				Lg		13 50 34.2			
	3.2nm,0.2s,SNR=7.9								
FLN	**La Foliniere**	**5.66**	**357**	*e*Pn	**Pn**	**13 48 58.2**	**-0.9**		
	baz=174								
FLN	**La Foliniere**	**5.66**	**357**	*e*Pg	**Pg**	**13 49 22.1**	**-1.0**		
	baz=173								
FLN				*e*Sn	**Sn**	**13 50 02.6**	**-1.6**		
	baz=177,SNR=1.0								
FLN				*e*Sg	**Sg**	**13 50 35.4**	**-1.0**		
	89nm,0.3s								
FLN	**La Foliniere**	**5.66**	**357**	*e*Pn	**Pn**	**13 48 58.2**	**-0.9**		
FLN				*e*Pg	**Pg**	**13 49 22.1**	**-1.0**		
FLN				*e*Sn	**Sn**	**13 50 02.6**	**-1.6**		
FLN				*e*Sg	**Sg**	**13 50 35.4**	**-1.0**		
FLN	**La Foliniere**	**5.66**	**357**	*e*Pg	**Pg**	**13 49 22.1**	**-1.0**		
FLN				*e*Sn	**Sn**	**13 50 02.6**	**-1.6**		
	SNR=1.0								
FLN				*e*Sg	**Sg**	**13 50 35.4**	**-1.0**		
	44nm,0.3s								
FLN	**La Foliniere**	**5.66**	**357**	Pn	**Pn**	**13 48 58.2**	**-0.9**		
FLN				Pg	**Pg**	**13 49 22.1**	**-1.0**		
FLN				Sn	**Sn**	**13 50 02.6**	**-1.6**		
FLN				Lg		13 50 35.4			
	44nm,0.3s								
ROSF	**Rostrenen**	**5.71**	**337**	*e*Pn	**Pn**	**13 49 00.0**	**+0.3**		
	SNR=1.0								
ROSF				*e*Sn	**Sn**	**13 50 03.5**	**-1.9**		
	32nm,0.3s,SNR=1.0								
ROSF				*e*Sg	**Sg**	**13 50 38.2**	**+0.2**		
	98nm,0.4s								
ROSF	**Rostrenen**	**5.71**	**337**	*e*Pn	**Pn**	**13 49 00.0**	**+0.3**		
	SNR=1.0								
ROSF				*e*Sn	**Sn**	**13 50 03.5**	**-1.9**		
	16nm,0.3s,SNR=1.0								
ROSF				*e*Sg	**Sg**	**13 50 38.2**	**+0.2**		
	49nm,0.4s								
EBAN	**Banos Encina**	**5.72**	**212**	Pn	**Pn**	**13 48 59.8**	**-0.1**		
EBAN				Sn	**Sn**	**13 50 00.0**	**-5.8**		
	20nm,0.3s,SNR=7.9								
EBAN	**Banos Encina**	**5.72**	**212**	Pn	**Pn**	**13 48 59.9**	**-0.1**		
	14nm,0.2s,SNR=16								
EBAN				Sn	**Sn**	**13 50 00.0**	**-5.8**		
	9.6nm,0.3s,SNR=7.9								
EBAN				Lg		13 50 35.2			
	36nm,0.6s,SNR=7.9								
EQES	**Quesada**	**5.80**	**205**	Pn	**Pn**	**13 49 01.6**	**+0.6**		
	6.0nm,0.3s,SNR=16								
EQES				Sn	**Sn**	**13 50 02.1**	**-5.6**		
	19nm,0.4s,SNR=7.9								
EQES	**Quesada**	**5.80**	**205**	Pn	**Pn**	**13 49 01.6**	**+0.6**		
	6.0nm,0.3s,SNR=16								
EQES				Sn	**Sn**	**13 50 02.1**	**-5.6**		
	5.4nm,0.2s,SNR=7.9								
EQES				Lg		13 50 40.4			
	40nm,0.5s,SNR=7.9								
EADA	**Adamuz**	**6.05**	**217**	Pn	**Pn**	**13 49 03.6**	**-0.8**		
EADA				Sn	**Sn**	**13 50 09.6**	**-4.2**		
EADA				Lg		13 50 46.2			
EADA	**Adamuz**	**6.05**	**217**	Pn	**Pn**	**13 49 03.6**	**-0.8**		
	4.1nm,0.3s,SNR=28								
EADA				Sn	**Sn**	**13 50 09.6**	**-4.2**		
	8.8nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**6.05**	**217**	Pn	**Pn**	**13 49 03.6**	**-0.8**		
	4.1nm,0.3s,SNR=28								
EADA				Sn	**Sn**	**13 50 09.6**	**-4.2**		
	12nm,0.3s,SNR=7.9								
EADA				Lg		13 50 46.2			
	28nm,0.4s,SNR=4.7								
ELOB	**Lobios**	**6.10**	**261**	Pn	**Pn**	**13 49 05.8**	**+0.7**		
	5.2nm,0.2s,SNR=13								
ELOB				Sn	**Sn**	**13 50 10.7**	**-4.3**		
	SNR=7.9								
ELOB	**Lobios**	**6.10**	**261**	Pn	**Pn**	**13 49 05.8**	**+0.7**		
	5.2nm,0.2s,SNR=13								
ELOB				Sn	**Sn**	**13 50 10.7**	**-4.3**		
	3.5nm,0.2s,SNR=7.9								
SFTF	**Sexfontaines**	**6.19**	**33**	*e*Pn	**Pn**	**13 49 07.1**	**+0.8**		
	baz=206								
SFTF				*e*Sn	**Sn**	**13 50 15.3**	**-1.9**		
SFTF				*e*Sg	**Sg**	**13 50 52.9**	**-0.4**		
	159nm,0.4s								
SFTF	**Sexfontaines**	**6.19**	**33**	*e*Pn	**Pn**	**13 49 07.1**	**+0.8**		
SFTF				*e*Sn	**Sn**	**13 50 15.3**	**-1.9**		
SFTF				*e*Sg	**Sg**	**13 50 52.9**	**-0.4**		
	79nm,0.4s								
ENIJ	**Nijar**	**6.37**	**196**	Pn	**Pn**	**13 49 10.0**	**+1.3**		
	17nm,0.3s,SNR=5.7								
ELUQ	**Luque**	**6.44**	**212**	Pn	**Pn**	**13 49 10.7**	**+1.0**		
	5.1nm,0.2s,SNR=7.9								
MEZF	**Maizieres J'vi**	**6.44**	**31**	*e*Pn	**Pn**	**13 49 10.0**	**+0.3**		
	baz=220								
MEZF				*e*Sn	**Sn**	**13 50 21.5**	**-1.8**		
MEZF				*e*Sg	**Sg**	**13 51 00.4**	**-0.8**		
	166nm,0.5s,baz=212								
MEZF	**Maizieres J'vi**	**6.44**	**31**	*e*Pn	**Pn**	**13 49 10.0**	**+0.3**		
MEZF				*e*Sn	**Sn**	**13 50 21.5**	**-1.8**		
MEZF				*e*Sg	**Sg**	**13 51 00.4**	**-0.8**		
	83nm,0.5s								
EQUE	**Quentar**	**6.46**	**205**	Pn	**Pn**	**13 49 10.9**	**+0.8**		
	4.6nm,0.4s,SNR=12								
EQUE				Sn	**Sn**	**13 50 20.0**	**-4.0**		
	SNR=7.9								
EQUE	**Quentar**	**6.46**	**205**	Pn	**Pn**	**13 49 10.9**	**+0.8**		
	4.6nm,0.4s,SNR=12								
EQUE				Sn	**Sn**	**13 50 20.0**	**-4.0**		
	1.3nm,0.1s,SNR=7.9								
EQUE				Lg		13 50 59.2			
	12nm,0.4s,SNR=7.9								
EZAM	**Zamans**	**6.50**	**264**	Pn	**Pn**	**13 49 11.2**	**+0.7**		
	2.2nm,0.2s,SNR=7.9								
EZAM				Sn	**Sn**	**13 50 23.8**	**-1.0**		
	3.5nm,0.3s,SNR=7.9								
EMAZ	**Mazaricos**	**6.59**	**272**	Pn	**Pn**	**13 49 13.0**	**+1.2**		
	7.8nm,0.1s,SNR=11								
EMAZ				Sn	**Sn**	**13 50 23.8**	**-3.4**		
	SNR=7.9								
EMAZ	**Mazaricos**	**6.59**	**272**	Pn	**Pn**	**13 49 13.0**	**+1.2**		
	7.8nm,0.1s,SNR=11								
EMAZ				Sn	**Sn**	**13 50 23.8**	**-3.4**		
	5.7nm,0.2s,SNR=7.9								
HAU	**Haudompre**	**6.61**	**40**	*e*Pn	**Pn**	**13 49 13.0**	**+1.0**		
HAU				*e*Sn	**Sn**	**13 50 24.9**	**-2.6**		
HAU				*e*Sg	**Sg**	**13 51 06.0**	**-0.8**		
	64nm,0.3s								
HAU	**Haudompre**	**6.61**	**40**	*e*Pn	**Pn**	**13 49 13.0**	**+1.0**		
HAU				*e*Sn	**Sn**	**13 50 24.9**	**-2.6**		
HAU				*e*Sg	**Sg**	**13 51 06.0**	**-0.8**		
	32nm,0.3s								
PGF	**Pioggiola**	**6.63**	**92**	*e*Pn	**Pn**	**13 49 13.0**	**+0.7**		
	SNR=1.0								
PGF				*e*Sn	**Sn**	**13 50 24.5**	**-3.5**		
	24nm,0.4s								
PGF	**Pioggiola**	**6.63**	**92**	Pn	**Pn**	**13 49 13.0**	**+0.7**		
PGF				Sn	**Sn**	**13 50 24.5**	**-3.5**		
	12nm,0.4s								
RFYF	**Reffroy**	**6.70**	**33**	*e*Pg	**Pg**	**13 49 41.6**	**-1.4**		
RFYF				*e*Sg	**Sg**	**13 51 09.0**	**-0.8**		
	94nm,0.4s,baz=213								
RFYF	**Reffroy**	**6.70**	**33**	*e*P	**Pn**	**13 49 19.1**	**+5.8**		
RFYF				*e*Pg	**Pg**	**13 49 41.6**	**-1.4**		
RFYF				*e*Sg	**Sg**	**13 51 09.0**	**-0.8**		
RFYF	**Reffroy**	**6.70**	**33**	*e*Pg	**Pg**	**13 49 41.6**	**-1.4**		
RFYF				*e*Sg	**Sg**	**13 51 09.0**	**-0.8**		
	47nm,0.4s								
RFYF	**Reffroy**	**6.70**	**33**	P	**Pn**	**13 49 19.1**	**+5.8**		
RFYF				Pg	**Pg**	**13 49 41.6**	**-1.4**		
RFYF				Lg		13 51 09.0			
	94nm,0.4s								
HINF	**Hinteralfeld**	**6.72**	**43**	*e*Pg	**Pg**	**13 49 41.8**	**-1.6**		
HINF				*e*Sn	**Sn**	**13 50 26.8**	**-3.6**		
HINF				*e*Sg	**Sg**	**13 51 09.5**	**-1.0**		
	70nm,0.5s								
HINF	**Hinteralfeld**	**6.72**	**43**	*e*Pg	**Pg**	**13 49 41.8**	**-1.6**		
HINF				*e*Sn	**Sn**	**13 50 26.8**	**-3.6**		
HINF				*e*Sg	**Sg**	**13 51 09.5**	**-1.0**		
	35nm,0.5s								
ERON	**Agron**	**6.75**	**207**	Pn	**Pn**	**13 49 15.4**	**+1.3**		
	3.0nm,0.2s,SNR=7.9								
ELOJ	**Sierra Loja**	**6.76**	**210**	Pn	**Pn**	**13 49 15.2**	**+1.1**		
ELOJ				Sn	**Sn**	**13 50 28.4**	**-2.8**		
ELOJ	**Sierra Loja**	**6.76**	**210**	Pn	**Pn**	**13 49 15.2**	**+1.1**		
	2.6nm,0.6s,SNR=9.4								
ELOJ				Sn	**Sn**	**13 50 28.4**	**-2.8**		
	3.6nm,0.3s,SNR=7.9								
EGUA	**Guajares**	**6.85**	**205**	Pn	**Pn**	**13 49 16.5**	**+1.2**		
	2.2nm,0.2s,SNR=7.9								
EBAD	**Badajoz**	**6.87**	**233**	Pn	**Pn**	**13 49 15.1**	**-0.6**		
	4.4nm,0.2s,SNR=18								
EBAD				Sn	**Sn**	**13 50 29.0**	**-5.1**		
	SNR=7.9								
EBAD	**Badajoz**	**6.87**	**233**	Pn	**Pn**	**13 49 15.1**	**-0.6**		
	4.4nm,0.2s,SNR=18								
EBAD				Sn	**Sn**	**13 50 29.0**	**-5.1**		
	7.7nm,0.2s,SNR=7.9								
CDF	**Champ du Feu**	**7.34**	**41**	*e*Pn	**Pn**	**13 49 22.4**	**+0.4**		
CDF				*e*Sg	**Sg**	**13 51 28.3**	**-1.8**		
	71nm,0.8s								
CDF	**Champ du Feu**	**7.34**	**41**	*e*Pn	**Pn**	**13 49 22.4**	**+0.4**		
CDF				*e*Sg	**Sg**	**13 51 28.3**	**-1.8**		
	35nm,0.8s								
EMIN	**Mina Concepcio**	**7.38**	**226**	Pn	**Pn**	**13 49 22.0**	**-0.7**		
	0.1nm,0.2s,SNR=7.6								
EMIN	**Mina Concepcio**	**7.38**	**226**	Pn	**Pn**	**13 49 22.0**	**-0.6**		
	0.1nm,0.2s,SNR=7.6								
EMIN				Sn	**Sn**	**13 50 39.6**	**-7.0**		
	3.8nm,0.2s,SNR=7.9								
EMIJ	**Mijas**	**7.50**	**211**	Pn	**Pn**	**13 49 25.3**	**+0.9**		
	4.1nm,0.3s,SNR=7.9								
EMIJ				Sn	**Sn**	**13 50 45.9**	**-3.7**		
	2.5nm,0.3s,SNR=7.9								
BAIF	**Baives**	**7.53**	**21**	*e*Pn	**Pn**	**13 49 25.4**	**+0.8**		
BAIF				*e*Sg	**Sg**	**13 51 35.1**	**-1.0**		
	70nm,0.7s								
BAIF	**Baives**	**7.53**	**21**	*e*Pn	**Pn**	**13 49 25.4**	**+0.8**		
BAIF				*e*Sg	**Sg**	**13 51 35.1**	**-1.0**		
	35nm,0.7s								
ESPR	**Espera**	**7.69**	**218**	Pn	**Pn**	**13 49 27.5**	**+0.6**		
	10nm,0.7s,SNR=4.0								
ESPR	**Espera**	**7.69**	**218**	Pn	**Pn**	**13 49 27.5**	**+0.6**		
	10nm,0.7s,SNR=4.0								
GIVF	**Givet**	**7.74**	**24**	*e*P	**Pn**	**13 49 34.0**	**+6.5**		
GIVF				*e*Sg	**Sg**	**13 51 41.8**	**-1.0**		
	104nm,0.7s								
GIVF	**Givet**	**7.74**	**24**	*e*Pn	**Pn**	**13 49 28.8**	**+1.3**		
GIVF				*e*P		13 49 34.0			
GIVF				*e*Sg	**Sg**	**13 51 41.8**	**-1.0**		
GIVF	**Givet**	**7.74**	**24**	*e*P	**Pn**	**13 49 34.0**	**+6.5**		
GIVF				*e*Sg	**Sg**	**13 51 41.8**	**-1.0**		
	52nm,0.7s								
GIVF	**Givet**	**7.74**	**24**	Pn	**Pn**	**13 49 28.8**	**+1.3**		
GIVF				P		13 49 34.0			
GIVF				Lg		13 51 41.8			
	52nm,0.7s								
BFO	**Black Forest**	**7.81**	**45**	*e*Pg	**Pg**	**13 49 59.1**	**-5.1**		
	53nm,1.0s								
BFO				*e*S	**Sb**	**13 51 13.2**	**-10**		
EJIF	**Jimena Fronter**	**7.88**	**214**	Pn	**Pn**	**13 49 30.4**	**+0.9**		
	5.3nm,0.4s,SNR=7.9								
EGRO	**El Granado**	**7.99**	**228**	Pn	**Pn**	**13 49 29.7**	**-1.3**		
	3.0nm,0.3s,SNR=7.9								
EGRO				Sn	**Sn**	**13 50 53.6**	**-7.9**		
	3.9nm,0.2s,SNR=7.9								
HGN	**Heimansgroeve**	**8.66**	**26**	*e*S	Sx	13 52 14.8			
WTSB	**Winterswijk**	**9.97**	**25**	*e*S	Sx	13 52 55.1			
KHC	**Kasperske Hory**	**11.17**	**53**	*e*P	**Pn**	**13 50 16.5**	**+2.0**		
KHC				*e*		13 50 25.5			
KHC				*e*S		13 53 37.0			
KHC	**Kasperske Hory**	**11.17**	**53**	*e*P	**Pn**	**13 50 16.5**	**+2.0**		
KHC				*ex*	x	13 50 25.5			
KHC	**Kasperske Hory**	**11.17**	**53**	*e*S	Sx	13 53 37.0			
CLL	**Collm**	**12.04**	**43**	Pn	**Pn**	**13 50 29.0**	**+2.6**		
CLL				*e*Sg		13 54 07.0			
PRU	**Pruhonice**	**12.12**	**50**	*e*S	Sx	13 54 08.9			
ESK	**Eskdalemuir**	**12.39**	**351**	Pn	**Pn**	**13 50 34.4**	**+3.2**		
ESK	**Eskdalemuir**	**12.39**	**351**	P	**Pn**	**13 50 34.4**	**+3.2**		
DPC	**Dobruska-Polom**	**13.31**	**51**	*e*S	Sx	13 54 39.9			

BJI ***15*** *14:20:07.5,9.12N×14179E,h24km,mB5.3,mb4.8,Ms4.5, Msz4.2*

IDC ***15*** *14:20:08.7±0.7,9.36N×14156E,h0km,mb4.6/15, mb1 4.8/18,mb1mx4.7/23,mbtmp4.7/18,ML4.9/3,MS3.7/16, Ms1 3.7/16,ms1mx3.5/32,Error ellipse: s-maj=22.0km s-min=12.9km az=96.0*

ISCJB ***15*** *14:20:09.8±1.6,9.37N±004×14152E±005,h19km±11km, mb4.8/63,MS3.9/23,Error ellipse: s-maj=8.7km s-min=6.8km az=10.5*

NEIC ***15*** *14:

comp=Z,79nm,4.5s
SSE LR LR
comp=N,169nm,14.2s,MS3.9
SSE LR LR
comp=E,150nm,14.2s,MS3.9
SSE LR LR
comp=Z,223nm,17.1s,MS3.8
SSE Sheshan 28.76 322 P **P** **14 26 07.5 -0.8**
comp=Z,46nm,0.7s,mb5.3
SSE sP sP 14 26 11.5 -10
SSE S **S** **14 30 54.9 -0.9**
SSE sS sS 14 31 00.3 -11
SSE LR LR
comp=Z,220nm,17.1s,MS3.8
CTA Charters Tower 29.63 171 LR LR 14 37 30.3
comp=Z,107nm,20.4s,MS3.5,baz=10,slow=35
WRAB Tennant Creek 29.97 194 *e*P **P** **14 26 18.9 -0.3**
comp=Z,7.6nm,0.6s,mb4.6
WRAB Tennant Creek 29.97 194 P **P** **14 26 19.5 +0.4**
comp=Z,17nm,1.3s,mb4.6
WB2 Warramunga Arr 29.98 194 *e*P **P** **14 26 19.1 -0.1**
WB2 Warramunga Arr 29.98 194 *e*P **P** **14 26 18.8 -0.4**
WRA Warramunga Arr 29.98 194 P **P** **14 26 18.9 -0.3**
comp=Z,6.5nm,0.6s,mb4.5,baz=14,slow=9.7,SNR=85
WRA LR LR 14 38 05.3
comp=Z,143nm,20.4s,MS3.6,baz=40,slow=36
KSRS Korea Array 30.56 338 P **P** **14 26 22.5 -1.7**
comp=Z,1.1nm,0.8s,mb3.7,baz=146,slow=8.9,SNR=2.9
KSRS LR LR 14 36 13.3
comp=Z,201nm,20.4s,MS3.8,baz=322,slow=32
NJ2 Nanjing 30.86 320 *e*P **P** **14 26 27.4 +0.4**
KSM Kuching 32.06 258 *e*P **P** **14 26 35.9 -1.9**
QIZ Qiongzhong 32.16 291 P **P** **14 26 36.5 -2.1**
QIZ S **S** **14 31 49.3 -0.1**
QIZ AMB AMB
comp=Z,210nm,4.5s
QIZ LR LR
comp=N,473nm,22.0s
QIZ LR LR
comp=Z,289nm,21.3s,MS3.9
ASAR Alice Springs 33.67 193 P **P** **14 26 51.7 +0.1**
comp=Z,3.8nm,0.7s,mb4.5,baz=18,slow=13,SNR=55
ASAR PcP PcP 14 29 32.5 +1.2
comp=Z,2.3nm,1.0s,baz=5.9,slow=3.4,SNR=5.9
MDJ Mudanjiang 36.62 346 P **P** **14 27 15.3 -1.5**
MDJ PP PP 14 28 40.1 -0.5
MDJ S **S** **14 32 57.5 -0.1**
MDJ AMB AMB
comp=Z,8.0nm,1.6s,mb4.3
MDJ AMB AMB
comp=Z,68nm,6.7s
MDJ LR LR
comp=N,158nm,33.4s
MDJ LR LR
comp=Z,211nm,34.6s,MS3.7
GYA Guiyang 37.13 302 ⇓*i*P **P** **14 27 23.3 +1.8**
GYA PP PP 14 28 49.0 +2.5
GYA PCP PcP 14 29 44.8 +3.3
GYA S **S** **14 33 10.3 +4.3**
GYA SCP ScP 14 33 28.8 +2.5
GYA SS SS 14 35 38.3 -11
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,180nm,7.1s
GYA LR LR
comp=N,480nm,12.2s,MS4.6
GYA LR LR
comp=E,420nm,11.9s,MS4.6
GYA LR LR
comp=Z,490nm,12.7s,MS4.5
MBWA Marble Bar 37.15 215 *e*P **P** **14 27 20.7 -0.9**
comp=Z,23nm,1.3s,mb4.9
YSS Yuzh-Sakhalins 37.47 1 P **P** **14 27 22.2 -1.9**
comp=Z,20nm,1.0s,mb4.9
BJT Baijiatuan 37.98 328 *e*P **P** **14 27 27.2 -1.2**
comp=Z,28nm,0.7s,mb5.1
XAN Xi'an 38.73 314 P **P** **14 27 34.8 0.0**
XAN AP pP 14 27 41.0 -3.5
XAN AMB AMB
comp=Z,5.0nm,0.8s,mb4.3
KMI Kunming 40.07 298 P **P** **14 27 46.4 +0.2**
KMI AP pP 14 27 51.4 -4.5
KMI XP sP 14 27 53.4 -6.5
KMI PP PP 14 29 23.3 +4.6
KMI S **S** **14 33 50.1 -0.3**
KMI SS SS 14 36 41.1 -7.4
KMI AMB AMB
comp=Z,13nm,1.3s,mb4.5
KMI AMB AMB
comp=Z,343nm,4.0s
KMI LR LR
comp=N,272nm,17.8s,MS4.2
KMI LR LR
comp=E,234nm,19.3s,MS4.2
KMI LR LR
comp=Z,295nm,20.5s,MS4.1
KMI Kunming 40.07 298 P **P** **14 27 46.4 +0.2**
comp=Z,13nm,1.3s,mb4.5
KMI pP pP 14 27 51.4 -4.5
KMI sP sP 14 27 53.4 -6.5
KMI PP PP 14 29 23.2 +4.5
KMI S **S** **14 33 50.1 -0.3**
KMI SS SS 14 36 41.1 -7.4
KMI SSS 14 37 17.8
KMI LR LR
comp=Z,290nm,20.5s,MS4.1
STKA Stephens Creek 41.01 180 *e*P **P** **14 27 52.8 -0.9**
comp=Z,1.6nm,0.7s,mb3.8
STKA Stephens Creek 41.01 180 P **P** **14 27 53.0 -0.7**
comp=Z,1.8nm,0.9s,mb3.7,baz=353,slow=8.7,SNR=5.5
STKA LR LR 14 43 32.7
comp=Z,117nm,20.1s,MS3.7,baz=24,slow=34
STKA Stephens Creek 41.01 180 *e*P **P** **14 27 52.9 -0.8**
comp=Z,9.6nm,1.4s,mb4.2
CD2 Chengdu 41.17 307 ⇑P **P** **14 27 55.8 +0.6**
CD2 AP pP 14 27 59.9 -5.0
CD2 XP sP 14 28 03.3 -5.5
CD2 PP PP 14 29 33.8 +3.3
CD2 S **S** **14 34 07.8 +1.3**
CD2 SS SS 14 37 06.3 -3.9
CD2 AMB AMB
comp=Z,40nm,0.9s,mb5.0
CD2 AMB AMB
comp=Z,190nm,4.2s
CD2 LR LR
comp=N,290nm,13.2s,MS4.4
CD2 LR LR
comp=E,140nm,10.8s,MS4.4
CD2 LR LR
comp=Z,250nm,11.9s,MS4.3
BTO Baotou 41.83 323 *e*P **P** **14 27 58.8 -1.6**
FORT Forrest 41.97 197 *e*P **P** **14 28 02.4 +0.8**
comp=Z,19nm,1.0s,mb4.7
CMAR Chiang Mai Arr 42.25 287 P **P** **14 28 05.6 +1.4**
comp=Z,38nm,0.8s,mb5.1,baz=91,slow=6.5,SNR=153
CMAR PcP PcP 14 29 58.8 +0.9
comp=Z,2.7nm,0.6s,baz=106,slow=2.4,SNR=6.9
CMAR LR LR 14 45 09.2
comp=Z,108nm,18.5s,MS3.8,baz=290,slow=36
CHTO Chiang Mai 42.29 288 *e*P **P** **14 28 04.8 +0.2**
comp=Z,20nm,1.1s,mb4.7
LZH Lanzhou 43.35 314 *e*P **P** **14 28 13.5 +0.6**
LZH AP pP 14 28 18.3 -4.4
LZH XP sP 14 28 20.6 -6.0
LZH PP PP 14 29 56.4 +2.3
LZH AMB AMB
comp=Z,25nm,1.4s,mb4.8
LZH AMB AMB
comp=Z,144nm,6.5s
LZH LR LR
comp=E,512nm,14.5s
LZH LR LR
comp=Z,709nm,18.2s,MS4.6
LZH Lanzhou 43.35 314 *e*P **P** **14 28 13.5 +0.6**
comp=Z,25nm,1.4s,mb4.8
LZH pP pP 14 28 18.3 -4.4
LZH sP sP 14 28 20.6 -6.0
LZH PP PP 14 29 56.4 +2.3
LZH LR LR
comp=Z,710nm,18.2s,MS4.6
HIA Hailar 43.76 339 P **P** **14 28 16.3 +0.4**
comp=Z,18nm,1.3s,mb4.6
PETK Petropavlovsk- 45.53 14 LR LR 14 46 47.1
comp=Z,85nm,18.5s,MS3.7,baz=194,slow=35
TOO Toolangi 46.83 176 *e*P **P** **14 28 39.1 -1.3**
MUN Mundaring 47.72 209 *e*P **P** **14 28 48.0 +0.5**
GTA Gaotai 47.73 316 *e*P **P** **14 28 47.8 +0.3**
GTA S **S** **14 35 45.5 +3.8**
GTA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,102nm,4.5s
GTA LR LR
comp=N,133nm,16.2s,MS4.2
GTA LR LR
comp=E,119nm,14.1s,MS4.2
GTA LR LR
comp=Z,201nm,18.6s,MS4.1
ULN Ulaanbaatar 48.16 329 *e*P **P** **14 28 51.3 +0.7**
comp=Z,10nm,1.1s,mb4.8
SONM Songino Array 48.47 329 P **P** **14 28 54.1 +1.0**
comp=Z,4.2nm,0.9s,mb4.5,baz=141,slow=6.7,SNR=24
SONM LR LR 14 50 21.3
comp=Z,122nm,18.3s,MS3.9,baz=149,slow=37
LSA Lhasa 51.18 301 *e*P **P** **14 29 15.4 +1.4**
comp=Z,5.3nm,0.6s,mb4.7
YAK Yakutsk 53.28 353 *e*P **P** **14 29 28.6 -0.4**
comp=Z,33nm,0.9s,mb5.3
TAPN Taplejung 53.73 297 *e*P **P** **14 29 33.0 +0.1**
comp=Z,17nm,0.7s,mb5.1
ODAN Odare 53.94 296 *e*P **P** **14 29 34.9 +0.5**
comp=Z,29nm,0.8s,mb5.3
RAMN Ramite 54.65 296 *e*P **P** **14 29 39.7 +0.1**
comp=Z,72nm,1.3s,mb5.5
RAO Raoul Island 54.76 136 LR LR 14 48 02.5
comp=Z,230nm,20.9s,MS4.2,baz=141,slow=31
JIRN Jiri 55.10 297 *e*P **P** **14 29 43.5 +0.6**
comp=Z,22nm,0.7s,mb5.3
GUN Gumba 55.41 297 *e*P **P** **14 29 46.0 +0.8**
comp=Z,78nm,1.1s,mb5.6
PKI Pulchoki 55.78 297 *e*P **P** **14 29 48.1 +0.3**
KKN Kakani 55.92 297 *e*P **P** **14 29 48.6 -0.2**
comp=Z,23nm,0.9s,mb5.2
DMN Daman 56.05 297 *e*P **P** **14 29 49.2 -0.5**
comp=Z,238nm,1.2s
GKN Gorkha 56.51 297 *e*P **P** **14 29 52.6 -0.4**
comp=Z,76nm,1.3s,mb5.5
DANN Dangsing 57.33 298 *e*P **P** **14 29 59.0 +0.2**
comp=Z,39nm,0.8s,mb5.5
KOLN Koldanda 57.40 297 *e*P **P** **14 29 59.3 0.0**
comp=Z,34nm,0.9s,mb5.4
WMQ Urumqi 57.81 316 *e*P **P** **14 30 02.0 +0.1**
WMQ PP PP 14 32 11.0 +0.8
WMQ S **S** **14 37 58.0 -1.1**
WMQ SS SS 14 41 50.0 0.0
WMQ AMB AMB
comp=Z,29nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,105nm,4.0s
WMQ LR LR
comp=N,46nm,15.0s,MS3.9
WMQ LR LR
comp=E,48nm,15.0s,MS3.9
WMQ LR LR
comp=Z,51nm,15.0s,MS3.8
PYUN Piuthan 57.97 297 *e*P **P** **14 30 03.6 +0.3**
comp=Z,56nm,0.9s,mb5.6
HYB Hyderabad 61.59 285 *e*P **P** **14 30 29.0 +0.6**
HYB Hyderabad 61.59 285 *i*P **P** **14 30 29.0 +0.6**
MK31 Makanchi Array 62.36 318 *e*P **P** **14 30 32.5 -0.5**
MKAR Makanchi Array 62.36 318 P **P** **14 30 33.1 +0.1**
comp=Z,8.5nm,0.8s,mb4.9,baz=96,slow=8.9,SNR=40
MKAR LR LR 14 55 23.5
comp=Z,77nm,21.2s,MS3.8,baz=226,slow=34
TIXI Tiksi 62.72 356 *e*P **P** **14 30 34.1 -0.9**
comp=Z,3.0nm,0.9s,mb4.4
ZAA0 Zalesovo Array 63.24 326 *e*P **P** **14 30 38.1 -0.6**
ZALV Zalesovo Beam 63.24 326 P **P** **14 30 38.5 -0.3**
comp=Z,3.3nm,0.7s,mb4.6,baz=104,slow=6.3,SNR=16
ZALV PcP PcP 14 31 14.9 -0.9
comp=Z,1.9nm,0.7s,baz=122,slow=5.6,SNR=3.9
ZALV LR LR 14 59 21.4
comp=Z,72nm,19.3s,MS3.9,baz=229,slow=37
ZALV Zalesovo Beam 63.24 326 P **P** **14 30 38.5 -0.3**
ZALV PcP PcP 14 31 14.9 -0.9
ZALV LR LR 14 59 21.4
KURK Kurchatov 65.78 322 *e*P **P** **14 30 54.9 -0.5**
comp=Z,38nm,1.3s,mb5.3
AML Almayashu 67.38 312 *e*P **P** **14 31 06.4 +0.6**
comp=Z,8.3nm,1.0s,mb4.7
KBL Kabul 70.37 303 *e*P **P** **14 31 23.6 -1.0**
comp=Z,8.3nm,0.8s,mb4.7
BRVK Borovoye 71.33 323 *e*P **P** **14 31 30.0 -0.1**
comp=Z,27nm,0.8s,mb5.2
PMR Palmer 72.02 28 P **P** **14 31 36.1 +2.1**
comp=Z,9.4nm,1.1s,mb4.6
MCK McKinley 72.63 26 P **P** **14 31 37.0 -0.6**
comp=Z,7.1nm,1.0s,mb4.5
COLD Coldfoot 73.06 22 *e*P **P** **14 31 41.3 +1.1**
comp=Z,7.4nm,1.0s,mb4.6
PPT Papeete 73.08 112 *e*LR LR 14 54 07.7
comp=Z,126nm,23.8s
DAWY Dawson 76.84 26 *e*P **P** **14 32 02.7 +0.7**
ARU Arti 78.39 326 *e*P **P** **14 32 09.7 -1.1**
comp=Z,7.6nm,0.6s,mb4.8
INK Inuvik 79.48 22 *e*P **P** **14 32 16.9 +0.4**
comp=Z,175nm,0.8s
YKA Yellowknife Ar 88.07 27 P **P** **14 33 01.7 +1.1**
comp=Z,5.3nm,0.7s,mb4.9,baz=288,slow=5.3,SNR=7.9
ETW Entiat 88.58 42 *e*P **P** **14 33 04.2 +0.9**
RES Resolute Bay 89.37 13 P **P** **14 33 06.0 -0.5**
comp=Z,139nm,0.9s
ARCES ARCESS Array B 90.06 342 P **P** **14 33 09.1 -0.7**
comp=Z,3.8nm,0.8s,mb4.8,baz=60,slow=7.2,SNR=6.3
NEW Newport 90.52 41 P **P** **14 33 11.6 -0.8**
comp=Z,2.7nm,0.8s,mb4.6
CMB Columbia Colle 90.57 51 *e*P **P** **14 33 14.3 +1.5**
comp=Z,11nm,1.1s,mb5.1
NVAR Mina Array Bea 92.08 51 P **P** **14 33 21.5 +1.6**
comp=Z,5.5nm,0.6s,mb5.1,baz=269,slow=5.1,SNR=61
TPNV Topopah Spring 94.03 52 *e*P **P** **14 33 30.6 +1.8**
comp=Z,6.3nm,0.9s,mb5.0
TPNV *e* 14 33 38.3
HWUT Hardware Ranch 96.19 46 P **P** **14 33 38.8 +0.1**
PDAR Pinedale Array 97.23 45 P **P** **14 33 43.6 +0.2**
comp=Z,0.2nm,0.3s,mb4.0,baz=244,slow=3.9,SNR=3.7
TORD Torodi Ar. Bea 134.30 299 PKP PKPdf 14 39 29.2 0.0
comp=Z,1.4nm,1.0s,baz=54,slow=0.6,SNR=6.2
PLCA Paso Flores 137.76 143 PKP PKPdf 14 39 34.5 -0.4
comp=Z,1.7nm,0.8s,baz=241,slow=7.2,SNR=3.2
DBIC Dimbokro 142.94 294 PKhKP 14 39 42.0
comp=Z,6.2nm,0.8s,baz=0.1,slow=2.9,SNR=7.5
KIC Kosan Boka 142.96 294 *e*PKP1 PKPdf 14 39 41.9 -3.2
comp=Z,124nm,1.6s
TIC Toumodi 143.10 294 *e*PKP1 PKPdf 14 39 42.3 -3.0
comp=Z,15nm,0.2s
LIC Lamto 143.28 294 *e*PKP1 PKPdf 14 39 42.9 -2.8
comp=Z,66nm,1.7s

IDC 15 14:26:18.6±5.1, 351S×15152E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/15, mbtmp3.5/3, Error ellipse: s-maj=153.3km s-min=29.8km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.40**	**224**	P	P	14 31 28.3	-1.2
	1.5nm,0.9s,baz=49,slow=9.8,SNR=9.5						
ASAR	**Alice Springs**	**26.29**	**219**	P	P	14 31 57.2	+1.2
	0.5nm,0.6s,baz=57,slow=8.7,SNR=10						
SONM	**Songino Array**	**64.56**	**328**	P	P	14 36 57.6	0.0
	0.5nm,0.8s,baz=136,slow=5.1,SNR=2.9						

IDC 15 14:42:37.0±4.9, 353S×15170E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.5/3, MS3.1/2, Ms1 3.0/2, ms1mx2.5/18, Error ellipse: s-maj=146.8km s-min=29.6km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**10.07**	**126**	LR	LR	14 47 22.6	
	comp=Z,54nm,19.8s,baz=201,slow=28						
WRA	**Warramunga Arr**	**23.52**	**225**	P	P	14 47 48.6	-0.4
	1.3nm,0.7s,baz=50,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**26.39**	**219**	P	P	14 48 15.8	+0.6
	0.6nm,0.6s,baz=53,slow=8.8,SNR=15						
STKA	**Stephens Creek**	**29.76**	**198**	LR	LR	14 59 15.0	
	comp=Z,54nm,18.1s,baz=205,slow=34						
SONM	**Songino Array**	**64.67**	**328**	P	P	14 53 16.7	0.0
	0.2nm,0.5s,baz=130,slow=6.4,SNR=2.8						

KRSC 15 14:45:07.6±0.7, 5375N×16113E, h4km±5km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.93**	**226**	*e*P	Pg	14 45 26.8	+1.4
SPN				*i* S	Sg	14 45 40.2	+2.7
NLC	**Nalytchevo**	**1.22**	**242**	*e*P	Pg	14 45 31.6	+0.7
NLC				*i* S	Sg	14 45 49.2	+2.6
AVH	**Avacha**	**1.51**	**252**	P	Pn	14 45 36.9	+1.5
AVH				*i* S	Sn	14 45 58.7	+3.3
TUMR	**Tumrok**	**1.64**	**340**	P	Pn	14 45 38.1	+0.9
TUMR				*i* S	Sn	14 46 00.6	+1.9
PET	**Petropavlovsk**	**1.65**	**245**	*e*P	Pn	14 45 38.4	+1.1
PET				*i* S	Sn	14 46 00.5	+1.5
GNL	**Ganaly**	**1.90**	**270**	P	Pn	14 45 43.2	+2.5
RUS	**Russkaya**	**2.06**	**231**	*e*P	Pn	14 45 45.0	+2.1
RUS				*i* S	Sn	14 46 12.2	+3.3
KMNR	**Kamenistaya**	**2.08**	**346**	P	Pn	14 45 44.6	+1.4
KMNR				*i* S	Sn	14 46 11.8	+2.4
BZGR	**Bezymyannyi-Gr**	**2.21**	**354**	P	Pn	14 45 46.2	+1.2
BZGR				*i* S	Sn	14 46 14.6	+1.9
BZMR	**Bezymyannaya**	**2.22**	**351**	P	Pn	14 45 47.3	+2.2
BZWR	**Bezymyannyi-We**	**2.25**	**351**	P	Pn	14 45 48.1	+2.6
KIRR	**Kirishev**	**2.25**	**349**	P	Pn	14 45 48.5	+2.9
ZLN	**Zelenaya**	**2.28**	**355**	*e*P	Pn	14 45 47.2	+1.2
ZLN				*e*S	Sn	14 46 16.5	+2.1
KPT	**Kopyto**	**2.28**	**347**	P	Pn	14 45 49.9	+3.9
CIRR	**Tsirk**	**2.38**	**355**	P	Pn	14 45 49.3	+2.0
KOZ	**Kozyrevsk**	**2.42**	**343**	P	Pn	14 45 49.3	+1.4
KRSR	**Krestovskiy**	**2.49**	**353**	P	Pn	14 45 51.8	+2.9
KBTR	**Krutoberegovo**	**2.65**	**21**	P	Pn	14 45 54.3	+3.3
SRDR	**Sredinnyy**	**2.70**	**343**	P	Pn	14 45 53.4	+1.7
SRDR				*i* S	Sn	14 46 26.7	+1.9
SRKR	**Sorokina**	**2.91**	**0**	P	Pn	14 45 58.0	+3.4
SRKR				*i* S	Sn	14 46 33.8	+3.8

ISCJB ***15*** *15:03:06.8±1.1, 2283S×7043W±003, h23km±7km, mb5.8/186, MS6.4/15, Error ellipse: s-maj=5.6km s-min=3.8km az=36.4*

LDG ***15*** *15:03:06.7±0.3, 2229S×7042W, h10km, Mb5.7/11, Ms6.1/1, Error ellipse: s-maj=30.2km s-min=12.3km az=157.0*

GCMT ***15*** *15:03:08.8±0.2, 2299S×7101W, h36km±1km, MW6.3/66, Moment Tensor Solution. s66,c97; s58,c94; Duration: 3?6 Moment tensor: Scale 10^18Nm; Mrr 2.36±.07; Mθθ 0.41±.07; Mϕϕ 2.77±.09; Mrθ 0.71±.10; Mθϕ 0.26±.07; Mϕr -2.91±.16; Best double couple: Mo 3.95400×10^18 NP1:ϕs 5.00000°, δ21.00000°, λ106.00000°. NP2: ϕs 168.00000°, δ70.00000°, λ84.00000°. Principal axes: T 3.7630, Plg65.0000°, Azm68.0000°; N 0.3880, Plg6.0000°, Azm170.0000°; P -4.1450, Plg25.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***15*** *15:03:08.8±0.2, 2287S×7041W, h27km, mb5.8/169, ME5.9, MW6.1, ML5.5(GUC) Error ellipse: s-maj=5.6km s-min=3.9km az=223.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^18Nm; Mrr 1.82; Mθθ -0.21; Mϕϕ -1.60; Mrθ 0.44; Mθϕ -0.14; Mϕr -1.12; Best double couple: Mo 2.10000×10^18 NP1:ϕs 16.00000°, δ30.00000°, λ111.00000°. NP2:ϕs 172.00000°, δ62.00000°, λ78.00000°. Principal axes: T 2.2400, Plg70.0000°, Azm56.0000°; N -0.3000, Plg10.0000°, Azm177.0000°; P -1.9300, Plg16.0000°, Azm270.0000°; Broadband fault plane solution: P waves. NP1:ϕs 170.00000°, δ75.00000°, λ90.00000°. NP2:ϕs 350.00000°, δ15.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm80.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm260.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at Mejillones; [IV] at Antofagasta, Quillagua, Sierra Gorda and Tocopilla; [III] at Maria Elena, Ollague, Pozo Almonte and San Pedro de Atacama; [II] at Caldera, Copiapo, Iquique, Taltal and Tierra Amarilla.

BJI ***15*** *15:03:08.8, 2207S×7098W, h27km, mB6.5, Ms6.7, Msz6.6*

MOS ***15*** *15:03:08.6±1.3, 2275S×7046W, h33km, mb6.0/74, MS6.6/4, Error ellipse: s-maj=9.8km s-min=5.8km az=95.1*

GUC ***15*** *15:03:08.0±1.2, 2295S×7057W, h25km±6km, ML5.6*

IDC ***15*** *15:03:09.2±2.1, 2287S×7038W, h33km±15km, mb5.2/19, mb1 5.2/22, mb1mx5.2/23, mbtmp5.2/22, ML5.0/3, MS6.6/2, Ms1 6.6/2, ms1mx5.8/31, Error ellipse: s-maj=13.8km s-min=11.8km az=73.0*

IGIL ***15*** *15:03:10.0, 2281S×7031W, h27km, MS6.4*

DJA ***15*** *15:03:20.6±0.0, 2457S×6921W, h34km, mB6.5/5, Mw(mB)6.2/5, Mwp6.2/6*

ISC 15 15:03:09.6±0.8, 2290S±003×7042W±003, h31km±5km, h31km±1.3km: pP-P, n1061, o0?9/847, mb5.8/185, MS6.4/15, 229C-227D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.53**	**158**	*e*P	**Pb**	**15 03 20.4**	**-0.1**
CEN1				*i* S	**Sb**	**15 03 29.6**	**+1.6**
PB06	**Plate Boundary**	**0.80**	**76**	*e*P	**Pn**	**15 03 24.6**	**-0.1**
PB06				*i* S	**Sn**	**15 03 37.7**	**+2.2**
PB04	**Plate Boundary**	**1.06**	**54**	*e*P	**Pn**	**15 03 20.9**	**-7.4**
PB04				*i* S	**Sn**	**15 03 31.9**	**-10**
PB07	**Plate Boundary**	**1.26**	**23**	*e*P	**Pn**	**15 03 31.4**	**+0.3**
PB07				*i* S	**Sn**	**15 03 49.8**	**+2.9**
LVC	**Limon Verde**	**1.42**	**79**	Pg	**Pn**	**15 03 34.8**	**+1.7**
	8μm,0.3s,baz=259,slow=13,SNR=1730						
LVC				Lg		15 03 55.5	
	21μm,0.3s,baz=61,slow=12,SNR=26						
LVC				LR	LR	15 04 14.9	
	comp=Z,1013μm,18.6s,baz=300,slow=48						
LVC	**Limon Verde**	**1.42**	**79**	*e*Pn	**Pn**	**15 03 34.7**	**+1.6**
LVC				*e*Sn	**Sn**	**15 03 54.6**	**+3.9**
LVC	**Limon Verde**	**1.42**	**79**	⇓*i*P	**Pn**	**15 03 34.8**	**+1.7**
LVC				*i* S	**Sn**	**15 03 55.9**	**+5.1**
LVC				AML	AML	15 03 58.3	
	comp=N,141μm,0.8s						
PB01	**Plate Boundary**	**2.04**	**25**	*e*P	**Pn**	**15 03 43.3**	**+1.6**
PB01				*i* S	**Sn**	**15 04 12.3**	**+6.2**
CPCH	**Copiapo**	**4.44**	**179**	P	**Pn**	**15 04 10.7**	**-4.0**
CPCH				S	**Sn**	**15 04 58.8**	**-6.6**
LCO	**Las Campanas**	**6.09**	**182**	*e*Pn	**Pn**	**15 04 32.5**	**-4.9**
	comp=N,672nm,1.8s						
ARE	**Arequipa**	**6.48**	**351**	*e*P	**Pn**	**15 04 41.0**	**-1.8**
ARE				*e*S	**Sn**	**15 05 50.0**	**-5.7**
CFAA	**Coronel Fontan**	**8.89**	**168**	Pn	**Pn**	**15 05 14.1**	**-1.7**
	comp=N,0.8nm,0.3s,baz=340,slow=13,SNR=33						
CFAA				Sn	**Sn**	**15 07 01.4**	**+6.7**
	comp=N,2.7nm,0.3s,baz=352,slow=16,SNR=3.1						
SIV	**San Ignacio**	**11.17**	**54**	Pn	**Pn**	**15 05 45.5**	**-1.6**
	comp=N,7.0nm,0.3s,baz=246,slow=13,SNR=101						
SIV				Sn	**Sn**	**15 07 53.8**	**+2.8**
	baz=232,slow=19						
NNA	**Nana**	**12.46**	**329**	Pn	**Pn**	**15 06 04.4**	**-0.3**
	comp=N,5.8nm,0.3s,baz=179,slow=13,SNR=7.8						
NNA				Sn	**Sn**	**15 08 17.4**	**-5.2**
	comp=N,6.3nm,0.3s,baz=193,slow=14,SNR=5.7						
NNA	**Nana**	**12.46**	**329**	*e*Pn	**Pn**	**15 06 03.1**	**-1.7**
	comp=N,100nm,0.9s						
LPA	**La Plata**	**16.19**	**140**	*ce*P	**Pn**	**15 06 52.0**	**-2.7**
LPA	**La Plata**	**16.19**	**140**	*de*P	**Pn**	**15 06 55.0**	**+0.3**
LPA	**La Plata**	**16.19**	**140**	*e*P	**Pn**	**15 06 58.0**	**+3.3**
LPA				*es*P	sP	15 07 09.0	-0.9
LPA				*i* S	**Sn**	**15 09 54.0**	**+0.7**
LPA	**La Plata**	**16.19**	**140**	⇑*e*P	**Pn**	**15 06 52.0**	**-2.7**
LPA				*e*P		15 06 55.0	
LPA				*e*P		15 06 58.0	
LPA				*es*P	sP	15 07 09.0	-0.9
LPA				*i* S	**Sn**	**15 09 54.0**	**+0.7**
ATAH	**Atahualpa**	**17.57**	**333**	P	**Pn**	**15 07 13.9**	**+1.7**
	comp=N,0.5nm,0.3s,baz=141,slow=10,SNR=8.6						
PLCA	**Paso Flores**	**17.78**	**180**	P	**Pn**	**15 07 14.6**	**0.0**
	comp=N,1.1nm,0.3s,baz=12,slow=12,SNR=21						
PLCA	**Paso Flores**	**17.78**	**180**	*e*Pn	**Pn**	**15 07 11.6**	**-3.0**
	comp=N,6.3nm,0.7s						
PLCA	**Paso Flores**	**17.78**	**180**	P	**Pn**	**15 07 14.6**	**0.0**
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SPB	**Sao Paulo**	**21.13**	**96**	*e*P	**P**	**15 07 51.5**	**-0.4**
BDFB	**Brasilia**	**22.33**	**75**	P	**P**	**15 08 02.6**	**-2.1**
	comp=Z,58nm,1.0s,mb5.0,baz=247,slow=18,SNR=27						

OTAV **Otavalo** 24.29 340 *e*P P **15 08 26.0 +1.8**
CAM4 **Nova Friburgo** 25.70 94⇑*i*P P **15 08 36.1 -0.9**
CAM4 *i* 15 08 40.7
CAM4 *i* 15 08 50.2
CAM4 *i* 15 08 53.8
CAM4 *i* 15 09 01.8
CAM4 *i* 15 09 10.1
ROSC **El Rosal** 27.85 352 P P **15 08 57.3 +0.9**
comp=Z,23nm,0.8s,baz=100,slow=23,SNR=7.1
ROSC **El Rosal** 27.85 352 *e*P P **15 08 55.1 -1.3**
PAYG **Puerto Ayora** 29.34 316 P P **15 09 09.2 -0.5**
comp=Z,221nm,1.4s,mb5.7
EFI **East Falkland** 30.27 165 P P **15 09 16.0 -1.6**
comp=Z,878nm,1.0s,mb6.4,SNR=7.3
EFI **East Falkland** 30.27 165 *e*P P **15 09 16.1 -1.5**
comp=Z,148nm,0.9s,mb5.7
EFI **East Falkland** 30.27 165 *e*P P **15 09 16.1 -1.5**
EFI pmax pmax
comp=Z,148nm,0.9s,mb5.7
USHA **Ushuaia** 31.92 178 P P **15 09 31.2 -0.9**
comp=Z,79nm,1.2s,mb5.4,baz=339,slow=6.0,SNR=9.7
BCIP **Isla Barro Col** 33.17 343 *e*P P **15 09 44.8 +1.3**
comp=Z,464nm,1.8s,mb6.1
PCRV **Puerto La Cruz** 33.35 10 P P **15 09 43.5 -1.5**
comp=Z,16nm,0.5s,mb5.2,baz=325,slow=1.0,SNR=9.3
RPN **Rapa Nui** 35.42 255 P P **15 10 01.9 -1.1**
comp=Z,240nm,1.2s,mb6.0,baz=24,slow=0.9,SNR=6.6
RCBR **Riachuelo** 37.35 68 *e*P P **15 10 19.3 -0.2**
TGUH **Tegucigalpa,Un** 40.27 334 *e*P P **15 10 43.4 -0.5**
comp=Z,282nm,1.4s,mb5.8
CPD **Cerro la Pandu** 40.92 7 *e*P P **15 10 46.3 -2.8**
comp=Z,147nm,0.8s,mb5.7
CPD **Cerro la Pandu** 40.92 7 *e*P P **15 10 46.3 -2.9**
CPD pmax pmax
comp=Z,150nm,0.9s,mb5.6
PCJ **Portland Cotta** 40.92 350⇑*e*P P **15 10 48.3 -0.9**
SJG **San Juan** 40.97 6 *e*P P **15 10 46.8 -2.8**
MPR **Mayaguez** 40.98 5 *e*P P **15 10 47.9 -1.8**
MTP **Monte Pirata** 41.02 7 *e*P P **15 10 46.5 -3.5**
HUMP **Col San Antoni** 41.03 7 *e*P P **15 10 47.8 -2.3**
comp=Z,501nm,1.8s,mb5.8
HOJ **Hope** 41.12 351⇑*e*P P **15 10 51.4 +0.6**
AOPR **Arecibo Observ** 41.15 5 *e*P P **15 10 48.4 -2.6**
comp=Z,103nm,0.8s,mb5.5
ANWB **Willy Bob** 41.19 13 *e*P P **15 10 46.0 -5.4**
STH **Stony Hill** 41.20 351⇑*i*P P **15 10 51.3 -0.2**
AGPR **Aguadilla, PR** 41.24 5 *e*P P **15 10 51.1 -0.7**
CVJ **Coleyville** 41.46 350⇑*e*P P **15 10 53.4 -0.2**
SDDR **Presa de Saban** 41.63 359 *e*P P **15 10 52.7 -2.3**
comp=Z,85nm,1.4s,mb5.2
PMSA **Palmer Station** 42.07 176 P P **15 10 59.0 +0.9**
comp=Z,156nm,1.2s,mb5.5,baz=17,slow=8.9,SNR=7.1
PMSA **Palmer Station** 42.07 176 *e*P P **15 10 57.0 -1.1**
comp=Z,232nm,1.1s,mb5.7
MASC **Masc** 42.97 355 *e*P P **15 11 05.2 -0.7**
LMGC **Las Mercedes** 43.18 351 *e*P P **15 11 07.6 0.0**
MOAC **Moa** 43.52 354 *e*P P **15 11 09.9 -0.4**
CCCC **Cccc** 44.41 350 *e*P P **15 11 17.9 +0.4**
CMIG **Matias Romero** 46.39 327 P P **15 11 32.4 -0.8**
comp=Z,14nm,0.7s,mb5.0,baz=159,slow=7.1,SNR=5.3
SOR **Soroa** 47.04 344 *e*P P **15 11 37.0 -1.2**
PTVM **Pico Tres Padr** 50.68 324 *e*P P **15 12 09.7 +3.5**
TRIS **Tristan da Cun** 51.54 120 *e*P P **15 12 13.2 +0.6**
comp=Z,327nm,0.9s,mb6.3
DWPF **Disney** 51.81 348 *e*P P **15 12 14.4 -0.1**
comp=Z,243nm,1.6s,mb5.9
MOIG **Morelia** 51.90 322 *e*P P **15 12 18.0 +2.6**
CJM **Chamela** 54.02 319 *e*P P **15 12 32.6 +1.6**
ZAIG **Zacatecas** 55.13 323 *i*P P **15 12 38.5 -0.5**
BBSR **BB Station** 55.23 6 *e*P P **15 12 38.5 -1.0**
comp=Z,135nm,0.8s,mb6.0
ASCN **Ascension** 55.73 84 *e*P P **15 12 43.6 0.0**
comp=Z,111nm,0.9s,mb5.9
BRAL **Brewton** 55.93 343 *e*P P **15 12 45.0 +0.4**
comp=Z,298nm,1.0s,mb6.3
NHSC **New Hope** 56.46 350 *e*P P **15 12 48.7 +0.3**
comp=Z,885nm,1.9s,mb6.5
GOGA **Godfrey** 57.36 347 *e*P P **15 12 54.3 -0.5**
comp=Z,170nm,1.9s,mb5.8
GOGA **Godfrey** 57.36 347 *e*P P **15 12 54.3 -0.4**
GOGA pmax pmax
comp=Z,170nm,1.9s,mb5.8
MAIG **Mazatlaan** 57.66 320 *i*S P **15 13 01.0 +3.9**
JSC **Jenkinsville** 57.79 349 *e*P P **15 12 56.3 -1.4**
LRAL **Lakeview Retre** 57.83 344 *e*P P **15 12 56.9 -1.2**
HKT **Hockley** 57.95 334 *e*P P **15 12 56.0 -3.0**
comp=Z,125nm,1.6s,mb5.7
HKT **Hockley** 57.95 334 *e*P P **15 12 56.0 -3.0**
HKT pmax pmax
comp=Z,125nm,1.6s,mb5.7
VBMS **Vicksburg** 58.08 340 *e*P P **15 12 59.0 -0.8**
CNNC **Cliffs of the** 58.25 353 *e*P P **15 13 00.6 -0.4**
comp=Z,167nm,1.2s,mb5.9
NATX **Nacogdoches** 59.10 336 *e*P P **15 13 08.1 +1.1**
comp=Z,1μm,2.3s,mb6.5
VNA3 **Neumayer Olymp** 59.21 161 *e*P P **15 13 06.3 -1.0**
VNA3 *e* 15 13 09.9
VNA3 *e* pP 15 13 15.2 -1.7
VNA3 *e* 15 13 22.6
VNA1 **Neumayer--Stat** 59.45 160 *e*P P **15 13 09.0 +0.1**
VNA1 *e* 15 13 12.0
VNA1 *e* pP 15 13 17.1 -1.5
VNA1 *e* 15 13 24.8
CPCT **Cooper Cave** 59.55 347 *e*P P **15 13 07.8 -2.2**
TKL **Tuckaleechee C** 59.59 347 *e*P P **15 13 08.1 -2.2**
SWET **Sewanee** 59.64 345 *e*P P **15 13 08.6 -2.0**
VNA2 **Neumayer--Watz** 59.81 160 *e*P P **15 13 10.7 -0.7**
baz=296,slow=6.8
VNA2 *e* 15 13 14.2
VNA2 *e* pP 15 13 19.5 -1.5
VNA2 *e* 15 13 27.0
OXF **Oxford** 59.88 342 *e*P P **15 13 10.3 -1.9**
comp=Z,175nm,0.9s,mb6.1
OXF **Oxford** 59.88 342 *e*P P **15 13 10.3 -2.0**
OXF pmax pmax
comp=Z,175nm,0.9s,mb6.1
JCT **Junction City** 60.11 331 *e*P P **15 13 13.3 -0.7**
comp=Z,80nm,0.8s,mb5.8
JCT **Junction City** 60.11 331 *e*P P **15 13 13.3 -0.6**
JCT pmax pmax
comp=Z,80nm,0.8s,mb5.8
TZTN **Tazewell** 60.41 348 *e*P P **15 13 14.9 -1.0**
comp=Z,104nm,1.4s,mb5.7
URVA **University of** 60.52 354 *e*P P **15 13 17.1 +0.5**
BLA **Blacksburg** 60.52 351 *e*P P **15 13 15.4 -1.2**
comp=Z,236nm,1.6s,mb6.1
BLA **Blacksburg** 60.52 351 *e*P P **15 13 15.4 -1.2**
BLA pmax pmax
comp=Z,237nm,1.6s,mb6.1
ELN **Prospectdale** 60.59 351 *e*P P **15 13 16.0 -1.1**
MET **Memphis--Engin** 60.60 342 *e*P P **15 13 16.7 -0.5**
WVT **Waverly** 60.97 344 *e*P P **15 13 17.2 -2.5**
comp=Z,110nm,0.8s,mb6.0
WVT **Waverly** 60.97 344 *e*P P **15 13 17.3 -2.4**
WVT pmax pmax
comp=Z,110nm,0.8s,mb6.0
TXAR **Lajitas Array** 61.00 327 P P **15 13 19.4 -0.6**
comp=Z,9.5nm,0.7s,mb5.0,baz=147,slow=7.2,SNR=35
TXAR PKP2bc 15 42 41.1
comp=Z,1.7nm,1.1s,baz=328,slow=3.3,SNR=4.4
TXAR **Lajitas Array** 61.00 327 P P **15 13 19.4 -0.6**
TXAR ⇑*e* 15 42 41.1
UALR **University of** 61.02 339 *e*P P **15 13 20.1 0.0**
comp=Z,148nm,1.3s,mb6.0
MIAR **Mount Ida** 61.22 338 *e*P P **15 13 20.4 -1.0**
comp=Z,114nm,1.0s,mb6.0
MIAR **Mount Ida** 61.22 338 *e*P P **15 13 20.4 -1.0**
MIAR pmax pmax
comp=Z,110nm,1.0s,mb5.9
GNAR **Gosnell** 61.41 342 *e*P P **15 13 22.1 -0.6**
comp=Z,1μm,0.8s,mb7.2
SNAA **Sanae** 61.43 161 *e*P P **15 13 19.8 -2.6**
SNAA *e* 15 13 22.7
SNAA *e* pP 15 13 28.7 -3.4
SNAA *e* 15 13 36.0
SNAA **Sanae** 61.43 161 *e*P P **15 13 19.9 -2.5**
PARMO **Parma** 61.99 342 *e*P P **15 13 25.1 -1.5**
SDMD **Soldier's Deli** 62.27 354 *e*P P **15 13 27.4 -1.0**
comp=Z,63nm,1.0s,mb5.7
WCI **Wyandotte Cave** 62.60 346 *e*P P **15 13 28.2 -2.5**
comp=Z,61nm,0.8s,mb5.8
WCI **Wyandotte Cave** 62.60 346 *e*P P **15 13 28.2 -2.5**
WCI pmax pmax
comp=Z,61nm,0.8s,mb5.8
USIN **University of** 62.67 345 *e*P P **15 13 30.4 -0.7**
comp=Z,90nm,0.9s,mb5.9
MVL **Millersville** 62.81 355 *e*P P **15 13 32.5 +0.4**
comp=Z,66nm,0.9s,mb5.8
SIUC **Southern Illin** 62.83 343 *e*P P **15 13 32.0 -0.2**
comp=Z,127nm,0.8s,mb6.1
MCWV **Mont Chateau** 62.85 352 *e*P P **15 13 31.6 -0.6**
comp=Z,110nm,1.1s,mb5.9
WMOK **Wichita Mounta** 63.33 334 *e*P P **15 13 32.8 -2.7**
comp=Z,170nm,1.9s,mb5.8
WMOK **Wichita Mounta** 63.33 334 *e*P P **15 13 34.5 -1.1**
WMOK pmax pmax
comp=Z,170nm,1.9s,mb5.8
FVM **French Village** 63.41 342 *e*P P **15 13 34.0 -2.0**
comp=Z,132nm,0.9s,mb6.1
FVM **French Village** 63.41 342 *e*P P **15 13 34.0 -2.0**
FVM pmax pmax
comp=Z,130nm,0.9s,mb6.1
OLIL **Olney** 63.51 345 *e*P P **15 13 35.5 -1.2**
comp=Z,84nm,0.9s,mb5.8
BLO **Bloomington** 63.56 346 *e*P P **15 13 33.9 -3.1**
comp=Z,102nm,0.4s,mb6.2
BLO **Bloomington** 63.56 346 *e*P P **15 13 33.9 -3.1**
BLO pmax pmax
comp=Z,100nm,0.4s,mb6.2
SSPA **Standing Stone** 63.59 354 *e*P P **15 13 36.4 -0.7**
comp=Z,166nm,1.5s,mb5.8
GDL2 **Guadalupe Moun** 63.68 328 *e*P P **15 13 38.6 +0.7**
CCM **Cathedral Cave** 63.71 342 *e*P P **15 13 36.2 -1.8**
comp=Z,96nm,1.0s,mb5.8
CCM **Cathedral Cave** 63.71 342 *e*P P **15 13 36.2 -1.8**
CCM pmax pmax
comp=Z,96nm,1.0s,mb5.8
ACSO **Alum Creek Sta** 63.89 349 *e*P P **15 13 37.8 -1.3**
comp=Z,116nm,1.0s,mb5.9
SLM **Saint Louis** 63.97 343 *e*P P **15 13 39.1 -0.6**
comp=Z,83nm,1.0s,mb5.7
SLM **Saint Louis** 63.97 343 *e*P P **15 13 42.4 +2.7**
SLM pmax pmax
comp=Z,83nm,1.0s,mb5.7
BRYW **Bryant College** 64.49 359 *e*P P **15 13 41.0 -2.1**
BBTS **Babate** 64.61 60 P P **15 13 43.6 -0.7**
comp=Z,64nm,0.9s,mb5.6,baz=248,slow=4.0,SNR=9.5
AMTX **Amarillo** 64.67 332 *e*P P **15 13 44.6 +0.2**
comp=Z,185nm,1.8s,mb5.8
ALLY **Alegheny Colle** 64.85 352 *e*P P **15 13 45.7 +0.4**
comp=Z,78nm,0.6s,mb5.9
BINY **Binghamton** 64.97 355 *e*P P **15 13 45.2 -0.9**
comp=Z,98nm,1.1s,mb5.8
ERPA **Erie** 65.29 352 *e*P P **15 13 48.3 +0.1**
comp=Z,99nm,0.9s,mb5.8
HDIL **Hopedale** 65.53 344 *e*P P **15 13 49.2 -0.6**
comp=Z,64nm,0.8s,mb5.7
319A **Douglas** 65.56 324 ⇑P P **15 13 50.7 +0.4**
baz=66,SNR=8.4
319A ⇑S S 15 22 34.3 +0.8
baz=66
318A **Bisbee** 66.00 323 ⇓P P **15 13 53.1 0.0**
baz=66,SNR=31
318A ⇓S S 15 22 39.2 +0.3
baz=66
MAIT **Maitri** 66.00 159 *e*P P **15 13 50.1 -2.5**
ACCN **Adirondack Com** 66.02 357 *e*P P **15 13 51.4 -1.5**
comp=Z,660nm,2.6s,mb6.2
219A **White Tail Can** 66.03 324 ⇓P P **15 13 53.5 +0.2**
baz=66,SNR=34
219A ⇓S S 15 22 43.6 +4.4
baz=66
NVL **N'lazarevskaya** 66.03 159*c* *i*P P **15 13 53.5 +0.7**
NVL *e*S S 15 22 39.2 +0.9
NVL pmax pmax
comp=Z,307nm,1.7s,mb6.1
HNH **Hanover** 66.29 359 *e*P P **15 13 54.8 +0.1**
BNM **Barren Site** 66.37 328 *e*P P **15 13 55.4 0.0**
KSU1 **Kansas State U** 66.37 338 *e*P P **15 13 54.8 -0.5**
comp=Z,23nm,0.6s,mb5.4
218A **Dragoon** 66.44 324 ⇑P P **15 13 55.8 -0.1**
baz=67,SNR=28
218A ⇑S S 15 22 46.2 +2.0
baz=67
Y22D **IRIS PASSCAL I** 66.45 327 ⇑P P **15 13 56.5 +0.6**
baz=67
LPM **Los Pinos Moun** 66.50 328 *e*P P **15 13 57.4 +1.1**
LENM **Lemitar** 66.55 327 *e*P P **15 13 57.9 +1.3**
MDV **Middlebury** 66.61 358 *e*P P **15 13 57.2 +0.5**
119A **Ashpeak Ranch,** 66.65 325 ⇑P P **15 13 57.2 0.0**
baz=67,SNR=9.9
119A ⇑S S 15 22 50.4 +3.7
baz=67
217A **Green Valley** 66.71 323 ⇓P P **15 13 57.9 +0.3**
baz=67,SNR=14
217A ⇑S S 15 22 51.4 +3.9
baz=67
LBNH **Lisbon** 66.82 359 *e*P P **15 13 58.6 +0.6**
comp=Z,89nm,1.2s,mb5.7
LBNH **Lisbon** 66.82 359 *e*P P **15 13 59.4 +1.4**
LBNH pmax pmax
comp=Z,89nm,1.2s,mb5.7
LAZ **Ladron** 66.82 327 *e*P P **15 14 00.3 +2.0**
118A **Homack Ranch,** 66.91 324 ⇑P P **15 13 58.8 0.0**
baz=67,SNR=22
118A ⇑S S 15 22 54.1 +4.3
baz=67
ANMO **Albuquerque** 66.93 328 *e*P P **15 13 58.7 -0.2**
comp=Z,317nm,1.8s,mb6.0
ANMO **Albuquerque** 66.93 328 *e*P P **15 13 59.4 +0.5**
ANMO pmax pmax
comp=Z,320nm,1.8s
Z19A **T-Link Ranch,** 67.04 325 ⇓P P **15 13 59.9 +0.3**
baz=67,SNR=7.1
Z19A ⇑S S 15 22 57.0 +5.7
baz=67
TUC **Tucson** 67.10 323 *e*P P **15 14 00.6 +0.5**
comp=Z,64nm,1.2s,mb5.5
TUC **Tucson** 67.10 323 *e*P P **15 14 00.6 +0.5**
TUC pmax pmax
comp=Z,65nm,1.2s,mb5.5
WVL **Waterville** 67.14 1 *e*P P **15 14 01.7 +1.7**
216A **Three Points,** 67.24 323 ⇓P P **15 14 01.3 +0.4**
baz=68,SNR=15
216A ⇓S S 15 22 58.9 +5.1
baz=68
CBKS **Cedar Bluff** 67.26 335 *e*P P **15 13 59.5 -1.4**
comp=Z,143nm,0.8s,mb6.0
CBKS **Cedar Bluff** 67.26 335 *e*P P **15 14 00.7 -0.2**
CBKS pmax pmax
comp=Z,140nm,0.9s,mb6.0
117A **Oracle** 67.27 324 ⇓P P **15 14 01.3 +0.2**
baz=68,SNR=20
117A ⇓S S 15 22 58.5 +4.3
baz=68
Z18A **Geronimo** 67.29 325 ⇑P P **15 14 01.5 +0.2**
baz=68
Z18A ⇓S S 15 22 58.6 +4.3
baz=68
LONY **Lake Ozonia** 67.30 357 *e*P P **15 14 01.2 +0.2**
comp=Z,104nm,1.4s,mb5.7
QSPA **South Pole Qui** 67.30 180 *e*P P **15 14 00.6 -0.1**
comp=Z,526nm,1.4s,mb6.4
EMMW **East Machias** 67.33 2 *e*P P **15 14 03.5 +2.2**
FRNY **Flat Rock** 67.46 358 *e*P P **15 14 01.8 -0.3**
comp=Z,118nm,1.1s,mb5.8
Y19A **Nutrioso** 67.55 326 ⇓P P **15 14 03.8 +0.9**
baz=68,SNR=46
Z17A **San Carlos Hig** 67.68 324 ⇓P P **15 14 03.8 +0.1**
baz=68
116A **Eloy** 67.80 323 ⇑P P **15 14 04.6 +0.1**
baz=68,SNR=8.2
116A ⇓S S 15 23 03.9 +3.3
baz=68
Y18A **Canyon Day Jun** 67.82 325 ⇑P P **15 14 04.8 +0.3**
baz=68
Y18A ⇓S S 15 23 04.1 +3.4
baz=68
SCIA **State Center** 67.84 342 *e*P P **15 14 03.0 -1.6**
comp=Z,152nm,1.2s,mb5.9
X19A **St. Johns** 67.93 326 ⇑P P **15 14 05.5 +0.2**
baz=68
214A **Organ Pipe Nat** 67.97 322 ⇓P P **15 14 05.8 +0.2**
baz=68,SNR=19
214A ⇓S S 15 23 06.3 +3.7
baz=68
JFWS **Jewell Farm** 67.99 344 *e*P P **15 14 03.6 -1.8**
comp=Z,89nm,0.8s,mb5.8
JFWS **Jewell Farm** 67.99 344 *e*P P **15 14 04.0 -1.4**
JFWS pmax pmax
comp=Z,89nm,0.8s,mb5.8
Y17A **Roosevelt** 68.19 324 ⇓P P **15 14 07.2 +0.3**
baz=68,SNR=30
115A **Sonoran Desert** 68.19 323 ⇓P P **15 14 07.0 0.0**
baz=68
Z16A **Peralta Trail,** 68.23 324 ⇓P P **15 14 07.3 +0.1**
baz=68
X18A **Snowflake** 68.35 326 ⇓P P **15 14 08.6 +0.7**
baz=69,SNR=5.3
W19A **Sanders** 68.52 326 ⇓P P **15 14 09.4 +0.5**
baz=69,SNR=7.0
Z15A **Gila River Ind** 68.59 323 ⇑P P **15 14 09.6 +0.2**
baz=69
X17A **Forest Lakes** 68.66 325 ⇓P P **15 14 10.2 +0.4**
baz=69,SNR=15
Y16A **Circle Bar Ran** 68.67 324 ⇓P P **15 14 10.0 +0.1**
baz=69,SNR=29
W18A **Petrified Fore** 68.70 326 ⇓P P **15 14 10.0 0.0**
baz=69,SNR=12
SDCO **Great Sand Dun** 68.76 331 *e*P P **15 14 10.5 +0.1**
comp=Z,626nm,2.2s,mb6.2
V19A **Window Rock** 68.81 327 ⇑P P **15 14 11.0 +0.2**
baz=69,SNR=19
X16A **Lo Mia Camp, P** 69.06 324 ⇓P P **15 14 13.0 +0.7**
baz=69,SNR=24
Z14A **Wintersburg** 69.09 323 ⇓P P **15 14 12.5 0.0**
baz=69
113A **Mohawk Valley,** 69.11 322 ⇓P P **15 14 12.8 +0.1**
baz=69,SNR=9.6
W17A **Winslow** 69.18 325 ⇑P P **15 14 13.3 +0.3**
baz=69
Y15A **Casa Rosa Ranc** 69.19 324 ⇑P P **15 14 13.6 +0.4**
baz=69,SNR=20
V18A **Ganado** 69.26 326 ⇑P P **15 14 14.1 +0.6**
baz=70,SNR=8.2
112A **Yuma** 69.41 321 ⇑P P **15 14 14.8 +0.3**
baz=70
X15A **Humboldt** 69.54 324 ⇓P P **15 14 15.7 +0.5**
baz=70,SNR=24
Y14A **Wickenburg** 69.55 323 ⇑P P **15 14 15.8 +0.4**
baz=70
W16A **Flagstaff** 69.62 325 ⇓P P **15 14 16.4 +0.6**
baz=70,SNR=29
T19A **Beclabito** 69.68 328 ⇑P P **15 14 16.2 0.0**
baz=70,SNR=38
MVCO **Mesa Verde** 69.72 328 *e*P P **15 14 16.5 +0.1**
comp=Z,82nm,2.0s,mb6.1
MVCO **Mesa Verde** 69.72 328 ⇑P P **15 14 16.7 +0.3**
baz=70
U18A **Rough Rock, Ch** 69.78 327 ⇓P P **15 14 17.1 +0.4**
baz=70,SNR=52
WUAZ **Wupatki** 69.86 325 *e*P P **15 14 17.9 +0.6**
comp=Z,188nm,1.3s,mb5.9
WUAZ **Wupatki** 69.86 325 ⇓P P **15 14 17.4 +0.2**
baz=70
X14A **Yava** 69.88 324 ⇑P P **15 14 17.6 +0.2**
baz=70,SNR=15
Y13A **Salome** 69.92 322 ⇑P P **15 14 17.6 0.0**
baz=70,SNR=9.5
GLA **Glamis** 69.93 321 *e*P P **15 14 18.9 +1.1**
comp=Z,370nm,1.8s,mb6.0
GLA **Glamis** 69.93 321 *e*P P **15 14 18.9 +1.2**
GLA pmax pmax
comp=Z,370nm,1.8s,mb6.0
GLA **Glamis** 69.93 321 ⇓P P **15 14 17.6 -0.1**
baz=70
OGNE **Ogallala** 69.98 335 *e*P P **15 14 17.2 -0.7**
comp=Z,104nm,1.0s,mb5.7
W15A **Williams** 70.08 324 ⇑P P **15 14 19.3 +0.7**
baz=70,SNR=14
LIC **Lamto** 70.11 74 *e*P P **15 14 18.0 -1.3**
comp=Z,484nm,1.6s,mb6.2
LIC **Lamto** 70.11 74 *e*P P **15 14 17.8 -1.5**
comp=Z,110nm,1.0s,mb5.4
LIC **Lamto** 70.11 74 *e*P P **15 14 17.8 -1.5**
comp=Z,55nm,1.0s,mb5.4
U16A **Tuba City** 70.21 326 ⇑P P **15 14 19.7 +0.3**
baz=70,SNR=26
Y12C **Blythe** 70.26 322 ⇑P P **15 14 19.9 +0.1**
baz=70,SNR=6.0
TIC **Toumodi** 70.31 74 *e*P P **15 14 19.5 -1.0**
comp=Z,2μm,1.7s,mb6.8
U17A **Shonto** 70.32 326 ⇓P P **15 14 20.4 +0.3**
baz=71,SNR=37
T18A **Mexican Hat** 70.34 327 ⇑P P **15 14 20.3 +0.2**
baz=71,SNR=63
DVTC **Desert V Tower** 70.39 320 ⇓P P **15 14 20.5 0.0**
baz=71
SWSC **Sam W. Stewart** 70.41 321 ⇓P P **15 14 20.5 -0.2**
baz=71
KIC **Kosan Boka** 70.43 74 *e*P P **15 14 20.2 -1.1**
comp=Z,1μm,1.4s,mb6.6
PDMCI **Parker Dam,Lak** 70.45 323 ⇑P P **15 14 21.0 +0.1**
baz=71
S19A **Harvey Farm, M** 70.46 328 ⇑P P **15 14 21.2 +0.3**
baz=71,SNR=54
DBIC **Dimbokro** 70.47 74 P P **15 14 20.2 -1.3**
comp=Z,72nm,0.8s,mb5.7,baz=218,slow=6.5,SNR=43
DBIC **Dimbokro** 70.47 74 *e*P P **15 14 19.8 -1.7**
comp=Z,360nm,1.4s,mb6.1
DBIC **Dimbokro** 70.47 74 P P **15 14 20.2 -1.3**
DBIC pmax pmax
comp=Z,72nm,0.8s
X13A **Yucca** 70.49 323 ⇓P P **15 14 21.4 +0.3**
baz=71,SNR=26
PV01 **Paradox Valley** 70.49 329 *e*P P **15 14 21.3 +0.2**
ISCO **Idaho Springs** 70.50 332 *e*P P **15 14 21.3 +0.2**
comp=Z,178nm,1.8s,mb5.7
ISCO **Idaho Springs** 70.50 332 *e*P P **15 14 21.3 +0.2**
ISCO pmax pmax
comp=Z,180nm,1.8s,mb5.7
V15A **Kaibab Nationa** 70.51 325 ⇑P P **15 14 21.5 +0.3**
baz=71,SNR=56
ECSD **EROS,Sioux Fal** 70.53 340 *e*P P **15 14 19.7 -1.5**
comp=Z,124nm,1.3s,mb5.7
W14A **Seligman** 70.54 324 ⇓P P **15 14 21.8 +0.3**
baz=71,SNR=29
SMCO **Snowmass** 70.59 331 *e*P P **15 14 22.3 +0.7**
comp=Z,125nm,1.3s,mb5.7
T17A **Navajo Res., N** 70.70 327 ⇑P P **15 14 22.6 +0.2**
baz=71,SNR=36
BC3 **Big Chuckw Mtn** 70.72 321 ⇓P P **15 14 22.4 -0.2**
baz=71,SNR=25
MONP **Monument Peak** 70.74 320 ⇓P P **15 14 22.8 +0.1**
baz=71,SNR=6.8
S18A **Hurst Farm, Bl** 70.83 328 ⇓P P **15 14 23.7 +0.5**
baz=71,SNR=104
V14A **Boquillas Ranc** 70.87 324 ⇑P P **15 14 23.9 +0.5**
baz=71,SNR=42
W13A **Hualapai Mount** 70.89 323 ⇓P P **15 14 23.6 0.0**
baz=71,SNR=34
PV10 **Paradox Valley** 70.91 329 *e*P P **15 14 23.9 +0.3**
IRM **Iron Mountain** 70.92 322 ⇑P P **15 14 23.7 -0.1**
baz=71,SNR=24
R19A **Curley Farm, L** 70.95 329 ⇑P P **15 14 23.9 +0.1**
baz=71,SNR=13
U15A **North Rim** 71.03 325 ⇑P P **15 14 24.8 +0.4**
baz=71,SNR=47
T16A **Glen Canyon Da** 71.05 326 ⇑P P **15 14 25.1 +0.6**
baz=71,SNR=17
NEE2 **Needles Airpor** 71.06 323 ⇑P P **15 14 24.4 -0.2**
baz=71
S17A **Black Ridge (B** 71.19 327 ⇓P P **15 14 25.7 +0.4**
baz=71,SNR=42
PFO **Pinyon Flat Ob** 71.27 321 P P **15 14 27.0 +1.1**
comp=Z,251nm,1.2s,mb6.0,SNR=6.0
PFO **Pinyon Flat Ob** 71.27 321 LR LR 15 42 26.1
comp=Z,54μm,21.9s,MS6.8,baz=146,slow=33
PFO **Pinyon Flat Ob** 71.27 321 *e*P P **15 14 27.4 +1.5**
comp=Z,92nm,1.3s,mb5.5
PFO **Pinyon Flat Ob** 71.27 321 *e*P P **15 14 27.4 +1.5**
PFO pmax pmax
comp=Z,92nm,1.3s,mb5.5
PFO **Pinyon Flat Ob** 71.27 321 ⇑P P **15 14 25.8 -0.1**
baz=72
BELC **Belle Mtn.** 71.29 321 ⇓P P **15 14 26.2 +0.2**
baz=72,SNR=7.2
R18A **Canyonlands Na** 71.33 328 ⇓P P **15 14 26.4 +0.2**
baz=72,SNR=34
Q19A **Hogan Spring (** 71.47 329 ⇓P P **15 14 27.0 0.0**
baz=72
V13A **Grand Canyon W** 71.51 324 ⇓P P **15 14 27.6 +0.3**
baz=72,SNR=43
T15A **Red Dirt Ranch** 71.53 326 ⇑P P **15 14 27.8 +0.4**
baz=72,SNR=22
W12A **Cal Nev Ari** 71.59 323 ⇓P P **15 14 27.7 -0.1**
baz=72
GMRC **Granite Mounta** 71.65 322 ⇓P P **15 14 28.4 +0.2**
baz=72,SNR=33
S16A **Weppner Ranch,** 71.66 327 ⇑P P **15 14 28.4 +0.2**

baz=72,SNR=5.1
PHWY **Pilot Hill** 71.67 333 eP P 15 14 28.5 +0.4
MURC **Murrieta** 71.70 320 ⇓P P 15 14 28.9 +0.3
baz=72
R17A **Hanksville Air** 71.76 328 ⇑P P 15 14 28.9 +0.2
baz=72,SNR=76
T14A **Hurricane** 71.93 325 ⇓P P 15 14 30.2 +0.4
baz=72
Q18A **Rafter H Ranch** 72.01 328 ⇑P P 15 14 30.3 +0.1
baz=72,SNR=28
BBRC **Big Bear Sol-O** 72.01 321 ⇑P P 15 14 30.6 +0.3
baz=72
S15A **Panguitch** 72.02 326 ⇓P P 15 14 30.9 +0.6
baz=72
EHIG **Higuera** 72.02 47 P P 15 14 31.1 +0.5
comp=Z,259nm,1.1s,mb6.1
HEC **Hector,Ludlow** 72.07 322 ⇑P P 15 14 30.7 0.0
baz=72,SNR=7.6
SCI **San Clemente I** 72.08 319 ⇑P P 15 14 30.6 -0.2
baz=72
EGOM **La Gomera** 72.18 48 P P 15 14 31.2 -0.3
comp=Z,69nm,0.8s,mb5.6
SRU **San Rafael** 72.20 328 ⇑P P 15 14 31.3 -0.1
baz=72
U12A **Valley of Fire** 72.24 324 ⇓P P 15 14 32.0 +0.3
baz=72,SNR=8.1
TUQ **Turquoise Moun** 72.28 322 ⇓P P 15 14 32.5 +0.6
baz=72,SNR=9.5
CIS **Catalina Islan** 72.29 319 ⇑P P 15 14 32.2 +0.2
baz=72
V11A **Goodsprings** 72.29 323 ⇓P P 15 14 32.3 +0.3
baz=72
T13A **Saint George** 72.33 325 ⇓P P 15 14 32.8 +0.6
baz=73,SNR=6.1
Q16A **Castle Valley** 72.37 328 ⇓P P 15 14 32.9 +0.5
baz=73,SNR=22
R15A **Junction** 72.38 327 ⇑P P 15 14 32.7 +0.2
baz=73
BFSC **Mount Baldy St** 72.42 320 ⇑P P 15 14 33.1 +0.2
baz=73,SNR=12
FMP **Fort Macarthur** 72.43 320 ⇓P P 15 14 32.8 -0.1
baz=73
P18A **Preston Nutter** 72.47 329 ⇑P P 15 14 33.6 +0.6
baz=73,SNR=54
O19A **Miners Draw (B** 72.47 330 ⇑P P 15 14 33.5 +0.5
baz=73,SNR=27
RRX **Edison Barstow** 72.49 321 ⇑P P 15 14 33.6 +0.4
baz=73
S14A **Cedar City** 72.50 326 ⇓P P 15 14 33.7 +0.5
baz=73
T12A **Moapa** 72.55 324 ⇓P P 15 14 33.8 +0.3
baz=73
P17A **Butcher Ranch,** 72.59 328 ⇓P P 15 14 34.1 +0.4
baz=73,SNR=16
SHPR **Sheep Range** 72.63 324 eP P 15 14 35.5 +1.6
MWC **Mount Wilson** 72.65 320 eP P 15 14 34.4 +0.2
comp=Z,277nm,1.8s,mb5.9
MWC **Mount Wilson** 72.65 320 eP P 15 14 36.1 +1.9
MWC pmax pmax
comp=Z,280nm,1.8s,mb5.9
GSC **Goldstone** 72.68 322 eP P 15 14 35.4 +1.1
comp=Z,227nm,1.8s,mb5.8
GSC **Goldstone** 72.68 322 eP P 15 14 35.4 +1.1
GSC pmax pmax
comp=Z,230nm,1.7s,mb5.8
GSC **Goldstone** 72.68 322 ⇑P P 15 14 34.4 +0.1
baz=73,SNR=18
U11A **Corn Creek** 72.69 323 ⇓P P 15 14 34.9 +0.5
baz=73
S13A **Holt Ranch, En** 72.72 325 ⇓P P 15 14 35.3 +0.8
baz=73,SNR=25
RWWY **Rawlins** 72.74 332 eP P 15 14 36.2 +1.7
comp=Z,251nm,1.7s,mb5.9
SHOC **Shoshone** 72.81 322 ⇓P P 15 14 35.4 +0.3
baz=73
R14A **James Farms, M** 72.83 326 ⇓P P 15 14 35.6 +0.5
baz=73
DECC **Green Verdugo** 72.83 320 ⇓P P 15 14 35.5 +0.2
baz=73
SNCC **San Nicolas Is** 72.86 318 P P 15 14 38.0 +2.6
comp=Z,247nm,1.7s,mb5.9
O18A **Roosevelt** 72.86 329 ⇓P P 15 14 35.7 +0.4
baz=73
N19A **John Jarvie Ra** 72.97 330 ⇑P P 15 14 36.6 +0.7
baz=73,SNR=6.2
M20A **Sweetwater, Wa** 73.00 331 ⇓P P 15 14 36.3 +0.2
baz=73,SNR=20
EYMN **Ely** 73.02 345 eP P 15 14 33.9 -2.1
comp=Z,60nm,0.9s,mb5.5
L21A **Rawlins** 73.03 332 ⇑P P 15 14 36.1 -0.1
baz=73,SNR=59
Q15A **Fillmore** 73.03 327 ⇓P P 15 14 36.7 +0.4
baz=73
EDW2 **Edwards Air Fo** 73.07 321 ⇓P P 15 14 36.4 -0.2
baz=73,SNR=11
P16A **Fountain Green** 73.14 328 ⇓P P 15 14 37.8 +0.8
baz=73
O17A **Robinson Place** 73.15 329 ⇑P P 15 14 37.6 +0.6
baz=73,SNR=64
BLG **Laguna Peak** 73.17 319 ⇓P P 15 14 37.2 -0.1
baz=73
T11A **Corn Creek, Al** 73.20 324 ⇓P P 15 14 37.7 +0.3
baz=73,SNR=20
U10A **Ash Meadows, A** 73.21 323 ⇑P P 15 14 37.7 +0.3
baz=73,SNR=11
R13A **O'Grain Ranch,** 73.23 325 ⇑P P 15 14 37.9 +0.4
baz=74
N18A **Larsen Ranch,** 73.27 330 ⇑P P 15 14 37.6 -0.1
baz=74,SNR=15
EOSO **Osorio** 73.27 49 P P 15 14 39.8 +1.8
comp=Z,75nm,1.2s,mb5.5
S12A **Delamar Landin** 73.27 325 ⇑P P 15 14 38.5 +0.7
baz=74
LRMC **Laurel Mountai** 73.31 321 ⇑P P 15 14 38.1 0.0
baz=74,SNR=14
OSI **Osito Adit** 73.32 320 eP P 15 14 37.7 -0.4
comp=Z,56nm,1.0s,mb5.5
OSI **Osito Adit** 73.32 320 ⇑P P 15 14 38.0 -0.2
baz=74
P15A **Leamington** 73.42 327 ⇑P P 15 14 38.8 +0.1
baz=74,SNR=23
BSC **Santa Cruz Isl** 73.43 319 ⇓P P 15 14 38.9 0.0
baz=74
M19A **Rock Springs** 73.45 331 ⇑P P 15 14 38.9 +0.2
baz=74
RSSD **Black Hills** 73.46 335 eP P 15 14 38.5 -0.3
Q14A **Sevier Lake (B** 73.48 326 ⇑P P 15 14 39.3 +0.3
baz=74
L20A **Wamsutter** 73.49 331 ⇑P P 15 14 38.9 0.0
baz=74,SNR=20
O16A **Springville** 73.53 328 ⇑P P 15 14 39.7 +0.4
baz=74,SNR=13
PDA **Ponta Delgada** 73.54 36 eP P 15 14 34.0 -5.4
FURC **Furnace Creek,** 73.55 322 ⇓P P 15 14 39.5 +0.1
baz=74
TPNV **Topopah Spring** 73.55 323 eP P 15 14 40.2 +0.8
comp=Z,633nm,2.3s,mb6.1
TPNV **Topopah Spring** 73.55 323 eP P 15 14 40.2 +0.8
TPNV pmax pmax
comp=Z,630nm,2.2s,mb6.2
MPMC **Manual Prospec** 73.61 322 ⇓P P 15 14 40.2 +0.4
baz=74,SNR=19
R12A **Pony Springs,** 73.67 325 ⇓P P 15 14 40.5 +0.4
baz=74,SNR=18
ARVC **Arvin** 73.73 320 ⇑P P 15 14 40.9 +0.4
baz=74
N17A **Moffit Pass** 73.78 329 ⇓P P 15 14 41.4 +0.7
baz=74,SNR=82
S11A **Rachel** 73.78 324 ⇓P P 15 14 41.5 +0.7
baz=74
SBC **Santa Barbara** 73.79 319 ⇓P P 15 14 40.3 -0.6
baz=74
M18A **Lyman** 73.81 330 ⇓P P 15 14 41.0 +0.2
baz=74,SNR=8.4
P14A **Drum Mountains** 73.83 327 ⇑P P 15 14 41.9 +0.9
baz=74,SNR=32
Q13A **Wheeler Ranch,** 73.84 326 ⇑P P 15 14 41.4 +0.3
baz=74
ISA **Isabella** 73.90 321 eP P 15 14 41.7 +0.2
comp=Z,274nm,2.0s,mb5.8
ISA **Isabella** 73.90 321 eP P 15 14 42.2 +0.7
ISA pmax pmax
comp=Z,270nm,2.0s,mb5.8
ISA **Isabella** 73.90 321 ⇑P P 15 14 41.7 +0.1
baz=74,SNR=37
L19A **Farson** 74.02 331 ⇓P P 15 14 42.5 +0.5
baz=74,SNR=30
N16A **Rees Ranch, Co** 74.03 329 ⇓P P 15 14 42.6 +0.5
baz=74
O15A **The Old Anders** 74.06 328 ⇓P P 15 14 42.6 +0.3
baz=74
M17A **Scullys Gap (B** 74.12 330 ⇓P P 15 14 42.5 -0.1
baz=74,SNR=5.6
DUG **Dugway** 74.16 328 eP P 15 14 43.2 +0.3
comp=Z,97nm,1.2s,mb5.6
DUG **Dugway** 74.16 328 eP P 15 14 43.6 +0.7
DUG pmax pmax
comp=Z,97nm,1.2s,mb5.6
DUG **Dugway** 74.16 328 ⇑P P 15 14 43.2 +0.3
baz=74
PKM **Peak Mountain** 74.16 320 ⇓P P 15 14 43.2 +0.1
baz=74,SNR=14
L18A **Fontenelle, Gr** 74.18 330 ⇑P P 15 14 43.0 -0.1
baz=74,SNR=67
SBA **Scott Base** 74.20 191 eP P 15 14 43.9 +1.1
comp=Z,372nm,1.4s,mb6.1
SBA **Scott Base** 74.20 191 eP P 15 14 43.9 +1.1
SBA pmax pmax
comp=Z,370nm,1.4s,mb6.1
P13A **Bates Ranch, G** 74.21 326 ⇑P P 15 14 43.6 +0.3
baz=74,SNR=6.4
R11A **Troy Canyon, C** 74.21 325 ⇑P P 15 14 43.5 +0.2
baz=74,SNR=32
GRAC **Grapevine Rang** 74.21 323 ⇑P P 15 14 43.4 +0.1
baz=74
CWC **Cottonwood Cre** 74.22 322 ⇑P P 15 14 43.3 -0.1
baz=74
Q12A **Willow Creek R** 74.32 326 ⇑P P 15 14 44.3 +0.4
baz=75,SNR=10.0
VES **Vestal, Richgr** 74.38 321 ⇓P P 15 14 44.1 -0.3
baz=75
S10A **Tonopah Range,** 74.44 324 ⇓P P 15 14 45.0 +0.3
baz=75,SNR=12
M16A **Huntsville** 74.45 329 ⇑P P 15 14 44.9 +0.3
baz=75,SNR=11
AGMN **Agassiz Refuge** 74.45 343 eP P 15 14 42.7 -1.7
comp=Z,72nm,0.8s,mb5.7
N15A **Stansbury Isla** 74.55 328 ⇑P P 15 14 45.1 -0.1
baz=75
R10A **Warm Springs** 74.55 324 ⇓P P 15 14 45.7 +0.5
baz=75,SNR=20
SMMC **Simmler** 74.55 320 ⇑P P 15 14 45.4 +0.1
baz=75,SNR=13
Q11A **Duckwater** 74.61 325 ⇑P P 15 14 45.7 +0.1
baz=75,SNR=21
PDAR **Pinedale Array** 74.64 331 P P 15 14 44.7 -0.9
comp=Z,4.5nm,0.6s,baz=140,slow=7.7,SNR=28
PDAR PKPPKP 15 42 12.7
comp=Z,0.5nm,0.9s,baz=304,slow=1.6,SNR=2.3
BW06 **Boulder Array** 74.64 331 eP P 15 14 45.8 +0.2
comp=Z,208nm,2.2s,mb5.7
BW06 **Boulder Array** 74.64 331 ⇓P P 15 14 45.9 +0.2
baz=75
HWUT **Hardware Ranch** 74.64 329 eP P 15 14 45.4 -0.3
comp=Z,83nm,1.2s,mb5.5
S09A **Goldfield** 74.65 323 ⇓P P 15 14 45.9 0.0
baz=75,SNR=6.7
O13A **Hicks Ranch, I** 74.70 327 ⇓P P 15 14 46.0 0.0
baz=75,SNR=7.5
TIN **Tinemaha** 74.73 322 ⇓P P 15 14 46.4 +0.1
baz=75,SNR=6.2
RCTC **Rector, Farmer** 74.79 321 ⇑P P 15 14 46.6 -0.1
baz=75
N14A **Grayback Hills** 74.85 328 ⇑P P 15 14 47.1 +0.2
baz=75,SNR=24
V05C **Boulder Hill,** 74.88 320 ⇓P P 15 14 47.4 +0.2
baz=75
TPH **Tonopah** 74.90 323 eP P 15 14 48.3 +1.0
comp=Z,796nm,2.9s,mb6.1
TPH **Tonopah** 74.90 323 eP P 15 14 48.3 +1.0
TPH pmax pmax
comp=Z,796nm,2.9s,mb6.1
L16A **Fish Haven** 74.90 330 ⇓P P 15 14 47.1 -0.1
baz=75,SNR=23
PTRM **Twissleman Ran** 74.91 320 eP P 15 14 47.1 -0.3
M15A **Larsen Ranch,** 74.95 329 ⇓P P 15 14 47.3 -0.2
baz=75,SNR=41
Q10A **Clear Creek Ra** 74.99 324 ⇓P P 15 14 48.1 +0.3
baz=75,SNR=14
MTUM **Tungsten Hills** 75.14 322 eP P 15 14 48.9 +0.3
P11A **Circle Ranch,** 75.18 325 ⇑P P 15 14 49.3 +0.4
baz=75
O12A **Currie** 75.19 326 ⇑P P 15 14 49.0 +0.1
baz=75,SNR=28
PKD **Parkfield** 75.31 320 ⇓P P 15 14 49.7 0.0
baz=76
EFAM **Famara** 75.32 49 P P 15 14 51.3 +1.4
comp=Z,428nm,2.0s,mb6.0
U05C **Westside ANR,** 75.33 320 ⇓P P 15 14 49.4 -0.4
baz=76
AHID **Aurn Hatcher** 75.33 330 eP P 15 14 49.4 -0.2
comp=Z,52nm,0.8s,mb5.5
L15A **Malad City** 75.34 329 ⇓P P 15 14 49.4 -0.3
baz=76,SNR=34
M14A **Sheep Mountain** 75.42 328 ⇑P P 15 14 50.1 -0.1
baz=76,SNR=29
Q09A **Carvers** 75.42 324 ⇑P P 15 14 49.9 -0.3
baz=76
MLAC **Mammoth Lakes** 75.48 322 ⇓P P 15 14 50.5 -0.2
baz=76
I18A **Diamond G Ranc** 75.50 332 ⇑P P 15 14 50.7 +0.1
baz=76,SNR=27
KCC **Kaiser Creek** 75.54 322 ⇑P P 15 14 50.4 -0.6
baz=76,SNR=20
T06C **Millerton Lake** 75.55 321 ⇑P P 15 14 50.1 -1.0
baz=76
O11A **Cowboy Ranch,** 75.56 326 ⇓P P 15 14 51.1 +0.1
baz=76,SNR=24
R08A **Mina** 75.58 323 ⇑P P 15 14 50.8 -0.3
baz=76
P10A **Eureka** 75.60 325 ⇓P P 15 14 51.3 0.0
baz=76,SNR=9.9
K16A **Soda Springs** 75.61 330 ⇓P P 15 14 51.1 -0.1
baz=76,SNR=43
J17A **Brown Place, J** 75.62 331 ⇑P P 15 14 51.4 +0.1
baz=76
REDW **Red Top Meadow** 75.69 331 eP P 15 14 51.7 0.0
comp=Z,223nm,1.8s,mb5.8
SYO **Syowa Base** 75.69 160 ‖eP P 15 14 49.2 -2.2
SYO **Syowa Base** 75.69 160 ‖pP pP 15 14 56.6 -4.7
M13A **Montello** 75.71 328 ⇑P P 15 14 52.1 +0.3
baz=76
SNOW **Snow King Moun** 75.72 331 eP P 15 14 51.8 0.0
comp=Z,43nm,0.7s,mb5.5
U04C **Hernandez Rese** 75.73 320 ⇑P P 15 14 52.2 +0.1
baz=76,SNR=6.6
NVAR **Mina Array Bea** 75.75 323 P P 15 14 53.0 +0.8
comp=Z,12nm,0.8s,baz=152,slow=5.8,SNR=33
NVAR PKPPKP 15 42 13.8
comp=Z,1.2nm,1.1s,baz=349,slow=1.8,SNR=3.9
L14A **Malta** 75.77 329 ⇓P P 15 14 52.1 -0.1
baz=76,SNR=22
N12A **Clover Valley,** 75.77 327 ⇑P P 15 14 52.4 +0.2
baz=76
V03C **Hunter Liggett** 75.77 320 ⇑P P 15 14 52.2 -0.2
baz=76
LOHW **Long Hollow** 75.77 331 eP P 15 14 52.1 0.0
comp=Z,124nm,1.6s,mb5.6
ELK **Elko** 75.79 326 eP P 15 14 53.3 +1.0
comp=Z,24nm,0.8s,mb5.2
TPAW **Teton Pass** 75.83 331 eP P 15 14 52.9 +0.4
comp=Z,122nm,1.4s,mb5.6
Q08A **Gabbs** 75.85 324 ⇓P P 15 14 53.0 +0.3
baz=76,SNR=17
RRI2 **Red Ridge** 75.89 330 eP P 15 14 52.8 -0.1
comp=Z,242nm,1.7s,mb5.8
P09A **Austin** 75.91 325 ⇑P P 15 14 52.9 -0.1
baz=76
K15A **Arbon** 75.93 329 ⇑P P 15 14 53.0 -0.1
baz=76,SNR=13
MOOW **Moose Ponds** 75.94 331 eP P 15 14 52.9 -0.2
comp=Z,190nm,2.0s,mb5.7
J16A **Bone** 75.96 330 ⇑P P 15 14 53.7 +0.4
baz=76,SNR=16
I17A **Pilgram Creek** 76.00 331 ⇑P P 15 14 54.1 +0.6
baz=76,SNR=30
DCID1 **Drake Creek** 76.02 331 eP P 15 14 54.6 +1.1
N11A **Elko Archery C** 76.10 326 ⇓P P 15 14 53.8 -0.3
baz=76
O10A **Cortez Mining,** 76.11 325 ⇓P P 15 14 54.2 0.0
baz=76
M12A **Wells** 76.13 327 ⇓P P 15 14 54.2 0.0
baz=76,SNR=12
K14A **Jones Ranch, D** 76.13 329 ⇓P P 15 14 54.1 -0.2
baz=76,SNR=13
S05C **Merced** 76.14 321 ⇓P P 15 14 54.6 +0.2
baz=76,SNR=7.1
IMW **Indian Meadow** 76.15 331 eP P 15 14 54.8 +0.5
comp=Z,209nm,1.8s,mb5.8
L13A **Double Diamond** 76.16 328 ⇑P P 15 14 54.7 +0.3
baz=76,SNR=20
ULM **Lac du Bonnet** 76.24 343 P P 15 14 52.9 -1.7
comp=Z,16nm,0.5s,mb5.2,baz=157,slow=6.0,SNR=13
ULM **Lac du Bonnet** 76.24 343 eP P 15 14 52.3 -2.4
comp=Z,209nm,1.6s,mb5.8
I16A **Newdale** 76.38 331 ⇑P P 15 14 55.9 +0.3
baz=77,SNR=8.6
H17A **Grant Village** 76.38 332 ⇓P P 15 14 56.1 +0.5
baz=77,SNR=7.3
Q07A **Schurz** 76.39 323 ⇓P P 15 14 55.7 -0.1
baz=77
O09A **Fish Creek Ran** 76.39 325 ⇑P P 15 14 55.7 0.0
baz=77,SNR=6.6
RLMT **Red Lodge** 76.40 333 eP P 15 14 55.4 -0.2
comp=Z,522nm,2.2s,mb6.1
RLMT **Red Lodge** 76.40 333 ⇓P P 15 14 56.1 +0.4
baz=77
N10A **Dunphy** 76.43 326 ⇓P P 15 14 55.6 -0.3
baz=77
WAKR **Walker** 76.43 322 eP P 15 14 57.7 +1.7
LKWY **Lake** 76.44 332 eP P 15 14 56.8 +0.9
comp=Z,69nm,1.1s,mb5.5
LKWY **Lake** 76.44 332 eP P 15 14 56.8 +0.9
LKWY pmax pmax
comp=Z,69nm,1.1s,mb5.5
J15A **Blackfoot** 76.44 330 ⇓P P 15 14 56.3 +0.4
baz=77,SNR=31
R06C **Coleville** 76.45 322 ⇓P P 15 14 56.5 +0.4
baz=77
LAO **LASA Array** 76.45 336 eP P 15 14 55.4 -0.5
comp=Z,84nm,0.9s,mb5.7
PACP **Pacheco Peak** 76.47 320 ⇑P P 15 14 56.2 -0.1
baz=77
P08A **Dixie Valley** 76.52 324 ⇓P P 15 14 56.2 -0.3
baz=77
M11A **Holland Ranch,** 76.58 327 ⇑P P 15 14 56.7 -0.2
baz=77,SNR=22
BMN **Battle Mountai** 76.59 325 eP P 15 14 56.8 -0.1
comp=Z,35nm,1.3s,mb5.1
BMN **Battle Mountai** 76.59 325 eP P 15 14 56.8 -0.1
BMN pmax pmax
comp=Z,35nm,1.3s,mb5.1
CMB **Columbia Colle** 76.65 322 eP P 15 14 58.6 +1.4
comp=Z,48nm,1.3s,mb5.3
CMB **Columbia Colle** 76.65 322 eP P 15 14 58.6 +1.3
CMB pmax pmax
comp=Z,48nm,1.2s,mb5.3
CMB **Columbia Colle** 76.65 322 ⇓P P 15 14 57.1 -0.2
baz=77
K13A **Stover Farm, H** 76.65 328 ⇓P P 15 14 57.5 +0.3
baz=77
G18A **Lazy EL Ranch,** 76.68 333 ⇓P P 15 14 57.3 0.0
baz=77,SNR=18
L12A **House Creek Ra** 76.72 328 ⇑P P 15 14 57.7 +0.1
baz=77,SNR=13
P07A **Fallon** 76.85 324 ⇓P P 15 14 58.3 -0.1
baz=77
J14A **Carey** 76.89 329 ⇑P P 15 14 58.8 +0.3
baz=77,SNR=30
H16A **Russell Place,** 76.92 331 ⇓P P 15 14 59.0 +0.3
baz=77,SNR=30
I15A **Monteview** 76.93 330 ⇓P P 15 14 59.1 +0.4
baz=77
O08A **Rochester Mine** 76.99 324 ⇓P P 15 14 58.7 -0.4
baz=77,SNR=12
M10A **I.L. Ranch, Tu** 77.03 326 ⇓P P 15 14 59.7 +0.3
baz=77
K12A **Draper Farm, C** 77.03 328 ⇓P P 15 14 59.4 0.0
baz=77,SNR=32
N09A **Rock Creek Ran** 77.06 325 ⇓P P 15 14 59.3 -0.2
baz=77
QLMT **Earthquake Lak** 77.10 331 eP P 15 15 01.3 +1.6
GCMT **Greycliff** 77.10 333 eP P 15 14 59.1 -0.5
L11A **Cat Creek Ranc** 77.11 327 ⇑P P 15 15 00.1 +0.4
baz=77,SNR=11
R04C **Big Horse Ranc** 77.11 321 ⇓P P 15 15 00.2 +0.3
baz=77
WENL **Wente Vineyard** 77.16 321 ⇑P P 15 15 00.2 0.0
baz=77
WCN **Washoe City** 77.17 323 ⇓P P 15 15 00.4 +0.3
baz=77
G17A **Pierce Place,** 77.18 332 ⇓P P 15 15 00.1 0.0
baz=77,SNR=5.4
DGMT **Dagmar** 77.21 338 eP P 15 15 00.0 -0.2
comp=Z,171nm,1.0s,mb5.9
DGMT **Dagmar** 77.21 338 ⇑P P 15 15 00.3 +0.1
baz=78,SNR=15
F18A **Big Timber** 77.21 333 ⇓P P 15 15 00.7 +0.4
baz=78,SNR=84
PAHR **Pah Rah Range** 77.24 323 eP P 15 15 01.4 +0.8
comp=Z,94nm,0.8s,mb5.8
J13A **Cove Ranch, Pi** 77.25 329 ⇓P P 15 15 00.8 +0.2
baz=78,SNR=30
O07A **Toulon** 77.29 324 ⇓P P 15 15 00.6 -0.2
baz=78,SNR=8.3
JRSC **Jasper Ridge** 77.30 320 ⇑P P 15 15 00.7 -0.3
baz=78
I14A **Mackay** 77.32 330 ⇑P P 15 15 01.1 +0.2
baz=78,SNR=46
N08A **GE Springer Mi** 77.33 325 ⇑P P 15 15 00.6 -0.4
baz=78
LAVA **Lava Cap Winer** 77.34 322 ⇑P P 15 15 00.6 -0.5
baz=78
L10A **Juniper Basin** 77.40 327 ⇑P P 15 15 01.2 -0.2
baz=78,SNR=20
M09A **Marrel Ranch,** 77.43 326 ⇑P P 15 15 01.6 0.0
baz=78,SNR=7.3
BDM **Black Diamond** 77.45 321 ⇓P P 15 15 01.9 +0.1
baz=78
H15A **Lima** 77.48 331 ⇑P P 15 15 02.5 +0.8
baz=78,SNR=12
HLID **Hailey** 77.49 329 eP P 15 15 02.3 +0.5
comp=Z,48nm,0.9s,mb5.4
HLID **Hailey** 77.49 329 ⇓P P 15 15 02.3 +0.4
baz=78,SNR=61
P06A **Stead Airport,** 77.51 323 ⇑P P 15 15 02.2 +0.1
baz=78
G16A **Moss Hill, Enn** 77.58 331 ⇑P P 15 15 02.3 0.0
baz=78,SNR=13
J12A **Stokes Ranch,** 77.59 328 ⇓P P 15 15 02.6 +0.2
baz=78,SNR=35
F17A **Fitzpatrick Pl** 77.61 332 ⇓P P 15 15 02.6 +0.1
baz=78,SNR=38
I13A **Wildhorse Cree** 77.62 329 ⇓P P 15 15 03.0 +0.5
baz=78,SNR=40
K11A **Parker Ranch,** 77.69 327 ⇓P P 15 15 03.3 +0.2
baz=78
MCMT **McKenzie Canyo** 77.73 331 eP P 15 15 03.6 +0.4
N07B **Gerlach** 77.77 324 ⇑P P 15 15 03.2 -0.3
baz=78,SNR=33
H14A **Leadore** 77.81 330 ⇑P P 15 15 03.9 +0.3
baz=78,SNR=33
O06A **Flanigan** 77.81 323 ⇑P P 15 15 03.9 +0.2
baz=78,SNR=7.1
E18A **Harlowton** 77.83 333 ⇑P P 15 15 03.8 +0.2
baz=78,SNR=23
BOZ **Bozeman (W)** 77.83 332 eP P 15 15 03.3 -0.4
comp=Z,23nm,0.7s,mb5.2
BOZ **Bozeman (W)** 77.83 332 eP P 15 15 05.0 +1.3
BOZ pmax pmax
comp=Z,23nm,0.7s,mb5.2
BOZ **Bozeman (W)** 77.83 332 ⇑P P 15 15 03.8 +0.1
baz=78
G15A **Dillon** 77.83 331 ⇑P P 15 15 03.9 +0.2
baz=78,SNR=21
BEKR **Beckwourth** 77.89 323 ⇑P P 15 15 04.6 +0.4
baz=78,SNR=45
F16A **Kennard Place,** 77.93 332 ⇑P P 15 15 04.4 +0.1
baz=78,SNR=6.5
M08A **Happy Creek Ra** 77.93 325 ⇑P P 15 15 04.2 -0.1
baz=78,SNR=10.0
FARB **Farallon Islan** 77.94 320 ⇑P P 15 15 04.3 -0.3
baz=78
L09A **Wilkinson Ranc** 77.97 326 ⇑P P 15 15 04.4 -0.2
baz=78
Q03C **Winters** 77.99 321 ⇑P P 15 15 04.7 -0.1
baz=78
I12A **Atlanta** 78.01 329 ⇑P P 15 15 04.8 0.0
baz=78
DLMT **Dillon** 78.03 331 eP P 15 15 05.4 +0.6
comp=Z,91nm,1.2s,mb5.6
CVS **Carmenet Viney** 78.06 321 ⇓P P 15 15 04.9 -0.3
baz=78
MFID **Camas Ranch** 78.07 328 ⇑P P 15 15 05.1 0.0

baz=78,SNR=18
K10A **MacKenzie Ranc** 78.11 327 ⇑P P 15 15 05.3 0.0
baz=78,SNR=26
E17A **Martinsdale** 78.14 333 ⇑P P 15 15 05.4 0.0
baz=78,SNR=40
OHCM **Honcut** 78.16 322 eP P 15 15 06.6 +0.9
MCCM **Marconi Confer** 78.17 320 eP P 15 15 07.6 +1.8
comp=Z,99nm,1.3s,mb5.6
MCCM **Marconi Confer** 78.17 320 ⇓P P 15 15 05.2 -0.5
baz=78
H13A **Challis** 78.18 330 ⇑P P 15 15 05.6 0.0
baz=78,SNR=68
N06A **Buffalo Meadow** 78.22 324 ⇑P P 15 15 06.0 0.0
baz=78,SNR=46
NSHM **Saint Helena R** 78.26 321 eP P 15 15 06.8 +0.5
O05C **Quincy** 78.27 323 ⇑P P 15 15 06.2 -0.1
baz=78,SNR=6.1
D18A **Linhart Farms,** 78.28 334 ⇑P P 15 15 06.2 +0.1
baz=78,SNR=14
ORV **Oroville** 78.32 322 ⇓P P 15 15 06.4 -0.2
baz=78,SNR=45
LRM **Limekiln Ridge** 78.32 331 eP P 15 15 07.6 +1.1
G14A **Jackson** 78.33 330 ⇑P P 15 15 06.5 0.0
baz=79,SNR=8.6
F15A **Butte** 78.36 331 ⇓P P 15 15 06.9 +0.3
baz=79,SNR=24
MNRC **McLaughlin Nat** 78.40 321 ⇓P P 15 15 06.9 -0.1
baz=79
L08A **Fields** 78.44 326 ⇑P P 15 15 07.1 -0.1
baz=79,SNR=20
H12A **Diamond D Ranc** 78.45 329 ⇑P P 15 15 07.2 +0.1
baz=79,SNR=35
K09A **Rome** 78.49 326 ⇑P P 15 15 07.5 +0.1
baz=79,SNR=24
I11A **Placerville** 78.50 328 ⇓P P 15 15 07.3 -0.1
baz=79
J10A **Berg Farm, Mel** 78.54 327 ⇑P P 15 15 07.4 -0.3
baz=79
E16A **East Helena** 78.54 332 ⇓P P 15 15 07.6 0.0
baz=79
G13A **Cobalt** 78.57 330 ⇑P P 15 15 08.2 +0.4
baz=79,SNR=177
O04C **Chester** 78.61 323 ⇓P P 15 15 08.0 -0.1
baz=79,SNR=6.8
D17A **Six Diamond Ra** 78.61 333 ⇓P P 15 15 08.0 0.0
baz=79,SNR=47
F14A **Wisdom** 78.72 331 ⇓P P 15 15 09.1 +0.4
baz=79,SNR=29
HRY **Holter Researc** 78.75 332 eP P 15 15 08.7 -0.1
WVOR **Wild Horse Val** 78.77 326 eP P 15 15 09.2 +0.2
comp=Z,92nm,1.7s,mb5.4
WVOR **Wild Horse Val** 78.77 326 eP P 15 15 09.2 +0.2
WVOR pmax pmax
comp=Z,92nm,1.7s,mb5.4
L07A **Adell** 78.84 325 ⇓P P 15 15 09.8 +0.4
baz=79,SNR=25
HOPS **Hopland** 78.85 321 eP P 15 15 11.2 +1.7
comp=Z,93nm,1.4s,mb5.5
HOPS **Hopland** 78.85 321 ⇓P P 15 15 09.5 0.0
baz=79
E15A **Deer Lodge** 78.87 332 ⇓P P 15 15 09.8 +0.3
baz=79,SNR=39
D16A **Dana Ranch, Ca** 78.88 333 ⇑P P 15 15 10.1 +0.6
baz=79,SNR=41
K08A **Mann Creek Ran** 78.90 326 ⇑P P 15 15 10.0 +0.3
baz=79,SNR=5.9
EGMT **Eagleton** 78.93 334 eP P 15 15 09.8 0.0
comp=Z,114nm,1.1s,mb5.7
EGMT **Eagleton** 78.93 334 ⇓P P 15 15 09.4 -0.3
baz=79
J09A **Fry Pan Ranch,** 78.97 327 ⇓P P 15 15 09.7 -0.4
baz=79
C17A **Wharram Farm,** 79.03 334 ⇓P P 15 15 10.0 -0.2
baz=79,SNR=17
I10A **Payette** 79.04 328 ⇓P P 15 15 10.2 -0.2
baz=79
SUR **Sutherland** 79.08 121 P P 15 15 12.6 +1.5
comp=Z,678nm,1.3s,mb6.4,SNR=9.9
SUR **Sutherland** 79.08 121 eP P 15 15 12.4 +1.3
comp=Z,1µm,2.4s,mb6.5
GASB **Alder Springs** 79.08 322 ⇑P P 15 15 10.3 -0.5
baz=79,SNR=5.1
H11A **Donnelly** 79.11 329 ⇑P P 15 15 10.9 0.0
baz=79,SNR=11
TOA0 **Torodi Ar. Sit** 79.13 71 eP P 15 15 10.2 -1.4
TORD **Torodi Ar. Bea** 79.13 71 P P 15 15 10.3 -1.3
comp=Z,106nm,0.7s,mb5.9,baz=253,slow=5.0,SNR=191
TORD PKPPKP 15 42 09.3
comp=Z,1.7nm,0.8s,baz=64,slow=3.4,SNR=6.9
F13A **Darby** 79.14 330 ⇓P P 15 15 10.8 -0.1
baz=79,SNR=131
E14A **Clinton** 79.24 331 ⇓P P 15 15 11.5 0.0
baz=80,SNR=18
K07A **Rock Creek Ran** 79.27 326 ⇑P P 15 15 11.7 0.0
baz=80,SNR=33
MOD **Modoc** 79.27 324 eP P 15 15 11.9 +0.1
comp=Z,115nm,1.2s,mb5.7
MOD **Modoc** 79.27 324 ⇓P P 15 15 10.8 -0.9
baz=80,SNR=18
D15A **Lincoln** 79.30 332 ⇓P P 15 15 11.9 +0.1
baz=80,SNR=23
J08A **Circle Bar Ran** 79.35 326 ⇑P P 15 15 12.0 -0.1
baz=80,SNR=12
H10A **Noah's Angus R** 79.38 328 ⇓P P 15 15 12.1 -0.2
baz=80,SNR=22
LTIM **Timbered Crate** 79.42 323 P P 15 15 12.6 0.0
I09A **Lost Marbles R** 79.42 327 ⇓P P 15 15 12.4 -0.2
baz=80,SNR=15
CHMT **Chamberlain Mo** 79.52 332 eP P 15 15 13.9 +0.9
F12A **Elk City** 79.54 330 ⇓P P 15 15 13.2 +0.1
baz=80,SNR=27
C16A **Fuhringer Ranc** 79.57 333 ⇓P P 15 15 13.0 -0.2
baz=80,SNR=21
E13A **Victor** 79.57 331 ⇓P P 15 15 12.9 -0.4
baz=80,SNR=45
KCPM **Cahto Peak** 79.60 321 eP P 15 15 15.6 +2.0
WDC **Whiskeytown Da** 79.60 322 eP P 15 15 11.8 -1.7
comp=Z,84nm,1.2s,mb5.5
WDC **Whiskeytown Da** 79.60 322 eP P 15 15 11.9 -1.7
WDC pmax pmax
comp=Z,84nm,1.2s,mb5.5
WDC **Whiskeytown Da** 79.60 322 ⇓P P 15 15 12.4 -1.2
baz=80,SNR=30
KIPM **Iron Peak** 79.62 321 eP P 15 15 14.5 +0.7
G11A **Walters Elk Ra** 79.75 329 ⇑P P 15 15 14.2 -0.1
baz=80,SNR=56
MSO **Missoula** 79.76 331 eP P 15 15 14.5 +0.2
comp=Z,82nm,1.3s,mb5.5
D14A **Greenough** 79.76 332 ⇑P P 15 15 14.6 +0.3
baz=80,SNR=24
J07A **Hines** 79.78 326 ⇑P P 15 15 14.2 -0.4
baz=80,SNR=20
I08A **Drewsey** 79.79 327 ⇑P P 15 15 14.5 -0.1
baz=80,SNR=24
BMO **Blue Mountains** 79.84 328 eP P 15 15 14.1 -0.7
comp=Z,167nm,1.4s,mb5.8
H09A **Durkee** 79.88 328 ⇓P P 15 15 15.5 +0.5
baz=80
C15A **Salmond Ranch,** 79.91 333 ⇓P P 15 15 15.5 +0.5
baz=80,SNR=72
B16A **M & M Farms, S** 80.03 333 ⇓P P 15 15 15.5 -0.2
baz=80,SNR=11
O01C **Eel River Cons** 80.04 321 ⇓P P 15 15 15.7 -0.2
baz=80
F11A **Grangeville** 80.06 329 ⇓P P 15 15 15.9 -0.1
baz=80,SNR=25
G10A **Bishop Farm, J** 80.08 329 ⇓P P 15 15 16.4 +0.4
baz=80,SNR=45
J06A **Christmas Vall** 80.14 326 ⇑P P 15 15 16.0 -0.4
baz=80,SNR=21
K05A **Summer Lake** 80.16 325 ⇓P P 15 15 16.5 -0.1
baz=80,SNR=19
E12A **Beaver Dam Sad** 80.18 330 ⇓P P 15 15 16.4 -0.2
baz=80,SNR=24
D13A **Huson** 80.19 331 ⇑P P 15 15 16.9 +0.3
baz=80,SNR=56
N02C **Big Bar** 80.19 322 ⇓P P 15 15 16.8 0.0
baz=80,SNR=52
H08A **Prairie City** 80.28 327 ⇑P P 15 15 16.8 -0.3
baz=80,SNR=15
B15A **Bradely Ranch,** 80.31 333 ⇓P P 15 15 16.8 -0.4
baz=80,SNR=53
G09A **Cove** 80.39 328 ⇑P P 15 15 17.8 +0.1
baz=81,SNR=69
I07A **Izee** 80.39 326 ⇑P P 15 15 17.6 -0.1
baz=81,SNR=18
A16A **West Butte Ran** 80.41 334 ⇑P P 15 15 17.9 +0.1
baz=81,SNR=122
E11A **Bogner Ranch,** 80.43 330 ⇑P P 15 15 17.5 -0.4
baz=81
YBH **Yreka Blue Hor** 80.47 323 eP P 15 15 16.8 -1.5
comp=Z,36nm,0.9s,mb5.3
YBH **Yreka Blue Hor** 80.47 323 eP P 15 15 16.8 -1.5
YBH pmax pmax
comp=Z,36nm,0.9s
YBH **Yreka Blue Hor** 80.47 323 ⇑P P 15 15 17.8 -0.4
baz=81,SNR=6.6
KHMM **Horse Mountain** 80.47 322 eP P 15 15 20.6 +2.4
JCC **Jacoby Creek** 80.60 322 ⇓P P 15 15 18.8 -0.2
baz=81
F10A **Beach Ranch, E** 80.63 329 ⇓P P 15 15 18.8 -0.2
baz=81,SNR=38
B14A **Marquette Ranc** 80.64 333 ⇓P P 15 15 18.6 -0.4
baz=81,SNR=12
I06A **Prineville** 80.65 326 ⇓P P 15 15 18.5 -0.6
baz=81,SNR=24
C13A **Hot Springs** 80.68 332 ⇑P P 15 15 19.6 +0.4
baz=81,SNR=50
F09A **S2 Ranch, Elgi** 80.76 328 ⇑P P 15 15 19.1 -0.6
baz=81
H07A **Lands Inn, Kim** 80.78 327 ⇑P P 15 15 19.7 -0.1
baz=81,SNR=6.5
A15A **Johnson Ranch,** 80.90 333 ⇑P P 15 15 19.7 -0.7
baz=81,SNR=26
BSMT **Basso Peak** 80.91 332 eP P 15 15 20.6 +0.2
E10A **Myers Farm, Un** 80.95 329 ⇑P P 15 15 20.2 -0.5
baz=81,SNR=43
G08A **Pilot Rock** 80.97 328 ⇑P P 15 15 20.8 0.0
baz=81,SNR=28
TSUM **Tsumeb** 80.97 107 eP P 15 15 21.8 +0.2
KRMB **Red Mountain** 81.00 322 eP P 15 15 20.6 -0.4
D11A **Klaveano Farm,** 81.00 330 ⇑P P 15 15 20.5 -0.4
baz=81,SNR=15
LNOR **Lincton Mounta** 81.06 328 eP P 15 15 23.1 +1.8
C12B **Naegeli Ranch,** 81.11 331 ⇓P P 15 15 21.2 -0.3
baz=81,SNR=17
B13A **Whitefish** 81.17 332 ⇑P P 15 15 21.3 -0.5
baz=81,SNR=20
A14A **Double T Ranch** 81.18 333 ⇑P P 15 15 20.9 -0.9
baz=81,SNR=14
HUMO **Hull Mountain** 81.19 324 eP P 15 15 21.9 -0.2
comp=Z,87nm,1.4s,mb5.5
HUMO **Hull Mountain** 81.19 324 ⇓P P 15 15 21.5 -0.6
baz=81
F08A **Pendleton** 81.25 328 ⇑P P 15 15 22.0 -0.3
baz=82,SNR=11
L02A **Cave Junction** 81.25 323 ⇑P P 15 15 21.0 -1.4
baz=82,SNR=5.6
VIPM **Ingram Point** 81.25 326 P P 15 15 23.6 +1.3
H06A **Lindquist Farm** 81.27 327 ⇓P P 15 15 22.4 0.0
baz=82,SNR=32
G07A **Ruggs Ranch, H** 81.31 327 ⇑P P 15 15 22.7 0.0
baz=82,SNR=34
M01C **Crescent City** 81.33 322 ⇓P P 15 15 22.5 -0.3
baz=82
I05A **Bend** 81.35 326 ⇑P P 15 15 23.2 +0.3
baz=82,SNR=6.7
D10A **Wagner Farm, O** 81.44 330 ⇑P P 15 15 23.2 -0.1
baz=82,SNR=43
WALA **Waterton Lakes** 81.45 333 eP P 15 15 23.5 +0.2
comp=Z,223nm,0.9s,mb6.1
E09A **Wood Farm, Sta** 81.46 329 ⇓P P 15 15 23.1 -0.2
baz=82,SNR=22
C11A **Tepee Creek (N** 81.55 331 ⇓P P 15 15 23.8 0.0
baz=82,SNR=85
K02A **Glendale** 81.59 323 ⇑P P 15 15 23.7 -0.5
baz=82,SNR=10.0
H05A **Madras** 81.66 326 ⇓P P 15 15 23.5 -1.0
baz=82
B12A **Libby** 81.73 332 ⇓P P 15 15 24.7 -0.1
baz=82,SNR=9.7
G06A **Carlson Farm,** 81.77 327 ⇓P P 15 15 25.2 +0.1
baz=82,SNR=10
E08A **Dider Farm, El** 81.88 328 ⇓P P 15 15 25.2 -0.4
baz=82
F07A **Phinny Hill Vi** 81.88 328 ⇓P P 15 15 26.1 +0.4
baz=82
FFC **Flin Flon** 81.91 342 P P 15 15 25.3 -0.3
comp=Z,245nm,1.4s,mb5.9,SNR=9.7
FFC **Flin Flon** 81.91 342 eP P 15 15 25.4 -0.2
FFC **Flin Flon** 81.91 342 eP P 15 15 25.8 +0.2
D09A **Jones Farm, Ri** 81.93 329 ⇓P P 15 15 25.4 -0.5
baz=82,SNR=30
C10A **Spiker Farm,** 82.02 330 ⇑P P 15 15 26.0 -0.3
baz=82
J02A **Umpqua** 82.04 324 ⇓P P 15 15 26.5 0.0
baz=82
HAWA **Hanford** 82.04 328 eP P 15 15 26.3 -0.1
B11A **Sandpoint** 82.05 331 ⇑P P 15 15 26.1 -0.4
baz=82
RSW **Rattlesnake Hi** 82.07 328 eP P 15 15 26.9 +0.3
A12A **Yaak River Ran** 82.10 332 ⇑P P 15 15 26.9 +0.1
baz=82,SNR=34
G05A **Wamic** 82.12 326 ⇓P P 15 15 26.4 -0.5
baz=82
H04A **Detroit Lake** 82.19 326 ⇓P P 15 15 27.2 -0.1
baz=82
F06A **Goldendale** 82.22 327 ⇓P P 15 15 27.1 -0.4
baz=82,SNR=9.0
D08A **Wollman Farm,** 82.22 329 ⇓P P 15 15 27.4 0.0
baz=82,SNR=17
NEW **Newport** 82.26 331 eP P 15 15 27.1 -0.5
NEW **Newport** 82.26 331 eP P 15 15 28.1 +0.5
I03A **Eugene** 82.28 324 ⇑P P 15 15 27.2 -0.6
baz=82
E07A **Sunnyside** 82.31 328 ⇑P P 15 15 27.5 -0.4
baz=82
B10A **Chitwood Farm,** 82.33 331 ⇓P P 15 15 27.3 -0.7
baz=83
HOOD **Mount Hood Mea** 82.35 326 P P 15 15 26.9 -1.3
comp=Z,54nm,0.6s,mb5.7
OD2 **Odessa Site #2** 82.36 329 P P 15 15 27.8 -0.3
A11A **Hall Mountain,** 82.43 331 ⇑P P 15 15 28.1 -0.4
baz=83,SNR=61
C09A **Chrisman Ranch** 82.45 330 ⇓P P 15 15 28.2 -0.3
baz=83,SNR=40
I02A **Mapleton** 82.60 324 ⇓P P 15 15 27.8 -1.6
baz=83
F05A **White Salmon** 82.64 327 ⇑P P 15 15 28.6 -1.0
baz=83
G04A **Mulino** 82.69 326 ⇑P P 15 15 29.2 -0.7
baz=83
COR **Corvallis** 82.71 325 eP P 15 15 31.6 +1.6
comp=Z,398nm,1.1s,mb6.4
H03A **Soap Creek Ran** 82.76 325 ⇓P P 15 15 29.8 -0.5
baz=83
C08A **Higginbotham F** 82.80 329 ⇑P P 15 15 30.1 -0.2
baz=83
D07A **Quincy** 82.82 328 ⇓P P 15 15 30.2 -0.3
baz=83
B09A **Rice** 82.84 330 ⇑P P 15 15 30.5 -0.1
baz=83,SNR=17
E06A **Yakima** 82.86 328 ⇑P P 15 15 30.4 -0.3
baz=83,SNR=6.7
A10A **Northport** 82.98 331 ⇓P P 15 15 30.6 -0.7
baz=83,SNR=14
F04A **Amboy** 83.16 326 ⇑P P 15 15 31.4 -0.9
baz=83
WTV **Waterville** 83.17 329 P P 15 15 32.7 +0.4
G03A **Yamhill** 83.19 325 ⇑P P 15 15 31.9 -0.6
baz=83
C07A **Waterville** 83.21 329 ⇓P P 15 15 32.0 -0.5
baz=83,SNR=18
D06A **Cle Elum** 83.24 328 ⇓P P 15 15 32.6 -0.1
baz=84
E05A **Randle** 83.26 327 ⇓P P 15 15 32.4 -0.4
baz=84
ETW **Entiat** 83.28 329 eP P 15 15 33.0 0.0
B08A **Colville Reser** 83.34 330 ⇑P P 15 15 32.7 -0.5
baz=84,SNR=11
MAW **Mawson** 83.39 164 eP P 15 15 33.0 -0.3
comp=Z,113nm,1.2s,mb5.8
MAW **Mawson** 83.39 164 P P 15 15 32.7 -0.7
comp=Z,113nm,1.0s,mb5.8,baz=205,slow=6.8,SNR=26
MAW **Mawson** 83.39 164 eP P 15 15 32.6 -0.7
comp=Z,231nm,1.1s,mb6.1
MAW **Mawson** 83.39 164 P P 15 15 32.7 -0.6
MAW pmax pmax
comp=Z,113nm,1.0s
A09A **Danville** 83.44 330 ⇓P P 15 15 33.2 -0.5
baz=84,SNR=18
FCC **Fort Churchill** 83.69 348 P P 15 15 34.1 -0.6
comp=Z,140nm,1.1s,mb6.0
FCC **Fort Churchill** 83.69 348 eP P 15 15 36.2 +1.5
FCC e*PP pP 15 15 47.0 +2.3
FCC pmax pmax
comp=Z,140nm,1.1s,mb6.0
A08A **Turner Farm, O** 83.74 330 ⇑P P 15 15 34.7 -0.5
baz=84,SNR=27
A08A ⇓S S 15 25 54.6 -1.2
baz=84
F03A **Seaside** 83.74 326 ⇓P P 15 15 34.9 -0.5
baz=84
E04A **Onalaska** 83.76 327 ⇑P P 15 15 34.5 -0.9
baz=84
B07A **Winthrop** 83.78 329 ⇓P P 15 15 35.1 -0.4
baz=84,SNR=23
B07A ⇑S S 15 25 55.5 -0.8
baz=84
D05A **Enumclaw** 83.80 327 ⇑P P 15 15 34.8 -0.7
baz=84
LIS **Lisbon** 83.92 44 eP P 15 15 36.2 -0.2
LIS eS S 15 25 57.5 -0.6
LIS AMS AMS 16 24 31.2
comp=Z,22µm,28.5s,MS6.4
BMW **Boistfort Moun** 83.94 326 eP P 15 15 36.5 +0.1
C05A **Tolt Reservoir** 84.00 328 ⇓P P 15 15 36.0 -0.6
baz=84,SNR=5.1
BOSA **Boshof** 84.02 118 P P 15 15 36.0 -1.4
comp=Z,47nm,0.8s,mb5.7,baz=250,slow=5.1,SNR=33
BOSA **Boshof** 84.02 118 eP P 15 15 36.2 -1.1
comp=Z,128nm,1.2s,mb5.9
BOSA **Boshof** 84.02 118 eP P 15 15 36.2 -1.1
BOSA pmax pmax
comp=Z,128nm,1.2s,mb5.9
E03A **Lebam** 84.16 326 ⇓P P 15 15 36.7 -0.7
baz=84
A07A **Ashnola River,** 84.32 330 ⇓P P 15 15 37.8 -0.4
baz=85,SNR=33
A07A ⇓S S 15 26 01.7 +0.1
baz=85
EGRO **El Granado** 84.33 45 P P 15 15 40.0 +1.5
comp=Z,59nm,0.8s,mb5.8
RPW **Rockport** 84.44 329 eP P 15 15 38.6 -0.2
EDM **Edmonton** 84.44 336 eP P 15 15 36.9 -1.8
JCW **Jim Creek** 84.46 328 eP P 15 15 38.9 -0.1
B06A **Marblemount** 84.47 329 ⇑P P 15 15 38.3 -0.7
baz=85
B05A **Bryant** 84.59 328 ⇑P P 15 15 38.7 -0.9
baz=85
C04A **Brinnon** 84.65 327 ⇑P P 15 15 39.0 -0.9
baz=85
EMIN **Mina Concepcio** 84.99 46 P P 15 15 43.1 +1.2
comp=Z,100nm,0.8s,mb6.0
ESPR **Espera** 85.03 47 P P 15 15 43.7 +1.6
comp=Z,137nm,1.0s,mb6.0
EJIF **Jimena Fronter** 85.07 47 P P 15 15 42.6 +0.3
comp=Z,417nm,1.7s,mb6.3
EJIF **Jimena Fronter** 85.07 47 P P 15 15 42.6 +0.3
EJIF pmax pmax
comp=Z,417nm,1.7s,mb6.3
A05A **Maple Falls** 85.09 329 ⇑P P 15 15 41.2 -0.8
baz=85
B04A **Port Angeles** 85.14 327 ⇓P P 15 15 42.0 -0.4
baz=85
B04A ⇓S S 15 26 09.9 +0.1
baz=85
EBAD **Badajoz** 85.32 45 P P 15 15 44.7 +1.3
comp=Z,56nm,0.9s,mb5.7
PGC **Sidney** 85.52 328 eP P 15 15 46.5 +2.3
comp=Z,280nm,1.0s,mb6.5
EMIJ **Mijas** 85.60 47 P P 15 15 45.5 +0.5
comp=Z,91nm,0.8s,mb6.0
LBTB **Lobatse** 85.69 115 eP P 15 15 45.4 -0.5
comp=Z,148nm,1.4s,mb6.0
LBTB **Lobatse** 85.69 115 eP P 15 15 45.4 -0.4
LBTB pmax pmax
comp=Z,148nm,1.4s,mb6.0
MTE **Manteigas** 85.91 43 eP P 15 15 46.5 +0.1
ELOJ **Sierra Loja** 86.33 47 P P 15 15 50.0 +1.5
comp=Z,63nm,0.8s,mb5.9
ELOJ **Sierra Loja** 86.33 47 P P 15 15 50.0 +1.5
ELOJ pmax pmax
comp=Z,63nm,0.8s,mb5.9
ELOB **Lobios** 86.42 42 P P 15 15 48.4 -0.5
comp=Z,34nm,1.7s,mb5.3
ELUQ **Luque** 86.47 47 P P 15 15 50.2 +0.9
comp=Z,175nm,1.1s,mb6.2
ELUQ **Luque** 86.47 47 P P 15 15 50.2 +1.0
ELUQ pmax pmax
comp=Z,175nm,1.1s,mb6.2
ERON **Agron** 86.50 47 P P 15 15 50.2 +0.8
comp=Z,15nm,0.9s,mb5.2
EMAZ **Mazaricos** 86.50 40 P P 15 15 48.5 -0.7
comp=Z,18nm,0.9s,mb5.3
EGUA **Guajares** 86.56 48 P P 15 15 50.3 +0.6
comp=Z,104nm,1.2s,mb5.9
EGUA **Guajares** 86.56 48 P P 15 15 50.3 +0.6
EGUA pmax pmax
comp=Z,104nm,1.2s,mb5.9
EADA **Adamuz** 86.59 46 P P 15 15 50.5 +0.7
comp=Z,103nm,1.4s,mb5.9
EPLA **Plasencia** 86.65 44 P P 15 15 51.7 +1.7
comp=Z,26nm,0.8s,mb5.5
EPLA **Plasencia** 86.65 44 P P 15 15 51.7 +1.7
EPLA pmax pmax
comp=Z,26nm,0.8s,mb5.5
TAM **Tamanrasset** 86.69 64 eP P 15 15 50.9 +0.3
STS **Santiago** 86.72 40 P P 15 15 50.4 +0.1
comp=Z,20nm,1.1s,mb5.2
STS **Santiago** 86.72 40 P P 15 15 50.4 +0.1
STS pmax pmax
comp=Z,20nm,1.1s,mb5.3
EBER **Berja** 87.06 48 P P 15 15 52.4 +0.3
comp=Z,37nm,1.0s,mb5.6
EBAN **Banos Encina** 87.12 46 P P 15 15 53.3 +0.9
comp=Z,32nm,0.9s,mb5.5
EBAN **Banos Encina** 87.12 46 P P 15 15 53.3 +0.9
EBAN pmax pmax
comp=Z,32nm,0.9s,mb5.5
ECAL **Calabor** 87.28 42 P P 15 15 52.8 -0.3
comp=Z,23nm,0.7s,mb5.5
ERUA **La Rua** 87.28 41 P P 15 15 52.4 -0.6
comp=Z,29nm,0.8s,mb5.6
ERUA **La Rua** 87.28 41 P P 15 15 52.4 -0.7
ERUA pmax pmax
comp=Z,29nm,0.8s,mb5.6
EQES **Quesada** 87.41 47 P P 15 15 53.9 +0.1
comp=Z,22nm,0.9s,mb5.4
PAB **San Pablo** 87.48 45 eP P 15 15 54.9 +0.9
comp=Z,110nm,1.5s,mb5.9
PAB **San Pablo** 87.48 45 eP P 15 15 54.9 +0.8
PAB pmax pmax
comp=Z,110nm,1.5s,mb5.9
ENIJ **Nijar** 87.56 48 P P 15 15 54.2 -0.3
comp=Z,23nm,0.9s,mb5.4
ENIJ **Nijar** 87.56 48 P P 15 15 54.2 -0.3
ENIJ pmax pmax
comp=Z,23nm,0.9s,mb5.4
EHUE **Huescar** 87.74 47 P P 15 15 55.7 +0.4
comp=Z,14nm,0.8s,mb5.2
EHUE **Huescar** 87.74 47 P P 15 15 55.7 +0.3
EHUE pmax pmax
comp=Z,14nm,0.8s,mb5.2
ESDC **Sonseca Array** 87.80 45 P P 15 15 55.6 0.0
comp=Z,9.7nm,0.8s,mb5.1,baz=238,slow=4.1,SNR=18
ESDC **Sonseca Array** 87.80 45 P P 15 15 56.2 +0.6
comp=Z,7.9nm,0.8s,mb5.0
ESLA **Sonseca Array** 87.80 45 eP P 15 15 56.0 +0.3
DRV **Dumont d'Urvil** 87.82 192 PKP P 15 15 59.0 +3.7
GUD **Guadarrama** 88.20 44 P P 15 15 58.8 +1.3
comp=Z,7.0nm,0.6s,mb5.1
GUD **Guadarrama** 88.20 44 P P 15 15 58.8 +1.3
GUD pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
EVIA **Vianos** 88.22 47 P P 15 15 59.6 +1.9
comp=Z,24nm,0.8s,mb5.5
EVIA **Vianos** 88.22 47 P P 15 15 59.6 +2.0
EVIA pmax pmax
comp=Z,25nm,0.8s,mb5.5
EMUR **La Murta** 88.67 48 P P 15 15 60.0 +0.2
comp=Z,54nm,1.3s,mb5.7
ETOB **Tobarra** 88.87 47 P P 15 15 59.8 -0.8
comp=Z,71nm,1.6s,mb5.8
ETRT **Tiaret** 89.23 51 P P 15 16 05.0 +2.5
EANR **'Ain N'Sour** 89.36 50 P P 15 16 03.0 -0.1
ETOR **Torete** 89.65 45 P P 15 16 05.3 +1.0
comp=Z,36nm,1.1s,mb5.6
ETOR **Torete** 89.65 45 P P 15 16 05.3 +1.0
ETOR pmax pmax
comp=Z,36nm,1.1s,mb5.6
ECHA **Ech Chlef** 89.65 50 P P 15 16 05.5 +1.1

ECHE Chera 89.74 46 P **P** 15 16 05.3 +0.6
comp=Z,18nm,0.9s,mb5.4
ECHE Chera 89.74 46 P **P** 15 16 05.3 +0.6
ECHE pmax pmax
comp=Z,19nm,0.9s,mb5.4
EBNR Beni Rached 89.83 50 P **P** 15 16 06.0 +0.7
EMHD Djebel Mahouad 90.80 51 P **P** 15 16 09.0 -0.8
CASY Casey 91.10 180 *eP* **P** 15 16 10.9 +0.2
CASY Casey 91.10 180 *eP* **P** 15 16 10.8 +0.1
comp=Z,382nm,1.3s,mb5.4
ERTA Horta de San J 91.28 46 P **P** 15 16 14.5 +2.6
comp=Z,27nm,0.9s,mb5.6
SJPF Ste Jean 91.35 43 *eP* **P** 15 16 12.6 +0.5
comp=Z,117nm,1.5s,mb5.7
SJPF Ste Jean 91.35 43 *eP* **P** 15 16 12.6 +0.5
comp=Z,58nm,1.5s,mb5.7
SJPF Ste Jean 91.35 43 *eP* **P** 15 16 12.6 +0.5
SJPF pmax pmax
comp=Z,58nm,1.5s,mb5.7
ETSF Etsaut 91.66 44 *eP* **P** 15 16 13.8 +0.2
LSZ Lusaka 91.82 107 P **P** 15 16 18.0 +2.9
SNR=8.6
LSZ Lusaka 91.82 107 *eP* **P** 15 16 17.3 +2.2
EBIE Bielsa 92.01 44 P **P** 15 16 17.1 +1.9
comp=Z,14nm,0.9s,mb5.3
YKA Yellowknife Ar 92.04 341 P **P** 15 16 13.4 -1.5
comp=Z,21nm,0.7s,mb5.6,baz=140,slow=4.2,SNR=35
YKW3 Yellowknife Ar 92.10 341 *eP* **P** 15 16 16.1 +1.0
URZ Urewera 92.23 227 P **P** 15 16 21.1 +4.5
comp=Z,4.9nm,0.8s,baz=127,slow=5.1,SNR=2.6
CKHR Kef el Ahmar 92.56 52 P **P** 15 16 17.5 -0.5
SET Setif 92.56 52 P **P** 15 16 20.0 +2.1
QUIF Quistinic 92.66 38 *eP* **P** 15 16 18.3 +0.2
comp=Z,27nm,0.8s,mb5.4
QUIF Quistinic 92.66 38 *eP* **P** 15 16 18.3 +0.2
comp=Z,14nm,0.8s,mb5.4
QUIF Quistinic 92.66 38 *eP* **P** 15 16 18.3 +0.2
QUIF pmax pmax
comp=Z,14nm,0.8s,mb5.4
ROSF Rostrenen 92.82 38 *eP* **P** 15 16 18.9 +0.1
RPZ Rata Peaks 93.03 220 P **P** 15 16 22.5 +2.4
comp=Z,21nm,1.0s,mb5.5,baz=334,slow=6.9,SNR=4.6
DFRA Djebel Bou Aff 93.06 52 P **P** 15 16 19.0 -1.2
SGMF Saint Gilles 93.18 38 *eP* **P** 15 16 20.1 -0.4
comp=Z,122nm,1.5s,mb5.8
SGMF Saint Gilles 93.18 38 *eP* **P** 15 16 20.1 -0.4
comp=Z,61nm,1.5s,mb5.8
SGMF Saint Gilles 93.18 38 *eP* **P** 15 16 20.1 -0.4
SGMF pmax pmax
comp=Z,61nm,1.5s,mb5.8
CTEI Djebel Teioual 93.23 52 P **P** 15 16 16.0 -5.0
CASM Ain Smara 93.38 52 P **P** 15 16 13.5 -8.2
LFF La Frestale 93.49 42 *eP* **P** 15 16 21.1 -0.9
CKFL Kef-Lekhel 93.61 52 P **P** 15 16 15.0 -7.8
MFF Saint Martin d 93.76 41 *eP* **P** 15 16 22.0 -1.2
comp=Z,261nm,1.9s,mb6.0
MFF Saint Martin d 93.76 41 *eP* **P** 15 16 22.0 -1.2
comp=Z,130nm,1.9s,mb6.0
MFF Saint Martin d 93.76 41 *eP* **P** 15 16 22.0 -1.2
MFF pmax pmax
comp=Z,131nm,1.9s,mb6.0
DLF Lyons Farm 93.77 33 *eP* **P** 15 16 21.4 -1.7
DMUB Kingscourt 93.92 32 *eP* **P** 15 16 22.3 -1.5
RJF Les Rejaudoux 94.14 42 *eP* **P** 15 16 24.6 -0.4
GRR Gorron 94.23 39 *eP* **P** 15 16 25.5 +0.2
CAF Calviac 94.31 43 *eP* **P** 15 16 25.7 -0.1
FLN La Foliniere 94.63 39 *eP* **P** 15 16 26.4 -0.7
LDF La Druitiere 94.75 39 *eP* **P** 15 16 27.1 -0.6
comp=Z,39nm,1.1s,mb5.4
LDF La Druitiere 94.75 39 *eP* **P** 15 16 27.1 -0.6
comp=Z,20nm,1.1s,mb5.5
LDF La Druitiere 94.75 39 *eP* **P** 15 16 27.1 -0.6
LDF pmax pmax
comp=Z,20nm,1.1s,mb5.5
DLBC Dease Lake 94.80 333 LR LR 16 03 29.7
comp=Z,18µm,18.4s,MS6.6,baz=124,slow=38
DLBC Dease Lake 94.80 333 *eP* **P** 15 16 27.3 -0.4
TCF Toulx Ste Croi 95.04 42 *eP* **P** 15 16 29.7 +0.6
comp=Z,59nm,1.4s,mb5.5
TCF Toulx Ste Croi 95.04 42 *eP* **P** 15 16 29.7 +0.6
comp=Z,30nm,1.4s,mb5.5
TCF Toulx Ste Croi 95.04 42 *eP* **P** 15 16 29.7 +0.6
TCF pmax pmax
comp=Z,30nm,1.4s,mb5.5
KEST Kesra 95.25 54 P **P** 15 16 30.2 -0.2
comp=Z,7.1nm,1.0s,mb5.1,baz=220,slow=5.1,SNR=8.0
BGF Bois d'Agland 95.55 42 *eP* **P** 15 16 30.5 -0.9
AVF Avril sur Loir 95.97 42 *eP* **P** 15 16 33.7 +0.4
comp=Z,15nm,0.8s,mb5.2
AVF Avril sur Loir 95.97 42 *eP* **P** 15 16 33.7 +0.4
comp=Z,7.4nm,0.8s,mb5.2
AVF Avril sur Loir 95.97 42 *eP* **P** 15 16 33.7 +0.4
AVF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
SSF Saint Saulge 96.18 41 *eP* **P** 15 16 34.8 +0.5
SMF Signal de Mont 96.20 42 *eP* **P** 15 16 33.9 -0.5
LOR Lormes 96.49 41 *eP* **P** 15 16 36.1 +0.4
ESK Eskdalemuir 96.50 32 *eP* **P** 15 16 34.6 -0.9
ORIF Oris-en-Rattie 96.72 44 *eP* **P** 15 16 37.4 +0.6
LPL La Plagne 97.52 44 *eP* **P** 15 16 40.9 +0.5
comp=Z,46nm,1.2s,mb5.6
LPL La Plagne 97.52 44 *eP* **P** 15 16 40.9 +0.5
comp=Z,23nm,1.2s,mb5.6
LPL La Plagne 97.52 44 *eP* **P** 15 16 40.9 +0.5
LPL pmax pmax
comp=Z,23nm,1.2s,mb5.6
LPG La Plagne 97.52 44 *eP* **P** 15 16 40.4 0.0
SUMG Summit 97.65 9 *eP* **P** 15 16 40.3 -0.1
comp=Z,9.6nm,1.2s,mb5.2
DOU Dourbes 98.18 39 P **P** 15 16 42.9 -0.3
comp=Z,13nm,1.9s,mb5.1
GIVF Givet 98.32 39 *eP* **P** 15 16 43.7 -0.1
UCC Uccle 98.36 38 P **P** 15 16 43.7 -0.3
BCLA Clavier 98.73 39 P **P** 15 16 45.2 -0.5
comp=Z,23nm,2.2s,mb5.3
WLF Walferdange 98.91 40 P **P** 15 16 46.3 -0.2
comp=Z,28nm,1.7s,mb5.5
WLF Walferdange 98.91 40 *eP* **P** 15 16 47.1 +0.6
TUE Stuetta 99.57 44 *eP* Pdif 15 16 49.3 -0.3
comp=Z,22nm,1.4s
DAWY Dawson 101.65 335 *e*Pdif Pdif 15 16 59.1 +0.3
INK Inuvik 101.77 340 *e*Pdif Pdif 15 16 58.8 -0.7
GRF Grafenberg Arr 101.95 41 *e*Pdiff Pdif 15 17 00.2 0.0
MOX Moxa 102.53 40 *e*PDIFF Pdif 15 17 08.1 +5.3
MOX *e* 15 17 23.9
LJU Ljubljana 102.77 45 *e*Pdiff Pdif 15 17 02.9 -0.9
LJU *e*PP PP 15 21 16.8 -1.4
VISS Visnje 102.89 46 *e*Pdiff Pdif 15 17 07.1 +2.7
VISS *e*PP PP 15 21 16.1 -3.0
BOJS Bojanci 103.06 46 *e*Pdiff Pdif 15 17 05.0 -0.1
BOJS *e*PP PP 15 21 19.6 -0.8
GERES GERESS Array B 103.18 42 Pdiff Pdif 15 17 05.6 -0.1
comp=Z,0.6nm,0.5s,baz=285,slow=2.6,SNR=7.2
KHC Kasperske Hory 105.26 42 *e*PDIF Pdif 15 17 06.5 +0.7
PERS Pernice 103.35 45 *e*Pdiff Pdif 15 17 08.0 +1.6
CLL Collm 103.58 40 *e*P Pdif 15 17 08.0 +0.5
CLL pmax pmax
comp=Z,8.0nm,1.4s
CLL Collm 103.58 40 *e*Pdif Pdif 15 17 08.0 +0.5
comp=Z,8.0nm,1.4s
CLL *e*PP PP 15 21 23.0 -1.0
BRG Berggiesshubel 104.00 41 *e*P Pdif 15 17 00.3 -9.0
BRG pmax pmax
comp=Z,6.0nm,1.5s
BRG Berggiesshubel 104.00 41 *e*PDIF Pdif 15 17 00.3 -9.1
comp=Z,9.4nm,1.5s
BRG SDIF Sdif 15 29 12.0 +15
KOGS Kog 104.03 45 *e*Pdiff Pdif 15 17 12.4 +2.9
KOGS *e*PP PP 15 21 25.4 -2.1
KONO Kongsberg 104.60 31 *e* Pdif 15 17 19.0 +7.0
KIS Kishinev 112.54 47 *i* PPS 15 36 12.0
KIS LRM 16 14 00.0
comp=Z,16µm,20.0s
ARCES ARCESS Array B 113.30 22 PKKPbc PKKPbc 15 32 29.7 -1.1
comp=Z,2.9nm,0.8s,baz=58,slow=3.6,SNR=3.9
ARCES PKKP PKKPbc 15 32 49.8 +19
comp=Z,8.7nm,1.1s,baz=96,slow=2.7,SNR=4.0
KIEV Kiev 113.36 43 *e*PKiKP PKiKP 15 21 43.2 -0.8
AKASG Malin Array Be 113.38 43 PKiKP PKiKP 15 21 42.9 -1.0
comp=Z,4.3nm,0.7s,baz=267,slow=2.9,SNR=12
AKASG PP PP 15 22 36.1 +0.7
comp=Z,1.1nm,0.6s,baz=254,slow=6.1,SNR=5.0
AKASG PKKPbc PKKPbc 15 32 30.1 0.0
comp=Z,2.0nm,0.7s,baz=81,slow=3.6,SNR=6.1
AKASG Malin Array Be 113.38 43 PKPdf PKiKP 15 21 42.9 -1.0
AKASG PP PP 15 22 36.1 +0.7
AKASG PKKPbc PKKPbc 15 32 30.1 0.0
AKASG Malin Array Be 113.38 43 PKIKP PKiKP 15 21 42.9 -1.1
AKASG 15 22 36.1
STKA Stephens Creek 117.51 211 *e*PKP PKPdf 15 21 52.6 -0.1
comp=Z,4.8nm,1.2s
STKA Stephens Creek 117.51 211 PKP PKPdf 15 21 52.5 -0.2
comp=Z,3.0nm,0.8s,baz=111,slow=3.5,SNR=7.5
STKA PKKPbc PKKPbc 15 32 16.1 +0.7
comp=Z,2.0nm,0.9s,baz=327,slow=4.8,SNR=4.2
OBN Obninsk 118.12 39⇑ *e*PKP PKPdf 15 21 51.3 -1.7
OBN Obninsk 118.12 39 *i* PKIKP PKPdf 15 21 51.3 -1.7
OBN *i* SS SS 15 39 22.7 +1.3
OBN pmax pmax
comp=Z,56nm,1.9s
OBN MLR MLR
comp=Z,17µm,17.0s,MS6.7
ANN Anapa 118.22 50 *i* PKIKP PKPdf 15 21 48.1 -5.4
ANN *e*PPP 15 25 36.6
ANN *e*SSS 15 43 38.6
ANN pmax pmax
comp=Z,63nm,1.0s
KLMR Klimovskoe 119.42 32 *e*PKIKP PKPdf 15 21 53.9 -1.4
SOC Sochi 119.76 52 *e*P Pdif 15 18 22.5 +3.1
SOC *e*PPP 15 23 17.6
SOC *e* 15 28 44.9
SOC *i* PS PS 15 33 07.9 -1.9
SOC pmax pmax
comp=Z,38nm,0.8s
MSL Mosul 121.70 60 *ex* x 15 22 04.0
MSL *ex* x 15 29 16.0
KIV Kislovodsk 121.93 52 P PKPdf 15 22 01.5 +0.8
SNR=5.3
KIV Kislovodsk 121.93 52 *e*PKPdf PKPdf 15 22 01.0 +0.4
KIV Kislovodsk 121.93 52 *e*P Pdif 15 18 27.2 -1.8
KIV *i* 15 22 00.5
KIV *e* 15 23 32.0
KIV *e*PPP 15 26 11.0
KIV *e* 15 28 54.4
KIV *e*PS PS 15 33 29.1 -0.1
KIV pmax pmax
comp=Z,12nm,0.6s
BHD Baghdad 122.36 64 *ex* x 15 21 58.0
BHD *ex* x 15 29 09.0
BHD *ex* x 15 30 30.0
GNI Garni 123.29 56 *e*PKPdf PKPdf 15 22 03.5 +0.2
BILL Bilibino 123.30 338 *e*PKP PKPdf 15 22 00.3 -2.2
BILL Bilibino 123.30 338 *i* PKIKP PKPdf 15 22 00.3 -2.2
BILL *i* 15 23 42.1
BILL pmax pmax
comp=Z,17nm,1.8s
FORT Forrest 123.76 199 *e*PKP PKPdf 15 22 04.8 +0.1
comp=Z,15nm,0.7s
NWAO Narrogin (SRO) 124.01 188 PKP PKPdf 15 22 05.1 0.0
comp=Z,14nm,1.0s,baz=178,slow=2.3,SNR=2.9
NAY Al-Naaiem 124.20 69 *e*P PKPdf 15 22 04.5 -1.0
baz=69
NAY AMb AMB 15 22 07.2
comp=Z,25nm,1.5s,baz=69
CTA Charters Tower 124.27 223 *e*PKP PKPdf 15 22 05.8 -0.1
comp=Z,8.7nm,0.9s
CTA Charters Tower 124.27 223 PKP PKPdf 15 22 06.0 +0.1
comp=Z,10nm,0.8s,baz=70,slow=2.1,SNR=7.0
CTAO Charters Tower 124.27 223 P PKPdf 15 22 09.1 +3.2
MIB Mutribah 124.37 69 *e*P PKPdf 15 22 04.7 -1.1
baz=69
MIB AMb AMB 15 22 10.0
comp=Z,43nm,1.5s,baz=69
RDF Al-Radifah 124.42 70 *e*P PKPdf 15 22 04.7 -1.2
baz=70
RDF AMb AMB 15 22 06.5
comp=Z,42nm,1.5s,baz=70
MUN Mundaring 125.07 187 *e*PKP PKPdf 15 22 06.0 -1.2
KLBR Kellerberrin 125.26 189 *e*PKP PKPdf 15 22 05.9 -1.7
comp=Z,34nm,0.9s
MAK Makhachkala 125.43 53 *i* P Pdif 15 18 48.3 +3.7
MAK *e* 15 22 05.5
MAK *i* 15 23 55.2
MAK *i* 15 29 11.3
MAK *e*PS PS 15 34 00.3 +0.1
MAK *e*SS SS 15 40 53.8 -1.5
MAK pmax pmax
comp=Z,124nm,1.1s
MAK MLR MLR
comp=Z,12µm,22.0s,MS6.5
MAK MLR MLR
comp=E,6µm,19.0s
ABTO Aybut 127.12 85 P PKPdf 15 22 12.3 +0.9
SNR=7.1
WHFO Wadi Hawf 127.71 85 P PKPdf 15 22 12.4 -0.1
SNR=10
ASAR Alice Springs 128.03 209 PKP PKPdf 15 22 11.7 -1.4
comp=E,4.7nm,0.6s,baz=137,slow=1.6,SNR=20
SOKR Solikamsk 128.09 31⇑ *i*PKIKP PKPdf 15 22 12.1 +0.2
SOKR pmax pmax
comp=Z,30nm,1.6s
TIXI Tiksi 129.99 352 *e*PKPdf PKPdf 15 22 14.7 -0.6
TIXI Tiksi 129.99 352 *i* PKIKP PKPdf 15 22 13.6 -1.7
TIXI pmax pmax
comp=Z,22nm,1.5s
ARU Arti 130.08 34 *e*PKPdf PKPdf 15 22 15.8 0.0
ARU Arti 130.08 34 *i* PKIKP PKPdf 15 22 16.1 +0.3
ARU 15 24 25.9
ARU 15 29 21.0
ARU MLR MLR
comp=Z,29µm,21.0s
COEN Coen 130.77 225 PKPdf PKPdf 15 22 19.9 +1.4
COEN Coen 130.77 225 P PKPdf 15 22 31.3 +13
SEY Seymchan 130.81 336⇑ *e*PKP PKPdf 15 22 15.4 -1.6
SEY Seymchan 130.81 336⇑ *i*PKIKP PKPdf 15 22 15.3 -1.7
SVE Sverdlovsk 131.00 33 *e*PKIKP PKPdf 15 22 14.6 -3.0
SVE pmax pmax
comp=Z,27nm,1.5s
WB2 Warramunga Arr 131.04 211 *e*PKP PKPdf 15 22 17.2 -1.7
WRA Warramunga Arr 131.04 211 PKP PKPdf 15 22 17.3 -1.5
comp=Z,18nm,0.8s,baz=153,slow=1.7,SNR=54
WRAB Tennant Creek 131.05 212 *e*PKPdf PKPdf 15 22 17.7 -1.1
WRAB Tennant Creek 131.05 212 *i* PKIKP PKPdf 15 22 18.6 -0.3
PMG Port Moresby 131.17 233⇑ *i*PKIKP PKPdf 15 22 20.5 +1.2
PMG Port Moresby 131.17 233 P PKPdf 15 22 33.4 +14
HATD Hatta, Dubai 131.34 76 P PKPdf 15 22 19.1 -0.1
SNR=14
ARQ Araqi 131.43 78 P PKPdf 15 22 19.4 0.0
SNR=7.0
AKTO Aktyubinsk 131.60 42 PKIKP PKPdf 15 22 19.4 +0.5
AKTO pmax pmax
comp=Z,5.0nm,1.1s
BSY Bisya 131.94 79 P PKPdf 15 22 20.6 +0.2
SNR=11
PET Petropavlovsk 132.32 322 *e*PKIKP PKPdf 15 22 19.4 -0.8
PET *e* 15 24 48.9
PET *e*PPP 15 27 36.2
PET *e*PPS 15 36 43.9
PET *e*SS SS 15 42 21.6 +2.1
PET pmax pmax
comp=Z,900nm,8.6s
PET pmax pmax
comp=Z,1µm,15.1s
SMDO Samad 132.76 79 P PKPdf 15 22 21.8 -0.2
SNR=19
PETK Petropavlovsk- 132.83 322 PKP PKPdf 15 22 21.7 +0.6
comp=Z,12nm,0.9s,baz=72,slow=4.8,SNR=8.8
AB31 Akbulak array 133.12 43 PKIKP PKPdf 15 22 22.1 +0.3
AB31 pmax pmax
comp=Z,24nm,0.9s
WBK Wadi Bani Khal 133.52 80 P PKPdf 15 22 24.3 +0.9
SNR=13
SKR Severo-Kuril's 134.59 320 *i* PKIKP PKPdf 15 22 30.0 +5.5
SKR *e* 15 28 03.0
SKR MLR MLR
comp=N,6µm,20.0s,MS6.5
SKR MLR MLR
comp=E,6µm,20.0s,MS6.5
SKR MLR MLR
comp=Z,9µm,20.0s,MS6.5
MBWA Marble Bar 135.11 193 *e*PKPdf PKPdf 15 22 26.3 -0.2
BRVK Borovoye 137.66 35 P PKPdf 15 22 30.4 +0.3
SNR=7.3
BRVK Borovoye 137.66 35⇑ *e*PKIKP PKPdf 15 22 28.2 -2.0
BVA0 Borovoye Array 137.73 35 *i* PKIKP PKPdf 15 22 30.7 +0.4
BVA0 Borovoye Array 137.73 35 *i* P PKPdf 15 22 30.7 +0.4
BVA0 pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 137.73 35 PKP PKPdf 15 22 30.3 0.0
comp=Z,11nm,0.7s,baz=301,slow=4.2,SNR=4.4
KAKA Kakadu 138.12 215 *e*PKP Px 15 22 15.8
comp=Z,15nm,0.6s
VOSK Vostochnaya 138.19 35 PKIKP PKPdf 15 22 32.0 +0.9
VOSK pmax pmax
comp=Z,14nm,0.8s
VOSK Vostochnaya 138.19 35 P PKPdf 15 22 32.0 +0.9
VOSK pmax pmax
comp=Z,14nm,0.8s
YAK Yakutsk 138.54 346 *e*PKHKP 15 22 24.2
YAK pmax pmax
comp=Z,36nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.5s
YAK pmax pmax
comp=E,9.0nm,1.5s
KK31 Karatay Array 141.97 49 *i* PKIKP PKPdf 15 22 34.2 -4.1
KK31 pmax pmax
comp=Z,11nm,0.9s
KBL Kabul 142.83 63 *e*PKPpre PKPdf 15 22 36.4 -3.8
KURK Kurchatov 143.25 33 *e*PKPpre PKPdf 15 22 37.1 -3.2
ZAA0 Zalesovo Array 143.80 25 *e*PKPpre PKPdf 15 22 37.4 -3.8
ZALV Zalesovo Beam 143.80 25 PKP PKPdf 15 22 38.0 -3.2
comp=Z,16nm,0.7s,baz=306,slow=3.5,SNR=34
YSS Yuzh-Sakhalins 144.16 320 *e*PKPdf PKPdf 15 22 41.6 -0.4
YSS Yuzh-Sakhalins 144.16 320 *i* PKIKP PKPdf 15 22 43.1 +1.1
CLNS Chul'man 144.29 346 *i* PKIKP PKPdf 15 22 39.0 -3.0
CLNS *e*SS SS 15 44 34.5 -5.3
CLNS pmax pmax
comp=Z,76nm,0.9s
CLNS pmax pmax
comp=E,20nm,0.8s
CLNS pmax pmax
comp=N,30nm,0.9s
CLNS MLR MLR
comp=N,13µm,24.0s
CLNS MLR MLR
comp=N,11µm,20.0s
BATI Baumata 144.33 204 PKP PKPdf 15 22 42.5 -0.9
comp=N,41nm,0.8s,baz=116,slow=0.9,SNR=9.7
EKS2 Erkin-Say 144.38 48 P PKPdf 15 22 42.4 -0.2
SNR=35
AML Almayashu 144.51 49 P PKPdf 15 22 42.0 -0.8
SNR=86
USP Ospenovka 144.63 46 P PKPdf 15 22 42.6 -0.3
SNR=33
KRAR Krasnoyarsk 144.70 16 *i* PKIKP PKPdf 15 22 41.1 -1.6
AAK Ala-Archa 144.88 48 P PKPdf 15 22 43.1 -0.4
SNR=123
FRU Bishkek 144.88 47⇑ *i*PKIKP PKPdf 15 22 43.0 -0.4
FRU *e* 15 29 12.0
FRU pmax pmax
comp=Z,290nm,2.0s
FRU MLR MLR
comp=Z,18µm,21.0s,MS6.8
CHMS Chumysh 144.90 47 P PKPdf 15 22 43.7 +0.2
SNR=50
BOD Bodaibo 144.97 356 *e*PKIKP PKPdf 15 22 40.5 -2.6
BOD pmax pmax
comp=Z,207nm,1.4s
UCH Uchtor 145.04 48 P PKPbc 15 22 45.5 +2.3
SNR=20
KBK Karagaybulak 145.17 47 P PKPbc 15 22 44.1 +0.6
SNR=112
GUMO Guam 145.31 261 *e*PKPdf PKPdf 15 22 46.3 +1.3
GUMO Guam 145.31 261 P PKPbc 15 22 55.9 +11
BOM Bombay 145.47 90 *ex* x 15 22 34.0
BOM *ex* x 15 25 32.4
GOA Goa 145.50 96⇑ *i*P PKPdf 15 22 44.4 -0.9
GOA *ex* x 15 25 33.9
TKM2 Tokmak 2 145.50 46 P PKPdf 15 22 44.8 +0.3
SNR=71
MNGI Mangalore 145.55 101 *i* P PKPdf 15 22 44.6 -0.8
MNGI *i* x x 15 25 36.4
MNGI *ex* x 16 17 53.5
comp=N,2µm,22.8s
TRD Trivandrum 145.59 109 *e*P PKPdf 15 22 45.1 -0.5
TRD AMS AMS 16 00 11.7
comp=Z,1µm,18.3s,MS5.8
KZA Kyzart 145.61 48 P PKPab 15 22 47.0 +1.7
SNR=50
ASAJ Asahikawa 145.62 316 PKPbc PKPbc 15 22 45.1 +0.2
comp=Z,31nm,0.7s,baz=12,slow=5.9,SNR=8.8
ASAJ Asahikawa 145.62 316 PKIKP PKPdf 15 22 45.2 +0.5
ASAJ pmax pmax
comp=Z,31nm,0.7s
ERM Erimo 146.15 312 *e*PKPbc PKPbc 15 22 47.6 +1.0
ULHL Ulahol 146.22 47 P PKPab 15 22 48.1 +0.5
SNR=14
POO Poona 146.34 91 *e*P PKPdf 15 22 44.2 -2.5
POO AMS AMS 15 58 40.5
comp=Z,2µm,20.1s,MS5.9
KAD Karad 146.35 93 *e*P PKPdf 15 22 46.1 -0.6
KAD AMS AMS 16 01 08.4
comp=Z,2µm,23.3s,MS5.9
KOD Kodaikanal 146.83 107 *e*P PKPdf 15 22 48.9 +1.3
KSH Kashi 147.06 52 PKP PKPdf 15 22 48.6 +1.3
KSH *e*APKP 15 22 59.4
KSH *e*XPKP 15 23 02.9
KSH PP PP
comp=Z,8µm,2.8s
KSH LR LR
comp=N,4µm,14.8s,MS6.5
KSH LR LR
comp=E,5µm,12.9s,MS6.5
KSH LR LR
comp=Z,4µm,13.6s,MS6.4
HABR Khabarovsk 147.44 328⇑ *i*PKP2 PKPbc 15 22 49.6 -0.5
HABR *e* 15 29 50.2
HABR *e* 15 38 51.0
HABR *e*SS SS 15 45 16.3 -0.1
MK31 Makanchi Array 147.58 36 *e*PKPdf PKPdf 15 22 47.5 -0.3
MKAR Makanchi Array 147.58 36 PKPbc PKPdf 15 22 47.9 0.0
comp=Z,27nm,0.7s,baz=321,slow=1.7,SNR=54
MKAR Makanchi Array 147.58 36 PKIKP PKPdf 15 22 47.9 0.0
MKAR pmax pmax
comp=Z,27nm,0.7s
AAI Ambon 147.93 217 P PKPbc 15 22 51.5 -1.0
AJM Ajmer 148.11 76 *e*P PKPdf 15 22 49.0 -0.4
AJM *i* x 15 25 42.0
DNP Denpasar 148.14 191 P PKPab 15 22 57.0 +1.2
THN Thein Dam 148.65 65 *e*P PKPdf 15 22 49.3 -0.8
THN *ex* x 15 25 39.8
LATR Latur 148.82 92 *e*P PKPdf 15 22 51.0 +0.2
LATR x x 15 26 43.0
DLH Dalhousie 148.84 65 *e*P PKPdf 15 22 50.0 -0.4
DLH *ex* x 15 22 59.0
BHK Bhakra 149.38 67 *ex* x 15 25 55.8
SJI Sawahan 149.48 184 P PKPbc 15 22 55.6 -0.9
AKL Akola 149.71 88 *e*P PKPdf 15 22 51.0 -1.2
SDNR Sundarnagar 149.84 66 *ex* PKPbc 15 22 57.0 +0.1
BJII Banjamegara 149.96 180 P PKPbc 15 22 59.5 +1.8
SMLA Simla 150.06 67 *i* P PKPdf 15 22 51.4 -1.0
SMLA *i* x 15 25 50.0
CBIJ Chichi jima 150.21 285 PKPbc PKPbc 15 22 56.3 -1.6
comp=Z,65nm,0.8s,baz=90,slow=1.0,SNR=4.6
NDI New Delhi 150.35 72 *e*P PKPdf 15 22 52.0 -0.9
LEM Lembang 150.40 176 P PKPbc 15 22 59.6 +0.9
HYB Hyderabad 150.40 95 *e*PKP PKPdf 15 22 53.5 +0.2
HYB Hyderabad 150.40 95 *i* PKP PKPdf 15 22 53.5 +0.2
HYB *e* 15 22 57.0
HYB *e* 15 23 06.0
HYB *e* 15 29 08.0
IRK Irkutsk 150.42 7 *e*PKIKP PKPdf 15 22 51.2 -1.1
IRK pmax pmax
comp=Z,306nm,1.7s
BHPL Bhopal 150.44 83 *e*P PKPdf 15 22 51.8 -1.4
BHPL *ex* x 15 28 52.4
KAPI Kappang 150.53 201 P PKPbc 15 22 58.6 -0.4
SNR=76
KAPI Kappang 150.53 201 PKPbc PKPbc 15 22 57.9 -1.2
comp=Z,120nm,1.0s,baz=169,slow=20,SNR=20
KAPI Kappang 150.53 201 *e*PKPbc PKPbc 15 22 58.9 -0.2
KAPI Kappang 150.53 201 P PKPbc 15 22 58.5 -0.6
CBJI Citeko 150.74 174 P PKPbc 15 22 57.9 -1.7
CIT Chita 150.77 355 *e*PKIKP PKPdf 15 22 53.2 +0.4
CIT pmax pmax
comp=Z,429nm,1.8s
LBMI Labuha 150.82 219 P PKPbc 15 23 00.6 +0.8
TLY Talaya 150.90 8⇓P PKPdf 15 22 53.0 -0.1
SNR=28
TLY Talaya 150.90 8 *e*PKPdf PKPdf 15 22 53.9 +0.8
TLY Talaya 150.90 8 *e*PKIKP PKPdf 15 22 53.3 +0.2
TLY pmax pmax

comp=Z,131nm,1.8s
NGP Nagpur 151.66 88 *i* P PKPdf 15 22 53.1 -2.0
MJAR Matsushiro Arr 151.79 305 PKPbc PKPbc 15 23 00.6 -0.7
comp=Z,31nm,0.7s,baz=111,slow=1.8,SNR=19
MJAR PKPab PKPab 15 23 11.2 +0.9
comp=Z,18nm,0.8s,baz=78,slow=0.8,SNR=11
MJAR Matsushiro Arr 151.79 305 PKIKP PKPbc 15 23 00.6 -0.7
MJAR 15 23 11.2
MJAR pmax pmax
comp=Z,31nm,0.7s
MAJO Matsushiro 151.79 305 *e*PKPbc PKPbc 15 22 60.0 -1.3
ZAK Zakamensk 152.13 9 *e*PKIKP PKPdf 15 22 55.9 +0.9
ZAK pmax pmax
comp=Z,48nm,1.7s
WMQ Urumqi 152.41 36 *e*PKP PKPdf 15 22 55.0 -0.6
WMQ PP PP
comp=Z,5μm,10.0s
WMQ LR LR
comp=N,19μm,24.0s,MS7.0
WMQ LR LR
comp=E,23μm,25.0s,MS7.0
WMQ LR LR
comp=Z,23μm,25.0s,MS6.9
KSI Kapahiang 152.74 165 P PKPbc 15 23 04.8 +0.6
MDJ Mudanjiang 152.83 328 PKP PKPdf 15 22 56.0 -0.2
MDJ XPKP 15 23 05.9
MDJ PP PP
comp=Z,2μm,12.5s
PTH Pithoragarh 152.88 70 *ex* x 15 25 53.0
PTH *ex* x 15 29 42.0
LGTI Lohaghat 152.92 70 *ex* x 15 25 54.5
BBKI Banjar Baru 153.30 192 P PKPbc 15 23 07.9 +2.5
PCI Palu 154.32 204 P PKPbc 15 23 12.5 +4.9
TPI Tanjungpandan 154.43 176 P PKPbc 15 23 08.7 +0.9
PDSI Padang 154.72 158 P PKPbc 15 23 08.9 +0.5
PPBI Pangkal Pinang 154.87 172 P PKPdf 15 23 02.2 +2.1
SONM Songino Array 154.99 5 PKP PKPdf 15 22 59.4 +0.3
comp=Z,8.1nm,0.8s,baz=329,slow=0.8,SNR=23
SONM PKPbc PKPbc 15 23 08.3 +0.4
comp=Z,6.7nm,0.8s,baz=321,slow=1.8,SNR=12
SONM PKPab PKPab 15 23 20.8 -2.5
comp=Z,7.6nm,0.8s,baz=343,slow=1.2,SNR=6.7
ULN Ulaanbaatar 155.00 4 ⇓P PKPdf 15 22 59.3 +0.1
SNR=12
ULN Ulaanbaatar 155.00 4 *e*PKIKP PKPdf 15 22 59.5 +0.3
PPI Padang Panjang 155.12 158 P PKPdf 15 23 05.4 +5.0
CN2 Changchun 155.38 332 *e*PKP PKPdf 15 22 59.8 0.0
CN2 XPKP 15 23 14.9
CN2 PP PP
comp=Z,3μm,13.0s
CN2 LR LR
comp=N,7μm,21.0s,MS6.7
CN2 LR LR
comp=E,10μm,21.0s,MS6.7
CN2 LR LR
comp=Z,9μm,21.0s,MS6.5
PYUN Piuthan 155.47 72 *e*P PKPdf 15 22 59.8 -0.6
comp=Z,39nm,0.7s
KOLN Koldanda 156.04 73 *e*P PKPdf 15 23 00.3 -0.9
comp=Z,56nm,1.1s
DANN Dangsing 156.11 71 *e*P PKPdf 15 23 01.1 -0.2
comp=Z,103nm,0.8s
GKN Gorkha 156.92 72 *e*P PKPdf 15 23 01.5 -0.8
DMN Daman 157.38 73 *e*P PKPdf 15 23 02.5 -0.4
KKN Kakani 157.51 72 *e*P PKPdf 15 23 01.9 -1.2
PKI Pulchoki 157.65 73 *e*P PKPdf 15 23 02.9 -0.4
BWNR Bhubaneshwar 157.74 92 *ex* x 15 25 55.0
SNY Shenyang 157.78 331 PKP PKPdf 15 23 01.9 -1.1
SNY PP PP
comp=Z,3μm,19.1s
SNY LR LR
comp=E,8μm,24.0s
SNY LR LR
comp=Z,15μm,23.5s,MS6.8
GUN Gumba 158.03 72 *e*P PKPdf 15 23 03.9 +0.2
BOK Bokaro 158.22 83 *e*P PKPdf 15 23 04.2 +0.1
BOK AMS AMS 15 59 39.3
comp=Z,2μm,21.8s,MS5.9
MYKOM Kota Tinggi 158.29 164 ⇑P PKPdf 15 23 02.0 -2.6
JIRN Jiri 158.33 73 *e*P PKPdf 15 23 03.9 -0.2
KGM Kluang 158.37 163 ⇓P PKPdf 15 23 07.2 +2.6
KSRS Korea Array 158.57 317 PKP PKPdf 15 23 03.9 -0.2
comp=Z,7.2nm,0.9s,baz=83,slow=1.7,SNR=13
KSRS PKPab PKPab 15 23 37.5 -1.7
comp=Z,5.4nm,0.9s,baz=50,slow=0.8,SNR=4.2
KSRS Korea Array 158.57 317 PKIKP PKPdf 15 23 03.9 -0.2
KSRS 15 23 37.5
KSRS pmax pmax
comp=Z,7.0nm,0.9s
KSM Kuching 158.69 182 *e*PKPdf PKPdf 15 23 05.2 +0.2
KSM Kuching 158.69 182 ⇓P PKPdf 15 23 07.1 +2.1
RAMN Ramite 158.78 74 *e*P PKPdf 15 23 03.9 -0.8
comp=Z,88nm,0.9s
FRIM Kepong 158.99 157 ⇑P PKPdf 15 23 03.0 -2.3
ODAN Odare 159.49 74 *e*P PKPdf 15 23 05.6 +0.1
comp=Z,207nm,1.5s
SBUM Sibu 159.51 188 ⇑P PKPdf 15 23 05.3 -0.7
TAPN Taplejung 159.71 73 *e*P PKPdf 15 23 04.7 -1.0
comp=Z,96nm,1.5s
IPM Ipoh 159.91 154 ⇑P PKPdf 15 23 07.6 +1.2
KULM Kulim 160.48 152 ⇑P PKPdf 15 23 09.6 +2.6
DL2 Dalian 161.02 330 PKP PKPdf 15 23 05.3 -1.5
DL2 PP PP
comp=Z,2μm,16.2s
DL2 LR LR
comp=N,3μm,20.4s
DL2 LR LR
comp=Z,9μm,23.0s
SDKM Sandakan 161.34 204 ⇓P PKPdf 15 23 10.1 +2.1
GTA Gaotai 161.56 25 PKP PKPdf 15 23 07.3 -0.1
GTA APKP 15 23 17.3
GTA XPKP 15 23 20.1
GTA PP PP
comp=Z,2μm,9.9s
GTA LR LR
comp=N,5μm,32.4s
GTA LR LR
comp=E,5μm,25.2s
GTA LR LR
comp=Z,12μm,38.4s
BJI Beijing 162.02 343 PKP PKPdf 15 23 08.3 +0.5
HHC Hu-ho-hao-te 162.02 355 *e*PKP PKPdf 15 23 08.3 +0.5
HHC APKP 15 23 20.1
HHC PP PP
comp=Z,5μm,16.7s
HHC LR LR
comp=N,11μm,22.6s
HHC LR LR
comp=E,15μm,19.0s
HHC LR LR
comp=Z,21μm,20.2s
KKM Kota Kinabalu 162.07 202 *e*PKPdf PKPdf 15 23 07.4 -1.3
KKM Kota Kinabalu 162.07 202 ⇑P PKPdf 15 23 09.2 +0.5
BTO Baotou 162.34 359 *e*PKP PKPdf 15 23 08.6 +0.5
BTO LR LR
comp=N,1μm,13.7s
BTO LR LR
comp=E,954nm,15.5s
SHL Shillong 163.64 77 *e*P PKPdf 15 23 08.4 -1.5
LZH Lanzhou 165.94 19 ⇑PKP PKPdf 15 23 12.4 +0.9
LZH APKP 15 23 23.3
LZH XPKP 15 23 27.0
LZH PP PP
comp=Z,4μm,9.0s
LZH LR LR
comp=N,10μm,18.5s
SSE Sheshan 166.83 311 PKP PKPdf 15 23 10.0 -2.4
SSE PP PP
comp=Z,522nm,5.1s
SSE Sheshan 166.83 311 PKP PKPdf 15 23 10.3 -2.1
SSE PP PP 15 28 04.5 +1.1
SSE SS SS 15 48 42.3 -2.9
SSE LR LR
comp=Z,30μm,16.0s
NJ2 Nanjing 167.72 320 *e*PKP PKPdf 15 23 11.0 -2.0
NST Nakhon Sawan 168.54 127 P PKPdf 15 23 14.0 0.0
BDT Bhumibol Dam 168.58 118 P PKPdf 15 23 13.5 -0.5
comp=Z,20nm,1.0s
XAN Xi'an 168.88 3 PKP PKPdf 15 23 13.9 +0.2
XAN APKP 15 23 22.6
CMAR Chiang Mai Arr 169.10 112 PKP PKPdf 15 23 14.1 -0.2
comp=Z,7.6nm,0.9s,baz=269,slow=1.7,SNR=26
CMAR PKPab PKPab 15 24 25.9 -0.1
comp=Z,7.2nm,0.9s,baz=254,slow=4.4,SNR=9.9
CHG Chiang Mai 169.25 110 ⇓P PKPdf 15 23 13.6 -0.8
comp=Z,24nm,1.3s
CHTO Chiang Mai 169.25 110 *e*PKPdf PKPdf 15 23 13.3 -1.1
CD2 Chengdu 170.48 32 PKP PKPdf 15 23 15.4 +0.6
CD2 APKP 15 23 25.0
CD2 XPKP 15 23 30.3
CD2 PKP2 PKPab 15 24 32.8 +1.2
CD2 PP PP
comp=Z,6μm,10.7s
CD2 LR LR
comp=Z,21μm,26.4s
WHN Wuhan 171.28 332 PKP PKPdf 15 23 15.3 +0.1
WHN PKP2 PKPab 15 24 33.1 -2.0
QZH Quanzhou 171.51 286 PKP PKPdf 15 23 14.1 -1.4
KMI Kunming 173.36 69 PKP PKPdf 15 23 16.1 -0.2
KMI pPKP pPKPdf 15 23 24.7 -2.0
KMI sPKP 15 23 27.7
GYA Guiyang 175.57 36 PKP PKPdf 15 23 17.1 +0.2
GYA APKP 15 23 27.9
GYA XPKP 15 23 31.5
GYA PKP2 PKPab 15 24 53.1 -1.3
GYA PP PP
comp=Z,4μm,13.2s

LDG ***15*** *15:05:52.8±0.3,23.11S×70.84W, h10km, Mb6.0/32, Ms6.5/10, Error ellipse: s-maj=25.4km s-min=11.7km az=162.0*
BGS ***15*** *15:05:54.4±2.1, 24.02S×69.78W, h26km, mb6.1, MS6.6*
BJI ***15*** *15:05:57.6, 23.61S×70.82W, h26km, mB6.7, Ms7.0, Msz7.0*
ISCJB ***15*** *15:05:58.9±0.2, 22.71S×103.00×70.14W±0.03, h33km, mb6.1/179, MS6.6/243, Error ellipse: s-maj=4.8km s-min=3.5km az=21.3*
NEIC ***15*** *15:05:58.4±0.2, 22.93S×70.24W, h26km, mb6.1/162, ME6.7, MS6.6/197, MW6.6, Error ellipse: s-maj=6.6km s-min=4.6km az=52.0 Broadband fault plane solution: P waves. NP1:φ=170.00000°, δ=75.00000°, λ=90.00000°. NP2:φ=350.00000°, δ=15.00000°, λ=90.00000°. Principal axes: T Plg60.0000°, Azm80.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm260.0000°; Moment Tensor Solution. s76 Moment tensor: Scale 10^19 Nm; Mrr=0.00; Mθθ=0.00; Mφφ=0.00; Mrθ=0.00; Mrφ=0.00; Mθφ=0.00; Best double couple: M=1.10000×10^19 NP1:φ=25.00000°, δ=29.00000°, λ=118.00000°. NP2:φ=173.00000°, δ=65.00000°, λ=75.00000°. Principal axes: T 1.0800, Plg67.0000°, Azm55.0000°; N 0.0900, Plg13.0000°, Azm179.0000°; P -1.1700, Plg18.0000°, Azm274.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] at Antofagasta; [IV] at Pozo Almonte; [III] at Alto Hospicio, Huara, Iquique, Maria Elena, Mejillones, Quillagua, Pica, Sierra Gorda and Tocopilla; [II] at Caldera, Copiapo, San Pedro de Atacama and Tierra Amarilla.
GCMT ***15*** *15:05:58.3±0.1, 22.98S×70.94W, h21km, MW6.8/112, Moment Tensor Solution. s112,c272; s109,c507; Duration: 6?2 Moment tensor: Scale 10^19Nm; Mrr=1.04±.01; Mθθ=0.02±.00; Mφφ=-1.06±.01; Mrθ=0.27±.01; Mrφ=0.08±.00; Mθφ=-1.71±.03; Best double couple: M=2.02600×10^19 NP1:φ=360.00000°, δ=16.00000°, λ=98.00000°. NP2:φ=172.00000°, δ=74.00000°, λ=88.00000°. Principal axes: T 2.0150, Plg61.0000°, Azm79.0000°; N 0.0250, Plg2.0000°, Azm172.0000°; P -2.0370, Plg29.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
GUC ***15*** *15:05:59.2±1.2, 23.00S×70.49W, h30km±5km, ML5.9*
MOS ***15*** *15:05:59.3±1.2, 22.73S×70.15W, h33km, mb6.2/75, MS6.6/53, Error ellipse: s-maj=9.2km s-min=5.8km az=90.0*
IDC ***15*** *15:06:05.8±1.4, 22.81S×70.03W, h81km±12km, mb5.1/22, mb1 5.2/26, mb1mx5.2/26, mbtmp5.1/26, MS6.6/27, Ms1 6.6/27, ms1mx6.5/33, Error ellipse: s-maj=13.7km s-min=11.6km az=75.0*
ISC 15 15:06:00.8±0.2, 22?4S±003×7008W±003, h35km, (h36km±1.3km:pP-P), n1146, σ0.80/856, mb6.1/178, MS6.6/243, 235C-217D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB06	**Plate Boundary**	**0.47**	**86**	*e*P		**Pn**	**15 06 15.0**	**+3.9**
PB06				*i* S		**Sn**	**15 06 27.6**	**+10**
CEN1	**Los Morros**	**0.66**	**190**	AML		AML	15 06 29.8	
	comp=E,402μm,1.0s							
PB04	**Plate Boundary**	**0.72**	**49**	*e*P		**Pn**	**15 06 12.0**	**-2.6**
PB04				*i* S		**Sn**	**15 06 22.6**	**-1.7**
LVC	**Limon Verde**	**1.08**	**84**	P		**Pn**	**15 06 25.5**	**+6.0**
	comp=E,9μm,0.3s,baz=254,slow=12,SNR=9.6							
LVC				S		**Sn**	**15 06 45.3**	**+12**
	comp=E,9μm,0.3s,baz=20,slow=22,SNR=6.0							
LVC	**Limon Verde**	**1.08**	**84**	*e*Pn		**Pn**	**15 06 25.2**	**+5.7**
LVC				*e*Sn		**Sn**	**15 06 42.5**	**+9.2**
LVC	**Limon Verde**	**1.08**	**84**	*e*P		**Pn**	**15 06 25.0**	**+5.5**
LVC				*i* S		**Sn**	**15 06 45.5**	**+12**
LVC				AML		AML	15 06 53.4	
	comp=N,169μm,0.7s							
SPCH	**San Pedro de A**	**1.74**	**96**	*e*P		**Pn**	**15 06 37.4**	**+8.8**
SPCH				*i* S		**Sn**	**15 07 07.1**	**+18**
SPCH				AML		AML	15 07 27.0	
	comp=N,505μm,0.8s							
PB01	**Plate Boundary**	**1.77**	**18**	*e*P		**Pn**	**15 06 35.3**	**+6.3**
PB01				*i* S		**Sn**	**15 07 03.0**	**+13**
PB01				AML		AML	15 07 17.7	
	comp=E,127μm,0.6s							
LCO	**Las Campanas**	**6.27**	**185**	P		**Pn**	**15 07 42.1**	**+11**
CFAA	**Coronel Fontan**	**8.98**	**170**	P		**Pn**	**15 08 10.7**	**+2.6**
	baz=5.2,slow=11,SNR=2.6							
CFAA				S		**Sn**	**15 09 58.1**	**+10**
	comp=E,7.4nm,0.3s,baz=330,slow=16,SNR=2.8							
CFAA				LR		LR	15 11 44.9	
	comp=E,106μm,21.9s,baz=332,slow=38							
SIV	**San Ignacio**	**10.83**	**53**	P		**Pn**	**15 08 38.2**	**+4.8**
	comp=E,30nm,0.3s,baz=236,slow=10,SNR=7.3							
NNA	**Nana**	**12.49**	**328**	P		**Pn**	**15 09 02.6**	**+6.5**
	comp=E,13nm,0.3s,baz=159,slow=17,SNR=3.5							
NNA				S		**Sn**	**15 11 07.9**	**-6.1**
	comp=E,9.2nm,0.3s,baz=207,slow=16,SNR=4.5							
NNA				LR		LR	15 13 21.5	
	comp=E,277μm,20.5s,baz=159,slow=35							
NNA	**Nana**	**12.49**	**328**	Pn		**Pn**	**15 08 54.5**	**-1.5**
NNA				P			15 09 02.6	
NNA				S		**Sn**	**15 11 07.9**	**-6.1**
NNA				*e*Sn		**Sn**	**15 11 09.1**	**-4.9**
NNA				LR		LR	15 13 21.5	
ATAH	**Atahualpa**	**17.58**	**332**	P		**Pn**	**15 10 07.1**	**+3.9**
	comp=E,0.5nm,0.3s,baz=168,slow=13,SNR=2.8							
PLCA	**Paso Flores**	**17.95**	**181**	P		**Pn**	**15 10 06.0**	**-1.5**
	comp=E,2.8nm,0.3s,baz=1.8,slow=12,SNR=4.8							
PLCA				LR		LR	15 16 43.1	
	comp=E,311μm,21.9s,baz=358,slow=36							
PLCA	**Paso Flores**	**17.95**	**181**	*e*Pn		**Pn**	**15 10 00.6**	**-6.9**
PLCA				P			15 10 06.0	
PLCA				LR		LR	15 16 43.1	
PLCA	**Paso Flores**	**17.95**	**181**	P		**Pn**	**15 10 06.0**	**-1.5**
PLCA				pmax		pmax		
	comp=Z,3.0nm,0.3s							
PLCA				MLR		MLR		
	comp=Z,311μm,21.9s							
SPB	**Sao Paulo**	**20.84**	**97**	*e*P		**P**	**15 10 40.9**	**+1.3**
BDFB	**Brasilia**	**21.98**	**75**	P		**P**	**15 10 53.0**	**+1.0**
	comp=Z,30nm,0.9s,baz=230,slow=17,SNR=3.0							
BDFB				LR		LR	15 21 08.6	
	comp=E,110μm,21.9s,MS6.2,baz=68,slow=41							
BDFB	**Brasilia**	**21.98**	**75**	*e*P		**P**	**15 10 51.8**	**-0.2**
	comp=Z,341nm,1.1s,mb5.7							
BDFB				LR		LR		
	comp=Z,171μm,22.0s,MS6.4							
OTAV	**Otavalo**	**24.25**	**339**	*e*P		**P**	**15 11 16.5**	**+1.8**
	comp=Z,1μm,1.5s,mb6.0							
OTAV				LR		LR		
	comp=Z,93μm,21.0s,MS6.2							
CAM4	**Nova Friburgo**	**25.40**	**94**	⇓P		**P**	**15 11 27.1**	**+1.9**
CAM4				*i*			15 11 29.1	
CAM4				*i*		pP	15 11 37.8	+2.7
CAM4				*i*			15 11 40.9	
CAM4				*i*			15 11 46.5	
ROSC	**El Rosal**	**27.74**	**351**	P		**P**	**15 11 51.9**	**+5.7**
	comp=Z,26nm,0.4s,baz=215,slow=2.9,SNR=3.7							
ROSC				LR		LR	15 23 34.5	
	comp=Z,122μm,21.4s,MS6.5,baz=188,slow=38							
ROSC	**El Rosal**	**27.74**	**351**	P		**P**	**15 11 50.0**	**+3.7**
PAYG	**Puerto Ayora**	**29.45**	**315**	*e*P		**P**	**15 11 57.3**	**-4.1**
	comp=Z,201nm,1.1s,mb5.8							
PAYG				LR		LR		
	comp=Z,208μm,20.0s,MS6.8							
EFI	**East Falkland**	**30.35**	**165**	P		**P**	**15 12 09.0**	**0.0**
	comp=Z,1μm,1.1s,mb6.6,SNR=7.4							
EFI	**East Falkland**	**30.35**	**165**	*e*P		**P**	**15 12 05.4**	**-3.6**
	comp=Z,236nm,0.9s,mb5.9							
EFI				LR		LR		
	comp=Z,241μm,21.0s,MS6.8							
EFI	**East Falkland**	**30.35**	**165**	*e*P		**P**	**15 12 09.6**	**+0.6**
USHA	**Ushuaia**	**32.07**	**178**	P		**P**	**15 12 23.9**	**-0.3**
	comp=Z,154nm,1.1s,mb5.7,baz=326,slow=5.6,SNR=3.6							
USHA				LR		LR	15 26 26.3	
	comp=Z,365μm,18.2s,MS7.1,baz=347,slow=38							
BCIP	**Isla Barro Col**	**33.12**	**342**	*e*P		**P**	**15 12 30.9**	**-2.9**
	comp=Z,294nm,1.2s,mb6.1							
BCIP				LR		LR		
	comp=Z,53μm,20.0s,MS6.2							
PCRV	**Puerto La Cruz**	**33.14**	**10**	P		**P**	**15 12 34.4**	**+0.5**
	comp=Z,18nm,0.5s,baz=183,slow=8.0,SNR=4.4							
PCRV				LR		LR	15 28 26.3	
	comp=Z,294μm,18.5s,MS7.0,baz=179,slow=40							
TRN	**Trinidad (W)**	**34.25**	**15**	*e*P		**P**	**15 12 42.1**	**-1.5**
TRN	**Trinidad (W)**	**34.25**	**15**	*e*		**P**	**15 12 42.1**	**-1.5**
GRGR	**Grenville**	**35.62**	**14**	*e*P		**P**	**15 12 52.1**	**-3.3**
	comp=Z,985nm,1.4s,mb6.5							
GRGR				LR		LR		
	comp=Z,92μm,21.0s,MS6.5							
RPN	**Rapa Nui**	**35.77**	**255**	P		**P**	**15 12 58.0**	**+1.3**
	comp=Z,337nm,1.1s,mb6.2,baz=84,slow=6.2,SNR=6.7							
RPN				LR		LR	15 23 23.1	
	comp=Z,266μm,22.0s,MS7.0,baz=98,slow=29							
RPN	**Rapa Nui**	**35.77**	**255**	*e*P		**P**	**15 12 52.9**	**-3.8**
	comp=Z,394nm,1.1s,mb6.2							
RPN				P			15 12 58.0	
RPN				LR		LR	15 23 23.1	
RCBR	**Riachuelo**	**37.00**	**68**	*e*P		**P**	**15 13 09.8**	**+2.4**
	comp=Z,702nm,0.9s,mb6.5							
RCBR				LR		LR		
	comp=Z,108μm,20.0s,MS6.6							
BBGH	**Gun Hill**	**37.12**	**17**	PFAKE			15 13 20.0	+12
BBGH				LR		LR		
	comp=Z,317μm,21.0s,MS7.1							
FDF	**Fort de France**	**38.25**	**14**	*e*P		**P**	**15 13 17.6**	**-0.2**
TGUH	**Tegucigalpa,Un**	**40.26**	**334**	*e*P		**P**	**15 13 37.0**	**+2.5**
TGUH				LR		LR		
	comp=Z,43μm,19.0s,MS6.3							
SJG	**San Juan**	**40.78**	**6**	*e*P		**P**	**15 13 36.6**	**-2.2**
	comp=Z,501nm,0.8s,mb6.2							
SJG				LR		LR		
	comp=Z,130μm,21.0s,MS6.8							
PCJ	**Portland Cotta**	**40.82**	**350**	*e*S		**P**	**15 13 35.3**	**-3.8**
MTP	**Monte Pirata**	**40.83**	**7**	*e*P		**P**	**15 13 37.5**	**-1.7**
ANWB	**Willy Bob**	**40.97**	**12**	*e*P		**P**	**15 13 36.6**	**-3.7**
HOJ	**Hope**	**41.02**	**350**	*e*S		**P**	**15 13 41.7**	**+1.0**
AGPR	**Aguadilla, PR**	**41.06**	**4**	P		**P**	**15 13 39.2**	**-1.9**
STH	**Stony Hill**	**41.09**	**350**	*e*S		**P**	**15 13 42.2**	**+0.9**
CVJ	**Coleyville**	**41.36**	**349**	*e*S		**P**	**15 13 43.6**	**0.0**
SDDR	**Presa de Saban**	**41.48**	**358**	P		**P**	**15 13 46.1**	**+1.6**
	comp=Z,129nm,1.4s							
SDDR				LR		LR		
	comp=Z,92μm,20.0s,MS6.7							
PMSA	**Palmer Station**	**42.21**	**176**	P		**P**	**15 13 50.3**	**+0.3**
	comp=Z,102nm,1.0s,baz=8.3,slow=11,SNR=5.8							
PMSA				LR		LR	15 32 15.3	
	comp=Z,108μm,18.1s,MS6.8,baz=345,slow=37							
PMSA	**Palmer Station**	**42.21**	**176**	*e*P		**P**	**15 13 47.7**	**-2.3**
	comp=Z,454nm,1.2s,mb6.0							
PMSA				LR		LR		
	comp=Z,110μm,19.0s,MS6.8							
CMIG	**Matias Romero**	**46.43**	**326**	P		**P**	**15 14 25.9**	**+1.6**
	comp=Z,34nm,0.8s,baz=125,slow=8.4,SNR=10							
CMIG				LR		LR	15 31 12.0	
	comp=Z,23μm,21.5s,MS6.1,baz=134,slow=32							
VHO	**Vista Hermosa**	**47.39**	**324**	*i* P		**P**	**15 14 34.2**	**+2.4**
VHO				*i* S		**S**	**15 21 24.8**	**+1.2**
PNIG	**Pinotepa**	**47.60**	**322**	*i* P		**P**	**15 14 36.8**	**+3.3**
PNIG				*i* S		**S**	**15 21 33.4**	**+6.6**
CAIG	**El Cayaco**	**49.35**	**321**	*i* P		**P**	**15 14 50.7**	**+3.7**
CAIG				*i* S		**S**	**15 21 56.5**	**+5.1**
PPM	**Popocatepetl**	**50.04**	**324**	*e*P		**P**	**15 14 55.5**	**+3.3**
PPM				*i* P			15 14 58.4	
PPM				*i* S		**S**	**15 21 57.0**	**-4.0**
YAIG	**Yautepec**	**50.12**	**323**	*i* S		**P**	**15 14 52.5**	**-0.3**
PTVM	**Pico Tres Padr**	**50.73**	**324**	*i* S		**P**	**15 15 04.7**	**+7.2**
TRIS	**Tristan da Cun**	**51.35**	**120**	*e*P		**P**	**15 15 02.4**	**+0.5**
	comp=Z,618nm,0.9s,mb6.5							
TRIS				LR		LR		
	comp=Z,31μm,19.0s,MS6.4							
DWPF	**Disney**	**51.73**	**347**	*e*P		**P**	**15 15 03.9**	**-0.8**
	comp=Z,210nm,1.1s,mb6.0							
DWPF				LR		LR		
	comp=Z,45μm,20.0s,MS6.5							
SFJM	**Santa Fe**	**53.67**	**321**	*e*P		**P**	**15 15 14.8**	**-4.4**
CJM	**Chamela**	**54.11**	**318**	*i* S		**P**	**15 15 25.0**	**+2.5**
PTCN	**Pitcairn Islan**	**54.53**	**255**	*e*P		**P**	**15 15 24.7**	**-0.9**
PTCN				LR		LR		
	comp=Z,88nm,19.0s,MS6.8							
BBSR	**BB Station**	**55.04**	**6**	*e*P		**P**	**15 15 28.7**	**-0.3**
	comp=Z,465nm,1.3s,mb6.3							
BBSR				LR		LR		
	comp=Z,21μm,22.0s,MS6.2							
ZAIG	**Zacatecas**	**55.19**	**323**	*i* S		**P**	**15 15 32.3**	**+2.1**
ASCN	**Ascension**	**55.40**	**84**	*e*P		**P**	**15 15 32.8**	**+0.8**
	comp=Z,152nm,1.0s,mb6.0							
ASCN				LR		LR		
	comp=Z,58nm,20.0s,MS6.7							
BRAL	**Brewton**	**55.87**	**342**	*e*P		**P**	**15 15 35.5**	**+0.5**
	comp=Z,925nm,1.2s,mb6.7							
BRAL				LR		LR		
	comp=Z,42μm,21.0s,MS6.5							
NHSC	**New Hope**	**56.36**	**350**	*e*P		**P**	**15 15 39.4**	**+1.0**
	comp=Z,840nm,1.2s,mb6.7							
NHSC				LR		LR		
	comp=Z,40μm,22.0s,MS6.5							
COW	**Cow Castle Cre**	**56.72**	**349**	*e*P		**P**	**15 15 39.4**	**-1.6**
KVTX	**Kingsville**	**56.76**	**330**	*e*P		**P**	**15 15 42.1**	**+0.8**
	comp=Z,392nm,1.1s,mb6.3							
KVTX				LR		LR		
	comp=Z,36μm,19.0s,MS6.5							
GOGA	**Godfrey**	**57.28**	**347**	*e*P		**P**	**15 15 44.1**	**-0.8**
	comp=Z,178nm,1.3s,mb5.9							
GOGA				LR		LR		
	comp=Z,37μm,21.0s,MS6.5							
GOGA	**Godfrey**	**57.28**	**347**	*e*P		**P**	**15 15 44.1**	**-0.8**
GOGA				pmax		pmax		
	comp=Z,178nm,1.3s,mb5.9							
GOGA				MLR		MLR		
	comp=Z,37μm,21.0s,MS6.5							
JSC	**Jenkinsville**	**57.69**	**349**	*e*P		**P**	**15 15 48.0**	**+0.1**
JSC	**Jenkinsville**	**57.69**	**349**	*e*P		**P**	**15 15 48.5**	**+0.7**
LRAL	**Lakeview Retre**	**57.76**	**343**	*e*P		**P**	**15 15 47.3**	**-1.1**
	comp=Z,248nm,1.2s,mb6.1							
LRAL				LR		LR		
	comp=Z,31μm,19.0s,MS6.4							
HKT	**Hockley**	**57.94**	**334**	*e*P		**P**	**15 15 48.8**	**-0.9**
	comp=Z,533nm,1.7s,mb6.3							
HKT				LR		LR		
	comp=Z,21μm,20.0s,MS6.2							
HKT	**Hockley**	**57.94**	**334**	*e*P		**P**	**15 15 52.4**	**+2.7**
VBMS	**Vicksburg**	**58.04**	**340**	*e*P		**P**	**15 15 49.8**	**-0.5**
	comp=Z,892nm,1.6s,mb6.5							
VBMS				LR		LR		
	comp=Z,25μm,21.0s,MS6.3							
CNNC	**Cliffs of the**	**58.13**	**352**	*e*P		**P**	**15 15 51.8**	**+0.9**
	comp=Z,513nm,1.2s,mb6.4							
CNNC				LR		LR		
	comp=Z,32μm,20.0s,MS6.4							
NATX	**Nacogdoches**	**59.08**	**336**	*e*P		**P**	**15 15 58.1**	**+0.5**
	comp=Z,588nm,1.5s,mb6.4							
NATX				LR		LR		
	comp=Z,18μm,21.0s,MS6.2							
VNA3	**Neumayer Olymp**	**59.26**	**161**	*e*P		**P**	**15 15 56.4**	**-2.0**
VNA3				*e*			15 16 00.3	
VNA3				*e*		pP	15 16 06.5	-2.5
VNA3				*e*			15 16 14.4	
VNA3				*e*			15 16 57.8	
RKT	**Rikitea**	**59.29**	**256**	*e*S		**S**	**15 24 04.1**	**-1.5**
	comp=Z,202μm,27.0s							
RKT				*e*LQ			15 30 48.5	
	comp=Z,48μm,28.2s							
RKT				*e*LR		LR	15 33 21.7	

comp=Z,373µm,26.5s,baz=110
VNA1 Neumayer--Stat 59.49 160 *e*P P **15 15 58.5 -1.5**
VNA1 *e* 15 16 02.4
VNA1 *e* pP 15 16 08.4 -2.2
VNA1 *e* 15 16 16.3
VNA1 *e* 15 16 59.2
TKL Tuckaleechee C 59.51 347 LR LR 15 45 31.7
comp=Z,26µm,18.8s,MS6.4,baz=178,slow=40
OXF Oxford 59.83 342 *e*P P **15 16 00.6 -2.1**
comp=Z,731nm,1.2s,mb6.6
OXF LR LR
comp=Z,27µm,19.0s,MS6.4
OXF Oxford 59.83 342 *e*P P **15 16 01.7 -1.0**
VNA2 Neumayer--Watz 59.85 160 *e*P P **15 16 00.7 -1.8**
VNA2 *e* 15 16 04.5
VNA2 *e* pP 15 16 10.9 -2.2
VNA2 *e* 15 16 18.6
VNA2 *e* 15 17 01.4
JCT Junction City 60.12 330 *e*P P **15 16 04.0 -0.8**
comp=Z,326nm,1.0s,mb6.3
JCT LR LR
comp=Z,15µm,20.0s,MS6.1
JCT Junction City 60.12 330 P P **15 16 05.0 +0.2**
JCT pmax pmax
comp=Z,330nm,1.0s,mb6.3
TZTN Tazewell 60.32 348 *e*P P **15 16 05.6 -0.4**
TZTN LR LR
comp=Z,37µm,19.0s,MS6.5
URVA University of 60.40 353 *e*P P **15 16 07.1 +0.6**
BLA Blacksburg 60.42 351 *e*P P **15 16 05.9 -0.8**
BLA LR LR
comp=Z,32µm,21.0s,MS6.5
BLA Blacksburg 60.42 351 *e*P P **15 16 08.9 +2.2**
ELN Prospectdale 60.49 350 *e*P P **15 16 06.1 -1.0**
SHEL Horse Pasture 60.68 96 *e*P P **15 16 10.7 +1.7**
comp=Z,267nm,0.9s,mb6.4
SHEL LR LR
comp=Z,40µm,19.0s,MS6.6
LPIG La Paz 60.79 317 *i* P P **15 16 08.8 -0.7**
LPIG *i* S S **15 24 35.3 +11**
WVT Waverly 60.91 344 *e*P P **15 16 07.7 -2.4**
WVT LR LR
comp=Z,39µm,22.0s,MS6.5
WVT Waverly 60.91 344 *e*P P **15 16 09.3 -0.7**
UALR University of 60.98 339 *e*P P **15 16 09.3 -1.2**
comp=Z,281nm,1.1s,mb6.3
CBN Corbin 61.01 353 *e*P P **15 16 10.6 0.0**
comp=Z,517nm,1.3s,mb6.5
CBN LR LR
comp=Z,61µm,21.0s,MS6.7
TXAR Lajitas Array 61.04 326 P P **15 16 11.0 -0.1**
comp=Z,21nm,0.8s,baz=144,slow=8.5,SNR=8.1
TXAR LR LR 15 39 07.9
comp=Z,54µm,20.4s,MS6.7,baz=250,slow=32
TXAR PKP2bc 15 45 37.0
comp=Z,3.6nm,1.1s,baz=48,slow=1.9,SNR=4.1
TXAR Lajitas Array 61.04 326 P P **15 16 11.0 -0.1**
TXAR LR LR 15 39 07.9
TXAR ⇑*e* 15 45 37.0
HALT Halls 61.11 342 P P **15 16 12.5 +1.1**
HBAR Harrisburg 61.17 341 *e*P P **15 16 11.5 -0.3**
MIAR Mount Ida 61.19 338 *e*P P **15 16 10.7 -1.3**
MIAR LR LR
comp=Z,26µm,19.0s,MS6.4
GNAR Gosnell 61.36 342 *e*P P **15 16 12.8 -0.3**
comp=Z,11µm,1.2s
UTMT University of 61.38 343 *e*P P **15 16 15.5 +2.2**
comp=Z,1µm,1.2s,mb6.8
GLAT Glass 61.43 342 *e*P P **15 16 12.5 -1.1**
SNAA Sanae 61.47 161 *e*P P **15 16 09.9 -3.6**
SNAA *e* 15 16 13.6
SNAA *e* pP 15 16 19.9 -4.3
SNAA Sanae 61.47 161 *e*P P **15 16 09.8 -3.7**
SNAA Sanae 61.47 161⇑*e*P P **15 16 10.4 -3.1**
SNAA *i* 15 16 15.9
SNAA pmax pmax
comp=Z,338nm,1.3s
PVMO Portageville 61.69 342 *e*P P **15 16 14.4 -0.8**
comp=Z,2µm,1.1s,mb7.2
PARMO Parma 61.93 342 *e*P P **15 16 16.0 -0.9**
SDMD Soldier's Deli 62.15 354 *e*P P **15 16 18.8 +0.5**
comp=Z,242nm,1.2s,mb6.2
WCI Wyandotte Cave 62.53 346 *e*P P **15 16 18.6 -2.3**
WCI LR LR
comp=Z,39µm,20.0s,MS6.6
WCI Wyandotte Cave 62.53 346 *e*P P **15 16 20.3 -0.6**
USIN University of 62.60 344 *e*P P **15 16 20.4 -1.0**
comp=Z,334nm,1.0s,mb6.4
MVL Millersville 62.69 355 *e*P P **15 16 21.3 -0.6**
comp=Z,219nm,1.2s,mb6.2
MCWV Mont Chateau 62.74 352 *e*P P **15 16 22.3 +0.1**
comp=Z,299nm,1.3s,mb6.3
MCWV LR LR
comp=Z,68µm,20.0s,MS6.8
SIUC Southern Illin 62.77 343 *e*P P **15 16 20.6 -1.9**
comp=Z,885nm,1.2s,mb6.8
BRNJ Basking Ridge 63.23 356 *e*P P **15 16 27.1 +1.5**
comp=Z,257nm,1.2s,mb6.2
CPNY Central Park 63.30 357 *e*P P **15 16 26.8 +0.8**
comp=Z,179nm,1.3s,mb6.0
WMOK Wichita Mounta 63.33 334 PFAKE 15 16 40.0 +14
WMOK LR LR
comp=Z,11µm,20.0s,MS6.0
OLIL Olney 63.44 344 *e*P P **15 16 25.7 -1.3**
comp=Z,405nm,1.3s,mb6.4
SSPA Standing Stone 63.47 353 PFAKE 15 16 40.0 +13
SSPA LR LR
comp=Z,53µm,20.0s,MS6.7
BLO Bloomington 63.48 346 *e*P P **15 16 26.4 -0.8**
comp=Z,181nm,0.9s,mb6.2
BLO Bloomington 63.48 346 *e*P P **15 16 29.1 +1.9**
BLO pmax pmax
comp=Z,180nm,0.9s,mb6.2
PAL Palisades 63.52 357 *e*P P **15 16 31.2 +3.8**
comp=Z,131nm,1.2s,mb5.8
PAL Palisades 63.52 357 *e*P P **15 16 31.2 +3.8**
PAL pmax pmax
comp=Z,131nm,1.2s,mb5.8
CCM Cathedral Cave 63.66 341 PFAKE 15 16 40.0 +12
CCM LR LR
comp=Z,23µm,20.0s,MS6.3
ACSO Alum Creek Sta 63.79 349 *e*P P **15 16 28.5 -0.7**
ACSO LR LR
comp=Z,41µm,22.0s,MS6.6
SLM Saint Louis 63.91 343 *e*P P **15 16 29.5 -0.6**
comp=Z,226nm,1.1s,mb6.1
SLM Saint Louis 63.91 343 *e*P P **15 16 32.1 +2.0**
SLM pmax pmax
comp=Z,230nm,1.1s,mb6.1
BBTS Babate 64.26 60 P P **15 16 33.2 +0.3**
comp=Z,74nm,1.0s,mb5.7,baz=266,slow=4.9,SNR=4.4
BRYW Bryant College 64.34 359 *e*P P **15 16 33.3 +0.5**
AMTX Amarillo 64.68 332 *e*P P **15 16 36.2 +1.0**
AMTX LR LR
comp=Z,16µm,19.0s,MS6.2
QUA2 Belchertown 64.72 358 P P **15 16 36.4 +1.1**
comp=Z,301nm,1.4s,mb6.1
ALLY Alegheny Colle 64.74 352 *e*P P **15 16 35.4 0.0**
comp=Z,268nm,1.2s,mb6.2
WES Weston 64.80 359 P P **15 16 35.5 -0.4**
comp=Z,213nm,1.3s,mb6.0
WES LR LR
comp=Z,21µm,20.0s,MS6.3
WES Weston 64.80 359 P P **15 16 35.5 -0.3**
WES pmax pmax
comp=Z,213nm,1.3s,mb6.0
WES MLR MLR
comp=Z,21µm,20.0s,MS6.3
BINY Binghamton 64.84 355 *e*P P **15 16 37.1 +1.0**
BINY LR LR
comp=Z,43µm,19.0s,MS6.7
ERPA Erie 65.18 352 *e*P P **15 16 38.3 +0.1**
comp=Z,297nm,1.2s,mb6.2
ERPA LR LR
comp=Z,51µm,20.0s,MS6.7
HDIL Hopedale 65.46 344 *e*P P **15 16 38.7 -1.5**
comp=Z,309nm,1.0s,mb6.3
HDIL LR LR
comp=Z,33µm,19.0s,MS6.5
319A Douglas 65.62 324 ⇑P P **15 16 41.1 -0.2**
baz=66,SNR=14
319A ⇓S S 15 25 25.4 +0.8
baz=66
ACCN Adirondack Com 65.88 357 *e*P P **15 16 43.7 +1.0**
comp=Z,181nm,1.2s,mb6.0
MAIT Maitri 66.04 159 *e*P P **15 16 40.3 -3.2**

318A Bisbee 66.06 323 ⇑P P **15 16 44.0 -0.3**
baz=66
318A ⇓S S 15 25 30.0 0.0
baz=66
NVL N'lazarevskaya 66.07 159*c i*P P **15 16 43.2 -0.6**
NVL *e*S S 15 25 33.3 +4.2
NVL pmax pmax
comp=Z,506nm,1.9s,mb6.2
219A White Tail Can 66.09 324 ⇑P P **15 16 44.3 -0.1**
baz=66
219A ⇓S S 15 25 30.9 +0.5
baz=66
HNH Hanover 66.14 358 *e*P P **15 16 44.5 0.0**
comp=Z,556nm,1.3s,mb6.4
KSU1 Kansas State U 66.34 338 *e*P P **15 16 45.1 -0.8**
comp=Z,130nm,0.9s,mb6.0
KSU1 LR LR
comp=Z,38µm,19.0s,MS6.6
MDV Middlebury 66.47 358 *e*P P **15 16 47.5 +0.9**
Y22D IRIS PASSCAL I 66.49 327 ⇓P P **15 16 47.3 +0.4**
baz=67
Y22D ⇑S S 15 25 36.0 +0.9
baz=67
218A Dragoon 66.50 323 ⇓P P **15 16 46.8 -0.2**
baz=67,SNR=13
218A ⇓S S 15 25 34.1 -1.2
baz=67
LPM Los Pinos Moun 66.53 327 *e*P P **15 16 47.7 +0.6**
LENM Lemitar 66.59 327 *e*P P **15 16 48.3 +0.8**
LBNH Lisbon 66.67 359 *e*P P **15 16 48.2 +0.4**
comp=Z,172nm,1.2s,mb6.0
LBNH LR LR
comp=Z,35µm,21.0s,MS6.5
LBNH Lisbon 66.67 359 *e*P P **15 16 49.2 +1.4**
LBNH pmax pmax
comp=Z,170nm,1.2s,mb6.0
119A Ashpeak Ranch, 66.70 325 ⇑P P **15 16 48.1 -0.2**
baz=67
119A ⇓S S 15 25 40.2 +2.5
baz=67
217A Green Valley 66.77 323 ⇓P P **15 16 48.5 -0.3**
baz=67
217A ⇑S S 15 25 41.2 +2.6
baz=67
LAZ Ladron 66.86 327 *e*P P **15 16 50.5 +1.2**
ANMO Albuquerque 66.96 328 LR LR 15 43 04.5
comp=Z,52µm,19.6s,MS6.8,baz=150,slow=33
ANMO Albuquerque 66.96 328 *e*P P **15 16 50.4 +0.5**
comp=Z,259nm,1.2s,mb6.1
ANMO LR LR
comp=Z,52µm,20.0s,MS6.8
ANMO Albuquerque 66.96 328 *e*P P **15 16 50.4 +0.5**
ANMO pmax pmax
comp=Z,259nm,1.2s
ANMO MLR MLR
comp=Z,52µm,20.0s
118A Homack Ranch, 66.96 324 ⇑P P **15 16 49.7 -0.2**
baz=67
118A ⇓S S 15 25 41.9 +1.0
baz=67
Z19A T-Link Ranch, 67.08 325 ⇑P P **15 16 50.6 -0.2**
baz=67
Z19A ⇓S S 15 25 44.5 +2.2
baz=67
LONY Lake Ozonia 67.16 357 *e*P P **15 16 50.9 0.0**
comp=Z,234nm,1.3s,mb6.0
LONY LR LR
comp=Z,45µm,20.0s,MS6.7
TUC Tucson 67.16 323 *e*P P **15 16 51.5 +0.2**
comp=Z,181nm,1.3s,mb5.9
TUC LR LR
comp=Z,33µm,19.0s,MS6.6
TUC Tucson 67.16 323 *e*P P **15 16 51.5 +0.3**
TUC pmax pmax
comp=Z,181nm,1.3s,mb5.9
TUC MLR MLR
comp=Z,33µm,19.0s,MS6.6
CBKS Cedar Bluff 67.24 335 *e*P P **15 16 51.7 +0.2**
comp=Z,487nm,1.1s,mb6.5
CBKS LR LR
comp=Z,21µm,20.0s,MS6.4
CBKS Cedar Bluff 67.24 335 *e*P P **15 16 52.1 +0.5**
CBKS pmax pmax
comp=Z,490nm,1.1s,mb6.5
216A Three Points, 67.30 322 ⇑P P **15 16 51.5 -0.7**
baz=68,SNR=12
216A ⇓S S 15 25 47.6 +2.6
baz=68
FRNY Flat Rock 67.32 357 *e*P P **15 16 52.5 +0.6**
comp=Z,290nm,1.3s,mb6.2
117A Oracle 67.33 323 ⇑P P **15 16 52.2 -0.1**
baz=68
117A ⇓S S 15 25 47.8 +2.5
baz=68
Z18A Geronimo 67.34 324 ⇓P P **15 16 52.3 -0.1**
baz=68
Z18A ⇓S S 15 25 49.1 +3.7
baz=68
QSPA South Pole Qui 67.46 180 P P **15 16 51.2 -1.3**
comp=Z,122nm,0.9s,mb5.9,baz=134,slow=4.0
QSPA South Pole Qui 67.46 180 *e*P P **15 16 49.4 -3.1**
comp=Z,281nm,1.0s,mb6.2
QSPA LR LR
comp=Z,52µm,19.0s,MS6.8
Y19A Nutrioso 67.59 325 ⇑P P **15 16 53.8 -0.2**
baz=68,SNR=16
Y19A ⇓S S 15 25 52.0 +3.5
baz=68
Z17A San Carlos Hig 67.73 324 ⇓P P **15 16 54.3 -0.6**
baz=68
Z17A ⇑S S 15 25 51.6 +1.5
baz=68
SCIA State Center 67.79 342 *e*P P **15 16 54.6 -0.4**
comp=Z,360nm,1.0s,mb6.4
SCIA LR LR
comp=Z,26µm,20.0s,MS6.5
116A Eloy 67.86 323 ⇑P P **15 16 55.2 -0.4**
baz=68
116A ⇓S S 15 25 53.6 +1.9
baz=68
Y18A Canyon Day Jun 67.87 325 ⇓P P **15 16 55.8 +0.2**
baz=68
Y18A ⇑S S 15 25 53.7 +2.0
baz=68
JFWS Jewell Farm 67.92 344 *e*P P **15 16 54.3 -1.4**
comp=Z,157nm,0.8s,mb6.1
JFWS LR LR
comp=Z,36µm,22.0s,MS6.5
JFWS Jewell Farm 67.92 344 *e*P P **15 16 55.2 -0.6**
X19A St. Johns 67.98 326 ⇑P P **15 16 55.9 -0.4**
baz=68
X19A ⇓S S 15 25 57.4 +4.4
baz=68
214A Organ Pipe Nat 68.04 322 ⇑P P **15 16 56.6 -0.2**
baz=68,SNR=13
214A ⇑S S 15 25 57.7 +3.8
baz=68
Y17A Roosevelt 68.24 324 ⇑P P **15 16 57.7 -0.3**
baz=68,SNR=14
Y17A ⇓S S 15 26 00.2 +4.1
baz=68
115A Sonoran Desert 68.26 322 ⇑P P **15 16 57.7 -0.4**
baz=68
Z16A Peralta Trail, 68.29 323 ⇑P P **15 16 57.8 -0.5**
baz=69,SNR=11
X18A Snowflake 68.40 325 ⇑P P **15 16 59.0 0.0**
baz=69
GLMI Grayling 68.53 349 P P **15 16 59.0 -0.5**
comp=Z,320nm,1.1s,mb6.2
GLMI LR LR
comp=Z,40µm,19.0s,MS6.7
W19A Sanders 68.56 326 ⇓P P **15 16 59.8 -0.1**
baz=69
Z15A Gila River Ind 68.66 323 ⇑P P **15 17 00.5 -0.2**
baz=69
X17A Forest Lakes 68.71 325 ⇓P P **15 17 01.1 +0.2**
baz=69
Y16A Circle Bar Ran 68.72 324 ⇓P P **15 17 00.9 -0.1**
baz=69,SNR=5.3
W18A Petrified Fore 68.74 326 ⇓P P **15 17 01.4 +0.3**
baz=69,SNR=16
SDCO Great Sand Dun 68.77 330 PFAKE 15 17 10.0 +8.8
SDCO LR LR
comp=Z,14µm,19.0s,MS6.2
V19A Window Rock 68.85 327 ⇓P P **15 17 01.4 -0.3**
baz=69,SNR=12
X16A Lo Mia Camp, P 69.11 324 ⇓P P **15 17 03.7 +0.3**
baz=69,SNR=14

Z14A Wintersburg 69.15 322 ⇓P P **15 17 03.1 -0.6**
baz=69
113A Mohawk Valley, 69.18 321 ⇑P P **15 17 03.4 -0.5**
baz=70,SNR=14
W17A Winslow 69.22 325 ⇓P P **15 17 04.2 +0.1**
baz=70
Y15A Casa Rosa Ranc 69.25 323 ⇓P P **15 17 04.4 +0.1**
baz=70
V18A Ganado 69.30 326 ⇓P P **15 17 04.9 +0.4**
baz=70
112A Yuma 69.48 321 ⇑P P **15 17 05.1 -0.6**
baz=70
X15A Humboldt 69.59 324 ⇓P P **15 17 06.5 +0.1**
baz=70,SNR=14
Y14A Wickenburg 69.61 323 ⇑P P **15 17 06.3 -0.2**
baz=70,SNR=16
W16A Flagstaff 69.67 325 ⇓P P **15 17 07.3 +0.4**
baz=70,SNR=18
T19A Beclabito 69.71 327 ⇑P P **15 17 06.9 -0.2**
baz=70,SNR=9.9
MVCO Mesa Verde 69.75 328 PFAKE 15 17 20.0 +13
MVCO LR LR
comp=Z,45µm,20.0s,MS6.7
MVCO Mesa Verde 69.75 328 ⇑P P **15 17 06.9 -0.4**
baz=70,SNR=9.5
LIC Lamto 69.77 74⇑*i*P P **15 17 08.7 +0.7**
comp=Z,111nm,0.8s,mb5.5
LIC *e*MLR MLR
comp=Z,72µm,23.0s,MS6.6
LIC Lamto 69.77 74⇑*i*P P **15 17 08.7 +0.7**
comp=Z,56nm,0.8s,mb5.5
LIC LR LR
comp=Z,36µm,23.0s,MS6.6
U18A Rough Rock, Ch 69.82 327 ⇓P P **15 17 08.0 +0.3**
baz=70
WUAZ Wupatki 69.91 325 PFAKE 15 17 20.0 +12
WUAZ LR LR
comp=Z,52µm,21.0s,MS6.8
WUAZ Wupatki 69.91 325 ⇓P P **15 17 08.6 +0.3**
baz=70,SNR=10
X14A Yava 69.94 323 ⇑P P **15 17 08.8 +0.2**
baz=70,SNR=15
OGNE Ogallala 69.97 335 *e*P P **15 17 09.2 +0.7**
comp=Z,253nm,1.0s,mb6.1
OGNE LR LR
comp=Z,26µm,19.0s,MS6.5
Y13A Salome 69.98 322 ⇑P P **15 17 08.5 -0.3**
baz=70,SNR=8.1
GLA Glamis 70.00 321 *e*P P **15 17 11.1 +2.1**
comp=Z,270nm,1.4s,mb6.0
GLA LR LR
comp=Z,23µm,19.0s,MS6.4
GLA Glamis 70.00 321 *e*P P **15 17 11.1 +2.2**
GLA pmax pmax
comp=Z,270nm,1.4s,mb6.0
GLA MLR MLR
comp=Z,23µm,19.0s,MS6.4
GLA Glamis 70.00 321 ⇑P P **15 17 09.2 +0.2**
baz=70
DBIC Dimbokro 70.12 74 P P **15 17 10.3 +0.2**
comp=Z,89nm,0.9s,mb5.7,baz=217,slow=5.7,SNR=9.8
DBIC PKPPKP 15 45 17.9
comp=Z,7.3nm,1.0s,baz=104,slow=6.3,SNR=3.7
DBIC LR LR 15 46 01.5
comp=Z,48µm,21.6s,MS6.7,baz=203,slow=34
DBIC Dimbokro 70.12 74 *e*P P **15 17 09.8 -0.3**
comp=Z,172nm,0.9s,mb6.0
DBIC LR LR
comp=Z,55µm,22.0s,MS6.8
W15A Williams 70.13 324 ⇓P P **15 17 10.3 +0.6**
baz=70,SNR=21
U16A Tuba City 70.25 326 ⇑P P **15 17 10.9 +0.5**
baz=71
Y12C Blythe 70.33 322 ⇓P P **15 17 11.0 0.0**
baz=71
U17A Shonto 70.36 326 ⇓P P **15 17 11.2 +0.1**
baz=71,SNR=15
T18A Mexican Hat 70.38 327 ⇓P P **15 17 11.6 +0.4**
baz=71,SNR=13
DVTC Desert V Tower 70.47 320 ⇓P P **15 17 11.9 +0.1**
baz=71,SNR=12
SWSC Sam W. Stewart 70.49 320 ⇓P P **15 17 11.6 -0.3**
baz=71
S19A Harvey Farm, M 70.49 328 ⇑P P **15 17 12.0 +0.2**
baz=71,SNR=12
ECSD EROS,Sioux Fal 70.49 340 *e*P P **15 17 10.6 -1.0**
comp=Z,394nm,1.4s,mb6.2
ECSD LR LR
comp=Z,25µm,22.0s,MS6.4
ISCO Idaho Springs 70.50 332 PFAKE 15 17 20.0 +8.1
ISCO LR LR
comp=Z,18µm,19.0s,MS6.3
PDMCI Parker Dam,Lak 70.51 322 ⇑P P **15 17 11.9 -0.2**
baz=71
PV01 Paradox Valley 70.52 329 *e*P P **15 17 12.9 +0.9**
X13A Yucca 70.55 323 ⇓P P **15 17 12.2 -0.1**
baz=71,SNR=16
V15A Kaibab Nationa 70.56 325 ⇑P P **15 17 12.7 +0.4**
baz=71,SNR=10
W14A Seligman 70.60 324 ⇓P P **15 17 12.7 +0.1**
baz=71
T17A Navajo Res., N 70.74 326 ⇑P P **15 17 14.1 +0.7**
baz=71,SNR=13
BC3 Big Chuckw Mtn 70.80 321 ⇓P P **15 17 13.4 -0.4**
baz=71,SNR=12
MONP Monument Peak 70.82 320 ⇓P P **15 17 13.9 -0.1**
baz=71,SNR=7.9
S18A Hurst Farm, BI 70.87 327 ⇓P P **15 17 14.8 +0.7**
baz=71
V14A Boquillas Ranc 70.92 324 ⇑P P **15 17 15.1 +0.6**
baz=71,SNR=20
PV10 Paradox Valley 70.94 328 P P **15 17 13.7 -0.9**
W13A Hualapai Mount 70.95 323 ⇑P P **15 17 15.2 +0.5**
baz=71
R19A Curley Farm, L 70.98 328 ⇓P P **15 17 14.9 +0.1**
baz=71,SNR=9.5
IRM Iron Mountain 70.98 322 ⇓P P **15 17 14.9 0.0**
baz=71,SNR=16
U15A North Rim 71.08 325 ⇓P P **15 17 16.3 +0.8**
baz=71,SNR=12
T16A Glen Canyon Da 71.09 326 ⇑P P **15 17 16.0 +0.5**
baz=71
NEE2 Needles Airpor 71.12 322 ⇓P P **15 17 15.8 +0.1**
baz=71
S17A Black Ridge (B 71.23 327 ⇑P P **15 17 16.6 +0.3**
baz=72
PFO Pinyon Flat Ob 71.35 320 P P **15 17 20.0 +2.9**
comp=Z,481nm,1.2s,mb6.3,SNR=6.0
PFO Pinyon Flat Ob 71.35 320 *e*P P **15 17 17.6 +0.5**
comp=Z,126nm,1.2s,mb5.7
PFO LR LR
comp=Z,50µm,21.0s,MS6.8
PFO Pinyon Flat Ob 71.35 320 *e*P P **15 17 17.6 +0.5**
PFO pmax pmax
comp=Z,126nm,1.2s,mb5.7
PFO MLR MLR
comp=Z,50µm,21.0s,MS6.8
PFO Pinyon Flat Ob 71.35 320 ⇑P P **15 17 17.4 +0.2**
baz=72,SNR=16
BELC Belle Mtn. 71.36 321 ⇓P P **15 17 17.2 0.0**
baz=72
R18A Canyonlands Na 71.36 328 ⇑P P **15 17 17.2 +0.1**
baz=72
Q19A Hogan Spring (71.50 329 ⇓P P **15 17 18.0 +0.1**
baz=72,SNR=8.3
V13A Grand Canyon W 71.56 324 ⇑P P **15 17 18.0 -0.4**
baz=72,SNR=16
T15A Red Dirt Ranch 71.57 325 ⇓P P **15 17 19.0 +0.6**
baz=72
LDFC Landfair 71.62 322 *e*P P **15 17 20.2 +1.5**
comp=Z,434nm,1.3s,mb6.2
W12A Cal Nev Ari 71.65 323 ⇑P P **15 17 18.9 -0.1**
baz=72
PHWY Pilot Hill 71.67 333 *e*P P **15 17 19.2 +0.3**
S16A Weppner Ranch, 71.70 326 ⇑P P **15 17 19.4 +0.2**
baz=72
GMRC Granite Mounta 71.72 322 ⇑P P **15 17 19.5 +0.2**
baz=72,SNR=16
MURC Murrieta 71.78 320 ⇓P P **15 17 19.7 -0.1**
baz=72
R17A Hanksville Air 71.79 327 ⇑P P **15 17 20.1 +0.4**
baz=72
T14A Hurricane 71.97 325 ⇑P P **15 17 21.3 +0.4**
baz=72
Q18A Rafter H Ranch 72.04 328 ⇓P P **15 17 21.7 +0.6**
baz=72
S15A Panguitch 72.06 326 ⇑P P **15 17 22.2 +0.8**
baz=72

TBI **Tubuai** 72.08 252 *e*P P 15 17 23.7 +1.8
comp=Z,559nm,1.3s,mb6.3
TBI *e*S S 15 26 38.8 -2.9
comp=Z,89µm,30.2s
TBI **Tubuai** 72.08 252 *e*LR LR 15 39 16.9
comp=Z,136µm,23.0s,baz=110
BBRC **Big Bear Sol-O** 72.08 321 ⇑P P 15 17 21.9 +0.3
baz=72
HEC **Hector,Ludlow** 72.14 321 ⇓P P 15 17 22.4 +0.5
baz=72,SNR=11
SCI **San Clemente I** 72.17 319 ⇑P P 15 17 21.9 -0.2
baz=72
U12A **Valley of Fire** 72.29 324 ⇓P P 15 17 23.0 +0.2
baz=73
TUQ **Turquoise Moun** 72.34 322 ⇑P P 15 17 23.2 +0.1
baz=73,SNR=11
V11A **Goodsprings** 72.36 323 ⇓P P 15 17 23.2 +0.1
baz=73
CIS **Catalina Islan** 72.37 319 ⇓P P 15 17 22.8 -0.5
baz=73
T13A **Saint George** 72.38 324 ⇓P P 15 17 23.7 +0.4
baz=73,SNR=11
Q16A **Castle Valley** 72.40 327 ⇓P P 15 17 23.8 +0.4
baz=73,SNR=13
R15A **Junction** 72.42 326 ⇑P P 15 17 23.9 +0.5
baz=73,SNR=8.9
O19A **Miners Draw (B** 72.50 330 ⇑P P 15 17 24.4 +0.5
baz=73,SNR=11
P18A **Preston Nutter** 72.50 329 ⇓P P 15 17 24.4 +0.4
baz=73,SNR=11
BFSC **Mount Baldy St** 72.50 320 ⇑P P 15 17 23.9 -0.2
baz=73,SNR=14
FMP **Fort Macarthur** 72.52 319 ⇑P P 15 17 24.3 +0.1
baz=73
MEH **Mehetia** 72.53 258 *e*P P 15 17 26.5 +1.8
S14A **Cedar City** 72.54 325 ⇑P P 15 17 24.9 +0.7
baz=73
RRX **Edison Barstow** 72.56 321 ⇑P P 15 17 24.6 +0.2
baz=73
T12A **Moapa** 72.60 324 ⇑P P 15 17 24.7 +0.1
baz=73
MVU **Marysvale** 72.61 327 PFAKE 15 17 40.0 +15
MVU LR LR
comp=Z,43µm,20.0s,MS6.7
P17A **Butcher Ranch,** 72.62 328 ⇓P P 15 17 24.9 +0.3
baz=73,SNR=12
MWC **Mount Wilson** 72.73 320 *e*P P 15 17 25.0 -0.4
comp=Z,94nm,1.4s,mb5.5
MWC LR LR
comp=Z,21µm,22.0s,MS6.4
MWC **Mount Wilson** 72.73 320 *e*P P 15 17 25.0 -0.4
MWC pmax pmax
comp=Z,94nm,1.4s,mb5.5
MWC MLR MLR
comp=Z,21µm,22.0s,MS6.4
RWWY **Rawlins** 72.75 332 *e*P P 15 17 26.3 +1.0
comp=Z,847nm,1.6s,mb6.4
GSC **Goldstone** 72.75 321 *e*P P 15 17 26.2 +0.7
comp=Z,648nm,1.8s,mb6.3
GSC LR LR
comp=Z,36µm,20.0s,MS6.6
GSC **Goldstone** 72.75 321 *e*P P 15 17 26.2 +0.7
GSC pmax pmax
comp=Z,648nm,1.8s,mb6.3
GSC MLR MLR
comp=Z,36µm,20.0s,MS6.6
GSC **Goldstone** 72.75 321 ⇑P P 15 17 25.5 0.0
baz=73
U11A **Corn Creek** 72.75 323 ⇓P P 15 17 25.4 -0.1
baz=73
S13A **Holt Ranch, En** 72.77 325 ⇓P P 15 17 26.0 +0.4
baz=73,SNR=16
R14A **James Farms, M** 72.87 326 ⇑P P 15 17 26.7 +0.6
baz=73,SNR=9.4
SHOC **Shoshone** 72.88 322 ⇑P P 15 17 26.0 -0.2
baz=73,SNR=17
O18A **Roosevelt** 72.89 329 ⇓P P 15 17 26.9 +0.7
baz=73,SNR=7.7
DECC **Green Verdugo** 72.91 320 ⇓P P 15 17 26.5 +0.1
baz=73
EYMN **Ely** 72.94 345 *e*P P 15 17 25.7 -0.7
comp=Z,162nm,0.9s,mb6.0
EYMN LR LR
comp=Z,29µm,19.0s,MS6.6
SNCC **San Nicolas Is** 72.95 318 *e*P P 15 17 26.2 -0.6
comp=Z,191nm,1.3s,mb5.9
SNCC LR LR
comp=Z,16µm,21.0s,MS6.3
SNCC **San Nicolas Is** 72.95 318 ⇑P P 15 17 26.7 -0.1
baz=73
N19A **John Jarvie Ra** 72.99 330 ⇑P P 15 17 26.8 0.0
baz=73,SNR=7.1
VAH **Vaihoa** 72.99 260 *e*P P 15 17 29.0 +1.6
comp=Z,241nm,1.3s,mb6.0
M20A **Sweetwater, Wa** 73.02 331 ⇓P P 15 17 27.5 +0.5
baz=73,SNR=11
L21A **Rawlins** 73.04 332 ⇓P P 15 17 27.4 +0.3
baz=73,SNR=14
Q15A **Fillmore** 73.07 327 ⇑P P 15 17 27.9 +0.6
baz=73
EDW2 **Edwards Air Fo** 73.14 320 ⇓P P 15 17 27.7 -0.2
baz=73,SNR=6.8
P16A **Fountain Green** 73.18 328 ⇓P P 15 17 28.6 +0.6
baz=74
O17A **Robinson Place** 73.18 329 ⇓P P 15 17 28.6 +0.7
baz=74,SNR=14
PDA **Ponta Delgada** 73.23 35 *e*P P 15 17 32.0 +3.7
PDA *e*LQ 15 36 38.0
PDA *e*LR LR 15 40 20.0
BLG **Laguna Peak** 73.25 319 ⇓P P 15 17 28.1 -0.4
baz=74
T11A **Corn Creek, Al** 73.26 324 ⇑P P 15 17 28.8 +0.3
baz=74,SNR=11
R13A **O'Grain Ranch,** 73.28 325 ⇑P P 15 17 29.5 +0.9
baz=74
U10A **Ash Meadows, A** 73.28 323 ⇑P P 15 17 28.6 0.0
baz=74
N18A **Larsen Ranch,** 73.29 330 ⇑P P 15 17 28.9 +0.4
baz=74,SNR=9.8
PMOR **Pomariorio Ree** 73.31 260 *e*P P 15 17 31.3 +2.0
comp=Z,141nm,0.9s,mb5.9
S12A **Delamar Landin** 73.32 324 ⇑P P 15 17 28.8 0.0
baz=74
OSI **Osito Adit** 73.39 320 *e*P P 15 17 31.5 +2.2
comp=Z,277nm,1.3s,mb6.0
OSI **Osito Adit** 73.39 320 ⇑P P 15 17 29.2 -0.1
baz=74
RSSD **Black Hills** 73.45 335 PFAKE 15 17 40.0 +11
RSSD LR LR
comp=Z,27µm,20.0s,MS6.5
P15A **Leamington** 73.45 327 ⇑P P 15 17 30.3 +0.8
baz=74,SNR=12
M19A **Rock Springs** 73.47 330 ⇓P P 15 17 30.0 +0.4
baz=74,SNR=8.6
L20A **Wamsutter** 73.50 331 ⇓P P 15 17 30.3 +0.5
baz=74,SNR=8.8
BSC **Santa Cruz Isl** 73.52 319 ⇓P P 15 17 30.1 0.0
baz=74,SNR=11
Q14A **Sevier Lake (B** 73.52 326 ⇑P P 15 17 30.9 +1.0
baz=74,SNR=13
O16A **Springville** 73.56 328 ⇓P P 15 17 30.7 +0.5
baz=74,SNR=16
FURC **Furnace Creek,** 73.61 322 ⇑P P 15 17 30.2 -0.4
baz=74,SNR=10
TPNV **Topopah Spring** 73.61 323 PFAKE 15 17 40.0 +9.4
TPNV LR LR
comp=Z,24µm,20.0s,MS6.5
TPNV **Topopah Spring** 73.61 323 ⇓P P 15 17 30.7 +0.2
baz=74,SNR=14
TVO **Taravao** 73.63 257 *e*P P 15 17 32.7 +1.5
comp=Z,2µm,1.5s,mb6.8
MPMC **Manual Prospec** 73.68 322 ⇓P P 15 17 31.0 0.0
baz=74,SNR=9.8
R12A **Pony Springs,** 73.72 325 ⇓P P 15 17 31.3 +0.1
baz=74,SNR=14
TIAR **Tiarei** 73.79 257 *e*P P 15 17 33.6 +1.5
comp=Z,591nm,1.2s,mb6.4
N17A **Moffit Pass** 73.81 329 ⇑P P 15 17 31.9 +0.3
baz=74,SNR=11
ARVC **Arvin** 73.81 320 ⇑P P 15 17 31.7 -0.1
baz=74
M18A **Lyman** 73.83 330 ⇑P P 15 17 32.4 +0.7
baz=74,SNR=11
S11A **Rachel** 73.84 324 ⇑P P 15 17 32.2 +0.3
baz=74
P14A **Drum Mountains** 73.87 327 ⇑P P 15 17 32.6 +0.6
baz=74,SNR=11
SBC **Santa Barbara** 73.87 319 ⇓P P 15 17 31.8 -0.4
baz=74
Q13A **Wheeler Ranch,** 73.88 326 ⇑P P 15 17 32.3 +0.2
baz=74,SNR=10
DAC **Darwin (Calif)** 73.89 322 PFAKE 15 17 40.0 +7.8
DAC LR LR
comp=Z,40µm,21.0s,MS6.7
PAE **Paea** 73.96 257 *e*P P 15 17 34.8 +1.7
comp=Z,736nm,1.0s,mb6.6
PAE **Paea** 73.96 257 *e*P P 15 17 34.8 +1.7
PAE pmax pmax
comp=Z,736nm,1.0s,mb6.6
ISA **Isabella** 73.97 321 *e*P P 15 17 32.1 -0.6
comp=Z,139nm,1.1s,mb5.8
ISA LR LR
comp=Z,20µm,20.0s,MS6.4
ISA **Isabella** 73.97 321 *e*P P 15 17 32.1 -0.6
ISA pmax pmax
comp=Z,139nm,1.1s,mb5.8
ISA MLR MLR
comp=Z,20µm,20.0s,MS6.4
ISA **Isabella** 73.97 321 ⇓P P 15 17 32.6 -0.1
baz=74,SNR=14
PPT **Papeete** 73.99 257 *e*P P 15 17 35.3 +2.0
comp=Z,125nm,1.4s,mb5.7
PPT *e*S S 15 27 02.6 -1.0
comp=Z,76µm,28.2s
PPT **Papeete** 73.99 257 *e*LR LR 15 40 26.7
comp=Z,232µm,25.5s,baz=105
PPT **Papeete** 73.99 257 P P 15 17 35.9 +2.6
comp=Z,21nm,0.7s,baz=95,slow=12,SNR=2.5
PPT LR LR 15 41 32.9
comp=Z,71µm,21.9s,MS6.9,baz=45,slow=29
L19A **Farson** 74.03 331 ⇓P P 15 17 33.2 +0.3
baz=74,SNR=10
N16A **Rees Ranch, Co** 74.05 329 ⇑P P 15 17 33.6 +0.6
baz=74,SNR=10.0
O15A **The Old Anders** 74.09 328 ⇓P P 15 17 34.2 +0.9
baz=74
M17A **Scullys Gap (B** 74.14 329 ⇑P P 15 17 33.6 +0.1
baz=74,SNR=5.9
DUG **Dugway** 74.20 327 *e*P P 15 17 34.4 +0.5
comp=Z,283nm,1.4s,mb6.0
DUG LR LR
comp=Z,21µm,20.0s,MS6.4
DUG **Dugway** 74.20 327 *e*P P 15 17 34.4 +0.5
DUG pmax pmax
comp=Z,283nm,1.4s,mb6.0
DUG MLR MLR
comp=Z,21µm,20.0s,MS6.4
DUG **Dugway** 74.20 327 ⇑P P 15 17 34.1 +0.2
baz=74,SNR=12
L18A **Fontenelle, Gr** 74.20 330 ⇑P P 15 17 33.6 -0.3
baz=74,SNR=15
PKM **Peak Mountain** 74.24 319 ⇑P P 15 17 34.2 -0.1
baz=74,SNR=18
P13A **Bates Ranch, G** 74.25 326 ⇓P P 15 17 34.3 +0.1
baz=75
R11A **Troy Canyon, C** 74.26 324 ⇑P P 15 17 34.6 +0.2
baz=75,SNR=13
GRAC **Grapevine Rang** 74.28 322 ⇓P P 15 17 34.7 +0.2
baz=75
CWC **Cottonwood Cre** 74.29 321 ⇑P P 15 17 34.5 0.0
baz=75,SNR=10
Q12A **Willow Creek R** 74.37 325 ⇓P P 15 17 35.2 +0.3
baz=75,SNR=11
AGMN **Agassiz Refuge** 74.39 342 *e*P P 15 17 33.4 -1.4
comp=Z,172nm,0.9s,mb6.0
AGMN LR LR
comp=Z,25µm,22.0s,MS6.5
SBA **Scott Base** 74.42 191 *e*P P 15 17 33.2 -1.5
comp=Z,139nm,1.0s,mb5.8
SBA LR LR
comp=Z,27µm,19.0s,MS6.6
SBA **Scott Base** 74.42 191 *e*P P 15 17 33.2 -1.6
SBA pmax pmax
comp=Z,139nm,1.0s,mb5.8
SBA MLR MLR
comp=Z,27µm,19.0s,MS6.6
VES **Vestal, Richgr** 74.45 320 ⇓P P 15 17 35.2 -0.3
baz=75
M16A **Huntsville** 74.47 329 ⇑P P 15 17 35.8 +0.3
baz=75,SNR=6.3
S10A **Tonopah Range,** 74.50 323 ⇓P P 15 17 36.2 +0.4
baz=75,SNR=14
N15A **Stansbury Isla** 74.58 328 ⇑P P 15 17 36.0 -0.1
baz=75,SNR=9.0
R10A **Warm Springs** 74.61 324 ⇓P P 15 17 36.9 +0.6
baz=75,SNR=8.0
SMMC **Simmler** 74.63 320 ⇓P P 15 17 36.8 +0.2
baz=75,SNR=9.0
BW06 **Boulder Array** 74.65 331 *e*P P 15 17 35.9 -0.6
comp=Z,184nm,1.4s,mb5.8
BW06 LR LR
comp=Z,24µm,19.0s,MS6.5
BW06 **Boulder Array** 74.65 331 ⇑P P 15 17 36.7 +0.3
baz=75,SNR=6.9
PDAR **Pinedale Array** 74.65 331 P P 15 17 36.0 -0.5
comp=Z,13nm,0.9s,baz=132,slow=7.1,SNR=9.5
PDAR PKPPKP 15 45 09.2
comp=Z,1.5nm,1.0s,baz=349,slow=1.5,SNR=6.5
Q11A **Duckwater** 74.66 325 ⇓P P 15 17 37.0 +0.4
baz=75,SNR=12
HWUT **Hardware Ranch** 74.67 329 *e*P P 15 17 35.9 -0.7
comp=Z,167nm,1.0s,mb5.9
HWUT LR LR
comp=Z,61µm,20.0s,MS6.9
S09A **Goldfield** 74.71 323 ⇓P P 15 17 36.6 -0.3
baz=75
O13A **Hicks Ranch, I** 74.74 327 ⇓P P 15 17 37.2 +0.2
baz=75
TIN **Tinemaha** 74.80 322 ⇓P P 15 17 37.7 +0.2
baz=75,SNR=13
RCTC **Rector, Farmer** 74.87 321 ⇓P P 15 17 37.1 -0.8
baz=75
N14A **Grayback Hills** 74.88 328 ⇑P P 15 17 38.2 +0.4
baz=75,SNR=9.5
L16A **Fish Haven** 74.92 329 ⇑P P 15 17 38.0 0.0
baz=75,SNR=8.5
V05C **Boulder Hill,** 74.95 320 ⇓P P 15 17 38.1 -0.4
baz=75
TPH **Tonopah** 74.96 323 *e*P P 15 17 39.4 +1.1
comp=Z,154nm,1.0s,mb5.9
TPH LR LR
comp=Z,20µm,22.0s,MS6.4
TPH **Tonopah** 74.96 323 *e*P P 15 17 39.4 +1.0
TPH pmax pmax
comp=Z,154nm,1.0s,mb5.9
TPH MLR MLR
comp=Z,20µm,22.0s,MS6.4
M15A **Larsen Ranch,** 74.98 328 ⇓P P 15 17 38.2 -0.2
baz=75,SNR=13
PTRM **Twissleman Ran** 74.99 320 P P 15 17 39.3 +0.6
Q10A **Clear Creek Ra** 75.05 324 ⇓P P 15 17 39.2 +0.3
baz=75,SNR=8.3
MTUM **Tungsten Hills** 75.20 322 *e*P P 15 17 40.5 +0.7
P11A **Circle Ranch,** 75.23 325 ⇑P P 15 17 40.0 +0.1
baz=76
O12A **Currie** 75.23 326 ⇑P P 15 17 39.7 -0.2
baz=76,SNR=9.8
AHID **Auburn Hatcher** 75.35 330 *e*P P 15 17 39.9 -0.6
comp=Z,152nm,0.9s,mb5.9
AHID LR LR
comp=Z,46µm,22.0s,MS6.7
L15A **Malad City** 75.37 329 ⇓P P 15 17 40.1 -0.6
baz=76,SNR=14
PKD **Parkfield** 75.39 320 ⇑P P 15 17 40.5 -0.4
baz=76,SNR=10
M14A **Sheep Mountain** 75.45 328 ⇑P P 15 17 40.8 -0.4
baz=76,SNR=10.0
Q09A **Carvers** 75.48 324 ⇓P P 15 17 41.3 -0.1
baz=76
I18A **Diamond G Ranc** 75.51 331 ⇑P P 15 17 41.4 0.0
baz=76,SNR=9.0
MLAC **Mammoth Lakes** 75.55 322 ⇑P P 15 17 41.6 -0.1
baz=76
O11A **Cowboy Ranch,** 75.60 326 ⇓P P 15 17 41.9 -0.1
baz=76
KCC **Kaiser Creek** 75.61 321 ⇑P P 15 17 41.5 -0.7
baz=76
T06C **Millerton Lake** 75.62 321 ⇑P P 15 17 41.0 -1.2
baz=76
K16A **Soda Springs** 75.63 330 ⇓P P 15 17 42.2 +0.1
baz=76,SNR=8.7
J17A **Brown Place, J** 75.64 331 ⇑P P 15 17 42.5 +0.4
baz=76,SNR=9.5
R08A **Mina** 75.64 323 ⇓P P 15 17 42.4 +0.2
baz=76,SNR=6.7
P10A **Eureka** 75.65 325 ⇑P P 15 17 42.6 +0.2
baz=76,SNR=7.8
SNOW **Snow King Moun** 75.74 331 *e*P P 15 17 43.7 +1.0
comp=Z,124nm,0.9s,mb5.8
M13A **Montello** 75.75 327 ⇑P P 15 17 43.2 +0.4
baz=76,SNR=13
L14A **Malta** 75.80 328 ⇑P P 15 17 43.3 +0.1
baz=76,SNR=7.9
NVAR **Mina Array Bea** 75.81 323 P P 15 17 43.5 +0.2
comp=Z,22nm,0.8s,baz=150,slow=6.8,SNR=11
NVAR PKPPKP 15 45 08.9
comp=Z,1.2nm,0.8s,baz=260,slow=1.6,SNR=6.9
N12A **Clover Valley,** 75.81 326 ⇓P P 15 17 43.1 -0.1
baz=76
U04C **Hernandez Rese** 75.81 320 ⇓P P 15 17 43.2 -0.1
baz=76,SNR=9.5
ELK **Elko** 75.83 326 LR LR 15 48 25.9
comp=Z,50µm,19.7s,MS6.8,baz=147,slow=34
ELK **Elko** 75.83 326 *e*P P 15 17 43.6 +0.3
ELK LR LR
comp=Z,54µm,20.0s,MS6.8
V03C **Hunter Ligget** 75.86 319 ⇓P P 15 17 43.6 0.0
baz=76,SNR=8.8
RRI2 **Red Ridge** 75.90 330 *e*P P 15 17 44.1 +0.5
comp=Z,297nm,1.1s,mb6.1
Q08A **Gabbs** 75.91 323 ⇑P P 15 17 43.7 -0.1
baz=76,SNR=8.1
K15A **Arbon** 75.96 329 ⇓P P 15 17 44.3 +0.3
baz=76,SNR=6.9
P09A **Austin** 75.97 324 ⇑P P 15 17 44.0 -0.2
baz=76
J16A **Bone** 75.98 330 ⇓P P 15 17 44.3 +0.2
baz=76
I17A **Pilgram Creek** 76.02 331 ⇓P P 15 17 44.7 +0.4
baz=76,SNR=13
DCID1 **Drake Creek** 76.03 331 *e*P P 15 17 47.0 +2.6
comp=Z,353nm,1.3s,mb6.1
N11A **Elko Archery C** 76.14 326 ⇑P P 15 17 45.0 -0.1
baz=76
K14A **Jones Ranch, D** 76.16 329 ⇓P P 15 17 45.0 -0.1
baz=76,SNR=6.4
O10A **Cortez Mining,** 76.16 325 ⇓P P 15 17 45.5 +0.3
baz=76
M12A **Wells** 76.17 327 ⇓P P 15 17 45.0 -0.2
baz=76,SNR=12
ULM **Lac du Bonnet** 76.17 343 P P 15 17 43.5 -1.6
comp=Z,38nm,0.7s,baz=158,slow=6.1,SNR=8.7
ULM LR LR 15 53 31.1
comp=Z,24µm,20.0s,MS6.5,baz=151,slow=37
ULM **Lac du Bonnet** 76.17 343 *e*P P 15 17 43.9 -1.1
comp=Z,109nm,0.9s,mb5.8
ULM LR LR
comp=Z,28µm,20.0s,MS6.6
L13A **Double Diamond** 76.19 328 ⇓P P 15 17 45.2 -0.1
baz=76,SNR=13
S05C **Merced** 76.21 321 ⇑P P 15 17 45.5 -0.1
baz=76,SNR=13
H17A **Grant Village** 76.39 331 ⇑P P 15 17 47.2 +0.8
baz=77
I16A **Newdale** 76.39 331 ⇓P P 15 17 46.9 +0.5
baz=77,SNR=6.4
RLMT **Red Lodge** 76.40 333 PFAKE 15 18 00.0 +14
RLMT LR LR
comp=Z,24µm,22.0s,MS6.5
RLMT **Red Lodge** 76.40 333 ⇓P P 15 17 46.6 +0.2
baz=77,SNR=7.7
O09A **Fish Creek Ran** 76.44 325 ⇓P P 15 17 46.8 0.0
baz=77
LAO **LASA Array** 76.44 335 *e*P P 15 17 45.7 -1.0
comp=Z,391nm,1.1s,mb6.2
LAO LR LR
comp=Z,19µm,20.0s,MS6.4
LKWY **Lake** 76.45 332 *e*P P 15 17 44.0 -2.7
comp=Z,222nm,1.4s,mb5.9
LKWY LR LR
comp=Z,41µm,19.0s,MS6.8
LKWY **Lake** 76.45 332 *e*P P 15 17 49.0 +2.3
Q07A **Schurz** 76.45 323 ⇓P P 15 17 46.9 0.0
baz=77
J15A **Blackfoot** 76.46 330 ⇑P P 15 17 47.3 +0.4
baz=77,SNR=9.3
N10A **Dunphy** 76.47 325 ⇑P P 15 17 46.9 -0.1
baz=77
SAO **San Andreas Ge** 76.48 320 *e*P P 15 17 46.6 -0.5
comp=Z,144nm,1.4s,mb5.7
SAO LR LR
comp=Z,24µm,21.0s,MS6.5
SAO **San Andreas Ge** 76.48 320 *e*P P 15 17 46.6 -0.5
SAO pmax pmax
comp=Z,144nm,1.4s,mb5.7
SAO MLR MLR
comp=Z,24µm,21.0s,MS6.5
R06C **Coleville** 76.52 322 ⇓P P 15 17 47.1 -0.1
baz=77
PACP **Pacheco Peak** 76.55 320 ⇓P P 15 17 47.5 0.0
baz=77
P08A **Dixie Valley** 76.58 324 ⇑P P 15 17 47.9 +0.3
baz=77
M11A **Holland Ranch,** 76.62 326 ⇑P P 15 17 47.8 +0.1
baz=77,SNR=11
BMN **Battle Mountai** 76.64 325 *e*P P 15 17 48.6 +0.7
comp=Z,227nm,1.9s,mb5.8
BMN LR LR
comp=Z,34µm,21.0s,MS6.6
BMN **Battle Mountai** 76.64 325 *e*P P 15 17 48.6 +0.7
BMN pmax pmax
comp=Z,227nm,1.9s,mb5.8
BMN MLR MLR
comp=Z,34µm,21.0s,MS6.6
K13A **Stover Farm, H** 76.67 328 ⇑P P 15 17 48.4 +0.4
baz=77,SNR=10
G18A **Lazy EL Ranch,** 76.68 333 ⇑P P 15 17 48.3 +0.3
baz=77,SNR=8.6
CMB **Columbia Colle** 76.72 321 *e*P P 15 17 51.0 +2.6
comp=Z,136nm,1.3s,mb5.7
CMB LR LR
comp=Z,18µm,20.0s,MS6.4
CMB **Columbia Colle** 76.72 321 ⇑P P 15 17 48.2 -0.2
baz=77
L12A **House Creek Ra** 76.76 327 ⇑P P 15 17 49.0 +0.5
baz=77,SNR=9.4
J14A **Carey** 76.91 329 ⇑P P 15 17 49.8 +0.4
baz=77,SNR=7.0
P07A **Fallon** 76.91 323 ⇓P P 15 17 49.9 +0.4
baz=77
H16A **Russell Place,** 76.93 331 ⇓P P 15 17 50.2 +0.7
baz=77,SNR=8.4
I15A **Monteview** 76.94 330 ⇓P P 15 17 50.0 +0.4
baz=77,SNR=7.4
O08A **Rochester Mine** 77.04 324 ⇑P P 15 17 49.5 -0.7
baz=77,SNR=13
K12A **Draper Farm, C** 77.07 328 ⇑P P 15 17 50.6 +0.3
baz=77,SNR=17
M10A **I.L. Ranch, Tu** 77.07 326 ⇓P P 15 17 50.4 0.0
baz=77
N09A **Rock Creek Ran** 77.10 325 ⇓P P 15 17 50.5 0.0
baz=77
QLMT **Earthquake Lak** 77.11 331 *e*P P 15 17 50.1 -0.4
L11A **Cat Creek Ranc** 77.14 327 ⇑P P 15 17 50.8 +0.1
baz=78,SNR=7.6
DGMT **Dagmar** 77.19 337 *e*P P 15 17 51.2 +0.4
comp=Z,627nm,1.1s,mb6.5
DGMT LR LR
comp=Z,23µm,22.0s,MS6.5
DGMT **Dagmar** 77.19 337 ⇑P P 15 17 51.1 +0.3
baz=78,SNR=9.5
R04C **Big Horse Ranc** 77.19 321 ⇓P P 15 17 50.7 -0.3
baz=78
G17A **Pierce Place,** 77.19 332 ⇑P P 15 17 51.2 +0.3
baz=78
F18A **Big Timber** 77.21 333 ⇑P P 15 17 51.3 +0.3
baz=78,SNR=14
WCN **Washoe City** 77.23 323 ⇑P P 15 17 51.1 -0.1
baz=78
WENL **Wente Vineyard** 77.24 320 ⇑P P 15 17 51.2 -0.1
baz=78
J13A **Cove Ranch, Pi** 77.28 329 ⇑P P 15 17 51.7 +0.3
baz=78
PAHR **Pah Rah Range** 77.30 323 *e*P P 15 17 51.8 +0.2
comp=Z,372nm,1.1s,mb6.2
I14A **Mackay** 77.34 329 ⇑P P 15 17 52.2 +0.4
baz=78,SNR=6.6
O07A **Toulon** 77.34 324 ⇑P P 15 17 52.0 +0.2
baz=78,SNR=8.0
JRSC **Jasper Ridge** 77.38 320 ⇑P P 15 17 51.6 -0.5
baz=78
N08A **GE Springer Mi** 77.38 325 ⇑P P 15 17 52.9 +0.8
baz=78,SNR=9.2
LAVA **Lava Cap Winer** 77.41 322 ⇑P P 15 17 51.9 -0.4

baz=78,SNR=10
L10A Juniper Basin 77.44 326 ⇓P P 15 17 52.3 -0.1
baz=78,SNR=15
M09A Marrel Ranch, 77.47 325 ⇑P P 15 17 52.2 -0.4
baz=78,SNR=8.8
H15A Lima 77.49 330 ⇑P P 15 17 52.9 +0.3
baz=78
HLID Hailey 77.52 329 eP P 15 17 53.8 +1.0
comp=Z,193nm,1.0s,mb6.0
HLID LR LR
comp=Z,21µm,22.0s,MS6.4
HLID Hailey 77.52 329 ⇓P P 15 17 53.2 +0.4
baz=78,SNR=18
BDM Black Diamond 77.52 320 ⇓P P 15 17 53.0 0.0
baz=78
P06A Stead Airport, 77.57 323 ⇓P P 15 17 53.0 -0.1
baz=78
G16A Moss Hill, Enn 77.59 331 ⇑P P 15 17 53.1 0.0
baz=78
F17A Fitzpatrick Pl 77.61 332 ⇓P P 15 17 53.4 +0.1
baz=78,SNR=9.5
J12A Stokes Ranch, 77.62 328 ⇓P P 15 17 53.7 +0.4
baz=78,SNR=9.3
I13A Wildhorse Cree 77.64 329 ⇓P P 15 17 53.6 +0.1
baz=78
K11A Parker Ranch, 77.73 327 ⇓P P 15 17 53.7 -0.3
baz=78,SNR=8.3
E18A Harlowton 77.82 333 ⇓P P 15 17 54.6 +0.2
baz=78,SNR=8.1
H14A Leadore 77.82 330 ⇓P P 15 17 54.8 +0.3
baz=78
N07B Gerlach 77.83 324 ⇑P P 15 17 54.5 -0.1
baz=78
BOZ Bozeman (W) 77.83 332 eP P 15 17 54.6 +0.1
comp=Z,276nm,1.7s,mb5.9
BOZ LR LR
comp=Z,38µm,21.0s,MS6.7
BOZ Bozeman (W) 77.83 332 eP P 15 17 54.6 +0.1
BOZ pmax pmax
comp=Z,276nm,1.7s,mb5.9
BOZ MLR MLR
comp=Z,38µm,21.0s,MS6.7
BOZ Bozeman (W) 77.83 332 ⇓P P 15 17 54.6 +0.1
baz=78
G15A Dillon 77.84 331 ⇑P P 15 17 54.8 +0.2
baz=78,SNR=6.9
O06A Flanigan 77.86 323 ⇓P P 15 17 54.8 0.0
baz=78
F16A Kennard Place, 77.94 332 ⇑P P 15 17 55.1 0.0
baz=78
BEKR Beckwourth 77.95 323 ⇑P P 15 17 54.9 -0.4
baz=78,SNR=15
M08A Happy Creek Ra 77.98 325 ⇑P P 15 17 55.2 -0.2
baz=78
L09A Wilkinson Ranc 78.01 326 ⇑P P 15 17 55.7 +0.1
baz=78
FARB Farallon Islan 78.03 320 ⇑P P 15 17 55.3 -0.4
baz=78
I12A Atlanta 78.04 328 ⇓P P 15 17 55.9 +0.2
baz=78,SNR=9.6
Q03C Winters 78.06 321 ⇑P P 15 17 56.3 +0.4
baz=78
MFID Camas Ranch 78.10 328 ⇑P P 15 17 56.0 0.0
baz=78,SNR=10
CVS Carmenet Viney 78.13 320 ⇑P P 15 17 55.9 -0.4
baz=78,SNR=9.0
E17A Martinsdale 78.14 333 ⇑P P 15 17 56.6 +0.4
baz=78
K10A MacKenzie Ranc 78.15 327 ⇓P P 15 17 56.2 -0.1
baz=78,SNR=6.2
H13A Challis 78.20 329 ⇑P P 15 17 56.8 +0.3
baz=78
OHCM Honcut 78.23 322 eP P 15 17 57.1 +0.2
MCCM Marconi Confer 78.25 320 eP P 15 17 56.9 -0.1
comp=Z,165nm,1.1s,mb5.9
MCCM LR LR
comp=Z,16µm,20.0s,MS6.3
MCCM Marconi Confer 78.25 320 ⇑P P 15 17 56.6 -0.4
baz=78
N06A Buffalo Meadow 78.27 324 ⇓P P 15 17 57.2 +0.1
baz=79,SNR=11
D18A Linhart Farms, 78.28 334 ⇑P P 15 17 56.9 -0.1
baz=79,SNR=6.7
O05C Quincy 78.33 323 ⇑P P 15 17 57.1 -0.3
baz=79,SNR=8.0
NSHM Saint Helena R 78.33 321 eP P 15 17 57.9 +0.5
G14A Jackson 78.34 330 ⇓P P 15 17 57.6 +0.3
baz=79
F15A Butte 78.37 331 ⇑P P 15 17 57.9 +0.5
baz=79,SNR=10
ORV Oroville 78.39 322 ⇓P P 15 17 57.5 -0.2
baz=79,SNR=16
H12A Diamond D Ranc 78.47 329 ⇑P P 15 17 58.3 +0.2
baz=79,SNR=7.8
MNRC McLaughlin Nat 78.48 321 ⇑P P 15 17 58.0 -0.2
baz=79
L08A Fields 78.49 326 ⇓P P 15 17 58.1 -0.2
baz=79,SNR=8.1
I11A Placerville 78.53 328 ⇑P P 15 17 58.2 -0.2
baz=79,SNR=7.3
K09A Rome 78.53 326 ⇑P P 15 17 58.2 -0.2
baz=79
E16A East Helena 78.55 332 ⇑P P 15 17 58.5 +0.1
baz=79,SNR=6.3
J10A Berg Farm, Mel 78.57 327 ⇑P P 15 17 58.2 -0.5
baz=79
G13A Cobalt 78.59 330 ⇓P P 15 17 59.2 +0.5
baz=79
D17A Six Diamond Ra 78.61 333 ⇑P P 15 17 58.8 0.0
baz=79,SNR=18
O04C Chester 78.67 323 ⇓P P 15 17 58.7 -0.5
baz=79,SNR=13
F14A Wisdom 78.74 331 ⇑P P 15 17 59.8 +0.3
baz=79,SNR=10
HRY Holter Researc 78.75 332 eP P 15 17 60.0 +0.5
TORD Torodi Ar. Bea 78.79 71 P P 15 18 00.2 -0.2
comp=Z,101nm,0.8s,mb5.8,baz=252,slow=5.1,SNR=11
TORD PKKPbc PKKPbc 15 37 01.4 +7.1
comp=Z,0.8nm,0.6s,baz=60,slow=1.8,SNR=5.2
TORD PKPPKP 15 44 59.2
comp=Z,2.9nm,1.3s,baz=112,slow=2.8,SNR=4.1
TORD LR LR 15 54 31.4
comp=Z,38µm,18.1s,MS6.8,baz=235,slow=37
TORD Torodi Ar. Bea 78.79 71 P P 15 18 00.2 -0.2
TORD PKKPbc PKKPbc 15 37 01.4 +7.1
TORD P'P' 15 44 59.2
TORD LR LR 15 54 31.4
WVOR Wild Horse Val 78.81 326 eP P 15 17 58.9 -1.1
comp=Z,158nm,1.4s,mb5.8
WVOR LR LR
comp=Z,31µm,21.0s,MS6.6
WVOR Wild Horse Val 78.81 326 eP P 15 18 00.7 +0.7
D16A Dana Ranch, Ca 78.88 333 ⇑P P 15 18 00.5 +0.2
baz=79,SNR=9.3
E15A Deer Lodge 78.88 332 ⇓P P 15 17 60.0 -0.3
baz=79,SNR=15
SUR Sutherland 78.89 120 P P 15 18 03.6 +2.8
comp=Z,891nm,0.9s,mb6.7,SNR=5.3
SUR Sutherland 78.89 120 eP P 15 18 01.1 +0.2
comp=Z,117nm,0.8s,mb5.9
SUR LR LR
comp=Z,48µm,19.0s,MS6.8
L07A Adell 78.89 325 ⇓P P 15 18 00.6 +0.2
baz=79
HOPS Hopland 78.92 321 eP P 15 18 03.2 +2.6
comp=Z,324nm,1.5s,mb6.0
HOPS LR LR
comp=Z,21µm,20.0s,MS6.5
HOPS Hopland 78.92 321 ⇑P P 15 18 00.5 -0.1
baz=79
EGMT Eagleton 78.92 334 PFAKE 15 18 10.0 +10
EGMT LR LR
comp=Z,23µm,20.0s,MS6.5
EGMT Eagleton 78.92 334 ⇓P P 15 17 59.9 -0.6
baz=79,SNR=7.6
K08A Mann Creek Ran 78.95 326 ⇓P P 15 18 00.4 -0.3
baz=79
J09A Fry Pan Ranch, 79.01 327 ⇑P P 15 18 00.9 -0.1
baz=79
C17A Wharram Farm, 79.02 333 ⇓P P 15 18 00.4 -0.6
baz=79,SNR=9.3
I10A Payette 79.07 328 ⇑P P 15 18 00.7 -0.7
baz=79
H11A Donnelly 79.14 329 ⇓P P 15 18 01.5 -0.2
baz=80,SNR=8.1
GASB Alder Springs 79.15 321 ⇓P P 15 18 01.5 -0.4
baz=79,SNR=9.4
F13A Darby 79.16 330 ⇓P P 15 18 01.7 -0.1
baz=80,SNR=24
E14A Clinton 79.25 331 ⇑P P 15 18 02.4 +0.1
baz=80,SNR=6.8
D15A Lincoln 79.31 332 ⇑P P 15 18 03.2 +0.6
baz=80,SNR=6.0
K07A Rock Creek Ran 79.31 325 ⇑P P 15 18 02.9 +0.2
baz=80
MOD Modoc 79.33 324 eP P 15 18 02.7 -0.1
comp=Z,250nm,1.3s,mb6.0
MOD LR LR
comp=Z,22µm,21.0s,MS6.5
MOD Modoc 79.33 324 ⇓P P 15 18 03.3 +0.5
baz=80,SNR=13
J08A Circle Bar Ran 79.39 326 ⇑P P 15 18 03.0 -0.1
baz=80
H10A Noah's Angus R 79.41 328 ⇓P P 15 18 02.9 -0.3
baz=80
I09A Lost Marbles R 79.45 327 ⇓P P 15 18 03.2 -0.2
baz=80,SNR=6.8
F12A Elk City 79.56 330 ⇓P P 15 18 04.1 +0.1
baz=80
C16A Fuhringer Ranc 79.57 333 ⇑P P 15 18 03.7 -0.3
baz=80,SNR=10
E13A Victor 79.59 331 ⇑P P 15 18 04.3 +0.2
baz=80,SNR=7.4
WDC Whiskeytown Da 79.67 322 eP P 15 18 02.1 -2.6
comp=Z,150nm,1.3s,mb5.8
WDC LR LR
comp=Z,12µm,20.0s,MS6.2
WDC Whiskeytown Da 79.67 322 eP P 15 18 03.4 -1.3
WDC Whiskeytown Da 79.67 322 ⇑P P 15 18 05.1 +0.4
baz=80,SNR=9.3
KCPM Cahto Peak 79.67 321 eP P 15 18 05.2 +0.4
KIPM Iron Peak 79.69 321 eP P 15 18 05.3 +0.4
D14A Greenough 79.77 331 ⇑P P 15 18 04.8 -0.3
baz=80,SNR=9.3
MSO Missoula 79.77 331 eP P 15 18 04.2 -0.9
comp=Z,102nm,1.1s,mb5.7
MSO LR LR
comp=Z,24µm,21.0s,MS6.5
G11A Walters Elk Ra 79.77 329 ⇑P P 15 18 05.2 +0.1
baz=80,SNR=18
I08A Drewsey 79.83 327 ⇑P P 15 18 05.6 +0.1
baz=80,SNR=9.4
J07A Hines 79.83 326 ⇑P P 15 18 05.1 -0.4
baz=80,SNR=8.4
BMO Blue Mountains 79.88 328 PFAKE 15 18 20.0 +14
BMO LR LR
comp=Z,25µm,19.0s,MS6.6
C15A Salmond Ranch, 79.91 332 ⇑P P 15 18 06.1 +0.2
baz=80,SNR=19
H09A Durkee 79.92 328 ⇓P P 15 18 05.6 -0.3
baz=80
B16A M & M Farms, S 80.03 333 ⇓P P 15 18 06.3 -0.1
baz=80,SNR=9.6
F11A Grangeville 80.08 329 ⇑P P 15 18 06.3 -0.5
baz=80,SNR=9.8
G10A Bishop Farm, J 80.10 328 ⇓P P 15 18 06.5 -0.4
baz=80,SNR=18
O01C Eel River Cons 80.11 321 ⇑P P 15 18 06.7 -0.4
baz=80
J06A Christmas Vall 80.18 325 ⇑P P 15 18 07.1 -0.3
baz=80,SNR=14
E12A Beaver Dam Sad 80.20 330 ⇑P P 15 18 06.9 -0.5
baz=80
D13A Huson 80.20 331 ⇓P P 15 18 07.5 +0.1
baz=80,SNR=8.5
K05A Summer Lake 80.21 325 ⇓P P 15 18 07.2 -0.4
baz=80,SNR=9.6
N02C Big Bar 80.26 322 ⇑P P 15 18 07.7 -0.2
baz=80,SNR=10
B15A Bradely Ranch, 80.31 333 ⇓P P 15 18 07.4 -0.5
baz=81,SNR=14
H08A Prairie City 80.31 327 ⇑P P 15 18 07.8 -0.3
baz=81
A16A West Butte Ran 80.40 334 ⇓P P 15 18 08.1 -0.4
baz=81,SNR=23
G09A Cove 80.42 328 ⇓P P 15 18 08.3 -0.3
baz=81,SNR=29
I07A Izee 80.43 326 ⇓P P 15 18 08.8 +0.1
baz=81,SNR=7.7
E11A Bogner Ranch, 80.45 330 ⇓P P 15 18 08.3 -0.5
baz=81,SNR=9.7
YBH Yreka Blue Hor 80.53 323 LR LR 15 51 36.8
comp=Z,27µm,21.4s,MS6.6,baz=143,slow=34
YBH Yreka Blue Hor 80.53 323 eP P 15 18 07.2 -2.1
comp=Z,53nm,1.0s
YBH LR LR
comp=Z,23µm,21.0s,MS6.5
YBH Yreka Blue Hor 80.53 323 eP P 15 18 08.7 -0.6
YBH Yreka Blue Hor 80.53 323 ⇑P P 15 18 09.5 +0.2
baz=81,SNR=9.0
B14A Marsolette Ranc 80.65 332 ⇓P P 15 18 09.7 -0.1
baz=81,SNR=7.7
F10A Beach Ranch, E 80.65 329 ⇑P P 15 18 10.0 +0.2
baz=81,SNR=15
JCC Jacoby Creek 80.67 322 ⇓P P 15 18 09.8 -0.3
baz=81
C13A Hot Springs 80.69 331 ⇑P P 15 18 10.1 0.0
baz=81,SNR=17
I06A Prineville 80.69 326 ⇑P P 15 18 10.2 +0.1
baz=81,SNR=9.7
TSUM Tsumeb 80.72 107 eP P 15 18 11.2 +0.3
comp=Z,216nm,1.1s,mb6.0
TSUM LR LR
comp=Z,44µm,19.0s,MS6.8
F09A S2 Ranch, Elgi 80.79 328 ⇓P P 15 18 10.1 -0.5
baz=81,SNR=6.8
H07A Lands Inn, Kim 80.81 327 ⇓P P 15 18 10.4 -0.4
baz=81
A15A Johnson Ranch, 80.89 333 ⇓P P 15 18 10.6 -0.5
baz=81,SNR=6.1
E10A Myers Farm, Un 80.97 329 ⇓P P 15 18 10.9 -0.7
baz=81,SNR=26
G08A Pilot Rock 81.00 327 ⇑P P 15 18 11.4 -0.4
baz=81,SNR=21
D11A Klaveano Farm, 81.02 330 ⇑P P 15 18 11.2 -0.7
baz=81
KRMB Red Mountain 81.06 322 eP P 15 18 12.1 -0.1
LNOR Lincton Mounta 81.09 328 eP P 15 18 11.0 -1.2
C12B Naegeli Ranch, 81.12 331 ⇓P P 15 18 12.3 0.0
baz=82,SNR=13
B13A Whitefish 81.17 332 ⇑P P 15 18 11.8 -0.8
baz=82,SNR=9.8
A14A Double T Ranch 81.18 333 ⇑P P 15 18 11.9 -0.7
baz=82,SNR=8.0
HUMO Hull Mountain 81.25 323 eP P 15 18 11.7 -1.4
comp=Z,118nm,1.3s,mb5.7
HUMO LR LR
comp=Z,17µm,21.0s,MS6.4
F08A Pendleton 81.28 328 ⇓P P 15 18 13.0 -0.3
baz=82,SNR=8.3
H06A Lindquist Farm 81.31 326 ⇑P P 15 18 14.1 +0.7
baz=82,SNR=13
L02A Cave Junction 81.31 323 ⇑P P 15 18 13.4 -0.1
baz=82
G07A Ruggs Ranch, H 81.34 327 ⇓P P 15 18 14.3 +0.7
baz=82,SNR=17
I05A Bend 81.40 325 ⇑P P 15 18 13.9 0.0
baz=82,SNR=7.4
WALA Waterton Lakes 81.45 333 eP P 15 18 11.7 -2.4
comp=Z,360nm,1.1s,mb6.2
D10A Wagner Farm, O 81.46 330 ⇓P P 15 18 13.3 -0.8
baz=82,SNR=9.2
E09A Wood Farm, Sta 81.48 329 ⇑P P 15 18 13.4 -0.8
baz=82
C11A Tepee Creek (N 81.57 331 ⇑P P 15 18 14.4 -0.3
baz=82,SNR=25
K02A Glendale 81.65 323 ⇓P P 15 18 15.1 -0.2
baz=82,SNR=9.3
H05A Madras 81.71 326 ⇓P P 15 18 14.9 -0.6
baz=82
B12A Libby 81.74 331 ⇓P P 15 18 15.4 -0.1
baz=82,SNR=16
RAR Rarotonga 81.79 251 P P 15 18 17.3 +0.7
comp=Z,20nm,0.8s,baz=117,slow=4.5,SNR=1.8
RAR LR LR 15 46 06.0
comp=Z,40µm,19.1s,MS6.8,baz=164,slow=29
RAR Rarotonga 81.79 251 P P 15 18 17.3 +0.7
RAR pmax pmax
comp=Z,20nm,0.8s
G06A Carlson Farm, 81.81 327 ⇓P P 15 18 16.1 +0.1
baz=82,SNR=7.4
FFC Flin Flon 81.86 342 P P 15 18 16.1 0.0
comp=Z,698nm,1.0s,mb6.5,SNR=8.1
FFC Flin Flon 81.86 342 eP P 15 18 15.4 -0.6
comp=Z,166nm,1.1s,mb5.9
FFC LR LR
comp=Z,28µm,20.0s,MS6.6
FFC Flin Flon 81.86 342 eP P 15 18 15.5 -0.6
FFC pmax pmax
comp=Z,166nm,1.1s,mb5.9
FFC MLR MLR
comp=Z,28µm,20.0s,MS6.6
E08A Dider Farm, El 81.91 328 ⇓P P 15 18 16.1 -0.4
baz=82
F07A Phinny Hill Vi 81.91 327 ⇓P P 15 18 16.0 -0.5
baz=82
D09A Jones Farm, Ri 81.95 329 ⇓P P 15 18 16.7 -0.1
baz=82,SNR=11
C10A Spilker Farm, 82.03 330 ⇑P P 15 18 17.1 -0.1
baz=82,SNR=9.9
B11A Sandpoint 82.06 331 ⇓P P 15 18 16.9 -0.3
baz=82,SNR=9.4
HAWA Hanford 82.07 328 eP P 15 18 16.8 -0.6
comp=Z,331nm,1.1s,mb6.2
HAWA LR LR
comp=Z,28µm,21.0s,MS6.6
J02A Umpqua 82.09 324 ⇑P P 15 18 16.9 -0.7
baz=82
RSW Rattlesnake Hi 82.10 328 eP P 15 18 16.7 -0.8
A12A Yaak River Ran 82.11 332 ⇓P P 15 18 17.4 -0.1
baz=82,SNR=28
G05A Wamic 82.16 326 ⇑P P 15 18 17.7 -0.2
baz=82
H04A Detroit Lake 82.23 325 ⇑P P 15 18 17.6 -0.6
baz=82,SNR=10
D08A Wollman Farm, 82.24 329 ⇓P P 15 18 18.4 +0.1
baz=83,SNR=6.9
F06A Goldendale 82.25 327 ⇓P P 15 18 18.5 +0.1
baz=83,SNR=5.6
NEW Newport 82.28 330 eP P 15 18 19.5 +1.1
comp=Z,108nm,1.1s,mb5.7
NEW LR LR
comp=Z,19µm,19.0s,MS6.5
NEW Newport 82.28 330 eP P 15 18 19.5 +1.1
NEW pmax pmax
comp=Z,108nm,1.1s
NEW MLR MLR
comp=Z,19µm,19.0s
I03A Eugene 82.33 324 ⇑P P 15 18 18.9 +0.1
baz=83,SNR=8.7
E07A Sunnyside 82.34 328 ⇓P P 15 18 18.3 -0.5
baz=83
HOOD Mount Hood Mea 82.39 326 eP P 15 18 19.6 +0.5
comp=Z,348nm,1.1s,mb6.2
A11A Hall Mountain, 82.44 331 ⇑P P 15 18 18.9 -0.4
baz=83,SNR=19
C09A Chrisman Ranch 82.47 330 ⇓P P 15 18 19.4 0.0
baz=83,SNR=19
I02A Mapleton 82.65 324 ⇓P P 15 18 20.4 -0.1
baz=83
F05A White Salmon 82.68 327 ⇓P P 15 18 20.3 -0.2
baz=83
G04A Mulino 82.74 326 ⇑P P 15 18 20.6 -0.3
baz=83
COR Corvallis 82.76 325 eP P 15 18 21.4 +0.3
comp=Z,461nm,1.2s,mb6.4
COR LR LR
comp=Z,22µm,21.0s,MS6.5
COR Corvallis 82.76 325 eP P 15 18 21.4 +0.4
COR pmax pmax
comp=Z,461nm,1.2s,mb6.4
COR MLR MLR
comp=Z,22µm,21.0s,MS6.5
H03A Soap Creek Ran 82.81 325 ⇓P P 15 18 21.5 +0.2
baz=83,SNR=7.7
C08A Higginbotham F 82.82 329 ⇓P P 15 18 21.0 -0.2
baz=83
D07A Quincy 82.85 328 ⇓P P 15 18 21.3 -0.2
baz=83,SNR=7.1
B09A Rice 82.86 330 ⇓P P 15 18 20.7 -0.7
baz=83
E06A Yakima 82.89 327 ⇑P P 15 18 21.1 -0.6
baz=83,SNR=5.4
A10A Northport 83.00 331 ⇑P P 15 18 21.5 -0.7
baz=83
F04A Amboy 83.20 326 ⇑P P 15 18 22.6 -0.6
baz=84,SNR=7.3
G03A Yamhill 83.23 325 ⇑P P 15 18 22.8 -0.7
baz=84
C07A Waterville 83.24 329 ⇓P P 15 18 23.0 -0.4
baz=84,SNR=8.3
D06A Cle Elum 83.27 328 ⇓P P 15 18 22.6 -1.1
baz=84,SNR=8.1
D06A ⇑S S 15 28 43.3 +1.8
baz=84
E05A Randle 83.29 327 ⇑P P 15 18 22.5 -1.2
baz=84
E05A ⇓S S 15 28 44.0 +2.2
baz=84
ETW Entiat 83.31 328 eP P 15 18 22.8 -1.0
B08A Colville Reser 83.36 329 ⇓P P 15 18 23.2 -0.9
baz=84,SNR=11
B08A ⇓S S 15 28 43.2 +0.8
baz=84
MDT Midelt 83.36 50 LR LR 15 56 04.1
comp=Z,28µm,19.4s,MS6.7,baz=253,slow=36
MAW Mawson 83.46 164 eP P 15 18 22.6 -1.8
comp=Z,220nm,1.0s,mb6.1
MAW Mawson 83.46 164 P P 15 18 23.3 -1.1
comp=Z,172nm,1.0s,mb6.0,baz=237,slow=5.9,SNR=12
MAW Mawson 83.46 164 eP P 15 18 22.2 -2.2
comp=Z,488nm,1.1s,mb6.5
MAW LR LR
comp=Z,87µm,20.0s,MS7.1
MAW Mawson 83.46 164 eP P 15 18 23.2 -1.2
A09A Danville 83.46 330 ⇓P P 15 18 23.4 -1.1
baz=84,SNR=9.0
A09A ⇑S S 15 28 44.9 +1.6
baz=84
FCC Fort Churchill 83.60 348 eP P 15 18 23.8 -1.3
comp=Z,134nm,1.1s,mb6.0
FCC Fort Churchill 83.60 348 eP P 15 18 23.8 -1.2
FCC pmax pmax
comp=Z,134nm,1.1s,mb6.0
A08A Turner Farm, O 83.76 330 ⇓P P 15 18 25.2 -0.9
baz=84,SNR=11
A08A ⇑S S 15 28 46.5 +0.1
baz=84
B07A Winthrop 83.81 329 ⇓P P 15 18 25.2 -1.2
baz=84,SNR=10
B07A ⇓S S 15 28 47.9 +1.0
baz=84
BOSA Boshof 83.82 118 P P 15 18 26.5 -0.6
comp=Z,75nm,1.1s,mb5.7,baz=255,slow=4.6,SNR=6.6
BOSA LR LR 15 54 57.4
comp=Z,52µm,19.3s,MS6.9,baz=247,slow=35
BOSA Boshof 83.82 118 eP P 15 18 26.4 -0.6
comp=Z,128nm,0.9s,mb6.0
BOSA LR LR
comp=Z,52µm,20.0s,MS6.9
BOSA Boshof 83.82 118 eP P 15 18 26.5 -0.6
BOSA pmax pmax
comp=Z,128nm,0.9s,mb6.0
BOSA MLR MLR
comp=Z,52µm,20.0s,MS6.9
D05A Emumclaw 83.84 327 ⇓P P 15 18 24.9 -1.6
baz=84
D05A ⇑S S 15 28 49.2 +2.0
baz=84
BMW Boistfort Moun 83.98 326 eP P 15 18 26.9 -0.3
C05A Tolt Reservoir 84.03 328 ⇓P P 15 18 26.4 -1.1
baz=84,SNR=5.6
C05A ⇑S S 15 28 50.8 +1.6
baz=84
E03A Lebam 84.20 326 ⇑P P 15 18 26.8 -1.5
baz=84
E03A ⇓S S 15 28 53.4 +2.5
baz=84
SFS San Fernando 84.24 47 PFAKE 15 18 40.0 +11
SFS LR LR
comp=Z,25µm,21.0s,MS6.6
A07A Ashnola River, 84.35 329 ⇑P P 15 18 28.5 -0.5
baz=85,SNR=8.0
A07A ⇓S S 15 28 53.0 +0.8
baz=85
EDM Edmonton 84.43 336 eP P 15 18 26.7 -2.6
EDM Edmonton 84.43 336 eP P 15 18 28.6 -0.8
RPW Rockport 84.47 328 eP P 15 18 28.4 -1.2
JCW Jim Creek 84.49 328 eP P 15 18 29.1 -0.7
B06A Marblemount 84.50 329 ⇓P P 15 18 28.7 -1.2
baz=85,SNR=5.7
B06A ⇓S S 15 28 53.2 -0.6
baz=85
B05A Bryant 84.62 328 ⇑S S 15 28 53.8 -1.3

baz=85
C04A Brinnon 84.69 327 ⇓S S 15 28 58.9 +3.2
baz=85
A05A Maple Falls 85.12 329 ⇓P **P 15 18 33.0 0.0**
baz=85,SNR=7.7
A05A ⇑S S 15 29 02.3 +2.4
baz=85
B04A Port Angeles 85.18 327 ⇓S S 15 29 03.8 +3.2
baz=86
LBTB Lobatse 85.48 115 *e*P **P 15 18 34.3 -1.2**
comp=Z,277nm,1.6s,mb6.1
LBTB LR LR
comp=Z,31µm,19.0s,MS6.7
LBTB Lobatse 85.48 115 *e*P **P 15 18 34.3 -1.2**
LBTB pmax pmax
comp=Z,277nm,1.6s,mb6.1
LBTB MLR MLR
comp=Z,31µm,19.0s,MS6.7
PGC Sidney 85.55 328 *e*P **P 15 18 34.9 -0.2**
comp=Z,395nm,1.2s,mb6.5
MTE Manteigas 85.58 43 *e*P **P 15 18 36.2 +0.7**
comp=Z,108nm,1.0s,mb6.0
MTE LR LR
comp=Z,44µm,19.0s,MS6.9
TAM Tamanrasset 86.34 64 *e*P **P 15 18 40.7 +1.0**
PAB San Pablo 87.15 45 *e*P **P 15 18 43.9 +0.6**
comp=Z,218nm,1.5s,mb6.2
PAB LR LR
comp=Z,23µm,22.0s,MS6.5
PAB San Pablo 87.15 45 *e*P **P 15 18 43.9 +0.7**
PAB pmax pmax
comp=Z,218nm,1.5s,mb6.2
PAB MLR MLR
comp=Z,23µm,22.0s,MS6.5
ESDC Sonseca Array 87.47 45 P **P 15 18 45.7 +0.9**
comp=Z,18nm,1.0s,baz=257,slow=4.1,SNR=5.6
ESLA Sonseca Array 87.47 45 *e*P **P 15 18 45.3 +0.6**
comp=Z,49nm,1.4s,mb5.5
ESLA LR LR
comp=Z,120µm,19.0s,MS7.3
DRV Dumont d'Urvil 88.03 192 P **P 15 18 45.0 -2.1**
DRV Dumont d'Urvil 88.03 192 PP PP 15 22 15.0 +1.9
DRV S SKSac 15 29 16.0 +3.3
DRV SS SS 15 35 28.0 +13
DRV L 15 42 00.0
DRV R 15 48 00.0
XMAS Kiritimati 88.35 273 PFAKE 15 19 00.0 +10
XMAS LR LR
comp=Z,85µm,19.0s,MS7.2
BBB Bella Bella 90.11 329 LR LR 16 03 51.2
comp=Z,19µm,19.7s,MS6.5,baz=132,slow=38
SFJD Kangerlussuaq 90.64 8 *e*P **P 15 18 55.3 -3.7**
SFJD *i* S S 15 29 50.0 -1.9
SFJD *i* 15 30 04.0
SFJD *i* 15 31 12.2
SFJD *i* 15 31 17.6
SFJD LR LR
comp=Z,12µm,20.0s,MS6.3
SFJD Kangerlussuaq 90.64 8 *e*P **P 15 18 55.3 -3.7**
SFJD *i* S S 15 29 50.0 -1.9
SFJD *i* 15 31 12.2
SFJD MLR MLR
comp=Z,12µm,20.0s,MS6.3
SFJD Kangerlussuaq 90.64 8 *i* P **P 15 18 55.3 -3.7**
SFJD *i* S S 15 29 50.0 -1.9
SFJD *i* 15 30 04.0
SFJD *i* 15 31 12.2
SFJD *i* 15 31 17.6
SFJD
comp=Z,12µm,20.0s
SJPF Ste Jean 91.02 43 *e*P **P 15 19 03.0 +1.6**
comp=Z,384nm,1.9s,mb6.1
SJPF Ste Jean 91.02 43 *e*P **P 15 19 03.0 +1.6**
comp=Z,192nm,1.9s,mb6.1
SJPF Ste Jean 91.02 43 *e*P **P 15 19 03.0 +1.6**
SJPF pmax pmax
comp=Z,192nm,1.9s,mb6.1
CASY Casey 91.26 180 *e*P **P 15 19 00.5 -1.7**
CASY Casey 91.26 180 *e*P **P 15 19 00.4 -1.9**
comp=Z,148nm,1.0s,mb6.3
CASY LR LR
comp=Z,37µm,19.0s,MS6.8
ETSF Etsaut 91.33 44 *e*P **P 15 19 04.4 +1.6**
comp=Z,233nm,1.5s,mb6.0
ETSF Etsaut 91.33 44 *e*P **P 15 19 04.4 +1.6**
comp=Z,116nm,1.5s,mb6.0
ETSF Etsaut 91.33 44 *e*P **P 15 19 04.4 +1.6**
ETSF pmax pmax
comp=Z,117nm,1.5s,mb6.0
LSZ Lusaka 91.57 107 *e*P **P 15 19 05.8 +1.1**
comp=Z,105nm,1.5s,mb6.0
LSZ LR LR
comp=Z,46µm,19.0s,MS6.9
LSZ Lusaka 91.57 107 *e*P **P 15 19 05.8 +1.1**
LSZ pmax pmax
comp=Z,105nm,1.5s,mb6.0
LSZ MLR MLR
comp=Z,46µm,19.0s,MS6.9
YKA Yellowknife Ar 91.99 341 P **P 15 19 04.1 -1.3**
comp=Z,23nm,0.8s,mb5.5,baz=138,slow=4.4,SNR=9.1
QUIF Quistinic 92.34 38 *e*P **P 15 19 07.7 +0.3**
comp=Z,195nm,1.6s,mb5.9
QUIF Quistinic 92.34 38 *e*P **P 15 19 07.7 +0.3**
comp=Z,97nm,1.6s,mb5.9
QUIF Quistinic 92.34 38 *e*P **P 15 19 07.7 +0.3**
QUIF pmax pmax
comp=Z,97nm,1.6s,mb5.9
SNZO South Karori 92.50 223 PFAKE 15 19 20.0 +12
SNZO LR LR
comp=Z,90µm,21.0s,MS7.2
ROSF Rostrenen 92.50 38 *e*P **P 15 19 08.4 +0.3**
comp=Z,224nm,1.4s,mb6.0
ROSF Rostrenen 92.50 38 *e*P **P 15 19 08.4 +0.3**
comp=Z,112nm,1.4s,mb6.0
ROSF Rostrenen 92.50 38 *e*P **P 15 19 08.4 +0.3**
ROSF pmax pmax
comp=Z,112nm,1.4s,mb6.0
URZ Urewera 92.57 227 P **P 15 19 09.3 +0.5**
comp=Z,8.5nm,0.9s,baz=95,slow=4.0,SNR=3.8
URZ LR LR 15 52 05.5
comp=Z,97µm,20.1s,MS7.2,baz=118,slow=30
SGMF Saint Gilles 92.86 38 *e*P **P 15 19 09.9 +0.1**
comp=Z,189nm,1.6s,mb6.0
SGMF Saint Gilles 92.86 38 *e*P **P 15 19 09.9 +0.1**
comp=Z,94nm,1.6s,mb6.0
SGMF Saint Gilles 92.86 38 *e*P **P 15 19 09.9 +0.1**
SGMF pmax pmax
comp=Z,94nm,1.6s,mb6.0
LFF La Frestale 93.16 42 *e*P **P 15 19 12.2 +1.0**
comp=Z,74nm,0.9s,mb5.8
LFF La Frestale 93.16 42 *e*P **P 15 19 12.2 +1.0**
comp=Z,37nm,0.9s,mb5.8
LFF La Frestale 93.16 42 *e*P **P 15 19 12.2 +1.0**
LFF pmax pmax
comp=Z,37nm,0.9s,mb5.8
DYA Yadsworthy 93.25 36 *e*P **P 15 19 10.6 -0.9**
DYA AMS AMS 15 57 30.3
comp=Z,26µm,21.0s,MS6.7
HTL Hartland 93.25 35 *e*P **P 15 19 10.3 -1.2**
HTL AMb AMB 15 19 23.3
comp=Z,157nm,1.9s,mb6.1
HTL AMS AMS 15 57 59.2
comp=Z,20µm,20.1s,MS6.6
MTLF Montolieu 93.32 44 *e*P **P 15 19 12.8 +0.8**
comp=Z,272nm,1.9s,mb6.1
MTLF Montolieu 93.32 44 *e*P **P 15 19 12.8 +0.8**
comp=Z,136nm,1.9s,mb6.0
MTLF Montolieu 93.32 44 *e*P **P 15 19 12.8 +0.8**
MTLF pmax pmax
comp=Z,136nm,1.9s,mb6.0
RPZ Rata Peaks 93.36 220 P **P 15 19 12.7 +0.4**
comp=Z,23nm,1.0s,mb5.6,baz=104,slow=5.5,SNR=4.3
RPZ LR LR 15 50 42.1
comp=Z,33µm,21.1s,MS6.8,baz=108,slow=29
MFF Saint Martin d 93.44 40 *e*P **P 15 19 13.1 +0.6**
comp=Z,497nm,1.8s,mb6.3
MFF Saint Martin d 93.44 40 *e*P **P 15 19 13.1 +0.6**
comp=Z,248nm,1.8s,mb6.3
MFF Saint Martin d 93.44 40 *e*P **P 15 19 13.1 +0.6**
MFF pmax pmax
comp=Z,248nm,1.8s,mb6.3
POHA Pohakuloa 93.45 290 PFAKE 15 19 20.0 +6.8
POHA LR LR
comp=Z,63µm,20.0s,MS7.1
RAO Raoul Island 93.46 236 PFAKE 15 19 20.0 +6.8
RAO LR LR
comp=Z,35µm,22.0s,MS6.8
DSB Dublin 93.52 33 *e*P **P 15 19 11.6 -1.0**
comp=Z,62nm,1.3s,mb5.9
RJF Les Rejaudoux 93.82 42 *e*P **P 15 19 14.8 +0.6**
comp=Z,334nm,1.7s,mb6.2
RJF *e*MLR MLR
comp=Z,31µm,17.8s,MS6.5
RJF Les Rejaudoux 93.82 42 *e*P **P 15 19 14.8 +0.6**
comp=Z,167nm,1.7s,mb6.2
RJF LR LR
comp=Z,31µm,17.8s,MS6.8
RJF Les Rejaudoux 93.82 42 *e*P **P 15 19 14.8 +0.6**
RJF pmax pmax
comp=Z,167nm,1.7s,mb6.2
RJF MLR MLR
comp=Z,31µm,17.8s,MS6.8
GRR Gorron 93.91 39 *e*P **P 15 19 14.7 +0.1**
comp=Z,326nm,1.9s,mb6.1
GRR Gorron 93.91 39 *e*P **P 15 19 14.7 +0.1**
comp=Z,163nm,1.9s,mb6.1
GRR Gorron 93.91 39 *e*P **P 15 19 14.7 +0.1**
GRR pmax pmax
comp=Z,163nm,1.9s,mb6.1
CAF Calviac 93.98 43 *e*P **P 15 19 15.9 +0.9**
comp=Z,239nm,1.9s,mb6.0
CAF Calviac 93.98 43 *e*P **P 15 19 15.9 +0.9**
comp=Z,120nm,1.9s,mb6.0
CAF Calviac 93.98 43 *e*P **P 15 19 15.9 +0.9**
CAF pmax pmax
comp=Z,120nm,1.9s,mb6.0
FLN La Foliniere 94.31 38 *e*P **P 15 19 16.8 +0.4**
comp=Z,428nm,1.8s,mb6.3
FLN *e*MLR MLR
comp=Z,35µm,22.8s,MS6.5
FLN La Foliniere 94.31 38 *e*P **P 15 19 16.8 +0.4**
comp=Z,214nm,1.8s,mb6.3
FLN LR LR
comp=Z,35µm,22.8s,MS6.8
FLN La Foliniere 94.31 38 *e*P **P 15 19 16.8 +0.4**
FLN pmax pmax
comp=Z,214nm,1.8s,mb6.3
FLN MLR MLR
comp=Z,35µm,22.8s,MS6.8
LDF La Druitiere 94.44 39 *e*P **P 15 19 17.2 +0.2**
comp=Z,163nm,1.5s,mb5.9
LDF La Druitiere 94.44 39 *e*P **P 15 19 17.2 +0.2**
comp=Z,81nm,1.5s,mb5.9
LDF La Druitiere 94.44 39 *e*P **P 15 19 17.2 +0.2**
LDF pmax pmax
comp=Z,81nm,1.5s,mb5.9
MCH1 Michaelchurch 94.58 35 *e*P **P 15 19 16.9 -0.6**
MCH1 AMb AMB 15 19 28.9
comp=Z,118nm,1.7s,mb6.0
MCH1 AMS AMS 15 58 49.5
comp=Z,24µm,20.3s,MS6.7
WRAK Wrangell Islan 94.63 330 *e*P **P 15 19 17.1 -0.6**
comp=Z,94nm,1.1s,mb6.1
WRAK LR LR
comp=Z,16µm,19.0s,MS6.5
TCF Toulx Ste Croi 94.71 42 *e*P **P 15 19 18.8 +0.5**
comp=Z,209nm,1.8s,mb6.0
TCF Toulx Ste Croi 94.71 42 *e*P **P 15 19 18.8 +0.5**
comp=Z,104nm,1.8s,mb6.0
TCF Toulx Ste Croi 94.71 42 *e*P **P 15 19 18.8 +0.5**
TCF pmax pmax
comp=Z,104nm,1.8s,mb6.0
LASF Ste Croix 94.72 44 *e*P **P 15 19 20.1 +1.7**
comp=Z,209nm,1.8s,mb6.0
DLBC Dease Lake 94.80 333 *e*P **P 15 19 17.2 -1.2**
LBL Lubilhac 94.86 43 *e*P **P 15 19 20.4 +1.4**
HLM1 Long Mynd 94.91 34 *e*P **P 15 19 17.4 -1.6**
KEST Kesra 94.91 53 P **P 15 19 19.7 +0.2**
comp=Z,4.0nm,0.9s,baz=236,slow=3.3,SNR=4.3
KEST LR LR 16 06 36.3
comp=Z,20µm,18.8s,MS6.6,baz=355,slow=38
SBD1 Bryn Du 94.92 34 *e*P **P 15 19 18.1 -0.9**
SBD1 AMb AMB 15 19 21.6
comp=Z,422nm,1.8s,mb6.6
BORG Borgarnes 94.94 19 PFAKE 15 19 30.0 +11
BORG LR LR
comp=Z,23µm,21.0s,MS6.6
SWN1 Swindon 94.96 36 AMS AMS 15 58 11.9
comp=Z,19µm,22.3s,MS6.5
AFI Afiamalu 95.16 253 LR LR 15 52 29.6
comp=Z,19µm,20.0s,MS6.6,baz=116,slow=29
AFI Afiamalu 95.16 253 PFAKE 15 19 30.0 +8.8
AFI LR LR
comp=Z,38µm,19.0s,MS6.9
AGO Saint Agoulin 95.17 42 *e*P **P 15 19 20.9 +0.5**
BGF Bois d'Agland 95.23 41 *e*P **P 15 19 21.3 +0.6**
comp=Z,209nm,1.4s,mb6.1
BGF Bois d'Agland 95.23 41 *e*P **P 15 19 21.3 +0.6**
comp=Z,104nm,1.4s,mb6.1
BGF Bois d'Agland 95.23 41 *e*P **P 15 19 21.3 +0.6**
BGF pmax pmax
comp=Z,104nm,1.4s,mb6.1
GAL1 Galloway 95.23 32 *e*P **P 15 19 19.9 -0.6**
GAL1 AMb AMB 15 19 31.9
comp=Z,88nm,1.6s,mb5.9
GAL1 AMS AMS 15 59 00.1
comp=Z,20µm,20.2s,MS6.6
PLDF La Plantade 95.43 42 *e*P **P 15 19 22.0 +0.4**
STNC Stoke 95.56 34 *e*P **P 15 19 20.9 -1.1**
STNC AMb AMB 15 19 38.0
comp=Z,182nm,1.9s,mb6.2
STNC AMS AMS 16 00 31.3
comp=Z,20µm,20.7s,MS6.6
VIVF Saint-Julien-l 95.59 44 *e*P **P 15 19 23.6 +1.2**
comp=Z,58nm,1.2s,mb5.6
VIVF Saint-Julien-l 95.59 44 *e*P **P 15 19 23.6 +1.2**
comp=Z,29nm,1.2s,mb5.6
VIVF Saint-Julien-l 95.59 44 *e*P **P 15 19 23.6 +1.2**
VIVF pmax pmax
comp=Z,29nm,1.2s,mb5.6
AVF Avril sur Loir 95.64 41 *e*P **P 15 19 22.9 +0.3**
comp=Z,143nm,1.7s,mb5.8
AVF Avril sur Loir 95.64 41 *e*P **P 15 19 22.9 +0.3**
comp=Z,72nm,1.7s,mb5.8
AVF Avril sur Loir 95.64 41 *e*P **P 15 19 22.9 +0.3**
AVF pmax pmax
comp=Z,72nm,1.7s,mb5.8
SSB Saint Sauveur 95.70 43 P **P 15 19 22.3 -0.6**
KWE Weaver Farm 95.70 34 *e*P **P 15 19 22.2 -0.5**
KAR1 Arisaig 95.82 30 *e*P **P 15 19 21.8 -1.3**
CWF Charnwood Fore 95.84 35 *e*P **P 15 19 21.9 -1.5**
CWF AMS AMS 15 59 37.5
comp=Z,18µm,19.9s,MS6.5
PGBU Glenifferbraes 95.85 31 *e*P **P 15 19 22.2 -1.0**
PGBU AMb AMB 15 19 31.4
comp=Z,79nm,1.4s,mb5.9
PGBU AMS AMS 15 58 42.0
comp=Z,31µm,20.4s,MS6.8
SSF Saint Saulge 95.86 41 *e*P **P 15 19 23.6 0.0**
comp=Z,33nm,1.0s
SSF Saint Saulge 95.86 41 *e*P **P 15 19 23.6 0.0**
comp=Z,17nm,1.0s
SSF Saint Saulge 95.86 41 *e*P **P 15 19 23.6 0.0**
SSF pmax pmax
comp=Z,17nm,1.0s
SMF Signal de Mont 95.88 42 *e*P **P 15 19 24.2 +0.6**
PCA1 Carrot 95.90 31 *e*P **P 15 19 22.3 -1.2**
LHO Holmfirth 95.97 34 *e*P **P 15 19 21.7 -2.2**
KBI1 Birley Grange 95.99 34 *e*P **P 15 19 23.5 -0.5**
KPL Plockton 96.13 29 *e*P **P 15 19 24.1 -0.4**
KPL AMb AMB 15 19 40.2
comp=Z,83nm,1.4s,mb6.0
KPL *e* 15 23 24.7
KPL AMS AMS 15 58 53.9
comp=Z,29µm,21.4s,MS6.7
LOR Lormes 96.17 41 *e*P **P 15 19 25.1 +0.1**
comp=Z,153nm,1.8s,mb5.8
LOR *e*MLR MLR
comp=Z,32µm,22.2s,MS6.5
LOR Lormes 96.17 41 *e*P **P 15 19 25.1 +0.1**
comp=Z,77nm,1.8s,mb5.8
LOR LR LR
comp=Z,32µm,22.3s,MS6.8
LOR Lormes 96.17 41 *e*P **P 15 19 25.1 +0.1**
LOR pmax pmax
comp=Z,77nm,1.8s,mb5.8
LOR MLR MLR
comp=Z,32µm,22.3s,MS6.8
ESK Eskdalemuir 96.20 32 *e*P **P 15 19 23.6 -1.3**
comp=Z,224nm,2.1s,mb6.2
ESK LR LR
comp=Z,12µm,20.0s,MS6.4
ESK Eskdalemuir 96.20 32 *e*P **P 15 19 24.0 -0.9**
ESK *e* 15 23 25.8
ESK AMS AMS 16 00 24.2
comp=Z,11µm,18.2s,MS6.3
ESK Eskdalemuir 96.20 32 *e*P **P 15 19 23.6 -1.3**
ESK pmax pmax
comp=Z,224nm,2.1s,mb6.2
ESK MLR MLR
comp=Z,12µm,20.0s,MS6.4
KIP Kipapa 96.23 290 PFAKE 15 19 40.0 +14
KIP LR LR
comp=Z,54µm,20.0s,MS7.0
HPK Haverah Park 96.30 34 *e*P **P 15 19 24.6 -0.7**
HPK *e* 15 23 15.3
HPK AMS AMS 15 58 23.0
comp=Z,28µm,22.6s,MS6.7
SIT Sitka 96.36 330 PFAKE 15 19 40.0 +14
SIT LR LR
comp=Z,28µm,20.0s,MS6.7
KAC Achnashellach 96.38 29 *e*P **P 15 19 25.4 -0.2**
ORIF Oris-en-Rattie 96.39 44 *e*P **P 15 19 27.6 +1.6**
comp=Z,193nm,1.6s,mb6.0
ORIF *e*MLR MLR
comp=Z,53µm,21.8s,MS6.7
ORIF Oris-en-Rattie 96.39 44 *e*P **P 15 19 27.6 +1.6**
comp=Z,97nm,1.6s,mb6.0
ORIF Oris-en-Rattie 96.39 44 *e*P **P 15 19 27.6 +1.6**
ORIF pmax pmax
comp=Z,97nm,1.6s,mb6.0
VSL Villasalto 96.47 50 PFAKE 15 19 40.0 +13
VSL LR LR
comp=Z,26µm,19.0s,MS6.7
EDI Edinburgh 96.53 31 *e*P **P 15 19 25.8 -0.6**
EDI AMb AMB 15 19 43.1
comp=Z,51nm,2.1s,mb5.6
CALN Calern 96.54 45 *e*P **P 15 19 26.1 -0.7**
MDO Dochfour 96.77 30 *e*P **P 15 19 26.5 -1.0**
MVIF Mont Vial 96.78 45 *e*P **P 15 19 32.2 +4.4**
TOUF Mont Tournerai 96.89 45 *e*P **P 15 19 29.1 +0.8**
LUCF Luceram 96.90 45 *e*P **P 15 19 29.6 +1.2**
BNI Bardonecchia 96.96 44 PFAKE 15 19 40.0 +11
BNI LR LR
comp=Z,57µm,22.0s,MS7.0
AUTN L'Aution 97.00 45 *e*P **P 15 19 28.4 -0.4**
LPL La Plagne 97.19 44 *e*P **P 15 19 31.5 +1.9**
comp=Z,111nm,1.4s,mb5.8
LPL La Plagne 97.19 44 *e*P **P 15 19 31.5 +1.9**
comp=Z,56nm,1.4s,mb5.8
LPL La Plagne 97.19 44 *e*P **P 15 19 31.5 +1.9**
LPL pmax pmax
comp=Z,56nm,1.4s,mb5.8
LPG La Plagne 97.19 44 *e*P **P 15 19 31.6 +1.9**
comp=Z,168nm,1.4s,mb6.0
LPG La Plagne 97.19 44 *e*P **P 15 19 31.6 +1.9**
comp=Z,84nm,1.4s,mb6.0
LPG La Plagne 97.19 44 *e*P **P 15 19 31.6 +1.9**
LPG pmax pmax
comp=Z,84nm,1.4s,mb6.0
CABF La Chapelle 97.25 42 *e*P **P 15 19 30.8 +0.9**
comp=Z,104nm,1.3s,mb5.8
CABF La Chapelle 97.25 42 *e*P **P 15 19 30.8 +0.9**
comp=Z,52nm,1.3s,mb5.8
CABF La Chapelle 97.25 42 *e*P **P 15 19 30.8 +0.9**
CABF pmax pmax
comp=Z,52nm,1.3s,mb5.8
MCD Coleburn Disti 97.36 30 *e*P **P 15 19 29.1 -1.0**
MEZF Maizieres J'vi 97.44 40 *e*P **P 15 19 31.1 +0.4**
SUMG Summit 97.45 9 *e*P **P 15 19 29.4 -0.7**
comp=Z,12nm,1.1s
BAIF Baives 97.62 39 *e*P **P 15 19 31.7 +0.2**
comp=Z,60nm,1.3s,mb5.7
BAIF Baives 97.62 39 *e*P **P 15 19 31.7 +0.2**
comp=Z,30nm,1.3s,mb5.7
BAIF Baives 97.62 39 *e*P **P 15 19 31.7 +0.2**
BAIF pmax pmax
comp=Z,30nm,1.3s,mb5.7
SKAG Skagway 97.65 332 *e*P **P 15 19 31.0 -0.4**
comp=Z,94nm,1.1s,mb6.2
DOU Dourbes 97.86 39 P **P 15 19 32.1 -0.4**
comp=Z,33nm,1.8s,mb5.6
SNF Seneffe 97.87 38 P **P 15 19 33.0 +0.5**
comp=Z,35nm,1.9s,mb5.6
THEF They Montfort 97.88 41 *e*P **P 15 19 35.8 +3.1**
GIVF Givet 98.00 39 *e*P **P 15 19 33.7 +0.5**
comp=Z,234nm,1.5s,mb6.2
GIVF Givet 98.00 39 *e*P **P 15 19 33.7 +0.5**
comp=Z,117nm,1.5s,mb6.2
GIVF Givet 98.00 39 *e*P **P 15 19 33.7 +0.5**
GIVF pmax pmax
comp=Z,117nm,1.5s,mb6.2
HAU Haudompre 98.00 41 *e*P **P 15 19 33.7 +0.5**
HAU *e*MLR MLR
comp=Z,35µm,23.0s,MS6.5
LOMF Lomont 98.02 42 *e*P **P 15 19 31.3 -2.0**
UCC Uccle 98.04 38 P **P 15 19 33.5 +0.2**
comp=Z,43nm,1.8s,mb5.7
HINF Hinteralfeld 98.23 42 *e*P **P 15 19 34.5 +0.2**
comp=Z,93nm,1.6s,mb5.8
HINF Hinteralfeld 98.23 42 *e*P **P 15 19 34.5 +0.2**
comp=Z,47nm,1.6s,mb5.8
HINF Hinteralfeld 98.23 42 *e*P **P 15 19 34.5 +0.2**
HINF pmax pmax
comp=Z,47nm,1.6s,mb5.8
BCLA Clavier 98.41 39 P **P 15 19 35.6 +0.5**
comp=Z,28nm,1.7s,mb5.5
MOF Molkenrain 98.42 42 *e*P **P 15 19 34.6 -0.5**
BBS Basel-Blauen 98.49 42 *e*P **P 15 19 37.0 +1.6**
ECH Echery 98.59 41 *e*P **P 15 19 35.5 -0.3**
ECH Echery 98.59 41 *e*P **P 15 19 35.6 -0.2**
WLF Walferdange 98.59 40 P **P 15 19 37.1 +1.2**
comp=Z,56nm,1.7s,mb5.8
WLF Walferdange 98.59 40 *e*P **P 15 19 36.1 +0.3**
comp=Z,119nm,1.5s,mb6.2
WLF LR LR
comp=Z,22µm,21.0s,MS6.6
WLF Walferdange 98.59 40 *e*P **P 15 19 36.1 +0.3**
WLF pmax pmax
comp=Z,119nm,1.5s,mb6.2
WLF MLR MLR
comp=Z,22µm,21.0s,MS6.6
WLF Walferdange 98.59 40 *e*Pdiff **P 15 19 36.9 +1.1**
CDF Champ du Feu 98.74 41 *e*P **P 15 19 37.1 +0.6**
comp=Z,126nm,1.5s,mb5.9
CDF Champ du Feu 98.74 41 *e*P **P 15 19 37.1 +0.6**
comp=Z,63nm,1.5s,mb5.9
CDF Champ du Feu 98.74 41 *e*P **P 15 19 37.1 +0.6**
CDF pmax pmax
comp=Z,63nm,1.5s,mb5.9
WDD Wield Dalam 98.84 55 PFAKE 15 19 50.0 +13
WDD LR LR
comp=Z,29µm,22.0s,MS6.7
MEM Membach 98.90 39 P **P 15 19 38.4 +1.2**
comp=Z,22nm,1.9s
HGN Heimansgroeve 98.92 39 *e*P **P 15 19 36.6 -0.7**
comp=Z,35nm,2.0s,mb5.5
HGN Heimansgroeve 98.92 39 *e*PP PP 15 23 45.7 +6.0
HGN Heimansgroeve 98.92 39 *e*SKS SKSac 15 30 05.0 -7.6
VLC Villacollemand 99.02 46 PFAKE 15 19 50.0 +12
VLC LR LR
comp=Z,12µm,20.0s,MS6.4
RUP Ruppelstein 99.14 40 *e*P **P 15 19 38.5 +0.2**
TUE Stuetta 99.24 43 *e*Pdif **P 15 19 37.1 -1.7**
comp=Z,98nm,1.8s,mb6.0
TUE LR LR
comp=Z,18µm,22.0s,MS6.5
BFO Black Forest 99.35 41 PFAKE 15 19 50.0 +11
BFO LR LR
comp=Z,17µm,19.0s,MS6.6
BFO Black Forest 99.35 41 *e*Pdiff **P 15 19 41.3 +2.1**
SPAK Spaichingen-Ko 99.54 42 *e*P **P 15 19 36.8 -3.3**
LRW Lerwick 99.58 28 *e*P Pdif 15 19 39.5 -0.9
LRW AMb AMB 15 19 48.0
comp=Z,81nm,1.7s,mb5.9
LRW *e* 15 23 47.6
LRW AMS AMS 15 59 30.4
comp=Z,27µm,20.7s,MS6.7
DAVA Damuels 99.90 43⇑ *i* Pdiff Pdif 15 19 42.3 +0.5
comp=Z,23nm,1.1s
WTSB Winterswijk 99.92 38 *e*P Pdif 15 19 41.9 0.0
BUG Bochum-Univer 99.97 38 *e*Pdiff Pdif 15 19 43.5 +1.3
TOD Tromm 100.14 40 *e*P Pdif 15 19 38.7 -4.2
FETA Feichten 100.33 43⇑ *i* Pdiff Pdif 15 19 44.0 +0.3
comp=Z,34nm,1.6s
AQU L'Aquila 100.38 48 *e*Pdif Pdif 15 19 42.8 -1.2
AQU LR LR
comp=Z,20µm,19.0s,MS6.7
IBBN Ibbenburen 100.60 38 *e*Pdiff Pdif 15 19 45.6 +0.7

MOTA Moosalm 100.69 43 ⇓*i* Pdiff Pdif 15 19 46.8 +1.4
comp=Z,20nm,1.0s
WTTA Wattenberg 101.00 43 ⇑*i* Pdiff Pdif 15 19 47.3 +0.6
comp=Z,55nm,1.8s
FUR Furstenfeldbru 101.10 42 *e*Pdiff Pdif 15 19 48.4 +1.2
CUC Castrocucco 101.26 51 PFAKE 15 20 00.0 +12
CUC LR LR
comp=Z,25µm,21.0s,MS6.7
UBBA Unterbreizbach 101.31 40 *e*Pdiff Pdif 15 19 48.8 +0.7
GRF Grafenberg Arr 101.63 41 *e*P Pdif 15 19 50.6 +1.1
GRF *e* 15 24 07.2
GRF *e*PS PS 15 33 11.6 +7.0
GRF *e*SS SS 15 38 48.2 +17
GRF MLR MLR
comp=Z,18µm,19.1s,MS6.6
GRF Grafenberg Arr 101.63 41 *e*Pdiff Pdif 15 19 50.6 +1.1
GRF *e*PP PP 15 24 07.2 +7.0
GRF *e*SKSac SKSac 15 30 46.8 +21
GRF *e*Sdiff Sdif 15 31 41.0 +13
GRF *e*PS PS 15 33 11.6 +7.0
GRF *e*PKKPbc PKKPbc 15 36 34.5 +37
GRF *e*SS SS 15 38 48.2 +17
GRF *e*L 16 07 41.6
comp=Z,18µm,19.1s
DAWY Dawson 101.64 335 *e*Pdif Pdif 15 19 50.1 +0.5
TIP Timpagrande 101.67 52 PFAKE 15 20 00.0 +10
TIP LR LR
comp=Z,31µm,22.0s,MS6.8
INK Inuvik 101.73 340 *e*Pdif Pdif 15 19 48.6 -1.3
comp=Z,1µm,1.2s
INK *e*PP PP 15 23 54.5 -6.1
INK Inuvik 101.73 340 *e*P Pdif 15 19 48.7 -1.3
INK pmax pmax
comp=Z,1µm,1.2s
MOX Moxa 102.21 40 *e*PDIFF Pdif 15 19 58.9 +6.8
comp=Z,35nm,1.8s
MOX *e* 15 23 40.1
MOX
comp=Z,2µm,19.0s
MOX Moxa 102.21 40 *e*PP PP 15 24 07.5 +2.9
ROTZ Rotzenmuhle 102.25 41 *e*Pdiff Pdif 15 19 53.9 +1.6
ROTZ *e*PP PP 15 24 06.4 +1.5
MANZ Manzenberg 102.27 41 *e*Pdiff Pdif 15 19 53.3 +0.9
MANZ *e*PP PP 15 24 06.9 +1.9
LJU Ljubljana 102.43 45 *e*P Pdif 15 19 57.7 +4.6
LJU *e* 15 24 10.3
LJU *e*SS SS 15 38 58.4 +16
LJU Ljubljana 102.43 45 *e*Pdiff Pdif 15 19 57.7 +4.6
LJU *e*PP PP 15 24 10.3 +3.9
LJU *e*SKSac SKSac 15 30 50.4 +21
LJU *e*Sdiff Sdif 15 31 58.0 +23
LJU *e* 15 33 27.9
LJU *e*SS SS 15 38 58.4 +16
WERN Wernitzgruen 102.54 41 *e*Pdiff Pdif 15 19 52.9 -0.7
VISS Visnje 102.56 46 *e*Pdiff Pdif 15 19 57.6 +4.0
VISS *e*PP PP 15 24 11.7 +4.4
VISS *e* 15 30 48.9
VISS *e* 15 34 00.5
VISS *e* 15 39 15.7
VISS *e* 15 44 14.2
NKC Novy Kostel 102.56 41 *e*Pdif Pdif 15 19 54.8 +1.1
NKC *e*PP PP 15 24 08.7 +1.5
NKC *e*SKS 15 30 31.3
NKC *e* 15 33 23.6
NKC *e* 15 38 55.5
NKC Novy Kostel 102.56 41 *i* P Pdif 15 19 54.8 +1.1
NKC *e* 15 24 08.7
NKC *e* 15 30 31.3
NKC *e* 15 38 55.5
NKC MLR MLR
comp=Z,17µm,17.6s,MS6.6
NKC Novy Kostel 102.56 41 *e*PDIF Pdif 15 19 54.8 +1.1
NKC *e*PP PP 15 24 08.7 +1.5
NKC *e*SKS 15 30 31.3
NKC *ex* x 15 33 23.6
NKC *e*SS SS 15 38 55.5 +12
NKC AMS AMS 16 09 40.0
comp=Z,17µm,17.6s
TANN Tannenbergstha 102.63 41 *e*Pdiff Pdif 15 19 55.2 +1.2
BSEG Bad Segeberg 102.64 37 *e*PP PP 15 24 10.0 +2.3
EGAK Eagle 102.65 335 *e*Pdif Pdif 15 19 54.1 +0.1
comp=Z,21nm,1.1s
EGAK LR LR
comp=Z,24µm,19.0s,MS6.7
BOJS Bojanci 102.73 46 *e*Pdiff Pdif 15 19 57.7 +3.2
BOJS *e*PP PP 15 24 12.4 +3.8
BOJS *e*SKSac SKSac 15 30 48.9 +18
BOJS *e*Sdiff Sdif 15 32 00.9 +24
BOJS *e*SS SS 15 39 01.9 +16
GEC2 GERESS Array S 102.85 42 *e*Pdiff Pdif 15 19 53.8 -1.2
GERES GERESS Array B 102.85 42 Pdiff Pdif 15 19 55.2 +0.2
comp=Z,1.6nm,0.9s,baz=238,slow=2.5,SNR=5.1
GERES PKKPbc PKKPbc 15 35 52.1 -2.1
comp=Z,0.6nm,0.6s,baz=101,slow=1.0,SNR=3.4
GERES PKPPKP 15 44 18.3
comp=Z,0.2nm,0.3s,baz=79,slow=2.9,SNR=3.5
KHC Kasperske Hory 102.87 42 *i* P Pdif 15 19 55.5 +0.4
KHC *e* 15 24 05.6
KHC *e* 15 30 34.3
KHC *e* 15 39 03.3
KHC MLR MLR
comp=Z,12µm,21.4s,MS6.4
KHC Kasperske Hory 102.87 42 *e*PDIF Pdif 15 19 55.5 +0.4
KHC *ex* x 15 20 16.5
KHC *ex* x 15 23 21.5
KHC *e*PP PP 15 24 05.6 -4.0
KHC *e*SKS 15 30 34.3
KHC *ex* x 15 33 29.0
KHC *ex* x 15 39 03.3
KHC AMS AMS 16 02 50.0
comp=Z,12µm,21.4s
MUD Monsted U'grnd 102.95 34 *e*P Pdif 15 20 05.6 +10
MUD *i* 15 24 15.7
MUD *i* 15 31 52.9
MUD *i* 15 33 35.9
MUD *i* 15 39 01.0
MUD Monsted U'grnd 102.95 34 *i* P Pdif 15 20 05.6 +10
MUD *i* 15 24 15.7
MUD *i* 15 31 52.9
MUD *i* 15 33 35.9
MUD *i* 15 39 01.0
comp=Z,23µm,20.0s
PERS Pernice 103.02 45 *e*Pdiff Pdif 15 20 00.5 +4.8
PERS *e*PP PP 15 24 13.8 +3.1
PERS *e*Sdiff Sdif 15 32 01.6 +22
PERS *e*SS SS 15 39 01.9 +12
CLL Collm 103.26 40 *e*Pdif Pdif 15 19 57.0 +0.2
CLL *e*PP PP 15 24 14.0 +1.6
CLL *e*SKS 15 30 39.0
CLL LR LR
comp=Z,13µm,21.3s,MS6.4
CLL Collm 103.26 40 *e*P Pdif 15 19 57.0 +0.2
CLL *e* 15 24 14.0
CLL *e* 15 30 39.0
CLL pmax pmax
comp=Z,24nm,1.4s
CLL MLR MLR
comp=Z,13µm,21.3s,MS6.4
CLL Collm 103.26 40 *e*Pdiff Pdif 15 19 56.8 0.0
CLL *e*PP PP 15 24 14.1 +1.7
CLL Collm 103.26 40 *e*Pdif Pdif 15 19 57.0 +0.2
comp=Z,24nm,1.4s
CLL LmV 15 10 00.0
comp=Z,13µm,21.3s
CLL *e*Plp 15 20 06.0
comp=Z,3µm,19.3s
CLL *e*PP PP 15 24 14.0 +1.6
CLL *e*PPlp 15 24 18.0
comp=E,2µm,17.2s
CLL *e*PPlp 15 24 18.0
comp=Z,5µm,13.0s
CLL *e*PPPP 15 28 02.0
CLL *e*SKSac SKSac 15 30 39.0 +5.5
CLL *e*Sdif Sdif 15 31 48.0 +6.4
CLL *e*PS PS 15 33 30.0 +8.2
CLL *e*PPS 15 34 20.0
CLL *e*SS SS 15 38 51.0 -2.4
CLL *e*SSS 15 43 00.0
FBE Freiberg 103.34 40 *e*Pdiff Pdif 15 19 57.3 +0.2
FBE *e*PP PP 15 24 15.8 +2.8
BRG Berggiesshubel 103.67 40 Pdif Pdif 15 20 07.0 +8.4
BRG PP PP 15 24 14.0 -1.5
BRG SKS 15 30 48.0
BRG Sdif Sdif 15 32 04.0 +19
BRG *i* 15 33 39.0
BRG *i* 15 39 18.0
BRG LR LR
comp=Z,15µm,22.4s,MS6.5
BRG Berggiesshubel 103.67 40 *e*Pdiff Pdif 15 19 59.1 +0.5
BRG Berggiesshubel 103.67 40 PDIF Pdif 15 20 07.0 +8.4
BRG PP PP 15 24 14.0 -1.5
BRG SKS 15 30 48.0
BRG SDIF Sdif 15 32 04.0 +19
BRG *i* 15 33 39.0
BRG *i* 15 39 18.0
BRG
comp=N,8µm,22.5s
BRG
comp=E,14µm,21.7s
BRG
comp=Z,26µm,22.4s
KOGS Kog 103.69 45 *e*Pdiff Pdif 15 20 03.5 +4.8
KOGS *e*PP PP 15 24 20.1 +4.3
KOGS *e*SKSac SKSac 15 30 41.9 +6.2
KOGS *e*Sdiff Sdif 15 32 10.0 +25
KOGS *e* 15 33 36.3
PRU Pruhonice 103.75 41 *i* P Pdif 15 19 56.5 -2.4
PRU *e* 15 24 13.4
PRU *e* 15 39 07.8
PRU MLR MLR
comp=Z,20µm,17.9s,MS6.7
PRU Pruhonice 103.75 41 *e*PDIF Pdif 15 19 56.5 -2.4
PRU *e*PP PP 15 24 13.4 -2.7
PRU *e*SKS 15 30 45.0
PRU *ex* x 15 33 36.5
PRU *e*SS SS 15 39 07.8 +7.6
PRU AMS AMS 16 08 40.0
comp=Z,20µm,17.9s
PVCC Panska Ves 103.94 41 *e*PP PP 15 24 14.5 -3.0
PVCC *e*SKS 15 30 41.5
PVCC *ex* x 15 33 37.4
PVCC *ex* x 15 39 17.4
PVCC AMS AMS 16 09 40.0
comp=Z,21µm,18.5s
DAG Danmarks Havn 103.97 11*b i*P PKiKP 15 24 07.2 -9.2
comp=Z,32nm,1.8s
DAG
comp=Z,18µm,20.0s
TREC Trest 104.11 42 *e*PP PP 15 24 21.6 +2.8
TREC *e*SKS 15 30 44.2
TREC AMS AMS 16 10 10.0
comp=Z,16µm,18.0s
KONO Kongsberg 104.30 31 PFAKE 15 20 10.0 +8.6
KONO LR LR
comp=Z,28µm,21.0s,MS6.8
KONO Kongsberg 104.30 31 *e*PP PP 15 24 19.1 -0.9
KONO *e*SKS 15 30 44.9
KONO *i* 15 34 38.3
KONO *e*SS SS 15 39 14.6 +7.3
KONO AMS AMS 16 03 24.4
comp=Z,22µm,22.0s,MS6.7
COP Copenhagen 104.39 35 *e*P Pdif 15 19 57.5 -4.3
COP *i* 15 24 18.9
COP *i* 15 29 21.8
COP *i* 15 30 44.0
COP *i* 15 33 35.5
COP LR LR
comp=Z,5µm,18.0s,MS6.1
COP Copenhagen 104.39 35 *e*P Pdif 15 19 57.5 -4.3
COP *i* 15 24 18.9
COP *i* 15 30 44.0
COP *i* 15 33 35.5
COP MLR MLR
comp=Z,5µm,18.0s,MS6.1
COP Copenhagen 104.39 35 *i* P Pdif 15 19 57.5 -4.3
COP *i* 15 24 18.9
COP *i* 15 29 21.8
COP *i* 15 30 44.0
COP *i* 15 33 35.5
COP
comp=Z,5µm,18.0s
MOL Molde 104.42 28 *e*PP PP 15 24 14.5 -6.2
MOL *e*SKS 15 30 41.1
MOL *i* 15 34 36.1
TIR Tirane 104.61 51 PFAKE 15 20 10.0 +7.2
TIR LR LR
comp=Z,20µm,19.0s,MS6.7
PMR Palmer 104.70 331 PFAKE 15 20 10.0 +6.8
PMR LR LR
comp=Z,17µm,21.0s,MS6.5
ZST Bratislava 104.79 44 *e*P Pdif 15 20 12.7 +9.1
ZST Bratislava 104.79 44 PDIF Pdif 15 20 12.7 +9.1
ZST *e*PS PS 15 33 47.7 +10
UPC Upice 104.81 41 *i* P Pdif 15 20 01.9 -1.8
UPC Upice 104.81 41 *e*PDIF Pdif 15 20 01.9 -1.8
DPC Dobruska-Polom 104.95 41 *i* P Pdif 15 20 04.7 +0.4
DPC *e* 15 24 27.5
DPC *e* 15 39 27.7
DPC MLR MLR
comp=Z,17µm,19.4s,MS6.6
DPC Dobruska-Polom 104.95 41 *e*PDIF Pdif 15 20 04.7 +0.4
DPC *e*PP PP 15 24 27.5 +2.5
DPC *ex* x 15 30 58.2
DPC *ex* x 15 33 50.5
DPC *e*PKKS 15 39 27.7
DPC AMS AMS 16 06 10.0
comp=Z,17µm,19.4s
MODS Modra-Piesok 104.95 44 *e*P Pdif 15 20 05.3 +1.0
MODS *e* 15 24 24.6
MODS *e*SS SS 15 39 19.7 +2.9
MODS Modra-Piesok 104.95 44 PDIF Pdif 15 20 05.3 +1.0
MODS *e*PP PP 15 24 24.6 -0.5
MODS Modra-Piesok 104.95 44⇑ *e*SKSp SKSac 15 30 53.5 +12
MODS *e*PS PS 15 33 47.2 +7.5
MODS *e*SS SS 15 39 19.7 +2.9
KDAK Kodiak Island 105.07 327 PFAKE 15 24 30.0 +11
KDAK LR LR
comp=Z,16µm,21.0s,MS6.5
KSP Ksiaz 105.08 41 *e*Pdiff Pdif 15 20 09.8 +4.9
KSP *e*PP PP 15 24 30.1 +4.1
KSP *e*SKS 15 31 02.5
KSP *e*PS PS 15 33 50.2 +9.3
KSP *e*SS SS 15 39 33.4 +15
KSP LMZ 16 02 46.4
comp=Z,40µm,24.0s
KSP Ksiaz 105.08 41 *e*Pdif Pdif 15 20 09.0 +4.1
KSP *e*PP PP 15 24 28.0 +2.0
KSP *e*SKS 15 31 00.0
KSP *e*Sdif Sdif 15 32 14.0 +17
KSP *e*PS PS 15 33 49.0 +8.1
KSP *e*SS SS 15 39 26.0 +7.6
KSP LR LR
comp=Z,46µm,24.0s,MS6.9
KSP Ksiaz 105.08 41 *e*P Pdif 15 20 09.0 +4.1
KSP *e* 15 24 28.0
KSP *e*SS SS 15 39 26.0 +7.6
COLA College 105.31 334 *e*Pdif Pdif 15 20 04.2 -1.6
comp=Z,24nm,1.1s
COLA LR LR
comp=Z,19µm,21.0s,MS6.6
COLA College 105.31 334 *e*P Pdif 15 20 04.3 -1.6
COLA pmax pmax
comp=Z,23nm,1.1s
COLA MLR MLR
comp=Z,19µm,21.0s,MS6.6
NAO01 NORSAR Array S 105.31 30 PFAKE 15 24 30.0 +11
NAO01 LR LR
comp=Z,26µm,21.0s,MS6.7
FUNA Funafuti 105.46 254 PFAKE 15 24 30.0 +9.0
FUNA LR LR
comp=Z,36µm,22.0s,MS6.9
NOA NORSAR Array B 105.53 30 Pdiff Pdif 15 20 07.9 +1.0
comp=Z,1.5nm,1.0s,baz=243,slow=3.9,SNR=2.7
OKC Ostrava-Krasne 105.92 42 *e*PP PP 15 24 36.5 +4.2
OKC *ex* x 15 30 56.0
OKC *ex* x 15 31 01.6
OKC *e*SS SS 15 39 38.6 +8.7
OKC AMS AMS 16 11 00.0
comp=Z,11µm,17.9s
VYHS Vyhne 105.98 44 *e*PP PP 15 24 32.2 -0.5
VYHS Vyhne 105.98 44⇑ *e*SKSp SKSac 15 31 04.7 +19
VYHS *e*PS PS 15 33 59.4 +9.1
VYHS *e*SS SS 15 39 22.8 -8.0
ABPO Ambohimpanom 106.03 119 PFAKE 15 24 30.0 +8.1
ABPO LR LR
comp=Z,24µm,20.0s,MS6.7
KTH Kantishna Hill 106.13 333 *e*PP PP 15 24 41.7 +8.3
TAU Tasmania Unive 106.15 208 PFAKE 15 24 30.0 +8.5
TAU LR LR
comp=Z,24µm,19.0s,MS6.8
BPAW Bear Paw Mtn. 106.33 333 *e*PKPdf PKiKP 15 24 24.5 +3.5
PSZ Piszkesteto 106.50 45 PFAKE 15 24 30.0 +8.2
PSZ LR LR
comp=Z,21µm,21.0s,MS6.7
NSS Namsos 106.94 27 *e* Pdif 15 20 24.8 +12
NSS *e*PP PP 15 24 38.0 -1.3
NSS *e*SKS SKSdf 15 30 50.0 -41
NSS *i* 15 34 07.5
NSS AMS AMS 16 03 09.3
comp=Z,21µm,22.2s,MS6.7
OJC Ojcow 107.05 42 *e*Pdiff Pdif 15 20 21.0 +7.4
OJC *e*PP PP 15 24 52.7 +12
OJC *e*SKSac SKSac 15 31 00.7 +10
OJC *e*PS PS 15 34 11.5 +10
OJC *e*SS SS 15 39 58.2 +13
OJC L 16 08 18.2
comp=Z,17nm,20.1s
CRVS Cervenica-Dubn 107.77 44⇑ *e*SKSp SKSac 15 31 10.3 +16
CRVS *e*PS PS 15 34 13.4 +4.7
CRVS *e*SS SS 15 39 58.3 +3.3
CRVS Cervenica-Dubn 107.77 44 *e*PP PP 15 24 45.2 -0.6
KOLS Kolonicke sedl 108.29 44 *e*PP PP 15 24 59.7 +10
KOLS *e*PS PS 15 34 24.6 +11
KWP Kalwaria 108.73 43 PFAKE 15 24 40.0 +14
KWP LR LR
comp=Z,12µm,20.0s,MS6.5
LVV L'vov 109.61 43 *e*P Pdif 15 20 33.9 +8.9
LVV *e* 15 25 03.7
LVV *e* 15 27 20.1
LVV MLR MLR
comp=N,5µm,23.0s,MS6.6
LVV MLR MLR
comp=E,19µm,23.0s,MS6.6
LVV MLR MLR
comp=Z,19µm,23.0s,MS6.6
KBS Kingsbay 110.63 12 PFAKE 15 24 40.0 +11
KBS LR LR
comp=Z,10µm,19.0s,MS6.4
BJO Bjornoya 111.53 17 *e*PP PP 15 25 16.0 +3.7
BJO *e*SS SS 15 40 45.5 +1.3
BJO AMS AMS 16 07 01.3
comp=Z,10µm,19.3s,MS6.4
ISP Isparta 111.66 57 PFAKE 15 24 40.0 +8.1
ISP LR LR
comp=Z,22µm,22.0s,MS6.7
KIS Kishinev 112.20 47 *e*P Pdif 15 20 36.0 -0.5
KIS pmax pmax
comp=Z,33µm,19.0s
KIS pmax pmax
comp=Z,3µm,20.0s
KIS MLR MLR
comp=Z,16µm,22.0s,MS6.6
KIS MLR MLR
comp=N,5µm,20.0s,MS6.4
KIS MLR MLR
comp=E,9µm,20.0s,MS6.4
KIS MLR MLR
comp=Z,16µm,20.0s
KIS Kishinev 112.20 47 *e*PKP PKiKP 15 24 20.0 -13
KIS Kishinev 112.20 47 *e*PP PP 15 25 32.0 +14
comp=Z,3µm,19.0s
KIS Kishinev 112.20 47 *e*SKS SKSac 15 31 22.0 +10
KIS *i* SKKS SKKSac 15 32 30.0 +13
KIS *i* S Sdif 15 33 22.0 +26
KIS Kishinev 112.20 47 *i* PS PS 15 35 04.0 +12
MNK Minsk 112.72 39 *e*P Pdif 15 20 44.0 +5.2
MNK *e* 15 25 32.0
MNK *e* 15 31 16.0
MNK *e*PS PS 15 34 56.0 -0.2
MNK pmax pmax
comp=Z,9µm,20.0s
MNK MLR MLR
comp=Z,74µm,20.0s,MS7.3
MNK MLR MLR
comp=E,55µm,20.0s,MS7.2
MNK MLR MLR
comp=N,20µm,20.0s,MS7.2
KIEV Kiev 113.04 43 *e*PKPdf PKiKP 15 24 32.5 -1.5
KIEV LR LR
comp=Z,16µm,20.0s,MS6.6
ARCES ARCESS Array B 113.04 22 PKKPbc PKKPbc 15 35 23.4 +1.0
comp=Z,8.0nm,1.0s,baz=90,slow=2.9,SNR=4.1
AKASG Malin Array Be 113.05 43 PKiKP PKiKP 15 24 32.5 -1.5
comp=Z,1.9nm,0.5s,baz=268,slow=9.9,SNR=6.9
AKASG PKKPbc PKKPbc 15 35 21.6 -0.3
comp=Z,1.4nm,0.6s,baz=71,slow=3.0,SNR=6.2
CSS Prodhromos 113.27 60 *e*PKPdf PKiKP 15 24 35.3 +0.3
CSS LR LR
comp=Z,12µm,20.0s,MS6.5
KEV Kevo 113.57 22 PFAKE 15 24 50.0 +15
KEV LR LR
comp=Z,17µm,21.0s,MS6.6
ANTO Ankara 113.81 55 PFAKE 15 24 50.0 +14
ANTO LR LR
comp=Z,21µm,22.0s,MS6.7
MIDW Midway 115.02 292 PFAKE 15 24 50.0 +11
MIDW LR LR
comp=Z,44µm,20.0s,MS7.1
TARA Tarawa 115.34 260 PFAKE 15 24 50.0 +10
TARA LR LR
comp=Z,72µm,20.0s,MS7.3
LVZ Lovozero 116.39 24 PFAKE 15 24 50.0 +10
LVZ LR LR
comp=Z,19µm,22.0s,MS6.7
OBN Obninsk 117.81 38 *e*PKPdf PKPdf 15 24 44.6 +1.5
OBN LR LR
comp=Z,19µm,19.0s,MS6.8
OBN Obninsk 117.81 38 *i* PKIKP PKPdf 15 24 44.5 +1.4
OBN *i* 15 25 58.1
OBN *i* SS SS 15 42 27.0 +19
OBN pmax pmax
comp=Z,37nm,1.1s
STKA Stephens Creek 117.81 210 *e*PKP PKPdf 15 24 42.0 -2.0
comp=Z,5.4nm,0.9s
STKA Stephens Creek 117.81 210 PKP PKPdf 15 24 43.1 -0.9
comp=Z,4.3nm,0.8s,baz=126,slow=4.8,SNR=5.2
STKA PKKPbc PKKPbc 15 35 10.2 +5.2
comp=Z,3.1nm,0.9s,baz=328,slow=6.8,SNR=3.6
STKA Stephens Creek 117.81 210 *e*PKPdf PKPdf 15 24 43.0 -0.9
ANN Anapa 117.88 50 *e*P Pdif 15 20 57.9 -3.9
ANN pmax pmax
comp=Z,147nm,1.6s
KLMR Klimovskoe 119.12 32 *e*PKIKP PKPdf 15 24 46.8 +1.4
VSR Storozhevoye 119.35 43 *i* PKIKP PKPdf 15 24 47.4 +1.2
VSR *e* 15 26 09.7
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,9.0nm,1.5s
VSR pmax pmax
comp=Z,650nm,7.3s
VSR pmax pmax
comp=N,270nm,5.3s
VSR pmax pmax
comp=E,580nm,5.9s
VSR MLR MLR
comp=E,9µm,20.0s,MS6.4
VSR MLR MLR
comp=Z,6µm,20.0s,MS6.2
VSR MLR MLR
comp=N,3µm,19.0s,MS6.4
SOC Sochi 119.42 52 *e*P Pdif 15 21 08.8 +0.2
SOC *i* 15 24 47.3
SOC *e* 15 26 12.2
SOC *e*PPP 15 28 44.2
SOC *e*PS PS 15 36 01.7 +4.1
SOC *e*SS SS 15 42 39.9 +11
SOC *e*SSS 15 46 57.2
SOC pmax pmax
comp=Z,22nm,0.7s
SOC pmax pmax
comp=Z,36nm,0.9s
VORD Divnogorie 119.43 43 *i* PKIKP PKPdf 15 24 48.0 +1.7
VORD *e* 15 26 08.8
VORD pmax pmax
comp=Z,10.0nm,1.0s

VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,20nm,0.7s
VORD pmax pmax
comp=Z,3μm,11.5s
VORD pmax pmax
comp=N,430nm,4.3s
VORD pmax pmax
comp=E,2μm,10.6s
VORD MLR MLR
comp=N,8μm,19.0s,MS6.5
VORD MLR MLR
comp=E,9μm,19.0s,MS6.5
VORD MLR MLR
comp=Z,13μm,19.0s,MS6.6
MSEY Mahe Island 120.26 110 PFAKE 15 25 00.0 +11
MSEY LR LR
comp=Z,28μm,20.0s,MS6.9
HNR Honiara 121.51 242 PFAKE 15 25 00.0 +8.5
HNR LR LR
comp=Z,35μm,22.0s,MS7.0
KIV Kislovodsk 121.59 51 *e*PKPdf PKPdf 15 24 49.7 -1.0
KIV LR LR
comp=Z,10μm,22.0s,MS6.4
KIV Kislovodsk 121.59 51 *e*P Pdif 15 21 19.7 +1.4
KIV *i* 15 24 50.3
KIV *e* 15 26 23.6
KIV *e* 15 31 50.6
KIV *e*PS PS 15 36 18.1 +1.1
KIV *e*SS SS 15 43 00.0 +2.9
KIV pmax pmax
comp=Z,26nm,1.1s
GNI Garni 122.95 56⇑ *e*PKP PKPdf 15 24 51.1 -2.4
GNI *e*PKPdf PKPdf 15 24 57.1 +3.6
GNI LR LR
comp=Z,20μm,22.0s,MS6.7
BILL Bilibino 123.27 338 *e*PKP PKPdf 15 24 53.4 +0.2
BILL LR LR
comp=Z,17μm,20.0s,MS6.7
BILL Bilibino 123.27 338 *i* PKIKP PKPdf 15 24 53.3 +0.1
BILL *i* 15 26 34.1
BILL pmax pmax
comp=Z,31nm,1.5s
SMY Shemya 123.34 319 PFAKE 15 25 00.0 +6.2
SMY LR LR
comp=Z,13μm,20.0s,MS6.6
DGRG David-gareji 123.48 54 P Pdif 15 21 31.3 +4.7
NWAO Narrogin (SRO) 124.21 187 PKP PKPdf 15 24 54.5 -1.8
comp=Z,38nm,1.2s,baz=211,slow=3.4,SNR=4.2
NWAO Narrogin (SRO) 124.21 187 PKIKP PKPdf 15 24 54.5 -1.8
NWAO MLR MLR
comp=Z,21μm,21.0s
CTA Charters Tower 124.60 223 PKP PKPdf 15 24 56.9 -0.4
comp=Z,12nm,1.0s,baz=162,slow=3.2,SNR=4.0
CTAO Charters Tower 124.60 223 PFAKE 15 25 10.0 +13
CTAO LR LR
comp=Z,29μm,22.0s,MS6.9
MAK Makhachkala 125.08 53 *e*P Pdif 15 21 41.3 +7.5
MAK *e* 15 24 58.7
MAK *i* 15 26 55.7
MAK *e*PPP 15 29 34.3
MAK *i* 15 31 59.0
MAK *e*SP SP 15 36 44.2 +1.1
MAK *i* PS PS 15 36 47.8 -0.1
MAK *e*SS SS 15 43 49.2 +7.8
MAK pmax pmax
comp=Z,123nm,1.1s
MUN Mundaring 125.26 187 *e*PKP PKPdf 15 24 59.4 +1.1
KLBR Kellerberrin 125.46 188 *e*PKP PKPdf 15 24 55.8 -2.9
comp=Z,54nm,0.8s
SOKR Solikamsk 127.79 31 *e*PKIKP PKPdf 15 25 00.6 -1.5
SOKR 15 27 04.4
SOKR PS PS 15 37 02.2 -8.7
SOKR SS SS 15 44 19.1 +5.2
SOKR SSS 15 48 54.5
SOKR pmax pmax
comp=Z,70nm,1.3s
ASAR Alice Springs 128.32 208 PKP PKPdf 15 25 01.5 -2.8
comp=Z,39nm,1.0s,baz=146,slow=2.3,SNR=13
ASAR SKKP 15 38 26.9
comp=Z,6.8nm,1.1s,baz=327,slow=3.3,SNR=6.3
ASAR Alice Springs 128.32 208 PKIKP PKPdf 15 25 01.5 -2.8
ASAR pmax pmax
comp=Z,39nm,1.0s
ASAR pmax pmax
comp=N,7.0nm,1.1s
ARU Arti 129.78 34 *e*PKPdf PKPdf 15 25 06.0 0.0
ARU LR LR
comp=Z,29μm,22.0s,MS6.9
ARU Arti 129.78 34 *i* PKIKP PKPdf 15 25 05.9 -0.1
ARU 15 27 17.4
ARU 15 32 11.0
TIXI Tiksi 129.88 352 *e*PKPdf PKPdf 15 25 04.3 -1.5
TIXI LR LR
comp=Z,17μm,20.0s,MS6.8
TIXI Tiksi 129.88 352 *i* PKIKP PKPdf 15 25 01.7 -4.1
TIXI pmax pmax
comp=Z,49nm,1.3s
SVE Sverdlovsk 130.70 33 *e*PKIKP PKPdf 15 25 11.8 +4.1
SVE pmax pmax
comp=Z,78nm,1.5s
SEY Seymchan 130.79 336⇑ *e*PKP PKPdf 15 25 04.8 -2.9
SEY Seymchan 130.79 336⇑ *i*PKIKP PKPdf 15 25 04.7 -3.0
COEN Coen 131.10 225 *e*PKPdf PKPdf 15 25 06.9 -2.9
AKTK Aktyubinsk 131.28 42 PKP PKPdf 15 25 08.7 -0.3
AKTO Aktyubinsk 131.28 42 PKP PKPdf 15 25 08.7 -0.3
comp=Z,12nm,1.0s,baz=323,slow=5.1,SNR=5.8
WB2 Warramunga Arr 131.34 211 *e*PKP PKPdf 15 25 08.3 -1.9
WB2 *e*PKS 15 28 32.7
WB2 Warramunga Arr 131.34 211 *e*PKPdf PKPdf 15 25 08.6 -1.5
WRA Warramunga Arr 131.34 211 PKP PKPdf 15 25 08.2 -2.0
comp=Z,71nm,1.2s,baz=162,slow=1.4,SNR=11
WRAB Tennant Creek 131.34 211 *e*PKPpre PKPdf 15 25 06.4 -3.8
WRAB *e*SKP 15 28 29.3
WRAB LR LR
comp=Z,45μm,19.0s,MS7.2
WRAB Tennant Creek 131.34 211 *i* PKIKP PKPdf 15 25 08.4 -1.8
PMG Port Moresby 131.52 233 PFAKE 15 25 20.0 +9.4
PMG LR LR
comp=Z,18μm,20.0s,MS6.8
PET Petropavlovsk 132.39 322 PFAKE 15 25 20.0 +9.0
PET LR LR
comp=Z,13μm,20.0s,MS6.7
PETK Petropavlovsk- 132.90 322 PKP PKPdf 15 25 11.9 -0.1
comp=Z,27nm,1.0s,baz=69,slow=8.1,SNR=7.5
MBWA Marble Bar 135.33 193 *e*PKPdf PKPdf 15 25 15.5 -2.2
MBWA LR LR
comp=Z,34μm,22.0s,MS7.0
BRVK Borovoye 137.35 35 *e*PKPdf PKPdf 15 25 19.1 -1.2
BRVK LR LR
comp=Z,42μm,20.0s,MS7.2
BVAR Borovoye Array 137.42 35 PKP PKPdf 15 25 19.9 -0.6
comp=Z,14nm,1.0s,baz=274,slow=4.5,SNR=8.4
KAKA Kakadu 138.43 214 *e*PKP Px 15 25 08.7
comp=Z,45nm,1.1s
KAKA Kakadu 138.43 214 *e*PKPpre Px 15 25 08.9
YAK Yakutsk 138.47 346⇑ *e*PKP PKPdf 15 25 19.4 -2.7
YAK LR LR
comp=Z,12μm,22.0s,MS6.6
YAK Yakutsk 138.47 346 *i* PKIKP PKPdf 15 25 17.5 -4.6
YAK *e*PPP 15 31 14.9
YAK pmax pmax
comp=Z,93nm,1.2s
YAK pmax pmax
comp=N,15nm,1.2s
YAK pmax pmax
comp=E,23nm,1.2s
YAK MLR MLR
comp=Z,16μm,22.0s,MS6.7
YAK MLR MLR
comp=N,8μm,23.0s,MS6.6
YAK MLR MLR
comp=E,10μm,23.0s,MS6.6
NVS Novosibirsk 142.24 25 *i* PKIKP PKPdf 15 25 27.9 -1.3
NVS pmax pmax
comp=N,56nm,1.8s
NVS pmax pmax
comp=Z,315nm,1.8s
NVS pmax pmax
comp=E,85nm,2.0s
KBL Kabul 142.48 63 *e*PKPdf PKPdf 15 25 31.1 +0.8
KURK Kurchatov 142.95 33 PFAKE 15 25 40.0 +9.5
KURK LR LR
comp=Z,16μm,21.0s,MS6.8
KURK Kurchatov 142.95 33 *i* PKIKP PKPdf 15 25 28.3 -2.2
COCO West Island 143.00 158 PFAKE 15 25 40.0 +8.2
COCO LR LR
comp=Z,9μm,21.0s,MS6.5
ZALV Zalesovo Beam 143.53 25 PKP PKPdf 15 25 29.7 -1.7
comp=Z,16nm,0.7s,baz=303,slow=3.2,SNR=3.0
EKS2 Erkin-Say 144.04 48 PFAKE 15 25 40.0 +7.3
EKS2 LR LR
comp=Z,12μm,20.0s,MS6.7
EKS2 Erkin-Say 144.04 48 P PKPdf 15 25 31.5 -1.2
SNR=10
AML Almayashu 144.18 49 *e*PKPdf PKPdf 15 25 32.1 -0.9
AML LR LR
comp=Z,16μm,21.0s,MS6.8
AML Almayashu 144.18 49 P PKPdf 15 25 32.4 -0.6
SNR=15
YSS Yuzh-Sakhalins 144.23 321 *e*PKPdf PKPdf 15 25 30.6 -2.3
YSS LR LR
comp=Z,7μm,21.0s,MS6.4
YSS Yuzh-Sakhalins 144.23 321 *c i*PKIKP PKPdf 15 25 28.0 -4.9
YSS *e*SS SS 15 47 34.0 +3.2
YSS *e*SSS 15 52 52.0
YSS pmax pmax
comp=Z,2μm,11.0s
YSS pmax pmax
comp=Z,930nm,2.0s
USP Ospenovka 144.29 47 P PKPdf 15 25 32.2 -0.9
SNR=8.8
KRAR Krasnoyarsk 144.46 16 *i* PKIKP PKPdf 15 25 31.0 -2.0
AAK Ala-Archa 144.54 48 P PKPdf 15 25 34.0 +0.4
SNR=22
CHMS Chumysh 144.57 47 P PKPdf 15 25 33.4 -0.2
SNR=17
BATI Baumata 144.60 204 PKP PKPdf 15 25 33.9 -0.7
comp=Z,123nm,1.0s,baz=180,slow=1.0,SNR=5.5
UCH Uchtor 144.71 48 *e*PKPdf PKPdf 15 25 34.8 +0.9
UCH LR LR
comp=Z,7μm,20.0s,MS6.5
UCH Uchtor 144.71 48 P PKPdf 15 25 35.4 +1.5
SNR=14
BOD Bodaibo 144.83 356 *e*PKIKP PKPdf 15 25 31.0 -2.6
BOD pmax pmax
comp=Z,290nm,1.4s
KBK Karagaybulak 144.84 47 P PKPdf 15 25 34.8 +0.7
SNR=22
TKM2 Tokmak 2 145.17 46 PFAKE 15 25 50.0 +16
TKM2 LR LR
comp=Z,15μm,22.0s,MS6.7
TKM2 Tokmak 2 145.17 46 P PKPbc 15 25 35.4 +1.1
SNR=12
KZA Kyzart 145.27 48 P PKPbc 15 25 37.5 +2.8
SNR=11
GUMO Guam 145.65 261 PKPbc PKPbc 15 25 37.0 +0.4
comp=Z,497nm,1.1s,baz=197,slow=7.3,SNR=5.6
GUMO Guam 145.65 261 *e*PKP2 PKPab 15 25 36.8 -0.1
GUMO MLR MLR
comp=Z,23μm,20.0s,MS7.0
ASAJ Asahikawa 145.72 316 PKPbc PKPbc 15 25 34.6 -1.4
comp=Z,159nm,1.0s,baz=57,slow=4.0,SNR=8.0
ASAJ Asahikawa 145.72 316 PKP2 PKPab 15 25 34.7 -1.7
ASAJ pmax pmax
comp=Z,159nm,1.0s
ULHL Ulahol 145.88 47 P PKPdf 15 25 38.2 +2.3
SNR=14
AAA Alma-Ata 145.91 45 *i* PKP2 PKPab 15 25 36.2 -0.9
AAA pmax pmax
comp=Z,24μm,7.4s
AAA MLR MLR
comp=Z,16μm,20.0s,MS6.8
ERM Erimo 146.28 313 *e*PKPbc PKPbc 15 25 38.6 +0.8
ERM LR LR
comp=Z,34μm,21.0s,MS7.1
KSH Kashi 146.72 52 *e*PKP PKPdf 15 25 40.5 +3.1
KSH *e*PKP2 PKPab 15 25 42.0 +1.6
KSH *e*APKP 15 25 51.3
KSH *e*PKS 15 29 14.8
KSH PP PP
comp=Z,5μm,5.8s
KSH LR LR
comp=N,24μm,21.3s,MS7.1
KSH LR LR
comp=E,21μm,17.7s,MS7.1
KSH LR LR
comp=Z,22μm,17.0s,MS7.0
XMIS Christmas Isla 146.72 172 *e*P PKPab 15 25 44.4 +3.4
MKAR Makanchi Array 147.27 36 PKPbc PKPdf 15 25 38.1 0.0
comp=Z,60nm,1.0s,baz=316,slow=4.0,SNR=8.3
HABR Khabarovsk 147.47 328 *e*PKP2 PKPdf 15 25 39.9 +1.5
HABR *e* 15 29 04.0
HABR *e* 15 32 41.6
HABR *e* 15 41 43.3
HABR *e*SS SS 15 48 05.5 -1.6
HABR *e*SSS 15 53 38.5
HYB Hyderabad 150.10 94 *e*PKP PKPbc 15 25 47.0 -1.6
HYB Hyderabad 150.10 94 *i* PKP PKPbc 15 25 47.0 -1.6
comp=Z,300nm,1.0s
IRK Irkutsk 150.23 7 *e*PKIKP PKPdf 15 25 43.5 +0.8
IRK pmax pmax
comp=Z,636nm,1.7s
CBIJ Chichi jima 150.47 285 PKPbc PKPbc 15 25 47.0 -2.3
comp=Z,112nm,1.0s,baz=114,slow=3.8,SNR=4.0
CBIJ PKPab PKPab 15 25 55.4 -0.5
comp=Z,187nm,1.0s,baz=101,slow=6.3,SNR=5.7
CIT Chita 150.63 355 *e*PKIKP PKPbc 15 25 47.2 -1.6
CIT pmax pmax
comp=Z,722nm,2.2s
TLY Talaya 150.70 8 *e*PKPdf PKPdf 15 25 44.7 +1.3
TLY *e*PKPbc PKPbc 15 25 49.8 +0.8
TLY LR LR
comp=Z,12μm,19.0s,MS6.7
TLY Talaya 150.70 8 *i* PKIKP PKPbc 15 25 48.4 -0.6
TLY *e* 15 29 35.1
TLY *e*PPS 15 42 21.8
TLY *e*SS SS 15 48 50.1 +7.8
TLY pmax pmax
comp=Z,137nm,1.5s
KAPI Kappang 150.79 200 PKPbc PKPbc 15 25 48.3 -2.2
comp=Z,89nm,0.7s,baz=152,slow=1.2,SNR=9.2
KAPI Kappang 150.79 200 *e*PKPbc PKPbc 15 25 48.7 -1.7
KAPI LR LR
comp=Z,19μm,21.0s,MS6.9
JHJ Hachijo jima 2 151.75 298 PKPbc PKPbc 15 25 53.7 +1.6
comp=Z,252nm,0.8s,baz=45,slow=1.4,SNR=3.3
MJAR Matsushiro Arr 151.95 306 PKPbc PKPbc 15 25 50.7 -1.7
comp=Z,58nm,0.9s,baz=74,slow=0.4,SNR=17
MJAR PKPab PKPab 15 26 01.8 0.0
comp=Z,83nm,0.9s,baz=100,slow=1.3,SNR=16
MAJO Matsushiro 151.95 306 PKPbc PKPbc 15 25 51.0 -1.5
MAJO LR LR
comp=Z,31μm,22.0s,MS7.1
MAT Matsushiro 151.95 306 PKP PKPbc 15 25 50.5 -1.9
WMQ Urumqi 152.10 36 *e*PKP PKPdf 15 25 45.0 -0.9
WMQ PP PP 15 29 38.0 +4.3
WMQ SKS SKSdf 15 32 47.0 -3.5
WMQ PP PP
comp=Z,7μm,10.0s
WMQ LR LR
comp=N,20μm,24.0s,MS7.0
WMQ LR LR
comp=E,23μm,24.0s,MS7.0
WMQ LR LR
comp=Z,24μm,24.0s,MS6.9
HIA Hailar 152.41 346 *e*PKPdf PKPdf 15 25 48.3 +2.1
HIA *e*PKPbc PKPbc 15 25 55.0 +2.0
HIA LR LR
comp=Z,20μm,21.0s,MS6.9
MDJ Mudanjiang 152.86 328 PKP PKPdf 15 25 45.8 -1.2
MDJ XPKP 15 25 55.3
MDJ PP PP 15 29 37.4 -0.5
MDJ LR LR
comp=N,7μm,34.3s,MS6.7
MDJ LR LR
comp=E,16μm,31.0s,MS6.7
MDJ LR LR
comp=Z,15μm,26.1s,MS6.7
MDJ Mudanjiang 152.86 328 *e*PKPdf PKPdf 15 25 46.1 -0.9
MDJ LR LR
comp=Z,20μm,21.0s,MS6.9
SONM Songino Array 154.80 6 PKP PKPdf 15 25 49.7 0.0
comp=Z,8.8nm,0.9s,baz=326,slow=1.5,SNR=4.9
SONM PKPbc PKPbc 15 25 60.0 +1.7
comp=Z,12nm,0.8s,baz=320,slow=2.2,SNR=5.1
SONM PKPab PKPab 15 26 13.4 +0.1
comp=Z,19nm,1.0s,baz=345,slow=2.3,SNR=5.0
SONM PP PP 15 29 59.5 +11
comp=Z,6.9nm,1.0s,baz=358,slow=6.3,SNR=3.0
SONM Songino Array 154.80 6 PKIKP PKPdf 15 25 49.7 +0.1
SONM 15 26 00.0
SONM 15 26 13.4
ULN Ulaanbaatar 154.82 5 PFAKE 15 26 00.0 +10
ULN LR LR
comp=Z,18μm,19.0s,MS6.9
ULN Ulaanbaatar 154.82 5 *i* PKIKP PKPbc 15 25 55.1 -3.2
CN2 Changchun 155.39 332 *e*PKP PKPdf 15 25 48.8 -1.8
CN2 XPKP 15 26 04.8
CN2 PP PP 15 29 53.4 +1.4
CN2 PP PP
comp=Z,4μm,14.0s
CN2 LR LR
comp=N,10μm,21.0s,MS6.9
CN2 LR LR
comp=E,16μm,21.0s,MS6.9
CN2 LR LR
comp=Z,17μm,21.0s,MS6.8
SNY Shenyang 157.79 332 PKP PKPdf 15 25 56.5 +2.8
SNY PP PP 15 30 09.8 +4.5
SNY SKKS SKKSac 15 36 51.3 -1.0
SNY PP PP
comp=Z,9μm,18.0s
SNY LR LR
comp=E,14μm,19.4s
SNY LR LR
comp=Z,22μm,20.6s,MS7.0
DAV Davao City (W) 158.32 226 PFAKE 15 26 00.0 +4.8
DAV LR LR
comp=Z,17μm,20.0s,MS6.9
KSRS Korea Array 158.66 317 PKP PKPdf 15 25 54.0 -0.9
comp=Z,38nm,1.2s,baz=64,slow=0.8,SNR=8.6
KSRS PKPab PKPab 15 26 32.0 +1.7
comp=Z,16nm,1.1s,baz=62,slow=3.8,SNR=4.2
KSRS PP PP 15 30 19.1 +8.5
comp=Z,1.4nm,0.9s,baz=28,slow=4.1,SNR=3.0
KSRS Korea Array 158.66 317 PKIKP PKPdf 15 25 54.1 -0.8
KSRS 15 30 19.1
KSRS pmax pmax
comp=Z,38nm,1.2s
KSM Kuching 158.86 181 PKPdf PKPdf 15 25 50.4 -5.6
KSM *e*PKPab PKPab 15 26 23.3 -8.4
KSM *e*PP PP 15 30 13.8 +3.2
DL2 Dalian 161.04 331 PKP PKPdf 15 25 56.5 -1.1
DL2 PP PP 15 30 28.3 +5.4
DL2 SKKS SKKSac 15 37 13.3 +3.9
DL2 PP PP
comp=Z,4μm,17.6s
DL2 LR LR
comp=N,5μm,19.6s
DL2 LR LR
comp=Z,9μm,22.6s
GTA Gaotai 161.28 25 PKP PKPdf 15 25 57.4 -0.4
GTA APKP 15 26 08.3
GTA XPKP 15 26 12.6
GTA PKP2 PKPab 15 26 42.3 +0.7
GTA PKS 15 29 29.5
GTA PP PP 15 30 28.5 +4.4
GTA SKS SKSdf 15 32 58.0 -2.2
GTA PP PP
comp=Z,9μm,15.3s
GTA LR LR
comp=N,9μm,21.6s
GTA LR LR
comp=E,12μm,21.6s
GTA LR LR
comp=Z,23μm,23.4s
LSA Lhasa 161.80 64 *e*PKPdf PKPdf 15 25 58.6 0.0
LSA LR LR
comp=Z,21μm,20.0s
HHC Hu-ho-hao-te 161.89 356 *e*PKP PKPdf 15 25 58.5 +0.1
HHC APKP 15 26 09.3
HHC PKS 15 29 31.5
HHC PP PP 15 30 33.3 +6.3
HHC SKS SKSdf 15 32 59.6 -1.1
BJI Beijing 161.96 344 PKP PKPdf 15 25 57.3 -1.2
BJI PP PP 15 30 31.8 +4.3
BJI PP PP
comp=Z,5μm,19.4s
BJI LR LR
comp=N,4μm,24.5s
BJI LR LR
comp=E,17μm,22.4s
BJI LR LR
comp=Z,22μm,26.6s
BJT Baijiatuan 161.98 344 PFAKE 15 26 10.0 +11
BJT LR LR
comp=Z,27μm,20.0s
SNG Songkhla 162.12 148 P PKPdf 15 25 59.0 -0.5
comp=Z,200nm,1.1s
KKM Kota Kinabalu 162.33 201 *e*PKPdf PKPdf 15 25 57.5 -2.2
KKM *e*PKPab PKPab 15 26 50.3 +3.5
KKM LR LR
comp=Z,16μm,22.0s
JOW Kunigami 162.85 287 PKP PKPdf 15 25 57.8 -2.0
comp=Z,13nm,0.9s,baz=70,slow=1.4,SNR=2.4
TIA Tai'an 165.19 337 PKP PKPdf 15 26 02.5 +0.9
TIA LR LR
comp=E,14μm,20.0s
LZH Lanzhou 165.69 20⇑ PKP PKPdf 15 26 02.3 +0.2
LZH APKP 15 26 12.8
LZH XPKP 15 26 16.8
LZH PP PP 15 30 52.3 +5.1
LZH SKS SKSdf 15 33 02.0 -1.7
LZH PP PP
comp=Z,9μm,8.3s
LZH LR LR
comp=N,20μm,19.0s
LZH LR LR
comp=Z,33μm,20.5s
SSE Sheshan 166.96 312 PKP PKPdf 15 26 02.0 -1.2
SSE PP PP 15 30 57.1 +2.3
SSE SS SS 15 51 36.1 -0.7
SSE PP PP
comp=Z,1μm,6.7s
SSE LR LR
comp=N,4μm,15.8s
SSE LR LR
comp=E,25μm,15.8s
SSE LR LR
comp=Z,30μm,16.1s
SSE Sheshan 166.96 312 PKP PKPdf 15 26 02.1 -1.1
SSE PP PP 15 30 57.1 +2.3
SSE SS SS 15 51 36.1 -0.7
SSE LR LR
comp=Z,30μm,16.1s
NJ2 Nanjing 167.80 321 *e*PKP PKPdf 15 26 01.1 -2.7
NJ2 APKP 15 26 11.8
NJ2 XPKP 15 26 15.6
NJ2 PP PP 15 31 01.1 +2.4
NJ2 SKS SKSdf 15 33 02.0 -3.1
NJ2 PP PP
comp=Z,1μm,10.8s
NJ2 LR LR
comp=N,4μm,25.1s
NJ2 LR LR
comp=E,8μm,28.0s
NJ2 LR LR
comp=Z,10μm,28.0s
XAN Xi'an 168.71 4 PKP PKPdf 15 26 03.3 -1.0
XAN PKP2 PKPab 15 27 21.8 +7.5
XAN PP PP 15 31 12.1 +10
XAN PP PP
comp=Z,11μm,18.3s
XAN LR LR
comp=N,4μm,23.3s
XAN LR LR
comp=E,12μm,26.9s
XAN LR LR
comp=Z,24μm,25.1s
CM31 Chiang Mai Arr 168.87 111 PFAKE 15 26 10.0 +5.1
CM31 LR LR
comp=Z,15μm,19.0s
CMAR Chiang Mai Arr 168.87 111 PKP PKPdf 15 26 03.2 -1.7
comp=Z,14nm,1.2s,baz=254,slow=2.5,SNR=3.1
CMAR PKPab PKPab 15 27 15.8 0.0
comp=Z,13nm,1.1s,baz=272,slow=3.0,SNR=3.6
CMAR PP PP 15 31 08.3 +3.0
comp=Z,9.4nm,1.1s,baz=262,slow=4.8,SNR=4.2
CHTO Chiang Mai 169.01 109 *e*PKPdf PKPdf 15 26 04.0 -1.0
CHTO *e*PKPab PKPab 15 27 16.5 +0.1
CHTO *e*PP PP 15 31 04.8 -1.2
CHTO LR LR
comp=Z,22μm,22.0s
TATO Taipei 169.18 284 *e*PKP PKPdf 15 26 08.0 +3.0

TATO					LR	LR				
	comp=Z,28μm,20.0s									
YHNB	**Yeheng**	**169.33**	**283**		PFAKE		15 26 10.0	+5.0		
YHNB					LR	LR				
	comp=Z,49μm,22.0s									
CD2	**Chengdu**	**170.18**	**33**		PKP	PKPdf	15 26 03.4	-1.9		
CD2					APKP		15 26 14.3			
CD2					XPKP		15 26 18.8			
CD2					PKP2	PKPab	15 27 22.5	+1.5		
CD2					PP	PP	15 31 14.0	+3.5		
CD2					SKS	SKSdf	15 33 03.0	-3.3		
CD2					PP	PP				
	comp=Z,10μm,10.9s									
CD2					LR	LR				
	comp=N,16μm,21.6s									
CD2					LR	LR				
	comp=E,20μm,25.1s									
CD2					LR	LR				
	comp=Z,30μm,26.5s									
QZH	**Quanzhou**	**171.77**	**287**		PKP	PKPdf	15 26 07.0	+0.7		
QZH					PP	PP				
	comp=Z,7μm,8.5s									
QZH					LR	LR				
	comp=N,27μm,23.0s									
QZH					LR	LR				
	comp=E,49μm,22.0s									
QZH					LR	LR				
	comp=Z,70μm,21.6s									
ENH	**Enshi**	**172.49**	**3**		PFAKE		15 26 20.0	+14		
ENH					LR	LR				
	comp=Z,4.0nm,21.0s									
KMI	**Kunming**	**173.01**	**69**		PKP	PKPdf	15 26 05.8	-1.1		
KMI	**Kunming**	**173.01**	**69**		PKP	PKPdf	15 26 05.7	-1.2		
KMI					pPKP	pPKPdf	15 26 16.7	-1.7		
KMI					sPKP		15 26 21.1			
KMI	**Kunming**	**173.01**	**69**		PKIKP	PKPdf	15 26 05.7	-1.2		
KMI							15 26 16.7			
GYA	**Guiyang**	**175.26**	**38**		PKP	PKPdf	15 26 06.6	-1.0		
GYA					APKP		15 26 17.4			
GYA					XPKP		15 26 21.0			
GYA					PKP2	PKPab	15 27 43.6	-0.1		
GYA					PKS		15 29 37.3			
GYA					PP	PP	15 31 37.1	+1.4		
GYA					SKS	SKSdf	15 33 08.0	-0.2		
GYA					PP	PP				
	comp=Z,10μm,13.8s									
GYA					LR	LR				
	comp=N,8μm,21.6s									
GYA					LR	LR				
	comp=E,12μm,19.8s									
GYA					LR	LR				
	comp=Z,11μm,19.2s									
HKC	**Hong Kong Obse**	**176.04**	**265**		PKPdf	PKPdf	15 26 10.0	+2.1		
QIZ	**Qiongzhong**	**176.31**	**179**		PKP	PKPdf	15 26 05.0	-3.0		
QIZ					PKP2	PKPab	15 27 47.1	-1.2		
QIZ					PP	PP	15 31 40.1	+0.3		
QIZ					SKKS	SKKSac	15 38 22.1	-2.8		
QIZ					PP	PP				
	comp=Z,14μm,17.8s									
QIZ					LR	LR				
	comp=N,15μm,21.1s									
QIZ					LR	LR				
	comp=Z,25μm,25.1s									
QIZ	**Qiongzhong**	**176.31**	**179**	*e*	PKPdf	PKPdf	15 26 10.3	+2.3		
QIZ					LR	LR				
	comp=Z,27μm,22.0s									

*ISCJB **15** 15:11:31.6±1.4,2325S±009×698W±02,h99km±13km, mb4.3/4, Error ellipse: s-maj=29.7km s-min=14.0km az=7.4*
*NEIC **15** 15:11:32.8±1.2,2323S×6974W,h98km±11km,mb4.8/1, Error ellipse: s-maj=24.2km s-min=11.3km az=97.0*
*IDC **15** 15:11:33.2±1.7,2329S×6964W,h96km±13km,mb4.2/4, mb1 4.5/7,mb1mx4.2/17,mbtmp4.4/7, Error ellipse: s-maj=33.7km s-min=20.8km az=88.0*
ISC 15 15:11:32.9±1.3,2325S±009×697W±02,h96km±13km,n11, σ0ş77/12,mb4.3/4,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**0.99**	**51**	P		**Pn**	**15 11 53.0**	**+0.1**
	600nm,0.3s,SNR=4.7							
LVC				S		**Sn**	**15 12 16.5**	**+8.5**
	2μm,0.3s,SNR=16							
LVC	**Limon Verde**	**0.99**	**51**	P		**Pn**	**15 11 53.0**	**+0.1**
LVC				*e*Sn		**Sn**	**15 12 16.4**	**+8.4**
CFAA	**Coronel Fontan**	**8.43**	**171**	P		**Pn**	**15 13 33.0**	**+0.8**
	baz=0.0,slow=18,SNR=1.4							
SIV	**San Ignacio**	**10.90**	**50**	P		**Pn**	**15 14 05.5**	**-0.4**
	3.1nm,0.3s,baz=248,slow=16,SNR=4.5							
PLCA	**Paso Flores**	**17.45**	**182**	P		**Pn**	**15 15 29.2**	**-0.8**
	1.0nm,0.3s,baz=9.5,slow=6.1,SNR=3.1							
OTAV	**Otavalo**	**24.83**	**339**	P		**P**	**15 16 45.4**	**-1.0**
TXAR	**Lajitas Array**	**61.63**	**326**	P		**P**	**15 21 42.0**	**+1.4**
	0.8nm,0.7s,mb3.9,baz=139,slow=4.8,SNR=2.7							
TORD	**Torodi Ar. Bea**	**78.67**	**70**	P		**P**	**15 23 25.5**	**+0.6**
	9.5nm,0.8s,mb4.7,baz=244,slow=4.4,SNR=4.4							
MAW	**Mawson**	**82.89**	**163**	P		**P**	**15 23 45.8**	**-0.7**
	6.6nm,1.0s,mb4.4,baz=206,slow=8.5,SNR=2.8							
BOSA	**Boshof**	**83.31**	**118**	P		**P**	**15 23 49.7**	**+0.2**
	7.1nm,1.0s,mb4.4,baz=254,slow=4.9,SNR=6.3							
MKAR	**Makanchi Array**	**147.49**	**37**	PKPbc		PKPbc	15 31 04.3	-1.4
	4.4nm,0.8s,baz=313,slow=3.3,SNR=3.8							

*ISCJB **15** 15:12:55.3±0.3,2310S±005×7052W±007,h29km, mb4.9/27, Error ellipse: s-maj=9.4km s-min=7.2km az=163.3*
*MOS **15** 15:12:56.7±2.4,2299S×7018W,h33km,mb5.3/7, Error ellipse: s-maj=38.3km s-min=15.3km az=108.4*
*IDC **15** 15:12:57.3±0.4,2307S×7039W,h28km±2km,mb4.5/11, mb1 4.6/13,mb1mx4.6/17,mbtmp4.5/13,ML5.1/1, Error ellipse: s-maj=14.2km s-min=11.2km az=169.0*
*NEIC **15** 15:12:57.4±2.8,2314S×7047W,h33km±19km,mb5.2/16, Error ellipse: s-maj=11.0km s-min=7.2km az=76.0*
ISC 15 15:12:57.6±0.3,2310S±005×7050W±006,h31km, h31km±1.1km;pP-P,n66,σ1ş15/56,mb4.9/27,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.55**	**72**	Pg		**Pn**	**15 13 24.2**	**+1.2**
	563nm,0.3s,baz=317,slow=20,SNR=6.7							
LVC				Lg			15 13 43.4	
	1μm,0.3s,baz=134,slow=14,SNR=8.9							
LVC	**Limon Verde**	**1.55**	**72**	*e*Pn		**Pn**	**15 13 23.8**	**+0.7**
LVC				Pg		**Pn**	**15 13 24.2**	**+1.2**
LVC				*e*Sn		**Sn**	**15 13 43.1**	**+1.0**
LVC				Lg			15 13 43.4	
LCO	**Las Campanas**	**5.89**	**182**	*e*Pn		**Pn**	**15 14 24.6**	**+1.9**
CFAA	**Coronel Fontan**	**8.70**	**167**	Pn		**Pn**	**15 15 00.7**	**-0.7**
	baz=354,slow=14,SNR=2.5							
CFAA				Sn		**Sn**	**15 16 52.5**	**+14**
	baz=324,slow=17,SNR=2.6							
SIV	**San Ignacio**	**11.36**	**53**	Pn		**Pn**	**15 15 37.1**	**-0.7**
	6.5nm,0.3s,baz=248,slow=22,SNR=6.6							
EFI	**East Falkland**	**30.10**	**164**	P		**P**	**15 19 01.2**	**-2.9**
RCBR	**Riachuelo**	**37.50**	**68**	*e*P		**P**	**15 20 08.2**	**-0.7**
	82nm,1.0s,mb5.5							
BBGH	**Gun Hill**	**37.58**	**18**	P		**P**	**15 20 12.3**	**+2.9**
SJG	**San Juan**	**41.18**	**6**	*e*P		**P**	**15 20 35.9**	**-3.6**
	80nm,0.9s,mb5.3							
SJG	**San Juan**	**41.18**	**6**	*e*P		**P**	**15 20 35.9**	**-3.5**
SJG				pmax		pmax		
	comp=Z,80nm,0.9s							
PMSA	**Palmer Station**	**41.88**	**176**	P		**P**	**15 20 44.0**	**-0.6**
	comp=Z,65nm,1.3s,mb5.1							
CMIG	**Matias Romero**	**46.52**	**327**	P		**P**	**15 21 23.8**	**+1.5**
	comp=Z,1.1nm,0.4s,mb4.1,baz=162,slow=13,SNR=2.3							
CMIG				pP		pP	15 21 31.4	-0.3
	comp=Z,5.8nm,0.8s,baz=175,slow=2.0,SNR=4.9							
VNA3	**Neumayer Olymp**	**59.05**	**161**	*e*		**P**	**15 22 55.1**	**+0.9**
VNA3				*e*			15 23 00.5	
VNA3				*e*		pP	15 23 03.8	0.0
VNA1	**Neumayer--Stat**	**59.28**	**160**	*e*		**P**	**15 22 57.0**	**+1.1**
VNA1				*e*			15 23 02.2	
VNA1				*e*		pP	15 23 06.3	+0.8
VNA2	**Neumayer--Watz**	**59.64**	**160**	*e*		**P**	**15 22 58.9**	**+0.5**
	baz=293,slow=8.1							
VNA2				*e*			15 23 04.1	
VNA2				*e*		pP	15 23 07.9	-0.1
JCT	**Junction City**	**60.25**	**331**	*e*P		**P**	**15 23 09.1**	**+6.1**
	comp=Z,27nm,0.8s,mb5.3							
JCT	**Junction City**	**60.25**	**331**	*e*P		**P**	**15 23 09.1**	**+6.1**
JCT				pmax		pmax		
	comp=Z,27nm,0.8s,mb5.3							
TXAR	**Lajitas Array**	**61.13**	**327**	P		**P**	**15 23 09.3**	**+0.3**
	comp=Z,2.0nm,1.0s,mb4.2,baz=125,slow=7.8,SNR=3.2							
TXAR				pP		pP	15 23 17.1	-1.6
	comp=Z,4.8nm,0.9s,baz=148,slow=11,SNR=7.7							
WVT	**Waverly**	**61.15**	**344**	*e*P		**P**	**15 23 07.4**	**-1.7**
	comp=Z,27nm,0.9s,mb5.4							
WVT	**Waverly**	**61.15**	**344**	*e*P		**P**	**15 23 07.4**	**-1.6**
WVT				pmax		pmax		
	comp=Z,27nm,0.9s,mb5.4							
SNAA	**Sanae**	**61.26**	**161**	*e*		**P**	**15 23 08.2**	**-1.2**
SNAA				*e*			15 23 14.3	
SNAA				*e*		pP	15 23 17.3	-1.7
SNAA	**Sanae**	**61.26**	**161**	*e*P		**P**	**15 23 07.9**	**-1.5**
	comp=Z,13nm,0.8s,mb5.1							
SIUC	**Southern Illin**	**63.00**	**343**	P		**P**	**15 23 19.9**	**-1.5**
FVM	**French Village**	**63.58**	**343**	P		**P**	**15 23 24.2**	**-1.1**
	comp=Z,22nm,0.8s,mb5.2							
FVM	**French Village**	**63.58**	**343**	P		**P**	**15 23 24.2**	**-1.1**
FVM				pmax		pmax		
	comp=Z,22nm,0.8s,mb5.2							
MAIT	**Maitri**	**65.84**	**159**	*e*P		**P**	**15 23 38.3**	**-1.3**
LPM	**Los Pinos Moun**	**66.63**	**328**	*e*P		**P**	**15 23 46.2**	**+1.0**
ANMO	**Albuquerque**	**67.06**	**328**	P		**P**	**15 23 48.3**	**+0.4**
	comp=Z,9.1nm,0.8s,mb4.9							
ANMO	**Albuquerque**	**67.06**	**328**	P		**P**	**15 23 48.3**	**+0.4**
ANMO				pmax		pmax		
	comp=Z,9.0nm,0.8s							
QSPA	**South Pole Qui**	**67.09**	**180**	P		**P**	**15 23 48.7**	**+1.2**
	comp=Z,16nm,0.6s,mb5.2,baz=154,slow=2.8,SNR=9.9							
QSPA				pP		pP	15 23 57.5	+0.3
	comp=Z,24nm,0.6s,baz=150,slow=1.7,SNR=8.2							
QSPA	**South Pole Qui**	**67.09**	**180**	*e*P		**P**	**15 23 48.2**	**+0.7**
QSPA				pP		pP	15 23 57.5	+0.3
SDCO	**Great Sand Dun**	**68.89**	**331**	*e*P		**P**	**15 24 00.1**	**+0.7**
	comp=Z,55nm,1.4s,mb5.3							
DBIC	**Dimbokro**	**70.60**	**74**	P		**P**	**15 24 09.2**	**-1.2**
	comp=Z,16nm,0.8s,mb5.0,baz=248,slow=6.2,SNR=6.2							
DBIC				pP		pP	15 24 19.2	-1.0
	comp=Z,8.7nm,0.6s,baz=261,slow=4.9,SNR=3.7							
DBIC	**Dimbokro**	**70.60**	**74**	*e*P		**P**	**15 24 09.2**	**-1.3**
	comp=Z,15nm,0.9s,mb4.9							
DBIC				pP		pP	15 24 19.2	-1.0
DBIC	**Dimbokro**	**70.60**	**74**	*e*P		**P**	**15 24 09.2**	**-1.2**
DBIC				*PP		pP	15 24 19.3	-0.9
DBIC				pmax		pmax		
	comp=Z,15nm,0.9s							
ECSD	**EROS,Sioux Fal**	**70.70**	**340**	P		**P**	**15 24 08.7**	**-1.6**
	comp=Z,16nm,0.8s,mb5.0							
ISA	**Isabella**	**74.01**	**321**	*e*P		**P**	**15 24 31.0**	**+0.7**
	comp=Z,16nm,1.2s,mb4.8							
ISA	**Isabella**	**74.01**	**321**	*e*P		**P**	**15 24 31.0**	**+0.7**
ISA				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.8							
PDAR	**Pinedale Array**	**74.78**	**331**	P		**P**	**15 24 37.4**	**+2.8**
	comp=Z,0.7nm,0.6s,baz=123,slow=6.6,SNR=2.3							
HWUT	**Hardware Ranch**	**74.78**	**329**	*e*P		**P**	**15 24 34.3**	**-0.3**
	comp=Z,20nm,1.0s,mb5.0							
NVAR	**Mina Array Bea**	**75.86**	**323**	P		**P**	**15 24 41.8**	**+0.9**
	comp=Z,1.3nm,0.8s,mb3.9,baz=153,slow=6.1,SNR=3.0							
ULM	**Lac du Bonnet**	**76.41**	**344**	P		**P**	**15 24 40.4**	**-3.3**
	comp=Z,3.3nm,0.6s,mb4.5,baz=146,slow=7.3,SNR=2.5							
ULM				pP		pP	15 24 51.5	-2.1
	comp=Z,6.8nm,0.7s,baz=159,slow=7.8,SNR=2.8							
ULM	**Lac du Bonnet**	**76.41**	**344**	P		**P**	**15 24 40.4**	**-3.3**
ULM				pP		pP	15 24 51.5	-2.1
PAHR	**Pah Rah Range**	**77.36**	**323**	P		**P**	**15 24 49.0**	**-0.4**
	comp=Z,8.1nm,0.7s,mb4.8							
HLID	**Hailey**	**77.63**	**329**	*e*P		**P**	**15 24 51.2**	**+0.4**
	comp=Z,10nm,0.9s,mb4.8							
SUR	**Sutherland**	**79.04**	**120**	P		**P**	**15 24 59.3**	**+0.2**
	comp=Z,16nm,0.8s,mb5.0,baz=243,slow=4.5,SNR=6.1							
TORD	**Torodi Ar. Bea**	**79.28**	**71**	P		**P**	**15 24 59.2**	**-1.3**
	comp=Z,21nm,0.8s,mb5.1,baz=256,slow=5.4,SNR=9.5							
TORD				pP		pP	15 25 09.2	-1.2
	comp=Z,8.8nm,0.7s,baz=254,slow=4.7,SNR=4.2							
TSUM	**Tsumeb**	**80.99**	**107**	*e*P		**P**	**15 25 10.0**	**+0.2**
	comp=Z,18nm,0.9s,mb5.0							
OD2	**Odessa Site #2**	**82.49**	**329**	*e*P		**P**	**15 25 17.3**	**+0.4**
MAW	**Mawson**	**83.22**	**164**	P		**P**	**15 25 20.8**	**+0.2**
	comp=Z,14nm,0.8s,mb5.1,baz=241,slow=6.9,SNR=8.0							
MAW				pP		pP	15 25 30.1	-0.4
	comp=Z,15nm,0.7s,baz=201,slow=2.8,SNR=6.9							
BOSA	**Boshof**	**83.99**	**118**	P		**P**	**15 25 24.7**	**-0.6**
	comp=Z,12nm,0.8s,mb5.1,baz=260,slow=2.5,SNR=6.7							
BOSA				pP		pP	15 25 35.3	0.0
	comp=Z,6.1nm,0.7s,baz=232,slow=5.1,SNR=3.6							
ESDC	**Sonseca Array**	**88.00**	**45**	P		**P**	**15 25 45.7**	**+1.0**
	comp=Z,0.3nm,0.2s,mb4.1,baz=270,slow=4.6,SNR=3.6							
YKA	**Yellowknife Ar**	**92.21**	**341**	P		**P**	**15 26 03.1**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.7,baz=138,slow=4.6,SNR=4.1							
YKA				pP		pP	15 26 11.5	-2.3
	comp=Z,3.1nm,0.8s,baz=137,slow=4.6,SNR=4.7							
ASAR	**Alice Springs**	**127.81**	**209**	PKP		PKPdf	15 32 00.3	-0.4
	comp=Z,4.9nm,0.8s,baz=134,slow=2.2,SNR=10							
ASAR				pPKP		pPKPdf	15 32 09.7	-1.4
	comp=Z,4.1nm,0.9s,baz=134,slow=2.1,SNR=6.0							
WRA	**Warramunga Arr**	**130.83**	**211**	PKP		PKPdf	15 32 06.4	-0.2
	comp=Z,3.7nm,0.9s,baz=150,slow=1.6,SNR=6.6							
WRA				pPKP		pPKPdf	15 32 15.4	-1.5
	comp=Z,10nm,1.1s,baz=146,slow=1.5,SNR=8.3							
BVAR	**Borovoye Array**	**137.94**	**35**	PKP		PKPdf	15 32 19.6	+0.8
	comp=Z,2.9nm,1.0s,baz=318,slow=1.9,SNR=2.6							
ZALV	**Zalesovo Beam**	**144.02**	**25**	PKP		PKPdf	15 32 28.3	-1.4
	comp=Z,9.3nm,0.8s,baz=308,slow=2.9,SNR=5.3							
AML	**Almayashu**	**144.71**	**49**	*e*P		PKPdf	15 32 30.9	-0.4
BOD	**Bodaibo**	**145.17**	**356**	*e*PKP2		PKPab	15 32 29.0	-2.2
BOD				pmax		pmax		
	comp=Z,36nm,1.4s							
UCH	**Uchtor**	**145.24**	**48**	*e*P		PKPbc	15 32 33.0	+1.1
ASAJ	**Asahikawa**	**145.71**	**316**	PKPbc		PKPbc	15 32 34.4	+1.0
	comp=Z,16nm,0.9s,baz=76,slow=4.2,SNR=4.0							
ASAJ				pPKPbc		pPKPbc	15 32 42.5	-1.1
	comp=Z,62nm,1.2s,baz=70,slow=9.6,SNR=5.1							
MKAR	**Makanchi Array**	**147.79**	**36**	PKPbc		PKPbc	15 32 39.0	-0.3
	comp=Z,9.5nm,0.7s,baz=326,slow=2.7,SNR=10.0							
MKAR				pPKPbc		pPKPbc	15 32 48.6	-0.9
	comp=Z,5.8nm,0.7s,baz=292,slow=2.8,SNR=4.4							
KAPI	**Kappang**	**150.31**	**201**	PKPbc		PKPbc	15 32 46.7	+0.1
	comp=Z,15nm,0.9s,baz=176,slow=6.1,SNR=4.0							
KAPI				PKPab		PKPab	15 32 51.8	-1.0
	comp=Z,19nm,0.8s,baz=169,slow=5.2,SNR=3.9							
MJAR	**Matsushiro Arr**	**151.84**	**305**	PKPbc		PKPbc	15 32 48.8	-0.8
	comp=Z,5.2nm,0.7s,baz=109,slow=1.4,SNR=7.6							
MJAR				PKPab		PKPab	15 32 58.0	-0.7
	comp=Z,8.1nm,0.9s,baz=75,slow=0.7,SNR=7.7							
SONM	**Songino Array**	**155.20**	**5**	PKP		PKPdf	15 32 48.3	+0.8
	comp=Z,4.3nm,0.9s,baz=11,slow=1.1,SNR=3.6							
SONM				PKPab		PKPab	15 33 13.3	+1.0
	comp=Z,4.2nm,1.0s,baz=0.9,slow=1.7,SNR=3.5							
SONM	**Songino Array**	**155.20**	**5**	PKIKP		PKPdf	15 32 48.3	+0.8
SONM							15 33 13.3	
SONM				pmax		pmax		
	comp=Z,4.0nm,1.0s							

*ISCJB **15** 15:15:47.1±0.2,2273S±003×7014W±004,h27km, mb5.3/69,MS6.1/2, Error ellipse: s-maj=6.0km s-min=4.6km az=159.0*
*GUC **15** 15:15:47.8±1.3,2291S×7053W,h24km±6km,ML5.1*
*MOS **15** 15:15:48.0±1.2,2271S×7029W,h33km,mb5.6/32, Error ellipse: s-maj=17.8km s-min=8.0km az=110.3*
*NEIC **15** 15:15:48.6±0.4,2279S×7020W,h29km±2km,mb5.6/59, Error ellipse: s-maj=9.5km s-min=5.6km az=62.0*
*IDC **15** 15:15:48.1±0.4,2287S×7039W,h28km±2km,mb4.6/15, mb1 4.7/18,mb1mx4.7/21,mbtmp4.6/18,ML4.8/2,MS5.7/2, Ms1 5.7/2,ms1mx4.7/28, Error ellipse: s-maj=12.4km s-min=9.6km az=12.0*
*BJI **15** 15:15:49.5,2280S×7020W,h29km,mB6.1,Ms6.5,Msz6.2*
ISC 15 15:15:48.9±0.2,2289S±003×7028W±004,h28km, h28km±3km;pP-P,n629,σ0ş65/557,mb5.3/69,MS6.1/2, 194C-163D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CEN1	**Los Morros**	**0.51**	**172**	*e*P		**Pb**	**15 16 00.3**	**+0.9**
CEN1				*i* S		**Sb**	**15 16 09.9**	**+3.4**
CEN1				AML		AML	15 16 14.3	
	comp=E,181μm,0.7s							
PB06	**Plate Boundary**	**0.68**	**75**	*e*P		**Pb**	**15 16 03.9**	**+1.8**
PB06				*i* S		**Sb**	**15 16 16.0**	**+4.8**
PB04	**Plate Boundary**	**0.96**	**50**	*e*P		**Pn**	**15 16 00.5**	**-6.0**
PB04				*i* S		**Sn**	**15 16 11.2**	**-8.0**
PB07	**Plate Boundary**	**1.21**	**17**	*e*P		**Pn**	**15 16 10.6**	**+0.7**
PB07				*i* S		**Sn**	**15 16 28.0**	**+2.6**
LVC	**Limon Verde**	**1.29**	**78**	Pg		**Pn**	**15 16 14.4**	**+3.4**
	comp=E,2μm,0.3s,baz=134,slow=17,SNR=23							
LVC				Lg			15 16 34.1	
	comp=E,4μm,0.3s,baz=315,slow=11,SNR=21							
LVC	**Limon Verde**	**1.29**	**78**	*e*Pn		**Pn**	**15 16 13.9**	**+2.8**
LVC				*e*Sn		**Sn**	**15 16 31.3**	**+3.9**
LVC	**Limon Verde**	**1.29**	**78**	*e*P		**Pn**	**15 16 14.2**	**+3.2**
LVC				*i* S		**Sn**	**15 16 34.0**	**+6.6**
SPCH	**San Pedro de A**	**1.92**	**91**	*e*P		**Pn**	**15 16 25.7**	**+6.1**
SPCH				*i* S		**Sn**	**15 16 54.3**	**+11**
PB01	**Plate Boundary**	**1.98**	**22**	*e*P		**Pn**	**15 16 23.8**	**+3.3**
PB01				*i* S		**Sn**	**15 16 50.4**	**+6.0**
PB01				AML		AML	15 17 00.2	
	comp=E,18μm,0.5s							
LCO	**Las Campanas**	**6.11**	**183**	*e*Pn		**Pn**	**15 17 23.7**	**+6.4**
LCO				*e*Sn		**Sn**	**15 18 37.4**	**+11**
CFAA	**Coronel Fontan**	**8.87**	**169**	Pn		**Pn**	**15 17 54.6**	**-0.6**
	baz=349,slow=10,SNR=1.8							
CFAA				Sn		**Sn**	**15 19 50.2**	**+16**
	comp=E,4.2nm,0.3s,baz=153,slow=15,SNR=11							
SIV	**San Ignacio**	**11.06**	**53**	Pn		**Pn**	**15 18 26.5**	**+1.2**
	comp=E,17nm,0.3s,baz=243,slow=11,SNR=16							
SIV				LR		LR	15 23 35.2	
	comp=E,24μm,20.1s,baz=75,slow=42							
NNA	**Nana**	**12.52**	**329**	Pn		**Pn**	**15 18 55.1**	**+10**
	comp=E,1.8nm,0.3s,baz=163,slow=12,SNR=2.1							
NNA				Sn		**Sn**	**15 20 55.8**	**-8.0**
	comp=E,5.1nm,0.3s,baz=225,slow=13,SNR=4.5							
ATAH	**Atahualpa**	**17.62**	**332**	P		**Pn**	**15 19 53.6**	**+1.1**
	comp=E,0.4nm,0.3s,baz=153,slow=9.0,SNR=3.2							
PLCA	**Paso Flores**	**17.79**	**181**	P		**Pn**	**15 19 54.6**	**+0.1**
	comp=E,0.3nm,0.3s,baz=352,slow=12,SNR=2.9							
PLCA	**Paso Flores**	**17.79**	**181**	P		**Pn**	**15 19 54.6**	**+0.1**
PLCA				*e*P			15 20 00.7	
BDFB	**Brasilia**	**22.20**	**75**	P		**P**	**15 20 44.3**	**+1.2**
	comp=E,22nm,0.7s,mb4.7,baz=234,slow=20,SNR=12							
OTAV	**Otavalo**	**24.32**	**340**	*e*P		**P**	**15 21 05.1**	**+0.8**
EFI	**East Falkland**	**30.25**	**165**	*e*P		**P**	**15 21 55.4**	**-1.8**
	comp=E,88nm,1.1s,mb5.4							
EFI	**East Falkland**	**30.25**	**165**	*e*P		**P**	**15 21 55.4**	**-1.8**
EFI				pmax		pmax		
	comp=Z,88nm,1.1s,mb5.4							
USHA	**Ushuaia**	**31.93**	**178**	P		**P**	**15 22 19.2**	**+7.3**
	comp=Z,11nm,0.7s,mb4.8,baz=334,slow=5.9,SNR=3.5							
PCRV	**Puerto La Cruz**	**33.32**	**10**	P		**P**	**15 22 23.7**	**-0.7**
	comp=Z,6.2nm,0.4s,mb4.9,baz=180,slow=2.0,SNR=4.1							
RCBR	**Riachuelo**	**37.22**	**68**	*e*P		**P**	**15 22 57.7**	**-0.5**
	comp=Z,89nm,0.9s,mb5.6							
CPD	**Cerro la Pandu**	**40.90**	**6**	*e*P		**P**	**15 23 26.2**	**-2.5**
	comp=Z,46nm,0.9s,mb5.1							
CPD	**Cerro la Pandu**	**40.90**	**6**	*e*P		**P**	**15 23 26.2**	**-2.5**
CPD				pmax		pmax		
	comp=Z,46nm,0.9s,mb5.1							
SJG	**San Juan**	**40.95**	**6**	*e*P		**P**	**15 23 25.0**	**-4.1**
	comp=Z,130nm,0.9s,mb5.6							
SJG	**San Juan**	**40.95**	**6**	*e*P		**P**	**15 23 25.5**	**-3.7**
SJG				pmax		pmax		
	comp=Z,130nm,1.0s							
MPR	**Mayaguez**	**40.96**	**5**	*e*P		**P**	**15 23 27.3**	**-2.0**
CMIG	**Matias Romero**	**46.45**	**327**	P		**P**	**15 24 13.5**	**0.0**
	comp=Z,21nm,0.9s,mb5.1,baz=139,slow=9.5,SNR=3.6							
CMIG				pP		pP	15 24 20.5	-1.6
	comp=Z,21nm,0.9s,baz=124,slow=6.3,SNR=7.4							
CMIG	**Matias Romero**	**46.45**	**327**	P		**P**	**15 24 13.5**	**0.0**
CMIG				pP		pP	15 24 20.5	-1.6
BBSR	**BB Station**	**55.20**	**6**	*e*P		**P**	**15 25 18.2**	**-1.0**
BBSR				*e*		pP	15 25 26.1	-1.8
LRAL	**Lakeview Retre**	**57.85**	**343**	*e*P		**P**	**15 25 36.5**	**-1.5**
	comp=Z,95nm,1.5s,mb5.6							
HKT	**Hockley**	**57.99**	**334**	*e*P		**P**	**15 25 45.6**	**+6.5**
	comp=Z,91nm,1.7s,mb5.5				

318A **Bisbee** 66.07 323 ⇓P P 15 26 33.3 -0.1
baz=66,SNR=5.6
219A **White Tail Can** 66.10 324 ⇓P P 15 26 33.3 -0.2
baz=66,SNR=5.3
BNM **Barren Site** 66.43 328 *e*P P 15 26 34.8 -0.7
BNM *e* pP 15 26 43.8 -0.7
218A **Dragoon** 66.51 324 ⇑P P 15 26 36.0 -0.2
baz=67,SNR=8.2
Y22D **IRIS PASSCAL I** 66.51 327 ⇓P P 15 26 35.6 -0.5
baz=67
LPM **Los Pinos Moun** 66.56 328 *e*P P 15 26 36.5 0.0
LPM *e*pP pP 15 26 44.9 -0.4
LENM **Lemitar** 66.61 327 *e*P P 15 26 35.4 -1.4
LENM *e* pP 15 26 44.9 -0.7
119A **Ashpeak Ranch,** 66.71 325 ⇑P P 15 26 37.8 +0.3
baz=67
217A **Green Valley** 66.78 323 ⇑P P 15 26 38.0 +0.1
baz=67,SNR=6.2
LBNH **Lisbon** 66.81 359 *e*pP pP 15 26 47.7 +1.0
LAZ **Ladron** 66.88 327 *e*P P 15 26 39.4 +0.9
LAZ *e* pP 15 26 46.8 -0.6
118A **Homack Ranch,** 66.97 324 ⇑P P 15 26 39.3 +0.2
baz=67,SNR=6.1
ANMO **Albuquerque** 66.99 328 *e*P P 15 26 39.4 +0.3
comp=Z,94nm,1.5s,mb5.6
ANMO *e* pP 15 26 46.9 -1.1
ANMO **Albuquerque** 66.99 328 *e*P P 15 26 39.4 +0.3
ANMO *e* pP 15 26 46.9 -1.1
ANMO pmax pmax
comp=Z,94nm,1.5s
Z19A **T-Link Ranch,** 67.10 325 ⇑P P 15 26 40.1 +0.2
baz=67,SNR=5.4
TUC **Tucson** 67.17 323 *e*P P 15 26 40.4 +0.1
comp=Z,50nm,1.4s,mb5.3
TUC *e* pP 15 26 48.1 -1.1
CBKS **Cedar Bluff** 67.30 335 *e*P P 15 26 40.9 -0.1
comp=Z,43nm,0.8s,mb5.5
CBKS *e* pP 15 26 48.5 -1.4
CBKS **Cedar Bluff** 67.30 335 P P 15 26 41.2 +0.2
CBKS *e**PP pP 15 26 49.2 -0.7
CBKS pmax pmax
comp=Z,43nm,0.8s,mb5.5
216A **Three Points,** 67.31 323 ⇑P P 15 26 41.2 0.0
baz=67,SNR=6.9
QSPA **South Pole Qui** 67.31 180 P P 15 26 40.6 0.0
comp=Z,28nm,0.9s,mb5.3,baz=170,slow=3.1,SNR=10
QSPA pP pP 15 26 49.9 +0.4
comp=Z,28nm,0.8s,baz=144,slow=4.7,SNR=8.0
QSPA **South Pole Qui** 67.31 180 *e*P P 15 26 40.4 -0.2
comp=Z,136nm,1.3s,mb5.8
QSPA *e* pP 15 26 48.8 -0.7
117A **Oracle** 67.34 324 ⇓P P 15 26 41.4 0.0
baz=67,SNR=7.0
Z18A **Geronimo** 67.35 324 ⇑P P 15 26 41.0 -0.5
baz=68
FRNY **Flat Rock** 67.46 357 *e*P P 15 26 41.8 0.0
comp=Z,103nm,1.6s,mb5.6
Y19A **Nutrioso** 67.61 326 ⇑P P 15 26 43.6 +0.5
baz=68,SNR=5.5
Z17A **San Carlos Hig** 67.75 324 ⇑P P 15 26 43.8 -0.1
baz=68
116A **Eloy** 67.87 323 ⇓P P 15 26 44.9 +0.1
baz=68
SCIA **State Center** 67.87 342 *e*P P 15 26 43.4 -1.2
comp=Z,72nm,1.0s,mb5.7
Y18A **Canyon Day Jun** 67.88 325 ⇑P P 15 26 44.7 -0.1
baz=68
X19A **St. Johns** 68.00 326 ⇑P P 15 26 45.4 -0.2
baz=68
JFWS **Jewell Farm** 68.01 344 *e*P P 15 26 43.4 -2.1
comp=Z,55nm,1.0s,mb5.5
JFWS **Jewell Farm** 68.01 344 *e*P P 15 26 44.2 -1.2
JFWS pmax pmax
comp=Z,55nm,1.0s,mb5.5
214A **Organ Pipe Nat** 68.04 322 ⇓P P 15 26 46.1 +0.2
baz=68,SNR=8.1
Y17A **Roosevelt** 68.25 324 ⇑P P 15 26 47.4 +0.2
baz=68,SNR=6.2
115A **Sonoran Desert** 68.26 323 ⇑P P 15 26 47.4 +0.1
baz=68,SNR=5.7
Z16A **Peralta Trail,** 68.30 324 ⇑P P 15 26 47.6 +0.1
baz=68,SNR=5.6
X18A **Snowflake** 68.42 325 ⇓P P 15 26 47.9 -0.3
baz=68
W19A **Sanders** 68.58 326 ⇑P P 15 26 49.3 +0.1
baz=69,SNR=5.2
X17A **Forest Lakes** 68.72 325 ⇓P P 15 26 49.8 -0.3
baz=69
Y16A **Circle Bar Ran** 68.73 324 ⇑P P 15 26 50.7 +0.5
baz=69,SNR=6.9
W18A **Petrified Fore** 68.76 326 ⇑P P 15 26 50.3 0.0
baz=69
SDCO **Great Sand Dun** 68.81 331 *e*P P 15 26 50.5 -0.1
comp=Z,89nm,1.3s,mb5.5
SDCO *e* pP 15 26 58.6 -0.8
V19A **Window Rock** 68.88 327 ⇑P P 15 26 51.2 +0.2
baz=69
X16A **Lo Mia Camp, P** 69.12 324 ⇑P P 15 26 52.9 +0.4
baz=69
Z14A **Wintersburg** 69.16 323 ⇓P P 15 26 52.9 +0.1
baz=69
113A **Mohawk Valley,** 69.18 322 ⇓P P 15 26 53.4 +0.4
baz=69,SNR=5.7
W17A **Winslow** 69.24 325 ⇑P P 15 26 53.4 +0.1
baz=69
Y15A **Casa Rosa Ranc** 69.26 323 ⇓P P 15 26 53.5 +0.1
baz=69,SNR=6.2
V18A **Ganado** 69.32 326 ⇑P P 15 26 54.1 +0.4
baz=69
112A **Yuma** 69.48 321 ⇑P P 15 26 54.7 -0.1
baz=70
X15A **Humboldt** 69.60 324 ⇑P P 15 26 55.7 +0.1
baz=70,SNR=6.1
Y14A **Wickenburg** 69.62 323 ⇑P P 15 26 55.9 +0.3
baz=70
W16A **Flagstaff** 69.68 325 ⇓P P 15 26 56.3 +0.3
baz=70,SNR=7.0
T19A **Beclabito** 69.74 328 ⇓P P 15 26 56.3 0.0
baz=70,SNR=6.4
MVCO **Mesa Verde** 69.78 328 *e*P P 15 26 56.6 0.0
comp=Z,118nm,1.4s,mb5.6
MVCO **Mesa Verde** 69.78 328 ⇑P P 15 26 56.4 -0.1
baz=70,SNR=5.4
U18A **Rough Rock, Ch** 69.84 327 ⇑P P 15 26 57.3 +0.4
baz=70,SNR=5.7
WUAZ **Wupatki** 69.92 325 *e*P P 15 26 57.4 -0.1
comp=Z,72nm,1.1s,mb5.5
WUAZ *e* pP 15 27 06.1 -0.2
WUAZ **Wupatki** 69.92 325 ⇑P P 15 26 57.4 -0.1
baz=70,SNR=6.4
X14A **Yava** 69.95 323 ⇑P P 15 26 57.7 0.0
baz=70,SNR=5.7
Y13A **Salome** 69.98 322 ⇑P P 15 26 57.8 -0.1
baz=70
GLA **Glamis** 70.00 321 *e*P P 15 26 58.8 +0.8
comp=Z,91nm,1.4s,mb5.5
GLA *e* pP 15 27 05.8 -1.1
GLA **Glamis** 70.00 321 *e*P P 15 26 58.8 +0.8
GLA *e* pP 15 27 05.8 -1.1
GLA pmax pmax
comp=Z,91nm,1.4s,mb5.5
GLA **Glamis** 70.00 321 ⇑P P 15 26 58.3 +0.3
baz=70,SNR=6.2
OGNE **Ogallala** 70.03 335 *e*P P 15 26 55.7 -2.3
comp=Z,136nm,1.5s,mb5.7
OGNE *e* pP 15 27 05.4 -1.5
W15A **Williams** 70.14 324 ⇑P P 15 26 59.1 +0.3
baz=70
U16A **Tuba City** 70.27 326 ⇑P P 15 26 59.5 -0.1
baz=70,SNR=6.4
Y12C **Blythe** 70.33 322 ⇓P P 15 26 59.7 -0.3
baz=70,SNR=5.0
DBIC **Dimbokro** 70.34 74 P P 15 26 59.4 -1.1
comp=Z,27nm,0.8s,mb5.2,baz=226,slow=5.5,SNR=14
DBIC **Dimbokro** 70.34 74 *e*P P 15 26 59.5 -1.0
comp=Z,52nm,1.1s,mb5.4
DBIC **Dimbokro** 70.34 74 *e*P P 15 26 59.5 -1.0
DBIC pmax pmax
comp=Z,52nm,1.1s
U17A **Shonto** 70.38 326 ⇓P P 15 27 00.0 -0.2
baz=70,SNR=7.1
T18A **Mexican Hat** 70.40 327 ⇑P P 15 27 00.5 +0.1
baz=70,SNR=7.7
DVTC **Desert V Tower** 70.46 320 ⇓P P 15 27 01.3 +0.4
baz=71,SNR=6.1
SWSC **Sam W. Stewart** 70.48 320 ⇑P P 15 27 01.3 +0.3
baz=71,SNR=5.6

PDMCI **Parker Dam,Lak** 70.52 323 ⇑P P 15 27 01.0 -0.2
baz=71
S19A **Harvey Farm, M** 70.52 328 ⇑P P 15 27 00.9 -0.1
baz=71,SNR=5.4
ISCO **Idaho Springs** 70.55 332 *e*P P 15 27 01.7 +0.5
comp=Z,79nm,1.7s,mb5.4
ISCO *e* pP 15 27 09.3 -0.8
ISCO **Idaho Springs** 70.55 332 *e*P P 15 27 01.7 +0.5
ISCO pmax pmax
comp=Z,79nm,1.7s,mb5.4
PV01 **Paradox Valley** 70.55 329 *e*P P 15 27 01.0 -0.3
PV01 *e* pP 15 27 09.8 -0.4
X13A **Yucca** 70.56 323 ⇑P P 15 27 01.4 0.0
baz=71,SNR=7.7
ECSD **EROS,Sioux Fal** 70.57 340 *e*P P 15 26 59.3 -1.9
comp=Z,80nm,1.3s,mb5.5
ECSD *e* pP 15 27 07.6 -2.6
V15A **Kaibab Nationa** 70.57 325 ⇑P P 15 27 01.6 +0.2
baz=71,SNR=6.3
W14A **Seligman** 70.61 324 ⇑P P 15 27 01.5 -0.2
baz=71,SNR=5.8
SMCO **Snowmass** 70.64 331 *e*P P 15 27 02.9 +1.1
comp=Z,52nm,1.2s,mb5.3
SMCO *e* pP 15 27 10.3 -0.4
T17A **Navajo Res., N** 70.76 327 ⇓P P 15 27 02.7 +0.1
baz=71,SNR=5.2
BC3 **Big Chuckw Mtn** 70.80 321 ⇑P P 15 27 02.9 +0.1
baz=71,SNR=6.8
MONP **Monument Peak** 70.81 320 ⇓P P 15 27 02.9 -0.1
baz=71,SNR=7.4
S18A **Hurst Farm, Bl** 70.89 328 ⇑P P 15 27 03.6 +0.3
baz=71,SNR=9.6
V14A **Boquillas Ranc** 70.93 324 ⇓P P 15 27 03.7 0.0
baz=71,SNR=6.1
W13A **Hualapai Mount** 70.96 323 ⇓P P 15 27 04.0 +0.2
baz=71,SNR=6.1
PV10 **Paradox Valley** 70.97 329 *e*P P 15 27 02.5 -1.3
IRM **Iron Mountain** 70.99 322 ⇑P P 15 27 04.4 +0.4
baz=72,SNR=9.6
R19A **Curley Farm, L** 71.01 328 ⇑P P 15 27 03.8 -0.2
baz=71,SNR=5.3
U15A **North Rim** 71.10 325 ⇓P P 15 27 05.2 +0.5
baz=71,SNR=7.4
T16A **Glen Canyon Da** 71.11 326 ⇑P P 15 27 04.6 -0.1
baz=71
NEE2 **Needles Airpor** 71.13 323 ⇑P P 15 27 05.1 +0.3
baz=71
S17A **Black Ridge (B** 71.25 327 ⇑P P 15 27 06.1 +0.5
baz=71,SNR=5.4
PFO **Pinyon Flat Ob** 71.35 321 P P 15 27 14.9 +8.7
comp=Z,134nm,1.2s,mb5.8,SNR=5.5
PFO **Pinyon Flat Ob** 71.35 321 *e*P P 15 27 06.0 -0.2
comp=Z,38nm,1.2s,mb5.2
PFO *e* pP 15 27 14.6 -0.5
PFO **Pinyon Flat Ob** 71.35 321 *e*P P 15 27 06.0 -0.2
PFO *e* pP 15 27 14.6 -0.5
PFO pmax pmax
comp=Z,38nm,1.2s,mb5.2
PFO **Pinyon Flat Ob** 71.35 321 ⇓P P 15 27 06.4 +0.2
baz=72,SNR=7.5
BELC **Belle Mtn.** 71.36 321 ⇓P P 15 27 06.3 +0.1
baz=72,SNR=6.7
R18A **Canyonlands Na** 71.39 328 ⇑P P 15 27 06.4 0.0
baz=72
Q19A **Hogan Spring (** 71.53 329 ⇑P P 15 27 07.5 +0.3
baz=72,SNR=6.6
V13A **Grand Canyon W** 71.57 324 ⇓P P 15 27 07.9 +0.4
baz=72,SNR=5.9
T15A **Red Dirt Ranch** 71.59 326 ⇑P P 15 27 07.8 +0.2
baz=72,SNR=5.1
LDFC **Landfair** 71.63 322 P P 15 27 08.1 +0.2
comp=Z,91nm,1.3s,mb5.5
LDFC *e* pP 15 27 16.9 +0.1
W12A **Cal Nev Ari** 71.66 323 ⇓P P 15 27 08.3 +0.3
baz=72
PHWY **Pilot Hill** 71.72 333 *e*P P 15 27 08.7 +0.4
S16A **Weppner Ranch,** 71.72 327 ⇓P P 15 27 08.3 -0.1
baz=72,SNR=5.6
GMRC **Granite Mounta** 71.72 322 ⇑P P 15 27 08.4 0.0
baz=72,SNR=5.1
R17A **Hanksville Air** 71.81 328 ⇓P P 15 27 08.6 -0.3
baz=72,SNR=6.4
T14A **Hurricane** 71.99 325 ⇑P P 15 27 09.7 -0.3
baz=72
Q18A **Rafter H Ranch** 72.06 328 ⇓P P 15 27 10.1 -0.3
baz=72,SNR=6.8
S15A **Panguitch** 72.08 326 ⇑P P 15 27 10.7 +0.2
baz=72
HEC **Hector,Ludlow** 72.14 322 ⇓P P 15 27 10.6 -0.4
baz=72,SNR=6.2
SRU **San Rafael** 72.26 328 ⇑P P 15 27 11.1 -0.5
baz=72,SNR=17
U12A **Valley of Fire** 72.30 324 ⇓P P 15 27 11.7 -0.2
baz=72
TUQ **Turquoise Moun** 72.35 322 ⇓P P 15 27 12.4 +0.2
baz=72,SNR=8.7
V11A **Goodsprings** 72.36 323 ⇓P P 15 27 12.4 +0.2
baz=72,SNR=5.9
CIS **Catalina Islan** 72.36 319 ⇓P P 15 27 12.3 0.0
baz=72
T13A **Saint George** 72.40 325 ⇑P P 15 27 12.6 +0.2
baz=72
Q16A **Castle Valley** 72.43 328 ⇑P P 15 27 12.6 0.0
baz=72,SNR=6.8
R15A **Junction** 72.44 326 ⇑P P 15 27 12.8 +0.2
baz=73
BFSC **Mount Baldy St** 72.50 320 ⇑P P 15 27 13.4 +0.3
baz=73,SNR=8.9
O19A **Miners Draw (B** 72.53 330 ⇑P P 15 27 13.4 +0.3
baz=73,SNR=6.1
P18A **Preston Nutter** 72.53 329 ⇑P P 15 27 13.6 +0.4
baz=73,SNR=5.5
S14A **Cedar City** 72.56 326 ⇑P P 15 27 13.7 +0.3
baz=73
P17A **Butcher Ranch,** 72.65 328 ⇓P P 15 27 14.0 +0.2
baz=73
SHPR **Sheep Range** 72.70 323 *e*P P 15 27 14.5 +0.3
MWC **Mount Wilson** 72.72 320 P P 15 27 15.2 +0.7
comp=Z,42nm,1.1s,mb5.3
MWC *e* pP 15 27 22.6 -0.8
MWC **Mount Wilson** 72.72 320 P P 15 27 15.2 +0.8
MWC *e* pP 15 27 22.6 -0.8
MWC pmax pmax
comp=Z,42nm,1.1s,mb5.3
GSC **Goldstone** 72.75 322 *e*pP pP 15 27 23.3 -0.3
GSC **Goldstone** 72.75 322 ⇑P P 15 27 15.3 +0.7
baz=73,SNR=8.3
S13A **Holt Ranch, En** 72.79 325 ⇓P P 15 27 15.6 +0.8
baz=73,SNR=7.0
R14A **James Farms, M** 72.89 326 ⇑P P 15 27 15.9 +0.6
baz=73
DECC **Green Verdugo** 72.90 320 ⇓P P 15 27 15.7 +0.2
baz=73
O18A **Roosevelt** 72.92 329 ⇑P P 15 27 16.1 +0.7
baz=73
N19A **John Jarvie Ra** 73.03 330 ⇑P P 15 27 15.6 -0.5
baz=73
EYMN **Ely** 73.04 345 *e*pP pP 15 27 21.9 -3.0
M20A **Sweetwater, Wa** 73.06 331 ⇓P P 15 27 16.0 -0.2
baz=73,SNR=6.6
L21A **Rawlins** 73.08 332 ⇑P P 15 27 16.1 -0.2
baz=73,SNR=6.3
Q15A **Fillmore** 73.09 327 ⇓P P 15 27 16.3 -0.2
baz=73
EDW2 **Edwards Air Fo** 73.14 321 ⇑P P 15 27 16.5 -0.4
baz=73
P16A **Fountain Green** 73.20 328 ⇑P P 15 27 17.3 +0.2
baz=73
O17A **Robinson Place** 73.21 329 ⇑P P 15 27 17.6 +0.4
baz=73,SNR=8.0
T11A **Corn Creek, Al** 73.27 324 ⇓P P 15 27 18.3 +0.7
baz=73,SNR=6.8
U10A **Ash Meadows, A** 73.28 323 ⇓P P 15 27 18.3 +0.6
baz=73
R13A **O'Grain Ranch,** 73.29 325 ⇓P P 15 27 18.3 +0.6
baz=73
N18A **Larsen Ranch,** 73.32 330 ⇑P P 15 27 18.0 +0.2
baz=73,SNR=7.8
S12A **Delamar Landin** 73.34 324 ⇑P P 15 27 18.8 +0.8
baz=73
LRMC **Laurel Mountai** 73.39 321 ⇓P P 15 27 19.3 +0.9
baz=74,SNR=6.0
OSI **Osito Adit** 73.39 320 ⇑P P 15 27 19.2 +0.8
baz=74
P15A **Leamington** 73.48 327 ⇑P P 15 27 19.1 +0.3
baz=74,SNR=5.5
M19A **Rock Springs** 73.50 331 ⇓P P 15 27 19.2 +0.3
baz=74
RSSD **Black Hills** 73.51 335 *e*P P 15 27 18.6 -0.2
comp=Z,34nm,1.2s,mb5.2
RSSD *e* pP 15 27 26.9 -0.9
Q14A **Sevier Lake (B** 73.54 326 ⇑P P 15 27 20.0 +0.8
baz=74,SNR=7.2
O16A **Springville** 73.59 328 ⇑P P 15 27 19.8 +0.4
baz=74,SNR=6.3
FURC **Furnace Creek,** 73.62 322 ⇑P P 15 27 20.0 +0.3
baz=74,SNR=7.5
TPNV **Topopah Spring** 73.62 323 *e*P P 15 27 20.4 +0.8
TPNV **Topopah Spring** 73.62 323 ⇑P P 15 27 20.3 +0.6
baz=74,SNR=5.9
MPMC **Manual Prospec** 73.68 322 ⇓P P 15 27 20.0 0.0
baz=74,SNR=5.7
N17A **Moffit Pass** 73.84 329 ⇓P P 15 27 21.3 +0.4
baz=74,SNR=6.9
M18A **Lyman** 73.86 330 ⇑P P 15 27 20.8 -0.2
baz=74,SNR=7.2
P14A **Drum Mountains** 73.89 327 ⇓P P 15 27 22.0 +0.8
baz=74,SNR=6.4
ISA **Isabella** 73.97 321 *e*P P 15 27 22.5 +0.8
comp=Z,58nm,1.4s,mb5.3
ISA *e*P 15 27 28.4
ISA *e* pP 15 27 30.0 -0.7
ISA **Isabella** 73.97 321 *e*P P 15 27 22.5 +0.7
ISA *e* 15 27 28.4
ISA *e* pP 15 27 30.0 -0.7
ISA pmax pmax
comp=Z,58nm,1.4s,mb5.3
ISA **Isabella** 73.97 321 ⇓P P 15 27 22.4 +0.6
baz=74,SNR=5.1
L19A **Farson** 74.07 331 ⇓P P 15 27 22.0 -0.2
baz=74,SNR=6.2
N16A **Rees Ranch, Co** 74.08 329 ⇓P P 15 27 22.8 +0.6
baz=74
O15A **The Old Anders** 74.12 328 ⇑P P 15 27 22.4 -0.1
baz=74
M17A **Scullys Gap (B** 74.17 330 ⇑P P 15 27 23.1 +0.3
baz=74
DUG **Dugway** 74.22 327 *e*P P 15 27 23.6 +0.5
comp=Z,69nm,1.3s,mb5.4
DUG *e* pP 15 27 31.4 -0.7
DUG **Dugway** 74.22 327 *e*P P 15 27 23.6 +0.5
DUG *e* pP 15 27 31.4 -0.7
DUG pmax pmax
comp=Z,69nm,1.3s,mb5.4
DUG **Dugway** 74.22 327 ⇑P P 15 27 23.4 +0.3
baz=74,SNR=5.4
PKM **Peak Mountain** 74.24 319 ⇑P P 15 27 24.0 +0.7
baz=74,SNR=11
L18A **Fontenelle, Gr** 74.24 330 ⇓P P 15 27 23.0 -0.2
baz=74,SNR=6.6
SBA **Scott Base** 74.24 191 *e*P P 15 27 22.5 -0.3
comp=Z,138nm,1.4s,mb5.7
SBA *e* pP 15 27 31.6 -0.2
SBA **Scott Base** 74.24 191 *e*P P 15 27 22.5 -0.3
SBA *e* pP 15 27 31.6 -0.2
SBA pmax pmax
comp=Z,138nm,1.4s,mb5.7
P13A **Bates Ranch, G** 74.27 326 ⇑P P 15 27 23.9 +0.4
baz=74
R11A **Troy Canyon, C** 74.28 324 ⇓P P 15 27 23.9 +0.5
baz=74,SNR=7.1
CWC **Cottonwood Cre** 74.29 322 ⇓P P 15 27 23.9 +0.3
baz=74,SNR=6.8
Q12A **Willow Creek R** 74.38 325 ⇓P P 15 27 24.3 +0.2
baz=74
VES **Vestal, Richgr** 74.45 321 ⇑P P 15 27 25.0 +0.5
baz=75,SNR=6.2
AGMN **Agassiz Refuge** 74.48 343 *e*P P 15 27 23.0 -1.4
AGMN *e* pP 15 27 30.9 -2.5
M16A **Huntsville** 74.50 329 ⇓P P 15 27 25.2 +0.4
baz=75
S10A **Tonopah Range,** 74.51 324 ⇑P P 15 27 25.6 +0.7
baz=75,SNR=6.6
R10A **Warm Springs** 74.62 324 ⇓P P 15 27 26.4 +1.0
baz=75,SNR=5.4
SMMC **Simmler** 74.63 320 ⇓P P 15 27 26.6 +1.0
baz=75,SNR=7.5
Q11A **Duckwater** 74.67 325 ⇓P P 15 27 26.5 +0.7
baz=75,SNR=5.9
BW06 **Boulder Array** 74.69 331 ⇓P P 15 27 26.0 +0.2
baz=75
PDAR **Pinedale Array** 74.69 331 P P 15 27 24.3 -1.5
comp=Z,1.4nm,0.7s,baz=139,slow=7.2,SNR=4.3
PDAR pP pP 15 27 33.2 -1.5
comp=Z,35nm,1.4s,baz=148,slow=7.0,SNR=6.8
HWUT **Hardware Ranch** 74.70 329 *e*P P 15 27 25.0 -0.8
comp=Z,41nm,1.1s,mb5.3
HWUT *e* pP 15 27 33.7 -1.1
S09A **Goldfield** 74.72 323 ⇓P P 15 27 26.5 +0.5
baz=75,SNR=6.8
O13A **Hicks Ranch, I** 74.76 327 ⇓P P 15 27 26.8 +0.6
baz=75
N14A **Grayback Hills** 74.91 328 ⇓P P 15 27 27.6 +0.6
baz=75,SNR=6.6
L16A **Fish Haven** 74.95 329 ⇓P P 15 27 27.6 +0.3
baz=75,SNR=5.7
TPH **Tonopah** 74.97 323 *e*P P 15 27 27.5 0.0
comp=Z,61nm,1.4s,mb5.3
TPH *e* pP 15 27 36.2 -0.3
TPH **Tonopah** 74.97 323 *e*P P 15 27 27.5 0.0
TPH *e* pP 15 27 36.2 -0.3
TPH pmax pmax
comp=Z,61nm,1.4s,mb5.3
PTRM **Twissleman Ran** 74.99 320 *e*P P 15 27 28.2 +0.5
PTRM *e* pP 15 27 36.1 -0.5
M15A **Larsen Ranch,** 75.01 329 ⇓P P 15 27 28.4 +0.7
baz=75,SNR=6.5
Q10A **Clear Creek Ra** 75.06 324 ⇑P P 15 27 28.7 +0.7
baz=75,SNR=6.8
MTUM **Tungsten Hills** 75.20 322 *e*P P 15 27 29.9 +1.0
MTUM *e* pP 15 27 37.5 -0.4
P11A **Circle Ranch,** 75.25 325 ⇓P P 15 27 29.3 +0.2
baz=75
O12A **Currie** 75.25 326 ⇑P P 15 27 29.7 +0.6
baz=75,SNR=6.4
PKD **Parkfield** 75.38 320 ⇓P P 15 27 30.3 +0.4
baz=76
AHID **Auburn Hatcher** 75.39 330 *e*P P 15 27 30.5 +0.7
L15A **Malad City** 75.40 329 ⇑P P 15 27 29.7 -0.2
baz=76,SNR=8.5
M14A **Sheep Mountain** 75.48 328 ⇑P P 15 27 30.7 +0.3
baz=76,SNR=6.6
Q09A **Carvers** 75.49 324 ⇑P P 15 27 30.8 +0.4
baz=76
I18A **Diamond G Ranc** 75.55 332 ⇓P P 15 27 30.9 +0.2
baz=76,SNR=5.5
MLAC **Mammoth Lakes** 75.55 322 ⇓P P 15 27 31.7 +0.9
baz=76,SNR=6.4
KCC **Kaiser Creek** 75.61 322 ⇓P P 15 27 31.5 +0.2
baz=76,SNR=6.7
O11A **Cowboy Ranch,** 75.62 326 ⇓P P 15 27 31.5 +0.3
baz=76
T06C **Millerton Lake** 75.62 321 ⇑P P 15 27 31.4 +0.1
baz=76
R08A **Mina** 75.65 323 ⇑P P 15 27 31.5 +0.1
baz=76
SYO **Syowa Base** 75.65 160 ⇓/X 15 27 23.2
K16A **Soda Springs** 75.66 330 ⇑P P 15 27 31.7 +0.3
baz=76,SNR=6.6
P10A **Eureka** 75.67 325 ⇓P P 15 27 31.4 -0.1
baz=76,SNR=5.7
J17A **Brown Place, J** 75.68 331 ⇓P P 15 27 31.5 +0.1
baz=76
REDW **Red Top Meadow** 75.74 331 *e*P P 15 27 31.6 -0.2
comp=Z,104nm,1.6s,mb5.5
REDW *e* pP 15 27 39.4 -1.4
M13A **Montello** 75.77 327 ⇑P P 15 27 32.1 +0.1
baz=76
U04C **Hernandez Rese** 75.81 320 ⇓P P 15 27 32.4 0.0
baz=76,SNR=7.4
NVAR **Mina Array Bea** 75.82 323 P P 15 27 32.0 -0.4
comp=Z,2.1nm,0.7s,mb4.2,baz=149,slow=6.1,SNR=7.8
NVAR pP pP 15 27 40.9 -0.5
comp=Z,10nm,1.1s,baz=135,slow=6.4,SNR=11
LOHW **Long Hollow** 75.83 331 *e*P P 15 27 31.8 -0.5
comp=Z,48nm,1.3s,mb5.3
LOHW *e* pP 15 27 40.2 -1.1
L14A **Malta** 75.83 328 ⇓P P 15 27 32.4 +0.1
baz=76,SNR=5.4
N12A **Clover Valley,** 75.83 327 ⇑P P 15 27 32.5 +0.1
baz=76
V03C **Hunter Liggett** 75.85 320 ⇑P P 15 27 32.5 -0.1
baz=76
ELK **Elko** 75.86 326 *e*P P 15 27 32.1 -0.4

comp=Z,59nm,1.6s,mb5.3
ELK *e* pP 15 27 39.9 -1.6
ELK Elko 75.86 326 P **P 15 27 32.6 +0.1**
ELK pmax pmax
comp=Z,59nm,1.6s
TPAW Teton Pass 75.89 331 *e*P **P 15 27 33.0 +0.4**
comp=Z,33nm,1.0s,mb5.2
TPAW *e* pP 15 27 41.2 -0.5
Q08A Gabbs 75.92 323 ⇑P **P 15 27 33.2 +0.2**
baz=76
RRI2 Red Ridge 75.94 330 *e*P **P 15 27 33.1 +0.1**
RRI2 *e* pP 15 27 41.6 -0.4
P09A Austin 75.98 324 ⇓P **P 15 27 33.0 -0.3**
baz=76
K15A Arbon 75.99 329 ⇑P **P 15 27 33.6 +0.3**
baz=76
MOOW Moose Ponds 76.00 331 *e*P **P 15 27 32.8 -0.5**
comp=Z,53nm,1.6s,mb5.2
MOOW *e* pP 15 27 41.2 -1.0
J16A Bone 76.02 330 ⇑P **P 15 27 33.7 +0.3**
baz=76
I17A Pilgram Creek 76.06 331 ⇑P **P 15 27 33.8 +0.2**
baz=76,SNR=6.4
DCID1 Drake Creek 76.07 331 P **P 15 27 34.5 +0.8**
DCID1 *e* pP 15 27 42.3 -0.4
N11A Elko Archery C 76.16 326 ⇑P **P 15 27 34.0 -0.3**
baz=76
O10A Cortez Mining, 76.18 325 ⇑P **P 15 27 34.4 0.0**
baz=76
K14A Jones Ranch, D 76.19 329 ⇑P **P 15 27 35.0 +0.6**
baz=76
M12A Wells 76.19 327 ⇓P **P 15 27 34.3 -0.1**
baz=76
IMW Indian Meadow 76.20 331 *e*P **P 15 27 34.6 +0.2**
IMW *e* pP 15 27 42.3 -1.1
L13A Double Diamond 76.21 328 ⇑P **P 15 27 35.1 +0.6**
baz=76,SNR=6.6
S05C Merced 76.21 321 ⇑P **P 15 27 35.4 +0.7**
baz=76,SNR=5.2
ULM Lac du Bonnet 76.26 343 P **P 15 27 32.8 -1.8**
comp=Z,5.7nm,0.5s,mb4.7,baz=152,slow=6.7,SNR=4.1
ULM pP pP 15 27 42.4 -1.2
comp=Z,16nm,1.0s,baz=147,slow=7.9,SNR=4.9
ULM Lac du Bonnet 76.26 343 *e*P **P 15 27 32.9 -1.7**
comp=Z,79nm,1.5s,mb5.4
ULM *e* pP 15 27 41.0 -2.6
I16A Newdale 76.43 331 ⇓P **P 15 27 36.2 +0.5**
baz=76
H17A Grant Village 76.43 332 ⇑P **P 15 27 36.0 +0.3**
baz=76
RLMT Red Lodge 76.44 333 *e*P **P 15 27 36.0 +0.2**
comp=Z,108nm,1.5s,mb5.6
RLMT *e* pP 15 27 44.0 -0.8
RLMT Red Lodge 76.44 333 ⇓P **P 15 27 36.2 +0.4**
baz=77
O09A Fish Creek Ran 76.45 325 ⇑P **P 15 27 36.3 +0.4**
baz=77
LKWY Lake 76.49 332 *e*P **P 15 27 39.4 +3.4**
N10A Dunphy 76.49 326 ⇓P **P 15 27 36.4 +0.2**
baz=77
J15A Blackfoot 76.49 330 ⇓P **P 15 27 36.1 0.0**
baz=77,SNR=6.2
LAO LASA Array 76.50 335 *e*P **P 15 27 35.7 -0.3**
comp=Z,121nm,1.4s,mb5.6
LAO *e* pP 15 27 43.7 -1.3
WAKR Walker 76.50 322 *e*P **P 15 27 37.4 +1.1**
R06C Coleville 76.52 322 ⇑P **P 15 27 36.8 +0.4**
baz=77,SNR=5.2
PACP Pacheco Peak 76.54 320 ⇑P **P 15 27 36.8 +0.3**
baz=77
P08A Dixie Valley 76.59 324 ⇑P **P 15 27 36.5 -0.3**
baz=77
M11A Holland Ranch, 76.64 327 ⇓P **P 15 27 37.3 +0.4**
baz=77,SNR=6.3
K13A Stover Farm, H 76.70 328 ⇓P **P 15 27 37.5 +0.2**
baz=77
CMB Columbia Colle 76.72 321 *e*pP pP 15 27 45.6 -0.9
CMB Columbia Colle 76.72 321 ⇓P **P 15 27 37.9 +0.4**
baz=77
G18A Lazy EL Ranch, 76.73 333 ⇓P **P 15 27 37.3 -0.1**
baz=77,SNR=5.6
L12A House Creek Ra 76.78 327 ⇓P **P 15 27 38.1 +0.4**
baz=77
P07A Fallon 76.92 323 ⇑P **P 15 27 39.1 +0.5**
baz=77
J14A Carey 76.94 329 ⇑P **P 15 27 38.7 +0.1**
baz=77
H16A Russell Place, 76.97 331 ⇑P **P 15 27 38.8 +0.1**
baz=77,SNR=6.9
I15A Monteview 76.98 330 ⇓P **P 15 27 38.8 0.0**
baz=77
M10A I.L. Ranch, Tu 77.09 326 ⇓P **P 15 27 39.9 +0.4**
baz=77
K12A Draper Farm, C 77.09 328 ⇑P **P 15 27 39.5 0.0**
baz=77,SNR=5.3
GCMT Greycliff 77.15 333 *e*P **P 15 27 39.0 -0.7**
GCMT *e* pP 15 27 47.5 -1.2
QLMT Earthquake Lak 77.15 331 *e*P **P 15 27 40.7 +1.0**
L11A Cat Creek Ranc 77.17 327 ⇑P **P 15 27 40.0 +0.1**
baz=77
R04C Big Horse Ranc 77.19 321 ⇓P **P 15 27 40.3 +0.1**
baz=77
WENL Wente Vineyard 77.23 320 ⇑P **P 15 27 41.2 +0.8**
baz=77
WCN Washoe City 77.23 323 ⇑P **P 15 27 40.8 +0.4**
baz=77
DGMT Dagmar 77.25 338 *e*P **P 15 27 40.9 +0.6**
DGMT *e* pP 15 27 48.5 -0.8
DGMT Dagmar 77.25 338 ⇑P **P 15 27 40.5 +0.3**
baz=77,SNR=6.6
F18A Big Timber 77.26 333 ⇓P **P 15 27 40.6 +0.2**
baz=77,SNR=6.0
PAHR Pah Rah Range 77.31 323 *e*P **P 15 27 41.8 +1.0**
comp=Z,84nm,1.3s,mb5.5
J13A Cove Ranch, Pi 77.31 329 ⇓P **P 15 27 41.1 +0.3**
baz=77
O07A Toulon 77.35 324 ⇓P **P 15 27 41.0 0.0**
baz=78
I14A Mackay 77.37 330 ⇓P **P 15 27 41.3 +0.2**
baz=78,SNR=5.1
N08A GE Springer Mi 77.39 325 ⇓P **P 15 27 40.8 -0.4**
baz=78
LAVA Lava Cap Winer 77.41 322 ⇓P **P 15 27 41.8 +0.4**
baz=78,SNR=5.3
L10A Juniper Basin 77.46 327 ⇑P **P 15 27 41.7 +0.1**
baz=78,SNR=10
M09A Marrel Ranch, 77.49 326 ⇑P **P 15 27 41.9 +0.1**
baz=78
BDM Black Diamond 77.52 321 ⇑P **P 15 27 41.6 -0.4**
baz=78
H15A Lima 77.53 330 ⇓P **P 15 27 42.0 +0.1**
baz=78
HLID Hailey 77.55 329 *e*P **P 15 27 42.1 +0.1**
HLID *e* pP 15 27 50.9 -0.2
HLID Hailey 77.55 329 ⇑P **P 15 27 42.6 +0.6**
baz=78,SNR=7.6
P06A Stead Airport, 77.58 323 ⇓P **P 15 27 42.5 +0.3**
baz=78
G16A Moss Hill, Enn 77.63 331 ⇑P **P 15 27 42.6 +0.2**
baz=78
J12A Stokes Ranch, 77.65 328 ⇓P **P 15 27 42.9 +0.4**
baz=78,SNR=7.0
F17A Fitzpatrick Pl 77.66 332 ⇑P **P 15 27 42.9 +0.3**
baz=78,SNR=6.0
I13A Wildhorse Cree 77.67 329 ⇑P **P 15 27 43.1 +0.4**
baz=78,SNR=5.1
K11A Parker Ranch, 77.75 327 ⇓P **P 15 27 42.9 -0.3**
baz=78
MCMT McKenzie Canyo 77.78 330 *e*P **P 15 27 44.1 +0.8**
MCMT *e* pP 15 27 52.2 -0.1
N07B Gerlach 77.84 324 ⇑P **P 15 27 44.0 +0.2**
baz=78,SNR=6.8
H14A Leadore 77.86 330 ⇓P **P 15 27 44.3 +0.6**
baz=78,SNR=5.6
E18A Harlowton 77.87 333 ⇑P **P 15 27 44.0 +0.2**
baz=78,SNR=6.2
O06A Flanigan 77.87 323 ⇑P **P 15 27 43.9 0.0**
baz=78
BOZ Bozeman (W) 77.88 332 *e*pP pP 15 27 52.0 -0.8
BOZ Bozeman (W) 77.88 332 ⇓P **P 15 27 43.5 -0.3**
baz=78
G15A Dillon 77.88 331 ⇓P **P 15 27 44.4 +0.6**
baz=78,SNR=5.7
BEKR Beckwourth 77.96 323 ⇑P **P 15 27 44.6 +0.1**
baz=78,SNR=6.1
F16A Kennard Place, 77.98 332 ⇓P **P 15 27 44.4 0.0**
baz=78
M08A Happy Creek Ra 78.00 325 ⇓P **P 15 27 45.6 +1.0**
baz=78,SNR=7.5
L09A Wilkinson Ranc 78.03 326 ⇑P **P 15 27 45.1 +0.4**
baz=78,SNR=7.0
Q03C Winters 78.06 321 ⇑P **P 15 27 45.2 +0.1**
baz=78
I12A Atlanta 78.07 329 ⇑P **P 15 27 45.4 +0.5**
baz=78,SNR=6.6
DLMT Dillon 78.08 331 *e*P **P 15 27 45.5 +0.6**
comp=Z,58nm,1.3s,mb5.3
MFID Camas Ranch 78.12 328 ⇑P **P 15 27 45.5 +0.2**
baz=78,SNR=7.5
CVS Carmenet Viney 78.13 321 ⇑P **P 15 27 45.0 -0.4**
baz=78
K10A MacKenzie Ranc 78.18 327 ⇓P **P 15 27 45.8 +0.2**
baz=78
E17A Martinsdale 78.19 333 ⇓P **P 15 27 45.5 0.0**
baz=78
H13A Challis 78.23 330 ⇓P **P 15 27 45.7 -0.1**
baz=78,SNR=8.3
OHCM Honcut 78.23 322 *e*P **P 15 27 46.0 +0.1**
OHCM *e* pP 15 27 53.8 -1.1
MCCM Marconi Confer 78.24 320 ⇓P **P 15 27 45.8 -0.2**
baz=78
N06A Buffalo Meadow 78.28 324 ⇓P **P 15 27 45.9 -0.2**
baz=78,SNR=6.1
D18A Linhart Farms, 78.33 334 ⇑P **P 15 27 46.9 +0.6**
baz=78
NSHM Saint Helena R 78.33 321 *e*P **P 15 27 46.3 -0.2**
NSHM *e* pP 15 27 54.7 -0.9
O05C Quincy 78.34 323 ⇑P **P 15 27 47.1 +0.6**
baz=78
LRM Limekiln Ridge 78.37 331 *e*P **P 15 27 47.1 +0.5**
LRM *e*pP pP 15 27 54.9 -0.7
ORV Oroville 78.39 322 ⇓P **P 15 27 47.1 +0.3**
baz=78,SNR=7.7
F15A Butte 78.41 331 ⇓P **P 15 27 47.5 +0.7**
baz=78,SNR=5.3
MNRC Mcloughlin Nat 78.47 321 ⇓P **P 15 27 47.6 +0.3**
baz=79
H12A Diamond D Ranc 78.50 329 ⇓P **P 15 27 47.7 +0.4**
baz=79
L08A Fields 78.51 326 ⇑P **P 15 27 47.8 +0.4**
baz=79
K09A Rome 78.55 326 ⇓P **P 15 27 47.7 +0.1**
baz=79,SNR=5.9
E16A East Helena 78.59 332 ⇑P **P 15 27 47.6 -0.2**
baz=79
G13A Cobalt 78.62 330 ⇑P **P 15 27 48.2 +0.2**
baz=79,SNR=14
D17A Six Diamond Ra 78.66 333 ⇓P **P 15 27 48.2 +0.1**
baz=79,SNR=7.1
O04C Chester 78.68 323 ⇑P **P 15 27 48.5 +0.1**
baz=79,SNR=6.9
F14A Wisdom 78.78 331 ⇑P **P 15 27 48.6 -0.1**
baz=79,SNR=6.5
HRY Holter Researc 78.80 332 P **P 15 27 48.4 -0.5**
HRY *e* pP 15 27 57.3 -0.6
WVOR Wild Horse Val 78.83 326 *e*P **P 15 27 49.5 +0.3**
comp=Z,23nm,1.3s,mb5.0
WVOR *e* pP 15 27 56.9 -1.3
WVOR Wild Horse Val 78.83 326 P **P 15 27 50.1 +0.9**
WVOR pmax pmax
comp=Z,23nm,1.3s,mb5.0
L07A Adell 78.91 325 ⇓P **P 15 27 49.5 -0.1**
baz=79,SNR=6.9
HOPS Hopland 78.92 321 ⇑P **P 15 27 49.6 -0.1**
baz=79
E15A Deer Lodge 78.92 332 ⇑P **P 15 27 49.5 0.0**
baz=79,SNR=5.4
D16A Dana Ranch, Ca 78.93 333 ⇓P **P 15 27 49.5 0.0**
baz=79
K08A Mann Creek Ran 78.97 326 ⇓P **P 15 27 49.4 -0.5**
baz=79
SUR Sutherland 78.97 120 P **P 15 27 50.4 0.0**
comp=Z,12nm,1.0s,mb4.8,baz=243,slow=6.8,SNR=4.7
SUR Sutherland 78.97 120 *e*P **P 15 27 51.0 +0.7**
EGMT Eagleton 78.97 334 *e*P **P 15 27 48.4 -1.4**
EGMT *e* pP 15 27 57.2 -1.6
EGMT Eagleton 78.97 334 ⇑P **P 15 27 49.3 -0.5**
baz=79,SNR=5.1
TOA0 Torodi Ar. Sit 79.01 71 *e*P **P 15 27 49.6 -1.1**
TOA0 *e* pP 15 27 59.7 -0.1
TORD Torodi Ar. Bea 79.01 71 P **P 15 27 49.6 -1.1**
comp=Z,36nm,0.9s,mb5.3,baz=258,slow=5.0,SNR=27
TORD pP pP 15 27 59.4 -0.4
comp=Z,32nm,0.7s,baz=251,slow=5.1,SNR=12
J09A Fry Pan Ranch, 79.03 327 ⇑P **P 15 27 50.0 -0.3**
baz=79
C17A Wharram Farm, 79.07 333 ⇓P **P 15 27 49.9 -0.4**
baz=79,SNR=8.2
I10A Payette 79.10 328 ⇓P **P 15 27 50.1 -0.5**
baz=79
GASB Alder Springs 79.15 321 ⇑P **P 15 27 51.3 +0.3**
baz=79
H11A Donnelly 79.17 329 ⇑P **P 15 27 50.9 0.0**
baz=79
F13A Darby 79.19 330 ⇓P **P 15 27 51.2 +0.1**
baz=79,SNR=14
E14A Clinton 79.29 331 ⇑P **P 15 27 51.5 -0.1**
baz=79,SNR=5.1
K07A Rock Creek Ran 79.33 326 ⇑P **P 15 27 51.7 -0.2**
baz=79
MOD Modoc 79.34 324 *e*P **P 15 27 52.1 +0.1**
comp=Z,40nm,1.1s,mb5.3
MOD *e* pP 15 27 59.9 -1.1
MOD Modoc 79.34 324 ⇑P **P 15 27 52.5 +0.5**
baz=79,SNR=5.3
D15A Lincoln 79.35 332 ⇑P **P 15 27 51.7 -0.2**
baz=80
J08A Circle Bar Ran 79.41 326 ⇓P **P 15 27 52.4 +0.1**
baz=80
H10A Noah's Angus R 79.44 328 ⇓P **P 15 27 52.4 0.0**
baz=80
I09A Lost Marbles R 79.48 327 ⇓P **P 15 27 52.7 0.0**
baz=80,SNR=7.2
CHMT Chamberlain Mo 79.57 332 *e*P **P 15 27 53.8 +0.7**
CHMT *e* pP 15 28 02.2 +0.1
F12A Elk City 79.59 330 ⇑P **P 15 27 53.2 0.0**
baz=80
C16A Fuhringer Ranc 79.61 333 ⇑P **P 15 27 52.8 -0.5**
baz=80,SNR=6.1
E13A Victor 79.62 331 ⇑P **P 15 27 53.0 -0.4**
baz=80,SNR=6.0
WDC Whiskeytown Da 79.67 322 *e*P **P 15 27 51.9 -1.9**
WDC *e* pP 15 28 00.2 -2.6
WDC Whiskeytown Da 79.67 322 *e*P **P 15 27 52.4 -1.4**
WDC Whiskeytown Da 79.67 322 ⇓P **P 15 27 52.6 -1.2**
baz=80
G11A Walters Elk Ra 79.81 329 ⇓P **P 15 27 54.8 +0.4**
baz=80,SNR=6.7
MSO Missoula 79.81 331 *e*pP pP 15 28 03.3 -0.1
D14A Greenough 79.81 332 ⇓P **P 15 27 54.6 +0.2**
baz=80,SNR=6.6
J07A Hines 79.85 326 ⇓P **P 15 27 54.8 +0.1**
baz=80
I08A Drewsey 79.85 327 ⇓P **P 15 27 55.1 +0.4**
baz=80,SNR=7.9
BMO Blue Mountains 79.90 328 *e*P **P 15 27 54.8 -0.2**
H09A Durkee 79.94 328 ⇓P **P 15 27 54.8 -0.4**
baz=80
C15A Salmond Ranch, 79.96 333 ⇑P **P 15 27 55.5 +0.3**
baz=80,SNR=8.0
B16A M & M Farms, S 80.08 333 ⇓P **P 15 27 55.3 -0.5**
baz=80,SNR=5.8
O01C Eel River Cons 80.11 321 ⇑P **P 15 27 55.9 -0.2**
baz=80
F11A Grangeville 80.11 329 ⇑P **P 15 27 55.9 -0.1**
baz=80,SNR=7.2
G10A Bishop Farm, J 80.13 328 ⇑P **P 15 27 55.8 -0.4**
baz=80,SNR=7.4
J06A Christmas Vall 80.20 325 ⇓P **P 15 27 56.5 -0.1**
baz=80,SNR=10
K05A Summer Lake 80.23 325 ⇑P **P 15 27 57.1 +0.4**
baz=80,SNR=7.1
E12A Beaver Dam Sad 80.23 330 ⇑P **P 15 27 56.4 -0.3**
baz=80,SNR=6.4
D13A Huson 80.24 331 ⇑P **P 15 27 56.8 +0.1**
baz=80,SNR=10
N02C Big Bar 80.26 322 ⇑P **P 15 27 56.9 -0.1**
baz=80,SNR=6.5
H08A Prairie City 80.34 327 ⇑P **P 15 27 56.9 -0.4**
baz=80,SNR=7.4
B15A Bradely Ranch, 80.36 333 ⇑P **P 15 27 56.9 -0.4**
baz=80,SNR=8.1
G09A Cove 80.44 328 ⇑P **P 15 27 57.5 -0.4**
baz=80,SNR=11
I07A Izee 80.45 326 ⇓P **P 15 27 57.9 0.0**
baz=81,SNR=7.0
A16A West Butte Ran 80.45 334 ⇓P **P 15 27 57.3 -0.5**
baz=81,SNR=18
E11A Bogner Ranch, 80.48 330 ⇓P **P 15 27 58.0 0.0**
baz=81
YBH Yreka Blue Hor 80.54 323 *e*P **P 15 27 57.8 -0.7**
YBH Yreka Blue Hor 80.54 323 ⇑P **P 15 27 57.8 -0.6**
baz=81
KHMM Horse Mountain 80.54 322 *e*P **P 15 28 06.1 +7.6**
F10A Beach Ranch, E 80.68 329 ⇓P **P 15 27 58.9 -0.3**
baz=81,SNR=7.1
B14A Marquette Ranc 80.69 333 ⇑P **P 15 27 59.0 -0.2**
baz=81,SNR=6.1
I06A Prineville 80.71 326 ⇑P **P 15 27 59.7 +0.4**
baz=81,SNR=5.9
C13A Hot Springs 80.74 331 ⇓P **P 15 27 59.2 -0.1**
baz=81,SNR=7.0
F09A S2 Ranch, Elgi 80.82 328 ⇓P **P 15 27 59.5 -0.4**
baz=81
H07A Lands Inn, Kim 80.84 327 ⇑P **P 15 27 59.7 -0.3**
baz=81
TSUM Tsumeb 80.85 107 LR LR 15 59 23.1
comp=Z,8µm,18.5s,MS6.1,slow=32
TSUM Tsumeb 80.85 107 *e*P **P 15 28 00.9 +0.1**
comp=Z,31nm,1.0s,mb5.2
TSUM *e* pP 15 28 10.7 +0.9
BSMT Bassoo Peak 80.96 331 P **P 15 28 00.9 +0.3**
E10A Myers Farm, Un 81.00 329 ⇓P **P 15 28 00.7 -0.1**
baz=81,SNR=8.9
G08A Pilot Rock 81.03 328 ⇓P **P 15 28 00.5 -0.5**
baz=81,SNR=7.9
D11A Klaveano Farm, 81.06 330 ⇑P **P 15 28 00.2 -0.9**
baz=81
LNOR Lincton Mounta 81.12 328 P **P 15 27 59.7 -1.7**
LNOR *e* pP 15 28 08.7 -1.8
C12B Naegeli Ranch, 81.16 331 ⇑P **P 15 28 01.1 -0.5**
baz=81
B13A Whitefish 81.22 332 ⇑P **P 15 28 01.9 0.0**
baz=81,SNR=6.5
A14A Double T Ranch 81.23 333 ⇓P **P 15 28 01.4 -0.5**
baz=81
BBOR Butler Butte 81.30 324 P **P 15 28 09.7 +7.2**
F08A Pendleton 81.30 328 ⇓P **P 15 28 01.7 -0.8**
baz=81
L02A Cave Junction 81.32 323 ⇑P **P 15 28 03.0 +0.4**
baz=81
VIPM Ingram Point 81.32 326 P **P 15 28 03.2 +0.7**
H06A Lindquist Farm 81.33 326 ⇓P **P 15 28 02.6 0.0**
baz=81,SNR=7.6
G07A Ruggs Ranch, H 81.37 327 ⇑P **P 15 28 03.3 +0.5**
baz=82,SNR=6.4
M01C Crescent City 81.40 322 ⇑P **P 15 28 02.8 -0.2**
baz=82
I05A Bend 81.41 326 ⇓P **P 15 28 03.2 +0.1**
baz=82
D10A Wagner Farm, O 81.50 330 ⇓P **P 15 28 03.0 -0.4**
baz=82,SNR=7.5
WALA Waterton Lakes 81.50 333 *e*P **P 15 28 02.9 -0.5**
WALA *e* pP 15 28 11.3 -1.1
E09A Wood Farm, Sta 81.51 329 ⇓P **P 15 28 03.0 -0.5**
baz=82
C11A Tepee Creek (N 81.61 331 ⇓P **P 15 28 03.7 -0.3**
baz=82,SNR=12
K02A Glendale 81.66 323 ⇑P **P 15 28 03.9 -0.5**
baz=82
H05A Madras 81.73 326 ⇓P **P 15 28 04.6 -0.1**
baz=82
B12A Libby 81.78 331 ⇑P **P 15 28 04.9 0.0**
baz=82
G06A Carlson Farm, 81.83 327 ⇑P **P 15 28 05.4 +0.1**
baz=82
FFC Flin Flon 81.94 342 *e*P **P 15 28 04.7 -0.9**
D09A Jones Farm, Ri 81.99 329 ⇓P **P 15 28 05.9 -0.1**
baz=82,SNR=7.6
C10A Spilker Farm, 82.07 330 ⇓P **P 15 28 06.8 +0.4**
baz=82
HAWA Hanford 82.10 328 *e*P **P 15 28 06.3 -0.3**
HAWA *e* pP 15 28 14.8 -0.8
B11A Sandpoint 82.10 331 ⇓P **P 15 28 06.9 +0.3**
baz=82
J02A Umpqua 82.10 324 ⇓P **P 15 28 07.2 +0.5**
baz=82
RSW Rattlesnake Hi 82.13 328 P **P 15 28 07.0 +0.2**
A12A Yaak River Ran 82.16 332 ⇑P **P 15 28 07.2 +0.3**
baz=82,SNR=5.8
G05A Wamic 82.18 326 ⇑P **P 15 28 07.1 0.0**
baz=82
KEBM Edson Butte 82.19 323 *e*pP pP 15 28 16.9 +0.7
GBL Gable Mountain 82.21 328 P **P 15 28 07.8 +0.6**
H04A Detroit Lake 82.25 325 ⇓P **P 15 28 07.5 0.0**
baz=82
D08A Wollman Farm, 82.28 329 ⇓P **P 15 28 07.5 0.0**
baz=82
F06A Goldendale 82.28 327 ⇓P **P 15 28 07.6 0.0**
baz=82,SNR=6.4
NEW Newport 82.31 331 *e*P **P 15 28 15.8 +8.2**
I03A Eugene 82.35 324 ⇓P **P 15 28 08.1 +0.1**
baz=82,SNR=5.2
E07A Sunnyside 82.37 328 ⇓P **P 15 28 08.4 +0.4**
baz=82
OD2 Odessa Site #2 82.41 329 P **P 15 28 07.7 -0.5**
A11A Hall Mountain, 82.48 331 ⇓P **P 15 28 08.8 +0.2**
baz=83,SNR=12
C09A Chrisman Ranch 82.50 330 ⇓P **P 15 28 08.8 +0.1**
baz=83,SNR=6.3
H03A Soap Creek Ran 82.83 325 ⇑P **P 15 28 10.7 +0.2**
baz=83
C08A Higginbotham F 82.85 329 ⇑P **P 15 28 10.9 +0.4**
baz=83
D07A Quincy 82.88 328 ⇓P **P 15 28 10.5 -0.1**
baz=83,SNR=6.3
B09A Rice 82.90 330 ⇑P **P 15 28 10.2 -0.5**
baz=83
E06A Yakima 82.91 327 ⇑P **P 15 28 10.5 -0.4**
baz=83
EBG Ellensburg 82.97 328 P **P 15 28 11.4 +0.2**
A10A Northport 83.03 331 ⇑P **P 15 28 10.8 -0.6**
baz=83,SNR=5.2
F04A Amboy 83.22 326 ⇑P **P 15 28 12.0 -0.5**
baz=83,SNR=5.7
WTV Waterville 83.22 329 P **P 15 28 11.4 -1.0**
C07A Waterville 83.27 329 ⇑P **P 15 28 12.0 -0.6**
baz=83,SNR=5.8
E05A Randle 83.32 327 ⇑P **P 15 28 12.7 -0.3**
baz=83,SNR=5.9
ETW Entiat 83.34 329 *e*P **P 15 28 12.5 -0.5**
ETW *e* pP 15 28 21.0 -1.1
MAW Mawson 83.37 164 *e*P **P 15 28 12.6 -0.4**
comp=Z,20nm,0.8s,mb5.2
MAW Mawson 83.37 164 P **P 15 28 12.5 -0.5**
comp=Z,30nm,0.9s,mb5.3,baz=226,slow=7.6,SNR=12
MAW pP pP 15 28 21.4 -0.7
comp=Z,41nm,1.0s,baz=217,slow=5.1,SNR=8.8
MAW Mawson 83.37 164 *e*P **P 15 28 12.6 -0.4**
comp=Z,212nm,1.6s,mb5.9
MAW *e* pP 15 28 21.2 -0.9
MAW Mawson 83.37 164 *e*P **P 15 28 12.6 -0.4**
MAW *e* pP 15 28 21.2 -0.9
MAW pmax pmax
comp=Z,212nm,1.6s
B08A Colville Reser 83.40 330 ⇓P **P 15 28 12.6 -0.8**
baz=84,SNR=6.4
A09A Danville 83.50 330 ⇑P **P 15 28 13.4 -0.4**
baz=84
A08A Turner Farm, O 83.80 330 ⇓P **P 15 28 15.1 -0.3**
baz=84,SNR=6.4
B07A Winthrop 83.84 329 ⇑P **P 15 28 15.6 0.0**
baz=84,SNR=6.2
BOSA Boshof 83.91 118 P **P 15 28 16.1 -0.5**
comp=Z,8.9nm,0.5s,mb5.1,baz=231,slow=7.9,SNR=14
BOSA pP pP 15 28 25.8 +0.1
comp=Z,14nm,0.8s,baz=246,slow=4.6,SNR=5.6
A07A Ashnola River, 84.38 330 ⇑P **P 15 28 18.5 +0.2**
baz=84,SNR=5.5
EDM Edmonton 84.49 336 *e*P **P 15 28 17.4 -1.4**
EDM *e* pP 15 28 25.2 -2.6
JCW Jim Creek 84.52 328 *e*P **P 15 28 17.7 -1.4**
JCW *e* pP 15 28 25.8 -2.4
B06A Marblemount 84.53 329 ⇑P **P 15 28 18.7 -0.4**
baz=85
B05A Bryant 84.65 328 ⇓P **P 15 28 19.3 -0.4**
baz=85
A05A Maple Falls 85.15 329 ⇑P **P 15 28 23.2 +1.0**
baz=85,SNR=6.7
PGC Sidney 85.58 328 *e*pP pP 15 28 33.4 -0.1
LBTB Lobatse 85.58 115 P **P 15 28 25.9 +0.8**

MTE	**Manteigas**	**85.81**	**43**	*e*P		**P**	**15 28 23.8**	**-1.9**
	comp=Z,27nm,1.0s,mb5.4							
MTE				*e*			15 28 36.8	
TAM	**Tamanrasset**	**86.57**	**64**	*e*P		**P**	**15 28 29.3**	**-0.6**
TAM				*e*			15 28 40.2	
ESDC	**Sonseca Array**	**87.70**	**45**	P		**P**	**15 28 34.6**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.3,baz=251,slow=3.9,SNR=3.6							
ESDC				pP		pP	15 28 43.4	-0.7
	comp=Z,1.6nm,0.7s,baz=235,slow=5.2,SNR=1.9							
CASY	**Casey**	**91.11**	**180**	P		**P**	**15 28 51.2**	**+0.6**
	comp=Z,116nm,1.4s,mb6.0							
LSZ	**Lusaka**	**91.70**	**107**	*e*P		**P**	**15 28 56.5**	**+2.1**
	comp=Z,18nm,1.3s,mb5.2							
LSZ	**Lusaka**	**91.70**	**107**	*e*P		**P**	**15 28 56.5**	**+2.1**
LSZ				pmax	pmax			
	comp=Z,18nm,1.3s,mb5.2							
YKA	**Yellowknife Ar**	**92.07**	**341**	P		**P**	**15 28 52.9**	**-2.0**
	comp=Z,4.5nm,0.7s,mb4.9,baz=134,slow=4.3,SNR=7.5							
YKA				pP		pP	15 29 03.1	-0.9
	comp=Z,3.8nm,0.6s,baz=139,slow=4.2,SNR=6.4							
DLBC	**Dease Lake**	**94.85**	**333**	*e*P		**P**	**15 29 07.8**	**+0.1**
CLL	**Collm**	**103.49**	**40**	*e*Pdif		Pdif	15 29 51.0	+4.1
	comp=Z,8.0nm,1.5s							
CLL	**Collm**	**103.49**	**40**	*e*P		Pdif	15 29 51.0	+4.1
CLL				pmax	pmax			
	comp=Z,8.0nm,1.5s							
CLL	**Collm**	**103.49**	**40**	*e*(Pdif)			15 29 51.0	
	comp=Z,8.0nm,1.5s							
CLL				*e*PP		PP	15 34 01.0	-2.2
OBN	**Obninsk**	**118.04**	**39**	*e*PKP		PKPdf	15 34 26.9	-5.7
OBN	**Obninsk**	**118.04**	**39**	*i* PKIKP		PKPdf	15 34 26.8	-5.8
OBN				pmax	pmax			
	comp=Z,11nm,1.5s							
KIV	**Kislovodsk**	**121.82**	**52**	*e*PKP		PKPdf	15 34 37.7	-2.6
KIV	**Kislovodsk**	**121.82**	**52**	*e*PKIKP		PKPdf	15 34 37.6	-2.7
KIV				pmax	pmax			
	comp=Z,9.0nm,1.1s							
BILL	**Bilibino**	**123.33**	**338**	*e*PKIKP		PKPdf	15 34 49.6	+7.1
BILL				pmax	pmax			
	comp=Z,12nm,1.4s							
ASAR	**Alice Springs**	**128.10**	**209**	PKP		PKPdf	15 34 52.0	-1.1
	comp=Z,7.4nm,0.9s,baz=143,slow=2.0,SNR=14							
ASAR				pPKP		pPKPdf	15 35 00.6	-1.9
	comp=Z,13nm,1.0s,baz=152,slow=2.1,SNR=12							
ARU	**Arti**	**130.00**	**34**	*i* PKIKP		PKPdf	15 34 52.7	-2.8
ARU							15 41 57.1	
SEY	**Seymchan**	**130.85**	**336**	*e*PKIKP		PKPdf	15 34 55.8	-1.2
WRA	**Warramunga Arr**	**131.12**	**211**	PKP		PKPdf	15 34 58.0	-0.9
	comp=Z,2.6nm,0.6s,baz=154,slow=1.7,SNR=24							
WRA				pPKP		pPKPdf	15 35 06.8	-1.5
	comp=Z,23nm,1.1s,baz=154,slow=1.6,SNR=18							
WRAB	**Tennant Creek**	**131.12**	**211**	*e*PKPdf		PKPdf	15 34 58.5	-0.4
WRAB				*e*			15 35 06.0	
AKTK	**Aktyubinsk**	**131.51**	**42**	PKP		PKPdf	15 34 58.1	-0.5
AKTO	**Aktyubinsk**	**131.51**	**42**	PKP		PKPdf	15 34 58.1	-0.5
	comp=Z,2.5nm,0.9s,baz=3.7,slow=3.8,SNR=4.0							
PETK	**Petropavlovsk-**	**132.90**	**322**	PKP		PKPdf	15 35 00.5	-0.7
	comp=Z,2.4nm,0.7s,baz=50,slow=4.1,SNR=6.8							
PETK	**Petropavlovsk-**	**132.90**	**322**	PKP		PKPdf	15 35 00.5	-0.7
BVAR	**Borovoye Array**	**137.65**	**35**	PKP		PKPdf	15 35 08.8	-1.2
	comp=Z,3.6nm,0.9s,baz=333,slow=1.6,SNR=4.4							
NVS	**Novosibirsk**	**142.46**	**25**	*i* PKIKP		PKPdf	15 35 17.9	-0.8
NVS				pmax	pmax			
	comp=Z,133nm,3.2s							
NVS				pmax	pmax			
	comp=N,28nm,2.5s							
NVS				pmax	pmax			
	comp=E,75nm,3.3s							
KURK	**Kurchatov**	**143.18**	**33**	*e*PKP		PKPdf	15 35 16.0	-4.1
KURK	**Kurchatov**	**143.18**	**33**	*i* PKIKP		PKPdf	15 35 16.9	-3.2
ZAA0	**Zalesovo Array**	**143.74**	**25**	*e*PKPdf		PKPdf	15 35 18.4	-2.6
ZALV	**Zalesovo Beam**	**143.74**	**25**	PKP		PKPdf	15 35 18.6	-2.4
	comp=E,6.9nm,0.7s,baz=327,slow=3.6,SNR=7.1							
YSS	**Yuzh-Sakhalins**	**144.23**	**320**	⇑*i*PKIKP		PKiKP	15 35 27.5	+1.9
YSS				pmax	pmax			
	comp=Z,130nm,1.4s							
EKS2	**Erkin-Say**	**144.27**	**48**	*e*PKPdf		PKPdf	15 35 20.1	-2.1
EKS2	**Erkin-Say**	**144.27**	**48**	P		PKPdf	15 35 20.9	-1.4
	SNR=6.4							
BATI	**Baumata**	**144.39**	**204**	PKP		PKPdf	15 35 21.7	-1.6
	comp=Z,12nm,0.8s,baz=169,slow=5.2,SNR=3.1							
AML	**Almayashu**	**144.41**	**49**	*e*PKPdf		PKPdf	15 35 21.6	-0.9
AML	**Almayashu**	**144.41**	**49**	P		PKPdf	15 35 22.3	-0.3
	SNR=9.8							
AAK	**Ala-Archa**	**144.77**	**48**	P		PKPdf	15 35 22.9	-0.2
	SNR=19							
CHMS	**Chumysh**	**144.80**	**47**	P		PKPdf	15 35 22.8	-0.4
	SNR=9.0							
UCH	**Uchtor**	**144.94**	**48**	*e*PKPdf		PKPdf	15 35 24.2	+0.8
BOD	**Bodaibo**	**144.97**	**356**	*e*PKIKP		PKPdf	15 35 20.3	-2.7
BOD				*e*			15 35 25.8	
BOD				pmax	pmax			
	comp=Z,44nm,0.9s							
KBK	**Karagaybulak**	**145.07**	**47**	P		PKPbc	15 35 23.9	+0.8
	SNR=18							
TKM2	**Tokmak 2**	**145.40**	**47**	*e*PKPdf		PKPdf	15 35 24.1	-0.1
TKM2	**Tokmak 2**	**145.40**	**47**	P		PKPbc	15 35 25.0	+0.8
	SNR=9.8							
KZA	**Kyzart**	**145.50**	**48**	P		PKPbc	15 35 26.4	+1.9
	SNR=6.4							
ASAJ	**Asahikawa**	**145.70**	**316**	PKPbc		PKPbc	15 35 24.9	-0.2
	comp=Z,10nm,0.8s,baz=90,slow=3.0,SNR=6.7							
ASAJ				pPKPbc		pPKPbc	15 35 33.1	-1.3
	comp=Z,128nm,1.1s,baz=136,slow=3.7,SNR=12							
POO	**Poona**	**146.22**	**91**	⇓*i*x		PKPbc	15 35 25.0	-2.4
	comp=Z,50nm,1.0s							
KSH	**Kashi**	**146.95**	**52**	*e*PKP		PKPdf	15 35 23.4	-3.5
KSH				*e*APKP			15 35 34.1	
KSH				*e*XPKP			15 35 38.0	
KSH				*e*PKS			15 38 57.6	
KSH				*e*SKS		SKSdf	15 42 28.1	-5.7
KSH				PP		PP		
	comp=Z,3μm,11.7s							
KSH				LR		LR		
	comp=Z,3μm,14.7s,MS6.2							
MK31	**Makanchi Array**	**147.50**	**36**	*e*PKPdf		PKPdf	15 35 27.6	0.0
MKAR	**Makanchi Array**	**147.50**	**36**	PKP		PKPdf	15 35 26.8	-0.8
	comp=Z,14nm,0.8s,baz=300,slow=2.8,SNR=15							
MKAR				PKPbc		PKPbc	15 35 29.7	-0.5
	comp=Z,14nm,0.8s,baz=318,slow=1.9,SNR=20							
THN	**Thein Dam**	**148.53**	**65**	*e*P		PKPdf	15 35 28.0	-1.8
HYB	**Hyderabad**	**150.27**	**95**	*e*PKP		PKPbc	15 35 37.5	-0.6
HYB	**Hyderabad**	**150.27**	**95**	*i* PKP		PKPbc	15 35 37.5	-0.6
	comp=Z,55nm,1.0s							
IRK	**Irkutsk**	**150.39**	**7**	*e*PKIKP		PKPbc	15 35 36.6	-0.8
IRK				pmax	pmax			
	comp=N,125nm,2.9s							
KDI	**Kendari**	**150.50**	**207**	P		PKPbc	15 35 38.5	-0.4
	comp=N,129nm,1.4s							
KAPI	**Kappang**	**150.59**	**201**	PKPbc		PKPbc	15 35 37.7	-1.4
	comp=N,26nm,0.9s,baz=217,slow=6.5,SNR=9.6							
KAPI	**Kappang**	**150.59**	**201**	*e*PKPdf		PKPbc	15 35 37.2	-1.9
TLY	**Talaya**	**150.87**	**8**	*e*PKPdf		PKPbc	15 35 36.2	-2.4
TLY				*e*PKPab		PKPab	15 35 46.6	+0.8
TLY	**Talaya**	**150.87**	**8**	*e*PKIKP		PKPbc	15 35 38.2	-0.3
TLY				pmax	pmax			
	comp=Z,46nm,1.8s							
MJAR	**Matsushiro Arr**	**151.89**	**305**	PKPbc		PKPbc	15 35 39.6	-1.8
	comp=Z,10nm,0.9s,baz=98,slow=1.3,SNR=11							
MJAR				PKPab		PKPab	15 35 49.2	-1.4
	comp=Z,23nm,1.1s,baz=63,slow=0.7,SNR=12							
MJAR				pPKPab		pPKPab	15 35 57.7	-2.1
	comp=Z,14nm,1.1s,baz=89,slow=1.5,SNR=4.5							
MJAR	**Matsushiro Arr**	**151.89**	**305**	PKPbc		PKPbc	15 35 39.6	-1.8
MJAR				PKPab		PKPab	15 35 49.2	-1.4
MJAR				pPKPab		pPKPab	15 35 57.7	-2.1
MJAR	**Matsushiro Arr**	**151.89**	**305**	PKIKP		PKPbc	15 35 39.6	-1.8
MJAR							15 35 49.2	
MAT	**Matsushiro**	**151.89**	**305**	PKP		PKPbc	15 35 40.4	-1.0
ZAK	**Zakamensk**	**152.10**	**9**	*e*PKIKP		PKPdf	15 35 32.4	-2.4
ZAK				pmax	pmax			
	comp=Z,9.0nm,1.6s							
WMQ	**Urumqi**	**152.33**	**36**	*e*PKP		PKPdf	15 35 35.0	-0.3
WMQ				PP		PP	15 39 26.0	+1.9
WMQ				SKS		SKSdf	15 42 37.0	-3.7
WMQ				SS		SS	15 58 48.0	-3.2
WMQ				PP		PP		
	comp=Z,3μm,10.0s							
HIA	**Hailar**	**152.51**	**346**	*e*PKPbc		PKPbc	15 35 41.7	-0.6
MDJ	**Mudanjiang**	**152.88**	**328**	PKP		PKPdf	15 35 36.4	+0.3
MDJ				PP		PP	15 39 27.0	-0.1
SONM	**Songino Array**	**154.96**	**5**	PKP		PKPdf	15 35 38.9	-0.1
	comp=Z,3.8nm,0.9s,baz=0.0,slow=4.3,SNR=4.0							
SONM				PKPbc		PKPbc	15 35 47.6	-0.1
	comp=Z,3.6nm,0.9s,baz=319,slow=0.6,SNR=3.7							
SONM				PKPab		PKPab	15 36 02.0	-1.1
	comp=Z,6.9nm,1.0s,baz=316,slow=0.9,SNR=4.7							
SONM				PP		PP	15 39 43.6	+5.3
	comp=Z,1.5nm,0.9s,baz=340,slow=3.9,SNR=3.9							
CN2	**Changchun**	**155.43**	**332**	*e*PKP		PKPdf	15 35 39.1	-0.6
KSRS	**Korea Array**	**158.65**	**317**	PKP		PKPdf	15 35 44.8	+0.7
	comp=Z,2.1nm,0.9s,baz=122,slow=0.9,SNR=3.5							
KSRS				pPKP		pPKPdf	15 35 52.2	-1.3
	comp=Z,5.5nm,1.0s,baz=90,slow=0.2,SNR=4.2							
GTA	**Gaotai**	**161.50**	**25**	PKP		PKPdf	15 35 46.5	-0.7
GTA				APKP			15 35 56.3	
GTA				XPKP			15 35 59.9	
HHC	**Hu-ho-hao-te**	**162.02**	**355**	*e*PKP		PKPdf	15 35 47.0	-0.7
HHC				APKP			15 35 57.8	
HHC				XPKP			15 36 01.3	
HHC				PKS			15 39 19.9	
HHC				PP		PP	15 40 19.4	+2.6
HHC				SKS		SKSdf	15 42 48.0	-2.6
HHC				SKKS		SKKSac	15 47 02.5	-1.5
HHC				SS		SS	16 00 31.9	-1.8
HHC				LR		LR		
	comp=N,4μm,16.6s							
HHC				LR		LR		
	comp=E,3μm,16.6s							
HHC				LR		LR		
	comp=Z,4μm,19.0s							
BJI	**Beijing**	**162.05**	**344**	PKP		PKPdf	15 35 46.6	-1.1
LZH	**Lanzhou**	**165.89**	**20**	*e*PKP		PKPdf	15 35 49.5	-1.9
LZH				APKP			15 36 00.0	
LZH				XPKP			15 36 03.6	
LZH				PP		PP	15 40 38.5	+1.2
LZH				SKS		SKSdf	15 42 48.4	-5.2
LZH				SKKS		SKKSac	15 47 20.5	-3.4
LZH				PP		PP		
	comp=Z,437nm,8.7s							
LZH				LR		LR		
	comp=Z,694nm,20.3s							
NJ2	**Nanjing**	**167.80**	**320**	*e*PKP		PKPdf	15 35 51.5	-1.4
CMAR	**Chiang Mai Arr**	**168.99**	**112**	PKP		PKPdf	15 35 52.4	-1.7
	comp=Z,3.5nm,1.0s,baz=324,slow=1.6,SNR=4.6							
CMAR				PKPab		PKPab	15 37 04.3	-1.1
	comp=Z,3.1nm,1.0s,baz=257,slow=4.5,SNR=5.4							
CMAR				PP		PP	15 40 53.6	-1.3
	comp=Z,1.2nm,1.0s,baz=250,slow=4.0,SNR=4.2							
CD2	**Chengdu**	**170.40**	**32**	*e*PKP		PKPdf	15 35 52.4	-2.2
CD2				XPKP			15 36 02.1	
CD2				PKP2		PKPab	15 37 09.4	-1.7
CD2				PP		PP	15 41 00.6	-0.1
CD2				SKS		SKSdf	15 42 50.9	-5.4
CD2				SKKS		SKKSac	15 47 42.5	-3.9
CD2				SS		SS	16 01 54.6	-5.3
CD2				PP		PP		
	comp=Z,4μm,11.8s							
KMI	**Kunming**	**173.24**	**69**	PKP		PKPdf	15 35 57.9	+1.8
GYA	**Guiyang**	**175.49**	**37**	PKP		PKPdf	15 35 58.8	+2.0
GYA				APKP			15 36 04.3	
GYA				XPKP			15 36 10.4	
GYA				PKP2		PKPab	15 37 33.8	0.0
GYA				PP		PP	15 41 27.6	+1.8
GYA				SKKS		SKKSac	15 48 06.0	-5.0
GYA				SS		SS	16 02 46.8	-2.9
GYA				PP		PP		
	comp=Z,440nm,8.5s							
GYA				LR		LR		
	comp=Z,970nm,25.8s							

ISCJB ***15*** *15:23:54.9*±*3.2,2159S*×*009*×*70.1W*±*02,h38km*±*29km, mb3.6/4,Error ellipse: s-maj=31.1km s-min=15.4km az=6.2*

NEIC ***15*** *15:23:54.5*±*0.8,2191S*×*7021W,h35km,Error ellipse: s-maj=16.5km s-min=14.8km az=71.0*

IDC ***15*** *15:23:57.6*±*2.8,2193S*×*7014W,h65km*±*28km,mb3.5/4, mb1 3.6/5,mb1mx3.6/15,mbtmp3.4/5,Error ellipse: s-maj=31.6km s-min=26.8km az=11.0*

ISC 15 15:23:55.9±2.3**,219S**±01×**702W**±02**,h46**km±25km**,n9,** σ0**s85**/10**,mb3.6**/4**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.41**	**121**	P		**Pn**	**Pn**	**15 24 19.4**	**+0.3**
	63nm,0.3s,SNR=3.3								
LVC				S		**Sn**	**Sn**	**15 24 37.6**	**+1.1**
	288nm,0.3s,SNR=10								
LVC	**Limon Verde**	**1.41**	**121**	*e*Pn		**Pn**	**Pn**	**15 24 17.2**	**-1.9**
CFAA	**Coronel Fontan**	**9.84**	**170**	P		**Pn**	**Pn**	**15 26 14.3**	**-0.4**
	0.1nm,0.3s,baz=4.4,slow=13,SNR=2.7								
CFAA				S		**Sn**	**Sn**	**15 28 15.4**	**+12**
	0.1nm,0.3s,baz=66,slow=20,SNR=2.8								
SIV	**San Ignacio**	**10.45**	**57**	P		**Pn**	**Pn**	**15 26 23.1**	**-0.1**
	4.9nm,0.3s,baz=245,slow=14,SNR=26								
BDFB	**Brasilia**	**21.91**	**77**	P		**P**	**P**	**15 28 45.3**	**-0.1**
	2.3nm,0.6s,mb3.8,baz=256,slow=18,SNR=2.9								
PDAR	**Pinedale Array**	**73.85**	**331**	P		**P**	**P**	**15 35 26.3**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=133,slow=5.0,SNR=2.7								
NVAR	**Mina Array Bea**	**75.06**	**323**	P		**P**	**P**	**15 35 33.8**	**+0.9**
	0.5nm,0.7s,mb3.6,baz=150,slow=6.1,SNR=3.2								
TORD	**Torodi Ar. Bea**	**78.63**	**71**	P		**P**	**P**	**15 35 52.2**	**-1.3**
	0.5nm,0.5s,mb3.7,baz=252,slow=5.2,SNR=7.8								
WRA	**Warramunga Arr**	**132.00**	**212**	PKP		PKPdf		15 43 03.9	-1.3
	0.7nm,1.1s,baz=170,slow=1.4,SNR=3.5								

DJA 15 15:31:57,407S×**10527E,h298km,MLv4.3/5,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBJI	**Citeko**	**2.81**	**146**	P		Pn	Pn	15 32 48.6	-2.2
DBJI	**Dramaga**	**2.87**	**149**	P		Pn	Pn	15 32 57.3	+5.9
LEM	**Lembang**	**3.60**	**140**	P		Pn	Pn	15 32 57.5	-1.3
PDSI	**Padang**	**5.74**	**303**	P		Pn	Pn	15 33 23.3	+0.1
	41nm,1.4s,0.3nm								
KSM	**Kuching**	**7.46**	**43**	P		Pn		15 33 39.8	-4.2
	20nm,1.8s,0.2nm								
SBUM	**Sibu**	**9.50**	**47**	P		Pn		15 34 14.4	+5.4

PRU ***15*** *15:32:38.4,48.12N*×*16.19E,h0km*

ISCJB ***15*** *15:32:38.4*±*0.3,4818N*±*002*×*1603E*±*003,h10km,Error ellipse: s-maj=2.6km s-min=2.4km az=171.9*

CSEM ***15*** *15:32:39.9*±*0.1,4808N*×*16.13E,h2km,ML3.3/9,Error ellipse: s-maj=1.5km s-min=0.9km az=136.0*

VIE ***15*** *15:32:39.5*±*0.3,4808N*×*16.12E,h11km*±*3km,mb1.8/3, ML2.5/4,Error ellipse: s-maj=2.6km s-min=1.1km az=116.0 3 km SSW of Sulz im Wienerwald felt 3-4 EMS98 at Heiligenkreuz / LOWER AUSTRIA*

IPEC ***15*** *15:32:40.0*±*0.1,4808N*×*16.19E,h11km*±*1km,ML2.2/3, Error ellipse: s-maj=1.1km s-min=0.6km az=122.0*

SZGRF ***15*** *15:32:40.4,48.11N*×*16.12E,h10km,mb2.7,Austria*

ISC 15 15:32:39.3±0.4**,4813N**±002×**1613E**±003**,h1**km±4km**,n39,** σ0**s99**/62**,5C-4D,Austria**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.27**	**222**	⇑*i*Pg		**Pg**	**Pg**	**15 32 44.7**	**+0.3**
	9.5nm,0.1s								
CONA				⇑*i*Sg		**Sg**	**Sg**	**15 32 47.8**	**0.0**
	96nm,0.1s								
CSNA	**Conrad Observa**	**0.27**	**222**	⇓*i*Pg		**Pg**	**Pg**	**15 32 44.7**	**+0.3**
	7.7nm,0.0s								
CSNA				⇓*i*Sg		**Sg**	**Sg**	**15 32 47.8**	**0.0**
	173nm,0.1s								
CSNA	**Conrad Observa**	**0.27**	**222**	Pg		**Pg**	**Pg**	**15 32 44.7**	**+0.3**
	7.7nm,0.0s								
CSNA				Sg		**Sg**	**Sg**	**15 32 47.8**	**-0.1**
	173nm,0.1s								
SOP	**Sopron**	**0.53**	**147**	*e*Pg		**Pg**	**Pg**	**15 32 49.6**	**+0.2**
ZST	**Bratislava**	**0.66**	**84**	*e*SN		**Sg**	**Sg**	**15 33 01.1**	**+0.8**
ZST	**Bratislava**	**0.66**	**84**	*e*Pg		**Pg**	**Pg**	**15 32 52.3**	**+0.5**
ZST				*e*Sn		**Sg**	**Sg**	**15 33 01.1**	**+0.8**
MODS	**Modra-Piesok**	**0.81**	**72**	*e*PN		**Pn**	**Pn**	**15 32 55.2**	**-2.5**
MODS				*e*SN		**Sg**	**Sg**	**15 33 06.6**	**+1.4**
SMOL	**Smolenice**	**0.95**	**66**	*e*SN		**Sn**	**Sn**	**15 33 13.8**	**-0.1**
KRUC	**Moravsky**	**0.95**	**11**	⇓*i*Pg		**Pg**	**Pg**	**15 32 58.7**	**+1.2**
KRUC				*e*Sg		**Sg**	**Sg**	**15 33 11.1**	**+1.3**
	28nm,0.1s								
ARSA	**Arzberg**	**0.97**	**205**	⇑*i*Pg		**Pg**	**Pg**	**15 32 57.2**	**-0.6**
	2.3nm,0.1s								
ARSA				⇑*i*Sg		**Sg**	**Sg**	**15 33 09.9**	**-0.3**
	11nm,0.1s								
ARSA	**Arzberg**	**0.97**	**205**	*e*Pg		**Pg**	**Pg**	**15 32 57.3**	**-0.5**
ARSA				*e*Sg		**Sg**	**Sg**	**15 33 09.9**	**-0.4**
ARSA	**Arzberg**	**0.97**	**205**	Pg		**Pg**	**Pg**	**15 32 57.2**	**-0.6**
	2.3nm,0.1s								
ARSA				Sg		**Sg**	**Sg**	**15 33 09.9**	**-0.4**
	11nm,0.1s								
VRAC	**Vranov**	**1.22**	**14**	*e*Pg		**Pg**	**Pg**	**15 33 02.9**	**+0.2**
VRAC				*e*Sg		**Sg**	**Sg**	**15 33 19.8**	**+1.3**
	78nm,0.2s								
MOA	**Molln**	**1.28**	**258**	⇓*i*Pg		**Pg**	**Pg**	**15 33 04.0**	**+0.2**
	4.8nm,0.1s								
MOA				⇑*i*Sg		**Sg**	**Sg**	**15 33 21.4**	**+1.0**
	15nm,0.2s								
MOA	**Molln**	**1.28**	**258**	*e*Pg		**Pg**	**Pg**	**15 33 03.9**	**+0.1**
MOA				*e*Sg		**Sg**	**Sg**	**15 33 21.3**	**+0.9**
MOA	**Molln**	**1.28**	**258**	*e*Pg		**Pg**	**Pg**	**15 33 03.9**	**+0.1**
MOA				Sg		**Sg**	**Sg**	**15 33 21.4**	**+1.0**
	15nm,0.2s								
KOLL	**Kolacno**	**1.58**	**73**	*e*PN		**Pn**	**Pn**	**15 33 07.8**	**-0.6**
KOLL				*e*SN		**Sn**	**Sn**	**15 33 27.5**	**-2.0**
GEC2	**GERESS Array S**	**1.77**	**295**	*e*Pn		**Pn**	**Pn**	**15 33 12.0**	**+1.1**
GEC2				*e*Sg		**Sg**	**Sg**	**15 33 35.9**	**-0.1**
VYHS	**Vyhne**	**1.84**	**78**	*e*PN		**Pn**	**Pn**	**15 33 12.2**	**+0.2**
VYHS				*e*SN		**Sn**	**Sn**	**15 33 33.3**	**-2.7**
MORC	**Moravsky Berou**	**1.90**	**29**	*e*Pn		**Pn**	**Pn**	**15 33 12.7**	**0.0**
MORC				*e*Sn		**Sn**	**Sn**	**15 33 37.5**	**+0.3**
	6.1nm,0.2s								
OBKA	**Obir**	**1.94**	**214**	*e*Pn		**Pn**	**Pn**	**15 33 12.9**	**-0.4**
KHC	**Kasperske Hory**	**1.97**	**302**	*e*Pn		**Pn**	**Pn**	**15 33 14.4**	**+0.7**
KHC	**Kasperske Hory**	**1.97**	**302**	Pg		**Pg**	**Pg**	**15 33 14.7**	**-2.2**
KHC				*e*Sn		**Sn**	**Sn**	**15 33 40.1**	**+1.2**
KHC				Sg		**Sg**	**Sg**	**15 33 40.3**	**-2.1**
	21nm,0.6s								
KHC	**Kasperske Hory**	**1.97**	**302**	*e*PG		**Pg**	**Pg**	**15 33 14.7**	**-2.2**
KHC				*e*SG		**Sg**	**Sg**	**15 33 40.3**	**-2.1**
	comp=Z,21nm,0.6s								
PRU	**Pruhonice**	**2.13**	**331**	Sg		**Sg**	**Sg**	**15 33 44.0**	**-3.8**
	comp=Z,15nm,0.2s								
PRU				*e*Sn		**Sn**	**Sn**	**15 33 44.3**	**+1.2**
PRU	**Pruhonice**	**2.13**	**331**	*e*SG		**Sg**	**Sg**	**15 33 44.0**	**-3.8**
	comp=Z,15nm,0.2s								
KBA	**Koelnbreinsper**	**2.15**	**242**	*e*Sn		**Sn**	**Sn**	**15 33 44.2**	**+0.6**
DPC	**Dobruska-Polom**	**2.23**	**3**	*e*Pn		**Pn**	**Pn**	**15 33 17.3**	**0.0**
DPC				*e*Sn		**Sn**	**Sn**	**15 33 46.2**	**+0.8**
DPC				Sg		**Sg**	**Sg**	**15 33 49.3**	**-1.5**
	comp=Z,7.8nm,0.2s								
UPC	**Upice**	**2.38**	**358**	*e*SG		**Sg**	**Sg**	**15 33 54.9**	**-0.9**
WET	**Wettzell**	**2.38**	**296**	*e*SG		**Sg**	**Sg**	**15 33 54.9**	**-0.9**
PVCC	**Panska Ves**	**2.61**	**338**	*e*SG		**Sg**	**Sg**	**15 34 02.9**	**-0.2**
	comp=Z,24nm,0.2s								
BRG	**Berggiesshubel**	**3.10**	**333**	*e*SG		**Sg**	**Sg**	**15 34 19.4**	**+0.8**
BRG	**Berggiesshubel**	**3.10**	**333**	SG		**Sg**	**Sg**	**15 34 17.9**	**-0.7**
	comp=Z,12nm,0.3s								
NKC	**Novy Kostel**	**3.20**	**312**	*e*SG		**Sg**	**Sg**	**15 34 21.2**	**-0.9**
	comp=Z,9.9nm,0.3s								
MANZ	**Manzenberg**	**3.23**	**307**	*e*Sg		**Sg**	**Sg**	**15 34 23.3**	**+0.3**
FBE	**Freiberg**	**3.33**	**328**	*e*Sg		**Sg**	**Sg**	**15 34 26.0**	**-0.1**
WERD	**Werda**	**3.41**	**314**	*e*Sg		**Sg**	**Sg**	**15 34 28.4**	**-0.4**
GRF	**Grafenberg Arr**	**3.59**	**298**	*e*Sg		**Sg**	**Sg**	**15 34 36.1**	**+1.4**
CLL	**Collm**	**3.77**	**329**	*e*Sg		**Sg**	**Sg**	**15 34 40.0**	**-0.4**

DJA 15 15:34:56.6±0.0**,439S**×**10749E,h222**km**,mb4.5**/3**, MLv4.1**/6**,Java Sea**

OTAV **Otavalo** 24.39 341 *e*P P 15 51 07.8 +2.2
comp=Z,18nm,1.0s,mb4.5
RCBR **Riachuelo** 37.54 68 *e*P P 15 53 01.4 -0.1
comp=Z,44nm,0.8s,mb5.2
TGUH **Tegucigalpa,Un** 40.35 334 P P 15 53 23.6 -1.3
SJG **San Juan** 41.14 6 *e*P P 15 53 27.4 -4.0
comp=Z,66nm,1.0s,mb5.2
SJG **San Juan** 41.14 6 *e*P P 15 53 27.4 -4.0
SJG pmax pmax
comp=Z,66nm,1.0s
VNA3 **Neumayer Olymp** 59.11 161 *e*P P 15 55 48.0 +1.0
VNA3 *e* 15 55 53.6
VNA3 *e* 15 56 04.0
VNA1 **Neumayer--Stat** 59.35 160 *e*P P 15 55 49.9 +1.3
VNA1 *e* 15 55 55.6
VNA1 *e* 15 56 04.4
VNA2 **Neumayer--Watz** 59.71 160 *e*P P 15 55 52.2 +1.1
baz=296,slow=8.3
VNA2 *e* 15 55 58.0
VNA2 *e* 15 56 09.7
TKL **Tuckaleechee C** 59.72 348 P P 15 55 49.0 -2.5
comp=Z,10nm,0.8s,mb4.9,baz=135,slow=7.5,SNR=8.2
JCT **Junction City** 60.18 331 *e*P P 15 55 53.2 -1.6
comp=Z,14nm,0.8s,mb5.0
JCT **Junction City** 60.18 331 *e*P P 15 55 53.2 -1.6
JCT pmax pmax
comp=Z,14nm,0.8s,mb5.0
TXAR **Lajitas Array** 61.06 327 P P 15 55 59.3 -1.5
comp=Z,0.5nm,0.6s,mb3.9,baz=141,slow=8.3,SNR=5.3
TXAR pP pP 15 56 06.3 -5.5
comp=Z,1.3nm,0.6s,baz=159,slow=11,SNR=7.0
WVT **Waverly** 61.09 344 *e*P P 15 55 57.5 -3.3
comp=Z,8.8nm,0.8s,mb4.9
WVT **Waverly** 61.09 344 *e*P P 15 55 57.6 -3.3
WVT pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SNAA **Sanae** 61.32 161 *e*P P 15 56 01.3 -0.8
SNAA *e* 15 56 07.1
SNAA **Sanae** 61.32 161 *e*P P 15 56 00.8 -1.4
comp=Z,14nm,0.9s,mb5.1
SNAA **Sanae** 61.32 161 *e*P P 15 56 01.1 -1.0
SNAA pmax pmax
comp=Z,18nm,1.0s
FVM **French Village** 63.52 343 *e*P P 15 56 14.5 -2.7
comp=Z,8.8nm,0.6s,mb5.0
FVM **French Village** 63.52 343 *e*P P 15 56 14.5 -2.6
FVM pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
CCM **Cathedral Cave** 63.82 342 *e*P P 15 56 16.2 -2.9
comp=Z,11nm,0.9s,mb4.9
CCM **Cathedral Cave** 63.82 342 *e*P P 15 56 16.2 -2.9
CCM pmax pmax
comp=Z,11nm,0.9s,mb4.9
319A **Douglas** 65.61 324 ⇑P P 15 56 31.2 +0.3
baz=66
318A **Bisbee** 66.04 324 ⇓P P 15 56 34.0 +0.3
baz=66
219A **White Tail Can** 66.08 324 ⇓P P 15 56 34.3 +0.3
baz=66
BNM **Barren Site** 66.43 328 *e*P P 15 56 36.7 +0.6
LPM **Los Pinos Moun** 66.56 328 *e*P P 15 56 35.7 -1.2
217A **Green Valley** 66.75 323 ⇓P P 15 56 39.6 +1.3
baz=67
ANMO **Albuquerque** 66.99 328 *e*P P 15 56 39.8 +0.1
comp=Z,2.6nm,0.8s,mb4.3
ANMO **Albuquerque** 66.99 328 *e*P P 15 56 39.8 +0.1
ANMO pmax pmax
comp=Z,3.0nm,0.8s
QSPA **South Pole Qui** 67.14 180 *e*P P 15 56 40.8 +0.7
comp=Z,13nm,0.9s,mb5.0
TUC **Tucson** 67.14 324 *e*P P 15 56 47.3 +6.6
comp=Z,6.3nm,1.1s,mb4.6
TUC **Tucson** 67.14 324 *e*P P 15 56 47.3 +6.6
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
216A **Three Points,** 67.28 323 ⇑P P 15 56 41.2 -0.5
baz=67
Y19A **Nutrioso** 67.60 326 ⇓P P 15 56 45.0 +1.4
baz=68,SNR=7.4
SADO **Sadowa** 67.95 353 P P 15 56 43.4 -2.1
comp=Z,7.7nm,0.8s,mb4.8,baz=182,slow=4.6,SNR=4.2
SADO **Sadowa** 67.95 353 P P 15 56 43.4 -2.1
214A **Organ Pipe Nat** 68.01 322 ⇑P P 15 56 47.1 +0.9
baz=68
Y17A **Roosevelt** 68.23 325 ⇑P P 15 56 49.0 +1.4
baz=68
Y16A **Circle Bar Ran** 68.71 324 ⇑P P 15 56 52.0 +1.4
baz=69
V19A **Window Rock** 68.87 327 ⇓P P 15 56 52.0 +0.5
baz=69
Y15A **Casa Rosa Ranc** 69.23 324 ⇓P P 15 56 54.1 +0.3
baz=69
X15A **Humboldt** 69.58 324 ⇓P P 15 56 56.3 +0.3
baz=70
Y14A **Wickenburg** 69.59 323 ⇑P P 15 56 57.0 +1.0
baz=70
W16A **Flagstaff** 69.67 325 ⇓P P 15 56 57.2 +0.7
baz=70
T19A **Beclabito** 69.74 328 ⇑P P 15 56 57.0 +0.1
baz=70
MVCO **Mesa Verde** 69.79 328 *e*P P 15 56 56.7 -0.4
comp=Z,3.6nm,0.8s,mb4.3
MVCO **Mesa Verde** 69.79 328 ⇓P P 15 56 58.0 +0.9
baz=70
U18A **Rough Rock, Ch** 69.84 327 ⇑P P 15 56 57.9 +0.5
baz=70
WUAZ **Wupatki** 69.91 325 ⇓P P 15 56 58.7 +0.7
baz=70
U16A **Tuba City** 70.26 326 ⇓P P 15 57 00.2 +0.1
baz=70
LIC **Lamto** 70.29 74 *e*P P 15 56 59.3 -1.5
comp=Z,26nm,0.8s,mb5.2
T18A **Mexican Hat** 70.40 327 ⇑P P 15 57 01.0 +0.1
baz=71
TIC **Toumodi** 70.49 74 *e*P P 15 57 01.0 -1.0
comp=Z,42nm,0.9s,mb5.4
TIC **Toumodi** 70.49 74 *e*P P 15 57 01.0 -1.0
TIC pmax pmax
comp=Z,42nm,0.9s,mb5.4
S19A **Harvey Farm, M** 70.52 328 ⇓P P 15 57 01.8 +0.2
baz=71
X13A **Yucca** 70.53 323 ⇑P P 15 57 01.7 -0.1
baz=71
V15A **Kaibab Nationa** 70.56 325 ⇑P P 15 57 02.6 +0.7
baz=71
W14A **Seligman** 70.59 324 ⇑P P 15 57 02.4 +0.3
baz=71
KIC **Kosan Boka** 70.61 74 *e*P P 15 57 01.5 -1.2
comp=Z,56nm,0.7s,mb5.6
DBIC **Dimbokro** 70.65 74 P P 15 57 01.9 -1.0
comp=Z,14nm,0.8s,mb5.0,baz=218,slow=6.9,SNR=19
DBIC **Dimbokro** 70.65 74 *e*P P 15 57 02.2 -0.8
comp=Z,14nm,0.7s,mb5.0
DBIC **Dimbokro** 70.65 74 *e*P P 15 57 02.2 -0.8
DBIC pmax pmax
comp=Z,15nm,0.7s
T17A **Navajo Res., N** 70.75 327 ⇓P P 15 57 03.9 +0.8
baz=71
BC3 **Big Chuckw Mtn** 70.76 321 ⇑P P 15 57 03.8 +0.6
baz=71
S18A **Hurst Farm, Bl** 70.89 328 ⇓P P 15 57 04.1 +0.1
baz=71
V14A **Boquillas Ranc** 70.91 324 ⇓P P 15 57 04.4 +0.4
baz=71
IRM **Iron Mountain** 70.95 322 ⇓P P 15 57 05.3 +0.9
baz=71
U15A **North Rim** 71.08 325 ⇑P P 15 57 05.5 +0.4
baz=71
S17A **Black Ridge (B** 71.25 327 ⇑P P 15 57 05.8 -0.2
baz=71
R18A **Canyonlands Na** 71.39 328 ⇓P P 15 57 07.1 +0.2
baz=72
Q19A **Hogan Spring (** 71.54 329 ⇓P P 15 57 09.0 +1.3
baz=72
V13A **Grand Canyon W** 71.55 324 ⇓P P 15 57 08.6 +0.7
baz=72
GMRC **Granite Mounta** 71.69 322 ⇓P P 15 57 08.7 -0.1
baz=72
R17A **Hanksville Air** 71.81 328 ⇑P P 15 57 09.3 -0.2
baz=72
Q18A **Rafter H Ranch** 72.07 329 ⇓P P 15 57 11.5 +0.5
baz=72
P18A **Preston Nutter** 72.54 329 ⇓P P 15 57 13.6 -0.2
baz=73
O19A **Miners Draw (B** 72.54 330 ⇑P P 15 57 14.0 +0.2
baz=73
MSU **Marysvale** 72.61 327 *e*P P 15 57 14.4 +0.1
P17A **Butcher Ranch,** 72.65 328 ⇓P P 15 57 14.6 +0.2
baz=73
ARUT **Antelope Range** 72.71 326 *e*P P 15 57 14.7 -0.1
TMUT **Trail Mountain** 72.74 328 *e*P P 15 57 09.7 -5.3
S13A **Holt Ranch, En** 72.77 325 ⇓P P 15 57 16.0 +0.8
baz=73
M20A **Sweetwater, Wa** 73.08 331 ⇓P P 15 57 16.5 -0.4
baz=73
EDW2 **Edwards Air Fo** 73.10 321 ⇓P P 15 57 17.8 +0.6
baz=73
L21A **Rawlins** 73.11 332 ⇓P P 15 57 17.0 0.0
baz=73
O17A **Robinson Place** 73.22 329 ⇑P P 15 57 17.6 -0.1
baz=73
T11A **Corn Creek, Al** 73.25 324 ⇓P P 15 57 18.7 +0.7
baz=73
R13A **O'Grain Ranch,** 73.28 326 ⇑P P 15 57 18.6 +0.4
baz=73
N18A **Larsen Ranch,** 73.33 330 ⇑P P 15 57 19.0 +0.6
baz=74
P15A **Leamington** 73.48 328 ⇑P P 15 57 20.5 +1.2
baz=74
Q14A **Sevier Lake (B** 73.53 327 ⇑P P 15 57 20.1 +0.5
baz=74
L20A **Wamsutter** 73.56 332 ⇓P P 15 57 19.4 -0.4
baz=74
O16A **Springville** 73.59 328 ⇓P P 15 57 19.8 -0.2
baz=74
TPNV **Topopah Spring** 73.59 323 ⇑P P 15 57 20.4 +0.3
baz=74
MPMC **Manual Prospec** 73.65 322 ⇓P P 15 57 20.7 +0.3
baz=74
R12A **Pony Springs,** 73.72 325 ⇓P P 15 57 20.2 -0.6
baz=74
N17A **Moffit Pass** 73.85 329 ⇓P P 15 57 22.0 +0.6
baz=74
P14A **Drum Mountains** 73.89 327 ⇑P P 15 57 21.8 +0.1
baz=74
ISA **Isabella** 73.93 321 P P 15 57 19.5 -2.5
comp=Z,4.5nm,0.9s,mb4.4
ISA **Isabella** 73.93 321 P P 15 57 19.5 -2.6
ISA pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ISA **Isabella** 73.93 321 ⇑P P 15 57 22.3 +0.2
baz=74
SBA **Scott Base** 74.02 191 P P 15 57 23.1 +1.0
comp=Z,4.5nm,1.0s,mb4.3
SBA **Scott Base** 74.02 191 P P 15 57 23.1 +1.0
SBA pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
L19A **Farson** 74.09 331 ⇓P P 15 57 22.8 -0.1
baz=74
DUG **Dugway** 74.22 328 *e*P P 15 57 24.2 +0.5
comp=Z,6.6nm,0.9s,mb4.6
DUG **Dugway** 74.22 328 *e*P P 15 57 24.2 +0.5
DUG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
L18A **Fontenelle, Gr** 74.25 330 ⇓P P 15 57 24.1 +0.3
baz=74
R11A **Troy Canyon, C** 74.26 325 ⇑P P 15 57 23.2 -0.7
baz=74
P13A **Bates Ranch, G** 74.26 326 ⇓P P 15 57 24.0 +0.1
baz=74
S10A **Tonopah Range,** 74.49 324 ⇑P P 15 57 25.6 +0.4
baz=75
AGMN **Agassiz Refuge** 74.56 343 *e*P P 15 57 22.1 -3.3
comp=Z,6.4nm,0.7s,mb4.7
R10A **Warm Springs** 74.60 324 ⇓P P 15 57 27.7 +1.8
baz=75
Q11A **Duckwater** 74.66 325 ⇑P P 15 57 27.0 +0.8
baz=75
BW06 **Boulder Array** 74.71 331 ⇑P P 15 57 25.7 -0.8
baz=75
PDAR **Pinedale Array** 74.71 331 P P 15 57 25.9 -0.5
comp=Z,0.7nm,0.9s,baz=148,slow=5.3,SNR=4.5
PDAR pP pP 15 57 34.2 -3.4
comp=Z,0.9nm,0.8s,baz=134,slow=6.4,SNR=4.7
HWUT **Hardware Ranch** 74.71 329 *e*P P 15 57 25.6 -0.9
comp=Z,8.4nm,0.9s,mb4.7
N14A **Grayback Hills** 74.90 328 ⇑P P 15 57 27.8 +0.2
baz=75
M15A **Larsen Ranch,** 75.02 329 ⇑P P 15 57 28.4 +0.2
baz=75
Q10A **Clear Creek Ra** 75.04 325 ⇓P P 15 57 28.8 +0.4
baz=75
O12A **Currie** 75.24 327 ⇑P P 15 57 30.0 +0.5
baz=75
L15A **Malad City** 75.40 329 ⇓P P 15 57 31.0 +0.6
baz=76
M14A **Sheep Mountain** 75.48 328 ⇓P P 15 57 30.7 -0.2
baz=76
I18A **Diamond G Ranc** 75.57 332 ⇓P P 15 57 31.3 0.0
baz=76
KCC **Kaiser Creek** 75.58 322 ⇑P P 15 57 31.2 -0.4
baz=76
SYO **Syowa Base** 75.59 160 ‖ *e*P P 15 57 30.0 -1.2
SYO **Syowa Base** 75.59 160 ‖ *e*pP pP 15 57 39.6 -2.8
O11A **Cowboy Ranch,** 75.61 326 ⇓P P 15 57 31.4 -0.3
baz=76
K16A **Soda Springs** 75.67 330 ⇓P P 15 57 33.3 +1.3
baz=76
M13A **Montello** 75.77 328 ⇓P P 15 57 33.1 +0.5
baz=76
NVAR **Mina Array Bea** 75.79 323 P P 15 57 32.2 -0.6
comp=Z,1.0nm,0.8s,mb3.8,baz=147,slow=5.7,SNR=7.4
NVAR **Mina Array Bea** 75.79 323 P P 15 57 32.2 -0.6
K15A **Arbon** 76.00 329 ⇑P P 15 57 33.7 -0.1
baz=76
M12A **Wells** 76.19 327 ⇑P P 15 57 35.1 +0.1
baz=76
ULM **Lac du Bonnet** 76.35 344 P P 15 57 33.7 -1.9
comp=Z,3.1nm,0.5s,mb4.5,baz=164,slow=4.0,SNR=3.3
ULM **Lac du Bonnet** 76.35 344 P P 15 57 33.7 -1.9
RLMT **Red Lodge** 76.47 333 *e*P P 15 57 35.6 -0.9
comp=Z,7.3nm,0.9s,mb4.6
J15A **Blackfoot** 76.50 330 ⇑P P 15 57 37.3 +0.6
baz=77
G18A **Lazy EL Ranch,** 76.75 333 ⇓P P 15 57 37.7 -0.3
baz=77
J14A **Carey** 76.95 329 ⇑P P 15 57 39.5 +0.2
baz=77
H16A **Russell Place,** 76.99 332 ⇓P P 15 57 38.7 -0.7
baz=77
K12A **Draper Farm, C** 77.09 328 ⇑P P 15 57 41.3 +1.2
baz=77
L11A **Cat Creek Ranc** 77.16 327 ⇓P P 15 57 40.6 +0.1
baz=77
GCMT **Greycliff** 77.18 333 *e*P P 15 57 38.9 -1.6
F18A **Big Timber** 77.29 333 ⇓P P 15 57 40.4 -0.7
baz=78
DGMT **Dagmar** 77.31 338 ⇑P P 15 57 40.9 -0.2
baz=78
J13A **Cove Ranch, Pi** 77.32 329 ⇓P P 15 57 42.2 +0.9
baz=78
O07A **Toulon** 77.33 324 ⇓P P 15 57 41.5 0.0
baz=78
I14A **Mackay** 77.38 330 ⇓P P 15 57 41.9 +0.2
baz=78
L10A **Juniper Basin** 77.46 327 ⇑P P 15 57 43.3 +1.2
baz=78
HLID **Hailey** 77.56 329 *e*P P 15 57 42.7 +0.1
comp=Z,8.1nm,1.2s,mb4.5
HLID **Hailey** 77.56 329 ⇓P P 15 57 43.2 +0.6
baz=78,SNR=5.9
J12A **Stokes Ranch,** 77.65 328 ⇑P P 15 57 43.0 -0.2
baz=78
I13A **Wildhorse Cree** 77.68 329 ⇑P P 15 57 43.5 +0.2
baz=78
F17A **Fitzpatrick Pl** 77.69 333 ⇑P P 15 57 44.0 +0.7
baz=78
MCMT **McKenzie Canyo** 77.80 331 *e*P P 15 57 44.1 +0.2
N07B **Gerlach** 77.82 324 ⇑P P 15 57 44.2 0.0
baz=78
G15A **Dillon** 77.90 331 ⇑P P 15 57 45.1 +0.6
baz=78
E18A **Harlowton** 77.90 333 ⇓P P 15 57 44.5 0.0
baz=78
BEKR **Beckwourth** 77.93 323 ⇓P P 15 57 44.4 -0.4
baz=78
I12A **Atlanta** 78.07 329 ⇓P P 15 57 45.7 +0.2
baz=78
MFID **Camas Ranch** 78.13 328 ⇓P P 15 57 46.3 +0.5
baz=78
E17A **Martinsdale** 78.21 333 ⇑P P 15 57 46.2 0.0
baz=78
H13A **Challis** 78.24 330 ⇓P P 15 57 46.5 +0.1
baz=78,SNR=6.2
N06A **Buffalo Meadow** 78.26 324 ⇓P P 15 57 46.6 0.0
baz=78
ORV **Oroville** 78.36 322 ⇓P P 15 57 47.1 -0.1
baz=78
F15A **Butte** 78.43 332 ⇑P P 15 57 47.7 +0.3
baz=79
L08A **Fields** 78.50 326 ⇑P P 15 57 48.3 +0.4
baz=79
H12A **Diamond D Ranc** 78.51 329 ⇑P P 15 57 47.4 -0.5
baz=79
K09A **Rome** 78.55 327 ⇑P P 15 57 47.9 -0.2
baz=79
G13A **Cobalt** 78.63 330 ⇓P P 15 57 48.8 +0.3
baz=79,SNR=16
D17A **Six Diamond Ra** 78.69 333 ⇓P P 15 57 48.5 -0.3
baz=79
F14A **Wisdom** 78.79 331 ⇓P P 15 57 49.3 -0.1
baz=79
E15A **Deer Lodge** 78.95 332 ⇓P P 15 57 50.2 0.0
baz=79
D16A **Dana Ranch, Ca** 78.95 333 ⇓P P 15 57 50.6 +0.3
baz=79
EGMT **Eagleton** 79.01 334 ⇑P P 15 57 50.6 0.0
baz=79
F13A **Darby** 79.21 330 ⇓P P 15 57 51.4 -0.3
baz=79,SNR=8.1
TORD **Torodi Ar. Bea** 79.32 71 P P 15 57 52.0 -1.0
comp=Z,18nm,0.7s,mb5.1,baz=254,slow=5.1,SNR=114
TORD pP pP 15 58 00.2 -4.1
comp=Z,14nm,0.8s,baz=253,slow=5.0,SNR=9.5
TORD **Torodi Ar. Bea** 79.32 71 P P 15 57 52.0 -1.0
TORD pP pP 15 58 00.2 -4.1
D15A **Lincoln** 79.38 332 ⇓P P 15 57 52.9 +0.3
baz=80
WDC **Whiskeytown Da** 79.64 322 ⇑P P 15 57 53.8 -0.4
baz=80
E13A **Victor** 79.64 331 ⇑P P 15 57 53.9 -0.1
baz=80
C16A **Fuhringer Ranc** 79.64 333 ⇓P P 15 57 54.3 +0.3
baz=80
G11A **Walters Elk Ra** 79.81 329 ⇑P P 15 57 54.9 -0.1
baz=80,SNR=7.1
C15A **Salmond Ranch,** 79.98 333 ⇓P P 15 57 56.2 +0.3
baz=80
B16A **M & M Farms, S** 80.11 334 ⇓P P 15 57 56.9 +0.4
baz=80
F11A **Grangeville** 80.12 330 ⇓P P 15 57 57.2 +0.6
baz=80
G10A **Bishop Farm, J** 80.14 329 ⇑P P 15 57 56.6 -0.2
baz=80
J06A **Christmas Vall** 80.19 326 ⇑P P 15 57 56.8 -0.3
baz=80
K05A **Summer Lake** 80.21 325 ⇑P P 15 57 56.5 -0.7
baz=80
N02C **Big Bar** 80.23 322 ⇓P P 15 57 57.6 +0.3
baz=80
E12A **Beaver Dam Sad** 80.25 330 ⇓P P 15 57 56.5 -0.8
baz=80
D13A **Huson** 80.26 331 ⇑P P 15 57 57.6 +0.3
baz=80
H08A **Prairie City** 80.33 327 ⇑P P 15 57 57.6 -0.2
baz=80
B15A **Bradely Ranch,** 80.38 333 ⇓P P 15 57 57.3 -0.7
baz=81
I07A **Izee** 80.44 327 ⇓P P 15 57 58.8 +0.4
baz=81
G09A **Cove** 80.44 328 ⇓P P 15 57 58.5 +0.1
baz=81
C14A **Swan Lake** 80.47 332 ⇑P P 15 57 58.4 -0.1
baz=81
A16A **West Butte Ran** 80.49 334 ⇑P P 15 57 57.8 -0.7
baz=81
E11A **Bogner Ranch,** 80.50 330 ⇓P P 15 57 57.8 -0.8
baz=81
D12A **Red Ives Fores** 80.63 331 ⇑P P 15 57 58.9 -0.4
baz=81
F10A **Beach Ranch, E** 80.69 329 ⇑P P 15 57 59.5 -0.2
baz=81
I06A **Prineville** 80.70 326 ⇑P P 15 58 00.2 +0.4
baz=81
B14A **Marquette Ranc** 80.72 333 ⇓P P 15 58 00.1 +0.3
baz=81
C13A **Hot Springs** 80.76 332 ⇑P P 15 58 00.3 +0.3
baz=81
E10A **Myers Farm, Un** 81.01 329 ⇓P P 15 58 01.6 +0.2
baz=81
TSUM **Tsumeb** 81.06 107 *e*P P 15 58 02.1 -0.3
comp=Z,15nm,1.3s,mb4.8
B13A **Whitefish** 81.24 332 ⇑P P 15 58 02.5 -0.1
baz=81
G07A **Ruggs Ranch, H** 81.36 327 ⇓P P 15 58 04.1 +0.8
baz=82
D10A **Wagner Farm, O** 81.51 330 ⇓P P 15 58 03.5 -0.5
baz=82
C11A **Tepee Creek (N** 81.62 331 ⇑P P 15 58 03.8 -0.8
baz=82,SNR=6.1
B12A **Libby** 81.80 332 ⇓P P 15 58 05.8 +0.3
baz=82
HAWA **Hanford** 82.10 328 P P 15 58 06.6 -0.6
comp=Z,8.0nm,0.9s,mb4.7
A12A **Yaak River Ran** 82.18 332 ⇓P P 15 58 07.4 -0.1
baz=82
OD2 **Odessa Site #2** 82.42 329 *e*P P 15 58 08.3 -0.5
A11A **Hall Mountain,** 82.50 332 ⇓P P 15 58 08.6 -0.6
baz=83,SNR=5.4
MAW **Mawson** 83.28 164 P P 15 58 13.0 -0.2
comp=Z,8.6nm,0.8s,mb4.8,baz=202,slow=7.4,SNR=7.4
MAW pP pP 15 58 19.4 -5.1
comp=Z,13nm,1.0s,baz=218,slow=9.6,SNR=5.5
MAW **Mawson** 83.28 164 *e*P P 15 58 13.2 +0.1
comp=Z,17nm,0.9s,mb5.1
MAW **Mawson** 83.28 164 *e*P P 15 58 13.2 +0.1
MAW pmax pmax
comp=Z,17nm,0.9s
E05A **Randle** 83.31 327 ⇓P P 15 58 13.2 -0.3
baz=84
A08A **Turner Farm, O** 83.81 330 ⇓P P 15 58 14.7 -1.2
baz=84
B07A **Winthrop** 83.85 329 ⇓P P 15 58 14.9 -1.3
baz=84
BOSA **Boshof** 84.07 118 P P 15 58 17.4 -0.6
comp=Z,9.2nm,0.8s,mb5.0,baz=260,slow=4.0,SNR=15
A07A **Ashnola River,** 84.39 330 ⇑P P 15 58 18.3 -0.6
baz=84
YKA **Yellowknife Ar** 92.15 341 P P 15 58 53.8 -1.9
comp=Z,2.4nm,0.7s,mb4.7,baz=130,slow=3.7,SNR=5.1
AKASG **Malin Array Be** 113.59 43 PKiKP PKiKP 16 04 23.6 -1.2
comp=Z,0.2nm,0.3s,baz=254,slow=3.1,SNR=4.2
OBN **Obninsk** 118.34 39 *i* PKIKP PKPdf 16 04 28.3 -5.4
OBN pmax pmax
comp=Z,6.0nm,1.4s
ASAR **Alice Springs** 127.82 209 PKP PKPdf 16 04 52.0 -1.0
comp=Z,2.2nm,0.9s,baz=145,slow=1.8,SNR=22
TIXI **Tiksi** 130.13 352 *e*PKIKP PKPdf 16 04 53.6 -2.3
TIXI pmax pmax
comp=Z,4.0nm,1.5s
WRA **Warramunga Arr** 130.84 212 PKP PKPdf 16 04 58.2 -0.7
comp=Z,1.5nm,0.5s,baz=153,slow=1.6,SNR=41
WRA pPKP pPKPdf 16 05 04.6 -5.9
comp=Z,1.4nm,0.9s,baz=157,slow=1.8,SNR=6.5
WRAB **Tennant Creek** 130.84 212 *i* PKIKP PKPdf 16 04 58.1 -0.7
PETK **Petropavlovsk-** 132.87 322 PKP PKPdf 16 05 02.1 +0.5
comp=Z,4.8nm,1.0s,baz=105,slow=1.7,SNR=5.9
KURK **Kurchatov** 143.47 33 *i* PKIKP PKPdf 16 05 15.9 -5.2
ZALV **Zalesovo Beam** 144.01 25 PKP PKPdf 16 05 19.3 -2.6
comp=Z,4.0nm,0.7s,baz=338,slow=1.6,SNR=17
YSS **Yuzh-Sakhalins** 144.19 320 *i* PKIKP PKPdf 16 05 20.4 -2.0
AML **Almayashu** 144.72 49 *e*PKPdf PKPdf 16 05 23.3 -0.2
BOD **Bodaibo** 145.12 356 *e*PKIKP PKPdf 16 05 21.3 -2.4
BOD pmax pmax
comp=Z,28nm,0.9s
MK31 **Makanchi Array** 147.79 36 *e*PKPdf PKPdf 16 05 27.5 -1.1
MK31 *e*PKPbc PKPbc 16 05 30.8 -0.7
MKAR **Makanchi Array** 147.79 36 PKPbc PKPbc 16 05 30.1 -1.4
comp=Z,6.9nm,0.7s,baz=316,slow=3.2,SNR=43
KDI **Kendari** 150.22 207 P PKPab 16 05 48.7 +4.0
KAPI **Kappang** 150.34 201 *e*PKPbc PKPbc 16 05 37.6 -1.3
MJAR **Matsushiro Arr** 151.76 305 PKPbc PKPbc 16 05 40.2 -1.4
comp=Z,4.0nm,0.8s,baz=85,slow=2.1,SNR=7.5
MJAR PKPab PKPab 16 05 47.4 -3.2
comp=Z,2.9nm,0.8s,baz=88,slow=0.9,SNR=4.3
MAT **Matsushiro** 151.77 305 PKP PKPbc 16 05 41.1 -0.5
ZAK **Zakamensk** 152.31 8 *e*PKIKP PKPbc 16 05 42.0 -0.3
ZAK *e* 16 05 51.7
ZAK pmax pmax
comp=Z,4.0nm,1.2s
WMQ **Urumqi** 152.62 36 *e*PKP PKPdf 16 05 35.0 -1.2
SONM **Songino Array** 155.16 5 PKP PKPdf 16 05 39.5 -0.2

comp=Z,1.0nm,0.8s,baz=337,slow=2.4,SNR=8.5
SONM pPKP pPKPdf 16 05 46.8 -4.7
comp=Z,1.2nm,0.8s,baz=324,slow=2.7,SNR=5.6
SONM PKPab PKPab 16 06 03.1 -1.3
comp=Z,1.8nm,0.8s,baz=330,slow=4.1,SNR=5.7
GTA Gaotai 161.76 24 *e*PKP PKPdf 16 05 48.3 +0.4
GTA APKP 16 05 59.5
GTA XPKP 16 06 04.6
HHC Hu-ho-hao-te 162.17 355 *e*PKP PKPdf 16 05 46.4 -1.9
HHC APKP 16 05 57.8
HHC XPKP 16 06 01.3
HHC PKS 16 09 18.8
HHC PP PP 16 10 20.6 +2.5
HHC SKS SKSdf 16 12 48.0 -2.4
HHC SKKS SKKSac 16 17 02.3 -2.1
HHC SS SS 16 30 33.6 -1.4
LZH Lanzhou 166.14 19 *e*PKP PKPdf 16 05 51.5 -0.5
LZH APKP 16 06 02.3
LZH XPKP 16 06 06.0
LZH LR LR
comp=E,127nm,18.6s
LZH LR LR
comp=Z,195nm,20.0s
CMAR Chiang Mai Arr 169.17 113 PKP PKPdf 16 05 54.6 0.0
comp=Z,0.2nm,0.4s,baz=264,slow=6.0,SNR=4.8
CMAR PKP pPKPdf 16 06 01.4 -5.1
comp=Z,0.8nm,0.8s,baz=310,slow=1.8,SNR=4.2
CMAR PKPab PKPab 16 07 06.8 +0.1
comp=Z,1.3nm,0.8s,baz=253,slow=4.8,SNR=8.9
CMAR PKPab pPKPab 16 07 13.4 -4.7
comp=Z,1.0nm,0.9s,baz=239,slow=4.5,SNR=4.7
CMAR PP PP 16 11 02.5 +6.2
comp=Z,0.8nm,1.1s,baz=268,slow=6.0,SNR=4.1
CMAR Chiang Mai Arr 169.17 113 PKIKP PKPdf 16 05 54.7 0.0
CMAR 16 06 01.4
CMAR 16 07 06.9
CMAR 16 11 02.6
CD2 Chengdu 170.69 32 *e*PKP PKPdf 16 05 53.0 -2.2
CD2 PKP2 PKPab 16 07 13.3 +0.4
CD2 PP PP 16 11 04.8 +2.2
CD2 SKS SKSdf 16 12 51.3 -4.7
CD2 SKKS SKKSac 16 17 46.6 -0.9
CD2 SS SS 16 32 01.9 -0.5
CD2 PP PP
comp=Z,210nm,10.6s
CD2 LR LR
comp=N,240nm,18.2s
CD2 LR LR
comp=Z,180nm,16.8s
KMI Kunming 173.55 70 PKP PKPdf 16 05 55.0 -1.7
KMI APKP 16 06 06.8
KMI XPKP 16 06 11.1
GYA Guiyang 175.78 36 *e*PKP PKPdf 16 05 58.5 +1.2
GYA APKP 16 06 06.9
GYA XPKP 16 06 12.6
GYA PKP2 PKPab 16 07 35.8 +0.2
GYA PKS 16 09 24.3
GYA SKKS SKKSac 16 18 10.3 -1.8
GYA SS SS 16 32 49.6 -2.6
GYA PP PP
comp=Z,80nm,9.1s
GYA LR LR
comp=N,91nm,25.0s
GYA LR LR
comp=E,89nm,24.6s
GYA LR LR
comp=Z,90nm,22.3s

*ISCJB **15** 16:10:48.1±1.6,2295S±005×7062W±005,h8km±10km, mb4.4/15, Error ellipse: s-maj=9.3km s-min=7.7km az=138.1*
*NEIC **15** 16:10:54.0±0.4,2295S×7048W,mb4.7/10, Error ellipse: s-maj=11.6km s-min=7.9km az=88.0*
*IDC **15** 16:10:53.8±0.7,2298S×7044W,h30km±4km, mb3.9/6, mb1 4.1/9,mb1mx4.1/17,mbtmp4.0/9,ML4.0/3, Error ellipse: s-maj=21.3km s-min=11.7km az=170.0*
ISC 15 16:10:50.0±1.7,**2297S**±005×**7059W**±005,**h6**km±11km, **h36**km±3.7km**:pP-P,n40,σ1§27/37,mb4.4**/15**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.59**	**78**	Pg		**Pg**	**16 11 20.4**	**-0.1**
	464nm,0.3s,SNR=272							
LVC				Lg			16 11 40.2	
	1μm,0.3s,SNR=36							
LVC	**Limon Verde**	**1.59**	**78**	*e*Pn		**Pn**	**16 11 19.5**	**+0.8**
LVC				Pg		**Pg**	**16 11 20.4**	**-0.1**
LVC				*e*Sn		**Sn**	**16 11 39.6**	**+0.1**
LVC				Lg			16 11 40.2	
LCO	**Las Campanas**	**6.02**	**181**	*e*Pn		**Pn**	**16 12 19.4**	**-0.2**
	74nm,0.8s							
ARE	**Arequipa**	**6.52**	**352**	*e*P		**Pn**	**16 12 26.0**	**-0.6**
ARE				*e*S		**Sn**	**16 13 37.0**	**-4.3**
LPAZ	**La Paz**	**7.04**	**20**	Pn		**Pn**	**16 12 36.4**	**+2.8**
	1.1nm,0.3s,baz=221,slow=7.7,SNR=14							
LPAZ	**La Paz**	**7.04**	**20**	*e*Pn		**Pn**	**16 12 36.2**	**+2.6**
CFAA	**Coronel Fontan**	**8.86**	**167**	Pn		**Pn**	**16 12 58.1**	**-0.4**
	0.1nm,0.3s,baz=90,slow=23,SNR=7.6							
CFAA				Sn		**Sn**	**16 14 49.6**	**+11**
	0.2nm,0.3s,baz=179,slow=14,SNR=3.9							
SIV	**San Ignacio**	**11.34**	**54**	Pn		**Pn**	**16 13 31.7**	**-0.9**
	2.2nm,0.3s,baz=240,slow=12,SNR=37							
SIV				Sn		**Sn**	**16 15 41.5**	**+1.7**
	0.2nm,0.3s,baz=138,slow=21,SNR=4.1							
PLCA	**Paso Flores**	**17.71**	**180**	P		**Pn**	**16 14 59.6**	**+2.3**
	0.1nm,0.3s,baz=30,slow=10,SNR=4.1							
BDFB	**Brasilia**	**22.50**	**75**	P		**P**	**16 15 50.6**	**+0.2**
	2.3nm,0.7s,mb3.7,baz=260,slow=22,SNR=4.8							
OTAV	**Otavalo**	**24.30**	**341**	*e*P		**P**	**16 16 10.4**	**+2.1**
	11nm,1.4s,mb4.1							
RCBR	**Riachuelo**	**37.52**	**68**	*e*P		**P**	**16 18 04.2**	**-0.8**
	25nm,0.9s,mb5.0							
SJG	**San Juan**	**41.05**	**6**	P		**P**	**16 18 31.4**	**-3.0**
VNA3	**Neumayer Olymp**	**59.20**	**161**	*e*		**P**	**16 20 51.4**	**-0.1**
VNA3				*e*			16 20 59.9	
VNA2	**Neumayer--Watz**	**59.80**	**160**	*e*		**P**	**16 20 55.1**	**-0.5**
	baz=292,slow=8.7							
VNA2				*e*			16 21 05.1	
TXAR	**Lajitas Array**	**60.97**	**327**	P		**P**	**16 21 04.6**	**+0.5**
	0.7nm,0.7s,mb3.9,baz=145,slow=8.9,SNR=5.2							
WVT	**Waverly**	**60.99**	**344**	*e*P		**P**	**16 21 02.0**	**-2.1**
	7.1nm,0.8s,mb4.8							
MIAR	**Mount Ida**	**61.22**	**338**	*e*P		**P**	**16 21 03.9**	**-1.8**
	7.5nm,0.8s,mb4.9							
SNAA	**Sanae**	**61.42**	**161**	*e*		**P**	**16 21 04.8**	**-1.8**
SNAA				*e*			16 21 13.2	
SNAA	**Sanae**	**61.42**	**161**	*e*P		**P**	**16 21 04.5**	**-2.1**
	14nm,1.3s,mb4.9							
ANMO	**Albuquerque**	**66.90**	**328**	P		**P**	**16 21 41.2**	**-1.9**
QSPA	**South Pole Qui**	**67.23**	**180**	*e*P		**P**	**16 21 45.6**	**+0.9**
	16nm,1.0s,mb5.0							
QSPA				*e*			16 21 53.4	
DBIC	**Dimbokro**	**70.64**	**74**	P		**P**	**16 22 05.7**	**-1.2**
	4.2nm,0.8s,mb4.4,baz=214,slow=11,SNR=5.0							
DBIC				pP		pP	16 22 17.7	+8.6
	3.3nm,0.8s,baz=236,slow=9.4,SNR=2.8							
DBIC	**Dimbokro**	**70.64**	**74**	*e*P		**P**	**16 22 05.1**	**-1.8**
	9.5nm,1.0s,mb4.7							
DBIC				P		pP	16 22 05.7	-3.3
DBIC				pP		pP	16 22 17.7	+8.6
MSU	**Marysvale**	**72.53**	**327**	*e*P		**P**	**16 22 19.1**	**+1.4**
ISA	**Isabella**	**73.85**	**321**	*e*P		**P**	**16 22 26.4**	**+0.9**
SBA	**Scott Base**	**74.11**	**191**	P		**P**	**16 22 27.6**	**+1.1**
	3.3nm,1.0s,mb4.2							
PDAR	**Pinedale Array**	**74.62**	**331**	P		**P**	**16 22 30.5**	**+0.6**
	0.4nm,0.6s,mb3.5,baz=130,slow=6.0,SNR=4.1							
HWUT	**Hardware Ranch**	**74.62**	**329**	P		**P**	**16 22 29.8**	**-0.1**
	3.2nm,0.9s,mb4.2							
NVAR	**Mina Array Bea**	**75.70**	**323**	P		**P**	**16 22 37.1**	**+0.9**
	1.0nm,0.7s,mb3.9,baz=132,slow=5.9,SNR=5.9							
NVAR				pP		pP	16 22 46.4	+8.0
	0.5nm,0.7s,baz=158,slow=4.8,SNR=1.9							
HLID	**Hailey**	**77.47**	**329**	*e*P		**P**	**16 22 47.4**	**+1.3**
	1.8nm,0.8s,mb4.0							
HLID				*e*			16 22 55.8	
TORD	**Torodi Ar. Bea**	**79.31**	**71**	P		**P**	**16 22 55.6**	**-1.4**
	5.9nm,0.7s,mb4.6,baz=252,slow=5.1,SNR=34							
TORD				pP		pP	16 23 06.6	+7.5
	2.9nm,0.6s,baz=250,slow=5.0,SNR=8.3							
ASAR	**Alice Springs**	**127.89**	**209**	PKP		PKPdf	16 29 56.8	-0.6
	1.5nm,0.8s,baz=116,slow=1.7,SNR=23							
ASAR				pPKP		pPKPdf	16 30 06.2	+6.6
	1.0nm,0.9s,baz=143,slow=1.8,SNR=5.2							
WRA	**Warramunga Arr**	**130.90**	**212**	PKP		PKPdf	16 30 02.9	-0.2
	1.0nm,0.6s,baz=150,slow=1.6,SNR=28							
WRA				pPKP		pPKPdf	16 30 12.2	+6.8
	1.3nm,1.0s,baz=146,slow=1.7,SNR=6.2							
ZALV	**Zalesovo Beam**	**143.93**	**25**	PKP		PKPdf	16 30 24.3	-1.7
	1.5nm,0.6s,baz=318,slow=2.0,SNR=9.3							
AML	**Almayshu**	**144.68**	**49**	*e*P		PKPdf	16 30 27.5	-0.2
MK31	**Makanchi Array**	**147.73**	**36**	*e*PKPdf		PKPdf	16 30 31.5	-1.2
MK31				*e*PKPbc		PKPbc	16 30 35.1	-0.4
MKAR	**Makanchi Array**	**147.73**	**36**	PKP		PKPdf	16 30 32.7	0.0
	2.5nm,0.8s,baz=318,slow=2.7,SNR=15							
MKAR				PKPbc		PKPbc	16 30 35.0	-0.5
	2.5nm,0.8s,baz=320,slow=2.7,SNR=17							
MKAR				pPKPbc		pPKPbc	16 30 43.9	+6.2
	1.2nm,0.8s,baz=349,slow=3.7,SNR=4.6							
MJAR	**Matsushiro Arr**	**151.69**	**305**	PKPbc		PKPbc	16 30 45.3	-0.3
	2.3nm,0.8s,baz=95,slow=2.2,SNR=6.1							
MJAR				PKPab		PKPab	16 30 54.0	-0.4
	0.9nm,0.7s,baz=136,slow=0.2,SNR=2.8							
SONM	**Songino Array**	**155.07**	**5**	PKP		PKPdf	16 30 44.4	+0.6
	0.2nm,0.7s,baz=4.6,slow=2.0,SNR=3.7							
SONM				PKPab		PKPab	16 31 08.6	+0.5
	0.8nm,0.9s,baz=346,slow=5.0,SNR=4.5							

*ISCJB **15** 16:13:52.7±0.4,2312S±006×7090W±006,h27km, mb4.5/16, Error ellipse: s-maj=8.6km s-min=7.4km az=139.4*
*IDC **15** 16:13:55.0±0.7,2306S×7064W,h27km±4km,mb4.1/8, mb1 4.2/13,mb1mx4.2/19,mbtmp4.1/13,ML4.1/5, Error ellipse: s-maj=19.0km s-min=12.1km az=174.0*
*NEIC **15** 16:13:56.2±1.0,2296S×7064W,h38km±9km,mb4.7/10, Error ellipse: s-maj=13.0km s-min=9.4km az=82.0*
ISC 15 16:13:55.1±0.4,**2307S**±006×**7076W**±007,**h29**km, **h29**km±.3km**:pP-P,n43,σ1§19/43,mb4.5**/16**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.76**	**75**	Pg		**Pn**	**16 14 24.7**	**+1.1**
	407nm,0.3s,SNR=16							
LVC				Lg			16 14 49.6	
	5μm,0.3s,SNR=26							
LVC	**Limon Verde**	**1.76**	**75**	Pg		**Pn**	**16 14 24.7**	**+1.1**
LVC				*e*Sn		**Sn**	**16 14 48.9**	**+3.8**
LVC				Lg			16 14 49.6	
LCO	**Las Campanas**	**5.92**	**180**	*e*Pn		**Pn**	**16 15 25.7**	**+4.9**
LPAZ	**La Paz**	**7.19**	**21**	Pn		**Pn**	**16 15 37.9**	**-0.4**
	2.7nm,0.3s,baz=170,slow=2.4,SNR=17							
LPAZ				Sn		**Sn**	**16 17 13.2**	**+14**
	baz=200,slow=17,SNR=1.3							
LPAZ	**La Paz**	**7.19**	**21**	*e*Pn		**Pn**	**16 15 36.3**	**-2.0**
LPAZ				Sn		**Sn**	**16 17 13.2**	**+14**
CFAA	**Coronel Fontan**	**8.79**	**166**	Pn		**Pn**	**16 15 59.7**	**-0.5**
	0.4nm,0.3s,baz=359,slow=15,SNR=1.2							
CFAA				Sn		**Sn**	**16 17 44.8**	**+6.5**
	0.2nm,0.3s,baz=0.0,slow=10,SNR=3.5							
CFAA	**Coronel Fontan**	**8.79**	**166**	Pn		**Pn**	**16 15 59.6**	**-0.5**
CFAA				Sn		**Sn**	**16 17 44.8**	**+6.5**
SIV	**San Ignacio**	**11.53**	**54**	Pn		**Pn**	**16 16 36.2**	**-1.6**
	3.6nm,0.3s,baz=247,slow=12,SNR=29							
SIV				Sn		**Sn**	**16 18 51.0**	**+5.4**
	0.3nm,0.3s,baz=153,slow=22,SNR=1.3							
NNA	**Nana**	**12.45**	**331**	Pn		**Pn**	**16 16 50.2**	**-0.2**
	0.8nm,0.3s,baz=192,slow=20,SNR=2.2							
NNA	**Nana**	**12.45**	**331**	Pn		**Pn**	**16 16 49.4**	**-1.0**
PLCA	**Paso Flores**	**17.61**	**179**	P		**Pn**	**16 17 58.5**	**+0.3**
	0.1nm,0.3s,baz=19,slow=14,SNR=5.0							
PLCA	**Paso Flores**	**17.61**	**179**	*e*Pn		**Pn**	**16 17 55.1**	**-3.2**
	8.2nm,0.9s							
BDFB	**Brasilia**	**22.68**	**75**	P		**P**	**16 18 52.7**	**-1.6**
	5.9nm,0.8s,mb4.1,baz=239,slow=18,SNR=8.2							
OTAV	**Otavalo**	**24.35**	**341**	*e*P		**P**	**16 19 05.9**	**-4.7**
RCBR	**Riachuelo**	**37.70**	**68**	*e*P		**P**	**16 21 07.9**	**-0.4**
	36nm,0.9s,mb5.1							
ANWB	**Willy Bob**	**41.43**	**13**	P		**P**	**16 21 42.7**	**+3.5**
AGPR	**Aguadilla, PR**	**41.44**	**5**	P		**P**	**16 21 43.7**	**+4.4**
VNA3	**Neumayer Olymp**	**59.15**	**161**	*e*		**P**	**16 23 53.2**	**+0.5**
VNA3				*e*		pP	16 24 01.6	-0.1
VNA3				*e*			16 24 04.4	
VNA2	**Neumayer--Watz**	**59.75**	**160**	*e*		**P**	**16 23 57.6**	**+0.7**
	baz=286,slow=8.8							
VNA2				*e*		pP	16 24 05.9	+0.1
OXF	**Oxford**	**59.95**	**342**	P		**P**	**16 24 05.6**	**+7.0**
	52nm,1.1s,mb5.5							
TXAR	**Lajitas Array**	**60.97**	**327**	P		**P**	**16 24 06.5**	**+0.7**
	0.4nm,0.6s,mb3.7,baz=158,slow=7.6,SNR=3.7							
TXAR				pP		pP	16 24 15.1	+0.4
	0.9nm,0.7s,baz=138,slow=7.5,SNR=5.5							
WVT	**Waverly**	**61.05**	**344**	*e*P		**P**	**16 24 03.8**	**-2.3**
	7.9nm,0.9s,mb4.8							
MIAR	**Mount Ida**	**61.26**	**339**	*e*P		**P**	**16 24 06.5**	**-1.1**
SNAA	**Sanae**	**61.37**	**160**	*e*		**P**	**16 24 06.7**	**-1.2**
SNAA				*e*		pP	16 24 15.2	-1.7
SNAA				*e*			16 24 17.7	
SNAA	**Sanae**	**61.37**	**160**	*e*P		**P**	**16 24 05.8**	**-2.0**
	7.1nm,0.9s,mb4.8							
QSPA	**South Pole Qui**	**67.13**	**180**	*e*P		**P**	**16 24 45.9**	**+0.4**
	4.6nm,0.7s,mb4.6							
DBIC	**Dimbokro**	**70.82**	**74**	P		**P**	**16 25 08.9**	**-0.6**
	6.9nm,0.9s,mb4.6,baz=193,slow=8.0,SNR=5.9							
DBIC	**Dimbokro**	**70.82**	**74**	*e*P		**P**	**16 25 07.3**	**-2.2**
	8.2nm,0.9s,mb4.7							
ISA	**Isabella**	**73.83**	**321**	P		**P**	**16 25 28.8**	**+1.8**
	4.4nm,1.1s,mb4.3							
PDAR	**Pinedale Array**	**74.64**	**331**	P		**P**	**16 25 31.7**	**+0.2**
	0.4nm,0.6s,mb3.5,baz=116,slow=6.8,SNR=2.8							
PDAR				sP		sP	16 25 44.3	+0.2
	0.5nm,0.6s,baz=121,slow=5.3,SNR=3.6							
NVAR	**Mina Array Bea**	**75.70**	**323**	P		**P**	**16 25 39.4**	**+1.6**
	0.6nm,0.8s,mb3.6,baz=143,slow=7.0,SNR=3.7							
HLID	**Hailey**	**77.48**	**329**	*e*P		**P**	**16 25 49.0**	**+1.3**
	4.1nm,1.0s,mb4.3							
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P		**P**	**16 25 58.8**	**-0.6**
	10.0nm,0.9s,mb4.8,baz=253,slow=5.0,SNR=24							
TORD				pP		pP	16 26 07.7	-0.9
	2.8nm,0.6s,baz=256,slow=5.0,SNR=6.5							
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P		**P**	**16 25 58.8**	**-0.6**
TORD				pP		pP	16 26 07.7	-0.9
TSUM	**Tsumeb**	**81.22**	**107**	*e*P		**P**	**16 26 08.7**	**-0.1**
	8.1nm,1.1s,mb4.6							
MAW	**Mawson**	**83.32**	**164**	P		**P**	**16 26 19.7**	**+0.8**
	1.6nm,0.3s,mb4.5,baz=210,slow=14,SNR=3.1							
BOSA	**Boshof**	**84.21**	**118**	P		**P**	**16 26 24.2**	**0.0**
	8.1nm,0.9s,mb4.8,baz=247,slow=3.8,SNR=5.3							
ASAR	**Alice Springs**	**127.73**	**209**	PKP		PKPdf	16 32 58.2	-0.2
	0.9nm,0.7s,baz=135,slow=2.3,SNR=16							
WRA	**Warramunga Arr**	**130.73**	**212**	PKP		PKPdf	16 33 04.3	+0.1
	0.7nm,0.8s,baz=157,slow=2.0,SNR=7.6							
WRA				pPKP		pPKPdf	16 33 13.5	-0.3
	1.5nm,0.9s,baz=154,slow=1.5,SNR=6.7							
ZALV	**Zalesovo Beam**	**144.09**	**25**	PKP		PKPdf	16 33 27.4	-0.2
	2.2nm,0.7s,baz=299,slow=3.1,SNR=7.9							
AML	**Almayashu**	**144.87**	**49**	*e*PKPdf		PKPdf	16 33 30.1	+0.7
AML				*e*			16 33 36.0	
MK31	**Makanchi Array**	**147.90**	**36**	*e*PKPbc		PKPbc	16 33 37.2	-0.2
MKAR	**Makanchi Array**	**147.90**	**36**	PKPbc		PKPbc	16 33 37.8	+0.5
	2.3nm,0.7s,baz=322,slow=3.1,SNR=12							

*ISCJB **15** 16:23:33.0±0.5,2298S±006×7071W±007,h29km, mb4.4/14, Error ellipse: s-maj=9.2km s-min=7.9km az=14.6*
*NEIC **15** 16:23:35.7±1.1,2298S×7052W,h36km±10km,mb4.7/9, Error ellipse: s-maj=15.4km s-min=9.3km az=92.0*
*IDC **15** 16:23:36.3±3.1,2300S×7040W,h35km±22km,mb4.0/7, mb1 4.2/10,mb1mx4.1/16,mbtmp4.0/10,ML3.9/3, Error ellipse: s-maj=23.5km s-min=20.3km az=86.0*
ISC 15 16:23:35.2±0.4,**2294S**±005×**7065W**±007,**h31**km, **h31**km±.6km**:pP-P,n37,σ1§43/35,mb4.4**/14**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.63**	**79**	Pg		**Pn**	**16 24 02.7**	**+0.9**
	398nm,0.3s,SNR=216							
LVC				Lg			16 24 23.4	
	2μm,0.3s,SNR=64							
LVC	**Limon Verde**	**1.63**	**79**	*e*Pn		**Pn**	**16 24 02.5**	**+0.7**
LVC				Pg		**Pn**	**16 24 02.7**	**+0.9**
LVC				*e*Sn		**Sn**	**16 24 23.1**	**+1.3**
LVC				Lg			16 24 23.4	
LCO	**Las Campanas**	**6.05**	**180**	*e*Pn		**Pn**	**16 25 02.6**	**0.0**
	38nm,0.6s							
ARE	**Arequipa**	**6.49**	**353**	*e*P		**Pn**	**16 25 08.0**	**-0.6**
ARE				*e*S		**Sn**	**16 26 19.0**	**-2.7**
LPAZ	**La Paz**	**7.03**	**20**	Pn		**Pn**	**16 25 19.2**	**+3.2**
	1.7nm,0.3s,baz=197,slow=10.0,SNR=22							
LPAZ	**La Paz**	**7.03**	**20**	*e*Pn		**Pn**	**16 25 17.7**	**+1.7**
CFAA	**Coronel Fontan**	**8.90**	**167**	Pn		**Pn**	**16 25 39.5**	**-2.1**
	0.1nm,0.3s,baz=342,slow=12,SNR=5.4							
CFAA				Sn		**Sn**	**16 27 31.4**	**+11**
	0.1nm,0.3s,baz=178,slow=18,SNR=4.3							
SIV	**San Ignacio**	**11.37**	**54**	Pn		**Pn**	**16 26 13.8**	**-1.7**
	1.7nm,0.3s,baz=247,slow=12,SNR=36							
PLCA	**Paso Flores**	**17.74**	**180**	P		**Pn**	**16 27 41.6**	**+1.7**
	0.1nm,0.3s,baz=357,slow=18,SNR=3.2							
PLCA	**Paso Flores**	**17.74**	**180**	Pn		**Pn**	**16 27 40.6**	**+0.8**
	19nm,1.7s							
BDFB	**Brasilia**	**22.54**	**75**	P		**P**	**16 28 34.3**	**+1.6**
	2.1nm,0.6s,mb3.8,baz=208,slow=22,SNR=4.4							
RCBR	**Riachuelo**	**37.56**	**68**	*e*P		**P**	**16 30 46.6**	**-0.4**
	18nm,0.8s,mb4.8							
SJG	**San Juan**	**41.03**	**7**	P		**P**	**16 31 12.9**	**-2.9**
	33nm,0.7s,mb5.1							
VNA3	**Neumayer Olymp**	**59.25**	**161**	*e*		**P**	**16 33 33.3**	**0.0**
VNA3				*e*		pP	16 33 42.5	-0.2
VNA2	**Neumayer--Watz**	**59.84**	**160**	*e*		**P**	**16 33 37.5**	**+0.1**
	baz=289,slow=8.6							
VNA2				*e*		pP	16 33 46.9	+0.1
TXAR	**Lajitas Array**	**60.92**	**327**	P		**P**	**16 33 46.4**	**+1.2**
	0.2nm,0.5s,mb3.5,baz=134,slow=7.2,SNR=3.9							
WVT	**Waverly**	**60.95**	**344**	*e*P		**P**	**16 33 44.0**	**-1.3**
	4.1nm,0.8s,mb4.6							
SNAA	**Sanae**	**61.46**	**161**	*e*		**P**	**16 33 46.9**	**-1.5**
SNAA				*e*		pP	16 33 56.1	-1.7
SNAA	**Sanae**	**61.46**	**161**	*e*P		**P**	**16 33 46.7**	**-1.7**
	8.3nm,1.4s,mb4.7							
QSPA	**South Pole Qui**	**67.26**	**180**	*e*P		**P**	**16 34 25.9**	**-0.3**
	7.8nm,1.1s,mb4.7							
QSPA				*e*		pP	16 34 34.9	-0.9
DBIC	**Dimbokro**	**70.68**	**74**	P		**P**	**16 34 47.8**	**-0.8**
	2.3nm,0.6s,mb4.3,baz=231,slow=5.8,SNR=5.6							
DBIC	**Dimbokro**	**70.68**	**74**	P		**P**	**16 34 46.1**	**-2.4**
	2.2nm,0.6s,mb4.3							
MSU	**Marysvale**	**72.47**	**327**	*e*P		**P**	**16 35 01.2**	**+2.4**
PDAR	**Pinedale Array**	**74.57**	**331**	P		**P**	**16 35 12.3**	**+1.3**
	3.5nm,1.4s,mb4.1,baz=165,slow=7.0,SNR=3.2							
NVAR	**Mina Array Bea**	**75.65**	**323**	P		**P**	**16 35 19.6**	**+2.3**
	0.4nm,0.7s,mb3.5,baz=147,slow=6.6,SNR=4.3							
HLID	**Hailey**	**77.42**	**329**	*e*P		**P**	**16 35 28.9**	**+1.6**
	1.7nm,0.8s,mb4.0							
HLID				*e*		pP	16 35 37.2	+0.3
SUR	**Sutherland**	**79.24**	**121**	*e*P		**P**	**16 35 34.2**	**-3.6**
	278nm,2.2s							
TORD	**Torodi Ar. Bea**	**79.35**	**71**	P		**P**	**16 35 37.8**	**-0.7**
	5.4nm,0.6s,mb4.6,baz=256,slow=5.3,SNR=37							
MAW	**Mawson**	**83.42**	**164**	P		**P**	**16 35 60.0**	**+0.7**
	17nm,1.3s,mb4.9,baz=287,slow=9.8,SNR=4.2							
MAW	**Mawson**	**83.42**	**164**	P		**P**	**16 35 59.1**	**-0.2**
	11nm,1.0s,mb4.9							
BOSA	**Boshof**	**84.19**	**118**	P		**P**	**16 36 02.9**	**-1.1**
	5.8nm,1.1s,mb4.6,baz=269,slow=11,SNR=4.7							
ASAR	**Alice Springs**	**127.89**	**209**	PKP		PKPdf	16 42 38.6	0.0
	0.8nm,0.8s,baz=134,slow=1.7,SNR=13							
WRA	**Warramunga Arr**	**130.90**	**212**	PKP		PKPdf	16 42 44.8	+0.4
	0.6nm,0.6s,baz=152,slow=1.6,SNR=15							
ZALV	**Zalesovo Beam**	**143.93**	**25**	PKP		PKPdf	16 43 06.4	-0.8
	1.1nm,0.5s,baz=277,slow=2.4,SNR=6.8							
MKAR	**Makanchi Array**	**147.74**	**36**	PKP		PKPdf	16 43 14.6	+0.7
	2.8nm,0.7s,baz=323,slow=1.8,SNR=18							
MKAR				PKPbc		PKPbc	16 43 17.0	+0.3
	2.8nm,0.7s,baz=320,slow=2.6,SNR=18							
MJAR	**Matsushiro Arr**	**151.64**	**305**	PKPbc		PKPbc	16 43 27.4	+0.6
	2.7nm,0.9s,baz=85,slow=1.9,SNR=5.0							
SONM	**Songino Array**	**155.04**	**5**	PKP		PKPdf	16 43 25.9	+0.9
	0.5nm,0.8s,baz=74,slow=1.5,SNR=2.9							
SONM				PKPbc		PKPdf	16 43 34.4	+9.4
	0.8nm,1.0s,baz=289,slow=4.5,SNR=3.9							

IDC 15 16:31:31.1±5.9,**2348S**×**6720W**,**h70**km±46km,**mb3.7**/1, **mb1 3.9**/3,**mb1mx3.6**/15,**mbtmp3.8**/3,**ML4.0**/2,**Error ellipse: s-maj=79.7km s-min=22.2km az=176.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.80**	**298**	P		Pn	16 32 01.7	+1.6
	25nm,0.3s,SNR=40							
LVC				S		Sn	16 32 22.5	+0.5
	88nm,0.3s,SNR=21							
LPAZ	**La Paz**	**7.21**	**353**	P		Pn	16 33 16.4	+2.5
	0.9nm,0.3s,baz=179,slow=10,SNR=12							
SIV	**San Ignacio**	**9.42**	**39**	P		Pn	16 33 43

PLCA **Paso Flores** 17.41 179 P Pn 16 36 50.9 +1.1
comp=E,0.1nm,0.3s,baz=4.0,slow=14,SNR=2.8
BDFB **Brasilia** 22.77 75 P P 16 37 49.9 +0.4
comp=E,1.7nm,0.8s,mb3.5,baz=265,slow=26,SNR=3.5
VNA3 **Neumayer Olymp** 58.98 161 *e* P 16 42 46.0 -0.3
VNA3 *e* 16 42 53.5
VNA3 *e* 16 42 58.1
VNA2 **Neumayer--Watz** 59.58 160 *e* P 16 42 50.1 -0.3
baz=295,slow=6.8
VNA2 *e* 16 42 57.6
VNA2 *e* 16 43 02.1
SNAA **Sanae** 61.20 160 *e* P 16 42 59.4 -2.1
SNAA *e* 16 43 07.1
SNAA *e* 16 43 12.4
DBIC **Dimbokro** 70.91 74 P P 16 44 04.2 -0.7
comp=E,5.0nm,0.8s,mb4.5,baz=176,slow=6.2,SNR=5.0
DBIC pP pP 16 44 12.3 +5.9
comp=E,3.3nm,0.7s,baz=208,slow=8.4,SNR=3.0
NVAR **Mina Array Bea** 75.83 323 P P 16 44 36.5 +3.2
comp=E,0.2nm,0.6s,mb3.2,baz=162,slow=4.4,SNR=2.9
NVAR **Mina Array Bea** 75.83 323 P P 16 44 36.5 +3.2
TORD **Torodi Ar. Bea** 79.59 71 P P 16 44 54.0 -0.8
comp=E,6.1nm,0.6s,mb4.7,baz=255,slow=5.2,SNR=33
TORD pP pP 16 45 01.9 +5.6
comp=E,5.7nm,0.8s,baz=251,slow=4.9,SNR=9.9
TSUM **Tsumeb** 81.21 107 P P 16 45 03.0 -0.6
comp=E,2.1nm,0.8s,mb4.1,baz=276,slow=21,SNR=3.3
BOSA **Boshof** 84.16 118 P P 16 45 18.0 -0.8
comp=E,3.3nm,0.9s,mb4.5,baz=233,slow=5.1,SNR=3.3
KEST **Kesra** 95.76 54 LR LR 17 28 57.7
comp=E,1µm,20.9s,baz=90,slow=35
ASAR **Alice Springs** 127.53 209 PKP PKPdf 16 51 53.1 +0.1
comp=E,0.6nm,0.8s,baz=129,slow=1.5,SNR=8.0
ASAR pPKP pPKPdf 16 52 00.7 +6.2
comp=E,0.3nm,0.6s,baz=139,slow=1.6,SNR=2.4
WRA **Warramunga Arr** 130.54 212 PKP PKPdf 16 51 58.7 -0.2
comp=E,0.4nm,0.5s,baz=149,slow=1.6,SNR=7.8
ZALV **Zalesovo Beam** 144.29 25 PKP PKPdf 16 52 22.0 -1.0
comp=E,1.1nm,0.5s,baz=318,slow=2.0,SNR=9.2
MKAR **Makanchi Array** 148.09 36 PKPbc PKPbc 16 52 33.2 +0.4
comp=E,2.1nm,0.7s,baz=335,slow=2.6,SNR=17
MKAR pPKPbc pPKPbc 16 52 41.1 +6.8
comp=E,1.0nm,0.7s,baz=338,slow=3.6,SNR=4.8
MKAR **Makanchi Array** 148.09 36 PKPbc PKPbc 16 52 33.2 +0.3
MKAR pPKPbc pPKPbc 16 52 41.1 +6.8

*ISCJB **15** 16:40:20.2±0.8,2493N±007×12284E±003,h10km, Error ellipse: s-maj=10.1km s-min=3.2km az=18.6*
*TAP **15** 16:40:20.9,2495N×12278E,h7km±2km,ML3.1,D*
*JMA **15** 16:40:21.9±0.1,2483N×12278E,h31km,M2.4*
ISC 15 16:40:19.8±1.0,**2496N**±007×**12286E**±004,**h8**km±5km,**n36,** σ1**9**01/42,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.52**	**164**	P	**Pg**	**16 40 30.8**	**+1.0**
YOJ				*e*S	**Sg**	**16 40 37.2**	**+0.6**
YOJ	**Yonaguni jima**	**0.52**	**164**	*i* P	**Pg**	**16 40 31.0**	**+1.2**
	baz=157						
YOJ				*i* S	**Sg**	**16 40 38.4**	**+1.8**
	baz=157						
TWB1	**Santiao Chiao**	**0.79**	**274**	*e*P	**Pg**	**16 40 35.4**	**+0.4**
	baz=274						
TWB1				*e*S	**Sg**	**16 40 44.9**	**-0.4**
	baz=274						
TWC	**Suao**	**0.98**	**249**	P	**Pg**	**16 40 37.1**	**-1.6**
	baz=248						
TWC				*e*S	**Sg**	**16 40 50.8**	**-0.6**
	baz=248						
NWF	**Wu-fen Shan**	**0.98**	**277**	*e*P	**Pg**	**16 40 40.6**	**+1.9**
	baz=277						
IRIF	**Iriomote-Funau**	**1.01**	**128**	P	**Pg**	**16 40 39.8**	**+0.6**
IRIF				*e*S	**Sg**	**16 40 52.1**	**-0.2**
TWE	**Neicheng**	**1.11**	**258**	P	**Pg**	**16 40 40.2**	**-0.9**
	baz=257						
ENA	**Nanau**	**1.15**	**243**	*e*P	**Pg**	**16 40 39.9**	**-1.9**
	baz=241						
TWA	**Mucha**	**1.16**	**271**	*e*P	**Pg**	**16 40 42.4**	**+0.4**
	baz=271						
ENTT	**Nioudou**	**1.22**	**255**	*e*P	**Pb**	**16 40 41.5**	**-1.6**
	baz=254						
HATJ	**Hateruma jima**	**1.25**	**136**	*e*S	**Sb**	**16 40 58.3**	**-1.5**
JKRS	**Kuro-shima**	**1.27**	**124**	P	**Pn**	**16 40 43.9**	**+0.1**
JIJ	**Ishigaki jima**	**1.31**	**117**	P	**Pn**	**16 40 44.7**	**+0.3**
JIJ				*e*S	**Sb**	**16 41 00.3**	**-1.3**
NSK	**Sanguang**	**1.39**	**259**	*e*P	**Pn**	**16 40 45.1**	**-0.4**
	baz=258						
TWD	**Chiawan**	**1.45**	**233**	*e*P	**Pn**	**16 40 44.7**	**-1.5**
	baz=231						
NNS	**Nan Shan**	**1.45**	**249**	*e*P	**Pn**	**16 40 46.1**	**-0.2**
	baz=248						
WHF	**Hehuan Shan**	**1.66**	**241**	P	**Pn**	**16 40 49.8**	**+0.6**
	baz=239						
TWT	**Tachien**	**1.69**	**246**	*e*P	**Pn**	**16 40 50.4**	**+0.8**
	baz=244						
NSTT	**Nanjuang**	**1.72**	**259**	*e*P	**Pn**	**16 40 50.2**	**+0.2**
	baz=258						
ESL	**Shilin**	**1.73**	**229**	*e*P	**Pn**	**16 40 50.3**	**+0.1**
	baz=227						
TWQ1	**Liyutan**	**1.99**	**253**	*e*P	**Pn**	**16 40 53.3**	**-0.5**
	baz=251						
EHY	**Hungye**	**2.02**	**224**	*e*P	**Pn**	**16 40 52.5**	**-1.6**
	baz=222						
SMLT	**Sun Moon Lake**	**2.08**	**239**	*e*P	**Pn**	**16 40 55.6**	**+0.6**
	baz=238						
TYC	**Yuchr**	**2.11**	**240**	*e*P	**Pn**	**16 40 55.6**	**+0.3**
	baz=239						
TWF1	**Yuli**	**2.14**	**222**	*e*P	**Pn**	**16 40 55.2**	**-0.7**
	baz=220						
WNT	**Mingjian**	**2.26**	**242**	*e*P	**Pn**	**16 40 56.8**	**-0.6**
	baz=240						
YUS	**Yu-Shan**	**2.27**	**230**	*e*P	**Pn**	**16 40 57.9**	**+0.2**
	baz=228						
ALS	**Alishan**	**2.37**	**233**	*e*P	**Pn**	**16 40 60.0**	**+1.1**
	baz=231						
CHN5	**Tsauling**	**2.41**	**236**	*e*P	**Pn**	**16 41 00.7**	**+1.2**
	baz=234						
ELDTW	**Lidau**	**2.44**	**224**	*e*P	**Pn**	**16 41 00.0**	**+0.1**
	baz=222						
STYT	**Tauyuan**	**2.62**	**227**	*e*P	**Pn**	**16 41 04.0**	**+1.5**
	baz=226						
WTP	**Ta-pu**	**2.67**	**231**	*e*P	**Pn**	**16 41 04.4**	**+1.3**
	baz=229						
CHN1	**Nanshi**	**2.77**	**231**	*e*P	**Pn**	**16 41 03.4**	**-1.0**
	baz=229						
SGST	**Jiashian**	**2.80**	**229**	*e*P	**Pn**	**16 41 06.7**	**+1.8**
	baz=227						
ECL	**Taimali**	**2.93**	**217**	*e*P	**Pn**	**16 41 05.9**	**-0.8**
	baz=215						
SSD	**Sandimen**	**3.00**	**223**	*e*P	**Pn**	**16 41 09.0**	**+1.3**
	baz=221						

*IDC **15** 16:41:32.8±2.0,2479N×12257E,h0km,mb3.5/6, mb1 3.6/6,mb1mx3.5/20,mbtmp3.5/6, Error ellipse: s-maj=161.7km s-min=20.2km az=65.0*
*ISCJB **15** 16:41:33.5±0.7,2489N±005×12282E±003,h18km±5km, mb3.9/7, Error ellipse: s-maj=8.9km s-min=4.2km az=17.8*
*NEIC **15** 16:41:33.5±0.6,2485N×12286E,h10km,mb4.9/2, Error ellipse: s-maj=14.3km s-min=10.1km az=216.0*
*JMA **15** 16:41:33.5±0.1,2493N×12286E,h14km±4km, M3.0*
*TAP **15** 16:41:33.9,2478N×12266E,h5km±1km,ML3.2,D*
ISC 15 16:41:32.9±0.7,**2487N**±005×**12281E**±003,**h4**km±4km,**n46,** σ0**9**79/51,**mb3.9/7,1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**156**	P	**Pg**	**16 41 42.9**	**+1.4**
YOJ				*e*S	**Sg**	**16 41 49.4**	**+2.1**
YOJ	**Yonaguni jima**	**0.45**	**156**	⇑ *i* P	**Pg**	**16 41 43.1**	**+1.7**
	baz=134						
YOJ				*i* S	**Sg**	**16 41 50.5**	**+3.2**
	baz=134						
TWB1	**Santiao Chiao**	**0.76**	**280**	*e*P	**Pg**	**16 41 48.0**	**+0.5**
	baz=290						
TWB1				*e*S	**Sg**	**16 41 58.2**	**+0.8**
	baz=290						
TWC	**Suao**	**0.91**	**254**	P	**Pg**	**16 41 49.6**	**-0.8**
	baz=257						
TWC				S	**Sg**	**16 42 01.1**	**-1.1**
	baz=257						
NWF	**Wu-fen Shan**	**0.96**	**282**	*e*P	**Pg**	**16 41 51.5**	**+0.3**
	baz=290						
IRIF	**Iriomote-Funau**	**0.99**	**122**	P	**Pg**	**16 41 52.0**	**+0.1**
IRIF				*e*S	**Sg**	**16 42 05.0**	**+0.2**
TWE	**Neicheng**	**1.05**	**262**	P	**Pg**	**16 41 52.2**	**-0.9**
	baz=266						
ENA	**Nanau**	**1.07**	**246**	P	**Pg**	**16 41 52.3**	**-1.1**
	baz=247						
TWA	**Mucha**	**1.12**	**276**	*e*P	**Pg**	**16 41 55.2**	**+0.9**
	baz=281						
ENTT	**Nioudou**	**1.16**	**259**	*e*P	**Pg**	**16 41 54.3**	**-0.8**
	baz=262						
TATO	**Taipei**	**1.21**	**275**	*e*Pn	**Pn**	**16 41 57.9**	**+1.4**
HATJ	**Hateruma jima**	**1.22**	**132**	P	**Pg**	**16 41 55.7**	**-0.5**
JKRS	**Kuro-shima**	**1.26**	**120**	P	**Pg**	**16 41 56.2**	**-0.8**
NACB	**Ninganchiao**	**1.31**	**238**	*e*Pn	**Pn**	**16 41 57.1**	**-0.8**
JIJ	**Ishigaki jima**	**1.31**	**112**	P	**Pn**	**16 41 56.8**	**-1.1**
YHNB	**Yeheng**	**1.32**	**262**	*e*Pn	**Pn**	**16 41 58.4**	**+0.4**
NSK	**Sanguang**	**1.34**	**262**	*e*P	**Pn**	**16 41 57.4**	**-0.9**
	baz=265						
TWD	**Chiawan**	**1.36**	**235**	*e*P	**Pn**	**16 41 58.1**	**-0.4**
	baz=234						
NNS	**Nan Shan**	**1.38**	**252**	*e*P	**Pn**	**16 41 59.4**	**+0.6**
	baz=253						
WHF	**Hehuan Shan**	**1.58**	**243**	P	**Pn**	**16 42 01.8**	**+0.1**
	baz=243						
TWT	**Tachien**	**1.61**	**248**	*e*P	**Pn**	**16 42 01.4**	**-0.6**
	baz=249						
ESL	**Shilin**	**1.64**	**230**	*e*P	**Pn**	**16 42 01.4**	**-1.0**
	baz=229						
NSTT	**Nanjuang**	**1.66**	**262**	*e*P	**Pn**	**16 42 03.1**	**+0.4**
	baz=264						
EHY	**Hungye**	**1.92**	**225**	*e*P	**Pn**	**16 42 06.7**	**+0.3**
	baz=223						
TWQ1	**Liyutan**	**1.93**	**255**	*e*P	**Pn**	**16 42 06.7**	**+0.3**
	baz=255						
SMLT	**Sun Moon Lake**	**2.00**	**241**	*e*P	**Pn**	**16 42 07.9**	**+0.5**
	baz=240						
TYC	**Yuchr**	**2.03**	**242**	*e*P	**Pn**	**16 42 08.1**	**+0.4**
	baz=242						
TWF1	**Yuli**	**2.05**	**223**	*e*P	**Pn**	**16 42 07.4**	**-0.7**
	baz=221						
YUS	**Yu-Shan**	**2.19**	**231**	*e*P	**Pn**	**16 42 10.0**	**+0.1**
	baz=230						
ALS	**Alishan**	**2.28**	**234**	*e*P	**Pn**	**16 42 11.5**	**+0.3**
	baz=233						
CHN5	**Tsauling**	**2.33**	**237**	*e*P	**Pn**	**16 42 12.3**	**+0.5**
	baz=236						
ELDTW	**Lidau**	**2.34**	**225**	*e*P	**Pn**	**16 42 12.1**	**0.0**
	baz=223						
CHN4	**Tsaushan**	**2.53**	**234**	*e*P	**Pn**	**16 42 14.7**	**0.0**
	baz=233						
STYT	**Tauyuan**	**2.53**	**228**	*e*P	**Pn**	**16 42 13.8**	**-0.9**
	baz=227						
WTP	**Ta-pu**	**2.58**	**232**	*e*P	**Pn**	**16 42 15.7**	**+0.3**
	baz=230						
CHN1	**Nanshi**	**2.68**	**232**	*e*P	**Pn**	**16 42 17.6**	**+0.8**
	baz=230						
SGST	**Jiashian**	**2.71**	**229**	*e*P	**Pn**	**16 42 17.0**	**-0.1**
	baz=228						
SSD	**Sandimen**	**2.91**	**224**	*e*P	**Pn**	**16 42 20.7**	**+0.8**
	baz=222						
GUMO	**Guam**	**23.62**	**114**	P	**P**	**16 46 43.5**	**-1.7**
	65nm,0.6s,mb5.2						
SONM	**Songino Array**	**26.35**	**335**	P	**P**	**16 47 10.9**	**+1.1**
	0.4nm,0.6s,baz=152,slow=8.5,SNR=3.2						
MKAR	**Makanchi Array**	**38.89**	**315**	P	**P**	**16 48 59.3**	**0.0**
	0.5nm,0.7s,mb3.4,baz=97,slow=9.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**40.49**	**326**	P	**P**	**16 49 12.1**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=108,slow=14,SNR=3.1						
WRAB	**Tennant Creek**	**45.93**	**165**	*e*P	**P**	**16 49 56.4**	**-0.5**
	6.1nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**45.93**	**165**	P	**P**	**16 49 56.4**	**-0.5**
	1.0nm,0.8s,mb3.8,baz=346,slow=8.6,SNR=5.1						
BVAR	**Borovoye Array**	**48.09**	**320**	P	**P**	**16 50 13.6**	**+0.2**
	0.3nm,0.5s,mb3.6,baz=105,slow=8.2,SNR=3.6						
ASAR	**Alice Springs**	**49.43**	**167**	P	**P**	**16 50 25.4**	**+1.4**
	0.2nm,0.6s,mb3.4,baz=346,slow=7.5,SNR=4.4						

*BJI **15** 16:44:57.7,3965×10073E,h27km,mB5.0,mb5.0,Ms5.4, Msz5.2*
*DJA **15** 16:45:01.6±0.0,3605×10047E,h10km,Mjma4.5/7, MLv4.9/8*
*MOS **15** 16:45:01.6±1.0,3525×10067E,h33km,mb5.0/20, Error ellipse: s-maj=16.7km s-min=7.3km az=103.8*
*ISCJB **15** 16:45:01.6±0.4,3535×10066E±006,h30km, mb4.8/59,MS4.8/5, Error ellipse: s-maj=9.6km s-min=5.6km az=139.1*
*NEIC **15** 16:45:01.2±7.5,3535×10068E,h15km±45km,mb4.8/19, Error ellipse: s-maj=18.9km s-min=7.0km az=52.0*
*IDC **15** 16:45:03.5±0.7,3465×10066E,h26km±2km,mb4.3/16, mb1 4.4/17,mb1mx4.3/23,mbtmp4.4/17,ML4.4/1, Error ellipse: s-maj=23.1km s-min=10.6km az=49.0*
ISC 15 16:45:03.8±0.4,**3555N**±005×**10067E**±006,**h32**km, **h32**km±1.9km**:pP-P,n108,** σ1**9**05/110,**mb4.8**/59,**MS4.8**/5, **3C-1D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.93**	**93**	P	**Pn**	**16 45 36.0**	**+1.6**
PDSI	**Padang**	**2.63**	**356**	P	**Pn**	**16 45 42.7**	**-1.3**
PPI	**Padang Panjang**	**3.08**	**355**	P	**Pn**	**16 45 50.0**	**-0.3**
RGRI	**Rengat**	**3.59**	**28**	P	**Pn**	**16 45 59.8**	**+2.5**
PPBI	**Pangkal Pinang**	**5.64**	**76**	P	**Pn**	**16 46 35.4**	**+10**
MYKOM	**Kota Tinggi**	**6.18**	**31**	P	**Pn**	**16 46 34.5**	**+1.5**
DBJI	**Dramaga**	**6.76**	**116**	P	**Pn**	**16 46 43.4**	**+2.6**
	135nm,1.7s,0.4nm						
KKM	**Kota Kinabalu**	**18.22**	**59**	*e*P	**Pn**	**16 49 12.7**	**-1.7**
KAPI	**Kappang**	**19.09**	**95**	P	**Pn**	**16 49 23.8**	**-1.2**
	1.2nm,0.3s,baz=269,slow=8.6,SNR=13						
KAPI	**Kappang**	**19.09**	**95**	*e*P	**Pn**	**16 49 23.8**	**-1.2**
	27nm,1.2s						
CM31	**Chiang Mai Arr**	**21.93**	**356**	*e*P	**P**	**16 49 52.7**	**-2.0**
	19nm,0.8s,mb4.6						
CMAR	**Chiang Mai Arr**	**21.93**	**356**	P	**P**	**16 49 52.8**	**-1.9**
	13nm,0.7s,mb4.5,baz=186,slow=8.7,SNR=30						
CMAR				PcP	PcP	16 53 54.3	+1.1
	0.9nm,0.8s,baz=207,slow=3.5,SNR=5.0						
CHTO	**Chiang Mai**	**22.29**	**356**	*e*P	**P**	**16 49 59.2**	**+0.7**
CHTO	**Chiang Mai**	**22.29**	**356**	*e*P	**P**	**16 49 59.2**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
BATI	**Baumata**	**23.76**	**107**	P	**P**	**16 50 13.6**	**-0.1**
	comp=Z,5.5nm,0.4s,mb4.3,baz=295,slow=16,SNR=2.7						
KMI	**Kunming**	**28.57**	**4**	P	**P**	**16 50 57.0**	**0.0**
	comp=Z,8.0nm,1.0s,mb4.4						
KMI				pP	pP	16 51 12.5	+6.2
KMI				sP	sP	16 51 17.6	+7.4
KMI				PP	PP	16 51 9	-10
KMI	**Kunming**	**28.57**	**4**	P	**P**	**16 50 57.0**	**0.0**
KMI				*PP	pP	16 51 12.5	+6.2
KMI						16 51 51.9	
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
GYA	**Guiyang**	**30.39**	**11**	⇑ *i*P	**P**	**16 51 13.3**	**+0.2**
GYA				AP	pP	16 51 25.3	+2.9
GYA				PP	PP	16 52 13.0	-9.1
GYA				PCP	PcP	16 54 13.5	+0.9
GYA				S	**S**	**16 56 08.3**	**-3.5**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,140nm,5.0s						
GYA				LR	LR		
	comp=N,700nm,15.2s,MS4.6						
GYA				LR	LR		
	comp=E,650nm,14.9s,MS4.6						
GYA				LR	LR		
	comp=Z,970nm,16.2s,MS4.5						
ODAN	**Odare**	**32.84**	**338**	*e*P	**P**	**16 51 35.8**	**+1.1**
	comp=Z,94nm,1.0s,mb5.7						
TAPN	**Taplejung**	**33.16**	**339**	*e*P	**P**	**16 51 39.2**	**+1.7**
	comp=Z,172nm,1.0s						
RAMN	**Ramite**	**33.23**	**337**	*e*P	**P**	**16 51 39.2**	**+1.2**
	comp=Z,55nm,1.0s,mb5.4						
JIRN	**Jiri**	**34.02**	**337**	*e*P	**P**	**16 51 46.4**	**+1.4**
	comp=Z,85nm,0.9s,mb5.7						
PKI	**Pulchoki**	**34.26**	**335**	*e*P	**P**	**16 51 48.0**	**+1.0**
GUN	**Gumba**	**34.37**	**336**	*e*P	**P**	**16 51 49.3**	**+1.3**
	comp=Z,66nm,0.4s						
CD2	**Chengdu**	**34.39**	**5**	*e*P	**P**	**16 51 47.5**	**-0.6**
CD2				AP	pP	16 52 00.6	+3.1
CD2				PP	PP	16 53 04.9	-1.6
CD2				S	**S**	**16 57 12.5**	**-1.5**
CD2				XS	sS	16 57 33.0	+3.5
CD2				SS	SS	16 59 26.5	-17
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,50nm,7.8s						
CD2				LR	LR		
	comp=N,210nm,14.8s,MS4.2						
CD2				LR	LR		
	comp=E,250nm,12.8s,MS4.2						
DMN	**Daman**	**34.42**	**335**	*e*P	**P**	**16 51 49.1**	**+0.7**
KKN	**Kakani**	**34.50**	**335**	*e*P	**P**	**16 51 49.8**	**+0.6**
	comp=E,63nm,0.8s,mb5.6						
GKN	**Gorkha**	**34.96**	**335**	*e*P	**P**	**16 51 53.8**	**+0.7**
	comp=E,29nm,0.5s,mb5.5						
KOLN	**Koldanda**	**35.21**	**333**	*e*P	**P**	**16 51 56.3**	**+1.0**
	comp=E,49nm,0.9s,mb5.5						
DANN	**Dangsing**	**35.64**	**334**	*e*P	**P**	**16 51 59.9**	**+0.9**
	comp=E,79nm,0.5s						
PYUN	**Piuthan**	**35.77**	**333**	*e*P	**P**	**16 52 00.8**	**+0.7**
	comp=E,24nm,0.5s,mb5.4						
WRA	**Warramunga Arr**	**36.65**	**119**	P	**P**	**16 52 07.8**	**0.0**
	comp=E,2.0nm,0.4s,mb4.3,baz=306,slow=8.1,SNR=41						
WRA				pP	pP	16 52 16.8	-0.3
	comp=E,1.7nm,0.4s,baz=308,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**36.65**	**119**	P	**P**	**16 52 07.8**	**0.0**
WRA				pP	pP	16 52 16.8	-0.3
WRA	**Warramunga Arr**	**36.65**	**119**	P	**P**	**16 52 07.8**	**0.0**
WRA				*PP	pP	16 52 16.8	-0.3
WRAB	**Tennant Creek**	**36.66**	**119**	*e*P	**P**	**16 52 06.7**	**-1.1**
	comp=E,4.7nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	**36.66**	**119**	*e*P	**P**	**16 52 06.8**	**-1.0**
WB2	**Warramunga Arr**	**36.66**	**119**	*e*P	**P**	**16 52 07.6**	**-0.2**
ASAR	**Alice Springs**	**37.82**	**125**	P	**P**	**16 52 18.3**	**+0.7**
	comp=E,3.6nm,0.4s,mb4.4,baz=301,slow=7.8,SNR=31						
ASAR				PcP	PcP	16 54 34.8	+0.9
	comp=E,1.8nm,1.1s,baz=316,slow=2.6,SNR=4.6						
ASAR				pPcP		16 54 43.2	
	comp=E,0.5nm,0.6s,baz=304,slow=2.6,SNR=4.7						
ASAR	**Alice Springs**	**37.82**	**125**	P	**P**	**16 52 18.3**	**+0.7**
ASAR				PcP	PcP	16 54 34.8	+0.9
ASAR				pPcP		16 54 43.2	
ASAR	**Alice Springs**	**37.82**	**125**	P	**P**	**16 52 18.3**	**+0.7**
ASAR						16 54 34.8	
XAN	**Xi'an**	**38.19**	**11**	P	**P**	**16 52 20.0**	**-0.5**
XAN				AP	pP	16 52 27.8	-2.1
XAN				AMB	AMB		
	comp=Z,48nm,0.8s,mb5.3						
LZH	**Lanzhou**	**39.54**	**4**	*e*P	**P**	**16 52 32.1**	**+0.3**
LZH				AP	pP	16 52 44.3	+3.0
LZH				*e*PP	PP	16 54 08.3	+5.3
LZH				*e*S	**S**	**16 58 32.5**	**+0.2**
LZH				*e*SS	SS	17 01 23.1	-4.9
LZH				AMB	AMB		
	comp=Z,41nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,155nm,5.6s						
LZH				LR	LR		
	comp=E,543nm,13.7s						
LZH				LR	LR		
	comp=Z,871nm,17.8s,MS4.6						
LZH	**Lanzhou**	**39.54**	**4**	*e*P	**P**	**16 52 32.1**	**+0.3**
	comp=Z,41nm,1.5s,mb4.9						
LZH				pP	pP	16 52 44.3	+3.0
LZH				sP	sP	16 52 49.8	+4.7
LZH				*e*PP	PP	16 54 08.2	+5.2
LZH				*e*S	**S**	**16 58 32.5**	**+0.2**
LZH				sS	sS	16 58 54.0	+6.1
LZH				*e*SS	SS	17 01 23.1	-4.9
LZH				LR	LR		
	comp=Z,870nm,17.8s,MS4.6						
LZH	**Lanzhou**	**39.54**	**4**	*e*P	**P**	**16 52 32.1**	**+0.3**
LZH				*PP	pP	16 52 44.3	+3.0
LZH				*e*		16 54 08.2	
LZH				*e*S	**S**	**16 58 32.5**	**+0.2**
LZH				*e*SS	SS	17 01 23.1	-4.9
LZH				pmax	pmax		
	comp=Z,41nm,1.5s,mb4.9						
LZH				MLR	MLR		
	comp=Z,870nm,17.8s,MS4.6						
GTA	**Gaotai**	**42.75**	**359**	*e*P	**P**	**16 52 58.8**	**+0.6**
GTA				AP	pP	16 53 09.4	+1.7
GTA				XP	sP	16 53 13.1	+1.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
HHC	**Hu-ho-hao-te**	**45.29**	**12**	*e*P	**P**	**16 53 20.0**	**+1.4**
HHC				PCP	PcP	16 54 58.8	+0.8
HHC				PP	PP	16 55 07.1	+2.1
HHC				PCS	PcS	16 58 51.9	+0.1
HHC				S	**S**	**16 59 57.3**	**+0.3**
HHC				SCS	ScS	17 03 08.8	-4.2
HHC				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.0						
HHC				LR	LR		
	comp=N,4µm,14.3s,MS5.5						
HHC				LR	LR		
	comp=E,2µm,16.6s,MS5.5						
HHC				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
BJI	**Beijing**	**45.66**	**17**	P	**P**	**16 53 21.6**	**+0.2**
BJI				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.3						
BJI	**Beijing**	**45.66**	**17**	P	**P**	**16 53 21.6**	**+0.2**
	comp=Z,27nm,0.7s,mb5.3						
CTAO	**Charters Tower**	**47.35**	**114**	P	**P**	**16 53 34.5**	**-0.6**
	comp=Z,23nm,1.3s,mb5.0						
CTAO	**Charters Tower**	**47.35**	**114**	P	**P**	**16 53 34.5**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
STKA	**Stephens Creek**	**47.63**	**131**	*e*P	**P**	**16 53 37.9**	**+0.7**
	comp=Z,5.0nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**47.63**	**131**	P	**P**	**16 53 38.2**	**+1.0**
	comp=Z,2.7nm,0.7s,mb4.4,baz=323,slow=8.7,SNR=9.2						
STKA				pP	pP	16 53 45.3	-1.5
	comp=Z,6.8nm,0.7s,baz=301,slow=6.9,SNR=13						
STKA	**Stephens Creek**	**47.63**	**131**	*e*P	**P**	**16 53 38.0**	**+0.8**
	comp=Z,5.5nm,0.7s,mb4.7						
STKA				*e*		16 53 44.5	
KSRS	**Korea Array**	**48.02**	**29**	P	**P**	**16 53 40.3**	**+0.3**
	comp=Z,11nm,1.0s,mb4.8,baz=221,slow=8.0,SNR=13						
KSRS				pP	pP	16 53 47.9	-1.7
	comp=Z,12nm,1.1s,baz=230,slow=8.4,SNR=5.6						
KBL	**Kabul**	**48.17**	**324**	P	**P**	**16 53 42.7**	**+1.5**
	comp=Z,3.6nm,0.5s,mb4.7						
KBL

comp=Z,7.6nm,0.7s,baz=155,slow=7.9,SNR=14
MJAR Matsushiro Arr 53.07 38 P **P** 16 54 17.5 -0.6
comp=Z,5.1nm,1.0s,mb4.4,baz=222,slow=8.8,SNR=7.5
MJAR pP pP 16 54 25.1 -2.7
comp=Z,5.1nm,1.1s,baz=223,slow=7.5,SNR=4.8
ZAK Zakamensk 53.76 2 *eP* **P** **16 54 23.6 +0.6**
ZAK pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
MDJ Mudanjiang 54.49 25 P **P** **16 54 28.8 +0.4**
MDJ AP pP 16 54 39.8 +1.7
MDJ XP sP 16 54 44.6 +2.7
MDJ AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,5μm,19.9s
TLY Talaya 55.08 2 P **P** **16 54 33.2 +0.7**
comp=Z,13nm,1.0s,mb4.9
TLY Talaya 55.08 2 *eP* **P** **16 54 34.1 +1.6**
TLY pmax pmax
comp=Z,13nm,1.1s,mb4.9
HIA Hailar 55.15 15 *eP* **P** **16 54 31.7 -1.4**
KURK Kurchatov 57.27 344 *eP* **P** **16 54 47.7 -0.5**
comp=Z,25nm,1.0s,mb5.2
KURK Kurchatov 57.27 344 *eP* **P** **16 54 47.7 -0.5**
KURK pmax pmax
comp=Z,25nm,1.0s,mb5.2
ZALV Zalesovo Beam 58.80 349 P **P** **16 54 58.7 -0.2**
comp=Z,21nm,0.9s,mb5.2,baz=164,slow=6.0,SNR=53
ZALV pP pP 16 55 06.9 -1.8
comp=Z,10nm,0.8s,baz=177,slow=5.5,SNR=6.6
KRAR Krasnoyarsk 59.70 355 *eP* **P** **16 55 03.9 -1.1**
KRAR pmax pmax
comp=Z,19nm,1.3s,mb5.0
NVS Novosibirsk 59.95 348 ⇑*iP* **P** **16 55 05.7 -1.1**
NVS *eS* **S** **17 03 09.7 -7.1**
NVS pmax pmax
comp=N,14nm,1.6s
NVS pmax pmax
comp=Z,15nm,1.6s,mb4.8
NVS pmax pmax
comp=E,6.0nm,1.8s
NVS smax
comp=N,28nm,3.3s
NVS smax
comp=E,20nm,2.2s
ASAJ Asahikawa 60.52 34 P **P** **16 55 11.9 +1.0**
comp=E,5.6nm,0.6s,mb4.8,baz=312,slow=18,SNR=4.2
BVA0 Borovoye Array 61.86 340 *i* P **P** **16 55 18.6 -1.2**
BVA0 pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
BVAR Borovoye Array 61.86 340 P **P** **16 55 19.0 -0.8**
comp=Z,4.2nm,0.6s,mb4.8,baz=146,slow=8.9,SNR=32
BVAR pP pP 16 55 26.5 -3.2
comp=Z,3.8nm,0.6s,baz=147,slow=9.4,SNR=12
BRVK Borovoye 61.92 340 *eP* **P** **16 55 19.1 -1.1**
comp=Z,5.9nm,0.6s,mb4.9
BRVK Borovoye 61.92 340 *eP* **P** **16 55 19.1 -1.1**
BRVK pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
BOD Bodaibo 62.11 8 *eP* **P** **16 55 20.8 -0.6**
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
AB31 Akbulak array 63.31 331 P **P** **16 55 28.6 -0.9**
AB31 pmax pmax
comp=Z,14nm,0.8s,mb5.1
AKTK Aktyubinsk 65.03 331 P **P** **16 55 39.9 -0.9**
AKTO Aktyubinsk 65.03 331 P **P** **16 55 39.9 -0.9**
comp=Z,2.5nm,0.9s,mb4.2,baz=149,slow=5.1,SNR=8.0
SVE Sverdlovsk 68.36 338⇓*eP* **P** **16 56 02.0 +0.1**
SVE pmax pmax
comp=Z,13nm,1.0s,mb4.9
ARU Arti 68.88 336 *eP* **P** **16 56 04.1 -1.1**
comp=Z,13nm,1.4s,mb4.7
ARU Arti 68.88 336*c iP* **P** **16 56 04.9 -0.3**
ARU *e* 16 58 42.6
ARU PPP 17 00 18.8
ARU *eS* S 17 05 06.6 -0.5
ARU SS SS 17 09 31.8 -1.1
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
YAK Yakutsk 69.07 14 *eP* **P** **16 56 04.4 -1.8**
comp=Z,15nm,0.9s,mb4.9
YAK Yakutsk 69.07 14 *eP* **P** **16 56 03.8 -2.4**
YAK pmax pmax
comp=Z,17nm,1.0s,mb4.9
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.1s
ASF Jabal al Asfar 70.03 306 P **P** **16 56 13.7 +0.9**
comp=E,3.4nm,1.0s,mb4.2,baz=27,slow=7.3,SNR=4.1
ASF pP pP 16 56 22.5 -0.3
comp=E,3.1nm,0.8s,baz=151,slow=3.9,SNR=4.0
KIV Kislovodsk 70.14 319 *eP* **P** **16 56 12.3 -0.9**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TIXI Tiksi 77.27 9 *eP* **P** **16 56 52.1 -2.4**
TIXI pmax pmax
comp=Z,8.0nm,1.8s,mb4.3
OBN Obninsk 78.45 328 *eP* **P** **16 56 59.9 -1.5**
OBN *i* 16 57 14.4
OBN pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
AKASG Malin Array Be 81.11 322 P **P** **16 57 14.7 -1.2**
comp=Z,0.3nm,0.3s,mb3.7,baz=110,slow=4.3,SNR=4.3
AKASG pP pP 16 57 24.6 -1.5
comp=Z,0.6nm,0.5s,baz=104,slow=4.1,SNR=2.6
SBA Scott Base 81.62 169 P **P** **16 57 25.8 +7.6**
BUR08 Bucovina Ar. S 82.87 319 P **P** **16 57 26.0 +0.7**
BILL Bilibino 84.37 20 *eP* **P** **16 57 31.1 -1.4**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
QSPA South Pole Qui 86.42 180 P **P** **16 57 42.0 -0.7**
comp=Z,5.5nm,1.4s,mb4.6
ARCES ARCESS Array B 88.14 340 pP pP 16 58 00.1 -1.2
comp=Z,1.1nm,0.5s,baz=91,slow=5.4,SNR=1.5
GERES GERESS Array B 90.64 319 P **P** **16 58 03.2 0.0**
comp=Z,0.8nm,0.8s,mb4.1,baz=108,slow=4.3,SNR=5.9
GERES pP pP 16 58 12.3 -1.2
comp=Z,0.4nm,0.7s,baz=87,slow=10.0,SNR=2.1
TOA0 Torodi Ar. Sit 99.53 283 P **P** **16 58 44.4 -0.1**
NVAR Mina Array Bea 130.36 40 PKP PKPdf 17 04 13.6 +2.2
comp=Z,0.3nm,0.5s,baz=236,slow=1.0,SNR=3.1
NVAR pPKP pPKPdf 17 04 21.3 -0.7
comp=Z,0.3nm,0.6s,baz=280,slow=4.0,SNR=1.9
TXAR Lajitas Array 145.50 39 PKPbc PKPbc 17 04 40.6 +1.1
comp=Z,9.7nm,0.7s,baz=298,slow=1.0,SNR=90
TXAR pPKPbc pPKPbc 17 04 48.6 -1.4
comp=Z,5.8nm,0.9s,baz=275,slow=0.6,SNR=7.6
ELN Prospectdale 146.46 2 *e*PKPbc PKPbc 17 04 41.4 -0.7
WVT Waverly 146.64 13 *e*PKPbc PKPbc 17 04 41.6 -1.1
JCT Junction City 146.96 34 *e*PKPbc PKPbc 17 04 43.9 +0.1

ISCJB ***15*** *16:45:31.8±0.6,2486N±005×12280E±003,h15km±6km, mb3.4/2,Error ellipse: s-maj=8.5km s-min=4.1km az=17.7*
TAP ***15*** *16:45:31.1,2483N×12270E,h5km±1km,ML3.4,D*
IDC ***15*** *16:45:31.8±1.9,2430N×12135E,h0km,mb3.8/2, mb1 4.1/3,mb1mx3.6/20,mbtmp3.9/3,Error ellipse: s-maj=96.2km s-min=31.2km az=77.0*
JMA ***15*** *16:45:32.6±0.2,2487N×12283E,h26km,M3.0*
ISC 15 16:45:31.1±0.7,**2488N**±005×**12281E**±003,**h6**km±4km,**n46,** σ1§**23**/50,**mb3.4**/2,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.46**	**156**	P		**Pg**	**16 45 41.6**	**+1.7**
YOJ				*e*S		**Sg**	**16 45 48.0**	**+2.1**
YOJ	**Yonaguni jima** baz=143	**0.46**	**156**	P		**Pg**	**16 45 41.0**	**+1.1**
YOJ	baz=143			*e*S		**Sg**	**16 45 47.7**	**+1.9**
TWB1	**Santiao Chiao** baz=284	**0.75**	**280**	*e*P		**Pg**	**16 45 45.6**	**+0.1**
TWB1	baz=284			*e*S		**Sg**	**16 45 54.8**	**-0.5**
TWC	**Suao** baz=253	**0.91**	**253**	*e*P		**Pg**	**16 45 47.0**	**-1.6**
NWF	**Wu-fen Shan** baz=285	**0.95**	**282**	*e*P		**Pg**	**16 45 49.8**	**+0.5**
PCYT	**Pengchaiyu** baz=324	**1.00**	**318**	*e*P		**Pg**	**16 45 50.0**	**-0.3**
IRIF	**Iriomote-Funau**	**1.00**	**123**	P		**Pg**	**16 45 50.2**	**-0.1**
TWE	**Neicheng** baz=263	**1.05**	**261**	*e*P		**Pg**	**16 45 50.0**	**-1.1**
ENA	**Nanau** baz=245	**1.07**	**245**	P		**Pg**	**16 45 50.5**	**-1.0**
TWA	**Mucha** baz=278	**1.11**	**275**	*e*P		**Pg**	**16 45 53.9**	**+1.4**
ENTT	**Nioudou** baz=259	**1.15**	**258**	P		**Pg**	**16 45 52.1**	**-1.0**
TWY	**Chenhua** baz=293	**1.16**	**290**	*e*P		**Pg**	**16 45 54.9**	**+1.6**
HATJ	**Hateruma jima**	**1.23**	**132**	P		**Pg**	**16 45 54.1**	**-0.5**
JKRS	**Kuro-shima**	**1.27**	**120**	P		**Pn**	**16 45 54.5**	**-0.9**
JIJ	**Ishigaki jima**	**1.32**	**113**	P		**Pn**	**16 45 54.9**	**-1.2**
JIJ				*e*S		**Sb**	**16 46 12.0**	**-1.5**
NSK	**Sanguang** baz=262	**1.33**	**261**	*e*P		**Pn**	**16 45 54.9**	**-1.4**
TWD	**Chiawan** baz=233	**1.36**	**234**	*e*P		**Pn**	**16 45 54.3**	**-2.3**
NNS	**Nan Shan** baz=252	**1.38**	**252**	*e*P		**Pn**	**16 45 55.8**	**-1.0**
WHF	**Hehuan Shan** baz=242	**1.58**	**243**	P		**Pn**	**16 46 00.0**	**+0.3**
TWT	**Tachien** baz=247	**1.61**	**247**	*e*P		**Pb**	**16 46 01.9**	**+0.7**
ESL	**Shilin** baz=228	**1.64**	**230**	*e*P		**Pn**	**16 46 00.1**	**-0.5**
NSTT	**Nanjuang** baz=262	**1.66**	**262**	*e*P		**Pn**	**16 46 01.7**	**+0.9**
JTJ	**Tarama**	**1.74**	**98**	P		**Pn**	**16 46 02.5**	**+0.6**
TWQ1	**Liyutan** baz=254	**1.93**	**254**	*e*P		**Pb**	**16 46 06.5**	**-0.1**
EHY	**Hungye** baz=223	**1.93**	**225**	*e*P		**Pn**	**16 46 03.7**	**-0.8**
SMLT	**Sun Moon Lake** baz=240	**2.00**	**241**	*e*P		**Pb**	**16 46 06.4**	**-1.5**
TYC	**Yuchr** baz=241	**2.03**	**242**	*e*P		**Pn**	**16 46 05.5**	**-0.3**
TWF1	**Yuli** baz=221	**2.05**	**222**	*e*P		**Pn**	**16 46 06.5**	**+0.3**
WNT	**Mingjian** baz=242	**2.18**	**243**	*e*P		**Pb**	**16 46 11.1**	**+0.2**
YUS	**Yu-Shan** baz=229	**2.19**	**231**	*e*P		**Pn**	**16 46 08.7**	**+0.7**
CHKT	**Chengkung** baz=215	**2.21**	**217**	*e*P		**Pn**	**16 46 06.0**	**-2.3**
ALS	**Alishan** baz=232	**2.28**	**234**	*e*P		**Pn**	**16 46 10.7**	**+1.4**
CHN5	**Tsauling** baz=236	**2.33**	**237**	*e*P		**Pn**	**16 46 11.0**	**+1.1**
ELDTW	**Lidau** baz=223	**2.35**	**225**	*e*P		**Pn**	**16 46 10.8**	**+0.6**
CHN4	**Tsaushan** baz=232	**2.53**	**233**	*e*P		**Pn**	**16 46 15.5**	**+2.8**
STYT	**Tauyuan** baz=226	**2.54**	**228**	*e*P		**Pn**	**16 46 12.0**	**-0.8**
WTP	**Ta-pu** baz=230	**2.58**	**231**	*e*P		**Pn**	**16 46 14.7**	**+1.2**
TWG	**Pinlang** baz=216	**2.59**	**218**	*e*P		**Pn**	**16 46 15.1**	**+1.5**
CHN1	**Nanshi** baz=230	**2.68**	**231**	*e*P		**Pn**	**16 46 16.5**	**+1.7**
SGST	**Jiashian** baz=228	**2.71**	**229**	*e*P		**Pn**	**16 46 16.5**	**+1.3**
ECL	**Taimali** baz=215	**2.84**	**217**	*e*P		**Pn**	**16 46 14.5**	**-2.5**
SSD	**Sandimen** baz=222	**2.91**	**224**	*e*P		**Pn**	**16 46 19.9**	**+2.0**
TWM1	**Shoushan** baz=226	**2.99**	**227**	*e*P		**Pb**	**16 46 21.8**	**-3.0**
SCZT	**Fangliau** baz=217	**3.20**	**219**	*e*P		**Pn**	**16 46 20.6**	**-1.4**
SONM	**Songino Array** 0.6nm,0.9s,mb3.1,baz=151,slow=9.1,SNR=4.1	**26.34**	**335**	P		**P**	**16 51 09.2**	**+1.5**
WRA	**Warramunga Arr** 0.9nm,0.8s,mb3.7,baz=346,slow=8.5,SNR=2.7	**45.95**	**165**	P		**P**	**16 53 55.1**	**+0.1**

ISCJB ***15*** *16:49:12.1±2.9,250N±0.1×12282E±007,h8km±18km, Error ellipse: s-maj=24.4km s-min=9.0km az=13.8*
TAP ***15*** *16:49:12.9,2489N×12270E,h2km±1km,ML2.6,D*
JMA ***15*** *16:49:14.1,2491N×12287E,h17km,M2.3*
ISC 15 16:49:11.4±1.6,**250N**±01×**12283E**±007,**h1**km±8km,**n16,** σ0§**98**/18,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.59**	**164**	P		**Pg**	**16 49 23.2**	**+0.5**
YOJ				*e*S		**Sg**	**16 49 29.6**	**-0.8**
YOJ	**Yonaguni jima** baz=146	**0.59**	**164**	*i* P		**Pg**	**16 49 23.6**	**+0.9**
YOJ	baz=146			*e*S		**Sg**	**16 49 31.5**	**+1.1**
TWB1	**Santiao Chiao** baz=280	**0.77**	**268**	*e*P		**Pg**	**16 49 27.1**	**+1.1**
TWC	**Suao** baz=250	**0.99**	**245**	*e*P		**Pg**	**16 49 30.6**	**+0.2**
IRIF	**Iriomote-Funau**	**1.07**	**130**	P		**Pg**	**16 49 31.9**	**0.0**
TWE	**Neicheng** baz=260	**1.10**	**254**	*e*P		**Pg**	**16 49 31.1**	**-1.5**
ENA	**Nanau** baz=242	**1.16**	**239**	P		**Pg**	**16 49 32.7**	**-0.9**
ENTT	**Nioudou** baz=256	**1.22**	**251**	*e*P		**Pg**	**16 49 35.2**	**+0.5**
JKRS	**Kuro-shima**	**1.33**	**126**	P		**Pg**	**16 49 36.4**	**-0.5**
NSK	**Sanguang** baz=260	**1.39**	**255**	*e*P		**Pn**	**16 49 37.4**	**-0.4**
NNS	**Nan Shan** baz=249	**1.45**	**246**	*e*P		**Pn**	**16 49 39.1**	**+0.3**
WHF	**Hehuan Shan** baz=240	**1.68**	**239**	P		**Pn**	**16 49 42.0**	**+0.2**
ESL	**Shilin** baz=227	**1.76**	**227**	*e*P		**Pn**	**16 49 40.5**	**-2.4**
SMLT	**Sun Moon Lake** baz=238	**2.10**	**237**	*e*P		**Pn**	**16 49 49.9**	**+2.3**
TWF1	**Yuli** baz=220	**2.18**	**220**	*e*P		**Pn**	**16 49 48.6**	**-0.1**
YUS	**Yu-Shan** baz=228	**2.30**	**229**	*e*P		**Pn**	**16 49 50.7**	**+0.3**

ISCJB ***15*** *16:49:51.9±1.0,2491N±005×12284E±003,h13km±6km, mb3.8/3,Error ellipse: s-maj=9.8km s-min=4.0km az=23.2*
TAP ***15*** *16:49:51.4,2490N×12276E,h5km±1km,ML3.4,D*
JMA ***15*** *16:49:52.2±0.1,2492N×12284E,h22km,M3.0*
IDC ***15*** *16:49:53.6±1.5,2435N×12187E,h0km,mb3.8/3, mb1 4.0/4,mb1mx3.6/20,mbtmp3.8/4,ML3.3/1,Error ellipse: s-maj=69.6km s-min=25.4km az=67.0*
ISC 15 16:49:51.2±0.7,**2491N**±006×**12285E**±004,**h2**km±4km,**n43,** σ1§**03**/48,**mb3.8**/3,**1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.47**	**162**	P		**Pg**	**16 50 01.8**	**+1.5**
YOJ				*e*S		**Sg**	**16 50 08.6**	**+2.2**
YOJ	**Yonaguni jima** baz=152	**0.47**	**162**	⇑*i*P		**Pg**	**16 50 01.8**	**+1.5**
YOJ	baz=152			*e*S		**Sg**	**16 50 09.2**	**+2.8**
TWB1	**Santiao Chiao** baz=279	**0.79**	**277**	*e*P		**Pg**	**16 50 05.9**	**-0.4**
TWB1	baz=279			*e*S		**Sg**	**16 50 18.8**	**+2.2**
TWC	**Suao** baz=251	**0.96**	**252**	*e*P		**Pg**	**16 50 07.8**	**-1.8**
NWF	**Wu-fen Shan** baz=281	**0.98**	**279**	*e*P		**Pg**	**16 50 11.6**	**+1.5**
IRIF	**Iriomote-Funau**	**0.98**	**126**	P		**Pg**	**16 50 10.3**	**+0.2**
PCYT	**Pengchaiyu** baz=319	**1.00**	**315**	*e*P		**Pg**	**16 50 10.6**	**+0.1**
TWE	**Neicheng** baz=260	**1.09**	**260**	*e*P		**Pg**	**16 50 10.7**	**-1.5**
ENA	**Nanau** baz=243	**1.12**	**245**	*e*P		**Pg**	**16 50 10.9**	**-1.8**
TWA	**Mucha** baz=274	**1.15**	**274**	*e*P		**Pg**	**16 50 15.2**	**+1.8**
ENTT	**Nioudou** baz=256	**1.20**	**257**	*e*P		**Pg**	**16 50 13.3**	**-0.9**
HATJ	**Hateruma jima**	**1.22**	**134**	P		**Pg**	**16 50 14.1**	**-0.5**
HATJ				*e*S		**Sg**	**16 50 30.2**	**-0.2**
JKRS	**Kuro-shima**	**1.25**	**122**	P		**Pg**	**16 50 14.9**	**-0.3**
JKRS				*e*S		**Sg**	**16 50 31.2**	**-0.2**
JIJ	**Ishigaki jima**	**1.30**	**115**	P		**Pg**	**16 50 15.2**	**-0.9**
NSK	**Sanguang** baz=260	**1.38**	**260**	*e*P		**Pn**	**16 50 16.2**	**-1.2**
TWD	**Chiawan** baz=232	**1.41**	**234**	*e*P		**Pn**	**16 50 17.6**	**-0.3**
NNS	**Nan Shan** baz=250	**1.43**	**251**	*e*P		**Pn**	**16 50 17.8**	**-0.3**
WHF	**Hehuan Shan** baz=241	**1.64**	**242**	*e*P		**Pn**	**16 50 20.5**	**-0.5**
ESL	**Shilin** baz=228	**1.69**	**230**	*e*P		**Pn**	**16 50 20.3**	**-1.4**
NSTT	**Nanjuang** baz=260	**1.71**	**261**	*e*P		**Pn**	**16 50 22.3**	**+0.4**
TWQ1	**Liyutan** baz=253	**1.97**	**254**	*e*P		**Pn**	**16 50 26.5**	**+0.9**
EHY	**Hungye** baz=223	**1.98**	**225**	*e*P		**Pn**	**16 50 24.1**	**-1.5**
SMLT	**Sun Moon Lake** baz=239	**2.05**	**240**	*e*P		**Pn**	**16 50 27.7**	**+0.9**
TYC	**Yuchr** baz=240	**2.08**	**241**	*e*P		**Pn**	**16 50 26.6**	**-0.5**
TWF1	**Yuli** baz=221	**2.10**	**223**	*e*P		**Pn**	**16 50 26.2**	**-1.2**
YUS	**Yu-Shan** baz=229	**2.24**	**231**	*e*P		**Pn**	**16 50 28.8**	**-0.4**
CHKT	**Chengkung** baz=215	**2.26**	**217**	*e*P		**Pn**	**16 50 29.9**	**+0.4**
ALS	**Alishan** baz=232	**2.33**	**234**	*e*P		**Pn**	**16 50 31.5**	**+0.9**
CHN5	**Tsauling** baz=235	**2.38**	**237**	*e*P		**Pn**	**16 50 31.9**	**+0.7**
ELDTW	**Lidau** baz=223	**2.40**	**225**	*e*P		**Pn**	**16 50 30.6**	**-0.9**
CHN4	**Tsaushan** baz=232	**2.58**	**233**	*e*P		**Pn**	**16 50 35.2**	**+1.2**
STYT	**Tauyuan** baz=226	**2.59**	**228**	*e*P		**Pn**	**16 50 33.8**	**-0.3**
WTP	**Ta-pu** baz=230	**2.63**	**231**	*e*P		**Pn**	**16 50 34.9**	**+0.2**
TWG	**Pinlang** baz=216	**2.64**	**218**	*e*P		**Pn**	**16 50 33.9**	**-0.9**
TWK	**Hsinying** baz=232	**2.71**	**233**	*e*P		**Pn**	**16 50 36.5**	**+0.7**
CHN1	**Nanshi** baz=230	**2.73**	**231**	*e*P		**Pn**	**16 50 35.6**	**-0.5**
SGST	**Jiashian** baz=227	**2.76**	**229**	*e*P		**Pn**	**16 50 35.5**	**-1.0**
ECL	**Taimali** baz=215	**2.89**	**217**	*e*P		**Pn**	**16 50 38.5**	**+0.3**
SSD	**Sandimen** baz=222	**2.96**	**224**	*e*P		**Pn**	**16 50 40.5**	**+1.2**
SCZT	**Fangliau** baz=217	**3.25**	**219**	*e*P		**Pn**	**16 50 45.1**	**+1.9**
MKAR	**Makanchi Array** 0.9nm,0.8s,mb3.6,baz=106,slow=9.2,SNR=4.2	**38.89**	**315**	P		**P**	**16 57 18.5**	**+0.6**
WRA	**Warramunga Arr** 2.3nm,0.7s,mb4.2,baz=347,slow=8.8,SNR=5.7	**45.97**	**165**	P		**P**	**16 58 15.5**	**-0.3**
ASAR	**Alice Springs** 0.5nm,1.0s,mb3.5,baz=352,slow=7.4,SNR=4.6	**49.47**	**167**	P		**P**	**16 58 44.0**	**+1.1**

ISCJB ***15*** *16:52:51.9±3.1,2304S±009×705W±02,h14km±23km, Error ellipse: s-maj=23.7km s-min=15.0km az=8.7*
IDC ***15*** *16:52:51.7±1.4,2330S×7017W,h0km,mb4.1/1,mb1 3.9/2, mb1mx3.6/15,mbtmp3.9/2,ML3.5/1,MS4.0/1,Ms1 4.2/1, ms1mx3.4/27,Error ellipse: s-maj=84.8km s-min=42.0km az=120.0*
NEIC ***15*** *16:52:53.9±3.1,2305S×7044W,h16km±19km,Error ellipse: s-maj=27.7km s-min=11.8km az=92.0*
ISC 15 16:52:53.9±3.4,**2305S**±009×**704W**±02,**h13**km±24km,**n10,** σ0§**99**/12,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**1.47**	**73**	*e*Pg		**Pg**	**16 53 22.1**	**-0.1**
LVC				*e*Sg		**Sg**	**16 53 41.3**	**-0.1**
LCO	**Las Campanas**	**5.94**	**182**	*e*Pn		**Pn**	**16 54 21.9**	**+0.3**
ARE	**Arequipa**	**6.63**	**351**	P		**Pn**	**16 54 30.0**	**-1.1**
ARE				*e*S		**Sn**	**16 55 41.0**	**-5.6**
LPAZ	**La Paz** 0.4nm,0.3s,baz=214,slow=8.6,SNR=7.3	**7.07**	**18**	Pn		**Pn**	**16 54 39.7**	**+2.5**
LPAZ	baz=204,slow=25,SNR=1.1			Sn		**Sn**	**16 56 13.6**	**+16**
LPAZ	comp=Z,1μm,19.9s,baz=8.0,slow=38			LR		LR	16 57 24.2	
LPAZ	**La Paz**	**7.07**	**18**	*e*Pn		**Pn**	**16 54 38.9**	**+1.7**
LPAZ				Pn		**Pn**	**16 54 39.6**	**+2.5**
LPAZ				Sn		**Sn**	**16 56 13.6**	**+16**
LPAZ				LR		LR	16 57 24.2	
TORD	**Torodi Ar. Bea** 1.3nm,0.6s,baz=251,slow=5.4,SNR=8.4	**79.20**	**71**	P		**P**	**17 04 58.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**79.20**	**71**	P		**P**	**17 04 58.4**	**-0.7**
ASAR	**Alice Springs** 0.4nm,0.8s,baz=137,slow=1.6,SNR=5.6	**127.89**	**209**	PKP	PKPdf		17 11 59.8	-0.3
WRA	**Warramunga Arr** 0.6nm,1.0s,baz=151,slow=1.6,SNR=5.3	**130.90**	**211**	PKP	PKPdf		17 12 05.7	-0.2
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=330,slow=2.4,SNR=4.6	**147.71**	**36**	PKPbc	PKPbc		17 12 37.3	-0.9

TAP ***15*** *17:09:43.3,2486N×12271E,h3km±1km,ML3.8,D*
ISCJB ***15*** *17:09:43.6±0.3,2490N±003×12280E±002,h10km, mb3.9/10,Error ellipse: s-maj=4.3km s-min=2.9km az=10.3*
JMA ***15*** *17:09:44.8±0.2,2489N×12283E,h24km,M3.7*
NEIC ***15*** *17:09:49.3±0.9,2479N×12248E,h45km±10km,mb4.5/3, Error ellipse: s-maj=11.3km s-min=10.4km az=87.0*
BJI ***15*** *17:09:49.3,2480N×12250E,h45km,mB4.6,mb4.2*
IDC ***15*** *17:10:00.5±3.7,2524N×12343E,h167km±43km,mb3.3/7, mb1 3.4/8,mb1mx3.3/20,mbtmp3.4/8,Error ellipse: s-maj=38.9km s-min=13.2km az=59.0*
ISC 15 17:09:44.5±0.3,**2489N**±003×**12275E**±002,**h10**km,**n83,** σ1§**35**/87,**mb3.9**/10,**1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**151**	P		**Pg**	**17 09 53.9**	**-0.2**
YOJ				*e*S		**Sg**	**17 10 00.4**	**-0.2**
YOJ	**Yonaguni jima** baz=145	**0.49**	**151**	⇑*i*P		**Pg**	**17 09 53.8**	**-0.2**
YOJ	baz=145			S		**Sg**	**17 10 01.8**	**+1.3**
TWB1	**Santiao Chiao** baz=283	**0.70**	**279**	P		**Pg**	**17 09 58.2**	**+0.1**
TWB1	baz=283			*e*S		**Sg**	**17 10 06.8**	**-0.6**
TWC	**Suao** baz=252	**0.87**	**251**	*e*P		**Pg**	**17 10 00.4**	**-0.9**
TWC	baz=252			*e*S		**Sg**	**17 10 12.8**	**+0.2**
NWF	**Wu-fen Shan** baz=284	**0.90**	**281**	*e*P		**Pg**	**17 10 01.3**	**-0.6**
ILA	**Ilan** baz=264	**0.92**	**262**	*e*P		**Pg**	**17 10 03.1**	**+0.8**
PCYT	**Pengchaiyu** baz=322	**0.96**	**320**	*e*P		**Pg**	**17 10 02.9**	**-0.1**
TWE	**Neicheng** baz=262	**1.00**	**260**	P		**Pg**	**17 10 02.8**	**-1.0**
ENA	**Nanau** baz=244	**1.03**	**243**	P		**Pg**	**17 10 03.1**	**-1.3**
IRIF	**Iriomote-Funau**	**1.05**	**122**	P		**Pg**	**17 10 02.8**	**-1.9**
IRIF				*e*S		**Sg**	**17 10 15.1**	**-3.2**
TWA	**Mucha** baz=276	**1.07**	**275**	*e*P		**Pg**	**17 10 04.0**	**-1.1**
ENTT	**Nioudou** baz=258	**1.11**	**257**	P		**Pb**	**17 10 04.6**	**-1.2**
TWY	**Chenhua** baz=292	**1.11**	**290**	*e*P		**Pb**	**17 10 04.4**	**-1.5**
TAP1	**Taipei** baz=279	**1.13**	**278**	*e*P		**Pb**	**17 10 05.8**	**-0.3**
TATO	**Taipei**	**1.15**	**274**	*e*P		**Pb**	**17 10 05.2**	**-1.4**
TWS1	**Kuangyinshan** baz=281	**1.23**	**280**	*e*P		**Pn**	**17 10 05.4**	**-2.4**
HATJ	**Hateruma jima**	**1.27**	**131**	P		**Pn**	**17 10 06.3**	**-2.0**
YHNB	**Yeheng**	**1.27**	**260**	*e*P		**Pn**	**17 10 07.3**	**-1.0**
NACB	**Ninganchiao**	**1.28**	**236**	*e*P		**Pn**	**17 10 07.7**	**-0.7**
NSK	**Sanguang** baz=261	**1.29**	**261**	*e*P		**Pn**	**17 10 07.8**	**-0.7**
JKRS	**Kuro-shima**	**1.32**	**120**	P		**Pn**	**17 10 07.0**	**-2.0**
TWD	**Chiawan** baz=232	**1.33**	**233**	*e*P		**Pg**	**17 10 09.4**	**-0.7**
NNS	**Nan Shan** baz=251	**1.33**	**251**	*e*P		**Pn**	**17 10 08.4**	**-0.8**
JIJ	**Ishigaki jima**	**1.37**	**112**	P		**Pn**	**17 10 07.3**	**-2.4**
HWA	**Hwalien** baz=229	**1.39**	**229**	*e*P		**Pg**	**17 10 12.0**	**+0.8**
WHF	**Hehuan Shan** baz=241	**1.55**	**242**	P		**Pn**	**17 10 12.5**	**+0.3**
TWT	**Tachien** baz=247	**1.57**	**246**	*e*P		**Pg**	**17 10 13.9**	**-0.8**
ESL	**Shilin**	**1.61**	**229**	*e*P		**Pn**	**17 10 11.6**	**-1.5**

baz=228
NSTT Nanjuang 1.61 261 *e*P Pn 17 10 13.3 +0.2
baz=261
JTJ Tarama 1.79 98 P Pn 17 10 14.4 -1.1
NSY Sanyi 1.88 256 *e*P Pn 17 10 18.2 +1.5
baz=256
TWQ1 Liyutan 1.88 254 *e*P Pg 17 10 19.3 -1.4
baz=254
EHY Hungye 1.90 224 *e*P Pn 17 10 16.1 -1.0
baz=223
SMLT Sun Moon Lake 1.97 240 P Pn 17 10 18.9 +1.0
baz=239
TYC Yuchr 1.99 241 *e*P Pn 17 10 19.3 +1.0
baz=240
TWF1 Yuli 2.03 221 *e*P Pn 17 10 18.1 -0.7
baz=220
WNT Mingjian 2.14 242 *e*P Pn 17 10 18.1 -2.3
baz=242
YUS Yu-Shan 2.16 230 P Pn 17 10 21.1 +0.5
baz=229
CHKT Chengkung 2.19 216 *e*P Pn 17 10 19.7 -1.3
baz=215
ALS Alishan 2.25 233 *e*P Pn 17 10 23.7 +1.8
baz=232
CHN5 Tsauling 2.29 236 *e*P Pn 17 10 24.9 +2.5
baz=236
ELDTW Lidau 2.32 223 *e*P Pn 17 10 21.9 -0.9
baz=223
WGK Gukeng 2.33 239 *e*P Pn 17 10 25.8 +2.8
baz=239
CHN2 Minshiung 2.48 237 *e*P Pn 17 10 27.5 +2.5
baz=237
CHN4 Tsaushan 2.50 233 *e*P Pn 17 10 26.9 +1.6
baz=232
STYT Tauyuan 2.51 227 P Pn 17 10 25.9 +0.5
baz=226
WTP Ta-pu 2.55 230 *e*P Pn 17 10 27.2 +1.2
baz=230
TWG Pinlang 2.58 217 *e*P Pn 17 10 25.1 -1.2
baz=216
TWK Hsinying 2.63 232 *e*P Pn 17 10 29.1 +2.0
baz=232
CHN1 Nanshi 2.65 231 P Pn 17 10 29.3 +1.9
baz=230
SGST Jiashian 2.68 228 *e*P Pn 17 10 28.8 +1.0
baz=227
ECL Taimali 2.82 216 *e*P Pn 17 10 29.2 -0.5
baz=215
SSD Sandimen 2.89 223 *e*P Pn 17 10 33.1 +2.5
baz=222
TWM1 Shoushan 2.97 226 *e*P Pn 17 10 34.7 +3.0
baz=226
SGLT Jiouru 2.99 224 *e*P Pn 17 10 36.1 +4.1
baz=223
TAW Tawu 3.05 214 *e*P Pn 17 10 34.9 +2.2
baz=213
LAY Lan-yu 3.05 201 *e*P Pn 17 10 31.3 -1.5
baz=200
SCZT Fangliau 3.18 218 *e*P Pn 17 10 37.0 +2.3
baz=217
TWP Hsiaoliuchiu 3.35 221 *e*P Pn 17 10 38.5 +1.5
baz=220
HEN Hengchun 3.42 213 *e*P Pn 17 10 39.1 +1.2
baz=212
TWK1 Hengchun 3.44 212 *e*P Pn 17 10 37.4 -0.8
baz=211
JIH Iheya 5.15 64 P Pn 17 11 04.5 +2.7
JOW Kunigami 5.33 68 P Pn 17 11 09.6 +5.3
1.9nm,0.3s,baz=247,slow=6.8,SNR=7.0
JOW Kunigami 5.33 68 P Pn 17 11 10.0 +5.8
JTK Tokunoshima 6.26 61 P Pn 17 11 18.6 +1.6
JAM Amami Oshima 7.06 59 P Pn 17 11 29.6 +1.7
KSRS Korea Array 13.28 18 P Px 17 13 03.6
0.1nm,0.3s,baz=198,slow=12,SNR=5.7
LZH Lanzhou 19.71 309 *e*P Pn 17 14 17.6 +2.0
LZH AP pP 17 14 22.3 +5.3
LZH AMB AMB
comp=Z,18nm,1.3s
LZH AMB AMB
comp=Z,72nm,4.0s
LZH Lanzhou 19.71 309 *e*P Pn 17 14 17.6 +2.0
comp=Z,18nm,1.3s
LZH pP pP 17 14 22.3 +5.3
LZH sP sP 17 14 24.7 +6.4
MDJ Mudanjiang 20.45 14 P P 17 14 26.5 +4.4
CMAR Chiang Mai Arr 23.02 259 P P 17 14 57.8 +7.9
comp=Z,0.7nm,0.9s,mb3.1,baz=67,slow=7.4,SNR=6.0
GTA Gaotai 24.13 312 *e*P P 17 15 02.5 +1.9
GTA AP 17 15 11.1
GTA XP sP 17 15 14.8 +10
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb3.9
SONM Songino Array 26.31 335 P P 17 15 21.4 +1.2
comp=Z,1.5nm,0.7s,mb3.6,baz=149,slow=8.7,SNR=11
MKAR Makanchi Array 38.84 315 P P 17 17 09.9 +0.2
comp=Z,1.0nm,0.6s,mb3.7,baz=107,slow=9.9,SNR=10
ZALV Zalesovo Beam 40.44 326 P P 17 17 22.3 -0.7
comp=Z,1.1nm,0.5s,mb3.8,baz=113,slow=9.3,SNR=6.1
WRAB Tennant Creek 45.96 165 *e*P P 17 18 07.0 -0.8
comp=Z,8.2nm,1.0s,mb4.6
WRA Warramunga Arr 45.97 165 P P 17 18 07.4 -0.6
comp=Z,3.7nm,0.9s,mb4.3,baz=347,slow=8.7,SNR=34
WB2 Warramunga Arr 45.97 165 *e*P P 17 18 07.2 -0.8
TIXI Tiksi 46.91 3 *e*P P 17 18 14.5 -0.3
comp=Z,6.6nm,0.8s,mb4.6
BRVK Borovoye 48.11 320 *e*P P 17 18 22.4 -1.9
ASAR Alice Springs 49.47 167 P P 17 18 35.4 +0.3
comp=Z,0.6nm,0.7s,mb3.7,baz=347,slow=6.5,SNR=18
STKA Stephens Creek 59.25 161 P P 17 19 46.6 +0.5
comp=Z,0.7nm,0.9s,mb3.7,baz=311,slow=11,SNR=2.1
STKA Stephens Creek 59.25 161 P P 17 19 47.0 +0.9

*IDC **15** 17:12:28.6±3.1,2333S×7026W,h0km,mb4.2/1,mb1 4.0/2, mb1mx3.6/15,mbtmp3.9/2,ML3.7/1,MS4.9/1,Ms1 4.9/1, ms1mx3.7/27,Error ellipse: s-maj=108.3km s-min=60.3km az=92.0*
*ISCJB **15** 17:12:32.2±1.1,2306S±004×7078W±0.10,h43km±9km, Error ellipse: s-maj=15.1km s-min=6.0km az=10.7*
*GUC **15** 17:12:32.1±1.5,2299S×7073W,h5km±21km,ML3.9*
ISC 15 17:12:32.7±1.4,**2306S**±004×**7076W**±008,**h28**km±8km,**n17**, σ1**8**12/23,**3C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.61**	**123**	⇑*i*P		**Pb**	**Pb**	**17 12 44.5**	**-0.3**
CEN1				*i*S		**Sb**	**Sb**	**17 12 54.2**	**+1.1**
CEN1				AML		AML	AML	17 12 56.3	
comp=E,3μm,0.6s									
ANCH	**Antofagasta**	**0.70**	**153**	⇓*i*P		**Pb**	**Pb**	**17 12 45.5**	**-0.8**
ANCH				*i*S		**Sb**	**Sb**	**17 12 55.7**	**+0.1**
ANCH				AML		AML	AML	17 12 57.7	
comp=N,6μm,0.5s									
PB06	**Plate Boundary**	**1.15**	**72**	*e*P		**Pn**	**Pn**	**17 12 51.0**	**-1.9**
PB06				*i*S		**Sn**	**Sn**	**17 13 05.9**	**-1.9**
PB04	**Plate Boundary**	**1.42**	**56**	*e*P		**Pn**	**Pn**	**17 12 47.0**	**-10**
PB04				*i*S		**Sn**	**Sn**	**17 12 58.8**	**-16**
PB04				AML		AML	AML	17 13 00.4	
comp=N,16μm,0.5s									
PB07	**Plate Boundary**	**1.55**	**32**	*e*P		**Pn**	**Pn**	**17 12 57.5**	**-0.9**
PB07				*i*S		**Sn**	**Sn**	**17 13 17.0**	**-0.7**
CPN1	**Cerro Paranal**	**1.59**	**168**	⇑*i*P		**Pn**	**Pn**	**17 12 58.6**	**-0.4**
CPN1				*i*S		**Sn**	**Sn**	**17 13 19.3**	**+0.5**
CPN1				AML		AML	AML	17 13 26.9	
comp=E,2μm,0.8s									
LVC	**Limon Verde**	**1.76**	**76**	⇑*i*P		**Pn**	**Pn**	**17 13 01.5**	**+0.1**
LVC				*i*S		**Sn**	**Sn**	**17 13 24.3**	**+1.5**
LVC				AML		AML	AML	17 13 27.4	
comp=N,2μm,0.5s									
PB01	**Plate Boundary**	**2.33**	**31**	*e*P		**Pn**	**Pn**	**17 13 10.3**	**+1.1**
PB01				*i*S		**Sn**	**Sn**	**17 13 39.7**	**+2.8**
PB01				AML		AML	AML	17 13 41.4	
comp=E,2μm,0.3s									
LPAZ	**La Paz**	**7.18**	**21**	Pn		**Pn**	**Pn**	**17 14 17.0**	**+1.2**
comp=E,0.6nm,0.3s,baz=197,slow=7.9,SNR=9.8									
LPAZ				Sn		**Sn**	**Sn**	**17 15 52.0**	**+16**
baz=167,slow=19,SNR=1.1									
PCRV	**Puerto La Cruz**	**33.57**	**11**	LR		LR	LR	17 33 31.8	
comp=E,2μm,18.5s,baz=196,slow=37									
VNA3	**Neumayer Olymp**	**59.17**	**161**	*e*		**P**		**17 22 31.2**	**+0.6**
VNA3				*e*		pP		17 22 40.8	+1.5
VNA1	**Neumayer--Stat**	**59.41**	**160**	*e*		**P**		**17 22 33.1**	**+0.8**
VNA2	**Neumayer--Watz**	**59.77**	**160**	*e*		**P**		**17 22 35.6**	**+0.9**
baz=292,slow=8.4									
VNA2				*e*		pP		17 22 44.7	+1.3

SNAA	**Sanae**	**61.38**	**160**	*e*		**P**	**17 22 44.6**	**-1.1**
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P		**P**	**17 24 35.8**	**-1.4**
comp=E,1.6nm,0.7s,baz=253,slow=5.1,SNR=11								
ZALV	**Zalesovo Beam**	**144.08**	**25**	PKP	PKPdf		17 32 05.8	+0.4
comp=E,0.4nm,0.5s,baz=325,slow=1.8,SNR=3.7								
MKAR	**Makanchi Array**	**147.89**	**36**	PKPbc	PKPbc		17 32 14.8	-0.3
comp=E,0.9nm,0.7s,baz=331,slow=3.0,SNR=7.0								

*IDC **15** 17:18:15.6±0.4,2294S×17497W,h0km,mb5.6/25, mb1 5.6/26,mb1mx5.6/27,mbtmp5.6/26,MS5.3/17, Ms1 5.3/17,ms1mx4.9/26,Error ellipse: s-maj=13.5km s-min=12.6km az=166.0*
*DJA **15** 17:18:18.2±0.0,2289S×17504W,h6km,mB6.6/34, Mw(mB)6.4/34,Mwp6.1/29*
*ISCJB **15** 17:18:19.4±0.1,2303S±003×17500W±003,h33km, mb5.9/167,MS5.5/223,Error ellipse: s-maj=5.0km s-min=2.6km az=148.9*
*SZGRF **15** 17:18:19.8,2326S×17385W,h33km,mb5.6,Tonga Islands region*
*MOS **15** 17:18:20.4±0.9,2283S×175.15W,h33km,mb6.0/55, MS5.4/43,Error ellipse: s-maj=9.2km s-min=7.2km az=68.2*
*BJI **15** 17:18:20.0,2242S×17455W,h33km,mB6.3,mb5.9,Ms5.6, Msz5.5*
*BGS **15** 17:18:21.2±5.6,2301S×17500W,h33km,mb5.8(NEIC)*
*GCMT **15** 17:18:21.2±0.2,2303S×174.37W,h70km±3km,MW5.8/92, Moment Tensor Solution. s39,c50; s92,c164; Duration: 1s9 Moment tensor: Scale 10^17^Nm; Mrr1.54±.26; Mθθ2.47±.18; Mφφ-4.01±.17; Mrθ2.35±.12; Mφr1.46±.13; Mθr3.53±.12; Best double couple: Mo5.69100×10^17^ NP1:φs129.00000°,δ39.00000°,λ16.00000°. NP2: φs26.00000°,δ80.00000°,λ128.00000°. Principal axes: T 5.6450, Plg42.0000°, Azm332.0000°; N 0.0910, Plg37.0000°, Azm199.0000°; P -5.7360, Plg25.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **15** 17:18:21.2±0.1,2301S×17500W,mb5.8/104,MS5.5/199 Error ellipse: s-maj=6.7km s-min=4.1km az=156.0*
ISC 15 17:18:21.3±0.1,**2301S**±003×**17496W**±003,**h35**km, **(h37**km±2.2km**:pP-P),n1164,**σ0**979**/745,**mb5.9**/167, **MS5.5**/223,**251C-193D,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.76**	**203**	Pn		**Pn**	**Pn**	**17 19 58.9**	**+0.9**
1μm,0.3s,baz=26,slow=1.5,SNR=40									
RAO				Sn		**Sn**	**Sn**	**17 21 12.4**	**-1.4**
1μm,0.3s,baz=73,slow=24,SNR=11									
RAO	**Raoul Island**	**6.76**	**203**	*e*P		**Pn**	**Pn**	**17 19 59.5**	**+1.5**
3μm,0.3s									
RAO				*e*S		**Sn**	**Sn**	**17 21 13.4**	**-0.3**
RAO	**Raoul Island**	**6.76**	**203**	*e*P		**Pn**	**Pn**	**17 19 59.5**	**+1.5**
RAO				*e*S		**Sn**	**Sn**	**17 21 13.5**	**-0.3**
RAO				smax					
comp=N,3μm,0.3s									
AFI	**Afiamalu**	**9.54**	**19**	Pn		**Pn**	**Pn**	**17 20 30.2**	**-6.0**
comp=N,70nm,0.3s,baz=199,slow=2.3,SNR=43									
AFI				Sn		**Sn**	**Sn**	**17 22 07.1**	**-15**
comp=N,243nm,0.3s,baz=120,slow=22,SNR=7.4									
AFI	**Afiamalu**	**9.54**	**19**	*e*P		**Pn**	**Pn**	**17 20 29.3**	**-7.0**
comp=N,1μm,0.9s									
AFI				*e*S		**Sn**	**Sn**	**17 22 05.3**	**-17**
AFI	**Afiamalu**	**9.54**	**19**	P		**Pn**	**Pn**	**17 20 30.2**	**-6.0**
AFI				pmax		pmax			
comp=Z,70nm,0.3s									
RAR	**Rarotonga**	**14.19**	**86**	Pn		**Pn**	**Pn**	**17 21 32.8**	**-7.1**
comp=Z,46nm,0.3s,baz=250,slow=8.3,SNR=63									
RAR				Sn		**Sn**	Sn	17 23 54.8	-21
comp=Z,95nm,0.3s,baz=104,slow=21,SNR=8.3									
RAR	**Rarotonga**	**14.19**	**86**	*e*P		**Pn**	**Pn**	**17 21 32.7**	**-7.2**
comp=Z,2μm,1.3s									
FUNA	**Funafuti**	**15.45**	**338**	*e*P		**Pn**	**Pn**	**17 21 55.6**	**-1.1**
comp=Z,4μm,1.9s									
PUZ	**Puketiti**	**16.10**	**200**	P		**Pn**	**Pn**	**17 21 57.8**	**-7.2**
URZ	**Urewera**	**16.65**	**202**	Pn		**Pn**	**Pn**	**17 22 10.2**	**-1.7**
comp=Z,1.8nm,0.3s,baz=257,slow=3.2,SNR=11									
URZ				Sn		**Sn**	**Sn**	**17 25 02.5**	**-13**
comp=Z,11nm,0.3s,baz=285,slow=21,SNR=14									
URZ	**Urewera**	**16.65**	**202**	Pn		**Pn**	**Pn**	**17 22 10.2**	**-1.7**
URZ				Sn		**Sn**	**Sn**	**17 25 02.5**	**-13**
DZM	**Mont Dzumac**	**17.20**	**270**	*e*P		**Pn**	**Pn**	**17 22 22.9**	**+3.9**
DZM	**Mont Dzumac**	**17.20**	**270**	*e*P		**Pn**	**Pn**	**17 22 22.4**	**+3.4**
NOUC	**Port Laguerre**	**17.33**	**269**	*e*P		**Pn**	**Pn**	**17 22 25.0**	**+4.5**
SNZO	**South Karori**	**20.21**	**203**	*e*P		**P**	**P**	**17 22 53.7**	**+0.6**
comp=Z,190nm,1.0s									
SNZO				*e*S		S	S	17 26 16.1	-22
SNZO				LR		LR	LR		
comp=Z,5μm,22.0s,MS4.9									
THZ	**Tophouse**	**21.28**	**206**	P		**P**	**P**	**17 23 03.2**	**-1.5**
THZ				S		**S**	**S**	**17 26 45.1**	**-14**
TBI	**Tubuai**	**23.44**	**96**	*e*P		**P**	**P**	**17 23 24.8**	**-2.9**
comp=Z,829nm,1.2s,mb6.0									
TBI				*e*LQ				17 27 58.0	
comp=Z,19μm,28.5s									
TBI				*e*LR		LR	LR	17 28 52.2	
comp=Z,30μm,28.8s,baz=270									
TBI	**Tubuai**	**23.44**	**96**	*e*P		**P**	**P**	**17 23 24.8**	**-2.9**
comp=Z,829nm,1.2s,mb6.0									
TBI				*e*LQ				17 27 58.0	
RPZ	**Rata Peaks**	**23.66**	**206**	P		**P**	**P**	**17 23 27.8**	**-1.8**
comp=Z,20nm,0.7s,mb4.7,baz=299,slow=5.3,SNR=13									
RPZ				S		**S**	**S**	**17 27 35.1**	**-6.6**
comp=Z,12nm,0.6s,baz=34,slow=11,SNR=3.7									
PAE	**Paea**	**24.37**	**82**	*e*P		**P**	**P**	**17 23 33.7**	**-2.6**
comp=Z,4μm,1.3s,mb6.6									
PPT	**Papeete**	**24.40**	**82**	*e*P		**P**	**P**	**17 23 34.2**	**-2.4**
comp=Z,386nm,1.3s,mb5.7									
PPT				*e*LQ				17 28 16.2	
comp=Z,9μm,27.0s									
PPT				*e*LR		LR	LR	17 29 17.1	
comp=Z,35μm,26.8s,baz=253									
PPT	**Papeete**	**24.40**	**82**	P		**P**	**P**	**17 23 34.4**	**-2.2**
comp=Z,82nm,0.5s,mb5.4,baz=232,slow=7.6,SNR=8.1									
PPT				LR		LR	LR	17 30 19.2	
comp=Z,9μm,20.9s,MS5.2,baz=244,slow=30									
TIAR	**Tiarei**	**24.61**	**82**	*e*P		**P**	**P**	**17 23 36.2**	**-2.3**
comp=Z,4μm,1.1s,mb6.9									
TVO	**Taravao**	**24.64**	**83**	*e*P		**P**	**P**	**17 23 36.5**	**-2.2**
comp=Z,9μm,1.5s,mb7.1									
MEH	**Mehetia**	**25.70**	**84**	*e*P		**P**	**P**	**17 23 46.6**	**-1.7**
comp=Z,7μm,1.2s,mb7.1									
PMOR	**Pomariorio Ree**	**26.77**	**78**	*e*P		**P**	**P**	**17 23 55.5**	**-2.5**
comp=Z,332nm,1.3s,mb5.7									
VAH	**Vaihoa**	**26.93**	**78**	*e*P		**P**	**P**	**17 23 56.6**	**-2.9**
comp=Z,148nm,1.0s,mb5.5									
TARA	**Tarawa**	**26.94**	**332**	*e*P		**P**	**P**	**17 23 56.6**	**-3.0**
comp=Z,473nm,0.7s,mb6.1									
TARA				LR		LR	LR		
comp=Z,5μm,19.0s,MS5.1									
HNR	**Honiara**	**27.55**	**295**	P		**P**	**P**	**17 24 03.6**	**-1.5**
comp=Z,265nm,0.7s,mb6.0,baz=6.2,slow=1.4,SNR=34									
HNR	**Honiara**	**27.55**	**295**	*e*P		**P**	**P**	**17 24 03.3**	**-1.8**
comp=Z,714nm,1.2s,mb6.2									
HNR				LR		LR	LR		
comp=Z,3μm,20.0s,MS4.8									
HNR	**Honiara**	**27.55**	**295**	P		**P**	**P**	**17 24 03.6**	**-1.5**
HNR				pmax		pmax			
comp=Z,265nm,0.7s,mb6.0									
XMAS	**Kiritimati**	**30.19**	**37**	PFAKE				17 24 40.0	+11
XMAS				LR		LR	LR		
comp=Z,4μm,21.0s,MS5.1									
ARMA	**Armidale**	**30.66**	**249**	*e*P		**P**	**P**	**17 24 32.8**	**+0.2**
ARMA	**Armidale**	**30.66**	**249**	*e*P		**P**	**P**	**17 24 32.8**	**+0.2**
comp=Z,1.3nm,0.8s									
EIDS	**Eidsvold**	**31.02**	**259**	*e*P		**P**	**P**	**17 24 34.9**	**-0.9**
comp=Z,401nm,1.3s,mb6.1									
CNB	**Canberra Magne**	**33.30**	**240**	*e*P		**P**	**P**	**17 24 56.7**	**+1.0**
CAN	**Canberra**	**33.60**	**240**	*e*P		**P**	**P**	**17 24 58.8**	**+0.5**
CAN	**Canberra**	**33.60**	**240**	P		**P**	**P**	**17 24 59.0**	**+0.7**
CTA	**Charters Tower**	**36.12**	**267**	⇑*i*P		**P**	**P**	**17 25 19.6**	**-0.6**
comp=Z,302nm,0.6s,mb6.4									
CTA				*e*S		**S**	**S**	**17 30 53.8**	**-3.9**
CTA	**Charters Tower**	**36.12**	**267**	P		**P**	**P**	**17 25 20.1**	**-0.1**
baz=98,slow=11									
CTA				S		**S**	**S**	**17 30 52.4**	**-5.3**
comp=Z,4.0nm,0.8s,baz=263,slow=17,SNR=7.9									
CTA				LR		LR	LR	17 38 08.6	
comp=Z,3μm,18.8s,MS5.1,baz=90,slow=33									
CTA	**Charters Tower**	**36.12**	**267**	P		**P**	**P**	**17 25 20.1**	**-0.1**
CTA				S		**S**	**S**	**17 30 52.4**	**-5.3**
CTA				LR		LR	LR	17 38 08.6	

CTA	**Charters Tower**	**36.12**	**267**	P		**P**	**P**	**17 25 20.1**	**-0.1**
CTA				S		**S**	**S**	**17 30 52.4**	**-5.3**
CTAO	**Charters Tower**	**36.12**	**267**	*e*P		**P**	**P**	**17 25 19.4**	**-0.8**
comp=Z,342nm,0.7s,mb6.4									
CTAO				LR		LR	LR		
comp=Z,3μm,19.0s,MS5.0									
CTAO	**Charters Tower**	**36.12**	**267**	P		**P**	**P**	**17 25 19.5**	**-0.7**
CTAO				pmax		pmax			
comp=Z,340nm,0.7s,mb6.4									
CTAO	**Charters Tower**	**36.12**	**267**	P		**P**	**P**	**17 25 19.5**	**-0.7**
comp=Z,625nm,0.7s,comp=Z,5μm,mb6.6									
TAOE	**Nuku Hiva Isla**	**36.20**	**73**	*e*P		**P**	**P**	**17 25 18.7**	**-2.2**
comp=Z,2μm,1.5s,mb6.7									
TAOE				*e*LR		LR	LR	17 34 40.8	
comp=Z,45μm,27.6s									
TAOE	**Nuku Hiva Isla**	**36.20**	**73**	*e*P		**P**	**P**	**17 25 19.0**	**-1.9**
RKT	**Rikitea**	**36.71**	**98**	*e*LR		LR	LR	17 35 00.5	
comp=Z,18μm,28.2s,baz=262									
TOO	**Toolangi**	**36.82**	**238**	*e*P		**P**	**P**	**17 25 25.7**	**-0.3**
MOO	**Moorlands**	**36.88**	**229**	*e*P		**P**	**P**	**17 25 28.4**	**+1.9**
TAU	**Tasmania Unive**	**36.95**	**228**	PFAKE				17 25 40.0	+13
TAU				LR		LR	LR		
comp=Z,3μm,21.0s,MS5.0									
PMG	**Port Moresby**	**38.67**	**284**	*e*P		**P**	**P**	**17 25 40.9**	**-1.1**
comp=Z,472nm,1.0s,mb6.2									
PMG				LR		LR	LR		
comp=Z,6μm,19.0s,MS5.4									
PMG	**Port Moresby**	**38.67**	**284**	*d*P		**P**	**P**	**17 25 41.7**	**-0.2**
PMG	**Port Moresby**	**38.67**	**284**	P		**P**	**P**	**17 25 41.5**	**-0.4**
comp=Z,597nm,1.1s,comp=Z,6μm,mb6.2									
STKA	**Stephens Creek**	**39.34**	**247**	⇑*i*P		**P**	**P**	**17 25 46.6**	**-0.7**
comp=Z,13nm,0.6s,mb4.8									
STKA	**Stephens Creek**	**39.34**	**247**	P		**P**	**P**	**17 25 46.7**	**-0.6**
comp=Z,27nm,0.7s,mb5.1,baz=90,slow=9.0,SNR=66									
STKA				S		**S**	**S**	**17 31 42.9**	**-3.4**
comp=Z,4.9nm,0.9s,baz=324,slow=17,SNR=3.5									
STKA				LR		LR	LR	17 41 25.0	
comp=Z,6μm,18.8s,MS5.5,baz=73,slow=35									
STKA	**Stephens Creek**	**39.34**	**247**	*e*P		**P**	**P**	**17 25 46.4**	**-1.0**
comp=Z,57nm,0.8s,mb5.3									
COEN	**Coen**	**40.59**	**275**	*e*P		**P**	**P**	**17 25 57.7**	**-0.3**
comp=Z,80nm,0.9s,mb5.3									
COEN	**Coen**	**40.59**	**275**	P		**P**	**P**	**17 25 58.1**	**+0.2**
comp=Z,120nm,0.9s,comp=Z,1μm,mb5.5									
PTCN	**Pitcairn Islan**	**40.89**	**102**	PFAKE				17 26 10.0	+10
PTCN				LR		LR	LR		
comp=Z,7μm,21.0s,MS5.5									
MMPI	**Meraukе**	**45.15**	**281**	P		**P**	**P**	**17 26 34.2**	**-0.7**
comp=Z,1μm,0.8s,mb6.8									
ASAR	**Alice Springs**	**46.74**	**259**	P		**P**	**P**	**17 26 46.2**	**-1.1**
comp=Z,108nm,0.8s,mb5.8,baz=104,slow=6.9,SNR=502									
ASAR				S		**S**	**S**	**17 33 31.9**	**-3.2**
comp=Z,6.0nm,1.0s,baz=89,slow=16,SNR=8.3									
ASAR				P4KPbc				18 04 35.1	
comp=Z,0.3nm,0.8s,baz=125,slow=1.7,SNR=5.6									
ASAR	**Alice Springs**	**46.74**	**259**	P		**P**	**P**	**17 26 46.3**	**-1.1**
ASAR				S		**S**	**S**	**17 33 31.9**	**-3.2**
WB2	**Warramunga Arr**	**47.08**	**264**	⇑*i*P		**P**	**P**	**17 26 48.2**	**-1.8**
WB2				*e*				17 27 10.9	
WB2				*e*S		**S**	**S**	**17 33 31.8**	**-8.2**
WB2				*e*SCS		ScS		17 36 42.5	+0.4
WB2	**Warramunga Arr**	**47.08**	**264**	*e*P		**P**	**P**	**17 26 47.9**	**-2.1**
WRAB	**Tennant Creek**	**47.09**	**264**	*e*P		**P**	**P**	**17 26 48.0**	**-2.1**
comp=Z,300nm,0.8s,mb6.3									
WRAB				LR		LR	LR		
comp=Z,6μm,21.0s,MS5.6									
WRAB	**Tennant Creek**	**47.09**	**264**	P		**P**	**P**	**17 26 48.3**	**-1.7**
WRAB				pmax		pmax			
comp=Z,300nm,0.9s,mb6.2									
WRAB	**Tennant Creek**	**47.09**	**264**	P		**P**	**P**	**17 26 48.0**	**-2.0**
comp=Z,491nm,0.9s,comp=Z,3μm,mb6.4									
WRA	**Warramunga Arr**	**47.09**	**264**	P		**P**	**P**	**17 26 48.4**	**-1.7**
comp=Z,257nm,0.8s,mb6.2,baz=102,slow=8.0,SNR=769									
WRA				S		**S**	**S**	**17 33 33.0**	**-7.1**
comp=Z,8.2nm,1.1s,baz=102,slow=14,SNR=7.1									
WRA				LR		LR	LR	17 45 06.5	
comp=Z,5μm,20.8s,MS5.4,baz=100,slow=34									
WRA				P4KPbc				18 04 36.2	
comp=Z,0.9nm,1.1s,baz=103,slow=3.3,SNR=4.7									
WRA	**Warramunga Arr**	**47.09**	**264**	P		**P**	**P**	**17 26 48.5**	**-1.7**
WRA				S		**S**	**S**	**17 33 33.0**	**-7.1**
WRA				LR		LR	LR	17 45 06.5	
WRA	**Warramunga Arr**	**47.09**	**264**	P		**P**	**P**	**17 26 48.5**	**-1.6**
WRA				S		**S**	**S**	**17 33 33.0**	**-7.2**
KIP	**Kipapa**	**47.15**	**22**	*e*P		**P**	**P**	**17 26 49.8**	**-0.5**
comp=Z,275nm,1.3s,mb6.0									
KIP	**Kipapa**	**47.15**	**22**	P		**P**	**P**	**17 26 50.1**	**-0.3**
KIP				pmax		pmax			
comp=Z,280nm,1.3s,mb6.0									
JAY	**Jayapura**	**47.52**	**289**	P		**P**	**P**	**17 26 52.5**	**-1.0**
comp=Z,707nm,0.7s,comp=Z,5μm,mb6.8									
KAKA	**Kakadu**	**50.87**	**272**	⇑*i*P			Px	17 27 04.6	
comp=Z,160nm,0.6s									
KAKA				*e*S			Sx	17 34 14.6	
FORT	**Forrest**	**50.95**	**248**	*e*P		**P**	**P**	**17 27 17.9**	**-1.6**
comp=Z,201nm,0.7s,mb6.2									
FORT	**Forrest**	**50.95**	**248**	*e*P		**P**	**P**	**17 27 17.9**	**-1.6**
comp=Z,24nm,0.6s,mb5.3									
MIDW	**Midway**	**50.98**	**357**	*e*P		**P**	**P**	**17 27 18.3**	**-1.2**
comp=Z,431nm,1.5s,mb6.2									
GUMO	**Guam**	**53.57**	**309**	LR		LR	LR	17 47 26.1	
comp=Z,3μm,21.9s,MS5.2,baz=303,slow=33									
GUMO	**Guam**	**53.57

comp=Z,40nm,1.1s,mb5.4
KAPI LR LR

comp=Z,903nm,21.0s,MS5.0
KAPI Kappang 65.32 275 P **P** 17 28 59.1 -1.3
comp=Z,45nm,1.4s,comp=Z,834nm,mb5.3
DAV Davao City (W) 65.34 290 P **P** 17 28 59.3 -1.1
comp=Z,210nm,0.6s,mb6.3,baz=53,slow=2.6,SNR=14
DAV Davao City (W) 65.34 290 *eP* **P** 17 28 59.3 -1.2
comp=Z,231nm,0.7s,mb6.3
DAV LR LR

comp=Z,2μm,22.0s,MS5.2
DAV Davao City (W) 65.34 290 P **P** 17 29 00.8 +0.3
comp=Z,413nm,0.8s,comp=Z,4μm,mb6.5
BUKP Musuan 66.18 290 *eP* **P** 17 29 05.7 -0.2
PCI Palu 66.89 279 P **P** 17 29 11.1 +0.7
comp=Z,485nm,1.2s,comp=Z,4μm,mb6.4
QSPA South Pole Qui 67.08 180 P **P** 17 29 12.0 +1.4
comp=Z,15nm,0.9s,mb5.0,baz=44,slow=2.7,SNR=28
QSPA South Pole Qui 67.08 180 *eP* **P** 17 29 11.6 +1.0
comp=Z,108nm,1.0s,mb5.8
QSPA LR LR

comp=Z,3μm,22.0s,MS5.5
MSLP Maasin 67.47 292 *eP* **P** 17 29 12.6 -1.4
KHKI Kahang-Kahang 67.88 270 P **P** 17 29 16.2 -0.5
OCLP Ormoc 68.14 293 *eP* **P** 17 29 16.7 -1.5
IPIL Ipil 68.30 289 *eP* **P** 17 29 18.2 -1.1
CNP Catarman 68.83 294 *eP* **P** 17 29 21.4 -1.2
GUIM Jordan 69.65 292 *eP* **P** 17 29 24.5 -3.1
PVCP Virac 69.81 295 *eP* **P** 17 29 27.5 -1.2
KMMI Kalianget 69.88 271 P **P** 17 29 29.9 +0.8
comp=Z,223nm,1.8s,comp=Z,4μm,mb5.8
MIR Mirnyy 69.93 205 ⇓*iP* **P** 17 29 31.0 +2.4
MIR *i* pP 17 29 39.0 -0.4
MIR *i* 17 29 53.0
MIR pmax pmax

comp=Z,200nm,1.0s,mb6.0
RCP Roxas 69.97 293 *eP* **P** 17 29 29.4 -0.3
BBKI Banjar Baru 70.43 275 P **P** 17 29 33.1 +0.5
comp=Z,196nm,1.7s,comp=Z,3μm,mb5.8
JHJ Hachijo jima 2 70.55 321 P **P** 17 29 32.5 -0.2
comp=Z,275nm,0.5s,mb6.4,baz=228,slow=21,SNR=8.0
MYLDM Lahad Datu 70.70 285 ⇓P **P** 17 29 36.3 +2.1
MYLDM Lahad Datu 70.70 285 P **P** 17 29 36.2 +2.0
KRKI Karangkates 70.87 269 P **P** 17 29 37.3 +2.1
TSM Tawau 70.87 283 ⇓P **P** 17 29 36.3 +1.1
CUYO Cuyo Island 71.11 291 *eP* **P** 17 29 35.8 -0.8
SJI Sawahan 71.65 269 P **P** 17 29 40.1 +0.1
PLKI Palangkaraya 71.74 275 P **P** 17 29 40.8 +0.3
comp=Z,299nm,1.5s,comp=Z,4μm,mb6.0
SJMP San Jose 71.80 293 *eP* **P** 17 29 39.8 -0.9
SDKM Sandakan 72.07 284 ⇑P **P** 17 29 42.2 -0.2
BUSP Coron 72.36 292 *eP* **P** 17 29 42.7 -1.5
ENPP El Nido 72.65 291 *eP* **P** 17 29 46.1 +0.3
BATP Bataraza 72.94 288 *eP* **P** 17 29 46.8 -0.8
KDM Kudat 72.95 285 ⇓P **P** 17 29 48.2 +0.6
KKM Kota Kinabalu 73.12 284 *eP* **P** 17 29 47.8 -0.9
KKM LR LR

comp=Z,1μm,21.0s,MS5.1
KKM Kota Kinabalu 73.12 284 ⇑P **P** 17 29 49.0 +0.3
KKM Kota Kinabalu 73.12 284 P **P** 17 29 48.7 0.0
comp=Z,146nm,1.2s,comp=Z,3μm,mb5.8
CAUP Cauayan 73.45 297 *eP* **P** 17 29 56.2 +5.7
PBKI Pangkalan Bun 73.64 274 P **P** 17 29 52.7 +0.9
comp=Z,271nm,1.1s,comp=Z,4μm,mb6.1
BJII Banjamegara 73.69 269 P **P** 17 29 53.4 +1.3
MJAR Matsushiro Arr 73.90 322 P **P** 17 29 52.3 -0.4
comp=Z,82nm,0.9s,mb5.7,baz=161,slow=5.9,SNR=117
MJAR LR 17 54 53.6

comp=Z,1μm,21.6s,MS5.2,baz=170,slow=30
MAJO Matsushiro 73.90 322 *eP* **P** 17 29 51.8 -1.0
comp=Z,177nm,1.0s,mb6.0
MAJO LR LR

comp=Z,2μm,22.0s,MS5.3
MAJO Matsushiro 73.90 322 P **P** 17 29 52.0 -0.8
MAJO pmax pmax

comp=Z,180nm,1.0s,mb6.0
MAT Matsushiro 73.90 322 P **P** 17 29 52.1 -0.7
JOW Kunigami 73.93 309 P **P** 17 29 53.7 +0.6
comp=Z,126nm,1.0s,mb5.8,baz=163,slow=6.7,SNR=15
AMKA Amchitka 74.23 356 *eP* **P** 17 29 54.1 -0.2
comp=Z,90nm,1.2s,mb5.6
BTM Bintulu 74.73 280 ⇑P **P** 17 29 59.2 +1.1
SBUM Sibu 75.20 279 ⇓P **P** 17 30 01.9 +1.0
SBUM Sibu 75.20 279 P **P** 17 30 01.2 +0.3
JCJI Jatiwangi 75.33 269 P **P** 17 30 02.3 +0.7
comp=Z,503nm,1.4s,comp=Z,7μm,mb6.3
ERM Erimo 75.40 329 *eP* **P** 17 30 02.9 +1.6
comp=Z,881nm,1.9s,mb6.4
ERM LR LR

comp=Z,3μm,21.0s,MS5.6
ERM Erimo 75.40 329 P **P** 17 30 03.2 +1.9
ERM pmax pmax

comp=Z,880nm,1.9s,mb6.4
SMY Shemya 76.02 353 *eP* **P** 17 30 04.5 0.0
comp=Z,431nm,1.1s,mb6.3
SMY LR LR

comp=Z,3μm,22.0s,MS5.6
SMY Shemya 76.02 353 *eP* **P** 17 30 04.5 0.0
SMY pmax pmax

comp=Z,431nm,1.1s,mb6.3
SMY MLR MLR

comp=Z,3μm,22.0s,MS5.6
XMIS Christmas Isla 76.28 264 *eP* **P** 17 30 07.4 +0.4
XMIS Christmas Isla 76.28 264 P **P** 17 30 08.3 +1.3
comp=Z,279nm,1.0s,comp=Z,0.0nm,mb6.2
KSM Kuching 76.55 277 *eP* **P** 17 30 08.2 -0.3
KSM Kuching 76.55 277 ⇓P **P** 17 30 09.6 +1.1
KSM Kuching 76.55 277 P **P** 17 30 08.8 +0.3
comp=Z,263nm,1.4s,comp=Z,3μm,mb6.0
CBJI Citeko 76.67 269 P **P** 17 30 08.6 -0.6
comp=Z,635nm,1.8s,comp=Z,8μm,mb6.3
DBJI Dramaga 76.71 268 P **P** 17 30 09.6 +0.1
comp=Z,460nm,1.7s,comp=Z,8μm,mb6.1
SNCC San Nicolas Is 76.94 45 PFAKE 17 30 20.0 +10
SNCC LR LR

comp=Z,2μm,21.0s,MS5.5
ASAJ Asahikawa 77.28 330 P **P** 17 30 12.6 +0.7
comp=Z,199nm,0.9s,mb6.1,baz=210,slow=9.4,SNR=51
ASAJ Asahikawa 77.28 330 P **P** 17 30 12.6 +0.7
ASAJ pmax pmax

comp=Z,199nm,0.9s
TPI Tanjungpandan 77.32 272 P **P** 17 30 13.6 +0.7
comp=Z,128nm,2.1s,comp=Z,2μm,mb5.5
BSC Santa Cruz Isl 77.34 44 ⇑P **P** 17 30 12.6 +0.1
baz=78
NACB Ninganchiao 77.41 303 *eP* **P** 17 30 12.3 -0.9
comp=Z,1μm,1.0s,mb6.8
SBJI Serang 77.44 269 P **P** 17 30 14.0 +0.4
comp=Z,631nm,1.9s,comp=Z,9μm,mb6.2
FARB Farallon Islan 77.66 40 ⇑P **P** 17 30 13.9 -0.3
baz=78
SKR Severo-Kuril's 77.69 342 *eP* **P** 17 30 13.5 -0.5
SKR *e* 17 30 27.8
SKR pmax pmax

comp=Z,220nm,1.0s,mb6.0
SKR MLR MLR

comp=Z,2μm,16.0s,MS5.5
PKM Peak Mountain 77.79 44 ⇓P **P** 17 30 15.5 +0.5
baz=78
YHNB Yeheng 77.84 303 *eP* **P** 17 30 14.5 -1.0
comp=Z,128nm,0.8s,mb5.9
YHNB LR LR

comp=Z,4μm,22.0s,MS5.7
PMSA Palmer Station 77.87 156 PFAKE 17 30 30.0 +15
PMSA LR LR

comp=Z,2μm,20.0s,MS5.4
TATO Taipei 77.92 304 *eP* **P** 17 30 15.8 -0.1
comp=Z,293nm,1.0s,mb6.2
TATO LR LR

comp=Z,3μm,21.0s,MS5.5
SAO San Andreas Ge 77.97 41 *eP* **P** 17 30 16.8 +0.8
comp=Z,11nm,0.8s,mb4.8
SAO LR LR

comp=Z,1μm,20.0s,MS5.3
SAO San Andreas Ge 77.97 41 P **P** 17 30 17.4 +1.4
SAO pmax pmax

comp=Z,11nm,0.9s,mb4.8
PKD Parkfield 78.00 42 ⇓P **P** 17 30 16.2 +0.1
baz=78
MCCM Marconi Confer 78.03 39 PFAKE 17 30 30.0 +14
MCCM LR LR

comp=Z,2μm,22.0s,MS5.3
U04C Hernandez Rese 78.12 42 ⇓P **P** 17 30 17.2 +0.4
baz=78,SNR=6.7
PACP Pacheco Peak 78.23 41 ⇓P **P** 17 30 17.1 -0.3
baz=78,SNR=13

CVS Carmenet Viney 78.41 40 ⇓P **P** 17 30 18.4 0.0
baz=79
NSHM Saint Helena R 78.44 39 *eP* **P** 17 30 19.4 +0.9
HOPS Hopland 78.49 39 *eP* **P** 17 30 19.9 +1.1
comp=Z,171nm,1.2s,mb5.8
HOPS LR LR

comp=Z,2μm,21.0s,MS5.3
HOPS Hopland 78.49 39 ⇑P **P** 17 30 19.1 +0.3
baz=79
MWC Mount Wilson 78.50 45 *eP* **P** 17 30 19.7 +0.7
comp=Z,31nm,1.3s,mb5.1
MWC LR LR

comp=Z,2μm,19.0s,MS5.5
MWC Mount Wilson 78.50 45 P **P** 17 30 20.4 +1.4
MWC *e* pP 17 30 29.0 -0.9
MWC pmax pmax

comp=Z,54nm,1.1s,mb5.4
KCPM Cahto Peak 78.66 38 *eP* **P** 17 30 20.4 +0.7
MURC Murrieta 78.69 46 ⇓P **P** 17 30 20.4 +0.4
baz=79
BFSC Mount Baldy St 78.77 45 ⇓P **P** 17 30 20.4 -0.1
baz=79
MNRC McLaughlin Nat 78.77 39 ⇓P **P** 17 30 21.0 +0.7
baz=79,SNR=19
MONP Monument Peak 78.78 47 ⇓P **P** 17 30 20.7 +0.2
baz=79,SNR=8.5
KIPM Iron Peak 78.80 38 *eP* **P** 17 30 21.3 +0.9
O01C Eel River Cons 78.84 37 ⇓P **P** 17 30 21.2 +0.5
baz=79,SNR=5.7
VES Vestal, Richgr 78.85 43 ⇓P **P** 17 30 20.9 +0.1
baz=79
DVTC Desert V Tower 78.86 47 ⇑P **P** 17 30 20.5 -0.4
baz=79
Q03C Winters 78.86 40 ⇑P **P** 17 30 21.6 +0.8
baz=79
PPBI Pangkal Pinang 78.94 272 P **P** 17 30 22.5 +0.6
comp=Z,277nm,1.8s,comp=Z,4μm,mb5.9
EDW2 Edwards Air Fo 78.95 45 ⇓P **P** 17 30 21.5 +0.1
baz=79,SNR=12
S05C Merced 79.03 41 ⇓P **P** 17 30 22.3 +0.5
baz=79
KLI Kotabumi 79.09 269 P **P** 17 30 22.1 -0.6
comp=Z,236nm,1.6s,mb5.9
PET Petropavlovsk 79.11 344 ⇑*eP* **P** 17 30 22.7 +0.9
PET LR LR

comp=Z,2μm,20.0s,MS5.4
PET Petropavlovsk 79.11 344 *eP* **P** 17 30 21.1 -0.7
PET *eS* S 17 40 17.4 -1.1
PET pmax pmax

comp=Z,138nm,1.2s,mb5.8
PET MLR MLR

comp=Z,1μm,21.0s,MS5.2
ISA Isabella 79.12 44 *eP* **P** 17 30 22.5 +0.2
comp=Z,112nm,1.3s,mb5.6
ISA LR LR

comp=Z,2μm,22.0s,MS5.4
ISA Isabella 79.12 44 P **P** 17 30 23.1 +0.8
ISA pmax pmax

comp=Z,110nm,1.3s,mb5.6
ISA Isabella 79.12 44 ⇓P **P** 17 30 23.0 +0.6
baz=79,SNR=21
GASB Alder Springs 79.14 38 ⇓P **P** 17 30 22.9 +0.6
baz=79
PFO Pinyon Flat Ob 79.19 46 *eP* **P** 17 30 22.6 -0.2
comp=Z,28nm,1.1s,mb5.1
PFO LR LR

comp=Z,3μm,19.0s,MS5.6
PFO Pinyon Flat Ob 79.19 46 P **P** 17 30 22.8 +0.1
PFO pmax pmax

comp=Z,28nm,1.1s,mb5.1
PFO Pinyon Flat Ob 79.19 46 ⇑P **P** 17 30 23.1 +0.4
baz=79
T06C Millerton Lake 79.19 42 ⇑P **P** 17 30 22.7 0.0
baz=79,SNR=7.9
SWSC Sam W. Stewart 79.23 47 ⇑P **P** 17 30 21.7 -1.3
baz=80
YSS Yuzh-Sakhalins 79.41 332 *eP* **P** 17 30 23.7 +0.1
comp=Z,180nm,0.9s,mb6.0
YSS LR LR

comp=Z,607nm,22.0s,MS4.9
YSS Yuzh-Sakhalins 79.41 332 *αiP* **P** 17 30 24.0 +0.4
YSS *e* pP 17 30 33.0 -1.6
YSS pmax pmax

comp=Z,220nm,0.9s,mb6.1
YSS pmax pmax

comp=Z,2μm,4.0s
YSS MLR MLR

comp=Z,1μm,16.0s,MS5.3
PETK Petropavlovsk- 79.43 344 P **P** 17 30 23.1 -0.5
comp=Z,155nm,0.8s,mb6.0,baz=118,slow=7.7,SNR=107
PETK LR LR 17 58 28.0

comp=Z,2μm,20.9s,MS5.3,baz=172,slow=30
CMB Columbia Colle 79.44 41 *eP* **P** 17 30 24.2 +0.2
comp=Z,80nm,1.1s,mb5.6
CMB LR LR

comp=Z,2μm,19.0s,MS5.5
CMB Columbia Colle 79.44 41 P **P** 17 30 24.6 +0.6
CMB pmax pmax

comp=Z,80nm,1.1s,mb5.6
CMB Columbia Colle 79.44 41 ⇓P **P** 17 30 24.1 +0.1
baz=80,SNR=14
LRMC Laurel Mountai 79.51 44 ⇓P **P** 17 30 24.7 +0.3
baz=80,SNR=7.4
N02C Big Bar 79.59 37 ⇑P **P** 17 30 24.8 0.0
baz=80,SNR=6.0
OHCM Honcut 79.64 39 *eP* **P** 17 30 25.1 +0.1
KCC Kaiser Creek 79.64 42 ⇑P **P** 17 30 25.6 +0.5
baz=80,SNR=21
LAVA Lava Cap Winer 79.69 40 ⇑P **P** 17 30 25.7 +0.4
baz=80,SNR=6.0
BELC Belle Mtn. 79.73 46 ⇓P **P** 17 30 26.3 +0.6
baz=80,SNR=8.8
KRMB Red Mountain 79.73 36 *eP* **P** 17 30 26.0 +0.5
ORV Oroville 79.77 39 ⇑P **P** 17 30 26.1 +0.3
baz=80,SNR=15
WDC Whiskeytown Da 79.85 38 *eP* **P** 17 30 26.6 +0.4
comp=Z,114nm,1.2s,mb5.7
WDC LR LR

comp=Z,3μm,21.0s,MS5.5
WDC Whiskeytown Da 79.85 38 P **P** 17 30 27.0 +0.8
WDC pmax pmax

comp=Z,110nm,1.1s,mb5.7
WDC Whiskeytown Da 79.85 38 ⇑P **P** 17 30 26.3 +0.1
baz=80,SNR=16
BC3 Big Chuckw Mtn 79.89 47 ⇓P **P** 17 30 27.1 +0.6
baz=80,SNR=7.9
GLA Glamis 79.96 48 *eP* **P** 17 30 27.9 +1.0
comp=Z,40nm,1.0s,mb5.3
GLA LR LR

comp=Z,2μm,19.0s,MS5.5
GLA Glamis 79.96 48 *eP* **P** 17 30 28.0 +1.1
GLA pmax pmax

comp=Z,40nm,1.0s,mb5.3
GLA MLR MLR

comp=Z,2μm,19.0s,MS5.5
GLA Glamis 79.96 48 ⇑P **P** 17 30 27.0 +0.1
baz=80
GSC Goldstone 79.98 45 *eP* **P** 17 30 27.2 +0.2
comp=Z,61nm,1.3s,mb5.4
GSC LR LR

comp=Z,2μm,21.0s,MS5.3
GSC Goldstone 79.98 45 *eP* **P** 17 30 27.2 +0.2
GSC pmax pmax

comp=Z,61nm,1.3s,mb5.4
GSC MLR MLR

comp=Z,2μm,21.0s,MS5.3
GSC Goldstone 79.98 45 ⇓P **P** 17 30 27.0 0.0
baz=80
MPMC Manual Prospec 80.00 44 ⇑P **P** 17 30 27.4 +0.3
baz=80,SNR=21
HEC Hector,Ludlow 80.00 45 ⇑P **P** 17 30 27.6 +0.4
baz=80,SNR=9.5
DAC Darwin (Calif) 80.06 44 PFAKE 17 30 40.0 +13
DAC LR LR

comp=Z,1μm,20.0s,MS5.3
MTUM Tungsten Hills 80.12 42 *eP* **P** 17 30 28.5 +0.8
MLAC Mammoth Lakes 80.13 42 ⇓P **P** 17 30 27.9 +0.1
baz=80
QZH Quanzhou 80.14 302 ⇑*iP* **P** 17 30 28.3 +0.2
QZH AMB AMB

comp=Z,680nm,1.3s,mb6.4
MAW Mawson 80.16 199 *eP* **P** 17 30 28.5 +1.0
comp=Z,68nm,1.0s,mb5.5
MAW Mawson 80.16 199 P **P** 17 30 29.0 +1.5
comp=Z,56nm,0.9s,mb5.5,baz=127,slow=7.2,SNR=40
MAW LR LR 18 04 59.2

comp=Z,1μm,18.1s,MS5.3,baz=120,slow=35
MAW Mawson 80.16 199 P **P** 17 30 29.0 +1.5
MAW pmax pmax

comp=Z,56nm,0.9s
MAW MLR MLR

comp=Z,1μm,18.1s
R06C Coleville 80.32 41 ⇓P **P** 17 30 28.8 +0.1
baz=81,SNR=20
L02A Cave Junction 80.33 36 ⇑P **P** 17 30 28.8 +0.1
baz=81
O05C Quincy 80.38 39 ⇓P **P** 17 30 29.1 +0.1
baz=81
IRM Iron Mountain 80.39 47 ⇓P **P** 17 30 29.7 +0.5
baz=81,SNR=9.1
GMRC Granite Mounta 80.42 46 ⇑P **P** 17 30 28.7 -0.7
baz=81
113A Mohawk Valley, 80.52 48 ⇑P **P** 17 30 30.0 0.0
baz=81
YBH Yreka Blue Hor 80.53 37 *eP* **P** 17 30 30.7 +0.8
comp=Z,67nm,1.1s,mb5.5
YBH LR LR

comp=Z,2μm,21.0s,MS5.4
YBH Yreka Blue Hor 80.53 37 P **P** 17 30 31.0 +1.2
YBH pmax pmax

comp=Z,67nm,1.0s
YBH Yreka Blue Hor 80.53 37 ⇑P **P** 17 30 30.4 +0.6
baz=81,SNR=14
Y12C Blythe 80.57 47 ⇑P **P** 17 30 29.6 -0.7
baz=81
KSRS Korea Array 80.63 317 P **P** 17 30 30.8 +0.3
comp=Z,91nm,0.8s,mb5.7,baz=136,slow=5.9,SNR=130
KSRS LR LR 17 59 42.8

comp=Z,2μm,21.6s,MS5.4,baz=133,slow=31
KSRS Korea Array 80.63 317 P **P** 17 30 30.8 +0.3
KSRS pmax pmax

comp=Z,91nm,0.8s,mb5.8
KSRS MLR MLR

comp=Z,2μm,21.6s,MS5.4
WCN Washoe City 80.63 40 ⇑P **P** 17 30 30.7 +0.3
baz=81,SNR=7.7
TUQ Turquoise Moun 80.63 45 ⇑P **P** 17 30 30.3 -0.2
baz=81
BEKR Beckwourth 80.64 39 ⇓P **P** 17 30 30.6 +0.2
baz=81,SNR=13
FURC Furnace Creek, 80.65 44 ⇓P **P** 17 30 30.6 0.0
baz=81
GRAC Grapevine Rang 80.65 43 ⇑P **P** 17 30 30.9 +0.3
baz=81,SNR=5.7
SHOC Shoshone 80.68 45 ⇑P **P** 17 30 30.6 -0.1
baz=81
214A Organ Pipe Nat 80.72 50 ⇑P **P** 17 30 30.7 -0.4
baz=81
K02A Glendale 80.81 36 ⇓P **P** 17 30 31.5 +0.3
baz=81
LTIM Timbered Crate 80.85 38 P **P** 17 30 32.4 +0.9
LDFC Landfair 80.95 46 *eP* **P** 17 30 33.0 +0.8
comp=Z,76nm,0.9s,mb5.6
NVAR Mina Array Bea 80.96 42 P **P** 17 30 33.0 +0.8
comp=Z,19nm,0.9s,mb5.0,baz=220,slow=8.2,SNR=83
NVAR Mina Array Bea 80.96 42 P **P** 17 30 33.0 +0.8
U10A Ash Meadows, A 80.96 44 ⇓P **P** 17 30 32.3 0.0
baz=81,SNR=12
HUMO Hull Mountain 80.99 36 *eP* **P** 17 30 32.9 +0.7
comp=Z,89nm,1.3s,mb5.5
HUMO LR LR

comp=Z,2μm,20.0s,MS5.5
HUMO Hull Mountain 80.99 36 ⇑P **P** 17 30 32.9 +0.6
baz=81,SNR=11
R08A Mina 81.03 42 ⇓P **P** 17 30 32.7 +0.2
baz=81,SNR=7.5
PAHR Pah Rah Range 81.11 40 *eP* **P** 17 30 33.2 +0.2
comp=Z,76nm,1.3s,mb5.5
O06A Flanigan 81.14 40 ⇓P **P** 17 30 33.4 +0.3
baz=81
J02A Umpqua 81.17 35 ⇓P **P** 17 30 33.7 +0.5
baz=81
S09A Goldfield 81.19 43 ⇑P **P** 17 30 33.5 +0.1
baz=81,SNR=10
TPNV Topopah Spring 81.33 44 *eP* **P** 17 30 34.7 +0.5
comp=Z,60nm,1.1s,mb5.4
TPNV LR LR

comp=Z,3μm,21.0s,MS5.6
TPNV Topopah Spring 81.33 44 P **P** 17 30 35.1 +0.9
TPNV pmax pmax

comp=Z,60nm,1.0s,mb5.5
TPNV Topopah Spring 81.33 44 ⇓P **P** 17 30 34.4 +0.2
baz=82
TPH Tonopah 81.40 42 *eP* **P** 17 30 35.4 +0.8
comp=Z,48nm,1.0s,mb5.4
TPH LR LR

comp=Z,1μm,19.0s,MS5.3
Q08A Gabbs 81.45 41 ⇑P **P** 17 30 35.1 +0.3
baz=82
SSE Sheshan 81.45 309 P **P** 17 30 34.9 -0.1
SSE AMB AMB

comp=Z,66nm,0.7s,mb5.7
SSE AMB AMB

comp=Z,2μm,9.2s
SSE Sheshan 81.45 309 P **P** 17 30 34.9 -0.1
comp=Z,66nm,0.7s,mb5.7
I02A Mapleton 81.48 35 ⇑P **P** 17 30 35.1 +0.3
baz=82
N06A Buffalo Meadow 81.52 39 ⇓P **P** 17 30 34.8 -0.3
baz=82,SNR=6.2
X13A Yucca 81.53 47 ⇑P **P** 17 30 35.7 +0.4
baz=82,SNR=10
KSI Kapahiang 81.64 270 P **P** 17 30 35.6 -0.8
comp=Z,774nm,1.3s,comp=Z,8μm,mb6.5
O07A Toulon 81.70 40 ⇓P **P** 17 30 36.4 +0.3
baz=82,SNR=13
S10A Tonopah Range, 81.70 43 ⇑P **P** 17 30 36.2 +0.1
baz=82,SNR=20
216A Three Points, 81.70 50 ⇓P **P** 17 30 36.1 -0.2
baz=82
Y14A Wickenburg 81.71 48 ⇑P **P** 17 30 36.4 +0.1
baz=82
W13A Hualapai Mount 81.78 46 ⇓P **P** 17 30 36.8 +0.2
baz=82,SNR=11
P08A Dixie Valley 81.88 41 ⇓P **P** 17 30 37.2 +0.1
baz=82
Q09A Carvers 81.90 42 ⇑P **P** 17 30 37.6 +0.4
baz=82
OHAK Old Harbor 81.97 12 *eP* **P** 17 30 37.5 +0.4
comp=Z,518nm,2.2s,mb6.1
MOD Modoc 81.99 38 *eP* **P** 17 30 37.7 +0.2
comp=Z,122nm,1.4s,mb5.6
MOD LR LR

comp=Z,2μm,19.0s,MS5.6
MOD Modoc 81.99 38 ⇑P **P** 17 30 37.7 +0.1
baz=82,SNR=10
N07B Gerlach 82.04 39 ⇓P **P** 17 30 37.8 -0.1
baz=82,SNR=6.7
S11A Rachel 82.07 44 ⇑P **P** 17 30 37.7 -0.4
baz=82
R10A Warm Springs 82.11 43 ⇓P **P** 17 30 38.5 +0.2
baz=82,SNR=20
U12A Valley of Fire 82.13 45 ⇑P **P** 17 30 38.4 0.0
baz=82
COR Corvallis 82.15 34 PFAKE 17 30 50.0 +12
COR LR LR

comp=Z,3μm,21.0s,MS5.6
V13A Grand Canyon W 82.15 46 ⇑P **P** 17 30 38.8 +0.2
baz=82,SNR=7.8
T11A Corn Creek, Al 82.16 44 ⇑P **P** 17 30 38.6 0.0
baz=82,SNR=21
Y15A Casa Rosa Ranc 82.18 48 ⇑P **P** 17 30 38.6 -0.2
baz=82,SNR=7.5
K05A Summer Lake 82.20 37 ⇑P **P** 17 30 39.3 +0.7
baz=82,SNR=15
H03A Soap Creek Ran 82.22 34 ⇑P **P** 17 30 39.2 +0.5
baz=82
TUC Tucson 82.35 50 *eP* **P** 17 30 40.4 +0.7
comp=Z,42nm,1.3s,mb5.2
TUC LR LR

comp=Z,2μm,21.0s,MS5.5
TUC Tucson 82.35 50 P **P** 17 30 40.5 +0.8
TUC pmax pmax

comp=Z,42nm,1.3s,mb5.2
P09A Austin 82.36 41 ⇑P **P** 17 30 40.1 +0.6
baz=83
ZIIG Zihuatanejo 82.37 67 *iP* **P** 17 30 39.9 -0.2
ZIIG *i* S sP 17 30 59.9 +4.7
Q10A Clear Creek Ra 82.37 42 ⇓P **P** 17 30 39.9 +0.3
baz=83,SNR=16
W14A Seligman 82.38 47 ⇓P **P** 17 30 40.6 +0.8
baz=83,SNR=9.3
318A Bisbee 82.44 51 ⇓P **P** 17 30 40.5 +0.3
baz=83,SNR=6.2
117A Oracle 82.52 50 ⇓P **P** 17 30 40.7 +0.1

baz=83
N08A GE Springer Mi 82.53 40 ⇑P P 17 30 40.7 +0.3
baz=83,SNR=5.5
X15A Humboldt 82.55 48 ⇑P P 17 30 40.9 +0.2
baz=83
MYKOM **Kota Tinggi** 82.59 275 ⇓P P
R11A Troy Canyon, C 82.59 43 ⇑P P 17 30 41.0 +0.2
baz=83,SNR=11
V14A Boquillas Ranc 82.61 46 ⇓P P 17 30 41.2 +0.3
baz=83,SNR=8.6
L07A Adell 82.62 38 ⇓P P 17 30 41.6 +0.8
baz=83,SNR=13
S12A Delamar Landin 82.62 44 ⇑P P 17 30 41.6 +0.7
baz=83,SNR=9.9
KDAK Kodiak Island 82.63 12 P P 17 30 41.0 +0.5
comp=Z,528nm,1.3s,mb6.4,SNR=5.0
KDAK Kodiak Island 82.63 12 *e*P P 17 30 40.6 +0.1
comp=Z,96nm,1.0s,mb5.8
KDAK LR LR
comp=Z,3μm,20.0s,MS5.6
G03A Yamhill 82.66 34 ⇑P P 17 30 41.7 +0.8
baz=83
218A Dragoon 82.69 51 ⇑P P 17 30 42.1 +0.7
baz=83,SNR=7.1
O09A Fish Creek Ran 82.71 41 ⇑P P 17 30 41.5 +0.1
baz=83
Y16A Circle Bar Ran 82.73 49 ⇑P P 17 30 41.2 -0.5
baz=83
H04A Detroit Lake 82.80 35 ⇓P P 17 30 41.7 0.0
baz=83,SNR=6.8
M08A Happy Creek Ra 82.81 39 ⇑P P 17 30 42.7 +0.8
baz=83,SNR=11
P10A Eureka 82.82 42 ⇑P P 17 30 41.9 -0.1
baz=83
Q11A Duckwater 82.85 43 ⇓P P 17 30 42.4 +0.3
baz=83,SNR=11
BMN Battle Mountai 82.86 41 *e*P P 17 30 42.5 +0.4
comp=Z,99nm,1.2s,mb5.7
BMN LR LR
comp=Z,2μm,21.0s,MS5.3
BMN Battle Mountai 82.86 41 P P 17 30 43.3 +1.2
BMN pmax pmax
comp=Z,99nm,1.1s,mb5.8
T13A Saint George 82.88 45 ⇓P P 17 30 42.3 0.0
baz=83
319A Douglas 82.92 52 ⇓P P 17 30 42.8 +0.1
baz=83,SNR=6.8
N09A Rock Creek Ran 82.94 40 ⇓P P 17 30 42.7 +0.2
baz=83
I05A Bend 82.95 36 ⇓P P 17 30 42.5 0.0
baz=83
J06A Christmas Vall 82.96 37 ⇑P P 17 30 42.4 -0.2
baz=83,SNR=21
G04A Mulino 83.00 34 ⇑P P 17 30 43.0 +0.2
baz=83
X16A Lo Mia Camp, P 83.05 48 ⇓P P 17 30 43.1 -0.2
baz=83
Y17A Roosevelt 83.07 49 ⇑P P 17 30 43.3 -0.1
baz=83
K07A Rock Creek Ran 83.10 38 ⇑P P 17 30 43.4 0.0
baz=83,SNR=22
118A Homack Ranch, 83.11 50 ⇓P P 17 30 43.8 +0.2
baz=83,SNR=7.6
CAIG El Cayaco 83.14 68 *i*P P 17 30 43.9 -0.2
CAIG *i*S sP 17 31 03.7 +4.6
RGRI Rengat 83.14 273 P P 17 30 46.5 +2.2
comp=Z,1μm,1.4s,mb6.7
KGM Kluang 83.16 275 ⇓P P 17 30 46.0 +1.6
R12A Pony Springs, 83.20 44 ⇓P P 17 30 43.9 0.0
baz=83,SNR=11
O10A Cortez Mining, 83.21 41 ⇓P P 17 30 44.4 +0.5
baz=83
P11A Circle Ranch, 83.21 42 ⇓P P 17 30 44.3 +0.3
baz=84,SNR=5.4
S13A Holt Ranch, En 83.24 44 ⇓P P 17 30 44.2 0.0
baz=84,SNR=16
219A White Tail Can 83.27 51 ⇓P P 17 30 44.6 +0.2
baz=84,SNR=12
WVOR Wild Horse Val 83.28 38 *e*P P 17 30 44.9 +0.6
comp=Z,105nm,1.2s,mb5.7
WVOR LR LR
comp=Z,3μm,19.0s,MS5.7
WVOR Wild Horse Val 83.28 38 P P 17 30 45.1 +0.8
WVOR pmax pmax
comp=Z,100nm,1.1s,mb5.8
H05A Madras 83.29 35 ⇓P P 17 30 44.7 +0.4
baz=84,SNR=5.8
L08A Fields 83.30 39 ⇑P P 17 30 44.6 +0.2
baz=84,SNR=21
M09A Marrel Ranch, 83.34 40 ⇑P P 17 30 45.1 +0.6
baz=84,SNR=9.4
V15A Kaibab Nationa 83.34 47 ⇑P P 17 30 44.5 -0.2
baz=84,SNR=14
E03A Lebam 83.36 33 ⇓P P 17 30 45.8 +1.2
baz=84,SNR=5.5
W16A Flagstaff 83.37 48 ⇓P P 17 30 45.2 +0.4
baz=84
I06A Prineville 83.38 36 ⇓P P 17 30 45.4 +0.7
baz=84,SNR=18
GZH Guangzhou 83.40 298 P P 17 30 45.8 +0.5
X17A Forest Lakes 83.44 49 ⇓P P 17 30 45.2 -0.1
baz=84
N10A Dunphy 83.46 41 ⇑P P 17 30 46.4 +1.1
baz=84
Q12A Willow Creek R 83.48 43 ⇓P P 17 30 45.4 0.0
baz=84
BMW Boistfort Moun 83.48 33 *e*P P 17 30 46.0 +0.8
BMW Boistfort Moun 83.48 33 P P 17 30 46.4 +1.2
J07A Hines 83.50 37 ⇓P P 17 30 45.8 +0.4
baz=84,SNR=9.7
R13A O'Grain Ranch, 83.52 44 ⇑P P 17 30 46.5 +0.9
baz=84,SNR=7.1
F04A Amboy 83.53 34 ⇑P P 17 30 45.8 +0.4
baz=84,SNR=11
CCUT Cedar City 83.54 45 *e*P P 17 30 46.8 +1.1
K08A Mann Creek Ran 83.56 38 ⇑P P 17 30 45.9 +0.3
baz=84,SNR=18
L09A Wilkinson Ranc 83.58 39 ⇓P P 17 30 46.2 +0.3
baz=84,SNR=8.3
U15A North Rim 83.60 46 ⇑P P 17 30 46.4 +0.3
baz=84,SNR=33
O11A Cowboy Ranch, 83.62 42 ⇓P P 17 30 46.8 +0.7
baz=84,SNR=14
ARUT Antelope Range 83.63 44 *e*P P 17 30 47.1 +0.9
G05A Wamic 83.64 35 ⇑P P 17 30 46.7 +0.7
baz=84
CROR Criterion Ridg 83.64 35 P P 17 30 46.5 +0.5
NJ2 Nanjing 83.64 309 *e*P P 17 30 47.3 +0.9
NJ2 AMB AMB
comp=Z,40nm,0.6s,mb5.7
119A Ashpeak Ranch, 83.65 51 ⇓P P 17 30 46.8 +0.4
baz=84,SNR=5.0
D03A Wishkah Elem. 83.66 32 ⇓P P 17 30 47.0 +1.0
baz=84
COCO West Island 83.70 259 PFAKE 17 31 00.0 +13
COCO LR LR
comp=Z,840nm,19.0s,MS5.1
WUAZ Wupatki 83.71 47 *e*P P 17 30 49.4 +2.7
comp=Z,72nm,1.2s,mb5.7
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.5
WUAZ Wupatki 83.71 47 ⇑P P 17 30 48.3 +1.6
baz=84
FL2 Flat Top 2 83.74 34 P P 17 30 47.6 +1.1
S14A Cedar City 83.79 45 ⇑P P 17 30 47.3 +0.3
baz=84
E04A Onalaska 83.82 33 ⇑P P 17 30 47.8 +0.9
baz=84,SNR=5.2
H06A Lindquist Farm 83.83 36 ⇑P P 17 30 47.5 +0.5
baz=84,SNR=19
I07A Izee 83.85 37 ⇑P P 17 30 47.4 +0.2
baz=84,SNR=16
T15A Red Dirt Ranch 83.88 46 ⇑P P 17 30 48.4 +1.0
baz=84,SNR=14
TDL Tradedollar La 83.91 34 P P 17 30 48.6 +1.2
M10A I.L. Ranch, Tu 83.94 40 ⇑P P 17 30 48.3 +0.7
baz=84,SNR=23
Q13A Wheeler Ranch, 83.94 43 ⇓P P 17 30 47.8 +0.1
baz=84,SNR=8.0
Z19A T-Link Ranch, 83.95 50 ⇑P P 17 30 47.8 -0.1
baz=84
J08A Circle Bar Ran 83.96 38 ⇓P P 17 30 47.9 +0.2
baz=84,SNR=21
K09A Rome 83.97 39 ⇓P P 17 30 47.9 +0.1
baz=84,SNR=42
F05A White Salmon 83.99 34 ⇑P P 17 30 48.2 +0.4
baz=84
G06A Carlson Farm, 83.99 35 ⇓P P 17 30 48.1 +0.3
baz=84,SNR=13
HABR Khabarovsk 84.02 329 ⇑*i*P P 17 30 48.8 +0.9
HABR *e**PP pP 17 30 58.2 -0.8
HABR *e* 17 34 01.6
HABR *e*PPP 17 35 54.7
HABR *e*S S 17 41 08.0 -1.5
HABR *e*SS SS 17 46 38.8 -0.3
HABR *e*SSS 17 50 08.7
HABR pmax pmax
HABR comp=Z,369nm,1.7s,mb6.2 MLR MLR
comp=Z,508nm,15.1s,MS5.0
D04A Dobbs Creek Ra 84.13 33 ⇑P P 17 30 49.2 +0.7
baz=84
X18A Snowflake 84.14 49 ⇑P P 17 30 48.5 -0.3
baz=84,SNR=5.8
H07A Lands Inn, Kim 84.15 36 ⇑P P 17 30 48.9 +0.3
baz=84,SNR=21
MDJ Mudanjiang 84.19 324 P P 17 30 50.0 +1.1
MDJ S S 17 41 12.3 +0.9
MDJ AMB AMB
comp=Z,210nm,1.2s,mb6.1
MDJ AMB AMB
comp=Z,1μm,7.7s
MDJ LR LR
comp=N,623nm,30.5s,MS5.0
MDJ LR LR
comp=E,809nm,30.5s,MS5.0
MDJ LR LR
comp=Z,1μm,29.2s,MS5.1
MDJ Mudanjiang 84.19 324 *e*P P 17 30 50.0 +1.1
comp=Z,693nm,1.5s,mb6.6
MDJ LR LR
comp=Z,2μm,20.0s,MS5.4
U16A Tuba City 84.22 47 ⇓P P 17 30 49.9 +0.7
baz=84,SNR=11
P13A Bates Ranch, G 84.23 43 ⇓P P 17 30 50.0 +0.8
baz=84,SNR=20
ELK Elko 84.24 41 *e*P P 17 30 49.2 0.0
comp=Z,64nm,1.0s,mb5.7
ELK LR LR
comp=Z,2μm,20.0s,MS5.5
ELK Elko 84.24 41 P P 17 30 49.9 +0.7
ELK pmax pmax
comp=Z,64nm,1.0s
I08A Drewsey 84.26 37 ⇓P P 17 30 49.3 +0.1
baz=84,SNR=16
O12A Currie 84.26 42 ⇓P P 17 30 49.0 -0.3
baz=84,SNR=20
S15A Panguitch 84.27 45 ⇑P P 17 30 50.7 +1.2
baz=84,SNR=9.9
F06A Goldendale 84.27 35 ⇓P P 17 30 49.5 +0.3
baz=84,SNR=7.8
E05A Randle 84.29 34 ⇓P P 17 30 49.4 +0.1
baz=84,SNR=12
L10A Juniper Basin 84.32 40 ⇑P P 17 30 49.6 +0.1
baz=85,SNR=42
M11A Holland Ranch, 84.33 40 ⇓P P 17 30 49.6 0.0
baz=85,SNR=18
J09A Fry Pan Ranch, 84.36 38 ⇑P P 17 30 49.9 +0.2
baz=85,SNR=30
GLK Glacier Lake 84.37 34 P P 17 30 50.4 +0.7
Q14A Sevier Lake (B 84.43 44 ⇓P P 17 30 50.3 +0.1
baz=85,SNR=35
N12A Clover Valley, 84.43 41 ⇓P P 17 30 50.0 -0.2
baz=85,SNR=5.2
T16A Glen Canyon Da 84.44 46 ⇓P P 17 30 50.6 +0.3
baz=85,SNR=10
QIZ Qiongzhong 84.45 293 PFAKE 17 31 00.0 +9.2
QIZ LR LR
comp=Z,2μm,20.0s,MS5.4
C04A Brinnon 84.46 32 ⇑P P 17 30 50.5 +0.3
baz=85,SNR=6.1
WPW White Pass 84.49 34 P P 17 30 51.0 +0.6
K10A MacKenzie Ranc 84.52 39 ⇑P P 17 30 50.5 0.0
baz=85,SNR=17
G07A Ruggs Ranch, H 84.53 36 ⇓P P 17 30 50.6 0.0
baz=85,SNR=11
H08A Prairie City 84.59 37 ⇑P P 17 30 51.0 +0.1
baz=85,SNR=9.9
D05A Enumclaw 84.59 33 ⇓P P 17 30 50.9 +0.1
baz=85,SNR=10
R15A Junction 84.62 45 ⇑P P 17 30 51.1 -0.1
baz=85
KTGM Kuala Trenggan 84.64 278 ⇓P P 17 30 54.3 +2.4
PDSI Padang 84.65 271 P P 17 30 51.1 -0.9
comp=Z,170nm,1.0s,mb6.1
E06A Yakima 84.68 34 ⇑P P 17 30 51.6 +0.4
baz=85,SNR=11
PNIG Pinotepa 84.70 70 *i*P P 17 30 51.7 -0.4
PNIG *i*S sP 17 31 13.0 +5.9
I09A Lost Marbles R 84.76 38 ⇓P P 17 30 51.6 -0.2
baz=85,SNR=12
U17A Shonto 84.79 47 ⇑P P 17 30 51.9 -0.2
baz=85,SNR=5.8
L11A Cat Creek Ranc 84.79 40 ⇓P P 17 30 52.6 +0.7
baz=85,SNR=35
S16A Weppner Ranch, 84.79 45 ⇓P P 17 30 52.1 0.0
baz=85
V18A Ganado 84.80 48 ⇑P P 17 30 52.0 -0.1
baz=85,SNR=11
F07A Phinny Hill Vi 84.80 35 ⇓P P 17 30 52.0 +0.1
baz=85
MVU Marysvale 84.83 44 PFAKE 17 31 00.0 +7.7
MVU LR LR
comp=Z,2μm,21.0s,MS5.6
PAYG Puerto Ayora 84.83 89 PFAKE 17 31 00.0 +7.1
PAYG LR LR
comp=Z,3μm,21.0s,MS5.6
M12A Wells 84.84 41 ⇓P P 17 30 51.9 -0.4
baz=85,SNR=20
W19A Sanders 84.84 49 ⇓P P 17 30 52.5 +0.1
baz=85,SNR=7.1
MSU Marysvale 84.86 44 *e*P P 17 30 53.8 +1.4
PGC Sidney 84.87 31 *e*P P 17 30 52.5 +0.3
comp=Z,184nm,1.1s,mb6.1
PPI Padang Panjang 84.89 272 P P 17 30 53.2 0.0
comp=Z,61nm,0.7s,mb5.8
SYO Syowa Base 84.89 192 ⇓*e*P P 17 30 50.6 -1.5
SYO Syowa Base 84.89 192 ⇓*e*PcP PcP 17 30 55.2 -0.3
P14A Drum Mountains 84.91 43 ⇑P P 17 30 52.2 -0.4
baz=85,SNR=13
T17A Navajo Res., N 84.91 46 ⇑P P 17 30 52.8 +0.1
baz=85
G08A Pilot Rock 84.93 36 ⇓P P 17 30 52.8 +0.3
baz=85,SNR=37
J10A Berg Farm, Mel 84.98 38 ⇓P P 17 30 53.0 +0.1
baz=85
K11A Parker Ranch, 85.00 39 ⇑P P 17 30 53.3 +0.3
baz=85,SNR=14
Q15A Fillmore 85.01 44 ⇓P P 17 30 53.0 -0.2
baz=85
C05A Tolt Reservoir 85.08 33 ⇑P P 17 30 53.4 +0.1
baz=85,SNR=12
D06A Cle Elum 85.18 34 ⇓P P 17 30 54.2 +0.4
baz=85,SNR=8.2
FRIM Kepong 85.20 276 ⇑P P 17 30 56.0 +1.3
L12A House Creek Ra 85.22 40 ⇑P P 17 30 54.4 +0.3
baz=86,SNR=10
H09A Durkee 85.24 37 ⇑P P 17 30 54.1 0.0
baz=86,SNR=6.0
M13A Montello 85.26 41 ⇑P P 17 30 54.4 +0.1
baz=86,SNR=14
SVW2 Sparrevohn 85.26 9 *e*P P 17 30 53.3 -0.6
B05A Bryant 85.27 32 ⇓P P 17 30 54.2 0.0
baz=86,SNR=6.1
S17A Black Ridge (B 85.27 46 ⇑P P 17 30 54.4 0.0
baz=86,SNR=8.7
E07A Sunnyside 85.27 35 ⇑P P 17 30 54.7 +0.5
baz=86,SNR=13
A04A Legoe Bay, Lum 85.28 32 ⇑P P 17 30 54.7 +0.5
baz=86,SNR=5.7
JCW Jim Creek 85.30 32 *e*P P 17 30 54.6 +0.3
RSW Rattlesnake Hi 85.30 35 *e*P P 17 30 54.8 +0.4
HAWA Hanford 85.33 35 *e*P P 17 30 54.6 0.0
HAWA comp=Z,140nm,1.4s,mb5.9 LR LR
comp=Z,3μm,20.0s,MS5.6
F08A Pendleton 85.35 36 ⇑P P 17 30 54.8 +0.2
baz=86,SNR=14
I10A Payette 85.36 38 ⇑P P 17 30 55.1 +0.3
baz=86,SNR=5.5
P15A Leamington 85.40 44 ⇓P P 17 30 55.3 +0.2
baz=86,SNR=7.4
SEW Seward 85.40 13 *e*P P 17 30 53.6 -0.9
V19A Window Rock 85.40 48 ⇑P P 17 30 54.2 -1.0
baz=86
SNAA Sanae 85.42 178 *e*P P 17 30 53.2 -1.6
SNAA *e* 17 30 55.6
SNAA *e* pP 17 31 04.7 -1.1
SNAA *e* 17 31 07.8
SNAA *e* 17 31 20.2
SNAA Sanae 85.42 178 ⇑*e*P P 17 30 53.5 -1.3
SNAA pmax pmax
comp=Z,88nm,1.6s
DUG Dugway 85.42 43 *e*P P 17 30 54.2 -0.9
comp=Z,26nm,1.2s,mb5.2
DUG LR LR
comp=Z,2μm,19.0s,MS5.5
DUG Dugway 85.42 43 P P 17 30 55.4 +0.2
DUG pmax pmax
comp=Z,26nm,1.2s,mb5.2
DUG Dugway 85.42 43 ⇓P P 17 30 54.7 -0.5
baz=86
VNA3 Neumayer Olymp 85.44 175 *e*P P 17 30 54.8 -0.1
VNA3 *e* 17 30 55.9
VNA3 *e* pP 17 31 07.4 +1.4
VNA3 *e* 17 31 10.2
VNA3 *e* 17 31 20.8
PLCA Paso Flores 85.51 132 P P 17 30 55.6 -0.2
comp=Z,14nm,0.9s,mb5.2,baz=230,slow=5.3,SNR=17
PLCA LR LR 18 01 24.8
comp=Z,2μm,20.4s,MS5.6,baz=188,slow=30
PLCA Paso Flores 85.51 132 *e*P P 17 30 55.8 0.0
comp=Z,56nm,1.5s,mb5.6
PLCA LR LR
comp=Z,2μm,20.0s,MS5.6
PLCA Paso Flores 85.51 132 P P 17 30 56.7 +0.9
PLCA pmax pmax
comp=Z,56nm,1.4s
MFID Camas Ranch 85.51 39 ⇑P P 17 30 55.5 0.0
baz=86,SNR=14
BMO Blue Mountains 85.56 37 PFAKE 17 31 10.0 +14
BMO LR LR
comp=Z,2μm,20.0s,MS5.4
G09A Cove 85.56 37 ⇓P P 17 30 55.9 +0.1
baz=86,SNR=16
N14A Grayback Hills 85.56 42 ⇑P P 17 30 55.3 -0.6
baz=86
K12A Draper Farm, C 85.58 40 ⇓P P 17 30 55.9 +0.1
baz=86,SNR=7.0
T18A Mexican Hat 85.61 47 ⇑P P 17 30 56.6 +0.4
baz=86,SNR=32
SLKM Skilak Lake 85.62 12 *e*P P 17 30 55.5 -0.2
D07A Quincy 85.62 34 ⇑P P 17 30 56.0 0.0
baz=86
E08A Dider Farm, El 85.65 35 ⇑P P 17 30 56.2 +0.1
baz=86,SNR=5.7
LNOR Lincton Mounta 85.66 36 *e*P P 17 30 55.8 -0.4
LNOR Lincton Mounta 85.66 36 P P 17 30 56.4 +0.2
O15A The Old Anders 85.68 43 ⇓P P 17 30 56.2 -0.2
baz=86
H10A Noah's Angus R 85.70 38 ⇓P P 17 30 56.7 +0.2
baz=86,SNR=16
I11A Placerville 85.74 38 ⇑P P 17 30 56.7 0.0
baz=86,SNR=13
Q16A Castle Valley 85.74 45 ⇓P P 17 30 56.3 -0.5
baz=86
B06A Marblemount 85.74 32 ⇑P P 17 30 56.9 +0.3
baz=86
R17A Hanksville Air 85.76 45 ⇓P P 17 30 56.8 -0.1
baz=86,SNR=8.6
F09A S2 Ranch, Elgi 85.76 36 ⇑P P 17 30 56.2 -0.5
baz=86
A05A Maple Falls 85.77 32 ⇓P P 17 30 56.8 +0.1
baz=86
S18A Hurst Farm, Bl 85.83 46 ⇓P P 17 30 57.1 -0.2
baz=86
J12A Stokes Ranch, 85.83 39 ⇑P P 17 30 57.2 +0.1
baz=86,SNR=15
M14A Sheep Mountain 85.84 41 ⇑P P 17 30 57.2 0.0
baz=86,SNR=11
C07A Waterville 85.91 34 ⇓P P 17 30 57.3 -0.1
baz=86,SNR=13
VNA2 Neumayer--Watz 85.92 176 *e*P P 17 30 57.3 +0.1
baz=201,slow=4.6
VNA2 *e* 17 30 58.9
VNA2 *e* pP 17 31 09.7 +1.4
VNA2 *e* 17 31 12.4
VNA2 *e* 17 31 24.7
EPH Ephrata 85.92 34 P P 17 30 57.7 +0.2
TMUT Trail Mountain 85.93 44 *e*P P 17 30 58.8 +1.1
G10A Bishop Farm, J 85.94 37 ⇑P P 17 30 57.2 -0.4
baz=86,SNR=12
N15A Stansbury Isla 86.00 42 ⇑P P 17 30 57.4 -0.6
baz=86
CN2 Changchun 86.01 321 ⇑P P 17 30 58.1 +0.1
CN2 *e*XP sP 17 31 16.4 +3.3
CN2 *e*S S 17 41 27.5 -1.9
CN2 AMB AMB
comp=Z,270nm,1.3s,mb6.3
CN2 AMB AMB
comp=Z,810nm,3.0s
CN2 LR LR
comp=N,410nm,18.0s,MS5.0
CN2 LR LR
comp=E,370nm,18.0s,MS5.0
CN2 LR LR
comp=Z,350nm,20.0s,MS4.8
T19A Beclabito 86.02 47 ⇓P P 17 30 58.2 0.0
baz=86,SNR=7.1
LENM Lemitar 86.04 50 *e*P P 17 31 00.8 +2.5
LENM *e* pP 17 31 08.6 -0.9
LAZ Ladron 86.04 50 *e*P P 17 31 00.2 +1.8
TXAR Lajitas Array 86.07 56 P P 17 30 59.0 +0.3
comp=Z,7.2nm,0.8s,mb4.9,baz=212,slow=7.6,SNR=36
TXAR PKKPbc PKKPbc 17 48 59.8 +1.0
comp=Z,0.7nm,0.9s,baz=66,slow=4.3,SNR=4.7
TXAR Lajitas Array 86.07 56 P P 17 30 59.0 +0.3
TXAR PKKPbc PKKPbc 17 48 59.8 +1.0
K13A Stover Farm, H 86.07 40 ⇓P P 17 30 58.0 -0.3
baz=86
D08A Wollman Farm, 86.08 35 ⇓P P 17 30 58.4 +0.1
baz=86,SNR=11
NOQ North Oquirrh 86.11 43 *e*P P 17 30 59.0 +0.4
comp=Z,88nm,1.3s,mb5.8
VNA1 Neumayer--Stat 86.13 176 *e*P P 17 30 58.8 +0.5
VNA1 *e* 17 31 00.0
VNA1 *e* pP 17 31 11.4 +2.0
VNA1 *e* 17 31 14.1
VNA1 *e* 17 31 25.8
I12A Atlanta 86.14 39 ⇓P P 17 30 58.8 +0.1
baz=86,SNR=22
E09A Wood Farm, Sta 86.15 35 ⇓P P 17 30 58.2 -0.4
baz=86,SNR=11
H11A Donnelly 86.19 38 ⇑P P 17 30 57.8 -1.1
baz=86,SNR=15
WHN Wuhan 86.19 305 ⇓P P 17 31 00.3 +1.1
WHN S S 17 41 28.8 -3.0
WHN LR LR
comp=Z,5μm,20.7s,MS5.9
L14A Malta 86.22 41 ⇑P P 17 30 57.2 -1.9
baz=86
IPM Ipoh 86.23 276 ⇑P P 17 31 01.3 +1.4
O16A Springville 86.25 43 ⇓P P 17 30 58.8 -0.5
baz=86
RC01 Rabbit Creek A 86.25 12 *e*P P 17 30 57.9 -0.9
comp=Z,74nm,1.0s,mb5.9
SRU San Rafael 86.27 45 *e*P P 17 30 59.4 0.0
comp=Z,51nm,1.1s,mb5.7
SRU San Rafael 86.27 45 P P 17 31 00.1 +0.7
SRU pmax pmax
comp=Z,51nm,1.1s,mb5.7
SRU San Rafael 86.27 45 ⇑P P 17 30 59.3 -0.1
baz=86
BNM Barren Site 86.28 51 *e*P P 17 31 01.0 +1.4
R18A Canyonlands Na 86.28 46 ⇑P P 17 30 59.3 -0.1
baz=86,SNR=11
SPUT South Promonto 86.28 42 *e*P P 17 30 59.3 -0.1
F10A Beach Ranch, E 86.30 36 ⇑P P 17 30 58.8 -0.6
baz=86,SNR=12
P17A Butcher Ranch, 86.33 44 ⇓P P 17 30 59.1 -0.6
baz=87
HVU Hansel Valley 86.36 42 *e*P P 17 30 59.7 -0.1
comp=Z,17nm,0.8s,mb5.3
HVU Hansel Valley 86.36 42 P P 17 31 00.7 +0.9
HVU pmax pmax
comp=Z,17nm,0.8s,mb5.3
MAIT Maitri 86.36 182 *e*P P 17 30 58.3 -1.1
LPM Los Pinos Moun 86.36 50 *e*P P 17 31 01.5 +1.6
NVL N'lazarevskaya 86.36 182 P P 17 31 07.7 +8.3
NVL pmax pmax
comp=Z,43nm,1.8s,mb5.4

M15A Larsen Ranch, 86.37 42 ⇓P P 17 30 59.7 -0.2
baz=87,SNR=9.7
B07A Winthrop 86.38 33 ⇓P P 17 30 59.6 -0.1
baz=87,SNR=12
D09A Jones Farm, Ri 86.41 35 ⇑P P 17 30 59.7 -0.2
baz=87,SNR=11
OD2 Odessa Site #2 86.41 34 P P 17 31 00.2 +0.4
HLID Hailey 86.42 39 eP P 17 31 00.2 +0.2
comp=Z,43nm,1.2s,mb5.5
HLID LR LR
comp=Z,2µm,19.0s,MS5.5
HLID Hailey 86.42 39 ⇓P P 17 30 59.9 -0.2
baz=87,SNR=5.8
S19A Harvey Farm, M 86.43 46 ⇑P P 17 30 59.4 -0.8
baz=87
SIT Sitka 86.43 20 PFAKE 17 31 10.0 +10
SIT LR LR
comp=Z,2µm,19.0s,MS5.5
J13A Cove Ranch, Pi 86.46 40 ⇑P P 17 30 59.7 -0.5
baz=87
G11A Walters Elk Ra 86.47 37 ⇑P P 17 30 59.7 -0.5
baz=87,SNR=18
C08A Higginbotham F 86.49 34 ⇑P P 17 31 00.1 -0.1
baz=87,SNR=7.7
JLU Jordanelle 86.50 43 eP P 17 31 00.1 -0.4
Q18A Rafter H Ranch 86.51 45 ⇑P P 17 31 00.3 -0.3
baz=87,SNR=7.4
DAU Daniels Canyon 86.52 43 eP P 17 31 01.9 +1.3
DAU Daniels Canyon 86.52 43 P P 17 31 02.1 +1.5
GAMB Gambell 86.53 1 eP P 17 31 00.3 +0.3
comp=Z,257nm,1.5s,mb6.2
K14A Jones Ranch, D 86.56 41 ⇑P P 17 30 60.0 -0.7
baz=87
MVCO Mesa Verde 86.58 47 PFAKE 17 31 10.0 +9.0
MVCO LR LR
comp=Z,2µm,19.0s,MS5.6
MVCO Mesa Verde 86.58 47 ⇓P P 17 31 00.4 -0.6
baz=87
A07A Ashnola River, 86.64 32 ⇑P P 17 31 00.7 -0.3
baz=87,SNR=12
R19A Curley Farm, L 86.64 46 ⇑P P 17 30 59.8 -1.5
baz=87
N16A Rees Ranch, Co 86.67 43 ⇓P P 17 31 00.9 -0.5
baz=87
E10A Myers Farm, Un 86.68 36 ⇓P P 17 31 00.2 -1.1
baz=87
B08A Colville Reser 86.71 33 ⇓P P 17 31 00.6 -0.7
baz=87,SNR=9.6
L15A Malad City 86.72 42 ⇑P P 17 31 00.6 -0.9
baz=87,SNR=6.1
O17A Robinson Place 86.73 44 ⇑P P 17 31 01.2 -0.4
baz=87,SNR=18
P18A Preston Nutter 86.73 44 ⇑P P 17 31 01.3 -0.3
baz=87
H12A Diamond D Ranc 86.75 38 ⇑P P 17 31 00.9 -0.7
baz=87,SNR=9.5
M16A Huntsville 86.80 42 ⇓P P 17 31 01.0 -0.9
baz=87
I13A Wildhorse Cree 86.80 39 ⇑P P 17 31 01.0 -0.9
baz=87
ANMO Albuquerque 86.80 50 eP P 17 31 02.9 +0.8
comp=Z,65nm,1.2s,mb5.7
ANMO LR LR
comp=Z,2µm,20.0s,MS5.5
ANMO Albuquerque 86.80 50 P P 17 31 03.3 +1.2
ANMO pmax pmax
comp=Z,65nm,1.2s
J14A Carey 86.81 40 ⇓P P 17 31 01.4 -0.6
baz=87,SNR=13
PMR Palmer 86.83 12 eP P 17 31 01.6 0.0
comp=Z,308nm,2.4s,mb6.1
PMR LR LR
comp=Z,1µm,21.0s,MS5.2
PMR Palmer 86.83 12 eP P 17 31 01.6 0.0
PMR pmax pmax
comp=Z,308nm,2.4s,mb6.1
PMR MLR MLR
comp=Z,1µm,21.0s,MS5.2
F11A Grangeville 86.84 37 ⇑P P 17 31 01.2 -0.8
baz=87
C09A Chrisman Ranch 86.90 34 ⇑P P 17 31 01.7 -0.5
baz=87,SNR=8.4
KULM Kulim 86.90 277 ⇓P P 17 31 04.9 +1.8
WRAK Wrangell Islan 86.92 22 eP P 17 31 03.2 +1.1
comp=Z,87nm,1.1s,mb5.9
WRAK LR LR
comp=Z,2µm,19.0s,MS5.5
D10A Wagner Farm, O 86.95 35 ⇑P P 17 31 01.6 -0.9
baz=87,SNR=9.2
HWUT Hardware Ranch 87.00 42 PFAKE 17 31 10.0 +7.1
HWUT LR LR
comp=Z,2µm,19.0s,MS5.5
Q19A Hogan Spring (87.00 45 ⇑P P 17 31 01.8 -1.2
baz=87,SNR=5.8
PV01 Paradox Valley 87.02 46 eP P 17 31 03.6 +0.5
K15A Arbon 87.02 41 ⇓P P 17 31 02.8 -0.2
baz=87
TIA Tai'an 87.04 311 eP P 17 31 03.0 -0.3
N17A Moffit Pass 87.08 43 ⇓P P 17 31 02.4 -1.0
baz=87,SNR=7.4
E11A Bogner Ranch, 87.09 36 ⇑P P 17 31 02.8 -0.5
baz=87
H13A Challis 87.11 39 ⇓P P 17 31 03.1 -0.2
baz=87
A08A Turner Farm, O 87.13 33 ⇓P P 17 31 03.6 +0.3
baz=87,SNR=23
I14A Mackay 87.20 39 ⇑P P 17 31 03.2 -0.7
baz=87
F12A Elk City 87.25 37 ⇑P P 17 31 02.9 -1.2
baz=88,SNR=14
L16A Fish Haven 87.31 42 ⇓P P 17 31 02.8 -1.7
baz=88
PNL Peninsula 87.39 17 eP P 17 31 04.1 -0.3
comp=Z,310nm,1.5s,mb6.3
C10A Spiker Farm, 87.41 35 ⇓P P 17 31 03.7 -1.0
baz=88
G13A Cobalt 87.43 38 ⇓P P 17 31 04.3 -0.6
baz=88,SNR=5.0
EFI East Falkland 87.45 146 PFAKE 17 31 20.0 +15
EFI LR LR
comp=Z,2µm,22.0s,MS5.6
D11A Klaveano Farm, 87.45 36 ⇓P P 17 31 04.4 -0.6
baz=88
E12A Beaver Dam Sad 87.48 37 ⇓P P 17 31 04.4 -0.8
baz=88,SNR=5.4
M17A Scullys Gap (B 87.48 43 ⇓P P 17 31 04.2 -1.1
baz=88
A09A Danville 87.49 33 ⇓P P 17 31 04.6 -0.5
baz=88,SNR=11
J15A Blackfoot 87.49 40 ⇑P P 17 31 05.0 -0.2
baz=88,SNR=7.5
PPLA Purkeypile 87.50 10 eP P 17 31 02.9 -1.9
comp=Z,52nm,1.2s,mb5.6
SNG Songkhla 87.67 279 P P 17 31 08.0 +1.2
comp=Z,860nm,1.0s,mb6.9
K16A Soda Springs 87.68 41 ⇓P P 17 31 05.0 -1.1
baz=88
NEW Newport 87.79 34 eP P 17 31 05.4 -1.1
comp=Z,12nm,1.1s,mb5.1
NEW LR LR
comp=Z,2µm,20.0s,MS5.6
NEW Newport 87.79 34 P P 17 31 05.6 -0.9
NEW e pP 17 31 18.9 +1.2
NEW pmax pmax
comp=Z,14nm,1.0s
F13A Darby 87.79 38 ⇑P P 17 31 05.8 -0.8
baz=88,SNR=5.8
O19A Miners Draw (B 87.82 44 ⇑P P 17 31 05.8 -1.0
baz=88
M18A Lyman 87.83 43 ⇑P P 17 31 06.1 -0.9
baz=88
N18A Larsen Ranch, 87.83 43 ⇓P P 17 31 05.7 -1.3
baz=88,SNR=5.7
J16A Bone 87.91 41 ⇑P P 17 31 06.5 -0.7
baz=88
AHID Auburn Hatcher 87.94 41 PFAKE 17 31 20.0 +13
AHID LR LR
comp=Z,1µm,19.0s,MS5.4
C11A Tepee Creek (N 87.98 35 ⇓P P 17 31 07.5 +0.1
baz=88,SNR=21
A10A Northport 88.01 34 ⇑P P 17 31 07.6 0.0
baz=88,SNR=7.9
H15A Lima 88.07 39 ⇓P P 17 31 07.3 -0.7
baz=88
MCMT McKenzie Canyo 88.07 39 eP P 17 31 07.8 -0.2
RRI2 Red Ridge 88.13 41 eP P 17 31 09.1 +0.8
comp=Z,12nm,1.2s,mb5.0

E13A Victor 88.26 37 ⇑P P 17 31 07.9 -0.9
baz=88
B11A Sandpoint 88.29 35 ⇓P P 17 31 08.3 -0.7
baz=88,SNR=16
C12B Naegeli Ranch, 88.32 36 ⇑P P 17 31 08.9 -0.2
baz=88
KTH Kantishna Hill 88.32 11 eP P 17 31 06.9 -1.8
comp=Z,82nm,1.0s,mb5.9
TRF Thorofare Moun 88.33 11 eP P 17 31 07.6 -1.2
comp=Z,135nm,0.8s,mb6.2
F14A Wisdom 88.35 38 ⇓P P 17 31 08.3 -1.0
baz=89
SKAG Skagway 88.38 19 eP P 17 31 10.5 +1.4
comp=Z,234nm,1.7s,mb6.1
CHUM Lake Minchumin 88.40 10 eP P 17 31 07.5 -1.6
comp=Z,67nm,0.9s,mb5.9
REDW Red Top Meadow 88.42 41 eP P 17 31 09.0 -0.7
comp=Z,43nm,1.3s,mb5.5
TPAW Teton Pass 88.43 41 eP P 17 31 09.8 +0.1
comp=Z,30nm,1.1s,mb5.4
M19A Rock Springs 88.45 43 ⇓P P 17 31 09.5 -0.4
baz=89
G15A Dillon 88.48 39 ⇓P P 17 31 09.6 -0.3
baz=89
D13A Huson 88.50 37 ⇓P P 17 31 09.4 -0.5
baz=89,SNR=6.3
J17A Brown Place, J 88.51 41 ⇑P P 17 31 08.7 -1.4
baz=89
DLMT Dillon 88.53 39 eP P 17 31 10.2 +0.1
comp=Z,22nm,1.0s,mb5.5
A11A Hall Mountain, 88.62 34 ⇓P P 17 31 09.9 -0.5
baz=89,SNR=15
MSO Missoula 88.63 37 PFAKE 17 31 20.0 +9.5
MSO LR LR
comp=Z,2µm,20.0s,MS5.4
SMCO Snowmass 88.63 46 eP P 17 31 11.2 +0.4
comp=Z,23nm,0.9s,mb5.5
E14A Clinton 88.63 37 ⇓P P 17 31 09.8 -0.8
baz=89,SNR=5.6
L19A Farson 88.65 43 ⇓P P 17 31 10.4 -0.3
baz=89,SNR=6.3
B12A Libby 88.72 35 ⇓P P 17 31 10.8 -0.2
baz=89,SNR=5.7
C13A Hot Springs 88.79 36 ⇑P P 17 31 10.8 -0.5
baz=89
BPAW Bear Paw Mtn. 88.82 10 eP P 17 31 09.8 -1.3
comp=Z,124nm,1.6s,mb6.0
MCK McKinley 88.83 11 eP P 17 31 10.0 -1.1
comp=Z,214nm,1.1s,mb6.4
MCK McKinley 88.83 11 P P 17 31 10.3 -0.8
MCK pmax pmax
comp=Z,210nm,1.1s,mb6.4
F15A Butte 88.86 38 ⇓P P 17 31 11.5 -0.2
baz=89
BW06 Boulder Array 88.88 42 PFAKE 17 31 20.0 +8.1
BW06 LR LR
comp=Z,2µm,22.0s,MS5.5
BW06 Boulder Array 88.88 42 ⇓P P 17 31 11.6 -0.3
baz=89
PDAR Pinedale Array 88.88 42 P P 17 31 11.6 -0.3
comp=Z,4.2nm,0.9s,mb4.8,baz=218,slow=3.8,SNR=23
SDCO Great Sand Dun 88.89 48 PFAKE 17 31 20.0 +8.0
SDCO LR LR
comp=Z,3µm,20.0s,MS5.7
I17A Pilgram Creek 88.90 41 ⇑P P 17 31 12.1 +0.1
baz=89
QLMT Earthquake Lak 88.90 40 eP P 17 31 12.6 +0.7
G16A Moss Hill, Enn 88.91 39 ⇑P P 17 31 11.9 0.0
baz=89
H16A Russell Place, 88.94 40 ⇑P P 17 31 12.4 +0.3
baz=89,SNR=5.7
A12A Yaak River Ran 88.97 35 ⇑P P 17 31 12.1 0.0
baz=89,SNR=13
D14A Greenough 89.02 37 ⇑P P 17 31 11.6 -0.8
baz=89,SNR=7.4
M20A Sweetwater, Wa 89.06 44 ⇑P P 17 31 12.4 -0.3
baz=89
CHMT Chamberlain Mo 89.06 37 eP P 17 31 12.1 -0.5
YMR Madison River 89.08 40 eP P 17 31 13.5 +0.8
comp=Z,31nm,1.5s,mb5.4
YMR LR LR
comp=Z,2µm,19.0s,MS5.6
E15A Deer Lodge 89.12 38 ⇓P P 17 31 12.4 -0.5
baz=89
H17A Grant Village 89.16 40 ⇑P P 17 31 12.3 -0.8
baz=89
L20A Wamsutter 89.23 43 ⇓P P 17 31 13.4 -0.1
baz=90
I18A Diamond G Ranc 89.24 41 ⇓P P 17 31 12.9 -0.6
baz=90
BOZ Bozeman (W) 89.25 39 PFAKE 17 31 20.0 +6.5
BOZ LR LR
comp=Z,1µm,20.0s,MS5.4
BOZ Bozeman (W) 89.25 39 ⇑P P 17 31 13.0 -0.5
baz=89
B13A Whitefish 89.26 35 ⇑P P 17 31 12.5 -1.0
baz=90
DLBC Dease Lake 89.28 22 eP P 17 31 14.1 +0.8
YNR Norris Junctio 89.28 40 eP P 17 31 14.0 +0.3
F16A Kennard Place, 89.33 39 ⇓P P 17 31 13.5 -0.4
baz=90
KKTK Khon Kaen 89.36 288 ⇓P P 17 31 16.0 +1.3
comp=Z,1µm,0.6s
LKWY Lake 89.36 40 PFAKE 17 31 30.0 +16
LKWY LR LR
comp=Z,4µm,20.0s,MS5.8
SEY Seymchan 89.47 346⇑eP P 17 31 14.6 +0.5
D15A Lincoln 89.54 37 ⇑P P 17 31 14.7 -0.2
baz=90,SNR=7.4
JCT Junction City 89.56 57 eP P 17 31 16.2 +0.8
comp=Z,7.6nm,1.0s,mb5.0
JCT LR LR
comp=Z,3µm,20.0s,MS5.7
JCT Junction City 89.56 57 P P 17 31 16.6 +1.2
JCT e pP 17 31 24.9 -1.6
JCT pmax pmax
comp=Z,65nm,1.4s,mb5.8
G17A Pierce Place, 89.58 39 ⇑P P 17 31 14.7 -0.4
baz=90
BJT Baijiatuau 89.65 314 eP P 17 31 15.6 0.0
comp=Z,95nm,0.8s,mb6.2
BJT LR LR
comp=Z,1µm,22.0s,MS5.3
BJT Baijiatuau 89.65 314 eP P 17 31 15.6 +0.1
BJT pmax pmax
BJT comp=Z,95nm,0.8s MLR MLR
comp=Z,1µm,22.0s
BJI Beijing 89.65 314 P P 17 31 16.4 +0.8
BJI SKS 17 41 41.9
BJI S S 17 42 02.0 -2.4
BJI AMB AMB
comp=Z,135nm,1.7s,mb6.0
BJI AMB AMB
comp=Z,3µm,11.1s
BJI LR LR
comp=N,498nm,21.2s,MS5.1
BJI LR LR
comp=E,583nm,24.3s,MS5.1
BJI LR LR
comp=Z,1µm,30.7s
BJI Beijing 89.65 314 P P 17 31 16.4 +0.8
comp=Z,135nm,1.7s,mb6.0
BJI SKS 17 41 41.9
BJI S S 17 42 02.0 -2.4
BJI LR LR
comp=Z,1µm,30.7s,MS5.2
E16A East Helena 89.72 38 ⇑P P 17 31 15.2 -0.5
baz=90
HRY Holter Researc 89.74 38 eP P 17 31 15.9 +0.1
KVTX Kingsville 89.75 60 PFAKE 17 31 30.0 +14
KVTX LR LR
comp=Z,3µm,19.0s,MS5.7
L21A Rawlins 89.83 44 ⇑P P 17 31 15.5 -0.8
baz=90
ISCO Idaho Springs 89.85 46 PFAKE 17 31 30.0 +14
ISCO LR LR
comp=Z,2µm,21.0s,MS5.6
B14A Marquette Ranc 89.89 36 ⇑P P 17 31 16.7 +0.3
baz=90
C15A Salmond Ranch, 89.92 37 ⇓P P 17 31 15.9 -0.6
baz=90
F17A Fitzpatrick Pl 89.96 39 ⇑P P 17 31 17.0 +0.2
baz=90,SNR=8.2
COLA College 90.07 11 i P P 17 31 15.9 -1.0
COLA LR LR
comp=Z,2µm,20.0s,MS5.5

D16A Dana Ranch, Ca 90.08 38 ⇓P P 17 31 17.4 0.0
baz=90,SNR=8.9
E17A Martinsdale 90.15 38 ⇑P P 17 31 17.5 -0.2
baz=90
A14A Double T Ranch 90.17 35 ⇓P P 17 31 17.8 0.0
baz=90,SNR=16
AMTX Amarillo 90.19 52 eP P 17 31 19.3 +1.1
comp=Z,28nm,0.9s,mb5.6
AMTX LR LR
comp=Z,2µm,20.0s,MS5.6
B15A Bradely Ranch, 90.25 36 ⇓P P 17 31 18.0 -0.1
baz=90
IMA2 Indian Mountai 90.26 9 eP P 17 31 17.2 -0.6
G18A Lazy EL Ranch, 90.27 40 ⇓P P 17 31 18.2 -0.1
baz=90
GYA Guiyang 90.33 299⇑iP P 17 31 20.1 +1.0
GYA AP pP 17 31 33.5 +3.3
GYA XP sP 17 31 38.3 +4.1
GYA PP PP 17 34 57.0 +3.2
GYA SKS 17 41 45.5
GYA S S 17 42 09.5 -1.8
GYA SS SS 17 48 11.8 -0.4
GYA AMB AMB
comp=Z,90nm,1.0s,mb6.0
GYA AMB AMB
comp=Z,470nm,7.8s
GYA LR LR
comp=N,750nm,17.4s,MS5.3
GYA LR LR
comp=E,680nm,18.8s,MS5.3
GYA LR LR
comp=Z,2µm,18.4s,MS5.5
RLMT Red Lodge 90.34 40 PFAKE 17 31 30.0 +11
RLMT LR LR
comp=Z,2µm,19.0s,MS5.6
C16A Fuhringer Ranc 90.41 37 ⇑P P 17 31 18.8 0.0
baz=91,SNR=7.9
GCMT Greycliff 90.47 39 eP P 17 31 20.1 +0.9
F18A Big Timber 90.50 39 ⇓P P 17 31 19.6 +0.2
baz=91,SNR=10
A15A Johnson Ranch, 90.54 36 ⇓P P 17 31 18.9 -0.6
baz=91,SNR=11
D17A Six Diamond Ra 90.64 38 ⇑P P 17 31 19.8 -0.1
baz=91,SNR=19
LCO Las Campanas 90.65 122 PFAKE 17 31 30.0 +9.4
LCO LR LR
comp=Z,2µm,21.0s,MS5.5
E18A Harlowton 90.75 39 ⇑P P 17 31 20.6 +0.1
baz=91,SNR=14
B16A M & M Farms, S 90.78 37 ⇓P P 17 31 19.8 -0.8
baz=91,SNR=7.2
C17A Wharram Farm, 90.86 38 ⇓P P 17 31 20.8 -0.2
baz=91,SNR=13
DAWY Dawson 91.12 15 eP P 17 31 21.5 -0.3
A16A West Butte Ran 91.14 36 ⇑P P 17 31 22.1 -0.1
baz=91
D18A Linhart Farms, 91.16 38 ⇓P P 17 31 22.5 +0.1
baz=91
EGAK Eagle 91.32 14 eP P 17 31 22.3 -0.4
comp=Z,130nm,1.1s,mb6.2
EGAK LR LR
comp=Z,1µm,21.0s,MS5.3
CFAA Coronel Fontan 91.35 125 LR LR 18 03 32.1
comp=Z,354nm,21.3s,MS4.8,baz=180,slow=30
NST Nakhon Sawan 91.46 286 P P 17 31 26.0 +1.5
EGMT Eagleton 91.64 38 eP P 17 31 24.6 0.0
comp=Z,87nm,1.4s,mb5.9
EGMT LR LR
comp=Z,1µm,20.0s,MS5.4
EGMT Eagleton 91.64 38 ⇑P P 17 31 24.9 +0.3
baz=92
BILL Bilibino 91.83 353 iP P 17 31 25.7 +0.7
BILL LR LR
comp=Z,888nm,21.0s,MS5.2
BILL Bilibino 91.83 353 iP P 17 31 25.6 +0.6
BILL i 17 35 02.0
BILL pmax pmax
comp=Z,102nm,1.8s,mb5.8
BILL MLR MLR
comp=Z,5µm,21.0s,MS5.9
COLD Coldfoot 91.85 9 eP P 17 31 25.0 -0.1
comp=Z,55nm,1.1s,mb5.8
XAN Xi'an 91.89 306 P P 17 31 26.5 +0.4
XAN AMB AMB
comp=Z,135nm,1.9s,mb6.0
XAN AMB AMB
comp=Z,1µm,18.2s
WMOK Wichita Mounta 92.25 53 P P 17 31 26.9 -0.8
comp=Z,11nm,1.1s,mb5.1
WMOK LR LR
comp=Z,3µm,20.0s,MS5.7
WMOK Wichita Mounta 92.25 53 P P 17 31 26.9 -0.8
WMOK pmax pmax
comp=Z,11nm,1.1s,mb5.1
WMOK MLR MLR
comp=Z,3µm,20.0s,MS5.7
HIA Hailar 92.37 323⇑iP P 17 31 27.7 -0.2
HIA LR LR
comp=Z,2µm,20.0s,MS5.5
HIA Hailar 92.37 323ciP P 17 31 27.6 -0.3
HKT Hockley 92.42 59 PFAKE 17 31 40.0 +11
HKT LR LR
comp=Z,3µm,20.0s,MS5.8
EDM Edmonton 92.70 32 eP P 17 31 28.4 -0.9
EDM Edmonton 92.70 32 P P 17 31 29.0 -0.4
NNA Nana 92.70 104 LR LR 18 04 11.3
comp=Z,3µm,20.2s,MS5.8,baz=321,slow=30
NNA Nana 92.70 104 PFAKE 17 31 40.0 +10
NNA LR LR
comp=Z,4µm,20.0s,MS5.8
OGNE Ogallala 92.80 46 PFAKE 17 31 40.0 +10
OGNE LR LR
comp=Z,1µm,19.0s,MS5.4
LAO LASA Array 92.97 40 eP P 17 31 31.5 +0.7
comp=Z,128nm,1.2s,mb6.2
LAO LR LR
comp=Z,2µm,20.0s,MS5.5
KMI Kunming 92.99 296 P P 17 31 32.8 +1.4
KMI AP pP 17 31 45.1 +2.5
KMI XP sP 17 31 50.0 +3.4
KMI PP PP 17 35 19.3 +4.5
KMI S S 17 42 33.0 -2.3
KMI SS SS 17 48 51.6 +1.0
KMI AMB AMB
comp=Z,93nm,1.5s,mb6.0
KMI AMB AMB
comp=Z,647nm,3.7s
KMI LR LR
comp=N,566nm,20.8s
KMI LR LR
comp=E,625nm,26.9s
KMI LR LR
comp=Z,1µm,33.1s
KMI Kunming 92.99 296 P P 17 31 32.7 +1.3
comp=Z,93nm,1.5s,mb6.0
KMI pP pP 17 31 45.1 +2.5
KMI sP sP 17 31 50.0 +3.4
KMI PP PP 17 35 19.3 +4.5
KMI S S 17 42 33.0 -2.3
KMI SS SS 17 48 51.6 +1.0
KMI SSS 17 52 30.8
KMI LR LR
comp=Z,1µm,33.1s,MS5.2
KMI Kunming 92.99 296 P P 17 31 32.7 +1.3
KMI *PP pP 17 31 45.1 +2.5
KMI 17 35 19.3
KMI S S 17 42 33.0 -2.3
KMI SS SS 17 48 51.6 +1.0
KMI SSS 17 52 30.8
KMI pmax pmax
comp=Z,93nm,1.5s,mb6.0
RSSD Black Hills 93.03 43 eP P 17 31 31.4 +0.3
comp=Z,53nm,1.1s,mb5.9
RSSD LR LR
comp=Z,2µm,21.0s,MS5.5
RSSD Black Hills 93.03 43 P P 17 31 31.7 +0.6
RSSD pmax pmax
comp=Z,53nm,1.1s,mb5.9
BDT Bhumibol Dam 93.07 287 P P 17 31 33.0 +1.1
comp=Z,24nm,0.9s,mb5.6
HHC Hu-ho-hao-te 93.12 313 eP P 17 31 33.3 +1.7
HHC AP pP 17 31 47.1 +4.3
HHC XP sP 17 31 51.8 +5.0
HHC PP PP 17 35 18.8 +3.3
HHC SKS 17 42 01.9
HHC S S 17 42 32.8 -3.0

HHC XS sS 17 42 56.6 +2.3
HHC SS SS 17 48 50.0 -1.8
HHC AMB AMB
comp=Z,58nm,1.3s,mb5.8
HHC AMB AMB
comp=Z,1µm,6.9s
HHC LR LR
comp=N,577nm,26.2s,MS5.2
HHC LR LR
comp=E,973nm,29.7s,MS5.2
HHC LR LR
comp=Z,2µm,29.7s,MS5.5
ATAH Atahualpa 93.30 99 P P 17 31 34.1 +1.0
comp=Z,4.7nm,0.5s,mb5.2,baz=350,slow=14,SNR=11
TGUH Tegucigalpa,Un 93.31 76 PFAKE 17 31 40.0 +6.9
TGUH LR LR
comp=Z,1µm,21.0s,MS5.4
CBKS Cedar Bluff 93.38 49 PFAKE 17 31 40.0 +7.1
CBKS LR LR
comp=Z,3µm,19.0s,MS5.8
CM31 Chiang Mai Arr 93.60 288 PFAKE 17 31 50.0 +16
CM31 LR LR
comp=Z,1µm,21.0s,MS5.3
CMAR Chiang Mai Arr 93.60 288 P P 17 31 35.4 +1.0
comp=Z,30nm,0.9s,mb5.7,baz=128,slow=2.9,SNR=88
CMAR PP PP 17 35 19.9 +0.2
comp=Z,4.2nm,0.8s,baz=128,slow=5.9,SNR=5.1
CMAR LR LR 18 09 56.7
comp=Z,1µm,20.3s,MS5.3,baz=270,slow=33
CMAR Chiang Mai Arr 93.60 288 P P 17 31 35.4 +1.1
CMAR 17 35 19.9
CHG Chiang Mai 93.73 289 ⇓P P 17 31 35.9 +0.9
comp=Z,58nm,0.8s,mb6.1
CHTO Chiang Mai 93.73 289 *e*P P 17 31 35.7 +0.7
comp=Z,65nm,1.1s,mb6.0
CHTO LR LR
comp=Z,1µm,22.0s,MS5.3
CHTO Chiang Mai 93.73 289 *e*P P 17 31 35.7 +0.7
CHTO pmax pmax
comp=Z,65nm,1.1s,mb6.0
CHTO MLR MLR
comp=Z,1µm,22.0s,MS5.3
BTO Baotou 94.05 312 *e*P P 17 31 36.5 +0.6
NATX Nacogdoches 94.09 57 PFAKE 17 31 50.0 +14
NATX LR LR
comp=Z,3µm,20.0s,MS5.8
CLNS Chul'man 94.16 331 *e*P P 17 31 34.8 -1.2
CLNS pmax pmax
comp=Z,39nm,1.3s,mb5.7
CLNS pmax pmax
comp=E,14nm,1.4s
CLNS pmax pmax
comp=N,32nm,1.3s
CD2 Chengdu 94.51 302 P P 17 31 38.8 +0.5
CD2 AP pP 17 31 50.3 +0.9
CD2 XP sP 17 31 54.8 +1.4
CD2 PP PP 17 35 28.9 +2.3
CD2 SKS 17 42 09.8
CD2 S S 17 42 44.8 -3.6
CD2 XS sS 17 43 05.1 -1.9
CD2 AMB AMB
comp=Z,40nm,1.4s,mb5.7
CD2 AMB AMB
comp=Z,2µm,5.9s
CD2 LR LR
comp=N,1µm,22.6s,MS5.5
CD2 LR LR
comp=E,2µm,24.3s,MS5.5
CD2 LR LR
comp=Z,2µm,26.2s,MS5.5
LVC Limon Verde 94.98 117 LR LR 18 05 21.3
comp=Z,3µm,20.4s,MS5.7,baz=225,slow=30
LVC Limon Verde 94.98 117 PFAKE 17 31 50.0 +9.3
LVC LR LR
comp=Z,3µm,21.0s,MS5.7
DGMT Dagmar 95.05 39 *e*P P 17 31 38.3 -2.0
comp=Z,65nm,1.1s,mb6.0
DGMT LR LR
comp=Z,2µm,20.0s,MS5.6
DGMT Dagmar 95.05 39 ⇓P P 17 31 40.3 0.0
baz=95
YAK Yakutsk 95.50 337 ⇑*i*P P 17 31 41.0 -1.0
YAK LR LR
comp=Z,1µm,21.0s,MS5.4
YAK Yakutsk 95.50 337 *e*P P 17 31 40.4 -1.6
YAK pmax pmax
comp=Z,31nm,0.9s,mb5.7
YAK pmax pmax
comp=E,13nm,1.1s
KSU1 Kansas State U 95.70 50 PFAKE 17 31 50.0 +6.5
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.7
INK Inuvik 95.97 14 *e*P P 17 31 42.5 -1.5
comp=Z,861nm,1.0s,mb7.1
INK Inuvik 95.97 14 P P 17 31 43.3 -0.7
MIAR Mount Ida 96.06 55 PFAKE 17 32 00.0 +15
MIAR LR LR
comp=Z,3µm,21.0s,MS5.7
OTAV Otavalo 96.09 92 PFAKE 17 32 00.0 +14
OTAV LR LR
comp=Z,2µm,21.0s,MS5.5
LZH Lanzhou 96.53 306 ⇑P P 17 31 48.3 +1.0
LZH AP pP 17 31 59.1 +0.6
LZH XP sP 17 32 02.9 +0.4
LZH PP PP 17 35 45.0 +2.9
LZH SKS 17 42 21.5
LZH S S 17 43 03.3 -2.4
LZH XS sS 17 43 20.8 -3.5
LZH SS SS 17 49 40.5 -0.1
LZH AMB AMB
comp=Z,71nm,1.5s,mb5.9
LZH AMB AMB
comp=Z,267nm,8.7s
LZH LR LR
comp=E,1µm,17.2s
LZH LR LR
comp=Z,3µm,19.5s,MS5.7
LZH Lanzhou 96.53 306 ⇑P P 17 31 48.3 +1.0
comp=Z,71nm,1.5s,mb5.9
LZH pP pP 17 31 59.1 +0.6
LZH sP sP 17 32 02.9 +0.4
LZH PP PP 17 35 45.0 +2.9
LZH SKS 17 42 21.5
LZH S S 17 43 03.2 -2.5
LZH sS sS 17 43 20.8 -3.5
LZH SS SS 17 49 40.5 -0.1
LZH LR LR
comp=Z,3µm,19.5s,MS5.7
LZH Lanzhou 96.53 306 ⇑P P 17 31 48.3 +1.0
LZH *PP pP 17 31 59.1 +0.6
LZH *SP sP 17 32 02.9 +0.4
LZH 17 35 45.0
LZH 17 42 21.5
LZH S S 17 43 03.2 -2.5
LZH SS SS 17 49 40.5 -0.1
LZH pmax pmax
comp=Z,71nm,1.5s,mb5.9
LZH MLR MLR
comp=Z,3µm,19.5s,MS5.7
VBMS Vicksburg 97.50 58 PFAKE 17 32 00.0 +8.1
VBMS LR LR
comp=Z,2µm,19.0s,MS5.6
YKA Yellowknife Ar 97.62 24 P P 17 31 50.3 -1.3
comp=Z,8.4nm,0.8s,mb5.3,baz=235,slow=4.4,SNR=14
ECSD EROS,Sioux Fal 97.63 46 *e*P P 17 31 51.3 -0.9
comp=Z,5.3nm,0.8s,mb5.1
ECSD LR LR
comp=Z,2µm,20.0s,MS5.6
BCIP Isla Barro Col 98.21 84 PFAKE 17 32 10.0 +15
BCIP LR LR
comp=Z,2µm,21.0s,MS5.6
LPAZ La Paz 98.50 112 PFAKE 17 32 10.0 +13
LPAZ LR LR
comp=Z,2µm,20.0s,MS5.5
ULN Ulaanbaatar 99.10 318 P P 17 31 58.5 -0.1
SNR=5.6
ULN Ulaanbaatar 99.10 318 ⇓*i*P P 17 31 58.3 -0.3
ULN LR LR
comp=Z,1µm,20.0s,MS5.4
CCM Cathedral Cave 99.15 53 PFAKE 17 32 10.0 +11
CCM LR LR
comp=Z,2µm,20.0s,MS5.7
SCIA State Center 99.20 48 PFAKE 17 32 10.0 +11
SCIA LR LR
comp=Z,2µm,20.0s,MS5.6

FFC Flin Flon 99.22 34 PFAKE 17 32 10.0 +11
FFC LR LR
comp=Z,2µm,20.0s,MS5.5
OXF Oxford 99.22 57 PFAKE 17 32 10.0 +10
OXF LR LR
comp=Z,2µm,20.0s,MS5.7
SONM Songino Array 99.49 318 P P 17 32 00.3 -0.1
comp=Z,3.2nm,0.8s,mb4.9,baz=125,slow=5.9,SNR=20
SONM PP PP 17 35 59.5 -5.1
comp=Z,13nm,1.1s,baz=125,slow=6.4,SNR=8.8
SONM LR LR 18 09 39.6
SONM Songino Array 99.49 318 P P 17 32 00.3 -0.1
SONM 17 35 59.5
BOD Bodaibo 99.67 329 *e*P Pdif 17 31 58.4 -2.9
BOD pmax pmax
comp=Z,12nm,1.7s,mb5.0
BRAL Brewton 99.81 61 PFAKE 17 32 10.0 +8.1
BRAL LR LR
comp=Z,3µm,21.0s,MS5.7
AGMN Agassiz Refuge 99.96 42 PFAKE 17 32 10.0 +7.4
AGMN LR LR
comp=Z,2µm,19.0s,MS5.6
LRAL Lakeview Retre 100.57 59 PFAKE 17 32 20.0 +15
LRAL LR LR
comp=Z,3µm,21.0s,MS5.7
ULM Lac du Bonnet 100.72 40 PFAKE 17 32 20.0 +14
ULM LR LR
comp=Z,2µm,19.0s,MS5.7
GTA Gaotai 100.74 308 *e*P Pdif 17 32 07.1 +1.1
GTA AP 17 32 18.1
GTA XP 17 32 24.0
GTA PP PP 17 36 17.3 +3.0
GTA S Sdif 17 43 35.1 -5.9
GTA XS 17 44 01.1
GTA AMB AMB
comp=Z,11nm,2.1s
GTA LR LR
comp=N,516nm,19.5s,MS5.2
GTA LR LR
comp=E,683nm,22.2s,MS5.2
GTA LR LR
comp=Z,989nm,23.1s,MS5.3
WVT Waverly 101.00 55 PFAKE 17 32 20.0 +13
WVT LR LR
comp=Z,2µm,20.0s,MS5.7
HDIL Hopedale 101.46 51 PFAKE 17 32 20.0 +11
HDIL LR LR
comp=Z,2µm,21.0s,MS5.6
JFWS Jewell Farm 101.61 48 PFAKE 17 32 20.0 +10
JFWS LR LR
comp=Z,2µm,20.0s,MS5.7
TIXI Tiksi 101.90 344 *e*P Pdif 17 32 07.8 -3.4
comp=Z,8.9nm,1.0s
TIXI LR LR
comp=Z,2µm,21.0s,MS5.5
TIXI Tiksi 101.90 344 *e*P Pdif 17 32 08.9 -2.3
TIXI pmax pmax
comp=Z,18nm,2.1s
ZAK Zakamensk 102.36 320 *e*P Pdif 17 32 13.2 0.0
ZAK pmax pmax
comp=Z,6.0nm,1.2s
EYMN Ely 102.55 43 PFAKE 17 32 30.0 +16
EYMN LR LR
comp=Z,1µm,20.0s,MS5.4
TLY Talaya 102.61 321 PFAKE 17 32 30.0 +16
TLY LR LR
comp=Z,1µm,20.0s,MS5.4
TLY Talaya 102.61 321 *e*P Pdif 17 32 18.1 +3.7
TLY pmax pmax
comp=Z,7.0nm,1.8s
TLY MLR MLR
comp=Z,1µm,20.0s,MS5.4
WCI Wyandotte Cave 102.86 54 PFAKE 17 32 30.0 +15
WCI LR LR
comp=Z,2µm,19.0s,MS5.6
DWPF Disney 103.43 65 PFAKE 17 32 30.0 +12
DWPF LR LR
comp=Z,2µm,20.0s,MS5.7
GOGA Godfrey 103.48 59 PFAKE 17 32 30.0 +12
GOGA LR LR
comp=Z,2µm,20.0s,MS5.7
LSA Lhasa 104.24 296 Pdif Pdif 17 32 19.3 -2.3
comp=Z,7.6nm,1.0s
LSA LR LR
comp=Z,1µm,22.0s,MS5.4
LSA Lhasa 104.24 296 P Pdif 17 32 19.3 -2.3
LSA pmax pmax
comp=Z,8.0nm,1.0s
LSA MLR MLR
comp=Z,1µm,22.0s,MS5.4
TZTN Tazewell 104.40 56 PFAKE 17 32 30.0 +7.7
TZTN LR LR
comp=Z,2µm,19.0s,MS5.7
ACSO Alum Creek Sta 105.93 53 PFAKE 17 36 50.0 +8.5
ACSO LR LR
comp=Z,2µm,22.0s,MS5.6
NHSC New Hope 106.01 60 PFAKE 17 36 50.0 +8.1
NHSC LR LR
comp=Z,2µm,20.0s,MS5.6
AAM Ann Arbor 106.03 51 PFAKE 17 36 50.0 +8.4
AAM LR LR
comp=Z,2µm,19.0s,MS5.7
GLMI Grayling 106.08 48 PFAKE 17 36 50.0 +8.4
GLMI LR LR
comp=Z,2µm,19.0s,MS5.6
TAPN Taplejung 106.39 293 *e*P PKiKP 17 36 41.1 -1.7
ODAN Odare 106.51 293 *e*P PKiKP 17 36 42.4 -0.6
comp=Z,67nm,1.3s
BLA Blacksburg 106.99 56 PFAKE 17 37 00.0 +16
BLA LR LR
comp=Z,2µm,21.0s,MS5.6
RAMN Ramite 107.21 292 *e*P PKiKP 17 36 43.6 -0.7
DGAR Diego Garcia 107.53 254 PFAKE 17 37 00.0 +15
DGAR LR LR
comp=Z,1µm,20.0s,MS5.5
JIRN Jiri 107.77 293 *e*P PKiKP 17 36 44.8 -0.5
comp=Z,22nm,0.7s
MCWV Mont Chateau 108.09 54 PFAKE 17 37 00.0 +14
MCWV LR LR
comp=Z,3µm,20.0s,MS5.8
GUN Gumba 108.11 293 *e*P PKiKP 17 36 44.9 -1.0
comp=Z,32nm,0.9s
PKI Pulchoki 108.41 293 *e*P PKiKP 17 36 45.5 -1.0
comp=Z,29nm,0.7s
CNNC Cliffs of the 108.43 59 PFAKE 17 37 00.0 +14
CNNC LR LR
comp=Z,2µm,22.0s,MS5.5
KKN Kakani 108.58 293 *e*P PKiKP 17 36 45.9 -0.9
comp=Z,36nm,0.8s
ERPA Erie 108.61 51 PFAKE 17 37 00.0 +14
ERPA LR LR
comp=Z,2µm,19.0s,MS5.6
DMN Daman 108.67 293 *e*P PKiKP 17 36 45.0 -2.0
GKN Gorkha 109.18 293 *e*P PKiKP 17 36 45.6 -2.4
comp=Z,29nm,1.1s
SDDR Presa de Saban 109.38 77 PFAKE 17 37 00.0 +11
SDDR LR LR
comp=Z,2µm,20.0s,MS5.7
CBN Corbin 109.59 56 PFAKE 17 37 00.0 +12
CBN LR LR
comp=Z,1µm,19.0s,MS5.6
SSPA Standing Stone 109.78 53 PFAKE 17 37 00.0 +11
SSPA LR LR
comp=Z,2µm,20.0s,MS5.7
KOLN Koldanda 110.00 292 *e*P PKiKP 17 36 47.6 -1.9
comp=Z,28nm,0.8s
DANN Dangsing 110.02 293 *e*P PKiKP 17 36 48.2 -1.3
comp=Z,40nm,0.7s
PYUN Piuthan 110.61 293 *e*P PKiKP 17 36 49.6 -1.0
comp=Z,27nm,0.9s
WMQ Urumqi 110.69 310 *e*PDIF Pdif 17 32 51.0 +0.7
WMQ PP PP 17 37 31.0 +3.3
WMQ SKS SKSdf 17 43 58.0 -1.7
WMQ SS SS 17 52 53.0 -2.2
WMQ PP PP
comp=Z,985nm,8.0s
WMQ LR LR
comp=N,1µm,22.0s,MS5.6
WMQ LR LR
comp=E,2µm,23.0s,MS5.6
WMQ LR LR
comp=Z,2µm,24.0s,MS5.6
BINY Binghamton 111.53 52 PFAKE 17 37 00.0 +8.1
BINY LR LR
comp=Z,1µm,19.0s,MS5.5

LONY Lake Ozonia 112.99 50 PFAKE 17 37 10.0 +15
LONY LR LR
comp=Z,1µm,20.0s,MS5.6
NCB Newcomb 113.13 50 PFAKE 17 37 10.0 +15
NCB LR LR
comp=Z,2µm,21.0s,MS5.6
SJG San Juan 113.74 80 PFAKE 17 37 10.0 +13
SJG LR LR
comp=Z,2µm,20.0s,MS5.6
ZALV Zalesovo Beam 114.21 320 PKiKP PKiKP 17 36 54.9 -1.8
comp=Z,6.8nm,0.7s,baz=148,slow=1.1,SNR=26
ZALV PP PP 17 37 50.3 -2.2
comp=Z,4.8nm,0.8s,baz=99,slow=4.7,SNR=6.5
LBNH Lisbon 114.81 50 PFAKE 17 37 10.0 +12
LBNH LR LR
comp=Z,2µm,20.0s,MS5.7
WES Weston 114.96 53 PFAKE 17 37 10.0 +12
WES LR LR
comp=Z,754nm,19.0s,MS5.3
MK31 Makanchi Array 114.97 312 *e*PKiKP PKiKP 17 36 55.6 -2.8
MK31 Makanchi Array 114.97 312 *i* PKiKP PKiKP 17 36 56.8 -1.6
MK31 pmax pmax
comp=Z,8.0nm,0.7s
MKAR Makanchi Array 114.97 312 PKiKP PKiKP 17 36 56.4 -2.0
comp=Z,6.1nm,0.7s,baz=226,slow=1.0,SNR=30
MKAR PKKP PKKPdf 17 47 59.8 -0.1
comp=Z,2.2nm,1.1s,baz=274,slow=4.6,SNR=3.9
MKAR Makanchi Array 114.97 312 ⇑*i* PKiKP PKiKP 17 36 56.7 -1.6
NVS Novosibirsk 115.22 321 *i* PKiKP PKiKP 17 36 56.1 -2.5
NVS *e*PPP 17 40 22.6
NVS *i* 17 43 58.2
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,10.0nm,1.2s
NVS pmax pmax
comp=Z,17nm,1.2s
BDFB Brasilia 115.43 122 PFAKE 17 37 10.0 +10
BDFB LR LR
comp=Z,2µm,20.0s,MS5.7
GRGR Grenville 115.96 87 PFAKE 17 37 10.0 +8.8
GRGR LR LR
comp=Z,1µm,22.0s,MS5.4
PKME Peaks-Kenny Pk 116.80 50 PFAKE 17 37 10.0 +8.1
PKME LR LR
comp=Z,1µm,19.0s,MS5.6
KURK Kurchatov 117.75 316 ⇑*e*PKiKP PKPdf 17 37 02.3 -1.3
KURK MLR MLR
comp=Z,864nm,21.0s,MS5.3
TRIS Tristan da Cun 118.05 164 PFAKE 17 37 20.0 +15
TRIS LR LR
comp=Z,2µm,21.0s,MS5.7
BBGH Gun Hill 118.22 87 PFAKE 17 37 20.0 +14
BBGH LR LR
comp=Z,3µm,20.0s,MS6.0
BBSR BB Station 118.50 65 PFAKE 17 37 20.0 +14
BBSR LR LR
comp=Z,1µm,21.0s,MS5.4
KSH Kashi 118.63 304 *e*PKP PKPdf 17 37 06.0 +0.4
KSH *e*XPKP 17 37 20.3
KSH *e*PKS 17 40 41.5
KSH PP PP
comp=Z,1µm,4.4s
KSH LR LR
comp=N,207nm,8.4s
KSH LR LR
comp=E,731nm,8.8s
KSH LR LR
comp=Z,1µm,14.2s,MS5.6
TKM2 Tokmak 2 119.27 307 *e*PKPdf PKPdf 17 37 04.9 -1.9
TKM2 LR LR
comp=Z,799nm,22.0s,MS5.3
TKM2 Tokmak 2 119.27 307 P PKPdf 17 37 05.9 -0.9
SNR=13
KBK Karagaybulak 119.73 307 P PKPdf 17 37 07.3 -0.3
SNR=9.1
CHMS Chumysh 119.90 307 P PKPdf 17 37 06.7 -1.2
SNR=11
UCH Uchtor 120.01 307 *e*P PKPdf 17 37 08.5 +0.3
UCH LR LR
comp=Z,394nm,21.0s,MS5.0
USP Ospenovka 120.10 308 P PKPdf 17 37 07.4 -0.9
SNR=10.0
EKS2 Erkin-Say 120.59 307 *e*PKPdf PKPdf 17 37 09.0 -0.3
EKS2 LR LR
comp=Z,952nm,20.0s,MS5.4
EKS2 Erkin-Say 120.59 307 P PKPdf 17 37 09.5 +0.2
SNR=5.2
AML Almayashu 120.61 306 P PKPdf 17 37 09.9 +0.6
SNR=12
ABPO Ambohimpanom 121.33 228 PFAKE 17 37 20.0 +8.5
ABPO LR LR
comp=Z,930nm,21.0s,MS5.4
OPO Ambohidratompo 121.67 228 PKP PKPdf 17 37 12.5 +0.3
comp=Z,9.5nm,0.8s,baz=131,slow=1.1,SNR=15
BVA0 Borovoye Array 122.81 319 *i* PKiKP PKPdf 17 37 12.0 -1.2
BVA0 pmax pmax
comp=Z,9.0nm,1.0s
BVAR Borovoye Array 122.81 319 PKP PKPdf 17 37 12.0 -1.2
comp=Z,17nm,0.8s,baz=80,slow=1.1,SNR=58
BRVK Borovoye 122.87 319 ⇑P PKPdf 17 37 13.0 -0.4
SNR=11
BRVK Borovoye 122.87 319 ⇑*e*PKiKP PKPdf 17 37 12.8 -0.6
BRVK MLR MLR
comp=Z,2µm,19.0s,MS5.7
SUR Sutherland 122.90 196 PFAKE 17 37 30.0 +16
SUR LR LR
comp=Z,2µm,19.0s,MS5.8
KK31 Karatay Array 123.01 307 PKiKP PKPdf 17 37 13.1 -0.8
KK31 pmax pmax
comp=Z,27nm,0.9s
KBL Kabul 123.55 297 *e*PKPdf PKPdf 17 37 14.8 -0.4
MSEY Mahe Island 123.60 247 PFAKE 17 37 30.0 +14
MSEY LR LR
comp=Z,1µm,19.0s,MS5.6
KBS Kingsbay 123.93 358 PFAKE 17 37 30.0 +15
KBS LR LR
comp=Z,999nm,20.0s,MS5.5
SFJD Kangerlussuaq 124.17 23 *i* P PKPdf 17 37 13.8 -1.6
SFJD LR LR
comp=Z,854nm,20.0s,MS5.4
SFJD Kangerlussuaq 124.17 23 *i* P PKPdf 17 37 13.8 -1.6
comp=Z,10nm,0.8s
SUMG Summit 124.89 15 *e*PKPdf PKPdf 17 37 15.9 -0.8
DAG Danmarks Havn 124.92 6 ⇑*i*P PKPdf 17 37 15.7 -1.0
comp=Z,4.5nm,0.8s
DAG
comp=Z,32µm,19.0s
BOSA Boshof 125.10 202 PKP PKPdf 17 37 19.1 +0.5
comp=Z,15nm,1.0s,baz=176,slow=2.8,SNR=8.2
BOSA Boshof 125.10 202 PKiKP PKPdf 17 37 19.1 +0.5
BOSA MLR MLR
comp=Z,2µm,20.0s,MS5.8
SVE Sverdlovsk 127.65 325 *i* PKiKP PKPdf 17 37 22.3 -0.1
SVE pmax pmax
comp=Z,29nm,1.0s
LBTB Lobatse 128.26 204 PFAKE 17 37 40.0 +15
LBTB LR LR
comp=Z,1µm,19.0s,MS5.6
SOKR Solikamsk 128.67 329 ⇑*i* PKiKP PKPdf 17 37 24.2 -0.1
SOKR pmax pmax
comp=Z,70nm,1.1s
ARU Arti 128.86 325 ⇑*e*PKP PKPdf 17 37 24.1 -0.6
ARU LR LR
comp=Z,1µm,22.0s,MS5.6
ARU Arti 128.86 325 *i* PKiKP PKPdf 17 37 24.0 -0.7
ARU 17 44 27.6
RCBR Riachuelo 130.79 121 PFAKE 17 37 40.0 +10
RCBR LR LR
comp=Z,3µm,20.0s,MS6.0
AKTK Aktyubinsk 130.81 318 PKP PKPdf 17 37 28.2 -0.4
AKTO Aktyubinsk 130.81 318 PKP PKPdf 17 37 28.2 -0.4
comp=Z,11nm,0.7s,baz=67,slow=2.7,SNR=26
AKTO Aktyubinsk 130.81 318 PKiKP PKPdf 17 37 28.4 -0.2
AKTO pmax pmax
comp=Z,3.0nm,0.8s
KEV Kevo 131.44 350 PFAKE 17 37 40.0 +11
KEV LR LR
comp=Z,1µm,22.0s,MS5.6
LVZ Lovozero 131.52 346 PFAKE 17 37 40.0 +11
LVZ LR LR
comp=Z,1µm,20.0s,MS5.6
ARCES ARCESS Array B 131.87 350 PKP PKPdf 17 37 29.1 -1.0
comp=Z,13nm,0.7s,baz=48,slow=1.8,SNR=17
APA Apatity 132.07 346 ⇓*i* PKiKP PKPdf 17 37 38.5 +8.0
APA pmax pmax

APA MLR MLR
comp=Z,2nm,0.8s
KLMR Klimovskoe 135.29 337 *e*PKIKP PKPdf 17 37 29.9 -6.8
LSZ Lusaka 135.72 213 *e*PKPdf PKPdf 17 37 35.5 -3.4
LSZ LR LR
comp=Z,2µm,23.0s,MS5.7
TSUM Tsumeb 136.29 197 PFAKE 17 37 50.0 +10
TSUM LR LR
comp=Z,2µm,20.0s,MS5.9
JOF Joensuu 136.36 343 *e*p PKPdf 17 37 39.0 +0.3
comp=Z,18nm,0.7s
JOF Joensuu 136.36 343 *e*PKIKP PKPdf 17 37 39.0 +0.3
JOF pmax pmax
comp=Z,18nm,0.7s
KAF Kangasniemi 138.31 345 *e*p PKPdf 17 37 41.0 -1.3
comp=Z,10nm,0.8s
KAF Kangasniemi 138.31 345 *e*PKIKP PKPdf 17 37 41.0 -1.3
KAF pmax pmax
comp=Z,10.0nm,0.8s
MOS Moscow 139.43 332 *e*PKIKP PKPdf 17 37 41.1 -3.4
MOS *e* 17 37 52.8
MOS pmax pmax
comp=Z,67nm,1.3s
SHEL Horse Pasture 139.86 164 PFAKE 17 38 00.0 +13
SHEL LR LR
comp=Z,1µm,21.0s,MS5.7
VRHR Novokhopersk 140.19 324 *e*PKHKP 17 37 39.3
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.7s
OBN Obninsk 140.29 332 *e*PKPpre 17 37 39.1
OBN LR LR
comp=Z,1µm,21.0s,MS5.7
OBN Obninsk 140.29 332 *i* PKHKP 17 37 36.9
OBN *i* PP 17 40 39.3 -4.8
OBN pmax pmax
comp=Z,58nm,1.4s
VOR Voronezh 141.12 326 PKHKP 17 37 42.0
VOR pmax pmax
comp=Z,150nm,1.5s
VSR Storozhevoye 141.43 326 *e*PKHKP 17 37 41.0
VSR pmax pmax
comp=Z,5.0nm,0.8s
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,1.1s
VORD Divnogorie 141.50 325 *e*PKHKP 17 37 41.6
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
NB2 NORSAR Subarra141.75 355 PKP 17 37 41.5
comp=Z,7.0nm,0.8s,baz=6.8,slow=3.5
NOA NORSAR Array B 141.75 355 PKhKP 17 37 41.9
comp=Z,5.5nm,0.7s,baz=3.2,slow=2.5,SNR=21
NOA PP PP 17 40 55.7 +3.1
comp=Z,2.3nm,0.9s,baz=21,slow=5.9,SNR=3.2
GNI Garni 142.46 307 PKhKP 17 37 46.5
comp=Z,13nm,0.8s,baz=10.0,slow=6.7,SNR=9.5
GNI PKP PKPdf 17 37 51.9 +1.4
comp=Z,15nm,0.8s,baz=347,slow=16,SNR=10
GNI Garni 142.46 307 PKIKP PKPdf 17 37 46.5 -4.0
GNI 17 37 51.9
comp=Z,736nm,21.0s
GNI MLR MLR
KIV Kislovodsk 142.72 313 *e*PKPpre 17 37 46.2
KIV *i* P PKPdf 17 37 50.3 -0.5
KIV LR LR
comp=Z,958nm,21.0s,MS5.5
KIV Kislovodsk 142.72 313 *e*PKHKP 17 37 46.2
KIV *i* PKPdf 17 37 50.3 -0.5
KIV MLR MLR
comp=Z,958nm,21.0s,MS5.5
KONO Kongsberg 143.25 356 *e*PKPpre 17 37 46.0
KONO LR LR
comp=Z,954nm,21.0s,MS5.5
ASCN Ascension 143.86 146 PFAKE 17 38 10.0 +16
ASCN LR LR
comp=Z,1µm,19.0s,MS5.6
HAKT HAKKARI 143.86 303 *i* P PKPdf 17 37 53.4 +0.3
MNK Minsk 144.21 337⇓*e*PKIKP PKPdf 17 37 50.0 -3.1
MNK pmax pmax
comp=Z,410nm,1.4s
ARTV Artvin 144.21 309 *i* P PKPdf 17 37 51.5 -2.0
MLA1 Latheron 144.22 8⇑*e*P PKPdf 17 37 50.2 -2.8
DAGI Agillar 144.25 309 *i* P PKPdf 17 37 51.7 -1.9
DBOC Borcka 144.34 310 *i* P PKPdf 17 37 52.1 -1.6
DBAD Bademkaya 144.43 309 *i* P PKPdf 17 37 52.6 -1.4
DDEM Demirkent 144.43 309 *i* P PKPdf 17 37 52.7 -1.3
MVH1 Achvaich 144.49 8⇑*e*P PKPdf 17 37 50.8 -2.7
KSK Scoval 144.54 11 *e*P PKPdf 17 37 50.8 -2.8
HOMI Horasan 144.58 307 *i* P PKPdf 17 37 53.0 -1.2
KAC Achnashellach 144.74 10⇑*e*P PKPdf 17 37 51.6 -2.3
KPL Plockton 144.83 10⇑*e*P PKPdf 17 37 51.7 -2.4
KPL AMb AMB 17 37 53.8
comp=Z,258nm,1.2s
SOC Sochi 144.85 314 *i* PKP PKPdf 17 37 54.0 -0.6
SOC Sochi 144.85 314 *e*PKIKP PKPdf 17 37 52.9 -1.7
SOC *e* 17 41 07.8
SOC *e*PPP 17 44 29.4
SOC *e*SSS 18 05 24.9
SOC pmax pmax
comp=Z,101nm,0.8s
MDO Dochfour 144.93 9⇑*e*P PKPdf 17 37 52.2 -2.0
MCD Coleburn Disti 144.94 8⇑*e*P PKPdf 17 37 51.9 -2.4
KSB Sheil Bridge 145.00 10⇑*e*P PKPdf 17 37 52.3 -2.1
ERZM Erzurum 145.02 307 *i* P PKPbc 17 37 55.4 +1.0
KAR1 Arisaig 145.21 10⇑*e*P PKPbc 17 37 53.1 -1.3
BNGL BINGÖL 145.46 306 *i* P PKPdf 17 37 56.7 +0.9
BEST Besiri 145.66 304 *i* P PKPdf 17 37 56.6 +0.5
MBAR Mbarara 145.71 230 PFAKE 17 38 10.0 +13
MBAR LR LR
comp=Z,475nm,22.0s,MS5.2
ANN Anapa 145.77 317 *i* PKP2 PKPdf 17 37 55.7 -0.4
ANN pmax pmax
comp=Z,632nm,1.0s
EAB Aberfoyle 146.15 9⇑*e*P PKPdf 17 37 55.9 -0.5
SUW Suwalki 146.15 341 *e*PKP PKPdf 17 37 57.0 +0.5
SUW *e* 17 38 05.7
SUW Suwalki 146.15 341 *e*PKP PKPdf 17 37 57.0 +0.5
SUW *e* 17 38 05.7
MARD Mardin 146.19 303 *i* P PKPdf 17 37 57.9 +0.8
EBH Black Hill 146.21 9⇑*e*P PKPdf 17 37 56.3 -0.2
MUD Monsted U'grnd 146.46 356⇑*i*PKP2 PKPdf 17 37 57.9 +1.0
MUD pmax pmax
comp=Z,120nm,0.9s
MUD Monsted U'grnd 146.46 356⇑*i*P PKPdf 17 37 57.9 +1.0
comp=Z,125nm,0.9s
PGBU Glenifferbraes 146.49 10⇑*e*P PKPdf 17 37 56.5 -0.5
PGBU AMb AMB 17 37 58.9
comp=Z,137nm,1.2s
DIYA Diyarbakir 146.53 305 *i* P PKPdf 17 37 59.5 +1.8
AKASG Malin Array Be 146.56 332 PKPbc PKPdf 17 37 56.4 -0.9
comp=Z,95nm,0.7s,baz=39,slow=4.0,SNR=229
AKASG PP PP 17 41 24.8 +3.0
comp=Z,12nm,0.9s,baz=42,slow=5.8,SNR=7.4
AKBB Malin Array Si 146.56 332 *e*PKPdf PKPdf 17 37 56.4 -0.9
EDI Edinburgh 146.57 8⇑*e*P PKPdf 17 37 57.1 0.0
EDI AMb AMB 17 37 59.4
comp=Z,138nm,1.2s
KIEV Kiev 146.57 332 *e*PKPdf PKPdf 17 37 55.8 -1.5
KIEV LR LR
comp=Z,1µm,22.0s,MS5.7
EAU Auchinoon 146.61 9⇑*e*P PKPdf 17 37 57.5 +0.4
PCA1 Carrot 146.63 10 *e*P PKPdf 17 37 57.7 +0.5
ESY Stoneypath 146.65 8⇑*e*P PKPdf 17 37 58.1 +0.8
EBL Broad Law 146.73 8⇑*e*P PKPdf 17 37 57.9 +0.5
GRSN GIRESUNGRSN 146.89 311 *i* P PKPdf 17 37 59.2 +1.0
COP Copenhagen 146.91 352 *i* PKP2 PKPdf 17 37 59.2 +1.5
COP pmax pmax
comp=Z,41nm,0.9s
COP Copenhagen 146.91 352 *i* P PKPdf 17 37 59.2 +1.5
comp=Z,41nm,0.9s
XSO Sourhope Farm 147.11 8⇑*e*P PKPdf 17 37 59.6 +1.6
ESK Eskdalemuir 147.16 9⇑*e*P PKPdf 17 37 58.7 +0.6
ESK AMb AMB 17 38 02.4
comp=Z,157nm,1.4s
ESK Eskdalemuir 147.16 9 *e*PKP2 PKPbc 17 37 59.4 -0.9
ESK MLR MLR
comp=Z,774nm,21.0s,MS5.5
ELZG Elazig 147.21 306 *i* P PKPbc 17 38 02.0 +0.9
ECK Cauldkaine Hil 147.30 9⇑*e*P PKPdf 17 37 59.7 +1.4
KEMA Kemaliye 147.32 308 *i* P PKPbc 17 38 01.7 +0.4
GAL1 Galloway 147.36 10⇑*e*P PKPdf 17 37 59.1 +0.6
GAL1 AMb AMB 17 38 03.1
comp=Z,304nm,1.6s
XAL Allendale 147.73 8⇑*e*P PKPbc 17 38 01.3 -0.6
DMUB Kingscourt 147.86 13 *e*P PKPdf 17 37 59.2 -0.1
AKCD Akcadag 148.07 306 *i* P PKPbc 17 38 04.2 +0.8
WAR Warsaw 148.34 341 *e*PKP PKPbc 17 38 04.3 +0.7
GKP Gorka Klasztor 148.39 346 *e*PKP PKPbc 17 38 02.7 -1.0
DLF Lyons Farm 148.50 13 *e*P PKPdf 17 38 00.9 +0.5
DSB Dublin 148.59 13 *e*PKPbc PKPbc 17 38 03.5 -0.7
GZT Gaziantep 148.63 305 *i* P PKPbc 17 38 05.1 +0.2
HPK Haverah Park 148.69 8⇑*e*P PKPbc 17 38 03.5 -0.9
HPK AMb AMB 17 38 06.2
comp=Z,232nm,1.7s
HLG Helgoland 148.79 357 *e*PKPbc PKPbc 17 38 05.1 +0.4
BSEG Bad Segeberg 148.86 354 *e*PKPdf PKPdf 17 38 00.8 -0.2
BSEG *e*PKPbc PKPbc 17 38 05.1 +0.2
BOYT Boyabat 148.99 313 *i* P PKPbc 17 38 06.1 +0.5
PINB Pinarbasi 149.06 308 *i* P PKPdf 17 38 02.3 +0.6
LHO Holmfirth 149.06 8⇑*e*P PKPbc 17 38 03.6 -1.8
LVV L'vov 149.36 336 *e*PKP2 PKPbc 17 38 05.9 -0.4
KIS Kishinev 149.37 327⇓*i*PKP2 PKPbc 17 38 06.0 -0.4
KIS pmax pmax
comp=Z,200nm,1.5s
KIS Kishinev 149.37 327⇓*i*P PKPbc 17 38 06.0 -0.4
comp=Z,500nm,1.4s
KBI1 Birley Grange 149.39 8 *e*P PKPbc 17 38 04.5 -1.7
CTKT Corum 149.42 312 *i* P PKPbc 17 38 07.3 +0.6
STNC Stoke 149.46 9⇑*e*P PKPbc 17 38 05.4 -1.0
STNC AMb AMB 17 38 08.3
comp=Z,424nm,1.6s
KWE Weaver Farm 149.58 8 *e*P PKPbc 17 38 05.6 -1.2
RUE Ruedersdorf 149.82 349 *e*PKPdf PKPdf 17 38 03.2 +0.6
RUE Ruedersdorf 149.82 349 *e*PKPdf PKPdf 17 38 02.7 +0.2
RUE *e*PKPbc PKPbc 17 38 07.5 +0.2
COBT Iskenderun 149.89 304 *i* P PKPbc 17 38 08.5 +0.4
HLM1 Long Mynd 149.92 10 *e*P PKPdf 17 38 01.8 -0.9
CWF Charnwood Fore 149.92 8 *e*P PKPbc 17 38 06.2 -1.4
BALT Daday 149.94 315 *i* P PKPbc 17 38 07.8 -0.2
KWP Kalwaria 150.01 337 *e*PKP PKPbc 17 38 07.8 -0.1
KWP *e* 17 38 14.3
KWP Kalwaria 150.01 337 *e*PKP PKPbc 17 38 07.8 -0.1
KWP *e* 17 38 14.3
KWP LR LR
comp=Z,2µm,22.0s,MS5.8
AVNT Avonos 150.14 309 *i* P PKPdf 17 38 05.7 +2.2
CDAG Cicekdag 150.14 311 *i* P PKPbc 17 38 09.3 +0.8
FKH Fakeheh 150.40 299 *e*P PKPbc 17 38 09.3 0.0
MCH1 Michaelchurch 150.41 10⇑*e*P PKPbc 17 38 07.2 -1.5
MCH1 AMb AMB 17 38 10.8
comp=Z,193nm,1.7s
ASF Jabal al Asfar 150.41 295 PKPbc PKPbc 17 38 09.7 +0.2
comp=Z,67nm,0.8s,baz=334,slow=2.1,SNR=93
ASF PKPab PKPab 17 38 15.9 -0.1
comp=Z,51nm,1.0s,baz=0.4,slow=1.5,SNR=13
OJC Ojcow 150.48 341 *e*PKPbc PKPbc 17 38 08.3 -0.7
BUR08 Bucovina Ar. S 150.60 332 *e*P PKPdf 17 38 04.5 +0.6
IBBN Ibbenburen 150.68 357 *e*PKPdf PKPdf 17 38 03.6 -0.3
IBBN *e*PKPbc PKPbc 17 38 09.4 0.0
IBBN *e*PKPab PKPab 17 38 16.4 +0.1
STHS Stebnicka Huta 150.71 338 *e*PKP PKPbc 17 38 10.0 +0.4
STHS *e* 17 38 17.8
KOLS Kolonicke sedl 150.75 336 *e*PKP PKPbc 17 38 10.5 +0.8
HGH Gray Hill 150.78 10 *e*P PKPdf 17 38 02.8 -1.2
KSP Ksiaz 150.87 345 *e*PKP PKPbc 17 38 10.0 +0.1
KSP *e* 17 38 17.6
KSP Ksiaz 150.87 345 *e*PKPdf PKPdf 17 38 04.6 +0.4
KSP *e*PKPbc PKPbc 17 38 09.6 -0.3
KSP *e*PKPab PKPab 17 38 17.3 +0.2
KSP LR LR
comp=Z,3µm,23.0s,MS6.0
SKP1 Kophill 150.98 8 *e*P PKPbc 17 38 08.8 -1.4
NIE Niedzica 151.02 339 *e*PKPbc PKPbc 17 38 10.4 +0.1
RCY Rachaya 151.04 298 *e*P PKPbc 17 38 11.0 +0.1
WTSB Winterswijk 151.06 358 *e*PKP PKPbc 17 38 09.2 -1.1
comp=Z,173nm,1.3s
WTSB Winterswijk 151.06 358 *ex* PKPab 17 38 17.4 -0.5
CRVS Cervenica-Dubn 151.07 337 *e*PKP PKPbc 17 38 10.8 +0.4
BHL Bhannes 151.08 299 *e*P PKPbc 17 38 11.0 0.0
CLL Collm 151.08 350 *i* PKP PKPdf 17 38 04.2 -0.3
CLL ⇑*i*PKP PKPbc 17 38 10.5 +0.1
CLL *ep*PKP pPKPdf 17 38 22.0 +6.0
CLL LR LR
comp=Z,700nm,21.8s,MS5.4
CLL Collm 151.08 350⇑*i*PKIKP PKPdf 17 38 04.2 -0.3
CLL *i* 17 38 10.5
CLL pmax pmax
comp=Z,27nm,1.4s
CLL MLR MLR
comp=Z,700nm,21.8s,MS5.4
CLL Collm 151.08 350 *e*PKPdf PKPdf 17 38 04.4 -0.1
CLL *e*PKPbc PKPbc 17 38 10.4 0.0
CLL *e*PKPab PKPab 17 38 18.6 +0.6
CLL *e*PP PP 17 41 44.4 -3.3
CLL Collm 151.08 350 *i* PKPdf PKPdf 17 38 04.2 -0.3
comp=Z,27nm,1.4s
CLL ⇑*i*PKPbc PKPbc 17 38 10.5 +0.1
comp=Z,165nm,1.0s
CLL ⇓*i*PKPab PKPab 17 38 17.5 -0.5
comp=Z,247nm,1.8s
CLL *i* pPKPbc pPKPbc 17 38 22.7 +0.9
CLL *i* pPKPab pPKPab 17 38 30.1 +0.9
CLL *i* (PKSdf) 17 41 44.6
comp=Z,42nm,1.7s
CLL *ep*PP PP 17 41 53.0 +5.3
CLL *i* (sPP) 17 42 02.9
CLL *ex* x 17 42 17.0
CLL L 17 48 00.0
comp=Z,700nm,21.8s
ANTO Ankara 151.13 312 *e*PKPbc PKPbc 17 38 10.3 -0.6
ANTO LR LR
comp=Z,620nm,21.0s,MS5.4
HEX Exmoor 151.16 12 *e*P PKPbc 17 38 09.3 -1.2
UPC Upice 151.24 345 *e*PKPDF PKPdf 17 38 04.7 -0.1
UPC ⇑*e*PKP PKPdf 17 38 10.8 +6.0
UPC *e*PKPAB PKPab 17 38 19.6 +0.9
OKC Ostrava-Krasne 151.31 342 *e*PKPDF PKPdf 17 38 04.9 0.0
OKC ⇑*e*PKP PKPbc 17 38 11.1 +0.1
OKC *e*PKPAB PKPab 17 38 18.4 -0.6
DPC Dobruska-Polom 151.32 345 *e*PKPDF PKPdf 17 38 05.3 +0.4
DPC ⇑*e*PKP PKPbc 17 38 11.3 +0.3
DPC *e*PKPAB PKPab 17 38 18.6 -0.4
WOL Wolverton 151.33 8 *e*P PKPbc 17 38 09.2 -1.8
WOL AMb AMB 17 38 13.1
comp=Z,292nm,1.9s
BRG Berggiesshubel 151.33 348⇑*i*PKIKP PKPdf 17 38 04.6 -0.3
BRG *i* 17 38 11.3
BRG *i* 17 38 19.0
BRG pmax pmax
comp=Z,20nm,1.4s
BRG Berggiesshubel 151.33 348 *e*PKPdf PKPdf 17 38 03.8 -1.1
BRG *e*PKPbc PKPbc 17 38 11.1 +0.1
BRG *e*PKPab PKPab 17 38 19.7 +0.6
BRG Berggiesshubel 151.33 348⇑*i*PKP PKPdf 17 38 04.6 -0.3
comp=Z,33nm,1.4s
BRG *i* 17 38 11.3
comp=Z,117nm,0.9s
BRG *i* 17 38 19.0
comp=Z,85nm,1.0s
BRG *i* 17 38 30.6
comp=Z,189nm,1.1s
BRG *i* 17 41 44.4
comp=Z,57nm,1.7s
FBE Freiberg 151.40 349 *e*PKPdf PKPdf 17 38 04.3 -0.7
FBE *e*PKPbc PKPbc 17 38 11.5 +0.4
FBE *e*PKPab PKPab 17 38 19.9 +0.6
FBE *e*PP PP 17 41 46.6 -2.9
MORC Moravsky Berou 151.53 343 *e*PKPdf PKPdf 17 38 04.5 -0.8
MORC *e*PKPbc PKPbc 17 38 10.7 -0.8
MORC *e*PKPab PKPab 17 38 18.2 -1.7
PVCC Panska Ves 151.54 347 *e*PKPDF PKPdf 17 38 05.3 0.0
PVCC ⇑*e*PKP PKPbc 17 38 11.6 +0.1
PVCC *e*PKPAB PKPab 17 38 19.8 -0.1
BUG Bochum--Univer 151.56 357 *e*PKPbc PKPbc 17 38 11.4 -0.1
BUG *e*PKPab PKPab 17 38 20.0 0.0
MOX Moxa 151.94 351 *e*PKP PKPdf 17 38 05.9 0.0
MOX *e* 17 38 12.5
comp=Z,136nm,1.8s
MOX *e* 17 38 20.7
comp=Z,168nm,1.5s
MOX Moxa 151.94 351 *e*PKPdf PKPdf 17 38 05.3 -0.6
MOX *e*PKPbc PKPbc 17 38 12.3 -0.1
MOX *e*PKPab PKPab 17 38 20.9 -0.7
UBBA Unterbreizbach 151.97 353 *e*PKPdf PKPdf 17 38 05.0 -0.9
UBBA *e*PKPbc PKPbc 17 38 12.0 -0.4
UBBA *e*PP PP 17 41 50.6 -2.2
WERD Werda 152.03 350 *e*PKPdf PKPdf 17 38 05.8 -0.2
WERD *e*PKPbc PKPbc 17 38 12.7 +0.1
TANN Tannenbergstha 152.03 350 *e*PKPdf PKPdf 17 38 05.1 -0.9
TANN *e*PKPbc PKPbc 17 38 12.7 +0.1
TANN *e*PP PP 17 41 51.1 -2.1
PRU Pruhonice 152.06 347 *e*PKPDF PKPdf 17 38 05.9 -0.2
PRU ⇑*e*PKP PKPbc 17 38 12.7 0.0
PRU *e*PKPAB PKPab 17 38 20.6 -1.5
GUNZ Gunzen 152.11 350 *e*PKPdf PKPdf 17 38 05.2 -0.9
GUNZ *e*PKPbc PKPbc 17 38 13.1 +0.3
WERN Wernitzgruen 152.17 350 *e*PKPdf PKPdf 17 38 06.3 +0.1
WERN *e*PKPbc PKPbc 17 38 13.3 +0.4
WERN *e*PP PP 17 41 51.7 -2.2
KDHN Kadinhani 152.20 310 *i* P PKPbc 17 38 12.2 -1.2
NKC Novy Kostel 152.21 350 *e*PKPDF PKPdf 17 38 06.3 0.0
NKC ⇑*e*PKP PKPbc 17 38 13.1 +0.1
NKC *e*PKPAB PKPab 17 38 21.2 -1.6
UCC Uccle 152.26 1 PKPbc PKPbc 17 38 13.1 0.0
UCC PKPab PKPab 17 38 22.6 -0.3
BEBN Eben Emael 152.26 359 PKPbc PKPbc 17 38 13.2 +0.1
BEBN PKPab PKPab 17 38 22.6 -0.3
HGN Heimansgroeve 152.29 359 *e*PKP PKPbc 17 38 12.3 -0.9
comp=Z,58nm,1.2s
HGN Heimansgroeve 152.29 359 *ex* PKPab 17 38 22.2 -0.8
VYHS Vyhne 152.30 340 *e*PKP PKPbc 17 38 13.5 +0.2
KOLL Kolacno 152.36 341 *e*PKIKP PKPbc 17 38 13.7 +0.3
KOLL *e* 17 38 22.6
KOLL Kolacno 152.36 341 *e*PKP PKPbc 17 38 13.7 +0.3
KOLL *e* 17 38 22.6
KOLL *e* 17 38 33.7
MEM Membach 152.44 359 PKPbc PKPbc 17 38 13.4 -0.1
MEM PKPab PKPab 17 38 22.3 -1.4
PSZ Piszkesteto 152.46 338 *e*PKPdf PKPdf 17 38 06.5 -0.2
PSZ LR LR
comp=Z,1µm,20.0s,MS5.7
PSZ Piszkesteto 152.46 338⇑*e*PKP PKPdf 17 38 06.6 -0.1
PSZ *e* PKPbc 17 38 13.3 -0.3
PSZ *e*PKP PKPab 17 38 24.7 +0.8
TREC Trest 152.50 345 *e*PKPDF PKPdf 17 38 06.5 -0.2
TREC ⇑*e*PKP PKPbc 17 38 13.6 -0.1
TREC *e*PKPAB PKPab 17 38 21.0 -3.0
MANZ Manzenberg 152.51 350 *e*PKPdf PKPdf 17 38 06.5 -0.2
MANZ *e*PKPbc PKPbc 17 38 13.9 +0.2
SNF Seneffe 152.54 1 PKPbc PKPbc 17 38 14.0 +0.3
SNF PKPab PKPab 17 38 23.3 -0.9
CSS Prodhromos 152.63 302 *e*PKPbc PKPbc 17 38 12.7 -1.7
CSS LR LR
comp=Z,726nm,21.0s,MS5.5
BCLA Clavier 152.64 360 PKPbc PKPbc 17 38 14.2 +0.2
BCLA PKPab PKPab 17 38 24.3 -0.2
BORA Eskisehir 152.70 314 *i* P PKPbc 17 38 13.6 -0.9
ROTZ Rotzenmuhle 152.70 350 *e*PKPdf PKPdf 17 38 06.8 -0.2
ROTZ *e*PKPbc PKPbc 17 38 14.3 +0.2
ROTZ *e*PKPab PKPab 17 38 25.4 +0.6
ROTZ *e*PP PP 17 41 54.7 -2.3
TNS Taunus Mts 152.71 355 *e*PKPdf PKPdf 17 38 06.2 -0.8
TNS *e*PKPbc PKPbc 17 38 14.2 +0.1
TNS *e*PKPab PKPab 17 38 25.0 +0.2
MODS Modra-Piesok 152.88 342 *e*PKIKP PKPdf 17 38 07.9 +0.6
MODS *e* 17 38 15.1
MODS Modra-Piesok 152.88 342 *e*PKP PKPdf 17 38 07.9 +0.6
MODS *e* 17 38 15.1
MODS *e* 17 38 25.9
MODS *e* 17 38 35.5
MODS *e*PP PP 17 41 51.1 -7.0
BOLV Bolvadin 152.93 311 *i* P PKPbc 17 38 14.8 -0.2
GRF Grafenberg Arr 152.93 351 *e*PKIKP PKPdf 17 38 06.7 -0.7
GRF *e* 17 38 14.6
GRF *e* 17 41 55.4
GRF MLR MLR
comp=Z,900nm,20.3s,MS5.6
GRF Grafenberg Arr 152.93 351 *e*PKPdf PKPdf 17 38 06.7 -0.7
GRF *e*PKPbc PKPbc 17 38 14.6 0.0
GRF *e*PKPab PKPab 17 38 26.2 +0.4
GRF *e*PP PP 17 41 55.4 -2.8
GRF *e*L 18 53 23.3
comp=Z,867nm,20.3s
GIVF Givet 152.96 0 *e*PKP1 PKPbc 17 38 14.6 -0.1
comp=Z,158nm,1.2s
DOU Dourbes 152.96 1 PKPbc PKPbc 17 38 14.8 +0.2
DOU PKPab PKPab 17 38 24.8 -1.1
BAIF Baives 152.99 1 *e*PKP1 PKPbc 17 38 14.8 +0.1
comp=Z,120nm,1.2s
KHC Kasperske Hory 153.07 348 *e*PKPDF PKPdf 17 38 07.5 -0.1
KHC ⇑*e*PKP PKPbc 17 38 15.0 +0.1
KHC *e*PKPAB PKPab 17 38 23.0 -3.4
ZST Bratislava 153.09 342 *e*PKP PKPab 17 38 27.2 +0.7
ZST *e* 17 38 35.0
ZST *e*PP PP 17 41 53.6 -5.7
ABH Alteburg 153.11 356 PKP PKPdf 17 38 06.3 -1.3
BUD Budapest 153.13 339⇑*e*pPKP pPKPdf 17 38 15.1 -4.1
BUD *e*PKP PKPab 17 38 26.8 +0.1
WET Wettzell 153.19 349 *e*PKPdf PKPdf 17 38 07.0 -0.8
WET *e*PKPbc PKPbc 17 38 14.0 -0.3
TOD Tromm 153.29 355 PKP PKPdf 17 38 07.2 -0.7
RUP Ruppelstein 153.31 357 PKP PKPdf 17 38 05.2 -2.7
GEC2 GERESS Array S 153.32 347 *e*PKPdf PKPdf 17 38 07.3 -0.7
GEC2 *e*PKPbc PKPbc 17 38 15.3 -0.2
GERES GERESS Array B 153.32 347 PKP PKPdf 17 38 07.6 -0.4
comp=Z,2.2nm,0.9s,baz=103,slow=1.8,SNR=17
GERES PKPbc PKPbc 17 38 15.5 0.0
comp=Z,6.9nm,0.8s,baz=22,slow=1.4,SNR=30
GERES PKPab PKPab 17 38 24.2 -3.3
comp=Z,18nm,0.9s,baz=40,slow=1.7,SNR=22
WLF Walferdange 153.38 358 PKPbc PKPbc 17 38 16.4 +0.8
WLF PKPab PKPab 17 38 26.3 -1.4
WLF Walferdange 153.38 358 *e*PKIKP PKPbc 17 38 16.1 +0.5
WLF MLR MLR
comp=Z,1µm,22.0s,MS5.6
KTD Kalmit 153.63 356 PKP PKPdf 17 38 08.1 -0.3
ISP Isparta 153.63 310 *e*PKPbc PKPbc 17 38 15.3 -1.2
ISP LR LR
comp=Z,835nm,22.0s,MS5.5
CONA Conrad Observa 153.67 343⇓*i*PKPdf PKPdf 17 38 08.3 -0.2
comp=Z,11nm,1.1s
CONA ⇓*i*PKiKP PKiKP 17 38 16.7 +0.3
comp=Z,69nm,1.5s
CSNA Conrad Observa 153.67 343⇓*i*PKPdf PKPdf 17 38 08.3 -0.2
comp=Z,10nm,1.1s
CSNA ⇓*i*PKiKP PKiKP 17 38 16.8 +0.4
comp=Z,64nm,1.5s
GDZ Gediz 153.75 313 *i* P PKPbc 17 38 16.4 -0.4
ROSF Rostrenen 153.87 13 *e*PKP1 PKPbc 17 38 16.4 -0.3
FLN La Foliniere 153.93 8 *e*PKP1 PKPbc 17 38 16.2 -0.6
FLN *e*MLR MLR
comp=Z,1µm,20.8s,MS5.3
FLN La Foliniere 153.93 8 *e*PKIKP PKPbc 17 38 16.2 -0.6
FLN MLR MLR
comp=Z,1µm,20.8s,MS5.6
LANF Langenberg 153.99 356 PKP PKPdf 17 38 07.6 -1.3
STU Stuttgart 154.08 354 *e*PKPbc PKPbc 17 38 07.4 -1.7
STU Stuttgart 154.08 354 *e*PKPdf PKPdf 17 38 08.7 -0.3
STU *e*PKPbc PKPbc 17 38 17.1 0.0
STU *e*PKPab PKPab 17 38 30.9 +0.2
SGMF Saint Gilles 154.09 12 *e*PKP1 PKPbc 17 38 16.3 -0.9
comp=Z,24nm,0.8s
MOA Molln 154.14 346⇑*i*PKPdf PKPdf 17 38 08.0 -1.2
comp=Z,15nm,1.7s
LDF La Druitiere 154.14 8 *e*PKP1 PKPbc 17 38 16.7 -0.6
comp=Z,36nm,1.0s
GRR Gorron 154.24 9 *e*PKP1 PKPbc 17 38 17.0 -0.5
QUIF Quistinic 154.29 13 *e*PKP1 PKPbc 17 38 16.7 -0.9
FUR Furstenfeldbru 154.41 350 *e*PKPdf PKPdf 17 38 09.0 -0.5
FUR *e*PKPbc PKPbc 17 38 17.8 -0.1
FUR *e*PKPab PKPab 17 38 32.6 +0.5
RJOB Jochberg 154.56 348 *e*PKPdf PKPdf 17 38 08.9 -0.8
RJOB *e*PKPbc PKPbc 17 38 17.8 -0.4
RJOB *e*PKPab PKPab 17 38 33.4 +0.7
MEZF Maizieres J'vi 154.56 360 *e*PKP1 PKPbc 17 38 18.2 0.0
comp=Z,105nm,1.3s
CDF Champ du Feu 154.59 357 *e*PKP1 PKPbc 17 38 18.0 -0.2
comp=Z,38nm,1.1s

BFO	**Black Forest**	**154.60**	**355**	*e*PKPbc	PKPbc	17 38 17.7	-0.5		
BFO				LR	LR				
	comp=Z,930nm,20.0s,MS5.6								
BFO	**Black Forest**	**154.60**	**355**	*e*PKPdf	PKPdf	17 38 08.9	-0.9		
BFO				*e*PKPbc	PKPbc	17 38 18.1	-0.2		
BFO				*e*PKPab	PKPab	17 38 33.0	+0.1		
BFO				*e*PP	PP	17 42 07.3	-0.3		
ECH	**Echery**	**154.79**	**357**	PKP	PKPdf	17 38 10.0	-0.1		
ECH				*e*PKPbc	PKPbc	17 38 20.8	+2.1		
THEF	**They Montfort**	**154.82**	**359**	PKP	PKPdf	17 38 10.4	+0.3		
KOGS	**Kog**	**154.92**	**342**	*e*PKPab	PKPab	17 38 34.8	+0.5		
HAU	**Haudompre**	**155.03**	**358**	*e*PKP1	PKPdf	17 38 18.9	+8.5		
HAU				*e*MLR	MLR				
	comp=Z,733nm,19.0s,MS5.2								
HAU	**Haudompre**	**155.03**	**358**	*e*PKIKP	PKPdf	17 38 18.9	+8.5		
HAU				MLR	MLR				
	comp=Z,730nm,19.0s,MS5.5								
PERS	**Pernice**	**155.06**	**343**	*e*PKPdf	PKPdf	17 38 09.0	-1.5		
PERS				*ep*PKPdf	pPKPdf	17 38 19.6	-2.4		
PERS				*e*PKPab	PKPab	17 38 35.2	+0.3		
FELD	**Feldberg im Sc**	**155.07**	**355**	PKP	PKPdf	17 38 09.6	-0.9		
GROS	**Grobnik**	**155.12**	**343**	*e*PKPdf	PKPdf	17 38 09.7	-0.9		
GROS				*ep*PKPdf	pPKPdf	17 38 19.8	-2.3		
GROS				*e*PKPab	PKPab	17 38 35.1	-0.1		
MOF	**Molkenrain**	**155.15**	**357**	PKP	PKPdf	17 38 10.2	-0.4		
HINF	**Hinteralfeld**	**155.20**	**357**	*e*PKP1	PKPdf	17 38 19.1	+8.5		
MOTA	**Moosalm**	**155.23**	**350**	⇓*i*PKPdf	PKPdf	17 38 10.1	-0.6		
	comp=Z,4.0nm,0.7s								
MOTA				⇑*i*PKPbc	PKPbc	17 38 19.0	+8.3		
	comp=Z,14nm,1.0s								
MOTA				⇓*ip*PKPbc	pPKPbc	17 38 28.8	-2.3		
	comp=Z,29nm,1.0s								
DAVA	**Damuels**	**155.47**	**352**	⇑*i*PKPdf	PKPdf	17 38 11.2	+0.2		
	comp=Z,13nm,1.7s								
DAVA				⇑*i*PKiKP	PKiKP	17 38 20.8	+0.7		
	comp=Z,24nm,1.2s								
ABTA	**Abfaltersbach**	**155.56**	**348**	⇑*i*PKPdf	PKPdf	17 38 09.9	-1.3		
	comp=Z,16nm,1.3s								
ABTA				⇓*ip*PKPdf	pPKPdf	17 38 19.7	-2.9		
	comp=Z,31nm,1.2s								
FETA	**Feichten**	**155.61**	**351**	⇑*i*PKPdf	PKPdf	17 38 10.9	-0.4		
	comp=Z,14nm,1.0s								
FETA				⇑*ip*PKPdf	pPKPdf	17 38 19.8	-2.9		
	comp=Z,23nm,1.0s								
LOMF	**Lomont**	**155.67**	**357**	PKP	PKPdf	17 38 11.3	0.0		
HYF	**Humbligny**	**155.72**	**4**	*e*PKP1	pPKPdf	17 38 20.8	-2.0		
PRK	**Paraskevi**	**155.75**	**317**	*e*P	PKPab	17 38 39.0	+0.8		
LJU	**Ljubljana**	**155.76**	**344**	*e*PKPdf	PKPdf	17 38 11.0	-0.5		
LOR	**Lormes**	**155.78**	**2**	*e*PKP1	pPKPdf	17 38 20.7	-2.2		
	comp=Z,50nm,1.1s								
LOR				*e*MLR	MLR				
	comp=Z,1μm,21.0s,MS5.4								
LOR	**Lormes**	**155.78**	**2**	*e*PKIKP	pPKPdf	17 38 20.7	-2.2		
LOR				MLR	MLR				
	comp=Z,1μm,21.0s,MS5.7								
VOY	**Vojsko**	**155.93**	**345**	*e*PKPdf	PKPdf	17 38 10.9	-0.8		
VOY				*e*		17 38 19.8			
VOY				*e*		17 38 31.4			
SSF	**Saint Saulge**	**155.97**	**3**	*e*PKP1	pPKPdf	17 38 21.1	-2.1		
	comp=Z,48nm,1.1s								
CEY	**Cerknica**	**156.07**	**344**	*e*PKPdf	PKPdf	17 38 10.7	-1.2		
CEY				*e*PKPab	PKPab	17 38 39.1	-0.2		
MFF	**Saint Martin d**	**156.09**	**9**	*e*PKP1	pPKPdf	17 38 20.8	-2.6		
	comp=Z,96nm,1.4s								
AVF	**Avril sur Loir**	**156.23**	**3**	*e*PKP1	pPKPdf	17 38 22.3	-1.2		
TUE	**Stuetta**	**156.33**	**353**	*e*PKPdf	PKPdf	17 38 11.6	-0.6		
TUE				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
SMF	**Signal de Mont**	**156.40**	**2**	*e*PKP1	pPKPdf	17 38 22.7	-1.1		
CABF	**La Chapelle**	**156.44**	**358**	*e*PKP1	pPKPdf	17 38 22.1	-1.7		
BGF	**Bois d'Agland**	**156.44**	**4**	*e*PKP1	pPKPdf	17 38 21.8	-2.0		
PLG	**Polygyros**	**156.73**	**322**	*e*P	PKPab	17 38 31.5	-11		
AGO	**Saint Agoulin**	**156.96**	**3**	PKP	PKPdf	17 38 15.9	+2.9		
PLDF	**La Plantade**	**157.06**	**3**	PKP	PKPdf	17 38 17.7	+4.6		
LBL	**Lubilhac**	**157.78**	**3**	PKP	PKPdf	17 38 16.1	+2.0		
TIR	**Tirane**	**157.88**	**329**	PFAKE		17 38 30.0	+16		
TIR				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
BNI	**Bardonecchia**	**157.97**	**357**	PFAKE		17 38 30.0	+16		
BNI				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
NPS	**Neapolis**	**158.32**	**309**	*e*P	pPKPdf	17 38 30.5	+3.9		
VLC	**Villacollemand**	**158.45**	**349**	PFAKE		17 38 30.0	+15		
VLC				LR	LR				
	comp=Z,1μm,22.0s,MS5.7								
EVR	**Evrytania**	**158.65**	**322**	*e*P	pPKPdf	17 38 28.0	+1.2		
JAN	**Janina**	**158.66**	**325**	*e*P	PKPdf	17 38 35.0	+20		
VAM	**Vamos**	**159.25**	**311**	*e*P	pPKPdf	17 38 29.5	+1.8		
VLI	**Veliai**	**159.37**	**316**	*e*P	PKPdf	17 38 33.5	+17		
AQU	**L'Aquila**	**159.49**	**342**	PFAKE		17 38 30.0	+14		
AQU				LR	LR				
	comp=Z,1μm,20.0s,MS5.8								
MTE	**Manteigas**	**159.66**	**29**	PFAKE		17 38 30.0	+14		
MTE				LR	LR				
	comp=Z,1μm,21.0s,MS5.7								
EPLA	**Plasencia**	**160.56**	**26**	PKP	PKPdf	17 38 18.2	+0.7		
LIC	**Lamto**	**160.70**	**148**	*e*PKIKP	PKPdf	17 38 17.5	-1.0		
	comp=Z,111nm,1.5s								
LIC	**Lamto**	**160.70**	**148**	*e*PKIKP	PKPdf	17 38 17.8	-0.7		
	comp=Z,57nm,1.3s								
LIC				*e*MLR	MLR				
	comp=Z,2μm,21.2s								
LIC	**Lamto**	**160.70**	**148**	*e*PKPdf	PKPdf	17 38 17.8	-0.7		
LIC				LR	LR				
	comp=Z,790nm,21.3s								
CUC	**Castrocucco**	**160.76**	**334**	PFAKE		17 38 30.0	+12		
CUC				LR	LR				
	comp=Z,2μm,21.0s								
EVO	**Evora**	**160.92**	**33**	*e*PKIKP	PKPdf	17 38 18.2	+0.3		
	comp=Z,68nm,1.4s								
EVO				*e*MLR	MLR				
	comp=Z,1μm,22.0s								
KIC	**Kosan Boka**	**160.95**	**149**	*e*PKIKP	PKPdf	17 38 17.9	-0.8		
	comp=Z,323nm,1.6s								
TIP	**Timpagrande**	**161.04**	**331**	PFAKE		17 38 30.0	+12		
TIP				LR	LR				
	comp=Z,1μm,21.0s								
TIC	**Toumodi**	**161.06**	**148**	*e*PKIKP	PKPdf	17 38 18.0	-0.8		
	comp=Z,276nm,1.5s								
DBIC	**Dimbokro**	**161.17**	**148**	PKP	PKPdf	17 38 17.9	-1.1		
	comp=Z,5.1nm,0.9s,baz=197,slow=5.9,SNR=4.2								
DBIC	**Dimbokro**	**161.17**	**148**	*e*PKIKP	PKPdf	17 38 17.1	-1.9		
DBIC				MLR	MLR				
	comp=Z,2μm,20.0s								
EBAD	**Badajoz**	**161.23**	**30**	PKP	PKPdf	17 38 18.6	+0.3		
PAB	**San Pablo**	**161.69**	**24**	PFAKE		17 38 30.0	+11		
PAB				LR	LR				
	comp=Z,1μm,20.0s								
ESDC	**Sonseca Array**	**161.71**	**23**	PKP	PKPdf	17 38 18.0	-0.7		
	comp=Z,2.2nm,0.7s,baz=353,slow=3.4,SNR=11								
ESDC				PKPab	PKPab	17 39 03.1	-0.8		
	comp=Z,6.2nm,0.7s,baz=326,slow=3.8,SNR=10								
ESDC	**Sonseca Array**	**161.71**	**23**	PKP	PKPdf	17 38 19.2	+0.5		
ESLA	**Sonseca Array**	**161.71**	**23**	PFAKE		17 38 30.0	+11		
ESLA				LR	LR				
	comp=Z,6μm,22.0s								
EMIN	**Mina Concepcio**	**162.18**	**32**	PKP	PKPdf	17 38 20.3	+1.0		
EADA	**Adamuz**	**162.79**	**26**	PKP	PKPdf	17 38 22.5	+2.6		
EBAN	**Banos Encina**	**163.11**	**25**	PKP	PKPdf	17 38 22.3	+2.1		
EVIA	**Vianos**	**163.14**	**21**	PKP	PKPdf	17 38 21.3	+1.1		
VSL	**Villasalto**	**163.16**	**348**	PFAKE		17 38 30.0	+10		
VSL				LR	LR				
	comp=Z,1μm,20.0s								
SFS	**San Fernando**	**163.43**	**33**	PFAKE		17 38 30.0	+9.5		
SFS				LR	LR				
	comp=Z,2μm,21.0s								
EQES	**Quesada**	**163.69**	**23**	PKP	PKPdf	17 38 21.1	+0.3		
EHUE	**Huescar**	**163.85**	**22**	PKP	PKPdf	17 38 20.5	-0.4		
WDD	**Wield Dalam**	**164.77**	**329**	PFAKE		17 38 30.0	+8.2		
WDD				LR	LR				
	comp=Z,1μm,19.0s								
KEST	**Kesra**	**166.78**	**344**	PKP	PKPdf	17 38 23.1	-0.3		
	comp=Z,1.6nm,0.8s,baz=317,slow=6.5,SNR=3.8								
KEST				PKPab	PKPab	17 39 25.4	-0.9		
	comp=Z,8.2nm,1.0s,baz=120,slow=1.2,SNR=8.3								
TORD	**Torodi Ar. Bea**	**169.69**	**161**	PKP	PKPdf	17 38 24.9	-1.1		
	comp=Z,6.3nm,1.1s,baz=323,slow=1.3,SNR=16								
TORD				PKPab	PKPab	17 39 39.6	+0.1		
	comp=Z,5.9nm,1.1s,baz=124,slow=2.6,SNR=2.7								
TAM	**Tamanrasset**	**179.50**	**244**	*e*PKPdf	PKPdf	17 38 29.4	+0.6		

*ISK **15** 17:20:43.1,3635N×2938E,h27km,MD2.8*
*ISCJB **15** 17:20:46.0±0.7,3694N±004×2932E±005,h10km,Error ellipse: s-maj=6.0km s-min=5.2km az=162.9*
*CSEM **15** 17:20:45.5±0.2,3709N×2949E,h20km,ML3.0,Error ellipse: s-maj=5.4km s-min=3.9km az=24.0*
*DDA **15** 17:20:48.5,3730N×2929E,h7km±9km,Md2.7,ML3.0*

ISC 15 17:20:46.2±0.7,3695N±005×2932E±007,h13km±9km,n6, σ1§08/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**34**	*i* P	**Pg**	**17 20 51.9**	**-1.4**
GOLH				*i* S	**Sg**	**17 20 58.6**	**+0.6**
FETY	**Fethiye**	**0.36**	**211**	*e*PG	**Pg**	**17 20 51.9**	**-1.5**
FETY				*e*SG	**Sg**	**17 20 58.4**	**0.0**
ELL	**Elmali**	**0.51**	**112**	*e*PG	**Pg**	**17 20 55.5**	**-0.8**
ELL				*e*SG	**Sg**	**17 21 04.5**	**+1.4**
TURN	**Turunc**	**0.58**	**263**	*e*P	**Pg**	**17 21 00.6**	**+3.1**
TURN				*i* S	**Sg**	**17 21 13.1**	**+7.9**
YER	**Yerkesik**	**0.85**	**283**	*e*PN	**Pn**	**17 21 04.3**	**+0.4**
AYDN	**Tasoluk**	**1.35**	**302**	*i* P	**Pn**	**17 21 10.3**	**-0.5**
AYDN				*i* S	**Sn**	**17 21 28.7**	**+0.1**

*TAP **15** 17:21:35.5,2487N×12274E,h5km,ML3.1,D*
*ISCJB **15** 17:21:36.4±1.0,2487N±008×12285E±004,h15km±8km, Error ellipse: s-maj=14.8km s-min=4.9km az=20.0*
*JMA **15** 17:21:36.3±0.1,2491N×12289E,h15km,M2.3*

ISC 15 17:21:35.1±1.1,2494N±008×12287E±004,h4km±5km,n28, σ1§00/34,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**165**	P	**Pg**	**17 21 45.2**	**+0.6**
YOJ				*e*S	**Sg**	**17 21 51.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.49**	**165**	P	**Pg**	**17 21 45.4**	**+0.8**
	baz=149						
YOJ				*e*S	**Sg**	**17 21 53.1**	**+2.2**
	baz=149						
TWB1	**Santiao Chiao**	**0.80**	**275**	*e*P	**Pg**	**17 21 52.9**	**+2.4**
	baz=281						
TWB1				*e*S	**Sg**	**17 22 01.1**	**+0.2**
	baz=281						
TWC	**Suao**	**0.98**	**251**	*e*P	**Pg**	**17 21 53.1**	**-0.9**
	baz=252						
TWC				*e*S	**Sg**	**17 22 05.3**	**-1.3**
	baz=252						
IRIF	**Iriomote-Funau**	**0.99**	**127**	P	**Pg**	**17 21 54.2**	**+0.1**
IRIF				*e*S	**Sg**	**17 22 06.9**	**0.0**
TWE	**Neicheng**	**1.11**	**259**	P	**Pg**	**17 21 55.4**	**-1.1**
	baz=261						
TWE				*e*S	**Sg**	**17 22 12.4**	**+1.5**
	baz=261						
ENA	**Nanau**	**1.14**	**244**	*e*P	**Pg**	**17 21 56.0**	**-1.1**
	baz=243						
ENTT	**Nioudou**	**1.22**	**256**	*e*P	**Pg**	**17 21 58.2**	**-0.3**
	baz=257						
JIJ	**Ishigaki jima**	**1.29**	**116**	P	**Pg**	**17 21 58.9**	**-1.0**
NSK	**Sanguang**	**1.40**	**260**	*e*P	**Pn**	**17 22 01.9**	**+0.4**
	baz=261						
NNS	**Nan Shan**	**1.45**	**250**	*e*P	**Pn**	**17 22 01.4**	**-0.7**
	baz=250						
WHF	**Hehuan Shan**	**1.66**	**242**	*e*P	**Pn**	**17 22 04.0**	**-1.0**
	baz=241						
TWT	**Tachien**	**1.68**	**247**	*e*P	**Pn**	**17 22 06.2**	**+0.8**
	baz=246						
ESL	**Shilin**	**1.72**	**230**	*e*P	**Pn**	**17 22 05.3**	**-0.6**
	baz=228						
NSTT	**Nanjuang**	**1.72**	**260**	*e*P	**Pn**	**17 22 07.3**	**+1.4**
	baz=261						
TWQ1	**Liyutan**	**1.99**	**253**	*e*P	**Pn**	**17 22 09.5**	**-0.1**
	baz=253						
EHY	**Hungye**	**2.00**	**225**	*e*P	**Pn**	**17 22 07.5**	**-2.3**
	baz=223						
SMLT	**Sun Moon Lake**	**2.08**	**240**	*e*P	**Pn**	**17 22 11.1**	**+0.2**
	baz=239						
TYC	**Yuchr**	**2.10**	**241**	*e*P	**Pn**	**17 22 12.0**	**+0.8**
	baz=240						
TWF1	**Yuli**	**2.13**	**223**	*e*P	**Pn**	**17 22 10.5**	**-1.1**
	baz=221						
YUS	**Yu-Shan**	**2.27**	**231**	*e*P	**Pn**	**17 22 13.0**	**-0.4**
	baz=229						
ALS	**Alishan**	**2.36**	**233**	*e*P	**Pn**	**17 22 15.2**	**+0.5**
	baz=232						
CHN5	**Tsauling**	**2.40**	**237**	*e*P	**Pn**	**17 22 15.1**	**-0.2**
	baz=235						
ELDTW	**Lidau**	**2.43**	**225**	*e*P	**Pn**	**17 22 15.7**	**+0.1**
	baz=223						
CHN4	**Tsaushan**	**2.61**	**233**	*e*P	**Pn**	**17 22 19.4**	**+1.3**
	baz=232						
STYT	**Tauyuan**	**2.62**	**228**	*e*P	**Pn**	**17 22 17.5**	**-0.7**
	baz=226						
WTP	**Ta-pu**	**2.66**	**231**	*e*P	**Pn**	**17 22 18.6**	**-0.3**
	baz=230						
CHN1	**Nanshi**	**2.76**	**231**	*e*P	**Pn**	**17 22 22.0**	**+1.8**
	baz=230						

*GUC **15** 17:22:55.3±2.3,2309S×7087W,h15km±26km,ML3.6*
*ISCJB **15** 17:22:56.9±1.4,2310S±005×7085W±009,h29km±8km, Error ellipse: s-maj=13.3km s-min=7.5km az=11.2*
*IDC **15** 17:23:04.5±3.5,2293S×7034W,h77km±25km,mb3.6/1, mb1 3.6/4,mb1mx3.4/17,mbtmp3.5/4,Error ellipse: s-maj=57.5km s-min=27.3km az=106.0*

ISC 15 17:22:58.8±1.2,2314S±005×707W±01,h42km±15km,n15, σ1§25/23,2C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.55**	**117**	⇑*i*P	**Pn**	**17 23 09.3**	**-1.0**
CEN1				*i* S	**Sn**	**17 23 19.2**	**+0.7**
CEN1				AML	AML	17 23 20.5	
	comp=E,4μm,0.3s						
ANCH	**Antofagasta**	**0.62**	**151**	*e*P	**Pn**	**17 23 09.7**	**-1.5**
ANCH				*i* S	**Sn**	**17 23 19.9**	**-0.2**
ANCH				AML	AML	17 23 22.4	
	comp=N,4μm,0.4s						
PB06	**Plate Boundary**	**1.15**	**69**	*e*P	**Pn**	**17 23 16.9**	**-1.6**
PB06				*i* S	**Sn**	**17 23 33.0**	**-0.1**
PB04	**Plate Boundary**	**1.44**	**53**	*e*P	**Pn**	**17 23 13.1**	**-9.3**
PB04				*i* S	**Sn**	**17 23 26.5**	**-14**
PB04				AML	AML	17 23 31.9	
	comp=N,6μm,0.6s						
CPN1	**Cerro Paranal**	**1.52**	**169**	*e*P	**Pn**	**17 23 23.4**	**0.0**
CPN1				*i* S	**Sn**	**17 23 43.6**	**+1.7**
CPN1				AML	AML	17 23 48.3	
	comp=E,1μm,0.7s						
PB07	**Plate Boundary**	**1.61**	**29**	*e*P	**Pn**	**17 23 24.0**	**-0.7**
PB07				*i* S	**Sn**	**17 23 44.3**	**+0.1**
LVC	**Limon Verde**	**1.76**	**73**	P	**Pn**	**17 23 27.8**	**+1.0**
	comp=E,52nm,0.3s,SNR=21						
LVC				S	**Sn**	**17 23 51.2**	**+3.2**
	comp=E,484nm,0.3s,SNR=27						
LVC	**Limon Verde**	**1.76**	**73**	⇑*i*P	**Pn**	**17 23 27.6**	**+0.8**
LVC				*i* S	**Sn**	**17 23 51.3**	**+3.3**
LVC				AML	AML	17 23 53.9	
	comp=N,1μm,0.3s						
PB01	**Plate Boundary**	**2.38**	**29**	*e*P	**Pn**	**17 23 36.6**	**+1.3**
PB01				*i* S	**Sn**	**17 24 09.3**	**+6.0**
PB01				AML	AML	17 24 12.6	
	comp=E,603nm,0.6s						
LPAZ	**La Paz**	**7.24**	**20**	P	**Pn**	**17 24 44.6**	**+2.5**
	comp=E,0.2nm,0.3s,baz=192,slow=8.1,SNR=4.8						
CFAA	**Coronel Fontan**	**8.72**	**166**	P	**Pn**	**17 25 10.1**	**+7.7**
	comp=E,0.2nm,0.3s,baz=349,slow=13,SNR=24						
CFAA				S	**Sn**	**17 26 56.8**	**+17**
	comp=E,0.1nm,0.3s,baz=334,slow=18,SNR=3.1						
SIV	**San Ignacio**	**11.55**	**54**	P	**Pn**	**17 25 39.0**	**-2.1**
	comp=E,0.7nm,0.3s,baz=251,slow=11,SNR=18						
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**17 35 01.3**	**-0.2**
	comp=E,0.5nm,0.5s,baz=257,slow=6.2,SNR=6.4						
ASAR	**Alice Springs**	**127.68**	**209**	PKP	PKPdf	17 42 01.1	+0.9
	comp=E,0.2nm,0.7s,baz=161,slow=1.7,SNR=3.4						
MKAR	**Makanchi Array**	**147.94**	**36**	PKPbc	PKPbc	17 42 39.9	+0.5
	comp=E,0.5nm,0.6s,baz=336,slow=4.3,SNR=2.7						

*NEIC **15** 17:25:27.4,1830N×10024W,h58km,MD3.7(MEX),After MEX.*

MEX 15 17:25:27.4±0.7,1830N×10024W,h58km±13km,MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEIG	**Mezcala**	**0.70**	**122**	*i* P	Pn	17 25 40.2	-1.3
MEIG				*i* S	Sn	17 25 50.3	-1.5
PLIG	**Platanillo**	**0.70**	**82**	*i* P	Pn	17 25 40.3	-1.3
PLIG				*i* S	Sn	17 25 50.3	-1.7
CAIG	**El Cayaco**	**1.25**	**181**	*i* P	Pn	17 25 46.8	-1.8
CAIG				*i* S	Sn	17 26 02.6	-1.8
MZVM		**1.30**	**47**	*e*P	Pn	17 25 49.1	-0.2
MZVM				*i* S	Sn	17 26 04.7	-1.1
ZIIG	**Zihuatanejo**	**1.36**	**240**	*i* P	Pn	17 25 49.2	-0.9
ZIIG				*i* S	Sn	17 26 04.9	-2.2
ACX	**Acapulco**	**1.46**	**168**	*i* P	Pn	17 25 50.8	-0.7
ACX				*i* S	Sn	17 26 06.9	-2.7
PPM	**Popocatepetl**	**1.71**	**63**	*e*P	Pn	17 25 53.9	-1.0
PPM				*i* S	Sn	17 26 12.9	-2.7
UTMO	**Huajuapan**	**2.36**	**101**	*i* P	Pn	17 26 04.2	+0.4
UTMO				*i* S	Sn	17 26 29.8	-1.9
PNIG	**Pinotepa**	**2.77**	**133**	*e*P	Pn	17 26 10.9	+1.6
PNIG				*i* S	Sn	17 26 39.1	-2.5

*IDC **15** 17:25:51.0±1.0,2287S×7098W,h0km,mb4.1/2,mb1 4.0/4, mb1mx3.9/16,mbtmp4.1/4,ML3.9/2,MS4.4/2,Ms1 4.4/2, ms1mx3.6/22,Error ellipse: s-maj=41.3km s-min=15.3km az=170.0*
*GUC **15** 17:25:52.3±1.4,2316S×7098W,h33km±7km,ML4.1*
*ISCJB **15** 17:25:54.8±1.1,2323S±005×7086W±008,h33km,mb3.9/2, Error ellipse: s-maj=11.1km s-min=6.7km az=179.2*
*NEIC **15** 17:25:55.9±0.8,2326S×7074W,h35km,mb3.3/1,Error ellipse: s-maj=17.8km s-min=13.5km az=115.0*

ISC 15 17:25:56.8±1.1,2325S±005×7074W±009,h35km,n24, σ1§39/28,mb3.9/2,1C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.51**	**105**	*i* P	**Pn**	**17 26 06.0**	**-1.6**
CEN1				*i* S	**Sn**	**17 26 15.0**	**-0.2**
CEN1				AML	AML	17 26 18.9	
	comp=E,7μm,0.5s						
ANCH	**Antofagasta**	**0.52**	**145**	⇓*i*P	**Pn**	**17 26 06.6**	**-1.2**
ANCH				*i* S	**Sn**	**17 26 15.9**	**+0.5**
ANCH	**Antofagasta**	**0.52**	**145**	⇓*i*P	**Pn**	**17 26 06.7**	**-1.1**
ANCH				*i* S	**Sn**	**17 26 15.9**	**+0.5**
ANCH				AML	AML	17 26 18.3	
	comp=N,12μm,0.5s						
PB06	**Plate Boundary**	**1.21**	**63**	*e*P	**Pn**	**17 26 15.8**	**-1.3**
PB06				*i* S	**Sn**	**17 26 34.5**	**+2.2**
PB04	**Plate Boundary**	**1.52**	**50**	*e*P	**Pn**	**17 26 12.2**	**-9.3**
PB04				*i* S	**Sn**	**17 26 27.2**	**-13**
PB04				AML	AML	17 26 30.5	
	comp=N,19μm,0.6s						
PB07	**Plate Boundary**	**1.71**	**28**	*e*P	**Pn**	**17 26 21.7**	**-2.5**
PB07				*i* S	**Sn**	**17 26 45.5**	**+0.7**
LVC	**Limon Verde**	**1.80**	**70**	Pg	**Pn**	**17 26 25.9**	**+0.5**
	comp=N,291nm,0.3s,SNR=131						
LVC				Lg		17 26 52.3	
	comp=N,1μm,0.3s,SNR=38						
LVC	**Limon Verde**	**1.80**	**70**	Pg	**Pn**	**17 26 25.9**	**+0.5**
LVC				Lg		17 26 52.3	
LVC	**Limon Verde**	**1.80**	**70**	⇑*i*P	**Pn**	**17 26 25.8**	**+0.5**
LVC				*i* S	**Sn**	**17 26 51.6**	**+4.6**
LPAZ	**La Paz**	**7.35**	**20**	Pn	**Pn**	**17 27 42.0**	**+0.3**
	comp=N,2.5nm,0.3s,baz=207,slow=8.9,SNR=20						
LPAZ				LR	LR	17 29 41.2	
	comp=N,483nm,21.2s,baz=152,slow=32						
CFAA	**Coronel Fontan**	**8.61**	**166**	Pn	**Pn**	**17 28 07.5**	**+8.5**
	comp=N,0.4nm,0.3s,baz=346,slow=12,SNR=15						
CFAA				Sn	**Sn**	**17 29 57.0**	**+22**
	comp=N,0.2nm,0.3s,baz=169,slow=12,SNR=15						
CFAA	**Coronel Fontan**	**8.61**	**166**	Pn	**Pn**	**17 28 07.5**	**+8.5**
CFAA				Sn	**Sn**	**17 29 57.0**	**+22**
SIV	**San Ignacio**	**11.62**	**53**	Pn	**Pn**	**17 28 37.6**	**-2.6**
	comp=N,1.6nm,0.3s,baz=243,slow=12,SNR=18						
SIV				Sn	**Sn**	**17 30 53.1**	**+4.2**
	comp=N,0.1nm,0.3s,baz=307,slow=20,SNR=3.3						
PLCA	**Paso Flores**	**17.43**	**180**	P	**Pn**	**17 30 00.5**	**+3.4**
	comp=N,0.1nm,0.3s,baz=355,slow=11,SNR=2.7						
PLCA	**Paso Flores**	**17.43**	**180**	P	**Pn**	**17 30 00.6**	**+3.4**
	comp=N,2.5nm,1.0s						
BDFB	**Brasilia**	**22.71**	**75**	P	**P**	**17 30 55.8**	**+0.2**
	comp=N,1.0nm,0.4s,mb3.6,baz=227,slow=19,SNR=4.0						
ULM	**Lac du Bonnet**	**76.49**	**344**	LR	LR	18 11 06.1	
	comp=N,2μm,19.1s,baz=274,slow=36						
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P	**P**	**17 37 59.6**	**-1.0**
	comp=N,3.5nm,0.8s,mb4.3,baz=255,slow=5.0,SNR=16						
EJIF	**Jimena Fronter**	**85.53**	**47**	PKP	**P**	**17 38 32.9**	**+1.6

YOJ	**Yonaguni jima**	**0.41 138**	P	Pg	18 04 40.6	+1.0
YOJ			*e*S	Sg	18 04 46.9	+1.9
YOJ	**Yonaguni jima** baz=138	**0.41 138**	P	Pg	18 04 40.6	+1.0
YOJ	baz=138		S	Sg	18 04 47.0	+2.0
TWB1	**Santiao Chiao** baz=289	**0.69 290**	*e*P	Pg	18 04 44.4	-0.5
TWC	**Suao** baz=258	**0.80 259**	*e*P	Pg	18 04 47.7	+0.8
TWC	baz=258		*e*S	Sg	18 04 59.6	+2.4
ENA	**Nanau** baz=248	**0.94 249**	*e*P	Pg	18 04 49.6	-0.1
TWE	**Neicheng** baz=267	**0.95 267**	*e*P	Pg	18 04 49.5	-0.2
IRIF	**Iriomote-Funau**	**1.03 115**	P	Pg	18 04 49.3	-2.0
IRIF			*e*S	Sg	18 05 02.7	-1.9
PCYT	**Pengchaiyu** baz=326	**1.03 326**	*e*P	Pg	18 04 51.7	+0.3
TWA	**Mucha** baz=281	**1.04 282**	*e*P	Pg	18 04 52.4	+0.8
ENTT	**Nioudou** baz=262	**1.05 263**	P	Pg	18 04 52.1	+0.4
NSK	**Sanguang** baz=265	**1.23 266**	P	Pb	18 04 55.2	+0.1
NNS	**Nan Shan** baz=254	**1.26 255**	*e*P	Pn	18 04 55.9	+0.4
JKRS	**Kuro-shima**	**1.30 114**	P	Pn	18 04 53.6	-2.4
JKRS			*e*S	Sb	18 05 09.5	-3.6
JIJ	**Ishigaki jima**	**1.37 107**	P	Pn	18 04 53.5	-3.5
WHF	**Hehuan Shan** baz=244	**1.45 245**	*e*P	Pn	18 04 58.8	+0.6
TWT	**Tachien** baz=249	**1.49 250**	*e*P	Pn	18 04 59.6	+0.9
ESL	**Shilin** baz=230	**1.50 231**	*e*P	Pn	18 04 59.1	+0.3
NSTT	**Nanjuang** baz=264	**1.56 265**	*e*P	Pn	18 05 01.4	+1.8
EHY	**Hungye** baz=225	**1.78 225**	*e*P	Pn	18 05 03.9	+1.2
SMLT	**Sun Moon Lake** baz=241	**1.87 242**	*e*P	Pn	18 05 06.3	+2.4
TYC	**Yuchr** baz=242	**1.90 243**	*e*P	Pn	18 05 04.8	+0.6
TWF1	**Yuli** baz=222	**1.91 223**	*e*P	Pn	18 05 06.2	+1.8
YUS	**Yu-Shan** baz=231	**2.05 232**	*e*P	Pn	18 05 08.7	+2.4
ALS	**Alishan** baz=234	**2.14 235**	*e*P	Pn	18 05 09.2	+1.6
CHN5	**Tsauling** baz=237	**2.19 238**	*e*P	Pn	18 05 09.9	+1.6
ELDTW	**Lidau** baz=224	**2.21 225**	*e*P	Pn	18 05 09.9	+1.4
CHN4	**Tsaushan** baz=233	**2.39 234**	*e*P	Pn	18 05 13.6	+2.5
STYT	**Tauyuan** baz=228	**2.40 229**	*e*P	Pn	18 05 11.7	+0.5
WTP	**Ta-pu** baz=231	**2.44 232**	*e*P	Pn	18 05 12.7	+0.9
CHN1	**Nanshi** baz=231	**2.54 232**	*e*P	Pn	18 05 15.1	+2.0
SGST	**Jiashian** baz=229	**2.57 230**	*e*P	Pn	18 05 15.6	+2.1
SSD	**Sandimen** baz=223	**2.77 224**	*e*P	Pn	18 05 18.9	+2.6
SONM	**Songino Array** 0.2nm,0.5s,baz=144,slow=10,SNR=3.9	**26.40 335**	P	Px	18 10 26.0	
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=348,slow=8.3,SNR=3.4	**45.86 165**	P	P	18 12 55.8	+1.3
ASAR	**Alice Springs** 0.4nm,1.0s,baz=346,slow=6.6,SNR=2.4	**49.36 166**	P	P	18 13 23.4	+1.8

*IDC **15** 18:27:38.6±2.5,2279S×17500W,h0km,mb4.1/5, mb1 4.4/5,mb1mx4.0/17,mbtmp4.1/5,Error ellipse: s-maj=150.2km s-min=27.4km az=155.0*
*ISCJB **15** 18:27:43.3±1.0,224S±02×1753W±02,h33km,mb4.2/7, Error ellipse: s-maj=31.7km s-min=21.5km az=9.6*
*NEIC **15** 18:27:43.4±0.9,2240S×17525W,h25km,mb4.3/2,Error ellipse: s-maj=37.2km s-min=22.6km az=160.0*

ISC 15 18:27:45.2±0.9,224S±02×1753W±02,h35km,n13,σ0⁰98/9, mb4.2/7,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** 15nm,1.2s,mb4.8,baz=117,slow=9.0,SNR=3.9	**35.85**	**266**	P	**P**	**18 34 42.8**	**+1.0**
ASAR	**Alice Springs** 0.7nm,0.4s,mb4.0,baz=96,slow=7.2,SNR=32	**46.56**	**258**	P	**P**	**18 36 09.3**	**-0.5**
ASAR	0.6nm,1.0s,baz=50,slow=2.2,SNR=4.8			PcP	PcP	18 37 44.0	+0.3
WRAB	**Tennant Creek** 1.2nm,0.7s,mb3.9	**46.84**	**263**	*e*P	**P**	**18 36 10.8**	**-1.3**
WRA	**Warramunga Arr** 1.1nm,0.5s,mb4.0,baz=92,slow=8.3,SNR=28	**46.85**	**263**	P	**P**	**18 36 11.5**	**-0.6**
WRA	0.4nm,0.7s,baz=95,slow=3.0,SNR=4.2			PcP	PcP	18 37 44.8	0.0
QSPA	**South Pole Qui** 5.4nm,1.2s,mb4.5	**67.65**	**180**	*e*P	**P**	**18 38 38.6**	**+0.5**
NVAR	**Mina Array Bea** 0.5nm,0.7s,mb3.6,baz=219,slow=9.3,SNR=5.5	**80.73**	**42**	P	**P**	**18 39 54.3**	**-0.6**
VNA3	**Neumayer Olymp**	**86.04**	**175**	*e*	**P**	**18 40 21.1**	**-0.7**
VNA3				*e*	pP	18 40 30.4	-2.5
VNA3				*e*		18 40 35.8	
VNA2	**Neumayer--Watz** baz=186,slow=4.9	**86.51**	**176**	*e*	**P**	**18 40 24.5**	**+0.4**
VNA2				*e*	pP	18 40 33.2	-2.0
VNA2				*e*		18 40 38.1	
CMAR	**Chiang Mai Arr** 1.8nm,0.8s,mb4.5,baz=120,slow=2.8,SNR=18	**93.12**	**289**	P	**P**	**18 40 58.3**	**+2.2**
AKASG	**Malin Array Be** 1.7nm,0.5s,baz=44,slow=4.2,SNR=12	**145.90**	**332**	PKPbc	PKPbc	18 47 19.7	-1.1
AKASG	**Malin Array Be**	**145.90**	**332**	PKPbc	PKPbc	18 47 19.7	-1.1
CLL	**Collm** comp=Z,4.0nm,0.9s	**150.46**	**349**	*i* PKPbc	PKPbc	18 47 32.6	-0.2
GERES	**GERESS Array B** comp=Z,0.5nm,0.7s,baz=36,slow=3.7,SNR=3.9	**152.69**	**347**	PKPbc	PKPbc	18 47 37.8	-0.2

IDC 15 18:34:54.2±1.3,930N×14159E,h0km,mb3.8/6,mb1 4.1/6, mb1mx3.9/18,mbtmp3.8/6,Error ellipse: s-maj=41.2km s-min=22.2km az=81.0,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 1.6nm,0.9s,baz=14,slow=9.7,SNR=12	**29.92**	**194**	P	P	18 41 03.6	-0.5
ASAR	**Alice Springs** 0.6nm,0.6s,baz=18,slow=13,SNR=12	**33.61**	**193**	P	P	18 41 37.0	+0.5
CMAR	**Chiang Mai Arr** 1.7nm,0.8s,baz=94,slow=6.7,SNR=18	**42.30**	**287**	P	P	18 42 50.5	+0.4
SONM	**Songino Array** 0.8nm,1.1s,baz=134,slow=4.2,SNR=2.3	**48.54**	**329**	P	P	18 43 39.5	+0.3
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=123,slow=4.5,SNR=4.6	**62.43**	**318**	P	P	18 45 18.4	-0.8
NVAR	**Mina Array Bea** 1.0nm,0.6s,baz=272,slow=5.0,SNR=7.3	**92.10**	**51**	P	P	18 48 06.3	+0.5

IDC 15 18:50:55.1±3.9,329S×10117E,h0km,mb3.3/4,mb1 3.6/4, mb1mx3.4/17,mbtmp3.4/4,Error ellipse: s-maj=150.7km s-min=21.4km az=58.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=182,slow=10,SNR=6.7	**21.72**	**354**	P	P	18 55 48.3	+0.2
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=287,slow=8.4,SNR=6.8	**36.34**	**120**	P	P	18 58 01.2	+0.1
ASAR	**Alice Springs** 0.3nm,0.4s,baz=302,slow=7.7,SNR=7.7	**37.55**	**126**	P	P	18 58 11.2	-0.1
SONM	**Songino Array** 0.2nm,0.5s,baz=189,slow=6.7,SNR=4.2	**51.12**	**5**	P	P	18 59 59.8	+0.2
MKAR	**Makanchi Array** 7.3nm,0.4s,baz=158,slow=8.8,SNR=59	**52.58**	**344**	P	P	19 00 10.4	-0.2

IDC 15 18:51:41.4±10.0,379S×6752E,h0km,mb3.7/3,mb1 3.9/3, mb1mx3.5/20,mbtmp3.7/3,Error ellipse: s-maj=339.4km s-min=41.3km az=65.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=193,slow=3.8,SNR=2.6	**59.32**	**12**	P	P	19 01 44.8	-0.2
SONM	**Songino Array** 0.9nm,0.9s,baz=211,slow=8.0,SNR=4.5	**61.64**	**29**	P	P	19 02 01.4	+0.4
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=284,slow=6.0,SNR=5.6	**66.93**	**110**	P	P	19 02 36.3	0.0

*CSEM **15** 18:53:47.9±0.6,4267N×4866E,h2km,mb4.2,Error ellipse: s-maj=12.4km s-min=4.9km az=39.0*
*ISCJB **15** 18:53:52.5±1.2,4231N±004×4826E±007,h3km±9km, Error ellipse: s-maj=9.5km s-min=5.3km az=150.2*
*MOS **15** 18:53:53.5±1.7,4237N×4819E,h13km,mb4.2/1,Error ellipse: s-maj=20.2km s-min=11.5km az=39.7*

ISC 15 18:53:52.9±1.2,4234N±004×4827E±007,h12km±8km,n24, σ1⁰67/43,1D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSR	**Manas**	**0.55**	**312**	PG	**Pg**	**18 54 02.8**	**-0.9**
MNSR				*e*S	**Sg**	**18 54 11.2**	**+0.3**
MNSR	comp=Z,123nm,0.3s			pmax	pmax		
MNSR	**Manas** comp=Z,123nm,0.3s	**0.55**	**312**	Pg	**Pg**	**18 54 02.8**	**-0.9**
MNSR				*e*Sg	**Sg**	**18 54 11.2**	**+0.3**
KSMR	**Kasumkent**	**0.74**	**188**	*e*PG	**Pg**	**18 54 08.0**	**+0.7**
KSMR				*i* S	**Sg**	**18 54 24.5**	**+7.6**
KSMR	comp=Z,809nm,0.1s			pmax	pmax		
KSMR	**Kasumkent** comp=Z,809nm,0.1s	**0.74**	**188**	*e*Pg	**Pg**	**18 54 08.0**	**+0.7**
KSMR				*i* Sg	**Sg**	**18 54 24.5**	**+7.6**
MAK	**Makhachkala**	**0.84**	**318**	*e*PG	**Pg**	**18 54 12.7**	**+3.5**
MAK				*e*	**Sg**	**18 54 27.0**	**+6.7**
MAK	comp=Z,139nm,0.3s			pmax	pmax		
MAK	comp=N,619nm,0.4s			smax			
MAK	comp=E,241nm,0.4s			smax			
MAK	**Makhachkala** comp=E,139nm,0.3s	**0.84**	**318**	*e*Pg	**Pg**	**18 54 12.7**	**+3.5**
MAK	comp=E,619nm,0.4s			*e*Sg	**Sg**	**18 54 27.0**	**+6.7**
GNBR	**Gunib**	**0.97**	**274**	↓ *i* PG	**Pg**	**18 54 09.0**	**-2.6**
GNBR				*i* S	**Sg**	**18 54 25.2**	**+0.9**
GNBR	comp=Z,137nm,0.3s			pmax	pmax		
GNBR	**Gunib** comp=Z,137nm,0.3s	**0.97**	**274**	*i* Pg	**Pg**	**18 54 09.0**	**-2.6**
GNBR				*i* Sg	**Sg**	**18 54 25.2**	**+0.9**
BUJR	**Buynaksk**	**0.99**	**300**	*e*Pg	**Pg**	**18 54 09.2**	**-2.8**
BUJR				*e*Sg	**Sg**	**18 54 27.2**	**+2.3**
XNZR	**Khunzakh**	**1.18**	**281**	*e*PG	**Pg**	**18 54 16.0**	**+0.4**
XNZR				*i* S	**Sg**	**18 54 33.6**	**+2.7**
XNZR	comp=Z,102nm,0.7s			pmax	pmax		
XNZR	**Khunzakh** comp=Z,102nm,0.7s	**1.18**	**281**	*e*Pg	**Pg**	**18 54 16.0**	**+0.4**
XNZR				*i* Sg	**Sg**	**18 54 33.6**	**+2.7**
DBC	**Dubki**	**1.26**	**303**	*e*PG	**Pn**	**18 54 13.5**	**-2.8**
DBC				*i* S	**Sb**	**18 54 33.0**	**+0.2**
DBC	comp=Z,52nm,0.2s			pmax	pmax		
DBC	**Dubki** comp=Z,52nm,0.2s	**1.26**	**303**	*e*Pg	**Pn**	**18 54 13.5**	**-2.8**
DBC				*i* Sg	**Sb**	**18 54 33.0**	**+0.2**
SIZA	**Siyzn** SNR=12	**1.34**	**159**	P	**Pn**	**18 54 17.1**	**-0.3**
SEKA	**Sheki** SNR=17	**1.38**	**216**	P	**Pn**	**18 54 21.8**	**+3.9**
BTLR	**Botlikh**	**1.55**	**283**	PG	**Pn**	**18 54 19.8**	**-0.5**
BTLR				*i* S	**Sg**	**18 54 43.0**	**+0.2**
BTLR	comp=Z,107nm,0.5s			pmax	pmax		
BTLR	**Botlikh** comp=Z,107nm,0.5s	**1.55**	**283**	Pg	**Pn**	**18 54 19.8**	**-0.5**
BTLR				*i* Sg	**Sg**	**18 54 43.0**	**+0.2**
PQL	**Pirkuli** SNR=21	**1.56**	**171**	P	**Pn**	**18 54 21.9**	**+1.5**
BRDA	**Brd** SNR=4.0	**2.23**	**202**	P	**Pn**	**18 54 32.9**	**+3.3**
GANJ	**Ganja** SNR=11	**2.23**	**222**	P	**Pg**	**18 54 32.6**	**-3.2**
GANJ				S	**Sg**	**18 55 04.9**	**+0.2**
DGRG	**David-gareji**	**2.34**	**249**	P	**Pg**	**18 54 36.1**	**-1.6**
DGRG				S	**Sg**	**18 55 10.3**	**+2.2**
MTA	**Mtatsminda**	**2.67**	**257**	P	**Pg**	**18 54 39.0**	**-5.1**
MTA				S	**Sg**	**18 55 15.8**	**-2.9**
TBLG	**Delisi**	**2.70**	**258**	P	**Pg**	**18 54 40.8**	**-3.9**
TBLG				S	**Sg**	**18 55 17.5**	**-2.1**
ONI	**Oni**	**3.58**	**276**	P	**Pg**	**18 54 56.6**	**-4.8**

*TAP **15** 19:07:22.9,2477N×12275E,h8km±1km,ML2.8,D*
*ISCJB **15** 19:07:23.5±0.8,2486N±007×12281E±003,h19km±6km, Error ellipse: s-maj=12.2km s-min=4.2km az=12.1*
*JMA **15** 19:07:23.7±0.1,2487N×12281E,h26km±3km,M2.3*

ISC 15 19:07:22.5±1.0,2489N±007×12281E±003,h9km±5km,n30, σ0⁰90/36,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.47**	**157**	P	**Pg**	**19 07 32.8**	**+1.2**
YOJ				*e*S	**Sg**	**19 07 39.2**	**+1.5**
TWB1	**Santiao Chiao** baz=288	**0.75**	**279**	*e*P	**Pg**	**19 07 38.1**	**+1.1**
TWC	**Suao** baz=258	**0.92**	**252**	*e*P	**Pg**	**19 07 39.4**	**-0.7**
TWC	baz=258			S	**Sg**	**19 07 51.5**	**-0.5**
NWF	**Wu-fen Shan** baz=288	**0.95**	**281**	*e*P	**Pg**	**19 07 41.7**	**+0.9**
IRIF	**Iriomote-Funau**	**1.01**	**123**	P	**Pg**	**19 07 41.7**	**-0.1**
TWE	**Neicheng** baz=266	**1.05**	**261**	*e*P	**Pg**	**19 07 41.9**	**-0.8**
TWE	baz=266			*e*S	**Sg**	**19 07 55.9**	**-0.4**
ENA	**Nanau** baz=248	**1.07**	**245**	P	**Pg**	**19 07 41.9**	**-1.3**
ENA	baz=248			*e*S	**Sg**	**19 07 55.5**	**-1.6**
TWA	**Mucha** baz=281	**1.11**	**275**	*e*P	**Pb**	**19 07 45.1**	**+1.1**
ENTT	**Nioudou** baz=262	**1.16**	**258**	*e*P	**Pb**	**19 07 44.7**	**+0.1**
ENTT	baz=262			*e*S	**Sb**	**19 07 59.9**	**+0.1**
HATJ	**Hateruma jima**	**1.23**	**132**	P	**Pn**	**19 07 45.3**	**-0.6**
JKRS	**Kuro-shima**	**1.27**	**121**	P	**Pn**	**19 07 45.9**	**-0.6**
JIJ	**Ishigaki jima**	**1.32**	**113**	P	**Pn**	**19 07 46.5**	**-0.7**
JIJ				*e*S	**Sb**	**19 08 03.3**	**-1.3**
NSK	**Sanguang** baz=265	**1.33**	**261**	*e*P	**Pn**	**19 07 47.4**	**0.0**
TWD	**Chiawan** baz=236	**1.37**	**234**	*e*P	**Pn**	**19 07 47.8**	**+0.1**
NNS	**Nan Shan** baz=254	**1.38**	**251**	*e*P	**Pn**	**19 07 47.9**	**-0.1**
WHF	**Hehuan Shan** baz=244	**1.59**	**242**	*e*P	**Pn**	**19 07 51.4**	**+0.6**
ESL	**Shilin** baz=230	**1.65**	**230**	*e*P	**Pn**	**19 07 50.9**	**-0.8**
NSTT	**Nanjuang** baz=265	**1.66**	**261**	*e*P	**Pn**	**19 07 52.3**	**+0.5**
TWQ1	**Liyutan** baz=257	**1.93**	**254**	*e*P	**Pn**	**19 07 54.4**	**-1.1**
SMLT	**Sun Moon Lake** baz=225	**2.01**	**240**	*e*P	**Pn**	**19 07 57.6**	**+1.0**
TYC	**Yuchr** baz=227	**2.03**	**241**	*e*P	**Pn**	**19 07 56.5**	**-0.4**
TWF1	**Yuli** baz=210	**2.06**	**222**	*e*P	**Pn**	**19 07 57.4**	**+0.1**
YUS	**Yu-Shan** baz=230	**2.20**	**231**	*e*P	**Pn**	**19 07 60.0**	**+0.8**
ALS	**Alishan** baz=233	**2.29**	**233**	*e*P	**Pn**	**19 08 02.3**	**+1.9**
CHN5	**Tsauling** baz=238	**2.33**	**237**	*e*P	**Pn**	**19 08 02.0**	**+0.9**
ELDTW	**Lidau** baz=223	**2.36**	**224**	*e*P	**Pn**	**19 07 59.4**	**-2.0**
WTP	**Ta-pu** baz=219	**2.59**	**231**	*e*P	**Pn**	**19 08 04.1**	**-0.5**
CHN1	**Nanshi** baz=231	**2.69**	**231**	*e*P	**Pn**	**19 08 06.8**	**+0.8**
SGST	**Jiashian** baz=229	**2.72**	**229**	*e*P	**Pn**	**19 08 06.0**	**-0.3**
SSD	**Sandimen** baz=223	**2.92**	**223**	*e*P	**Pn**	**19 08 10.3**	**+1.1**

IDC 15 19:16:07.1±8.0,2352S×7036W,h24km±41km,mb3.9/1, mb1 3.7/3,mb1mx3.4/16,mbtmp3.6/3,ML4.1/1,Error ellipse: s-maj=72.0km s-min=51.9km az=144.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde** 58nm,0.3s,SNR=146	**1.61**	**56**	Pg	Pn	19 16 36.8	+2.8
LVC				Lg		19 16 58.8	
LPAZ	**La Paz** 299nm,0.3s,SNR=36	**7.49**	**17**	Pn	Pn	19 17 55.3	+0.3
SIV	**San Ignacio** 0.1nm,0.3s,baz=204,slow=10.0,SNR=2.6	**11.51**	**51**	Pn	Pn	19 18 50.5	+0.5
TORD	**Torodi Ar. Bea** 0.6nm,0.3s,baz=234,slow=11,SNR=11	**79.29**	**71**	P	P	19 28 11.1	0.0
MKAR	**Makanchi Array** 1.4nm,0.8s,baz=254,slow=5.7,SNR=8.9	**148.04**	**37**	PKPbc	PKPbc	19 35 50.1	-0.5
	0.5nm,0.8s,baz=288,slow=2.3,SNR=3.4						

*ISCJB **15** 19:21:24.3±0.4,729S±005×12642E±007,h450km±5km, mb4.0/17,Error ellipse: s-maj=11.3km s-min=6.3km az=154.5*
*DJA **15** 19:21:24,724S×12638E,h454km,MLv4.3/4*
*IDC **15** 19:21:25.3±2.5,731S×12635E,h439km±31km,mb3.2/5, mb1 3.5/9,mb1mx3.4/15,mbtmp3.4/9,Error ellipse: s-maj=56.4km s-min=10.6km az=58.0*
*NEIC **15** 19:21:25.3±1.2,727S×12650E,h443km±17km,mb4.0/5, Error ellipse: s-maj=27.3km s-min=7.8km az=50.0*

ISC 15 19:21:25.0±0.4,732S±005×12646E±007,h440km±5km, n41,σ0⁰87/44,mb4.0/17,2D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata** 76nm,0.3s,baz=50,slow=1.0,SNR=228	**3.98**	**224**	P	**P**	**19 22 40.5**	**+1.1**
BATI	17nm,0.3s,baz=100,slow=4.1,SNR=5.4			S	**S**	**19 23 37.7**	**-2.1**
BATI	**Baumata**	**3.98**	**224**	P	**P**	**19 22 40.4**	**+1.0**
BATI	**Baumata**	**3.98**	**224**	S	**S**	**19 23 40.0**	**+0.1**
AAI	**Ambon**	**4.00**	**26**	P	**P**	**19 22 40.1**	**+0.5**
AAI	**Ambon**	**4.00**	**26**	S	**S**	**19 23 40.4**	**+0.2**
KDI	**Kendari**	**5.07**	**311**	P	**P**	**19 22 49.6**	**-0.1**
LBMI	**Labuha** 60nm,1.2s,0.2nm	**6.71**	**9**	P	**P**	**19 23 05.5**	**-1.1**
KAPI	**Kappang** 1.0nm,0.3s,baz=169,slow=18,SNR=5.3	**7.05**	**289**	P	**P**	**19 23 10.8**	**+0.7**
KAKA	**Kakadu** 43nm,0.6s	**7.97**	**133**	↓ *i* P	Px	19 23 07.8	
PCI	**Palu** 35nm,0.5s	**9.17**	**314**	P	**P**	**19 23 29.3**	**-3.9**
WRAB	**Tennant Creek** 14nm,0.8s	**14.70**	**149**	*e*P	**P**	**19 24 33.4**	**+0.3**
WRAB	**Tennant Creek** 22nm,1.3s	**14.70**	**149**	P	**P**	**19 24 33.4**	**+0.3**
WRA	**Warramunga Arr** 3.3nm,0.3s,baz=325,slow=11,SNR=259	**14.70**	**149**	P	**P**	**19 24 33.5**	**+0.3**
WRA	0.2nm,0.3s,baz=319,slow=21,SNR=6.5			S	**S**	**19 27 06.8**	**-1.8**
WB2	**Warramunga Arr**	**14.70**	**149**	↓ *i* P	**P**	**19 24 33.6**	**+0.4**
WB2				*e*S	**S**	**19 27 06.7**	**-2.1**
WB2	**Warramunga Arr**	**14.70**	**149**	*e*P	**P**	**19 24 33.3**	**+0.1**
MBWA	**Marble Bar** 5.0nm,0.5s	**15.22**	**205**	*e*P	**P**	**19 24 39.3**	**+0.6**
ASAR	**Alice Springs** 2.6nm,0.3s,baz=334,slow=10.0,SNR=130	**17.76**	**157**	P	**P**	**19 25 06.3**	**+0.7**
ASAR	0.1nm,0.3s,baz=344,slow=20,SNR=6.8			S	**S**	**19 28 09.4**	**+1.7**
CBJI	**Citeko** 113nm,1.0s	**19.48**	**271**	P	**P**	**19 25 20.0**	**-2.5**
STKA	**Stephens Creek** 2.1nm,0.6s,mb3.6	**28.22**	**152**	*e*P	**P**	**19 26 42.0**	**+1.5**
STKA				*e*		19 27 55.9	
STKA	**Stephens Creek** 4.1nm,0.7s,mb3.9,baz=318,slow=9.6,SNR=17	**28.22**	**152**	P	**P**	**19 26 42.0**	**+1.5**
STKA	**Stephens Creek**	**28.22**	**152**	*e*P	**P**	**19 26 41.9**	**+1.4**
CMAR	**Chiang Mai Arr** 1.4nm,0.6s,mb3.5,baz=141,slow=6.4,SNR=16	**37.32**	**314**	P	**P**	**19 27 58.9**	**+0.5**
LSA	**Lhasa** 3.7nm,0.6s,mb3.9	**50.06**	**319**	*e*P	**P**	**19 29 39.0**	**+1.0**
ODAN	**Odare** 12nm,0.6s,mb4.3	**50.86**	**313**	*e*P	**P**	**19 29 43.9**	**0.0**
TAPN	**Taplejung** 11nm,0.5s,mb4.4	**50.92**	**314**	*e*P	**P**	**19 29 44.5**	**+0.1**
RAMN	**Ramite** 30nm,0.6s	**51.49**	**313**	*e*P	**P**	**19 29 48.7**	**+0.2**
JIRN	**Jiri** 12nm,0.7s,mb4.2	**52.20**	**313**	*e*P	**P**	**19 29 54.1**	**+0.5**
GUN	**Gumba** 29nm,0.7s	**52.56**	**314**	*e*P	**P**	**19 29 56.7**	**+0.4**
PKI	**Pulchoki** 10nm,0.5s,mb4.3	**52.71**	**313**	*e*P	**P**	**19 29 57.0**	**-0.3**
KKN	**Kakani** 8.1nm,0.5s,mb4.2	**52.93**	**313**	*e*P	**P**	**19 29 58.8**	**-0.1**
DMN	**Daman** 18nm,1.0s,mb4.3	**52.95**	**313**	*e*P	**P**	**19 29 59.0**	**-0.1**
GKN	**Gorkha** 17nm,0.4s	**53.52**	**313**	*e*P	**P**	**19 30 02.9**	**-0.2**
KOLN	**Koldanda** 22nm,0.7s,mb4.5	**54.15**	**312**	*e*P	**P**	**19 30 07.7**	**+0.1**
DANN	**Dangsing** 12nm,0.7s,mb4.2	**54.35**	**313**	*e*P	**P**	**19 30 08.7**	**-0.4**
PYUN	**Piuthan** 20nm,0.6s,mb4.5	**54.78**	**312**	*e*P	**P**	**19 30 11.9**	**-0.2**
SONM	**Songino Array** 0.5nm,0.7s,mb2.9,baz=151,slow=8.5,SNR=3.4	**57.70**	**344**	P	**P**	**19 30 32.4**	**+0.4**
MKAR	**Makanchi Array** 0.7nm,0.6s,mb3.5,baz=119,slow=7.5,SNR=9.1	**66.61**	**329**	P	**P**	**19 31 30.0**	**-0.3**
MKAR	**Makanchi Array**	**66.61**	**329**	P	**P**	**19 31 30.0**	**-0.3**
ZALV	**Zalesovo Beam** 1.9nm,0.5s,mb3.9,baz=146,slow=6.2,SNR=11	**70.36**	**335**	P	**P**	**19 31 52.1**	**-0.9**
KURK	**Kurchatov** 1.6nm,0.5s,mb3.8	**70.99**	**330**	*e*P	**P**	**19 31 56.7**	**-0.1**
BRVK	**Borovoye** 1.7nm,0.7s,mb3.8	**76.56**	**329**	P	**P**	**19 32 27.6**	**-1.1**

*IDC **15** 19:23:23.3±1.0,5215N×17012W,h0km,mb3.7/5, mb1 4.1/6,mb1mx3.7/23,mbtmp3.8/6,ML4.4/1,Error ellipse: s-maj=65.8km s-min=20.5km az=4.0*
*ISCJB **15** 19:23:24.9±2.4,520N±0.1×17011W±02,h19km±16km, mb3.7/5,Error ellipse: s-maj=27.4km s-min=10.5km az=153.2*
*NEIC **15** 19:23:28.8,5205N×16991W,h17km,ML3.4(AEIC),After AEIC,*

ISC 15 19:23:29.5±1.8,522N±02×1701W±01,h43km±17km,n11, σ0⁰87/13,mb3.7/5,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**1.08**	**45**	P	**Pn**	**19 23 47.0**	**-1.2**
NIKO				S	**Sn**	**19 24 00.8**	**-1.2**
OKCD	**Okmok Cone D**	**1.72**	**44**	P	**Pn**	**19 23 57.5**	**+0.6**
OKCD				S	**Sn**	**19 24 19.9**	**+2.2**
ATKA	**Atka Island**	**2.50**	**271**	P	**Pn**	**19 24 08.5**	**+0.8**
UNV	**Unalaska Valle**	**2.73**	**52**	P	**Pn**	**19 24 10.3**	**-0.4**
KDAK	**Kodiak Island** 0.7nm,0.3s,baz=19,slow=7.9,SNR=14	**11.49**	**54**	Pn	**Pn**	**19 26 21.1**	**+10**
PETK	**Petropavlovsk-** 1.1nm,0.3s,baz=85,slow=15,SNR=29	**19.45**	**285**	P	**Pn**	**19 27 53.0**	**-0.7**
PDAR	**Pinedale Array** 0.7nm,0.5s,mb3.5,baz=310,slow=3.6,SNR=6.9	**40.89**	**78**	P	**P**	**19 31 07.5**	**+0.4**
SONM	**Songino Array** 0.2nm,0.4s,mb3.4,baz=36,slow=7.0,SNR=3.8	**50.98**	**300**	P	**P**	**19 32 26.0**	**-0.5**
TXAR	**Lajitas Array** 0.6nm,0.6s,mb3.7,baz=310,slow=5.1,SNR=9.5	**53.22**	**88**	P	**P**	**19 32 43.1**	**-0.2**
CMAR	**Chiang Mai Arr** 1.1nm,0.7s,mb3.9,baz=27,slow=6.6,SNR=12	**76.20**	**282**	P	**P**	**19 35 13.6**	**+0.3**
ASAR	**Alice Springs** 0.4nm,0.7s,mb3.9,baz=30,slow=4.5,SNR=7.5	**89.94**	**229**	P	**P**	**19 36 23.9**	**+0.1**

**IDC 15 20:02:26.4±1.6,2184S×6877E,h0km,mb3.8/5,mb1

ASAR	**Alice Springs**	**59.61**	**105**	P		P		20 12 33.5	+1.0	
	0.7nm,0.6s,baz=264,slow=6.4,SNR=15									
WRA	**Warramunga Arr**	**60.86**	**101**	P		P		20 12 39.9	-1.2	
	0.6nm,0.6s,baz=257,slow=6.3,SNR=7.2									
MKAR	**Makanchi Array**	**69.39**	**10**	P		P		20 13 35.1	-0.7	
	0.7nm,0.7s,baz=202,slow=7.0,SNR=5.0									
TORD	**Torodi Ar. Bea**	**74.40**	**291**	P		P		20 14 06.6	0.0	
	0.6nm,0.8s,baz=100,slow=5.3,SNR=3.9									
ZALV	**Zalesovo Beam**	**76.73**	**10**	P		P		20 14 20.4	+1.3	
	0.8nm,0.5s,baz=194,slow=5.5,SNR=4.3									

IDC ***15*** *20:10:28.4±2.4, 1320N×90.11W, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.8/20, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=55.3km s-min=37.8km az=31.0*

ISCJB ***15*** *20:10:42.0±0.9, 137N±0.1×9062W±0.009, h89km±9km, mb3.9/2, Error ellipse: s-maj=21.9km s-min=6.8km az=39.4*

CASC ***15*** *20:10:43.4±1.7, 1379N×9055W, h82km±11km, MD4.0, ML3.9*

ISC 15 20:10:43.2±0.9, 138N±01×9061W±009, h86km±9km, n34, σ0§95/21, mb3.9/2, 6C-10D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.63**	**0**	⇓*eP*			**Pn**	**20 10 58.4**	**-0.4**
FUG	**Fuego 3**	**0.72**	**342**	*eP*			**Pn**	**20 10 58.9**	**-0.8**
		0.84	**342**	⇓*eP*			**Pn**	**20 11 00.3**	**-0.5**
NBG	**Las Nubes**	**0.86**	**17**	⇓*iP*			**Pn**	**20 11 01.5**	**+0.3**
NBG				*eS*			**Sn**	**20 11 15.4**	**+0.9**
RTR	**El Retiro**	**0.95**	**82**	⇓*eP*			x	20 11 01.5	
RTR				*eS*			x	20 11 16.4	
RBDL	**Robledal**	**0.96**	**69**	⇑*eP*			x	20 11 01.3	
SBLS	**San Blas**	**0.96**	**85**	⇑*eP*			x	20 11 01.8	
SNJE	**San Jose**	**0.98**	**84**	⇑*eP*			x	20 11 01.8	
SNJE				*eS*			x	20 11 16.2	
BOQS	**Boqueron**	**1.29**	**91**	⇓*eP*			x	20 11 05.7	
BOQS				*eS*			x	20 11 23.9	
MTO2	**Montecristo 2**	**1.37**	**62**	⇑*eP*			x	20 11 06.2	
MTO2				*eS*			x	20 11 24.1	
LFU	**La Fuente**	**1.46**	**90**	⇑*eP*			x	20 11 07.8	
LFRS	**El Faro**	**1.51**	**95**	*eP*			x	20 11 08.3	
LBRS	**Las Brisas**	**1.52**	**91**	⇑*eP*			x	20 11 08.6	
LBRS				*eS*			x	20 11 27.2	
MRL	**Marmol**	**1.58**	**34**	*eP*			**Pn**	**20 11 10.5**	**+0.7**
SNVI	**San Vicente**	**1.73**	**95**	⇓*eP*			x	20 11 11.7	
SNVI				*eS*			x	20 11 33.8	
VSM	**San Miguel**	**2.30**	**98**	*eP*			x	20 11 19.7	
BLLM	**Bellamira**	**2.33**	**97**	⇓*eP*			x	20 11 19.6	
CAHU	**Cacaocuatique**	**2.33**	**89**	⇓*eP*			x	20 11 19.6	
CNCH	**Conchagua**	**2.75**	**100**	⇓*eP*			x	20 11 25.2	
TGUH	**Tegucigalpa,Un**	**3.26**	**84**	*eP*			**Pn**	**20 11 31.6**	**-0.5**
TGUH				*eP*				20 11 31.8	
TEL3	**Telica 3**	**3.85**	**107**	*eP*			**Pn**	**20 11 40.4**	**+0.2**
CNGN	**Cerro Negro**	**4.01**	**108**	*eP*			**Pn**	**20 11 42.0**	**-0.4**
MIRN	**Miramar**	**4.02**	**109**	*eP*			**Pn**	**20 11 41.3**	**-1.2**
MOMN	**Momotombo**	**4.19**	**108**	*eP*			**Pn**	**20 11 46.0**	**+1.2**
COPN	**Copaltepe**	**4.22**	**111**	⇓*eP*			**Pn**	**20 11 45.4**	**+0.2**
CSAN		**4.38**	**111**	*eP*			**Pn**	**20 11 48.2**	**+0.8**
APYN	**Apoyeque**	**4.42**	**110**	*eP*			**Pn**	**20 11 48.3**	**+0.3**
APYN				*eS*			**Sn**	**20 12 36.3**	**-2.0**
APYN					AML		AML	20 12 43.9	
	comp=Z,370nm,0.4s								
TICN	**Ticuantepe**	**4.60**	**111**	*eP*			**Pn**	**20 11 52.1**	**+1.7**
CMIG	**Matias Romero**	**5.29**	**309**	Pn			**Pn**	**20 11 59.2**	**-0.5**
	comp=Z,2.2nm,0.3s,baz=103,slow=9.8,SNR=21								
CMIG					Sn		**Sn**	**20 13 09.0**	**+10**
	comp=Z,12nm,0.3s,baz=62,slow=20,SNR=7.6								
TXAR	**Lajitas Array**	**19.66**	**324**	P			**Pn**	**20 15 06.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=138,slow=11,SNR=3.9								
TKL	**Tuckaleechee C**	**22.66**	**15**	P			**P**	**20 15 36.0**	**-1.2**
	comp=Z,3.0nm,0.5s,mb3.9,baz=173,slow=11,SNR=5.8								
NVAR	**Mina Array Bea**	**34.71**	**320**	P			**P**	**20 17 26.6**	**+1.8**
	comp=Z,1.2nm,0.6s,mb3.9,baz=132,slow=8.8,SNR=9.8								
WRA	**Warramunga Arr**	**136.64**	**255**	PKP			PKPdf	20 29 54.2	-2.0
	comp=Z,0.2nm,0.6s,baz=66,slow=1.9,SNR=4.9								
CMAR	**Chiang Mai Arr**	**146.63**	**343**	PKPbc			PKPbc	20 30 13.7	-2.1
	comp=Z,1.0nm,0.5s,baz=339,slow=3.1,SNR=9.6								

MOS 15 20:11:25.9±0.3, 4305N×4489E, h19km, mb3.8/1, 2C, Error ellipse: s-maj=34.9km s-min=13.7km az=0.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.06**	**288**	*e*PG			Pg	20 11 30.3	+0.9
SNJR				*e*S			Sg	20 11 41.2	+9.5
VLKR	**Vladikavkaz**	**0.15**	**269**	*e*Pg			Pg	20 11 32.0	+1.7
VLKR				*e*S			Sg	20 11 44.2	+11
ARNR	**Ardon**	**0.47**	**288**	*e*PG			Pg	20 11 36.6	+1.2
ARNR				*e*S			Sg	20 11 52.6	+11
LACR	**Lac**	**0.49**	**243**	⇑*i*PG			Pg	20 11 37.0	+1.2
LACR				*e*S			Sg	20 11 52.8	+10
KORR	**Kora**	**0.60**	**274**	*e*PG			Pg	20 11 39.1	+1.2
KORR				*e*S			Sb	20 11 56.8	+11
ZEI	**Tsey**	**0.78**	**249**	⇑*i*PG			Pg	20 11 41.2	0.0
ZEI				*e*S			Sb	20 12 00.3	+9.3
LSNR	**Lesken**	**0.82**	**286**	*e*PG			Pg	20 11 41.9	0.0
LSNR				*e*S			Sb	20 12 00.3	+8.2
DIGR	**Digorskoe uzhe**	**0.97**	**262**	*e*PG			Pg	20 11 43.8	-1.0
DIGR				*e*S			Sb	20 12 05.3	+8.8

ISCJB ***15*** *20:15:23.6±0.8, 2039S×007×688W±0.1, h127km±11km, mb4.0/2, Error ellipse: s-maj=19.5km s-min=11.0km az=2.4*

IDC ***15*** *20:15:23.2±0.8, 2034S×6889W, h108km±6km, mb3.8/4, mb1 3.9/7, mb1mx3.7/18, mbtmp3.9/7, Error ellipse: s-maj=24.5km s-min=8.6km az=100.0*

NEIC ***15*** *20:15:24.4±0.7, 2038S×6888W, h122km±7km, mb4.7/2, Error ellipse: s-maj=12.1km s-min=9.1km az=101.0*

ISC 15 20:15:24.6±0.8, 2038S±007×689W±01, h120km±11km, n17, σ0§57/17, mb4.0/2, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.22**	**181**	P			**Pn**	**20 16 01.1**	**+0.3**
	203nm,0.3s,SNR=106								
LVC					S		**Sn**	**20 16 28.5**	**-0.1**
	422nm,0.3s,SNR=19								
LPAZ	**La Paz**	**4.13**	**10**	P			**Pn**	**20 16 26.2**	**+0.2**
	13nm,0.3s,baz=190,slow=8.6,SNR=225								
LPAZ	**La Paz**	**4.13**	**10**	P			**Pn**	**20 16 26.2**	**+0.2**
SIV	**San Ignacio**	**8.60**	**61**	P			**Pn**	**20 17 25.4**	**-0.8**
LCO	**Las Campanas**	**8.75**	**191**	*e*P			**Pn**	**20 17 36.9**	**+8.7**
	30nm,0.6s								
LCO				*e*S			**Sn**	**20 18 57.2**	**-7.9**
CFAA	**Coronel Fontan**	**11.19**	**177**	P			**Pn**	**20 17 56.0**	**-5.0**
	0.1nm,0.3s,baz=1.6,slow=18,SNR=5.3								
CFAA					S		**Sn**	**20 19 55.4**	**-8.8**
	0.2nm,0.3s,baz=216,slow=19,SNR=7.4								
CFAA	**Coronel Fontan**	**11.19**	**177**	P			**Pn**	**20 17 56.0**	**-5.0**
CFAA					S		**Sn**	**20 19 55.4**	**-8.8**
NNA	**Nana**	**11.33**	**316**	P			**Pn**	**20 18 03.0**	**+0.1**
	1.6nm,0.3s,baz=127,slow=18,SNR=2.7								
PLCA	**Paso Flores**	**20.34**	**184**	P			**P**	**20 19 51.3**	**0.0**
	8.3nm,0.8s,baz=355,slow=12,SNR=12								
PLCA	**Paso Flores**	**20.34**	**184**	*e*P			**P**	**20 19 50.9**	**-0.4**
	12nm,1.0s								
BDFB	**Brasilia**	**20.37**	**80**	P			**P**	**20 19 53.3**	**+1.3**
	3.0nm,0.5s,baz=249,slow=18,SNR=9.1								
DBIC	**Dimbokro**	**68.38**	**74**	P			**P**	**20 26 13.3**	**-0.5**
	4.5nm,0.9s,mb4.3,baz=216,slow=8.7,SNR=3.6								
DBIC					pP		pP	20 26 40.1	-3.2
	4.3nm,0.9s,baz=231,slow=6.5,SNR=2.8								
TORD	**Torodi Ar. Bea**	**76.94**	**71**	P			**P**	**20 27 04.2**	**-0.2**
	1.0nm,0.5s,mb3.8,baz=251,slow=5.5,SNR=26								
TORD					pP		pP	20 27 31.4	-3.1
	2.1nm,0.6s,baz=249,slow=5.8,SNR=8.2								
ASAR	**Alice Springs**	**130.92**	**208**	PKP			PKPdf	20 34 22.0	-0.7
	0.2nm,0.4s,baz=146,slow=1.7,SNR=2.8								
WRA	**Warramunga Arr**	**133.93**	**211**	PKP			PKPdf	20 34 27.2	-1.2
	0.4nm,0.7s,baz=156,slow=1.7,SNR=8.6								
MKAR	**Makanchi Array**	**144.70**	**35**	PKP			PKPdf	20 34 46.8	-0.4
	0.3nm,0.6s,baz=350,slow=2.3,SNR=4.7								
MKAR					pPKP		pPKPdf	20 35 16.4	-3.1
	0.2nm,0.6s,baz=319,slow=3.2,SNR=2.2								
SONM	**Songino Array**	**152.35**	**7**	PKPbc			PKPbc	20 35 06.8	+0.4
	0.4nm,0.5s,baz=321,slow=2.1,SNR=3.2								
SONM					pPKPbc		pPKPbc	20 35 34.7	-3.9
	0.4nm,0.5s,baz=343,slow=1.5,SNR=2.4								

DJA ***15*** *20:30:27, 543N×12673E, h10km, Mw5.3/5*

MOS ***15*** *20:30:28.1±1.3, 541N×12634E, h48km, mb5.4/24, MS4.3/8, Error ellipse: s-maj=16.7km s-min=6.0km az=113.8*

MAN ***15*** *20:30:28, 541N×12633E, h8km, mb5.2, ML4.2, MS4.4*

IDC ***15*** *20:30:28.7±1.6, 531N×12625E, h35km±11km, mb4.4/17, mb1 4.5/19, mb1mx4.5/22, mbtmp4.5/19, ML4.3/2, MS4.2/17, Ms1 4.2/17, ms1mx4.0/25, Error ellipse: s-maj=24.4km s-min=9.8km az=73.0*

ISCJB ***15*** *20:30:29.9±0.5, 530N±002×12641E±004, h69km±3km, mb4.9/91, Error ellipse: s-maj=6.9km s-min=4.0km az=176.8*

BJI ***15*** *20:30:29.3, 505N×12626E, h78km, mB5.0, mb4.9, Ms4.5, Msz4.4*

NEIC ***15*** *20:30:31.0±1.0, 531N×12623E, h59km±9km, mb5.1/34, Error ellipse: s-maj=10.0km s-min=5.0km az=76.0*

GCMT ***15*** *20:30:31.0±0.3, 525N×12656E, h24km±1km, MW5.3/63, Moment Tensor Solution. s27,c31; s63,c95; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr 0.65±.07; Mθθ 0.17±.04; Mϕϕ -0.82±.04; Mrθ 0.46±.06; Mϕθ -0.00±.02; Mrϕ 0.59±.07; Best double couple: M0 1.06400×10^17 NP1: ϕs 155.00000°, δ31.00000°, λ 44.00000°. NP2: ϕs 26.00000°, δ69.00000°, λ 113.00000°. Principal axes: T 1.0740, Plg59.0000°, Azm329.0000°; N -0.0200, Plg22.0000°, Azm197.0000°; P -1.0550, Plg21.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 20:30:32.0±0.5, 533N±002×12645E±004, h72km±3km, h70km±9.0km:pP-P, n236, σ1§31/247, mb4.9/91, 16C-11D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.61**	**353**	*e*P			**Pn**	**20 30 56.7**	**-1.9**
MATI				*e*S			**Sn**	**20 31 23.0**	**+4.4**
GSPH	**General Santos**	**1.67**	**297**	*e*P			**Pn**	**20 30 54.3**	**-4.9**
GSPH				*e*S			**Sn**	**20 31 15.2**	**-4.7**
DAV	**Davao City (W)**	**1.93**	**334**	Pn			**Pn**	**20 30 59.8**	**-3.0**
	281nm,0.3s,baz=128,slow=1.6,SNR=36								
DAV					Sn		**Sn**	**20 31 23.3**	**-2.8**
	716nm,0.3s,baz=11,slow=11,SNR=10								
DAV	**Davao City (W)**	**1.93**	**334**	*e*P			**Pn**	**20 31 00.3**	**-2.5**
DAV	**Davao City (W)**	**1.93**	**334**	P			**Pn**	**20 31 01.4**	**-1.4**
DMPH	**Davao City--Mi**	**1.97**	**332**	*e*P			**Pn**	**20 31 01.0**	**-2.4**
BIPH	**Bislig**	**2.83**	**358**	*e*P			**Pn**	**20 31 13.8**	**-1.2**
BIPH				*e*S			**Sn**	**20 31 48.3**	**+0.3**
BUKP	**Musuan**	**2.88**	**332**	*e*P			**Pn**	**20 31 13.7**	**-2.0**
BUKP				*e*S			**Sn**	**20 31 50.8**	**+1.7**
CGP	**Cagayan de Oro**	**3.55**	**331**	*e*P			**Pn**	**20 31 23.1**	**-1.8**
CGP				*e*S			**Sn**	**20 32 09.4**	**+3.7**
BUTP	**Butuan**	**3.70**	**347**	*e*P			**Pn**	**20 31 26.7**	**-0.2**
BUTP				*e*S			**Sn**	**20 32 18.0**	**+8.7**
PAGZ	**Pagadian**	**3.94**	**310**	*e*P			**Pn**	**20 31 29.0**	**-1.0**
MNI	**Manado**	**4.18**	**203**	P			**Pn**	**20 31 31.5**	**-1.9**
SCPH	**Surigao**	**4.52**	**348**	*e*P			**Pn**	**20 31 37.9**	**-0.2**
SCPH				*e*S			**Sn**	**20 32 32.6**	**+3.3**
IPIL	**Ipil**	**4.56**	**303**	*e*P			**Pn**	**20 31 36.0**	**-2.5**
IPIL				*e*S			**Sn**	**20 32 13.3**	**-17**
MSLP	**Maasin**	**5.02**	**342**	*e*P			**Pn**	**20 31 44.3**	**-0.6**
MSLP				*e*S			**Sn**	**20 32 42.5**	**+0.9**
TBP	**Tagbilaran**	**5.03**	**330**	*e*P			**Pn**	**20 31 43.6**	**-1.4**
LLP	**Lapu-Lapu**	**5.53**	**334**	*e*P			**Pn**	**20 31 50.8**	**-1.0**
OCLP	**Ormoc**	**5.96**	**342**	*e*P			**Pn**	**20 31 59.2**	**+1.4**
OCLP				*e*S			**Sn**	**20 33 06.1**	**+1.4**
PLP	**Palo**	**5.97**	**346**	⇓*e*P			**Pn**	**20 31 58.6**	**+0.7**
GUIM	**Jordan**	**6.50**	**324**	*e*P			**Pn**	**20 32 07.0**	**+1.9**
RCP	**Roxas**	**7.19**	**330**	*e*P			**Pn**	**20 32 14.6**	**+0.1**
CNP	**Catarman**	**7.34**	**346**	*e*P			**Pn**	**20 32 16.9**	**+0.2**
KALP	**Kalibo**	**7.50**	**327**	*e*P			**Pn**	**20 32 21.8**	**+3.1**
CUYO	**Cuyo Island**	**7.67**	**316**	*e*P			**Pn**	**20 32 20.8**	**-0.3**
MYLDM	**Lahad Datu**	**7.91**	**269**	⇓P			**Pn**	**20 32 25.4**	**+1.0**
MYLDM	**Lahad Datu**	**7.91**	**269**	P			**Pn**	**20 32 25.6**	**+1.1**
OTRP	**Odiongan**	**8.24**	**328**	*e*P			**Pn**	**20 32 30.3**	**+1.5**
PVCP	**Virac**	**8.51**	**345**	⇑*e*P			**Pn**	**20 32 34.6**	**+1.9**
TSM	**Tawau**	**8.61**	**263**	⇓P			**Pn**	**20 32 32.7**	**-1.2**
ENPP	**El Nido**	**9.07**	**310**	*e*P			**Pn**	**20 32 38.3**	**-1.9**
AAI	**Ambon**	**9.13**	**169**	P			**Pn**	**20 32 46.5**	**+5.4**
SDKM	**Sandakan**	**9.21**	**272**	⇑P			**Pn**	**20 32 43.4**	**+1.2**
BATP	**Bataraza**	**9.24**	**292**	*e*P			**Pn**	**20 32 43.4**	**+0.8**
KDM	**Kudat**	**9.69**	**280**	⇑P			**Pn**	**20 32 51.0**	**+2.3**
KDI	**Kendari**	**9.99**	**203**	P			**Pn**	**20 32 52.9**	**+0.1**
	89nm,1.4s,4μm								
KKM	**Kota Kinabalu**	**10.21**	**274**	*e*P			**Pn**	**20 32 55.7**	**-0.1**
KKM	**Kota Kinabalu**	**10.21**	**274**	⇑P			**Pn**	**20 32 51.0**	**-4.7**
KKM	**Kota Kinabalu**	**10.21**	**274**	P			**Pn**	**20 32 57.1**	**+1.3**
	96nm,1.4s,2μm								
SCZP	**Santa Cruz**	**12.20**	**329**	*e*P			**Pn**	**20 33 28.2**	**+5.3**
KAPI	**Kappang**	**12.26**	**213**	Pn			**Pn**	**20 33 26.4**	**+2.6**
	506nm,1.2s,SNR=5.3								
KAPI	**Kappang**	**12.26**	**213**	Pn			**Pn**	**20 33 20.7**	**-3.1**
	2.4nm,0.3s,baz=68,slow=14,SNR=4.5								
KAPI	**Kappang**	**12.26**	**213**	*e*P			**Pn**	**20 33 20.4**	**-3.4**
	54nm,1.1s								
KAPI	**Kappang**	**12.26**	**213**	P			**Pn**	**20 33 25.3**	**+1.5**
	56nm,1.2s,457nm								
CAUP	**Cauayan**	**12.39**	**339**	*e*P			**Pn**	**20 33 26.8**	**+1.2**
BTM	**Bintulu**	**13.49**	**261**	⇑P			**Pn**	**20 33 43.4**	**+2.9**
SBUM	**Sibu**	**14.48**	**259**	⇓P			**Pn**	**20 33 56.1**	**+2.7**
BATI	**Baumata**	**15.69**	**190**	Pn			**Pn**	**20 34 06.3**	**-2.5**
	0.8nm,0.3s,baz=104,slow=4.9,SNR=5.3								
KSM	**Kuching**	**16.56**	**257**	*e*P			**Pn**	**20 34 22.3**	**+2.5**
KSM	**Kuching**	**16.56**	**257**	⇓P			**Pn**	**20 34 23.7**	**+3.9**
KAKA	**Kakadu**	**18.89**	**162**	*e*P			Px	20 34 32.8	
	42nm,0.6s								
QZH	**Quanzhou**	**20.90**	**340**	⇑*i*P			**P**	**20 35 08.4**	**-0.3**
QZH					S		**S**	**20 38 54.4**	**-3.5**
QZH					LR		LR		
	comp=Z,3μm,23.4s								
QIZ	**Qiongzhong**	**21.15**	**311**	P			**P**	**20 35 09.1**	**-2.3**
QIZ					AP			20 35 25.3	
QIZ					XP		sP	20 35 35.6	+0.3
QIZ					S		**S**	**20 39 00.3**	**-2.5**
QIZ					LR		LR		
	comp=N,449nm,19.1s								
QIZ					LR		LR		
	comp=E,810nm,18.6s								
QIZ					LR		LR		
	comp=Z,2μm,22.6s								
JOW	**Kunigami**	**21.45**	**4**	P			**P**	**20 35 15.1**	**+0.5**
	comp=Z,14nm,0.8s,mb4.3,baz=188,slow=24,SNR=3.2								
JOW					LR		LR	20 43 35.6	
	comp=Z,956nm,20.8s,baz=326,slow=37								
GZH	**Guangzhou**	**21.71**	**326**	P			**P**	**20 35 19.8**	**+2.4**
GZH					LR		LR		
	comp=N,730nm,18.8s								
GZH					LR		LR		
	comp=E,524nm,18.2s								
GZH					LR		LR		
	comp=Z,1μm,16.6s								
MYKOM	**Kota Tinggi**	**22.82**	**262**	⇓P			**P**	**20 35 31.4**	**+2.2**
KTGM	**Kuala Trenggan**	**23.21**	**271**	⇑P			**P**	**20 35 34.6**	**+1.4**
KGM	**Kluang**	**23.31**	**263**	⇓P			**P**	**20 35 36.0**	**+2.0**
FRIM	**Kepong**	**24.84**	**266**	⇓P			**P**	**20 35 50.6**	**+2.6**
IPM	**Ipoh**	**25.34**	**269**	⇑P			**P**	**20 35 53.8**	**+1.3**
KKTK	**Khon Kaen**	**25.61**	**297**	P			**P**	**20 35 58.0**	**+3.0**
	comp=Z,340nm,0.5s,mb6.0								
KULM	**Kulim**	**25.68**	**271**	⇑P			**P**	**20 35 57.4**	**+1.7**
SSE	**Sheshan**	**26.10**	**350**	P			**P**	**20 36 00.3**	**+1.1**
SSE					XP		sP	20 36 28.3	+3.8
SSE					S		**S**	**20 40 23.6**	**-1.9**
SSE					XS		sS	20 40 56.3	+1.7
SSE					AMB		AMB		
	comp=Z,67nm,1.2s,mb5.0								
SSE					AMB		AMB		
	comp=Z,228nm,5.8s								
SSE					LR		LR		
	comp=N,155nm,18.2s								
SSE					LR		LR		
	comp=E,342nm,18.2s								
SSE					LR		LR		
	comp=Z,302nm,14.6s								
SSE	**Sheshan**	**26.10**	**350**	P			**P**	**20 36 00.2**	**+1.0**
	comp=Z,67nm,1.2s,mb5.0								
SSE					sP		sP	20 36 28.3	+3.8
SSE					S		**S**	**20 40 23.6**	**-1.9**
SSE					sS		sS	20 40 56.3	+1.7
SSE					LR		LR		
	comp=Z,300nm,14.6s								
WRAB	**Tennant Creek**	**26.29**	**163**	P			**P**	**20 36 02.7**	**+1.7**
	comp=Z,342nm,0.7s,mb5.9,SNR=8.0								
WRAB	**Tennant Creek**	**26.29**	**163**	*e*P			**P**	**20 36 01.9**	**+0.9**
	comp=Z,46nm,0.8s,mb5.0								
WRAB	**Tennant Creek**	**26.29**	**163**	*e*P			**P**	**20 36 02.7**	**+1.7**
WRA	**Warramunga Arr**	**26.29**	**163**	P			**P**	**20 36 00.3**	**-0.7**
	comp=Z,7.0nm,0.6s,mb4.3,baz=344,slow=10,SNR=52								
WRA					S		**S**	**20 40 33.5**	**+4.8**
	comp=Z,1.5nm,1.0s,baz=337,slow=10,SNR=2.5								
WRA					ScP		ScP	20 43 03.6	+4.0
	comp=Z,1.4nm,0.6s,baz=340,slow=3.0,SNR=9.0								
WRA	**Warramunga Arr**	**26.29**	**163**	P			**P**	**20 36 00.3**	**-0.7**
WRA					S		**S**	**20 40 33.5**	**+4.8**
WB2	**Warramunga Arr**	**26.29**	**163**	*e*P			**P**	**20 36 02.1**	**+1.1**
WB2				*e*S			**S**	**20 40 34.8**	**+6.1**
WB2	**Warramunga Arr**	**26.29**	**163**	*e*P			**P**	**20 36 01.3**	**+0.3**
CBIJ	**Chichi jima**	**26.33**	**33**	P			**P**	**20 35 59.6**	**-1.7**
	comp=Z,44nm,0.5s,mb5.2,baz=260,slow=6.4,SNR=16								
MBWA	**Marble Bar**	**27.14**	**194**	*e*P			**P**	**20 36 07.7**	**-0.9**
	comp=Z,53nm,1.1s,mb5.0								
NJ2	**Nanjing**	**27.51**	**346**	*e*P			**P**	**20 36 12.3**	**+0.4**
NJ2					AMB		AMB		
	comp=Z,70nm,1.2s,mb5.1								
WHN	**Wuhan**	**27.54**	**337**	⇓P			**P**	**20 36 15.4**	**+3.2**
WHN					S		**S**	**20 40 38.8**	**-9.5**
WHN					LR		LR		
	comp=N,496nm,12.9s								
WHN					LR		LR		
	comp=E,3μm,22.3s								
WHN					LR		LR		
	comp=Z,3μm,22.9s								
NST	**Nakhon Sawan**	**27.80**	**294**	P			**P**	**20 36 15.0**	**+0.4**
GYA	**Guiyang**	**28.25**	**320**	*e*P			**P**	**20 36 17.1**	**-1.5**
GYA					AMB		AMB		
	comp=Z,120nm,8.4s								
GYA					LR		LR		
	comp=N,690nm,17.3s								
GYA					LR		LR		
	comp=E,620nm,18.8s								
GYA					LR		LR		
	comp=Z,990nm,18.6s								
ASAR	**Alice Springs**	**29.73**	**166**	P			**P**	**20 36 31.9**	**+0.3**
	comp=Z,3.6nm,0.6s,mb4.2,baz=343,slow=7.1,SNR=18								
ASAR					PcP		PcP	20 39 34.9	+0.7
	comp=Z,3.2nm,0.7s,baz=348,slow=2.3,SNR=5.9								
ASAR					ScP		ScP	20 43 14.7	+4.6
	comp=Z,2.1nm,0.7s,baz=347,slow=2.7,SNR=8.1								
ASAR	**Alice Springs**	**29.73**	**166**	P			**P**	**20 36 32.0**	**+0.4**
ASAR								20 39 34.9	
CM31	**Chiang Mai Arr**	**29.84**	**298**	*e*P			**P**	**20 36 30.1**	**-2.7**
	comp=Z,13nm,1.1s,mb4.5								
CMAR	**Chiang Mai Arr**	**29.84**	**298**	P			**P**	**20 36 33.0**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=124,slow=7.8,SNR=9.8								
CMAR					PcP		PcP	20 39 36.5	+1.8
	comp=Z,2.0nm,0.9s,baz=164,slow=1.4,SNR=7.3								
CMAR					ScP		ScP	20 43 15.0	+4.3
	comp=Z,1.1nm,1.0s,baz=124,slow=1.6,SNR=6.4								
CMAR					LR		LR	20 48 51.7	
	comp=Z,670nm,19.2s,baz=291,slow=37								
CMAR	**Chiang Mai Arr**	**29.84**	**298**	P			**P**	**20 36 33.0**	**+0.2**
CMAR								20 39 36.5	
CMAR								20 43 15.0	
CHTO	**Chiang Mai**	**29.98**	**299**	*e*P			**P**	**20 36 33.5**	**-0.4**
	comp=Z,5.7nm,0.7s,mb4.3								
CHTO	**Chiang Mai**	**29.98**	**299**	*e*P			**P**	**20 36 33.6**	**-0.4**
CHTO					pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.3								
KMI	**Kunming**

LZH sS sS 20 43 34.9 -10
LZH eSS SS 20 45 48.5 -11
LZH LR LR
comp=Z,930nm,17.3s
LZH Lanzhou 36.99 329 ⇑P **P** **20 37 35.1 +0.5**
LZH *SP sP 20 37 48.8 -11
LZH 20 39 02.3
LZH eS **S** **20 43 18.0 +3.0**
LZH *SS sS 20 43 34.9 -10
LZH eSS SS 20 45 48.5 -11
LZH pmax pmax
comp=Z,76nm,1.4s,mb5.4
LZH MLR MLR
comp=Z,930nm,17.3s
KLBR Kellerberrin 37.64 192 eP **P** **20 37 39.6 -0.6**
comp=Z,78nm,1.5s,mb5.3
HHC Hu-ho-hao-te 37.80 341 eP **P** **20 37 42.8 +1.4**
HHC PP PP 20 39 13.9 +4.9
HHC PCP PcP 20 39 58.5 +1.7
HHC S **S** **20 43 34.3 +7.2**
HHC PCS PcS 20 43 45.3 -0.2
HHC SS SS 20 46 12.8 -2.9
HHC AMB AMB
comp=Z,32nm,1.4s,mb5.0
HHC LR LR
comp=N,291nm,17.2s
HHC LR LR
comp=E,269nm,16.7s
HHC LR LR
comp=Z,366nm,19.6s
CN2 Changchun 38.32 359 eP **P** **20 37 47.3 +1.6**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
CN2 AMB AMB
comp=Z,160nm,8.0s
CN2 LR LR
comp=N,330nm,14.0s
CN2 LR LR
comp=E,390nm,14.0s
CN2 LR LR
comp=Z,350nm,15.0s
MUN Mundaring 38.37 194 eP **P** **20 37 45.9 -0.4**
NWAO Narrogin (SRO) 39.04 192 eP **P** **20 37 51.5 -0.4**
comp=Z,81nm,1.5s,mb5.3
NWAO Narrogin (SRO) 39.04 192 eP **P** **20 37 51.6 -0.3**
NWAO pmax pmax
comp=Z,81nm,1.5s
MDJ Mudanjiang 39.22 4 P **P** **20 37 55.1 +1.8**
MDJ S **S** **20 43 52.0 +3.5**
MDJ AMB AMB
comp=Z,38nm,1.4s,mb5.0
MDJ AMB AMB
comp=Z,110nm,6.2s
MDJ LR LR
comp=N,239nm,28.1s
MDJ LR LR
comp=Z,247nm,26.2s
MDJ Mudanjiang 39.22 4 eP **P** **20 37 54.2 +0.9**
comp=Z,62nm,1.3s,mb5.3
STKA Stephens Creek 39.72 160 eP **P** **20 37 58.6 +1.0**
comp=Z,9.9nm,0.6s,mb4.8
STKA Stephens Creek 39.72 160 P **P** **20 37 58.5 +1.0**
comp=Z,8.2nm,0.7s,mb4.7,baz=338,slow=7.5,SNR=19
STKA LR LR 20 54 54.5
comp=Z,266nm,18.5s,baz=132,slow=37
LSA Lhasa 41.18 310 P **P** **20 38 11.1 +1.3**
LSA AMB AMB
comp=Z,20nm,1.0s,mb4.9
LSA Lhasa 41.18 310 eP **P** **20 38 11.2 +1.4**
comp=Z,41nm,1.4s,mb5.1
LSA Lhasa 41.18 310 eP **P** **20 38 11.2 +1.4**
LSA pmax pmax
comp=Z,41nm,1.4s,mb5.1
GTA Gaotai 41.59 328 ⇑P **P** **20 38 13.0 +0.1**
GTA PP PP 20 39 53.3 +3.0
GTA PCP PcP 20 40 11.3 +2.4
GTA PCS PcS 20 44 00.8 +0.5
GTA S **S** **20 44 25.8 +1.9**
GTA SS SS 20 47 26.0 -5.4
GTA AMB AMB
comp=Z,9.0nm,1.2s,mb4.4
GTA AMB AMB
comp=Z,141nm,4.5s
GTA LR LR
comp=N,342nm,20.4s
GTA LR LR
comp=E,451nm,16.2s
GTA LR LR
comp=Z,726nm,17.1s
TAPN Taplejung 42.86 305 eP **P** **20 38 24.1 +0.7**
comp=Z,31nm,0.7s,mb5.1
ODAN Odare 42.92 304 eP **P** **20 38 24.5 +0.5**
comp=Z,33nm,0.5s,mb5.3
ARMA Armidale 42.96 147 eP **P** **20 38 26.6 +2.4**
ARMA Armidale 42.96 147 eP **P** **20 38 26.8 +2.6**
comp=Z,0.3nm,0.8s
HABR Khabarovsk 43.61 8 eP **P** **20 38 27.0 -2.1**
HABR e*PP pP 20 38 46.4 -0.4
HABR e 20 40 09.3
HABR e 20 40 13.7
HABR ePPP 20 40 46.2
HABR eS **S** **20 44 50.2 -3.1**
HABR e 20 48 18.8
HABR eSSS 20 48 51.5
RAMN Ramite 43.61 304 eP **P** **20 38 30.3 +0.8**
comp=Z,36nm,0.6s,mb5.3
HIA Hailar 44.15 354 eP **P** **20 38 34.0 +0.6**
comp=Z,182nm,1.6s,mb5.6
HIA Hailar 44.15 354 eP **P** **20 38 34.0 +0.6**
HIA pmax pmax
comp=Z,182nm,1.6s
JIRN Jiri 44.22 305 eP **P** **20 38 34.9 +0.5**
comp=Z,49nm,0.7s,mb5.4
GUN Gumba 44.57 305 eP **P** **20 38 37.6 +0.4**
comp=Z,51nm,0.6s,mb5.4
KKN Kakani 45.01 304 eP **P** **20 38 40.9 +0.2**
DMN Daman 45.09 304 eP **P** **20 38 41.6 +0.3**
comp=Z,20nm,0.6s,mb5.0
ULN Ulaanbaatar 45.52 342 eP **P** **20 38 43.5 -0.8**
comp=Z,15nm,0.7s,mb4.8
ULN Ulaanbaatar 45.52 342⇑eP **P** **20 38 44.8 +0.5**
GKN Gorkha 45.62 304 eP **P** **20 38 45.4 -0.1**
comp=Z,8.7nm,0.3s,mb4.9
SONM Songino Array 45.70 341 P **P** **20 38 45.8 0.0**
comp=Z,6.6nm,0.6s,mb4.5,baz=158,slow=8.8,SNR=38
SONM PcP PcP 20 40 24.0 +1.3
comp=Z,3.0nm,0.7s,baz=160,slow=3.9,SNR=3.9
SONM ScP ScP 20 44 13.7 +4.2
comp=Z,0.7nm,0.4s,baz=3.4,slow=25,SNR=6.8
SONM LR LR 21 00 06.1
comp=Z,337nm,21.0s,baz=355,slow=39
SONM Songino Array 45.70 341 P **P** **20 38 45.8 0.0**
SONM 20 40 24.0
TOO Toolangi 46.23 159 eP **P** **20 38 50.4 +0.3**
KOLN Koldanda 46.39 304 eP **P** **20 38 51.7 +0.1**
comp=Z,43nm,0.5s,mb5.5
DANN Dangsing 46.47 304 eP **P** **20 38 52.0 -0.2**
comp=Z,79nm,0.6s,mb5.6
PYUN Piuthan 47.01 304 eP **P** **20 38 56.7 +0.2**
comp=Z,35nm,0.6s,mb5.3
CIT Chita 47.75 349 eP **P** **20 39 00.7 -1.0**
CIT e pP 20 39 13.8 -5.8
CIT e pP 20 39 19.2 -0.4
CIT pmax pmax
comp=Z,176nm,1.3s,mb5.7
HYB Hyderabad 48.33 289 *i* P **P** **20 39 09.0 +2.2**
ZAK Zakamensk 48.93 340 eP **P** **20 39 10.5 -0.3**
ZAK e 20 40 35.4
ZAK pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
TLY Talaya 49.93 342 eP **P** **20 39 20.2 +1.8**
comp=Z,14nm,0.8s,mb4.9
TLY Talaya 49.93 342 eP **P** **20 39 19.3 +0.9**
TLY e 20 41 18.2
TLY eS **S** **20 46 35.9 +13**
TLY pmax pmax
comp=Z,12nm,0.7s,mb4.9
TLY MLR MLR
comp=Z,269nm,23.0s
JOSI Joshimath 50.67 306 eP **P** **20 39 24.5 +0.1**
JOSI AMb AMB 20 39 26.5
comp=Z,146nm,0.8s,mb6.0
WMQ Urumqi 51.26 324 eP **P** **20 39 28.0 -0.6**
CLNS Chul'man 51.38 359 eP **P** **20 39 28.3 -0.9**
CLNS pmax pmax
comp=Z,21nm,1.0s,mb5.1
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=N,18nm,0.9s
KLP Kalpa 52.06 306 eP **P** **20 39 35.1 +0.3**
KLP AMb AMB 20 39 37.5
comp=Z,22nm,0.7s,mb5.3
KUDL Kundal 52.48 302 eP **P** **20 39 36.7 -1.3**
KUDL AMb AMB 20 39 48.8
comp=Z,18nm,1.2s,mb5.0
SMLA Simla 52.80 305 *i* P **P** **20 39 39.5 -0.8**
KHET Khetri 53.04 301 eP **P** **20 39 41.1 -1.0**
BOD Bodaibo 53.25 352 eP **P** **20 39 44.0 +0.9**
BOD pmax pmax
comp=Z,78nm,1.2s,mb5.6
PETK Petropavlovsk- 54.06 23 P **P** **20 39 49.8 +0.7**
comp=Z,8.7nm,0.8s,mb4.8,baz=194,slow=4.4,SNR=7.0
PETK PcP PcP 20 40 53.6 +0.4
comp=Z,3.9nm,0.7s,baz=211,slow=1.7,SNR=2.2
PETK LR LR 21 00 21.8
comp=Z,106nm,19.3s,baz=217,slow=33
DLH Dalhousie 54.22 307 eP **P** **20 39 49.0 -1.7**
THN Thein Dam 54.39 306 eP **P** **20 39 49.4 -2.5**
THN ex x 20 41 36.5
MK31 Makanchi Array 56.09 325 eP **P** **20 40 02.8 -1.1**
MK31 Makanchi Array 56.09 325 P **P** **20 40 03.3 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
MKAR Makanchi Array 56.09 325 P **P** **20 40 03.7 -0.1**
comp=Z,9.2nm,0.5s,mb5.0,baz=118,slow=7.9,SNR=244
MKAR PcP PcP 20 41 01.6 +0.4
comp=Z,5.7nm,0.6s,baz=103,slow=4.4,SNR=4.8
MKAR ScP ScP 20 44 59.1 +4.8
comp=Z,0.9nm,0.7s,baz=130,slow=3.9,SNR=3.8
MKAR LR LR 21 04 49.3
comp=Z,568nm,21.1s,baz=116,slow=37
MKAR Makanchi Array 56.09 325 P **P** **20 40 03.7 -0.1**
MKAR 20 41 01.6
YAK Yakutsk 56.62 2 eP **P** **20 40 07.6 +0.2**
comp=Z,116nm,1.0s,mb5.9
YAK Yakutsk 56.62 2 eP **P** **20 40 07.1 -0.3**
YAK pmax pmax
comp=Z,76nm,1.0s,mb5.7
YAK pmax pmax
comp=N,48nm,1.2s
YAK pmax pmax
comp=E,12nm,1.4s
KRAR Krasnoyarsk 57.16 338 eP **P** **20 40 10.4 -0.8**
KRAR pmax pmax
comp=Z,14nm,1.3s,mb4.8
TKM2 Tokmak 2 58.37 318 eP **P** **20 40 18.9 -1.1**
comp=Z,24nm,1.1s,mb5.1
TKM2 Tokmak 2 58.37 318 eP **P** **20 40 18.9 -1.1**
TKM2 pmax pmax
comp=Z,24nm,1.1s,mb5.1
UCH Uchtor 58.81 317 eP **P** **20 40 24.0 +0.8**
comp=Z,30nm,1.5s,mb5.1
ZAA0 Zalesovo Array 59.04 333 eP **P** **20 40 23.1 -1.4**
ZALV Zalesovo Beam 59.04 333 P **P** **20 40 23.6 -0.9**
comp=Z,7.7nm,0.5s,mb5.0,baz=125,slow=6.7,SNR=30
ZALV LR LR 21 07 30.7
comp=Z,157nm,20.9s,baz=131,slow=38
AML Almayashu 59.33 316 eP **P** **20 40 25.6 -1.1**
comp=Z,37nm,1.2s,mb5.3
EKS2 Erkin-Say 59.48 317 eP **P** **20 40 27.3 -0.5**
comp=Z,26nm,1.2s,mb5.2
KURK Kurchatov 60.24 327 P **P** **20 40 32.2 -0.6**
comp=Z,202nm,0.6s,mb6.3,SNR=13
KURK Kurchatov 60.24 327 eP **P** **20 40 31.9 -0.9**
comp=Z,71nm,1.3s,mb5.5
KURK Kurchatov 60.24 327 eP **P** **20 40 31.9 -0.9**
KURK pmax pmax
comp=Z,71nm,1.3s,mb5.5
NVS Novosibirsk 60.32 333⇑*i*P **P** **20 40 31.5 -1.7**
NVS *i* 20 41 15.4
NVS eS **S** **20 48 33.7 -8.5**
NVS *i* 20 50 17.2
NVS pmax pmax
comp=Z,51nm,2.2s,mb5.2
NVS pmax pmax
comp=N,23nm,2.1s
NVS pmax pmax
comp=E,16nm,1.7s
NVS smax
comp=N,18nm,2.3s
NVS smax
comp=E,22nm,2.2s
KK31 Karatay Array 61.88 317 P **P** **20 40 43.4 -0.6**
KK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
BVA0 Borovoye Array 65.83 327 *i* P **P** **20 41 08.8 -1.0**
BVA0 pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
BRVK Borovoye 65.90 327 P **P** **20 41 10.7 +0.5**
comp=Z,135nm,0.6s,mb6.0,SNR=14
BRVK Borovoye 65.90 327 eP **P** **20 41 08.3 -1.9**
comp=Z,22nm,0.6s,mb5.2
BRVK Borovoye 65.90 327 eP **P** **20 41 08.3 -1.9**
BRVK pmax pmax
comp=Z,22nm,0.6s,mb5.2
TIXI Tiksi 66.25 1 eP **P** **20 41 11.6 -0.6**
comp=Z,26nm,1.0s,mb5.0
TIXI Tiksi 66.25 1 eP **P** **20 41 11.8 -0.3**
TIXI pmax pmax
comp=Z,33nm,1.2s,mb5.0
TIXI MLR MLR
comp=Z,223nm,18.0s
BILL Bilibino 68.09 15 eP **P** **20 41 25.7 +1.9**
BILL Bilibino 68.09 15 eP **P** **20 41 24.7 +0.9**
BILL e pP 20 41 42.7 0.0
BILL e 20 43 49.6
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
AB31 Akbulak array 70.74 320 P **P** **20 41 39.4 -1.1**
AB31 pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
AKTK Aktyubinsk 72.23 321 P **P** **20 41 49.2 -0.4**
AKTO Aktyubinsk 72.23 321 P **P** **20 41 49.2 -0.4**
comp=Z,8.3nm,0.7s,mb4.7,baz=94,slow=9.8,SNR=26
SVE Sverdlovsk 72.45 328||eP **P** **20 41 50.1 -0.6**
SVE pmax pmax
comp=Z,33nm,1.4s,mb5.0
SVE MLR MLR
comp=Z,329nm,19.0s
DRV Dumont d'Urvil 72.49 174 S S 20 51 11.0 +2.0
DRV SS SS 20 56 26.0 +37
DRV R 21 05 00.0
ARU Arti 73.44 328 eP **P** **20 41 55.0 -1.5**
comp=Z,12nm,0.5s,mb5.0
ARU Arti 73.44 328*c* *i*P **P** **20 41 55.2 -1.3**
ARU e*PP pP 20 42 17.8 +2.2
ARU ePPP 20 46 22.2
ARU eS S 20 51 17.4 -2.8
ARU pmax pmax
comp=Z,33nm,1.7s,mb4.9
MIB Mutribah 77.92 299 eP **P** **20 42 21.1 -1.6**
MIB AMb AMB 20 42 29.2
comp=Z,22nm,0.7s,mb5.0
NAY Al-Naaiem 78.00 299 eP **P** **20 42 21.3 -1.9**
NAY AMb AMB 20 42 34.1
comp=Z,9.0nm,1.5s,mb4.3
GNI Garni 80.25 310 P **P** **20 42 35.8 +0.6**
comp=Z,0.6nm,0.3s,mb3.9,baz=16,slow=23,SNR=2.6
GNI Garni 80.25 310 eP **P** **20 42 36.7 +1.5**
GNI pmax pmax
comp=Z,5.0nm,1.3s
IMA2 Indian Mountai 81.04 24 eP **P** **20 42 40.5 +1.6**
CHUM Lake Minchumin 81.38 26 eP **P** **20 42 42.1 +1.4**
comp=Z,8.9nm,0.8s,mb4.7
KIV Kislovodsk 81.83 314 eP **P** **20 42 44.5 +1.0**
KIV eS S 20 52 50.0 -1.4
KIV pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
KIV MLR MLR
comp=Z,165nm,20.0s
BPAW Bear Paw Mtn. 81.98 26 eP **P** **20 42 44.8 +0.9**
comp=Z,25nm,1.2s,mb4.9
SLKM Skilak Lake 82.10 30 eP **P** **20 42 43.4 -1.2**
TRF Thorofare Moun 82.24 27 eP **P** **20 42 46.0 +0.7**
comp=Z,23nm,1.1s,mb4.9
COLD Coldfoot 82.53 23 eP **P** **20 42 49.3 +2.6**
comp=Z,17nm,1.0s,mb4.8
VRHR Novokhopersk 82.63 321 eP **P** **20 42 45.5 -2.0**
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.1
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.6s
MCK McKinley 82.86 27 eP **P** **20 42 49.8 +1.3**
comp=E,21nm,1.0s,mb4.9
MCK McKinley 82.86 27 eP **P** **20 42 49.8 +1.3**
MCK pmax pmax
comp=Z,21nm,1.0s,mb4.9
KLMR Klimovskoe 83.88 331 eP **P** **20 42 51.0 -2.8**
KLMR pmax pmax
comp=Z,54nm,1.3s,mb5.2
VORD Divnogorie 84.10 321 eP **P** **20 42 53.5 -1.6**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 84.17 321 eP **P** **20 42 54.5 -1.0**
VSR pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.8s
MOS Moscow 84.97 325 eP **P** **20 42 56.0 -3.4**
MAW Mawson 85.15 200 LR LR 21 18 05.4
comp=E,88nm,21.3s,baz=176,slow=34
OBN Obninsk 85.59 325 eP **P** **20 43 01.7 -0.8**
comp=E,23nm,0.8s,mb5.2
OBN Obninsk 85.59 325 eP **P** **20 43 01.6 -0.9**
OBN *e* 20 46 22.0
OBN pmax pmax
comp=Z,62nm,1.5s,mb5.3
OBN MLR MLR
comp=Z,200nm,17.0s
PPT Papeete 85.88 108 LR LR 21 13 17.1
comp=Z,214nm,21.4s,baz=323,slow=30
JOF Joensuu 87.63 333 ep **P** **20 43 11.4 -0.9**
comp=Z,4.3nm,0.3s,mb5.0
JOF Joensuu 87.63 333 eP **P** **20 43 11.4 -0.9**
JOF pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KEV Kevo 88.30 340 ep **P** **20 43 15.7 +0.4**
comp=Z,0.8nm,0.4s,mb4.1
KEV Kevo 88.30 340 eP **P** **20 43 15.7 +0.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARCES ARCESS Array B 88.86 340 P **P** **20 43 17.9 0.0**
comp=Z,12nm,0.6s,mb5.1,baz=80,slow=7.1,SNR=60
ARCES LR LR 21 26 54.4
comp=Z,194nm,18.2s,baz=83,slow=38
ARCES ARCESS Array B 88.86 340 P **P** **20 43 17.9 0.0**
ARCES LR LR 21 26 54.4
KAF Kangasniemi 90.05 332 ep **P** **20 43 23.1 -0.6**
comp=Z,3.6nm,0.4s,mb4.8,baz=76,slow=4.3
KAF Kangasniemi 90.05 332 eP **P** **20 43 23.1 -0.6**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
AKASG Malin Array Be 90.48 321 P **P** **20 43 25.1 -0.8**
comp=Z,0.9nm,0.5s,mb4.2,baz=69,slow=4.6,SNR=5.4
AKASG LR LR 21 26 10.4
comp=Z,157nm,20.9s,baz=335,slow=37
DLBC Dease Lake 92.52 31 LR LR 21 20 39.3
comp=Z,145nm,19.6s,baz=90,slow=32
SYO Syowa Base 93.81 201||eP pP 20 44 04.6 +4.0
HFS Hagfors 96.48 332 P **P** **20 43 53.2 -0.1**
comp=Z,3.5nm,0.5s,mb5.0,baz=106,slow=5.3,SNR=19
NB2 NORSAR Subarra 97.23 334 P **P** **20 43 55.4 -1.3**
comp=Z,1.8nm,0.6s,mb4.7,baz=66,slow=4.6
NOA NORSAR Array B 97.23 334 P **P** **20 43 55.5 -1.2**
comp=Z,2.7nm,0.8s,mb4.7,baz=66,slow=4.6,SNR=11
YKA Yellowknife Ar 98.16 24 LR LR 21 30 08.7
comp=Z,43nm,20.2s,baz=190,slow=36
GERES GERESS Array B 100.66 322 P Pdif 20 44 12.9 +0.8
comp=Z,0.5nm,0.8s,baz=81,slow=8.2,SNR=3.8
ANMO Albuquerque 116.15 47⇑*i*PKIKP PKPdf 20 49 08.5 +0.9
TOAO Torodi Ar. Sit 122.14 289 ePKPdf PKPdf 20 49 19.2 -0.4
TORD Torodi Ar. Bea 122.14 289 PKP PKPdf 20 49 19.6 0.0
comp=Z,4.0nm,0.7s,baz=53,slow=1.5,SNR=29
JCT Junction City 123.22 48 ePKPdf PKPdf 20 49 22.5 +1.2
KIC Kosan Boka 129.91 283 ePKIKP PKPdf 20 49 36.0 +1.4
comp=Z,71nm,1.2s
DBIC Dimbokro 129.95 283 PKP PKPdf 20 49 35.8 +1.2
comp=Z,2.3nm,0.6s,baz=309,slow=4.3,SNR=5.4
TIC Toumodi 130.12 283 ePKIKP PKPdf 20 49 36.7 +1.8
comp=Z,20nm,0.2s
LIC Lamto 130.22 283 ePKIKP PKPdf 20 49 36.0 +0.9
comp=Z,47nm,1.4s
BLA Blacksburg 130.81 28 ePKPdf PKPdf 20 49 34.5 -1.1
PLCA Paso Flores 141.60 159 PKP PKPdf 20 49 57.1 +1.7
comp=Z,2.0nm,0.8s,baz=202,slow=5.4,SNR=5.3
SDDR Presa de Saban 150.18 35 ePKPbc PKPbc 20 50 16.7 +0.9
LCO Las Campanas 151.40 147 ePKPbc PKPbc 20 50 19.7 +1.4

IDC 15 20:42:04.1±1.8, 570N×12687E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, Error ellipse: s-maj=183.5km s-min=22.6km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.52**	**164**	P	P	20 47 42.4	-1.2
	0.3nm,0.5s,baz=345,slow=9.9,SNR=6.4						
ASAR	**Alice Springs**	**29.99**	**167**	P	P	20 48 16.3	+1.8
	0.1nm,0.3s,baz=2.1,slow=10,SNR=2.6						
SONM	**Songino Array**	**45.49**	**341**	P	P	20 50 26.1	+1.0
	0.2nm,0.5s,baz=153,slow=8.4,SNR=2.4						
MKAR	**Makanchi Array**	**56.03**	**324**	P	P	20 51 44.1	-0.5
	0.4nm,0.5s,baz=118,slow=7.5,SNR=14						

IDC 15 20:44:51.1±11.0, 2016S×17782W, h469km±142km, mb3.3/6, mb1 3.5/7, mb1mx3.3/17, mbtmp3.3/7, Error ellipse: s-maj=71.1km s-min=29.5km az=10.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.56**	**193**	P	P	20 48 37.5	-0.6
	1.1nm,0.3s,baz=86,slow=14,SNR=6.3						
CTA	**Charters Tower**	**33.69**	**264**	P	P	20 50 52.7	+0.6
	2.4nm,0.4s,baz=96,slow=16,SNR=6.7						
STKA	**Stephens Creek**	**38.09**	**244**	P	P	20 51 29.1	+0.5
	0.4nm,0.3s,baz=90,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**44.76**	**256**	P	P	20 52 21.7	-0.2
	2.9nm,0.6s,baz=93,slow=7.6,SNR=43						
WB2	**Warramunga Arr**	**44.81**	**262**	eP	P	20 52 21.3	-1.0
WRA	**Warramunga Arr**	**44.82**	**262**	P	P	20 52 21.7	-0.6
	2.1nm,0.3s,baz=96,slow=7.6,SNR=168						
KAKA	**Kakadu**	**48.14**	**271**	eP	Px	20 52 34.6	
	2.3nm,0.2s						
PDAR	**Pinedale Array**	**88.60**	**43**	P	P	20 56 53.7	+0.5
	0.4nm,0.7s,baz=212,slow=8.3,SNR=3.3						
CMAR	**Chiang Mai Arr**	**90.16**	**290**	P	P	20 57 00.5	-0.4
	0.6nm,0.8s,baz=107,slow=4.8,SNR=4.9						

*MAN **15** 21:01:04, 538N×126.48E, h1km, mb5.0, ML4.0, MS4.1*
*IDC **15** 21:01:05.5±2.8, 577N×127.39E, h40km±22km, mb3.7/8, mb1 3.9/9, mb1mx3.8/17, mbtmp3.7/9, ML3.7/1, MS3.4/3, Ms1 3.5/3, ms1mx2.8/33, Error ellipse: s-maj=43.4km s-min=12.2km az=55.0*
*ISCJB **15** 21:01:06.9±1.2, 554N±007×1270E±0.1, h67km±12km, mb3.9/10, Error ellipse: s-maj=21.3km s-min=10.2km az=157.8*
*NEIC **15** 21:01:06.8±2.6, 569N×127.17E, h51km±23km, mb4.4/1, Error ellipse: s-maj=54.4km s-min=9.6km az=65.0*
*DJA **15** 21:01:25.8±0.0, 460N×126.11E, h70km, Mjma4.3/3, MLv4.5/3*

ISC 15 21:01:02.2±2.1, 554N±007×1271E±01, h8km±12km, n33, σ1§11/36, mb4.0/10, MS3.5/2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.63**	**329**	eP	**Pn**	**21 01 32.9**	**+1.7**
MATI				eS	**Sn**	**21 01 54.4**	**+2.0**
DAV	**Davao City (W)**	**2.15**	**315**	P	**Pn**	**21 01 40.4**	**+2.1**
	21nm,0.3s,baz=19,slow=12,SNR=3.8						
DAV				S	**Sn**	**21 02 06.7**	**+1.5**
	63nm,0.3s,baz=92,slow=21,SNR=9.9						
DAV				LR	LR	21 02 28.1	
	comp=Z,380nm,19.3s,baz=308,slow=37						
DAV	**Davao City (W)**	**2.15**	**315**	eP	**Pn**	**21 01 39.4**	**+1.0**

DAV				Sn	Sn	21 02 02.0	-3.2	
DAV				LR	LR	21 02 28.1		
DAV	**Davao City (W)**	**2.15**	**315**	P	**Sn**	**21 02 04.9**	**-0.3**	
GSPH	**General Santos**	**2.21**	**284**	*eP*	**Pn**	**21 01 31.1**	**-8.2**	
GSPH	**General Santos**	**2.21**	**284**	*eP*	**Pn**	**21 01 31.1**	**-8.2**	
BUKP	**Musuan**	**3.09**	**319**	*eP*	**Pn**	**21 01 50.8**	**-0.4**	
BUKP				*eS*	**Sn**	**21 02 27.4**	**-1.0**	
PAGZ	**Pagadian**	**4.35**	**302**	*eP*	**Pg**	**21 02 25.1**	**-0.6**	
MNI	**Manado**	**4.65**	**209**	P	**Pn**	**21 02 12.6**	**-0.2**	
MSLP	**Maasin**	**5.08**	**334**	*eP*	**Pn**	**21 02 23.9**	**+5.2**	
CUYO	**Cuyo Island**	**8.01**	**312**	*eP*	**Pn**	**21 02 58.8**	**-0.1**	
MYLDM	**Lahad Datu**	**8.58**	**268**	P	**Pn**	**21 03 14.8**	**+8.1**	
SBUM	**Sibu**	**15.16**	**259**	P	**Pn**	**21 04 37.3**	**+0.5**	
BBKI	**Banjar Baru** 41nm,1.0s	**15.17**	**234**	P	**Pn**	**21 04 41.5**	**+4.6**	
BATI	**Baumata** 1.5nm,0.3s,baz=95,slow=13,SNR=2.4	**16.01**	**192**	P	**Pn**	**21 04 47.0**	**-0.8**	
BATI	**Baumata** 18nm,1.2s	**16.01**	**192**	P	**Pn**	**21 04 54.5**	**+6.6**	
KAKA	**Kakadu** 20nm,0.8s	**18.89**	**164**	P	**Pn**	**21 05 32.2**	**+8.4**	
WRAB	**Tennant Creek** 15nm,1.3s,mb4.4	**26.30**	**164**	*eP*	**P**	**21 06 39.4**	**+1.0**	
WRAB	**Tennant Creek** 11nm,1.9s,mb4.0	**26.30**	**164**	P	**P**	**21 06 47.9**	**+10**	
WRA	**Warramunga Arr** 4.3nm,0.8s,mb4.0,baz=339,slow=10,SNR=22	**26.30**	**164**	P	**P**	**21 06 38.9**	**+0.4**	
WRA				ScP	ScP	21 13 40.9	-4.2	
	0.5nm,0.8s,baz=346,slow=2.9,SNR=4.7							
WB2	**Warramunga Arr**	**26.30**	**164**	*eP*	**P**	**21 06 39.5**	**+1.1**	
WB2	**Warramunga Arr**	**26.30**	**164**	*eP*	**P**	**21 06 39.4**	**+0.9**	
PDSI	**Padang** 21nm,1.0s,mb4.7	**27.37**	**257**	P	**P**	**21 06 48.3**	**+0.1**	
ASAR	**Alice Springs** 0.5nm,0.5s,mb3.5,baz=347,slow=6.9,SNR=9.3	**29.77**	**167**	P	**P**	**21 07 09.3**	**-0.1**	
ASAR				PcP	PcP	21 10 13.0	-0.3	
	0.5nm,0.7s,baz=348,slow=2.2,SNR=4.3							
ASAR				ScP	ScP	21 13 50.8	-5.0	
	0.8nm,1.0s,baz=343,slow=3.0,SNR=4.6							
CMAR	**Chiang Mai Arr** 0.5nm,0.7s,mb3.4,baz=114,slow=7.7,SNR=4.7	**30.33**	**297**	P	**P**	**21 07 14.4**	**-0.1**	
CMAR				LR	LR	21 19 46.3		
	comp=Z,94nm,18.0s,MS3.5,baz=180,slow=37							
STKA	**Stephens Creek** 2.0nm,0.7s,mb4.0	**39.69**	**161**	*eP*	**P**	**21 08 35.2**	**+0.3**	
STKA	**Stephens Creek** 1.5nm,0.7s,mb3.9,baz=346,slow=7.2,SNR=6.5	**39.69**	**161**	P	**P**	**21 08 35.2**	**+0.3**	
STKA				LR	LR	21 25 58.2		
	comp=Z,96nm,20.7s,MS3.6,baz=184,slow=38							
STKA	**Stephens Creek**	**39.69**	**161**	P	**P**	**21 08 35.2**	**+0.3**	
STKA				LR	LR	21 25 58.2		
SONM	**Songino Array** 0.4nm,0.6s,mb3.5,baz=155,slow=8.0,SNR=4.4	**45.72**	**341**	P	**P**	**21 09 23.2**	**-0.6**	
MKAR	**Makanchi Array** 1.4nm,0.6s,mb4.2,baz=119,slow=7.8,SNR=20	**56.30**	**324**	P	**P**	**21 10 40.6**	**-2.8**	
ZALV	**Zalesovo Beam** 0.5nm,0.5s,mb3.8,baz=145,slow=5.3,SNR=3.3	**59.16**	**332**	P	**P**	**21 11 00.3**	**-3.0**	
ARCES	**ARCESS Array B** 2.4nm,0.8s,mb4.5,baz=45,slow=5.3,SNR=4.9	**88.89**	**340**	P	**P**	**21 13 55.5**	**-1.2**	
TAOE	**Nuku Hiva Isla** 2µm,26.6s	**93.54**	**99**	*eLR*	LR	21 14 55.3		

*ISCJB **15** 21:01:42.6±2.7,2268S±0.10×708W±0.2,h42km±25km, Error ellipse: s-maj=27.6km s-min=11.9km az=25.4*
*IDC **15** 21:01:45.5±4.8,2313S×7032W,h35km±32km, mb3.9/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, ML3.3/3, MS3.8/1, Ms1 3.8/1, ms1mx2.4/34, Error ellipse: s-maj=49.1km s-min=29.0km az=118.0*
*NEIC **15** 21:01:45.2±1.1,2276S×7064W,h35km, Error ellipse: s-maj=27.5km s-min=13.6km az=127.0*
ISC 15 21:01:44.9±2.3, 2263S±0.10×707W±0.2, h40km±24km, n11, σ0§84/10, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.66**	**90**	Pg		**Pn**	**Pn**	**21 02 11.6**	**0.0**
	172nm,0.3s,SNR=55								
LVC				Lg				21 02 31.3	
	313nm,0.3s,SNR=20								
LVC	**Limon Verde**	**1.66**	**90**	*e*Pn		**Pn**	**Pn**	**21 02 11.4**	**-0.2**
LVC				*e*Sn		**Sn**	**Sn**	**21 02 31.1**	**-0.6**
LCO	**Las Campanas**	**6.36**	**180**	*e*Pn		**Pn**	**Pn**	**21 03 15.0**	**-1.1**
LPAZ	**La Paz**	**6.76**	**22**	*e*Pn		**Pn**	**Pn**	**21 03 28.7**	**+7.1**
	0.4nm,0.3s,baz=198,slow=7.2,SNR=5.0								
LPAZ	**La Paz**	**6.76**	**22**	*e*Pn		**Pn**	**Pn**	**21 03 28.7**	**+7.1**
CFAA	**Coronel Fontan**	**9.21**	**167**	Pn		**Pn**	**Pn**	**21 03 49.0**	**-6.2**
	0.1nm,0.3s,baz=335,slow=14,SNR=3.1								
CFAA				Sn			**Sn**	**21 05 38.6**	**+1.0**
	0.1nm,0.3s,baz=224,slow=21,SNR=10.0								
SIV	**San Ignacio**	**11.24**	**56**	Pn			**Pn**	**21 04 24.2**	**+1.2**
	0.5nm,0.3s,baz=236,slow=11,SNR=17								
TKL	**Tuckaleechee C**	**59.27**	**348**	LR			LR	21 38 54.0	
	comp=Z,82nm,21.7s,baz=118,slow=37								
TORD	**Torodi Ar. Bea**	**79.30**	**71**	P			**P**	**21 13 46.5**	**-0.3**
	1.3nm,0.7s,baz=258,slow=5.1,SNR=16								
WRA	**Warramunga Arr**	**131.13**	**212**	PKP			PKPdf	21 20 54.2	+1.0
	0.3nm,1.0s,baz=144,slow=1.3,SNR=4.5								
MKAR	**Makanchi Array**	**147.52**	**36**	PKPbc			PKPbc	21 21 26.2	+1.6
	0.4nm,0.7s,baz=306,slow=3.7,SNR=4.4								

*ISCJB **15** 21:05:33.2±1.3,2301S±0.06×7021W±0.10,h37km±13km, mb4.4/22, Error ellipse: s-maj=15.4km s-min=9.2km az=174.4*
*IDC **15** 21:05:34.5±2.9,2292S×7033W,h33km±21km, mb4.0/9, mb1 4.2/11, mb1mx4.1/19, mbtmp4.1/11, ML4.0/2, Error ellipse: s-maj=22.0km s-min=20.2km az=44.0*
*BJI **15** 21:05:34.9,2300S×7030W,h35km, mB4.9, Ms5.0, Msz4.8*
*NEIC **15** 21:05:34.9±0.3,2302S×7030W,h35km, mb4.7/14, Error ellipse: s-maj=8.9km s-min=6.8km az=78.0*
ISC 15 21:05:34.8±2.7, 2297S±0.05×7027W±0.09, h32km±19km, h35km±.6km: pP-P, n60, σ1§02/44, mb4.4/22, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.31**	**74**	Pg		**Pn**	**Pn**	**21 05 59.8**	**+3.0**
	634nm,0.3s,SNR=313								
LVC				Lg				21 06 18.9	
	2µm,0.3s,SNR=39								
LVC	**Limon Verde**	**1.31**	**74**	*e*Pn		**Pn**	**Pn**	**21 05 59.7**	**+2.8**
LVC				Sn		**Sn**	**Sn**	**21 06 17.9**	**+4.7**
LCO	**Las Campanas**	**6.02**	**184**	Pn		**Pn**	**Pn**	**21 07 00.6**	**-1.1**
ARE	**Arequipa**	**6.58**	**350**	*eP*		**Pn**	**Pn**	**21 07 07.0**	**-2.4**
ARE				*eS*		**Sn**	**Sn**	**21 08 19.0**	**-4.3**
LPAZ	**La Paz**	**6.95**	**17**	Pn		**Pn**	**Pn**	**21 07 17.2**	**+2.7**
	2.1nm,0.3s,baz=222,slow=7.0,SNR=30								
LPAZ	**La Paz**	**6.95**	**17**	*e*Pn		**Pn**	**Pn**	**21 07 17.4**	**+2.9**
CFAA	**Coronel Fontan**	**8.79**	**169**	Pn		**Pn**	**Pn**	**21 07 40.5**	**+0.9**
	0.0nm,0.3s,baz=345,slow=16,SNR=2.4								
CFAA				Sn			**Sn**	**21 09 28.6**	**+11**
	0.1nm,0.3s,baz=358,slow=19,SNR=2.6								
SIV	**San Ignacio**	**11.11**	**53**	Pn			**Pn**	**21 08 11.3**	**-0.3**
	2.1nm,0.3s,baz=251,slow=12,SNR=16								
PLCA	**Paso Flores**	**17.71**	**181**	P			**Pn**	**21 09 39.6**	**+0.7**
	0.1nm,0.3s,baz=14,slow=16,SNR=2.8								
BDFB	**Brasilia**	**22.22**	**75**	P			**P**	**21 10 28.5**	**-0.3**
	1.5nm,0.7s,mb3.5,baz=225,slow=19,SNR=3.5								
VNA3	**Neumayer Olymp**	**59.10**	**161**	*e*P			**P**	**21 15 31.8**	**+0.2**
VNA3				*e*			pP	21 15 42.1	+0.6
VNA3				*e*				21 15 45.0	
VNA2	**Neumayer--Watz** baz=293,slow=8.4	**59.69**	**160**	*e*P			**P**	**21 15 35.8**	**+0.1**
VNA2				*e*			pP	21 15 46.3	+0.7
VNA2				*e*				21 15 49.8	
TKL	**Tuckaleechee C**	**59.70**	**347**	P			**P**	**21 15 34.9**	**-1.3**
	3.6nm,0.4s,mb4.7,baz=164,slow=7.4,SNR=4.6								
JCT	**Junction City**	**60.24**	**331**	*e*P			**P**	**21 15 39.7**	**-0.3**
	6.6nm,0.8s,mb4.7								
TXAR	**Lajitas Array**	**61.13**	**327**	P			**P**	**21 15 45.5**	**-0.6**
	1.1nm,0.7s,mb4.1,baz=148,slow=9.1,SNR=10								
SNAA	**Sanae**	**61.31**	**161**	*e*P			**P**	**21 15 45.0**	**-1.8**
SNAA				*e*			pP	21 15 55.5	-1.2
SNAA				*e*				21 15 58.4	
SNAA	**Sanae** 4.1nm,0.9s,mb4.6	**61.31**	**161**	*e*P			**P**	**21 15 45.5**	**-1.3**
FVM	**French Village** 10nm,0.6s,mb5.0	**63.52**	**342**	*e*P			**P**	**21 16 00.5**	**-1.4**
ANMO	**Albuquerque** 1.6nm,0.7s,mb4.2,baz=153,slow=11,SNR=3.5	**67.06**	**328**	P			**P**	**21 16 24.6**	**-0.3**
SDCO	**Great Sand Dun** 4.2nm,0.8s,mb4.4	**68.89**	**331**	*e*P			**P**	**21 16 36.6**	**+0.3**
SDCO				*e*pP			pP	21 16 46.4	0.0
WUAZ	**Wupatki** 7.2nm,1.0s,mb4.6	**69.99**	**325**	*e*P			**P**	**21 16 44.4**	**+1.2**
DBIC	**Dimbokro** 5.0nm,0.7s,mb4.5,baz=178,slow=7.8,SNR=6.8	**70.36**	**74**	P			**P**	**21 16 45.4**	**-0.6**
SRU	**San Rafael**	**72.34**	**328**	*e*P			**P**	**21 16 57.8**	**+0.5**
MSU	**Marysvale**	**72.69**	**327**	*e*P			**P**	**21 17 00.5**	**+1.0**
RSSD	**Black Hills** 3.6nm,0.8s,mb4.3	**73.58**	**335**	P			**P**	**21 17 04.9**	**+0.3**
TPNV	**Topopah Spring** 80nm,3.0s	**73.69**	**323**	*e*P			**P**	**21 17 06.2**	**+0.7**
DUG	**Dugway** 19nm,1.6s,mb4.8	**74.30**	**327**	*e*P			**P**	**21 17 08.8**	**0.0**
PDAR	**Pinedale Array** 0.5nm,0.5s,mb3.7,baz=142,slow=6.5,SNR=6.6	**74.77**	**331**	P			**P**	**21 17 11.0**	**-0.5**
HWUT	**Hardware Ranch** 9.5nm,1.3s,mb4.6	**74.78**	**329**	*e*P			**P**	**21 17 11.5**	**-0.2**
SPUT	**South Promonto**	**74.97**	**328**	*e*P			**P**	**21 17 13.5**	**+0.7**
SYO	**Syowa Base**	**75.57**	**160**	*e*P			**P**	**21 17 14.4**	**-1.5**
NVAR	**Mina Array Bea** 1.3nm,0.8s,mb3.9,baz=148,slow=6.9,SNR=7.7	**75.89**	**323**	P			**P**	**21 17 17.7**	**-0.4**
LOHW	**Long Hollow** 42nm,2.6s,mb4.9	**75.90**	**331**	*e*P			**P**	**21 17 18.4**	**+0.3**
ELK	**Elko** 2.3nm,1.0s,mb4.1,baz=81,slow=5.1,SNR=6.7	**75.93**	**326**	P			**P**	**21 17 18.0**	**-0.3**
ELK	**Elko**	**75.93**	**326**	P			**P**	**21 17 18.0**	**-0.3**
RRI2	**Red Ridge** 5.1nm,0.8s,mb4.5	**76.02**	**330**	*e*P			**P**	**21 17 19.7**	**+1.0**
PAHR	**Pah Rah Range** 6.7nm,0.8s,mb4.6	**77.38**	**323**	*e*P			**P**	**21 17 27.6**	**+1.0**
HLID	**Hailey** 3.6nm,0.9s,mb4.3	**77.63**	**329**	*e*P			**P**	**21 17 28.7**	**+0.9**
BOZ	**Bozeman (W)** 7.4nm,0.7s,mb4.7	**77.95**	**332**	*e*P			**P**	**21 17 31.9**	**+2.4**
TOA0	**Torodi Ar. Sit**	**79.04**	**71**	*e*P			**P**	**21 17 35.6**	**-0.6**
TOA0				*e*PcP			PcP	21 17 44.8	+0.1
TORD	**Torodi Ar. Bea** 6.7nm,0.7s,mb4.7,baz=256,slow=5.3,SNR=44	**79.04**	**71**	P			**P**	**21 17 35.5**	**-0.7**
ASAR	**Alice Springs** 1.8nm,0.8s,baz=144,slow=2.4,SNR=16	**128.02**	**208**	PKP			PKPdf	21 24 37.4	-0.9
WRA	**Warramunga Arr** 1.7nm,0.9s,baz=152,slow=1.7,SNR=30	**131.05**	**211**	PKP			PKPdf	21 24 43.4	-0.6
ZALV	**Zalesovo Beam** 1.9nm,0.6s,baz=318,slow=2.0,SNR=10	**143.82**	**25**	PKP			PKPdf	21 25 04.9	-1.5
AML	**Almayashu**	**144.47**	**49**	*e*PKPdf			PKPdf	21 25 08.0	0.0
MK31	**Makanchi Array**	**147.56**	**36**	*e*PKPbc			PKPbc	21 25 15.5	-0.2
MKAR	**Makanchi Array** 3.0nm,0.7s,baz=311,slow=1.3,SNR=18	**147.56**	**36**	PKPbc			PKPbc	21 25 12.7	-3.0
MJAR	**Matsushiro Arr** 1.9nm,0.6s,baz=126,slow=1.1,SNR=5.3	**151.94**	**305**	PKPbc			PKPbc	21 25 25.9	-0.9
WMQ	**Urumqi**	**152.40**	**36**	*e*PKP			PKPdf	21 25 20.0	-0.7
MDJ	**Mudanjiang**	**152.96**	**328**	PKP			PKPdf	21 25 21.3	-0.2
SONM	**Songino Array** 0.6nm,0.9s,baz=230,slow=1.2,SNR=3.8	**155.05**	**5**	PKP			PKPdf	21 25 24.7	+0.3
SONM				PKPbc			PKPbc	21 25 33.1	+8.7
	0.6nm,0.9s,baz=347,slow=2.5,SNR=5.1								
SONM				PKPab			PKPab	21 25 48.7	-0.1
	1.3nm,0.9s,baz=321,slow=4.1,SNR=5.7								
CN2	**Changchun**	**155.51**	**332**	*e*PKP			PKPdf	21 25 24.1	-1.0
GTA	**Gaotai**	**161.57**	**25**	*e*PKP			PKPdf	21 25 33.1	+0.6
GTA				APKP				21 25 43.5	
GTA				XPKP				21 25 47.4	
HHC	**Hu-ho-hao-te**	**162.11**	**355**	*e*PKP			PKPdf	21 25 31.4	-1.6
HHC				APKP				21 25 42.0	
HHC				XPKP				21 25 45.5	
HHC				PKS				21 29 04.1	
HHC				PP		PP		21 30 03.6	+1.0
HHC				PP		PP			
	comp=Z,65nm,10.1s								
HHC				LR		LR			
	comp=N,130nm,14.9s								
HHC				LR		LR			
	comp=E,126nm,16.1s								
HHC				LR		LR			
	comp=Z,105nm,18.4s								
LZH	**Lanzhou**	**165.97**	**20**	*e*PKP			PKPdf	21 25 36.0	-0.7
LZH				APKP				21 25 46.9	
LZH				XPKP				21 25 50.5	
LZH				*e*PP		PP		21 30 27.0	+3.9
LZH				PP		PP			
	comp=Z,97nm,8.5s								
LZH				LR		LR			
	comp=N,123nm,18.0s								
LZH				LR		LR			
	comp=Z,165nm,20.3s								
NJ2	**Nanjing**	**167.87**	**320**	*e*PKP			PKPdf	21 25 37.5	-0.8
CMAR	**Chiang Mai Arr**	**168.96**	**112**	PKP			PKPdf	21 25 38.9	-0.4
	comp=Z,0.3nm,0.3s,baz=278,slow=3.3,SNR=4.1								
CD2	**Chengdu**	**170.47**	**33**	*e*PKP			PKPdf	21 25 37.9	-2.0
CD2				APKP				21 25 48.8	
CD2				XPKP				21 25 52.5	
CD2				PKP2		PKPab		21 26 58.3	+1.5
CD2				PP		PP		21 30 49.6	+3.2
CD2				PP		PP			
	comp=Z,130nm,10.8s								
CD2				LR		LR			
	comp=N,180nm,18.8s								
CD2				LR		LR			
	comp=Z,160nm,16.8s								
KMI	**Kunming**	**173.27**	**70**	PKP			PKPdf	21 25 40.8	-0.6
GYA	**Guiyang**	**175.55**	**38**	*e*PKP			PKPdf	21 25 43.3	+1.2
GYA				APKP				21 25 51.6	
GYA				XPKP				21 25 58.5	
GYA				PKS				21 29 10.3	
GYA				PP		PP			
	comp=Z,80nm,9.2s								
GYA				LR		LR			
	comp=N,90nm,25.0s								
GYA				LR		LR			
	comp=E,70nm,25.2s								
GYA				LR		LR			
	comp=Z,90nm,23.0s								

*ISCJB **15** 21:12:23.7±0.2,2291S±0.05×7058W±0.06,h31km, mb4.8/29, MS4.3/7, Error ellipse: s-maj=8.8km s-min=5.3km az=144.9*
*MOS **15** 21:12:23.4±1.5,2277S×7081W,h33km,mb5.3/10, Error ellipse: s-maj=20.7km s-min=9.9km az=94.2*
*IDC **15** 21:12:24.9±3.1,2286S×7064W,h33km±21km,mb4.4/10, mb1 4.5/13,mb1mx4.4/20,mbtmp4.4/13, ML4.5/3, MS4.3/8, Ms1 4.3/8,ms1mx3.9/24, Error ellipse: s-maj=21.1km s-min=16.6km az=56.0*
*NEIC **15** 21:12:25.6±0.3,2288S×7066W,h35km,mb5.0/21, Error ellipse: s-maj=8.9km s-min=6.6km az=67.0*
NEIC Felt at Antofagasta and Iquique.
*BJI **15** 21:12:26.5,2290S×7070W,h35km,mB5.1,Ms5.1,Msz4.9*
ISC 15 21:12:26.2±0.2, 2290S±0.05×7057W±0.06, h34km, h34km±1.7km: pP-P, n243, σ0§65/197, mb4.8/29, MS4.3/7, 61C-70D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.56**	**80**	Pg		**Pn**	**Pn**	**21 12 53.2**	**+1.8**
	553nm,0.3s,SNR=220								
LVC				Lg				21 13 19.0	
	1µm,0.3s,SNR=24								
LVC	**Limon Verde**	**1.56**	**80**	*e*Pn		**Pn**	**Pn**	**21 12 53.2**	**+1.8**
LVC				*e*Sn		**Sn**	**Sn**	**21 13 17.8**	**+7.4**
LCO	**Las Campanas**	**6.08**	**181**	*e*Pn		**Pn**	**Pn**	**21 13 54.5**	**+0.8**
ARE	**Arequipa**	**6.47**	**352**	*e*P		**Pn**	**Pn**	**21 13 54.0**	**-5.0**
ARE				*e*S		**Sn**	**Sn**	**21 15 05.0**	**-6.6**
LPAZ	**La Paz** 7.5nm,0.3s,baz=229,slow=6.7,SNR=107	**6.97**	**20**	Pn		**Pn**	**Pn**	**21 14 06.9**	**+1.0**
LPAZ				LR		LR	LR	21 17 03.2	
	comp=Z,3µm,18.4s,baz=198,slow=40								
LPAZ	**La Paz** 1.5nm,0.4s	**6.97**	**20**	*e*Pn			**Pn**	**21 14 06.8**	**+0.9**
LPAZ	**La Paz**	**6.97**	**20**	*e*P			**Pn**	**21 14 06.8**	**+0.9**
LPAZ				pmax		pmax	pmax		
	comp=Z,1.0nm,0.4s								
CFAA	**Coronel Fontan**	**8.91**	**167**	Pn			**Pn**	**21 14 31.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=346,slow=16,SNR=4.5								
CFAA				Sn			**Sn**	**21 16 21.5**	**+10**
	comp=Z,0.2nm,0.3s,baz=323,slow=13,SNR=2.5								
CFAA				LR		LR		21 17 42.1	
	comp=Z,161nm,19.4s,baz=331,slow=35								
SIV	**San Ignacio**	**11.29**	**54**	Pn			**Pn**	**21 15 04.2**	**-0.9**
	comp=Z,3.5nm,0.3s,baz=241,slow=13,SNR=56								
PLCA	**Paso Flores**	**17.78**	**180**	P			**Pn**	**21 16 31.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=6.6,slow=11,SNR=4.1								
PLCA	**Paso Flores**	**17.78**	**180**	*e*Pn			**Pn**	**21 16 31.6**	**+0.8**
	comp=Z,19nm,1.6s								
PLCA	**Paso Flores**	**17.78**	**180**	*e*P			**Pn**	**21 16 31.7**	**+0.8**
PLCA				pmax		pmax	pmax		
	comp=Z,19nm,1.6s								
SPB	**Sao Paulo**	**21.27**	**96**	P			**P**	**21 17 12.4**	**+2.8**
BDFB	**Brasilia** comp=Z,7.0nm,0.6s,mb4.3,baz=244,slow=16,SNR=21	**22.46**	**75**	P			**P**	**21 17 22.0**	**-0.5**
BDFB				LR		LR	LR	21 26 46.2	
	comp=Z,397nm,19.9s,MS3.8,baz=100,slow=38								
BDFB	**Brasilia** comp=Z,18nm,1.2s,mb4.4	**22.46**	**75**	*e*P			**P**	**21 17 22.4**	**-0.1**
OTAV	**Otavalo** comp=Z,20nm,2.3s,mb4.1	**24.25**	**340**	*e*P			**P**	**21 17 41.1**	**+1.0**
EFI	**East Falkland** comp=Z,92nm,1.8s,mb5.2	**30.31**	**165**	*e*P			**P**	**21 18 33.9**	**-0.2**
EFI	**East Falkland**	**30.31**	**165**	*e*P			**P**	**21 18 33.9**	**-0.2**
EFI				pmax		pmax			
	comp=Z,92nm,1.8s,mb5.2								
USHA	**Ushuaia** comp=Z,850nm,18.1s,MS4.5,baz=353,slow=38	**31.93**	**178**	LR		LR	LR	21 32 37.2	
PCRV	**Puerto La Cruz** comp=Z,529nm,19.1s,MS4.3,baz=5.1,slow=40	**33.38**	**11**	LR		LR	LR	21 34 39.0	
RPN	**Rapa Nui** comp=Z,320nm,18.8s,MS4.1,baz=80,slow=30	**35.29**	**255**	LR		LR	LR	21 30 05.5	
RCBR	**Riachuelo**	**37.48**	**68**	*e*P			**P**	**21 19 37.5**	**+0.6**
RKT	**Rikitea** comp=Z,518nm,26.2s	**58.81**	**256**	*e*LR			LR	21 39 43.7	
VNA3	**Neumayer Olymp**	**59.26**	**161**	*e*P			**P**	**21 22 23.9**	**+0.1**
VNA3				*e*			pP	21 22 36.2	+2.0
VNA1	**Neumayer--Stat**	**59.49**	**160**	*e*P			**P**	**21 22 27.0**	**+1.6**
TKL	**Tuckaleechee C** comp=Z,6.1nm,0.8s,mb4.7,baz=152,slow=11,SNR=5.2	**59.57**	**348**	P			**P**	**21 22 23.0**	**-3.3**
SWET	**Sewanee**	**59.61**	**345**	*e*P			**P**	**21 22 23.9**	**-2.7**
VNA2	**Neumayer--Watz** baz=298,slow=9.0	**59.85**	**160**	*e*P			**P**	**21 22 27.7**	**-0.2**
VNA2				*e*			pP	21 22 38.3	0.0
JCT	**Junction City** comp=Z,9.9nm,0.7s,mb5.0	**60.04**	**331**	*e*P			**P**	**21 22 28.6**	**-1.1**
JCT				*e*pP			pP	21 22 37.8	-2.4
JCT	**Junction City**	**60.04**	**331**	*e*P			**P**	**21 22 28.6**	**-1.1**
JCT				*e**PP			pP	21 22 37.8	-2.3
JCT				pmax			pmax		
	comp=Z,10.0nm,0.7s,mb5.0								
TXAR	**Lajitas Array** comp=Z,1.3nm,0.8s,mb4.1,baz=149,slow=8.6,SNR=11	**60.93**	**327**	P			**P**	**21 22 34.0**	**-1.8**
MIAR	**Mount Ida** comp=Z,91nm,2.0s,mb5.6	**61.17**	**338**	*e*P			**P**	**21 22 35.1**	**-2.2**
MIAR				*e*pP			pP	21 22 45.7	-2.1
MIAR	**Mount Ida**	**61.17**	**338**	*e*P			**P**	**21 22 35.1**	**-2.2**
MIAR				*e**PP			pP	21 22 45.7	-2.1
MIAR				pmax			pmax		
	comp=Z,91nm,2.0s,mb5.6								
SNAA	**Sanae**	**61.47**	**161**	*e*P			**P**	**21 22 36.7**	**-2.2**
SNAA	**Sanae** comp=Z,25nm,1.2s,mb5.2	**61.47**	**161**	*e*P			**P**	**21 22 37.3**	**-1.6**
SNAA	**Sanae** comp=Z,25nm,1.2s	**61.47**	**161**	*e*P			**P**	**21 22 37.3**	**-1.6**
SNAA				pmax			pmax		
FVM	**French Village** comp=Z,13nm,0.9s,mb5.1	**63.37**	**343**	*e*P			**P**	**21 22 49.7**	**-2.3**
FVM				*e*pP			pP	21 22 59.1	-3.3
FVM	**French Village**	**63.37**	**343**	*e*P			**P**	**21 22 49.7**	**-2.3**
FVM				*e**PP			pP	21 22 59.1	-3.4
FVM				pmax			pmax		
	comp=Z,13nm,0.9s,mb5.1								
CCM	**Cathedral Cave** comp=Z,172nm,2.9s,mb5.6	**63.67**	**342**	*e*P			**P**	**21 22 51.7**	**-2.2**
CCM				*e*pP			pP	21 23 00.6	-3.8
CCM	**Cathedral Cave**	**63.67**	**342**	*e*P			**P**	**21 22 51.7**	**-2.3**
CCM				*e**PP			pP	21 23 00.6	-3.8
CCM				pmax			pmax		
	comp=Z,172nm,2.9s,mb5.6								
319A	**Douglas** baz=66	**65.48**	**324**	⇑P			**P**	**21 23 05.8**	**-0.2**
318A	**Bisbee** baz=66	**65.92**	**324**	⇓P			**P**	**21 23 08.1**	**-0.7**
219A	**White Tail Can** baz=66	**65.95**	**324**	⇓P			**P**	**21 23 08.2**	**-0.8**
BNM	**Barren Site**	**66.30**	**328**	*e*P			**P**	**21 23 10.0**	**-1.1**
218A	**Dragoon** baz=66	**66.36**	**324**	⇓P			**P**	**21 23 11.0**	**-0.5**
118A	**Homack Ranch,** baz=67	**66.83**	**324**	⇓P			**P**	**21 23 14.4**	**-0.2**
ANMO	**Albuquerque** comp=Z,1.9nm,0.7s,mb4.2,baz=90,slow=8.1,

	baz=71							
S17A	Black Ridge (B	71.12	327	⇑P	P	21 23 41.4	+0.3	
	baz=71							
R18A	Canyonlands Na	71.26	328	⇑P	P	21 23 42.0	+0.1	
	baz=72							
Q19A	Hogan Spring (	71.41	329	⇑P	P	21 23 43.4	+0.6	
	baz=72							
V13A	Grand Canyon W	71.43	324	⇓P	P	21 23 43.4	+0.4	
	baz=72							
GMRC	Granite Mounta	71.57	322	⇑P	P	21 23 44.5	+0.6	
	baz=72							
TBI	Tubuai	71.59	252	*e*LR	LR	21 45 41.5		
	comp=Z,198nm,24.0s							
R17A	Hanksville Air	71.68	328	⇑P	P	21 23 45.2	+0.7	
	baz=72							
Q18A	Rafter H Ranch	71.94	329	⇓P	P	21 23 46.1	+0.1	
	baz=72							
SRU	San Rafael	72.13	328	⇓P	P	21 23 46.9	-0.3	
	baz=72							
TUQ	Turquoise Moun	72.19	322	⇓P	P	21 23 47.7	+0.1	
	baz=72							
P18A	Preston Nutter	72.40	329	⇓P	P	21 23 49.1	+0.3	
	baz=73							
O19A	Miners Draw (B	72.41	330	⇓P	P	21 23 49.1	+0.3	
	baz=73							
P17A	Butcher Ranch,	72.52	328	⇓P	P	21 23 49.8	+0.3	
	baz=73							
L21A	Rawlins	72.97	332	⇓P	P	21 23 52.3	+0.2	
	baz=73							
O17A	Robinson Place	73.08	329	⇓P	P	21 23 53.6	+0.8	
	baz=73							
T11A	Corn Creek, Al	73.12	324	⇑P	P	21 23 53.3	+0.2	
	baz=73							
N18A	Larsen Ranch,	73.20	330	⇓P	P	21 23 53.8	+0.3	
	baz=73							
Q14A	Sevier Lake (B	73.41	327	⇓P	P	21 23 54.9	+0.1	
	baz=74							
TPNV	Topopah Spring	73.47	323	⇑P	P	21 23 55.5	+0.4	
	baz=74							
PPT	Papeete	73.51	258	*e*S	S	21 33 22.6	-1.2	
	comp=Z,139nm,25.2s							
PPT	Papeete	73.51	258	*e*LR	LR	21 46 38.0		
	comp=Z,360nm,26.0s							
PPT	Papeete	73.51	258	LR	LR	21 47 54.3		
	comp=Z,148nm,18.9s,MS4.3,baz=56,slow=29							
MPMC	Manual Prospec	73.53	322	⇓P	P	21 23 55.5	-0.1	
	baz=74							
R12A	Pony Springs,	73.60	325	⇓P	P	21 23 56.1	+0.2	
	baz=74							
N17A	Moffit Pass	73.71	329	⇓P	P	21 23 56.6	+0.1	
	baz=74							
P14A	Drum Mountains	73.76	327	⇓P	P	21 23 57.3	+0.5	
	baz=74							
ISA	Isabella	73.81	321	⇑P	P	21 23 57.1	-0.1	
	baz=74							
L19A	Farson	73.95	331	⇓P	P	21 23 57.8	-0.1	
	baz=74							
M17A	Scullys Gap (B	74.05	330	⇑P	P	21 23 59.0	+0.5	
	baz=74							
DUG	Dugway	74.09	328	⇑P	P	21 23 58.8	+0.1	
	baz=74							
L18A	Fontenelle, Gr	74.12	330	⇓P	P	21 23 59.0	+0.2	
	baz=74							
R11A	Troy Canyon, C	74.13	325	⇑P	P	21 23 59.2	+0.2	
	baz=74							
P13A	Bates Ranch, G	74.13	326	⇑P	P	21 23 58.8	-0.2	
	baz=74							
S10A	Tonopah Range,	74.36	324	⇑P	P	21 24 00.4	0.0	
	baz=74							
R10A	Warm Springs	74.47	324	⇑P	P	21 24 01.1	+0.1	
	baz=75							
Q11A	Duckwater	74.53	325	⇓P	P	21 24 01.2	-0.2	
	baz=75							
BW06	Boulder Array	74.57	331	⇓P	P	21 24 01.2	-0.3	
	baz=75							
HWUT	Hardware Ranch	74.58	329	*e*P	P	21 24 00.9	-0.7	
	comp=Z,9.9nm,1.0s,mb4.7							
M15A	Larsen Ranch,	74.89	329	⇑P	P	21 24 03.2	-0.1	
	baz=75							
Q10A	Clear Creek Ra	74.91	325	⇑P	P	21 24 03.9	+0.3	
	baz=75							
O12A	Currie	75.11	327	⇑P	P	21 24 04.5	-0.2	
	baz=75							
L15A	Malad City	75.27	329	⇓P	P	21 24 05.5	0.0	
	baz=76							
M14A	Sheep Mountain	75.35	328	⇓P	P	21 24 05.8	-0.1	
	baz=76							
I18A	Diamond G Ranc	75.43	332	⇓P	P	21 24 06.4	0.0	
	baz=76							
K16A	Soda Springs	75.54	330	⇓P	P	21 24 07.2	+0.2	
	baz=76							
NVAR	Mina Array Bea	75.67	323	P	P	21 24 07.6	-0.3	
	comp=Z,1.0nm,1.0s,mb3.7,baz=147,slow=6.2,SNR=4.9							
SYO	Syowa Base	75.73	160	⇑*e*P	P	21 24 05.0	-2.9	
SYO	Syowa Base	75.73	160	⇑*e*pP	pP	21 24 15.0	-3.6	
RRI2	Red Ridge	75.82	331	*e*P	P	21 24 09.1	+0.4	
	comp=Z,14nm,1.1s,mb4.8							
J16A	Bone	75.90	330	⇑P	P	21 24 09.8	+0.7	
	baz=76							
I17A	Pilgram Creek	75.94	331	⇑P	P	21 24 10.0	+0.7	
	baz=76							
S05C	Merced	76.06	321	⇓P	P	21 24 10.1	-0.1	
	baz=76							
J15A	Blackfoot	76.37	330	⇑P	P	21 24 11.8	0.0	
	baz=77							
G18A	Lazy EL Ranch,	76.62	333	⇑P	P	21 24 13.2	0.0	
	baz=77							
J14A	Carey	76.82	329	⇓P	P	21 24 14.7	+0.4	
	baz=77							
H16A	Russell Place,	76.86	331	⇓P	P	21 24 14.8	+0.3	
	baz=77							
F18A	Big Timber	77.15	333	⇓P	P	21 24 16.0	-0.1	
	baz=77							
PAHR	Pah Rah Range	77.16	323	*e*P	P	21 24 17.7	+1.3	
	comp=Z,10nm,1.1s,mb4.7							
I14A	Mackay	77.25	330	⇑P	P	21 24 17.1	+0.4	
	baz=77							
L10A	Juniper Basin	77.33	327	⇓P	P	21 24 17.3	0.0	
	baz=78							
HLID	Hailey	77.42	329	*e*P	P	21 24 18.4	+0.7	
	comp=Z,7.0nm,1.1s,mb4.5							
HLID	Hailey	77.42	329	⇓P	P	21 24 18.0	+0.3	
	baz=78							
J12A	Stokes Ranch,	77.52	328	⇑P	P	21 24 18.2	0.0	
	baz=78							
F17A	Fitzpatrick Pl	77.55	333	⇑P	P	21 24 18.3	-0.1	
	baz=78							
I13A	Wildhorse Cree	77.55	329	⇓P	P	21 24 18.6	+0.1	
	baz=78							
MCMT	McKenzie Canyo	77.67	331	*e*P	P	21 24 19.8	+0.8	
N07B	Gerlach	77.69	324	⇓P	P	21 24 18.6	-0.6	
	baz=78							
I12A	Atlanta	77.94	329	⇓P	P	21 24 20.4	-0.2	
	baz=78							
H13A	Challis	78.11	330	⇓P	P	21 24 21.4	-0.1	
	baz=78,SNR=5.2							
N06A	Buffalo Meadow	78.14	324	⇑P	P	21 24 21.2	-0.5	
	baz=78							
F15A	Butte	78.29	332	⇓P	P	21 24 22.7	+0.2	
	baz=78							
H12A	Diamond D Ranc	78.38	329	⇓P	P	21 24 23.1	+0.1	
	baz=79							
G13A	Cobalt	78.50	330	⇓P	P	21 24 23.5	-0.1	
	baz=79,SNR=9.7							
D17A	Six Diamond Ra	78.55	333	⇑P	P	21 24 23.7	-0.2	
	baz=79,SNR=5.6							
E15A	Deer Lodge	78.81	332	⇑P	P	21 24 25.3	0.0	
	baz=79							
D16A	Dana Ranch, Ca	78.82	333	⇑P	P	21 24 25.5	+0.1	
	baz=79,SNR=5.8							
F13A	Darby	79.08	330	⇓P	P	21 24 26.5	-0.2	
	baz=79,SNR=7.1							
TOA0	Torodi Ar. Sit	79.27	71	*e*P	P	21 24 27.7	-0.8	
TORD	Torodi Ar. Bea	79.27	71	P	P	21 24 27.3	-1.3	
	comp=Z,23nm,0.9s,mb5.1,baz=254,slow=4.3,SNR=80							
F12A	Elk City	79.47	330	⇑P	P	21 24 29.4	+0.4	
	baz=80							
C16A	Fuhringer Ranc	79.51	333	⇓P	P	21 24 29.2	+0.1	
	baz=80							
E13A	Victor	79.51	331	⇑P	P	21 24 29.5	+0.3	
	baz=80							
G11A	Walters Elk Ra	79.68	329	⇑P	P	21 24 30.5	+0.4	
	baz=80							
D14A	Greenough	79.70	332	⇓P	P	21 24 30.4	+0.2	
	baz=80							
J07A	Hines	79.71	326	⇑P	P	21 24 30.1	-0.2	
	baz=80							
I08A	Drewsey	79.72	327	⇑P	P	21 24 30.1	-0.2	
	baz=80							
C15A	Salmond Ranch,	79.85	333	⇑P	P	21 24 30.8	-0.1	
	baz=80							
F11A	Grangeville	79.99	330	⇓P	P	21 24 31.3	-0.5	
	baz=80							
G10A	Bishop Farm, J	80.01	329	⇑P	P	21 24 31.6	-0.3	
	baz=80							
E12A	Beaver Dam Sad	80.11	330	⇓P	P	21 24 32.3	-0.1	
	baz=80							
D13A	Huson	80.12	331	⇓P	P	21 24 32.4	0.0	
	baz=80							
B15A	Bradely Ranch,	80.25	333	⇑P	P	21 24 32.4	-0.7	
	baz=80							
I07A	Izee	80.31	327	⇓P	P	21 24 33.6	0.0	
	baz=80							
G09A	Cove	80.31	328	⇓P	P	21 24 33.4	-0.1	
	baz=80							
A16A	West Butte Ran	80.35	334	⇓P	P	21 24 33.1	-0.6	
	baz=81,SNR=5.3							
E11A	Bogner Ranch,	80.36	330	⇑P	P	21 24 33.6	-0.2	
	baz=81							
F10A	Beach Ranch, E	80.56	329	⇑P	P	21 24 35.4	+0.6	
	baz=81							
C13A	Hot Springs	80.62	332	⇑P	P	21 24 35.4	+0.3	
	baz=81							
E10A	Myers Farm, Un	80.88	329	⇑P	P	21 24 36.8	+0.3	
	baz=81							
B13A	Whitefish	81.10	332	⇑P	P	21 24 37.4	-0.3	
	baz=81							
TSUM	Tsumeb	81.11	107	*e*P	P	21 24 39.3	+0.8	
	comp=Z,14nm,1.0s,mb4.8							
A14A	Double T Ranch	81.12	333	⇓P	P	21 24 37.2	-0.6	
	baz=81							
G07A	Ruggs Ranch, H	81.23	327	⇓P	P	21 24 38.5	+0.1	
	baz=81							
D10A	Wagner Farm, O	81.37	330	⇑P	P	21 24 38.8	-0.3	
	baz=82							
WALA	Waterton Lakes	81.39	333	*e*P	P	21 24 39.2	0.0	
	comp=Z,168nm,2.9s,mb5.5							
C11A	Tepee Creek (N	81.49	331	⇓P	P	21 24 39.1	-0.6	
	baz=82							
OD2	Odessa Site #2	82.29	329	*e*P	P	21 24 43.6	-0.3	
A11A	Hall Mountain,	82.37	332	⇑P	P	21 24 43.7	-0.7	
	baz=83							
C07A	Waterville	83.14	329	⇓P	P	21 24 48.1	-0.3	
	baz=83							
MAW	Mawson	83.43	164	P	P	21 24 49.6	-0.2	
	comp=Z,6.7nm,0.8s,mb4.7,baz=265,slow=7.6,SNR=4.2							
MAW				LR	LR	22 02 36.4		
	comp=Z,137nm,19.2s,MS4.3,baz=16,slow=36							
A08A	Turner Farm, O	83.67	330	⇑P	P	21 24 50.7	-0.4	
	baz=84							
BOSA	Boshof	84.14	118	P	P	21 24 53.0	-1.2	
	comp=Z,7.7nm,0.9s,mb4.8,baz=275,slow=4.4,SNR=7.5							
A07A	Ashcola River,	84.26	330	⇓P	P	21 24 53.6	-0.5	
	baz=84							
TAM	Tamanrasset	86.82	64	P	P	21 25 08.3	+0.8	
RAO	Raoul Island	92.99	237	LR	LR	21 59 11.8		
	comp=Z,292nm,19.6s,MS4.7,baz=113,slow=30							
ANN	Anapa	118.33	50	*e*PKIKP	PKPdf	21 31 10.3	+0.4	
SOC	Sochi	119.88	52	*i* PKIKP	PKPdf	21 31 12.8	-0.1	
ASAR	Alice Springs	127.96	209	PKP	PKPdf	21 31 27.3	-1.8	
	comp=Z,1.9nm,1.0s,baz=153,slow=2.5,SNR=10							
TIXI	Tiksi	129.97	352	*i* PKIKP	PKPdf	21 31 29.1	-2.3	
WRA	Warrmunga Arr	130.97	212	PKP	PKPdf	21 31 33.3	-1.6	
	comp=Z,1.7nm,0.9s,baz=148,slow=1.6,SNR=14							
WRAB	Tennant Creek	130.97	212	PKPdf	PKPdf	21 31 34.0	-1.0	
SVE	Sverdlovsk	131.08	33	*e*PKIKP	PKPdf	21 31 32.8	-1.1	
SVE				pmax	pmax			
	comp=Z,7.0nm,0.6s							
YAK	Yakutsk	138.51	346	*i* PKIKP	PKPdf	21 31 46.1	-1.5	
NVS	Novosibirsk	142.58	25	*e*PKIKP	PKPdf	21 31 50.0	-5.2	
NVS				*i*		21 35 02.0		
NVS				pmax	pmax			
	comp=Z,10.0nm,1.7s							
NVS				pmax	pmax			
	comp=N,16nm,2.3s							
NVS				pmax	pmax			
	comp=E,12nm,2.3s							
KURK	Kurchatov	143.34	33	*i* PKIKP	PKPdf	21 31 52.6	-4.1	
ZAA0	Zalesovo Array	143.87	25	*e*PKPdf	PKPdf	21 31 55.2	-2.3	
ZALV	Zalesovo Beam	143.87	25	PKP	PKPdf	21 31 56.5	-1.0	
	comp=E,4.5nm,1.0s,baz=306,slow=3.5,SNR=14							
EKS2	Erkin-Say	144.48	48	*e*PKPdf	PKPdf	21 31 58.6	-0.4	
AML	Almayashu	144.62	49	P	PKPdf	21 31 58.9	-0.3	
	SNR=6.0							
BOD	Bodaibo	144.96	356	*e*PKIKP	PKPdf	21 31 56.2	-3.1	
BOD				pmax	pmax			
	comp=Z,20nm,1.1s							
AAK	Ala-Archa	144.98	47	P	PKPdf	21 32 00.6	+0.8	
	SNR=14							
CHMS	Chumysh	145.01	47	P	PKPbc	21 31 59.9	+0.6	
	SNR=6.2							
KBK	Karagaybulak	145.28	47	P	PKPbc	21 32 01.4	+1.3	
	SNR=13							
TKM2	Tokmak 2	145.61	46	P	PKPdf	21 32 02.0	+1.1	
	SNR=5.4							
HABR	Khabarovsk	147.37	328	*e*PKP2	PKPbc	21 32 05.6	-0.5	
HABR				*e*		21 35 33.4		
HABR				*e*		21 48 13.9		
HABR				*e*SSS		22 00 08.8		
MK31	Makanchi Array	147.66	36	*e*PKPbc	PKPbc	21 32 06.3	-0.7	
MKAR	Makanchi Array	147.66	36	PKPbc	PKPdf	21 32 04.2	0.0	
	comp=Z,9.1nm,1.0s,baz=324,slow=2.3,SNR=30							
HYB	Hyderabad	150.54	95	*i* PKP	PKPbc	21 32 15.5	+0.4	
TLY	Talaya	150.93	7	*e*PKIKP	PKPab	21 32 22.6	+0.3	
TLY				pmax	pmax			
	comp=Z,15nm,1.2s							
MJAR	Matsushiro Arr	151.68	305	PKPbc	PKPbc	21 32 16.1	-1.2	
	comp=Z,3.2nm,0.9s,baz=62,slow=2.0,SNR=7.0							
MAT	Matsushiro	151.68	305	*e*PKP	PKPbc	21 32 14.3	-2.9	
ZAK	Zakamensk	152.15	8	*e*PKIKP	PKPbc	21 32 17.3	-0.5	
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
HIA	Hailar	152.46	345	*i* PKIKP	PKPbc	21 32 16.4	-2.2	
WMQ	Urumqi	152.50	35	*e*PKP	PKPdf	21 32 12.0	+0.1	
MDJ	Mudanjiang	152.75	327	PKP	PKPdf	21 32 12.8	+0.5	
MDJ				PP	PP			
	comp=Z,105nm,4.9s							
SONM	Songino Array	155.00	5	PKP	PKPdf	21 32 15.0	-0.3	
	comp=Z,1.3nm,0.9s,baz=248,slow=1.0,SNR=8.1							
SONM				PKPbc	PKPbc	21 32 23.6	-0.5	
	comp=Z,1.0nm,0.9s,baz=290,slow=1.8,SNR=4.6							
SONM				PKPab	PKPab	21 32 38.1	-1.6	
	comp=Z,1.4nm,0.9s,baz=339,slow=2.4,SNR=5.7							
GTA	Gaotai	161.62	24	PKP	PKPdf	21 32 24.1	+0.5	
HHC	Hu-ho-hao-te	162.02	355	*e*PKP	PKPdf	21 32 22.9	-1.1	
HHC				PKS		21 35 55.0		
HHC				PP	PP	21 36 56.8	+3.7	
HHC				SKS	SKSdf	21 39 23.1	-3.2	
HHC				SKKS	SKKSac	21 43 38.9	-0.8	
HHC				PP	PP			
	comp=Z,66nm,10.7s							
HHC				LR	LR			
	comp=N,133nm,21.4s							
HHC				LR	LR			
	comp=E,143nm,19.0s							
HHC				LR	LR			
	comp=Z,152nm,20.2s							
LZH	Lanzhou	166.00	19	*e*PKP	PKPdf	21 32 27.5	-0.3	
LZH				*e*PP	PP	21 37 17.6	+3.4	
LZH				SKKS	SKKSac	21 43 59.6	-0.5	
LZH				*e*SS	SS	21 57 51.3	+0.6	
LZH				PP	PP			
	comp=Z,93nm,8.8s							
LZH				LR	LR			
	comp=N,137nm,18.5s							
LZH				LR	LR			
	comp=Z,172nm,20.6s							
CMAR	Chiang Mai Arr	169.23	112	PKPab	PKPab	21 33 42.7	-0.1	
	comp=Z,0.7nm,0.6s,baz=254,slow=3.9,SNR=7.2							
CD2	Chengdu	170.56	31	*e*PKP	PKPdf	21 32 29.8	-1.2	
CD2				PP	PP	21 37 40.8	+3.0	
CD2				SKS	SKSdf	21 39 28.3	-3.8	
CD2				SKKS	SKKSac	21 44 21.8	-1.1	
CD2				SS	SS	21 58 35.5	-1.6	
CD2				PP	PP			
	comp=Z,170nm,10.2s							
CD2				LR	LR			
	comp=N,190nm,19.2s							
CD2				LR	LR			
	comp=Z,210nm,18.2s							
KMI	Kunming	173.49	69	PKP	PKPdf	21 32 30.3	-2.2	
GYA	Guiyang	175.66	35	*e*PKP	PKPdf	21 32 36.5	+3.3	
GYA				PKP2	PKPab	21 34 11.3	+0.4	
GYA				PP	PP	21 38 03.0	+0.1	
GYA				SKKS	SKKSac	21 44 47.0	-0.5	
GYA				SS	SS	21 59 24.6	-2.3	
GYA				PP	PP			
	comp=Z,80nm,9.0s							
GYA				LR	LR			
	comp=N,92nm,23.4s							
GYA				LR	LR			
	comp=E,90nm,25.0s							
GYA				LR	LR			
	comp=Z,80nm,24.6s							

ISCJB ***15*** *21:17:48.1±1.1, 1932S×005×6396W×006, h35km±10km, mb4.5/13, MS4.3/6, Error ellipse: s-maj=9.6km s-min=8.6km az=33.5*
NEIC ***15*** *21:17:49.1±2.7, 1928S×6396W, h29km±19km, mb5.1/5, Error ellipse: s-maj=12.2km s-min=9.9km az=99.0*
IDC ***15*** *21:17:50.4±2.4, 1923S×6405W, h40km±21km, mb4.0/9, mb1 4.2/13, mb1mx4.1/21, mbtmp4.1/13, ML4.8/3, MS4.2/9, Ms1 4.2/9, ms1mx3.9/24, Error ellipse: s-maj=18.8km s-min=18.4km az=107.0*

ISC 15 21:17:50.6±0.9, 1931S×005×6396W×006, h39km±9km, n42, σ1§05/35, mb4.5/13, MS4.3/6, 1C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	4.30	40	Pn		Pn	Pn	21 18 52.2	-1.3
	78nm,0.3s,baz=237,slow=10,SNR=685								
SIV				Sn		Sn	Sn	21 19 43.2	+0.8
	46nm,0.3s,baz=158,slow=20,SNR=8.6								
LPAZ	La Paz	4.99	306	Pn		Pn	Pn	21 19 02.7	-0.2
	11nm,0.3s,baz=127,slow=11,SNR=72								
LPAZ				Sn		Sn	Sn	21 19 59.7	+0.3
	8.9nm,0.3s,baz=3.0,slow=18,SNR=1.9								
LPAZ	La Paz	4.99	306	*e*Pn		Pn	Pn	21 19 02.5	-0.4
LVC	Limon Verde	5.68	234	Pn		Pn	Pn	21 19 13.8	+1.4
	3.9nm,0.3s,SNR=6.1								
LVC				Sn		Sn	Sn	21 20 21.5	+5.2
	6.9nm,0.3s,baz=313,slow=0.0,SNR=4.1								
LVC				LR		LR		21 21 28.0	
	comp=Z,644nm,20.2s,baz=44,slow=38								
LVC	Limon Verde	5.68	234	*e*Pn		Pn	Pn	21 19 12.2	-0.2
	71nm,0.8s								
LVC				Sn		Sn	Sn	21 20 21.5	+5.2
LVC				LR		LR		21 21 28.0	
CFAA	Coronel Fontan	12.83	197	Pn		Pn	Pn	21 20 51.0	+0.5
	0.1nm,0.3s,baz=11,slow=14,SNR=3.8								
CFAA	Coronel Fontan	12.83	197	Pn		Pn	Pn	21 20 51.0	+0.5
NNA	Nana	14.38	299	LR		LR	LR	21 26 50.3	
	comp=Z,949nm,21.8s,baz=140,slow=38								
ATAH	Atahualpa	18.62	309	LR		LR		21 29 50.3	
	comp=Z,1µm,19.5s,baz=158,slow=39								
PLCA	Paso Flores	22.08	193	P		P	P	21 22 41.1	-1.0
	1.3nm,0.6s,mb3.6,baz=33,slow=11,SNR=5.0								
PLCA				LR		LR		21 31 30.1	
	comp=Z,460nm,18.8s,MS3.9,baz=3.5,slow=37								
PLCA	Paso Flores	22.08	193	*e*P		P	P	21 22 41.1	-1.1
	24nm,1.9s,mb4.3								
PLCA				LR		LR		21 31 30.1	
CMIG	Matias Romero	47.25	318	P		P	P	21 26 17.8	-2.3
	9.3nm,0.8s,mb4.8,baz=91,slow=6.0,SNR=8.2								
VNA3	Neumayer Olymp	60.70	162	*e*		P	P	21 27 57.7	+0.2
VNA3				*e*				21 27 59.2	
VNA3				*e*				21 28 02.8	
VNA1	Neumayer--Stat	60.83	162	*e*		P	P	21 27 59.7	+1.3
VNA1				*e*				21 28 04.3	
VNA2	Neumayer--Watz	61.21	162	*e*		P	P	21 28 01.8	+0.8
	baz=298,slow=8.2								
VNA2				*e*				21 28 02.9	
VNA2				*e*				21 28 06.5	
TXAR	Lajitas Array	61.70	321	P		P	P	21 28 02.5	-2.3
	0.2nm,0.4s,mb3.6,baz=134,slow=7.2,SNR=3.5								
SNAA	Sanae	62.86	162	*e*		P	P	21 28 10.6	-1.5
SNAA				*e*				21 28 12.1	
SNAA				*e*				21 28 17.1	
SNAA	Sanae	62.86	162	*e*P		P	P	21 28 10.7	-1.4
	30nm,1.4s,mb5.2								
SNAA				*e*PcP		PcP	PcP	21 28 50.1	0.0
DBIC	Dimbokro	63.65	72	P		P	P	21 28 18.7	+0.4
	5.5nm,1.0s,mb4.5,baz=226,slow=7.7,SNR=3.8								
DBIC	Dimbokro	63.65	72	P		P	P	21 28 18.7	+0.4
TOA0	Torodi Ar. Sit	72.24	69	*e*P		P	P	21 29 11.9	-0.4
TORD	Torodi Ar. Bea	72.24	69	P		P	P	21 29 12.0	-0.2
	6.1nm,0.6s,mb4.7,baz=256,slow=5.6,SNR=43								
GSC	Goldstone	73.90	317	*e*P		P	P	21 29 22.2	+0.6
	72nm,2.4s,mb5.2								
TPNV	Topopah Spring	74.58	319	*e*P		P	P	21 29 26.9	+1.4
PDAR	Pinedale Array	74.68	327	P		P	P	21 29 24.6	-1.3
	0.7nm,0.5s,mb3.9,baz=128,slow=7.5,SNR=5.4								
ISA	Isabella	75.19	317	*e*P		P	P	21 29 29.8	+0.7
	7.7nm,1.1s,mb4.5								
IMW	Indian Meadow	76.20	327	*e*P		P	P	21 29 36.1	+1.4
	86nm,2.7s,mb5.2								
NVAR	Mina Array Bea	76.77	319	P		P	P	21 29 38.2	+0.2
	2.5nm,0.9s,mb4.2,baz=146,slow=5.6,SNR=11								
NVAR	Mina Array Bea	76.77	319	P		P	P	21 29 38.2	+0.2
SYO	Syowa Base	76.88	159	⇑*e*P		P	P	21 29 36.6	-1.6
HLID	Hailey	77.80	325	*e*P		P	P	21 29 44.2	+0.5
BOSA	Boshof	80.33	117	LR		LR		22 00 01.8	
	comp=Z,260nm,18.9s,MS4.6,baz=262,slow=32								
ESDC	Sonseca Array	81.06	43	P		P	P	21 30 02.3	+0.8
	0.9nm,0.6s,mb3.9,baz=238,slow=5.5,SNR=5.8								
MAW	Mawson	85.02	162	P		P	P	21 30 22.3	+0.7
	5.1nm,0.7s,mb4.8,baz=219,slow=8.7,SNR=4.1								
DAVOX	Davos/Dischmat	93.33	41	LR		LR		22 08 12.9	
	comp=Z,132nm,19.1s,MS4.4,baz=254,slow=32								
GERES	GERESS Array B	96.51	41	LR		LR	LR	22 14 09.7	
	comp=Z,97nm,18.1s,MS4.3,baz

DDA ***15*** *21:35:31.5, 3697N×3436E, h3km±5km, Md3.3, Ml3.9*
ISCJB ***15*** *21:35:33.8±0.5, 3698N±004×3446E±004, h10km, Error ellipse: s-maj=5.0km s-min=4.1km az=36.8*
ISK ***15*** *21:35:33.0, 3701N×3444E, h5km, MD3.3*
CSEM ***15*** *21:35:33.1±0.1, 3701N×3444E, h5km, MD3.3, Error ellipse: s-maj=1.9km s-min=1.5km az=151.0*

ISC 15 21:35:34.3±0.5, 3699N±004×3446E±004, h10km, n13, σ0§84/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.13**	**156**	PG	**Pg**	**21 35 37.0**	**-0.3**
MERS				SG	**Sg**	**21 35 39.6**	**+0.2**
KARA	**Karaisali**	**0.55**	**60**	PG	**Pg**	**21 35 44.0**	**-1.1**
KARA				SG	**Sg**	**21 35 52.5**	**+0.1**
IKL	**Isikli**	**0.97**	**220**	PG	**Pg**	**21 35 52.1**	**-0.9**
IKL				SG	**Sg**	**21 36 05.9**	**+0.3**
CEYT	**Ceyhan**	**1.03**	**88**	*e*PG	**Pg**	**21 35 53.5**	**-0.7**
CEYT				*e*SG	**Sg**	**21 36 08.7**	**+1.0**
NIG	**Nigde**	**1.13**	**6**	*e*PN	**Pn**	**21 35 54.7**	**-1.4**
HDMB	**Hadim**	**1.58**	**270**	*e*PN	**Pn**	**21 36 02.8**	**+0.4**
HTY	**Hatay**	**1.61**	**122**	*e*PN	**Pn**	**21 36 03.2**	**+0.5**
AVNT	**Avonos**	**1.82**	**10**	*i* P	**Pn**	**21 36 05.0**	**-0.7**
AVNT				*i* S	**Sn**	**21 36 29.1**	**+0.3**
KONT	**Konya--Tatoy**	**1.92**	**301**	*e*PN	**Pn**	**21 36 07.8**	**+0.7**
KMRS	**Kahramanmaras**	**2.02**	**74**	*e*PN	**Pn**	**21 36 09.1**	**+0.7**
LADK	**Ladik-KONYA**	**2.06**	**307**	*e*PN	**Pn**	**21 36 09.4**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.45**	**46**	*e*PN	**Pn**	**21 36 10.0**	**-4.3**
CDAG	**Cicekdag**	**2.63**	**359**	*i* P	**Pg**	**21 36 20.9**	**-3.9**
CDAG				*i* S	**Sg**	**21 37 02.4**	**+3.4**

IDC 15 21:47:59.5±2.0, 362S×12903E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.6/15, mbtmp3.8/4, ML3.5/2, Error ellipse: s-maj=58.5km s-min=28.5km az=63.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.36**	**261**	Pn	Pn	21 50 16.9	+1.2
	1.2nm,0.3s,baz=50,slow=5.6,SNR=4.8						
KAKA	**Kakadu**	**9.64**	**160**	*e*P	Pn	21 50 10.6	-9.0
	4.0nm,0.6s						
WRA	**Warramunga Arr**	**17.03**	**163**	P	Pn	21 51 58.9	-0.3
	0.1nm,0.3s,baz=342,slow=13,SNR=8.8						
ASAR	**Alice Springs**	**20.48**	**167**	P	P	21 52 39.1	+0.1
	2.7nm,0.6s,baz=348,slow=11,SNR=41						
MKAR	**Makanchi Array**	**64.89**	**326**	P	P	21 58 40.5	-0.1
	0.4nm,0.8s,baz=113,slow=7.8,SNR=4.4						

IDC 15 22:10:44.9±5.0, 2279S×7043W, h35km±33km, mb3.9/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, ML3.3/3, MS3.5/2, Ms1 3.4/2, ms1mx2.8/33, Error ellipse: s-maj=42.9km s-min=31.8km az=112.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.41**	**83**	Pg	Pn	22 11 10.7	+2.6
	117nm,0.3s,SNR=20						
LVC				Lg		22 11 31.5	
	246nm,0.3s,SNR=23						
LPAZ	**La Paz**	**6.82**	**19**	Pn	Pn	22 12 24.6	+2.1
	0.2nm,0.3s,baz=197,slow=7.3,SNR=3.3						
CFAA	**Coronel Fontan**	**9.00**	**168**	Pn	Pn	22 12 53.7	+1.3
	0.2nm,0.3s,baz=350,slow=12,SNR=16						
SIV	**San Ignacio**	**11.12**	**54**	Pn	Pn	22 13 21.7	+0.2
	0.4nm,0.3s,baz=240,slow=12,SNR=11						
PLCA	**Paso Flores**	**17.89**	**180**	LR	LR	22 21 06.2	
	comp=Z,62nm,19.8s,baz=358,slow=35						
TORD	**Torodi Ar. Bea**	**79.11**	**71**	P	P	22 22 46.0	-0.4
	1.1nm,0.6s,baz=254,slow=5.2,SNR=19						
LBTB	**Lobatse**	**85.75**	**115**	LR	LR	22 58 18.1	
	comp=Z,58nm,19.4s,baz=116,slow=33						
MKAR	**Makanchi Array**	**147.50**	**36**	PKPbc	PKPbc	22 30 24.9	-0.3
	0.5nm,0.7s,baz=324,slow=3.3,SNR=4.5						

ISCJB ***15*** *22:29:21.5±0.6, 517N±0.1×17854E±007, h56km±7km, mb4.1/11, Error ellipse: s-maj=20.1km s-min=5.9km az=11.2*
BJI ***15*** *22:29:21.8, 5162N×17898E, h69km, mB4.8, mb4.3, Ms4.2, Msz4.3*
NEIC ***15*** *22:29:22.6, 5139N×17841E, h47km, ML4.3(PMR), ML3.6(AEIC), After AEIC.*
IDC ***15*** *22:29:26.9±5.9, 5152N×17829E, h104km±52km, mb3.5/7, mb1 3.6/8, mb1mx3.5/23, mbtmp3.5/8, Error ellipse: s-maj=33.4km s-min=23.8km az=7.0*

ISC 15 22:29:22.3±0.7, 515N±01×17846E±007, h58km±6km, n24, σ1§12/28, mb4.1/11, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.54**	**102**	*e*Pg	**Pn**	**22 29 33.9**	**-0.6**
AMKA				*e*Sg	**Sn**	**22 29 42.5**	**-0.9**
SMY	**Shemya**	**2.96**	**296**	*e*Pn	**Pn**	**22 30 06.7**	**0.0**
SMY				*e*Sn	**Sn**	**22 30 41.1**	**+0.1**
FX1	**Attu Island--F**	**3.54**	**295**	P	**Pn**	**22 30 15.4**	**+0.8**
FX1				S	**Sn**	**22 30 53.8**	**-1.4**
ATKA	**Atka Island**	**4.61**	**78**	P	**Pn**	**22 30 29.5**	**+0.3**
ATKA				S	**Sn**	**22 31 21.3**	**-0.1**
UNV	**Unalaska Valle**	**9.44**	**70**	*e*Pn	**Pn**	**22 31 36.8**	**+1.5**
PETK	**Petropavlovsk-**	**12.80**	**285**	P	**Pn**	**22 32 23.9**	**+2.6**
	0.3nm,0.3s,baz=90,slow=19,SNR=9.7						
PETK				S	**Sn**	**22 34 33.6**	**-8.4**
	0.2nm,0.3s,baz=69,slow=18,SNR=3.3						
KDAK	**Kodiak Island**	**17.81**	**58**	P	**Pn**	**22 33 37.3**	**+12**
	1.4nm,0.3s,baz=327,slow=4.7,SNR=24						
MDJ	**Mudanjiang**	**32.86**	**278**	P	**P**	**22 35 53.6**	**+3.4**
MDJ				S	**S**	**22 41 10.6**	**+7.3**
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,54nm,4.9s						
SONM	**Songino Array**	**45.05**	**295**	P	**P**	**22 37 31.4**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=59,slow=8.5,SNR=7.4						
NVAR	**Mina Array Bea**	**45.23**	**81**	P	**P**	**22 37 34.5**	**+1.0**
	comp=Z,0.7nm,0.7s,mb3.6,baz=297,slow=7.2,SNR=5.3						
NVAR	**Mina Array Bea**	**45.23**	**81**	P	**P**	**22 37 34.5**	**+1.0**
ZALV	**Zalesovo Beam**	**52.69**	**312**	P	**P**	**22 38 29.3**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.7,baz=52,slow=5.5,SNR=2.9						
LZH	**Lanzhou**	**53.70**	**284**	*e*P	**P**	**22 38 43.5**	**+5.5**
LZH				*e*PP	PP	22 40 45.8	+6.8
LZH				AMB	AMB		
	comp=Z,18nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,107nm,6.2s						
LZH				LR	LR		
	comp=E,307nm,16.2s						
LZH				LR	LR		
	comp=Z,512nm,18.6s						
LZH	**Lanzhou**	**53.70**	**284**	*e*P	**P**	**22 38 43.5**	**+5.5**
	comp=Z,18nm,1.4s,mb4.8						
LZH				pP	pP	22 38 53.6	+0.2
LZH				sP	sP	22 38 57.5	-2.5
LZH				*e*PP	PP	22 40 45.8	+6.8
GYA	**Guiyang**	**58.60**	**274**	*e*P	**P**	**22 39 17.4**	**+4.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
MKAR	**Makanchi Array**	**58.60**	**307**	P	**P**	**22 39 11.8**	**-1.0**
	comp=Z,0.7nm,0.5s,mb4.0,baz=53,slow=6.5,SNR=19						
MKAR	**Makanchi Array**	**58.60**	**307**	P	**P**	**22 39 11.8**	**-1.0**
KMI	**Kunming**	**62.01**	**276**	P	**P**	**22 39 40.1**	**+3.8**
KMI				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.5						
KMI	**Kunming**	**62.01**	**276**	P	**P**	**22 39 40.1**	**+3.8**
	comp=Z,4.0nm,1.0s,mb4.5						
KMI				pP	pP	22 39 49.2	-2.8
KMI				sP	sP	22 39 52.6	-6.0
NOA	**NORSAR Array B**	**67.35**	**353**	P	**P**	**22 40 10.5**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.9,baz=8.9,slow=6.1,SNR=3.2						
AKASG	**Malin Array Be**	**74.89**	**340**	P	**P**	**22 40 54.6**	**-1.6**
	comp=Z,1.5nm,0.5s,mb4.2,baz=24,slow=6.3,SNR=5.3						
WRA	**Warramunga Arr**	**80.94**	**222**	P	**P**	**22 41 29.1**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=34,slow=6.3,SNR=5.5						
BOSA	**Boshof**	**149.59**	**308**	PKPbc	PKPbc	22 49 04.3	-0.5
	comp=Z,3.1nm,0.8s,baz=36,slow=1.7,SNR=4.1						
BOSA	**Boshof**	**149.59**	**308**	PKPbc	PKPbc	22 49 04.3	-0.5

ISCJB ***15*** *22:30:18.8±0.4, 4980N±003×18143E±003, h0km, Error ellipse: s-maj=4.4km s-min=2.7km az=16.0*
NEIC ***15*** *22:30:18.5±1.1, 4961N×1853E, h5km, MG2.5(WAR), Error ellipse: s-maj=20.3km s-min=7.6km az=183.0*
CSEM ***15*** *22:30:18.9±0.2, 4987N×1851E, h0km±1km, ML2.9/6, Error ellipse: s-maj=4.7km s-min=2.2km az=36.0*
IPEC ***15*** *22:30:18.9±0.1, 4980N×1856E, h1km±1km, ML2.0/4, Error ellipse: s-maj=2.1km s-min=0.7km az=161.0*
PRU ***15*** *22:30:20.1, 4982N×1842E, h0km*

ISC 15 22:30:19.3±0.4, 4978N±003×1844E±003, h0km, n28, σ1§34/54, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.19**	**286**	*e*Pg	**Pg**	**22 30 24.3**	**+1.3**
OKC				*e*Sg	**Sg**	**22 30 27.5**	**+2.0**
OKC	**Ostrava-Krasne**	**0.19**	**286**	*e*PG	**Pg**	**22 30 24.5**	**+1.5**
OKC				*e*SG	**Sg**	**22 30 26.3**	**+0.8**
	comp=Z,92nm,0.5s						
RAC	**Raciborz**	**0.34**	**333**	*e*Pg	**Pg**	**22 30 27.5**	**+1.7**
RAC				*e*Sg	**Sg**	**22 30 32.8**	**+2.6**
MORC	**Moravsky Berou**	**0.58**	**270**	*e*Pg	**Pg**	**22 30 31.8**	**+1.4**
MORC				*e*Sg	**Sg**	**22 30 39.8**	**+1.9**
MORC	**Moravsky Berou**	**0.58**	**270**	*e*Pg	**Pg**	**22 30 31.5**	**+1.1**
MORC				*e*Sg	**Sg**	**22 30 39.4**	**+1.5**
	comp=Z,54nm,0.4s						
OJC	**Ojcow**	**0.98**	**63**	*e*Pg	**Pg**	**22 30 36.1**	**-2.0**
OJC				*e*Sg	**Sg**	**22 30 48.4**	**-2.5**
OJC	**Ojcow**	**0.98**	**63**	*e*Pg	**Pg**	**22 30 36.8**	**-1.3**
OJC				Sg	**Sg**	**22 30 48.6**	**-2.2**
OJC	**Ojcow**	**0.98**	**63**	*e*Pg	**Pg**	**22 30 36.1**	**-2.0**
OJC				*e*Sg	**Sg**	**22 30 47.5**	**-3.4**
JAVC	**Velka Javorina**	**1.05**	**209**	*e*Pg	**Pg**	**22 30 41.2**	**+1.7**
JAVC				*e*Sg	**Sg**	**22 30 57.6**	**+4.5**
	comp=Z,16nm,0.4s						
KOLL	**Kolacno**	**1.21**	**181**	*e*PN	**Pn**	**22 30 42.5**	**-0.9**
KOLL				*e*SN	**Sn**	**22 31 00.0**	**-0.4**
NIE	**Niedzica**	**1.28**	**106**	*e*Pg	**Pg**	**22 30 42.2**	**-1.5**
NIE				*e*Sg	**Sg**	**22 31 00.6**	**+0.3**
VRAC	**Vranov**	**1.29**	**249**	*e*Pg	**Pg**	**22 30 44.4**	**+0.4**
VRAC				*e*Sg	**Sg**	**22 31 01.7**	**+1.0**
	comp=Z,29nm,0.4s						
VYHS	**Vyhne**	**1.32**	**168**	*e*PN	**Pn**	**22 30 43.5**	**-1.4**
VYHS				*e*SN	**Sn**	**22 31 03.2**	**0.0**
VYHS	**Vyhne**	**1.32**	**168**	*e*Pn	**Pn**	**22 30 43.6**	**-1.3**
VYHS				*e*Sn	**Sn**	**22 31 03.2**	**0.0**
DPC	**Dobruska-Polom**	**1.48**	**293**	*e*Pn	**Pn**	**22 30 47.0**	**-0.1**
DPC				*e*Sn	**Sn**	**22 31 07.3**	**+0.3**
DPC	**Dobruska-Polom**	**1.48**	**293**	*e*Pg	**Pg**	**22 30 46.9**	**-0.7**
DPC	**Dobruska-Polom**	**1.48**	**293**	*e*Pn	**Pn**	**22 30 47.0**	**-0.1**
DPC				Sg	**Sg**	**22 31 06.9**	**+0.2**
	comp=Z,14nm,0.4s						
DPC				*e*Sn	**Sn**	**22 31 07.3**	**+0.2**
DPC	**Dobruska-Polom**	**1.48**	**293**	*e*PG	**Pg**	**22 30 47.4**	**-0.2**
DPC				*e*SG	**Sg**	**22 31 06.9**	**+0.2**
	comp=Z,14nm,0.4s						
KRUC	**Moravsky**	**1.52**	**242**	*e*Pg	**Pg**	**22 30 47.8**	**-0.5**
KRUC				*e*Sg	**Sg**	**22 31 08.8**	**+0.8**
	comp=Z,7.9nm,0.2s						
MODS	**Modra-Piesok**	**1.60**	**209**	*e*PN	**Pn**	**22 30 48.9**	**0.0**
MODS				*e*SN	**Sn**	**22 31 10.4**	**+0.2**
UPC	**Upice**	**1.72**	**296**	*e*PG	**Pg**	**22 30 51.0**	**-1.2**
UPC				*e*SG	**Sg**	**22 31 14.1**	**-0.4**
ZST	**Bratislava**	**1.82**	**209**	*e*SN	**Sn**	**22 31 12.3**	**-3.2**
STHS	**Stebnicka Huta**	**1.86**	**100**	*e*PN	**Pn**	**22 30 53.5**	**+1.1**
STHS				*e*SN	**Sn**	**22 31 19.7**	**+3.0**
CRVS	**Cervenica-Dubn**	**2.17**	**113**	*e*PN	**Pn**	**22 30 58.0**	**+1.4**
CRVS				*e*SN	**Sn**	**22 31 26.9**	**+2.8**
PRU	**Pruhonice**	**2.53**	**276**	*e*PG	**Pg**	**22 31 06.7**	**-1.0**
PRU				*e*SG	**Sg**	**22 31 39.1**	**-1.3**
	comp=Z,13nm,0.9s						
BRG	**Berggiesshubel**	**3.08**	**292**	SG	**Sg**	**22 31 56.8**	**-1.4**
	comp=Z,6.0nm,0.5s						
KHC	**Kasperske Hory**	**3.23**	**260**	*e*PG	**Pg**	**22 31 19.3**	**-2.0**
KHC				*e*SG	**Sg**	**22 32 01.0**	**-2.2**
	comp=Z,5.7nm,0.4s						
CLL	**Collm**	**3.79**	**296**	*i* Pg	**Pg**	**22 31 35.3**	**+3.5**
CLL				*e*Sg	**Sg**	**22 32 20.0**	**-0.9**

IDC ***15*** *22:32:56.0±0.6, 1145N×8664W, h0km, mb4.4/12, mb1 4.7/13, mb1mx4.4/22, mbtmp4.5/13, ML4.1/1, MS4.0/14, Ms1 4.0/14, ms1mx3.7/37, Error ellipse: s-maj=28.8km s-min=12.7km az=55.0*
BJI ***15*** *22:32:58.0, 1075N×8650W, h21km, mB5.2, Ms5.0, Msz4.8*
ISCJB ***15*** *22:33:02.5±0.8, 1136N±006×8668W±006, h65km±9km, mb4.6/40, Error ellipse: s-maj=11.9km s-min=6.9km az=136.3*
NEIC ***15*** *22:33:02.5±0.7, 1130N×8678W, h48km±7km, mb4.8/30, Error ellipse: s-maj=11.6km s-min=5.0km az=52.0*

ISC 15 22:33:04.0±0.7, 1137N±006×8666W±006, h62km±8km, n271, σ0§73/246, mb4.7/40, 96C-79D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**1.60**	**141**	*e*P	**Pn**	**22 33 32.9**	**+2.8**
JCR	**Jicaral**	**2.14**	**135**	*e*P	**Pn**	**22 33 37.3**	**-0.2**
FORC	**Fortuna**	**2.15**	**114**	*e*P	**Pn**	**22 33 41.8**	**+4.2**
CGA2	**Cerro Gallo 2**	**2.54**	**122**	*e*P	**Pn**	**22 33 41.4**	**-1.5**
PRS1	**Puriscal**	**2.69**	**121**	*e*P	**Pn**	**22 33 45.1**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.73**	**347**	*e*Pn	**Pn**	**22 33 44.9**	**-0.6**
QCR	**Quepos**	**3.12**	**128**	*e*P	**Pn**	**22 33 48.5**	**-2.3**
URSC	**Urasca**	**3.21**	**118**	*e*P	**Pn**	**22 33 52.6**	**+0.5**
ACR	**Cerro Adams**	**4.37**	**128**	*e*P	**Pn**	**22 34 06.0**	**-1.9**
CMIG	**Matias Romero**	**9.79**	**306**	Pn	**Pn**	**22 35 18.4**	**-3.8**
	1.7nm,0.3s,baz=109,slow=10.0,SNR=24						
ROSC	**El Rosal**	**13.81**	**117**	*e*Pn	**Pn**	**22 36 24.3**	**+7.4**
BRAL	**Brewton**	**19.55**	**359**	*e*P	**Pn**	**22 37 30.4**	**+2.0**
	178nm,1.2s						
ATAH	**Atahualpa**	**20.02**	**155**	LR	LR	22 44 19.6	
	comp=Z,565nm,19.9s,baz=171,slow=34						
HKT	**Hockley**	**20.36**	**337**	*e*P	**P**	**22 37 36.7**	**+1.2**
	81nm,1.5s						
LRAL	**Lakeview Retre**	**21.56**	**359**	*e*Pn	**P**	**22 37 49.8**	**+1.4**
NATX	**Nacogdoches**	**21.59**	**341**	*e*P	**P**	**22 37 49.8**	**+1.0**
	62nm,1.0s,mb5.0						
PCRV	**Puerto La Cruz**	**21.66**	**91**	P	**P**	**22 37 50.4**	**+0.8**
	8.8nm,0.5s,mb4.5,baz=241,slow=12,SNR=4.9						
JCT	**Junction City**	**22.59**	**329**	*e*P	**P**	**22 37 59.4**	**0.0**
	16nm,0.9s,mb4.5						
OXF	**Oxford**	**23.17**	**354**	*e*P	**P**	**22 38 05.3**	**0.0**
	61nm,1.2s,mb4.9						
JSC	**Jenkinsville**	**23.33**	**11**	P	**P**	**22 38 09.1**	**+2.3**
SWET	**Sewanee**	**23.75**	**1**	*e*P	**P**	**22 38 12.1**	**+1.5**
TXAR	**Lajitas Array**	**23.89**	**321**	P	**P**	**22 38 11.4**	**-0.6**
	14nm,0.8s,mb4.5,baz=138,slow=9.6,SNR=110						
TXAR				PcP	PcP	22 41 55.3	+1.8
	4.5nm,0.9s,baz=139,slow=3.9,SNR=14						
TXAR				ScP	ScP	22 45 36.5	+10
	1.2nm,1.0s,baz=126,slow=6.4,SNR=5.5						
MIAR	**Mount Ida**	**23.91**	**346**	*e*P	**P**	**22 38 12.0**	**-0.1**
	24nm,0.8s,mb4.7						
CPCT	**Cooper Cave**	**24.05**	**4**	*e*P	**P**	**22 38 14.5**	**+1.1**
TKL	**Tuckaleechee C**	**24.32**	**6**	P	**P**	**22 38 16.7**	**+0.9**
	40nm,1.0s,mb4.8,baz=183,slow=10,SNR=10						
TKL	**Tuckaleechee C**	**24.32**	**6**	*e*P	**P**	**22 38 17.1**	**+1.3**
WMOK	**Wichita Mounta**	**25.75**	**337**	*e*P	**P**	**22 38 28.8**	**-0.1**
	35nm,0.9s,mb4.9						
LPIG	**La Paz**	**25.79**	**303**	LR	LR	22 49 48.6	
	comp=Z,220nm,18.6s,baz=194,slow=39						
GDL2	**Guadalupe Moun**	**26.38**	**325**	*e*P	**P**	**22 38 36.1**	**+1.5**
CCM	**Cathedral Cave**	**26.89**	**352**	*e*P	**P**	**22 38 38.3**	**-0.8**
AMTX	**Amarillo**	**27.11**	**332**	*e*P	**P**	**22 38 39.5**	**-1.5**
	17nm,0.7s,mb4.7						
319A	**Douglas**	**28.87**	**317**	⇑P	**P**	**22 38 57.2**	**+0.3**
	baz=28						
ACSO	**Alum Creek Sta**	**28.93**	**6**	*e*P	**P**	**22 38 58.0**	**+0.8**
	30nm,0.8s,mb5.1						
KSU1	**Kansas State U**	**29.00**	**344**	*e*P	**P**	**22 38 57.7**	**-0.2**
	25nm,0.9s,mb4.9						
BNM	**Barren Site**	**29.09**	**324**	*e*P	**P**	**22 38 59.4**	**+0.6**
219A	**White Tail Can**	**29.25**	**318**	⇓P	**P**	**22 39 00.6**	**+0.4**
	baz=29						
SDMD	**Soldier's Deli**	**29.25**	**16**	*e*P	**P**	**22 39 02.3**	**+2.1**
	26nm,0.8s,mb5.0						
318A	**Bisbee**	**29.39**	**316**	⇑P	**P**	**22 39 01.1**	**-0.4**
	baz=29						
ANMO	**Albuquerque**	**29.59**	**326**	P	**P**	**22 39 03.4**	**+0.3**
	3.3nm,0.9s,mb4.1,baz=149,slow=6.4,SNR=6.4						
ANMO	**Albuquerque**	**29.59**	**326**	*e*P	**P**	**22 39 04.0**	**+0.9**
	4.5nm,0.9s,mb4.2						
218A	**Dragoon**	**29.75**	**317**	⇓P	**P**	**22 39 05.0**	**+0.3**
	baz=29						
119A	**Ashpeak Ranch,**	**29.77**	**319**	⇑P	**P**	**22 39 05.0**	**+0.2**
	baz=29						
118A	**Homack Ranch,**	**30.12**	**318**	⇑P	**P**	**22 39 08.5**	**+0.6**
	baz=30						
217A	**Green Valley**	**30.15**	**316**	⇑P	**P**	**22 39 08.8**	**+0.6**
	baz=30						
SSPA	**Standing Stone**	**30.16**	**13**	*e*P	**P**	**22 39 09.6**	**+1.5**
	12nm,0.8s,mb4.7						
Y19A	**Nutrioso**	**30.52**	**321**	⇓P	**P**	**22 39 12.0**	**+0.6**
	baz=30						
117A	**Oracle**	**30.58**	**317**	⇑P	**P**	**22 39 12.7**	**+0.7**
	baz=30						
ERPA	**Erie**	**31.18**	**10**	*e*P	**P**	**22 39 17.8**	**+0.7**
SDCO	**Great Sand Dun**	**31.23**	**330**	*e*P	**P**	**22 39 17.9**	**+0.3**
	5.9nm,0.8s,mb4.5						
214A	**Organ Pipe Nat**	**31.64**	**314**	⇓P	**P**	**22 39 21.7**	**+0.4**
	baz=31						
115A	**Sonoran Desert**	**31.66**	**316**	⇓P	**P**	**22 39 22.6**	**+1.1**
	baz=31						
X17A	**Forest Lakes**	**31.74**	**320**	⇑P	**P**	**22 39 22.8**	**+0.6**
	baz=31						
Y16A	**Circle Bar Ran**	**31.88**	**319**	⇑P	**P**	**22 39 24.0**	**+0.6**
	baz=32						
BINY	**Binghamton**	**32.09**	**15**	*e*P	**P**	**22 39 26.5**	**+1.4**
	27nm,0.8s,mb5.1						
V18A	**Ganado**	**32.12**	**323**	⇓P	**P**	**22 39 25.7**	**+0.2**
	baz=32						
X16A	**Lo Mia Camp, P**	**32.20**	**319**	⇑P	**P**	**22 39 26.2**	**+0.1**
	baz=32,SNR=7.7						
MVCO	**Mesa Verde**	**32.36**	**326**	*e*P	**P**	**22 39 27.8**	**+0.2**
	6.2nm,0.7s,mb4.5						
MVCO	**Mesa Verde**	**32.36**	**326**	⇓P	**P**	**22 39 27.8**	**+0.2**
	baz=32						
Z14A	**Wintersburg**	**32.54**	**316**	⇑P	**P**	**22 39 30.2**	**+1.0**
	baz=32						
W16A	**Flagstaff**	**32.69**	**320**	⇑P	**P**	**22 39 31.4**	**+1.0**
	baz=32						
X15A	**Humboldt**	**32.75**	**319**	⇑P	**P**	**22 39 32.2**	**+1.2**
	baz=32						
113A	**Mohawk Valley,**	**32.76**	**315**	⇑P	**P**	**22 39 32.1**	**+1.0**
	baz=32						
WUAZ	**Wupatki**	**32.86**	**321**	*e*P	**P**	**22 39 33.8**	**+1.9**
	7.2nm,1.1s,mb4.5						
WUAZ	**Wupatki**	**32.86**	**321**	⇓P	**P**	**22 39 32.4**	**+0.4**
	baz=32						
Y14A	**Wickenburg**	**32.92**	**317**	⇑P	**P**	**22 39 33.1**	**+0.6**
	baz=32						
LPAZ	**La Paz**	**33.03**	**146**	P	**P**	**22 39 35.4**	**+1.7**
	2.4nm,1.2s,mb4.0,baz=288,slow=5.9,SNR=3.6						
LPAZ				LR	LR	22 54 22.2	
	comp=Z,176nm,20.1s,baz=340,slow=39						
T18A	**Mexican Hat**	**33.07**	**325**	⇑P	**P**	**22 39 33.4**	**-0.4**
	baz=33						
S19A	**Harvey Farm, M**	**33.10**	**326**	⇓P	**P**	**22 39 33.7**	**-0.4**
	baz=33,SNR=6.1						
U16A	**Tuba City**	**33.12**	**322**	⇑P	**P**	**22 39 34.5**	**+0.3**
	baz=33						
U17A	**Shonto**	**33.16**	**323**	⇓P	**P**	**22 39 34.7**	**+0.2**
	baz=33						
X14A	**Yava**	**33.16**	**318**	⇓P	**P**	**22 39 35.0**	**+0.4**
	baz=33						
ECSD	**EROS,Sioux Fal**	**33.38**	**347**	*e*P	**P**	**22 39 34.7**	**-1.6**
	17nm,0.8s,mb5.0						
GLMI	**Grayling**	**33.38**	**3**	*e*P	**P**	**22 39 35.7**	**-0.6**
	58nm,0.6s,mb5.6						
Y13A	**Salome**	**33.40**	**316**	⇑P	**P**	**22 39 36.9**	**+0.2**
	baz=33						
PV10	**Paradox Valley**	**33.51**	**327**	*e*P	**P**	**22 39 37.2**	**-0.3**
T17A	**Navajo Res., N**	**33.51**	**324**	⇑P	**P**	**22 39 37.7**	**0.0**
	baz=33,SNR=5.8						
S18A	**Hurst Farm, BI**	**33.53**	**325**	⇑P	**P**	**22 39 37.1**	**-0.7**
	baz=33,SNR=11						
V15A	**Kaibab Nationa**	**33.55**	**321**	⇑P	**P**	**22 39 37.7**	**-0.3**
	baz=33,SNR=9.2						
R19A	**Curley Farm, L**	**33.56**	**327**	⇑P	**P**	**22 39 37.8**	**-0.3**
	baz=33						
GLA	**Glamis**	**33.66**	**314**	⇓P	**P**	**22 39 39.7**	**+0.7**
	baz=33						
W14A	**Seligman**	**33.74**	**319**	⇑P	**P**	**22 39 40.0**	**+0.3**
	baz=33						
X13A	**Yucca**	**33.86**	**317**	⇓P	**P**	**22 39 40.7**	**+0.1**
	baz=33						
PDMCI	**Parker Dam,Lak**	**33.89**	**317**	⇑P	**P**	**22 39 41.1**	**+0.1**
	baz=33						

TPNV	Topopah Spring	36.84	319	⇓P		P	22 40 06.6	+0.4	
	baz=36								
DUG	Dugway	36.85	326	*e*P		P	22 40 06.4	+0.1	
	6.6nm,1.0s,mb4.4								
DUG	Dugway	36.85	326	⇓P		P	22 40 06.5	+0.2	
	baz=36								
LRMC	Laurel Mountai	36.96	316	⇑P		P	22 40 08.0	+0.6	
	baz=36								
M16A	Huntsville	37.02	328	⇓P		P	22 40 07.6	-0.1	
	baz=37								
P13A	Bates Ranch, G	37.03	324	⇑P		P	22 40 08.0	+0.2	
	baz=37								
BW06	Boulder Array	37.08	332	⇑P		P	22 40 07.8	-0.4	
	baz=37								
PDAR	Pinedale Array	37.08	332	P		P	22 40 07.4	-0.8	
	3.9nm,0.9s,mb4.3,baz=130,slow=9.4,SNR=11								
PDAR				PcP		PcP	22 42 28.5	+0.8	
	1.0nm,0.9s,baz=156,slow=7.5,SNR=3.9								
PDAR				ScP		ScP	22 46 16.4	+6.9	
	0.9nm,0.9s,baz=186,slow=3.0,SNR=5.1								
MPMC	Manual Prospec	37.15	317	⇓P		P	22 40 09.0	+0.1	
	baz=37								
N15A	Stansbury Isla	37.18	327	⇑P		P	22 40 09.1	0.0	
	baz=37								
HWUT	Hardware Ranch	37.19	328	*e*P		P	22 40 09.1	-0.1	
	17nm,0.8s,mb4.9								
R11A	Troy Canyon, C	37.26	321	⇓P		P	22 40 10.2	+0.4	
	baz=37								
L16A	Fish Haven	37.42	329	⇑P		P	22 40 10.9	-0.2	
	baz=37								
SPUT	South Promonto	37.44	327	*e*P		P	22 40 10.8	-0.5	
SPUT				*e*pP		pP	22 40 23.1	-3.7	
N14A	Grayback Hills	37.51	326	⇑P		P	22 40 11.8	-0.1	
	baz=37,SNR=6.1								
M15A	Larsen Ranch,	37.55	328	⇑P		P	22 40 11.7	-0.5	
	baz=37,SNR=10								
GRAC	Grapevine Rang	37.59	318	⇑P		P	22 40 12.9	+0.3	
	baz=37								
ISA	Isabella	37.60	315	⇓P		P	22 40 13.3	+0.6	
	baz=37								
AGMN	Agassiz Refuge	37.61	350	*e*P		P	22 40 11.2	-1.3	
	25nm,1.2s,mb4.8								
Q11A	Duckwater	37.61	322	⇑P		P	22 40 13.2	+0.5	
	baz=37								
S10A	Tonopah Range,	37.63	320	⇓P		P	22 40 13.8	+0.8	
	baz=37								
R10A	Warm Springs	37.67	320	⇓P		P	22 40 13.7	+0.4	
	baz=37								
CWC	Cottonwood Cre	37.75	317	⇑P		P	22 40 14.6	+0.6	
	baz=37								
L15A	Malad City	37.90	328	⇑P		P	22 40 14.6	-0.5	
	baz=38,SNR=6.0								
S09A	Goldfield	37.92	319	⇓P		P	22 40 15.7	+0.4	
	baz=38								
I18A	Diamond G Ranc	37.93	332	⇑P		P	22 40 15.2	-0.2	
	baz=38								
LVC	Limon Verde	37.99	153	P		P	22 40 18.5	+2.4	
	25nm,0.3s,mb5.4,baz=130,slow=0.0,SNR=9.8								
O12A	Currie	37.99	324	⇓P		P	22 40 15.8	-0.2	
	baz=38								
M14A	Sheep Mountain	38.05	327	⇓P		P	22 40 16.2	-0.2	
	baz=38,SNR=8.3								
Q10A	Clear Creek Ra	38.06	321	⇑P		P	22 40 16.9	+0.4	
	baz=38								
J17A	Brown Place, J	38.08	331	⇑P		P	22 40 16.2	-0.5	
	baz=38,SNR=6.3								
K16A	Soda Springs	38.11	330	⇑P		P	22 40 16.9	0.0	
	baz=38								
REDW	Red Top Meadow	38.15	331	*e*P		P	22 40 16.9	-0.3	
	12nm,0.8s,mb4.7								
PKM	Peak Mountain	38.16	313	⇓P		P	22 40 18.3	+0.9	
	baz=38								
SNOW	Snow King Moun	38.18	331	*e*P		P	22 40 18.0	+0.5	
	11nm,0.9s,mb4.6								
LOHW	Long Hollow	38.22	332	*e*P		P	22 40 17.7	-0.1	
TPAW	Teton Pass	38.29	331	*e*P		P	22 40 19.2	+0.8	
L14A	Malta	38.37	328	⇓P		P	22 40 19.2	+0.1	
	baz=38								
M13A	Montello	38.40	326	⇑P		P	22 40 19.2	-0.2	
	baz=38								
I17A	Pilgram Creek	38.45	332	⇑P		P	22 40 19.2	-0.5	
	baz=38,SNR=5.5								
J16A	Bone	38.45	330	⇑P		P	22 40 18.8	-0.9	
	baz=38,SNR=5.4								
K15A	Arbon	38.47	329	⇑P		P	22 40 19.7	-0.2	
	baz=38								
SMMC	Simmler	38.49	314	⇑P		P	22 40 21.0	+0.8	
	baz=38								
N12A	Clover Valley,	38.55	325	⇓P		P	22 40 20.3	-0.3	
	baz=38								
K14A	Jones Ranch, D	38.70	328	⇑P		P	22 40 21.6	-0.3	
	baz=38,SNR=14								
M12A	Wells	38.85	325	⇑P		P	22 40 23.0	-0.1	
	baz=38								
J15A	Blackfoot	38.94	330	⇑P		P	22 40 23.4	-0.5	
	baz=39,SNR=9.2								
NVAR	Mina Array Bea	39.02	319	P		P	22 40 25.1	+0.4	
	5.3nm,0.9s,mb4.3,baz=133,slow=7.4,SNR=22								
NVAR				PcP		PcP	22 42 35.5	+1.7	
	4.0nm,0.9s,baz=143,slow=4.1,SNR=9.5								
KCC	Kaiser Creek	39.07	317	⇑P		P	22 40 25.8	+0.7	
	baz=39								
G18A	Lazy EL Ranch,	39.09	334	⇑P		P	22 40 24.4	-0.6	
	baz=39								
H16A	Russell Place,	39.36	332	⇑P		P	22 40 27.2	-0.1	
	baz=39								
O09A	Fish Creek Ran	39.37	322	⇓P		P	22 40 27.8	+0.3	
	baz=39								
J14A	Carey	39.43	329	⇓P		P	22 40 27.5	-0.4	
	baz=39,SNR=10.0								
ULM	Lac du Bonnet	39.50	351	P		P	22 40 26.6	-1.8	
	16nm,0.9s,mb4.7,baz=166,slow=9.1,SNR=7.9								
ULM	Lac du Bonnet	39.50	351	*e*P		P	22 40 26.8	-1.6	
	14nm,0.9s,mb4.7								
F18A	Big Timber	39.62	335	⇓P		P	22 40 29.0	-0.5	
	baz=40								
K12A	Draper Farm, C	39.67	327	⇓P		P	22 40 30.1	+0.1	
	baz=39								
L11A	Cat Creek Ranc	39.82	326	⇑P		P	22 40 31.0	-0.2	
	baz=40								
J13A	Cove Ranch, Pi	39.82	328	⇓P		P	22 40 31.1	-0.1	
	baz=40								
I14A	Mackay	39.84	329	⇓P		P	22 40 31.0	-0.3	
	baz=40,SNR=8.6								
M10A	I.L. Ranch, Tu	39.84	324	⇑P		P	22 40 30.8	-0.5	
	baz=40								
H15A	Lima	39.95	331	⇓P		P	22 40 32.2	0.0	
	baz=40,SNR=13								
N09A	Rock Creek Ran	39.99	323	⇑P		P	22 40 33.1	+0.4	
	baz=40								
G16A	Moss Hill, Enn	40.01	332	⇓P		P	22 40 32.5	-0.2	
	baz=40								
F17A	Fitzpatrick Pl	40.02	334	⇑P		P	22 40 32.5	-0.3	
	baz=40								
HLID	Hailey	40.06	328	⇑P		P	22 40 32.8	-0.4	
	baz=40								
I13A	Wildhorse Cree	40.16	329	⇑P		P	22 40 33.6	-0.4	
	baz=40,SNR=7.0								
MCMT	McKenzie Canyo	40.20	331	*e*P		P	22 40 35.8	+1.5	
J12A	Stokes Ranch,	40.20	327	⇑P		P	22 40 34.1	-0.2	
	baz=40								
G15A	Dillon	40.28	332	⇑P		P	22 40 34.8	-0.2	
	baz=40								
H14A	Leadore	40.29	330	⇓P		P	22 40 35.1	0.0	
	baz=40,SNR=11								
I12A	Atlanta	40.60	328	⇓P		P	22 40 37.4	-0.2	
	baz=40								
H13A	Challis	40.69	329	⇑P		P	22 40 38.2	-0.2	
	baz=40,SNR=9.2								
F15A	Butte	40.79	332	⇑P		P	22 40 39.0	-0.2	
	baz=41								
E16A	East Helena	40.96	334	⇓P		P	22 40 39.9	-0.7	
	baz=41								
O06A	Flanigan	40.98	320	⇓P		P	22 40 41.0	+0.1	
	baz=41								
D17A	Six Diamond Ra	41.02	335	⇓P		P	22 40 40.4	-0.6	
	baz=41								
G13A	Cobalt	41.06	330	⇓P		P	22 40 41.0	-0.5	
	baz=41								
I11A	Placerville	41.11	327	⇓P		P	22 40 41.5	-0.3	
	baz=41								
K09A	Rome	41.27	325	⇑P		P	22 40 42.8	-0.4	
	baz=41,SNR=5.9								
E15A	Deer Lodge	41.30	333	⇓P		P	22 40 42.9	-0.5	
	baz=41								
L08A	Fields	41.30	324	⇓P		P	22 40 43.5	0.0	
	baz=41								
N06A	Buffalo Meadow	41.33	321	⇑P		P	22 40 44.1	+0.4	
	baz=41								
F13A	Darby	41.62	331	⇓P		P	22 40 45.1	-0.9	
	baz=41								
H11A	Donnelly	41.68	328	⇓P		P	22 40 45.4	-1.1	
	baz=41,SNR=6.6								
J09A	Fry Pan Ranch,	41.71	326	⇑P		P	22 40 46.0	-0.7	
	baz=41,SNR=6.0								
K08A	Mann Creek Ran	41.73	324	⇓P		P	22 40 46.5	-0.4	
	baz=41								
E13A	Victor	42.03	331	⇑P		P	22 40 48.1	-1.1	
	baz=42								
I09A	Lost Marbles R	42.11	326	⇑P		P	22 40 49.3	-0.7	
	baz=42								
K07A	Rock Creek Ran	42.14	324	⇓P		P	22 40 49.7	-0.6	
	baz=42								
G11A	Walters Elk Ra	42.30	329	⇑P		P	22 40 50.6	-0.9	
	baz=42								
BMO	Blue Mountains	42.46	328	*e*P		P	22 40 51.5	-1.3	
	5.9nm,1.2s,mb4.1								
F11A	Grangeville	42.58	329	⇓P		P	22 40 52.9	-0.9	
	baz=42								
D13A	Huson	42.63	332	⇑P		P	22 40 53.7	-0.5	
	baz=42								
G10A	Bishop Farm, J	42.66	328	⇑P		P	22 40 53.7	-0.7	
	baz=42								
E12A	Beaver Dam Sad	42.66	330	⇓P		P	22 40 53.7	-0.8	
	baz=42								
E11A	Bogner Ranch,	42.93	330	⇓P		P	22 40 55.2	-1.4	
	baz=43								
H08A	Prairie City	42.97	326	⇓P		P	22 40 56.4	-0.6	
	baz=43								
G09A	Cove	42.99	328	⇓P		P	22 40 56.2	-0.9	
	baz=43								
F10A	Beach Ranch, E	43.18	329	⇓P		P	22 40 58.2	-0.5	
	baz=43								
A15A	Johnson Ranch,	43.30	335	⇓P		P	22 40 58.4	-1.2	
	baz=43								
F09A	S2 Ranch, Elgi	43.35	328	⇑P		P	22 40 59.7	-0.3	
	baz=43								
E10A	Myers Farm, Un	43.47	329	⇑P		P	22 41 00.4	-0.6	
	baz=43								
B13A	Whitefish	43.59	333	⇑P		P	22 41 02.3	+0.4	
	baz=43								
A14A	Double T Ranch	43.59	335	⇓P		P	22 41 01.5	-0.4	
	baz=43								
YBH	Yreka Blue Hor	43.67	320	LR		LR	23 00 58.5		
	comp=Z,306nm,19.7s,baz=13,slow=39								
D10A	Wagner Farm, O	43.95	330	⇓P		P	22 41 04.2	-0.6	
	baz=44								
C11A	Tepee Creek (N	44.01	331	⇓P		P	22 41 04.5	-0.8	
	baz=44								
B11A	Sandpoint	44.49	332	⇓P		P	22 41 08.5	-0.6	
	baz=44								
D08A	Wolman Farm,	44.77	329	⇑P		P	22 41 10.8	-0.6	
	baz=44								
A11A	Hall Mountain,	44.87	332	⇑P		P	22 41 11.5	-0.6	
	baz=45								
E07A	Sunnyside	44.92	328	⇓P		P	22 41 12.2	-0.4	
	baz=45								
C09A	Chrisman Ranch	44.95	330	⇑P		P	22 41 12.4	-0.4	
	baz=45								
B09A	Rice	45.32	331	⇓P		P	22 41 15.1	-0.6	
	baz=45								
B08A	Colville Reser	45.85	330	⇓P		P	22 41 19.5	-0.5	
	baz=46								
A09A	Danville	45.91	331	⇓P		P	22 41 19.6	-0.8	
	baz=46								
BDFB	Brasilia	46.73	124	P		P	22 41 27.2	-0.1	
	2.1nm,0.5s,mb4.4,baz=279,slow=18,SNR=7.8								
BDFB				LR		LR	23 01 50.3		
	comp=Z,187nm,18.8s,baz=303,slow=37								
A07A	Ashnola River,	46.83	330	⇑P		P	22 41 27.0	-0.6	
	baz=47								
PLCA	Paso Flores	53.94	165	P		P	22 42 20.9	-0.4	
	4.0nm,0.9s,mb4.3,baz=316,slow=5.6,SNR=4.1								
YKA	Yellowknife Ar	54.85	345	P		P	22 42 26.0	-1.6	
	1.6nm,0.7s,mb4.2,baz=138,slow=8.2,SNR=4.4								
YKA				LR		LR	23 08 28.6		
	comp=Z,55nm,18.5s,baz=105,slow=39								
PPT	Papeete	68.47	246	*e*S		S	22 52 51.8	-5.8	
	110nm,27.2s								
PPT	Papeete	68.47	246	*e*LR		LR	23 04 21.8		
	136nm,25.5s								
PPT	Papeete	68.47	246	LR		LR	23 06 42.6		
	comp=Z,141nm,19.8s,baz=216,slow=30								
TBI	Tubuai	70.45	240	*e*S		S	22 53 15.7	-5.0	
	111nm,29.8s								
TBI	Tubuai	70.45	240	*e*LR		LR	23 05 25.8		
	152nm,25.8s								
DBIC	Dimbokro	80.70	85	LR		LR	23 18 04.9		
	comp=Z,58nm,19.7s,baz=257,slow=34								
NOA	NORSAR Array B	83.93	29	LR		LR	23 19 41.7		
	comp=Z,73nm,19.0s,baz=295,slow=34								
BILL	Bilibino	85.80	339	*e*P		P	22 45 36.5	+0.2	
	6.2nm,0.7s,mb5.0								
TORD	Torodi Ar. Bea	85.88	77	P		P	22 45 36.5	-1.2	
	0.4nm,1.0s,mb3.6,baz=285,slow=2.2,SNR=2.7								
TORD				LR		LR	23 19 28.6		
	comp=Z,81nm,20.1s,baz=230,slow=32								
ARCES	ARCESS Array B	86.94	19	LR		LR	23 25 24.8		
	comp=Z,119nm,18.2s,baz=149,slow=36								
GERES	GERESS Array B	88.25	41	LR		LR	23 22 38.9		
	comp=Z,127nm,19.1s,baz=25,slow=34								
KEST	Kesra	88.25	54	LR		LR	23 21 10.0		
	comp=Z,49nm,19.1s,baz=242,slow=33								
VRAC	Vranov	89.94	40	LR		LR	23 23 25.5		
	comp=Z,170nm,18.5s,baz=32,slow=34								
MDJ	Mudanjiang	115.32	332	PKP		PKPdf	22 51 40.0	+1.2	
SONM	Songino Array	119.92	350	PKP		PKPdf	22 51 47.7	+0.2	
	0.5nm,0.6s,baz=35,slow=1.6,SNR=5.1								
MKAR	Makanchi Array	121.26	9	PKP		PKPdf	22 51 49.4	-0.8	
	0.3nm,0.7s,baz=318,slow=1.6,SNR=3.6								
KSRS	Korea Array	121.59	328	PKP		PKPdf	22 51 50.8	-0.3	
	2.7nm,0.8s,baz=18,slow=1.9,SNR=6.8								
GTA	Gaotai	129.12	354	*e*PKP		PKPdf	22 52 06.6	+1.2	
LZH	Lanzhou	131.77	349	*e*PKP		PKPdf	22 52 12.5	+1.9	
LZH				*e*PP		PP	22 54 36.1	+6.4	
LZH				SKKS		SKKSac	23 01 23.3	+1.3	
LZH				PP		PP			
	comp=Z,83nm,8.1s								
LZH				LR		LR			
	comp=N,135nm,18.7s								
LZH				LR		LR			
	comp=Z,198nm,20.3s								
LZH	Lanzhou	131.77	349	*e*PKP		PKPdf	22 52 12.5	+1.9	
LZH				pPKP		pPKPdf	22 52 23.4	-5.4	
LZH				sPKP			22 52 27.0		
LZH				*e*PP		PP	22 54 36.1	+6.4	
LZH				SKKS		SKKSac	23 01 23.2	+1.2	
LZH				*e*SS		SS	23 12 04.6	+5.1	
LZH				LR		LR			
	comp=Z,200nm,20.3s								
LSA	Lhasa	139.11	3	*e*PKPdf		PKPdf	22 52 26.5	+2.0	
ASAR	Alice Springs	139.58	247	PKP		PKPdf	22 52 24.4	-0.9	
	comp=Z,0.9nm,0.9s,baz=100,slow=2.5,SNR=5.2								
GYA	Guiyang	140.23	341	PDIF		Pdif	22 49 39.8	-1.3	
GYA				PKP		PKPdf	22 52 26.5	0.0	
GYA				XPKP			22 52 41.6		
GYA				PKS			22 56 01.6		
GYA				PP		PP			
	comp=Z,120nm,8.6s								
GYA				LR		LR			
	comp=N,120nm,20.3s								
GYA				LR		LR			
	comp=E,110nm,19.6s								
GYA				LR		LR			
	comp=Z,130nm,21.5s								
CMAR	Chiang Mai Arr	149.85	349	PKPbc		PKPbc	22 52 48.0	0.0	
	comp=Z,12nm,1.0s,baz=332,slow=2.4,SNR=23								

*ISCJB **15** 22:53:29.9±0.4, 188S±005×5559E±010, h10km, mb4.0/22, Error ellipse: s-maj=14.1km s-min=7.6km az=8.7*
*IDC **15** 22:53:30.4±0.6, 179S×5557E, h0km, mb4.0/19, mb1 4.1/19, mb1mx4.0/28, mbtmp4.0/19, Error ellipse: s-maj=18.9km s-min=15.5km az=133.0*
*NEIC **15** 22:53:31.6±0.4, 190S×5559E, h10km, mb4.3/4, Error ellipse: s-maj=12.6km s-min=8.6km az=108.0*

ISC 15 22:53:32.7±6.5, 194S±005×5561E±010, h16km±40km, n32, σ1°17/31, mb4.0/22, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	2.72	183	*e*Pn		Pn	22 54 14.2	-1.6
MSEY				*e*Sn		Sn	22 54 46.4	-2.0
LBTB	Lobatse	36.94	229	P		P	23 00 42.0	+0.9
	2.6nm,0.6s,mb4.2,baz=266,slow=23,SNR=5.2							
KBL	Kabul	38.41	18	*e*P		P	23 00 54.3	+0.8
	4.1nm,0.8s,mb4.2							
KBL				*e*			23 01 02.2	
BOSA	Boshof	39.27	225	P		P	23 01 02.0	+1.3
	3.7nm,1.0s,mb4.1,baz=347,slow=13,SNR=5.0							
TSUM	Tsumeb	40.98	243	P		P	23 01 16.8	+1.7
	4.2nm,0.7s,mb4.2,baz=348,slow=3.3,SNR=7.0							
GNI	Garni	43.05	348	P		P	23 01 32.5	+0.8
	1.6nm,0.5s,mb4.0,baz=110,slow=12,SNR=3.3							
CMAR	Chiang Mai Arr	47.19	63	P		P	23 02 07.0	+2.0
	0.9nm,0.3s,mb4.1,baz=232,slow=7.0,SNR=4.5							
AKTK	Aktyubinsk	52.21	2	P		P	23 02 43.1	+0.5
AKTO	Aktyubinsk	52.21	2	P		P	23 02 43.1	+0.5
	1.0nm,0.4s,mb4.1,baz=193,slow=8.9,SNR=3.7							
MKAR	Makanchi Array	53.90	22	P		P	23 02 54.3	-0.9
	0.9nm,0.8s,mb3.7,baz=214,slow=9.0,SNR=7.1							
TORD	Torodi Ar. Bea	55.54	287	P		P	23 03 07.7	0.0
	0.4nm,0.9s,mb3.4,baz=105,slow=6.9,SNR=3.8							
TORD				PcP		PcP	23 04 06.5	-1.1
	0.5nm,0.9s,baz=88,slow=3.5,SNR=3.9							
BVAR	Borovoye Array	56.15	11	P		P	23 03 10.8	-0.6
	0.6nm,0.5s,mb3.9,baz=184,slow=7.3,SNR=6.5							
AKASG	Malin Array Be	57.08	340	P		P	23 03 17.4	-0.7
	0.7nm,0.5s,mb4.0,baz=148,slow=6.2,SNR=3.4							
ZAA0	Zalesovo Array	60.75	19	*e*P		P	23 03 42.4	-1.1
ZAA0				*e*		pP	23 03 48.4	-0.4
ZALV	Zalesovo Beam	60.75	19	P		P	23 03 41.8	-1.7
	0.5nm,0.3s,mb4.1,baz=224,slow=6.2,SNR=4.5							
DBIC	Dimbokro	60.96	279	P		P	23 03 44.4	-1.2
	3.7nm,1.1s,mb4.5,baz=99,slow=3.4,SNR=4.0							
DBIC	Dimbokro	60.96	279	*e*P		P	23 03 44.4	-1.3
	2.4nm,0.7s,mb4.4							
VRAC	Vranov	61.13	332	P		P	23 03 45.3	-0.8
	1.9nm,0.8s,mb4.3,baz=168,slow=17,SNR=2.5							
MAW	Mawson	65.74	177	*e*P		P	23 04 12.1	-4.2
SONM	Songino Array	66.36	35	P		P	23 04 20.3	-0.3
	1.2nm,0.8s,mb4.0,baz=264,slow=6.0,SNR=3.6							
HFS	Hagfors	69.93	339	P		P	23 04 41.0	-1.8
	2.3nm,0.9s,mb4.1,baz=223,slow=7.9,SNR=2.6							
ARCES	ARCESS Array B	74.18	349	P		P	23 05 07.5	-0.6
	2.9nm,1.1s,mb4.1,baz=152,slow=5.5,SNR=5.0							
ARCES	ARCESS Array B	74.18	349	P		P	23 05 07.5	-0.6
EKA	Eskdalemuir Ar	74.42	330	P		P	23 05 09.9	+0.1
	1.5nm,1.0s,mb3.9,baz=119,slow=5.7,SNR=3.1							
ASAR	Alice Springs	78.50	114	P		P	23 05 34.3	+0.7
	1.4nm,0.7s,mb4.0,baz=280,slow=5.1,SNR=12							
SNAA	Sanae	78.62	196	*e*P		P	23 05 33.1	-0.2
	1.0nm,0.8s,mb3.8							
WRA	Warramunga Arr	78.74	110	P		P	23 05 35.9	+0.9
	1.5nm,0.7s,mb4.0,baz=281,slow=4.3,SNR=9.5							
WRAB	Tennant Creek	78.75	110	*e*P		P	23 05 35.0	-0.1
	2.2nm,0.7s,mb4.2							
VNA2	Neumayer--Watz	79.58	197	*e*		P	23 05 41.2	+2.6
	baz=41,slow=4.0							
VNA2				*e*			23 05 48.6	
VNA3	Neumayer Olymp	80.39	197	*e*		P	23 05 45.2	+2.2
VNA3				*e*			23 05 52.8	
PDAR	Pinedale Array	137.24	344	PKP		PKPdf	23 12 56.0	+0.4
	0.3nm,0.7s,baz=46,slow=3.9,SNR=3.3							
TXAR	Lajitas Array	146.37	326	PKPbc		PKPbc	23 13 13.5	0.0
	0.6nm,0.5s,baz=47,slow=6.6,SNR=8.5							

*IDC **15** 22:56:41.5±6.2, 463N×12498E, h124km±66km, mb3.5/6, mb1 3.6/7, mb1mx3.5/17, mbtmp3.6/7, Error ellipse: s-maj=164.8km s-min=15.2km az=68.0*

NEIC 15 22:56:41.7±4.9, 465N×12492E, h129km±52km, mb4.0/1, Error ellipse: s-maj=138.9km s-min=11.2km az=70.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.50	15	P		Pn	22 57 21.9	+0.1
	51nm,0.3s,baz=235,slow=16,SNR=3.4							
DAV				S		Sn	22 57 41.4	-11
	30nm,0.3s,baz=126,slow=22,SNR=9.0							
DAV	Davao City (W)	2.50	15	P		Pn	22 57 21.9	+0.1
DAV				S		Sn	22 57 41.4	-11
WRAB	Tennant Creek	26.12	160	*e*P		P	23 02 04.0	+0.2
	5.7nm,1.4s							
WRA	Warramunga Arr	26.13	160	P		P	23 02 03.5	-0.4
	1.1nm,0.5s,baz=344,slow=10,SNR=7.8							
WB2	Warramunga Arr	26.13	160	*e*P		P	23 02 03.9	0.0
WB2	Warramunga Arr	26.13	160	*e*P		P	23 02 04.6	+0.8
ASAR	Alice Springs	29.47	163	P		P	23 02 33.1	-0.5
	0.2nm,0.5s,baz=354,slow=7.5,SNR=2.8							
STKA	Stephens Creek	39.64	158	*e*P		P	23 04 01.9	+1.0
	0.9nm,0.4s							
STKA	Stephens Creek	39.64	158	P		P	23 04 01.1	+0.2
	1.1nm,0.4s,baz=340,slow=7.4,SNR=8.2							
MKAR	Makanchi Array	55.78	326	P		P	23 06 06.2	+1.0
	0.7nm,0.5s,baz=120,slow=7.8,SNR=20							
MKAR	Makanchi Array	55.78	326	P		P	23 06 06.2	+1.0
ZALV	Zalesovo Beam	58.97	334	P		P	23 06 26.1	-1.3
	0.4nm,0.4s,baz=107,slow=9.2,SNR=3.6							
ARCES	ARCESS Array B	88.97	340	P		P	23 09 22.0	+0.6
	3.6nm,0.9s,baz=67,slow=10,SNR=3.5							

IDC 15 23:20:10.8±3.1, 233N×9565E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=109.4km s-min=29.0km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.35**	**11**	Pn	Pn	23 24 03.2	+1.2
	0.2nm,0.3s,baz=202,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**43.94**	**122**	P	P	23 28 20.0	+0.1
	0.4nm,0.8s,baz=294,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**45.80**	**347**	P	P	23 28 34.7	+0.4
	1.0nm,0.7s,baz=168,slow=8.4,SNR=12						
SONM	**Songino Array**	**46.28**	**10**	P	P	23 28 37.2	-0.8
	0.5nm,0.5s,baz=187,slow=9.5,SNR=5.9						
ZALV	**Zalesovo Beam**	**52.22**	**352**	P	P	23 29 23.4	0.0
	0.5nm,0.4s,baz=169,slow=7.2,SNR=4.5						

IDC 15 23:23:34.0±0.8, 1131N×8666W, h0km, mb4.2/10, mb1 4.4/11, mb1mx4.2/22, mbtmp4.2/11, ML3.9/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/29, Error ellipse: s-maj=30.8km s-min=16.3km az=48.0
BJI 15 23:23:37.7, 1120N×8690W, h35km, mB5.2, Ms4.9, Msz4.6
ISCJB 15 23:23:39.7±0.9, 1118N±005×8687W±008, h58km±7km, mb4.4/18, MS4.2/5, Error ellipse: s-maj=14.8km s-min=4.9km az=147.2
NEIC 15 23:23:39.8±0.6, 1123N×8692W, h35km, mb4.6/9, Error ellipse: s-maj=16.5km s-min=5.4km az=224.0
CASC 15 23:23:40.4±2.4, 1119N×8685W, h44km±161km, MD4.4, ML3.7, mb4.6(NEIC)
ISC 15 23:23:40.6±0.8, 1119N±005×8687W±007, h48km±7km, n74, σ0°91/60, mb4.4/18, MS4.2/5, 14C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.96**	**35**	*e*P	**Pn**	**23 23 58.4**	**+0.7**
COPN	**Copaltepe**	**1.02**	**15**	*e*P	**Pn**	**23 23 58.3**	**-0.2**
COPN				AML	AML	23 24 24.6	
	comp=Z,3μm,0.4s						
TICN	**Ticuantepe**	**1.04**	**37**	*e*P	**Pn**	**23 23 58.7**	**-0.1**
APON	**Apoyo**	**1.06**	**47**	*e*P	**Pn**	**23 23 59.4**	**+0.3**
CSAN		**1.07**	**24**	*e*P	**Pn**	**23 23 59.0**	**-0.3**
XAVN	**Gruta Xavier**	**1.09**	**29**	*e*P	**Pn**	**23 23 59.6**	**+0.2**
TISN	**Laguna Tiscapa**	**1.11**	**22**	*e*P	**Pn**	**23 23 59.8**	**+0.1**
MGAN	**Managua**	**1.12**	**33**	*e*P	**Pn**	**23 23 59.9**	**0.0**
MGAN				*e*S	**Sn**	**23 24 14.5**	**+0.2**
APYN	**Apoyeque**	**1.15**	**26**	*e*P	**Pn**	**23 24 00.1**	**-0.1**
APYN				AML	AML	23 24 23.1	
	comp=Z,2μm,0.3s						
MIRN	**Miramar**	**1.25**	**7**	*e*P	**Pn**	**23 24 01.2**	**-0.4**
MOMN	**Momotombo**	**1.25**	**15**	*e*P	**Pn**	**23 24 01.6**	**0.0**
CONN	**Concepcion**	**1.27**	**73**	*e*P	**Pn**	**23 24 01.8**	**-0.1**
CNGN	**Cerro Negro**	**1.31**	**7**	*e*P	**Pn**	**23 24 01.7**	**-0.7**
CNGN				AML	AML	23 24 29.0	
	comp=Z,485nm,0.5s						
HUEN		**1.32**	**31**	*e*P	**Pn**	**23 24 02.6**	**-0.1**
TEL3	**Telica 3**	**1.37**	**1**	*e*P	**Pn**	**23 24 02.6**	**-0.6**
TEL3				AML	AML	23 24 27.0	
	comp=Z,478nm,0.6s						
CRIN	**San Cristobal**	**1.51**	**353**	*e*P	**Pn**	**23 24 04.3**	**-0.8**
CRIN				AML	AML	23 24 21.4	
	comp=Z,2μm,0.6s						
VCR	**Vista de Mar**	**1.61**	**131**	*e*P	**Pn**	**23 24 10.1**	**+3.5**
VCR	**Vista de Mar**	**1.61**	**131**	*e*P	**Pn**	**23 24 06.0**	**-0.6**
LIM1	**Limonal**	**1.66**	**107**	*e*P	**Pn**	**23 24 06.0**	**-1.2**
CUI	**Cuipilapa**	**1.75**	**108**	*e*P	**Pn**	**23 24 07.7**	**-0.8**
JCR	**Jicaral**	**2.18**	**128**	*e*P	**Pn**	**23 24 16.7**	**+2.3**
FORC	**Fortuna**	**2.28**	**108**	*e*P	**Pn**	**23 24 16.9**	**+1.3**
CGA2	**Cerro Gallo 2**	**2.63**	**116**	*e*P	**Pn**	**23 24 19.8**	**-0.8**
PRS1	**Puriscal**	**2.79**	**115**	*e*P	**Pn**	**23 24 24.3**	**+1.6**
PRS1	**Puriscal**	**2.79**	**115**	*e*P	**Pn**	**23 24 24.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**2.87**	**352**	*e*Pn	**Pn**	**23 24 23.7**	**-0.2**
TGUH				*e*Sn	**Sn**	**23 24 58.9**	**+1.7**
LAJ	**Bijagual**	**3.01**	**116**	*e*P	**Pn**	**23 24 21.5**	**-4.2**
TRTC	**Tortuguero**	**3.16**	**101**	*e*P	**Pn**	**23 24 26.9**	**-0.9**
QCR	**Quepos**	**3.19**	**123**	*e*P	**Pn**	**23 24 27.6**	**-0.6**
URSC	**Urasca**	**3.32**	**114**	*i*P	**Pn**	**23 24 31.9**	**+1.9**
URSC				*e*S	**Sn**	**23 25 08.5**	**+0.2**
CMIG	**Matias Romero**	**9.74**	**308**	Pn	**Pn**	**23 25 56.5**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=106,slow=9.5,SNR=10						
LAPE	**La Pedrera**	**15.51**	**102**	*e*P	Px	23 24 03.0	
ATAH	**Atahualpa**	**19.94**	**155**	LR	LR	23 34 58.5	
	comp=Z,152nm,20.4s,baz=230,slow=34						
HKT	**Hockley**	**20.45**	**337**	*e*P	**P**	**23 28 14.1**	**0.0**
	comp=Z,8.4nm,0.8s						
LRAL	**Lakeview Retre**	**21.74**	**360**	*e*P	**P**	**23 28 28.5**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.2						
PCRV	**Puerto La Cruz**	**21.87**	**91**	P	**P**	**23 28 28.0**	**-1.5**
	comp=Z,11nm,0.6s,mb4.5,baz=311,slow=5.6,SNR=5.0						
GOGA	**Godfrey**	**22.33**	**8**	P	**P**	**23 28 34.7**	**+0.4**
	comp=Z,18nm,0.7s,mb4.6						
JSC	**Jenkinsville**	**23.55**	**12**	*e*P	**P**	**23 28 47.9**	**+1.3**
TXAR	**Lajitas Array**	**23.90**	**321**	P	**P**	**23 28 50.1**	**+0.1**
	comp=Z,6.1nm,0.8s,mb4.1,baz=138,slow=9.9,SNR=46						
TXAR				PcP	PcP	23 32 34.4	+2.5
	comp=Z,1.8nm,0.8s,baz=123,slow=4.6,SNR=9.0						
MIAR	**Mount Ida**	**24.04**	**346**	*e*P	**P**	**23 28 51.3**	**+0.2**
	comp=Z,12nm,0.8s,mb4.4						
CPCT	**Cooper Cave**	**24.24**	**5**	*e*P	**P**	**23 28 53.2**	**+0.2**
TKL	**Tuckaleechee C**	**24.52**	**6**	P	**P**	**23 28 55.0**	**-0.4**
	comp=Z,10nm,0.7s,mb4.5,baz=175,slow=12,SNR=14						
LPIG	**La Paz**	**25.71**	**303**	LR	LR	23 40 52.4	
	comp=Z,80nm,19.3s,MS3.3,baz=11,slow=40						
WMOK	**Wichita Mounta**	**25.83**	**337**	*e*P	**P**	**23 29 07.9**	**+0.4**
	comp=Z,14nm,1.0s,mb4.4						
SDCO	**Great Sand Dun**	**31.28**	**331**	*e*P	**P**	**23 29 57.0**	**+1.0**
	comp=Z,33nm,2.5s,mb4.7						
BINY	**Binghamton**	**32.32**	**15**	*e*P	**P**	**23 30 05.3**	**+0.2**
	comp=Z,464nm,2.5s						
ECSD	**EROS,Sioux Fal**	**33.50**	**347**	*e*P	**P**	**23 30 13.8**	**-1.6**
	comp=Z,11nm,0.9s,mb4.8						
SADO	**Sadowa**	**34.11**	**10**	P	**P**	**23 30 19.8**	**-0.9**
	comp=Z,7.4nm,0.5s,mb4.8,baz=215,slow=9.7,SNR=5.1						
PDAR	**Pinedale Array**	**37.14**	**332**	P	**P**	**23 30 46.2**	**-0.5**
	comp=Z,1.8nm,0.7s,mb4.0,baz=132,slow=9.4,SNR=12						
PDAR				PcP	PcP	23 33 07.2	+1.0
	comp=Z,0.4nm,0.6s,baz=165,slow=3.7,SNR=4.0						
PDAR				ScP	ScP	23 36 56.6	+7.2
	comp=Z,0.1nm,0.4s,baz=159,slow=4.6,SNR=3.6						
HWUT	**Hardware Ranch**	**37.24**	**329**	*e*P	**P**	**23 30 47.7**	**+0.2**
HWUT				*e*PcP	PcP	23 33 08.1	+1.6
REDW	**Red Top Meadow**	**38.21**	**331**	*e*P	**P**	**23 30 56.0**	**+0.3**
	comp=Z,6.8nm,0.6s,mb4.5						
MOOW	**Moose Ponds**	**38.45**	**332**	*e*P	**P**	**23 30 58.9**	**+1.1**
	comp=Z,83nm,2.9s,mb5.0						
NVAR	**Mina Array Bea**	**39.02**	**319**	P	**P**	**23 31 03.7**	**+1.1**
	comp=Z,1.7nm,0.8s,mb3.8,baz=120,slow=8.8,SNR=10						
NVAR				PcP	PcP	23 33 13.1	+1.0
	comp=Z,1.2nm,0.7s,baz=136,slow=3.9,SNR=8.0						
NVAR	**Mina Array Bea**	**39.02**	**319**	P	**P**	**23 31 03.7**	**+1.1**
NVAR				PcP	PcP	23 33 13.1	+1.0
ULM	**Lac du Bonnet**	**39.64**	**351**	P	**P**	**23 31 05.3**	**-2.2**
	comp=Z,4.0nm,0.5s,mb4.4,baz=175,slow=10,SNR=3.5						
ULM	**Lac du Bonnet**	**39.64**	**351**	P	**P**	**23 31 05.3**	**-2.2**
MCMT	**McKenzie Canyo**	**40.26**	**331**	P	**P**	**23 31 13.9**	**+1.1**
BDFB	**Brasilia**	**46.80**	**124**	P	**P**	**23 32 05.8**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.3,baz=270,slow=16,SNR=6.2						
PLCA	**Paso Flores**	**53.82**	**165**	P	**P**	**23 32 58.6**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.1,baz=343,slow=5.6,SNR=3.8						
ESDC	**Sonseca Array**	**77.51**	**52**	LR	LR	00 07 46.4	
	comp=Z,49nm,18.3s,MS3.9,baz=260,slow=34						
TORD	**Torodi Ar. Bea**	**86.12**	**77**	P	**P**	**23 36 15.3**	**-1.9**
	comp=Z,0.3nm,0.9s,mb3.5,baz=298,slow=5.0,SNR=3.4						
MDJ	**Mudanjiang**	**115.38**	**332**	PKP	PKPdf	23 42 12.5	-4.7
MDJ				PP	PP		
	comp=Z,49nm,4.6s						
SONM	**Songino Array**	**120.06**	**350**	PKP	PKPdf	23 42 26.2	0.0
	comp=Z,0.4nm,0.8s,baz=325,slow=1.0,SNR=3.3						
MKAR	**Makanchi Array**	**121.47**	**9**	PKP	PKPdf	23 42 28.1	-0.7
	comp=Z,0.3nm,0.8s,baz=297,slow=2.7,SNR=3.1						
KSRS	**Korea Array**	**121.64**	**328**	PKP	PKPdf	23 42 30.0	+0.5
	comp=Z,0.4nm,0.3s,baz=6.4,slow=2.9,SNR=4.8						
WMQ	**Urumqi**	**125.03**	**5**	*e*PKP	PKPdf	23 42 35.0	-0.8
HHC	**Hu-ho-hao-te**	**125.49**	**343**	*e*PKP	PKPdf	23 42 35.5	-1.3
HHC				XPKP		23 42 49.3	
HHC				PP	PP	23 44 30.4	+3.6
HHC				PKS		23 46 10.3	
HHC				SKS	SKSdf	23 49 42.0	-2.9
HHC				SKKS	SKKSac	23 51 19.0	-3.3
HHC				LR	LR		
	comp=N,138nm,17.2s,MS4.8						
HHC				LR	LR		
	comp=E,116nm,19.6s,MS4.8						
HHC				LR	LR		
	comp=Z,123nm,20.2s,MS4.6						
LZH	**Lanzhou**	**131.90**	**348**	*e*PKP	PKPdf	23 42 49.0	-0.1
LZH				LR	LR		
	comp=N,115nm,18.0s						
LZH				LR	LR		
	comp=Z,163nm,20.2s,MS4.7						
CD2	**Chengdu**	**136.91**	**347**	*e*PKP	PKPdf	23 42 57.0	-1.7
CD2				XPKP		23 43 11.3	
CD2				PP	PP	23 45 42.6	+2.0
CD2				PKS		23 46 31.8	
CD2				SKS	SKSdf	23 50 02.3	-3.6
CD2				SKKS	SKKSac	23 52 30.4	-2.6
CD2				PP	PP		
	comp=Z,120nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,18.2s						
CD2				LR	LR		
	comp=Z,90nm,16.8s,MS4.6						
ASAR	**Alice Springs**	**139.32**	**247**	PKP	PKPdf	23 43 04.8	+1.6
	comp=Z,0.5nm,0.7s,baz=76,slow=1.8,SNR=5.4						
WRA	**Warramunga Arr**	**139.46**	**252**	PKhKP		23 43 00.5	
	comp=Z,0.3nm,0.7s,baz=96,slow=2.6,SNR=3.9						
WRA				PKP	PKPdf	23 43 06.2	+2.7
	comp=Z,1.2nm,0.9s,baz=90,slow=2.1,SNR=7.6						
GYA	**Guiyang**	**140.33**	**341**	*e*PKP	PKPdf	23 43 02.3	-2.8
GYA				PP	PP	23 46 03.1	+1.2
GYA				PP	PP		
	comp=Z,60nm,7.0s						
KMI	**Kunming**	**142.71**	**346**	PKP	PKPdf	23 43 09.6	+0.3
KMI				APKP		23 43 17.8	
CMAR	**Chiang Mai Arr**	**149.99**	**349**	PKPbc	PKPbc	23 43 26.8	+0.1
	comp=Z,3.6nm,0.8s,baz=348,slow=3.6,SNR=19						

MOS 15 23:26:40.8±1.5, 3651N×2973E, h10km, mb4.1/4, Error ellipse: s-maj=11.8km s-min=7.0km az=43.9
DDA 15 23:26:44.1, 3629N×2954E, h40km±1km, Md3.6, Ml3.9
ISCJB 15 23:26:45.7±0.2, 3632N±002×2958E±002, h63km±3km, mb3.9/10, Error ellipse: s-maj=3.1km s-min=2.2km az=43.5
ATH 15 23:26:45.6, 3647N×2953E, h34km±1km, MD4.0/12
CSEM 15 23:26:46.6±0.1, 3641N×2959E, h30km, Mw3.7, Error ellipse: s-maj=1.7km s-min=1.2km az=170.0
ISK 15 23:26:46.6, 3642N×2953E, h28km, ML4.0
HLW 15 23:26:47.3, 3623N×2941E, h33km, Mb3.5
IDC 15 23:26:47.0±2.1, 3648N×2967E, h55km±24km, mb3.6/7, mb1 3.8/12, mb1mx3.6/26, mbtmp3.7/12, ML3.9/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/37, Error ellipse: s-maj=18.1km s-min=13.4km az=171.0
NEIC 15 23:26:47.0, 3651N×2952E, h31km, mb4.0/10, MD4.0(ATH), ML3.9(ISK), After ISK.
GII 15 23:26:50.7±0.0, 3639N×3012E, h30km±1km, mb4.1/4, ML4.0/4
NIC 15 23:26:52.8±0.2, 3583N×2979E, h46km, ML3.4, MW3.7
ISC 15 23:26:47.2±0.2, 3636N±002×2957E±002, h56km±4km, n161, σ1°9/10/190, mb3.9/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.21**	**177**	*e*PB	**Pn**	**23 26 54.0**	**-2.2**
ELL	**Elmali**	**0.47**	**35**	PG	**Pn**	**23 26 56.6**	**-1.9**
ELL				*e*SG	**Sn**	**23 27 04.6**	**-2.1**
FETY	**Fethiye**	**0.48**	**305**	PG	**Pn**	**23 26 56.2**	**-2.4**
FETY				*e*SG	**Sn**	**23 27 03.7**	**-3.1**
GOLH	**Golhisar**	**0.88**	**360**	*i*P	**Pn**	**23 27 02.0**	**-1.5**
GOLH				*i*S	**Sn**	**23 27 16.4**	**+1.0**
TURN	**Turunc**	**0.93**	**304**	*i*P	**Pn**	**23 27 07.1**	**+2.9**
TURN				*i*S	**Sn**	**23 27 22.0**	**+5.3**
ANTB	**Antalya**	**1.03**	**58**	*e*PG	**Pn**	**23 27 05.9**	**+0.5**
ANTB				*e*SG	**Sn**	**23 27 19.6**	**+0.7**
ARG	**Arkhangelos**	**1.18**	**264**	*e*PN	**Pn**	**23 27 07.4**	**0.0**
ARG				*e*SN	**Sn**	**23 27 23.2**	**+0.8**
YER	**Yerkesik**	**1.29**	**307**	*e*PN	**Pn**	**23 27 08.7**	**-0.3**
BCK	**Bucak**	**1.37**	**36**	*e*PN	**Pn**	**23 27 10.2**	**+0.2**
BCK				*e*SN	**Sn**	**23 27 27.2**	**+0.1**
DENT	**Denizli**	**1.46**	**343**	*e*PN	**Pn**	**23 27 10.7**	**-0.5**
DAT	**Datca**	**1.65**	**284**	*e*PN	**Pn**	**23 27 14.1**	**+0.4**
ISP	**Isparta**	**1.66**	**27**	P	**Pn**	**23 27 15.3**	**+1.3**
MLSB	**Milas**	**1.72**	**304**	*e*PN	**Pn**	**23 27 15.2**	**+0.6**
BDRM	**Kayabasi**	**1.85**	**293**	*e*P	**Pn**	**23 27 16.9**	**+0.4**
BDRM				*i*S	**Sn**	**23 27 39.4**	**+0.7**
AYDN	**Tasoluk**	**1.88**	**314**	*e*P	**Pn**	**23 27 16.7**	**-0.2**
AYDN				*i*S	**Sn**	**23 27 39.7**	**+0.3**
BODT	**Bodrum**	**1.95**	**292**	*e*PN	**Pn**	**23 27 18.5**	**+0.7**
KHL	**Karahalli**	**1.96**	**359**	*e*PN	**Pn**	**23 27 16.9**	**-1.1**
NISR	**Nisiros**	**1.98**	**278**	*e*PN	**Pn**	**23 27 18.0**	**-0.3**
KARP	**Karpathos**	**2.12**	**248**	*e*PN	**Pn**	**23 27 21.1**	**+1.0**
KARP				*e*SN	**Sn**	**23 27 46.6**	**+1.3**
KULA	**Kula-Manisa**	**2.27**	**342**	*e*PN	**Pn**	**23 27 21.2**	**-1.0**
MANT	**Manisa**	**2.28**	**340**	*i*P	**Pn**	**23 27 21.1**	**-1.2**
MANT				*i*S	**Sn**	**23 27 52.1**	**+2.9**
GCAM	**G?zelcaml?**	**2.30**	**306**	*i*P	**Pn**	**23 27 22.2**	**-0.5**
GCAM				*i*S	**Sn**	**23 27 46.7**	**-3.1**
SHUT	**Suhut-Afyon**	**2.33**	**19**	*e*PN	**Pn**	**23 27 23.3**	**+0.3**
HDMB	**Hadim**	**2.42**	**75**	*e*PN	**Pn**	**23 27 25.9**	**+1.6**
SMG	**Samos**	**2.57**	**302**	*e*PN	**Pn**	**23 27 25.9**	**-0.4**
SMG				*e*SN	**Sn**	**23 27 55.0**	**-1.4**
BOLV	**Bolvadin**	**2.60**	**25**	*i*P	**Pn**	**23 27 26.9**	**+0.2**
BOLV				*i*S	**Sn**	**23 27 59.2**	**+2.1**
AKMC	**Akamas**	**2.61**	**120**	P	**Pn**	**23 27 27.4**	**+0.5**
PPCY	**Paphos**	**2.70**	**122**	P	**Pn**	**23 27 28.3**	**+0.2**
GDZ	**Gediz**	**2.73**	**359**	*i*P	**Pn**	**23 27 27.2**	**-1.3**
GDZ				*i*S	**Sn**	**23 28 01.3**	**+1.1**
KONT	**Konya--Tatoy**	**2.73**	**54**	*e*PN	**Pn**	**23 27 30.1**	**+1.5**
ALFC	**Alevga**	**2.74**	**115**	P	**Pn**	**23 27 29.7**	**+1.0**
	14nm,0.2s						
ALFC				S	**Sn**	**23 27 59.0**	**-1.6**
DEMI	**Demirci**	**2.77**	**346**	*i*P	**Pn**	**23 27 27.7**	**-1.3**
DEMI				*i*S	**Sn**	**23 28 03.6**	**+2.4**
BLCB	**Balcova**	**2.85**	**316**	*e*PN	**Pn**	**23 27 29.3**	**-1.0**
AKHS	**Akhisar**	**2.88**	**332**	*i*P	**Pn**	**23 27 29.0**	**-1.6**
AKS	**Akhisar**	**2.88**	**332**	*e*PN	**Pn**	**23 27 29.2**	**-1.4**
LADK	**Ladik-KONYA**	**2.89**	**50**	*e*PN	**Pn**	**23 27 32.2**	**+1.5**
KDHN	**Kadinhani**	**2.96**	**42**	*i*P	**Pn**	**23 27 32.9**	**+1.2**
KDHN				*i*S	**Sn**	**23 28 06.4**	**+0.4**
LEF	**Lefka**	**2.97**	**114**	*e*PN	**Pn**	**23 27 31.4**	**-0.4**
KIZT	**Kizilcal**	**3.12**	**35**	*e*PN	**Pn**	**23 27 34.2**	**+0.4**
SZAC	**Souni-Zanaja**	**3.14**	**120**	P	**Pn**	**23 27 35.1**	**+1.0**
SZAC				S	**Sn**	**23 28 09.5**	**-0.9**
APE	**Apeiranthos**	**3.32**	**284**	*e*PN	**Pn**	**23 27 36.7**	**+0.1**
IKL	**Isikli**	**3.33**	**91**	*e*PN	**Pn**	**23 27 37.6**	**+0.9**
DST	**Dursunbey**	**3.33**	**347**	*e*PN	**Pn**	**23 27 35.5**	**-1.2**
NPS	**Neapolis**	**3.40**	**252**	*e*PN	**Pn**	**23 27 38.1**	**+0.4**
LAST	**Lasithi**	**3.54**	**251**	P	**Pn**	**23 27 41.4**	**+1.8**
BALB	**Balikesir**	**3.54**	**338**	*e*PN	**Pn**	**23 27 39.8**	**+0.2**
BORA	**Eskisehir**	**3.58**	**11**	*i*P	**Pn**	**23 27 39.1**	**-1.1**
BORA				*i*S	**Sn**	**23 28 18.5**	**-2.8**
CAVI	**Cavuskoy**	**3.84**	**3**	*e*PN	**Pn**	**23 27 44.6**	**+0.8**
PHNC	**Paralimni**	**3.88**	**109**	P	**Pn**	**23 27 46.4**	**+2.2**
	4.8nm,0.5s						
PHNC				S	**Sn**	**23 28 28.6**	**+0.1**
PRK	**Paraskevi**	**3.89**	**319**	*e*PN	**Pn**	**23 27 44.5**	**+0.1**
IDI	**Anoyia**	**3.95**	**256**	P	**Pn**	**23 27 45.3**	**0.0**
	11nm,0.3s,baz=61,slow=16,SNR=21						
IDI				S	**Sn**	**23 28 29.0**	**-1.3**
	54nm,0.3s,baz=311,slow=17,SNR=13						
IDI	**Anoyia**	**3.95**	**256**	P	**Pn**	**23 27 45.2**	**0.0**
IDI				S	**Sn**	**23 28 29.0**	**-1.3**
GULT	**Gulveren**	**4.13**	**10**	*e*PN	**Pn**	**23 27 49.3**	**+1.5**
VAM	**Vamos**	**4.46**	**259**	*e*PN	**Pn**	**23 27 53.5**	**+1.2**
GVD	**Gavdhos**	**4.72**	**253**	*e*PN	**Pn**	**23 27 57.0**	**+1.2**
PTL	**Penteli**	**4.86**	**292**	P	**Pn**	**23 28 01.9**	**+4.2**
CDAG	**Cicekdag**	**5.00**	**48**	*i*P	**Pn**	**23 28 01.3**	**+1.7**
KYTH	**Kithira**	**5.28**	**271**	*e*PN	**Pn**	**23 28 04.3**	**+0.9**
VLI	**Veliai**	**5.35**	**276**	*e*PN	**Pn**	**23 28 05.7**	**+1.2**
HWQ	**Hawqa**	**5.61**	**110**	*e*Pn	**Pn**	**23 28 08.2**	**+0.2**
HWQ	**Hawqa**	**5.61**	**110**	*e*Pn	**Pn**	**23 28 08.2**	**+0.2**
HNTI	**Hanita**	**5.65**	**124**	Sn	**Sn**	**23 29 07.6**	**-4.6**
RDO	**Rodhopi**	**5.73**	**328**	P	**Pn**	**23 28 10.0**	**+0.4**
OFRI	**'Ofer**	**5.82**	**128**	Pn	**Pn**	**23 28 10.6**	**-0.3**
NEO	**Neokhori**	**5.82**	**302**	P	**Pn**	**23 28 11.9**	**+1.0**
MMA2	**Mount Meron ar**	**5.85**	**123**	Pn	**Pn**	**23 28 10.6**	**-0.7**
MMA2				Sn	**Sn**	**23 29 13.1**	**-4.0**
RCY	**Rachaya**	**5.88**	**117**	*e*Pn	**Pn**	**23 28 11.0**	**-0.7**
KSDI	**Kefar Szold**	**5.92**	**120**	Pn	**Pn**	**23 28 11.5**	**-0.8**
KSDI				Sn	**Sn**	**23 29 14.4**	**-4.4**
HRI	**Mount Hermon**	**5.93**	**120**	Pn	**Pn**	**23 28 11.6**	**-0.9**
HRSH	**Kfar Ka'horesh**	**5.96**	**126**	P	**Pn**	**23 28 19.1**	**+6.3**
SLUM		**6.05**	**218**	P	**Pn**	**23 28 11.9**	**-2.2**
SLTI	**Sal'it**	**6.11**	**131**	Pn	**Pn**	**23 28 14.2**	**-0.7**
SLTI				Sn	**Sn**	**23 29 19.6**	**-3.9**
ITM	**Ithomi**	**6.19**	**280**	P	**Pn**	**23 28 21.7**	**+5.8**
MMLI	**Mount Malkishu**	**6.22**	**127**	Pn	**Pn**	**23 28 15.9**	**-0.4**
MMLI				Sn	**Sn**	**23 29 22.4**	**-3.6**
RSH		**6.40**	**146**	P	**Pn**	**23 28 19.1**	**+0.3**
HMDT	**Nahal Hemdat**	**6.41**	**128**	Pn	**Pn**	**23 28 18.9**	**0.0**
HMDT				Sn	**Sn**	**23 29 27.4**	**-3.3**
AMAG	**Maghara**	**6.46**	**151**	P	**Pn**	**23 28 19.6**	**-0.1**
SQR		**6.60**	**168**	P	**Pn**	**23 28 21.5**	**-0.1**
HMYD	**Mayadein**	**6.62**	**171**	P	**Pn**	**23 28 22.4**	**+0.4**
KOT	**Kottamia**	**6.69**	**163**	P	**Pn**	**23 28 22.9**	**+0.1**
HHAG	**Hagoal**	**6.73**	**161**	P	**Pn**	**23 28 23.4**	**+0.1**
DSI	**Dead Sea**	**6.79**	**133**	Pn	**Pn**	**23 28 24.3**	**+0.1**
DSI				Sn	**Sn**	**23 29 36.9**	**-3.1**
RTMI	**Retamim**	**6.79**	**140**	Pn	**Pn**	**23 28 24.3**	**0.0**
HSAF	**As Saff**	**6.92**	**166**	P	**Pn**	**23 28 25.9**	**-0.1**
AKCD	**Akcadag**	**6.93**	**71**	*i*P	**Pn**	**23 28 28.6**	**+2.6**
MZDA	**Masada**	**6.97**	**135**	Pn	**Pn**	**23 28 26.7**	**+0.1**
MZDA				Sn	**Sn**	**23 29 40.8**	**-3.7**
GLL	**Jalalah**	**7.00**	**165**	P	**Pn**	**23 28 26.9**	**-0.1**
SUZ		**7.05**	**156**	P	**Pn**	**23 28 28.2**	**+0.4**
ASF	**Jabal al Asfar**	**7.36**	**122**	P	**Pn**	**23 28 31.6**	**-0.4**
	0.9nm,0.3s,baz=177,slow=9.8,SNR=10						
ASF				S	**Sn**	**23 29 55.0**	**+0.8**
	0.8nm,0.3s,baz=135,slow=21,SNR=2.2						
HNKL	**Nakhl**	**7.40**	**149**	P	**Pn**	**23 28 33.0**	**+0.4**
ZAF		**7.49**	**160**	P	**Pn**	**23 28 33.8**	**0.0**
ZNM		**7.50**	**157**	P	**Pn**	**23 28 33.7**	**-0.2**
PRNI	**Paran**	**7.52**	**141**	Pn	**Pn**	**23 28 34.3**	**+0.1**
KRMI	**Paran Flat**	**7.57**	**144**	Pn	**Pn**	**23 28 35.0**	**+0.1**
HRFI	**Mount Harif**	**7.79**	**142**	Pn	**Pn**	**23 28 38.0**	**+0.1**
MBRI	**Mt Berech**	**7.93**	**144**	Pn	**Pn**	**23 28 39.8**	**-0.1**
AQBJ	**Aqaba**	**8.05**	**144**	Pn	**Pn**	**23 28 42.2**	**+0.7**
EIL	**Elat**	**8.05**	**144**	Pn	**Pn**	**23 28 41.9**	**+0.4**
GRB	**Gharib**	**8.51**	**160**	P	**Pn**	**23 28 48.1**	**+0.4**
HKAT	**Jabal Katrina**	**8.66**	**153**	P	**Pn**	**23 28 50.4**	**+0.6**
HKAT	**Jabal Katrina**	**8.66**	**153**	P	**Pn**	**23 28 50.3**	**+0.5**
TR2		**8.69**	**155**	P	**Pn**	**23 28 50.6**	**+0.4**
ASUT		**9.09**	**169**	P	**Pn**	**23 28 55.8**	**+0.1**
HFRF	**Wahat Farafira**	**9.24**	**187**	P	**Pn**	**23 28 57.1**	**-0.7**
MLR	**Muntele Rosu**	**9.53**	**344**	P	**Pn**	**23 29 00.9**	**-0.7**
	0.4nm,0.3s,baz=127,slow=15,SNR=7.0						
HHRG	**Al Ghardaqah**	**9.72**	**158**	P	**Pn**	**23 29

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**20.97**	**245**	*e*P	P	23 41 12.1	-10
	3.7nm,0.9s						
WB2	**Warramunga Arr**	**23.11**	**226**	*e*P	P	23 41 44.9	+0.4
WRA	**Warramunga Arr**	**23.12**	**226**	P	P	23 41 45.0	+0.5
	0.8nm,0.4s,baz=51,slow=9.9,SNR=20						
ASAR	**Alice Springs**	**25.92**	**220**	P	P	23 42 10.6	-0.2
	0.3nm,0.5s,baz=55,slow=8.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**149.31**	**289**	PKPbc	PKPbc	23 56 28.0	-0.6
	0.3nm,0.6s,baz=84,slow=2.8,SNR=9.6						

IDC 15 23:37:38.6±10.0, 2550S×17950W, h514km±151km, mb3.1/4, mb1 3.3/5, mb1mx3.2/16, mbtmp3.2/5, Error ellipse: s-maj=225.7km s-min=72.4km az=82.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.04**	**192**	P	P	23 40 28.3	+0.5
	1.9nm,0.3s,baz=46,slow=4.3,SNR=11						
URZ				S	S	23 42 46.0	-1.3
	0.3nm,0.3s,baz=94,slow=19,SNR=2.3						
CTA	**Charters Tower**	**31.97**	**273**	P	P	23 43 22.3	+0.2
	1.8nm,0.6s,baz=104,slow=8.4,SNR=5.8						
STKA	**Stephens Creek**	**34.58**	**250**	P	P	23 43 43.9	-0.2
	0.9nm,0.4s,baz=116,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**42.25**	**262**	P	P	23 44 46.5	0.0
	1.3nm,0.8s,baz=105,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**42.77**	**268**	P	P	23 44 50.5	-0.2
	1.1nm,0.5s,baz=102,slow=8.1,SNR=26						

*ISCJB **15** 23:57:16.3±0.6, 284S±0.1×627E±0.1, h10km, mb4.2/11, MS3.7/5, Error ellipse: s-maj=18.5km s-min=12.3km az=38.9*

*IDC **15** 23:57:16.5±0.7, 28.36S×62.65E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.2/22, mbtmp4.2/12, ML4.4/1, MS3.7/5, Ms1 3.6/5, ms1mx3.3/24, Error ellipse: s-maj=26.0km s-min=18.8km az=32.0*

*NEIC **15** 23:57:18.1±0.5, 28.38S×62.76E, h10km, mb3.8/1, Error ellipse: s-maj=20.3km s-min=10.4km az=207.0*

ISC 15 23:57:18.2±0.6, 284S±01×627E±01, h10km, n24, σ0§79/19, mb4.2/11, MS3.7/5, 1C, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.61**	**317**	*e*Pn	**Pn**	**23 59 35.9**	**-0.6**
ABPO	**Ambohimpanom**	**16.97**	**300**	*e*P	**Pn**	**00 01 18.2**	**+2.4**
	10nm,1.5s						
OPO	**Ambohidratompo**	**17.27**	**301**	P	**Pn**	**00 01 19.7**	**+0.2**
	1.4nm,0.3s,baz=124,slow=12,SNR=15						
OPO				S	**Sn**	**00 04 16.5**	**-15**
	1.0nm,0.3s,baz=3.4,slow=19,SNR=5.5						
BOSA	**Boshof**	**32.83**	**261**	LR	LR	00 16 09.9	
	comp=Z,66nm,19.1s,MS3.4,baz=311,slow=35						
MAW	**Mawson**	**39.21**	**180**	LR	LR	00 16 25.1	
	comp=Z,93nm,21.1s,MS3.6,baz=6,9,slow=29						
SYO	**Syowa Base**	**42.81**	**190**	*e*P	**P**	**00 05 14.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**58.30**	**41**	P	**P**	**00 07 13.8**	**+0.4**
	2.0nm,0.5s,mb4.4,baz=230,slow=7.5,SNR=8.8						
QSPA	**South Pole Qui**	**61.73**	**180**	P	**P**	**00 07 37.3**	**+1.1**
	4.0nm,0.9s,mb4.6,baz=263,slow=5.2,SNR=7.7						
ASAR	**Alice Springs**	**63.30**	**104**	P	**P**	**00 07 47.8**	**+0.2**
	2.5nm,0.5s,mb4.6,baz=246,slow=6.3,SNR=43						
WRA	**Warramunga Arr**	**65.06**	**100**	P	**P**	**00 07 59.5**	**+0.3**
	3.8nm,0.9s,mb4.4,baz=249,slow=5.7,SNR=16						
WRA				PcP	PcP	00 08 32.2	+0.1
	1.2nm,0.6s,baz=244,slow=2.9,SNR=9.7						
WRA				LR	LR	00 32 48.7	
	comp=Z,44nm,20.0s,MS3.6,baz=235,slow=33						
TORD	**Torodi Ar. Bea**	**72.02**	**296**	P	**P**	**00 08 41.9**	**-0.8**
	0.9nm,0.8s,mb3.7,baz=114,slow=6.2,SNR=8.5						
TORD				LR	LR	00 39 49.1	
	comp=Z,83nm,18.1s,MS4.0,baz=105,slow=36						
DBIC	**Dimbokro**	**73.78**	**287**	P	**P**	**00 08 53.2**	**0.0**
	2.7nm,0.7s,mb4.3,baz=67,slow=7.2,SNR=4.2						
MKAR	**Makanchi Array**	**76.93**	**14**	P	**P**	**00 09 10.0**	**-0.5**
	0.8nm,0.7s,mb3.7,baz=189,slow=4.5,SNR=8.5						
AKASG	**Malin Array Be**	**84.16**	**339**	P	**P**	**00 09 48.6**	**-0.5**
	1.8nm,0.5s,mb4.4,baz=154,slow=4.4,SNR=7.5						
ZALV	**Zalesovo Beam**	**84.23**	**13**	P	**P**	**00 09 49.0**	**-0.5**
	2.6nm,0.6s,mb4.5,baz=214,slow=4.5,SNR=17						
ZALV	**Zalesovo Beam**	**84.23**	**13**	P	**P**	**00 09 49.0**	**-0.5**
SONM	**Songino Array**	**85.45**	**28**	P	**P**	**00 09 56.2**	**+0.4**
	2.2nm,0.9s,mb4.3,baz=206,slow=5.5,SNR=13						
GERES	**GERESS Array B**	**89.50**	**330**	P	**P**	**00 10 09.9**	**-0.6**
	0.5nm,0.7s,mb3.9,baz=134,slow=5.8,SNR=5.4						
BRG	**Berggiesshubel**	**89.91**	**332**	*e*(P)	**P**	**00 10 17.8**	**+0.6**
	8.2nm,1.3s						
CLL	**Collm**	**90.63**	**331**	*e*P	**P**	**00 10 13.0**	**-7.5**
NOA	**NORSAR Array B**	**98.44**	**337**	LR	LR	00 54 18.2	
	comp=Z,34nm,18.2s,MS3.9,baz=90,slow=35						
YKA	**Yellowknife Ar**	**145.88**	**358**	PKPbc	PKPbc	00 16 56.4	-0.7
	7.1nm,0.6s,baz=349,slow=3.2,SNR=26						
ULM	**Lac du Bonnet**	**152.80**	**329**	PKP	PKPdf	00 17 06.2	-1.7
	2.3nm,0.5s,baz=127,slow=5.1,SNR=2.9						
ULM				PKPbc	PKPbc	00 17 14.2	-0.9
	2.5nm,0.6s,baz=11,slow=5.7,SNR=3.0						
NVAR	**Mina Array Bea**	**169.98**	**5**	PKPab	PKPab	00 18 41.1	+0.1
	0.9nm,0.8s,baz=306,slow=3.3,SNR=7.1						

IDC 15 23:57:23.9±2.0, 416N×12695E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=171.4km s-min=24.8km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.03**	**163**	P	P	00 02 49.4	-0.5
	0.7nm,0.4s,baz=344,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**28.48**	**167**	P	P	00 03 20.8	-0.2
	0.3nm,0.4s,baz=344,slow=7.1,SNR=7.8						
STKA	**Stephens Creek**	**38.46**	**160**	P	P	00 04 48.6	+1.0
	2.1nm,0.6s,baz=321,slow=8.6,SNR=7.1						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	00 07 13.6	-0.2
	0.1nm,0.4s,baz=123,slow=7.2,SNR=5.6						

*NNC **16** 00:31:42.2±6.9, 4245N×8466E, h4km±32km, mb3.5, mpv3.1, Error ellipse: s-maj=46.6km s-min=18.7km az=145.0*

BJI 16 00:31:39.3, 4207N×8430E, h14km, ML2.9, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.05**	**54**	*e*P	Pn	00 32 31.5	+4.5
WMQ				S	Sn	00 33 08.0	+4.8
WMQ				Smax			
	comp=N,65nm,0.5s						
WMQ				Smax			
	comp=E,58nm,0.5s						
MK31	**Makanchi Array**	**4.94**	**344**	⇓Pn	Pn	00 32 53.5	+0.5
	comp=E,0.8nm,0.7s,baz=161,slow=14,SNR=5.8						
MK31				⇑Pg	Pg	00 33 07.6	-6.2
	comp=E,1.7nm,0.5s,baz=157,slow=16,SNR=19						
MK31				⇑Lg		00 34 09.3	
	comp=E,8.9nm,0.5s,baz=156,slow=27,SNR=13						
TKM2	**Tokmak 2**	**6.49**	**280**	⇑Pn	Pn	00 33 21.1	+6.8
	comp=E,6.3nm,1.4s						
TKM2				⇓Lg		00 35 13.0	
	comp=E,6.6nm,1.2s						
KURK	**Kurchatov**	**9.49**	**338**	⇑Lg		00 36 35.9	
	comp=E,5.2nm,1.0s						

*NIED **16** 00:48:00, 24.10N×122.40E, h32km, Mw3.8 Best double couple: M₀4.82000×10¹⁴ NP1:φs70.00000°, δ87.00000°, λ47.00000°. NP2:φs337.00000°, δ43.00000°, λ175.00000°.*

*NEIC **16** 00:48:31.9±2.8, 2376N×122.51E, h35km, MG3.5(JMA), Error ellipse: s-maj=52.2km s-min=29.3km az=189.0*

*ISCJB **16** 00:48:32.1±0.7, 2392N±002×122.45E±002, h10km±5km, mb3.9/4, Error ellipse: s-maj=2.8km s-min=2.5km az=138.9*

*TAP **16** 00:48:33.2, 2399N×122.42E, h27km, ML4.2, C*

*JMA **16** 00:48:33.9±0.3, 2408N×122.41E, h36km, M3.5*

*IDC **16** 00:48:59.8±20.0, 25.17N×122.05E, h204km±188km, mb3.4/4, mb1 3.4/5, mb1mx3.2/21, mbtmp3.4/5, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/21, Error ellipse: s-maj=263.5km s-min=132.3km az=140.0*

ISC 16 00:48:32.2±0.4, 2395N±002×12245E±002, h10km±2km, n77, σ0§95/137, mb3.9/4, 2C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.72**	**45**	P	**Pg**	**00 48 46.8**	**+0.6**
YOJ				*e*S	**Sg**	**00 48 55.7**	**+0.1**
HWA	**Hwalien**	**0.78**	**272**	*e*P	**Pg**	**00 48 47.0**	**-0.2**
	baz=256						
HWA				*e*S	**Sg**	**00 48 57.5**	**+0.2**
	baz=256						
TWD	**Chiawan**	**0.80**	**280**	*i* P	**Pg**	**00 48 47.6**	**0.0**
	baz=277						
TWD				S	**Sg**	**00 48 58.2**	**+0.2**
	baz=277						
ENA	**Nanau**	**0.81**	**306**	⇑*i*P	**Pg**	**00 48 47.9**	**+0.1**
	baz=313						
ENA				S	**Sg**	**00 48 58.9**	**+0.6**
	baz=313						
NACB	**Ninganchiao**	**0.82**	**286**	*e*Pn	**Pn**	**00 48 48.3**	**-1.4**
NACB				*e*Sn	**Sn**	**00 48 58.6**	**-3.2**
TWC	**Suao**	**0.86**	**320**	⇑*i*P	**Pg**	**00 48 48.5**	**-0.3**
	baz=320						
TWC				*e*S	**Sg**	**00 48 59.5**	**-0.4**
	baz=320						
ESF	**Shoufeng Towns**	**0.87**	**265**	*e*P	**Pg**	**00 48 49.6**	**+0.6**
	baz=251						
ESF				*e*S	**Sg**	**00 49 00.3**	**0.0**
	baz=251						
TEGC	**Jichi Village**	**0.87**	**254**	*e*P	**Pg**	**00 48 49.7**	**+0.7**
	baz=250						
TEGC				*e*S	**Sg**	**00 49 00.8**	**+0.5**
	baz=250						
ESL	**Shilin**	**0.94**	**262**	P	**Pg**	**00 48 49.2**	**-1.1**
	baz=247						
ESL				*e*S	**Sg**	**00 49 01.4**	**-1.3**
	baz=247						
ILA	**Ilan**	**1.04**	**322**	*e*P	**Pg**	**00 48 52.3**	**+0.2**
	baz=310						
ILA				*e*S	**Sg**	**00 49 06.4**	**+0.7**
	baz=310						
TWE	**Neicheng**	**1.05**	**317**	*e*P	**Pg**	**00 48 52.1**	**-0.3**
	baz=316						
TWE				*e*S	**Sg**	**00 49 05.9**	**-0.2**
	baz=316						
ENTT	**Nioudou**	**1.06**	**311**	⇓P	**Pb**	**00 48 52.4**	**-0.3**
	baz=309						
ENTT				*e*S	**Sg**	**00 49 06.9**	**+0.4**
	baz=309						
NNS	**Nan Shan**	**1.10**	**297**	P	**Pb**	**00 48 52.8**	**-0.5**
	baz=295						
WHF	**Hehuan Shan**	**1.10**	**280**	⇓*i*P	**Pb**	**00 48 52.5**	**-0.8**
	baz=266						
WHF				*e*S	**Sb**	**00 49 06.8**	**-1.0**
	baz=266						
EHY	**Hungye**	**1.13**	**247**	*e*P	**Pb**	**00 48 52.5**	**-1.3**
	baz=244						
EHY				*e*S	**Sb**	**00 49 06.5**	**-1.9**
	baz=244						
TWB1	**Santiao Chiao**	**1.14**	**338**	*i* P	**Pb**	**00 48 53.1**	**-0.8**
	baz=339						
TWB1				S	**Sb**	**00 49 09.4**	**+0.7**
	baz=339						
TWT	**Tachien**	**1.21**	**285**	P	**Pn**	**00 48 54.7**	**-0.3**
	baz=270						
TWT				*e*S	**Sb**	**00 49 10.8**	**+0.1**
	baz=270						
TWF1	**Yuli**	**1.22**	**241**	*i* P	**Pn**	**00 48 54.0**	**-1.2**
	baz=238						
TWF1				*e*S	**Sb**	**00 49 09.6**	**-1.4**
	baz=238						
YHNB	**Yeheng**	**1.22**	**306**	*e*Pn	**Pn**	**00 48 54.3**	**-0.9**
YHNB				*e*Sn	**Sn**	**00 49 07.7**	**-4.0**
IRIF	**Iriomote-Funau**	**1.23**	**71**	*e*S	**Sb**	**00 49 11.5**	**+0.2**
NSK	**Sanguang**	**1.23**	**306**	P	**Pn**	**00 48 54.8**	**-0.7**
	baz=289						
NSK				*e*S	**Sb**	**00 49 10.8**	**-0.7**
	baz=289						
HATJ	**Hateruma jima**	**1.24**	**85**	P	**Pn**	**00 48 55.6**	**+0.1**
HATJ				*e*S	**Sb**	**00 49 12.5**	**+0.8**
NWF	**Wu-fen Shan**	**1.27**	**331**	*i* P	**Pn**	**00 48 55.5**	**-0.5**
	baz=331						
NWF				S	**Sb**	**00 49 13.7**	**+1.0**
	baz=331						
TWA	**Mucha**	**1.30**	**323**	*e*P	**Pn**	**00 48 56.4**	**+0.1**
	baz=321						
TWA				*e*S	**Sb**	**00 49 13.7**	**+0.3**
	baz=321						
CHKT	**Chengkung**	**1.31**	**230**	*e*P	**Pn**	**00 48 55.8**	**-0.7**
	baz=226						
TATO	**Taipei**	**1.35**	**319**	*e*Pn	**Pn**	**00 48 57.2**	**+0.1**
TATO				*e*Sn	**Sn**	**00 49 10.9**	**-4.1**
TAP1	**Taipei**	**1.38**	**322**	*e*P	**Pn**	**00 48 56.8**	**-0.6**
	baz=321						
TAP1				S	**Sb**	**00 49 15.7**	**0.0**
	baz=321						
SMLT	**Sun Moon Lake**	**1.42**	**268**	⇓*i*P	**Pn**	**00 48 57.6**	**-0.5**
	baz=265						
SMLT				*e*S	**Sn**	**00 49 15.0**	**-1.8**
	baz=265						
YUS	**Yu-Shan**	**1.45**	**252**	*e*P	**Pn**	**00 48 58.0**	**-0.4**
	baz=249						
YUS				*e*S	**Sn**	**00 49 15.3**	**-2.2**
	baz=249						
JKRS	**Kuro-shima**	**1.45**	**78**	P	**Pn**	**00 48 58.7**	**+0.3**
JKRS				*e*S	**Sn**	**00 49 18.3**	**+0.8**
TYC	**Yuchr**	**1.46**	**269**	⇓*i*P	**Pn**	**00 48 58.0**	**-0.5**
	baz=266						
TYC				*e*S	**Sn**	**00 49 16.0**	**-1.7**
	baz=266						
TWS1	**Kuangyinshan**	**1.48**	**321**	*e*P	**Pn**	**00 48 59.2**	**+0.3**
	baz=320						
TWS1				*e*S	**Sn**	**00 49 19.0**	**+0.7**
	baz=320						
NSTT	**Nanjuang**	**1.49**	**297**	P	**Pn**	**00 48 59.5**	**+0.5**
	baz=295						
NSTT				*e*S	**Sn**	**00 49 18.4**	**0.0**
	baz=295						
ELDTW	**Lidau**	**1.52**	**240**	*e*P	**Pn**	**00 48 58.0**	**-1.3**
	baz=238						
TWY	**Chenhua**	**1.53**	**330**	*e*P	**Pn**	**00 49 00.0**	**+0.5**
	baz=329						
TWY				*e*S	**Sn**	**00 49 20.7**	**+1.1**
	baz=329						
NCU	**National Centr**	**1.54**	**312**	*e*P	**Pn**	**00 48 58.6**	**-1.0**
	baz=310						
ALS	**Alishan**	**1.57**	**254**	P	**Pn**	**00 49 00.1**	**0.0**
	baz=251						
ALS				*e*S	**Sn**	**00 49 18.8**	**-1.7**
	baz=251						
TWQ1	**Liyutan**	**1.59**	**285**	*e*P	**Pn**	**00 49 01.1**	**+0.8**
	baz=270						
TWQ1				*e*S	**Sn**	**00 49 20.6**	**-0.2**
	baz=270						
JIJ	**Ishigaki jima**	**1.60**	**75**	P	**Pn**	**00 49 00.1**	**-0.3**
JIJ				*e*S	**Sn**	**00 49 20.0**	**-1.1**
NSY	**Sanyi**	**1.61**	**287**	*e*P	**Pn**	**00 49 01.0**	**+0.3**
	baz=284						
NSY				*e*S	**Sn**	**00 49 21.6**	**+0.1**
	baz=284						
WNT	**Mingjian**	**1.62**	**268**	*e*P	**Pn**	**00 49 01.2**	**+0.5**
	baz=265						
WNT				*e*S	**Sn**	**00 49 21.7**	**0.0**
	baz=265						
TCU	**Taichung**	**1.64**	**277**	*e*P	**Pn**	**00 49 01.4**	**+0.4**
	baz=274						
TCU				*e*S	**Sn**	**00 49 23.1**	**+1.1**
	baz=274						
CHN5	**Tsauling**	**1.66**	**258**	P	**Pn**	**00 49 01.8**	**+0.5**
	baz=245						
CHN5				*e*S	**Sn**	**00 49 23.0**	**+0.3**
	baz=245						
TTN	**Taitung**	**1.69**	**226**	*e*P	**Pn**	**00 49 01.1**	**-0.7**
	baz=224						
TWG	**Pinlang**	**1.69**	**229**	*e*P	**Pn**	**00 49 00.8**	**-1.0**
	baz=237						
STYT	**Tauyuan**	**1.74**	**244**	*e*P	**Pn**	**00 49 02.2**	**-0.2**
	baz=231						
STYT				*e*S	**Sn**	**00 49 23.7**	**-1.0**
	baz=231						
WGK	**Gukeng**	**1.75**	**262**	*e*P	**Pn**	**00 49 02.7**	**+0.2**
	baz=259						
WGK				*e*S	**Sn**	**00 49 25.4**	**+0.5**
	baz=259						
CHN4	**Tsaushan**	**1.81**	**251**	*e*P	**Pn**	**00 49 04.2**	**+0.9**
	baz=248						
CHN4				*e*S	**Sn**	**00 49 27.0**	**+0.7**
	baz=248						
WTP	**Ta-pu**	**1.83**	**248**	*e*P	**Pn**	**00 49 04.2**	**+0.6**
	baz=245						
WTP				*e*S	**Sn**	**00 49 27.1**	**+0.4**
	baz=245						
CHN2	**Minshiung**	**1.86**	**258**	*e*P	**Pn**	**00 49 04.5**	**+0.5**
	baz=255						
CHN2				*e*S	**Sn**	**00 49 28.7**	**+1.1**
	baz=255						
CHY	**Chiayi**	**1.91**	**257**	*e*P	**Pn**	**00 49 05.5**	**+0.7**
	baz=254						
CHY				*e*S	**Sn**	**00 49 29.4**	**+0.5**
	baz=254						
SGST	**Jiashian**	**1.92**	**244**	*e*P	**Pn**	**00 49 05.8**	**+0.9**
	baz=233						
SGST				*e*S	**Sn**	**00 49 29.8**	**+0.7**
	baz=233						
CHN1	**Nanshi**	**1.92**	**247**	*e*P	**Pn**	**00 49 05.8**	**+0.8**
	baz=244						
CHN1				*e*S	**Sn**	**00 49 30.3**	**+1.2**
	baz=244						
ECL	**Taimali**	**1.93**	**226**	*e*P	**Pn**	**00 49 03.4**	**-1.6**
	baz=234						
TWK	**Hsinying**	**1.93**	**250**	*e*P	**Pn**	**00 49 05.7**	**+0.7**
	baz=247						
TWK				*e*S	**Sn**	**00 49 29.6**	**+0.4**
	baz=247						
WTCT	**Ta-ch'eng**	**1.99**	**268**	*e*P	**Pn**	**00 49 06.4**	**+0.6**
	baz=279						
WTCT				*e*S	**Sn**	**00 49 31.7**	**+0.9**
	baz=279						
SSD	**Sandimen**	**2.06**	**235**	*e*P	**Pn**	**00 49 07.7**	**+0.9**
	baz=225						
SSD				*e*S	**Sn**	**00 49 32.2**	**-0.3**
	baz=225						
WSF	**Szhu**	**2.07**	**262**	*e*P	**Pn**	**00 49 07.5**	**+0.6**
	baz=259						
WSF				*e*S	**Sn**	**00 49 33.7**	**+1.0**
	baz=259						
LAY	**Lan-yu**	**2.08**	**204**	*e*P	**Pn**	**00 49 05.1**	**-1.9**
	baz=203						
TAW	**Tawu**	**2.14**	**222**	*e*P	**Pn**	**00 49 08.9**	**+1.1**
	baz=231						
SGLT	**Jiouru**	**2.18**	**236**	*e*P	**Pn**	**00 49 09.4**	**+1.0**
	baz=225						
SGLT				*e*S	**Sn**	**00 49 36.0**	**+0.6**
	baz=225						
TWM1	**Shoushan**	**2.18**	**239**	*e*P	**Pn**	**00 49 10.6**	**+2.2**
	baz=237						
TWM1				*e*S	**Sn**	**00 49 37.6**	**+2.2**
	baz=237						
SCLT	**Jiali**	**2.21**	**250**	*e*P	**Pn**	**00 49 09.4**	**+0.5**
	baz=247						
SCLT				*e*S	**Sn**	**00 49 37.2**	**+0.9**
	baz=247						
TAI1	**Yung-k'ang**	**2.23**	**247**	*e*P	**Pn**	**00 49 10.8**	**+1.6**
	baz=258						
TAI1				*e*S	**Sn**	**00 49 37.6**	**+0.8**
	baz=258						
SCZT	**Fangliau**	**2.30**	**227**	*e*P	**Pn**	**00 49 11.6**	**+1.4**
	baz=219						
SCZT				*e*S	**Sn**	**00 49 39.7**	**+1.1**
	baz=219						
TSEB	**Hengchuen, Pin**	**2.49**	**215**	*e*P	**Pn**	**00 49 12.9**	**+0.1**
	baz=215						
TSEB				*e*S	**Sn**	**00 49 42.6**	**-0.5**
	baz=215						
HEN	**Hengchun**	**2.50**	**220**	*e*P	**Pn**	**00 49 13.9**	**+1.1**
	baz=219						
HEN				*e*S	**Sn**	**00 49 41.6**	**-1.7**
	baz=219						
TWP	**Hsiaoliuchiu**	**2.50**	**231**	*e*P	**Pn**	**00 49 14.7**	**+1.8**
	baz=229						
TWP				*e*S	**Sn**	**00 49 45.1**	**+1.8**
	baz=229						
TWK1	**Hengchun**	**2.51**	**218**	*e*P	**Pn**	**00 49 12.4**	**-0.6**
	baz=217						
TWK1				*e*S	**Sn**	**00 49 41.7**	**-1.9**
	baz=217						
PNG	**Penghu**	**2.68**	**262**	*e*P	**Pn**	**00 49 15.2**	**-0.2**
	baz=260						
PNG				*e*S	**Sn**	**00 49 46.8**	**-1.1**
	baz=260						
KNM	**Kinmen**	**3.70**	**278**	*e*P	**Pn**	**00 49 29.9**	**+0.6**
	baz=274						
KNM				*e*S	**Sn**	**00 50 14.0**	**+1.0**
	baz=274						
KSRS	**Korea Array**	**14.26**	**18**	P	**Pn**	**00 51 59.6**	**+5.6**
	0.4nm,0.3s,baz=199,slow=12,SNR=6.9						
KSRS				LR	LR	00 57 11.2	
	comp=Z,47nm,18.7s,baz=160,slow=37						
CBIJ	**Chichi jima**	**18.08**	**76**	LR	LR	01 00 18.4	
	comp=Z,33nm,18.7s,baz=265,slow=37						
SONM	**Songino Array**	**27.05**	**336**	P	**P**	**00 54 12.1**	**-2.4**
	1.1nm,0.6s,mb3.5,baz=152,slow=9.9,SNR=7.2						
MKAR	**Makanchi Array**	**39.31**	**316**	P	**P**	**00 55 59.5**	**-1.7**
	0.9nm,0.4s,mb3.9,baz=102,slow=9.6,SNR=30						
ZALV	**Zalesovo Beam**	**41.08**	**327**	P	**P**	**00 56 12.9**	**-2.8**
	1.9nm,0.5s,mb4.0,baz=124,slow=8.2,SNR=13						
BVAR	**Borovoye Array**	**48.59**	**321**	P	**P**	**00 57 13.7**	**-2.0**
	0.8nm,0.5s,mb4.0,baz=114,slow=8.6,SNR=8.7						

*IDC **16** 00:48:59.3±1.6, 7.12S×129.58E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.8/13, mbtmp3.9/4, ML4.0/2, Error ellipse: s-maj=102.6km s-min=24.5km az=65.0*

*NEIC **16** 00:48:59.5±2.3, 6.43S×130.98E, h68km±25km, mb3.9/3, Error ellipse: s-maj=18.1km s-min=12.7km az=53.0*

*ISCJB **16** 00:49:00.3±3.4, 6.55S±0.1×131.0E±0.1, h98km±36km, mb4.3/4, Error ellipse: s-maj=21.3km s-min=17.6km az=138.7*

ISC 16 00:48:59.1±2.5, 64S±01×1310E±01, h61km±28km, n20, σ1§00/20, mb4.3/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.72**	**204**	Pn	**Pn**	**00 51 55.5**	**-1.7**
WRAB	**Tennant Creek**	**13.84**	**167**	*e*Pn	**Pn**	**00 52 12.7**	**+0.4**
WRAB				*e*Sn	Sx	00 54 33.9	
WRA	**Warramunga Arr**	**13.84**	**167**	Pn	**Pn**	**00 52 12.9**	**+0.5**
	0.8nm,0.3s,baz=339,slow=13,SNR=32						
WRA				Sn	Sx	00 54 32.2	
	2.3nm,0.3s,baz=344,slow=22,SNR=14						
WB2	**Warramunga Arr**	**13.85**	**167**	*e*Pn	**Pn**	**00 52 13.3**	**+0.8**
WB2				*e*Sn	Sx	00 54 34.4	
ASAR	**Alice Springs**	**17.39**	**171**	Pn	**Pn**	**00 52 59.0**	**+1.5**
	0.6nm,0.3s,baz=345,slow=10,SNR=31						
ASAR				Sn	Sx	00 55 55.2	
	0.6nm,0.3s,baz=351,slow=28,SNR=6.0						
MBWA	**Marble Bar**	**18.25**	**215**	*e*P	**Pn**	**00 53 08.1**	**0.0**
	4.0nm,0.8s						
CTAO	**Charters Tower**	**20.14**	**134**	P	**P**	**00 53 26.8**	**-1.4**
KSM	**Kuching**	**22.05**	**290**	P	**P**	**00 53 48.4**	**-0.5**
STKA	**Stephens Creek**	**27.21**	**160**	P	**P**	**00 54 43.4**	**+6.2**
	1.0nm,0.4s,mb3.7,baz=340,slow=8.7,SNR=6.4						
STKA	**Stephens Creek**	**27.21**	**160**	*e*P	**P**	**00 54 34.6**	**-2.6**
	1.0nm,0.4s,mb3.7						
COCO

*ISCJB **16** 00:56:12.5±0.3, 4313N×002×005E±002, h6$^{6m}_{\pm 4m}$, Error ellipse: s-maj=2.9km s-min=2.3km az=155.7*
*STR **16** 00:56:13.9±0.2, 4294N×003W, h5^{km}, MI2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **16** 00:56:14.2±0.1, 4300N×000W, h2^{km}, ML2.4/11, Error ellipse: s-maj=1.0km s-min=0.7km az=178.0*
*MDD **16** 00:56:14.8±0.2, 4302N×001E, h0^{km}, mbLg1.6/30, Error ellipse: s-maj=2.1km s-min=1.6km az=2.0, PRIMO*
*LDG **16** 00:56:14.1±0.1, 4300N×000E, h4^{km}, Md2.8/2, Ml2.4/12, Error ellipse: s-maj=1.2km s-min=1.0km az=139.0*

ISC 16 00:56:13.7±0.2, 4307N±002×002E±002, h8$^{km}_{\pm 3km}$, n79, σ0^{s}90/120, 1C, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LABF	**Labassere**	**0.04**	**117**	P	**Pg**	**00 56 16.0**	**+0.7**
LABF				S	**Sg**	**00 56 17.3**	**+0.9**
VIEF	**Viey**	**0.18**	**180**	P	**Pg**	**00 56 16.9**	**-0.6**
VIEF				S	**Sg**	**00 56 19.3**	**-0.7**
EPF	**Esparros**	**0.23**	**99**	*e*Pg	**Pg**	**00 56 19.2**	**+0.8**
EPF				*e*Sg	**Sg**	**00 56 22.5**	**+0.9**
	33nm,0.2s						
EPF	**Esparros**	**0.23**	**99**	*e*Pg	**Pg**	**00 56 19.2**	**+0.8**
EPF				*e*Sg	**Sg**	**00 56 22.5**	**+0.9**
	16nm,0.2s						
REYF	**Montagne du Re**	**0.30**	**271**	Pg	**Pg**	**00 56 19.6**	**-0.1**
REYF				Sg	**Sg**	**00 56 24.2**	**+0.4**
REYF	**Montagne du Re**	**0.30**	**271**	P	**Pg**	**00 56 19.8**	**+0.1**
REYF				S	**Sg**	**00 56 24.3**	**+0.6**
RESF	**Ens**	**0.35**	**138**	Pg	**Pg**	**00 56 20.5**	**0.0**
RESF				Sg	**Sg**	**00 56 25.0**	**-0.1**
RESF	**Ens**	**0.35**	**138**	P	**Pg**	**00 56 20.6**	**0.0**
RESF				S	**Sg**	**00 56 25.2**	**+0.2**
EBIE	**Bielsa**	**0.39**	**167**	Pg	**Pg**	**00 56 20.9**	**-0.4**
	SNR=49						
EBIE				Lg		00 56 25.5	
	118nm,0.2s,SNR=124						
EBIE	**Bielsa**	**0.39**	**167**	Pg	**Pg**	**00 56 20.9**	**-0.4**
	SNR=49						
EBIE				Lg		00 56 25.5	
	118nm,0.2s,SNR=124						
ETSF	**Etsaut**	**0.46**	**249**	*e*Pg	**Pg**	**00 56 22.3**	**-0.3**
ETSF				*e*Sg	**Sg**	**00 56 27.9**	**-0.8**
	17nm,0.2s						
ETSF	**Etsaut**	**0.46**	**249**	*e*Pg	**Pg**	**00 56 22.3**	**-0.3**
ETSF				*e*Sg	**Sg**	**00 56 27.9**	**-0.8**
	8.5nm,0.2s						
FDAF	**Les Forges d'A**	**0.50**	**240**	P	**Pg**	**00 56 23.0**	**-0.4**
FDAF				S	**Sg**	**00 56 29.4**	**-0.5**
ATE	**Arette**	**0.53**	**272**	Pg	**Pg**	**00 56 24.1**	**+0.1**
ATE				Sg	**Sg**	**00 56 31.2**	**+0.3**
ATE	**Arette**	**0.53**	**272**	P	**Pg**	**00 56 23.7**	**-0.3**
ATE				S	**Sg**	**00 56 31.5**	**+0.6**
MELF	**Melles**	**0.57**	**109**	Pg	**Pg**	**00 56 24.8**	**0.0**
MELF				Sg	**Sg**	**00 56 32.9**	**+0.6**
MELF	**Melles**	**0.57**	**109**	P	**Pg**	**00 56 24.9**	**+0.1**
MELF				S	**Sg**	**00 56 33.0**	**+0.7**
LARF	**Larrau**	**0.74**	**268**	P	**Pg**	**00 56 27.9**	**-0.1**
LARF				S	**Sg**	**00 56 37.4**	**-0.3**
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pg	**Pg**	**00 56 30.6**	**-0.7**
SJPF				*e*Sg	**Sg**	**00 56 43.0**	**-0.2**
	4.7nm,0.3s						
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pg	**Pg**	**00 56 30.6**	**-0.7**
SJPF				*e*Sg	**Sg**	**00 56 43.0**	**-0.2**
	2.3nm,0.3s						
SJPF	**Ste Jean**	**0.92**	**273**	Pg	**Pg**	**00 56 30.6**	**-0.7**
SJPF				Lg		00 56 43.0	
	2.3nm,0.3s						
EORO	**Oroz-Betelu**	**0.99**	**260**	Pg	**Pg**	**00 56 33.9**	**+1.1**
	1.5nm,0.2s,SNR=4.0						
EORO	**Oroz-Betelu**	**0.99**	**260**	Pg	**Pg**	**00 56 33.9**	**+1.1**
	1.5nm,0.2s,SNR=4.0						
EORO				Lg		00 56 47.3	
	27nm,0.7s,SNR=5.9						
CEST	**Esterri de Car**	**1.02**	**117**	P	**Pg**	**00 56 36.5**	**+3.2**
CEST				S	**Sg**	**00 56 51.2**	**+4.7**
IPRE	**Itoiz**	**1.05**	**256**	Lg		00 56 50.1	
	8.3nm,0.8s,SNR=7.9						
IZUN	**Zunzarren**	**1.11**	**260**	Pg	**Pg**	**00 56 35.3**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**1.11**	**260**	Pg	**Pg**	**00 56 35.3**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		00 56 51.4	
	3.4nm,0.8s,SNR=7.9						
EALK	**Alkurruntz**	**1.13**	**278**	Pg	**Pg**	**00 56 35.2**	**-0.2**
	8.5nm,0.9s,SNR=9.0						
EALK				Lg		00 56 53.5	
	9.4nm,0.3s,SNR=9.7						
ELIZ	**Elizondo**	**1.14**	**275**	Pg	**Pg**	**00 56 37.4**	**+1.8**
	6.3nm,0.7s						
ELIZ				Lg		00 56 52.5	
	13nm,0.9s,SNR=9.1						
IUSE	**Utxeti**	**1.16**	**265**	Pg	**Pg**	**00 56 37.3**	**+1.3**
	1.5nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**1.16**	**265**	Pg	**Pg**	**00 56 37.3**	**+1.3**
	1.5nm,0.2s,SNR=7.9						
IUSE				Lg		00 56 54.2	
	6.0nm,0.6s,SNR=7.9						
IUNC	**Unciti**	**1.16**	**255**	Pg	**Pg**	**00 56 36.8**	**+0.8**
	0.7nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**1.16**	**255**	Pg	**Pg**	**00 56 36.8**	**+0.8**
	0.7nm,0.1s,SNR=7.9						
IUNC				Lg		00 56 54.1	
	11nm,1.0s,SNR=7.9						
EARA	**Aranguren**	**1.21**	**257**	Lg		00 56 56.1	
	5.9nm,0.5s,SNR=7.9						
CAVN	**Les Avellanes**	**1.30**	**155**	P	**Pn**	**00 56 39.3**	**+1.1**
CAVN				S	**Sb**	**00 56 56.8**	**+1.5**
	8.9nm,0.2s						
ESAC	**San Caprasio**	**1.39**	**195**	Pg	**Pg**	**00 56 40.6**	**+0.2**
	46nm,0.2s,SNR=18						
ESAC	**San Caprasio**	**1.39**	**195**	⇑Pg	**Pg**	**00 56 40.6**	**+0.1**
	46nm,0.2s,SNR=18						
ESAC				Lg		00 56 58.7	
	37nm,0.3s,SNR=14						
EMIR	**Miracle**	**1.60**	**136**	Pg	**Pg**	**00 56 43.6**	**-0.8**
	25nm,1.1s,SNR=4.0						
EMIR	**Miracle**	**1.60**	**136**	Pg	**Pg**	**00 56 43.6**	**-0.8**
	25nm,1.1s,SNR=4.0						
EMIR				Lg		00 57 03.3	
	7.0nm,0.4s,SNR=8.2						
MTLF	**Montolieu**	**1.63**	**80**	*e*Pg	**Pn**	**00 56 42.7**	**0.0**
MTLF				*e*Sg	**Sg**	**00 57 03.6**	**-2.4**
	0.8nm,0.2s						
MTLF	**Montolieu**	**1.63**	**80**	*e*Pn	**Pn**	**00 56 42.2**	**-0.5**
MTLF	**Montolieu**	**1.63**	**80**	*e*Pg	**Pg**	**00 56 45.0**	**+0.1**
MTLF				*e*Sg	**Sg**	**00 57 06.2**	**+0.2**
	5.3nm,0.2s						
MTLF	**Montolieu**	**1.63**	**80**	*e*Pn	**Pn**	**00 56 42.2**	**-0.5**
MTLF	**Montolieu**	**1.63**	**80**	*e*Pg	**Pg**	**00 56 45.0**	**+0.1**
MTLF				*e*Sg	**Sg**	**00 57 06.2**	**+0.2**
	2.7nm,0.2s						
MTLF	**Montolieu**	**1.63**	**80**	Pg	**Pn**	**00 56 42.7**	**0.0**
MTLF				Pg	**Pg**	**00 56 45.0**	**+0.1**
MTLF				Lg		00 57 06.2	
	2.7nm,0.2s						
CORI	**Orista**	**1.85**	**125**	P	**Pg**	**00 56 49.4**	**+0.1**
CORI				S	**Sg**	**00 57 13.8**	**+0.5**
	5.8nm,0.3s						
EPOB	**Poblet**	**1.88**	**155**	Pg	**Pg**	**00 56 48.1**	**-1.7**
	25nm,1.2s,SNR=12						
EPOB	**Poblet**	**1.88**	**155**	Pg	**Pg**	**00 56 48.1**	**-1.7**
	25nm,1.2s,SNR=12						
EPOB				Lg		00 57 12.5	
	3.0nm,0.3s,SNR=7.1						
LFF	**La Frestale**	**1.94**	**15**	*e*Pg	**Pg**	**00 56 51.7**	**+0.7**
LFF				*e*Sg	**Sg**	**00 57 18.2**	**+2.0**
	14nm,0.4s,SNR=1.0						
LFF	**La Frestale**	**1.94**	**15**	*e*Pg	**Pg**	**00 56 51.7**	**+0.7**
LFF				*e*Sg	**Sg**	**00 57 18.2**	**+2.0**
	6.8nm,0.4s,SNR=1.0						
ERTA	**Horta de San J**	**2.12**	**174**	Pg	**Pg**	**00 56 52.6**	**-1.8**
	3.0nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**2.12**	**174**	Pg	**Pg**	**00 56 52.6**	**-1.8**
	3.0nm,0.3s,SNR=7.9						
ERTA				Lg		00 57 19.8	
	5.7nm,0.2s,SNR=7.9						
CAF	**Calviac**	**2.37**	**38**	*e*Pn	**Pn**	**00 56 52.7**	**-0.2**
CAF	**Calviac**	**2.37**	**38**	*e*Pg	**Pg**	**00 56 58.8**	**-0.4**
CAF				*e*Sg	**Sg**	**00 57 30.9**	**+1.0**
	3.1nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.37**	**38**	*e*Pg	**Pg**	**00 56 58.8**	**-0.4**
CAF				*e*Sg	**Sg**	**00 57 30.9**	**+1.0**
	1.5nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.37**	**38**	Pn	**Pn**	**00 56 52.7**	**-0.2**
CAF				Pg	**Pg**	**00 56 58.8**	**-0.4**
CAF				Lg		00 57 30.9	
	1.6nm,0.2s						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pg	**Pg**	**00 57 01.4**	**+0.1**
RJF				*e*Sg	**Sg**	**00 57 35.1**	**+1.7**
	3.5nm,0.2s						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pg	**Pg**	**00 57 01.4**	**+0.1**
RJF				*e*Sg	**Sg**	**00 57 35.1**	**+1.7**
	1.8nm,0.2s						
EMOS	**Mosqueruela**	**2.73**	**188**	Pg	**Pg**	**00 57 04.6**	**-1.4**
	0.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.73**	**188**	Pg	**Pg**	**00 57 04.6**	**-1.4**
	0.7nm,0.2s,SNR=7.9						
EMOS				Lg		00 57 39.7	
	11nm,0.5s,SNR=7.9						
ETOR	**Torete**	**2.73**	**215**	Pn	**Pn**	**00 56 58.7**	**+0.8**
	2.4nm,0.1s,SNR=7.9						
ETOR				Sn	**Sn**	**00 57 31.2**	**+0.2**
	3.5nm,0.4s,SNR=7.9						
LASF	**Ste Croix**	**2.96**	**69**	*e*Pn	**Pn**	**00 56 59.5**	**-1.6**
LASF	**Ste Croix**	**2.96**	**69**	*e*P	**Pn**	**00 57 03.4**	**+2.3**
LASF	**Ste Croix**	**2.96**	**69**	*e*Pg	**Pg**	**00 57 09.9**	**-0.6**
LASF				*e*Sg	**Sg**	**00 57 48.7**	**-0.2**
	1.1nm,0.2s						
LASF	**Ste Croix**	**2.96**	**69**	*e*Pg	**Pg**	**00 57 09.9**	**-0.6**
LASF				*e*Sg	**Sg**	**00 57 48.7**	**-0.2**
	0.6nm,0.2s						
LASF	**Ste Croix**	**2.96**	**69**	Pn	**Pn**	**00 56 59.5**	**-1.6**
LASF				P		00 57 03.4	
LASF				Pg	**Pg**	**00 57 09.9**	**-0.6**
LASF				Lg		00 57 48.7	
	0.6nm,0.2s						
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pn	**Pn**	**00 57 09.2**	**+0.2**
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pg	**Pg**	**00 57 20.9**	**-0.6**
MFF				*e*Sg	**Sg**	**00 58 05.7**	**-1.6**
	2.1nm,0.4s						
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pg	**Pg**	**00 57 20.9**	**-0.6**
MFF				*e*Sg	**Sg**	**00 58 05.7**	**-1.6**
	1.0nm,0.4s						
MFF	**Saint Martin d**	**3.54**	**358**	Pn	**Pn**	**00 57 09.2**	**+0.2**
MFF				Pg	**Pg**	**00 57 20.9**	**-0.6**
MFF				Lg		00 58 05.7	
	1.1nm,0.4s						
TCF	**Toulx Ste Croi**	**3.58**	**25**	*e*Pg	**Pg**	**00 57 21.9**	**-0.4**
TCF				*e*Sg	**Sg**	**00 58 08.7**	**+0.1**
	1.3nm,0.2s						
TCF	**Toulx Ste Croi**	**3.58**	**25**	*e*Pg	**Pg**	**00 57 21.9**	**-0.4**
TCF				*e*Sg	**Sg**	**00 58 08.7**	**+0.1**
	0.6nm,0.2s						
VIVF	**Saint-Julien-l**	**3.80**	**60**	*e*Pg	**Pg**	**00 57 25.0**	**-1.6**
VIVF				*e*Sg	**Sg**	**00 58 15.1**	**-0.7**
	1.5nm,0.3s						
VIVF	**Saint-Julien-l**	**3.80**	**60**	*e*Pg	**Pg**	**00 57 25.0**	**-1.6**
VIVF				*e*Sg	**Sg**	**00 58 15.1**	**-0.7**
	0.8nm,0.3s						
BGF	**Bois d'Agland**	**4.03**	**29**	*e*Pg	**Pg**	**00 57 29.2**	**-1.7**
BGF				*e*Sg	**Sg**	**00 58 22.2**	**-0.8**
	10nm,0.5s,SNR=1.0						
BGF	**Bois d'Agland**	**4.03**	**29**	Pg	**Pg**	**00 57 29.2**	**-1.7**
BGF				Lg		00 58 22.2	
	5.1nm,0.5s						
AVF	**Avril sur Loir**	**4.41**	**31**	*e*Sg	**Sg**	**00 58 34.7**	**-0.6**
	0.8nm,0.3s						
AVF	**Avril sur Loir**	**4.41**	**31**	*e*Sg	**Sg**	**00 58 34.7**	**-0.6**
	0.4nm,0.3s						
AVF	**Avril sur Loir**	**4.41**	**31**	Lg		00 58 34.7	
	0.4nm,0.3s						

*ISCJB **16** 01:04:02.6±0.4, 3860S±004×17589E±006, h151$^{km}_{\pm 4km}$, mb3.8/4, Error ellipse: s-maj=9.1km s-min=5.9km az=38.1*
*IDC **16** 01:04:02.8±0.8, 3862S×17597E, h138$^{km}_{\pm 10km}$, mb3.5/3, mb1 3.7/4, mb1mx3.6/13, mbtmp3.6/4, Error ellipse: s-maj=32.3km s-min=23.0km az=150.0*
*NEIC **16** 01:04:03.9, 3843S×17591E, h142^{km}, MG4.9(WEL), After WEL.*

ISC 16 01:04:03.3±0.5, 3859S±004×17591E±006, h148$^{km}_{\pm 4km}$, n76, σ1^{s}18/75, mb3.8/4, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.18**	**230**	P	**Pn**	**01 04 23.5**	**+0.2**
WATZ				S	**Sn**	**01 04 38.5**	**0.0**
RATZ	**Rangitukua**	**0.30**	**201**	P	**Pn**	**01 04 23.9**	**+0.3**
HATZ	**Hinemaiaia**	**0.33**	**154**	P	**Pn**	**01 04 24.0**	**+0.3**
RITZ	**Rihia Road**	**0.39**	**186**	P	**Pn**	**01 04 24.8**	**+0.9**
KATZ	**Kakaramea**	**0.42**	**204**	P	**Pn**	**01 04 24.8**	**+0.8**
UTU	**Utuhina**	**0.47**	**28**	P	**Pn**	**01 04 23.8**	**-0.5**
WTVZ	**West Tongariro**	**0.58**	**205**	P	**Pn**	**01 04 25.8**	**+1.0**
TAZ	**Tarawera**	**0.59**	**53**	P	**Pn**	**01 04 24.6**	**-0.3**
TWVZ	**Taurewa**	**0.60**	**217**	P	**Pn**	**01 04 25.8**	**+0.8**
MKRZ	**Makatiti**	**0.63**	**44**	P	**Pn**	**01 04 25.0**	**-0.2**
NGZ	**Ngauruhoe**	**0.63**	**202**	P	**Pn**	**01 04 26.0**	**+0.9**
WPVZ	**Whakapapa**	**0.67**	**205**	P	**Pn**	**01 04 26.5**	**+1.1**
TUVZ	**Tukino**	**0.70**	**196**	P	**Pn**	**01 04 25.8**	**+1.2**
FWVZ	**Far West T-bar**	**0.72**	**203**	P	**Pn**	**01 04 26.8**	**+1.1**
BKZ	**Black Stump Fm**	**0.73**	**142**	P	**Pn**	**01 04 26.0**	**+0.2**
WNVZ	**Wahianoa**	**0.77**	**198**	P	**Pn**	**01 04 27.4**	**+1.3**
EDRZ	**Edgecumbe**	**0.81**	**54**	P	**Pn**	**01 04 25.9**	**-0.5**
MOVZ	**Moawhango**	**0.82**	**188**	P	**Pn**	**01 04 27.4**	**+1.0**
HIZ	**Hauiti**	**0.83**	**275**	P	**Pn**	**01 04 25.9**	**-0.6**
HIZ				S	**Sn**	**01 04 42.8**	**-1.3**
MARZ	**Manawahe**	**0.85**	**45**	P	**Pn**	**01 04 26.2**	**-0.5**
TOZ	**Tahuroa Road**	**0.92**	**339**	P	**Pn**	**01 04 25.7**	**-1.5**
URZ	**Urewera**	**1.00**	**71**	P	**Pn**	**01 04 27.1**	**-0.8**
	106nm,0.3s,baz=263,slow=5.0,SNR=235						
URZ				S	**Sn**	**01 04 44.1**	**-2.5**
	346nm,0.3s,baz=118,slow=19,SNR=75						
URZ	**Urewera**	**1.00**	**71**	P	**Pn**	**01 04 26.9**	**-1.0**
VRZ	**Vera Road**	**1.04**	**239**	P	**Pn**	**01 04 28.9**	**+0.7**
MWZ	**Matawai**	**1.30**	**79**	P	**Pn**	**01 04 30.3**	**-0.3**
WAZ	**Wanganui**	**1.37**	**211**	P	**Pn**	**01 04 32.7**	**+1.4**
RAEZ	**Rainy Point**	**1.37**	**239**	P	**Pn**	**01 04 32.9**	**+1.6**
KNZ	**Kokohu**	**1.44**	**108**	P	**Pn**	**01 04 33.0**	**+0.9**
TSZ	**Takapari Road**	**1.47**	**178**	P	**Pn**	**01 04 33.4**	**+1.1**
NEZ	**North Egmont**	**1.57**	**244**	P	**Pn**	**01 04 35.1**	**+1.7**
DFE	**Dawson Falls**	**1.59**	**242**	P	**Pn**	**01 04 35.4**	**+1.8**
MKAZ	**Moumakai**	**1.59**	**338**	P	**Pn**	**01 04 32.0**	**-1.7**
PKE	**Pukeiti**	**1.62**	**248**	P	**Pn**	**01 04 35.1**	**+1.2**
NWEZ	**Newall Road**	**1.73**	**246**	P	**Pn**	**01 04 36.6**	**+1.4**
PUZ	**Puketiti**	**1.92**	**75**	P	**Pn**	**01 04 36.6**	**-0.7**
MRZ	**Mangatainoka R**	**2.08**	**187**	P	**Pn**	**01 04 39.7**	**+0.5**
BFZ	**Birch Farm**	**2.10**	**173**	P	**Pn**	**01 04 40.2**	**+0.7**
MXZ	**Matakaoa Point**	**2.15**	**62**	P	**Pn**	**01 04 39.4**	**-0.7**
KIW	**Kapiti Island**	**2.39**	**198**	P	**Pn**	**01 04 43.3**	**+0.3**
MTW	**Mount Morrison**	**2.58**	**187**	P	**Pn**	**01 04 45.5**	**+0.2**
CAW	**Cannon Point**	**2.59**	**194**	P	**Pn**	**01 04 45.7**	**+0.3**
PAWZ	**Paruwai Farm**	**2.81**	**187**	P	**Pn**	**01 04 48.1**	**0.0**
WEL	**Wellington**	**2.83**	**198**	P	**Pn**	**01 04 48.5**	**+0.1**
MSWZ	**Moikau Station**	**2.87**	**190**	P	**Pn**	**01 04 48.7**	**-0.1**
SNZO	**South Karori**	**2.87**	**198**	P	**Pn**	**01 04 48.6**	**-0.2**
TCW	**Tory Channel**	**2.90**	**205**	P	**Pn**	**01 04 49.0**	**-0.3**
BHW	**Baring Head**	**2.92**	**195**	P	**Pn**	**01 04 49.3**	**-0.3**
NNZ	**Nelson**	**3.27**	**216**	P	**Pn**	**01 04 53.5**	**-0.4**
CMWZ	**Cape Campbell**	**3.41**	**202**	P	**Pn**	**01 04 56.0**	**+0.2**
QRZ	**Quartz Range**	**3.43**	**228**	P	**Pn**	**01 04 55.1**	**-0.9**
BSWZ	**Blackbirch Sta**	**3.49**	**206**	P	**Pn**	**01 04 56.1**	**-0.6**
THZ	**Tophouse**	**3.92**	**215**	P	**Pn**	**01 05 01.3**	**-1.0**
KHZ	**Kahutara**	**4.23**	**205**	P	**Pn**	**01 05 05.5**	**-0.9**
DSZ	**Denniston Nort**	**4.45**	**224**	P	**Pn**	**01 05 07.7**	**-1.6**
LTZ	**Lake Taylor**	**5.02**	**212**	P	**Pn**	**01 05 15.4**	**-1.4**
CRLZ	**Canterbury Las**	**5.56**	**205**	P	**Pn**	**01 05 21.5**	**-2.6**
MQZ	**McQueen's Vall**	**5.67**	**205**	P	**Pn**	**01 05 22.6**	**-2.9**
WVZ	**Waitaha Valley**	**5.95**	**220**	P	**Pn**	**01 05 26.2**	**-3.1**
RPZ	**Rata Peaks**	**6.29**	**214**	P	**Pn**	**01 05 32.5**	**-1.3**
	6.4nm,0.3s,baz=42,slow=1.4,SNR=34						
RPZ				S	**Sn**	**01 06 38.8**	**-5.8**
	12nm,0.3s,baz=320,slow=4.2,SNR=4.5						
RPZ	**Rata Peaks**	**6.29**	**214**	P	**Pn**	**01 05 31.7**	**-2.1**
FOZ	**Fox Glacier**	**6.84**	**221**	P	**Pn**	**01 05 38.6**	**-2.4**
ODZ	**Otahua Downs**	**7.55**	**210**	P	**Pn**	**01 05 47.7**	**-2.9**
JCZ	**Jackson Bay**	**7.67**	**222**	P	**Pn**	**01 05 48.6**	**-3.6**
EAZ	**Earnscleugh**	**8.26**	**214**	P	**Pn**	**01 05 57.3**	**-2.7**
TUZ	**Tuapeka**	**8.70**	**210**	P	**Pn**	**01 06 04.8**	**-1.1**
ASAR	**Alice Springs**	**38.57**	**280**	P	**P**	**01 11 12.9**	**+1.2**
	1.1nm,0.5s,mb3.7,baz=126,slow=8.7,SNR=14						
WRA	**Warramunga Arr**	**40.34**	**285**	P	**P**	**01 11 27.0**	**+0.6**
	0.4nm,0.4s,mb3.4,baz=123,slow=8.2,SNR=8.3						
QSPA	**South Pole Qui**	**51.53**	**180**	P	**P**	**01 12 58.7**	**+5.5**
	3.0nm,0.7s,mb4.0,baz=303,slow=2.2,SNR=6.1						
VNA3	**Neumayer Olymp**	**70.40**	**178**	*e*	**P**	**01 15 03.2**	**+2.6**
VNA3				*e*		01 15 05.1	
VNA3				*e*	pP	01 15 37.3	+0.8
VNA2	**Neumayer--Watz**	**70.76**	**179**	*e*	**P**	**01 15 06.0**	**+3.2**
	baz=175,slow=5.6						
VNA2				*e*		01 15 07.7	
VNA2				*e*	pP	01 15 40.6	+1.8
KSRS	**Korea Array**	**87.64**	**324**	P	**P**	**01 16 36.4**	**+1.9**
	1.6nm,0.7s,mb4.0,baz=152,slow=4.7,SNR=3.2						
MKAR	**Makanchi Array**	**119.03**	**308**	PKP	PKPdf	01 22 32.9	-0.9
	0.1nm,0.6s,baz=72,slow=4.7,SNR=2.7						
KEV	**Kevo**	**144.68**	**342**	*e*p	PKPdf	01 23 19.4	-1.7
ARCES	**ARCESS Array B**	**145.20**	**342**	PKPbc	PKPbc	01 23 21.6	-0.4
	6.5nm,1.1s,baz=47,slow=3.5,SNR=12						
JOF	**Joensuu**	**147.64**	**330**	*e*p	PKPdf	01 23 27.9	+1.6
	1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**154.14**	**193**	PKPbc	PKPbc	01 23 47.3	+1.4
	0.3nm,0.8s,baz=176,slow=3.3,SNR=2.8						
TORD				PKPab	PKPab	01 24 00.8	+0.7
	0.4nm,0.7s,baz=164,slow=2.4,SNR=4.2						

*BJI **16** 01:28:28.5, 1023N×91.10E, h12^{km}, mB5.1, mb4.3, Ms5.0, Msz4.9*
*IDC **16** 01:28:29.6±1.0, 1017N×9159E, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.9/22, mbtmp3.9/10, MS3.3/1, Ms1 3.5/1, ms1mx3.0/25, Error ellipse: s-maj=40.0km s-min=16.8km az=60.0*
*ISCJB **16** 01:28:32.6±0.7, 1023N±008×9163E±0.10, h33^{km}, mb4.1/15, Error ellipse: s-maj=15.5km s-min=8.3km az=146.8*
*NEIC **16** 01:28:34.0±0.5, 1019N×9159E, h30^{km}, mb4.3/4, Error ellipse: s-maj=11.9km s-min=7.7km az=66.0*

ISC 16 01:28:34.7±0.7, 1021N±008×9153E±009, h35^{km}, n36, σ0^{s}96/36, mb4.1/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.89**	**40**	Pn	**Pn**	**01 31 08.4**	**+0.2**
	0.2nm,0.3s,baz=238,slow=14,SNR=7.2						
CMAR				LR	LR	01 35 46.5	
	comp=Z,176nm,20.9s,baz=225,slow=40						
CMAR	**Chiang Mai Arr**	**10.89**	**40**	Pn	**Pn**	**01 31 08.4**	**+0.2**
CMAR				LR	LR	01 35 46.5	
CHTO	**Chiang Mai**	**11.16**	**39**	*e*Pn	**Pn**	**01 31 11.7**	**-0.1**
ODAN	**Odare**	**17.01**	**347**	*e*P	**Pn**	**01 32 30.3**	**+0.3**
RAMN	**Ramite**	**17.29**	**345**	*e*P	**Pn**	**01 32 33.0**	**-0.4**
TAPN	**Taplejung**	**17.42**	**349**	*e*P	**Pn**	**01 32 34.2**	**-0.9**
JIRN	**Jiri**	**18.07**	**345**	*e*P	**Pn**	**01 32 44.8**	**+1.7**
	58nm,1.1s						
PKI	**Pulchoki**	**18.20**	**342**	*e*P	**Pn**	**01 32 45.0**	**+0.3**
DMN	**Daman**	**18.33**	**342**	*e*P	**Pn**	**01 32 46.3**	**0.0**
GUN	**Gumba**	**18.39**	**344**	*e*P	**Pn**	**01 32 46.8**	**-0.2**
KKN	**Kakani**	**18.45**	**342**	*e*P	**Pn**	**01 32 48.1**	**+0.4**
GKN	**Gorkha**	**18.85**	**341**	*e*P	**Pn**	**01 32 51.9**	**-0.6**
KOLN	**Koldanda**	**18.99**	**338**	*e*P	**Pn**	**01 32 53.5**	**-0.8**
LSA	**Lhasa**	**19.39**	**359**	P	**Pn**	**01 32 55.4**	**-3.6**
LSA	**Lhasa**	**19.39**	**359**	*e*P	**Pn**	**01 32 57.1**	**-2.0**
	11nm,0.7s						
DANN	**Dangsing**	**19.46**	**339**	*e*P	**Pn**	**01 32 58.3**	**-1.6**
PYUN	**Piuthan**	**19.52**	**337**	*e*P	**Pn**	**01 32 58.9**	**-1.7**
GYA	**Guiyang**	**21.58**	**40**	P	**P**	**01 33 23.6**	**+2.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
LZH	**Lanzhou**	**28.08**	**22**	*e*P	**P**	**01 34 21.0**	**

ARS *e* 01 30 07.0
ARS Pmax
comp=E,262nm,0.7s
ARS max
comp=E,2μm,0.4s
HRMR Khuramsha 1.46 88⇑ *i*Pg Pn 01 29 44.4 +1.9
HRMR *e*Sg Sn 01 30 03.7 +3.2
HRMR Pmax
comp=E,303nm,0.6s
HRMR Smax
comp=E,2μm,0.4s
ZAK Zakamensk 1.48 215 *e*PN Pn 01 29 45.0 +2.1
ZAK *e* 01 30 04.7
ZAK pmax pmax
comp=Z,477nm,0.2s
ZAK smax
comp=N,1μm,0.2s
ZAK Zakamensk 1.48 215 *e*Pg Pn 01 29 45.3 +2.4
ZAK *e* 01 29 47.0
ZAK *e*Sg Sn 01 30 04.7 +3.5
ZAK *e* 01 30 08.7
ZAK max
comp=N,472nm,0.2s
ZAK max
comp=N,1μm,0.3s
TRG Tyrgan 1.57 42 *e*PN Pn 01 29 47.6 +3.5
TRG *e* 01 30 07.9
TRG pmax pmax
comp=Z,75nm,0.2s
TRG smax
comp=E,673nm,0.2s
TRG Tyrgan 1.57 42 *e*Pg Pn 01 29 47.6 +3.5
TRG *e*Sg Sn 01 30 07.7 +4.2
TRG Pmax
comp=E,69nm,0.3s
TRG Smax
comp=E,680nm,0.3s
UUDB Ulan-Yde 1.91 81 *e*Pg Pn 01 29 53.2 +4.4
UUDB *e* 01 29 54.4
UUDB *e*Sg Sn 01 30 17.8 +6.0
UUDB max
comp=E,152nm,0.8s
UUDB Smax
comp=E,369nm,0.9s
TRTB Turuntaevo 1.97 70 *e*Pg Pn 01 29 54.3 +4.8
TRTB *e*Sg Sn 01 30 20.3 +7.1
TRTB Pmax
comp=E,116nm,0.6s
TRTB Smax
comp=E,252nm,1.0s
OGRR Ongureny 2.73 40 *e*PN Pn 01 30 04.3 +4.2
OGRR *e* 01 30 08.5
OGRR *e* 01 30 42.0
OGRR pmax pmax
comp=Z,23nm,0.2s
OGRR smax
comp=E,298nm,1.3s
OGRR Ongureny 2.73 40 *e*Pg Pn 01 30 06.6 +6.5
OGRR *e*Sg Sn 01 30 42.4 +10
OGRR Pmax
comp=E,41nm,0.3s
OGRR Smax
comp=E,331nm,0.9s
ORL Orlik 3.11 289 *e*PN Pn 01 30 13.4 +8.1
ORL *e* 01 30 55.1
ORL pmax pmax
comp=Z,54nm,0.4s
ORL smax
comp=N,545nm,0.6s
ORL Orlik 3.11 289 *e*Pg Pn 01 30 13.4 +8.1
ORL *e*Sg Sn 01 30 54.4 +13
ORL Pmax
comp=N,54nm,0.3s
ORL Smax
comp=N,466nm,0.5s
SYVR Suvo 3.87 56 *e* Sn 01 31 05.6 +5.5
SYVR *e*Sg Sn 01 31 20.1 +20
SYVR Smax
comp=N,96nm,1.6s
NIZ Nizh Angarsk 5.10 33 *e*PN Pn 01 30 36.3 +3.7
NIZ *e* 01 30 50.6
NIZ *e*S Sn 01 31 32.8 +2.4
NIZ *e* 01 31 55.3
NIZ pmax pmax
comp=Z,20nm,1.8s
NIZ smax
comp=N,86nm,0.9s
NIZ Nizh Angarsk 5.10 33 *e* Pn 01 30 38.3 +5.7
NIZ *e* 01 31 36.4
NIZ *e*Sg Sn 01 31 55.2 +25
NIZ max
comp=N,10.0nm,0.7s
NIZ Smax
comp=N,86nm,1.0s
YLYR Ulyunkhan 5.12 48 *e* Pn 01 30 39.4 +6.6
YLYR *e*Pg Pn 01 30 50.5 +18
YLYR *e*Sg Sn 01 31 56.3 +26
YLYR Pmax
comp=N,4.0nm,0.6s
YLYR Smax
comp=N,49nm,1.5s
KPC Khapcheranga 5.29 108 *e*PN Pn 01 30 36.4 +1.2
KPC *e* 01 30 53.6
KPC *e* 01 32 01.2
KPC pmax pmax
comp=Z,13nm,0.3s
KPC smax
comp=N,80nm,1.1s
KPC Khapcheranga 5.29 108 *e* Pn 01 30 36.3 +1.1
KPC *e* 01 30 39.9
KPC *e*Pg Pn 01 30 53.4 +18
KPC *e*Sg Sn 01 32 01.4 +26
KPC Pmax
comp=N,25nm,1.6s
KPC Smax
comp=N,74nm,0.9s
TDJR Todzha 5.33 282 *e*Pg Pn 01 30 53.6 +18
TDJR *e*Sg Sn 01 32 01.1 +25
KMO Kumora 5.80 40 *e*Pg Pn 01 31 02.7 +21
KMO *e*Sg Sn 01 32 17.8 +30
KMO Pmax
comp=N,8.0nm,0.4s
KMO Smax
comp=N,81nm,1.0s
BOD Bodaibo 8.26 37 *e*PN Pn 01 31 18.3 +2.4
BOD *e* 01 31 47.1
BOD *e* 01 33 32.9
BOD pmax pmax
comp=Z,3.0nm,0.1s
BOD smax
comp=E,24nm,1.5s
BOD Bodaibo 8.26 37 *e*Sg Sn 01 33 33.6 +46
BOD Smax
comp=E,10.0nm,0.7s
TUP Tupik 9.66 67 *e*Sg Sn 01 34 17.6 +55
TUP Smax
comp=E,13nm,0.6s
POO Poona 40.94 228 *e*P P 01 37 07.0 +9.0

IDC **16** *01:38:38.1±0.7,3564N×8837E,h0km,mb4.2/11, mb1 4.3/15,mb1mx4.2/24,mbtmp4.2/15,ML3.7/2,MS4.0/16, Ms1 4.0/16,ms1mx3.9/20,Error ellipse: s-maj=27.2km s-min=13.9km az=44.0*
ISCJB **16** *01:38:38.2±0.2,3577N×003×8831E±004,h10km, mb4.4/30,MS4.0/16,Error ellipse: s-maj=4.6km s-min=4.5km az=143.3*
BJI **16** *01:38:38.7,3574N×8839E,h9km,mB4.6,mb4.2,Ms4.6, Msz4.3*
NEIC **16** *01:38:39.3±0.4,3580N×8849E,h10km,mb4.6/20,Error ellipse: s-maj=11.1km s-min=6.1km az=57.0*
MOS **16** *01:38:40.7±1.4,3574N×8838E,h33km,mb4.8/18,Error ellipse: s-maj=11.2km s-min=6.1km az=118.6*
SZGRF **16** *01:38:44.1,3571N×8856E,h33km,mb4.5,Xizang*
ISC 16 01:38:40.2±0.3,3582N±003×8838E±004,h10km,n121, **σ1§25/117,mb4.4/30,MS4.0/16,1D,Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa** 52nm,0.9s	**6.53**	**158**	*e*Pg	**Pg**	**01 40 38.0**	**-7.2**
WMQ	**Urumqi**	**8.01**	**356**	*e*P	**Pn**	**01 40 40.5**	**+4.0**
WMQ				S	**Sn**	**01 42 18.0**	**+11**
WMQ	comp=N,2μm,3.0s			LR	LR		
WMQ	comp=E,3μm,3.0s			LR	LR		
WMQ	comp=Z,1μm,3.0s			LR	LR		
JIRN	**Jiri**	**8.35**	**194**	*e*P	**Pn**	**01 40 45.8**	**+4.6**
DANN	**Dangsing** comp=Z,47nm,1.2s	**8.41**	**209**	*e*P	**Pn**	**01 40 44.6**	**+2.5**
TAPN	**Taplejung** comp=Z,64nm,0.9s	**8.46**	**184**	*e*P	**Pn**	**01 40 44.6**	**+1.8**
DMN	**Daman** comp=Z,25nm,0.9s	**8.65**	**200**	*e*P	**Pn**	**01 40 48.6**	**+3.3**
PYUN	**Piuthan** comp=Z,50nm,0.9s	**8.95**	**212**	*e*P	**Pn**	**01 40 49.0**	**-0.5**
ODAN	**Odare** comp=Z,72nm,0.8s	**8.97**	**186**	*e*P	**Pn**	**01 40 49.3**	**-0.5**
RAMN	**Ramite** comp=Z,64nm,1.0s	**8.97**	**190**	*e*P	**Pn**	**01 40 50.0**	**+0.2**
KOLN	**Koldanda**	**8.99**	**208**	*e*P	**Pn**	**01 40 50.3**	**+0.2**
GTA	**Gaotai**	**9.75**	**65**	*e*P	**Pn**	**01 41 02.1**	**+1.7**
GTA				AP		01 41 05.8	
GTA				XP		01 41 07.3	
GTA				S	**Sn**	**01 42 56.3**	**+6.3**
GTA				XS		01 43 01.6	
GTA				LG1		01 43 48.5	
GTA				LG2		01 44 05.5	
GTA	comp=Z,4.0nm,1.0s			AMB	AMB		
GTA	comp=Z,70nm,4.2s			AMB	AMB		
GTA	comp=N,5μm,15.3s			LR	LR		
GTA	comp=E,912nm,15.0s			LR	LR		
GTA	comp=Z,778nm,12.3s			LR	LR		
MK31	**Makanchi Array**	**11.88**	**339**	*e*Pn	**Pn**	**01 41 28.8**	**-0.7**
MK31	**Makanchi Array**	**11.88**	**339**	P	**Pn**	**01 41 29.1**	**-0.4**
MK31	comp=Z,2.0nm,0.4s			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,0.8nm,0.3s,baz=152,slow=14,SNR=29	**11.88**	**339**	Pn	**Pn**	**01 41 28.9**	**-0.7**
MKAR	comp=Z,0.0nm,0.3s,baz=166,slow=35,SNR=2.0			Lg		01 45 05.0	
MKAR	comp=Z,1μm,18.7s,baz=155,slow=41			LR	LR	01 46 52.2	
TKM2	**Tokmak 2** comp=Z,54nm,1.5s	**12.16**	**310**	*e*Pn	**Pn**	**01 41 34.6**	**+1.2**
TKM2	**Tokmak 2**	**12.16**	**310**	*e*P	**Pn**	**01 41 34.6**	**+1.1**
TKM2	comp=Z,54nm,1.5s			pmax	pmax		
AML	**Almayashu** comp=Z,18nm,1.1s	**13.04**	**303**	*e*Pn	**Pn**	**01 41 46.7**	**+1.2**
EKS2	**Erkin-Say** comp=Z,34nm,1.4s	**13.21**	**306**	*e*Pn	**Pn**	**01 41 49.3**	**+1.5**
KK31	**Karatay Array**	**15.59**	**303**	*i* P	**Pn**	**01 42 25.8**	**+6.0**
KK31	comp=Z,3.0nm,0.5s			pmax	pmax		
KBL	**Kabul** comp=Z,42nm,1.1s	**15.87**	**271**	*e*Pn	**Pn**	**01 42 23.6**	**0.0**
KBL	**Kabul**	**15.87**	**271**	*e*P	**Pn**	**01 42 23.6**	**0.0**
KBL	comp=Z,42nm,1.1s			pmax	pmax		
KMI	**Kunming**	**16.32**	**127**	P	**Pn**	**01 42 31.1**	**+1.7**
KMI				AP	pP	01 42 38.1	+3.0
KMI				XP	sP	01 42 40.8	+4.4
KMI				PP		01 42 44.8	
KMI				S	**Sn**	**01 45 34.1**	**+3.6**
KMI	comp=Z,11nm,0.7s			AMB	AMB		
KMI	comp=Z,162nm,3.5s			AMB	AMB		
KMI	comp=N,753nm,8.6s			LR	LR		
KMI	comp=E,636nm,7.8s			LR	LR		
KMI	comp=Z,830nm,10.8s			LR	LR		
KURK	**Kurchatov** comp=Z,7.5nm,0.3s	**16.48**	**338**	*e*Pn	**Pn**	**01 42 30.0**	**-1.3**
KURK	**Kurchatov**	**16.48**	**338**	*e*P	**Pn**	**01 42 30.0**	**-1.3**
KURK	comp=Z,7.0nm,0.3s			pmax	pmax		
XAN	**Xi'an**	**16.94**	**90**	P	**Pn**	**01 42 41.3**	**+4.1**
XAN	comp=Z,5.0nm,0.9s			AMB	AMB		
XAN	comp=Z,76nm,4.8s			AMB	AMB		
XAN	comp=N,285nm,9.9s			LR	LR		
XAN	comp=E,676nm,11.9s			LR	LR		
XAN	comp=Z,1μm,11.9s			LR	LR		
SONM	**Songino Array** baz=228,slow=11,SNR=23	**17.96**	**43**	P	**Pn**	**01 42 51.9**	**+2.1**
SONM	comp=Z,0.2nm,0.3s,baz=234,slow=28,SNR=5.1			Lg		01 48 07.6	
ZAK	**Zakamensk** comp=Z,6.0nm,1.4s	**18.12**	**32**	*e*P	**Pn**	**01 42 53.6**	**+1.8**
ZAK				pmax	pmax		
GYA	**Guiyang**	**18.20**	**116⇓**	*i*P	**Pn**	**01 42 51.0**	**-1.9**
GYA				S	**Sn**	**01 46 22.0**	**+6.0**
GYA	comp=Z,30nm,1.0s			AMB	AMB		
GYA	comp=Z,170nm,5.7s			AMB	AMB		
GYA	comp=N,540nm,9.6s			LR	LR		
GYA	comp=E,620nm,9.2s			LR	LR		
GYA	comp=Z,940nm,9.0s			LR	LR		
ZAA0	**Zalesovo Array**	**18.30**	**353**	*e*P	**Pn**	**01 42 52.5**	**-1.4**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=17	**18.30**	**353**	P	**Pn**	**01 42 53.2**	**-0.7**
ZALV	comp=Z,0.1nm,0.3s,baz=272,slow=26,SNR=2.2			Lg		01 48 21.9	
ZALV	comp=Z,540nm,18.7s,baz=172,slow=40			LR	LR	01 51 03.3	
ULN	**Ulaanbaatar** comp=Z,16nm,1.2s	**18.34**	**43**	*e*P	**Pn**	**01 42 54.4**	**-0.1**
ULN	**Ulaanbaatar**	**18.34**	**43**	*e*P	**Pn**	**01 42 54.4**	**-0.1**
ULN	comp=Z,16nm,1.2s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**18.85**	**68**	*e*P	**Pn**	**01 43 01.1**	**+0.4**
HHC				AP	pP	01 43 04.6	+1.6
HHC				XP	sP	01 43 08.8	+4.5
HHC				PP		01 43 18.9	
HHC				S	**Sn**	**01 46 31.0**	**-0.6**
HHC				XS	sS	01 46 37.5	-1.5
HHC				SS		01 46 57.8	
HHC	comp=Z,15nm,1.2s			AMB	AMB		
HHC	comp=Z,91nm,3.5s			AMB	AMB		
HHC	comp=N,3μm,17.8s			LR	LR		
HHC	comp=E,875nm,14.3s			LR	LR		
HHC	comp=Z,1μm,14.3s			LR	LR		
CHTO	**Chiang Mai** comp=Z,9.2nm,1.0s	**19.34**	**148**	*e*P	**Pn**	**01 43 02.9**	**-3.9**
CHTO	**Chiang Mai**	**19.34**	**148**	*e*P	**Pn**	**01 43 02.9**	**-3.9**
CHTO	comp=Z,9.0nm,1.0s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.1nm,0.3s,baz=332,slow=11,SNR=26	**19.66**	**149**	P	**Pn**	**01 43 07.5**	**-3.1**
CMAR	comp=Z,410nm,21.0s,baz=324,slow=39			LR	LR	01 51 27.4	
HYB	**Hyderabad**	**20.30**	**208**	*e*P	**P**	**01 43 16.5**	**+0.3**
HYB	**Hyderabad**	**20.30**	**208**	*i* P	**P**	**01 43 16.5**	**+0.3**
BVA0	**Borovoye Array**	**21.37**	**329**	*i* P	**P**	**01 43 31.8**	**+4.3**
BVAR	**Borovoye Array** comp=Z,4.7nm,0.9s,mb3.8,baz=129,slow=12,SNR=12	**21.37**	**329**	P	**P**	**01 43 28.0**	**+0.5**
BVAR	comp=Z,0.2nm,0.4s,baz=53,slow=22,SNR=2.2			Lg		01 50 03.9	
BVAR	comp=Z,1μm,19.4s,MS4.2,baz=237,slow=40			LR	LR	01 52 47.7	
BRVK	**Borovoye** comp=Z,13nm,0.8s,mb4.3	**21.44**	**329**	*e*P	**P**	**01 43 27.8**	**-0.4**
BRVK	**Borovoye**	**21.44**	**329**	*e*P	**P**	**01 43 27.8**	**-0.5**
BRVK	comp=Z,13nm,0.8s,mb4.3			pmax	pmax		
POO	**Poona**	**21.49**	**221**	*e*P	**P**	**01 43 30.0**	**+0.9**
BJI	**Beijing**	**22.28**	**71**	P	**P**	**01 43 40.1**	**+2.6**
BJI				S	**S**	**01 47 36.8**	**-5.8**
BJI	comp=Z,18nm,1.3s,mb4.3			AMB	AMB		
BJI	comp=N,1μm,22.2s,MS4.4			LR	LR		
BJI	comp=E,639nm,19.3s,MS4.4			LR	LR		
BJI	comp=Z,564nm,15.9s,MS4.1			LR	LR		
AKTK	**Aktyubinsk**	**26.32**	**313**	P	**P**	**01 44 15.9**	**0.0**
AKTK				LR	LR	01 56 09.2	
AKTO	**Aktyubinsk** comp=Z,1.1nm,0.6s,mb3.6,baz=124,slow=3.8,SNR=2.7	**26.32**	**313**	P	**P**	**01 44 15.9**	**0.0**
AKTO	comp=Z,377nm,20.9s,MS3.9,baz=122,slow=40			LR	LR	01 56 09.2	
BOD	**Bodaibo**	**27.83**	**30**	*e*P	**P**	**01 44 29.7**	**+0.3**
BOD	comp=Z,6.0nm,2.3s,mb3.8			pmax	pmax		
ARU	**Arti** comp=Z,5.5nm,1.1s,mb4.2	**28.82**	**325**	*e*P	**P**	**01 44 37.0**	**-1.2**
ARU	**Arti**	**28.82**	**325**	*e*P	**P**	**01 44 37.0**	**-1.2**
ARU	comp=Z,5.0nm,1.1s,mb4.2			pmax	pmax		
KSRS	**Korea Array** comp=Z,2.3nm,1.0s,mb4.0,baz=278,slow=11,SNR=4.8	**31.61**	**75**	P	**P**	**01 45 03.7**	**+0.6**
KSRS	comp=Z,168nm,21.8s,MS3.7,baz=97,slow=37			LR	LR	01 58 15.7	
KSRS	**Korea Array**	**31.61**	**75**	P	**P**	**01 45 03.7**	**+0.5**
KSRS	comp=Z,2.0nm,1.0s,mb3.9			pmax	pmax		
KSRS	comp=Z,168nm,21.8s,MS3.7			MLR	MLR		
KULM	**Kulim**	**32.41**	**157**	*e*P	**P**	**01 45 09.2**	**-1.1**
DGRG	**David-gareji**	**33.80**	**293**	P	**P**	**01 45 25.4**	**+3.1**
GNI	**Garni** comp=Z,13nm,0.9s,mb4.8,baz=72,slow=3.0,SNR=11	**34.41**	**291**	P	**P**	**01 45 29.6**	**+2.0**
GNI	**Garni** comp=Z,30nm,1.1s,mb5.1	**34.41**	**291**	*e*P	**P**	**01 45 29.0**	**+1.4**
GNI	**Garni**	**34.41**	**291**	*e*P	**P**	**01 45 29.0**	**+1.4**
GNI	comp=Z,29nm,1.1s			pmax	pmax		
MIB	**Mutribah**	**34.83**	**272**	*e*P	**P**	**01 45 30.9**	**-0.3**
MIB				AMb	AMB	01 45 35.4	
NAY	**Al-Naaiem** comp=Z,28nm,1.1s,mb5.1	**35.10**	**271**	*e*P	**P**	**01 45 33.7**	**0.0**
NAY				AMb	AMB	01 45 37.8	
ONI	**Oni**	**35.14**	**295**	P	**P**	**01 45 40.0**	**+6.1**
KKM	**Kota Kinabalu**	**39.13**	**133**	*e*P	**P**	**01 46 07.3**	**-0.6**
OBN	**Obninsk**	**40.05**	**315**	P	**P**	**01 46 15.9**	**+0.7**
OBN				*e*		01 46 25.6	
OBN	comp=Z,300nm,18.0s,MS4.2			MLR	MLR		
JHJ	**Hachijo jima 2** comp=Z,122nm,19.6s,MS3.8,baz=41,slow=38	**42.07**	**78**	LR	LR	02 05 40.4	
JOF	**Joensuu**	**43.93**	**326**	*e*p	**P**	**01 46 46.4**	**-0.4**
AKASG	**Malin Array Be** comp=Z,3.4nm,0.8s,mb4.2,baz=81,slow=6.4,SNR=9.2	**44.39**	**309**	P	**P**	**01 46 51.0**	**+0.4**
AKASG	**Malin Array Be**	**44.39**	**309**	P	**P**	**01 46 51.0**	**+0.3**
AKASG	comp=Z,3.0nm,0.8s			pmax	pmax		
AKBB	**Malin Array Si**	**44.39**	**309**	*e*P	**P**	**01 46 50.9**	**+0.2**
KIEV	**Kiev** comp=Z,8.4nm,1.0s,mb4.4	**44.40**	**309**	*e*P	**P**	**01 46 50.7**	**0.0**
KIEV	**Kiev**	**44.40**	**309**	*e*P	**P**	**01 46 50.7**	**0.0**
KIEV	comp=Z,8.0nm,1.0s,mb4.4			pmax	pmax		
DAV	**Davao City (W)** comp=Z,187nm,20.6s,MS4.0,baz=287,slow=39	**44.46**	**121**	LR	LR	02 07 46.9	
KAF	**Kangasniemi**	**46.12**	**325**	*e*p	**P**	**01 46 55.5**	**-8.7**
ARCES	**ARCESS Array B** comp=Z,3.5nm,1.0s,mb4.3,baz=87,slow=4.1,SNR=5.7	**47.49**	**335**	P	**P**	**01 47 16.1**	**+1.2**
ARCES	comp=Z,305nm,19.2s,MS4.3,baz=11,slow=38			LR	LR	02 08 45.1	
KWP	**Kalwaria** comp=Z,19nm,1.0s,mb5.1	**48.67**	**308**	*e*P	**P**	**01 47 25.4**	**+1.0**
KWP	**Kalwaria**	**48.67**	**308**	*e*P	**P**	**01 47 25.4**	**+1.1**
KWP	comp=Z,19nm,1.0s,mb5.1			pmax	pmax		
PSZ	**Piszkesteto** comp=Z,2.4nm,0.8s,mb4.2	**50.83**	**306**	*e*P	**P**	**01 47 41.2**	**+0.4**
PSZ	**Piszkesteto**	**50.83**	**306**	*e*P	**P**	**01 47 41.2**	**+0.4**
PSZ	comp=Z,2.0nm,0.8s,mb4.1			pmax	pmax		
MORC	**Moravsky Berou** comp=Z,4.1nm,1.1s,mb4.3	**51.94**	**309**	*e*P	**P**	**01 47 49.5**	**+0.5**
MORC	**Moravsky Berou**	**51.94**	**309**	*e*P	**P**	**01 47 49.5**	**+0.5**
MORC	comp=Z,4.0nm,1.1s,mb4.3			pmax	pmax		
NB2	**NORSAR Subarra** comp=Z,4.5nm,0.8s,mb4.5,baz=82,slow=7.4	**53.36**	**324**	P	**P**	**01 47 59.5**	**+0.2**
NOA	**NORSAR Array B** comp=Z,3.3nm,0.8s,mb4.3,baz=81,slow=7.4,SNR=7.8	**53.36**	**324**	P	**P**	**01 47 59.8**	**+0.5**
NOA	comp=Z,158nm,19.0s,MS4.1,baz=320,slow=38			LR	LR	02 12 14.6	
BRG	**Berggiesshubel** comp=Z,5.0nm,1.3s,mb4.3	**53.92**	**311**	*e*P	**P**	**01 48 05.9**	**+2.3**
BRG	comp=N,149nm,13.9s,MS4.2			pmax	pmax		
BRG	comp=E,88nm,16.8s,MS4.2			MLR	MLR		
BRG	comp=Z,184nm,20.1s,MS4.1			MLR	MLR		
BRG	**Berggiesshubel** comp=Z,8.5nm,1.3s,mb4.5	**53.92**	**311**	*e*P	**P**	**01 48 05.9**	**+2.3**
BRG	comp=N,249nm,13.9s						
BRG	comp=E,147nm,16.8s						
BRG	comp=Z,307nm,20.1s						
CLL	**Collm**	**54.39**	**312**	*e*P	**P**	**01 48 12.0**	**+5.0**
CLL	**Collm**	**54.39**	**312**	*e*pP	pP	01 48 12.0	+1.8
GEC2	**GERESS Array S**	**54.60**	**309**	*e*P	**P**	**01 48 09.7**	**+1.1**
GERES	**GERESS Array B** comp=Z,3.9nm,1.0s,mb4.4,baz=74,slow=5.7,SNR=10	**54.60**	**309**	P	**P**	**01 48 09.5**	**+0.9**
GRF	**Grafenberg Arr** comp=Z,5.0nm,0.9s,mb4.5	**55.92**	**310**	*e*P	**P**	**01 48 19.3**	**+1.2**
GRF				pmax	pmax		
GRF	**Grafenberg Arr** comp=Z,5.0nm,0.9s,mb4.5	**55.92**	**310**	*e*P	**P**	**01 48 19.3**	**+1.2**
GRF				pmax	pmax		
GRF	**Grafenberg Arr** comp=Z,5.0nm,0.9s,mb4.5	**55.92**	**310**	*e*P	**P**	**01 48 19.3**	**+1.2**
CDF	**Champ du Feu** comp=Z,29nm,1.5s,mb4.8	**58.79**	**310**	*e*P	**P**	**01 48 36.7**	**-1.7**
CDF	**Champ du Feu** comp=Z,14nm,1.5s,mb4.8	**58.79**	**310**	*e*P	**P**	**01 48 36.7**	**-1.7**
CDF	**Champ du Feu**	**58.79**	**310**	*e*P	**P**	**01 48 36.7**	**-1.7**
CDF	comp=Z,14nm,1.5s,mb4.8			pmax	pmax		
GIVF	**Givet**	**59.70**	**312**	*e*P	**P**	**01 48 43.2**	**-1.5**
BAIF	**Baives**	**60.09**	**312**	*e*P	**P**	**01 48 46.7**	**-0.7**
LPG	**La Plagne** comp=Z,35nm,1.3s,mb5.0	**60.17**	**307**	*e*P	**P**	**01 48 46.5**	**-1.5**
LPG	**La Plagne** comp=Z,18nm,1.3s,mb4.9	**60.17**	**307**	*e*P	**P**	**01 48 46.5**	**-1.5**
LPG	**La Plagne**	**60.17**	**307**	*e*P	**P**	**01 48 46.5**	**-1.5**
LPG	comp=Z,18nm,1.3s,mb4.9			pmax	pmax		
LPL	**La Plagne** comp=Z,23nm,1.1s,mb4.8	**60.18**	**307**	*e*P	**P**	**01 48 46.0**	**-2.0**
LPL	**La Plagne** comp=Z,11nm,1.1s,mb4.8	**60.18**	**307**	*e*P	**P**	**01 48 46.0**	**-2.0**
LPL	**La Plagne**	**60.18**	**307**	*e*P	**P**	**01 48 46.0**	**-2.0**
LPL	comp=Z,11nm,1.1s,mb4.8			pmax	pmax		
SMF	**Signal de Mont** comp=Z,40nm,1.3s,mb5.1	**61.60**	**309**	*e*P	**P**	**01 48 55.5**	**-2.2**
SMF	**Signal de Mont** comp=Z,20nm,1.3s,mb5.1	**61.60**	**309**	*e*P	**P**	**01 48 55.5**	**-2.2**
SMF	**Signal de Mont**	**61.60**	**309**	*e*P	**P**	**01 48 55.5**	**-2.2**
SMF	comp=Z,20nm,1.3s,mb5.1			pmax	pmax		
SSF	**Saint Saulge**	**61.65**	**309**	*e*P	**P**	**01 48 56.9**	**-1.1**
AVF	**Avril sur Loir** comp=Z,43nm,1.4s,mb5.1	**61.86**	**309**	*e*P	**P**	**01 48 56.4**	**-3.0**
AVF	**Avril sur Loir** comp=Z,22nm,1.4s,mb5.1	**61.86**	**309**	*e*P	**P**	**01 48 56.4**	**-3.0**
AVF	**Avril sur Loir**	**61.86**	**309**	*e*P	**P**	**01 48 56.4**	**-3.0**
AVF	comp=Z,22nm,1.4s,mb5.1			pmax	pmax		
BGF	**Bois d'Agland**	**62.27**	**309**	*e*P	**P**	**01 49 00.3**	**-1.9**

KEST	**Kesra**	**62.32**	**296**	LR	LR	02 22 08.8			
	comp=Z,45nm,19.2s,MS3.6,baz=339,slow=42								
WRAB	**Tennant Creek**	**70.49**	**134**	*eP*	**P**	**01 49 54.8**	**-0.3**		
	comp=Z,6.8nm,1.1s,mb4.5								
WRAB	**Tennant Creek**	**70.49**	**134**	*eP*	**P**	**01 49 54.8**	**-0.2**		
WRAB				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.5								
WRA	**Warramunga Arr**	**70.49**	**134**	P	**P**	**01 49 53.8**	**-1.2**		
	comp=Z,3.9nm,1.0s,mb4.3,baz=327,slow=6.7,SNR=17								
ASAR	**Alice Springs**	**73.17**	**137**	P	**P**	**01 50 09.8**	**-1.3**		
	comp=Z,1.8nm,0.9s,mb4.0,baz=322,slow=6.4,SNR=11								
LSZ	**Lusaka**	**76.27**	**240**	*eP*	**P**	**01 50 28.3**	**-1.0**		
	comp=Z,4.6nm,0.8s,mb4.5								
LSZ	**Lusaka**	**76.27**	**240**	*eP*	**P**	**01 50 28.3**	**-1.0**		
LSZ				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
TORD	**Torodi Ar. Bea**	**79.78**	**279**	P	**P**	**01 50 47.5**	**-1.5**		
	comp=Z,1.4nm,0.9s,mb3.9,baz=56,slow=5.2,SNR=6.3								
TORD				LR	LR	02 29 08.1			
	comp=Z,68nm,19.2s,MS4.0,baz=350,slow=38								
YKA	**Yellowknife Ar**	**80.29**	**11**	LR	LR	02 28 23.1			
	comp=Z,31nm,19.5s,MS3.7,baz=70,slow=37								
STKA	**Stephens Creek**	**83.81**	**137**	LR	LR	02 36 11.2			
	comp=Z,64nm,19.9s,MS4.0,baz=24,slow=41								
BOSA	**Boshof**	**87.40**	**232**	LR	LR	02 26 38.2			
	comp=Z,89nm,18.6s,MS4.2,baz=244,slow=33								
ULM	**Lac du Bonnet**	**94.22**	**3**	LR	LR	02 42 09.2			
	comp=Z,80nm,18.4s,MS4.2,baz=294,slow=40								
VNA2	**Neumayer--Watz**	**125.25**	**204**	*e*	PKPdf	01 57 42.9	+3.0		
	baz=14,slow=3.1								
VNA2				*e*		01 57 45.6			
VNA3	**Neumayer Olymp**	**126.02**	**203**	*e*	PKPdf	01 57 44.2	+2.8		
VNA3				*e*		01 57 46.8			

NEIC ***16*** *01:53:05.9,2297S×7047W,h35km,mb4.5/9,ML4.1(GUC), After GUC.*
GUC ***16*** *01:53:05.7±2.2,2293S×7054W,h31km±13km,ML4.3*
IDC ***16*** *01:53:06.2±3.2,2304S×7038W,h31km±21km,mb3.8/7, mb1 4.0/11,mb1mx3.9/18,mbtmp3.9/11,ML4.2/1,MS3.5/6, Ms1 3.5/6,ms1mx3.1/27,Error ellipse: s-maj=22.9km s-min=21.1km az=115.0*
ISCJB ***16*** *01:53:07.4±0.6,2296S±004×7042W±006,h57km±5km, mb4.2/14,MS3.8/3,Error ellipse: s-maj=10.3km s-min=5.3km az=17.2*

ISC 16 01:53:07.3±0.7,2294S±003×7052W±006,h39km±7km, h29km±1.0km:pP-P,n44,σ1s22/50,mb4.2/14,MS3.8/3, 3C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CEN1	**Los Morros**	**0.53**	**147**	↑*iP*	**Pn**	**01 53 18.5**		**+0.1**
CEN1				*i* S	**Sn**	**01 53 27.7**		**+1.5**
CEN1				AML	AML	01 53 29.0		
	comp=E,12μm,0.9s							
ANCH	**Antofagasta**	**0.74**	**172**	↓*iP*	**Pn**	**01 53 22.8**		**+1.5**
ANCH				*i* S	**Sn**	**01 53 32.7**		**+1.4**
PB06	**Plate Boundary**	**0.91**	**75**	↓*eP*	**Pn**	**01 53 22.4**		**-1.2**
PB06				*i* S	**Sn**	**01 53 34.4**		**-1.0**
PB04	**Plate Boundary**	**1.17**	**55**	↓*iP*	**Pn**	**01 53 19.0**		**-8.1**
PB04				*i* S	**Sn**	**01 53 29.0**		**-13**
PB04				AML	AML	01 53 31.1		
	comp=E,33μm,0.4s							
PB07	**Plate Boundary**	**1.34**	**26**	↑*iP*	**Pn**	**01 53 29.0**		**-0.5**
PB07				*i* S	**Sn**	**01 53 46.4**		**+0.2**
LVC	**Limon Verde**	**1.52**	**78**	Pg	**Pn**	**01 53 32.6**		**+0.7**
LVC				Lg		01 53 52.3		
	comp=E,2μm,0.3s,SNR=79							
LVC	**Limon Verde**	**1.52**	**78**	Pg	**Pn**	**01 53 32.6**		**+0.7**
LVC				Lg		01 53 52.3		
LVC	**Limon Verde**	**1.52**	**78**	↑*iP*	**Pn**	**01 53 31.8**		**-0.1**
LVC				*i* S	**Sn**	**01 53 52.1**		**+1.5**
LVC				AML	AML	01 53 55.1		
	comp=N,8μm,0.4s							
PB01	**Plate Boundary**	**2.12**	**27**	*eP*	**Pn**	**01 53 40.0**		**-0.2**
PB01				*i* S	**Sn**	**01 54 09.0**		**+3.7**
PB01				AML	AML	01 54 11.8		
	comp=E,5μm,0.4s							
SPCH	**San Pedro de A**	**2.14**	**90**	*eP*	**Pn**	**01 53 44.0**		**+3.5**
SPCH				*i* S	**Sn**	**01 54 10.5**		**+4.7**
LCO	**Las Campanas**	**6.04**	**182**	*ePn*	**Pn**	**01 54 31.8**		**-2.4**
	comp=E,56nm,0.8s							
LCO				*eSn*	**Sn**	**01 55 40.3**		**-1.8**
ARE	**Arequipa**	**6.51**	**352**	*eP*	**Pn**	**01 54 39.0**		**-1.6**
ARE				*eS*	**Sn**	**01 55 34.0**		**-20**
LPAZ	**La Paz**	**6.99**	**19**	Pn	**Pn**	**01 54 49.7**		**+2.5**
	comp=E,1.9nm,0.3s,baz=182,slow=12,SNR=21							
LPAZ				Sn	**Sn**	**01 56 23.1**		**+18**
	comp=E,0.7nm,0.3s,baz=230,slow=9.9,SNR=1.8							
LPAZ				LR	LR	01 57 45.9		
	comp=E,356nm,19.4s,baz=208,slow=40							
CFAA	**Coronel Fontan**	**8.86**	**167**	Pn	**Pn**	**01 55 10.6**		**-2.2**
	comp=E,0.2nm,0.3s,baz=358,slow=15,SNR=13							
CFAA				Sn	**Sn**	**01 56 53.1**		**+1.8**
	comp=E,0.2nm,0.3s,baz=48,slow=5.7,SNR=3.8							
CFAA				LR	LR	01 58 57.8		
	comp=E,45nm,21.2s,baz=333,slow=40							
SIV	**San Ignacio**	**11.28**	**54**	Pn	**Pn**	**01 55 44.0**		**-1.9**
	comp=E,4.2nm,0.3s,baz=240,slow=12,SNR=38							
SIV				Sn	**Sn**	**01 57 51.1**		**+0.4**
	comp=E,0.3nm,0.3s,baz=140,slow=23,SNR=5.6							
PLCA	**Paso Flores**	**17.74**	**180**	P	**Pn**	**01 57 09.8**		**-1.4**
	comp=E,0.1nm,0.3s,baz=9.5,slow=12,SNR=2.1							
PLCA				LR	LR	02 04 29.2		
	comp=E,139nm,18.0s,baz=0.7,slow=39							
PLCA	**Paso Flores**	**17.74**	**180**	*eP*	**Pn**	**01 57 10.7**		**-0.5**
	comp=E,5.2nm,0.9s							
PLCA				LR	LR	02 04 29.2		
BDFB	**Brasilia**	**22.43**	**75**	P	**P**	**01 58 02.4**		**-0.4**
	comp=E,2.2nm,0.7s,mb3.7,baz=257,slow=20,SNR=5.9							
BDFB				LR	LR	02 08 02.9		
	comp=E,124nm,18.2s,MS3.4,baz=73,slow=40							
RCBR	**Riachuelo**	**37.45**	**68**	*eP*	**P**	**02 00 16.8**		**-0.5**
	comp=E,16nm,0.8s,mb4.9							
VNA3	**Neumayer Olymp**	**59.20**	**161**	*e*	**P**	**02 03 04.3**		**+0.3**
VNA3				*e*	pP	02 03 13.3		-2.2
VNA2	**Neumayer--Watz**	**59.80**	**160**	*e*	**P**	**02 03 08.7**		**+0.6**
	baz=293,slow=8.8							
VNA2				*e*	pP	02 03 17.3		-2.3
TXAR	**Lajitas Array**	**60.99**	**327**	P	**P**	**02 03 17.3**		**+0.5**
	comp=E,0.2nm,0.5s,mb3.5,baz=162,slow=9.1,SNR=2.4							
WVT	**Waverly**	**60.99**	**344**	*eP*	**P**	**02 03 16.0**		**-0.7**
	comp=E,5.9nm,0.9s,mb4.7							
SNAA	**Sanae**	**61.42**	**161**	*e*	**P**	**02 03 17.8**		**-1.3**
SNAA				*e*	pP	02 03 26.3		-4.3
SNAA	**Sanae**	**61.42**	**161**	*eP*	**P**	**02 03 17.6**		**-1.5**
	comp=E,10nm,1.4s,mb4.8							
SDCO	**Great Sand Dun**	**68.75**	**331**	*eP*	**P**	**02 04 08.7**		**+1.6**
	comp=E,2.1nm,0.8s,mb4.1							
DBIC	**Dimbokro**	**70.57**	**74**	P	**P**	**02 04 18.2**		**-0.8**
	comp=E,4.0nm,0.7s,mb4.5,baz=190,slow=6.7,SNR=8.5							
DBIC	**Dimbokro**	**70.57**	**74**	*eP*	**P**	**02 04 18.1**		**-0.9**
	comp=E,9.8nm,1.0s,mb4.7							
PDAR	**Pinedale Array**	**74.63**	**331**	P	**P**	**02 04 43.1**		**+0.7**
	comp=E,0.2nm,0.3s,mb3.5,baz=113,slow=9.1,SNR=2.3							
PDAR				LR	LR	02 40 43.3		
	comp=E,78nm,18.9s,MS4.0,baz=167,slow=38							
HWUT	**Hardware Ranch**	**74.63**	**329**	*eP*	**P**	**02 04 43.4**		**+0.9**
	comp=E,1.5nm,0.7s,mb4.0							
NVAR	**Mina Array Bea**	**75.72**	**323**	P	**P**	**02 04 50.9**		**+2.0**
	comp=E,0.3nm,0.6s,mb3.4,baz=139,slow=4.4,SNR=2.9							
PAHR	**Pah Rah Range**	**77.22**	**323**	*eP*	**P**	**02 04 58.0**		**+0.8**
	comp=E,3.6nm,0.8s,mb4.3							
HLID	**Hailey**	**77.48**	**329**	*eP*	**P**	**02 04 58.7**		**+0.1**
	comp=E,2.9nm,1.1s,mb4.1							
TOA0	**Torodi Ar. Sit**	**79.24**	**71**	*eP*	**P**	**02 05 07.9**		**-1.1**
TORD	**Torodi Ar. Bea**	**79.24**	**71**	P	**P**	**02 05 08.3**		**-0.7**
	comp=E,6.3nm,0.6s,mb4.7,baz=258,slow=5.3,SNR=54							
TORD	**Torodi Ar. Bea**	**79.24**	**71**	P	**P**	**02 05 08.3**		**-0.7**
MDT	**Midelt**	**83.81**	**51**	LR	LR	02 43 38.0		
	comp=E,57nm,18.2s,MS4.0,baz=190,slow=36							
BOSA	**Boshof**	**84.08**	**118**	P	**P**	**02 05 34.2**		**-0.2**
	comp=E,3.3nm,0.7s,mb4.6,baz=214,slow=3.6,SNR=9.5							
ASAR	**Alice Springs**	**127.94**	**209**	PKP	PKPdf	02 12 08.8		-0.9
	comp=E,0.6nm,0.7s,baz=111,slow=2.0,SNR=7.2							
WRA	**Warramunga Arr**	**130.96**	**212**	PKP	PKPdf	02 12 15.7		+0.3
	comp=E,0.6nm,0.7s,baz=155,slow=1.7,SNR=11							
ZALV	**Zalesovo Beam**	**143.88**	**25**	PKP	PKPdf	02 12 38.0		0.0
	comp=E,1.2nm,0.6s,baz=339,slow=3.7,SNR=5.7							
MK31	**Makanchi Array**	**147.67**	**36**	*ePKPbc*	PKPbc	02 12 45.3		-2.2
MKAR	**Makanchi Array**	**147.67**	**36**	PKPbc	PKPbc	02 12 45.4		-2.2
	comp=E,2.0nm,0.8s,baz=308,slow=2.9,SNR=18							
SONM	**Songino Array**	**155.04**	**5**	PKP	PKPdf	02 12 57.3		+1.4
	comp=E,0.4nm,0.9s,baz=55,slow=5.5,SNR=2.6							

TRN ***16*** *02:01:09.2,1985N×6452W,h3km*
RSPR ***16*** *02:01:11.1,20.19N×6433W,h48km±34km,MD3.7/8, MD3.7/8*

ISC 16 02:01:09.4±2.0,2003N±009×645W±01,h3km±12km,n11, σ0s71/17,6C-5D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ABV	**Anegada**	**1.30**	**175**	↑*eP*	**Pg**	**02 01 33.5**		**-0.9**
ABV				*eS*	**Sg**	**02 01 51.8**		**+0.5**
TBVI	**Tortola**	**1.61**	**185**	↓*eP*	**Pn**	**02 01 38.5**		**-0.3**
TBVI				*eS*	**Sn**	**02 02 00.2**		**+0.1**
STVI	**Saint Thomas**	**1.73**	**196**	↓*eP*	**Pn**	**02 01 40.0**		**-0.4**
STVI	**Saint Thomas**	**1.73**	**196**	↓*eP*	**Pn**	**02 01 40.4**		**-0.1**
STVI				*eS*	**Sn**	**02 02 02.4**		**-0.7**
MTP	**Monte Pirata**	**2.19**	**208**	↓*eP*	**Pn**	**02 01 47.2**		**+0.6**
CBYP	**Canovanas**	**2.19**	**217**	↓*eP*	**Pn**	**02 01 46.5**		**-0.3**
CBYP				*eS*	**Sn**	**02 02 14.6**		**+0.1**
CDVI	**St. Croix**	**2.29**	**187**	↓*eP*	**Pn**	**02 01 48.5**		**+0.4**
HUMP	**Col San Antoni**	**2.29**	**215**	↓*eP*	**Pn**	**02 01 47.9**		**-0.3**
HUMP				*eS*	**Sn**	**02 02 18.2**		**+1.2**
AOPR	**Arecibo Observ**	**2.74**	**233**	↓*eP*	**Pn**	**02 01 54.0**		**-0.3**
AOPR	**Arecibo Observ**	**2.74**	**233**	↓*eP*	**Pn**	**02 01 54.2**		**-0.1**
CRPR	**Cabo Rojo, PR**	**3.22**	**232**	↓*eP*	**Pn**	**02 02 02.3**		**+1.5**
CRPR				*eS*	**Sn**	**02 02 38.5**		**-1.3**

ISCJB ***16*** *02:13:15.8±0.5,2236S±004×6842W±006,h108km±4km, mb4.2/28,Error ellipse: s-maj=9.7km s-min=6.9km az=167.1*
IDC ***16*** *02:13:17.3±0.6,2245S×6846W,h107km±5km,mb3.9/9, mb1 4.0/11,mb1mx3.9/16,mbtmp3.8/11,Error ellipse: s-maj=17.9km s-min=16.5km az=53.0*
NEIC ***16*** *02:13:17.9,2236S×6867W,h99km,mb4.3/23, MD4.2(GUC),After GUC.*
GUC ***16*** *02:13:17.9±0.6,2236S×6867W,h99km±4km,MD4.2, ML4.3*

ISC 16 02:13:16.8±0.5,2235S±004×6841W±006,h101km±4km, h113km±1.4km:pP-P,n64,σ0s98/74,mb4.2/28,3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
LVC	**Limon Verde**	**0.53**	**240**	P	**Pn**	**02 13 33.5**		**+0.7**
LVC				S	**Sn**	**02 13 45.9**		**+1.0**
	2μm,0.3s,SNR=50							
LVC	**Limon Verde**	**0.53**	**240**	P	**Pn**	**02 13 33.5**		**+0.7**
LVC				S	**Sn**	**02 13 45.9**		**+1.0**
LVC	**Limon Verde**	**0.53**	**240**	*i* P	**Pn**	**02 13 33.5**		**+0.6**
LVC				*i* S	**Sn**	**02 13 45.0**		**+0.1**
SPCH	**San Pedro de A**	**0.59**	**161**	*i* P	**Pn**	**02 13 35.8**		**+2.5**
SPCH				*i* S	**Sn**	**02 13 50.0**		**+4.3**
SPCH	**San Pedro de A**	**0.59**	**161**	*i* P	**Pn**	**02 13 35.8**		**+2.5**
SPCH				*i* S	**Sn**	**02 13 50.0**		**+4.3**
SPCH				AML	AML	02 13 51.0		
	comp=E,16μm,0.5s							
PB04	**Plate Boundary**	**1.00**	**275**	↑*iP*	**Pn**	**02 13 43.1**		**+5.8**
PB04				*i* S	**Sn**	**02 14 03.6**		**+11**
PB04				AML	AML	02 14 08.3		
	comp=E,6μm,0.4s							
PB06	**Plate Boundary**	**1.13**	**251**	*i* P	**Pn**	**02 13 38.0**		**-0.7**
PB06				*i* S	**Sn**	**02 13 54.5**		**-0.7**
PB07	**Plate Boundary**	**1.50**	**294**	*eP*	**Pn**	**02 13 42.7**		**-0.4**
PB07				*i* S	**Sn**	**02 14 02.0**		**-1.1**
PB01	**Plate Boundary**	**1.64**	**322**	↑*iP*	**Pn**	**02 13 44.9**		**+0.1**
PB01				*i* S	**Sn**	**02 14 06.0**		**-0.1**
PB01				AML	AML	02 14 11.8		
	comp=N,4μm,0.4s							
CEN1	**Los Morros**	**1.95**	**238**	↑*iP*	**Pn**	**02 13 50.6**		**+1.9**
CEN1				*i* S	**Sn**	**02 14 15.4**		**+2.3**
CEN1				AML	AML	02 14 23.0		
	comp=N,2μm,0.7s							
ANCH	**Antofagasta**	**2.27**	**234**	*eP*	**Pn**	**02 13 52.4**		**-0.5**
ANCH				*i* S	**Sn**	**02 14 18.3**		**-2.2**
ANCH	**Antofagasta**	**2.27**	**234**	*eP*	**Pn**	**02 13 52.4**		**-0.5**
ANCH				*i* S	**Sn**	**02 14 18.3**		**-2.2**
ANCH				AML	AML	02 14 27.1		
	comp=E,3μm,0.7s							
LPAZ	**La Paz**	**6.04**	**3**	P	**Pn**	**02 14 46.8**		**+3.1**
	comp=E,1.9nm,0.3s,baz=207,slow=4.4,SNR=31							
LPAZ				S	**Sn**	**02 15 39.5**		**-12**
	comp=E,1.8nm,0.3s,baz=174,slow=11,SNR=7.5							
LCO	**Las Campanas**	**6.95**	**197**	*ePn*	**Pn**	**02 14 52.4**		**-3.6**
	comp=E,54nm,0.8s							
LCO				*eSn*	**Sn**	**02 16 03.9**		**-10**
CFAA	**Coronel Fontan**	**9.22**	**179**	P	**Pn**	**02 15 25.0**		**-1.8**
	comp=E,0.1nm,0.3s,baz=357,slow=13,SNR=7.8							
CFAA				S	**Sn**	**02 17 02.2**		**-6.6**
	comp=E,0.1nm,0.3s,baz=347,slow=19,SNR=2.2							
CFAA	**Coronel Fontan**	**9.22**	**179**	P	**Pn**	**02 15 25.0**		**-1.8**
CFAA				S	**Sn**	**02 17 02.2**		**-6.6**
SIV	**San Ignacio**	**9.38**	**49**	P	**Pn**	**02 15 27.2**		**-1.9**
	comp=E,11nm,0.3s,baz=259,slow=8.5,SNR=225							
SIV				S	**Sn**	**02 17 06.2**		**-6.7**
	comp=E,2.2nm,0.3s,baz=295,slow=19,SNR=5.9							
PLCA	**Paso Flores**	**18.42**	**185**	P	**P**	**02 17 24.4**		**+0.4**
	comp=E,0.1nm,0.3s,baz=355,slow=11,SNR=2.6							
BDFB	**Brasilia**	**20.39**	**74**	P	**P**	**02 17 45.5**		**-0.4**
	comp=E,4.3nm,0.9s							
PLCA	**Paso Flores**	**18.42**	**185**	*eP*	**P**	**02 17 25.4**		**+1.3**
	comp=E,1.7nm,0.4s,baz=218,slow=17,SNR=15							
OTAV	**Otavalo**	**24.49**	**335**	*eP*	**P**	**02 18 27.9**		**+1.2**
	comp=E,2.3nm,0.8s,mb3.6							
HKT	**Hockley**	**58.30**	**332**	*eP*	**P**	**02 23 00.8**		**-0.3**
	comp=E,6.4nm,1.0s,mb4.6							
VNA3	**Neumayer Olymp**	**59.13**	**161**	*e*	**P**	**02 23 06.8**		**+0.4**
VNA3				*e*	pP	02 23 32.9		+1.8
VNA1	**Neumayer--Stat**	**59.33**	**160**	*e*	**P**	**02 23 08.9**		**+1.1**
VNA1				*e*	pP	02 23 35.8		+3.3
VNA2	**Neumayer--Watz**	**59.70**	**161**	*e*	**P**	**02 23 11.2**		**+0.9**
	baz=298,slow=8.1							
VNA2				*e*	pP	02 23 38.0		+2.9
JCT	**Junction City**	**60.56**	**329**	*eP*	**P**	**02 23 16.3**		**-0.4**
	comp=E,9.9nm,0.8s,mb4.9							
WVT	**Waverly**	**60.99**	**342**	*eP*	**P**	**02 23 17.9**		**-1.7**
	comp=E,4.2nm,0.8s,mb4.5							
SNAA	**Sanae**	**61.33**	**161**	*e*	**P**	**02 23 20.2**		**-1.2**
SNAA				*e*	pP	02 23 47.0		+0.8
SNAA	**Sanae**	**61.33**	**161**	*eP*	**P**	**02 23 20.0**		**-1.4**
	comp=E,4.4nm,0.8s,mb4.5							
TXAR	**Lajitas Array**	**61.59**	**325**	P	**P**	**02 23 23.4**		**-0.3**
	comp=E,0.5nm,0.6s,mb3.7,baz=149,slow=8.8,SNR=5.9							
WMOK	**Wichita Mounta**	**63.68**	**332**	*eP*	**P**	**02 23 36.2**		**-1.2**
	comp=E,1.7nm,0.7s,mb4.0							
ANMO	**Albuquerque**	**67.46**	**327**	*eP*	**P**	**02 24 02.1**		**+0.3**
	comp=E,4.4nm,0.8s,mb4.3							
CBKS	**Cedar Bluff**	**67.55**	**334**	*eP*	**P**	**02 24 02.1**		**-0.2**
	comp=E,17nm,0.9s,mb4.9							
DBIC	**Dimbokro**	**68.53**	**73**	P	**P**	**02 24 08.9**		**-0.1**
	comp=E,5.5nm,0.6s,mb4.5,baz=207,slow=12,SNR=12							
DBIC	**Dimbokro**	**68.53**	**73**	*eP*	**P**	**02 24 08.7**		**-0.3**
	comp=E,6.0nm,0.7s,mb4.5							
SDCO	**Great Sand Dun**	**69.21**	**329**	*eP*	**P**	**02 24 13.2**		**+0.5**
	comp=E,4.1nm,0.9s,mb4.3							
RSSD	**Black Hills**	**73.76**	**334**	*eP*	**P**	**02 24 40.2**		**+0.4**
	comp=E,2.7nm,0.8s,mb4.0							
DUG	**Dugway**	**74.72**	**326**	*eP*	**P**	**02 24 45.7**		**+0.2**
	comp=E,3.2nm,1.0s,mb4.0							
PDAR	**Pinedale Array**	**75.07**	**330**	P	**P**	**02 24 47.6**		**+0.1**
	comp=E,0.5nm,0.6s,mb3.5,baz=143,slow=7.5,SNR=5.3							
BW06	**Boulder Array**	**75.07**	**330**	*eP*	**P**	**02 24 47.5**		**0.0**
	comp=E,1.9nm,1.0s,mb3.8							
HWUT	**Hardware Ranch**	**75.14**	**328**	*eP*	**P**	**02 24 48.0**		**0.0**
	comp=E,2.8nm,0.7s,mb4.1							
LOHW	**Long Hollow**	**76.21**	**330**	*eP*	**P**	**02 24 54.4**		**+0.4**
	comp=E,2.3nm,0.6s,mb4.1							
TPAW	**Teton Pass**	**76.28**	**330**	*eP*	**P**	**02 24 54.4**		**0.0**
	comp=E,4.4nm,0.9s,mb4.2							
ELK	**Elko**	**76.38**	**325**	*eP*	**P**	**02 24 55.5**		**+0.5**
MOOW	**Moose Ponds**	**76.38**	**330**	*eP*	**P**	**02 24 54.9**		**0.0**
	comp=E,1.9nm,0.7s,mb3.9							
NVAR	**Mina Array Bea**	**76.44**	**322**	P	**P**	**02 24 56.1**		**+0.7**
	comp=E,0.6nm,0.6s,mb3.5,baz=157,slow=7.1,SNR=7.9							
NVAR				pP	pP	02 25 24.6		+3.4
	comp=E,0.1nm,0.5s,baz=228,slow=49,SNR=2.5							
TOA0	**Torodi Ar. Sit**	**77.21**	**70**	*eP*	**P**	**02 24 59.5**		**-0.7**
TOA0				*ePP*	pP	02 25 28.9		+2.8
TORD	**Torodi Ar. Bea**	**77.21**	**70**	P	**P**	**02 24 59.6**		**-0.6**
	comp=E,2.7nm,0.3s,mb4.4,baz=257,slow=5.5,SNR=101							
TORD				pP	pP	02 25 29.5		+3.5
	comp=E,4.2nm,0.8s,baz=255,slow=5.2,SNR=5.8							
SUR	**Sutherland**	**77.75**	**120**	*eP*	**P**	**02 25 01.6**		**-1.5**

	comp=E,15nm,0.9s,mb4.7								
HLID	**Hailey**	**78.00**	**328**	*eP*	**P**	**02 25 04.7**		**+0.7**	
	comp=E,4.3nm,0.8s,mb4.2								
MCMT	**McKenzie Canyo**	**78.18**	**329**	*eP*	**P**	**02 25 06.1**		**+1.1**	
BOSA	**Boshof**	**82.64**	**118**	P	**P**	**02 25 29.4**		**0.0**	
	comp=E,5.2nm,0.9s,mb4.3,baz=333,slow=8.1,SNR=3.8								
BOSA	**Boshof**	**82.64**	**118**	*eP*	**P**	**02 25 29.4**		**0.0**	
	comp=E,6.4nm,0.9s,mb4.5								
MAW	**Mawson**	**83.39**	**163**	P	**P**	**02 25 33.0**		**+0.5**	
	comp=E,3.0nm,0.5s,mb4.4,baz=211,slow=5.9,SNR=4.2								
LBTB	**Lobatse**	**84.25**	**115**	*eP*	**P**	**02 25 38.0**		**+0.3**	
	comp=E,4.3nm,0.8s,mb4.3								
LSZ	**Lusaka**	**90.21**	**107**	*eP*	**P**	**02 26 07.2**		**+0.6**	
	comp=E,1.6nm,0.7s,mb4.3								
YKA	**Yellowknife Ar**	**92.14**	**340**	P	**P**	**02 26 13.9**		**-0.5**	
	comp=E,1.5nm,0.4s,mb4.5,baz=141,slow=4.6,SNR=12								
ASAR	**Alice Springs**	**129.37**	**207**	PKP	PKPdf	02 32 13.8		-0.4	
	comp=E,1.4nm,0.7s,baz=154,slow=2.1,SNR=17								
ASAR				pPKP	pPKPdf	02 32 42.4		+0.5	
	comp=E,0.1nm,0.3s,baz=157,slow=2.8,SNR=2.4								
WRA	**Warramunga Arr**	**132.46**	**210**	PKP	PKPdf	02 32 20.0		-0.2	
	comp=E,1.0nm,0.5s,baz=155,slow=1.7,SNR=35								
WRAB	**Tennant Creek**	**132.46**	**210**	*ePKPdf*	PKPdf	02 32 19.7		-0.5	
ZALV	**Zalesovo Beam**	**142.51**	**26**	PKhKP		02 32 33.5			
	comp=E,1.4nm,0.5s,baz=348,slow=6.7,SNR=4.9								
ZALV				PKP	PKPdf	02 32 38.0		+0.4	
	comp=E,2.9nm,0.5s,baz=272,slow=1.9,SNR=12								
MK31	**Makanchi Array**	**146.04**	**37**	*ePKPbc*	PKPbc	02 32 44.1		-0.8	
MKAR	**Makanchi Array**	**146.04**	**37**	PKPbc	PKPbc	02 32 44.3		-0.6	
	comp=E,6.8nm,0.8s,baz=311,slow=2.9,SNR=52								
SONM	**Songino Array**	**154.23**	**8**	PKP	PKPdf	02 32 57.5		+0.8	
	comp=E,1.0nm,0.8s,baz=319,slow=2.7,SNR=6.0								
SONM				PKPbc	PKPbc	02 33 05.1		+0.2	
	comp=E,0.9nm,0.5s,baz=294,slow=1.8,SNR=5.9								
SONM				PKPab	PKPab	02 33 20.0		+0.9	
	comp=E,0.9nm,0.7s,baz=327,slow=4.6,SNR=4.6								

CASC ***16*** *03:12:40.0±2.5,370S×7724W,h49km±104km,mb5.6, mb6.3(NEIC)*
BGS ***16*** *03:12:49.0±1.3,208S×7820W,h33km,mb6.7,MS6.0*
IGQ ***16*** *03:12:52.1,285S×7798W,h155km±4km,Mb5.9,Ms6.0, Mw6.8,Error ellipse: s-maj=4.8km s-min=2.5km az=56.9*
ISCJB ***16*** *03:12:58.5±0.1,236S±002×7790W±001,h122km, mb6.3/416,Error ellipse: s-maj=2.9km s-min=1.7km az=30.6*
MOS ***16*** *03:12:58.6±0.8,223S×7794W,h120km,mb6.2/111, MS5.9/24,Error ellipse: s-maj=5.8km s-min=4.1km az=75.7*
BJI ***16*** *03:12:59.1,230S×7780W,h122km,mB6.6*
IGIL ***16*** *03:12:59.7,230S×7779W,h119

BUS Buena Vista 13.23 333 eP Pn 03 16 04.1 +0.5
SDV Santo Domingo 13.24 33 P Pn 03 16 02.6 -1.1
17nm,0.3s,baz=235,slow=13,SNR=211
QCR Quepos 13.30 332 eP Pn 03 16 04.5 0.0
LIO Limon 13.33 337 eP Pn 03 16 06.8 +1.9
LCR2 La Lucha 2 13.50 333 eP Pn 03 16 10.1 +3.0
LAJ Bijagual 13.66 333 eP Pn 03 16 10.6 +1.4
SJS Escuela Geolog 13.70 333⇑ eP Pn 03 16 09.2 -0.4
SJS eS Sn 03 18 49.1 +8.2
PRS1 Puriscal 13.86 332 eP Pn 03 16 13.3 +1.7
CGA2 Cerro Gallo 2 13.96 332 eP Pn 03 16 16.1 +3.2
TRTC Tortuguero 14.12 335 eP Pn 03 16 15.2 +0.2
JCR Jicaral 14.13 329 eP Pn 03 16 16.0 +0.8
FORC Fortuna 14.45 332 eP Pn 03 16 21.0 +1.8
VCR Vista de Mar 14.64 328 eP Pn 03 16 21.4 -0.2
CUI Cuipilapa 14.85 331 eP Pn 03 16 24.9 +0.6
LIM1 Limonal 14.93 330 eP Pn 03 16 26.3 +1.1
ARE Arequipa 15.34 157⇓ iP Pn 03 16 32.5 +2.1
ARE eS S 03 19 18.0 -10
CONN Concepcion 15.86 331 eP Pn 03 16 38.0 +1.1
APON Apoyo 16.38 330 eP Pn 03 16 45.9 +2.7
APON AML AML 03 16 56.0
comp=Z,36nm,1.1s
CRUN El Crucero 16.55 329 eP Pn 03 16 47.9 +2.5
TICN Ticuantepe 16.56 330 eP Pn 03 16 48.5 +3.0
WILN Americas 2 16.64 330 eP Pn 03 16 47.9 +1.3
MGAN Managua 16.66 330 P Pn 03 16 48.4 +1.7
TISN Laguna Tiscapa 16.67 330 eP Pn 03 16 48.1 +1.2
CSAN 16.78 329 eP Pn 03 16 49.5 +1.3
HUEN 16.79 330 eP Pn 03 16 48.4 +0.1
HUEN eP 03 16 49.9
LPAZ La Paz 16.81 146 P Pn 03 16 46.1 -2.5
comp=Z,3.3nm,0.3s,baz=328,slow=14,SNR=68
LPAZ S S 03 19 52.4 -3.7
comp=Z,12nm,0.3s,baz=148,slow=25,SNR=3.9
LPAZ LR LR 03 23 36.2
comp=Z,55µm,20.7s,baz=200,slow=38
LPAZ La Paz 16.81 146 ePn Pn 03 16 46.0 -2.5
comp=Z,18nm,0.1s
LPAZ La Paz 16.81 146 P Pn 03 16 46.1 -2.4
LPAZ S S 03 19 52.4 -3.7
LPAZ pmax pmax
comp=Z,3.0nm,0.3s
LPAZ smax
comp=N,12nm,0.3s
LPAZ MLR MLR
comp=Z,55µm,20.7s
COPN Copaltepe 16.87 329 eP Pn 03 16 49.1 -0.2
COPN eP 03 16 50.4
MOMN Momotombo 17.03 330 eP Pn 03 16 52.7 +1.4
MIRN Miramar 17.15 329 eP Pn 03 16 53.8 +1.1
CNGN Cerro Negro 17.19 329 P Pn 03 16 54.0 +0.8
CNGN Cerro Negro 17.19 329 eP Pn 03 16 52.9 -0.2
CNGN ⇑eP 03 16 54.1
CNGN AMb AMB 03 17 01.7
comp=N,768nm,1.6s
CNGN AML AML 03 17 27.5
comp=Z,50nm,0.7s
TEL3 Telica 3 17.33 329 eP Pn 03 16 56.5 +1.7
CRIN San Cristobal 17.54 329 P Pn 03 16 58.4 +1.0
CRIN San Cristobal 17.54 329 eP Pn 03 16 58.1 +0.7
CRIN AML AML 03 17 23.3
comp=Z,259nm,0.7s
PCRV Puerto La Cruz 18.06 46 P P 03 17 01.7 -0.7
comp=Z,43nm,0.3s,baz=217,slow=9.2,SNR=99
PCRV S S 03 20 21.7 -1.4
comp=Z,6.8nm,0.3s,baz=345,slow=17,SNR=1.7
CNCH Conchagua 18.44 328 eP x 03 17 07.8
CNCH eP x 03 17 08.1
BLLM Bellamira 18.79 327 eP x 03 17 11.8
VSM San Miguel 18.80 327 eP x 03 17 12.0
VSM eP x 03 17 12.6
TGUH Tegucigalpa,Un 18.81 330 ePn Pn 03 17 10.3 -2.2
comp=Z,4µm,1.4s
TGUH eScP ScP 03 24 57.5 +0.3
TGUH Tegucigalpa,Un 18.81 330 eP P 03 17 09.6 -0.9
TGUH eP 03 17 12.4
CAHU Cacacuatique 19.05 327 eP x 03 17 13.8
CAHU eP x 03 17 14.9
LFRS El Faro 19.40 325 eP x 03 17 18.4
SNET Serv Nac Est T 19.55 325 eP x 03 17 19.2
BOQS Boqueron 19.62 325 eP x 03 17 21.1
BOQS eP x 03 17 21.4
SNJE San Jose 19.91 324 eP x 03 17 23.5
RTR El Retiro 19.96 324 eP x 03 17 23.7
PCJ Portland Cotta 19.96 2⇑ eP P 03 17 22.7 -0.3
MCJ Malvern 20.14 0⇑ eP P 03 17 26.4 +1.5
RBDL Robledal 20.15 325 eP x 03 17 25.4
HOJ Hope 20.24 3⇑ eP P 03 17 27.6 +1.5
STH Stony Hill 20.31 3⇑ eP P 03 17 27.6 +0.8
GWJ Greenwich 20.31 3⇑ eP P 03 17 27.5 +0.7
CVJ Coleyville 20.44 1⇑ eP P 03 17 30.0 +1.9
BNJ Bonny Gate 20.55 2⇑ eP P 03 17 31.1 +1.8
TCE Chacachacare 20.56 51 eP P 03 17 29.2 -0.3
TCE eP 03 21 17.4
TPP Pointe-a-Pierr 20.56 52 eP P 03 17 31.3 +1.8
TPP eP 03 21 18.6
TRN Trinidad (W) 20.80 51 eP P 03 17 31.6 -0.4
TRN eP 03 21 18.1
TBH Brigand Hill 20.96 52 eP P 03 17 34.3 +0.5
TBH eP 03 21 27.2
SIV San Ignacio 21.34 130 P P 03 17 37.8 0.0
comp=Z,682nm,1.1s,mb5.9,baz=315,slow=12,SNR=240
SIV S S 03 21 26.6 -1.3
comp=Z,112nm,0.7s,baz=309,slow=23,SNR=2.2
GRW Mount Saint Ca 21.55 48 eP P 03 17 38.3 -1.7
TPR Prospect 21.61 51 eP P 03 17 40.0 -0.7
TPR eP 03 18 08.0
TPR eP 03 21 35.4
BOT Bacolet 21.64 51 eP P 03 17 41.3 +0.2
BOT eP 03 21 33.1
LVC Limon Verde 21.92 158 P P 03 17 45.2 +1.3
comp=Z,865nm,1.1s,mb6.0,baz=327,slow=0.0,SNR=76
LVC S S 03 21 44.8 +6.6
SNR=2.1
LVC Limon Verde 21.92 158⇓ iP P 03 17 45.1 +1.2
SDDR Presa de Saban 22.13 17⇑ iPn P 03 17 45.4 -0.7
comp=Z,5µm,1.3s,mb6.7
SDDR eScP ScP 03 25 03.0 -2.1
LMGC Las Mercedes 22.28 2 eP P 03 17 48.7 +1.0
MASC Masc 22.64 9 eP P 03 17 52.6 +1.2
MPR Mayaguez 22.96 27 ePn P 03 17 52.9 -1.5
AGPR Aguadilla, PR 23.20 27⇑ iP P 03 17 55.3 -1.1
AOPR Arecibo Observ 23.25 27 ePn P 03 17 56.1 -0.9
comp=Z,2µm,1.3s,mb6.3
SJG San Juan 23.34 29⇑ iP P 03 17 55.4 -2.3
SJG San Juan 23.34 29 eP P 03 17 55.8 -2.0
SJG San Juan 23.34 29⇑ eP P 03 17 56.3 -1.4
CPD Cerro la Pandu 23.39 30 ePn P 03 17 56.0 -2.2
comp=Z,740nm,0.8s,mb6.1
CPD Cerro la Pandu 23.39 30 eP P 03 17 56.0 -2.2
CPD pmax pmax
comp=Z,740nm,0.9s,mb6.0
HUMP Col San Antoni 23.51 30 ePn P 03 17 57.3 -2.0
comp=Z,7µm,2.4s,mb6.5
BIM Bigot 23.56 44⇓ eP P 03 17 56.1 -3.7
CBYP Canovanas 23.61 29 ePn P 03 17 58.8 -1.5
comp=Z,1µm,1.1s,mb6.2
MTP Monte Pirata 23.62 30⇑ iP P 03 17 57.7 -2.6
MTP eScP ScP 03 25 09.2 +0.2
FDF Fort de France 23.65 44⇑ iP P 03 17 57.5 -3.2
FDF Fort de France 23.65 44⇓ eP P 03 17 58.5 -2.2
MVM Montagne Vaucl 23.70 44⇓ eP P 03 17 57.8 -3.4
BBGH Gun Hill 23.75 49 eP P 03 18 01.6 0.0
comp=Z,3µm,1.2s,mb6.5
BBGH eS S 03 22 07.8 -0.3
BBGH Gun Hill 23.75 49⇑ eP P 03 17 58.9 -2.7
SCX San Cristobal 23.96 323 eP P 03 18 03.7 +0.3
HMG Houelmont 24.18 41 eP P 03 18 04.1 -1.3
SCG Saint Claude 24.22 41 eP P 03 18 04.4 -1.4
LZG Guadaloupe-1 24.24 40 eP P 03 18 06.1 0.0
DOG Dongo Capester 24.27 41 eP P 03 18 06.5 +0.2
BCG Bois Riant Cap 24.30 41 eP P 03 18 06.9 +0.3
MGG Marie-Galante 24.38 41 eP P 03 18 06.9 -0.4
ANWB Willy Bob 25.38 38⇑ iP P 03 18 13.6 -2.8
ANWB epP pP 03 18 41.2 -1.6
ANWB eS S 03 22 38.7 +4.7
SOR Soroa 25.49 349 eP P 03 18 17.2 -0.1
baz=163
SOR eS S 03 22 32.6 -3.0
comp=N,57µm,7.2s
SOR e

comp=E,71µm,7.2s
CMIG Matias Romero 25.64 319 P P 03 18 18.1 -0.5
comp=E,341nm,1.0s,mb5.8,baz=126,slow=5.3,SNR=77
CMIG pP pP 03 18 46.0 +0.8
comp=E,288nm,0.9s,baz=119,slow=6.5,SNR=3.7
CMIG PcP PcP 03 21 47.0 +0.6
comp=E,23nm,0.7s,baz=99,slow=1.0,SNR=5.3
CMIG S S 03 22 34.9 -3.1
comp=E,14nm,0.9s,baz=57,slow=11,SNR=1.8
CMIG PKiKP PKiKP 03 29 25.8 -1.0
comp=E,8.5nm,1.0s,baz=42,slow=3.3,SNR=5.3
CMIG Matias Romero 25.64 319 P P 03 18 18.1 -0.5
CMIG pP pP 03 18 46.0 +0.8
CMIG PcP PcP 03 21 47.0 +0.6
CMIG S S 03 22 34.9 -3.1
VHO Vista Hermosa 26.86 317 iP P 03 18 30.4 +0.7
LCO Las Campanas 27.37 166⇓ iP P 03 18 34.4 +0.3
comp=E,453nm,0.9s,mb6.0
LCO eScP ScP 03 25 19.2 -0.4
PNIG Pinotepa 27.38 314 iP P 03 18 35.1 +0.7
TLL Tololo Astrono 28.46 167⇓ eP P 03 18 44.7 +0.9
LVIG Laguna Verde 28.55 321 iP P 03 18 45.1 +0.3
ACX Acapulco 29.00 312 iP P 03 18 49.4 +0.7
CAIG El Cayaco 29.38 312 iP P 03 18 50.0 -2.0
PPM Popocatepetl 29.53 317 iP P 03 18 55.8 +2.4
PLIG Platanillo 29.68 315 iP P 03 18 55.2 +0.4
YAIG Yautepec 29.69 316 eP P 03 18 55.5 +0.6
UNM Universidad Na 30.09 317 iP P 03 18 59.4 +1.1
PBVM Pinon 30.10 317 eP P 03 18 59.5 +1.1
PTVM Pico Tres Padr 30.23 317 eP P 03 19 00.5 +0.9
CFAA Coronel Fontan 30.47 164 P P 03 19 02.1 +0.5
comp=E,53nm,0.9s,mb5.2,baz=340,slow=8.4,SNR=250
CFAA pP pP 03 19 28.1 -0.4
comp=E,27nm,0.7s,baz=331,slow=9.7,SNR=5.3
CFAA S S 03 23 50.2 -3.7
comp=E,5.5nm,0.9s,baz=184,slow=13,SNR=2.0
CFAA Coronel Fontan 30.47 164 P P 03 19 02.1 +0.5
CFAA pP pP 03 19 28.1 -0.4
CFAA S S 03 23 50.2 -3.7
DWPF Disney 30.48 354⇑ iP P 03 19 01.5 -0.1
comp=E,729nm,0.8s,mb6.4
DWPF eScP ScP 03 25 29.9 +0.4
ZIIG Zihuatanejo 30.62 311 iP P 03 19 02.2 -0.9
PEL Peldehue 31.36 168⇓ eP P 03 19 09.7 +0.3
FCH Farellones 31.62 168⇓ eP P 03 19 12.9 +1.3
CLCH Cerro Calan 31.64 168⇓ eP P 03 19 12.4 +0.6
MOIG Morelia 31.73 315 iP P 03 19 13.7 +0.9
LMEL Las Melosas 32.14 168⇓ eP P 03 19 17.1 +0.9
BDFB Brasilia 32.18 116 P P 03 19 17.8 +1.0
comp=E,78nm,0.7s,mb5.5,baz=275,slow=17,SNR=77
BDFB S S 03 24 18.8 -2.1
comp=E,46nm,0.8s,baz=145,slow=27,SNR=2.0
BDFB LR LR 03 33 49.6
comp=E,15µm,19.6s,baz=100,slow=39
BDFB Brasilia 32.18 116 eP P 03 19 17.6 +0.8
comp=E,677nm,1.4s,mb6.2
BDFB Brasilia 32.18 116 P P 03 19 17.8 +1.0
BDFB S S 03 24 18.8 -2.0
BDFB pmax pmax
comp=Z,78nm,0.7s
BDFB smax
comp=N,46nm,0.9s
BDFB MLR MLR
comp=Z,15µm,19.6s
SFJM Santa Fe 33.57 314 eP P 03 19 29.8 +0.9
BRAL Brewton 34.32 346⇑ eP P 03 19 35.9 +0.7
comp=Z,495nm,0.7s,mb6.5
BRAL epP pP 03 20 04.2 +1.8
BRAL eScP ScP 03 25 45.1 +2.6
CJM Chamela 34.46 310 iP P 03 19 35.7 -0.9
CCHI Chillan 34.50 172⇓ eP P 03 19 36.9 +0.2
ZAIG Zacatecas 34.74 317 iP P 03 19 40.0 +1.1
NHSC New Hope 35.33 357⇑ iP P 03 19 43.8 0.0
comp=Z,2µm,1.3s,mb6.8
NHSC epP pP 03 20 12.5 +1.4
KVTX Kingsville 35.46 328 eP P 03 19 46.2 +1.2
comp=Z,2µm,1.4s,mb6.7
KVTX epP pP 03 20 16.0 +3.7
COW Cow Castle Cre 35.63 356 eP P 03 19 47.0 +0.5
GOGA Godfrey 35.96 352⇑ iP P 03 19 48.0 -1.2
comp=E,243nm,0.8s,mb6.2
GOGA epP pP 03 20 15.2 -1.3
GOGA Godfrey 35.96 352⇑ iP P 03 19 48.1 -1.1
GOGA e*PP pP 03 20 15.2 -1.4
GOGA pmax pmax
comp=Z,243nm,0.8s,mb6.2
SPB Sao Paulo 36.19 128 eP P 03 19 51.1 -0.3
LRAL Lakeview Retre 36.24 347⇑ eP P 03 19 50.3 -1.3
comp=E,242nm,0.4s,mb6.5
LRAL epP pP 03 20 18.2 -0.8
VBMS Vicksburg 36.42 342⇑ eP P 03 19 51.9 -1.3
comp=Z,156nm,0.9s,mb5.9
VBMS ePcP PcP 03 22 15.1 +0.2
VBMS eScP ScP 03 25 51.0 +0.9
HKT Hockley 36.44 333 eP P 03 19 52.0 -1.4
comp=Z,628nm,1.9s,mb6.2
HKT ePcP PcP 03 22 14.7 -0.2
HKT eScP ScP 03 25 50.9 +0.6
HKT Hockley 36.44 333 eP P 03 19 52.1 -1.3
HKT e 03 22 14.7
HKT pmax pmax
comp=Z,628nm,1.9s,mb6.2
JSC Jenkinsville 36.57 355 eP P 03 19 53.7 -0.7
JSC ePcP PcP 03 22 15.3 0.0
BBSR BB Station 36.69 19 eP P 03 19 54.0 -1.4
comp=Z,159nm,1.0s,mb5.9
LPA La Plata 37.30 153 dP P 03 20 21.0 -7.1
LPA epP pP 03 20 27.0 -1.1
LPA esP sP 03 20 45.0 +2.8
LPA ePP PP 03 21 29.0 +0.7
LPA ePP PP 03 21 33.0 +4.7
LPA eS S 03 25 41.0 +1.9
CNNC Cliffs of the 37.38 360 eP P 03 20 00.8 -0.4
comp=Z,642nm,0.8s,mb6.6
NATX Nacogdoches 37.51 336⇑ eP P 03 20 01.1 -1.2
comp=Z,554nm,1.0s,mb6.3
NATX eScP ScP 03 25 54.8 +0.6
MAIG Mazatlaan 37.71 314 iP P 03 20 04.5 +0.3
CPCT Cooper Cave 38.12 351 eP P 03 20 06.2 -1.3
SWET Sewanee 38.13 349⇑ iP P 03 20 05.7 -1.9
TKL Tuckaleechee C 38.21 352 eP P 03 20 07.1 -1.1
OXF Oxford 38.25 344⇑ eP P 03 20 05.3 -3.2
comp=Z,746nm,1.2s,mb6.4
OXF epP pP 03 20 34.1 -2.1
OXF eS S 03 25 52.2 -1.1
OXF Oxford 38.25 344⇑ eP P 03 20 05.3 -3.2
OXF e*PP pP 03 20 34.1 -2.0
OXF eS S 03 25 52.2 -1.1
OXF pmax pmax
comp=Z,746nm,1.2s,mb6.4
PLCA Paso Flores 38.78 171 P P 03 20 12.8 0.0
comp=Z,210nm,0.7s,mb6.1,baz=344,slow=9.6,SNR=230
PLCA PcP PcP 03 22 22.6 +0.7
comp=Z,66nm,0.6s,baz=340,slow=6.9,SNR=3.9
PLCA S S 03 25 56.4 -4.7
comp=Z,18nm,0.9s,baz=322,slow=18,SNR=2.7
PLCA PKiKP PKiKP 03 29 34.4 -1.0
comp=Z,5.7nm,0.9s,baz=309,slow=2.9,SNR=3.3
PLCA Paso Flores 38.78 171 ⇓ iP P 03 20 12.8 -0.1
comp=Z,892nm,1.2s,mb6.5
PLCA ePcP PcP 03 22 22.2 +0.3
PLCA eScP ScP 03 25 58.5 -0.4
PLCA Paso Flores 38.78 171 P P 03 20 12.9 0.0
PLCA 03 22 22.6
PLCA S S 03 25 56.4 -4.7
PLCA i 03 29 34.4
PLCA pmax pmax
comp=Z,210nm,0.7s
PLCA smax
comp=N,18nm,0.9s
JCT Junction City 38.81 329 eP P 03 20 12.9 -0.4
comp=N,464nm,0.8s,mb6.4
JCT epP pP 03 20 40.2 -0.7
JCT eScP ScP 03 25 58.6 -0.6
JCT Junction City 38.81 329 eP P 03 20 12.9 -0.4
JCT e*PP pP 03 20 40.2 -0.7
JCT e 03 25 58.6
JCT pmax pmax
comp=Z,464nm,0.8s,mb6.4
MET Memphis--Engin 38.96 344 eP P 03 20 12.0 -2.5
RPN Rapa Nui 38.98 228 P P 03 20 14.4 -0.4
comp=Z,3µm,1.0s,mb7.1,SNR=6.4
RPN Rapa Nui 38.98 228 P P 03 20 14.1 -0.8
comp=Z,487nm,1.0s,mb6.3,baz=49,slow=5.7,SNR=12

RPN PcP PcP 03 22 23.6 +0.7
comp=Z,120nm,0.8s,baz=292,slow=5.4,SNR=4.7
RPN S S 03 26 02.5 -2.1
comp=Z,30nm,0.8s,baz=51,slow=15,SNR=1.8
RPN Rapa Nui 38.98 228⇓ iP P 03 20 13.8 -1.0
comp=Z,774nm,1.1s,mb6.5
TZTN Tazewell 39.05 353⇑ eP P 03 20 13.8 -1.4
comp=Z,334nm,0.7s,mb6.3
TZTN epP pP 03 20 42.8 -0.1
UALR University of 39.37 341 eP P 03 20 16.0 -1.8
comp=Z,353nm,1.1s,mb6.1
UALR eScP ScP 03 26 02.1 +0.8
WVT Waverly 39.40 347 eP P 03 20 15.1 -3.0
comp=Z,319nm,0.7s,mb6.3
WVT ePcP PcP 03 22 22.7 -1.3
WVT eScP ScP 03 26 00.9 -0.5
WVT Waverly 39.40 347 eP P 03 20 15.1 -3.0
WVT e 03 22 22.7
WVT e 03 26 00.9
WVT pmax pmax
comp=Z,319nm,0.7s,mb6.3
BLA Blacksburg 39.42 357⇑ iP P 03 20 18.1 -0.2
comp=Z,464nm,0.8s,mb6.4
BLA eScP ScP 03 26 00.7 -0.7
BLA Blacksburg 39.42 357⇑ iP P 03 20 18.1 -0.2
BLA e 03 26 00.7
BLA pmax pmax
comp=Z,464nm,0.8s,mb6.4
HALT Halls 39.55 345⇑ iP P 03 20 16.8 -2.6
HALT epP pP 03 20 45.6 -1.6
HALT ePcP PcP 03 22 23.4 -1.1
HALT eScP ScP 03 26 01.7 -0.3
CAM4 Nova Friburgo 39.56 123⇓ iP P 03 20 20.0 +0.3
CAM4 i 03 20 29.8
CAM4 i 03 20 33.7
CAM4 i 03 20 36.6
CAM4 i pP 03 20 44.0 -3.5
CAM4 i pP 03 20 49.9 +2.5
CAM4 i 03 21 00.8
HBAR Harrisburg 39.57 343⇑ eP P 03 20 17.6 -2.0
HBAR epP pP 03 20 46.8 -0.5
HBAR eScP ScP 03 26 01.0 -1.0
MIAR Mount Ida 39.57 339 eP P 03 20 17.9 -1.7
comp=Z,649nm,0.4s,mb6.8
MIAR eScP ScP 03 26 02.4 +0.3
URVA University of 39.71 0⇑ iP P 03 20 20.1 -0.6
URVA eScP ScP 03 26 03.8 +1.3
GNAR Gosnell 39.78 344 eP P 03 20 20.2 -1.1
comp=Z,9µm,0.9s,mb7.6
GNAR ePcP PcP 03 22 25.4 +0.2
GNAR eScP ScP 03 26 02.3 -0.6
UTMT University of 39.84 346⇑ eP P 03 20 19.2 -2.6
comp=Z,959nm,1.1s,mb6.5
UTMT eScP ScP 03 26 03.0 -0.1
GLAT Glass 39.88 345 eP P 03 20 20.7 -1.4
TXAR Lajitas Array 40.07 324 P P 03 20 23.1 -0.7
comp=Z,130nm,1.0s,mb5.7,baz=148,slow=8.5,SNR=249
TXAR pP pP 03 20 52.6 +1.0
comp=Z,85nm,1.0s,baz=166,slow=8.4,SNR=4.6
TXAR PcP PcP 03 22 25.8 -0.5
comp=Z,55nm,0.9s,baz=146,slow=7.3,SNR=4.5
TXAR S S 03 26 18.2 -2.6
comp=Z,5.3nm,1.0s,baz=197,slow=42,SNR=2.1
TXAR P3KP 03 51 33.2
comp=Z,0.8nm,1.0s,baz=147,slow=3.0,SNR=4.3
TXAR Lajitas Array 40.07 324 P P 03 20 23.1 -0.7
TXAR pP pP 03 20 52.6 +1.0
TXAR PcP PcP 03 22 25.8 -0.5
TXAR S S 03 26 18.2 -2.6
TXAR PKKKP 03 51 33.2
TXAR Lajitas Array 40.07 324 P P 03 20 23.1 -0.7
TXAR *PP pP 03 20 52.6 +1.0
TXAR 03 22 25.8
TXAR S S 03 26 18.2 -2.6
PVMO Portageville 40.12 345 eP P 03 20 22.2 -1.9
comp=Z,665nm,0.8s,mb6.5
CBN Corbin 40.34 1⇑ iP P 03 20 25.7 -0.1
comp=Z,520nm,0.5s,mb6.6
CBN epP pP 03 20 53.2 -0.5
CBN eScP ScP 03 26 04.5 -0.5
PARMO Parma 40.37 345⇑ eP P 03 20 24.1 -2.0
PARMO eScP ScP 03 26 01.8 -3.4
LPIG La Paz 41.10 312 eP P 03 20 25.7 -6.7
WCI Wyandotte Cave 41.12 350⇑ eP P 03 20 29.8 -2.5
comp=Z,297nm,0.8s,mb6.2
WCI Wyandotte Cave 41.12 350⇑ eP P 03 20 29.8 -2.5
WCI pmax pmax
comp=Z,297nm,0.8s,mb6.2
USIN University of 41.13 348⇑ iP P 03 20 30.0 -2.4
comp=Z,1µm,0.9s,mb6.8
USIN epP pP 03 20 59.5 -0.8
USIN eScP ScP 03 26 07.5 -0.6
SIUC Southern Illin 41.23 346 eP P 03 20 31.1 -2.2
comp=Z,1µm,0.9s,mb6.8
SIUC eScP ScP 03 26 06.2 -2.3
SDMD Soldier's Deli 41.55 1⇑ iP P 03 20 35.7 -0.1
comp=Z,471nm,0.8s,mb6.3
SDMD ePcP PcP 03 22 30.8 -0.1
SDMD eScP ScP 03 26 10.0 +0.3
FVM French Village 41.79 345 eP P 03 20 35.5 -2.3
comp=Z,530nm,0.8s,mb6.3
FVM eScP ScP 03 26 10.7 0.0
WMOK Wichita Mounta 41.81 334⇑ eP P 03 20 37.1 -0.9
comp=Z,198nm,0.4s,mb6.2
WMOK epP pP 03 21 04.3 -1.7
WMOK ePcP PcP 03 22 32.0 +0.1
WMOK eScP ScP 03 26 10.9 0.0
WMOK Wichita Mounta 41.81 334⇑ eP P 03 20 37.1 -0.9
WMOK e*PP pP 03 21 04.3 -1.7
WMOK e 03 22 32.0
WMOK pmax pmax
comp=Z,198nm,0.4s,mb6.2
MCWV Mont Chateau 41.83 358⇑ iP P 03 20 37.5 -0.6
comp=Z,221nm,0.7s,mb6.0
RCBR Riachuelo 41.92 96⇑ iP P 03 20 39.2 0.0
comp=Z,1µm,1.4s,mb6.4
RCBR epP pP 03 21 06.0 -1.2
RCBR ePP PP 03 22 18.4 -0.3
OLIL Olney 41.96 348⇑ eP P 03 20 36.6 -2.6
comp=Z,798nm,0.8s,mb6.5
OLIL eScP ScP 03 26 10.8 -0.6
CCM Cathedral Cave 42.08 344 eP P 03 20 37.1 -3.0
comp=Z,520nm,0.7s,mb6.4
CCM Cathedral Cave 42.08 344 eP P 03 20 37.1 -3.0
CCM pmax pmax
comp=Z,520nm,0.7s,mb6.4
BLO Bloomington 42.08 350⇑ iP P 03 20 37.7 -2.4
comp=Z,503nm,0.6s,mb6.4
BLO epP pP 03 21 06.2 -1.9
BLO eScP ScP 03 26 12.0 +0.2
BLO Bloomington 42.08 350⇑ iP P 03 20 37.7 -2.4
BLO e*PP pP 03 21 06.2 -1.9
BLO pmax pmax
comp=Z,503nm,0.6s,mb6.4
MVL Millersville 42.15 2⇑ iP P 03 20 40.9 +0.2
comp=Z,2µm,0.9s,mb6.7
SLM Saint Louis 42.36 345⇑ iP P 03 20 39.9 -2.4
comp=Z,457nm,0.9s,mb6.2
SLM epP pP 03 21 08.4 -1.9
SLM ePcP PcP 03 22 33.7 +0.1
SLM eScP ScP 03 26 13.0 0.0
SLM Saint Louis 42.36 345⇑ iP P 03 20 39.9 -2.5
SLM e*PP pP 03 21 08.4 -2.0
SLM e 03 22 33.7
SLM pmax pmax
comp=Z,457nm,0.9s,mb6.2
GDL2 Guadalupe Moun 42.60 326 eP P 03 20 45.0 +0.5
ACSO Alum Creek Sta 42.63 354⇑ iP P 03 20 42.7 -1.8
comp=Z,582nm,1.0s,mb6.3
ACSO epP pP 03 21 11.0 -1.6
SSPA Standing Stone 42.77 360⇑ iP P 03 20 45.4 -0.2
comp=Z,779nm,0.8s,mb6.5
SSPA epP pP 03 21 13.6 -0.1
SSPA eScP ScP 03 26 16.4 +1.8
LUPA Lehigh Univers 42.79 3⇑ iP P 03 20 46.2 +0.4
LUPA epP pP 03 21 14.1 +0.3
LUPA eScP ScP 03 26 15.5 +0.8
BRNJ Basking Ridge 42.92 4⇑ eP P 03 20 47.6 +0.8
comp=Z,843nm,1.1s,mb6.4
CPNY Central Park 43.07 4 eP P 03 20 47.7 -0.3
comp=Z,597nm,1.3s,mb6.2
CPNY epP pP 03 21 15.9 -0.2
AMTX Amarillo 43.28 331 eP P 03 20 49.5 -0.3
comp=Z,518nm,0.8s,mb6.3

AMTX ePP pP 03 21 17.5 -0.5
AMTX eScP ScP 03 26 17.7 +0.9
PAL Palisades 43.28 4⇑iP P 03 20 49.3 -0.5
comp=Z,1µm,1.0s,mb6.5
PAL ePP pP 03 21 16.6 -1.2
PAL Palisades 43.28 4⇑iP P 03 20 49.3 -0.5
PAL e*PP pP 03 21 16.7 -1.2
PAL pmax pmax
comp=Z,1µm,1.0s,mb6.5
COYC Coyhaique 43.35 174⇓eP P 03 20 49.9 -0.3
HDIL Hopedale 43.97 347 eP P 03 20 52.3 -2.9
comp=Z,1µm,0.6s,mb6.8
HDIL ePP pP 03 21 20.8 -2.6
HDIL eScP ScP 03 26 19.7 +0.2
ERPA Erie 44.29 358⇑iP P 03 20 56.8 -1.1
comp=Z,705nm,0.7s,mb6.5
ERPA ePP pP 03 21 24.8 -1.3
BINY Binghamton 44.36 2⇑iP P 03 20 58.6 +0.2
comp=Z,1µm,0.8s,mb6.7
BINY ePP pP 03 21 23.8 -2.8
BRYW Bryant College 44.41 7⇑iP P 03 20 58.8 0.0
comp=Z,2µm,1.0s,mb6.7
QUA2 Belchertown 44.68 6⇑iP P 03 21 00.6 -0.3
comp=Z,1µm,1.0s,mb6.6
AAM Ann Arbor 44.75 354⇑iP P 03 20 59.5 -1.9
comp=Z,268nm,0.8s,mb6.0
AAM ePP pP 03 21 28.1 -1.6
AAM Ann Arbor 44.75 354⇑iP P 03 20 59.5 -1.9
AAM e*PP pP 03 21 28.1 -1.6
AAM pmax pmax
comp=Z,268nm,0.8s,mb6.0
WES Weston 44.90 7⇑iP P 03 21 02.3 -0.3
comp=Z,802nm,0.9s,mb6.5
WES Weston 44.90 7⇑iP P 03 21 02.3 -0.3
WES pmax pmax
comp=Z,802nm,0.9s,mb6.5
319A Douglas 44.95 321 ⇓P P 03 21 03.6 +0.4
baz=45,SNR=275
319A ⇑S S 03 27 33.4 +1.1
baz=45
BNM Barren Site 45.31 326 eP P 03 21 06.0 -0.1
BNM ePP pP 03 21 33.7 -0.7
BNM eScP ScP 03 26 24.4 -0.8
219A White Tail Can 45.35 321 ⇓P P 03 21 06.8 +0.3
baz=45,SNR=459
219A ⇓S S 03 27 38.7 +0.6
baz=45
Y22D IRIS PASSCAL I 45.42 325 ⇑P P 03 21 07.5 +0.5
baz=46,SNR=11
Y22D ⇑S S 03 27 42.4 +3.4
baz=46
LPM Los Pinos Moun 45.43 326 eP P 03 21 06.9 -0.1
LPM ePP pP 03 21 35.6 +0.3
LPM eScP ScP 03 26 26.7 +1.0
318A Bisbee 45.44 320 ⇑P P 03 21 07.2 +0.1
baz=46,SNR=270
318A ⇑S S 03 27 40.0 +0.7
baz=46
LENM Lemitar 45.52 325 eP P 03 21 07.9 +0.2
LENM ePP pP 03 21 35.9 -0.1
LENM eScP ScP 03 26 26.4 +0.4
ACCN Adirondack Com 45.67 4⇑iP P 03 21 08.8 +0.2
comp=Z,1µm,1.1s,mb6.6
ACCN ePP pP 03 21 36.6 -0.5
ACCN eScP ScP 03 26 26.8 +0.4
CBKS Cedar Bluff 45.67 336⇑eP P 03 21 08.4 -0.4
comp=Z,554nm,0.9s,mb6.3
CBKS ePP pP 03 21 36.7 -0.5
CBKS eScP ScP 03 26 27.4 +0.9
CBKS Cedar Bluff 45.67 336⇑eP P 03 21 08.4 -0.4
CBKS e*PP pP 03 21 36.7 -0.5
CBKS pmax pmax
comp=Z,554nm,0.9s,mb6.3
LAZ Ladron 45.78 326 eP P 03 21 10.0 +0.2
LAZ ePP pP 03 21 37.2 -1.0
LAZ eScP ScP 03 26 27.7 +0.6
ANMO Albuquerque 45.81 327 eP P 03 21 10.1 +0.1
comp=Z,15nm,0.4s,mb5.1
ANMO ePP pP 03 21 38.5 +0.1
ANMO eScP ScP 03 26 26.9 -0.3
ANMO Albuquerque 45.81 327 eP P 03 21 10.1 +0.1
ANMO e*PP pP 03 21 38.5 +0.2
ANMO pmax pmax
comp=Z,15nm,0.4s
218A Dragoon 45.83 321 ⇓P P 03 21 10.5 +0.4
baz=46,SNR=139
218A ⇓S S 03 27 46.1 +1.1
baz=46
119A Ashpeak Ranch, 45.90 322 ⇑P P 03 21 11.3 +0.6
baz=46,SNR=268
119A ⇑S S 03 27 48.0 +2.0
baz=46
FFD Franklin Falls 45.93 6⇑iP P 03 21 10.8 0.0
comp=Z,1µm,1.0s,mb6.6
HNH Hanover 46.10 6⇑iP P 03 21 12.3 +0.2
comp=Z,1µm,1.0s,mb6.6
217A Green Valley 46.19 320 ⇑P P 03 21 13.1 +0.1
baz=46,SNR=121
217A ⇑S S 03 27 51.4 +1.3
baz=46
SCIA State Center 46.21 344⇑eP P 03 21 10.5 -2.4
comp=Z,662nm,0.8s,mb6.4
SCIA ePP pP 03 21 39.1 -2.3
SCIA eScP ScP 03 26 30.1 +1.3
118A Homack Ranch, 46.23 322 ⇓P P 03 21 13.7 +0.4
baz=46,SNR=391
118A ⇓S S 03 27 52.6 +2.0
baz=46
Z19A T-Link Ranch, 46.24 323 ⇓P P 03 21 13.9 +0.6
baz=46,SNR=72
Z19A ⇑S S 03 27 53.4 +2.6
baz=46
MDV Middlebury 46.31 5 eP P 03 21 13.5 -0.2
TUC Tucson 46.52 321⇓iP P 03 21 15.4 -0.1
comp=Z,243nm,0.8s,mb6.0
TUC ePP pP 03 21 43.7 -0.3
TUC eScP ScP 03 26 31.4 +1.1
TUC Tucson 46.52 321⇓iP P 03 21 15.5 -0.1
TUC e*PP pP 03 21 43.7 -0.3
TUC pmax pmax
comp=Z,243nm,0.8s,mb6.0
Z18A Geronimo 46.57 322 ⇓P P 03 21 16.3 +0.4
baz=47,SNR=19
Z18A ⇑S S 03 27 57.4 +1.9
baz=47
117A Oracle 46.66 321 ⇑P P 03 21 16.8 +0.1
baz=47,SNR=290
117A ⇑S S 03 27 57.3 +0.4
baz=47
LBNH Lisbon 46.67 6⇑iP P 03 21 16.8 +0.3
comp=Z,1µm,0.9s,mb6.6
LBNH ePP pP 03 21 43.8 -1.2
LBNH Lisbon 46.67 6⇑iP P 03 21 16.8 +0.3
LBNH e*PP pP 03 21 43.8 -1.2
LBNH pmax pmax
comp=Z,1µm,0.9s,mb6.6
Y19A Nutrioso 46.69 323 ⇓P P 03 21 17.7 +0.8
baz=47,SNR=181
Y19A ⇓S S 03 28 00.8 +3.5
baz=47
216A Three Points, 46.75 320 ⇓P P 03 21 17.4 0.0
baz=47,SNR=195
216A ⇑S S 03 27 59.6 +1.5
baz=47
LONY Lake Ozonia 46.84 3⇑iP P 03 21 17.4 -0.5
comp=Z,702nm,0.9s,mb6.4
LONY ePP pP 03 21 45.3 -1.0
LONY eScP ScP 03 26 30.9 -0.3
LONY eS S 03 28 01.7 +2.8
SADO Sadowa 46.91 359 S S 03 27 49.9 -10
comp=Z,16nm,1.0s,baz=304,slow=17,SNR=1.7
Z17A San Carlos Hig 46.98 322 ⇓P P 03 21 19.3 +0.1
baz=47,SNR=46
Z17A ⇓S S 03 28 02.8 +1.4
baz=47
Y18A Canyon Day Jun 47.04 323 ⇑P P 03 21 19.9 +0.3
baz=47,SNR=349
Y18A ⇓S S 03 28 03.9 +1.7
baz=47
X19A St. Johns 47.04 324 ⇑P P 03 21 20.0 +0.4
baz=47,SNR=77
X19A ⇑S S 03 28 05.8 +3.6
baz=47
FRNY Flat Rock 47.12 4⇑iP P 03 21 19.8 -0.1
comp=Z,2µm,1.0s,mb6.8
FRNY ePP pP 03 21 48.4 -0.1

116A Eloy 47.27 320 ⇓P P 03 21 21.4 0.0
baz=47,SNR=388
116A ⇑S S 03 28 06.7 +1.1
baz=47
GLMI Grayling 47.35 353⇑eP P 03 21 19.6 -2.1
comp=Z,739nm,0.8s,mb6.5
SDCO Great Sand Dun 47.43 330 eP P 03 21 22.6 +0.1
comp=Z,70nm,0.6s,mb5.6
SDCO ePP pP 03 21 51.6 +0.5
SDCO eScP ScP 03 26 34.2 +0.3
Y17A Roosevelt 47.48 322 ⇓P P 03 21 23.0 0.0
baz=48,SNR=133
Y17A ⇑S S 03 28 10.6 +2.2
baz=48
X18A Snowflake 47.51 323 ⇑P P 03 21 23.6 +0.3
baz=48,SNR=108
X18A ⇑S S 03 28 11.7 +3.0
baz=48
W19A Sanders 47.58 324 ⇓P P 03 21 24.2 +0.4
baz=48,SNR=32
W19A ⇓S S 03 28 12.8 +3.0
baz=48
214A Organ Pipe Nat 47.60 319 ⇓P P 03 21 24.1 +0.1
baz=48,SNR=119
214A ⇓S S 03 28 12.2 +1.9
baz=48
Z16A Peralta Trail, 47.61 321 ⇓P P 03 21 24.0 0.0
baz=48,SNR=76
Z16A ⇓S S 03 28 12.2 +2.0
baz=48
115A Sonoran Desert 47.70 320 ⇑P P 03 21 24.9 +0.2
baz=48,SNR=112
W18A Petrified Fore 47.79 324 ⇓P P 03 21 26.0 +0.6
baz=48,SNR=118
V19A Window Rock 47.81 325 ⇓P P 03 21 26.2 +0.6
baz=48,SNR=46
X17A Forest Lakes 47.89 323 ⇓P P 03 21 27.1 +1.0
baz=48,SNR=225
PKME Peaks-Kenny Pk 47.99 8 eP P 03 21 26.9 +0.1
comp=Z,1µm,0.9s,mb6.8
Y16A Circle Bar Ran 47.99 322 ⇑P P 03 21 27.6 +0.6
baz=48,SNR=403
Z15A Gila River Ind 48.03 321 ⇓P P 03 21 27.3 0.0
baz=48,SNR=71
V18A Ganado 48.32 325 ⇓P P 03 21 29.4 -0.1
baz=48,SNR=80
X16A Lo Mia Camp, P 48.33 322 ⇑P P 03 21 30.2 +0.7
baz=48,SNR=138
W17A Winslow 48.34 323 ⇓P P 03 21 30.0 +0.4
baz=48,SNR=27
OGNE Ogallala 48.42 335 eP P 03 21 29.6 -0.5
comp=Z,2µm,1.5s,mb6.7
OGNE ePP pP 03 21 58.4 -0.4
OGNE eScP ScP 03 26 38.0 -0.1
Y15A Casa Rosa Ranc 48.58 321 ⇑P P 03 21 31.6 +0.1
baz=49,SNR=150
Z14A Wintersburg 48.58 320 ⇓P P 03 21 31.6 +0.1
baz=49,SNR=60
MVCO Mesa Verde 48.59 327⇓eP P 03 21 31.6 +0.1
comp=Z,17µm,1.5s,mb7.8
MVCO ePP pP 03 22 00.2 0.0
MVCO eScP ScP 03 26 40.6 +1.7
MVCO Mesa Verde 48.59 327 ⇑P P 03 21 31.7 +0.2
baz=49,SNR=77
T19A Beclabito 48.60 326 ⇓P P 03 21 31.4 -0.2
baz=49,SNR=94
113A Mohawk Valley, 48.74 319 ⇓P P 03 21 32.4 -0.3
baz=49,SNR=93
U18A Rough Rock, Ch 48.78 325 ⇑P P 03 21 33.2 +0.2
baz=49,SNR=100
W16A Flagstaff 48.84 323 ⇓P P 03 21 34.4 +0.9
baz=49,SNR=158
X15A Humboldt 48.87 322 ⇓P P 03 21 34.2 +0.6
baz=49,SNR=271
ECSD EROS,Sioux Fal 48.88 342 eP P 03 21 31.0 -2.6
comp=Z,282nm,0.9s,mb6.2
ECSD ePP pP 03 21 59.6 -2.6
Y14A Wickenburg 48.99 321 ⇑P P 03 21 34.7 +0.1
baz=49,SNR=124
WUAZ Wupatki 49.03 323⇓iP P 03 21 35.5 +0.6
comp=Z,484nm,0.8s,mb6.5
WUAZ ePP pP 03 22 04.0 +0.4
WUAZ eScP ScP 03 26 42.4 +1.6
WUAZ Wupatki 49.03 323 ⇑P P 03 21 35.4 +0.5
baz=49,SNR=468
ISCO Idaho Springs 49.08 332 eP P 03 21 35.2 0.0
comp=Z,432nm,1.3s,mb6.2
ISCO ePP pP 03 22 04.2 +0.2
ISCO ePP PP 03 23 30.2 +0.1
ISCO eScP ScP 03 26 42.4 +1.5
ISCO Idaho Springs 49.08 332 eP P 03 21 35.2 0.0
ISCO e*PP pP 03 22 04.2 +0.3
ISCO e 03 23 30.2
ISCO pmax pmax
comp=Z,432nm,1.3s,mb6.2
112A Yuma 49.14 318 ⇓P P 03 21 35.4 -0.3
baz=49,SNR=15
X14A Yava 49.26 321 ⇑P P 03 21 37.1 +0.5
baz=49,SNR=220
SMCO Snowmass 49.26 330 eP P 03 21 37.0 +0.4
comp=Z,460nm,1.4s,mb6.2
SMCO ePP pP 03 22 04.7 -0.6
SMCO eScP ScP 03 26 41.1 -0.6
T18A Mexican Hat 49.29 326 ⇓P P 03 21 36.6 -0.3
baz=49,SNR=309
PV01 Paradox Valley 49.30 328 eP P 03 21 37.0 0.0
U16A Tuba City 49.31 324 ⇑P P 03 21 37.4 +0.3
baz=49,SNR=147
S19A Harvey Farm, M 49.32 327 ⇑P P 03 21 37.2 +0.1
baz=49,SNR=182
W15A Williams 49.34 322 ⇓P P 03 21 38.1 +0.8
baz=49,SNR=94
U17A Shonto 49.36 325 ⇓P P 03 21 37.6 +0.2
baz=49,SNR=103
Y13A Salome 49.44 320 ⇑P P 03 21 38.0 0.0
baz=50,SNR=44
GLA Glamis 49.62 318⇓iP P 03 21 39.1 -0.3
comp=Z,447nm,1.4s,mb6.2
GLA ePP pP 03 22 08.0 -0.2
GLA eScP ScP 03 26 42.8 -0.6
GLA Glamis 49.62 318⇓iP P 03 21 39.1 -0.3
GLA e*PP pP 03 22 08.0 -0.2
GLA pmax pmax
comp=Z,447nm,1.4s,mb6.2
GLA Glamis 49.62 318 ⇑P P 03 21 39.3 -0.1
baz=50,SNR=46
V15A Kaibab Nationa 49.72 323 ⇓P P 03 21 40.8 +0.7
baz=50,SNR=196
T17A Navajo Res., N 49.72 325 ⇑P P 03 21 40.7 +0.6
baz=50,SNR=300
PV10 Paradox Valley 49.73 328 eP P 03 21 39.1 -1.1
S18A Hurst Farm, Bl 49.76 326 ⇑P P 03 21 40.5 +0.2
baz=50,SNR=219
R19A Curley Farm, L 49.79 327 ⇑P P 03 21 40.4 -0.2
baz=50,SNR=176
Y12C Blythe 49.85 319 ⇓P P 03 21 41.0 -0.1
baz=50,SNR=48
W14A Seligman 49.87 322 ⇓P P 03 21 41.7 +0.4
baz=50,SNR=125
X13A Yucca 49.94 321 ⇓P P 03 21 41.8 0.0
baz=50,SNR=74
PDMCI Parker Dam,Lak 49.95 320 ⇑P P 03 21 41.6 -0.2
baz=50,SNR=44
T16A Glen Canyon Da 50.11 325 ⇓P P 03 21 43.5 +0.4
baz=50,SNR=75
V14A Boquillas Ranc 50.16 322 ⇓P P 03 21 44.1 +0.7
baz=50,SNR=227
S17A Black Ridge (B 50.17 326 ⇓P P 03 21 43.6 +0.1
baz=50,SNR=125
U15A North Rim 50.20 324 ⇑P P 03 21 44.5 +0.8
baz=50,SNR=225
SWSC Sam W. Stewart 50.20 318 ⇑P P 03 21 43.6 -0.2
baz=50,SNR=43
PHWY Pilot Hill 50.20 333 eP P 03 21 43.4 -0.3
comp=Z,211nm,0.7s,mb6.2
PHWY ePP pP 03 22 12.7 +0.2
PHWY eScP ScP 03 26 47.0 +1.3
R18A Canyonlands Na 50.20 327 ⇑P P 03 21 43.4 -0.3
baz=50,SNR=291
DVTC Desert V Tower 50.24 317 ⇑P P 03 21 44.2 +0.1
baz=50,SNR=76
Q19A Hogan Spring (50.27 328 ⇑P P 03 21 44.4 +0.2
baz=50,SNR=23
W13A Hualapai Mount 50.29 321 ⇓P P 03 21 45.2 +0.7
baz=50,SNR=313
BC3 Big Chuckw Mtn 50.40 319 ⇑P P 03 21 45.3 0.0
baz=50,SNR=71

IRM Iron Mountain 50.51 319 ⇑P P 03 21 46.1 0.0
baz=51,SNR=69
NEE2 Needles Airpor 50.55 320 ⇓P P 03 21 46.4 0.0
baz=51,SNR=10.0
MONP Monument Peak 50.59 317 ⇑P P 03 21 46.7 -0.1
baz=51,SNR=76
P19A Cripple Cowboy 50.63 329 ⇓P P 03 21 46.9 0.0
baz=51
T15A Red Dirt Ranch 50.65 324 ⇑P P 03 21 47.7 +0.6
baz=51,SNR=92
R17A Hanksville Air 50.67 327 ⇑P P 03 21 47.1 -0.1
baz=51,SNR=207
S16A Weppner Ranch, 50.68 325 ⇑P P 03 21 47.3 0.0
baz=51,SNR=189
V13A Grand Canyon W 50.84 322 ⇑P P 03 21 48.9 +0.3
baz=51,SNR=153
Q18A Rafter H Ranch 50.85 328 ⇑P P 03 21 48.8 +0.2
baz=51,SNR=289
BELC Belle Mtn. 50.97 319 ⇑P P 03 21 49.8 +0.2
baz=51,SNR=91
PFO Pinyon Flat Ob 51.04 318 P P 03 21 50.0 -0.1
comp=Z,608nm,1.1s,mb6.5,SNR=30
PFO Pinyon Flat Ob 51.04 318⇓iP P 03 21 50.0 -0.1
comp=Z,314nm,1.4s,mb6.2
PFO ePP pP 03 22 19.2 +0.2
PFO eScP ScP 03 26 48.7 -0.7
PFO Pinyon Flat Ob 51.04 318⇓iP P 03 21 50.0 -0.1
PFO e*PP pP 03 22 19.2 +0.2
PFO pmax pmax
comp=Z,314nm,1.4s,mb6.2
PFO Pinyon Flat Ob 51.04 318 ⇑P P 03 21 50.2 +0.1
baz=51,SNR=51
W12A Cal Nev Ari 51.04 321 ⇓P P 03 21 50.2 +0.1
baz=51,SNR=28
LDFC Landfair 51.05 320⇓iP P 03 21 50.9 +0.7
comp=Z,621nm,1.2s,mb6.5
LDFC ePP pP 03 22 18.8 -0.3
LDFC eScP ScP 03 26 49.4 -0.1
SRU San Rafael 51.06 327 ⇓P P 03 21 50.2 0.0
baz=51,SNR=283
S15A Panguitch 51.09 325 ⇓P P 03 21 50.8 +0.5
baz=51,SNR=55
T14A Hurricane 51.09 324 ⇑P P 03 21 50.9 +0.4
baz=51,SNR=149
O19A Miners Draw (B 51.20 329 ⇑P P 03 21 51.0 -0.1
baz=51,SNR=146
GMRC Granite Mounta 51.22 320 ⇓P P 03 21 51.8 +0.3
baz=51,SNR=169
Q16A Castle Valley 51.28 327 ⇑P P 03 21 52.0 +0.2
baz=51,SNR=79
P18A Preston Nutter 51.29 328 ⇑P P 03 21 52.2 +0.4
baz=51,SNR=189
RWWY Rawlins 51.32 332 eP P 03 21 51.6 -0.4
comp=Z,751nm,1.2s,mb6.6
RWWY ePP pP 03 22 20.7 -0.2
RWWY eScP ScP 03 26 50.5 +0.1
R15A Junction 51.40 325 ⇓P P 03 21 52.9 +0.2
baz=52,SNR=67
P17A Butcher Ranch, 51.44 327 ⇓P P 03 21 53.0 0.0
baz=52,SNR=36
MURC Murrieta 51.53 317 ⇓P P 03 21 53.8 0.0
baz=52,SNR=68
T13A Saint George 51.56 323 ⇓P P 03 21 54.5 +0.6
baz=52,SNR=160
U12A Valley of Fire 51.56 322 ⇑P P 03 21 54.1 +0.1
baz=52,SNR=38
L21A Rawlins 51.60 332 ⇑P P 03 21 54.1 0.0
baz=52,SNR=98
S14A Cedar City 51.61 324 ⇓P P 03 21 54.6 +0.3
baz=52,SNR=81
O18A Roosevelt 51.63 329 ⇓P P 03 21 54.5 +0.2
baz=52,SNR=79
M20A Sweetwater, Wa 51.63 331 ⇓P P 03 21 54.7 +0.3
baz=52,SNR=128
N19A John Jarvie Ra 51.67 330 ⇓P P 03 21 54.4 -0.3
baz=52,SNR=118
HEC Hector,Ludlow 51.69 319 ⇓P P 03 21 55.4 +0.5
baz=52,SNR=183
V11A Goodsprings 51.74 321 ⇑P P 03 21 55.4 +0.1
baz=52,SNR=69
BBRC Big Bear Sol-O 51.74 318 ⇑P P 03 21 56.2 +0.9
baz=52,SNR=84
TUQ Turquoise Moun 51.80 320 ⇓P P 03 21 55.8 0.0
baz=52,SNR=137
T12A Moapa 51.85 322 ⇓P P 03 21 56.4 +0.3
baz=52,SNR=80
EFI East Falkland 51.88 165 P P 03 21 56.5 +0.5
comp=Z,5µm,1.5s,mb7.3,SNR=66
EFI East Falkland 51.88 165⇓iP P 03 21 56.3 +0.3
comp=Z,953nm,1.1s,mb6.7
EFI ePP pP 03 22 24.4 -0.6
EFI East Falkland 51.88 165⇓iP P 03 21 56.3 +0.3
EFI e*PP pP 03 22 24.4 -0.6
EFI pmax pmax
comp=Z,953nm,1.1s,mb6.7
RSSD Black Hills 51.88 336 eP P 03 21 55.9 -0.3
comp=Z,216nm,0.8s,mb6.2
RSSD ePP pP 03 22 24.9 -0.2
RSSD eS S 03 29 07.7 -1.6
RSSD Black Hills 51.88 336 eP P 03 21 55.9 -0.2
RSSD e*PP pP 03 22 24.9 -0.2
RSSD eS S 03 29 07.7 -1.6
RSSD pmax pmax
comp=Z,216nm,0.8s,mb6.2
R14A James Farms, M 51.89 325 ⇓P P 03 21 56.3 0.0
baz=52,SNR=21
S13A Holt Ranch, En 51.90 324 ⇓P P 03 21 57.4 +0.9
baz=52,SNR=150
O17A Robinson Place 51.96 328 ⇑P P 03 21 57.3 +0.5
baz=52,SNR=193
N18A Larsen Ranch, 51.98 329 ⇓P P 03 21 57.1 +0.2
baz=52,SNR=313
Q15A Fillmore 52.01 326 ⇑P P 03 21 57.3 +0.1
baz=52,SNR=77
P16A Fountain Green 52.03 327 ⇓P P 03 21 57.8 +0.4
baz=52,SNR=54
U11A Corn Creek 52.08 321 ⇑P P 03 21 58.0 +0.2
baz=52,SNR=36
L20A Wamsutter 52.10 331 ⇓P P 03 21 58.1 +0.3
baz=52,SNR=62
SCI San Clemente I 52.10 316 ⇓P P 03 21 57.7 -0.3
baz=52,SNR=21
M19A Rock Springs 52.12 330 ⇓P P 03 21 57.8 -0.2
baz=52,SNR=8.4
RRX Edison Barstow 52.16 319 ⇑P P 03 21 58.7 +0.3
baz=52,SNR=11
BFSC Mount Baldy St 52.22 318 ⇓P P 03 21 58.8 -0.1
baz=52,SNR=106
CIS Catalina Islan 52.24 316 ⇓P P 03 21 58.8 -0.2
baz=52,SNR=14
GSC Goldstone 52.29 319⇑iP P 03 21 59.6 +0.3
comp=Z,578nm,1.3s,mb6.5
GSC ePP pP 03 22 28.8 +0.4
GSC Goldstone 52.29 319⇑iP P 03 21 59.6 +0.3
GSC e*PP pP 03 22 28.8 +0.4
GSC pmax pmax
comp=Z,578nm,1.3s,mb6.5
GSC Goldstone 52.29 319 ⇑P P 03 21 59.7 +0.3
baz=52,SNR=164
SHOC Shoshone 52.31 320 ⇓P P 03 21 59.7 +0.1
baz=52,SNR=100
FMP Fort Macarthur 52.34 317 ⇑P P 03 21 59.8 0.0
baz=52,SNR=5.7
P15A Leamington 52.35 326 ⇓P P 03 21 59.8 +0.1
baz=52,SNR=164
R13A O'Grain Ranch, 52.36 324 ⇓P P 03 22 00.6 +0.8
baz=52,SNR=202
O16A Springville 52.37 328 ⇑P P 03 22 00.0 +0.2
baz=52,SNR=212
MWC Mount Wilson 52.48 318⇓iP P 03 22 00.9 +0.1
comp=Z,736nm,1.5s,mb6.5
MWC ePP pP 03 22 30.4 +0.5
MWC Mount Wilson 52.48 318⇓iP P 03 22 00.9 +0.1
MWC e*PP pP 03 22 30.4 +0.6
MWC pmax pmax
comp=Z,736nm,1.5s,mb6.5
T11A Corn Creek, Al 52.50 322 ⇑P P 03 22 01.2 +0.4
baz=53,SNR=171
Q14A Sevier Lake (B 52.51 325 ⇓P P 03 22 01.7 +0.8
baz=53,SNR=282
S12A Delamar Landin 52.51 323 ⇓P P 03 22 01.5 +0.5
baz=53,SNR=72
M18A Lyman 52.51 330 ⇓P P 03 22 00.5 -0.4
baz=53,SNR=119
N17A Moffit Pass 52.55 329 ⇓P P 03 22 01.7 +0.5
baz=53,SNR=140
L19A Farson 52.66 331 ⇓P P 03 22 01.3 -0.7

baz=53,SNR=106
U10A Ash Meadows, A 52.67 321 ⇑P P **03 22 02.5 +0.3**
baz=53,SNR=67
DECC Green Verdugo 52.68 317 ⇑P P **03 22 02.3 +0.1**
baz=53,SNR=21
P14A Drum Mountains 52.80 326 ⇓P P **03 22 03.9 +0.8**
baz=53,SNR=204
EDW2 Edwards Air Fo 52.81 318 ⇑P P **03 22 03.3 +0.1**
baz=53,SNR=229
N16A Rees Ranch, Co 52.83 328 ⇑P P **03 22 03.7 +0.5**
baz=53,SNR=155
AGMN Agassiz Refuge 52.83 345⇑*eP* P **03 22 01.1 -2.0**
comp=Z,24nm,0.6s,mb5.4
AGMN *epP* pP 03 22 30.2 -2.0
AGMN *eScP* ScP 03 26 57.2 +0.4
R12A Pony Springs, 52.84 324 ⇓P P **03 22 04.0 +0.7**
baz=53,SNR=167
M17A Scullys Gap (B 52.85 329 ⇑P P **03 22 02.9 -0.5**
baz=53,SNR=142
L18A Fontenelle, Gr 52.87 330 ⇑P P **03 22 03.3 -0.2**
baz=53,SNR=82
Q13A Wheeler Ranch, 52.91 325 ⇓P P **03 22 04.3 +0.5**
baz=53,SNR=447
SNCC San Nicolas Is 52.93 316⇓*iP* P **03 22 03.5 -0.6**
comp=Z,123nm,0.8s,mb6.0
SNCC *epP* pP 03 22 33.1 -0.1
SNCC San Nicolas Is 52.93 316 ⇑P P **03 22 03.6 -0.6**
baz=53,SNR=6.5
TPNV Topopah Spring 52.95 321⇓*iP* P **03 22 04.7 +0.6**
comp=Z,369nm,1.1s,mb6.3
TPNV *epP* pP 03 22 33.9 +0.6
TPNV Topopah Spring 52.95 321⇓*iP* P **03 22 04.7 +0.5**
TPNV *e**PP pP 03 22 33.9 +0.6
TPNV pmax pmax
comp=Z,369nm,1.1s,mb6.3
TPNV Topopah Spring 52.95 321 ⇓P P **03 22 04.6 +0.5**
baz=53,SNR=281
O15A The Old Anders 52.95 327 ⇓P P **03 22 04.6 +0.5**
baz=53,SNR=77
LRMC Laurel Mountai 52.97 319 ⇓P P **03 22 04.5 +0.1**
baz=53,SNR=73
FURC Furnace Creek, 53.03 321 ⇓P P **03 22 04.9 +0.1**
baz=53,SNR=79
S11A Rachel 53.08 322 ⇓P P **03 22 05.9 +0.8**
baz=53,SNR=111
DUG Dugway 53.08 327⇓*iP* P **03 22 05.3 +0.2**
comp=Z,138nm,0.5s,mb6.2
DUG *epP* pP 03 22 34.3 +0.1
DUG *eS* **S 03 29 26.1 +0.3**
DUG Dugway 53.08 327⇓*iP* P **03 22 05.3 +0.2**
DUG *e**PP pP 03 22 34.3 +0.1
DUG *eS* **S 03 29 26.1 +0.3**
DUG pmax pmax
comp=Z,138nm,0.5s,mb6.2
DUG Dugway 53.08 327 ⇑P P **03 22 05.3 +0.2**
baz=53,SNR=274
BLG Laguna Peak 53.10 317 ⇓P P **03 22 05.1 -0.2**
baz=53,SNR=15
OSI Osito Adit 53.15 318⇓*iP* P **03 22 05.4 -0.3**
comp=Z,667nm,1.6s,mb6.4
OSI *epP* pP 03 22 34.2 -0.6
OSI *eS* **S 03 29 28.7 +1.7**
OSI Osito Adit 53.15 318 ⇓P P **03 22 05.3 -0.4**
baz=53
MPMC Manual Prospec 53.19 320 ⇓P P **03 22 05.7 -0.3**
baz=53,SNR=111
M16A Huntsville 53.23 328 ⇓P P **03 22 06.1 -0.1**
baz=53,SNR=96
P13A Bates Ranch, G 53.24 325 ⇑P P **03 22 06.8 +0.5**
baz=53,SNR=252
BW06 Boulder Array 53.26 331⇓*iP* P **03 22 05.7 -0.7**
comp=Z,79nm,0.8s,mb5.8
BW06 *epP* pP 03 22 34.1 -1.3
BW06 *eScP* ScP 03 26 59.2 +0.3
BW06 Boulder Array 53.26 331 ⇓P P **03 22 06.0 -0.4**
baz=53,SNR=225
PDAR Pinedale Array 53.26 331 P P **03 22 05.5 -0.9**
comp=Z,69nm,0.8s,mb5.8,baz=129,slow=7.5,SNR=180
PDAR pP pP 03 22 36.0 +0.5
comp=Z,129nm,1.1s,baz=134,slow=8.5,SNR=3.3
PDAR ScP ScP 03 26 58.5 -0.4
comp=Z,46nm,1.1s,baz=132,slow=6.2,SNR=6.9
PDAR S **S 03 29 24.3 -3.9**
comp=Z,3.2nm,1.0s,baz=126,slow=9.2,SNR=2.2
PDAR PKiKP PKiKP 03 29 50.6 +1.1
comp=Z,4.6nm,1.0s,baz=86,slow=4.4,SNR=3.8
PDAR LR LR 03 45 56.9
comp=Z,15µm,19.9s,baz=144,slow=37
PDAR PKPPKP 03 52 20.6
comp=Z,0.9nm,0.8s,baz=147,slow=2.2,SNR=3.1
PDAR P4KPbc 03 59 27.6
comp=Z,0.9nm,0.6s,baz=149,slow=4.2,SNR=7.6
PDAR Pinedale Array 53.26 331 P P **03 22 05.5 -0.9**
PDAR pP pP 03 22 36.0 +0.5
PDAR ScP ScP 03 26 58.5 -0.4
PDAR S **S 03 29 24.3 -3.9**
N15A Stansbury Isla 53.41 327 ⇓P P **03 22 07.4 -0.1**
baz=54,SNR=151
HWUT Hardware Ranch 53.41 329⇓*iP* P **03 22 07.1 -0.4**
comp=Z,76nm,0.6s,mb5.9
HWUT *epP* pP 03 22 36.0 -0.6
HWUT *eScP* ScP 03 26 58.6 -0.9
BSC Santa Cruz Isl 53.42 316 ⇓P P **03 22 07.1 -0.6**
baz=54,SNR=6.8
R11A Troy Canyon, C 53.43 323 ⇑P P **03 22 08.3 +0.6**
baz=54,SNR=211
Q12A Willow Creek R 53.44 324 ⇑P P **03 22 08.2 +0.5**
baz=54,SNR=107
ARVC Arvin 53.52 318 ⇑P P **03 22 08.4 0.0**
baz=54,SNR=75
ISA Isabella 53.59 319⇓*iP* P **03 22 08.8 -0.2**
comp=Z,458nm,1.4s,mb6.3
ISA *epP* pP 03 22 38.0 -0.1
ISA *eScP* ScP 03 26 59.3 -1.2
ISA Isabella 53.59 319⇓*iP* P **03 22 08.8 -0.1**
ISA *e**PP pP 03 22 38.0 -0.1
ISA pmax pmax
comp=Z,458nm,1.4s,mb6.3
ISA Isabella 53.59 319 ⇑P P **03 22 09.0 0.0**
baz=54,SNR=89
L16A Fish Haven 53.64 329 ⇓P P **03 22 08.6 -0.5**
baz=54,SNR=267
GRAC Grapevine Rang 53.68 321 ⇑P P **03 22 09.8 +0.2**
baz=54,SNR=70
O13A Hicks Ranch, I 53.68 326 ⇓P P **03 22 09.8 +0.3**
baz=54,SNR=174
SBC Santa Barbara 53.73 317 ⇑P P **03 22 09.2 -0.7**
baz=54
N14A Grayback Hills 53.74 327 ⇑P P **03 22 09.7 -0.1**
baz=54,SNR=255
M15A Larsen Ranch, 53.77 328 ⇑P P **03 22 09.9 -0.2**
baz=54,SNR=465
S10A Tonopah Range, 53.77 322 ⇑P P **03 22 10.6 +0.4**
baz=54,SNR=446
Q11A Duckwater 53.79 324 ⇓P P **03 22 10.8 +0.4**
baz=54,SNR=406
CWC Cottonwood Cre 53.80 320 ⇓P P **03 22 10.4 0.0**
baz=54,SNR=46
R10A Warm Springs 53.82 323 ⇑P P **03 22 11.4 +0.9**
baz=54,SNR=100
AHID Auburn Hatcher 54.02 330 *eP* P **03 22 11.1 -0.8**
comp=Z,563nm,1.3s,mb6.4
AHID *epP* pP 03 22 40.3 -0.8
AHID *eScP* ScP 03 27 01.1 -1.1
S09A Goldfield 54.04 322 ⇑P P **03 22 12.1 0.0**
baz=54
PKM Peak Mountain 54.05 317 ⇑P P **03 22 12.2 -0.1**
baz=54,SNR=45
I18A Diamond G Ranc 54.09 332 ⇓P P **03 22 12.3 -0.1**
baz=54
VES Vestal, Richgr 54.10 319 ⇓P P **03 22 12.5 -0.1**
baz=54,SNR=80
L15A Malad City 54.12 329 ⇓P P **03 22 12.3 -0.4**
baz=54,SNR=341
O12A Currie 54.20 325 ⇑P P **03 22 13.7 +0.4**
baz=54,SNR=286
Q10A Clear Creek Ra 54.23 323 ⇓P P **03 22 14.2 +0.7**
baz=54,SNR=209
TPH Tonopah 54.25 322⇓*iP* P **03 22 13.8 +0.1**
comp=Z,468nm,1.2s,mb6.4
TPH *epP* pP 03 22 43.2 +0.3
TPH Tonopah 54.25 322⇓*iP* P **03 22 13.8 +0.1**
TPH *e**PP pP 03 22 43.2 +0.3
TPH pmax pmax
comp=Z,468nm,1.2s,mb6.4
TIN Tinemaha 54.26 320 ⇓P P **03 22 14.0 +0.3**
baz=54,SNR=9.2
J17A Brown Place, J 54.27 331 ⇓P P **03 22 13.8 +0.1**
baz=54,SNR=107
M14A Sheep Mountain 54.28 327 ⇑P P **03 22 13.5 -0.3**
baz=54,SNR=214
K16A Soda Springs 54.31 330 ⇑P P **03 22 14.1 +0.1**
baz=54,SNR=187
P11A Circle Ranch, 54.31 324 ⇑P P **03 22 14.1 +0.1**
baz=54,SNR=43
REDW Red Top Meadow 54.34 331⇓*iP* P **03 22 14.0 -0.2**
comp=Z,1µm,1.5s,mb6.8
REDW *epP* pP 03 22 42.8 -0.6
SNOW Snow King Moun 54.36 331 *eP* P **03 22 14.1 -0.3**
comp=Z,958nm,1.4s,mb6.6
LOHW Long Hollow 54.40 331 *eP* P **03 22 14.1 -0.6**
comp=Z,193nm,1.1s,mb6.0
LOHW *epP* pP 03 22 43.4 -0.5
LOHW *eScP* ScP 03 27 01.5 -2.3
SMMC Simmler 54.41 317 ⇓P P **03 22 14.5 -0.4**
baz=54,SNR=16
RCTC Rector, Farmer 54.48 319 ⇓P P **03 22 14.8 -0.5**
baz=54,SNR=26
TPAW Teton Pass 54.48 331 *eP* P **03 22 14.8 -0.4**
comp=Z,514nm,1.4s,mb6.4
RRI2 Red Ridge 54.55 330⇓*iP* P **03 22 15.7 0.0**
comp=Z,1µm,1.5s,mb6.8
RRI2 *epP* pP 03 22 44.7 -0.3
RRI2 *eScP* ScP 03 27 05.5 +1.0
MOOW Moose Ponds 54.57 331 *eP* P **03 22 15.5 -0.3**
comp=Z,415nm,1.6s,mb6.2
MOOW *epP* pP 03 22 44.7 -0.4
MOOW *eScP* ScP 03 27 01.0 -3.6
L14A Malta 54.59 328 ⇓P P **03 22 15.5 -0.6**
baz=55,SNR=199
I17A Pilgram Creek 54.62 331 ⇓P P **03 22 16.7 +0.5**
baz=55,SNR=200
M13A Montello 54.62 327 ⇑P P **03 22 15.9 -0.4**
baz=55,SNR=90
O11A Cowboy Ranch, 54.63 325 ⇑P P **03 22 16.5 +0.1**
baz=55,SNR=194
ULM Lac du Bonnet 54.64 346 P P **03 22 14.0 -2.3**
comp=Z,222nm,0.7s,mb6.3,baz=155,slow=7.5,SNR=68
ULM pP pP 03 22 43.5 -2.0
comp=Z,128nm,0.6s,baz=163,slow=8.6,SNR=5.3
ULM S **S 03 29 38.8 -7.7**
comp=Z,14nm,1.0s,baz=310,slow=21,SNR=2.0
ULM LR LR 03 46 57.3
comp=Z,12µm,18.2s,baz=147,slow=37
ULM PKP2bc 03 52 37.6
comp=Z,6.4nm,0.8s,baz=284,slow=4.2,SNR=4.4
ULM P4KPbc 03 59 33.0
comp=Z,4.4nm,0.6s,baz=164,slow=6.6,SNR=3.7
ULM Lac du Bonnet 54.64 346⇑*eP* P **03 22 13.8 -2.4**
comp=Z,245nm,0.8s,mb6.3
ULM *epP* pP 03 22 43.2 -2.3
ULM *eScP* ScP 03 27 05.2 +0.5
J16A Bone 54.65 330 ⇑P P **03 22 16.5 +0.1**
baz=55,SNR=238
MTUM Tungsten Hills 54.65 320 *eP* P **03 22 16.7 +0.1**
MTUM *epP* pP 03 22 45.7 -0.1
V05C Boulder Hill, 54.66 318 ⇓P P **03 22 16.7 0.0**
baz=55
DCID1 Drake Creek 54.67 331 *eP* P **03 22 16.6 0.0**
comp=Z,180nm,0.8s,mb6.2
DCID1 *eScP* ScP 03 27 05.8 +0.8
K15A Arbon 54.69 329 ⇓P P **03 22 16.5 -0.2**
baz=55,SNR=78
Q09A Carvers 54.70 323 ⇓P P **03 22 17.3 +0.4**
baz=55,SNR=25
N12A Clover Valley, 54.76 326 ⇓P P **03 22 17.1 -0.2**
baz=55,SNR=70
P10A Eureka 54.77 324 ⇑P P **03 22 17.9 +0.5**
baz=55,SNR=89
IMW Indian Meadow 54.77 331 *eP* P **03 22 16.9 -0.5**
comp=Z,121nm,0.7s,mb6.0
IMW *epP* pP 03 22 46.3 -0.3
IMW *eScP* ScP 03 27 05.1 -0.4
ELK Elko 54.80 326⇓*iP* P **03 22 17.6 0.0**
comp=Z,155nm,1.0s,mb6.0
ELK *epP* pP 03 22 46.9 0.0
ELK *eScP* ScP 03 27 05.5 -0.1
ELK Elko 54.80 326⇓*iP* P **03 22 17.6 0.0**
ELK *e**PP pP 03 22 46.9 0.0
ELK pmax pmax
comp=Z,155nm,1.0s
LAO LASA Array 54.87 336 *eP* P **03 22 17.1 -0.9**
comp=Z,42nm,0.4s,mb5.8
LAO *epP* pP 03 22 46.0 -1.2
LAO *eS* **S 03 29 47.5 -2.2**
K14A Jones Ranch, D 54.92 328 ⇓P P **03 22 17.9 -0.6**
baz=55,SNR=202
RLMT Red Lodge 54.92 333 *eP* P **03 22 15.2 -3.1**
comp=Z,415nm,1.3s,mb6.3
RLMT Red Lodge 54.92 333 ⇓P P **03 22 18.1 -0.2**
baz=55,SNR=34
R08A Mina 54.97 322 ⇑P P **03 22 19.3 +0.4**
baz=55,SNR=27
H17A Grant Village 54.97 332 ⇓P P **03 22 19.4 +0.6**
baz=55,SNR=78
MLAC Mammoth Lakes 54.99 320 ⇑P P **03 22 19.0 0.0**
baz=55,SNR=20
L13A Double Diamond 55.01 328 ⇑P P **03 22 18.9 -0.1**
baz=55,SNR=115
LKWY Lake 55.02 332 *eP* P **03 22 19.2 +0.1**
comp=Z,159nm,1.0s,mb6.0
LKWY *epP* pP 03 22 48.2 -0.1
LKWY *eS* **S 03 29 52.8 +1.0**
LKWY Lake 55.02 332 *eP* P **03 22 19.2 +0.1**
LKWY *e**PP pP 03 22 48.2 -0.2
LKWY *eS* **S 03 29 52.8 +1.0**
LKWY pmax pmax
comp=Z,159nm,1.0s,mb6.0
I16A Newdale 55.03 331 ⇑P P **03 22 19.2 +0.1**
baz=55,SNR=124
U05C Westside ANR, 55.07 318 ⇑P P **03 22 19.0 -0.7**
baz=55
M12A Wells 55.07 326 ⇑P P **03 22 19.0 -0.5**
baz=55,SNR=124
KCC Kaiser Creek 55.12 320 ⇑P P **03 22 19.4 -0.6**
baz=55,SNR=96
PKD Parkfield 55.13 318 ⇓P P **03 22 19.4 -0.7**
baz=55,SNR=16
P09A Austin 55.13 323 ⇑P P **03 22 20.3 +0.3**
baz=55,SNR=27
N11A Elko Archery C 55.13 325 ⇓P P **03 22 20.0 0.0**
baz=55,SNR=46
NVAR Mina Array Bea 55.14 322 P P **03 22 19.7 -0.4**
comp=Z,150nm,1.0s,mb6.0,baz=136,slow=6.8,SNR=298
NVAR pP pP 03 22 50.6 +1.2
comp=Z,136nm,1.0s,baz=138,slow=6.6,SNR=5.3
NVAR S **S 03 29 54.3 +0.7**
comp=Z,2.9nm,1.0s,baz=106,slow=9.5,SNR=2.3
NVAR PKPPKP 03 52 05.4
comp=Z,0.4nm,0.5s,baz=243,slow=3.0,SNR=3.6
NVAR PKP2bc 03 52 35.6
comp=Z,5.3nm,1.1s,baz=269,slow=1.9,SNR=7.2
NVAR Mina Array Bea 55.14 322 P P **03 22 19.7 -0.4**
NVAR pP pP 03 22 50.6 +1.2
NVAR S **S 03 29 54.3 +0.7**
NVAR P'P' 03 52 05.4
NVAR ⇑*e* 03 52 35.6
J15A Blackfoot 55.15 330 ⇓P P **03 22 20.2 +0.1**
baz=55,SNR=278
Q08A Gabbs 55.18 322 ⇓P P **03 22 20.3 0.0**
baz=55,SNR=172
T06C Millerton Lake 55.19 319 ⇓P P **03 22 19.3 -1.1**
baz=55,SNR=48
G18A Lazy EL Ranch, 55.20 333 ⇑P P **03 22 20.1 -0.3**
baz=55,SNR=44
O10A Cortez Mining, 55.23 324 ⇓P P **03 22 21.2 +0.6**
baz=55
K13A Stover Farm, H 55.47 328 ⇓P P **03 22 22.0 -0.3**
baz=56,SNR=74
N10A Dunphy 55.51 325 ⇓P P **03 22 22.5 -0.2**
baz=56,SNR=50
H16A Russell Place, 55.52 332 ⇓P P **03 22 23.4 +0.7**
baz=56,SNR=214
U04C Hernandez Rese 55.53 318 ⇑P P **03 22 22.6 -0.3**
baz=56,SNR=33
O09A Fish Creek Ran 55.55 324 ⇓P P **03 22 23.1 0.0**
baz=56,SNR=201
M11A Holland Ranch, 55.57 326 ⇑P P **03 22 22.8 -0.3**
baz=56,SNR=108
DGMT Dagmar 55.57 339 ⇑P P **03 22 22.4 -0.6**
baz=56,SNR=42
I15A Monteview 55.61 330 ⇓P P **03 22 23.7 +0.4**
baz=56,SNR=42
GCMT Greycliff 55.62 333 *eP* P **03 22 22.9 -0.5**
GCMT *eScP* ScP 03 27 08.6 -0.6
L12A House Creek Ra 55.62 327 ⇑P P **03 22 23.2 -0.3**
baz=56,SNR=144
V03C Hunter Liggett 55.64 318 ⇑P P **03 22 23.8 0.0**
baz=56,SNR=20
J14A Carey 55.65 329 ⇑P P **03 22 24.1 +0.5**
baz=56,SNR=408
QLMT Earthquake Lak 55.70 332 *eP* P **03 22 24.3 +0.3**
QLMT *epP* pP 03 22 55.4 +2.1
QLMT *eScP* ScP 03 27 10.8 +1.3
F18A Big Timber 55.73 333 ⇓P P **03 22 24.2 +0.1**
baz=56,SNR=720
BMN Battle Mountai 55.74 324⇓*iP* P **03 22 24.0 -0.3**
comp=Z,248nm,0.8s,mb6.3
BMN *epP* pP 03 22 53.3 -0.4
BMN Battle Mountai 55.74 324⇓*iP* P **03 22 24.0 -0.3**
BMN *e**PP pP 03 22 53.3 -0.4
BMN pmax pmax
comp=Z,248nm,0.8s,mb6.3
G17A Pierce Place, 55.75 332 ⇓P P **03 22 25.4 +1.1**
baz=56,SNR=132
Q07A Schurz 55.76 322 ⇑P P **03 22 25.1 +0.5**
baz=56
P08A Dixie Valley 55.78 323 ⇓P P **03 22 24.9 +0.2**
baz=56,SNR=75
S05C Merced 55.79 319 ⇓P P **03 22 24.2 -0.6**
baz=56,SNR=136
K12A Draper Farm, C 55.90 327 ⇓P P **03 22 25.5 +0.1**
baz=56,SNR=164
R06C Coleville 55.91 321 ⇓P P **03 22 26.1 +0.5**
baz=56,SNR=93
J13A Cove Ranch, Pi 56.04 329 ⇑P P **03 22 26.4 0.0**
baz=56,SNR=228
I14A Mackay 56.04 329 ⇑P P **03 22 26.9 +0.5**
baz=56,SNR=164
L11A Cat Creek Ranc 56.04 327 ⇑P P **03 22 26.2 -0.2**
baz=56,SNR=137
M10A I.L. Ranch, Tu 56.05 325 ⇓P P **03 22 26.4 -0.2**
baz=56,SNR=86
H15A Lima 56.13 331 ⇓P P **03 22 27.8 +0.7**
baz=56,SNR=196
F17A Fitzpatrick Pl 56.15 333 ⇑P P **03 22 27.6 +0.5**
baz=56,SNR=120
G16A Moss Hill, Enn 56.18 332 ⇑P P **03 22 27.6 +0.3**
baz=56,SNR=83
P07A Fallon 56.18 322 ⇑P P **03 22 27.7 +0.2**
baz=56,SNR=28
N09A Rock Creek Ran 56.19 324 ⇑P P **03 22 27.1 -0.4**
baz=56,SNR=77
SAO San Andreas Ge 56.19 318⇓*iP* P **03 22 27.0 -0.6**
comp=Z,434nm,1.5s,mb6.3
SAO *epP* pP 03 22 56.7 -0.4
SAO San Andreas Ge 56.19 318⇓*iP* P **03 22 27.0 -0.6**
SAO *e**PP pP 03 22 56.7 -0.3
SAO pmax pmax
comp=Z,434nm,1.5s,mb6.3
O08A Rochester Mine 56.20 323 ⇑P P **03 22 27.3 -0.3**
baz=56,SNR=115
CMB Columbia Colle 56.22 320⇓*iP* P **03 22 26.9 -0.9**
comp=Z,258nm,1.4s,mb6.1
CMB *epP* pP 03 22 56.9 -0.3
CMB *eS* **S 03 30 08.2 +0.2**
CMB Columbia Colle 56.22 320⇓*iP* P **03 22 26.9 -0.9**
CMB *e**PP pP 03 22 56.9 -0.3
CMB *eS* **S 03 30 08.2 +0.2**
CMB pmax pmax
comp=Z,258nm,1.4s,mb6.1
CMB Columbia Colle 56.22 320 ⇑P P **03 22 27.0 -0.8**
baz=56,SNR=84
HLID Hailey 56.28 329 *eP* P **03 22 27.6 -0.5**
comp=Z,130nm,0.7s,mb6.1
HLID *epP* pP 03 22 57.6 +0.1
HLID *eScP* ScP 03 27 12.2 +0.1
HLID *eS* **S 03 30 07.0 -1.6**
HLID Hailey 56.28 329 ⇓P P **03 22 28.2 +0.1**
baz=56,SNR=198
E18A Harlowton 56.32 334 ⇓P P **03 22 28.4 0.0**
baz=56,SNR=124
I13A Wildhorse Cree 56.37 329 ⇑P P **03 22 29.1 +0.3**
baz=56,SNR=175
L10A Juniper Basin 56.38 326 ⇑P P **03 22 28.7 -0.1**
baz=56,SNR=244
MCMT McKenzie Canyo 56.39 331 *eP* P **03 22 28.8 0.0**
MCMT *epP* pP 03 22 58.5 +0.2
MCMT *eScP* ScP 03 27 12.8 +0.3
BOZ Bozeman (W) 56.41 332 *eP* P **03 22 28.5 -0.5**
comp=Z,1µm,1.5s,mb6.7
BOZ Bozeman (W) 56.41 332 *eP* P **03 22 28.5 -0.5**
BOZ pmax pmax
comp=Z,1µm,1.5s,mb6.7
BOZ Bozeman (W) 56.41 332 ⇓P P **03 22 28.8 -0.2**
baz=56,SNR=90
J12A Stokes Ranch, 56.42 328 ⇓P P **03 22 29.2 +0.1**
baz=56,SNR=136
G15A Dillon 56.46 331 ⇑P P **03 22 29.1 -0.2**
baz=56,SNR=82
H14A Leadore 56.49 330 ⇑P P **03 22 29.8 +0.2**
baz=57,SNR=210
N08A GE Springer Mi 56.50 324 ⇓P P **03 22 28.4 -1.3**
baz=57,SNR=108
F16A Kennard Place, 56.51 332 ⇑P P **03 22 29.6 0.0**
baz=57,SNR=58
M09A Marrel Ranch, 56.51 325 ⇓P P **03 22 29.4 -0.4**
baz=57,SNR=86
O07A Toulon 56.55 323 ⇓P P **03 22 29.7 -0.4**
baz=57,SNR=151
WCN Washoe City 56.57 322 ⇑P P **03 22 30.6 +0.3**
baz=57,SNR=90
PAHR Pah Rah Range 56.59 322⇓*iP* P **03 22 30.4 0.0**
comp=Z,1µm,1.6s,mb6.6
PAHR *epP* pP 03 22 59.7 -0.1
PAHR *eS* **S 03 30 11.5 -1.2**
K11A Parker Ranch, 56.60 327 ⇑P P **03 22 30.4 0.0**
baz=57,SNR=315
DLMT Dillon 56.66 331 *eP* P **03 22 29.7 -1.0**
comp=Z,302nm,1.2s,mb6.2
DLMT *epP* pP 03 22 59.8 -0.4
DLMT *eScP* ScP 03 27 13.2 -0.5
E17A Martinsdale 56.66 333 ⇑P P **03 22 30.4 -0.4**
baz=57,SNR=143
LCCM Lewis and Clar 56.66 332 P P **03 22 30.4 -0.3**
R04C Big Horse Ranc 56.70 320 ⇑P P **03 22 31.6 +0.4**
baz=57,SNR=88
D18A Linhart Farms, 56.76 334 ⇓P P **03 22 31.6 +0.1**
baz=57,SNR=118
I12A Atlanta 56.82 328 ⇓P P **03 22 32.2 +0.2**
baz=57,SNR=102
LAVA Lava Cap Winer 56.87 320 ⇑P P **03 22 32.1 -0.3**
baz=57,SNR=59
WENL Wente Vineyard 56.88 319 ⇓P P **03 22 32.8 +0.3**
baz=57,SNR=24
P06A Stead Airport, 56.88 322 ⇓P P **03 22 32.8 +0.4**
baz=57,SNR=32
H13A Challis 56.90 330 ⇓P P **03 22 32.5 0.0**
baz=57,SNR=181
MFID Camas Ranch 56.93 328 ⇓P P **03 22 33.0 +0.3**
baz=57,SNR=532
F15A Butte 56.96 332 ⇓P P **03 22 32.7 -0.2**
baz=57,SNR=84
N07B Gerlach 56.99 323 ⇑P P **03 22 32.3 -0.9**
baz=57,SNR=142
L09A Wilkinson Ranc 57.02 325 ⇓P P **03 22 33.3 0.0**
baz=57,SNR=394
M08A Happy Creek Ra 57.06 324 ⇓P P **03 22 33.2 -0.5**
baz=57,SNR=179
K10A MacKenzie Ranc 57.07 326 ⇓P P **03 22 33.8 +0.1**
baz=57,SNR=334
JRSC Jasper Ridge 57.08 318 ⇓P P **03 22 33.6 -0.3**
baz=57,SNR=10
E16A East Helena 57.09 333 ⇓P P **03 22 33.9 +0.1**
baz=57,SNR=119
D17A Six Diamond Ra 57.11 334 ⇑P P **03 22 34.2 +0.2**
baz=57,SNR=88
O06A Flanigan 57.13 322 ⇑P P **03 22 34.3 +0.1**
baz=57,SNR=152
BDM Black Diamond 57.13 319 ⇓P P **03 22 34.8 +0.5**
baz=57,SNR=28
H12A Diamond D Ranc 57.20 329 ⇓P P **03 22 34.6 0.0**
baz=57,SNR=178
G13A Cobalt 57.26 330 ⇓P P **03 22 34.8 -0.3**
baz=57,SNR=102
BEKR Beckwourth 57.28 322 ⇑P P **03 22 35.5 +0.2**
baz=57,SNR=295
HRY Holter Researc 57.29 333 *eP* P **03 22 34.6 -0.6**
I11A Placerville 57.33 328 ⇑P P **03 22 35.4 -0.1**
baz=57,SNR=405
F14A Wisdom 57.35 331 ⇑P P **03 22 35.6 0.0**

baz=57,SNR=93
EGMT Eagleton 57.38 335⇓*i*P P 03 22 35.6 -0.2
comp=Z,519nm,1.2s,mb6.4
EGMT *e*pP pP 03 23 04.6 -0.8
EGMT Eagleton 57.38 335⇑P P 03 22 35.8 0.0
baz=58,SNR=44
D16A Dana Ranch, Ca 57.40 333⇓P P 03 22 36.2 +0.2
baz=58,SNR=124
J10A Berg Farm, Mel 57.44 327⇑P P 03 22 35.8 -0.5
baz=58,SNR=58
E15A Deer Lodge 57.45 332⇓P P 03 22 36.4 0.0
baz=58,SNR=72
K09A Rome 57.49 326⇑P P 03 22 37.0 +0.3
baz=58,SNR=811
N06A Buffalo Meadow 57.49 323⇑P P 03 22 36.4 -0.3
baz=58,SNR=333
C17A Wharram Farm, 57.51 334⇑P P 03 22 36.6 -0.1
baz=58,SNR=178
L08A Fields 57.51 325⇓P P 03 22 36.6 -0.2
baz=58,SNR=508
Q03C Winters 57.61 320⇑P P 03 22 38.1 +0.5
baz=58,SNR=24
OHCM Honcut 57.67 321 *e*P P 03 22 37.6 -0.4
OHCM *e*pP pP 03 23 08.1 +0.5
OHCM *e*ScP ScP 03 27 17.9 -0.5
O05C Quincy 57.68 322⇓P P 03 22 38.4 +0.4
baz=58,SNR=125
CVS Carmenet Viney 57.74 319⇑P P 03 22 38.2 -0.3
baz=58,SNR=32
FARB Farallon Islan 57.74 318⇑P P 03 22 38.0 -0.5
baz=58,SNR=8.5
F13A Darby 57.81 331⇑P P 03 22 38.8 0.0
baz=58,SNR=178
ORV Oroville 57.81 321⇑P P 03 22 39.2 +0.2
baz=58,SNR=333
WVOR Wild Horse Val 57.84 325⇓*i*P P 03 22 38.7 -0.4
comp=Z,2μm,1.4s,mb7.0
WVOR *e*pP pP 03 23 07.8 -0.9
WVOR Wild Horse Val 57.84 325⇓*i*P P 03 22 38.7 -0.4
WVOR *e**PP pP 03 23 07.8 -0.9
WVOR pmax pmax
comp=Z,2μm,1.4s,mb7.0
E14A Clinton 57.85 332⇓P P 03 22 39.3 +0.2
baz=58,SNR=48
D15A Lincoln 57.85 333⇑P P 03 22 39.1 0.0
baz=58,SNR=46
I10A Payette 57.90 328⇓P P 03 22 39.3 -0.2
baz=58,SNR=37
H11A Donnelly 57.90 329⇓P P 03 22 38.8 -0.7
baz=58,SNR=120
MCCM Marconi Confer 57.91 319⇓*i*P P 03 22 38.6 -1.1
comp=Z,211nm,0.9s,mb6.2
MCCM *e*pP pP 03 23 08.0 -1.2
MCCM Marconi Confer 57.91 319⇓P P 03 22 39.1 -0.6
baz=58,SNR=14
J09A Fry Pan Ranch, 57.93 326⇓P P 03 22 39.5 -0.2
baz=58,SNR=318
NSHM Saint Helena R 57.94 319 *e*P P 03 22 39.5 -0.4
NSHM *e*ScP ScP 03 27 20.3 +0.8
K08A Mann Creek Ran 57.94 325⇑P P 03 22 39.7 -0.1
baz=58,SNR=251
L07A Adell 57.98 324⇑P P 03 22 40.2 +0.1
baz=58,SNR=131
O04C Chester 58.00 322⇑P P 03 22 40.4 +0.1
baz=58,SNR=196
MNRC McLaughlin Nat 58.03 320⇓P P 03 22 40.7 +0.2
baz=58,SNR=53
C16A Fuhringer Ranc 58.07 334⇑P P 03 22 40.8 +0.2
baz=58
CHMT Chamberlain Mo 58.10 332 *e*P P 03 22 39.9 -1.0
E13A Victor 58.20 331⇓P P 03 22 41.5 -0.1
baz=58,SNR=129
H10A Noah's Angus R 58.21 328⇑P P 03 22 40.6 -1.1
baz=58,SNR=82
F12A Elk City 58.24 330⇓P P 03 22 41.6 -0.2
baz=58,SNR=273
I09A Lost Marbles R 58.33 327⇓P P 03 22 41.9 -0.6
baz=58,SNR=143
J08A Circle Bar Ran 58.34 326⇑P P 03 22 42.1 -0.5
baz=58,SNR=144
D14A Greenough 58.34 332⇑P P 03 22 42.1 -0.4
baz=58,SNR=47
K07A Rock Creek Ran 58.35 325⇑P P 03 22 42.2 -0.4
baz=58
MSO Missoula 58.36 332 *e*P P 03 22 42.2 -0.4
comp=Z,4.3nm,1.7s
MSO *e*pP pP 03 23 11.9 -0.3
C15A Salmond Ranch, 58.44 333⇓P P 03 22 43.8 +0.6
baz=58,SNR=93
LBCM Butte Creek Ri 58.47 322 P P 03 22 43.1 -0.4
MOD Modoc 58.47 324⇑*i*P P 03 22 42.9 -0.6
comp=Z,301nm,1.1s,mb6.2
MOD *e*pP pP 03 23 11.9 -1.2
MOD Modoc 58.47 324⇑P P 03 22 43.0 -0.6
baz=58,SNR=87
HOPS Hopland 58.50 320⇓*i*P P 03 22 43.5 -0.3
comp=Z,288nm,1.3s,mb6.2
HOPS Hopland 58.50 320⇓P P 03 22 44.0 +0.2
baz=59,SNR=19
G11A Walters Elk Ra 58.51 329⇓P P 03 22 42.8 -0.9
baz=59,SNR=121
B16A M & M Farms, S 58.52 334⇑P P 03 22 43.4 -0.3
baz=59,SNR=29
GASB Alder Springs 58.64 320⇑P P 03 22 45.2 +0.4
baz=59,SNR=91
I08A Drewsey 58.74 326⇓P P 03 22 44.8 -0.6
baz=59,SNR=64
H09A Durkee 58.75 328⇑P P 03 22 44.6 -0.7
baz=59,SNR=47
F11A Grangeville 58.79 330⇑P P 03 22 44.8 -0.9
baz=59,SNR=146
D13A Huson 58.80 332⇑P P 03 22 45.6 -0.1
baz=59,SNR=104
J07A Hines 58.81 326⇑P P 03 22 45.2 -0.7
baz=59,SNR=55
B15A Bradely Ranch, 58.82 334⇑P P 03 22 45.5 -0.3
baz=59,SNR=106
E12A Beaver Dam Sad 58.86 330⇑P P 03 22 45.7 -0.4
baz=59,SNR=151
A16A West Butte Ran 58.88 335⇑P P 03 22 46.2 0.0
baz=59,SNR=64
G10A Bishop Farm, J 58.88 328⇓P P 03 22 45.7 -0.6
baz=59,SNR=121
C14A Swan Lake 58.95 332⇑P P 03 22 47.1 +0.4
baz=59
RKT Rikitea 59.04 244 *e*S S 03 30 44.2 -1.2
comp=Z,51μm,25.5s
RKT *e*LQ 03 37 45.7
comp=Z,24μm,39.2s
RKT *e*LR LR 03 40 36.3
comp=Z,45μm,37.2s,baz=75
WDC Whiskeytown Da 59.05 321⇓*i*P P 03 22 45.2 -2.4
comp=Z,97nm,0.8s,mb5.9
WDC *e*ScP ScP 03 27 22.6 -1.9
WDC Whiskeytown Da 59.05 321⇓*i*P P 03 22 45.2 -2.4
WDC pmax pmax
comp=Z,97nm,0.8s,mb5.9
WDC Whiskeytown Da 59.05 321⇓P P 03 22 45.1 -2.5
baz=59,SNR=62
E11A Bogner Ranch, 59.14 330⇑P P 03 22 47.2 -0.8
baz=59,SNR=139
B14A Marquette Ranc 59.17 333⇓P P 03 22 48.3 +0.1
baz=59,SNR=246
H08A Prairie City 59.19 327⇑P P 03 22 48.0 -0.4
baz=59,SNR=134
D12A Red Ives Fores 59.20 331⇑P P 03 22 48.2 -0.2
baz=59
KCPM Cahto Peak 59.21 320⇓*e*P P 03 22 49.0 +0.3
KCPM *e*pP pP 03 23 18.2 -0.1
KCPM *e*ScP ScP 03 27 24.0 -1.2
G09A Cove 59.21 328⇑P P 03 22 48.2 -0.4
baz=59,SNR=162
KIPM Iron Peak 59.22 320 *e*P P 03 22 48.9 +0.2
KIPM *e*pP pP 03 23 20.2 +1.8
J06A Christmas Vall 59.22 325⇓P P 03 22 48.3 -0.3
baz=59,SNR=39
C13A Hot Springs 59.27 332⇑P P 03 22 49.3 +0.3
baz=59,SNR=122
K05A Summer Lake 59.32 324⇓P P 03 22 49.8 +0.5
baz=59,SNR=80
I07A Izee 59.37 326⇑P P 03 22 49.6 -0.1
baz=59,SNR=176
A15A Johnson Ranch, 59.39 334⇓P P 03 22 49.6 -0.1
baz=60,SNR=70
F10A Beach Ranch, E 59.39 329⇓P P 03 22 49.7 -0.1
baz=60,SNR=156
F09A S2 Ranch, Elgi 59.57 328⇓P P 03 22 51.1 +0.1
baz=60,SNR=244
O01C Eel River Cons 59.61 320⇑P P 03 22 51.8 +0.3
baz=60,SNR=38
N02C Big Bar 59.67 321⇓P P 03 22 51.3 -0.6
baz=60,SNR=79
D11A Klaveano Farm, 59.68 330⇑P P 03 22 51.1 -0.6
baz=60,SNR=116
E10A Myers, Un 59.68 330⇑P P 03 22 51.2 -0.5
baz=60,SNR=152
I06A Prineville 59.68 326⇓P P 03 22 52.5 +0.7
baz=60,SNR=183
A14A Double T Ranch 59.69 334⇑P P 03 22 51.7 -0.1
baz=60,SNR=57
C12B Naegeli Ranch, 59.72 331⇑P P 03 22 52.4 +0.4
baz=60,SNR=129
B13A Whitefish 59.73 333⇓P P 03 22 52.2 +0.1
baz=60,SNR=78
H07A Lands Inn, Kim 59.73 327⇑P P 03 22 52.0 -0.2
baz=60,SNR=119
YBH Yreka Blue Hor 59.82 322 LR LR 03 51 59.3
comp=Z,9μm,20.5s,baz=128,slow=39
YBH PKP2bc 03 52 21.5
comp=Z,3.8nm,1.1s,baz=349,slow=5.2,SNR=3.5
YBH Yreka Blue Hor 59.82 322⇓*i*P P 03 22 51.1 -1.7
comp=Z,125nm,0.9s,mb5.9
YBH *e*pP pP 03 23 20.6 -2.0
YBH Yreka Blue Hor 59.82 322⇓*i*P P 03 22 51.1 -1.7
YBH *e**PP pP 03 23 20.6 -2.0
YBH pmax pmax
comp=Z,125nm,0.9s
YBH Yreka Blue Hor 59.82 322⇑P P 03 22 51.2 -1.6
baz=60,SNR=67
G08A Pilot Rock 59.85 327⇓P P 03 22 53.2 +0.2
baz=60,SNR=220
BUOR Burton Butte 59.86 323 P P 03 22 52.7 -0.4
LNOR Lincton Mounta 59.87 328 *e*P P 03 22 52.5 -0.6
LNOR *e*pP pP 03 23 26.3 +3.4
WALA Waterton Lakes 59.97 333⇓*i*P P 03 22 53.5 -0.2
comp=Z,270nm,1.0s,mb6.2
WALA *e*pP pP 03 23 23.0 -0.5
WALA *e*ScP ScP 03 27 27.9 -0.4
F08A Pendleton 60.08 328⇓P P 03 22 54.0 -0.5
baz=60,SNR=78
A13A Flathead Natio 60.11 333⇑P P 03 22 55.0 +0.3
baz=60,SNR=161
JCC Jacoby Creek 60.12 321⇑P P 03 22 55.0 +0.1
baz=60,SNR=18
D10A Wagner Farm, O 60.15 330⇑P P 03 22 54.4 -0.6
baz=60,SNR=211
C11A Tepee Creek (N 60.19 331⇓P P 03 22 55.3 0.0
baz=60,SNR=192
G07A Ruggs Ranch, H 60.22 327⇑P P 03 22 55.8 +0.3
baz=60,SNR=64
E09A Wood Farm, Sta 60.23 329⇑P P 03 22 55.2 -0.3
baz=60,SNR=92
H06A Lindquist Farm 60.25 326⇓P P 03 22 56.0 +0.3
baz=60,SNR=101
FFC Flin Flon 60.28 344 P P 03 22 55.9 +0.2
comp=Z,1μm,0.8s,mb7.0,SNR=46
FFC Flin Flon 60.28 344⇑*e*P P 03 22 54.2 -1.5
comp=Z,335nm,1.1s,mb6.3
FFC *e*pP pP 03 23 24.0 -1.5
FFC *e*S S 03 30 55.2 -5.0
FFC Flin Flon 60.28 344⇑*e*P P 03 22 54.3 -1.4
FFC *e**PP pP 03 23 24.0 -1.5
FFC *e*S S 03 30 55.2 -4.9
FFC pmax pmax
comp=Z,335nm,1.1s,mb6.3
B12A Libby 60.32 332⇓P P 03 22 56.1 +0.1
baz=60,SNR=71
I05A Bend 60.41 325⇑P P 03 22 57.4 +0.5
baz=60,SNR=89
KRMB Red Mountain 60.44 322⇓*i*P P 03 22 57.1 +0.1
KRMB *e*pP pP 03 23 27.0 +0.1
HUMO Hull Mountain 60.48 323 *e*P P 03 22 54.4 -2.9
comp=Z,78nm,1.1s,mb5.7
HUMO Hull Mountain 60.48 323⇓P P 03 22 56.2 -1.1
baz=60,SNR=16
L02A Cave Junction 60.61 322⇓P P 03 22 57.7 -0.5
baz=61,SNR=26
VTHM Trough 60.65 327 P P 03 22 59.0 +0.6
B11A Sandpoint 60.66 332⇑P P 03 22 58.5 +0.1
baz=61,SNR=161
A12A Yaak River Ran 60.68 332⇑P P 03 22 59.2 +0.7
baz=61,SNR=82
D09A Jones Farm, Ri 60.68 329⇓P P 03 22 58.5 -0.1
baz=61,SNR=71
E08A Dider Farm, El 60.69 328⇓P P 03 22 58.0 -0.7
baz=61,SNR=52
C10A Spilker Farm, 60.69 331⇓P P 03 22 58.5 -0.1
baz=61,SNR=15
H05A Madras 60.69 326⇑P P 03 22 59.0 +0.3
baz=61,SNR=23
G06A Carlson Farm, 60.73 327⇑P P 03 22 59.5 +0.6
baz=61,SNR=82
M01C Crescent City 60.75 322⇓P P 03 22 59.0 -0.1
baz=61,SNR=14
F07A Phinny Hill Vi 60.76 328⇓P P 03 22 59.1 -0.1
baz=61,SNR=49
CALA Caldeira 60.81 43 *e*P P 03 23 01.8 +2.1
HOR Horta 60.84 43 *e*P P 03 23 00.6 +0.8
PCED Cedros 60.84 43 *e*P P 03 23 00.6 +0.8
comp=Z,2μm,1.4s,mb7.0
HAWA Hanford 60.87 328⇓*i*P P 03 22 59.4 -0.5
comp=Z,345nm,1.3s,mb6.2
HAWA *e*pP pP 03 23 28.8 -0.9
K02A Glendale 60.89 323⇑P P 03 22 59.3 -0.8
baz=61,SNR=45
RSW Rattlesnake Hi 60.90 328 *e*P P 03 22 59.6 -0.5
NEW Newport 60.90 331 *e*P P 03 22 58.7 -1.4
comp=Z,598nm,1.3s,mb6.5
NEW *e*pP pP 03 23 30.0 +0.1
NEW Newport 60.90 331 *e*P P 03 22 58.7 -1.4
NEW *e**PP pP 03 23 30.0 +0.1
NEW pmax pmax
comp=Z,598nm,1.3s
PICO Pico 60.96 43 *e*P P 03 23 01.0 +0.3
B10A Chitwood Farm, 60.98 331⇑P P 03 23 00.3 -0.2
baz=61,SNR=22
D08A Wollman Farm, 60.99 329⇓P P 03 23 00.5 -0.1
baz=61,SNR=37
A11A Hall Mountain, 61.02 332⇑P P 03 23 01.4 +0.5
baz=61,SNR=141
OD2 Odessa Site #2 61.10 329 *e*P P 03 23 01.0 -0.4
OD2 *e*pP pP 03 23 31.3 0.0
OD2 *e*ScP ScP 03 27 32.8 -0.5
G05A Wamic 61.11 326⇑P P 03 23 02.0 +0.5
baz=61,SNR=48
F06A Goldendale 61.14 327⇓P P 03 23 02.2 +0.5
baz=61,SNR=78
E07A Sunnyside 61.15 328⇑P P 03 23 01.9 +0.1
baz=61,SNR=88
C09A Chrisman Ranch 61.15 330⇑P P 03 23 02.1 +0.3
baz=61,SNR=40
ROSA Rosais 61.20 43 *e*P P 03 23 03.0 +0.8
H04A Detroit Lake 61.25 325⇓P P 03 23 01.7 -0.8
baz=61,SNR=27
PMAN Manadas 61.26 43 *e*P P 03 23 02.8 +0.2
comp=Z,2μm,1.2s,mb7.1
J02A Umpqua 61.28 323⇓P P 03 23 02.7 0.0
baz=61,SNR=38
HOOD Mount Hood Mea 61.34 326⇓*i*P P 03 23 03.4 +0.3
comp=Z,2μm,1.5s,mb6.9
HOOD *e*pP pP 03 23 33.1 +0.1
KEBM Edson Butte 61.46 323 *e*P P 03 23 04.2 +0.2
I03A Eugene 61.46 324⇓P P 03 23 03.6 -0.4
baz=62,SNR=18
K01A Sixes 61.51 322⇓P P 03 23 04.4 +0.2
baz=62
B09A Rice 61.51 331⇑P P 03 23 04.3 +0.1
baz=62,SNR=234
C08A Higginbotham F 61.53 330⇑P P 03 23 04.3 0.0
baz=62,SNR=36
F05A White Salmon 61.58 327⇑P P 03 23 04.9 +0.2
baz=62,SNR=26
A10A Northport 61.61 331⇓P P 03 23 04.3 -0.5
baz=62,SNR=56
D07A Quincy 61.62 329⇓P P 03 23 05.4 +0.5
baz=62,SNR=83
E06A Yakima 61.73 328⇑P P 03 23 06.0 +0.3
baz=62,SNR=48
G04A Mulino 61.73 326⇓P P 03 23 05.1 -0.6
baz=62,SNR=33
I02A Mapleton 61.80 324⇓P P 03 23 06.0 -0.2
baz=62,SNR=12
COR Corvallis 61.84 325 *e*P P 03 23 06.1 -0.3
comp=Z,779nm,1.3s,mb6.6
COR pmax pmax
comp=Z,779nm,1.3s,mb6.6
H03A Soap Creek Ran 61.88 325⇓P P 03 23 06.7 0.0
baz=62,SNR=30
PSCM Serra do Cume 61.95 43 *e*P P 03 23 06.7 -0.6
comp=Z,705nm,1.5s,mb6.5
C07A Waterville 61.99 329⇓P P 03 23 07.3 0.0
baz=62,SNR=113
B08A Colville Reser 62.06 330⇓P P 03 23 07.5 -0.3
baz=62,SNR=66
ETW Entiat 62.07 329 *e*P P 03 23 08.1 +0.2
D06A Cle Elum 62.08 328⇓P P 03 23 08.1 +0.1
baz=62,SNR=24
A09A Danville 62.10 331⇑P P 03 23 08.0 -0.1
baz=62,SNR=99
F04A Amboy 62.14 326⇓P P 03 23 08.2 -0.3
baz=62,SNR=31
E05A Randle 62.17 327⇑P P 03 23 08.4 -0.2
baz=62,SNR=23
G03A Yamhill 62.26 325⇓P P 03 23 09.3 +0.1
baz=62,SNR=13
G03A ⇓S S 03 31 27.0 +1.5
baz=62
FCC Fort Churchill 62.27 350 *e*P P 03 23 07.1 -2.0
comp=Z,450nm,1.2s,mb6.4
FCC Fort Churchill 62.27 350 *e*P P 03 23 07.1 -1.9
FCC pmax pmax
comp=Z,450nm,1.2s,mb6.4
H02A Toledo 62.29 324⇓P P 03 23 09.5 0.0
baz=62
TAOE Nuku Hiva Isla 62.33 261 *e*S S 03 31 29.6 +2.1
comp=Z,214μm,26.1s
TAOE *e*LQ 03 39 07.3
comp=Z,106μm,35.4s
TAOE *e*LR LR 03 41 58.9
comp=Z,110μm,33.5s
TAOE Nuku Hiva Isla 62.33 261 *e*P P 03 23 09.2 -1.1
A08A Turner Farm, O 62.42 330⇑P P 03 23 10.5 +0.2
baz=62,SNR=138
A08A ⇑S S 03 31 28.6 +1.2
baz=62
HEBO Mount Hebo 62.47 325 *e*P P 03 23 10.6 0.0
comp=Z,506nm,1.2s,mb6.4
HEBO *e*pP pP 03 23 41.2 +0.7
PSET Sete Cidades 62.51 45 *e*P P 03 23 10.8 -0.3
comp=Z,628nm,0.9s,mb6.5
PDA Ponta Delgada 62.52 45 *e*S S 03 31 34.0 +5.0
PDA *e*LQ 03 39 05.0
PDA *e*LR LR 03 42 32.0
B07A Winthrop 62.52 330⇑P P 03 23 10.7 -0.2
baz=63,SNR=38
B07A ⇑S S 03 31 30.5 +1.9
baz=63
C06A Tall Timber Ra 62.57 329⇓P P 03 23 11.4 +0.2
baz=63,SNR=14
C06A ⇓S S 03 31 31.7 +2.4
baz=63
PSMN Pico do Norte, 62.60 46 *e*P P 03 23 10.3 -1.4
D05A Enumclaw 62.68 328⇑P P 03 23 11.8 -0.2
baz=63,SNR=49
D05A ⇓S S 03 31 33.0 +2.3
baz=63
E04A Onalaska 62.71 327⇓P P 03 23 12.2 0.0
baz=63,SNR=14
E04A ⇓S S 03 31 33.4 +2.3
baz=63
F03A Seaside 62.78 326⇑P P 03 23 12.1 -0.5
baz=63,SNR=8.7
F03A ⇑S S 03 31 34.5 +2.5
baz=63
C05A Tolt Reservoir 62.84 328⇓P P 03 23 12.5 -0.5
baz=63,SNR=32
C05A ⇑S S 03 31 33.7 +1.0
baz=63
EDM Edmonton 62.84 337 *e*P P 03 23 11.1 -1.9
BMW Boistfort Moun 62.92 326 *e*P P 03 23 13.2 -0.3
BBTS Babate 62.95 72 P P 03 23 14.9 +0.6
comp=Z,748nm,1.0s,mb6.6,baz=271,slow=1.5,SNR=66
BBTS pP pP 03 23 44.8 +0.5
comp=Z,153nm,0.9s,baz=242,slow=14,SNR=1.9
BBTS S S 03 31 33.5 -1.6
comp=Z,9.0nm,0.6s,baz=241,slow=10,SNR=2.3
BBTS LR LR 03 47 47.2
comp=Z,29μm,21.8s,baz=77,slow=33
BBTS PKPPKP 03 52 10.4
comp=Z,41nm,1.1s,baz=333,slow=4.4,SNR=4.1
A07A Ashnola River, 63.03 330⇓P P 03 23 14.9 +0.6
baz=63,SNR=116
A07A ⇑S S 03 31 37.5 +2.5
baz=63
D04A Dobbs Creek Ra 63.07 327⇑P P 03 23 14.9 +0.4
baz=63
PMSA Palmer Station 63.09 173⇓*i*P P 03 23 14.5 +0.1
comp=Z,2μm,1.7s,mb6.8
E03A Lebam 63.15 326⇑P P 03 23 15.3 +0.2
baz=63,SNR=13
E03A ⇓S S 03 31 38.4 +1.9
baz=63
RPW Rockport 63.22 329 *e*P P 03 23 14.6 -0.9
B06A Marblemount 63.25 329⇑P P 03 23 15.2 -0.5
baz=63,SNR=19
JCW Jim Creek 63.28 329 *e*P P 03 23 14.6 -1.3
ASCN Ascension 63.37 98⇑*e*P P 03 23 17.0 -0.2
comp=Z,568nm,1.0s,mb6.5
B05A Bryant 63.41 329⇓P P 03 23 15.9 -0.8
baz=64,SNR=21
B05A ⇓S S 03 31 41.2 +1.5
baz=64
C04A Brinnon 63.53 328⇓P P 03 23 17.1 -0.5
baz=64,SNR=32
C04A ⇓S S 03 31 42.5 +1.2
baz=64
D03A Wishkah Elem. 63.60 327⇓P P 03 23 18.2 +0.1
baz=64
NLWA Neilton Lookou 63.82 327 *e*P P 03 23 19.8 +0.3
comp=Z,240nm,1.0s,mb6.0
A05A Maple Falls 63.86 329⇓P P 03 23 19.2 -0.5
baz=64,SNR=44
A05A ⇓S S 03 31 46.1 +0.8
baz=64
A04A Legoe Bay, Lum 64.01 329⇑P P 03 23 20.8 +0.1
baz=64,SNR=20
A04A ⇓S S 03 31 48.6 +1.4
baz=64
B04A Port Angeles 64.02 328⇑P P 03 23 21.0 +0.2
baz=64,SNR=21
PGC Sidney 64.36 328⇓*i*P P 03 23 21.7 -1.3
comp=Z,1μm,1.4s,mb6.5
CHIE El Hierro 64.76 58 P P 03 23 25.8 -0.3
comp=Z,3μm,1.3s,mb7.0
EHIG Higuera 65.14 57 P P 03 23 28.4 -0.1
comp=Z,762nm,0.9s,mb6.5
EGOM La Gomera 65.53 58 P P 03 23 30.4 -0.6
comp=Z,1μm,1.2s,mb6.7
CCAN Las Canadas 66.06 58 P P 03 23 34.6 +0.3
comp=Z,81nm,0.7s,mb5.7
EBAJ Bajamar 66.37 58 P P 03 23 36.5 +0.1
comp=Z,925nm,1.3s,mb6.5
EOSO Osorio 66.91 58 P P 03 23 39.7 -0.1
comp=Z,523nm,1.1s,mb6.3
CFTV Fuerteventura 68.25 58 P P 03 23 48.3 +0.1
comp=Z,428nm,1.3s,mb6.1
EFAM Famara 68.90 58 P P 03 23 52.5 +0.2
comp=Z,644nm,1.1s,mb6.4
TRIS Tristan da Cun 69.14 129 *e*P P 03 23 54.7 +1.1
comp=Z,356nm,0.7s,mb6.3
VAH Vaihoa 69.93 255 *e*P P 03 23 58.3 -0.6
comp=Z,1μm,1.2s,mb6.5
VAH *e*pP pP 03 24 30.9 +1.5
comp=Z,744nm,1.2s
PMOR Pomariorio Ree 70.18 255 *e*P P 03 23 59.9 -0.5
comp=Z,1μm,1.3s,mb6.5
PMOR *e*pP pP 03 24 32.6 +1.7
comp=Z,905nm,1.2s
YKA Yellowknife Ar 70.40 343 P P 03 23 59.2 -1.5
comp=Z,58nm,0.6s,mb5.6,baz=140,slow=6.2,SNR=159
YKA pP pP 03 24 29.1 -2.2
comp=Z,43nm,0.8s,baz=139,slow=5.4,SNR=3.8
YKA S S 03 32 59.1 -4.1
comp=Z,1.6nm,0.8s,baz=73,slow=30,SNR=2.8
YKA LR LR 03 58 36.1
comp=Z,6μm,18.5s,baz=135,slow=39
YKA Yellowknife Ar 70.40 343 P P 03 23 59.2 -1.5
YKA pP pP 03 24 29.1 -2.2
YKA S S 03 32 59.1 -4.1
YKA LR LR 03 58 36.1

YKA Yellowknife Ar 70.40 343 P **P** 03 23 59.2 -1.5
YKA *PP pP 03 24 29.1 -2.2
YKA S S 03 32 59.1 -4.1
MEH Mehetia 70.52 252 *e*P **P** **03 24 01.7 -0.7**
comp=Z,15µm,1.2s,mb7.7
MEH *e*pP pP 03 24 34.7 +1.7
TVO Taravao 71.64 252 *e*P **P** **03 24 08.7 -0.5**
comp=Z,4µm,1.3s,mb7.0
TVO *e*pP pP 03 24 38.3 -1.5
comp=Z,3µm,1.3s
TIAR Tiarei 71.71 252 *e*P **P** **03 24 09.1 -0.5**
comp=Z,2µm,0.9s,mb6.9
TIAR *e*pP pP 03 24 41.8 +1.5
comp=Z,2µm,1.0s
SFJD Kangerlussuaq 71.81 11 P **P** **03 24 08.1 -1.1**
comp=Z,450nm,0.9s,mb6.3,baz=191,slow=7.2,SNR=61
SFJD Kangerlussuaq 71.81 11 *i* P **P** **03 24 07.6 -1.6**
SFJD *i* pP 03 24 36.6 -3.3
SFJD *i* S S 03 33 13.7 -5.7
SFJD *e* 03 33 51.0
SFJD
comp=Z,13µm,24.0s
PPT Papeete 71.93 252 *e*P **P** **03 24 10.6 -0.3**
comp=Z,394nm,1.4s,mb6.1
PPT *e*pP pP 03 24 43.4 +1.8
comp=Z,484nm,1.5s
PPT *e*S S 03 33 22.0 -0.6
comp=Z,40µm,26.0s
PPT Papeete 71.93 252 *e*LR LR 03 46 30.9
comp=Z,76µm,33.8s
PPT Papeete 71.93 252 P **P** **03 24 09.6 -1.4**
comp=Z,143nm,0.8s,mb5.8,baz=81,slow=6.5,SNR=8.6
PPT LR LR 03 49 25.8
comp=Z,4µm,21.1s,baz=76,slow=30
PAE Paea 71.94 252 *e*P **P** **03 24 10.6 -0.4**
comp=Z,7µm,1.2s,mb7.4
PAE *e*pP pP 03 24 43.2 +1.5
comp=Z,6µm,1.3s
LIC Lamto 73.14 83 *e*P **P** **03 24 17.9 -0.3**
comp=Z,1µm,1.1s,mb6.7
LIC Lamto 73.14 83⇑ *i*P **P** **03 24 18.0 -0.2**
comp=Z,519nm,0.9s,mb6.1
LIC *e*MLR MLR
comp=Z,10µm,19.5s
LIC Lamto 73.14 83⇑ *i*P **P** **03 24 18.0 -0.2**
comp=Z,260nm,0.9s,mb6.1
LIC LR LR
comp=Z,5µm,19.5s
TIC Toumodi 73.19 82 *e*P **P** **03 24 18.2 -0.3**
comp=Z,4µm,1.3s,mb7.1
WRAK Wrangell Islan 73.24 332 *e*P **P** **03 24 17.9 0.0**
comp=Z,107nm,1.1s,mb5.6
DLBC Dease Lake 73.30 334 LR LR 03 59 34.6
comp=Z,11µm,19.1s,baz=106,slow=38
DLBC Dease Lake 73.30 334⇓ *i*P **P** **03 24 18.6 +0.5**
DBIC Dimbokro 73.35 82 P **P** **03 24 19.2 -0.2**
comp=Z,216nm,0.6s,mb6.1,baz=249,slow=5.5,SNR=190
DBIC pP pP 03 24 49.3 -0.9
comp=Z,465nm,0.9s,baz=256,slow=5.6,SNR=8.3
DBIC S S 03 33 36.6 -2.3
comp=Z,12nm,1.1s,baz=48,slow=18,SNR=5.1
DBIC PKPPKP 03 51 45.4
comp=Z,3.9nm,0.8s,baz=48,slow=8.2,SNR=3.8
DBIC LR LR 03 52 48.0
comp=Z,9µm,21.4s,baz=240,slow=32
DBIC Dimbokro 73.35 82⇑ *i*P **P** **03 24 19.1 -0.3**
comp=Z,660nm,1.0s,mb6.4
DBIC *e*pP pP 03 24 49.4 -0.8
DBIC *e*PP PP 03 27 04.2 -0.4
DBIC *e*S S 03 33 37.0 -1.9
KIC Kosan Boka 73.44 83 *e*P **P** **03 24 19.8 -0.1**
comp=Z,3µm,1.0s,mb7.0
LIS Lisbon 74.97 49 *e*P **P** **03 24 28.1 -0.2**
LIS *e*S S 03 33 56.1 0.0
LIS *e*S S 03 33 56.1 0.0
LIS AMS AMS 03 52 41.5
comp=Z,9µm,22.1s
ALMR Almeirim 75.51 49 *e*P **P** **03 24 31.3 -0.1**
EVO Evora 75.78 49⇑ *i*P **P** **03 24 32.5 -0.4**
comp=Z,1µm,0.9s,mb6.3
EVO *e*MLR MLR
comp=Z,13µm,20.5s
EGRO El Granado 75.93 50 P **P** **03 24 34.3 +0.4**
comp=Z,297nm,0.8s,mb6.1
SKAG Skagway 76.17 334 *e*P **P** **03 24 34.6 -0.1**
comp=Z,187nm,1.6s,mb5.6
EZAM Zamans 76.23 46 P **P** **03 24 35.6 +0.2**
comp=Z,187nm,1.0s,mb5.8
EZAM Zamans 76.23 46 P **P** **03 24 35.6 +0.2**
EZAM pmax pmax
comp=Z,187nm,1.0s,mb5.8
EMAZ Mazaricos 76.26 45 P **P** **03 24 35.1 -0.4**
comp=Z,429nm,1.0s,mb6.1
STS Santiago 76.54 45 P **P** **03 24 37.3 +0.1**
comp=Z,406nm,1.1s,mb6.1
STS Santiago 76.54 45 P **P** **03 24 37.3 +0.1**
STS pmax pmax
comp=Z,406nm,1.1s,mb6.1
EBAD Badajoz 76.59 49 P **P** **03 24 37.5 -0.1**
comp=Z,194nm,0.8s,mb5.9
MTE Manteigas 76.60 48⇑ *i*P **P** **03 24 37.0 -0.6**
comp=Z,504nm,1.0s,mb6.2
MTE *e*PP PP 03 27 31.3 -0.2
ELOB Lobios 76.61 46 P **P** **03 24 37.4 -0.2**
comp=Z,414nm,1.1s,mb6.1
EMIN Mina Concepcio 76.61 50 P **P** **03 24 37.8 +0.1**
comp=Z,419nm,1.3s,mb6.0
SFS San Fernando 76.68 52⇑ *i*P **P** **03 24 39.0 +0.9**
comp=Z,2µm,1.3s,mb6.7
SFS San Fernando 76.68 52⇑ *i*P **P** **03 24 39.0 +0.9**
SFS pmax pmax
comp=Z,2µm,1.3s,mb6.7
ESPR Espera 77.04 51 P **P** **03 24 40.0 -0.2**
comp=Z,232nm,0.9s,mb5.9
MDT Midelt 77.20 56 P **P** **03 24 41.8 +0.8**
comp=Z,257nm,1.1s,mb5.9,baz=270,slow=5.4,SNR=122
MDT pP pP 03 25 11.9 -0.3
comp=Z,100nm,0.9s,baz=284,slow=8.1,SNR=4.0
MDT S S 03 34 16.9 -3.8
comp=Z,3.4nm,1.1s,baz=220,slow=8.5,SNR=2.0
EJIF Jimena Fronter 77.25 52 P **P** **03 24 42.1 +0.8**
comp=Z,648nm,1.4s,mb6.2
EJIF Jimena Fronter 77.25 52 P **P** **03 24 42.1 +0.8**
EJIF pmax pmax
comp=Z,648nm,1.4s,mb6.2
ERUA La Rua 77.41 46 P **P** **03 24 41.8 -0.2**
comp=Z,1µm,1.4s,mb6.4
ERUA La Rua 77.41 46 P **P** **03 24 41.8 -0.2**
ERUA pmax pmax
comp=Z,1µm,1.4s,mb6.4
ECAL Calabor 77.58 46 P **P** **03 24 43.1 +0.1**
comp=Z,556nm,1.0s,mb6.2
RES Resolute Bay 77.60 355⇑ *e*P **P** **03 24 40.9 -1.6**
comp=Z,6µm,1.0s,mb7.3
EPLA Plasencia 77.61 48 P **P** **03 24 43.2 0.0**
comp=Z,303nm,0.7s,mb6.1
EPLA Plasencia 77.61 48 P **P** **03 24 43.2 0.0**
EPLA pmax pmax
comp=Z,303nm,0.7s,mb6.1
EPON Pontenova 77.65 45 P **P** **03 24 43.3 0.0**
comp=Z,3µm,1.4s,mb6.8
EMIJ Mijas 77.83 52 P **P** **03 24 44.9 +0.4**
comp=Z,301nm,0.7s,mb6.1
PNL Peninsula 78.10 333 *e*P **P** **03 24 46.0 +0.5**
comp=Z,232nm,1.0s,mb5.9
PNL *e*pP pP 03 25 17.4 +0.7
EADA Adamuz 78.32 50 P **P** **03 24 47.1 -0.1**
ELUQ Luque 78.43 51 P **P** **03 24 48.3 +0.5**
comp=Z,248nm,0.8s,mb6.0
ELUQ Luque 78.43 51 P **P** **03 24 48.3 +0.5**
ELUQ pmax pmax
comp=Z,248nm,0.8s,mb6.0
ELOJ Sierra Loja 78.43 51 P **P** **03 24 49.0 +1.2**
comp=Z,2µm,1.6s,mb6.7
ELOJ Sierra Loja 78.43 51 P **P** **03 24 49.0 +1.2**
ELOJ pmax pmax
comp=Z,2µm,1.6s,mb6.7
BORG Borgarnes 78.45 21 P **P** **03 24 49.3 +2.0**
comp=Z,4µm,1.4s,mb7.0,SNR=7.7
BORG Borgarnes 78.45 21 P **P** **03 24 47.1 -0.2**
comp=Z,467nm,0.9s,mb6.2,baz=250,slow=3.3,SNR=41
BORG Borgarnes 78.45 21 *e*P **P** **03 24 48.4 +1.1**
comp=Z,2µm,1.5s,mb6.6
ERON Agron 78.68 52 P **P** **03 24 49.6 +0.5**
comp=Z,411nm,0.6s,mb6.4
PAB San Pablo 78.79 49⇑ *i*P **P** **03 24 49.5 -0.2**
comp=Z,949nm,1.4s,mb6.4
PAB San Pablo 78.79 49⇑ *i*P **P** **03 24 49.5 -0.2**
PAB pmax pmax
comp=Z,949nm,1.4s,mb6.4
SUMG Summit 78.80 11⇑ *i*P **P** **03 24 49.1 0.0**
comp=Z,149nm,0.8s,mb5.9
EGUA Guajares 78.83 52 P **P** **03 24 50.3 +0.3**
comp=Z,505nm,1.6s,mb6.1
EGUA Guajares 78.83 52 P **P** **03 24 50.3 +0.3**
EGUA pmax pmax
comp=Z,505nm,1.6s,mb6.1
STCH Steam Cracks 78.85 290 *e*P **P** **03 24 50.1 -0.3**
STCH *e*pP pP 03 25 21.2 -0.5
ECOG Cogollos-Vega 78.92 51 P **P** **03 24 51.4 +0.9**
comp=Z,601nm,0.6s,mb6.6
ECOG Cogollos-Vega 78.92 51 P **P** **03 24 51.4 +0.9**
ECOG pmax pmax
comp=Z,601nm,0.6s,mb6.6
EBAN Banos Encina 78.93 51 P **P** **03 24 51.2 +0.7**
comp=Z,117nm,0.7s,mb5.8
EBAN Banos Encina 78.93 51 P **P** **03 24 51.2 +0.7**
EBAN pmax pmax
comp=Z,117nm,0.7s,mb5.8
EARI Arriondas 79.01 45 P **P** **03 24 51.2 +0.4**
comp=Z,4µm,1.4s,mb7.0
EALB Alboran 79.08 53 P **P** **03 24 51.9 +0.5**
comp=Z,231nm,0.7s,mb6.1
ESDC Sonseca Array 79.11 49 P **P** **03 24 51.6 +0.1**
comp=Z,219nm,1.0s,mb6.0,baz=256,slow=3.8,SNR=185
ESDC pP pP 03 25 22.0 -0.7
comp=Z,16nm,0.7s,baz=271,slow=6.2,SNR=1.7
ESDC S S 03 34 40.1 -0.9
comp=Z,0.2nm,0.3s,baz=277,slow=37,SNR=2.8
ESDC PKKPbc PKKPbc 03 43 42.1 -1.9
comp=Z,2.3nm,0.9s,baz=96,slow=3.5,SNR=4.7
ESDC PKPPKP 03 51 45.3
comp=Z,4.6nm,1.0s,baz=70,slow=3.2,SNR=5.9
ESDC Sonseca Array 79.11 49 P **P** **03 24 51.6 +0.1**
comp=Z,130nm,0.8s,mb5.8
ESLA Sonseca Array 79.11 49⇑ *i*P **P** **03 24 51.5 +0.1**
comp=Z,523nm,1.5s,mb6.1
GUD Guadarrama 79.17 48 P **P** **03 24 52.0 +0.2**
comp=Z,337nm,0.8s,mb6.2
GUD Guadarrama 79.17 48 P **P** **03 24 52.0 +0.2**
GUD pmax pmax
comp=Z,337nm,0.8s,mb6.2
POHA Pohakuloa 79.27 290 *e*P **P** **03 24 51.7 -1.0**
comp=Z,346nm,1.2s,mb6.1
EBER Berja 79.38 52 P **P** **03 24 53.5 +0.6**
comp=Z,509nm,0.7s,mb6.5
EQES Quesada 79.41 51 P **P** **03 24 53.8 +0.6**
comp=Z,425nm,0.8s,mb6.3
XMAS Kiritimati 79.75 272⇓ *i*P **P** **03 24 54.5 -1.0**
comp=Z,370nm,1.1s,mb6.1
EHUE Huescar 79.78 51 P **P** **03 24 55.9 +0.7**
comp=Z,2µm,1.4s,mb6.8
EHUE Huescar 79.78 51 P **P** **03 24 55.9 +0.7**
EHUE pmax pmax
comp=Z,2µm,1.4s,mb6.8
ENIJ Nijar 79.93 52 P **P** **03 24 56.0 0.0**
comp=Z,237nm,0.7s,mb6.1
ENIJ Nijar 79.93 52 P **P** **03 24 56.0 0.0**
ENIJ pmax pmax
comp=Z,237nm,0.7s,mb6.1
EVIA Vianos 80.01 50 P **P** **03 24 57.5 +1.2**
comp=Z,394nm,0.7s,mb6.3
EVIA Vianos 80.01 50 P **P** **03 24 57.5 +1.1**
EVIA pmax pmax
comp=Z,394nm,0.7s,mb6.3
HKL Haleakala 80.05 291 *e*P **P** **03 24 56.5 -0.4**
DAWY Dawson 80.06 337⇓ *e*P **P** **03 24 55.5 -0.6**
DAWY *e*pP pP 03 25 25.7 -1.7
INK Inuvik 80.12 342 *e*P **P** **03 24 55.4 -0.9**
comp=Z,66nm,0.6s,mb5.6
INK *e*pP pP 03 25 26.3 -1.3
INK *e*S S 03 34 50.3 -0.2
INK Inuvik 80.12 342 *e*P **P** **03 24 55.4 -0.9**
INK *e**PP pP 03 25 26.3 -1.3
INK *e*S S 03 34 50.3 -0.2
INK pmax pmax
comp=Z,66nm,0.6s
ELAN Lanestosa 80.26 46 P **P** **03 24 57.8 +0.2**
comp=Z,375nm,0.8s,mb6.3
TOA0 Torodi Ar. Sit 80.31 76⇑ *i*P **P** **03 24 57.5 -0.9**
TOA0 *e*pP pP 03 25 29.2 -0.5
TOA0 *e*PP PP 03 28 01.9 -1.1
TORD Torodi Ar. Bea 80.31 76 P **P** **03 24 57.5 -0.9**
comp=Z,73nm,0.5s,mb5.7,baz=283,slow=5.4,SNR=323
TORD pP pP 03 25 28.6 -1.1
comp=Z,244nm,1.1s,baz=311,slow=6.5,SNR=6.7
TORD PP PP 03 28 01.4 -1.6
comp=Z,55nm,1.1s,baz=265,slow=5.5,SNR=4.1
TORD S S 03 34 47.5 -6.9
comp=Z,2.8nm,1.1s,baz=295,slow=4.6,SNR=2.9
TORD PKKPbc PKKPbc 03 43 38.9 -1.3
comp=Z,10nm,0.6s,baz=107,slow=2.6,SNR=57
TORD PKPPKP 03 51 27.0
comp=Z,2.4nm,0.8s,baz=58,slow=1.7,SNR=5.7
TORD LR LR 03 58 09.5
comp=Z,14µm,21.8s,baz=245,slow=34
TORD Torodi Ar. Bea 80.31 76 P **P** **03 24 57.5 -0.9**
TORD pP pP 03 25 28.6 -1.1
TORD PP PP 03 28 01.4 -1.6
TORD S S 03 34 47.5 -6.9
TORD PKKPbc PKKPbc 03 43 38.9 -1.3
TORD P'P' 03 51 27.0
TORD LR LR 03 58 09.5
DMUB Kingscourt 80.74 35⇑ *i*P **P** **03 24 59.7 -0.2**
ETOB Tobarra 80.75 50 P **P** **03 25 01.1 +0.8**
comp=Z,290nm,0.8s,mb6.2
ETOR Torete 80.77 48 P **P** **03 25 01.0 +0.6**
comp=Z,717nm,1.5s,mb6.3
ETOR Torete 80.77 48 P **P** **03 25 01.0 +0.6**
ETOR pmax pmax
comp=Z,717nm,1.5s,mb6.3
DLF Lyons Farm 80.78 35⇑ *i*P **P** **03 24 59.7 -0.4**
ECRI Cripan 80.79 46 P **P** **03 25 01.4 +0.9**
comp=Z,2µm,1.8s,mb6.6
ECRI Cripan 80.79 46 P **P** **03 25 01.4 +0.9**
ECRI pmax pmax
comp=Z,2µm,1.8s,mb6.6
EMUR La Murta 80.84 51 P **P** **03 25 00.8 0.0**
comp=Z,244nm,0.8s,mb6.1
DSB Dublin 80.85 35⇑ *i*P **P** **03 25 00.3 -0.3**
comp=Z,909nm,1.4s,mb6.4
VNA3 Neumayer Olymp 80.86 162 *e*P **P** **03 25 00.1 -0.2**
VNA3 *e* 03 25 03.2
VNA3 *e* 03 25 07.0
VNA3 *e* pP 03 25 31.7 +0.1
VNA3 *e* 03 28 06.2
VNA3 *e* 03 43 36.1
VNA3 *e* 03 51 34.3
VNA3 *e* 03 51 41.8
VNA3 *e* 03 51 46.9
VNA3 *e* 03 54 59.4
CART Cartagena 80.98 52⇑ *i*P **P** **03 24 60.0 -1.6**
comp=Z,169nm,0.8s,mb5.9
USTO Oran 81.03 53 P **P** **03 25 04.0 +2.1**
EGAK Eagle 81.06 337 *e*P **P** **03 25 01.0 -0.4**
comp=Z,130nm,0.7s,mb5.9
VNA1 Neumayer--Stat 81.10 162 *e*P **P** **03 25 01.8 +0.3**
VNA1 *e* 03 25 05.2
VNA1 *e* 03 25 09.1
VNA1 *e* pP 03 25 34.5 +1.6
VNA1 *e* 03 28 09.9
VNA1 *e* 03 43 36.2
VNA1 *e* 03 54 58.9
ODJA Bouhanifia 81.29 54 P **P** **03 25 05.0 +1.7**
MENT Mentasta 81.35 335 *e*P **P** **03 25 02.6 -0.4**
ECHE Chera 81.36 50 P **P** **03 25 04.5 +0.9**
comp=Z,100nm,0.7s,mb5.8
ECHE Chera 81.36 50 P **P** **03 25 04.5 +1.0**
ECHE pmax pmax
comp=Z,100nm,0.7s,mb5.8
GMM Mts of Mourne 81.38 34⇑ *e*P **P** **03 25 02.5 -0.7**
HTL Hartland 81.38 38⇑ *i*P **P** **03 25 03.5 +0.1**
HTL AMb AMB 03 25 07.0
comp=Z,2µm,1.6s,mb6.7
HTL *e* 03 34 57.9
HTL AMS AMS 03 54 36.4
comp=Z,6µm,18.6s
VNA2 Neumayer--Watz 81.46 162 *e*P **P** **03 25 03.4 0.0**
VNA2 *e* 03 25 06.4
VNA2 *e* 03 25 10.3
VNA2 *e* pP 03 25 34.8 0.0
VNA2 *e* 03 28 11.2
VNA2 *e* 03 43 35.5
VNA2 *e* 03 51 33.4
VNA2 *e* 03 51 40.1
VNA2 *e* 03 51 46.0
VNA2 *e* 03 54 57.5
QUIF Quistinic 81.48 41⇑ *i*P **P** **03 25 03.9 -0.1**
comp=Z,3µm,1.4s,mb6.7
QUIF Quistinic 81.48 41⇑ *i*P **P** **03 25 03.9 -0.1**
comp=Z,2µm,1.4s,mb6.7
QUIF Quistinic 81.48 41⇑ *i*P **P** **03 25 03.9 -0.1**
QUIF pmax pmax
comp=Z,2µm,1.4s,mb6.7
ROSF Rostrenen 81.50 41⇑ *i*P **P** **03 25 04.0 -0.1**
comp=Z,2µm,1.0s,mb6.6
ROSF Rostrenen 81.50 41⇑ *i*P **P** **03 25 04.0 -0.1**
comp=Z,945nm,1.0s,mb6.6
ROSF Rostrenen 81.50 41⇑ *i*P **P** **03 25 04.0 -0.1**
ROSF pmax pmax
comp=Z,945nm,1.0s,mb6.6
DYA Yadsworthy 81.58 38⇑ *e*P **P** **03 25 03.3 -1.2**
DYA AMb AMB 03 25 08.5
comp=Z,1µm,1.7s,mb6.5
DYA *e* 03 34 58.8
DYA AMS AMS 03 54 50.1
comp=Z,8µm,19.7s
ELIZ Elizondo 81.61 46 P **P** **03 25 06.5 +1.8**
comp=Z,303nm,1.2s,mb6.0
ELIZ Elizondo 81.61 46 P **P** **03 25 06.5 +1.7**
ELIZ pmax pmax
comp=Z,303nm,1.2s,mb6.0
EALK Alkurruntz 81.63 46 P **P** **03 25 05.0 +0.1**
comp=Z,439nm,1.0s,mb6.2
OJBR Djebel Berber 81.72 54 P **P** **03 25 08.0 +2.4**
KIP Kipapa 81.75 292 *e*P **P** **03 25 05.6 -0.4**
comp=Z,88nm,0.9s,mb5.6
KIP Kipapa 81.75 292 *e*P **P** **03 25 06.0 0.0**
EBEN Beniarda 81.78 51 P **P** **03 25 06.3 +0.6**
comp=Z,418nm,0.7s,mb6.4
SJPF Ste Jean 81.82 46⇑ *i*P **P** **03 25 06.3 +0.4**
comp=Z,1µm,0.8s,mb6.5
SJPF Ste Jean 81.82 46⇑ *i*P **P** **03 25 06.3 +0.4**
comp=Z,612nm,0.8s,mb6.5
SJPF Ste Jean 81.82 46⇑ *i*P **P** **03 25 06.3 +0.4**
SJPF pmax pmax
comp=Z,612nm,0.8s,mb6.5
OSSF Osses 81.82 46 *e*P **P** **03 25 05.7 -0.2**
EMOS Mosqueruela 81.87 49 P **P** **03 25 07.8 +1.5**
comp=Z,304nm,0.7s,mb6.2
KSK Scoval 81.90 31⇑ *i*P **P** **03 25 05.8 -0.2**
SGMF Saint Gilles 81.95 41⇑ *i*P **P** **03 25 06.3 -0.1**
comp=Z,5µm,1.3s,mb6.8
SGMF Saint Gilles 81.95 41⇑ *i*P **P** **03 25 06.3 -0.1**
comp=Z,2µm,1.3s,mb6.8
SGMF Saint Gilles 81.95 41⇑ *i*P **P** **03 25 06.3 -0.1**
SGMF pmax pmax
comp=Z,2µm,1.3s,mb6.8
LARF Larrau 81.97 46 *e*P **P** **03 25 07.4 +0.7**
OKGL Djebel Kef Gue 82.03 53 P **P** **03 25 09.0 +1.8**
OJGS Djebel Guires 82.04 54 P **P** **03 25 10.0 +2.8**
ORDF Ordiarp 82.04 46 *e*P **P** **03 25 07.0 0.0**
RRH Rhenigidale 82.05 31⇑ *i*P **P** **03 25 06.3 -0.4**
ESAC San Caprasio 82.11 48 P **P** **03 25 08.6 +1.1**
comp=Z,732nm,0.8s,mb6.6
KAR1 Arisaig 82.20 32⇑ *i*P **P** **03 25 06.8 -0.7**
GAL1 Galloway 82.24 34⇑ *i*P **P** **03 25 07.5 -0.3**
GAL1 AMb AMB 03 25 11.7
comp=Z,3µm,1.5s,mb6.9
GAL1 *e* 03 35 01.5
GAL1 AMS AMS 03 55 48.9
comp=Z,8µm,19.6s
ETSF Etsaut 82.26 46⇑ *i*P **P** **03 25 08.7 +0.5**
comp=Z,354nm,0.6s,mb6.1
ETSF Etsaut 82.26 46⇑ *i*P **P** **03 25 08.7 +0.5**
comp=Z,177nm,0.6s,mb6.1
ETSF Etsaut 82.26 46⇑ *i*P **P** **03 25 08.7 +0.5**
ETSF pmax pmax
comp=Z,177nm,0.6s,mb6.1
HTR Trewern Hill 82.38 37⇑ *i*P **P** **03 25 08.2 -0.4**
EANR 'Ain N'Sour 82.39 53 P **P** **03 25 09.5 +0.5**
JSA Saint Aubin 82.40 40⇑ *e*P **P** **03 25 08.1 -0.7**
JSA AMb AMB 03 25 13.0
comp=Z,2µm,1.4s,mb6.7
REYF Montagne du Re 82.41 46 *e*P **P** **03 25 09.3 +0.4**
KPL Plockton 82.41 31⇑ *e*P **P** **03 25 08.0 -0.6**
KPL AMb AMB 03 25 12.3
comp=Z,2µm,1.6s,mb6.8
KPL *e* 03 35 09.8
KPL AMS AMS 03 54 46.2
comp=Z,6µm,21.1s
RTO Tolsta 82.42 30⇑ *i*P **P** **03 25 08.3 -0.4**
ETRT Tiaret 82.47 54 P **P** **03 25 10.4 +1.0**
RRR Rubha Reidh 82.48 31⇑ *e*P **P** **03 25 08.2 -0.8**
KSB Sheil Bridge 82.49 32⇑ *i*P **P** **03 25 08.2 -0.9**
MCH1 Michaelchurch 82.52 37⇑ *i*P **P** **03 25 08.8 -0.5**
MCH1 AMb AMB 03 25 13.1
comp=Z,2µm,1.3s,mb6.7
MCH1 AMS AMS 03 52 37.9
comp=Z,6µm,21.1s
HGH Gray Hill 82.55 37⇑ *i*P **P** **03 25 09.2 -0.3**
ERTA Horta de San J 82.58 48 P **P** **03 25 10.5 +0.6**
comp=Z,897nm,1.1s,mb6.5
SBD1 Bryn Du 82.58 36⇑ *e*P **P** **03 25 08.6 -1.0**
PGBU Glenifferbraes 82.61 33⇑ *i*P **P** **03 25 09.4 -0.3**
PGBU AMb AMB 03 25 13.7
comp=Z,2µm,1.4s,mb6.8
PGBU AMS AMS 03 56 13.8
comp=Z,4µm,22.9s
ECHA Ech Chlef 82.63 53 P **P** **03 25 11.0 +0.7**
KAC Achnashellach 82.64 31⇑ *i*P **P** **03 25 09.1 -0.7**
GCD Castle Douglas 82.67 34⇑ *i*P **P** **03 25 09.7 -0.4**
VIEF Viey 82.67 46 *e*P **P** **03 25 11.1 +0.8**
PCA1 Carrot 82.71 33⇑ *i*P **P** **03 25 09.6 -0.7**
HLM1 Long Mynd 82.71 37⇑ *i*P **P** **03 25 09.9 -0.4**
EBIE Bielsa 82.73 47 P **P** **03 25 11.5 +0.9**
comp=Z,352nm,0.8s,mb6.2
LABF Labassere 82.74 46 *e*P **P** **03 25 11.5 +0.8**
EBNR Beni Rached 82.78 53 P **P** **03 25 11.8 +0.8**
EAB Aberfoyle 82.79 33⇑ *i*P **P** **03 25 09.8 -0.9**
RESF Ens 82.89 47 *e*P **P** **03 25 12.2 +0.7**
EPF Esparros 82.93 46⇑ *i*P **P** **03 25 12.1 +0.5**
comp=Z,6µm,1.4s,mb7.0
EPF Esparros 82.93 46⇑ *i*P **P** **03 25 12.1 +0.5**
comp=Z,3µm,1.4s,mb6.9
RSC Scourie 82.94 30⇑ *e*P **P** **03 25 10.6 -0.8**
SEW Seward 82.97 331⇓ *i*P **P** **03 25 10.1 -1.3**
SEW *e*pP pP 03 25 40.9 -2.0
EIBI Ibiza 83.04 50 P **P** **03 25 12.9 +0.6**
comp=Z,1µm,1.4s,mb6.5
SNAA Sanae 83.08 162 *e*P **P** **03 25 10.2 -1.6**
SNAA *e* 03 25 13.1
SNAA *e* 03 25 16.8
SNAA *e* pP 03 25 41.7 -1.6
SNAA *e* 03 28 23.7
SNAA *e* 03 43 30.0
SNAA *e* 03 51 28.8
SNAA *e* 03 51 35.6
SNAA *e* 03 51 42.0
SNAA *e* 03 54 48.7
SNAA Sanae 83.08 162⇓ *i*P **P** **03 25 10.0 -1.8**
comp=Z,2µm,1.5s,mb6.7
SNAA Sanae 83.08 162⇓ *i*P **P** **03 25 10.0 -1.8**
SNAA pmax pmax
comp=Z,2µm,1.5s
GRR Gorron 83.09 41⇑ *i*P **P** **03 25 12.1 -0.2**
comp=Z,5µm,1.2s,mb6.9
GRR Gorron 83.09 41⇑ *i*P **P** **03 25 12.1 -0.2**
comp=Z,2µm,1.2s,mb6.9
MDO Dochfour 83.11 31⇑ *i*P **P** **03 25 11.7 -0.6**
SWN1 Swindon 83.14 38⇑ *e*P **P** **03 25 12.2 -0.4**
SWN1 AMb AMB 03 25 16.5
comp=Z,4µm,1.5s,mb7.0
SWN1 AMS AMS 03 55 60.0
comp=Z,6µm,19.7s
SOFL Sornfelli, Far 83.18 27⇑ *e*P **P** **03 25 11.7 -0.8**
SOFL AMb AMB 03 25 17.2
comp=Z,831nm,1.5s,mb6.3
EAU Auchinoon 83.19 33⇑ *i*P **P** **03 25 12.0 -0.6**
ESK Eskdalemuir 83.19 34 P **P** **03 25 12.0 -0.7**
comp=Z,4µm,1.6s,mb7.0,SNR=90
ESK Eskdalemuir 83.19 34⇑ *i*P **P** **03 25 12.2 -0.5**
comp=Z,1µm,1.3s,mb6.5
ESK *e*pP pP 03 25 42.2 -2.0
ESK Eskdalemuir 83.19 34⇑ *e*P **P** **03 25 11.9 -0.8**
ESK AMb AMB 03 25 16.6

comp=Z,1µm,1.4s,mb6.6
ESK *e* 03 35 13.1
ESK AMS AMS 03 56 25.0

comp=Z,9µm,19.6s
ESK Eskdalemuir 83.19 34⇑ iP P 03 25 12.2 -0.5
ESK *e**PP pP 03 25 42.2 -2.0
ESK pmax pmax

comp=Z,1µm,1.3s,mb6.5
EPOB Poblet 83.19 48 P P 03 25 13.7 +0.7
comp=Z,188nm,0.7s,mb6.0
ECK Cauldkaine Hil 83.20 34⇑ iP P 03 25 12.2 -0.6
MELF Melles 83.21 47 eP P 03 25 13.5 +0.4
EKA Eskdalemuir Ar 83.22 34 P P 03 25 12.3 -0.5
comp=Z,189nm,0.6s,mb6.1,baz=250,slow=3.7,SNR=177
EKA PKKPbc PKKPbc 03 43 32.0 -3.4
comp=Z,1.8nm,0.6s,baz=103,slow=0.4,SNR=8.8
MFF Saint Martin d 83.22 43⇑ iP P 03 25 13.1 0.0
comp=Z,2µm,1.0s,mb6.7
MFF Saint Martin d 83.22 43⇑ iP P 03 25 13.1 0.0
comp=Z,1µm,1.0s,mb6.7
MFF Saint Martin d 83.22 43⇑ iP P 03 25 13.1 0.0
MFF pmax pmax
comp=Z,1µm,1.0s,mb6.7
STNC Stoke 83.24 36⇑ eP P 03 25 12.8 -0.2
STNC AMb AMB 03 25 17.5
comp=Z,3µm,1.4s,mb7.0
STNC AMS AMS 03 55 49.5
comp=Z,7µm,20.8s
EBH Black Hill 83.26 33⇑ iP P 03 25 12.6 -0.4
PMR Palmer 83.26 333 eP P 03 25 11.8 -1.1
comp=Z,44nm,0.6s,mb5.5
PMR Palmer 83.26 333 eP P 03 25 11.8 -1.1
PMR pmax pmax
comp=Z,44nm,0.6s,mb5.5
MVH1 Achvaich 83.33 31⇑ eP P 03 25 12.6 -0.8
EDI Edinburgh 83.35 33⇑ eP P 03 25 13.0 -0.5
EDI AMb AMB 03 25 17.4
comp=Z,1µm,1.5s,mb6.6
RC01 Rabbit Creek A 83.39 332⇓ iP P 03 25 12.8 -0.8
comp=Z,292nm,1.0s,mb6.1
EBL Broad Law 83.39 33⇑ iP P 03 25 12.9 -0.8
FLN La Foliniere 83.41 41⇑ iP P 03 25 14.0 0.0
comp=Z,5µm,1.3s,mb6.9
FLN *e*MLR MLR
comp=Z,6µm,20.8s
FLN La Foliniere 83.41 41⇑ iP P 03 25 14.0 0.0
comp=Z,3µm,1.3s,mb6.9
FLN LR LR
comp=Z,6µm,20.8s
KWE Weaver Farm 83.44 36⇑ iP P 03 25 13.7 -0.3
WOL Wolverton 83.45 38⇑ eP P 03 25 12.8 -1.3
WOL AMb AMB 03 25 18.2
comp=Z,2µm,1.4s,mb6.7
SLKM Skilak Lake 83.45 332 eP P 03 25 13.0 -1.0
SLKM *e*pP pP 03 25 44.2 -1.3
MLS Moulis 83.46 46 eP P 03 25 14.8 +0.4
LFF La Frestale 83.54 44⇑ iP P 03 25 14.7 0.0
comp=Z,3µm,0.8s,mb6.8
LFF La Frestale 83.54 44⇑ iP P 03 25 14.7 0.0
comp=Z,1µm,0.8s,mb6.8
LFF La Frestale 83.54 44⇑ iP P 03 25 14.7 0.0
LFF pmax pmax
comp=Z,1µm,0.8s,mb6.8
LHO Holmfirth 83.55 36⇑ iP P 03 25 14.6 0.0
LDF La Druitiere 83.61 41⇑ iP P 03 25 14.9 -0.1
comp=Z,3µm,1.0s,mb6.8
LDF La Druitiere 83.61 41⇑ iP P 03 25 14.9 -0.1
comp=Z,1µm,1.0s,mb6.8
LDF La Druitiere 83.61 41⇑ iP P 03 25 14.9 -0.1
LDF pmax pmax
comp=Z,1µm,1.0s,mb6.8
EMIR Miracle 83.61 48 P P 03 25 15.6 +0.4
comp=Z,527nm,0.7s,mb6.5
XAL Allendale 83.64 34⇑ iP P 03 25 14.4 -0.6
ESY Stoneypath 83.66 33⇑ iP P 03 25 14.8 -0.4
KBI1 Birley Grange 83.68 36⇑ iP P 03 25 15.1 -0.2
CWF Charnwood Fore 83.70 36⇑ eP P 03 25 14.9 -0.5
CWF AMb AMB 03 25 19.5
comp=Z,1µm,1.7s,mb6.4
CWF *e* 03 35 15.8
CWF AMS AMS 03 58 44.8
comp=Z,8µm,20.7s
MCD Coleburn Disti 83.72 31⇑ iP P 03 25 14.8 -0.5
COLA College 83.75 336⇓ iP P 03 25 14.4 -0.9
comp=Z,164nm,1.0s,mb5.8
COLA *e*pP pP 03 25 44.9 -2.0
COLA *e*PP PP 03 28 29.1 -0.9
COLA College 83.75 336⇓ iP P 03 25 14.5 -0.9
COLA *e**PP pP 03 25 44.9 -2.0
COLA *e* 03 28 29.1
COLA pmax pmax
comp=Z,164nm,1.0s,mb5.8
HPK Haverah Park 83.77 35⇑ iP P 03 25 15.3 -0.4
HPK AMb AMB 03 25 19.9
comp=Z,2µm,1.5s,mb6.6
HPK *e* 03 35 25.7
HPK AMS AMS 03 57 08.0
comp=Z,8µm,19.6s
LDU Leeds Universi 83.78 35⇑ eP P 03 25 15.0 -0.8
MCK McKinley 83.83 335 eP P 03 25 15.1 -0.7
comp=Z,76nm,0.5s,mb5.8
MCK *e*pP pP 03 25 45.9 -1.4
MCK McKinley 83.83 335 eP P 03 25 15.1 -0.7
MCK *e**PP pP 03 25 45.9 -1.4
MCK pmax pmax
comp=Z,77nm,0.5s,mb5.8
MLA1 Latheron 83.85 31⇑ iP P 03 25 15.2 -0.8
KDAK Kodiak Island 83.90 329 LR LR 04 05 44.8
comp=Z,7µm,19.3s,baz=105,slow=38
EMHD Djebel Mahouad 83.91 53 P P 03 25 17.0 +0.2
VALF Valcebollere 84.05 47 eP P 03 25 18.1 +0.7
ABA Alger-Bouzarea 84.05 53 P P 03 25 18.0 +0.5
OHAK Old Harbor 84.14 328 eP P 03 25 17.6 +0.1
comp=Z,278nm,1.6s,mb5.8
RJF Les Rejaudoux 84.14 44⇑ iP P 03 25 17.6 -0.2
comp=Z,3µm,1.0s,mb6.7
RJF *e*MLR MLR
comp=Z,15µm,22.0s
RJF Les Rejaudoux 84.14 44⇑ iP P 03 25 17.6 -0.2
comp=Z,1µm,1.0s,mb6.7
RJF LR LR
comp=Z,15µm,22.0s
RJF Les Rejaudoux 84.14 44⇑ iP P 03 25 17.6 -0.2
RJF pmax pmax
comp=Z,1µm,1.0s,mb6.7
RJF MLR MLR
comp=Z,15µm,22.0s
CARF Carcanieres 84.16 47 eP P 03 25 18.1 +0.2
CARF Carcanieres 84.17 47 eP P 03 25 18.3 +0.4
ETOS Mallorca 84.27 50 P P 03 25 19.4 +0.8
comp=Z,538nm,1.0s,mb6.3
ADJB Djebel Djouab 84.29 53 P P 03 25 19.6 +0.8
TRF Thorofare Moun 84.33 334⇓ iP P 03 25 17.7 -0.6
comp=Z,497nm,1.3s,mb6.2
TRF *e*pP pP 03 25 48.3 -1.6
MTLF Montolieu 84.33 46⇑ iP P 03 25 18.6 -0.2
comp=Z,2µm,1.1s,mb6.6
MTLF Montolieu 84.33 46⇑ iP P 03 25 18.6 -0.2
comp=Z,966nm,1.1s,mb6.5
MTLF Montolieu 84.33 46⇑ iP P 03 25 18.6 -0.2
MTLF pmax pmax
comp=Z,966nm,1.1s,mb6.5
CAF Calviac 84.47 45⇑ iP P 03 25 19.3 -0.1
comp=Z,2µm,1.1s,mb6.6
CAF Calviac 84.47 45⇑ iP P 03 25 19.3 -0.1
comp=Z,1µm,1.1s,mb6.6
CAF Calviac 84.47 45⇑ iP P 03 25 19.3 -0.1
CAF pmax pmax
comp=Z,1µm,1.1s,mb6.6
FILF Fillols 84.47 47 eP P 03 25 19.6 +0.1
LRDF Laroque-de-Fa 84.51 47 eP P 03 25 19.6 -0.1
KTH Kantishna Hill 84.63 335⇓ iP P 03 25 19.0 -0.9
comp=Z,26nm,0.3s,mb5.6
KTH *e*pP pP 03 25 51.2 -0.2
AKET Djebel Ketaf 84.64 54 P P 03 25 20.4 -0.1
EJON La Jonquera 84.69 47 P P 03 25 21.7 +1.1
comp=Z,284nm,0.7s,mb6.3
SJAF Saint Jean de 84.69 47 eP P 03 25 20.5 -0.1
TAM Tamanrasset 84.74 67⇑ iP P 03 25 22.1 +0.8
TAM *e*pP pP 03 25 51.8 -1.1
TAM *e*PP PP 03 28 37.4 -1.8
TAM *e*PKKPbc PKKPbc 03 43 31.4 +1.1
TAM Tamanrasset 84.74 67⇑ iP P 03 25 22.1 +0.8
TAM *e**PP pP 03 25 51.8 -1.1
TAM *e* 03 28 37.4

TCF Toulx Ste Croi 84.78 43⇑ iP P 03 25 20.5 -0.5
comp=Z,988nm,0.7s,mb6.5
TCF Toulx Ste Croi 84.78 43⇑ iP P 03 25 20.5 -0.5
comp=Z,494nm,0.7s,mb6.5
TCF Toulx Ste Croi 84.78 43⇑ iP P 03 25 20.5 -0.5
TCF pmax pmax
comp=Z,494nm,0.7s,mb6.5
BPAW Bear Paw Mtn. 84.81 335 eP P 03 25 19.4 -1.3
comp=Z,39nm,0.6s,mb5.5
BPAW *e*pP pP 03 25 50.5 -1.8
TFO1 Folkestone 84.87 38 P P 03 25 21.4 +0.1
TFO1 AMb AMB 03 25 25.6
comp=Z,4µm,1.4s,mb7.2
TFO1 Folkestone 84.87 38⇑ iP P 03 25 21.4 +0.1
TFO1 AMb AMB 03 25 25.6
comp=Z,4µm,1.4s,mb7.2
ATAF Djebel Tarf 84.93 54 P P 03 25 21.4 -0.6
PPLA Purkeypile 85.00 334⇑ iP P 03 25 21.1 -0.6
comp=Z,1µm,1.4s,mb6.7
ALE Alert 85.05 2 P P 03 25 21.0 -0.7
comp=Z,2µm,1.1s,mb6.9
ABA1 Baconsthorpe 85.19 37⇑ eP P 03 25 21.9 -0.9
WAL1 Walls 85.19 29⇑ eP P 03 25 22.1 -0.6
AEU East Anglia Un 85.19 37⇑ eP P 03 25 22.3 -0.5
HYF Humbligny 85.22 42⇑ iP P 03 25 23.1 0.0
BGF Bois d'Agland 85.25 43⇑ iP P 03 25 23.1 -0.2
comp=Z,984nm,0.8s,mb6.5
BGF Bois d'Agland 85.25 43⇑ iP P 03 25 23.1 -0.2
comp=Z,492nm,0.8s,mb6.5
BGF Bois d'Agland 85.25 43⇑ iP P 03 25 23.1 -0.2
BGF pmax pmax
comp=Z,492nm,0.8s,mb6.5
CHUM Lake Minchumin 85.31 335⇓ iP P 03 25 22.2 -1.1
comp=Z,1µm,1.6s,mb6.6
LBL Lubilhac 85.34 44 eP P 03 25 24.2 +0.4
AWI1 Witton 85.36 37⇑ eP P 03 25 23.0 -0.7
AGO Saint Agoulin 85.37 44 eP P 03 25 23.9 0.0
LRW Lerwick 85.37 29⇑ eP P 03 25 22.9 -0.8
LRW AMb AMB 03 25 27.6
comp=Z,460nm,1.8s,mb6.1
LRW *e* 03 35 33.2
LRW AMS AMS 03 57 09.7
comp=Z,9µm,20.2s
COLD Coldfoot 85.40 338⇓ iP P 03 25 23.9 +0.3
comp=Z,260nm,1.1s,mb6.1
COLD *e*pP pP 03 25 54.7 -0.6
MENF Mencas 85.41 39 eP P 03 25 23.8 -0.2
DAG Danmarks Havn 85.49 11 *i* P P 03 25 23.2 -0.7
comp=Z,298nm,0.9s,mb6.2
DAG Danmarks Havn 85.49 11*j* iP P 03 25 23.2 -0.7
DAG pmax pmax
comp=Z,300nm,0.9s,mb6.2
DAG Danmarks Havn 85.49 11*j* iP P 03 25 23.2 -0.7
comp=Z,297nm,0.9s,mb6.2
JMIC Jan Mayen 85.55 18 P P 03 25 24.1 -0.2
comp=Z,145nm,0.9s,mb5.9,baz=116,slow=3.1,SNR=7.7
JMIC S S 03 35 35.0 -10
comp=Z,36nm,0.6s,baz=153,slow=20,SNR=2.1
JMIC LR LR 03 59 56.9
comp=Z,7µm,21.1s,baz=247,slow=33
LASF Ste Croix 85.61 46⇑ iP P 03 25 25.6 +0.4
comp=Z,700nm,0.7s,mb6.4
AVF Avril sur Loir 85.63 43⇑ iP P 03 25 24.5 -0.7
comp=Z,727nm,0.9s,mb6.3
AVF Avril sur Loir 85.63 43⇑ iP P 03 25 24.5 -0.7
comp=Z,364nm,0.9s,mb6.3
AVF Avril sur Loir 85.63 43⇑ iP P 03 25 24.5 -0.7
AVF pmax pmax
comp=Z,363nm,0.9s,mb6.3
PLDF La Plantade 85.70 44 eP P 03 25 25.3 -0.3
SSF Saint Saulge 85.77 43⇑ iP P 03 25 25.1 -0.8
comp=Z,1µm,1.2s,mb6.4
SSF Saint Saulge 85.77 43⇑ iP P 03 25 25.1 -0.8
comp=Z,632nm,1.2s,mb6.4
SSF Saint Saulge 85.77 43⇑ iP P 03 25 25.1 -0.8
SSF pmax pmax
comp=Z,632nm,1.2s,mb6.4
SET Setif 85.87 54 P P 03 25 28.0 +1.3
SMF Signal de Mont 85.94 43⇑ iP P 03 25 26.3 -0.4
comp=Z,3µm,1.5s,mb6.7
SMF Signal de Mont 85.94 43⇑ iP P 03 25 26.3 -0.4
comp=Z,1µm,1.5s,mb6.7
SMF Signal de Mont 85.94 43⇑ iP P 03 25 26.3 -0.4
SMF pmax pmax
comp=Z,1µm,1.5s,mb6.7
CKHR Kef el Ahmar 85.95 54 P P 03 25 29.0 +2.0
LOR Lormes 86.04 42⇑ iP P 03 25 26.5 -0.7
comp=Z,631nm,0.9s,mb6.2
LOR *e*MLR MLR
comp=Z,13µm,22.5s
LOR Lormes 86.04 42⇑ iP P 03 25 26.5 -0.7
comp=Z,316nm,0.9s,mb6.2
LOR LR LR
comp=Z,13µm,22.5s
LOR Lormes 86.04 42⇑ iP P 03 25 26.5 -0.7
LOR pmax pmax
comp=Z,316nm,0.9s,mb6.2
LOR MLR MLR
comp=Z,13µm,22.5s
SVW2 Sparrevohn 86.14 332 eP P 03 25 25.9 -1.5
SSB Saint Sauveur 86.25 45⇑ iP P 03 25 28.4 +0.1
DFRA Djebel Bou Aff 86.29 53 P P 03 25 29.7 +1.0
VIVF Saint-Julien-l 86.29 45⇑ iP P 03 25 28.6 +0.1
comp=Z,360nm,0.9s,mb6.0
VIVF Saint-Julien-l 86.29 45⇑ iP P 03 25 28.6 +0.1
comp=Z,180nm,0.9s,mb6.0
VIVF Saint-Julien-l 86.29 45⇑ iP P 03 25 28.6 +0.1
VIVF pmax pmax
comp=Z,180nm,0.9s,mb6.0
IMA2 Indian Mountai 86.43 337 eP P 03 25 28.1 -0.6
BAIF Baives 86.64 40⇑ iP P 03 25 29.8 -0.3
comp=Z,356nm,0.8s,mb6.1
BAIF Baives 86.64 40⇑ iP P 03 25 29.8 -0.3
comp=Z,178nm,0.8s,mb6.0
BAIF Baives 86.64 40⇑ iP P 03 25 29.8 -0.3
BAIF pmax pmax
comp=Z,178nm,0.8s,mb6.0
CTEI Djebel Teioual 86.67 54 P P 03 25 32.0 +1.4
OG26 St.-Nazaire-De 86.70 45 eP P 03 25 30.9 +0.4
CHGN Chignik 86.73 327 eP P 03 25 30.2 -0.2
SNF Seneffe 86.75 39 P P 03 25 30.5 -0.1
comp=Z,292nm,1.5s,mb6.0
CASM Ain Smara 86.76 54 P P 03 25 31.5 +0.5
SMRF Simiane la Rot 86.83 46⇑ iP P 03 25 31.2 0.0
comp=Z,870nm,1.4s,mb6.2
SMRF Simiane la Rot 86.83 46⇑ iP P 03 25 31.2 0.0
comp=Z,870nm,1.4s,mb6.5
UCC Uccle 86.83 39 P P 03 25 30.8 -0.2
DOU Dourbes 86.89 40 P P 03 25 31.2 -0.1
comp=Z,348nm,1.4s,mb6.1
CKFL Kef-Lekhel 86.95 54 P P 03 25 33.0 +1.1
MEZF Maizieres J'vi 86.99 41⇑ iP P 03 25 31.5 -0.3
comp=Z,864nm,0.9s,mb6.4
MEZF Maizieres J'vi 86.99 41⇑ iP P 03 25 31.5 -0.3
comp=Z,864nm,0.9s,mb6.7
GIVF Givet 87.04 40⇑ iP P 03 25 32.0 0.0
comp=Z,2µm,0.9s,mb6.8
GIVF Givet 87.04 40⇑ iP P 03 25 32.0 0.0
comp=Z,1µm,0.9s,mb6.8
GIVF Givet 87.04 40⇑ iP P 03 25 32.0 0.0
GIVF pmax pmax
comp=Z,1µm,0.9s,mb6.8
GRN Grenoble 87.09 45 eP P 03 25 32.9 +0.5
CAEH 'Ain El Ouahch 87.09 53 P P 03 25 32.6 0.0
ORIF Oris-en-Rattie 87.15 45⇑ iP P 03 25 32.9 +0.2
comp=Z,633nm,0.8s,mb6.3
ORIF *e*MLR MLR
comp=Z,8µm,22.5s
ORIF Oris-en-Rattie 87.15 45⇑ iP P 03 25 32.9 +0.2
comp=Z,317nm,0.8s,mb6.3
ORIF Oris-en-Rattie 87.15 45⇑ iP P 03 25 32.9 +0.2
ORIF pmax pmax
comp=Z,317nm,0.8s,mb6.3
GDM Grand'Maison 87.35 45 eP P 03 25 33.7 +0.1
BCLA Clavier 87.38 39 P P 03 25 33.1 -0.6
comp=Z,218nm,1.6s,mb5.8
LMR La Mourre 87.44 47⇑ iP P 03 25 33.7 -0.4
comp=Z,799nm,1.4s,mb6.2
LMR La Mourre 87.44 47⇑ iP P 03 25 33.7 -0.4
comp=Z,400nm,1.4s,mb6.2
LMR La Mourre 87.44 47⇑ iP P 03 25 33.7 -0.4
LMR pmax pmax
comp=Z,400nm,1.4s,mb6.2
CABF La Chapelle 87.47 43⇑ iP P 03 25 33.8 -0.4
comp=Z,766nm,1.2s,mb6.2
CABF La Chapelle 87.47 43⇑ iP P 03 25 33.8 -0.4
comp=Z,383nm,1.2s,mb6.2
CABF La Chapelle 87.47 43⇑ iP P 03 25 33.8 -0.4
CABF pmax pmax
comp=Z,383nm,1.2s,mb6.2
CMAH Djebel Manchou 87.54 53 P P 03 25 34.4 -0.3
ABSA Djebel Ababsia 87.55 54 P P 03 25 35.6 +0.8
FRF La Foret Royal 87.56 46⇑ iP P 03 25 34.1 -0.6
comp=Z,495nm,0.9s,mb6.2
FRF La Foret Royal 87.56 46⇑ iP P 03 25 34.1 -0.6
comp=Z,247nm,0.9s,mb6.2
FRF La Foret Royal 87.56 46⇑ iP P 03 25 34.1 -0.6
FRF pmax pmax
comp=Z,247nm,0.9s,mb6.2
THEF They Montfort 87.58 42 eP P 03 25 34.5 -0.2
GIMEL St. Georges / 87.59 43⇑ iP P 03 25 34.6 -0.1
comp=Z,2µm,3.6s
MAIT Maitri 87.65 161 eP P 03 25 32.9 -1.7
MAIT *e*S SKSac 03 35 48.5 -2.3
NVL N'lazarevskaya 87.69 161*d* iP P 03 25 35.2 +0.5
NVL *e* pP 03 26 06.8 +0.3
NVL *e*S SKSac 03 35 51.3 +0.3
NVL pmax pmax
comp=Z,635nm,1.5s,mb6.4
BNI Bardonecchia 87.73 45 eP P 03 25 34.9 -0.6
comp=Z,183nm,0.9s,mb6.1
BNI *e*PP PP 03 29 02.6 -0.1
BNI Bardonecchia 87.73 45 eP P 03 25 34.9 -0.5
BNI *e* 03 29 02.6
BNI pmax pmax
comp=Z,183nm,0.9s,mb6.1
QSPA South Pole Qui 87.73 180 P P 03 25 35.4 +0.6
comp=Z,1µm,1.0s,mb6.8,baz=147,slow=2.2,SNR=471
QSPA S SKSac 03 35 48.4 -2.5
comp=Z,3.6nm,1.0s,baz=197,slow=23,SNR=8.5
SDPT Sand Point 87.74 325 eP P 03 25 35.7 +0.4
comp=Z,335nm,1.1s,mb6.3
CALN Calern 87.76 46 eP P 03 25 36.7 +1.1
MBDF Montbardon 87.76 45⇑ iP P 03 25 35.6 0.0
comp=Z,177nm,0.8s,mb5.9
MBDF Montbardon 87.76 45⇑ iP P 03 25 35.6 0.0
comp=Z,88nm,0.8s,mb5.8
MBDF Montbardon 87.76 45⇑ iP P 03 25 35.6 0.0
MBDF pmax pmax
comp=Z,88nm,0.8s,mb5.8
SURF Saint Ours 87.77 45 eP P 03 25 36.0 +0.3
BRANT Les Verrieres 87.77 43⇑ iP P 03 25 35.7 +0.1
comp=Z,4µm,4.5s
HAU Haudompre 87.80 42⇑ iP P 03 25 35.0 -0.7
comp=Z,218nm,0.9s,mb5.9
HAU *e*MLR MLR
comp=Z,8µm,21.2s
HAU Haudompre 87.80 42⇑ iP P 03 25 35.0 -0.7
comp=Z,109nm,0.9s,mb5.9
HAU LR LR
comp=Z,8µm,21.3s
HAU Haudompre 87.80 42⇑ iP P 03 25 35.0 -0.7
HAU pmax pmax
comp=Z,109nm,0.9s,mb5.9
HAU MLR MLR
comp=Z,8µm,21.3s
LPL La Plagne 87.81 44⇑ iP P 03 25 36.2 +0.4
comp=Z,287nm,0.9s,mb6.0
LPL La Plagne 87.81 44⇑ iP P 03 25 36.2 +0.4
comp=Z,143nm,0.9s,mb6.0
LPL La Plagne 87.81 44⇑ iP P 03 25 36.2 +0.4
LPL pmax pmax
comp=Z,143nm,0.9s,mb6.0
HGN Heimansgroeve 87.82 39⇑ eP P 03 25 35.6 -0.1
HGN Heimansgroeve 87.82 39⇑ eP P 03 25 35.8 +0.1
comp=Z,200nm,0.9s,mb6.1
HGN Heimansgroeve 87.82 39 epP pP 03 26 06.7 -0.8
comp=Z,229nm,1.6s
HGN Heimansgroeve 87.82 39 esP sP 03 26 19.9 -0.7
HGN Heimansgroeve 87.82 39 ePP PP 03 28 39.7 -24
HGN Heimansgroeve 87.82 39 eS S 03 36 07.2 -0.9
LPG La Plagne 87.82 44⇑ iP P 03 25 36.4 +0.5
comp=Z,335nm,0.9s,mb6.1
LPG La Plagne 87.82 44⇑ iP P 03 25 36.4 +0.5
comp=Z,168nm,0.9s,mb6.1
LPG La Plagne 87.82 44⇑ iP P 03 25 36.4 +0.5
LPG pmax pmax
comp=Z,168nm,0.9s,mb6.1
WLF Walferdange 87.84 40 P P 03 25 36.2 +0.3
comp=Z,540nm,1.1s,mb6.5
WLF Walferdange 87.84 40⇑ iP P 03 25 36.0 +0.1
comp=Z,763nm,0.9s,mb6.7
WLF Walferdange 87.84 40⇑ iP P 03 25 36.0 +0.1
WLF pmax pmax
comp=Z,763nm,0.9s,mb6.7
WLF Walferdange 87.84 40 eP P 03 25 36.1 +0.2
comp=Z,847nm,1.0s,mb6.7
WLF *e*SKSac SKSac 03 35 54.1 +1.4
WLF *e*S S 03 36 09.0 +0.7
MEM Membach 87.85 39 P P 03 25 35.9 0.0
comp=Z,180nm,1.5s,mb5.9
MVIF Mont Vial 87.96 46 eP P 03 25 37.8 +1.2
EMV Vieux Emosson 87.98 44⇑ iP P 03 25 36.7 +0.1
comp=Z,2µm,3.2s
SALAN Lac Salanfe 88.04 44⇑ iP P 03 25 36.8 -0.1
comp=Z,625nm,1.6s,mb6.4
TOUF Mont Tournerai 88.04 46 eP P 03 25 37.0 +0.1
AIGLE Aigle 88.04 44⇑ iP P 03 25 36.9 0.0
comp=Z,2µm,3.5s
LOMF Lomont 88.05 43 eP P 03 25 36.6 -0.3
DOI San Damiano 88.08 46 P P 03 25 37.5 +0.4
comp=Z,104nm,0.7s,mb6.0
DOI San Damiano 88.08 46 P P 03 25 37.5 +0.4
DOI pmax pmax
comp=Z,104nm,0.7s,mb6.0
TORNY Torny/Romont 88.09 43⇑ iP P 03 25 37.2 +0.1
comp=Z,4µm,4.4s
LUCF Luceram 88.10 46 eP P 03 25 37.1 -0.1
REVF Revere 88.10 46 eP P 03 25 37.3 +0.1
HINF Hinteralfeld 88.12 42⇑ iP P 03 25 36.4 -0.8
comp=Z,100nm,0.6s,mb5.7
HINF Hinteralfeld 88.12 42⇑ iP P 03 25 36.4 -0.8
comp=Z,50nm,0.6s,mb5.7
HINF Hinteralfeld 88.12 42⇑ iP P 03 25 36.4 -0.8
HINF pmax pmax
comp=Z,50nm,0.6s,mb5.7
GRYON Gryon 88.14 44⇑ iP P 03 25 37.4 0.0
comp=Z,820nm,1.6s,mb6.5
RSP Reno Superiore 88.15 45 P P 03 25 38.1 +0.7
SBF Sospel 88.16 46⇑ iP P 03 25 36.9 -0.6
comp=Z,667nm,0.9s,mb6.4
SBF Sospel 88.16 46⇑ iP P 03 25 36.9 -0.6
comp=Z,333nm,0.9s,mb6.4
SBF Sospel 88.16 46⇑ iP P 03 25 36.9 -0.6
SBF pmax pmax
comp=Z,333nm,0.9s,mb6.4
AUTN L'Aution 88.17 46 eP P 03 25 37.6 +0.1
SAOF Saorge 88.26 46 eP P 03 25 37.8 -0.2
SENIN Lac Senin/Sane 88.28 44⇑ iP P 03 25 38.0 0.0
comp=Z,3µm,4.7s
MOF Molkenrain 88.31 42 eP P 03 25 37.5 -0.6
BOURR Bourrignon 88.33 43⇑ iP P 03 25 38.8 +0.6
comp=Z,1µm,2.4s,mb6.5
DIX Grande Dixence 88.33 44⇑ iP P 03 25 38.3 0.0
comp=Z,2µm,3.4s
ECH Echery 88.36 42 eP P 03 25 38.1 -0.2
ECH Echery 88.36 42⇑ iP P 03 25 37.9 -0.4
ECH *e**PP pP 03 26 07.2 -3.0
ECH *e* 03 29 06.4
SUE Sulen 88.42 29 eP P 03 25 39.2 +0.8
KMY Karmoy 88.42 31 eP P 03 25 38.8 +0.4
KMY AMb AMB 03 25 40.6
comp=Z,229nm,0.9s,mb6.2
RUP Ruppelstein 88.43 40 eP P 03 25 39.0 +0.3
CDF Champ du Feu 88.45 42⇑ iP P 03 25 38.3 -0.5
comp=Z,615nm,0.9s,mb6.3
CDF Champ du Feu 88.45 42⇑ iP P 03 25 38.3 -0.5
comp=Z,307nm,0.9s,mb6.3
CDF Champ du Feu 88.45 42⇑ iP P 03 25 38.3 -0.5
CDF pmax pmax
comp=Z,307nm,0.9s,mb6.3
WTSB Winterswijk 88.49 38⇑ eP P 03 25 39.2 +0.4
comp=Z,270nm,1.1s,mb6.2
IMI Imperia 88.49 46 P P 03 25 38.9 -0.2
LKBD Leukerbad 88.51 44⇑ iP P 03 25 39.2 +0.1
comp=Z,788nm,2.4s,mb6.3
BBS Basel-Blauen 88.53 43 eP P 03 25 38.8 -0.3
WIMIS Wimmis 88.53 43⇑ iP P 03 25 39.3 +0.1
comp=Z,2µm,5.8s
EGD Espegrend 88.55 30 eP P 03 25 38.1 -0.9
ASK Askoy 88.56 29 eP P 03 25 38.3 -0.7
BER Bergen 88.61 30 eP P 03 25 38.6 -0.7

BER AMb AMB 03 25 40.8
comp=Z,273nm,1.2s,mb6.2
STAV Stavanger 88.62 31 *eP* **P 03 25 39.8 +0.4**
BALST Balsthal 88.64 43⇑*iP* **P 03 25 39.5 -0.2**
comp=Z,2µm,2.5s,mb6.7
LIBD Limburg 88.65 42 *eP* **P 03 25 39.7 0.0**
ORO Oropa 88.69 44 P **P 03 25 39.4 -0.6**
MMK Mattmark 88.72 44⇑*iP* **P 03 25 40.7 +0.6**
comp=Z,1µm,2.4s,mb6.5
BUG Bochum–Univer 88.73 39 *eP* **P 03 25 40.1 +0.1**
comp=Z,441nm,1.1s,mb6.4
BUG *eS* S 03 36 17.4 +0.8
FIN Finale Ligure 88.74 46 P **P 03 25 40.0 -0.3**
ABH Alteburg 88.76 40 *eP* **P 03 25 40.3 +0.1**
STR Strasbourg 88.79 41 *eP* **P 03 25 40.5 +0.1**
KIZ Kirchzarten 88.84 42 P **P 03 25 40.7 +0.1**
LANF Langenberg 88.85 41 *eP* **P 03 25 40.7 +0.1**
FELD Feldberg im Sc 88.89 42 *eP* **P 03 25 40.5 -0.4**
HASLI Hasliberg/Brie 88.90 43⇑*iP* **P 03 25 40.8 -0.1**
comp=Z,1µm,2.4s,mb6.6
SULZ Cheisacher 88.94 43⇑*iP* **P 03 25 41.2 +0.1**
comp=Z,2µm,3.6s
KEST Kesra 89.03 54 P **P 03 25 41.9 +0.1**
comp=Z,141nm,0.9s,mb6.0,baz=189,slow=2.0,SNR=59
KEST S SKSac 03 36 00.8 +0.5
comp=Z,3.5nm,1.2s,baz=30,slow=14,SNR=2.1
KEST PKKPbc PKKPbc 03 43 20.0 -0.5
comp=Z,2.3nm,0.7s,baz=309,slow=3.3,SNR=7.1
KEST LR LR 04 04 58.7
comp=Z,3µm,20.3s,baz=221,slow=35
KTD Kalmit 89.06 41 *eP* **P 03 25 41.4 -0.2**
BLS5 Blasjo 89.06 31 *eP* **P 03 25 43.4 +2.0**
BLS5 AMb AMB 03 25 45.2
comp=Z,137nm,0.9s,mb6.0
IBBN Ibbenburen 89.11 38 *eP* **P 03 25 42.0 +0.2**
comp=Z,934nm,1.7s,mb6.5
IBBN *eS* S 03 36 21.0 +0.9
HYA Hoyanger 89.12 29 *eP* **P 03 25 42.2 +0.6**
HYA AMb AMB 03 25 44.5
comp=Z,152nm,1.6s,mb5.8
BFO Black Forest 89.15 42 P **P 03 25 42.2 +0.2**
comp=Z,666nm,1.2s,mb6.5,SNR=28
BFO Black Forest 89.15 42 *eP* **P 03 25 41.2 -0.9**
comp=Z,125nm,1.0s,mb5.9
BFO Black Forest 89.15 42 *eP* **P 03 25 41.7 -0.3**
BFO *e* 03 29 12.0
BFO *e* 03 35 59.6
BFO *eS* S 03 36 21.0 +0.3
BFO pmax pmax
comp=Z,155nm,1.2s,mb5.9
BFO Black Forest 89.15 42 *eP* **P 03 25 41.7 -0.3**
comp=Z,155nm,1.2s,mb5.9
BFO *ePP* PP 03 29 12.0 -1.9
BFO *eSKSac* SKSac 03 35 59.6 -0.9
BFO *eS* S 03 36 21.0 +0.3
PGF Pioggiola 89.20 48⇑*iP* **P 03 25 41.8 -0.6**
comp=Z,376nm,1.0s,mb6.1
PGF Pioggiola 89.20 48⇑*iP* **P 03 25 41.8 -0.6**
comp=Z,188nm,1.0s,mb6.1
PGF Pioggiola 89.20 48⇑*iP* **P 03 25 41.8 -0.6**
PGF pmax pmax
comp=Z,188nm,1.0s,mb6.1
ODD1 Odda 89.20 30 *eP* **P 03 25 41.3 -0.7**
ODD1 AMb AMB 03 25 44.1
comp=Z,193nm,0.9s,mb6.1
ODD1 *ep*P pP 03 26 13.5 -0.4
SLE Schleitheim 89.21 42⇑*iP* **P 03 25 42.3 -0.1**
comp=Z,3µm,3.2s
FUSIO Fusio 89.23 44⇑*iP* **P 03 25 42.1 -0.4**
comp=Z,1µm,1.9s,mb6.7
ZUR Degenried 89.24 43⇑*iP* **P 03 25 42.7 +0.2**
comp=Z,3µm,3.5s
FLACH Flaach 89.25 43⇑*iP* **P 03 25 42.7 +0.2**
comp=Z,1µm,2.4s,mb6.6
MUO Muotathal 89.25 43⇑*iP* **P 03 25 42.6 0.0**
comp=Z,3µm,2.5s,mb6.8
VAI Varese 89.26 44 P **P 03 25 41.7 -0.9**
VSL Villasalto 89.28 51 *eP* **P 03 25 42.6 -0.3**
comp=Z,483nm,0.7s,mb6.6
VSL *ePP* PP 03 29 13.8 -1.5
TRULL Truellikon 89.33 42⇑*iP* **P 03 25 42.9 0.0**
comp=Z,789nm,1.1s,mb6.7
HLG Helgoland 89.34 36 *eP* **P 03 25 43.5 +0.7**
comp=Z,1µm,1.3s,mb6.8
SNART Snartemo 89.34 32 *eP* **P 03 25 43.0 +0.3**
SNART AMb AMB 03 25 47.7
comp=Z,137nm,1.7s,mb5.7
TNS Taunus Mts 89.37 40 *eP* **P 03 25 43.2 +0.2**
TNS *e* 03 36 02.9
TNS *eS* S 03 36 23.2 +0.5
TNS pmax pmax
comp=Z,287nm,1.0s,mb6.3
TNS Taunus Mts 89.37 40 *eP* **P 03 25 43.2 +0.2**
comp=Z,287nm,1.0s,mb6.3
TNS *eSKSac* SKSac 03 36 02.9 +1.2
TNS *eS* S 03 36 23.2 +0.5
MUGIO Muggio 89.46 44⇑*iP* **P 03 25 43.1 -0.5**
comp=Z,797nm,1.7s,mb6.5
STEIN Stein am Rhein 89.46 42⇑*iP* **P 03 25 43.3 -0.2**
comp=Z,697nm,0.8s,mb6.7
WILA Wila 89.47 43⇑*iP* **P 03 25 43.7 +0.1**
comp=Z,2µm,1.7s,mb6.8
SWS Schriesheim-Wi 89.48 41 P **P 03 25 44.6 +1.0**
LBG Lerchenberg 89.48 41 P **P 03 25 43.4 -0.2**
LLS Linth-Limmern 89.50 43⇑*iP* **P 03 25 43.8 +0.1**
comp=Z,2µm,3.3s
SISB Singen-Schiene 89.53 42 P **P 03 25 44.3 +0.5**
WEIN Weingarten 89.53 43⇑*iP* **P 03 25 44.0 +0.2**
comp=Z,760nm,1.1s,mb6.7
TOD Tromm 89.55 40 *eP* **P 03 25 43.3 -0.6**
GUT Gutenstein 89.65 42 P **P 03 25 44.5 +0.1**
BOB Bobbio (Coli) 89.67 45 P **P 03 25 44.5 -0.1**
TUE Stuetta 89.70 44⇑*iP* **P 03 25 44.7 0.0**
comp=Z,246nm,0.7s,mb6.5
TUE *ePP* PP 03 29 17.5 -1.0
STU Stuttgart 89.75 41⇑*iP* **P 03 25 44.5 -0.3**
comp=Z,304nm,0.9s,mb6.4
STU Stuttgart 89.75 41⇑*iP* **P 03 25 44.5 -0.4**
STU pmax pmax
comp=Z,304nm,0.9s,mb6.4
STU Stuttgart 89.75 41 *eP* **P 03 25 44.7 -0.2**
comp=Z,348nm,0.9s,mb6.5
STU *ePP* PP 03 29 19.6 +0.9
STU *eSKSac* SKSac 03 36 05.4 +1.4
PLONS Plons/SG 89.77 43⇑*iP* **P 03 25 45.2 +0.2**
comp=Z,863nm,1.7s,mb6.6
VDL Val di Lei 89.78 44⇑*iP* **P 03 25 45.1 +0.1**
comp=Z,1µm,1.8s,mb6.7
BUCH Bad Urach 89.84 42 P **P 03 25 45.7 +0.4**
LIENZ Kamor/St.Gall 89.86 43⇑*iP* **P 03 25 45.8 +0.4**
comp=Z,2µm,1.7s,mb6.9
DAVOS Davos 90.03 43 P **P 03 25 47.0 +0.8**
DAVOS S SKSac 03 36 03.9 -1.9
SIND Sindeldorf 90.06 41 P **P 03 25 46.5 +0.2**
DAVOX Davos/Dischmat 90.09 43 P **P 03 25 47.0 +0.5**
comp=Z,314nm,0.8s,mb6.5,baz=276,slow=4.2,SNR=170
DAVOX S SKSac 03 36 03.9 -2.2
DAVOX PKKPbc PKKPbc 03 43 16.6 -1.8
comp=Z,7.1nm,0.6s,baz=50,slow=3.9,SNR=8.6
DAVOX Davos/Dischmat 90.09 43⇑*iP* **P 03 25 46.9 +0.4**
comp=Z,1µm,1.6s,mb6.7
DAVA Damuels 90.12 43⇑*iPcP* PcP 03 25 47.0 -0.8
comp=Z,500nm,1.2s,SNR=182
DAVA Damuels 90.12 43 P **P 03 25 47.4 +0.8**
BERNI Berninapass 90.17 44⇑*iP* **P 03 25 47.1 +0.2**
comp=Z,965nm,1.6s,mb6.7
MUD Monsted U'grnd 90.25 34⇑*iP* **P 03 25 47.5 +0.5**
comp=Z,108nm,1.0s,mb5.9
MUD *i* pP 03 26 17.9 -1.0
MUD *i* S SKSac 03 36 08.3 +1.7
MUD *i* 03 36 33.4
MUD Monsted U'grnd 90.25 34⇑*iP* **P 03 25 47.5 +0.5**
MUD *i* pP 03 26 17.9 -1.0
MUD *i* S SKSac 03 36 08.3 +1.7
MUD pmax pmax
comp=Z,110nm,1.0s,mb5.9
MUD MLR MLR
comp=Z,4µm,18.0s
MUD Monsted U'grnd 90.25 34⇑*iP* **P 03 25 47.5 +0.5**
comp=Z,108nm,1.0s,mb5.9
MUD *i* pP 03 26 17.9 -1.0
MUD *i* S SKSac 03 36 08.3 +1.7
MUD *i* 03 36 33.4
MUD
comp=Z,4µm,18.0s

UBR Ueberruh 90.30 42 P **P 03 25 48.1 +0.7**
VLC Villacollemand 90.30 46 *eP* **P 03 25 46.7 -0.8**
comp=Z,230nm,0.9s,mb6.3
ERBM Eremo 90.34 46 P **P 03 25 48.9 +1.2**
FUORN Ofenpass-Fuorn 90.34 44⇑*iP* **P 03 25 48.0 +0.3**
comp=Z,2µm,3.6s
PII Pisa 90.38 46 P **P 03 25 46.9 -1.0**
comp=Z,270nm,0.9s,mb6.4
PII Pisa 90.38 46 P **P 03 25 46.9 -1.0**
PII pmax pmax
comp=Z,270nm,0.9s,mb6.4
UBBA Unterbreizbach 90.40 39 *eP* **P 03 25 48.0 +0.2**
comp=Z,70nm,1.1s,mb5.7
UBBA *ep*P pP 03 26 18.3 -1.4
UBBA *ePP* PP 03 29 23.2 -0.6
UBBA *eSKSac* SKSac 03 36 10.1 +2.4
UBBA *eS* S 03 36 32.7 +0.6
HDH Heidenheim-Cha 90.41 42 P **P 03 25 48.5 +0.6**
BRMO Bormio 90.41 44 P **P 03 25 48.2 +0.2**
BDI Bagni Di Lucca 90.45 46 P **P 03 25 48.3 +0.1**
GSCL Gusciola 90.46 46 P **P 03 25 48.0 -0.3**
MABI Malga Bissina 90.49 44 P **P 03 25 47.5 -0.9**
MAGA Magasa 90.56 44 P **P 03 25 48.1 -0.6**
DOMB Dombas 90.57 28 *eP* **P 03 25 49.1 +0.8**
DOMB AMb AMB 03 25 50.8
comp=Z,61nm,0.9s,mb5.7
KONO Kongsberg 90.68 30 *eP* **P 03 25 50.5 +1.6**
comp=Z,112nm,1.3s,mb5.8
KONO Kongsberg 90.68 30 *eP* **P 03 25 50.5 +1.6**
KONO pmax pmax
comp=Z,112nm,1.3s,mb5.8
FETA Feichten 90.68 43⇑*iPcP* PcP 03 25 49.5 -0.8
comp=Z,430nm,1.0s,SNR=261
AKUT Akutan 90.69 324 *eP* **P 03 25 49.7 +0.6**
comp=Z,552nm,1.6s,mb6.4
RETA Reutte 90.73 43⇑*iP* **P 03 25 49.6 +0.1**
comp=Z,185nm,1.1s,mb6.1,SNR=64
ZCCA Zocca 90.74 46 P **P 03 25 50.5 +0.9**
BSEG Bad Segeberg 90.76 36 *eP* **P 03 25 50.2 +0.8**
BSEG *e* 03 36 10.3
BSEG *eS* S 03 36 36.2 +0.9
BSEG pmax pmax
comp=Z,113nm,1.1s,mb5.9
BSEG Bad Segeberg 90.76 36 *eP* **P 03 25 50.2 +0.8**
comp=Z,113nm,1.1s,mb5.9
BSEG *eSKSac* SKSac 03 36 10.3 +0.7
BSEG *eS* S 03 36 36.2 +0.9
FNVD Fontana Vidola 90.83 46 P **P 03 25 49.5 -0.5**
comp=Z,621nm,1.4s,mb6.5
CSNT Castellina Chi 90.93 47 P **P 03 25 49.6 -0.9**
MOTA Moosalm 90.95 43⇑*iP* **P 03 25 50.5 0.0**
comp=Z,269nm,0.8s,mb6.4,SNR=152
MOTA Moosalm 90.95 43 P **P 03 25 50.9 +0.4**
SEI Scarperia 91.00 46 P **P 03 25 50.2 -0.6**
FUR Furstenfeldbru 91.10 42 *eP* **P 03 25 51.2 0.0**
FUR *e* 03 36 15.5
FUR *eS* S 03 36 38.8 +0.1
FUR pmax pmax
comp=Z,265nm,1.0s,mb6.3
FUR Furstenfeldbru 91.10 42 *eP* **P 03 25 51.2 0.0**
comp=Z,265nm,1.0s,mb6.3
FUR *eSKSac* SKSac 03 36 15.5 +3.6
FUR *eS* S 03 36 38.8 +0.1
UNV Unalaska Valle 91.11 324⇓*iP* **P 03 25 51.0 -0.1**
comp=Z,167nm,0.8s,mb6.2
GRF Grafenberg Arr 91.13 41 *eP* **P 03 25 51.6 +0.4**
comp=Z,206nm,1.0s,mb6.2
GRF *ePP* PP 03 29 29.4 -0.2
GRF *eSKS* 03 36 16.8
GRF *eS* S 03 36 39.2 +0.4
GRF *eSS* SS 03 42 46.7 +0.9
GRF PKKP PKKPbc 03 43 13.3 -2.6
GRF Grafenberg Arr 91.13 41 *eP* **P 03 25 51.6 +0.4**
GRF *e* 03 29 29.4
GRF *e* 03 36 16.8
GRF *eS* S 03 36 39.2 +0.4
GRF *eSS* SS 03 42 46.7 +0.9
GRF pmax pmax
comp=Z,206nm,1.0s,mb6.2
GRF Grafenberg Arr 91.13 41 *eP* **P 03 25 51.6 +0.4**
comp=Z,206nm,1.0s,mb6.2
GRF *ePP* PP 03 29 29.4 -0.2
GRF *eSKSac* SKSac 03 36 16.8 +4.9
GRF *eS* S 03 36 39.2 +0.4
GRF *eSS* SS 03 42 46.7 +0.9
GRF *ePKKPdf* PKKPdf 03 43 13.3 +1.0
GRF *epPKKPbc* 03 43 54.7
GRF *ePKPPKPdf* 03 51 20.4
VMG Vicchio 91.13 46 P **P 03 25 47.2 -4.2**
OSL Oslo 91.26 30 *eP* **P 03 25 52.6 +1.0**
OSL AMb AMB 03 25 53.8
comp=Z,8µm,1.1s,mb7.8
LATE Laterza 91.27 48 P **P 03 25 52.2 +0.1**
WATA Walderalm 91.27 43⇓*iP* **P 03 25 51.8 -0.2**
comp=Z,347nm,1.3s,mb6.3,SNR=44
WATA Walderalm 91.27 43 P **P 03 25 52.4 +0.4**
CTI Castel Tesino 91.28 44 P **P 03 25 51.9 -0.1**
WTTA Wattenberg 91.31 43⇑*iPcP* PcP 03 25 52.5 -0.6
comp=Z,305nm,0.8s,SNR=182
WTTA Wattenberg 91.31 43 P **P 03 25 52.8 +0.6**
SFI Santa Sofia 91.34 46 P **P 03 25 52.6 +0.2**
NAO01 NORSAR Array S 91.38 29 *eP* **P 03 25 53.8 +1.7**
comp=Z,29nm,0.8s,mb5.5
TOLF Tolfa 91.40 48 P **P 03 25 51.1 -1.6**
MOX Moxa 91.42 40 *eP* **P 03 25 52.9 +0.3**
comp=Z,176nm,1.6s,mb5.9
MOX *e* pP 03 26 26.9 +2.4
MOX
comp=Z,6µm,19.0s
MOX Moxa 91.42 40 *eP* **P 03 25 52.9 +0.3**
MOX *e* pP 03 26 26.9 +2.4
MOX pmax pmax
comp=Z,176nm,1.6s,mb5.9
MOX MLR MLR
comp=Z,6µm,19.0s
MOX Moxa 91.42 40 *eP* **P 03 25 52.9 +0.3**
comp=Z,243nm,1.7s,mb6.1
MOX *ePP* PP 03 29 30.0 -1.8
MOX *eSKSac* SKSac 03 36 16.9 +3.4
MOX *eS* S 03 36 41.8 +0.4
NB2 NORSAR Subarra 91.55 29 P **P 03 25 53.0 +0.1**
comp=Z,84nm,1.0s,mb5.9,baz=267,slow=4.6
NOA NORSAR Array B 91.55 29 P **P 03 25 52.4 -0.5**
comp=Z,47nm,0.9s,mb5.7,baz=268,slow=4.3,SNR=79
NOA PKKPbc PKKPbc 03 43 12.1 -3.3
comp=Z,1.7nm,0.9s,baz=63,slow=5.1,SNR=5.1
NOA PKPPKP 03 51 08.6
comp=Z,2.4nm,0.8s,baz=262,slow=3.2,SNR=19
NOA LR LR 04 01 50.2
comp=Z,7µm,21.2s,baz=270,slow=32
NOA NORSAR Array B 91.55 29 P **P 03 25 52.4 -0.5**
NOA PKKPbc PKKPbc 03 43 12.1 -3.3
NOA P'P' 03 51 08.6
NOA LR LR 04 01 50.2
BADI Badiali 91.62 47 P **P 03 25 52.8 -0.9**
SEST Monte Rota 91.69 43 P **P 03 25 54.1 +0.2**
MANZ Manzenberg 91.71 40 *eP* **P 03 25 54.6 +0.7**
comp=Z,162nm,1.0s,mb6.2
MANZ *eSKSac* SKSac 03 36 18.7 +3.5
MANZ *eS* S 03 36 44.4 +0.3
ERC Erice 91.73 52 P **P 03 25 54.6 +0.3**
ROTZ Rotzenmuhle 91.77 40 *eP* **P 03 25 55.0 +0.8**
comp=Z,194nm,1.0s,mb6.3
ROTZ *eSKSac* SKSac 03 36 19.5 +4.0
ROTZ *eS* S 03 36 44.9 +0.3
MURB Monte Urbino 91.82 47 P **P 03 25 53.6 -1.0**
comp=Z,222nm,0.9s,mb6.4
WERD Werda 91.85 40 *eP* **P 03 25 55.0 +0.4**
comp=Z,145nm,1.0s,mb6.2
WERD *ep*P pP 03 26 25.7 -0.8
WERD *ePP* PP 03 29 33.5 -1.8
WERD *eSKSac* SKSac 03 36 21.1 +5.1
WERD *eS* S 03 36 45.7 +0.4
GUNZ Gunzen 91.86 40 *eP* **P 03 25 55.2 +0.6**
comp=Z,419nm,1.8s,mb6.4
GUNZ *ep*P pP 03 26 25.7 -0.8
GUNZ *eSKSac* SKSac 03 36 21.1 +5.0
GUNZ *eS* S 03 36 45.8 +0.4
WERN Wernitzgruen 91.89 40 *eP* **P 03 25 55.4 +0.6**
comp=Z,246nm,1.2s,mb6.3
WERN *ep*P pP 03 26 26.3 -0.4
WERN *ePP* PP 03 29 38.1 +2.5
WERN *eSKSac* SKSac 03 36 20.0 +3.8
WERN *eS* S 03 36 46.0 +0.3
ABTA Abfaltersbach 91.90 43⇑*iP* **P 03 25 54.8 -0.1**
comp=Z,330nm,1.1s,mb6.5,SNR=162
ASS Assisi 91.91 47 P **P 03 25 54.0 -1.0**
LAV9 Lanuvio 91.91 49 P **P 03 25 56.0 +0.9**
MNS Montasola 91.91 48 P **P 03 25 55.6 +0.5**
RDP Rocca di Papa 91.92 48 P **P 03 25 53.9 -1.2**
NKC Novy Kostel 91.94 40 *eP* **P 03 25 55.8 +0.8**
NKC *e* 03 29 38.0
NKC *e* 03 36 20.8
NKC *e* 03 43 08.0
NKC Novy Kostel 91.94 40 *eP* **P 03 25 55.8 +0.8**
NKC *ePP* PP 03 29 38.0 +2.1
NKC *eSKS* 03 36 20.8
NKC *ex* x 03 37 49.2
NKC *ePKKP* PKKPbc 03 43 08.0 -5.9
MTCE Montecelio 91.95 48 P **P 03 25 54.4 -0.8**
TANN Tannenbergstha 91.95 40 *eP* **P 03 25 55.8 +0.8**
comp=Z,276nm,1.2s,mb6.4
TANN *ep*P pP 03 26 26.6 -0.3
TANN *eSKSac* SKSac 03 36 19.4 +2.9
TANN *eS* S 03 36 46.5 +0.3
FSSB Fossombrone 92.01 47 P **P 03 25 55.2 -0.3**
COP Copenhagen 92.04 35⇑*iP* **P 03 25 55.6 +0.3**
COP *i* pP 03 26 25.7 -1.5
COP *i* S SKSac 03 36 16.4 -0.4
COP *i* 03 36 50.0
COP *i* 03 37 55.9
COP pmax pmax
comp=Z,39nm,1.0s,mb5.6
COP MLR MLR
comp=Z,3µm,19.0s
COP Copenhagen 92.04 35⇑*iP* **P 03 25 55.6 +0.3**
comp=Z,39nm,1.0s,mb5.6
COP *i* pP 03 26 25.7 -1.5
COP *i* S SKSac 03 36 16.4 -0.4
COP *i* 03 36 50.0
COP *i* 03 37 55.9
COP
comp=Z,3µm,19.0s
RJOB Jochberg 92.11 42 *eP* **P 03 25 55.8 0.0**
comp=Z,145nm,0.9s,mb6.2
RJOB *ePP* PP 03 29 37.4 0.0
RJOB *eSKSac* SKSac 03 36 19.4 +1.8
RJOB *eS* S 03 36 47.7 -0.1
SNTG Esanatoglia 92.12 47 P **P 03 25 55.8 -0.2**
CERT Cerreto 92.12 48 P **P 03 25 55.6 -0.5**
WET Wettzell 92.19 41 *eP* **P 03 25 56.8 +0.6**
WET *e**PP pP 03 26 27.5 -0.6
WET *e* 03 29 37.5
WET *e* 03 36 19.6
WET *eS* S 03 36 48.6 +0.2
WET pmax pmax
comp=Z,175nm,1.1s,mb6.2
WET Wettzell 92.19 41 *eP* **P 03 25 56.8 +0.6**
comp=Z,175nm,1.1s,mb6.2
WET *ep*P pP 03 26 27.5 -0.6
WET *ePP* PP 03 29 37.5 -0.5
WET *eSKSac* SKSac 03 36 19.6 +1.6
WET *eS* S 03 36 48.6 +0.2
KBS Kingsbay 92.23 11 *eP* **P 03 25 57.7 +1.9**
comp=Z,212nm,1.3s,mb6.2
KBS Kingsbay 92.23 11 *eP* **P 03 25 57.7 +1.9**
KBS pmax pmax
comp=Z,212nm,1.3s,mb6.2
FIAM Fiamignano 92.23 48 P **P 03 25 56.8 +0.3**
NRCA Norcia 92.24 47 P **P 03 25 56.2 -0.4**
CLL Collm 92.31 39⇑*iP* **P 03 25 57.0 +0.3**
comp=Z,166nm,1.0s,mb6.2
CLL *ep*P pP 03 26 28.0 -0.6
CLL *eSKS* 03 36 16.0
CLL *i* PKKP PKKPbc 03 43 05.3 -7.7
CLL LR LR
comp=Z,7µm,19.1s
CLL Collm 92.31 39⇑*iP* **P 03 25 57.0 +0.3**
CLL *e**PP pP 03 26 28.0 -0.6
CLL *e* 03 36 16.0
CLL *i* 03 43 05.3
CLL pmax pmax
comp=Z,166nm,1.0s,mb6.2
CLL MLR MLR
comp=Z,7µm,19.1s
CLL Collm 92.31 39 *eP* **P 03 25 57.0 +0.3**
comp=Z,166nm,1.0s,mb6.2
CLL *ep*P pP 03 26 28.2 -0.4
CLL *eSKSac* SKSac 03 36 20.1 +1.6
CLL *eS* S 03 36 49.8 +0.4
CLL Collm 92.31 39⇑*iP* **P 03 25 57.0 +0.3**
comp=Z,166nm,1.0s,mb6.2
CLL *ePmax* 03 26 00.0
CLL *ep*P pP 03 26 28.0 -0.6
CLL *ex* x 03 29 06.0
CLL *ePP* PP 03 29 32.0 -6.8
comp=Z,2µm,14.3s
CLL *eSKSac* SKSac 03 36 16.0 -2.5
CLL *eSKKSac* SKKSac 03 36 31.0 -5.3
CLL *eScS* ScS 03 36 51.0 -0.4
CLL *eSS* SS 03 37 42.0 -2.7
CLL *eSP* SP 03 38 01.0 +0.6
CLL *ePPS* 03 38 42.0
CLL *eSS* SS 03 43 00.0 -2.6
CLL *i* PKKPdf PKKPdf 03 43 05.3 -4.9
CLL *i* PKKPbc PKKPbc 03 43 10.8 -2.2
CLL *i* PKPPKPdf 03 51 22.6
CLL L 04 02 00.0
comp=Z,7µm,19.1s
CING Cingoli 92.31 47 P **P 03 25 56.0 -0.9**
MPG Monte Pellegri 92.34 52 P **P 03 25 58.5 +1.4**
GMNA Gemona 92.39 44 P **P 03 25 57.0 -0.2**
PTQR Pietraquaria 92.44 48 P **P 03 25 57.8 +0.3**
AQU L'Aquila 92.44 48⇑*iP* **P 03 25 57.2 -0.3**
comp=Z,197nm,0.9s,mb6.3
AQU *ePP* PP 03 29 39.4 -0.8
AQU L'Aquila 92.44 48⇑*iP* **P 03 25 57.2 -0.3**
AQU *e* 03 29 39.4
AQU pmax pmax
comp=Z,197nm,0.9s,mb6.3
AQU L'Aquila 92.44 48⇑*iP* **P 03 25 57.4 -0.1**
STOK Stokkvaagen 92.45 24 *eP* **P 03 25 57.7 +0.7**
STOK AMb AMB 03 26 00.5
comp=Z,152nm,1.1s,mb6.2
PTCC Patocco-Chiusa 92.47 44 P **P 03 25 57.5 0.0**
KBA Koelnbreinsper 92.47 43⇑*iP* **P 03 25 57.4 -0.2**
comp=Z,222nm,1.3s,mb6.2,SNR=7.1
FBE Freiberg 92.53 39 *eP* **P 03 25 58.3 +0.6**
comp=Z,279nm,1.1s,mb6.5
FBE *eSKSac* SKSac 03 36 22.5 +2.8
FBE *eS* S 03 36 51.6 +0.3
RGN Rugen 92.54 36 *eP* **P 03 25 58.1 +0.5**
comp=Z,388nm,1.1s,mb6.7
RGN Rugen 92.54 36 *eP* **P 03 25 58.8 +1.2**
comp=Z,705nm,1.5s,mb6.8
FAVR Favara 92.56 53 P **P 03 26 00.2 +2.0**
FLOS Flostrand 92.59 24 *eP* **P 03 26 00.5 +2.9**
TERO Teramo 92.60 48 P **P 03 25 58.1 -0.1**
VVLD Villa Vallelon 92.60 48 P **P 03 25 58.0 -0.3**
AOI Ancona 92.61 47 P **P 03 25 59.1 +0.9**
KHC Kasperske Hory 92.65 41 *eP* **P 03 25 58.1 -0.2**
KHC *e* 03 29 41.4
KHC *e* 03 36 22.5
KHC *e* 03 43 06.8
KHC *e* 03 43 10.8
KHC Kasperske Hory 92.65 41 *eP* **P 03 25 58.1 -0.2**
KHC *ex* x 03 26 16.0
KHC *ePP* PP 03 29 41.4 -0.2
KHC *ex* x 03 30 07.0
KHC *ex* x 03 30 31.0
KHC *eSKS* 03 36 22.5
KHC *eXS* sS 03 37 45.2 -2.7
KHC *ePKKP* PKKPbc 03 43 06.8 -5.2
KHC *ex* x 03 43 10.8
KHC *ePKPPKP* 03 51 17.2
LOF Lofoten 92.65 22 *eP* **P 03 25 59.7 +1.8**
LOF Lofoten 92.65 22 *eP* **P 03 26 00.5 +2.6**
LOF AMb AMB 03 26 03.3
comp=Z,219nm,1.3s,mb6.3

MYKA **Terra Mystica** **92.67** **44**⇑ *i*PcP PcP 03 25 58.5 -0.6
comp=Z,137nm,0.9s
GEC2 GERESS Array S 92.73 41⇑ *i*P **P** **03 25 58.5 -0.2**
GEC2 *e*PP PP 03 29 41.7 -0.5
GEC2 GERESS Array S 92.73 41 *e*P **P** **03 25 58.7 0.0**
GEC2 *e**PP pP 03 26 30.0 -0.6
GEC2 *e* 03 29 41.9
GEC2 *e* 03 36 21.9
GEC2 pmax pmax
comp=Z,72nm,0.9s,mb6.0
GEC2 GERESS Array S 92.73 41 *e*P **P** **03 25 58.7 0.0**
comp=Z,72nm,0.9s,mb6.0
GEC2 *e*pP pP 03 26 30.0 -0.6
GEC2 *e*PP PP 03 29 41.9 -0.3
GEC2 *e*SKSac SKSac 03 36 21.9 +0.9
GERES GERESS Array B 92.73 41 P **P** **03 25 58.4 -0.3**
comp=Z,42nm,0.7s,mb5.9,baz=256,slow=2.5,SNR=175
GERES PP PP 03 29 42.8 +0.5
comp=Z,50nm,1.2s,baz=262,slow=7.5,SNR=8.3
GERES PKKP PKKPbc 03 43 07.1 -4.7
comp=Z,2.8nm,0.6s,baz=94,slow=1.9,SNR=14
GERES PKPPKP 03 51 10.0
comp=Z,2.7nm,0.7s,baz=98,slow=1.9,SNR=9.2
GERES LR LR 04 04 13.8
comp=Z,6µm,21.3s,baz=264,slow=33
GERES GERESS Array B 92.73 41 P **P** **03 25 58.4 -0.3**
GERES 03 29 42.8
GERES 03 43 07.1
CADS Cadrg **92.73 44** *e*P **P** **03 25 58.8 0.0**
CADS *e*pP pP 03 26 29.1 -1.5
CADS *e*PP PP 03 29 41.1 -1.2
CADS *e* 03 43 27.0
CADS *e* 03 57 18.1
SDI San Donato 92.74 49 P **P** **03 25 58.8 -0.1**
HFS Hagfors 92.76 30 P **P** **03 25 57.5 -1.0**
comp=Z,26nm,0.6s,mb5.7,baz=241,slow=1.5,SNR=57
HFS LR LR 04 02 16.5
comp=Z,9µm,21.7s,baz=266,slow=32
RUE Ruedersdorf 92.80 38⇑ *i*P **P** **03 25 59.1 +0.2**
comp=Z,228nm,1.0s,mb6.5
RUE Ruedersdorf 92.80 38 *e*P **P** **03 25 59.4 +0.5**
comp=Z,286nm,1.2s,mb6.5
RUE *e*pP pP 03 26 30.6 -0.2
RUE *e*PP PP 03 29 41.3 -1.4
INTR Introdacqua 92.81 48 P **P** **03 25 59.2 0.0**
VOY Vojsko 92.84 44 *e*P **P** **03 25 59.2 -0.1**
VOY *e*pP pP 03 26 29.8 -1.4
VOY *e* 03 28 36.3
VOY *e* 03 28 43.9
GIB Gibilmanna 92.86 52 P **P** **03 25 59.5 0.0**
CSLB Castelbuono 92.89 52 P **P** **03 25 59.4 -0.3**
BRG Berggiesshubel 92.90 39⇑ *i*P **P** **03 26 00.0 +0.6**
comp=Z,145nm,1.0s,mb6.3
BRG *i* pP pP 03 26 32.0 +0.7
BRG *i* sP sP 03 26 50.1 +5.8
BRG PP PP 03 29 46.0 +2.5
BRG SKS 03 36 22.0
BRG S S 03 37 06.0 +11
BRG *i* 03 37 49.0
BRG *i* 03 38 47.0
BRG *e* 03 41 07.4
BRG *e*PKKP PKKPbc 03 43 09.5 -1.9
BRG SS SS 03 43 23.0 +12
BRG *e*P'P' 03 51 20.8
BRG LR LR
comp=Z,4µm,18.9s
BRG Berggiesshubel 92.90 39 *e*P **P** **03 26 00.0 +0.6**
comp=Z,242nm,1.0s,mb6.5
BRG *e*SKSac SKSac 03 36 23.3 +1.5
BRG *e*S S 03 36 55.7 +1.1
BRG Berggiesshubel 92.90 39⇑ *i*P **P** **03 26 00.0 +0.6**
comp=Z,242nm,1.0s,mb6.5
BRG *i* pP pP 03 26 32.0 +0.7
BRG *i* sP sP 03 26 50.1 +5.8
comp=Z,73nm,1.3s
BRG PP PP 03 29 46.0 +2.5
BRG SKS 03 36 22.0
BRG S S 03 37 06.0 +11
BRG *i* 03 37 49.0
BRG *i* 03 38 47.0
BRG *e*PKKP PKKPbc 03 43 09.5 -1.9
comp=Z,17nm,1.4s
BRG SS SS 03 43 23.0 +12
BRG *e*PKPPKP 03 51 20.8
comp=Z,155nm,2.8s
BRG
comp=N,2µm,24.2s
BRG
comp=E,6µm,18.1s
BRG
comp=Z,8µm,18.9s
SBA Scott Base 92.94 191 ⇓ *i*P **P** **03 25 59.0 -0.1**
comp=Z,378nm,1.4s,mb6.5
SBA *e*PP PP 03 29 44.1 +1.0
SBA Scott Base 92.94 191 ⇓ *i*P **P** **03 25 59.0 -0.1**
SBA *e* 03 29 44.1
SBA pmax pmax
comp=Z,378nm,1.4s,mb6.5
JAVS Javornik 92.96 44 *e*P **P** **03 26 00.1 +0.2**
JAVS *e*pP pP 03 26 30.4 -1.3
JAVS *e*SKSac SKSac 03 36 24.3 +1.9
JAVS *e* 03 43 59.5
JAVS *e* 03 51 18.8
JAVS *e* 03 57 22.7
RNI2 Rionero Sannit 93.00 49 P **P** **03 26 00.8 +0.7**
MOR8 Moi Rana 93.03 24 *e*P **P** **03 25 59.6 -0.1**
MOR8 AMb AMB 03 26 03.4
comp=Z,84nm,1.8s,mb5.8
MIDA Miranda 93.07 49 P **P** **03 26 00.8 +0.4**
MOA Molln 93.10 42⇑ *i*PcP PcP 03 26 00.4 -0.6
comp=Z,166nm,0.9s,SNR=117
MOA Molln 93.10 42 P **P** **03 26 00.8 +0.4**
SPB4 Spitsbergen Ar 93.13 12 ⇓ *i*P **P** **03 26 00.1 +0.2**
SPB4 *e*PP PP 03 29 38.6 -5.9
SPITS Spitsbergen Ar 93.13 12 P **P** **03 26 00.1 +0.1**
comp=Z,112nm,0.9s,mb6.2,baz=258,slow=3.6,SNR=24
VAE Valguarnera 93.16 53 P **P** **03 26 01.4 +0.4**
comp=Z,39nm,0.8s,mb5.8,baz=88,slow=8.2,SNR=7.2
VAE S SKSac 03 36 22.7 -1.1
comp=Z,6.2nm,0.8s,baz=80,slow=20,SNR=2.4
VAE LR LR 04 03 53.9
comp=Z,8µm,18.1s,baz=235,slow=33
KNDS Knezji Dol 93.18 45 *e*P **P** **03 26 01.3 +0.5**
KNDS *i* PP pP 03 26 31.3 -1.4
CEY Cerknica 93.21 45 P **P** **03 26 03.2 +2.2**
PRU Pruhonice 93.28 40 *e*P **P** **03 26 01.5 +0.3**
PRU *e* 03 29 46.7
PRU *e* 03 36 25.7
PRU *e* 03 43 18.0
PRU Pruhonice 93.28 40 *e*P **P** **03 26 01.5 +0.3**
PRU *e*PP PP 03 29 46.7 +0.2
PRU *e*SKS 03 36 25.7
PRU *e*XS sS 03 37 52.2 -1.3
PRU *e*PKKP PKKPbc 03 43 08.4 -2.0
PRU *e*SS SS 03 43 18.0 +1.4
PRU *ex* x 03 43 42.4
PRU *e*PKPPKP 03 51 14.4
LJU Ljubljana 93.28 44 *e*P **P** **03 26 01.5 +0.2**
LJU *e**PP pP 03 26 31.8 -1.4
LJU *e* 03 29 45.5
LJU *e*S S 03 36 58.9 +0.7
LJU Ljubljana 93.28 44 *e*P **P** **03 26 01.5 +0.2**
LJU *e*pP pP 03 26 31.8 -1.4
LJU *e* 03 29 18.4
LJU *e*PP PP 03 29 45.5 -1.1
LJU *e*SKSac SKSac 03 36 25.7 +1.6
LJU *e*S S 03 36 58.9 +0.7
LJU *e* 03 57 35.2
PVCC Panska Ves 93.30 40 *e*P **P** **03 26 01.8 +0.6**
PVCC *e* 03 36 24.5
PVCC Panska Ves 93.30 40 *e*P **P** **03 26 01.8 +0.6**
PVCC *e*SKS 03 36 24.5
PVCC *e*XS sS 03 37 50.6 -3.0
PVCC *e*PKKP PKKPbc 03 43 09.0 -1.4
PVCC *e*PKPPKP 03 51 12.9
OBKA Obir 93.30 44⇑ *i*P **P** **03 26 00.7 -0.6**
comp=Z,90nm,1.0s,mb6.0,SNR=22
OBKA Obir 93.30 44 P **P** **03 26 01.7 +0.4**
STEI Steigen 93.30 22 *e* **P** **03 26 02.7 +1.8**
STEI AMb AMB 03 26 05.5
comp=Z,130nm,1.3s,mb6.1
AFI Afiamalu 93.31 256 P **P** **03 26 01.5 -0.6**
comp=Z,93nm,1.0s,mb6.1,baz=18,slow=3.8,SNR=11
AFI LR LR 03 58 02.9
comp=Z,6µm,21.4s,baz=267,slow=29
AFI Afiamalu 93.31 256 *e*P **P** **03 26 02.5 +0.5**
comp=Z,210nm,1.2s,mb6.3
AFI Afiamalu 93.31 256 *e*P **P** **03 26 02.6 +0.5**
AFI pmax pmax
comp=Z,210nm,1.2s,mb6.3
HVZN Vizzini 93.40 53 P **P** **03 26 02.4 +0.3**
VNDS Vrh nad Dolski 93.40 44⇑ *i*P **P** **03 26 01.9 0.0**
NVLJ Novalja 93.53 46 P **P** **03 26 01.2 -1.3**
MRB1 Monte Rocchett 93.61 49 P **P** **03 26 01.5 -1.4**
SOKA Soboth 93.63 44⇑ *i*P **P** **03 26 02.3 -0.6**
comp=Z,84nm,1.4s,mb5.9
PERS Pernice 93.69 44 *e*P **P** **03 26 02.5 -0.6**
PERS *e*pP pP 03 26 32.8 -2.2
PERS *e* 03 29 20.9
PERS *e*PP PP 03 29 47.3 -2.5
PERS *e*SKSac SKSac 03 36 26.2 -0.1
PERS *e* 03 57 49.5
FG5 Orsara di Pugl 93.83 49 P **P** **03 26 03.8 -0.1**
TREC Trest 93.90 41 *e*P **P** **03 26 04.3 +0.2**
TREC *e* 03 36 25.5
TREC Trest 93.90 41 *e*P **P** **03 26 04.3 +0.2**
TREC *e*SKS 03 36 25.5
TREC *e*PKKP PKKPbc 03 43 02.3 -6.4
CRES Cresnjev 93.93 44 P **P** **03 26 05.7 +1.4**
ARSA Arzberg 93.96 43⇑ *i*PcP PcP 03 26 04.2 -0.6
comp=Z,122nm,0.8s,SNR=70
ARSA Arzberg 93.96 43 P **P** **03 26 04.3 -0.1**
ATN Antennamare 94.00 52 P **P** **03 26 05.2 +0.4**
VNDA Vanda 94.03 191 P **P** **03 26 04.2 +0.1**
comp=Z,38nm,0.8s,mb5.8,baz=122,slow=4.2,SNR=134
VNDA PP PP 03 29 51.0 -0.5
comp=Z,19nm,1.2s,baz=131,slow=8.4,SNR=4.9
VNDA S SKSac 03 36 22.5 -4.6
comp=Z,1.4nm,0.9s,baz=331,slow=5.6,SNR=2.3
VNDA PKKP PKKPbc 03 43 05.0 -4.2
comp=Z,1.1nm,0.6s,baz=315,slow=5.7,SNR=6.2
VNDA LR LR 03 59 56.9
comp=Z,8µm,20.9s,baz=118,slow=30
VNDA Vanda 94.03 191 P **P** **03 26 04.2 +0.1**
VNDA PP PP 03 29 51.0 -0.5
VNDA S SKSac 03 36 22.5 -4.6
VNDA PKKP PKKPbc 03 43 05.0 -4.2
VNDA LR LR 03 59 56.9
VNDA Vanda 94.03 191 P **P** **03 26 04.2 +0.1**
VNDA 03 29 51.0
VNDA S SKSac 03 36 22.5 -4.6
MGR Morigerati 94.06 50 P **P** **03 26 04.5 -0.5**
RGNG Rignano Grg 94.07 49 P **P** **03 26 04.1 -0.9**
CSNA Conrad Observa 94.17 42⇑ *i*PcP PcP 03 26 05.6 -0.1
comp=Z,157nm,0.8s
CONA Conrad Observa 94.18 42⇑ *i*PcP PcP 03 26 05.6 -0.1
comp=Z,167nm,0.8s,SNR=169
MTTG Motta San Giov 94.18 52 P **P** **03 26 06.5 +0.9**
SGRT San Giovanni R 94.19 48 P **P** **03 26 06.6 +1.0**
UPC Upice 94.22 40 *e*P **P** **03 26 06.1 +0.6**
UPC *e* 03 29 53.0
UPC Upice 94.22 40 *e*P **P** **03 26 06.1 +0.6**
UPC *e*PP PP 03 29 53.0 -0.8
UPC *e*PKKP PKKPbc 03 43 01.8 -6.2
UPC *e*PKPPKP 03 51 10.9
CUC Castrocucco 94.26 50 *e*P **P** **03 26 04.4 -1.5**
comp=Z,101nm,0.8s,mb6.2
TSUM Tsumeb 94.31 109 PKKPbc PKKPbc 03 43 06.2 -0.3
comp=Z,4.2nm,0.6s,baz=45,slow=3.6,SNR=4.6
TSUM LR LR 04 08 52.3
comp=Z,11µm,20.5s,baz=255,slow=36
TSUM Tsumeb 94.31 109 ⇓ *i*P **P** **03 26 07.7 +1.1**
comp=Z,138nm,1.2s,mb6.2
TSUM *e*pP pP 03 26 37.0 -1.6
TSUM *e*PP PP 03 29 58.0 +2.6
FGMS Monte Sant'Ang 94.34 49 P **P** **03 26 07.1 +0.8**
ACER Acerenza 94.35 49 P **P** **03 26 08.1 +1.8**
KSP Ksiaz 94.39 39 *e*P **P** **03 26 07.1 +0.8**
KSP *e*PcP pP 03 26 37.2 -1.0
KSP *e*PP PP 03 29 50.9 -4.2
KSP *i* SKSac SKSac 03 36 32.8 +2.9
KSP *e*S S 03 37 10.7 +3.0
KSP *e*SP SP 03 38 22.4 -0.9
KSP *e*SS SS 03 43 55.1 +23
KSP LMZ 03 58 34.0
comp=Z,44µm,49.8s
KSP Ksiaz 94.39 39⇑ *e*P **P** **03 26 06.9 +0.7**
KSP *e*pP pP 03 26 37.2 -1.0
KSP *e*PP PP 03 29 50.5 -4.6
KSP *e*SKS 03 36 32.0
KSP *e*S S 03 37 10.0 +2.3
KSP *e*SP SP 03 38 18.0 -5.3
KSP *e*SS SS 03 43 30.0 -2.3
KSP Ksiaz 94.39 39⇑ *e*P **P** **03 26 06.9 +0.7**
KSP *e**PP pP 03 26 37.2 -1.0
KSP *e* 03 29 50.5
KSP *e* 03 36 32.0
KSP *e*S S 03 37 10.0 +2.3
KSP *e*SS SS 03 43 30.0 -2.3
DPC Dobruska-Polom 94.42 40 *e*P **P** **03 26 07.0 +0.6**
DPC *e*PP PP 03 29 53.9 -1.5
DPC *e*SKS 03 36 29.2
DPC *e* 03 38 13.8
DPC *e*PKKP PKKPbc 03 43 04.9 -2.5
DPC *e* 03 43 33.4
DPC *e* 03 43 37.2
DPC *e*P'P' 03 51 11.3
DPC Dobruska-Polom 94.42 40 *e*P **P** **03 26 07.0 +0.6**
DPC *e* 03 29 53.9
DPC *e* 03 36 29.2
DPC *e* 03 43 33.4
DPC *e* 03 43 37.2
DPC Dobruska-Polom 94.42 40 *e*P **P** **03 26 07.0 +0.6**
DPC *e*PP PP 03 29 53.9 -1.5
DPC *e*SKS 03 36 29.2
DPC *ex* x 03 38 13.8
DPC *e*PKKP PKKPbc 03 43 04.9 -2.5
DPC *e*SS SS 03 43 37.2 +4.4
DPC *e*PKPPKP 03 51 11.3
SOI Samo 94.46 52 P **P** **03 26 07.0 +0.1**
KOGS Kog 94.47 44 *e*P **P** **03 26 07.0 +0.2**
KOGS *e*pP pP 03 26 37.1 -1.6
KOGS *e*PP PP 03 29 48.9 -7.0
KOGS *e* 03 30 20.0
KOGS *e*SKSac SKSac 03 36 32.3 +1.7
KOGS *e*S S 03 37 08.8 +0.2
KOGS *e* 03 58 7.9
SISC Sisak 94.58 45 P **P** **03 26 07.5 +0.2**
VRAC Vranov 94.63 41 P **P** **03 26 07.9 +0.5**
comp=Z,80nm,0.9s,mb6.1,baz=270,slow=4.8,SNR=58
VRAC pP pP 03 26 38.7 -0.6
comp=Z,19nm,1.0s,baz=278,slow=6.7,SNR=1.8
VRAC PP PP 03 29 56.3 -0.7
comp=Z,75nm,1.3s,baz=259,slow=8.5,SNR=7.4
VRAC S SKSac 03 36 29.2 -2.1
comp=Z,0.9nm,0.4s,baz=93,slow=11,SNR=1.7
VRAC PKPPKP 03 51 14.9
comp=Z,1.7nm,0.5s,baz=90,slow=2.0,SNR=3.0
VRAC LR LR 04 06 39.8
comp=Z,6µm,18.6s,baz=270,slow=34
VRAC Vranov 94.63 41 P **P** **03 26 08.1 +0.7**
VRAC Vranov 94.63 41⇑ *i*P **P** **03 26 07.8 +0.4**
GRI Girifalco 94.74 51 P **P** **03 26 07.4 -0.8**
GKP Gorka Klasztor 94.88 37 *e*P **P** **03 26 09.5 +1.1**
GKP *e*PcP pP 03 26 39.6 -0.8
GKP *e*PP PP 03 29 57.6 -1.2
GKP *e*SKSac SKSac 03 36 33.9 +1.4
GKP *e*S S 03 37 14.9 +3.1
GKP *e*SP SP 03 38 28.5 -0.1
GKP *e*SS SS 03 43 44.6 +5.5
GKP LMZ 03 58 59.8
comp=Z,41µm,38.0s
GKP Gorka Klasztor 94.88 37 *e*P **P** **03 26 09.5 +1.1**
GKP *e*PcP pP 03 26 39.6 -0.8
GKP *e*PP PP 03 29 57.6 -1.2
GKP *e*SKSac SKSac 03 36 33.9 +1.5
GKP *e*S S 03 37 14.9 +3.1
GKP *e*SP SP 03 38 28.5 -0.1
GKP *e*SS SS 03 43 44.6 +5.5
GKP LR LR
comp=Z,41µm,38.0s
GKP Gorka Klasztor 94.88 37 *e*P **P** **03 26 09.5 +1.1**
GKP *e* pP 03 26 39.6 -0.8
GKP *e* 03 29 57.6
GKP *e* 03 36 33.9
GKP *e*S S 03 37 14.9 +3.1
GKP *e*SP SP 03 38 28.5 -0.1
GKP *e*SS SS 03 43 44.6 +5.5
GKP LMZ 03 58 59.8
TIP Timpagrande 95.00 51 *e*P **P** **03 26 08.1 -1.3**
comp=Z,70nm,0.6s,mb6.3
ZST Bratislava 95.00 42 P **P** **03 26 10.1 +1.0**
ZST Bratislava 95.00 42 *e*P **P** **03 26 09.8 +0.7**
ZST *e* 03 29 59.8
ZST *e*SS SS 03 43 47.5 +6.3
ZST Bratislava 95.00 42 *e*P **P** **03 26 09.8 +0.7**
ZST *e*PP PP 03 29 59.8 -0.1
LTRZ Laterza 95.02 50 P **P** **03 26 05.9 -3.5**
MODS Modra-Piesok 95.11 42 *e*P **P** **03 26 10.0 +0.4**
MODS *e*SS SS 03 43 45.5 +2.8
MODS Modra-Piesok 95.11 42 *e*P **P** **03 26 10.0 +0.4**
MODS *e*PP PP 03 29 51.4 -9.4
SMOL Smolenice 95.21 42 *e*P **P** **03 26 11.4 +1.3**
MORC Moravsky Berou 95.23 40⇑ *i*P **P** **03 26 10.2 +0.1**
comp=Z,108nm,1.2s,mb6.2
MORC *e*PP PP 03 30 00.3 -1.3
MORC *e*PKKPdf PKKPdf 03 43 03.3 -1.7
MORC Moravsky Berou 95.23 40⇑ *i*P **P** **03 26 10.2 +0.1**
MORC *e* 03 30 00.3
MORC pmax pmax
comp=Z,108nm,1.2s,mb6.2
MORC Moravsky Berou 95.23 40⇑ *i*P **P** **03 26 10.0 -0.1**
STON Ston 95.61 47 P **P** **03 26 11.4 -0.6**
OKC Ostrava-Krasne 95.62 40 *e*P **P** **03 26 12.2 +0.3**
OKC *e* 03 30 02.4
OKC *e* 03 36 37.0
OKC *e* 03 43 58.0
OKC Ostrava-Krasne 95.62 40 *e*P **P** **03 26 12.2 +0.3**
OKC *e*PP PP 03 30 02.4 -2.2
OKC *e*SKS 03 36 37.0
OKC *ex* x 03 38 22.5
OKC *e*PKKP PKKPbc 03 43 03.8 -0.4
OKC *e*SS SS 03 43 58.0 +8.2
RAC Raciborz 95.63 40 *e*P **P** **03 26 13.1 +1.1**
RAC *e**PP pP 03 26 42.4 -1.5
RAC *e* 03 29 59.2
RAC *e* 03 36 39.3
KOLL Kolacno 95.85 42 *e*P **P** **03 26 13.5 +0.5**
KOLL *e*PP PP 03 30 05.7 -0.8
SUR Sutherland 96.02 123 *e*P **P** **03 26 15.2 +1.1**
comp=Z,193nm,1.8s,mb6.2
KTK1 Kautokeino 96.12 21 *e*P **P** **03 26 14.4 +0.6**
PKSM Moragy 96.14 44 P **P** **03 26 14.5 +0.1**
PKSM Moragy 96.14 44⇑ *i*P **P** **03 26 14.5 +0.2**
VYHS Vyhne 96.14 42 *e*P **P** **03 26 14.7 +0.4**
VYHS *e*SS SS 03 44 01.4 +4.1
VYHS Vyhne 96.14 42 P **P** **03 26 15.2 +0.9**
VYHS Vyhne 96.14 42 *e*P **P** **03 26 14.7 +0.4**
VYHS *e*PP PP 03 30 01.7 -7.0
HCY Herceg Novi 96.22 48⇓ *i*P **P** **03 26 15.4 +0.6**
BRY Bratogost 96.23 47⇑ *i*P **P** **03 26 15.3 +0.4**
BUD Budapest 96.33 43⇑ *e*P **P** **03 26 17.1 +1.9**
BUD *e*PcP pP 03 26 45.5 -1.7
UPM Unac-Piva 96.48 47 *e*P **P** **03 26 16.0 0.0**
BUM Brajici-Budva 96.52 48⇓ *i*P **P** **03 26 17.0 +0.8**
NKV Niksic 96.57 47⇑ *i*P **P** **03 26 16.6 +0.2**
OJC Ojcow 96.65 40 *e*P **P** **03 26 17.1 +0.5**
OJC *e*pP pP 03 26 46.7 -1.9
OJC *e*PP PP 03 30 04.2 -8.4
OJC *e*SKSac SKSac 03 36 42.7 +0.8
OJC *e*PS PS 03 38 49.9 -14
OJC L 04 06 12.0
comp=Z,6.7nm,21.2s
OJC Ojcow 96.65 40 *e*P **P** **03 26 17.1 +0.5**
OJC *e**PP pP 03 26 46.7 -1.9
OJC *e* 03 36 42.7
OJC *e*PS PS 03 38 49.9 -14
TTG Podgorica 96.78 48⇓ *i*P **P** **03 26 18.1 +0.7**
ULC Ulcinj 96.80 48⇑ *i*P **P** **03 26 18.0 +0.6**
BBLS Lazići 96.81 46 P **P** **03 26 18.9 +1.5**
ARCES ARCESS Array B 96.82 20 P **P** **03 26 16.1 -0.8**
comp=Z,64nm,0.9s,mb6.1,baz=267,slow=4.1,SNR=78
ARCES PP PP 03 30 11.9 -1.4
comp=Z,36nm,1.0s,baz=294,slow=6.5,SNR=8.0
ARCES PKiKP PKiKP 03 30 50.2 -2.5
comp=Z,12nm,0.9s,baz=289,slow=3.7,SNR=1.8
ARCES PKKPbc PKKPbc 03 42 57.7 -3.9
comp=Z,10nm,0.7s,baz=118,slow=3.7,SNR=13
ARCES LR LR 04 06 55.5
comp=Z,5µm,21.5s,baz=277,slow=33
ARCES ARCESS Array B 96.82 20 P **P** **03 26 16.1 -0.8**
ARCES 03 30 11.9
ARE0 ARCESS Array S 96.82 20 *e*P **P** **03 26 16.1 -0.8**
ARE0 *e*PP PP 03 30 10.2 -3.1
PLE Pljevlja 96.83 47⇑ *i*P **P** **03 26 19.3 +1.7**
PSZ Piszkesteto 96.89 42⇑ *i*P **P** **03 26 18.2 +0.5**
comp=Z,81nm,1.0s,mb6.1
PSZ Piszkesteto 96.89 42⇑ *e*P **P** **03 26 18.4 +0.7**
PSZ *e*pP pP 03 26 47.9 -1.8
PSZ Piszkesteto 96.89 42⇑ *i*P **P** **03 26 17.9 +0.2**
NIE Niedzica 97.05 41 *e*P **P** **03 26 19.7 +1.3**
IVA Berane 97.23 47⇓ *i*P **P** **03 26 20.1 +0.7**
WAR Warsaw 97.25 38 *e*P **P** **03 26 22.9 +3.6**
WAR *e*SKSac SKSac 03 36 46.1 +1.2
WAR *e*S S 03 37 36.0 +3.7
WAR *e*SP SP 03 38 58.2 +3.8
WAR LMZ 04 00 25.5
comp=Z,28µm,38.8s
WAR Warsaw 97.25 38 *e*P **P** **03 26 22.9 +3.7**
WAR *e*SKSac SKSac 03 36 46.1 +1.2
WAR *e*S S 03 37 36.0 +3.7
WAR *e*SP SP 03 38 58.2 +3.7
WAR LR LR
comp=Z,28µm,38.8s
WAR Warsaw 97.25 38 *e*P **P** **03 26 22.9 +3.7**
WAR *e* 03 36 46.1
WAR *e*S S 03 37 36.0 +3.7
WAR *e*SP SP 03 38 58.2 +3.7
KEV Kevo 97.29 20 ep **P** **03 26 17.6 -1.4**
comp=Z,81nm,1.1s,mb6.1
KEV Kevo 97.29 20 *e*P **P** **03 26 17.6 -1.4**
KEV pmax pmax
comp=Z,81nm,1.1s,mb6.1
TIR Tirane 97.29 49 P **P** **03 26 20.8 +1.1**
PVY Plav 97.30 48⇑ *i*P **P** **03 26 20.7 +1.0**
SYO Syowa Base 97.34 161 ⇓ *e*P **P** **03 26 16.6 -2.7**
SYO Syowa Base 97.34 161 ⇓ *i*PcP PcP 03 26 19.3 0.0
STHS Stebnicka Huta 97.65 41 *e*P **P** **03 26 22.7 +1.6**
STHS *e* 03 30 18.2
STHS Stebnicka Huta 97.65 41 *e*P **P** **03 26 22.7 +1.6**
STHS *e*PP PP 03 30 18.1 -2.2
STHS *e* 03 42 53.3
STHS *e* 03 43 25.5
STHS *e* 03 51 03.8
RAO Raoul Island 97.69 240 PKKPbc PKKPbc 03 42 54.9 -2.8
comp=Z,210nm,0.4s,baz=90,slow=20,SNR=2.8
RAO LR LR 03 58 45.0
comp=Z,4µm,21.2s,baz=110,slow=28
IGT Igoumenitsa 97.75 51 P **P** **03 26 21.8 0.0**
CRVS Cervenica-Dubn 97.84 41 *e*P **P** **03 26 22.9 +0.9**
CRVS *e*NS 03 44 20.6
CRVS Cervenica-Dubn 97.84 41 *e*P **P** **03 26 22.8 +0.8**
CRVS *e*PP PP 03 30 12.9 -8.9
VLS Valsamata 98.03 52 P **P** **03 26 22.3 -0.8**
VLS Valsamata 98.03 52 *e*P **P** **03 26 18.5 -4.6**
LKD Levkas 98.05 51 P **P** **03 26 23.9 +0.7**
JAN Janina 98.15 50 *e*P **P** **03 26 24.5 +0.9**
KFL Anninata 98.19 52 P **P** **03 26 22.4 -1.4**
BZS Buzias 98.25 44 P **P** **03 26 24.1 +0.2**
BZS Buzias 98.25 44⇑ *i*P **P** **03 26 24.0 +0.1**
SUW Suwalki 98.34 36 *e*P **P** **03 26 24.1 0.0**
SUW *e*PcP pP 03 26 54.7 -1.4
SUW *e*PP PP 03 30 23.3 -2.0
SUW *i* SKSac SKSac 03 36 50.3 -0.1
SUW *e*SP SP 03 39 01.4 -4.7
SUW LMZ 04 00 36.1
comp=Z,34µm,39.9s
SUW Suwalki 98.34 36 *e*P **P** **03 26 24.1 0.0**
SUW *e* pP 03 26 54.7 -1.4
SUW *e* 03 30 23.3
SUW *i* 03 36 50.3
SUW *e*SP SP 03 39 01.4 -4.8
KOLS Kolonicke sedl 98.38 41 *e*P **P** **03 26 25.5 +1.1**
KOLS *e*SS SS 03 44 26.2 -2.5
UZH Uzhgorod 98.42 41 *e*P **P** **03 26 26.0 +1.4**
UZH *e**PP pP 03 26 55.0 -1.6
UZH *e* 03 36 44.0

UZH eS S 03 37 40.0 -2.4
UZH MLR MLR
comp=Z,2µm,18.0s
FNA Florina 98.47 49 P **P 03 26 24.2 -0.8**
KWP Kalwaria 98.58 40 eP **P 03 26 26.4 +1.1**
KWP ePcP pP 03 26 57.2 0.0
KWP ePP PP 03 30 22.8 -4.6
KWP eSKSac SKSac 03 36 52.9 +1.1
KWP eS S 03 37 48.1 +4.4
KWP eSP SP 03 39 12.9 +3.9
KWP eSS SS 03 44 46.5 +15
KWP LMZ 04 00 38.6
comp=Z,33µm,41.6s
KWP Kalwaria 98.58 40 eP **P 03 26 26.4 +1.1**
KWP e pP 03 26 57.2 -0.1
KWP e 03 30 22.8
KWP e 03 36 52.9
KWP eS S 03 37 48.1 +4.4
KWP eSP SP 03 39 12.9 +3.9
KWP eSS SS 03 44 46.5 +15
KWP Kalwaria 98.58 40⇑ iP **P 03 26 24.8 -0.5**
TRPA Tarpa 98.64 42⇑ iP **P 03 26 25.6 +0.1**
KAF Kangasniemi 98.64 27 ep **P 03 26 24.3 -0.9**
comp=Z,60nm,0.9s,mb6.1
KAF Kangasniemi 98.64 27 eP **P 03 26 24.3 -0.9**
KAF pmax pmax
comp=Z,60nm,0.9s,mb6.1
KZN Kozani 98.81 50 eP **P 03 26 27.0 +0.5**
DRGR 98.89 43 P **P 03 26 27.5 +0.8**
DRGR 98.89 43⇑ iP **P 03 26 26.7 0.0**
EVR Evrytania 98.94 51 eP **P 03 26 27.5 +0.4**
THL Klokotos Trika 99.05 50 P **P 03 26 27.3 -0.3**
GZR Gura Zlata 99.09 45 P **P 03 26 28.4 +0.7**
GZR Gura Zlata 99.09 45⇑ iP **P 03 26 29.6 +2.0**
GRG Griva 99.23 49 P **P 03 26 28.1 -0.3**
VAY Valandovo 99.33 49 i P Pdif 03 26 28.8 +0.3
BMR Baia Mare 99.33 42 P Pdif 03 26 31.5 +3.0
BMR Baia Mare 99.33 42⇑ iP Pdif 03 26 31.6 +3.1
AGG Agios Georgios 99.34 51 P Pdif 03 26 28.8 +0.3
LIT Litokhoron 99.37 50 P Pdif 03 26 27.9 -0.8
LVV L'vov 99.41 40 eP Pdif 03 26 28.9 0.0
LVV e 03 26 58.1
LVV e 03 30 32.9
LVV e 03 36 52.5
LVV eS S 03 37 49.3 -1.4
LVV e 03 39 18.5
LVV e 03 44 54.7
LVV MLR MLR
comp=Z,4µm,22.0s
LVV MLR MLR
comp=N,2µm,20.0s
LVV MLR MLR
comp=E,3µm,21.0s
VLX Vlachokerasia 99.50 53 P Pdif 03 26 28.9 -0.4
VSU Vasula 99.57 31 eP Pdif 03 26 28.4 -1.2
KNT Kendrikon 99.59 49 P Pdif 03 26 29.7 +0.1
KKB Krupnik 99.66 48 i P Pdif 03 26 29.4 -0.6
THE Thessaloniki 99.69 49 P Pdif 03 26 29.3 -0.8
HORT Hortiatis 99.79 49 P Pdif 03 26 31.1 +0.5
LKR Lokris 99.89 51 P Pdif 03 26 31.2 +0.2
LTK Loutraki 99.92 52 P Pdif 03 26 31.1 0.0
SOH Sokhos 99.96 49 P Pdif 03 26 31.9 +0.6
SOH Sokhos 99.96 49 i P Pdif 03 26 34.0 +2.7
XOR Xorichti 99.97 51 P Pdif 03 26 32.5 +1.1
PLG Polygyros 100.08 50 P Pdif 03 26 31.6 -0.2
APA Apatity 100.14 21⇑ iP Pdif 03 26 32.6 +0.5
APA i 03 30 34.0
APA i 03 36 58.0
APA i S Sdif 03 37 56.0 -0.6
APA i SP SP 03 39 33.0 +8.1
APA pmax pmax
comp=Z,81nm,1.4s
MMB Musomiste 100.17 48 i P Pdif 03 26 31.7 -0.5
DID Didima 100.17 52 P Pdif 03 26 31.1 -1.1
PAIG Paliouri 100.30 50 P Pdif 03 26 32.5 -0.3
BOSA Boshof 100.31 119 P Pdif 03 26 33.6 +0.7
comp=Z,6.9nm,1.0s,baz=315,slow=5.2,SNR=5.2
BOSA PP PP 03 30 39.8 -1.4
comp=Z,10nm,0.8s,baz=212,slow=7.5,SNR=3.7
BOSA S SKSac 03 37 03.1 +1.8
comp=Z,5.8nm,1.1s,baz=106,slow=8.9,SNR=1.9
BOSA PKKPbc PKKPbc 03 42 48.3 -2.1
comp=Z,7.4nm,0.5s,baz=121,slow=3.8,SNR=16
BOSA Boshof 100.31 119 ePdif Pdif 03 26 34.3 +1.4
comp=Z,38nm,1.4s
BOSA Boshof 100.31 119 P Pdif 03 26 33.6 +0.7
BOSA 03 30 39.8
BOSA S SKSac 03 37 03.1 +1.8
BOSA pmax pmax
comp=Z,7.0nm,1.0s
BOSA smax
comp=N,6.0nm,1.1s
URZ Urewera 100.36 231 P Pdif 03 26 33.0 -0.1
comp=N,7.1nm,0.9s,baz=278,slow=4.6,SNR=3.4
URZ PP PP 03 30 40.9 -0.3
comp=N,8.0nm,0.8s,baz=146,slow=19,SNR=3.7
URZ PKKPbc PKKPbc 03 42 48.2 -2.3
comp=N,3.7nm,0.3s,baz=147,slow=4.2,SNR=7.1
PGB Panagyurishte 100.39 47 i P Pdif 03 26 34.0 +0.8
BUR08 Bucovina Ar. S 100.47 42 ePdif Pdif 03 26 34.8 +1.3
BUR08 ePP PP 03 30 41.3 -0.5
LVZ Lovozero 100.48 21 eP Pdif 03 26 32.2 -1.4
BURAR Bucovina Array 100.49 42⇑⇑ P Pdif 03 26 34.3 +0.6
BURAR Bucovina Array 100.49 42⇑ iP Pdif 03 26 34.3 +0.6
VOIR 100.67 44 P Pdif 03 26 37.1 +2.6
VOIR 100.67 44⇑ iP Pdif 03 26 37.3 +2.8
JOF Joensuu 100.70 26 ep Pdif 03 26 32.6 -2.0
comp=N,45nm,1.0s
JOF Joensuu 100.70 26 eP Pdif 03 26 32.6 -2.0
JOF pmax pmax
comp=Z,45nm,1.0s
PLD Plovdiv 100.83 48 P Pdif 03 26 35.9 +0.7
RZN Rozhen 100.89 48 i P Pdif 03 26 35.2 -0.2
MNK Minsk 100.95 35 deP Pdif 03 26 32.0 -3.7
MNK e 03 37 00.0
MNK eS Sdif 03 37 52.0 -11
MNK pmax pmax
comp=Z,340nm,1.0s
LBTB Lobatse 101.12 116 ePdif Pdif 03 26 37.8 +1.3
comp=Z,9.9nm,0.8s
LBTB Lobatse 101.12 116 eP Pdif 03 26 37.8 +1.3
LBTB pmax pmax
comp=Z,10.0nm,0.8s
MLR Muntele Rosu 101.29 44 P Pdif 03 26 37.1 -0.1
comp=Z,36nm,0.9s,baz=189,slow=1.0,SNR=26
MLR PP PP 03 30 46.7 -1.3
comp=Z,298nm,1.3s,baz=271,slow=4.7,SNR=21
MLR S SKSac 03 37 01.7 -3.6
comp=Z,18nm,1.3s,baz=67,slow=23,SNR=8.5
MLR PKKPbc PKKPbc 03 42 44.9 -3.3
comp=Z,13nm,0.9s,baz=157,slow=1.6,SNR=11
MLR Muntele Rosu 101.29 44 P Pdif 03 26 37.1 -0.1
MLR 03 30 46.7
MLR S SKSac 03 37 01.7 -3.6
KDZ Kurdzhali 101.42 48 i P Pdif 03 26 37.8 0.0
SZH Strazhica 101.59 46 i P Pdif 03 26 37.3 -1.2
BILL Bilibino 101.65 340 ePdif Pdif 03 26 38.5 -0.4
comp=Z,42nm,1.4s
BILL ePP PP 03 30 46.9 -3.1
BILL Bilibino 101.65 340⇑ iP Pdif 03 26 38.8 0.0
BILL i 03 30 47.4
BILL i S SKSac 03 37 04.6 -1.5
BILL i PS PS 03 39 41.5 -15
BILL pmax pmax
comp=Z,32nm,1.5s
SIVA Sivas 101.66 55 P Pdif 03 26 36.7 -2.2
IDI Anoyia 101.70 55 P Pdif 03 26 40.0 +0.9
comp=Z,35nm,0.7s,baz=298,slow=5.7,SNR=14
IDI PP PP 03 30 48.1 -3.4
comp=Z,86nm,1.1s,baz=283,slow=8.2,SNR=10.0
IDI S SKSac 03 37 08.0 +0.3
comp=Z,35nm,1.3s,baz=82,slow=19,SNR=7.9
IDI PKKPbc PKKPbc 03 42 44.4 -2.2
comp=Z,14nm,0.7s,baz=68,slow=5.7,SNR=5.3
PLOR Plostina 101.72 44⇓ iP Pdif 03 26 43.5 +4.4
VRI Vrincioaia 101.77 44⇑⇑ P Pdif 03 26 37.8 -1.6
VRI Vrincioaia 101.77 44⇑ iP Pdif 03 26 37.8 -1.6
ALN Alexandroupoli 101.98 49 P Pdif 03 26 40.5 +0.2
JMB Yambol 102.17 47 P Pdif 03 26 43.6 +2.5
JMB Yambol 102.17 47 i P Pdif 03 26 43.4 +2.3
CHOS Chios island 102.30 51 P Pdif 03 26 40.3 -1.4
PRK Paraskevi 102.36 50 P Pdif 03 26 41.0 -1.0
KIEV Kiev 102.54 39 ePdif Pdif 03 26 42.0 -0.7
comp=Z,19nm,1.3s
KIEV ePP PP 03 30 53.7 -3.5
KIEV Kiev 102.54 39 eP Pdif 03 26 42.0 -0.8
KIEV e 03 30 53.7
KIEV pmax pmax
comp=Z,19nm,1.3s
AKASG Malin Array Be 102.55 39 P Pdif 03 26 42.3 -0.5
comp=Z,9.6nm,0.9s,baz=266,slow=4.3,SNR=14
AKASG PP PP 03 30 56.5 -0.8
comp=Z,22nm,1.0s,baz=276,slow=6.6,SNR=10
AKASG S SKSac 03 37 04.8 -6.2
comp=Z,0.7nm,0.6s,baz=256,slow=3.3,SNR=2.4
AKASG PKKPbc PKKPbc 03 42 40.0 -4.7
comp=Z,6.5nm,0.6s,baz=82,slow=3.3,SNR=14
AKASG PKPPKP 03 50 57.3
comp=Z,1.2nm,0.5s,baz=81,slow=2.5,SNR=8.1
AKASG Malin Array Be 102.55 39 P Pdif 03 26 42.3 -0.5
AKASG PP PP 03 30 56.5 -0.8
AKASG S SKSac 03 37 04.8 -6.2
AKASG PKKPbc PKKPbc 03 42 40.0 -4.7
AKASG P'P' 03 50 57.3
AKASG Malin Array Be 102.55 39 P Pdif 03 26 42.3 -0.5
AKASG 03 30 56.5
AKASG S SKSac 03 37 04.8 -6.2
AKBB Malin Array Si 102.55 39 ePdif Pdif 03 26 41.2 -1.6
PRD Provadia 102.66 46 i P Pdif 03 26 45.5 +2.2
KIS Kishinev 103.01 42 eP Pdif 03 26 43.0 -1.9
KIS i 03 30 58.0
KIS i 03 37 12.0
KIS i 03 38 07.0
KIS i S Sdif 03 38 22.0 +1.5
KIS pmax pmax
comp=Z,4µm,6.0s
KIS MLR MLR
comp=Z,4µm,16.0s
KIS MLR MLR
comp=N,2µm,15.0s
KIS MLR MLR
comp=E,2µm,17.0s
KIS MLR MLR
comp=Z,4µm,16.0s
KIS Kishinev 103.01 42 eP Pdif 03 26 43.0 -1.9
KIS epP 03 27 12.0
KIS Kishinev 103.01 42 i PP PP 03 30 58.0 -2.8
comp=Z,4µm,6.0s
KIS i SKS 03 37 12.0
KIS i SKKS SKKSac 03 37 52.0 -2.2
KIS i S Sdif 03 38 22.0 +1.5
KIS Kishinev 103.01 42 i PS SP 03 39 23.0 -33
KIS LRM 04 12 52.0
comp=Z,4µm,16.0s
PSN Preselentsi 103.15 46 i P Pdif 03 26 47.8 +2.3
TIRR Tirgusor 103.18 45⇑ P Pdif 03 26 45.7 +0.1
TIRR Tirgusor 103.18 45 i P Pdif 03 26 46.0 +0.4
TIRR Tirgusor 103.18 45⇑ iP Pdif 03 26 45.7 +0.1
RPZ Rata Peaks 103.50 224 Pdiff Pdif 03 26 50.6 +3.5
comp=Z,8.8nm,0.7s,baz=144,slow=6.7,SNR=5.0
LSZ Lusaka 104.77 106 ePdif Pdif 03 26 54.5 +1.8
comp=Z,23nm,1.5s
LSZ Lusaka 104.77 106 eP Pdif 03 26 54.5 +1.8
LSZ pmax pmax
comp=Z,23nm,1.5s
MAW Mawson 104.99 165 Pdiff Pdif 03 26 55.3 +1.6
comp=Z,10nm,0.8s,baz=168,slow=6.3,SNR=11
KLMR Klimovskoe 105.06 27 eP Pdif 03 26 53.4 -0.6
KLMR 03 31 13.9
KLMR pmax pmax
comp=Z,49nm,1.2s
OBN Obninsk 105.66 33 ePdif Pdif 03 26 57.1 +0.4
comp=Z,15nm,0.8s
OBN Obninsk 105.66 33⇑ eP Pdif 03 26 58.0 +1.3
OBN i 03 37 24.0
OBN i 03 38 10.1
OBN i PS PS 03 40 19.8 -19
OBN SS SS 03 46 15.0 +6.3
OBN pmax pmax
comp=Z,25nm,1.4s
OBN MLR MLR
comp=Z,4µm,18.0s
ISP Isparta 105.85 51 P Pdif 03 26 58.1 +0.6
MOS Moscow 106.02 32 i PP PP 03 31 25.8 +3.0
MOS e 03 38 07.3
MOS i 03 40 23.9
MOS MLR MLR
comp=Z,4µm,19.0s
DRV Dumont d'Urvil 106.10 195 Pdif Pdif 03 27 01.0 +2.4
DRV Dumont d'Urvil 106.10 195 PP PP 03 31 27.0 +4.2
DRV SKKS SKSac 03 37 31.0 +4.4
DRV SP SP 03 40 32.0 +4.8
DRV SS SS 03 46 37.0 +23
DRV L 03 57 00.0
DRV R 04 04 00.0
ANTO Ankara 107.23 49 ePdif Pdif 03 27 03.5 -0.2
comp=Z,7.1nm,0.7s
ANTO Ankara 107.23 49⇑ iP Pdif 03 27 03.7 +0.1
VSR Storozhevoye 108.45 36 eP Pdif 03 27 11.3 +2.3
VSR e 03 31 38.4
VSR e 03 37 33.6
VSR ePS PS 03 40 49.0 -19
VSR pmax pmax
comp=Z,3.0nm,1.0s
VSR pmax pmax
comp=N,5.0nm,1.2s
VSR pmax pmax
comp=E,5.0nm,0.8s
VSR pmax pmax
comp=Z,3.0nm,0.8s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.8s
CSS Prodhromos 108.59 54 ePKP PKiKP 03 31 14.2 -0.9
VORD Divnogorie 108.61 36 eP Pdif 03 27 11.7 +1.9
VORD pmax pmax
comp=Z,6.0nm,0.8s
VORD pmax pmax
comp=N,9.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.8s
TIXI Tiksi 108.74 351 eP Pdif 03 27 08.7 -1.6
TIXI e 03 37 34.2
TIXI pmax pmax
comp=Z,8.0nm,0.9s
TIXI pmax pmax
comp=N,3.0nm,1.2s
TIXI pmax pmax
comp=E,4.0nm,1.5s
TIXI MLR MLR
comp=Z,11µm,19.0s
TIXI MLR MLR
comp=N,11µm,24.0s
TIXI MLR MLR
comp=E,6µm,26.0s
ANN Anapa 109.37 43 eP Pdif 03 27 11.0 -2.1
ANN e 03 31 45.2
ANN e 03 37 41.4
ANN ePS PS 03 41 04.1 -13
ANN pmax pmax
comp=Z,53nm,1.4s
VRHR Novokhopersk 109.93 36 eP Pdif 03 27 13.1 -2.5
VRHR e 03 37 42.7
VRHR eSP SP 03 41 02.6 -4.4
VRHR pmax pmax
comp=Z,10.0nm,0.4s
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,5.0nm,0.4s
SOC Sochi 111.30 44 eP Pdif 03 27 20.9 -0.8
SOC i 03 31 18.1
SOC i 03 31 59.5
SOC e 03 37 46.5
SOC ePS PS 03 41 32.7 -2.4
SOC eSS SS 03 47 23.2 -2.1
SOC pmax pmax
comp=Z,36nm,1.0s
SOC pmax pmax
comp=Z,33nm,0.9s
PET Petropavlovsk 111.46 327 ePKP PKiKP 03 31 17.1 -2.9
PET Petropavlovsk 111.46 327 eP Pdif 03 27 32.1 +10
PET 03 31 15.6
PET e 03 32 10.4
PET ePPP 03 34 23.6
PET e 03 37 51.7
PET ePS PS 03 41 22.9 -13
PET ePPS 03 42 27.1
PET eSS SS 03 47 33.1 +6.4
PET eSSS 03 51 38.3
PET pmax pmax
comp=Z,900nm,14.6s
PET pmax pmax
comp=Z,1µm,20.2s
PET pmax pmax
comp=Z,4µm,16.3s
PET pmax pmax
comp=Z,4µm,11.8s
PET MLR MLR
comp=Z,4µm,20.0s
PET MLR MLR
comp=Z,3µm,20.0s
PETK Petropavlovsk- 111.94 328 PKiKP PKiKP 03 31 20.5 -0.4
comp=Z,6.0nm,0.8s,baz=104,slow=4.7,SNR=3.9
ASF Jabal al Asfar 112.05 56 PKKPbc PKKPbc 03 42 13.6 -0.9
baz=214,slow=4.1
KIV Kislovodsk 113.21 43 ePKP PKiKP 03 31 21.1 -2.5
KIV ePP PP 03 32 10.4 -4.7
KIV Kislovodsk 113.21 43 ceP Pdif 03 27 31.5 +1.3
KIV i 03 31 23.0
KIV e 03 31 51.6
KIV i 03 32 11.3
KIV e 03 37 59.0
KIV i PS PS 03 41 39.2 -13
KIV pmax pmax
comp=Z,9.0nm,0.8s
KIV MLR MLR
comp=Z,2µm,21.0s
ONI Oni 114.21 44 P PP 03 32 16.8 -5.4
ARU Arti 115.81 25 ePKPdf PKPdf 03 31 28.3 +0.1
ARU Arti 115.81 25 PKIKP PKPdf 03 31 26.7 -1.5
ARU 03 32 26.4
ARU PS PS 03 41 39.2 -36
ARU SS SS 03 48 06.8 -17
DGRG David-gareji 115.95 44 P PP 03 32 30.6 -3.9
GNI Garni 115.97 46 ePKPdf PKPdf 03 31 29.8 +0.8
GNI ePKKPbc PKKPbc 03 42 01.8 +0.3
MAK Makhachkala 116.83 42 i PKIKP PKPdf 03 31 29.9 -0.7
MAK i 03 32 38.0
MAK ePPP 03 35 10.1
MAK i 03 38 12.2
MAK i 03 38 31.2
MAK i PS PS 03 42 14.1 -12
MAK eSS SS 03 48 55.7 +18
MAK pmax pmax
comp=Z,317nm,2.1s
YAK Yakutsk 116.98 346 ePKP PKPdf 03 31 27.8 -2.5
YAK Yakutsk 116.98 346 i PKIKP PKPdf 03 31 29.7 -0.6
YAK e 03 32 38.3
YAK ePPP 03 35 14.3
YAK e 03 38 04.7
YAK eSP SP 03 42 16.8 +6.3
YAK ePS PS 03 42 17.1 -8.9
YAK eSSS 03 53 00.5
YAK pmax pmax
comp=Z,17nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.3s
AKTK Aktyubinsk 119.30 31 PKP PKPdf 03 31 34.6 -0.5
AKTK pPKP pPKPdf 03 32 07.2 -1.3
AKTK PKKPbc PKKPbc 03 41 47.6 -2.4
AKTK SKKPbc 03 45 15.2
AKTO Aktyubinsk 119.30 31 PKP PKPdf 03 31 34.6 -0.5
comp=E,8.9nm,0.8s,baz=106,slow=5.4
AKTO pPKP pPKPdf 03 32 07.2 -1.3
comp=E,8.6nm,0.8s,baz=286,slow=13,SNR=2.9
AKTO PKPbc PKKPbc 03 41 47.6 -2.4
comp=E,30nm,0.7s,baz=156,slow=2.0,SNR=30
AKTO SKKPbc 03 45 15.2
comp=E,8.0nm,1.0s,baz=96,slow=7.4,SNR=4.0
AKTO Aktyubinsk 119.30 31 PKIKP PKPdf 03 31 34.6 -0.5
AKTO 03 32 07.2
MIB Mutribah 121.32 56 eP PKPdf 03 31 39.4 -0.3
baz=56
MIB AMb AMB 03 31 41.1
comp=Z,103nm,0.7s,baz=56
NAY Al-Naaiem 121.40 57 eP PKPdf 03 31 39.0 -0.8
baz=57
NAY AMb AMB 03 31 41.1
comp=Z,45nm,0.7s,baz=57
UMR Umm Al-Rimmam 121.71 56 eP PKPdf 03 31 39.9 -0.5
baz=56
UMR AMb AMB 03 31 42.0
comp=Z,184nm,0.7s,baz=56
RDF Al-Radifah 121.75 57 eP PKPdf 03 31 39.7 -0.8
baz=57
RDF AMb AMB 03 31 41.8
comp=Z,101nm,0.8s,baz=57
ABPO Ambohimpanom 121.96 114 ePKPdf PKPdf 03 31 41.6 +0.5
ABPO epPKPdf pPKPdf 03 32 14.2 -0.3
CAN Canberra 122.42 225 ePKPdf PKPdf 03 31 40.6 -1.1
CLNS Chul'man 122.72 345 ePKIKP PKPdf 03 31 39.5 -2.0
CLNS pmax pmax
comp=Z,41nm,1.3s
CLNS pmax pmax
comp=N,14nm,0.8s
CLNS pmax pmax
comp=E,17nm,1.0s
ARMA Armidale 122.75 231 ePKPdf PKPdf 03 31 42.2 -0.3
BRVK Borovoye 122.97 22 ePKPdf PKPdf 03 31 41.2 -0.9
BRVK ePKKPab PKKPab 03 41 32.9 -1.9
BVA0 Borovoye Array 123.04 22 i PKIKP PKPdf 03 31 41.8 -0.4
BVA0 pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 123.04 22 PKP PKPdf 03 31 42.0 -0.2
comp=Z,16nm,0.6s,baz=246,slow=1.4,SNR=24
BVAR PP PP 03 33 18.3 -4.0
comp=Z,14nm,0.9s,baz=291,slow=6.2,SNR=4.0
BVAR PKKPbc PKKPbc 03 41 32.7 -3.3
comp=Z,5.2nm,0.7s,baz=144,slow=5.0,SNR=10.0
BVAR PKKP PKKPbc 03 42 12.6 +37
comp=Z,2.8nm,0.7s,baz=163,slow=1.5,SNR=4.2
BVAR SKKPbc 03 44 36.9
comp=Z,5.0nm,0.9s,baz=132,slow=4.4,SNR=4.2
YUK Yuzh-Kuril'sk 123.33 323 ePKIKP PKPdf 03 31 52.0 +8.9
YSS Yuzh-Sakhalins 123.34 328 ePKPdf PKPdf 03 31 41.5 -1.5
YSS Yuzh-Sakhalins 123.34 328⇓ iPKIKP PKPdf 03 31 41.5 -1.5
YSS e 03 32 14.0
YSS ePS PS 03 43 06.0 -17
YSS eSS SS 03 49 58.0 -2.8
BOD Bodaibo 123.89 352 ePKIKP PKPdf 03 31 42.7 -1.1
BOD pmax pmax
comp=Z,17nm,0.6s
ASAJ Asahikawa 125.19 325 PKP PKPdf 03 31 46.1 -0.5
comp=Z,62nm,1.0s,baz=264,slow=4.5,SNR=13
ASAJ pPKP pPKPdf 03 32 19.1 -0.9
comp=Z,54nm,0.9s,baz=290,slow=8.9,SNR=4.0
ASAJ Asahikawa 125.19 325 P PKPdf 03 31 46.9 +0.2
ASAJ Asahikawa 125.19 325 PKIKP PKPdf 03 31 46.2 -0.5
ASAJ 03 32 19.1
ASAJ pmax pmax
comp=Z,62nm,1.0s
EIDS Eidsvold 125.26 237 ePKPdf PKPdf 03 31 47.4 +0.1
NVS Novosibirsk 125.43 13⇓ iPKIKP PKPdf 03 31 45.2 -1.6
NVS i 03 32 15.3
NVS e 03 38 30.2
NVS pmax pmax
comp=Z,73nm,1.7s
NVS pmax pmax
comp=N,26nm,1.8s
NVS pmax pmax
comp=E,27nm,1.4s
KRAR Krasnoyarsk 125.96 6 i PKIKP PKPdf 03 31 45.7 -2.1
HABR Khabarovsk 126.08 333 eP Pdif 03 28 24.9 -2.5
HABR i 03 31 46.6
HABR e 03 33 40.6
HABR ePS PS 03 43 44.5 -2.7
HABR eSS SS 03 50 34.4 -0.4
HABR eSSS 03 55 15.4
JEM Erimo 126.11 323 P PKPdf 03 31 48.0 -0.5
ZAA0 Zalesovo Array 126.61 13 ePKPdf PKPdf 03 31 48.3 -0.8
ZALV Zalesovo Beam 126.61 13 PKP PKPdf 03 31 48.2 -0.8
comp=E,69nm,0.6s,baz=259,slow=3.5,SNR=55
ZALV pPKP pPKPdf 03 32 21.6 -0.8
comp=E,27nm,0.6s,baz=248,slow=3.4,SNR=2.8
ZALV SKKPbc 03 44 53.9
comp=E,6.7nm,0.8s,baz=151,slow=3.4,SNR=4.8
ZALV Zalesovo Beam 126.61 13 PKP PKPdf 03 31 48.2 -0.8

ZALV					pPKP	pPKPdf	03 32 21.6	-0.8	
ZALV					SKKPbc		03 44 53.9		
ZALV	**Zalesovo Beam**	**126.61**	**13**	PKIKP	PKPdf		03 31 48.2	-0.9	
ZALV							03 32 21.6		
KLR	**Kul'dur**	**126.90**	**336**	*e*PKIKP	PKPdf		03 31 44.2	-5.6	
KLR				*e*			03 33 44.5		
KLR				*e*S	SKSac		03 38 37.0	-7.5	
KLR				pmax	pmax				
	comp=Z,90nm,1.2s								
KLR				pmax	pmax				
	comp=Z,2μm,10.5s								
JSH	**Shimam**	**127.56**	**325**	P	PKPdf		03 31 51.4	+0.2	
KURK	**Kurchatov**	**127.84**	**19**	P	PKPdf		03 31 51.9	+0.4	
	SNR=18								
KURK	**Kurchatov**	**127.84**	**19**	*e*PKIKP	PKPdf		03 31 51.4	-0.1	
KURK				*e*			03 33 51.2		
JOM	**Ohasama**	**128.75**	**321**	P	PKPdf		03 31 51.3	-2.3	
RER	**Riviere de l'E**	**128.90**	**120**	*e*PKPdf	PKPdf		03 31 55.1	+0.7	
STKA	**Stephens Creek**	**129.47**	**224**	PKhKP			03 31 39.8		
	comp=Z,5.0nm,0.6s,baz=45,slow=4.6,SNR=12								
STKA				PKP	PKPdf		03 31 54.0	-1.3	
	comp=Z,106nm,0.7s,baz=88,slow=2.4,SNR=54								
STKA				pPKP	pPKPdf		03 32 27.2	-1.3	
	comp=Z,35nm,0.7s,baz=240,slow=2.9,SNR=2.5								
STKA				PP	PP		03 34 02.6	-3.1	
	comp=Z,29nm,1.1s,baz=130,slow=11,SNR=4.3								
STKA	**Stephens Creek**	**129.47**	**224**	PKP			03 31 39.8		
STKA				*e*PKPpre			03 31 43.4		
STKA				PKP	PKPdf		03 31 54.0	-1.3	
STKA				*e*PKPdf	PKPdf		03 31 54.2	-1.0	
STKA				pPKP	pPKPdf		03 32 27.2	-1.3	
STKA				*e*pPKPdf	pPKPdf		03 32 27.8	-0.8	
STKA				*e*PP	PP		03 34 02.6	-3.1	
ABTO	**Aybut**	**129.73**	**69**	P	PKPdf		03 31 56.8	+0.7	
	SNR=26								
JMM	**Marumori**	**130.01**	**320**	P	PKPdf		03 31 52.5	-3.6	
WHFO	**Wadi Hawf**	**130.06**	**69**	P	PKPdf		03 31 57.0	+0.4	
	SNR=26								
BANOM	**Banah**	**130.07**	**58**	P	PKPdf		03 31 57.1	+0.6	
	SNR=10								
IRK	**Irkutsk**	**130.24**	**358**	*e*PKIKP	PKPdf		03 31 56.0	0.0	
IRK				pmax	pmax				
	comp=Z,113nm,1.5s								
JYA	**Atsumi**	**130.26**	**321**	P	PKPdf		03 31 56.3	-0.2	
HATD	**Hatta, Dubai**	**130.30**	**59**	P	PKPdf		03 31 56.9	-0.1	
	SNR=23								
RBK	**Rabkut**	**130.55**	**69**	P	PKPdf		03 31 58.1	+0.5	
	SNR=11								
TLY	**Talaya**	**130.82**	**359**	P	PKPdf		03 31 58.3	+1.2	
	SNR=6.7								
TLY	**Talaya**	**130.82**	**359**	*e*PKPdf	PKPdf		03 31 56.4	-0.7	
TLY				*e*PP	PP		03 34 12.0	-1.3	
TLY				*e*SKPbc	SKPbc		03 35 10.5	+0.4	
TLY	**Talaya**	**130.82**	**359**	*e*PKIKP	PKPdf		03 31 57.5	+0.4	
TLY				*i*			03 32 28.9		
TLY				*e*			03 34 11.7		
TLY				*e*PPS			03 45 51.6		
TLY				pmax	pmax				
	comp=Z,46nm,1.5s								
HIA	**Hailar**	**130.90**	**345**	*e*PKPdf	PKPdf		03 31 56.7	-0.7	
HIA				*e*PP	PP		03 34 11.7	-2.2	
HIA				*e*SKPbc	SKPbc		03 35 10.5	0.0	
HIA	**Hailar**	**130.90**	**345**	*e*PKIKP	PKPdf		03 31 56.7	-0.7	
HIA				*e*			03 34 11.7		
ARQ	**Araqi**	**131.12**	**61**	P	PKPdf		03 31 59.4	+0.8	
	SNR=11								
CTA	**Charters Tower**	**131.39**	**241**	PKhKP			03 31 45.7		
	comp=Z,4.5nm,0.7s,baz=50,slow=2.4,SNR=4.1								
CTA				PKP	PKPdf		03 31 57.3	-1.8	
	comp=Z,78nm,0.6s,baz=118,slow=2.8,SNR=8.8								
CTA				pPKP	pPKPdf		03 32 30.3	-2.2	
	comp=Z,45nm,1.0s,baz=70,slow=0.9,SNR=2.1								
CTA				SKPbc	SKPbc		03 35 10.6	-2.6	
	comp=Z,64nm,1.3s,baz=203,slow=1.9,SNR=5.8								
CTA	**Charters Tower**	**131.39**	**241**	PKP			03 31 45.7		
CTA				PKP	PKPdf		03 31 57.3	-1.8	
CTA				pPKP	pPKPdf		03 32 30.3	-2.2	
CTA				SKPbc	SKPbc		03 35 10.6	-2.6	
CTA	**Charters Tower**	**131.39**	**241**	PKHKP			03 31 45.7		
CTA							03 31 57.3		
CTA							03 32 30.3		
CTAO	**Charters Tower**	**131.39**	**241**	*e*PKPpre			03 31 52.0		
CTAO				*e*PKPdf	PKPdf		03 31 58.1	-1.0	
CTAO				*e*SKPbc	SKPbc		03 35 11.7	-1.5	
MDJ	**Mudanjiang**	**131.45**	**334**	PKP	PKPdf		03 31 57.5	-1.1	
MDJ				XPKP			03 32 42.8		
MDJ				PP	PP		03 34 16.6	-1.2	
MDJ				PKS			03 35 34.0		
MDJ				SKS	SKSdf		03 38 56.4	-2.3	
MDJ				SS	SS		03 51 40.5	-0.5	
MDJ				PP	PP				
	comp=Z,577nm,10.3s								
MDJ				LR	LR				
	comp=N,7μm,28.4s								
MDJ				LR	LR				
	comp=E,3μm,28.4s								
MDJ				LR	LR				
	comp=Z,9μm,25.3s								
MDJ	**Mudanjiang**	**131.45**	**334**	*e*PKPdf	PKPdf		03 31 57.4	-1.2	
MDJ				*e*SKPbc	SKPbc		03 35 13.0	+0.3	
HOQ	**Hoqain**	**131.72**	**60**	P	PKPdf		03 31 59.9	+0.2	
	SNR=11								
BSY	**Bisya**	**131.89**	**61**	P	PKPdf		03 31 59.9	-0.2	
	SNR=23								
ZAK	**Zakamensk**	**132.12**	**359**	⇓ *i* PKIKP	PKPdf		03 32 00.2	+0.5	
ZAK				pmax	pmax				
	comp=Z,28nm,1.7s								
USP	**Ospenovka**	**132.37**	**27**	P	PKPdf		03 32 01.3	+0.9	
	SNR=15								
MK31	**Makanchi Array**	**132.45**	**18**	*e*PKPpre			03 31 51.8		
MK31				*e*PKPdf	PKPdf		03 32 00.3	-0.1	
MK31				*e*PP	PP		03 34 22.6	-1.4	
MK31				*e*SKPbc	SKPbc		03 35 15.6	-0.5	
MK31	**Makanchi Array**	**132.45**	**18**	*e*PKIKP			03 31 51.8		
MK31				*e*			03 34 22.6		
MKAR	**Makanchi Array**	**132.45**	**18**	PKhKP			03 31 51.0		
	comp=Z,1.8nm,0.6s,baz=31,slow=2.6,SNR=7.6								
MKAR				PKP	PKPdf		03 31 59.6	-0.8	
	comp=Z,18nm,0.5s,baz=306,slow=2.2,SNR=59								
MKAR				pPKP	pPKPdf		03 32 32.0	-1.7	
	comp=Z,7.5nm,0.5s,baz=346,slow=2.2,SNR=2.0								
MKAR				PP	PP		03 34 22.1	-1.9	
	comp=Z,48nm,1.0s,baz=337,slow=5.3,SNR=8.8								
MKAR				SKKPbc			03 43 42.7		
	comp=Z,2.7nm,0.8s,baz=133,slow=5.8,SNR=4.2								
MKAR	**Makanchi Array**	**132.45**	**18**	PKIKP			03 31 51.0		
MKAR							03 32 32.0		
MKAR							03 34 22.1		
BIDO	**Bidbid**	**132.45**	**60**	P	PKPdf		03 32 02.2	+1.1	
	SNR=7.8								
MAJO	**Matsushiro**	**132.46**	**320**	*e*PKPpre			03 31 53.2		
MAJO				*e*PKPdf	PKPdf		03 32 00.6	-0.1	
MAJO				*e*SKPbc	SKPbc		03 35 16.0	-0.5	
MAT	**Matsushiro**	**132.46**	**320**	PKP	PKPdf		03 31 59.5	-1.2	
MAT	**Matsushiro**	**132.46**	**320**	P	PKPdf		03 32 00.7	0.0	
MJAR	**Matsushiro Arr**	**132.46**	**320**	PKhKP			03 31 48.0		
	comp=Z,2.4nm,0.9s,baz=270,slow=1.4,SNR=4.9								
MJAR				PKP	PKPdf		03 31 58.8	-1.9	
	comp=Z,16nm,0.6s,baz=99,slow=1.0,SNR=32								
MJAR				pPKP	pPKPdf		03 32 32.0	-2.0	
	comp=Z,16nm,0.9s,baz=71,slow=2.0,SNR=3.0								
MJAR				SKPbc	SKPbc		03 35 14.9	-1.5	
	comp=Z,35nm,1.1s,baz=33,slow=1.1,SNR=10								
MJAR	**Matsushiro Arr**	**132.46**	**320**	PKHKP			03 31 48.1		
MJAR							03 31 58.8		
MJAR							03 32 32.0		
EKS2	**Erkin-Say**	**132.50**	**28**	*e*PKPdf	PKPdf		03 32 00.8	+0.2	
EKS2				*e*PP	PP		03 34 19.7	-4.9	
EKS2				*e*SKP			03 35 16.6		
EKS2	**Erkin-Say**	**132.50**	**28**	P	PKPdf		03 32 03.3	+2.7	
	SNR=16								
SMDO	**Samad**	**132.53**	**61**	P	PKPdf		03 32 02.1	+0.9	
	SNR=36								
JOD2	**Odawara 2**	**132.63**	**318**	P	PKPdf		03 32 00.5	-0.6	
CHMS	**Chumysh**	**132.69**	**27**	P	PKPdf		03 32 01.9	+1.0	
	SNR=8.2								
FRU	**Bishkek**	**132.76**	**28**	*e*PKIKP	PKPdf		03 32 02.0	+0.9	
FRU				*i*			03 32 33.0		
FRU				pmax	pmax				
	comp=Z,460nm,2.5s								
MSEY	**Mahe Island**	**132.79**	**99**	*e*PKPdf	PKPdf		03 32 01.2	-0.8	
MSEY				*e*pPKPdf	pPKPdf		03 32 35.2	-0.2	
MSEY				*e*SKP			03 35 19.1		
JMDO	**Jabal Madar**	**132.80**	**61**	P	PKPdf		03 32 01.5	-0.2	
	SNR=7.4								
AAK	**Ala-Archa**	**132.85**	**28**	P	PKPdf		03 32 03.5	+2.2	
	SNR=15								
AML	**Almayashu**	**132.86**	**29**	*e*PKPpre			03 31 51.5		
AML				*e*PKPdf	PKPdf		03 32 00.5	-0.8	
AML				*e*SKPbc	SKPbc		03 35 19.4	+1.7	
AML	**Almayashu**	**132.86**	**29**	P	PKPdf		03 32 04.0	+2.7	
	SNR=10								
KBK	**Karagaybulak**	**133.05**	**28**	P	PKPdf		03 32 03.9	+2.2	
	SNR=7.7								
TKM2	**Tokmak 2**	**133.14**	**27**	*e*PKPdf	PKPdf		03 32 00.4	-1.4	
TKM2				*e*PP	PP		03 34 28.8	+0.1	
TKM2				*e*SKP			03 35 19.7		
TKM2	**Tokmak 2**	**133.14**	**27**	*e*PKIKP	PKPdf		03 32 00.4	-1.4	
TKM2				*e*			03 34 28.8		
TKM2	**Tokmak 2**	**133.14**	**27**	P	PKPdf		03 32 00.0	-1.8	
	SNR=9.9								
UCH	**Uchtor**	**133.18**	**28**	*e*PKPdf	PKPdf		03 32 02.8	+0.9	
UCH				*e*SKP			03 35 22.5		
WBK	**Wadi Bani Khal**	**133.48**	**61**	P	PKPdf		03 32 04.0	+1.0	
	SNR=12								
JGF	**Kuroka**	**133.57**	**320**	P	PKPdf		03 32 02.5	-0.4	
PMG	**Port Moresby**	**133.72**	**255**	*e*PKPdf	PKPdf		03 32 03.6	-0.1	
CN2	**Changchun**	**133.85**	**337**	*e*PKP	PKPdf		03 32 01.5	-1.6	
CN2				SS	SS		03 52 05.8	-4.1	
CN2				LR	LR				
	comp=N,5μm,20.0s								
CN2				LR	LR				
	comp=E,4μm,20.0s								
CN2				LR	LR				
	comp=Z,6μm,20.0s								
ULN	**Ulaanbaatar**	**134.46**	**355**	P	PKPdf		03 32 04.2	+0.1	
	SNR=15								
ULN	**Ulaanbaatar**	**134.46**	**355**	*e*PKPpre			03 31 50.6		
ULN				*e*PKP	PKPdf		03 32 03.1	-1.0	
ULN				*e*PKPdf	PKPdf		03 32 03.8	-0.3	
ULN				*e*PP	PP		03 34 34.8	-1.7	
ULN	**Ulaanbaatar**	**134.46**	**355**	*e*PKHKP			03 31 50.7		
ULN				*e*			03 32 03.1		
ULN				*e*			03 34 34.8		
CBIJ	**Chichi jima**	**134.50**	**307**	PKP	PKPdf		03 32 03.4	-1.5	
	comp=Z,68nm,0.7s,baz=43,slow=8.0,SNR=7.3								
CBIJ				SKPbc	SKPbc		03 35 20.6	-3.0	
	comp=Z,133nm,1.2s,baz=66,slow=5.4,SNR=5.1								
CBIJ	**Chichi jima**	**134.50**	**307**	P	PKPdf		03 32 04.1	-0.8	
SONM	**Songino Array**	**134.54**	**356**	PKhKP			03 31 51.1		
	comp=Z,3.2nm,0.7s,baz=336,slow=3.6,SNR=11								
SONM				PKP	PKPdf		03 32 04.1	-0.2	
	comp=Z,41nm,0.8s,baz=280,slow=0.8,SNR=28								
SONM				pPKP	pPKPdf		03 32 36.1	-1.5	
	comp=Z,14nm,0.9s,baz=356,slow=4.0,SNR=2.0								
SONM				PP	PP		03 34 33.7	-3.4	
	comp=Z,37nm,1.2s,baz=349,slow=4.5,SNR=5.4								
SONM				SKPbc	SKPbc		03 35 23.1	0.0	
	comp=Z,37nm,1.1s,baz=76,slow=0.6,SNR=6.9								
SONM				SKKPbc			03 44 28.7		
	comp=Z,4.2nm,0.9s,baz=202,slow=3.1,SNR=2.9								
SONM	**Songino Array**	**134.54**	**356**	PKHKP			03 31 51.1		
SONM							03 32 04.1		
SONM							03 32 36.1		
SONM							03 34 33.7		
JIE	**Ise**	**134.73**	**319**	P	PKPdf		03 32 04.7	-0.4	
JWT	**Wachi**	**135.02**	**321**	P	PKPdf		03 32 05.1	-0.5	
KBL	**Kabul**	**135.51**	**40**	*e*PKPdf	PKPdf		03 32 06.7	+0.2	
KBL				*e*PP	PP		03 34 37.7	-6.6	
KBL				*e*SKP			03 35 27.4		
KSH	**Kashi**	**135.97**	**29**	*e*PKP	PKPdf		03 32 08.4	+1.2	
KSH				*e*PKS			03 35 43.8		
KSH				LR	LR				
	comp=N,5μm,13.7s								
KSH				LR	LR				
	comp=E,16μm,17.1s								
KSH				LR	LR				
	comp=Z,20μm,18.2s								
JAD	**Aida**	**136.02**	**321**	P	PKPdf		03 32 05.7	-1.8	
COEN	**Coen**	**136.28**	**247**	*e*PKPpre			03 31 54.6		
COEN				*e*PKPdf	PKPdf		03 32 07.9	-0.6	
GUMO	**Guam**	**136.38**	**287**	*e*PKPdf	PKPdf		03 32 08.4	-0.2	
GUMO				*e*SKPbc	SKPbc		03 35 28.8	-1.0	
JHS	**Saijyo**	**136.63**	**322**	P	PKPdf		03 32 07.5	-1.1	
WMQ	**Urumqi**	**136.73**	**15**	*e*PKP	PKPdf		03 32 07.0	-1.5	
WMQ				PP	PP		03 34 54.0	+3.0	
WMQ				SKS	SKSdf		03 39 03.0	-5.1	
WMQ				SKKS	SKKSac		03 41 33.0	-1.9	
WMQ				SS	SS		03 52 45.0	+1.0	
WMQ				PP	PP				
	comp=Z,8μm,9.0s								
WMQ				LR	LR				
	comp=N,17μm,24.0s								
WMQ				LR	LR				
	comp=E,14μm,24.0s								
WMQ				LR	LR				
	comp=Z,16μm,24.0s								
JMN	**Monobe**	**136.98**	**320**	P	PKPdf		03 32 09.2	-0.1	
KSRS	**Korea Array**	**137.81**	**329**	PKhKP			03 31 58.8		
	comp=Z,14nm,0.9s,baz=51,slow=4.6,SNR=20								
KSRS				PKP	PKPdf		03 32 09.8	-1.0	
	comp=Z,52nm,0.8s,baz=53,slow=2.4,SNR=33								
KSRS				pPKP	pPKPdf		03 32 42.8	-1.2	
	comp=Z,46nm,0.9s,baz=33,slow=1.3,SNR=3.7								
KSRS				SKPbc	SKPbc		03 35 31.0	-2.4	
	comp=Z,28nm,1.0s,baz=15,slow=2.9,SNR=4.7								
FORT	**Forrest**	**138.87**	**215**	*e*PKPpre			03 32 02.9		
JNU	**Nakatsue**	**139.26**	**322**	P	PKPdf		03 32 04.8	-8.7	
DL2	**Dalian**	**139.52**	**336**	PKP	PKPdf		03 32 12.4	-1.4	
DL2				PP	PP		03 35 09.8	+1.3	
DL2				SS	SS		03 53 18.4	+1.1	
DL2				PP	PP				
	comp=Z,3μm,9.2s								
DL2				LR	LR				
	comp=N,3μm,21.6s								
DL2				LR	LR				
	comp=Z,4μm,27.7s								
ASAR	**Alice Springs**	**139.76**	**228**	PKhKP			03 32 03.1		
	comp=Z,68nm,0.7s,baz=121,slow=3.7,SNR=118								
ASAR				PKP	PKPdf		03 32 12.6	-2.1	
	comp=Z,161nm,0.9s,baz=116,slow=2.3,SNR=34								
ASAR				PP	PP		03 35 09.3	-1.7	
	comp=Z,24nm,1.1s,baz=126,slow=5.5,SNR=5.4								
ASAR				SKPbc	SKPbc		03 35 36.7	-2.5	
	comp=Z,30nm,1.0s,baz=132,slow=3.9,SNR=4.5								
ASAR				PKKP			03 41 39.0		
	comp=Z,3.0nm,0.7s,baz=306,slow=1.5,SNR=4.6								
ASAR				SKKPbc			03 43 42.6		
	comp=Z,5.1nm,1.0s,baz=287,slow=2.6,SNR=3.7								
ASAR	**Alice Springs**	**139.76**	**228**	PKHKP			03 32 03.2		
ASAR							03 32 12.6		
ASAR							03 35 09.3		
BJI	**Beijing**	**140.39**	**343**	PKP	PKPdf		03 32 13.0	-2.3	
BJI				XPKP			03 32 55.0		
BJI				PP	PP		03 35 12.3	-1.3	
BJI				PKS			03 35 49.3		
BJI				SS	SS		03 53 23.3	-3.9	
BJI				PP	PP				
	comp=Z,9μm,9.7s								
BJT	**Baijiatuan**	**140.41**	**343**	*e*PKPdf	PKPdf		03 32 14.1	-1.3	
BJT				*e*SKP			03 35 39.0		
JSU	**Suzuyama**	**140.61**	**320**	P			03 31 58.7		
HHC	**Hu-ho-hao-te**	**140.74**	**349**	*e*PKP	PKPdf		03 32 14.1	-1.8	
HHC				PP	PP		03 35 15.1	-0.6	
HHC				PKS			03 35 48.4		
HHC				SKS	SKSdf		03 39 14.3	-0.6	
HHC				SKKS	SKKSac		03 41 58.3	-0.3	
HHC				SS	SS		03 53 28.0	-3.1	
HHC				PP	PP				
	comp=Z,10μm,15.5s								
HHC				LR	LR				
	comp=N,6μm,28.5s								
HHC				LR	LR				
	comp=E,5μm,26.2s								
HHC				LR	LR				
	comp=Z,10μm,32.1s								
THN	**Thein Dam**	**141.07**	**37**	*ex*	x		03 32 10.7		
WB2	**Warramunga Arr**	**141.46**	**233**	*e*PKPpre			03 32 10.2		
WRAB	**Tennant Creek**	**141.46**	**233**	*e*PKPpre			03 32 10.6		
WRA	**Warramunga Arr**	**141.47**	**233**	PKhKP			03 32 09.2		
	comp=Z,162nm,0.6s,baz=125,slow=3.0,SNR=499								
WRA				pPKP	pPKPdf		03 32 48.5	-2.7	
	comp=Z,49nm,0.9s,baz=121,slow=1.2,SNR=4.6								
WRA				PP	PP		03 35 18.7	-2.9	
	comp=Z,100nm,1.3s,baz=114,slow=5.7,SNR=12								
WRA				SKPbc	SKPbc		03 35 41.6	-2.2	
	comp=Z,35nm,0.9s,baz=120,slow=2.4,SNR=4.7								
WRA				PKKP			03 41 35.4		
	comp=Z,1.2nm,0.6s,baz=318,slow=1.4,SNR=9.1								
WRA				SKKPbc			03 43 33.7		
	comp=Z,2.6nm,0.6s,baz=278,slow=2.3,SNR=5.4								
WRA	**Warramunga Arr**	**141.47**	**233**	PKHKP			03 32 09.2		
WRA							03 35 18.7		
NWAO	**Narrogin (SRO)**	**142.16**	**201**	*e*PKPpre			03 32 12.7		
NWAO				*e*PKPdf	PKPdf		03 32 19.0	+0.2	
BHK	**Bhakra**	**142.20**	**37**	*ex*	x		03 34 12.0		
BHJ	**Bhuj**	**142.23**	**54**	*e*P	PKPdf		03 32 16.3	-2.8	
BHJ				*ex*	x		03 42 07.1		
SDNR	**Sundarnagar**	**142.48**	**37**	*e*P	PKPdf		03 32 17.0	-2.3	
SDNR				*ex*	x		03 35 25.0		
SMLA	**Simla**	**142.86**	**37**	*i* P	PKPdf		03 32 16.8	-3.3	
GTA	**Gaotai**	**143.04**	**3**	PKP	PKPdf		03 32 16.5	-3.6	
GTA				APKP			03 32 50.8		
GTA				XPKP			03 33 05.3		
GTA				PP	PP		03 35 30.5	+1.0	
GTA				PKS			03 35 50.5		
GTA				SKKS	SKKSac		03 42 06.9	-5.0	
GTA				PP	PP				
	comp=Z,3μm,6.3s								
GTA				LR	LR				
	comp=N,4μm,24.0s								
GTA				LR	LR				
	comp=E,5μm,22.2s								
GTA				LR	LR				
	comp=Z,8μm,22.8s								
JAM	**Amami Oshima**	**143.19**	**317**	P	PKPdf		03 32 16.7	-4.0	
KLP	**Kalpa**	**143.21**	**35**	*e*P	PKPdf		03 32 17.6	-3.0	
TIY	**Taiyuan**	**143.56**	**346**	PKP	PKPdf		03 32 22.9	+1.8	
TIY				PP	PP				
	comp=Z,2μm,8.7s								
TIY				LR	LR				
	comp=N,4μm,17.8s								
TIY				LR	LR				
	comp=E,3μm,19.2s								
TIY				LR	LR				
	comp=Z,6μm,20.8s								
TIA	**Tai'an**	**143.58**	**339**	PKP	PKPdf		03 32 15.6	-5.5	
TIA				LR	LR				
	comp=E,11μm,30.0s								
JMZ	**Minamidaito 2**	**143.62**	**313**	P	PKPdf		03 32 16.8	-4.7	
DDI	**Dehra Dun**	**143.97**	**37**	*ex*	PKPdf		03 32 16.0	-6.0	
DDI				*ex*	PP		03 35 30.0	-6.0	
KHET	**Khetri**	**144.08**	**42**	*e*P	PKPdf		03 32 19.0	-3.3	
AJM	**Ajmer**	**144.28**	**45**	*e*P	PKPdf		03 32 20.4	-2.3	
KUDL	**Kundal**	**144.49**	**41**	*e*P	PKPdf		03 32 20.9	-2.1	
NDI	**New Delhi**	**144.60**	**40**	*e*P	PKPdf		03 32 22.0	-1.1	
NDI				*ex*	x		03 42 21.0		
AYAN	**Aya Nagar**	**144.68**	**40**	*e*P	PKPdf		03 32 21.4	-1.9	
JOSI	**Joshimath**	**144.68**	**35**	*e*P	PKPdf		03 32 22.5	-0.7	
KALG	**Kalgarh**	**144.98**	**37**	*ex*	PKPdf		03 32 16.3	-7.4	
JOW	**Kunigami**	**145.10**	**317**	PKPbc	PKPbc		03 32 22.4	-1.4	
	comp=E,280nm,0.7s,baz=18,slow=0.9,SNR=76								
JOW				pPKPbc			03 32 54.7		
	comp=E,114nm,0.7s,baz=21,slow=1.2,SNR=2.5								
JOW	**Kunigami**	**145.10**	**317**	P	PKPbc		03 32 22.7	-1.1	
PTH	**Pithoragarh**	**145.81**	**35**	*e*P	PKPdf		03 32 26.0	+0.8	
PTH				*ex*	x		03 35 47.0		
LGTI	**Lohaghat**	**145.90**	**36**	*ex*	x		03 32 50.9		
LGTI				*ex*	x		03 35 48.1		
AGRA	**Agra**	**146.05**	**41**	*e*P	PKPdf		03 32 25.0	-0.7	
SSE	**Sheshan**	**146.24**	**330**	PKP	PKPdf		03 32 25.6	-0.3	
SSE				PP	PP		03 35 53.1	+3.9	
SSE				SS	SS		03 54 34.5	-0.8	
SSE				PP	PP				
	comp=Z,963nm,12.3s								
SSE				LR	LR				
	comp=N,4μm,24.0s								
SSE				LR	LR				
	comp=E,5μm,24.0s								
SSE				LR	LR				
	comp=Z,7μm,17.3s								
LZH	**Lanzhou**	**146.39**	**358**	⇓ PKP	PKPdf		03 32 26.8	+0.8	
LZH				PKP2	PKPab		03 32 30.5	+2.1	
LZH				APKP			03 32 58.5		
LZH				XPKP			03 33 06.3		
LZH				PP	PP		03 35 53.5	+4.1	
LZH				PKS			03 36 01.0		
LZH				SKS	SKSdf		03 39 21.3	-2.4	
LZH				SKKS	SKKSac		03 42 30.0	-1.1	
LZH				PP	PP				
	comp=Z,4μm,7.0s								
LZH				LR	LR				
	comp=N,7μm,19.0s								
LZH				LR	LR				
	comp=Z,10μm,20.5s								
NJ2	**Nanjing**	**146.54**	**334**	*e*PKP	PKPdf		03 32 26.5	+0.1	
NJ2				APKP			03 32 53.1		
NJ2				PP	PP		03 35 56.5	+5.6	
NJ2				SS	SS		03 54 40.0	+1.5	
NJ2				PP	PP				
	comp=Z,840nm,10.2s								
NJ

	comp=N,8μm,28.2s								
CD2					LR	LR			
	comp=E,6μm,26.8s								
CD2					LR	LR			
	comp=Z,10μm,24.6s								
ODAN	**Odare**	**151.78**	**29**	*e*P		PKPdf	03 32 35.0	+0.1	
	comp=Z,610nm,1.2s								
HYB	**Hyderabad**	**152.36**	**56**	*e*PKP		PKPdf	03 32 35.5	-0.5	
HYB	**Hyderabad**	**152.36**	**56**	*i* PKP		PKPdf	03 32 35.5	-0.5	
HYB				*e*PKPAB		PKPab	03 32 54.5	+1.2	
HYB				*e*pPKP		pPKPab	03 33 24.5	-1.0	
HYB				*e*pPKPAB			03 33 42.5		
HYB				*e*sPKP			03 33 51.0		
HYB				*e*SKP			03 35 58.0		
HYB				*e*PP		PP	03 36 28.0	+2.2	
HYB				*e*			03 36 54.0		
HYB				*e*SKS		SKSdf	03 39 30.0	-2.3	
HYB				*e*SKKS		SKKSac	03 43 04.0	-1.2	
HYB				*e*SS		SS	03 55 44.0	-1.5	
QZH	**Quanzhou**	**152.53**	**326**	*i* PKP		PKPdf	03 32 35.5	-0.6	
QZH				XPKP			03 33 16.6		
QZH				*e*PP		PP	03 36 27.8	+2.1	
QZH				SKKS		SKKSac	03 43 03.4	-2.2	
QZH				SS		SS	03 55 49.4	+3.8	
QZH				LR		LR			
	comp=N,10μm,25.1s								
QZH				LR		LR			
	comp=E,7μm,18.8s								
QZH				LR		LR			
	comp=Z,14μm,28.8s								
SHBG	**Sahibganj**	**153.28**	**30**	*ex*		PKPdf	03 32 39.0	+1.9	
BOK	**Bokaro**	**153.46**	**35**	*e*P		PKPdf	03 32 35.6	-1.8	
BOK				*ex*		x	03 43 07.7		
TRD	**Trivandrum**	**154.14**	**75**	*e*P		PKPdf	03 32 37.5	-1.1	
KOD	**Kodaikanal**	**154.21**	**71**	*e*P		PKPdf	03 32 37.9	-0.8	
SHL	**Shillong**	**154.86**	**22**	*e*P		PKPdf	03 32 37.1	-2.3	
GYA	**Guiyang**	**155.64**	**350**	PKP		PKPdf	03 32 39.0	-1.4	
GYA				PKP2		PKPab	03 33 06.0	-0.8	
GYA				APKP			03 33 07.6		
GYA				XPKP			03 33 24.8		
GYA				PP		PP	03 36 43.0	+0.5	
GYA				SKS		SKSdf	03 39 30.9	-4.9	
GYA				SKKS		SKKSac	03 43 17.3	-4.8	
GYA				SS		SS	03 56 17.4	-0.8	
GYA				PP		PP			
	comp=Z,3μm,5.9s								
GYA				LR		LR			
	comp=N,7μm,23.5s								
GYA				LR		LR			
	comp=E,4μm,21.6s								
GYA				LR		LR			
	comp=Z,4μm,24.6s								
MDRS	**Chennai**	**155.80**	**63**	*ex*		x	03 33 01.2		
MDRS				*ex*		x	03 35 20.2		
MDRS				AMS		AMS	04 10 24.2		
	comp=Z,3μm,23.9s								
CAL	**Calcutta**	**155.82**	**33**	*e*P		PKPdf	03 32 39.3	-1.4	
CAL				*ex*		x	03 43 25.6		
CAL				AMP			03 47 35.0		
	comp=Z,5μm,16.8s								
BWNR	**Bhubaneshwar**	**156.02**	**41**	*e*P		PKPdf	03 32 38.0	-3.0	
BWNR				*ex*		x	03 33 10.0		
IMP	**Imphal**	**156.30**	**19**	*ex*		PKPdf	03 32 44.0	+2.7	
IMP				*i* x		x	03 33 11.0		
GZH	**Guangzhou**	**156.72**	**333**	PKP		PKPdf	03 32 40.3	-1.6	
GZH				SS		SS	03 56 27.9	-2.7	
GZH				LR		LR			
	comp=N,2μm,38.7s								
GZH				LR		LR			
	comp=E,6μm,26.7s								
GZH				LR		LR			
	comp=Z,7μm,38.2s								
HKC	**Hong Kong Obse**	**157.00**	**331**	PKPdf		PKPdf	03 32 40.0	-2.3	
KMI	**Kunming**	**157.34**	**359**	PKP		PKPdf	03 32 41.4	-1.2	
KMI				PKP2		PKPab	03 33 13.3	-0.9	
KMI				PP		PP	03 36 52.9	+1.1	
KMI				SS		SS	03 56 31.9	-4.4	
KMI				PP		PP			
	comp=Z,3μm,8.6s								
KMI				LR		LR			
	comp=N,5μm,21.3s								
KMI				LR		LR			
	comp=E,5μm,27.7s								
KMI				LR		LR			
	comp=Z,9μm,30.7s								
KAPI	**Kappang**	**161.01**	**247**	P		PKPdf	03 32 45.6	-1.6	
	SNR=24								
KAPI	**Kappang**	**161.01**	**247**	*e*PKPdf		PKPdf	03 32 45.6	-1.7	
KAPI				*e*PKPab		PKPab	03 33 29.9	-0.8	
QIZ	**Qiongzhong**	**161.81**	**336**	PKP		PKPdf	03 32 47.0	-0.9	
QIZ				APKP			03 33 20.9		
QIZ				PP		PP	03 37 22.9	+6.5	
QIZ				SS		SS	03 57 27.5	+3.4	
QIZ				LR		LR			
	comp=E,4μm,30.4s								
QIZ				LR		LR			
	comp=Z,9μm,48.6s								
DNP	**Denpasar**	**163.03**	**230**	P		PKPab	03 33 41.1	+1.7	
	comp=Z,1μm,1.6s,comp=Z,4.5nm								
CHG	**Chiang Mai**	**163.32**	**11**	⇓P		PKPdf	03 32 48.7	-0.7	
	comp=Z,36nm,1.1s								
CHTO	**Chiang Mai**	**163.32**	**11**	P		PKPdf	03 32 49.0	-0.4	
	SNR=10								
CHTO	**Chiang Mai**	**163.32**	**11**	*e*PKIKP		PKPdf	03 32 48.2	-1.2	
CHTO				*e*			03 33 39.3		
CM31	**Chiang Mai Arr**	**163.66**	**11**	*e*PKPdf		PKPdf	03 32 49.4	-0.3	
CM31				*e*PKPab		PKPab	03 33 42.3	+0.5	
CMAR	**Chiang Mai Arr**	**163.66**	**11**	PKP		PKPdf	03 32 49.0	-0.7	
	comp=Z,34nm,0.8s,baz=297,slow=1.8,SNR=67								
CMAR					pPKP	pPKPdf	03 33 22.2	-1.0	
	comp=Z,16nm,0.8s,baz=295,slow=2.0,SNR=2.4								
CMAR					PKPab	PKPab	03 33 41.5	-0.3	
	comp=Z,78nm,0.9s,baz=303,slow=2.5,SNR=4.4								
CMAR					PP	PP	03 37 24.7	-1.2	
	comp=Z,15nm,0.6s,baz=344,slow=5.7,SNR=5.9								
CMAR					PKKP		03 40 56.9		
	comp=Z,2.0nm,0.3s,baz=215,slow=1.7,SNR=5.9								
CMAR					SKKPbc		03 42 24.8		
	comp=Z,5.6nm,0.7s,baz=171,slow=2.4,SNR=4.9								
CMAR	**Chiang Mai Arr**	**163.66**	**11**	PKIKP		PKPdf	03 32 49.0	-0.7	
CMAR							03 33 22.3		
CMAR							03 33 41.6		
CMAR							03 37 24.7		
NBBI	**Negara**	**163.68**	**229**	P		PKPab	03 33 43.0	+0.7	
	comp=Z,511nm,1.5s,comp=Z,7μmcomp=Z,1.8nm								
TSM	**Tawau**	**164.24**	**277**	⇓P		PKPdf	03 32 50.5	+0.1	
SDKM	**Sandakan**	**164.69**	**283**	⇓P		PKPdf	03 32 50.0	-0.8	
KDM	**Kudat**	**164.73**	**288**	⇓P		PKPdf	03 32 51.0	+0.2	
KKM	**Kota Kinabalu**	**165.55**	**285**	*e*PKPdf		PKPdf	03 32 50.4	-1.1	
KKM	**Kota Kinabalu**	**165.55**	**285**	⇑P		PKPdf	03 32 51.5	0.0	
SJI	**Sawahan**	**166.18**	**224**	P		PKPdf	03 32 51.7	-0.3	
NST	**Nakhon Sawan**	**166.59**	**9**	P		PKPdf	03 32 51.0	-1.2	
XMIS	**Christmas Isla**	**166.81**	**195**	*e*PKPdf		PKPdf	03 32 51.8	-0.7	
XMIS				*e*PKPab		PKPab	03 33 54.6	-1.2	
XMIS	**Christmas Isla**	**166.81**	**195**	P		PKPdf	03 32 54.3	+1.8	
BJII	**Banjamegara**	**167.82**	**218**	P		PKPdf	03 32 53.8	+0.6	
JCJI	**Jatiwangi**	**169.34**	**215**	P		PKPdf	03 32 54.4	+0.2	
LEM	**Lembang**	**169.41**	**211**	P		PKPdf	03 32 53.9	-0.4	
SBUM	**Sibu**	**169.99**	**271**	⇑P		PKPdf	03 32 54.7	0.0	
DBJI	**Dramaga**	**170.07**	**207**	P		PKPdf	03 32 54.2	-0.5	
CBJI	**Citeko**	**170.14**	**208**	P		PKPdf	03 32 54.8	+0.1	
SBJI	**Serang**	**170.73**	**205**	P		PKPdf	03 32 55.5	+0.5	
KSM	**Kuching**	**171.86**	**264**	*e*PKPdf		PKPdf	03 32 54.3	-1.3	
KSM				*ep*PKPdf		pPKPdf	03 33 27.8	-1.3	
KSM				*e*PKPab		PKPab	03 34 17.6	-1.1	
KSM	**Kuching**	**171.86**	**264**	⇓P		PKPdf	03 32 55.2	-0.4	
KLI	**Kotabumi**	**172.37**	**200**	P		pPKPdf	03 33 29.3	-0.1	
	comp=Z,145nm,1.0s,comp=Z,0.6nm								
SNG	**Songkhla**	**174.94**	**18**	P		PKPab	03 34 31.0	-0.8	
	comp=Z,540nm,1.0s								

*BJI **16** 03:47:01.6, 2600N×12860E, h12km, mB4.9, mb4.5*
*IDC **16** 03:47:02.9±0.9, 2595N×12840E, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.1/23, mbtmp4.0/14, ML3.3/1, Error ellipse: s-maj=40.5km s-min=15.4km az=75.0*
*NEIC **16** 03:47:04.6±6.1, 2601N×12858E, h12km±38km, mb4.3/5, Error ellipse: s-maj=22.5km s-min=9.9km az=70.0*
*ISCJB **16** 03:47:05.2±1.1, 2595N±003×12857E±004, h30km±7km, mb4.3/26, Error ellipse: s-maj=6.5km s-min=4.5km az=139.5*
*JMA **16** 03:47:05.0±0.2, 2592N×12860E, h50km±5km, M3.8*

ISC 16 03:47:06.2±1.0, 2599N±004×12853E±004, h24km±6km, n51, σ1º01/65, mb4.3/26, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.72**	**282**	P	**Pb**	**03 47 20.2**	**+0.1**
JJT2				S	**Sb**	**03 47 31.1**	**+1.5**
NAH1	**Naha**	**0.79**	**286**	P	**Pb**	**03 47 20.9**	**-0.4**
NAH1				S	**Sb**	**03 47 32.7**	**+1.2**
JOW	**Kunigami**	**0.87**	**345**	Pn	**Pn**	**03 47 22.3**	**-0.7**
	467nm,0.3s,baz=163,slow=14,SNR=761						
JOW				Sn	**Sn**	**03 47 33.8**	**-1.2**
	514nm,0.3s,baz=101,slow=21,SNR=17						
JIH	**Iheya**	**1.16**	**334**	P	**Pn**	**03 47 26.7**	**-0.2**
JIH				*e*S	**Sn**	**03 47 42.1**	**+0.1**
JAGN	**Aguni-jima**	**1.30**	**298**	P	**Pn**	**03 47 28.7**	**-0.2**
JAGN				*e*S	**Sn**	**03 47 46.4**	**+0.8**
JKE	**Kume jima 2**	**1.60**	**282**	P	**Pn**	**03 47 32.2**	**-0.9**
JKE				S	**Sn**	**03 47 51.9**	**-1.1**
JTK	**Tokunoshima**	**1.83**	**12**	P	**Pn**	**03 47 35.8**	**-0.3**
JTK				S	**Sn**	**03 47 56.5**	**-2.0**
JMZ	**Minamidaito 2**	**2.43**	**93**	P	**Pn**	**03 47 42.3**	**-2.1**
JMZ				*e*S	**Sn**	**03 48 08.2**	**-5.1**
JAM	**Amami Oshima**	**2.60**	**21**	P	**Pn**	**03 47 46.1**	**-0.6**
JAM				S	**Sn**	**03 48 16.2**	**-1.3**
JZK	**Kikaishima**	**2.65**	**29**	P	**Pn**	**03 47 48.1**	**+0.7**
JZK				*e*S	**Sn**	**03 48 18.7**	**-0.1**
JOGS	**Gusukube**	**3.08**	**247**	P	**Pn**	**03 47 52.9**	**-0.5**
JOGS				*e*S	**Sn**	**03 48 28.0**	**-1.4**
JMJ	**Miyako jima 2**	**3.15**	**249**	P	**Pn**	**03 47 53.6**	**-0.8**
JMJ				*e*S	**Sn**	**03 48 29.8**	**-1.4**
JTJ	**Tarama**	**3.72**	**250**	P	**Pn**	**03 48 00.9**	**-1.2**
JTJ				*e*S	**Sn**	**03 48 41.9**	**-3.2**
JIJ	**Ishigaki jima**	**4.29**	**249**	P	**Pn**	**03 48 07.6**	**-2.4**
JIJ				*e*S	**Sn**	**03 48 54.5**	**-4.9**
KSRS	**Korea Array**	**11.44**	**358**	Pn	**Pn**	**03 49 49.6**	**+1.5**
	0.2nm,0.3s,baz=175,slow=14,SNR=3.5						
LZH	**Lanzhou**	**23.37**	**301**	*e*P	**P**	**03 52 11.0**	**-2.2**
LZH				AP		03 52 16.3	
LZH				XP	sP	03 52 19.0	-4.1
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.3						
LZH				AMB	AMB		
	comp=Z,83nm,4.3s						
GTA	**Gaotai**	**27.49**	**306**	P	**P**	**03 52 49.8**	**-0.8**
GTA				AP	pP	03 52 55.1	-2.8
GTA				XP	sP	03 52 58.0	-2.9
GTA				AMB	AMB		
	comp=Z,18nm,0.9s,mb4.6						
ULN	**Ulaanbaatar**	**27.61**	**328**	*e*P	**P**	**03 52 52.9**	**+1.4**
	comp=Z,4.0nm,0.7s,mb4.2						
SONM	**Songino Array**	**27.90**	**327**	P	**P**	**03 52 56.1**	**+1.9**
	comp=Z,2.1nm,0.5s,mb4.0,baz=138,slow=10,SNR=15						
CHTO	**Chiang Mai**	**28.23**	**261**	*e*P	**P**	**03 52 59.4**	**+1.9**
	comp=Z,2.0nm,0.6s,mb3.9						
TAPN	**Taplejung**	**36.39**	**281**	*e*P	**P**	**03 54 09.6**	**+0.8**
	comp=Z,80nm,1.8s,mb5.3						
ODAN	**Odare**	**36.74**	**281**	*e*P	**P**	**03 54 12.8**	**+1.0**
	comp=Z,33nm,0.7s,mb5.3						
RAMN	**Ramite**	**37.43**	**281**	*e*P	**P**	**03 54 18.2**	**+0.6**
JIRN	**Jiri**	**37.69**	**282**	*e*P	**P**	**03 54 19.8**	**-0.1**
GUN	**Gumba**	**37.93**	**283**	*e*P	**P**	**03 54 23.2**	**+1.3**
PKI	**Pulchoki**	**38.39**	**282**	*e*P	**P**	**03 54 26.2**	**+0.4**
	comp=Z,30nm,0.9s,mb5.0						
KKN	**Kakani**	**38.47**	**283**	*e*P	**P**	**03 54 27.2**	**+0.7**
DMN	**Daman**	**38.65**	**282**	*e*P	**P**	**03 54 28.5**	**+0.6**
GKN	**Gorkha**	**39.01**	**283**	*e*P	**P**	**03 54 31.1**	**+0.1**
DANN	**Dangsing**	**39.73**	**284**	*e*P	**P**	**03 54 37.6**	**+0.6**
	comp=Z,35nm,0.8s,mb5.1						
KOLN	**Koldanda**	**39.95**	**283**	*e*P	**P**	**03 54 39.8**	**+1.0**
	comp=Z,22nm,0.9s,mb4.9						
PYUN	**Piuthan**	**40.44**	**284**	*e*P	**P**	**03 54 43.4**	**+0.5**
	comp=Z,16nm,0.7s,mb4.9						
MK31	**Makanchi Array**	**41.90**	**312**	*e*P	**P**	**03 54 54.0**	**-0.6**
MKAR	**Makanchi Array**	**41.90**	**312**	P	**P**	**03 54 54.4**	**-0.2**
	comp=Z,1.6nm,0.6s,mb3.9,baz=98,slow=11,SNR=23						
MKAR				PcP	PcP	03 56 50.1	+0.2
	comp=Z,0.3nm,0.5s,baz=76,slow=6.1,SNR=3.8						
ZALV	**Zalesovo Beam**	**42.60**	**323**	P	**P**	**03 54 59.4**	**-0.9**
	comp=Z,0.9nm,0.5s,mb3.8,baz=89,slow=7.4,SNR=3.5						
KURK	**Kurchatov**	**45.18**	**317**	*e*P	**P**	**03 55 21.1**	**+0.1**
	comp=Z,2.9nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**45.99**	**172**	*e*P	**P**	**03 55 27.6**	**0.0**
	comp=Z,3.6nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**46.00**	**172**	P	**P**	**03 55 27.3**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=353,slow=8.5,SNR=19						
ASAR	**Alice Springs**	**49.63**	**174**	P	**P**	**03 55 56.9**	**+1.1**
	comp=Z,1.0nm,0.8s,mb3.9,baz=4.8,slow=9.2,SNR=11						
BRVK	**Borovoye**	**50.70**	**318**	*e*P	**P**	**03 56 04.3**	**+0.6**
	comp=Z,6.2nm,0.4s,mb4.9						
AKTK	**Aktyubinsk**	**58.20**	**315**	P	**P**	**03 56 57.5**	**-0.7**
AKTO	**Aktyubinsk**	**58.20**	**315**	P	**P**	**03 56 57.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=81,slow=14,SNR=2.2						
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**03 58 50.7**	**+0.1**
	comp=Z,3.1nm,0.5s,mb4.5,baz=58,slow=6.5,SNR=13						
ASF	**Jabal al Asfar**	**77.93**	**300**	P	**P**	**03 59 03.0**	**+0.5**
	comp=Z,3.6nm,1.0s,mb4.3,baz=73,slow=9.1,SNR=4.0						
HFS	**Hagfors**	**79.16**	**332**	P	**P**	**03 59 09.0**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.9,baz=29,slow=3.3,SNR=1.5						
NB2	**NORSAR Subarra**	**79.65**	**334**	P	**P**	**03 59 11.3**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=53,slow=5.6						
NOA	**NORSAR Array B**	**79.65**	**334**	P	**P**	**03 59 11.1**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.0,baz=53,slow=5.4,SNR=5.7						
MLR	**Muntele Rosu**	**80.11**	**316**	P	**P**	**03 59 15.5**	**+1.4**
	comp=Z,1.5nm,0.6s,mb4.1						
CLL	**Collm**	**84.50**	**325**	*i* P	**P**	**03 59 37.8**	**+0.8**
GERES	**GERESS Array B**	**85.56**	**323**	P	**P**	**03 59 42.7**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.8,baz=332,slow=38,SNR=3.2						
NVAR	**Mina Array Bea**	**90.48**	**46**	P	**P**	**04 00 07.7**	**+1.6**
	comp=Z,0.2nm,0.3s,mb4.0,baz=114,slow=3.7,SNR=3.6						

*ISCJB **16** 03:49:34.6±0.4, 3873N±002×2051E±004, h10km, Error ellipse: s-maj=4.5km s-min=3.0km az=171.2*
*THE **16** 03:49:34.7, 3874N×2053E, h2km±2km, ML3.8/5, Error ellipse: s-maj=2.5km s-min=0.8km az=252.0*
*NEIC **16** 03:49:34.9, 3872N×2064E, h9km, MD3.5(ATH), After ATH.*
*ATH **16** 03:49:34.9, 3872N×2064E, h9km±3km, MD3.5/11*
*CSEM **16** 03:49:34.2±0.1, 3876N×2057E, h2km, ML3.8/5, Error ellipse: s-maj=2.2km s-min=1.9km az=98.0*

ISC 16 03:49:34.6±0.6, 3874N±002×2054E±004, h1km±4km, n40, σ0º78/55, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.09**	**109**	P	**Pg**	**03 49 36.7**	**+0.3**
LKD				S	**Sg**	**03 49 37.7**	**+0.1**
VLS	**Valsamata**	**0.56**	**176**	P	**Pg**	**03 49 44.7**	**-0.6**
VLS				S	**Sg**	**03 49 53.0**	**+0.4**
VLS	**Valsamata**	**0.56**	**176**	*e*PG	**Pg**	**03 49 45.1**	**-0.2**
VLS				*e*SB	**Sg**	**03 49 53.8**	**+1.2**
VLS	**Valsamata**	**0.56**	**176**	*e*Pg	**Pg**	**03 49 45.1**	**-0.2**
VLS				*e*Sb	**Sg**	**03 49 53.8**	**+1.2**
KFL	**Anninata**	**0.66**	**162**	P	**Pg**	**03 49 46.4**	**-0.8**
KFL				S	**Sg**	**03 49 57.0**	**+1.3**
IGT	**Igoumenitsa**	**0.81**	**349**	P	**Pg**	**03 49 49.6**	**-0.6**
IGT				S	**Sg**	**03 50 01.0**	**+0.3**
JAN	**Janina**	**0.95**	**15**	*e*PN	**Pg**	**03 49 53.4**	**+0.6**
JAN				*e*SB	**Sg**	**03 50 06.3**	**+1.1**
RLS	**Riolos of Patr**	**1.00**	**133**	*e*PG	**Pg**	**03 49 52.3**	**-1.4**
EVR	**Evrytania**	**1.01**	**79**	*e*PB	**Pg**	**03 49 52.5**	**-1.5**
KEK	**Kerkira**	**1.13**	**330**	*e*PB	**Pb**	**03 49 57.2**	**+0.2**
THL	**Klokotos Trika**	**1.42**	**54**	P	**Pg**	**03 49 59.7**	**-1.8**
THL				S	**Sg**	**03 50 20.6**	**+0.5**
THL	**Klokotos Trika**	**1.42**	**54**	*e*Pg	**Pn**	**03 49 59.9**	**-1.6**
THL				S	**Sg**	**03 50 20.6**	**+0.5**
AGG	**Agios Georgios**	**1.43**	**78**	P	**Pn**	**03 50 00.2**	**-1.5**
AGG				S	**Sg**	**03 50 21.0**	**+0.5**
KZN	**Kozani**	**1.83**	**31**	*e*PN	**Pn**	**03 50 08.0**	**+0.7**
ITM	**Ithomi**	**1.90**	**144**	*e*PN	**Pn**	**03 50 08.8**	**+0.6**
LKR	**Lokris**	**1.93**	**92**	P	**Pn**	**03 50 09.2**	**+0.6**
LKR	**Lokris**	**1.93**	**92**	*e*PG	**Pn**	**03 50 09.6**	**+1.0**
LKR	**Lokris**	**1.93**	**92**	P	**Pn**	**03 50 09.2**	**+0.6**
LKR	**Lokris**	**1.93**	**92**	*e*Pg	**Pn**	**03 50 09.6**	**+1.0**
LIT	**Litokhoron**	**2.04**	**47**	P	**Pn**	**03 50 10.7**	**+0.6**
LIT				S	**Sn**	**03 50 36.3**	**+0.2**
LTK	**Loutraki**	**2.04**	**110**	P	**Pn**	**03 50 10.4**	**+0.3**
LTK				S	**Sn**	**03 50 37.4**	**+1.2**
PYL	**PYLOS**	**2.07**	**152**	P	**Pn**	**03 50 10.3**	**-0.2**
PYL				S	**Sn**	**03 50 37.0**	**0.0**
FNA	**Florina**	**2.14**	**17**	P	**Pn**	**03 50 11.8**	**+0.2**
FNA				S	**Sn**	**03 50 39.6**	**+0.8**
XOR	**Xorichti**	**2.16**	**72**	P	**Pn**	**03 50 10.3**	**-1.5**
NEO	**Neokhori**	**2.17**	**74**	*e*PN	**Pn**	**03 50 11.9**	**0.0**
GRG	**Griva**	**2.64**	**32**	P	**Pn**	**03 50 17.6**	**-0.8**
TIR	**Tirane**	**2.66**	**349**	P	**Pn**	**03 50 18.5**	**-0.1**
TIR	**Tirane**	**2.66**	**349**	*e*Pn	**Pn**	**03 50 18.3**	**-0.3**
TIR	**Tirane**	**2.66**	**349**	*e*Pn	**Pn**	**03 50 18.3**	**-0.3**
TIR	**Tirane**	**2.66**	**349**	P	**Pn**	**03 50 18.5**	**-0.1**
PAIG	**Paliouri**	**2.71**	**63**	P	**Pn**	**03 50 19.1**	**-0.2**
PAIG				S	**Sn**	**03 50 52.8**	**0.0**
HORT	**Hortiatis**	**2.71**	**46**	P	**Pn**	**03 50 19.7**	**+0.3**
PLG	**Polygyros**	**2.78**	**53**	P	**Pn**	**03 50 19.5**	**-0.8**
PLG	**Polygyros**	**2.78**	**53**	*e*PB	**Pn**	**03 50 21.0**	**+0.7**
PLG	**Polygyros**	**2.78**	**53**	P	**Pn**	**03 50 19.5**	**-0.8**
TIP	**Timpagrande**	**2.98**	**280**	P	**Pn**	**03 50 23.9**	**+0.9**
KNT	**Kendrikon**	**3.03**	**36**	P	**Pn**	**03 50 23.3**	**-0.4**
OUR	**Ouranopolis**	**3.10**	**58**	P	**Pn**	**03 50 24.3**	**-0.5**
PE1	**Pezze di Greco**	**3.17**	**312**	*e*Pn	**Pn**	**03 50 24.5**	**-1.1**
SG1	**Sgolgore (BA)**	**3.64**	**306**	*e*Pn	**Pn**	**03 50 32.4**	**+0.3**

IDC 16 04:09:25.1±25.0, 1656S×6793E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=812.7km s-min=37.3km az=58.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**61.89**	**108**	P	P	04 19 46.7	-0.2
	0.4nm,0.7s,baz=269,slow=5.0,SNR=4.0						
WRA	**Warramunga Arr**	**62.80**	**104**	P	P	04 19 53.3	+0.3
	1.0nm,1.0s,baz=266,slow=6.6,SNR=6.5						
MKAR	**Makanchi Array**	**64.37**	**11**	P	P	04 20 02.8	+0.1
	0.2nm,0.5s,baz=210,slow=8.0,SNR=2.6						

IDC 16 04:39:07.1±42.0, 1496S×17324W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=814.7km s-min=182.6km az=78.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.39**	**240**	P	P	04 47 19.4	-0.2
	0.9nm,0.5s,baz=54,slow=8.7,SNR=2.9						
WRA	**Warramunga Arr**	**50.09**	**256**	P	P	04 48 04.4	+0.1
	0.4nm,0.3s,baz=92,slow=7.1,SNR=22						
ASAR	**Alice Springs**	**50.39**	**252**	P	P	04 48 06.5	-0.1
	2.3nm,0.5s,baz=86,slow=8.1,SNR=44						

*ISCJB **16** 04:39:51.9±0.3, 4312N×002×002E±002, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=162.0*
*STR **16** 04:39:52.9±0.1, 4302N×001W, h5km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **16** 04:39:53.5±0.1, 4301N×001E, h6km, Md2.5/2, Ml2.3/10, Error ellipse: s-maj=1.3km s-min=1.1km az=153.0*
*MDD **16** 04:39:54.1±0.3, 4301N×001W, h0km, mbLg1.6/11, Error ellipse: s-maj=2.9km s-min=1.8km az=19.0, PRIMO*

ISC 16 04:39:53.1±0.3, 4307N±002×000E±002, h8km±6km, n37, σ0º91/59, 1C, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LABF	**Labassere**	**0.06**	**113**	P	**Pg**	**04 39 55.3**	**+0.5**
LABF				S	**Sg**	**04 39 56.6**	**+0.5**
VIEF	**Viey**	**0.19**	**175**	Pg	**Pg**	**04 39 56.4**	**-0.5**
VIEF				Sg	**Sg**	**04 39 58.4**	**-1.1**
VIEF	**Viey**	**0.19**	**175**	P	**Pg**	**04 39 56.5**	**-0.4**
VIEF				S	**Sg**	**04 39 58.5**	**-0.9**
EPF	**Esparros**	**0.25**	**99**	*e*Pg	**Pg**	**04 39 58.4**	**+0.3**
EPF				*e*Sg	**Sg**	**04 40 01.8**	**+0.4**
	60nm,0.2s						
REYF	**Montagne du Re**	**0.29**	**270**	Pg	**Pg**	**04 39 58.6**	**-0.2**
REYF				Sg	**Sg**	**04 40 03.2**	**+0.6**
REYF	**Montagne du Re**	**0.29**	**270**	P	**Pg**	**04 39 59.0**	**+0.2**
REYF				S	**Sg**	**04 40 03.4**	**+0.7**
RESF	**Ens**	**0.36**	**137**	Pg	**Pg**	**04 39 59.7**	**-0.4**
R

ISCJB ***16*** *04:40:13.5±1.5, 12S±02×125W±05, h10km, mb3.5/2, Error ellipse: s-maj=73.6km s-min=14.9km az=26.0*
IDC ***16*** *04:40:14.8±5.2, 077S×1296W, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=170.7km s-min=73.8km az=148.0*

ISC 16 04:40:15.2±1.5, 11S±02×127W±04, h10km, n7, σ0≟81/8, mb3.5/2, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**11.01**	**45**	Pn		**Pn**	**04 42 52.4**	**-0.5**
	0.2nm,0.3s,baz=210,slow=16,SNR=3.5							
DBIC				Sn		**Sn**	**04 44 47.9**	**-8.3**
	0.1nm,0.3s,baz=183,slow=8.6,SNR=2.3							
TORD	**Torodi Ar. Bea**	**20.12**	**45**	P		**P**	**04 44 50.0**	**+0.5**
	1.7nm,0.5s,baz=232,slow=11,SNR=20							
GERES	**GERESS Array B**	**54.77**	**21**	P		**P**	**04 49 44.6**	**-0.5**
	0.1nm,0.3s,mb3.3,baz=215,slow=6.6,SNR=2.8							
VNA2	**Neumayer--Watz**	**69.76**	**178**	*e*		**P**	**04 51 26.1**	**+0.9**
	baz=335,slow=7.8							
VNA2				*e*			04 51 32.3	
VNA2				*e*			04 51 43.4	
VNA3	**Neumayer Olymp**	**70.02**	**179**	*e*		**P**	**04 51 27.0**	**+0.2**
VNA3				*e*			04 51 32.8	
VNA3				*e*			04 51 44.2	
SNAA	**Sanae**	**70.70**	**177**	*e*		**P**	**04 51 29.4**	**-1.5**
SNAA				*e*			04 51 36.0	
MKAR	**Makanchi Array**	**94.24**	**43**	P		**P**	**04 53 35.5**	**+0.7**
	0.3nm,0.8s,mb3.8,baz=270,slow=2.9,SNR=2.9							

IDC ***16*** *04:58:06.5±2.8, 2301S×7049W, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.5/16, mbtmp3.7/3, ML4.0/1, Error ellipse: s-maj=63.2km s-min=62.2km az=68.0*
ISCJB ***16*** *04:58:14.8±0.7, 2241S±004×7027W±007, h50km±10km, mb3.6/2, Error ellipse: s-maj=11.0km s-min=6.1km az=1.7*
GUC ***16*** *04:58:14.6±1.2, 2244S×7020W, h41km±3km, ML3.8*
NEIC ***16*** *04:58:15.7, 2246S×7019W, h22km, ML3.7(GUC), After GUC.*

ISC 16 04:58:15.6±0.7, 2242S±004×7024W±007, h42km±13km, n16, σ1≟18/27, mb3.6/2, 2C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB06	**Plate Boundary**	**0.68**	**115**	⇓*i* P		**Pn**	**04 58 27.7**	**-1.2**
PB06				*i* S		**Sn**	**04 58 36.8**	**-1.6**
PB04	**Plate Boundary**	**0.72**	**78**	*e*P		**Pn**	**04 58 22.1**	**-7.2**
PB04				*i* S		**Sn**	**04 58 27.0**	**-12**
PB04				AML		AML	04 58 27.2	
	comp=E,38μm,0.4s							
PB07	**Plate Boundary**	**0.77**	**26**	⇓*i* P		**Pn**	**04 58 29.4**	**-0.6**
PB07				*i* S		**Sn**	**04 58 40.1**	**-0.3**
CEN1	**Los Morros**	**0.97**	**178**	⇓*i* P		**Pn**	**04 58 35.1**	**+2.4**
CEN1				*i* S		**Sn**	**04 58 49.9**	**+4.6**
CEN1				AML		AML	04 58 53.1	
	comp=E,3μm,0.7s							
LVC	**Limon Verde**	**1.25**	**99**	⇓*i* P		**Pn**	**04 58 36.9**	**+0.4**
LVC				*i* S		**Sn**	**04 58 52.5**	**+0.3**
LVC	**Limon Verde**	**1.25**	**99**	⇓*i* P		**Pn**	**04 58 36.9**	**+0.4**
LVC				*i* S		**Sn**	**04 58 52.5**	**+0.3**
LVC				AML		AML	04 58 53.6	
	comp=E,3μm,0.7s							
ANCH	**Antofagasta**	**1.27**	**187**	⇑*i* P		**Pn**	**04 58 36.5**	**-0.3**
ANCH				*i* S		**Sn**	**04 58 52.8**	**+0.1**
ANCH	**Antofagasta**	**1.27**	**187**	⇑*i* P		**Pn**	**04 58 36.5**	**-0.3**
ANCH				*i* S		**Sn**	**04 58 52.8**	**+0.1**
ANCH				AML		AML	04 58 58.3	
	comp=N,2μm,0.6s							
PB01	**Plate Boundary**	**1.54**	**27**	*e*P		**Pn**	**04 58 41.3**	**+0.7**
PB01				*i* S		**Sn**	**04 59 00.9**	**+1.5**
SPCH	**San Pedro de A**	**1.95**	**105**	*e*P		**Pn**	**04 58 49.9**	**+3.6**
SPCH				*i* S		**Sn**	**04 59 15.2**	**+5.7**
SPCH	**San Pedro de A**	**1.95**	**105**	*e*P		**Pn**	**04 58 49.9**	**+3.6**
SPCH				*i* S		**Sn**	**04 59 15.2**	**+5.7**
SPCH				AML		AML	04 59 24.0	
	comp=N,3μm,0.5s							
ARE	**Arequipa**	**6.04**	**349**	*e*P		**Pn**	**04 59 41.0**	**-1.5**
ARE				*e*S		**Sn**	**05 00 50.0**	**-0.4**
LPAZ	**La Paz**	**6.42**	**18**	Pn		**Pn**	**04 59 51.0**	**+3.4**
	comp=N,1.4nm,0.3s,baz=201,slow=7.1,SNR=6.6							
BDFB	**Brasilia**	**22.05**	**76**	P		**P**	**05 03 08.1**	**+1.2**
	comp=N,0.7nm,0.5s,mb3.4,baz=230,slow=17,SNR=7.2							
TORD	**Torodi Ar. Bea**	**78.83**	**71**	P		**P**	**05 10 13.2**	**-1.4**
	comp=N,0.6nm,0.4s,mb3.9,baz=253,slow=5.2,SNR=22							
MKAR	**Makanchi Array**	**147.10**	**36**	PKPbc		PKPbc	05 17 53.3	-0.6
	comp=N,0.3nm,0.8s,baz=300,slow=6.5,SNR=3.0							

DDA ***16*** *05:12:23.7, 3988N×4033E, h8km±1km, Md3.2*
ISK ***16*** *05:12:23.2, 3987N×4032E, h5km, MD3.3*
ISCJB ***16*** *05:12:24.9±0.3, 3985N±003×4030E±003, h10km, Error ellipse: s-maj=3.8km s-min=2.7km az=159.5*
CSEM ***16*** *05:12:24.8±0.1, 3990N×4027E, h5km, MD3.3, Error ellipse: s-maj=2.3km s-min=1.5km az=160.0*

ISC 16 05:12:25.1±0.5, 3987N±003×4032E±003, h4km±4km, n23, σ0≟96/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.41**	**253**	*e*PG		**Pg**	**05 12 39.0**	**+6.1**
EZM	**Erzurum**	**0.80**	**87**	*e*PG		**Pg**	**05 12 39.5**	**-1.0**
EZM				*e*SG		**Sg**	**05 12 51.9**	**+0.9**
ERZM	**Erzurum**	**0.81**	**87**	*i* P		**Pg**	**05 12 39.2**	**-1.3**
ERZM				*i* S		**Sg**	**05 12 52.4**	**+1.3**
GUMT	**Gumushane**	**0.87**	**313**	*e*PG		**Pg**	**05 12 41.5**	**-0.4**
GUMT				*e*SG		**Sg**	**05 12 54.2**	**+1.0**
BNGL	**BINGOL**	**1.12**	**145**	*i* P		**Pg**	**05 12 45.3**	**-1.2**
BNGL				*i* S		**Sg**	**05 13 01.3**	**+0.3**
KTUT	**Trabzon**	**1.20**	**340**	*e*PN		**Pn**	**05 12 46.9**	**-1.7**
PTK	**Pertek**	**1.21**	**217**	*e*PN		**Pn**	**05 12 47.1**	**-1.6**
HOMI	**Horasan**	**1.23**	**81**	*i* P		**Pg**	**05 12 46.8**	**-2.0**
HOMI				*i* S		**Sg**	**05 13 08.6**	**+3.8**
PZAR	**Pazar-Rize**	**1.38**	**18**	*e*PN		**Pn**	**05 12 50.9**	**-0.3**
PZAR				*e*SN		**Sn**	**05 13 10.5**	**+0.7**
DDEM	**Demirkent**	**1.50**	**46**	*i* P		**Pn**	**05 12 51.9**	**-0.8**
DDEM				*i* S		**Sn**	**05 13 11.6**	**-1.1**
KEMA	**Kemaliye**	**1.53**	**248**	*i* P		**Pn**	**05 12 52.9**	**-0.3**
KEMA				*i* S		**Sg**	**05 13 15.4**	**+1.0**
DBAD	**Bademkaya**	**1.56**	**42**	*i* P		**Pn**	**05 12 52.6**	**-0.9**
DBAD				*i* S		**Sn**	**05 13 14.0**	**-0.2**
SVRC	**Sivrice-ELAZIG**	**1.68**	**208**	*e*PN		**Pn**	**05 12 55.1**	**-0.1**
DAGI	**Agillar**	**1.72**	**45**	*i* P		**Pn**	**05 12 55.4**	**-0.3**
DAGI				*i* S		**Sn**	**05 13 18.9**	**+0.9**
ELZG	**Elazig**	**1.72**	**218**	*i* P		**Pn**	**05 12 56.0**	**+0.3**
ELZG				*i* S		**Sn**	**05 13 11.2**	**-6.9**
DBOC	**Borcka**	**1.80**	**34**	*i* P		**Pn**	**05 12 57.6**	**+0.7**
DBOC				*i* S		**Sn**	**05 13 20.7**	**+0.6**
ARTV	**Artvin**	**1.80**	**42**	*i* P		**Pn**	**05 12 57.2**	**+0.3**
ARTV				*i* S		**Sg**	**05 13 23.1**	**+0.2**
BCA	**Borcka**	**1.86**	**32**	*e*PN		**Pn**	**05 12 58.3**	**+0.6**
GRSN	**GIRESUNGRSN**	**1.89**	**305**	*i* P		**Pn**	**05 12 59.2**	**+1.2**
GRSN				*i* S		**Sg**	**05 13 25.2**	**-0.5**
GRSN	**GIRESUNGRSN**	**1.89**	**305**	*i* P		**Pn**	**05 12 59.2**	**+1.1**
GRSN				*i* S		**Sg**	**05 13 25.2**	**-0.6**
TUTA	**Tutak**	**1.98**	**103**	*i* P		**Pn**	**05 13 00.7**	**+1.3**
TUTA				*i* S		**Sg**	**05 13 29.7**	**+0.9**
AKCD	**Akcadag**	**2.44**	**231**	*i* P		**Pg**	**05 13 10.7**	**-1.1**
AKCD				*i* S		**Sg**	**05 13 45.0**	**+1.7**
SVSK	**Karacayir**	**2.56**	**272**	*e*PN		**Pn**	**05 13 07.5**	**+0.2**

IDC ***16*** *05:18:34.4±1.9, 791N×12650E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, Error ellipse: s-maj=218.2km s-min=17.7km az=66.0*
ISCJB ***16*** *05:18:45.2±0.7, 778N±005×12660E±008, h106km±6km, mb3.7/6, Error ellipse: s-maj=12.9km s-min=7.9km az=162.7*
MAN ***16*** *05:18:47, 774N×12653E, h69km, mb4.3, ML3.1, MS2.9*

ISC 16 05:18:46.4±0.7, 778N±005×12660E±007, h97km±5km, n15, σ0≟88/22, mb3.7/6, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.47**	**330**	⇓*i* P		**Pn**	**05 19 01.9**	**+0.2**
BIPH				*e*S		**Sn**	**05 19 12.4**	**-0.7**
MATI	**Mati**	**0.89**	**202**	*e*P		**Pn**	**05 19 05.7**	**+0.2**
MATI				*e*S		**Sn**	**05 19 17.4**	**-2.3**
BUKP	**Musuan**	**1.52**	**274**	*e*P		**Pn**	**05 19 12.1**	**-0.7**
BUKP				*e*S		**Sn**	**05 19 33.8**	**+0.9**
KCP	**Kidapawan**	**1.68**	**243**	⇑*i* P		**Pn**	**05 19 15.6**	**+0.8**
KCP				*i* S		**Sn**	**05 19 36.3**	**+0.1**
CGP	**Cagayan de Oro**	**2.00**	**290**	⇓*i* P		**Pn**	**05 19 19.4**	**+0.5**
CGP				*i* S		**Sn**	**05 19 43.0**	**-0.7**
SCPH	**Surigao**	**2.27**	**331**	*e*P		**Pn**	**05 19 23.7**	**+1.2**
SCPH				*e*S		**Sn**	**05 19 50.8**	**+0.7**
MSLP	**Maasin**	**2.90**	**324**	*e*P		**Pn**	**05 19 31.1**	**+0.3**
PAGZ	**Pagadian**	**3.19**	**272**	*e*P		**Pn**	**05 19 35.5**	**+0.9**
TBP	**Tagbilaran**	**3.31**	**305**	*e*P		**Pn**	**05 19 36.4**	**+0.2**
TBP				*e*S		**Sn**	**05 20 13.7**	**-1.0**
WRA	**Warramunga Arr**	**28.58**	**165**	P		**P**	**05 24 34.5**	**+1.1**
	0.3nm,0.6s,mb3.1,baz=346,slow=10,SNR=5.1							
ASAR	**Alice Springs**	**32.05**	**167**	P		**P**	**05 25 04.2**	**+0.2**
	0.3nm,0.3s,mb3.5,baz=341,slow=7.6,SNR=6.0							
STKA	**Stephens Creek**	**41.95**	**161**	P		**P**	**05 26 27.9**	**+0.2**
	0.4nm,0.3s,mb3.6,baz=334,slow=13,SNR=2.4							
MKAR	**Makanchi Array**	**54.20**	**324**	P		**P**	**05 28 01.1**	**-0.8**
	1.7nm,0.6s,mb4.3,baz=122,slow=8.0,SNR=27							
ZALV	**Zalesovo Beam**	**56.96**	**332**	P		**P**	**05 28 19.7**	**-1.8**
	0.5nm,0.3s,mb4.0,baz=122,slow=6.8,SNR=3.9							
BVAR	**Borovoye Array**	**63.89**	**326**	P		**P**	**05 29 08.1**	**-0.6**
	0.6nm,0.3s,mb3.9,baz=76,slow=6.1,SNR=3.9							

IDC 16 05:30:06.1±23.0, 087S×1244W, h0km, mb3.3/1, mb1 3.7/3, mb1mx3.5/20, mbtmp3.6/3, ML3.3/1, MS4.3/1, Ms1 4.3/1, ms1mx3.5/16, Error ellipse: s-maj=590.0km s-min=90.4km az=163.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**10.64**	**45**	Pn		Pn	05 32 40.4	+0.4
	0.2nm,0.3s,baz=191,slow=10,SNR=5.8							
DBIC				Sn		Sn	05 34 35.9	-4.2
	0.2nm,0.3s,baz=270,slow=20,SNR=2.1							
TORD	**Torodi Ar. Bea**	**19.76**	**45**	P		Pn	05 34 37.6	-1.7
	0.3nm,0.3s,baz=232,slow=11,SNR=17							
LSZ	**Lusaka**	**42.58**	**112**	LR		LR	05 54 40.3	
	comp=Z,379nm,19.0s,baz=158,slow=35							
GERES	**GERESS Array B**	**54.43**	**21**	P		P	05 39 35.2	+0.2
	0.1nm,0.3s,baz=206,slow=6.5,SNR=2.6							
VNA2	**Neumayer--Watz**	**70.02**	**178**	*e*		P	05 41 12.8	-6.5
VNA2				*e*			05 41 15.6	
VNA2				*e*			05 41 21.3	
VNA3	**Neumayer Olymp**	**70.28**	**179**	*e*		P	05 41 13.6	-7.3
VNA3				*e*			05 41 16.7	
VNA3				*e*			05 41 21.9	

ISCJB ***16*** *05:42:02.3±0.9, 1076N±008×6224W±004, h102km±8km, Error ellipse: s-maj=13.1km s-min=5.7km az=178.8*
FUNV ***16*** *05:42:03.5, 1087N×6215W, h98km, MW3.4*
NEIC ***16*** *05:42:05.8, 1097N×6212W, h79km, MD3.3(TRN), After TRN.*
TRN ***16*** *05:42:06.2, 1099N×6211W, h76km, MD3.3*

ISC 16 05:42:03.2±0.9, 1079N±008×6223W±003, h98km±8km, n14, σ0≟96/27, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.15**	**177**	*e*P		**Pn**	**05 42 17.8**	**+0.8**
GUIV				*e*S		**Sn**	**05 42 27.2**	**0.0**
TCE	**Chacachacare**	**0.48**	**102**	⇓*e*P		**Pn**	**05 42 19.2**	**+0.6**
TCE				*e*S		**Sn**	**05 42 29.1**	**-1.0**
TRN	**Trinidad (W)**	**0.83**	**100**	⇑*i* P		**Pn**	**05 42 22.3**	**+0.7**
TRN				*e*S		**Sn**	**05 42 34.6**	**-0.8**
TPP	**Pointe-a-Pierr**	**0.90**	**122**	*e*P		**Pn**	**05 42 27.8**	**+5.4**
TPP				*e*S		**Sn**	**05 42 40.1**	**+3.4**
TPP	**Pointe-a-Pierr**	**0.90**	**122**	*e*P		**Pn**	**05 42 24.9**	**+2.5**
TPP				*e*S		**Sn**	**05 42 38.2**	**+1.4**
CRUV	**Carupano**	**1.00**	**263**	⇓*i* P		**Pn**	**05 42 24.5**	**+1.1**
CRUV				*e*S		**Sn**	**05 42 39.2**	**+0.6**
ITEV	**Isla Los Testi**	**1.05**	**302**	*e*P		**Pn**	**05 42 24.1**	**+0.2**
ITEV				*e*S		**Sn**	**05 42 39.0**	**-0.5**
TBH	**Brigand Hill**	**1.18**	**105**	*e*P		**Pn**	**05 42 26.3**	**+0.8**
TBH				*e*S		**Sn**	**05 42 41.2**	**-1.2**
GRW	**Mount Saint Ca**	**1.47**	**22**	*e*P		**Pn**	**05 42 29.3**	**+0.3**
GRW				*e*S		**Sn**	**05 42 43.7**	**-4.7**
TPR	**Prospect**	**1.48**	**75**	*e*P		**Pn**	**05 42 29.1**	**+0.1**
TPR				*e*S		**Sn**	**05 42 47.1**	**-1.5**
CUPV	**Cœpira**	**3.58**	**259**	*e*P		**Pn**	**05 42 57.6**	**+0.9**
CUPV				*e*S		**Sn**	**05 43 37.5**	**-0.4**
MERV	**Las Mercedes**	**4.29**	**249**	*e*S		**Sn**	**05 43 53.7**	**-1.5**
CAOV	**Caicara del Or**	**5.31**	**230**	*e*P		**Pn**	**05 43 19.6**	**-0.5**
CAOV				*e*S		**Sn**	**05 44 16.5**	**-3.5**
BAUV	**El Baul**	**6.01**	**253**	*e*P		**Pn**	**05 43 29.3**	**-0.4**
BAUV				*e*S		**Sn**	**05 44 32.1**	**-5.1**

ISCJB ***16*** *05:44:40.6±0.6, 097S±008×130W±0.1, h10km, mb4.0/6, Error ellipse: s-maj=16.7km s-min=9.7km az=32.2*
IDC ***16*** *05:44:41.4±1.2, 090S×1308W, h0km, mb3.9/7, mb1 4.2/9, mb1mx3.9/23, mbtmp4.0/9, ML3.5/2, MS3.7/1, Ms1 3.7/1, ms1mx3.3/28, Error ellipse: s-maj=35.3km s-min=24.9km az=150.0*
NEIC ***16*** *05:44:42.5±1.0, 095S×1312W, h10km, Error ellipse: s-maj=19.3km s-min=13.5km az=147.0*

ISC 16 05:44:42.6±0.6, 098S±008×131W±01, h10km, n19, σ0≟79/21, mb4.0/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.78**	**48**	*e*PKP1		**Pn**	**05 47 23.2**	**+6.0**
	38nm,1.1s							
TIC	**Toumodi**	**11.07**	**47**	*e*PKP1		**Pn**	**05 47 22.4**	**+1.3**
	27nm,0.2s							
KIC	**Kosan Boka**	**11.08**	**49**	*e*PKP1		**Pn**	**05 47 22.2**	**+0.9**
	161nm,1.6s							
DBIC	**Dimbokro**	**11.20**	**47**	Pn		**Pn**	**05 47 22.4**	**-0.5**
	0.3nm,0.3s,baz=184,slow=7.9,SNR=5.1							
DBIC				Sn		**Sn**	**05 49 16.3**	**-12**
	0.2nm,0.3s,baz=311,slow=20,SNR=3.2							
DBIC				LR		LR	05 50 49.1	
	comp=Z,471nm,21.7s,baz=223,slow=33							
DBIC	**Dimbokro**	**11.20**	**47**	Pn		**Pn**	**05 47 22.4**	**-0.6**
DBIC				Sn		**Sn**	**05 49 16.3**	**-12**
DBIC				LR		LR	05 50 49.1	
BBTS	**Babate**	**15.91**	**348**	Pn		**Pn**	**05 48 26.4**	**-0.3**
	0.3nm,0.3s,baz=211,slow=5.9,SNR=1.8							
BBTS	**Babate**	**15.91**	**348**	Pn		**Pn**	**05 48 26.4**	**-0.3**
TOA0	**Torodi Ar. Sit**	**20.31**	**46**	*e*P		**P**	**05 49 18.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**20.31**	**46**	P		**P**	**05 49 18.3**	**-0.7**
	6.0nm,1.0s,baz=232,slow=11,SNR=34							
LSZ	**Lusaka**	**43.16**	**111**	P		**P**	**05 52 44.1**	**+0.3**
	2.6nm,0.9s,mb4.0,baz=261,slow=7.9,SNR=4.2							
SIV	**San Ignacio**	**49.57**	**250**	P		**P**	**05 53 34.8**	**+0.4**
	0.7nm,0.7s,mb3.8,baz=77,slow=11,SNR=4.4							
GERES	**GERESS Array B**	**54.78**	**21**	P		**P**	**05 54 11.7**	**-0.8**
	1.0nm,0.8s,mb3.9,baz=202,slow=6.8,SNR=7.5							
NOA	**NORSAR Array B**	**64.62**	**13**	P		**P**	**05 55 19.9**	**-0.2**
	3.0nm,1.1s,mb4.2,baz=213,slow=7.1,SNR=2.6							
VNA1	**Neumayer--Stat**	**69.63**	**178**	*e*		**P**	**05 55 52.4**	**+0.6**
VNA1				*e*			05 55 58.3	
VNA2	**Neumayer--Watz**	**69.93**	**178**	*e*		**P**	**05 55 53.7**	**+0.1**
VNA2				*e*			05 56 00.0	
VNA2				*e*			05 56 05.7	
VNA3	**Neumayer Olymp**	**70.19**	**179**	*e*		**P**	**05 55 55.1**	**-0.1**
VNA3				*e*			05 56 01.2	
VNA3				*e*			05 56 08.0	
SNAA	**Sanae**	**70.89**	**177**	*e*		**P**	**05 55 57.7**	**-1.8**
SNAA				*e*			05 56 04.1	
SNAA				*e*			05 56 10.7	
TXAR	**Lajitas Array**	**90.97**	**299**	P		**P**	**05 57 48.2**	**+0.8**
	0.4nm,1.0s,mb3.7,baz=119,slow=6.8,SNR=4.3							
MKAR	**Makanchi Array**	**94.41**	**43**	P		**P**	**05 58 03.9**	**+1.0**
	0.8nm,0.9s,mb4.2,baz=289,slow=3.7,SNR=6.8							

NEIC ***16*** *05:52:29.6, 1587N×9918W, h15km, MD3.5(MEX), After MEX.*

MEX 16 05:52:29.6±0.5, 1587N×9918W, h15km±18km, MD3.5, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.13**	**63**	*i* P		Pb	05 52 47.4	-3.5
PNIG				*i* S		Sb	05 53 00.9	-4.5
ACX	**Acapulco**	**1.22**	**324**	*e*P		Pn	05 52 48.0	-4.1
ACX				*i* S		Sb	05 53 03.8	-4.0
CAIG	**El Cayaco**	**1.57**	**318**	*e*P		Pn	05 52 53.4	-3.6
CAIG				*i* S		Sn	05 53 12.3	-4.6
UTMO	**Huajuapan**	**2.35**	**34**	*i* P		Pn	05 53 05.4	-2.2
UTMO				*i* S		Sn	05 53 31.7	-4.5
VHO	**Vista Hermosa**	**2.63**	**63**	*e*P		Pn	05 53 09.1	-2.4
VHO				*i* S		Sn	05 53 37.5	-5.7
PPM	**Popocatepetl**	**3.22**	**9**	*e*P		Pn	05 53 17.8	-1.8
PPM				*i* S		Sn	05 53 59.5	+1.7

IDC ***16*** *05:56:34.3±2.5, 2316S×6956W, h0km, mb4.1/1, mb1 3.9/3, mb1mx3.5/17, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=74.4km s-min=45.4km az=120.0*
NEIC ***16*** *05:56:41.4, 2252S×7005W, h20km, ML3.5(GUC), After GUC.*
GUC ***16*** *05:56:41.2±1.6, 2255S×7004W, h47km±2km, ML3.8*
ISCJB ***16*** *05:56:42.5±0.9, 2252S±004×7005W±007, h33km±7km, Error ellipse: s-maj=10.2km s-min=5.8km az=6.3*

ISC 16 05:56:43.3±1.0, 2244S±003×6991W±006, h16km±6km, n14, σ1≟43/23, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB06	**Plate Boundary**	**0.41**	**130**	⇓*i* P		**Pg**	**05 56 52.2**	**+0.5**
PB06				*i* S		**Sg**	**05 56 59.9**	**+2.7**
PB04	**Plate Boundary**	**0.43**	**66**	⇑*e*P		**Pg**	**05 56 50.1**	**-1.8**
PB04				*i* S		**Sg**	**05 56 56.6**	**-1.2**
PB04				AML		AML	05 56 57.3	
	comp=N,18μm,0.1s							
PB07	**Plate Boundary**	**0.71**	**2**	⇑*i* P		**Pb**	**05 56 57.4**	**+0.2**
PB07				*i* S		**Sb**	**05 57 08.8**	**+2.1**
LVC	**Limon Verde**	**0.94**	**101**	*e*P		**Pb**	**05 57 00.4**	**-0.7**
LVC	**Limon Verde**	**0.94**	**101**	⇓*i* P		**Pb**	**05 57 00.3**	**-0.8**
LVC				*i* S		**Sb**	**05 57 14.4**	**+1.1**
LVC				AML		AML	05 57 15.2	
	comp=N,3μm,0.2s							
CEN1	**Los Morros**	**0.98**	**196**	⇓*i* P		**Pb**	**05 57 00.2**	**-1.8**
CEN1				*i* S		**Sb**	**05 57 14.4**	**-0.3**
CEN1				AML		AML	05 57 16.7	
	comp=N,3μm,0.4s							
ANCH	**Antofagasta**	**1.32**	**200**	⇑*i* P		**Pn**	**05 57 02.0**	**-5.1**
ANCH				*i* S		**Sn**	**05 57 17.6**	**-6.6**
PB01	**Plate Boundary**	**1.44**	**16**	*e*P		**Pn**	**05 57 08.1**	**-0.6**
PB01				*i* S		**Sn**	**05 57 27.8**	**+0.5**
PB01				AML		AML	05 57 31.4	
	comp=E,5μm,0.3s							
SPCH	**San Pedro de A**	**1.65**	**107**	*i* P		**Pn**	**05 57 12.9**	**+1.4**
SPCH				*i* S		**Sn**	**05 57 36.9**	**+4.6**
LPAZ	**La Paz**	**6.34**	**16**	Pn		**Pn**	**05 58 18.1**	**+1.9**
	comp=E,0.5nm,0.3s,baz=234,slow=5.3,SNR=8.8							
LCO	**Las Campanas**	**6.58**	**186**	*e*Pn		**Pn**	**05 58 19.4**	**0.0**
LCO				*e*Sn		**Sn**	**05 59 47.8**	**+14**
SIV	**San Ignacio**	**10.52**	**54**	Pn		**Pn**	**05 59 10.5**	**-3.0**
	comp=E,0.8nm,0.3s,baz=244,slow=13,SNR=17							
SIV				Sn		**Sn**	**06 01 08.7**	**-2.4**
	comp=E,0.1nm,0.3s,baz=307,slow=16,SNR=1.4							
TORD	**Torodi Ar. Bea**	**78.54**	**71**	P		**P**	**06 08 37.7**	**-6.7**
	comp=E,1.2nm,0.8s,baz=247,slow=5.0,SNR=6.4							
MKAR	**Makanchi Array**	**146.93**	**36**	PKPbc		PKPbc	06 16 19.0	-5.8
	comp=E,0.5nm,0.6s,baz=326,slow=2.6,SNR=6.3							

ISCJB ***16*** *06:01:47.8±1.0, 3355N±004×14109E±008, h54km±10km, mb3.7/3, Error ellipse: s-maj=11.4km s-min=7.1km az=15.8*
JMA ***16*** *06:01:48.2±0.2, 3360N×14109E, h52km, M3.2*
IDC ***16*** *06:01:49.3±3.9, 3342N×141.11E, h42km±35km, mb3.4/3, mb1 3.6/4, mb1mx3.3/20, mbtmp3.4/4, ML3.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/22, Error ellipse: s-maj=32.2km s-min=22.9km az=108.0*

ISC 16 06:01:48.5±1.2, 3354N±005×14110E±009, h38km±14km, n15, σ0≟73/24, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.12**	**355**	P		**Pn**	**06 02 06.9**	**-0.7**
BSO1				*e*S		**Sn**	**06 02 21.0**	**-0.8**
JHJ2	**Mitsune**	**1.16**	**249**	P		**Pn**	**06 02 08.7**	**+0.6**
JHJ2				*e*S		**Sn**	**06 02 22.7**	**0.0**
JHJ	**Hachijo jima 2**	**1.18**	**250**	P		**Pn**	**06 02 08.8**	**+0.3**
	195nm,0.3s,baz=148,slow=4.2,SNR=32							
JHJ				S		**Sn**	**06 02 22.8**	**-0.5**
	164nm,0.3s,baz=57,slow=23,SNR=11							
JHJ				LR		LR	06 02 28.7	
	comp=Z,1μm,18.5s,baz=5.0,slow=

NEIC ***16*** *06:47:55.8, 2272S×7074W, h20km, ML3.2(GUC), After GUC.*
GUC ***16*** *06:47:55.8±0.9, 2272S×7074W, h20km±20km, ML3.2*
ISC 16 06:47:56.4±1.2, 2279S±006×709W±01, h35km, n12, σ1§03/19, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.89**	**132**	*eP*	**Pn**	**06 48 11.8**	**-0.7**
CEN1				*i* S	**Sn**	**06 48 24.9**	**+0.7**
CEN1				AML	AML	06 48 27.1	
	comp=E,452nm,0.6s						
ANCH	**Antofagasta**	**1.01**	**152**	*i* P	**Pn**	**06 48 13.6**	**-0.5**
ANCH				*i* S	**Sn**	**06 48 26.1**	**-0.9**
LVC	**Limon Verde**	**1.86**	**85**	Pg	**Pn**	**06 48 25.3**	**-0.5**
	comp=E,45nm,0.3s,SNR=20						
LVC				Lg		06 48 47.7	
	comp=E,73nm,0.3s,SNR=20						
LVC	**Limon Verde**	**1.86**	**85**	*ePn*	**Pn**	**06 48 25.1**	**-0.7**
LVC				Pg	**Pn**	**06 48 25.3**	**-0.5**
LVC				*eSn*	**Sn**	**06 48 47.4**	**-0.7**
LVC				Lg		06 48 47.7	
LVC	**Limon Verde**	**1.86**	**85**	*i* P	**Pn**	**06 48 25.1**	**-0.7**
LVC				*i* S	**Sn**	**06 48 47.5**	**-0.7**
LVC				AML	AML	06 48 49.9	
	comp=N,291nm,0.3s						
SPCH	**San Pedro de A**	**2.51**	**93**	*eP*	**Pn**	**06 48 37.2**	**+2.5**
SPCH				*i* S	**Sn**	**06 49 07.7**	**+3.5**
SPCH	**San Pedro de A**	**2.51**	**93**	*eP*	**Pn**	**06 48 37.2**	**+2.5**
SPCH				*i* S	**Sn**	**06 49 07.7**	**+3.5**
SPCH				AML	AML	06 49 15.2	
	comp=E,730nm,0.3s						
LPAZ	**La Paz**	**6.98**	**23**	Pn	**Pn**	**06 49 36.6**	**+0.4**
	comp=E,0.1nm,0.3s,baz=232,slow=13,SNR=2.4						
CFAA	**Coronel Fontan**	**9.10**	**165**	Pn	**Pn**	**06 50 06.2**	**+0.9**
	comp=E,0.0nm,0.3s,baz=4.1,slow=14,SNR=2.1						
CFAA				Sn	**Sn**	**06 51 60.0**	**+14**
	comp=E,0.0nm,0.3s,baz=205,slow=19,SNR=2.4						
SIV	**San Ignacio**	**11.49**	**56**	Pn	**Pn**	**06 50 36.8**	**-1.2**
	comp=E,0.2nm,0.3s,baz=248,slow=14,SNR=8.5						
TORD	**Torodi Ar. Bea**	**79.54**	**71**	P	**P**	**07 00 00.2**	**+0.1**
	comp=E,0.4nm,0.7s,baz=253,slow=5.2,SNR=2.9						
MKAR	**Makanchi Array**	**147.76**	**35**	PKPbc	PKPbc	07 07 38.9	+1.5
	comp=E,0.2nm,0.6s,baz=336,slow=3.2,SNR=2.9						

ISCJB ***16*** *06:48:31.4±0.5, 3649N±004×2957E±004, h21km, Error ellipse: s-maj=6.1km s-min=4.0km az=170.6*
CSEM ***16*** *06:48:31.4±0.2, 3652N×2959E, h25km, MD3.1, Error ellipse: s-maj=5.7km s-min=1.9km az=173.0*
ISK ***16*** *06:48:31.6, 3657N×2961E, h21km, MD3.1*
DDA ***16*** *06:48:32.4, 3650N×2918E, h7km±6km, Md3.0*
ISC 16 06:48:32.4±0.7, 3643N±004×2955E±004, h30km±5km, n25, σ1§00/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.28**	**175**	*eP*	**Pb**	**06 48 39.5**	**-0.1**
FETY	**Fethiye**	**0.43**	**298**	*ePG*	**Pb**	**06 48 40.7**	**-1.0**
FETY				*eSG*	**Sb**	**06 48 48.5**	**+0.4**
GOLH	**Golhisar**	**0.80**	**0**	*i* P	**Pn**	**06 48 47.2**	**-0.5**
GOLH				*i* S	**Sb**	**06 48 59.9**	**+1.6**
TURN	**Turunc**	**0.88**	**300**	*i* P	**Pn**	**06 48 52.0**	**+3.2**
TURN				*i* S	**Sn**	**06 49 06.7**	**+6.2**
ANTB	**Antalya**	**1.00**	**62**	*ePG*	**Pn**	**06 48 49.7**	**-0.7**
ARG	**Arkhangelos**	**1.17**	**260**	*eP*	**Pn**	**06 48 52.3**	**-0.5**
YER	**Yerkesik**	**1.24**	**305**	*ePN*	**Pn**	**06 48 53.5**	**-0.1**
YER				*eSN*	**Sn**	**06 49 10.6**	**+1.3**
BCK	**Bucak**	**1.32**	**39**	*ePN*	**Pn**	**06 48 53.6**	**-1.1**
DENT	**Denizli**	**1.38**	**343**	*ePN*	**Pn**	**06 48 54.4**	**-1.2**
ISP	**Isparta**	**1.60**	**28**	*ePN*	**Pn**	**06 48 57.7**	**-1.0**
DAT	**Datca**	**1.62**	**281**	*ePN*	**Pn**	**06 48 59.0**	**+0.2**
MLSB	**Milas**	**1.66**	**302**	*ePN*	**Pn**	**06 48 59.4**	**-0.1**
BDRM	**Kayabasi**	**1.81**	**291**	*i* P	**Pn**	**06 49 01.9**	**+0.4**
BDRM				*i* S	**Sn**	**06 49 24.5**	**+1.1**
KHL	**Karahalli**	**1.89**	**359**	*ePN*	**Pn**	**06 49 00.8**	**-1.8**
KARP	**Karpathos**	**2.13**	**246**	*eP*	**Pn**	**06 49 06.0**	**0.0**
KULA	**Kula-Manisa**	**2.19**	**341**	*ePN*	**Pn**	**06 49 06.1**	**-0.8**
GCAM	**G?zelcaml?**	**2.25**	**305**	*i* P	**Pn**	**06 49 06.9**	**-0.6**
GCAM				*i* S	**Sn**	**06 49 33.0**	**-1.2**
HDMB	**Hadim**	**2.42**	**76**	*ePN*	**Pn**	**06 49 10.4**	**+0.5**
BOLV	**Bolvadin**	**2.54**	**26**	*i* P	**Pn**	**06 49 13.4**	**+1.9**
BOLV				*i* S	**Sn**	**06 49 44.0**	**+2.7**
GDZ	**Gediz**	**2.65**	**359**	*i* P	**Pn**	**06 49 12.2**	**-0.9**
GDZ				*i* S	**Sn**	**06 49 43.7**	**-0.5**
LADK	**Ladik-KONYA**	**2.85**	**51**	*ePN*	**Pn**	**06 49 15.7**	**-0.1**
KDHN	**Kadinhani**	**2.92**	**44**	*eP*	**Pn**	**06 49 16.7**	**0.0**
KDHN				*i* S	**Sn**	**06 49 51.0**	**+0.3**
LEF	**Lefka**	**3.01**	**115**	*ePN*	**Pn**	**06 49 19.7**	**+1.6**
KIZT	**Kizilcal**	**3.06**	**36**	*ePN*	**Pn**	**06 49 18.5**	**-0.3**
APE	**Apeiranthos**	**3.29**	**282**	*eP*	**Pn**	**06 49 22.8**	**+0.9**

IDC ***16*** *06:53:46.4±0.9, 1359S×7679W, h0km, mb3.9/7, mb1 4.1/10, mb1mx4.0/19, mbtmp3.9/10, ML3.2/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=36.7km s-min=15.5km az=73.0*
ISCJB ***16*** *06:53:49.0±0.7, 1365S±006×769W±0.1, h33km, mb3.9/7, Error ellipse: s-maj=16.7km s-min=7.5km az=161.6*
NEIC ***16*** *06:53:51.7±0.6, 1355S×7686W, h35km, mb4.0/1, ML4.3(LIM), Error ellipse: s-maj=18.4km s-min=10.3km az=58.0*
NEIC Felt [II] at Pisco.
ISC 16 06:53:51.2±0.7, 1360S±006×769W±01, h35km, n23, σ1§14/24, mb3.9/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.60**	**0**	Pn	**Pn**	**06 54 15.7**	**-1.3**
	129nm,0.3s,baz=181,slow=13,SNR=232						
NNA				Sn	**Sn**	**06 54 37.1**	**+0.6**
	334nm,0.3s,baz=201,slow=19,SNR=25						
NNA				LR	LR	06 54 39.8	
	comp=Z,679nm,19.5s,baz=311,slow=34						
NNA	**Nana**	**1.60**	**0**	*ePn*	**Pn**	**06 54 15.7**	**-1.4**
NNA				*eSn*	**Sn**	**06 54 36.8**	**+0.3**
ARE	**Arequipa**	**5.91**	**119**	*eP*	**Pn**	**06 55 22.0**	**+5.7**
ARE				*eS*	**Sn**	**06 56 34.0**	**+11**
ATAH	**Atahualpa**	**6.73**	**347**	Pn	**Pn**	**06 55 28.4**	**+0.8**
	2.4nm,0.3s,baz=120,slow=12,SNR=15						
ATAH				Sn	**Sn**	**06 56 41.4**	**-1.7**
	baz=0.0,slow=19,SNR=1.6						
LPAZ	**La Paz**	**8.84**	**109**	Pn	**Pn**	**06 55 58.3**	**+1.8**
	0.6nm,0.3s,baz=284,slow=14,SNR=9.7						
LPAZ	**La Paz**	**8.84**	**109**	*ePn*	**Pn**	**06 56 00.1**	**+3.5**
	3.8nm,0.6s						
LVC	**Limon Verde**	**11.71**	**141**	Pn	**Pn**	**06 56 33.1**	**-2.8**
	1.6nm,0.3s,baz=346,slow=0.1,SNR=9.9						
LVC	**Limon Verde**	**11.71**	**141**	*ePn*	**Pn**	**06 56 33.6**	**-2.3**
	6.5nm,0.5s						
SIV	**San Ignacio**	**15.44**	**101**	Pn	**Pn**	**06 57 26.0**	**-0.5**
	0.1nm,0.3s,baz=276,slow=10,SNR=3.0						
CFAA	**Coronel Fontan**	**19.59**	**158**	P	**Pn**	**06 58 16.7**	**-1.2**
	0.1nm,0.3s,baz=332,slow=13,SNR=19						
CFAA	**Coronel Fontan**	**19.59**	**158**	P	**Pn**	**06 58 16.7**	**-1.2**
SDV	**Santo Domingo**	**23.17**	**16**	P	**P**	**06 58 55.3**	**+0.4**
	3.9nm,1.0s,mb3.8,baz=194,slow=2.6,SNR=4.7						
PCRV	**Puerto La Cruz**	**26.55**	**28**	LR	LR	07 09 29.6	
	comp=Z,96nm,18.0s,baz=14,slow=36						
PLCA	**Paso Flores**	**27.59**	**170**	P	**P**	**06 59 35.1**	**0.0**
	2.5nm,0.8s,mb3.9,baz=320,slow=13,SNR=4.5						
PLCA	**Paso Flores**	**27.59**	**170**	*eP*	**P**	**06 59 35.3**	**+0.2**
	2.9nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**49.92**	**329**	P	**P**	**07 02 43.2**	**+1.5**
	0.6nm,0.9s,mb3.6,baz=145,slow=9.0,SNR=6.0						
PDAR	**Pinedale Array**	**52.61**	**334**	P	**P**	**07 04 17.8**	**-0.8**
	0.5nm,0.8s,mb3.6,baz=116,slow=4.1,SNR=3.1						
PDAR	**Pinedale Array**	**63.61**	**334**	P	**P**	**07 04 17.8**	**-0.8**
NVAR	**Mina Array Bea**	**64.68**	**325**	P	**P**	**07 04 26.8**	**+1.2**
	0.4nm,0.6s,mb3.6,baz=138,slow=7.2,SNR=3.2						
ULM	**Lac du Bonnet**	**65.73**	**347**	P	**P**	**07 04 32.6**	**+0.4**
	3.8nm,0.7s,mb4.5,baz=166,slow=3.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**82.22**	**74**	P	**P**	**07 06 09.7**	**+0.2**
	1.4nm,0.9s,mb3.9,baz=266,slow=4.7,SNR=4.8						
WRA	**Warramunga Arr**	**134.70**	**223**	PKP	PKPdf	07 13 08.2	+1.2
	0.4nm,0.7s,baz=137,slow=2.0,SNR=2.8						
SONM	**Songino Array**	**145.76**	**356**	PKPbc	PKPbc	07 13 27.8	+1.2
	0.5nm,0.5s,baz=357,slow=3.2,SNR=2.4						

ISCJB ***16*** *06:58:51.6±0.8, 2105±02×16936E±009, h10km, mb4.1/5, MS3.7/5, Error ellipse: s-maj=29.0km s-min=8.0km az=160.3*
IDC ***16*** *06:58:52.2±1.7, 2048S×16915E, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.0/16, mbtmp4.2/5, MS3.7/8, Ms1 3.7/8, ms1mx3.3/25, Error ellipse: s-maj=89.1km s-min=26.4km az=155.0*
NOU ***16*** *06:58:57.7±1.5, 2012S×16867E, h10km, MD2.6, ML3.5*
ISC 16 06:58:53.2±0.8, 2115±02×16940E±009, h10km, n18, σ1§05/14, mb4.1/5, MS3.7/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NORM	**Noumea**	**2.95**	**246**	*eS*	**Sn**	**07 00 15.2**	**-0.4**
ONTRN	**Noumea**	**3.01**	**245**	*eP*	**Pn**	**06 59 44.2**	**+3.4**
ONTRN				*eS*	**Sn**	**07 00 16.8**	**-0.2**
ONTRN				AMP		07 00 22.1	
	comp=Z,955nm,0.0s						
NOUC	**Port Laguerre**	**3.06**	**250**	*eP*	**Pn**	**06 59 42.8**	**+1.2**
NOUC				*eS*	**Sn**	**07 00 18.1**	**-0.2**
NOUC				AMP		07 00 22.7	
	comp=Z,152nm,2.6s						
HNR	**Honiara**	**14.72**	**320**	LR	LR	07 06 58.2	
	comp=Z,196nm,20.9s,baz=337,slow=34						
URZ	**Urewera**	**18.39**	**160**	LR	LR	07 09 20.1	
	comp=Z,297nm,19.3s,baz=42,slow=33						
AFI	**Afiamalu**	**19.30**	**71**	LR	LR	07 09 09.0	
	comp=Z,150nm,21.5s,baz=125,slow=32						
CTA	**Charters Tower**	**21.69**	**268**	P	**P**	**07 03 44.7**	**+0.3**
	comp=Z,7.7nm,0.9s,mb4.2,baz=98,slow=15,SNR=3.9						
CTA				LR	LR	07 11 03.9	
	comp=Z,190nm,21.5s,MS3.5,baz=309,slow=34						
RPZ	**Rata Peaks**	**22.63**	**177**	LR	LR	07 12 02.2	
	comp=Z,282nm,20.4s,MS3.7,baz=211,slow=34						
STKA	**Stephens Creek**	**27.05**	**241**	P	**P**	**07 04 37.4**	**+1.6**
	comp=Z,2.2nm,0.8s,mb3.8,baz=80,slow=8.8,SNR=9.4						
STKA				LR	LR	07 15 51.3	
	comp=Z,165nm,18.5s,MS3.6,baz=301,slow=38						
RAR	**Rarotonga**	**28.73**	**96**	LR	LR	07 13 31.6	
	comp=Z,200nm,21.4s,MS3.7,baz=331,slow=30						
WRA	**Warramunga Arr**	**32.82**	**266**	P	**P**	**07 05 25.5**	**-1.6**
	comp=Z,1.3nm,0.5s,mb4.1,baz=96,slow=8.5,SNR=48						
WRA				LR	LR	07 18 43.5	
	comp=Z,196nm,19.4s,MS3.8,baz=90,slow=36						
ASAR	**Alice Springs**	**32.88**	**259**	P	**P**	**07 05 26.8**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.5,baz=81,slow=9.1,SNR=44						
ASAR				PcP	PcP	07 08 12.1	-0.2
	comp=Z,0.4nm,0.8s,baz=109,slow=5.0,SNR=3.7						
SNAA	**Sanae**	**87.36**	**182**	*e*	**P**	**07 11 38.1**	**-2.0**
SNAA				*e*		07 11 50.6	
SNAA				*e*		07 11 58.9	
VNA3	**Neumayer Olymp**	**87.94**	**180**	*e*	**P**	**07 11 42.5**	**-0.4**
VNA2	**Neumayer--Watz**	**88.23**	**181**	*e*	**P**	**07 11 44.3**	**0.0**
	baz=187,slow=4.6						
VNA2				*e*		07 11 57.2	
VNA2				*e*		07 12 05.3	
VNA1	**Neumayer--Stat**	**88.52**	**181**	*e*	**P**	**07 11 46.6**	**+1.0**
NVAR	**Mina Array Bea**	**89.89**	**48**	P	**P**	**07 11 52.9**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.8,baz=236,slow=6.1,SNR=3.0						
GERES	**GERESS Array B**	**146.16**	**331**	PKPbc	PKPbc	07 18 31.7	-1.9
	comp=Z,0.9nm,0.8s,baz=40,slow=6.4,SNR=6.3						

IDC 16 07:06:11.2±2.1, 379N×12673E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=160.0km s-min=25.9km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.74**	**163**	P	P	07 11 33.8	-0.7
	1.0nm,0.4s,baz=342,slow=10,SNR=15						
ASAR	**Alice Springs**	**28.17**	**166**	P	P	07 12 06.5	+1.0
	0.2nm,0.3s,baz=352,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**57.50**	**325**	P	P	07 16 02.2	0.0
	0.2nm,0.4s,baz=121,slow=7.0,SNR=6.5						

ISCJB ***16*** *07:34:46.0±0.7, 12S±02×126W±02, h10km, mb4.0/7, MS3.8/3, Error ellipse: s-maj=31.0km s-min=11.0km az=34.3*
IDC ***16*** *07:34:47.8±3.0, 072S×1308W, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/22, mbtmp4.1/9, ML4.0/1, MS3.9/4, Ms1 3.9/4, ms1mx3.5/29, Error ellipse: s-maj=108.3km s-min=37.8km az=155.0*
ISC 16 07:34:48.4±0.9, 12S±02×125W±03, h10km, n18, σ1§17/17, mb4.0/7, MS3.8/3, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.53**	**45**	*eP*	**Pn**	**07 37 22.1**	**+2.6**
	60nm,0.9s						
KIC	**Kosan Boka**	**10.83**	**46**	*eP*	**Pn**	**07 37 24.0**	**+0.4**
	60nm,0.7s						
TIC	**Toumodi**	**10.83**	**44**	*eP*	**Pn**	**07 37 23.3**	**-0.3**
	28nm,0.2s						
DBIC	**Dimbokro**	**10.96**	**44**	Pn	**Pn**	**07 37 25.3**	**-0.1**
	1.2nm,0.3s,baz=222,slow=15,SNR=14						
DBIC				Sn	**Sn**	**07 39 21.6**	**-6.6**
	0.4nm,0.3s,baz=143,slow=20,SNR=2.4						
DBIC				LR	LR	07 40 54.8	
	comp=Z,749nm,21.5s,baz=193,slow=33						
TORD	**Torodi Ar. Bea**	**20.07**	**44**	P	**Pn**	**07 39 23.1**	**-0.8**
	9.5nm,0.6s,baz=233,slow=11,SNR=35						
TORD				S	**Sn**	**07 42 58.8**	**-11**
	1.4nm,0.7s,baz=241,slow=22,SNR=4.1						
TORD				LR	LR	07 46 32.5	
	comp=Z,395nm,19.6s,MS3.8,baz=225,slow=35						
KEST	**Kesra**	**42.06**	**27**	LR	LR	08 01 28.6	
	comp=Z,84nm,18.5s,MS3.7,baz=210,slow=38						
GERES	**GERESS Array B**	**54.80**	**21**	P	**P**	**07 44 18.7**	**+0.3**
	0.9nm,0.6s,mb4.0,baz=202,slow=6.9,SNR=6.1						
LPAZ	**La Paz**	**56.75**	**251**	LR	LR	08 06 44.1	
	comp=Z,143nm,21.9s,MS4.0,baz=260,slow=34						
AKASG	**Malin Array Be**	**62.75**	**28**	P	**P**	**07 45 12.2**	**-1.5**
	0.3nm,0.4s,mb3.8,baz=239,slow=5.8,SNR=5.1						
VNA2	**Neumayer--Watz**	**69.66**	**178**	*e*	**P**	**07 45 58.2**	**+0.5**
	baz=341,slow=7.8						
VNA2				*e*		07 46 06.0	
VNA2				*e*		07 46 11.6	
VNA3	**Neumayer Olymp**	**69.92**	**179**	*e*	**P**	**07 45 59.2**	**-0.1**
VNA3				*e*		07 46 07.6	
VNA3				*e*		07 46 12.2	
SNAA	**Sanae**	**70.60**	**177**	*e*	**P**	**07 46 02.3**	**-1.2**
SNAA				*e*		07 46 10.6	
SNAA				*e*		07 46 16.0	
ARCES	**ARCESS Array B**	**75.11**	**13**	P	**P**	**07 46 29.2**	**-1.1**
	1.8nm,0.7s,mb4.1,baz=224,slow=5.1,SNR=7.2						
AKTO	**Aktyubinsk**	**78.66**	**38**	P	**P**	**07 46 52.2**	**+1.5**
	2.4nm,1.0s,mb4.1,baz=273,slow=6.9,SNR=4.8						
BVAR	**Borovoye Array**	**86.70**	**37**	P	**P**	**07 47 33.9**	**+1.4**
	1.5nm,0.7s,mb4.3,baz=260,slow=4.4,SNR=8.4						
TXAR	**Lajitas Array**	**91.60**	**299**	P	**P**	**07 47 53.3**	**-2.8**
	0.3nm,0.6s,mb3.8,baz=126,slow=6.3,SNR=4.1						
MKAR	**Makanchi Array**	**94.20**	**43**	P	**P**	**07 48 08.4**	**+0.7**
	0.8nm,0.7s,mb4.2,baz=266,slow=4.1,SNR=9.2						
ASAR	**Alice Springs**	**139.04**	**129**	PKhKP		07 54 07.0	
	0.3nm,0.6s,baz=216,slow=2.6,SNR=6.0						

CSEM ***16*** *07:36:30.2±0.9, 3739N×2473W, h5km, ML2.1, Error ellipse: s-maj=9.6km s-min=8.2km az=53.0, After PDA*
PDA 16 07:36:30.2±0.9, 3739N×2473W, h5km, MD3.9, ML2.1, Error ellipse: s-maj=9.6km s-min=8.2km az=53.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.47**	**215**	*eP*	Pg	07 36 38.7	-0.5
PSMN				*eS*	Sg	07 36 44.5	-0.7
PDA	**Ponta Delgada**	**0.82**	**296**	*eP*	Pg	07 36 43.0	-3.0
PDA				*eS*	Sg	07 36 52.6	-4.1
PSET	**Sete Cidades**	**0.90**	**299**	*eP*	Pg	07 36 44.7	-2.8
PSET				*eS*	Sg	07 36 55.6	-3.6
PSET				A		07 37 01.6	
	21nm,0.2s						
PSET	**Sete Cidades**	**0.90**	**299**	*eP*	Pg	07 36 44.7	-2.8
PSET				*eS*	Sg	07 36 55.6	-3.6
PSCM	**Serra do Cume**	**2.30**	**306**	*eP*	Pn	07 37 03.8	-4.9
PSCM				*eS*	Sn	07 37 29.4	-8.0
PSCM				A		07 37 31.4	
	6.6nm,0.2s						
PSCM	**Serra do Cume**	**2.30**	**306**	*eP*	Pn	07 37 03.8	-4.9
PSCM				*eS*	Sn	07 37 29.4	-8.0

BJI ***16*** *07:52:16.9, 561S×15238E, h47km, mB5.2, mb5.1, Ms5.0, Msz4.8*
ISCJB ***16*** *07:52:20.0±0.1, 551S±003×15161E±002, h42km, mb5.2/102, MS4.8/40, Error ellipse: s-maj=5.1km s-min=3.4km az=165.5*
MOS ***16*** *07:52:19.5±1.1, 537S×15157E, h33km, mb5.5/32, MS4.9/5, Error ellipse: s-maj=9.4km s-min=6.9km az=84.5*
NEIC ***16*** *07:52:20.8±0.1, 549S×15168E, mb5.3/50, Error ellipse: s-maj=4.9km s-min=3.6km az=125.0*
GCMT ***16*** *07:52:20.8±0.3, 575S×15190E, h26km±1km, MW5.4/61, Moment Tensor Solution. s43,c56; s61,c87; Duration: 1§2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00±.08; $M_{\theta\theta}$-1.10±.05; $M_{\phi\phi}$0.09±.05; $M_{r\theta}$1.33±.14; $M_{\theta\phi}$-0.29±.04; $M_{\phi r}$0.07±.11; Best double couple: $M_0$1.71800×10^{17} NP1:ϕ_s247.00000°, δ20.00000°, λ72.00000°. NP2: ϕ_s85.00000°, δ71.00000°, λ96.00000°. Principal axes: T 1.6470, Plg64.0000°, Azm6.0000°; N 0.1380, Plg6.0000°, Azm263.0000°; P -1.7890, Plg25.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***16*** *07:52:20.4±3.7, 549S×15162E, h36km±29km, mb4.8/19, mb1 4.9/21, mb1mx4.9/22, mbtmp4.8/21, ML4.2/2, MS4.7/22, Ms1 4.7/22, ms1mx4.5/29 Error ellipse: s-maj=16.0km s-min=11.3km az=114.0*
DJA ***16*** *07:52:28, 547S×15126E, h51km, Mw5.6/5*
ISC 16 07:52:21.7±0.1, 553S±003×15168E±002, h44km, h44km±1.7km:pP-P, n680, σ0§68/527, mb5.2/102, MS4.8/40, 160C-160D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.91**	**229**	*ePn*	**Pn**	**07 53 49.1**	**+2.4**
PMG				*eSn*	**Sn**	**07 54 55.2**	**+2.0**
PMG	**Port Moresby**	**5.91**	**229**	P	**Pn**	**07 53 50.0**	**+3.3**
	1μm,1.0s,4.7nm						
HNR	**Honiara**	**9.07**	**116**	Pn	**Pn**	**07 54 27.8**	**-2.2**
	12nm,0.3s,baz=302,slow=1.7,SNR=12						
HNR				LR	LR	07 57 25.2	
	comp=Z,4μm,20.8s,baz=285,slow=33						
HNR	**Honiara**	**9.07**	**116**	*ePn*	**Pn**	**07 54 27.4**	**-2.6**
	190nm,0.8s						
HNR	**Honiara**	**9.07**	**116**	*eP*	**Pn**	**07 54 27.4**	**-2.6**
HNR				pmax	pmax		
	comp=Z,190nm,0.8s						
COEN	**Coen**	**11.85**	**224**	*ePn*	**Pn**	**07 55 08.6**	**+0.5**
	comp=Z,16nm,1.1s						
COEN	**Coen**	**11.85**	**224**	P	**Pn**	**07 55 08.6**	**+0.5**
	comp=Z,15nm,1.4s						
CTA	**Charters Tower**	**15.40**	**200**	Pn	**Pn**	**07 55 55.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=37,slow=12,SNR=3.1						
CTA				LR	LR	08 01 13.0	
	comp=Z,3μm,21.4s,baz=25,slow=34						
CTA	**Charters Tower**	**15.40**	**200**	Pn	**Pn**	**07 55 55.2**	**-0.9**
CTA				LR	LR	08 01 13.0	
CTAO	**Charters Tower**	**15.40**	**200**	*eP*	**Pn**	**07 55 56.6**	**+0.5**
	comp=Z,31nm,0.8s						
CTAO	**Charters Tower**	**15.40**	**200**	*eP*	**Pn**	**07 55 56.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,31nm,0.8s						
CTAO	**Charters Tower**	**15.40**	**200**	P	**Pn**	**07 56 01.3**	**+5.2**
	comp=Z,76nm,1.6s						
EIDS	**Eidsvold**	**19.74**	**182**	*eP*	**Pn**	**07 56 47.8**	**-1.7**
	comp=Z,426nm,1.0s						
GUMO	**Guam**	**20.16**	**340**	*eP*	**P**	**07 56 53.2**	**+0.7**
	comp=Z,981nm,1.1s						
GUMO				*e*		07 57 02.6	
GUMO	**Guam**	**20.16**	**340**	*eP*	**P**	**07 56 53.2**	**+0.7**
GUMO				pmax	pmax		
	comp=Z,981nm,1.1s						
GUMO	**Guam**	**20.16**	**340**	P	**P**	**07 56 55.5**	**+3.0**
	comp=Z,1μm,1.2s						
SWI	**Sorong**	**20.90**	**282**	P	**P**	**07 57 03.2**	**+2.6**
	comp=Z,158nm,1.0s,comp=Z,2μm						
DZM	**Mont Dzumac**	**21.78**	**140**	*eP*	**P**	**07 57 08.0**	**-1.9**
WRAB	**Tennant Creek**	**22.12**	**228**	P	**P**	**07 57 14.0**	**+0.5**
	comp=Z,1μm,0.7s,mb6.4,SNR=22						
WRAB	**Tennant Creek**	**22.12**	**228**	*eP*	**P**	**07 57 14.1**	**+0.6**
	comp=Z,124nm,0.8s,mb5.4						
WRAB				*e*		07 57 27.3	
WRAB				*eS*	**S**	**08 01 14.9**	**-0.1**
WRAB	**Tennant Creek**	**22.12**	**228**	*eP*	**P**	**07 57 14.1**	**+0.6**
WRAB				*e*		07 57 27.3	
WRAB				*eS*	**S**	**08 01 15.0**	**0.0**
WRAB				pmax	pmax		
	comp=Z,124nm,0.8s,mb5.4						
WRAB	**Tennant Creek**	**22.12**	**228**	P	**P**	**07 57 14.6**	**+1.1**
	comp=Z,214nm,0.9s,mb5.6						
WB2	**Warramunga Arr**	**22.12**	**228**	*eP*	**P**	**07 57 13.8**	**+0.3**
WB2				*e*		07 57 29.3	
WB2				*eS*	**S**	**08 01 14.7**	**-0.4**
WRA	**Warramunga Arr**	**22.13**	**228**	P	**P**	**07 57 13.9**	**+0.2**
	comp=Z,38nm,0.9s,mb4.8,baz=53,slow=10,SNR=98						
WRA				S	**S**	**08

SSE XS sS 08 07 57.6 +5.1
SSE AMB AMB
comp=Z,24nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,192nm,5.2s
SSE LR LR
comp=N,375nm,14.7s,MS4.8
SSE LR LR
comp=E,599nm,14.7s,MS4.8
SSE LR LR
comp=Z,814nm,13.5s,MS4.8
QIZ Qiongzhong 47.89 302 P **P** **08 00 56.6 +0.8**
QIZ S **S** **08 07 53.4 +3.1**
QIZ XS sS 08 08 12.1 +1.3
QIZ LR LR
comp=E,656nm,18.0s
QIZ LR LR
comp=Z,935nm,21.4s,MS4.7
KSRS Korea Array 48.16 335 P **P** **08 00 56.5 -1.0**
comp=Z,6.0nm,0.9s,mb4.6,baz=153,slow=8.6,SNR=15
KSRS PcP PcP 08 02 24.6 0.0
comp=Z,4.9nm,0.9s,baz=154,slow=2.9,SNR=6.2
KSRS LR LR 08 17 18.3
comp=Z,391nm,20.1s,MS4.4,baz=186,slow=31
ASAJ Asahikawa 50.09 351 LR LR 08 22 22.5
comp=Z,372nm,19.3s,MS4.4,baz=160,slow=36
WHN Wuhan 50.62 317 *e*P **P** **08 01 16.5 0.0**
SNY Shenyang 53.65 334 P **P** **08 01 40.8 +2.0**
SNY AMB AMB
comp=Z,157nm,12.0s
SNY LR LR
comp=N,316nm,16.2s,MS4.7
SNY LR LR
comp=E,377nm,16.8s,MS4.7
SNY LR LR
comp=Z,577nm,17.7s,MS4.7
MDJ Mudanjiang 53.72 341 P **P** **08 01 40.4 +1.1**
MDJ AMB AMB
comp=Z,6.0nm,0.9s,mb4.5
MDJ AMB AMB
comp=Z,102nm,6.5s
MDJ LR LR
comp=N,347nm,22.5s,MS4.5
MDJ LR LR
comp=E,260nm,18.0s,MS4.5
MDJ LR LR
comp=Z,574nm,19.5s,MS4.6
GYA Guiyang 53.96 308⇑ *i*P **P** **08 01 42.9 +1.5**
GYA AP pP 08 01 55.5 +1.7
GYA XP sP 08 02 01.0 +2.1
GYA PCP PcP 08 02 47.5 +1.2
GYA PP PP 08 03 46.0 +2.9
GYA PCS PcS 08 06 47.3 +1.5
GYA S **S** **08 09 14.0 -0.2**
GYA XS sS 08 09 35.3 +0.4
GYA SS SS 08 12 55.0 -1.2
GYA AMB AMB
comp=Z,20nm,0.6s,mb5.2
GYA AMB AMB
comp=Z,170nm,4.5s
GYA LR LR
comp=N,740nm,17.0s,MS4.9
GYA LR LR
comp=E,630nm,18.3s,MS4.9
GYA LR LR
comp=Z,870nm,18.1s,MS4.9
CN2 Changchun 54.51 337 *e*P **P** **08 01 44.3 -0.8**
CN2 *e*AP pP 08 01 56.9 -0.6
CN2 *e*S **S** **08 09 18.8 -2.3**
CN2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.6
CN2 LR LR
comp=E,200nm,19.0s,MS4.6
CN2 LR LR
comp=Z,200nm,22.0s,MS4.1
BJT Baijiatuau 55.88 327 *e*P **P** **08 01 55.1 +0.1**
comp=Z,30nm,1.2s,mb5.2
BJT Baijiatuau 55.88 327 *e*P **P** **08 01 55.1 +0.1**
BJT pmax pmax
comp=Z,30nm,1.2s
BJI Beijing 55.89 327 P **P** **08 01 55.0 -0.1**
BJI PP PP 08 04 03.1 +2.9
BJI SS SS 08 13 29.1 +2.9
BJI AMB AMB
comp=Z,15nm,1.4s,mb4.8
BJI AMB AMB
comp=Z,194nm,6.5s
BJI LR LR
comp=N,690nm,22.6s,MS4.8
BJI LR LR
comp=E,523nm,18.8s,MS4.8
BJI LR LR
comp=Z,902nm,21.1s,MS4.8
XAN Xi'an 56.39 317 P **P** **08 01 58.3 -0.5**
XAN AP pP 08 02 13.5 +2.2
XAN S **S** **08 09 51.6 +5.1**
XAN SCS ScS 08 11 36.1 -8.5
XAN AMB AMB
comp=Z,28nm,1.2s,mb5.2
XAN AMB AMB
comp=Z,136nm,7.5s
XAN LR LR
comp=N,221nm,21.3s,MS4.6
XAN LR LR
comp=E,472nm,18.8s,MS4.6
XAN LR LR
comp=Z,1μm,20.9s,MS4.9
KMI Kunming 56.48 305 P **P** **08 02 00.8 +1.2**
KMI AP pP 08 02 09.3 -2.8
KMI PP PP 08 04 08.6 +2.9
KMI S **S** **08 09 50.0 +2.0**
KMI SS SS 08 13 39.3 +3.4
KMI AMB AMB
comp=Z,23nm,1.3s,mb5.0
KMI AMB AMB
comp=Z,94nm,3.1s
KMI LR LR
comp=N,206nm,19.5s,MS4.6
KMI LR LR
comp=E,402nm,16.7s,MS4.6
KMI LR LR
comp=Z,524nm,19.5s,MS4.6
CMAR Chiang Mai Arr 57.18 296 P **P** **08 02 04.0 -0.7**
comp=Z,9.6nm,0.7s,mb4.9,baz=124,slow=5.3,SNR=57
CMAR LR LR 08 26 40.5
comp=Z,406nm,20.1s,MS4.5,baz=100,slow=36
CMAR Chiang Mai Arr 57.18 296 *i* P **P** **08 02 06.0 +1.3**
CMAR pmax pmax
comp=Z,10.0nm,0.7s
KLR Kul'dur 57.23 345 *e*P **P** **08 01 58.8 -5.6**
CHTO Chiang Mai 57.30 296 *e*P **P** **08 02 05.7 +0.1**
comp=Z,70nm,1.7s,mb5.4
CHTO Chiang Mai 57.30 296 *e*P **P** **08 02 05.7 +0.2**
CHTO pmax pmax
comp=Z,70nm,1.7s,mb5.4
CD2 Chengdu 58.37 311⇓ *i*P **P** **08 02 13.8 +1.0**
CD2 AP pP 08 02 26.4 +1.0
CD2 XP sP 08 02 31.8 +1.4
CD2 PCP PcP 08 03 02.9 -0.5
CD2 PP PP 08 04 25.3 +2.8
CD2 PCS PcS 08 07 04.0 -1.0
CD2 S **S** **08 10 11.5 -1.2**
CD2 XS sS 08 10 33.0 -0.6
CD2 SCS ScS 08 11 56.3 -3.0
CD2 SS SS 08 14 05.8 +0.2
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,310nm,7.1s
CD2 LR LR
comp=N,710nm,19.0s
CD2 LR LR
comp=E,1μm,24.2s
CD2 LR LR
comp=Z,1μm,21.4s,MS5.0
PPT Papeete 58.57 107 *e*S **S** **08 10 13.6 -2.1**
comp=Z,634nm,25.8s
PPT *e*LQ 08 16 58.3
comp=Z,982nm,29.0s
PPT *e*LR LR 08 19 27.8
comp=Z,438nm,23.0s
PPT Papeete 58.57 107 LR LR 08 21 20.5
comp=Z,267nm,18.9s,MS4.4,baz=12,slow=30
PETK Petropavlovsk- 58.64 4 P **P** **08 02 13.6 -0.6**
comp=Z,11nm,1.0s,mb4.8,baz=187,slow=7.3,SNR=4.1
PETK LR LR 08 22 13.7
comp=Z,487nm,21.2s,MS4.6,baz=189,slow=31
PETK Petropavlovsk- 58.64 4 P **P** **08 02 13.6 -0.6**
PETK LR LR 08 22 13.7
HHC Hu-ho-hao-te 58.99 325 *e*P **P** **08 02 17.8 +0.9**
HHC AP pP 08 02 29.1 -0.4
HHC XP sP 08 02 36.3 +1.7
HHC PCP PcP 08 03 06.0 +0.4
HHC PP PP 08 04 30.4 +2.6
HHC PCS PcS 08 07 06.3 -1.1
HHC S **S** **08 10 21.3 +0.9**
HHC XS sS 08 10 42.8 +1.5
HHC SCS ScS 08 12 01.3 -2.1
HHC SS SS 08 14 18.9 +3.9
HHC AMB AMB
comp=Z,36nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,216nm,5.6s
HHC LR LR
comp=N,629nm,17.8s,MS4.9
HHC LR LR
comp=E,590nm,20.2s,MS4.9
HHC LR LR
comp=Z,956nm,18.4s,MS5.0
PMOR Pomariorio Ree 60.04 104 *e*P **P** **08 02 25.5 +0.8**
comp=Z,238nm,1.3s,mb6.1
LZH Lanzhou 60.98 317⇑ P **P** **08 02 31.0 +0.3**
LZH AP pP 08 02 43.9 +0.6
LZH XP sP 08 02 49.0 +0.7
LZH PP PP 08 04 48.3 +2.8
LZH S **S** **08 10 45.1 -1.0**
LZH XS sS 08 11 06.8 -0.3
LZH SS SS 08 14 46.5 +0.1
LZH AMB AMB
comp=Z,58nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,249nm,5.8s
LZH LR LR
comp=E,388nm,14.1s
LZH LR LR
comp=Z,697nm,16.7s,MS4.9
HIA Hailar 61.25 337 *e*P **P** **08 02 31.6 -0.6**
comp=Z,17nm,0.9s,mb5.2
HIA Hailar 61.25 337 *e*P **P** **08 02 31.6 -0.6**
HIA pmax pmax
comp=Z,17nm,0.9s
DRV Dumont d'Urvil 61.57 185 S **S** **08 10 46.0 -6.6**
GTA Gaotai 65.44 318⇑ P **P** **08 03 00.6 +0.4**
GTA AP pP 08 03 13.8 +0.9
GTA XP sP 08 03 18.8 +0.9
GTA S S 08 11 43.3 +1.6
GTA XS sS 08 12 05.4 +2.5
GTA SS SS 08 16 00.9 +5.0
GTA AMB AMB
comp=Z,15nm,1.1s,mb4.9
GTA AMB AMB
comp=Z,147nm,4.8s
GTA LR LR
comp=N,372nm,18.0s,MS4.8
GTA LR LR
comp=E,429nm,18.6s,MS4.8
GTA LR LR
comp=Z,621nm,21.3s,MS4.8
SHL Shillong 65.72 301 *e*P **P** **08 03 02.0 -0.3**
ULN Ulaanbaatar 66.03 329 *e*P **P** **08 03 04.3 +0.5**
comp=Z,30nm,0.4s,mb5.7
ULN Ulaanbaatar 66.03 329 *e*P **P** **08 03 04.3 +0.5**
ULN pmax pmax
comp=Z,30nm,0.4s,mb5.7
SONM Songino Array 66.35 328 P **P** **08 03 05.9 0.0**
comp=Z,20nm,0.7s,mb5.3,baz=138,slow=5.3,SNR=58
SONM LR LR 08 32 19.6
comp=Z,703nm,19.9s,MS4.9,baz=300,slow=36
TAOE Nuku Hiva Isla 67.64 97 *e*LR LR 08 23 44.8
comp=Z,897nm,23.5s
LSA Lhasa 67.73 305 *e*P **P** **08 03 15.6 +0.5**
comp=Z,23nm,0.9s,mb5.2
LSA Lhasa 67.73 305 *e*P **P** **08 03 15.6 +0.6**
LSA pmax pmax
comp=Z,23nm,0.9s,mb5.2
YAK Yakutsk 69.47 349 *e*P **P** **08 03 24.4 -0.7**
YAK Yakutsk 69.47 349 *e*P **P** **08 03 23.7 -1.4**
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.0
ZAK Zakamensk 69.54 329⇑ *i*P **P** **08 03 26.1 +0.3**
ZAK pmax pmax
comp=Z,54nm,0.9s,mb5.5
TAPN Taplejung 69.83 302 *e*P **P** **08 03 28.6 +0.5**
ODAN Odare 69.95 301 *e*P **P** **08 03 28.8 -0.1**
BOD Bodaibo 70.08 340 *e*P **P** **08 03 27.3 -1.7**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TLY Talaya 70.15 331 *e*P **P** **08 03 30.1 +0.5**
comp=Z,11nm,0.5s,mb5.0
TLY Talaya 70.15 331 *e*P **P** **08 03 29.6 0.0**
TLY eS S 08 12 38.5 +0.9
TLY pmax pmax
comp=Z,24nm,1.0s,mb5.1
TLY MLR MLR
comp=Z,431nm,18.0s,MS4.7
BOK Bokaro 70.40 298 *e*P **P** **08 03 30.9 -0.8**
BOK AMb AMB 08 03 35.3
comp=Z,41nm,1.3s,mb5.2
JIRN Jiri 71.21 302 *e*P **P** **08 03 35.7 -0.8**
comp=Z,23nm,0.7s,mb5.2
VIS Vishakhapatnam 71.27 291 *e*P **P** **08 03 36.9 -0.2**
VIS AMb AMB 08 03 39.5
comp=Z,48nm,0.9s,mb5.4
GUN Gumba 71.55 302 *e*P **P** **08 03 38.4 -0.2**
comp=Z,72nm,0.9s,mb5.6
PKI Pulchoki 71.85 301 *e*P **P** **08 03 39.8 -0.6**
comp=Z,69nm,1.2s,mb5.5
KKN Kakani 72.02 301 *e*P **P** **08 03 41.2 -0.2**
comp=Z,45nm,0.8s,mb5.5
DMN Daman 72.12 301 *e*P **P** **08 03 41.8 -0.2**
comp=Z,99nm,1.0s,mb5.7
VNDA Vanda 72.15 178 P **P** **08 03 41.0 -0.2**
comp=Z,1.9nm,0.7s,mb4.1,baz=325,slow=6.8,SNR=17
VNDA Vanda 72.15 178 *e*P **P** **08 03 41.0 -0.2**
comp=Z,9.4nm,1.1s,mb4.6
RKT Rikitea 72.54 112 *e*LR LR 08 25 58.2
comp=Z,622nm,29.2s
GKN Gorkha 72.63 301 *e*P **P** **08 03 44.7 -0.3**
comp=Z,68nm,0.9s,mb5.6
SBA Scott Base 72.72 177 *e*P **P** **08 03 44.9 +0.2**
comp=Z,12nm,1.1s,mb4.7
KOLN Koldanda 73.45 301 *e*P **P** **08 03 49.3 -0.6**
comp=Z,66nm,0.8s,mb5.6
DANN Dangsing 73.47 302 *e*P **P** **08 03 49.4 -0.6**
comp=Z,65nm,0.8s,mb5.6
PYUN Piuthan 74.05 301 *e*P **P** **08 03 52.3 -1.1**
comp=Z,65nm,0.8s,mb5.6
BILL Bilibino 74.12 6 *e*P **P** **08 03 52.4 -0.6**
comp=Z,21nm,1.0s,mb5.0
BILL Bilibino 74.12 6*c i*P **P** **08 03 52.3 -0.6**
BILL *i* pP 08 04 06.3 +0.4
BILL pmax pmax
comp=Z,26nm,1.1s,mb5.1
WMQ Urumqi 75.52 318 P **P** **08 04 02.0 +0.4**
WMQ AP pP 08 04 15.0 +0.4
WMQ XP sP 08 04 20.0 +0.5
WMQ PP PP 08 06 53.0 +1.6
WMQ S S 08 13 38.0 -1.1
WMQ SCS ScS 08 14 08.0 -3.7
WMQ SS SS 08 18 33.0 +2.2
WMQ AMB AMB
comp=Z,35nm,1.1s,mb5.2
WMQ AMB AMB
comp=Z,85nm,6.0s
WMQ LR LR
comp=N,387nm,20.0s,MS4.8
WMQ LR LR
comp=E,256nm,18.0s,MS4.8
WMQ LR LR
comp=Z,332nm,20.0s,MS4.6
KOD Kodaikanal 75.54 282 *e*P **P** **08 04 02.9 +0.6**
HYB Hyderabad 75.68 289 *e*P **P** **08 04 02.5 -0.5**
HYB Hyderabad 75.68 289 *i* P **P** **08 04 02.5 -0.5**
TRD Trivandrum 75.80 280 *e*P **P** **08 04 03.3 -0.5**
TRD AMb AMB 08 04 06.5
comp=Z,36nm,0.8s,mb5.4
OHAK Old Harbor 76.70 27 *e*P **P** **08 04 07.3 -0.7**
comp=Z,1μm,2.8s,mb6.3
LGTI Lohaghat 76.73 302 *e*P **P** **08 04 08.1 -0.7**
KDAK Kodiak Island 77.33 27 LR LR 08 32 07.7
comp=Z,548nm,20.7s,MS4.9,baz=273,slow=31
AKL Akola 77.71 292 *e*P **P** **08 04 13.3 -1.1**
AKL AMb AMB 08 04 15.9
comp=Z,100nm,0.9s,mb5.7
BHPL Bhopal 77.83 295 *e*P **P** **08 04 13.7 -1.4**
TIXI Tiksi 78.47 353 *e*P **P** **08 04 15.1 -2.5**
TIXI Tiksi 78.47 353 *e*P **P** **08 04 16.1 -1.5**
TIXI pmax pmax
comp=Z,14nm,1.5s,mb4.7
TIXI MLR MLR
comp=Z,303nm,16.0s,MS4.7
NDI New Delhi 79.13 300 *e*P **P** **08 04 20.0 -2.1**
SMLA Simla 79.71 303 *e*P **P** **08 04 24.3 -0.9**
SMLA AMb AMB 08 04 36.1
comp=Z,30nm,0.7s,mb5.4
KAD Karad 79.77 289 *e*P **P** **08 04 25.4 -0.4**
KAD AMb AMB 08 04 27.2
comp=Z,61nm,0.9s,mb5.5
SLKM Skilak Lake 79.80 25 *e*P **P** **08 04 23.8 -1.3**
SLKM *e*pP pP 08 04 35.4 -2.7
SEW Seward 79.92 26 *e*P **P** **08 04 24.9 -0.8**
MK31 Makanchi Array 80.14 319 *e*P **P** **08 04 27.0 -0.2**
MKAR Makanchi Array 80.14 319 P **P** **08 04 26.1 -1.1**
comp=Z,17nm,0.9s,mb5.0,baz=101,slow=6.3,SNR=104
MKAR PKKPbc PKKPbc 08 23 09.9 -3.1
comp=Z,0.6nm,0.8s,baz=321,slow=1.7,SNR=5.0
MKAR LR LR 08 40 09.7
comp=Z,414nm,19.0s,MS4.8,baz=100,slow=36
MKAR Makanchi Array 80.14 319 P **P** **08 04 26.2 -1.0**
MKAR 08 23 09.9
POO Poona 80.28 290 *e*P **P** **08 04 26.4 -2.2**
RC01 Rabbit Creek A 80.30 25 *e*P **P** **08 04 26.9 -0.8**
comp=Z,3μm,1.2s
CHUM Lake Minchumin 80.76 22 *e*P **P** **08 04 30.2 0.0**
comp=Z,31nm,1.0s,mb5.2
PMR Palmer 80.81 25 *e*P **P** **08 04 29.2 -1.2**
comp=Z,42nm,1.8s,mb5.1
PMR Palmer 80.81 25 *e*P **P** **08 04 29.2 -1.2**
PMR pmax pmax
comp=Z,42nm,1.8s,mb5.1
KTH Kantishna Hill 81.11 22 *e*P **P** **08 04 30.9 -1.1**
comp=Z,17nm,1.0s,mb4.9
ZAA0 Zalesovo Array 81.14 327 *e*P **P** **08 04 30.9 -1.5**
ZALV Zalesovo Beam 81.14 327 P **P** **08 04 30.8 -1.6**
comp=Z,20nm,0.9s,mb5.1,baz=112,slow=5.7,SNR=58
ZALV LR LR 08 40 17.9
comp=Z,361nm,19.9s,MS4.7,baz=326,slow=36
TRF Thorofare Moun 81.30 23 *e*P **P** **08 04 31.7 -1.3**
comp=Z,11nm,0.8s,mb4.8
TRF *e*pP pP 08 04 43.5 -2.6
BPAW Bear Paw Mtn. 81.37 22 *e*P **P** **08 04 32.4 -1.0**
comp=Z,5.2nm,0.7s,mb4.6
IMA2 Indian Mountai 81.51 20 *e*P **P** **08 04 34.8 +0.7**
MCK McKinley 81.96 23 *e*P **P** **08 04 35.0 -1.6**
comp=Z,57nm,1.2s,mb5.4
MCK McKinley 81.96 23 *e*P **P** **08 04 35.0 -1.5**
MCK pmax pmax
comp=Z,57nm,1.2s,mb5.4
NVS Novosibirsk 82.33 327⇑ *i*P **P** **08 04 36.1 -2.5**
NVS pmax pmax
comp=N,20nm,1.5s
NVS pmax pmax
comp=E,28nm,1.5s
NVS pmax pmax
comp=Z,34nm,1.5s,mb5.1
COLA College 82.94 22 *e*P **P** **08 04 40.2 -1.4**
comp=Z,18nm,0.7s,mb5.2
COLA College 82.94 22 *e*P **P** **08 04 40.2 -1.4**
COLA pmax pmax
comp=Z,18nm,0.7s,mb5.2
COLD Coldfoot 83.31 19 *e*P **P** **08 04 43.5 0.0**
comp=Z,7.1nm,0.8s,mb4.8
TKM2 Tokmak 2 83.63 314 *e*P **P** **08 04 45.9 +0.3**
comp=Z,20nm,0.8s,mb5.3
TKM2 Tokmak 2 83.63 314 *e*P **P** **08 04 45.9 +0.2**
TKM2 pmax pmax
comp=Z,20nm,0.8s,mb5.3
TKM2 Tokmak 2 83.63 314 P **P** **08 04 45.9 +0.2**
SNR=26
KURK Kurchatov 83.66 322 P **P** **08 04 45.2 -0.4**
comp=Z,240nm,1.1s,mb6.2,SNR=26
KURK Kurchatov 83.66 322 *e*P **P** **08 04 44.9 -0.7**
comp=Z,58nm,1.1s,mb5.6
KURK Kurchatov 83.66 322 *e*P **P** **08 04 44.9 -0.7**
KURK pmax pmax
comp=Z,58nm,1.1s,mb5.6
KBK Karagaybulak 84.03 314 P **P** **08 04 48.4 +0.6**
SNR=11
CHMS Chumysh 84.25 314 P **P** **08 04 49.1 +0.3**
SNR=17
UCH Uchtor 84.25 313 P **P** **08 04 50.5 +1.6**
SNR=6.6
FRU Bishkek 84.31 314 *e*P **P** **08 04 49.0 -0.1**
FRU pmax pmax
comp=Z,52nm,1.6s,mb5.4
AAK Ala-Archa 84.36 314 P **P** **08 04 50.7 +1.3**
comp=Z,170nm,0.8s,mb6.2,SNR=17
AAK Ala-Archa 84.36 314 P **P** **08 04 49.6 +0.3**
SNR=23
MAW Mawson 84.47 203 P **P** **08 04 49.3 -0.2**
comp=Z,2.7nm,0.6s,mb4.6,baz=114,slow=7.7,SNR=4.2
USP Ospenovka 84.49 314 P **P** **08 04 50.4 +0.3**
SNR=30
AML Almayashu 84.83 313 P **P** **08 04 53.2 +1.4**
SNR=74
BHJ Bhuj 84.87 294 *e*P **P** **08 04 51.2 -1.2**
BHJ AMb AMB 08 04 54.9
comp=Z,59nm,1.4s,mb5.5
EKS2 Erkin-Say 84.88 314 *e*P **P** **08 04 52.6 +0.6**
comp=Z,67nm,1.0s,mb5.7
EKS2 Erkin-Say 84.88 314 P **P** **08 04 52.9 +0.9**
SNR=40
EGAK Eagle 85.46 23 *e*P **P** **08 04 54.5 0.0**
comp=Z,14nm,0.8s,mb5.2
DAWY Dawson 85.90 24 *e*P **P** **08 04 56.9 +0.2**
SKAG Skagway 86.19 29 *e*P **P** **08 04 58.5 +0.4**
comp=Z,109nm,1.8s,mb5.8
KBL Kabul 87.06 305 *e*P **P** **08 05 01.6 -1.4**
comp=Z,6.6nm,0.9s,mb4.9
KBL Kabul 87.06 305 *e*P **P** **08 05 01.6 -1.4**
KBL pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
KK31 Karatay Array 87.32 314 *i* P **P** **08 05 03.4 -0.6**
DLBC Dease Lake 88.58 31 P **P** **08 05 09.4 -0.2**
baz=267,slow=6.0
BVA0 Borovoye Array 89.15 323 *i* P **P** **08 05 10.5 -2.0**
BVA0 pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
BVAR Borovoye Array 89.15 323 P **P** **08 05 11.0 -1.5**
comp=Z,25nm,0.8s,mb5.6,baz=106,slow=4.9,SNR=83
BRVK Borovoye 89.22 323 P **P** **08 05 11.8 -1.0**
comp=Z,164nm,0.9s,mb6.4,SNR=10
BRVK Borovoye 89.22 323 *e*P **P** **08 05 11.0 -1.8**
comp=Z,37nm,0.9s,mb5.7
BRVK Borovoye 89.22 323 *e*P **P** **08 05 11.0 -1.8**
BRVK pmax pmax
comp=Z,37nm,0.9s,mb5.7
INK Inuvik 89.53 21 *e*P **P** **08 05 13.3 -0.7**
INK *e*pP pP 08 05 23.9 -3.2
L02A Cave Junction 89.76 48⇓ P **P** **08 05 16.5 +0.9**
baz=90
N02C Big Bar 89.81 49⇑ P **P** **08 05 16.3 +0.4**
baz=90
I02A Mapleton 89.84 46⇓ P **P** **08 05 16.6 +0.6**
baz=90
K02A Glendale 89.92 47⇓ P **P** **08 05 17.1 +0.7**
baz=90
J02A Umpqua 89.94 47⇑ P **P** **08 05 16.9 +0.5**
baz=90
GASB Alder Springs 90.11 50⇓ P **P** **08 05 18.1 +0.8**
baz=90
MNRC McLaughlin Nat 90.23 51⇑ P **P** **08 05 18.3 +0.4**
baz=90
I03A Eugene 90.23 46⇑ P **P** **08 05 18.0 +0.2**
baz=90
HUMO Hull Mountain 90.29 47 *e*P **P** **08 05 18.6 +0.5**
comp=Z,38nm,0.9s,mb5.7
HUMO Hull Mountain 90.29 47⇑ P **P** **08 05 19.0 +0.9**
baz=90
H03A Soap Creek Ran 90.31 45⇓ P **P** **08 05 18.5 +0.4**
baz=90
WDC Whiskeytown Da 90.36 49 *e*P **P** **08 05 18.7 +0.3**
WDC Whiskeytown Da 90.36 49⇑ P **P** **08 05 18.7 +0.2**
baz=90

YBH **Yreka Blue Hor** 90.37 48 P P 08 05 19.1 +0.6
comp=Z,20nm,1.0s,mb5.4,baz=192,slow=3.3,SNR=22
YBH LR LR 08 37 47.8
comp=Z,764nm,21.5s,MS5.1,baz=215,slow=30
YBH **Yreka Blue Hor** 90.37 48 *e*P P 08 05 18.3 -0.1
comp=Z,17nm,0.9s,mb5.4
YBH **Yreka Blue Hor** 90.37 48 *e*P P 08 05 18.3 -0.2
YBH pmax pmax
comp=Z,17nm,0.9s
YBH **Yreka Blue Hor** 90.37 48 ⇑P P 08 05 18.9 +0.4
baz=90
E03A **Lebam** 90.37 43 ⇓P P 08 05 19.0 +0.7
baz=90
C04A **Brinnon** 90.92 42 ⇓P P 08 05 21.1 +0.2
baz=91,SNR=5.8
G04A **Mulino** 90.95 45 ⇑P P 08 05 21.3 +0.2
baz=91
ORV **Oroville** 91.03 51 ⇑P P 08 05 21.8 +0.2
baz=91
F04A **Amboy** 91.08 44 ⇑P P 08 05 22.2 +0.5
baz=91
FRIS **Frissel Point** 91.11 46 P P 08 05 22.1 +0.3
A04A **Legoe Bay, Lum** 91.22 41 ⇑P P 08 05 23.1 +0.8
baz=91
U04C **Hernandez Rese** 91.26 54 ⇑P P 08 05 23.0 +0.2
baz=91
LBCM **Butte Creek Ri** 91.28 49 P P 08 05 22.8 0.0
R04C **Big Horse Ranc** 91.33 52 ⇓P P 08 05 23.5 +0.5
baz=91
PKD **Parkfield** 91.41 54 ⇓P P 08 05 23.9 +0.5
baz=91
O04C **Chester** 91.43 50 ⇓P P 08 05 23.6 +0.2
baz=92,SNR=9.1
D05A **Enumclaw** 91.52 43 ⇑P P 08 05 23.8 +0.2
baz=92
O05C **Quincy** 91.52 50 ⇑P P 08 05 23.9 +0.1
baz=92
LAVA **Lava Cap Winer** 91.53 51 ⇓P P 08 05 24.0 0.0
baz=92,SNR=7.1
B05A **Bryant** 91.57 42 ⇑P P 08 05 24.1 +0.2
baz=92
E05A **Randle** 91.61 44 ⇓P P 08 05 24.0 -0.1
baz=92
JCW **Jim Creek** 91.67 42 *e*P P 08 05 24.2 -0.1
I05A **Bend** 91.70 46 ⇑P P 08 05 25.0 +0.4
baz=92
S05C **Merced** 91.72 53 ⇓P P 08 05 24.8 0.0
baz=92
CMB **Columbia Colle** 91.74 52 *e*P P 08 05 25.1 +0.1
CMB **Columbia Colle** 91.74 52 ⇑P P 08 05 25.1 +0.1
baz=92,SNR=8.2
F05A **White Salmon** 91.74 44 ⇓P P 08 05 25.1 +0.4
baz=92
G05A **Wamic** 91.77 45 ⇑P P 08 05 25.0 +0.1
baz=92
H05A **Madras** 91.78 45 ⇓P P 08 05 25.1 +0.2
baz=92
C05A **Tolt Reservoir** 91.78 42 ⇑P P 08 05 24.9 0.0
baz=92
K05A **Summer Lake** 91.82 47 ⇓P P 08 05 25.8 +0.6
baz=92,SNR=16
BEKR **Beckwourth** 91.94 50 ⇓P P 08 05 25.9 +0.1
baz=92,SNR=12
RPW **Rockport** 91.97 42 *e*P P 08 05 25.1 -0.6
B06A **Marblemount** 92.00 42 ⇓P P 08 05 25.6 -0.3
baz=92
E06A **Yakima** 92.14 44 ⇓P P 08 05 26.3 -0.3
baz=92
MOD **Modoc** 92.17 48 *e*P P 08 05 27.2 +0.4
comp=Z,22nm,1.0s,mb5.4
MOD *e*pP pP 08 05 39.6 -0.5
MOD **Modoc** 92.17 48 ⇓P P 08 05 26.9 +0.1
baz=92,SNR=16
T06C **Millerton Lake** 92.18 53 ⇑P P 08 05 27.0 0.0
baz=92,SNR=10
VIPM **Ingram Point** 92.19 46 P P 08 05 27.1 +0.2
F06A **Goldendale** 92.20 44 ⇑P P 08 05 27.0 +0.1
baz=92,SNR=6.4
G06A **Carlson Farm,** 92.25 45 ⇓P P 08 05 27.2 +0.1
baz=92
P06A **Stead Airport,** 92.27 51 ⇑P P 08 05 27.6 +0.3
baz=92
D06A **Cle Elum** 92.30 43 ⇓P P 08 05 27.6 +0.4
baz=92,SNR=6.9
C06A **Tall Timber Ra** 92.33 42 ⇑P P 08 05 27.5 0.0
baz=92
WCN **Washoe City** 92.35 51 ⇓P P 08 05 27.9 +0.2
baz=92,SNR=9.9
O06A **Flanigan** 92.37 50 ⇓P P 08 05 27.6 -0.2
baz=92,SNR=8.6
J06A **Christmas Vall** 92.41 47 ⇓P P 08 05 27.8 -0.1
baz=92,SNR=16
H06A **Lindquist Farm** 92.42 45 ⇓P P 08 05 27.7 -0.2
baz=92,SNR=12
N06A **Buffalo Meadow** 92.42 49 ⇑P P 08 05 27.9 -0.1
baz=92,SNR=11
I06A **Prineville** 92.43 46 ⇓P P 08 05 28.3 +0.3
baz=92,SNR=14
EBG **Ellensburg** 92.46 43 P P 08 05 28.2 +0.2
TBM **Table Mountain** 92.46 43 P P 08 05 28.0 0.0
KCC **Kaiser Creek** 92.52 53 ⇑P P 08 05 28.4 -0.2
baz=93,SNR=20
R06C **Coleville** 92.52 52 ⇓P P 08 05 28.9 +0.4
baz=93,SNR=7.0
WAKR **Walker** 92.53 52 *e*P P 08 05 29.4 +0.8
VES **Vestal, Richgr** 92.58 54 ⇓P P 08 05 29.0 +0.2
baz=93
SYO **Syowa Base** 92.61 200⇑ *e*P P 08 05 26.3 -2.0
SYO **Syowa Base** 92.61 200⇑ *i*P P 08 05 34.4 +6.1
SYO **Syowa Base** 92.61 200⇓ *e*pP pP 08 05 40.2 -1.4
PAHR **Pah Rah Range** 92.67 51 *e*P P 08 05 29.8 +0.6
ETW **Entiat** 92.68 43 *e*P P 08 05 28.9 -0.1
A07A **Ashnola River,** 92.78 41 ⇓P P 08 05 29.2 -0.2
baz=93,SNR=7.8
F07A **Phinny Hill Vi** 92.81 44 ⇓P P 08 05 29.6 0.0
baz=93
C07A **Waterville** 92.87 43 ⇑P P 08 05 29.4 -0.5
baz=93,SNR=8.8
D07A **Quincy** 92.89 43 ⇓P P 08 05 30.2 +0.2
baz=93,SNR=7.6
B07A **Winthrop** 92.90 42 ⇓P P 08 05 29.8 -0.2
baz=93,SNR=5.2
L07A **Adell** 92.90 48 ⇓P P 08 05 30.4 +0.2
baz=93,SNR=17
E07A **Sunnyside** 92.92 44 ⇑P P 08 05 30.1 0.0
baz=93,SNR=7.6
G07A **Ruggs Ranch, H** 92.93 45 ⇑P P 08 05 29.9 -0.3
baz=93,SNR=11
CIS **Catalina Islan** 92.94 57 ⇓P P 08 05 31.5 +0.9
baz=93
WTV **Waterville** 92.94 43 P P 08 05 29.9 -0.4
H07A **Lands Inn, Kim** 92.95 46 ⇓P P 08 05 30.8 +0.4
baz=93,SNR=13
I07A **Izee** 92.95 46 ⇓P P 08 05 30.5 +0.1
baz=93,SNR=21
K07A **Rock Creek Ran** 93.03 48 ⇓P P 08 05 31.2 +0.5
baz=93,SNR=12
J07A **Hines** 93.03 47 ⇓P P 08 05 31.1 +0.4
baz=93,SNR=10
ISA **Isabella** 93.06 55 *e*P P 08 05 31.2 +0.1
ISA **Isabella** 93.06 55 ⇑P P 08 05 31.0 -0.1
baz=93,SNR=6.5
N07B **Gerlach** 93.08 50 ⇑P P 08 05 31.1 +0.1
baz=93,SNR=14
RSW **Rattlesnake Hi** 93.08 44 *e*P P 08 05 30.9 0.0
O07A **Toulon** 93.10 50 ⇑P P 08 05 30.9 -0.2
baz=93,SNR=7.2
MTUM **Tungsten Hills** 93.12 53 *e*P P 08 05 32.0 +0.7
HAWA **Hanford** 93.12 44 *e*P P 08 05 31.2 +0.1
comp=Z,22nm,0.9s,mb5.6
EPH **Ephrata** 93.16 43 P P 08 05 31.0 -0.3
MWC **Mount Wilson** 93.29 56 *e*P P 08 05 33.1 +0.9
comp=Z,60nm,1.5s,mb5.8
MWC **Mount Wilson** 93.29 56 *e*P P 08 05 33.1 +0.9
MWC pmax pmax
comp=Z,60nm,1.5s,mb5.8
TIN **Tinemaha** 93.36 53 ⇓P P 08 05 32.6 +0.2
baz=93
EDW2 **Edwards Air Fo** 93.39 55 ⇑P P 08 05 32.6 0.0
baz=93,SNR=5.2
NVAR **Mina Array Bea** 93.41 52 P P 08 05 33.0 +0.4
comp=Z,9.9nm,0.8s,mb5.3,baz=253,slow=6.4,SNR=79
B08A **Colville Reser** 93.41 42 ⇓P P 08 05 31.8 -0.6
baz=94,SNR=8.3
WRD **Warden** 93.42 43 P P 08 05 32.9 +0.4
CWC **Cottonwood Cre** 93.44 54 ⇑P P 08 05 32.6 -0.2
baz=94

G08A **Pilot Rock** 93.44 45 ⇑P P 08 05 32.7 +0.2
baz=94,SNR=14
WVOR **Wild Horse Val** 93.45 48 *e*P P 08 05 32.8 +0.1
comp=Z,39nm,1.2s,mb5.7
WVOR **Wild Horse Val** 93.45 48 *e*P P 08 05 32.8 +0.1
WVOR pmax pmax
comp=Z,39nm,1.2s,mb5.7
E08A **Dider Farm, El** 93.46 44 ⇑P P 08 05 32.6 -0.1
baz=94,SNR=9.5
A08A **Turner Farm, O** 93.50 41 ⇓P P 08 05 32.7 -0.1
baz=94,SNR=8.4
C08A **Higginbotham F** 93.56 43 ⇓P P 08 05 33.0 -0.1
baz=94,SNR=12
M08A **Happy Creek Ra** 93.57 49 ⇑P P 08 05 34.0 +0.7
baz=94,SNR=7.8
H08A **Prairie City** 93.58 46 ⇑P P 08 05 33.0 -0.2
baz=94,SNR=7.8
K08A **Mann Creek Ran** 93.59 48 ⇓P P 08 05 33.0 -0.3
baz=94
D08A **Wollman Farm,** 93.59 43 ⇑P P 08 05 33.2 0.0
baz=94,SNR=6.4
F08A **Pendleton** 93.60 45 ⇓P P 08 05 33.4 0.0
baz=94,SNR=6.8
I08A **Drewsey** 93.61 46 ⇓P P 08 05 33.5 +0.1
baz=94,SNR=7.0
J08A **Circle Bar Ran** 93.64 47 ⇑P P 08 05 33.9 +0.4
baz=94,SNR=15
L08A **Fields** 93.65 48 ⇑P P 08 05 34.3 +0.7
baz=94,SNR=14
O08A **Rochester Mine** 93.66 50 ⇑P P 08 05 33.9 +0.1
baz=94,SNR=5.3
P08A **Dixie Valley** 93.67 51 ⇓P P 08 05 33.9 +0.1
baz=94
LRMC **Laurel Mountai** 93.68 55 ⇑P P 08 05 34.4 +0.4
baz=94,SNR=12
N08A **GE Springer Mi** 93.71 50 ⇑P P 08 05 33.9 -0.1
baz=94,SNR=8.9
Q08A **Gabbs** 93.73 51 ⇑P P 08 05 34.3 +0.2
baz=94,SNR=15
OD2 **Odessa Site #2** 93.76 43 P P 08 05 33.8 -0.2
MPMC **Manual Prospec** 93.89 54 ⇑P P 08 05 35.1 +0.3
baz=94,SNR=9.4
A09A **Danville** 93.95 41 ⇑P P 08 05 35.0 +0.1
baz=94,SNR=10
D09A **Jones Farm, Ri** 94.01 43 ⇑P P 08 05 35.1 -0.1
baz=94,SNR=6.8
C09A **Chrisman Ranch** 94.08 43 ⇓P P 08 05 34.9 -0.5
baz=94,SNR=6.6
E09A **Wood Farm, Sta** 94.09 44 ⇓P P 08 05 35.2 -0.3
baz=94,SNR=16
K09A **Rome** 94.14 48 ⇑P P 08 05 35.7 -0.2
baz=94,SNR=7.7
L09A **Wilkinson Ranc** 94.14 48 ⇑P P 08 05 36.1 +0.2
baz=94,SNR=9.8
J09A **Fry Pan Ranch,** 94.16 47 ⇑P P 08 05 35.8 -0.2
baz=94,SNR=14
N09A **Rock Creek Ran** 94.18 50 ⇓P P 08 05 36.0 -0.1
baz=94,SNR=6.3
F09A **S2 Ranch, Elgi** 94.20 45 ⇑P P 08 05 36.0 -0.1
baz=94,SNR=8.2
B09A **Rice** 94.21 42 ⇓P P 08 05 35.8 -0.3
baz=94,SNR=10
S09A **Goldfield** 94.21 53 ⇓P P 08 05 36.6 +0.3
baz=94,SNR=28
I09A **Lost Marbles R** 94.21 46 ⇑P P 08 05 35.8 -0.4
baz=94,SNR=11
BBRC **Big Bear Sol-O** 94.23 56 ⇓P P 08 05 36.5 0.0
baz=94
G09A **Cove** 94.27 45 ⇑P P 08 05 36.3 -0.1
baz=94,SNR=17
M09A **Marrel Ranch,** 94.27 49 ⇑P P 08 05 37.5 +1.0
baz=94,SNR=6.9
H09A **Durkee** 94.31 46 ⇑P P 08 05 36.3 -0.3
baz=94,SNR=7.3
Q09A **Carvers** 94.31 52 ⇓P P 08 05 37.0 +0.2
baz=94,SNR=6.8
O09A **Fish Creek Ran** 94.39 50 ⇑P P 08 05 37.3 +0.2
baz=94,SNR=9.1
P09A **Austin** 94.39 51 ⇑P P 08 05 37.2 +0.1
baz=94
GSC **Goldstone** 94.39 55 *e*P P 08 05 37.8 +0.6
GSC **Goldstone** 94.39 55 ⇓P P 08 05 37.2 0.0
baz=94
FURC **Furnace Creek,** 94.42 54 ⇓P P 08 05 37.8 +0.5
baz=94,SNR=14
MONP **Monument Peak** 94.56 58 ⇑P P 08 05 38.7 +0.6
baz=95,SNR=12
PFO **Pinyon Flat Ob** 94.57 57 P P 08 05 38.5 +0.4
comp=Z,7.8nm,1.0s,mb5.1,baz=280,slow=6.3,SNR=8.0
PFO **Pinyon Flat Ob** 94.57 57 *e*P P 08 05 38.7 +0.6
comp=Z,5.1nm,0.9s,mb5.0
PFO **Pinyon Flat Ob** 94.57 57 *e*P P 08 05 38.7 +0.6
PFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
PFO **Pinyon Flat Ob** 94.57 57 ⇑P P 08 05 38.3 +0.2
baz=95
BMO **Blue Mountains** 94.58 46 *e*P P 08 05 37.7 -0.1
A10A **Northport** 94.63 41 ⇑P P 08 05 37.9 0.0
baz=95,SNR=11
F10A **Beach Ranch, E** 94.69 44 ⇓P P 08 05 38.1 -0.2
baz=95,SNR=20
D10A **Wagner Farm, O** 94.72 43 ⇑P P 08 05 38.2 -0.2
baz=95,SNR=25
S10A **Tonopah Range,** 94.72 52 ⇓P P 08 05 38.9 +0.3
baz=95,SNR=20
G10A **Bishop Farm, J** 94.73 45 ⇑P P 08 05 38.4 -0.1
baz=95,SNR=36
C10A **Spilker Farm,** 94.73 43 ⇑P P 08 05 38.3 -0.2
baz=95
HEC **Hector,Ludlow** 94.75 56 ⇓P P 08 05 38.7 -0.2
baz=95,SNR=5.0
K10A **MacKenzie Ranc** 94.78 48 ⇑P P 08 05 38.8 0.0
baz=95,SNR=11
E10A **Myers Farm, Un** 94.80 44 ⇓P P 08 05 38.2 -0.6
baz=95
B10A **Chitwood Farm,** 94.81 42 ⇓P P 08 05 38.8 -0.1
baz=95
U10A **Ash Meadows, A** 94.84 54 ⇓P P 08 05 39.3 0.0
baz=95,SNR=6.6
SHOC **Shoshone** 94.85 55 ⇓P P 08 05 39.2 -0.1
baz=95,SNR=9.8
NEW **Newport** 94.88 42 *e*P P 08 05 38.9 -0.2
comp=Z,14nm,0.9s,mb5.4
NEW **Newport** 94.88 42 *e*P P 08 05 38.9 -0.2
NEW pmax pmax
comp=Z,14nm,0.9s
J10A **Berg Farm, Mel** 94.89 47 ⇓P P 08 05 39.5 +0.2
baz=95
I10A **Payette** 94.89 46 ⇓P P 08 05 39.6 +0.3
baz=95
P10A **Eureka** 94.92 51 ⇑P P 08 05 39.5 -0.1
baz=95
Q10A **Clear Creek Ra** 94.92 52 ⇓P P 08 05 39.5 -0.1
baz=95,SNR=6.4
O10A **Cortez Mining,** 94.92 50 ⇓P P 08 05 39.6 +0.1
baz=95
TPNV **Topopah Spring** 94.94 53 *e*P P 08 05 40.3 +0.6
TPNV **Topopah Spring** 94.94 53 ⇓P P 08 05 39.7 0.0
baz=95,SNR=12
N10A **Dunphy** 94.94 50 ⇑P P 08 05 40.1 +0.5
baz=95
M10A **I.L. Ranch, Tu** 94.96 49 ⇓P P 08 05 39.8 +0.1
baz=95
H10A **Noah's Angus R** 94.96 46 ⇑P P 08 05 39.3 -0.3
baz=95,SNR=19
R10A **Warm Springs** 94.97 52 ⇑P P 08 05 40.0 +0.2
baz=95
BELC **Belle Mtn.** 94.98 56 ⇑P P 08 05 40.1 +0.2
baz=95,SNR=7.3
L10A **Juniper Basin** 95.04 48 ⇓P P 08 05 40.1 +0.1
baz=95,SNR=14
TUQ **Turquoise Moun** 95.12 55 ⇓P P 08 05 40.5 0.0
baz=95,SNR=8.6
AB31 **Akbulak array** 95.28 319 P P 08 05 38.5 -2.4
AB31 pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
GMRC **Granite Mounta** 95.30 56 ⇑P P 08 05 41.3 -0.1
baz=95,SNR=6.8
G11A **Walters Elk Ra** 95.34 45 ⇓P P 08 05 40.8 -0.5
baz=95,SNR=16
D11A **Klaveano Farm,** 95.36 43 ⇑P P 08 05 40.6 -0.7
baz=95,SNR=10.0
S11A **Rachel** 95.37 53 ⇑P P 08 05 41.5 -0.1
baz=95
B11A **Sandpoint** 95.39 42 ⇑P P 08 05 41.4 -0.1
baz=95,SNR=9.2
K11A **Parker Ranch,** 95.39 48 ⇓P P 08 05 41.6 0.0
baz=95,SNR=13

BC3 **Big Chuckw Mtn** 95.41 57 ⇑P P 08 05 42.8 +0.9
baz=95,SNR=8.8
A11A **Hall Mountain,** 95.41 41 ⇓P P 08 05 42.0 +0.4
baz=95,SNR=21
E11A **Bogner Ranch,** 95.42 44 ⇓P P 08 05 40.9 -0.8
baz=95,SNR=14
F11A **Grangeville** 95.44 45 ⇑P P 08 05 40.5 -1.3
baz=96,SNR=12
C11A **Tepee Creek (N** 95.44 43 ⇓P P 08 05 41.6 -0.1
baz=96,SNR=8.9
P11A **Circle Ranch,** 95.46 51 ⇓P P 08 05 42.3 +0.3
baz=96
H11A **Donnelly** 95.49 46 ⇓P P 08 05 41.4 -0.6
baz=96,SNR=8.9
I11A **Placerville** 95.50 47 ⇓P P 08 05 41.7 -0.3
baz=96,SNR=11
Q11A **Duckwater** 95.50 52 ⇓P P 08 05 42.2 0.0
baz=96,SNR=11
M11A **Holland Ranch,** 95.51 49 ⇓P P 08 05 42.4 +0.2
baz=96,SNR=6.7
R11A **Troy Canyon, C** 95.53 52 ⇑P P 08 05 42.4 0.0
baz=96,SNR=16
V11A **Goodsprings** 95.54 55 ⇑P P 08 05 42.7 +0.2
baz=96,SNR=6.9
O11A **Cowboy Ranch,** 95.56 50 ⇑P P 08 05 42.6 +0.2
baz=96,SNR=9.5
MFID **Camas Ranch** 95.57 47 ⇑P P 08 05 42.4 0.0
baz=96,SNR=6.3
L11A **Cat Creek Ranc** 95.57 48 ⇓P P 08 05 42.3 -0.1
baz=96,SNR=10
IRM **Iron Mountain** 95.69 56 ⇓P P 08 05 43.3 +0.2
baz=96,SNR=10
LDFC **Landfair** 95.77 55 *e*P P 08 05 44.2 +0.7
comp=Z,66nm,1.5s,mb5.8
T11A **Corn Creek, Al** 95.77 53 ⇓P P 08 05 43.6 +0.1
baz=96,SNR=12
SHPR **Sheep Range** 95.79 54 *e*P P 08 05 44.5 +0.9
E12A **Beaver Dam Sad** 95.86 44 ⇑P P 08 05 42.9 -0.8
baz=96,SNR=16
A12A **Yaak River Ran** 95.88 41 ⇓P P 08 05 43.8 +0.2
baz=96,SNR=6.9
ELK **Elko** 95.90 50 P P 08 05 44.3 +0.3
comp=Z,3.4nm,0.8s,mb4.8,baz=249,slow=4.1,SNR=18
GLA **Glamis** 95.90 57 *e*P P 08 05 47.4 +3.2
B12A **Libby** 95.91 42 ⇑P P 08 05 43.8 0.0
baz=96
D12A **Red Ives Fores** 96.03 43 ⇑P P 08 05 44.3 -0.2
baz=96
N12A **Clover Valley,** 96.06 50 ⇑P P 08 05 44.9 +0.2
baz=96,SNR=17
F12A **Elk City** 96.06 45 ⇓P P 08 05 43.6 -0.9
baz=96,SNR=8.2
S12A **Delamar Landin** 96.08 53 ⇓P P 08 05 45.6 +0.7
baz=96,SNR=7.1
I12A **Atlanta** 96.09 47 ⇓P P 08 05 44.5 -0.2
baz=96
J12A **Stokes Ranch,** 96.10 47 ⇓P P 08 05 45.0 +0.2
baz=96,SNR=14
L12A **House Creek Ra** 96.12 48 ⇓P P 08 05 45.3 +0.3
baz=96,SNR=12
Q12A **Willow Creek R** 96.15 51 ⇓P P 08 05 45.4 +0.3
baz=96,SNR=11
M12A **Wells** 96.17 49 ⇑P P 08 05 45.1 -0.1
baz=96,SNR=11
Y12C **Blythe** 96.19 57 ⇑P P 08 05 45.3 -0.1
baz=96
K12A **Draper Farm, C** 96.22 48 ⇓P P 08 05 45.2 -0.2
baz=96
O12A **Currie** 96.26 50 ⇑P P 08 05 45.7 0.0
baz=96,SNR=17
U12A **Valley of Fire** 96.29 54 ⇑P P 08 05 46.0 +0.2
baz=96
ARU **Arti** 96.30 326 *e*P P 08 05 42.9 -2.5
comp=Z,6.4nm,0.6s,mb5.2
ARU **Arti** 96.30 326 *d i*P P 08 05 42.9 -2.5
ARU 08 09 37.7
ARU S SKSac 08 16 12.0 -6.3
ARU SS SS 08 23 29.7 -5.2
ARU pmax pmax
comp=Z,13nm,1.0s,mb5.3
ARU MLR MLR
comp=Z,1μm,22.0s,MS5.3
R12A **Pony Springs,** 96.30 52 ⇓P P 08 05 46.3 +0.5
baz=96,SNR=12
H12A **Diamond D Ranc** 96.31 46 ⇓P P 08 05 45.4 -0.4
baz=96
BSMT **Bassoo Peak** 96.43 43 P P 08 05 46.1 -0.1
PDMCI **Parker Dam,Lak** 96.53 56 ⇑P P 08 05 48.5 +1.5
baz=97
AKTK **Aktyubinsk** 96.56 320 P P 08 05 45.2 -1.5
AKTO **Aktyubinsk** 96.56 320 P P 08 05 45.2 -1.5
comp=Z,4.4nm,1.0s,mb4.9,baz=72,slow=5.4,SNR=7.6
C13A **Hot Springs** 96.57 43 ⇑P P 08 05 46.3 -0.5
baz=97
YKA **Yellowknife Ar** 96.59 28 P P 08 05 45.9 -0.7
comp=Z,3.2nm,0.7s,mb4.9,baz=268,slow=4.8,SNR=6.1
HLID **Hailey** 96.60 47 *e*P P 08 05 46.9 -0.2
comp=Z,6.9nm,0.8s,mb5.1
HLID **Hailey** 96.60 47 ⇓P P 08 05 47.0 -0.1
baz=97,SNR=12
B13A **Whitefish** 96.66 42 ⇓P P 08 05 47.3 +0.1
baz=97,SNR=17
A13A **Flathead Natio** 96.70 41 ⇑P P 08 05 47.3 -0.1
baz=97
F13A **Darby** 96.71 45 ⇓P P 08 05 46.9 -0.6
baz=97,SNR=23
V13A **Grand Canyon W** 96.72 55 ⇓P P 08 05 47.9 +0.1
baz=97,SNR=9.3
M13A **Montello** 96.73 49 ⇑P P 08 05 47.8 0.0
baz=97,SNR=14
H13A **Challis** 96.74 46 ⇓P P 08 05 47.6 -0.1
baz=97,SNR=12
G13A **Cobalt** 96.77 45 ⇑P P 08 05 47.2 -0.6
baz=97,SNR=7.1
W13A **Hualapai Mount** 96.77 55 ⇓P P 08 05 48.3 +0.2
baz=97,SNR=7.3
J13A **Cove Ranch, Pi** 96.77 47 ⇑P P 08 05 47.7 -0.2
baz=97
Q13A **Wheeler Ranch,** 96.78 52 ⇓P P 08 05 48.2 +0.2
baz=97
X13A **Yucca** 96.80 56 ⇑P P 08 05 48.4 +0.2
baz=97
P13A **Bates Ranch, G** 96.80 51 ⇑P P 08 05 48.1 0.0
baz=97,SNR=6.9
R13A **O'Grain Ranch,** 96.80 52 ⇑P P 08 05 48.6 +0.4
baz=97,SNR=7.6
T13A **Saint George** 96.81 53 ⇑P P 08 05 48.9 +0.7
baz=97,SNR=10
E13A **Victor** 96.82 44 ⇓P P 08 05 47.3 -0.7
baz=97
K13A **Stover Farm, H** 96.83 48 ⇓P P 08 05 48.2 +0.1
baz=97
I13A **Wildhorse Cree** 96.83 47 ⇑P P 08 05 48.1 0.0
baz=97,SNR=15
O13A **Hicks Ranch, I** 96.84 50 ⇑P P 08 05 48.5 +0.2
baz=97,SNR=7.8
S13A **Holt Ranch, En** 96.87 53 ⇓P P 08 05 48.9 +0.4
baz=97,SNR=9.8
L13A **Double Diamond** 96.92 48 ⇓P P 08 05 48.5 -0.1
baz=97
MSO **Missoula** 96.99 44 *e*P P 08 05 49.6 +0.8
WALA **Waterton Lakes** 97.03 41 *e*P P 08 05 49.6 +0.7
C14A **Swan Lake** 97.13 43 ⇓P P 08 05 49.2 -0.2
baz=97
ARUT **Antelope Range** 97.21 53 *e*P P 08 05 50.2 +0.3
E14A **Clinton** 97.30 44 ⇓P P 08 05 49.6 -0.6
baz=97
I14A **Mackay** 97.31 47 ⇓P P 08 05 50.2 -0.1
baz=97,SNR=8.2
A14A **Double T Ranch** 97.35 41 ⇓P P 08 05 50.4 +0.1
baz=97,SNR=9.3
M14A **Sheep Mountain** 97.35 49 ⇑P P 08 05 50.4 -0.1
baz=97,SNR=13
Q14A **Sevier Lake (B** 97.36 52 ⇑P P 08 05 50.8 +0.2
baz=97,SNR=7.3
EDM **Edmonton** 97.37 37 *e*P P 08 05 50.2 -0.1
H14A **Leadore** 97.37 46 ⇑P P 08 05 50.6 +0.1
baz=97,SNR=5.3
V14A **Boquillas Ranc** 97.42 55 ⇑P P 08 05 51.4 +0.3
baz=97,SNR=5.7
L14A **Malta** 97.44 48 ⇓P P 08 05 50.9 0.0
baz=98,SNR=17
B14A **Marquette Ranc** 97.45 42 ⇓P P 08 05 49.9 -0.9
baz=98
N14A **Grayback Hills** 97.46 50 ⇓P P 08 05 50.8 -0.3
baz=98,SNR=9.0
CHMT **Chamberlain Mo** 97.47 44 *e*P P 08 05 50.3 -0.6
T14A **Hurricane** 97.47 53 ⇓P P 08 05 51.6 +0.4

baz=98,SNR=6.6
K14A **Jones Ranch, D** 97.49 48 ⇓P P 08 05 51.2 0.0
baz=98,SNR=7.2
P14A **Drum Mountains** 97.53 51 ⇑P P 08 05 51.2 -0.2
baz=98,SNR=6.9
X14A **Yava** 97.57 56 ⇓P P 08 05 52.5 +0.8
baz=98
MCMT **McKenzie Canyo** 97.74 46 *e*P P 08 05 52.2 -0.1
A15A **Johnson Ranch,** 97.81 41 ⇓P P 08 05 52.1 -0.3
baz=98,SNR=11
E15A **Deer Lodge** 97.89 44 ⇑P P 08 05 52.4 -0.4
baz=98,SNR=7.4
H15A **Lima** 97.89 46 ⇓P P 08 05 52.9 +0.1
baz=98
C15A **Salmond Ranch,** 97.90 43 ⇓P P 08 05 52.5 -0.4
baz=98,SNR=11
DLMT **Dillon** 97.92 45 *e*P P 08 05 53.0 0.0
B15A **Bradely Ranch,** 97.93 42 ⇓P P 08 05 52.2 -0.7
baz=98
N15A **Stansbury Isla** 97.97 50 ⇑P P 08 05 52.9 -0.4
baz=98
K15A **Arbon** 97.97 48 ⇑P P 08 05 53.5 +0.2
baz=98,SNR=7.1
F15A **Butte** 97.99 45 ⇓P P 08 05 52.9 -0.4
baz=98
G15A **Dillon** 98.00 45 ⇑P P 08 05 53.1 -0.3
baz=98
M15A **Larsen Ranch,** 98.03 49 ⇑P P 08 05 53.4 -0.2
baz=98,SNR=6.7
T15A **Red Dirt Ranch** 98.03 54 ⇑P P 08 05 54.1 +0.3
baz=98,SNR=5.5
J15A **Blackfoot** 98.04 47 ⇑P P 08 05 53.7 +0.1
baz=98,SNR=5.3
Q15A **Fillmore** 98.06 52 ⇓P P 08 05 53.5 -0.3
baz=98
L15A **Malad City** 98.08 48 ⇑P P 08 05 53.4 -0.4
baz=98
U15A **North Rim** 98.10 54 ⇓P P 08 05 54.5 +0.5
baz=98,SNR=6.5
X15A **Humboldt** 98.11 56 ⇑P P 08 05 54.8 +0.7
baz=98
R15A **Junction** 98.13 52 ⇑P P 08 05 54.5 +0.4
baz=98
P15A **Leamington** 98.14 51 ⇑P P 08 05 54.3 +0.2
baz=98
V15A **Kaibab Nationa** 98.19 55 ⇓P P 08 05 54.7 +0.3
baz=98,SNR=5.4
MSU **Marysvale** 98.22 52 *e*P P 08 05 55.1 +0.6
C16A **Fuhringer Ranc** 98.48 43 ⇓P P 08 05 54.4 -1.0
baz=98,SNR=6.0
G16A **Moss Hill, Enn** 98.48 45 ⇑P P 08 05 55.3 -0.2
baz=98
E16A **East Helena** 98.55 44 ⇑P P 08 05 55.1 -0.7
baz=99
A16A **West Butte Ran** 98.56 41 ⇓P P 08 05 55.1 -0.6
baz=99,SNR=6.8
F16A **Kennard Place,** 98.60 45 ⇓P P 08 05 55.8 -0.2
baz=99
D16A **Dana Ranch, Ca** 98.63 43 ⇓P P 08 05 56.2 +0.1
baz=99
J16A **Bone** 98.64 47 ⇓P P 08 05 56.4 +0.1
baz=99,SNR=9.0
K16A **Soda Springs** 98.66 48 ⇑P P 08 05 56.7 +0.3
baz=99,SNR=6.3
S16A **Weppner Ranch,** 98.67 53 ⇑P P 08 05 56.8 +0.2
baz=99,SNR=8.2
HWUT **Hardware Ranch** 98.69 49 *e*P P 08 05 56.7 +0.1
I16A **Newdale** 98.73 47 ⇓P P 08 05 56.8 +0.1
baz=99,SNR=11
O16A **Springville** 98.74 50 ⇑P P 08 05 56.6 -0.2
baz=99
QLMT **Earthquake Lak** 98.75 46 *e*P P 08 05 57.3 +0.6
JLU **Jordanelle** 98.78 50 *e*P P 08 05 57.0 +0.1
L16A **Fish Haven** 98.79 48 ⇑P P 08 05 56.8 -0.2
baz=99
N16A **Rees Ranch, Co** 98.79 50 ⇑P P 08 05 57.2 +0.2
baz=99
WUAZ **Wupatki** 98.83 55 *e*P P 08 05 59.3 +2.0
WUAZ **Wupatki** 98.83 55 ⇓P P 08 05 58.2 +0.9
baz=99
RRI2 **Red Ridge** 98.86 47 *e*P P 08 05 58.1 +0.9
H16A **Russell Place,** 98.89 46 ⇓P P 08 05 57.5 +0.1
baz=99,SNR=6.9
DCID1 **Drake Creek** 98.95 47 *e*P P 08 05 58.5 +0.9
TMUT **Trail Mountain** 98.97 51 *e*P P 08 05 58.5 +0.6
Q16A **Castle Valley** 99.00 52 ⇓P P 08 05 58.5 +0.5
baz=99
U16A **Tuba City** 99.03 54 ⇑P P 08 05 58.9 +0.6
baz=99
E17A **Martinsdale** 99.12 44 ⇓P P 08 05 58.5 +0.2
baz=99
TPAW **Teton Pass** 99.12 47 *e*P P 08 05 58.9 +0.4
comp=Z,11nm,1.2s,mb5.3
IMW **Indian Meadow** 99.12 47 *e*P P 08 05 59.0 +0.6
C17A **Wharram Farm,** 99.15 43 ⇑P P 08 05 57.9 -0.6
baz=99,SNR=5.5
YFT **Old Faithful** 99.19 46 *e*P P 08 06 00.5 +1.8
REDW **Red Top Meadow** 99.20 47 *e*P P 08 05 59.0 +0.2
D17A **Six Diamond Ra** 99.22 43 ⇑P P 08 05 58.4 -0.3
baz=99,SNR=6.4
G17A **Pierce Place,** 99.23 45 ⇓P P 08 05 59.4 +0.5
baz=99
N17A **Moffit Pass** 99.25 50 ⇓P P 08 05 59.2 +0.1
baz=99
SNOW **Snow King Moun** 99.27 47 *e*P P 08 05 59.4 +0.4
comp=Z,7.2nm,1.0s,mb5.2
MOOW **Moose Ponds** 99.27 47 *e*P P 08 05 59.2 +0.1
comp=Z,4.8nm,1.0s,mb5.0
F17A **Fitzpatrick Pl** 99.27 45 ⇓P P 08 05 59.3 +0.3
baz=99,SNR=7.1
TUC **Tucson** 99.29 58 *e*P P 08 06 04.6 +5.2
S17A **Black Ridge (B** 99.30 53 ⇑P P 08 05 59.3 -0.1
baz=99
T17A **Navajo Res., N** 99.30 54 ⇑P P 08 05 59.3 -0.1
baz=99,SNR=6.1
O17A **Robinson Place** 99.33 50 ⇓P P 08 05 59.2 -0.3
baz=99,SNR=8.4
R17A **Hanksville Air** 99.37 52 ⇑P P 08 05 59.8 +0.2
baz=99
LOHW **Long Hollow** 99.37 47 *e*Pdif P 08 05 59.6 +0.1
H17A **Grant Village** 99.37 46 ⇑P P 08 06 00.4 +0.8
baz=99,SNR=6.9
I17A **Pilgram Creek** 99.39 47 ⇑P P 08 06 00.1 +0.5
baz=99
SRU **San Rafael** 99.51 51 ⇑P P 08 06 00.2 0.0
baz=100,SNR=5.4
E18A **Harlowton** 99.77 44 ⇓P Pdif 08 06 01.4 +0.3
baz=100,SNR=5.8
Q18A **Rafter H Ranch** 99.81 51 ⇓P Pdif 08 06 01.1 -0.2
baz=100,SNR=5.5
EGMT **Eagleton** 99.81 42 *e*Pdif Pdif 08 06 01.8 +0.5
EGMT **Eagleton** 99.81 42 ⇑P Pdif 08 06 01.2 -0.1
baz=100
D18A **Linhart Farms,** 99.82 43 ⇑P Pdif 08 06 01.5 +0.2
baz=100
M18A **Lyman** 99.82 49 ⇓P Pdif 08 06 01.2 -0.1
baz=100
L18A **Fontenelle, Gr** 99.83 49 ⇓P Pdif 08 06 01.5 +0.2
baz=100
O18A **Roosevelt** 99.89 50 ⇓P Pdif 08 06 02.3 +0.7
baz=100
F18A **Big Timber** 99.93 45 ⇑P Pdif 08 06 02.0 +0.2
baz=100
S18A **Hurst Farm, Bl** 99.94 53 ⇑P Pdif 08 06 02.4 +0.6
baz=100,SNR=7.0
I18A **Diamond G Ranc** 99.94 47 ⇓P Pdif 08 06 02.3 +0.4
baz=100
GCMT **Greycliff** 99.97 45 *e*Pdif Pdif 08 06 02.6 +0.7
V18A **Ganado** 100.01 55 ⇓P Pdif 08 06 03.1 +0.9
baz=100,SNR=5.7
R18A **Canyonlands Na** 100.01 52 ⇑P Pdif 08 06 02.4 +0.3
baz=100
T18A **Mexican Hat** 100.04 53 ⇓P Pdif 08 06 03.1 +0.8
baz=100,SNR=6.4
U18A **Rough Rock, Ch** 100.05 54 ⇓P Pdif 08 06 03.4 +1.1
baz=100
N18A **Larsen Ranch,** 100.13 50 ⇓P Pdif 08 06 02.5 -0.2
baz=100,SNR=5.8
BW06 **Boulder Array** 100.16 48 *e*Pdif Pdif 08 06 02.6 -0.2
BW06 **Boulder Array** 100.16 48 ⇓P Pdif 08 06 02.6 -0.2
baz=100,SNR=9.1
PDAR **Pinedale Array** 100.16 48 P Pdif 08 06 02.5 -0.3
comp=Z,6.0nm,0.9s,baz=246,slow=2.5,SNR=39
PDAR PP PP 08 10 07.3 -1.9
comp=Z,0.6nm,0.8s,baz=260,slow=5.1,SNR=3.4
L19A **Farson** 100.33 48 ⇓P Pdif 08 06 03.6 +0.1
baz=100
O19A **Miners Draw (B** 100.56 50 ⇓P Pdif 08 06 04.5 -0.1
baz=101,SNR=5.1
S19A **Harvey Farm, M** 100.62 53 ⇑P Pdif 08 06 05.4 +0.6
baz=101,SNR=11
P19A **Cripple Cowboy** 100.69 51 ⇑P Pdif 08 06 05.6 +0.4
baz=101
T19A **Beclabito** 100.72 54 ⇑P Pdif 08 06 06.2 +0.9
baz=101,SNR=6.1
PV01 **Paradox Valley** 101.06 52 *e*Pdif Pdif 08 06 07.7 +0.9
L20A **Wamsutter** 101.09 48 ⇑P Pdif 08 06 06.7 -0.2
baz=101
MVCO **Mesa Verde** 101.14 53 *e*Pdif Pdif 08 06 08.6 +1.5
MVCO **Mesa Verde** 101.14 53 ⇑P Pdif 08 06 07.9 +0.8
baz=101
M20A **Sweetwater, Wa** 101.23 49 ⇑P Pdif 08 06 07.7 +0.2
baz=101
SMCO **Snowmass** 102.26 51 *e*Pdif Pdif 08 06 13.8 +1.6
LAO **LASA Array** 102.30 44 *e*Pdif Pdif 08 06 13.3 +1.0
ANMO **Albuquerque** 102.86 56 P Pdif 08 06 17.5 +2.7
comp=Z,1.0nm,0.8s,baz=319,slow=11,SNR=3.4
PHWY **Pilot Hill** 103.29 49 *e*Pdif Pdif 08 06 10.3 -6.4
DGMT **Dagmar** 103.48 42 ⇑P Pdif 08 06 18.0 +0.5
baz=104
TXAR **Lajitas Array** 105.46 61 PKiKP PKiKP 08 10 40.5 -0.1
comp=Z,0.3nm,0.8s,baz=188,slow=3.6,SNR=3.7
TXAR **Lajitas Array** 105.46 61 PKPdf PKiKP 08 10 40.5 -0.1
ARCES **ARCESS Array B** 107.23 343 PKiKP PKiKP 08 10 41.5 -1.1
comp=Z,0.9nm,0.6s,baz=54,slow=1.6,SNR=5.2
ANN **Anapa** 110.99 316 *i* PKiKP PKiKP 08 10 46.9 -3.5
ANN pmax pmax
comp=Z,99nm,2.0s
AKASG **Malin Array Be** 114.43 324 PKP PKiKP 08 10 55.9 -0.9
comp=Z,5.4nm,0.8s,baz=65,slow=2.0,SNR=10.0
NB2 **NORSAR Subarra** 117.21 340 PKPdf PKPdf 08 11 00.4 -1.4
comp=Z,18nm,1.7s,baz=44,slow=1.9
NB2 **NORSAR Subarra** 117.21 340 PKPdf PKPdf 08 11 00.4 -1.4
baz=44,slow=1.9
NOA **NORSAR Array B** 117.21 340 PKP PKPdf 08 11 00.6 -1.2
comp=Z,2.0nm,0.7s,baz=47,slow=1.8,SNR=7.5
TIRR **Tirgusor** 117.25 318 ⇓*i*P PKPdf 08 11 01.2 -1.2
KWP **Kalwaria** 118.67 325 *e*PKPdf PKPdf 08 11 05.1 +0.1
KOLS **Kolonicke sedl** 119.25 324 *e*PKIKP PKPdf 08 11 06.7 +0.6
KOLS **Kolonicke sedl** 119.25 324 *e*PKP PKPdf 08 11 06.6 +0.5
TRPA **Tarpa** 119.47 323 ⇓*i*P PKPdf 08 11 06.2 -0.4
STHS **Stebnicka Huta** 119.61 325 *e*PKP PKPdf 08 11 07.3 +0.5
CRVS **Cervenica-Dubn** 119.74 325 *e*PKP PKPdf 08 11 06.5 -0.6
PLCA **Paso Flores** 119.86 144 PKP PKPdf 08 11 07.2 -0.4
comp=Z,1.8nm,0.6s,baz=194,slow=3.3,SNR=3.3
OJC **Ojcow** 120.02 326 *e*PKPdf PKPdf 08 11 07.5 -0.1
NIE **Niedzica** 120.14 325 *e*PKPdf PKPdf 08 11 08.9 +1.1
GZR **Gura Zlata** 120.56 320 ⇓*i*P PKPdf 08 11 08.7 -0.1
PSZ **Piszkesteto** 121.13 324 ⇓*e*P PKPdf 08 11 09.4 -0.4
BZS **Buzias** 121.19 321 ⇓*i*P PKPdf 08 11 09.0 -1.0
VYHS **Vyhne** 121.45 325 *e*PKP PKPdf 08 11 10.0 -0.4
MORC **Moravsky Berou** 121.48 327 *e*PKPdf PKPdf 08 11 09.7 -0.7
MORC **Moravsky Berou** 121.48 327 ⇑*i*P PKPdf 08 11 10.0 -0.4
KOLL **Kolacno** 121.65 325 *e*PKP PKPdf 08 11 09.9 -0.9
DPC **Dobruska-Polom** 121.82 328 *e*PKP PKPdf 08 11 11.0 0.0
UPC **Upice** 121.89 328 *e*PKP PKPdf 08 11 11.2 0.0
MODS **Modra-Piesok** 122.39 326 *e*PKP PKPdf 08 11 12.3 +0.1
BSEG **Bad Segeberg** 122.47 334 *e*PKPdf PKPdf 08 11 12.1 -0.1
ZST **Bratislava** 122.59 326 *e*PKIKP PKPdf 08 11 12.8 +0.2
ZST MLR MLR
comp=Z,200nm,20.2s,MS4.8
PVCC **Panska Ves** 122.63 329 *e*PKP PKPdf 08 11 12.9 +0.3
PKSM **Moragy** 122.73 323 ⇑*i*P PKPdf 08 11 12.4 -0.5
BRG **Berggiesshubel** 122.74 330 *i* PKIKP PKPdf 08 11 12.4 -0.4
BRG *i* 08 11 20.8
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG MLR MLR
comp=N,176nm,19.4s,MS4.9
BRG MLR MLR
comp=E,178nm,14.5s,MS4.9
BRG MLR MLR
comp=Z,364nm,16.3s,MS5.1
BRG **Berggiesshubel** 122.74 330 *e*PKPdf PKPdf 08 11 12.5 -0.3
BRG **Berggiesshubel** 122.74 330 *i* PKP PKPdf 08 11 12.4 -0.4
comp=Z,16nm,0.9s
BRG *i* 08 11 20.8
comp=Z,32nm,1.9s
TREC **Trest** 122.86 327 *e*PKP PKPdf 08 11 12.7 -0.4
CLL **Collm** 122.94 330 *e*PKIKP PKPdf 08 11 11.0 -2.2
CLL pmax pmax
comp=Z,6.0nm,1.3s
CLL **Collm** 122.94 330 *e*PKPdf PKPdf 08 11 12.7 -0.5
CLL **Collm** 122.94 330 ⇓*i*PKPdf PKPdf 08 11 12.8 -0.4
comp=Z,12nm,0.8s
CLL LmH 09 06 00.0
comp=N,300nm,19.4s
CLL LmH 09 06 00.0
comp=E,200nm,20.9s
CLL LmV 09 07 00.0
comp=Z,400nm,20.3s
PRU **Pruhonice** 122.96 328 *e*PKP PKPdf 08 11 12.9 -0.3
FBE **Freiberg** 123.00 330 *e*PKPdf PKPdf 08 11 13.3 0.0
CONA **Conrad Observa** 123.43 326 ⇑*i*PKiKP PKiKP 08 11 13.8 -0.6
comp=Z,8.3nm,0.8s
CSNA **Conrad Observa** 123.43 326 ⇑*i*PKiKP PKiKP 08 11 13.8 -0.7
comp=Z,8.1nm,0.8s
TANN **Tannenbergstha** 123.76 330 *e*PKPdf PKPdf 08 11 14.5 -0.3
WERD **Werda** 123.82 330 *e*PKPdf PKPdf 08 11 14.1 -0.8
GUNZ **Gunzen** 123.86 330 *e*PKPdf PKPdf 08 11 14.7 -0.3
NKC **Novy Kostel** 123.88 330 *e*PKP PKPdf 08 11 14.9 -0.1
WERN **Wernitzgruen** 123.89 330 *e*PKPdf PKPdf 08 11 15.0 0.0
KHC **Kasperske Hory** 123.97 328 *e*PKP PKPdf 08 11 14.9 -0.3
GEC2 **GERESS Array S** 124.08 328 *e*PKPdf PKPdf 08 11 15.2 -0.3
GEC2 **GERESS Array S** 124.08 328 *e*PKPdf PKPdf 08 11 15.1 -0.3
GERES **GERESS Array B** 124.08 328 PKP PKPdf 08 11 15.0 -0.4
comp=Z,8.4nm,0.7s,baz=66,slow=1.6,SNR=64
MANZ **Manzenberg** 124.21 330 *e*PKPdf PKPdf 08 11 15.4 -0.2
WET **Wettzell** 124.33 328 *e*PKPdf PKPdf 08 11 15.8 -0.1
MOA **Molln** 124.36 326 ⇑*i*PKiKP PKiKP 08 11 15.8 -0.5
comp=Z,6.3nm,1.1s
SOKA **Soboth** 124.59 325 ⇑*i*PKPdf PKPdf 08 11 15.7 -0.8
comp=Z,11nm,1.0s
GCIS **Gornji Cirnik** 124.70 324 *e*PKPdf PKPdf 08 11 16.8 +0.1
UBBA **Unterbreizbach** 124.71 331 *e*PKPdf PKPdf 08 11 16.0 -0.6
IBBN **Ibbenburen** 124.72 334 *e*PKPdf PKPdf 08 11 16.8 +0.3
GRF **Grafenberg Arr** 124.84 330 *e*PKPdf PKPdf 08 11 16.5 -0.4
GRFO **Grafenberg** 124.84 330 *e*PKPdf PKPdf 08 11 16.3 -0.6
MIV **Mineville/With** 124.87 39 *e*PKPdf PKPdf 08 11 15.1 -2.0
BOJS **Bojanci** 125.11 324 *e*PKPdf PKPdf 08 11 17.7 +0.2
VISS **Visnje** 125.19 324 *i* PKPdf PKPdf 08 11 17.7 0.0
RJOB **Jochberg** 125.23 327 *e*PKPdf PKPdf 08 11 17.0 -0.7
ROBS **Robic** 125.71 325 *e*PKPdf PKPdf 08 11 18.0 -0.6
FUR **Furstenfeldbru** 125.77 328 *e*PKPdf PKPdf 08 11 18.5 -0.2
TNS **Taunus Mts** 125.84 332 *e*PKPdf PKPdf 08 11 18.7 -0.1
WTTA **Wettenberg** 126.14 327 ⇑*i*PKiKP PKiKP 08 11 18.8 -1.0
comp=Z,26nm,1.0s
MOTA **Moosalm** 126.38 328 ⇑*i*PKiKP PKiKP 08 11 19.3 -1.0
comp=Z,17nm,0.8s
STU **Stuttgart** 126.45 330 *e*PKPdf PKPdf 08 11 19.8 -0.2
MEM **Membach** 126.69 333 PKP PKPdf 08 11 20.8 +0.4
FETA **Feichten** 126.78 327 ⇓*i*PKiKP PKiKP 08 11 20.6 -0.5
comp=Z,17nm,0.9s
DAVA **Damuels** 127.06 328 ⇑*i*PKiKP PKiKP 08 11 20.1 -1.6
comp=Z,13nm,0.8s
BCLA **Clavier** 127.14 334 PKP PKPdf 08 11 21.6 +0.4
WLF **Walferdange** 127.30 332 PKP PKPdf 08 11 22.9 +1.3
WLF **Walferdange** 127.30 332 *e*PKPdf PKPdf 08 11 22.2 +0.6
GIVF **Givet** 127.58 334 *e*PKP1 PKPdf 08 11 21.8 -0.3
comp=Z,32nm,1.0s
CDF **Champ du Feu** 127.64 331 *e*PKP1 PKPdf 08 11 21.4 -0.8
comp=Z,17nm,1.1s
DOU **Dourbes** 127.69 334 PKP PKPdf 08 11 21.8 -0.5
ECH **Echery** 127.83 331 *e*PKPdf PKPdf 08 11 21.4 -1.2
TUE **Stuetta** 127.86 328 *e*PKPdf PKPdf 08 11 22.6 -0.1
BAIF **Baives** 127.89 334 *e*PKP1 PKPdf 08 11 22.4 -0.3
comp=Z,46nm,1.3s
HINF **Hinteralfeld** 128.25 330 *e*PKP1 PKPdf 08 11 22.7 -0.7
comp=Z,34nm,1.1s
HAU **Haudompre** 128.37 331 *e*PKP1 PKPdf 08 11 23.1 -0.6
comp=Z,48nm,1.2s
MEZF **Maizieres J'vi** 128.63 332 *e*PKP1 PKPdf 08 11 24.1 0.0
comp=Z,58nm,1.2s
CABF **La Chapelle** 129.46 330 *e*PKP1 PKPdf 08 11 25.8 0.0
comp=Z,78nm,1.3s
LPL **La Plagne** 129.87 328 *e*PKP1 PKPdf 08 11 27.4 +0.8
LPG **La Plagne** 129.87 328 *e*PKP1 PKPdf 08 11 26.8 +0.2
comp=Z,17nm,0.9s
LOR **Lormes** 130.08 332 *e*PKP1 PKPdf 08 11 26.5 -0.4
comp=Z,32nm,1.2s
SSF **Saint Saulge** 130.40 332 *e*PKP1 PKPdf 08 11 27.5 0.0
comp=Z,21nm,1.0s
SMF **Signal de Mont** 130.54 331 *e*PKP1 PKPdf 08 11 28.5 +0.7
comp=Z,23nm,1.0s
HYF **Humbligny** 130.65 333 *e*PKP1 PKPdf 08 11 29.2 +1.2
ORIF **Oris-en-Rattie** 130.71 328 *e*PKP1 PKPdf 08 11 28.1 -0.1
comp=Z,21nm,0.8s
LDF **La Druitiere** 130.84 336 *e*PKP1 PKPdf 08 11 29.0 +0.7
FLN **La Foliniere** 130.86 336 *e*PKP1 PKPdf 08 11 29.0 +0.6
comp=Z,15nm,0.7s
BGF **Bois d'Agland** 131.07 332 *e*PKP1 PKPdf 08 11 29.7 +0.9
GRR **Gorron** 131.31 336 *e*PKP1 PKPdf 08 11 30.1 +0.9
comp=Z,11nm,0.6s
VIVF **Saint-Julien-l** 131.38 329 *e*PKP1 PKPdf 08 11 30.3 +0.8
comp=Z,22nm,0.8s
TCF **Toulx Ste Croi** 131.57 332 *e*PKP1 PKPdf 08 11 29.8 0.0
comp=Z,39nm,1.0s
SGMF **Saint Gilles** 132.09 337 *e*PKP1 PKPdf 08 11 30.3 -0.4
comp=Z,36nm,1.0s
ROSF **Rostrenen** 132.30 338 *e*PKP1 PKPdf 08 11 31.3 +0.2
comp=Z,39nm,1.1s
LASF **Ste Croix** 132.34 329 *e*PKP1 PKPdf 08 11 31.5 +0.2
comp=Z,63nm,1.2s
MFF **Saint Martin d** 132.40 334 *e*PKP1 PKPdf 08 11 31.3 -0.1
comp=Z,12nm,0.8s
KEST **Kesra** 134.17 316 PKP PKPdf 08 11 35.7 +0.7
comp=Z,6.8nm,0.9s,baz=282,slow=2.5,SNR=10
ROSC **El Rosal** 134.18 89 PKP PKPdf 08 11 36.0 +0.3
comp=Z,7.2nm,0.7s,baz=85,slow=19,SNR=7.9
ROSC **El Rosal** 134.18 89 *e*PKPdf PKPdf 08 11 36.1 +0.4
LPAZ **La Paz** 135.04 120 PKP PKPdf 08 11 38.2 +1.1
comp=Z,3.7nm,0.8s,baz=283,slow=1.5,SNR=7.7
LPAZ **La Paz** 135.04 120 *e*PKIKP PKPdf 08 11 38.2 +1.0
ETSF **Etsaut** 135.41 331 *e*PKP1 PKPdf 08 11 37.4 +0.3
comp=Z,22nm,0.9s
ESDC **Sonseca Array** 139.53 331 PKhKP 08 11 38.4
comp=Z,0.2nm,0.2s,baz=129,slow=3.5,SNR=5.7
TAM **Tamanrasset** 143.11 301 *e*PKPdf PKPdf 08 11 49.0 -2.7
TORD **Torodi Ar. Sit** 149.46 286 *e*PKPbc PKPbc 08 12 06.4 -0.8
TORD **Torodi Ar. Bea** 149.46 286 PKP PKPdf 08 12 01.6 -1.1
comp=Z,52nm,1.2s,baz=47,slow=1.2,SNR=12
TORD PKPbc PKPbc 08 12 06.9 -0.3
comp=Z,109nm,0.8s,baz=71,slow=2.6,SNR=381
BDFB **Brasilia** 151.32 137 PKPbc PKPbc 08 12 11.2 -0.3
comp=Z,14nm,0.8s,baz=198,slow=7.3,SNR=32
KIC **Kosan Boka** 156.53 273 *e*P PKPdf 08 12 22.1 +9.1
comp=Z,105nm,0.9s
DBIC **Dimbokro** 156.64 274 PKPbc PKPdf 08 12 21.8 +8.7
comp=Z,4.1nm,0.7s,baz=121,slow=2.5,SNR=5.6
DBIC PKPab PKPab 08 12 42.7 +0.2
comp=Z,16nm,0.8s,baz=86,slow=5.7,SNR=9.4
DBIC **Dimbokro** 156.64 274 *e*PKPdf PKPdf 08 12 14.4 +1.2
DBIC *e*PKPdif PKPdf 08 12 21.6 +8.5
DBIC *e*PKPab PKPab 08 12 42.3 -0.1
DBIC **Dimbokro** 156.64 274 *e*PKIKP PKPdf 08 12 14.4 +1.2
DBIC *e* 08 12 21.6
TIC **Toumodi** 156.81 274 *e*P PKPdf 08 12 23.5 +10
comp=Z,227nm,1.4s
LIC **Lamto** 156.82 273 *e*P PKPdf 08 12 23.4 +10
comp=Z,106nm,1.3s
LIC **Lamto** 156.82 273 *e*PKIKP PKPdf 08 12 12.3 -1.1
comp=Z,110nm,1.3s

IDC ***16*** *07:53:56.9±0.6,2161S×17385W,h0km,mb4.7/10, mb1 4.9/11,mb1mx4.7/23,mbtmp4.8/11,ML4.6/1,MS4.2/3, Ms1 4.2/3,ms1mx3.3/31,Error ellipse: s-maj=27.2km s-min=17.0km az=150.0*

SZGRF ***16*** *07:53:57.7,2302S×16467W,h33km,Cook Islands region*

ISCJB ***16*** *07:54:00.3±0.5,2165S±0.1×17394W±009,h33km,mb4.8/16, MS4.2/2,Error ellipse: s-maj=16.2km s-min=11.0km az=156.8*

MOS ***16*** *07:54:01.2±3.4,2163S×17376W,h33km,mb5.2/7,Error ellipse: s-maj=15.8km s-min=13.1km az=144.7*

NEIC ***16*** *07:54:01.9±0.4,2166S×17384W,h35km,mb5.1/9,Error ellipse: s-maj=14.8km s-min=9.2km az=149.0*

ISC 16 07:54:02.1±0.5,2174S±008×17383W±009,h35km, (h37km±4km:pP-P),n100,σ093/42,mb4.9/16,MS4.2/2, 7C-4D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.03**	**14**	Pn	**Pn**	**07 55 50.1**	**-6.1**
	4.7nm,0.3s,baz=28,slow=16,SNR=11						
AFI				Sn	Sx	07 57 13.5	
	13nm,0.3s,baz=271,slow=17,SNR=4.2						
AFI	**Afiamalu**	**8.03**	**14**	*e*Pn	**Pn**	**07 55 51.4**	**-4.9**
	38nm,0.4s						
AFI				*e*Sn	Sx	07 57 15.6	
AFI	**Afiamalu**	**8.03**	**14**	*e*P	**Pn**	**07 55 51.4**	**-4.9**
AFI				pmax	pmax		
	comp=Z,38nm,0.4s						
RAO	**Raoul Island**	**8.34**	**205**	Sn	**Sn**	**07 57 32.4**	**-1.1**
	comp=Z,103nm,0.3s,baz=30,slow=20,SNR=5.4						
RAR	**Rarotonga**	**13.10**	**90**	Pn	**Pn**	**07 57 01.1**	**-4.6**
	comp=Z,8.9nm,0.3s,baz=262,slow=8.0,SNR=12						
RAR				Sn	Sx	07 59 15.9	
	comp=Z,8.4nm,0.3s,baz=53,slow=12,SNR=5.3						
RAR				LR	LR	08 00 45.0	
	comp=Z,932nm,18.8s,baz=270,slow=31						
RAR	**Rarotonga**	**13.10**	**90**	*e*Pn	**Pn**	**07 57 01.0**	**-4.8**
	comp=Z,123nm,0.9s						
RAR	**Rarotonga**	**13.10**	**90**	*e*P	**Pn**	**07 57 01.0**	**-4.8**
RAR				pmax	pmax		
	comp=Z,123nm,0.9s						
URZ	**Urewera**	**18.22**	**203**	P	**Pn**	**07 58 13.1**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=12,slow=6.7,SNR=21						
URZ				S	Sx	08 01 21.3	
	comp=Z,2.3nm,0.3s,baz=139,slow=21,SNR=10						
DZM	**Mont Dzumac**	**18.31**	**265**	*e*P	**Pn**	**07 58 15.4**	**+2.0**
PPT	**Papeete**	**23.21**	**84**	*e*LR	LR	08 04 22.6	
	comp=Z,1μm,24.5s,baz=253						
PPT	**Papeete**	**23.21**	**84**	LR	LR	08 05 22.6	
	comp=Z,565nm,19.7s,MS4.0,baz=244,slow=30						
RPZ	**Rata Peaks**	**25.26**	**206**	P	**P**	**07 59 26.8**	**+1.9**
	comp=Z,9.7nm,0.7s,mb4.5,baz=268,slow=6.2,SNR=2.9						
ARMA	**Armidale**	**32.10**	**247**	*e*P	**P**	**08 00 26.9**	**+0.8**
EIDS	**Eidsvold**	**32.31**	**257**	*e*P	**P**	**08 00 27.5**	**-0.5**
	comp=Z,24nm,0.7s,mb5.1						
TAOE	**Nuku Hiva Isla**	**34.83**	**74**	*e*LR	LR	08 09 49.7	
	comp=Z,2μm,25.5s						
RKT	**Rikitea**	**35.88**	**100**	*e*LR	LR	08 10 11.4	
	comp=Z,768nm,27.5s						
CTA	**Charters Tower**	**37.25**	**265**	P	**P**	**08 01 10.2**	**-0.4**
	comp=Z,28nm,0.7s,mb5.2,baz=97,slow=11,SNR=20						
CTAO	**Charters Tower**	**37.25**	**265**	*e*P	**P**	**08 01 09.8**	**-0.8**
	comp=Z,32nm,0.8s,mb5.2						
CTAO	**Charters Tower**	**37.25**	**265**	*e*P	**P**	**08 01 09.8**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.2						
CTAO	**Charters Tower**	**37.25**	**265**	*e*	**P**	**08 01 09.9**	**-0.7**
STKA	**Stephens Creek**	**40.80**	**246**	P	**P**	**08 01 41.0**	**+0.7**
	comp=Z,15nm,0.6s,mb4.8,baz=88,slow=9.4,SNR=20						
STKA	**Stephens Creek**	**40.80**	**246**	*e*P	**P**	**08 01 40.5**	**+0.2**
	comp=Z,21nm,0.7s,mb4.9						
BBOO	**Buckleboo**	**45.52**	**245**	*e*P	**P**	**08 02 18.9**	**+0.5**
	comp=Z,36nm,0.8s,mb5.3						
ASAR	**Alice Springs**	**48.03**	**257**	P	**P**	**08 02 38.0**	**-0.1**
	comp=Z,27nm,0.8s,mb5.3,baz=89,slow=8.2,SNR=29						
ASAR				S	**S**	**08 09 30.2**	**-4.0**
	comp=Z,0.7nm,0.8s,baz=97,slow=15,SNR=4.4						
WRAB	**Tennant Creek**	**48.28**	**262**	*e*P	**P**	**08 02 38.5**	**-1.6**
	comp=Z,59nm,1.0s,mb5.6						
WRAB	**Tennant Creek**	**48.28**	**262**	*e*P	**P**	**08 02 38.5**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.6						
WRA	**Warramunga Arr**	**48.28**	**262**	P	**P**	**08 02 39.1**	**-1.1**
	comp=Z,27nm,0.8s,mb5.3,baz=99,slow=5.1,SNR=27						
WRA				LR	LR	08 19 23.4	
	comp=Z,292nm,18.7s,MS4.3,baz=0.0,slow=32						
FORT	**Forrest**	**52.39**	**247**	*e*P	**P**	**08 03 11.4**	**+0.3**
	comp=Z,5.8nm,0.7s,mb4.6						
DRV	**Dumont d'Urvil**	**53.54**	**201**	S	**S**	**08 10 55.0**	**+5.7**
DRV				R		08 21 00.0	
DRV				R		08 23 00.0	
MBWA	**Marble Bar**	**61.38**	**257**	*e*P	**P**	**08 04 14.2**	**-0.8**
MJAR	**Matsushiro Arr**	**73.55**	**321**	P	**P**	**08 05 32.0**	**+0.5**
	comp=Z,1.5nm,0.6s,mb4.1,baz=158,slow=6.7,SNR=4.1						
TXAR	**Lajitas Array**	**84.49**	**56**	P	**P**	**08 06 31.5**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.1,baz=227,slow=6.6,SNR=14						
TXAR	**Lajitas Array**	**84.49**	**56**	P	**P**	**08 06 31.5**	**-0.1**
ANMO	**Albuquerque**	**85

ANMO					pmax	pmax			
	comp=Z,7.0nm,1.1s								
PLCA	**Paso Flores**	**85.58**	**132**		P	**P**	**08 06 37.5**	**+0.6**	
	comp=Z,1.3nm,0.8s,mb4.2,baz=284,slow=6.9,SNR=2.9								
CMIG	**Matias Romero**	**86.39**	**70**	P	**P**		**08 06 41.5**	**+0.2**	
	comp=Z,9.5nm,1.2s,mb4.9,baz=248,slow=6.3,SNR=3.7								
VNA3	**Neumayer Olymp**	**86.61**	**175**	*e*Pdiff	**P**		**08 06 41.1**	**-0.4**	
VNA3				*e*	pP		08 06 52.3	-0.3	
SNAA	**Sanae**	**86.63**	**177**	*e*Pdiff	**P**		**08 06 40.1**	**-1.4**	
SNAA				*e*	pP		08 06 51.0	-1.6	
SNAA	**Sanae**	**86.63**	**177**	*e*P	**P**		**08 06 39.9**	**-1.7**	
	comp=Z,8.3nm,1.3s,mb4.8								
SNAA	**Sanae**	**86.63**	**177**	*e*P	**P**		**08 06 39.9**	**-1.6**	
SNAA					pmax	pmax			
	comp=Z,8.0nm,1.3s								
VNA2	**Neumayer--Watz**	**87.10**	**176**	*e*Pdiff	**P**		**08 06 44.4**	**+0.6**	
	baz=196,slow=2.0								
VNA2				*e*	pP		08 06 55.2	+0.3	
COLA	**College**	**88.63**	**11**	*e*P	**P**		**08 06 50.2**	**-0.8**	
	comp=Z,13nm,1.1s,mb5.2								
COLA	**College**	**88.63**	**11**	*e*P	**P**		**08 06 50.2**	**-0.8**	
COLA					pmax	pmax			
	comp=Z,13nm,1.1s,mb5.2								
ZALV	**Zalesovo Beam**	**113.90**	**321**	PKiKP	PKiKP		08 12 36.1	-0.8	
	comp=Z,0.9nm,0.4s,baz=53,slow=0.7,SNR=5.7								
MKAR	**Makanchi Array**	**114.88**	**313**	PKP	PKiKP		08 12 38.3	-0.7	
	comp=Z,1.3nm,0.9s,baz=66,slow=3.0,SNR=6.7								
TKM2	**Tokmak 2**	**119.33**	**308**	*e*Pdif	Pdif		08 09 11.6	+2.2	
AKTK	**Aktyubinsk**	**130.57**	**319**	PKP	PKPdf		08 13 10.1	+1.1	
AKTO	**Aktyubinsk**	**130.57**	**319**	PKP	PKPdf		08 13 10.1	+1.1	
	comp=Z,1.4nm,0.8s,baz=45,slow=2.9,SNR=4.3								
AKASG	**Malin Array Be**	**145.91**	**334**	PKPbc	PKPbc		08 13 36.7	-1.0	
	comp=Z,9.5nm,0.8s,baz=37,slow=3.4,SNR=15								
AKBB	**Malin Array Si**	**145.91**	**334**	*e*PKPdf	PKPdf		08 13 36.8	-0.1	
KIEV	**Kiev**	**145.92**	**334**	*e*PKPdf	PKPdf		08 13 36.7	-0.3	
BSEG	**Bad Segeberg**	**147.70**	**355**	*e*PKPbc	PKPbc		08 13 42.3	-0.4	
LVV	**L'vov**	**148.62**	**338**	*e*PKP2	PKPbc		08 13 44.7	-0.5	
KSP	**Ksiaz**	**149.89**	**347**	*e*P	PKPbc		08 13 48.7	+0.3	
STHS	**Stebnicka Huta**	**149.90**	**340**	*e*PKP	PKPbc		08 13 48.6	+0.2	
BURAR	**Bucovina Array**	**149.97**	**334**	⇑*i*P	PKiKP		08 13 50.9	+1.3	
KOLS	**Kolonicke sedl**	**149.98**	**339**	*e*PKP	PKPbc		08 13 49.1	+0.4	
CLL	**Collm**	**150.01**	**351**	*i* PKP2	PKPbc		08 13 48.6	0.0	
CLL					pmax	pmax			
	comp=Z,15nm,1.0s								
CLL	**Collm**	**150.01**	**351**	*e*PKPbc	PKPbc		08 13 48.3	-0.3	
CLL	**Collm**	**150.01**	**351**	⇑*i*PKPbc	PKPbc		08 13 48.6	0.0	
	comp=Z,25nm,1.4s								
CLL				⇓*i*PKPab	PKPab		08 13 54.0	-0.4	
	comp=Z,13nm,1.0s								
CLL				*i* pPKPbc	pPKPbc		08 14 00.0	-0.1	
UPC	**Upice**	**150.26**	**347**	*e*PKP	PKPbc		08 13 49.2	-0.1	
UPC				*ep*PKP	pPKPdf		08 13 55.9	+0.3	
CRVS	**Cervenica-Dubn**	**150.28**	**339**	*e*PKP	PKPbc		08 13 49.7	+0.3	
BRG	**Berggiesshubel**	**150.29**	**350**	*e*PKPbc	PKPbc		08 13 49.3	0.0	
BRG	**Berggiesshubel**	**150.29**	**350**	*i* PKP	PKPbc		08 13 49.5	+0.2	
	comp=Z,17nm,1.1s								
BRG									
	comp=N,294nm,19.4s								
BRG									
	comp=E,297nm,14.5s								
BRG									
	comp=Z,608nm,16.3s								
FBE	**Freiberg**	**150.33**	**351**	*e*PKPbc	PKPbc		08 13 49.9	+0.5	
DPC	**Dobruska-Polom**	**150.35**	**347**	*e*PKP	PKPbc		08 13 50.0	+0.5	
DPC				*ep*PKP	pPKPdf		08 13 56.6	+0.9	
OKC	**Ostrava-Krasne**	**150.40**	**344**	*e*PKP	PKPbc		08 13 50.1	+0.5	
OKC				*ep*PKP	pPKPdf		08 13 56.3	+0.5	
PVCC	**Panska Ves**	**150.52**	**349**	*e*PKP	PKPbc		08 13 50.3	+0.4	
TRPA	**Tarpa**	**150.57**	**337**	⇑*i*P	PKPbc		08 13 50.2	+0.1	
MORC	**Moravsky Berou**	**150.61**	**345**	*e*PKPbc	PKPbc		08 13 50.5	+0.3	
MORC	**Moravsky Berou**	**150.61**	**345**	⇑*i*P	PKPbc		08 13 50.2	+0.1	
VRI	**Vrincioaia**	**150.65**	**330**	⇓*i*P	PKPbc		08 13 50.2	-0.2	
PLOR	**Plostina**	**150.70**	**330**	⇑*i*P	PKPbc		08 13 50.9	+0.4	
MOX	**Moxa**	**150.84**	**353**	*e*PKP	PKPbc		08 13 50.5	-0.1	
HARR	**Harsova**	**150.92**	**327**	⇓*i*P	PKPbc		08 13 51.6	+0.5	
WERD	**Werda**	**150.94**	**352**	*e*PKPbc	PKPbc		08 13 50.9	0.0	
TANN	**Tannenbergstha**	**150.96**	**352**	*e*PKPbc	PKPbc		08 13 50.8	-0.1	
GUNZ	**Gunzen**	**151.02**	**352**	*e*PKPbc	PKPbc		08 13 51.1	0.0	
PRU	**Pruhonice**	**151.04**	**349**	*e*PKP	PKPbc		08 13 51.0	-0.1	
WERN	**Wernitzgruen**	**151.09**	**352**	*e*PKPbc	PKPbc		08 13 51.4	+0.1	
NKC	**Novy Kostel**	**151.13**	**352**	*e*PKP	PKPbc		08 13 51.6	+0.2	
NKC				*ep*PKP	pPKPdf		08 13 59.0	+2.0	
MLR	**Muntele Rosu**	**151.30**	**330**	⇓*i*P	PKPbc		08 13 52.2	+0.3	
MANZ	**Manzenberg**	**151.42**	**352**	*e*PKPbc	PKPbc		08 13 52.0	0.0	
VYHS	**Vyhne**	**151.44**	**342**	*e*PKP	PKPbc		08 13 52.4	+0.3	
VYHS				*e*			09 03 00.1		
TREC	**Trest**	**151.52**	**347**	*e*PKP	PKPbc		08 13 52.8	+0.5	
ROTZ	**Rotzenmuhle**	**151.62**	**352**	*e*PKPbc	PKPbc		08 13 53.1	+0.6	
VOIR		**151.75**	**331**	⇑*i*P	PKPbc		08 13 54.1	+1.2	
GRF	**Grafenberg Arr**	**151.82**	**353**	*e*PKPbc	PKPbc		08 13 52.2	-0.7	
MODS	**Modra-Piesok**	**151.97**	**344**	*e*PKP	PKPbc		08 13 53.7	+0.4	
KHC	**Kasperske Hory**	**152.04**	**350**	*e*PKP	PKPbc		08 13 53.5	0.0	
KHC				*ep*PKP	pPKPdf		08 14 03.0	+4.6	
WET	**Wettzell**	**152.14**	**351**	*e*PKPbc	PKPbc		08 13 53.8	+0.1	
GEC2	**GERESS Array S**	**152.29**	**349**	*e*PKPbc	PKPbc		08 13 53.6	-0.4	
GEC2	**GERESS Array S**	**152.29**	**349**	*e*PKPbc	PKPbc		08 13 54.1	+0.1	
GERES	**GERESS Array B**	**152.29**	**349**	PKPbc	PKPbc		08 13 54.1	+0.1	
	comp=Z,2.2nm,0.9s,baz=122,slow=1.7,SNR=7.5								
GERES				PKPab	PKPab		08 14 03.9	-0.1	
	comp=Z,0.8nm,0.7s,baz=43,slow=2.4,SNR=4.4								
BFO	**Black Forest**	**153.41**	**357**	*e*PKPbc	PKPbc		08 13 54.0	-2.5	
PKSM	**Moragy**	**153.55**	**340**	⇑*i*P	PKPdf		08 13 49.5	+0.3	
ESDC	**Sonseca Array**	**160.14**	**24**	PKPab	PKPab		08 14 38.1	+0.3	
	comp=Z,2.0nm,0.7s,baz=20,slow=6.0,SNR=5.9								
TORD	**Torodi Ar. Bea**	**170.45**	**153**	PKPab	PKPab		08 15 24.0	+0.2	
	comp=Z,1.8nm,1.0s,baz=193,slow=5.1,SNR=3.4								

*ISCJB **16** 08:06:31.6±1.4,2306S±008×704W±0.1,h62km±18km, Error ellipse: s-maj=18.0km s-min=10.2km az=34.5*
*NEIC **16** 08:06:32.4,2299S×7032W,h26km,ML3.5(GUC), After GUC.*
*GUC **16** 08:06:32.0±1.1,2299S×7034W,h34km±2km,ML3.5*
ISC 16 08:06:32.3±1.4,**2307S**±007×**704W**±01,**h59**km±18km,**n11,** σ1**s05/21,5D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.34**	**157**	⇓*i*P	**Pn**	**08 06 43.2**	**+0.5**
CEN1				*i* S	**Sn**	**08 06 51.7**	**+1.5**
CEN1				AML	AML	08 06 54.2	
	comp=E,3μm,0.7s						
ANCH	**Antofagasta**	**0.61**	**186**	*e*P	**Pn**	**08 06 44.6**	**-0.8**
ANCH				*i* S	**Sn**	**08 06 54.4**	**-0.6**
PB06	**Plate Boundary**	**0.80**	**63**	⇓*i*P	**Pn**	**08 06 46.4**	**-1.4**
PB06				*i* S	**Sn**	**08 06 57.0**	**-2.1**
PB04	**Plate Boundary**	**1.13**	**45**	⇓*i*P	**Pn**	**08 06 45.1**	**-7.0**
PB04				*i* S	**Sn**	**08 06 55.2**	**-11**
LVC	**Limon Verde**	**1.40**	**71**	⇓*i*P	**Pn**	**08 06 56.4**	**+0.8**
LVC				*i* S	**Sn**	**08 07 13.9**	**+0.8**
LVC	**Limon Verde**	**1.40**	**71**	⇓*i*P	**Pn**	**08 06 56.4**	**+0.8**
LVC				*i* S	**Sn**	**08 07 13.9**	**+0.8**
LVC				AML	AML	08 07 14.8	
	comp=N,1μm,0.4s						
PB07	**Plate Boundary**	**1.41**	**18**	*e*P	**Pn**	**08 06 54.9**	**-0.8**
PB07				*i* S	**Sn**	**08 07 12.6**	**-0.6**
SPCH	**San Pedro de A**	**1.98**	**86**	*e*P	**Pn**	**08 07 08.4**	**+4.8**
SPCH				*i* S	**Sn**	**08 07 34.2**	**+6.8**
SPCH	**San Pedro de A**	**1.98**	**86**	*e*P	**Pn**	**08 07 08.4**	**+4.8**
SPCH				*i* S	**Sn**	**08 07 34.2**	**+6.8**
SPCH				AML	AML	08 07 38.6	
	comp=E,2μm,0.3s						
PB01	**Plate Boundary**	**2.17**	**22**	*e*P	**Pn**	**08 07 07.0**	**+0.8**
PB01				*i* S	**Sn**	**08 07 33.3**	**+1.4**
PB01				AML	AML	08 07 46.2	
	comp=E,468nm,0.4s						
LPAZ	**La Paz**	**7.07**	**18**	Pn	**Pn**	**08 08 13.3**	**+0.2**
	comp=E,3.7nm,0.6s						

*IDC **16** 08:10:52.8±1.5,1204N×12582E,h0km,mb3.9/7, mb1 4.0/7,mb1mx3.8/19,mbtmp3.9/7,MS4.4/1,Ms1 4.4/1, ms1mx3.0/33,Error ellipse: s-maj=182.4km s-min=17.0km az=67.0*
*ISCJB **16** 08:10:58.2±1.1,1207N±006×12558E±008,h52km±10km, mb3.9/7,Error ellipse: s-maj=12.9km s-min=9.6km az=159.2*
*MAN **16** 08:10:59,1203N×12540E,h17km,mb4.2,ML3.0,MS2.7*
ISC 16 08:10:57.5±1.4,**1213N**±005×**12561E**±006,**h25**km±10km, **n16,**σ1**s24/21,mb3.9/7,1C,Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.55**	**198**	*e*P	**Pb**	**08 11 09.6**	**+1.0**
CNP	**Catarman**	**1.00**	**292**	*e*P	**Pn**	**08 11 15.2**	**-0.7**
CNP				*e*S	**Sb**	**08 11 26.8**	**-2.1**
OCLP	**Ormoc**	**1.45**	**222**	*e*P	**Pn**	**08 11 21.2**	**-0.9**
OCLP				*e*S	**Sn**	**08 11 41.2**	**+0.9**
PVCP	**Virac**	**2.03**	**316**	*e*P	**Pn**	**08 11 32.7**	**+2.6**
PVCP				*e*S	**Sn**	**08 12 01.2**	**+6.5**
MSLP	**Maasin**	**2.12**	**200**	*e*P	**Pn**	**08 11 32.0**	**+0.8**
MSLP				*e*S	**Sn**	**08 11 59.9**	**+3.2**
RCP	**Roxas**	**2.86**	**259**	⇑*e*P	**Pn**	**08 11 42.2**	**+0.7**
RCP				*i* S	**Sn**	**08 12 15.1**	**0.0**
GUIM	**Jordan**	**3.32**	**244**	*e*P	**Pn**	**08 11 48.1**	**+0.3**
GUIM				*e*S	**Sn**	**08 12 25.3**	**-1.1**
OTRP	**Odiongan**	**3.51**	**274**	*e*P	**Pn**	**08 11 51.0**	**+0.5**
WRA	**Warramunga Arr**	**33.01**	**165**	P	**P**	**08 17 27.8**	**-2.9**
	0.6nm,0.7s,mb3.6,baz=342,slow=9.1,SNR=8.8						
WRA				PcP	PcP	08 20 13.5	-0.9
	0.2nm,0.4s,baz=338,slow=2.9,SNR=4.9						
ASAJ	**Asahikawa**	**35.07**	**21**	LR	LR	08 32 04.1	
	comp=Z,587nm,19.7s,baz=145,slow=36						
ASAR	**Alice Springs**	**36.49**	**167**	P	**P**	**08 17 59.0**	**-1.7**
	1.7nm,0.4s,mb4.3,baz=346,slow=7.3,SNR=40						
STKA	**Stephens Creek**	**46.36**	**161**	P	**P**	**08 19 19.9**	**-1.8**
	0.7nm,0.3s,mb4.0,baz=0.5,slow=10,SNR=4.6						
MKAR	**Makanchi Array**	**50.16**	**322**	P	**P**	**08 19 51.9**	**+1.0**
	0.8nm,0.6s,mb3.9,baz=114,slow=8.3,SNR=5.1						
MKAR				PcP	PcP	08 21 09.9	-0.1
	0.2nm,0.5s,baz=90,slow=3.3,SNR=2.1						
ZALV	**Zalesovo Beam**	**52.69**	**331**	P	**P**	**08 20 10.0**	**+0.3**
	0.6nm,0.5s,mb3.8,baz=108,slow=9.3,SNR=2.8						
BVAR	**Borovoye Array**	**59.78**	**325**	P	**P**	**08 21 00.8**	**+0.5**
	0.5nm,0.5s,mb3.8,baz=153,slow=15,SNR=4.3						
ARCES	**ARCESS Array B**	**82.23**	**340**	P	**P**	**08 23 16.5**	**+0.3**
	2.8nm,1.0s,mb4.2,baz=64,slow=8.2,SNR=6.0						

*ISCJB **16** 08:21:49.8±1.0,690N±007×7307W±009,h168km±12km, Error ellipse: s-maj=17.5km s-min=7.4km az=35.5*
*IDC **16** 08:21:50.2±3.5,673N×7292W,h164km±57km,mb1 3.2/2, mb1mx2.9/19,mbtmp3.4/2,Error ellipse: s-maj=685.5km s-min=7.5km az=132.0*
*FUNV **16** 08:21:50.3,677N×7314W,h168km,MW3.2*
ISC 16 08:21:50.5±1.1,**690N**±007×**7308W**±009,**h166**km±12km, **n13,**σ0**s68/18,1C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.22**	**38**	⇑*i*P	**Pn**	**08 22 19.5**	**+0.8**
CAPV				*e*S	**Sn**	**08 22 41.0**	**+0.7**
ROSC	**El Rosal**	**2.38**	**212**	P	**Pn**	**08 22 31.2**	**+0.1**
	11nm,0.3s,baz=278,slow=23,SNR=40						
ROSC				S	**Sn**	**08 23 01.8**	**-0.7**
	19nm,0.3s,baz=96,slow=22,SNR=15						
VIGV	**El Vigia**	**2.57**	**41**	*e*P	**Pn**	**08 22 33.9**	**+0.6**
VIGV				*e*S	**Sn**	**08 23 05.9**	**-0.5**
SOCV	**Socops**	**2.59**	**58**	*e*P	**Pn**	**08 22 34.2**	**+0.6**
SOCV				*e*S	**Sn**	**08 23 06.2**	**-0.7**
SDV	**Santo Domingo**	**3.12**	**51**	P	**Pn**	**08 22 41.0**	**+0.9**
	6.0nm,0.3s,baz=263,slow=5.4,SNR=41						
SDV				S	**Sn**	**08 23 18.3**	**-0.2**
	6.9nm,0.3s,baz=80,slow=22,SNR=21						
ELOV	**Elorza**	**3.57**	**88**	*e*P	**Pn**	**08 22 45.7**	**0.0**
VIRV	**Villa del Rosa**	**3.64**	**10**	*e*P	**Pn**	**08 22 46.2**	**-0.4**
VIRV				*e*S	**Sn**	**08 23 29.3**	**-1.0**
QARV	**Quebrada Arrib**	**4.14**	**37**	*e*P	**Pn**	**08 22 53.9**	**+0.8**
CURV	**Curarigua**	**4.36**	**45**	*e*P	**Pn**	**08 22 56.4**	**+0.4**
SIQV	**Siquisique**	**4.93**	**41**	*e*P	**Pn**	**08 23 03.5**	**+0.2**
BAUV	**El Baul**	**5.38**	**68**	*e*P	**Pn**	**08 23 08.0**	**-1.3**
BAUV				*e*S	**Sn**	**08 24 06.8**	**-4.1**
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc	PKPbc	08 41 19.9	-0.3
	0.3nm,0.7s,baz=133,slow=3.9,SNR=3.8						
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc	PKPbc	08 41 22.8	-0.4
	0.4nm,0.8s,baz=108,slow=2.4,SNR=7.7						

*LDG **16** 08:42:37.7±0.2,2207S×7055W,h10km,Mb5.4/14, Ms4.9/10,Error ellipse: s-maj=15.2km s-min=5.7km az=173.0*
*ISCJB **16** 08:42:38.1±0.1,2281S±003×7033W±004,h22km, mb5.3/139,MS5.0/173,Error ellipse: s-maj=5.1km s-min=3.6km az=153.2*
*GCMT **16** 08:42:39.0±0.3,2289S×7079W,h26km±1km,MW5.5/79, Moment Tensor Solution. s39,c52; s79,c115; Duration: 1s4 Moment tensor: Scale 10^17^Nm; Mrr1.34±.07; Mθθ0.01±.04; Mϕϕ-1.35±.05; Mrθ0.56±.09; Mθϕ0.09±.03; Mϕr-1.77±.11; Best double couple: Mo2.29400×10^17^ NP1:ϕs7.00000°,δ19.00000°,λ111.00000°. NP2: ϕs165.00000°,δ72.00000°,λ83.00000°. Principal axes: T 2.3120, Plg62.0000°, Azm65.0000°; N -0.0370, Plg7.0000°, Azm167.0000°; P -2.2750, Plg27.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **16** 08:42:39.4±0.4,2283S×7044W,h24km±2km,mb4.8/15, mb1 4.8/18,mb1mx4.8/19,mbtmp4.7/18,ML4.2/4,MS4.8/17, Ms1 4.8/17,ms1mx4.7/25 Error ellipse: s-maj=11.3km s-min=9.8km az=18.0*
*GUC **16** 08:42:39.6±0.9,2286S×7058W,h30km±6km,ML5.1, MS4.5*
*NEIC **16** 08:42:39.0,2284S×7060W,h15km,mb5.4/128, MS5.0/154,ML5.1(GUC),After GUC.*
*MOS **16** 08:42:40.1±1.1,2260S×7040W,h33km,mb5.6/59, MS4.8/24,Error ellipse: s-maj=11.6km s-min=6.3km az=104.0*
*BJI **16** 08:42:43.0,2280S×7060W,h34km,mB5.4,Ms5.5,Msz5.2*
*DJA **16** 08:42:47,24.15S×71.76W,h10km,mb5.3/5*
ISC 16 08:42:39.9±0.1,**2287S**±002×**7032W**±003,**h24**km, **h24**km±.3km:**pP-P,n860,**σ0**s73/674,mb5.3/139,MS5.0/173, 232C-176D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.53**	**168**	⇓*i*P	**Pb**	**08 42 53.3**	**+2.6**
CEN1				*i* S	**Sb**	**08 43 03.1**	**+5.1**
CEN1				AML	AML	08 43 06.8	
	comp=N,74μm,0.6s						
PB06	**Plate Boundary**	**0.71**	**77**	⇓*e*P	**Pb**	**08 42 56.6**	**+2.9**
PB06				*i* S	**Sb**	**08 43 09.4**	**+6.4**
ANCH	**Antofagasta**	**0.82**	**186**	⇑*i*P	**Pb**	**08 42 54.4**	**-1.1**
ANCH				*i* S	**Sb**	**08 43 05.9**	**-0.2**
PB04	**Plate Boundary**	**0.97**	**52**	⇓*i*P	**Pn**	**08 42 52.7**	**-6.0**
PB04				*e*S	**Sb**	**08 43 01.2**	**-9.4**
PB04				AML	AML	08 43 05.8	
	comp=N,130μm,0.8s						
PB07	**Plate Boundary**	**1.20**	**20**	⇑*i*P	**Pn**	**08 43 02.0**	**+0.7**
PB07				*i* S	**Sn**	**08 43 19.4**	**+2.6**
LVC	**Limon Verde**	**1.32**	**79**	Pg	**Pn**	**08 43 06.7**	**+3.7**
	comp=N,1μm,0.3s,SNR=1752						
LVC				Lg		08 43 26.3	
	comp=N,5μm,0.3s,baz=138,slow=0.0,SNR=36						
LVC	**Limon Verde**	**1.32**	**79**	*e*Pn	**Pn**	**08 43 06.9**	**+4.0**
LVC				*e*Sn	**Sn**	**08 43 27.3**	**+7.5**
LVC	**Limon Verde**	**1.32**	**79**	⇓*i*P	**Pn**	**08 43 06.9**	**+4.0**
LVC				*i* S	**Sn**	**08 43 27.3**	**+7.5**
LVC				AML	AML	08 43 28.3	
	comp=E,17μm,0.4s						
SPCH	**San Pedro de A**	**1.96**	**92**	*e*P	**Pn**	**08 43 18.6**	**+7.0**
SPCH				*i* S	**Sn**	**08 43 47.4**	**+12**
SPCH	**San Pedro de A**	**1.96**	**92**	*e*P	**Pn**	**08 43 18.7**	**+7.1**
SPCH				*i* S	**Sn**	**08 43 47.4**	**+12**
SPCH				AML	AML	08 43 54.9	
	comp=N,65μm,0.8s						
PB01	**Plate Boundary**	**1.97**	**23**	⇑*i*P	**Pn**	**08 43 13.1**	**+1.3**
PB01				*i* S	**Sn**	**08 43 38.1**	**+2.3**
PB01				AML	AML	08 43 45.1	
	comp=E,28μm,0.5s						
LCO	**Las Campanas**	**6.13**	**183**	*e*Pn	**Pn**	**08 44 05.8**	**-3.2**
	comp=E,454nm,0.8s						
ARE	**Arequipa**	**6.47**	**350**	⇑*i*P	**Pn**	**08 44 11.2**	**-2.5**
ARE				*e*S	**Sn**	**08 45 20.0**	**-6.7**
LPAZ	**La Paz**	**6.86**	**18**	Pn	**Pn**	**08 44 21.9**	**+2.8**
	comp=E,4.2nm,0.3s,baz=206,slow=8.2,SNR=63						
LPAZ				LR	LR	08 47 18.7	
	comp=E,15μm,19.0s,baz=203,slow=41						
LPAZ	**La Paz**	**6.86**	**18**	*e*Pn	**Pn**	**08 44 22.5**	**+3.4**
LPAZ				LR	LR	08 47 18.7	
CFAA	**Coronel Fontan**	**8.90**	**168**	Pn	**Pn**	**08 44 46.6**	**-0.4**
	comp=E,0.2nm,0.3s,baz=345,slow=14,SNR=12						

CFAA					Sn	**Sn**	**08 46 36.7**	**+10**	
	comp=E,0.9nm,0.3s,baz=338,slow=19,SNR=3.0								
CFAA					LR	LR	08 48 22.1		
	comp=E,1μm,21.4s,baz=332,slow=38								
CFAA	**Coronel Fontan**	**8.90**	**168**		Pn	**Pn**	**08 44 46.6**	**-0.4**	
CFAA					Sn	**Sn**	**08 46 36.7**	**+10**	
CFAA					LR	LR	08 48 22.1		
PEL	**Peldehue**	**10.24**	**182**	*e*P		**Pn**	**08 45 03.8**	**-1.7**	
PEL					AMS	AMS	08 49 34.3		
	comp=N,11μm,21.7s								
FCH	**Farellones**	**10.42**	**180**	*e*P		**Pn**	**08 45 09.5**	**+1.6**	
FCH					AMS	AMS	08 49 29.0		
	comp=Z,8μm,18.4s								
SIV	**San Ignacio**	**11.08**	**54**		Pn	**Pn**	**08 45 17.4**	**+0.4**	
	comp=Z,3.1nm,0.3s,baz=248,slow=13,SNR=177								
SIV					Sn	**Sn**	**08 47 32.3**	**+12**	
	baz=162,slow=18								
NNA	**Nana**	**12.48**	**329**		Pn	**Pn**	**08 45 35.8**	**-0.3**	
	comp=Z,0.7nm,0.3s,baz=83,slow=16,SNR=3.1								
NNA					Sn	**Sn**	**08 47 44.8**	**-10**	
	comp=Z,2.5nm,0.3s,baz=0.0,slow=20,SNR=3.8								
NNA					LR	LR	08 49 55.4		
	comp=Z,3μm,19.7s,baz=160,slow=35								
NNA	**Nana**	**12.48**	**329**	*e*Pn		**Pn**	**08 45 33.1**	**-3.0**	
NNA				*e*Sn		**Sn**	**08 47 48.9**	**-5.6**	
CCHI	**Chillan**	**13.77**	**186**	*e*P		**Pn**	**08 45 57.9**	**+4.2**	
CCHI					AMS	AMS	08 51 47.1		
	comp=N,3μm,19.8s								
LPA	**La Plata**	**16.16**	**141**	*c*eP		**Pn**	**08 46 30.0**	**+4.5**	
LPA	**La Plata**	**16.16**	**141**	*e*P		**Pn**	**08 46 33.0**	**+7.5**	
LPA				*es*P		sP	08 46 40.0	+1.9	
LPA				*es*S		sS	08 49 42.0	-5.1	
LPA	**La Plata**	**16.16**	**141**	⇑*e*P		**Pn**	**08 46 30.0**	**+4.5**	
LPA				*e*P			08 46 33.0		
LPA				*es*P		sP	08 46 40.0	+1.9	
LPA				*es*S		sS	08 49 42.0	-5.1	
ATAH	**Atahualpa**	**17.59**	**333**	P		**Pn**	**08 46 44.4**	**+0.9**	
	comp=N,0.1nm,0.3s,baz=158,slow=4.0,SNR=11								
PLCA	**Paso Flores**	**17.82**	**181**	P		**Pn**	**08 46 44.9**	**-1.4**	
	comp=N,0.3nm,0.3s,baz=10.0,slow=12,SNR=15								
PLCA	**Paso Flores**	**17.82**	**181**	*e*P		**Pn**	**08 46 46.1**	**-0.1**	
	comp=N,87nm,1.1s								
PLCA	**Paso Flores**	**17.82**	**181**	*e*P		**Pn**	**08 46 46.2**	**0.0**	
PLCA					pmax	pmax			
	comp=Z,87nm,1.1s								
SPB	**Sao Paulo**	**21.04**	**96**	*e*P		**P**	**08 47 25.8**	**+3.5**	
BDFB	**Brasilia**	**22.23**	**75**	P		**P**	**08 47 34.9**	**-0.2**	
	comp=Z,15nm,0.8s,mb4.5,baz=246,slow=15,SNR=19								
BDFB					LR	LR	08 57 38.7		
	comp=Z,4μm,18.3s,MS4.9,baz=70,slow=40								
BDFB	**Brasilia**	**22.23**	**75**	*e*P		**P**	**08 47 34.7**	**-0.3**	
BDFB					LR	LR	08 57 38.7		
OTAV	**Otavalo**	**24.29**	**340**	*e*P		**P**	**08 47 56.5**	**+0.8**	
	comp=Z,19nm,0.9s,mb4.5								
OTAV				*e*PcP		PcP	08 51 35.7	+0.2	
OTAV					LR	LR			
	comp=Z,1μm,22.0s,MS4.3								
ROSC	**El Rosal**	**27.83**	**351**	P		**P**	**08 48 27.5**	**-0.1**	
	comp=Z,16nm,1.0s,mb4.6,baz=170,slow=5.0,SNR=11								
ROSC					LR	LR	08 58 45.7		
	comp=Z,1μm,19.1s,MS4.5,baz=188,slow=35								
ROSC	**El Rosal**	**27.83**	**351**	*e*P		**P**	**08 48 27.0**	**-0.6**	
**EFI

comp=Z,544nm,22.0s,MS4.6
VNA3 Neumayer Olymp 59.21 161 *e*P **P** **08 52 38.9 +0.2**
VNA3 *e* pP 08 52 46.8 +0.5
VNA3 *e* 08 52 49.6
VNA3 *e* 08 53 01.1
VNA1 Neumayer--Stat 59.45 160 *e*P **P** **08 52 40.6 +0.2**
VNA1 *e* pP 08 52 49.0 +1.1
VNA1 *e* 08 52 52.5
VNA1 *e* 08 53 04.2
CPCT Cooper Cave 59.54 347 *e*P **P** **08 52 39.2 -2.1**
CPCT epP pP 08 52 46.3 -2.6
TKL Tuckaleechee C 59.58 347 *e*P **P** **08 52 39.6 -2.1**
TKL epP pP 08 52 45.9 -3.3
SWET Sewanee 59.63 345 *e*P **P** **08 52 40.4 -1.6**
SWET epP pP 08 52 47.4 -2.2
VNA2 Neumayer--Watz 59.81 160 *e*P **P** **08 52 43.2 +0.4**
VNA2 *e* pP 08 52 51.2 +0.8
VNA2 *e* 08 52 54.3
VNA2 *e* 08 53 06.6
OXF Oxford 59.88 342 *e*P **P** **08 52 41.4 -2.3**
comp=Z,143nm,1.1s,mb5.9
OXF LR LR
comp=Z,595nm,20.0s,MS4.7
OXF Oxford 59.88 342 *e*P **P** **08 52 41.4 -2.3**
OXF pmax pmax
comp=Z,143nm,1.1s,mb5.9
OXF MLR MLR
comp=Z,595nm,20.0s,MS4.7
JCT Junction City 60.12 331 *e*P **P** **08 52 44.6 -0.9**
comp=Z,51nm,0.9s,mb5.6
JCT epP pP 08 52 51.5 -1.5
JCT LR LR
comp=Z,299nm,20.0s,MS4.4
JCT Junction City 60.12 331 *e*P **P** **08 52 44.6 -0.9**
JCT e*PP pP 08 52 51.5 -1.5
JCT pmax pmax
comp=Z,51nm,0.9s,mb5.5
JCT MLR MLR
comp=Z,299nm,20.0s,MS4.4
TZTN Tazewell 60.40 348 PFAKE 08 53 00.0 +13
TZTN LR LR
comp=Z,428nm,21.0s,MS4.6
BLA Blacksburg 60.51 351 PFAKE 08 53 00.0 +12
BLA LR LR
comp=Z,784nm,20.0s,MS4.8
ELN Prospectdale 60.57 350 *e*P **P** **08 52 47.8 -0.6**
ELN epP pP 08 52 54.7 -1.2
SHEL Horse Pasture 60.89 96 PFAKE 08 53 10.0 +19
SHEL LR LR
comp=Z,2μm,20.0s,MS5.2
WVT Waverly 60.97 344 *e*P **P** **08 52 48.9 -2.2**
comp=Z,74nm,0.9s,mb5.8
WVT epP pP 08 52 55.4 -3.3
WVT LR LR
comp=Z,786nm,21.0s,MS4.8
WVT Waverly 60.97 344 *e*P **P** **08 52 48.9 -2.2**
WVT e*PP pP 08 52 55.4 -3.3
WVT pmax pmax
comp=Z,74nm,0.9s,mb5.8
WVT MLR MLR
comp=Z,786nm,21.0s,MS4.8
UALR University of 61.02 339 *e*P **P** **08 52 49.6 -2.0**
comp=Z,57nm,1.2s,mb5.6
UALR epP pP 08 52 57.0 -2.1
UALR esP sP 08 53 01.1 -0.8
TXAR Lajitas Array 61.02 327 P **P** **08 52 50.8 -0.9**
comp=Z,4.9nm,0.8s,mb4.7,baz=147,slow=8.1,SNR=56
TXAR pP pP 08 52 58.1 -1.1
comp=Z,10nm,0.9s,baz=150,slow=7.8,SNR=25
TXAR LR LR 09 16 12.4
comp=Z,402nm,18.4s,MS4.6,baz=195,slow=33
TXAR Lajitas Array 61.02 327 P **P** **08 52 50.8 -0.9**
TXAR *PP pP 08 52 58.1 -1.1
CBN Corbin 61.10 354 PFAKE 08 53 00.0 +8.0
CBN LR LR
comp=Z,1μm,20.0s,MS5.1
MIAR Mount Ida 61.22 338 *e*P **P** **08 52 51.9 -1.0**
comp=Z,63nm,0.9s,mb5.8
MIAR epP pP 08 52 59.1 -1.3
MIAR LR LR
comp=Z,729nm,20.0s,MS4.8
MIAR Mount Ida 61.22 338 *e*P **P** **08 52 51.9 -1.0**
MIAR e*PP pP 08 52 59.1 -1.3
MIAR pmax pmax
comp=Z,63nm,0.9s,mb5.8
MIAR MLR MLR
comp=Z,729nm,20.0s,MS4.8
SNAA Sanae 61.43 161 *e*P **P** **08 52 52.4 -1.5**
SNAA *e* pP 08 53 00.5 -0.9
SNAA *e* 08 53 03.7
SNAA *e* 08 53 15.9
SNAA Sanae 61.43 161 *e*P **P** **08 52 52.3 -1.6**
comp=Z,50nm,0.9s,mb5.7
UTMT University of 61.44 343 *e*P **P** **08 52 53.1 -1.3**
comp=Z,179nm,1.0s,mb6.2
UTMT epP pP 08 52 59.6 -2.3
PARMO Parma 61.99 342 *e*P **P** **08 52 56.6 -1.4**
PARMO epP pP 08 53 02.8 -2.8
WCI Wyandotte Cave 62.59 346 *e*P **P** **08 52 59.7 -2.3**
comp=Z,52nm,0.8s,mb5.7
WCI LR LR
comp=Z,653nm,20.0s,MS4.8
WCI Wyandotte Cave 62.59 346 *e*P **P** **08 52 59.7 -2.3**
WCI pmax pmax
comp=Z,52nm,0.8s,mb5.7
WCI MLR MLR
comp=Z,653nm,20.0s,MS4.8
USIN University of 62.67 345 *e*P **P** **08 53 00.2 -2.3**
comp=Z,73nm,0.9s,mb5.8
USIN epP pP 08 53 07.3 -2.8
MVL Millersville 62.79 355 *e*P **P** **08 53 03.4 +0.1**
comp=Z,33nm,0.9s,mb5.5
SIUC Southern Illin 62.83 343 *e*P **P** **08 53 02.4 -1.2**
comp=Z,152nm,1.1s,mb6.0
SIUC epP pP 08 53 08.8 -2.3
SIUC esP sP 08 53 13.4 -0.6
MCWV Mont Chateau 62.83 352 *e*P **P** **08 53 02.6 -1.0**
comp=Z,503nm,2.5s,mb6.2
MCWV epP pP 08 53 10.4 -0.8
MCWV LR LR
comp=Z,1μm,21.0s,MS5.1
WMOK Wichita Mounta 63.34 334 *e*P **P** **08 53 05.5 -1.6**
comp=Z,145nm,2.8s,mb5.6
WMOK LR LR
comp=Z,379nm,20.0s,MS4.6
WMOK Wichita Mounta 63.34 334 *e*P **P** **08 53 05.5 -1.6**
WMOK pmax pmax
comp=Z,145nm,2.8s,mb5.6
WMOK MLR MLR
comp=Z,379nm,20.0s,MS4.6
FVM French Village 63.41 342 *e*P **P** **08 53 05.9 -1.6**
comp=Z,78nm,0.9s,mb5.8
FVM epP pP 08 53 12.6 -2.5
FVM French Village 63.41 342 *e*P **P** **08 53 05.9 -1.6**
FVM e*PP pP 08 53 12.6 -2.4
FVM pmax pmax
comp=Z,78nm,0.9s,mb5.8
OLIL Olney 63.50 345 *e*P **P** **08 53 06.2 -1.9**
comp=Z,38nm,1.1s,mb5.3
BLO Bloomington 63.55 346 *e*P **P** **08 53 05.8 -2.6**
comp=Z,29nm,0.8s,mb5.4
BLO epP pP 08 53 13.2 -2.8
BLO esP sP 08 53 18.4 -0.4
BLO Bloomington 63.55 346 *e*P **P** **08 53 05.8 -2.6**
BLO e*PP pP 08 53 13.2 -2.7
BLO e*SP sP 08 53 18.4 -0.4
BLO pmax pmax
comp=Z,29nm,0.8s,mb5.4
SSPA Standing Stone 63.56 354 *e*P **P** **08 53 07.9 -0.5**
comp=Z,368nm,2.7s,mb5.9
SSPA LR LR
comp=Z,1μm,20.0s,MS5.0
GDL2 Guadalupe Moun 63.70 328 *e*P **P** **08 53 09.8 +0.2**
ACSO Alum Creek Sta 63.87 349 *e*P **P** **08 53 08.7 -1.7**
comp=Z,66nm,1.0s,mb5.6
ACSO epP pP 08 53 15.7 -2.4
ACSO LR LR
comp=Z,632nm,21.0s,MS4.8
SLM Saint Louis 63.97 343 *e*P **P** **08 53 09.8 -1.4**
comp=Z,31nm,0.8s,mb5.4
SLM Saint Louis 63.97 343 *e*P **P** **08 53 09.8 -1.3**
SLM pmax pmax
comp=Z,31nm,0.8s,mb5.4
BRYW Bryant College 64.46 359 *e*P **P** **08 53 14.1 -0.2**
comp=Z,61nm,0.8s,mb5.7

AMTX Amarillo 64.69 332 PFAKE 08 53 30.0 +14
AMTX LR LR
comp=Z,448nm,21.0s,MS4.6
WES Weston 64.93 359 *e*P **P** **08 53 17.8 +0.4**
WES LR LR
comp=Z,834nm,20.0s,MS4.9
BINY Binghamton 64.95 355 *e*P **P** **08 53 17.6 +0.2**
comp=Z,475nm,2.6s,mb6.1
BINY LR LR
comp=Z,1μm,19.0s,MS5.1
ERPA Erie 65.27 352 PFAKE 08 53 30.0 +10
ERPA LR LR
comp=Z,1μm,22.0s,MS5.0
HDIL Hopedale 65.52 344 *e*P **P** **08 53 19.1 -2.2**
comp=Z,44nm,0.8s,mb5.5
HDIL epP pP 08 53 26.0 -2.8
HDIL LR LR
comp=Z,393nm,20.0s,MS4.6
319A Douglas 65.59 324 ⇑P **P** **08 53 22.0 +0.1**
baz=66,SNR=10
MAIT Maitri 66.00 159⇑*i*P **P** **08 53 22.4 -1.6**
AAM Ann Arbor 66.00 349 PFAKE 08 53 40.0 +16
AAM LR LR
comp=Z,781nm,21.0s,MS4.9
318A Bisbee 66.03 323 ⇓P **P** **08 53 25.1 +0.4**
baz=66,SNR=18
NVL N'lazarevskaya 66.03 159 *e*P **P** **08 53 24.8 +0.6**
NVL *e* pP 08 53 32.6 +0.8
NVL pmax pmax
comp=Z,81nm,1.3s,mb5.6
NVL MLR MLR
comp=N,231nm,18.0s,MS4.8
NVL MLR MLR
comp=E,539nm,18.0s,MS4.8
NVL MLR MLR
comp=Z,878nm,18.0s,MS5.0
219A White Tail Can 66.06 324 ⇑P **P** **08 53 25.1 +0.2**
baz=66,SNR=11
KSU1 Kansas State U 66.37 338 *e*P **P** **08 53 25.4 -1.4**
comp=Z,27nm,0.9s,mb5.3
KSU1 LR LR
comp=Z,597nm,21.0s,MS4.8
BNM Barren Site 66.39 328 *e*P **P** **08 53 27.5 +0.5**
BNM epP pP 08 53 34.1 -0.4
218A Dragoon 66.47 324 ⇓P **P** **08 53 27.8 +0.3**
baz=66,SNR=12
Y22D IRIS PASSCAL I 66.47 327 ⇓P **P** **08 53 27.9 +0.4**
baz=66
LPM Los Pinos Moun 66.52 328 *e*P **P** **08 53 28.1 +0.3**
LPM epP pP 08 53 35.3 -0.1
LENM Lemitar 66.57 327 *e*P **P** **08 53 28.6 +0.4**
LENM epP pP 08 53 35.9 +0.1
MDV Middlebury 66.59 358 *e*P **P** **08 53 28.0 0.0**
NCB Newcomb 66.60 357 PFAKE 08 53 40.0 +12
NCB LR LR
comp=Z,910nm,20.0s,MS5.0
119A Ashpeak Ranch, 66.67 325 ⇑P **P** **08 53 29.0 +0.2**
baz=67
217A Green Valley 66.74 323 ⇑P **P** **08 53 29.5 +0.2**
baz=67,SNR=8.4
LBNH Lisbon 66.79 359 PFAKE 08 53 40.0 +11
LBNH LR LR
comp=Z,575nm,20.0s,MS4.8
LAZ Ladron 66.84 327 *e*P **P** **08 53 30.2 +0.3**
118A Homack Ranch, 66.93 324 ⇓P **P** **08 53 30.6 +0.1**
baz=67,SNR=9.7
ANMO Albuquerque 66.95 328 *e*P **P** **08 53 30.6 +0.1**
comp=Z,36nm,1.3s,mb5.2
ANMO LR LR
comp=Z,542nm,20.0s,MS4.8
ANMO Albuquerque 66.95 328⇑*e*P **P** **08 53 29.2 -1.3**
Z19A T-Link Ranch, 67.06 325 ⇑P **P** **08 53 31.7 +0.4**
baz=67
TUC Tucson 67.13 323 *e*P **P** **08 53 31.8 +0.1**
comp=Z,23nm,1.1s,mb5.1
TUC LR LR
comp=Z,498nm,19.0s,MS4.8
TUC Tucson 67.13 323 *e*P **P** **08 53 31.8 +0.1**
TUC pmax pmax
comp=Z,23nm,1.1s,mb5.1
TUC MLR MLR
comp=Z,498nm,19.0s,MS4.8
CBKS Cedar Bluff 67.26 335 *e*P **P** **08 53 32.2 -0.3**
comp=Z,84nm,1.0s,mb5.7
CBKS epP pP 08 53 38.3 -1.8
CBKS LR LR
comp=Z,525nm,21.0s,MS4.7
CBKS Cedar Bluff 67.26 335 *e*P **P** **08 53 32.2 -0.2**
CBKS e*PP pP 08 53 38.3 -1.8
CBKS pmax pmax
comp=Z,84nm,1.0s,mb5.7
CBKS MLR MLR
comp=Z,525nm,21.0s,MS4.7
216A Three Points, 67.27 323 ⇓P **P** **08 53 32.8 +0.2**
baz=67,SNR=6.0
LONY Lake Ozonia 67.27 357 *e*P **P** **08 53 31.7 -0.6**
comp=Z,13nm,0.8s,mb5.0
LONY LR LR
comp=Z,906nm,20.0s,MS5.0
117A Oracle 67.30 324 ⇓P **P** **08 53 33.0 +0.2**
baz=67,SNR=14
Z18A Geronimo 67.31 324 ⇓P **P** **08 53 33.0 +0.2**
baz=67
QSPA South Pole Qui 67.33 180 PFAKE 08 53 50.0 +18
QSPA LR LR
comp=Z,883nm,20.0s,MS5.0
FRNY Flat Rock 67.44 357 *e*P **P** **08 53 33.1 -0.3**
comp=Z,40nm,1.0s,mb5.4
Y19A Nutrioso 67.57 326 ⇑P **P** **08 53 35.5 +1.0**
baz=68,SNR=30
Z17A San Carlos Hig 67.71 324 ⇓P **P** **08 53 35.5 +0.1**
baz=68
PKME Peaks-Kenny Pk 67.81 1 PFAKE 08 53 50.0 +14
PKME LR LR
comp=Z,875nm,20.0s,MS5.0
116A Eloy 67.83 323 ⇓P **P** **08 53 36.1 -0.1**
baz=68,SNR=5.7
SCIA State Center 67.84 342 *e*P **P** **08 53 34.5 -1.5**
comp=Z,79nm,1.0s,mb5.7
SCIA LR LR
comp=Z,514nm,19.0s,MS4.8
Y18A Canyon Day Jun 67.84 325 ⇑P **P** **08 53 36.4 +0.2**
baz=68,SNR=16
X19A St. Johns 67.95 326 ⇑P **P** **08 53 37.1 +0.2**
baz=68,SNR=5.8
JFWS Jewell Farm 67.98 344 *e*P **P** **08 53 35.4 -1.5**
comp=Z,34nm,0.8s,mb5.4
JFWS epP pP 08 53 42.4 -2.1
JFWS LR LR
comp=Z,808nm,21.0s,MS4.9
JFWS Jewell Farm 67.98 344 *e*P **P** **08 53 35.4 -1.5**
JFWS e*PP pP 08 53 42.4 -2.1
JFWS pmax pmax
comp=Z,34nm,0.8s,mb5.4
JFWS MLR MLR
comp=Z,808nm,21.0s,MS4.9
214A Organ Pipe Nat 68.00 322 ⇓P **P** **08 53 37.4 +0.2**
baz=68
Y17A Roosevelt 68.21 324 ⇑P **P** **08 53 38.9 +0.4**
baz=68,SNR=21
115A Sonoran Desert 68.22 323 ⇓P **P** **08 53 39.0 +0.3**
baz=68
Z16A Peralta Trail, 68.26 324 ⇓P **P** **08 53 39.2 +0.3**
baz=68,SNR=9.6
X18A Snowflake 68.38 325 ⇓P **P** **08 53 40.0 +0.4**
baz=68,SNR=6.8
W19A Sanders 68.54 326 ⇓P **P** **08 53 41.1 +0.5**
baz=68,SNR=11
GLMI Grayling 68.62 349 PFAKE 08 53 50.0 +9.2
GLMI LR LR
comp=Z,810nm,20.0s,MS5.0
Z15A Gila River Ind 68.62 323 ⇓P **P** **08 53 41.3 +0.2**
baz=69
X17A Forest Lakes 68.68 325 ⇓P **P** **08 53 42.3 +0.8**
baz=69,SNR=15
Y16A Circle Bar Ran 68.69 324 ⇓P **P** **08 53 42.1 +0.6**
baz=69,SNR=8.1
W18A Petrified Fore 68.72 326 ⇑P **P** **08 53 42.2 +0.5**
baz=69
SDCO Great Sand Dun 68.77 331 *e*P **P** **08 53 42.1 +0.2**
comp=Z,44nm,1.0s,mb5.3
SDCO epP pP 08 53 48.8 -0.8
SDCO LR LR
comp=Z,412nm,20.0s,MS4.7
V19A Window Rock 68.84 327 ⇑P **P** **08 53 42.7 +0.3**
baz=69,SNR=12
X16A Lo Mia Camp, P 69.08 324 ⇓P **P** **08 53 44.5 +0.6**
baz=69,SNR=15
Z14A Wintersburg 69.11 323 ⇑P **P** **08 53 44.4 +0.3**
baz=69
113A Mohawk Valley, 69.14 322 ⇓P **P** **08 53 44.7 +0.3**
baz=69
W17A Winslow 69.20 325 ⇑P **P** **08 53 45.0 +0.3**
baz=69
Y15A Casa Rosa Ranc 69.22 323 ⇑P **P** **08 53 45.0 +0.2**
baz=69,SNR=8.2
V18A Ganado 69.28 326 ⇓P **P** **08 53 45.3 +0.1**
baz=69,SNR=7.1
112A Yuma 69.44 321 ⇓P **P** **08 53 46.4 +0.1**
baz=69
X15A Humboldt 69.56 324 ⇑P **P** **08 53 47.4 +0.4**
baz=70,SNR=14
Y14A Wickenburg 69.58 323 ⇓P **P** **08 53 47.1 +0.1**
baz=70,SNR=5.6
W16A Flagstaff 69.64 325 ⇑P **P** **08 53 48.3 +0.9**
baz=70,SNR=11
T19A Beclabito 69.70 328 ⇑P **P** **08 53 47.7 0.0**
baz=70,SNR=13
MVCO Mesa Verde 69.74 328 *e*P **P** **08 53 48.2 +0.2**
comp=Z,40nm,1.0s,mb5.3
MVCO LR LR
comp=Z,537nm,21.0s,MS4.8
MVCO Mesa Verde 69.74 328 ⇓P **P** **08 53 48.3 +0.3**
baz=70,SNR=23
U18A Rough Rock, Ch 69.80 327 ⇓P **P** **08 53 48.7 +0.3**
baz=70,SNR=15
WUAZ Wupatki 69.88 325 *e*P **P** **08 53 49.6 +0.7**
comp=Z,53nm,1.1s,mb5.4
WUAZ epP pP 08 53 56.7 +0.2
WUAZ LR LR
comp=Z,635nm,22.0s,MS4.8
WUAZ Wupatki 69.88 325 ⇓P **P** **08 53 49.5 +0.6**
baz=70,SNR=43
X14A Yava 69.91 323 ⇓P **P** **08 53 49.6 +0.5**
baz=70,SNR=5.8
Y13A Salome 69.94 322 ⇓P **P** **08 53 49.5 +0.2**
baz=70
GLA Glamis 69.96 321 *e*P **P** **08 53 50.1 +0.7**
comp=Z,54nm,1.5s,mb5.2
GLA LR LR
comp=Z,424nm,21.0s,MS4.7
GLA Glamis 69.96 321 *e*P **P** **08 53 50.1 +0.7**
GLA pmax pmax
comp=Z,54nm,1.5s,mb5.3
GLA MLR MLR
comp=Z,424nm,21.0s,MS4.7
GLA Glamis 69.96 321 ⇑P **P** **08 53 49.5 +0.1**
baz=70
OGNE Ogallala 69.99 335 PFAKE 08 54 00.0 +11
OGNE LR LR
comp=Z,572nm,20.0s,MS4.8
LIC Lamto 70.02 74 *e*P **P** **08 53 49.9 -0.3**
comp=Z,41nm,1.0s,mb5.3
LIC Lamto 70.02 74⇑*i*P **P** **08 53 49.7 -0.5**
comp=Z,110nm,1.4s,mb5.3
LIC *e*MLR MLR
comp=Z,1μm,19.0s,MS4.9
LIC Lamto 70.02 74⇑*i*P **P** **08 53 49.7 -0.5**
comp=Z,55nm,1.4s,mb5.3
LIC LR LR
comp=Z,720nm,19.0s,MS4.9
W15A Williams 70.10 324 ⇑P **P** **08 53 50.8 +0.6**
baz=70,SNR=6.2
TIC Toumodi 70.22 74 *e*P **P** **08 53 51.2 -0.2**
comp=Z,156nm,1.1s,mb5.9
TIC Toumodi 70.22 74 *e*P **P** **08 53 51.2 -0.2**
TIC pmax pmax
comp=Z,156nm,1.1s,mb5.8
U16A Tuba City 70.23 326 ⇓P **P** **08 53 51.3 +0.3**
baz=70,SNR=16
Y12C Blythe 70.29 322 ⇓P **P** **08 53 51.7 +0.3**
baz=70,SNR=6.3
KIC Kosan Boka 70.33 74 *e*P **P** **08 53 52.0 -0.2**
comp=Z,220nm,1.0s,mb6.0
U17A Shonto 70.34 326 ⇑P **P** **08 53 52.1 +0.4**
baz=70,SNR=7.0
T18A Mexican Hat 70.36 327 ⇓P **P** **08 53 51.9 +0.2**
baz=70,SNR=30
DBIC Dimbokro 70.37 74 P **P** **08 53 52.4 0.0**
comp=Z,44nm,1.0s,mb5.4,baz=210,slow=5.8,SNR=30
DBIC LR LR 09 25 46.8
comp=Z,1μm,18.5s,MS5.2,baz=144,slow=37
DBIC Dimbokro 70.37 74 *e*P **P** **08 53 52.1 -0.2**
comp=Z,55nm,1.0s,mb5.4
DBIC LR LR 09 25 46.8
DBIC Dimbokro 70.37 74 *e*P **P** **08 53 52.2 -0.2**
DBIC pmax pmax
comp=Z,55nm,1.0s
DVTC Desert V Tower 70.42 320 ⇓P **P** **08 53 52.3 +0.1**
baz=70
SWSC Sam W. Stewart 70.44 320 ⇑P **P** **08 53 52.6 +0.3**
baz=70
PDMCI Parker Dam,Lak 70.48 323 ⇑P **P** **08 53 52.8 +0.2**
baz=70
S19A Harvey Farm, M 70.48 328 ⇓P **P** **08 53 52.6 +0.2**
baz=70,SNR=30
ISCO Idaho Springs 70.51 332 *e*P **P** **08 53 53.2 +0.6**
comp=Z,19nm,1.0s,mb5.0
ISCO epP pP 08 53 59.9 -0.4
ISCO LR LR
comp=Z,450nm,20.0s,MS4.7
ISCO Idaho Springs 70.51 332 *e*P **P** **08 53 53.2 +0.6**
ISCO e*PP pP 08 53 59.9 -0.4
ISCO pmax pmax
comp=Z,19nm,1.0s,mb5.0
ISCO MLR MLR
comp=Z,450nm,20.0s,MS4.7
PV01 Paradox Valley 70.51 329 *e*P **P** **08 53 53.6 +0.9**
PV01 epP pP 08 54 00.2 -0.1
X13A Yucca 70.52 323 ⇑P **P** **08 53 53.0 +0.2**
baz=70,SNR=8.7
ECSD EROS,Sioux Fal 70.53 340 *e*P **P** **08 53 51.4 -1.3**
comp=Z,48nm,1.1s,mb5.3
ECSD LR LR
comp=Z,547nm,21.0s,MS4.8
V15A Kaibab Nationa 70.53 325 ⇑P **P** **08 53 53.6 +0.7**
baz=70,SNR=17
W14A Seligman 70.57 324 ⇓P **P** **08 53 53.6 +0.6**
baz=70,SNR=9.7
SMCO Snowmass 70.61 331 *e*P **P** **08 53 54.0 +0.8**
comp=Z,34nm,0.9s,mb5.3
T17A Navajo Res., N 70.72 327 ⇑P **P** **08 53 55.1 +1.1**
baz=71,SNR=23
BC3 Big Chuckw Mtn 70.75 321 ⇓P **P** **08 53 54.6 +0.3**
baz=71,SNR=10
MONP Monument Peak 70.77 320 ⇑P **P** **08 53 54.8 +0.4**
baz=71,SNR=6.3
S18A Hurst Farm, Bl 70.86 328 ⇑P **P** **08 53 55.4 +0.7**
baz=71,SNR=43
V14A Boquillas Ranc 70.89 324 ⇓P **P** **08 53 55.8 +0.7**
baz=71,SNR=19
W13A Hualapai Mount 70.92 323 ⇑P **P** **08 53 55.8 +0.5**
baz=71,SNR=10.0
PV10 Paradox Valley 70.93 329 *e*P **P** **08 53 55.0 -0.2**
PV10 epP pP 08 54 01.3 -1.6
IRM Iron Mountain 70.94 322 ⇓P **P** **08 53 55.6 +0.2**
baz=71,SNR=7.7
R19A Curley Farm, L 70.97 328 ⇓P **P** **08 53 55.5 0.0**
baz=71,SNR=6.3
U15A North Rim 71.06 325 ⇑P **P** **08 53 56.6 +0.6**
baz=71,SNR=15
T16A Glen Canyon Da 71.07 326 ⇓P **P** **08 53 56.5 +0.4**
baz=71,SNR=6.7
S17A Black Ridge (B 71.21 327 ⇓P **P** **08 53 57.3 +0.3**
baz=71,SNR=9.3
PFO Pinyon Flat Ob 71.31 321 *e*P **P** **08 53 57.5 -0.1**
comp=Z,26nm,1.2s,mb5.0
PFO epP pP 08 54 04.8 -0.5
PFO LR LR
comp=Z,707nm,20.0s,MS4.9
PFO Pinyon Flat Ob 71.31 321 *e*P **P** **08 53 57.5 -0.1**
PFO e*PP pP 08 54 04.8 -0.5
PFO pmax pmax
comp=Z,26nm,1.2s,mb5.0
PFO MLR MLR
comp=Z,707nm,20.0s,MS4.9
PFO Pinyon Flat Ob 71.31 321 ⇓P **P** **08 53 58.2 +0.6**
baz=71,SNR=5.8
BELC Belle Mtn. 71.32 321 ⇓P **P** **08 53 58.0 +0.3**
baz=71
R18A Canyonlands Na 71.35 328 ⇓P **P** **08 53 57.8 0.0**
baz=71,SNR=12
Q19A Hogan Spring (71.49 329 ⇓P **P** **08 53 59.0 +0.4**
baz=72,SNR=17
V13A Grand Canyon W 71.53 324 ⇑P **P** **08 53 59.5 +0.5**

baz=72,SNR=17
T15A Red Dirt Ranch 71.55 326 ⇑P P **08 53 59.8 +0.8**
baz=72,SNR=18
LDFC Landfair 71.59 322 eP P **08 54 00.6 +1.4**
comp=Z,48nm,1.3s,mb5.3
W12A Cal Nev Ari 71.62 323 ⇑P P **08 53 59.7 +0.2**
baz=72
S16A Weppner Ranch, 71.68 327 ⇑P P **08 54 00.0 +0.2**
baz=72,SNR=15
GMRC Granite Mounta 71.68 322 ⇑P P **08 54 00.4 +0.6**
baz=72,SNR=11
PHWY Pilot Hill 71.68 333 eP P **08 54 00.1 +0.4**
comp=Z,40nm,1.2s,mb5.2
PHWY epP pP 08 54 06.7 -0.7
MURC Murrieta 71.74 320 ⇑P P **08 54 00.2 0.0**
baz=72
R17A Hanksville Air 71.78 328 ⇓P P **08 54 00.6 +0.2**
baz=72,SNR=21
P19A Cripple Cowboy 71.90 329 ⇑P P **08 54 01.5 +0.5**
baz=72,SNR=31
T14A Hurricane 71.95 325 ⇓P P **08 54 02.0 +0.6**
baz=72,SNR=5.5
Q18A Rafter H Ranch 72.03 328 ⇑P P **08 54 02.2 +0.4**
baz=72,SNR=13
BBRC Big Bear Sol-O 72.04 321 ⇓P P **08 54 02.3 +0.3**
baz=72
S15A Panguitch 72.04 326 ⇑P P **08 54 02.5 +0.6**
baz=72
EGOM La Gomera 72.09 48 ⇑P P **08 54 02.2 -0.3**
comp=Z,101nm,0.9s,mb5.8
HEC Hector,Ludlow 72.10 322 ⇑P P **08 54 03.0 +0.6**
baz=72
SRU San Rafael 72.22 328 ⇑P P **08 54 03.1 +0.2**
baz=72,SNR=32
U12A Valley of Fire 72.26 324 ⇓P P **08 54 03.7 +0.4**
baz=72,SNR=7.2
TUQ Turquoise Moun 72.31 322 ⇑P P **08 54 04.1 +0.5**
baz=72,SNR=5.9
T13A Saint George 72.36 325 ⇓P P **08 54 04.5 +0.7**
baz=72,SNR=5.5
Q16A Castle Valley 72.39 328 ⇓P P **08 54 04.4 +0.4**
baz=72,SNR=15
R15A Junction 72.40 326 ⇑P P **08 54 04.6 +0.5**
baz=72,SNR=9.6
BFSC Mount Baldy St 72.46 320 ⇓P P **08 54 04.6 +0.1**
baz=72,SNR=6.1
O19A Miners Draw (B 72.49 330 ⇑P P **08 54 04.9 +0.3**
baz=72,SNR=24
P18A Preston Nutter 72.49 329 ⇓P P **08 54 05.2 +0.6**
baz=72,SNR=20
S14A Cedar City 72.52 326 ⇑P P **08 54 05.7 +0.9**
baz=72,SNR=6.4
CCAN Las Canadas 72.55 48 ⇑P P **08 54 04.9 -0.3**
comp=Z,35nm,1.1s,mb5.2
MVU Marysvale 72.59 327 PFAKE 08 54 20.0 +15
MVU LR LR
comp=Z,454nm,20.0s,MS4.8
P17A Butcher Ranch, 72.61 328 ⇑P P **08 54 05.5 +0.2**
baz=73,SNR=17
SHPR Sheep Range 72.66 323 eP P **08 54 06.3 +0.7**
MWC Mount Wilson 72.68 320 eP P **08 54 06.1 +0.2**
comp=Z,69nm,1.8s,mb5.3
MWC Mount Wilson 72.68 320 eP P **08 54 06.1 +0.3**
MWC pmax pmax
comp=Z,69nm,1.8s,mb5.3
GSC Goldstone 72.71 322 eP P **08 54 06.7 +0.7**
comp=Z,34nm,1.4s,mb5.1
GSC epP pP 08 54 13.2 -0.4
GSC LR LR
comp=Z,481nm,20.0s,MS4.8
GSC Goldstone 72.71 322 eP P **08 54 06.7 +0.7**
GSC e*PP pP 08 54 13.3 -0.4
GSC pmax pmax
comp=Z,34nm,1.4s,mb5.1
GSC MLR MLR
comp=Z,481nm,20.0s,MS4.8
GSC Goldstone 72.71 322 ⇓P P **08 54 06.2 +0.2**
baz=73,SNR=5.3
S13A Holt Ranch, En 72.75 325 ⇑P P **08 54 07.2 +1.0**
baz=73,SNR=18
RWWY Rawlins 72.75 332 eP P **08 54 06.2 +0.1**
comp=Z,26nm,1.0s,mb5.1
R14A James Farms, M 72.85 326 ⇑P P **08 54 07.5 +0.7**
baz=73
O18A Roosevelt 72.88 329 ⇑P P **08 54 07.2 +0.3**
baz=73,SNR=11
EBAJ Bajamar 72.92 48 ⇑P P **08 54 07.2 -0.2**
comp=Z,804nm,3.6s
N19A John Jarvie Ra 72.99 330 ⇑P P **08 54 07.5 0.0**
baz=73,SNR=20
EYMN Ely 73.01 345 eP P **08 54 06.1 -1.4**
comp=Z,32nm,0.9s,mb5.2
EYMN epP pP 08 54 12.7 -2.5
EYMN LR LR
comp=Z,543nm,19.0s,MS4.8
M20A Sweetwater, Wa 73.02 331 ⇑P P **08 54 07.7 0.0**
baz=73,SNR=9.2
L21A Rawlins 73.04 332 ⇑P P **08 54 07.7 -0.1**
baz=73,SNR=24
Q15A Fillmore 73.06 327 ⇑P P **08 54 08.3 +0.4**
baz=73
EDW2 Edwards Air Fo 73.10 321 ⇑P P **08 54 08.3 0.0**
baz=73
P16A Fountain Green 73.16 328 ⇓P P **08 54 09.2 +0.6**
baz=73
O17A Robinson Place 73.17 329 ⇓P P **08 54 09.2 +0.6**
baz=73,SNR=33
EOSO Osorio 73.18 49 ⇑P P **08 54 09.8 +0.8**
comp=Z,343nm,2.1s,mb5.9
T11A Corn Creek, Al 73.23 324 ⇑P P **08 54 09.7 +0.7**
baz=73,SNR=16
U10A Ash Meadows, A 73.24 323 ⇓P P **08 54 09.8 +0.7**
baz=73
R13A O'Grain Ranch, 73.25 325 ⇓P P **08 54 10.0 +0.8**
baz=73,SNR=6.7
N18A Larsen Ranch, 73.28 330 ⇓P P **08 54 09.1 -0.1**
baz=73,SNR=11
S12A Delamar Landin 73.30 324 ⇓P P **08 54 09.9 +0.5**
baz=73
LRMC Laurel Mountai 73.34 321 ⇓P P **08 54 09.8 +0.1**
baz=73,SNR=5.6
P15A Leamington 73.44 327 ⇓P P **08 54 10.5 +0.3**
baz=73,SNR=6.2
M19A Rock Springs 73.47 331 ⇑P P **08 54 10.4 +0.1**
baz=73
RSSD Black Hills 73.47 335 eP P **08 54 09.5 -0.7**
comp=Z,13nm,0.7s,mb5.0
RSSD epP pP 08 54 17.0 -0.9
RSSD Black Hills 73.47 335 eP P **08 54 09.5 -0.8**
RSSD e*PP pP 08 54 17.0 -1.0
RSSD pmax pmax
comp=Z,13nm,0.7s,mb5.0
Q14A Sevier Lake (B 73.50 326 ⇓P P **08 54 11.2 +0.6**
baz=74,SNR=14
L20A Wamsutter 73.50 331 ⇓P P **08 54 10.7 +0.1**
baz=74,SNR=12
O16A Springville 73.55 328 ⇓P P **08 54 11.1 +0.3**
baz=74
FURC Furnace Creek, 73.58 322 ⇑P P **08 54 11.2 +0.1**
baz=74,SNR=5.7
TPNV Topopah Spring 73.58 323 eP P **08 54 11.9 +0.8**
comp=Z,20nm,0.9s,mb5.1
TPNV LR LR
comp=Z,438nm,20.0s,MS4.7
TPNV Topopah Spring 73.58 323 eP P **08 54 11.9 +0.8**
TPNV pmax pmax
comp=Z,20nm,0.9s,mb5.0
TPNV MLR MLR
comp=Z,438nm,20.0s,MS4.7
TPNV Topopah Spring 73.58 323 ⇑P P **08 54 11.7 +0.7**
baz=74,SNR=21
MPMC Manual Prospec 73.64 322 ⇑P P **08 54 11.6 +0.1**
baz=74,SNR=5.5
R12A Pony Springs, 73.70 325 ⇓P P **08 54 12.4 +0.7**
baz=74
PPT Papeete 73.75 257 eS S 09 03 40.7 -1.9
comp=Z,2µm,28.0s
PPT Papeete 73.75 257 eLR LR 09 17 05.5
comp=Z,2µm,25.2s,baz=106
PPT Papeete 73.75 257 LR LR 09 18 41.5
comp=Z,526nm,20.9s,MS4.8,baz=77,slow=29
ARVC Arvin 73.77 320 ⇓P P **08 54 12.4 +0.2**
baz=74
N17A Moffit Pass 73.80 329 ⇑P P **08 54 12.7 +0.5**
baz=74,SNR=28
S11A Rachel 73.81 324 ⇑P P **08 54 13.2 +0.8**
baz=74
M18A Lyman 73.82 330 ⇑P P **08 54 12.0 -0.4**
baz=74,SNR=5.7
P14A Drum Mountains 73.85 327 ⇑P P **08 54 13.3 +0.7**
baz=74,SNR=18
DAC Darwin (Calif) 73.85 322 PFAKE 08 54 20.0 +7.3
DAC LR LR
comp=Z,638nm,22.0s,MS4.9
Q13A Wheeler Ranch, 73.86 326 ⇓P P **08 54 12.9 +0.2**
baz=74,SNR=8.3
ISA Isabella 73.93 321 eP P **08 54 13.9 +0.8**
comp=Z,17nm,0.9s,mb5.0
ISA epP pP 08 54 20.4 -0.5
ISA LR LR
comp=Z,295nm,21.0s,MS4.5
ISA Isabella 73.93 321 eP P **08 54 13.9 +0.7**
ISA e*PP pP 08 54 20.4 -0.5
ISA pmax pmax
comp=Z,17nm,0.9s,mb5.0
ISA MLR MLR
comp=Z,295nm,21.0s,MS4.5
ISA Isabella 73.93 321 ⇓P P **08 54 13.5 +0.3**
baz=74,SNR=8.7
L19A Farson 74.03 331 ⇓P P **08 54 13.8 +0.1**
baz=74,SNR=14
N16A Rees Ranch, Co 74.04 329 ⇓P P **08 54 14.1 +0.4**
baz=74,SNR=6.8
O15A The Old Anders 74.08 328 ⇓P P **08 54 14.3 +0.3**
baz=74
M17A Scullys Gap (B 74.14 330 ⇑P P **08 54 13.7 -0.5**
baz=74
DUG Dugway 74.18 327 eP P **08 54 14.9 +0.4**
comp=Z,21nm,0.9s,mb5.1
DUG LR LR
comp=Z,339nm,20.0s,MS4.6
DUG Dugway 74.18 327 eP P **08 54 14.9 +0.4**
DUG pmax pmax
comp=Z,21nm,0.9s,mb5.1
DUG MLR MLR
comp=Z,339nm,20.0s,MS4.6
DUG Dugway 74.18 327 ⇓P P **08 54 15.0 +0.5**
baz=74,SNR=27
PKM Peak Mountain 74.19 319 ⇑P P **08 54 15.0 +0.2**
baz=74
L18A Fontenelle, Gr 74.20 330 ⇓P P **08 54 14.4 -0.2**
baz=74,SNR=21
P13A Bates Ranch, G 74.23 326 ⇓P P **08 54 15.4 +0.6**
baz=74,SNR=12
R11A Troy Canyon, C 74.23 325 ⇓P P **08 54 15.5 +0.6**
baz=74,SNR=14
GRAC Grapevine Rang 74.24 322 ⇑P P **08 54 15.4 +0.5**
baz=74
CWC Cottonwood Cre 74.25 322 ⇑P P **08 54 15.4 +0.3**
baz=74
SBA Scott Base 74.25 191 eP P **08 54 15.7 +1.1**
comp=Z,49nm,1.3s,mb5.3
SBA epP pP 08 54 23.1 +0.8
SBA LR LR
comp=Z,366nm,20.0s,MS4.7
SBA Scott Base 74.25 191 eP P **08 54 15.7 +1.2**
SBA e*PP pP 08 54 23.1 +0.9
SBA pmax pmax
comp=Z,49nm,1.3s,mb5.3
SBA MLR MLR
comp=Z,366nm,20.0s,MS4.7
Q12A Willow Creek R 74.34 325 ⇑P P **08 54 15.7 +0.2**
baz=74,SNR=5.6
VES Vestal, Richgr 74.41 321 ⇓P P **08 54 16.1 +0.1**
baz=74
CFTV Fuerteventura 74.42 49 ⇑P P **08 54 16.2 0.0**
comp=Z,21nm,1.0s,mb5.0
AGMN Agassiz Refuge 74.45 343 eP P **08 54 14.5 -1.4**
comp=Z,23nm,0.7s,mb5.2
AGMN epP pP 08 54 21.0 -2.6
AGMN LR LR
comp=Z,377nm,21.0s,MS4.7
M16A Huntsville 74.47 329 ⇑P P **08 54 15.9 -0.2**
baz=74,SNR=5.7
S10A Tonopah Range, 74.47 324 ⇑P P **08 54 16.4 +0.1**
baz=74,SNR=12
N15A Stansbury Isla 74.57 328 ⇓P P **08 54 16.5 -0.2**
baz=74,SNR=8.9
R10A Warm Springs 74.58 324 ⇓P P **08 54 17.8 +0.9**
baz=74,SNR=13
SMMC Simmler 74.59 320 ⇑P P **08 54 17.5 +0.5**
baz=74
Q11A Duckwater 74.63 325 ⇓P P **08 54 17.6 +0.3**
baz=75,SNR=12
BW06 Boulder Array 74.65 331 eP P **08 54 17.1 -0.1**
BW06 LR LR
comp=Z,456nm,20.0s,MS4.8
BW06 Boulder Array 74.65 331 ⇓P P **08 54 16.6 -0.6**
baz=75,SNR=6.4
PDAR Pinedale Array 74.65 331 P P **08 54 16.6 -0.6**
comp=Z,3.4nm,1.0s,mb4.2,baz=152,slow=6.7,SNR=13
PDAR pP pP 08 54 24.2 -0.7
comp=Z,3.9nm,1.0s,baz=131,slow=8.1,SNR=10
HWUT Hardware Ranch 74.66 329 eP P **08 54 17.1 -0.2**
comp=Z,17nm,0.8s,mb5.0
HWUT epP pP 08 54 23.9 -1.1
HWUT LR LR
comp=Z,814nm,20.0s,MS5.0
S09A Goldfield 74.68 323 ⇓P P **08 54 17.5 0.0**
baz=75,SNR=7.8
O13A Hicks Ranch, I 74.72 327 ⇑P P **08 54 18.0 +0.3**
baz=75,SNR=6.4
TIN Tinemaha 74.76 322 ⇑P P **08 54 18.7 +0.7**
baz=75
RCTC Rector, Farmer 74.83 321 ⇓P P **08 54 18.3 -0.1**
baz=75
N14A Grayback Hills 74.87 328 ⇓P P **08 54 18.5 0.0**
baz=75,SNR=13
L16A Fish Haven 74.92 330 ⇓P P **08 54 18.5 -0.3**
baz=75,SNR=9.3
TPH Tonopah 74.92 323 eP P **08 54 19.4 +0.5**
comp=Z,35nm,1.1s,mb5.2
TPH LR LR
comp=Z,414nm,19.0s,MS4.8
TPH Tonopah 74.92 323 eP P **08 54 19.4 +0.5**
TPH pmax pmax
comp=Z,35nm,1.1s,mb5.2
TPH MLR MLR
comp=Z,414nm,19.0s,MS4.8
M15A Larsen Ranch, 74.97 329 ⇓P P **08 54 19.0 -0.1**
baz=75,SNR=19
Q10A Clear Creek Ra 75.02 324 ⇓P P **08 54 20.0 +0.6**
baz=75,SNR=12
MTUM Tungsten Hills 75.16 322 eP P **08 54 20.4 +0.1**
MTUM epP pP 08 54 27.8 -0.2
O12A Currie 75.21 326 ⇓P P **08 54 20.7 +0.2**
baz=75,SNR=13
VNDA Vanda 75.28 190 P P **08 54 21.4 +0.9**
comp=Z,4.5nm,0.9s,mb4.4,baz=138,slow=3.4,SNR=26
VNDA pP pP 08 54 29.1 +1.0
comp=Z,14nm,1.0s,baz=134,slow=4.6,SNR=26
VNDA LR LR 09 26 38.7
comp=Z,470nm,21.1s,MS4.8,baz=148,slow=35
VNDA Vanda 75.28 190 eP P **08 54 21.2 +0.7**
comp=Z,21nm,1.1s,mb5.0
VNDA epP pP 08 54 28.4 +0.3
VNDA LR LR
comp=Z,541nm,19.0s,MS4.9
VNDA Vanda 75.28 190 eP P **08 54 21.2 +0.7**
VNDA e*PP pP 08 54 28.5 +0.3
VNDA pmax pmax
comp=Z,21nm,1.1s
VNDA MLR MLR
comp=Z,541nm,19.0s
AHID Auburn Hatcher 75.35 330 eP P **08 54 21.6 +0.3**
comp=Z,31nm,0.9s,mb5.2
AHID LR LR
comp=Z,733nm,21.0s,MS5.0
L15A Malad City 75.36 329 ⇓P P **08 54 20.9 -0.4**
baz=75,SNR=14
M14A Sheep Mountain 75.44 328 ⇓P P **08 54 21.6 -0.2**
baz=75,SNR=18
I18A Diamond G Ranc 75.51 332 ⇓P P **08 54 22.4 +0.2**
baz=76,SNR=16
MLAC Mammoth Lakes 75.51 322 ⇓P P **08 54 23.0 +0.7**
baz=76
KCC Kaiser Creek 75.57 322 ⇑P P **08 54 22.1 -0.6**
baz=76
O11A Cowboy Ranch, 75.58 326 ⇑P P **08 54 23.0 +0.4**
baz=76,SNR=5.8
K16A Soda Springs 75.62 330 ⇑P P **08 54 23.1 +0.3**
baz=76,SNR=24
P10A Eureka 75.63 325 ⇑P P **08 54 23.4 +0.5**
baz=76,SNR=5.4
J17A Brown Place, J 75.64 331 ⇑P P **08 54 23.1 +0.2**
baz=76,SNR=6.0
SYO Syowa Base 75.69 160 ⇑eP P **08 54 21.5 -1.4**
SYO Syowa Base 75.69 160 ⇑pP pP 08 54 29.6 -1.0
REDW Red Top Meadow 75.70 331 eP P **08 54 23.3 0.0**
comp=Z,28nm,1.0s,mb5.2
REDW epP pP 08 54 29.9 -1.1
M13A Montello 75.73 327 ⇓P P **08 54 22.8 -0.7**
baz=76,SNR=8.3
SNOW Snow King Moun 75.74 331 eP P **08 54 23.6 +0.2**
comp=Z,24nm,0.9s,mb5.1
SNOW epP pP 08 54 30.3 -0.8
NVAR Mina Array Bea 75.78 323 P P **08 54 24.1 +0.3**
comp=Z,4.6nm,0.8s,mb4.5,baz=153,slow=6.6,SNR=30
NVAR pP pP 08 54 31.1 -0.4
comp=Z,8.8nm,0.9s,baz=141,slow=6.4,SNR=13
LOHW Long Hollow 75.79 331 eP P **08 54 23.6 -0.1**
comp=Z,18nm,0.9s,mb5.0
L14A Malta 75.79 328 ⇑P P **08 54 23.4 -0.4**
baz=76,SNR=17
ELK Elko 75.82 326 eP P **08 54 24.5 +0.5**
comp=Z,16nm,1.0s,mb4.9
ELK epP pP 08 54 30.4 -1.3
ELK LR LR
comp=Z,602nm,20.0s,MS4.9
ELK Elko 75.82 326 eP P **08 54 24.5 +0.5**
ELK e*PP pP 08 54 30.4 -1.3
ELK pmax pmax
comp=Z,16nm,1.0s
ELK MLR MLR
comp=Z,602nm,20.0s
TPAW Teton Pass 75.85 331 eP P **08 54 24.3 +0.3**
comp=Z,43nm,1.4s,mb5.2
Q08A Gabbs 75.88 324 ⇓P P **08 54 24.3 -0.1**
baz=76,SNR=9.7
RRI2 Red Ridge 75.90 330 eP P **08 54 25.1 +0.7**
comp=Z,27nm,1.0s,mb5.1
P09A Austin 75.94 324 ⇓P P **08 54 24.8 +0.1**
baz=76
K15A Arbon 75.95 329 ⇑P P **08 54 24.5 -0.2**
baz=76,SNR=8.4
MOOW Moose Ponds 75.96 331 eP P **08 54 24.7 0.0**
comp=Z,55nm,2.0s,mb5.1
J16A Bone 75.98 330 ⇑P P **08 54 24.9 +0.1**
baz=76,SNR=6.4
I17A Pilgram Creek 76.02 331 ⇑P P **08 54 25.8 +0.8**
baz=76,SNR=13
DCID1 Drake Creek 76.03 331 eP P **08 54 26.0 +0.9**
comp=Z,30nm,0.9s,mb5.2
N11A Elko Archery C 76.12 326 ⇑P P **08 54 25.7 0.0**
baz=76
O10A Cortez Mining, 76.14 325 ⇓P P **08 54 26.0 +0.2**
baz=76
K14A Jones Ranch, D 76.15 329 ⇑P P **08 54 25.4 -0.5**
baz=76
M12A Wells 76.15 327 ⇑P P **08 54 25.8 -0.1**
baz=76,SNR=5.7
IMW Indian Meadow 76.16 331 eP P **08 54 26.2 +0.4**
comp=Z,43nm,1.4s,mb5.2
S05C Merced 76.17 321 ⇓P P **08 54 26.0 -0.1**
baz=76,SNR=9.4
L13A Double Diamond 76.17 328 ⇑P P **08 54 26.2 +0.2**
baz=76,SNR=17
ULM Lac du Bonnet 76.23 343 P P **08 54 24.6 -1.5**
comp=Z,15nm,0.9s,mb4.9,baz=149,slow=5.6,SNR=9.5
ULM pP pP 08 54 32.0 -1.8
comp=Z,17nm,0.9s,baz=173,slow=6.5,SNR=6.9
ULM Lac du Bonnet 76.23 343 eP P **08 54 24.5 -1.6**
comp=Z,56nm,1.4s,mb5.3
ULM epP pP 08 54 31.6 -2.2
ULM LR LR
comp=Z,527nm,19.0s,MS4.9
I16A Newdale 76.39 331 ⇓P P **08 54 27.5 +0.3**
baz=76,SNR=8.7
H17A Grant Village 76.39 332 ⇑P P **08 54 28.1 +1.0**
baz=76
RLMT Red Lodge 76.41 333 PFAKE 08 54 40.0 +13
RLMT LR LR
comp=Z,633nm,20.0s,MS4.9
RLMT Red Lodge 76.41 333 ⇑P P **08 54 27.5 +0.3**
baz=76
O09A Fish Creek Ran 76.41 325 ⇓P P **08 54 27.4 +0.1**
baz=76
LKWY Lake 76.45 332 eP P **08 54 29.2 +1.7**
comp=Z,35nm,1.0s,mb5.2
LKWY LR LR
comp=Z,762nm,22.0s,MS5.0
LKWY Lake 76.45 332 eP P **08 54 29.2 +1.7**
LKWY pmax pmax
comp=Z,35nm,1.0s,mb5.2
LKWY MLR MLR
comp=Z,762nm,22.0s,MS5.0
N10A Dunphy 76.45 326 ⇓P P **08 54 27.4 -0.2**
baz=76
J15A Blackfoot 76.46 330 ⇑P P **08 54 27.8 +0.3**
baz=76,SNR=10
WAKR Walker 76.46 322 eP P **08 54 28.8 +1.1**
LAO LASA Array 76.46 335 eP P **08 54 27.2 -0.2**
comp=Z,57nm,1.0s,mb5.5
LAO epP pP 08 54 33.7 -1.5
LAO LR LR
comp=Z,442nm,19.0s,MS4.8
R06C Coleville 76.48 322 ⇓P P **08 54 28.7 +0.9**
baz=76,SNR=5.4
P08A Dixie Valley 76.55 324 ⇑P P **08 54 28.6 +0.4**
baz=76
M11A Holland Ranch, 76.60 327 ⇑P P **08 54 28.8 +0.4**
baz=77,SNR=11
BMN Battle Mountai 76.62 325 PFAKE 08 54 40.0 +11
BMN LR LR
comp=Z,513nm,21.0s,MS4.8
K13A Stover Farm, H 76.67 328 ⇑P P **08 54 28.9 +0.2**
baz=77,SNR=5.6
CMB Columbia Colle 76.68 322 eP P **08 54 29.0 +0.1**
comp=Z,12nm,1.0s,mb4.8
CMB Columbia Colle 76.68 322 eP P **08 54 29.0 +0.1**
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.8
CMB Columbia Colle 76.68 322 ⇓P P **08 54 28.8 -0.1**
baz=77
G18A Lazy EL Ranch, 76.69 333 ⇓P P **08 54 28.8 0.0**
baz=77,SNR=17
L12A House Creek Ra 76.74 327 ⇑P P **08 54 29.6 +0.4**
baz=77,SNR=14
J14A Carey 76.91 329 ⇑P P **08 54 30.6 +0.5**
baz=77,SNR=12
H16A Russell Place, 76.93 331 ⇓P P **08 54 30.9 +0.7**
baz=77,SNR=12
I15A Monteview 76.94 330 ⇓P P **08 54 30.8 +0.5**
baz=77,SNR=9.6
O08A Rochester Mine 77.01 324 ⇑P P **08 54 30.6 -0.2**
baz=77
M10A I.L. Ranch, Tu 77.05 326 ⇑P P **08 54 31.2 +0.3**
baz=77
K12A Draper Farm, C 77.05 328 ⇑P P **08 54 31.4 +0.4**
baz=77,SNR=27
N09A Rock Creek Ran 77.08 325 ⇓P P **08 54 31.0 -0.1**
baz=77
GCMT Greycliff 77.11 333 eP P **08 54 31.2 0.0**
GCMT epP pP 08 54 38.2 -0.7
QLMT Earthquake Lak 77.11 331 eP P **08 54 32.2 +0.9**
L11A Cat Creek Ranc 77.13 327 ⇓P P **08 54 31.5 +0.1**
baz=77,SNR=8.2
R04C Big Horse Ranc 77.14 321 ⇓P P **08 54 31.7 +0.1**
baz=77,SNR=6.4
WCN Washoe City 77.19 323 ⇑P P **08 54 32.3 +0.5**
baz=77
G17A Pierce Place, 77.20 332 ⇑P P **08 54 32.3 +0.6**
baz=77
DGMT Dagmar 77.22 338 eP P **08 54 31.9 +0.2**
comp=Z,78nm,0.9s,mb5.6
DGMT epP pP 08 54 38.7 -0.7
DGMT Dagmar 77.22 338 ⇓P P **08 54 31.8 +0.1**
baz=77,SNR=15
F18A Big Timber 77.22 333 ⇑P P **08 54 31.8 0.0**
baz=77,SNR=23
PAHR Pah Rah Range 77.27 323 eP P **08 54 33.0 +0.8**
comp=Z,37nm,0.9s,mb5.3
PAHR epP pP 08 54 40.1 +0.1
J13A Cove Ranch, Pi 77.27 329 ⇑P P **08 54 32.6 +0.4**
baz=77,SNR=13
O07A Toulon 77.31 324 ⇑P P **08 54 32.3 -0.2**
baz=77,SNR=8.0
I14A Mackay 77.33 330 ⇑P P **08 54 33.1 +0.7**
baz=77,SNR=17
LAVA Lava Cap Winer 77.37 322 ⇓P P **08 54 32.6 -0.3**
baz=77
L10A Juniper Basin 77.42 327 ⇑P P **08 54 33.4 +0.4**
baz=77,SNR=22

M09A Marrel Ranch, 77.45 326 ⇑P P **08 54 33.3 +0.1**
baz=77,SNR=8.1
H15A Lima 77.49 330 ⇑P P **08 54 34.1 +0.7**
baz=77,SNR=6.9
HLID Hailey 77.51 329 *e*P P **08 54 34.1 +0.6**
comp=Z,21nm,0.9s,mb5.1
HLID *ep*P pP 08 54 39.8 -1.4
HLID LR LR
comp=Z,244nm,21.0s,MS4.5
HLID Hailey 77.51 329 ⇑P P **08 54 34.0 +0.6**
baz=78,SNR=20
G16A Moss Hill, Enn 77.59 331 ⇓P P **08 54 34.1 +0.2**
baz=78,SNR=5.2
J12A Stokes Ranch, 77.61 328 ⇓P P **08 54 34.3 +0.2**
baz=78,SNR=12
F17A Fitzpatrick Pl 77.62 332 ⇑P P **08 54 34.6 +0.6**
baz=78,SNR=14
I13A Wildhorse Cree 77.64 329 ⇑P P **08 54 34.9 +0.8**
baz=78,SNR=12
K11A Parker Ranch, 77.71 327 ⇓P P **08 54 34.9 +0.3**
baz=78,SNR=10
MCMT McKenzie Canyo 77.75 331 *e*P P **08 54 35.4 +0.7**
MCMT *ep*P pP 08 54 42.3 -0.2
N07B Gerlach 77.80 324 ⇑P P **08 54 35.1 -0.1**
baz=78,SNR=12
H14A Leadore 77.82 330 ⇑P P **08 54 35.6 +0.4**
baz=78,SNR=13
E18A Harlowton 77.84 333 ⇑P P **08 54 35.3 +0.1**
baz=78,SNR=11
BOZ Bozeman (W) 77.84 332 *e*P P **08 54 35.4 +0.1**
BOZ LR LR
comp=Z,421nm,20.0s,MS4.8
BOZ Bozeman (W) 77.84 332 ⇓P P **08 54 35.2 -0.1**
baz=78,SNR=6.4
G15A Dillon 77.84 331 ⇑P P **08 54 35.7 +0.4**
baz=78,SNR=13
BEKR Beckwourth 77.92 323 ⇓P P **08 54 36.1 +0.2**
baz=78,SNR=6.7
F16A Kennard Place, 77.95 332 ⇓P P **08 54 35.7 -0.1**
baz=78
M08A Happy Creek Ra 77.96 325 ⇑P P **08 54 36.0 0.0**
baz=78
L09A Wilkinson Ranc 77.99 326 ⇓P P **08 54 36.2 0.0**
baz=78,SNR=6.1
I12A Atlanta 78.03 329 ⇑P P **08 54 36.8 +0.4**
baz=78,SNR=13
DLMT Dillon 78.05 331 *e*P P **08 54 35.9 -0.5**
comp=Z,34nm,1.3s,mb5.1
CVS Carmenet Viney 78.09 321 ⇓P P **08 54 36.6 -0.2**
baz=78
MFID Camas Ranch 78.09 328 ⇓P P **08 54 36.9 +0.2**
baz=78,SNR=14
K10A MacKenzie Ranc 78.14 327 ⇓P P **08 54 37.0 0.0**
baz=78,SNR=9.1
E17A Martinsdale 78.15 333 ⇑P P **08 54 37.0 +0.1**
baz=78,SNR=12
OHCM Honcut 78.19 322 *e*P P **08 54 37.1 -0.2**
OHCM *ep*P pP 08 54 44.7 -0.4
H13A Challis 78.19 330 ⇑P P **08 54 37.9 +0.6**
baz=78,SNR=25
MCCM Marconi Confer 78.20 320 ⇓P P **08 54 37.7 +0.2**
baz=78
N06A Buffalo Meadow 78.24 324 ⇑P P **08 54 37.7 0.0**
baz=78,SNR=10.0
NSHM Saint Helena R 78.29 321 *e*P P **08 54 37.4 -0.5**
NSHM *ep*P pP 08 54 45.2 -0.5
D18A Linhart Farms, 78.29 334 ⇑P P **08 54 37.7 0.0**
baz=78,SNR=11
O05C Quincy 78.30 323 ⇓P P **08 54 38.1 +0.2**
baz=78
ORV Oroville 78.35 322 ⇓P P **08 54 38.3 +0.1**
baz=78,SNR=19
F15A Butte 78.37 331 ⇑P P **08 54 38.4 +0.2**
baz=78,SNR=15
H12A Diamond D Ranc 78.46 329 ⇑P P **08 54 39.0 +0.2**
baz=78,SNR=9.5
L08A Fields 78.47 326 ⇓P P **08 54 38.6 -0.2**
baz=78,SNR=6.0
K09A Rome 78.51 326 ⇑P P **08 54 38.9 -0.2**
baz=78,SNR=6.3
I11A Placerville 78.52 328 ⇓P P **08 54 38.8 -0.2**
baz=78,SNR=5.5
E16A East Helena 78.55 332 ⇑P P **08 54 39.3 +0.1**
baz=78,SNR=7.8
J10A Berg Farm, Mel 78.56 327 ⇓P P **08 54 38.8 -0.5**
baz=78
G13A Cobalt 78.58 330 ⇓P P **08 54 40.0 +0.6**
baz=78,SNR=49
D17A Six Diamond Ra 78.62 333 ⇑P P **08 54 39.7 +0.2**
baz=79,SNR=19
O04C Chester 78.64 323 ⇑P P **08 54 39.6 -0.2**
baz=79,SNR=8.5
F14A Wisdom 78.74 331 ⇓P P **08 54 40.7 +0.5**
baz=79,SNR=16
HRY Holter Researc 78.76 332 *e*P P **08 54 40.8 +0.4**
HRY *ep*P pP 08 54 47.7 -0.4
WVOR Wild Horse Val 78.79 326 PFAKE **08 54 50.0 +9.4**
WVOR LR LR
comp=Z,420nm,21.0s,MS4.8
L07A Adell 78.87 325 ⇓P P **08 54 41.1 +0.1**
baz=79,SNR=7.5
E15A Deer Lodge 78.89 332 ⇑P P **08 54 41.2 +0.2**
baz=79,SNR=8.7
D16A Dana Ranch, Ca 78.89 333 ⇑P P **08 54 41.4 +0.4**
baz=79,SNR=21
EGMT Eagleton 78.94 334 *e*P P **08 54 41.1 -0.1**
comp=Z,23nm,0.9s,mb5.1
EGMT *ep*P pP 08 54 47.5 -1.5
EGMT LR LR
comp=Z,457nm,19.0s,MS4.8
EGMT Eagleton 78.94 334 ⇓P P **08 54 40.8 -0.5**
baz=79,SNR=9.0
SUR Sutherland 79.02 120 *e*P P **08 54 43.3 +1.0**
comp=Z,46nm,1.1s,mb5.3
SUR *ep*P pP 08 54 52.5 +2.5
SUR LR LR
comp=Z,1μm,20.0s,MS5.3
C17A Wharram Farm, 79.04 333 ⇓P P **08 54 41.4 -0.5**
baz=79,SNR=9.0
TOA0 Torodi Ar. Sit 79.04 71 *e*P P **08 54 42.4 -0.2**
TORD Torodi Ar. Bea 79.04 71 P P **08 54 42.4 -0.2**
comp=Z,57nm,0.8s,mb5.5,baz=252,slow=5.2,SNR=274
I10A Payette 79.06 328 ⇓P P **08 54 41.7 -0.3**
baz=79
GASB Alder Springs 79.11 321 ⇑P P **08 54 42.7 +0.3**
baz=79,SNR=5.8
H11A Donnelly 79.13 329 ⇑P P **08 54 42.2 -0.2**
baz=79,SNR=6.0
LBCM Butte Creek Ri 79.14 323 P P **08 54 41.9 -0.7**
F13A Darby 79.16 330 ⇓P P **08 54 42.9 +0.3**
baz=79,SNR=44
E14A Clinton 79.26 331 ⇓P P **08 54 43.5 +0.5**
baz=79,SNR=14
K07A Rock Creek Ran 79.29 326 ⇑P P **08 54 43.4 +0.1**
baz=79
MOD Modoc 79.30 324 *e*P P **08 54 43.4 0.0**
comp=Z,11nm,0.8s,mb4.8
MOD *ep*P pP 08 54 51.0 -0.2
D15A Lincoln 79.31 332 ⇑P P **08 54 43.8 +0.4**
baz=79,SNR=11
J08A Circle Bar Ran 79.37 326 ⇓P P **08 54 43.8 +0.1**
baz=79
H10A Noah's Angus R 79.40 328 ⇓P P **08 54 43.6 -0.2**
baz=79,SNR=8.0
I09A Lost Marbles R 79.44 327 ⇓P P **08 54 44.0 -0.1**
baz=79
CHMT Chamberlain Mo 79.53 332 *e*P P **08 54 44.7 +0.2**
F12A Elk City 79.56 330 ⇑P P **08 54 44.7 0.0**
baz=80,SNR=7.7
C16A Fuhringer Ranc 79.58 333 ⇑P P **08 54 44.6 -0.1**
baz=80,SNR=17
E13A Victor 79.59 331 ⇑P P **08 54 45.2 +0.3**
baz=80,SNR=20
WDC Whiskeytown Da 79.63 322 *e*P P **08 54 43.4 -1.9**
comp=Z,5.4nm,0.7s,mb4.6
WDC *ep*P pP 08 54 50.5 -2.5
WDC Whiskeytown Da 79.63 322 *e*P P **08 54 43.4 -1.8**
WDC *e**PP pP 08 54 50.5 -2.5
WDC pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
WDC Whiskeytown Da 79.63 322 ⇑P P **08 54 43.6 -1.7**
baz=80
G11A Walters Elk Ra 79.77 329 ⇓P P **08 54 45.9 +0.1**
baz=80,SNR=32
MSO Missoula 79.77 331 *e*P P **08 54 46.5 +0.7**
MSO LR LR
comp=Z,299nm,19.0s,MS4.7

D14A Greenough 79.77 332 ⇓P P **08 54 46.1 +0.2**
baz=80,SNR=9.6
J07A Hines 79.81 326 ⇑P P **08 54 46.2 0.0**
baz=80,SNR=9.7
I08A Drewsey 79.81 327 ⇓P P **08 54 46.3 +0.2**
baz=80,SNR=13
BMO Blue Mountains 79.86 328 *e*P P **08 54 46.1 -0.3**
comp=Z,17nm,0.8s,mb5.0
BMO *ep*P pP 08 54 53.5 -0.7
BMO LR LR
comp=Z,324nm,19.0s,MS4.7
H09A Durkee 79.90 328 ⇑P P **08 54 46.5 -0.1**
baz=80
C15A Salmond Ranch, 79.92 333 ⇑P P **08 54 46.9 +0.3**
baz=80,SNR=33
B16A M & M Farms, S 80.04 333 ⇓P P **08 54 46.6 -0.7**
baz=80,SNR=9.1
F11A Grangeville 80.08 329 ⇑P P **08 54 47.1 -0.4**
baz=80,SNR=17
G10A Bishop Farm, J 80.09 329 ⇓P P **08 54 48.0 +0.3**
baz=80,SNR=17
J06A Christmas Vall 80.16 325 ⇓P P **08 54 47.9 -0.2**
baz=80,SNR=6.4
K05A Summer Lake 80.19 325 ⇑P P **08 54 48.3 +0.2**
baz=80
E12A Beaver Dam Sad 80.19 330 ⇓P P **08 54 48.0 -0.2**
baz=80,SNR=6.8
D13A Huson 80.20 331 ⇓P P **08 54 48.2 +0.1**
baz=80,SNR=19
N02C Big Bar 80.22 322 ⇓P P **08 54 48.3 -0.2**
baz=80,SNR=7.9
H08A Prairie City 80.30 327 ⇓P P **08 54 48.6 -0.2**
baz=80
B15A Bradely Ranch, 80.32 333 ⇑P P **08 54 48.1 -0.7**
baz=80,SNR=17
G09A Cove 80.40 328 ⇓P P **08 54 49.4 +0.1**
baz=80,SNR=30
C14A Swan Lake 80.41 332 ⇓P P **08 54 49.3 +0.1**
baz=80,SNR=13
I07A Izee 80.41 326 ⇓P P **08 54 49.4 +0.1**
baz=80,SNR=7.3
A16A West Butte Ran 80.42 334 ⇓P P **08 54 49.1 -0.2**
baz=80,SNR=59
E11A Bogner Ranch, 80.45 330 ⇓P P **08 54 49.0 -0.5**
baz=80,SNR=6.8
YBH Yreka Blue Hor 80.50 323 ⇑P P **08 54 48.5 -1.4**
baz=80
D12A Red Ives Fores 80.57 331 ⇓P P **08 54 50.2 0.0**
baz=80,SNR=26
F10A Beach Ranch, E 80.64 329 ⇓P P **08 54 50.4 -0.2**
baz=81,SNR=12
B14A Marquette Ranc 80.66 333 ⇑P P **08 54 50.4 -0.2**
baz=81,SNR=7.4
I06A Prineville 80.67 326 ⇓P P **08 54 51.0 +0.2**
baz=81,SNR=8.3
C13A Hot Springs 80.70 331 ⇓P P **08 54 51.2 +0.4**
baz=81,SNR=22
F09A S2 Ranch, Elgi 80.78 328 ⇑P P **08 54 50.9 -0.4**
baz=81,SNR=5.7
H07A Lands Inn, Kim 80.80 327 ⇑P P **08 54 51.3 -0.2**
baz=81
TSUM Tsumeb 80.90 107 *e*P P **08 54 53.8 +1.1**
comp=Z,32nm,0.8s,mb5.3
TSUM *ep*P pP 08 55 03.1 +2.6
TSUM LR LR
comp=Z,1μm,20.0s,MS5.3
A15A Johnson Ranch, 80.91 333 ⇑P P **08 54 50.9 -1.0**
baz=81,SNR=6.6
BSMT Bassoo Peak 80.92 331 P P **08 54 52.0 0.0**
E10A Myers Farm, Un 80.96 329 ⇑P P **08 54 52.1 -0.1**
baz=81,SNR=22
G08A Pilot Rock 80.99 328 ⇑P P **08 54 52.3 -0.1**
baz=81,SNR=5.3
D11A Klawano Farm, 81.02 330 ⇓P P **08 54 51.9 -0.6**
baz=81
LNOR Lincton Mounta 81.08 328 *e*P P **08 54 52.0 -0.9**
C12B Naegeli Ranch, 81.12 331 ⇑P P **08 54 53.2 +0.1**
baz=81,SNR=7.3
B13A Whitefish 81.18 332 ⇑P P **08 54 53.2 -0.2**
baz=81,SNR=9.2
A14A Double T Ranch 81.19 333 ⇓P P **08 54 52.6 -0.9**
baz=81,SNR=8.6
F08A Pendleton 81.26 328 ⇑P P **08 54 53.2 -0.7**
baz=81
L02A Cave Junction 81.28 323 ⇑P P **08 54 54.0 0.0**
baz=81
VIPM Ingram Point 81.28 326 P P **08 54 54.8 +0.8**
H06A Lindquist Farm 81.29 326 ⇑P P **08 54 54.5 +0.4**
baz=81,SNR=6.5
G07A Ruggs Ranch, H 81.33 327 ⇓P P **08 54 54.6 +0.4**
baz=81,SNR=7.4
I05A Bend 81.37 326 ⇓P P **08 54 54.4 -0.1**
baz=81
D10A Wagner Farm, O 81.46 330 ⇓P P **08 54 54.1 -0.8**
baz=81,SNR=17
WALA Waterton Lakes 81.46 333 *e*P P **08 54 54.7 -0.1**
comp=Z,25nm,0.7s,mb5.2
WALA *ep*P pP 08 55 01.4 -1.2
RAR Rarotonga 81.54 251 LR LR 09 22 53.8
comp=Z,404nm,18.3s,MS4.8,baz=104,slow=30
C11A Tepee Creek (N 81.57 331 ⇑P P **08 54 55.3 -0.1**
baz=82,SNR=26
A13A Flathead Natio 81.58 332 ⇓P P **08 54 55.7 +0.2**
baz=82
B12A Libby 81.74 331 ⇓P P **08 54 56.4 +0.1**
baz=82,SNR=6.7
G06A Carlson Farm, 81.79 327 ⇑P P **08 54 56.9 +0.2**
baz=82
E08A Dider Farm, El 81.90 328 ⇑P P **08 54 57.1 -0.1**
baz=82
FFC Flin Flon 81.91 342 *e*P P **08 54 55.8 -1.3**
comp=Z,40nm,1.3s,mb5.2
FFC *ep*P pP 08 55 02.8 -2.1
FFC LR LR
comp=Z,582nm,20.0s,MS4.9
FFC Flin Flon 81.91 342 *e*P P **08 54 55.8 -1.3**
FFC *e**PP pP 08 55 02.8 -2.0
FFC pmax pmax
comp=Z,40nm,1.3s,mb5.2
FFC MLR MLR
comp=Z,582nm,20.0s,MS4.9
D09A Jones Farm, Ri 81.95 329 ⇓P P **08 54 57.1 -0.4**
baz=82,SNR=10.0
PRW Prosser 82.00 328 P P **08 54 58.5 +0.7**
H2OWA Water 82.01 328 P P **08 54 58.0 +0.2**
C10A Spilker Farm, 82.03 330 ⇑P P **08 54 57.5 -0.4**
baz=82,SNR=7.7
HAWA Hanford 82.06 328 *e*P P **08 54 58.1 0.0**
comp=Z,32nm,0.8s,mb5.3
HAWA *ep*P pP 08 55 04.9 -0.9
J02A Umpqua 82.06 324 ⇓P P **08 54 58.1 -0.1**
baz=82
RSW Rattlesnake Hi 82.09 328 *e*P P **08 54 58.5 +0.3**
RSW *ep*P pP 08 55 05.7 -0.3
A12A Yaak River Ran 82.12 332 ⇑P P **08 54 58.3 0.0**
baz=82,SNR=21
H04A Detroit Lake 82.21 326 ⇓P P **08 54 58.1 -0.8**
baz=82
D08A Wollman Farm, 82.24 329 ⇓P P **08 54 58.8 -0.2**
baz=82,SNR=7.0
F06A Goldendale 82.24 327 ⇑P P **08 54 58.9 -0.1**
baz=82
NEW Newport 82.28 331 *e*P P **08 54 58.0 -1.1**
comp=Z,16nm,1.1s,mb4.8
NEW Newport 82.28 331 *e*P P **08 54 58.0 -1.2**
NEW pmax pmax
comp=Z,16nm,1.1s
E07A Sunnyside 82.33 328 ⇑P P **08 54 59.4 -0.1**
baz=82
OD2 Odessa Site #2 82.38 329 P P **08 54 59.5 -0.2**
A11A Hall Mountain, 82.45 331 ⇑P P **08 54 59.8 -0.3**
baz=82,SNR=31
C09A Chrisman Ranch 82.47 330 ⇑P P **08 54 59.8 -0.4**
baz=82,SNR=15
DPW Davenport 82.48 330 P P **08 55 00.3 +0.1**
G04A Mulino 82.72 326 ⇑P P **08 55 01.0 -0.6**
baz=83
H03A Soap Creek Ran 82.79 325 ⇓P P **08 55 01.4 -0.5**
baz=83
D07A Quincy 82.84 328 ⇑P P **08 55 01.6 -0.5**
baz=83
B09A Rice 82.86 330 ⇓P P **08 55 01.5 -0.7**
baz=83,SNR=6.7
E06A Yakima 82.88 327 ⇑P P **08 55 01.9 -0.4**
baz=83
EBG Ellensburg 82.93 328 P P **08 55 03.1 +0.5**
A10A Northport 83.00 331 ⇑P P **08 55 01.7 -1.2**
baz=83
TBM Table Mountain 83.12 328 P P **08 55 03.9 +0.3**
F04A Amboy 83.18 326 ⇑P P **08 55 03.3 -0.7**
baz=83
WTV Waterville 83.19 329 P P **08 55 03.9 0.0**
G03A Yamhill 83.21 325 ⇑P P **08 55 03.9 -0.2**
baz=83
C07A Waterville 83.23 329 ⇑P P **08 55 03.6 -0.6**
baz=83,SNR=8.9
ETW Entiat 83.30 329 *e*P P **08 55 04.4 -0.1**
ETW *ep*P pP 08 55 11.2 -1.1
B08A Colville Reser 83.36 330 ⇓P P **08 55 04.0 -0.8**
baz=83
MAW Mawson 83.40 164 P P **08 55 04.7 -0.2**
comp=Z,32nm,0.9s,mb5.3,baz=227,slow=6.0,SNR=18
MAW pP pP 08 55 12.7 +0.1
comp=Z,55nm,1.0s,baz=216,slow=5.8,SNR=14
MAW LR LR 09 32 24.2
comp=Z,955nm,18.9s,MS5.2,baz=236,slow=36
MAW Mawson 83.40 164 *e*P P **08 55 05.0 +0.1**
comp=Z,68nm,1.0s,mb5.6
MAW *ep*P pP 08 55 12.4 -0.2
MAW LR LR
comp=Z,967nm,19.0s,MS5.2
MAW Mawson 83.40 164 *e*P P **08 55 05.0 +0.1**
MAW *e**PP pP 08 55 12.4 -0.2
MAW pmax pmax
comp=Z,68nm,1.0s
MAW MLR MLR
comp=Z,967nm,19.0s
A09A Danville 83.46 330 ⇑P P **08 55 04.4 -0.9**
baz=83,SNR=10
MDT Midelt 83.62 51 LR LR 09 32 34.8
comp=Z,572nm,18.2s,MS5.0,baz=27,slow=36
FCC Fort Churchill 83.67 348 *e*P P **08 55 05.2 -1.0**
comp=Z,38nm,0.9s,mb5.5
FCC *ep*P pP 08 55 12.3 -1.6
FCC Fort Churchill 83.67 348 *e*P P **08 55 05.2 -0.9**
FCC *e**PP pP 08 55 12.3 -1.6
FCC pmax pmax
comp=Z,38nm,0.9s,mb5.5
A08A Turner Farm, O 83.76 330 ⇑P P **08 55 06.1 -0.7**
baz=84,SNR=15
B07A Winthrop 83.80 329 ⇑P P **08 55 06.1 -1.0**
baz=84,SNR=5.8
D05A Enumclaw 83.82 327 ⇓P P **08 55 06.2 -1.0**
baz=84
BOSA Boshof 83.96 118 P P **08 55 08.7 +0.2**
comp=Z,15nm,0.8s,mb5.2,baz=239,slow=5.6,SNR=15
BOSA pP pP 08 55 16.4 +0.1
comp=Z,27nm,1.0s,baz=263,slow=5.1,SNR=9.3
BOSA Boshof 83.96 118 P P **08 55 08.7 +0.2**
BOSA *PP pP 08 55 16.4 +0.1
BOSA MLR MLR
comp=Z,2μm,19.0s,MS5.4
E03A Lebam 84.18 326 ⇑P P **08 55 08.6 -0.4**
baz=84
EGRO El Granado 84.24 45 ⇑P P **08 55 10.8 +1.2**
comp=Z,384nm,3.1s
A07A Ashnola River, 84.34 330 ⇓P P **08 55 09.4 -0.4**
baz=84,SNR=13
EDM Edmonton 84.45 336 *e*P P **08 55 08.4 -1.8**
EVO Evora 84.46 44 ⇑/P P **08 55 11.1 +0.4**
comp=Z,83nm,1.2s,mb5.4
EVO *e*MLR MLR
comp=Z,1μm,22.8s,MS5.0
JCW Jim Creek 84.48 328 *e*P P **08 55 09.5 -1.1**
SFS San Fernando 84.49 47 PFAKE **08 55 20.0 +9.1**
SFS LR LR
comp=Z,2μm,20.0s,MS5.4
B06A Marblemount 84.49 329 ⇓P P **08 55 10.0 -0.5**
baz=84
EMIN Mina Concepcio 84.90 45 ⇑P P **08 55 13.4 +0.4**
comp=Z,429nm,3.3s
ESPR Espera 84.95 47 ⇑P P **08 55 14.2 +1.0**
comp=Z,155nm,1.2s,mb6.0
EJIF Jimena Fronter 84.98 47 ⇑P P **08 55 15.0 +1.7**
comp=Z,65nm,1.1s,mb5.7
EJIF Jimena Fronter 84.98 47 ⇑P P **08 55 15.0 +1.7**
EJIF pmax pmax
comp=Z,65nm,1.1s,mb5.7
EBAD Badajoz 85.23 45 ⇑P P **08 55 15.2 +0.6**
comp=Z,372nm,2.8s,mb6.0
EMIJ Mijas 85.51 47 ⇑P P **08 55 16.4 +0.4**
comp=Z,123nm,1.7s,mb5.9
C03A Quillayute Air 85.62 327 ⇑P P **08 55 16.1 -0.1**
baz=86
LBTB Lobatse 85.63 115 *e*P P **08 55 17.0 0.0**
comp=Z,24nm,1.3s,mb5.3
LBTB LR LR
comp=Z,563nm,21.0s,MS4.9
LBTB Lobatse 85.63 115 *e*P P **08 55 17.0 0.0**
LBTB pmax pmax
comp=Z,23nm,1.3s,mb5.2
LBTB MLR MLR
comp=Z,563nm,21.0s,MS4.9
MTE Manteigas 85.82 43 *e*P P **08 55 17.6 +0.1**
comp=Z,26nm,0.8s,mb5.5
MTE LR LR
comp=Z,1μm,22.0s,MS5.3
ELOJ Sierra Loja 86.25 47 P P **08 55 20.1 +0.5**
comp=Z,29nm,1.0s,mb5.5
ELOJ Sierra Loja 86.25 47 P P **08 55 20.1 +0.5**
ELOJ pmax pmax
comp=Z,29nm,1.0s,mb5.5
ELOB Lobios 86.34 41 P P **08 55 20.0 +0.1**
comp=Z,164nm,2.3s,mb5.8
ELUQ Luque 86.39 47 P P **08 55 21.2 +0.9**
comp=Z,89nm,1.3s,mb5.8
ELUQ Luque 86.39 47 P P **08 55 21.2 +0.9**
ELUQ pmax pmax
comp=Z,89nm,1.3s,mb5.8
EADA Adamuz 86.51 46 P P **08 55 21.2 +0.4**
comp=Z,315nm,3.8s
EPLA Plasencia 86.56 44 P P **08 55 21.4 +0.2**
comp=Z,757nm,3.4s
EPLA Plasencia 86.56 44 P P **08 55 21.4 +0.3**
EPLA pmax pmax
comp=Z,757nm,3.4s
TAM Tamanrasset 86.60 64 *e*P P **08 55 22.3 +0.6**
TAM *ep*P pP 08 55 29.3 -0.2
ECOG Cogollos-Vega 86.71 47 P P **08 55 23.1 +1.2**
comp=Z,18nm,1.3s,mb5.1
ECOG Cogollos-Vega 86.71 47 P P **08 55 23.1 +1.2**
ECOG pmax pmax
comp=Z,18nm,1.3s,mb5.1
EBAN Banos Encina 87.03 46 P P **08 55 23.9 +0.5**
comp=Z,12nm,0.8s,mb5.2
EBAN Banos Encina 87.03 46 P P **08 55 23.9 +0.5**
EBAN pmax pmax
comp=Z,12nm,0.8s,mb5.2
PAB San Pablo 87.40 45 PFAKE **08 55 40.0 +15**
PAB LR LR
comp=Z,737nm,21.0s,MS5.1
ESDC Sonseca Array 87.72 45 P P **08 55 26.9 +0.2**
comp=Z,2.5nm,0.7s,mb4.6,baz=247,slow=4.7,SNR=8.3
ESDC LR LR 09 31 23.4
comp=Z,466nm,19.1s,MS4.9,baz=225,slow=33
ESDC Sonseca Array 87.72 45 P P **08 55 26.6 -0.2**
comp=Z,57nm,3.0s
ESLA Sonseca Array 87.72 45 PFAKE **08 55 40.0 +13**
ESLA LR LR
comp=Z,4μm,19.0s,MS5.9
DRV R 09 25 00.0
DRV Dumont d'Urvil 87.87 192 S S 09 06 08.0 -0.3
CASY Casey 91.13 180 *e*P P **08 55 45.3 +2.9**
comp=Z,47nm,1.1s,mb5.7
CASY LR LR
comp=Z,607nm,20.0s,MS5.0
LSZ Lusaka 91.75 107 PFAKE **08 56 00.0 +14**
LSZ LR LR
comp=Z,2μm,20.0s,MS5.5
YKA Yellowknife Ar 92.04 341 P P **08 55 45.5 -0.8**
comp=Z,7.8nm,0.8s,mb5.1,baz=138,slow=4.7,SNR=12
YKA pP pP 08 55 53.3 -0.9
comp=Z,6.7nm,0.8s,baz=135,slow=4.8,SNR=7.9
YKA Yellowknife Ar 92.04 341 P P **08 55 45.5 -0.9**
YKA *PP pP 08 55 53.4 -0.8
SNZO South Karori 92.25 223 PFAKE **08 56 00.0 +12**
SNZO LR LR
comp=Z,1μm,21.0s,MS5.3
URZ Urewera 92.32 227 LR LR 09 28 43.7
comp=Z,1μm,20.0s,MS5.3,baz=213,slow=30
QUIF Quistinic 92.58 38 *e*P P **08 55 48.4 -0.8**
comp=Z,100nm,1.5s,mb5.7
QUIF Quistinic 92.58 38 *e*P P **08 55 48.4 -0.8**
comp=Z,50nm,1.5s,mb5.7

QUIF Quistinic 92.58 38 eP P 08 55 48.4 -0.8
QUIF pmax pmax
comp=Z,50nm,1.5s,mb5.7
ROSF Rostrenen 92.74 38⇑iP P 08 55 49.4 -0.5
comp=Z,31nm,1.0s,mb5.4
ROSF Rostrenen 92.74 38⇑iP P 08 55 49.4 -0.5
comp=Z,15nm,1.0s,mb5.4
ROSF Rostrenen 92.74 38⇑iP P 08 55 49.4 -0.5
ROSF pmax pmax
comp=Z,15nm,1.0s,mb5.4
RPZ Rata Peaks 93.12 220 LR LR 09 27 29.6
comp=Z,389nm,20.1s,MS4.8,baz=111,slow=29
LFF La Frestale 93.40 42⇑iP P 08 55 52.9 -0.2
comp=Z,25nm,0.8s,mb5.4
LFF La Frestale 93.40 42⇑iP P 08 55 52.9 -0.2
comp=Z,12nm,0.8s,mb5.4
LFF La Frestale 93.40 42⇑iP P 08 55 52.9 -0.2
LFF pmax pmax
comp=Z,12nm,0.8s,mb5.4
MFF Saint Martin d 93.68 41⇑iP P 08 55 53.9 -0.4
comp=Z,46nm,1.2s,mb5.5
MFF Saint Martin d 93.68 41⇑iP P 08 55 53.9 -0.4
comp=Z,23nm,1.2s,mb5.5
MFF Saint Martin d 93.68 41⇑iP P 08 55 53.9 -0.4
MFF pmax pmax
comp=Z,23nm,1.2s,mb5.5
GRR Gorron 94.15 39⇑iP P 08 55 55.5 -0.9
comp=Z,18nm,1.0s,mb5.2
GRR Gorron 94.15 39⇑iP P 08 55 55.5 -0.9
comp=Z,9.3nm,1.0s,mb5.2
GRR Gorron 94.15 39⇑iP P 08 55 55.5 -0.9
GRR pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
FLN La Foliniere 94.55 39⇑iP P 08 55 57.6 -0.7
comp=Z,34nm,1.1s,mb5.4
FLN eMLR MLR
comp=Z,435nm,21.6s,MS4.6
FLN La Foliniere 94.55 39⇑iP P 08 55 57.6 -0.7
comp=Z,17nm,1.1s,mb5.4
FLN LR LR
comp=Z,440nm,21.8s,MS4.9
FLN La Foliniere 94.55 39⇑iP P 08 55 57.6 -0.7
FLN pmax pmax
comp=Z,17nm,1.1s,mb5.4
FLN MLR MLR
comp=Z,440nm,21.6s,MS4.9
LDF La Druitiere 94.67 39⇑iP P 08 55 57.8 -1.1
comp=Z,44nm,1.3s,mb5.4
LDF La Druitiere 94.67 39⇑iP P 08 55 57.8 -1.1
comp=Z,22nm,1.3s,mb5.4
LDF La Druitiere 94.67 39⇑iP P 08 55 57.8 -1.1
LDF pmax pmax
comp=Z,22nm,1.3s,mb5.4
DLBC Dease Lake 94.81 333 eP P 08 55 58.0 -1.2
DLBC epP pP 08 56 06.2 -0.9
AFI Afiamalu 94.91 253 LR LR 09 29 54.3
comp=Z,424nm,18.7s,MS4.9,baz=171,slow=30
TCF Toulx Ste Croi 94.95 42⇑iP P 08 55 59.5 -0.7
KEST Kesra 95.16 53 P P 08 56 00.9 -0.5
comp=Z,1.9nm,0.8s,mb4.6,baz=250,slow=1.1,SNR=4.6
KEST LR LR 09 43 26.0
comp=Z,476nm,18.5s,MS5.0,baz=356,slow=38
BGF Bois d'Agland 95.47 42 eP P 08 56 02.1 -0.4
AVF Avril sur Loir 95.89 42⇑iP P 08 56 03.7 -0.7
comp=Z,9.4nm,0.9s,mb4.9
AVF Avril sur Loir 95.89 42⇑iP P 08 56 03.7 -0.7
comp=Z,4.7nm,0.9s,mb4.9
AVF Avril sur Loir 95.89 42⇑iP P 08 56 03.7 -0.7
AVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
SMF Signal de Mont 96.12 42⇑iP P 08 56 05.1 -0.4
comp=Z,17nm,0.9s,mb5.2
SMF Signal de Mont 96.12 42⇑iP P 08 56 05.1 -0.4
comp=Z,8.4nm,0.9s,mb5.2
SMF Signal de Mont 96.12 42⇑iP P 08 56 05.1 -0.4
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
LOR Lormes 96.41 41⇑iP P 08 56 05.7 -1.1
comp=Z,21nm,1.2s,mb5.2
LOR eMLR MLR
comp=Z,770nm,21.0s,MS4.9
LOR Lormes 96.41 41⇑iP P 08 56 05.7 -1.1
comp=Z,11nm,1.2s,mb5.2
LOR LR LR
comp=Z,770nm,21.0s,MS5.2
LOR Lormes 96.41 41⇑iP P 08 56 05.7 -1.1
LOR pmax pmax
comp=Z,11nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,770nm,21.0s,MS5.2
ESK Eskdalemuir 96.43 32 PFAKE 08 56 20.0 +13
ESK LR LR
comp=Z,1μm,21.0s,MS5.3
BNI Bardonecchia 97.20 44 PFAKE 08 56 20.0 +10
BNI LR LR
comp=Z,2μm,19.0s,MS5.6
GIVF Givet 98.24 39⇑iP P 08 56 14.5 -0.5
HAU Haudompre 98.25 41 eP P 08 56 14.3 -0.8
HAU eMLR MLR
comp=Z,776nm,22.2s,MS4.8
HAU Haudompre 98.25 41 eP P 08 56 14.3 -0.8
HAU MLR MLR
comp=Z,780nm,22.3s,MS5.2
WLF Walferdange 98.83 40 PFAKE 08 56 30.0 +12
WLF LR LR
comp=Z,944nm,22.0s,MS5.2
CDF Champ du Feu 98.98 41 eP P 08 56 17.8 -0.6
WDD Wield Dalam 99.09 55 PFAKE 08 56 30.0 +11
WDD LR LR
comp=Z,1μm,21.0s,MS5.3
TUE Stuetta 99.49 44 PFAKE 08 56 30.0 +9.3
TUE LR LR
comp=Z,625nm,19.0s,MS5.1
BFO Black Forest 99.59 42 PFAKE 08 56 30.0 +8.8
BFO LR LR
comp=Z,542nm,19.0s,MS5.1
MBAR Mbarara 99.95 95 PFAKE 08 56 40.0 +17
MBAR LR LR
comp=Z,236nm,21.0s,MS4.7
AQU L'Aquila 100.64 49 PFAKE 08 56 40.0 +14
AQU LR LR
comp=Z,758nm,21.0s,MS5.2
CUC Castrocucco 101.51 51 PFAKE 08 56 40.0 +10
CUC LR LR
comp=Z,679nm,19.0s,MS5.2
TIP Timpagrande 101.92 52 PFAKE 08 56 40.0 +8.4
TIP LR LR
comp=Z,699nm,22.0s,MS5.1
EGAK Eagle 102.67 335 PFAKE 08 56 50.0 +15
EGAK LR LR
comp=Z,481nm,20.0s,MS5.0
KONO Kongsberg 104.53 31 PFAKE 08 57 00.0 +17
KONO LR LR
comp=Z,800nm,19.0s,MS5.3
TIR Tirane 104.86 51 PFAKE 09 01 10.0 +10
TIR LR LR
comp=Z,641nm,20.0s,MS5.2
COLA College 105.33 334 PFAKE 09 01 10.0 +10
COLA LR LR
comp=Z,409nm,21.0s,MS5.0
ABPO Ambohimpanom 106.17 119 PFAKE 09 01 20.0 +17
ABPO LR LR
comp=Z,596nm,22.0s,MS5.1
PSZ Piszkesteto 106.75 45 PFAKE 09 01 20.0 +17
PSZ LR LR
comp=Z,624nm,20.0s,MS5.2
APE Apeiranthos 107.88 57⇑iP PKiKP 09 00 59.1 -6.5
KWP Kalwaria 108.98 43 PFAKE 09 01 20.0 +13
KWP LR LR
comp=Z,778nm,19.0s,MS5.3
KBS Kingsbay 110.80 12 PFAKE 09 01 20.0 +10
KBS LR LR
comp=Z,1μm,20.0s,MS5.5
ISP Isparta 111.91 57 PFAKE 09 01 30.0 +17
ISP LR LR
comp=Z,620nm,22.0s,MS5.2
KIEV Kiev 113.28 43 PFAKE 09 01 30.0 +15
KIEV LR LR
comp=Z,398nm,20.0s,MS5.0
AKASG Malin Array Be 113.29 43 PKiKP PKiKP 09 01 14.3 -1.1
comp=Z,0.7nm,0.5s,baz=276,slow=2.3,SNR=5.8
AKASG Malin Array Be 113.29 43 PKPdf PKiKP 09 01 14.3 -1.1
CSS Prodhromos 113.53 61 PFAKE 09 01 30.0 +14
CSS LR LR
comp=Z,371nm,20.0s,MS5.0
ANTO Ankara 114.06 55 PFAKE 09 01 30.0 +13
ANTO LR LR
comp=Z,512nm,22.0s,MS5.1
TARA Tarawa 115.10 260 PFAKE 09 01 30.0 +10
TARA LR LR
comp=Z,909nm,20.0s,MS5.4
LVZ Lovozero 116.60 24 PFAKE 09 01 30.0 +8.8
LVZ LR LR
comp=Z,612nm,19.0s,MS5.2
STKA Stephens Creek 117.58 210 PKP PKPdf 09 01 23.4 -1.0
comp=Z,2.4nm,0.9s,baz=357,slow=22,SNR=4.5
OBN Obninsk 118.05 39 PFAKE 09 01 40.0 +16
OBN LR LR
comp=Z,464nm,20.0s,MS5.1
OBN Obninsk 118.05 39⇓iPKIKP PKPdf 09 01 23.7 -0.7
OBN pmax pmax
comp=Z,23nm,1.1s
OBN MLR MLR
comp=Z,300nm,17.0s,MS5.0
MSEY Mahe Island 120.43 110 PFAKE 09 01 40.0 +10
MSEY LR LR
comp=Z,700nm,19.0s,MS5.3
HNR Honiara 121.25 243 PFAKE 09 01 40.0 +8.2
HNR LR LR
comp=Z,436nm,21.0s,MS5.1
KIV Kislovodsk 121.84 51 PFAKE 09 01 40.0 +8.0
KIV LR LR
comp=Z,238nm,22.0s,MS4.8
KIV Kislovodsk 121.84 51 i PKIKP PKPdf 09 01 32.0 0.0
KIV pmax pmax
comp=Z,7.0nm,0.7s
KIV MLR MLR
comp=Z,200nm,18.0s,MS4.8
GNI Garni 123.20 56 PFAKE 09 01 50.0 +15
GNI LR LR
comp=Z,414nm,22.0s,MS5.0
GNI Garni 123.20 56⇑iPKIKP PKPdf 09 01 34.9 +0.1
GNI MLR MLR
comp=Z,400nm,22.0s
SMY Shemya 123.29 319 PFAKE 09 01 50.0 +15
SMY LR LR
comp=Z,409nm,19.0s,MS5.1
BILL Bilibino 123.30 338 PFAKE 09 01 50.0 +16
BILL LR LR
comp=Z,574nm,20.0s,MS5.2
BILL Bilibino 123.30 338 i PKIKP PKPdf 09 01 33.1 -1.0
BILL e 09 03 12.6
BILL pmax pmax
comp=Z,12nm,1.7s
CTAO Charters Tower 124.35 223 PFAKE 09 01 50.0 +12
CTAO LR LR
comp=Z,523nm,19.0s,MS5.2
ASAR Alice Springs 128.10 209 PKP PKPdf 09 01 43.4 -1.3
comp=Z,8.7nm,0.8s,baz=149,slow=2.1,SNR=71
ASAR pPKP pPKPdf 09 01 51.6 -1.1
comp=Z,11nm,1.0s,baz=146,slow=2.3,SNR=17
TIXI Tiksi 129.97 352 ePKPdf PKPdf 09 01 45.1 -1.7
TIXI LR LR
comp=Z,595nm,20.0s,MS5.3
TIXI Tiksi 129.97 352 i PKIKP PKPdf 09 01 44.9 -1.9
TIXI pmax pmax
comp=Z,8.0nm,1.1s
ARU Arti 130.01 34 PFAKE 09 02 00.0 +13
ARU LR LR
comp=Z,559nm,22.0s,MS5.2
ARU Arti 130.01 34 i PKIKP PKPdf 09 01 47.6 +0.4
ARU 09 04 03.3
ARU SS SS 09 21 23.4 +0.2
SEY Seymchan 130.82 336⇑iPKIKP PKPdf 09 01 47.6 -1.0
WB2 Warramunga Arr 131.11 211 ePKPdf PKPdf 09 01 49.8 -0.7
WB2 epPKPdf pPKPdf 09 01 57.6 -1.0
WRA Warramunga Arr 131.12 211 PKP PKPdf 09 01 49.6 -1.0
comp=Z,7.6nm,0.9s,baz=153,slow=1.7,SNR=44
WRA pPKP pPKPdf 09 01 57.7 -0.9
comp=Z,22nm,1.1s,baz=160,slow=1.5,SNR=25
WRA SKPbc SKPbc 09 05 11.1 -2.7
comp=Z,2.1nm,1.0s,baz=133,slow=4.1,SNR=5.7
WRA Warramunga Arr 131.12 211 PKIKP PKPdf 09 01 49.6 -1.0
WRA 09 01 57.7
WRAB Tennant Creek 131.12 211 ePKPdf PKPdf 09 01 50.1 -0.5
WRAB epPKPdf pPKPdf 09 01 57.5 -1.1
WRAB LR LR
comp=Z,692nm,21.0s,MS5.3
WRAB Tennant Creek 131.12 211 i PKIKP PKPdf 09 01 48.4 -2.2
DGAR Diego Garcia 132.75 125 PFAKE 09 02 10.0 +16
DGAR LR LR
comp=Z,1μm,19.0s,MS5.7
PETK Petropavlovsk- 132.86 322 PKP PKPdf 09 01 52.2 -0.6
comp=Z,7.7nm,0.9s,baz=83,slow=6.1,SNR=4.8
PETK Petropavlovsk- 132.86 322 PKP PKPdf 09 01 52.2 -0.6
MBWA Marble Bar 135.16 193 PFAKE 09 02 10.0 +12
MBWA LR LR
comp=Z,299nm,20.0s,MS5.0
BRVK Borovoye 137.58 35 ePKPdf PKPdf 09 02 01.7 +0.2
BRVK LR LR
comp=Z,865nm,20.0s,MS5.5
YAK Yakutsk 138.53 346 PFAKE 09 02 20.0 +17
YAK LR LR
comp=Z,643nm,20.0s,MS5.4
YAK Yakutsk 138.53 346 ePKIKP PKPdf 09 02 01.6 -1.4
YAK pmax pmax
comp=Z,13nm,1.2s
NVS Novosibirsk 142.45 25 i PKHKP PKPdf 09 02 05.2 -5.1
NVS pmax pmax
comp=Z,38nm,2.0s
NVS pmax pmax
comp=E,9.0nm,1.5s
KURK Kurchatov 143.18 33 ePKPdf PKPdf 09 02 08.0 -3.8
KURK LR LR
comp=Z,357nm,22.0s,MS5.1
KURK Kurchatov 143.18 33 i PKIKP PKPdf 09 02 08.8 -3.0
BHJ Bhuj 143.25 81 eP PKPdf 09 02 12.2 -0.5
ZAA0 Zalesovo Array 143.74 25 ePKPdf PKPdf 09 02 09.2 -3.4
ZALV Zalesovo Beam 143.74 25 PKP PKPdf 09 02 09.6 -3.1
comp=Z,12nm,0.8s,baz=329,slow=3.7,SNR=23
YSS Yuzh-Sakhalins 144.19 320 PFAKE 09 02 30.0 +16
YSS LR LR
comp=Z,265nm,19.0s,MS5.0
YSS Yuzh-Sakhalins 144.19 320 i PKIKP PKPdf 09 02 15.8 +2.1
CLNS Chul'man 144.29 346 ePKIKP PKPdf 09 02 10.2 -3.3
CLNS pmax pmax
comp=Z,25nm,0.9s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,0.8s
EKS2 Erkin-Say 144.29 48 ePKPdf PKPdf 09 02 12.9 -1.0
EKS2 LR LR
comp=Z,408nm,22.0s,MS5.2
EKS2 Erkin-Say 144.29 48 P PKPdf 09 02 13.4 -0.6
SNR=21
BATI Baumata 144.39 204 P PKPdf 09 02 23.8 +8.7
AML Almayashu 144.43 49 P PKPdf 09 02 14.2 0.0
SNR=42
USP Ospenovka 144.54 47 P PKPdf 09 02 13.4 -0.9
SNR=18
KRAR Krasnoyarsk 144.64 16 i PKIKP PKPdf 09 02 12.9 -1.2
AAK Ala-Archa 144.79 48 P PKPdf 09 02 15.2 +0.4
SNR=54
FRU Bishkek 144.79 47⇑iPKIKP PKPdf 09 02 15.0 +0.2
FRU pmax pmax
comp=Z,262nm,2.2s
CHMS Chumysh 144.82 47 P PKPdf 09 02 14.9 0.0
SNR=18
BOD Bodaibo 144.94 356 ePKIKP PKPdf 09 02 12.4 -2.2
BOD pmax pmax
comp=Z,88nm,0.9s
UCH Uchtor 144.96 48 ePKPdf PKPdf 09 02 16.5 +1.4
UCH LR LR
comp=Z,191nm,22.0s,MS4.8
UCH Uchtor 144.96 48 P PKPdf 09 02 16.9 +1.7
SNR=6.7
KBK Karagaybulak 145.09 47 P PKPbc 09 02 16.3 +1.4
SNR=42
GUMO Guam 145.40 261 P PKPbc 09 02 24.4 +7.7
TKM2 Tokmak 2 145.42 46 ePKPdf PKPdf 09 02 16.5 +0.6
TKM2 LR LR
comp=Z,343nm,20.0s,MS5.1
TKM2 Tokmak 2 145.42 46 P PKPbc 09 02 16.7 +0.8
SNR=40
MNGI Mangalore 145.47 101 eP PKPdf 09 02 15.0 -1.8
KZA Kyzart 145.52 48 P PKPdf 09 02 17.7 +1.6
SNR=34
TRD Trivandrum 145.52 109 eP PKPdf 09 02 18.0 +1.0
ULHL Ulahol 146.13 47 P PKPdf 09 02 18.5 +1.4
SNR=33
ERM Erimo 146.20 312 PFAKE 09 02 30.0 +13
ERM LR LR
comp=Z,722nm,20.0s,MS5.5
POO Poona 146.26 91 eP PKPdf 09 02 18.8 +0.7
KAD Karad 146.26 93 eP PKPdf 09 02 17.9 -0.2
NIL Nilore 146.32 63 PFAKE 09 02 30.0 +12
NIL LR LR
comp=Z,79nm,20.0s,MS4.5
KOD Kodaikanal 146.75 107 eP PKPdf 09 02 19.9 +0.9
KSH Kashi 146.97 52 PKP PKPbc 09 02 21.0 +0.3
KSH ePKP2 PKPab 09 02 22.4 +0.3
KSH eAPKP 09 02 31.6
KSH eXPKP 09 02 35.6
KSH ePKS 09 05 54.9
KSH eSKS SKSdf 09 09 25.1 -0.9
KSH PP PP
comp=Z,1μm,5.7s
KSH LR LR
comp=N,321nm,5.2s
KSH LR LR
comp=E,441nm,3.6s
KSH LR LR
comp=Z,496nm,3.8s
HABR Khabarovsk 147.46 328 ePKHKP PKPdf 09 02 15.3 -3.9
HABR e 09 05 50.5
HABR e 09 09 19.5
HABR eSS SS 09 24 44.2 -4.6
HABR eSSS 09 30 18.4
MK31 Makanchi Array 147.50 36 ePKPdf PKPdf 09 02 18.8 -0.5
MK31 ePKPbc PKPbc 09 02 22.0 +0.1
MKAR Makanchi Array 147.50 36 PKPbc PKPdf 09 02 19.1 -0.2
comp=Z,24nm,0.8s,baz=304,slow=2.4,SNR=44
AJM Ajmer 148.02 76 ex PKPdf 09 02 22.6 +1.8
SWI Sorong 148.41 225 P PKPbc 09 02 25.4 0.0
KLR Kul'dur 148.44 332 ePKIKP PKPdf 09 02 19.2 -1.6
THN Thein Dam 148.55 65 eP PKPdf 09 02 18.8 -2.7
AKL Akola 149.62 88 eP PKPdf 09 02 23.9 +0.3
AKL AMS AMS 09 37 23.5
comp=Z,471nm,17.3s,MS5.3
SMLA Simla 149.97 67 eP PKPdf 09 02 22.5 -1.4
NDI New Delhi 150.26 72 eP PKPdf 09 02 24.0 -0.4
HYB Hyderabad 150.31 95 ePKP PKPdf 09 02 25.0 +0.3
HYB Hyderabad 150.31 95 i PKP PKPdf 09 02 25.0 +0.3
HYB e 09 02 30.0
HYB e 09 02 36.5
BHPL Bhopal 150.35 83 eP PKPdf 09 02 23.9 -0.7
IRK Irkutsk 150.38 7⇑iPKIKP PKPbc 09 02 28.7 -0.3
IRK pmax pmax
comp=Z,75nm,1.7s
MDRS Chennai 150.41 104 ex x 09 02 48.2
MDRS ex x 09 04 04.2
KDI Kendari 150.50 207 P PKPbc 09 02 30.8 +0.3
KAPI Kappang 150.59 201 PKPbc PKPbc 09 02 29.6 -1.1
comp=Z,38nm,0.9s,baz=223,slow=2.8,SNR=14
KAPI pPKPbc pPKPbc 09 02 37.9 -0.9
comp=Z,77nm,1.0s,baz=238,slow=2.8,SNR=12
KAPI Kappang 150.59 201 PKPbc PKPbc 09 02 29.6 -1.1
KAPI pPKPbc pPKPbc 09 02 37.9 -0.9
KAPI LR LR
comp=Z,262nm,22.0s,MS5.0
KAPI Kappang 150.59 201 P PKPbc 09 02 30.1 -0.7
DBJI Dramaga 150.62 174 P PKPbc 09 02 30.9 +0.1
DDI Dehra Dun 150.83 68 ex x 09 02 20.5
TLY Talaya 150.86 8 ePKPbc PKPbc 09 02 30.1 0.0
TLY LR LR
comp=Z,269nm,21.0s,MS5.0
TLY Talaya 150.86 8 i PKIKP PKPbc 09 02 30.3 +0.1
TLY e 09 02 38.5
TLY eSS SS 09 25 26.3 +0.5
TLY pmax pmax
comp=Z,16nm,0.8s
NGP Nagpur 151.57 88 eP PKPdf 09 02 23.9 -2.7
NGP AMS AMS 09 33 56.0
comp=Z,278nm,11.8s,MS5.3
MJAR Matsushiro Arr 151.84 305 PKPbc PKPbc 09 02 32.0 -0.9
comp=Z,15nm,0.8s,baz=108,slow=1.0,SNR=40
MJAR pPKPbc pPKPbc 09 02 40.0 -1.0
comp=Z,20nm,0.9s,baz=132,slow=1.1,SNR=13
MAJO Matsushiro 151.84 305 ePKPbc PKPbc 09 02 32.0 -1.0
MAJO LR LR
comp=Z,597nm,20.0s,MS5.4
MAT Matsushiro 151.84 305 APKP PKPbc 09 02 32.0 -1.0
ZAK Zakamensk 152.08 9 ePKIKP PKPdf 09 02 26.8 +0.4
ZAK pmax pmax
comp=Z,16nm,1.2s
WMQ Urumqi 152.33 36 PKP PKPdf 09 02 28.0 +1.0
WMQ PP PP 09 06 19.0 +3.2
WMQ SKS SKSdf 09 09 30.0 -2.8
WMQ SKKS SKKSac 09 13 02.0 -3.1
WMQ PP PP
comp=Z,214nm,9.0s
WMQ LR LR
comp=N,325nm,25.0s,MS5.2
WMQ LR LR
comp=E,412nm,25.0s,MS5.2
WMQ LR LR
comp=Z,393nm,25.0s,MS5.1
HIA Hailar 152.48 346 ePKPbc PKPbc 09 02 33.1 -0.8
HIA LR LR
comp=Z,329nm,20.0s,MS5.1
MDJ Mudanjiang 152.85 328 PKP PKPdf 09 02 27.5 -0.3
MDJ Mudanjiang 152.85 328 ePKPbc PKPbc 09 02 33.9 -1.1
MDJ LR LR
comp=Z,314nm,21.0s,MS5.1
SONM Songino Array 154.95 5 PKP PKPdf 09 02 30.6 -0.1
comp=Z,2.7nm,0.8s,baz=292,slow=0.8,SNR=11
SONM PKPbc PKPbc 09 02 38.6 -0.7
comp=Z,3.9nm,1.0s,baz=278,slow=0.3,SNR=7.4
SONM PKPab PKPab 09 02 54.6 -0.1
comp=Z,5.5nm,0.9s,baz=344,slow=3.2,SNR=7.1
SONM Songino Array 154.95 5 PKIKP PKPdf 09 02 30.6 0.0
SONM 09 02 38.6
ULN Ulaanbaatar 154.97 4 ePKPdf PKPdf 09 02 30.9 +0.2
ULN LR LR
comp=Z,269nm,22.0s,MS5.0
CN2 Changchun 155.40 332 ePKP PKPdf 09 02 32.0 +0.6
CN2 eXP 09 02 46.5
CN2 PKP2 PKPab 09 02 59.0 +2.2
CN2 PP PP 09 06 36.0 +3.2
CN2 PP PP
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,20.0s,MS5.2
CN2 LR LR
comp=E,200nm,20.0s,MS5.2
CN2 LR LR
comp=Z,200nm,21.0s,MS4.9
KOLN Koldanda 155.94 73 eP PKPdf 09 02 31.9 -0.7
DANN Dangsing 156.02 71 eP PKPdf 09 02 32.2 -0.5
GKN Gorkha 156.83 72 eP PKPdf 09 02 33.1 -0.7
PKI Pulchoki 157.56 73 eP PKPdf 09 02 33.9 -0.8
GUN Gumba 157.93 72 eP PKPdf 09 02 34.6 -0.6
BOK Bokaro 158.13 83 ex PKPdf 09 02 37.7 +2.2
JIRN Jiri 158.24 72 eP PKPdf 09 02 34.9 -0.7
KSRS Korea Array 158.60 317 PKP PKPdf 09 02 35.6 -0.1
comp=Z,3.2nm,0.8s,baz=71,slow=0.8,SNR=10
GTA Gaotai 161.49 25 PKP PKPdf 09 02 39.1 +0.2
GTA APKP 09 02 50.0
GTA XPKP 09 02 53.5
GTA PKP2 PKPab 09 03 25.9 +2.6
GTA PP PP 09 07 10.3 +4.3
GTA SKKS SKKSac 09 13 53.3 -0.3
GTA PP PP
comp=Z,122nm,5.4s
GTA LR LR
comp=N,266nm,21.0s
GTA LR LR
comp=E,201nm,20.4s
GTA LR LR
comp=Z,456nm,21.9s
HHC Hu-ho-hao-te 162.00 355 ePKP PKPdf 09 02 40.0 +0.7
HHC APKP 09 02 51.0
HHC XPKP 09 02 54.5
HHC PKS 09 06 12.0
HHC SKS SKSdf 09 09 41.3 -1.5
HHC SKKS SKKSac 09 13 55.8 -0.2
HHC PP PP
comp=Z,156nm,14.2s
HHC LR LR
comp=N,421nm,19.0s
HHC LR LR
comp=E,232nm,23.8s
HHC LR LR
comp=Z,322nm,22.6s

BJI	**Beijing**	**162.01**	**344**		PKP	PKPdf	09 02 39.0	-0.4
BJI					PP	PP	09 07 08.3	-0.3
BJI					SS	SS	09 27 27.6	+1.7
BJI					PP	PP		
	comp=Z,184nm,10.5s							
BJI					LR	LR		
	comp=N,220nm,27.8s							
BJI					LR	LR		
	comp=E,204nm,34.5s							
BJI					LR	LR		
	comp=Z,249nm,25.0s							
BJT	**Baijiatuau**	**162.04**	**344**		PFAKE		09 02 50.0	+11
BJT					LR	LR		
	comp=Z,327nm,20.0s							
LSA	**Lhasa**	**162.05**	**64**		PKP	PKPdf	09 02 39.0	-0.8
LSA	**Lhasa**	**162.05**	**64**		PFAKE		09 02 50.0	+10
LSA					LR	LR		
	comp=Z,354nm,20.0s							
KKM	**Kota Kinabalu**	**162.13**	**202**		PFAKE		09 02 50.0	+10
KKM					LR	LR		
	comp=Z,202nm,21.0s							
SSE	**Sheshan**	**166.88**	**311**		PKP	PKPdf	09 02 44.8	+0.8
SSE					PP	PP	09 07 38.0	+2.9
SSE					SS	SS	09 28 15.1	-2.8
SSE					PP	PP		
	comp=Z,53nm,3.6s							
SSE					LR	LR		
	comp=N,55nm,15.5s							
SSE					LR	LR		
	comp=E,208nm,15.5s							
SSE					LR	LR		
	comp=Z,328nm,14.8s							
NJ2	**Nanjing**	**167.76**	**320**	*e*PKP		PKPdf	09 02 45.4	+0.8
XAN	**Xi'an**	**168.85**	**3**	PKP		PKPdf	09 02 44.8	-0.5
TATO	**Taipei**	**169.00**	**283**	PFAKE			09 03 00.0	+14
TATO				LR	LR			
	comp=Z,492nm,20.0s							
CM31	**Chiang Mai Arr**	**169.03**	**112**	PFAKE			09 03 00.0	+14
CM31				LR	LR			
	comp=Z,436nm,22.0s							
CMAR	**Chiang Mai Arr**	**169.03**	**112**	PKP		PKPdf	09 02 44.1	-1.7
	comp=Z,1.4nm,0.4s,baz=290,slow=1.7,SNR=13							
CMAR				PKPab		PKPab	09 03 57.4	+0.1
	comp=Z,2.6nm,0.4s,baz=255,slow=5.0,SNR=11							
CMAR				PP		PP	09 07 46.6	-0.2
	comp=Z,1.2nm,0.8s,baz=247,slow=6.1,SNR=4.8							
YHNB	**Yeheng**	**169.14**	**282**	PFAKE			09 03 00.0	+14
YHNB				LR	LR			
	comp=Z,725nm,22.0s							
CHTO	**Chiang Mai**	**169.18**	**110**	PFAKE			09 03 00.0	+14
CHTO				LR	LR			
	comp=Z,398nm,20.0s							
CD2	**Chengdu**	**170.40**	**32**	*e*PKP		PKPdf	09 02 46.8	+0.5
CD2				APKP			09 02 54.3	
CD2				XPKP			09 03 01.3	
CD2				PKP2		PKPab	09 04 06.3	+3.5
CD2				PP		PP	09 07 57.5	+5.1
CD2				SKS		SKSdf	09 09 45.1	-3.3
CD2				SKKS		SKKSac	09 14 39.4	+0.8
CD2				PP		PP		
	comp=Z,380nm,9.6s							
CD2				LR		LR		
	comp=N,420nm,18.8s							
CD2				LR		LR		
	comp=E,340nm,22.6s							
CD2				LR		LR		
	comp=Z,430nm,22.6s							
KMI	**Kunming**	**173.27**	**69**	PKP		PKPdf	09 02 47.9	+0.1
KMI				APKP			09 03 00.0	
KMI				XPKP			09 03 03.6	
KMI				PKP2		PKPab	09 04 16.4	+0.5
KMI				PP		PP	09 08 08.5	+0.6
KMI				SKKS		SKKSac	09 14 51.3	-1.8
KMI				PP		PP		
	comp=Z,185nm,8.9s							
KMI				LR		LR		
	comp=N,218nm,23.7s							
KMI				LR		LR		
	comp=E,319nm,18.4s							
KMI				LR		LR		
	comp=Z,514nm,22.4s							
GYA	**Guiyang**	**175.49**	**37**	PKP		PKPdf	09 02 48.4	-0.1
GYA				APKP			09 03 01.3	
GYA				XPKP			09 03 04.8	
GYA				PKP2		PKPab	09 04 25.3	-0.2
GYA				PKS			09 06 19.3	
GYA				PP		PP	09 08 18.0	+0.5
GYA				SKS		SKSdf	09 09 47.3	-3.0
GYA				SKKS		SKKSac	09 15 02.0	-1.2
GYA				PP		PP		
	comp=Z,130nm,4.3s							
GYA				LR		LR		
	comp=N,240nm,23.5s							
GYA				LR		LR		
	comp=E,180nm,24.0s							
GYA				LR		LR		
	comp=Z,350nm,26.1s							
QIZ	**Qiongzhong**	**176.18**	**182**	PKP		PKPdf	09 02 50.4	+1.6
QIZ				PP		PP	09 08 26.5	+6.6
QIZ				SS		SS	09 29 43.8	-3.0
QIZ				LR		LR		
	comp=Z,560nm,20.1s							
QIZ	**Qiongzhong**	**176.18**	**182**	PFAKE			09 03 00.0	+11
QIZ				LR		LR		
	comp=Z,599nm,22.0s							

NEIC ***16*** *08:59:31.9, 37.10N×29.28E, h5km, ML3.7(ISK), After ISK.*
CSEM ***16*** *08:59:32.3±0.1, 3705N×2930E, h5km, MD3.6, Error ellipse: s-maj=2.1km s-min=1.2km az=171.0*
ISK ***16*** *08:59:32.4, 3708N×2926E, h3km, ML3.7*
ISCJB ***16*** *08:59:32.1±0.6, 3694N±002×2929E±002, h8km±4km, Error ellipse: s-maj=4.0km s-min=2.9km az=9.4*
DDA ***16*** *08:59:33.3, 37.10N×2930E, h28km±1km, Md3.6*
GII ***16*** *08:59:36.9±0.0, 3633N×2916E, h0km, ML3.6/3*

ISC 16 08:59:33.1±0.6,3696N±002×2928E±002,h8km±4km,n75, σ1§12/97,5C-5D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
GOLH	**Golhisar**	**0.36**	**39**	*i*	**P**	**Sg**	**08 59 39.0**		**-1.0**
GOLH					*i* S	**Sg**	**08 59 45.6**		**+0.9**
ELL	**Elmali**	**0.55**	**113**	Pg		**Pg**	**08 59 42.0**		**-1.6**
ELL	**Elmali**	**0.55**	**113**	Pg		**Pg**	**08 59 42.0**		**-1.6**
TURN	**Turunc**	**0.55**	**261**	*i*	**P**	**Pg**	**08 59 47.2**		**+3.6**
TURN					*i* S	**Sg**	**08 59 58.8**		**+8.0**
DENT	**Denizli**	**0.82**	**346**	*e*PG		**Pg**	**08 59 46.8**		**-2.0**
DENT	**Denizli**	**0.82**	**346**	Pg		**Pg**	**08 59 47.0**		**-1.8**
YER	**Yerkesik**	**0.82**	**283**	*e*PG		**Pg**	**08 59 48.3**		**-0.4**
YER	**Yerkesik**	**0.82**	**283**	Pg		**Pg**	**08 59 48.8**		**+0.1**
YER				Sg		**Sg**	**09 00 00.8**		**+1.4**
YER	**Yerkesik**	**0.82**	**283**	Pg		**Pg**	**08 59 48.8**		**0.0**
YER				Sg		**Sg**	**09 00 00.8**		**+1.4**
KSL	**Kastellorizon**	**0.84**	**163**	PB		**Pb**	**08 59 50.0**		**0.0**
ANTB	**Antalya**	**1.10**	**93**	*e*PN		**Pn**	**08 59 54.5**		**-0.3**
ANTB				*e*SN		**Sn**	**09 00 11.5**		**+1.3**
BCK	**Bucak**	**1.16**	**64**	*e*PN		**Pn**	**08 59 54.2**		**-1.4**
BCK				*e*SN		**Sn**	**09 00 10.6**		**-1.0**
BCK	**Bucak**	**1.16**	**64**	Pn		**Pn**	**08 59 54.0**		**-1.6**
ARG	**Arkhangelos**	**1.19**	**232**	PN		**Pn**	**08 59 54.0**		**-2.0**
ARG	**Arkhangelos**	**1.19**	**232**	P		**Pb**	**08 59 54.8**		**-1.1**
MLSB	**Milas**	**1.25**	**286**	*e*PN		**Pn**	**08 59 56.4**		**-0.4**
MLSB				*e*SN		**Sn**	**09 00 13.7**		**-0.2**
MLSB	**Milas**	**1.25**	**286**	Pn		**Pn**	**08 59 55.9**		**-1.0**
ISP	**Isparta**	**1.32**	**48**	*e*PN		**Pn**	**08 59 57.2**		**-0.6**
ISP				*e*SN		**Sn**	**09 00 15.9**		**+0.4**
ISP	**Isparta**	**1.32**	**48**	Pn		**Pn**	**08 59 56.5**		**-1.2**
AYDN	**Tasoluk**	**1.32**	**302**	*i*	**P**	**Pn**	**08 59 56.9**		**-1.0**
AYDN				*i*	S	**Sb**	**09 00 13.1**		**-2.1**
AYDN	**Tasoluk**	**1.32**	**302**	*i*	**P**	**Pn**	**08 59 56.8**		**-1.0**
AYDN				*i*	S	**Sb**	**09 00 13.1**		**-2.1**
KHL	**Karahalli**	**1.37**	**8**	*e*PN		**Pn**	**08 59 57.0**		**-1.6**
KHL	**Karahalli**	**1.37**	**8**	Pn		**Pn**	**08 59 56.3**		**-2.3**
DAT	**Datca**	**1.39**	**261**	*e*PN		**Pn**	**08 59 59.6**		**+0.9**
DAT				*e*SN		**Sn**	**09 00 19.1**		**+1.8**
BDRM	**Kayabasi**	**1.47**	**275**	*i*	**P**	**Pn**	**09 00 00.3**		**+0.4**
BDRM				*i*	S	**Sn**	**09 00 20.0**		**+0.6**
KULA	**Kula-Manisa**	**1.63**	**343**	*e*PN		**Pn**	**09 00 01.2**		**-0.9**
KULA				*e*SN		**Sn**	**09 00 22.3**		**-0.9**
GCAM	**G?zelcaml?**	**1.79**	**295**	*i*	**P**	**Pn**	**09 00 04.2**		**-0.1**
GCAM				*i*	S	**Sn**	**09 00 24.4**		**-2.8**
SHUT	**Suhut-Afyon**	**1.88**	**32**	*e*PN		**Pn**	**09 00 05.0**		**-0.5**
SMG	**Samos**	**2.09**	**292**	PN		**Pn**	**09 00 08.2**		**-0.2**
SMG	**Samos**	**2.09**	**292**	P		**Pn**	**09 00 08.8**		**+0.4**
DEMI	**Demirci**	**2.13**	**348**	*i*	P	**Pn**	**09 00 08.4**		**-0.5**
DEMI					*i* S	**Sn**	**09 00 30.0**		**-5.6**
GDZ	**Gediz**	**2.13**	**4**	*i*	P	**Pn**	**09 00 08.5**		**-0.5**
GDZ					*i* S	**Sn**	**09 00 31.1**		**-4.6**
KDAG	**Bornova**	**2.15**	**313**	*i*	P	**Pn**	**09 00 09.2**		**-0.1**
KDAG					*i* S	**Sn**	**09 00 36.5**		**+0.4**
BOLV	**Bolvadin**	**2.20**	**36**	*i*	P	**Pn**	**09 00 10.1**		**+0.2**
BOLV					*i* S	**Sn**	**09 00 37.1**		**-0.1**
KARP	**Karpathos**	**2.22**	**231**	PN		**Pn**	**09 00 10.9**		**+0.7**
KARP	**Karpathos**	**2.22**	**231**	P		**Pn**	**09 00 11.3**		**+1.1**
AKHS	**Akhisar**	**2.24**	**329**	*i*	P	**Pn**	**09 00 09.7**		**-0.8**
AKHS					*i* S	**Sn**	**09 00 32.2**		**-6.1**
AKS	**Akhisar**	**2.24**	**329**	*e*PN		**Pn**	**09 00 10.0**		**-0.4**
BLCB	**Balcova**	**2.28**	**309**	*e*PN		**Pn**	**09 00 10.9**		**-0.1**
BLCB	**Balcova**	**2.28**	**309**	Pn		**Pn**	**09 00 10.6**		**-0.4**
HDMB	**Hadim**	**2.57**	**89**	*e*PN		**Pn**	**09 00 17.0**		**+2.0**
KONT	**Konya--Tatoy**	**2.64**	**67**	*e*PN		**Pn**	**09 00 17.4**		**+1.4**
KDHN	**Kadinhani**	**2.73**	**54**	*i*	P	**Pn**	**09 00 19.0**		**+1.7**
LADK	**Ladik-KONYA**	**2.75**	**62**	*e*PN		**Pn**	**09 00 17.5**		**0.0**
KIZT	**Kizilcal**	**2.81**	**46**	*e*PN		**Pn**	**09 00 18.3**		**0.0**
APE	**Apeiranthos**	**3.00**	**273**	PN		**Pn**	**09 00 21.8**		**+0.8**
PRK	**Paraskevi**	**3.29**	**315**	PN		**Pn**	**09 00 25.2**		**+0.3**
NPS	**Neapolis**	**3.42**	**241**	P		**Pn**	**09 00 28.2**		**+1.5**
IKL	**Isikli**	**3.62**	**100**	*e*PN		**Pn**	**09 00 31.5**		**+2.1**
LFK	**Lefkose**	**3.83**	**115**	*e*PN		**Pn**	**09 00 35.1**		**+2.8**
ANTO	**Ankara**	**4.00**	**42**	⇑	*i*P	**Pn**	**09 00 37.1**		**+2.4**
GADA	**Gvkgeada**	**4.17**	**322**	*e*PN		**Pn**	**09 00 36.8**		**-0.2**
MERS	**Mersin**	**4.20**	**90**	*e*PN		**Pn**	**09 00 40.5**		**+3.0**
LIA	**Limnos Island**	**4.35**	**314**	PN		**Pn**	**09 00 40.1**		**+0.6**
KARA	**Karaisali**	**4.62**	**85**	*e*PN		**Pn**	**09 00 45.0**		**+1.8**
VLI	**Veliai**	**5.09**	**269**	PN		**Pn**	**09 00 50.0**		**+0.3**
KSDI	**Kefar Szold**	**6.44**	**124**	Pn		**Pn**	**09 01 09.0**		**+0.8**
MMLI	**Mount Malkishu**	**6.78**	**130**	Pn		**Pn**	**09 01 12.2**		**-0.6**
HMDT	**Nahal Hemdat**	**6.97**	**131**	Pn		**Pn**	**09 01 15.7**		**+0.3**
HMDT						Sn	**Sn**	**09 02 34.6**	**-0.3**
DSI	**Dead Sea**	**7.37**	**135**	Pn		**Pn**	**09 01 21.0**		**0.0**
DSI						Sn	**Sn**	**09 02 43.1**	**-1.8**
TIRR	**Tirgusor**	**7.52**	**355**	⇓	P	**Pn**	**09 01 23.4**		**+0.4**
TIRR	**Tirgusor**	**7.52**	**355**	⇓	*i*P	**Pn**	**09 01 23.4**		**+0.4**
MZDA	**Masada**	**7.56**	**136**	Pn		**Pn**	**09 01 22.5**		**-1.1**
PRNI	**Paran**	**8.13**	**142**	Pn		**Pn**	**09 01 30.5**		**-1.0**
KRMI	**Paran Flat**	**8.20**	**145**	Pn		**Pn**	**09 01 31.6**		**-0.7**
HRFI	**Mount Harif**	**8.41**	**144**	Pn		**Pn**	**09 01 34.2**		**-1.1**
MBRI	**Mt Berech**	**8.56**	**145**	Pn		**Pn**	**09 01 36.7**		**-0.5**
EIL	**Elat**	**8.68**	**145**	Pn		**Pn**	**09 01 38.1**		**-0.9**
EIL						Sn	**Sn**	**09 03 10.9**	**-6.2**
MLR	**Muntele Rosu**	**8.88**	**345**	⇑	P	**Pn**	**09 01 43.3**		**+1.6**
MLR	**Muntele Rosu**	**8.88**	**345**	⇑	*i*P	**Pn**	**09 01 43.3**		**+1.6**
VOIR		**9.05**	**341**	⇑	P	**Pn**	**09 01 44.8**		**+0.8**
VOIR		**9.05**	**341**	⇑	*i*P	**Pn**	**09 01 44.8**		**+0.8**
PLOR	**Plostina**	**9.10**	**348**	⇓	*i*P	**Pn**	**09 01 45.5**		**+0.8**
BZS	**Buzias**	**10.39**	**329**	⇓	P	**Pn**	**09 01 57.0**		**-5.4**
BZS	**Buzias**	**10.39**	**329**	⇓	*i*P	**Pn**	**09 01 57.0**		**-5.3**

VIE ***16*** *09:01:01.8±0.3, 5052N×1408E, h0km, mb2.3/2, ML2.8/7, Error ellipse: s-maj=2.5km s-min=1.5km az=20.0, Suspected Mining explosion.*
ISCJB ***16*** *09:01:02.1±0.5, 5049N±002×1401E±003, h0km, Error ellipse: s-maj=3.2km s-min=3.0km az=8.0*
NEIC ***16*** *09:01:03.2±0.6, 5061N×1398E, h5km, Error ellipse: s-maj=8.3km s-min=6.2km az=168.0*
CSEM ***16*** *09:01:03.7±0.2, 5053N×1403E, h0km, ML3.3/8, Error ellipse: s-maj=3.4km s-min=2.3km az=144.0, Mining explosion.*
PRU ***16*** *09:01:04.6, 5051N×1405E, h0km, Explosion Lovosice Mining explosion.*

ISC 16 09:01:03.2±0.5,5055N±002×1401E±003,h0km,n29, σ1§17/51,7C-9D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
PVCC	**Panska Ves**	**0.36**	**93**	*e*PG		**Pg**	**09 01 10.7**		**+0.6**
PVCC				*e*SG		**Sg**	**09 01 16.0**		**+1.3**
	comp=Z,249nm,0.4s								
PRU	**Pruhonice**	**0.66**	**148**	*e*PG		**Pg**	**09 01 16.4**		**+0.6**
PRU				*e*SG		**Sg**	**09 01 24.8**		**+0.5**
	comp=Z,51nm,0.6s								
CLL	**Collm**	**0.99**	**320**	*i*	Pg	**Pg**	**09 01 22.1**		**-0.1**
CLL				*i*	Sg	**Sg**	**09 01 35.4**		**+0.3**
	comp=Z,119nm,0.8s								
NKC	**Novy Kostel**	**1.05**	**253**	*e*PG		**Pg**	**09 01 23.7**		**+0.4**
NKC				*e*SG		**Sg**	**09 01 38.5**		**+1.7**
	comp=Z,325nm,0.9s								
UPC	**Upice**	**1.28**	**91**	*e*PG		**Pg**	**09 01 27.5**		**-0.2**
KHC	**Kasperske Hory**	**1.45**	**191**	*e*PG		**Pg**	**09 01 30.0**		**-0.9**
KHC				*e*SG		**Sg**	**09 01 49.3**		**-0.3**
	comp=Z,30nm,0.5s								
KSP	**Ksiaz**	**1.48**	**78**	*e*Pn		**Pn**	**09 01 31.2**		**+0.1**
KSP				*e*Sn		**Sn**	**09 01 51.8**		**+0.7**
KSP	**Ksiaz**	**1.48**	**78**	*e*Pg		**Pg**	**09 01 31.2**		**-0.4**
KSP				*e*Sn		**Sn**	**09 01 49.8**		**-1.3**
KSP				*e*Sg		**Sg**	**09 01 51.6**		**+0.8**
TREC	**Trest**	**1.58**	**142**	*e*PG		**Pg**	**09 01 32.6**		**-0.8**
GEC2	**GERESS Array S**	**1.72**	**187**	*e*Pn		**Pn**	**09 01 35.1**		**+0.8**
GEC2				*e*Sn		**Sn**	**09 01 58.1**		**+1.2**
GEC2	**GERESS Array S**	**1.72**	**187**	*e*Pn		**Pn**	**09 01 35.1**		**+0.8**
GEC2				*e*Sn		**Sn**	**09 01 58.1**		**+1.2**
RUE	**Ruedersdorf**	**1.94**	**356**	Pn		**Pn**	**09 01 35.6**		**-1.8**
RUE	**Ruedersdorf**	**1.94**	**356**	Pn		**Pn**	**09 01 35.6**		**-1.8**
VRAC	**Vranov**	**2.08**	**126**	⇑	P	**Pn**	**09 01 40.1**		**+0.8**
VRAC					S	**Sn**	**09 02 08.5**		**+2.6**
VRAC	**Vranov**	**2.08**	**126**	*e*Pn		**Pn**	**09 01 40.8**		**+1.5**
VRAC				*e*Sg		**Sg**	**09 02 07.9**		**-2.1**
VRAC				S		**Sn**	**09 02 08.5**		**+2.6**
VRAC	**Vranov**	**2.08**	**126**	⇑	*i*P	**Pn**	**09 01 40.1**		**+0.8**
MORC	**Moravsky Berou**	**2.40**	**107**	*e*Pn		**Pn**	**09 01 44.0**		**+0.3**
MORC				*e*Sn		**Sn**	**09 02 15.9**		**+2.1**
MORC	**Moravsky Berou**	**2.40**	**107**	*e*Pn		**Pn**	**09 01 44.0**		**+0.3**
MORC	**Moravsky Berou**	**2.40**	**107**	⇑	*i*P	**Pn**	**09 01 47.2**		**+3.5**
MORC				*e*Sg		**Sg**	**09 02 16.9**		**-3.4**
MORC				S		**Sn**	**09 02 19.6**		**+5.8**
MORC	**Moravsky Berou**	**2.40**	**107**	⇑	*i*P	**Pn**	**09 01 47.2**		**+3.5**
MOA	**Molln**	**2.71**	**176**	⇓	*i*Pn	**Pn**	**09 01 46.6**		**-1.4**
MOA				⇓	*i*Pg	**Pg**	**09 01 53.6**		**-1.4**
MOA				⇓	*i*Sg	**Sg**	**09 02 29.5**		**-0.7**
	comp=Z,33nm,0.7s								
CONA	**Conrad Observa**	**2.89**	**154**	⇓	*i*Pg	**Pg**	**09 01 56.6**		**-2.0**
CONA				⇓	*i*Sg	**Sg**	**09 02 36.3**		**+0.3**
	comp=Z,21nm,0.4s								
CSNA	**Conrad Observa**	**2.89**	**154**	⇓	*i*Pg	**Pg**	**09 01 57.4**		**-1.2**
CSNA				⇓	*i*Sg	**Sg**	**09 02 36.3**		**+0.3**
	comp=Z,20nm,0.4s								
MODS	**Modra-Piesok**	**3.05**	**134**	*e*SG		**Sg**	**09 02 42.0**		**+0.9**
ZST	**Bratislava**	**3.10**	**138**	*e*SG		**Sg**	**09 02 43.5**		**+0.6**
ARSA	**Arzberg**	**3.45**	**163**	⇓	*i*Pg	**Pg**	**09 02 07.0**		**-2.3**
ARSA				⇓	*i*Sg	**Sg**	**09 02 54.2**		**+0.2**
	comp=Z,22nm,0.6s								
KBA	**Koelnbreinsper**	**3.50**	**187**	⇑	*i*Pg	**Pg**	**09 02 08.6**		**-1.7**
KBA				⇑	*i*Sg	**Sg**	**09 02 56.0**		**+0.4**
	comp=Z,15nm,0.5s								
WTTA	**Wattenberg**	**3.64**	**206**	⇓	*i*Sg	**Sg**	**09 03 02.0**		**+1.9**
	comp=Z,14nm,0.8s								
WTTA	**Wattenberg**	**3.64**	**206**		Sg	**Sg**	**09 03 02.0**		**+1.9**
	comp=Z,14nm,0.8s								

BJI ***16*** *09:08:20.6, 3669N×2909E, h21km, mB5.2, mb4.9, Ms4.9, Msz4.6*
IDC ***16*** *09:08:22.3±0.6, 3688N×2942E, h0km, mb4.4/19, mb1 4.5/24, mb1mx4.5/28, mbtmp4.4/24, ML4.2/5, MS4.5/24, Ms1 4.5/24, ms1mx4.4/34, Error ellipse: s-maj=12.9km s-min=12.1km az=160.0*
DDA ***16*** *09:08:22.7, 3694N×2930E, h22km±1km, Md4.8*
ISK ***16*** *09:08:22.7, 3702N×2926E, h5km, ML5.0*
NEIC ***16*** *09:08:23.0, 3702N×2926E, h5km, mb4.7/19, ML5.0(ISK), After ISK.*
NEIC Felt [III] at Fethiye.
MOS ***16*** *09:08:23.0±1.1, 3692N×2944E, h12km, mb4.8/22, MS4.4/23, Error ellipse: s-maj=4.7km s-min=2.7km az=109.2*
HLW ***16*** *09:08:23.3, 3725N×2921E, h31km, Mb4.7*
GCMT ***16*** *09:08:23.0±0.4, 3683N×2934E, h13km±1km, MW5.1/71, Moment Tensor Solution. s16,c17; s71,c118; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mw-5.77±.47; Mθθ5.69±.31; Mϕϕ0.08±.25; Mrθ-1.48±.60; Mrϕ-0.46±.16; Mϕf1.42±.85; Best double couple: Mw6.09800×10¹⁶ NP1:ϕ263.00000°, δ38.00000°, λ-108.00000°. NP2: ϕ106.00000°, δ54.00000°, λ-76.00000°. Principal axes: T 5.9480, Plg8.0000°, Azm186.0000°; N 0.3000, Plg11.0000°, Azm278.0000°; P -6.2480, Plg76.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***16*** *09:08:24.3±0.4, 3688N±001×2934E±001, h21km±3km, mb4.7/76, MS4.5/29 Error ellipse: s-maj=2.0km s-min=1.4km az=34.6*
CSEM ***16*** *09:08:24.0±0.0, 3702N×2932E, h10km, mb4.6/31, Ms4.2, Mw5.1, Error ellipse: s-maj=1.1km s-min=0.8km az=12.0*
THE ***16*** *09:08:27.3, 3699N×2938E, h16km±2km, ML5.3/4, Error ellipse: s-maj=2.7km s-min=0.9km az=102.0*
GII ***16*** *09:08:28.4±0.5, 3659N×2908E, h50km, mb4.4/4, ML4.2/4*
NIC ***16*** *09:08:28.4±0.3, 3629N×2891E, h62km, mb4.8, ML4.6, Western Turkey, 18 km W Altinyayla*

ISC 16 09:08:27.3±0.4,3689N±001×2935E±001,h29km±3km, h25km±1.0km:pP-P,n649,σ1§24/736,mb4.7/76,MS4.5/29, 35C-19D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
GOLH	**Golhisar**	**0.39**	**26**	⇑	*i*P	**Pb**	**09 08 30.5**		**-5.4**
GOLH					*i* S	**Sb**	**09 08 37.2**		**-4.6**
ELL	**Elmali**	**0.47**	**107**	*e*PG		**Pb**	**09 08 34.7**		**-2.4**
ELL				*e*SG		**Sb**	**09 08 43.9**		**0.0**
TURN	**Turunc**	**0.60**	**269**	⇑	*i*P	**Pb**	**09 08 39.0**		**-0.3**
TURN					*i* S	**Sb**	**09 08 50.8**		**+3.3**
YER	**Yerkesik**	**0.89**	**286**	*e*PG		**Pn**	**09 08 39.1**		**-4.7**
DENT	**Denizli**	**0.90**	**344**	*e*PG		**Pn**	**09 08 38.4**		**-5.6**
ANTB	**Antalya**	**1.04**	**89**	*e*PN		**Pn**	**09 08 45.2**		**-0.7**
BCK	**Bucak**	**1.14**	**60**	*e*PN		**Pn**	**09 08 45.3**		**-2.0**
BCK				*e*SN		**Sn**	**09 09 02.4**		**+0.5**
ARG	**Arkhangelos**	**1.19**	**236**	PG		**Pn**	**09 08 45.3**		**-2.7**
ARG	**Arkhangelos**	**1.19**	**236**	P		**Pn**	**09 08 46.6**		**-1.4**
MLSB	**Milas**	**1.32**	**288**	*e*PN		**Pn**	**09 08 46.8**		**-3.0**
ISP	**Isparta**	**1.33**	**44**	*e*PN		**Pn**	**09 08 47.5**		**-2.3**
ISP	**Isparta**	**1.33**	**44**	P		**Pn**	**09 08 47.3**		**-2.5**
ISP				S		**Sn**	**09 09 04.5**		**-2.0**
ISP	**Isparta**	**1.33**	**44**	*e*Pn		**Pn**	**09 08 48.2**		**-1.6**
ISP	**Isparta**	**1.33**	**44**	*e*Pn		**Pn**	**09 08 48.2**		**-1.6**
ISP				S		**Sn**	**09 09 04.5**		**-2.0**
ISP	**Isparta**	**1.33**	**44**	⇓	*i*P	**Pn**	**09 08 48.3**		**-1.5**
AYDN	**Tasoluk**	**1.41**	**304**	⇑	*i*P	**Pn**	**09 08 48.1**		**-2.8**
AYDN					*i* S	**Sn**	**09 09 07.7**		**-0.7**
DAT	**Datca**	**1.43**	**264**	*e*PN		**Pn**	**09 08 50.0**		**-1.3**
KHL	**Karahalli**	**1.44**	**5**	*e*PN		**Pn**	**09 08 49.1**		**-2.3**
BDRM	**Kayabasi**	**1.54**	**277**	⇓	*i*P	**Pn**	**09 08 51.2**		**-1.5**
BDRM					*i* S	**Sn**	**09 09 14.2**		**+2.5**
KULA	**Kula-Manisa**	**1.71**	**342**	*e*PN		**Pn**	**09 08 53.1**		**-2.0**
MANT	**Manisa**	**1.72**	**339**	⇑	*i*P	**Pn**	**09 08 53.0**		**-2.2**
MANT					*i* S	**Sn**	**09 09 16.9**		**+0.7**
GCAM	**G?zelcaml?**	**1.87**	**296**	⇑	*i*P	**Pn**	**09 08 55.6**		**-1.7**
GCAM					*i* S	**Sn**	**09 09 21.3**		**+1.4**
SHUT	**Suhut-Afyon**	**1.92**	**29**	*e*PN		**Pn**	**09 08 56.3**		**-1.6**
SMG	**Samos**	**2.17**	**293**	PB		**Pn**	**09 08 59.6**		**-1.7**
SMG	**Samos**	**2.17**	**293**	P		**Pn**	**09 09 00.1**		**-1.2**
GDZ	**Gediz**	**2.20**	**3**	⇑	*i*P	**Pn**	**09 09 00.3**		**-1.5**
GDZ					*i* S	**Sn**	**09 09 29.1**		**+1.1**
DEMI	**Demirci**	**2.21**	**347**	⇑	*i*P	**Pn**	**09 08 59.9**		**-2.0**
DEMI					*i* S	**Sn**	**09 09 29.1**		**+0.8**
KARP	**Karpathos**	**2.22**	**234**	PN		**Pn**	**09 09 02.6**		**+0.5**
KARP	**Karpathos**	**2.22**	**234**	P		**Pn**	**09 09 03.1**		**+1.0**
BOLV	**Bolvadin**	**2.22**	**34**	⇑	*i*P	**Pn**	**09 09 02.0**		**-0.1**
BOLV					*i* S	**Sn**	**09 09 29.7**		**

ANTO	Ankara	4.02	41	ePN	Pn	09 09 27.3	+0.5	RMNI	Mount Ramon	7.72	143
ANTO	Ankara	4.02	41⇑	iP	Pn	09 09 27.2	+0.4	ASF	Jabal al Asfar	7.80	125
LPK	Lapseki	4.03	331	ePN	Pn	09 09 24.7	-2.2		comp=Z,2.0nm,0.3s,baz=181,slow=3.4,SNR=15		
MAGT	Magosa	4.08	115	Pn	Pn	09 09 29.2	+1.6	ASF			Sn
MAGT				Sg	Sn	09 10 18.2	+3.9		comp=Z,1.3nm,0.3s,baz=192,slow=2.8,SNR=4.1		
EREN	Erenkoy	4.13	108	ePN	Pn	09 09 30.5	+2.2	ASF			LR
EREN	Erenkoy	4.13	108	Pn	Pn	09 09 29.2	+0.9		comp=Z,4µm,19.6s,baz=315,slow=43		
EREN				Sg	Sn	09 10 18.2	+2.7	ASF	Jabal al Asfar	7.80	125
SIVA	Sivas	4.13	244	P	Pn	09 09 29.7	+1.4	ASF			
SIVA				S	Sn	09 10 16.6	+1.0	HARR	Harsova	7.87	353
MERS	Mersin	4.15	89	ePN	Pn	09 09 31.1	+2.6	HARR	Harsova	7.87	353
RKY	Sarkoy-Tekirda	4.16	337	ePN	Pn	09 09 26.9	-1.8	HARR	Harsova	7.87	353⇑
ISK	Istanbul-Kandi	4.18	357	ePN	Pn	09 09 27.8	-1.2	OHR	Ohrid	7.88	305
MFT	Murefte	4.21	338	ePN	Pn	09 09 28.8	-0.7	SRN	Sarande	7.93	295
PHNC	Paralimni	4.24	115	P	Pn	09 09 33.3	+3.5	HNKL	Nakhl	7.95	150⇑
PHNC				S	Sn	09 10 24.4	+6.1	SKO	Skopje	7.95	312
SILT	Sile	4.26	3	ePN	Pn	09 09 29.7	-0.5	ZFRI	Zfri	7.96	141
GADA	Gvkgeada	4.27	322	ePN	Pn	09 09 28.7	-1.5	KEK	Kerkira	8.02	293
BGKT	Bogazkoy	4.31	354	ePN	Pn	09 09 30.0	-0.8	SVRC	Sivrice-ELAZID	8.04	76
NIG	Nigde	4.36	72	ePN	Pn	09 09 32.2	+0.8	PRNI	Paran	8.04	143
KLYT	Kilyos	4.37	357	ePN	Pn	09 09 30.3	-1.3	PRNI			Sn
VAM	Vamos	4.42	252	PB	Pn	09 09 38.4	+6.0	ZAF		8.04	160
SLVT	Silivri	4.43	349	ePN	Pn	09 09 31.4	-1.0	ZNM		8.05	157
LIA	Limnos Island	4.44	314	P	Pn	09 09 31.3	-1.3	KRMI	Paran Flat	8.11	145
LIA				S	Sn	09 10 21.8	-1.6	PTK	Pertek	8.19	73
LIA	Limnos Island	4.44	314	P	Pn	09 09 33.4	+0.8	BARS	Barje	8.28	318
LIA	Limnos Island	4.44	314	PN	Pn	09 09 31.9	-0.7	TLCR		8.30	357
KARA	Karaisali	4.58	84	ePN	Pn	09 09 36.6	+2.1	TLCR		8.30	357⇑
ENEZ	Enez	4.58	328	ePN	Pn	09 09 33.2	-1.3	HRFI	Mount Harif	8.32	144
ATH	Athens Observa	4.61	285	PG	Sn	09 10 30.8	+3.3	HRFI	Mount Harif	8.32	144
CTYL	Yal??k??y-??at	4.65	350	ePN	Pn	09 09 34.4	-1.1	HRFI			Sn
KDZE	Karadeniz Ereo	4.71	20	ePN	Pn	09 09 36.2	-0.1	SEV	Sevastopol'	8.32	22
ALN	Alexandroupoli	4.76	328	P	Pn	09 09 35.2	-1.8	SEV			eS
ALN				S	Sn	09 10 29.9	-1.3	SEV			pmax
CDAG	Cicekdag	4.80	54	iP	Pn	09 09 39.2	+1.7		comp=Z,10.0nm,0.3s		
CDAG				iS	Sn	09 10 34.4	+2.2	SEV			smax
DID	Didima	4.92	279	P	Pn	09 09 39.1	-0.1		comp=N,10.0nm,0.4s		
DID				S	Sn	09 10 35.7	+0.6	SEV			smax
CANT	Cankiri	4.99	41	ePN	Pn	09 09 40.1	0.0		comp=E,4.0nm,0.4s		
SAFT	Safranbolu	5.06	30	ePN	Pn	09 09 41.0	-0.1	SEV	Sevastopol'	8.32	22
CEYT	Ceyhan	5.12	87	ePN	Pn	09 09 44.4	+2.4		comp=E,10.0nm,0.3s		
VLI	Velıai	5.15	270	PN	Pn	09 09 40.0	-2.4	PHP	Peshkopia	8.40	307
RDO	Rodhopi	5.19	326	PN	Pn	09 09 42.5	-0.3	YAL	Yalta	8.42	24⇓
RDO	Rodhopi	5.19	326	P	Pn	09 09 43.9	+1.1	YAL			eS
LTK	Loutraki	5.20	284	P	Pn	09 09 43.0	-0.1	YAL			pmax
LTK				S	Sn	09 10 42.9	+0.8		comp=Z,185nm,1.0s		
CORM	Corum	5.28	50	ePN	Pn	09 09 44.9	+0.8	YAL			smax
LKR	Lokris	5.33	291	P	Pn	09 09 45.2	+0.4		comp=N,20nm,1.4s		
LKR	Lokris	5.33	291	PN	Pn	09 09 45.5	+0.7	YAL			smax
EDRB	Edirne	5.35	339	ePN	Pn	09 09 44.3	-0.8		comp=E,40nm,1.4s		
PAIG	Paliouri	5.39	306	P	Pn	09 09 45.5	-0.1	YAL	Yalta	8.42	24
NEO	Neokhori	5.40	298	PN	Pn	09 09 46.8	+1.0		comp=E,185nm,1.0s		
NEO	Neokhori	5.40	298	P	Pn	09 09 47.8	+2.0	YAL			eS
YOZ	Yozgat	5.44	58	ePN	Pn	09 09 47.7	+1.4	MBRI	Mt Berech	8.47	145
BNN	Bunyan	5.50	67	ePN	Pn	09 09 48.9	+1.8	AQBJ	Aqaba	8.59	145
TOS	Tosya	5.51	40	ePN	Pn	09 09 48.3	+1.0	EIL	Elat	8.59	145
HTY	Hatay	5.52	96	ePN	Pn	09 09 50.6	+3.2	EIL	Elat	8.59	145
COBT	Iskenderun	5.56	92⇑	iP	Pn	09 09 50.9	+2.9	EIL			Sn
COBT				iS	Sn	09 10 47.5	-3.4	TIR	Tirane	8.61	304
BALT	Daday	5.60	33	iP	Pn	09 09 48.7	+0.2		comp=E,72nm,0.7s		
KDZ	Kurdzhali	5.65	329	P	Pn	09 09 48.6	-0.6	TIR			pmax
KDZ				S	Sn	09 10 53.2	+0.1		comp=Z,72nm,0.7s		
KDZ	Kurdzhali	5.65	329	iP	Pn	09 09 48.1	-1.1	TIR	Tirane	8.61	304
PLG	Polygyros	5.79	309	PB	Pn	09 09 56.8	+5.7	ALU	Alushta	8.68	25⇑
DIM	Dimitrovgrad	5.94	331	eP	Pn	09 09 52.1	-1.1	ALU			eS
AGG	Agios Georgios	5.94	293	P	Pn	09 09 54.0	+0.8	ALU			pmax
AGG				S	Sn	09 10 59.7	-0.6		comp=Z,30nm,0.8s		
BHL	Bhannes	5.95	118	eP	Pn	09 09 57.7	+4.4	ALU			smax
JMB	Yambol	5.97	340	P	Pn	09 09 54.0	+0.5		comp=N,10.0nm,0.4s		
JMB	Yambol	5.97	340	P	Pn	09 09 56.0	+2.5	ALU			smax
HWQ	Hawqa	5.97	114	eP	Pn	09 09 54.6	+1.0		comp=E,10.0nm,0.4s		
HWQ	Hawqa	5.97	114	P	Pn	09 09 54.4	+0.7	ALU	Alushta	8.68	25
RZN	Rozen	5.99	325	P	Pn	09 09 53.8	-0.1		comp=E,30nm,0.8s		
RZN				S	Sn	09 11 01.8	+0.3	ALU			eS
RZN	Rozhen	5.99	325	iP	Pn	09 09 52.8	-1.1	GUMT	Gumushane	8.69	63
KMRS	Kahramanmaras	6.06	82	ePN	Pn	09 09 57.2	+2.4	EZC	Erzincan	8.71	68
SARI	SarD1z-Kayseri	6.09	71	ePN	Pn	09 09 53.9	-1.3	PUK	Puka	8.94	308
SOH	Sokhos	6.11	312	P	Pn	09 09 55.1	-0.4	MLR	Muntele Rosu	8.97	344
SOH	Sokhos	6.11	312	P	Pn	09 09 55.9	+0.4		comp=E,1.9nm,0.3s,baz=189,slow=3.8,SNR=35		
HORT	Hortiatis	6.13	309	P	Pn	09 09 55.5	-0.3	MLR			Sn
MANS	Anshas	6.18	162	P	Pn	09 10 05.1	+8.5		comp=E,0.8nm,0.3s,baz=352,slow=10,SNR=3.1		
MANS				S	Sn	09 11 20.1	+14	MLR			LR
BZK	Bozkurt	6.21	34	ePN	Pn	09 09 58.1	+1.1		comp=E,7µm,18.6s,baz=172,slow=42		
THE	Thessaloniki	6.24	309	P	Pn	09 09 58.1	+0.9	MLR	Muntele Rosu	8.97	344
LIT	Litokhoron	6.26	309	P	Pn	09 09 58.2	+1.1	SUDU	Sudak	9.06	26⇓
RCY	Rachaya	6.29	121	eP	Pn	09 09 58.3	+1.3	SUDU			eS
MMA0	Mount Meron ar	6.29	126	Pn	Pn	09 09 57.9	-0.2	SUDU			pmax
OFRI	'Ofer	6.29	131	Pn	Pn	09 09 57.6	-0.5		comp=Z,35nm,0.8s		
GAZ	Gaziantep	6.29	85	ePN	Pn	09 10 01.0	+2.9	SUDU			smax
EVR	Evrytania	6.30	291	PN	Pn	09 09 49.9	-8.2		comp=E,70nm,0.9s		
PLD	Plovdiv	6.33	327	P	Pn	09 09 56.3	-2.2	SUDU			smax
PLD	Plovdiv	6.33	327	P	Pn	09 09 58.1	-0.4		comp=N,65nm,0.8s		
PLD	Plovdiv	6.33	327	eP	Pn	09 10 06.0	+7.5	SUDU	Sudak	9.06	26
KSDI	Kefar Szold	6.35	124	P	Pn	09 10 00.6	+1.7		comp=N,35nm,0.8s		
KSDI	Kefar Szold	6.35	124	Pn	Pn	09 09 59.5	+0.6	SUDU			eS
HRI	Mount Hermon	6.36	123	Pn	Pn	09 10 00.1	+1.1		comp=N,65nm,0.8s		
THL	Klokotos Trika	6.36	297	P	Pn	09 10 00.5	+1.5	GRB	Gharib	9.07	160
THL	Klokotos Trika	6.36	297	PN	Pn	09 10 00.4	+1.4	KTUT	Trabzon	9.09	60
MMB	Musomiste	6.41	319	P	Pn	09 09 58.8	-0.8	VOIR		9.13	341
MMB	Musomiste	6.41	319	iP	Pn	09 09 58.2	-1.4	VOIR		9.13	341
MMB				S	Sn	09 11 09.0	-2.8	VOIR		9.13	341⇓
HRSH	Kfar Ka'horesh	6.42	129	P	Pn	09 10 06.7	+6.8	PLOR	Plostina	9.18	348
KSHT	Keshet	6.58	124	Pn	Pn	09 10 03.0	+1.0	PLOR	Plostina	9.18	348⇑
SLTI	Sal'it	6.60	133	Pn	Pn	09 10 02.4	+0.2	VRI	Vrincioaia	9.18	348
SLTI				Sn	Sn	09 11 16.1	-0.3	VRI	Vrincioaia	9.18	348
DIKM	Dikmen	6.60	42	ePN	Pn	09 10 03.8	+1.5	VRI	Vrincioaia	9.18	348⇓
KVT	Kavak	6.69	49	ePN	Pn	09 10 04.8	+1.3	TR2		9.24	155
MMLI	Mount Malkishu	6.69	130	P	Pn	09 10 03.4	-0.1	GRUS	Gruza	9.60	319
MMLI	Mount Malkishu	6.69	130	Pn	Pn	09 10 03.4	-0.1	TR1		9.67	155
MMLI				Sn	Sn	09 11 19.4	+0.7	HFRF	Wahat Farafira	9.75	185
SVSK	Karacayir	6.72	61	ePN	Pn	09 10 05.9	+2.0	GZR	Gura Zlata	9.83	332
GRG	Griva	6.77	309	P	Pn	09 10 04.8	+0.2	GZR	Gura Zlata	9.83	332⇑
AANS		6.80	165	P	Pn	09 10 05.1	+0.1	SHRM		9.84	154
AANS				S	Sn	09 11 20.1	-1.3	SHRM			eP
KZN	Kozani	6.85	302	PN	Pn	09 10 07.4	+1.8	SHRM		9.84	154
HMDT	Nahal Hemdat	6.88	130	Pn	Pn	09 10 06.7	+0.6	SHRM			P
SZH	Strazhica	6.89	339	P	Pn	09 10 06.7	+0.5	SHRM			S
SZH	Strazhica	6.89	339	iP	Pn	09 10 06.4	+0.2	ANN	Anapa	9.99	35
RSH		6.94	147	P	Pn	09 10 06.7	-0.2	ANN			eS
KKB	Krupnik	6.95	318	P	Pn	09 10 07.0	+0.2	ANN			pmax
KKB	Krupnik	6.95	318	iP	Pn	09 10 07.0	0.0		comp=Z,72nm,1.3s		
AMAG	Maghara	7.01	152⇓	eP	Pn	09 10 07.1	-0.8	ANN			MLR
PVL	Pavlikeni	7.03	335	P	Pn	09 10 07.9	-0.3		comp=N,2µm,15.0s		
PVL	Pavlikeni	7.03	335	iP	Pn	09 10 07.0	-1.2	ANN			MLR
SQR		7.16	167	P	Pn	09 10 09.8	-0.2		comp=E,3µm,15.0s		
HMYD	Mayadein	7.18	170	P	Pn	09 10 10.1	-0.1	ANN			MLR
JAN	Janina	7.24	295	PB	Pn	09 10 17.9	+6.9		comp=Z,2µm,15.0s		
KOT	Kottamia	7.24	163	P	Pn	09 10 11.0	-0.2	ANN	Anapa	9.99	35
DSI	Dead Sea	7.28	135	Pn	Pn	09 10 11.4	-0.3		comp=Z,72nm,1.3s		
DSI				Sn	Sn	09 11 33.1	-0.2	KIS	Kishinev	10.11	358
HHAG	Hagoal	7.29	161	P	Pn	09 10 11.3	-0.4	KIS			MLR
HHAG				S	Sn	09 11 32.2	-1.2		comp=N,4µm,16.0s		
YTIR	Yattir	7.29	137	Pn	Pn	09 10 11.7	-0.2	KIS			MLR
FYM	Al Fayyum	7.32	168	P	Pn	09 10 12.0	-0.1		comp=Z,4µm,16.0s		
RTMI	Retamim	7.32	141	Pn	Pn	09 10 11.5	-0.6	KIS			MLR
FNA	Florina	7.34	304	P	Pn	09 10 13.8	+1.4		comp=E,3µm,10.0s		
VTS	Vitosha	7.40	322	iP	Pn	09 10 14.0	+0.7	KIS			MLR
MZDA	Masada	7.47	136	Pn	Pn	09 10 13.8	-0.4		comp=Z,4µm,15.0s		
HSAF	As Saff	7.48	165	P	Pn	09 10 14.3	-0.1	TIP	Timpagrande	10.19	287
CVD	Cernavoda	7.49	353	P	Pn	09 10 16.9	+2.5	TIP			eSn
BIA	Bitola	7.49	306	ePn	Pn	09 10 12.9	-1.6	TIP	Timpagrande	10.19	287
GLL	Jalalah	7.55	164	P	Pn	09 10 15.6	+0.2	HHRG	Al Ghardaqah	10.28	158
URFA	Urfa	7.58	83	ePN	Pn	09 10 18.5	+2.8	SOC	Sochi	10.36	47
TIRR	Tirgusor	7.60	355	ePn	Pn	09 10 14.6	-1.3	SOC			e
	33nm,0.6s							SOC			pmax
TIRR				eSn	Sn	09 11 38.7	-2.2		comp=Z,12nm,0.6s		
TIRR	Tirgusor	7.60	355	eP	Pn	09 10 14.6	-1.3	SOC			MLR
TIRR				e		09 11 38.7			comp=Z,2µm,15.0s		
TIRR				pmax	pmax			SOC	Sochi	10.36	47
	comp=Z,33nm,0.6s								comp=Z,12nm,0.6s		
TIRR	Tirgusor	7.60	355	eP	Pn	09 10 14.6	-1.3	BZS	Buzias	10.48	329
	comp=Z,33nm,0.6s							BZS	Buzias	10.48	329
TIRR				eS	Sn	09 11 38.7	-2.2	BZS	Buzias	10.48	329⇓
TIRR	Tirgusor	7.60	355⇑	iP	Pn	09 10 14.9	-1.0	HSFG		11.00	158
SUZ		7.61	157	P	Pn	09 10 16.1	-0.1	HSFG			S
SUZ		7.61	157	P	Pn	09 10 16.0	-0.1	CUC	Castrocucco	11.06	290
KBN	Korca	7.66	302	eP	Pn	09 10 22.0	+5.2		comp=Z,202nm,1.3s		
KRUS	Krusevo	7.72	308	ePn	Pn	09 10 16.3	-1.4	AGRB	Hanur-Agry	11.06	72
KRUS	Krusevo	7.72	308	ePn	Pn	09 10 16.4	-1.3	MSL	Mosul	11.07	88
								MSL			ex
								MSL			ex
								MSL			ex
								MSL			ex

7.87	353	P	Pn	09 10 20.7	+1.1		
7.87	353	P	Pn	09 10 20.7	+1.1		
7.87	353⇑	iP	Pn	09 10 18.7	-0.9		
7.88	305	ePn	Pn	09 10 22.4	+2.6		
7.93	295	eP	Pn	09 10 29.0	+8.5		
7.95	150⇑	eP	Pn	09 10 19.7	-1.1		
7.95	312	ePn	Pn	09 10 23.3	+2.5		
7.96	141	Pn	Pn	09 10 20.4	-0.6		
8.02	293	PN	Pn	09 10 26.3	+4.5		
8.04	76	ePN	Pn	09 10 24.7	+2.7		
8.04	143	Pn	Pn	09 10 20.7	-1.4		
		Sn	Sn	09 11 49.4	-2.6		
8.04	160	P	Pn	09 10 22.0	-0.1		
8.05	157	P	Pn	09 10 22.4	+0.1		
8.11	145	Pn	Pn	09 10 21.7	-1.2		
8.19	73	ePN	Pn	09 10 25.8	+1.8		
8.28	318	ePn	Pn	09 10 25.1	-0.2		
8.30	357	P	Pn	09 10 24.3	-1.3		
8.30	357⇑	iP	Pn	09 10 24.3	-1.3		
8.32	144	P	Pn	09 10 25.4	-0.5		
8.32	144	Pn	Pn	09 10 24.7	-1.2		
		Sn	Sn	09 11 57.0	-1.9		
8.32	22	eP	Pn	09 10 24.7	-1.1		
		eS	Sn	09 11 54.1	-4.6		
		pmax	pmax				
		smax					
		smax					
8.32	22	eP	Pn	09 10 24.7	-1.1		
8.40	307	eP	Pn	09 10 30.1	+3.1		
8.42	24⇓	eP	Pn	09 10 27.5	+0.3		
		eS	Sn	09 11 59.5	-1.7		
		pmax	pmax				
		smax					
		smax					
8.42	24	eP	Pn	09 10 27.5	+0.3		
		eS	Sn	09 11 59.5	-1.7		
8.47	145	Pn	Pn	09 10 26.7	-1.2		
8.59	145	Pn	Pn	09 10 28.6	-0.9		
8.59	145	P	Pn	09 10 28.9	-0.7		
8.59	145	Pn	Pn	09 10 28.4	-1.2		
		Sn	Sn	09 12 01.8	-3.7		
8.61	304	ePn	Pn	09 10 30.9	+1.0		
		pmax	pmax				
8.61	304	eP	Pn	09 10 30.9	+1.1		
		pmax	pmax				
8.61	304	ePn	Pn	09 10 30.9	+1.1		
8.68	25⇑	eP	Pn	09 10 30.5	-0.2		
		eS	Sn	09 12 06.7	-0.8		
		pmax	pmax				
		smax					
		smax					
8.68	25	eP	Pn	09 10 30.5	-0.2		
		eS	Sn	09 12 06.7	-0.8		
8.69	63	ePN	Pn	09 10 32.7	+1.8		
8.71	68	ePN	Pn	09 10 28.4	-2.7		
8.94	308	eP	Pn	09 10 32.0	-2.4		
8.97	344	Pn	Pn	09 10 34.7	-0.1		
		Sn	Sn	09 12 15.1	+0.5		
		LR	LR	09 14 41.3			
8.97	344	iP	Pn	09 10 34.8	+0.1		
9.06	26⇓	eP	Pn	09 10 36.7	+0.7		
		eS	Sn	09 12 18.6	+1.6		
		pmax	pmax				
		smax					
		smax					
9.06	26	eP	Pn	09 10 36.7	+0.7		
		eS	Sn	09 12 18.6	+1.6		
9.07	160	P	Pn	09 10 35.8	-0.4		
9.09	60	ePN	Pn	09 10 37.8	+1.5		
9.13	341	P	Pn	09 10 36.5	-0.5		
9.13	341	P	Pn	09 10 36.5	-0.5		
9.13	341⇓	iP	Pn	09 10 38.1	+1.1		
9.18	348	P	Pn	09 10 38.7	+1.1		
9.18	348⇑	iP	Pn	09 10 38.9	+1.3		
9.18	348	P	Pn	09 10 38.4	+0.8		
9.18	348	P	Pn	09 10 38.4	+0.7		
9.18	348⇓	iP	Pn	09 10 37.4	-0.3		
9.24	155	P	Pn	09 10 38.0	-0.6		
9.60	319	ePn	Pn	09 10 45.2	+1.8		
9.67	155	P	Pn	09 10 43.9	-0.5		
9.75	185	⇓P	Pn	09 10 44.8	-0.8		
9.83	332	⇑P	Pn	09 10 46.9	+0.3		
9.83	332⇑	iP	Pn	09 10 46.9	+0.3		
9.84	154⇑	eP	Pn	09 10 45.8	-0.9		
		S	Sn	09 12 33.2	-2.9		
9.84	154	P	Pn	09 10 45.8	-0.9		
		S	Sn	09 12 33.2	-2.9		
9.99	35	eP	Pn	09 10 48.3	-0.5		
		eS	Sn	09 12 46.0	+6.2		
		pmax	pmax				
		MLR	MLR				
		MLR	MLR				
		MLR	MLR				
		MLR	MLR				
9.99	35	eP	Pn	09 10 48.3	-0.5		
		e		09 12 54.9			
		pmax	pmax				
		MLR	MLR				
10.36	47	eP	Pn	09 10 54.4	+0.6		
10.48	329	P	Pn	09 10 55.5	+0.1		
10.48	329	P	Pn	09 10 55.5	+0.1		
10.48	329⇓	iP	Pn	09 10 56.0	+0.6		
11.00	158	P	Pn	09 11 02.3	-0.3		
		S	Sn	09 12 59.7	-5.0		
11.06	290	ePn	Pn	09 11 04.9	+1.6		
11.06	72	ePN	Pn	09 11 04.6	+1.2		
11.07	88	ex	x	09 11 03.0			
		ex	x	09 11 54.0			
		ex	x	09 13 06.0			
		ex	x	09 14 10.0			
		ex	x	09 14 22.0			

BURAR	Bucovina Array	11.15	345	⇑P	Pn	09 11 05.5	+1.0
BURAR	Bucovina Array	11.15	345⇑	iP	Pn	09 11 05.5	+1.0
BUR08	Bucovina Ar. S	11.18	345	ePn	Pn	09 11 04.5	-0.4
BUR08	Bucovina Ar. S	11.18	345	ePn	Pn	09 11 04.5	-0.5
VANB	Van	11.25	77	ePN	Pn	09 11 07.0	+1.0
KARS	Kars	11.36	67	ePN	Pn	09 11 09.2	+1.8
GTR	Jabal at Tayr	11.39	174	P	Pn	09 11 07.2	-0.8
AKRG	Al Kharijah	11.39	175	P	Pn	09 11 06.7	-1.3
CLDR	Caldiran	11.71	75	ePN	Pn	09 11 13.9	+1.6
KMPD	K-Podol'skiy	11.86	351	P	Pn	09 11 12.0	-2.3
HEDF	Idfu	12.21	163	P	Pn	09 11 18.3	-0.9
PKSM	Moragy	12.28	323	⇓P	Pn	09 11 20.8	+0.7
PKSM	Moragy	12.28	323⇓	eP	Pn	09 11 20.4	+0.3
PKSM	Moragy	12.28	323⇓	iP	Pn	09 11 20.8	+0.7
KIV	Kislovodsk	12.36	51	P	Pn	09 11 26.0	+4.8
KIV				pmax	pmax		
	comp=Z,18nm,1.3s						
KIV				MLR	MLR		
	comp=Z,1µm,18.0s						
GNI	Garni	12.49	70	ePN	Pn	09 11 24.4	+1.5
GNI	Garni	12.49	70	Pn	Pn	09 11 28.0	+5.1
	comp=Z,1.5nm,0.3s,baz=180,slow=4.3,SNR=12						
GNI				LR	LR	09 17 09.6	
	comp=Z,2µm,19.3s,baz=267,slow=42						
GNI	Garni	12.49	70	P	Pn	09 11 23.3	+0.4
EMRS	Mersa Alam	12.73	157	P	Pn	09 11 25.5	-0.9
MTA	Mtatsminda	12.88	63	P	Pn	09 11 32.0	+3.7
PSZ	Piszkesteto	13.04	331	ePn	Pn	09 11 30.4	0.0
PSZ	Piszkesteto	13.04	331	⇓eP	Pn	09 11 30.5	+0.1
PSZ	Piszkesteto	13.04	331	eP	Pn	09 11 30.4	0.0
KOLS	Kolonicke sedl	13.10	339	ePN	Pn	09 11 30.7	-0.5
DGRG	David-gareji	13.24	65	P	Pn	09 11 35.1	+1.9
CRVS	Cervenica-Dubn	13.32	337	ePN	Pn	09 11 34.9	+0.7
HAGS	Hagol	13.37	157	P	Pn	09 11 34.0	-1.1
AQU	L'Aquila	13.45	299	Pn	Pn	09 11 31.0	-5.0
	comp=Z,150nm,1.8s						
AQU	L'Aquila	13.45	299	P	Pn	09 11 31.0	-5.0
AQU				pmax	pmax		
	comp=Z,150nm,1.8s						
AQU	L'Aquila	13.45	299⇑	iP	Pn	09 11 40.7	+4.7
LVV	L'vov	13.49	345	eP	Pn	09 11 41.0	+4.5
LVV				eS	Sn	09 14 17.0	+12
LVV				MLR	MLR		
	comp=Z,2µm,13.0s						
KWP	Kalwaria	13.62	341	ePn	Pn	09 11 36.4	-1.9
	comp=Z,14nm,0.9s						
KWP	Kalwaria	13.62	341	eP	Pn	09 11 36.4	-1.9
KWP				pmax	pmax		
	comp=Z,14nm,0.9s						
KWP	Kalwaria	13.62	341	eP	Pn	09 11 36.4	-1.9
	comp=Z,14nm,0.9s						
KWP	Kalwaria	13.62	341	⇓iP	Pn	09 11 30.5	-7.8
KIEV	Kiev	13.80	360	ePn	Pn	09 11 39.4	-1.4
	comp=Z,18nm,1.0s						
KIEV	Kiev	13.80	360	eP	Pn	09 11 39.4	-1.4
KIEV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIEV	Kiev	13.80	360	eP	Pn	09 11 39.4	-1.4
	comp=Z,18nm,1.0s						
AKASG	Malin Array Be	13.81	360	Pn	Pn	09 11 38.4	-2.5
	comp=Z,0.9nm,0.3s,baz=183,slow=12,SNR=15						
AKASG				LR	LR	09 17 45.9	
	comp=Z,2µm,18.9s,baz=175,slow=41						
AKASG	Malin Array Be	13.81	360	Pn	Pn	09 11 38.4	-2.5
AKASG				LR	LR	09 17 45.9	
AKBB	Malin Array Si	13.81	360	ePn	Pn	09 11 39.5	-1.4
AKBB	Malin Array Si	13.81	360	eP	Pn	09 11 39.5	-1.4
STHS	Stebnicka Huta	13.84	337	ePN	Pn	09 11 44.4	+3.1
VYHS	Vyhne

KHC **Kasperske Hory** 16.77 322 *e*P Pn 09 12 22.7 +2.8
KHC *e* 09 12 26.5
KHC *e*S **Sn** **09 15 36.5 +11**
KHC **Kasperske Hory** 16.77 322 *e*P **Pn** 09 12 22.7 +2.8
KHC *ex* x 09 12 26.5
KHC *e*S **Sn** **09 15 36.5 +11**
KHC AMS AMS 09 19 30.0
comp=E,4μm,11.2s
KSP **Ksiaz** 16.79 330 *e*P **Pn** **09 12 22.6 +2.5**
KSP *e*S **Sn** **09 15 40.0 +14**
NAY **Al-Naaiem** 16.80 112 *e*P **Pn** **09 12 20.3 -0.1**
comp=E,55nm,1.0s
NAY **Al-Naaiem** 16.80 112 *e*P **Pn** **09 12 20.3 -0.1**
baz=112
NAY AMb AMB 09 12 23.9
comp=Z,55nm,1.0s,baz=112
PRU **Pruhonice** 16.90 325 *e*P **Pn** **09 12 24.2 +2.7**
PRU *e*S **Sn** **09 15 39.6 +11**
PRU **Pruhonice** 16.90 325 *e*P **Pn** **09 12 24.2 +2.7**
PRU *e*S **Sn** **09 15 39.6 +11**
PRU AMS AMS 09 19 40.0
comp=Z,3μm,11.1s
UMR **Umm Al-Rimmam** 17.00 110 *e*P **Pn** **09 12 23.1 +0.2**
comp=Z,174nm,1.7s
UMR **Umm Al-Rimmam** 17.00 110 *e*P **Pn** **09 12 23.1 +0.2**
baz=110
UMR AMb AMB 09 12 26.7
comp=Z,174nm,1.7s,baz=110
FETA **Feichten** 17.12 312 𝄩 *i*pP pP 09 12 26.7 -6.8
comp=Z,40nm,1.0s
WET **Wettzell** 17.13 321 P **Pn** **09 12 27.4 +3.0**
WET **Wettzell** 17.13 321 *e*P **Pn** **09 12 26.6 +2.2**
WET pmax pmax
comp=Z,42nm,1.4s
WET **Wettzell** 17.13 321 *e*P **Pn** **09 12 26.6 +2.2**
comp=Z,42nm,1.4s
KBD **Kabd** 17.18 111 *e*P **Pn** **09 12 25.1 0.0**
comp=Z,50nm,1.2s
KBD **Kabd** 17.18 111 *e*P **Pn** **09 12 25.1 0.0**
baz=111
KBD AMb AMB 09 12 30.8
comp=Z,50nm,1.2s,baz=111
RDF **Al-Radifah** 17.20 112 *e*P **Pn** **09 12 25.5 +0.1**
comp=Z,107nm,1.0s
RDF **Al-Radifah** 17.20 112 *e*P **Pn** **09 12 25.5 +0.1**
baz=112
RDF AMb AMB 09 12 28.6
comp=Z,107nm,1.0s,baz=112
PVCC **Panska Ves** 17.28 327 *e*P **Pn** **09 12 28.9 +2.7**
PVCC *e*S **Sn** **09 15 52.5 +15**
PVCC **Panska Ves** 17.28 327 *e*P **Pn** **09 12 28.9 +2.7**
PVCC *e*S **Sn** **09 15 52.5 +15**
PVCC AMS AMS 09 20 30.0
comp=Z,3μm,12.7s
DAVOX **Davos/Dischmat** 17.51 310 P **Pn** **09 12 31.7 +2.6**
comp=Z,0.2nm,0.3s,baz=139,slow=11,SNR=5.5
DAVOX LR LR 09 19 36.3
comp=Z,2μm,19.2s,baz=112,slow=38
DAVOS **Davos** 17.59 311 P **Pn** **09 12 31.7 +1.6**
MNK **Minsk** 17.64 357 *e*P **Pn** **09 12 30.0 -0.7**
MNK MLR MLR
comp=Z,15μm,12.0s
MNK **Minsk** 17.64 357 *e*P **Pn** **09 12 30.0 -0.7**
comp=Z,15μm,12.0s
DAVA **Damuels** 17.75 312 𝄩 *i*P **Pn** **09 12 33.9 +1.8**
comp=Z,27nm,1.3s
BRG **Berggiesshubel** 17.80 327 *e*P **Pn** **09 12 33.4 +0.7**
comp=Z,2.1nm,0.9s
BRG *i* 09 12 35.9
BRG S **Sn** **09 15 54.0 +3.9**
BRG Sg Sn 09 16 13.2 +23
BRG **Berggiesshubel** 17.80 327 *e*P **Pn** **09 12 33.3 +0.6**
BRG S **Sn** **09 15 54.0 +3.9**
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG MLR MLR
comp=N,1μm,12.4s
BRG MLR MLR
comp=E,894nm,10.9s
BRG MLR MLR
comp=Z,2μm,12.6s
BRG **Berggiesshubel** 17.80 327 *e*P **Pn** **09 12 34.1 +1.4**
comp=Z,44nm,1.5s
BRG **Berggiesshubel** 17.80 327 *e*P **Pn** **09 12 33.4 +0.7**
comp=Z,3.5nm,0.9s
BRG *i* 09 12 35.9
comp=Z,44nm,1.5s
BRG S **Sn** **09 15 54.0 +3.9**
BRG
comp=N,2μm,12.4s
BRG
comp=E,2μm,10.9s
BRG
comp=Z,4μm,12.6s
ROTZ **Rotzenmuhle** 17.87 321 *e*P **Pn** **09 12 34.7 +1.2**
comp=Z,60nm,1.7s
NKC **Novy Kostel** 18.05 323 *e*P **Pn** **09 12 36.0 +0.3**
NKC *e*S **Sn** **09 16 03.6 +7.5**
NKC **Novy Kostel** 18.05 323 *e*P **Pn** **09 12 36.0 +0.3**
NKC *e*S **Sn** **09 16 03.6 +7.5**
NKC AMS AMS 09 20 20.0
comp=Z,2μm,10.8s
MANZ **Manzenberg** 18.06 322 *e*P **Pn** **09 12 36.0 +0.2**
comp=Z,63nm,1.9s
SBF **Sospel** 18.07 299 *e*P **Pn** **09 12 34.4 -1.5**
comp=Z,113nm,1.0s
SBF **Sospel** 18.07 299 *e*P **Pn** **09 12 34.4 -1.5**
comp=Z,56nm,1.0s
FBE **Freiberg** 18.10 326 *e*P **Pn** **09 12 36.3 0.0**
comp=Z,85nm,1.8s
NE53 **Naroch'** 18.10 355 *e*PcP PcP 09 17 05.1 -4.0
WERN **Wernitzgruen** 18.12 323 *e*P **Pn** **09 12 36.6 0.0**
comp=Z,28nm,1.6s
TANN **Tannenbergstha** 18.17 323 *e*P **Pn** **09 12 38.8 +1.7**
comp=Z,28nm,1.4s
GUNZ **Gunzen** 18.20 323 *e*P **Pn** **09 12 39.1 +1.6**
comp=Z,154nm,2.8s
WERD **Werda** 18.26 323 *e*P **Pn** **09 12 39.7 +1.4**
comp=Z,24nm,1.6s
GRF **Grafenberg Arr** 18.32 320 *e*P **Pn** **09 12 40.7 +1.7**
GRF pmax pmax
comp=Z,150nm,2.2s
GRF MLR MLR
comp=Z,2μm,20.1s
GRF **Grafenberg Arr** 18.32 320 *e*P **Pn** **09 12 40.7 +1.7**
comp=Z,150nm,2.2s
GRF *e*L 09 20 09.7
comp=Z,2μm,20.1s
CLL **Collm** 18.53 326 *e*P **Pn** **09 12 42.0 +0.5**
CLL *e*S **Sn** **09 16 11.0 +3.4**
CLL pmax pmax
comp=Z,12nm,1.1s
CLL MLR MLR
comp=Z,3μm,12.4s
CLL **Collm** 18.53 326 *e*(P) **Pn** **09 12 42.0 +0.5**
comp=Z,12nm,1.1s
CLL *e*PP 09 12 49.0
CLL *e*S **Sn** **09 16 11.0 +3.4**
CLL *e*S **Sn** **09 16 11.0 +3.4**
FRF **La Foret Royal** 18.55 298 *e*P **Pn** **09 12 41.9 +0.1**
LMR **La Mourre** 18.59 297 *e*P **Pn** **09 12 42.9 +0.5**
MOX **Moxa** 18.73 323 *e*P **Pn** **09 12 45.9 +2.0**
comp=Z,26nm,1.4s
MOX *e* 09 16 22.0
MOX
comp=Z,1μm,17.0s
MOX **Moxa** 18.73 323 *e*P **Pn** **09 12 45.9 +2.0**
comp=Z,26nm,1.4s
MOX *e* 09 16 22.0
MOX **Moxa** 18.73 323 *e*P **Pn** **09 12 45.9 +2.0**
MOX pmax pmax
comp=Z,26nm,1.4s
MOX MLR MLR
comp=Z,1μm,17.0s
MOX **Moxa** 18.73 323 *e*P **Pn** **09 12 44.4 +0.5**
comp=Z,77nm,2.0s
MBDF **Montbardon** 18.76 302 *e*P **Pn** **09 12 44.7 +0.3**
comp=Z,67nm,1.0s
MBDF **Montbardon** 18.76 302 *e*P **Pn** **09 12 44.7 +0.3**
comp=Z,33nm,1.0s
SPAK **Spaichingen-Ko** 18.79 313 *e*P **Pn** **09 12 45.4 +0.6**
OBN **Obninsk** 18.89 13 P **Pn** **09 12 44.0 -1.8**
OBN pmax pmax
comp=Z,17nm,2.2s
OBN MLR MLR
comp=Z,1μm,17.0s
OBN **Obninsk** 18.89 13 P **Pn** **09 12 44.0 -1.8**
comp=Z,1μm,17.0s
STU **Stuttgart** 18.90 315 *e*P **Pn** **09 12 45.9 -0.1**
STU **Stuttgart** 18.90 315 *e*P **Pn** **09 12 46.3 +0.3**
comp=Z,29nm,1.0s
STU **Stuttgart** 18.90 315 *e*P **Pn** **09 12 45.9 -0.1**
BNI **Bardonecchia** 18.92 303 *e*Pn **Pn** **09 12 47.0 +0.7**
comp=Z,29nm,1.1s
BNI **Bardonecchia** 18.92 303 *e*P **Pn** **09 12 47.0 +0.7**
BNI pmax pmax
comp=Z,29nm,1.1s
BNI **Bardonecchia** 18.92 303 *e*P **Pn** **09 12 47.0 +0.7**
comp=Z,29nm,1.1s
LPG **La Plagne** 19.01 304 *e*P **Pn** **09 12 46.8 -0.6**
comp=Z,75nm,1.0s
LPG **La Plagne** 19.01 304 *e*P **Pn** **09 12 46.8 -0.6**
comp=Z,37nm,1.0s
LPL **La Plagne** 19.03 304 *e*P **Pn** **09 12 47.9 +0.2**
comp=Z,41nm,0.8s
LPL **La Plagne** 19.03 304 *e*P **Pn** **09 12 47.9 +0.2**
comp=Z,20nm,0.8s
FELD **Feldberg im Sc** 19.15 312 *e*P **Pn** **09 12 49.7 +0.6**
BFO **Black Forest** 19.17 313 *e*P **Pn** **09 12 49.6 +0.3**
comp=Z,96nm,1.6s
BFO **Black Forest** 19.17 313 *e*P **Pn** **09 12 49.4 +0.1**
BFO pmax pmax
comp=Z,660nm,3.1s
BFO **Black Forest** 19.17 313 *e*P **Pn** **09 12 49.4 +0.1**
comp=Z,660nm,3.1s
BBS **Basel-Blauen** 19.27 310 *e*P **Pn** **09 12 52.5 +2.0**
ORIF **Oris-en-Rattie** 19.42 302 *e*P **Pn** **09 12 51.0 -1.4**
comp=Z,38nm,1.0s
ORIF *e*MLR MLR
comp=Z,1μm,21.0s
ORIF **Oris-en-Rattie** 19.42 302 *e*P **Pn** **09 12 51.0 -1.4**
comp=Z,19nm,1.0s
TOD **Tromm** 19.56 317 *e*P **Pn** **09 12 52.7 -1.2**
MOF **Molkenrain** 19.66 311 *e*P **Pn** **09 12 57.7 +2.5**
MOS **Moscow** 19.68 14 *e*P **Pn** **09 12 52.3 -3.0**
MOS *e*S **Sn** **09 16 37.6 +2.4**
MOS pmax pmax
comp=Z,63nm,1.1s
MOS MLR MLR
comp=Z,800nm,16.0s
MOS **Moscow** 19.68 14 *e*P **Pn** **09 12 52.3 -3.0**
comp=Z,800nm,16.0s
LANF **Langenberg** 19.79 314 *e*P **Pn** **09 12 58.1 +1.4**
KTD **Kalmit** 19.81 316 *e*P **Pn** **09 12 55.7 -1.2**
ECH **Echery** 19.81 312 *e*P **Pn** **09 12 57.0 +0.1**
ECH **Echery** 19.81 312 *e*P **Pn** **09 12 56.0 -0.9**
HINF **Hinteralfeld** 19.82 310 *e*P **Pn** **09 12 55.7 -1.4**
CABF **La Chapelle** 19.83 307 *e*P **Pn** **09 12 57.1 -0.1**
comp=Z,88nm,1.0s
CABF **La Chapelle** 19.83 307 *e*P **Pn** **09 12 57.1 -0.1**
comp=Z,44nm,1.0s
CDF **Champ du Feu** 19.83 312 *e*P **Pn** **09 12 55.1 -2.1**
comp=Z,83nm,1.3s
CDF **Champ du Feu** 19.83 312 *e*P **Pn** **09 12 55.1 -2.1**
comp=Z,41nm,1.3s
TNS **Taunus Mts** 20.09 318 *e*P **P** **09 12 58.2 -0.1**
TNS pmax pmax
comp=Z,68nm,1.5s
TNS **Taunus Mts** 20.09 318 *e*P **P** **09 12 58.2 -0.1**
comp=Z,68nm,1.5s
HAU **Haudompre** 20.21 311 *e*P **P** **09 13 00.2 +0.6**
comp=Z,188nm,1.7s
HAU *e*MLR MLR
comp=Z,3μm,18.5s,MS4.3
HAU **Haudompre** 20.21 311 *e*P **P** **09 13 00.2 +0.6**
comp=Z,94nm,1.7s
VIVF **Saint-Julien-l** 20.23 301 *e*P **P** **09 12 58.7 -1.2**
comp=Z,74nm,1.0s
VIVF **Saint-Julien-l** 20.23 301 *e*P **P** **09 12 58.7 -1.2**
comp=Z,37nm,1.0s
THEF **They Montfort** 20.52 311 *e*P **P** **09 13 02.9 -0.1**
RUP **Ruppelstein** 20.57 316 *e*P **P** **09 13 04.0 +0.5**
LASF **Ste Croix** 20.63 298 *e*P **P** **09 13 05.5 +1.3**
comp=Z,210nm,1.7s
LASF **Ste Croix** 20.63 298 *e*P **P** **09 13 05.5 +1.3**
comp=Z,105nm,1.7s
WLF **Walferdange** 21.07 315 P **P** **09 13 11.7 +2.8**
comp=Z,226nm,1.4s,mb4.3
WLF **Walferdange** 21.07 315 *e*P **P** **09 13 08.5 -0.4**
comp=Z,237nm,2.2s,mb5.1
WLF **Walferdange** 21.07 315 *e*P **P** **09 13 08.5 -0.4**
WLF pmax pmax
comp=Z,237nm,2.2s,mb5.1
WLF **Walferdange** 21.07 315 *e*P **P** **09 13 10.7 +1.8**
comp=Z,199nm,2.2s,mb5.1
WLF **Walferdange** 21.07 315 *e*P **P** **09 13 08.5 -0.4**
comp=Z,237nm,2.2s,mb5.1
SMF **Signal de Mont** 21.30 305 *e*P **P** **09 13 10.5 -0.9**
comp=Z,148nm,1.4s,mb4.8
SMF **Signal de Mont** 21.30 305 *e*P **P** **09 13 10.5 -0.9**
comp=Z,74nm,1.4s,mb4.8
BUG **Bochum--Univer** 21.39 320 *e*P **P** **09 13 12.6 +0.3**
comp=Z,18nm,0.8s,mb4.5
LOR **Lormes** 21.49 307 *e*P **P** **09 13 14.4 +1.0**
LOR *e*MLR MLR
comp=Z,973nm,21.5s,MS3.9
BSEG **Bad Segeberg** 21.54 328 *e*P **P** **09 13 14.4 +0.5**
BSEG pmax pmax
comp=Z,79nm,2.2s,mb4.8
BSEG **Bad Segeberg** 21.54 328 *e*P **P** **09 13 14.4 +0.5**
comp=Z,79nm,2.2s,mb4.8
MEM **Membach** 21.62 317 P **P** **09 13 17.6 +2.9**
comp=Z,19nm,1.4s,mb4.3
SSF **Saint Saulge** 21.65 306 *e*P **P** **09 13 15.8 +0.7**
comp=Z,24nm,0.9s,mb4.3
SSF **Saint Saulge** 21.65 306 *e*P **P** **09 13 15.8 +0.7**
comp=Z,12nm,0.9s,mb4.3
AVF **Avril sur Loir** 21.66 305 *e*P **P** **09 13 17.1 +1.8**
comp=Z,53nm,1.3s,mb4.5
AVF **Avril sur Loir** 21.66 305 *e*P **P** **09 13 17.1 +1.8**
comp=Z,26nm,1.3s,mb4.5
HGN **Heimansgroeve** 21.74 317 *e*P **P** **09 13 16.3 +0.2**
BCLA **Clavier** 21.91 316 P **P** **09 13 18.8 +0.8**
comp=Z,37nm,1.4s,mb4.6
BCLA **Clavier** 21.91 316 P **P** **09 13 18.7 +0.8**
comp=Z,37nm,1.4s,mb4.6
BGF **Bois d'Agland** 21.93 304 *e*P **P** **09 13 18.0 -0.1**
comp=Z,12nm,0.6s,mb4.2
BGF **Bois d'Agland** 21.93 304 *e*P **P** **09 13 18.0 -0.1**
comp=Z,5.9nm,0.6s,mb4.2
COP **Copenhagen** 22.03 334 *e*P **P** **09 13 21.5 +2.4**
COP *i* S **S** **09 17 25.4 +5.0**
COP **Copenhagen** 22.03 334 *i*P **P** **09 13 21.5 +2.4**
COP *i* S **S** **09 17 25.4 +5.0**
GIVF **Givet** 22.04 315 *e*P **P** **09 13 19.9 +0.7**
comp=Z,72nm,1.2s,mb4.7
GIVF **Givet** 22.04 315 *e*P **P** **09 13 19.9 +0.7**
comp=Z,36nm,1.2s,mb4.7
CAF **Calviac** 22.06 300 *e*P **P** **09 13 20.4 +0.9**
comp=Z,78nm,1.6s,mb4.6
CAF **Calviac** 22.06 300 *e*P **P** **09 13 20.4 +0.9**
comp=Z,39nm,1.6s,mb4.6
DOU **Dourbes** 22.16 314 P **P** **09 13 21.7 +1.1**
comp=Z,20nm,1.6s,mb4.3
TCF **Toulx Ste Croi** 22.27 303 *e*P **P** **09 13 21.8 0.0**
BAIF **Baives** 22.37 314 *e*P **P** **09 13 22.1 -0.7**
comp=Z,102nm,1.4s,mb4.8
BAIF **Baives** 22.37 314 *e*P **P** **09 13 22.1 -0.7**
comp=Z,51nm,1.4s,mb4.8
RJF **Les Rejaudoux** 22.51 301 *e*P **P** **09 13 24.2 -0.2**
comp=Z,73nm,1.5s,mb4.6
RJF *e*MLR MLR
comp=Z,2μm,20.5s,MS4.1
RJF **Les Rejaudoux** 22.51 301 *e*P **P** **09 13 24.2 -0.2**
comp=Z,36nm,1.5s,mb4.6
SNF **Senffe** 22.53 315 P **P** **09 13 26.3 +1.8**
UCC **Uccle** 22.62 316 P **P** **09 13 25.5 0.0**
MENF **Mencas** 23.77 314 *e*P **P** **09 13 36.7 -0.4**
MFF **Saint Martin d** 23.93 303 *e*P **P** **09 13 37.3 -1.3**
comp=Z,86nm,1.5s,mb4.7
MFF **Saint Martin d** 23.93 303 *e*P **P** **09 13 37.3 -1.3**
comp=Z,43nm,1.5s,mb4.7
AKTK **Aktyubinsk** 24.58 48 P **P** **09 13 44.0 -0.5**
AKTK LR LR 09 26 44.2
AKTK **Aktyubinsk** 24.58 48 *i*P **P** **09 13 43.6 -0.9**
comp=Z,4.0nm,0.9s,mb4.0
AKTO **Aktyubinsk** 24.58 48 P **P** **09 13 44.0 -0.5**
comp=Z,18nm,0.8s,mb4.6,baz=250,slow=8.6,SNR=56
AKTO LR LR 09 26 44.3
comp=Z,758nm,20.3s,MS4.2,baz=100,slow=45
AKTO **Aktyubinsk** 24.58 48 *i*P **P** **09 13 43.6 -0.9**
AKTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
KLMR **Klimovskoe** 24.84 12 *e*P **P** **09 13 47.7 +1.0**
KLMR pmax pmax
comp=Z,35nm,1.1s,mb4.8
KLMR **Klimovskoe** 24.84 12 *e*P **P** **09 13 47.7 +1.0**
comp=Z,35nm,1.1s,mb4.8
GRR **Gorron** 24.86 307 *e*P **P** **09 13 44.8 -2.2**
comp=Z,25nm,0.8s,mb4.5
GRR **Gorron** 24.86 307 *e*P **P** **09 13 44.8 -2.2**
comp=Z,13nm,0.8s,mb4.5
TAM **Tamanrasset** 24.90 242 *e*P **P** **09 13 48.3 +0.6**
TAM **Tamanrasset** 24.90 242 *e*P **P** **09 13 48.3 +0.6**
KAF **Kangasniemi** 25.32 357 *e*p **P** **09 13 48.3 -2.8**
comp=Z,13nm,0.7s,mb4.6
KAF **Kangasniemi** 25.32 357 *e*P **P** **09 13 48.3 -2.8**
KAF pmax pmax
comp=Z,13nm,0.7s,mb4.6
HFS **Hagfors** 25.34 342 P **P** **09 13 51.4 +0.2**
comp=Z,9.5nm,0.8s,mb4.4,baz=150,slow=9.9,SNR=13
HFS LR LR 09 24 49.5
comp=Z,2μm,19.6s,MS4.7,baz=152,slow=39
AB31 **Akbulak array** 25.35 51 P **P** **09 13 50.7 -0.8**
AB31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
AB31 **Akbulak array** 25.35 51 P **P** **09 13 50.7 -0.8**
comp=Z,6.0nm,0.6s,mb4.3
SGMF **Saint Gilles** 25.91 306 *e*P **P** **09 13 57.3 +0.7**
JOF **Joensuu** 26.09 2 *e*p **P** **09 13 57.3 -0.7**
comp=Z,12nm,0.7s,mb4.5
JOF **Joensuu** 26.09 2 *e*P **P** **09 13 57.3 -0.7**
JOF pmax pmax
comp=Z,12nm,0.7s,mb4.5
ESDC **Sonseca Array** 26.22 286 P **P** **09 13 59.8 +0.3**
comp=Z,5.1nm,0.8s,mb4.1,baz=82,slow=10,SNR=13
NAO01 **NORSAR Array S** 26.68 340 *e*P **P** **09 14 02.9 -0.5**
comp=Z,16nm,0.9s,mb4.6
NAO01 **NORSAR Array S** 26.68 340 *e*P **P** **09 14 02.9 -0.5**
comp=Z,16nm,0.9s,mb4.6
NB2 **NORSAR Subarra** 26.76 340 P **P** **09 14 03.4 -0.7**
comp=Z,6.2nm,1.0s,mb4.1,baz=145,slow=10
NOA **NORSAR Array B** 26.76 340 P **P** **09 14 03.8 -0.3**
comp=Z,3.5nm,0.8s,mb4.0,baz=146,slow=9.0,SNR=12
NOA LR LR 09 26 02.1
comp=Z,1μm,18.1s,MS4.5,baz=150,slow=40
ARU **Arti** 27.66 36 *e*P **P** **09 14 11.8 -0.4**
comp=Z,15nm,1.0s,mb4.6
ARU **Arti** 27.66 36 *c i*P **P** **09 14 11.5 -0.8**
ARU *e* 09 14 53.0
ARU *e*PPP 09 15 07.4
ARU *e*S **S** **09 18 54.0 +1.9**
ARU *e*SS 09 20 09.5
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.4
ARU MLR MLR
comp=Z,670nm,18.0s,MS4.3
ARU **Arti** 27.66 36 *e*P **P** **09 14 11.9 -0.4**
comp=Z,15nm,1.0s,mb4.6
MDT **Midelt** 28.08 272 P **P** **09 14 15.2 -1.0**
comp=Z,0.8nm,0.6s,baz=130,slow=7.9,SNR=3.0
EKA **Eskdalemuir Ar** 28.74 320 P **P** **09 14 20.8 -1.1**
comp=Z,2.4nm,0.9s,mb3.9,baz=94,slow=7.9,SNR=4.7
APA **Apatity** 30.82 3 𝄩 *e*P **P** **09 14 41.0 +0.9**
APA MLR MLR
comp=Z,2μm,15.0s,MS4.9
APA **Apatity** 30.82 3 *e*P **P** **09 14 41.0 +0.9**
comp=Z,2μm,15.0s
KK31 **Karatay Array** 31.89 66 *i*P **P** **09 14 49.4 -0.5**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
KK31 **Karatay Array** 31.89 66 *i*P **P** **09 14 49.4 -0.5**
comp=Z,2.0nm,0.4s,mb4.3
KBL **Kabul** 32.16 82 *e*P **P** **09 14 53.0 +0.7**
comp=Z,11nm,0.9s,mb4.7
KBL **Kabul** 32.16 82 *e*P **P** **09 14 53.0 +0.7**
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.7
KBL **Kabul** 32.16 82 *e*P **P** **09 14 53.0 +0.7**
comp=Z,11nm,0.9s,mb4.7
BVA0 **Borovoye Array** 32.69 47 *i*P **P** **09 14 56.7 -0.1**
ARCES **ARCESS Array B** 32.77 358 P **P** **09 14 57.2 0.0**
comp=Z,9.6nm,0.8s,mb4.8,baz=170,slow=8.0,SNR=22
ARCES LR LR 09 28 48.2
comp=Z,922nm,19.4s,MS4.5,baz=167,slow=37
ARCES **ARCESS Array B** 32.77 358 P **P** **09 14 57.2 -0.1**
KEV **Kevo** 32.95 358 *e*p **P** **09 14 58.4 -0.4**
comp=Z,5.6nm,0.8s,mb4.5
KEV **Kevo** 32.95 358 *e*P **P** **09 14 58.4 -0.4**
KEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VOSK **Vostochnaya** 32.98 48 P **P** **09 14 57.3 -1.9**
VOSK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VOSK **Vostochnaya** 32.98 48 P **P** **09 14 57.3 -1.9**
comp=Z,7.0nm,0.9s,mb4.6
TOA0 **Torodi Ar. Sit** 34.22 234 *e*P **P** **09 15 09.9 -0.6**
TOA0 **Torodi Ar. Sit** 34.22 234 *e*P **P** **09 15 09.9 -0.6**
TORD **Torodi Ar. Bea** 34.22 234 P **P** **09 15 09.7 -0.8**
comp=Z,20nm,0.8s,mb5.1,baz=36,slow=8.8,SNR=40
AAK **Ala-Archa** 34.85 66 P **P** **09 15 15.9 +0.2**
SNR=11
FRU **Bishkek** 34.92 66 *e*P **P** **09 15 17.0 +0.7**
FRU pmax pmax
comp=Z,42nm,1.6s,mb5.1
FRU **Bishkek** 34.92 66 *e*P **P** **09 15 17.0 +0.7**
comp=Z,42nm,1.6s,mb5.1
CHMS **Chumysh** 35.00 66 P **P** **09 15 16.6 -0.4**
SNR=7.0
KZA **Kyzart** 35.47 67 P **P** **09 15 21.5 +0.5**
SNR=13
TKM2 **Tokmak 2** 35.63 66 *e*P **P** **09 15 21.9 -0.5**
comp=Z,6.0nm,0.8s,mb4.6
TKM2 *e*PP PP 09 16 43.2 -0.2
TKM2 **Tokmak 2** 35.63 66 *e*P **P** **09 15 21.9 -0.4**
TKM2 *e* 09 16 43.2
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TKM2 **Tokmak 2** 35.63 66 P **P** **09 15 22.2 -0.1**
SNR=12
TKM2 **Tokmak 2** 35.63 66 *e*P **P** **09 15 21.9 -0.4**
comp=Z,6.0nm,0.8s,mb4.6
TKM2 **Tokmak 2** 35.63 66 *e*PP PP 09 16 43.2 -0.2
ULHL **Ulahol** 36.18 67 P **P** **09 15 27.6 +0.5**
SNR=14
KURK **Kurchatov** 37.45 52 *e*P **P** **09 15 36.6 -1.2**
comp=Z,22nm,1.1s,mb4.9
KURK *e*PP PP 09 17 03.0 -0.3
KURK **Kurchatov** 37.45 52 *e*P **P** **09 15 36.6 -1.1**
KURK *e* 09 17 03.0
KURK pmax pmax
comp=Z,22nm,1.1s,mb4.9
KURK **Kurchatov** 37.45 52 *e*P **P** **09 15 36.6 -1.1**
comp=Z,22nm,1.1s,mb4.9
KURK **Kurchatov** 37.45 52 *e*PP PP 09 17 03.0 -0.3
SDNR **Sundarnagar** 39.43 83 *ex* x 09 15 54.6
SMLA **Simla** 39.72 84 *i*P **P** **09 15 56.3 -0.8**
SMLA *ex* x 09 15 58.7
comp=Z,138nm,0.4s
SMLA *i*S **S** **09 21 56.6 -2.4**
SMLA *i*S **S** **09 21 58.1 -0.9**
MK31 **Makanchi Array** 39.98 59 *e*P **P** **09 15 58.6 -0.5**
MK31 **Makanchi Array** 39.98 59 *e*P **P** **09 15 58.6 -0.5**
MKAR **Makanchi Array** 39.98 59 P **P** **09 15 58.5 -0.6**
comp=Z,16nm,0.8s,mb4.8,baz=282,slow=6.1,SNR=90
MKAR LR LR 09 36 34.3
comp=Z,286nm,20.5s,MS4.1,baz=5.2,slow=42
MKAR **Makanchi Array** 39.98 59 P **P** **09 15 58.5 -0.6**
MKAR LR LR 09 36 34.3
NVS **Novosibirsk** 40.46 46 *i*P **P** **09 16 02.0 -0.9**
NVS *e* 09 17 34.4
NVS pmax pmax
comp=Z,18nm,1.5s,mb4.6
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,8.0nm,1.3s
NVS **Novosibirsk** 40.46 46 *i*P **P** **09 16 02.0 -0.9**
comp=E,5.0nm,1.2s,mb4.1
NDI **New Delhi** 40.72 87 *ex* x 09 16 06.0
ZAA0 **Zalesovo Array** 41.35 47 *e*P **P** **09 16 08.7 -1.5**
ZALV **Zalesovo Beam** 41.35 47 P **P** **09 16 08.7 -1.6**
comp=E,1.6nm,0.3s,mb4.1,baz=270,slow=8.9,SNR=12
ZALV LR LR 09 36 53.5
comp=E,386nm,21.7s,MS4.2,baz=266,slow=41
SPITS **Spitsbergen Ar** 41.76 356 P **P** **09 16 15.6 +2.3**
comp=E,11nm,0.9s,mb4.5,baz=151,slow=4.4,SNR=4.1
DBIC **Dimbokro** 43.32 234 P **P** **09 16 26.3 -0.4**
comp=E,2.0nm,0.5s,mb4.2,baz=50,slow=8.0,SNR=7.5

WMQ	**Urumqi**	**44.20**	**62**	P	**P**	**09 16 33.0**	**-0.5**
WMQ				XP	sP	09 16 44.0	-1.8
WMQ				PP	PP	09 18 17.0	+0.4
WMQ				S	**S**	**09 23 03.0**	**-1.8**
WMQ				XS	sS	09 23 16.0	-3.3
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,68nm,5.0s						
WMQ				LR	LR		
	comp=N,719nm,16.0s,MS4.8						
WMQ				LR	LR		
	comp=E,568nm,16.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,502nm,16.0s,MS4.5						
PYUN	**Piuthan**	**45.58**	**85**	*e*P	**P**	**09 16 44.6**	**-0.1**
	comp=Z,55nm,0.8s,mb5.5						
DANN	**Dangsing**	**46.09**	**84**	*e*P	**P**	**09 16 48.5**	**-0.2**
	comp=Z,243nm,0.8s						
KOLN	**Koldanda**	**46.20**	**85**	*e*P	**P**	**09 16 49.5**	**-0.1**
	comp=Z,100nm,0.9s,mb5.7						
GKN	**Gorkha**	**46.93**	**84**	*e*P	**P**	**09 16 54.8**	**-0.5**
	comp=Z,93nm,0.8s,mb5.8						
HYB	**Hyderabad**	**47.32**	**101**	*i* P	**P**	**09 16 59.5**	**+1.1**
HYB	**Hyderabad**	**47.32**	**101**	*e*P	**P**	**09 16 59.5**	**+1.1**
DMN	**Daman**	**47.48**	**84**	*e*P	**P**	**09 16 59.3**	**-0.3**
	comp=Z,118nm,0.8s,mb5.9						
KKN	**Kakani**	**47.54**	**84**	*e*P	**P**	**09 17 00.0**	**-0.1**
	comp=Z,44nm,0.6s,mb5.6						
PKI	**Pulchoki**	**47.73**	**84**	*e*P	**P**	**09 17 01.2**	**-0.4**
	comp=Z,52nm,0.8s,mb5.6						
GUN	**Gumba**	**47.96**	**84**	*e*P	**P**	**09 17 02.9**	**-0.5**
	comp=Z,37nm,0.7s,mb5.5						
JIRN	**Jiri**	**48.32**	**84**	*e*P	**P**	**09 17 06.0**	**-0.1**
	comp=Z,52nm,0.8s,mb5.6						
SUMG	**Summit**	**48.61**	**338**	*e*P	**P**	**09 17 08.7**	**+0.9**
	comp=Z,43nm,2.0s,mb5.1						
SUMG	**Summit**	**48.61**	**338**	*e*P	**P**	**09 17 08.7**	**+1.0**
	comp=Z,43nm,2.0s,mb5.1						
LSA	**Lhasa**	**51.37**	**79**	*e*P	**P**	**09 17 29.2**	**-0.1**
	comp=Z,8.2nm,0.8s,mb4.7						
LSA	**Lhasa**	**51.37**	**79**	*e*P	**P**	**09 17 29.2**	**-0.1**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
LSA	**Lhasa**	**51.37**	**79**	*e*P	**P**	**09 17 29.2**	**-0.1**
	comp=Z,8.2nm,0.8s,mb4.7						
ZAK	**Zakamensk**	**53.04**	**50**	*e*P	**P**	**09 17 41.4**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
ZAK	**Zakamensk**	**53.04**	**50**	*e*P	**P**	**09 17 41.4**	**0.0**
	comp=Z,5.0nm,1.4s,mb4.2						
GTA	**Gaotai**	**54.15**	**64**	⇑P	**P**	**09 17 49.8**	**+0.1**
GTA				AP	pP	09 17 56.6	-2.1
GTA				XP	sP	09 17 59.4	-2.8
GTA				S	**S**	**09 25 25.1**	**+0.5**
GTA				XS	sS	09 25 36.8	-2.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,147nm,5.4s						
GTA				LR	LR		
	comp=N,265nm,18.6s,MS4.5						
GTA				LR	LR		
	comp=E,319nm,22.5s,MS4.5						
GTA				LR	LR		
	comp=Z,440nm,20.4s,MS4.5						
SONM	**Songino Array**	**55.75**	**53**	P	**P**	**09 18 00.5**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.2,baz=294,slow=8.7,SNR=6.4						
SONM				LR	LR	09 45 07.1	
	comp=Z,709nm,21.0s,MS4.7,baz=146,slow=40						
ULN	**Ulaanbaatar**	**56.16**	**52**	*e*P	**P**	**09 18 03.3**	**-0.8**
	comp=Z,5.1nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**56.16**	**52**	*e*P	**P**	**09 18 03.8**	**-0.3**
BOD	**Bodaibo**	**56.98**	**39**	*e*P	**P**	**09 18 08.0**	**-1.7**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
BOD	**Bodaibo**	**56.98**	**39**	*e*P	**P**	**09 18 08.0**	**-1.7**
	comp=Z,7.0nm,1.5s,mb4.5						
TIXI	**Tiksi**	**58.34**	**22**	*e*P	**P**	**09 18 18.5**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,495nm,16.0s,MS4.7						
TIXI	**Tiksi**	**58.34**	**22**	*e*P	**P**	**09 18 18.5**	**-0.6**
	comp=Z,495nm,16.0s						
LZH	**Lanzhou**	**58.39**	**66**	*e*P	**P**	**09 18 19.5**	**-0.5**
LZH				AP	pP	09 18 27.3	-1.8
LZH				XP	sP	09 18 30.6	-1.9
LZH				PP	PP	09 20 30.3	+1.1
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,129nm,6.5s						
LZH				LR	LR		
	comp=N,486nm,16.5s						
LZH				LR	LR		
	comp=Z,702nm,18.3s,MS4.8						
CD2	**Chengdu**	**60.61**	**72**	*e*P	**P**	**09 18 34.5**	**-0.9**
CD2				AP	pP	09 18 41.5	-3.0
CD2				XP	sP	09 18 44.8	-3.2
CD2				PP	PP	09 20 49.8	+0.9
CD2				S	**S**	**09 26 46.3**	**-3.5**
CD2				SS	sS	09 30 45.3	-2.8
CD2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.4						
CD2				AMB	AMB		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,360nm,18.0s						
CD2				LR	LR		
	comp=E,250nm,11.9s						
CD2				LR	LR		
	comp=Z,170nm,16.6s,MS4.3						
HHC	**Hu-ho-hao-te**	**61.85**	**58**	*e*P	**P**	**09 18 44.4**	**+0.8**
HHC				AP	pP	09 18 51.0	-1.7
HHC				XP	sP	09 18 54.5	-1.7
HHC				PP	PP	09 21 03.0	+3.4
HHC				PCS	PcS	09 23 27.8	+0.4
HHC				S	**S**	**09 27 03.3**	**-1.9**
HHC				XS	sS	09 27 16.3	-3.9
HHC				SCS	ScS	09 28 31.1	-2.2
HHC				AMB	AMB		
	comp=Z,18nm,0.6s,mb5.4						
HHC				AMB	AMB		
	comp=Z,135nm,4.4s						
HHC				LR	LR		
	comp=N,439nm,26.2s,MS4.6						
HHC				LR	LR		
	comp=E,325nm,25.0s,MS4.6						
HHC				LR	LR		
	comp=Z,284nm,21.4s,MS4.4						
KMI	**Kunming**	**62.60**	**78**	P	**P**	**09 18 48.0**	**-0.9**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.7						
CHTO	**Chiang Mai**	**62.84**	**86**	*e*P	**P**	**09 18 50.5**	**-0.1**
CHTO	**Chiang Mai**	**62.84**	**86**	*e*P	**P**	**09 18 50.5**	**-0.1**
RES	**Resolute Bay**	**62.85**	**346**	*e*P	**P**	**09 18 50.1**	**+0.3**
	comp=Z,4µm,2.7s						
RES	**Resolute Bay**	**62.85**	**346**	*e*P	**P**	**09 18 50.1**	**+0.3**
	comp=Z,4µm,2.7s						
CMAR	**Chiang Mai Arr**	**63.03**	**86**	P	**P**	**09 18 51.0**	**-0.8**
	comp=Z,4.6nm,0.8s,mb4.7,baz=299,slow=8.1,SNR=25						
CMAR				LR	LR	09 51 28.9	
	comp=Z,81nm,21.5s,MS3.9,baz=185,slow=41						
CMAR	**Chiang Mai Arr**	**63.03**	**86**	*i* P	**P**	**09 18 51.2**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**63.03**	**86**	*i* P	**P**	**09 18 51.2**	**-0.7**
	comp=Z,5.0nm,0.8s,mb4.7						
GYA	**Guiyang**	**65.00**	**75**	*e*P	**P**	**09 19 04.3**	**-0.3**
GYA				AP	pP	09 19 12.8	-1.0
GYA				PCP	PcP	09 19 37.5	0.0
GYA				PP	PP	09 21 30.3	+2.7
GYA				S	**S**	**09 27 42.4**	**-2.4**
GYA				SKS		09 28 52.6	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,440nm,19.5s,MS4.8						
GYA				LR	LR		
	comp=E,480nm,18.0s,MS4.8						
GYA				LR	LR		
	comp=Z,450nm,20.1s,MS4.7						
BOSA	**Boshof**	**65.27**	**184**	P	**P**	**09 19 06.5**	**+0.4**
	comp=Z,2.1nm,0.9s,mb4.2,baz=315,slow=4.3,SNR=2.6						
BOSA				LR	LR	09 48 42.8	
	comp=Z,410nm,18.8s,MS4.7,baz=356,slow=37						
BOSA	**Boshof**	**65.27**	**184**	P	**P**	**09 19 06.5**	**+0.4**
BOSA				LR	LR	09 48 42.8	
CN2	**Changchun**	**69.48**	**50**	*e*P	**P**	**09 19 32.6**	**-0.2**
CN2				*e*AP	pP	09 19 40.4	-1.6
CN2				*e*S	S	09 28 35.8	-2.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=E,400nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=Z,300nm,22.0s						
BILL	**Bilibino**	**70.52**	**16**	*e*P	**P**	**09 19 35.0**	**-3.7**
BILL				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.6						
NJ2	**Nanjing**	**71.24**	**64**	*e*P	**P**	**09 19 44.8**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KSRS	**Korea Array**	**74.53**	**55**	P	**P**	**09 20 01.6**	**-1.5**
	comp=Z,1.3nm,0.6s,mb4.0,baz=300,slow=4.3,SNR=4.5						
KSRS				LR	LR	09 55 53.8	
	comp=Z,274nm,21.8s,MS4.5,baz=350,slow=38						
KSRS	**Korea Array**	**74.53**	**55**	P	**P**	**09 20 01.7**	**-1.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KSRS				MLR	MLR		
	comp=Z,274nm,21.8s,MS4.5						
YKA	**Yellowknife Ar**	**76.80**	**344**	P	**P**	**09 20 15.5**	**-0.2**
	comp=Z,2.3nm,0.8s,mb4.2,baz=43,slow=4.1,SNR=3.2						
IMA2	**Indian Mountai**	**77.34**	**1**	*e*P	**P**	**09 20 19.6**	**+0.9**
EGAK	**Eagle**	**78.39**	**356**	*e*P	**P**	**09 20 25.7**	**+1.1**
COLA	**College**	**78.55**	**359**	*e*P	**P**	**09 20 22.2**	**-3.2**
DAWY	**Dawson**	**78.99**	**355**	*e*P	**P**	**09 20 28.6**	**+0.8**
ASAJ	**Asahikawa**	**79.24**	**42**	LR	LR	09 59 34.5	
	comp=Z,574nm,20.7s,MS4.9,baz=2.1,slow=39						
BPAW	**Bear Paw Mtn.**	**79.35**	**0**	*e*P	**P**	**09 20 29.0**	**-0.8**
	comp=Z,30nm,1.7s,mb4.9						
PETK	**Petropavlovsk-**	**79.81**	**29**	LR	LR	10 00 27.2	
	comp=Z,453nm,20.1s,MS4.8,baz=360,slow=39						
ULM	**Lac du Bonnet**	**80.72**	**328**	LR	LR	09 56 34.3	
	comp=Z,513nm,20.2s,MS4.9,baz=250,slow=36						
MJAR	**Matsushiro Arr**	**81.63**	**50**	P	**P**	**09 20 42.8**	**+0.3**
	comp=Z,2.1nm,1.0s,mb4.0,baz=305,slow=4.3,SNR=3.1						
MJAR				LR	LR	10 01 42.5	
	comp=Z,358nm,21.3s,MS4.7,baz=85,slow=39						
HDIL	**Hopedale**	**84.59**	**318**	*e*P	**P**	**09 20 58.0**	**+0.2**
EDM	**Edmonton**	**84.60**	**339**	*e*P	**P**	**09 20 57.5**	**-0.1**
LAO	**LASA Array**	**87.75**	**331**	*e*P	**P**	**09 21 14.5**	**+1.3**
	comp=Z,12nm,0.9s,mb5.1						
BDFB	**Brasilia**	**89.49**	**250**	P	**P**	**09 21 23.0**	**+1.1**
	comp=Z,1.8nm,0.7s,mb4.5,baz=120,slow=20,SNR=3.4						
BDFB				LR	LR	10 02 01.1	
	comp=Z,170nm,19.8s,MS4.5,baz=173,slow=36						
PDAR	**Pinedale Array**	**92.33**	**331**	P	**P**	**09 21 34.1**	**-0.6**
	comp=Z,0.7nm,0.8s,mb4.0,baz=42,slow=3.4,SNR=6.5						
PDAR				LR	LR	10 05 59.9	
	comp=Z,326nm,18.9s,MS4.8,baz=36,slow=37						
ANMO	**Albuquerque**	**97.55**	**325**	*e*P	**P**	**09 21 53.8**	**-5.0**
TXAR	**Lajitas Array**	**100.74**	**319**	P	Pdif	09 22 12.4	-0.5
	comp=Z,0.5nm,0.8s,baz=123,slow=1.9,SNR=6.1						
ASAR	**Alice Springs**	**115.04**	**102**	PKP	PKiKP	09 27 05.2	-0.4
	comp=Z,0.3nm,0.6s,baz=0.9,slow=2.8,SNR=4.8						
STKA	**Stephens Creek**	**124.91**	**106**	PKP	PKPdf	09 27 23.3	-1.1
	comp=Z,2.4nm,0.9s,baz=250,slow=5.9,SNR=3.7						
RPZ	**Rata Peaks**	**150.21**	**115**	PKPbc	PKPbc	09 28 14.8	-0.2
	comp=Z,12nm,0.9s,baz=10,slow=6.6,SNR=5.0						

IDC 16 09:11:30.5±43.0, 2386S×17656W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=801.2km s-min=161.5km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.66**	**248**	P	P	09 18 46.6	-0.9
	0.5nm,0.3s,baz=66,slow=10.0,SNR=4.9						
ASAR	**Alice Springs**	**45.14**	**260**	P	P	09 19 49.1	0.0
	0.6nm,0.4s,baz=93,slow=7.4,SNR=24						
WRA	**Warramunga Arr**	**45.55**	**265**	P	P	09 19 53.0	+0.6
	1.1nm,0.8s,baz=103,slow=7.8,SNR=10						

*IDC **16** 09:11:51.2±1.1, 2352S×7090W, h0km, mb4.2/3, mb1 4.1/6, mb1mx3.9/18, mbtmp4.2/6, ML3.9/2, Error ellipse: s-maj=40.4km s-min=16.3km az=146.0*
*ISCJB **16** 09:11:53.0±1.3, 2347S±005×7111W±0.1, h33km±13km, mb4.4/5, Error ellipse: s-maj=18.2km s-min=8.3km az=13.4*
*NEIC **16** 09:11:56.1±0.7, 2340S×7092W, h35km, mb4.6/3, Error ellipse: s-maj=18.5km s-min=10.1km az=101.0*

ISC 16 09:11:55.9±1.1, 2345S±005×711W±01, h42km±12km, n19, σ0§90/20, mb4.4/5, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.21**	**68**	Pn	**Pn**	**09 12 28.3**	**-1.8**
	161nm,0.3s,SNR=170						
LVC				Lg		09 12 55.6	
	385nm,0.3s,SNR=20						
LVC	**Limon Verde**	**2.21**	**68**	Pn	**Pn**	**09 12 28.3**	**-1.8**
LVC				Lg		09 12 55.6	
LCO	**Las Campanas**	**5.55**	**176**	*e*Pn	**Pn**	**09 13 19.7**	**+3.8**
	32nm,0.7s						
LCO				*e*Sn	**Sn**	**09 14 19.1**	**+0.6**
ARE	**Arequipa**	**6.96**	**357**	*e*P	**Pn**	**09 13 35.0**	**-0.3**
ARE				*e*S	**Sn**	**09 14 46.0**	**-7.3**
LPAZ	**La Paz**	**7.67**	**22**	Pn	**Pn**	**09 13 45.9**	**+0.9**
	0.4nm,0.3s,baz=193,slow=4.7,SNR=8.8						
CFAA	**Coronel Fontan**	**8.52**	**163**	Pn	**Pn**	**09 13 55.8**	**-0.9**
	0.0nm,0.3s,baz=21,slow=16,SNR=2.5						
CFAA				Sn	**Sn**	**09 15 49.2**	**+18**
	0.2nm,0.3s,baz=171,slow=15,SNR=14						
CFAA	**Coronel Fontan**	**8.52**	**163**	Pn	**Pn**	**09 13 55.8**	**-0.9**
CFAA				Sn	**Sn**	**09 15 49.2**	**+18**
SIV	**San Ignacio**	**12.03**	**54**	Pn	**Pn**	**09 14 40.7**	**-4.1**
	1.2nm,0.3s,baz=250,slow=12,SNR=23						
SIV				Sn	**Sn**	**09 16 59.2**	**+1.5**
	0.2nm,0.3s,baz=292,slow=19,SNR=3.8						
BDFB	**Brasilia**	**23.11**	**75**	P	**P**	**09 16 57.7**	**-0.7**
	1.2nm,0.7s,mb3.4,baz=195,slow=22,SNR=3.3						
EFI	**East Falkland**	**29.93**	**164**	*e*P	**P**	**09 17 59.3**	**-0.4**
	130nm,1.5s,mb5.4						
SNAA	**Sanae**	**61.13**	**160**	P	**P**	**09 22 05.7**	**+0.3**
	1.0nm,0.7s,mb4.0						
DBIC	**Dimbokro**	**71.26**	**74**	P	**P**	**09 23 11.3**	**+0.1**
	8.7nm,1.2s,mb4.5,baz=223,slow=7.7,SNR=3.4						
DBIC	**Dimbokro**	**71.26**	**74**	*e*P	**P**	**09 23 11.1**	**-0.2**
	6.3nm,1.1s,mb4.5						
TORD	**Torodi Ar. Bea**	**79.94**	**71**	P	**P**	**09 24 01.2**	**+0.2**
	3.1nm,0.6s,mb4.4,baz=255,slow=4.9,SNR=26						
BMW	**Boistfort Moun**	**84.03**	**327**	*e*P	**P**	**09 24 21.7**	**0.0**
ASAR	**Alice Springs**	**127.23**	**209**	PKP	PKPdf	09 30 58.8	+2.3
	0.3nm,0.8s,baz=165,slow=1.4,SNR=3.4						
WRA	**Warramunga Arr**	**130.23**	**212**	PKP	PKPdf	09 31 02.1	-0.1
	0.4nm,0.9s,baz=143,slow=1.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**144.58**	**25**	PKP	PKPdf	09 31 29.5	+2.0
	0.5nm,0.3s,baz=28,slow=3.5,SNR=4.2						
MKAR	**Makanchi Array**	**148.41**	**36**	PKPbc	PKPbc	09 31 39.5	+1.8
	0.7nm,0.5s,baz=296,slow=3.8,SNR=6.9						

*ISK **16** 09:14:19.4, 3698N×2926E, h8km, MD3.3*
*NEIC **16** 09:14:19.0, 3698N×2926E, h8km, MD3.3(ISK), ML3.3(ATH), After ISK.*
*CSEM **16** 09:14:19.6±0.1, 3700N×2930E, h7km±1km, MD3.3, Error ellipse: s-maj=3.2km s-min=1.9km az=18.0*
*ISCJB **16** 09:14:20.1±0.6, 3697N±003×2927E±003, h8km±5km, Error ellipse: s-maj=5.9km s-min=4.2km az=170.2*
*DDA **16** 09:14:20.1, 3700N×2927E, h25km±2km, Md3.3*

ISC 16 09:14:20.4±0.6, 3696N±004×2927E±003, h7km±5km, n34, σ0§84/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.36**	**40**	*i* P	**Pg**	**09 14 27.3**	**0.0**
GOLH				*i* S	**Sg**	**09 14 33.8**	**+1.7**
TURN	**Turunc**	**0.54**	**261**	*i* P	**Pg**	**09 14 35.3**	**+4.5**
ELL	**Elmali**	**0.56**	**112**	*e*PG	**Pg**	**09 14 30.7**	**-0.4**
ELL				*e*SG	**Sg**	**09 14 39.5**	**+1.2**
YER	**Yerkesik**	**0.81**	**283**	*e*PG	**Pg**	**09 14 35.4**	**-0.4**
DENT	**Denizli**	**0.81**	**347**	*e*PG	**Pg**	**09 14 35.0**	**-1.0**
KSL	**Kastellorizon**	**0.85**	**163**	*e*P	**Pg**	**09 14 36.0**	**-0.7**
ANTB	**Antalya**	**1.11**	**93**	*e*PN	**Pn**	**09 14 41.1**	**-1.2**
BCK	**Bucak**	**1.17**	**64**	*e*PN	**Pn**	**09 14 42.2**	**-0.9**
BCK				*e*SN	**Sn**	**09 14 59.1**	**-0.1**
ARG	**Arkhangelos**	**1.18**	**231**	*e*P	**Pg**	**09 14 42.1**	**-0.9**
MLSB	**Milas**	**1.24**	**286**	*e*PN	**Pn**	**09 14 43.4**	**-0.6**
ISP	**Isparta**	**1.32**	**48**	*e*PN	**Pn**	**09 14 44.8**	**-0.5**
ISP	**Isparta**	**1.32**	**48**	P	**Pn**	**09 14 45.8**	**+0.6**
KHL	**Karahalli**	**1.37**	**8**	*e*PN	**Pn**	**09 14 45.1**	**-0.9**
DAT	**Datca**	**1.38**	**261**	*e*PN	**Pn**	**09 14 45.3**	**-0.7**
BDRM	**Kayabasi**	**1.46**	**275**	*i* P	**Pn**	**09 14 47.3**	**+0.1**
BDRM				*i* S	**Sn**	**09 15 07.2**	**+0.6**
KULA	**Kula-Manisa**	**1.62**	**343**	*e*PN	**Pn**	**09 14 48.5**	**-0.9**
GCAM	**G?zelcaml?**	**1.78**	**295**	*i* P	**Pn**	**09 14 52.4**	**+0.9**
GCAM				*i* S	**Sn**	**09 15 14.7**	**+0.3**
SHUT	**Suhut-Afyon**	**1.89**	**32**	*e*PN	**Pn**	**09 14 52.6**	**-0.3**
SMG	**Samos**	**2.08**	**292**	*e*P	**Pn**	**09 14 56.5**	**+0.9**
SMG	**Samos**	**2.08**	**292**	P	**Pn**	**09 14 56.4**	**+0.8**
DEMI	**Demirci**	**2.12**	**348**	*i* P	**Pn**	**09 14 56.6**	**+0.4**
DEMI				*i* S	**Sn**	**09 15 19.9**	**-3.0**
GDZ	**Gediz**	**2.13**	**4**	*i* P	**Pn**	**09 14 57.0**	**+0.6**
GDZ				*i* S	**Sn**	**09 15 23.4**	**+0.3**
KDAG	**Bornova**	**2.14**	**313**	*i* P	**Pn**	**09 14 56.7**	**+0.2**
KARP	**Karpathos**	**2.21**	**231**	*e*P	**Pn**	**09 14 57.0**	**-0.5**
KARP	**Karpathos**	**2.21**	**231**	P	**Pn**	**09 14 59.9**	**+2.4**
AKS	**Akhisar**	**2.23**	**329**	*e*PN	**Pn**	**09 14 57.6**	**-0.1**
BLCB	**Balcova**	**2.27**	**309**	*e*PN	**Pn**	**09 14 57.8**	**-0.4**
HDMB	**Hadim**	**2.58**	**89**	*e*PN	**Pn**	**09 15 02.6**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**46**	*e*PN	**Pn**	**09 15 06.3**	**+0.5**
APE	**Apeiranthos**	**2.99**	**273**	*e*P	**Pn**	**09 15 09.0**	**+0.8**
APE	**Apeiranthos**	**2.99**	**273**	P	**Pn**	**09 15 10.1**	**+1.9**
PRK	**Paraskevi**	**3.28**	**315**	*e*P	**Pn**	**09 15 13.0**	**+0.8**
NPS	**Neapolis**	**3.41**	**241**	P	**Pn**	**09 15 18.8**	**+4.8**
NPS	**Neapolis**	**3.41**	**241**	*e*P	**Pn**	**09 15 15.0**	**+1.0**

JMA 16 09:30:06.5±0.1, 2612N×14125E, h140km, M4.1, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**0.97**	**58**	P	Pn	09 30 30.3	+0.2
JHHJ				S	Sn	09 30 48.1	+0.1
CBIJ	**Chichi jima**	**1.28**	**41**	P	Pn	09 30 33.1	+0.1
CBIJ				*e*S	Sn	09 30 54.0	+0.8
BSO1	**Boso 1**	**8.51**	**358**	P	Pn	09 32 06.6	-0.1
BSO3	**Boso 3**	**8.68**	**356**	P	Pn	09 32 10.0	+1.1
BSO4	**Boso 4**	**8.88**	**355**	P	Pn	09 32 13.0	+1.4

IDC 16 09:49:06.2±1.1, 2186N×14321E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.8/21, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=43.8km s-min=19.0km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.30**	**350**	Pn	Pn	09 50 27.2	+0.6
	7.0nm,0.3s,baz=116,slow=24,SNR=7.7						
CBIJ				Sn	Sn	09 51 28.9	+0.6
	3.3nm,0.3s,baz=292,slow=19,SNR=4.3						
KSRS	**Korea Array**	**20.40**	**323**	P	P	09 53 48.4	+3.7
	3.5nm,1.0s,baz=135,slow=9.1,SNR=7.4						
SONM	**Songino Array**	**39.23**	**320**	P	P	09 56 36.2	+0.1
	1.6nm,1.0s,baz=132,slow=6.4,SNR=4.0						
WRA	**Warramunga Arr**	**42.44**	**192**	P	P	09 57 02.8	0.0
	0.7nm,0.7s,baz=18,slow=8.8,SNR=7.0						
ASAR	**Alice Springs**	**46.15**	**192**	P	P	09 57 32.5	-0.1
	0.5nm,0.6s,baz=16,slow=9.8,SNR=15						
MKAR	**Makanchi Array**	**54.61**	**313**	P	P	09 58 36.4	0.0
	0.3nm,0.7s,baz=96,slow=7.4,SNR=3.8						
BVAR	**Borovoye Array**	**62.56**	**319**	P	P	09 59 31.5	-0.3
	2.1nm,0.8s,baz=94,slow=7.6,SNR=8.2						
NVAR	**Mina Array Bea**	**83.03**	**51**	P	P	10 01 34.3	+0.6
	1.1nm,0.9s,baz=278,slow=5.7,SNR=5.9						

*CSEM **16** 10:35:24.4±0.2, 4570N×1060E, h20km, ML3.0/7, Error ellipse: s-maj=4.3km s-min=3.6km az=138.0*
*ISCJB **16** 10:35:25.6±0.5, 4575N±002×1063E±003, h9km±3km, Error ellipse: s-maj=4.3km s-min=3.2km az=29.0*
*ROM **16** 10:35:25.7±0.2, 4573N×1062E, h8km±1km, Md2.4/8, Ml2.3/7, Error ellipse: s-maj=2.6km s-min=1.9km az=135.0*
*VIE **16** 10:35:26.1±0.4, 4577N×1061E, h8km±1km, mb1.9/7, ML2.8/9, Error ellipse: s-maj=2.2km s-min=1.3km az=176.0*

ISC 16 10:35:26.2±0.5, 4573N±003×1061E±003, h9km±3km, n17, σ0§56/38, 10C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAGA	**Magasa**	**0.05**	**15**	Pg	**Pg**	**10 35 27.9**	**-0.2**
MAGA				Sg	**Sg**	**10 35 29.6**	**+0.1**
	6µm,0.2s						
SALO	**Salr**	**0.12**	**209**	Pg	**Pg**	**10 35 28.6**	**-0.4**
SALO				Sg	**Sg**	**10 35 31.2**	**+0.2**
	2µm,0.2s						
MABI	**Malga Bissina**	**0.34**	**349**	Pg	**Pg**	**10 35 32.7**	**-0.1**

Mjma3.8/4, MLv4.4/5, Mw(mB)5.3/3, Mwp4.4/3
ISC 16 10:41:06.7±1.0, 097N±006×12619E±008, h69km±10km, n53, σ1ᵍ02/52, mb4.3/26, 2C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.07**	**141**	P	**Pn**	**10 41 39.6**	**+0.3**
SWI	**Sorong**	**5.39**	**110**	P	**Pn**	**10 42 30.0**	**+5.4**
	29nm,1.2s,0.1nm						
KDI	**Kendari**	**6.06**	**216**	P	**Pn**	**10 42 34.1**	**+0.3**
	45nm,1.1s,4μm0.1nm						
PCI	**Palu**	**6.62**	**254**	P	**Pn**	**10 42 41.4**	**-0.1**
	91nm,1.2s,0.3nm						
MYLDM	**Lahad Datu**	**8.74**	**299**	P	**Pn**	**10 43 10.8**	**+0.4**
KAPI	**Kappang**	**8.76**	**227**	P	**Pn**	**10 43 09.1**	**-1.6**
	2.5nm,0.3s,baz=37,slow=11,SNR=6.8						
KKM	**Kota Kinabalu**	**11.15**	**297**	*e*Pn	**Pn**	**10 43 38.7**	**-4.7**
SBUM	**Sibu**	**14.04**	**276**	P	**Pn**	**10 44 25.6**	**+3.2**
KAKA	**Kakadu**	**14.94**	**156**	*e*P	**Pn**	**10 44 26.6**	**-7.6**
	86nm,1.4s						
KSM	**Kuching**	**15.88**	**272**	*e*P	**Pn**	**10 44 45.7**	**-0.5**
KSM	**Kuching**	**15.88**	**272**	P	**Pn**	**10 44 50.6**	**+4.4**
	28nm,0.9s						
SJI	**Sawahan**	**16.79**	**239**	P	**Pn**	**10 44 59.4**	**+2.0**
WRAB	**Tennant Creek**	**22.26**	**159**	*e*P	**P**	**10 45 57.3**	**-0.8**
	17nm,0.9s,mb4.4						
WRAB	**Tennant Creek**	**22.26**	**159**⇑	*e*P	**P**	**10 45 58.8**	**+0.7**
WRA	**Warramunga Arr**	**22.27**	**159**	P	**P**	**10 45 58.1**	**-0.1**
	9.6nm,0.7s,mb4.2,baz=339,slow=11,SNR=59						
WRA				S	**S**	**10 49 59.5**	**+0.3**
	2.8nm,1.0s,baz=331,slow=20,SNR=5.7						
WB2	**Warramunga Arr**	**22.27**	**159**	*e*P	**P**	**10 45 56.7**	**-1.5**
MBWA	**Marble Bar**	**22.89**	**196**	*e*P	**P**	**10 46 03.1**	**-1.5**
	7.5nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**25.61**	**163**	P	**P**	**10 46 30.6**	**+0.8**
	3.0nm,0.3s,mb4.2,baz=345,slow=12,SNR=53						
NJ2	**Nanjing**	**31.68**	**348**	*e*P	**P**	**10 47 23.3**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CMAR	**Chiang Mai Arr**	**31.89**	**305**	P	**P**	**10 47 25.3**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.5,baz=131,slow=8.5,SNR=4.6						
STKA	**Stephens Creek**	**35.78**	**157**	P	**P**	**10 48 00.1**	**+0.9**
	comp=Z,1.7nm,0.3s,mb4.4,baz=327,slow=10,SNR=7.6						
STKA	**Stephens Creek**	**35.78**	**157**	*e*P	**P**	**10 47 58.5**	**-0.8**
	comp=Z,4.5nm,0.8s,mb4.5						
KSRS	**Korea Array**	**36.34**	**2**	P	**P**	**10 48 04.8**	**+0.9**
	comp=Z,1.4nm,0.6s,mb4.1,baz=181,slow=9.2,SNR=6.9						
KSRS				LR	LR	11 01 54.5	
	comp=Z,35nm,20.7s,baz=7.0,slow=34						
MJAR	**Matsushiro Arr**	**37.10**	**16**	P	**P**	**10 48 09.6**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.2,baz=184,slow=9.1,SNR=9.5						
MDJ	**Mudanjiang**	**43.56**	**4**	P	**P**	**10 49 05.0**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,40nm,3.5s						
ULN	**Ulaanbaatar**	**49.57**	**343**	*i* P	**P**	**10 49 51.6**	**+1.0**
SONM	**Songino Array**	**49.73**	**343**	P	**P**	**10 49 52.3**	**+0.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=156,slow=9.8,SNR=7.6						
TLY	**Talaya**	**53.97**	**343**	*e*P	pP	10 50 40.1	-1.1
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
BOD	**Bodaibo**	**57.50**	**352**	*e*P	**P**	**10 50 48.9**	**+0.4**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
PETK	**Petropavlovsk-**	**58.17**	**22**	P	**P**	**10 50 54.5**	**+1.2**
	comp=Z,4.9nm,0.8s,mb4.6,baz=165,slow=6.2,SNR=3.7						
MK31	**Makanchi Array**	**59.52**	**326**	*e*P	**P**	**10 51 01.8**	**-1.0**
MKAR	**Makanchi Array**	**59.52**	**326**	P	**P**	**10 51 02.5**	**-0.3**
	comp=Z,4.0nm,0.8s,mb4.5,baz=123,slow=7.9,SNR=21						
TKM2	**Tokmak 2**	**61.46**	**320**	*e*P	**P**	**10 51 16.4**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**61.46**	**320**	*e*P	**P**	**10 51 16.4**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
AML	**Almayashu**	**62.35**	**318**	*e*P	**P**	**10 51 21.6**	**-0.4**
	comp=Z,4.4nm,0.9s,mb4.5						
ZAA0	**Zalesovo Array**	**62.80**	**334**	*e*P	**P**	**10 51 23.1**	**-1.7**
ZALV	**Zalesovo Beam**	**62.80**	**334**	P	**P**	**10 51 22.9**	**-1.9**
	comp=Z,1.6nm,0.7s,mb4.0,baz=122,slow=5.2,SNR=3.8						
KURK	**Kurchatov**	**63.77**	**328**	*e*P	**P**	**10 51 30.3**	**-1.1**
	comp=Z,17nm,0.9s,mb4.9						
KURK	**Kurchatov**	**63.77**	**328**⇑	*e*P	**P**	**10 51 31.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
BVAR	**Borovoye Array**	**69.33**	**328**	P	**P**	**10 52 06.3**	**-0.5**
	comp=Z,4.6nm,1.0s,mb4.3,baz=134,slow=8.5,SNR=12						
BRVK	**Borovoye**	**69.41**	**328**	*e*P	**P**	**10 52 06.9**	**-0.3**
	comp=Z,9.5nm,0.9s,mb4.6						
BRVK	**Borovoye**	**69.41**	**328**	*e*P	**P**	**10 52 06.9**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
TIXI	**Tiksi**	**70.59**	**1**	*e*P	**P**	**10 52 11.2**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.3						
AKTK	**Aktyubinsk**	**75.48**	**322**	P	**P**	**10 52 43.2**	**-0.1**
AKTO	**Aktyubinsk**	**75.48**	**322**	P	**P**	**10 52 43.2**	**-0.1**
	comp=Z,1.6nm,0.3s,mb4.2,baz=111,slow=5.1,SNR=13						
ARU	**Arti**	**76.97**	**328**	*e*P	**P**	**10 52 51.5**	**-0.2**
	comp=Z,6.6nm,0.6s,mb4.5						
ARU	**Arti**	**76.97**	**328**	*e*P	**P**	**10 52 51.5**	**-0.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
VNDA	**Vanda**	**80.78**	**173**	P	**P**	**10 53 14.1**	**+1.8**
	comp=Z,0.6nm,0.4s,mb3.8,baz=286,slow=8.7,SNR=5.9						
KIV	**Kislovodsk**	**84.64**	**314**	P	**P**	**10 53 34.0**	**+1.1**
KIV				*e*		10 53 41.5	
ASF	**Jabal al Asfar**	**88.89**	**302**	P	**P**	**10 53 55.7**	**+1.8**
	comp=Z,2.2nm,0.7s,mb4.3,baz=90,slow=1.0,SNR=4.4						
OBN	**Obninsk**	**88.99**	**325**	P	**P**	**10 53 54.0**	**+0.2**
OBN				*e*		10 54 04.6	
BUR08	**Bucovina Ar. S**	**96.69**	**318**	*e*P	**P**	**10 54 29.4**	**0.0**
TORD	**Torodi Ar. Bea**	**123.22**	**286**	PKP	PKPdf	10 59 57.9	+1.2
	comp=Z,1.2nm,0.8s,baz=73,slow=1.7,SNR=7.3						

TAP **16** *10:51:06.8, 2468N×12266E, h99km, ML3.0, C*
ISCJB **16** *10:51:07.4±0.9, 2463N±010×12266E±003, h95km±8km, Error ellipse: s-maj=16.1km s-min=3.9km az=1.3*
JMA **16** *10:51:07.4±0.1, 2474N×12269E, h96km*
ISC 16 10:51:07.8±0.9, 2464N±010×12266E±003, h94km±8km, n20, σ0ᵍ44/35, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.36**	**120**	P	**Pn**	**10 51 22.2**	**+0.2**
YOJ				*e*S	**Sn**	**10 51 33.1**	**+0.5**
TWB1	**Santiao Chiao**	**0.71**	**301**	*e*P	**Pn**	**10 51 24.2**	**-0.6**
	baz=298						
TWC	**Suao**	**0.74**	**268**	P	**Pn**	**10 51 24.5**	**-0.6**
	baz=261						
TWC				S	**Sn**	**10 51 37.4**	**-0.6**
	baz=261						
ENA	**Nanau**	**0.87**	**256**	P	**Pn**	**10 51 26.3**	**-0.1**
	baz=248						
ENA				*e*S	**Sn**	**10 51 40.3**	**+0.1**
	baz=248						
TWE	**Neicheng**	**0.91**	**275**	*i* P	**Pn**	**10 51 26.8**	**0.0**
	baz=273						
TWE				*e*S	**Sn**	**10 51 40.9**	**-0.1**
	baz=273						
ENTT	**Nioudou**	**1.00**	**270**	P	**Pn**	**10 51 28.0**	**+0.3**
	baz=265						
ENTT				S	**Sn**	**10 51 43.2**	**+0.4**
	baz=265						
IRIF	**Iriomote-Funau**	**1.02**	**107**	P	**Pn**	**10 51 27.9**	**-0.1**
IRIF				*e*S	**Sn**	**10 51 43.7**	**+0.5**
TWD	**Chiawan**	**1.12**	**240**	*e*P	**Pn**	**10 51 28.7**	**-0.5**
	baz=233						
TWD				*e*S	**Sn**	**10 51 44.0**	**-1.3**
	baz=233						
NSK	**Sanguang**	**1.19**	**272**	P	**Pn**	**10 51 29.8**	**-0.1**
	baz=262						
NSK				*e*S	**Sn**	**10 51 47.1**	**+0.5**
	baz=262						
NNS	**Nan Shan**	**1.19**	**260**	P	**Pn**	**10 51 30.0**	**0.0**
	baz=253						
NNS				*e*S	**Sn**	**10 51 47.0**	**+0.3**
	baz=253						
JKRS	**Kuro-shima**	**1.29**	**108**	P	**Pn**	**10 51 31.4**	**+0.2**
JKRS				*e*S	**Sn**	**10 51 49.4**	**+0.6**
WHF	**Hehuan Shan**	**1.37**	**249**	*e*P	**Pn**	**10 51 32.2**	**0.0**
	baz=248						
WHF				*e*S	**Sn**	**10 51 50.4**	**-0.1**
	baz=248						
JIJ	**Ishigaki jima**	**1.38**	**101**	P	**Pn**	**10 51 32.0**	**-0.2**
JIJ				*e*S	**Sn**	**10 51 49.9**	**-0.8**
ESL	**Shilin**	**1.39**	**234**	*e*P	**Pn**	**10 51 31.9**	**-0.6**
	baz=228						
TWT	**Tachien**	**1.41**	**254**	*e*P	**Pn**	**10 51 33.4**	**+0.7**
	baz=248						
TWT				*e*S	**Sn**	**10 51 51.8**	**+0.4**
	baz=248						
NSTT	**Nanjuang**	**1.51**	**270**	*e*P	**Pn**	**10 51 34.3**	**+0.4**
	baz=269						
NSTT				*e*S	**Sn**	**10 51 53.7**	**0.0**
	baz=269						
SMLT	**Sun Moon Lake**	**1.78**	**245**	*e*P	**Pn**	**10 51 37.7**	**+0.4**
	baz=238						
TWF1	**Yuli**	**1.79**	**224**	*e*P	**Pn**	**10 51 37.7**	**+0.2**
	baz=231						
JTJ	**Tarama**	**1.85**	**90**	P	**Pn**	**10 51 38.2**	**-0.1**
JTJ				*e*S	**Sn**	**10 52 01.2**	**-0.3**
ALS	**Alishan**	**2.04**	**237**	*e*P	**Pn**	**10 51 40.9**	**+0.2**
	baz=230						

ISCJB **16** *10:54:06.9±3.0, 2328S±007×705W±0.1, h33km±25km, mb3.8/4, Error ellipse: s-maj=21.7km s-min=11.8km az=5.7*
IDC **16** *10:54:09.3±3.9, 2328S×7030W, h31km±25km, mb3.7/4, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=28.4km s-min=27.0km az=18.0*
NEIC **16** *10:54:09.5±0.5, 2326S×7047W, h35km, Error ellipse: s-maj=14.4km s-min=8.7km az=97.0*
ISC 16 10:54:09.9±1.1, 2328S±007×705W±01, h39km±13km, n15, σ0ᵍ97/16, mb3.8/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.57**	**65**	Pg	**Pn**	**10 54 35.9**	**+0.7**
	60nm,0.3s,SNR=484						
LVC				Lg		10 54 56.2	
	178nm,0.3s,SNR=29						
LCO	**Las Campanas**	**5.71**	**182**	*e*Pn	**Pn**	**10 55 32.6**	**+0.4**
	17nm,0.6s						
ARE	**Arequipa**	**6.85**	**352**	*e*P	**Pn**	**10 55 46.0**	**-1.9**
ARE				*e*S	**Sn**	**10 56 58.0**	**-6.7**
LPAZ	**La Paz**	**7.29**	**18**	Pn	**Pn**	**10 55 55.7**	**+1.8**
	0.3nm,0.3s,baz=199,slow=8.9,SNR=5.8						
LPAZ				Sn	**Sn**	**10 57 33.0**	**+17**
	baz=10,slow=24,SNR=1.5						
LPAZ	**La Paz**	**7.29**	**18**	*e*Pn	**Pn**	**10 55 55.4**	**+1.5**
	18nm,1.0s						
CFAA	**Coronel Fontan**	**8.52**	**167**	Pn	**Pn**	**10 56 10.3**	**-0.4**
	0.0nm,0.3s,baz=3.6,slow=18,SNR=2.1						
CFAA				Sn	**Sn**	**10 57 55.1**	**+10**
	0.1nm,0.3s,baz=117,slow=21,SNR=4.1						
CFAA	**Coronel Fontan**	**8.52**	**167**	Pn	**Pn**	**10 56 10.3**	**-0.4**
CFAA				Sn	**Sn**	**10 57 55.1**	**+10**
SIV	**San Ignacio**	**11.43**	**52**	Pn	**Pn**	**10 56 50.1**	**-0.5**
	0.6nm,0.3s,baz=236,slow=11,SNR=39						
TXAR	**Lajitas Array**	**61.30**	**327**	P	**P**	**11 04 21.5**	**0.0**
	0.3nm,0.8s,mb3.5,baz=156,slow=8.3,SNR=3.9						
DBIC	**Dimbokro**	**70.61**	**74**	P	**P**	**11 05 20.9**	**-0.8**
	4.5nm,1.1s,mb4.3,baz=217,slow=5.1,SNR=3.3						
NVAR	**Mina Array Bea**	**76.03**	**323**	P	**P**	**11 05 54.4**	**+1.3**
	0.2nm,0.6s,mb3.2,baz=141,slow=5.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**79.29**	**71**	P	**P**	**11 06 11.5**	**-0.3**
	2.9nm,0.8s,mb4.2,baz=254,slow=5.0,SNR=14						
WRA	**Warramunga Arr**	**130.70**	**211**	PKP	PKPdf	11 13 18.5	+1.0
	0.5nm,0.9s,baz=123,slow=2.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**144.16**	**25**	PKP	PKPdf	11 13 42.0	+1.0
	0.7nm,0.6s,baz=306,slow=3.5,SNR=4.0						
MKAR	**Makanchi Array**	**147.91**	**36**	PKPbc	PKPbc	11 13 50.5	-0.2
	0.9nm,0.7s,baz=330,slow=3.0,SNR=9.6						

NEIC **16** *11:06:18.0, 1569N×9503W, h10km, MD4.1(MEX), After MEX.*
MEX 16 11:06:18.2±0.8, 1583N×9504W, h10km±11km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.27**	**7**	*e*P	Pn	11 06 38.2	-3.8
CMIG				*i* S	Sb	11 06 53.4	-5.1
PCIG		**1.76**	**94**	*i* P	Pn	11 06 45.2	-3.5
PCIG				*i* S	Sn	11 07 05.9	-5.3
VHO	**Vista Hermosa**	**2.04**	**308**	*e*P	Pn	11 06 50.2	-2.5
VHO				*i* S	Sn	11 07 15.4	-2.8
VHO	**Vista Hermosa**	**2.04**	**308**	*e*P	Pn	11 06 50.2	-2.5
VHO				*i* S	Sn	11 07 14.9	-3.3
TGIG		**2.07**	**63**	*i* P	Pn	11 06 50.1	-2.9
TGIG				*i* S	Sn	11 07 15.0	-3.9
SCX	**San Cristobal**	**2.48**	**68**	*e*P	Pn	11 06 57.1	-1.6
SCX				*i* S	Sn	11 07 26.0	-3.0
THIG		**2.83**	**108**	*e*P	Pn	11 07 00.6	-2.9
THIG				*i* S	Sn	11 07 33.6	-4.0
PNIG	**Pinotepa**	**3.02**	**281**	*i* P	Pn	11 07 02.4	-3.7
PNIG				*i* S	Sn	11 07 39.2	-3.1
UTMO	**Huajuapan**	**3.31**	**307**	*i* P	Pn	11 07 08.8	-1.3
UTMO				*i* S	Sn	11 07 47.9	-1.7
TPIG	**Tehuac#an**	**3.40**	**320**	*i* S	Sn	11 07 53.1	+1.3
PPM	**Popocatepetl**	**4.70**	**314**	*e*P	Pn	11 07 29.0	-0.2
PPM				*i* S	Sn	11 08 27.8	+3.9

ISCJB **16** *11:35:00.7±0.5, 2309S±003×7086W±005, h33km, mb4.5/8, MS3.5/5, Error ellipse: s-maj=6.7km s-min=4.5km az=18.2*
NEIC **16** *11:35:02.0, 2307S×7065W, h5km, ML4.1(GUC), After GUC.*
GUC **16** *11:35:02.3±0.9, 2302S×7073W, h22km±8km, ML4.3*
IDC **16** *11:35:03.7±3.8, 2311S×7048W, h32km±25km, mb4.1/5, mb1 4.1/7, mb1mx3.9/17, mbtmp4.1/7, ML3.8/3, MS3.4/7, Ms1 3.4/7, ms1mx3.2/28, Error ellipse: s-maj=27.2km s-min=25.9km az=150.0*
ISC 16 11:35:01.1±1.3, 2305S±004×7081W±006, h21km±9km, h21km±.5km: pP-P, n44, σ1ᵍ20/49, mb4.5/8, MS3.5/5, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.65**	**121**⇑	*i*P	**Pb**	**11 35 14.4**	**+0.5**
CEN1				*i* S	**Sb**	**11 35 23.1**	**+0.5**
CEN1				AML	AML	11 35 24.8	
	comp=N,21μm,0.4s						
ANCH	**Antofagasta**	**0.73**	**150**⇓	*i*P	**Pb**	**11 35 15.2**	**+0.1**
ANCH				*i* S	**Sb**	**11 35 24.9**	**+0.1**
ANCH	**Antofagasta**	**0.73**	**150**⇓	*i*P	**Pb**	**11 35 15.2**	**+0.1**
ANCH				*i* S	**Sb**	**11 35 24.9**	**+0.1**
ANCH				AML	AML	11 35 26.7	
	comp=N,21μm,0.6s						
PB06	**Plate Boundary**	**1.19**	**74**⇓	*i*P	**Pn**	**11 35 21.5**	**-1.1**
PB06				*i* S	**Sb**	**11 35 36.6**	**-1.4**
PB04	**Plate Boundary**	**1.45**	**58**⇓	*i*P	**Pn**	**11 35 17.8**	**-8.3**
PB04				*i* S	**Sn**	**11 35 30.2**	**-14**
PB04				AML	AML	11 35 31.9	
	comp=N,22μm,0.4s						
PB07	**Plate Boundary**	**1.57**	**33**	*e*P	**Pn**	**11 35 28.3**	**+0.5**
PB07				*i* S	**Sn**	**11 35 47.6**	**+0.1**
LVC	**Limon Verde**	**1.80**	**76**	Pg	**Pn**	**11 35 31.8**	**+0.8**
	comp=N,544nm,0.3s,SNR=783						
LVC				Lg		11 35 53.7	
	comp=N,969nm,0.3s,SNR=23						
LVC	**Limon Verde**	**1.80**	**76**	Pg	**Pn**	**11 35 31.8**	**+0.8**
LVC				⇑*i*Pn	**Pn**	**11 35 31.8**	**+0.8**
LVC				Lg		11 35 53.7	
LVC				*e*Sn	**Sn**	**11 35 53.9**	**+0.6**
LVC	**Limon Verde**	**1.80**	**76**⇑	*i*P	**Pn**	**11 35 31.8**	**+0.8**
LVC				*i* S	**Sn**	**11 35 54.6**	**+1.3**
LVC				AML	AML	11 35 57.5	
	comp=N,4μm,0.6s						
PB01	**Plate Boundary**	**2.34**	**32**	*e*P	**Pn**	**11 35 41.0**	**+2.6**
PB01				*i* S	**Sn**	**11 36 10.9**	**+4.4**
PB01				AML	AML	11 36 14.2	
	comp=E,3μm,0.3s						
SPCH	**San Pedro de A**	**2.41**	**87**	*e*P	**Pn**	**11 35 43.8**	**+4.5**
SPCH				*i* S	**Sn**	**11 36 14.2**	**+6.0**
LCO	**Las Campanas**	**5.94**	**179**	*e*Pn	**Pn**	**11 36 27.8**	**-0.1**
	comp=E,33nm,0.3s						
LCO				*e*Sn	**Sn**	**11 37 35.6**	**+0.3**
ARE	**Arequipa**	**6.58**	**354**	*e*P	**Pn**	**11 36 37.0**	**+0.2**
ARE				*e*S	**Sn**	**11 37 48.0**	**-3.2**
LPAZ	**La Paz**	**7.18**	**21**	Pn	**Pn**	**11 36 48.0**	**+3.1**
	comp=E,0.9nm,0.3s,baz=203,slow=6.9,SNR=13						
LPAZ				LR	LR	11 39 46.8	
	comp=E,441nm,18.9s,baz=219,slow=40						
LPAZ	**La Paz**	**7.18**	**21**	Pn	**Pn**	**11 36 48.0**	**+3.1**
LPAZ				LR	LR	11 39 46.8	
CFAA	**Coronel Fontan**	**8.82**	**166**	Pn	**Pn**	**11 37 07.1**	**-0.4**
	comp=E,0.1nm,0.3s,baz=350,slow=16,SNR=2.5						
CFAA				Sn	**Sn**	**11 38 56.3**	**+10**
	comp=E,0.3nm,0.3s,baz=220,slow=17,SNR=2.6						
CFAA				LR	LR	11 40 38.5	
	comp=E,48nm,18.9s,baz=331,slow=38						
CFAA	**Coronel Fontan**	**8.82**	**166**	Pn	**Pn**	**11 37 07.1**	**-0.4**
CFAA				Sn	**Sn**	**11 38 56.3**	**+10**
CFAA				LR	LR	11 40 38.5	
SIV	**San Ignacio**	**11.55**	**54**	Pn	**Pn**	**11 37 42.7**	**-2.2**
	comp=E,1.7nm,0.3s,baz=252,slow=13,SNR=20						
SIV				Sn	**Sn**	**11 39 55.4**	**+2.1**
	baz=139,slow=20,SNR=2.8						
BDFB	**Brasilia**	**22.71**	**75**	P	**P**	**11 39 59.1**	**-2.6**
	comp=E,2.3nm,0.7s,mb3.7,baz=248,slow=18,SNR=5.2						
BDFB				LR	LR	11 50 04.7	
	comp=E,148nm,18.3s,MS3.5,baz=196,slow=40						
USHA	**Ushuaia**	**31.79**	**177**	LR	LR	11 55 20.7	
	comp=E,150nm,20.4s,MS3.7,baz=356,slow=38						
PCRV	**Puerto La Cruz**	**33.57**	**11**	LR	LR	11 54 23.5	
	comp=E,103nm,18.0s,MS3.6,baz=176,slow=35						
RCBR	**Riachuelo**	**37.74**	**68**	*e*P	**P**	**11 42 15.5**	**-0.3**
	comp=E,59nm,1.2s,mb5.2						
VNA3	**Neumayer Olymp**	**59.19**	**161**	*e*	**P**	**11 45 01.1**	**+0.9**
VNA3				*e*	pP	11 45 06.8	-0.1
VNA1	**Neumayer--Stat**	**59.43**	**160**	*e*	**P**	**11 45 01.9**	**0.0**
VNA1				*e*	pP	11 45 07.8	-0.8
VNA2	**Neumayer--Watz**	**59.79**	**160**	*e*	**P**	**11 45 05.4**	**+1.1**
	baz=294,slow=8.3						
VNA2				*e*	pP	11 45 11.7	+0.7
TXAR	**Lajitas Array**	**60.93**	**327**	P	**P**	**11 45 14.7**	**+2.0**
	comp=E,0.3nm,0.8s,mb3.5,baz=161,slow=5.3,SNR=3.5						
SNAA	**Sanae**	**61.41**	**160**	*e*	**P**	**11 45 14.5**	**-0.8**
SNAA				*e*	pP	11 45 20.9	-1.2
SNAA	**Sanae**	**61.41**	**160**	*e*P	**P**	**11 45 14.3**	**-1.0**
	comp=E,9.2nm,1.1s,mb4.8						
LIC	**Lamto**	**70.50**	**74**	*e*P	**P**	**11 46 15.1**	**+0.3**
	comp=E,59nm,1.9s,mb5.2						
TIC	**Toumodi**	**70.70**	**74**	*e*P	**P**	**11 46 13.8**	**-2.2**
	comp=E,79nm,1.5s						
KIC	**Kosan Boka**	**70.82**	**74**	*e*P	**P**	**11 46 16.0**	**-0.7**
	comp=E,35nm,0.9s						
DBIC	**Dimbokro**	**70.86**	**74**	P	**P**	**11 46 15.5**	**-1.4**
	comp=E,3.4nm,0.5s,mb4.5,baz=208,slow=6.1,SNR=8.9						
DBIC				LR	LR	12 18 13.0	
	comp=E,58nm,18.6s,MS3.9,baz=150,slow=37						
DBIC	**Dimbokro**	**70.86**	**74**	P	**P**	**11 46 15.5**	**-1.4**
DBIC				LR	LR	12 18 13.0	
PPT	**Papeete**	**73.27**	**258**	LR	LR	12 11 37.9	
	comp=E,5.4nm,18.8s,MS2.9,baz=76,slow=30						
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P	**P**	**11 47 06.4**	**-0.5**
	comp=E,4.8nm,0.5s,mb4.7,baz=255,slow=5.2,SNR=64						
BOSA	**Boshof**	**84.27**	**119**	P	**P**	**11 47 32.0**	**+0.3**
	comp=E,2.8nm,0.4s,mb4.7,baz=218,slow=2.0,SNR=11						
ASAR	**Alice Springs**	**127.72**	**209**	PKP	PKPdf	11 54 06.0	+0.3
	comp=E,0.9nm,0.8s,baz=145,slow=1.9,SNR=8.4						
WRA	**Warramunga Arr**	**130.73**	**212**	PKP	PKPdf	11 54 12.5	+1.1
	comp=E,0.5nm,0.6s,baz=150,slow=1.6,SNR=11						
ZALV	**Zalesovo Beam**	**144.09**	**25**	PKP	PKPdf	11 54 34.5	-0.5
	comp=E,2.1nm,0.7s,baz=299,slow=1.5,SNR=10						
AML	**Almayashu**	**144.88**	**49**	*e*P	PKPdf	11 54 37.5	+0.8
TKM2	**Tokmak 2**	**145.87**	**46**	*e*PKPdf	PKPdf	11 54 40.6	+2.2
MK31	**Makanchi Array**	**147.91**	**36**	*e*PKPdf	PKPdf	11 54 42.8	+1.2
MK31				*e*SKPdf	SKPdf	11 58 21.1	+6.7
MKAR	**Makanchi Array**	**147.91**	**36**	PKPbc	PKPbc	11 54 45.3	+0.7
	comp=E,2.5nm,0.7s,baz=18,slow=0.4,SNR=24						
MJAR	**Matsushiro Arr**	**151.58**	**305**	PKPbc	PKPbc	11 54 55.1	+1.1
	comp=E,1.0nm,0.8s,baz=77,slow=1.6,SNR=4.4						

NEIC **16** *11:37:34.1±0.7, 2654S×17383W, h35km, mb4.8/5, Error ellipse: s-maj=25.2km s-min=11.6km az=157.0*
IDC **16** *11:37:35.9±60.0, 2190S×17521W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/17, mbtmp4.2/3, Error ellipse: s-maj=1122.0km s-min=170.3km az=86.0*
ISCJB **16** *11:37:41.7±2.4, 224S±09×1755W±05, h33km, mb4.5/6, Error ellipse: s-maj=136.5km s-min=25.7km az=154.3*
ISC 16 11:37:43.2±2.3, 225S±09×1754W±05, h35km, n10, σ0ᵍ88/8, mb4.5/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.10**	**198

DDEM	**Demirkent**	**2.07**	**62**	*i* P	**Pn**	**11 41 13.4**	**+0.2**
DDEM				*i* S	**Sn**	**11 41 40.4**	**+0.7**
DDEM	**Demirkent**	**2.07**	**62**	*i* P	**Pn**	**11 41 13.4**	**+0.2**
DDEM				*i* S	**Sn**	**11 41 40.3**	**+0.7**
DBAD	**Bademkaya**	**2.09**	**59**	*i* P	**Pn**	**11 41 14.1**	**+0.6**
DBAD				*i* S	**Sn**	**11 41 39.9**	**-0.2**
DAGI	**Agillar**	**2.26**	**59**	*i* P	**Pb**	**11 41 17.6**	**-1.3**
DAGI				*i* S	**Sb**	**11 41 46.4**	**-1.0**
BCA	**Borcka**	**2.29**	**49**	*e*PN	**Pn**	**11 41 15.6**	**-0.6**
ARTV	**Artvin**	**2.33**	**57**	*i* P	**Pn**	**11 41 18.5**	**+1.7**
ARTV				*i* S	**Sn**	**11 41 48.5**	**+2.6**
ARTV	**Artvin**	**2.33**	**57**	*i* P	**Pn**	**11 41 18.5**	**+1.8**
ARTV				*i* S	**Sn**	**11 41 48.5**	**+2.5**
SARI	**SarD1z-Kayseri**	**2.41**	**239**	*e*PN	**Pg**	**11 41 23.0**	**-0.4**

IDC 16 12:00:21.4±3.8, 508S×15152E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/16, mbtmp3.5/2, Error ellipse: s-maj=166.7km s-min=46.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.32**	**227**	P	P	12 05 20.3	-0.5
	0.9nm,0.9s,baz=52,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**25.10**	**221**	P	P	12 05 48.5	+0.4
	1.5nm,0.8s,baz=59,slow=8.7,SNR=15						
TORD	**Torodi Ar. Bea**	**149.18**	**287**	PKPbc	PKPbc	12 20 12.5	-0.5
	1.4nm,0.7s,baz=77,slow=2.8,SNR=9.5						

*ISCJB **16** 12:00:20.8±0.3, 4279N×14227E×0.04, h113km±2km, mb3.9/11, Error ellipse: s-maj=5.9km s-min=4.5km az=141.7*
*MOS **16** 12:00:20.8±0.9, 4281N×14222E, h117km, mb4.5/1, Error ellipse: s-maj=20.7km s-min=14.8km az=92.5*
*IDC **16** 12:00:22.0±1.6, 4286N×14225E, h110km±10km, mb3.5/8, mb1 3.6/10, mb1mx3.5/22, mbtmp3.4/10, Error ellipse: s-maj=24.3km s-min=15.5km az=145.0*
*NEIC **16** 12:00:21.5, 4282N×14229E, h112km, MG3.3(JMA), After JMA.*
*JMA **16** 12:00:21.5±0.1, 4282N×14229E, h112km±2km, M3.3*
ISC 16 12:00:21.8±0.3, 4279N±003×14227E±004, h108km±2km, n40, σ0°68/58, mb3.9/11, 1C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBT2	**Biratori 2**	**0.07**	**102**	P	**Pn**	**12 00 36.8**	**+0.1**
JBT2				*e*S	**Sn**	**12 00 48.2**	**+0.3**
JFR	**Furan**	**0.44**	**32**	P	**Pn**	**12 00 37.9**	**-0.1**
JFR				*e*S	**Sn**	**12 00 49.9**	**-0.4**
JEW	**Eniwo**	**0.61**	**275**	P	**Pn**	**12 00 39.2**	**0.0**
JEW				*e*S	**Sn**	**12 00 52.5**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.62**	**145**	P	**Pn**	**12 00 40.3**	**+1.0**
JNBK				*e*S	**Sn**	**12 00 54.1**	**+1.6**
JAB	**Ashibetsu**	**0.71**	**357**	P	**Pn**	**12 00 40.4**	**+0.3**
JAB				*e*S	**Sn**	**12 00 54.3**	**+0.4**
JCH	**Churui**	**0.82**	**102**	P	**Pn**	**12 00 40.4**	**-0.6**
JCH				*e*S	**Sn**	**12 00 54.3**	**-1.3**
JNB	**Noboribetsu**	**0.97**	**251**	P	**Pn**	**12 00 42.0**	**-0.5**
JNB				*e*S	**Sn**	**12 00 57.4**	**-0.7**
ERM	**Erimo**	**1.01**	**140**	*e*Pn	**Pn**	**12 00 43.5**	**+0.5**
ERM				*e*Sn	**Sn**	**12 01 00.8**	**+1.8**
JHR	**Hokuryu**	**1.03**	**337**	P	**Pn**	**12 00 43.5**	**+0.3**
JHR				*e*S	**Sn**	**12 00 59.9**	**+0.6**
JKK2	**Kamakawa 2**	**1.13**	**18**	P	**Pn**	**12 00 44.6**	**+0.3**
JKK2				*e*S	**Sn**	**12 01 01.3**	**+0.1**
JAR	**Ashorobuto**	**1.21**	**65**	P	**Pn**	**12 00 44.8**	**-0.2**
JAR				*e*S	**Sn**	**12 01 02.3**	**-0.4**
JKB	**Kayabe**	**1.29**	**226**	P	**Pn**	**12 00 45.6**	**-0.4**
JKB				*e*S	**Sn**	**12 01 03.6**	**-0.7**
ASAJ	**Asahikawa**	**1.34**	**10**	P	**Pn**	**12 00 47.0**	**+0.4**
	6.4nm,0.3s,baz=222,slow=8.9,SNR=130						
ASAJ				S	**Sn**	**12 01 04.4**	**-1.1**
	9.4nm,0.3s,baz=168,slow=14,SNR=8.2						
ASAJ	**Asahikawa**	**1.34**	**10**	PN	**Pn**	**12 00 47.1**	**+0.5**
ASAJ				S	**Sn**	**12 01 04.4**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,9.0nm,0.3s						
JSK	**Shakotan**	**1.43**	**294**	P	**Pn**	**12 00 47.7**	**+0.1**
JSK				*e*S	**Sn**	**12 01 07.3**	**0.0**
JTKR	**Abashiri--Toko**	**1.68**	**45**	P	**Pn**	**12 00 51.1**	**+0.5**
JTKR				*e*S	**Sn**	**12 01 13.3**	**+0.8**
JOT	**Ohata**	**1.68**	**213**	P	**Pn**	**12 00 50.2**	**-0.5**
JOT				*e*S	**Sn**	**12 01 11.4**	**-1.2**
JAK	**Akkeshi**	**1.79**	**83**	P	**Pn**	**12 00 51.4**	**-0.6**
JAK				*e*S	**Sn**	**12 01 13.6**	**-1.5**
MAT	**Matsushiro**	**6.98**	**208**	P	**Pn**	**12 02 01.2**	**-0.2**
MJAR	**Matsushiro Arr**	**6.99**	**208**	P	**Pn**	**12 02 01.5**	**+0.1**
	comp=N,0.9nm,0.3s,baz=33,slow=11,SNR=7.5						
KSRS	**Korea Array**	**12.21**	**246**	P	**Pn**	**12 03 12.5**	**+0.6**
	comp=N,0.1nm,0.3s,baz=60,slow=13,SNR=3.2						
SONM	**Songino Array**	**25.57**	**294**	P	**P**	**12 05 40.6**	**+0.1**
	comp=N,1.0nm,0.5s,mb3.5,baz=99,slow=9.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**38.74**	**307**	P	**P**	**12 07 34.8**	**-0.3**
	comp=N,0.4nm,0.3s,mb3.7,baz=87,slow=9.1,SNR=5.0						
MK31	**Makanchi Array**	**41.86**	**297**	*e*P	**P**	**12 08 00.4**	**-0.4**
MKAR	**Makanchi Array**	**41.86**	**297**	P	**P**	**12 08 00.6**	**-0.2**
	comp=N,1.5nm,0.6s,mb3.9,baz=80,slow=10.0,SNR=9.8						
TAPN	**Taplejung**	**46.45**	**269**	*e*P	**P**	**12 08 39.1**	**+1.3**
ODAN	**Odare**	**46.97**	**269**	*e*P	**P**	**12 08 42.6**	**+0.8**
JIRN	**Jiri**	**47.40**	**270**	*e*P	**P**	**12 08 45.6**	**+0.5**
GUN	**Gumba**	**47.49**	**271**	*e*P	**P**	**12 08 46.3**	**+0.5**
RAMN	**Ramite**	**47.50**	**269**	*e*P	**P**	**12 08 45.6**	**-0.3**
DANN	**Dangsing**	**48.81**	**273**	*e*P	**P**	**12 08 56.4**	**+0.5**
	comp=N,15nm,0.5s						
KOLN	**Koldanda**	**49.24**	**272**	*e*P	**P**	**12 08 59.2**	**-0.1**
	comp=N,5.3nm,0.3s,mb5.0						
PYUN	**Piuthan**	**49.51**	**273**	*e*P	**P**	**12 09 01.6**	**+0.3**
	comp=N,4.8nm,0.3s,mb4.9						
YKA	**Yellowknife Ar**	**58.54**	**32**	P	**P**	**12 10 05.9**	**-0.5**
	comp=N,1.8nm,0.7s,mb4.2,baz=304,slow=6.9,SNR=3.1						
OBN	**Obninsk**	**63.93**	**322**	*e*P	**P**	**12 10 41.2**	**-1.6**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
HFS	**Hagfors**	**69.13**	**335**	P	**P**	**12 11 14.8**	**-1.0**
	comp=Z,0.8nm,0.4s,mb3.9,baz=46,slow=6.4,SNR=6.6						
NVAR	**Mina Array Bea**	**71.08**	**55**	P	**P**	**12 11 28.6**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.4,baz=290,slow=6.0,SNR=5.8						
PDAR	**Pinedale Array**	**73.21**	**47**	P	**P**	**12 11 40.8**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=274,slow=1.6,SNR=5.2						
TXAR	**Lajitas Array**	**86.11**	**53**	P	**P**	**12 12 50.7**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=277,slow=3.3,SNR=5.7						
LHS	**Liberty Hill**	**93.60**	**34**	*e*P	**P**	**12 13 25.8**	**+0.1**

*CSEM **16** 12:10:14.7±0.1, 3685N×2927E, h2km, MD3.6, Error ellipse: s-maj=2.1km s-min=1.1km az=75.0*
*ISCJB **16** 12:10:17.0±0.3, 3686N±002×2931E±003, h10km, Error ellipse: s-maj=3.4km s-min=3.1km az=171.3*
*NEIC **16** 12:10:17.0, 3706N×2926E, h6km, ML3.5(ISK), ML3.3(ATH), After ISK.*
*ISK **16** 12:10:18.0, 3706N×2927E, h6km, MD3.5, ML3.5*
*DDA **16** 12:10:20.5, 3728N×2928E, h7km±7km, Md3.6*
*HLW **16** 12:10:24.4, 3654N×2934E, h33km, Mb3.6*
ISC 16 12:10:17.3±0.7, 3692N±003×2929E±003, h2km±5km, n54, σ1°93/62, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.38**	**35**	⇑*i*P	**Pg**	**12 10 24.4**	**-0.4**
GOLH				*i* S	**Sg**	**12 10 30.1**	**+0.4**
TURN	**Turunc**	**0.55**	**265**	*e*P	**Pg**	**12 10 32.6**	**+4.6**
TURN				*e*S	**Sg**	**12 10 44.6**	**+10**
KSL	**Kastellorizon**	**0.81**	**163**	PN	**Pn**	**12 10 33.2**	**-2.4**
YER	**Yerkesik**	**0.83**	**285**	*e*PG	**Pg**	**12 10 33.6**	**+0.3**
YER				*e*SG	**Sg**	**12 10 45.4**	**+1.3**
DENT	**Denizli**	**0.86**	**346**	*e*PG	**Pg**	**12 10 32.2**	**-1.5**
ANTB	**Antalya**	**1.09**	**91**	*e*PN	**Pn**	**12 10 39.8**	**+0.1**
ANTB				*e*SN	**Sn**	**12 10 56.2**	**+0.9**
ARG	**Arkhangelos**	**1.17**	**233**	P	**Pg**	**12 10 41.0**	**+1.2**
ARG	**Arkhangelos**	**1.17**	**233**	PN	**Pn**	**12 10 39.3**	**-1.4**
BCK	**Bucak**	**1.17**	**62**	*e*PN	**Pn**	**12 10 39.8**	**-0.8**
BCK				*e*SN	**Sn**	**12 10 56.2**	**-1.0**
MLSB	**Milas**	**1.27**	**288**	*e*PN	**Pn**	**12 10 41.5**	**-0.4**
ISP	**Isparta**	**1.34**	**46**	*e*PN	**Pn**	**12 10 42.1**	**-0.9**
ISP	**Isparta**	**1.34**	**46**	P	**Pn**	**12 10 42.7**	**-0.3**
AYDN	**Tasoluk**	**1.34**	**304**	*e*P	**Pn**	**12 10 42.4**	**-0.7**
AYDN				*e*S	**Sg**	**12 11 00.2**	**-0.4**
DAT	**Datca**	**1.39**	**263**	*e*PN	**Pn**	**12 10 44.2**	**+0.5**
KHL	**Karahalli**	**1.41**	**8**	*e*PN	**Pn**	**12 10 43.0**	**-1.0**
BDRM	**Kayabasi**	**1.48**	**276**	*e*P	**Pn**	**12 10 45.0**	**0.0**
BDRM				*e*S	**Sn**	**12 11 05.6**	**+0.7**
KULA	**Kula-Manisa**	**1.67**	**343**	*e*PN	**Pn**	**12 10 46.9**	**-0.6**
SHUT	**Suhut-Afyon**	**1.91**	**31**	*e*PN	**Pn**	**12 10 51.1**	**+0.2**
SMG	**Samos**	**2.11**	**293**	PN	**Pn**	**12 10 53.7**	**+0.1**
SMG	**Samos**	**2.11**	**293**	P	**Pn**	**12 10 53.8**	**+0.2**
KARP	**Karpathos**	**2.20**	**232**	P	**Pn**	**12 10 57.2**	**+2.4**
KARP	**Karpathos**	**2.20**	**232**	PB	**Pb**	**12 10 56.5**	**-1.3**
BOLV	**Bolvadin**	**2.23**	**36**	*e*P	**Pn**	**12 10 54.3**	**-0.9**
BOLV				*e*S	**Sn**	**12 11 24.1**	**+0.9**
AKS	**Akhisar**	**2.28**	**330**	*e*PN	**Pn**	**12 10 55.3**	**-0.6**
BLCB	**Balcova**	**2.31**	**310**	*e*PN	**Pn**	**12 10 55.3**	**-1.0**
HDMB	**Hadim**	**2.56**	**88**	*e*PN	**Pn**	**12 11 01.6**	**+1.8**
KONT	**Konya--Tatoy**	**2.65**	**66**	*e*PN	**Pn**	**12 11 02.4**	**+1.3**
DST	**Dursunbey**	**2.73**	**349**	*e*PN	**Pn**	**12 11 01.1**	**-1.1**
LADK	**Ladik-KONYA**	**2.76**	**61**	*e*PN	**Pn**	**12 11 03.7**	**+1.2**
KIZT	**Kizilcal**	**2.83**	**46**	*e*PN	**Pn**	**12 11 04.2**	**+0.6**
APE	**Apeiranthos**	**3.01**	**274**	P	**Pn**	**12 11 07.1**	**+1.1**
APE	**Apeiranthos**	**3.01**	**274**	PN	**Pn**	**12 11 06.6**	**+0.6**
ZKR	**Zakros**	**3.07**	**235**	P	**Pn**	**12 11 09.4**	**+2.5**
NPS	**Neapolis**	**3.41**	**242**	P	**Pn**	**12 11 14.0**	**+2.6**
NPS	**Neapolis**	**3.41**	**242**	PN	**Pn**	**12 11 13.0**	**+1.6**
GEMT	**Gemlik**	**3.51**	**359**	*e*PN	**Pn**	**12 11 13.0**	**+0.2**
IKL	**Isikli**	**3.60**	**100**	*e*PN	**Pn**	**12 11 16.6**	**+2.4**
GULT	**Gulveren**	**3.63**	**15**	*e*PN	**Pn**	**12 11 14.3**	**-0.2**
YLV	**Yalova**	**3.64**	**1**	*e*PN	**Pn**	**12 11 15.1**	**+0.4**
MERS	**Mersin**	**4.20**	**89**	*e*PN	**Pn**	**12 11 24.6**	**+2.3**
VLI	**Veliai**	**5.10**	**270**	PN	**Pn**	**12 11 34.2**	**-0.5**
HMAT	**Matruh**	**6.09**	**198**	P	**Pn**	**12 11 47.8**	**-0.6**
HRSH	**Kfar Ka'horesh**	**6.48**	**129**	P	**Pn**	**12 12 00.7**	**+7.0**
RSH		**6.99**	**147**	P	**Pn**	**12 12 00.7**	**0.0**
AMAG	**Maghara**	**7.06**	**151**	P	**Pn**	**12 12 01.1**	**-0.6**
KOT	**Kottamia**	**7.29**	**162**	P	**Pn**	**12 12 04.2**	**-0.6**
HHAG	**Hagoal**	**7.33**	**161**	P	**Pn**	**12 12 04.8**	**-0.7**
HSAF	**As Saff**	**7.53**	**165**	P	**Pn**	**12 12 07.5**	**-0.6**
HSAF	**As Saff**	**7.53**	**165**	P	**Pn**	**12 12 07.4**	**-0.6**
GLL	**Jalalah**	**7.60**	**164**	P	**Pn**	**12 12 08.1**	**-0.9**
SUZ		**7.66**	**156**	P	**Pn**	**12 12 09.0**	**-0.9**
HKAT	**Jabal Katrina**	**9.26**	**153**	P	**Pn**	**12 12 31.7**	**-0.2**
TR2		**9.29**	**155**	P	**Pn**	**12 12 31.9**	**-0.4**
HHRG	**Al Ghardaqah**	**10.33**	**158**	P	**Pn**	**12 12 46.4**	**-0.1**

*ISCJB **16** 12:19:44.8±0.5, 3998N±003×7286E±006, h10km, mb3.6/4, Error ellipse: s-maj=6.8km s-min=4.6km az=161.8*
*IDC **16** 12:19:45.9±1.1, 4007N×7303E, h0km, mb3.7/4, mb1 3.8/8, mb1mx3.6/24, mbtmp3.6/8, ML3.3/4, Error ellipse: s-maj=21.4km s-min=16.3km az=57.0*
*BJI **16** 12:19:50.3, 4019N×7299E, h32km, ML3.4*
*MOS **16** 12:19:51.2±1.9, 4043N×7282E, h33km, mb4.5/1, Error ellipse: s-maj=22.0km s-min=9.3km az=78.7*
*NNC **16** 12:19:52.4±1.6, 4054N×7317E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=15.2km s-min=5.8km az=4.0*
*NEIC **16** 12:19:54.3±0.9, 4045N×7297E, h63km±10km, mb3.6/1, Error ellipse: s-maj=11.9km s-min=9.4km az=119.0*
ISC 16 12:19:46.6±1.8, 4001N±004×7289E±006, h9km±13km, n49, σ1°19/58, mb3.6/4, 7C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.21**	**16**	*e*Pn	**Pn**	**12 20 23.1**	**-0.3**
AML				*e*Sn	**Sn**	**12 20 49.3**	**-1.4**
AML	**Almayashu**	**2.21**	**16**	P	**Pn**	**12 20 23.1**	**-0.2**
	SNR=1149						
KSH	**Kashi**	**2.42**	**101**	P	**Pn**	**12 20 29.4**	**+3.1**
KSH				S	**Sn**	**12 20 55.9**	**-0.1**
KSH				Smax			
	comp=N,99nm,0.6s						
KSH				Smax			
	comp=E,94nm,0.5s						
UCH	**Uchtor**	**2.54**	**28**	*e*Pn	**Pn**	**12 20 27.6**	**-0.2**
UCH				*e*Sn	**Sn**	**12 20 56.8**	**-1.9**
UCH	**Uchtor**	**2.54**	**28**	P	**Pn**	**12 20 28.5**	**+0.6**
	SNR=12						
KZA	**Kyzart**	**2.73**	**40**	P	**Pn**	**12 20 30.9**	**+0.4**
	SNR=45						
EKS2	**Erkin-Say**	**2.74**	**14**	*e*Pn	**Pn**	**12 20 31.2**	**+0.6**
EKS2				*e*Sn	**Sn**	**12 21 03.1**	**-0.6**
EKS2	**Erkin-Say**	**2.74**	**14**	P	**Pn**	**12 20 32.2**	**+1.6**
	SNR=65						
AAK	**Ala-Archa**	**2.89**	**24**	P	**Pn**	**12 20 33.4**	**+0.7**
	SNR=48						
KBK	**Karagaybulak**	**3.07**	**30**	P	**Pn**	**12 20 36.4**	**+1.2**
	SNR=51						
FRU	**Bishkek**	**3.11**	**24**	*e*PN	**Pn**	**12 20 37.6**	**+1.9**
FRU				*e*S	**Sn**	**12 21 15.0**	**+2.1**
FRU				pmax	pmax		
	comp=Z,117nm,1.8s						
FRU				smax			
	comp=E,850nm,2.0s						
CHMS	**Chumysh**	**3.30**	**24**	P	**Pn**	**12 20 38.9**	**+0.5**
	SNR=9.1						
ULHL	**Ulahol**	**3.38**	**47**	P	**Pn**	**12 20 39.4**	**0.0**
	SNR=28						
USP	**Ospenovka**	**3.47**	**20**	P	**Pn**	**12 20 42.2**	**+1.5**
	SNR=9.2						
TKM2	**Tokmak 2**	**3.55**	**34**	⇓Pn	**Pn**	**12 20 42.1**	**+0.3**
TKM2				⇑Pg	**Pg**	**12 20 47.0**	**-7.6**
	comp=E,28nm,0.5s						
TKM2				⇑Lg		12 21 26.3	
	comp=E,50nm,0.7s						
TKM2	**Tokmak 2**	**3.55**	**34**	*e*PN	**Pn**	**12 20 42.1**	**+0.3**
TKM2	**Tokmak 2**	**3.55**	**34**	P	**Pn**	**12 20 42.2**	**+0.5**
	SNR=11						
KK31	**Karatay Array**	**3.58**	**331**	Pn	**Pn**	**12 20 44.1**	**+2.0**
	comp=E,1.6nm,0.3s,baz=136,slow=14,SNR=200						
KK31				Pg	**Pg**	**12 20 51.2**	**-3.9**
	comp=E,13nm,0.4s,baz=135,slow=15,SNR=46						
KK31				⇑Sn	**Sn**	**12 21 25.5**	**+1.1**
	comp=E,21nm,0.3s,baz=138,slow=25,SNR=4.4						
KK31				⇓Lg		12 21 35.5	
	comp=E,19nm,0.3s,baz=138,slow=31,SNR=5.8						
KNDC	**Almaty**	**4.43**	**42**	⇑Pg	**Pg**	**12 21 02.8**	**-8.6**
	comp=E,44nm,0.5s						
KNDC				⇓Lg		12 21 57.0	
	comp=E,169nm,1.2s						
KBL	**Kabul**	**6.26**	**211**	*e*Pn	**Pn**	**12 21 30.4**	**+11**
	comp=E,8.8nm,0.5s						
KBL	**Kabul**	**6.26**	**211**	*e*PN	**Pn**	**12 21 30.4**	**+11**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MK31	**Makanchi Array**	**9.63**	**42**	⇑Pn	**Pn**	**12 22 05.5**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=229,slow=14,SNR=4.0						
MK31				⇑Lg		12 24 39.0	
	comp=Z,8.0nm,1.1s,baz=227,slow=28,SNR=4.0						
MK31	**Makanchi Array**	**9.63**	**42**	*e*P	**Pn**	**12 22 05.0**	**-0.2**
MKAR	**Makanchi Array**	**9.63**	**42**	Pn	**Pn**	**12 22 05.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=227,slow=14,SNR=4.2						
MKAR				Lg		12 24 41.0	
	comp=Z,0.2nm,0.3s,baz=223,slow=29,SNR=5.9						
MKAR	**Makanchi Array**	**9.63**	**42**	Pn	**Pn**	**12 22 05.1**	**-0.1**
MKAR				Lg		12 24 41.0	
KURBB	**Kurchatov Arra**	**11.33**	**19**	⇑Lg		12 25 33.0	
	comp=Z,1.5nm,0.8s						
AB01	**Akbulak array**	**13.04**	**319**	⇓Pn	**Pn**	**12 22 51.3**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=124,slow=14						
BVA0	**Borovoye Array**	**13.14**	**353**	⇓Lg		12 26 33.4	
	comp=Z,1.2nm,1.4s						
BVAR	**Borovoye Array**	**13.14**	**353**	Pn	**Pn**	**12 22 51.1**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=161,slow=14,SNR=7.3						
BVAR				Lg		12 26 41.1	
	comp=Z,0.2nm,0.3s,baz=167,slow=24,SNR=3.7						
BRVK	**Borovoye**	**13.18**	**353**	*e*Pn	**Pn**	**12 22 50.7**	**-3.0**
	comp=Z,5.5nm,1.2s						
BRVK	**Borovoye**	**13.18**	**353**	*e*P	**Pn**	**12 22 50.7**	**-3.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PYUN	**Piuthan**	**14.51**	**142**	*e*P	**Pn**	**12 23 11.4**	**-0.6**
DANN	**Dangsing**	**14.68**	**139**	*e*P	**Pn**	**12 23 13.0**	**-1.4**
	comp=Z,7.6nm,0.5s						
AKTK	**Aktyubinsk**	**14.76**	**320**	Pn	**Pn**	**12 23 14.3**	**-1.0**
AKTK				Sn	**Sn**	**12 25 53.0**	**-5.8**
AKTO	**Aktyubinsk**	**14.76**	**320**	⇓Pn	**Pn**	**12 23 20.3**	**+5.0**
	comp=Z,0.8nm,1.1s						
AKTO	**Aktyubinsk**	**14.76**	**320**	Pn	**Pn**	**12 23 14.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=189,slow=9.7,SNR=2.7						
AKTO				Sn	**Sn**	**12 25 53.0**	**-5.8**
	comp=Z,0.2nm,0.3s,baz=359,slow=17,SNR=2.3						
ZAA0	**Zalesovo Array**	**16.11**	**26**	*e*Pn	**Pn**	**12 23 31.9**	**-1.2**
ZAA0				*e*Sn	**Sn**	**12 26 27.5**	**-4.2**
ZALV	**Zalesovo Beam**	**16.11**	**26**	Pn	**Pn**	**12 23 31.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=13,SNR=2.9						
JIRN	**Jiri**	**16.52**	**134**	*e*P	**Pn**	**12 23 37.4**	**-1.0**
	comp=Z,7.0nm,0.5s						
RAMN	**Ramite**	**17.30**	**135**	*e*P	**Pn**	**12 23 47.4**	**-0.9**
TAPN	**Taplejung**	**17.61**	**131**	*e*P	**Pn**	**12 23 53.0**	**+0.8**
ARU	**Arti**	**18.94**	**335**	*e*P	**Pn**	**12 24 07.3**	**-0.9**
	comp=Z,1.9nm,0.4s						
ARU	**Arti**	**18.94**	**335**	*e*P	**Pn**	**12 24 07.3**	**-0.9**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	**ARCESS Array B**	**38.53**	**335**	P	**P**	**12 27 08.1**	**-0.7**
	comp=Z,3.0nm,0.9s,mb4.0,baz=106,slow=9.7,SNR=4.7						
ARCES	**ARCESS Array B**	**38.53**	**335**	P	**P**	**12 27 08.1**	**-0.7**
ARCES	**ARCESS Array B**	**38.53**	**335**	P	**P**	**12 27 08.1**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.30**	**268**	P	**P**	**12 30 43.8**	**+1.9**
	comp=Z,0.3nm,0.4s,mb3.7,baz=57,slow=5.0,SNR=5.9						
WRA	**Warramunga Arr**	**82.63**	**124**	P	**P**	**12 32 11.1**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=330,slow=5.5,SNR=8.4						
ASAR	**Alice Springs**	**85.08**	**126**	P	**P**	**12 32 23.3**	**+0.6**
	comp=Z,0.3nm,0.8s,mb3.5,baz=326,slow=5.8,SNR=5.7						

*IDC **16** 12:22:36.5±1.1, 4008N×7322E, h0km, mb3.8/5, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.5/3, Error ellipse: s-maj=35.2km s-min=18.6km az=61.0*
*ISCJB **16** 12:22:40.4±2.1, 400N±0.1×7292E±0.10, h36km±18km, mb3.8/6, Error ellipse: s-maj=20.8km s-min=11.3km az=19.1*
*MOS **16** 12:22:40.4±2.1, 4030N×7292E, h33km, mb4.3/1, Error ellipse: s-maj=27.6km s-min=12.8km az=91.0*
*NEIC **16** 12:22:42.1±0.9, 4019N×7297E, h35km, mb4.5/1, Error ellipse: s-maj=15.5km s-min=14.0km az=115.0*
*NNC **16** 12:22:44.4±2.1, 4060N×7328E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=16.9km s-min=4.9km az=2.0*
ISC 16 12:22:38.6±2.9, 4001N±007×7296E±009, h11km±19km, n37, σ1°07/33, mb3.8/6, 8C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.19**	**15**	*e*Pn	**Pn**	**12 23 13.4**	**-1.4**
AML	**Almayashu**	**2.19**	**15**	P	**Pn**	**12 23 13.9**	**-1.0**
	SNR=55						
UCH	**Uchtor**	**2.51**	**27**	*e*Pn	**Pn**	**12 23 18.0**	**-1.2**
UCH	**Uchtor**	**2.51**	**27**	P	**Sn**	**12 23 49.2**	**-0.5**
	SNR=7.6						
KZA	**Kyzart**	**2.70**	**39**	P	**Pn**	**12 23 23.0**	**+1.2**
	SNR=22						
EKS2	**Erkin-Say**	**2.72**	**13**	*e*Pn	**Pn**	**12 23 22.2**	**+0.1**
EKS2	**Erkin-Say**	**2.72**	**13**	P	**Pn**	**12 23 22.6**	**+0.4**
	SNR=24						
AAK	**Ala-Archa**	**2.87**	**23**	P	**Pn**	**12 23 23.9**	**-0.2**
	SNR=35						
KBK	**Karagaybulak**	**3.04**	**29**	P	**Pn**	**12 23 28.0**	**+1.4**
	SNR=7.4						
CHMS	**Chumysh**	**3.27**	**24**	P	**Pn**	**12 23 30.7**	**+0.9**
	SNR=14						
ULHL	**Ulahol**	**3.34**	**47**	P	**Pn**	**12 23 34.8**	**+4.1**
	SNR=22						
TKM2	**Tokmak 2**	**3.52**	**33**	⇑Pg	**Pg**	**12 23 37.3**	**-8.8**
	26nm,0.5s						
TKM2				⇓Lg		12 24 15.4	
	89nm,0.5s						
TKM2	**Tokmak 2**	**3.52**	**33**	*e*PN	**Pn**	**12 23 32.4**	**-0.8**
TKM2	**Tokmak 2**	**3.52**	**33**	P	**Pn**	**12 23 35.9**	**+2.7**
	SNR=5.4						
KK31	**Karatay Array**	**3.59**	**330**	⇓Pg	**Pg**	**12 23 43.3**	**-4.2**
	7.6nm

*HLW **16** 12:30:09.7, 29.75N×037.21E, h20km, Mb3.2*
*SGS **16** 12:30:13.7, 30.20N×036.33E, h2km*
*ISCJB **16** 12:30:16.2±0.6, 29.87N±0.003×036.26E±0.004, h0km, Error ellipse: s-maj=5.6km s-min=4.1km az=167.4*
*GII **16** 12:30:16.3±1.7, 29.80N×036.21E, h0km, ML2.3/5, EXPLOSION*
*CSEM **16** 12:30:17.0±0.4, 29.76N×036.22E, h2km, ML2.9, Error ellipse: s-maj=10.9km s-min=5.5km az=62.0*

ISC 16 12:30:16.5±0.6, 2988N±003×3628E±004, h0km, n34, σ0§98/40, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.08**	**262**	Pg	**Pg**	**12 30 36.7**	**-0.5**
HRFI	**Mount Harif**	**1.09**	**279**	Pg	**Pg**	**12 30 36.5**	**-0.9**
ZFRI	**Zfri**	**1.17**	**306**	Pg	**Pg**	**12 30 37.9**	**-1.0**
EIL	**Elat**	**1.18**	**260**	Pg	**Pg**	**12 30 38.4**	**-0.7**
EIL				Sg	**Sg**	**12 30 54.9**	**+0.6**
MBRI	**Mt Berech**	**1.19**	**266**	Pg	**Pg**	**12 30 38.6**	**-0.7**
MBRI				Sg	**Sg**	**12 30 56.8**	**+2.0**
PRNI	**Paran**	**1.21**	**294**	Pg	**Pg**	**12 30 38.9**	**-0.7**
HQLS		**1.21**	**242**	S	**Sg**	**12 30 56.0**	**+0.7**
HQLS		**1.21**	**242**	P	**Pg**	**12 30 38.6**	**-1.0**
HQLS		**1.21**	**242**	P	**Pg**	**12 30 38.6**	**-1.0**
HQLS				S	**Sg**	**12 30 56.0**	**+0.7**
JLOS		**1.33**	**211**	P	**Pg**	**12 30 41.3**	**-0.7**
KRMI	**Paran Flat**	**1.37**	**280**	Pn	**Pn**	**12 30 41.7**	**-1.2**
KRMI				Sn	**Sn**	**12 31 00.8**	**-1.0**
RMNI	**Mount Ramon**	**1.50**	**299**	Pn	**Pn**	**12 30 44.1**	**-0.5**
HBST	**Basata**	**1.50**	**244**	P	**Pn**	**12 30 44.1**	**-0.6**
MZDA	**Masada**	**1.63**	**331**	Pn	**Pn**	**12 30 46.4**	**-0.1**
TBKS	**Tabuk**	**1.67**	**172**	S	**Sn**	**12 31 10.6**	**+1.6**
TBKS	**Tabuk**	**1.67**	**172**	P	**Pn**	**12 30 46.5**	**-0.4**
BDAS	**Al Bad'**	**1.77**	**216**	S	**Sn**	**12 31 12.9**	**+1.3**
BDAS	**Al Bad'**	**1.77**	**216**	P	**Pn**	**12 30 47.6**	**-0.8**
YTIR	**Yattir**	**1.79**	**326**	Pn	**Pn**	**12 30 49.0**	**+0.3**
RTMI	**Retamim**	**1.81**	**311**	Pn	**Pn**	**12 30 48.8**	**-0.1**
RTMI				Sn	**Sn**	**12 31 13.2**	**+0.7**
DSI	**Dead Sea**	**1.86**	**336**	Pn	**Pn**	**12 30 50.3**	**+0.7**
HNKL	**Nakhl**	**2.00**	**272**	P	**Pn**	**12 30 52.2**	**+0.7**
HNKL	**Nakhl**	**2.00**	**272**	P	**Pn**	**12 30 52.2**	**+0.7**
RSHS		**2.04**	**220**	S	**Sn**	**12 31 20.6**	**+2.4**
RSHS		**2.04**	**220**	P	**Pn**	**12 30 50.6**	**-1.4**
HKAT	**Jabal Katrina**	**2.41**	**237**	P	**Pn**	**12 30 56.4**	**-0.8**
HMDT	**Nahal Hemdat**	**2.46**	**345**	Pn	**Pn**	**12 31 00.1**	**+2.3**
HMDT				Sn	**Sn**	**12 31 32.9**	**+4.4**
RSH		**2.46**	**297**	P	**Pn**	**12 30 58.7**	**+0.8**
MMLI	**Mount Malkishu**	**2.66**	**344**	Pn	**Pn**	**12 31 01.2**	**+0.6**
TR2		**2.69**	**237**	P	**Pn**	**12 31 00.1**	**-0.8**
AMAG	**Maghara**	**2.77**	**287**	P	**Pn**	**12 31 03.3**	**+1.2**
HRSH	**Kfar Ka'horesh**	**2.94**	**343**	P	**Pn**	**12 30 58.7**	**-5.8**
BIDS	**Bi'r al Bayda'**	**3.06**	**169**	P	**Pn**	**12 31 05.9**	**-0.2**
WJHS		**3.13**	**178**	P	**Pn**	**12 31 06.9**	**-0.2**

*NNC **16** 12:35:18.2±0.9, 42.25N×079.36E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=9.1km s-min=3.6km az=158.0*

ISC 16 12:35:17.1±2.3, 420N±02×795E±02, h10km, n11, σ0§43/12, 6C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**2.23**	**304**	⇓Pg	**Pn**	**12 35 54.8**	**+0.6**
KNDC	38nm,0.6s			⇓Lg		12 36 22.6	
	152nm,0.6s						
ULHL	**Ulahol**	**2.44**	**277**	P	**Pn**	**12 35 56.4**	**-0.6**
	SNR=141						
TKM2	**Tokmak 2**	**3.04**	**289**	⇑Pn	**Pn**	**12 36 05.1**	**-0.1**
TKM2	4.1nm,0.3s			⇑Sn	**Sn**	**12 36 41.7**	**+0.1**
	46nm,0.5s						
TKM2	**Tokmak 2**	**3.04**	**289**	P	**Pn**	**12 36 05.2**	**0.0**
	SNR=21						
KZA	**Kyzart**	**3.17**	**273**	P	**Pn**	**12 36 07.3**	**+0.2**
	SNR=12						
KBK	**Karagaybulak**	**3.44**	**283**	P	**Pn**	**12 36 10.9**	**+0.2**
	SNR=12						
USP	**Ospenovka**	**3.90**	**291**	P	**Pn**	**12 36 16.6**	**-0.5**
	SNR=7.3						
EKS2	**Erkin-Say**	**4.30**	**281**	P	**Pg**	**12 36 35.0**	**-4.4**
	SNR=7.0						
MK31	**Makanchi Array**	**5.19**	**22**	Pn	**Pn**	**12 36 35.2**	**+0.4**
	0.5nm,0.3s,baz=200,slow=13,SNR=40						
MK31				⇑Sn	**Sn**	**12 37 34.4**	**-0.3**
	1.2nm,0.4s,baz=204,slow=24,SNR=5.9						
MK31				⇑Lg		12 37 55.4	
	3.0nm,0.6s						
KK31	**Karatay Array**	**6.73**	**282**	⇑Pg	**Pg**	**12 37 18.9**	**-7.2**
	0.4nm,0.4s,baz=94,slow=15,SNR=6.6						
KK31				⇓Lg		12 38 46.7	
	2.3nm,0.5s,baz=98,slow=28,SNR=6.2						
KURK	**Kurchatov**	**8.74**	**356**	⇑Lg		12 39 46.5	
	10.0nm,1.4s						

*ISCJB **16** 12:54:19.3±2.2, 50.31N±0.008×177.63W±0.007, h12km±13km, mb4.3/27, MS3.4/3, Error ellipse: s-maj=13.3km s-min=7.5km az=5.3*
*MOS **16** 12:54:22.3±0.9, 50.28N×177.65W, h33km, mb4.7/10, Error ellipse: s-maj=18.1km s-min=10.1km az=112.6*
*IDC **16** 12:54:23.6±0.7, 50.27N×177.66W, h30km±5km, mb3.9/16, mb1 4.1/17, mb1mx4.0/25, mbtmp3.9/17, ML3.7/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/37, Error ellipse: s-maj=22.1km s-min=14.5km az=162.0*
*NEIC **16** 12:54:24.4±0.4, 50.34N×177.65W, h35km, mb4.6/7, Error ellipse: s-maj=12.0km s-min=6.9km az=174.0*

ISC 16 12:54:22.0±2.4, 5030N±008×17767W±007, h17km±15km, h33km±.7km: pP-P, n57, σ0§92/58, mb4.3/27, MS3.4/3, 4C-4D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**2.20**	**300**	P	**Pn**	**12 54 56.9**	**-0.7**
AMKA				S	**Sn**	**12 55 23.9**	**-0.6**
ATKA	**Atka Island**	**2.90**	**48**	P	**Pn**	**12 55 04.8**	**-2.4**
UNV	**Unalaska Valle**	**7.74**	**58**	ePn	**Pn**	**12 56 12.4**	**-1.3**
PETK	**Petropavlovsk-**	**15.50**	**290**	Pn	**Pn**	**12 58 00.8**	**+1.3**
PETK	0.3nm,0.3s,baz=95,slow=17,SNR=7.6			LR	LR	13 03 11.3	
	comp=Z,34nm,18.0s,baz=99,slow=34						
KDAK	**Kodiak Island**	**16.45**	**53**	Pn	**Pn**	**12 58 21.2**	**+10**
	0.6nm,0.3s,baz=324,slow=15,SNR=8.0						
BILL	**Bilibino**	**19.48**	**342**	*e*P	**Pn**	**12 58 48.7**	**-0.2**
	27nm,0.9s						
BILL	**Bilibino**	**19.48**	**342**	⇑*i*P	**Pn**	**12 58 48.9**	**0.0**
BILL				pmax	pmax		
	comp=Z,28nm,0.9s						
IMA2	**Indian Mountai**	**20.02**	**29**	*e*P	**P**	**12 58 54.0**	**+0.5**
SEY	**Seymchan**	**20.53**	**319**	⇓*i*P	**P**	**12 59 00.7**	**+1.7**
HABR	**Khabarovsk**	**30.43**	**285**	*e*P	**P**	**13 00 33.0**	**-0.1**
HABR				*e**PP	pP	13 00 41.6	+3.3
HABR				*e*S	**S**	**13 05 31.7**	**-1.3**
HABR				*e**SS	sS	13 05 47.6	+6.0
HABR				*e*		13 07 15.7	
HABR				*e*		13 11 07.2	
TIXI	**Tiksi**	**31.93**	**331**	*e*P	**P**	**13 00 45.2**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.8						
TIXI	**Tiksi**	**31.93**	**331**	*e*P	**P**	**13 00 44.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.2						
KLR	**Kul'dur**	**32.18**	**288**	*e*P	**P**	**13 00 44.2**	**-4.3**
YKA	**Yellowknife Ar**	**35.47**	**46**	P	**P**	**13 01 17.0**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.0,baz=279,slow=9.3,SNR=2.6						
YKA				LR	LR	13 16 05.4	
	comp=Z,29nm,18.4s,MS3.1,baz=170,slow=37						
MDJ	**Mudanjiang**	**35.47**	**282**	*e*P	**P**	**13 01 17.2**	**0.0**
EDM	**Edmonton**	**38.72**	**60**	*e*P	**P**	**13 01 44.8**	**+0.1**
BOD	**Bodaibo**	**39.20**	**308**	*e*P	**P**	**13 01 48.1**	**-0.5**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
HIA	**Hailar**	**39.36**	**294**	*e*P	**P**	**13 01 50.5**	**+0.4**
	comp=Z,2.7nm,0.3s,mb4.5						
HIA	**Hailar**	**39.36**	**294**	*e*P	**P**	**13 01 50.5**	**+0.4**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS	**Korea Array**	**40.39**	**273**	P	**P**	**13 01 59.2**	**+0.5**
	comp=Z,2.5nm,0.8s,mb4.0,baz=52,slow=9.4,SNR=7.9						
KSRS	**Korea Array**	**40.39**	**273**	P	**P**	**13 01 59.3**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
MCMT	**McKenzie Canyo**	**42.84**	**71**	*e*P	**P**	**13 02 21.1**	**+2.3**
NVAR	**Mina Array Bea**	**42.98**	**82**	P	**P**	**13 02 21.4**	**+1.4**
	comp=Z,1.1nm,0.9s,mb3.6,baz=292,slow=7.8,SNR=5.6						
PDAR	**Pinedale Array**	**45.96**	**72**	P	**P**	**13 02 44.0**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=340,slow=3.9,SNR=4.4						
ULN	**Ulaanbaatar**	**47.39**	**298**	⇑*e*P	**P**	**13 02 55.6**	**+0.8**
SONM	**Songino Array**	**47.78**	**298**	P	**P**	**13 02 57.8**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=80,slow=9.2,SNR=6.3						
ZAK	**Zakamensk**	**48.13**	**302**	*e*P	**P**	**13 03 01.6**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
PV01	**Paradox Valley**	**49.29**	**76**	*e*P	**P**	**13 03 08.5**	**-1.1**
SPITS	**Spitsbergen Ar**	**51.50**	**356**	P	**P**	**13 03 26.4**	**+0.5**
	comp=Z,20nm,1.1s,mb5.0,baz=54,slow=17,SNR=3.7						
TXAR	**Lajitas Array**	**58.11**	**81**	P	**P**	**13 04 13.1**	**-1.3**
	comp=Z,0.6nm,0.9s,mb3.6,baz=289,slow=3.8,SNR=5.5						
TXAR				pP	pP	13 04 22.9	+3.1
	comp=Z,0.7nm,0.8s,baz=302,slow=4.2,SNR=5.9						
KURK	**Kurchatov**	**60.28**	**315**	*e*P	**P**	**13 04 28.1**	**-1.0**
	comp=Z,11nm,1.1s,mb4.8						
KURK	**Kurchatov**	**60.28**	**315**	⇓*e*P	**P**	**13 04 29.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
MKAR	**Makanchi Array**	**61.27**	**310**	P	**P**	**13 04 35.4**	**-0.4**
	comp=Z,1.2nm,0.8s,mb4.1,baz=52,slow=8.1,SNR=7.1						
BVAR	**Borovoye Array**	**62.18**	**321**	LR	LR	13 33 40.2	
	comp=Z,45nm,19.3s,MS3.6,baz=289,slow=38						
BRVK	**Borovoye**	**62.19**	**321**	*e*P	**P**	**13 04 40.8**	**-1.1**
	comp=Z,7.5nm,0.9s,mb4.8						
BRVK	**Borovoye**	**62.19**	**321**	*e*P	**P**	**13 04 40.8**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
ARU	**Arti**	**63.90**	**329**	*d* *i*P	**P**	**13 04 53.7**	**+0.5**
ARU				*e*		13 07 11.1	
ARU				*e*S	**S**	**13 13 28.0**	**+0.4**
ARU				*e*SS	SS	13 17 31.2	-3.8
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
TKL	**Tuckaleechee C**	**65.81**	**63**	P	**P**	**13 05 07.4**	**+1.4**
NB2	**NORSAR Subarra**	**68.78**	**355**	P	**P**	**13 05 24.7**	**+0.3**
	comp=Z,4.7nm,1.2s,mb4.3,baz=6.3,slow=6.2						
NOA	**NORSAR Array B**	**68.78**	**355**	P	**P**	**13 05 24.4**	**-0.1**
	comp=Z,1.9nm,0.9s,mb4.0,baz=6.8,slow=6.3,SNR=3.7						
NOA				LR	LR	13 34 22.3	
	comp=Z,22nm,18.3s,MS3.4,baz=135,slow=35						
AML	**Almayashu**	**68.88**	**311**	*e*P	**P**	**13 05 22.5**	**-2.9**
	comp=Z,2.8nm,0.8s,mb4.2						
OBN	**Obninsk**	**71.13**	**340**	⇑*e*P	**P**	**13 05 39.8**	**+0.9**
OBN				*e*		13 06 01.0	
OBN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
CMAR	**Chiang Mai Arr**	**71.85**	**277**	P	**P**	**13 05 44.0**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=33,slow=4.9,SNR=6.2						
AKASG	**Malin Array Be**	**76.79**	**343**	P	**P**	**13 06 12.1**	**0.0**
	comp=Z,5.5nm,0.7s,mb4.6,baz=18,slow=5.9,SNR=16						
KIEV	**Kiev**	**76.80**	**343**	*e*P	**P**	**13 06 12.1**	**-0.1**
	comp=Z,10nm,1.2s,mb4.6						
KIEV	**Kiev**	**76.80**	**343**	*e*P	**P**	**13 06 12.1**	**-0.1**
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CTA	**Charters Tower**	**76.99**	**215**	P	**P**	**13 06 13.2**	**-0.2**
	comp=Z,8.5nm,0.9s,mb4.7,baz=31,slow=12,SNR=4.1						
DPC	**Dobruska-Polom**	**79.02**	**351**	*e*P	**P**	**13 06 25.3**	**+0.8**
KIV	**Kislovodsk**	**79.76**	**332**	⇓*e*P	**P**	**13 06 28.4**	**-0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KHC	**Kasperske Hory**	**80.48**	**353**	⇑*i*P	**P**	**13 06 33.8**	**+1.3**
KHC	**Kasperske Hory**	**80.48**	**353**	*e*P	**P**	**13 06 33.1**	**+0.6**
GERES	**GERESS Array B**	**80.75**	**352**	P	**P**	**13 06 33.6**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=24,slow=7.5,SNR=4.1						
WRA	**Warramunga Arr**	**81.74**	**225**	P	**P**	**13 06 38.5**	**-1.0**
	comp=Z,0.8nm,0.9s,mb3.7,baz=34,slow=5.9,SNR=5.5						
WRA				pP	pP	13 06 48.1	+3.0
	comp=Z,0.7nm,0.7s,baz=32,slow=5.7,SNR=4.5						
ASAR	**Alice Springs**	**85.19**	**223**	P	**P**	**13 06 56.5**	**-0.5**
	comp=Z,0.5nm,0.9s,mb3.7,baz=35,slow=8.2,SNR=3.8						
ASAR				pP	pP	13 07 06.2	+3.4
	comp=Z,0.9nm,0.8s,baz=20,slow=5.8,SNR=5.6						
STKA	**Stephens Creek**	**89.42**	**214**	P	**P**	**13 07 17.2**	**-0.1**
	comp=Z,2.1nm,0.9s,mb4.5,baz=33,slow=15,SNR=3.7						
STKA				pP	pP	13 07 27.6	+4.6
	comp=Z,4.0nm,0.9s,baz=293,slow=3.4,SNR=5.1						
STKA	**Stephens Creek**	**89.42**	**214**	P	**P**	**13 07 17.2**	**-0.1**
STKA				pP	pP	13 07 27.6	+4.6
BOSA	**Boshof**	**152.23**	**313**	pPKPbc	PKPab	13 14 26.5	+0.3
	comp=Z,2.2nm,0.7s,baz=66,slow=1.6,SNR=4.4						

*CSEM **16** 13:08:43.0±0.1, 37.17N×037.53E, h2km, MD3.1, Error ellipse: s-maj=5.0km s-min=2.6km az=177.0*
*ISK **16** 13:08:43.9, 37.14N×037.49E, h4km, MD2.6*
*ISCJB **16** 13:08:44.7±0.8, 37.13N±0.005×037.50E±0.005, h10km, Error ellipse: s-maj=7.7km s-min=4.8km az=156.1*
*DDA **16** 13:08:45.9, 37.16N×037.47E, h7km±5km, Md3.1*

ISC 16 13:08:44.8±1.0, 3711N±006×3748E±005, h1km±14km, n7, σ0§64/13, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.22**	**286**	*e*PG	**Pg**	**13 08 49.0**	**-0.1**
GZT	**Gaziantep**	**0.25**	**15**	*e*P	**Pg**	**13 08 48.2**	**-1.4**
GZT				*e*S	**Sg**	**13 08 52.9**	**0.0**
KMRS	**Kahramanmaras**	**0.61**	**311**	*e*PG	**Pg**	**13 08 55.8**	**-0.7**
KMRS				*e*SG	**Sg**	**13 09 04.9**	**+0.6**
URFA	**Urfa**	**1.12**	**72**	*e*PN	**Pg**	**13 09 05.8**	**-0.4**
URFA				*e*SN	**Sg**	**13 09 21.4**	**+0.6**
COBT	**Iskenderun**	**1.15**	**239**	*e*P	**Pg**	**13 09 07.4**	**+0.6**
COBT				*e*S	**Sn**	**13 09 24.1**	**0.0**
COBT	**Iskenderun**	**1.15**	**239**	*e*P	**Pg**	**13 09 07.4**	**+0.7**
COBT				*e*S	**Sn**	**13 09 24.1**	**-0.1**
AKCD	**Akcadag**	**1.23**	**16**	⇓*i*P	**Pg**	**13 09 08.5**	**0.0**
AKCD				*i*S	**Sg**	**13 09 25.3**	**+0.8**

IDC 16 13:10:12.2±2.2, 2311S×6970W, h0km, mb3.5/1, mb1 3.5/2, mb1mx3.3/16, mbtmp3.4/2, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/20, Error ellipse: s-maj=91.1km s-min=49.3km az=111.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**6.95**	**13**	Pn	Pn	13 11 55.9	+0.6
	0.2nm,0.3s,baz=185,slow=3.6,SNR=2.8						
ATAH	**Atahualpa**	**18.07**	**331**	LR	LR	13 22 10.9	
	comp=Z,35nm,19.7s,baz=86,slow=40						
TORD	**Torodi Ar. Bea**	**78.59**	**70**	P	P	13 22 16.3	+0.1
	0.2nm,0.4s,baz=262,slow=4.9,SNR=6.4						
ASAR	**Alice Springs**	**128.15**	**208**	PKP	PKPdf	13 29 20.9	-0.2
	0.2nm,0.8s,baz=160,slow=3.0,SNR=4.5						

*IDC **16** 13:12:12.0±1.2, 177N×126.68E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.8/16, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=56.5km s-min=20.0km az=68.0*
*ISCJB **16** 13:12:17.0±6.1, 16N±02×126.4E±02, h55km±53km, mb4.2/9, Error ellipse: s-maj=42.9km s-min=14.6km az=137.0*
*NEIC **16** 13:12:16.5±0.7, 165N×126.54E, h35km, mb4.5/5, Error ellipse: s-maj=19.1km s-min=10.6km az=60.0*

ISC 16 13:12:19.4±4.4, 16N±02×126.4E±02, h60km±39km, n13, σ0§80/13, mb4.2/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.34**	**226**	Pn	**Pn**	**13 14 31.8**	**+0.4**
	0.7nm,0.3s,baz=67,slow=13,SNR=3.2						
WRAB	**Tennant Creek**	**22.73**	**160**	*e*P	**P**	**13 17 15.9**	**-0.5**
	3.6nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**22.73**	**160**	P	**P**	**13 17 16.4**	**-0.1**
	2.9nm,0.6s,mb3.9,baz=341,slow=10.0,SNR=40						
WB2	**Warramunga Arr**	**22.74**	**160**	*e*P	**P**	**13 17 14.7**	**-1.8**
KULM	**Kulim**	**26.00**	**279**	*e*P	**P**	**13 17 46.4**	**-0.6**
ASAR	**Alice Springs**	**26.11**	**164**	P	**P**	**13 17 48.9**	**+1.1**
	0.9nm,0.4s,mb3.7,baz=345,slow=8.0,SNR=26						
ASAR				PcP	PcP	13 21 15.9	+1.8
	0.2nm,0.5s,baz=352,slow=1.7,SNR=4.2						
COCO	**West Island**	**32.42**	**244**	*e*P	**P**	**13 18 44.3**	**+0.3**
	13nm,0.3s,mb5.2						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**13 19 17.9**	**+1.2**
	0.8nm,0.5s,mb3.9,baz=340,slow=7.5,SNR=7.9						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**13 19 17.9**	**+1.2**
PALK	**Pallekele**	**45.92**	**279**	*e*P	**P**	**13 20 36.0**	**-0.7**
	5.0nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**13 22 14.9**	**+0.9**
	0.6nm,0.3s,mb4.0,baz=119,slow=8.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**62.38**	**334**	P	**P**	**13 22 35.6**	**-0.2**
	0.4nm,0.3s,mb4.0,baz=120,slow=8.5,SNR=2.8						
KURK	**Kurchatov**	**63.41**	**328**	*e*P	**P**	**13 22 42.5**	**-0.1**
	2.9nm,0.6s,mb4.6						

*ISCJB **16** 13:22:21.3±1.2, 2311S±005×706W±0.1, h46km±12km, Error ellipse: s-maj=17.2km s-min=8.2km az=13.8*
*GUC **16** 13:22:21.0±1.6, 2305S×7058W, h36km±6km, ML3.5*
*IDC **16** 13:22:22.7±6.8, 2349S×7014W, h32km±42km, mb3.8/1, mb1 3.8/3, mb1mx3.5/17, mbtmp3.7/3, ML3.6/2, Error ellipse: s-maj=70.6km s-min=48.9km az=150.0*

ISC 16 13:22:21.4±1.3, 2311S±005×707W±01, h39km±16km, n13, σ0§81/18, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.51**	**123**	⇓*i*P	**Pn**	**13 22 32.6**	**+0.3**
CEN1				*i*S	**Sn**	**13 22 40.5**	**+0.6**
CEN1				AML	AML	13 22 41.7	
	comp=E,2μm,0.5s						
ANCH	**Antofagasta**	**0.62**	**158**	⇑*i*P	**Pn**	**13 22 33.6**	**-0.1**
ANCH				*i*S	**Sn**	**13 22 42.3**	**-0.2**
ANCH				AML	AML	13 22 45.0	
	comp=N,3μm,0.2s						
PB06	**Plate Boundary**	**1.09**	**68**	⇓*i*P	**Pn**	**13 22 39.0**	**-1.1**
PB06				*i*S	**Sn**	**13 22 52.5**	**-1.4**
PB04	**Plate Boundary**	**1.38**	**53**	⇓*i*P	**Pn**	**13 22 36.4**	**-7.7**
PB04				*i*S	**Sn**	**13 22 47.9**	**-13**
PB04				AML	AML	13 22 50.2	
	comp=E,8μm,0.5s						
PB07	**Plate Boundary**	**1.55**	**28**	*e*P	**Pn**	**13 22 46.5**	**-0.1**
PB07				*i*S	**Sn**	**13 23 05.6**	**+0.1**
LVC	**Limon Verde**	**1.69**	**73**	Pg	**Pn**	**13 22 49.1**	**+0.6**
	comp=E,108nm,0.3s,SNR=529						
LVC				Lg		13 23 09.6	
	comp=E,224nm,0.3s,SNR=41						
LVC	**Limon Verde**	**1.69**	**73**	⇓*i*P	**Pn**	**13 22 49.3**	**+0.9**
LVC				*i*S	**Sn**	**13 23 10.0**	**+1.1**
LVC				AML	AML	13 23 12.5	
	comp=N,693nm,0.5s						
PB01	**Plate Boundary**	**2.33**	**28**	⇑*i*P	**Pn**	**13 22 57.4**	**+0.2**
PB01				*i*S	**Sn**	**13 23 25.5**	**+0.9**
PB01				AML	AML	13 23 35.5	
	comp=N,517nm,0.4s						
LPAZ	**La Paz**	**7.19**	**20**	Pn	**Pn**	**13 24 09.3**	**+5.2**
	comp=N,0.3nm,0.3s,baz=200,slow=12,SNR=3.2						
SIV	**San Ignacio**	**11.48**	**54**	Pn	**Pn**	**13 25 01.2**	**-1.7**
	comp=N,0.5nm,0.3s,baz=237,slow=12,SNR=13						
TORD	**Torodi Ar. Bea**	**79.42**	**71**	P	**P**	**13 34 24.4**	**+0.4**
	comp=N,1.0nm,0.7s,baz=259,slow=5.4,SNR=9.1						
WRA	**Warramunga Arr**	**130.74**	**212**	PKP	PKPdf	13 41 31.3	+2.2
	comp=N,0.3nm,0.8s,baz=150,slow=1.4,SNR=5.1						
MKAR	**Makanchi Array**	**147.88**	**36**	PKPbc	PKPbc	13 42 03.7	+1.6
	comp=N,0.5nm,0.7s,baz=323,slow=2.4,SNR=7.2						

*ISCJB **16** 13:39:44.1±0.7, 5174S±008×1612E±02, h10km, Error ellipse: s-maj=18.0km s-min=8.8km az=30.2*
*NEIC **16** 13:39:45.3±0.7, 5191S×16120E, h10km, mb4.2/1, Error ellipse: s-maj=15.8km s-min=8.6km az=126.0*
*GCMT **16** 13:39:52.0±0.3, 5177S×16078E, h32km±1km, MW5.1/62, Moment Tensor Solution. s28,c37; s62,c87; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.07±.25; Mθθ 4.71±.20; Mϕϕ -4.79±.18; Mrθ -1.67±.29; Mrϕ 2.44±.18; Mθϕ 0.51±.32; Best double couple: Mo 5.61700×10^16 NP1: ϕ211.00000°, δ73.00000°, λ176.00000°. NP2: ϕ302.00000°, δ86.00000°, λ17.00000°. Principal axes: T 5.7060, Plg15.0000°, Azm168.0000°; N -0.1840, Plg72.0000°, Azm314.0000°; P -5.5270, Plg9.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 16 13:39:46.6±0.7, 5178S±008×1612E±02, h10km, n12, σ1§20/14, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**3.04**	**205**	*e*Pn	**Pn**	**13 40 31.0**	**-3.7**
MCQ				*e*Sn	**Sn**	**13 41 03.7**	**-7.4**
WHZ	**Wether Hill Ro**	**7.38**	**40**	P	**Pn**	**13 41 34.1**	**-0.3**
MLZ	**Mavora Lakes**	**7.92**	**38**	P	**Pn**	**13 41 42.5**	**+0.7**
TUZ	**Tuapeka**

CEN1	**Los Morros**	**0.61**	**146**	⇑*iP*	**Pn**	**14 07 05.4**	**+0.3**
CEN1				*i* S	**Sn**	**14 07 15.8**	**+2.0**
CEN1				AML	AML	14 07 17.7	
	comp=E,4μm,0.5s						
ANCH	**Antofagasta**	**0.81**	**170**	⇑*iP*	**Pn**	**14 07 06.8**	**-1.0**
ANCH				*i* S	**Sn**	**14 07 18.2**	**-0.4**
PB06	**Plate Boundary**	**0.94**	**79**	⇓*iP*	**Pn**	**14 07 08.1**	**-1.4**
PB06				*i* S	**Sn**	**14 07 20.7**	**-1.0**
PB04	**Plate Boundary**	**1.17**	**59**	⇓*iP*	**Pn**	**14 07 03.2**	**-10**
PB04				*i* S	**Sn**	**14 07 12.2**	**-15**
PB04				AML	AML	14 07 19.2	
	comp=N,8μm,0.5s						
PB07	**Plate Boundary**	**1.31**	**29**	⇑*iP*	**Pn**	**14 07 13.3**	**-1.4**
PB07				*i* S	**Sn**	**14 07 30.4**	**-0.6**
LVC	**Limon Verde**	**1.55**	**80**	Pg	**Pn**	**14 07 18.3**	**+0.3**
	comp=N,200nm,0.3s,SNR=17						
LVC				Lg		14 07 39.4	
	comp=N,374nm,0.3s,SNR=22						
LVC	**Limon Verde**	**1.55**	**80**	⇑*iP*	**Pn**	**14 07 18.2**	**+0.3**
LVC				*i* S	**Sn**	**14 07 38.3**	**+1.4**
LVC				AML	AML	14 07 41.7	
	comp=E,2μm,0.4s						
PB01	**Plate Boundary**	**2.09**	**29**	*eP*	**Pn**	**14 07 26.2**	**+0.8**
PB01				*i* S	**Sn**	**14 07 52.8**	**+2.7**
PB01				AML	AML	14 07 57.8	
	comp=E,3μm,0.4s						
SPCH	**San Pedro de A**	**2.18**	**91**	*eP*	**Pn**	**14 07 30.7**	**+4.0**
SPCH				*i* S	**Sn**	**14 07 59.4**	**+6.9**
SPCH	**San Pedro de A**	**2.18**	**91**	*eP*	**Pn**	**14 07 30.7**	**+4.0**
SPCH				*i* S	**Sn**	**14 07 59.4**	**+6.9**
SPCH				AML	AML	14 08 09.6	
	comp=N,4μm,0.4s						
LPAZ	**La Paz**	**6.95**	**20**	Pn	**Pn**	**14 08 33.0**	**+0.8**
	comp=N,0.6nm,0.3s,baz=205,slow=6.8,SNR=6.2						
CFAA	**Coronel Fontan**	**8.93**	**167**	Pn	**Pn**	**14 08 59.2**	**-0.1**
	comp=N,0.1nm,0.3s,baz=18,slow=20,SNR=1.9						
SIV	**San Ignacio**	**11.28**	**54**	Pn	**Pn**	**14 09 29.3**	**-2.2**
	comp=N,1.5nm,0.3s,baz=246,slow=12,SNR=17						
TXAR	**Lajitas Array**	**60.91**	**327**	P	**P**	**14 17 02.6**	**+1.2**
	comp=N,0.2nm,0.7s,mb3.4,baz=136,slow=11,SNR=3.1						
DBIC	**Dimbokro**	**70.60**	**74**	P	**P**	**14 18 04.0**	**-0.2**
	comp=N,1.2nm,0.4s,mb4.2,baz=254,slow=7.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**79.26**	**71**	P	**P**	**14 18 53.9**	**-0.3**
	comp=N,2.5nm,0.5s,mb4.4,baz=256,slow=5.3,SNR=31						
ASAR	**Alice Springs**	**127.97**	**209**	PKP	PKPdf	14 25 54.0	-0.7
	comp=N,0.3nm,0.9s,baz=134,slow=1.7,SNR=3.6						
WRA	**Warramunga Arr**	**130.98**	**212**	PKP	PKPdf	14 26 01.9	+1.3
	comp=N,0.2nm,0.7s,baz=149,slow=1.6,SNR=5.2						
WRA				pPKP	pPKPdf	14 26 10.2	-3.6
	comp=N,0.4nm,0.9s,baz=193,slow=3.4,SNR=2.1						
ZALV	**Zalesovo Beam**	**143.85**	**25**	PKP	PKPdf	14 26 23.4	+0.3
	comp=N,0.4nm,0.3s,baz=298,slow=3.1,SNR=3.5						
MKAR	**Makanchi Array**	**147.65**	**36**	PKPbc	PKPbc	14 26 33.1	+0.6
	comp=N,0.9nm,0.7s,baz=340,slow=2.4,SNR=9.5						
MKAR				pPKPbc	pPKPbc	14 26 41.0	-4.8
	comp=N,0.7nm,0.7s,baz=349,slow=2.6,SNR=6.2						

IDC ***16*** *14:17:30.2±1.8,4980N×8724E,h0km,mb4.4/1,mb1 4.7/1, mb1mx3.4/20,mbtmp4.4/1,ML2.5/2,Error ellipse: s-maj=34.5km s-min=14.4km az=114.0*

ISCJB ***16*** *14:17:34.7±1.4,4983N±006×867E±0.1,h10km,Error ellipse: s-maj=13.6km s-min=7.5km az=18.6*

NNC ***16*** *14:17:37.6±2.6,4981N×8645E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=23.1km s-min=9.7km az=54.0*

NEIC ***16*** *14:17:37.9±2.5,4985N×8677E,h35km,Error ellipse: s-maj=41.7km s-min=10.6km az=106.0*

ISC 16 14:17:35.5±1.4,4979N±006×868E±01,h10km,n9, σ0§94/15,7C-1D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**4.22**	**227**	⇑Pn	**Pn**	**14 18 41.3**	**+1.4**
	0.1nm,0.3s						
MK31				⇑Pg	**Pg**	**14 18 53.3**	**-3.1**
	1.5nm,0.5s,baz=48,slow=13,SNR=23						
MK31				⇑Lg		14 19 46.8	
	3.5nm,0.5s,baz=67,slow=34,SNR=8.5						
MK31	**Makanchi Array**	**4.22**	**227**	*e*Pn	**Pn**	**14 18 40.0**	**+0.1**
MK31				*e*S	**Sn**	**14 19 41.1**	**+12**
MKAR	**Makanchi Array**	**4.22**	**227**	Pn	**Pn**	**14 18 40.9**	**+0.9**
	0.1nm,0.3s,baz=45,slow=14,SNR=13						
MKAR				Lg		14 19 49.9	
	2.1nm,0.3s,baz=45,slow=28,SNR=8.3						
ZAA0	**Zalesovo Array**	**4.34**	**345**	*e*Pn	**Pn**	**14 18 40.9**	**-0.6**
ZAA0				*e*Sn	**Sn**	**14 19 32.7**	**+0.6**
ZALV	**Zalesovo Beam**	**4.34**	**345**	Pn	**Pn**	**14 18 40.1**	**-1.3**
	0.4nm,0.3s,baz=163,slow=14,SNR=6.3						
ZALV				Sn	**Sn**	**14 19 32.6**	**+0.6**
	1.2nm,0.3s,baz=164,slow=28,SNR=5.9						
ZALV				Lg		14 19 49.5	
	2.0nm,0.3s,baz=160,slow=31,SNR=12						
KURK	**Kurchatov**	**5.30**	**283**	⇑Sn	**Sn**	**14 19 56.4**	**+0.6**
	1.7nm,0.8s						
KURK				⇓Lg		14 20 20.7	
	7.0nm,0.7s						
KURK	**Kurchatov**	**5.30**	**283**	*e*Pn	**Pn**	**14 18 54.4**	**-0.3**
	9.3nm,0.8s						
KURK				*e*Sn	**Sn**	**14 19 55.7**	**-0.1**
KURBB	**Kurchatov Arra**	**5.35**	**282**	⇑Pn	**Pn**	**14 18 55.9**	**+0.6**
	0.2nm,0.3s						
KURBB				⇑Sn	**Sn**	**14 19 56.4**	**-0.6**
	0.5nm,0.8s						
KURBB				⇑Lg		14 20 22.6	
	0.9nm,0.7s						
YKA	**Yellowknife Ar**	**66.79**	**11**	P	**P**	**14 28 21.8**	**-4.8**
	4.5nm,0.9s,baz=330,slow=7.2,SNR=2.5						

CSEM ***16*** *14:19:59.3±0.3,3696N×2939E,h12km,MD2.8,Error ellipse: s-maj=7.1km s-min=3.3km az=150.0*

ISCJB ***16*** *14:20:00.6±2.0,370N±0.1×2935E±009,h9km±9km,Error ellipse: s-maj=23.8km s-min=8.3km az=156.9*

ISK ***16*** *14:20:00.1,3700N×2937E,h12km,MD2.8*

DDA ***16*** *14:20:01.9,3719N×2922E,h7km±8km,Md3.0*

ISC 16 14:20:00.9±2.1,370N±01×2937E±010,h13km±8km,n7, σ0§70/11,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.30**	**30**	*i* P	**Pg**	**14 20 06.7**	**-0.5**
GOLH				*i* S	**Sg**	**14 20 12.7**	**+1.4**
DENT	**Denizli**	**0.82**	**341**	*e*PG	**Pg**	**14 20 16.2**	**-0.7**
YER	**Yerkesik**	**0.89**	**281**	*e*PG	**Pg**	**14 20 18.1**	**0.0**
YER				*e*SG	**Sg**	**14 20 29.5**	**-0.2**
MLSB	**Milas**	**1.32**	**285**	*e*PN	**Pn**	**14 20 24.6**	**-0.3**
MLSB				*e*SN	**Sn**	**14 20 43.0**	**+0.6**
DAT	**Datca**	**1.46**	**261**	*e*PN	**Pn**	**14 20 26.4**	**-0.5**
DAT				*e*SN	**Sn**	**14 20 46.7**	**+0.8**
BDRM	**Kayabasi**	**1.55**	**274**	*i* P	**Pn**	**14 20 28.7**	**+0.6**
KULA	**Kula-Manisa**	**1.64**	**340**	*e*PN	**Pn**	**14 20 28.3**	**-1.1**

GUC ***16*** *14:34:06.4±1.2,2324S×7066W,h27km±10km,ML4.8*

NEIC ***16*** *14:34:07.4,2338S×7057W,h44km,mb5.0/29,After GUC. NEIC Felt at Antofagasta.*

MOS ***16*** *14:34:07.8±1.3,2291S×7031W,h33km,mb5.0/13,Error ellipse: s-maj=19.7km s-min=10.0km az=105.1*

GCMT ***16*** *14:34:07.4±0.3,2316S×7088W,h30km±1km,MW5.2/57, Moment Tensor Solution. s36,c46; s57,c80; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.68±.24; Mθθ0.20±.16; Mϕϕ-4.88±.18; Mrθ-0.34±.24; Mθϕ0.20±.11; Mϕr-5.41±.31; Best double couple: Mo7.23000×10¹⁶ NP1:ϕs353.00000°,δ21.00000°,λ81.00000°. NP2: ϕs182.00000°,δ69.00000°,λ93.00000°. Principal axes: T 7.1420, Plg66.0000°, Azm98.0000°; N 0.1770, Plg3.0000°, Azm1.0000°; P -7.3190, Plg24.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***16*** *14:34:08.3±0.4,2331S±003×7039W±005,h44km±3km, mb4.9/40,MS4.6/13 Error ellipse: s-maj=7.3km s-min=4.8km az=178.1*

IDC ***16*** *14:34:08.7±2.6,2318S×7041W,h35km±19km,mb4.3/14, mb1 4.4/18,mb1mx4.3/22,mbtmp4.3/18,ML3.6/3,MS4.4/17, Ms1 4.4/17,ms1mx4.2/22,Error ellipse: s-maj=18.0km s-min=13.8km az=91.0*

BJI ***16*** *14:34:09.1,2340S×7060W,h25km,mB5.1,Ms5.5,Msz5.0*

ISC 16 14:34:09.1±0.5,2333S±003×7041W±004,h35km±3km, h28km±3.1km:pP-P,n312,σ0§72/272,mb4.9/40,MS4.6/13,

82C-83D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.21**	**108**	*e*P	**Pb**	**14 34 15.5**	**-0.4**
CEN1				*i* S	**Sb**	**14 34 22.2**	**+1.6**
CEN1				AML	AML	14 34 24.4	
	comp=E,69μm,0.7s						
ANCH	**Antofagasta**	**0.35**	**179**	⇓*iP*	**Pb**	**14 34 16.6**	**-1.1**
ANCH				*i* S	**Sb**	**14 34 22.9**	**-0.7**
ANCH	**Antofagasta**	**0.35**	**179**	⇓*iP*	**Pb**	**14 34 16.6**	**-1.1**
ANCH				*i* S	**Sb**	**14 34 22.9**	**-0.7**
ANCH				AML	AML	14 34 29.4	
	comp=E,60μm,0.5s						
PB06	**Plate Boundary**	**0.99**	**52**	⇓*iP*	**Pn**	**14 34 26.1**	**-0.4**
PB06				*i* S	**Sn**	**14 34 41.1**	**+1.8**
PB04	**Plate Boundary**	**1.36**	**39**	⇓*iP*	**Pn**	**14 34 24.3**	**-7.3**
PB04				*i* S	**Sn**	**14 34 38.9**	**-9.5**
PB04				AML	AML	14 34 41.5	
	comp=E,61μm,0.4s						
LVC	**Limon Verde**	**1.56**	**63**	Pg	**Pn**	**14 34 36.2**	**+1.9**
LVC				Lg		14 34 58.4	
	comp=E,6μm,0.3s,SNR=48						
LVC	**Limon Verde**	**1.56**	**63**	*e*P	**Pn**	**14 34 36.3**	**+2.0**
LVC				*i* S	**Sn**	**14 34 58.6**	**+5.3**
LVC				AML	AML	14 35 01.9	
	comp=N,21μm,0.5s						
PB07	**Plate Boundary**	**1.67**	**17**	*e*P	**Pn**	**14 34 34.4**	**-1.4**
PB07				*i* S	**Sn**	**14 34 56.5**	**+0.5**
PB01	**Plate Boundary**	**2.43**	**21**	*e*P	**Pn**	**14 34 47.5**	**+1.2**
PB01				*i* S	**Sn**	**14 35 18.5**	**+3.7**
PB01				AML	AML	14 35 21.9	
	comp=E,13μm,0.5s						
CPCH	**Copiapo**	**4.01**	**179**	*e*P	**Pn**	**14 35 07.4**	**-0.7**
ARE	**Arequipa**	**6.90**	**351**	*e*P	**Pn**	**14 35 43.0**	**-4.9**
ARE				*e*S	**Sn**	**14 36 56.0**	**-9.2**
LPAZ	**La Paz**	**7.32**	**17**	Pn	**Pn**	**14 35 53.1**	**-0.5**
	comp=E,0.9nm,0.3s,baz=206,slow=8.4,SNR=9.9						
LPAZ				LR	LR	14 38 55.3	
	comp=E,3μm,19.5s,baz=204,slow=40						
LPAZ	**La Paz**	**7.32**	**17**	*e*P	**Pn**	**14 35 54.4**	**+0.8**
CFAA	**Coronel Fontan**	**8.47**	**167**	Pn	**Pn**	**14 36 11.9**	**+2.6**
	comp=E,0.4nm,0.3s,baz=352,slow=13,SNR=11						
CFAA				Sn	**Sn**	**14 37 49.0**	**+5.3**
	comp=E,0.4nm,0.3s,baz=10,slow=18,SNR=1.4						
CFAA				LR	LR	14 39 41.1	
	comp=E,435nm,21.1s,baz=334,slow=39						
CFAA	**Coronel Fontan**	**8.47**	**167**	Pn	**Pn**	**14 36 11.9**	**+2.6**
CFAA				Sn	**Sn**	**14 37 49.0**	**+5.3**
CFAA				LR	LR	14 39 41.1	
SIV	**San Ignacio**	**11.43**	**52**	Pn	**Pn**	**14 36 48.1**	**-1.8**
	comp=E,7.4nm,0.3s,baz=248,slow=14,SNR=43						
SIV				Sn	**Sn**	**14 38 56.1**	**-0.3**
	comp=E,0.5nm,0.3s,baz=261,slow=16,SNR=1.0						
NNA	**Nana**	**12.83**	**330**	Pn	**Pn**	**14 37 11.8**	**+2.7**
	comp=E,1.6nm,0.3s,baz=184,slow=16,SNR=2.3						
NNA				Sn	**Sn**	**14 39 16.1**	**-15**
	comp=E,1.3nm,0.3s,baz=228,slow=19,SNR=4.3						
NNA				LR	LR	14 41 18.7	
	comp=E,1μm,21.8s,baz=154,slow=34						
PLCA	**Paso Flores**	**17.36**	**180**	P	**Pn**	**14 38 07.3**	**-1.2**
	comp=E,0.3nm,0.3s,baz=352,slow=11,SNR=9.4						
PLCA				LR	LR	14 45 22.7	
	comp=E,877nm,18.7s,baz=359,slow=38						
PLCA	**Paso Flores**	**17.36**	**180**	*e*Pn	**Pn**	**14 38 04.6**	**-4.0**
	comp=E,23nm,1.1s						
PLCA	**Paso Flores**	**17.36**	**180**	*e*P	**Pn**	**14 38 04.6**	**-3.9**
PLCA				pmax	pmax		
	comp=Z,23nm,1.1s						
ATAH	**Atahualpa**	**17.95**	**333**	P	**Pn**	**14 38 12.4**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=98,slow=14,SNR=1.6						
ATAH				LR	LR	14 43 58.0	
	comp=Z,658nm,21.6s,baz=308,slow=33						
BDFB	**Brasilia**	**22.44**	**74**	P	**P**	**14 39 03.6**	**-1.5**
	comp=Z,10nm,0.9s,mb4.3,baz=241,slow=16,SNR=12						
BDFB				LR	LR	14 49 43.5	
	comp=Z,654nm,18.0s,MS4.1,baz=96,slow=42						
BDFB	**Brasilia**	**22.44**	**74**	P	**P**	**14 39 03.6**	**-1.5**
BDFB				LR	LR	14 49 43.5	
OTAV	**Otavalo**	**24.69**	**340**	*e*P	**P**	**14 39 28.2**	**+1.2**
ROSC	**El Rosal**	**28.27**	**352**	LR	LR	14 51 41.4	
	comp=Z,686nm,19.6s,MS4.2,baz=28,slow=37						
EFI	**East Falkland**	**29.86**	**164**	*e*P	**P**	**14 40 10.0**	**-3.1**
	comp=Z,33nm,0.8s,mb5.1						
EFI	**East Falkland**	**29.86**	**164**	*e*P	**P**	**14 40 10.0**	**-3.1**
EFI				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.1						
USHA	**Ushuaia**	**31.50**	**178**	P	**P**	**14 40 27.8**	**+0.3**
	comp=Z,3.6nm,0.6s,mb4.4,baz=349,slow=5.8,SNR=3.0						
RCBR	**Riachuelo**	**37.51**	**68**	*e*P	**P**	**14 41 20.4**	**+0.5**
CPD	**Cerro la Pandu**	**41.34**	**6**	*e*P	**P**	**14 41 47.6**	**-4.1**
	comp=Z,32nm,1.1s,mb4.9						
CPD	**Cerro la Pandu**	**41.34**	**6**	*e*P	**P**	**14 41 47.6**	**-4.1**
CPD				pmax	pmax		
	comp=Z,32nm,1.1s,mb4.9						
SJG	**San Juan**	**41.39**	**6**	*e*P	**P**	**14 41 48.7**	**-3.5**
MTP	**Monte Pirata**	**41.44**	**7**	*e*P	**P**	**14 41 49.5**	**-3.0**
VNA3	**Neumayer Olymp**	**58.81**	**161**	*e*P	**P**	**14 44 04.2**	**+0.6**
VNA3				*e*	pP	14 44 12.2	-1.9
VNA3				*e*	pP	14 44 15.4	+1.3
RKT	**Rikitea**	**58.85**	**256**	*e*S	**S**	**14 52 08.4**	**+0.2**
	comp=Z,679nm,26.2s						
RKT				*e*LR	LR	15 01 23.8	
	comp=Z,1μm,26.2s						
VNA1	**Neumayer--Stat**	**59.05**	**160**	*e*P	**P**	**14 44 06.7**	**+1.5**
VNA1				*e*	pP	14 44 14.1	-1.7
VNA1				*e*	pP	14 44 18.4	+2.6
VNA2	**Neumayer--Watz**	**59.41**	**160**	*e*P	**P**	**14 44 08.8**	**+1.1**
	baz=298,slow=8.8						
VNA2				*e*	pP	14 44 16.4	-1.9
VNA2				*e*	pP	14 44 19.7	+1.4
SWET	**Sewanee**	**60.05**	**345**	*e*P	**P**	**14 44 09.8**	**-2.7**
JCT	**Junction City**	**60.48**	**331**	*e*P	**P**	**14 44 14.0**	**-1.6**
	comp=Z,10nm,0.8s,mb4.9						
JCT	**Junction City**	**60.48**	**331**	*e*P	**P**	**14 44 14.0**	**-1.6**
JCT				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
SNAA	**Sanae**	**61.02**	**160**	*e*P	**P**	**14 44 17.6**	**-1.2**
SNAA				*e*	pP	14 44 25.6	-3.8
SNAA				*e*	pP	14 44 28.8	-0.6
TXAR	**Lajitas Array**	**61.36**	**327**	P	**P**	**14 44 20.0**	**-1.5**
	comp=Z,0.9nm,0.8s,mb4.0,baz=147,slow=8.5,SNR=11						
TXAR				LR	LR	15 07 24.3	
	comp=Z,216nm,18.0s,MS4.3,baz=10.0,slow=33						
TXAR	**Lajitas Array**	**61.36**	**327**	P	**P**	**14 44 20.0**	**-1.5**
TXAR				LR	LR	15 07 24.3	
WVT	**Waverly**	**61.38**	**344**	*e*P	**P**	**14 44 17.2**	**-4.4**
	comp=Z,230nm,3.0s						
WVT	**Waverly**	**61.38**	**344**	*e*P	**P**	**14 44 17.2**	**-4.4**
WVT				pmax	pmax		
	comp=Z,230nm,3.0s						
CBN	**Corbin**	**61.55**	**354**	*e*P	**P**	**14 44 17.0**	**-5.7**
	comp=Z,56nm,0.7s,mb5.8						
MIAR	**Mount Ida**	**61.62**	**338**	*e*P	**P**	**14 44 21.7**	**-1.5**
	comp=Z,42nm,1.8s,mb5.3						
MIAR	**Mount Ida**	**61.62**	**338**	*e*P	**P**	**14 44 21.7**	**-1.5**
MIAR				pmax	pmax		
	comp=Z,42nm,1.8s,mb5.3						
FVM	**French Village**	**63.82**	**342**	*e*P	**P**	**14 44 35.9**	**-1.9**
	comp=Z,30nm,1.4s,mb5.1						
FVM	**French Village**	**63.82**	**342**	*e*P	**P**	**14 44 35.9**	**-1.9**
FVM				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
GDL2	**Guadalupe Moun**	**64.04**	**328**	*e*pP	pP	14 44 46.6	-3.4
MAIT	**Maitri**	**65.60**	**159**	*e*P	**P**	**14 44 48.6**	**-0.5**
NVL	**N'lazarevskaya**	**65.63**	**159**	P	**P**	**14 44 50.7**	**+1.4**
NVL				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
319A	**Douglas**	**65.91**	**324**	⇑P	**P**	**14 44 51.5**	**0.0**
	baz=66						
318A	**Bisbee**	**66.34**	**324**	⇓P	**P**	**14 44 54.1**	**-0.3**
	baz=67						
219A	**White Tail Can**	**66.38**	**324**	⇓P	**P**	**14 44 54.6**	**0.0**
	baz=67						
218A	**Dragoon**	**66.78**	**324**	⇑P	**P**	**14 44 57.3**	**+0.1**
	baz=67						
QSPA	**South Pole Qui**	**66.87**	**180**	P	**P**	**14 44 58.1**	**+1.0**
	comp=Z,14nm,0.6s,mb5.2,baz=154,slow=1.5,SNR=37						
QSPA	**South Pole Qui**	**66.87**	**180**	P	**P**	**14 44 58.1**	**+1.0**
217A	**Green Valley**	**67.05**	**323**	⇓P	**P**	**14 44 58.8**	**0.0**
	baz=67						
LAZ	**Ladron**	**67.18**	**328**	*e*P	**P**	**14 44 58.6**	**-1.0**
118A	**Homack Ranch,**	**67.25**	**324**	⇑P	**P**	**14 45 00.3**	**+0.1**
	baz=68						
ANMO	**Albuquerque**	**67.29**	**328**	*e*P	**P**	**14 44 59.8**	**-0.6**
	comp=Z,29nm,2.1s,mb4.9						
ANMO				*e*pP	pP	14 45 06.7	-4.3
ANMO	**Albuquerque**	**67.29**	**328**	*e*P	**P**	**14 44 59.8**	**-0.5**
ANMO				*e**PP	pP	14 45 06.7	-4.3
ANMO				pmax	pmax		
	comp=Z,29nm,2.1s						
Z19A	**T-Link Ranch,**	**67.39**	**325**	⇑P	**P**	**14 45 01.0**	**+0.1**
	baz=68						
TUC	**Tucson**	**67.44**	**324**	*e*P	**P**	**14 45 00.7**	**-0.6**
	comp=Z,11nm,1.3s,mb4.7						
TUC	**Tucson**	**67.44**	**324**	*e*P	**P**	**14 45 00.7**	**-0.6**
TUC				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
117A	**Oracle**	**67.62**	**324**	⇑P	**P**	**14 45 02.3**	**-0.1**
	baz=68						
Y19A	**Nutrioso**	**67.90**	**326**	⇓P	**P**	**14 45 04.3**	**+0.1**
	baz=68,SNR=7.3						
TAOE	**Nuku Hiva Isla**	**67.98**	**270**	*e*LR	LR	15 05 37.1	
	comp=Z,2μm,24.6s						
214A	**Organ Pipe Nat**	**68.30**	**322**	⇑P	**P**	**14 45 06.7**	**-0.1**
	baz=69						
Y17A	**Roosevelt**	**68.53**	**324**	⇑P	**P**	**14 45 08.2**	**0.0**
	baz=69,SNR=6.1						
Y16A	**Circle Bar Ran**	**69.01**	**324**	⇑P	**P**	**14 45 11.3**	**+0.1**
	baz=69						
SDCO	**Great Sand Dun**	**69.13**	**331**	*e*P	**P**	**14 45 11.3**	**-0.4**
	comp=Z,6.8nm,0.9s,mb4.6						
X16A	**Lo Mia Camp, P**	**69.40**	**325**	⇑P	**P**	**14 45 14.1**	**+0.5**
	baz=70						
113A	**Mohawk Valley,**	**69.45**	**322**	⇓P	**P**	**14 45 14.0**	**+0.2**
	baz=70						
Y15A	**Casa Rosa Ranc**	**69.53**	**324**	⇓P	**P**	**14 45 14.6**	**+0.2**
	baz=70						
X15A	**Humboldt**	**69.88**	**324**	⇓P	**P**	**14 45 16.9**	**+0.4**
	baz=70						
Y14A	**Wickenburg**	**69.89**	**323**	⇓P	**P**	**14 45 16.9**	**+0.3**
	baz=70						
W16A	**Flagstaff**	**69.97**	**325**	⇑P	**P**	**14 45 17.6**	**+0.6**
	baz=70						
T19A	**Beclabito**	**70.04**	**328**	⇓P	**P**	**14 45 17.5**	**+0.1**
	baz=70						
MVCO	**Mesa Verde**	**70.09**	**328**	⇓P	**P**	**14 45 17.7**	**0.0**
	baz=70						
U18A	**Rough Rock, Ch**	**70.14**	**327**	⇑P	**P**	**14 45 18.2**	**+0.2**
	baz=70						
WUAZ	**Wupatki**	**70.21**	**325**	*e*P	**P**	**14 45 18.9**	**+0.5**
	comp=Z,9.6nm,1.0s,mb4.7						
WUAZ				*e*pP	pP	14 45 28.4	-0.9
WUAZ	**Wupatki**	**70.21**	**325**	⇓P	**P**	**14 45 18.8**	**+0.3**
	baz=70						
X14A	**Yava**	**70.22**	**324**	⇑P	**P**	**14 45 18.3**	**-0.3**
	baz=70						
LIC	**Lamto**	**70.23**	**74**	*e*P	**P**	**14 45 17.6**	**-1.5**
	comp=Z,57nm,1.6s,mb5.2						
Y13A	**Salome**	**70.25**	**323**	⇑P	**P**	**14 45 19.1**	**+0.3**
	baz=70						
TIC	**Toumodi**	**70.43**	**73**	*e*P	**P**	**14 45 20.4**	**+0.1**
	comp=Z,105nm,1.3s,mb5.6						
KIC	**Kosan Boka**	**70.55**	**74**	*e*P	**P**	**14 45 19.8**	**-1.2**
	comp=Z,250nm,1.5s,mb5.9						
DBIC	**Dimbokro**	**70.59**	**73**	P	**P**	**14 45 20.7**	**-0.6**
	comp=Z,13nm,0.9s,mb4.9,baz=228,slow=8.3,SNR=13						
DBIC				LR	LR	15 16 15.3	
	comp=Z,542nm,18.1s,MS4.8,baz=206,slow=36						
DBIC	**Dimbokro**	**70.59**	**73**	P	**P**	**14 45 20.7**	**-0.6**
DBIC				LR	LR	15 16 15.3	
Y12C	**Blythe**	**70.60**	**322**	⇓P	**P**	**14 45 20.6**	**-0.3**
	baz=71						
U17A	**Shonto**	**70.68**	**327**	⇓P	**P**	**14 45 21.8**	**+0.5**
	baz=71						
T18A	**Mexican Hat**	**70.70**	**327**	⇑P	**P**	**14 45 21.4**	**-0.1**
	baz=71,SNR=6.3						
S19A	**Harvey Farm, M**	**70.82**	**328**	⇓P	**P**	**14 45 22.3**	**+0.1**
	baz=71,SNR=6.1						
X13A	**Yucca**	**70.83**	**323**	⇓P	**P**	**14 45 22.3**	**0.0**
	baz=71						
V15A	**Kaibab Nationa**	**70.86**	**325**	⇓P	**P**	**14 45 22.9**	**+0.4**
	baz=71						
W14A	**Seligman**	**70.89**	**324**	⇑P	**P**	**14 45 22.6**	**0.0**
	baz=71						
ECSD	**EROS,Sioux Fal**	**70.93**	**340**	*e*P	**P**	**14 45 21.2**	**-1.5**
	comp=Z,11nm,1.0s,mb4.7						
T17A	**Navajo Res., N**	**71.06**	**327**	⇓P	**P**	**14 45 23.6**	**0.0**
	baz=71						
BC3	**Big Chuckw Mtn**	**71.06**	**321**	⇓P	**P**	**14 45 23.7**	**0.0**
	baz=71						
MONP	**Monument Peak**	**71.07**	**320**	⇑P	**P**	**14 45 23.6**	**-0.2**
	baz=71						
S18A	**Hurst Farm, Bl**	**71.19**	**328**	⇑P	**P**	**14 45 24.7**	**+0.3**
	baz=72,SNR=11						

baz=74
Q13A **Wheeler Ranch,** 74.19 326 ⇓P P 14 45 42.3 +0.1
baz=74
ISA **Isabella** 74.23 321 eP P 14 45 42.4 -0.1
comp=Z,8.5nm,1.3s,mb4.5
ISA **Isabella** 74.23 321 eP P 14 45 42.4 -0.1
ISA pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
ISA **Isabella** 74.23 321 ⇑P P 14 45 42.6 +0.1
baz=74
L19A **Farson** 74.39 331 ⇑P P 14 45 43.7 +0.4
baz=75
M17A **Scullys Gap (B** 74.49 330 ⇑P P 14 45 44.5 +0.6
baz=75
DUG **Dugway** 74.52 328 eP P 14 45 43.6 -0.5
comp=Z,6.4nm,1.1s,mb4.5
DUG **Dugway** 74.52 328 eP P 14 45 43.6 -0.5
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
DUG **Dugway** 74.52 328 ⇑P P 14 45 44.5 +0.4
baz=75
CWC **Cottonwood Cre** 74.55 322 ⇑P P 14 45 44.8 +0.4
baz=75
L18A **Fontenelle, Gr** 74.56 330 ⇑P P 14 45 44.1 -0.2
baz=75,SNR=6.9
R11A **Troy Canyon, C** 74.56 325 ⇑P P 14 45 44.8 +0.4
baz=75
P13A **Bates Ranch, G** 74.56 326 ⇑P P 14 45 44.9 +0.5
baz=75
S10A **Tonopah Range,** 74.79 324 ⇓P P 14 45 45.8 +0.1
baz=75
VNDA **Vanda** 74.82 190 P P 14 45 47.2 +1.9
comp=Z,1.6nm,0.9s,mb4.0,baz=140,slow=3.0,SNR=9.4
VNDA LR LR 15 18 18.1
comp=Z,86nm,20.2s,MS4.0,baz=137,slow=35
AGMN **Agassiz Refuge** 74.86 343 eP P 14 45 43.5 -2.4
comp=Z,222nm,3.0s
R10A **Warm Springs** 74.90 324 ⇑P P 14 45 46.8 +0.5
baz=75
N15A **Stansbury Isla** 74.91 328 ⇑P P 14 45 46.7 +0.3
baz=75
Q11A **Duckwater** 74.96 325 ⇑P P 14 45 47.1 +0.4
baz=75
S09A **Goldfield** 74.99 323 ⇑P P 14 45 46.9 0.0
baz=75
HWUT **Hardware Ranch** 75.01 329 eP P 14 45 46.7 -0.2
comp=Z,49nm,2.1s,mb5.1
PDAR **Pinedale Array** 75.01 331 P P 14 45 46.2 -0.7
comp=Z,0.5nm,0.7s,baz=153,slow=7.0,SNR=3.9
N14A **Grayback Hills** 75.21 328 ⇓P P 14 45 48.0 -0.1
baz=76
SYO **Syowa Base** 75.29 160⇓eP P 14 45 47.6 -0.6
M15A **Larsen Ranch,** 75.32 329 ⇑P P 14 45 48.4 -0.3
baz=76
L15A **Malad City** 75.71 329 ⇑P P 14 45 50.5 -0.4
baz=76
M14A **Sheep Mountain** 75.78 328 ⇓P P 14 45 51.0 -0.3
baz=76,SNR=5.0
I18A **Diamond G Ranc** 75.87 332 ⇑P P 14 45 52.0 +0.2
baz=76
K16A **Soda Springs** 75.98 330 ⇓P P 14 45 52.9 +0.5
baz=76
NVAR **Mina Array Bea** 76.09 323 P P 14 45 53.4 +0.2
comp=Z,1.1nm,0.8s,mb3.8,baz=158,slow=6.7,SNR=5.0
L14A **Malta** 76.14 329 ⇑P P 14 45 53.2 -0.2
baz=76
I17A **Pilgram Creek** 76.38 331 ⇓P P 14 45 55.2 +0.6
baz=77
K14A **Jones Ranch, D** 76.50 329 ⇓P P 14 45 55.0 -0.4
baz=77
L13A **Double Diamond** 76.52 328 ⇓P P 14 45 55.6 +0.1
baz=77
RLMT **Red Lodge** 76.78 333 ⇓P P 14 45 56.9 0.0
baz=77
J15A **Blackfoot** 76.81 330 ⇓P P 14 45 57.2 +0.1
baz=77
LAO **LASA Array** 76.84 336 eP P 14 45 56.9 -0.4
comp=Z,34nm,1.6s,mb5.0
M11A **Holland Ranch,** 76.94 327 ⇓P P 14 45 57.9 0.0
baz=77
G18A **Lazy EL Ranch,** 77.06 333 ⇓P P 14 45 58.8 +0.4
baz=77
L12A **House Creek Ra** 77.08 328 ⇓P P 14 45 59.1 +0.4
baz=77
J14A **Carey** 77.25 329 ⇑P P 14 45 59.9 +0.2
baz=78
H16A **Russell Place,** 77.29 331 ⇑P P 14 46 00.4 +0.6
baz=78
K12A **Draper Farm, C** 77.40 328 ⇑P P 14 46 00.7 +0.3
baz=78
L11A **Cat Creek Ranc** 77.47 327 ⇑P P 14 46 01.1 +0.3
baz=78
PAHR **Pah Rah Range** 77.58 323 eP P 14 46 01.6 +0.1
comp=Z,7.7nm,0.9s,mb4.6
F18A **Big Timber** 77.59 333 ⇓P P 14 46 01.2 -0.2
baz=78
J13A **Cove Ranch, Pi** 77.62 329 ⇓P P 14 46 02.0 +0.3
baz=78
O07A **Toulon** 77.63 324 ⇓P P 14 46 01.4 -0.4
baz=78
I14A **Mackay** 77.69 330 ⇓P P 14 46 02.3 +0.2
baz=78
L10A **Juniper Basin** 77.76 327 ⇓P P 14 46 02.5 0.0
baz=78
HLID **Hailey** 77.86 329 eP P 14 46 03.1 +0.1
comp=Z,17nm,1.5s,mb4.8
HLID **Hailey** 77.86 329 ⇑P P 14 46 03.3 +0.3
baz=78,SNR=6.2
G16A **Moss Hill, Enn** 77.95 331 ⇓P P 14 46 04.1 +0.7
baz=78
J12A **Stokes Ranch,** 77.95 328 ⇓P P 14 46 04.2 +0.7
baz=78
I13A **Wildhorse Cree** 77.99 329 ⇑P P 14 46 04.4 +0.7
baz=78
F17A **Fitzpatrick Pl** 77.99 333 ⇓P P 14 46 03.9 +0.2
baz=78
K11A **Parker Ranch,** 78.05 327 ⇑P P 14 46 04.6 +0.5
baz=78
E18A **Harlowton** 78.21 333 ⇓P P 14 46 05.2 +0.4
baz=78
K10A **MacKenzie Ranc** 78.47 327 ⇓P P 14 46 06.5 +0.1
baz=79
MCCM **Marconi Confer** 78.50 320 eP P 14 45 58.2 -8.5
comp=Z,92nm,1.4s,mb5.5
E17A **Martinsdale** 78.52 333 ⇑P P 14 46 06.5 0.0
baz=79
H13A **Challis** 78.54 330 ⇑P P 14 46 07.1 +0.4
baz=79,SNR=8.4
N06A **Buffalo Meadow** 78.56 324 ⇓P P 14 46 06.9 0.0
baz=79
ORV **Oroville** 78.66 322 ⇓P P 14 46 07.5 0.0
baz=79
F15A **Butte** 78.73 331 ⇓P P 14 46 08.2 +0.4
baz=79
L08A **Fields** 78.80 326 ⇓P P 14 46 07.9 -0.3
baz=79
H12A **Diamond D Ranc** 78.81 329 ⇓P P 14 46 08.5 +0.2
baz=79
E16A **East Helena** 78.92 332 ⇑P P 14 46 09.2 +0.5
baz=79
G13A **Cobalt** 78.94 330 ⇑P P 14 46 09.4 +0.5
baz=79,SNR=16
O04C **Chester** 78.95 323 ⇑P P 14 46 08.9 -0.2
baz=79
D17A **Six Diamond Ra** 78.99 333 ⇑P P 14 46 09.3 +0.1
baz=79,SNR=5.6
F14A **Wisdom** 79.10 331 ⇓P P 14 46 10.3 +0.5
baz=79
E15A **Deer Lodge** 79.25 332 ⇓P P 14 46 10.6 +0.1
baz=80
D16A **Dana Ranch, Ca** 79.26 333 ⇓P P 14 46 10.9 +0.3
baz=80
TOA0 **Torodi Ar. Sit** 79.27 71 eP P 14 46 10.8 -0.6
TORD **Torodi Ar. Bea** 79.27 71 P P 14 46 10.7 -0.8
comp=Z,24nm,0.9s,mb5.1,baz=254,slow=4.4,SNR=64
TORD LR LR 15 21 10.4
comp=Z,224nm,19.0s,MS4.5,baz=235,slow=36
EGMT **Eagleton** 79.31 334 ⇓P P 14 46 11.3 +0.4
baz=80
F13A **Darby** 79.51 330 ⇑P P 14 46 12.2 +0.1
baz=80,SNR=11
MOD **Modoc** 79.62 325 ⇑P P 14 46 12.1 -0.6
baz=80
D15A **Lincoln** 79.68 332 ⇓P P 14 46 13.2 +0.3
baz=80
H10A **Noah's Angus R** 79.74 328 ⇑P P 14 46 13.4 0.0
baz=80
E13A **Victor** 79.94 331 ⇑P P 14 46 14.7 +0.4
baz=80
C16A **Fuhringer Ranc** 79.95 333 ⇓P P 14 46 14.4 +0.1
baz=80
G11A **Walters Elk Ra** 80.11 329 ⇑P P 14 46 15.2 -0.1
baz=80,SNR=8.3
D14A **Greenough** 80.14 332 ⇑P P 14 46 15.4 0.0
baz=80
J07A **Hines** 80.14 326 ⇑P P 14 46 15.2 -0.3
baz=80
I08A **Drewsey** 80.15 327 ⇑P P 14 46 15.2 -0.3
baz=80
BMO **Blue Mountains** 80.21 328 eP P 14 46 15.4 -0.4
comp=Z,44nm,2.1s,mb5.0
BMO epP pP 14 46 23.3 -3.4
C15A **Salmond Ranch,** 80.29 333 ⇓P P 14 46 16.2 +0.1
baz=81,SNR=6.1
F11A **Grangeville** 80.42 330 ⇓P P 14 46 16.7 -0.3
baz=81,SNR=5.1
G10A **Bishop Farm, J** 80.44 329 ⇑P P 14 46 17.2 +0.2
baz=81
J06A **Christmas Vall** 80.49 326 ⇑P P 14 46 17.4 0.0
baz=81
D13A **Huson** 80.56 331 ⇓P P 14 46 17.7 0.0
baz=81
H08A **Prairie City** 80.64 327 ⇓P P 14 46 17.6 -0.5
baz=81
B15A **Bradely Ranch,** 80.69 333 ⇑P P 14 46 17.9 -0.4
baz=81
I07A **Izee** 80.74 327 ⇑P P 14 46 18.5 -0.2
baz=81
G09A **Cove** 80.75 328 ⇓P P 14 46 19.1 +0.4
baz=81
A16A **West Butte Ran** 80.79 334 ⇑P P 14 46 18.3 -0.5
baz=81,SNR=7.4
TSUM **Tsumeb** 80.85 107 eP P 14 46 21.1 +1.1
comp=Z,26nm,1.2s,mb5.0
F10A **Beach Ranch, E** 80.99 329 ⇑P P 14 46 20.0 0.0
baz=81
I06A **Prineville** 81.00 326 ⇓P P 14 46 20.3 +0.2
baz=81
B14A **Marquette Ranc** 81.02 333 ⇑P P 14 46 19.4 -0.7
baz=81
C13A **Hot Springs** 81.06 332 ⇓P P 14 46 20.1 -0.2
baz=81
E10A **Myers Farm, Un** 81.31 329 ⇑P P 14 46 21.9 +0.2
baz=82
D11A **Klaveano Farm,** 81.37 330 ⇑P P 14 46 21.8 -0.2
baz=82
G07A **Ruggs Ranch, H** 81.67 327 ⇓P P 14 46 23.9 +0.3
baz=82
D10A **Wagner Farm, O** 81.81 330 ⇓P P 14 46 23.5 -0.8
baz=82
A13A **Flathead Natio** 81.95 332 ⇓P P 14 46 25.0 0.0
baz=82
HAWA **Hanford** 82.40 328 epP pP 14 46 37.5 -0.9
RSW **Rattlesnake Hi** 82.43 328 eP P 14 46 26.7 -0.9
A12A **Yaak River Ran** 82.48 332 ⇓P P 14 46 27.3 -0.5
baz=83
D08A **Wollman Farm,** 82.58 329 ⇓P P 14 46 28.1 -0.3
baz=83
OD2 **Odessa Site #2** 82.72 329 eP P 14 46 27.9 -1.2
A11A **Hall Mountain,** 82.81 331 ⇑P P 14 46 29.3 -0.2
baz=83
MAW **Mawson** 82.98 164 P P 14 46 29.7 -0.6
comp=Z,14nm,0.6s,mb5.2,baz=232,slow=6.0,SNR=18
MAW LR LR 15 23 34.4
comp=Z,331nm,20.1s,MS4.7,baz=1,5,slow=36
B09A **Rice** 83.21 330 ⇑P P 14 46 30.9 -0.7
baz=84
C07A **Waterville** 83.58 329 ⇓P P 14 46 33.1 -0.4
baz=84
BOSA **Boshof** 83.82 118 P P 14 46 35.4 0.0
comp=Z,5.8nm,0.5s,mb5.0,baz=215,slow=2.3,SNR=18
BOSA LR LR 15 21 25.5
comp=Z,386nm,18.5s,MS4.8,baz=185,slow=34
MDT **Midelt** 83.98 51 P P 14 46 36.4 +0.5
comp=Z,7.9nm,1.0s,mb4.8,baz=234,slow=4.8,SNR=12
MDT LR LR 15 24 53.6
comp=Z,464nm,19.2s,MS4.9,baz=207,slow=36
A08A **Turner Farm, O** 84.11 330 ⇑P P 14 46 35.9 -0.2
baz=84
EDM **Edmonton** 84.83 336 eP P 14 46 36.9 -2.9
ESDC **Sonseca Array** 88.10 45 LR LR 15 22 46.8
comp=Z,195nm,21.7s,MS4.5,baz=75,slow=33
YKA **Yellowknife Ar** 92.45 341 P P 14 47 14.5 -1.3
comp=Z,0.5nm,0.5s,mb4.1,baz=144,slow=4.7,SNR=3.3
KEST **Kesra** 95.51 54 P P 14 47 30.0 -0.6
comp=Z,0.8nm,0.5s,mb4.4,baz=40,slow=21,SNR=2.7
KEST LR LR 15 34 45.7
comp=Z,215nm,18.4s,MS4.7,baz=197,slow=38
ASAR **Alice Springs** 127.66 208 PKP PKPdf 14 53 10.7 -0.7
comp=Z,1.5nm,0.6s,baz=134,slow=1.9,SNR=23
TIXI **Tiksi** 130.41 352 i PKIKP PKPdf 14 53 13.3 -1.8
TIXI pmax pmax
comp=Z,3.0nm,1.1s
ARU **Arti** 130.44 35 i PKIKP PKPdf 14 53 12.5 -3.0
ARU 14 55 27.1
WRA **Warramunga Arr** 130.68 211 PKP PKPdf 14 53 16.6 -0.6
comp=Z,1.1nm,0.5s,baz=151,slow=1.6,SNR=20
NVS **Novosibirsk** 142.91 25 ePKIKP PKPdf 14 53 37.7 -0.9
KURK **Kurchatov** 143.61 33 ePKPdf PKPdf 14 53 37.9 -2.1
ZAA0 **Zalesovo Array** 144.19 25 ePKPdf PKPdf 14 53 38.8 -2.1
ZALV **Zalesovo Beam** 144.19 25 PKP PKPdf 14 53 38.1 -2.8
comp=Z,3.4nm,0.5s,baz=270,slow=3.0,SNR=18
EKS2 **Erkin-Say** 144.66 48 ePKPdf PKPdf 14 53 41.0 -1.1
EKS2 **Erkin-Say** 144.66 48 P PKPdf 14 53 41.6 -0.5
SNR=9.6
AML **Almayashu** 144.79 49 ePKPbc PKPdf 14 53 41.9 -0.5
AML **Almayashu** 144.79 49 P PKPdf 14 53 42.5 +0.1
SNR=19
USP **Ospenovka** 144.92 47 P PKPdf 14 53 42.0 -0.5
SNR=12
AAK **Ala-Archa** 145.16 48 P PKPab 14 53 43.4 +0.8
SNR=29
FRU **Bishkek** 145.17 48 ePKIKP PKPdf 14 53 44.0 +1.0
FRU pmax pmax
comp=Z,185nm,2.4s
CHMS **Chumysh** 145.19 47 P PKPab 14 53 43.5 +0.7
SNR=7.0
UCH **Uchtor** 145.33 49 ePKPdf PKPdf 14 53 44.6 +1.4
BOD **Bodaibo** 145.39 356 ePKIKP PKPdf 14 53 40.7 -2.2
BOD e 14 53 49.8
BOD pmax pmax
comp=Z,20nm,1.2s
BOD pmax pmax
comp=Z,21nm,1.0s
KBK **Karagaybulak** 145.46 48 P PKPab 14 53 44.5 +0.8
SNR=18
TKM2 **Tokmak 2** 145.79 47 ePKPab PKPab 14 53 44.7 -0.3
TKM2 **Tokmak 2** 145.79 47 P PKPdf 14 53 45.1 +1.0
SNR=14
KZA **Kyzart** 145.89 48 P PKPab 14 53 46.6 +1.2
SNR=10
KSH **Kashi** 147.32 52 ePKP PKPdf 14 53 44.5 -2.2
KSH eAPKP 14 53 55.0
KSH eXPKP 14 53 59.1
KSH ePKS 14 57 19.1
KSH LR LR
comp=N,268nm,5.0s
KSH LR LR
comp=E,508nm,4.0s
KSH LR LR
comp=Z,354nm,3.3s
MK31 **Makanchi Array** 147.92 36 ePKPdf PKPdf 14 53 48.0 +0.5
MKAR **Makanchi Array** 147.92 36 PKPbc PKPdf 14 53 47.5 -0.1
comp=Z,3.3nm,0.6s,baz=307,slow=1.1,SNR=33
HYB **Hyderabad** 150.36 96 ePKP PKPbc 14 53 58.0 +0.5
HYB **Hyderabad** 150.36 96 i PKP PKPbc 14 53 58.0 +0.5
TLY **Talaya** 151.32 8 i PKIKP PKPdf 14 53 51.9 -0.8
TLY e 14 54 01.5
TLY eSS SS 15 16 55.9 -1.6
TLY pmax pmax
comp=Z,16nm,2.0s
MJAR **Matsushiro Arr** 152.03 305 PKPbc PKPbc 14 54 00.3 -0.6
comp=Z,2.3nm,0.7s,baz=122,slow=1.3,SNR=8.0
MAT **Matsushiro** 152.03 305 PKP PKPbc 14 54 00.1 -0.8
ZAK **Zakamensk** 152.55 9 ePKIKP PKPbc 14 54 01.7 +0.1
ZAK pmax pmax
comp=Z,5.0nm,1.1s
WMQ **Urumqi** 152.75 36 ePKP PKPdf 14 53 53.0 -2.1
SONM **Songino Array** 155.41 5 PKP PKPdf 14 53 59.6 +0.8
comp=Z,0.2nm,0.3s,baz=127,slow=2.2,SNR=4.3
SONM PKPbc PKPdf 14 54 06.8 +8.0
comp=Z,1.2nm,0.8s,baz=225,slow=1.9,SNR=5.5
SONM PKPab PKPab 14 54 24.1 -0.1
comp=Z,1.2nm,0.8s,baz=214,slow=0.5,SNR=4.1
SONM **Songino Array** 155.41 5 PKIKP PKPdf 14 53 59.6 +0.8
SONM 14 54 06.8
ULN **Ulaanbaatar** 155.43 4 i PKIKP PKPdf 14 54 06.9 +8.1
CN2 **Changchun** 155.76 331 PKP PKPdf 14 53 57.1 -2.3
CN2 PP PP 14 58 04.8 +2.4
CN2 PP PP
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,19.0s,MS5.5
CN2 LR LR
comp=E,400nm,19.0s,MS5.5
CN2 LR LR
comp=Z,400nm,16.0s,MS5.3
GTA **Gaotai** 161.94 25 PKP PKPdf 14 54 07.3 +0.5
GTA APKP 14 54 18.0
GTA XPKP 14 54 21.6
GTA PP PP 14 58 41.4 +5.4
GTA PP PP
comp=Z,82nm,5.1s
GTA LR LR
comp=N,125nm,14.1s
GTA LR LR
comp=E,81nm,14.4s
GTA LR LR
comp=Z,149nm,15.3s
BJI **Beijing** 162.43 343 PKP PKPdf 14 54 05.0 -2.3
BJI LR LR
comp=N,110nm,21.3s
BJI LR LR
comp=E,130nm,15.1s
BJI LR LR
comp=Z,97nm,22.9s
HHC **Hu-ho-hao-te** 162.45 355 ePKP PKPdf 14 54 05.5 -1.8
HHC APKP 14 54 16.3
HHC XPKP 14 54 19.9
HHC PKS 14 57 37.3
HHC PP PP 14 58 42.8 +4.5
HHC SKS SKSdf 15 01 05.5 -3.9
HHC SKKS SKKSac 15 05 22.4 -2.3
HHC PP PP
comp=Z,71nm,5.0s
HHC LR LR
comp=N,745nm,22.6s
HHC LR LR
comp=E,535nm,20.2s
HHC LR LR
comp=Z,680nm,17.8s
LZH **Lanzhou** 166.34 20 ePKP PKPdf 14 54 08.5 -2.4
LZH APKP 14 54 19.3
LZH XPKP 14 54 23.0
LZH PKP2 PKPab 14 55 12.3 +0.1
LZH ePP PP 14 59 00.6 +1.7
LZH SKKS SKKSac 15 05 42.8 -1.8
LZH PP PP
comp=Z,91nm,8.0s
LZH LR LR
comp=N,154nm,18.4s
LZH LR LR
comp=Z,196nm,20.5s
NJ2 **Nanjing** 168.05 319 ePKP PKPdf 14 54 09.6 -2.7
CMAR **Chiang Mai Arr** 168.94 114 PKP PKPdf 14 54 13.2 -0.1
comp=Z,0.6nm,0.8s,baz=288,slow=2.4,SNR=5.1
CMAR PKPab PKPab 14 55 23.6 -0.7
comp=Z,0.4nm,0.6s,baz=258,slow=4.4,SNR=6.1
CMAR PP PP 14 59 14.0 +0.2
comp=Z,0.2nm,0.3s,baz=239,slow=4.6,SNR=4.6
CD2 **Chengdu** 170.84 33 ePKP PKPdf 14 54 18.8 +4.8
CD2 APKP 14 54 26.3
CD2 XPKP 14 54 30.3
CD2 PKP2 PKPab 14 55 39.8 +7.5
CD2 PP PP 14 59 30.9 +8.8
CD2 SKS SKSdf 15 01 17.3 +2.3
CD2 SKKS SKKSac 15 06 12.0 +4.9
CD2 PP PP
comp=Z,160nm,10.6s
CD2 LR LR
comp=N,190nm,18.2s
CD2 LR LR
comp=Z,150nm,16.8s
KMI **Kunming** 173.50 73 PKP PKPdf 14 54 12.8 -2.6
KMI APKP 14 54 22.1
KMI LR LR
comp=N,130nm,12.8s
KMI LR LR
comp=E,83nm,19.5s
KMI LR LR
comp=Z,90nm,34.6s
GYA **Guiyang** 175.91 40 ePKP PKPdf 14 54 13.3 -2.8
GYA APKP 14 54 22.8
GYA XPKP 14 54 31.6
GYA PKP2 PKPab 14 55 53.5 -1.4
GYA PKS 14 57 42.4
GYA PP PP 14 59 48.9 +1.7
GYA SKS SKSdf 15 01 10.3 -6.4
GYA SKKS SKKSac 15 06 29.8 -1.7
GYA PP PP
comp=Z,80nm,5.4s
GYA LR LR
comp=N,240nm,22.5s
GYA LR LR
comp=E,180nm,25.0s
GYA LR LR
comp=Z,150nm,23.1s

*NEIC **16** 14:35:07.6, 5048N×12996W, h10km, ML2.8(PGC), After PGC.*

PGC 16 14:35:07.6±3.6, 5048N×12996W, h10km, ML2.8/5, Mw3.5, 3D, 181km west of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.18**	**81**	⇑P	Pb	14 35 28.2	-1.8
BPBC	**Brooks Peninsu**	**1.44**	**102**	⇑P	Pn	14 35 31.0	-2.7
MAYB	**Maynard**	**1.79**	**91**	⇑Pn	Pn	14 35 36.7	-1.7
EDB	**Eliza Dome**	**1.92**	**107**	⇑Pn	Pn	14 35 37.9	-2.4
EDB				⇓Sn	Sn	14 36 00.8	-3.7
BBB	**Bella Bella**	**2.06**	**33**	⇓Pn	Pn	14 35 40.5	-1.7
BBB				⇓Sn	Sn	14 36 04.2	-3.8
GDR	**Gold River**	**2.62**	**104**	⇑Pn	Pn	14 35 48.4	-1.6
MCW	**Mount Constitu**	**4.97**	**108**	P	Pn	14 36 23.4	+1.1
VDB	**Vedder Mountai**	**5.30**	**103**	P	Pn	14 36 27.8	+1.1
MBW	**Mount Baker**	**5.51**	**105**	P	Pn	14 36 30.9	+1.4
JCW	**Jim Creek**	**5.73**	**110**	P	Pn	14 36 34.0	+1.4
RPW	**Rockport**	**5.87**	**107**	P	Pn	14 36 35.5	+1.0
NLW	**Nelson Butte**	**6.74**	**107**	P	Pn	14 36 47.6	+1.2
TBM	**Table Mountain**	**7.01**	**115**	P	Pn	14 36 52.6	+2.4
WTV	**Waterville**	**7.14**	**109**	P	Pn	14 36 53.1	+1.2

*IDC **16** 14:39:26.0±2.1, 2301S×7090W, h0km, mb4.1/1, mb1 4.2/3, mb1mx3.7/17, mbtmp4.1/3, ML4.2/2, Error ellipse: s-maj=60.4km s-min=20.7km az=172.0*
*ISCJB **16** 14:39:28.6±4.3, 2265S±0.1×7114W±0.1, h30km±38km, Error ellipse: s-maj=21.9km s-min=18.5km az=140.8*
*NEIC **16** 14:39:33.3±1.4, 2266S×7072W, h35km, Error ellipse: s-maj=27.2km s-min=14.1km az=100.0*

ISC 16 14:39:28.9±5.1, 225S±01×710W±02, h18km±39km, n9, σ0s34/10, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.95**	**94**	Pn	**Pn**	**14 40 00.8**	**-0.3**
	74nm,0.3s,SNR=62						
LVC				Lg		14 40 25.8	
	132nm,0.3s,SNR=8.5						
LVC	**Limon Verde**	**1.95**	**94**	ePn	**Pn**	**14 40 00.3**	**-0.8**
LVC				ePn	**Pn**	**14 40 00.7**	**-0.5**
LVC				eSn	**Sn**	**14 40 25.4**	**+0.1**
LPAZ	**La Paz**	**6.74**	**24**	Pn	**Pn**	**14 41 13.5**	**+6.5**
	1.5nm,0.3s,baz=212,slow=9.6,SNR=10.0						
LPAZ	**La Paz**	**6.74**	**24**	ePn	**Pn**	**14 41 12.3**	**+5.3**
	6.2nm,0.7s						
CFAA	**Coronel Fontan**	**9.42**	**165**	Pn	**Pn**	**14 41 43.9**	**+0.2**
	0.0nm,0.3s,baz=13,slow=19,SNR=2.5						
CFAA	**Coronel Fontan**	**9.42**	**165**	Pn	**Pn**	**14 41 43.9**	**+0.2**
SIV	**San Ignacio**	**11.39**	**57**	Pn	**Pn**	**14 42 11.3**	**+0.4**
	0.9nm,0.3s,baz=246,slow=14,SNR=5.6						
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P	**P**	**14 51 35.0**	**-0.2**
	1.1nm,0.6s,baz=252,slow=5.0,SNR=6.5						
MKAR	**Makanchi Array**	**147.57**	**35**	PKPbc	PKPbc	14 59 13.3	+1.3
	0.4nm,0.5s,baz=285,slow=2.7,SNR=4.3						

IDC 16 14:46:54.0±3.6, 550S×15216E, h0km, mb3.4/2, mb1 3.8/2, mb1mx3.4/16, mbtmp3.5/2, Error ellipse: s-maj=156.8km s-min=47.0km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.51**	**229**	P	P	14 51 55.3	-0.1
	0.7nm,0.7s,baz=53,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**25.21**	**222**	P	P	14 52 21.6	+0.1
	1.2nm,0.6s,baz=57,slow=8.6,SNR=25						
TORD	**Torodi Ar. Bea**	**149.90**	**287**	PKPbc	PKPbc	15 06 47.1	-0.2
	0.4nm,0.6s,baz=84,slow=2.8,SNR=3.4						

*HLW **16** 14:47:00.4, 37.47N×29.41E, h33km, Mb3.8*
*CSEM **16** 14:47:05.9±0.2, 37.07N×29.27E, h6km±1km, MD3.6, Error ellipse: s-maj=2.7km s-min=1.6km az=162.0*
*NEIC **16** 14:47:05.0, 37.11N×29.24E, h5km, ML3.6(ISK), After ISK.*
*ISK **16** 14:47:05.3, 37.11N×29.25E, h5km, ML3.5*
*DDA **16** 14:47:05.4, 37.02N×29.34E, h24km±1km, Md3.6*
*ISCJB **16** 14:47:06.4±0.4, 37.01N±0.03×29.27E±0.03, h10km, Error ellipse: s-maj=4.7km s-min=3.0km az=179.6*

ISC 16 14:47:05.6±0.6, 36.95N±0.03×29.29E±0.03, h2km±5km, n64, σ1s05/71, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.36**	**37**	*i* P	**Pg**	**14 47 12.5**	**+0.1**
DENT	**Denizli**	**0.82**	**346**	*e*PG	**Pg**	**14 47 19.8**	**-1.6**
YER	**Yerkesik**	**0.83**	**283**	*e*PG	**Pg**	**14 47 21.3**	**-0.1**
YER				*e*SG	**Sg**	**14 47 33.1**	**+0.9**
KSL	**Kastellorizon**	**0.83**	**164**	*e*P	**Pg**	**14 47 22.0**	**+0.4**
ANTB	**Antalya**	**1.09**	**92**	*e*PN	**Pn**	**14 47 28.5**	**+0.5**
BCK	**Bucak**	**1.15**	**64**	*e*PN	**Pn**	**14 47 27.9**	**-0.9**
BCK				*e*SN	**Sn**	**14 47 44.5**	**-0.6**
ARG	**Arkhangelos**	**1.19**	**232**	*e*P	**Pg**	**14 47 27.5**	**-0.9**
ARG	**Arkhangelos**	**1.19**	**232**	P	**Pg**	**14 47 28.6**	**+0.2**
MLSB	**Milas**	**1.26**	**286**	*e*PN	**Pn**	**14 47 29.3**	**-0.9**
ISP	**Isparta**	**1.32**	**47**	*e*PN	**Pn**	**14 47 29.9**	**-1.1**
ISP	**Isparta**	**1.32**	**47**	P	**Pg**	**14 47 30.4**	**-0.4**
AYDN	**Tasoluk**	**1.33**	**303**	*i* P	**Pg**	**14 47 30.4**	**-0.7**
AYDN				*i* S	**Sg**	**14 47 49.2**	**+0.9**
KHL	**Karahalli**	**1.38**	**8**	*e*PN	**Pn**	**14 47 29.9**	**-2.0**
DAT	**Datca**	**1.39**	**261**	*e*PN	**Pn**	**14 47 32.4**	**+0.4**
BDRM	**Kayabasi**	**1.48**	**275**	*i* P	**Pn**	**14 47 33.0**	**-0.3**
BDRM				*i* S	**Sb**	**14 47 55.0**	**+1.8**
KULA	**Kula-Manisa**	**1.64**	**342**	*e*PN	**Pn**	**14 47 33.8**	**-1.6**
MANT	**Manisa**	**1.64**	**339**	*i* P	**Pn**	**14 47 34.6**	**-0.9**
NISR	**Nisiros**	**1.77**	**260**	*e*P	**Pn**	**14 47 37.5**	**+0.3**
GCAM	**G?zelcaml?**	**1.80**	**295**	*i* P	**Pn**	**14 47 38.2**	**+0.5**
GCAM				*i* S	**Sn**	**14 48 00.1**	**-1.1**
SHUT	**Suhut-Afyon**	**1.88**	**32**	*e*PN	**Pn**	**14 47 38.9**	**+0.1**
SMG	**Samos**	**2.10**	**292**	*e*P	**Pn**	**14 47 41.9**	**+0.2**
SMG	**Samos**	**2.10**	**292**	P	**Pn**	**14 47 41.8**	**+0.1**
DEMI	**Demirci**	**2.13**	**348**	*i* P	**Pn**	**14 47 42.2**	**-0.1**
GDZ	**Gediz**	**2.14**	**4**	*i* P	**Pn**	**14 47 42.3**	**0.0**
KDAG	**Bornova**	**2.16**	**313**	*i* P	**Pn**	**14 47 42.4**	**-0.3**
KDAG				*i* S	**Sn**	**14 48 10.7**	**+0.7**
BOLV	**Bolvadin**	**2.20**	**36**	*i* P	**Pn**	**14 47 43.3**	**+0.1**
KARP	**Karpathos**	**2.22**	**231**	*e*P	**Pn**	**14 47 44.8**	**+1.4**
KARP	**Karpathos**	**2.22**	**231**	P	**Pn**	**14 47 45.0**	**+1.6**
AKHS	**Akhisar**	**2.25**	**329**	*i* P	**Pn**	**14 47 42.9**	**-0.9**
AKHS				*i* S	**Sn**	**14 48 11.5**	**-0.7**
AKS	**Akhisar**	**2.25**	**329**	*e*PN	**Pn**	**14 47 43.5**	**-0.3**
BLCB	**Balcova**	**2.29**	**309**	*e*PN	**Pn**	**14 47 43.9**	**-0.4**
HDMB	**Hadim**	**2.56**	**89**	*e*PN	**Pn**	**14 47 50.3**	**+2.2**
KONT	**Konya--Tatoy**	**2.64**	**67**	*e*PN	**Pn**	**14 47 50.7**	**+1.5**
DST	**Dursunbey**	**2.70**	**349**	*e*PN	**Pn**	**14 47 49.1**	**-0.9**
LADK	**Ladik-KONYA**	**2.74**	**62**	*e*PN	**Pn**	**14 47 52.0**	**+1.4**
KIZT	**Kizilcal**	**2.81**	**46**	*e*PN	**Pn**	**14 47 52.3**	**+0.7**
BALB	**Balikesir**	**2.90**	**338**	*e*PN	**Pn**	**14 47 52.6**	**-0.2**
APE	**Apeiranthos**	**3.01**	**273**	*e*P	**Pn**	**14 47 55.2**	**+0.9**
APE	**Apeiranthos**	**3.01**	**273**	P	**Pn**	**14 47 55.4**	**+1.1**
CAVI	**Cavuskoy**	**3.27**	**7**	*e*PN	**Pn**	**14 47 57.4**	**-0.5**
PRK	**Paraskevi**	**3.30**	**315**	*e*P	**Pn**	**14 47 58.8**	**+0.5**
KCT	**Karacabey**	**3.39**	**348**	*e*PN	**Pn**	**14 47 58.6**	**-0.9**
NPS	**Neapolis**	**3.42**	**242**	*e*P	**Pn**	**14 48 00.5**	**+0.5**
NPS	**Neapolis**	**3.42**	**242**	P	**Pn**	**14 48 01.5**	**+1.5**
GULT	**Gulveren**	**3.60**	**15**	*e*PN	**Pn**	**14 48 03.0**	**+0.5**
IKL	**Isikli**	**3.61**	**100**	*e*PN	**Pn**	**14 48 05.2**	**+2.7**
YLV	**Yalova**	**3.61**	**1**	*e*PN	**Pn**	**14 48 02.5**	**0.0**
EYL	**Eskiyayla**	**3.67**	**10**	*e*PN	**Pn**	**14 48 03.0**	**-0.4**
EZN	**Ezine**	**3.69**	**322**	*e*PN	**Pn**	**14 48 03.4**	**-0.3**
GADA	**Gvkgeada**	**4.18**	**322**	*e*PN	**Pn**	**14 48 10.5**	**+0.1**
MERS	**Mersin**	**4.19**	**90**	*e*PN	**Pn**	**14 48 13.3**	**+2.7**
LIA	**Limnos Island**	**4.36**	**314**	*e*P	**Pn**	**14 48 13.8**	**+0.9**
LIA	**Limnos Island**	**4.36**	**314**	P	**Pn**	**14 48 14.3**	**+1.4**
KARA	**Karaisali**	**4.62**	**84**	*e*PN	**Pn**	**14 48 18.9**	**+2.5**
EDRB	**Edirne**	**5.27**	**339**	*e*PN	**Pn**	**14 48 26.0**	**+0.6**
CORM	**Corum**	**5.28**	**51**	*e*PN	**Pn**	**14 48 27.4**	**+1.9**
HMAT	**Matruh**	**6.12**	**198**	P	**Pn**	**14 48 36.3**	**-0.8**
AMAG	**Maghara**	**7.09**	**151**	P	**Pn**	**14 48 48.2**	**-2.1**
HHAG	**Hagoal**	**7.37**	**161**	P	**Pn**	**14 48 52.7**	**-1.5**
HSAF	**As Saff**	**7.56**	**165**	P	**Pn**	**14 48 55.4**	**-1.4**
GLL	**Jalalah**	**7.63**	**164**	P	**Pn**	**14 48 56.3**	**-1.5**
MLR	**Muntele Rosu**	**8.89**	**345**	⇓*i*P	**Pn**	**14 49 16.4**	**+1.3**
VOIR		**9.06**	**341**	⇑*i*P	**Pn**	**14 49 17.4**	**+0.1**
TR2		**9.32**	**155**	P	**Pn**	**14 49 19.7**	**-1.4**

RSPR 16 14:52:59.7, 1815N×6886W, h160km±3km, MD3.7/12, MD3.7/12, 8C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMO	**Isla Mona**	**0.91**	**93**	⇓*e*P	Pn	14 53 24.1	-0.5
IMO	**Isla Mona**	**0.91**	**93**	*e*S	Sn	14 53 43.5	-0.3
CRPR	**Cabo Rojo, PR**	**1.68**	**95**	⇑*e*P	Pn	14 53 31.4	-0.4
CRPR	**Cabo Rojo, PR**	**1.68**	**95**	*e*S	Sn	14 53 57.4	+0.9
LSP	**Las Mesas**	**1.69**	**89**	⇑*e*P	Pn	14 53 32.4	+0.4
LSP	**Las Mesas**	**1.69**	**89**	*e*S	Sn	14 53 57.7	+1.0
AGPR	**Aguadilla, PR**	**1.69**	**79**	⇑*e*P	Pn	14 53 32.4	+0.4
AGPR	**Aguadilla, PR**	**1.69**	**79**	*e*S	Sn	14 53 57.7	+0.8
GBPR	**Guanica, Bosqu**	**1.90**	**95**	⇑*e*P	Pn	14 53 35.2	+0.9
LRS	**Lares**	**1.92**	**86**	*e*S	Sn	14 54 01.6	+0.2
AOPR	**Arecibo Observ**	**2.01**	**84**	⇓*e*P	Pn	14 53 35.9	+0.4
AOPR	**Arecibo Observ**	**2.01**	**84**	*e*S	Sn	14 54 04.0	+0.8
CELP	**Cerrillos**	**2.17**	**92**	⇓*e*P	Pn	14 53 37.2	-0.2
CELP				*e*S	Sn	14 54 06.7	+0.2
ICM	**Isla Caja Muer**	**2.24**	**96**	⇑*e*P	Pn	14 53 38.3	+0.1
ICM	**Isla Caja Muer**	**2.24**	**96**	*e*S	Sn	14 54 08.8	+0.9
SJG	**San Juan**	**2.58**	**91**	⇑*e*P	Pn	14 53 42.0	-0.2
SJG				*e*S	Sn	14 54 15.3	+0.2
CPD	**Cerro la Pandu**	**2.81**	**92**	⇓*e*P	Pn	14 53 46.1	+1.1
CPD	**Cerro la Pandu**	**2.81**	**92**	*e*S	Sn	14 54 20.7	+0.6
CBYP	**Canovanas**	**2.86**	**87**	⇑*e*P	Pn	14 53 45.4	-0.3
CBYP	**Canovanas**	**2.86**	**87**	*e*S	Sn	14 54 21.4	+0.1
HUMP	**Col San Antoni**	**2.87**	**90**	⇑*e*P	Pn	14 53 45.9	+0.1
HUMP	**Col San Antoni**	**2.87**	**90**	*e*S	Sn	14 54 23.3	+1.9

*IDC **16** 14:59:59.7±0.7, 966S×108 92E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.6/18, mbtmp4.5/14, ML4.5/1, MS4.1/12, Ms1 4.1/12, ms1mx3.9/26, Error ellipse: s-maj=26.7km s-min=14.3km az=58.0*
*ISCJB **16** 15:00:01.6±0.3, 983S±004×108 82E±003, h29km, mb4.9/77, MS4.4/24, Error ellipse: s-maj=5.4km s-min=3.9km az=18.7*
*DJA **16** 15:00:02.4±0.0, 986S×108 83E, h16km, mB5.5/10, Mjma4.8/12, MLv5.3/13, Mw(mB)5.3/10, Mwp4.4/14*
*BJI **16** 15:00:02.8, 970S×108 80E, h35km, mB5.1, mb5.0, Ms4.8, Ms24.7*
*MOS **16** 15:00:02.5±1.1, 968S×108 92E, h33km, mb5.1/28, Error ellipse: s-maj=13.6km s-min=7.4km az=112.3*
*NEIC **16** 15:00:04.8±0.3, 971S×108 84E, h35km, mb4.9/20, Error ellipse: s-maj=10.3km s-min=7.3km az=53.0*

ISC 16 15:00:03.8±0.3, 985S±004×10881E±003, h31km, h31km±.6km: pP-P, n190, σ1s11/189, mb4.9/77, MS4.4/24, 11C-5D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLJI	**Cilicap**	**2.13**	**5**	P	**Pn**	**15 00 37.3**	**0.0**
CLJI	**Cilicap**	**2.13**	**5**	S	**Sn**	**15 01 05.9**	**+3.2**
BJII	**Banjamegara**	**2.65**	**20**	P	**Pn**	**15 00 44.7**	**+0.2**
XMIS	**Christmas Isla**	**3.17**	**258**	*e*Pn	**Pn**	**15 00 46.8**	**-4.9**
LEM	**Lembang**	**3.23**	**338**	P	**Pn**	**15 00 53.2**	**+0.7**
JCJI	**Jatiwangi**	**3.38**	**351**	P	**Pn**	**15 00 52.6**	**-2.0**
SJI	**Sawahan**	**3.60**	**54**	P	**Pn**	**15 00 58.2**	**+0.7**
DBJI	**Dramaga**	**3.86**	**328**	P	**Pn**	**15 01 00.2**	**-0.9**
DBJI	**Dramaga**	**3.86**	**328**	S	**Sn**	**15 01 46.9**	**+1.4**
CBJI	**Citeko**	**3.92**	**330**	P	**Pn**	**15 00 58.2**	**-3.8**
KRKI	**Karangkates**	**3.97**	**65**	P	**Pn**	**15 01 02.7**	**+0.1**
KRKI	**Karangkates**	**3.97**	**65**	S	**Sn**	**15 01 47.2**	**-1.0**
NBBI	**Negara**	**5.92**	**76**	P	**Pn**	**15 01 29.6**	**+0.1**
	1μm,0.9s,8μm3.0nm						
NBBI	**Negara**	**5.92**	**76**	S	**Sn**	**15 02 36.0**	**-0.3**
	1μm,0.9s,8μm3.0nm						
KHKI	**Kahang-Kahang**	**6.87**	**78**	P	**Pn**	**15 01 42.7**	**+0.2**
KHKI	**Kahang-Kahang**	**6.87**	**78**	S	**Sn**	**15 02 58.1**	**-1.6**
TPI	**Tanjungpandan**	**7.14**	**351**	P	**Pn**	**15 01 47.0**	**+0.7**
	59nm,1.0s,890nm0.3nm						
PBKI	**Pangkalan Bun**	**7.64**	**22**	P	Px	15 02 05.7	
PPBI	**Pangkal Pinang**	**8.09**	**341**	P	**Pn**	**15 02 00.1**	**+0.8**
	60nm,1.4s,710nm0.2nm						
KSI	**Kapahiang**	**8.72**	**315**	P	**Pn**	**15 02 07.0**	**-0.9**
	229nm,1.0s,0.6nm						
BBKI	**Banjar Baru**	**8.72**	**44**	P	**Pn**	**15 02 13.6**	**+5.6**
STKI	**Sintang**	**10.20**	**15**	P	**Pn**	**15 02 31.1**	**+2.8**
	60nm,1.1s,5μm						
KSM	**Kuching**	**11.35**	**8**	*e*Pn	**Pn**	**15 02 48.7**	**+4.8**
KAPI	**Kappang**	**11.86**	**67**	Pn	**Pn**	**15 02 51.0**	**0.0**
	0.6nm,0.3s,baz=249,slow=10.0,SNR=14						
KAPI				LR	LR	15 08 01.0	
	comp=Z,704nm,20.4s,baz=244,slow=41						
KAPI	**Kappang**	**11.86**	**67**	*e*Pn	**Pn**	**15 02 51.6**	**+0.6**
KAPI	**Kappang**	**11.86**	**67**	P	**Pn**	**15 02 51.1**	**+0.1**
	76nm,1.4s,757nm						
COCO	**West Island**	**11.99**	**258**	*e*Pn	**Pn**	**15 02 55.1**	**+2.5**
	54nm,1.1s						
COCO	**West Island**	**11.99**	**258**	*e*P	**Pn**	**15 02 55.2**	**+2.5**
COCO				pmax	pmax		
	comp=Z,54nm,1.1s						
PDSI	**Padang**	**12.16**	**316**	P	**Pn**	**15 02 55.0**	**-0.1**
	comp=Z,43nm,1.0s						
PPI	**Padang Panjang**	**12.54**	**318**	P	**Pn**	**15 02 57.7**	**-2.5**
	comp=Z,22nm,1.1s						
MYKOM	**Kota Tinggi**	**12.58**	**337**	⇑P	**Pn**	**15 03 02.0**	**+1.2**
SBUM	**Sibu**	**12.68**	**16**	⇓P	**Pn**	**15 03 07.3**	**+5.1**
SBUM	**Sibu**	**12.68**	**16**	P	**Pn**	**15 03 04.6**	**+2.4**
BTM	**Bintulu**	**13.64**	**18**	⇑P	**Pn**	**15 03 20.7**	**+5.3**
PCI	**Palu**	**14.11**	**52**	P	**Pn**	**15 03 24.0**	**+2.2**
	comp=Z,172nm,1.2s,comp=Z,2μm						
BATI	**Baumata**	**14.63**	**93**	Pn	**Pn**	**15 03 28.7**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=345,slow=5.5,SNR=5.4						
BATI				Sn	**Sn**	**15 05 59.4**	**-11**
	comp=Z,3.2nm,0.3s,baz=60,slow=21,SNR=6.5						
BATI	**Baumata**	**14.63**	**93**	P	**Pn**	**15 03 34.3**	**+5.5**
FRIM	**Kepong**	**14.84**	**331**	⇑P	**Pn**	**15 03 32.1**	**+0.4**
KDI	**Kendari**	**14.90**	**68**	P	**Pn**	**15 03 41.1**	**+8.6**
MBWA	**Marble Bar**	**15.39**	**138**	*e*Pn	**Pn**	**15 03 32.5**	**-6.3**
	comp=Z,55nm,0.9s						
MBWA	**Marble Bar**	**15.39**	**138**	P	**Pn**	**15 03 34.1**	**-4.7**
	comp=Z,41nm,1.1s						
IPM	**Ipoh**	**16.21**	**331**	⇓P	**Pn**	**15 03 49.2**	**-0.4**
IPM	**Ipoh**	**16.21**	**331**	P	**Pn**	**15 03 55.1**	**+5.6**
TSM	**Tawau**	**16.70**	**33**	⇑P	**Pn**	**15 04 01.4**	**+5.6**
KULM	**Kulim**	**17.10**	**331**	*e*P	**Pn**	**15 03 57.8**	**-2.9**
KULM	**Kulim**	**17.10**	**331**	⇑P	**Pn**	**15 04 01.0**	**+0.3**
KKM	**Kota Kinabalu**	**17.43**	**25**	*e*Pn	**Pn**	**15 04 02.8**	**-2.0**
SDKM	**Sandakan**	**17.51**	**29**	⇓P	**Pn**	**15 04 10.8**	**+4.9**
MYLDM	**Lahad Datu**	**17.78**	**33**	P	**Pn**	**15 04 17.4**	**+8.2**
AAI	**Ambon**	**20.19**	**74**	P	**P**	**15 04 35.6**	**-0.6**
	comp=Z,395nm,1.3s,comp=Z,4μm						
BSI	**Banda Aceh**	**20.34**	**318**	P	**P**	**15 04 38.9**	**+1.1**
	comp=Z,54nm,1.1s						
LBMI	**Labuha**	**20.72**	**65**	P	**P**	**15 04 42.5**	**+0.5**
	comp=Z,293nm,1.3s,comp=Z,2μm						
KAKA	**Kakadu**	**23.34**	**99**	*e*P	Px	15 04 57.2	
DAV	**Davao City (W)**	**23.70**	**45**	LR	LR	15 15 46.2	
	comp=Z,142nm,20.3s,MS3.4,baz=242,slow=40						
NWAO	**Narrogin (SRO)**	**24.24**	**163**	P	**P**	**15 05 19.5**	**+1.4**
	comp=Z,28nm,1.3s,mb4.5,baz=321,slow=2.8,SNR=3.3						
NWAO				LR	LR	15 13 20.4	
	comp=Z,692nm,21.0s,MS4.1,baz=337,slow=33						
NWAO	**Narrogin (SRO)**	**24.24**	**163**	*e*P	**P**	**15 05 19.9**	**+1.8**
	comp=Z,66nm,1.6s,mb4.8						
NWAO	**Narrogin (SRO)**	**24.24**	**163**	*e*P	**P**	**15 05 19.9**	**+1.8**
NWAO				pmax	pmax		
	comp=Z,66nm,1.6s						
WRA	**Warramunga Arr**	**26.59**	**115**	P	**P**	**15 05 39.1**	**-0.5**
	comp=Z,6.5nm,0.8s,mb4.2,baz=286,slow=11,SNR=24						
WRAB	**Tennant Creek**	**26.60**	**115**	*e*P	**P**	**15 05 41.3**	**+1.6**
	comp=Z,16nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**26.60**	**115**	*e*P	**P**	**15 05 41.3**	**+1.7**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**26.60**	**115**	*e*P	**P**	**15 05 41.8**	**+2.1**
ASAR	**Alice Springs**	**27.61**	**123**	P	**P**	**15 05 49.3**	**+0.6**
	comp=Z,5.3nm,0.9s,mb4.2,baz=300,slow=8.6,SNR=19						
ASAR				PcP	PcP	15 09 08.1	+2.2
	comp=Z,0.8nm,0.6s,baz=294,slow=2.3,SNR=3.9						
QIZ	**Qiongzhong**	**28.71**	**2**	P	**P**	**15 05 59.8**	**+1.3**
QIZ				AP	pP	15 06 08.8	+1.3
QIZ				S	**S**	**15 10 49.3**	**+3.5**
QIZ				XS	sS	15 11 03.4	+2.8
QIZ				AMB	AMB		
	comp=Z,24nm,1.8s,mb4.6						
QIZ				LR	LR		
	comp=N,713nm,12.1s,MS4.7						
QIZ				LR	LR		
	comp=E,906nm,15.3s,MS4.7						
QIZ				LR	LR		
	comp=Z,951nm,13.7s,MS4.6						
CM31	**Chiang Mai Arr**	**29.77**	**341**	*e*P	**P**	**15 06 07.5**	**-0.3**
	comp=Z,16nm,1.0s,mb4.7						
CMAR	**Chiang Mai Arr**	**29.77**	**341**	P	**P**	**15 06 07.7**	**-0.2**
	comp=Z,12nm,1.0s,mb4.6,baz=176,slow=8.6,SNR=70						
CMAR				LR	LR	15 19 06.0	
	comp=Z,543nm,18.2s,MS4.2,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**29.77**	**341**	*i* P	**P**	**15 06 08.1**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**30.10**	**341**	*e*P	**P**	**15 06 10.9**	**+0.1**
	comp=Z,19nm,1.2s,mb4.7						
CHTO	**Chiang Mai**	**30.10**	**341**	*e*P	**P**	**15 06 10.9**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
COEN	**Coen**	**33.85**	**100**	*e*P	**P**	**15 06 49.2**	**+5.4**
	comp=Z,20nm,1.3s,mb4.9						
KMI	**Kunming**	**35.26**	**350**	P	**P**	**15 06 57.9**	**+2.0**
KMI				AP	pP	15 07 06.8	+1.9
KMI				XP	sP	15 07 10.1	+1.4
KMI				PP	PP	15 08 19.6	+3.3
KMI				S	**S**	**15 12 32.0**	**+4.2**
KMI				XS	sS	15 12 46.8	+4.1
KMI				AMB	AMB		
	comp=Z,41nm,1.2s,mb5.2						
KMI				AMB	AMB		
	comp=Z,161nm,4.7s						
KMI				LR	LR		
	comp=N,1μm,15.3s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,13.6s,MS5.0						
KMI				LR	LR		
	comp=Z,1μm,11.6s,MS4.8						
QZH	**Quanzhou**	**35.87**	**15**	*e*P	**P**	**15 07 05.0**	**+3.9**
QZH				S	**S**	**15 12 35.3**	**-1.9**
QZH				LR	LR		
	comp=N,1μm,9.2s						
QZH				LR	LR		
	comp=E,780nm,16.6s						
QZH				LR	LR		
	comp=Z,1μm,10.3s						
GYA	**Guiyang**	**36.15**	**357**	⇓*i*P	**P**	**15 07 05.0**	**+1.5**
GYA				AP	pP	15 07 15.0	+2.5
GYA				XP	sP	15 07 19.1	+2.8
GYA				PP	PP	15 08 30.0	+3.9
GYA				PCP	PcP	15 09 29.0	+0.1
GYA				S	**S**	**15 12 45.6**	**+4.2**
GYA				XS	sS	15 13 01.3	+4.9
GYA				SCP	ScP	15 13 11.3	-1.9
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,910nm,13.4s,MS4.8						
GYA				LR	LR		
	comp=E,670nm,12.8s,MS4.8						
GYA				LR	LR		
	comp=Z,920nm,12.9s,MS4.7						
STKA	**Stephens Creek**	**37.42**	**131**	P	**P**	**15 07 14.6**	**+0.3**
	comp=Z,10nm,0.9s,mb4.7,baz=305,slow=7.8,SNR=9.1						
STKA	**Stephens Creek**	**37.42**	**131**	*e*P	**P**	**15 07 15.1**	**+0.7**
	comp=Z,18nm,0.9s,mb4.9						
SHL	**Shillong**	**38.87**	**335**	*e*P	**P**	**15 07 26.3**	**-0.3**
HYB	**Hyderabad**	**40.35**	**312**	*e*P	**P**	**15 07 39.5**	**+0.5**
HYB	**Hyderabad**	**40.35**	**312**	*i* P	**P**	**15 07 39.5**	**+0.5**
WHN	**Wuhan**	**40.51**	**7**	⇓P	**P**	**15 07 40.8**	**+0.7**
WHN				AP	pP	15 07 49.3	0.0
WHN				LR	LR		
	comp=Z,2μm,14.6s,MS5.1						
CD2	**Chengdu**	**40.81**	**353**	⇑*i*P	**P**	**15 07 42.8**	**+0.2**
CD2				AP	pP	15 07 52.5	+0.7
CD2				XP	sP	15 07 56.9	+1.4
CD2				PP	PP	15 09 21.0	+3.8
CD2				PCP	PcP	15 09 43.0	-0.3
CD2				PCS	PcS	15 13 32.8	-1.4
CD2				S	**S**	**15 13 52.3**	**+0.5**
CD2				XS	sS	15 14 09.3	+2.5
CD2				SCS	ScS	15 17 42.8	-3.0
CD2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.0						
CD2				AMB	AMB		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,1μm,13.1s,MS5.1						
CD2				LR	LR		
	comp=E,1μm,14.2s,MS5.1						
CD2				LR	LR		
	comp=Z,2μm,13.2s,MS5.0						
JOW	**Kunigami**	**41.07**	**27**	LR	LR	15 23 12.4	
	comp=Z,219nm,21.6s,MS4.0,baz=137,slow=34						
NJ2	**Nanjing**	**42.76**	**13**	*e*P	**P**	**15 08 00.1**	**+1.6**
NJ2				AP	pP	15 08 10.0	+2.3
NJ2				XP	sP	15 08 14.1	+2.7
NJ2				PP	PP	15 09 42.1	+3.9
NJ2				S	**S**	**15 14 25.0**	**+4.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,110nm,6.7s						
NJ2				LR	LR		
	comp=N,300nm,22.0s,MS4.3						
NJ2				LR	LR		
	comp=E,370nm,24.8s,MS4.3						
NJ2				LR	LR		
	comp=Z,390nm,22.3s,MS4.2						
LSA	**Lhasa**	**42.84**	**337**	P	**P**	**15 08 00.0**	**+0.7**
LSA	**Lhasa**	**42.84**	**337**	*e*P	**P**	**15 08 00.2**	**+1.0**
	comp=Z,43nm,1.2s,mb5.0						
LSA	**Lhasa**	**42.84**	**337**	*e*P	**P**	**15 08 00.2**	**+0.9**
LSA				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.0						
JIRN	**Jiri**	**43.25**	**330**	*e*P	**P**	**15 08 03.2**	**+0.6**
	comp=Z,152nm,1.3s,mb5.5						
PKI	**Pulchoki**	**43.57**	**329**	*e*P	**P**	**15 08 05.1**	**0.0**
GUN	**Gumba**	**43.61**	**330**	*e*P	**P**	**15 08 06.0**	**+0.5**
	comp=Z,193nm,1.3s,mb5.7						
XAN	**Xi'an**	**43.65**	**0**	P	**P**	**15 08 05.3**	**-0.4**
XAN				AP	pP	15 08 13.6	-1.3
XAN				PP	PP	15 09 50.8	+3.1
XAN				S	**S**	**15 14 23.4**	**-10**
XAN				SCS	ScS	15 18 03.8	+0.7
XAN				AMB	AMB		
	comp=Z,38nm,1.5s,mb4.9						
XAN				AMB	AMB		
	comp=Z,150nm,4.2s						
XAN				LR	LR		
	comp=N,349nm,12.0s,MS4.6						
XAN				LR	LR		
	comp=E,302nm,14.0s,MS4.6						
XAN				LR	LR		
	comp=Z,1μm,12.3s,MS5.0						
DMN	**Daman**	**43.75**	**329**	*e*P	**P**	**15 08 06.8**	**+0.2**
	comp=Z,82nm,1.0s,mb5.4						
KKN	**Kakani**	**43.81**	**329**	*e*P	**P**	**15 08 07.0**	**-0.1**
	comp=Z,134nm,1.3s,mb5.5

HHC AMB AMB
comp=Z,16nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,193nm,6.0s
HHC LR LR
comp=N,745nm,21.4s,MS4.8
HHC LR LR
comp=E,535nm,19.0s,MS4.8
HHC LR LR
comp=Z,697nm,20.2s,MS4.7
SMLA Simla 50.80 325 *i* P **P 15 08 59.5 -2.0**
SMLA AMb AMB 15 09 05.2
comp=Z,45nm,0.9s,mb5.4
SMLA *i* S **S 15 16 14.6 -0.9**
JASL Jaisalmer 51.86 316 *eP* **P 15 09 10.3 +0.8**
JASL AMb AMB 15 09 18.6
comp=Z,47nm,1.0s,mb5.4
THN Thein Dam 52.60 324 *ex* **P 15 09 12.6 -2.3**
MAJO Matsushiro 53.79 29 *eP* **P 15 09 30.3 +6.6**
comp=Z,27nm,1.3s,mb5.0
MAJO Matsushiro 53.79 29 *eP* **P 15 09 30.3 +6.7**
MAJO pmax pmax
comp=Z,27nm,1.3s,mb5.0
MAT Matsushiro 53.79 29 P **P 15 09 21.2 -2.4**
MAT S **S 15 16 47.8 -8.5**
MJAR Matsushiro Arr 53.79 29 P **P 15 09 21.5 -2.2**
comp=Z,3.8nm,1.0s,mb4.3,baz=211,slow=8.6,SNR=8.1
MJAR LR LR 15 30 33.6
comp=Z,170nm,20.2s,MS4.1,baz=140,slow=34
CN2 Changchun 55.50 15 *eP* **P 15 09 40.3 +4.5**
CN2 *eAP* pP 15 09 50.3 +5.0
CN2 *eS* **S 15 17 23.3 +4.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,200nm,3.0s
WMQ Urumqi 56.76 342 P **P 15 09 46.0 +1.1**
WMQ AP pP 15 09 56.0 +1.7
WMQ XP sP 15 10 00.0 +2.0
WMQ PP PP 15 11 54.0 +2.5
WMQ S **S 15 17 34.0 -1.8**
WMQ SCS ScS 15 19 29.0 -2.9
WMQ SS SS 15 21 22.0 -2.4
WMQ AMB AMB
comp=Z,24nm,1.1s,mb5.1
WMQ AMB AMB
comp=Z,76nm,5.0s
WMQ LR LR
comp=N,152nm,18.0s,MS4.3
WMQ LR LR
comp=E,149nm,18.0s,MS4.3
WMQ LR LR
comp=Z,126nm,18.0s,MS4.1
MDJ Mudanjiang 57.38 18 *eP* **P 15 09 55.5 +6.3**
comp=Z,11nm,1.1s,mb4.8
SONM Songino Array 57.47 358 P **P 15 09 49.8 0.0**
comp=Z,14nm,1.1s,mb4.9,baz=172,slow=7.3,SNR=34
SONM LR LR 15 37 35.4
comp=Z,235nm,20.2s,MS4.3,baz=355,slow=39
ULN Ulaanbaatar 57.48 359 *eP* **P 15 09 50.0 +0.1**
comp=Z,14nm,0.9s,mb5.0
ULN Ulaanbaatar 57.48 359 *eP* **P 15 09 50.0 +0.1**
ULN pmax pmax
comp=Z,14nm,0.9s,mb5.0
KBL Kabul 58.04 322 *eP* **P 15 09 53.5 -0.6**
comp=Z,16nm,1.2s,mb4.9
KBL Kabul 58.04 322 *eP* **P 15 09 53.5 -0.6**
KBL pmax pmax
comp=Z,16nm,1.2s,mb4.9
HIA Hailar 59.64 8 *eP* **P 15 10 03.9 -1.0**
comp=Z,2.8nm,0.4s,mb4.7
HIA Hailar 59.64 8 *eP* **P 15 10 03.9 -1.0**
HIA pmax pmax
comp=Z,3.0nm,0.4s
ZAK Zakamensk 60.17 356 *eP* **P 15 10 08.7 +0.2**
ZAK *e* pP 15 10 16.6 -1.4
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
TKM2 Tokmak 2 60.64 333 *eP* **P 15 10 11.3 -0.6**
comp=Z,7.6nm,0.7s,mb4.9
TKM2 Tokmak 2 60.64 333 *eP* **P 15 10 11.3 -0.6**
TKM2 pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
AML Almayashu 60.92 331 *eP* **P 15 10 13.9 0.0**
comp=Z,7.7nm,1.0s,mb4.8
MK31 Makanchi Array 61.16 339 *eP* **P 15 10 15.7 +0.3**
MKAR Makanchi Array 61.16 339 P **P 15 10 15.0 -0.3**
comp=Z,5.7nm,0.8s,mb4.7,baz=141,slow=7.8,SNR=38
MKAR LR LR 15 39 52.5
comp=Z,179nm,19.6s,MS4.2,baz=154,slow=39
MKAR Makanchi Array 61.16 339 *i* P **P 15 10 15.3 0.0**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 61.29 331 *eP* **P 15 10 16.1 -0.2**
comp=Z,7.1nm,0.9s,mb4.8
TLY Talaya 61.44 356 *eP* **P 15 10 15.1 -2.0**
TLY pmax pmax
comp=Z,10.0nm,1.5s,mb4.7
KLR Kul'dur 62.19 17 *eP* **P 15 10 16.8 -5.4**
KLR pmax pmax
comp=Z,33nm,1.4s,mb5.3
HABR Khabarovsk 62.52 19 *eP* **P 15 10 23.2 -1.3**
HABR *e**PP pP 15 10 31.9 -2.1
HABR *e**SP sP 15 10 35.9 -1.7
HABR *e* 15 11 01.2
HABR *e* 15 12 39.2
HABR *eS* **S 15 18 47.1 -2.8**
HABR *e* 15 20 11.5
HABR *eSS* SS 15 22 51.9 -2.8
KURK Kurchatov 65.78 339 *eP* **P 15 10 46.0 +0.3**
comp=Z,20nm,1.0s,mb5.1
KURK Kurchatov 65.78 339 *eP* **P 15 10 46.1 +0.3**
KURK pmax pmax
comp=Z,20nm,1.0s,mb5.1
ZAA0 Zalesovo Array 66.73 345 *eP* **P 15 10 51.0 -0.8**
ZALV Zalesovo Beam 66.73 345 P **P 15 10 50.6 -1.2**
comp=Z,6.5nm,0.8s,mb4.7,baz=131,slow=4.1,SNR=20
BOD Bodaibo 67.56 3 *eP* **P 15 10 56.3 -0.7**
BOD pmax pmax
comp=Z,14nm,1.7s,mb4.7
CLNS Chul'man 67.76 9 *eP* **P 15 10 58.6 +0.3**
CLNS pmax pmax
comp=Z,19nm,1.3s,mb5.0
CLNS pmax pmax
comp=N,17nm,1.2s
CLNS pmax pmax
comp=E,17nm,1.9s
NVS Novosibirsk 67.94 344 *eP* **P 15 10 57.0 -2.5**
NVS pmax pmax
comp=Z,16nm,1.4s,mb4.9
NVS pmax pmax
comp=N,14nm,1.6s
NVS pmax pmax
comp=E,7.0nm,1.5s
BVA0 Borovoye Array 70.68 337 P **P 15 11 16.1 -0.3**
BVA0 pmax pmax
comp=Z,4.0nm,1.7s,mb4.1
BRVK Borovoye 70.74 337 *eP* **P 15 11 16.8 0.0**
comp=Z,16nm,0.9s,mb4.9
BRVK Borovoye 70.74 337 *eP* **P 15 11 16.8 -0.1**
BRVK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AB31 Akbulak array 72.76 329 P **P 15 11 29.0 -0.1**
AB31 pmax pmax
comp=Z,29nm,1.1s,mb5.1
VNDA Vanda 72.86 170 P **P 15 11 28.2 -1.1**
comp=Z,1.5nm,1.0s,mb3.9,baz=301,slow=7.7,SNR=5.3
VNDA LR LR 15 39 24.6
comp=Z,87nm,19.4s,MS4.0,baz=323,slow=32
VNDA Vanda 72.86 170 P **P 15 11 28.2 -1.1**
VNDA LR LR 15 39 24.6
YAK Yakutsk 73.49 10 *eP* **P 15 11 32.0 -1.1**
YAK Yakutsk 73.49 10 *eP* **P 15 11 30.7 -2.4**
YAK pmax pmax
comp=Z,22nm,1.1s,mb5.0
AKTO Aktyubinsk 74.47 329 *i* P **P 15 11 39.0 -0.1**
AKTO pmax pmax
comp=Z,4.0nm,1.8s,mb4.0
PETK Petropavlovsk- 75.22 28 P **P 15 11 43.8 +0.4**
comp=Z,8.3nm,1.0s,mb4.6,baz=302,slow=6.0,SNR=3.6
GNI Garni 77.23 315 *i* P **P 15 11 54.5 -0.6**
GNI pmax pmax
comp=Z,6.0nm,1.0s
SVE Sverdlovsk 77.33 335⇑ *eP* **P 15 11 56.0 +0.7**
SVE *e* pP 15 12 04.6 -0.4
SVE *eS* S 15 21 36.1 -7.1
SVE pmax pmax
comp=Z,21nm,1.2s,mb4.9
SVE MLR MLR
comp=Z,323nm,21.0s,MS4.6
ARU Arti 77.95 334 *eP* **P 15 11 59.2 +0.4**
ARU Arti 77.95 334 *ci* P **P 15 11 59.0 +0.3**
ARU *eS* S 15 21 48.7 -1.2
ARU pmax pmax
comp=Z,31nm,1.7s,mb5.0
LSZ Lusaka 78.50 256 P **P 15 12 04.0 +1.3**
comp=Z,0.7nm,0.3s,mb4.0,baz=79,slow=2.7,SNR=4.0
BOSA Boshof 79.73 243 LR LR 15 40 18.2
comp=Z,187nm,18.6s,MS4.5,baz=153,slow=30
QSPA South Pole Qui 80.16 180 *eP* **P 15 12 10.8 +0.2**
comp=Z,7.5nm,1.3s,mb4.5
KIV Kislovodsk 80.18 318 P **P 15 12 13.0 +1.7**
KIV *e* pP 15 12 21.1 0.0
KIV 15 22 19.0
KIV pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
TIXI Tiksi 82.41 6 *eP* **P 15 12 21.6 -0.9**
TIXI Tiksi 82.41 6 *eP* **P 15 12 21.5 -1.0**
TIXI *e* pP 15 12 30.2 -2.1
TIXI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VRHR Novokhopersk 83.74 324 *eP* **P 15 12 30.1 +0.3**
VRHR *e**PP pP 15 12 38.9 -0.7
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.4s
VORD Divnogorie 85.05 324 *eP* **P 15 12 36.2 -0.2**
VORD pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 85.21 324 *eP* **P 15 12 36.0 -1.2**
VSR *e**PP pP 15 12 44.2 -2.9
VSR pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
SNAA Sanae 87.35 197 *eP* **P 15 12 47.0 -0.5**
SNAA *e* pP 15 12 56.2 -1.2
SNAA Sanae 87.35 197 *eP* **P 15 12 46.6 -0.9**
comp=E,5.7nm,1.3s,mb4.6
SNAA Sanae 87.35 197 *eP* **P 15 12 46.6 -0.9**
SNAA pmax pmax
comp=Z,6.0nm,1.3s
OBN Obninsk 88.08 327 *eP* **P 15 12 51.3 +0.2**
OBN Obninsk 88.08 327⇑ *eP* **P 15 12 52.4 +1.3**
OBN *e* 15 12 59.2
OBN 15 16 26.0
OBN 15 23 27.0
OBN pmax pmax
comp=Z,27nm,1.4s,mb5.3
KLMR Klimovskoe 88.72 333 *eP* **P 15 12 52.9 -1.1**
VNA2 Neumayer--Watz 89.00 197 *eP* **P 15 12 56.8 +1.5**
VNA2 *e* pP 15 13 05.8 +0.6
VNA1 Neumayer--Stat 89.39 197 *eP* pP 15 13 09.5 +2.5
VNA3 Neumayer Olymp 89.50 197 *eP* **P 15 12 58.8 +1.2**
VNA3 *e* pP 15 13 07.7 +0.2
AKASG Malin Array Be 91.03 321 P **P 15 13 04.4 -0.6**
comp=Z,2.2nm,0.9s,mb4.5,baz=98,slow=4.2,SNR=4.5
NIKO Nikolski 93.20 37 *eP* **P 15 13 08.3 -6.8**
ARCES ARCESS Array B 96.82 339 LR LR 16 03 16.9
comp=Z,117nm,18.8s,MS4.4,baz=350,slow=39
TORD Torodi Ar. Bea 108.72 281 PKiKP PKiKP 15 18 33.0 +2.1
comp=Z,0.2nm,0.6s,baz=307,slow=0.7,SNR=2.4
NVAR Mina Array Bea 129.19 48 PKP PKPdf 15 19 12.6 +3.2
comp=Z,0.2nm,0.3s,baz=180,slow=0.3,SNR=2.5
TXAR Lajitas Array 143.97 53 PKP PKPdf 15 19 35.7 -1.3
comp=Z,1.3nm,0.9s,baz=114,slow=1.1,SNR=8.0
WMOK Wichita Mounta 144.65 41 *e*PKPdf PKPdf 15 19 37.5 -0.5
JCT Junction City 146.37 48 *e*PKPdf PKPab 15 19 43.0 -0.1
MIAR Mount Ida 148.00 36 *e*PKPbc PKPbc 15 19 47.3 +0.5
HKT Hockley 149.52 46 *e*PKPbc PKPbc 15 19 52.3 +1.5
WVT Waverly 149.78 27 *e*PKPbc PKPbc 15 19 49.1 -2.1
OXF Oxford 150.32 31 *e*PKPbc PKPbc 15 19 53.3 +0.7
LPAZ La Paz 153.85 187 PKPbc PKPbc 15 20 04.3 +3.2
comp=Z,0.4nm,0.6s,baz=336,slow=3.0,SNR=2.1

IDC 16 15:15:35.6±10.0, 240N×12796E, h162km±99km, mb3.1/5, mb1 3.2/5, mb1mx3.1/15, mbtmp3.1/5, Error ellipse: s-maj=124.0km s-min=20.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.07**	**165**	P		P	15 20 27.2	+0.2
	0.6nm,0.6s,baz=344,slow=10,SNR=10.0							
ASAR	**Alice Springs**	**26.55**	**168**	P		P	15 20 58.5	0.0
	0.2nm,0.9s,baz=351,slow=7.8,SNR=2.9							
ASAR				PcP		PcP	15 24 18.6	-0.3
	0.2nm,0.6s,baz=354,slow=2.3,SNR=5.6							
STKA	**Stephens Creek**	**36.47**	**160**	P		P	15 22 24.8	-0.2
	3.9nm,1.1s,baz=341,slow=7.4,SNR=3.6							
SONM	**Songino Array**	**48.94**	**341**	P		P	15 24 05.0	-0.2
	0.4nm,0.6s,baz=165,slow=12,SNR=2.6							
MKAR	**Makanchi Array**	**59.34**	**325**	P		P	15 25 20.8	+0.3
	0.5nm,0.5s,baz=115,slow=9.5,SNR=5.5							

*ISCJB **16** 15:17:34.8±0.5, 3460N±004×2442E±005, h82km±6km, mb3.8/5, Error ellipse: s-maj=8.9km s-min=4.5km az=140.6*
*NEIC **16** 15:17:34.7, 3446N×2434E, h62km, MG3.3(ATH), After ATH.*
*ATH **16** 15:17:34.7, 3446N×2434E, h62km±6km*
*CSEM **16** 15:17:35.3±0.1, 3468N×2436E, h73km±2km, Error ellipse: s-maj=4.3km s-min=2.4km az=71.0*
*HLW **16** 15:17:35.2, 3488N×2477E, h33km, Mb3.5*
*IDC **16** 15:17:36.4±2.4, 3496N×2412E, h35km±19km, mb3.9/5, mb1 3.9/6, mb1mx3.6/22, mbtmp3.9/6, ML4.8/1, Error ellipse: s-maj=37.9km s-min=21.2km az=133.0*
*THE **16** 15:17:37.4, 3483N×2428E, h13km±2km, Error ellipse: s-maj=4.2km s-min=1.2km az=196.0*
*GII **16** 15:17:49.4±0.0, 3446N×2601E, h0km, ML3.6/2*

ISC 16 15:17:36.2±0.5, 3462N±004×2439E±005, h63km±7km, n52, σ1°18/60, mb4.0/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.33**	**312**	*eP*		**Pn**	**15 17 46.5**	**-0.3**
SIVA	**Sivas**	**0.53**	**41**	P		**Pn**	**15 17 46.7**	**-2.0**
SIVA				S		**Sn**	**15 17 54.1**	**-3.7**
IDI	**Anoyia**	**0.79**	**31**	Pg		**Pn**	**15 17 50.6**	**-1.1**
	146nm,0.3s,baz=199,slow=15,SNR=267							
IDI				Lg			15 18 01.7	
	209nm,0.3s,baz=225,slow=22,SNR=30							
IDI	**Anoyia**	**0.79**	**31**	Pg		**Pn**	**15 17 50.5**	**-1.2**
VAM	**Vamos**	**0.81**	**349**	*eP*		**Pn**	**15 17 53.4**	**+1.5**
VAM				*eS*		**Sn**	**15 18 06.9**	**+3.5**
LAST	**Lasithi**	**1.05**	**58**	P		**Pn**	**15 17 55.5**	**+0.5**
LAST				S		**Sn**	**15 18 10.3**	**+1.4**
NPS	**Neapolis**	**1.20**	**57**	*eP*		**Pn**	**15 17 58.3**	**+1.4**
NPS				*eS*		**Sn**	**15 18 14.1**	**+1.8**
ZKR	**Zakros**	**1.58**	**71**	P		**Pn**	**15 18 05.4**	**+3.3**
ZKR				S		**Sn**	**15 18 26.0**	**+4.4**
THR6	**Thira Island,**	**1.92**	**25**	P		**Pn**	**15 18 06.6**	**0.0**
THR1	**Thera Island**	**1.96**	**26**	P		**Pn**	**15 18 06.6**	**-0.5**
THR5	**Thira Island,**	**1.96**	**23**	P		**Pn**	**15 18 06.5**	**-0.7**
THR3	**Thira Island,**	**1.97**	**24**	P		**Pn**	**15 18 07.0**	**-0.3**
KYTH	**Kithira**	**2.00**	**327**	*eP*		**Pn**	**15 18 09.0**	**+1.4**
THR4	**Thira Island,**	**2.02**	**24**	P		**Pn**	**15 18 08.1**	**+0.2**
VLI	**Veliai**	**2.41**	**331**	*eP*		**Pn**	**15 18 15.0**	**+1.8**
KARP	**Karpathos**	**2.46**	**67**	*eP*		**Pn**	**15 18 15.7**	**+1.8**
APE	**Apeiranthos**	**2.62**	**20**	P		**Pn**	**15 18 15.2**	**-0.9**
APE	**Apeiranthos**	**2.62**	**20**	P		**Pn**	**15 18 15.6**	**-0.5**
DID	**Didima**	**3.03**	**342**	P		**Pn**	**15 18 21.6**	**-0.1**
DID				S		**Sn**	**15 18 55.8**	**-1.0**
PYL	**PYLOS**	**3.13**	**317**	P		**Pn**	**15 18 22.8**	**-0.3**
PYL				S		**Sn**	**15 18 57.0**	**-2.3**
SLUM		**3.19**	**167**	P		**Pn**	**15 18 25.6**	**+1.7**
ITM	**Ithomi**	**3.25**	**323**	*eP*		**Pn**	**15 18 25.6**	**+0.9**
ARG	**Arkhangelos**	**3.45**	**61**	*eP*		**Pn**	**15 18 28.8**	**+1.4**
CHOS	**Chios island**	**4.00**	**19**	P		**Pn**	**15 18 34.6**	**-0.3**
HMAT	**Matruh**	**4.19**	**146**	P		**Pn**	**15 18 38.4**	**+0.8**
HMAT				S		Sx	15 19 23.5	
AGG	**Agios Georgios**	**4.70**	**340**	P		**Pn**	**15 18 45.1**	**+0.6**
AGG				S		**Sn**	**15 19 37.0**	**-0.7**
AWBH		**7.36**	**147**	P		**Pn**	**15 19 21.6**	**+0.5**
HHAG	**Hagoal**	**8.01**	**123**	P		**Pn**	**15 19 28.8**	**-1.1**
AMAG	**Maghara**	**8.43**	**116**	P		**Pn**	**15 19 33.5**	**-2.1**
AMAG				S		Sx	15 21 00.0	
KZIT	**Kziot**	**9.20**	**111**	Pn		**Pn**	**15 19 45.4**	**-0.8**
MMAI	**Mount Meron Ar**	**9.30**	**97**	Pn		**Pn**	**15 19 46.4**	**-1.2**
	0.9nm,0.3s,baz=294,slow=11,SNR=3.5							
MMAI				Sn		Sx	15 21 24.4	
	2.8nm,0.3s,baz=273,slow=27,SNR=5.5							
HNKL	**Nakhl**	**9.37**	**117**	P		**Pn**	**15 19 46.7**	**-1.7**
RTMI	**Retamim**	**9.37**	**109**	Pn		**Pn**	**15 19 47.7**	**-0.8**
HMDT	**Nahal Hemdat**	**9.60**	**101**	Pn		**Pn**	**15 19 51.2**	**-0.4**
RMNI	**Mount Ramon**	**9.62**	**112**	Pn		**Pn**	**15 19 52.2**	**+0.3**
DSI	**Dead Sea**	**9.71**	**105**	Pn		**Pn**	**15 19 51.2**	**-1.8**
MZDA	**Masada**	**9.79**	**107**	Pn		**Pn**	**15 19 53.2**	**-1.0**
PRNI	**Paran**	**9.92**	**112**	Pn		**Pn**	**15 19 55.5**	**-0.5**
PRNI				Sn		Sx	15 21 35.4	
HDK1	**Dakhla**	**10.03**	**153**	P		**Pn**	**15 19 59.4**	**+1.9**
HRFI	**Mount Harif**	**10.10**	**114**	Pn		**Pn**	**15 19 58.0**	**-0.5**
MBRI	**Mt Berech**	**10.13**	**115**	Pn		**Pn**	**15 19 59.2**	**+0.4**
MBRI				Sn		Sx	15 21 40.9	
EIL	**Elat**	**10.22**	**116**	Pn		**Pn**	**15 19 59.8**	**-0.3**
	0.4nm,0.3s,baz=278,slow=23,SNR=9.3							
EIL				Sn		Sx	15 21 46.5	
	0.9nm,0.3s,baz=322,slow=16,SNR=5.1							
EIL	**Elat**	**10.22**	**116**	Pn		**Pn**	**15 19 59.7**	**-0.4**
EIL				Sn		Sx	15 21 42.4	
HSFG		**11.48**	**132**	P		**Pn**	**15 20 17.2**	**0.0**
HSFG		**11.48**	**132**	P		**Pn**	**15 20 17.2**	**-0.1**
GERES	**GERESS Array B**	**16.28**	**334**	Pn		**Pn**	**15 21 24.5**	**+3.9**
	0.1nm,0.3s,baz=145,slow=12,SNR=13							
AKASG	**Malin Array Be**	**16.46**	**11**	Pn		**Pn**	**15 21 20.9**	**-2.0**
	3.5nm,0.3s,baz=198,slow=11,SNR=13							
HFS	**Hagfors**	**26.47**	**348**	P		**P**	**15 23 07.2**	**+0.1**
	1.5nm,0.7s,mb3.6,baz=175,slow=39,SNR=1.9							
TORD	**Torodi Ar. Bea**	**29.65**	**229**	P		**P**	**15 23 40.1**	**+4.2**
	0.9nm,0.5s,mb3.8,baz=34,slow=8.5,SNR=16							
ARCES	**ARCESS Array B**	**34.98**	**1**	P		**P**	**15 24 21.9**	**-0.1**
	2.1nm,0.8s,mb4.1,baz=172,slow=9.7,SNR=5.1							
MKAR	**Makanchi Array**	**44.60**	**56**	P		**P**	**15 25 43.9**	**+1.8**
	1.5nm,0.6s,mb4.0,baz=286,slow=6.6,SNR=12							
ZALV	**Zalesovo Beam**	**45.84**	**46**	P		**P**	**15 25 52.6**	**+0.8**
	1.5nm,0.3s,mb4.3,baz=267,slow=10.0,SNR=8.3							

*ISCJB **16** 15:34:46.4±0.6, 2399N×002×12225E×002, h6km±4km, Error ellipse: s-maj=3.3km s-min=2.5km az=140.6*
*TAP **16** 15:34:47.5, 2406N×12221E, h19km, ML3.0, C*
*JMA **16** 15:34:49.0±0.3, 2419N×122.18E, h36km, M2.4*

ISC 16 15:34:47.0±0.5, 2401N±002×12225E±002, h9km±3km, n51, σ0°88/92, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.59**	**267**	*eP*		**Pg**	**15 34 58.5**	**+0.2**
	baz=262							
HWA				*eS*		**Sg**	**15 35 08.2**	**+2.2**
	baz=262							
TWD	**Chiawan**	**0.60**	**277**	*eP*		**Pg**	**15 34 59.3**	**+0.7**
	baz=273							
TWD				S		**Sg**	**15 35 07.9**	**+1.5**
	baz=273							
ENA	**Nanau**	**0.62**	**312**⇑	*iP*		**Pg**	**15 34 58.9**	**-0.1**
	baz=322							
ENA				*eS*		**Sg**	**15 35 06.8**	**-0.4**
	baz=322							
TWC	**Suao**	**0.70**	**329**⇑	*iP*		**Pg**	**15 34 59.9**	**-0.5**
	baz=337							
TWC				*eS*		**Sg**	**15 35 08.4**	**-1.2**
	baz=337							
ESL	**Shilin**	**0.77**	**256**	P		**Pg**	**15 35 01.7**	**-0.1**
	baz=237							
ESL				S		**Sg**	**15 35 13.2**	**+1.4**
	baz=237							
YOJ	**Yonaguni jima**	**0.83**	**57**	P		**Pg**	**15 35 04.0**	**+1.0**
YOJ				*eS*		**Sg**	**15 35 14.6**	**+0.7**
ILA	**Ilan**	**0.88**	**329**	*eP*		**Pg**	**15 35 02.1**	**-1.8**
	baz=329							
ILA				S		**Sg**	**15 35 16.6**	**+1.2**
	baz=329							
ENTT	**Nioudou**	**0.88**	**316**	P		**Pg**	**15 35 03.8**	**-0.2**
	baz=326							
ENTT				*eS*		**Sg**	**15 35 16.2**	**+0.7**
	baz=326							
TWE	**Neicheng**	**0.89**	**324**	*i* P		**Pg**	**15 35 03.6**	**-0.4**
	baz=332							
TWE				*eS*		**Sg**	**15 35 16.4**	**+0.9**
	baz=332							
NNS	**Nan Shan**	**0.91**	**299**	P		**Pg**	**15 35 04.3**	**-0.1**
	baz=297							
WHF	**Hehuan Shan**	**0.91**	**279**	P		**Pg**	**15 35 04.3**	**-0.1**
	baz=276							
WHF				S		**Sg**	**15 35 16.6**	**+0.4**
	baz=276							
EHY	**Hungye**	**0.98**	**240**	*eP*		**Pg**	**15 35 05.4**	**-0.5**
	baz=225							
EHY				*eS*		**Sg**	**15 35 18.8**	**+0.2**
	baz=225							
TWT	**Tachien**	**1.01**	**284**	*eP*		**Pg**	**15 35 06.2**	**-0.1**
	baz=270							
TWT				*eS*		**Sg**	**15 35 20.3**	**+0.9**
	baz=270							
TWB1	**Santiao Chiao**	**1.02**	**347**	P		**Pg**	**15 35 06.2**	**-0.4**
	baz=1.0							
TWB1				*eS*		**Sg**	**15 35 18.9**	**-1.1**
	baz=1.0							
NSK	**Sanguang**	**1.05**	**310**	*eP*		**Pg**	**15 35 06.6**	**-0.5**
	baz=309							
NSK				*eS*		**Sg**	**15 35 20.1**	**-0.6**
	baz=309							
TWF1	**Yuli**	**1.09**	**233**	P		**Pg**	**15 35 07.0**	**-0.9**
	baz=216							
TWF1				S		**Sg**	**15 35 21.2**	**-0.8**
	baz=216							
NWF	**Wu-fen Shan**	**1.14**	**338**	*eP*		**Pb**	**15 35 08.2**	**-0.7**
	baz=338							
NWF				*eS*		**Sg**	**15 35 23.3**	**-0.4**
	baz=338							
TWA	**Mucha**	**1.14**	**328**	*eP*		**Pb**	**15 35 08.6**	**-0.2**
	baz=328							
TWA				*eS*		**Sg**	**15 35 24.1**	**+0.4**
	baz=328							
CHKT	**Chengkung**	**1.21**	**222**	*eP*		**Pn**	**15 35 07.8**	**-2.2**
	baz=206							
CHKT				*eS*		**Sb**	**15 35 22.5**	**-3.3**
	baz=206							
TAP1	**Taipei**	**1.22**	**328**	*eP*		**Pn**	**15 35 08.5**	**-1.6**
	baz=327							
TAP1				*eS*		**Sb**	**15 35 26.5**	**+0.5**
	baz=327							
SMLT	**Sun Moon Lake**	**1.24**	**265**	P		**Pn**	**15 35 09.6**	**-0.8**
	baz=263							
SMLT				*eS*		**Sb**	**15 35 25.4**	**-1.1**
	baz=263							
TYC	**Yuchr**	**1.27**	**266**	*i* P		**Pn**	**15 35 10.2**	**-0.7**
	baz=264							
TYC				*eS*		**Sb**	**15 35 25.6**	**-2.0**
	baz=264							
YUS	**Yu-Shan**	**1.29**	**247**	*eP*		**Pn**	**15 35 10.8**	**-0.4**
	baz=245							
YUS				*eS*		**Sb**	**15 35 27.1**	**-1.0**
	baz=245							
NSTT	**Nanjuang**	**1.29**	**299**	*eP*		**Pn**	**15 35 10.7**	**-0.4**
	baz=300							
TWS1	**Kuangyinshan**	**1.32**	**325**	*eP*		**Pn**	**15 35 11.5**	**-0.1**
	baz=326							
TWQ1	**Liyutan**	**1.39**	**284**	*eP*		**Pn**	**15 35 12.7**	**+0.3**
	baz=269							
TWQ1				*eS*		**Sb**	**15 35 32.1**	**+1.3**
	baz=269							
ELDTW	**Lidau**	**1.39**	**234**	*eP*		**Pn**	**15 35 11.1**	**-1.4**
	baz=233							
TWY	**Chenhua**	**1.39**	**335**	*eP*		**Pn**	**15 35 12.2**	**-0.3**
	baz=352							
IRIF	**Iriomote-Funau**	**1.40**	**76**	P		**Pn**	**15 35 13.2**	**+0.7**
IRIF				*eS*		**Sb**	**15 35 31.6**	**+0.6**
ALS	**Alishan**	**1.41**	**250**	P		**Pn**	**15 35 12.9**	**+0.2**
	baz=249							
ALS				S		**Sn**	**15 35 30.2**	**-1.2**

baz=249
NSY Sanyi 1.42 287 *e*P Pn 15 35 11.3 -1.6
baz=288
WNT Mingjian 1.43 265 *e*P Pn 15 35 13.2 +0.1
WNT *e*S Sn 15 35 31.9 -0.1
baz=264
TCU Taichung 1.44 276 *e*P Pn 15 35 13.9 +0.7
TCU *e*S Sn 15 35 32.3 +0.1
baz=275
CHN5 Tsauling 1.49 254 P Pn 15 35 14.2 +0.3
CHN5 S Sn 15 35 33.7 +0.2
baz=241
WGK Gukeng 1.57 259 *e*P Pn 15 35 14.9 -0.1
WGK *e*S Sn 15 35 36.2 +0.8
baz=244
TWG Pinlang 1.60 223 *e*P Pn 15 35 13.9 -1.4
TWG *e*S Sn 15 35 32.9 -3.2
baz=222
STYT Tauyuan 1.60 239 P Pn 15 35 15.4 0.0
STYT *e*S Sn 15 35 36.4 +0.2
baz=227
JKRS Kuro-shima 1.63 82 P Pn 15 35 16.6 +0.8
CHN4 Tsaushan 1.65 247 *e*P Pn 15 35 16.6 +0.6
baz=246
CHN4 *e*S Sn 15 35 38.4 +1.1
baz=246
WTP Ta-pu 1.68 243 *e*P Pn 15 35 17.1 +0.7
WTP *e*S Sn 15 35 38.7 +0.6
baz=243
JIJ Ishigaki jima 1.77 78 P Pn 15 35 17.9 +0.2
JIJ *e*S Sn 15 35 40.5 +0.2
TWK Hsinying 1.77 246 *e*P Pn 15 35 18.1 +0.4
baz=245
TWK *e*S Sn 15 35 41.0 +0.7
baz=245
CHN1 Nanshi 1.77 243 *e*P Pn 15 35 18.6 +0.8
baz=242
CHN1 *e*S Sn 15 35 40.7 +0.3
baz=242
SGST Jiashian 1.78 239 *e*P Pn 15 35 18.6 +0.7
baz=225
SGST *e*S Sn 15 35 41.8 +1.2
baz=225
WTCT Ta-ch'eng 1.80 266 *e*P Pn 15 35 18.7 +0.6
baz=267
ECL Taimali 1.84 220 *e*P Pn 15 35 16.6 -2.0
baz=220
WSF Szhu 1.89 259 *e*P Pn 15 35 19.4 +0.1
baz=244
WSF *e*S Sn 15 35 44.2 +1.0
baz=244
SSD Sandimen 1.94 230 *e*P Pn 15 35 20.6 +0.5
baz=220
SSD *e*S Sn 15 35 45.2 +0.6
baz=220
LAY Lan-yu 2.06 198 *e*P Pn 15 35 21.0 -0.7
baz=198
LAY *e*S Sn 15 35 43.2 -4.3
baz=198
SCZT Fangliau 2.21 223 *e*P Pn 15 35 23.9 +0.1
baz=216
SCZT *e*S Sn 15 35 52.0 +0.8
baz=216
JTJ Tarama 2.33 74 P Pn 15 35 26.6 +1.2

MAN 16 16:12:43,968N×12453E,h26km,mb4.4,ML3.2,MS3.0, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.66**	**271**	*e*P	Pb	16 12 56.9	+1.1
TBP				*e*S	Sb	16 13 04.1	-0.5
LLP	**Lapu-Lapu**	**0.84**	**319**↑	*e*P	Pb	16 12 59.2	+0.2
LLP				*e*S	Sb	16 13 10.7	+0.9
SCPH	**Surigao**	**0.95**	**84**	*e*P	Pn	16 12 59.9	-0.9
SCPH				*e*S	Sb	16 13 09.9	-3.2
SNPH	**Sibulan**	**1.32**	**255**	*e*P	Pn	16 13 08.5	+2.8

IDC 16 16:34:55.6±9.2,588S×14737E,h0km,mb3.6/2,mb1 3.8/3, mb1mx3.4/15,mbtmp3.7/3,ML3.5/1,Error ellipse: s-maj=141.1km s-min=79.2km az=3.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.87**	**221**	P	Pn	16 39 17.3	-0.7
	0.2nm,0.3s,baz=44,slow=11,SNR=15						
ASAR	**Alice Springs**	**21.93**	**215**	P	P	16 39 51.1	+0.4
	1.4nm,0.7s,baz=51,slow=8.9,SNR=33						
STKA	**Stephens Creek**	**26.42**	**191**	P	P	16 40 34.1	-0.1
	1.2nm,0.8s,baz=7.3,slow=14,SNR=3.2						

*ISCJB **16** 16:47:28.9±3.3,544S±0.08×15182E±0.08,h24km±24km, mb4.5/21,MS3.6/4,Error ellipse: s-maj=16.4km s-min=10.2km az=41.4*
*BJI **16** 16:47:29.9,540S×15180E,h35km,mB5.0,mb4.2*
*IDC **16** 16:47:31.4±2.9,554S×15170E,h30km±19km,mb4.2/11, mb1 4.4/12,mb1mx4.2/19,mbtmp4.3/12,ML4.5/1,MS3.6/6, Ms1 3.6/6,ms1mx3.1/21,Error ellipse: s-maj=21.8km s-min=13.6km az=125.0*
*NEIC **16** 16:47:31.9±0.3,543S×15184E,h35km,mb4.7/8,Error ellipse: s-maj=9.4km s-min=7.6km az=112.0*

ISC 16 16:47:33.0±1.7,549S±010×15180E±008,h41km±17km, n36,σ0°84/30,mb4.5/20,MS3.6/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.02**	**229**	*e*Pn	Pn	**16 49 00.3**	**+0.6**
	130nm,1.0s						
PMG				*e*Sn	Sn	16 50 06.2	-1.1
HNR	**Honiara**	**8.98**	**116**	Pn	Pn	**16 49 39.7**	**-0.5**
	5.2nm,0.3s,baz=205,slow=19,SNR=3.4						
HNR				LR	LR	16 52 37.9	
	comp=Z,288nm,20.8s,baz=278,slow=34						
CTA	**Charters Tower**	**15.48**	**200**	Pn	Pn	**16 51 13.0**	**+4.5**
	0.2nm,0.3s,baz=40,slow=12,SNR=3.5						
CTA				LR	LR	16 55 10.5	
	comp=Z,135nm,20.3s,baz=310,slow=30						
KAKA	**Kakadu**	**20.40**	**248**	*e*P	Px	16 51 53.9	
WRAB	**Tennant Creek**	**22.23**	**228**	*e*P	P	**16 52 27.5**	**+1.3**
	12nm,0.6s,mb4.5						
WRAB				*e*		16 56 25.3	
WB2	**Warramunga Arr**	**22.23**	**228**	*e*P	P	**16 52 26.4**	**+0.1**
WB2				*e*PcP	PcP	16 56 20.2	-1.5
WRA	**Warramunga Arr**	**22.24**	**228**	P	P	**16 52 25.7**	**-0.7**
	6.1nm,0.6s,mb4.2,baz=52,slow=9.8,SNR=63						
WRA				S	S	**16 56 25.9**	**-3.2**
	2.7nm,1.1s,baz=57,slow=17,SNR=4.3						
WRA				ScP	ScP	16 59 58.1	+2.0
	0.7nm,0.7s,baz=45,slow=2.9,SNR=6.2						
WRA				LR	LR	17 01 04.4	
	comp=Z,132nm,18.6s,MS3.4,baz=45,slow=37						
ASAR	**Alice Springs**	**24.97**	**222**	P	P	**16 52 52.7**	**-0.1**
	12nm,0.8s,mb4.5,baz=51,slow=9.0,SNR=77						
ASAR				S	S	**16 57 21.2**	**+7.3**
	2.7nm,1.2s,baz=45,slow=17,SNR=5.6						
ASAR				ScP	ScP	17 00 06.5	+3.1
	0.4nm,0.7s,baz=37,slow=4.3,SNR=4.1						
STKA	**Stephens Creek**	**27.94**	**199**	*e*P	P	**16 53 20.8**	**+1.3**
	2.6nm,0.7s,mb4.0						
BATI	**Baumata**	**28.25**	**259**	P	P	**16 53 22.9**	**+0.4**
	17nm,0.6s,mb4.9,baz=196,slow=1.6,SNR=7.7						
DAV	**Davao City (W)**	**28.98**	**295**	LR	LR	17 04 46.6	
	comp=Z,157nm,18.8s,MS3.6,baz=267,slow=36						
MBWA	**Marble Bar**	**34.76**	**240**	*e*P	P	**16 54 20.0**	**+0.3**
YHNB	**Yeheng**	**42.13**	**317**	*e*P	P	**16 55 22.5**	**+0.9**
	30nm,1.1s,mb4.8						
MJAR	**Matsushiro Arr**	**43.70**	**344**	LR	LR	17 11 27.6	
	comp=Z,65nm,20.7s,MS3.5,baz=220,slow=33						
CMAR	**Chiang Mai Arr**	**57.27**	**296**	P	P	**16 57 17.1**	**+0.2**
	1.1nm,0.5s,mb4.1,baz=124,slow=6.0,SNR=9.5						
PETK	**Petropavlovsk-**	**58.59**	**4**	P	P	**16 57 25.0**	**-0.4**
	3.1nm,1.0s,mb4.3,baz=155,slow=6.6,SNR=11						
PETK				LR	LR	17 21 07.2	
	comp=Z,67nm,21.0s,MS3.7,baz=221,slow=34						
GTA	**Gaotai**	**65.48**	**318**	*e*P	P	**16 58 13.1**	**+1.0**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb4.1						
ULN	**Ulaanbaatar**	**66.05**	**329**	*e*P	P	**16 58 16.2**	**+0.6**
	comp=Z,1.9nm,0.4s,mb4.5						
SONM	**Songino Array**	**66.38**	**328**	P	P	**16 58 18.2**	**+0.6**
	comp=Z,2.4nm,0.4s,mb4.6,baz=148,slow=5.6,SNR=24						
MK31	**Makanchi Array**	**80.19**	**319**	*e*P	P	**16 59 38.7**	**-0.4**
MKAR	**Makanchi Array**	**80.19**	**319**	P	P	**16 59 39.0**	**0.0**
	comp=Z,3.4nm,0.3s,mb4.3,baz=98,slow=6.6,SNR=18						
ZAA0	**Zalesovo Array**	**81.17**	**327**	*e*P	P	**16 59 42.8**	**-1.4**
ZALV	**Zalesovo Beam**	**81.17**	**327**	P	P	**16 59 42.7**	**-1.5**
	comp=Z,2.0nm,0.4s,mb4.4,baz=111,slow=5.4,SNR=11						
TKM2	**Tokmak 2**	**83.69**	**314**	*e*P	P	**16 59 57.6**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.4						
KURK	**Kurchatov**	**83.69**	**322**	*e*P	P	**16 59 56.6**	**-0.8**
	comp=Z,9.2nm,1.2s,mb4.8						
QSPA	**South Pole Qui**	**84.48**	**180**	P	P	**17 00 00.7**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=313,slow=2.1,SNR=3.5						
AML	**Almayashu**	**84.88**	**313**	*e*P	P	**17 00 04.7**	**+1.0**
	comp=Z,16nm,0.9s,mb5.1						
EKS2	**Erkin-Say**	**84.93**	**314**	*e*P	P	**17 00 03.7**	**-0.2**
	comp=Z,8.3nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**89.19**	**323**	P	P	**17 00 22.6**	**-1.6**
	comp=Z,2.9nm,0.8s,mb4.7,baz=122,slow=6.1,SNR=9.1						
NVAR	**Mina Array Bea**	**93.29**	**52**	P	P	**17 00 44.4**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.6,baz=251,slow=5.7,SNR=11						
PDAR	**Pinedale Array**	**100.05**	**48**	P	Pdif	17 01 13.8	-0.2
	comp=Z,0.9nm,0.8s,baz=250,slow=3.0,SNR=5.9						
GERES	**GERESS Array B**	**124.11**	**328**	PKP	PKPdf	17 06 26.5	-0.6
	comp=Z,0.8nm,0.4s,baz=74,slow=1.7,SNR=12						
LCO	**Las Campanas**	**126.66**	**132**	*e*PKPdf	PKPdf	17 06 31.6	-1.1
TOA0	**Torodi Ar. Sit**	**149.56**	**287**	*e*PKPbc	PKPbc	17 07 18.3	-0.7
TORD	**Torodi Ar. Bea**	**149.56**	**287**	PKPbc	PKPbc	17 07 18.6	-0.5
	comp=Z,16nm,0.7s,baz=76,slow=2.8,SNR=94						
BDFB	**Brasilia**	**151.27**	**137**	PKPbc	PKPbc	17 07 23.2	+0.1
	comp=Z,0.9nm,0.5s,baz=198,slow=20,SNR=3.9						

IDC 16 17:02:46.3±7.3,312N×12772E,h0km,mb3.6/3,mb1 3.8/3, mb1mx3.4/17,mbtmp3.6/3,Error ellipse: s-maj=172.2km s-min=114.7km az=77.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.82**	**164**	P	P	17 08 01.3	0.0
	0.5nm,0.4s,baz=342,slow=10,SNR=12						
ASAR	**Alice Springs**	**27.30**	**168**	P	P	17 08 33.4	+0.6
	0.5nm,0.4s,baz=359,slow=8.7,SNR=12						
STKA	**Stephens Creek**	**37.22**	**160**	P	P	17 09 59.1	-0.5
	1.9nm,1.1s,baz=333,slow=8.2,SNR=5.6						

*MOS **16** 17:05:17.9±1.1,2187S×6988W,h33km,mb5.0/14,Error ellipse: s-maj=19.9km s-min=12.4km az=110.7*
*IDC **16** 17:05:18.9±2.2,2210S×6996W,h33km±16km,mb4.4/13, mb1 4.5/16,mb1mx4.5/19,mbtmp4.4/16,ML4.3/3,MS3.9/11, Ms1 3.9/11,ms1mx3.7/16,Error ellipse: s-maj=18.4km s-min=15.3km az=78.0*
*GUC **16** 17:05:19.9±0.8,2218S×7004W,h48km±1km,ML4.8*
*ISCJB **16** 17:05:19.9±0.3,2220S±003×6982W±004,h53km±3km, mb4.8/39,MS3.9/9,Error ellipse: s-maj=6.0km s-min=4.5km az=0.1*
*NEIC **16** 17:05:19.5±0.9,2217S×6991W,h39km±8km,mb4.8/28, Error ellipse: s-maj=7.5km s-min=5.9km az=65.0*
NEIC Felt [IV] at Tocopilla.
*BJI **16** 17:05:24.4,2220S×6990W,h60km,mB5.1,Ms5.3,Msz4.9*
*DJA **16** 17:05:30,2348S×6874W,h42km,mb5.0/4*

ISC 16 17:05:20.9±0.3,2221S±003×6984W±004,h45km±3km, h51km±1.7km:pP-P,n335,σ0°68/292,mb4.8/39,MS3.9/9, 98C-92D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.33**	**99**↓	*i*P	Pn	**17 05 28.3**	**-1.7**
PB04				*i* S	Sn	**17 05 34.3**	**-2.0**
PB04				AML	AML	17 05 35.1	
	comp=E,210μm,0.5s						
PB07	**Plate Boundary**	**0.48**	**355**↓	*i*P	Pn	**17 05 31.1**	**-0.7**
PB07				*i* S	Sn	**17 05 38.8**	**-0.6**
PB06	**Plate Boundary**	**0.55**	**153**↓	*i*P	Pn	**17 05 33.8**	**+1.2**
PB06				*i* S	Sn	**17 05 43.9**	**+3.1**
LVC	**Limon Verde**	**0.95**	**115**	Pg	Pn	**17 05 41.3**	**+3.5**
	baz=153,slow=0.0						
LVC				LR	LR	17 05 53.3	
	comp=E,3μm,21.5s,baz=44,slow=32						
LVC				Lg		17 05 55.7	
	comp=E,3μm,0.3s,SNR=33						
LVC	**Limon Verde**	**0.95**	**115**	*e*Pg	Pn	**17 05 40.9**	**+3.1**
LVC				*e*Sg	Sn	**17 05 55.9**	**+5.7**
LVC	**Limon Verde**	**0.95**	**115**	*e*P	Pn	**17 05 40.7**	**+2.9**
LVC				*i* S	Sn	**17 05 55.8**	**+5.6**
LVC				AML	AML	17 05 56.8	
	comp=N,22μm,0.5s						
MECH	**Mejillones**	**1.05**	**212**↑	*e*P	Pn	**17 05 38.3**	**-0.9**
MECH				*i* S	Sn	**17 05 52.7**	**-0.1**
PB01	**Plate Boundary**	**1.21**	**16**↓	*i*P	Pn	**17 05 41.9**	**+0.5**
PB01				*i* S	Sn	**17 05 58.0**	**+1.4**
PB01				AML	AML	17 06 00.0	
	comp=E,61μm,0.3s						
CEN1	**Los Morros**	**1.22**	**196**↑	*e*P	Pn	**17 05 43.5**	**+1.9**
CEN1				*i* S	Sn	**17 06 01.6**	**+4.8**
CEN1				AML	AML	17 06 05.2	
	comp=N,22μm,0.5s						
ANCH	**Antofagasta**	**1.56**	**200**	*e*P	Pn	**17 05 45.2**	**-1.0**
ANCH				*e*S	Sn	**17 06 03.8**	**-1.3**
ANCH	**Antofagasta**	**1.56**	**200**	*e*P	Pn	**17 05 45.2**	**-1.0**
ANCH				*i* S	Sn	**17 06 04.9**	**-0.2**
ANCH				AML	AML	17 06 12.1	
	comp=N,16μm,0.5s						
SPCH	**San Pedro de A**	**1.67**	**115**	*e*P	Pn	**17 05 53.6**	**+5.9**
SPCH				*e*S	Sn	**17 06 17.0**	**+9.1**
LPAZ	**La Paz**	**6.11**	**16**	Pn	Pn	**17 06 52.7**	**+4.0**
	comp=N,5.6nm,0.3s,baz=182,slow=9.7,SNR=18						
LPAZ	**La Paz**	**6.11**	**16**	*e*P	Pn	**17 06 52.3**	**+3.6**
LCO	**Las Campanas**	**6.81**	**186**	*e*Pn	Pn	**17 07 09.7**	**+11**
CFAA	**Coronel Fontan**	**9.46**	**172**	Pn	Pn	**17 07 33.6**	**-1.0**
	comp=N,0.3nm,0.3s,baz=316,slow=10,SNR=19						
CFAA				Sn	Sn	**17 09 31.6**	**+12**
	comp=N,1.4nm,0.3s,baz=224,slow=9.9,SNR=6.0						
SIV	**San Ignacio**	**10.34**	**55**	Pn	Pn	**17 07 46.9**	**+0.2**
	comp=N,10nm,0.3s,baz=250,slow=13,SNR=51						
SIV				Sn	Sn	**17 09 43.3**	**+2.0**
	baz=279,slow=17,SNR=4.9						
SIV				LR	LR	17 12 33.3	
	comp=N,2μm,21.1s,baz=239,slow=42						
NNA	**Nana**	**12.17**	**326**	Pn	Pn	**17 08 12.2**	**+0.5**
	comp=N,0.2nm,0.3s,baz=194,slow=8.3,SNR=2.6						
NNA				LR	LR	17 12 32.4	
	comp=N,279nm,21.7s,baz=141,slow=36						
NNA	**Nana**	**12.17**	**326**	Pn	Pn	**17 08 14.7**	**+3.0**
PLCA	**Paso Flores**	**18.47**	**182**	P	Pn	**17 09 33.6**	**+0.2**
	comp=N,0.2nm,0.3s,baz=353,slow=11,SNR=3.8						
PLCA				LR	LR	17 17 09.4	
	comp=N,447nm,18.8s,baz=4.1,slow=38						
PLCA	**Paso Flores**	**18.47**	**182**	*e*P	Pn	**17 09 30.3**	**-3.1**
	comp=N,22nm,1.3s						
PLCA				P		17 09 33.6	
PLCA				LR	LR	17 17 09.4	
PLCA	**Paso Flores**	**18.47**	**182**	*e*P	Pn	**17 09 30.3**	**-3.2**
PLCA				pmax	pmax		
	comp=Z,22nm,1.3s						
SPB	**Sao Paulo**	**20.69**	**98**	*e*P	P	**17 09 57.0**	**-0.3**
BDFB	**Brasilia**	**21.64**	**76**	P	P	**17 10 06.2**	**-1.4**
	comp=Z,8.3nm,0.7s,mb4.3,baz=236,slow=18,SNR=16						
BDFB				LR	LR	17 19 24.2	
	comp=Z,300nm,20.7s,MS3.7,baz=73,slow=39						
BDFB	**Brasilia**	**21.64**	**76**	*e*P	P	**17 10 06.3**	**-1.2**
	comp=Z,15nm,0.8s,mb4.5						
BDFB	**Brasilia**	**21.64**	**76**	*e*P	P	**17 10 06.4**	**-1.2**
BDFB				pmax	pmax		
	comp=Z,15nm,0.8s						
OTAV	**Otavalo**	**23.84**	**338**	P	P	**17 10 30.4**	**+0.3**
	comp=Z,8.7nm,0.9s,mb4.2						
ROSC	**El Rosal**	**27.26**	**350**	LR	LR	17 23 36.2	
	comp=Z,162nm,19.5s,MS3.6,baz=18,slow=40						
SDV	**Santo Domingo**	**30.91**	**358**	P	P	**17 11 30.8**	**-2.7**
	comp=Z,4.7nm,0.8s,mb4.3,baz=243,slow=4.5,SNR=6.7						
SDV				LR	LR	17 25 09.3	
	comp=Z,303nm,19.4s,MS4.0,baz=210,slow=39						
BCIP	**Isla Barro Col**	**32.69**	**341**	*e*P	P	**17 11 47.1**	**-2.0**
	comp=Z,56nm,0.7s,mb5.6						
RPN	**Rapa Nui**	**36.12**	**254**	LR	LR	17 21 18.3	
	comp=Z,92nm,20.7s,MS3.5,baz=116,slow=27						
RCBR	**Riachuelo**	**36.60**	**69**	*e*P	P	**17 12 23.1**	**+0.1**
	comp=Z,36nm,0.8s,mb5.3						
SJG	**San Juan**	**40.24**	**5**	P	P	**17 12 49.1**	**-4.3**
RKT	**Rikitea**	**59.64**	**255**	*e*LR	LR	17 33 01.0	
	comp=Z,512nm,29.5s						
VNA3	**Neumayer Olymp**	**59.68**	**161**	*e*P	P	**17 15 20.5**	**+0.2**
VNA3				*e*	pP	17 15 35.4	+2.2
JCT	**Junction City**	**59.78**	**330**	*e*P	P	**17 15 19.8**	**-1.7**
	comp=Z,14nm,1.0s,mb4.9						
JCT	**Junction City**	**59.78**	**330**	*e*P	P	**17 15 19.8**	**-1.6**
JCT				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
VNA1	**Neumayer--Stat**	**59.91**	**160**	*e*P	P	**17 15 22.7**	**+0.9**
VNA1				*e*	pP	17 15 37.2	+2.4
VNA2	**Neumayer--Watz**	**60.27**	**160**	*e*P	P	**17 15 24.8**	**+0.5**
	baz=285,slow=7.7						
VNA2				*e*	pP	17 15 39.5	+2.3
WVT	**Waverly**	**60.47**	**343**	*e*P	P	**17 15 22.9**	**-3.1**
	comp=Z,10.0nm,0.8s,mb4.9						
WVT	**Waverly**	**60.47**	**343**	*e*P	P	**17 15 22.9**	**-3.1**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
TXAR	**Lajitas Array**	**60.73**	**326**	P	P	**17 15 26.5**	**-1.4**
	comp=Z,1.7nm,0.8s,mb4.2,baz=145,slow=7.8,SNR=19						
TXAR				LR	LR	17 41 10.0	
	comp=Z,90nm,21.5s,MS3.9,baz=120,slow=36						
TXAR	**Lajitas Array**	**60.73**	**326**	P	P	**17 15 26.5**	**-1.4**
TXAR				LR	LR	17 41 10.0	
MIAR	**Mount Ida**	**60.79**	**338**	*e*P	P	**17 15 26.5**	**-1.8**
	comp=Z,11nm,0.8s,mb5.0						
MIAR	**Mount Ida**	**60.79**	**338**	*e*P	P	**17 15 26.5**	**-1.7**
MIAR				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
SNAA	**Sanae**	**61.89**	**161**	*e*P	P	**17 15 33.8**	**-1.5**
SNAA				*e*	pP	17 15 48.7	+0.4
SNAA	**Sanae**	**61.89**	**161**	*e*P	P	**17 15 33.5**	**-1.8**
	comp=Z,14nm,1.0s,mb5.1						
SNAA				*e*	pP	17 15 47.1	-1.2
SNAA	**Sanae**	**61.89**	**161**	*e*P	P	**17 15 33.5**	**-1.8**
SNAA				*e*	pP	17 15 47.1	-1.2
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
FVM	**French Village**	**62.93**	**342**	*e*P	P	**17 15 40.0**	**-2.6**
	comp=Z,13nm,0.8s,mb5.1						
FVM	**French Village**	**62.93**	**342**	*e*P	P	**17 15 40.0**	**-2.6**
FVM				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.1						
319A	**Douglas**	**65.33**	**323**	↑P	P	**17 15 58.6**	**+0.1**
	baz=66,SNR=5.5						
318A	**Bisbee**	**65.77**	**323**	↓P	P	**17 16 01.1**	**-0.2**
	baz=66,SNR=6.7						
219A	**White Tail Can**	**65.79**	**324**	↓P	P	**17 16 01.4**	**0.0**
	baz=66						
BNM	**Barren Site**	**66.08**	**327**	*e*P	P	**17 16 02.8**	**-0.5**
218A	**Dragoon**	**66.21**	**323**	↑P	P	**17 16 04.4**	**+0.2**
	baz=66						
LPM	**Los Pinos Moun**	**66.21**	**327**	*e*P	P	**17 16 03.4**	**-0.7**
119A	**Ashpeak Ranch,**	**66.40**	**324**	↓P	P	**17 16 05.5**	**+0.2**
	baz=66						
217A	**Green Valley**	**66.49**	**322**	↓P	P	**17 16 06.0**	**0.0**
	baz=67						
ANMO	**Albuquerque**	**66.63**	**328**	*e*P	P	**17 16 06.1**	**-0.7**
	comp=Z,3.6nm,0.8s,mb4.5						
ANMO	**Albuquerque**	**66.63**	**328**	*e*P	P	**17 16 06.1**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
118A	**Homack Ranch,**	**66.67**	**324**	↑P	P	**17 16 07.0**	**-0.1**
	baz=67						
216A	**Three Points,**	**67.02**	**322**	↑P	P	**17 16 09.7**	**+0.4**
	baz=67						
117A	**Oracle**	**67.04**	**323**	↓P	P	**17 16 09.7**	**+0.2**
	baz=67						
Y19A	**Nutrioso**	**67.29**	**325**	↓P	P	**17 16 11.3**	**+0.3**
	baz=67,SNR=9.5						
X19A	**St. Johns**	**67.67**	**325**	↑P	P	**17 16 13.3**	**-0.1**
	baz=68						
214A	**Organ Pipe Nat**	**67.77**	**321**	↓P	P	**17 16 14.1**	**+0.1**
	baz=68						
Y17A	**Roosevelt**	**67.95**	**324**	↓P	P	**17 16 15.4**	**+0.3**
	baz=68,SNR=7.5						
QSPA	**South Pole Qui**	**67.98**	**180**	*e*P	P	**17 16 15.2**	**+0.5**
	comp=Z,15nm,1.0s,mb5.0						
W19A	**Sanders**	**68.25**	**326**	↓P	P	**17 16 16.8**	**-0.2**
	baz=68						
X17A	**Forest Lakes**	**68.41**	**324**	↑P	P	**17 16 18.9**	**+0.9**
	baz=68						
Y16A	**Circle Bar Ran**	**68.43**	**324**	↓P	P	**17 16 18.8**	**+0.7**
	baz=69						
TAOE	**Nuku Hiva Isla**	**68.53**	**269**	*e*LR	LR	17 37 07.8	
	comp=Z,845nm,25.6s						
V19A	**Window Rock**	**68.54**	**326**	↓P	P	**17 16 19.5**	**+0.7**
	baz=69						
X16A	**Lo Mia Camp, P**	**68.81**	**324**	↑P	P	**17 16 21.0**	**+0.5**
	baz=69						
113A	**Mohawk Valley,**	**68.91**	**321**	↓P	P	**17 16 21.3**	**+0.2**
	baz=69						
Y15A	**Casa Rosa Ranc**	**68.96**	**323**	↓P	P	**17 16 21.8**	**+0.3**
	baz=69						
X15A	**Humboldt**	**69.30**	**323**	↓P	P	**17 16 24.0**	**+0.4**
	baz=69						
Y14A	**Wickenburg**	**69.33**	**323**	↓P	P	**17 16 23.9**	**+0.2**
	baz=70						
W16A	**Flagstaff**	**69.37**	**324**	↑P	P	**17 16 24.4**	**+0.5**
	baz=70						
T19A	**Beclabito**	**69.39**	**327**	↑P	P	**17 16 24.0**	**-0.1**
	baz=70						
LIC	**Lamto**	**69.41**	**74**	*e*P	P	**17 16 23.7**	**-1.0**
	comp=Z,27nm,0.7s,mb5.3						
MVCO	**Mesa Verde**	**69.43**	**328**	↑P	P	**17 16 24.2**	**-0.1**
	baz=70						
U18A	**Rough Rock, Ch**	**69.50**	**326**	↓P	P	**17 16 24.6**	**-0.2**
	baz=70						
WUAZ	**Wupatki**	**69.60**	**325**	*e*P	P	**17 16 25.0**	**-0.4**
	comp=Z,6.9nm,0.9s,mb4.6						
WUAZ	**Wupatki**	**69.60**	**325**	↑P	P	**17 16 25.7**	**+0.3**
	baz=70						
TIC	**Toumodi**	**69.61**	**74**	*e*P	P	**17 16 25.1**	**-0.8**
	comp=Z,8.6nm,0.2s,mb5.4						
KIC	**Kosan Koka**	**69.73**	**74**	*e*P	P	**17 16 26.0**	**-0.7**
	comp=Z,122nm,0.8s,mb5.9						
DBIC	**Dimbokro**	**69.76**	**74**	P	P	**17 16 26.3**	**-0.6**
	comp=Z,27nm,0.8s,mb5.2,baz=217,slow=6.4,SNR=39						
DBIC	**Dimbokro**	**69.76**	**74**	*e*P	P	**17 16 26.1**	**-0.7**
	comp=Z,27nm,0.8s,mb5.2						
DBIC	**Dimbokro**	**69.76**	**74**	*e*P	P	**17 16 26.2**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,27nm,0.8s						
U16A	**Tuba City**	**69.95**	**325**	↑P	P	**17 16 27.9**	**+0.4**
	baz=70						
Y12C	**Blythe**	**70.06**	**321**	↓P	P	**17 16 28.6**	**+0.4**
	baz=70						
T18A	**Mexican Hat**	**70.06**	**327**	↓P	P	**17 16 28.1**	**-0.1**
	baz=70,SNR=8.3						
S19A	**Harvey Farm, M**	**70.16**	**328**	↑P	P	**17 16 28.5**	**-0.2**
	baz=70,SNR=

baz=72
R17A Hanksville Air 71.47 327 ⇓P P 17 16 36.7 0.0
baz=72,SNR=8.0
P19A Cripple Cowboy 71.56 329 ⇑P P 17 16 37.3 +0.1
baz=72,SNR=11
SRU San Rafael 71.91 328 *e*P P 17 16 38.7 -0.7
comp=Z,4.4nm,0.7s,mb4.5
SRU *e* pP 17 16 52.1 -0.5
SRU San Rafael 71.91 328 *e*P P 17 16 38.7 -0.6
SRU *e* pP 17 16 52.1 -0.5
SRU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SRU San Rafael 71.91 328 ⇑P P 17 16 38.9 -0.4
baz=72,SNR=8.3
U12A Valley of Fire 72.00 323 ⇑P P 17 16 39.9 0.0
baz=72
TUQ Turquoise Moun 72.07 322 ⇑P P 17 16 40.7 +0.3
baz=72
O19A Miners Draw (B 72.16 329 ⇓P P 17 16 40.8 0.0
baz=72
P18A Preston Nutter 72.17 328 ⇑P P 17 16 41.1 +0.2
baz=72,SNR=5.8
CCUT Cedar City 72.19 325 *e*P P 17 16 41.6 +0.6
CCUT *e* pP 17 16 54.6 +0.3
BFSC Mount Baldy St 72.24 320 ⇓P P 17 16 42.0 +0.6
baz=72
MSU Marysvale 72.28 326 *e*P P 17 16 41.3 -0.3
P17A Butcher Ranch, 72.29 328 ⇓P P 17 16 41.9 +0.2
baz=72
M20A Sweetwater, Wa 72.67 331 ⇓P P 17 16 43.8 0.0
baz=73
L21A Rawlins 72.68 332 ⇓P P 17 16 43.8 -0.1
baz=73
O17A Robinson Place 72.85 328 ⇓P P 17 16 45.4 +0.4
baz=73,SNR=5.7
T11A Corn Creek, Al 72.97 324 ⇑P P 17 16 46.1 +0.4
baz=73,SNR=5.4
R13A O'Grain Ranch, 72.97 325 ⇑P P 17 16 46.7 +1.0
baz=73
LRMC Laurel Mountai 73.12 321 ⇓P P 17 16 47.3 +0.7
baz=73
Q14A Sevier Lake (B 73.21 326 ⇑P P 17 16 47.8 +0.7
baz=73
TPNV Topopah Spring 73.33 323 ⇓P P 17 16 48.6 +0.7
baz=74
MPMC Manual Prospec 73.41 321 ⇑P P 17 16 48.9 +0.6
baz=74
R12A Pony Springs, 73.42 325 ⇓P P 17 16 49.0 +0.6
baz=74,SNR=5.3
N17A Moffit Pass 73.47 329 ⇑P P 17 16 49.0 +0.4
baz=74,SNR=5.5
P14A Drum Mountains 73.55 327 ⇓P P 17 16 49.7 +0.6
baz=74,SNR=6.1
Q13A Wheeler Ranch, 73.57 325 ⇓P P 17 16 49.4 +0.2
baz=74
L19A Farson 73.68 330 ⇓P P 17 16 49.8 0.0
baz=74
ISA Isabella 73.71 320 *e*P P 17 16 49.4 -0.7
comp=Z,3.5nm,0.8s,mb4.3
ISA Isabella 73.71 320 *e*P P 17 16 49.4 -0.7
ISA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ISA Isabella 73.71 320 ⇓P P 17 16 50.6 +0.5
baz=74
N16A Rees Ranch, Co 73.72 328 ⇑P P 17 16 50.5 +0.4
baz=74
L18A Fontenelle, Gr 73.86 330 ⇑P P 17 16 50.7 -0.1
baz=74,SNR=7.5
DUG Dugway 73.88 327 ⇓P P 17 16 51.5 +0.5
baz=74
P13A Bates Ranch, G 73.94 326 ⇑P P 17 16 51.7 +0.3
baz=74
R11A Troy Canyon, C 73.97 324 ⇓P P 17 16 52.2 +0.6
baz=74
S10A Tonopah Range, 74.21 323 ⇑P P 17 16 53.4 +0.4
baz=74
N15A Stansbury Isla 74.25 328 ⇑P P 17 16 53.2 +0.1
baz=74
PDAR Pinedale Array 74.30 331 P P 17 16 52.4 -1.0
comp=Z,0.7nm,0.7s,mb3.7,baz=142,slow=5.6,SNR=6.0
R10A Warm Springs 74.31 324 ⇑P P 17 16 54.2 +0.7
baz=74
PPT Papeete 74.32 257 *e*S S 17 26 28.7 +3.3
comp=Z,285nm,29.8s
PPT Papeete 74.32 257 *e*LR LR 17 39 47.5
comp=Z,294nm,29.2s
HWUT Hardware Ranch 74.33 329 *e*P P 17 16 53.1 -0.5
comp=Z,6.2nm,0.8s,mb4.6
Q11A Duckwater 74.36 324 ⇓P P 17 16 54.2 +0.4
baz=74
S09A Goldfield 74.42 323 ⇑P P 17 16 54.6 +0.3
baz=75
M15A Larsen Ranch, 74.65 328 ⇓P P 17 16 55.1 -0.3
baz=75
P11A Circle Ranch, 74.93 325 ⇑P P 17 16 57.2 +0.1
baz=75
SBA Scott Base 74.97 191 *e*P P 17 16 58.1 +1.1
comp=Z,13nm,1.2s,mb4.7
SBA Scott Base 74.97 191 *e*P P 17 16 58.1 +1.2
SBA pmax pmax
comp=Z,13nm,1.2s,mb4.7
L15A Malad City 75.03 329 ⇓P P 17 16 57.7 0.0
baz=75
M14A Sheep Mountain 75.12 328 ⇓P P 17 16 58.1 0.0
baz=75
I18A Diamond G Ranc 75.15 331 ⇑P P 17 16 58.2 -0.1
baz=75,SNR=6.6
K16A Soda Springs 75.29 330 ⇓P P 17 16 59.1 0.0
baz=75,SNR=6.7
O11A Cowboy Ranch, 75.29 325 ⇓P P 17 16 59.4 +0.2
baz=75
KCC Kaiser Creek 75.34 321 ⇓P P 17 16 59.0 -0.6
baz=76
L14A Malta 75.47 328 ⇑P P 17 16 60.0 -0.2
baz=76
NVAR Mina Array Bea 75.53 323 P P 17 17 00.4 -0.1
comp=Z,2.4nm,0.8s,mb4.2,baz=156,slow=7.0,SNR=16
Q08A Gabbs 75.62 323 ⇓P P 17 17 01.1 +0.1
baz=76
K15A Arbon 75.62 329 ⇓P P 17 17 00.7 -0.4
baz=76
J16A Bone 75.64 330 ⇑P P 17 17 01.0 -0.1
baz=76
I17A Pilgram Creek 75.66 331 ⇑P P 17 17 01.7 +0.4
baz=76
L13A Double Diamond 75.86 328 ⇓P P 17 17 02.5 +0.1
baz=76
S05C Merced 75.95 321 ⇓P P 17 17 03.8 +0.8
baz=76
VNDA Vanda 76.00 190 P P 17 17 03.0 +0.2
comp=Z,1.3nm,0.7s,mb4.0,baz=157,slow=5.0,SNR=8.4
VNDA Vanda 76.00 190 *e*P P 17 17 03.7 +0.9
comp=Z,1.2nm,0.8s,mb3.9
VNDA Vanda 76.00 190 *e*P P 17 17 03.7 +0.9
VNDA pmax pmax
comp=Z,1.0nm,0.8s
RLMT Red Lodge 76.04 332 *e*P P 17 17 03.0 -0.4
comp=Z,3.4nm,0.7s,mb4.4
RLMT Red Lodge 76.04 332 ⇑P P 17 17 03.1 -0.2
baz=76
I16A Newdale 76.04 330 ⇑P P 17 17 03.6 +0.2
baz=76
J15A Blackfoot 76.12 329 ⇑P P 17 17 04.2 +0.4
baz=76
SYO Syowa Base 76.14 160 ⇑*e*P P 17 17 02.4 -1.3
M11A Holland Ranch, 76.31 326 ⇑P P 17 17 05.2 +0.3
baz=76
G18A Lazy EL Ranch, 76.32 332 ⇑P P 17 17 04.9 0.0
baz=76,SNR=6.3
K13A Stover Farm, H 76.35 328 ⇑P P 17 17 05.3 +0.2
baz=76
H16A Russell Place, 76.58 331 ⇑P P 17 17 06.7 +0.3
baz=77,SNR=5.7
J14A Carey 76.58 329 ⇓P P 17 17 06.6 +0.1
baz=77
K12A Draper Farm, C 76.74 328 ⇓P P 17 17 07.9 +0.6
baz=77
DGMT Dagmar 76.79 337 ⇑P P 17 17 07.3 -0.2
baz=77
L11A Cat Creek Ranc 76.83 327 ⇓P P 17 17 08.0 +0.1
baz=77
F18A Big Timber 76.85 333 ⇓P P 17 17 07.5 -0.4
baz=77,SNR=6.2
I14A Mackay 77.00 329 ⇑P P 17 17 09.1 +0.2
baz=77
O07A Toulon 77.05 324 ⇓P P 17 17 09.9 +0.8
baz=77
L10A Juniper Basin 77.13 326 ⇓P P 17 17 09.7 +0.1
baz=77,SNR=6.5
H15A Lima 77.15 330 ⇓P P 17 17 10.1 +0.5
baz=77
HLID Hailey 77.19 328 *e*P P 17 17 09.7 -0.2
comp=Z,4.6nm,0.9s,mb4.4
HLID *e* pP 17 17 22.6 -0.6
HLID Hailey 77.19 328 ⇑P P 17 17 10.1 +0.3
baz=77,SNR=5.7
F17A Fitzpatrick Pl 77.25 332 ⇑P P 17 17 10.2 0.0
baz=77,SNR=6.4
J12A Stokes Ranch, 77.29 328 ⇓P P 17 17 10.8 +0.3
baz=77
I13A Wildhorse Cree 77.31 329 ⇑P P 17 17 10.9 +0.4
baz=78
MCMT McKenzie Canyo 77.40 330 *e*P P 17 17 11.0 0.0
K11A Parker Ranch, 77.41 327 ⇓P P 17 17 11.2 +0.1
baz=78
E18A Harlowton 77.46 333 ⇑P P 17 17 11.3 0.0
baz=78
G15A Dillon 77.50 331 ⇑P P 17 17 11.7 +0.2
baz=78
BEKR Beckwourth 77.67 323 ⇑P P 17 17 12.7 +0.1
baz=78
E17A Martinsdale 77.78 332 ⇑P P 17 17 13.0 -0.1
baz=78,SNR=7.4
K10A MacKenzie Ranc 77.84 327 ⇑P P 17 17 13.4 -0.1
baz=78
H13A Challis 77.86 329 ⇓P P 17 17 13.6 0.0
baz=78,SNR=7.6
D18A Linhart Farms, 77.91 333 ⇓P P 17 17 13.7 -0.1
baz=78
N06A Buffalo Meadow 77.98 323 ⇑P P 17 17 14.5 +0.1
baz=78
F15A Butte 78.01 331 ⇓P P 17 17 14.7 +0.3
baz=78
ORV Oroville 78.11 322 ⇑P P 17 17 15.3 +0.2
baz=78
H12A Diamond D Ranc 78.14 329 ⇓P P 17 17 15.1 0.0
baz=78
L08A Fields 78.18 325 ⇑P P 17 17 15.5 0.0
baz=78
E16A East Helena 78.19 332 ⇓P P 17 17 15.1 -0.2
baz=78
K09A Rome 78.22 326 ⇑P P 17 17 15.4 -0.3
baz=78
D17A Six Diamond Ra 78.25 333 ⇓P P 17 17 15.4 -0.3
baz=78,SNR=7.4
G13A Cobalt 78.25 330 ⇓P P 17 17 16.1 +0.3
baz=78,SNR=15
F14A Wisdom 78.39 331 ⇓P P 17 17 16.9 +0.4
baz=78
HRY Holter Researc 78.39 332 *e*P P 17 17 16.2 -0.3
TOA0 Torodi Ar. Sit 78.41 71 *e*P P 17 17 16.2 -1.1
TORD Torodi Ar. Bea 78.41 71 P P 17 17 16.4 -0.8
comp=Z,28nm,0.7s,mb5.3,baz=252,slow=5.2,SNR=116
TORD LR LR 17 52 50.5
comp=Z,63nm,19.9s,MS3.9,baz=20,slow=36
D16A Dana Ranch, Ca 78.52 332 ⇓P P 17 17 17.3 +0.1
baz=79
E15A Deer Lodge 78.53 331 ⇓P P 17 17 17.3 0.0
baz=79,SNR=5.4
EGMT Eagleton 78.55 334 ⇓P P 17 17 16.8 -0.5
baz=79
L07A Adell 78.59 325 ⇑P P 17 17 17.6 -0.1
baz=79
F13A Darby 78.81 330 ⇓P P 17 17 19.2 +0.3
baz=79,SNR=16
GASB Alder Springs 78.88 321 ⇑P P 17 17 20.1 +0.7
baz=79
E14A Clinton 78.90 331 ⇑P P 17 17 19.7 +0.4
baz=79
D15A Lincoln 78.95 332 ⇑P P 17 17 19.9 +0.4
baz=79
SUR Sutherland 78.97 120 *e*P P 17 17 21.5 +1.3
comp=Z,22nm,0.9s,mb5.1
MOD Modoc 79.03 324 ⇑P P 17 17 20.3 +0.2
baz=79
H10A Noah's Angus R 79.08 328 ⇓P P 17 17 20.5 +0.2
baz=79
I09A Lost Marbles R 79.14 327 ⇑P P 17 17 20.3 -0.3
baz=79
C16A Fuhringer Ranc 79.20 333 ⇓P P 17 17 20.5 -0.4
baz=79,SNR=5.4
E13A Vicor 79.24 331 ⇑P P 17 17 21.4 +0.3
baz=79
D14A Greenough 79.41 331 ⇑P P 17 17 22.2 +0.2
baz=80
G11A Walters Elk Ra 79.44 329 ⇑P P 17 17 22.3 0.0
baz=80,SNR=7.4
I08A Drewsey 79.51 326 ⇓P P 17 17 23.0 +0.3
baz=80
BMO Blue Mountains 79.55 328 *e*P P 17 17 21.8 -1.0
comp=Z,7.7nm,1.4s,mb4.4
C15A Salmond Ranch, 79.55 332 ⇓P P 17 17 22.7 -0.1
baz=80,SNR=9.0
F11A Grangeville 79.74 329 ⇓P P 17 17 23.8 -0.1
baz=80,SNR=5.4
G10A Bishop Farm, J 79.78 328 ⇓P P 17 17 24.0 -0.1
baz=80,SNR=7.1
D13A Huson 79.85 331 ⇑P P 17 17 24.2 -0.2
baz=80,SNR=7.5
E12A Beaver Dam Sad 79.86 330 ⇑P P 17 17 24.1 -0.4
baz=80
B15A Bradely Ranch, 79.94 333 ⇑P P 17 17 24.4 -0.5
baz=80,SNR=5.9
N02C Big Bar 79.99 322 ⇑P P 17 17 25.4 +0.1
baz=80
A16A West Butte Ran 80.03 334 ⇓P P 17 17 25.0 -0.4
baz=80,SNR=16
G09A Cove 80.09 328 ⇑P P 17 17 25.7 -0.1
baz=80,SNR=11
I07A Izee 80.11 326 ⇓P P 17 17 26.1 +0.1
baz=80
F10A Beach Ranch, E 80.32 329 ⇓P P 17 17 27.0 0.0
baz=80,SNR=6.9
C13A Hot Springs 80.34 331 ⇓P P 17 17 27.0 -0.1
baz=80,SNR=5.7
I06A Prineville 80.39 326 ⇑P P 17 17 27.9 +0.5
baz=80
E10A Myers Farm, Un 80.63 329 ⇑P P 17 17 28.4 -0.3
baz=81
TSUM Tsumeb 80.66 107 *e*P P 17 17 30.0 +0.4
comp=Z,20nm,0.9s,mb5.0
B13A Whitefish 80.82 332 ⇑P P 17 17 29.6 0.0
baz=81
F08A Pendleton 80.95 328 ⇑P P 17 17 30.7 +0.3
baz=81
H06A Lindquist Farm 81.00 326 ⇑P P 17 17 31.0 +0.3
baz=81
G07A Ruggs Ranch, H 81.02 327 ⇓P P 17 17 31.4 +0.5
baz=81
D10A Wagner Farm, O 81.12 329 ⇑P P 17 17 30.5 -0.8
baz=81,SNR=5.5
B12A Libby 81.38 331 ⇑P P 17 17 32.4 -0.2
baz=82
D09A Jones Farm, Ri 81.62 329 ⇑P P 17 17 33.8 -0.2
baz=82
A12A Yak River Ran 81.76 331 ⇑P P 17 17 34.4 -0.2
baz=82,SNR=6.2
OD2 Odessa Site #2 82.05 329 *e*P P 17 17 35.0 -1.2
A11A Hall Mountain, 82.09 331 ⇓P P 17 17 36.1 -0.2
baz=82,SNR=12
C09A Chrisman Ranch 82.13 329 ⇓P P 17 17 36.5 -0.1
baz=82
B09A Rice 82.52 330 ⇑P P 17 17 37.8 -0.8
baz=83
F04A Amboy 82.89 326 ⇑P P 17 17 40.0 -0.6
baz=83
C07A Waterville 82.91 328 ⇓P P 17 17 40.1 -0.5
baz=83
A09A Danville 83.11 330 ⇓P P 17 17 41.0 -0.7
baz=83
A08A Turner Farm, O 83.42 330 ⇑P P 17 17 42.7 -0.6
baz=84,SNR=5.3
B07A Winthrop 83.47 329 ⇓P P 17 17 42.7 -0.8
baz=84
BOSA Boshof 83.87 118 P P 17 17 46.1 -0.1
comp=Z,15nm,0.8s,mb5.2,baz=263,slow=4.4,SNR=18
MAW Mawson 83.90 164 P P 17 17 45.4 -0.1
comp=Z,12nm,0.9s,mb5.0,baz=204,slow=7.9,SNR=8.3
MAW LR LR 17 53 40.5
comp=Z,125nm,18.7s,MS4.3,baz=64,slow=34
MAW Mawson 83.90 164 *e*P P 17 17 45.6 0.0
A07A Ashnola River, 84.01 329 ⇑P P 17 17 45.9 -0.3
baz=84,SNR=5.5
EDM Edmonton 84.04 335 *e*P P 17 17 44.1 -2.2
LBTB Lobatse 85.50 115 *e*P P 17 17 54.8 +0.2
comp=Z,9.6nm,0.8s,mb5.1
LBTB Lobatse 85.50 115 *e*P P 17 17 54.8 +0.3
LBTB pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
TAM Tamanrasset 85.91 64 *e*P P 17 17 56.6 +0.2
ESDC Sonseca Array 86.94 45 P P 17 18 01.2 +0.1
comp=Z,0.3nm,0.3s,mb4.0,baz=237,slow=4.4,SNR=4.3
ESLA Sonseca Array 86.94 45 P P 17 18 01.7 +0.6
LSZ Lusaka 91.52 107 *e*P P 17 18 24.9 +1.6
comp=Z,4.5nm,0.9s,mb4.8
LSZ Lusaka 91.52 107 *e*P P 17 18 24.9 +1.6
LSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
YKA Yellowknife Ar 91.57 341 P P 17 18 21.2 -1.1
comp=Z,8.8nm,1.0s,mb5.0,baz=137,slow=4.5,SNR=5.6
KEST Kesra 94.42 53 P P 17 18 35.1 -1.0
comp=Z,3.7nm,1.1s,mb4.7,baz=247,slow=5.2,SNR=4.0
KEST LR LR 18 03 30.5
comp=Z,47nm,18.3s,MS4.0,baz=264,slow=37
ASAR Alice Springs 126.88 208 PKP PKPdf 17 24 23.3 -1.0
comp=Z,2.9nm,0.8s,baz=148,slow=2.1,SNR=12
ARU Arti 129.22 34 *i* PKIKP PKPdf 17 24 23.0 -0.8
ARU 17 26 31.2
ARU SS SS 17 43 48.9 -1.0
TIXI Tiksi 129.38 352 *e*PKPdf PKPdf 17 24 22.1 -1.5
TIXI Tiksi 129.38 352 ⇑*i*PKIKP PKPdf 17 24 23.0 -0.7
SEY Seymchan 130.40 336 ⇑*i*PKIKP PKPdf 17 24 25.8 0.0
AKTK Aktyubinsk 130.74 42 PKP PKPdf 17 24 27.0 +0.2
AKTO Aktyubinsk 130.74 42 PKP PKPdf 17 24 27.0 +0.2
comp=Z,1.4nm,0.8s,baz=193,slow=2.9,SNR=6.6
WRA Warramunga Arr 131.90 211 PKP PKPdf 17 24 29.1 -1.0
comp=Z,1.7nm,0.7s,baz=155,slow=1.7,SNR=6.5
WRAB Tennant Creek 131.91 211 *i* PKIKP PKPdf 17 24 29.8 -0.3
YAK Yakutsk 138.01 346 ⇑*i*PKIKP PKPdf 17 24 39.2 -0.9
NVS Novosibirsk 141.68 25 *e*PKIKP PKPdf 17 24 45.9 -1.1
ZAA0 Zalesovo Array 142.96 25 *e*PKPpre 17 24 44.4
ZAA0 *e*PKPdf PKPdf 17 24 48.9 -0.4
ZALV Zalesovo Beam 142.96 25 PKhKP 17 24 45.2
comp=Z,9.3nm,0.8s,baz=302,slow=2.2,SNR=20
EKS2 Erkin-Say 143.52 47 *e*PKPdf PKPdf 17 24 48.4 -2.2
EKS2 Erkin-Say 143.52 47 P PKPdf 17 24 48.8 -1.8
SNR=6.0
AML Almayashu 143.66 48 P PKPdf 17 24 49.7 -1.2
SNR=11
AAK Ala-Archa 144.02 47 P PKPdf 17 24 50.4 -1.1
SNR=16
CHMS Chumysh 144.05 46 P PKPdf 17 24 49.6 -2.0
SNR=6.1
KBK Karagaybulak 144.32 47 P PKPdf 17 24 51.2 -0.9
SNR=23
BOD Bodaibo 144.32 356 *e*PKIKP PKPdf 17 24 47.7 -3.9
BOD pmax pmax
comp=Z,14nm,0.8s
TKM2 Tokmak 2 144.65 46 *e*PKPdf PKPdf 17 24 51.6 -1.0
TKM2 Tokmak 2 144.65 46 P PKPdf 17 24 52.0 -0.6
SNR=17
KZA Kyzart 144.75 48 P PKPdf 17 24 53.4 +0.6
SNR=21
BATI Baumata 145.17 204 PKPbc PKPbc 17 24 51.9 -2.0
comp=Z,23nm,1.0s,baz=230,slow=4.3,SNR=3.8
ULHL Ulahol 145.36 47 P PKPbc 17 24 55.4 +1.6
SNR=7.5
POO Poona 145.81 89 *e*P PKPdf 17 24 55.0 -0.3
MK31 Makanchi Array 146.71 36 *e*PKPdf PKPdf 17 24 55.5 -0.5
MKAR Makanchi Array 146.71 36 PKPbc PKPbc 17 24 55.9 -1.9
comp=Z,14nm,0.7s,baz=318,slow=3.0,SNR=65
HABR Khabarovsk 147.13 329 *e*PKIKP PKPdf 17 24 54.0 -2.7
HABR *i* 17 24 59.4
HABR *e* 17 25 05.0
HABR *e* 17 28 22.5
HABR *e* 17 32 00.1
HABR *e* 17 41 02.5
HABR *e*SS SS 17 47 22.3 +0.9
HABR *e*SSS 17 52 55.0
THN Thein Dam 147.87 64 *e*P PKPbc 17 25 00.4 -1.0
HYB Hyderabad 149.92 93 *e*P PKPbc 17 25 05.5 -1.5
HYB Hyderabad 149.92 93 *i* PKP PKPbc 17 25 05.5 -1.5
HYB *e* 17 25 12.5
LEM Lembang 151.03 175 P PKPbc 17 25 11.1 +1.3
KAPI Kappang 151.36 200 PKPbc PKPbc 17 25 09.5 -1.1
comp=Z,4.3nm,0.3s,baz=194,slow=5.9,SNR=7.4
CBJI Citeko 151.36 173 P PKPbc 17 25 08.6 -2.0
ZAK Zakamensk 151.37 9 *e*PKIKP PKiKP 17 25 08.8 -1.1
ZAK pmax pmax
comp=Z,5.0nm,1.6s
WMQ Urumqi 151.54 35 *e*PKP PKPdf 17 25 02.0 -1.9
WMQ PP PP 17 28 51.0 +1.5
WMQ SKS SKSdf 17 32 02.0 -5.7
WMQ SKKS SKKSac 17 35 32.0 -4.7
WMQ SS SS 17 48 07.0 -3.9
WMQ PP PP
comp=Z,74nm,9.0s
WMQ LR LR
comp=N,65nm,24.0s,MS4.5
WMQ LR LR
comp=E,58nm,24.0s,MS4.5
WMQ LR LR
comp=Z,67nm,24.0s,MS4.4
MJAR Matsushiro Arr 151.82 307 PKPbc PKPbc 17 25 10.0 -0.9
comp=Z,4.9nm,0.8s,baz=84,slow=1.3,SNR=11
MJAR PKPab PKPab 17 25 19.0 -1.1
comp=Z,2.0nm,0.7s,baz=99,slow=2.9,SNR=4.4
HIA Hailar 151.95 347 *e*PKPbc PKPbc 17 25 09.5 -1.3
SONM Songino Array 154.26 6 PKP PKPdf 17 25 07.6 -0.1
comp=Z,2.1nm,1.0s,baz=347,slow=1.3,SNR=8.8
SONM PKPbc PKPbc 17 25 14.9 -1.1
comp=Z,2.5nm,0.8s,baz=327,slow=1.2,SNR=12
SONM PKPab PKPab 17 25 29.4 -0.4
comp=Z,1.2nm,0.8s,baz=316,slow=6.2,SNR=4.5
SONM Songino Array 154.26 6 PKIKP PKPdf 17 25 07.6 -0.1
SONM 17 25 14.9
KSRS Korea Array 158.42 319 PKP PKPdf 17 25 13.2 -0.3
comp=Z,1.9nm,0.9s,baz=73,slow=1.5,SNR=5.7
GTA Gaotai 160.72 25 *e*PKP PKPdf 17 25 16.3 +0.3
HHC Hu-ho-hao-te 161.38 357 *e*PKP PKPdf 17 25 15.9 -0.8
HHC APKP 17 25 34.5
HHC XPKP 17 25 41.8
HHC PKS 17 28 48.4
HHC PP PP 17 29 46.8 +3.6
HHC SKS SKSdf 17 32 16.5 -1.5
HHC SKKS SKKSac 17 36 29.8 +1.1
HHC SS SS 17 49 54.8 -0.4
HHC PP PP
comp=Z,111nm,6.1s
HHC LR LR
comp=N,141nm,25.0s
HHC LR LR
comp=E,194nm,22.6s
HHC LR LR
comp=Z,118nm,20.2s
LZH Lanzhou 165.12 20 *e*PKP PKPdf 17 25 24.0 +3.6
LZH APKP 17 25 34.8
LZH PKP2 PKPab 17 26 23.1 +5.7
LZH LR LR
comp=E,125nm,18.2s
LZH LR LR
comp=Z,189nm,20.3s
NJ2 Nanjing 167.52 324 *e*PKP PKPdf 17 25 24.4 +2.0
CMAR Chiang Mai Arr 168.83 108 PKP PKPdf 17 25 23.0 -0.7
comp=Z,1.1nm,0.8s,baz=272,slow=1.9,SNR=8.2
CMAR PKPab PKPab 17 26 34.2 -0.3
comp=Z,2.0nm,0.8s,baz=255,slow=5.2,SNR=16
CMAR PP PP 17 30 22.7 -1.3
comp=Z,0.6nm,0.8s,baz=256,slow=5.6,SNR=5.3
CD2 Chengdu 169.62 32 *e*PKP PKPdf 17 25 21.3 -2.5
CD2 APKP 17 25 38.3
CD2 XPKP 17 25 48.0
CD2 PKP2 PKPab 17 26 37.3 -0.1
CD2 PP PP 17 30 26.9 +0.3
CD2 SKS SKSdf 17 32 17.9 -6.0
CD2 SKKS SKKSac 17 37 06.9 -3.7
CD2 PP PP
comp=Z,120nm,10.2s
KMI Kunming 172.61 65 PKP PKPdf 17 25 22.4 -3.1
KMI APKP 17 25 40.5
KMI XPKP 17 25 46.9
KMI PP PP 17 30 42.3 -0.4
KMI PP PP
comp=Z,81nm,5.2s
KMI LR LR
comp=N,102nm,12.7s
KMI LR LR
comp=E,98nm,13.2s
KMI LR LR
comp=Z,90nm,15.1s

GYA	**Guiyang**	**174.71**	**36**	*e*PKP	PKPdf	17 25 25.8	-0.5
GYA				APKP		17 25 41.9	
GYA				XPKP		17 25 48.6	
GYA				PKS		17 28 54.3	
GYA				PP	PP	17 30 51.6	-0.3
GYA				PP	PP		

comp=Z,70nm,7.5s

IDC **16** *17:14:16.3±1.2,502S×152.10E,h40km±9km,mb4.1/6, mb1 4.3/7,mb1mx3.9/17,mbtmp4.1/7,ML3.4/1,MS3.5/4, Ms1 3.6/4,ms1mx3.0/28,Error ellipse: s-maj=54.9km s-min=21.5km az=124.0*

ISCJB **16** *17:14:21.6±3.6,52S±02×1519E±02,h92km±30km, mb4.3/9,Error ellipse: s-maj=32.7km s-min=23.5km az=144.8*

NEIC **16** *17:14:22.5±2.2,5.17S×15197E,h93km±18km,mb4.8/3, Error ellipse: s-maj=20.0km s-min=15.9km az=136.0*

ISC 16 17:14:23.5±3.4,53S±02×1519E±02,h94km±26km,n18, σ0§61/13,mb4.3/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.26**	**228**	*e*Pn	**Pn**	**17 15 53.3**	**0.0**
PMG				*e*Sn	**Sn**	**17 17 02.8**	**-0.7**
HNR	**Honiara**	**8.99**	**118**	LR	LR	17 19 22.3	
	comp=Z,92nm,20.8s,baz=276,slow=34						
CTA	**Charters Tower**	**15.74**	**200**	Pn	**Pn**	**17 18 00.9**	**+1.1**
	0.1nm,0.3s,baz=15,slow=14,SNR=3.7						
WRAB	**Tennant Creek**	**22.46**	**228**	*e*P	**P**	**17 19 14.9**	**-0.2**
	17nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**22.47**	**228**	*e*P	**P**	**17 19 14.8**	**-0.3**
WRA	**Warramunga Arr**	**22.48**	**228**	P	**P**	**17 19 15.5**	**+0.3**
	13nm,0.7s,mb4.4,baz=53,slow=9.9,SNR=48						
WRA				pP		17 19 27.1	
	6.4nm,0.6s,baz=51,slow=9.9,SNR=9.1						
WRA				LR	LR	17 27 24.5	
	comp=Z,73nm,21.7s,baz=125,slow=35						
ASAR	**Alice Springs**	**25.22**	**222**	P	**P**	**17 19 41.3**	**+0.6**
	6.9nm,0.5s,mb4.4,baz=58,slow=8.8,SNR=44						
ASAR				pP		17 19 53.0	-8.6
	12nm,0.9s,baz=63,slow=8.6,SNR=18						
STKA	**Stephens Creek**	**28.19**	**199**	P	**P**	**17 20 06.9**	**-0.4**
	1.7nm,0.6s,mb3.7,baz=18,slow=10,SNR=7.2						
STKA	**Stephens Creek**	**28.19**	**199**	*e*P	**P**	**17 20 06.8**	**-0.4**
KAPI	**Kappang**	**32.02**	**269**	P	**P**	**17 20 42.4**	**+1.0**
	98nm,1.8s,mb5.2						
MBWA	**Marble Bar**	**34.97**	**240**	P	**P**	**17 21 06.2**	**-0.7**
	14nm,1.1s,mb4.7						
KSRS	**Korea Array**	**48.01**	**334**	LR	LR	17 39 05.8	
	comp=Z,87nm,19.3s,baz=323,slow=31						
VNDA	**Vanda**	**72.42**	**178**	P	**P**	**17 25 38.9**	**-0.1**
	1.1nm,0.9s,mb3.7,baz=305,slow=7.2,SNR=7.1						
NVAR	**Mina Array Bea**	**93.06**	**52**	P	**P**	**17 27 26.3**	**-0.7**
	0.9nm,0.8s,mb4.2,baz=243,slow=7.8,SNR=5.4						
PDAR	**Pinedale Array**	**99.81**	**48**	P	Pdif	17 27 56.2	-1.0
	0.3nm,0.8s,baz=264,slow=3.5,SNR=2.4						
PDAR				LR	LR	18 04 28.5	
	comp=Z,106nm,20.9s,baz=98,slow=30						
TOA0	**Torodi Ar. Sit**	**149.59**	**287**	PKPbc	PKPbc	17 34 02.6	-0.6
TORD	**Torodi Ar. Bea**	**149.59**	**287**	PKPbc	PKPbc	17 34 02.1	-1.0
	1.0nm,0.7s,baz=108,slow=2.8,SNR=5.5						
TORD				pPKPbc	PKPab	17 34 14.1	+5.6
	1.2nm,0.9s,baz=25,slow=3.1,SNR=5.1						
TORD	**Torodi Ar. Bea**	**149.59**	**287**	PKPbc	PKPbc	17 34 02.1	-1.0
TORD				pPKPbc	PKPab	17 34 14.1	+5.6

NEIC **16** *17:19:24.8±2.9,728S×12960E,h138km±30km,mb4.4/1, Error ellipse: s-maj=27.0km s-min=16.8km az=71.0*

ISCJB **16** *17:19:28.6±2.1,76S±01×1293E±01,h196km±22km, mb3.5/6,Error ellipse: s-maj=23.3km s-min=8.8km az=138.0*

IDC **16** *17:19:29.6±6.6,738S×129.15E,h169km±63km,mb3.2/5, mb1 3.4/7,mb1mx3.3/14,mbtmp3.3/7,Error ellipse: s-maj=60.5km s-min=19.9km az=54.0*

ISC 16 17:19:25.8±2.8,74S±02×1295E±01,h145km±30km,n16, σ1§15/20,mb3.6/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.38**	**243**	P	**Pn**	**17 20 58.7**	**+1.2**
	3.4nm,0.3s,baz=97,slow=6.5,SNR=17						
BATI				S	**Sn**	**17 22 07.2**	**-2.1**
	9.6nm,0.3s,baz=12,slow=23,SNR=11						
WRAB	**Tennant Creek**	**13.36**	**160**	*e*Pn	**Pn**	**17 22 30.0**	**+0.2**
WRAB				*e*Sn	**Sn**	**17 24 46.9**	**-11**
WRA	**Warramunga Arr**	**13.37**	**160**	P	**Pn**	**17 22 29.5**	**-0.3**
	1.3nm,0.3s,baz=337,slow=13,SNR=23						
WRA				S	**Sn**	**17 24 51.7**	**-6.1**
	2.6nm,0.3s,baz=333,slow=23,SNR=10						
WB2	**Warramunga Arr**	**13.37**	**160**	*e*Pn	**Pn**	**17 22 29.0**	**-0.9**
WB2				*e*Sn	**Sn**	**17 24 46.2**	**-12**
MBWA	**Marble Bar**	**16.62**	**213**	*e*P	**Pn**	**17 23 10.9**	**+0.6**
ASAR	**Alice Springs**	**16.76**	**166**	P	**Pn**	**17 23 13.4**	**+1.5**
	0.9nm,0.3s,baz=347,slow=9.6,SNR=35						
ASAR				S	**S**	**17 26 06.3**	**-12**
	0.2nm,0.3s,baz=328,slow=17,SNR=3.4						
STKA	**Stephens Creek**	**26.88**	**157**	P	**P**	**17 24 56.1**	**+3.1**
	1.2nm,0.8s,mb3.6,baz=332,slow=11,SNR=4.0						
CMAR	**Chiang Mai Arr**	**39.55**	**311**	P	**P**	**17 26 42.8**	**0.0**
	0.5nm,0.8s,mb3.2,baz=134,slow=7.7,SNR=4.7						
ULN	**Ulaanbaatar**	**58.45**	**342**	P	**P**	**17 29 00.6**	**-5.6**
	5.3nm,1.2s,mb4.2						
SONM	**Songino Array**	**58.62**	**342**	P	**P**	**17 29 08.6**	**+1.2**
	0.2nm,0.4s,mb3.3,baz=158,slow=8.6,SNR=2.5						
MK31	**Makanchi Array**	**68.24**	**327**	P	**P**	**17 30 11.2**	**+0.6**
MKAR	**Makanchi Array**	**68.24**	**327**	P	**P**	**17 30 10.7**	**0.0**
	0.7nm,0.4s,mb3.8,baz=119,slow=7.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**71.67**	**334**	P	**P**	**17 30 31.0**	**-0.5**
	0.5nm,0.4s,mb3.6,baz=142,slow=7.2,SNR=2.8						
VNDA	**Vanda**	**72.15**	**173**	*e*P	**P**	**17 30 34.0**	**0.0**
BILL	**Bilibino**	**79.60**	**13**	P	**P**	**17 31 13.7**	**-2.5**
TORD	**Torodi Ar. Bea**	**128.35**	**281**	PKP	PKPdf	17 38 16.8	+0.7
	0.2nm,0.5s,baz=50,slow=1.6,SNR=2.7						

ISCJB **16** *17:29:14.1±0.2,4933N±001×676E±003,h0km,Error ellipse: s-maj=2.6km s-min=1.9km az=32.6*

NEIC **16** *17:29:15.3,4938N×678E,h1km,ML2.5(LDG), ML2.3(STR),After STR.*

CSEM **16** *17:29:16.1±0.0,4937N×686E,h1km,ML2.5/16,Error ellipse: s-maj=0.8km s-min=0.7km az=118.0*

LDG **16** *17:29:16.2±0.1,4938N×684E,h1km,Md2.8/2,Ml2.5/18, Error ellipse: s-maj=0.9km s-min=0.8km az=173.0, Suspected Mining induced.*

BGR **16** *17:29:16.1±0.3,4936N×683E,h1km,ML1.9/3,Error ellipse: s-maj=4.4km s-min=3.3km az=53.0*

BNS **16** *17:29:18.3±1.0,4948N×684E,h1km,ML1.4*

ISC 16 17:29:15.0±0.2,4935N±001×677E±003,h0km,n68, σ0§95/129,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.40**	**28**	*e*Pg	**Pg**	**17 29 23.1**	**+0.4**
	SNR=15						
RUP	**Ruppelstein**	**0.40**	**28**	Pg	**Pg**	**17 29 22.9**	**+0.2**
RUP				Sg	**Sg**	**17 29 26.7**	**-1.2**
WLF	**Walferdange**	**0.51**	**309**	*e*Pg	**Pg**	**17 29 26.6**	**+1.8**
	SNR=3.2						
WLF				*e*Sg	**Sg**	**17 29 32.3**	**+0.8**
	SNR=4.3						
WLF	**Walferdange**	**0.51**	**309**	P	**Pg**	**17 29 26.7**	**+1.8**
WLF	**Walferdange**	**0.51**	**309**	*e*Pg	**Pg**	**17 29 26.3**	**+1.4**
ABH	**Alteburg**	**0.74**	**43**	Pg	**Pg**	**17 29 28.3**	**-0.8**
ABH				Sg	**Sg**	**17 29 38.5**	**-0.2**
LANF	**Langenberg**	**0.77**	**118**	*e*Pg	**Pg**	**17 29 30.1**	**+0.3**
	SNR=5.2						
LANF	**Langenberg**	**0.77**	**118**	Pg	**Pg**	**17 29 29.9**	**+0.1**
KTD	**Kalmit**	**0.86**	**91**	Pg	**Pg**	**17 29 31.3**	**-0.2**
KTD				Sg	**Sg**	**17 29 43.9**	**+1.3**
BGG	**Burgeitz**	**0.94**	**23**	*e*Pg	**Pg**	**17 29 33.0**	**+0.1**
HILG	**Hillesheim**	**0.95**	**356**	*e*Pg	**Pg**	**17 29 33.6**	**+0.5**
CDF	**Champ du Feu**	**0.99**	**160**	*e*Pn	**Pn**	**17 29 35.7**	**-0.5**
CDF				*e*Sn	**Sn**	**17 29 49.6**	**-1.3**
	20nm,0.2s						
CDF	**Champ du Feu**	**0.99**	**160**	*e*Pg	**Pg**	**17 29 34.7**	**+0.7**
CDF				*e*Pn	**Pn**	**17 29 35.7**	**-0.5**
CDF				*e*Sn	**Sn**	**17 29 49.6**	**-1.3**
CDF	**Champ du Feu**	**0.99**	**160**	*e*Pn	**Pn**	**17 29 35.7**	**-0.5**
CDF				*e*Sn	**Sn**	**17 29 49.6**	**-1.3**
	9.9nm,0.2s						
RFYF	**Reffroy**	**1.12**	**230**	*e*P	**Pg**	**17 29 39.6**	**+3.2**
RFYF				*e*Sn	**Sn**	**17 29 53.9**	**0.0**
	37nm,0.3s,baz=53						
RFYF	**Reffroy**	**1.12**	**230**	*e*Pg	**Pg**	**17 29 38.1**	**+1.7**
RFYF				*e*P		17 29 39.6	
RFYF				*e*Sn	**Sn**	**17 29 53.9**	**0.0**
RFYF	**Reffroy**	**1.12**	**230**	*e*P	**Pg**	**17 29 39.6**	**+3.2**
RFYF				*e*Sn	**Sn**	**17 29 53.9**	**0.0**
	18nm,0.3s						
ECH	**Echery**	**1.16**	**167**	*e*Pg	**Pg**	**17 29 38.4**	**+1.1**
	SNR=13						
ECH	**Echery**	**1.16**	**167**	Pg	**Pg**	**17 29 38.7**	**+1.5**
THEF	**They Montfort**	**1.23**	**205**	*e*Pg	**Pg**	**17 29 39.8**	**+1.2**
	SNR=5.7						
THEF	**They Montfort**	**1.23**	**205**	Pg	**Pg**	**17 29 39.8**	**+1.1**
	SNR=5.7						
THEF				Sg	**Sg**	**17 29 56.2**	**+1.6**
KOE	**Koeppel**	**1.25**	**30**	*e*Pg	**Pg**	**17 29 39.2**	**+0.3**
KOE				*e*Sg	**Sg**	**17 29 54.6**	**-0.4**
STB	**Steinbach**	**1.25**	**2**	*e*Pg	**Pg**	**17 29 39.9**	**+1.0**
TOD	**Tromm**	**1.35**	**78**	*e*Pg	**Pg**	**17 29 40.7**	**-0.2**
	SNR=3.3						
TOD	**Tromm**	**1.35**	**78**	Pg	**Pg**	**17 29 40.4**	**-0.5**
HAU	**Haudompre**	**1.37**	**192**	*e*Pn	**Pn**	**17 29 41.5**	**+0.1**
HAU				*e*Sn	**Sn**	**17 29 59.7**	**-0.5**
	20nm,0.3s						
HAU	**Haudompre**	**1.37**	**192**	*e*Pn	**Pn**	**17 29 41.5**	**+0.1**
HAU				*e*Sn	**Sn**	**17 29 59.7**	**-0.5**
	9.9nm,0.3s						
TNS	**Taunus Mts**	**1.40**	**50**	*e*Pg	**Pg**	**17 29 42.2**	**+0.5**
TNS				*e*Sg	**Sg**	**17 29 59.4**	**-0.5**
	SNR=4.3						
MEZF	**Maizieres J'vi**	**1.41**	**234**	*e*Pg	**Pg**	**17 29 43.6**	**+1.5**
MEZF				*e*Sn	**Sn**	**17 30 01.2**	**0.0**
	8.3nm,0.3s						
MEZF	**Maizieres J'vi**	**1.41**	**234**	*e*Pg	**Pg**	**17 29 43.6**	**+1.5**
MEZF				*e*Sn	**Sn**	**17 30 01.2**	**0.0**
	4.2nm,0.3s						
BFO	**Black Forest**	**1.45**	**134**	*e*Pg	**Pg**	**17 29 43.3**	**+0.5**
	SNR=3.8						
BFO				*e*Sg	**Sg**	**17 30 00.6**	**-0.9**
	SNR=3.1						
BFO	**Black Forest**	**1.45**	**134**	*e*Pn	**Pn**	**17 29 41.7**	**-0.7**
BFO				*e*Sn	**Sn**	**17 30 01.6**	**-0.4**
BFO	**Black Forest**	**1.45**	**134**	*e*Pn	**Pn**	**17 29 41.7**	**-0.7**
BFO	**Black Forest**	**1.45**	**134**	Pg	**Pg**	**17 29 43.3**	**+0.6**
	SNR=3.8						
BFO				Sg	**Sg**	**17 30 00.6**	**-0.9**
	SNR=3.1						
BFO				*e*Sn	**Sn**	**17 30 01.6**	**-0.5**
GIVF	**Givet**	**1.47**	**302**	*e*Pg	**Pg**	**17 29 43.9**	**+0.7**
GIVF				*e*Sn	**Sn**	**17 30 01.7**	**-1.0**
	15nm,0.4s						
GIVF	**Givet**	**1.47**	**302**	*e*Pn	**Pn**	**17 29 42.6**	**-0.2**
GIVF				*e*Pg	**Pg**	**17 29 43.9**	**+0.7**
GIVF				*e*Sn	**Sn**	**17 30 01.7**	**-1.0**
GIVF	**Givet**	**1.47**	**302**	*e*Pg	**Pg**	**17 29 43.9**	**+0.7**
GIVF				*e*Sn	**Sn**	**17 30 01.7**	**-1.0**
	7.5nm,0.4s						
MOF	**Molkenrain**	**1.52**	**171**	*e*Pg	**Pg**	**17 29 45.0**	**+0.9**
	SNR=10						
MOF	**Molkenrain**	**1.52**	**171**	Pg	**Pg**	**17 29 45.1**	**+1.1**
MOF				Sg	**Sg**	**17 30 04.9**	**+1.2**
MOF	**Molkenrain**	**1.52**	**171**	Pg	**Pg**	**17 29 45.0**	**+1.0**
	SNR=10						
MOF				Sg	**Sg**	**17 30 04.9**	**+1.2**
HINF	**Hinteralfeld**	**1.53**	**178**	*e*Pg	**Pg**	**17 29 45.0**	**+0.7**
HINF				*e*Sg	**Sg**	**17 30 05.2**	**+1.0**
	22nm,0.2s						
HINF	**Hinteralfeld**	**1.53**	**178**	*e*Pg	**Pg**	**17 29 45.0**	**+0.7**
HINF				*e*Sg	**Sg**	**17 30 05.2**	**+1.0**
	11nm,0.2s						
SFTF	**Sexfontaines**	**1.62**	**226**	*e*Pn	**Pn**	**17 29 45.1**	**+0.4**
SFTF				*e*Sn	**Sn**	**17 30 05.9**	**-0.4**
	9.3nm,0.2s						
SFTF	**Sexfontaines**	**1.62**	**226**	*e*Pn	**Pn**	**17 29 45.1**	**+0.4**
SFTF				*e*Sn	**Sn**	**17 30 05.9**	**-0.4**
	4.7nm,0.2s						
FELD	**Feldberg im Sc**	**1.68**	**150**	*e*Pg	**Pg**	**17 29 48.1**	**+0.9**
	SNR=4.4						
FELD	**Feldberg im Sc**	**1.68**	**150**	Pg	**Pg**	**17 29 47.5**	**+0.2**
BAIF	**Baives**	**1.81**	**294**	*e*Pg	**Pg**	**17 29 50.5**	**+0.8**
BAIF				*e*Sn	**Sn**	**17 30 09.7**	**-1.3**
	3.8nm,0.2s						
BAIF	**Baives**	**1.81**	**294**	*e*Pn	**Pn**	**17 29 47.5**	**+0.1**
BAIF				*e*Pg	**Pg**	**17 29 50.5**	**+0.8**
BAIF				*e*Sn	**Sn**	**17 30 09.7**	**-1.3**
BAIF	**Baives**	**1.81**	**294**	*e*Pg	**Pg**	**17 29 50.5**	**+0.8**
BAIF				*e*Sn	**Sn**	**17 30 09.7**	**-1.3**
	1.9nm,0.2s						
CABF	**La Chapelle**	**2.78**	**190**	*e*Pn	**Pn**	**17 30 00.6**	**-0.1**
CABF				*e*Sg	**Sg**	**17 30 44.9**	**+0.8**
	2.6nm,0.4s						
CABF	**La Chapelle**	**2.78**	**190**	*e*Pn	**Pn**	**17 30 00.6**	**-0.1**
CABF				*e*Sg	**Sg**	**17 30 44.9**	**+0.8**
	1.3nm,0.4s						
LOR	**Lormes**	**2.85**	**224**	*e*Pn	**Pn**	**17 30 01.4**	**-0.2**
	baz=45						
LOR				*e*Sn	**Sn**	**17 30 35.5**	**-1.1**
	baz=45						
LOR				*e*Sg	**Sg**	**17 30 47.8**	**+1.4**
	3.4nm,0.2s,baz=39						
LOR	**Lormes**	**2.85**	**224**	*e*Pn	**Pn**	**17 30 01.4**	**-0.2**
LOR				*e*Sn	**Sn**	**17 30 35.5**	**-1.1**
LOR				*e*Sg	**Sg**	**17 30 47.8**	**+1.4**
	1.7nm,0.2s						
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**17 30 05.6**	**-0.4**
SSF				*e*Sn	**Sn**	**17 30 42.9**	**-1.4**
	4.0nm,0.5s						
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**17 30 05.6**	**-0.4**
SSF				*e*Sn	**Sn**	**17 30 42.9**	**-1.4**
	2.0nm,0.5s						
SMF	**Signal de Mont**	**3.34**	**217**	*e*Pn	**Pn**	**17 30 08.5**	**0.0**
SMF				*e*Sn	**Sn**	**17 30 47.4**	**-1.4**
SMF				*e*Sg	**Sg**	**17 31 02.5**	**+0.2**
	3.1nm,0.3s						
SMF	**Signal de Mont**	**3.34**	**217**	*e*Pn	**Pn**	**17 30 08.5**	**0.0**
SMF				*e*Sn	**Sn**	**17 30 47.4**	**-1.4**
SMF				*e*Sg	**Sg**	**17 31 02.5**	**+0.2**
	1.5nm,0.3s						
AVF	**Avril sur Loir**	**3.43**	**223**	*e*Pn	**Pn**	**17 30 09.6**	**-0.1**
AVF				*e*Sn	**Sn**	**17 30 49.3**	**-1.8**
	2.1nm,0.3s						
AVF	**Avril sur Loir**	**3.43**	**223**	*e*Pn	**Pn**	**17 30 09.6**	**-0.1**
AVF				*e*Sn	**Sn**	**17 30 49.3**	**-1.8**
	1.0nm,0.3s						
HYF	**Humbligny**	**3.45**	**235**	*e*Pn	**Pn**	**17 30 09.8**	**-0.2**
HYF				*e*Sg	**Sg**	**17 31 06.6**	**+0.7**
LPL	**La Plagne**	**3.83**	**180**	*e*Pn	**Pn**	**17 30 15.2**	**0.0**
LPL				*e*Sn	**Sn**	**17 30 58.6**	**-2.3**
	0.3nm,0.3s						
LPL	**La Plagne**	**3.83**	**180**	*e*Pn	**Pn**	**17 30 15.2**	**0.0**
LPL				*e*Sn	**Sn**	**17 30 58.6**	**-2.3**
	0.2nm,0.3s						
BGF	**Bois d'Agland**	**3.84**	**225**	*e*Pn	**Pn**	**17 30 15.2**	**-0.1**
BGF				*e*Sn	**Sn**	**17 30 59.0**	**-2.1**
BGF				*e*Sg	**Sg**	**17 31 18.7**	**+0.4**
	6.1nm,0.4s						
BGF	**Bois d'Agland**	**3.84**	**225**	*e*Pn	**Pn**	**17 30 15.2**	**-0.1**
BGF				*e*Sn	**Sn**	**17 30 59.0**	**-2.1**
BGF				*e*Sg	**Sg**	**17 31 18.7**	**+0.4**
	3.0nm,0.4s						
LPG	**La Plagne**	**3.85**	**180**	*e*Pn	**Pn**	**17 30 15.4**	**0.0**
LPG				*e*Sn	**Sn**	**17 30 58.7**	**-2.7**
	0.4nm,0.2s						
LPG	**La Plagne**	**3.85**	**180**	*e*Pn	**Pn**	**17 30 15.4**	**0.0**
LPG				*e*Sn	**Sn**	**17 30 58.7**	**-2.7**
	0.2nm,0.2s						
TCF	**Toulx Ste Croi**	**4.34**	**227**	*e*Pn	**Pn**	**17 30 21.8**	**-0.3**
TCF				*e*Sn	**Sn**	**17 31 10.8**	**-2.5**
	0.8nm,0.3s						
TCF	**Toulx Ste Croi**	**4.34**	**227**	*e*Pn	**Pn**	**17 30 21.8**	**-0.3**
TCF				*e*Sn	**Sn**	**17 31 10.8**	**-2.5**
	0.4nm,0.3s						

DDA **16** *18:16:56.3,3701N×29.13E,h26km±2km,Md3.2*

ISK **16** *18:16:56.4,3703N×2914E,h7km,MD3.2*

ATH **16** *18:16:57.1,3706N×2889E,h5km±1km,MD3.6/5*

ISCJB **16** *18:16:57.2±0.7,3703N±003×29.13E±003,h7km±4km, Error ellipse: s-maj=5.3km s-min=3.5km az=165.6*

CSEM **16** *18:16:57.2±0.1,3708N×29.15E,h10km,MD3.2,Error ellipse: s-maj=2.0km s-min=1.5km az=171.0*

NEIC **16** *18:16:59.0,3702N×2904E,h10km,MD3.2(ISK), MD3.0(ATH),After ATH.*

ISC 16 18:16:57.9±0.7,3704N±003×2912E±003,h9km±4km,n36, σ0§98/49,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.40**	**61**	*i* P	**Pg**	**18 17 04.6**	**-1.2**
GOLH				*i* S	**Sg**	**18 17 12.5**	**+1.4**
TURN	**Turunc**	**0.45**	**248**	*i* P	**Pg**	**18 17 09.6**	**+2.9**
TURN				*i* S	**Sg**	**18 17 21.9**	**+9.2**
YER	**Yerkesik**	**0.68**	**278**	*e*PG	**Pg**	**18 17 10.4**	**-0.6**
YER				*e*SG	**Sg**	**18 17 20.6**	**+0.7**
DENT	**Denizli**	**0.71**	**354**	*e*PG	**Pg**	**18 17 10.7**	**-1.0**
DENT				*e*SG	**Sg**	**18 17 21.6**	**+0.5**
KSL	**Kastellorizon**	**0.96**	**157**	*e*PN	**Pn**	**18 17 17.5**	**-0.1**
MLSB	**Milas**	**1.10**	**284**	*e*PN	**Pn**	**18 17 18.1**	**-1.4**
MLSB				*e*SN	**Sn**	**18 17 34.6**	**-0.3**
ARG	**Arkhangelos**	**1.15**	**224**	*e*PN	**Pn**	**18 17 17.2**	**-3.0**
AYDN	**Tasoluk**	**1.17**	**302**	*i* P	**Pb**	**18 17 18.6**	**-1.6**
AYDN				*i* S	**Sb**	**18 17 36.7**	**+1.3**
ANTB	**Antalya**	**1.23**	**96**	*e*PN	**Pn**	**18 17 20.0**	**-1.3**
BCK	**Bucak**	**1.24**	**70**	*e*PN	**Pn**	**18 17 20.4**	**-1.0**
DAT	**Datca**	**1.28**	**256**	*e*PN	**Pn**	**18 17 20.9**	**-1.0**
KHL	**Karahalli**	**1.32**	**14**	*e*PN	**Pn**	**18 17 21.9**	**-0.5**
BDRM	**Kayabasi**	**1.34**	**271**	*i* P	**Pn**	**18 17 22.7**	**-0.1**
BDRM				*i* S	**Sb**	**18 17 40.5**	**0.0**
ISP	**Isparta**	**1.36**	**54**	*e*PN	**Pn**	**18 17 22.2**	**-0.8**
ISP	**Isparta**	**1.36**	**54**	P	**Pn**	**18 17 24.5**	**+1.4**
KULA	**Kula-Manisa**	**1.51**	**346**	*e*PN	**Pn**	**18 17 25.1**	**-0.1**
MANT	**Manisa**	**1.51**	**343**	*e*P	**Pn**	**18 17 24.6**	**-0.6**
MANT				*e*S	**Sn**	**18 17 50.9**	**+6.0**
GCAM	**G?zelcaml?**	**1.64**	**294**	*i* P	**Pn**	**18 17 26.6**	**-0.3**
GCAM				*e*S	**Sn**	**18 17 48.5**	**+0.4**
SHUT	**Suhut-Afyon**	**1.89**	**36**	*e*PN	**Pn**	**18 17 29.8**	**-0.4**
SMG	**Samos**	**1.94**	**291**	*e*PN	**Pn**	**18 17 30.0**	**-1.0**
SMG				*e*SN	**Sn**	**18 17 54.6**	**-0.8**
KDAG	**Bornova**	**2.00**	**313**	*e*P	**Pn**	**18 17 31.4**	**-0.4**
DEMI	**Demirci**	**2.02**	**351**	*e*P	**Pn**	**18 17 31.7**	**-0.5**
DEMI				*e*S	**Sn**	**18 18 00.8**	**+3.3**
GDZ	**Gediz**	**2.06**	**8**	*e*P	**Pn**	**18 17 33.5**	**+0.8**
GDZ				*e*S	**Sn**	**18 17 59.8**	**+1.3**
AKHS	**Akhisar**	**2.10**	**331**	*e*P	**Pn**	**18 17 32.3**	**-1.0**
AKS	**Akhisar**	**2.11**	**331**	*e*PN	**Pn**	**18 17 32.8**	**-0.5**
KARP	**Karpathos**	**2.18**	**227**	*e*PN	**Pn**	**18 17 34.8**	**+0.5**
KARP				*e*SN	**Sn**	**18 18 02.7**	**+1.4**
HDMB	**Hadim**	**2.69**	**91**	*e*PN	**Pn**	**18 17 41.5**	**+0.1**
KONT	**Konya--Tatoy**	**2.73**	**70**	*e*PN	**Pn**	**18 17 42.4**	**+0.5**
KDHN	**Kad?nhani**	**2.79**	**57**	*i* P	**Pn**	**18 17 42.8**	**+0.1**
LADK	**Ladik-KONYA**	**2.82**	**65**	*e*PN	**Pn**	**18 17 43.8**	**+0.6**
KIZT	**Kizilcal**	**2.85**	**49**	*e*PN	**Pn**	**18 17 43.8**	**+0.2**
APE	**Apeiranthos**	**2.87**	**272**	*e*PN	**Pn**	**18 17 44.1**	**+0.2**
ZKR	**Zakros**	**3.04**	**232**	P	**Pn**	**18 17 47.5**	**+1.4**
YLV	**Yalova**	**3.52**	**3**	*e*PN	**Pn**	**18 17 53.5**	**+0.7**
GULT	**Gulveren**	**3.56**	**17**	*e*PN	**Pn**	**18 17 54.3**	**+1.0**
IDI	**Anoyia**	**3.85**	**244**	P	**Pn**	**18 17 58.6**	**+1.4**

IDC **16** *18:29:00.9±1.9,2446N×12197E,h0km,mb3.7/4, mb1 3.8/4,mb1mx3.5/19,mbtmp3.7/4,MS2.9/1,Ms1 2.9/1, ms1mx2.4/31,Error ellipse: s-maj=240.5km s-min=21.9km az=68.0*

ISCJB **16** *18:29:01.5±0.5,2470N±002×12263E±002,h5km±3km, mb3.7/4,Error ellipse: s-maj=4.2km s-min=2.6km az=17.4*

NEIC **16** *18:29:01.7±0.8,2468N×12258E,h10km,Error ellipse: s-maj=13.4km s-min=10.1km az=198.0*

JMA **16** *18:29:01.4±0.2,2478N×12263E,h12km,M3.0*

TAP **16** *18:29:02.7,2470N×12256E,h17km,ML3.9,D*

ISC 16 18:29:01.8±0.4,2471N±003×12263E±002,h4km±2km,n62, σ1§04/104,mb3.7/4,3C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.42**	**125**	P	**Pg**	**18 29 10.5**	**+0.6**
YOJ				S	**Sg**	**18 29 16.8**	**+1.4**
TWB1	**Santiao Chiao**	**0.66**	**297**	⇑*i* P	**Pg**	**18 29 15.2**	**+0.8**
	baz=302						
TWB1				*i* S	**Sg**	**18 29 23.8**	**+0.9**
	baz=302						
TWC	**Suao**	**0.72**	**262**	*e*P	**Pg**	**18 29 14.9**	**-0.6**
	baz=

EHY				*e*S		**Sn**	18 29 53.2	-1.0
	baz=223							
NSY	**Sanyi**	**1.73**	**261**	*e*P		**Pn**	18 29 34.0	+1.4
	baz=273							
NSY				*e*S		**Sn**	18 29 56.0	+0.9
	baz=273							
TWQ1	**Liyutan**	**1.73**	**258**	*e*P		**Pn**	18 29 34.2	+1.5
	baz=270							
TWQ1				*e*S		**Sn**	18 29 55.9	+0.8
	baz=270							
SMLT	**Sun Moon Lake**	**1.78**	**243**	*e*P		**Pn**	18 29 33.9	+0.6
	baz=227							
SMLT				*e*S		**Sn**	18 29 56.6	+0.2
	baz=227							
TYC	**Yuchr**	**1.80**	**244**	*e*P		**Pn**	18 29 34.2	+0.6
	baz=229							
TYC				*e*S		**Sn**	18 29 57.4	+0.4
	baz=229							
TWF1	**Yuli**	**1.82**	**222**	*e*P		**Pn**	18 29 32.3	-1.5
	baz=238							
TWF1				*e*S		**Sn**	18 29 55.3	-2.1
	baz=238							
TCU	**Taichung**	**1.87**	**253**	*e*P		**Pn**	18 29 35.8	+1.3
	baz=252							
JTJ	**Tarama**	**1.89**	**92**	P		**Pn**	18 29 34.5	-0.3
YUS	**Yu-Shan**	**1.95**	**232**	P		**Pn**	18 29 36.1	+0.4
	baz=230							
YUS				S		**Sn**	18 29 59.7	-1.0
	baz=230							
WNT	**Mingjian**	**1.96**	**246**	*e*P		**Pn**	18 29 37.0	+1.2
	baz=244							
CHKT	**Chengkung**	**1.97**	**216**	*e*P		**Pn**	18 29 34.1	-1.9
	baz=202							
ALS	**Alishan**	**2.05**	**235**	*e*P		**Pn**	18 29 38.2	+1.2
	baz=219							
ALS				*e*S		**Sn**	18 30 03.2	+0.2
	baz=219							
CHN5	**Tsauling**	**2.10**	**239**	*e*P		**Pn**	18 29 39.0	+1.3
	baz=237							
ELDTW	**Lidau**	**2.11**	**225**	*e*P		**Pn**	18 29 36.5	-1.4
	baz=221							
ELDTW				*e*S		**Sn**	18 30 02.5	-2.2
	baz=221							
WGK	**Gukeng**	**2.14**	**242**	*e*P		**Pn**	18 29 39.7	+1.3
	baz=240							
WGK				*e*S		**Sn**	18 30 05.5	+0.1
	baz=240							
CHN2	**Minshiung**	**2.29**	**240**	*e*P		**Pn**	18 29 41.7	+1.4
	baz=236							
CHN2				*e*S		**Sn**	18 30 09.8	+0.7
	baz=236							
CHN4	**Tsaushan**	**2.30**	**235**	*e*P		**Pn**	18 29 41.8	+1.3
	baz=231							
CHN4				*e*S		**Sn**	18 30 09.9	+0.6
	baz=231							
STYT	**Tauyuan**	**2.30**	**229**	*e*P		**Pn**	18 29 41.2	+0.6
	baz=215							
STYT				S		**Sn**	18 30 09.4	+0.1
	baz=215							
CHY	**Chiayi**	**2.35**	**240**	*e*P		**Pn**	18 29 41.8	+0.7
	baz=221							
WTP	**Ta-pu**	**2.35**	**232**	*e*P		**Pn**	18 29 42.9	+1.7
	baz=219							
WTP				*e*S		**Sn**	18 30 11.7	+1.2
	baz=219							
TWG	**Pinlang**	**2.36**	**218**	*e*P		**Pn**	18 29 38.9	-2.4
	baz=215							
TWG				*e*S		**Sn**	18 30 07.0	-3.6
	baz=215							
TWK	**Hsinying**	**2.43**	**234**	*e*P		**Pn**	18 29 43.0	+0.8
	baz=231							
TWK				*e*S		**Sn**	18 30 13.0	+0.6
	baz=231							
WSF	**Szhu**	**2.44**	**245**	*e*P		**Pn**	18 29 44.5	+2.0
	baz=241							
WSF				*e*S		**Sn**	18 30 13.7	+0.9
	baz=241							
CHN1	**Nanshi**	**2.45**	**232**	*e*P		**Pn**	18 29 44.0	+1.5
	baz=229							
CHN1				*e*S		**Sn**	18 30 13.7	+0.8
	baz=229							
SGST	**Jiashian**	**2.47**	**230**	P		**Pn**	18 29 44.1	+1.2
	baz=226							
SGST				*e*S		**Sn**	18 30 14.4	+0.8
	baz=226							
ECL	**Taimali**	**2.60**	**217**	*e*P		**Pn**	18 29 43.8	-0.8
	baz=213							
SSD	**Sandimen**	**2.67**	**224**	*e*P		**Pn**	18 29 46.7	+1.0
	baz=220							
SSD				*e*S		**Sn**	18 30 18.9	+0.4
	baz=220							
TWM1	**Shoushan**	**2.76**	**228**	*e*P		**Pn**	18 29 48.8	+2.0
	baz=224							
TWM1				*e*S		**Sn**	18 30 21.1	+0.5
	baz=224							
SCZT	**Fangliau**	**2.97**	**219**	*e*P		**Pn**	18 29 51.6	+1.9
	baz=208							
JOW	**Kunigami**	**5.51**	**66**	LR		LR	18 32 27.2	
	comp=Z,110nm,21.4s,baz=205,slow=33							
SONM	**Songino Array**	**26.43**	**335**	P		**P**	18 34 39.6	0.0
	2.4nm,1.0s,mb3.7,baz=150,slow=10,SNR=8.9							
ZALV	**Zalesovo Beam**	**40.54**	**326**	P		**P**	18 36 39.9	-2.0
	0.3nm,0.3s,mb3.3,baz=111,slow=8.1,SNR=3.9							
WRA	**Warramunga Arr**	**45.82**	**165**	P		**P**	18 37 23.8	-1.2
	1.2nm,0.8s,mb3.9,baz=346,slow=8.7,SNR=6.1							
ASAR	**Alice Springs**	**49.31**	**166**	P		**P**	18 37 51.3	-0.8
	0.6nm,0.7s,mb3.8,baz=354,slow=7.5,SNR=6.6							

ISC 16 18:37:43.9±1.6, 370N±01×720E±03, h150km, n7, σ0°71/12, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THN	**Thein Dam**	**5.47**	**144**	*e*P		**Pn**	**18 39 03.6**	**+0.1**
THN				*ex*		x	18 40 06.5	
DLH	**Dalhousie**	**5.50**	**142**	*e*P		**Pn**	**18 39 04.0**	**0.0**
DLH				*ex*		x	18 40 08.0	
KK31	**Karatay Array**	**6.24**	**350**	↑P		**Pn**	**18 39 14.0**	**+0.4**
	3.4nm,0.3s,baz=182,slow=13,SNR=128							
KK31				S		**Sn**	**18 40 23.4**	**-0.6**
	7.9nm,0.5s,baz=185,slow=18,SNR=14							
SMLA	**Simla**	**7.25**	**142**	*i* P		**Pn**	**18 39 26.6**	**-0.6**
SMLA				*i* S		**Sn**	**18 40 46.7**	**-1.5**
SMLA				*ex*		x	18 40 50.2	
	comp=E,211nm,0.3s							
SMLA				*ex*		x	18 40 50.7	
	comp=N,151nm,0.3s							
KLP	**Kalpa**	**7.51**	**134**	*e*P		**Pn**	**18 39 31.7**	**+1.0**
KLP				*e*S		**Sn**	**18 40 55.1**	**+0.5**
KLP				AML		AML	18 41 02.0	
	comp=E,47nm,0.5s							
KLP				AML		AML	18 41 03.4	
	comp=N,81nm,0.5s							
JOSI	**Joshimath**	**8.99**	**133**	*e*P		**Pn**	**18 39 51.2**	**+0.8**
JOSI				*e*S		**Sn**	**18 41 30.1**	**-0.1**
JOSI				AML		AML	18 41 34.8	
	comp=E,24nm,0.1s							
JOSI				AML		AML	18 41 37.2	
	comp=N,27nm,0.6s							
KUDL	**Kundal**	**9.58**	**155**	*e*P		**Pn**	**18 39 52.8**	**-5.5**
KUDL				*e*S		**Sn**	**18 41 33.3**	**-11**

*ISCJB **16** 18:38:52.9±0.6, 2157S×006×6654W±010, h221km±10km, mb3.6/2, Error ellipse: s-maj=15.5km s-min=8.3km az=26.3*
*IDC **16** 18:38:53.5±0.9, 2159S×6650W, h206km±13km, mb3.6/2, mb1 3.2/7, mb1mx3.1/20, mbtmp3.2/7, Error ellipse: s-maj=30.3km s-min=12.7km az=134.0*
*NEIC **16** 18:38:53.9±0.7, 2159S×6656W, h217km±8km, Error ellipse: s-maj=15.8km s-min=9.7km az=114.0*
ISC 16 18:38:53.7±0.6, 2155S±006×6652W±009, h211km±10km, n16, σ1°13/19, mb3.6/2, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**2.46**	**244**	P		**Pn**	**18 39 39.4**	**+1.6**
	3.1nm,0.3s,baz=334,slow=0.0,SNR=5.3							
LVC				S		**S**	**18 40 11.9**	**-0.4**
	8.9nm,0.3s,baz=26,slow=0.0,SNR=9.1							
LVC	**Limon Verde**	**2.46**	**244**	*e*Pn		**Pn**	**18 39 39.0**	**+1.3**
LVC				S		**S**	**18 40 11.9**	**-0.4**
LPAZ	**La Paz**	**5.46**	**343**	P		**Pn**	**18 40 15.9**	**+1.7**
	1.5nm,0.3s,baz=153,slow=9.8,SNR=21							
LPAZ				S		**S**	**18 41 16.1**	**-1.8**
	baz=266,slow=24,SNR=1.4							
LPAZ	**La Paz**	**5.46**	**343**	*e*Pn		**Pn**	**18 40 15.8**	**+1.6**
LPAZ				S		**S**	**18 41 16.1**	**-1.8**
LPAZ				*e*Sn		**S**	**18 41 19.2**	**+1.3**
SIV	**San Ignacio**	**7.56**	**44**	P		**Pn**	**18 40 42.4**	**+1.1**
	1.5nm,0.3s,baz=263,slow=11,SNR=27							
SIV				S		**S**	**18 42 05.9**	**-1.2**
	0.1nm,0.3s,baz=311,slow=23,SNR=3.4							
LCO	**Las Campanas**	**8.33**	**206**	*e*Pn		**Pn**	**18 40 49.5**	**-1.7**
LCO				*e*Sn		**S**	**18 42 18.2**	**-7.0**
CFAA	**Coronel Fontan**	**10.13**	**188**	P		**Pn**	**18 41 14.3**	**0.0**
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=8.5							
BDFB	**Brasilia**	**18.49**	**75**	P		**P**	**18 42 54.1**	**-0.1**
	0.2nm,0.3s,baz=270,slow=20,SNR=2.3							
TGUH	**Tegucigalpa,Un**	**40.83**	**328**	*e*P		**P**	**18 46 13.8**	**-1.1**
TORD	**Torodi Ar. Bea**	**75.28**	**69**	P		**P**	**18 50 14.1**	**+0.1**
	0.6nm,0.6s,mb3.4,baz=255,slow=5.7,SNR=14							
TORD	**Torodi Ar. Bea**	**75.28**	**69**	P		**P**	**18 50 14.1**	**+0.1**
BOSA	**Boshof**	**81.45**	**117**	P		**P**	**18 50 48.6**	**+1.0**
	1.3nm,0.6s,mb3.7,baz=200,slow=22,SNR=3.5							
ASAR	**Alice Springs**	**130.85**	**205**	PKP		PKPdf	18 57 40.6	+0.1
	0.3nm,0.9s,baz=110,slow=1.7,SNR=4.2							
WRA	**Warramunga Arr**	**133.99**	**208**	PKP		PKPdf	18 57 47.0	+0.5
	0.1nm,0.5s,baz=161,slow=1.5,SNR=3.6							
MKAR	**Makanchi Array**	**144.34**	**38**	PKP		PKPdf	18 58 03.5	-1.0
	0.6nm,0.6s,baz=321,slow=4.1,SNR=6.3							
MKAR	**Makanchi Array**	**144.34**	**38**	PKP		PKPdf	18 58 03.5	-1.0

*ISCJB **16** 18:44:16.1±0.5, 5208N±008×17791E±007, h137km±5km, mb3.7/11, Error ellipse: s-maj=14.0km s-min=6.6km az=9.8*
*NEIC **16** 18:44:17.4±0.6, 5201N×17796E, h136km±6km, mb4.5/5, Error ellipse: s-maj=13.0km s-min=7.2km az=172.0*
*IDC **16** 18:44:19.4±5.8, 5207N×178.10E, h154km±54km, mb3.3/9, mb1 3.6/10, mb1mx3.4/23, mbtmp3.3/10, MS2.7/1, Ms1 2.8/1, ms1mx2.5/18, Error ellipse: s-maj=35.4km s-min=15.0km az=163.0*
ISC 16 18:44:17.3±0.5, 5206N±008×17792E±007, h132km±5km, n25, σ0°93/29, mb3.7/11, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AMKA	**Amchitka**	**1.10**	**128**	P		**Pn**	**18 44 41.4**	**0.0**
AMKA				S		**Sn**	**18 44 59.5**	**0.0**
SMY	**Shemya**	**2.44**	**287**	P		**Pn**	**18 44 56.7**	**0.0**
SMY				S		**Sn**	**18 45 27.3**	**+0.3**
FX1	**Attu Island--F**	**3.02**	**288**	P		**Pn**	**18 45 03.7**	**-0.5**
FX1				S		**Sn**	**18 45 38.7**	**-1.7**
UNV	**Unalaska Valle**	**9.57**	**73**	*e*Pn		**Pn**	**18 46 32.4**	**+0.7**
	36nm,0.9s							
PETK	**Petropavlovsk-**	**12.34**	**283**	P		**Pn**	**18 47 10.8**	**+2.5**
	0.3nm,0.3s,baz=91,slow=19,SNR=9.8							
PETK				S		**Sn**	**18 49 19.2**	**-5.1**
	0.1nm,0.3s,baz=98,slow=14,SNR=3.7							
BILL	**Bilibino**	**16.99**	**345**	P		**Pn**	**18 48 06.5**	**-0.2**
KDAK	**Kodiak Island**	**17.80**	**60**	P		**Pn**	**18 48 27.8**	**+11**
	0.9nm,0.3s,baz=316,slow=19,SNR=6.1							
SLKM	**Skilak Lake**	**19.42**	**52**	*e*P		**P**	**18 48 32.9**	**-0.1**
RC01	**Rabbit Creek A**	**19.78**	**50**	*e*P		**P**	**18 48 38.2**	**+1.4**
KTH	**Kantishna Hill**	**19.95**	**43**	*e*P		**P**	**18 48 39.4**	**+0.7**
TRF	**Thorofare Moun**	**20.19**	**43**	*e*P		**P**	**18 48 43.0**	**+1.9**
	4.2nm,0.3s							
MCK	**McKinley**	**20.85**	**43**	*e*P		**P**	**18 48 48.5**	**+0.3**
	7.0nm,0.9s							
COLA	**College**	**21.67**	**41**	P		**P**	**18 48 57.0**	**+0.1**
	5.9nm,0.7s,mb4.1							
EGAK	**Eagle**	**24.40**	**43**	*e*P		**P**	**18 49 22.0**	**-1.0**
	36nm,0.4s,mb5.2							
DAWY	**Dawson**	**25.03**	**45**	*e*P		**P**	**18 49 28.4**	**-0.2**
YKA	**Yellowknife Ar**	**36.24**	**47**	P		**P**	**18 51 06.8**	**-0.3**
	2.3nm,0.6s,mb4.0,baz=280,slow=8.4,SNR=4.6							
KSRS	**Korea Array**	**37.61**	**267**	P		**P**	**18 51 20.5**	**+1.5**
	0.7nm,0.8s,mb3.4,baz=46,slow=9.2,SNR=3.3							
EDM	**Edmonton**	**40.25**	**60**	P		**P**	**18 51 39.4**	**-1.3**
NVAR	**Mina Array Bea**	**45.48**	**81**	P		**P**	**18 52 22.2**	**-0.8**
	0.4nm,0.5s,mb3.3,baz=288,slow=7.4,SNR=5.1							
NVAR				LR		LR	19 07 16.4	
	comp=Z,10nm,21.2s,baz=270,slow=30							
PDAR	**Pinedale Array**	**48.03**	**71**	P		**P**	**18 52 41.3**	**-1.5**
	0.4nm,0.4s,mb3.4,baz=307,slow=5.4,SNR=4.2							
ARCES	**ARCESS Array B**	**57.05**	**349**	P		**P**	**18 53 48.2**	**-0.6**
	4.0nm,0.9s,mb4.2,baz=27,slow=9.1,SNR=3.9							
TXAR	**Lajitas Array**	**60.55**	**79**	P		**P**	**18 54 12.6**	**-0.9**
	0.2nm,0.4s,mb3.3,baz=293,slow=4.7,SNR=6.6							
CMAR	**Chiang Mai Arr**	**68.92**	**273**	P		**P**	**18 55 08.2**	**+0.3**
	0.2nm,0.4s,mb3.2,baz=32,slow=6.3,SNR=3.8							
WRA	**Warramunga Arr**	**81.14**	**221**	P		**P**	**18 56 17.4**	**-0.5**
	0.7nm,0.7s,mb3.4,baz=30,slow=6.0,SNR=7.3							
ASAR	**Alice Springs**	**84.66**	**220**	P		**P**	**18 56 36.5**	**+0.6**
	0.5nm,0.9s,mb3.2,baz=23,slow=4.8,SNR=3.7							

*NEIC **16** 18:50:52.7, 4092N×2018E, h14km, MD3.5(ATH), After ATH.*
*ATH **16** 18:50:52.7, 4092N×2018E, h14km, MD3.5/5*
*ISCJB **16** 18:50:55.3±0.8, 4076N±005×2025E±007, h5km±9km, Error ellipse: s-maj=10.8km s-min=5.6km az=137.9*
*CSEM **16** 18:50:55.3±0.2, 4079N×2024E, h10km, ML3.4/6, Error ellipse: s-maj=3.7km s-min=2.5km az=118.0*
*THE **16** 18:50:56.8, 4072N×2033E, h0km±2km, ML3.4/6, Error ellipse: s-maj=2.5km s-min=0.9km az=279.0*
ISC 16 18:50:55.6±0.8, 4075N±004×2022E±006, h6km±5km, n27, σ1°11/46, 2C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHR	**Ohrid**	**0.57**	**50**	↑*i*Pg		**Pg**	**18 51 05.9**	**-0.6**
OHR				*e*Sg		**Sg**	**18 51 16.5**	**+2.6**
OHR	**Ohrid**	**0.57**	**50**	↑*i*Pg		**Pg**	**18 51 06.0**	**-0.5**
OHR				*e*Sg		**Sg**	**18 51 16.6**	**+2.6**
OHR				*e*Sg		**Sg**	**18 51 16.6**	**+2.6**
TIR	**Tirane**	**0.66**	**336**	P		**Pg**	**18 51 10.6**	**+2.4**
TIR				S		**Sg**	**18 51 21.6**	**+4.8**
FNA	**Florina**	**0.88**	**87**	P		**Pg**	**18 51 11.6**	**-0.8**
FNA				S		**Sg**	**18 51 24.1**	**+0.3**
BIA	**Bitola**	**0.88**	**72**	*e*Pg		**Pg**	**18 51 10.9**	**-1.6**
BIA				*e*Sg		**Sg**	**18 51 24.7**	**+0.8**
BIA	**Bitola**	**0.88**	**72**	*e*Pg		**Pg**	**18 51 10.9**	**-1.5**
BIA				*e*Sg		**Sg**	**18 51 24.8**	**+0.9**
BIA				*e*Sg		**Sg**	**18 51 24.8**	**+0.9**
KRUS	**Krusevo**	**0.99**	**51**	*e*Pn		**Pn**	**18 51 14.3**	**-1.8**
KRUS	**Krusevo**	**0.99**	**51**	*e*Pn		**Pn**	**18 51 14.4**	**-1.7**
KRUS				*i* Pg		**Pg**	**18 51 15.3**	**+0.7**
KEK	**Kerkira**	**1.08**	**198**	*e*PB		**Pb**	**18 51 16.1**	**-0.6**
JAN	**Janina**	**1.19**	**156**	*e*PB		**Pb**	**18 51 18.3**	**-0.3**
IGT	**Igoumenitsa**	**1.22**	**176**	P		**Pg**	**18 51 18.4**	**-0.5**
IGT				S		**Sg**	**18 51 35.9**	**+1.2**
KZN	**Kozani**	**1.26**	**110**	*e*PB		**Pb**	**18 51 18.5**	**-1.2**
GRG	**Griva**	**1.67**	**82**	P		**Pn**	**18 51 24.8**	**-0.5**
GRG				S		**Sn**	**18 51 47.1**	**+0.1**
GRG	**Griva**	**1.67**	**82**	P		**Pn**	**18 51 24.8**	**-0.5**
GRG				S		**Sn**	**18 51 47.0**	**0.0**
THL	**Klokotos Trika**	**1.81**	**130**	P		**Pn**	**18 51 27.4**	**+0.1**
THL				S		**Sn**	**18 51 51.4**	**+0.8**
THL	**Klokotos Trika**	**1.81**	**130**	*e*Pn		**Pn**	**18 51 27.7**	**+0.4**
THL				S		**Sn**	**18 51 51.4**	**+0.8**
LIT	**Litokhoron**	**1.85**	**110**	P		**Pn**	**18 51 27.8**	**0.0**
LIT				S		**Sn**	**18 51 52.2**	**+0.7**
LIT	**Litokhoron**	**1.85**	**110**	P		**Pn**	**18 51 27.8**	**0.0**
LIT				S		**Sn**	**18 51 52.5**	**+1.0**
VAY	**Valandovo**	**1.87**	**71**	*e*Pn		**Pn**	**18 51 26.8**	**-1.2**
VAY	**Valandovo**	**1.87**	**71**	*e*Pn		**Pn**	**18 51 26.9**	**-1.2**
VAY				*i* Pg		**Pg**	**18 51 29.3**	**-2.1**
KNT	**Kendrikon**	**2.07**	**78**	P		**Pn**	**18 51 30.4**	**-0.4**
EVR	**Evrytania**	**2.20**	**146**	*e*PN		**Pn**	**18 51 33.3**	**+0.7**
AGG	**Agios Georgios**	**2.37**	**136**	P		**Pn**	**18 51 36.4**	**+1.5**
AGG				S		**Sn**	**18 52 05.3**	**+1.0**
AGG	**Agios Georgios**	**2.37**	**136**	P		**Pn**	**18 51 36.4**	**+1.5**
AGG				S		**Sn**	**18 52 04.7**	**+0.4**
VLS	**Valsamata**	**2.58**	**174**	*e*PB		**Pb**	**18 51 39.2**	**-3.1**
XOR	**Xorichti**	**2.67**	**120**	P		**Pn**	**18 51 39.4**	**+0.4**
OUR	**Ouranopolis**	**2.90**	**97**	P		**Pn**	**18 51 41.9**	**-0.3**

*NEIC **16** 18:57:32.0, 3230S×7135W, h41km, mb3.9/1, MD4.1(GUC), After GUC.*
NEIC Felt [II] at Cabildo, La Ligua, Los Andes, Nogales, Papudo and San Felipe.
GUC 16 18:57:32.2±0.5, 3231S×7135W, h41km±1km, MD4.1, ML3.9, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PACH	**Papudo**	**0.24**	**197**	*e*P		**Pn**	18 57 39.9	0.0
CHNG	**Los Chungos**	**0.44**	**343**	↓*e*P		**Pn**	18 57 42.3	+0.1
CHNG				*i* S		Sn	18 57 49.4	+0.2
ROCH	**El Roble**	**0.72**	**157**	*e*P		**Pn**	18 57 46.7	+0.7
JACH	**Jahuel**	**0.74**	**120**	*e*P		**Pn**	18 57 47.0	+0.8
IHA	**Instituto Hidr**	**0.76**	**199**	*e*P		**Pn**	18 57 46.7	+0.2
IHA				*i* S		Sn	18 57 57.2	+0.5
PEL	**Peldehue**	**1.01**	**146**	*e*P		**Pn**	18 57 50.5	+0.6
PEL				*e*S		Sn	18 58 04.5	+1.7
PEL				AML		AML	18 58 06.0	
	comp=N,7μm,0.2s							
CLCH	**Cerro Calan**	**1.28**	**148**	*e*P		**Pn**	18 57 55.0	+1.3
CLCH				*i* S		Sn	18 58 11.8	+2.2
CLCH				AML		AML	18 58 14.1	
	comp=E,3μm,0.2s							
FCH	**Farellones**	**1.35**	**139**	*e*P		**Pn**	18 57 56.5	+1.9
FCH				*e*S		Sn	18 58 14.6	+3.2
TACH	**Talagante**	**1.39**	**166**	*e*P		**Pn**	18 57 56.3	+1.2
ANTU	**Antumapu**	**1.40**	**155**	*e*P		**Pn**	18 57 56.2	+1.0
ANTU				*i* S		Sn	18 58 14.4	+2.0
PCH	**Pirque**	**1.49**	**152**	*e*P		**Pn**	18 57 57.8	+1.3
YECH	**El Yeso**	**1.72**	**142**	*e*P		**Pn**	18 58 01.2	+1.6
YECH				*i* S		Sn	18 58 23.1	+2.6
CHCH	**Chadas Angostu**	**1.73**	**160**	*e*P		**Pn**	18 58 01.0	+1.3
LCO	**Las Campanas**	**3.33**	**10**	*e*Pn		**Pn**	18 58 20.4	-1.4
LCO				*e*Sn		Sn	18 58 57.4	-2.8
LCO	**Las Campanas**	**3.33**	**10**	*e*P		**Pn**	18 58 21.9	+0.1
LVC	**Limon Verde**	**9.90**	**13**	*e*Pn		**Pn**	18 59 43.1	-8.7
	comp=E,4.5nm,0.4s							

*GUC **16** 19:07:25.1±1.0, 2277S×7057W, h32km±4km, ML4.0*
*ISCJB **16** 19:07:26.0±0.7, 2280S±003×7056W±006, h45km±6km, mb4.4/24, MS3.5/3, Error ellipse: s-maj=8.8km s-min=4.9km az=11.9*
*IDC **16** 19:07:26.5±2.9, 2271S×7043W, h31km±20km, mb3.9/9, mb1 4.1/12, mb1mx4.0/19, mbtmp4.0/12, ML3.8/3, MS3.3/7, Ms1 3.4/7, ms1mx3.2/28, Error ellipse: s-maj=21.4km s-min=18.7km az=43.0*
*NEIC **16** 19:07:26.8±0.8, 2280S×7044W, h37km±8km, mb4.5/18, Error ellipse: s-maj=10.5km s-min=7.1km az=79.0*
*BJI **16** 19:07:29.7, 2280S×7040W, h50km, mB5.1, Ms4.9, Msz4.9*
ISC 16 19:07:23.6±0.9, 2276S±003×7058W±004, h11km±6km, n68, σ1°17/62, mb4.4/24, MS3.5/3, 2C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEN1	**Los Morros**	**0.72**	**151**	↓*i*P		**Pg**	**19 07 40.1**	**+2.5**
CEN1				*i* S		**Sg**	**19 07 51.4**	**+4.4**
CEN1				AML		AML	19 07 53.6	
	comp=E,10μm,0.5s							
ANCH	**Antofagasta**	**0.93**	**170**	↑*i*P		**Pg**	**19 07 41.2**	**-0.4**
ANCH				*i* S		**Sg**	**19 07 53.9**	**+0.1**
ANCH				AML		AML	19 07 58.9	
	comp=N,10μm,0.5s							
PB06	**Plate Boundary**	**0.94**	**87**	↓*i*P		**Pg**	**19 07 41.9**	**+0.2**
PB06				*i* S		**Sg**	**19 07 54.3**	**+0.4**
PB04	**Plate Boundary**	**1.13**	**64**	↓*i*P		**Pb**	**19 07 36.3**	**-8.9**
PB04				*i* S		**Sb**	**19 07 45.0**	**-15**
PB04				AML		AML	19 07 47.5	
	comp=E,13μm,0.4s							
PB07	**Plate Boundary**	**1.22**	**32**	↓*i*P		**Pn**	**19 07 46.5**	**-0.2**
PB07				*i* S		**Sb**	**19 08 03.0**	**+0.6**
LVC	**Limon Verde**	**1.55**	**85**	Pg		**Pg**	**19 07 52.1**	**-1.4**
LVC				Lg			19 08 12.6	
	comp=E,805nm,0.3s,SNR=21							
LVC				LR		LR	19 08 14.6	
	comp=E,943nm,20.0s,baz=134,slow=34							
LVC	**Limon Verde**	**1.55**	**85**	*e*Pg		**Pg**	**19 07 52.0**	**-1.4**
LVC				*e*Sg		**Sg**	**19 08 10.2**	**-3.4**
LVC	**Limon Verde**	**1.55**	**85**	↓*i*P		**Pn**	**19 07 52.2**	**+0.9**
LVC				*i* S		**Sn**	**19 08 12.4**	**+1.0**
LVC				AML		AML	19 08 15.6	
	comp=N,3μm,0.4s							
PB01	**Plate Boundary**	**1.99**	**31**	↑*i*P		**Pn**	**19 07 58.7**	**+1.4**
PB01				*i* S		**Sn**	**19 08 23.5**	**+1.3**
PB01				AML		AML	19 08 29.7	
	comp=E,3μm,0.2s							
LCO	**Las Campanas**	**6.23**	**181**	*e*Pn		**Pn**	**19 08 55.3**	**-0.2**
	comp=E,50nm,0.6s							
ARE	**Arequipa**	**6.32**	**352**	*e*P		**Pn**	**19 08 56.0**	**-0.9**
ARE				*e*S		**Sn**	**19 10 07.0**	**-2.2**
LPAZ	**La Paz**	**6.84**	**20**	Pn		**Pn**	**19 09 07.1**	**+3.1**
	comp=E,1.6nm,0.3s,baz=210,slow=3.6,SNR=24							
LPAZ				LR		LR	19 12 00.9	
	comp=E,568nm,19.0s,baz=30,slow=41							
LPAZ	**La Paz**	**6.84**	**20**	*e*Pn		**Pn**	**19 09 07.0**	**+3.0**
	comp=E,31nm,0.8s							
CFAA	**Coronel Fontan**	**9.05**	**167**	Pn		**Pn**	**19 09 33.9**	**-0.5**
	comp=E,0.1nm,0.3s,baz=32,slow=23,SNR=2.7		

comp=E,2.0nm,0.7s,mb4.2
PDAR Pinedale Array 74.44 331 P **P** 19 19 01.6 -0.2
comp=E,0.4nm,0.6s,mb3.6,baz=165,slow=6.2,SNR=4.4
HWUT Hardware Ranch 74.45 329 *eP* **P** 19 19 02.2 +0.4
comp=E,2.2nm,0.7s,mb4.2
VNDA Vanda 75.34 190 P **P** 19 19 07.9 +1.3
comp=E,0.7nm,0.8s,mb3.6,baz=102,slow=2.2,SNR=3.3
VNDA Vanda 75.34 190 *eP* **P** 19 19 07.1 +0.4
comp=E,1.1nm,0.8s,mb3.8
NVAR Mina Array Bea 75.54 323 P **P** 19 19 09.2 +0.9
comp=E,0.8nm,0.7s,mb3.8,baz=151,slow=4.6,SNR=5.8
HLID Hailey 77.30 329 *eP* **P** 19 19 19.2 +1.2
comp=E,3.1nm,0.9s,mb4.2
TOA0 Torodi Ar. Sit 79.24 71 *eP* **P** 19 19 28.1 -1.4
TOA0 *e* 19 19 35.5
TORD Torodi Ar. Bea 79.24 71 P **P** 19 19 28.1 -1.4
comp=E,8.2nm,0.7s,mb4.7,baz=253,slow=5.4,SNR=78
BMO Blue Mountains 79.65 328 *eP* **P** 19 19 31.6 +0.6
comp=E,3.8nm,1.0s,mb4.3
YBH Yreka Blue Hor 80.27 323 P **P** 19 19 34.2 -0.3
comp=E,1.4nm,0.9s,mb3.9,baz=117,slow=9.0
WALA Waterton Lakes 81.26 333 P **P** 19 19 39.6 0.0
BOSA Boshof 84.22 118 P **P** 19 19 54.6 -1.1
comp=E,4.5nm,1.0s,mb4.5,baz=158,slow=16,SNR=3.0
ASAR Alice Springs 128.07 209 PKP PKPdf 19 26 29.4 -1.2
comp=E,1.0nm,0.7s,baz=152,slow=2.6,SNR=8.6
WRA Warramunga Arr 131.08 212 PKP PKPdf 19 26 35.4 -1.0
comp=E,0.7nm,0.6s,baz=148,slow=1.6,SNR=12
ZALV Zalesovo Beam 143.74 25 PKP PKPdf 19 26 56.3 -2.3
comp=E,1.8nm,0.5s,baz=321,slow=3.6,SNR=8.5
AML Almayashu 144.54 48 *e*PKPdf PKPdf 19 26 59.1 -1.3
MK31 Makanchi Array 147.56 36 *e*PKPbc PKPbc 19 27 05.0 -3.0
MKAR Makanchi Array 147.56 36 PKP PKPdf 19 27 04.8 -0.6
comp=E,3.0nm,0.6s,baz=316,slow=2.7,SNR=25
MKAR PKPbc PKPbc 19 27 07.3 -0.7
comp=E,3.0nm,0.6s,baz=311,slow=2.6,SNR=25
MJAR Matsushiro Arr 151.58 305 PKPbc PKPbc 19 27 17.6 -0.7
comp=E,3.0nm,0.8s,baz=100,slow=1.4,SNR=7.6
MAT Matsushiro 151.58 305 PKP PKPdf 19 27 09.3 -2.8
WMQ Urumqi 152.39 35 *e*PKP PKPdf 19 27 12.0 -1.0
SONM Songino Array 154.86 5 PKPbc PKPbc 19 27 24.5 -0.6
comp=E,0.8nm,0.6s,baz=39,slow=1.6,SNR=3.8
HHC Hu-ho-hao-te 161.87 355 *e*PKP PKPdf 19 27 23.3 -1.8
HHC APKP 19 27 41.1
HHC XPKP 19 27 48.3
HHC PKS 19 30 57.3
HHC PP PP 19 31 56.8 +3.3
HHC SKS SKSdf 19 34 24.3 -5.8
HHC SKKS SKKSac 19 38 40.0 -2.8
HHC SS SS 19 52 08.4 -3.0
HHC PP PP
comp=Z,104nm,10.7s
HHC LR LR
comp=N,243nm,21.4s
HHC LR LR
comp=E,744nm,22.6s
HHC LR LR
comp=Z,165nm,21.8s
LZH Lanzhou 165.87 19 *e*PKP PKPdf 19 27 27.5 -1.5
LZH LR LR
comp=N,113nm,18.0s
LZH LR LR
comp=Z,164nm,20.5s
NJ2 Nanjing 167.52 320 *e*PKP PKPdf 19 27 30.1 -0.2
CD2 Chengdu 170.44 31 *e*PKP PKPdf 19 27 29.3 -2.9
KMI Kunming 173.46 68 PKP PKPdf 19 27 29.6 -4.2
GYA Guiyang 175.55 34 *e*PKP PKPdf 19 27 30.3 -4.1
GYA APKP 19 27 46.8
GYA XPKP 19 27 50.6
GYA PKP2 PKPab 19 29 10.6 -1.0
GYA PKS 19 31 02.5
GYA PP PP 19 33 03.6 +0.1
GYA PP PP
comp=Z,70nm,7.8s

IDC ***16*** *19:15:05.9±3.3, 1877S×17571W, h200km±51km, mb3.7/4, mb1 3.8/5, mb1mx3.4/19, mbtmp3.7/5, Error ellipse: s-maj=55.2km s-min=30.0km az=101.0*

NEIC 16 19:15:05.7±0.9, 1880S×17569W, h200km, mb4.2/3, Error ellipse: s-maj=30.7km s-min=14.1km az=134.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.15**	**38**	P	Pn	19 16 35.0	+0.1
	2.9nm,0.3s,baz=130,slow=16,SNR=2.4						
AFI				S	Sn	19 17 38.5	-7.0
	11nm,0.3s,baz=87,slow=20,SNR=8.2						
URZ	**Urewera**	**20.38**	**196**	P	P	19 19 27.4	+0.4
	3.6nm,0.5s,baz=344,slow=5.5,SNR=7.0						
URZ				S	S	19 22 57.9	-6.2
	2.1nm,0.6s,baz=253,slow=18,SNR=2.8						
CTAO	**Charters Tower**	**35.86**	**262**	*e*P	P	19 21 48.0	+1.3
	7.5nm,0.8s						
STKA	**Stephens Creek**	**40.49**	**243**	P	P	19 22 25.1	-0.1
	4.4nm,1.1s,baz=58,slow=9.4,SNR=4.3						
STKA	**Stephens Creek**	**40.49**	**243**	*e*P	P	19 22 23.8	-1.4
	11nm,1.3s						
WRAB	**Tennant Creek**	**47.00**	**260**	*e*P	P	19 23 16.9	-0.3
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**47.01**	**260**	P	P	19 23 17.2	-0.1
	3.8nm,0.5s,baz=96,slow=7.5,SNR=137						
ASAR	**Alice Springs**	**47.04**	**255**	P	P	19 23 17.9	+0.5
	2.3nm,0.5s,baz=88,slow=8.5,SNR=34						
ASAR				PcP	PcP	19 24 46.2	-0.1
	0.5nm,0.6s,baz=100,slow=3.6,SNR=4.9						

IDC ***16*** *19:33:04.7±3.8, 1676S×17431W, h87km±48km, mb4.1/5, mb1 4.2/6, mb1mx3.8/19, mbtmp4.1/6, ML3.0/1, Error ellipse: s-maj=40.5km s-min=32.0km az=62.0*

ISCJB ***16*** *19:33:06.5±3.7, 165S±03×1740W±03, h146km±60km, mb4.1/5, Error ellipse: s-maj=57.3km s-min=41.2km az=153.8*

ISC 16 19:33:06.5±4.1, 166S±03×1741W±03, h124km±64km, n6, σ1part24/7, mb4.3/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.46**	**40**	P	**Pn**	**19 34 00.3**	**+1.3**
	62nm,0.3s,baz=190,slow=2.1,SNR=101						
AFI				S	**Sn**	**19 34 38.6**	**-0.9**
	111nm,0.3s,baz=129,slow=18,SNR=12						
URZ	**Urewera**	**22.95**	**198**	P	**P**	**19 37 58.8**	**-1.3**
	10nm,0.3s,mb4.6,baz=7.9,slow=5.7,SNR=26						
STKA	**Stephens Creek**	**42.89**	**241**	P	**P**	**19 40 52.8**	**0.0**
	1.2nm,0.4s,mb4.0,baz=69,slow=10,SNR=8.9						
WRA	**Warramunga Arr**	**48.94**	**258**	P	**P**	**19 41 40.3**	**-0.2**
	0.9nm,0.4s,mb4.1,baz=96,slow=7.1,SNR=53						
WRA				PcP	PcP	19 43 03.9	+1.0
	0.2nm,0.5s,baz=112,slow=2.8,SNR=3.6						
ASAR	**Alice Springs**	**49.13**	**253**	P	**P**	**19 41 42.0**	**+0.1**
	14nm,0.5s,mb5.1,baz=88,slow=8.5,SNR=311						
VNDA	**Vanda**	**62.15**	**186**	P	**P**	**19 43 15.1**	**+1.1**
	0.4nm,0.7s,mb3.5,baz=0.2,slow=6.1,SNR=8.5						

IDC 16 19:48:60.0±4.0, 605S×15258E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/16, mbtmp3.2/2, Error ellipse: s-maj=194.1km s-min=48.8km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.47**	**230**	P	P	19 54 00.9	-0.1
	0.3nm,0.6s,baz=54,slow=9.6,SNR=5.4						
ASAR	**Alice Springs**	**25.09**	**224**	P	P	19 54 26.4	-0.1
	0.6nm,0.7s,baz=52,slow=11,SNR=7.5						
TORD	**Torodi Ar. Bea**	**150.46**	**286**	PKPbc	PKPbc	20 08 54.5	-0.1
	0.3nm,0.8s,baz=90,slow=1.4,SNR=2.8						

IDC 16 20:01:18.3±1.7, 077N×12237E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/17, mbtmp3.1/3, Error ellipse: s-maj=224.3km s-min=26.9km az=61.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.69**	**151**	P	P	20 06 32.2	+0.2
	0.3nm,0.4s,baz=327,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**26.75**	**156**	P	P	20 06 59.6	-0.1
	0.3nm,0.8s,baz=343,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**57.64**	**328**	P	P	20 11 10.2	0.0
	0.1nm,0.4s,baz=128,slow=8.6,SNR=4.1						

NEIC 16 20:10:25.3, 3985S×17697E, h43km, ML3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.78**	**331**	P	Pn	20 10 38.5	-1.3
TSZ	**Takapari Road**	**0.80**	**255**	P	Pn	20 10 39.6	-0.6
KNZ	**Kokohu**	**0.99**	**34**	P	Pn	20 10 42.3	-0.4
BFZ	**Birch Farm**	**1.00**	**213**	P	Pn	20 10 42.6	-0.2
MOVZ	**Moawhango**	**1.04**	**295**	P	Pn	20 10 42.9	-0.5
TUVZ	**Tukino**	**1.17**	**299**	P	Pn	20 10 45.3	+0.1
HATZ	**Hinemaiaia**	**1.17**	**324**	P	Pn	20 10 44.8	-0.4
WNVZ	**Wahianoa**	**1.18**	**296**	P	Pn	20 10 45.6	+0.3
RITZ	**Rihia Road**	**1.22**	**315**	P	Pn	20 10 45.9	0.0
FWVZ	**Far West T-bar**	**1.25**	**298**	P	Pn	20 10 46.2	0.0
NGZ	**Ngauruhoe**	**1.25**	**302**	P	Pn	20 10 46.2	-0.1
WPVZ	**Whakapapa**	**1.28**	**300**	P	Pn	20 10 46.5	-0.1
KATZ	**Kakaramea**	**1.32**	**311**	P	Pn	20 10 47.0	-0.2
MRZ	**Mangatainoka R**	**1.34**	**232**	P	Pn	20 10 46.8	-0.7
TWVZ	**Taurewa**	**1.42**	**303**	P	Pn	20 10 48.0	-0.6
WATZ	**Wairara**	**1.49**	**319**	P	Pn	20 10 46.4	-3.2
WAZ	**Wanganui**	**1.53**	**273**	P	Pn	20 10 51.0	+0.9
MWZ	**Matawai**	**1.57**	**16**	P	Pn	20 10 49.7	-1.0
URZ	**Urewera**	**1.59**	**4**	P	Pn	20 10 49.8	-1.2
TAZ	**Tarawera**	**1.65**	**347**	P	Pn	20 10 51.3	-0.5
MTW	**Mount Morrison**	**1.72**	**220**	P	Pn	20 10 51.2	-1.5
EDRZ	**Edgecumbe**	**1.75**	**354**	P	Pn	20 10 52.3	-0.8
VRZ	**Vera Road**	**1.86**	**292**	P	Pn	20 10 54.3	-0.3
KIW	**Kapiti Island**	**1.87**	**237**	P	Pn	20 10 54.1	-0.7
CAW	**Cannon Point**	**1.92**	**228**	P	Pn	20 10 54.3	-1.2
PAWZ	**Paruwai Farm**	**1.93**	**217**	P	Pn	20 10 53.9	-1.7
PUZ	**Puketiti**	**2.04**	**30**	P	Pn	20 10 55.8	-1.3
MSWZ	**Moikau Station**	**2.04**	**219**	P	Pn	20 10 55.2	-1.9
RAEZ	**Rainy Point**	**2.07**	**285**	P	Pn	20 10 58.1	+0.6
HIZ	**Hauiti**	**2.12**	**308**	P	Pn	20 10 57.4	-0.8
BHW	**Baring Head**	**2.23**	**225**	P	Pn	20 10 58.1	-1.6
SNZO	**South Karori**	**2.26**	**229**	P	Pn	20 10 58.6	-1.5
PKE	**Pukeiti**	**2.40**	**285**	P	Pn	20 11 03.0	+1.0
TCW	**Tory Channel**	**2.46**	**236**	P	Pn	20 11 01.4	-1.5
MXZ	**Matakaoa Point**	**2.51**	**25**	P	Pn	20 11 02.8	-0.8
BSWZ	**Blackbirch Sta**	**3.00**	**231**	P	Pn	20 11 08.2	-2.1
NNZ	**Nelson**	**3.06**	**242**	P	Pn	20 11 09.7	-1.4
QRZ	**Quartz Range**	**3.53**	**253**	P	Pn	20 11 15.8	-1.8
THZ	**Tophouse**	**3.63**	**237**	P	Pn	20 11 16.7	-2.2
KHZ	**Kahutara**	**3.65**	**224**	P	Pn	20 11 17.7	-1.4
DSZ	**Denniston Nort**	**4.36**	**243**	P	Pn	20 11 26.6	-2.3
LTZ	**Lake Taylor**	**4.59**	**229**	P	Pn	20 11 29.4	-2.8
MQZ	**McQueen's Vall**	**5.03**	**219**	P	Pn	20 11 35.5	-2.6
RPZ	**Rata Peaks**	**5.87**	**227**	P	Pn	20 11 47.7	-2.0

NEIC ***16*** *20:21:57.6, 1749N×9470W, h143km, MD4.2(MEX), After MEX.*

MEX 16 20:21:57.5±1.1, 1746N×9472W, h142km±10km, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.40**	**202**	*i* P	Pn	20 22 16.1	-1.4
CMIG				*i* S	Sn	20 22 30.3	-2.3
TGIG		**1.68**	**114**	*i* P	Pn	20 22 27.5	-0.9
TGIG				*i* S	Sn	20 22 49.9	-2.1
OXX	**Oaxaca**	**1.95**	**259**	*i* P	Pn	20 22 31.7	+0.2
OXX				*i* S	Sn	20 22 57.3	-0.3
VHO	**Vista Hermosa**	**1.96**	**259**	*i* P	Pn	20 22 30.8	-0.8
VHO				*i* S	Sn	20 22 57.3	-0.6
PCIG		**2.27**	**140**	*i* P	Pn	20 22 34.5	-0.9
PCIG				*i* S	Sn	20 23 03.0	-1.5
TPIG	**Tehuac#an**	**2.69**	**291**	*i* P	Pn	20 22 40.0	-0.5
TPIG				*i* S	Sn	20 23 12.7	-1.1
LVIG	**Laguna Verde**	**2.76**	**325**	*i* P	Pn	20 22 40.4	-1.1
LVIG				*i* S	Sn	20 23 12.5	-3.0
UTMO	**Huajuapan**	**2.96**	**278**	*i* P	Pn	20 22 43.3	-0.7
UTMO				*i* S	Sn	20 23 18.2	-1.7
PNIG	**Pinotepa**	**3.43**	**252**	*i* P	Pn	20 22 46.3	-3.7
PNIG				*i* S	Sn	20 23 26.3	-4.4
PNIG	**Pinotepa**	**3.43**	**252**	*i* P	Pn	20 22 46.4	-3.7
PNIG				*i* S	Sn	20 23 27.5	-3.2
PPM	**Popocatepetl**	**4.04**	**294**	*i* P	Pn	20 22 59.8	+1.8
PPM				*i* S	Sn	20 23 45.2	+0.2
PPM	**Popocatepetl**	**4.04**	**294**	*e*P	Pn	20 22 59.4	+1.4
PPM				*i* S	Sn	20 23 45.2	+0.2
CAIG	**El Cayaco**	**5.31**	**266**	*i* P	Pn	20 23 12.9	-2.0
CAIG				*i* S	Sn	20 24 11.9	-3.4
CAIG	**El Cayaco**	**5.31**	**266**	*i* P	Pn	20 23 12.4	-2.6
CAIG				*i* S	Sn	20 24 13.1	-2.3

NNC ***16*** *20:43:39.7±2.0, 4332N×7934E, h6km±9km, mb3.8, mpv3.4, Error ellipse: s-maj=18.1km s-min=4.9km az=139.0*

ISCJB ***16*** *20:43:42.7±1.2, 441N±02×784E±02, h10km, Error ellipse: s-maj=38.4km s-min=6.4km az=142.5*

ISC 16 20:43:43.7±1.4, 438N±02×787E±02, h10km, n15, σ1part11/13, 10C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**1.37**	**245**	⇑Pn	**Pn**	**20 44 10.1**	**+1.3**
	36nm,0.3s						
KNDC				⇑Lg		20 44 35.6	
	107nm,0.7s						
ULHL	**Ulahol**	**2.37**	**229**	P	**Pn**	**20 44 19.0**	**-3.5**
	SNR=32						
TKM2	**Tokmak 2**	**2.41**	**249**	⇑Pn	**Pn**	**20 44 25.6**	**+2.5**
	3.6nm,0.5s						
TKM2				⇑Pg	**Pg**	**20 44 29.8**	**0.0**
	40nm,0.8s						
TKM2				⇑Lg		20 45 06.2	
	38nm,0.4s						
TKM2	**Tokmak 2**	**2.41**	**249**	P	**Pn**	**20 44 25.7**	**+2.6**
	SNR=12						
KBK	**Karagaybulak**	**2.95**	**248**	P	**Pg**	**20 44 39.3**	**-0.9**
	SNR=31						
CHMS	**Chumysh**	**2.96**	**255**	P	**Pn**	**20 44 37.5**	**+6.7**
	SNR=8.1						
KZA	**Kyzart**	**3.05**	**236**	P	**Pn**	**20 44 31.0**	**-0.9**
	SNR=9.7						
AAK	**Ala-Archa**	**3.27**	**250**	P	**Pn**	**20 44 40.6**	**+5.7**
	SNR=16						
EKS2	**Erkin-Say**	**3.75**	**254**	P	**Pg**	**20 44 56.0**	**+0.5**
	SNR=6.7						
MK31	**Makanchi Array**	**3.92**	**39**	⇑Pn	**Pn**	**20 44 43.3**	**-0.6**
	2.8nm,0.5s,baz=211,slow=13,SNR=192						
MK31				⇑Sn	**Sn**	**20 45 30.3**	**+0.3**
	7.6nm,0.6s,baz=200,slow=15,SNR=7.4						
MK31				⇑Lg		20 45 47.7	
	6.1nm,0.4s,baz=210,slow=26,SNR=8.4						
KK31	**Karatay Array**	**5.97**	**266**	⇓Pg	**Pg**	**20 45 37.2**	**-0.8**
	0.8nm,0.4s,baz=84,slow=15,SNR=7.7						
KK31				⇓Lg		20 47 04.3	
	3.4nm,0.5s,baz=88,slow=28,SNR=8.9						
KURBB	**Kurchatov Arra**	**6.81**	**359**	⇓Lg		20 47 34.5	
	3.5nm,1.0s						
KURK	**Kurchatov**	**6.90**	**360**	⇑Lg		20 47 37.9	
	12nm,0.7s						
VOSK	**Vostochnaya**	**10.27**	**333**	⇓Lg		20 49 29.1	
	2.9nm,0.7s						
BVA0	**Borovoye Array**	**10.72**	**332**	⇑Lg		20 49 41.1	
	1.4nm,1.4s,baz=127,slow=26,SNR=3.8						

ISCJB ***16*** *20:48:44.3±0.3, 1495N±002×11908E±004, h33km, mb4.2/15, Error ellipse: s-maj=5.0km s-min=3.4km az=4.3*

NEIC ***16*** *20:48:46.2±3.2, 1487N×119.14E, h34km±24km, mb4.5/6, Error ellipse: s-maj=16.0km s-min=7.2km az=76.0*

IDC ***16*** *20:48:47.2±0.7, 1494N×119.31E, h39km±6km, mb3.8/8, mb1 3.8/10, mb1mx3.7/20, mbtmp3.8/10, ML4.1/2, MS3.2/3, Ms1 3.3/3, ms1mx2.7/38, Error ellipse: s-maj=29.8km s-min=11.8km az=69.0*

MAN ***16*** *20:50:37, 1566N×12178E, h13km, mb4.3, ML3.2, MS3.0*

ISC 16 20:48:46.6±0.3, 1494N±002×11916E±004, h35km, (h43km±1.4km:pP-P), n52, σ1part30/63, mb4.2/15, 2C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	**1.10**	**41**	*e*P	**Pn**	**20 49 02.5**	**-2.9**
LUBP	**Lubang**	**1.59**	**139**	*e*P	**Pn**	**20 49 12.2**	**-0.1**
LUBP				*e*S	**Sn**	**20 49 31.8**	**+0.1**
BOLP	**Bolinao**	**1.60**	**27**	*e*P	**Pn**	**20 49 09.2**	**-3.2**
BOLP				*e*S	**Sn**	**20 49 31.8**	**-0.1**
TGY	**Tagaytay City**	**1.91**	**116**	⇑*e*P	**Pn**	**20 49 18.5**	**+1.8**
TGY				*e*S	**Sn**	**20 49 43.0**	**+3.5**
PCPH	**Palayan**	**1.96**	**71**	⇓*i*P	**Pn**	**20 49 16.0**	**-1.4**
BCPH	**Baguio City Da**	**1.98**	**43**	⇑*i*P	**Pn**	**20 49 15.7**	**-1.9**
BCPH				*i* S	**Sn**	**20 49 39.5**	**-1.6**
BALP	**Baler**	**2.46**	**71**	*e*P	**Pn**	**20 49 22.1**	**-2.1**
BALP				*e*S	**Sn**	**20 49 52.7**	**-0.3**
POLP	**Polilio Island**	**2.69**	**94**	*e*P	**Pn**	**20 49 28.3**	**+0.9**
ABRA	**Dolores**	**3.07**	**29**	*e*P	**Pn**	**20 49 31.0**	**-1.6**
ABRA				*e*S	**Sn**	**20 50 09.2**	**+0.9**
BUSP	**Coron**	**3.09**	**161**	*e*P	**Pn**	**20 49 33.9**	**+1.0**
BUSP				*e*S	**Sn**	**20 50 07.5**	**-1.1**
SJMP	**San Jose**	**3.11**	**142**	*e*P	**Pn**	**20 49 33.9**	**+0.7**
SJMP				*e*S	**Sn**	**20 50 08.2**	**-1.0**
SIPP	**Brgy, Tapao**	**3.21**	**23**	⇓*e*P	**Pn**	**20 49 32.7**	**-1.9**
SIPP				*i* S	**Sn**	**20 50 21.1**	**+9.5**
CAUP	**Cauayan**	**3.24**	**52**	*e*P	**Pn**	**20 49 36.9**	**+2.0**
CAUP				*e*S	**Sn**	**20 50 26.0**	**+14**
GQP	**Guinayangan**	**3.34**	**108**	⇓*e*P	**Pn**	**20 49 37.8**	**+1.4**
ENPP	**El Nido**	**3.72**	**176**	*e*P	**Pn**	**20 49 41.7**	**+0.1**
CVP	**Callao Caves**	**3.75**	**43**	⇓*e*P	**Pn**	**20 49 41.9**	**-0.1**
CVP				*i* S	**Sn**	**20 50 24.7**	**-0.2**
AUQP	**San Andres**	**3.77**	**115**	*e*P	**Pn**	**20 49 51.1**	**+8.9**
PALP	**Palanan**	**3.78**	**56**	*e*P	**Pn**	**20 49 44.1**	**+1.8**
OTRP	**Odiongan**	**3.78**	**132**	*e*P	**Pn**	**20 49 44.2**	**+1.8**
CUYO	**Cuyo Island**	**4.45**	**156**	*e*P	**Pn**	**20 49 51.6**	**-0.1**
PVCP	**Virac**	**5.02**	**105**	*e*P	**Pn**	**20 50 00.8**	**+1.3**
GUIM	**Jordan**	**5.44**	**142**	*e*P	**Pn**	**20 50 07.2**	**+2.0**
BATP	**Bataraza**	**6.25**	**192**	*e*P	**Pn**	**20 50 15.5**	**-0.9**
KKM	**Kota Kinabalu**	**9.30**	**198**	*e*Pn	**Pn**	**20 50 57.5**	**-0.8**
KKM				*e*Sn	**Sn**	**20 52 32.4**	**-9.4**
QIZ	**Qiongzhong**	**9.80**	**296**	*e*Pn	**Pn**	**20 51 03.3**	**-1.7**
QIZ				*e*Sn	**Sn**	**20 52 48.1**	**-5.8**
YHNB	**Yeheng**	**9.90**	**12**	*e*Pn	**Pn**	**20 51 07.5**	**+1.2**
DAV	**Davao City (W)**	**10.04**	**141**	LR	LR	20 55 55.3	
	comp=Z,202nm,21.9s,baz=336,slow=43						
KSM	**Kuching**	**15.99**	**214**	*e*Pn	**Pn**	**20 52 32.4**	**+3.5**
CMAR	**Chiang Mai Arr**	**19.68**	**283**	P	**Pn**	**20 53 16.5**	**+2.1**
	0.2nm,0.3s,baz=96,slow=8.8,SNR=12						
CMAR				LR	LR	21 00 46.5	
	comp=Z,68nm,18.1s,baz=90,slow=36						
KAPI	**Kappang**	**19.84**	**178**	P	**Pn**	**20 53 14.7**	**-1.5**
	0.5nm,0.3s,baz=45,slow=17,SNR=2.5						
KAPI				LR	LR	21 00 04.5	
	comp=Z,62nm,20.9s,baz=360,slow=34						
KAPI	**Kappang**	**19.84**	**178**	P	**Pn**	**20 53 14.7**	**-1.6**
KAPI				LR	LR	21 00 04.5	
KSRS	**Korea Array**	**23.73**	**18**	P	**P**	**20 53 55.0**	**-0.5**
	2.5nm,0.9s,mb3.7,baz=207,slow=11,SNR=3.9						
BATI	**Baumata**	**25.38**	**170**	P	**P**	**20 54 10.5**	**-0.2**
	26nm,0.5s,mb5.0,baz=346,slow=4.2,SNR=7.2						
SONM	**Songino Array**	**34.46**	**345**	P	**P**	**20 55 31.6**	**+0.7**
	0.5nm,0.6s,mb3.6,baz=184,slow=8.2,SNR=2.9						
SONM				pP	pP	20 55 41.8	+0.8
	0.7nm,0.5s,baz=167,slow=10,SNR=5.5						
MBWA	**Marble Bar**	**35.88**	**179**	*e*P	**P**	**20 55 42.0**	**-1.4**
WRAB	**Tennant Creek**	**37.74**	**156**	*e*P	**P**	**20 55 58.2**	**-1.0**
	15nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**37.74**	**156**	P	**P**	**20 55 58.1**	**-1.1**
	12nm,0.6s,mb4.8,baz=332,slow=9.9,SNR=183						
WRA				pP	pP	20 56 10.8	+1.3
	3.1nm,0.5s,baz=330,slow=10.0,SNR=6.2						
WB2	**Warramunga Arr**	**37.75**	**156**	*e*P	**P**	**20 55 58.4**	**-0.8**
ASAR	**Alice Springs**	**40.99**	**159**	P	**P**	**20 56 26.2**	**0.0**
	4.7nm,0.5s,mb4.4,baz=340,slow=7.0,SNR=130						
MKAR	**Makanchi Array**	**44.16**	**324**	P	**P**	**20 56 52.6**	**+0.8**
	0.5nm,0.8s,mb3.3,baz=126,slow=12,SNR=4.6						
MKAR				pP	pP	20 57 04.3	+2.2
	0.4nm,0.7s,baz=106,slow=8.9,SNR=4.4						
MKAR				pPcP		20 58 46.8	
	0.4nm,0.9s,baz=97,slow=4.5,SNR=2.3						
TKM2	**Tokmak 2**	**46.50**	**316**	P	**P**	**20 57 12.8**	**+2.4**
	2.0nm,0.8s,mb4.1						
ZALV	**Zalesovo Beam**	**47.28**	**333**	pP	pP	20 57 26.8	0.0
	0.8nm,0.6s,baz=126,slow=7.5,SNR=2.8						
PETK	**Petropavlovsk-**	**48.68**	**30**	P	**P**	**20 57 28.4**	**+1.2**
	2.9nm,0.7s,mb4.4,baz=195,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**51.28**	**155**	P	**P**	**20 57 46.8**	**-0.4**
	3.0nm,0.8s,mb4.3,baz=156,slow=19,SNR=4.5						
STKA	**Stephens Creek**	**51.28**	**155**	*e*P	**P**	**20 57 46.5**	**-0.6**
	4.8nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**53.91**	**326**	P	**P**	**20 58 06.8**	**+0.3**
	0.3nm,0.6s,mb3.4,baz=91,slow=12,SNR=3.6						
BVAR				pP	pP	20 58 18.1	+1.2
	0.5nm,0.5s,baz=127,slow=10,SNR=4.3						
BRVK	**Borovoye**	**53.99**	**326**	P	**P**	**20 58 08.0**	**+1.0**
	2.5nm,0.7s,mb4.2						
TIXI	**Tiksi**	**56.99**	**4**	*e*P	**P**	**20 58 31.1**	**+2.9**
	5.3nm,1.1s,mb4.5						
AKTK	**Aktyubinsk**	**60.31**	**320**	P	**P**	**20 58 52.1**	**+0.4**
AKTK				pP	pP	20 59 03.9	+1.5
AKTO	**Aktyubinsk**	**60.31**	**320**	P	**P**	**20 58 52.1**	**+0.4**
	1.5nm,0.7s,mb4.1,baz=71,slow=6.8,SNR=5.2						
AKTO				pP	pP	20 59 03.9	+1.5
	1.4nm,0.6s,baz=95,slow=11,SNR=3.1						
MCK	**McKinley**	**77.57**	**27**	*e*P	**P**	**21 00 37.8**	**-0.9**
	6.2nm,0.8s,mb4.6						

JAGN S **Sn** 21 04 11.6 0.0
JOGS Gusukube 2.03 274 P **Pn** 21 03 49.4 +0.2
JOGS S **Sn** 21 04 14.0 +0.6
JMJ Miyako jima 2 2.14 275 S **Sn** 21 04 16.1 +0.1
JOW Kunigami 2.25 15 Pn **Pn** 21 03 52.1 0.0
2.6nm,0.3s,baz=201,slow=13,SNR=58
JOW Sn **Sn** 21 04 15.6 -3.1
5.0nm,0.3s,baz=124,slow=25,SNR=7.4
JOW Kunigami 2.25 15 P **Pn** 21 03 52.9 +0.7
JIH Iheya 2.39 7 P **Pn** 21 03 55.0 +0.8
JIH S **Sn** 21 04 22.3 0.0
JTJ Tarama 2.67 270 P **Pn** 21 03 57.7 -0.3
JTJ S **Sn** 21 04 28.2 -0.9
JIJ Ishigaki jima 3.20 266 P **Pn** 21 04 04.8 -0.4
JIJ S **Sn** 21 04 40.0 -2.1
JTK Tokunoshima 3.34 20 P **Pn** 21 04 08.0 +0.9
JTK S **Sn** 21 04 44.5 -1.1
JMZ Minamidaito 2 3.45 70 P **Pn** 21 04 07.0 -1.6
JMZ S **Sn** 21 04 45.0 -3.3
JAM Amami Oshima 4.14 25 P **Pn** 21 04 18.7 +0.5
MKAR Makanchi Array 42.20 313 P **P** 21 11 07.8 +0.9
0.1nm,0.5s,mb2.7,baz=102,slow=10,SNR=3.4
ZALV Zalesovo Beam 43.19 324 P **P** 21 11 17.2 +2.5
0.3nm,0.3s,mb3.5,baz=132,slow=8.7,SNR=2.6
WRA Warramunga Arr 44.80 171 P **P** 21 11 28.8 +0.8
0.4nm,0.7s,mb3.4,baz=353,slow=8.9,SNR=7.0

*NEIC **16** 21:09:29.3₀2.1, 2333S×7063W, h8km±12km, mb4.5/3, Error ellipse: s-maj=15.0km s-min=7.5km az=97.0*
*ISCJB **16** 21:09:31.6₀0.8, 2317S±004×7067W±008, h39km±6km, mb4.2/10, MS3.8/10, Error ellipse: s-maj=12.8km s-min=6.1km az=7.5*
*GUC **16** 21:09:31.1₀0.7, 2328S×7077W, h35km±2km, ML4.5*
*IDC **16** 21:09:31.7₀3.6, 2330S×7059W, h22km±22km, mb4.1/8, mb1 4.3/11, mb1mx4.2/18, mbtmp4.2/11, ML4.3/3, MS3.7/13, Ms1 3.8/13, ms1mx3.6/35, Error ellipse: s-maj=22.1km s-min=18.2km az=109.0*
ISC 16 21:09:31.0±1.2, 2326S±004×7079W±007, h21km±8km, n49, σ1°28/36, mb4.2/10, MS3.8/10, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.35**	**64**	⇓*i*P	**Pb**	**21 09 38.8**	**+0.2**
MECH				*i* S	**Sb**	**21 09 45.2**	**+1.4**
MECH				AML	AML	21 09 50.5	
	comp=E,104μm,0.6s						
CEN1	**Los Morros**	**0.56**	**104**	⇑*i*P	**Pb**	**21 09 41.7**	**-0.4**
CEN1				*i* S	**Sb**	**21 09 48.9**	**-0.8**
CEN1				AML	AML	21 09 54.2	
	comp=N,18μm,0.5s						
CPN1	**Cerro Paranal**	**1.41**	**166**	⇓*i*P	**Pn**	**21 09 55.6**	**+0.2**
CPN1				*i* S	**Sn**	**21 10 14.3**	**+1.0**
CPN1				AML	AML	21 10 17.3	
	comp=E,19μm,0.6s						
LVC	**Limon Verde**	**1.85**	**70**	Pg	**Pn**	**21 10 02.8**	**+1.3**
LVC				Lg		21 10 26.1	
	comp=E,2μm,0.3s,SNR=19						
LVC	**Limon Verde**	**1.85**	**70**	⇑*i*P	**Pn**	**21 10 02.9**	**+1.4**
LVC				*i* S	**Sn**	**21 10 26.6**	**+2.4**
LVC				AML	AML	21 10 30.9	
	comp=N,11μm,0.6s						
LCO	**Las Campanas**	**5.73**	**179**	*e*Pn	**Pn**	**21 10 52.7**	**-2.1**
	comp=N,111nm,0.6s						
ARE	**Arequipa**	**6.79**	**354**	*e*P	**Pn**	**21 11 09.0**	**-0.5**
LPAZ	**La Paz**	**7.37**	**20**	Pn	**Pn**	**21 11 20.3**	**+2.8**
	comp=N,3.2nm,0.3s,baz=196,slow=4.9,SNR=35						
LPAZ				Sn	**Sn**	**21 12 38.7**	**-1.8**
	baz=212,slow=9.5,SNR=1.5						
LPAZ				LR	LR	21 14 16.5	
	comp=N,452nm,18.3s,baz=199,slow=39						
CFAA	**Coronel Fontan**	**8.62**	**165**	Pn	**Pn**	**21 11 34.2**	**-0.3**
	comp=N,0.1nm,0.3s,baz=352,slow=13,SNR=8.6						
CFAA				Sn	**Sn**	**21 13 17.7**	**+6.6**
	comp=N,0.5nm,0.3s,baz=355,slow=14,SNR=3.3						
CFAA				LR	LR	21 14 48.5	
	comp=N,62nm,19.8s,baz=330,slow=37						
SIV	**San Ignacio**	**11.66**	**53**	Pn	**Pn**	**21 12 14.8**	**-1.5**
	comp=N,1.6nm,0.3s,baz=244,slow=13,SNR=35						
SIV				Sn	**Sn**	**21 14 25.4**	**-0.5**
	baz=240,slow=20,SNR=2.0						
PLCA	**Paso Flores**	**17.43**	**179**	P	**Pn**	**21 13 31.6**	**-1.2**
	comp=N,0.1nm,0.3s,baz=4.2,slow=14,SNR=5.8						
PLCA				LR	LR	21 19 58.4	
	comp=N,328nm,20.2s,baz=360,slow=36						
PLCA	**Paso Flores**	**17.43**	**179**	*e*Pn	**Pn**	**21 13 31.4**	**-1.3**
	comp=N,22nm,1.2s						
BDFB	**Brasilia**	**22.75**	**75**	P	**P**	**21 14 29.9**	**-2.1**
	comp=N,2.6nm,0.7s,mb3.8,baz=232,slow=15,SNR=5.5						
BDFB				LR	LR	21 24 38.4	
	comp=N,250nm,18.3s,MS3.7,baz=210,slow=40						
USHA	**Ushuaia**	**31.58**	**177**	P	**P**	**21 16 01.0**	**+9.1**
	comp=N,5.7nm,0.9s,mb4.4,baz=346,slow=0.7,SNR=5.6						
USHA				LR	LR	21 29 42.2	
	comp=N,303nm,19.0s,MS4.0,baz=353,slow=38						
SDV	**Santo Domingo**	**31.95**	**0**	LR	LR	21 28 02.1	
	comp=N,96nm,18.0s,MS3.5,baz=184,slow=35						
PCRV	**Puerto La Cruz**	**33.77**	**11**	LR	LR	21 28 59.0	
	comp=N,181nm,18.9s,MS3.8,baz=180,slow=35						
RPN	**Rapa Nui**	**35.00**	**256**	LR	LR	21 26 31.9	
	comp=N,215nm,21.1s,MS3.9,baz=209,slow=29						
VNA3	**Neumayer Olymp**	**58.99**	**161**	*e*	**P**	**21 19 30.0**	**+1.4**
VNA3				*e*		21 19 40.1	
VNA2	**Neumayer--Watz**	**59.59**	**160**	*e*	**P**	**21 19 33.7**	**+0.9**
	baz=305,slow=5.6						
VNA2				*e*		21 19 44.3	
LPIG	**La Paz**	**60.73**	**318**	LR	LR	21 41 09.3	
	comp=N,55nm,18.8s,MS3.7,baz=30,slow=31						
TXAR	**Lajitas Array**	**61.11**	**327**	P	**P**	**21 19 44.2**	**+0.4**
	comp=N,0.3nm,0.7s,mb3.5,baz=140,slow=6.6,SNR=3.7						
TXAR	**Lajitas Array**	**61.11**	**327**	P	**P**	**21 19 44.2**	**+0.4**
SNAA	**Sanae**	**61.20**	**160**	*e*	**P**	**21 19 43.3**	**-0.5**
SNAA				*e*		21 19 53.5	
SNAA	**Sanae**	**61.20**	**160**	*e*P	**P**	**21 19 42.8**	**-1.0**
	comp=N,3.0nm,0.8s,mb4.5						
DBIC	**Dimbokro**	**70.90**	**74**	P	**P**	**21 20 47.1**	**0.0**
	comp=N,6.4nm,0.8s,mb4.6,baz=235,slow=5.5,SNR=8.2						
DBIC				LR	LR	21 51 36.3	
	comp=N,125nm,19.6s,MS4.2,baz=199,slow=36						
DBIC	**Dimbokro**	**70.90**	**74**	*e*P	**P**	**21 20 46.5**	**-0.6**
	comp=N,6.7nm,0.9s,mb4.6						
DBIC				LR	LR	21 51 36.3	
PPT	**Papeete**	**73.24**	**258**	LR	LR	21 42 53.2	
	comp=N,21nm,20.5s,MS3.4,baz=119,slow=27						
VNDA	**Vanda**	**74.82**	**190**	P	**P**	**21 21 11.3**	**+2.0**
	comp=N,1.2nm,0.9s,mb3.8,baz=135,slow=5.7,SNR=3.4						
VNDA	**Vanda**	**74.82**	**190**	P	**P**	**21 21 11.3**	**+2.0**
NVAR	**Mina Array Bea**	**75.83**	**323**	P	**P**	**21 21 17.4**	**+1.9**
	comp=N,0.7nm,0.6s,mb3.7,baz=163,slow=6.7,SNR=5.4						
TOA0	**Torodi Ar. Sit**	**79.58**	**71**	*e*P	**P**	**21 21 36.7**	**-0.3**
TOA0				*e*pP	pP	21 21 44.9	+1.0
TORD	**Torodi Ar. Bea**	**79.58**	**71**	P	**P**	**21 21 36.5**	**-0.5**
	comp=N,7.4nm,0.8s,mb4.6,baz=252,slow=4.9,SNR=38						
TORD				LR	LR	21 56 50.6	
	comp=N,76nm,18.9s,MS4.1,baz=185,slow=36						
MAW	**Mawson**	**83.15**	**164**	P	**P**	**21 21 55.9**	**+0.8**
	comp=N,7.9nm,0.8s,mb4.8,baz=230,slow=7.3,SNR=6.2						
BOSA	**Boshof**	**84.15**	**118**	P	**P**	**21 21 58.9**	**-2.1**
	comp=N,2.7nm,0.7s,mb4.5,baz=260,slow=6.1,SNR=5.0						
ESDC	**Sonseca Array**	**88.30**	**45**	LR	LR	21 57 30.9	
	comp=N,54nm,18.6s,MS4.0,baz=60,slow=33						
ASAR	**Alice Springs**	**127.55**	**209**	PKP	PKPdf	21 28 35.5	+0.3
	comp=N,1.6nm,0.8s,baz=157,slow=2.1,SNR=14						
WRA	**Warramunga Arr**	**130.56**	**212**	PKP	PKPdf	21 28 41.5	+0.5
	comp=N,1.1nm,0.8s,baz=148,slow=1.9,SNR=7.4						
WRA	**Warramunga Arr**	**130.56**	**212**	PKP	PKPdf	21 28 41.5	+0.5
ZAA0	**Zalesovo Array**	**144.27**	**25**	*e*PKPdf	PKPdf	21 29 05.5	+0.4
ZALV	**Zalesovo Beam**	**144.27**	**25**	PKP	PKPdf	21 29 05.1	0.0
	comp=N,2.5nm,0.8s,baz=313,slow=4.2,SNR=10						
EKS2	**Erkin-Say**	**144.87**	**48**	*e*PKPdf	PKPdf	21 29 07.4	+0.9
AML	**Almayashu**	**145.01**	**49**	*e*PKPdf	PKPdf	21 29 08.0	+1.3
TKM2	**Tokmak 2**	**146.00**	**47**	*e*PKPdf	PKPdf	21 29 10.3	+1.9
MK31	**Makanchi Array**	**148.07**	**36**	*e*PKPdf	PKPdf	21 29 12.6	+0.8
MK31				*e*PKPbc	PKPbc	21 29 15.4	+0.5
MKAR	**Makanchi Array**	**148.07**	**36**	PKP	PKPdf	21 29 12.9	+1.2
	comp=N,2.8nm,0.7s,baz=270,slow=0.1,SNR=19						
MKAR				PKPbc	PKPbc	21 29 14.8	-0.1
	comp=N,2.8nm,0.7s,baz=330,slow=2.4,SNR=26						
MKAR	**Makanchi Array**	**148.07**	**36**	PKP	PKPdf	21 29 12.9	+1.1
MKAR				PKPbc	PKPbc	21 29 14.8	-0.1
MJAR	**Matsushiro Arr**	**151.71**	**305**	PKPbc	PKPbc	21 29 24.1	-0.1
	comp=N,1.1nm,0.7s,baz=120,slow=1.0,SNR=4.4						
MJAR				PKPab	PKPab	21 29 32.9	-0.1
	comp=N,3.4nm,0.9s,baz=77,slow=1.1,SNR=7.8						
MAT	**Matsushiro**	**151.71**	**305**	PKP	PKPbc	21 29 25.1	+0.9
SONM	**Songino Array**	**155.37**	**5**	PKPab	PKPab	21 29 50.0	+2.0
	comp=N,0.6nm,0.7s,baz=349,slow=2.9,SNR=3.2						

*BJI **16** 21:23:19.9, 236N×9444E, h10km, mB5.0, mb4.9, Ms4.7, Msz4.5*
*IDC **16** 21:23:21.9₀0.5, 262N×9444E, h0km, mb4.6/25, mb1 4.7/26, mb1mx4.6/30, mbtmp4.6/26, ML4.5/1, MS4.0/14, Ms1 4.0/14, ms1mx3.8/34, Error ellipse: s-maj=20.1km s-min=11.6km az=50.0*
*ISCJB **16** 21:23:24.6₀0.2, 262N±003×9447E±003, h27km, mb5.0/125, MS4.3/31, Error ellipse: s-maj=4.7km s-min=3.4km az=25.4*
*MOS **16** 21:23:25.5₀0.9, 269N×9455E, h33km, mb5.3/52, MS4.4/4, Error ellipse: s-maj=10.4km s-min=4.9km az=116.0*
*NEIC **16** 21:23:26.1₀0.2, 263N×9449E, mb5.1/40, Error ellipse: s-maj=5.7km s-min=4.1km az=47.0*
*DJA **16** 21:23:26.6₀0.0, 282N×9447E, h10km, mB5.5/5, Mjma4.2/2, MLv4.7/2, Mw(mB)5.3/5, Mwp4.7/5*
*SZGRF **16** 21:23:28.2, 3.14N×94.76E, h31km, mb5.0, Off west coast of northern Sumatera, Indonesia*
ISC 16 21:23:26.7±0.2, 262N±003×9444E±002, h28km, h28km±.6km: pP-P, n335, σ0°98/336, mb5.0/125, MS4.3/31, 47C-22D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**2.98**	**17**	P	**Pn**	**21 24 10.2**	**-2.0**
BSI	**Banda Aceh**	**2.98**	**17**	S	**Sn**	**21 24 46.6**	**-0.4**
PPI	**Padang Panjang**	**6.70**	**117**	P	**Pn**	**21 25 02.2**	**-1.1**
KULM	**Kulim**	**6.74**	**67**	*e*Pn	**Pn**	**21 25 03.1**	**-0.8**
KULM	**Kulim**	**6.74**	**67**	⇓P	**Pn**	**21 25 04.0**	**+0.1**
IPM	**Ipoh**	**6.83**	**74**	P	**Pn**	**21 25 04.7**	**-0.4**
	129nm,1.2s,1μm0.3nm						
PDSI	**Padang**	**6.97**	**120**	P	**Pn**	**21 25 05.1**	**-2.0**
FRIM	**Kepong**	**7.21**	**85**	⇑P	**Pn**	**21 25 09.7**	**-0.6**
SNG	**Songkhla**	**7.64**	**53**	P	**Pn**	**21 25 15.0**	**-1.3**
	140nm,1.0s						
KGM	**Kluang**	**8.90**	**94**	⇓P	**Pn**	**21 25 34.4**	**+0.9**
MYKOM	**Kota Tinggi**	**9.44**	**95**	⇓P	**Pn**	**21 25 41.2**	**+0.2**
MYKOM	**Kota Tinggi**	**9.44**	**95**	P	**Pn**	**21 25 41.5**	**+0.5**
KSI	**Kapahiang**	**10.26**	**127**	P	**Pn**	**21 25 53.2**	**+1.0**
	253nm,1.1s,3μm						
NST	**Nakhon Sawan**	**14.13**	**23**	P	**Pn**	**21 26 52.0**	**+6.9**
KSM	**Kuching**	**15.90**	**94**	*e*P	**Pn**	**21 27 12.0**	**+3.3**
KKTK	**Khon Kaen**	**15.93**	**31**	P	**Pn**	**21 27 12.0**	**+2.9**
	586nm,0.6s						
LEM	**Lembang**	**16.16**	**126**	P	**Pn**	**21 27 17.2**	**+5.2**
CM31	**Chiang Mai Arr**	**16.35**	**15**	*e*P	**Pn**	**21 27 13.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**16.35**	**15**	Pn	**Pn**	**21 27 13.4**	**-1.0**
	0.6nm,0.3s,baz=200,slow=11,SNR=37						
CMAR				LR	LR	21 33 34.7	
	comp=Z,416nm,20.6s,baz=200,slow=38						
CMAR	**Chiang Mai Arr**	**16.35**	**15**	*i* P	**Pn**	**21 27 13.8**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,14nm,0.9s						
CHG	**Chiang Mai**	**16.69**	**15**	⇓P	**Pn**	**21 27 16.5**	**-2.2**
	comp=Z,41nm,1.0s						
CHTO	**Chiang Mai**	**16.69**	**15**	⇓P	**Pn**	**21 27 20.8**	**+2.1**
	SNR=16						
CHTO	**Chiang Mai**	**16.69**	**15**	*e*P	**Pn**	**21 27 16.4**	**-2.3**
	comp=Z,35nm,1.0s						
CHTO	**Chiang Mai**	**16.69**	**15**	*e*P	**Pn**	**21 27 16.4**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,35nm,1.0s						
STKI	**Sintang**	**17.22**	**98**	P	**Pn**	**21 27 28.3**	**+2.8**
SBUM	**Sibu**	**17.77**	**90**	⇓P	**Pn**	**21 27 32.8**	**+0.6**
SBUM	**Sibu**	**17.77**	**90**	P	**Pn**	**21 27 33.0**	**+0.8**
PBKI	**Pangkalan Bun**	**18.02**	**107**	P	**Pn**	**21 27 37.6**	**+2.3**
	comp=Z,167nm,1.3s,comp=Z,1μm						
KOD	**Kodaikanal**	**18.47**	**295**	*e*P	**Pn**	**21 27 41.6**	**+0.8**
VIS	**Vishakhapatnam**	**18.55**	**325**	*e*P	**Pn**	**21 27 41.2**	**-0.5**
VIS				*i* x	x	21 31 00.8	
BTM	**Bintulu**	**18.63**	**88**	⇑P	**Pn**	**21 27 44.2**	**+1.4**
BBKI	**Banjar Baru**	**21.27**	**106**	P	**P**	**21 28 11.5**	**+0.4**
HYB	**Hyderabad**	**21.43**	**314**	*e*P	**P**	**21 28 13.5**	**+0.7**
HYB				*e*pP		21 28 16.0	
HYB	**Hyderabad**	**21.43**	**314**	⇑*i*P	**P**	**21 28 13.5**	**+0.7**
HYB				*e*		21 28 16.0	
HYB				*e*S	**S**	**21 32 02.0**	**-7.3**
MNGI	**Mangalore**	**21.95**	**299**	*e*P	**P**	**21 28 17.0**	**-1.4**
KKM	**Kota Kinabalu**	**21.98**	**80**	⇑P	**P**	**21 28 20.2**	**+1.5**
IMP	**Imphal**	**22.04**	**359**	*i* P	**P**	**21 28 18.0**	**-1.2**
IMP				*i* x	x	21 32 28.0	
QIZ	**Qiongzhong**	**22.21**	**42**	P	**P**	**21 28 19.8**	**-1.3**
QIZ				AP		21 28 22.9	
QIZ				S	**S**	**21 32 24.9**	**+0.5**
QIZ				XS	sS	21 32 29.8	-7.0
QIZ				AMB	AMB		
	comp=Z,34nm,1.5s,mb4.6						
QIZ				LR	LR		
	comp=N,870nm,17.8s,MS4.4						
QIZ				LR	LR		
	comp=E,780nm,16.3s,MS4.4						
QIZ				LR	LR		
	comp=Z,1μm,16.9s,MS4.3						
BOK	**Bokaro**	**22.62**	**339**	*e*P	**P**	**21 28 25.1**	**-0.3**
BOK				AMb	AMB	21 28 28.7	
	comp=Z,91nm,0.9s,mb5.2						
BOK				*ex*	x	21 32 36.3	
SDKM	**Sandakan**	**22.89**	**82**	⇓P	**P**	**21 28 29.1**	**+0.7**
SHL	**Shillong**	**22.95**	**354**	*ex*	x	21 28 22.7	
SHL				AMb	AMB	21 28 27.2	
	comp=Z,100nm,1.9s,mb4.9						
TSM	**Tawau**	**23.45**	**85**	⇑P	**P**	**21 28 35.1**	**+0.8**
NGP	**Nagpur**	**23.74**	**322**	*e*P	**P**	**21 28 34.8**	**-2.1**
KMI	**Kunming**	**23.76**	**19**	P	**P**	**21 28 38.0**	**+1.0**
KMI				AP		21 28 46.4	
KMI				XP	sP	21 28 50.3	+1.7
KMI				PP		21 29 14.9	
KMI				S	**S**	**21 32 55.3**	**+4.7**
KMI				AMB	AMB		
	comp=Z,34nm,1.6s,mb4.5						
KMI				AMB	AMB		
	comp=Z,272nm,4.3s						
KMI				LR	LR		
	comp=N,1μm,10.6s,MS4.6						
KMI				LR	LR		
	comp=E,527nm,10.9s,MS4.6						
KMI				LR	LR		
	comp=Z,984nm,11.6s,MS4.5						
GOA	**Goa**	**24.00**	**303**	*e*P	**P**	**21 28 38.7**	**-0.5**
MYLDM	**Lahad Datu**	**24.14**	**83**	⇑P	**P**	**21 28 43.3**	**+2.6**
MYLDM	**Lahad Datu**	**24.14**	**83**	P	**P**	**21 28 42.8**	**+2.2**
KAD	**Karad**	**24.67**	**308**	*e*P	**P**	**21 28 43.7**	**-1.7**
AKL	**Akola**	**24.73**	**318**	*e*P	**P**	**21 28 47.5**	**+1.6**
ODAN	**Odare**	**25.03**	**345**	*e*P	**P**	**21 28 49.2**	**+0.7**
	comp=Z,152nm,1.4s,mb5.3						
RAMN	**Ramite**	**25.33**	**343**	*e*P	**P**	**21 28 52.3**	**+1.0**
	comp=Z,134nm,1.2s,mb5.3						
TAPN	**Taplejung**	**25.42**	**346**	*e*P	**P**	**21 28 52.8**	**+0.7**
	comp=Z,99nm,0.9s,mb5.3						
POO	**Poona**	**25.62**	**310**	⇓*i*P	**P**	**21 28 53.5**	**-0.5**
	comp=Z,80nm,1.0s,mb5.2						
PCI	**Palu**	**25.64**	**98**	P	**P**	**21 28 55.0**	**+0.8**
	comp=Z,76nm,1.1s,comp=Z,634nm,mb5.2						
JIRN	**Jiri**	**26.12**	**343**	*e*P	**P**	**21 28 59.3**	**+0.9**
	comp=Z,61nm,0.8s,mb5.2						
PKI	**Pulchoki**	**26.27**	**342**	*e*P	**P**	**21 29 00.2**	**+0.4**
BHPL	**Bhopal**	**26.30**	**323**	*e*P	**P**	**21 28 57.9**	**-2.2**
DMN	**Daman**	**26.40**	**341**	*e*P	**P**	**21 29 01.3**	**+0.3**
	comp=Z,31nm,0.7s,mb4.9						
KAPI	**Kappang**	**26.41**	**107**	P	**P**	**21 29 00.2**	**-1.0**
	comp=Z,15nm,1.1s,mb4.5,baz=256,slow=11,SNR=3.7						
KAPI	**Kappang**	**26.41**	**107**	*e*P	**P**	**21 29 00.5**	**-0.6**
	comp=Z,13nm,1.1s,mb4.4						
KAPI	**Kappang**	**26.41**	**107**	P	**P**	**21 29 05.1**	**+3.9**
GUN	**Gumba**	**26.44**	**343**	*e*P	**P**	**21 29 02.1**	**+0.8**
	comp=Z,61nm,0.8s,mb5.2						
GYA	**Guiyang**	**26.45**	**25**	⇑*i*P	**P**	**21 29 01.6**	**+0.2**
GYA				PP		21 29 46.8	
GYA				PCP	PcP	21 32 23.6	-2.8
GYA				S	**S**	**21 33 35.9**	**+2.3**
GYA				SS		21 34 47.3	
GYA				SCP	ScP	21 36 01.3	-3.3
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,860nm,12.0s,MS4.6						
GYA				LR	LR		
	comp=E,780nm,12.8s,MS4.6						
GYA				LR	LR		
	comp=Z,1μm,11.9s,MS4.7						
KKN	**Kakani**	**26.51**	**342**	*e*P	**P**	**21 29 02.1**	**+0.1**
	comp=Z,50nm,1.0s,mb5.0						
GKN	**Gorkha**	**26.92**	**341**	*e*P	**P**	**21 29 06.1**	**+0.5**
	comp=Z,80nm,0.9s,mb5.2						
KOLN	**Koldanda**	**27.07**	**339**	*e*P	**P**	**21 29 07.5**	**+0.5**
	comp=Z,90nm,1.0s,mb5.3						
LSA	**Lhasa**	**27.11**	**354**	P	**P**	**21 29 09.0**	**+1.7**
LSA				AP	pP	21 29 17.0	+1.4
LSA				XP	sP	21 29 21.0	+2.0
LSA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
LSA				AMB	AMB		
	comp=Z,170nm,5.7s						
LSA				LR	LR		
	comp=E,2μm,12.7s						
LSA				LR	LR		
	comp=Z,200nm,12.7s,MS3.9						
LSA	**Lhasa**	**27.11**	**354**	*e*P	**P**	**21 29 08.8**	**+1.5**
	comp=Z,47nm,0.6s,mb5.2						
LSA	**Lhasa**	**27.11**	**354**	*e*P	**P**	**21 29 08.8**	**+1.5**
LSA				pmax	pmax		
	comp=Z,47nm,0.6s,mb5.2						
DANN	**Dangsing**	**27.54**	**339**	*e*P	**P**	**21 29 11.7**	**+0.5**
	comp=Z,90nm,1.1s,mb5.3						
PYUN	**Piuthan**	**27.59**	**338**	*e*P	**P**	**21 29 11.9**	**+0.2**
	comp=Z,58nm,1.1s,mb5.1						
CD2	**Chengdu**	**29.48**	**16**	⇓*i*P	**P**	**21 29 28.0**	**-0.5**
CD2				AP	pP	21 29 32.4	-4.4
CD2				XP	sP	21 29 35.3	-4.9
CD2				PP	PP	21 30 24.3	-11
CD2				PCP	PcP	21 32 32.8	-0.9
CD2				S	**S**	**21 34 21.5**	**+0.2**
CD2				XS	sS	21 34 28.8	-6.2
CD2				SS	SS	21 35 54.9	-32
CD2				SCS	ScS	21 40 06.3	-2.2
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CD2				AMB	AMB		
	comp=Z,120nm,6.4s						
CD2				LR	LR		
	comp=N,550nm,14.2s,MS4.6						
CD2				LR	LR		
	comp=E,700nm,13.0s,MS4.6						
CD2				LR	LR		
	comp=Z,490nm,13.0s,MS4.3						
LGTI	**Lohaghat**	**29.90**	**335**	*e*P	**P**	**21 29 30.9**	**-1.3**
DDI	**Dehra Dun**	**31.62**	**332**	*ex*	x	21 29 32.0	
SMLA	**Simla**	**32.71**	**332**	*i* P	**P**	**21 29 55.8**	**-1.2**
SMLA				AMb	AMB	21 29 58.5	
	comp=Z,39nm,1.3s,mb5.2						
WHN	**Wuhan**	**33.56**	**32**	⇓P	**P**	**21 30 05.0**	**+0.6**
WHN				AP	pP	21 30 13.3	+0.6
WHN				LR	LR		
	comp=N,1μm,11.0s,MS5.0						
WHN				LR	LR		
	comp=E,1μm,14.0s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,10.5s,MS5.1						
XAN	**Xi'an**	**34.06**	**22**	P	**P**	**21 30 07.8**	**-0.8**
XAN				AP	pP	21 30 16.0	-1.0
XAN				S	**S**	**21 35 27.4**	**-5.2**
XAN				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.0						
XAN				AMB	AMB		
	comp=Z,72nm,6.7s						
XAN				LR	LR		
	comp=N,231nm,12.3s,MS4.4						
XAN				LR	LR		
	comp=E,403nm,12.3s,MS4.4						
XAN				LR	LR		
	comp=Z,641nm,12.0s,MS4.6						
LZH	**Lanzhou**	**34.42**	**14**	*e*P	**P**	**21 30 11.5**	**-0.2**
LZH				AP	pP	21 30 21.3	+1.2
LZH				XP	sP	21 30 25.3	+1.8
LZH				*e*PP	PP	21 31 28.1	-2.0
LZH				*e*S	**S**	**21 35 37.0**	**-1.1**
LZH				XS	sS	21 35 52.6	+0.7
LZH				*e*SS	SS	21 37 47.5	-21
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,145nm,6.8s						
LZH				LR	LR		
	comp=N,539nm,12.5s						
LZH				LR	LR		
	comp=Z,802nm,15.6s,MS4.6						
THN	**Thein Dam**	**34.48**	**331**	*e*P	**P**	**21 30 10.8**	**-1.5**
GTA	**Gaotai**	**36.94**	**7**	P	**P**	**21 30 33.0**	**-0.4**
GTA				AP	pP	21 30 37.6	-4.1
GTA				XP	sP	21 30 40.0	-5.2
GTA				S	**S**	**21 36 17.8**	**+1.0**
GTA				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,99nm,5.4s						
GTA				LR	LR		
	comp=N,288nm,12.0s,MS4.4						
GTA				LR	LR		
	comp=E,180nm,11.4s,MS4.4						
GTA				LR	LR		
	comp=Z,350nm,11.7s,MS4.4						
NJ2	**Nanjing**	**37.21**	**35**	*e*P

WMQ XP sP 21 31 18.0 -4.9
WMQ PP PP 21 32 50.0 +2.8
WMQ S **S** **21 37 26.0 +1.4**
WMQ SS SS 21 40 25.0 -4.6
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,56nm,4.0s
WMQ LR LR
comp=N,127nm,14.0s,MS4.1
WMQ LR LR
comp=E,142nm,15.0s,MS4.1
WMQ LR LR
comp=Z,103nm,14.0s,MS3.9
HOQ Hoqain 41.51 303 ⇓P **P 21 31 14.1 +2.3**
SNR=8.9
ARQ Araqi 42.07 303 ⇑P **P 21 31 18.7 +2.2**
SNR=5.8
BJI Beijing 42.14 25 P **P 21 31 17.9 +1.2**
BJI S **S** **21 37 44.9 +10**
BJI SS SS 21 40 44.3 +1.1
BJI AMB AMB
comp=Z,34nm,1.0s,mb4.9
BJI AMB AMB
comp=Z,95nm,3.3s
BJI LR LR
comp=N,265nm,20.6s,MS4.2
BJI LR LR
comp=E,242nm,21.5s,MS4.2
BJI LR LR
comp=Z,188nm,23.3s,MS3.9
KZA Kyzart 42.88 339 P **P 21 31 24.1 +1.4**
SNR=8.5
KBK Karagaybulak 43.50 339 P **P 21 31 28.9 +1.3**
SNR=18
TKM2 Tokmak 2 43.50 340 *eP* **P 21 31 28.2 +0.5**
comp=Z,44nm,1.5s,mb5.0
TKM2 Tokmak 2 43.50 340 *eP* **P 21 31 28.2 +0.5**
TKM2 pmax pmax
comp=Z,44nm,1.5s,mb5.0
TKM2 Tokmak 2 43.50 340 P **P 21 31 29.1 +1.4**
SNR=14
AML Almayashu 43.51 338 *eP* **P 21 31 28.9 +1.2**
comp=Z,47nm,1.3s,mb5.1
AML Almayashu 43.51 338 P **P 21 31 28.9 +1.2**
SNR=18
AAK Ala-Archa 43.64 339 P **P 21 31 30.2 +1.4**
comp=Z,60nm,1.6s,mb5.1,SNR=5.9
AAK Ala-Archa 43.64 339 P **P 21 31 30.0 +1.2**
SNR=6.9
FRU Bishkek 43.77 339 *eP* **P 21 31 31.0 +1.1**
FRU pmax pmax
comp=Z,54nm,2.0s,mb4.9
EKS2 Erkin-Say 43.93 338 *eP* **P 21 31 32.2 +1.1**
comp=Z,8.2nm,0.8s,mb4.5
EKS2 *e* pP 21 31 39.5 -0.1
EKS2 Erkin-Say 43.93 338 P **P 21 31 32.3 +1.2**
SNR=10
USP Ospenovka 44.19 339 P **P 21 31 33.9 +0.6**
SNR=22
WRA Warramunga Arr 45.13 122 P **P 21 31 39.8 -1.3**
comp=Z,6.7nm,0.9s,mb4.5,baz=300,slow=9.0,SNR=26
WRA LR LR 21 52 53.3
comp=Z,92nm,22.0s,MS3.7,baz=155,slow=39
WRAB Tennant Creek 45.13 122 *eP* **P 21 31 40.3 -0.8**
comp=Z,20nm,1.0s,mb4.9
WRAB *e* pP 21 31 48.1 -1.5
WRAB Tennant Creek 45.13 122 *eP* **P 21 31 40.3 -0.8**
WRAB *e* pP 21 31 48.1 -1.5
WRAB pmax pmax
comp=Z,20nm,1.0s,mb4.9
WRAB Tennant Creek 45.13 122 P **P 21 31 41.2 +0.1**
WB2 Warramunga Arr 45.14 122 *eP* **P 21 31 40.5 -0.7**
WB2 *e* pP 21 31 48.4 -1.3
MK31 Makanchi Array 45.25 348 *eP* **P 21 31 42.1 +0.5**
MK31 *e* pP 21 31 50.7 +0.6
MKAR Makanchi Array 45.25 348 P **P 21 31 41.7 +0.1**
comp=Z,30nm,0.9s,mb5.1,baz=164,slow=8.3,SNR=63
MKAR LR LR 21 53 40.9
comp=Z,93nm,20.6s,MS3.7,baz=160,slow=40
MKAR Makanchi Array 45.25 348 P **P 21 31 41.7 +0.1**
MKAR LR LR 21 53 40.9
FORT Forrest 46.15 139 *eP* **P 21 31 47.2 -1.8**
comp=Z,8.7nm,1.1s,mb4.6
FORT *e* 21 31 57.5
SONM Songino Array 46.21 11 P **P 21 31 49.1 0.0**
comp=Z,9.0nm,0.8s,mb4.7,baz=190,slow=8.4,SNR=42
SONM PcP PcP 21 33 24.9 +0.3
comp=Z,2.4nm,0.8s,baz=190,slow=2.0,SNR=3.5
SONM LR LR 21 52 51.4
comp=Z,166nm,20.7s,MS4.0,baz=189,slow=38
SONM Songino Array 46.21 11 P **P 21 31 49.1 -0.1**
SONM 21 33 24.9
KSRS Korea Array 46.33 37 P **P 21 31 49.3 -1.0**
comp=Z,6.4nm,0.9s,mb4.5,baz=231,slow=8.5,SNR=15
KSRS LR LR 21 53 38.5
comp=Z,301nm,19.4s,MS4.3,baz=40,slow=39
ULN Ulaanbaatar 46.37 12 *eP* **P 21 31 49.5 -0.9**
comp=Z,19nm,1.4s,mb4.8
ULN Ulaanbaatar 46.37 12⇑*eP* **P 21 31 49.8 -0.6**
ULN Ulaanbaatar 46.37 12 P **P 21 31 50.5 +0.1**
comp=Z,14nm,1.5s,mb4.7
ASAR Alice Springs 46.45 126 P **P 21 31 50.6 -0.9**
comp=Z,2.3nm,0.9s,mb4.1,baz=300,slow=8.2,SNR=18
ASAR PcP PcP 21 33 26.1 +0.2
comp=Z,1.3nm,0.8s,baz=322,slow=4.3,SNR=5.0
ZAK Zakamensk 48.18 8⇑*iP* **P 21 32 05.0 +0.6**
ZAK pmax pmax
comp=Z,14nm,1.3s,mb4.8
ABKT Ailbek 48.37 321 P **P 21 32 06.1 -0.1**
comp=Z,177nm,0.9s,mb6.1,SNR=12
CN2 Changchun 49.36 29 *eP* **P 21 32 13.1 -0.6**
CN2 *e*XP sP 21 32 20.1 -5.6
CN2 *e*S **S** **21 39 18.4 -0.3**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,15.0s,MS4.7
CN2 LR LR
comp=E,200nm,15.0s,MS4.7
CN2 LR LR
comp=Z,400nm,16.0s,MS4.5
TLY Talaya 49.50 8 *eP* **P 21 32 15.1 +0.5**
comp=Z,13nm,0.9s,mb5.0
TLY Talaya 49.50 8 *eP* **P 21 32 15.2 +0.7**
TLY pmax pmax
comp=Z,19nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,176nm,15.0s,MS4.2
KURK Kurchatov 49.75 347 P **P 21 32 17.3 +0.8**
comp=Z,170nm,1.1s,mb6.0,SNR=11
KURK Kurchatov 49.75 347 ⇓P **P 21 32 17.1 +0.6**
SNR=18
KURK Kurchatov 49.75 347 *eP* **P 21 32 16.7 +0.2**
comp=Z,50nm,1.2s,mb5.4
KURK Kurchatov 49.75 347*c iP* **P 21 32 17.1 +0.6**
KURK pmax pmax
comp=Z,73nm,1.9s,mb5.4
IRK Irkutsk 50.13 8 *eP* **P 21 32 18.9 -0.5**
IRK pmax pmax
comp=Z,51nm,1.7s,mb5.3
HIA Hailar 51.25 21 *eP* **P 21 32 28.0 +0.1**
comp=Z,40nm,1.0s,mb5.3
HIA Hailar 51.25 21 *eP* **P 21 32 28.0 +0.1**
HIA pmax pmax
comp=Z,40nm,1.0s
KBD Kabd 51.63 306 *eP* **P 21 32 31.9 +0.8**
baz=306
KBD AMb AMB 21 32 33.9
comp=Z,42nm,1.7s,mb5.1,baz=306
CBIJ Chichi jima 51.73 57 LR LR 21 51 19.3
comp=Z,94nm,19.1s,MS3.8,baz=108,slow=32
UMR Umm Al-Rimmam 51.76 306 *eP* **P 21 32 33.0 +1.0**
baz=306
UMR AMb AMB 21 32 34.1
comp=Z,81nm,1.0s,mb5.6,baz=306
ZAA0 Zalesovo Array 51.77 353 *eP* **P 21 32 32.0 +0.3**
ZAA0 *e* pP 21 32 40.5 +0.2
ZALV Zalesovo Beam 51.77 353 P **P 21 32 31.7 0.0**
comp=Z,11nm,0.4s,mb5.1,baz=179,slow=6.7,SNR=64
ZALV LR LR 21 57 05.5
comp=Z,75nm,18.3s,MS3.8,baz=254,slow=39
NAY Al-Naaiem 52.03 306 *eP* **P 21 32 34.6 +0.6**
baz=305
NAY AMb AMB 21 32 35.4
comp=Z,29nm,0.9s,mb5.2,baz=305
MDJ Mudanjiang 52.04 31 P **P 21 32 33.9 0.0**
MDJ AMB AMB
comp=Z,14nm,1.5s,mb4.7
MDJ AMB AMB
comp=Z,70nm,7.1s
JHJ Hachijo jima 2 52.13 49 LR LR 21 54 13.1
comp=Z,118nm,18.5s,MS4.0,baz=2.7,slow=36
MIB Mutribah 52.15 306 *eP* **P 21 32 36.1 +1.1**
baz=306
MIB AMb AMB 21 32 37.2
comp=Z,151nm,1.0s,mb5.9,baz=306
MAT Matsushiro 52.56 45 P **P 21 32 36.4 -1.5**
MJAR Matsushiro Arr 52.57 45 P **P 21 32 37.5 -0.4**
comp=Z,1.0nm,0.8s,mb3.8,baz=223,slow=6.7,SNR=4.5
MJAR PcP PcP 21 33 47.6 -0.5
comp=Z,0.5nm,0.3s,baz=262,slow=3.4,SNR=4.2
MJAR LR LR 21 55 31.6
comp=Z,241nm,19.8s,MS4.2,baz=250,slow=37
MJAR Matsushiro Arr 52.57 45 P **P 21 32 37.5 -0.4**
MJAR 21 33 47.6
NVS Novosibirsk 52.85 352⇑*iP* **P 21 32 38.8 -0.9**
NVS pmax pmax
comp=Z,42nm,1.2s,mb5.2
NVS pmax pmax
comp=N,37nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
KRAR Krasnoyarsk 53.24 359⇓*iP* **P 21 32 44.0 +1.4**
KRAR pmax pmax
comp=Z,71nm,1.2s,mb5.5
BVAR Borovoye Array 54.04 342 P **P 21 32 47.8 -0.6**
comp=Z,15nm,0.8s,mb5.0,baz=145,slow=8.1,SNR=91
BRVK Borovoye 54.10 342 P **P 21 32 48.7 -0.2**
comp=Z,120nm,1.0s,mb5.8,SNR=15
BRVK Borovoye 54.10 342 ⇓P **P 21 32 49.2 +0.4**
SNR=8.9
BRVK Borovoye 54.10 342 *eP* **P 21 32 48.2 -0.7**
comp=Z,38nm,1.0s,mb5.3
BRVK Borovoye 54.10 342 *eP* **P 21 32 48.2 -0.7**
BRVK pmax pmax
comp=Z,38nm,1.0s,mb5.3
CTA Charters Tower 55.60 116 P **P 21 32 59.8 -0.6**
comp=Z,6.7nm,0.9s,mb4.7,baz=301,slow=5.9,SNR=3.3
KLR Kul'dur 56.28 29 *eP* **P 21 33 00.0 -4.7**
KLR pmax pmax
comp=Z,42nm,1.6s,mb5.2
STKA Stephens Creek 56.36 131 P **P 21 33 05.0 -0.5**
comp=Z,4.4nm,0.8s,mb4.5,baz=298,slow=7.4,SNR=5.5
STKA Stephens Creek 56.36 131 *eP* **P 21 33 04.8 -0.7**
comp=Z,12nm,1.0s,mb4.9
STKA *e* pP 21 33 13.5 -0.8
AKTK Aktyubinsk 56.70 333 P **P 21 33 06.7 -1.0**
AKTO Aktyubinsk 56.70 333 P **P 21 33 06.7 -1.0**
comp=Z,7.6nm,1.0s,mb4.7,baz=130,slow=5.7,SNR=15
BOD Bodaibo 57.17 12 *eP* **P 21 33 10.9 0.0**
BOD pmax pmax
comp=Z,29nm,1.2s,mb5.2
HABR Khabarovsk 57.42 31 *eP* **P 21 33 10.4 -2.4**
HABR *e**PP pP 21 33 20.2 -1.3
HABR *e*S **S** **21 41 05.9 -2.0**
GNI Garni 58.37 317 P **P 21 33 19.5 -0.1**
comp=Z,7.5nm,0.8s,mb4.8,baz=187,slow=3.6,SNR=9.2
GNI Garni 58.37 317 *eP* **P 21 33 20.3 +0.7**
comp=Z,24nm,1.2s,mb5.1
GNI Garni 58.37 317 *eP* **P 21 33 20.3 +0.7**
GNI pmax pmax
comp=Z,24nm,1.2s
ASAJ Asahikawa 59.24 39 LR LR 22 02 17.2
comp=Z,245nm,18.2s,MS4.4,baz=310,slow=39
SVE Sverdlovsk 60.38 339⇑*eP* **P 21 33 33.2 0.0**
SVE *e*S **S** **21 41 44.9 -1.1**
SVE pmax pmax
comp=Z,56nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,279nm,20.0s,MS4.4
DAGI Agillar 60.71 317 *i* P **P 21 33 35.3 -0.5**
ARTV Artvin 60.74 317 *i* P **P 21 33 33.5 -2.4**
ARU Arti 60.83 338 P **P 21 33 35.0 -1.2**
comp=Z,145nm,1.1s,mb6.0,SNR=9.7
ARU Arti 60.83 338 *eP* **P 21 33 35.2 -1.1**
comp=Z,28nm,1.0s,mb5.3
ARU *e* pP 21 33 44.5 -0.5
ARU Arti 60.83 338*c iP* **P 21 33 35.4 -0.8**
ARU *e*S **S** **21 41 51.5 -0.3**
ARU *e*SS SS 21 45 48.5 -2.7
ARU pmax pmax
comp=Z,54nm,1.7s,mb5.4
DBAD Bademkaya 60.84 316 *i* P **P 21 33 36.2 -0.4**
KIV Kislovodsk 61.44 320 P **P 21 33 40.2 -0.5**
comp=Z,136nm,1.2s,mb6.0,SNR=5.7
KIV Kislovodsk 61.44 320 ⇑P **P 21 33 41.2 +0.6**
SNR=7.7
KIV Kislovodsk 61.44 320 *eP* **P 21 33 40.8 +0.2**
comp=Z,24nm,1.0s,mb5.3
KIV *e* pP 21 33 49.3 -0.1
KIV Kislovodsk 61.44 320*ceP* **P 21 33 40.5 -0.2**
KIV *e**PP pP 21 33 49.2 -0.2
KIV 21 34 21.0
KIV pmax pmax
comp=Z,36nm,1.3s,mb5.3
KIV Kislovodsk 61.44 320⇑*iP* **P 21 33 40.3 -0.4**
SOC Sochi 63.23 318*c iP* **P 21 33 50.7 -1.9**
SOC *e**PP pP 21 34 00.3 -1.1
SOC *e* 21 34 26.8
SOC *e*S **S** **21 42 24.2 +1.6**
SOC pmax pmax
comp=Z,32nm,1.1s,mb5.4
ARMA Armidale 63.60 126 *eP* **P 21 33 56.4 +1.0**
comp=Z,0.1nm,0.9s
ARMA *e* pP 21 34 04.9 +0.8
YAK Yakutsk 64.87 17 *eP* **P 21 34 02.6 -0.4**
comp=Z,31nm,1.0s,mb5.3
YAK Yakutsk 64.87 17 *eP* **P 21 34 01.8 -1.2**
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.1s
ANN Anapa 65.22 319 *eP* **P 21 34 15.0 +9.4**
ANN pmax pmax
comp=Z,81nm,1.3s,mb5.6
ANTO Ankara 66.78 313 *eP* **P 21 34 15.7 -0.1**
comp=Z,19nm,1.3s,mb5.0
ANTO *e* pP 21 34 24.0 -0.7
ANTO Ankara 66.78 313 *eP* **P 21 34 15.7 -0.2**
ANTO *e* pP 21 34 24.0 -0.7
ANTO pmax pmax
comp=Z,19nm,1.3s,mb5.0
LSZ Lusaka 67.89 252 *eP* **P 21 34 23.4 +0.1**
comp=Z,3.3nm,0.8s,mb4.4
LSZ *e* pP 21 34 32.1 0.0
LSZ Lusaka 67.89 252 *eP* **P 21 34 23.4 +0.1**
LSZ *e* pP 21 34 32.1 0.0
LSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
MOS Moscow 69.71 330 *eP* **P 21 34 31.5 -2.4**
MOS *e* pP 21 34 40.8 -2.0
MOS pmax pmax
comp=Z,56nm,1.2s,mb5.4
OBN Obninsk 69.97 329 *eP* **P 21 34 34.8 -0.7**
comp=Z,36nm,1.1s,mb5.2
OBN *e* pP 21 34 43.3 -1.1
OBN Obninsk 69.97 329*x iP* **P 21 34 34.7 -0.8**
OBN *i* pP 21 34 43.2 -1.2
OBN *e* 21 34 53.8
OBN pmax pmax
comp=Z,54nm,1.6s,mb5.2
TIRR Tirgusor 71.19 316⇑*iP* **P 21 34 42.4 -0.8**
TIRR Tirgusor 71.19 316⇑*iP* **P 21 34 42.3 -0.8**
KLMR Klimovskoe 71.30 335 *eP* **P 21 34 38.7 -4.7**
KLMR pmax pmax
comp=Z,42nm,1.6s,mb5.1
HARR Harsova 71.58 316⇑*iP* **P 21 34 45.5 0.0**
HARR Harsova 71.58 316⇑*iP* **P 21 34 45.5 0.0**
LBTB Lobatse 72.06 243 *eP* **P 21 34 49.0 +0.3**
comp=Z,14nm,1.1s,mb4.8
LBTB *e* pP 21 34 57.6 -0.1
LBTB Lobatse 72.06 243 *eP* **P 21 34 49.0 +0.3**
LBTB *e* pP 21 34 57.6 -0.1
LBTB pmax pmax
comp=Z,15nm,1.1s,mb4.8
PETK Petropavlovsk- 72.11 34 LR LR 22 10 47.9
comp=Z,128nm,18.1s,MS4.2,baz=226,slow=40
TIXI Tiksi 72.30 11 *eP* **P 21 34 48.4 -0.9**
comp=Z,33nm,1.2s,mb5.1
TIXI Tiksi 72.30 11 *eP* **P 21 34 48.2 -1.1**
TIXI pmax pmax
comp=Z,38nm,1.4s,mb5.1
TIXI MLR MLR
comp=Z,233nm,14.0s,MS4.6
AKASG Malin Array Be 72.46 323 P **P 21 34 48.7 -1.9**
comp=Z,5.3nm,0.8s,mb4.5,baz=95,slow=4.6,SNR=22
AKASG Malin Array Be 72.46 323 P **P 21 34 48.7 -1.9**
AKBB Malin Array Si 72.46 323 *eP* **P 21 34 49.1 -1.5**
KIEV Kiev 72.47 323 *eP* **P 21 34 49.1 -1.6**
comp=Z,12nm,1.1s,mb4.7
KIEV *e* pP 21 34 58.0 -1.6
KIEV Kiev 72.47 323 *eP* **P 21 34 49.1 -1.6**
KIEV *e* pP 21 34 58.0 -1.6
KIEV pmax pmax
comp=Z,12nm,1.1s,mb4.7
VRI Vrincioaia 72.71 317⇑*iP* **P 21 34 52.5 +0.2**
VRI Vrincioaia 72.71 317⇑*iP* **P 21 34 52.5 +0.3**
PLOR Plostina 72.75 317⇓*iP* **P 21 34 52.9 +0.4**
BOSA Boshof 73.11 239 LR LR 22 03 19.4
comp=Z,110nm,18.4s,MS4.2,baz=265,slow=33
MLR Muntele Rosu 73.15 317 P **P 21 34 55.0 +0.2**
comp=Z,19nm,1.0s,mb5.0,baz=153,slow=2.3
MLR Muntele Rosu 73.15 317⇑*iP* **P 21 34 54.8 0.0**
SEY Seymchan 73.57 24⇑*eP* **P 21 34 56.8 -0.1**
SEY Seymchan 73.57 24⇑*eP* **P 21 34 56.7 -0.2**
VOIR 73.75 317 ⇑P **P 21 34 58.0 -0.3**
VOIR 73.75 317⇑*iP* **P 21 34 58.0 -0.4**
BURAR Bucovina Array 74.14 319 ⇑P **P 21 35 01.2 +0.6**
BURAR Bucovina Array 74.14 319⇑*iP* **P 21 35 01.2 +0.6**
BUR08 Bucovina Ar. S 74.16 319 *eP* **P 21 35 00.8 +0.1**
LVV L'vov 75.43 321 *eP* **P 21 35 07.1 -0.9**
DRGR 75.63 318 ⇓P **P 21 35 09.2 0.0**
DRGR 75.63 318⇓*iP* **P 21 35 09.2 0.0**
JOF Joensuu 75.69 335 *ep* **P 21 35 07.2 -2.1**
comp=Z,18nm,0.9s,mb5.0
JOF Joensuu 75.69 335 *eP* **P 21 35 07.2 -2.1**
JOF pmax pmax
comp=Z,18nm,0.9s,mb5.0
TRPA Tarpa 76.02 319⇑*iP* **P 21 35 11.2 -0.2**
KWP Kalwaria 76.22 321 *eP* **P 21 35 12.5 0.0**
comp=Z,23nm,1.1s,mb5.0
KWP Kalwaria 76.22 321 *eP* **P 21 35 12.5 -0.1**
KWP pmax pmax
comp=Z,23nm,1.1s,mb5.0
KOLS Kolonicke sedl 76.35 320 *eP* **P 21 35 13.7 +0.4**
KOLS *ep*P pP 21 35 21.8 -0.5
APA Apatity 76.84 340⇑*iP* **P 21 35 09.4 -6.3**
APA pmax pmax
comp=Z,34nm,1.3s,mb5.1
CRVS Cervenica-Dubn 76.87 320 *eP* **P 21 35 16.4 +0.1**
SUW Suwalki 76.93 325 *eP* **P 21 35 15.5 -1.0**
STHS Stebnicka Huta 77.11 320 *eP* **P 21 35 18.1 +0.5**
STHS *e* pP 21 35 26.8 +0.2
STHS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
STHS Stebnicka Huta 77.11 320 *eP* **P 21 35 18.1 +0.5**
STHS *ep*P pP 21 35 26.8 +0.2
KAF Kangasniemi 77.58 333 *ep* **P 21 35 18.7 -1.2**
comp=Z,24nm,1.0s,mb5.1,baz=106,slow=5.3
KAF Kangasniemi 77.58 333 *eP* **P 21 35 18.7 -1.2**
KAF pmax pmax
comp=Z,24nm,1.0s,mb5.1
NIE Niedzica 77.71 320 *eP* **P 21 35 21.8 +0.9**
PSZ Piszkesteto 77.72 318 *eP* **P 21 35 20.9 -0.1**
comp=Z,10nm,1.0s,mb4.7
PSZ Piszkesteto 77.72 318 *eP* **P 21 35 20.9 -0.1**
PSZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PSZ Piszkesteto 77.72 318⇑*iP* **P 21 35 20.8 -0.2**
OJC Ojcow 78.18 321 *eP* **P 21 35 24.1 +0.6**
PKSM Moragy 78.29 317 ⇑P **P 21 35 23.6 -0.7**
PKSM Moragy 78.29 317⇑*iP* **P 21 35 23.6 -0.7**
VYHS Vyhne 78.51 319 *eP* **P 21 35 25.2 -0.2**
VYHS *ep*P pP 21 35 32.8 -1.6
KOLL Kolacno 78.81 319 *eP* **P 21 35 27.4 +0.4**
OKC Ostrava-Krasne 79.17 320 *eP* **P 21 35 29.2 +0.2**
MODS Modra-Piesok 79.52 319 *eP* **P 21 35 31.2 +0.3**
MODS *e* pP 21 35 39.8 -0.2
MODS pmax pmax
comp=Z,17nm,1.5s,mb4.8
MODS Modra-Piesok 79.52 319 *eP* **P 21 35 31.2 +0.3**
MODS *ep*P pP 21 35 39.8 -0.2
MORC Moravsky Berou 79.55 320 *eP* **P 21 35 30.9 -0.1**
comp=Z,12nm,1.2s,mb4.7
MORC Moravsky Berou 79.55 320⇑*iP* **P 21 35 31.2 +0.2**
ZST Bratislava 79.61 318 *eP* **P 21 35 31.8 +0.4**
ZST *e* pP 21 35 40.3 -0.2
ZST pmax pmax
comp=Z,18nm,0.9s,mb5.0
ZST Bratislava 79.61 318 *eP* **P 21 35 31.8 +0.4**
ZST *ep*P pP 21 35 40.2 -0.3
VRAC Vranov 80.09 319 P **P 21 35 34.2 +0.2**
comp=Z,0.6nm,0.3s,mb4.0,baz=90,slow=6.1,SNR=3.1
ARCES ARCESS Array B 80.28 341 P **P 21 35 34.2 -0.4**
comp=Z,10nm,0.9s,mb4.7,baz=119,slow=7.1,SNR=10
DPC Dobruska-Polom 80.40 321 *eP* **P 21 35 36.1 +0.4**
DPC *ep*P pP 21 35 44.7 0.0
KSP Ksiaz 80.49 321 *eP* **P 21 35 36.4 +0.3**
ARSA Arzberg 80.55 317⇑*iP* **P 21 35 36.9 +0.3**
comp=Z,19nm,1.5s,mb4.8
UPC Upice 80.62 321 *eP* **P 21 35 36.9 +0.1**
UPC *ep*P pP 21 35 43.2 -2.7
TREC Trest 80.81 319 *eP* **P 21 35 38.1 +0.2**
TREC *ep*P pP 21 35 46.3 -0.6
BILL Bilibino 80.84 21 *eP* **P 21 35 38.2 +0.6**
BILL *e*SS SS 21 51 00.9 +3.3
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.7
PRU Pruhonice 81.50 320 *eP* **P 21 35 40.6 -0.9**
PRU *ep*P pP 21 35 49.8 -0.8
PVCC Panska Ves 81.54 321 *eP* **P 21 35 41.3 -0.4**
PVCC *ex* x 21 35 48.4
GEC2 GERESS Array S 81.93 319 *eP* **P 21 35 43.7 -0.2**
GEC2 *e* pP 21 35 52.1 -0.7
GEC2 GERESS Array S 81.93 319 *eP* **P 21 35 44.1 +0.3**
GEC2 *e**PP pP 21 35 52.7 -0.2
GEC2 pmax pmax
comp=Z,22nm,1.2s,mb5.0
GEC2 GERESS Array S 81.93 319 *eP* **P 21 35 44.1 +0.3**
comp=Z,22nm,1.2s,mb5.0
GEC2 *ep*P pP 21 35 52.7 -0.2
GERES GERESS Array B 81.93 319 P **P 21 35 43.9 +0.1**
comp=Z,7.7nm,0.9s,mb4.6,baz=100,slow=5.5,SNR=50
BRG Berggiesshubel 81.97 321 *eP* **P 21 35 44.0 0.0**
BRG pmax pmax
comp=Z,24nm,1.9s,mb4.8
BRG Berggiesshubel 81.97 321 *eP* **P 21 35 43.9 -0.1**
comp=Z,40nm,1.9s,mb5.0
BRG Berggiesshubel 81.97 321 *eP* **P 21 35 44.0 0.0**
comp=Z,40nm,1.9s,mb5.0
KHC Kasperske Hory 82.04 319 *eP* **P 21 35 45.0 +0.6**
KHC *ep*P pP 21 35 53.1 -0.3
RPZ Rata Peaks 82.16 135 P **P 21 35 44.7 -0.4**
comp=Z,6.9nm,1.0s,mb4.5,baz=310,slow=7.9,SNR=2.9
RJOB Jochberg 82.44 318 *eP* **P 21 35 46.0 -0.5**
comp=Z,6.0nm,0.9s,mb4.5
RJOB *ep*P pP 21 35 55.5 -0.1
WET Wettzell 82.50 319 *eP* **P 21 35 46.7 -0.1**
WET *e**PP pP 21 35 55.6 -0.2
WET pmax pmax
comp=Z,22nm,1.6s,mb4.8
WET Wettzell 82.50 319 *eP* **P 21 35 46.7 -0.1**
comp=Z,22nm,1.6s,mb4.8
WET *ep*P pP 21 35 55.6 -0.2
CLL Collm 82.60 321 *eP* **P 21 35 46.0 -1.3**
CLL pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
CLL Collm 82.60 321 *eP* **P 21 35 46.8 -0.5**
comp=Z,10.0nm,1.3s,mb4.7
CLL *ep*P pP 21 35 56.0 -0.3
NKC Novy Kostel 82.86 320 *eP* **P 21 35 48.3 -0.4**
ROTZ Rotzenmuhle 82.98 320 *eP* **P 21 35 49.7 +0.4**
comp=Z,6.0nm,1.1s,mb4.5
ROTZ *ep*P pP 21 35 58.4 0.0
MANZ Manzenberg 83.06 320 *eP* **P 21 35 50.1 +0.4**
comp=Z,17nm,1.2s,mb5.0
MANZ *ep*P pP 21 35 58.7 -0.1
HFS Hagfors 83.12 330 P **P 21 35 49.3 -0.5**

comp=Z,10.0nm,1.0s,mb4.8,baz=116,slow=6.8,SNR=6.0
MOX Moxa 83.42 321 *e*P **P 21 35 51.4 -0.2**
comp=Z,4.0nm,1.0s,mb4.4
GRF Grafenberg Arr 83.62 320 *e*P **P 21 35 52.7 +0.1**
GRF pmax pmax
comp=Z,22nm,1.4s,mb5.1
GRF Grafenberg Arr 83.62 320 *e*P **P 21 35 52.7 +0.1**
GRF pmax pmax
comp=Z,22nm,1.4s,mb5.1
GRF Grafenberg Arr 83.62 320 *e*P **P 21 35 52.7 +0.1**
comp=Z,22nm,1.4s,mb5.1
DAVOX Davos/Dischmat 84.37 317 P **P 21 35 56.4 -0.1**
comp=Z,14nm,1.0s,mb5.0,baz=98,slow=5.2,SNR=10
DAVA Damuels 84.39 317⇑ *i*P **P 21 35 56.8 +0.3**
comp=Z,14nm,1.0s,mb5.0
BSEG Bad Segeberg 84.42 324 *e*P **P 21 35 56.3 -0.3**
BSEG pmax pmax
comp=Z,21nm,1.3s,mb5.1
BSEG Bad Segeberg 84.42 324 *e*P **P 21 35 56.3 -0.3**
comp=Z,21nm,1.3s,mb5.1
DAVOS Davos 84.43 317 P **P 21 35 56.4 -0.4**
NB2 NORSAR Subarra 84.43 331 P **P 21 35 55.5 -1.0**
comp=Z,10nm,1.1s,mb4.9,baz=96,slow=5.1
NOA NORSAR Array B 84.43 331 P **P 21 35 55.4 -1.1**
comp=Z,4.7nm,0.9s,mb4.6,baz=94,slow=5.4,SNR=8.2
NOA PP PP 21 39 10.7 -1.0
comp=Z,1.4nm,1.0s,baz=105,slow=7.9,SNR=3.0
KEST Kesra 84.49 305 P **P 21 35 57.6 +0.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=31,slow=2.9,SNR=6.3
TNS Taunus Mts 85.43 320 *e*P **P 21 36 01.6 -0.1**
TNS *e**PP pP 21 36 10.9 +0.1
TNS pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
TNS Taunus Mts 85.43 320 *e*P **P 21 36 01.6 -0.1**
comp=Z,9.0nm,1.2s,mb4.8
TNS *e*pP pP 21 36 10.9 +0.1
LPG La Plagne 86.52 315⇑ *i*P **P 21 36 07.2 0.0**
comp=Z,36nm,1.2s,mb5.2
LPG La Plagne 86.52 315⇑ *i*P **P 21 36 07.2 0.0**
comp=Z,18nm,1.2s,mb5.2
LPG La Plagne 86.52 315⇑ *i*P **P 21 36 07.2 0.0**
LPG pmax pmax
comp=Z,18nm,1.2s,mb5.2
LPL La Plagne 86.53 315⇑ *i*P **P 21 36 07.3 0.0**
comp=Z,24nm,1.0s,mb5.1
LPL La Plagne 86.53 315⇑ *i*P **P 21 36 07.3 0.0**
comp=Z,12nm,1.0s,mb5.1
LPL La Plagne 86.53 315⇑ *i*P **P 21 36 07.3 0.0**
LPL pmax pmax
comp=Z,12nm,1.0s,mb5.1
FRF La Foret Royal 86.61 313 *e*P **P 21 36 07.2 -0.5**
comp=Z,77nm,1.3s,mb5.5
FRF La Foret Royal 86.61 313 *e*P **P 21 36 07.2 -0.5**
comp=Z,39nm,1.3s,mb5.5
FRF La Foret Royal 86.61 313 *e*P **P 21 36 07.2 -0.5**
FRF pmax pmax
comp=Z,39nm,1.3s,mb5.5
VNDA Vanda 87.76 168 P **P 21 36 12.3 -0.2**
comp=Z,0.2nm,0.3s,mb3.9,baz=280,slow=6.1,SNR=12
VNDA LR LR 22 08 35.2
comp=Z,60nm,18.2s,MS4.0,baz=87,slow=31
GIVF Givet 87.76 320 *e*P **P 21 36 12.0 -1.1**
TAM Tamanrasset 88.00 293 *e*P **P 21 36 16.4 +1.6**
TAM *e* pP 21 36 24.3 +0.3
BAIF Baives 88.16 320 *e*P **P 21 36 15.1 +0.1**
LOR Lormes 88.49 317 *e*P **P 21 36 16.3 -0.4**
comp=Z,19nm,1.0s,mb5.0
LOR Lormes 88.49 317 *e*P **P 21 36 16.3 -0.4**
comp=Z,9.3nm,1.0s,mb5.0
LOR Lormes 88.49 317 *e*P **P 21 36 16.3 -0.4**
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
SMF Signal de Mont 88.52 316 *e*P **P 21 36 16.4 -0.4**
comp=Z,18nm,0.9s,mb5.1
SMF Signal de Mont 88.52 316 *e*P **P 21 36 16.4 -0.4**
comp=Z,9.3nm,0.9s,mb5.1
SMF Signal de Mont 88.52 316 *e*P **P 21 36 16.4 -0.4**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
AVF Avril sur Loir 88.85 317 *e*P **P 21 36 18.0 -0.4**
comp=Z,13nm,1.1s,mb4.9
AVF Avril sur Loir 88.85 317 *e*P **P 21 36 18.0 -0.4**
comp=Z,6.7nm,1.1s,mb4.9
AVF Avril sur Loir 88.85 317 *e*P **P 21 36 18.0 -0.4**
AVF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
BGF Bois d'Agland 89.21 316 *e*P **P 21 36 20.3 +0.2**
comp=Z,26nm,1.1s,mb5.2
BGF Bois d'Agland 89.21 316 *e*P **P 21 36 20.3 +0.2**
comp=Z,13nm,1.1s,mb5.2
BGF Bois d'Agland 89.21 316 *e*P **P 21 36 20.3 +0.2**
BGF pmax pmax
comp=Z,13nm,1.1s,mb5.2
TCF Toulx Ste Croi 89.67 316 *e*P **P 21 36 21.4 -0.8**
NVL N'lazarevskaya 90.01 199 P **P 21 36 25.4 +2.1**
NVL pmax pmax
comp=Z,26nm,1.5s,mb5.3
MAIT Maitri 90.05 199 *e*P **P 21 36 22.9 -0.5**
LDF La Druitiere 91.07 319 *e*P **P 21 36 28.6 -0.1**
comp=Z,37nm,1.2s,mb5.3
LDF La Druitiere 91.07 319 *e*P **P 21 36 28.6 -0.1**
comp=Z,19nm,1.2s,mb5.3
LDF La Druitiere 91.07 319 *e*P **P 21 36 28.6 -0.1**
LDF pmax pmax
comp=Z,19nm,1.2s,mb5.3
GRR Gorron 91.58 318 *e*P **P 21 36 31.1 0.0**
comp=Z,25nm,1.2s,mb5.1
GRR Gorron 91.58 318 *e*P **P 21 36 31.1 0.0**
comp=Z,12nm,1.2s,mb5.1
GRR Gorron 91.58 318 *e*P **P 21 36 31.1 0.0**
GRR pmax pmax
comp=Z,12nm,1.2s,mb5.1
TOA0 Torodi Ar. Sit 92.08 283 *e*P **P 21 36 34.3 +0.2**
TORD Torodi Ar. Bea 92.08 283 P **P 21 36 34.1 0.0**
comp=Z,3.0nm,1.1s,mb4.5,baz=95,slow=5.9,SNR=13
TORD PP PP 21 40 20.4 +6.2
comp=Z,1.0nm,1.2s,baz=71,slow=5.3,SNR=3.5
TORD LR LR 22 13 37.9
comp=Z,72nm,18.8s,MS4.1,baz=195,slow=33
NVAR Mina Array Bea 129.19 33 PKP PKPdf 21 42 33.5 +0.8
comp=Z,1.0nm,1.0s,baz=276,slow=1.3,SNR=4.4
PDAR Pinedale Array 129.89 23 PKP PKPdf 21 42 34.1 +0.1
comp=Z,0.9nm,1.1s,baz=25,slow=2.4,SNR=3.9
TXAR Lajitas Array 143.80 27 PKP PKPdf 21 42 57.9 -2.1
comp=Z,2.7nm,0.9s,baz=289,slow=2.8,SNR=16
JCT Junction City 144.39 21 *e*PKPdf PKPdf 21 42 59.2 -1.8
CFAA Coronel Fontan 146.86 208 PKPbc PKPbc 21 43 06.8 -0.2
comp=Z,1.4nm,0.9s,baz=148,slow=3.7,SNR=12
CFAA Coronel Fontan 146.86 208 PKPbc PKPbc 21 43 06.8 -0.2
SIV San Ignacio 152.47 240 PKPbc PKPbc 21 43 20.4 -1.0
comp=Z,1.6nm,0.8s,baz=125,slow=4.0,SNR=7.8
LPAZ La Paz 158.12 231 PKPab PKPab 21 43 56.6 +1.0
comp=Z,4.9nm,0.8s,baz=135,slow=3.3,SNR=8.0
LPAZ La Paz 158.12 231 *e*PKP2 PKPab 21 43 57.3 +1.6
SDV Santo Domingo 161.23 308 PKPab PKPab 21 44 09.0 -0.3
comp=Z,3.7nm,0.8s,baz=45,slow=7.4,SNR=4.4

*GUC **16** 21:25:04.7±0.6, 2257S×7034W, h48km±2km, ML3.1*
*ISCJB **16** 21:25:05.2±1.0, 2251S±006×704W±0.1, h53km±12km, Error ellipse: s-maj=16.9km s-min=8.1km az=18.9*
*IDC **16** 21:25:05.8±5.9, 2263S×7037W, h50km±37km, mb3.7/1, mb1 3.5/3, mb1mx3.3/17, mbtmp3.5/3, ML3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx2.4/33, Error ellipse: s-maj=72.2km s-min=24.7km az=28.0*
ISC 16 21:25:06.5±1.0, 2251S±006×704W±01, h49km±14km, n11, σ1§51/15, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.59**	**187**⇑	*i*P	**Pn**	**21 25 16.2**	**-2.6**
MECH				*i* S	**Sn**	**21 25 25.2**	**-2.5**
MECH				AML	AML	21 25 28.2	
	comp=N,4μm,0.4s						
CEN1	**Los Morros**	**0.89**	**170**⇓	*i*P	**Pn**	**21 25 23.1**	**+0.4**
CEN1				*i* S	**Sn**	**21 25 36.7**	**+2.2**
CEN1				AML	AML	21 25 39.3	
	comp=E,677nm,0.3s						
LVC	**Limon Verde**	**1.35**	**94**	P	**Pn**	**21 25 28.0**	**-0.9**
	comp=E,41nm,0.3s,SNR=1052						
LVC				S	**Sn**	**21 25 45.6**	**-0.1**
	comp=E,49nm,0.3s,SNR=18						
LVC	**Limon Verde**	**1.35**	**94**⇓	*i*P	**Pn**	**21 25 28.2**	**-0.7**
LVC				*i* S	**Sn**	**21 25 45.3**	**-0.3**
LVC				AML	AML	21 25 50.3	
	comp=E,292nm,0.1s						

PB01	**Plate Boundary**	**1.68**	**29**⇑	*i*P	**Pn**	**21 25 32.8**	**-0.6**
PB01				*i* S	**Sn**	**21 25 54.4**	**+0.7**
PB01				AML	AML	21 25 59.5	
	comp=E,688nm,0.3s						
LPAZ	**La Paz**	**6.54**	**19**	P	**Pn**	**21 26 42.3**	**+2.1**
	comp=E,0.3nm,0.3s,baz=197,slow=5.0,SNR=3.6						
CFAA	**Coronel Fontan**	**9.25**	**169**	P	**Pn**	**21 27 20.2**	**+3.0**
	comp=E,0.0nm,0.3s,baz=342,slow=9.6,SNR=2.3						
CFAA				S	**Sn**	**21 29 10.6**	**+11**
	comp=E,0.0nm,0.3s,baz=342,slow=20,SNR=2.7						
SIV	**San Ignacio**	**10.91**	**55**	P	**Pn**	**21 27 39.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=247,slow=13,SNR=4.9						
CMIG	**Matias Romero**	**46.10**	**327**	LR	LR	21 49 55.0	
	comp=E,58nm,19.6s,baz=204,slow=32						
TORD	**Torodi Ar. Bea**	**78.96**	**71**	P	**P**	**21 37 04.6**	**-1.0**
	comp=E,0.6nm,0.6s,baz=255,slow=5.0,SNR=18						
MKAR	**Makanchi Array**	**147.24**	**36**	PKPbc	PKPbc	21 44 44.0	-0.4
	comp=E,0.5nm,0.9s,baz=310,slow=3.2,SNR=3.7						

*ISCJB **16** 21:47:59.2±1.0, 2494N±004×12270E±003, h11km±7km, mb3.5/5, Error ellipse: s-maj=6.8km s-min=3.8km az=21.3*
*IDC **16** 21:47:59.1±2.2, 2469N×12220E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, Error ellipse: s-maj=160.1km s-min=27.7km az=64.0*
*TAP **16** 21:48:00.1, 2491N×12262E, h4km±1km, ML3.4, D*
*JMA **16** 21:48:04.3±0.5, 2475N×12287E, h28km, M2.3*
ISC 16 21:47:59.1±0.6, 2492N±004×12267E±003, h1km±4km, n51, σ0§91/59, mb3.5/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.55**	**146**	P	**Pg**	**21 48 11.5**	**+1.9**
TWB1	**Santiao Chiao**	**0.62**	**278**	*i* P	**Pg**	**21 48 11.4**	**+0.4**
	baz=280						
TWB1				*e*S	**Sg**	**21 48 19.2**	**0.0**
	baz=280						
TWC	**Suao**	**0.81**	**248**	*i* P	**Pg**	**21 48 14.5**	**0.0**
	baz=247						
TWC				*e*S	**Sg**	**21 48 23.7**	**-1.3**
	baz=247						
NWF	**Wu-fen Shan**	**0.82**	**281**	*e*P	**Pg**	**21 48 15.5**	**+0.7**
	baz=282						
NWF				*e*S	**Sb**	**21 48 26.5**	**-1.2**
	baz=282						
ILA	**Ilan**	**0.85**	**260**	*e*P	**Pg**	**21 48 15.6**	**+0.2**
	baz=260						
ILA				*e*S	**Sb**	**21 48 27.6**	**-1.0**
	baz=260						
PCYT	**Pengchaiyu**	**0.89**	**323**	P	**Pg**	**21 48 16.6**	**+0.5**
	baz=325						
PCYT				*e*S	**Sg**	**21 48 29.0**	**+1.2**
	baz=325						
TWE	**Neicheng**	**0.93**	**258**	*i* P	**Pg**	**21 48 17.1**	**+0.1**
	baz=258						
ENA	**Nanau**	**0.98**	**240**	*e*P	**Pg**	**21 48 17.5**	**-0.3**
	baz=239						
TWA	**Mucha**	**0.99**	**274**	*e*P	**Pg**	**21 48 17.9**	**-0.1**
	baz=274						
TWY	**Chenhua**	**1.03**	**290**	*e*P	**Pg**	**21 48 18.8**	**-0.1**
	baz=291						
ENTT	**Nioudou**	**1.04**	**255**	*i* P	**Pg**	**21 48 19.2**	**+0.1**
	baz=254						
TAP1	**Taipei**	**1.05**	**277**	*e*P	**Pg**	**21 48 19.0**	**-0.2**
	baz=277						
IRIF	**Iriomote-Funau**	**1.13**	**121**	P	**Pb**	**21 48 20.8**	**-0.5**
IRIF				*e*S	**Sb**	**21 48 32.5**	**-4.0**
TWS1	**Kuangyinshan**	**1.15**	**279**	*e*P	**Pg**	**21 48 20.9**	**-0.2**
	baz=280						
TWS1				*e*S	**Sg**	**21 48 34.6**	**-1.4**
	baz=280						
NSK	**Sanguang**	**1.22**	**259**	P	**Pg**	**21 48 22.1**	**-0.3**
	baz=258						
NNS	**Nan Shan**	**1.27**	**248**	*e*P	**Pg**	**21 48 22.7**	**-0.8**
	baz=247						
TWD	**Chiawan**	**1.29**	**230**	*e*P	**Pg**	**21 48 23.7**	**-0.1**
	baz=228						
HATJ	**Hateruma jima**	**1.34**	**129**	P	**Pg**	**21 48 23.8**	**-1.0**
JKRS	**Kuro-shima**	**1.40**	**119**	P	**Pn**	**21 48 24.5**	**-1.2**
JIJ	**Ishigaki jima**	**1.45**	**112**	P	**Pn**	**21 48 25.5**	**-0.9**
JIJ				*e*S	**Sg**	**21 48 41.2**	**-4.5**
WHF	**Hehuan Shan**	**1.49**	**239**	*e*P	**Pn**	**21 48 26.3**	**-0.7**
	baz=238						
TWT	**Tachien**	**1.51**	**244**	*e*P	**Pn**	**21 48 26.5**	**-0.8**
	baz=244						
NSTT	**Nanjuang**	**1.54**	**260**	*e*P	**Pn**	**21 48 26.9**	**-0.8**
	baz=259						
ESL	**Shilin**	**1.57**	**226**	*e*P	**Pn**	**21 48 27.1**	**-1.0**
	baz=224						
NSY	**Sanyi**	**1.81**	**254**	*e*P	**Pn**	**21 48 32.1**	**+0.8**
	baz=253						
TWQ1	**Liyutan**	**1.82**	**252**	*e*P	**Pn**	**21 48 32.2**	**+0.7**
	baz=251						
EHY	**Hungye**	**1.87**	**221**	*e*P	**Pn**	**21 48 31.6**	**-0.6**
	baz=220						
SMLT	**Sun Moon Lake**	**1.91**	**238**	*e*P	**Pn**	**21 48 32.5**	**-0.3**
	baz=237						
TYC	**Yuchr**	**1.94**	**239**	*e*P	**Pn**	**21 48 33.7**	**+0.6**
	baz=238						
TCU	**Taichung**	**1.97**	**248**	*e*P	**Pn**	**21 48 35.2**	**+1.6**
	baz=246						
TWF1	**Yuli**	**2.00**	**219**	*e*P	**Pn**	**21 48 33.3**	**-0.7**
	baz=218						
WNT	**Mingjian**	**2.08**	**241**	*e*P	**Pn**	**21 48 36.0**	**+0.8**
	baz=239						
ALS	**Alishan**	**2.21**	**231**	*e*P	**Pn**	**21 48 37.9**	**+1.1**
	baz=230						
CHN5	**Tsauling**	**2.24**	**235**	*e*P	**Pn**	**21 48 38.0**	**+0.7**
	baz=233						
ELDTW	**Lidau**	**2.29**	**222**	*e*P	**Pn**	**21 48 37.7**	**-0.3**
	baz=220						
CHN4	**Tsaushan**	**2.46**	**231**	*e*P	**Pn**	**21 48 41.5**	**+1.2**
	baz=230						
STYT	**Tauyuan**	**2.47**	**225**	*e*P	**Pn**	**21 48 40.0**	**-0.5**
	baz=224						
WTP	**Ta-pu**	**2.51**	**229**	*e*P	**Pn**	**21 48 42.0**	**+0.9**
	baz=227						
TWG	**Pinlang**	**2.55**	**215**	*e*P	**Pn**	**21 48 41.4**	**-0.2**
	baz=214						
TWK	**Hsinying**	**2.58**	**231**	*e*P	**Pn**	**21 48 44.6**	**+2.6**
	baz=230						
CHN1	**Nanshi**	**2.61**	**229**	*e*P	**Pn**	**21 48 43.7**	**+1.3**
	baz=228						
SGST	**Jiashian**	**2.64**	**227**	*e*P	**Pn**	**21 48 43.7**	**+0.9**
	baz=225						
ECL	**Taimali**	**2.79**	**215**	*e*P	**Pn**	**21 48 44.1**	**-0.8**
	baz=213						
SSD	**Sandimen**	**2.86**	**221**	*e*P	**Pn**	**21 48 46.9**	**+1.1**
	baz=220						
SCZT	**Fangliau**	**3.15**	**217**	*e*P	**Pn**	**21 48 51.2**	**+1.3**
	baz=216						
KSRS	**Korea Array**	**13.28**	**18**	Pn	**Pn**	**21 51 22.6**	**+14**
	0.3nm,0.3s,baz=199,slow=11,SNR=4.0						
SONM	**Songino Array**	**26.25**	**335**	P	**P**	**21 53 37.2**	**+1.5**
	0.6nm,0.8s,mb3.3,baz=145,slow=8.5,SNR=4.8						
MKAR	**Makanchi Array**	**38.77**	**315**	P	**P**	**21 55 24.6**	**-0.4**
	0.7nm,0.6s,mb3.5,baz=98,slow=9.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**40.38**	**326**	P	**P**	**21 55 37.5**	**-0.8**
	0.3nm,0.4s,mb3.3,baz=104,slow=4.6,SNR=3.8						
WRA	**Warramunga Arr**	**46.01**	**165**	P	**P**	**21 56 23.6**	**-0.6**
	0.3nm,0.4s,mb3.6,baz=347,slow=8.5,SNR=2.8						
BVAR	**Borovoye Array**	**47.97**	**320**	P	**P**	**21 56 37.5**	**-1.7**
	0.6nm,0.8s,mb3.8,baz=102,slow=11,SNR=3.9						

*ISK **16** 22:06:01.5, 3539N×2768E, h42km, ML3.6*
*ISCJB **16** 22:06:03.8±0.3, 3556N±002×2798E±002, h23km, Error ellipse: s-maj=3.2km s-min=2.8km az=30.2*
*CSEM **16** 22:06:04.7±0.1, 3557N×2796E, h37km±2km, MD3.7, Error ellipse: s-maj=2.6km s-min=1.7km az=21.0*
*NEIC **16** 22:06:04.0, 3568N×2796E, h23km, MD3.7(ATH), After ATH.*
*ATH **16** 22:06:04.0, 3568N×2796E, h23km±2km, MD3.7/9*
*HLW **16** 22:06:06.5, 3556N×2814E, h14km, Mb3.0*
*THE **16** 22:06:07.5, 3571N×2797E, h32km±18km, Error ellipse: s-maj=18.2km s-min=1.7km az=227.0*
*DDA **16** 22:06:09.7, 3601N×2802E, h10km, Md3.4*
ISC 16 22:06:04.6±0.7, 3561N±002×2793E±003, h15km±5km, n78, σ1§06/97, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.63**	**14**⇑	*i*PN	**Pg**	**22 06 15.6**	**-1.3**
ARG				*e*SN	**Sg**	**22 06 23.3**	**-2.0**
KARP	**Karpathos**	**0.63**	**265**	*e*PB	**Pg**	**22 06 16.4**	**-0.6**
KARP				*e*SN	**Sg**	**22 06 26.7**	**+1.3**
DAT	**Datca**	**1.16**	**346**	*e*PN	**Pn**	**22 06 24.6**	**-1.7**
DAT				*e*SN	**Sn**	**22 06 40.9**	**-1.0**
NISR	**Nisiros**	**1.20**	**327**	*e*PN	**Pn**	**22 06 26.0**	**-0.8**
TURN	**Turunc**	**1.38**	**23**	*i* P	**Pn**	**22 06 25.3**	**-4.0**
TURN				*i* S	**Sn**	**22 06 40.9**	**-6.3**
KSL	**Kastellorizon**	**1.45**	**68**	*e*PN	**Pn**	**22 06 30.0**	**-0.2**
ZKR	**Zakros**	**1.49**	**251**	P	**Pn**	**22 06 32.1**	**+1.3**
BDRM	**Kayabasi**	**1.51**	**345**	*i* P	**Pn**	**22 06 30.2**	**-0.9**
BDRM				*i* S	**Sn**	**22 06 48.9**	**-1.6**
YER	**Yerkesik**	**1.55**	**10**	*e*PN	**Pn**	**22 06 32.0**	**+0.3**
YER				*e*SN	**Sn**	**22 06 52.1**	**+0.5**
MLSB	**Milas**	**1.69**	**356**	*e*PN	**Pn**	**22 06 33.0**	**-0.6**
MLSB				*e*SN	**Sn**	**22 06 55.2**	**+0.2**
NPS	**Neapolis**	**1.93**	**260**	*e*PB	**Pn**	**22 06 38.3**	**-1.1**
AYDN	**Tasoluk**	**2.05**	**359**	*i* P	**Pn**	**22 06 38.8**	**+0.3**
AYDN				*i* S	**Sn**	**22 07 04.0**	**+0.2**
LAST	**Lasithi**	**2.05**	**258**	P	**Pn**	**22 06 40.7**	**+2.1**
LAST				S	**Sn**	**22 07 04.6**	**+0.6**
GOLH	**Golhisar**	**2.09**	**38**	*i* P	**Pn**	**22 06 40.6**	**+1.4**
GOLH				*i* S	**Sn**	**22 07 08.8**	**+3.9**
THR1	**Thera Island**	**2.15**	**292**	P	**Pn**	**22 06 39.5**	**-0.4**
THR1				S	**Sn**	**22 07 05.0**	**-1.2**
GCAM	**G?zelcaml?**	**2.16**	**345**	*i* P	**Pn**	**22 06 39.7**	**-0.4**
THR6	**Thira Island,**	**2.19**	**291**	P	**Pn**	**22 06 40.4**	**-0.1**
THR3	**Thira Island,**	**2.20**	**292**	P	**Pn**	**22 06 40.2**	**-0.5**
THR4	**Thira Island,**	**2.23**	**293**	P	**Pn**	**22 06 40.8**	**-0.2**
SMG	**Samos**	**2.27**	**338**	P	**Pn**	**22 06 41.1**	**-0.6**
DENT	**Denizli**	**2.32**	**22**	*e*PN	**Pn**	**22 06 42.7**	**+0.5**
APE	**Apeiranthos**	**2.43**	**308**	P	**Pn**	**22 06 43.3**	**-0.4**
APE				S	**Sn**	**22 07 11.3**	**-1.9**
APE	**Apeiranthos**	**2.43**	**308**	*e*Pn	**Pn**	**22 06 43.6**	**-0.1**
APE				S	**Sn**	**22 07 11.3**	**-1.9**
IDI	**Anoyia**	**2.50**	**264**	P	**Pn**	**22 06 46.1**	**+1.3**
ANTB	**Antalya**	**2.55**	**59**	*e*PN	**Pn**	**22 06 46.2**	**+0.8**
BCK	**Bucak**	**2.83**	**48**	*e*PN	**Pn**	**22 06 50.3**	**+1.1**
BLCB	**Balcova**	**2.86**	**346**	P	**Pn**	**22 06 49.1**	**-0.6**
BLCB	**Balcova**	**2.86**	**346**	*e*Pn	**Pn**	**22 06 48.4**	**-1.3**
BLCB	**Balcova**	**2.86**	**346**	P	**Pn**	**22 06 49.1**	**-0.6**
KULA	**Kula-Manisa**	**2.96**	**11**	*e*PN	**Pn**	**22 06 51.7**	**+0.6**
KHL	**Karahalli**	**3.00**	**25**	*e*PN	**Pn**	**22 06 52.6**	**+1.1**
ISP	**Isparta**	**3.04**	**42**	*e*PN	**Pn**	**22 06 53.8**	**+1.5**
VAM	**Vamos**	**3.05**	**267**	*e*PN	**Pn**	**22 06 54.5**	**+2.2**
CHOS	**Chios island**	**3.16**	**332**	P	**Pn**	**22 06 53.3**	**-0.5**
CHOS				S	**Sn**	**22 07 28.4**	**-2.8**
AKS	**Akhisar**	**3.27**	**358**	*e*PN	**Pn**	**22 06 55.3**	**0.0**
DEMI	**Demirci**	**3.49**	**10**	*i* P	**Pn**	**22 06 58.2**	**-0.1**
DEMI				*i* S	**Sn**	**22 07 39.9**	**+0.6**
DEMI	**Demirci**	**3.49**	**10**	*i* P	**Pn**	**22 06 58.2**	**-0.1**
DEMI				*i* S	**Sn**	**22 07 39.9**	**+0.6**
SHUT	**Suhut-Afyon**	**3.61**	**35**	*e*PN	**Pn**	**22 07 01.9**	**+1.9**
PRK	**Paraskevi**	**3.87**	**340**	P	**Pn**	**22 07 03.3**	**-0.2**
PRK	**Paraskevi**	**3.87**	**340**	*e*PN	**Pn**	**22 07 03.5**	**0.0**
PRK	**Paraskevi**	**3.87**	**340**	P	**Pn**	**22 07 03.3**	**-0.2**
PRK	**Paraskevi**	**3.87**	**340**	*e*Pn	**Pn**	**22 07 03.5**	**0.0**
HDMB	**Hadim**	**3.92**	**68**	*e*PN	**Pn**	**22 07 05.0**	**+0.8**
BALB	**Balikesir**	**4.03**	**359**	*e*PN	**Pn**	**22 07 05.8**	**0.0**
DST	**Dursunbey**	**4.03**	**8**	*e*PN	**Pn**	**22 07 05.9**	**+0.1**
LEF	**Lefka**	**4.08**	**95**	*e*PN	**Pn**	**22 07 05.5**	**-0.9**
VLI	**Veliai**	**4.19**	**287**	*e*PN	**Pn**	**22 07 09.1**	**+1.1**
KONT	**Konya--Tatoy**	**4.25**	**55**	*e*PN	**Pn**	**22 07 10.4**	**+1.6**
LADK	**Ladik-KONYA**	**4.39**	**53**	*e*PN	**Pn**	**22 07 12.9**	**+2.1**
CSS	**Prodhromos**	**4.46**	**97**	*e*PN	**Pn**	**22 07 11.7**	**0.0**
CSS	**Prodhromos**	**4.46**	**97**	P	**Pn**	**22 07 11.5**	**-0.2**
CSS	**Prodhromos**	**4.46**	**97**	*e*Pn	**Pn**	**22 07 11.3**	**-0.5**
CSS				*e*Sn	**Sn**	**22 08 01.6**	**-1.8**
CSS	**Prodhromos**	**4.46**	**97**	*e*Pn	**Pn**	**22 07 11.3**	**-0.4**
CSS				*e*Sn	**Sn**	**22 08 01.6**	**-1.8**
KIZT	**Kizilcal**	**4.54**	**43**	*e*PN	**Pn**	**22 07 13.4**	**+0.6**
HMAT	**Matruh**	**4.55**	**189**	P	**Pn**	**22 07 14.2**	**+1.2**
LFK	**Lefkose**	**4.58**	**92**	*e*PN	**Pn**	**22 07 12.8**	**-0.6**
KCT	**Karacabey**	**4.66**	**4**	*e*PN	**Pn**	**22 07 14.8**	**+0.3**
IKL	**Isikli**	**4.71**	**81**	*e*PN	**Pn**	**22 07 15.3**	**+0.2**
EDC	**Edincik**	**4.73**	**359**	*e*PN	**Pn**	**22 07 15.5**	**0.0**
LPK	**Lapseki**	**4.85**	**349**	*e*PN	**Pn**	**22 07 16.1**	**-0.9**
YLV	**Yalova**	**5.08**	**12**	*e*PN	**Pn**	**22 07 21.8**	**+1.6**
EREN	**Erenkoy**	**5.08**	**89**	*e*PN	**Pn**	**22 07 19.6**	**-0.6**
ITM	**Ithomi**	**5.09**	**290**	P	**Pn**	**22 07 25.0**	**+4.6**
GULT	**Gulveren**	**5.23**	**22**	*e*PN	**Pn**	**22 07 24.8**	**+2.5**
MERS	**Mersin**	**5.47**	**75**	*e*PN	**Pn**	**22 07 26.4**	**+0.8**
ALN	**Alexandroupoli**	**5.49**	**345**	P	**Pn**	**22 07 26.0**	**+0.2**
RDO	**Rodhopi**	**5.84**	**342**	P	**Pn**	**22 07 32.1**	**+1.4**
KARA	**Karaisali**	**5.97**	**72**	*e*PN	**Pn**	**22 07 33.6**	**+1.1**
AMAG	**Maghara**	**6.64**	**137**	P	**Pn**	**22 07 40.3**	**-1.3**
HTV	**Hatay**	**6.68**	**83**	*e*PN	**Pn**	**22 07 41.3**	**-0.7**
RSH		**6.71**	**132**	P	**Pn**	**22 07 41.6**	**-1.0**
HRSH	**Kfar Ka'horesh**	**6.75**	**113**	P	**Pn**	**22 07 41.6**	**-1.5**
GLL	**Jalalah**	**6.80**	**151**	P	**Pn**	**22 07 43.4**	**-0.5**
SUZ		**7.08**	**143**	P	**Pn**	**22 07 46.9**	**-0.7**
AWBH		**7.31**	**173**	P	**Pn**	**22 07 51.0**	**+0.1**
AWBH				S	**Sn**	**22 09 08.6**	**-5.0**
TR2		**8.72**	**144**	P	**Pn**	**22 08 09.1**	**-1.1**
HKAT	**Jabal Katrina**	**8.73**	**142**	P	**Pn**	**22 08 09.7**	**-0.7**
TR1		**9.14**	**144**	P	**Pn**	**22 08 14.8**	**-1.2**

*DJA **16** 22:11:11.0±0.0, 2460S×17636W, h37km, mB6.2/2, mb5.6/14, Mw(mB)5.9/2*
*SZGRF **16** 22:11:18.9, 25.19S×17951W, h33km, South of Fiji Islands*
*BJI **16** 22:12:14.7, 2370S×17990W, h483km, mB4.8, mb4.7*
*ISCJB **16** 22:12:14.9±0.8, 2380S

CTAO Charters Tower 31.64 270 *e*P **P** **22 17 58.1 +0.3**
CTAO pmax pmax
comp=Z,79nm,0.6s,mb5.3
CTAO Charters Tower 31.64 270 P **P** **22 17 58.4 +0.6**
comp=Z,160nm,0.8s,mb5.5
TAU Tasmania Unive 33.09 227 *e*P **P** **22 18 10.4 +0.6**
comp=Z,18nm,0.6s,mb4.7
TAU Tasmania Unive 33.09 227 *e*P **P** **22 18 10.4 +0.5**
TAU pmax pmax
comp=Z,18nm,0.6s,mb4.7
PMG Port Moresby 34.63 289 *e*P **P** **22 18 22.8 -0.5**
PMG Port Moresby 34.63 289 *i* P **P** **22 18 22.4 -0.9**
PMG pmax pmax
comp=Z,89nm,0.9s
PMG Port Moresby 34.63 289 P **P** **22 18 23.9 +0.6**
comp=Z,126nm,1.0s,mb5.3
STKA Stephens Creek 34.89 248 P **P** **22 18 25.8 +0.5**
comp=Z,17nm,0.8s,mb4.5,baz=86,slow=8.8,SNR=18
STKA PcP PcP 22 20 45.1 +0.3
comp=Z,4.8nm,0.5s,baz=68,slow=4.3,SNR=4.6
STKA Stephens Creek 34.89 248 *e*P **P** **22 18 25.9 +0.7**
comp=Z,39nm,1.2s,mb4.7
COEN Coen 36.27 279 P **P** **22 18 38.3 +1.4**
comp=Z,16nm,1.4s,mb4.3
ASAR Alice Springs 42.20 261 P **P** **22 19 24.4 -0.6**
comp=Z,38nm,0.8s,mb4.9,baz=96,slow=7.9,SNR=251
ASAR PcP PcP 22 21 07.5 -0.7
comp=Z,3.8nm,0.7s,baz=115,slow=3.0,SNR=6.5
ASAR ScP ScP 22 24 12.3 0.0
comp=Z,6.9nm,0.8s,baz=108,slow=4.3,SNR=16
ASAR S **S** **22 25 06.2 -3.3**
comp=Z,2.4nm,0.8s,baz=96,slow=16,SNR=7.4
ASAR Alice Springs 42.20 261 P **P** **22 19 24.4 -0.5**
ASAR 22 21 07.6
ASAR S **S** **22 25 06.3 -3.2**
WB2 Warramunga Arr 42.56 266 ⇓*i* P **P** **22 19 27.2 -0.6**
WRAB Tennant Creek 42.56 266 *e*P **P** **22 19 27.0 -0.8**
comp=Z,56nm,0.9s,mb5.0
WRAB Tennant Creek 42.56 266 *e*P **P** **22 19 27.0 -0.8**
WRAB pmax pmax
comp=Z,56nm,0.9s,mb5.0
WRAB Tennant Creek 42.56 266 P **P** **22 19 26.8 -1.0**
comp=Z,90nm,0.9s,mb5.2
WRA Warramunga Arr 42.57 266 P **P** **22 19 26.8 -1.1**
comp=Z,57nm,0.7s,mb5.1,baz=103,slow=8.1,SNR=125
WRA PcP PcP 22 21 09.0 -0.5
comp=Z,5.9nm,0.8s,baz=99,slow=3.7,SNR=6.0
WRA ScP ScP 22 24 14.4 +0.5
comp=Z,6.7nm,0.9s,baz=99,slow=4.0,SNR=12
WRA S **S** **22 25 08.5 -6.4**
comp=Z,2.3nm,0.7s,baz=98,slow=15,SNR=6.7
WRA Warramunga Arr 42.57 266 P **P** **22 19 26.8 -1.1**
WRA 22 21 09.0
WRA S **S** **22 25 08.5 -6.4**
FORT Forrest 46.48 250 *e*P **P** **22 19 57.2 -0.8**
comp=Z,26nm,0.6s,mb4.8
POHA Pohakuloa 49.39 31 *e*P **P** **22 20 19.2 -0.6**
comp=Z,134nm,1.3s,mb5.1
GUMO Guam 50.75 313 *e*P **P** **22 20 28.6 -1.3**
comp=Z,117nm,1.0s,mb5.2
GUMO Guam 50.75 313 *e*P **P** **22 20 28.6 -1.4**
GUMO pmax pmax
comp=Z,117nm,1.0s,mb5.2
MIDW Midway 51.81 3 *e*P **P** **22 20 36.7 -0.8**
comp=Z,107nm,1.0s,mb5.1
AAI Ambon 53.95 283 P **P** **22 20 54.0 +0.9**
comp=Z,50nm,0.7s,mb5.0
SBA Scott Base 54.44 183 *e*P **P** **22 20 58.1 +2.5**
comp=Z,37nm,0.9s,mb4.7
SBA Scott Base 54.44 183 *e*P **P** **22 20 58.1 +2.5**
SBA pmax pmax
comp=Z,37nm,0.9s,mb4.7
VNDA Vanda 54.45 185 P **P** **22 20 56.7 +1.1**
comp=Z,4.9nm,0.7s,mb4.0,baz=2.5,slow=7.4,SNR=43
VNDA PcP PcP 22 21 51.9 0.0
comp=Z,3.6nm,0.7s,baz=332,slow=4.6,SNR=9.2
BATI Baumata 55.38 274 P **P** **22 21 04.0 +0.7**
comp=Z,48nm,0.5s,mb5.1,baz=158,slow=2.9,SNR=14
BATI Baumata 55.38 274 P **P** **22 21 04.4 +1.2**
comp=Z,49nm,0.7s,mb5.0
NWAO Narrogin (SRO) 55.40 245 P **P** **22 21 02.2 -0.9**
comp=Z,9.2nm,0.5s,mb4.4,baz=89,slow=7.1,SNR=12
NWAO Narrogin (SRO) 55.40 245 *e*P **P** **22 21 02.6 -0.5**
comp=Z,8.9nm,0.6s,mb4.3
NWAO Narrogin (SRO) 55.40 245 *e*P **P** **22 21 02.6 -0.5**
NWAO pmax pmax
comp=Z,9.0nm,0.6s
MBWA Marble Bar 55.54 260 *e*P **P** **22 21 03.4 -0.8**
comp=Z,45nm,1.0s,mb4.8
MBWA Marble Bar 55.54 260 P **P** **22 21 03.4 -0.8**
comp=Z,63nm,1.1s,mb4.9
LBMI Labuha 55.97 286 P **P** **22 21 09.4 +2.1**
KDI Kendari 58.83 280 P **P** **22 21 27.2 +0.3**
comp=Z,23nm,1.3s,comp=Z,1µm,mb4.3
CASY Casey 60.23 206 *e*P **P** **22 21 34.6 -0.8**
comp=Z,14nm,0.7s,mb4.5
KAPI Kappang 60.98 278 P **P** **22 21 39.1 -2.2**
comp=Z,5.8nm,0.4s,mb4.3,baz=140,slow=9.2,SNR=2.9
PCI Palu 62.65 282 P **P** **22 21 53.2 +1.0**
comp=Z,61nm,1.2s,mb5.0
BBKI Banjar Baru 66.08 277 P **P** **22 22 14.4 +0.4**
comp=Z,60nm,1.3s,mb5.1
QSPA South Pole Qui 66.24 180 *e*P **P** **22 22 14.9 +1.0**
comp=Z,42nm,0.9s,mb5.1
SJI Sawahan 67.19 272 P **P** **22 22 20.5 -0.4**
KKM Kota Kinabalu 69.04 287 *e*P **P** **22 22 31.9 -0.3**
PBKI Pangkalan Bun 69.27 276 P **P** **22 22 34.6 +1.0**
comp=Z,165nm,1.1s,comp=Z,2µm,mb5.5
JOW Kunigami 71.08 312 P **P** **22 22 43.2 -0.8**
comp=Z,31nm,0.7s,mb5.0,baz=113,slow=6.7,SNR=8.1
LEM Lembang 71.34 271 P **P** **22 22 45.7 -0.2**
comp=Z,110nm,0.9s,mb5.4
MJAR Matsushiro Arr 71.94 325 P **P** **22 22 47.7 -1.2**
comp=Z,4.3nm,0.8s,mb4.0,baz=161,slow=5.4,SNR=9.1
MAJO Matsushiro 71.94 325 *e*P **P** **22 22 48.4 -0.5**
comp=Z,5.5nm,0.6s,mb4.3
MAJO Matsushiro 71.94 325 *e*P **P** **22 22 48.4 -0.5**
MAJO pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
MAT Matsushiro 71.94 325 P **P** **22 22 48.1 -0.8**
KSM Kuching 72.25 280 *e*P **P** **22 22 50.6 -0.6**
TATO Taipei 74.75 307 *e*P **P** **22 23 05.2 0.0**
comp=Z,27nm,0.5s,mb5.0
MAW Mawson 77.86 200 P **P** **22 23 21.4 -0.2**
comp=Z,13nm,0.9s,mb4.3,baz=90,slow=6.3,SNR=16
MAW Mawson 77.86 200 *e*P **P** **22 23 22.2 +0.5**
comp=Z,29nm,1.1s,mb4.6
MAW Mawson 77.86 200 *e*P **P** **22 23 22.2 +0.5**
MAW pmax pmax
comp=Z,29nm,1.1s
KSRS Korea Array 78.31 320 P **P** **22 23 24.9 +0.3**
comp=Z,3.0nm,0.7s,mb3.9,baz=133,slow=6.1,SNR=8.1
PMSA Palmer Station 78.90 157 *e*P **P** **22 23 27.1 -0.2**
comp=Z,191nm,1.7s,mb5.3
PETK Petropavlovsk- 79.08 346 P **P** **22 23 27.4 -0.9**
comp=Z,3.7nm,0.7s,mb4.0,baz=106,slow=5.4,SNR=8.5
NJ2 Nanjing 80.75 311 *e*P **P** **22 23 38.9 +1.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
MDJ Mudanjiang 82.31 326 P **P** **22 23 45.9 +0.6**
MDJ AMB AMB
comp=Z,13nm,0.8s,mb4.5
MDJ AMB AMB
comp=Z,76nm,3.5s
HABR Khabarovsk 82.54 332 *e*P **P** **22 23 40.9 -5.5**
HABR *e**SP sP 22 26 24.0 +1.4
HABR *e* 22 27 02.3
HABR *e*PPP 22 28 58.0
HABR *e*S S 22 33 13.2 -9.2
HABR *e*SS SS 22 38 56.8 -1.5
HABR *e*SSS 22 42 30.7
ISA Isabella 82.87 46 *e*P **P** **22 23 48.1 -0.2**
comp=Z,4.4nm,0.7s,mb4.1
ISA Isabella 82.87 46 *e*P **P** **22 23 48.1 -0.2**
ISA pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
CMB Columbia Colle 83.05 43 *e*P **P** **22 23 49.4 +0.2**
comp=Z,16nm,1.3s,mb4.4
CMB Columbia Colle 83.05 43 *e*P **P** **22 23 49.4 +0.2**
CMB pmax pmax
comp=Z,16nm,1.3s,mb4.4
SYO Syowa Base 83.10 193⇑*e*P **P** **22 23 46.6 -2.4**
GLA Glamis 83.87 50 *e*P **P** **22 23 54.7 +1.3**
WAKR Walker 83.93 43 *e*P **P** **22 23 54.6 +1.0**
CN2 Changchun 83.94 324 *e*P **P** **22 23 53.0 -0.5**
CN2 *e*S S 22 33 38.8 +2.3
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.3
CN2 AMB AMB
comp=Z,200nm,4.0s
NVAR Mina Array Bea 84.60 44 P **P** **22 23 56.8 -0.1**
comp=Z,1.7nm,0.8s,mb3.7,baz=223,slow=7.2,SNR=10
SNAA Sanae 84.72 179 *e*P **P** **22 23 54.4 -2.6**
SNAA *e* 22 23 56.7
SNAA *e* 22 24 00.4
SNAA Sanae 84.72 179 *e*P **P** **22 23 54.4 -2.6**
comp=Z,2.9nm,0.4s,mb4.3
SNAA Sanae 84.72 179 *e*P **P** **22 23 54.4 -2.6**
SNAA pmax pmax
comp=Z,3.0nm,0.4s
VNA3 Neumayer Olymp 84.92 177 *e*P **P** **22 23 57.3 -0.7**
VNA3 *e* 22 23 59.7
VNA3 *e* 22 24 03.7
TPH Tonopah 85.09 45 *e*P **P** **22 24 00.0 +0.7**
comp=Z,2.4nm,0.6s,mb4.0
TPH Tonopah 85.09 45 *e*P **P** **22 24 00.0 +0.7**
TPH pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
VNA2 Neumayer--Watz 85.34 178 *e*P **P** **22 23 59.2 -0.8**
baz=197,slow=3.3
VNA2 *e* 22 24 02.1
VNA2 *e* 22 24 06.0
VNA1 Neumayer--Stat 85.58 177 *e*P **P** **22 24 00.7 -0.5**
VNA1 *e* 22 24 03.4
VNA1 *e* 22 24 07.1
HEBO Mount Hebo 85.59 36 *e*P **P** **22 23 59.4 -2.1**
comp=Z,212nm,1.4s,mb5.6
TUC Tucson 86.36 52 *e*P **P** **22 24 06.8 +1.3**
comp=Z,4.7nm,0.7s,mb4.2
TUC Tucson 86.36 52 *e*P **P** **22 24 06.8 +1.3**
TUC pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
GYA Guiyang 86.86 301 P **P** **22 24 07.8 -0.2**
GYA AP pP 22 25 56.6 +0.7
GYA XP sP 22 26 42.8 -2.5
GYA PP PP 22 27 41.5 +1.7
GYA SKS 22 33 47.8
GYA S S 22 34 02.8 -2.5
GYA XS sS 22 37 15.0 -2.4
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,110nm,4.8s
BJI Beijing 87.10 316 P **P** **22 24 09.3 +0.4**
BJI AMB AMB
comp=Z,16nm,0.7s,mb4.9
PMR Palmer 88.65 14 *e*P **P** **22 24 12.8 -2.8**
comp=Z,22nm,0.4s,mb5.3
PMR Palmer 88.65 14 *e*P **P** **22 24 12.8 -2.8**
PMR pmax pmax
comp=Z,22nm,0.4s,mb5.3
EFI East Falkland 89.17 148 *e*P **P** **22 24 19.3 +0.9**
comp=Z,63nm,1.2s,mb5.3
EFI East Falkland 89.17 148 *e*P **P** **22 24 19.3 +0.8**
EFI pmax pmax
comp=Z,63nm,1.2s,mb5.3
KMI Kunming 89.38 298 P **P** **22 24 20.6 +0.7**
KMI AMB AMB
comp=Z,10.0nm,1.3s,mb4.5
CMAR Chiang Mai Arr 89.66 290 P **P** **22 24 22.3 +1.0**
comp=Z,8.3nm,0.9s,mb4.6,baz=137,slow=3.2,SNR=40
CHTO Chiang Mai 89.81 291 *e*P **P** **22 24 22.6 +0.6**
comp=Z,14nm,1.0s,mb4.8
CHTO Chiang Mai 89.81 291 *e*P **P** **22 24 22.6 +0.6**
CHTO pmax pmax
comp=Z,14nm,1.0s,mb4.8
TXAR Lajitas Array 90.27 58 P **P** **22 24 24.1 +0.2**
comp=Z,2.5nm,0.7s,mb4.2,baz=214,slow=6.5,SNR=36
TXAR PP PP 22 28 12.5 +5.9
comp=Z,0.8nm,1.1s,baz=261,slow=5.1,SNR=3.4
TXAR PKKPbc PKKPbc 22 41 50.2 -0.4
comp=Z,0.5nm,0.6s,baz=90,slow=3.1,SNR=7.3
TXAR Lajitas Array 90.27 58 P **P** **22 24 24.1 +0.2**
TXAR PP PP 22 28 12.6 +5.9
TXAR PKKPbc PKKPbc 22 41 50.2 -0.4
TXAR Lajitas Array 90.27 58 P **P** **22 24 24.1 +0.2**
TXAR 22 28 12.6
HHC Hu-ho-hao-te 90.49 315 *e*P **P** **22 24 26.3 +1.7**
HHC PP PP 22 28 11.3 +3.1
HHC S S 22 34 41.4 +3.3
HHC AMB AMB
comp=Z,13nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,140nm,5.6s
HWUT Hardware Ranch 90.66 44 *e*P **P** **22 24 25.8 +0.4**
comp=Z,2.7nm,0.7s,mb4.3
ANMO Albuquerque 90.80 52 *e*P **P** **22 24 26.3 +0.1**
comp=Z,2.3nm,1.0s,mb4.1
ANMO Albuquerque 90.80 52 *e*P **P** **22 24 26.3 +0.1**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
PV01 Paradox Valley 90.87 48 *e*P **P** **22 24 27.3 +0.9**
CD2 Chengdu 91.19 303 *e*P **P** **22 24 29.0 +0.9**
CD2 AP pP 22 26 16.5 -0.3
CD2 XP sP 22 27 04.6 -1.3
CD2 PP PP 22 28 16.3 +2.5
CD2 SKS 22 34 14.6
CD2 S S 22 34 43.9 -0.8
CD2 XS sS 22 37 55.6 -3.5
CD2 SS SS 22 41 06.5 +2.4
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,40nm,4.2s
BILL Bilibino 92.19 355 *e*P **P** **22 24 24.8 -7.0**
BILL pmax pmax
comp=Z,12nm,1.5s,mb4.6
PDAR Pinedale Array 92.54 44 P **P** **22 24 33.7 -0.3**
comp=Z,1.3nm,0.7s,mb4.1,baz=211,slow=2.9,SNR=11
PDAR PP PP 22 28 27.1 +3.1
comp=Z,1.5nm,1.1s,baz=236,slow=2.7,SNR=4.6
SDCO Great Sand Dun 92.80 50 *e*P **P** **22 24 35.4 0.0**
comp=Z,0.7nm,0.7s,mb3.8
WALA Waterton Lakes 93.27 37 *e*P **P** **22 24 37.7 +0.5**
comp=Z,45nm,2.3s,mb5.1
LZH Lanzhou 93.47 308 P **P** **22 24 39.5 +1.0**
LZH AP pP 22 26 28.6 +1.3
LZH PP PP 22 28 33.4 +2.0
LZH SKS 22 34 27.3
LZH S S 22 35 04.6 +0.2
LZH AMB AMB
comp=Z,18nm,1.4s,mb4.9
LZH AMB AMB
comp=Z,97nm,8.5s
GCMT Greycliff 94.00 41 *e*P **P** **22 24 40.9 +0.3**
SONM Songino Array 97.17 319 P **P** **22 24 53.9 -1.0**
comp=Z,0.5nm,0.7s,mb3.9,baz=116,slow=3.4,SNR=3.3
TIXI Tiksi 101.54 345 *e*P Pdif 22 25 07.5 -7.0
TIXI pmax pmax
comp=Z,5.0nm,1.0s
LPAZ La Paz 102.30 114 PKiKP PKiKP 22 29 35.9 -1.6
comp=Z,0.6nm,0.2s,baz=241,slow=2.5,SNR=4.0
RES Resolute Bay 111.47 17 *e*PKP PKiKP 22 29 54.2 +1.3
ZALV Zalesovo Beam 112.01 321 PKiKP PKiKP 22 29 52.2 -2.2
comp=Z,0.9nm,0.4s,baz=106,slow=1.9,SNR=6.3
MK31 Makanchi Array 112.23 313 *e*PKP PKiKP 22 29 53.5 -1.7
MKAR Makanchi Array 112.23 313 Pdiff Pdif 22 26 04.7 +2.6
comp=Z,0.2nm,0.5s,baz=78,slow=5.7,SNR=4.5
MKAR PKiKP PKiKP 22 29 53.1 -2.0
comp=Z,1.5nm,0.6s,baz=118,slow=6.3,SNR=18
KURK Kurchatov 115.27 316 *i* PKIKP PKPdf 22 29 57.2 -3.6
AML Almayashu 117.51 306 *e*PKPdf PKPdf 22 30 03.8 -1.6
OPO Ambohidratompo 117.71 232 PKP PKPdf 22 30 06.0 -0.6
comp=Z,2.2nm,0.6s,baz=262,slow=7.2,SNR=5.9
KBL Kabul 119.96 297 *e*PKPdf PKPdf 22 30 09.8 -0.5
BVAR Borovoye Array 120.50 319 PKP PKPdf 22 30 09.3 -1.5
comp=Z,3.1nm,0.4s,baz=122,slow=1.2,SNR=26
BOSA Boshof 122.52 206 PKP PKPdf 22 30 13.7 -2.0
comp=Z,5.5nm,0.9s,baz=224,slow=14,SNR=5.9
ARU Arti 126.94 324 *e*PKPdf PKPdf 22 30 21.9 -1.1
ARU Arti 126.94 324 *i* PKIKP PKPdf 22 30 20.8 -2.2
ARU 22 32 26.6
AKTK Aktyubinsk 128.37 316 PKP PKPdf 22 30 24.6 -1.4
AKTO Aktyubinsk 128.37 316 PKP PKPdf 22 30 24.6 -1.4
comp=Z,3.9nm,0.6s,baz=87,slow=3.6,SNR=12
KEV Kevo 131.40 348 *e*p PKPdf 22 30 29.8 -1.4
ARCES ARCESS Array B 131.87 348 PKP PKPdf 22 30 30.1 -1.9
comp=Z,2.5nm,0.5s,baz=19,slow=1.1,SNR=21
ARCES SKPbc SKPbc 22 33 10.1 -2.3
comp=Z,5.2nm,0.7s,baz=46,slow=3.9,SNR=10
LSZ Lusaka 132.45 218 *e*PKPdf PKPdf 22 30 35.4 +0.6
JOF Joensuu 135.74 340 *e*p 22 30 31.6
comp=Z,4.2nm,0.5s
JOF Joensuu 135.74 340 *e*PKHKP 22 30 31.6
JOF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 137.84 342 *e*p 22 30 34.3
comp=Z,2.8nm,0.6s
KAF Kangasniemi 137.84 342 *e*PKHKP 22 30 34.3
KAF pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 138.81 329 *i* PKIKP PKPdf 22 30 42.0 -3.3
OBN pmax pmax
comp=Z,8.0nm,1.3s
GNI Garni 139.31 304 *e*PKPdf PKPdf 22 30 46.8 +0.1
KIV Kislovodsk 139.95 311 *e*PKPdf PKPdf 22 30 47.0 -0.8
KIV Kislovodsk 139.95 311⇑*i*PKIKP PKPdf 22 30 45.0 -2.8
KIV *e*SSS 22 56 58.7
KIV pmax pmax
comp=Z,7.0nm,1.0s
NB2 NORSAR Subarra 142.05 351 PKP 22 30 46.0
comp=Z,1.0nm,0.6s,baz=16,slow=3.2
NOA NORSAR Array B 142.05 351 PKhKP 22 30 45.8
comp=Z,4.3nm,1.0s,baz=16,slow=4.7,SNR=9.7
NOA SKPbc SKPbc 22 33 40.1 -2.4
comp=Z,2.1nm,0.7s,baz=15,slow=4.2,SNR=7.7
HFS Hagfors 142.53 349 PKhKP 22 30 46.7
comp=Z,8.2nm,0.4s,baz=72,slow=4.8,SNR=77
HFS SKPbc SKPbc 22 33 40.9 -2.8
comp=Z,3.0nm,0.7s,baz=114,slow=3.5,SNR=5.8
ANN Anapa 143.24 314 *i* PKHKP 22 30 49.7
ANN pmax pmax
comp=Z,78nm,1.2s
AKASG Malin Array Be 145.01 327 PKP PKPdf 22 30 54.9 -1.6
comp=Z,11nm,0.5s,baz=42,slow=4.3,SNR=56
AKASG SKPbc SKPbc 22 33 47.3 -2.5
comp=Z,4.6nm,0.7s,baz=45,slow=2.9,SNR=8.2
AKBB Malin Array Si 145.01 327 *e*PKPdf PKPdf 22 30 55.6 -0.9
KIEV Kiev 145.03 327 *e*PKPdf PKPdf 22 30 55.6 -0.9
SUW Suwalki 145.28 336 *e*PKP PKPdf 22 30 56.6 -0.3
ASF Jabal al Asfar 146.66 293 PKPbc PKPbc 22 31 01.8 -0.7
comp=Z,11nm,0.7s,baz=356,slow=1.5,SNR=24
MMAI Mount Meron Ar 147.83 294 PKPbc PKPbc 22 31 05.3 -0.2
comp=Z,21nm,0.5s,baz=70,slow=7.4,SNR=89
LVV L'vov 148.07 330 *e*PKIKP PKPdf 22 31 03.3 +1.7
ANTO Ankara 148.24 308 *e*PKPbc PKPbc 22 31 05.4 -0.9
ANTO *e*PKPab PKPab 22 31 11.3 +0.2
ANTO Ankara 148.24 308⇑*i*P PKPbc 22 31 05.2 -1.1
EKA Eskdalemuir Ar 148.45 4 PKPbc PKPbc 22 31 04.3 -2.0
comp=Z,2.5nm,0.7s,baz=348,slow=2.7,SNR=10
TLCR 148.49 320 P PKPbc 22 31 05.9 -0.8
TLCR 148.49 320⇓*i*P PKPbc 22 31 06.0 -0.7
EIL Elat 148.49 288 PKPbc PKPbc 22 31 06.5 -0.7
comp=Z,15nm,0.7s,baz=360,slow=2.3,SNR=19
EIL PKPab PKPab 22 31 13.0 +0.5
comp=Z,15nm,0.6s,baz=318,slow=1.4,SNR=13
KWP Kalwaria 148.80 331 *e*PKP PKPbc 22 31 06.7 -0.7
KWP Kalwaria 148.80 331⇑*i*P PKPbc 22 31 06.6 -0.7
BUR08 Bucovina Ar. S 149.00 326 *e*PKPbc PKPbc 22 31 07.8 -0.2
BURAR Bucovina Array 149.01 326⇑P PKPbc 22 31 07.4 -0.5
BURAR Bucovina Array 149.01 326⇑*i*P PKPbc 22 31 07.4 -0.5
TIRR Tirgusor 149.12 319⇑P PKPdf 22 31 05.5 +2.0
TIRR Tirgusor 149.12 319⇑*i*P PKPdf 22 31 05.5 +2.0
CSS Prodhromos 149.20 299 *e*PKPdf PKPdf 22 31 05.0 +1.1
CSS *e*PKPbc PKPbc 22 31 08.2 -0.6
CSS *e*PKPab PKPab 22 31 15.3 +0.1
HARR Harsova 149.29 319 P PKPbc 22 31 08.4 -0.3
HARR Harsova 149.29 319⇑*i*P PKPbc 22 31 08.2 -0.5
VRI Vrincioaia 149.31 322⇓P PKPbc 22 31 07.6 -1.1
VRI Vrincioaia 149.31 322⇓*i*P PKPbc 22 31 07.6 -1.1
PLOR Plostina 149.36 322⇑*i*P PKPbc 22 31 07.8 -1.0
KOLS Kolonicke sedl 149.50 331 *e*PKP PKPbc 22 31 08.8 -0.3
OJC Ojcow 149.56 335 *e*PKP PKPbc 22 31 08.3 -0.9
RUE Ruedersdorf 149.58 343 *e*PKPbc PKPbc 22 31 08.8 -0.3
STHS Stebnicka Huta 149.59 332 *e*PKP PKPbc 22 31 08.9 -0.4
CRVS Cervenica-Dubn 149.89 331 *e*PKP PKPbc 22 31 09.2 -0.8
TRPA Tarpa 149.97 329⇑*i*P PKPbc 22 31 09.0 -1.2
MLR Muntele Rosu 149.97 322 PKPbc PKPbc 22 31 08.7 -1.6
comp=Z,4.4nm,0.6s,baz=318,slow=6.7,SNR=17
MLR Muntele Rosu 149.97 322 P PKPbc 22 31 09.8 -0.5
MLR Muntele Rosu 149.97 322⇑*i*P PKPbc 22 31 09.4 -0.9
NIE Niedzica 149.98 333 *e*PKP PKPbc 22 31 10.1 -0.1
KSP Ksiaz 150.29 339 *e*PKP PKPbc 22 31 10.5 -0.4
KSP Ksiaz 150.29 339 *e*PKIKP PKPbc 22 31 10.4 -0.5
OKC Ostrava-Krasne 150.49 336 *e*PKPbc PKPbc 22 31 10.5 -0.9
VOIR 150.50 323 P PKPbc 22 31 10.5 -1.0
VOIR 150.50 323⇑*i*P PKPbc 22 31 10.4 -1.1
ISP Isparta 150.60 305⇑P PKPbc 22 31 10.3 -1.7
ISP Isparta 150.60 305⇑*i*P PKPbc 22 31 10.3 -1.7
UPC Upice 150.68 339 *e*PKPbc PKPbc 22 31 11.2 -0.6
UPC *e*PKPab PKPab 22 31 20.5 -0.3
DPC Dobruska-Polom 150.71 339 *e*PKPbc PKPbc 22 31 11.5 -0.3
DPC *e*PKPab PKPab 22 31 20.1 -0.9
MORC Moravsky Berou 150.77 337 *e*PKPbc PKPbc 22 31 11.0 -1.0
MORC *e*PKPab PKPab 22 31 20.7 -0.5
MORC Moravsky Berou 150.77 337⇓*i*P PKPbc 22 31 11.5 -0.5
DRGR 150.83 327 PKIKP PKPbc 22 31 11.4 -0.8
DRGR 150.83 327⇓*i*P PKPbc 22 31 11.1 -1.1
CLL Collm 150.85 343⇓*i*PKIKP PKPbc 22 31 11.3 -0.8
CLL *i* 22 31 20.7
CLL pmax pmax
comp=Z,24nm,0.8s
CLL Collm 150.85 343 *e*PKPbc PKPbc 22 31 11.2 -0.9
CLL *e*PKPab PKPab 22 31 20.7 -0.8
CLL Collm 150.85 343 *e*PKPdf PKPdf 22 31 05.0 -1.0
CLL ⇓*i*PKPbc PKPbc 22 31 11.3 -0.8
comp=Z,24nm,0.8s
CLL *ex* x 22 31 14.0
CLL *i* PKPab PKPab 22 31 20.7 -0.8
comp=Z,5.0nm,0.8s
CLL *ep*PKPab pPKPab 22 33 14.0 +2.1
BRG Berggiesshubel 150.99 342 *i* PKIKP PKPbc 22 31 11.8 -0.7
BRG pmax pmax
comp=Z,13nm,1.1s
BRG Berggiesshubel 150.99 342 *e*PKPbc PKPbc 22 31 11.7 -0.8
BRG *e*PKPab PKPab 22 31 21.5 -0.6
BRG Berggiesshubel 150.99 342 *i* PKP PKPbc 22 31 11.8 -0.7
comp=Z,22nm,1.1s
PVCC Panska Ves 151.11 341 *e*PKPbc PKPbc 22 31 12.1 -0.7
NEUB Neuenburg 151.25 345 *e*PKPbc PKPbc 22 31 12.3 -0.8
VYHS Vyhne 151.31 334 *e*PKP PKPbc 22 31 12.1 -1.2
PSZ Piszkesteto 151.31 332⇑*i*P PKPbc 22 31 12.1 -1.2
VRAC Vranov 151.50 337 PKPbc PKPbc 22 31 13.0 -0.6
comp=Z,1.6nm,0.8s,baz=201,slow=2.7,SNR=3.7
VRAC PKPab PKPab 22 31 23.8 -0.5
comp=Z,5.4nm,0.6s,baz=8.7,slow=3.6,SNR=7.5
PRU Pruhonice 151.59 340 *e*PKPbc PKPbc 22 31 13.0 -0.9
PRU *e*PKPab PKPab 22 31 24.1 -0.6
GZR Gura Zlata 151.75 325⇑*i*P PKPbc 22 31 13.1 -1.3
TANN Tannenbergstha 151.81 343 *e*PKPbc PKPbc 22 31 13.4 -0.9
MOX Moxa 151.81 344 *e*PKP PKPdf 22 31 09.8 +2.4
MOX Moxa 151.81 344 *e*PKPbc PKPbc 22 31 13.2 -1.1
MOX *e*PKPab PKPab 22 31 24.7 -0.9
WERD Werda 151.82 343 *e*PKPbc PKPbc 22 31 13.5 -0.8
GUNZ Gunzen 151.89 343 *e*PKPbc PKPbc 22 31 13.8 -0.7
GUNZ *e*PKPab PKPab 22 31 26.0 +0.1
TREC Trest 151.89 338 *e*PKPbc PKPbc 22 31 13.4 -1.2
WERN Wernitzgruen 151.94 343 *e*PKPbc PKPbc 22 31 14.1 -0.5
WERN *e*PKPab PKPab 22 31 26.1 -0.1
NKC Novy Kostel 151.97 343 *e*PKPbc PKPbc 22 31 13.7 -1.0
MODS Modra-Piesok 152.02 335 *e*PKP PKPbc 22 31 14.3 -0.6
MODS *e* 22 31 26.5
BZS Buzias 152.19 327⇑*i*P PKPbc 22 31 14.1 -1.3
MANZ Manzenberg 152.29 343 *e*PKPbc PKPbc 22 31 14.4 -1.0
KHC Kasperske Hory 152.65 341 *e*PKPbc PKPbc 22 31 15.4 -0.8
KHC *e*PKPab PKPab 22 31 28.5 -0.7
GRF Grafenberg Arr 152.79 344 *e*PKPbc PKPbc 22 31 15.7 -0.8
GRF *e*PKPab PKPab 22 31 27.8 -1.9
WET Wettzell 152.84 342 *e*PKPab PKPab 22 31 29.9 -0.1
GERES GERESS Array B 152.86 340 PKPbc PKPbc 22 31 15.5 -1.2
comp=Z,1.6nm,0.7s,baz=45,slow=2.6,SNR=12
GERES PKPab PKPab 22 31 29.6 -0.5
comp=Z,0.7nm,0.6s,baz=61,slow=3.3,SNR=4.3
TNS Taunus Mts 152.89 348 *e*PKPbc PKPbc 22 31 16.1 -0.6
TNS *e*PKPab PKPab 22 31 29.8 -0.4
PKSM Moragy 153.17 331⇑P PKPbc 22 31 16.4 -1.1
DAVOX Davos/Dischmat 155.82 344 PKPab PKPab 22 31 41.9 -1.0
comp=Z,2.6nm,0.6s,baz=291,slow=14,SNR=5.2
LIC Lamto 161.78 163 *e*P PKPab 22 32 08.2 -1.4
comp=Z,29nm,1.0s
KIC Kosan Boka 161.98 164 *e*P PKPab 22 32 09.9 -0.5
comp=Z,36nm,0.8s
TIC Toumodi 162.18 163 *e*P PKPab 22 32 10.7 -0.6
comp=Z,25nm,0.9s

DBIC	**Dimbokro**	**162.25 163**	PKP	PKPdf	22 31 20.2	-1.4		
	comp=Z,3.8nm,0.9s,baz=148,slow=1.5,SNR=4.8							
DBIC			PKPab	PKPab	22 32 10.7	-1.0		
	comp=Z,6.2nm,1.1s,baz=161,slow=10,SNR=4.1							
TOA0	**Torodi Ar. Sit**	**169.26 188**	*e*PKPdf	PKPdf	22 31 25.3	-1.8		
TOA0			*e*PKPab	PKPab	22 32 41.7	-0.8		
TORD	**Torodi Ar. Bea**	**169.26 188**	PKP	PKPdf	22 31 25.3	-1.9		
	comp=Z,4.0nm,1.1s,baz=329,slow=0.8,SNR=14							
TORD			PKPab	PKPab	22 32 41.7	-0.8		
	comp=Z,4.9nm,0.7s,baz=176,slow=3.8,SNR=27							
TORD			PP	PP	22 36 29.4	-2.2		
	comp=Z,2.9nm,1.0s,baz=178,slow=5.8,SNR=7.7							
TORD	**Torodi Ar. Bea**	**169.26 188**	PKP	PKPdf	22 31 25.3	-1.9		
TORD			PKPab	PKPab	22 32 41.7	-0.8		
TORD			PP	PP	22 36 29.4	-2.2		

IDC 16 22:13:12.6±1.5, 042N×12197E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=208.0km s-min=24.1km az=61.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.59**	**150**	P	P	22 18 25.3	-0.1
	1.6nm,0.6s,baz=327,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**26.61**	**155**	P	P	22 18 52.8	0.0
	0.5nm,0.5s,baz=344,slow=14,SNR=13						
MKAR	**Makanchi Array**	**57.72**	**329**	P	P	22 23 05.2	+0.1
	0.4nm,0.4s,baz=126,slow=8.4,SNR=9.2						

ISCJB 16 22:16:40.7±1.3, 2486N±0.10×1227E±0.1, h42km±16km, mb4.0/10, MS3.9/6, Error ellipse: s-maj=19.4km s-min=15.0km az=153.9
JMA 16 22:16:42.5±0.7, 2483N×12292E, h21km, M3.1
IDC 16 22:16:44.6±4.1, 2496N×12275E, h62km±42km, mb3.7/10, mb1 3.8/11, mb1mx3.7/23, mbtmp3.7/11, ML2.8/1, MS3.8/9, Ms1 3.9/9, ms1mx3.6/28, Error ellipse: s-maj=34.1km s-min=17.8km az=64.0

ISC 16 22:16:41.2±1.4, 248N±01×12274E±008, h32km±11km, n25, σ1§14/20, mb4.0/10, MS3.9/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.44**	**145**	P	**Pb**	**22 16 50.2**	**-0.7**
IRIF	**Iriomote-Funau**	**1.03**	**118**	P	**Pn**	**22 16 58.9**	**-0.6**
IRIF				*e*S	**Sn**	**22 17 11.0**	**-1.9**
HATJ	**Hateruma jima**	**1.24**	**128**	P	**Pn**	**22 17 02.9**	**+0.5**
JKRS	**Kuro-shima**	**1.30**	**117**	P	**Pn**	**22 17 03.0**	**-0.2**
JJ	**Ishigaki jima**	**1.36**	**110**	P	**Pn**	**22 17 03.4**	**-0.7**
JTJ	**Tarama**	**1.80**	**96**	P	**Pn**	**22 17 12.0**	**+1.9**
JOW	**Kunigami**	**5.38**	**67**	P	**Pn**	**22 18 01.5**	**+2.2**
	0.7nm,0.3s,baz=260,slow=11,SNR=6.5						
KSRS	**Korea Array**	**13.34**	**18**	P	**Pn**	**22 20 00.5**	**+12**
	0.4nm,0.3s,baz=198,slow=12,SNR=15						
KSRS				LR	LR	22 25 23.4	
	comp=Z,463nm,18.5s,baz=169,slow=39						
JHJ	**Hachijo jima 2**	**17.04**	**57**	LR	LR	22 26 20.0	
	comp=Z,159nm,18.4s,baz=260,slow=34						
MJAR	**Matsushiro Arr**	**17.68**	**45**	LR	LR	22 27 35.6	
	comp=Z,228nm,18.2s,baz=245,slow=37						
CMAR	**Chiang Mai Arr**	**22.99**	**259**	P	**P**	**22 21 44.1**	**+0.7**
	0.7nm,0.3s,mb3.5,baz=72,slow=10,SNR=4.2						
CMAR				LR	LR	22 31 27.0	
	comp=Z,280nm,21.4s,MS3.7,baz=75,slow=38						
ASAJ	**Asahikawa**	**25.15**	**35**	LR	LR	22 32 07.6	
	comp=Z,425nm,18.5s,MS4.0,baz=193,slow=37						
SONM	**Songino Array**	**26.36**	**335**	P	**P**	**22 22 14.8**	**+0.5**
	2.5nm,0.9s,mb3.7,baz=144,slow=7.9,SNR=12						
KAPI	**Kappang**	**29.80**	**196**	LR	LR	22 36 58.9	
	comp=Z,74nm,19.1s,MS3.3,baz=208,slow=41						
PETK	**Petropavlovsk-**	**38.55**	**34**	LR	LR	22 40 13.4	
	comp=Z,127nm,19.9s,MS3.7,baz=223,slow=37						
MKAR	**Makanchi Array**	**38.87**	**315**	P	**P**	**22 24 03.1**	**-0.4**
	2.6nm,0.6s,mb4.1,baz=101,slow=11,SNR=26						
ZALV	**Zalesovo Beam**	**40.49**	**326**	P	**P**	**22 24 15.6**	**-1.3**
	2.0nm,0.8s,mb3.9,baz=120,slow=8.8,SNR=8.4						
WRA	**Warramunga Arr**	**45.91**	**165**	P	**P**	**22 25 02.2**	**+1.2**
	1.2nm,0.6s,mb4.0,baz=346,slow=8.6,SNR=4.8						
BVAR	**Borovoye Array**	**48.08**	**320**	P	**P**	**22 25 17.0**	**-0.7**
	1.7nm,0.7s,mb4.2,baz=103,slow=6.9,SNR=8.7						
ASAR	**Alice Springs**	**49.41**	**166**	P	**P**	**22 25 29.5**	**+1.4**
	0.5nm,0.5s,mb3.8,baz=350,slow=9.4,SNR=3.8						
AKTO	**Aktyubinsk**	**55.31**	**315**	P	**P**	**22 26 12.7**	**+1.0**
	1.7nm,0.5s,mb4.3,baz=112,slow=5.4,SNR=5.5						
HFS	**Hagfors**	**77.69**	**331**	P	**P**	**22 28 33.4**	**-1.1**
	1.7nm,0.8s,mb4.0,baz=64,slow=6.6,SNR=2.8						
NB2	**NORSAR Subarra**	**78.31**	**332**	P	**P**	**22 28 36.6**	**-1.4**
	comp=Z,8.7nm,1.7s,mb4.4,baz=57,slow=5.6						
NOA	**NORSAR Array B**	**78.31**	**332**	P	**P**	**22 28 36.2**	**-1.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=66,slow=10.0,SNR=3.6						
NOA				LR	LR	23 06 10.4	
	comp=Z,88nm,18.4s,MS4.1,baz=65,slow=38						
PPT	**Papeete**	**95.18**	**107**	LR	LR	23 09 05.1	
	comp=Z,125nm,18.0s,MS4.4,baz=50,slow=33						

GUC 16 23:50:45.1±0.9, 2269S×7039W, h55km±7km, ML3.6
ISCJB 16 23:50:46.2±0.6, 2269S±005×7037W±008, h54km±8km, mb3.7/2, Error ellipse: s-maj=13.4km s-min=6.8km az=17.9
NEIC 16 23:50:46.1±1.2, 2289S×7026W, h49km±12km, Error ellipse: s-maj=19.2km s-min=12.6km az=96.0
IDC 16 23:50:48.1±2.8, 2272S×7030W, h58km±23km, mb3.5/2, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, ML3.3/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/20, Error ellipse: s-maj=27.8km s-min=24.1km az=175.0

ISC 16 23:50:46.4±0.7, 2263S±004×7042W±008, h42km±10km, n19, σ1§24/24, mb3.7/2, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.47**	**183**	⇑*i*P	**Pn**	**23 50 55.8**	**-1.0**
MECH				*i* S	**Sn**	**23 51 03.7**	**-0.4**
MECH				AML	AML	23 51 09.7	
	comp=N,7μm,0.4s						
CEN1	**Los Morros**	**0.78**	**165**	⇓*i*P	**Pn**	**23 51 02.4**	**+1.4**
CEN1				*i* S	**Sn**	**23 51 14.9**	**+3.4**
CEN1				AML	AML	23 51 18.4	
	comp=E,2μm,0.2s						
LVC	**Limon Verde**	**1.40**	**89**	P	**Pn**	**23 51 09.4**	**0.0**
	comp=E,96nm,0.3s,baz=265,slow=13,SNR=645						
LVC				S	**Sn**	**23 51 26.7**	**+0.1**
	comp=E,135nm,0.3s,baz=165,slow=16,SNR=15						
LVC	**Limon Verde**	**1.40**	**89**	⇓*i*P	**Pn**	**23 51 09.4**	**0.0**
LVC				*i* S	**Sn**	**23 51 27.1**	**+0.5**
LVC				AML	AML	23 51 32.5	
	comp=E,795nm,0.1s						
PB01	**Plate Boundary**	**1.81**	**29**	⇑*i*P	**Pn**	**23 51 15.1**	**+0.1**
PB01				*i* S	**Sn**	**23 51 37.8**	**+1.2**
PB01				AML	AML	23 51 42.1	
	comp=E,3μm,0.3s						
CPN1	**Cerro Paranal**	**1.98**	**180**	⇓*i*P	**Pn**	**23 51 16.9**	**-0.5**
CPN1				*i* S	**Sn**	**23 51 40.9**	**-0.2**
CPN1				AML	AML	23 51 49.9	
	comp=E,1μm,0.6s						
ARE	**Arequipa**	**6.22**	**350**	*e*P	**Pn**	**23 52 20.0**	**+4.3**
ARE				*e*S	**Sn**	**23 53 23.0**	**-2.5**
LCO	**Las Campanas**	**6.36**	**182**	*e*Pn	**Pn**	**23 52 13.7**	**-3.8**
LPAZ	**La Paz**	**6.67**	**19**	P	**Pn**	**23 52 24.6**	**+2.8**
	comp=E,1.2nm,0.3s,baz=200,slow=8.5,SNR=22						
LPAZ				LR	LR	23 55 14.8	
	comp=E,110nm,20.5s,baz=68,slow=40						
CFAA	**Coronel Fontan**	**9.15**	**168**	P	**Pn**	**23 52 56.2**	**+0.5**
	comp=E,0.0nm,0.3s,baz=270,slow=9.1,SNR=3.7						
CFAA	**Coronel Fontan**	**9.15**	**168**	P	**Pn**	**23 52 56.2**	**+0.5**
SIV	**San Ignacio**	**11.02**	**55**	P	**Pn**	**23 53 19.9**	**-1.6**
	comp=E,0.3nm,0.3s,baz=232,slow=13,SNR=8.1						
SIV				S	**Sn**	**23 55 22.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=156,slow=20,SNR=3.8						
PLCA	**Paso Flores**	**18.05**	**180**	LR	LR	00 01 46.2	
	comp=E,82nm,19.2s,baz=98,slow=37						
NVAR	**Mina Array Bea**	**75.53**	**323**	P	**P**	**00 02 27.6**	**+1.2**
	comp=E,0.2nm,0.4s,mb3.4,baz=155,slow=6.9,SNR=2.9						
NVAR	**Mina Array Bea**	**75.53**	**323**	P	**P**	**00 02 27.6**	**+1.2**
TORD	**Torodi Ar. Bea**	**79.05**	**71**	P	**P**	**00 02 45.7**	**-1.0**
	comp=E,2.0nm,0.8s,mb4.1,baz=254,slow=5.5,SNR=19						
TORD	**Torodi Ar. Bea**	**79.05**	**71**	P	**P**	**00 02 45.7**	**-1.0**
ZALV	**Zalesovo Beam**	**143.57**	**25**	PKP	PKPdf	00 10 14.7	-1.6
	comp=E,0.7nm,0.7s,baz=316,slow=4.0,SNR=3.5						
MKAR	**Makanchi Array**	**147.37**	**36**	PKPbc	PKPbc	00 10 25.7	+0.3
	comp=E,1.5nm,0.8s,baz=324,slow=2.0,SNR=9.6						

IDC 16 23:51:35.1±1.2, 503S×10187E, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.2/19, mbtmp4.3/10, Error ellipse: s-maj=50.4km s-min=15.1km az=57.0
NEIC 16 23:51:37.3±7.7, 496S×10198E, h13km±50km, mb4.3/1, Error ellipse: s-maj=20.3km s-min=10.1km az=64.0
ISCJB 16 23:51:38.8±1.3, 511S±006×10199E±007, h33km±11km, mb4.6/19, Error ellipse: s-maj=12.6km s-min=8.8km az=157.2
DJA 16 23:51:43, 469S×10177E, h20km, MLv4.7/4

ISC 16 23:51:41.0±1.9, 507S±005×10202E±007, h34km±14km, n29, σ0§94/29, mb4.6/19, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.52**	**22**	P	**Pn**	**23 52 04.8**	**-0.9**
KSI	**Kapahiang**	**1.52**	**22**	S	**Sn**	**23 52 24.6**	**+0.3**
KLI	**Kotabumi**	**2.83**	**86**	P	**Pb**	**23 52 31.5**	**+0.6**
PDSI	**Padang**	**4.41**	**339**	P	**Pn**	**23 52 44.2**	**-1.4**
PDSI	**Padang**	**4.41**	**339**	S	**Sn**	**23 53 31.4**	**-4.4**
COCO	**West Island**	**8.74**	**216**	*e*Pn	**Pn**	**23 53 44.8**	**-0.3**
	52nm,0.6s						
BATI	**Baumata**	**22.04**	**105**	P	**P**	**23 56 32.6**	**-0.3**
	14nm,0.3s,mb4.9,baz=259,slow=19,SNR=7.8						
BATI				S	**S**	**00 00 27.2**	**-7.3**
	8.9nm,0.3s,baz=292,slow=19,SNR=2.9						
CMAR	**Chiang Mai Arr**	**23.57**	**353**	P	**P**	**23 56 46.0**	**-2.8**
	1.6nm,0.5s,mb3.7,baz=178,slow=9.0,SNR=9.3						
NWAO	**Narrogin (SRO)**	**31.14**	**155**	*e*P	**P**	**23 57 56.4**	**-0.3**
WRA	**Warramunga Arr**	**34.74**	**118**	P	**P**	**23 58 27.3**	**-1.0**
	1.8nm,0.7s,mb4.1,baz=291,slow=9.8,SNR=11						
WRAB	**Tennant Creek**	**34.75**	**118**	*e*P	**P**	**23 58 28.7**	**+0.3**
	2.3nm,0.5s,mb4.4						
ODAN	**Odare**	**34.75**	**337**	*e*P	**P**	**23 58 28.9**	**+0.7**
	6.4nm,0.4s,mb4.9						
TAPN	**Taplejung**	**35.07**	**338**	*e*P	**P**	**23 58 32.1**	**+1.2**
	4.0nm,0.3s,mb4.8						
RAMN	**Ramite**	**35.15**	**336**	*e*P	**P**	**23 58 33.1**	**+1.4**
	6.9nm,0.5s,mb4.9						
ASAR	**Alice Springs**	**35.85**	**124**	P	**P**	**23 58 38.6**	**+0.9**
	2.7nm,0.5s,mb4.5,baz=295,slow=7.7,SNR=34						
JIRN	**Jiri**	**35.95**	**336**	*e*P	**P**	**23 58 39.1**	**+0.6**
	6.9nm,0.3s,mb5.1						
GUN	**Gumba**	**36.30**	**335**	*e*P	**P**	**23 58 41.8**	**+0.3**
	9.4nm,0.3s,mb5.2						
KKN	**Kakani**	**36.44**	**335**	*e*P	**P**	**23 58 43.4**	**+0.7**
GKN	**Gorkha**	**36.91**	**334**	*e*P	**P**	**23 58 47.5**	**+0.8**
	5.8nm,0.3s,mb5.0						
KOLN	**Koldanda**	**37.17**	**332**	*e*P	**P**	**23 58 49.2**	**+0.3**
DANN	**Dangsing**	**37.59**	**333**	*e*P	**P**	**23 58 52.7**	**+0.2**
	16nm,0.3s,mb5.2						
PYUN	**Piuthan**	**37.73**	**332**	*e*P	**P**	**23 58 54.7**	**+1.0**
	6.4nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**45.63**	**131**	P	**P**	**23 59 59.5**	**+1.2**
	3.1nm,0.4s,mb4.6,baz=311,slow=8.0,SNR=19						
SONM	**Songino Array**	**52.81**	**4**	P	**P**	**00 00 52.4**	**-0.5**
	2.6nm,0.6s,mb4.4,baz=186,slow=9.5,SNR=24						
MKAR	**Makanchi Array**	**54.51**	**343**	P	**P**	**00 01 04.3**	**-1.1**
	1.2nm,0.5s,mb4.2,baz=150,slow=9.2,SNR=31						
ZALV	**Zalesovo Beam**	**60.54**	**348**	P	**P**	**00 01 46.1**	**-1.7**
	1.5nm,0.3s,mb4.6,baz=157,slow=5.7,SNR=12						
VNDA	**Vanda**	**78.17**	**169**	P	**P**	**00 03 38.6**	**-1.2**
	0.4nm,0.6s,mb3.5,baz=304,slow=9.3,SNR=3.5						
ARCES	**ARCESS Array B**	**90.02**	**340**	P	**P**	**00 04 36.4**	**-0.4**
	2.8nm,1.0s,mb4.6,baz=90,slow=4.5,SNR=4.3						
TXAR	**Lajitas Array**	**145.75**	**42**	PKPbc	PKPbc	00 11 17.2	+0.1
	0.3nm,0.4s,baz=222,slow=1.7,SNR=8.7						

NEIC 17 00:35:41.5±0.8, 5207S×16145E, h10km, mb3.5/1, Error ellipse: s-maj=26.9km s-min=8.7km az=131.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**2.85**	**211**	*e*Pn	Pn	00 36 27.0	0.0
MCQ				*e*Sg	Sg	00 37 01.3	-12
WHZ	**Wether Hill Ro**	**7.51**	**37**	P	Pn	00 37 30.2	-0.8
MLZ	**Mavora Lakes**	**8.06**	**36**	P	Pn	00 37 38.0	-0.5
TUZ	**Tuapeka**	**8.15**	**45**	*e*P	Pn	00 37 39.6	-0.1
EAZ	**Earnscleugh**	**8.59**	**40**	P	Pn	00 37 46.6	+0.8
ODZ	**Otahua Downs**	**9.30**	**45**	P	Pn	00 37 55.6	+0.1
JCZ	**Jackson Bay**	**9.38**	**34**	P	Pn	00 37 57.4	+0.9
WRAB	**Tennant Creek**	**38.41**	**316**	P	P	00 43 03.0	+0.1
	0.8nm,0.7s						

MAN 17 01:05:57, 896N×12661E, h15km, mb4.7, ML3.5, MS3.5
ISCJB 17 01:06:00.9±0.8, 896N±003×12646E±007, h73km±6km, mb4.2/23, Error ellipse: s-maj=11.8km s-min=5.3km az=169.3
IDC 17 01:06:04.8±1.7, 885N×12621E, h92km±16km, mb3.8/15, mb1 3.9/16, mb1mx3.8/22, mbtmp3.8/16, MS2.9/1, Ms1 3.1/1, ms1mx2.1/33, Error ellipse: s-maj=24.5km s-min=11.5km az=78.0
NEIC 17 01:06:05.4±1.4, 880N×12615E, h99km±13km, mb4.2/1, Error ellipse: s-maj=23.2km s-min=10.1km az=75.0

ISC 17 01:06:02.1±0.8, 895N±003×12645E±007, h70km±6km, n53, σ1§07/60, mb4.2/23, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.82**	**271**	*e*P	**Pn**	**01 06 15.4**	**-3.0**
BUTP				*e*S	**Sn**	**01 06 26.4**	**-4.1**
SCPH	**Surigao**	**1.26**	**311**	⇓*i*P	**Pn**	**01 06 21.8**	**-2.1**
SCPH				*i* S	**Sn**	**01 06 38.1**	**-2.2**
BUKP	**Musuan**	**1.74**	**232**	*e*P	**Pn**	**01 06 28.6**	**-1.7**
BUKP				*e*S	**Sn**	**01 06 54.4**	**+2.7**
MSLP	**Maasin**	**1.96**	**307**	*e*P	**Pn**	**01 06 33.2**	**-0.1**
MSLP				*e*S	**Sn**	**01 06 58.8**	**+1.7**
MATI	**Mati**	**2.00**	**186**	*e*P	**Pn**	**01 06 35.3**	**+1.5**
DAV	**Davao City (W)**	**2.06**	**205**	P	**Pn**	**01 06 35.0**	**+0.3**
	64nm,0.3s,baz=90,slow=4.4,SNR=3.0						
DAV				S	**Sn**	**01 06 59.3**	**-0.1**
	120nm,0.3s,baz=212,slow=20,SNR=14						
DAV	**Davao City (W)**	**2.06**	**205**	*e*Pn	**Pn**	**01 06 35.2**	**+0.6**
DAV				S	**Sn**	**01 06 59.3**	**-0.1**
KCP	**Kidapawan**	**2.35**	**215**	⇑*i*P	**Pn**	**01 06 38.4**	**-0.3**
KCP				*i* S	**Sn**	**01 07 07.5**	**+1.0**
PLP	**Palo**	**2.64**	**327**	⇓*e*P	**Pn**	**01 06 41.8**	**-0.6**
PLP				*e*S	**Sn**	**01 07 15.6**	**+2.3**
TBP	**Tagbilaran**	**2.66**	**286**	*e*P	**Pn**	**01 06 42.2**	**-0.6**
TBP				*e*S	**Sn**	**01 07 13.1**	**-0.9**
LLP	**Lapu-Lapu**	**2.80**	**299**	*e*P	**Pn**	**01 06 45.1**	**+0.4**
LLP				*e*S	**Sn**	**01 07 20.1**	**+2.6**
SNPH	**Sibulan**	**3.20**	**277**	*e*P	**Pn**	**01 06 50.5**	**+0.4**
PAGZ	**Pagadian**	**3.23**	**250**	*e*P	**Pn**	**01 06 49.7**	**-0.9**
CNP	**Catarman**	**3.95**	**334**	*e*P	**Pn**	**01 06 59.6**	**-0.7**
GUIM	**Jordan**	**4.16**	**294**	*e*P	**Pn**	**01 07 03.1**	**-0.1**
RCP	**Roxas**	**4.48**	**306**	⇑*e*P	**Pn**	**01 07 08.8**	**+1.2**
PVCP	**Virac**	**5.14**	**334**	*e*P	**Pn**	**01 07 16.6**	**+0.1**
JOW	**Kunigami**	**17.87**	**5**	P	**Pn**	**01 10 10.2**	**+4.2**
	1.4nm,0.3s,baz=138,slow=24,SNR=4.9						
KAKA	**Kakadu**	**22.33**	**164**	*e*P	Px	01 10 41.4	
	5.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.31**	**292**	P	**P**	**01 11 49.8**	**+0.3**
	1.1nm,0.3s,mb3.8,baz=102,slow=7.4,SNR=5.7						
CMAR				LR	LR	01 22 21.1	
	comp=Z,24nm,21.0s,baz=115,slow=35						
KSRS	**Korea Array**	**28.41**	**2**	P	**P**	**01 11 52.0**	**+2.0**
	1.5nm,0.8s,mb3.6,baz=163,slow=8.9,SNR=5.4						
WRA	**Warramunga Arr**	**29.74**	**165**	P	**P**	**01 12 01.0**	**-1.1**
	0.3nm,0.3s,mb3.4,baz=342,slow=8.6,SNR=10						
WRA				PcP	PcP	01 15 05.3	+0.6
	0.4nm,0.5s,baz=337,slow=2.8,SNR=3.8						
ASAR	**Alice Springs**	**33.22**	**167**	P	**P**	**01 12 32.1**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=356,slow=7.6,SNR=10						
ASAR				PcP	PcP	01 15 13.8	-0.1
	0.6nm,0.6s,baz=357,slow=2.4,SNR=5.9						
ASAJ	**Asahikawa**	**37.74**	**19**	P	**P**	**01 13 12.8**	**+1.6**
	7.0nm,0.7s,mb4.6,baz=213,slow=8.6,SNR=4.8						
TAPN	**Taplejung**	**40.88**	**302**	*e*P	**P**	**01 13 37.9**	**+0.2**
ODAN	**Odare**	**41.00**	**301**	*e*P	**P**	**01 13 38.4**	**-0.2**
	17nm,0.5s,mb5.1						
RAMN	**Ramite**	**41.70**	**301**	*e*P	**P**	**01 13 44.6**	**+0.3**
	7.6nm,0.7s,mb4.5						
JIRN	**Jiri**	**42.26**	**302**	*e*P	**P**	**01 13 49.2**	**+0.3**
	12nm,0.4s,mb4.9						
SONM	**Songino Array**	**42.31**	**340**	P	**P**	**01 13 48.4**	**-0.6**
	0.4nm,0.4s,mb3.5,baz=153,slow=9.2,SNR=3.8						
SONM				PcP	PcP	01 15 41.6	+0.1
	0.4nm,0.4s,baz=152,slow=3.2,SNR=3.6						
GUN	**Gumba**	**42.60**	**302**	*e*P	**P**	**01 13 51.4**	**-0.3**
KKN	**Kakani**	**43.07**	**301**	*e*P	**P**	**01 13 55.7**	**+0.2**
STKA	**Stephens Creek**	**43.10**	**161**	P	**P**	**01 13 55.8**	**+0.2**
	0.6nm,0.4s,mb3.7,baz=346,slow=15,SNR=3.1						
STKA	**Stephens Creek**	**43.10**	**161**	P	**P**	**01 13 55.8**	**+0.2**
DMN	**Daman**	**43.16**	**301**	*e*P	**P**	**01 13 55.5**	**-0.7**
KOLN	**Koldanda**	**44.49**	**301**	*e*P	**P**	**01 14 07.0**	**+0.2**
	15nm,0.7s,mb4.8						
DANN	**Dangsing**	**44.52**	**302**	*e*P	**P**	**01 14 06.8**	**-0.3**
	12nm,0.6s,mb4.8						
PYUN	**Piuthan**	**45.10**	**301**	*e*P	**P**	**01 14 11.9**	**+0.2**
	7.6nm,0.4s,mb4.7						
PETK	**Petropavlovsk-**	**50.76**	**24**	P	**P**	**01 14 57.4**	**+2.4**
	4.1nm,0.8s,mb4.5,baz=196,slow=3.7,SNR=5.4						
MKAR	**Makanchi Array**	**53.18**	**323**	P	**P**	**01 15 13.0**	**-0.1**
	5.3nm,0.6s,mb4.8,baz=128,slow=7.8,SNR=64						
MKAR				PcP	PcP	01 16 20.5	+0.2
	1.3nm,0.6s,baz=108,slow=4.7,SNR=5.5						
MKAR	**Makanchi Array**	**53.18**	**323**	P	**P**	**01 15 13.0**	**-0.1**
MKAR				PcP	PcP	01 16 20.5	+0.1
ZALV	**Zalesovo Beam**	**55.87**	**332**	P	**P**	**01 15 31.2**	**-1.2**
	2.0nm,0.4s,mb4.5,baz=119,slow=6.7,SNR=12						
ZALV				PcP	PcP	01 16 29.5	-1.0
	0.8nm,0.5s,baz=132,slow=2.1,SNR=3.5						
BVAR	**Borovoye Array**	**62.85**	**326**	P	**P**	**01 16 20.6**	**0.0**
	1.4nm,0.6s,mb4.1,baz=124,slow=7.7,SNR=9.8						
BVAR				PcP	PcP	01 16 57.2	-1.2
	0.6nm,0.7s,baz=121,slow=5.6,SNR=2.5						
BVAR	**Borovoye Array**	**62.85**	**326**	P	**P**	**01 16 20.6**	**0.0**
BVAR				PcP	PcP	01 16 57.2	-1.2
AKTK	**Aktyubinsk**	**69.45**	**321**	P	**P**	**01 17 02.9**	**0.0**
AKTO	**Aktyubinsk**	**69.45**	**321**	P	**P**	**01 17 02.9**	**0.0**
	0.9nm,0.4s,mb4.0,baz=72,slow=16,SNR=5.3						
JOF	**Joensuu**	**84.44**	**333**	*e*p	**P**	**01 18 26.5**	**-0.4**
	1.6nm,0.5s,mb4.1						
KEV	**Kevo**	**84.93**	**340**	*e*p	**P**	**01 18 28.7**	**-0.5**
ARCES	**ARCESS Array B**	**85.49**	**340**	P	**P**	**01 18 32.1**	**0.0**
	1.1nm,0.4s,mb4.1,baz=84,slow=6.7,SNR=13						
KAF	**Kangasniemi**	**86.87**	**332**	*e*p	**P**	**01 18 37.6**	**-1.4**
	2.2nm,0.8s,mb4.1						
VNDA	**Vanda**	**88.61**	**173**	P	**P**	**01 18 47.9**	**+1.0**
	0.8nm,0.7s,mb3.9,baz=298,slow=5.0,SNR=6.4						
NOA	**NORSAR Array B**	**94.02**	**334**	P	**P**	**01 19 11.1**	**-1.2**
	1.0nm,1.0s,mb4.1,baz=59,slow=4.2,SNR=2.6						
TXAR	**Lajitas Array**	**118.54**	**50**	PKP	PKPdf	01 24 44.2	+1.5
	0.1nm,0.6s,baz=276,slow=3.5,SNR=2.7						
TORD	**Torodi Ar. Bea**	**120.92**	**291**	PKP	PKPdf	01 24 47.1	-0.5
	0.5nm,0.9s,baz=55,slow=1.8,SNR=7.2						

IDC 17 01:13:28.3±7.8, 1428S×2636E, h0km, mb4.1/2, mb1 4.1/3, mb1mx3.6/19, mbtmp4.1/3, ML4.4/1, Error ellipse: s-maj=209.5km s-min=27.1km az=80.0
ISCJB 17 01:13:34.4±0.7, 1468S±007×2490E±004, h10km, mb4.1/2, Error ellipse: s-maj=9.8km s-min=6.2km az=1.0
NEIC 17 01:13:35.7±0.9, 1455S×2491E, h10km, Error ellipse: s-maj=15.5km s-min=12.5km az=56.0

ISC 17 01:13:36.6±0.7, 1461S±007×2488E±004, h10km, n18, σ1§12/26, mb4.1/2, Zambia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**3.27**	**102**	*e*Pn	**Pn**	**01 14 27.1**	**-0.9**
LSZ				*e*Sn	**Sn**	**01 15 09.7**	**+2.8**
LSZ				*e*Sg	**Sg**	**01 15 21.4**	**-0.4**
TSUM	**Tsumeb**	**8.34**	**236**	*e*Pn	**Pn**	**01 15 38.1**	**+0.4**
	29nm,0.6s						
TSUM

LPAZ	**La Paz**	**7.37**	**21**	*e*Pn		**Pn**	**01 26 15.2**	**+3.8**
LPAZ				LR		LR	01 29 16.3	
CFAA	**Coronel Fontan**	**8.65**	**165**	Pn		**Pn**	**01 26 28.2**	**-0.6**
	comp=N,0.1nm,0.3s,baz=342,slow=13,SNR=5.2							
CFAA				Sn		**Sn**	**01 28 13.6**	**+7.5**
	comp=N,0.1nm,0.3s,baz=329,slow=18,SNR=2.0							
SIV	**San Ignacio**	**11.69**	**54**	Pn		**Pn**	**01 27 09.0**	**-1.7**
	comp=N,0.6nm,0.3s,baz=240,slow=13,SNR=11							
SIV				LR		LR	01 32 25.9	
	comp=N,139nm,21.9s,baz=49,slow=42							
BDFB	**Brasilia**	**22.80**	**75**	P		**P**	**01 29 24.5**	**-2.0**
	comp=N,1.2nm,0.8s,mb3.4,baz=159,slow=16,SNR=3.3							
RCBR	**Riachuelo**	**37.84**	**68**	*e*P		**P**	**01 31 41.5**	**+0.9**
	comp=N,5.9nm,1.0s,mb4.3							
VNA3	**Neumayer Olymp**	**59.02**	**161**	*e*		**P**	**01 34 23.8**	**+0.8**
VNA3				*e*			01 34 30.8	
VNA2	**Neumayer--Watz**	**59.62**	**160**	*e*		**P**	**01 34 28.6**	**+1.4**
	baz=286,slow=8.0							
VNA2				*e*		pP	01 34 35.1	+2.7
SNAA	**Sanae**	**61.24**	**160**	*e*		**P**	**01 34 37.5**	**-0.7**
SNAA				*e*			01 34 44.4	
DBIC	**Dimbokro**	**70.94**	**74**	P		**P**	**01 35 40.9**	**-0.6**
	comp=N,3.1nm,1.1s,mb4.2,baz=215,slow=10,SNR=5.3							
TORD	**Torodi Ar. Bea**	**79.62**	**71**	P		**P**	**01 36 31.3**	**-0.1**
	comp=N,3.7nm,0.8s,mb4.3,baz=255,slow=5.0,SNR=28							
BOSA	**Boshof**	**84.20**	**119**	P		**P**	**01 36 55.7**	**+0.2**
	comp=N,1.8nm,0.9s,mb4.2,baz=52,slow=17,SNR=4.0							
ASAR	**Alice Springs**	**127.54**	**209**	PKP		PKPdf	01 43 30.2	+0.8
	comp=N,0.6nm,0.9s,baz=202,slow=29,SNR=3.3							
WRA	**Warramunga Arr**	**130.55**	**212**	PKP		PKPdf	01 43 36.1	+0.9
	comp=N,0.2nm,0.6s,baz=159,slow=1.7,SNR=5.2							
ZALV	**Zalesovo Beam**	**144.28**	**25**	PKP		PKPdf	01 43 59.6	+0.3
	comp=N,1.0nm,0.8s,baz=298,slow=3.2,SNR=4.7							
MKAR	**Makanchi Array**	**148.09**	**36**	PKPbc		PKPbc	01 44 08.3	-0.9
	comp=N,1.3nm,0.8s,baz=319,slow=3.5,SNR=5.8							

IDC 17 01:32:42.5±12.0**, 1163S**×**16697E, h0**km**, mb3.5/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/25, Error ellipse: s-maj=397.6km s-min=54.0km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.24**	**287**	LR	LR	01 36 27.0	
	comp=Z,56nm,18.9s,baz=153,slow=31						
WRA	**Warramunga Arr**	**32.42**	**251**	P	P	01 39 15.3	+0.8
	0.3nm,0.7s,baz=80,slow=8.9,SNR=3.3						
ASAR	**Alice Springs**	**33.62**	**245**	P	P	01 39 24.1	-0.9
	0.3nm,0.6s,baz=71,slow=9.3,SNR=4.5						
MKAR	**Makanchi Array**	**94.77**	**317**	P	P	01 46 06.1	0.0
	0.2nm,0.5s,baz=116,slow=3.4,SNR=2.8						

*CSEM **17** 01:33:41.9±0.1, 3724N×29.14E, h7km±1km, MD3.0, Error ellipse: s-maj=4.9km s-min=2.5km az=165.0*
*ISK **17** 01:33:42.7, 3725N-29.12E, h10km, MD3.0*
*ISCJB **17** 01:33:43.0±0.7, 3727N-008×29.10E±004, h9km±7km, Error ellipse: s-maj=13.8km s-min=5.1km az=173.0*
*DDA **17** 01:33:43.4, 37.15N-29.14E, h7km±8km, Md2.8*
ISC 17 01:33:43.6±0.7**, 3728N**±008×**2911E**±004**, h11**km±7km**, n8, σ0§79/13, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.36**	**96**	*i* P	**Pg**	**01 33 49.2**	**-1.5**
GOLH				*i* S	**Sg**	**01 33 57.0**	**+1.4**
TURN	**Turunc**	**0.57**	**226**	*i* P	**Pg**	**01 33 54.0**	**-0.6**
TURN				*i* S	**Sg**	**01 34 06.4**	**+4.2**
YER	**Yerkesik**	**0.68**	**258**	*e*PG	**Pg**	**01 33 56.2**	**-0.5**
YER				*e*SG	**Sg**	**01 34 18.7**	**+0.7**
MLSB	**Milas**	**1.06**	**272**	*e*PG	**Pg**	**01 34 03.5**	**-0.5**
MLSB				*e*SG	**Sg**	**01 34 18.7**	**+0.7**
KHL	**Karahalli**	**1.10**	**17**	*e*PN	**Pn**	**01 34 04.6**	**-0.3**
KULA	**Kula-Manisa**	**1.29**	**344**	*e*PN	**Pn**	**01 34 07.7**	**+0.3**
DAT	**Datca**	**1.34**	**247**	*e*PN	**Pn**	**01 34 07.5**	**-0.7**
DAT				*e*SN	**Sn**	**01 34 26.4**	**+0.4**
HDMB	**Hadim**	**2.71**	**96**	*e*PN	**Pn**	**01 34 27.6**	**+0.5**

GUC 17 02:11:46.0±0.7**, 2329S**×**7051W, h30**km±2km**, ML3.6, 1C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.19**	**18**⇓	*i* P	Pb	02 11 51.5	-0.7
MECH				*i* S	Sb	02 11 56.2	-0.1
MECH				AML	AML	02 11 57.0	
	comp=E,24μm,0.5s						
CPN1	**Cerro Paranal**	**1.34**	**176**⇓	*i* P	Pn	02 12 10.0	+1.4
CPN1				*i* S	Sn	02 12 27.6	+2.3
CPN1				AML	AML	02 12 31.7	
	comp=E,2μm,0.3s						
LVC	**Limon Verde**	**1.62**	**66**⇓	*i* P	Pn	02 12 14.4	+1.9
LVC				*i* S	Sn	02 12 35.7	+3.4
LVC				AML	AML	02 12 37.7	
	comp=N,505nm,0.6s						
PB01	**Plate Boundary**	**2.43**	**23**⇑	*i* P	Pn	02 12 25.4	+1.8
PB01				*i* S	Sn	02 12 56.1	+3.8
PB01				AML	AML	02 13 03.5	
	comp=E,386nm,0.2s						

*IDC **17** 02:38:16.2±10.0, 1345N×91.53W, h0km, mb3.6/1, mb1 3.9/2, mb1mx3.5/18, mbtmp3.4/2, ML3.8/1, Error ellipse: s-maj=763.2km s-min=67.7km az=65.0*
*CASC **17** 02:38:16.4±1.9, 1437N-9045W, h6km±7km, MD4.3*
*ISCJB **17** 02:38:17.3±1.1, 1441N±008×9050W±006, h13km±4km, mb3.5/2, Error ellipse: s-maj=15.2km s-min=7.5km az=156.5*
*NEIC **17** 02:38:20.8±1.1, 1420N×9062W, h35km, Error ellipse: s-maj=29.7km s-min=12.1km az=202.0*
NEIC Felt at Santa Catarina Pinula.
ISC 17 02:38:17.7±1.1**, 1441N**±007×**9047W**±005**, h3**km±7km**, n29, σ0§67/19, mb3.5/2, 17C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.14**	**264**⇑	*e*P	**Pg**	**02 38 20.6**	**+0.2**
GCG	**Guatemala City**	**0.19**	**341**	*e*P	**Pg**	**02 38 20.9**	**-0.5**
GCG				*e*P		02 38 21.7	
GCG				*e*P		02 38 22.4	
GCG				*e*S	**Sg**	**02 38 24.7**	**+0.9**
GCG				*e*S	**Sg**	**02 38 25.7**	**+1.9**
NBG	**Las Nubes**	**0.21**	**33**⇑	*i* P	**Pg**	**02 38 22.1**	**+0.2**
FUG	**Fuego 3**	**0.36**	**276**⇑	*i* P	**Pg**	**02 38 24.4**	**-0.3**
FG6		**0.43**	**291**⇑	*i* P	**Pg**	**02 38 26.1**	**+0.2**
RBLL	**Robledal**	**0.81**	**111**⇑	*e*P	x	02 38 30.7	
RTR	**El Retiro**	**0.94**	**122**⇑	*e*P	x	02 38 33.4	
RTR				*e*S	x	02 38 46.3	
SNJE	**San Jose**	**0.99**	**123**⇑	*e*P	x	02 38 34.1	
SNJE				*e*S	x	02 38 47.2	
MRL	**Marmol**	**1.00**	**49**⇑	*e*P	**Pg**	**02 38 35.9**	**-0.9**
MRL				*e*S	**Sg**	**02 38 49.3**	**-0.4**
SBLS	**San Blas**	**1.00**	**124**⇑	*e*P	x	02 38 34.0	
SBLS				*e*S	x	02 38 47.5	
MTO2	**Montecristo 2**	**1.07**	**90**⇑	*e*P	x	02 38 35.5	
JAT	**Jato**	**1.14**	**266**⇑	*i* P	Px	02 38 20.6	
BOQS	**Boqueron**	**1.33**	**120**⇑	*e*P	x	02 38 40.3	
BOQS				*e*S	x	02 38 56.9	
SNET	**Serv Nac Est T**	**1.40**	**121**	*e*P	x	02 38 41.5	
SNET				*e*S	x	02 38 59.4	
LFU	**La Fuente**	**1.47**	**116**⇑	*e*P	x	02 38 42.3	
LBRS	**Las Brisas**	**1.53**	**116**⇑	*e*P	x	02 38 43.0	
LBRS				*e*S	x	02 39 02.8	
LFRS	**El Faro**	**1.57**	**120**⇑	*e*P	x	02 38 43.6	
SNVI	**San Vicente**	**1.77**	**116**⇑	*e*P	x	02 38 46.6	
SNVI				*e*S	x	02 39 11.1	
CAHU	**Cacacuatique**	**2.28**	**106**⇑	*e*P	x	02 38 53.3	
VSM	**San Miguel**	**2.34**	**114**	*e*P	x	02 38 55.4	
SCX	**San Cristobal**	**3.12**	**318**	*i* P	**Pn**	**02 39 07.5**	**-0.3**
TGUH	**Tegucigalpa,Un**	**3.12**	**96**	*e*Pn	**Pn**	**02 39 09.8**	**+2.0**
TGUH				*e*Sn	**Sn**	**02 39 52.9**	**+7.3**
TGUH	**Tegucigalpa,Un**	**3.12**	**96**	*e*P	**Pn**	**02 39 12.3**	**+4.5**
TGUH				*e*S	**Sn**	**02 39 50.4**	**+4.8**
PNIG	**Pinotepa**	**7.65**	**286**	*e*P	**Pn**	**02 40 09.3**	**-0.8**
TXAR	**Lajitas Array**	**19.23**	**323**	P	**Pn**	**02 42 43.9**	**-0.1**
	0.1nm,0.3s,baz=147,slow=12,SNR=6.5						
WMOK	**Wichita Mounta**	**21.59**	**341**	P	**P**	**02 43 08.8**	**+0.1**
	1.1nm,0.7s,mb3.4						
NVAR	**Mina Array Bea**	**34.31**	**319**	P	**P**	**02 45 05.5**	**0.0**
	0.8nm,0.8s,mb3.7,baz=135,slow=10,SNR=5.3						
NVAR	**Mina Array Bea**	**34.31**	**319**	P	**P**	**02 45 05.5**	**0.0**
WRA	**Warramunga Arr**	**136.93**	**256**	PKP	PKPdf	02 57 39.2	-3.6
	0.3nm,0.7s,baz=96,slow=2.7,SNR=4.6						

*ISCJB **17** 02:44:52.1±0.5, 6012S±008×254W±02, h32km, mb4.2/13, MS3.8/4, Error ellipse: s-maj=14.6km s-min=8.1km az=136.4*
*IDC **17** 02:44:55.0±0.6, 5985S×2558W, h31km±4km, mb4.1/13, mb1 4.1/13, mb1mx4.1/19, mbtmp4.1/13, MS3.8/4, Ms1 3.8/4, ms1mx3.3/27, Error ellipse: s-maj=17.9km s-min=15.6km az=7.0*
*NEIC **17** 02:44:55.4±0.3, 5984S×2551W, h35km, mb4.4/1, Error ellipse: s-maj=12.4km s-min=9.4km az=189.0*
ISC 17 02:44:54.4±0.5**, 6010S**±008×**255W**±02**, h34**km, **h34**km±3km**: pP-P, n34, σ0§90/29, mb4.2**/13**, MS3.8**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.72**	**153**	*e*P	**Pn**	**02 47 52.4**	**-0.2**
VNA1				*e*		02 48 05.3	
VNA1				*e*S	**Sn**	**02 50 03.5**	**-9.2**
VNA3	**Neumayer Olymp**	**12.88**	**157**	*e*P	**Pn**	**02 47 54.5**	**-0.2**
VNA3				*e*		02 48 06.4	
VNA3				*e*S	**Sn**	**02 50 03.1**	**-13**
VNA2	**Neumayer--Watz**	**13.12**	**153**	*e*P	**Pn**	**02 47 57.3**	**-0.7**
	baz=317,slow=15						
VNA2				*e*		02 48 09.4	
VNA2				*e*S	**Sn**	**02 50 11.4**	**-11**
SNAA	**Sanae**	**14.70**	**151**	*e*P	**Pn**	**02 48 17.5**	**-2.0**
SNAA				*e*		02 48 30.6	
SNAA				*e*S	**Sn**	**02 50 44.5**	**-16**
SNAA	**Sanae**	**14.70**	**151**	*e*Pn	**Pn**	**02 48 18.0**	**-1.5**
	3.7nm,0.7s						
SNAA				Sn	**Sn**	**02 50 49.5**	**-11**
MAIT	**Maitri**	**18.43**	**141**	*e*P	**Pn**	**02 49 07.2**	**+0.5**
MAIT				*e*E		02 51 59.0	
EFI	**East Falkland**	**19.94**	**280**	P	**Pn**	**02 49 24.5**	**-0.4**
	18nm,0.9s						
USHA	**Ushuaia**	**23.36**	**264**	P	**P**	**02 50 00.3**	**+0.7**
	24nm,0.9s,mb4.6,baz=86,slow=9.3,SNR=14						
USHA				LR	LR	02 57 05.9	
	comp=Z,157nm,19.0s,MS3.5,baz=113,slow=31						
USHA	**Ushuaia**	**23.36**	**264**	P	**P**	**02 50 00.3**	**+0.7**
USHA				LR	LR	02 57 05.9	
QSPA	**South Pole Qui**	**30.14**	**180**	P	**P**	**02 51 05.0**	**+4.6**
	2.9nm,0.6s,mb4.2,baz=202,slow=3.0,SNR=8.4						
PLCA	**Paso Flores**	**33.75**	**284**	P	**P**	**02 51 31.9**	**-0.6**
	1.7nm,0.7s,mb4.1,baz=111,slow=2.6,SNR=3.0						
MAW	**Mawson**	**36.40**	**140**	LR	LR	03 04 57.8	
	comp=Z,170nm,21.9s,MS3.8,baz=120,slow=33						
CFAA	**Coronel Fontan**	**40.07**	**296**	P	**P**	**02 52 25.0**	**-1.2**
	0.2nm,0.3s,mb3.3,baz=144,slow=7.9,SNR=6.9						
SUR	**Sutherland**	**41.05**	**69**	LR	LR	03 04 46.5	
	comp=Z,218nm,18.4s,MS4.0,baz=221,slow=29						
VNDA	**Vanda**	**42.56**	**182**	P	**P**	**02 52 48.8**	**+2.7**
	1.5nm,0.9s,mb3.7,baz=218,slow=5.1,SNR=5.3						
BOSA	**Boshof**	**46.28**	**70**	P	**P**	**02 53 16.2**	**-0.2**
	7.4nm,1.0s,mb4.6,baz=214,slow=3.1,SNR=6.0						
LVC	**Limon Verde**	**48.16**	**302**	P	**P**	**02 53 30.9**	**-0.2**
	1.7nm,0.3s,mb4.5,baz=172,slow=8.9,SNR=2.3						
LVC				pP	pP	02 53 40.6	-0.5
	3.0nm,0.3s,baz=136,slow=6.3,SNR=3.5						
LVC	**Limon Verde**	**48.16**	**302**	P	**P**	**02 53 30.9**	**-0.2**
LVC				pP	pP	02 53 40.6	-0.5
LBTB	**Lobatse**	**49.50**	**68**	P	**P**	**02 53 41.2**	**-0.2**
	3.5nm,0.8s,mb4.5,baz=234,slow=10,SNR=4.9						
LBTB				LR	LR	03 10 32.6	
	comp=Z,88nm,18.8s,MS3.8,baz=103,slow=31						
LBTB	**Lobatse**	**49.50**	**68**	P	**P**	**02 53 41.2**	**-0.2**
LBTB				LR	LR	03 10 32.6	
LPAZ	**La Paz**	**53.48**	**306**	P	**P**	**02 54 11.3**	**+0.1**
	1.0nm,0.6s,mb3.9,baz=137,slow=8.5,SNR=5.0						
LPAZ				pP	pP	02 54 21.1	-0.2
	1.5nm,0.3s,baz=119,slow=11,SNR=6.8						
LPAZ	**La Paz**	**53.48**	**306**	P	**P**	**02 54 11.3**	**+0.1**
LPAZ				pP	pP	02 54 21.1	-0.2
DBIC	**Dimbokro**	**68.54**	**22**	P	**P**	**02 55 53.3**	**0.0**
	1.7nm,0.9s,mb4.0,baz=196,slow=8.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**76.20**	**27**	P	**P**	**02 56 39.4**	**+0.4**
	1.5nm,0.3s,mb4.4,baz=200,slow=6.3,SNR=45						
TORD				pP	pP	02 56 49.1	-0.3
	3.5nm,0.6s,baz=199,slow=6.4,SNR=12						
ASAR	**Alice Springs**	**94.85**	**161**	P	**P**	**02 58 14.1**	**+1.4**
	1.3nm,0.7s,mb4.5,baz=183,slow=3.9,SNR=16						
ASAR				pP	pP	02 58 24.3	+0.9
	0.4nm,0.6s,baz=180,slow=3.9,SNR=2.8						
WRA	**Warramunga Arr**	**98.57**	**161**	P	**P**	**02 58 30.7**	**+1.1**
	0.8nm,1.1s,mb4.2,baz=199,slow=4.6,SNR=3.3						
PDAR	**Pinedale Array**	**123.19**	**299**	PKP	PKPdf	03 03 47.1	+0.7
	0.4nm,0.8s,baz=120,slow=5.5,SNR=2.7						
PDAR				pPKP	pPKPdf	03 03 56.5	-0.9
	0.4nm,0.5s,baz=152,slow=5.0,SNR=2.9						
NVAR	**Mina Array Bea**	**123.71**	**289**	PKP	PKPdf	03 03 48.7	+1.1
	0.5nm,0.8s,baz=134,slow=2.6,SNR=3.9						
NVAR				pPKP	pPKPdf	03 03 58.1	-0.4
	0.5nm,0.7s,baz=163,slow=3.8,SNR=4.0						
NVAR	**Mina Array Bea**	**123.71**	**289**	PKP	PKPdf	03 03 48.7	+1.1
NVAR				pPKP	pPKPdf	03 03 58.1	-0.4
AKTK	**Aktyubinsk**	**128.98**	**55**	PKP	PKPdf	03 03 57.8	+0.6
AKTO	**Aktyubinsk**	**128.98**	**55**	PKP	PKPdf	03 03 57.8	+0.6
	1.0nm,0.8s,baz=147,slow=3.5,SNR=6.4						
ARCES	**ARCESS Array B**	**134.37**	**22**	PKP	PKPdf	03 04 07.5	+0.7
	2.9nm,1.0s,baz=162,slow=0.8,SNR=3.6						
YKA	**Yellowknife Ar**	**139.72**	**314**	PKP	PKPdf	03 04 19.2	+2.2
	2.5nm,0.8s,baz=129,slow=1.9,SNR=3.5						
SONM	**Songino Array**	**149.87**	**92**	PKPbc	PKPbc	03 04 40.8	+1.1
	6.0nm,0.9s,baz=220,slow=2.5,SNR=24						

*IDC **17** 02:59:09.8±0.9, 2751N×5525E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.7/24, mbtmp3.8/10, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/38, Error ellipse: s-maj=26.4km s-min=20.9km az=129.0*
*ISCJB **17** 02:59:10.5±0.4, 2749N±004×5517E±003, h10km, mb3.8/9, Error ellipse: s-maj=6.2km s-min=3.9km az=11.2*
*CSEM **17** 02:59:13.6±0.1, 2753N×5524E, h35km, mb3.9/1, Error ellipse: s-maj=2.6km s-min=1.9km az=105.0*
*THR **17** 02:59:13.5±1.0, 2767N×5529E, h14km±12km, ML3.6*
*NEIC **17** 02:59:13.8±1.3, 2749N×5526E, h26km±9km, mb3.9/1, ML3.6(THR), MN3.7(TEH), Error ellipse: s-maj=9.7km s-min=6.5km az=212.0*
*TEH **17** 02:59:17.3, 2752N×5519E, h17km, ML3.7*
ISC 17 02:59:13.3±0.8**, 2752N**±004×**5522E**±003**, h18**km±6km**, n54, σ0§87/66, mb3.8/9, 1C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.85**	**98**	*e*Pg	**Pg**	**02 59 29.0**	**-1.0**
BNDS	**Bandar-Abbas**	**0.85**	**98**	*e*Pg	**Pg**	**02 59 29.2**	**-0.8**
BNDS				AML	AML	02 59 48.9	
	comp=E,2μm,0.4s						
BNDS				AML	AML	02 59 51.5	
	comp=N,2μm,0.4s						
IBND	**Bandar-abas**	**1.18**	**93**	*e*Pg	**Pg**	**02 59 35.7**	**-0.3**
IBND				*e*Sg	**Sg**	**02 59 52.0**	**+0.6**
IBND	**Bandar-abas**	**1.18**	**93**	*e*Pg	**Pg**	**02 59 35.7**	**-0.3**
IBND				*e*Sg	**Sg**	**02 59 52.0**	**+0.6**
GHIR	**Ghir-Karzin**	**2.12**	**292**	*e*Pn	**Pg**	**02 59 50.8**	**-3.2**
GHIR				*e*Sg	**Sg**	**03 00 20.7**	**-0.8**
GHIR				AML	AML	03 00 34.8	
	comp=E,383nm,0.4s						
GHIR				AML	AML	03 00 36.3	
	comp=N,388nm,0.5s						
GHIR	**Ghir-Karzin**	**2.12**	**292**	*e*Pn	**Pg**	**02 59 50.0**	**-4.0**
GHIR				*e*Sg	**Sg**	**03 00 20.0**	**-1.5**
ISRV	**Sarvestan**	**2.62**	**316**	*e*Pn	**Pn**	**02 59 56.0**	**+1.2**
ISRV				*e*		03 00 49.0	
KRBR	**Kerman**	**2.81**	**29**	*e*Pn	**Pn**	**02 59 58.2**	**+1.0**
KRBR				AML	AML	03 00 42.3	
	comp=E,298nm,0.5s						
KRBR				AML	AML	03 00 49.8	
	comp=N,291nm,0.6s						
KRBR	**Kerman**	**2.81**	**29**	*e*Pn	**Pn**	**02 59 58.0**	**+0.7**
IPAR	**Pars**	**3.00**	**321**	Pn	**Pn**	**03 00 00.7**	**+0.7**
IPAR				Sn	**Sn**	**03 00 36.0**	**+0.5**
IPAR	**Pars**	**3.00**	**321**⇑	*e*Pn	**Pn**	**03 00 00.8**	**+0.8**
IPAR				*e*Sn	**Sn**	**03 00 36.0**	**+0.5**
IPAR	**Pars**	**3.00**	**321**	*e*Pn	**Pn**	**03 00 00.8**	**+0.8**
IPAR				*e*Sn	**Sn**	**03 00 36.0**	**+0.5**
IPAR				*e*		03 01 01.6	

IMEH	**Mehriz**	**3.90**	**352**	*e*Pn		**Pn**	**03 00 13.4**	**+1.1**
IMEH				*e*			03 00 14.2	
IBAF	**Bafgh**	**4.07**	**4**	*e*Pn		**Pn**	**03 00 15.1**	**+0.4**
IBAF				*e*			03 01 03.5	
ISAD	**Sadrabad**	**4.58**	**343**	*e*Pn		**Pn**	**03 00 22.4**	**+0.7**
ISAD	**Sadrabad**	**4.58**	**343**	*e*Pn		**Pn**	**03 00 22.9**	**+1.2**
ISAD				*e*			03 01 19.1	
ICHK	**Chekchek**	**4.76**	**352**	Pn		**Pn**	**03 00 24.9**	**+0.7**
ICHK				Sn		**Sn**	**03 01 17.0**	**-2.0**
ICHK	**Chekchek**	**4.76**	**352**	*e*Pn		**Pn**	**03 00 25.0**	**+0.8**
ICHK				Sn		**Sn**	**03 01 17.0**	**-2.0**
ICHK	**Chekchek**	**4.76**	**352**	*e*Pn		**Pn**	**03 00 25.0**	**+0.8**
ICHK				*e*			03 00 54.8	
ICHK				*e*Sn		**Sn**	**03 01 17.1**	**-1.9**
SLWS		**4.92**	**238**	P		**Pn**	**03 00 27.6**	**+1.2**
BTHS		**5.24**	**230**	P		**Pn**	**03 00 31.7**	**+0.9**
IGAR	**Gharneh**	**5.59**	**331**	*e*Pn		**Pn**	**03 00 37.0**	**+1.4**
IGAR				*e*			03 00 39.6	
NASN	**Na'in**	**5.66**	**339**	*e*Pn		**Pn**	**03 00 37.0**	**+0.4**
NASN	**Na'in**	**5.66**	**339**	*e*Pn		**Pn**	**03 00 37.5**	**+0.9**
IKOO	**Kooshah**	**5.89**	**33**	*e*Pn		**Pn**	**03 00 40.7**	**+1.0**
IKOO	**Kooshah**	**5.89**	**33**	*e*Pn		**Pn**	**03 00 40.7**	**+1.0**
IKOO				*e*			03 02 35.4	
IZEF	**Zefreh**	**5.92**	**336**	Pn		**Pn**	**03 00 39.6**	**-0.4**
IZEF	**Zefreh**	**5.92**	**336**	*e*Pn		**Pn**	**03 00 39.7**	**-0.3**
IZEF				*e*			03 00 44.2	
IPIR	**Pirpir**	**6.37**	**325**⇓	*e*Pn		**Pn**	**03 00 47.3**	**+1.0**
IPIR				*e*Sn		**Sn**	**03 01 55.1**	**-3.4**
IPIR	**Pirpir**	**6.37**	**325**	*e*Pn		**Pn**	**03 00 47.4**	**+1.1**
IPIR				*e*Sn		**Sn**	**03 01 54.8**	**-3.7**
IPIR				*e*			03 01 59.7	
IKLH	**Kolahrood**	**6.58**	**332**	*e*Pn		**Pn**	**03 00 49.6**	**+0.4**
IKLH	**Kolahrood**	**6.58**	**332**	*e*Pn		**Pn**	**03 00 49.6**	**+0.4**
IKLH				*e*			03 00 52.3	
UMR	**Umm Al-Rimmam**	**6.90**	**289**	*e*P		**Pn**	**03 00 53.6**	**0.0**
RDF	**Al-Radifah**	**6.91**	**284**	*e*P		**Pn**	**03 00 53.9**	**+0.2**
	baz=284							
RDF					AML	AML	03 02 11.5	
	comp=Z,10.0nm,0.5s,baz=284							
HRDDS		**6.93**	**230**	P		**Pn**	**03 00 54.1**	**+0.1**
NAY	**Al-Naaiem**	**7.24**	**286**	*e*P		**Pn**	**03 00 58.1**	**-0.1**
	baz=286							
NAY					AML	AML	03 02 20.7	
	comp=Z,11nm,0.6s,baz=286							
MIB	**Mutribah**	**7.29**	**290**	*e*P		**Pn**	**03 00 58.8**	**-0.1**
	baz=290							
MIB					AML	AML	03 02 21.0	
	comp=Z,18nm,0.6s,baz=290							
IVIS	**Veis**	**10.01**	**316**	*e*Pn		**Pn**	**03 01 35.3**	**-1.0**
IVIS				*e*			03 03 30.5	
IDHR	**Dehrash**	**10.41**	**316**	*e*Pn		**Pn**	**03 01 40.9**	**-0.9**
IDHR				*e*			03 03 41.9	
MMAI	**Mount Meron Ar**	**17.96**	**293**	P		**Pn**	**03 03 22.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=101,slow=15,SNR=3.5							
KIV	**Kislovodsk**	**19.26**	**332**	*e*P		**Pn**	**03 03 37.6**	**-0.2**
	comp=Z,5.3nm,0.8s							
KIV	**Kislovodsk**	**19.26**	**332**	*e*P		**Pn**	**03 03 37.6**	**-0.2**
	comp=Z,5.3nm,0.8s							
AKTK	**Aktyubinsk**	**22.98**	**5**	P		**P**	**03 04 16.8**	**-0.1**
AKTK	**Aktyubinsk**	**22.98**	**5**	P		**P**	**03 04 16.8**	**0.0**
AKTO	**Aktyubinsk**	**22.98**	**5**	P		**P**	**03 04 16.8**	**-0.1**
	comp=Z,1.2nm,0.4s,mb3.6,baz=188,slow=8.4,SNR=6.5							
BVAR	**Borovoye Array**	**27.87**	**20**	P		**P**	**03 05 01.3**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=205,slow=9.0,SNR=3.6							
BVAR				LR		LR	03 16 50.6	
	comp=Z,45nm,18.1s,baz=95,slow=38							
MKAR	**Makanchi Array**	**28.68**	**41**	P		**P**	**03 05 08.1**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.5,baz=232,slow=10,SNR=3.5							
ZALV	**Zalesovo Beam**	**34.19**	**31**	P		**P**	**03 05 56.6**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.0,baz=245,slow=11,SNR=3.1							
NOA	**NORSAR Array B**	**44.57**	**331**	P		**P**	**03

$M_{\phi\phi}$0.06±.02; $M_{\theta r}$-2.17±.09; Best double couple: M_o2.47300×10^{17} NP1:ϕ_{ϕ}14.00000°,δ13.00000°, λ119.00000°. NP2:ϕ_{ϕ}164.00000°,δ79.00000°,λ84.00000°. Principal axes: T 2.4260, Plg56.0000°, Azm66.0000°; N 0.0960, Plg6.0000°, Azm165.0000°; P -2.5210, Plg33.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC **17** *03:07:32.5,2305S×7029W,h34km,mb5.4/169, ML5.3(GUC),After GUC.*

NEIC Felt [IV] at Tocopilla; [III] at Antofagasta and Maria Elena; [II] at San Pedro de Atacama.

IDC **17** *03:07:32.5±0.4,2293S×7021W,h31km±2km,mb4.9/20, mb1 5.0/24,mb1mx5.0/25,mbtmp4.9/24,ML4.4/5,MS4.8/24, Ms1 4.8/24,ms1mx4.7/31,Error ellipse: s-maj=7.9km s-min=7.1km az=86.0*

BJI **17** *03:07:33.8,2300S×7030W,h34km,mB5.5,Ms5.4,Msz5.1*

DJA **17** *03:08:01.7±0.0,2489S×6885W,h183km*

ISC 17 03:07:32.7±0.1,2301S×002×7023W×003,h35km, h35km±.2km:pP-P,n576,σ1ᵍ05/460,mb5.3/186,MS4.9/34, 13C-12D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.22**	**245**	⇓*iP*			**Pb**	**03 07 38.2**	**-1.6**
MECH				*eS*			**Sb**	**03 07 43.7**	**-0.8**
MECH				AML			AML	03 07 51.4	
	comp=N,577μm,0.6s								
CEN1	**Los Morros**	**0.38**	**176**	*eP*			**Pb**	**03 07 43.7**	**+2.0**
CEN1				*i* S			**Sb**	**03 07 52.9**	**+5.1**
CEN1				AML			AML	03 07 55.4	
	comp=E,184μm,0.5s								
PB06	**Plate Boundary**	**0.68**	**64**	⇓*iP*			**Pn**	**03 07 46.4**	**+0.5**
PB06				*i* S			**Sn**	**03 07 57.1**	**+1.9**
ANCH	**Antofagasta**	**0.69**	**194**	⇑*iP*			**Pn**	**03 07 44.1**	**-1.9**
ANCH				*eS*			**Sn**	**03 07 54.0**	**-1.6**
ANCH	**Antofagasta**	**0.69**	**194**	⇑*iP*			**Pn**	**03 07 44.1**	**-1.9**
ANCH				*eS*			**Sn**	**03 07 54.4**	**-1.2**
ANCH				AML			AML	03 07 56.8	
	comp=E,189μm,0.4s								
PB04	**Plate Boundary**	**1.01**	**43**	⇓*iP*			**Pn**	**03 07 44.9**	**-5.6**
PB04				*i* S			**Sn**	**03 07 54.5**	**-8.9**
PB04				AML			AML	03 07 57.5	
	comp=E,424μm,0.8s								
LVC	**Limon Verde**	**1.28**	**72**	Pg			**Pn**	**03 07 56.4**	**+2.3**
	comp=E,3μm,0.3s,baz=252,slow=13,SNR=9135								
LVC					Lg			03 08 14.2	
	comp=E,14μm,0.3s,baz=68,slow=6.3,SNR=26								
LVC	**Limon Verde**	**1.28**	**72**	*e*Pn			**Pn**	**03 07 56.6**	**+2.5**
LVC	**Limon Verde**	**1.28**	**72**	⇓*iP*			**Pn**	**03 07 55.9**	**+1.8**
LVC				*i* S			**Sn**	**03 08 14.0**	**+3.9**
LVC				AML			AML	03 08 17.0	
	comp=E,350μm,0.6s								
PB07	**Plate Boundary**	**1.32**	**14**	⇓*iP*			**Pn**	**03 07 54.6**	**0.0**
PB07				*i* S			**Sn**	**03 08 11.9**	**+0.9**
CPN1	**Cerro Paranal**	**1.62**	**186**	⇓*eP*			**Pn**	**03 07 58.8**	**0.0**
CPN1				*i* S			**Sn**	**03 08 21.2**	**+2.7**
CPN1				AML			AML	03 08 35.0	
	comp=E,42μm,0.8s								
SPCH	**San Pedro de A**	**1.87**	**87**	*eP*			**Pn**	**03 08 08.0**	**+5.6**
SPCH				*i* S			**Sn**	**03 08 33.5**	**+8.7**
PB01	**Plate Boundary**	**2.07**	**20**	⇑*iP*			**Pn**	**03 08 05.8**	**+0.7**
PB01				*i* S			**Sn**	**03 08 31.8**	**+2.1**
CPCH	**Copiapo**	**4.33**	**181**	*eP*			**Pn**	**03 08 34.4**	**-1.7**
LCO	**Las Campanas**	**5.99**	**184**	*e*Pn			**Pn**	**03 08 56.9**	**-2.0**
	comp=E,698nm,0.8s								
LCO					Sn		**Sn**	**03 10 14.8**	**+8.4**
ARE	**Arequipa**	**6.62**	**349**	⇓*iP*			**Pn**	**03 09 05.6**	**-2.0**
ARE				*i* S			**Sn**	**03 10 17.0**	**-4.9**
LPAZ	**La Paz**	**6.97**	**17**	Pn			**Pn**	**03 09 14.6**	**+2.1**
	comp=E,7.3nm,0.3s,baz=190,slow=9.6,SNR=222								
LPAZ					Sn		**Sn**	**03 10 43.7**	**+13**
	baz=174,slow=24,SNR=1.8								
LPAZ	**La Paz**	**6.97**	**17**	*e*Pn			**Pn**	**03 09 15.1**	**+2.7**
	comp=E,3.3nm,0.8s								
LPAZ	**La Paz**	**6.97**	**17**	*eP*			**Pn**	**03 09 15.1**	**+2.6**
LPAZ					pmax		pmax		
	comp=Z,3.0nm,0.8s								
TLL	**Tololo Astrono**	**7.15**	**184**	*eP*			**Pn**	**03 09 12.7**	**-2.2**
CFAA	**Coronel Fontan**	**8.74**	**169**	Pn			**Pn**	**03 09 36.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=29								
CFAA					Sn		**Sn**	**03 11 24.4**	**+10**
	comp=Z,1.9nm,0.3s,baz=154,slow=22,SNR=2.6								
CFAA					LR		LR	03 13 23.5	
	comp=Z,2μm,18.8s,baz=338,slow=40								
PEL	**Peldehue**	**10.10**	**182**	*eP*			**Pn**	**03 09 56.8**	**+1.4**
PEL					AMS		AMS	03 14 40.4	
	comp=Z,10μm,21.0s								
FCH	**Farellones**	**10.28**	**180**	*eP*			**Pn**	**03 09 55.8**	**-2.0**
FCH					AMS		AMS	03 14 01.6	
	comp=Z,5μm,20.0s								
CLCH	**Cerro Calan**	**10.35**	**181**	*eP*			**Pn**	**03 09 59.7**	**+1.0**
CLCH					AMS		AMS	03 14 39.2	
	comp=Z,5μm,20.1s								
LMEL	**Las Melosas**	**10.80**	**180**	P			**Pn**	**03 10 11.6**	**+6.7**
LMEL	**Las Melosas**	**10.80**	**180**	*eP*			**Pn**	**03 10 03.1**	**-1.7**
LMEL					AMS		AMS	03 14 36.8	
	comp=Z,4μm,20.4s								
SIV	**San Ignacio**	**11.10**	**53**	Pn			**Pn**	**03 10 07.7**	**-1.4**
	comp=Z,8.3nm,0.3s,baz=244,slow=13,SNR=108								
SIV					Sn		**Sn**	**03 12 13.6**	**+1.6**
	baz=319,slow=19,SNR=4.7								
NNA	**Nana**	**12.64**	**329**	Pn			**Pn**	**03 10 30.7**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=232,slow=4.3,SNR=6.0								
NNA					Sn		**Sn**	**03 12 45.7**	**-4.1**
	comp=Z,3.4nm,0.3s,baz=160,slow=17,SNR=4.8								
NNA					LR		LR	03 14 46.0	
	comp=Z,3μm,21.4s,baz=157,slow=34								
NNA	**Nana**	**12.64**	**329**	*e*Pn			**Pn**	**03 10 30.3**	**+0.1**
NNA					Sn		**Sn**	**03 12 46.4**	**-3.4**
LPA	**La Plata**	**15.99**	**141**	*de*P			**Pn**	**03 11 15.0**	**-0.1**
LPA				*ep*P			pP	03 11 22.0	-5.3
LPA	**La Plata**	**15.99**	**141**	*eP*			**Pn**	**03 11 15.0**	**-0.1**
LPA				*ep*P			pP	03 11 22.0	-5.3
PLCA	**Paso Flores**	**17.67**	**181**	P			**Pn**	**03 11 37.7**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=348,slow=13,SNR=11								
PLCA					S		**Sn**	**03 14 57.3**	**+5.4**
	comp=Z,0.1nm,0.3s,baz=306,slow=9.3,SNR=1.5								
PLCA					PcP		PcP	03 16 14.7	+1.1
	comp=Z,0.1nm,0.3s,baz=328,slow=9.2,SNR=3.0								
PLCA					LR		LR	03 18 46.7	
	comp=Z,4μm,20.0s,baz=356,slow=38								
PLCA	**Paso Flores**	**17.67**	**181**	*eP*			**Pn**	**03 11 36.7**	**+0.6**
	comp=Z,116nm,1.4s								
PLCA	**Paso Flores**	**17.67**	**181**	*eP*			**Pn**	**03 11 36.7**	**+0.6**
PLCA					pmax		pmax		
	comp=Z,116nm,1.4s								
ATAH	**Atahualpa**	**17.75**	**332**	P			**Pn**	**03 11 37.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=152,slow=11,SNR=8.0								
ATAH					S		**Sn**	**03 14 55.6**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=332,slow=23,SNR=1.9								
ATAH					LR		LR	03 17 25.5	
	comp=Z,2μm,21.6s,baz=306,slow=34								
SPB	**Sao Paulo**	**20.95**	**96**	*eP*			**P**	**03 12 13.2**	**+0.5**
BDFB	**Brasilia**	**22.19**	**75**	P			**P**	**03 12 24.6**	**-1.5**
	comp=Z,10.0nm,0.7s,mb4.3,baz=247,slow=14,SNR=16								
BDFB					S		**S**	**03 16 26.9**	**-1.9**
	comp=Z,5.2nm,0.8s,baz=122,slow=19,SNR=2.0								
BDFB					LR		LR	03 22 42.4	
	comp=Z,1μm,18.2s,MS4.3,baz=69,slow=41								
BDFB	**Brasilia**	**22.19**	**75**	*eP*			**P**	**03 12 24.6**	**-1.5**
	comp=Z,15nm,0.9s,mb4.4								
OTAV	**Otavalo**	**24.45**	**340**	*eP*			**P**	**03 12 48.9**	**+0.4**
	comp=Z,6.3nm,0.8s,mb4.1								
OTAV					*ep*P			03 12 57.0	
CAM4	**Nova Friburgo**	**25.52**	**94**	⇓*iP*			**P**	**03 12 57.7**	**-0.5**
CAM4				*i*			pP	03 13 06.4	-1.7
CAM4				*i*				03 13 11.0	
CAM4				*i*				03 13 13.9	
CAM4				*i*				03 13 16.4	
CAM4				*i*				03 13 33.6	
CAM3	**Guarapari**	**27.64**	**91**	⇓*iP*			**P**	**03 13 12.0**	**-5.3**
CAM3				*i*				03 13 15.4	
CAM3				*i*			pP	03 13 23.0	-4.3
CAM3				*i*				03 13 26.3	
CAM3				*i*				03 13 30.4	
CAM3				*i*				03 13 33.1	
ROSC	**El Rosal**	**27.98**	**351**	P			**P**	**03 13 20.8**	**+0.4**
	comp=Z,9.8nm,0.5s,mb4.7,baz=121,slow=3.5,SNR=10								
ROSC					S		**S**	**03 18 06.5**	**+4.1**
	comp=Z,2.1nm,0.3s,baz=101,slow=21,SNR=1.8								
ROSC					LR		LR	03 25 17.8	
	comp=Z,2μm,20.3s,MS4.7,baz=192,slow=38								
ROSC	**El Rosal**	**27.98**	**351**	*eP*			**P**	**03 13 21.4**	**+1.0**
EFI	**East Falkland**	**30.12**	**165**	*eP*			**P**	**03 13 38.9**	**-0.1**
	comp=Z,152nm,1.4s,mb5.5								
EFI	**East Falkland**	**30.12**	**165**	*eP*			**P**	**03 13 38.9**	**-0.1**
EFI					pmax		pmax		
	comp=Z,152nm,1.4s,mb5.5								
USHA	**Ushuaia**	**31.81**	**178**	P			**P**	**03 13 54.1**	**+0.3**
	comp=Z,7.6nm,0.8s,mb4.6,baz=336,slow=4.6,SNR=6.2								
USHA					S		**S**	**03 19 03.0**	**+1.3**
	comp=Z,8.7nm,1.1s,baz=327,slow=8.3,SNR=2.6								
USHA					LR		LR	03 28 14.2	
	comp=Z,3μm,18.0s,MS5.0,baz=343,slow=39								
USHA	**Ushuaia**	**31.81**	**178**	P			**P**	**03 13 54.1**	**+0.3**
USHA					S		**S**	**03 19 03.0**	**+1.3**
USHA					LR		LR	03 28 14.2	
RPN	**Rapa Nui**	**35.56**	**255**	LR			LR	03 25 09.9	
	comp=Z,2μm,19.5s,MS4.8,baz=96,slow=30								
RCBR	**Riachuelo**	**37.23**	**68**	*eP*			**P**	**03 14 41.7**	**+0.5**
	comp=Z,111nm,1.0s,mb5.7								
FDF	**Fort de France**	**38.55**	**14**	*eP*			**P**	**03 14 49.3**	**-2.9**
TGUH	**Tegucigalpa,Un**	**40.44**	**334**	*eP*			**P**	**03 15 08.3**	**+0.3**
	comp=Z,51nm,0.8s,mb5.3								
CPD	**Cerro la Pandu**	**41.01**	**6**	*eP*			**P**	**03 15 09.8**	**-2.9**
	comp=Z,88nm,0.8s,mb5.4								
CPD	**Cerro la Pandu**	**41.01**	**6**	*eP*			**P**	**03 15 09.8**	**-2.9**
CPD					pmax		pmax		
	comp=Z,88nm,0.8s,mb5.4								
SJG	**San Juan**	**41.06**	**6**	*eP*			**P**	**03 15 10.3**	**-2.8**
	comp=Z,244nm,0.8s,mb5.9								
SJG					*ep*P		pP	03 15 21.0	-2.2
SJG	**San Juan**	**41.06**	**6**	*eP*			**P**	**03 15 10.3**	**-2.8**
SJG					*e**PP		pP	03 15 21.0	-2.2
SJG					pmax		pmax		
	comp=Z,244nm,0.8s								
MPR	**Mayaguez**	**41.08**	**4**	*eP*			**P**	**03 15 10.8**	**-2.4**
MTP	**Monte Pirata**	**41.11**	**7**	*eP*			**P**	**03 15 10.3**	**-3.2**
MTP					*ep*P		pP	03 15 21.1	-2.5
HUMP	**Col San Antoni**	**41.12**	**6**	*eP*			**P**	**03 15 11.0**	**-2.6**
	comp=Z,46nm,0.9s,mb5.1								
AOPR	**Arecibo Observ**	**41.24**	**5**	*eP*			**P**	**03 15 12.4**	**-2.2**
	comp=Z,55nm,0.9s,mb5.2								
CBYP	**Canovanas**	**41.25**	**6**	*eP*			**P**	**03 15 12.5**	**-2.2**
	comp=Z,168nm,0.9s,mb5.7								
PMSA	**Palmer Station**	**41.95**	**176**	P			**P**	**03 15 21.1**	**+1.3**
	comp=Z,25nm,0.9s,mb4.8,baz=329,slow=11,SNR=4.3								
PMSA					S		**S**	**03 21 41.0**	**+5.2**
	comp=Z,15nm,0.8s,baz=142,slow=8.5,SNR=2.3								
PMSA					LR		LR	03 32 58.4	
	comp=Z,1μm,18.2s,MS4.8,baz=340,slow=36								
CMIG	**Matias Romero**	**46.58**	**327**	LR			LR	03 31 50.2	
	comp=Z,624nm,21.9s,MS4.5,baz=120,slow=31								
BRAL	**Brewton**	**56.08**	**343**	*eP*			**P**	**03 17 08.2**	**-0.2**
	comp=Z,161nm,1.0s,mb6.0								
BRAL					*ep*P		pP	03 17 18.6	-0.3
NHSC	**New Hope**	**56.60**	**350**	*eP*			**P**	**03 17 10.9**	**-1.2**
	comp=Z,167nm,1.4s,mb5.9								
GOGA	**Godfrey**	**57.51**	**347**	*eP*			**P**	**03 17 16.9**	**-1.6**
	comp=Z,14nm,0.9s,mb5.0								
GOGA					*ep*P		pP	03 17 27.0	-2.0
GOGA	**Godfrey**	**57.51**	**347**	*eP*			**P**	**03 17 16.9**	**-1.6**
GOGA					*e**PP		pP	03 17 27.0	-2.0
GOGA					pmax		pmax		
	comp=Z,14nm,0.9s,mb5.0								
JSC	**Jenkinsville**	**57.93**	**349**	*eP*			**P**	**03 17 20.6**	**-0.8**
JSC					*ep*P		pP	03 17 31.0	-1.0
LRAL	**Lakeview Retre**	**57.98**	**343**	*eP*			**P**	**03 17 20.1**	**-1.7**
	comp=Z,30nm,1.1s,mb5.2								
LRAL					*ep*P		pP	03 17 30.9	-1.5
HKT	**Hockley**	**58.12**	**334**	*eP*			**P**	**03 17 22.4**	**-0.5**
	comp=Z,26nm,1.2s,mb5.1								
HKT					*ep*P		pP	03 17 32.4	-1.0
HKT	**Hockley**	**58.12**	**334**	*eP*			**P**	**03 17 22.4**	**-0.5**
HKT					*e**PP		pP	03 17 32.4	-1.0
HKT					pmax		pmax		
	comp=Z,26nm,1.2s,mb5.1								
CNNC	**Cliffs of the**	**58.38**	**353**	*ep*P			pP	03 17 34.9	-0.2
VNA3	**Neumayer Olymp**	**59.05**	**161**	*eP*			**P**	**03 17 29.3**	**+0.4**
VNA3				*e*			pP	03 17 38.1	-1.3
VNA3				*e*				03 17 43.8	
RKT	**Rikitea**	**59.09**	**256**	*eS*			**S**	**03 25 34.4**	**-0.6**
	comp=Z,2μm,29.0s								
RKT					*e*LR		LR	03 34 56.9	
	comp=Z,4μm,26.5s,baz=111								
NATX	**Nacogdoches**	**59.27**	**336**	*eP*			**P**	**03 17 30.9**	**+0.1**
	comp=Z,132nm,1.4s,mb5.8								
NATX					*ep*P		pP	03 17 40.9	-0.5
VNA1	**Neumayer--Stat**	**59.28**	**160**	*eP*			**P**	**03 17 31.0**	**+0.5**
VNA1				*e*			pP	03 17 40.1	-0.9
VNA1				*e*				03 17 45.2	
VNA2	**Neumayer--Watz**	**59.65**	**160**	*eP*			**P**	**03 17 33.5**	**+0.5**
	baz=294,slow=7.7								
VNA2				*e*			pP	03 17 42.1	-1.4
VNA2				*e*				03 17 47.4	
CPCT	**Cooper Cave**	**59.70**	**346**	*eP*			**P**	**03 17 32.4**	**-1.4**
CPCT					*ep*P		pP	03 17 42.6	-1.6
TKL	**Tuckaleechee C**	**59.74**	**347**	*eP*			**P**	**03 17 32.6**	**-1.4**
TKL					*ep*P		pP	03 17 42.8	-1.8
SWET	**Sewanee**	**59.79**	**345**	*eP*			**P**	**03 17 32.9**	**-1.5**
SWET					*ep*P		pP	03 17 43.4	-1.5
OXF	**Oxford**	**60.04**	**342**	*eP*			**P**	**03 17 34.2**	**-1.9**
	comp=Z,90nm,0.9s,mb5.8								
OXF					*ep*P		pP	03 17 44.5	-2.1
OXF	**Oxford**	**60.04**	**342**	*eP*			**P**	**03 17 34.2**	**-1.9**
OXF					*e**PP		pP	03 17 44.5	-2.1
OXF					pmax		pmax		
	comp=Z,90nm,0.9s,mb5.8								
JCT	**Junction City**	**60.29**	**331**	*eP*			**P**	**03 17 37.3**	**-0.6**
	comp=Z,54nm,0.8s,mb5.6								
JCT					*ep*P		pP	03 17 47.7	-0.7
JCT	**Junction City**	**60.29**	**331**	*eP*			**P**	**03 17 37.3**	**-0.6**
JCT					*e**PP		pP	03 17 47.7	-0.7
JCT					pmax		pmax		
	comp=Z,54nm,0.8s,mb5.6								
TZTN	**Tazewell**	**60.55**	**348**	*eP*			**P**	**03 17 38.4**	**-1.1**
	comp=Z,150nm,2.1s,mb5.8								
TZTN					*ep*P		pP	03 17 47.9	-2.2
URVA	**University of**	**60.65**	**353**	*eP*			**P**	**03 17 39.8**	**-0.4**
ELN	**Prospectdale**	**60.73**	**350**	*eP*			**P**	**03 17 40.6**	**-0.2**
ELN					*ep*P		pP	03 17 50.9	-0.5
WVT	**Waverly**	**61.13**	**344**	*eP*			**P**	**03 17 41.4**	**-2.2**
	comp=Z,54nm,0.8s,mb5.7								
WVT					*ep*P		pP	03 17 52.0	-2.1
WVT	**Waverly**	**61.13**	**344**	*eP*			**P**	**03 17 41.4**	**-2.1**
WVT					*e**PP		pP	03 17 52.0	-2.1
WVT					pmax		pmax		
	comp=Z,54nm,0.8s,mb5.7								
UALR	**University of**	**61.18**	**339**	*eP*			**P**	**03 17 43.1**	**-0.8**
	comp=Z,84nm,1.3s,mb5.7								
UALR					*ep*P		pP	03 17 53.1	-1.4
TXAR	**Lajitas Array**	**61.19**	**327**	P			**P**	**03 17 43.8**	**-0.3**
	comp=Z,7.4nm,0.8s,mb4.9,baz=148,slow=8.1,SNR=99								
TXAR					*ep*		pP	03 17 53.5	-1.1
	comp=Z,6.8nm,0.7s,baz=156,slow=8.7,SNR=12								
TXAR					PcP		PcP	03 18 26.5	0.0
	comp=Z,4.3nm,0.8s,baz=171,slow=7.8,SNR=4.6								
TXAR					S		**S**	**03 26 04.1**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=337,slow=18,SNR=2.6								
TXAR					LR		LR	03 40 42.6	
	comp=Z,492nm,20.6s,MS4.6,baz=5.0,slow=33								
TXAR					PKP2bc			03 47 05.5	
	comp=Z,0.4nm,0.8s,baz=241,slow=1.3,SNR=4.8								
TXAR					PKP2ab			03 47 13.1	
	comp=Z,0.8nm,0.9s,baz=302,slow=2.8,SNR=5.4								
TXAR	**Lajitas Array**	**61.19**	**327**	P			**P**	**03 17 43.8**	**-0.3**
TXAR					*ep*		pP	03 17 53.5	-1.1
TXAR					PcP		PcP	03 18 26.5	0.0
TXAR					S		**S**	**03 26 04.1**	**+2.6**
TXAR					LR		LR	03 40 42.6	
TXAR				⇑*e*				03 47 05.5	
TXAR					P'P'ab			03 47 13.1	
TXAR	**Lajitas Array**	**61.19**	**327**	P			**P**	**03 17 43.8**	**-0.3**
TXAR					*PP		pP	03 17 53.5	-1.1
TXAR								03 18 26.5	
TXAR					S		**S**	**03 26 04.1**	**+2.7**
CBN	**Corbin**	**61.26**	**354**	*eP*			**P**	**03 17 44.1**	**-0.2**
	comp=Z,74nm,1.3s,mb5.7								
CBN					*ep*P		pP	03 17 52.9	-2.0
SNAA	**Sanae**	**61.27**	**161**	*eP*			**P**	**03 17 42.8**	**-1.2**
SNAA					*e*		pP	03 17 51.6	-3.0
SNAA					*e*			03 17 56.7	
SNAA	**Sanae**	**61.27**	**161**	*eP*			**P**	**03 17 42.6**	**-1.5**
	comp=Z,49nm,0.9s,mb5.6								
SNAA	**Sanae**	**61.27**	**161**	*eP*			**P**	**03 17 42.8**	**-1.2**
SNAA					pmax		pmax		
	comp=Z,94nm,1.6s								
MIAR	**Mount Ida**	**61.38**	**338**	*eP*			**P**	**03 17 44.4**	**-0.9**
	comp=Z,58nm,1.0s,mb5.7								
MIAR					*ep*P		pP	03 17 55.0	-0.9
MIAR	**Mount Ida**	**61.38**	**338**	*eP*			**P**	**03 17 44.4**	**-0.9**
MIAR					*e**PP		pP	03 17 55.0	-0.8
MIAR					pmax		pmax		
	comp=Z,58nm,1.0s,mb5.7								
GNAR	**Gosnell**	**61.57**	**342**	*eP*			**P**	**03 17 45.8**	**-0.7**
	comp=Z,1μm,1.1s								
GNAR					*ep*P		pP	03 17 55.9	-1.2
PARMO	**Parma**	**62.15**	**342**	*eP*			**P**	**03 17 49.5**	**-0.9**
PARMO					*ep*P		pP	03 17 59.8	-1.1
SDMD	**Soldier's Deli**	**62.40**	**354**	*eP*			**P**	**03 17 51.9**	**-0.1**
	comp=Z,32nm,0.9s,mb5.5								
SDMD					*ep*P		pP	03 18 02.5	0.0
WCI	**Wyandotte Cave**	**62.75**	**346**	*eP*			**P**	**03 17 52.6**	**-1.8**
	comp=Z,41nm,0.8s,mb5.6								
WCI					*ep*P		pP	03 18 02.7	-2.2
WCI	**Wyandotte Cave**	**62.75**	**346**	*eP*			**P**	**03 17 52.6**	**-1.8**
WCI					*e**PP		pP	03 18 02.7	-2.3
WCI					pmax		pmax		
	comp=Z,41nm,0.8s,mb5.6								
USIN	**University of**	**62.83**	**345**	*eP*			**P**	**03 17 53.2**	**-1.7**
	comp=Z,52nm,0.9s,mb5.7								
USIN					*ep*P		pP	03 18 03.6	-1.9
MVL	**Millersville**	**62.94**	**355**	*eP*			**P**	**03 17 55.3**	**-0.3**
	comp=Z,29nm,0.9s,mb5.4								
MCWV	**Mont Chateau**	**62.98**	**352**	*eP*			**P**	**03 17 55.4**	**-0.5**
	comp=Z,35nm,0.8s,mb5.5								
SIUC	**Southern Illin**	**62.99**	**343**	*eP*			**P**	**03 17 54.4**	**-1.6**
	comp=Z,78nm,0.8s,mb5.9								
WMOK	**Wichita Mounta**	**63.51**	**334**	*eP*			**P**	**03 17 57.9**	**-1.5**
	comp=Z,18nm,1.3s,mb4.9								
WMOK	**Wichita Mounta**	**63.51**	**334**	*eP*			**P**	**03 17 57.9**	**-1.6**
WMOK					pmax		pmax		
	comp=Z,18nm,1.3s,mb4.9								
FVM	**French Village**	**63.57**	**342**	*eP*			**P**	**03 17 58.6**	**-1.2**
	comp=Z,62nm,0.7s,mb5.8								
FVM					*ep*P		pP	03 18 09.1	-1.3
FVM	**French Village**	**63.57**	**342**	*eP*			**P**	**03 17 58.6**	**-1.2**
FVM					*e**PP		pP	03 18 09.1	-1.3
FVM					pmax		pmax		
	comp=Z,62nm,0.7s,mb5.8								
OLIL	**Olney**	**63.66**	**344**	*eP*			**P**	**03 17 58.4**	**-2.0**
	comp=Z,22nm,0.8s,mb5.2								
OLIL					*ep*P		pP	03 18 08.8	-2.2
BLO	**Bloomington**	**63.71**	**346**	*eP*			**P**	**03 17 58.9**	**-1.8**
	comp=Z,30nm,0.7s,mb5.4								
BLO					*ep*P		pP	03 18 09.4	-1.9
BLO	**Bloomington**	**63.71**	**346**	*eP*			**P**	**03 17 58.9**	**-1.8**
BLO					*e**PP		pP	03 18 09.4	-1.9
BLO					pmax		pmax		
	comp=Z,30nm,0.7s,mb5.4								
SSPA	**Standing Stone**	**63.72**	**354**	*eP*			**P**	**03 18 00.7**	**0.0**
	comp=Z,27nm,1.0s,mb5.2								
GDL2	**Guadalupe Moun**	**63.87**	**328**	*eP*			**P**	**03 18 02.2**	**+0.3**
ACSO	**Alum Creek Sta**	**64.03**	**349**	*eP*			**P**	**03 18 01.5**	**-1.3**
	comp=Z,60nm,0.9s,mb5.6								
ACSO					*ep*P		pP	03 18 11.9	-1.5
SLM	**Saint Louis**	**64.13**	**343**	*eP*			**P**	**03 18 02.3**	**-1.2**
	comp=Z,57nm,1.2s,mb5.5								
SLM					*ep*P		pP	03 18 12.4	-1.7
SLM	**Saint Louis**	**64.13**	**343**	*eP*			**P**	**03 18 02.3**	**-1.2**
SLM					*e**PP		pP	03 18 12.

comp=Z,470nm,20.0s,MS4.7
WUAZ Wupatki 70.05 325 *e*P P **03 18 42.4 +1.3**
comp=Z,68nm,1.1s,mb5.5
GLA Glamis 70.12 321 *e*P P **03 18 42.6 +0.9**
comp=Z,108nm,1.8s,mb5.5
GLA *e*pP pP 03 18 52.3 -0.1
GLA Glamis 70.12 321 *e*P P **03 18 42.6 +0.9**
GLA *e**PP pP 03 18 52.3 -0.1
GLA pmax pmax
comp=Z,108nm,1.8s,mb5.5
OGNE Ogallala 70.16 335 *e*P P **03 18 41.9 +0.2**
comp=Z,67nm,1.1s,mb5.5
OGNE *e*pP pP 03 18 52.4 0.0
TIC Toumodi 70.18 73 *e*P P **03 18 41.8 -0.6**
comp=Z,240nm,1.1s,mb6.0
TIC Toumodi 70.18 73 *e*P P **03 18 41.8 -0.6**
TIC pmax pmax
comp=Z,240nm,1.1s,mb6.0
KIC Kosan Boka 70.30 74 *e*P P **03 18 42.6 -0.6**
comp=Z,296nm,0.9s,mb6.2
DBIC Dimbokro 70.33 74 P P **03 18 42.9 -0.5**
comp=Z,555nm,0.8s,mb5.5,baz=214,slow=6.0,SNR=69
DBIC S S 03 27 54.6 +0.9
comp=Z,3.2nm,1.0s,baz=68,slow=8.0,SNR=2.4
DBIC LR LR 03 50 43.6
comp=Z,892nm,18.2s,MS5.1,baz=216,slow=37
DBIC Dimbokro 70.33 74 *e*P P **03 18 43.0 -0.4**
comp=Z,73nm,0.9s,mb5.6
DBIC Dimbokro 70.33 74 *e*P P **03 18 43.0 -0.4**
DBIC pmax pmax
comp=Z,73nm,0.9s
ISCO Idaho Springs 70.67 332 *e*P P **03 18 45.7 +0.8**
comp=Z,61nm,1.5s,mb5.3
ISCO Idaho Springs 70.67 332 *e*P P **03 18 45.7 +0.8**
ISCO pmax pmax
comp=Z,61nm,1.5s,mb5.3
PV01 Paradox Valley 70.68 329 *e*P P **03 18 45.8 +0.9**
PV01 *e*pP pP 03 18 56.2 +0.6
ECSD EROS,Sioux Fal 70.70 340 *e*P P **03 18 43.8 -1.1**
comp=Z,33nm,1.0s,mb5.2
SMCO Snowmass 70.77 330 *e*P P **03 18 46.6 +1.1**
comp=Z,29nm,0.8s,mb5.3
SMCO *e*pP pP 03 18 56.8 +0.6
PV10 Paradox Valley 71.09 329 *e*P P **03 18 48.0 +0.6**
LDFC Landfair 71.75 322 *e*P P **03 18 53.0 +1.5**
comp=Z,46nm,1.5s,mb5.2
PHWY Pilot Hill 71.85 333 *e*P P **03 18 52.8 +0.9**
EGOM La Gomera 72.13 48 P P **03 18 53.8 -0.1**
comp=Z,46nm,0.8s,mb5.5
SRU San Rafael 72.39 328 *e*P P **03 18 55.8 +0.6**
comp=Z,31nm,0.8s,mb5.3
SRU *e*pP pP 03 19 05.9 0.0
SRU San Rafael 72.39 328 *e*P P **03 18 55.8 +0.6**
SRU *e**PP pP 03 19 05.9 -0.1
SRU pmax pmax
comp=Z,31nm,0.8s,mb5.3
CCAN Las Canadas 72.58 48 P P **03 18 56.6 0.0**
comp=Z,22nm,0.8s,mb5.2
CCUT Cedar City 72.63 325 *e*P P **03 18 58.4 +1.7**
CCUT *e*pP pP 03 19 08.9 +1.4
MSU Marysvale 72.75 327 *e*P P **03 18 58.5 +1.1**
MSU *e*pP pP 03 19 09.1 +1.0
SHPR Sheep Range 72.82 323 *e*P P **03 18 58.9 +1.0**
MWC Mount Wilson 72.84 320 *e*P P **03 18 59.2 +1.2**
comp=Z,148nm,2.2s,mb5.5
MWC Mount Wilson 72.84 320 *e*P P **03 18 59.2 +1.1**
MWC pmax pmax
comp=Z,148nm,2.2s,mb5.5
ARUT Antelope Range 72.85 325 *e*P P **03 18 59.9 +1.9**
ARUT *e*pP pP 03 19 09.5 +0.8
TMUT Trail Mountain 72.87 328 *e*P P **03 18 59.4 +1.3**
TMUT *e*pP pP 03 19 09.5 +0.6
GSC Goldstone 72.88 322 *e*P P **03 18 59.7 +1.5**
comp=Z,30nm,1.4s,mb5.0
GSC *e*pP pP 03 19 09.7 +0.7
GSC Goldstone 72.88 322 *e*P P **03 18 59.7 +1.5**
GSC *e**PP pP 03 19 09.7 +0.7
GSC pmax pmax
comp=Z,30nm,1.4s,mb5.0
RWWY Rawlins 72.92 332 *e*P P **03 18 58.9 +0.6**
comp=Z,30nm,0.9s,mb5.2
RWWY *e*pP pP 03 19 09.0 -0.1
EYMN Ely 73.17 345 *e*P P **03 18 58.6 -1.0**
comp=Z,34nm,0.9s,mb5.3
EOSO Osorio 73.21 49 P P **03 19 02.0 +1.6**
comp=Z,21nm,0.8s,mb5.1
MPU Maple Canyon 73.63 328 *e*P P **03 19 03.4 +0.8**
comp=Z,34nm,1.0s,mb5.2
RSSD Black Hills 73.64 335 *e*P P **03 19 02.8 +0.3**
comp=Z,20nm,0.8s,mb5.1
RSSD Black Hills 73.64 335 *e*P P **03 19 02.8 +0.3**
RSSD pmax pmax
comp=Z,20nm,0.8s,mb5.1
TPNV Topopah Spring 73.74 323 *e*P P **03 19 04.6 +1.3**
comp=Z,30nm,1.1s,mb5.1
TPNV Topopah Spring 73.74 323 *e*P P **03 19 04.6 +1.3**
TPNV pmax pmax
comp=Z,30nm,1.1s,mb5.1
DAU Daniels Canyon 73.75 329 *e*P P **03 19 04.5 +1.2**
DAU *e*pP pP 03 19 15.5 +1.5
PPT Papeete 73.80 257 *e*P P **03 19 03.2 -0.9**
comp=Z,111nm,26.8s
PPT *e*S S 03 28 33.1 -0.3
comp=Z,697nm,28.0s
PPT Papeete 73.80 257 *e*LR LR 03 41 50.1
comp=Z,3µm,27.2s,baz=108
PPT Papeete 73.80 257 LR LR 03 43 08.6
comp=Z,738nm,19.5s,MS5.0,baz=80,slow=29
NLU North Lily Min 73.80 328 *e*P P **03 19 02.8 -0.8**
NLU *e*pP pP 03 19 13.2 -1.1
JLU Jordanelle 73.99 329 *e*P P **03 19 05.5 +0.9**
JLU *e*pP pP 03 19 15.8 +0.4
ISA Isabella 74.09 321 *e*P P **03 19 06.3 +0.9**
comp=Z,14nm,0.9s,mb4.9
ISA *e*pP pP 03 19 16.5 +0.4
ISA Isabella 74.09 321 *e*P P **03 19 06.3 +0.9**
ISA *e**PP pP 03 19 16.5 +0.3
ISA pmax pmax
comp=Z,14nm,0.9s,mb4.9
SBA Scott Base 74.13 191 *e*P P **03 19 06.8 +1.7**
comp=Z,81nm,1.2s,mb5.5
SBA *e*pP pP 03 19 17.1 +1.3
SBA Scott Base 74.13 191 *e*P P **03 19 06.8 +1.8**
SBA *e**PP pP 03 19 17.1 +1.3
SBA pmax pmax
comp=Z,81nm,1.2s,mb5.5
DUG Dugway 74.35 327 *e*P P **03 19 07.5 +0.8**
comp=Z,26nm,0.9s,mb5.2
DUG Dugway 74.35 327 *e*P P **03 19 07.5 +0.8**
DUG pmax pmax
comp=Z,26nm,0.9s,mb5.2
CFTV Fuerteventura 74.44 49 P P **03 19 07.7 +0.1**
comp=Z,18nm,0.8s,mb5.1
AGMN Agassiz Refuge 74.61 343 *e*P P **03 19 07.1 -1.0**
comp=Z,38nm,0.9s,mb5.3
AGMN *e*pP pP 03 19 17.4 -1.5
PDAR Pinedale Array 74.82 331 P P **03 19 09.2 -0.2**
comp=Z,2.5nm,0.7s,mb4.3,baz=143,slow=7.0,SNR=22
PDAR pP pP 03 19 18.2 -2.0
comp=Z,4.7nm,0.6s,baz=128,slow=6.8,SNR=9.0
BW06 Boulder Array 74.82 331 *e*P P **03 19 09.3 -0.2**
comp=Z,12nm,0.9s,mb4.8
HWUT Hardware Ranch 74.83 329 *e*P P **03 19 09.7 +0.2**
comp=Z,24nm,0.9s,mb5.1
HWUT *e*pP pP 03 19 20.2 -0.1
BGU Big Grassy Mou 75.01 328 *e*P P **03 19 10.9 +0.3**
BGU *e*pP pP 03 19 21.2 -0.2
SPUT South Promonto 75.02 328 *e*P P **03 19 11.1 +0.5**
TPH Tonopah 75.09 323 *e*P P **03 19 12.0 +0.9**
comp=Z,11nm,0.8s,mb4.8
TPH Tonopah 75.09 323 *e*P P **03 19 12.0 +0.9**
TPH pmax pmax
comp=Z,11nm,0.8s,mb4.8
VNDA Vanda 75.16 190 P P **03 19 12.4 +1.4**
comp=Z,6.6nm,0.8s,mb4.6,baz=133,slow=4.8,SNR=37
VNDA *e*pP pP 03 19 21.6 -0.2
comp=Z,22nm,1.0s,baz=154,slow=1.8,SNR=17
VNDA LR LR 03 54 15.7
comp=Z,343nm,18.4s,MS4.7,baz=146,slow=37
VNDA Vanda 75.16 190 P P **03 19 12.5 +1.5**
VNDA *PP pP 03 19 21.6 -0.2
AHID Auburn Hatcher 75.51 330 *e*P P **03 19 13.9 +0.4**
comp=Z,28nm,0.8s,mb5.2
SYO Syowa Base 75.52 160⇑*i*P P **03 19 12.0 -1.2**
SYO Syowa Base 75.52 160⇓*i*PcP PcP 03 19 24.8 -1.3
HVU Hansel Valley 75.54 329 *e*P P **03 19 13.6 0.0**
comp=Z,18nm,0.9s,mb5.0
HVU Hansel Valley 75.54 329 *e*P P **03 19 13.6 0.0**
HVU pmax pmax
comp=Z,18nm,0.9s,mb5.0
SNOW Snow King Moun 75.90 331 *e*P P **03 19 16.4 +0.7**
comp=Z,24nm,0.8s,mb5.2
SNOW *e*pP pP 03 19 26.6 +0.1
NVAR Mina Array Bea 75.94 323 P P **03 19 16.8 +0.8**
comp=Z,7.1nm,0.8s,mb4.7,baz=154,slow=6.3,SNR=60
NVAR pP pP 03 19 26.8 +0.1
comp=Z,5.9nm,0.8s,baz=156,slow=6.9,SNR=9.2
LOHW Long Hollow 75.95 331 *e*P P **03 19 16.5 +0.6**
comp=Z,34nm,1.3s,mb5.1
ELK Elko 75.98 326 *e*P P **03 19 16.9 +0.7**
comp=Z,12nm,0.9s,mb4.8
ELK Elko 75.98 326 *e*P P **03 19 16.9 +0.8**
ELK pmax pmax
comp=Z,12nm,0.9s
TPAW Teton Pass 76.01 331 *e*P P **03 19 16.8 +0.5**
comp=Z,22nm,0.8s,mb5.2
TPAW *e*pP pP 03 19 27.1 +0.1
RRI2 Red Ridge 76.07 330 *e*P P **03 19 17.2 +0.7**
comp=Z,29nm,0.9s,mb5.2
DCID1 Drake Creek 76.20 331 *e*P P **03 19 18.5 +1.1**
comp=Z,33nm,1.0s,mb5.2
IMW Indian Meadow 76.33 331 *e*P P **03 19 18.6 +0.6**
comp=Z,69nm,1.5s,mb5.4
ULM Lac du Bonnet 76.39 343 P P **03 19 17.0 -1.2**
comp=Z,16nm,0.7s,mb5.0,baz=155,slow=6.2,SNR=11
ULM LR LR 03 55 36.4
comp=Z,516nm,21.8s,MS4.8,baz=100,slow=38
ULM Lac du Bonnet 76.39 343 *e*P P **03 19 17.0 -1.2**
comp=Z,21nm,0.9s,mb5.1
RLMT Red Lodge 76.57 333 *e*P P **03 19 19.8 +0.4**
comp=Z,22nm,0.8s,mb5.2
LKWY Lake 76.62 332 *e*P P **03 19 21.5 +1.8**
comp=Z,17nm,0.9s,mb5.0
LKWY Lake 76.62 332 *e*P P **03 19 21.5 +1.8**
LKWY pmax pmax
comp=Z,17nm,0.9s,mb5.0
WAKR Walker 76.62 322 *e*P P **03 19 21.0 +1.1**
LAO LASA Array 76.63 335 *e*P P **03 19 19.6 -0.1**
comp=Z,50nm,1.0s,mb5.4
YFT Old Faithful 76.72 331 *e*P P **03 19 22.6 +2.4**
CMB Columbia Colle 76.84 321 *e*P P **03 19 21.4 +0.3**
comp=Z,15nm,1.3s,mb4.8
CMB Columbia Colle 76.84 321 *e*P P **03 19 21.4 +0.3**
CMB pmax pmax
comp=Z,15nm,1.3s,mb4.8
YNR Norris Junctio 76.86 332 *e*P P **03 19 22.8 +1.7**
YMR Madison River 76.95 331 *e*P P **03 19 23.0 +1.5**
comp=Z,31nm,0.8s,mb5.3
GCMT Greycliff 77.28 333 *e*P P **03 19 23.7 +0.4**
QLMT Earthquake Lak 77.28 331 *e*P P **03 19 25.0 +1.6**
DGMT Dagmar 77.38 338 *e*P P **03 19 24.3 +0.4**
PAHR Pah Rah Range 77.43 323 *e*P P **03 19 25.5 +1.1**
comp=Z,46nm,0.8s,mb5.5
HLID Hailey 77.68 329 *e*P P **03 19 26.7 +1.0**
comp=Z,29nm,0.8s,mb5.3
MCMT McKenzie Canyo 77.91 330 *e*P P **03 19 28.1 +1.2**
BOZ Bozeman (W) 78.00 332 *e*P P **03 19 27.9 +0.5**
DLMT Dillon 78.21 331 *e*P P **03 19 29.2 +0.6**
comp=Z,20nm,0.9s,mb5.0
OHCM Honcut 78.36 322 *e*P P **03 19 29.9 +0.3**
NSHM Saint Helena R 78.45 321 *e*P P **03 19 31.0 +0.9**
LRM Limekiln Ridge 78.50 331 *e*P P **03 19 30.9 +0.7**
SUR Sutherland 78.87 120 P P **03 19 34.6 +1.9**
comp=Z,379nm,0.9s,mb6.3,SNR=11
SUR Sutherland 78.87 120 *e*P P **03 19 34.1 +1.4**
comp=Z,48nm,0.8s,mb5.5
HRY Hotter Researc 78.92 332 *e*P P **03 19 33.6 +1.1**
TOA0 Torodi Ar. Sit 79.01 71 *e*P P **03 19 33.0 -0.6**
TORD Torodi Ar. Bea 79.01 71 P P **03 19 32.9 -0.8**
comp=Z,73nm,0.8s,mb5.7,baz=255,slow=4.9,SNR=624
TORD S S 03 29 30.2 -0.4
comp=Z,0.6nm,1.1s,baz=284,slow=2.7,SNR=3.2
TORD PKKP PKKPbc 03 38 19.1 -6.7
comp=Z,0.6nm,1.0s,baz=224,slow=6.2,SNR=3.5
TORD PKKPbc PKKPbc 03 38 26.2 +0.4
comp=Z,0.2nm,0.4s,baz=59,slow=2.1,SNR=9.0
TORD LR LR 03 55 23.8
comp=Z,612nm,18.1s,MS5.0,baz=240,slow=36
EGMT Eagleton 79.10 334 *e*P P **03 19 33.3 -0.1**
comp=Z,61nm,1.4s,mb5.3
MOD Modoc 79.46 324 *e*P P **03 19 36.1 +0.5**
comp=Z,26nm,1.1s,mb5.1
CHMT Chamberlain Mo 79.70 332 *e*P P **03 19 37.8 +1.1**
CHMT *e*pP pP 03 19 47.9 +0.3
WDC Whiskeytown Da 79.79 322 *e*P P **03 19 36.3 -1.0**
comp=Z,13nm,0.8s,mb4.9
WDC Whiskeytown Da 79.79 322 *e*P P **03 19 36.3 -1.1**
WDC pmax pmax
comp=Z,13nm,0.8s,mb4.9
MSO Missoula 79.94 331 *e*P P **03 19 38.7 +0.7**
comp=Z,34nm,1.8s,mb5.0
BMO Blue Mountains 80.03 328 *e*P P **03 19 38.8 +0.3**
comp=Z,25nm,1.2s,mb5.0
BMO *e*pP pP 03 19 49.6 +0.2
YBH Yreka Blue Hor 80.66 323 *e*P P **03 19 41.5 -0.5**
TSUM Tsumeb 80.78 107 P P **03 19 44.2 +1.0**
comp=Z,48nm,0.9s,mb5.5,baz=232,slow=5.4,SNR=47
TSUM Tsumeb 80.78 107 *e*P P **03 19 44.0 +0.8**
comp=Z,62nm,1.0s,mb5.5
BSMT Bassoo Peak 81.09 331 *e*P P **03 19 44.1 0.0**
KTRM Thompson Ridge 81.15 323 P P **03 19 45.1 +0.5**
LNOR Lincton Mounta 81.24 328 *e*P P **03 19 44.8 -0.2**
RAR Rarotonga 81.57 251 LR LR 03 47 13.7
comp=Z,546nm,18.3s,MS5.0,baz=102,slow=29
WALA Waterton Lakes 81.63 333 *e*P P **03 19 47.2 +0.2**
comp=Z,31nm,0.8s,mb5.3
FFC Flin Flon 82.07 342 P P **03 19 48.8 -0.3**
comp=Z,135nm,0.9s,mb5.3,SNR=5.5
FFC Flin Flon 82.07 342 *e*P P **03 19 48.4 -0.7**
comp=Z,40nm,1.4s,mb5.2
FFC *e*pP pP 03 20 00.1 +0.1
FFC Flin Flon 82.07 342 *e*P P **03 19 48.4 -0.8**
FFC *e**PP pP 03 20 00.1 +0.1
FFC pmax pmax
comp=Z,41nm,1.4s,mb5.2
HAWA Hanford 82.22 328 *e*P P **03 19 50.5 +0.3**
RSW Rattlesnake Hi 82.25 328 P P **03 19 50.8 +0.5**
WRD Warden 82.33 329 P P **03 19 51.8 +1.1**
NEW Newport 82.44 331 *e*P P **03 19 50.9 -0.3**
OD2 Odessa Site #2 82.54 329 P P **03 19 51.9 +0.1**
EBG Ellensburg 83.09 328 P P **03 19 55.5 +0.8**
MAW Mawson 83.24 164⇑*i*P P **03 19 55.4 +0.1**
comp=Z,40nm,0.9s,mb5.5
MAW Mawson 83.24 164 P P **03 19 55.7 +0.4**
comp=Z,47nm,0.8s,mb5.6,baz=215,slow=5.9,SNR=35
MAW S S 03 30 15.2 +2.3
comp=Z,4.8nm,0.9s,baz=283,slow=8.0,SNR=2.3
MAW LR LR 03 56 55.7
comp=Z,958nm,19.9s,MS5.2,baz=229,slow=36
MAW Mawson 83.24 164 *e*P P **03 19 55.7 +0.4**
comp=Z,61nm,0.9s,mb5.6
MAW *e*pP pP 03 20 06.2 +0.1
MAW Mawson 83.24 164 *e*P P **03 19 55.7 +0.4**
MAW *e**PP pP 03 20 06.2 0.0
MAW pmax pmax
comp=Z,61nm,0.9s
WTV Waterville 83.35 329 P P **03 19 55.7 -0.3**
ETW Entiat 83.47 328 *e*P P **03 19 57.2 +0.6**
BOSA Boshof 83.81 118 P P **03 19 59.0 0.0**
comp=Z,46nm,0.8s,mb5.7,baz=255,slow=4.2,SNR=58
BOSA S S 03 30 23.0 +2.8
comp=Z,1.2nm,0.8s,baz=60,slow=15,SNR=1.8
BOSA LR LR 03 54 48.2
comp=Z,780nm,18.7s,MS5.1,baz=249,slow=34
BOSA Boshof 83.81 118 *e*P P **03 19 59.0 0.0**
comp=Z,51nm,0.8s,mb5.7
BOSA Boshof 83.81 118 *e*P P **03 19 59.0 0.0**
BOSA pmax pmax
comp=Z,51nm,0.8s,mb5.7
FCC Fort Churchill 83.83 348 *e*P P **03 19 57.5 -0.7**
LIS Lisbon 83.89 44 *e*P P **03 19 59.3 +0.3**
EGRO El Granado 84.28 45 P P **03 20 02.4 +1.4**
comp=Z,46nm,1.1s,mb5.5
ALMR Almeirim 84.50 43 *e*P P **03 20 02.4 +0.3**
EVO Evora 84.51 44⇑*i*P P **03 20 02.3 +0.2**
comp=Z,78nm,1.0s,mb5.5
EVO *e*MLR MLR
comp=Z,1µm,22.5s,MS4.9
EDM Edmonton 84.61 336 *e*P P **03 20 01.0 -1.3**
RPW Rockport 84.62 329 *e*P P **03 20 01.5 -0.9**
RPW *e*pP pP 03 20 12.6 -0.8
JCW Jim Creek 84.65 328 *e*P P **03 20 02.0 -0.5**
EMIN Mina Concepcio 84.94 45 P P **03 20 05.3 +0.9**
comp=Z,80nm,0.8s,mb5.9
ESPR Espera 84.98 47 P P **03 20 06.2 +1.6**
comp=Z,78nm,0.9s,mb5.8
EJIF Jimena Fronter 85.02 47 P P **03 20 05.3 +0.6**
comp=Z,57nm,0.8s,mb5.8
EJIF Jimena Fronter 85.02 47 P P **03 20 05.3 +0.6**
EJIF pmax pmax
comp=Z,57nm,0.8s,mb5.8
EBAD Badajoz 85.28 44 P P **03 20 06.8 +0.8**
comp=Z,44nm,0.9s,mb5.6
LBTB Lobatse 85.49 115 *e*P P **03 20 07.4 -0.1**
comp=Z,44nm,1.1s,mb5.5
LBTB Lobatse 85.49 115 *e*P P **03 20 07.4 -0.1**
LBTB pmax pmax
comp=Z,44nm,1.1s,mb5.5
EMIJ Mijas 85.55 47 P P **03 20 07.7 +0.3**
comp=Z,59nm,0.8s,mb5.9
MTE Manteigas 85.87 43 *e*P P **03 20 09.2 +0.3**
comp=Z,56nm,0.8s,mb5.8
ELOJ Sierra Loja 86.28 47 P P **03 20 12.3 +1.3**
comp=Z,44nm,0.8s,mb5.7
ELOJ Sierra Loja 86.28 47 P P **03 20 12.3 +1.3**
ELOJ pmax pmax
comp=Z,44nm,0.8s,mb5.7
ELOB Lobios 86.39 41 P P **03 20 10.5 -0.9**
comp=Z,22nm,1.0s,mb5.3
ELUQ Luque 86.43 47 P P **03 20 12.1 +0.4**
comp=Z,117nm,1.0s,mb6.1
ELUQ Luque 86.43 47 P P **03 20 12.1 +0.4**
ELUQ pmax pmax
comp=Z,117nm,1.0s,mb6.1
ERON Agron 86.45 47 P P **03 20 11.5 -0.3**
comp=Z,15nm,0.8s,mb5.3
EGUA Guajares 86.51 48 P P **03 20 12.9 +0.7**
comp=Z,71nm,1.0s,mb5.8
EGUA Guajares 86.51 48 P P **03 20 12.9 +0.8**
EGUA pmax pmax
comp=Z,71nm,1.0s,mb5.8
EADA Adamuz 86.55 46 P P **03 20 12.5 +0.2**
comp=Z,32nm,0.8s,mb5.6
TAM Tamanrasset 86.58 64 *e*P P **03 20 13.3 +0.5**
TAM *e*pP pP 03 20 23.3 -0.5
EPLA Plasencia 86.61 44 P P **03 20 13.5 +0.9**
comp=Z,28nm,0.9s,mb5.5
EPLA Plasencia 86.61 44 P P **03 20 13.5 +1.0**
EPLA pmax pmax
comp=Z,28nm,0.9s,mb5.5
STS Santiago 86.69 40 P P **03 20 12.5 -0.3**
comp=Z,22nm,1.1s,mb5.3
STS Santiago 86.69 40 P P **03 20 12.5 -0.4**
STS pmax pmax
comp=Z,22nm,1.1s,mb5.3
ECOG Cogollos-Vega 86.75 47 P P **03 20 13.9 +0.6**
comp=Z,15nm,1.0s,mb5.2
ECOG Cogollos-Vega 86.75 47 P P **03 20 13.9 +0.6**
ECOG pmax pmax
comp=Z,15nm,1.0s,mb5.2
EBER Berja 87.01 48 P P **03 20 17.1 +2.5**
comp=Z,18nm,0.8s,mb5.3
EBAN Banos Encina 87.07 46 P P **03 20 15.7 +0.9**
comp=Z,29nm,0.8s,mb5.6
EBAN Banos Encina 87.07 46 P P **03 20 15.7 +0.9**
EBAN pmax pmax
comp=Z,29nm,0.8s,mb5.6
ECAL Calabor 87.25 42 P P **03 20 16.0 +0.4**
comp=Z,13nm,0.7s,mb5.3
ERUA La Rua 87.25 41 P P **03 20 15.2 -0.5**
comp=Z,15nm,0.6s,mb5.4
ERUA La Rua 87.25 41 P P **03 20 15.2 -0.4**
ERUA pmax pmax
comp=Z,15nm,0.6s,mb5.4
EQES Quesada 87.36 47 P P **03 20 16.1 -0.2**
comp=Z,12nm,0.8s,mb5.2
PAB San Pablo 87.44 45 *e*P P **03 20 17.0 +0.4**
comp=Z,43nm,1.4s,mb5.5
PAB pP pP 03 20 28.0 +0.4
PAB San Pablo 87.44 45 *e*P P **03 20 17.0 +0.4**
PAB *PP pP 03 20 28.0 +0.4
PAB pmax pmax
comp=Z,43nm,1.4s,mb5.5
ENIJ Nijar 87.51 48 P P **03 20 16.6 -0.4**
comp=Z,4.0nm,0.5s,mb4.9
ENIJ Nijar 87.51 48 P P **03 20 16.7 -0.3**
ENIJ pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
EHUE Huescar 87.69 47 P P **03 20 17.5 -0.4**
comp=Z,13nm,0.9s,mb5.2
EHUE Huescar 87.69 47 P P **03 20 17.5 -0.3**
EHUE pmax pmax
comp=Z,13nm,0.9s,mb5.2
DRV Dumont d'Urvil 87.74 192 S S 03 30 42.0 -15
DRV R 03 49 00.0
ESDC Sonseca Array 87.76 45 P P **03 20 18.2 +0.1**
comp=Z,8.1nm,0.8s,mb5.0,baz=251,slow=4.2,SNR=21
ESDC LR LR 03 56 03.6
comp=Z,404nm,21.9s,MS4.8,baz=240,slow=33
ESDC Sonseca Array 87.76 45 P P **03 20 18.3 +0.1**
comp=Z,13nm,0.9s,mb5.2
GUD Guadarrama 88.16 44 P P **03 20 19.4 -0.6**
comp=Z,7.6nm,1.0s,mb4.9
GUD Guadarrama 88.16 44 P P **03 20 19.4 -0.6**
GUD pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
EVIA Vianos 88.18 46 P P **03 20 21.7 +1.6**
comp=Z,16nm,0.8s,mb5.3
EVIA Vianos 88.18 46 P P **03 20 21.7 +1.6**
EVIA pmax pmax
comp=Z,17nm,0.8s,mb5.3
EMUR La Murta 88.62 48 P P **03 20 23.8 +1.5**
comp=Z,9.3nm,0.8s,mb5.2
ETOB Tobarra 88.82 47 P P **03 20 23.1 0.0**
comp=Z,19nm,0.8s,mb5.5
ETOR Torete 89.60 45 P P **03 20 26.3 -0.5**
comp=Z,22nm,0.9s,mb5.5
ETOR Torete 89.60 45 P P **03 20 26.3 -0.5**
ETOR pmax pmax
comp=Z,22nm,0.9s,mb5.5
ECHE Chera 89.69 46 P P **03 20 27.8 +0.6**
comp=Z,15nm,0.9s,mb5.3
ECHE Chera 89.69 46 P P **03 20 27.8 +0.6**
ECHE pmax pmax
comp=Z,15nm,0.9s,mb5.3
CASY Casey 90.99 180 *e*P P **03 20 33.7 +0.8**
CASY Casey 90.99 180 *e*P P **03 20 34.2 +1.2**
comp=Z,65nm,1.1s,mb5.9
CASY *e*pP pP 03 20 44.2 +0.3
SJPF Ste Jean 91.31 43 *e*P P **03 20 34.7 0.0**
comp=Z,26nm,0.9s,mb5.2
SJPF Ste Jean 91.31 43 *e*P P **03 20 34.7 0.0**
comp=Z,13nm,0.9s,mb5.2
SJPF Ste Jean 91.31 43 *e*P P **03 20 34.7 0.0**
SJPF pmax pmax
comp=Z,13nm,0.9s,mb5.3
ETSF Etsaut 91.62 44 *e*P P **03 20 35.5 -0.7**
comp=Z,13nm,0.7s,mb5.1
ETSF Etsaut 91.62 44 *e*P P **03 20 35.5 -0.7**
comp=Z,6.5nm,0.7s,mb5.1
ETSF Etsaut 91.62 44 *e*P P **03 20 35.5 -0.7**
ETSF pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
LSZ Lusaka 91.63 107 P P **03 20 39.2 +2.3**
comp=Z,7.6nm,0.9s,mb5.0,baz=234,slow=4.6,SNR=14
YKA Yellowknife Ar 92.20 341 P P **03 20 37.3 -1.0**
comp=Z,16nm,0.7s,mb5.5,baz=138,slow=4.5,SNR=23
YKA LR LR 04 05 30.7
comp=Z,243nm,19.7s,MS4.7,baz=320,slow=38
YKW3 Yellowknife Ar 92.26 341 *e*P P **03 20 38.0 -0.6**
URZ Urewera 92.28 227 LR LR 03 53 40.2
comp=Z,855nm,19.7s,MS5.2,baz=118,slow=30
QUIF Quistinic 92.64 38 *e*P P **03 20 39.5 -1.2**
comp=Z,40nm,1.2s,mb5.4
QUIF Quistinic 92.64 38 *e*P P **03 20 39.5 -1.2**
comp=Z,20nm,1.2s,mb5.4
QUIF Quistinic 92.64 38 *e*P P **03 20 39.5 -1.2**
QUIF pmax pmax
comp=Z,20nm,1.2s,mb5.4
ROSF Rostrenen 92.80 38 *e*P P **03 20 40.4 -1.0**
comp=Z,29nm,1.0s,mb5.4
ROSF Rostrenen 92.80 38 *e*P P **03 20 40.4 -1.0**
comp=Z,15nm,1.0s,mb5.4
ROSF Rostrenen 92.80 38 *e*P P **03 20 40.4 -1.0**
ROSF pmax pmax
comp=Z,15nm,1.0s,mb5.4
RPZ Rata Peaks 93.06 220 LR LR 03 51 52.1
comp=Z,752nm,21.8s,MS5.1,baz=116,slow=29

SGMF Saint Gilles 93.16 38 *e*P P 03 20 42.5 -0.6
LFF La Frestale 93.45 42 *e*P P 03 20 44.1 -0.4
comp=Z,45nm,0.9s,mb5.6
LFF La Frestale 93.45 42 *e*P P 03 20 44.1 -0.4
comp=Z,22nm,0.9s,mb5.6
LFF La Frestale 93.45 42 *e*P P 03 20 44.1 -0.4
LFF pmax pmax
comp=Z,22nm,0.9s,mb5.6
MFF Saint Martin d 93.73 41 *e*P P 03 20 45.1 -0.7
comp=Z,42nm,1.2s,mb5.5
MFF Saint Martin d 93.73 41 *e*P P 03 20 45.1 -0.7
comp=Z,21nm,1.2s,mb5.4
MFF Saint Martin d 93.73 41 *e*P P 03 20 45.1 -0.7
MFF pmax pmax
comp=Z,21nm,1.2s,mb5.4
RJF Les Rejaudoux 94.11 42 *e*P P 03 20 46.8 -0.8
comp=Z,19nm,1.0s,mb5.2
RJF *e*MLR MLR
comp=Z,448nm,22.5s,MS4.6
RJF Les Rejaudoux 94.11 42 *e*P P 03 20 46.8 -0.8
comp=Z,9.6nm,1.0s,mb5.2
RJF LR LR
comp=Z,450nm,22.5s,MS4.9
RJF Les Rejaudoux 94.11 42 *e*P P 03 20 46.8 -0.8
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
RJF MLR MLR
comp=Z,450nm,22.5s,MS4.9
GRR Gorron 94.20 39 *e*P P 03 20 46.7 -1.2
comp=Z,22nm,1.1s,mb5.2
GRR Gorron 94.20 39 *e*P P 03 20 46.7 -1.2
comp=Z,11nm,1.1s,mb5.2
GRR Gorron 94.20 39 *e*P P 03 20 46.7 -1.2
GRR pmax pmax
comp=Z,11nm,1.1s,mb5.2
CAF Calviac 94.27 43 *e*P P 03 20 47.7 -0.6
comp=Z,21nm,1.1s,mb5.2
CAF Calviac 94.27 43 *e*P P 03 20 47.7 -0.6
comp=Z,11nm,1.1s,mb5.2
CAF Calviac 94.27 43 *e*P P 03 20 47.7 -0.6
CAF pmax pmax
comp=Z,11nm,1.1s,mb5.2
FLN La Foliniere 94.61 39 *e*P P 03 20 48.1 -1.7
FLN *e*MLR MLR
comp=Z,359nm,23.0s,MS4.5
FLN La Foliniere 94.61 39 *e*P P 03 20 48.1 -1.7
FLN MLR MLR
comp=Z,360nm,23.0s,MS4.8
LDF La Druitiere 94.73 39 *e*P P 03 20 49.1 -1.2
comp=Z,16nm,0.9s,mb5.2
LDF La Druitiere 94.73 39 *e*P P 03 20 49.1 -1.2
comp=Z,7.9nm,0.9s,mb5.1
LDF La Druitiere 94.73 39 *e*P P 03 20 49.1 -1.2
LDF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
TCF Toulx Ste Croi 95.00 42 *e*P P 03 20 51.3 -0.3
comp=Z,12nm,1.1s,mb5.0
TCF Toulx Ste Croi 95.00 42 *e*P P 03 20 51.3 -0.3
comp=Z,6.2nm,1.1s,mb5.0
TCF Toulx Ste Croi 95.00 42 *e*P P 03 20 51.3 -0.3
TCF pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
LASF Ste Croix 95.01 44 *e*P P 03 20 52.4 +0.7
KEST Kesra 95.18 53 P P 03 20 53.7 +1.0
comp=Z,3.9nm,0.9s,mb4.8,baz=201,slow=3.7,SNR=4.6
KEST LR LR 04 08 29.8
comp=Z,429nm,18.2s,MS5.0,baz=2.5,slow=38
BGF Bois d'Agland 95.52 42 *e*P P 03 20 53.2 -0.8
comp=Z,43nm,1.1s,mb5.5
BGF Bois d'Agland 95.52 42 *e*P P 03 20 53.2 -0.8
comp=Z,21nm,1.1s,mb5.5
BGF Bois d'Agland 95.52 42 *e*P P 03 20 53.2 -0.8
BGF pmax pmax
comp=Z,21nm,1.1s,mb5.5
HYF Humbligny 95.72 41 *e*P P 03 20 54.1 -0.8
AVF Avril sur Loir 95.94 42 *e*P P 03 20 54.2 -1.7
comp=Z,11nm,1.0s,mb5.0
AVF Avril sur Loir 95.94 42 *e*P P 03 20 54.2 -1.7
comp=Z,5.7nm,1.0s,mb5.0
AVF Avril sur Loir 95.94 42 *e*P P 03 20 54.2 -1.7
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
SSF Saint Saulge 96.15 41 *e*P P 03 20 55.6 -1.3
comp=Z,14nm,1.0s,mb5.1
SSF Saint Saulge 96.15 41 *e*P P 03 20 55.6 -1.3
comp=Z,7.2nm,1.0s,mb5.1
SSF Saint Saulge 96.15 41 *e*P P 03 20 55.6 -1.3
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
SMF Signal de Mont 96.17 42 *e*P P 03 20 56.2 -0.7
comp=Z,40nm,1.1s,mb5.5
SMF Signal de Mont 96.17 42 *e*P P 03 20 56.2 -0.7
comp=Z,20nm,1.1s,mb5.5
SMF Signal de Mont 96.17 42 *e*P P 03 20 56.2 -0.7
SMF pmax pmax
comp=Z,20nm,1.1s,mb5.5
LOR Lormes 96.46 41 *e*P P 03 20 57.0 -1.3
comp=Z,8.9nm,0.8s,mb5.0
LOR *e*MLR MLR
comp=Z,316nm,22.0s,MS4.5
LOR Lormes 96.46 41 *e*P P 03 20 57.0 -1.3
comp=Z,4.4nm,0.8s,mb4.9
LOR LR LR
comp=Z,320nm,22.0s,MS4.8
LOR Lormes 96.46 41 *e*P P 03 20 57.0 -1.3
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,320nm,22.0s,MS4.8
ORIF Oris-en-Rattie 96.68 44 *e*P P 03 20 59.6 +0.3
comp=Z,16nm,0.9s,mb5.1
ORIF *e*MLR MLR
comp=Z,994nm,22.8s,MS4.9
ORIF Oris-en-Rattie 96.68 44 *e*P P 03 20 59.6 +0.3
comp=Z,7.8nm,0.9s,mb5.1
ORIF Oris-en-Rattie 96.68 44 *e*P P 03 20 59.6 +0.3
ORIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
SBF Sospel 97.24 45 *e*P P 03 21 00.2 -1.7
comp=Z,106nm,1.2s,mb5.8
SBF Sospel 97.24 45 *e*P P 03 21 00.2 -1.7
comp=Z,53nm,1.2s,mb5.8
SBF Sospel 97.24 45 *e*P P 03 21 00.2 -1.7
SBF pmax pmax
comp=Z,53nm,1.2s,mb5.8
LPL La Plagne 97.48 44 *e*P P 03 21 03.3 +0.4
comp=Z,17nm,1.1s,mb5.1
LPL La Plagne 97.48 44 *e*P P 03 21 03.3 +0.4
comp=Z,8.4nm,1.1s,mb5.1
LPL La Plagne 97.48 44 *e*P P 03 21 03.3 +0.4
LPL pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
LPG La Plagne 97.49 44 *e*P P 03 21 03.5 +0.6
comp=Z,25nm,1.1s,mb5.2
LPG La Plagne 97.49 44 *e*P P 03 21 03.5 +0.6
comp=Z,13nm,1.1s,mb5.3
LPG La Plagne 97.49 44 *e*P P 03 21 03.5 +0.6
LPG pmax pmax
comp=Z,13nm,1.1s,mb5.3
CABF La Chapelle 97.54 43 *e*P P 03 21 02.6 -0.6
MEZF Maizieres J'vi 97.73 40 *e*P P 03 21 03.1 -0.9
comp=Z,20nm,0.9s,mb5.3
MEZF Maizieres J'vi 97.73 40 *e*P P 03 21 03.1 -0.9
comp=Z,20nm,0.9s,mb5.6
BAIF Baives 97.92 39 *e*P P 03 21 03.7 -1.1
comp=Z,23nm,1.2s,mb5.3
BAIF Baives 97.92 39 *e*P P 03 21 03.7 -1.1
comp=Z,12nm,1.2s,mb5.3
BAIF Baives 97.92 39 *e*P P 03 21 03.7 -1.1
BAIF pmax pmax
comp=Z,12nm,1.2s,mb5.3
DOU Dourbes 98.16 39 P P 03 21 05.1 -0.7
GIVF Givet 98.30 39 *e*P P 03 21 05.7 -0.8
comp=Z,46nm,1.2s,mb5.6
GIVF Givet 98.30 39 *e*P P 03 21 05.7 -0.8
comp=Z,23nm,1.2s,mb5.6
GIVF Givet 98.30 39 *e*P P 03 21 05.7 -0.8
GIVF pmax pmax
comp=Z,23nm,1.2s,mb5.6
HAU Haudompre 98.30 41 *e*P P 03 21 06.0 -0.5
HAU *e*MLR MLR
comp=Z,466nm,22.5s,MS4.6
HAU Haudompre 98.30 41 *e*P P 03 21 06.0 -0.5
HAU MLR MLR
comp=Z,470nm,22.5s,MS4.9
UCC Uccle 98.34 38 P P 03 21 06.0 -0.6
comp=Z,17nm,2.0s,mb5.2

HINF Hinteralfeld 98.53 42 *e*P P 03 21 06.6 -1.0
BCLA Clavier 98.71 39 P P 03 21 08.1 -0.2
comp=Z,11nm,2.3s,mb5.0
WLF Walferdange 98.89 40 P P 03 21 08.9 -0.2
comp=Z,17nm,1.8s,mb5.3
CDF Champ du Feu 99.03 41 *e*P P 03 21 08.9 -0.9
MEM Membach 99.20 39 P P 03 21 10.6 +0.1
GERES GERESS Array B 103.14 42 Pdiff Pdif 03 21 27.7 -0.6
GERES PKiKP PKiKP 03 25 48.2 +0.6
comp=Z,0.8nm,0.8s,baz=220,slow=3.5,SNR=8.0
comp=Z,0.8nm,0.8s,baz=204,slow=2.9,SNR=5.0
KHC Kasperske Hory 103.17 42 AMS AMS 04 05 50.0
comp=Z,200nm,16.4s
CLL Collm 103.56 40 *e*Pdif Pdif 03 21 29.0 -1.1
CLL comp=Z,8.0nm,1.4s
CLL *e*PS PS 03 34 58.0 +1.1
CLL LR LR
comp=Z,400nm,21.6s,MS4.9
CLL Collm 103.56 40 *e*P Pdif 03 21 29.0 -1.1
CLL *e*PS PS 03 34 58.0 +1.1
CLL pmax pmax
comp=Z,8.0nm,1.4s
CLL MLR MLR
comp=Z,400nm,21.6s,MS4.9
CLL Collm 103.56 40 *e*Pdif Pdif 03 21 29.0 -1.1
comp=Z,8.0nm,1.4s
CLL LmV 03 04 00.0
comp=Z,400nm,21.6s
CLL *e*PP PP 03 25 47.0 +0.4
CLL *e*PS PS 03 34 58.0 +1.1
CLL *e*SS SS 03 40 45.0 +16
BRG Berggiesshubel 103.97 41 *i* (P) PS 03 35 06.0 +4.8
BRG comp=N,389nm,16.1s
BRG comp=E,162nm,20.8s
BRG comp=Z,240nm,18.7s
PRU Pruhonice 104.04 41 AMS AMS 04 03 40.0
comp=Z,300nm,22.9s
PVCC Panska Ves 104.23 41 AMS AMS 04 05 00.0
comp=Z,400nm,20.5s
DPC Dobruska-Polom 105.24 42 AMS AMS 04 06 50.0
comp=Z,200nm,21.6s
OKC Ostrava-Krasne 106.22 42 AMS AMS 04 12 00.0
comp=Z,300nm,18.1s
CHGN Chignik 107.84 324 *e*Pdif Pdif 03 21 51.8 +2.7
AKASG Malin Array Be 113.34 43 PKiKP PKiKP 03 26 05.2 -1.5
comp=Z,1.5nm,0.6s,baz=265,slow=2.8,SNR=9.3
AKASG PKKPbc PKKPbc 03 36 51.2 -1.6
comp=Z,0.2nm,0.3s,baz=65,slow=4.2,SNR=4.1
STKA Stephens Creek 117.50 210 *e*PKP PKPdf 03 26 13.6 -1.8
comp=Z,3.1nm,0.8s
STKA Stephens Creek 117.50 210 PKP PKPdf 03 26 13.7 -1.7
comp=Z,3.2nm,0.9s,baz=153,slow=2.3,SNR=4.6
STKA PKKPbc PKKPbc 03 36 36.6 -1.5
comp=Z,2.0nm,0.8s,baz=349,slow=12,SNR=3.6
STKA PKPPKP 03 45 17.8
comp=Z,0.6nm,0.3s,baz=90,slow=3.1,SNR=3.8
STKA Stephens Creek 117.50 210 PKP PKPdf 03 26 13.7 -1.7
STKA PKKPbc PKKPbc 03 36 36.6 -1.5
STKA P'P' 03 45 17.8
OBN Obninsk 118.11 39 *e*PKP PKPdf 03 26 14.6 -1.0
OBN Obninsk 118.11 39 *i* PKiKP PKPdf 03 26 14.5 -1.1
OBN *e* 03 27 32.9
OBN *e*PS PS 03 37 18.6 +1.4
OBN *e*SS SS 03 43 47.2 +3.6
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.7
ANN Anapa 118.16 50 *i* PKiKP PKPdf 03 26 13.7 -2.4
ANN pmax pmax
comp=Z,21nm,0.9s
VSR Storozhevoye 119.64 43 *e*PKiKP PKPdf 03 26 17.8 -0.9
VSR pmax pmax
comp=Z,4.0nm,1.0s
VSR pmax pmax
comp=N,3.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.7s
VORD Divnogorie 119.72 43 *e*PKiKP PKPdf 03 26 17.9 -1.0
VORD pmax pmax
comp=Z,5.0nm,0.9s
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.8s
VRHR Novokhopersk 121.19 43 *e*PKiKP PKPdf 03 26 20.1 -1.6
VRHR pmax pmax
comp=N,5.0nm,0.4s
VRHR pmax pmax
comp=Z,5.0nm,0.4s
VRHR pmax pmax
comp=E,2.0nm,0.6s
KIV Kislovodsk 121.86 52 *e*PKP PKPdf 03 26 21.8 -1.4
KIV Kislovodsk 121.86 52 *i* PKiKP PKPdf 03 26 21.8 -1.4
KIV *i* 03 27 54.9
KIV *e*SS SS 03 44 25.8 -6.8
KIV pmax pmax
comp=Z,14nm,1.2s
GNI Garni 123.21 56 *e*PKP PKPdf 03 26 25.4 -0.5
BILL Bilibino 123.46 338 *e*PKP PKPdf 03 26 24.9 -0.7
BILL Bilibino 123.46 338 *i* PKiKP PKPdf 03 26 24.9 -0.7
BILL *e* 03 28 09.2
BILL *e* 03 33 25.4
BILL *e*PS PS 03 38 03.7 -0.9
BILL *e*SS SS 03 44 48.8 -2.5
BILL pmax pmax
comp=Z,2.0nm,0.6s
CTA Charters Tower 124.31 223 *e*PKP PKPdf 03 26 28.2 -0.5
comp=Z,5.3nm,0.9s
KLBR Kellerberrin 125.17 188 *e*P PKPdf 03 26 29.5 -0.6
comp=Z,21nm,0.9s
ASAR Alice Springs 128.01 208 PKP PKPdf 03 26 35.0 -0.8
comp=Z,14nm,0.8s,baz=144,slow=2.1,SNR=43
ASAR pPKP pPKPdf 03 26 46.2 -0.8
comp=Z,9.7nm,0.8s,baz=141,slow=1.8,SNR=10
ARU Arti 130.08 34 *e*PKPdf PKPdf 03 26 39.3 +0.7
ARU Arti 130.08 34 *i* PKiKP PKPdf 03 26 38.6 +0.1
ARU 03 28 49.0
ARU SS SS 03 46 11.9 -2.5
TIXI Tiksi 130.12 352 *e*PKPdf PKPdf 03 26 37.3 -0.9
TIXI Tiksi 130.12 352 *i* PKiKP PKPdf 03 26 34.4 -3.8
TIXI pmax pmax
comp=Z,8.0nm,0.9s
TIXI MLR MLR
comp=Z,387nm,21.0s,MS5.1
SEY Seymchan 130.98 336 *e*PKiKP PKPdf 03 26 40.4 +0.3
SVE Sverdlovsk 131.00 33 *e*PKiKP PKPdf 03 26 40.5 +0.2
SVE pmax pmax
comp=Z,21nm,1.7s
WB2 Warramunga Arr 131.03 211 *i* PKP PKPdf 03 26 41.1 -0.5
WB2 *e* 03 26 53.1
WB2 Warramunga Arr 131.03 211 *e*PKPdf PKPdf 03 26 41.3 -0.2
WRA Warramunga Arr 131.04 211 PKP PKPdf 03 26 41.2 -0.4
comp=Z,10nm,0.9s,baz=150,slow=1.6,SNR=86
WRA pPKP pPKPdf 03 26 51.9 -1.0
comp=Z,7.7nm,0.6s,baz=149,slow=1.5,SNR=11
WRA SKPbc SKPbc 03 30 02.2 -1.3
comp=Z,7.1nm,1.1s,baz=147,slow=4.0,SNR=9.6
WRA Warramunga Arr 131.04 211 PKiKP PKPdf 03 26 41.2 -0.4
WRA 03 26 51.9
WRAB Tennant Creek 131.04 211 *e*PKPdf PKPdf 03 26 41.6 0.0
WRAB *e*pPKPdf pPKPdf 03 26 53.7 +0.8
WRAB Tennant Creek 131.04 211 *c i* PKiKP PKPdf 03 26 40.1 -1.5
PETK Petropavlovsk- 133.02 322 PKP PKPdf 03 26 43.4 -0.9
comp=Z,6.7nm,0.9s,baz=83,slow=4.9,SNR=3.9
PETK pPKP pPKPdf 03 26 54.4 -1.1
comp=Z,7.3nm,0.9s,baz=114,slow=3.6,SNR=3.2
BRVK Borovoye 137.65 35 *e*PKPdf PKPdf 03 26 53.1 +0.2
BVAR Borovoye Array 137.72 35 PKiKP 03 26 41.0
BVAR PKP PKPdf 03 26 53.3 +0.3
comp=Z,5.7nm,0.8s
KAKA Kakadu 138.13 214 *e*PKP Px 03 26 41.9
comp=Z,4.7nm,0.6s
YAK Yakutsk 138.69 346 *e*PKiKP PKPdf 03 26 52.5 -2.0
YAK pmax pmax
comp=Z,12nm,1.1s
NVS Novosibirsk 142.55 25 *e*PKHKP 03 26 55.7
NVS pmax pmax
comp=Z,40nm,1.8s
NVS pmax pmax
comp=E,13nm,1.7s
KURK Kurchatov 143.25 33 *e*PKPdf PKPdf 03 27 00.3 -2.8

ZAA0 Zalesovo Array 143.83 25 *e*PKPdf PKPdf 03 27 01.9 -2.1
ZALV Zalesovo Beam 143.83 25 PKhKP 03 27 01.0
comp=E,31nm,0.7s,baz=290,slow=2.3,SNR=43
ZALV PKP PKPdf 03 27 04.2 +0.3
comp=E,31nm,0.7s,baz=292,slow=2.3,SNR=67
EKS2 Erkin-Say 144.32 48 *e*PKPdf PKPdf 03 27 04.8 -0.4
EKS2 Erkin-Say 144.32 48 P PKPdf 03 27 04.5 -0.7
SNR=36
CLNS Chul'man 144.44 346 *i* PKiKP PKPdf 03 27 03.0 -1.9
CLNS pmax pmax
comp=Z,36nm,0.7s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=N,9.0nm,0.8s
AML Almayashu 144.46 49 P PKPdf 03 27 05.2 -0.2
SNR=94
USP Ospenovka 144.58 47 P PKPdf 03 27 05.2 -0.5
SNR=18
AAK Ala-Archa 144.82 48 P PKPdf 03 27 06.3 +0.3
SNR=90
FRU Bishkek 144.83 47⇑ *i* PKiKP PKPdf 03 27 06.0 -0.1
FRU *i* 03 27 20.0
FRU pmax pmax
comp=Z,100nm,1.6s
CHMS Chumysh 144.85 47 P PKPdf 03 27 05.7 -0.4
SNR=40
UCH Uchtor 144.99 48 P PKPdf 03 27 07.7 +1.3
SNR=11
BOD Bodaibo 145.09 356⇓ *i* PKiKP PKPdf 03 27 03.9 -2.1
BOD pmax pmax
comp=Z,109nm,0.9s
KBK Karagaybulak 145.12 47 P PKPbc 03 27 07.4 +1.2
SNR=79
GOA Goa 145.32 96 *e*P PKPbc 03 27 07.4 -0.2
MNGI Mangalore 145.36 101 *e*P PKPbc 03 27 08.2 +0.5
TRD Trivandrum 145.40 109 *e*P PKPbc 03 27 08.5 +0.7
TKM2 Tokmak 2 145.45 47 *e*PKPbc PKPbc 03 27 07.7 +0.5
TKM2 Tokmak 2 145.45 47 P PKPdf 03 27 07.9 +0.7
SNR=55
KZA Kyzart 145.55 48 P PKPdf 03 27 09.1 +1.7
SNR=44
ASAJ Asahikawa 145.82 316 PKPbc PKPbc 03 27 08.8 +0.5
comp=Z,37nm,0.8s,baz=252,slow=2.9,SNR=15
ASAJ pPKPbc pPKPbc 03 27 19.1 -0.4
comp=Z,23nm,0.9s,baz=70,slow=4.2,SNR=4.6
ULHL Ulahol 146.16 47 P PKPdf 03 27 10.2 +1.8
SNR=23
KAD Karad 146.17 93 *e*P PKPdf 03 27 09.4 +0.3
POO Poona 146.17 91⇑ *i*P PKPdf 03 27 08.5 -0.6
comp=Z,120nm,1.0s
ERM Erimo 146.35 312 *e*PKPbc PKPbc 03 27 11.1 +1.1
KOD Kodaikanal 146.63 107 *e*P PKPdf 03 27 10.3 +0.3
KSH Kashi 146.99 52 PKP PKPdf 03 27 12.4 +2.5
KSH *e*APKP 03 27 23.1
KSH *e*XPKP 03 27 27.3
KSH *e*PKS 03 30 47.3
KSH *e*SKS SKSdf 03 34 16.8 +0.8
KSH PP PP
comp=Z,808nm,3.8s
KSH LR LR
comp=N,363nm,4.8s
KSH LR LR
comp=E,674nm,5.3s
KSH LR LR
comp=Z,776nm,6.9s
MK31 Makanchi Array 147.57 36 *e*PKPbc PKPbc 03 27 13.4 +0.1
MKAR Makanchi Array 147.57 36 PKPbc PKPdf 03 27 10.8 +0.3
comp=Z,40nm,0.8s,baz=305,slow=1.3,SNR=49
HABR Khabarovsk 147.62 328 *i* PKHKP PKPdf 03 27 08.0 -2.6
HABR *i* 03 27 13.5
HABR *e* 03 30 43.3
HABR *e* 03 34 14.0
HABR *e* 03 43 15.3
HABR *e*SSS 03 55 13.8
AJM Ajmer 147.97 77 *e*P PKPdf 03 27 08.7 -3.2
THN Thein Dam 148.54 65 *e*P PKPdf 03 27 12.1 -0.5
KLR Kul'dur 148.61 332 *e*PKHKP 03 27 07.8
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,48nm,1.6s
LATR Latur 148.64 92 *ex* PKPbc 03 27 15.5 -1.4
SJI Sawahan 149.38 184 P PKPbc 03 27 19.2 +0.2
AKL Akola 149.54 88 *ex* PKPbc 03 27 17.7 -1.5
AKL AMS AMS 04 03 54.8
comp=Z,572nm,13.1s,MS5.5
SMLA Simla 149.94 67 *ex* PKPbc 03 27 19.2 -0.6
SMLA AMS AMS 04 00 48.0
comp=Z,342nm,19.9s,MS5.2
HYB Hyderabad 150.22 95 *e*P PKPdf 03 27 16.5 +0.8
HYB Hyderabad 150.22 95 *i* PKP PKPdf 03 27 16.5 +0.8
HYB *e* 03 27 21.0
HYB *e*PKPAB PKPab 03 27 27.0 0.0
HYB *e* 03 27 32.0
NDI New Delhi 150.22 72 *e*P PKPdf 03 27 15.0 -0.5
BHPL Bhopal 150.28 83 *e*P PKPdf 03 27 15.3 -0.4
KDI Kendari 150.41 207 P PKPbc 03 27 21.2 -0.3
DBJI Dramaga 150.47 174 P PKPbc 03 27 21.9 +0.3
KAPI Kappang 150.49 201 *e*PKPbc PKPbc 03 27 21.6 -0.1
IRK Irkutsk 150.51 7 *e*PKiKP PKPdf 03 27 13.6 -1.5
IRK pmax pmax
comp=Z,89nm,1.6s
DDI Dehra Dun 150.80 69 *ex* PKPdf 03 27 12.0 -4.3
TLY Talaya 150.99 8 *e*PKPbc PKPbc 03 27 22.0 +0.4
TLY Talaya 150.99 8 *e*PKiKP PKPbc 03 27 21.9 +0.3
TLY *i* 03 27 29.9
TLY *e* 03 31 00.5
TLY pmax pmax
comp=Z,19nm,0.8s
MJAR Matsushiro Arr 151.99 305 PKPbc PKPbc 03 27 23.8 -0.6
comp=Z,16nm,0.8s,baz=115,slow=1.6,SNR=52
MJAR pPKPbc pPKPbc 03 27 33.6 -2.2
comp=Z,16nm,0.9s,baz=90,slow=1.8,SNR=10
MAJO Matsushiro 151.99 305 *e*PKPbc PKPbc 03 27 24.4 -0.1
MAT Matsushiro 151.99 305 PKP PKPbc 03 27 23.7 -0.8
ZAK Zakamensk 152.21 9⇑ *e*PKiKP PKPdf 03 27 18.0 +0.2
ZAK *e* 03 31 01.5
ZAK pmax pmax
comp=Z,22nm,0.9s
WMQ Urumqi 152.40 36 PKP PKPdf 03 27 18.0 -0.3
WMQ PP PP 03 31 09.0 +1.6
WMQ SKS SKSdf 03 34 20.0 -2.9
WMQ SKKS SKKSac 03 37 53.0 -2.5
WMQ PP PP
comp=Z,467nm,9.0s
WMQ LR LR
comp=N,249nm,24.0s,MS5.1
WMQ LR LR
comp=E,288nm,24.0s,MS5.1
WMQ LR LR
comp=Z,312nm,25.0s,MS5.0
HIA Hailar 152.64 346 *e*PKPbc PKPbc 03 27 25.1 -0.4
HIA *e*PKPab PKPab 03 27 35.9 -0.2
MDJ Mudanjiang 153.01 328 PKP PKPdf 03 27 18.4 -0.8
MDJ PP PP 03 31 14.1 +3.3
MDJ LR LR
comp=N,113nm,35.7s
MDJ LR LR
comp=E,187nm,29.4s
MDJ LR LR
comp=Z,224nm,29.4s
SONM Songino Array 155.08 5 PKP PKPdf 03 27 22.1 +0.1
comp=Z,5.3nm,0.8s,baz=296,slow=1.0,SNR=37
SONM PKPbc PKPdf 03 27 30.1 +8.1
comp=Z,5.0nm,0.8s,baz=324,slow=1.8,SNR=12
SONM PKPab PKPab 03 27 46.9 +0.4
comp=Z,6.9nm,0.8s,baz=329,slow=4.1,SNR=11
SONM PP PP 03 31 20.9 -0.8
comp=Z,2.0nm,1.0s,baz=354,slow=3.0,SNR=5.1
SONM Songino Array 155.08 5 PKiKP PKPdf 03 27 22.1 +0.1
SONM 03 27 30.1
SONM 03 31 20.9
ULN Ulaanbaatar 155.10 4 *e*PKPdf PKPdf 03 27 22.8 +0.8
ULN *e*PKPbc PKPdf 03 27 31.5 +9.5
PYUN Piuthan 155.34 73 *e*P PKPdf 03 27 22.6 -0.4
comp=Z,20nm,0.8s
CN2 Changchun 155.56 332 *e*PKP PKPdf 03 27 23.6 +0.8
CN2 PP PP 03 31 29.4 +4.5
CN2 PP PP
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,20.0s,MS5.4
CN2 LR LR
comp=E,300nm,20.0s,MS5.4

CN2					LR	LR			
	comp=Z,300nm,22.0s,MS5.1								
KOLN	**Koldanda**	**155.91**	**73**	*e*P		PKPdf	03 27 23.2	-0.5	
DANN	**Dangsing**	**155.98**	**72**	*e*P		PKPdf	03 27 23.9	+0.1	
	comp=Z,80nm,0.8s								
GKN	**Gorkha**	**156.79**	**72**	*e*P		PKPdf	03 27 24.4	-0.5	
DMN	**Daman**	**157.25**	**73**	*e*P		PKPdf	03 27 25.0	-0.5	
KKN	**Kakani**	**157.38**	**73**	*e*P		PKPdf	03 27 25.3	-0.3	
	comp=Z,27nm,0.8s								
PKI	**Pulchoki**	**157.52**	**73**	*e*P		PKPdf	03 27 25.5	-0.3	
GUN	**Gumba**	**157.90**	**72**	*e*P		PKPdf	03 27 26.2	-0.1	
BOK	**Bokaro**	**158.07**	**83**	*e*P		PKPdf	03 27 23.1	-3.5	
JIRN	**Jiri**	**158.20**	**73**	*e*P		PKPdf	03 27 26.2	-0.5	
	comp=Z,8.6nm,0.7s								
RAMN	**Ramite**	**158.64**	**75**	*e*P		PKPdf	03 27 27.1	-0.1	
	comp=Z,45nm,1.0s								
KSRS	**Korea Array**	**158.77**	**317**		PKP	PKPdf	03 27 26.7	-0.3	
	comp=Z,4.6nm,0.9s,baz=113,slow=0.8,SNR=12								
KSRS					pPKP	pPKPdf	03 27 37.5	-0.9	
	comp=Z,3.7nm,0.8s,baz=76,slow=0.5,SNR=5.1								
KSRS					PKPab	PKPab	03 28 02.5	-0.2	
	comp=Z,6.0nm,0.8s,baz=52,slow=4.4,SNR=10.0								
ODAN	**Odare**	**159.35**	**75**	*e*P		PKPdf	03 27 27.8	-0.2	
	comp=Z,30nm,0.8s								
TAPN	**Taplejung**	**159.58**	**73**	*e*P		PKPdf	03 27 27.4	-0.9	
	comp=Z,22nm,1.0s								
GTA	**Gaotai**	**161.59**	**25**		PKP	PKPdf	03 27 30.8	+0.7	
GTA					APKP		03 27 41.4		
GTA					XPKP		03 27 45.0		
GTA					PP	PP	03 32 05.0	+7.3	
GTA					PP	PP			
	comp=Z,232nm,6.6s								
GTA					LR	LR			
	comp=N,175nm,20.1s								
GTA					LR	LR			
	comp=E,183nm,20.4s								
GTA					LR	LR			
	comp=Z,238nm,21.0s								
LSA	**Lhasa**	**162.04**	**64**		PKP	PKPdf	03 27 30.0	-0.9	
LSA	**Lhasa**	**162.04**	**64**	*e*PKIKP		PKPdf	03 27 32.5	+1.6	
HHC	**Hu-ho-hao-te**	**162.15**	**356**	*e*PKP		PKPdf	03 27 30.3	-0.3	
HHC					APKP		03 27 41.5		
HHC					XPKP		03 27 45.1		
HHC					PKS		03 31 02.5		
HHC					PP	PP	03 32 03.3	+3.0	
HHC					SKS	SKSdf	03 34 30.8	-2.1	
HHC					SKKS	SKKSac	03 38 46.5	-0.3	
HHC					PP	PP			
	comp=Z,113nm,6.1s								
HHC					LR	LR			
	comp=N,262nm,22.6s								
HHC					LR	LR			
	comp=E,399nm,25.0s								
HHC					LR	LR			
	comp=Z,310nm,25.0s								
BJI	**Beijing**	**162.18**	**344**		PKP	PKPdf	03 27 30.8	+0.1	
BJI					PP	PP			
	comp=Z,228nm,5.2s								
BJI					LR	LR			
	comp=N,233nm,32.8s								
BJI					LR	LR			
	comp=E,307nm,20.5s								
BJI					LR	LR			
	comp=Z,332nm,25.9s								
SHL	**Shillong**	**163.49**	**78**	*e*P		PKPdf	03 27 30.5	-1.9	
SHL				*ex*		x	03 28 24.0		
LZH	**Lanzhou**	**165.99**	**20**	*e*PKP		PKPdf	03 27 34.0	-0.3	
LZH					APKP		03 27 44.9		
LZH					XPKP		03 27 48.5		
LZH					PKP2	PKPab	03 28 34.6	+0.3	
LZH				*e*PP		PP	03 32 23.1	+2.3	
LZH					SKS	SKSdf	03 34 32.8	-3.1	
LZH					SKKS	SKKSac	03 39 05.3	-1.3	
LZH					PP	PP			
	comp=Z,267nm,7.2s								
LZH					LR	LR			
	comp=N,347nm,18.2s								
LZH					LR	LR			
	comp=Z,486nm,20.3s								
NJ2	**Nanjing**	**167.92**	**320**	*e*PKP		PKPdf	03 27 36.3	+0.5	
CMAR	**Chiang Mai Arr**	**168.90**	**112**		PKP	PKPdf	03 27 36.5	-0.3	
	comp=Z,1.4nm,0.3s,baz=294,slow=2.1,SNR=18								
CMAR					PKPab	PKPab	03 28 47.2	-0.7	
	comp=Z,4.1nm,0.9s,baz=254,slow=5.0,SNR=11								
CMAR					PP	PP	03 32 36.4	-1.0	
	comp=Z,1.0nm,0.3s,baz=256,slow=5.0,SNR=6.0								
XAN	**Xi'an**	**168.99**	**4**	*e*PKP		PKPdf	03 27 32.0	-4.5	
XAN					APKP		03 27 42.8		
XAN					XPKP		03 27 46.8		
XAN					SKS	SKSdf	03 34 30.8	-6.9	
XAN					PP	PP			
	comp=Z,234nm,16.8s								
XAN					LR	LR			
	comp=N,106nm,31.4s								
XAN					LR	LR			
	comp=E,109nm,26.7s								
XAN					LR	LR			
	comp=Z,353nm,23.5s								
CD2	**Chengdu**	**170.48**	**33**	*e*PKP		PKPdf	03 27 37.6	+0.1	
CD2					APKP		03 27 47.0		
CD2					XPKP		03 27 52.0		
CD2					PKP2	PKPab	03 28 55.3	+0.9	
CD2					PP	PP	03 32 44.5	+0.5	
CD2					SKS	SKSdf	03 34 36.3	-2.2	
CD2					PP	PP			
	comp=Z,250nm,9.6s								
CD2					LR	LR			
	comp=N,270nm,24.8s								
CD2					LR	LR			
	comp=E,260nm,28.6s								
CD2					LR	LR			
	comp=Z,290nm,25.0s								
WHN	**Wuhan**	**171.46**	**332**	*e*PKP		PKPdf	03 27 38.5	+0.5	
KMI	**Kunming**	**173.24**	**70**		PKP	PKPdf	03 27 39.5	+0.6	
KMI					APKP		03 27 50.6		
KMI					PKP2	PKPab	03 29 07.3	+0.3	
KMI					PKS		03 31 10.4		
KMI					PP	PP	03 32 59.6	+0.6	
KMI					SKKS	SKKSac	03 39 42.8	-0.2	
KMI					PP	PP			
	comp=Z,276nm,6.0s								
KMI					LR	LR			
	comp=N,263nm,19.5s								
KMI					LR	LR			
	comp=E,316nm,15.6s								
KMI					LR	LR			
	comp=Z,419nm,22.0s								
GYA	**Guiyang**	**175.55**	**39**		PKP	PKPdf	03 27 39.5	-0.1	
GYA					APKP		03 27 50.3		
GYA					XPKP		03 27 53.9		
GYA					PKP2	PKPab	03 29 16.6	-0.4	
GYA					PKS		03 31 10.3		
GYA					PP	PP	03 33 09.9	+0.8	
GYA					SKS	SKSdf	03 34 37.4	-2.9	
GYA					SKKS	SKKSac	03 39 50.3	-3.2	
GYA					SS	SS	03 54 31.5	-1.2	
GYA					PP	PP			
	comp=Z,230nm,6.6s								
GYA					LR	LR			
	comp=N,230nm,22.0s								
GYA					LR	LR			
	comp=E,180nm,23.3s								
GYA					LR	LR			
	comp=Z,350nm,24.1s								

*ISCJB **17** 03:20:14.7±0.5, 22.48S±0.03°×70.38W±0.06°, h58km±5km, mb4.2/5, Error ellipse: s-maj=10.2km s-min=5.0km az=13.6*

*IDC **17** 03:20:14.5±0.8, 22.48S×70.18W, h32km±5km, mb4.0/5, mb1 4.0/7, mb1mx3.8/18, mbtmp4.0/7, ML3.9/2, Error ellipse: s-maj=20.5km s-min=11.9km az=6.0*

*NEIC **17** 03:20:14.6±0.5, 22.56S×70.31W, Error ellipse: s-maj=14.6km s-min=8.3km az=97.0*

*GUC **17** 03:20:14.5±0.7, 22.56S×70.30W, h49km±11km, ML4.4*

ISC 17 03:20:15.7±0.5,**2252S**±0.03°×**7037W**±0.06°,**h46**km±6km,**h35**km±4.8km:**pP-P,n30,**σ1º**32/36,mb4.2/5,1C-3D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.59**	**187**	⇑*i*P		**Pn**	**03 20 26.4**	**-1.5**
MECH				*i* S		**Sn**	**03 20 35.5**	**-1.0**
MECH					AML	AML	03 20 38.3	
	comp=N,18μm,0.5s							
CEN1	**Los Morros**	**0.88**	**170**	⇓*i*P		**Pn**	**03 20 33.2**	**+1.4**
CEN1				*i* S		**Sn**	**03 20 46.7**	**+3.2**
CEN1					AMP		03 20 51.1	
	comp=N,28μm,0.2s							
ANCH	**Antofagasta**	**1.16**	**182**	⇓*e*P		**Pn**	**03 20 37.5**	**+2.0**
ANCH				*i* S		**Sn**	**03 20 52.6**	**+2.4**
ANCH					AML	AML	03 20 57.0	
	comp=N,94μm,0.0s							
LVC	**Limon Verde**	**1.35**	**94**	Pg		**Pn**	**03 20 37.9**	**-0.3**
	comp=N,290nm,0.3s,baz=265,slow=12,SNR=218							
LVC					Lg		03 20 52.6	
	comp=N,280nm,0.3s,baz=246,slow=4.5,SNR=28							
LVC	**Limon Verde**	**1.35**	**94**	*e*Pn		**Pn**	**03 20 37.9**	**-0.3**
LVC				*e*Sn		**Sn**	**03 20 54.0**	**-0.9**
LVC	**Limon Verde**	**1.35**	**94**	*e*P		**Pn**	**03 20 37.5**	**-0.7**
LVC				*i* S		**Sn**	**03 20 54.4**	**-0.6**
LVC					AML	AML	03 20 56.7	
	comp=E,2μm,0.7s							
PB01	**Plate Boundary**	**1.68**	**29**	⇓*e*P		**Pn**	**03 20 42.4**	**-0.3**
PB01				*e*S		**Sn**	**03 21 04.0**	**+1.0**
PB01					AML	AML	03 21 06.5	
	comp=E,5μm,0.2s							
SPCH	**San Pedro de A**	**2.04**	**101**	*e*P		**Pn**	**03 20 50.5**	**+2.9**
SPCH				*i* S		**Sn**	**03 21 17.6**	**+5.6**
SPCH					AML	AML	03 21 28.4	
	comp=E,7μm,0.6s							
CPN1	**Cerro Paranal**	**2.10**	**181**	*e*P		**Pn**	**03 20 47.1**	**-1.3**
CPN1				*i* S		**Sn**	**03 21 11.2**	**-2.1**
CPN1					AML	AML	03 21 23.3	
	comp=N,2μm,0.7s							
ARE	**Arequipa**	**6.11**	**350**	*e*P		**Pn**	**03 21 44.0**	**+0.4**
ARE				*e*S		**Sn**	**03 22 51.0**	**-1.2**
LCO	**Las Campanas**	**6.47**	**183**	Pn		**Pn**	**03 21 47.1**	**-1.4**
LPAZ	**La Paz**	**6.55**	**19**	Pn		**Pn**	**03 21 52.6**	**+3.1**
	comp=N,1.0nm,0.3s,baz=167,slow=3.1,SNR=12							
LPAZ	**La Paz**	**6.55**	**19**	*e*Pn		**Pn**	**03 21 52.2**	**+2.7**
CFAA	**Coronel Fontan**	**9.25**	**169**	Pn		**Pn**	**03 22 25.4**	**-1.1**
	comp=N,0.0nm,0.3s,baz=354,slow=17,SNR=8.1							
CFAA					Sn	**Sn**	**03 24 16.3**	**+7.1**
	comp=N,0.2nm,0.3s,baz=334,slow=10,SNR=3.1							
SIV	**San Ignacio**	**10.92**	**55**	Pn		**Pn**	**03 22 47.9**	**-1.5**
	comp=N,0.9nm,0.3s,baz=254,slow=14,SNR=15							
SIV					Sn	**Sn**	**03 24 50.5**	**+0.3**
	comp=N,0.2nm,0.3s,baz=322,slow=23,SNR=3.3							
PLCA	**Paso Flores**	**18.16**	**180**	P		**Pn**	**03 24 25.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=334,slow=14,SNR=2.4							
VNA3	**Neumayer Olymp**	**59.56**	**161**	*e*		**P**	**03 30 14.4**	**+0.2**
VNA3				*e*		pP	03 30 24.3	-2.8
VNA3				*e*		pP	03 30 30.7	+3.6
VNA2	**Neumayer--Watz**	**60.15**	**160**	*e*		**P**	**03 30 18.3**	**+0.1**
	baz=292,slow=8.6							
VNA2				*e*		pP	03 30 28.8	-2.4
VNA2				*e*		pP	03 30 34.8	+3.6
TXAR	**Lajitas Array**	**60.70**	**327**	P		**P**	**03 30 23.9**	**+1.3**
	comp=N,0.5nm,1.0s,mb3.6,baz=153,slow=8.1,SNR=3.0							
TXAR					pP	pP	03 30 33.2	-2.3
	comp=N,0.2nm,0.6s,baz=148,slow=7.4,SNR=1.9							
SNAA	**Sanae**	**61.77**	**161**	*e*		**P**	**03 30 28.0**	**-1.2**
SNAA				*e*		pP	03 30 37.6	-4.7
SNAA				*e*		pP	03 30 43.6	+1.3
QSPA	**South Pole Qui**	**67.68**	**180**	P		**P**	**03 31 09.2**	**+1.6**
	comp=N,1.1nm,0.5s,mb4.2,baz=171,slow=0.6,SNR=4.0							
QSPA					pP	pP	03 31 18.6	-2.1
	comp=N,0.8nm,0.3s,baz=265,slow=2.6,SNR=2.4							
DBIC	**Dimbokro**	**70.32**	**74**	P		**P**	**03 31 24.2**	**-0.9**
	comp=N,3.5nm,0.8s,mb4.3,baz=180,slow=6.7,SNR=5.6							
TORD	**Torodi Ar. Bea**	**78.97**	**71**	P		**P**	**03 32 14.3**	**-0.9**
	comp=N,3.1nm,0.5s,mb4.5,baz=253,slow=5.2,SNR=86							
BOSA	**Boshof**	**84.17**	**118**	P		**P**	**03 32 42.2**	**-0.3**
	comp=N,3.9nm,1.1s,mb4.5,baz=212,slow=9.5,SNR=3.5							
BOSA					pP	pP	03 32 52.6	-3.4
	comp=N,2.2nm,0.8s,baz=276,slow=8.9,SNR=1.7							
BOSA	**Boshof**	**84.17**	**118**	P		**P**	**03 32 42.2**	**-0.3**
BOSA					pP	pP	03 32 52.6	-3.4
ASAR	**Alice Springs**	**128.38**	**209**	PKP		PKPdf	03 39 18.2	+0.1
	comp=N,0.5nm,0.8s,baz=80,slow=0.9,SNR=4.5							
ASAR					pPKP	pPKPdf	03 39 29.0	-3.1
	comp=N,0.6nm,0.7s,baz=135,slow=1.0,SNR=3.5							
WRA	**Warramunga Arr**	**131.39**	**212**	PKP		PKPdf	03 39 24.3	+0.5
	comp=N,0.3nm,0.6s,baz=144,slow=1.5,SNR=7.2							
WRA					pPKP	pPKPdf	03 39 34.9	-3.1
	comp=N,0.5nm,0.7s,baz=152,slow=1.7,SNR=2.8							
ZALV	**Zalesovo Beam**	**143.44**	**25**	PKP		PKPdf	03 39 45.5	+0.6
	comp=N,0.5nm,0.3s,baz=14,slow=2.4,SNR=4.5							
MKAR	**Makanchi Array**	**147.25**	**36**	PKPbc		PKPbc	03 39 54.2	+0.3
	comp=N,2.7nm,0.8s,baz=322,slow=2.9,SNR=10.0							
SONM	**Songino Array**	**154.60**	**5**	PKP		PKPdf	03 40 03.7	+0.8
	comp=N,0.5nm,0.8s,baz=356,slow=8.1,SNR=3.2							
SONM					PKPbc	PKPbc	03 40 09.8	-1.7
	comp=N,0.4nm,0.7s,baz=358,slow=9.0,SNR=2.4							
SONM					PKPab	PKPab	03 40 26.3	+0.2
	comp=N,0.4nm,0.8s,baz=26,slow=7.0,SNR=2.3							

MAN 17 03:37:15,695N×12369E,h14km,mb4.5,ML3.4,MS3.3, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.61**	**64**	⇓*i*P		Pg	03 37 27.8	+0.9
CTBH				*i* S		Sg	03 37 37.7	+2.6
PAGZ	**Pagadian**	**0.94**	**341**	*e*P		Pb	03 37 33.6	+0.5
PAGZ				*e*S		Sb	03 37 48.3	+2.7
IPIL	**Ipil**	**1.39**	**307**	*e*P		Pn	03 37 40.3	+0.3
BUKP	**Musuan**	**1.64**	**56**	*e*P		Pn	03 37 44.3	+0.8
BUKP				*e*S		Sn	03 38 10.3	+6.0

GUC 17 03:54:57.2±0.6,2283S×7061W,h38km±4km,ML3.7, 2C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.32**	**152**	⇓*i*P		Pn	03 55 05.0	-0.4
MECH				*i* S		Sn	03 55 11.0	-0.2
MECH					AML	AML	03 55 11.6	
	comp=N,26μm,0.3s							
CEN1	**Los Morros**	**0.68**	**146**	⇑*e*P		Pn	03 55 11.9	+1.6
CEN1				*i* S		Sn	03 55 22.7	+3.1
CEN1					AML	AML	03 55 25.3	
	comp=N,2μm,0.5s							
ANCH	**Antofagasta**	**0.87**	**168**	*e*P		Pn	03 55 13.0	0.0
ANCH				*i* S		Sn	03 55 25.1	+0.5
LVC	**Limon Verde**	**1.58**	**83**	*e*P		Pn	03 55 25.1	+2.4
LVC				*i* S		Sn	03 55 46.0	+4.0
LVC					AML	AML	03 55 48.2	
	comp=N,536nm,0.2s							
CPN1	**Cerro Paranal**	**1.80**	**174**	*e*P		Pn	03 55 26.6	+0.8
CPN1				*i* S		Sn	03 55 48.5	+1.1
CPN1					AML	AML	03 55 58.0	
	comp=E,1μm,0.5s							
PB01	**Plate Boundary**	**2.06**	**31**	*e*P		Pn	03 55 31.3	+2.0
PB01				*i* S		Sn	03 55 56.8	+3.1
PB01					AML	AML	03 56 03.8	
	comp=E,861nm,0.4s							
SPCH	**San Pedro de A**	**2.23**	**93**	⇑*i*P		Pn	03 55 37.9	+6.3
SPCH				*i* S		Sn	03 56 07.2	+9.3
SPCH				*i* S		Sn	03 56 08.3	+10
SPCH					AML	AML	03 56 14.8	
	comp=E,2μm,0.6s							

*IDC **17** 03:59:39.8±0.6, 26.32N×93.24E, h33km±4km, mb3.6/9, mb1 3.8/10, mb1mx3.6/22, mbtmp3.6/10, ML4.3/1, Error ellipse: s-maj=33.0km s-min=13.5km az=53.0*

*NEIC **17** 03:59:40.5±0.6, 26.33N×93.25E, h35km, mb4.2/2, Error ellipse: s-maj=27.2km s-min=10.4km az=56.0*

*ISCJB **17** 03:59:41.2±0.8, 26.19N±0.08°×93.02E±0.06°, h68km±10km, mb3.7/11, Error ellipse: s-maj=15.0km s-min=6.3km az=25.9*

ISC 17 03:59:41.7±0.9,**2632N**±009°×**9316E**±007,**h48**km±11km, **h34**km±1.5km:**pP-P,n31,**σ0º**85/40,mb3.9/11,Northeastern India**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SHL	**Shillong**	**1.37**	**237**	*e*PG		**Pn**	**04 00 05.0**	**+0.6**
SHL				*e*SG		**Sn**	**04 00 13.0**	**-8.5**
IMP	**Imphal**	**1.68**	**155**	*i* P		**Pn**	**04 00 08.0**	**-0.7**
IMP				*i* S		**Sn**	**04 00 35.0**	**+6.0**
LSA	**Lhasa**	**3.81**	**333**	*e*Pn		**Pn**	**04 00 41.1**	**+3.3**
TAPN	**Taplejung**	**4.98**	**283**	*e*Pn		**Pn**	**04 00 54.7**	**+0.8**
ODAN	**Odare**	**5.20**	**277**	*e*Pn		**Pn**	**04 00 57.8**	**+0.9**
RAMN	**Ramite**	**5.91**	**278**	*e*Pn		**Pn**	**04 01 07.8**	**+1.2**
JIRN	**Jiri**	**6.36**	**284**	*e*Pn		**Pn**	**04 01 12.2**	**-0.7**
JIRN				*e*Sn		**Sn**	**04 02 23.3**	**-0.9**
	95nm,0.3s							
GUN	**Gumba**	**6.68**	**285**	*e*Pn		**Pn**	**04 01 17.9**	**+0.7**
GUN				*e*Sn		**Sn**	**04 02 31.9**	**-0.1**
	74nm,0.4s							
PKI	**Pulchoki**	**7.03**	**282**	*e*Pn		**Pn**	**04 01 22.6**	**+0.6**
PKI				*e*Sn		**Sn**	**04 02 41.2**	**+0.6**
	25nm,0.2s							
PKIN	**Phulchoki**	**7.04**	**282**	*e*Pn		**Pn**	**04 01 22.6**	**+0.4**
PKIN				*e*Sn		**Sn**	**04 02 41.4**	**+0.5**
	28nm,0.4s							
KKN	**Kakani**	**7.18**	**284**	*e*Pn		**Pn**	**04 01 24.7**	**+0.6**
KKN				*e*Sn		**Sn**	**04 02 44.9**	**+0.6**
	26nm,0.2s							
DMN	**Daman**	**7.30**	**282**	*e*Pn		**Pn**	**04 01 26.0**	**+0.2**
GKN	**Gorkha**	**7.78**	**284**	*e*Pn		**Pn**	**04 01 32.3**	**0.0**
GKN				*e*Sn		**Sn**	**04 02 58.0**	**-0.9**
	44nm,0.2s							
DANN	**Dangsing**	**8.60**	**286**	*e*Pn		**Pn**	**04 01 42.3**	**-1.3**
DANN				*e*Sn		**Sn**	**04 03 15.5**	**-3.7**
	32nm,0.3s							
KOLN	**Koldanda**	**8.65**	**282**	*e*Pn		**Pn**	**04 01 43.1**	**-1.1**
PYUN	**Piuthan**	**9.23**	**283**	*e*Pn		**Pn**	**04 01 50.5**	**-1.6**
PYUN				*e*Sn		**Sn**	**04 03 31.8**	**-2.8**
	30nm,0.4s							
CMAR	**Chiang Mai Arr**	**9.48**	**144**	Pn		**Pn**	**04 01 55.4**	**-0.2**
	0.9nm,0.3s,baz=322,slow=13,SNR=4.4							
TKM2	**Tokmak 2**	**21.91**	**324**	*e*P		**P**	**04 04 30.5**	**-0.2**
	6.2nm,0.8s,mb4.1							
MK31	**Makanchi Array**	**22.18**	**340**	*e*P		**P**	**04 04 33.3**	**-0.3**
MKAR	**Makanchi Array**	**22.18**	**340**	P		**P**	**04 04 32.8**	**-0.7**
	4.8nm,0.8s,mb4.0,baz=148,slow=12,SNR=22							
KBL	**Kabul**	**22.31**	**297**	*e*P		**P**	**04 04 36.5**	**+1.3**
	8.3nm,0.6s,mb4.3							
SONM	**Songino Array**	**23.86**	**22**	P		**P**	**04 04 50.4**	**-0.1**
	0.2nm,0.4s,mb2.9,baz=199,slow=8.5,SNR=2.5							
ZALV	**Zalesovo Beam**	**28.28**	**350**	P		**P**	**04 05 30.1**	**-0.1**
	0.4nm,0.3s,mb3.5,baz=168,slow=15,SNR=2.9							
ZALV					pP	pP	04 05 40.5	-2.4
	1.1nm,0.5s,baz=175,slow=8.2,SNR=4.0							
AKTK	**Aktyubinsk**	**36.06**	**321**	P		**P**	**04 06 39.0**	**+0.6**
AKTO	**Aktyubinsk**	**36.06**	**321**	P		**P**	**04 06 39.0**	**+0.6**
	1.5nm,0.9s,mb3.9,baz=133,slow=9.9,SNR=4.3							
WRA	**Warramunga Arr**	**60.92**	**135**	P		**P**	**04 09 49.3**	**-0.5**
	0.2nm,0.3s,mb3.7,baz=323,slow=7.3,SNR=5.8							
WRA					pP	pP	04 09 58.9	-4.6
	1.9nm,0.7s,baz=323,slow=7.4,SNR=12							
ASAR	**Alice Springs**	**63.42**	**138**	P		**P**	**04 10 06.7**	**+0.2**
	0.2nm,0.4s,mb3.6,baz=318,slow=6.6,SNR=4.0							
ASAR					pP	pP	04 10 15.8	-4.4
	0.8nm,0.6s,baz=320,slow=6.8,SNR=6.9							
NOA	**NORSAR Array B**	**63.48**	**327**	P		**P**	**04 10 05.7**	**-0.8**
	1.1nm,0.9s,mb4.0,baz=17,slow=7.5,SNR=2.9							
GERES	**GERESS Array B**	**63.93**	**314**	P		**P**	**04 10 09.7**	**+0.1**
	0.8nm,0.5s,mb4.0,baz=78,slow=5.9,SNR=11							
GERES					pP	pP	04 10 20.3	-3.0
	0.2nm,0.3s,baz=67,slow=7.4,SNR=2.0							
TORD	**Torodi Ar. Bea**	**85.57**	**282**	P		**P**	**04 12 15.9**	**+0.5**
	2.5nm,0.7s,mb4.6,baz=65,slow=4.5,SNR=20							
TORD					pP	pP	04 12 26.5	-3.0
	0.8nm,0.6s,baz=70,slow=4.9,SNR=4.4							
TORD					sP	sP	04 12 30.3	-4.6
	0.8nm,0.6s,baz=69,slow=4.4,SNR=3.9							
TXAR	**Lajitas Array**	**122.36**	**17**	PKP		PKPdf	04 18 31.9	-0.1
	0.2nm,0.5s,baz=346,slow=0.8,SNR=3.9							
TXAR					pPKP	pPKPdf	04 18 42.8	-3.9
	0.2nm,0.5s,baz=19,slow=3.5,SNR=3.5							

*IDC **17** 04:06:18.6±8.8, 36.99N×7180E, h209km±83km, mb3.0/3, mb1 3.0/6, mb1mx2.9/22, mbtmp3.0/6, Error ellipse: s-maj=51.3km s-min=26.0km az=176.0*

*NEIC **17** 04:06:19.5±2.7, 3703N×7177E, h218km±17km, mb4.0/2, Error ellipse: s-maj=33.9km s-min=16.3km az=171.0*

*ISCJB **17** 04:06:21.3±0.9, 3735N±008°×717E±0.1, h235km±9km, mb3.2/3, Error ellipse: s-maj=16.7km s-min=10.6km az=35.5*

ISC 17 04:06:22.5±0.9,**3736N**±008°×**717E**±01,**h222**km±9km,**n22,** σ1º**03/24,mb3.2/3,2C,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KBL	**Kabul**	**3.54**	**218**	*e*Pn		**Pn**	**04 07 18.5**	**-1.1**
AML	**Almayashu**	**5.01**	**17**	P		**Pn**	**04 07 38.2**	**+0.8**
	SNR=52							
UCH	**Uchtor**	**5.32**	**23**	*e*Pn		**Pn**	**04 07 42.3**	**+0.9**
	9.9nm,0.7s							
UCH	**Uchtor**	**5.32**	**23**	P		**S**	**04 08 42.7**	**-1.3**
	SNR=11							
KZA	**Kyzart**	**5.45**	**29**	P		**Pn**	**04 07 42.6**	**-0.4**
	SNR=5.4							
EKS2	**Erkin-Say**	**5.53**	**16**	*e*Pn		**Pn**	**04 07 45.3**	**+1.3**
	9.5nm,0.8s							
AAK	**Ala-Archa**	**5.69**	**21**	P		**Pn**	**04 07 46.7**	**+0.7**
	SNR=14							
KK31	**Karatay Array**	**5.81**	**351**	Pn		**Pn**	**04 07 48.5**	**+0.9**
	0.5nm,0.3s,baz=174,slow=14,SNR=17							
KK31					Sn	**S**	**04 08 53.7**	**-1.5**
	4.9nm,0.8s,baz=185,slow=30,SNR=13						

	comp=Z,0.8nm,0.6s,mb3.6,baz=64,slow=6.8,SNR=4.6							
ZALV	**Zalesovo Beam**	**42.68**	**306**	P	**P**	**04 34 19.0**	**-1.0**	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7							
MKAR	**Makanchi Array**	**46.98**	**297**	P	**P**	**04 34 53.4**	**-0.9**	
	comp=Z,1.5nm,0.8s,mb4.0,baz=70,slow=7.3,SNR=7.1							
MKAR	**Makanchi Array**	**46.98**	**297**	P	**P**	**04 34 53.4**	**-0.9**	
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**47.43**	**304**↑	*e*P	**P**	**04 34 56.6**	**-1.1**	
KURK				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
BVAR	**Borovoye Array**	**50.94**	**310**	P	**P**	**04 35 23.3**	**-1.2**	
	comp=Z,0.5nm,0.3s,mb3.9,baz=49,slow=8.5,SNR=3.9							
BVAR	**Borovoye Array**	**50.94**	**310**	P	**P**	**04 35 23.3**	**-1.2**	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**50.98**	**310**	*e*P	**P**	**04 35 24.9**	**0.0**	
CMAR	**Chiang Mai Arr**	**52.26**	**256**	P	**P**	**04 35 34.5**	**-0.4**	
	comp=Z,0.7nm,0.4s,mb4.0,baz=34,slow=7.1,SNR=4.3							
CMAR	**Chiang Mai Arr**	**52.26**	**256**	P	**P**	**04 35 34.5**	**-0.3**	
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ARU	**Arti**	**55.12**	**318***c*	*i*P	**P**	**04 35 55.7**	**+0.4**	
ARU				*e*		04 37 58.8		
ARU				*e*S	**S**	**04 43 36.8**	**+2.2**	
ARU				SS	SS	04 47 19.9	+1.7	
ARU				pmax	pmax			
	comp=Z,6.0nm,2.5s,mb4.2							
KEV	**Kevo**	**57.52**	**341**	*e*p	**P**	**04 36 10.7**	**-1.4**	
ARCES	**ARCESS Array B**	**58.03**	**341**	P	**P**	**04 36 16.1**	**+0.3**	
	comp=Z,4.0nm,1.0s,mb4.4,baz=22,slow=6.7,SNR=6.7							
ARCES	**ARCESS Array B**	**58.03**	**341**	P	**P**	**04 36 16.1**	**+0.4**	
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.0s							
JOF	**Joensuu**	**61.49**	**334**	*e*p	**P**	**04 36 37.3**	**-2.3**	
	comp=Z,1.2nm,0.5s,mb4.3							
JOF	**Joensuu**	**61.49**	**334**	*e*P	**P**	**04 36 37.3**	**-2.3**	
JOF				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.2							
NVAR	**Mina Array Bea**	**62.59**	**62**	P	**P**	**04 36 47.4**	**0.0**	
	comp=Z,0.8nm,0.7s,mb3.9,baz=290,slow=6.1,SNR=6.8							
PDAR	**Pinedale Array**	**64.92**	**54**	P	**P**	**04 37 02.9**	**+0.2**	
	comp=Z,0.7nm,0.8s,mb3.7,baz=270,slow=2.5,SNR=5.9							
WRA	**Warramunga Arr**	**68.30**	**199**	P	**P**	**04 37 22.4**	**-1.9**	
	comp=Z,0.3nm,0.8s,mb3.4,baz=11,slow=6.6,SNR=3.1							
NB2	**NORSAR Subarra**	**68.40**	**341**	P	**P**	**04 37 24.9**	**+0.4**	
	comp=Z,1.4nm,0.5s,mb4.2,baz=28,slow=6.2							
NOA	**NORSAR Array B**	**68.40**	**341**	P	**P**	**04 37 25.0**	**+0.5**	
	comp=Z,1.5nm,0.5s,mb4.3,baz=28,slow=6.4,SNR=18							
NOA	**NORSAR Array B**	**68.40**	**341**	*e*P	**P**	**04 37 25.3**	**+0.8**	
NOA				pmax	pmax			
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**71.68**	**326**	P	**P**	**04 37 44.5**	**-0.3**	
	comp=Z,2.8nm,0.4s,mb4.5,baz=32,slow=6.3,SNR=11							
AKASG	**Malin Array Be**	**71.68**	**326**	P	**P**	**04 37 44.5**	**-0.3**	
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.4s							
ASAR	**Alice Springs**	**71.99**	**198**	P	**P**	**04 37 48.5**	**+1.7**	
	comp=Z,0.3nm,0.7s,mb3.4,baz=12,slow=5.1,SNR=4.1							
ASAR	**Alice Springs**	**71.99**	**198**	*e*P	**P**	**04 37 48.3**	**+1.5**	
KWP	**Kalwaria**	**74.97**	**329**↓	*i*P	**P**	**04 38 05.5**	**+1.3**	
BURAR	**Bucovina Array**	**75.73**	**327**↓	*i*P	**P**	**04 38 09.4**	**+0.8**	
TRPA	**Tarpa**	**76.29**	**328**↓	*i*P	**P**	**04 38 12.9**	**+1.1**	
CLL	**Collm**	**76.63**	**336**	*e*P	**P**	**04 38 13.0**	**-0.6**	
CLL				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.5							
MLR	**Muntele Rosu**	**77.20**	**325**↑	*i*P	**P**	**04 38 18.8**	**+1.9**	
TXAR	**Lajitas Array**	**77.65**	**60**	P	**P**	**04 38 19.6**	**-0.1**	
	comp=Z,1.4nm,0.6s,mb4.1,baz=300,slow=3.9,SNR=16							
TXAR	**Lajitas Array**	**77.65**	**60**	*e*P	**P**	**04 38 19.6**	**-0.1**	
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
GERES	**GERESS Array B**	**78.61**	**334**	P	**P**	**04 38 25.1**	**+0.3**	
	comp=Z,0.6nm,0.5s,mb3.8,baz=39,slow=6.5,SNR=7.6							
GERES	**GERESS Array B**	**78.61**	**334**	P	**P**	**04 38 25.1**	**+0.4**	
GERES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ASF	**Jabal al Asfar**	**82.78**	**310**	LR	LR	05 19 22.9		
	comp=Z,53nm,19.1s,baz=73,slow=38							

*ISCJB **17** 04:42:16.4±0.7, 53S±0.1×688E±0.1, h10km, mb4.2/14, MS3.6/2, Error ellipse: s-maj=19.2km s-min=17.1km az=147.3*
*IDC **17** 04:42:16.9±0.7, 5.19S×6874E, h0km, mb4.1/11, mb1 4.1/11, mb1mx4.0/22, mbtmp4.1/11, MS3.7/2, Ms1 3.7/2, ms1mx2.9/39, Error ellipse: s-maj=22.1km s-min=18.9km az=7.0*
*NEIC **17** 04:42:18.6±0.6, 5.29S×6871E, h10km, mb4.4/3, Error ellipse: s-maj=16.9km s-min=15.7km az=138.0*

ISC 17 04:42:18.4±0.7, 53S±0.1×687E±0.1, h10km, n18, σ1s01/15, mb4.2/14, MS3.6/2, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**37.99**	**51**	P	**P**	**04 49 37.4**	**+0.4**
	1.0nm,0.3s,mb4.0,baz=242,slow=9.2,SNR=7.8						
CMAR				LR	LR	05 02 55.2	
	comp=Z,64nm,20.4s,MS3.4,baz=235,slow=33						
KBL	**Kabul**	**39.61**	**0**	P	**P**	**04 49 52.7**	**+2.4**
	7.0nm,1.4s,mb4.2						
BOSA	**Boshof**	**47.24**	**235**	P	**P**	**04 50 51.4**	**-0.6**
	1.8nm,0.7s,mb4.1,baz=73,slow=13,SNR=3.1						
BOSA				LR	LR	05 06 46.9	
	comp=Z,128nm,20.7s,MS3.9,baz=254,slow=31						
TKM2	**Tokmak 2**	**48.38**	**7**	*e*P	**P**	**04 51 01.6**	**+1.1**
	6.1nm,1.5s,mb4.4						
GNI	**Garni**	**50.32**	**336**	P	**P**	**04 51 15.6**	**+0.2**
	1.6nm,0.3s,mb4.5,baz=178,slow=16,SNR=4.2						
MKAR	**Makanchi Array**	**53.23**	**12**	P	**P**	**04 51 36.5**	**-0.5**
	1.0nm,0.6s,mb3.9,baz=208,slow=9.4,SNR=6.4						
KURK	**Kurchatov**	**56.42**	**8**	*e*P	**P**	**04 51 59.8**	**-0.3**
	5.5nm,1.0s,mb4.5						
ZALV	**Zalesovo Beam**	**60.54**	**11**	P	**P**	**04 52 27.8**	**-0.9**
	1.9nm,0.6s,mb4.4,baz=205,slow=6.6,SNR=12						
SONM	**Songino Array**	**62.38**	**28**	P	**P**	**04 52 39.7**	**-1.7**
	1.3nm,0.8s,mb4.1,baz=219,slow=8.1,SNR=10						
ASAR	**Alice Springs**	**65.17**	**114**	P	**P**	**04 53 00.3**	**+0.1**
	1.7nm,0.8s,mb4.2,baz=280,slow=5.5,SNR=17						
WRA	**Warramunga Arr**	**65.29**	**109**	P	**P**	**04 53 01.6**	**+0.5**
	4.4nm,0.9s,mb4.5,baz=283,slow=8.3,SNR=23						
AKASG	**Malin Array Be**	**65.30**	**334**	P	**P**	**04 52 58.8**	**-1.7**
	0.2nm,0.3s,mb3.6,baz=135,slow=5.5,SNR=6.3						
TORD	**Torodi Ar. Bea**	**69.04**	**286**	P	**P**	**04 53 26.0**	**+1.0**
	1.3nm,1.1s,mb3.8,baz=96,slow=3.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**69.04**	**286**	P	**P**	**04 53 26.0**	**+1.0**
DBIC	**Dimbokro**	**74.40**	**278**	P	**P**	**04 53 57.8**	**+0.5**
	1.8nm,0.8s,mb4.1,baz=104,slow=4.2,SNR=2.4						
PDAR	**Pinedale Array**	**142.65**	**358**	PKP	PKPdf	05 01 54.0	+1.8
	0.4nm,0.7s,baz=347,slow=3.7,SNR=3.0						
NVAR	**Mina Array Bea**	**146.39**	**10**	PKPbc	PKPbc	05 02 00.8	+0.7
	1.7nm,0.8s,baz=17,slow=1.4,SNR=14						
TXAR	**Lajitas Array**	**155.03**	**344**	PKPbc	PKPdf	05 02 22.6	+10
	0.4nm,1.0s,baz=127,slow=2.4,SNR=3.1						
TXAR				PKPab	PKPab	05 02 35.8	-0.8
	0.6nm,0.8s,baz=70,slow=2.7,SNR=6.4						

IDC 17 04:58:35.3±3.8, 482S×15169E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/16, mbtmp3.6/2, Error ellipse: s-maj=157.8km s-min=48.2km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.61**	**227**	P	P	05 03 37.8	0.0
	1.2nm,0.6s,baz=51,slow=9.6,SNR=8.6						
ASAR	**Alice Springs**	**25.40**	**221**	P	P	05 04 04.7	+0.1
	1.0nm,0.7s,baz=55,slow=8.7,SNR=14						
TORD	**Torodi Ar. Bea**	**149.26**	**288**	PKPbc	PKPbc	05 18 26.6	-0.4
	0.2nm,0.3s,baz=93,slow=2.3,SNR=6.1						

IDC 17 05:03:51.5±6.7, 657S×13104E, h40km±56km, mb3.7/5, mb1 4.0/7, mb1mx3.7/15, mbtmp3.9/7, ML4.7/3, Error ellipse: s-maj=80.3km s-min=21.8km az=59.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**8.14**	**243**	P	Pn	05 05 47.5	+0.3
	7.5nm,0.3s,baz=88,slow=11,SNR=9.1						
BATI				S	Sn	05 07 11.1	-7.0
	19nm,0.3s,baz=176,slow=18,SNR=5.7						
WRA	**Warramunga Arr**	**13.67**	**167**	P	Pn	05 07 01.7	-1.2
	6.0nm,0.3s,baz=350,slow=13,SNR=111						
WRA				S	Sn	05 09 23.5	-10
	4.1nm,0.3s,baz=334,slow=22,SNR=8.5						
ASAR	**Alice Springs**	**17.22**	**171**	P	Pn	05 07 48.6	-0.5
	2.1nm,0.3s,baz=341,slow=9.5,SNR=82						
ASAR				S	S	05 10 48.6	-19
	0.4nm,0.3s,baz=353,slow=26,SNR=7.2						
STKA	**Stephens Creek**	**27.04**	**160**	P	P	05 09 31.0	+1.0
	0.7nm,0.4s,baz=330,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**68.44**	**326**	P	P	05 14 49.8	+0.5
	1.7nm,0.5s,baz=118,slow=7.8,SNR=25						
VNDA	**Vanda**	**72.75**	**173**	P	P	05 15 15.0	-0.1
	0.4nm,0.5s,baz=324,slow=8.0,SNR=6.1						
BVAR	**Borovoye Array**	**78.26**	**327**	P	P	05 15 46.8	-0.1
	0.4nm,0.4s,baz=116,slow=6.6,SNR=3.2						
AKTO	**Aktyubinsk**	**84.37**	**322**	P	P	05 16 19.3	-0.2
	0.4nm,0.4s,baz=117,slow=6.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**129.74**	**282**	PKP	PKPdf	05 22 56.5	-1.0
	0.5nm,0.6s,baz=95,slow=2.4,SNR=5.9						

*BJI **17** 05:06:25.0, 365S×10031E, h37km, mB5.1, mb4.9, Ms5.0, Msz4.8*
*NEIC **17** 05:06:28.9±0.3, 326S×10037E, mb4.9/13, Error ellipse: s-maj=10.0km s-min=6.3km az=53.0*
NEIC Felt [III] at Mukomuko, Sumatra.
*ISCJB **17** 05:06:28.2±0.7, 329S±004×10031E±004, h36km±5km, mb4.8/58, MS4.6/32, Error ellipse: s-maj=8.2km s-min=4.8km az=146.2*
*MOS **17** 05:06:28.6±1.1, 304S×10056E, h33km, mb5.2/19, Error ellipse: s-maj=16.2km s-min=7.8km az=108.1*
*IDC **17** 05:06:29.4±0.7, 3.10S×10050E, h26km±4km, mb4.4/21, mb1 4.5/22, mb1mx4.4/26, mbtmp4.4/22, ML4.8/1, MS4.4/14, Ms1 4.4/14, ms1mx4.1/25, Error ellipse: s-maj=24.7km s-min=9.2km az=47.0*
*DJA **17** 05:06:31.8±0.0, 3.11S×10048E, h10km, mB5.5/10, Mjma4.7/11, MLv5.2/11, Mw(mB)5.3/10, Mwp4.6/10*

ISC 17 05:06:30.1±1.0, 328S±004×10031E±004, h34km±6km, h33km±1.2km:pP-P, n159, σ1s18/150, mb4.8/58, MS4.6/32, 12C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**2.31**	**99**	P	**Pn**	**05 07 05.5**	**-0.3**
KSI	**Kapahiang**	**2.31**	**99**	S	**Pn**	**05 07 06.4**	**+0.6**
PDSI	**Padang**	**2.36**	**4**	P	**Pn**	**05 07 04.8**	**-1.6**
PDSI	**Padang**	**2.36**	**4**	S	**Sn**	**05 07 34.5**	**+0.3**
PPI	**Padang Panjang**	**2.81**	**2**	P	**Pn**	**05 07 11.0**	**-1.6**
RGRI	**Rengat**	**3.55**	**35**	P	**Pn**	**05 07 22.7**	**-0.1**
RGRI	**Rengat**	**3.55**	**35**	S	Sx	05 07 56.7	
KLI	**Kotabumi**	**4.80**	**109**	P	**Pn**	**05 07 42.7**	**+2.7**
KLI	**Kotabumi**	**4.80**	**109**	S	**Sn**	**05 08 34.3**	**-0.2**
PPBI	**Pangkal Pinang**	**5.93**	**79**	P	**Pn**	**05 07 56.5**	**+1.0**
	37nm,0.8s,1μm0.6nm						
KGM	**Kluang**	**6.06**	**30**	↑P	**Pn**	**05 07 59.2**	**+1.9**
MYKOM	**Kota Tinggi**	**6.16**	**35**	↑P	**Pn**	**05 08 00.0**	**+1.4**
MYKOM	**Kota Tinggi**	**6.16**	**35**	P	**Pn**	**05 07 59.2**	**+0.5**
FRIM	**Kepong**	**6.61**	**12**	↑P	**Pn**	**05 08 05.4**	**+0.5**
DBJI	**Dramaga**	**7.19**	**117**	P	**Pn**	**05 08 13.8**	**+0.9**
	193nm,0.7s,1.2nm						
CBJI	**Citeko**	**7.23**	**116**	P	**Pn**	**05 08 17.7**	**+4.3**
	825nm,0.9s,3.7nm						
IPM	**Ipoh**	**7.74**	**5**	↑P	**Pn**	**05 08 23.1**	**+2.6**
IPM	**Ipoh**	**7.74**	**5**	P	**Pn**	**05 08 21.2**	**+0.7**
	58nm,1.4s,1μm0.3nm						
LEM	**Lembang**	**8.09**	**116**	P	**Pn**	**05 08 28.6**	**+3.4**
	229nm,1.2s,3μm0.7nm						
KULM	**Kulim**	**8.52**	**2**	↑P	**Pn**	**05 08 32.3**	**+1.1**
COCO	**West Island**	**9.49**	**201**	*e*Pn	**Pn**	**05 08 42.5**	**-2.0**
COCO	**West Island**	**9.49**	**201**	P	**Pn**	**05 08 44.2**	**-0.3**
	142nm,1.0s						
BSI	**Banda Aceh**	**10.05**	**330**	P	Px	05 09 03.7	
	35nm,1.2s						
BJII	**Banjamegara**	**10.19**	**114**	P	**Pn**	**05 08 56.5**	**+2.5**
SNG	**Songkhla**	**10.39**	**2**	P	**Pn**	**05 08 56.0**	**-0.8**
KSM	**Kuching**	**11.06**	**65**	Pn	**Pn**	**05 09 05.7**	**-0.2**
KSM	**Kuching**	**11.06**	**65**	↑P	Px	05 09 08.9	
KSM	**Kuching**	**11.06**	**65**	P	Px	05 09 17.8	
	24nm,1.6s						
SJI	**Sawahan**	**12.23**	**112**	P	**Pn**	**05 09 21.8**	**-0.2**
SBUM	**Sibu**	**13.20**	**65**	↓P	Px	05 09 39.0	
SBUM	**Sibu**	**13.20**	**65**	P	Px	05 09 38.3	
KMMI	**Kalianget**	**14.11**	**106**	P	Px	05 09 57.2	
	84nm,1.4s						
BTM	**Bintulu**	**14.30**	**63**	↓P	Px	05 09 55.2	
BBKI	**Banjar Baru**	**14.51**	**91**	P	Px	05 09 59.9	
	124nm,1.1s						
KKM	**Kota Kinabalu**	**18.39**	**60**	*e*P	**Pn**	**05 10 41.1**	**-1.5**
KKM	**Kota Kinabalu**	**18.39**	**60**	↓P	**Pn**	**05 10 43.0**	**+0.4**
SDKM	**Sandakan**	**19.05**	**62**	↑P	**Pn**	**05 10 50.6**	**0.0**
KAPI	**Kappang**	**19.47**	**96**	P	**Pn**	**05 10 51.8**	**-3.8**
	2.7nm,0.3s,baz=269,slow=6.7,SNR=17						
KAPI	**Kappang**	**19.47**	**96**	*e*P	**Pn**	**05 10 52.3**	**-3.3**
	71nm,1.3s						
KAPI	**Kappang**	**19.47**	**96**	P	**Pn**	**05 10 53.7**	**-1.9**
	46nm,1.2s,581nm						
MYLDM	**Lahad Datu**	**20.02**	**65**	P	**P**	**05 11 04.4**	**+4.2**
CM31	**Chiang Mai Arr**	**21.64**	**356**	*e*P	**P**	**05 11 16.3**	**-1.3**
	12nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**21.64**	**356**	P	**P**	**05 11 15.6**	**-2.1**
	7.2nm,0.7s,mb4.2,baz=185,slow=9.8,SNR=29						
CMAR				PcP	PcP	05 15 20.0	+1.4
	1.6nm,0.8s,baz=202,slow=4.2,SNR=5.3						
CMAR				LR	LR	05 21 09.8	
	comp=Z,1μm,18.0s,MS4.4,baz=184,slow=41						
CMAR	**Chiang Mai Arr**	**21.64**	**356**	P	**P**	**05 11 15.6**	**-2.0**
CMAR						05 15 20.0	
CHG	**Chiang Mai**	**22.00**	**357**	↑P	**P**	**05 11 22.9**	**+1.5**
	10.0nm,1.0s,mb4.2						
CHTO	**Chiang Mai**	**22.00**	**357**	*e*P	**P**	**05 11 20.4**	**-1.0**
	5.0nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**22.00**	**357**	*e*P	**P**	**05 11 20.4**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
QIZ	**Qiongzhong**	**24.07**	**23**	P	**P**	**05 11 44.0**	**+1.5**
QIZ				AP		05 11 52.5	
QIZ				S	**S**	**05 16 01.5**	**+3.7**
QIZ				XS	sS	05 16 16.1	+2.1
QIZ				AMB	AMB		
	comp=Z,112nm,4.8s						
QIZ				LR	LR		
	comp=N,1μm,14.4s						
QIZ				LR	LR		
	comp=Z,1μm,14.7s,MS4.5						
KMI	**Kunming**	**28.33**	**5**	P	**P**	**05 12 22.1**	**+1.2**
KMI				AP	pP	05 12 34.5	+3.7
KMI				XP	sP	05 12 36.8	+1.9
KMI				PP	PP	05 13 16.3	-9.0
KMI				S	**S**	**05 17 06.0**	**+0.7**
KMI				XS	sS	05 17 23.5	+1.9
KMI				SS		05 18 33.8	
KMI				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.5						
KMI				LR	LR		
	comp=N,1μm,14.8s,MS4.7						
KMI				LR	LR		
	comp=E,968nm,12.9s,MS4.7						
KMI				LR	LR		
	comp=Z,1μm,15.4s,MS4.6						
FITZ	**Fitzroy Crossi**	**28.86**	**123**	*e*P	**P**	**05 12 22.5**	**-3.1**
SHL	**Shillong**	**29.82**	**345**	*e*P	**P**	**05 12 34.5**	**+0.5**
GYA	**Guiyang**	**30.20**	**11**	P	**P**	**05 12 36.8**	**-0.6**
GYA				AP	pP	05 12 46.6	-0.7
GYA				XP	sP	05 12 50.8	-0.7
GYA				PP	PP	05 13 35.3	-11
GYA				PCP	PcP	05 15 39.4	+1.4
GYA				S	**S**	**05 17 30.8**	**-3.8**
GYA				SCP	ScP	05 19 17.0	-0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,1μm,16.0s,MS4.8						
GYA				LR	LR		
	comp=E,1μm,13.8s,MS4.8						
GYA				LR	LR		
	comp=Z,2μm,16.3s,MS4.7						
ODAN	**Odare**	**32.46**	**338**	*e*P	**P**	**05 12 57.7**	**+0.4**
TAPN	**Taplejung**	**32.79**	**339**	*e*P	**P**	**05 13 01.4**	**+1.2**
	comp=Z,66nm,1.0s,mb5.5						
RAMN	**Ramite**	**32.84**	**337**	*e*P	**P**	**05 13 01.8**	**+1.1**
KAKA	**Kakadu**	**33.13**	**108**	*e*P	Px	05 12 48.3	
	comp=Z,6.4nm,0.6s						
JIRN	**Jiri**	**33.64**	**337**	*e*P	**P**	**05 13 08.6**	**+1.0**
	comp=Z,44nm,0.9s,mb5.4						
LSA	**Lhasa**	**33.95**	**346**	P	**P**	**05 13 10.0**	**-0.3**
GUN	**Gumba**	**33.98**	**337**	*e*P	**P**	**05 13 12.4**	**+1.8**
	comp=Z,39nm,0.5s,mb5.6						
DMN	**Daman**	**34.03**	**335**	*e*P	**P**	**05 13 12.4**	**+1.4**
KKN	**Kakani**	**34.12**	**336**	*e*P	**P**	**05 13 13.2**	**+1.4**
CD2	**Chengdu**	**34.16**	**5**	*e*P	**P**	**05 13 11.3**	**-0.8**
CD2				AP	pP	05 13 21.6	-0.5
CD2				XP	sP	05 13 25.8	-0.4
CD2				PP	PP	05 14 28.3	-1.6
CD2				S	**S**	**05 18 36.8**	**+0.6**
CD2				XS	sS	05 18 52.8	+0.1
CD2				SS	SS	05 20 48.5	-17
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,120nm,6.2s						
CD2				LR	LR		
	comp=N,2μm,15.6s,MS4.9						
CD2				LR	LR		
	comp=E,1μm,19.0s,MS4.9						
CD2				LR	LR		
	comp=Z,2μm,14.3s,MS4.9						
GKN	**Gorkha**	**34.57**	**335**	*e*P	**P**	**05 13 16.8**	**+1.1**
KOLN	**Koldanda**	**34.82**	**334**	*e*P	**P**	**05 13 18.5**	**+0.7**
DANN	**Dangsing**	**35.25**	**334**	*e*P	**P**	**05 13 23.0**	**+1.5**
PYUN	**Piuthan**	**35.37**	**333**	*e*P	**P**	**05 13 24.2**	**+1.6**
WHN	**Wuhan**	**36.21**	**21**	↓P	**P**	**05 13 29.4**	**-0.4**
WHN				S	**S**	**05 19 10.9**	**+3.1**
WHN				LR	LR		
	comp=N,3μm,14.6s,MS5.3						
WHN				LR	LR		
	comp=E,2μm,18.3s,MS5.3						
WHN				LR	LR		
	comp=Z,4μm,14.4s,MS5.3						
WRA	**Warramunga Arr**	**37.09**	**119**	P	**P**	**05 13 36.4**	**-1.1**
	comp=Z,6.9nm,0.5s,mb4.7,baz=292,slow=8.8,SNR=20						
WRA				S	**S**	**05 19 20.3**	**-1.3**
	comp=Z,2.7nm,1.0s,baz=292,slow=16,SNR=5.8						
WRA				LR	LR	05 30 43.7	
	comp=Z,635nm,20.2s,MS4.4,baz=300,slow=39						
WRA	**Warramunga Arr**	**37.09**	**119**	P	**P**	**05 13 36.4**	**-1.1**
WRA				S	**S**	**05 19 20.3**	**-1.3**
WRAB	**Tennant Creek**	**37.10**	**119**	*e*P	**P**	**05 13 36.7**	**-0.9**
	comp=Z,65nm,1.6s,mb5.2						
WRAB	**Tennant Creek**	**37.10**	**119**	*e*P	**P**	**05 13 36.7**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,65nm,1.6s,mb5.2						
WB2	**Warramunga Arr**	**37.10**	**119**	*e*P	**P**	**05 13 37.2**	**-0.4**
WB2	**Warramunga Arr**	**37.10**	**119**	*e*P	**P**	**05 13 37.3**	**-0.3**
XAN	**Xi'an**	**38.00**	**12**	P	**P**	**05 13 43.3**	**-1.6**
XAN				AP	pP	05 13 51.9	-3.1
XAN				XP	sP	05 13 56.1	-3.0
XAN				PP	PP	05 15 11.3	-0.9
XAN				S	**S**	**05 19 36.0**	**+1.1**
XAN				SCP	ScP	05 19 45.8	+0.4
XAN				AMB	AMB		
	comp=Z,49nm,0.9s,mb5.2						
XAN				AMB	AMB		
	comp=Z,68nm,4.5s						
XAN				LR	LR		
	comp=N,534nm,15.9s,MS4.7						
XAN				LR	LR		
	comp=E,867nm,14.9s,MS4.7						
XAN				LR	LR		
	comp=Z,2μm,16.2s,MS5.0						
ASAR	**Alice Springs**	**38.26**	**125**	P	**P**	**05 13 47.3**	**0.0**
	comp=Z,9.2nm,0.7s,mb4.6,baz=299,slow=7.5,SNR=22						
ASAR				S	**S**	**05 19 41.6**	**+2.4**
	comp=Z,1.2nm,1.0s,baz=291,slow=16,SNR=7.1						
LZH	**Lanzhou**	**39.30**	**5**	*e*P	**P**	**05 13 55.3**	**-0.5**
LZH				AP	pP	05 14 05.0	-0.9
LZH				XP	sP	05 14 09.1	-0.9
LZH				*e*PP	PP	05 15 30.3	+3.8
LZH				*e*S	**S**	**05 19 54.5**	**0.0**
LZH				XS	sS	05 20 11.3	+0.2
LZH				*e*SS	SS	05 22 43.5	-5.6
LZH				AMB	AMB		
	comp=Z,49nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,148nm,5.2s						
LZH				LR	LR		
	comp=N,903nm,14.5s						
LZH				LR	LR		
	comp=Z,2μm,17.4s,MS4.9						
SSE	**Sheshan**	**39.56**	**29**	P	**P**	**05 13 56.9**	**-1.1**
SSE				S	**S**	**05 19 54.3**	**-4.2**
SSE				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,106nm,4.1s						
SSE				LR	LR		
	comp=N,434nm,15.7s,MS4.4						
SSE				LR

STKA				pP	pP	05 15 14.1	-2.8		
	comp=Z,12nm,0.7s,baz=321,slow=9.6,SNR=11								
STKA				LR	LR	05 37 05.3			
	comp=Z,945nm,19.3s,MS4.8,baz=115,slow=38								
STKA	**Stephens Creek**	**48.08**	**131**	*eP*	**P**	**05 15 07.5**	**+0.9**		
	comp=Z,15nm,0.8s,mb5.1								
WMQ	**Urumqi**	**48.24**	**348**	P	**P**	**05 15 08.6**	**+1.0**		
WMQ				AP	pP	05 15 18.6	+0.8		
WMQ				XP	sP	05 15 22.6	+0.7		
WMQ				PP	PP	05 17 00.6	+0.3		
WMQ				S	**S**	**05 22 05.6**	**+0.8**		
WMQ				SCS	ScS	05 24 56.6	-1.3		
WMQ				SS	SS	05 25 28.6	-6.1		
WMQ				AMB	AMB				
	comp=Z,37nm,1.0s,mb5.4								
WMQ				AMB	AMB				
	comp=Z,105nm,4.0s								
WMQ				LR	LR				
	comp=N,327nm,15.0s,MS4.6								
WMQ				LR	LR				
	comp=E,329nm,15.0s,MS4.6								
WMQ				LR	LR				
	comp=Z,318nm,15.0s,MS4.4								
SNY	**Shenyang**	**49.63**	**23**	⇓P	**P**	**05 15 18.8**	**+0.5**		
SNY				AMB	AMB				
	comp=Z,272nm,4.1s								
SNY				LR	LR				
	comp=N,727nm,14.7s								
SNY				LR	LR				
	comp=Z,666nm,16.3s,MS4.7								
TKM2	**Tokmak 2**	**51.12**	**337**	*eP*	**P**	**05 15 29.8**	**+0.3**		
	comp=Z,13nm,0.8s,mb4.9								
TKM2	**Tokmak 2**	**51.12**	**337**	*eP*	**P**	**05 15 29.8**	**+0.3**		
TKM2				pmax	pmax				
	comp=Z,13nm,0.8s,mb4.9								
SONM	**Songino Array**	**51.18**	**5**	P	**P**	**05 15 30.2**	**+0.4**		
	comp=Z,24nm,0.8s,mb5.2,baz=186,slow=8.8,SNR=85								
SONM				PcP	PcP	05 16 45.2	+0.2		
	comp=Z,3.0nm,0.7s,baz=184,slow=4.8,SNR=2.4								
ULN	**Ulaanbaatar**	**51.27**	**6**	*eP*	**P**	**05 15 30.9**	**+0.4**		
	comp=Z,28nm,1.0s,mb5.2								
ULN				*e*pP	pP	05 15 39.9	-1.0		
ULN	**Ulaanbaatar**	**51.27**	**6**	*eP*	**P**	**05 15 30.9**	**+0.3**		
ULN				*e**PP	pP	05 15 39.9	-1.0		
ULN				pmax	pmax				
	comp=Z,28nm,1.0s,mb5.2								
EKS2	**Erkin-Say**	**51.65**	**335**	*eP*	**P**	**05 15 34.1**	**+0.6**		
	comp=Z,14nm,0.9s,mb4.9								
EKS2				*e*pP	pP	05 15 45.9	+2.1		
CN2	**Changchun**	**52.03**	**23**	*eP*	**P**	**05 15 35.0**	**-1.3**		
CN2				*e*XP	sP	05 15 48.9	-1.8		
CN2				*eS*	**S**	**05 22 55.9**	**-1.7**		
CN2				AMB	AMB				
	comp=Z,20nm,1.0s,mb5.0								
CN2				AMB	AMB				
	comp=Z,200nm,5.0s								
CN2				LR	LR				
	comp=N,1μm,18.0s,MS5.0								
CN2				LR	LR				
	comp=E,500nm,18.0s,MS5.0								
CN2				LR	LR				
	comp=Z,800nm,16.0s,MS4.8								
MK31	**Makanchi Array**	**52.34**	**344**	*eP*	**P**	**05 15 38.4**	**-0.1**		
MKAR	**Makanchi Array**	**52.34**	**344**	P	**P**	**05 15 38.4**	**-0.2**		
	comp=Z,24nm,0.8s,mb5.2,baz=148,slow=8.1,SNR=61								
MKAR				LR	LR	05 42 43.8			
	comp=Z,163nm,18.6s,MS4.1,baz=164,slow=42								
MAT	**Matsushiro**	**53.08**	**38**	P	**P**	**05 15 41.9**	**-2.3**		
MJAR	**Matsushiro Arr**	**53.08**	**38**	P	**P**	**05 15 42.1**	**-2.1**		
	comp=Z,5.9nm,1.0s,mb4.5,baz=218,slow=8.5,SNR=12								
ZAK	**Zakamensk**	**53.51**	**2**	*eP*	**P**	**05 15 46.5**	**-0.6**		
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.6s,mb4.2								
MDJ	**Mudanjiang**	**54.40**	**25**	P	**P**	**05 15 54.3**	**+0.6**		
MDJ				AP	pP	05 16 02.1	-2.0		
MDJ				XP	sP	05 16 07.0	-1.2		
MDJ				SCP	ScP	05 20 53.3	+0.2		
MDJ				PCS	PcS	05 20 57.0	+0.4		
MDJ				S	**S**	**05 23 31.8**	**+2.0**		
MDJ				SS	SS	05 27 15.3	+2.7		
MDJ				AMB	AMB				
	comp=Z,8.0nm,1.2s,mb4.5								
MDJ				AMB	AMB				
	comp=Z,114nm,5.3s								
MDJ				LR	LR				
	comp=N,600nm,19.4s,MS4.8								
MDJ				LR	LR				
	comp=E,488nm,20.4s,MS4.8								
MDJ				LR	LR				
	comp=Z,942nm,17.4s,MS4.9								
ARMA	**Armidale**	**55.42**	**125**	*eP*	**P**	**05 16 03.7**	**+2.3**		
KURK	**Kurchatov**	**56.91**	**344**	*eP*	**P**	**05 16 11.0**	**-0.6**		
	comp=Z,22nm,0.9s,mb5.2								
KURK	**Kurchatov**	**56.91**	**344**	*c iP*	**P**	**05 16 11.2**	**-0.4**		
KURK				pmax	pmax				
	comp=Z,25nm,0.9s,mb5.2								
ZAA0	**Zalesovo Array**	**58.48**	**349**	*eP*	**P**	**05 16 21.9**	**-0.7**		
ZALV	**Zalesovo Beam**	**58.48**	**349**	P	**P**	**05 16 21.7**	**-0.9**		
	comp=Z,18nm,0.8s,mb5.2,baz=180,slow=5.3,SNR=61								
ZALV				LR	LR	05 43 28.1			
	comp=Z,133nm,21.1s,MS4.0,baz=337,slow=38								
KLR	**Kul'dur**	**58.97**	**24**	*eP*	**P**	**05 16 21.2**	**-4.9**		
KLR				*eS*	**S**	**05 24 38.5**	**+8.4**		
KLR				pmax	pmax				
	comp=Z,50nm,1.6s,mb5.3								
KLR				MLR	MLR				
	comp=E,700nm,13.0s								
KLR				MLR	MLR				
	comp=Z,2μm,13.0s,MS5.5								
NVS	**Novosibirsk**	**59.62**	**349**	*eP*	**P**	**05 16 27.9**	**-2.6**		
NVS				pmax	pmax				
	comp=Z,20nm,1.7s,mb4.9								
NVS				pmax	pmax				
	comp=N,26nm,2.0s								
BVAR	**Borovoye Array**	**61.48**	**340**	P	**P**	**05 16 41.8**	**-1.4**		
	comp=N,4.4nm,0.5s,mb4.8,baz=141,slow=8.7,SNR=26								
BRVK	**Borovoye**	**61.55**	**340**	*eP*	**P**	**05 16 42.5**	**-1.2**		
	comp=N,11nm,1.0s,mb5.0								
BRVK	**Borovoye**	**61.55**	**340**	*eP*	**P**	**05 16 42.5**	**-1.2**		
BRVK				pmax	pmax				
	comp=Z,11nm,1.0s,mb4.9								
BOD	**Bodaibo**	**61.90**	**8**	*eP*	**P**	**05 16 45.1**	**-0.8**		
BOD				pmax	pmax				
	comp=Z,15nm,1.6s,mb4.9								
YSS	**Yuzh-Sakhalins**	**62.40**	**31⇑**	*eP*	**P**	**05 16 49.4**	**-0.1**		
YSS				pmax	pmax				
	comp=Z,28nm,1.1s,mb5.3								
AKTK	**Aktyubinsk**	**64.62**	**332**	P	**P**	**05 17 02.9**	**-1.2**		
AKTO	**Aktyubinsk**	**64.62**	**332**	P	**P**	**05 17 02.9**	**-1.2**		
	comp=Z,2.2nm,0.5s,mb4.4,baz=108,slow=19,SNR=9.8								
SVE	**Sverdlovsk**	**67.98**	**338**	*eP*	**P**	**05 17 26.6**	**+1.1**		
SVE				pmax	pmax				
	comp=Z,17nm,1.0s,mb5.0								
ARU	**Arti**	**68.50**	**337**	*eP*	**P**	**05 17 27.3**	**-1.5**		
	comp=Z,10nm,1.2s,mb4.7								
ARU	**Arti**	**68.50**	**337**	*c iP*	**P**	**05 17 28.1**	**-0.6**		
ARU				PPP		05 21 37.3			
ARU				*eS*	S	05 26 27.4	-0.8		
ARU				*e*SS	SS	05 30 50.9	-1.8		
ARU				pmax	pmax				
	comp=Z,14nm,1.7s,mb4.7								
ARU				MLR	MLR				
	comp=Z,272nm,21.0s,MS4.5								
YAK	**Yakutsk**	**68.90**	**14**	*eP*	**P**	**05 17 29.8**	**-1.3**		
YAK				pmax	pmax				
	comp=Z,29nm,1.0s,mb5.2								
YAK				pmax	pmax				
	comp=E,12nm,1.9s								
YAK				pmax	pmax				
	comp=N,10.0nm,1.0s								
MAW	**Mawson**	**69.13**	**194**	LR	LR	05 41 19.1			
	comp=N,350nm,19.8s,MS4.6,baz=198,slow=30								
KIV	**Kislovodsk**	**69.71**	**319**	*eP*	**P**	**05 17 37.6**	**+1.1**		
KIV				*i*		05 17 57.5			
KIV				*e*		05 20 11.4			
KIV				*i* S	S	05 26 44.7	+1.6		
KIV				pmax	pmax				
	comp=Z,19nm,1.5s,mb4.8								
KIV				MLR	MLR				
	comp=Z,100nm,16.0s,MS4.2								
EIL	**Elat**	**70.47**	**303**	P	**P**	**05 17 41.6**	**0.0**		
	comp=Z,7.5nm,1.0s,mb4.6,baz=39,slow=8.1,SNR=4.1								
ANN	**Anapa**	**73.49**	**319**	*eP*	**P**	**05 17 56.9**	**-2.4**		
ANN				*eS*	S	05 27 23.2	-3.5		
ANN				pmax	pmax				
	comp=Z,49nm,1.6s,mb5.2								
PETK	**Petropavlovsk-**	**73.80**	**32**	P	**P**	**05 17 59.3**	**-1.6**		
	comp=Z,2.5nm,0.7s,mb4.3,baz=303,slow=1.3,SNR=4.0								
VSR	**Storozhevoye**	**75.00**	**325**	*eP*	**P**	**05 18 06.7**	**-1.2**		
VSR				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.5								
VSR				pmax	pmax				
	comp=N,1.0nm,0.4s								
VSR				pmax	pmax				
	comp=E,2.0nm,0.6s								
BOSA	**Boshof**	**75.31**	**241**	pP	pP	05 18 19.1	-2.0		
	comp=E,3.0nm,0.7s,baz=82,slow=6.1,SNR=3.2								
BOSA				LR	LR	05 48 54.6			
	comp=E,216nm,18.2s,MS4.5,baz=109,slow=34								
TIXI	**Tiksi**	**77.07**	**9**	*eP*	**P**	**05 18 17.9**	**-1.4**		
	comp=E,6.9nm,0.9s,mb4.6								
TIXI	**Tiksi**	**77.07**	**9**	*eP*	**P**	**05 18 18.1**	**-1.2**		
TIXI				pmax	pmax				
	comp=Z,15nm,1.4s,mb4.7								
OBN	**Obninsk**	**78.04**	**328⇓**	*eP*	**P**	**05 18 25.1**	**0.0**		
OBN				*e*	pP	05 18 34.4	-1.5		
OBN				pmax	pmax				
	comp=Z,18nm,1.4s,mb4.8								
KLMR	**Klimovskoe**	**79.11**	**334**	*eP*	**P**	**05 18 30.8**	**0.0**		
KLMR				pmax	pmax				
	comp=Z,27nm,1.5s,mb5.0								
AKASG	**Malin Array Be**	**80.68**	**322**	P	**P**	**05 18 38.7**	**-0.9**		
	comp=Z,0.2nm,0.3s,mb3.5,baz=99,slow=4.1,SNR=7.5								
AKASG				pP	pP	05 18 47.4	-3.0		
	comp=Z,0.4nm,0.3s,baz=87,slow=5.3,SNR=3.2								
VNDA	**Vanda**	**80.85**	**169**	P	**P**	**05 18 41.1**	**+1.0**		
	comp=Z,0.9nm,1.0s,mb3.7,baz=302,slow=11,SNR=2.9								
VNDA				LR	LR	05 49 35.5			
	comp=Z,176nm,18.6s,MS4.4,baz=316,slow=32								
MLR	**Muntele Rosu**	**81.44**	**317**	P	**P**	**05 18 45.0**	**+1.2**		
	comp=Z,4.0nm,0.8s,mb4.4,baz=225,slow=2.6,SNR=5.6								
BUR08	**Bucovina Ar. S**	**82.44**	**319**	*eP*	**P**	**05 18 49.9**	**+1.0**		
BUR08				*e*pP	pP	05 18 59.5	-0.3		
BILL	**Bilibino**	**84.24**	**20**	*eP*	**P**	**05 18 56.7**	**-1.1**		
BILL				*e*		05 22 09.7			
ARCES	**ARCESS Array B**	**87.77**	**340**	P	**P**	**05 19 15.2**	**0.0**		
	comp=Z,4.2nm,0.8s,mb4.8,baz=100,slow=5.5,SNR=11								
ARCES				LR	LR	06 01 50.4			
	comp=Z,244nm,21.7s,MS4.6,baz=101,slow=38								
GERES	**GERESS Array B**	**90.21**	**319**	P	**P**	**05 19 28.0**	**+0.9**		
	comp=Z,2.0nm,1.0s,mb4.4,baz=85,slow=4.7,SNR=9.1								
GERES				pP	pP	05 19 37.1	-1.0		
	comp=Z,1.1nm,0.8s,baz=72,slow=4.3,SNR=5.3								
GERES				LR	LR	06 07 10.2			
	comp=Z,131nm,20.0s,MS4.4,baz=288,slow=40								
GERES	**GERESS Array B**	**90.21**	**319**	P	**P**	**05 19 28.0**	**+0.9**		
GERES				*PP	pP	05 19 37.1	-1.0		
SNAA	**Sanae**	**91.03**	**198**	*eP*	**P**	**05 19 39.9**	**+9.4**		
HFS	**Hagfors**	**91.13**	**330**	P	**P**	**05 19 32.0**	**+0.8**		
	comp=Z,3.4nm,1.0s,mb4.7,baz=112,slow=14,SNR=3.0								
NOA	**NORSAR Array B**	**92.41**	**331**	P	**P**	**05 19 38.1**	**+1.1**		
	comp=Z,0.7nm,0.8s,mb4.0,baz=95,slow=5.1,SNR=3.2								
NOA				LR	LR	06 08 04.0			
	comp=Z,81nm,20.4s,MS4.2,baz=85,slow=40								
VNA2	**Neumayer--Watz**	**92.64**	**198**	*eP*	**P**	**05 19 41.2**	**+3.2**		
	baz=33,slow=2.6								
VNA2				*e*	pP	05 19 48.8	-0.2		
KEST	**Kesra**	**92.68**	**305**	LR	LR	06 04 10.7			
	comp=Z,80nm,18.2s,MS4.2,baz=300,slow=37								
TORD	**Torodi Ar. Bea**	**99.12**	**283**	LR	LR	06 05 48.2			
	comp=Z,126nm,18.2s,MS4.5,baz=75,slow=36								
PPT	**Papeete**	**108.09**	**110**	*e*LR	LR	05 56 55.3			
	comp=Z,187nm,24.8s								
RKT	**Rikitea**	**120.09**	**119**	*e*LR	LR	06 02 25.2			
	comp=Z,252nm,33.0s								
NVAR	**Mina Array Bea**	**130.38**	**40**	PKP	PKPdf	05 25 39.3	+1.9		
	comp=Z,0.7nm,0.7s,baz=250,slow=2.0,SNR=5.9								
NVAR				pPKP	pPKPdf	05 25 48.1	-0.6		
	comp=Z,0.6nm,0.6s,baz=260,slow=1.5,SNR=4.2								
PDAR	**Pinedale Array**	**132.53**	**30**	PKP	PKPdf	05 25 42.0	+0.7		
	comp=Z,0.3nm,0.7s,baz=300,slow=2.0,SNR=3.2								
WMOK	**Wichita Mounta**	**144.03**	**27**	*e*PKPdf	PKPdf	05 25 59.8	-2.9		
TXAR	**Lajitas Array**	**145.51**	**39**	PKPbc	PKPbc	05 26 06.1	+0.6		
	comp=Z,19nm,0.7s,baz=306,slow=1.1,SNR=209								
URVA	**University of**	**145.82**	**357**	*e*PKPbc	PKPbc	05 26 05.8	-0.3		
ELN	**Prospectdale**	**146.20**	**2**	*e*PKPbc	PKPbc	05 26 07.0	-0.4		
MIAR	**Mount Ida**	**146.32**	**21**	*e*PKPbc	PKPbc	05 26 07.2	-0.5		
WVT	**Waverly**	**146.46**	**12**	*e*PKPbc	PKPbc	05 26 07.5	-0.7		
TZTN	**Tazewell**	**146.71**	**6**	*e*PKPbc	PKPbc	05 26 08.4	-0.4		
TZTN				*ep*PKPdf	pPKPdf	05 26 17.7	-0.8		
CPCT	**Cooper Cave**	**147.68**	**7**	*e*PKPbc	PKPbc	05 26 10.7	-0.9		
SWET	**Sewanee**	**147.70**	**10**	*e*PKPbc	PKPbc	05 26 10.7	-1.0		

NEIC ***17*** *05:11:09.9±1.0,5150N×16.14E,h5km,MG2.6(WAR), Error ellipse: s-maj=11.5km s-min=6.4km az=202.0*
ISCJB ***17*** *05:11:09.7±0.6,5137N±003×16.10E±003,h0km, Error ellipse: s-maj=4.5km s-min=2.5km az=12.5*
CSEM ***17*** *05:11:10.5±0.2,5148N×1609E,h1km,ML3.2/9, Error ellipse: s-maj=3.0km s-min=1.7km az=13.0*
PRU ***17*** *05:11:11.6,5143N×1608E,h0km*
WAR ***17*** *05:11:11,5146N×1610E,ML2.6, Mining Induced*
VIE ***17*** *05:11:13.6±0.9,5123N×16.16E,h0km,mb2.2/4,ML2.6/4, Error ellipse: s-maj=5.5km s-min=5.3km az=124.0 61 km WNW of Wroclaw Suspected Mining induced.*

ISC 17 05:11:10.4±0.6,5145N±003×1609E±003,h0km,n28, σ0§92/62,1C-6D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.62**	**168**	*e*Pg	**Pg**	**05 11 22.9**	**+0.6**
KSP				*e*Sg	**Sg**	**05 11 31.4**	**+1.1**
KSP	**Ksiaz**	**0.62**	**168**	⇓*i*Pg	**Pg**	**05 11 22.8**	**+0.6**
KSP				*e*Sg	**Sg**	**05 11 31.3**	**+1.1**
UPC	**Upice**	**0.94**	**183**	*e*PG	**Pg**	**05 11 29.0**	**+0.6**
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*PG	**Pg**	**05 11 31.7**	**+0.1**
DPC				*e*SG	**Sg**	**05 11 45.9**	**0.0**
	comp=Z,22nm,0.4s						
PVCC	**Panska Ves**	**1.33**	**227**	*e*PG	**Pg**	**05 11 36.1**	**+0.2**
PVCC				*e*SG	**Sg**	**05 11 54.3**	**+1.2**
	comp=Z,87nm,0.3s						
BRG	**Berggiesshubel**	**1.47**	**248**	Pg	**Pg**	**05 11 38.6**	**+0.1**
BRG	**Berggiesshubel**	**1.47**	**248**	PN	**Pn**	**05 11 37.3**	**-0.8**
BRG				PG	**Pg**	**05 11 38.6**	**+0.1**
BRG				SG	**Sg**	**05 11 58.6**	**+1.1**
	comp=Z,32nm,0.4s						
PRU	**Pruhonice**	**1.76**	**215**	*e*PN	**Pn**	**05 11 41.7**	**-0.4**
PRU				*e*PG	**Sg**	**05 11 43.4**	**-0.7**
PRU				*e*SG	**Sg**	**05 12 06.0**	**-0.9**
	comp=Z,18nm,0.5s						
MORC	**Moravsky Berou**	**1.91**	**150**	*e*Pn	**Pn**	**05 11 42.9**	**-1.3**
MORC				*e*S	**Sn**	**05 12 10.3**	**+1.4**
MORC	**Moravsky Berou**	**1.91**	**150**	*e*Pn	**Pn**	**05 11 42.9**	**-1.3**
MORC				*e*S	**Sn**	**05 12 10.3**	**+1.4**
MORC				*e*Sg	**Sg**	**05 12 10.8**	**-1.0**
CLL	**Collm**	**1.94**	**267**	*i* Pn	**Pn**	**05 11 43.7**	**-0.9**
CLL				*e*Pg	**Pg**	**05 11 47.0**	**-0.5**
CLL				*e*Sg	**Sg**	**05 12 13.0**	**+0.4**
CLL	**Collm**	**1.94**	**267**	*i* Pn	**Pn**	**05 11 43.7**	**-0.9**
CLL				LmV		05 04 00.0	
	comp=Z,100nm,21.8s						
CLL				*e*Pg	**Pg**	**05 11 47.0**	**-0.5**
CLL				*e*Sn	**Sn**	**05 12 01.0**	**-8.6**
CLL				*e*Sg	**Sg**	**05 12 13.0**	**+0.4**
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*SG	**Sg**	**05 12 15.2**	**-1.9**
	comp=Z,26nm,0.7s						
TREC	**Trest**	**2.19**	**190**	*e*PN	**Pn**	**05 11 48.7**	**+0.7**
TREC				*e*PG	**Pg**	**05 11 51.8**	**-0.5**
NKC	**Novy Kostel**	**2.61**	**244**	*e*PN	**Pn**	**05 11 53.8**	**0.0**
NKC				*e*PG	**Pg**	**05 12 00.5**	**+0.1**
NKC				*e*SG	**Sg**	**05 12 34.9**	**+0.8**
	comp=Z,22nm,0.3s						
OJC	**Ojcow**	**2.65**	**116**	*e*Pn	**Pn**	**05 11 53.5**	**-0.9**
OJC				*e*Pg	**Pg**	**05 12 01.3**	**0.0**
OJC				*e*Sg	**Sg**	**05 12 36.2**	**+0.6**
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PN	**Pn**	**05 11 57.0**	**+0.3**
KHC				*e*PG	**Pg**	**05 12 02.6**	**-1.9**
KHC				*e*SN	**Sn**	**05 12 31.3**	**-0.1**
KHC				*e*SG	**Sg**	**05 12 41.1**	**+0.1**
	comp=Z,9.1nm,0.5s						
GEC2	**GERESS Array S**	**3.02**	**211**	*e*Pn	**Pn**	**05 12 00.1**	**+0.6**
GEC2				*e*Pg	**Pg**	**05 12 08.2**	**-0.1**
GEC2				*e*Sg	**Sg**	**05 12 46.8**	**-0.7**
GEC2	**GERESS Array S**	**3.02**	**211**	*e*Pn	**Pn**	**05 12 00.1**	**+0.6**
GEC2	**GERESS Array S**	**3.02**	**211**	*e*Pg	**Pg**	**05 12 08.2**	**-0.1**
MODS	**Modra-Piesok**	**3.17**	**166**	*e*PG	**Pg**	**05 12 10.7**	**-0.4**
MODS				*e*SG	**Sg**	**05 12 53.6**	**+1.4**
KOLL	**Kolacno**	**3.24**	**152**	*e*PG	**Pg**	**05 12 11.4**	**-1.0**
KOLL				*e*SG	**Sg**	**05 12 55.3**	**+1.0**
ZST	**Bratislava**	**3.32**	**168**	*e*SG	**Sg**	**05 12 56.3**	**-0.7**
VYHS	**Vyhne**	**3.45**	**148**	*e*PG	**Pg**	**05 12 14.8**	**-1.6**
VYHS				*e*SG	**Sg**	**05 13 01.8**	**+0.7**
CONA	**Conrad Observa**	**3.52**	**182**	⇓*i*Pn	**Pn**	**05 12 07.5**	**+1.1**
CONA				⇓*i*Sg	**Sg**	**05 13 02.0**	**-1.6**
	comp=Z,8.6nm,0.4s						
CSNA	**Conrad Observa**	**3.52**	**183**	⇓*i*Pn	**Pn**	**05 12 07.5**	**+1.1**
CSNA				⇓*i*Sg	**Sg**	**05 13 02.0**	**-1.6**
	comp=Z,5.6nm,0.3s						
MOA	**Molln**	**3.79**	**199**	⇑*i*Pn	**Pn**	**05 12 10.7**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**05 13 13.1**	**+1.0**
	comp=Z,9.2nm,0.5s						
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PN	**Pn**	**05 12 11.4**	**+0.3**
STHS				*e*PG	**Pg**	**05 12 24.5**	**-0.1**
STHS				*e*SG	**Sg**	**05 13 17.3**	**+2.6**

IDC 17 05:17:55.5±2.8,419S×13569E,h0km,mb1 3.7/2, mb1mx3.4/13,mbtmp3.5/2,ML3.2/2,Error ellipse: s-maj=106.4km s-min=45.8km az=103.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.71**	**185**	Pn	Pn	05 21 40.6	+2.2
	0.1nm,0.3s,baz=6.3,slow=12,SNR=5.6							
ASAR	**Alice Springs**	**19.44**	**185**	P	Pn	05 22 22.9	-1.9
	0.1nm,0.3s,baz=11,slow=11,SNR=13							
TXAR	**Lajitas Array**	**118.64**	**59**	PKP	PKPdf	05 36 46.3	+0.1
	0.1nm,0.6s,baz=260,slow=1.7,SNR=3.7							

IDC ***17*** *05:21:53.8±4.3,2328S×7034W,h0km,mb4.1/1,mb1 3.9/2, mb1mx3.5/16,mbtmp3.9/2,ML3.7/1,MS3.5/2,Ms1 3.5/2, ms1mx3.0/19,Error ellipse: s-maj=134.1km s-min=60.5km az=88.0*
GUC ***17*** *05:21:55.6±1.1,2310S×7073W,h38km±3km,ML3.9*
ISCJB ***17*** *05:21:56.7±1.1,2308S±005×7075W±009,h33km,Error ellipse: s-maj=12.0km s-min=6.6km az=2.3*

ISC 17 05:21:58.2±1.2,2313S±005×707W±01,h35km,n9, σ1§16/12,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.19**	**83**	*eP*	**Pn**	**05 22 03.0**	**-1.9**
MECH				*i* S	**Sn**	**05 22 08.3**	**-1.2**
MECH				AML	AML	05 22 09.1		
	comp=E,48μm,0.5s						
CEN1	**Los Morros**	**0.49**	**122**	*eP*	**Pn**	**05 22 07.6**	**-1.1**
CEN1				*i* S	**Sn**	**05 22 16.1**	**0.0**
CEN1				AML	AML	05 22 17.9		
	comp=N,3μm,0.3s						
CPN1	**Cerro Paranal**	**1.51**	**171**	*eP*	**Pn**	**05 22 22.5**	**-0.2**
CPN1				*i* S	**Sn**	**05 22 43.9**	**+2.8**
CPN1				AML	AML	05 22 45.7		
	comp=E,5μm,0.5s						
LVC	**Limon Verde**	**1.69**	**73**	*eP*	**Pn**	**05 22 25.6**	**+0.4**
LVC				*i* S	**Sn**	**05 22 48.7**	**+3.1**
LVC				AML	AML	05 22 50.0		
	comp=N,1μm,0.5s						
PB01	**Plate Boundary**	**2.34**	**28**	*eP*	**Pn**	**05 22 34.2**	**+0.1**
PB01				*i* S	**Sn**	**05 23 01.9**	**+0.2**
PB01				AML	AML	05 23 11.2		
	comp=E,895nm,0.6s						
LPAZ	**La Paz**	**7.21**	**20**	Pn	**Pn**	**05 23 41.8**	**+0.8**
	comp=E,0.6nm,0.3s,baz=196,slow=16,SNR=17							
LPAZ				LR	LR	05 26 43.2		
	comp=E,79nm,19.9s,baz=154,slow=40							
TORD	**Torodi Ar. Bea**	**79.42**	**71**	P	**P**	**05 34 01.3**	**0.0**
	comp=E,0.9nm,0.5s,baz=256,slow=5.4,SNR=29							
YKA	**Yellowknife Ar**	**92.19**	**341**	LR	LR	06 21 13.3		
	comp=E,113nm,22.0s,baz=115,slow=38							
MKAR	**Makanchi Array**	**147.89**	**36**	PKPbc	PKPbc	05 41 40.1	+0.6
	comp=E,0.3nm,0.6s,baz=304,slow=2.8,SNR=3.5							

PRU 17 05:43:27.3,4983N×1840E,h0km,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.16**	**273**	*e*PG	**Pg**	**05 43 31.1**	**+0.7**
OKC				*e*SG	Sg	05 43 33.5	+1.0
	comp=Z,52nm,0.6s						
RAC	**Raciborz**	**0.29**	**332**	*e*Pg	Pg	05 43 34.0	+1.2
RAC				*e*Sg	S

JFR	**Furan**	**1.17**	**12**	ǁP		**Pn**	**05 56 48.9**	**-0.7**
JFR				*e*S		**Sn**	**05 57 04.2**	**-0.6**
JYM2	**Yakumo 2**	**1.40**	**275**	ǁP		**Pn**	**05 56 52.4**	**-0.2**
JYM2				*e*S		**Sn**	**05 57 10.2**	**-0.1**
JSR	**Shiriuchi**	**1.46**	**251**	P		**Pn**	**05 56 53.2**	**-0.2**
JSR				*e*S		**Sn**	**05 57 11.3**	**-0.3**
JOB	**Onbets**	**1.47**	**53**	⇑P		**Pn**	**05 56 54.0**	**+0.5**
JOB				*e*S		**Sn**	**05 57 13.3**	**+1.5**
JAB	**Ashibetsu**	**1.48**	**359**	ǁP		**Pn**	**05 56 53.9**	**+0.2**
JAB				*e*S		**Sn**	**05 57 13.4**	**+1.2**
JAR	**Ashorobuto**	**1.70**	**41**	⇑P		**Pn**	**05 56 56.3**	**-0.3**
JAR				*e*S		**Sn**	**05 57 16.8**	**-0.5**
JANG	**Nango**	**1.74**	**199**	P		**Pn**	**05 56 57.1**	**0.0**
JANG				*e*S		**Sn**	**05 57 18.4**	**+0.1**
JHR	**Hokuryu**	**1.76**	**347**	ǁP		**Pn**	**05 56 58.0**	**+0.5**
JHR				*e*S		**Sn**	**05 57 20.4**	**+1.5**
ASAJ	**Asahikawa**	**2.11**	**7**	P		**Pn**	**05 57 02.5**	**+0.3**
	41nm,0.3s,baz=223,slow=11,SNR=112							
ASAJ				S		**Sn**	**05 57 29.1**	**+1.9**
	70nm,0.3s,baz=51,slow=25,SNR=11							
ASAJ	**Asahikawa**	**2.11**	**7**	PN		**Pn**	**05 57 02.5**	**+0.4**
ASAJ				S		**Sn**	**05 57 29.2**	**+1.9**
ASAJ				pmax	pmax			
	comp=Z,41nm,0.3s							
ASAJ				smax				
	comp=N,70nm,0.3s							
YSS	**Yuzh-Sakhalins**	**4.94**	**4**	*e*PN		**Pn**	**05 57 41.3**	**+0.5**
YSS				pmax	pmax			
	comp=Z,70nm,1.0s							
MAJO	**Matsushiro**	**6.31**	**211**	*e*Pn		**Pn**	**05 58 01.5**	**+2.0**
	comp=Z,13nm,0.5s							
MAJO	**Matsushiro**	**6.31**	**211**	*e*PN		**Pn**	**05 58 01.5**	**+2.0**
MAJO				pmax	pmax			
	comp=Z,13nm,0.5s							
MAT	**Matsushiro**	**6.31**	**211**	P		**Pn**	**05 58 00.9**	**+1.4**
MAT				S		**Sn**	**05 59 04.8**	**-5.3**
MJAR	**Matsushiro Arr**	**6.31**	**211**	P		**Pn**	**05 58 01.1**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=22,slow=15,SNR=11							
MJAR				LR		LR	06 00 43.0	
	comp=Z,110nm,21.5s,baz=75,slow=40							
KSRS	**Korea Array**	**11.93**	**252**	P		**Pn**	**05 59 22.9**	**+6.5**
	comp=Z,0.5nm,0.3s,baz=62,slow=14,SNR=5.3							
KSRS	**Korea Array**	**11.93**	**252**	PN		**Pn**	**05 59 22.9**	**+6.6**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.3s							
PEA0B	**Petropavlovsk-**	**15.18**	**38**	*e*Pn		**Pn**	**05 59 57.8**	**-1.7**
PETK	**Petropavlovsk-**	**15.18**	**38**	P		**Pn**	**05 59 57.1**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=210,slow=8.4,SNR=15							
JOW	**Kunigami**	**19.00**	**222**	LR		LR	06 08 22.2	
	comp=Z,82nm,19.2s,baz=53,slow=38							
SONM	**Songino Array**	**25.88**	**295**	P		**P**	**06 01 54.5**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.3,baz=65,slow=8.1,SNR=6.3							
SONM	**Songino Array**	**25.88**	**295**	P		**P**	**06 01 54.5**	**-0.1**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**39.19**	**308**	P		**P**	**06 03 50.0**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.0,baz=69,slow=8.3,SNR=6.2							
ZALV				PcP	PcP		06 05 58.5	+0.1
	comp=Z,0.8nm,0.6s,baz=56,slow=3.6,SNR=3.9							
ZALV	**Zalesovo Beam**	**39.19**	**308**	P		**P**	**06 03 50.0**	**-0.4**
ZALV							06 05 58.5	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.9							
MK31	**Makanchi Array**	**42.20**	**298**	*e*P		**P**	**06 04 15.0**	**-0.3**
MKAR	**Makanchi Array**	**42.20**	**298**	P		**P**	**06 04 15.1**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.7,baz=83,slow=9.9,SNR=7.9							
MKAR	**Makanchi Array**	**42.20**	**298**	P		**P**	**06 04 15.1**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**43.52**	**304**	*e*P		**P**	**06 04 26.6**	**+0.7**
	comp=Z,5.5nm,0.9s,mb4.3							
KURK	**Kurchatov**	**43.52**	**304**	*e*P		**P**	**06 04 26.6**	**+0.7**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.3							
BVAR	**Borovoye Array**	**47.81**	**309**	P		**P**	**06 04 59.7**	**0.0**
	comp=Z,1.5nm,0.4s,mb4.1,baz=77,slow=8.4,SNR=9.0							
BVAR				pP	pP		06 05 17.8	+1.4
	comp=Z,0.8nm,0.4s,baz=84,slow=8.0,SNR=2.9							
BVAR	**Borovoye Array**	**47.81**	**309**	P		**P**	**06 04 59.7**	**0.0**
BVAR				*PP	pP		06 05 17.8	+1.5
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
TKM2	**Tokmak 2**	**47.98**	**295**	*e*P		**P**	**06 05 00.1**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.3							
TKM2	**Tokmak 2**	**47.98**	**295**	*e*P		**P**	**06 05 00.1**	**-1.1**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.3							
AKTK	**Aktyubinsk**	**55.90**	**310**	P		**P**	**06 05 60.0**	**0.0**
AKTO	**Aktyubinsk**	**55.90**	**310**	P		**P**	**06 05 60.0**	**0.0**
	comp=Z,1.0nm,0.4s,mb4.2,baz=69,slow=11,SNR=2.9							
AKTO	**Aktyubinsk**	**55.90**	**310**	P		**P**	**06 06 00.0**	**+0.1**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.2							
JOF	**Joensuu**	**61.90**	**331**	*e*p		**P**	**06 06 38.2**	**-3.0**
	comp=Z,3.0nm,0.6s,mb4.5							
JOF	**Joensuu**	**61.90**	**331**	*e*P		**P**	**06 06 38.2**	**-3.0**
JOF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.5							
WRA	**Warramunga Arr**	**62.08**	**188**	P		**P**	**06 06 43.3**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=7.5,slow=6.6,SNR=3.4							
WRA				pP	pP		06 07 01.8	+1.6
	comp=Z,1.8nm,0.6s,baz=7.0,slow=6.8,SNR=9.6							
ASAR	**Alice Springs**	**65.81**	**188**	P		**P**	**06 07 07.6**	**+0.3**
	comp=Z,0.2nm,0.6s,mb3.2,baz=18,slow=7.3,SNR=3.2							
ASAR				pP	pP		06 07 27.1	+2.3
	comp=Z,0.8nm,0.6s,baz=8.4,slow=7.3,SNR=6.2							
NB2	**NORSAR Subarra**	**69.85**	**337**	P		**P**	**06 07 31.7**	**-0.6**
	comp=Z,0.9nm,0.5s,mb3.9,baz=35,slow=6.5							
NOA	**NORSAR Array B**	**69.85**	**337**	P		**P**	**06 07 31.6**	**-0.7**
	comp=Z,2.4nm,0.9s,mb4.0,baz=36,slow=6.2,SNR=7.2							
NOA	**NORSAR Array B**	**69.85**	**337**	P		**P**	**06 07 31.7**	**-0.6**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
AKASG	**Malin Array Be**	**70.77**	**322**	P		**P**	**06 07 37.5**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.0,baz=43,slow=6.0,SNR=8.5							
AKASG				pP	pP		06 07 57.4	+1.6
	comp=Z,0.4nm,0.4s,baz=43,slow=5.8,SNR=2.6							
AKASG	**Malin Array Be**	**70.77**	**322**	P		**P**	**06 07 37.5**	**-0.7**
AKASG				*PP	pP		06 07 57.4	+1.6
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**71.53**	**55**	P		**P**	**06 07 44.1**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=288,slow=6.0,SNR=11							
PDAR	**Pinedale Array**	**73.75**	**47**	P		**P**	**06 07 56.8**	**+0.7**
	comp=Z,2.0nm,0.7s,mb4.0,baz=278,slow=2.3,SNR=18							
GIVF	**Givet**	**80.97**	**334**	*e*P		**P**	**06 08 36.5**	**+0.2**
CDF	**Champ du Feu**	**81.58**	**332**	*e*P		**P**	**06 08 39.2**	**-0.3**
LOR	**Lormes**	**83.75**	**333**	*e*P		**P**	**06 08 50.4**	**-0.4**
	comp=Z,2.8nm,0.6s,mb4.0							
SSF	**Saint Saulge**	**84.05**	**333**	*e*P		**P**	**06 08 52.5**	**+0.2**
SMF	**Signal de Mont**	**84.29**	**333**	*e*P		**P**	**06 08 53.3**	**-0.3**
	comp=Z,5.3nm,0.9s,mb4.1							
AVF	**Avril sur Loir**	**84.33**	**333**	*e*P		**P**	**06 08 53.7**	**-0.1**
	comp=Z,6.2nm,0.6s,mb4.3							
CAF	**Calviac**	**86.40**	**333**	*e*P		**P**	**06 09 04.9**	**+0.8**
	comp=Z,7.9nm,0.8s,mb4.4							
TXAR	**Lajitas Array**	**86.58**	**53**	P		**P**	**06 09 06.2**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.8,baz=294,slow=3.9,SNR=11							
TXAR	**Lajitas Array**	**86.58**	**53**	P		**P**	**06 09 06.3**	**+1.0**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MIV	**Mineville/With**	**88.47**	**25**	*e*P		**P**	**06 09 07.8**	**-6.3**
VBMS	**Vicksburg**	**91.62**	**42**	*e*P		**P**	**06 09 28.1**	**-1.0**
	comp=Z,96nm,0.3s							

IDC 17 06:02:17.8±4.0, 512S×15225E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=130.5km s-min=30.4km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**20.96**	**248**	*e*P		Px	06 06 48.7	
	5.6nm,0.4s							
WRA	**Warramunga Arr**	**22.83**	**228**	P		P	06 07 22.6	0.0
	0.5nm,0.3s,baz=50,slow=9.9,SNR=6.4							
ASAR	**Alice Springs**	**25.55**	**222**	P		P	06 07 49.0	+0.5
	0.5nm,0.4s,baz=58,slow=9.1,SNR=9.0							
SONM	**Songino Array**	**66.30**	**328**	P		P	06 13 08.9	+0.9
	0.4nm,0.5s,baz=140,slow=4.7,SNR=3.9							
SNAA	**Sanae**	**101.64**	**188**	*e*		Pdif	06 16 18.6	+6.5
SNAA				*e*			06 16 24.0	
VNA3	**Neumayer Olymp**	**102.86**	**186**	*e*		Pdif	06 16 27.2	+10
VNA3				*e*			06 16 32.2	
VNA3				*e*			06 16 35.8	
VNA2	**Neumayer--Watz**	**102.91**	**187**	*e*		Pdif	06 16 26.1	+8.3
	baz=112,slow=0.3							
VNA2				*e*			06 16 30.9	
VNA2				*e*			06 16 34.4	
TORD	**Torodi Ar. Bea**	**149.88**	**287**	PKPbc		PKPbc	06 22 09.1	-2.0
	0.1nm,0.3s,baz=87,slow=3.6,SNR=3.5							

MOS ***17*** *06:57:53.8±1.4, 1322N×14458E, h33km, mb4.7/5, Error ellipse: s-maj=19.9km s-min=11.7km az=92.5*
ISCJB ***17*** *06:57:55.4±0.7, 1320N±006×14485E±0.10, h52km±6km, mb4.4/25, MS3.7/21, Error ellipse: s-maj=15.9km s-min=8.9km az=166.6*
BJI ***17*** *06:57:55.0, 1330N×14490E, h53km, mB4.7, mb4.7, Ms4.3, Msz4.1*
IDC ***17*** *06:57:56.1±0.8, 1331N×14490E, h45km±6km, mb4.0/15, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, MS3.7/20, Ms1 3.7/20, ms1mx3.6/40, Error ellipse: s-maj=21.8km s-min=13.2km az=89.0*
NEIC ***17*** *06:57:57.1±0.9, 1327N×14487E, h54km±8km, mb4.6/7, Error ellipse: s-maj=14.6km s-min=7.7km az=86.0*
NEIC Felt [III] at Santa Rita; [II] at Tamuning, Tumon and Yigo. Felt at Anderson AFB, Dededo and Hagatna Heights. Also felt at Settlement, Northern Mariana Islands.

ISC 17 06:57:56.8±0.7, 1324N±006×14489E±009, h50km±6km, h44km±1.3km: pP-P, n65, σ0=82/48, mb4.4/25, MS3.7/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.34**	**357**	P		**Pn**	**06 58 06.2**	**-0.2**
	4μm,0.3s,baz=164,slow=7.2,SNR=1089							
GUMO				S		**Sn**	**06 58 13.1**	**-0.1**
	14μm,0.3s,baz=336,slow=19,SNR=151							
GUMO	**Guam**	**0.34**	**357**	*e*Pg		**Pn**	**06 58 06.3**	**-0.1**
GUMO				*e*Sg		**Sn**	**06 58 12.6**	**-0.6**
DAV	**Davao City (W)**	**19.96**	**254**	LR		LR	07 09 04.4	
	comp=Z,155nm,18.3s,baz=112,slow=33							
JHJ	**Hachijo jima 2**	**20.33**	**348**	LR		LR	07 09 12.6	
	comp=Z,326nm,20.8s,MS3.7,baz=285,slow=33							
JOW	**Kunigami**	**20.61**	**313**	P		**P**	**07 02 34.1**	**+2.2**
	10nm,0.4s,baz=157,slow=13,SNR=6.6							
JOW				LR		LR	07 08 51.9	
	comp=Z,216nm,21.4s,MS3.5,baz=107,slow=32							
MJAR	**Matsushiro Arr**	**23.96**	**347**	P		**P**	**07 03 06.2**	**-0.3**
	1.4nm,0.5s,mb3.7,baz=165,slow=9.8,SNR=3.1							
MJAR				LR		LR	07 11 40.9	
	comp=Z,86nm,21.1s,MS3.2,baz=180,slow=34							
MAJO	**Matsushiro**	**23.96**	**347**	P		**P**	**07 03 07.0**	**+0.5**
	10nm,0.9s,mb4.3							
MAJO	**Matsushiro**	**23.96**	**347**	P		**P**	**07 03 07.0**	**+0.5**
MAJO				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.2							
MAT	**Matsushiro**	**23.96**	**347**	P		**P**	**07 03 08.2**	**+1.7**
HNR	**Honiara**	**27.04**	**146**	LR		LR	07 12 16.2	
	comp=Z,196nm,18.9s,MS3.7,baz=332,slow=32							
KSRS	**Korea Array**	**28.47**	**331**	P		**P**	**07 03 47.4**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.0,baz=144,slow=11,SNR=5.8							
KSRS				PcP	PcP		07 06 57.0	-1.2
	comp=Z,1.7nm,0.8s,baz=149,slow=2.6,SNR=5.0							
KSRS				LR		LR	07 14 52.1	
	comp=Z,125nm,18.1s,MS3.5,baz=293,slow=36							
KAPI	**Kappang**	**30.86**	**236**	LR		LR	07 16 21.1	
	comp=Z,79nm,18.1s,MS3.4,baz=236,slow=36							
CTA	**Charters Tower**	**33.15**	**178**	P		**P**	**07 04 29.9**	**+1.4**
	comp=Z,5.4nm,0.8s,mb4.5,baz=21,slow=6.5,SNR=3.2							
CTA				LR		LR	07 16 12.4	
	comp=Z,90nm,18.9s,MS3.5,baz=229,slow=33							
CTA	**Charters Tower**	**33.15**	**178**	P		**P**	**07 04 29.9**	**+1.4**
CTA				LR		LR	07 16 12.4	
CTAO	**Charters Tower**	**33.15**	**178**	*e*P		**P**	**07 04 29.1**	**+0.6**
	comp=Z,18nm,1.2s,mb4.9							
CTAO	**Charters Tower**	**33.15**	**178**	*e*P		**P**	**07 04 29.1**	**+0.6**
CTAO				pmax	pmax			
	comp=Z,18nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**34.56**	**198**	*e*P		**P**	**07 04 40.1**	**-0.7**
	comp=Z,9.4nm,0.8s,mb4.8							
WRAB	**Tennant Creek**	**34.56**	**198**	*e*P		**P**	**07 04 40.1**	**-0.7**
WRAB				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8							
WB2	**Warramunga Arr**	**34.57**	**198**	*e*P		**P**	**07 04 41.2**	**+0.3**
WB2	**Warramunga Arr**	**34.57**	**198**	*e*P		**P**	**07 04 40.7**	**-0.2**
WRA	**Warramunga Arr**	**34.57**	**198**	P		**P**	**07 04 41.2**	**+0.3**
	comp=Z,7.3nm,0.8s,mb4.7,baz=22,slow=9.8,SNR=38							
WRA				LR		LR	07 19 12.6	
	comp=Z,82nm,20.8s,MS3.5,baz=155,slow=37							
GYA	**Guiyang**	**38.13**	**296**	P		**P**	**07 05 11.3**	**0.0**
GYA				AP	pP		07 05 22.6	-1.9
GYA				XP	sP		07 05 30.4	0.0
GYA				PP	PP		07 06 41.5	+2.3
GYA				PCP	PcP		07 07 25.8	+0.3
GYA				S	**S**		**07 11 00.6**	**-0.4**
GYA				SCP	ScP		07 11 08.5	-0.7
GYA				SCS	ScS		07 15 16.3	-2.7
GYA				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.6							
ASAR	**Alice Springs**	**38.22**	**196**	P		**P**	**07 05 11.9**	**-0.1**
	comp=Z,2.5nm,0.6s,mb4.1,baz=21,slow=12,SNR=42							
KMI	**Kunming**	**41.36**	**293**	P		**P**	**07 05 38.9**	**+0.7**
KMI				AP	pP		07 05 50.3	-1.2
KMI				XP	sP		07 05 56.3	-1.1
KMI				PP	PP		07 07 16.3	+1.9
KMI				S	**S**		**07 11 49.3**	**-0.2**
KMI				XS	sS		07 12 10.8	-1.1
KMI				SS	SS		07 14 46.3	-8.6
KMI				AMB	AMB			
	comp=Z,7.0nm,0.6s,mb4.5							
KMI				AMB	AMB			
	comp=Z,29nm,3.6s							
KMI				LR	LR			
	comp=N,84nm,17.1s,MS3.8							
KMI				LR	LR			
	comp=E,87nm,21.5s,MS3.8							
KMI				LR	LR			
	comp=Z,136nm,21.5s,MS3.8							
CD2	**Chengdu**	**41.69**	**302**	*e*P		**P**	**07 05 41.0**	**+0.2**
CD2				AP	pP		07 05 53.3	-0.8
CD2				XP	sP		07 05 59.0	-1.0
CD2				PP	PP		07 07 21.3	+3.4
CD2				S	**S**		**07 11 54.3**	**+0.1**
CD2				XS	sS		07 12 15.0	-1.6
CD2				SS	SS		07 14 55.3	-5.9
CD2				AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.5							
CD2				AMB	AMB			
	comp=Z,30nm,3.8s							
CD2				LR	LR			
	comp=N,190nm,16.2s,MS4.2							
CD2				LR	LR			
	comp=E,160nm,14.2s,MS4.2							
CD2				LR	LR			
	comp=Z,180nm,15.2s,MS4.1							
MBWA	**Marble Bar**	**42.18**	**216**	*e*P		**P**	**07 05 44.6**	**-0.2**
	comp=Z,10nm,0.7s,mb4.6							
CMAR	**Chiang Mai Arr**	**44.41**	**283**	P		**P**	**07 06 03.3**	**+0.3**
	comp=Z,1.1nm,0.3s,mb4.1,baz=84,slow=6.3,SNR=9.9							
CMAR				PcP	PcP		07 07 47.0	+0.8
	comp=Z,1.1nm,0.4s,baz=71,slow=2.3,SNR=4.4							
CMAR				LR	LR		07 23 16.1	
	comp=Z,90nm,18.5s,MS3.7,baz=129,slow=34							
CMAR	**Chiang Mai Arr**	**44.41**	**283**	P		**P**	**07 06 03.3**	**+0.3**
CMAR							07 07 47.0	
STKA	**Stephens Creek**	**44.97**	**184**	*e*P		**P**	**07 06 07.0**	**-0.1**
	comp=Z,2.8nm,0.9s,mb4.1							
STKA	**Stephens Creek**	**44.97**	**184**	P		**P**	**07 06 06.8**	**-0.4**
	comp=Z,1.5nm,0.5s,mb4.1,baz=319,slow=14,SNR=4.5							
STKA				LR	LR		07 24 48.7	
	comp=Z,80nm,21.9s,MS3.6,baz=25,slow=36							
STKA	**Stephens Creek**	**44.97**	**184**	*e*P		**P**	**07 06 07.0**	**-0.1**
	comp=Z,4.6nm,1.0s,mb4.3							
SONM	**Songino Array**	**47.02**	**325**	P		**P**	**07 06 22.4**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.7,baz=145,slow=11,SNR=4.0							
SONM				LR	LR		07 26 14.3	
	comp=Z,101nm,18.0s,MS3.8,baz=178,slow=36							
ZAK	**Zakamensk**	**50.13**	**326**	*e*P		**P**	**07 06 47.3**	**+0.3**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.2s,mb4.2							
KLBR	**Kellerberin**	**51.62**	**210**	*e*P		**P**	**07 06 58.1**	**-0.3**
	comp=Z,39nm,1.5s,mb5.1							
LSA	**Lhasa**	**52.17**	**297**	*e*P		**P**	**07 07 03.2**	**+0.5**
	comp=Z,4.3nm,0.5s,mb4.6							
LSA	**Lhasa**	**52.17**	**297**	*e*P		**P**	**07 07 03.2**	**+0.6**
LSA				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6							
MK31	**Makanchi Array**	**61.75**	**316**	*e*P		**P**	**07 08 09.1**	**-1.1**
MKAR	**Makanchi Array**	**61.75**	**316**	P		**P**	**07 08 09.2**	**-1.0**
	comp=Z,1.1nm,0.4s,mb4.4,baz=93,slow=7.8,SNR=24							
ZALV	**Zalesovo Beam**	**61.91**	**325**	LR		LR	07 34 26.8	
	comp=Z,52nm,19.0s,MS3.7,baz=108,slow=35							
KURK	**Kurchatov**	**64.86**	**320**	*e*P		**P**	**07 08 28.8**	**-1.8**
	comp=Z,1.7nm,0.5s,mb4.3							
KURK	**Kurchatov**	**64.86**	**320**	*e*P		**P**	**07 08 28.8**	**-1.9**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
BVAR	**Borovoye Array**	**70.21**	**322**	LR		LR	07 39 11.8	
	comp=Z,94nm,21.4s,MS4.0,baz=165,slow=35							
PPT	**Papeete**	**71.56**	**114**	*e*LR		LR	07 31 03.4	
	comp=Z,197nm,24.8s,baz=290							
PPT	**Papeete**	**71.56**	**114**	LR		LR	07 39 55.8	
	comp=Z,20nm,18.2s,MS3.4,baz=33,slow=35							
AKTO	**Aktyubinsk**	**77.94**	**319**	LR		LR	07 45 32.9	
	comp=Z,59nm,18.3s,MS4.0,baz=257,slow=37							
YBH	**Yreka Blue Hor**	**83.09**	**49**	P		**P**	**07 10 18.5**	**+1.2**
	comp=Z,4.5nm,1.0s,mb4.4,baz=136,slow=2.9,SNR=4.3							
YKA	**Yellowknife Ar**	**83.16**	**27**	P		**P**	**07 10 15.5**	**-1.8**
	comp=Z,1.1nm,0.4s,mb4.3,baz=286,slow=5.1,SNR=7.0							
YKA				LR		LR	07 44 34.6	
	comp=Z,38nm,19.6s,MS3.8,baz=140,slow=34							
YKA	**Yellowknife Ar**	**83.16**	**27**	P		**P**	**07 10 15.5**	**-1.8**
YKA				LR		LR	07 44 34.5	
RKT	**Rikitea**	**86.29**	**115**	*e*LR		LR	07 37 22.1	
	comp=Z,194nm,34.2s							
NVAR	**Mina Array Bea**	**87.12**	**51**	P		**P**	**07 10 37.9**	**+0.3**
	comp=Z,1.3nm,0.6s,mb4.4,baz=269,slow=5.7,SNR=13							
ARCES	**ARCESS Array B**	**87.42**	**342**	P		**P**	**07 10 37.3**	**-1.1**
	comp=Z,3.1nm,1.1s,mb4.5,baz=38,slow=4.6,SNR=3.4							
ELK	**Elko**	**88.79**	**48**	P		**P**	**07 10 46.0**	**+0.5**
	comp=Z,4.4nm,0.9s,mb4.8,baz=282,slow=4.2,SNR=16							
VNDA	**Vanda**	**91.12**	**176**	P		**P**	**07 10 55.8**	**+0.2**
	comp=Z,0.8nm,1.1s,mb4.0,baz=304,slow=6.2,SNR=3.6							
PDAR	**Pinedale Array**	**92.19**	**45**	LR		LR	07 46 51.5	
	comp=Z,102nm,18.9s,MS4.3,baz=148,slow=32							
AKASG	**Malin Array Be**	**95.31**	**325**	LR		LR	07 55 23.6	
	comp=Z,58nm,20.9s,MS4.0,baz=30,slow=36							
NOA	**NORSAR Array B**	**97.38**	**339**	LR		LR	07 56 51.1	
	comp=Z,29nm,18.1s,MS3.8,baz=0.0,slow=36							
TXAR	**Lajitas Array**	**101.53**	**56**	PKKPbc		PKKPbc	07 27 45.0	-6.8
	comp=Z,0.2nm,0.8s,baz=60,slow=2.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**135.07**	**304**	PKP		PKPdf	07 17 11.8	+0.3
	comp=Z,1.8nm,1.0s,baz=33,slow=1.2,SNR=9.4							
DBIC	**Dimbokro**	**144.02**	**302**	PKP		PKPdf	07 17 25.1	-2.7
	comp=Z,1.0nm,0.3s,baz=73,slow=4.5,SNR=5.3							
KIC	**Kosan Boka**	**144.09**	**301**	*e*P		PKPdf	07 17 25.1	-2.9
	comp=Z,78nm,1.4s							
TIC	**Toumodi**	**144.17**	**302**	*e*P		PKPdf	07 17 25.3	-2.9
	comp=Z,55nm,1.1s							
LIC	**Lamto**	**144.40**	**301**	*e*P		PKPdf	07 17 26.9	-1.7
	comp=Z,25nm,0.7s							
LVC	**Limon Verde**	**146.59**	**111**	PKPbc		PKPbc	07 17 32.9	-0.7
	comp=Z,9.0nm,0.8s,baz=274,slow=6.7,SNR=10							
LPAZ	**La Paz**	**147.95**	**100**	PKPbc		PKPbc	07 17 36.5	-1.1
	comp=Z,3.5nm,1.0s,baz=274,slow=3.4,SNR=8.5							
LPAZ	**La Paz**	**147.95**	**100**	*e*PKIKP		PKPdf	07 17 35.9	+1.5
LPAZ				*e*			07 17 39.1	

IDC 17 07:07:26.1±3.5, 1164S×11720E, h0km, mb3.7/2, mb1 3.5/4, mb1mx3.4/15, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=210.2km s-min=27.0km az=46.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.43**	**119**	P

RUS	**Russkaya**	**1.29**	**259**	*e*P		Pn	07 16 08.4	+0.9
RUS				*i* S		Sn	07 16 25.5	+1.5
KII	**Karymskiy**	**1.50**	**334**	*e*P		Pn	07 16 11.2	+0.8
KII				*i* S		Sn	07 16 30.7	+1.5
GRL	**Gorelyy**	**1.54**	**265**	P		Pn	07 16 12.1	+1.3
GNL	**Ganaly**	**1.87**	**303**	P		Pn	07 16 17.5	+2.0
GNL				*i* S		Sn	07 16 42.1	+3.7
MKZ	**Mys Kozlova**	**1.98**	**20**	*e*P		Pn	07 16 16.7	-0.3
MKZ				*i* S		Sn	07 16 40.3	-0.7
TUMR	**Tumrok**	**2.60**	**355**	*e*P		Pn	07 16 28.0	+2.5
TUMR				*i* S		Sn	07 16 58.4	+2.1
KMNR	**Kamenistaya**	**3.07**	**356**	P		Pn	07 16 34.9	+3.0
BZMR	**Bezymyannaya**	**3.24**	**359**	P		Pn	07 16 37.2	+2.9
BZGR	**Bezymyannyi-Gr**	**3.25**	**1**	P		Pn	07 16 37.7	+3.4
BZWR	**Bezymyannyi-We**	**3.27**	**359**	P		Pn	07 16 37.7	+3.0
KPT	**Kopyto**	**3.28**	**356**	P		Pn	07 16 38.5	+3.7
ZLN	**Zelenaya**	**3.33**	**2**	P		Pn	07 16 39.0	+3.6
SRDR	**Sredinnyy**	**3.66**	**352**	P		Pn	07 16 43.0	+3.0
KBTR	**Krutoberegovo**	**3.75**	**19**	P		Pn	07 16 41.9	+0.6
KBTR				*i* S		Sn	07 17 24.0	-0.6

MOS ***17*** *07:16:14.8±0.9, 2193N×143.05E, h33km, mb4.6/7, Error ellipse: s-maj=25.9km s-min=11.3km az=109.1*
ISCJB ***17*** *07:16:15.9±2.3, 2190N±007×143.1E±02, h44km±20km, mb4.3/18, MS3.4/4, Error ellipse: s-maj=24.4km s-min=11.8km az=173.3*
NEIC ***17*** *07:16:16.7±0.4, 2189N×143.15E, h35km, mb4.5/5, Error ellipse: s-maj=18.3km s-min=9.9km az=68.0*
IDC ***17*** *07:16:17.9±3.1, 2187N×143.06E, h44km±29km, mb3.9/10, mb1 4.1/11, mb1mx3.9/21, mbtmp3.9/11, ML4.2/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/32, Error ellipse: s-maj=27.1km s-min=15.0km az=86.0*

ISC 17 07:16:18.2±2.0, 2190N±007×1432E±02, h49km±17km, n41, σ0°90/32, mb4.3/18, MS3.4/4, 6C-1D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.25**	**350**	P	**Pn**	**07 17 33.8**	**-0.4**
	19nm,0.3s,baz=94,slow=20,SNR=9.3						
CBIJ				S	**Sn**	**07 18 33.9**	**+0.4**
	8.7nm,0.3s,baz=284,slow=19,SNR=3.0						
JHJ	**Hachijo jima 2**	**11.57**	**346**	LR	LR	07 23 21.0	
	comp=Z,61nm,18.8s,baz=121,slow=37						
JOW	**Kunigami**	**14.44**	**293**	LR	LR	07 24 07.0	
	comp=Z,91nm,18.8s,baz=333,slow=33						
KSRS	**Korea Array**	**20.35**	**323**	P	**P**	**07 20 52.2**	**+1.7**
	4.6nm,0.7s,baz=144,slow=10,SNR=13						
DAV	**Davao City (W)**	**22.50**	**232**	LR	LR	07 28 42.9	
	comp=Z,105nm,21.9s,MS3.2,baz=276,slow=33						
HNR	**Honiara**	**35.21**	**150**	LR	LR	07 34 27.8	
	comp=Z,56nm,19.3s,MS3.3,baz=349,slow=31						
ULN	**Ulaanbaatar**	**38.81**	**321**	*e*P	**P**	**07 23 36.8**	**-1.4**
	13nm,1.9s,mb4.3						
ULN	**Ulaanbaatar**	**38.81**	**321**⇑	*e*P	**P**	**07 23 38.8**	**+0.6**
SONM	**Songino Array**	**39.18**	**320**	P	**P**	**07 23 41.2**	**-0.1**
	2.2nm,0.7s,mb4.0,baz=132,slow=7.6,SNR=12						
YAK	**Yakutsk**	**41.17**	**350**⇓	*e*P	**P**	**07 23 57.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.4						
SEY	**Seymchan**	**41.48**	**6**⇑	*e*P	**P**	**07 24 00.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**41.56**	**273**	LR	LR	07 40 10.7	
	comp=Z,24nm,20.0s,MS3.1,baz=100,slow=35						
ZAK	**Zakamensk**	**42.19**	**322**	*e*P	**P**	**07 24 03.3**	**-2.7**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.0						
WRAB	**Tennant Creek**	**42.46**	**192**	*i* P	**P**	**07 24 09.0**	**+0.4**
WRA	**Warramunga Arr**	**42.47**	**192**	*i* P	**P**	**07 24 08.4**	**-0.3**
	comp=Z,2.3nm,0.7s,mb3.9,baz=18,slow=8.9,SNR=19						
WRA	**Warramunga Arr**	**42.47**	**192**	*i* P	**P**	**07 24 08.6**	**-0.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TLY	**Talaya**	**42.60**	**324**	*e*P	**P**	**07 24 07.8**	**-1.6**
ASAR	**Alice Springs**	**46.18**	**192**	P	**P**	**07 24 37.5**	**-0.7**
	comp=Z,1.3nm,0.6s,mb4.0,baz=16,slow=9.5,SNR=28						
BILL	**Bilibino**	**48.32**	**11**	*e*P	**P**	**07 24 53.5**	**-0.9**
BILL				*e*	pP	07 25 10.2	+2.5
BILL				*e*		07 26 47.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**53.49**	**182**	P	**P**	**07 25 33.9**	**+0.2**
	comp=Z,3.2nm,1.1s,mb4.2,baz=347,slow=7.9,SNR=3.8						
ZAA0	**Zalesovo Array**	**54.05**	**322**	*e*P	**P**	**07 25 36.9**	**-0.7**
ZALV	**Zalesovo Beam**	**54.05**	**322**	P	**P**	**07 25 36.9**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.3,baz=96,slow=7.6,SNR=12						
MKAR	**Makanchi Array**	**54.56**	**313**	P	**P**	**07 25 41.4**	**0.0**
	comp=Z,1.0nm,0.7s,mb4.0,baz=91,slow=9.6,SNR=9.5						
MKAR	**Makanchi Array**	**54.56**	**313**⇑	*e*P	**P**	**07 25 41.9**	**+0.5**
KURK	**Kurchatov**	**57.33**	**317**	*e*P	**P**	**07 26 00.7**	**-0.4**
	comp=Z,5.2nm,1.0s,mb4.5						
KURK	**Kurchatov**	**57.33**	**317**⇑	*e*P	**P**	**07 26 01.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
TKM2	**Tokmak 2**	**59.22**	**308**	*e*P	**P**	**07 26 16.1**	**+1.6**
	comp=Z,3.0nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**59.22**	**308**	*e*P	**P**	**07 26 16.1**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
AML	**Almayashu**	**60.67**	**307**	*e*P	**P**	**07 26 25.9**	**+1.5**
	comp=Z,4.9nm,1.0s,mb4.6						
BRVK	**Borovoye**	**62.58**	**319**	*e*P	**P**	**07 26 37.5**	**+0.4**
	comp=Z,8.8nm,0.9s,mb4.9						
BRVK	**Borovoye**	**62.58**	**319**	*e*P	**P**	**07 26 37.5**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
ARU	**Arti**	**69.10**	**324**	*c* *i*P	**P**	**07 27 19.0**	**0.0**
ARU				*e**PP	pP	07 27 34.1	+1.2
ARU				*e*		07 29 49.9	
ARU				*e*PPP		07 31 27.1	
ARU				*e*S	S	07 36 19.6	-1.0
ARU				SS	SS	07 40 43.8	-3.1
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
YKA	**Yellowknife Ar**	**76.28**	**28**	P	**P**	**07 28 01.8**	**+0.4**
	comp=Z,0.9nm,0.4s,mb4.0,baz=294,slow=5.9,SNR=4.6						
YKA	**Yellowknife Ar**	**76.28**	**28**⇑	*e*P	**P**	**07 28 02.0**	**+0.5**
PPT	**Papeete**	**76.62**	**115**	LR	LR	07 55 50.6	
	comp=Z,66nm,20.8s,MS3.9,baz=179,slow=31						
ARCES	**ARCESS Array B**	**78.73**	**341**	P	**P**	**07 28 14.8**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=76,slow=7.5,SNR=3.7						
NVAR	**Mina Array Bea**	**83.02**	**51**	P	**P**	**07 28 39.6**	**+1.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=273,slow=5.4,SNR=13						
CLL	**Collm**	**95.02**	**331**	*i* P	pP	07 29 52.6	+2.6
PLCA	**Paso Flores**	**145.89**	**131**	PKPbc	PKPbc	07 35 51.9	-0.5
	comp=Z,0.8nm,0.6s,baz=254,slow=7.3,SNR=3.2						
LPAZ	**La Paz**	**149.92**	**85**	PKPbc	PKPbc	07 36 05.6	+1.7
	comp=Z,1.8nm,0.6s,baz=351,slow=4.7,SNR=4.7						
LPAZ				PKPab	PKPab	07 36 11.8	+2.1
	comp=Z,1.7nm,0.6s,baz=260,slow=0.9,SNR=7.3						
LPAZ	**La Paz**	**149.92**	**85**	*e*PKIKP	PKPbc	07 36 05.4	+1.5

MAN 17 07:44:22.6, 87N×12364E, h4km, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.70**	**60**⇓	*i* P	Pg	07 44 36.2	+0.7
CTBH				*i* S	Sg	07 44 46.5	+1.9
PAGZ	**Pagadian**	**1.00**	**346**	*e*P	Pg	07 44 42.3	+1.0
PAGZ				*e*S	Sg	07 44 58.1	+3.9
IPIL	**Ipil**	**1.39**	**311**	*e*P	Pn	07 44 47.9	-0.3
IPIL				*e*S	Sb	07 45 07.9	+1.1
BUKP	**Musuan**	**1.73**	**55**	*e*P	Pn	07 44 53.0	+0.1
BUKP				*e*S	Sn	07 45 18.9	+3.4
CGP	**Cagayan de Oro**	**1.89**	**34**	*e*P	Pn	07 44 56.0	+0.9
CGP				*i* S	Sn	07 45 19.9	+0.5

IDC 17 07:54:07.9±27.0, 2226S×17416W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/19, mbtmp4.2/4, Error ellipse: s-maj=496.9km s-min=145.9km az=77.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.91**	**266**	P	P	08 01 19.3	+0.7
	4.5nm,0.4s,baz=96,slow=11,SNR=12						
STKA	**Stephens Creek**	**40.31**	**247**	P	P	08 01 46.5	-0.7
	1.0nm,0.5s,baz=79,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**47.62**	**258**	P	P	08 02 45.8	-0.2
	0.9nm,0.5s,baz=96,slow=8.6,SNR=21						
WRA	**Warramunga Arr**	**47.92**	**263**	P	P	08 02 48.4	0.0
	1.9nm,0.3s,baz=97,slow=8.2,SNR=63						

IDC ***17*** *08:02:39.9±1.2, 2314S×7084W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, ML4.2/2, MS3.2/3, Ms1 3.3/3, ms1mx2.8/35, Error ellipse: s-maj=41.1km s-min=15.2km az=173.0*
ISCJB ***17*** *08:02:44.7±1.3, 2279S×004×7096W±007, h32km±7km, mb3.8/5, Error ellipse: s-maj=10.9km s-min=6.5km az=177.8*
GUC ***17*** *08:02:45.9±0.9, 2283S×7082W, h47km±2km, ML3.9*

ISC 17 08:02:46.0±1.2, 2282S±004×7089W±007, h28km±7km, n23, σ1°06/24, mb3.8/5, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.49**	**125**	*e*P	**Pb**	**08 02 55.9**	**-0.4**
MECH				*i* S	**Sb**	**08 03 03.8**	**+0.6**
MECH				AML	AML	08 03 06.6	
	comp=E,17μm,0.5s						
CEN1	**Los Morros**	**0.85**	**132**⇓	*i* P	**Pn**	**08 03 02.6**	**+0.4**
CEN1				*i* S	**Sn**	**08 03 14.7**	**+1.0**
CEN1				AML	AML	08 03 18.0	
	comp=E,2μm,0.5s						
ANCH	**Antofagasta**	**0.96**	**153**	*e*P	**Pn**	**08 03 03.5**	**-0.2**
ANCH				*i* S	**Sn**	**08 03 16.0**	**-0.5**
ANCH				AML	AML	08 03 23.4	
	comp=E,3μm,0.7s						
LVC	**Limon Verde**	**1.84**	**84**	Pn	**Pn**	**08 03 15.3**	**-0.4**
	comp=E,160nm,0.3s,baz=263,slow=12,SNR=188						
LVC				Lg		08 03 38.2	
	comp=E,244nm,0.3s,baz=224,slow=17,SNR=16						
LVC	**Limon Verde**	**1.84**	**84**⇑	*i* P	**Pn**	**08 03 15.4**	**-0.3**
LVC				*i* S	**Sn**	**08 03 38.0**	**0.0**
LVC				AML	AML	08 03 43.7	
	comp=N,1μm,0.4s						
CPN1	**Cerro Paranal**	**1.85**	**166**	*e*P	**Pn**	**08 03 16.0**	**+0.1**
CPN1				*i* S	**Sn**	**08 03 39.5**	**+1.0**
CPN1				AML	AML	08 03 50.1	
	comp=E,4μm,0.7s						
PB01	**Plate Boundary**	**2.19**	**37**	*e*P	**Pn**	**08 03 21.2**	**+0.6**
PB01				*i* S	**Sn**	**08 03 47.8**	**+0.9**
PB01				AML	AML	08 03 54.6	
	comp=E,2μm,0.5s						
LPAZ	**La Paz**	**7.00**	**22**	Pn	**Pn**	**08 04 28.0**	**+1.3**
	comp=E,1.9nm,0.3s,baz=226,slow=8.3,SNR=19						
LPAZ				LR	LR	08 07 21.6	
	comp=E,261nm,18.5s,baz=205,slow=39						
CFAA	**Coronel Fontan**	**9.06**	**165**	Pn	**Pn**	**08 04 53.1**	**-1.9**
	baz=353,slow=16,SNR=2.7						
SIV	**San Ignacio**	**11.48**	**55**	Pn	**Pn**	**08 05 25.3**	**-2.8**
	comp=E,0.8nm,0.3s,baz=254,slow=12,SNR=24						
SIV				LR	LR	08 10 17.4	
	comp=E,138nm,19.6s,baz=12,slow=39						
PLCA	**Paso Flores**	**17.86**	**179**	LR	LR	08 13 48.6	
	comp=E,52nm,18.2s,baz=0.1,slow=38						
BDFB	**Brasilia**	**22.73**	**76**	P	**P**	**08 07 43.5**	**-2.5**
	comp=E,1.7nm,0.5s,mb3.7,baz=263,slow=13,SNR=4.9						
VNA3	**Neumayer Olymp**	**59.43**	**161**	*e*	**P**	**08 12 46.9**	**+1.2**
VNA3				*e*		08 12 52.2	
VNA2	**Neumayer--Watz**	**60.03**	**160**	*e*	**P**	**08 12 51.3**	**+1.4**
	baz=295,slow=8.8						
VNA2				*e*		08 12 55.6	
TXAR	**Lajitas Array**	**60.70**	**327**	P	**P**	**08 12 55.0**	**+0.1**
	comp=E,0.1nm,0.5s,mb3.2,baz=192,slow=34,SNR=2.8						
SNAA	**Sanae**	**61.65**	**161**	*e*	**P**	**08 13 00.0**	**-0.8**
SNAA				*e*		08 13 04.5	
DBIC	**Dimbokro**	**70.86**	**74**	P	**P**	**08 13 59.6**	**-1.3**
	comp=E,4.1nm,0.9s,mb4.4,baz=233,slow=4.3,SNR=4.2						
PDAR	**Pinedale Array**	**74.36**	**331**	P	**P**	**08 14 21.7**	**+0.7**
	comp=E,0.2nm,0.5s,mb3.8,baz=182,slow=5.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**79.52**	**71**	P	**P**	**08 14 49.7**	**-1.0**
	comp=E,3.3nm,0.6s,mb4.5,baz=257,slow=5.2,SNR=29						
WRA	**Warramunga Arr**	**130.88**	**212**	PKP	PKPdf	08 21 51.8	-3.8
	comp=E,0.8nm,1.1s,baz=159,slow=1.5,SNR=3.4						
ZALV	**Zalesovo Beam**	**143.91**	**24**	PKP	PKPdf	08 22 18.9	+0.6
	comp=E,0.7nm,0.6s,baz=308,slow=3.6,SNR=3.9						
MKAR	**Makanchi Array**	**147.77**	**36**	PKPbc	PKPbc	08 22 26.3	-1.7
	comp=E,1.1nm,0.7s,baz=308,slow=3.4,SNR=8.9						
SONM	**Songino Array**	**154.94**	**4**	PKPab	PKPab	08 23 00.0	-0.1
	comp=E,0.3nm,0.6s,baz=350,slow=4.8,SNR=2.7						

IDC ***17*** *08:26:43.4±0.8, 2296S×7069W, h0km, mb4.1/6, mb1 4.1/8, mb1mx3.9/18, mbtmp4.1/8, ML4.0/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/33, Error ellipse: s-maj=24.2km s-min=14.2km az=161.0*
ISCJB ***17*** *08:26:47.3±1.1, 2292S±005×707W±0.1, h39km±8km, mb4.1/6, Error ellipse: s-maj=16.4km s-min=7.2km az=14.5*
GUC ***17*** *08:26:47.9±0.8, 2296S×7061W, h44km±2km, ML4.2*

ISC 17 08:26:48.3±1.2, 2291S±005×7069W±009, h30km±6km, h25km±2km: pP-P, n22, σ0°83/21, mb4.1/6, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.29**	**130**	*e*P	**Pb**	**08 26 55.0**	**-0.6**
MECH				*i* S	**Sb**	**08 27 01.2**	**+0.6**
MECH				AML	AML	08 27 01.7	
	comp=N,83μm,0.3s						
LVC	**Limon Verde**	**1.67**	**80**	Pn	**Pn**	**08 27 15.7**	**+0.2**
	comp=N,447nm,0.3s,baz=254,slow=11,SNR=1825						
LVC				Lg		08 27 36.8	
	comp=N,755nm,0.3s,baz=104,slow=12,SNR=37						
LVC	**Limon Verde**	**1.67**	**80**⇓	*i* P	**Pn**	**08 27 15.7**	**+0.2**
LVC				*i* S	**Sn**	**08 27 36.2**	**+0.2**
LVC				AML	AML	08 27 37.9	
	comp=E,2μm,0.4s						
CPN1	**Cerro Paranal**	**1.73**	**171**	*e*P	**Pn**	**08 27 16.4**	**+0.1**
CPN1				*i* S	**Sn**	**08 27 38.2**	**+0.8**
CPN1				AML	AML	08 27 45.4	
	comp=E,4μm,0.7s						
PB01	**Plate Boundary**	**2.17**	**31**	*e*P	**Pn**	**08 27 22.3**	**-0.1**
PB01				*i* S	**Sn**	**08 27 49.3**	**+1.0**
PB01				AML	AML	08 27 56.5	
	comp=E,3μm,0.4s						
LPAZ	**La Paz**	**7.02**	**21**	Pn	**Pn**	**08 28 30.4**	**+1.3**
	comp=E,1.0nm,0.3s,baz=207,slow=7.1,SNR=13						
CFAA	**Coronel Fontan**	**8.93**	**166**	Pn	**Pn**	**08 28 54.5**	**-0.7**
	comp=E,0.0nm,0.3s,baz=269,slow=8.1,SNR=9.9						
SIV	**San Ignacio**	**11.39**	**54**	Pn	**Pn**	**08 29 27.0**	**-2.0**
	comp=E,0.9nm,0.3s,baz=241,slow=12,SNR=18						
PLCA	**Paso Flores**	**17.77**	**180**	LR	LR	08 37 17.0	
	comp=E,54nm,21.1s,baz=0.1,slow=36						
BDFB	**Brasilia**	**22.58**	**75**	P	**P**	**08 31 46.0**	**-0.4**
	comp=E,1.1nm,0.5s,mb3.6,baz=202,slow=16,SNR=5.0						
BDFB				LR	LR	08 41 56.2	
	comp=E,42nm,19.7s,baz=184,slow=40						
VNA3	**Neumayer Olymp**	**59.28**	**161**	*e*	**P**	**08 36 47.7**	**+1.0**
VNA3				*e*	pP	08 36 54.9	-1.0
VNA3				*e*		08 37 04.9	
VNA2	**Neumayer--Watz**	**59.88**	**160**	*e*	**P**	**08 36 52.0**	**+1.1**
VNA2				*e*	pP	08 36 59.3	-0.8
VNA2				*e*		08 37 07.7	
TXAR	**Lajitas Array**	**60.87**	**327**	P	**P**	**08 36 58.4**	**+0.3**
	comp=E,0.5nm,0.9s,mb3.7,baz=134,slow=7.3,SNR=4.4						
SNAA	**Sanae**	**61.50**	**161**	*e*	**P**	**08 37 00.8**	**-1.1**
SNAA				*e*	pP	08 37 08.3	-2.8
SNAA				*e*		08 37 18.0	
QSPA	**South Pole Qui**	**67.28**	**180**	P	**P**	**08 37 39.4**	**-0.2**
	comp=E,0.9nm,0.2s,mb4.4,baz=135,slow=5.7,SNR=3.3						
DBIC	**Dimbokro**	**70.72**	**74**	P	**P**	**08 38 00.9**	**-1.1**
	comp=E,1.1nm,0.4s,mb4.1,baz=231,slow=13,SNR=3.4						
TORD	**Torodi Ar. Bea**	**79.38**	**71**	P	**P**	**08 38 51.2**	**-0.8**
	comp=E,2.3nm,0.5s,mb4.4,baz=254,slow=5.1,SNR=19						
BOSA	**Boshof**	**84.24**	**118**	P	**P**	**08 39 17.4**	**0.0**
	comp=E,1.8nm,0.7s,mb4.3,baz=225,slow=2.9,SNR=2.5						
ASAR	**Alice Springs**	**127.89**	**209**	PKP	PKPdf	08 45 51.8	0.0
	comp=E,0.4nm,0.7s,baz=130,slow=2.0,SNR=4.6						
WRA	**Warramunga Arr**	**130.90**	**212**	PKP	PKPdf	08 45 57.8	+0.2
	comp=E,0.2nm,0.7s,baz=146,slow=1.4,SNR=4.6						
ZALV	**Zalesovo Beam**	**143.92**	**25**	PKP	PKPdf	08 46 19.3	-1.1
	comp=E,0.5nm,0.5s,baz=308,slow=5.3,SNR=2.4						
MKAR	**Makanchi Array**	**147.74**	**36**	PKPbc	PKPbc	08 46 30.0	0.0
	comp=E,1.0nm,0.6s,baz=322,slow=3.3,SNR=8.6						

NIED ***17*** *08:32:00, 4350N×147.40E, h41km, Mw4.0 Best double couple: M0 1.17000×10^15 NP1:φs 187.00000°, δ62.00000°, λ62.00000°. NP2:φs 55.00000°, δ39.00000°, λ131.00000°.*
ISCJB ***17*** *08:32:09.4±1.0, 4371N±006×14765E±008, h40km±9km, mb3.8/13, Error ellipse: s-maj=12.7km s-min=6.0km az=138.8*
JMA ***17*** *08:32:09.9±0.3, 4349N×147.45E, h15km±5km, M4.1*
MOS ***17*** *08:32:09.7±1.3, 4370N×147.72E, h48km, mb4.2/5, Error ellipse: s-maj=15.4km s-min=12.3km az=96.9*
SKHL ***17*** *08:32:10.6±0.4, 4384N×14750E, h47km±22km, mb4.8/2*
IDC ***17*** *08:32:13.5±3.1, 4371N×14756E, h63km±28km, mb3.5/11, mb1 3.8/13, mb1mx3.7/21, mbtmp3.5/13, ML3.6/2, MS3.0/4, Ms1 3.0/4, ms1mx2.8/40, Error ellipse: s-maj=21.4km s-min=17.3km az=142.0*

ISC 17 08:32:11.1±1.0, 4373N±006×14762E±008, h37km±9km, n40, σ1°15/47, mb3.8/13, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.30**	**284**⇑	*i* PN	**Pn**	**08 32 32.0**	**-0.7**
YUK				*i* S	**Sn**	**08 32 48.4**	**-0.5**
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=Z,920nm,0.3s						
YUK				pmax	pmax		
	comp=N,370nm,0.5s						
YUK				pmax	pmax		
	comp=E,570nm,0.5s						
YUK				smax			
	comp=N,8μm,1.0s						
YUK				smax			
	comp=E,10μm,1.0s						
YUK				smax			
	comp=N,5μm,0.5s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.30**	**284**⇑	*i* P	**Pn**	**08 32 32.0**	**-0.7**
YUK				AMB	AMB	08 32 33.0	
	comp=E,2μm,1.0s						
YUK				AMB	AMB	08 32 33.4	
	comp=E,920nm,0.2s						
YUK				AMB	AMB	08 32 33.4	
	comp=E,370nm,0.5s						
YUK				AMB	AMB	08 32 33.4	
	comp=E,570nm,0.5s						
YUK				*i* S	**Sn**	**08 32 48.4**	**-0.5**
YUK				A		08 32 51.5	
	comp=E,8μm,1.0s						
YUK				A		08 32 51.5	
	comp=E,10μm,1.0s						
YUK				A		08 32 54.0	
	comp=E,5μm,0.5s						
YUK				A		08 32 54.0	
	comp=E,3μm,0.5s						
NEM2	**Nemuro 2**	**1.41**	**256**	P	**Pn**	**08 32 32.7**	**-1.5**
NEM2				*e*S	**Sn**	**08 32 49.4**	**-2.1**
KUR	**Kuril'sk**	**1.51**	**7**	*e*P	**Pn**	**08 32 33.5**	**-2.1**
KUR				AMB	AMB	08 32 36.4	
	comp=E,122nm,0.5s						
KUR				AMB	AMB	08 32 36.4	
	comp=E,152nm,0.5s						
KUR				*e*S	**Sn**	**08 32 52.7**	**-1.4**
JRA	**Rausu**	**1.81**	**277**	P	**Pn**	**08 32 40.0**	**+0.2**
JRA				*e*S	**Sn**	**08 33 02.1**	**+0.6**
JNK	**Nakash**	**2.11**	**267**	P	**Pn**	**08 32 43.1**	**-0.7**
JAK	**Akkeshi**	**2.25**	**252**	*e*S	**Sn**	**08 33 10.5**	**-1.8**
JTKR	**Abashiri--Toko**	**2.69**	**276**	P	**Pn**	**08 32 52.8**	**+1.0**
JTKR				*e*S	**Sn**	**08 33 24.7**	**+1.6**
JAR	**Ashorobuto**	**2.83**	**262**	P	**Pn**	**08 32 53.6**	**-0.1**
JOB	**Onbets**	**2.88**	**255**	P	**Pn**	**08 32 55.2**	**+0.8**
JOB				*e*S	**Sn**	**08 33 27.0**	**-0.8**
JMP	**Maruseppu**	**3.09**	**277**	P	**Pn**	**08 32 58.6**	**+1.3**
JCH	**Churui**	**3.31**	**252**	P	**Pn**	**08 33 00.7**	**+0.5**
JCH				*e*S	**Sn**	**08 33 38.1**	**-0.2**
ASAJ	**Asahikawa**	**3.65**	**278**	P	**Pn**	**08 33 07.8**	**+2.9**
	comp=E,2.9nm,0.3s,baz=89,slow=16,SNR=18						
ASAJ				S	**Sn**	**08 33 52.0**	**+5.3**
	comp=E,0.7nm,0.3s,baz=326,slow=16,SNR=2.1						
ASAJ				LR	LR	08 34 36.8	
	comp=E,211nm,21.6s,baz=165,slow=40						
ASAJ	**Asahikawa**	**3.65**	**278**	PN	**Pn**	**08 33 07.8**	**+2.9**
ASAJ				S	**Sn**	**08 33 52.0**	**+5.3**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ERM	**Erimo**	**3.70**	**244**	*e*P	**Pn**	**08 33 07.0**	**+1.3**
JNBK	**Urakawa-nobuka**	**3.85**	**250**	P	**Pn**	**08 33 08.2**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.70**	**315**	*e*P	**Pn**	**08 33 21.0**	**+1.6**
MJAR	**Matsushiro Arr**	**10.16**	**228**	LR	LR	08 38 35.5	
	comp=N,62nm,20.2s,baz=70,slow=38						
PETK	**Petropavlovsk-**	**11.52**	**32**	P	**Pn**	**08 34 53.9**	**+1.1**
	comp=N,0.5nm,0.3s,baz=202,slow=12,SNR=14						
JHJ	**Hachijo jima 2**	**12.24**	**213**	LR	LR	08 40 25.1	
	comp=N,67nm,18

WRA	**Warramunga Arr**	**42.37**	**193**	P	**P**	**08 40 50.9**	**-0.1**
	1.0nm,0.3s,mb3.5,baz=16,slow=9.2,SNR=53						
ASAR	**Alice Springs**	**46.08**	**192**	P	**P**	**08 41 20.1**	**-0.1**
	0.3nm,0.6s,mb2.8,baz=14,slow=7.8,SNR=5.3						
STKA	**Stephens Creek**	**53.33**	**182**	P	**P**	**08 42 14.3**	**-0.1**
	1.5nm,0.9s,mb3.3,baz=16,slow=7.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**54.38**	**322**	P	**P**	**08 42 21.8**	**0.0**
	1.9nm,0.5s,mb3.7,baz=104,slow=6.3,SNR=6.1						
MKAR	**Makanchi Array**	**54.91**	**313**	P	**P**	**08 42 26.1**	**+0.3**
	0.7nm,0.5s,mb3.4,baz=87,slow=7.8,SNR=8.1						
ARCES	**ARCESS Array B**	**78.99**	**342**	P	**P**	**08 44 56.6**	**+0.1**
	1.7nm,0.9s,mb3.8,baz=64,slow=5.5,SNR=5.2						
PLCA	**Paso Flores**	**145.54**	**131**	PKPbc	PKPbc	08 52 29.4	-0.2
	1.3nm,0.9s,baz=223,slow=19,SNR=4.1						

ISCJB ***17*** *08:38:23.2±1.6, 14S±02×123W±04, h10km, Error ellipse: s-maj=71.5km s-min=11.8km az=28.6*
IDC ***17*** *08:38:30.6±10.0, 026S×1271W, h0km, mb3.5/1, mb1 3.8/3, mb1mx3.5/20, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=290.0km s-min=61.2km az=157.0*

ISC 17 08:38:26.4±1.4, 16S±02×119W±04, h10km, n9, σ1§38/10, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.36**	**42**	*eP*		**Pn**		**08 40 57.6**	**+2.4**
	65nm,1.6s								
KIC	**Kosan Boka**	**10.65**	**42**	*eP*		**Pn**		**08 41 01.5**	**+2.3**
	74nm,1.3s								
TIC	**Toumodi**	**10.68**	**40**	*eP*		**Pn**		**08 40 58.5**	**-1.0**
	11nm,0.2s								
DBIC	**Dimbokro**	**10.80**	**41**	Pn		**Pn**		**08 41 02.5**	**+1.3**
	0.5nm,0.3s,baz=219,slow=14,SNR=7.6								
DBIC						Sn		**08 43 00.3**	**-2.1**
	0.4nm,0.3s,baz=131,slow=20,SNR=3.8								
TORD	**Torodi Ar. Bea**	**19.91**	**42**	P		**Pn**		**08 42 59.2**	**-0.8**
	0.3nm,0.3s,baz=232,slow=11,SNR=12								
GERES	**GERESS Array B**	**54.89**	**20**	P		**P**		**08 47 56.4**	**-0.7**
	0.2nm,0.3s,baz=206,slow=6.5,SNR=4.9								
VNA2	**Neumayer--Watz**	**69.33**	**178**	*e*		**P**		**08 49 34.5**	**+0.8**
	baz=354,slow=7.5								
VNA2				*e*				08 49 42.0	
VNA3	**Neumayer Olymp**	**69.60**	**179**	*e*		**P**		**08 49 34.7**	**-0.6**
VNA3				*e*				08 49 42.8	
SNAA	**Sanae**	**70.26**	**177**	*e*		**P**		**08 49 38.5**	**-0.9**
SNAA				*e*				08 49 45.7	

BJI ***17*** *08:42:17.4, 087S×1354W, h12km, mB5.5, Ms5.1, Msz4.7*
MOS ***17*** *08:42:18.2±1.1, 117S×131.1W, h10km, mb5.2/21, MS4.7/9, Error ellipse: s-maj=17.1km s-min=6.6km az=72.5*
IDC ***17*** *08:42:18.6±0.9, 097S×1303W, h0km, mb4.2/13, mb1 4.3/15, mb1mx4.2/23, mbtmp4.3/15, ML4.5/2, MS4.4/27, Ms1 4.4/27, ms1mx4.4/31, Error ellipse: s-maj=24.5km s-min=20.1km az=85.0*
ISCJB ***17*** *08:42:18.2±0.3, 1.15S±005×13.13W±008, h10km, mb4.8/42, MS4.5/37, Error ellipse: s-maj=11.2km s-min=7.6km az=12.7*
NEIC ***17*** *08:42:19.8±0.4, 1.19S×13.16W, h10km, mb5.0/26, Error ellipse: s-maj=11.6km s-min=9.4km az=92.0*
GCMT ***17*** *08:42:19.8±0.2, 094S×1313W, h12km, MW5.2/91, Moment Tensor Solution. s53,c74; s91,c166; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.74±.01; $M_{\theta\theta}$0.15±.01; $M_{\phi\phi}$0.59±.01; $M_{r\theta}$0.12±.04; $M_{r\phi}$-0.27±.01; $M_{\theta\phi}$-0.07±.04; Best double couple: M0.74200×10^{17} NP1:ϕ_s329.00000°,δ50.00000°,λ-98.00000°. Principal axes: T 0.7270, Plg4.0000°, Azm64.0000°; N 0.0310, Plg6.0000°, Azm334.0000°; P -0.7570, Plg83.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 17 08:42:20.0±0.3, 119S±005×1315W±008, h10km, n145, σ1§13/133, mb4.8/42, MS4.5/37, 1C, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.95**	**48**	*eP*		**Pn**		**08 44 52.3**	**-4.6**
	113nm,0.9s								
LIC	**Lamto**	**10.95**	**48**	*e*Pn		**Pn**		**08 44 52.4**	**-4.5**
LIC				*e*Sn		**Sn**		**08 46 45.3**	**-14**
	55nm,0.8s								
LIC				*e*MLR		MLR			
	comp=Z,7μm,20.0s								
TIC	**Toumodi**	**11.24**	**46**	*eP*		**Pn**		**08 44 55.7**	**-5.1**
	comp=Z,66nm,0.2s								
TIC	**Toumodi**	**11.24**	**46**	*eP*		**Pn**		**08 44 55.7**	**-5.1**
TIC				pmax		pmax			
	comp=Z,66nm,0.2s								
KIC	**Kosan Boka**	**11.25**	**48**	*eP*		**Pn**		**08 44 55.8**	**-5.2**
	comp=Z,230nm,1.0s								
DBIC	**Dimbokro**	**11.38**	**47**	Pn		**Pn**		**08 44 57.5**	**-5.2**
	comp=Z,2.3nm,0.3s,baz=226,slow=14,SNR=17								
DBIC				Sn		**Sn**		**08 46 56.4**	**-14**
	comp=Z,1.6nm,0.3s,baz=315,slow=20,SNR=3.6								
DBIC				LR		LR		08 48 27.5	
	comp=Z,6μm,21.6s,baz=204,slow=33								
DBIC	**Dimbokro**	**11.38**	**47**	Pn		**Pn**		**08 44 57.5**	**-5.2**
DBIC				Sn		**Sn**		**08 46 56.4**	**-14**
DBIC				LR		LR		08 48 27.5	
BBTS	**Babate**	**16.10**	**348**	Pn		**Pn**		**08 46 03.2**	**-3.3**
	comp=Z,2.2nm,0.3s,baz=150,slow=7.3,SNR=2.5								
BBTS				LR		LR		08 51 14.6	
	comp=Z,832nm,20.4s,baz=342,slow=34								
BBTS	**Babate**	**16.10**	**348**	Pn		**Pn**		**08 46 03.2**	**-3.3**
BBTS				LR		LR		08 51 14.6	
TORD	**Torodi Ar. Bea**	**20.48**	**45**	P		**P**		**08 46 54.9**	**-3.3**
	comp=Z,17nm,0.8s,baz=231,slow=11,SNR=62								
TORD				S		**S**		**08 50 41.6**	**-6.0**
	comp=Z,3.5nm,0.8s,baz=229,slow=22,SNR=4.0								
TORD				LR		LR		08 53 55.2	
	comp=Z,4μm,21.1s,MS4.7,baz=225,slow=34								
TORD	**Torodi Ar. Bea**	**20.48**	**45**	P		**P**		**08 46 54.9**	**-3.3**
TORD				S		**S**		**08 50 41.6**	**-6.0**
TORD				LR		LR		08 53 55.2	
MDT	**Midelt**	**34.77**	**13**	P		**P**		**08 49 08.0**	**-2.6**
	comp=Z,1.6nm,0.9s,mb3.9,baz=238,slow=10.0,SNR=2.2								
MDT				LR		LR		09 03 04.0	
	comp=Z,2μm,19.7s,MS4.8,baz=193,slow=36								
TSUM	**Tsumeb**	**35.03**	**123**	LR		LR		09 00 43.7	
	comp=Z,807nm,19.4s,MS4.5,baz=306,slow=32								
TSUM	**Tsumeb**	**35.03**	**123**	*eP*		**P**		**08 49 12.8**	**-0.3**
	comp=Z,5.6nm,1.2s,mb4.4								
BDFB	**Brasilia**	**37.27**	**245**	LR		LR		09 02 27.6	
	comp=Z,233nm,19.0s,MS4.0,baz=22,slow=32								
EVO	**Evora**	**39.80**	**6**	*eP*		**P**		**08 49 55.5**	**+2.1**
EVO				*e*MLR		MLR			
	comp=Z,554nm,20.8s,MS4.1								
ESDC	**Sonseca Array**	**41.52**	**11**	P		**P**		**08 50 05.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=192,slow=12,SNR=2.9								
ESDC				PP		PP		08 51 41.8	-1.8
	comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=4.8								
ESDC				LR		LR		09 07 22.8	
	comp=Z,412nm,19.9s,baz=180,slow=36								
KEST	**Kesra**	**42.30**	**28**	LR		LR		09 09 01.2	
	comp=Z,670nm,18.4s,MS4.6,baz=5.8,slow=38								
LSZ	**Lusaka**	**43.12**	**111**	P		**P**		**08 50 21.0**	**0.0**
	comp=Z,3.7nm,0.7s,mb4.2,baz=311,slow=9.9,SNR=4.1								
LSZ				LR		LR		09 05 10.5	
	comp=Z,699nm,21.1s,MS4.5,baz=309,slow=32								
LSZ	**Lusaka**	**43.12**	**111**	*eP*		**P**		**08 50 21.2**	**+0.3**
	comp=Z,4.6nm,0.8s,mb4.3								
LSZ	**Lusaka**	**43.12**	**111**	*eP*		**P**		**08 50 21.2**	**+0.2**
LSZ				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.3								
SUR	**Sutherland**	**44.55**	**138**	LR		LR		09 06 37.5	
	comp=Z,182nm,19.2s,MS4.0,baz=150,slow=33								
ETSF	**Etsaut**	**45.33**	**13**	*eP*		**P**		**08 50 39.2**	**+1.0**
	comp=Z,32nm,1.3s,mb4.7								
ETSF	**Etsaut**	**45.33**	**13**	*eP*		**P**		**08 50 39.2**	**+1.0**
	comp=Z,16nm,1.3s,mb4.7								
ETSF	**Etsaut**	**45.33**	**13**	*eP*		**P**		**08 50 39.2**	**+1.0**
ETSF				pmax		pmax			
	comp=Z,16nm,1.3s,mb4.7								
SJPF	**Ste Jean**	**45.38**	**12**	*eP*		**P**		**08 50 40.5**	**+1.9**
	comp=Z,36nm,1.2s,mb4.8								
SJPF	**Ste Jean**	**45.38**	**12**	*eP*		**P**		**08 50 40.5**	**+1.9**
	comp=Z,18nm,1.3s,mb4.7								
SJPF	**Ste Jean**	**45.38**	**12**	*eP*		**P**		**08 50 40.5**	**+1.9**
SJPF				pmax		pmax			
	comp=Z,18nm,1.3s,mb4.7								
EPF	**Esparros**	**45.66**	**14**	*eP*		**P**		**08 50 42.4**	**+1.6**
	comp=Z,31nm,1.2s,mb4.8								
EPF	**Esparros**	**45.66**	**14**	*eP*		**P**		**08 50 42.4**	**+1.6**
	comp=Z,16nm,1.2s,mb4.8								
EPF	**Esparros**	**45.66**	**14**	*eP*		**P**		**08 50 42.4**	**+1.6**
EPF				pmax		pmax			
	comp=Z,16nm,1.2s,mb4.8								
BOSA	**Boshof**	**45.68**	**130**	P		**P**		**08 50 41.1**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.3,baz=292,slow=8.8,SNR=4.7								
BOSA				LR		LR		09 06 06.5	
	comp=Z,302nm,20.1s,MS4.2,baz=307,slow=31								
ORIF	**Oris-en-Rattie**	**48.92**	**18**	*eP*		**P**		**08 51 07.2**	**+1.0**
ORIF				*e*MLR		MLR			
	comp=Z,1μm,19.2s,MS4.7								
TCF	**Toulx Ste Croi**	**49.18**	**14**	*eP*		**P**		**08 51 09.6**	**+1.5**
BGF	**Bois d'Agland**	**49.59**	**14**	*eP*		**P**		**08 51 13.9**	**+2.6**
LPG	**La Plagne**	**49.72**	**18**	*eP*		**P**		**08 51 14.6**	**+2.3**
	comp=Z,17nm,1.0s,mb4.7								
LPG	**La Plagne**	**49.72**	**18**	*eP*		**P**		**08 51 14.6**	**+2.3**
	comp=Z,8.6nm,1.0s,mb4.7								
LPG	**La Plagne**	**49.72**	**18**	*eP*		**P**		**08 51 14.6**	**+2.3**
LPG				pmax		pmax			
	comp=Z,9.0nm,1.0s,mb4.8								
SMF	**Signal de Mont**	**49.92**	**15**	*eP*		**P**		**08 51 14.7**	**+0.9**
	comp=Z,54nm,1.6s,mb5.0								
SMF	**Signal de Mont**	**49.92**	**15**	*eP*		**P**		**08 51 14.7**	**+0.9**
	comp=Z,27nm,1.6s,mb5.0								
SMF	**Signal de Mont**	**49.92**	**15**	*eP*		**P**		**08 51 14.7**	**+0.9**
SMF				pmax		pmax			
	comp=Z,27nm,1.6s,mb5.0								
CABF	**La Chapelle**	**50.52**	**17**	*eP*		**P**		**08 51 19.2**	**+0.9**
FLN	**La Foliniere**	**50.95**	**11**	*eP*		**P**		**08 51 23.0**	**+1.4**
	comp=Z,110nm,1.6s,mb5.2								
FLN	**La Foliniere**	**50.95**	**11**	*eP*		**P**		**08 51 23.0**	**+1.4**
	comp=Z,55nm,1.6s,mb5.2								
FLN	**La Foliniere**	**50.95**	**11**	*eP*		**P**		**08 51 23.0**	**+1.4**
FLN				pmax		pmax			
	comp=Z,55nm,1.6s,mb5.2								
HINF	**Hinteralfeld**	**51.83**	**17**	*eP*		**P**		**08 51 28.3**	**+0.1**
HAU	**Haudompre**	**51.85**	**17**	*eP*		**P**		**08 51 29.1**	**+0.7**
	comp=Z,90nm,1.9s,mb5.1								
HAU				*e*MLR		MLR			
	comp=Z,706nm,19.2s,MS4.4								
HAU	**Haudompre**	**51.85**	**17**	*eP*		**P**		**08 51 29.1**	**+0.7**
	comp=Z,45nm,1.9s,mb5.1								
HAU				LR		LR			
	comp=Z,710nm,19.3s,MS4.7								
HAU	**Haudompre**	**51.85**	**17**	*eP*		**P**		**08 51 29.1**	**+0.7**
HAU				pmax		pmax			
	comp=Z,45nm,1.9s,mb5.1								
HAU				MLR		MLR			
	comp=Z,710nm,19.3s,MS4.7								
MEZF	**Maizieres J'vi**	**51.95**	**15**	*eP*		**P**		**08 51 28.5**	**-0.6**
	comp=Z,102nm,1.6s,mb5.2								
MEZF	**Maizieres J'vi**	**51.95**	**15**	*eP*		**P**		**08 51 28.5**	**-0.6**
	comp=Z,102nm,1.6s,mb5.5								
CDF	**Champ du Feu**	**52.49**	**17**	*eP*		**P**		**08 51 33.8**	**+0.7**
	comp=Z,60nm,1.7s,mb5.0								
CDF	**Champ du Feu**	**52.49**	**17**	*eP*		**P**		**08 51 33.8**	**+0.7**
	comp=Z,30nm,1.7s,mb5.0								
CDF	**Champ du Feu**	**52.49**	**17**	*eP*		**P**		**08 51 33.8**	**+0.7**
CDF				pmax		pmax			
	comp=Z,30nm,1.7s,mb5.0								
BAIF	**Baives**	**53.18**	**14**	*eP*		**P**		**08 51 37.7**	**-0.4**
	comp=Z,60nm,1.5s,mb5.0								
BAIF	**Baives**	**53.18**	**14**	*eP*		**P**		**08 51 37.7**	**-0.4**
	comp=Z,30nm,1.5s,mb5.0								
BAIF	**Baives**	**53.18**	**14**	*eP*		**P**		**08 51 37.7**	**-0.4**
BAIF				pmax		pmax			
	comp=Z,30nm,1.5s,mb5.0								
GIVF	**Givet**	**53.37**	**14**	*eP*		**P**		**08 51 40.0**	**+0.5**
GEC2	**GERESS Array S**	**54.98**	**21**	*eP*		**P**		**08 51 50.7**	**-0.6**
GERES	**GERESS Array B**	**54.98**	**21**	P		**P**		**08 51 51.0**	**-0.4**
	comp=Z,2.8nm,0.8s,mb4.3,baz=201,slow=7.1,SNR=12								
GERES				LR		LR		09 16 13.8	
	comp=Z,596nm,18.9s,MS4.7,baz=217,slow=37								
KHC	**Kasperske Hory**	**55.18**	**21**	*eP*		**P**		**08 51 53.0**	**+0.3**
KHC				*e*S		**S**		**08 59 37.4**	**+1.5**
KHC				AMS		AMS		09 15 20.0	
	comp=Z,700nm,15.5s								
NKC	**Novy Kostel**	**55.72**	**20**	*eP*		**P**		**08 51 57.1**	**+0.5**
NKC				*e*S		**S**		**08 59 46.2**	**+3.1**
NKC	**Novy Kostel**	**55.72**	**20**	*eP*		**P**		**08 51 57.1**	**+0.5**
NKC				*e*S		**S**		**08 59 46.2**	**+3.1**
NKC				AMS		AMS		09 15 20.0	
	comp=Z,400nm,14.4s								
TREC	**Trest**	**56.02**	**22**	*eP*		**P**		**08 51 58.3**	**-0.5**
TREC				*e*S		**S**		**08 59 47.6**	**+0.5**
TREC				AMS		AMS		09 16 30.0	
	comp=Z,700nm,15.1s								
LPAZ	**La Paz**	**56.17**	**251**	LR		LR		09 14 46.7	
	comp=Z,897nm,19.6s,MS4.9,baz=84,slow=35								
PRU	**Pruhonice**	**56.24**	**21**	*eP*		**P**		**08 52 00.9**	**+0.5**
PRU				*e*S		**S**		**08 59 51.0**	**+0.9**
PRU				AMS		AMS		09 17 10.0	
	comp=Z,800nm,15.7s								
PVCC	**Panska Ves**	**56.70**	**21**	*eP*		**P**		**08 52 03.6**	**0.0**
PVCC				AMS		AMS		09 17 00.0	
	comp=Z,800nm,16.4s								
CLL	**Collm**	**56.82**	**19**	*eP*		**P**		**08 52 04.0**	**-0.4**
CLL				*e*S		**S**		**08 59 58.0**	**+0.3**
CLL	**Collm**	**56.82**	**19**	*eP*		**P**		**08 52 04.0**	**-0.4**
CLL				*e*S		**S**		**08 59 58.0**	**+0.3**
CLL				*e*sS		sS		09 00 01.0	-1.9
CLL				*e*SP				09 00 07.0	
CLL				*e*SS		SS		09 03 48.0	+2.0
CLL				LmV				09 16 00.0	
	comp=Z,500nm,19.6s								
DPC	**Dobruska-Polom**	**57.19**	**22**	*eP*		**P**		**08 52 06.8**	**-0.3**
DPC				*e*S		**S**		**09 00 07.3**	**+4.7**
DPC				AMS		AMS		09 15 10.0	
	comp=Z,500nm,16.3s								
MORC	**Moravsky Berou**	**57.20**	**23**	*eP*		**P**		**08 52 06.8**	**-0.4**
	comp=Z,87nm,2.7s,mb5.3								
MORC	**Moravsky Berou**	**57.20**	**23**	*eP*		**P**		**08 52 06.8**	**-0.4**
MORC				pmax		pmax			
	comp=Z,87nm,2.7s,mb5.3								
UPC	**Upice**	**57.20**	**22**	*eP*		**P**		**08 52 07.5**	**+0.3**
OKC	**Ostrava-Krasne**	**57.49**	**24**	*eP*		**P**		**08 52 09.4**	**+0.2**
OKC				*e*S		**S**		**09 00 08.3**	**+1.7**
OKC	**Ostrava-Krasne**	**57.49**	**24**	*eP*		**P**		**08 52 09.4**	**+0.2**
OKC				*e*S		**S**		**09 00 08.3**	**+1.7**
OKC				AMS		AMS		09 15 10.0	
	comp=Z,400nm,21.3s								
BUR08	**Bucovina Ar. S**	**59.00**	**29**	*eP*		**P**		**08 52 17.3**	**-2.5**
ROSC	**El Rosal**	**61.41**	**276**	P		**P**		**08 52 37.3**	**+0.3**
	comp=Z,2.2nm,0.3s,mb4.8,baz=100,slow=19,SNR=4.2								
ROSC				LR		LR		09 16 15.6	
	comp=Z,557nm,21.9s,MS4.7,baz=30,slow=33								
AKASG	**Malin Array Be**	**63.01**	**29**	P		**P**		**08 52 45.7**	**-1.4**
	comp=Z,0.6nm,0.3s,mb4.2,baz=228,slow=7.8,SNR=13								
AKASG				LR		LR		09 22 31.0	
	comp=Z,415nm,19.4s,MS4.6,baz=230,slow=38								
AKASG	**Malin Array Be**	**63.01**	**29**	P		**P**		**08 52 45.7**	**-1.4**
AKASG				LR		LR		09 22 31.0	
NOA	**NORSAR Array B**	**64.83**	**13**	P		**P**		**08 52 58.0**	**-0.8**
	comp=Z,2.3nm,0.9s,mb4.2,baz=208,slow=6.5,SNR=4.7								
NOA				LR		LR		09 24 09.7	
	comp=Z,196nm,18.1s,MS4.3,baz=215,slow=39								
SOC	**Sochi**	**64.88**	**40**	*eP*		**P**		**08 52 59.7**	**+0.2**
SOC				*e*				08 53 35.3	
SOC				*e*				08 55 19.2	
SOC				*e*S		**S**		**09 01 44.2**	**+3.2**
SOC				*e*				09 02 47.1	
SOC				pmax		pmax			
	comp=Z,7.0nm,0.5s,mb5.0								
SOC				MLR		MLR			
	comp=Z,214nm,20.0s,MS4.3								
PLCA	**Paso Flores**	**65.00**	**225**	LR		LR		09 16 18.9	
	comp=Z,433nm,21.5s,MS4.6,baz=54,slow=31								
VSR	**Storozhevoye**	**68.38**	**32**	*eP*		**P**		**08 53 20.8**	**-0.9**
VSR				pmax		pmax			
	comp=Z,7.0nm,1.2s,mb4.6								
VSR				pmax		pmax			
	comp=N,7.0nm,1.4s								
VSR				pmax		pmax			
	comp=E,9.0nm,1.2s								
OBN	**Obninsk**	**69.23**	**28**	*eP*		**P**		**08 53 26.6**	**-0.4**
OBN				*e*				08 53 51.0	
OBN				*e*S		S		09 02 37.9	+4.9
OBN				pmax		pmax			
	comp=Z,7.0nm,1.1s,mb4.5								
VNA1	**Neumayer--Stat**	**69.42**	**178**	*eP*		**P**		**08 53 29.3**	**+1.4**
VNA1				*e*				08 53 36.9	
VNA1				*e*				08 53 43.0	
VNA2	**Neumayer--Watz**	**69.73**	**178**	*eP*		**P**		**08 53 30.6**	**+0.9**
	baz=345,slow=7.9								
VNA2				*e*				08 53 38.6	
VNA2				*e*				08 53 44.6	
VNA3	**Neumayer Olymp**	**69.98**	**179**	*eP*		**P**		**08 53 31.3**	**0.0**
VNA3				*e*				08 53 39.6	
VNA3				*e*				08 53 45.9	
MOS	**Moscow**	**70.08**	**28**	*eP*		**P**		**08 53 29.9**	**-2.3**
SNAA	**Sanae**	**70.69**	**177**	*eP*		**P**		**08 53 34.6**	**-1.0**
SNAA				*e*				08 53 41.6	
SNAA				*e*				08 53 48.4	
SNAA	**Sanae**	**70.69**	**177**	*eP*		**P**		**08 53 34.8**	**-0.8**
	comp=Z,9.1nm,1.1s,mb4.6								
SNAA	**Sanae**	**70.69**	**177**	*eP*		**P**		**08 53 34.8**	**-0.8**
SNAA				pmax		pmax			
	comp=Z,9.0nm,1.1s								
JOF	**Joensuu**	**72.04**	**20**	*ep*		**P**		**08 53 43.2**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.2								
JOF	**Joensuu**	**72.04**	**20**	*eP*		**P**		**08 53 43.2**	**-0.7**
JOF				pmax		pmax			
	comp=Z,2.0nm,0.6s,mb4.2								
KLMR	**Klimovskoe**	**73.81**	**24**	*eP*		**P**		**08 53 52.2**	**-2.2**
KLMR				pmax		pmax			
	comp=Z,40nm,1.8s,mb5.0								
ARCES	**ARCESS Array B**	**75.21**	**13**	P		**P**		**08 54 01.9**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.3,baz=216,slow=4.8,SNR=12								
ARCES				LR		LR		09 31 13.6	
	comp=Z,232nm,18.0s,MS4.5,baz=227,slow=39								
KEV	**Kevo**	**75.72**	**13**	*ep*		**P**		**08 54 04.1**	**-1.2**
	comp=Z,0.6nm,0.4s,mb3.9								
KEV	**Kevo**	**75.72**	**13**	*eP*		**P**		**08 54 04.1**	**-1.2**
KEV				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb4.1								
WVT	**Waverly**	**78.36**	**307**	*eP*		**P**		**08 54 20.4**	**-0.6**
	comp=Z,108nm,3.0s								
WVT	**Waverly**	**78.36**	**307**	*eP*		**P**		**08 54 20.4**	**-0.5**
WVT				pmax		pmax			
	comp=Z,108nm,3.0s								
AKTO	**Aktyubinsk**	**79.01**	**38**	LR		LR		09 31 05.1	
	comp=Z,188nm,22.0s,MS4.4,baz=91,slow=37								
FVM	**French Village**	**80.71**	**309**	*eP*		**P**		**08 54 32.0**	**-1.7**
	comp=Z,25nm,1.6s,mb4.9								
FVM	**French Village**	**80.71**	**309**	*eP*		**P**		**08 54 32.1**	**-1.6**
FVM				pmax		pmax			
	comp=Z,25nm,1.6s,mb4.9								
ARU	**Arti**	**80.96**	**32**	*eP*		**P**		**08 54 33.3**	**-1.3**
	comp=Z,12nm,0.9s,mb4.8								
ARU	**Arti**	**80.96**	**32**	*c iP*		**P**		**08 54 34.5**	**-0.1**
ARU					S	S		09 04 44.6	+1.2
ARU					SS	SS		09 10 02.7	+5.1
ARU					pmax	pmax			
	comp=Z,22nm,2.5s,mb4.6								
MAW	**Mawson**	**83.59**	**158**	P		**P**		**08 54 49.9**	**+1.7**
	comp=Z,4.1nm,0.8s,mb4.6,baz=288,slow=9.8,SNR=3.1								
MAW				LR		LR		09 24 39.0	
	comp=Z,148nm,20.7s,MS4.3,baz=138,slow=30								
ECSD	**EROS,Sioux Fal**	**86.08**	**314**	*eP*		**P**		**08 55 00.1**	**-1.1**
	comp=Z,15nm,1.4s,mb5.0								
ULM	**Lac du Bonnet**	**86.25**	**320**	LR		LR		09 28 37.2	
	comp=Z,149nm,21.1s,MS4.4,baz=65,slow=32								
BRVK	**Borovoye**	**86.98**	**37**	*eP*		**P**		**08 55 05.5**	**0.0**
	comp=Z,143nm,2.7s,mb5.7								
BRVK	**Borovoye**	**86.98**	**37**	*eP*		**P**		**08 55 05.5**	**+0.1**
BRVK				pmax		pmax			
	comp=Z,143nm,2.7s,mb5.7								
BVAR	**Borovoye Array**	**87.04**	**37**	LR		LR		09 39 04.6	
	comp=Z,245nm,18.3s,MS4.7,baz=268,slow=39								
WMOK	**Wichita Mounta**	**87.08**	**305**	*eP*		**P**		**08 55 06.0**	**-0.3**
	comp=Z,7.3nm,1.0s,mb4.9								
WMOK	**Wichita Mounta**	**87.08**	**305**	*eP*		**P**		**08 55 06.0**	**-0.3**
WMOK				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.8								
JCT	**Junction City**	**87.71**	**300**	*eP*		**P**		**08 55 09.6**	**+0.1**
	comp=Z,8.9nm,1.0s,mb5.0								
JCT	**Junction City**	**87.71**	**300**	*eP*		**P**		**08 55 09.6**	**+0.1**
JCT				pmax		pmax			
	comp=Z,9.0nm,1

HHC					LR	LR			
	comp=N,144nm,23.8s,MS4.7								
HHC					LR	LR			
	comp=E,190nm,22.6s,MS4.7								
HHC					LR	LR			
	comp=Z,177nm,25.0s,MS4.6								
GYA	**Guiyang**	**117.05**	**61**	*e*PDIF	Pdif		08 57 19.5	-1.6	
GYA				PKP	PKPdf		09 01 02.8	-3.2	
GYA				PKS			09 04 40.8	-	
GYA				SKS	SKSdf		09 08 13.3	-5.3	
GYA				SKKS	SKKSac		09 09 07.5	-10	
GYA				SS	SS		09 18 21.0	-3.5	
GYA				PP	PP				
	comp=Z,100nm,8.0s								
GYA				LR	LR				
	comp=N,260nm,21.0s,MS4.9								
GYA				LR	LR				
	comp=E,110nm,20.8s,MS4.9								
GYA				LR	LR				
	comp=Z,130nm,20.3s,MS4.5								
RKT	**Rikitea**	**118.51**	**243**	*e*LR	LR		09 37 36.6		
	comp=Z,275nm,25.0s								
BJI	**Beijing**	**119.97**	**43**	PKP	PKPdf		09 01 09.4	-1.9	
BJI				PP	PP		09 02 33.8	-1.3	
BJI				PS	PS		09 12 32.6	+7.3	
BJI				SS	SS		09 19 02.1	+1.0	
BJI				LR	LR				
	comp=N,171nm,22.6s,MS4.8								
BJI				LR	LR				
	comp=E,159nm,20.8s,MS4.8								
BJI				LR	LR				
	comp=Z,191nm,32.1s								
WHN	**Wuhan**	**122.38**	**54**	PKP	PKPdf		09 01 18.8	+2.6	
CN2	**Changchun**	**123.86**	**35**	*e*PKP	PKPdf		09 01 18.8	+0.2	
CN2				PP	PP		09 03 05.3	+4.1	
CN2				LR	LR				
	comp=N,400nm,23.0s,MS5.1								
CN2				LR	LR				
	comp=E,200nm,23.0s,MS5.1								
CN2				LR	LR				
	comp=Z,200nm,20.0s,MS4.8								
NJ2	**Nanjing**	**125.38**	**51**	*e*PKP	PKPdf		09 01 16.8	-5.1	
HABR	**Khabarovsk**	**125.51**	**26**	*i* PKIKP	PKPdf		09 01 20.1	-1.5	
HABR				*e*			09 03 11.3		
HABR				*e*			09 08 31.3		
HABR				*e*PS	PS		09 13 12.7	-1.0	
HABR				*e*SS	SS		09 20 12.5	+2.2	
HABR				*e*SSS			09 24 51.6		
MDJ	**Mudanjiang**	**125.64**	**32**	PKP	PKPdf		09 01 19.4	-2.6	
MDJ				SS	SS		09 20 07.6	-4.8	
MDJ				PP	PP				
	comp=Z,71nm,5.0s								
MDJ				LR	LR				
	comp=N,76nm,31.0s,MS4.5								
MDJ				LR	LR				
	comp=E,127nm,31.0s,MS4.5								
MDJ				LR	LR				
	comp=Z,163nm,31.0s,MS4.5								
PPT	**Papeete**	**133.22**	**244**	*e*SS	SS		09 21 45.5	-2.7	
	comp=Z,164nm,30.2s								
PPT	**Papeete**	**133.22**	**244**	*e*LR	LR		09 44 10.8		
	comp=Z,251nm,23.0s								
ASAR	**Alice Springs**	**139.56**	**130**	PKhKP			09 01 39.4		
	comp=Z,0.5nm,0.6s,baz=223,slow=2.7,SNR=10								
WRA	**Warramunga Arr**	**141.83**	**125**	PKhKP			09 01 46.2		
	comp=Z,0.3nm,0.6s,baz=238,slow=2.3,SNR=4.8								

ISCJB ***17*** *08:44:43.6±1.5, 1876N×008×1455E±0.2, h231±13km, mb3.6/6, Error ellipse: s-maj=38.8km s-min=12.4km az=171.6*

IDC ***17*** *08:44:43.8±2.1, 1876N×14566E, h216±18km, mb3.4/5, mb1 3.6/8, mb1mx3.4/22, mbtmp3.6/8, Error ellipse: s-maj=33.8km s-min=12.8km az=80.0*

ISC 17 08:44:43.9±1.5, 1877N±008×1456E±03, h219km±14km, n9, σ1§14/11, mb3.6/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GUMO	**Guam**	**5.20**	**188**	P		P	**Pn**	**08 46 02.5**	**+1.1**
	2.0nm,0.3s,baz=217,slow=20,SNR=4.6								
GUMO				S			**S**	**08 47 01.8**	**-0.9**
	9.2nm,0.3s,baz=198,slow=20,SNR=4.0								
CBIJ	**Chichi jima**	**8.87**	**340**	P		P	**Pn**	**08 46 47.8**	**-0.6**
	3.1nm,0.3s,baz=270,slow=20,SNR=4.0								
CBIJ				S			**S**	**08 48 18.8**	**-10**
	3.3nm,0.3s,baz=288,slow=19,SNR=2.7								
JOW	**Kunigami**	**17.87**	**300**	P			**P**	**08 48 39.0**	**+1.8**
	2.9nm,0.3s,baz=146,slow=14,SNR=8.3								
WRA	**Warramunga Arr**	**40.02**	**197**	P			**P**	**08 51 58.4**	**+0.6**
	3.9nm,0.5s,mb4.1,baz=25,slow=9.1,SNR=89								
ASAR	**Alice Springs**	**43.69**	**196**	P			**P**	**08 52 27.6**	**+0.1**
	1.0nm,0.4s,mb3.5,baz=14,slow=7.3,SNR=22								
STKA	**Stephens Creek**	**50.50**	**184**	P			**P**	**08 53 19.1**	**-0.7**
	1.4nm,0.7s,mb3.4,baz=9.2,slow=5.1,SNR=3.9								
MKAR	**Makanchi Array**	**58.36**	**314**	P			**P**	**08 54 15.8**	**-0.5**
	0.3nm,0.7s,mb3.1,baz=88,slow=9.2,SNR=3.0								
NVAR	**Mina Array Bea**	**83.17**	**52**	P			**P**	**08 56 47.0**	**+1.3**
	0.7nm,0.6s,mb3.5,baz=268,slow=6.3,SNR=6.4								
JOF	**Joensuu**	**83.92**	**335**	*e*p			**P**	**08 56 46.6**	**-2.5**
	1.2nm,0.5s,mb3.9								

GUC 17 08:47:05.8±2.2, 2261S×7078W, h1km±26km, ML3.7, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MECH	**Mejillones**	**0.58**	**148**	*e*P			Pg	08 47 16.2	-0.8
MECH				*i* S			Sg	08 47 24.0	-0.6
MECH				AML		AML	AML	08 47 27.2	
	comp=E,7μm,0.4s								
ANCH	**Antofagasta**	**1.12**	**162**	⇓*e*P			Pg	08 47 25.6	-1.8
ANCH				*i* S			Sg	08 47 40.3	-1.7
ANCH				AML		AML	AML	08 47 55.2	
	comp=N,5μm,0.1s								
LVC	**Limon Verde**	**1.73**	**91**	*e*P			Pn	08 47 36.5	-0.5
LVC				*i* S			Sn	08 47 59.5	-0.2
LVC				AML		AML	AML	08 48 05.0	
	comp=N,770nm,0.5s								
PB01	**Plate Boundary**	**1.97**	**38**	*e*P			Pn	08 47 41.2	+1.0
PB01				*i* S			Sn	08 48 05.2	-0.3
PB01				AML		AML	AML	08 48 14.0	
	comp=E,1μm,0.5s								

NEIC ***17*** *08:58:18.2, 1634N×9941W, h10km, MD3.7(MEX), After MEX.*

MEX 17 08:58:18.1±1.0, 1635N×9940W, h8km±15km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ACX	**Acapulco**	**0.71**	**317**	*i* P			Pg	08 58 29.8	-2.1
ACX				*i* S			Sg	08 58 39.5	-1.7
CAIG	**El Cayaco**	**1.08**	**310**	*i* P			Pg	08 58 36.7	-2.2
CAIG				*i* S			Sg	08 58 49.6	-3.4
PNIG	**Pinotepa**	**1.23**	**88**	*i* P			Pb	08 58 37.5	-4.1
PNIG				*i* S			Sb	08 58 53.0	-4.5
MEIG	**Mezcala**	**1.59**	**353**	*e*P			Pn	08 58 42.7	-3.8
MEIG				*i* S			Sn	08 59 02.6	-4.5
PLIG	**Platanillo**	**2.04**	**357**	*i* P			Pn	08 58 50.0	-2.7
PLIG				*i* S			Sn	08 59 13.9	-4.4
UTMO	**Huajuapan**	**2.13**	**46**	*i* P			Pn	08 58 51.8	-2.1
UTMO				*i* S			Sn	08 59 15.4	-5.1
ZIIG	**Zihuatanejo**	**2.34**	**303**	*i* P			Pn	08 58 52.5	-4.4
ZIIG				*i* S			Sn	08 59 22.8	-3.0
VHO	**Vista Hermosa**	**2.66**	**74**	*i* P			Pn	08 58 53.8	-7.4
VHO				*i* S			Sn	08 59 30.2	-3.5
MZVM		**2.83**	**3**	*i* P			Pn	08 59 04.6	+0.9

IDC 17 09:02:30.0±6.3, 2211N×14447E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/21, mbtmp3.6/6, MS2.7/1, Ms1 2.7/1, ms1mx2.3/31, Error ellipse: s-maj=254.2km s-min=22.4km az=77.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GUMO	**Guam**	**8.48**	**177**	LR		LR	LR	09 07 47.4	
	comp=Z,49nm,18.4s,baz=110,slow=37								
SONM	**Songino Array**	**39.80**	**320**	P		P		09 10 04.5	-0.2
	0.6nm,0.5s,baz=123,slow=6.8,SNR=3.9								
WRA	**Warramunga Arr**	**42.95**	**194**	P		P		09 10 31.7	+0.9
	0.5nm,0.6s,baz=17,slow=9.0,SNR=4.8								
ASAR	**Alice Springs**	**46.64**	**193**	P		P		09 10 59.5	-0.8
	0.3nm,0.6s,baz=16,slow=7.0,SNR=6.4								
ZALV	**Zalesovo Beam**	**54.64**	**321**	P		P		09 12 00.7	+0.3
	0.5nm,0.5s,baz=90,slow=7.2,SNR=3.5								
MKAR	**Makanchi Array**	**55.30**	**312**	P		P		09 12 04.6	-0.7
	0.2nm,0.6s,baz=100,slow=9.2,SNR=2.1								
BVAR	**Borovoye Array**	**63.14**	**319**	P		P		09 13 00.1	+0.6
	1.0nm,0.7s,baz=95,slow=9.1,SNR=4.8								

ISCJB ***17*** *09:20:59.9±0.6, 5703N±006×15658W±0.10, h71km±8km, mb3.7/9, Error ellipse: s-maj=12.3km s-min=5.4km az=140.5*

NEIC ***17*** *09:21:00.1, 5680N×15632W, h44km, ML3.5(AEIC), After AEIC.*

IDC ***17*** *09:21:06.0±6.5, 5720N×15643W, h110km±61km, mb3.4/8, mb1 3.6/9, mb1mx3.5/23, mbtmp3.4/9, Error ellipse: s-maj=37.3km s-min=15.9km az=25.0*

ISC 17 09:21:01.4±0.5, 5696N±006×15654W±010, h67km±8km, n24, σ1§06/29, mb3.7/9, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CHGN	**Chignik**	**1.23**	**238**	P		P	**Pn**	**09 21 21.8**	**-0.8**
OHAK	**Old Harbor**	**1.79**	**80**	P		P	**Pn**	**09 21 28.4**	**-1.7**
KDAK	**Kodiak Island**	**2.30**	**67**	P		Px		09 21 49.8	
	35nm,0.3s,baz=234,slow=6.5,SNR=777								
KDAK				S		Sx		09 22 15.5	
	45nm,0.3s,baz=228,slow=8.5,SNR=8.7								
KDAK	**Kodiak Island**	**2.30**	**67**	P			**Pn**	**09 21 35.6**	**-1.3**
KDAK				S			**Sn**	**09 22 15.5**	**+11**
SDPT	**Sand Point**	**2.73**	**235**	*e*P			**Pn**	**09 21 41.8**	**-1.0**
SDPT				*e*Sn			**Sn**	**09 22 15.0**	**+0.4**
SEW	**Seward**	**4.87**	**47**	*e*Pn			**Pn**	**09 22 13.7**	**+1.7**
SEW				*e*Sn			**Sn**	**09 23 07.5**	**+0.5**
RC01	**Rabbit Creek A**	**5.43**	**37**	*e*Pn			**Pn**	**09 22 19.5**	**-0.2**
RC01				*e*Sn			**Sn**	**09 23 20.6**	**-0.1**
TRF	**Thorofare Moun**	**7.22**	**23**	*e*Pn			**Pn**	**09 22 46.2**	**+2.2**
	20nm,1.1s								
TRF				*e*Sn			**Sn**	**09 24 10.4**	**+6.1**
BPAW	**Bear Paw Mtn.**	**7.67**	**19**	*e*Pn			**Pn**	**09 22 50.0**	**-0.1**
	4.0nm,0.5s								
NIKO	**Nikolski**	**8.13**	**246**	Pn			**Pn**	**09 22 58.0**	**+1.5**
COLA	**College**	**8.99**	**24**	*e*Pn			**Pn**	**09 23 09.3**	**+1.1**
	4.2nm,0.5s								
COLA				*e*Sn			**Sn**	**09 24 47.0**	**-0.6**
PNL	**Peninsula**	**9.42**	**66**	Pn			**Pn**	**09 23 13.0**	**-1.1**
DLBC	**Dease Lake**	**14.22**	**73**	P			**Pn**	**09 24 19.9**	**+0.8**
	0.1nm,0.3s,baz=223,slow=19,SNR=2.7								
YKA	**Yellowknife Ar**	**21.54**	**58**	P			**P**	**09 25 44.1**	**-0.6**
	1.8nm,0.9s,mb3.4,baz=274,slow=9.9,SNR=4.1								
PETK	**Petropavlovsk-**	**26.12**	**281**	P			**P**	**09 26 30.2**	**+1.5**
	2.7nm,0.7s,mb3.8,baz=73,slow=15,SNR=4.6								
PETK	**Petropavlovsk-**	**26.12**	**281**	P			**P**	**09 26 30.2**	**+1.5**
NVAR	**Mina Array Bea**	**31.15**	**110**	P			**P**	**09 27 14.6**	**+1.0**
	1.0nm,0.7s,mb3.7,baz=296,slow=7.4,SNR=10.0								
PDAR	**Pinedale Array**	**32.73**	**95**	P			**P**	**09 27 27.6**	**+0.2**
	0.6nm,0.6s,mb3.6,baz=316,slow=4.5,SNR=5.2								
SRU	**San Rafael**	**34.76**	**101**	*e*P			**P**	**09 27 45.9**	**+0.9**
	4.9nm,1.0s,mb4.3								
TXAR	**Lajitas Array**	**45.86**	**104**	P			**P**	**09 29 16.9**	**+0.2**
	0.6nm,0.7s,mb3.4,baz=320,slow=5.7,SNR=8.7								
TXAR				PcP		PcP		09 30 52.4	-0.5
	0.1nm,0.4s,baz=284,slow=3.6,SNR=5.3								
TXAR	**Lajitas Array**	**45.86**	**104**	P			**P**	**09 29 16.9**	**+0.2**
TXAR				PcP		PcP		09 30 52.4	-0.5
ARCES	**ARCESS Array B**	**53.80**	**359**	P			**P**	**09 30 15.2**	**-1.2**
	3.1nm,1.0s,mb4.3,baz=9.5,slow=8.2,SNR=3.3								
SONM	**Songino Array**	**55.05**	**305**	P			**P**	**09 30 24.6**	**-1.2**
	0.4nm,0.5s,mb3.7,baz=30,slow=7.6,SNR=3.9								
MKAR	**Makanchi Array**	**65.60**	**320**	P			**P**	**09 31 36.2**	**-1.6**
	0.1nm,0.5s,mb2.9,baz=34,slow=5.4,SNR=2.4								

IGQ 17 09:33:07.1, 264S×7789W, h111km±4km, Mb4.3, Ms4.1, 2C-7D, Error ellipse: s-maj=4.6km s-min=2.8km az=47.6, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PATA	**Patacocha**	**1.25**	**334**	⇓P			Pn	09 33 32.3	+1.2
PATA	**Patacocha**	**1.25**	**334**	⇓S			Sn	09 33 49.5	+0.2
ARRY	**Arrayan**	**1.25**	**333**	P			Pn	09 33 31.6	+0.4
ULBA	**Ulba**	**1.29**	**336**	⇓P			Pn	09 33 32.6	+1.1
ULBA	**Ulba**	**1.29**	**336**	⇓S			Sn	09 33 55.0	+5.0
RETU	**Refugio**	**1.30**	**335**	⇓P			Pn	09 33 32.8	+1.1
BIL2	**Estacion Bilba**	**1.32**	**332**	P			Pn	09 33 32.8	+0.9
RUN5	**Runtun**	**1.32**	**336**	⇓P			Pn	09 33 32.8	+0.9
JUI6	**Juive**	**1.33**	**334**	P			Pn	09 33 32.8	+0.8
IGUA	**Igualata**	**1.36**	**327**	P			Pn	09 33 33.5	+1.1
PISA	**Pisayambo**	**1.64**	**342**	⇑P			Pn	09 33 37.1	+1.4
TAMB	**Tambo**	**1.99**	**346**	P			Pn	09 33 41.6	+1.6
TAMB	**Tambo**	**1.99**	**346**	S			Sn	09 34 06.8	+1.7
QIL2	**Quilotoa**	**2.03**	**330**	P			Pn	09 33 41.7	+1.2
CAMI	**Rancho Maria**	**2.04**	**343**	P			Pn	09 33 42.0	+1.4
VC1	**Cotopaxi 1**	**2.04**	**346**	P			Pn	09 33 42.7	+1.9
ANTI	**Antisana**	**2.19**	**353**	⇓P			Pn	09 33 44.1	+1.5
JUA2	**San Juan 2**	**2.51**	**343**	P			Pn	09 33 47.9	+1.2
LAV3	**Lava3-Reventad**	**2.54**	**6**	⇑P			Pn	09 33 48.5	+1.5
GGP	**Refugio Guagua**	**2.54**	**344**	P			Pn	09 33 48.1	+1.0
TERV	**Terraza Guagua**	**2.55**	**344**	P			Pn	09 33 48.4	+1.2
CONE	**Cono NE Rev Vo**	**2.56**	**6**	P			Pn	09 33 48.9	+1.5
PINO	**Pino**	**2.56**	**344**	P			Pn	09 33 48.5	+1.1
YANA	**Yana**	**2.59**	**345**	P			Pn	09 33 48.6	+0.9
CAYA	**Cayambe**	**2.69**	**358**	P			Pn	09 33 50.8	+1.7
COTA	**Cotacachi**	**2.98**	**351**	P			Pn	09 33 54.5	+1.5
CHIS	**Cerro-Chispas-**	**3.24**	**299**	P			Pn	09 33 57.4	+1.0

IDC ***17*** *09:46:11.6±4.3, 2304S×7029W, h0km, mb3.9/1, mb1 3.7/2, mb1mx3.4/16, mbtmp3.7/2, ML3.4/1, Error ellipse: s-maj=139.3km s-min=61.7km az=89.0*

ISCJB ***17*** *09:46:13.1±1.7, 2275S±005×7094W±0.10, h28km±9km, Error ellipse: s-maj=15.6km s-min=7.8km az=8.9*

GUC ***17*** *09:46:14.9±2.5, 2289S×7099W, h45km±10km, ML3.3*

ISC 17 09:46:14.1±1.8, 2277S±005×709W±01, h25km±10km, n9, σ1§01/14, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MECH	**Mejillones**	**0.53**	**128**	⇓*i*P			**Pb**	**09 46 23.6**	**-1.2**
MECH				*i* S			**Sb**	**09 46 31.4**	**-0.7**
MECH				AML		AML	AML	09 46 41.5	
	comp=N,3μm,0.4s								
CEN1	**Los Morros**	**0.89**	**134**	*e*P			**Pb**	**09 46 31.4**	**+0.6**
CEN1				*i* S			**Sb**	**09 46 44.2**	**+1.9**
CEN1				AML		AML	AML	09 46 47.1	
	comp=E,581nm,0.7s								
ANCH	**Antofagasta**	**1.01**	**154**	*e*P			**Pn**	**09 46 32.5**	**-0.2**
ANCH				*i* S			**Sb**	**09 46 45.7**	**-0.1**
ANCH				AML		AML	AML	09 46 46.0	
	comp=N,1μm,0.0s								
LVC	**Limon Verde**	**1.84**	**85**	*e*P			**Pn**	**09 46 43.3**	**-0.8**
LVC				*i* S			**Sn**	**09 47 06.2**	**-0.4**
LVC				AML		AML	AML	09 47 07.5	
	comp=E,517nm,0.4s								
CPN1	**Cerro Paranal**	**1.90**	**166**	*e*P			**Pn**	**09 46 45.2**	**+0.3**
CPN1				*i* S			**Sn**	**09 47 08.4**	**+0.4**
CPN1				AML		AML	AML	09 47 18.4	
	comp=E,376nm,0.7s								
PB01	**Plate Boundary**	**2.17**	**38**	*e*P			**Pn**	**09 46 47.0**	**-1.6**
PB01				*i* S			**Sn**	**09 47 15.8**	**+1.2**
PB01				AML		AML	AML	09 47 18.7	
	comp=E,736nm,0.5s								
LPAZ	**La Paz**	**6.96**	**23**	Pn			**Pn**	**09 47 56.3**	**+1.8**
	comp=E,0.4nm,0.3s,baz=206,slow=11,SNR=10.0								
TORD	**Torodi Ar. Bea**	**79.52**	**71**	P			**P**	**09 58 18.4**	**-0.8**
	comp=E,0.7nm,0.6s,baz=254,slow=5.7,SNR=7.5								
MKAR	**Makanchi Array**	**147.74**	**35**	PKPbc		PKPbc		10 05 57.3	+0.8
	comp=E,0.3nm,0.6s,baz=311,slow=3.6,SNR=3.7								

ISCJB ***17*** *10:08:09.2±0.6, 3975N±006×11921E±004, h10km, mb3.3/2, Error ellipse: s-maj=9.0km s-min=4.2km az=9.7*

IDC ***17*** *10:08:11.4±1.6, 3943N×11901E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.5/19, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=50.1km s-min=19.7km az=34.0*

BJI ***17*** *10:08:14.5, 3929N×119.12E, h18km, mB4.9, mb4.7, ML3.7, Ms3.6, Msz3.6*

ISC 17 10:08:12.0±0.5, 3958N±005×11915E±004, h10km, n11, σ1§24/18, mb3.3/2, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
DL2	**Dalian**	**2.04**	**109**	*e*P			**Pn**	**10 08 48.3**	**+2.0**
DL2				PG			**Pg**	**10 08 51.3**	**+0.3**
DL2				SG			**Sg**	**10 09 17.8**	**+0.3**
DL2				Smax					
	comp=N,800nm,0.4s								
DL2				Smax					
	comp=E,600nm,0.5s								
BJI	**Beijing**	**2.34**	**282**	P			**Pn**	**10 08 52.3**	**+1.8**
BJI				PG			**Pg**	**10 08 56.0**	**-0.8**
BJI				SG			**Sg**	**10 09 26.5**	**-0.6**
BJI				Smax					
	comp=N,413nm,0.6s								
BJI				Smax					
	comp=E,1μm,0.5s								
TIA	**Tai'an**	**3.73**	**206**	P			**Pn**	**10 09 09.5**	**-0.1**
TIA				SG			**Sg**	**10 10 09.3**	**-2.4**
TIA				Smax					
	comp=N,62nm,0.7s								
TIA				Smax					
	comp=E,42nm,0.7s								
HHC	**Hu-ho-hao-te**	**5.95**	**285**	*e*PG			**Pg**	**10 10 05.4**	**-0.4**
HHC				LR		LR			
	comp=N,236nm,12.5s								
HHC				LR		LR			
	comp=E,394nm,16.1s								
CN2	**Changchun**	**6.32**	**46**	*e*PG			**Pg**	**10 10 10.3**	**-2.7**
CN2				*e*SG			**Sg**	**10 11 33.9**	**-1.0**
CN2				Smax					
	comp=N,100nm,0.8s								
CN2				Smax					
	comp=E,100nm,0.8s								
BTO	**Baotou**	**7.08**	**281**	*e*PG			**Pg**	**10 10 20.4**	**-7.0**
BTO				Smax					
	comp=N,4.0nm,0.2s								
BTO				Smax					
	comp=E,10.0nm,0.4s								
KSRS	**Korea Array**	**7.20**	**104**	Pn			**Pn**	**10 09 58.2**	**+1.0**
	comp=E,2.4nm,0.3s,baz=289,slow=14,SNR=17								
KSRS				Sn			**Sn**	**10 11 17.5**	**-1.5**
	comp=E,1.0nm,0.3s,baz=289,slow=24,SNR=4.3								
KSRS				Lg				10 12 00.6	
	comp=E,3.5nm,0.3s,baz=282,slow=30,SNR=8.7								
SONM	**Songino Array**	**12.37**	**316**	Pn			**Pn**	**10 11 08.6**	**+0.7**
	comp=E,0.3nm,0.3s,baz=133,slow=13,SNR=4.9								
SONM				Lg				10 14 44.8	
	comp=E,0.4nm,0.3s,baz=130,slow=29,SNR=7.8								
LZH	**Lanzhou**	**12.60**	**259**	*e*P			**Pn**	**10 11 15.0**	**+3.8**
LZH				AP				10 11 17.3	
LZH				XP				10 11 19.8	
LZH				PP				10 11 25.6	
LZH				AMB		AMB			
	comp=Z,16nm,1.0s								
LZH				AMB		AMB			
	comp=Z,53nm,4.1s								
LZH				LR		LR			
	comp=N,176nm,9.2s								
LZH				LR		LR			
	comp=Z,204nm,11.5s								
ZALV	**Zalesovo Beam**	**27.24**	**313**	P			**P**	**10 13 57.0**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.3,baz=117,slow=8.6,SNR=3.6								
WRA	**Warramunga Arr**	**60.89**	**164**	P			**P**	**10 18 25.5**	**+0.7**
	comp=Z,0.2nm,0.6s,mb3.4,baz=350,slow=7.1,SNR=3.1								

NIED ***17*** *10:09:00, 4350N×14740E, h32km, Mw4.4 Best double couple: M0 4.80000×10^15 NP1:ϕ0=48.00000°, δ0.00000°, λ113.00000°. NP2:ϕ0=195.00000°, δ45.00000°, λ65.00000°.*

BJI ***17*** *10:09:24.2, 4386N×14788E, h44km, mB4.9, mb4.8, Ms4.3, Msz4.0*

JMA ***17*** *10:09:25.4±0.2, 4353N×14740E, h12km±3km, M4.8*

MOS ***17*** *10:09:25.2±0.9, 4362N×14759E, h42km, mb4.9/43, Error ellipse: s-maj=8.6km s-min=5.6km az=101.3*

ISCJB ***17*** *10:09:25.4±0.5, 4372N±004×14754E±003, h38km±4km, mb4.7/89, MS3.8/22, Error ellipse: s-maj=7.0km s-min=3.5km az=158.1*

IDC ***17*** *10:09:26.7±0.6, 4368N×14755E, h40km±5km, mb4.1/16, mb1 4.3/19, mb1mx4.2/23, mbtmp4.1/19, ML3.7/3, MS3.6/11, Ms1 3.6/11, ms1mx3.4/31, Error ellipse: s-maj=14.6km s-min=12.0km az=109.0*

NEIC ***17*** *10:09:27.8±0.5, 4368N×14750E, h47km±4km, mb4.8/46, MS4.0/2, Error ellipse: s-maj=5.7km s-min=3.7km az=157.0*

SKHL ***17*** *10:09:28.7±0.9, 4411N×14736E, h50km±17km, mb5.1/3*

SZGRF ***17*** *10:09:29.1, 4409N×14779E, h33km, mb4.8, Kuril Islands, Russia*

ISC 17 10:09:27.2±0.5, 4371N±004×14751E±004, h39km±4km, h46km±1.5km; pP-P, n255, σ0.84/267, mb4.7/89, MS3.8/22, 10C-15D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.24**	**286**	*i*PN			**Pn**	**10 09 48.0**	**0.0**
YUK				*i* S			**Sn**	**10 10 03.2**	**-0.2**
YUK				pmax		pmax			
	comp=N,3μm,0.9s								
YUK				pmax		pmax			
	comp=E,5μm,0.9s								
YUK				pmax		pmax			
	comp=Z,8μm,0.9s								
YUK				pmax		pmax			
	comp=N,2μm,0.5s								
YUK				pmax		pmax			
	comp=E,3μm,0.5s								
YUK				pmax		pmax			
	comp=Z,3μm,0.5s								
YUK				smax					
	comp=N,15μm,0.5s								
YUK				smax					
	comp=E,11μm,0.5s								
YUK				smax

JAR eS Sn **10 10 39.3 -1.5**
JOB Onbets 2.80 255 P Pn **10 10 09.6 +0.1**
JOB eS Sn **10 10 42.4 +0.4**
JMP Maruseppu 3.02 277 P Pn **10 10 13.9 +1.5**
JCH Churui 3.23 252 P Pn **10 10 16.0 +0.7**
JCH eS Sn **10 10 53.9 +1.4**
ASAJ Asahikawa 3.57 278 P Pn **10 10 21.7 +1.6**
comp=E,4.1nm,0.3s,baz=95,slow=14,SNR=23
ASAJ LR LR 10 11 52.7
comp=E,1µm,19.1s,baz=174,slow=40
ASAJ Asahikawa 3.57 278 PN Pn **10 10 21.7 +1.6**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ MLR MLR
comp=Z,1µm,19.1s
ERM Erimo 3.62 244 *e*Pn Pn **10 10 22.7 +2.0**
YSS Yuzh-Sakhalins 4.67 316 *e*Pn Pn **10 10 37.3 +2.2**
YSS Yuzh-Sakhalins 4.67 316 *e*P Pn **10 10 36.7 +1.6**
YSS *e*S Sn **10 11 27.0 -0.9**
YSS AMS AMS 10 12 35.0
comp=Z,1µm,18.0s
YSS AMS AMS 10 12 35.0
comp=Z,700nm,16.0s
YSS AMS AMS 10 12 35.0
comp=Z,600nm,16.0s
SKR Severo-Kuril's 9.11 37 *e*P Pn **10 11 36.0 0.0**
HABR Khabarovsk 9.88 303 *e*PN Pn **10 11 51.0 +4.5**
MJAR Matsushiro Arr 10.09 228 P Pn **10 11 48.7 -0.9**
comp=Z,0.5nm,0.3s,baz=30,slow=13,SNR=8.1
MJAR LR LR 10 16 04.7
comp=Z,179nm,20.6s,baz=60,slow=40
MJAR Matsushiro Arr 10.09 228 P Pn **10 11 48.7 -0.9**
MJAR LR LR 10 16 04.7
MAJO Matsushiro 10.09 228 *e*Pn Pn **10 11 49.1 -0.4**
MAT Matsushiro 10.09 228 P Pn **10 11 48.3 -1.2**
MAT S Sn **10 13 38.6 -2.8**
PEA0B Petropavlovsk- 11.58 32 *e*Pn Pn **10 12 09.4 -0.3**
PETK Petropavlovsk- 11.58 32 P Pn **10 12 09.4 -0.4**
comp=Z,1.2nm,0.3s,baz=199,slow=9.1,SNR=32
PETK LR LR 10 17 02.2
comp=Z,75nm,18.7s,baz=7.8,slow=39
KLR Kul'dur 12.18 302 *e*PN Pn **10 12 16.9 -1.1**
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,2µm,12.0s
MDJ Mudanjiang 12.90 280 P Pn **10 12 27.8 -0.1**
MDJ S Sn **10 14 49.8 -0.2**
MDJ SCP ScP 10 21 30.8 +0.6
MDJ PCS PcS 10 21 35.3 +0.8
MDJ SCS ScS 10 25 07.1 +0.6
MDJ AMB AMB
comp=Z,50nm,4.2s
MDJ LR LR
comp=N,94nm,5.5s
MDJ LR LR
comp=E,293nm,17.7s
MDJ LR LR
comp=Z,419nm,16.6s
CN2 Changchun 15.94 278 *e*P Pn **10 13 08.8 +0.3**
CN2 *e*AP pP 10 13 17.6 -3.7
CN2 *e*S **S** **10 16 02.4 -14**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,200nm,3.0s
KSRS Korea Array 16.12 254 LR LR 10 20 00.9
comp=Z,217nm,18.7s,baz=164,slow=39
SEY Seymchan 19.47 7⇑ *e*P Pn **10 13 50.6 -1.2**
YAK Yakutsk 21.14 336 *i* P P **10 14 11.1 +2.6**
YAK pmax pmax
comp=Z,18nm,1.2s,mb4.3
YAK MLR MLR
comp=Z,200nm,19.0s,MS3.5
BJI Beijing 23.55 272 P P **10 14 35.4 +1.4**
BJI S S **10 18 47.5 +2.5**
BJI AMB AMB
comp=Z,15nm,1.1s,mb4.3
BJI AMB AMB
comp=Z,93nm,4.4s
BJI LR LR
comp=N,171nm,19.7s,MS3.7
BJI LR LR
comp=E,214nm,22.1s,MS3.7
BJI LR LR
comp=Z,161nm,21.7s,MS3.5
NJ2 Nanjing 25.31 252 *e*P P **10 14 52.6 +2.5**
NJ2 AP pP 10 15 04.1 +3.3
NJ2 XP sP 10 15 09.8 +4.3
NJ2 PP 10 15 32.6
NJ2 S S **10 19 11.0 -2.5**
NJ2 XS sS 10 19 29.0 -2.3
NJ2 AMB AMB
comp=Z,20nm,1.2s,mb4.5
NJ2 AMB AMB
comp=Z,80nm,3.6s
NJ2 LR LR
comp=N,180nm,26.7s,MS3.7
NJ2 LR LR
comp=E,250nm,22.4s,MS3.7
NJ2 LR LR
comp=Z,250nm,22.4s,MS3.7
BILL Bilibino 26.33 16 *i* P P **10 14 59.1 +0.1**
BILL *e*S S **10 19 29.3 +0.4**
BILL pmax pmax
comp=Z,2.0nm,0.9s,mb3.6
BILL MLR MLR
comp=Z,200nm,18.0s,MS3.7
HHC Hu-ho-hao-te 26.62 276 *e*P P **10 15 02.3 +0.4**
HHC AP pP 10 15 14.9 +2.3
HHC XP sP 10 15 19.8 +2.5
HHC PP 10 15 47.0
HHC PCP PcP 10 18 26.4 +1.3
HHC S S **10 19 33.0 -1.1**
HHC XS sS 10 19 52.0 +0.1
HHC SS 10 20 45.5
HHC SCS ScS 10 25 50.0 -2.3
HHC AMB AMB
comp=Z,10.0nm,1.2s,mb4.2
HHC LR LR
comp=N,254nm,15.5s,MS4.1
HHC LR LR
comp=E,278nm,14.9s,MS4.1
HHC LR LR
comp=Z,313nm,15.5s,MS4.0
ULN Ulaanbaatar 28.28 293‖ *e*P P **10 15 15.5 -1.2**
SONM Songino Array 28.73 293 P P **10 15 21.4 +0.7**
comp=Z,4.0nm,0.9s,mb4.1,baz=89,slow=8.9,SNR=6.2
SONM LR LR 10 28 02.3
comp=Z,320nm,18.8s,MS4.0,baz=101,slow=39
SONM Songino Array 28.73 293 P P **10 15 21.4 +0.7**
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM MLR MLR
comp=Z,320nm,18.8s
WHN Wuhan 29.32 255 P P **10 15 25.4 -0.7**
TLY Talaya 30.19 301 *e*P P **10 15 33.4 -0.2**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
TLY MLR MLR
comp=Z,148nm,16.0s,MS3.7
XAN Xi'an 31.31 265 P P **10 15 43.6 -0.1**
XAN S S **10 20 48.0 +0.1**
XAN LR LR
comp=E,93nm,6.9s
XAN LR LR
comp=Z,122nm,10.9s,MS3.8
GTA Gaotai 35.56 280 *e*P P **10 16 22.8 +2.2**
GTA AP pP 10 16 35.8 +4.4
GTA XP sP 10 16 40.9 +4.8
GTA S S **10 21 57.0 +3.4**
GTA XS sS 10 22 19.3 +7.7
GTA AMB AMB
comp=Z,5.0nm,1.4s,mb4.2
GTA AMB AMB
comp=Z,47nm,5.1s
GTA LR LR
comp=N,96nm,15.3s,MS3.9
GTA LR LR
comp=E,124nm,16.5s,MS3.9
GTA LR LR
comp=Z,154nm,16.2s,MS3.9
GYA Guiyang 37.16 256 P P **10 16 35.5 +1.1**
GYA AP pP 10 16 47.8 +2.5
GYA XP sP 10 16 52.0 +2.1
GYA PP PP 10 18 02.5 +3.0
GYA PCP PcP 10 18 53.9 0.0
GYA S S **10 22 18.9 +0.6**
GYA SCP ScP 10 22 36.5 -1.2
GYA XS sS 10 22 40.5 +4.1
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
GYA AMB AMB
comp=Z,90nm,4.6s
GYA LR LR
comp=N,350nm,11.2s,MS4.5
GYA LR LR
comp=E,370nm,13.3s,MS4.5
GYA LR LR
comp=Z,490nm,13.7s,MS4.5
IMA2 Indian Mountai 38.57 34 *e*P P **10 16 46.0 +0.2**
QIZ Qiongzhong 39.98 244 P P **10 16 58.5 +0.4**
QIZ S S **10 23 02.6 +1.6**
QIZ LR LR
comp=Z,187nm,27.8s,MS3.8
COLD Coldfoot 40.05 32 *e*P P **10 16 58.5 +0.4**
comp=Z,6.8nm,0.7s,mb4.5
KMI Kunming 40.76 258 P P **10 17 04.3 -0.2**
KMI S S **10 23 13.8 +1.3**
KMI AMB AMB
comp=Z,11nm,0.7s,mb4.6
KMI AMB AMB
comp=Z,74nm,3.1s
KMI LR LR
comp=N,136nm,13.3s,MS4.2
KMI LR LR
comp=E,142nm,12.8s,MS4.2
KMI LR LR
comp=Z,120nm,16.2s,MS3.8
COLA College 40.95 36 *e*P P **10 17 05.7 +0.1**
comp=Z,25nm,1.1s,mb4.8
COLA College 40.95 36 *e*P P **10 17 05.7 +0.1**
COLA pmax pmax
comp=Z,25nm,1.1s,mb4.8
ZALV Zalesovo Beam 41.23 307 P P **10 17 07.6 -0.5**
comp=Z,1.1nm,0.5s,mb3.7,baz=68,slow=7.1,SNR=4.4
ZALV PcP PcP 10 19 05.7 -0.6
comp=Z,3.2nm,0.7s,baz=90,slow=3.0,SNR=11
ZALV LR LR 10 35 11.8
comp=Z,52nm,20.9s,MS3.4,baz=65,slow=37
ZALV Zalesovo Beam 41.23 307 P P **10 17 07.6 -0.5**
ZALV PcP PcP 10 19 05.7 -0.6
ZALV LR LR 10 35 11.8
ZALV Zalesovo Beam 41.23 307 P P **10 17 07.6 -0.4**
ZALV 10 19 05.7
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV MLR MLR
comp=Z,52nm,20.9s,MS3.4
WMQ Urumqi 42.35 292 *e*P P **10 17 19.0 +1.7**
WMQ XP sP 10 17 37.0 +4.0
WMQ PP PP 10 19 00.0 +4.3
WMQ S S **10 23 36.0 +0.3**
WMQ SS SS 10 26 42.0 -3.1
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,58nm,4.0s
WMQ LR LR
comp=N,125nm,16.0s,MS4.1
WMQ LR LR
comp=E,165nm,16.0s,MS4.1
WMQ LR LR
comp=Z,214nm,16.0s,MS4.1
EGAK Eagle 43.81 36 *e*P P **10 17 28.9 0.0**
comp=Z,76nm,1.9s,mb5.1
MK31 Makanchi Array 44.84 298 *i* P P **10 17 37.3 0.0**
MK31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
MKAR Makanchi Array 44.84 298 P P **10 17 37.3 0.0**
comp=Z,5.0nm,0.8s,mb4.5,baz=79,slow=8.7,SNR=48
MKAR LR LR 10 37 34.3
comp=Z,84nm,20.4s,MS3.7,baz=43,slow=38
MKAR Makanchi Array 44.84 298 P P **10 17 37.3 0.0**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,85nm,20.4s
KURK Kurchatov 45.77 304 *e*P P **10 17 44.2 -0.4**
comp=Z,6.1nm,0.8s,mb4.6
KURK *e*pP pP 10 17 56.0 +0.3
KURK Kurchatov 45.77 304 *e*P P **10 17 44.2 -0.4**
KURK *e**PP pP 10 17 56.0 +0.3
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
INK Inuvik 46.31 30 *e*P P **10 17 48.8 +0.2**
comp=Z,875nm,0.9s
CMAR Chiang Mai Arr 47.76 254 P P **10 18 01.3 +0.7**
comp=Z,1.1nm,0.6s,mb4.0,baz=46,slow=7.0,SNR=6.3
CMAR PcP PcP 10 19 29.1 -0.1
comp=Z,0.5nm,0.2s,baz=16,slow=3.6,SNR=4.7
CMAR LR LR 10 38 55.4
comp=Z,71nm,21.4s,MS3.6,baz=90,slow=37
CMAR Chiang Mai Arr 47.76 254⇑ *e*P P **10 18 01.2 +0.6**
TAPN Taplejung 50.27 272 *e*P P **10 18 20.3 +0.6**
ULHL Ulahol 50.65 295 P P **10 18 23.1 +0.7**
SNR=7.8
TKM2 Tokmak 2 50.76 296 *e*P P **10 18 23.7 +0.5**
comp=Z,8.2nm,0.7s,mb4.8
TKM2 Tokmak 2 50.76 296 *e*P P **10 18 23.7 +0.5**
TKM2 pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
TKM2 Tokmak 2 50.76 296 P P **10 18 23.8 +0.6**
SNR=15
JIRN Jiri 51.20 273 *e*P P **10 18 27.3 +0.6**
GUN Gumba 51.28 274 *e*P P **10 18 27.7 +0.4**
comp=Z,8.6nm,0.4s,mb5.0
KBK Karagaybulak 51.30 296 P P **10 18 28.1 +0.8**
SNR=5.2
RAMN Ramite 51.31 272 *e*P P **10 18 27.2 -0.3**
USP Ospenovka 51.32 296 P P **10 18 27.7 +0.3**
SNR=11
KZA Kyzart 51.38 295 P P **10 18 26.0 -1.8**
SNR=11
KKN Kakani 51.78 274 *e*P P **10 18 31.1 +0.1**
DMN Daman 52.01 274 *e*P P **10 18 33.4 +0.6**
comp=Z,11nm,0.5s,mb5.0
EKS2 Erkin-Say 52.07 296 *e*P P **10 18 33.2 +0.3**
comp=Z,15nm,0.3s,mb5.3
EKS2 Erkin-Say 52.07 296 P P **10 18 33.4 +0.4**
SNR=5.6
GKN Gorkha 52.12 274 *e*P P **10 18 34.0 +0.4**
comp=Z,13nm,0.5s,mb5.1
AML Almayashu 52.37 296 *e*P P **10 18 36.4 +1.2**
comp=Z,6.9nm,0.8s,mb4.6
AML Almayashu 52.37 296 P P **10 18 36.5 +1.3**
SNR=9.8
DANN Dangsing 52.56 275 *e*P P **10 18 37.4 +0.6**
comp=Z,38nm,0.7s,mb5.4
KOLN Koldanda 53.01 275 *e*P P **10 18 40.3 +0.2**
comp=Z,20nm,0.8s,mb5.1
PYUN Piuthan 53.26 276 *e*P P **10 18 42.0 0.0**
KK31 Karatay Array 53.96 298 *i* P P **10 18 46.7 -0.2**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ARU Arti 54.55 317 *e*P P **10 18 50.2 -0.8**
comp=Z,7.7nm,1.0s,mb4.7
ARU Arti 54.55 317 *d i*P P **10 18 50.4 -0.6**
ARU *e* 10 20 51.5
ARU eS S **10 26 25.2 -2.1**
ARU eSS SS 10 30 03.6 -6.0
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.7
RES Resolute Bay 54.93 17 *e*P P **10 18 52.9 -0.6**
comp=Z,466nm,1.1s
YKA Yellowknife Ar 55.69 34 P P **10 18 58.3 -0.8**
comp=Z,3.5nm,0.5s,mb4.6,baz=302,slow=7.5,SNR=6.9
AB31 Akbulak array 57.29 309 P P **10 19 10.4 -0.3**
AB31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KEV Kevo 58.84 339 *e*p P **10 19 19.5 -1.8**
ARCES ARCESS Array B 59.38 340 P P **10 19 23.9 -1.1**
comp=Z,1.7nm,0.6s,mb4.3,baz=53,slow=7.3,SNR=10
ARCES ARCESS Array B 59.38 340 P P **10 19 23.9 -1.1**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
EDM Edmonton 61.26 43 *e*P P **10 19 37.9 -0.2**
NEW Newport 62.16 49 *e*P P **10 19 44.2 0.0**
comp=Z,94nm,2.8s,mb5.4
JOF Joensuu 62.25 332 *e*p P **10 19 42.7 -1.9**
comp=Z,2.2nm,0.3s,mb4.8
JOF Joensuu 62.25 332 *e*P P **10 19 42.7 -1.9**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
HYB Hyderabad 63.03 269 *e*P P **10 19 50.0 -0.5**
CTA Charters Tower 63.49 181 P P **10 19 52.1 -1.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=28,slow=13,SNR=3.3
CTA Charters Tower 63.49 181 P P **10 19 52.1 -1.1**
CTA pmax pmax
comp=Z,3.0nm,0.8s
SUMG Summit 63.94 2 *e*P P **10 19 55.4 -0.2**
KAF Kangasniemi 64.47 334 *e*p P **10 19 57.2 -2.1**
comp=Z,1.7nm,0.4s,mb4.4,baz=43,slow=6.3
KAF Kangasniemi 64.47 334 *e*P P **10 19 57.2 -2.1**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
WRA Warramunga Arr 64.48 194 P P **10 19 58.1 -1.7**
comp=Z,1.8nm,0.7s,mb4.2,baz=9.7,slow=6.6,SNR=20
WRA pP pP 10 20 09.9 -1.4
comp=Z,3.1nm,0.7s,baz=14,slow=6.8,SNR=11
WRA Warramunga Arr 64.48 194 P P **10 19 58.1 -1.6**
WRA *PP pP 10 20 09.9 -1.4
WRA pmax pmax
comp=Z,2.0nm,0.7s
MSO Missoula 64.75 49 *e*P P **10 20 01.5 +0.2**
comp=Z,4.6nm,1.0s,mb4.5
OBN Obninsk 65.50 324‖ *e*P P **10 20 05.7 -0.4**
OBN pmax pmax
comp=Z,33nm,1.3s,mb5.2
FFC Flin Flon 65.58 37 *e*P P **10 20 06.7 +0.1**
comp=Z,11nm,0.9s,mb4.9
FFC Flin Flon 65.58 37 *e*P P **10 20 06.7 +0.1**
FFC pmax pmax
comp=Z,11nm,0.9s,mb4.9
PAHR Pah Rah Range 65.93 58 *e*P P **10 20 09.4 +0.3**
comp=Z,6.9nm,1.1s,mb4.6
HRY Holter Researc 65.97 48 *e*P P **10 20 09.7 +0.5**
LRM Limekiln Ridge 66.19 49 *e*P P **10 20 11.1 +0.5**
EGMT Eagleton 66.23 46 *e*P P **10 20 11.1 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
CMB Columbia Colle 66.33 59 *e*P P **10 20 12.0 +0.2**
comp=Z,59nm,2.7s,mb5.1
CMB Columbia Colle 66.33 59 *e*P P **10 20 12.0 +0.3**
CMB pmax pmax
comp=Z,59nm,2.7s,mb5.1
DLMT Dillon 66.39 49 *e*P P **10 20 12.2 +0.2**
comp=Z,57nm,2.5s,mb5.2
HLID Hailey 66.50 52 *e*P P **10 20 12.8 +0.1**
BOZ Bozeman (W) 66.74 49 *e*P P **10 20 14.4 +0.2**
comp=Z,5.2nm,0.8s,mb4.6
BOZ Bozeman (W) 66.74 49 *e*P P **10 20 14.4 +0.2**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
NVAR Mina Array Bea 67.38 58 P P **10 20 18.8 +0.4**
comp=Z,3.5nm,0.7s,mb4.5,baz=291,slow=6.7,SNR=36
ASAR Alice Springs 68.20 193 P P **10 20 22.6 -0.9**
comp=Z,1.1nm,0.6s,mb4.1,baz=11,slow=6.3,SNR=17
ASAR pP pP 10 20 35.9 +0.7
comp=Z,1.2nm,0.7s,baz=12,slow=5.3,SNR=7.1
ASAR Alice Springs 68.20 193 P P **10 20 22.6 -0.9**
ASAR *PP pP 10 20 35.9 +0.8
ASAR pmax pmax
comp=Z,1.0nm,0.6s
IMW Indian Meadow 68.24 50 *e*P P **10 20 25.0 +1.3**
comp=Z,4.5nm,0.8s,mb4.5
DCID1 Drake Creek 68.30 50 *e*P P **10 20 24.6 +0.5**
RRI2 Red Ridge 68.38 50 *e*P P **10 20 25.8 +1.2**
comp=Z,8.2nm,0.9s,mb4.8
MOOW Moose Ponds 68.44 50 *e*P P **10 20 26.1 +1.1**
comp=Z,7.5nm,1.1s,mb4.6
TPAW Teton Pass 68.49 50 *e*P P **10 20 26.4 +1.2**
comp=Z,7.9nm,0.9s,mb4.7
LOHW Long Hollow 68.61 50 *e*P P **10 20 27.1 +1.1**
comp=Z,14nm,1.8s,mb4.6
SNOW Snow King Moun 68.62 50 *e*P P **10 20 26.9 +0.8**
comp=Z,59nm,2.7s,mb5.0
REDW Red Top Meadow 68.63 50 *e*P P **10 20 26.8 +0.6**
comp=Z,40nm,2.2s,mb5.0
DGMT Dagmar 68.75 43 *e*P P **10 20 27.0 +0.1**
comp=Z,14nm,0.8s,mb4.9
LAO LASA Array 68.93 45 *e*P P **10 20 28.1 +0.2**
comp=Z,201nm,2.9s,mb5.5
GOF Gofitskoye 69.07 313 *e*P pP 10 20 41.5 +1.0
DUG Dugway 69.56 54 *e*P P **10 20 32.5 +0.6**
TPNV Topopah Spring 69.58 58 *e*P P **10 20 32.5 +0.4**
NB2 NORSAR Subarra 69.74 339 P P **10 20 31.6 -1.1**
comp=Z,2.6nm,0.5s,mb4.4,baz=31,slow=6.5
NOA NORSAR Array B 69.74 339 P P **10 20 31.5 -1.2**
comp=Z,5.3nm,0.7s,mb4.6,baz=32,slow=6.2,SNR=24
NOA pP pP 10 20 44.0 -0.3
comp=Z,1.2nm,0.6s,baz=32,slow=6.2,SNR=2.7
NOA LR LR 10 53 48.8
comp=Z,43nm,21.6s,MS3.7,baz=0.0,slow=38
NOA NORSAR Array B 69.74 339 P P **10 20 31.5 -1.2**
NOA *PP pP 10 20 44.0 -0.3
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA MLR MLR
comp=Z,43nm,21.6s
BW06 Boulder Array 69.74 50 *e*P P **10 20 32.8 -0.2**
comp=Z,7.6nm,1.2s,mb4.5
PDAR Pinedale Array 69.74 50 P P **10 20 32.7 -0.3**
comp=Z,3.3nm,0.9s,mb4.2,baz=262,slow=1.3,SNR=18
KIV Kislovodsk 69.99 312⇑ P P **10 20 35.9 +1.4**
KIV Kislovodsk 69.99 312 *e*P P **10 20 35.9 +1.4**
KIV *e* 10 20 59.8
KIV pmax pmax
comp=Z,27nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,100nm,20.0s,MS4.1
KIV Kislovodsk 69.99 312⇑ *i*P P **10 20 35.9 +1.4**
SHPR Sheep Range 70.53 58 *e*P P **10 20 38.7 +0.7**
SRU San Rafael 71.60 53 *e*P P **10 20 44.5 +0.1**
comp=Z,4.8nm,0.9s,mb4.4
SRU San Rafael 71.60 53 *e*P P **10 20 44.5 +0.1**
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AKASG Malin Array Be 71.77 324 P P **10 20 44.5 -0.7**
comp=Z,7.3nm,0.7s,mb4.8,baz=38,slow=6.3,SNR=31
AKASG Malin Array Be 71.77 324 P P **10 20 44.6 -0.6**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
KIEV Kiev 71.78 324 *e*P P **10 20 44.8 -0.5**
comp=Z,18nm,1.0s,mb5.0
KIEV Kiev 71.78 324 *e*P P **10 20 44.8 -0.5**
KIEV pmax pmax
comp=Z,18nm,1.0s,mb5.0
ISCO Idaho Springs 73.93 50 *e*P P **10 20 58.1 -0.2**
LVV L'vov 74.61 326 *e*P P **10 21 00.7 -1.3**
KWP Kalwaria 75.29 326⇑ *i*P P **10 21 06.4 +0.5**
KWP Kalwaria 75.29 326⇑ *i*P P **10 21 06.4 +0.5**
STKA Stephens Creek 75.41 185 P P **10 21 05.9 -0.7**
comp=Z,1.0nm,0.4s,mb4.1,baz=265,slow=5.6,SNR=4.4
BUR08 Bucovina Ar. S 75.81 324 *e*P P **10 21 08.9 0.0**
BURAR Bucovina Array 75.83 324‖ *e*P P **10 21 09.0 -0.1**
BURAR Bucovina Array 75.83 324‖ *i*P P **10 21 09.0 0.0**
OJC Ojcow 75.95 328 *e*P P **10 21 09.7 0.0**
KOLS Kolonicke sedl 76.01 326 *e*P P **10 21 09.8 -0.3**
STHS Stebnicka Huta 76.04 327 *e*P P **10 21 11.0 +0.8**
STHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
CRVS Cervenica-Dubn 76.36 327 *e*P P **10 21 11.9 -0.2**
TRPA Tarpa 76.54 326⇑ *i*P P **10 21 13.6 +0.5**
ANMO Albuquerque 76.81 54‖ *e*P P **10 21 15.3 +0.4**
KBD Kabd 76.95 298 *e*P P **10 21 15.4 -0.3**
baz=298
KBD AMb AMB 10 21 17.3
comp=Z,20nm,1.4s,mb4.8,baz=298
UPC Upice 77.11 331 *e*P P **10 21 16.5 +0.2**
DPC Dobruska-Polom 77.13 330 *e*P P **10 21 16.7 +0.3**
MORC Moravsky Berou 77.16 329‖ P P **10 21 16.8 +0.3**
MORC Moravsky Berou 77.16 329‖ *i*P P **10 21 16.8 +0.3**
NAY Al-Naaiem 77.19 298 *e*P P **10 21 16.5 -0.6**
baz=298
NAY AMb AMB 10 21 19.3
comp=Z,12nm,1.8s,mb4.5,baz=298
RDF Al-Radifah 77.21 298 *e*P P **10 21 16.9 -0.3**
baz=298
RDF AMb AMB 10 21 18.0
comp=Z,39nm,1.0s,mb5.3,baz=298
CLL Collm 77.47 333⇑ *i*P P **10 21 17.6 -0.7**
comp=Z,8.0nm,0.7s,mb4.8
CLL Collm 77.47 333⇑ *i*P P **10 21 17.6 -0.7**
comp=Z,8.0nm,0.7s,mb4.8
CLL LmV 10 59 00.0
comp=Z,100nm,19.3s
VOIR 77.59 323‖ P P **10 21 20.2 +1.2**

VOIR		**77.59**	**323**	ǁ *iP*	**P**		**10 21 20.2**	**+1.2**
VYHS	**Vyhne**	**77.72**	**328**	*e*P	**P**		**10 21 19.7**	**0.0**
VRAC	**Vranov**	**77.90**	**330**	ǁ *iP*	**P**		**10 21 21.5**	**+0.8**
PRU	**Pruhonice**	**78.06**	**331**	*e*P	**P**		**10 21 21.3**	**-0.3**
NKC	**Novy Kostel**	**78.57**	**332**	*e*P	**P**		**10 21 25.4**	**+1.0**
KHC	**Kasperske Hory**	**79.12**	**331**	*e*P	**P**		**10 21 27.3**	**-0.1**
KHC				*ex*	x	10 21 36.0		
GERES	**GERESS Array B**	**79.32**	**331**	P	**P**		**10 21 27.7**	**-0.9**
	comp=Z,1.3nm,0.5s,mb4.1,baz=46,slow=5.8,SNR=11							
GERES				LR	LR	10 57 22.9		
	comp=Z,49nm,19.5s,MS3.9,baz=276,slow=36							
GERES	**GERESS Array B**	**79.32**	**331**	P	**P**		**10 21 27.7**	**-0.8**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GERES				MLR	MLR			
	comp=Z,49nm,19.5s							
GRF	**Grafenberg Arr**	**79.45**	**333**	*e*P	**P**		**10 21 29.4**	**+0.2**
GRF				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
GRF	**Grafenberg Arr**	**79.45**	**333**	*e*P	**P**		**10 21 29.4**	**+0.2**
GRF				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
GRF	**Grafenberg Arr**	**79.45**	**333**	*e*P	**P**		**10 21 29.4**	**+0.2**
	comp=Z,10.0nm,0.9s,mb4.8							
MEM	**Membach**	**80.27**	**336**	P	**P**		**10 21 33.3**	**-0.3**
BCLA	**Clavier**	**80.64**	**337**	P	**P**		**10 21 35.5**	**-0.1**
	comp=Z,13nm,2.2s,mb4.5							
GIVF	**Givet**	**81.06**	**337**	*e*P	**P**		**10 21 36.8**	**-1.1**
HDIL	**Hopedale**	**81.75**	**40**	*e*P	**P**		**10 21 41.4**	**-0.3**
CDF	**Champ du Feu**	**81.83**	**334**	*e*P	**P**		**10 21 41.5**	**-0.5**
	comp=Z,10nm,0.9s,mb4.5							
CDF	**Champ du Feu**	**81.83**	**334**	*e*P	**P**		**10 21 41.5**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.5							
CDF	**Champ du Feu**	**81.83**	**334**	*e*P	**P**		**10 21 41.5**	**-0.5**
CDF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
MEZF	**Maizieres J'vi**	**82.43**	**336**	*e*P	**P**		**10 21 45.3**	**+0.2**
TXAR	**Lajitas Array**	**82.46**	**56**	P	**P**		**10 21 45.4**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=300,slow=3.8,SNR=31							
TXAR				pP	pP	10 21 57.4	-0.1	
	comp=Z,1.3nm,0.8s,baz=306,slow=3.7,SNR=6.8							
TXAR	**Lajitas Array**	**82.46**	**56**	P	**P**		**10 21 45.4**	**-0.2**
TXAR				*P	pP	10 21 57.4	-0.1	
TXAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
HINF	**Hinteralfeld**	**82.49**	**334**	*e*P	**P**		**10 21 44.5**	**-1.0**
	comp=Z,6.1nm,0.8s,mb4.3							
HINF	**Hinteralfeld**	**82.49**	**334**	*e*P	**P**		**10 21 44.5**	**-1.0**
	comp=Z,3.0nm,0.8s,mb4.3							
HINF	**Hinteralfeld**	**82.49**	**334**	*e*P	**P**		**10 21 44.5**	**-1.0**
HINF				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
FLN	**La Foliniere**	**83.72**	**339**	*e*P	**P**		**10 21 51.0**	**-0.8**
	comp=Z,8.1nm,0.6s,mb4.7							
FLN				*e*MLR	MLR			
	comp=Z,67nm,18.8s,MS3.8							
FLN	**La Foliniere**	**83.72**	**339**	*e*P	**P**		**10 21 51.0**	**-0.8**
	comp=Z,4.1nm,0.6s,mb4.7							
FLN				LR	LR			
	comp=Z,70nm,18.8s,MS4.1							
FLN	**La Foliniere**	**83.72**	**339**	*e*P	**P**		**10 21 51.0**	**-0.8**
FLN				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.7							
FLN				MLR	MLR			
	comp=Z,70nm,18.8s,MS4.1							
LDF	**La Druitiere**	**83.79**	**339**	*e*P	**P**		**10 21 51.7**	**-0.4**
	comp=Z,32nm,1.2s,mb5.0							
LDF	**La Druitiere**	**83.79**	**339**	*e*P	**P**		**10 21 51.7**	**-0.4**
	comp=Z,16nm,1.2s,mb5.0							
LDF	**La Druitiere**	**83.79**	**339**	*e*P	**P**		**10 21 51.7**	**-0.4**
LDF				pmax	pmax			
	comp=Z,16nm,1.2s,mb5.0							
CABF	**La Chapelle**	**83.80**	**334**	*e*P	**P**		**10 21 51.8**	**-0.4**
	comp=Z,19nm,1.0s,mb4.9							
CABF	**La Chapelle**	**83.80**	**334**	*e*P	**P**		**10 21 51.8**	**-0.4**
	comp=Z,9.6nm,1.0s,mb4.9							
CABF	**La Chapelle**	**83.80**	**334**	*e*P	**P**		**10 21 51.8**	**-0.4**
CABF				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.9							
LOR	**Lormes**	**83.89**	**336**	*e*P	**P**		**10 21 51.9**	**-0.8**
	comp=Z,12nm,0.8s,mb4.8							
LOR				*e*MLR	MLR			
	comp=Z,73nm,20.2s,MS3.8							
LOR	**Lormes**	**83.89**	**336**	*e*P	**P**		**10 21 51.9**	**-0.8**
	comp=Z,6.0nm,0.8s,mb4.8							
LOR				LR	LR			
	comp=Z,70nm,20.3s,MS4.0							
LOR	**Lormes**	**83.89**	**336**	*e*P	**P**		**10 21 51.9**	**-0.8**
LOR				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.8							
LOR				MLR	MLR			
	comp=Z,70nm,20.3s,MS4.0							
SIUC	**Southern Illin**	**84.04**	**42**	*e*P	**P**		**10 21 53.4**	**-0.2**
GRR	**Gorron**	**84.16**	**339**	*e*P	**P**		**10 21 53.7**	**-0.3**
SSF	**Saint Saulge**	**84.18**	**336**	*e*P	**P**		**10 21 53.4**	**-0.8**
SMF	**Signal de Mont**	**84.46**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
	comp=Z,16nm,0.8s,mb4.9							
SMF	**Signal de Mont**	**84.46**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
	comp=Z,8.3nm,0.8s,mb4.9							
SMF	**Signal de Mont**	**84.46**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
SMF				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.9							
AVF	**Avril sur Loir**	**84.47**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
	comp=Z,4.0nm,0.6s,mb4.5							
AVF	**Avril sur Loir**	**84.47**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.4							
AVF	**Avril sur Loir**	**84.47**	**336**	*e*P	**P**		**10 21 55.2**	**-0.4**
AVF				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.4							
LPL	**La Plagne**	**84.57**	**333**	*e*P	**P**		**10 21 55.4**	**-0.8**
LPG	**La Plagne**	**84.58**	**333**	*e*P	**P**		**10 21 56.3**	**+0.1**
	comp=Z,20nm,1.0s,mb4.9							
LPG	**La Plagne**	**84.58**	**333**	*e*P	**P**		**10 21 56.3**	**+0.1**
	comp=Z,9.8nm,1.0s,mb4.9							
LPG	**La Plagne**	**84.58**	**333**	*e*P	**P**		**10 21 56.3**	**+0.1**
LPG				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.9							
SGMF	**Saint Gilles**	**84.71**	**340**	*e*P	**P**		**10 21 56.6**	**-0.2**
ROSF	**Rostrenen**	**84.81**	**341**	*e*P	**P**		**10 21 57.3**	**0.0**
	comp=Z,37nm,1.0s,mb5.2							
ROSF	**Rostrenen**	**84.81**	**341**	*e*P	**P**		**10 21 57.3**	**0.0**
	comp=Z,18nm,1.0s,mb5.2							
ROSF	**Rostrenen**	**84.81**	**341**	*e*P	**P**		**10 21 57.3**	**0.0**
ROSF				pmax	pmax			
	comp=Z,18nm,1.0s,mb5.2							
QUIF	**Quistinic**	**85.17**	**341**	*e*P	**P**		**10 21 58.6**	**-0.5**
	comp=Z,27nm,1.0s,mb5.0							
QUIF	**Quistinic**	**85.17**	**341**	*e*P	**P**		**10 21 58.6**	**-0.5**
	comp=Z,14nm,1.0s,mb5.0							
QUIF	**Quistinic**	**85.17**	**341**	*e*P	**P**		**10 21 58.6**	**-0.5**
QUIF				pmax	pmax			
	comp=Z,14nm,1.0s,mb5.0							
TCF	**Toulx Ste Croi**	**85.26**	**337**	*e*P	**P**		**10 21 59.3**	**-0.3**
	comp=Z,5.6nm,0.7s,mb4.5							
TCF	**Toulx Ste Croi**	**85.26**	**337**	*e*P	**P**		**10 21 59.3**	**-0.3**
	comp=Z,2.8nm,0.7s,mb4.5							
TCF	**Toulx Ste Croi**	**85.26**	**337**	*e*P	**P**		**10 21 59.3**	**-0.3**
TCF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.5							
MFF	**Saint Martin d**	**85.63**	**338**	*e*P	**P**		**10 22 01.5**	**+0.1**
	comp=Z,11nm,0.8s,mb4.8							
MFF	**Saint Martin d**	**85.63**	**338**	*e*P	**P**		**10 22 01.5**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.8							
MFF	**Saint Martin d**	**85.63**	**338**	*e*P	**P**		**10 22 01.5**	**+0.1**
MFF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.8							
PGF	**Pioggiola**	**86.42**	**331**	*e*P	**P**		**10 22 04.9**	**-0.5**
	comp=Z,184nm,1.7s,mb5.7							
PGF	**Pioggiola**	**86.42**	**331**	*e*P	**P**		**10 22 04.9**	**-0.5**
	comp=Z,92nm,1.7s,mb5.7							
PGF	**Pioggiola**	**86.42**	**331**	*e*P	**P**		**10 22 04.9**	**-0.5**
PGF				pmax	pmax			
	comp=Z,92nm,1.7s,mb5.7							
CAF	**Calviac**	**86.54**	**336**	*e*P	**P**		**10 22 05.2**	**-0.8**
	comp=Z,6.9nm,0.8s,mb4.7							
CAF	**Calviac**	**86.54**	**336**	*e*P	**P**		**10 22 05.2**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.6							
CAF	**Calviac**	**86.54**	**336**	*e*P	**P**		**10 22 05.2**	**-0.8**
CAF				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.6							
LFF	**La Frestale**	**86.91**	**337**	*e*P	**P**		**10 22 07.5**	**-0.3**
	comp=Z,14nm,0.6s,mb5.0							
LFF	**La Frestale**	**86.91**	**337**	*e*P	**P**		**10 22 07.5**	**-0.3**
	comp=Z,7.2nm,0.6s,mb5.1							
LFF	**La Frestale**	**86.91**	**337**	*e*P	**P**		**10 22 07.5**	**-0.3**
LFF				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb5.1							
KEST	**Kesra**	**92.25**	**327**	LR	LR	11 10 50.8		
	comp=Z,27nm,18.6s,MS3.7,baz=39,slow=40							
TORD	**Torodi Ar. Bea**	**115.39**	**323**	PKP	PKPdf	10 28 03.0	-2.0	
	comp=Z,0.4nm,0.5s,baz=6.9,slow=2.6,SNR=5.3							
SNAA	**Sanae**	**148.49**	**197**	*e*PKPdf	PKPdf	10 29 06.2	+1.5	
SNAA				*e*		10 29 18.2		
SNAA				*e*		10 29 30.0		
SNAA	**Sanae**	**148.49**	**197**	ǁ *i*PKP2	PKPdf	10 29 06.7	+2.0	
BDFB	**Brasilia**	**149.06**	**30**	PKPbc	PKPbc	10 29 11.2	-0.2	
	comp=Z,0.8nm,0.4s,baz=289,slow=14,SNR=3.9							
BDFB	**Brasilia**	**149.06**	**30**	PKP2	PKPbc	10 29 11.2	-0.2	
BDFB				pmax	pmax			
	comp=Z,1.0nm,0.4s							
VNA2	**Neumayer--Watz**	**150.02**	**196**	*e*PKPdf	PKPbc	10 29 12.1	0.0	
	baz=64,slow=0.7							
VNA2				*e*		10 29 24.1		
VNA2				*e*		10 29 36.0		
VNA3	**Neumayer Olymp**	**150.20**	**195**	*e*PKPdf	PKPbc	10 29 12.1	-0.4	
VNA3				*e*		10 29 24.4		
VNA3				*e*		10 29 36.0		
VNA1	**Neumayer--Stat**	**150.41**	**196**	*e*PKPdf	PKPbc	10 29 12.5	-0.6	
VNA1				*e*		10 29 24.6		
VNA1				*e*		10 29 35.6		
PLCA	**Paso Flores**	**151.82**	**97**	PKPbc	PKPbc	10 29 17.2	0.0	
	comp=Z,4.5nm,0.7s,baz=251,slow=2.8,SNR=12							
PLCA	**Paso Flores**	**151.82**	**97**	PKIKP	PKPbc	10 29 17.2	-0.1	
PLCA				pmax	pmax			
	comp=Z,5.0nm,0.7s							

NIED ***17*** *10:17:00, 3000N×13130E, h29km, Mw4.1 Best double couple: M0 1.34000×10^15 NP1:φ8 32.00000°, δ61.00000°, λ95.00000°. NP2:φ8 202.00000°, δ30.00000°, λ82.00000°.*
JMA ***17*** *10:17:13.9±0.2, 2996N×13127E, h34km±2km, M3.6*
ISCJB ***17*** *10:17:14.1±1.2, 2996N±004×13122E±008, h30km±8km, mb3.6/8, Error ellipse: s-maj=12.3km s-min=5.9km az=10.7*
IDC ***17*** *10:17:18.7±4.1, 3000N×13084E, h42km±34km, mb3.4/7, mb1 3.5/9, mb1mx3.4/21, mbtmp3.4/9, ML3.1/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/25, Error ellipse: s-maj=43.0km s-min=16.2km az=89.0*

ISC 17 10:17:15.3±1.5, 2999N±004×13116E±009, h26km±9km, n22, σ0°99/26, mb3.6/8, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**0.68**	**347**	P	**Pb**	**10 17 27.9**	**-0.7**
JTN				*e*S	**Sb**	**10 17 37.9**	**+0.3**
JKC	**Kuchinoerabu**	**0.96**	**299**	P	**Pn**	**10 17 32.9**	**-0.1**
JKC				*e*S	**Sb**	**10 17 46.5**	**+0.9**
JNN	**Nakanoshima**	**1.13**	**263**	P	**Pn**	**10 17 35.3**	**-0.1**
JTSR	**Tashiro 2**	**1.19**	**350**	P	**Pn**	**10 17 35.6**	**-0.6**
JTSR				*e*S	**Sn**	**10 17 51.8**	**+0.3**
JNAR	**Kushima--Naru**	**1.53**	**3**	P	**Pn**	**10 17 40.5**	**-0.4**
JSU	**Suzuyama**	**1.63**	**338**	P	**Pn**	**10 17 41.7**	**-0.5**
JSU				*e*S	**Sn**	**10 18 03.0**	**+0.7**
JTZ	**Takazaki**	**1.90**	**358**	P	**Pn**	**10 17 45.7**	**-0.4**
JAM	**Amami Oshima**	**2.08**	**221**	P	**Pn**	**10 17 48.5**	**0.0**
JAM				*e*S	**Sn**	**10 18 14.1**	**+0.6**
JSJ	**Shimokoshiki**	**2.09**	**324**	P	**Pn**	**10 17 47.6**	**-1.0**
JOW	**Kunigami**	**4.05**	**220**	P	**Pn**	**10 18 15.4**	**-0.1**
	3.0nm,0.3s,baz=79,slow=23,SNR=9.1						
JOW				S	**Sn**	**10 19 00.8**	**-1.2**
	7.0nm,0.3s,baz=171,slow=27,SNR=8.1						
KSRS	**Korea Array**	**7.92**	**341**	P	**Pn**	**10 19 10.3**	**+1.7**
	0.2nm,0.3s,baz=158,slow=15,SNR=4.1						
JHJ	**Hachijo jima 2**	**7.99**	**65**	LR	LR	10 22 19.8	
	comp=Z,56nm,18.9s,baz=276,slow=36						
ASAJ	**Asahikawa**	**16.77**	**30**	LR	LR	10 28 20.9	
	comp=Z,67nm,19.2s,baz=311,slow=39						
SONM	**Songino Array**	**26.07**	**320**	P	**P**	**10 22 45.2**	**-1.3**
	0.4nm,0.5s,mb3.2,baz=139,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**41.11**	**308**	P	**P**	**10 24 56.1**	**-0.7**
	0.6nm,0.6s,mb3.4,baz=93,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**49.74**	**176**	P	**P**	**10 26 06.0**	**+0.6**
	0.3nm,0.8s,mb3.4,baz=356,slow=8.9,SNR=2.9						
ASAR	**Alice Springs**	**53.41**	**177**	P	**P**	**10 26 35.0**	**+2.2**
	0.3nm,0.8s,mb3.3,baz=11,slow=11,SNR=2.6						
ARCES	**ARCESS Array B**	**67.47**	**338**	P	**P**	**10 28 10.2**	**+1.8**
	2.1nm,0.9s,mb4.2,baz=39,slow=7.8,SNR=3.7						
JOF	**Joensuu**	**68.02**	**331**	*e*p	**P**	**10 28 10.1**	**-1.8**
	1.4nm,0.5s,mb4.2						
AKASG	**Malin Array Be**	**74.35**	**320**	P	**P**	**10 28 51.9**	**+1.5**
	0.4nm,0.4s,mb3.7,baz=52,slow=7.5,SNR=2.9						
NB2	**NORSAR Subarra**	**77.08**	**334**	P	**P**	**10 29 04.8**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=51,slow=5.9						
NOA	**NORSAR Array B**	**77.08**	**334**	P	**P**	**10 29 05.0**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.9,baz=49,slow=5.8,SNR=3.6						

JMA 17 10:51:35.2±0.3, 4354N×14749E, h26km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.28**	**263**	P	Pn	10 51 58.0	+0.6
NEM2				*e*S	Sn	10 52 14.1	+0.3
JRA	**Rausu**	**1.76**	**284**	P	Pn	10 52 04.7	+0.7
JNK	**Nakash**	**2.02**	**272**	P	Pn	10 52 08.4	+0.9
JAK	**Akkeshi**	**2.11**	**256**	P	Pn	10 52 10.0	+1.2
JTKR	**Abashiri--Toko**	**2.63**	**281**	P	Pn	10 52 17.5	+1.6
JAR	**Ashorobuto**	**2.72**	**266**	P	Pn	10 52 18.4	+1.2
JAR				*e*S	Sn	10 52 50.8	+1.6
JCH	**Churui**	**3.16**	**254**	*e*S	Sn	10 53 02.1	+2.0
JNBK	**Urakawa-nobuka**	**3.70**	**252**	P	Pn	10 52 33.1	+2.5
JNBK				*e*S	Sn	10 53 16.1	+2.7

SKHL 17 11:12:51.5±1.5, 5297N×14338E, h10km, mb4.2/4, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**0.64**	**335**	*i* Pg	Pg	11 13 05.2	+1.3
OKH				AMB	AMB	11 13 07.0	
	2μm,0.2s						
OKH				*e*Sg	Sg	11 13 14.8	+2.5
OKH				A		11 13 16.8	
	7μm,0.5s						
OKH				A		11 13 16.8	
	8μm,0.5s						
NKL	**Nikolayevsk**	**1.64**	**277**	*i* Pg	Pg	11 13 22.8	-0.1
NKL				AMB	AMB	11 13 24.2	
	60nm,0.4s						
NKL				AMB	AMB	11 13 24.2	
	90nm,0.4s						
NKL				*e*Sg	Sg	11 13 46.5	+2.3
NKL				A		11 13 47.8	
	1μm,0.3s						
TYV	**Tymovskoe**	**2.16**	**192**	*e*Pg	Pg	11 13 34.0	+1.2
TYV				AMB	AMB	11 13 38.0	
	8.0nm,0.5s						
TYV				*e*Sg	Sg	11 14 03.7	+2.9
GRNR	**Gornyy**	**4.84**	**246**	*e*Pg	Pg	11 14 27.5	+3.3
GRNR				*e*Sg	Sg	11 15 36.0	+9.2
GRNR				A		11 15 36.5	
	9.0nm,0.5s						
EKMR	**Ekimchan**	**6.30**	**275**	*e*Pg	Pg	11 14 56.0	+4.0
EKMR				AMB	AMB	11 14 57.0	
	2.0nm,0.2s						
EKMR				*e*Sg	Sg	11 16 23.0	+10
EKMR				A		11 16 24.0	
	10.0nm,0.5s						
EKMR				A		11 16 24.0	
	4.0nm,0.5s						
OHTR	**Okhotsk**	**6.41**	**360**	*e*rx	rx	11 14 16.3	
HABR	**Khabarovsk**	**6.94**	**233**	*e*rx	rx	11 15 23.5	
YASR	**Yasnyy**	**9.27**	**278**	*e*Sg	Sn	11 17 50.7	+61
YASR				A		11 17 54.6	
	4.0nm,0.6s						

ISCJB ***17*** *11:17:54.7±0.9, 2297S±005×705W±0.1, h50km±7km, Error ellipse: s-maj=16.4km s-min=6.9km az=15.7*
GUC ***17*** *11:17:54.7±1.1, 2302S×7033W, h46km±3km, ML3.6*
IDC ***17*** *11:17:55.5±9.9, 2328S×7005W, h35km±58km, mb3.8/1, mb1 3.8/3, mb1mx3.4/17, mbtmp3.7/3, ML3.6/2, Error ellipse: s-maj=89.1km s-min=58.9km az=21.0*

ISC 17 11:17:55.7±0.9, 2299S±005×704W±01, h44km±7km, n11, σ1°06/16, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.12**	**185**	ǁ *iP*	**Pn**	**11 18 01.6**	**-1.3**
MECH				*i* S	**Sn**	**11 18 07.4**	**-0.5**
MECH				AML	AML	11 18 08.1	
	comp=E,15μm,0.2s						
CEN1	**Los Morros**	**0.46**	**151**	*e*P	**Pn**	**11 18 06.7**	**+0.6**
CEN1				*i* S	**Sn**	**11 18 15.5**	**+2.1**
CEN1				AML	AML	11 18 16.0	
	comp=E,6μm,0.2s						
ANCH	**Antofagasta**	**0.69**	**178**	*e*P	**Pn**	**11 18 08.2**	**-0.9**
ANCH				*i* S	**Sn**	**11 18 18.3**	**-0.5**
ANCH				AML	AML	11 18 20.2	
	comp=N,6μm,0.1s						
LVC	**Limon Verde**	**1.46**	**75**	Pg	**Pn**	**11 18 19.2**	**-0.4**
	baz=258,slow=14						
LVC				Lg		11 18 36.5	
	comp=N,279nm,0.3s,baz=45,slow=7.1,SNR=53						
LVC	**Limon Verde**	**1.46**	**75**	ǁ *iP*	**Pn**	**11 18 19.2**	**-0.4**
LVC				*i* S	**Sn**	**11 18 36.6**	**-0.9**
LVC				AML	AML	11 18 38.9	
	comp=N,671nm,0.5s						
CPN1	**Cerro Paranal**	**1.63**	**179**	*e*P	**Pn**	**11 18 21.9**	**0.0**
CPN1				*i* S	**Sn**	**11 18 42.9**	**+1.1**
CPN1				AML	AML	11 18 50.3	
	comp=E,930nm,0.4s						
PB01	**Plate Boundary**	**2.13**	**25**	*e*P	**Pn**	**11 18 28.6**	**-0.2**
PB01				*i* S	**Sn**	**11 18 55.2**	**+1.2**
PB01				AML	AML	11 19 00.6	
	comp=E,748nm,0.4s						
LPAZ	**La Paz**	**7.01**	**18**	Pn	**Pn**	**11 19 38.1**	**+2.2**
	comp=E,0.3nm,0.3s,baz=184,slow=8.8,SNR=6.0						
SIV	**San Ignacio**	**11.24**	**53**	Pn	**Pn**	**11 20 32.8**	**-1.1**
	comp=E,0.4nm,0.3s,baz=227,slow=19,SNR=14						
TORD	**Torodi Ar. Bea**	**79.18**	**71**	P	**P**	**11 29 55.8**	**-0.7**
	comp=E,0.7nm,0.5s,baz=252,slow=5.0,SNR=11						
MKAR	**Makanchi Array**	**147.66**	**36**	PKPbc	PKPbc	11 37 36.0	+0.7
	comp=E,0.6nm,0.9s,baz=279,slow=2.8,SNR=3.6						

MAN 17 11:19:43, 1851N×12105E, h1km, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.92**	**200**	*e*P	Pg	11 20 01.5	+0.9
CVP	**Callao Caves**	**1.09**	**137**	*e*P	Pg	11 20 05.2	+1.2
CVP				*i* S	Sg	11 20 19.8	+1.7
CAUP	**Cauayan**	**1.73**	**155**	*e*P	Pn	11 20 16.1	+2.0
CAUP				*e*S	Sn	11 20 39.9	+3.0
PALP	**Palanan**	**1.95**	**137**	*e*P	Pn	11 20 20.3	+3.0
PALP				*e*S	Sn	11 20 47.7	+5.3
BOLP	**Bolinao**	**2.38**	**207**	*e*P	Pn	11 20 25.0	+1.8
BOLP				*e*S	Sn	11 20 59.0	+5.9

ISCJB ***17*** *11:29:36.8±1.3, 2233S±005×709W±0.1, h49km±15km, Error ellipse: s-maj=17.9km s-min=7.2km az=14.4*
GUC ***17*** *11:29:36.0±0.8, 2238S×7080W, h77km±8km, ML3.9*
IDC ***17*** *11:29:38.8±5.2, 2260S×7055W, h34km±36km, mb3.7/1, mb1 3.5/4, mb1mx3.3/18, mbtmp3.4/4, ML3.4/3, MS3.0/2, Ms1 3.1/2, ms1mx2.4/22, Error ellipse: s-maj=41.0km s-min=31.1km az=109.0*

ISC 17 11:29:36.0±2.0, 2232S±005×710W±01, h28km±12km, n15, σ0°95/17, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.91**	**150**	*e*P	**Pn**	**11 29 52.5**	**-0.4**
MECH				*i* S	**Sb**	**11 30 05.1**	**+0.2**
MECH				AML	AML	11 30 16.2	
	comp=N,9μm,0.8s						
CEN1	**Los Morros**	**1.27**	**147**	*e*P	**Pn**	**11 29 59.0**	**+1.1**
CEN1				*i* S	**Sn**	**11 30 16.1**	**+2.0**
CEN1				AML	AML	11 30 21.3	
	comp=E,2μm,0.8s						
ANCH	**Antofagasta**	**1.45**	**160**	*e*P	**Pn**	**11 29 59.9**	**-0.4**
ANCH				*i* S	**Sn**	**11 30 17.5**	**-0.8**
ANCH				AML	AML	11 30 25.6	
	comp=E,2μm,0.5s						
PB01	**Plate Boundary**	**1.86**	**47**	*e*P	**Pn**	**11 30 05.6**	**-0.4**
PB01				*i* S	**Sn**	**11 30 28.8**	**+0.4**
PB01				AML	AML	11 30 32.2	
	comp=E,2μm,0.3s						
LVC	**Limon Verde**	**1.91**	**99**	Pg	**Pn**	**11 30 06.9**	**+0.3**
	baz=276,slow=13						
LVC				Lg		11 30 28.4	
	comp=E,323nm,0.3s,baz=79,slow=16,SNR=54						
LVC	**Limon Verde**	**1.91**	**99**	*e*P	**Pn**	**11 30 06.3**	**-0.3**
LVC				*i* S	**Sn**	**11 30 28.4**	**-1.3**
LVC				AML	AML	11 30 32.1	
	comp=E,2μm,0.3s						
CPN1	**Cerro Paranal**	**2.35**	**168**	*e*P	**Pn**	**11 30 12.7**	**-0.1**
CPN1				*i* S	**Sn**	**11 30 41.1**	**+0

MECH	**Mejillones**	**0.22**	**202**	*e*P	Pn	11 40 58.7	-0.9
MECH				*e*S	Sn	11 41 04.4	-0.1
MECH				AML	AML	11 41 05.0	
	comp=N,19μm,0.3s						
CEN1	**Los Morros**	**0.51**	**163**	*e*P	Pn	11 41 05.1	+1.7
CEN1				*i* S	Sn	11 41 15.0	+4.2
CEN1				AML	AML	11 41 17.2	
	comp=N,3μm,0.5s						
ANCH	**Antofagasta**	**0.78**	**184**	*e*P	Pn	11 41 06.9	-0.2
ANCH				*i* S	Sn	11 41 17.7	+0.1
ANCH				AML	AML	11 41 19.3	
	comp=N,10μm,0.4s						
LVC	**Limon Verde**	**1.37**	**78**	*e*P	Pn	11 41 17.1	+1.9
LVC				*e*S	Sn	11 41 35.1	+3.0
LVC				AML	AML	11 41 37.0	
	comp=E,1μm,0.4s						
CPN1	**Cerro Paranal**	**1.72**	**181** ⇑	*i*P	Pn	11 41 20.0	0.0
CPN1				*e*S	Sn	11 41 40.5	-0.2
CPN1				AML	AML	11 41 46.3	
	comp=E,1μm,0.3s						
SPCH	**San Pedro de A**	**1.99**	**91**	*e*P	Pn	11 41 29.4	+5.6
SPCH				*e*S	Sn	11 41 56.6	+9.1
SPCH				AML	AML	11 42 09.5	
	comp=E,2μm,0.4s						

SGS ***17*** *11:41:04.3,3061N×3560E, h6km*
ISCJB ***17*** *11:41:06.6±1.1, 3015N±004×3589E±008, h0km, Error ellipse: s-maj=9.9km s-min=5.4km az=164.6*
GII ***17*** *11:41:06.2±0.0, 3015N×3594E, h0km, ML2.0/3, EXPLOSION*
CSEM ***17*** *11:41:09.9±1.0, 2998N×3564E, h1km±9km, ML2.6, Error ellipse: s-maj=17.0km s-min=6.5km az=69.0*
HLW ***17*** *11:41:10.4, 3005N×3577E, h7km, Mb2.6*

ISC 17 11:41:06.7±1.1, 3015N±004×3592E±008, h0km, n21, σ0§78/25, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFRI	**Zfri**	**0.76**	**302**	Pg	**Pg**	**11 41 21.7**	**+0.5**
HRFI	**Mount Harif**	**0.77**	**262**	Pg	**Pg**	**11 41 21.0**	**-0.5**
PRNI	**Paran**	**0.81**	**284**	Pg	**Pg**	**11 41 22.2**	**-0.1**
PRNI				Sg	**Sg**	**11 41 33.0**	**+0.1**
AQBJ	**Aqaba**	**0.86**	**241**	Pg	**Pg**	**11 41 22.9**	**-0.4**
MBRI	**Mt Berech**	**0.94**	**248**	Pg	**Pg**	**11 41 24.2**	**-0.5**
EIL	**Elat**	**0.97**	**240**	Pg	**Pg**	**11 41 24.7**	**-0.6**
EIL				Sg	**Sg**	**11 41 40.2**	**+2.4**
KRMI	**Paran Flat**	**1.03**	**268**	Pg	**Pg**	**11 41 25.8**	**-0.8**
HQLS		**1.13**	**221**	P	**Pg**	**11 41 27.6**	**-0.8**
HQLS		**1.13**	**221**	P	**Pg**	**11 41 27.6**	**-0.8**
HQLS				S	**Sg**	**11 41 41.6**	**-1.4**
RTMI	**Retamim**	**1.39**	**311**	Pn	**Pn**	**11 41 33.0**	**-0.3**
HBST	**Basata**	**1.39**	**228**	P	**Pn**	**11 41 33.4**	**+0.1**
JLOS		**1.46**	**195**	P	**Pn**	**11 41 34.9**	**+0.6**
JLOS		**1.46**	**195**	P	**Pn**	**11 41 34.9**	**+0.6**
JLOS				S	**Sg**	**11 41 54.3**	**+0.6**
KZIT	**Kziot**	**1.51**	**300**	Pn	**Pn**	**11 41 35.2**	**+0.2**
HNKL	**Nakhl**	**1.69**	**263**	P	**Pn**	**11 41 37.4**	**-0.1**
BDAS	**Al Bad'**	**1.86**	**203**	P	**Pn**	**11 41 39.6**	**-0.2**
RSH		**2.06**	**294**	P	**Pn**	**11 41 43.9**	**+1.3**
RSHS		**2.09**	**208**	S	**Sn**	**11 42 10.8**	**+1.1**
RSHS		**2.09**	**208**	P	**Pn**	**11 41 42.3**	**-0.7**
HRSH	**Kfar Ka'horesh**	**2.60**	**348**	P	**Pn**	**11 41 43.9**	**-6.1**
TR2		**2.60**	**228**	P	**Pn**	**11 41 50.0**	**0.0**

IDC 17 11:50:01.7±9.0, 981S×11797E, h53km±85km, mb2.8/2, mb1 3.1/4, mb1mx3.0/17, mbtmp3.0/4, ML3.1/2, Error ellipse: s-maj=84.1km s-min=21.0km az=69.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.08**	**20**	P	Pn	11 51 16.2	+1.0
	2.4nm,0.3s,baz=205,slow=8.7,SNR=8.6						
KAPI				S	Sn	11 52 12.8	+0.2
	5.4nm,0.3s,baz=148,slow=22,SNR=8.9						
WRA	**Warramunga Arr**	**18.74**	**124**	P	Pn	11 54 15.1	-2.0
	0.0nm,0.3s,baz=298,slow=9.9,SNR=5.3						
ASAR	**Alice Springs**	**20.53**	**134**	P	P	11 54 36.5	+0.7
	0.5nm,0.8s,baz=312,slow=10,SNR=6.7						
MKAR	**Makanchi Array**	**64.72**	**334**	P	P	12 00 34.5	+0.2
	0.2nm,0.4s,baz=139,slow=6.6,SNR=5.3						

HLW ***17*** *12:00:11.6, 2992N×3672E, h15km, Mb3.2*
ISCJB ***17*** *12:00:13.9±0.8, 2987N±004×3628E±006, h0km, Error ellipse: s-maj=7.2km s-min=5.3km az=176.8*
SGS ***17*** *12:00:14.9, 3001N×3623E, h4km*
CSEM ***17*** *12:00:14.7±0.6, 2988N×3624E, h10km, ML3.2, Error ellipse: s-maj=14.7km s-min=5.3km az=81.0*
GII ***17*** *12:00:14.6±1.3, 2984N×3620E, h0km, ML2.1/2, EXPLOSION*

ISC 17 12:00:13.9±0.8, 2987N±004×3632E±006, h0km, n26, σ0§66/32, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.11**	**263**	Pg	**Pg**	**12 00 34.7**	**-0.5**
HRFI	**Mount Harif**	**1.12**	**279**	Pg	**Pg**	**12 00 34.9**	**-0.5**
ZFRI	**Zfri**	**1.20**	**305**	Pg	**Pg**	**12 00 36.4**	**-0.5**
EIL	**Elat**	**1.20**	**261**	Pg	**Pg**	**12 00 36.4**	**-0.6**
EIL				Sg	**Sg**	**12 00 53.8**	**+1.1**
MBRI	**Mt Berech**	**1.22**	**267**	Pg	**Pg**	**12 00 37.0**	**-0.3**
MBRI				Sg	**Sg**	**12 00 53.6**	**+0.5**
HQLS		**1.23**	**243**	P	**Pg**	**12 00 36.8**	**-0.8**
HQLS		**1.23**	**243**	P	**Pg**	**12 00 36.8**	**-0.7**
HQLS				S	**Sg**	**12 00 53.7**	**+0.2**
PRNI	**Paran**	**1.23**	**293**	Pg	**Pg**	**12 00 37.0**	**-0.5**
JLOS		**1.34**	**213**	P	**Pg**	**12 00 39.7**	**0.0**
JLOS		**1.34**	**213**	P	**Pg**	**12 00 39.7**	**+0.1**
JLOS				S	**Sg**	**12 00 58.0**	**+1.0**
KRMI	**Paran Flat**	**1.40**	**280**	Pn	**Pn**	**12 00 39.5**	**-1.2**
KRMI				Sn	**Sn**	**12 00 59.1**	**-0.8**
HBST	**Basata**	**1.53**	**245**	P	**Pn**	**12 00 42.4**	**0.0**
RMNI	**Mount Ramon**	**1.53**	**299**	Pn	**Pn**	**12 00 41.8**	**-0.6**
MZDA	**Masada**	**1.65**	**330**	Pn	**Pn**	**12 00 44.7**	**+0.5**
TBKS	**Tabuk**	**1.66**	**173**	P	**Pn**	**12 00 44.9**	**+0.7**
BDAS	**Al Bad'**	**1.79**	**217**	P	**Pn**	**12 00 45.8**	**-0.3**
YTIR	**Yattir**	**1.81**	**325**	Pn	**Pn**	**12 00 47.1**	**+0.8**
RTMI	**Retamim**	**1.83**	**310**	Pn	**Pn**	**12 00 47.7**	**+1.0**
RTMI				Sn	**Sn**	**12 01 11.9**	**+1.3**
KZIT	**Kziot**	**1.95**	**302**	Pn	**Pn**	**12 00 49.0**	**+0.7**
HNKL	**Nakhl**	**2.03**	**272**	P	**Pn**	**12 00 49.7**	**+0.3**
RSHS		**2.06**	**221**	P	**Pn**	**12 00 49.0**	**-0.7**
HKAT	**Jabal Katrina**	**2.44**	**237**	P	**Pn**	**12 00 55.1**	**+0.2**
RSH		**2.49**	**296**	P	**Pn**	**12 00 55.6**	**-0.1**
TR2		**2.71**	**238**	P	**Pn**	**12 00 58.6**	**-0.1**
AMAG	**Maghara**	**2.80**	**287**	P	**Pn**	**12 00 59.4**	**-0.6**
HRSH	**Kfar Ka'horesh**	**2.96**	**343**	P	**Pn**	**12 00 55.6**	**-6.5**

IDC 17 12:18:54.3±11.0, 809S×12858E, h162km±86km, mb3.7/1, mb1 3.8/3, mb1mx3.2/14, mbtmp3.7/3, Error ellipse: s-maj=139.0km s-min=75.3km az=75.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**5.96**	**141**	*e*P	Px	12 20 10.8	
	48nm,0.3s						
KAKA				*e*S	Sx	12 21 22.1	
WRA	**Warramunga Arr**	**13.04**	**155**	P	Pn	12 21 52.6	-0.9
	1.1nm,0.3s,baz=333,slow=13,SNR=68						
WRA				S	Sn	12 24 17.9	-0.1
	1.3nm,0.3s,baz=334,slow=23,SNR=11						
WB2	**Warramunga Ar**	**13.04**	**155**	*e*P	Pn	12 21 52.8	-0.8
WB2				*e*S	Sn	12 24 16.9	-1.3
ASAR	**Alice Springs**	**16.31**	**162**	P	Pn	12 22 35.5	+1.4
	1.6nm,0.3s,baz=341,slow=12,SNR=182						
ASAR				S	S	12 25 37.0	+1.6
	0.4nm,0.3s,baz=336,slow=22,SNR=7.4						
STKA	**Stephens Creek**	**26.59**	**155**	*e*P	P	12 24 17.3	-0.1
	1.0nm,0.4s						
STKA	**Stephens Creek**	**26.59**	**155**	P	P	12 24 17.2	-0.1
	1.8nm,0.6s,baz=319,slow=12,SNR=6.2						

NEIC 17 12:33:46.5, 6153N×15050W, h52km, ML4.0(PMR), ML3.6(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIB	**Fire Island**	**0.40**	**156**	P	Pn	12 33 57.4	+0.8
RC01	**Rabbit Creek A**	**0.57**	**140**	P	Pn	12 33 57.9	-0.8
RC01				S	Sn	12 34 08.3	+0.8
PMR	**Palmer**	**0.66**	**84**	P	Pn	12 33 58.9	-0.8
SKT	**Skwentna**	**0.67**	**313**	P	Pn	12 33 58.8	-1.0
SKT				S	Sn	12 34 08.9	-0.6
GHO	**Glory Hole Cre**	**0.79**	**71**	P	Pn	12 34 01.2	-0.3
KNK	**Knik Glacier**	**0.99**	**96**	P	Pn	12 34 03.9	-0.1
SLKM	**Skilak Lake**	**1.03**	**172**	P	Pn	12 34 03.8	-0.8
SML	**Sawmill**	**1.07**	**74**	P	Pn	12 34 04.7	-0.4
SML				S	Sn	12 34 19.8	+0.8
SEW	**Seward**	**1.52**	**160**	P	Pn	12 34 10.4	-0.8
PPLA	**Purkeypile**	**1.58**	**331**	P	Pn	12 34 11.5	-0.6
TRF	**Thorofare Moun**	**1.93**	**3**	P	Pn	12 34 16.5	-0.4
TRF				S	Sn	12 34 40.8	+0.9
KTH	**Kantishna Hill**	**2.04**	**355**	P	Pn	12 34 18.4	+0.1
MCK	**McKinley**	**2.33**	**17**	P	Pn	12 34 22.1	-0.1
MCK				S	Sn	12 34 50.7	+1.1
SVW2	**Sparrevohn**	**2.49**	**262**	P	Pn	12 34 23.3	-1.1
CHUM	**Lake Minchumin**	**2.51**	**341**	P	Pn	12 34 24.0	-0.7
CHUM				S	Sn	12 34 52.9	-1.0
EYAK	**Cordova Ski Ar**	**2.51**	**111**	P	Pn	12 34 23.3	-1.4
BPAW	**Bear Paw Mtn.**	**2.59**	**355**	P	Pn	12 34 24.5	-1.3
BPAW				S	Sn	12 34 54.9	-1.1
PAX	**Paxson**	**2.77**	**56**	P	Pn	12 34 28.6	+0.5
TT01	**Tatalina**	**2.93**	**301**	P	Pn	12 34 29.4	-1.0
MENT	**Mentasta**	**3.48**	**63**	*e*P	Pn	12 34 37.4	-0.5
COLA	**College**	**3.57**	**19**	P	Pn	12 34 38.4	-0.8
IL1	**Eielson Array**	**3.65**	**25**	P	Pn	12 34 39.3	-0.9
KDAK	**Kodiak Island**	**3.90**	**197**	*e*Pn	Pn	12 34 43.8	0.0
KDAK				*e*Sn	Sn	12 35 31.7	+3.4
GCSA	**Galena City Sc**	**4.33**	**321**	P	Pn	12 34 49.4	-0.3
BCA3	**Beaver Creek A**	**4.35**	**65**	P	Pn	12 34 50.2	+0.3
OHAK	**Old Harbor**	**4.55**	**199**	P	Pn	12 34 50.9	-1.7
IM3	**Indian Mountai**	**4.70**	**344**	P	Pn	12 34 54.0	-0.7
IMA2	**Indian Mountai**	**4.77**	**344**	*e*P	Pn	12 34 54.7	-1.0
EGAK	**Eagle**	**5.34**	**48**	P	Pn	12 35 03.2	-0.3
DAWY	**Dawson**	**5.70**	**59**	P	Pn	12 35 08.1	-0.3
COLD	**Coldfoot**	**5.72**	**1**	P	Pn	12 35 08.3	-0.4
SKAG	**Skagway**	**7.77**	**99**	*e*P	Pn	12 35 37.3	+0.5

IDC 17 12:43:28.7±2.0, 629S×13022E, h0km, mb3.9/2, mb1 4.2/5, mb1mx3.8/14, mbtmp4.0/5, ML4.0/3, Error ellipse: s-maj=58.2km s-min=27.7km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.56**	**239**	Pn	Pn	12 45 21.9	+1.6
	3.3nm,0.3s,baz=41,slow=18,SNR=6.1						
BATI				Sn	Sn	12 46 34.2	-13
	3.0nm,0.3s,baz=86,slow=24,SNR=7.3						
WRA	**Warramunga Arr**	**14.15**	**164**	Pn	Pn	12 46 49.7	-0.8
	0.5nm,0.3s,baz=333,slow=13,SNR=34						
WRA				Sn	Sn	12 49 14.0	-14
	1.0nm,0.3s,baz=334,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**17.64**	**169**	P	Pn	12 47 35.5	-0.4
	0.7nm,0.3s,baz=343,slow=9.9,SNR=103						
ASAR				S	Sn	12 50 36.2	-17
	0.3nm,0.3s,baz=346,slow=24,SNR=6.9						
CMAR	**Chiang Mai Arr**	**39.45**	**309**	P	P	12 50 58.9	-2.0
	0.5nm,0.3s,baz=131,slow=7.5,SNR=5.0						
MKAR	**Makanchi Array**	**67.75**	**327**	P	P	12 54 29.4	+1.3
	0.7nm,0.5s,baz=118,slow=8.1,SNR=9.1						

IDC 17 12:46:59.6±1.5, 751N×9353E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=63.3km s-min=22.0km az=64.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.09**	**25**	Pn	Pn	12 49 55.4	+2.2
	0.4nm,0.3s,baz=212,slow=15,SNR=5.3						
SONM	**Songino Array**	**41.65**	**13**	P	P	12 54 48.7	-0.9
	0.4nm,0.5s,baz=200,slow=7.4,SNR=4.7						
SONM				PcP	PcP	12 56 47.1	+0.6
	0.3nm,0.5s,baz=216,slow=4.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**46.83**	**353**	P	P	12 55 30.6	-0.5
	1.2nm,0.3s,baz=176,slow=8.8,SNR=9.4						
WRA	**Warramunga Arr**	**48.55**	**125**	P	P	12 55 44.6	-0.3
	0.2nm,0.3s,baz=300,slow=9.8,SNR=6.7						
ASAR	**Alice Springs**	**50.15**	**129**	P	P	12 55 57.0	-0.2
	0.2nm,0.3s,baz=305,slow=7.1,SNR=4.2						
ASAR				PcP	PcP	12 57 16.9	+0.2
	0.3nm,0.6s,baz=294,slow=4.2,SNR=4.2						
ARCES	**ARCESS Array B**	**75.40**	**340**	P	P	12 58 45.0	+0.2
	2.3nm,0.9s,baz=109,slow=6.6,SNR=12						
TXAR	**Lajitas Array**	**139.80**	**24**	PKP	PKPdf	13 06 31.8	+1.4
	0.2nm,0.6s,baz=28,slow=0.7,SNR=4.0						

ISCJB ***17*** *13:06:29.1±0.7, 5757N±004×13267W±007, h10km, Error ellipse: s-maj=5.4km s-min=5.0km az=138.6*
NEIC ***17*** *13:06:31.7±0.8, 5741N×13238W, h10km, ML2.8(PGC), Error ellipse: s-maj=13.2km s-min=9.2km az=74.0*
PGC ***17*** *13:06:34.4±8.6, 5762N×13261W, h1km, ML2.8/3, 131km Ese of Juneau, Ak Southeastern Alaska*

ISC 17 13:06:31.7±0.6, 5754N±003×13260W±006, h10km, n9, σ1§64/18, 1D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAK	**Wrangell Islan**	**1.13**	**173**	*e*Pg	**Pg**	**13 06 52.4**	**-0.9**
WRAK				*e*Sg	**Sg**	**13 07 06.1**	**-1.9**
SIT	**Sitka**	**1.56**	**253**	*e*P	**Pn**	**13 07 01.6**	**+2.2**
SIT				*e*Sg	**Sg**	**13 07 21.7**	**0.0**
DLBC	**Dease Lake**	**1.64**	**56**	*e*Pn	**Pn**	**13 07 01.0**	**+0.5**
DLBC				*i* Pg	**Pg**	**13 07 02.3**	**-0.8**
DLBC				*e*Sg	**Sg**	**13 07 24.3**	**0.0**
DLBC	**Dease Lake**	**1.64**	**56**	⇑Pn	**Pn**	**13 07 01.8**	**+1.3**
DLBC				⇑Sg	**Sg**	**13 07 24.4**	**0.0**
SKAG	**Skagway**	**2.40**	**325**	*e*Pn	**Pn**	**13 07 13.5**	**+2.5**
SKAG				*e*Sg	**Sg**	**13 07 47.7**	**-1.2**
PLBC	**Pleasant Camp**	**2.76**	**316**	⇓Pn	**Pn**	**13 07 17.6**	**+1.7**
PLBC				Sn	**Sn**	**13 07 51.4**	**+2.1**
PLBC				Sg	**Sg**	**13 07 58.2**	**-2.0**
WHY	**Whitehorse**	**3.35**	**340**	Pn	**Pn**	**13 07 26.0**	**+2.0**
WHY				Sg	**Sg**	**13 08 15.8**	**-3.2**
HYT	**Haines Junctio**	**4.15**	**325**	Sg	**Sg**	**13 08 41.2**	**-3.7**
DAWY	**Dawson**	**7.34**	**336**	Sg	**Sg**	**13 10 19.8**	**-7.1**

IDC 17 13:21:59.9±1.8, 192N×12368E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/17, mbtmp3.3/3, Error ellipse: s-maj=198.6km s-min=26.2km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.11**	**155**	P	P	13 27 16.9	-0.6
	0.5nm,0.4s,baz=333,slow=11,SNR=17						
ASAR	**Alice Springs**	**27.30**	**159**	P	P	13 27 47.7	+1.3
	0.2nm,0.8s,baz=342,slow=8.8,SNR=2.8						
MKAR	**Makanchi Array**	**57.36**	**327**	P	P	13 31 49.5	-0.5
	0.1nm,0.4s,baz=114,slow=9.4,SNR=4.5						

IDC 17 13:29:46.0±2.2, 140N×12666E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/15, mbtmp3.3/3, Error ellipse: s-maj=182.9km s-min=26.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.51**	**161**	P	P	13 34 45.7	-1.7
	0.4nm,0.4s,baz=339,slow=10,SNR=10						
ASAR	**Alice Springs**	**25.89**	**165**	P	P	13 35 21.5	+1.7
	0.1nm,0.3s,baz=343,slow=11,SNR=4.8						
MKAR	**Makanchi Array**	**59.43**	**326**	P	P	13 39 50.5	0.0
	0.2nm,0.4s,baz=125,slow=7.8,SNR=4.7						

NEIC ***17*** *13:37:24.8±7.5, 2134S×17526W, h243km±69km, mb4.7/4, Error ellipse: s-maj=40.4km s-min=16.0km az=223.0*
ISCJB ***17*** *13:37:49.0±0.9, 228S±01×1778W±02, h300km, mb3.8/7, Error ellipse: s-maj=22.9km s-min=14.3km az=28.5*
IDC ***17*** *13:37:53.4±5.6, 2282S×17732W, h371km±122km, mb3.4/5, mb1 3.5/7, mb1mx3.2/20, mbtmp3.5/7, Error ellipse: s-maj=85.1km s-min=25.2km az=84.0*

ISC 17 13:37:50.3±0.9, 228S±01×1778W±02, h300km, n11, σ0§81/11, mb3.8/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.50**	**34**	P	**Pn**	**13 40 14.8**	**+0.1**
	4.4nm,0.3s,baz=298,slow=17,SNR=7.4						
AFI				S	Sx	13 42 03.0	
	2.0nm,0.3s,baz=180,slow=20,SNR=3.4						
URZ	**Urewera**	**16.04**	**195**	P	**P**	**13 41 18.5**	**-0.2**
	1.6nm,0.3s,baz=327,slow=6.7,SNR=14						
URZ				S	Sx	13 44 04.2	
	1.6nm,0.3s,baz=141,slow=22,SNR=12						
SNZO	**South Karori**	**19.53**	**197**	*e*P	**P**	**13 41 57.2**	**+1.1**
	6.0nm,0.5s						
RPZ	**Rata Peaks**	**22.83**	**201**	P	**P**	**13 42 26.4**	**-1.3**
	7.6nm,1.0s,mb4.0,baz=36,slow=4.8,SNR=5.3						
HNR	**Honiara**	**25.11**	**298**	*e*P	**P**	**13 42 41.2**	**-7.5**
	40nm,0.5s,mb5.1						
CTA	**Charters Tower**	**33.52**	**268**	P	**P**	**13 44 03.4**	**+0.9**
	3.6nm,0.8s,mb3.9,baz=98,slow=14,SNR=5.6						
CTAO	**Charters Tower**	**33.52**	**268**	*e*P	**P**	**13 44 02.7**	**+0.2**
	1.5nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**37.02**	**247**	P	**P**	**13 44 33.0**	**+1.0**
	1.8nm,0.8s,mb3.6,baz=90,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**44.23**	**259**	P	**P**	**13 45 30.9**	**+0.2**
	1.4nm,0.5s,mb3.4,baz=101,slow=6.7,SNR=23						
WRAB	**Tennant Creek**	**44.51**	**264**	*e*P	**P**	**13 45 31.7**	**-1.3**
	0.6nm,0.4s,mb3.2						
WRA	**Warramunga Arr**	**44.52**	**264**	P	**P**	**13 45 32.9**	**-0.2**
	0.9nm,0.3s,mb3.5,baz=102,slow=8.4,SNR=118						

GUC 17 13:39:23.5±2.0, 2327S×7065W, h35km±6km, ML3.8, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.25**	**49**	⇓*i*P	Pn	13 39 30.0	-0.8
MECH				*i* S	Sn	13 39 35.3	-0.5
MECH				AML	AML	13 39 36.1	
	comp=E,21μm,0.5s						
CEN1	**Los Morros**	**0.43**	**106**	*e*P	Pn	13 39 33.1	-0.1
CEN1				*i* S	Sn	13 39 39.5	-0.3
CEN1				AML	AML	13 39 40.0	
	comp=E,5μm,0.3s						
ANCH	**Antofagasta**	**0.47**	**152**	⇓*i*P	Pn	13 39 33.7	0.0
ANCH				*i* S	Sn	13 39 40.2	-0.6
ANCH				AML	AML	13 39 43.0	
	comp=N,16μm,0.0s						
CPN1	**Cerro Paranal**	**1.37**	**171** ⇑	*i*P	Pn	13 39 47.7	+1.6
CPN1				*i* S	Sn	13 40 06.2	+3.2
CPN1				AML	AML	13 40 09.1	
	comp=E,3μm,0.4s						
LVC	**Limon Verde**	**1.73**	**68**	*e*P	Pn	13 39 53.6	+2.5
LVC				*i* S	Sn	13 40 15.9	+3.9
LVC				AML	AML	13 40 17.4	
	comp=N,1μm,0.7s						
PB01	**Plate Boundary**	**2.46**	**26**	*e*P	Pn	13 40 02.6	+1.4
PB01				*i* S	Sn	13 40 34.5	+4.4
PB01				AML	AML	13 40 38.2	
	comp=E,704nm,0.4s						

IDC ***17*** *13:50:32.5±2.1, 1571N×122.13E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, Error ellipse: s-maj=79.8km s-min=23.5km az=51.0*
ISCJB ***17*** *13:50:36.7±0.8, 1564N±004×12183E±005, h22km±6km, mb3.3/4, Error ellipse: s-maj=7.5km s-min=6.5km az=164.6*
MAN ***17*** *13:50:37, 1566N×12174E, h18km, mb4.6, ML3.5, MS3.5*

ISC 17 13:50:36.6±0.9, 1565N±004×12184E±005, h15km±5km, n15, σ0§94/25, mb3.3/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.27**	**290**	*e*P	**Pg**	**13 50 42.7**	**+0.3**
BALP				*e*S	**Sg**	**13 50 46.9**	**+0.5**
PCPH	**Palayan**	**0.72**	**263**	⇓*i*P	**Pg**	**13 50 50.1**	**-0.6**
PCPH				*i* S	**Sg**	**13 50 59.7**	**-0.6**
POLP	**Polilio Island**	**0.92**	**174**	*e*P	**Pb**	**13 50 54.6**	**+0.4**
POLP				*e*S	**Sb**	**13 51 09.3**	**+3.1**
CAUP	**Cauayan**	**1.29**	**359**	*e*P	**Pn**	**13 50 59.3**	**-0.7**
CAUP				*e*S	**Sb**	**13 51 17.0**	**+0.1**
PALP	**Palanan**	**1.51**	**22**	*e*P	**Pn**	**13 51 03.5**	**+0.3**
PALP				*e*S	**Sn**	**13 51 28.0**	**+5.4**
SCZP	**Santa Cruz**	**1.86**	**274**	*e*P	**Pn**	**13 51 07.9**	**0.0**
SCZP				*e*S	**Sn**	**13 51 31.6**	**+0.3**
BOLP	**Bolinao**	**1.99**	**292**	*e*P	**Pn**	**13 51 08.3**	**-1.4**
BOLP				*e*S	**Sn**	**13 51 35.8**	**+1.4**
CVP	**Callao Caves**	**2.04**	**359** ⇑	*e*P	**Pn**	**13 51 10.3**	**-0.1**
CVP				*i* S	**Sn**	**13 51 36.1**	**+0.5**
ABRA	**Dolores**	**2.26**	**332**	*e*P	**Pn**	**13 51 13.8**	**+0.3**
ABRA				*e*S	**Sn**	**13 51 40.9**	**-0.2**
LUBP	**Lubang**	**2.45**	**219**	*e*P	**Pn**	**13 51 16.2**	**+0.2**
LUBP				*e*S	**Sn**	**13 51 28.2**	**-18**
PVCP	**Virac**	**3.03**	**132**	*e*P	**Pn**	**13 51 25.9**	**+1.9**
CMAR	**Chiang Mai Arr**	**22.07**	**281**	P	**P**	**13 55 31.6**	**+0.5**
	0.2nm,0.3s,mb3.0,baz=82,slow=8.4,SNR=5.0						
WRA	**Warramunga Arr**	**37.44**	**160**	P	**P**	**13 57 46.9**	**-2.5**
	0.3nm,0.4s,mb3.4,baz=342,slow=9.1,SNR=9.1						
ASAR	**Alice Springs**	**40.81**	**163**	P	**P**	**13 58 16.1**	**-1.5**
	0.3nm

mb5.5/151, Error ellipse: s-maj=3.4km s-min=2.5km az=160.6

MAN ***17*** *15:02:34, 570N×12683E, h52km, mb5.9, ML4.9, MS5.4*

IDC ***17*** *15:02:35.8±1.1, 590N×12682E, h74km±8km, mb5.1/19, mb1 5.2/22, mb1mx5.2/23, mbtmp5.1/22, MS4.1/29, Ms1 4.1/29, ms1mx4.0/42, Error ellipse: s-maj=15.7km s-min=8.1km az=74.0*

DJA ***17*** *15:02:36, 599N×12696E, h79km, Mw5.5/30*

GCMT ***17*** *15:02:36.2±0.1, 589N×12682E, h80km±1km, MW5.3/101, Moment Tensor Solution. s71,c112; s101,c189; Duration: 1§1 Moment tensor: Scale 10¹⁷Nm; Mrr0.74±.02; Mθθ0.31±.02; Mϕϕ-1.05±.02; Mrθ0.44±.01; Mθϕ-0.43±.02; Mϕr-0.39±.02; Best double couple: M₀1.18500×10¹⁷ NP1:ϕs47.00000°,δ48.00000°, λ141.00000°. NP2:ϕs165.00000°,δ62.00000°,λ49.00000°. Principal axes: T 1.1590, Plg53.0000°, Azm24.0000°; N 0.0520, Plg36.0000°, Azm188.0000°; P -1.2100, Plg8.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***17*** *15:02:36.2±0.8, 593N×12685E, h80km±7km, mb5.5/59, MW5.4 Error ellipse: s-maj=6.2km s-min=4.1km az=68.0, Moment Tensor Solution. s11 Moment tensor: Scale 10¹⁷Nm; Mrr1.58; Mθθ-0.11; Mϕϕ-1.47; Mrθ-0.21; Mϕϕ0.85; Mϕr-0.39; Best double couple: M₀1.80000×10¹⁷ NP1: ϕs320.00000°,δ43.00000°,λ69.00000°. NP2: ϕs168.00000°,δ51.00000°,λ109.00000°. Principal axes: T 1.6900, Plg74.0000°, Azm138.0000°; N 0.2000, Plg14.0000°, Azm336.0000°; P -1.9000, Plg4.0000°, Azm245.0000°;*

SZGRF ***17*** *15:03:02.1, 1124N×122.48E, h33km, mb5.6, Panay, Philippine Islands*

ISC 17 15:02:36.6±0.1, 590N±002×12692E±002, h83km, h83km±2.2km:pP-P, n619, σ1§11/522, mb5.5/152, 72C-49D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.23**	**328**	*eP*	**Pn**	**15 02 57.6**	**-1.0**
DAV	**Davao City (W)**	**1.77**	**311**	⇓P	**Pn**	**15 03 05.1**	**-0.3**
	SNR=281						
DAV	**Davao City (W)**	**1.77**	**311**	P	**Pn**	**15 03 05.0**	**-0.5**
	2μm,0.3s,baz=230,slow=2.7,SNR=399						
DAV				S	**Sn**	**15 03 29.1**	**+1.6**
	2μm,0.3s,baz=275,slow=21,SNR=9.2						
DAV				LR	LR	15 03 44.5	
	comp=Z,11μm,20.8s,baz=257,slow=41						
DAV	**Davao City (W)**	**1.77**	**311**	⇓*e*Pn	**Pn**	**15 03 04.8**	**-0.6**
DAV				*e*Sn	**Sn**	**15 03 23.7**	**-3.7**
DAV	**Davao City (W)**	**1.77**	**311**	⇓*e*P	**Pn**	**15 03 03.0**	**-2.4**
DAV	**Davao City (W)**	**1.77**	**311**	P	**Pn**	**15 03 05.3**	**-0.2**
KCP	**Kidapawan**	**2.12**	**301**	⇓*i*P	**Pn**	**15 03 08.4**	**-1.8**
KCP				*i* S	**Sn**	**15 03 35.1**	**-0.7**
BUKP	**Musuan**	**2.69**	**317**	*e*P	**Pn**	**15 03 17.3**	**-0.5**
BUKP				*e*S	**Sn**	**15 03 51.0**	**+1.4**
CTBH	**Cotabato--PC H**	**2.96**	**296**	⇓*i*P	**Pn**	**15 03 12.1**	**-9.3**
CTBH				*i* S	**Sn**	**15 03 49.2**	**-6.8**
BUTP	**Butuan**	**3.31**	**337**	*e*P	**Pn**	**15 03 27.1**	**+0.9**
BUTP				*e*S	**Sn**	**15 04 13.1**	**+8.7**
CGP	**Cagayan de Oro**	**3.36**	**319**	*e*P	**Pn**	**15 03 26.5**	**-0.4**
CGP				*i* S	**Sn**	**15 04 07.2**	**+1.4**
PAGZ	**Pagadian**	**4.01**	**299**	*e*P	**Pn**	**15 03 35.1**	**-0.5**
SCPH	**Surigao**	**4.11**	**340**	*e*P	**Pn**	**15 03 38.1**	**+1.1**
SCPH				*e*S	**Sn**	**15 04 25.7**	**+1.8**
MSLP	**Maasin**	**4.67**	**334**	*e*P	**Pn**	**15 03 44.9**	**+0.2**
IPIL	**Ipil**	**4.70**	**294**	*e*P	**Pn**	**15 03 44.4**	**-0.7**
IPIL				*e*S	**Sn**	**15 04 41.6**	**+3.1**
TBP	**Tagbilaran**	**4.83**	**321**	*e*P	**Pn**	**15 03 47.1**	**+0.3**
TBP				*e*S	**Sn**	**15 04 36.8**	**-4.8**
MNI	**Manado**	**4.89**	**205**	P	**Pn**	**15 03 48.3**	**+0.6**
ZMPH	**Zamboanga City**	**4.93**	**283**	⇑*i*P	**Pn**	**15 03 46.7**	**-1.6**
SNPH	**Sibulan**	**5.00**	**313**	*e*P	**Pn**	**15 03 51.0**	**+1.8**
LLP	**Lapu-Lapu**	**5.27**	**327**	⇓*e*P	**Pn**	**15 03 54.2**	**+1.3**
LLP				*e*S	**Sn**	**15 04 54.2**	**+1.9**
PLP	**Palo**	**5.57**	**340**	⇓*e*P	**Pn**	**15 03 58.2**	**+1.3**
OCLP	**Ormoc**	**5.60**	**336**	*e*P	**Pn**	**15 03 58.5**	**+1.1**
GUIM	**Jordan**	**6.35**	**318**	*e*P	**Pn**	**15 04 08.2**	**+0.6**
LBMI	**Labuha**	**6.52**	**175**	P	**Pn**	**15 04 10.2**	**+0.3**
	1μm,0.7s,6.9nm						
CNP	**Catarman**	**6.93**	**341**	*e*P	**Pn**	**15 04 18.7**	**+3.1**
CNP				*e*S	**Sn**	**15 05 37.6**	**+4.6**
RCP	**Roxas**	**6.97**	**324**	⇓*e*P	**Pn**	**15 04 17.1**	**+1.0**
KALP	**Kalibo**	**7.31**	**322**	⇓*e*P	**Pn**	**15 04 23.5**	**+2.8**
CUYO	**Cuyo Island**	**7.63**	**311**	*e*P	**Pn**	**15 04 25.8**	**+0.7**
OTRP	**Odiongan**	**8.04**	**323**	*e*P	**Pn**	**15 04 33.1**	**+2.5**
PVCP	**Virac**	**8.12**	**341**	*e*P	**Pn**	**15 04 35.2**	**+3.5**
MYLDM	**Lahad Datu**	**8.41**	**266**	⇓P	**Pn**	**15 04 36.4**	**+0.7**
MYLDM	**Lahad Datu**	**8.41**	**266**	P	**Pn**	**15 04 36.7**	**+1.0**
SJMP	**San Jose**	**8.67**	**319**	*e*P	**Pn**	**15 04 42.0**	**+2.7**
PPR	**Puerto Princes**	**8.98**	**296**	⇓*e*P	**Pn**	**15 04 48.0**	**+4.5**
BUSP	**Coron**	**8.99**	**313**	*e*P	**Pn**	**15 04 44.6**	**+1.0**
ENPP	**El Nido**	**9.09**	**306**	*e*P	**Pn**	**15 04 45.5**	**+0.5**
GQP	**Guinayangan**	**9.09**	**331**	⇑*i*P	**Pn**	**15 04 50.1**	**+5.1**
TSM	**Tawau**	**9.15**	**260**	⇓P	**Pn**	**15 04 45.1**	**-0.7**
AAI	**Ambon**	**9.61**	**172**	P	**Pn**	**15 04 52.2**	**+0.1**
	296nm,0.9s,3μm						
AAI	**Ambon**	**9.61**	**172**	P	**Pn**	**15 04 51.9**	**-0.2**
	296nm,0.9s,3μm						
SDKM	**Sandakan**	**9.68**	**269**	⇑P	**Pn**	**15 04 52.3**	**-0.7**
PCI	**Palu**	**9.78**	**227**	P	**Pn**	**15 04 56.1**	**+1.7**
	266nm,1.4s,3μm						
KDM	**Kudat**	**10.07**	**276**	⇑P	**Pn**	**15 05 01.1**	**+2.7**
LUBP	**Lubang**	**10.19**	**320**	*e*P	**Pn**	**15 05 03.0**	**+3.1**
KKM	**Kota Kinabalu**	**10.64**	**271**	*e*Pn	**Pn**	**15 05 06.8**	**+0.6**
KKM	**Kota Kinabalu**	**10.64**	**271**	⇑P	**Pn**	**15 05 07.7**	**+1.4**
KKM	**Kota Kinabalu**	**10.64**	**271**	P	**Pn**	**15 05 07.4**	**+1.2**
	260nm,1.4s,3μm						
KDI	**Kendari**	**10.69**	**204**	P	**Pn**	**15 05 06.2**	**-0.6**
	134nm,1.3s,3μm						
BALP	**Baler**	**11.10**	**332**	*e*P	**Pn**	**15 05 16.5**	**+4.2**
SCZP	**Santa Cruz**	**11.98**	**326**	*e*P	**Pn**	**15 05 29.0**	**+4.6**
CAUP	**Cauayan**	**12.05**	**336**	*e*P	**Pn**	**15 05 23.2**	**-2.2**
BOLP	**Bolinao**	**12.47**	**327**	*e*P	**Pn**	**15 05 32.2**	**+1.1**
CVP	**Callao Caves**	**12.74**	**337**	⇓*e*P	**Px**	15 05 45.0	
KAPI	**Kappang**	**12.99**	**214**	Pn	**Pn**	**15 05 35.1**	**-2.8**
	944nm,0.8s,SNR=18						
KAPI	**Kappang**	**12.99**	**214**	⇑P	**Pn**	**15 05 35.0**	**-3.0**
	SNR=17						
KAPI	**Kappang**	**12.99**	**214**	P	**Pn**	**15 05 36.0**	**-2.0**
	4.9nm,0.3s,baz=24,slow=8.3,SNR=32						
KAPI				LR	LR	15 11 23.7	
	comp=Z,2μm,18.0s,baz=218,slow=41						
KAPI	**Kappang**	**12.99**	**214**	⇓*e*Pn	**Pn**	**15 05 35.2**	**-2.7**
	86nm,1.0s						
KAPI	**Kappang**	**12.99**	**214**	P	**Pn**	**15 05 35.4**	**-2.5**
	90nm,1.1s,744nm						
ABRA	**Dolores**	**13.16**	**333**	*e*P	**Pn**	**15 05 43.6**	**+3.5**
BTM	**Bintulu**	**14.05**	**260**	⇑P	**Pn**	**15 05 52.7**	**+0.9**
SBUM	**Sibu**	**15.05**	**257**	⇓P	**Pn**	**15 06 05.7**	**+0.9**
BBKI	**Banjar Baru**	**15.23**	**233**	P	**Pn**	**15 06 08.6**	**+1.5**
	555nm,1.4s,5μm						
PLKI	**Palangkaraya**	**15.26**	**238**	P	**Pn**	**15 06 09.3**	**+1.8**
	800nm,1.2s,8μm						
BATI	**Baumata**	**16.32**	**191**	P	**Pn**	**15 06 21.6**	**+0.8**
	21nm,0.3s,baz=31,slow=2.4,SNR=25						
BATI				S	**S**	**15 09 31.0**	**+1.9**
	5.4nm,0.3s,baz=70,slow=15,SNR=3.8						
BATI				LR	LR	15 13 32.2	
	comp=Z,506nm,18.6s,baz=18,slow=40						
BATI	**Baumata**	**16.32**	**191**	P	**Pn**	**15 06 23.0**	**+2.1**
	251nm,1.1s,2μm						
STKI	**Sintang**	**16.46**	**250**	P	**Pn**	**15 06 22.9**	**+0.3**
	327nm,1.2s,5μm						
KSM	**Kuching**	**17.14**	**256**	*e*P	**Pn**	**15 06 30.1**	**-0.9**
KSM	**Kuching**	**17.14**	**256**	⇓P	**Pn**	**15 06 31.5**	**+0.5**
KSM	**Kuching**	**17.14**	**256**	P	**Pn**	**15 06 31.3**	**+0.3**
	288nm,1.1s,3μm						
PBKI	**Pangkalan Bun**	**17.46**	**241**	P	**Pn**	**15 06 35.5**	**+0.6**
	399nm,1.1s,3μm						
KHKI	**Kahang-Kahang**	**18.11**	**219**	P	**Pn**	**15 06 45.9**	**+3.2**
KMMI	**Kalianget**	**18.23**	**225**	P	**Pn**	**15 06 44.6**	**+0.4**
	190nm,0.8s,2μm						
NACB	**Ninganchiao**	**18.88**	**345**	P	**Pn**	**15 06 47.0**	**-4.8**
	123nm,0.8s						
GUMO	**Guam**	**19.26**	**65**	P	**Pn**	**15 06 56.6**	**+0.1**
	18nm,0.3s,baz=180,slow=11,SNR=9.8						
GUMO				LR	LR	15 13 03.8	
	comp=Z,728nm,18.9s,baz=178,slow=32						
GUMO	**Guam**	**19.26**	**65**	*e*P	**Pn**	**15 06 56.9**	**+0.4**
	214nm,1.1s						
GUMO	**Guam**	**19.26**	**65**	*e*P	**Pn**	**15 06 56.9**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,214nm,1.1s						
KAKA	**Kakadu**	**19.29**	**163**	*e*P	Px	15 06 42.0	
	comp=Z,126nm,0.5s						
KAKA				*e*S	Sx	15 10 21.3	
KAKA	**Kakadu**	**19.29**	**163**	*e*P	Px	15 06 41.9	
YHNB	**Yeheng**	**19.41**	**345**	*e*P	**Pn**	**15 06 58.9**	**+0.8**
	comp=Z,60nm,0.6s						
TATO	**Taipei**	**19.67**	**345**	*e*P	**Pn**	**15 06 59.3**	**-1.9**
	comp=Z,75nm,0.7s						
SJI	**Sawahan**	**20.29**	**228**	P	**P**	**15 07 05.1**	**-0.8**
QZH	**Quanzhou**	**20.55**	**338**	⇑*i*P	**P**	**15 07 10.3**	**+1.8**
QZH				PP		15 07 34.4	
QZH				S	**S**	**15 10 51.0**	**-2.9**
QZH				AMB	AMB		
	comp=Z,320nm,0.9s						
JOW	**Kunigami**	**20.86**	**3**	P	**P**	**15 07 11.7**	**-0.1**
	comp=Z,20nm,0.6s,baz=182,slow=7.2,SNR=12						
JOW				LR	LR	15 15 15.5	
	comp=Z,594nm,19.5s,baz=329,slow=36						
TPI	**Tanjungpandan**	**21.07**	**246**	P	**P**	**15 07 13.3**	**-1.0**
	comp=Z,163nm,1.1s,comp=Z,1μm,mb5.3						
QIZ	**Qiongzhong**	**21.14**	**310**	P	**P**	**15 07 14.6**	**-0.3**
QIZ				AP		15 07 30.8	
QIZ				XP	sP	15 07 41.0	-1.0
QIZ				S	**S**	**15 11 04.8**	**-0.8**
QIZ				XS	sS	15 11 33.0	-0.2
QIZ				AMB	AMB		
	comp=Z,83nm,0.9s,mb5.1						
QIZ				AMB	AMB		
	comp=Z,330nm,4.7s						
QIZ				LR	LR		
	comp=N,1μm,16.1s						
QIZ				LR	LR		
	comp=Z,963nm,13.6s						
QIZ	**Qiongzhong**	**21.14**	**310**	*e*P	**P**	**15 07 14.4**	**-0.5**
	comp=Z,71nm,0.9s,mb5.0						
GZH	**Guangzhou**	**21.52**	**324**	P	**P**	**15 07 21.3**	**+2.3**
GZH				S	**S**	**15 11 14.5**	**+1.5**
GZH				LR	LR		
	comp=N,2μm,17.9s						
GZH				LR	LR		
	comp=E,2μm,17.9s						
BJI	**Banjamegara**	**21.62**	**233**	P	**P**	**15 07 20.3**	**+0.2**
LEM	**Lembang**	**23.04**	**237**	P	**P**	**15 07 35.0**	**0.0**
	comp=E,134nm,0.8s,comp=E,2μm,mb5.3						
MYKOM	**Kota Tinggi**	**23.37**	**261**	⇑P	**P**	**15 07 37.2**	**-0.8**
MYKOM	**Kota Tinggi**	**23.37**	**261**	P	**P**	**15 07 36.9**	**-1.1**
CBJI	**Citeko**	**23.47**	**239**	P	**P**	**15 07 39.1**	**+0.1**
	comp=E,487nm,1.1s,comp=E,8μm,mb5.7						
DBJI	**Dramaga**	**23.62**	**239**	P	**P**	**15 07 41.4**	**+1.0**
	comp=E,159nm,1.3s,mb5.2						
KGM	**Kluang**	**23.85**	**262**	⇑P	**P**	**15 07 42.1**	**-0.4**
KLI	**Kotabumi**	**24.48**	**245**	P	**P**	**15 07 50.3**	**+2.1**
	comp=E,194nm,1.0s,mb5.4						
PMG	**Port Moresby**	**25.26**	**127**	*e*P	**P**	**15 07 54.7**	**-0.6**
	comp=E,18nm,0.8s,mb4.6						
PMG	**Port Moresby**	**25.26**	**127**	*i* P	**P**	**15 07 57.1**	**+1.8**
RGRI	**Rengat**	**25.31**	**257**	P	**P**	**15 07 58.7**	**+2.9**
	comp=E,363nm,1.1s,mb5.7						
FRIM	**Kepong**	**25.35**	**265**	⇑P	**P**	**15 07 55.3**	**-0.7**
CBIJ	**Chichi jima**	**25.61**	**33**	P	**P**	**15 07 56.9**	**-1.3**
	comp=E,479nm,0.4s,mb6.3,baz=231,slow=3.7,SNR=67						
CBIJ				LR	LR	15 15 49.7	
	comp=E,669nm,21.1s,baz=343,slow=31						
SSE	**Sheshan**	**25.64**	**349**	P	**P**	**15 07 55.9**	**-2.5**
SSE				XP	sP	15 08 24.6	-2.6
SSE				S	**S**	**15 12 21.8**	**+1.1**
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,248nm,6.9s						
SSE				LR	LR		
	comp=N,236nm,25.4s						
SSE				LR	LR		
	comp=E,134nm,25.8s						
SSE				LR	LR		
	comp=Z,291nm,25.9s						
IPM	**Ipoh**	**25.82**	**268**	⇓P	**P**	**15 07 59.6**	**-0.8**
IPM	**Ipoh**	**25.82**	**268**	P	**P**	**15 07 59.0**	**-1.4**
	comp=Z,95nm,1.5s,comp=Z,1μm,mb5.0						
KSI	**Kapahiang**	**26.08**	**249**	P	**P**	**15 08 02.4**	**-0.3**
	comp=Z,229nm,1.0s,comp=Z,5μm,mb5.6						
KULM	**Kulim**	**26.15**	**270**	⇑P	**P**	**15 08 03.4**	**+0.1**
SNG	**Songkhla**	**26.16**	**274**	P	**P**	**15 08 02.0**	**-1.4**
	comp=Z,120nm,0.7s,mb5.4						
WRAB	**Tennant Creek**	**26.69**	**164**	P	**P**	**15 08 08.4**	**+0.3**
	comp=Z,415nm,0.7s,mb6.1,SNR=30						
WRAB	**Tennant Creek**	**26.69**	**164**	⇓*e*P	**P**	**15 08 07.8**	**-0.2**
	comp=Z,74nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**26.69**	**164**	⇓*e*P	**P**	**15 08 07.8**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**26.69**	**164**	P	**P**	**15 08 08.6**	**+0.5**
	comp=Z,134nm,1.1s,comp=Z,1μm,mb5.4						
WRA	**Warramunga Arr**	**26.70**	**164**	P	**P**	**15 08 08.1**	**-0.1**
	comp=Z,24nm,0.6s,mb4.9,baz=344,slow=10.0,SNR=99						
WRA				PcP	PcP	15 11 30.2	+0.2
	comp=Z,7.5nm,0.5s,baz=334,slow=2.3,SNR=5.0						
WRA				S	**S**	**15 12 36.3**	**-1.4**
	comp=Z,5.5nm,1.1s,baz=331,slow=15,SNR=5.1						
WRA				ScP	ScP	15 15 02.7	-0.1
	comp=Z,8.3nm,0.9s,baz=346,slow=3.7,SNR=8.0						
WRA				PKiKP	PKiKP	15 19 07.8	-0.7
	comp=Z,0.5nm,0.4s,baz=313,slow=1.3,SNR=12						
WRA				P3KPbc		15 40 48.0	
	comp=Z,0.7nm,0.6s,baz=158,slow=4.0,SNR=8.8						
WRA	**Warramunga Arr**	**26.70**	**164**	P	**P**	**15 08 08.1**	**-0.1**
WRA				PcP	PcP	15 11 30.2	+0.2
WRA				S	**S**	**15 12 36.3**	**-1.4**
WRA				ScP	ScP	15 15 02.7	-0.1
WRA	**Warramunga Arr**	**26.70**	**164**	P	**P**	**15 08 08.1**	**0.0**
WRA						15 11 30.2	
WRA				S	**S**	**15 12 36.3**	**-1.4**
WB2	**Warramunga Arr**	**26.70**	**164**	*e*P	**P**	**15 08 08.0**	**-0.2**
WB2				*e*S	**S**	**15 12 34.4**	**-3.3**
WB2				*e*SCP	ScP	15 15 04.3	+1.5
WB2	**Warramunga Arr**	**26.70**	**164**	⇓*e*P	**P**	**15 08 07.9**	**-0.2**
WB2				*e*ScP	ScP	15 15 03.3	+0.5
NJ2	**Nanjing**	**27.09**	**345**	*e*P	**P**	**15 08 12.8**	**+1.3**
NJ2				AP	pP	15 08 34.3	+3.7
NJ2				XP	sP	15 08 46.0	+5.7
NJ2				PP		15 09 03.3	
NJ2				S	**S**	**15 12 41.0**	**-2.7**
NJ2				XS	sS	15 13 19.0	+2.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,40nm,4.6s						
NJ2				LR	LR		
	comp=N,230nm,23.2s						
NJ2				LR	LR		
	comp=E,620nm,27.3s						
NJ2				LR	LR		
	comp=Z,540nm,19.0s						
WHN	**Wuhan**	**27.21**	**336**	⇑P	**P**	**15 08 11.8**	**-0.9**
WHN				XP	sP	15 08 40.1	-1.4
WHN				S	**S**	**15 12 46.8**	**+1.1**
WHN				PCS	PcS	15 15 08.9	-3.8
WHN				AMB	AMB		
	comp=Z,149nm,1.0s,mb5.5						
WHN				AMB	AMB		
	comp=Z,834nm,5.2s						
PPI	**Padang Panjang**	**27.22**	**257**	P	**P**	**15 08 11.1**	**-1.9**
	comp=Z,115nm,1.5s,comp=Z,1μm,mb5.2						
PDSI	**Padang**	**27.27**	**256**	P	**P**	**15 08 12.7**	**-0.7**
	comp=Z,242nm,1.2s,comp=Z,2μm,mb5.6						
NNT	**Nongplab**	**27.62**	**286**	P	**P**	**15 08 19.6**	**+3.1**
MBWA	**Marble Bar**	**27.80**	**194**	*e*P	**P**	**15 08 17.5**	**-0.5**
	comp=Z,84nm,1.0s,mb5.2						
MBWA				*e*PcP	PcP	15 11 32.1	-0.4
MBWA	**Marble Bar**	**27.80**	**194**	P	**P**	**15 08 18.7**	**+0.7**
	comp=Z,92nm,1.1s,mb5.2						
NST	**Nakhon Sawan**	**28.01**	**292**	P	**P**	**15 08 19.0**	**-1.0**
GYA	**Guiyang**	**28.13**	**319**	⇓*i*P	**P**	**15 08 22.4**	**+1.5**
GYA				AP	pP	15 08 40.4	+0.4
GYA				XP	sP	15 08 49.4	-0.3
GYA				PP	PP	15 09 16.0	-10
GYA				S	**S**	**15 13 00.1**	**-0.1**
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,330nm,7.0s						
GYA				LR	LR		
	comp=N,1μm,13.3s						
GYA				LR	LR		
	comp=E,910nm,12.8s						
GYA				LR	LR		
	comp=Z,1μm,12.0s						
BDT	**Bhumibol Dam**	**29.53**	**295**	P	**P**	**15 08 33.0**	**-0.5**
JHJ	**Hachijo jima 2**	**29.61**	**22**	LR	LR	15 19 19.0	
	comp=Z,567nm,19.3s,baz=262,slow=34						
CM31	**Chiang Mai Arr**	**30.00**	**297**	*e*P	**P**	**15 08 36.3**	**-1.3**
	comp=Z,22nm,0.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**30.00**	**297**	P	**P**	**15 08 36.5**	**-1.1**
	comp=Z,21nm,0.7s,mb4.9,baz=115,slow=7.2,SNR=113						
CMAR				PcP	PcP	15 11 39.3	+1.1
	comp=Z,10nm,0.7s,baz=139,slow=0.8,SNR=14						
CMAR				ScP	ScP	15 15 14.4	+1.3
	comp=Z,13nm,0.9s,baz=125,slow=1.5,SNR=28						
CMAR				PKiKP	PKiKP	15 19 10.3	-0.3
	comp=Z,0.7nm,0.6s,baz=253,slow=1.6,SNR=4.3						
CMAR				LR	LR	15 22 44.5	
	comp=Z,399nm,18.3s,baz=303,slow=40						
CMAR	**Chiang Mai Arr**	**30.00**	**297**	P	**P**	**15 08 36.5**	**-1.1**
CMAR				PcP	PcP	15 11 39.3	+1.1
CMAR				ScP	ScP	15 15 14.4	+1.3
CMAR	**Chiang Mai Arr**	**30.00**	**297**	P	**P**	**15 08 36.5**	**-1.1**
CMAR						15 11 39.3	
KMI	**Kunming**	**30.03**	**312**	⇑P	**P**	**15 08 38.3**	**+0.5**
KMI				AP	pP	15 08 59.1	+2.1
KMI				XP	sP	15 09 09.0	+2.3
KMI				PP	PP	15 09 39.3	-7.7
KMI				S	**S**	**15 13 29.5**	**-0.6**
KMI				XS	sS	15 14 04.3	+1.1
KMI				AMB	AMB		
	comp=Z,107nm,0.8s,mb5.5						
KMI				AMB	AMB		
	comp=Z,128nm,3.1s						
KMI				LR	LR		
	comp=N,817nm,14.8s						
KMI				LR	LR		
	comp=E,577nm,13.2s						
KMI				LR	LR		
	comp=Z,647nm,18.7s						
CHG	**Chiang Mai**	**30.12**	**298**	⇑P	**P**	**15 08 37.6**	**-1.1**
	comp=Z,38nm,0.6s,mb5.2						
CHTO	**Chiang Mai**	**30.12**	**298**	⇓P	**P**	**15 08 38.3**	**-0.4**
	SNR=6.6						
CHTO	**Chiang Mai**	**30.12**	**298**	⇑*i*P	**P**	**15 08 37.6**	**-1.1**
	comp=Z,27nm,0.6s,mb5.0						
CHTO				*e*PcP	PcP	15 11 39.5	+1.0
CHTO				*e*ScP	ScP	15 15 13.5	-0.1
CHTO	**Chiang Mai**	**30.12**	**298**	⇑*i*P	**P**	**15 08 37.6**	**-1.1**
CHTO				*e*		15 11 39.5	
CHTO				*e*		15 15 13.5	
CHTO				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
ASAR	**Alice Springs**	**30.17**	**167**	P	**P**	**15 08 38.8**	**-0.2**
	comp=Z,17nm,0.6s,mb4.9,baz=342,slow=7.2,SNR=153						
ASAR				PcP	PcP	15 11 39.1	+0.6
	comp=Z,20nm,0.5s,baz=348,slow=2.3,SNR=23						
ASAR				ScP	ScP	15 15 14.4	+0.8
	comp=Z,7.4nm,1.0s,baz=340,slow=3.0,SNR=8.5						
ASAR				PKiKP	PKiKP	15 19 09.6	-1.0
	comp=Z,2.3nm,0.8s,baz=335,slow=6.8,SNR=8.1						
ASAR				P3KPbc		15 40 30.9	
	comp=Z,0.8nm,0.9s,baz=169,slow=4.0,SNR=6.9						
ASAR	**Alice Springs**	**30.17**	**167**	P	**P**	**15 08 38.8**	**-0.2**
ASAR						15 11 39.1	
ASAR						15 15 14.4	
KS15	**Wonju Array Si**	**31.41**	**1**	*e*P	**P**	**15 08 49.3**	**-0.4**
KSRS	**Korea Array**	**31.42**	**2**	P	**P**	**15 08 48.9**	**-1.0**
	comp=Z,4.9nm,0.8s,mb4.3,baz=181,slow=9.8,SNR=11						
KSRS				PcP	PcP	15 11 42.0	+0.4
	comp=Z,4.2nm,0.8s,baz=189,slow=2.2,SNR=7.1						
KSRS				ScP	ScP	15 15 19.1	+1.6
	comp=Z,6.5nm,0.9s,baz=187,slow=3.5,SNR=4.6						
KSRS				LR	LR	15 21 15.7	
	comp=Z,303nm,21.5s,baz=182,slow=36						
BSI	**Banda Aceh**	**31.46**	**271**	P	**P**	**15 08 51.7**	**+1.1**
	comp=Z,28nm,1.6s,mb4.7						
TIA	**Tai'an**	**31.48**	**345**	*e*P	**P**	**15 08 47.0**	**-3.4**
CTA	**Charters Tower**	**32.07**	**144**	*e*P	**P**	**15 08 57.3**	**+1.5**
	comp=Z,25nm,0.6s,mb5.1						
CTA				*e*PCP	PcP	15 11 45.3	+1.6
CTA				*e*SCP	ScP	15 15 22.0	+2.0
CTA	**Charters Tower**	**32.07**	**144**	P	**P**	**15 08 57.4**	**+1.6**
	comp=Z,33nm,0.7s,mb5.2,baz=319,slow=12,SNR=34						
CTA				PcP	PcP	15 11 45.8	+2.1
	comp=Z,16nm,1.0s,baz=340,slow=2.1,SNR=4.2						
CTA				ScP	ScP	15 15 22.4	+2.5
	comp=Z,18nm,0.9s,baz=20,slow=2.1,SNR=5.0						
CTA				LR	LR	15 21 33.2	
	comp=Z,545nm,21.8

FORT Forrest 36.49 178 *e*P **P** **15 09 33.8 0.0**
comp=Z,219nm,0.6s,mb6.3
FORT *e*PCP PcP 15 11 56.9 +0.8
FORT *e*SCP ScP 15 15 36.2 +0.7
FORT Forrest 36.49 178 *e*P **P** **15 09 33.8 0.0**
comp=Z,29nm,0.6s,mb5.4
LZH Lanzhou 36.76 328 ⇑P **P** **15 09 37.0 +0.9**
LZH AP pP 15 09 55.6 0.0
LZH XP sP 15 10 04.5 -0.7
LZH PP PP 15 11 05.0 +3.7
LZH PCP PcP 15 11 58.0 +1.1
LZH S **S** **15 15 15.3 +1.4**
LZH PCS PcS 15 15 45.1 +0.2
LZH XS sS 15 15 48.6 +1.1
LZH SCS ScS 15 19 43.0 -0.5
LZH AMB AMB
comp=Z,109nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,426nm,5.3s
LZH LR LR
comp=E,1μm,15.3s
LZH LR LR
comp=Z,2μm,18.0s
IMP Imphal 36.77 304 *e*P **P** **15 09 36.0 -0.4**
IMP *ex* x 15 11 57.0
HHC Hu-ho-hao-te 37.42 341 *e*P **P** **15 09 43.6 +2.0**
HHC AP pP 15 10 04.4 +3.2
HHC XP sP 15 10 10.4 -0.4
HHC PP PP 15 11 13.4 +4.9
HHC S **S** **15 15 22.0 -1.8**
HHC PCS PcS 15 15 48.1 +0.9
HHC XS sS 15 16 01.3 +3.8
HHC AMB AMB
comp=Z,253nm,1.1s,mb6.1
HHC AMB AMB
comp=Z,913nm,3.6s
HHC LR LR
comp=N,235nm,17.8s
HHC LR LR
comp=E,258nm,17.8s
HHC LR LR
comp=Z,362nm,19.0s
BTO Baotou 37.73 339 *e*P **P** **15 09 45.5 +1.2**
CN2 Changchun 37.77 358 *e*P **P** **15 09 47.1 +2.6**
CN2 *e*S **S** **15 15 31.8 +2.7**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.6
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,500nm,18.0s
CN2 LR LR
comp=Z,300nm,20.0s
KLBR Kellerberrin 38.29 193 *e*P **P** **15 09 49.0 -0.1**
comp=Z,74nm,0.9s,mb5.5
KLBR *e*PCP PcP 15 12 02.7 +1.1
KLBR *e*SCP ScP 15 15 42.9 +0.7
MDJ Mudanjiang 38.63 3 P **P** **15 09 50.9 -0.9**
MDJ AP pP 15 10 09.8 -1.6
MDJ XP sP 15 10 19.5 -1.5
MDJ S **S** **15 15 40.8 -1.3**
MDJ SCP ScP 15 15 42.8 -0.5
MDJ PCS PcS 15 15 51.8 +0.1
MDJ AMB AMB
comp=Z,49nm,1.1s,mb5.2
MDJ AMB AMB
comp=Z,134nm,4.4s
MDJ LR LR
comp=N,517nm,35.6s
MDJ LR LR
comp=E,181nm,29.9s
MDJ LR LR
comp=Z,615nm,37.0s
MDJ Mudanjiang 38.63 3 *e*P **P** **15 09 49.1 -2.6**
comp=Z,51nm,0.9s,mb5.3
SHL Shillong 38.78 304⇑*i*P **P** **15 09 53.5 +0.2**
SHL *ex* x 15 13 47.5
EIDS Eidsvold 38.96 144 *e*P **P** **15 09 54.3 -0.5**
comp=Z,116nm,1.1s,mb5.6
MUN Mundaring 39.02 195 *e*P **P** **15 09 55.8 +0.6**
NWAO Narrogin (SRO) 39.69 193 *e*P **P** **15 10 00.9 +0.1**
comp=Z,105nm,0.9s,mb5.7
NWAO Narrogin (SRO) 39.69 193 *e*P **P** **15 10 00.9 +0.2**
NWAO pmax pmax
comp=Z,105nm,0.9s
STKA Stephens Creek 40.09 160 *e*P **P** **15 10 04.5 +0.5**
comp=Z,44nm,0.9s,mb5.3
STKA *e*PCP PcP 15 12 08.4 +1.1
STKA Stephens Creek 40.09 160 P **P** **15 10 04.6 +0.5**
comp=Z,61nm,0.9s,mb5.4,baz=337,slow=8.0,SNR=62
STKA PcP PcP 15 12 08.3 +1.0
comp=Z,18nm,0.6s,baz=328,slow=6.9,SNR=4.0
STKA LR LR 15 27 11.4
comp=Z,404nm,20.4s,baz=133,slow=37
STKA Stephens Creek 40.09 160 P **P** **15 10 04.6 +0.5**
STKA PcP PcP 15 12 08.3 +1.0
STKA LR LR 15 27 11.4
ASAJ Asahikawa 40.48 17 P **P** **15 10 08.1 +1.0**
comp=Z,48nm,0.6s,mb5.5,baz=217,slow=8.7,SNR=41
ASAJ LR LR 15 26 44.3
comp=Z,371nm,19.4s,baz=359,slow=36
ASAJ Asahikawa 40.48 17 P **P** **15 10 08.1 +1.0**
ASAJ pmax pmax
comp=Z,48nm,0.6s
ASAJ MLR MLR
comp=Z,371nm,19.4s
LSA Lhasa 41.18 309 *e*P **P** **15 10 13.9 +0.8**
comp=Z,17nm,0.5s,mb5.1
LSA Lhasa 41.18 309 *e*P **P** **15 10 14.0 +0.8**
LSA pmax pmax
comp=Z,17nm,0.5s,mb5.1
GTA Gaotai 41.36 328⇑*i*P **P** **15 10 14.8 +0.4**
GTA AP pP 15 10 35.4 +1.1
GTA XP sP 15 10 45.6 +1.8
GTA PP PP 15 11 55.0 +3.5
GTA PCP PcP 15 12 11.8 +0.5
GTA SCP ScP 15 15 55.0 +0.9
GTA PCS PcS 15 16 01.8 -0.8
GTA S **S** **15 16 23.4 +0.4**
GTA XS sS 15 16 59.1 +2.1
GTA AMB AMB
comp=Z,106nm,1.2s,mb5.5
GTA AMB AMB
comp=Z,403nm,4.8s
GTA LR LR
comp=N,835nm,20.1s
GTA LR LR
comp=E,594nm,19.8s
GTA LR LR
comp=Z,961nm,24.6s
TAPN Taplejung 42.92 304 *e*P **P** **15 10 27.0 -0.3**
comp=Z,64nm,0.4s,mb5.7
HABR Khabarovsk 42.98 8⇑*e*P **P** **15 10 27.0 -0.5**
HABR *e**PP pP 15 10 45.4 -2.0
HABR *e* 15 12 06.5
HABR *e* 15 12 15.0
HABR *e*PPP 15 12 42.2
HABR *e*S **S** **15 16 46.4 -0.2**
HABR *e*SS SS 15 20 02.1 +0.5
HABR *e* 15 20 19.5
HABR *e*SSS 15 20 43.8
HABR pmax pmax
comp=Z,82nm,1.2s,mb5.3
ODAN Odare 43.00 304 *e*P **P** **15 10 27.3 -0.7**
comp=Z,123nm,0.6s,mb5.8
YSS Yuzh-Sakhalins 43.12 16 *i*P **P** **15 10 27.8 -0.8**
ARMA Armidale 43.18 148 *e*P **P** **15 10 30.5 +1.2**
ARMA *e*PCP PcP 15 12 20.1 +2.6
ARMA Armidale 43.18 148 *e*P **P** **15 10 30.0 +0.7**
comp=Z,0.8nm,0.7s
BOK Bokaro 43.25 299 *e*P **P** **15 10 29.4 -0.7**
BOK AMb AMB 15 10 34.1
comp=Z,41nm,0.8s,mb5.2
KLR Kul'dur 43.37 5 *e*P **P** **15 10 24.5 -6.1**
KLR MLR MLR
comp=Z,700nm,14.0s
HIA Hailar 43.64 353 *e*PCP PcP 15 12 19.3 +0.6
comp=Z,58nm,1.0s
RAMN Ramite 43.69 303 *e*P **P** **15 10 33.0 -0.5**
comp=Z,90nm,0.5s,mb5.7
VIS Vishakhapatnam 44.14 289 *e*P **P** **15 10 36.5 -0.7**
VIS AMb AMB 15 10 38.7
comp=Z,67nm,0.8s,mb5.5

JIRN Jiri 44.29 304 *e*P **P** **15 10 38.0 -0.3**
comp=Z,51nm,0.4s,mb5.7
GUN Gumba 44.64 304 *e*P **P** **15 10 40.6 -0.5**
comp=Z,183nm,0.7s,mb5.9
PKI Pulchoki 44.90 304 *e*P **P** **15 10 42.2 -1.0**
PKIN Phulchoki 44.91 304 *e*P **P** **15 10 42.3 -1.0**
KKN Kakani 45.09 304 *e*P **P** **15 10 43.7 -1.0**
ULN Ulaanbaatar 45.13 341⇑P **P** **15 10 45.7 +1.0**
SNR=74
ULN Ulaanbaatar 45.13 341⇓*e*P **P** **15 10 43.8 -0.9**
DMN Daman 45.17 303 *e*P **P** **15 10 44.5 -0.8**
SONM Songino Array 45.32 341 P **P** **15 10 46.1 -0.1**
comp=Z,92nm,1.0s,mb5.5,baz=159,slow=5.1,SNR=165
SONM PcP PcP 15 12 25.3 +0.8
comp=Z,10nm,0.9s,baz=150,slow=2.9,SNR=4.9
SONM ScP ScP 15 16 12.8 +2.8
comp=Z,2.2nm,0.8s,baz=132,slow=3.9,SNR=3.7
SONM LR LR 15 29 47.6
comp=Z,168nm,21.0s,baz=35,slow=36
SONM Songino Array 45.32 341 P **P** **15 10 46.1 -0.1**
SONM 15 12 25.3
GKN Gorkha 45.69 304 *e*P **P** **15 10 48.3 -1.2**
comp=Z,43nm,0.5s,mb5.4
CAN Canberra 45.97 155 *e*P **P** **15 10 52.7 +1.2**
CNB Canberra Magne 46.12 154 *e*P **P** **15 10 55.2 +2.6**
KOLN Koldanda 46.48 303 *e*P **P** **15 10 55.1 -0.5**
DANN Dangsing 46.54 304 *e*P **P** **15 10 55.3 -0.8**
comp=Z,138nm,0.5s,mb5.9
TOO Toolangi 46.59 160 *e*P **P** **15 10 57.9 +1.6**
PYUN Piuthan 47.09 303 *e*P **P** **15 10 59.8 -0.6**
comp=Z,126nm,0.5s,mb5.9
DZM Mont Dzumac 47.66 127 *e*P **P** **15 11 05.6 +0.7**
DZM Mont Dzumac 47.66 127 *e*P **P** **15 11 05.3 +0.5**
ZAK Zakamensk 48.56 340 *e*P **P** **15 11 10.0 -1.3**
ZAK *e* 15 12 35.7
ZAK *e* 15 18 12.1
ZAK pmax pmax
comp=Z,22nm,1.1s,mb5.0
HYB Hyderabad 48.59 288 *e*P **P** **15 11 10.0 -2.2**
HYB Hyderabad 48.59 288 *i*P **P** **15 11 11.0 -1.2**
HYB *e*pP pP 15 11 31.5 -1.0
HYB *e*sP sP 15 11 43.0 +1.1
HYB *e*PcP PcP 15 12 37.5 +0.7
HYB *e*PP PP 15 13 05.0 -0.8
HYB *e*ScP ScP 15 16 26.5 +2.1
HYB *e*S **S** **15 18 08.0 -0.2**
NGP Nagpur 48.73 293⇑*i*x x 15 11 07.2
NGP *ex* x 15 11 08.7
comp=Z,90nm,0.6s
KOD Kodaikanal 49.11 278 *e*P **P** **15 11 15.1 -1.2**
KOD AMb AMB 15 11 20.5
comp=Z,40nm,1.3s,mb5.2
TLY Talaya 49.54 341 P **P** **15 11 20.9 +2.0**
comp=Z,742nm,0.8s,mb6.7,SNR=12
TLY Talaya 49.54 341⇑P **P** **15 11 20.3 +1.4**
SNR=21
TLY Talaya 49.54 341⇓*e*P **P** **15 11 20.2 +1.4**
TLY Talaya 49.54 341 *e*P **P** **15 11 19.5 +0.7**
TLY *e* 15 12 39.0
TLY *e* 15 13 14.9
TLY *e*S **S** **15 18 25.0 +4.6**
TLY *e*SS ScS 15 21 02.1 -0.3
TLY pmax pmax
comp=Z,125nm,0.9s,mb5.8
LGTI Lohaghat 49.81 304 *e*P **P** **15 11 20.3 -1.0**
LGTI *ex* x 15 12 41.5
IRK Irkutsk 49.83 342⇑*i*P **P** **15 11 21.8 +0.8**
IRK *e* 15 11 34.5
IRK *e* pP 15 11 41.3 -0.1
IRK *e* 15 18 33.3
IRK pmax pmax
comp=Z,117nm,1.8s,mb5.5
PTH Pithoragarh 49.87 304 *e*P **P** **15 11 21.0 -0.7**
PTH *ex* x 15 12 42.0
MOY Mondy 50.42 339 *e*P **P** **15 11 27.6 +2.1**
MOY pmax pmax
comp=Z,19nm,1.8s,mb4.7
AKL Akola 50.52 292 *e*P **P** **15 11 26.1 -0.7**
AKL AMb AMB 15 11 27.2
comp=Z,172nm,1.3s,mb5.9
LATR Latur 50.61 289 *e*P **P** **15 11 26.0 -1.5**
BHPL Bhopal 50.62 295 *e*P **P** **15 11 26.1 -1.4**
BHPL AMb AMB 15 11 28.1
comp=Z,189nm,0.7s,mb6.2
CLNS Chul'man 50.82 359 *e*P **P** **15 11 28.7 +0.3**
CLNS *e**PP pP 15 11 36.8 -12
CLNS *e* 15 12 41.7
CLNS pmax pmax
comp=Z,38nm,0.7s,mb5.5
CLNS pmax pmax
comp=N,20nm,0.7s
CLNS pmax pmax
comp=E,14nm,0.8s
WMQ Urumqi 51.08 324⇑*i*P **P** **15 11 30.5 -0.1**
WMQ AP pP 15 11 53.5 +2.4
WMQ PP PP 15 13 29.5 +1.5
WMQ S **S** **15 18 38.5 -3.5**
WMQ XS sS 15 19 19.5 +2.5
WMQ SCS ScS 15 21 07.5 -5.8
WMQ AMB AMB
comp=Z,75nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,152nm,4.0s
WMQ LR LR
comp=N,2μm,16.0s
WMQ LR LR
comp=E,748nm,16.0s
WMQ LR LR
comp=Z,845nm,16.0s
DDI Dehra Dun 51.89 304 *ex* x 15 11 30.5
NDI New Delhi 52.11 302 *e*P **P** **15 11 36.0 -2.6**
KAD Karad 52.73 287 *e*P **P** **15 11 41.7 -1.6**
BOD Bodaibo 52.76 351 *e*P **P** **15 11 42.7 -0.1**
BOD pmax pmax
comp=Z,58nm,1.0s,mb5.6
SMLA Simla 52.86 305⇑*i*P **P** **15 11 44.0 0.0**
SMLA *ex* x 15 11 45.0
comp=Z,1μm,0.3s
SMLA *i*x x 15 19 02.2
SDNR Sundarnagar 53.14 305 *e*P **P** **15 11 46.6 +0.5**
SDNR *ex* x 15 12 54.6
POO Poona 53.17 289⇑*i*P **P** **15 11 43.0 -3.6**
comp=Z,30nm,1.0s,mb5.3
PETK Petropavlovsk- 53.37 23 P **P** **15 11 48.7 +1.3**
comp=Z,23nm,0.7s,mb5.3,baz=189,slow=3.3,SNR=32
PETK LR LR 15 33 06.9
comp=Z,138nm,18.6s,baz=215,slow=34
PET Petropavlovsk 53.67 23 *e*P **P** **15 11 41.9 -7.7**
comp=Z,35nm,0.4s,mb5.7
PET Petropavlovsk 53.67 23 *i*P **P** **15 11 50.3 +0.7**
PET pmax pmax
comp=Z,20nm,0.5s,mb5.4
AJM Ajmer 53.78 299 *e*P **P** **15 11 49.4 -1.5**
AJM AMb AMB 15 11 51.2
comp=Z,69nm,0.6s,mb5.8
DLH Dalhousie 54.27 306 *e*P **P** **15 11 53.0 -1.3**
DLH *ex* x 15 11 59.0
THN Thein Dam 54.44 306 *e*P **P** **15 11 53.5 -2.1**
MK31 Makanchi Array 55.90 324⇑*i*P **P** **15 12 05.6 -0.2**
MK31 *e*PcP PcP 15 13 03.9 +0.3
MK31 *e*ScP ScP 15 16 56.8 +1.3
MK31 Makanchi Array 55.90 324⇑*i*P **P** **15 12 05.6 -0.2**
MK31 *e* 15 13 03.9
MKAR Makanchi Array 55.90 324 P **P** **15 12 05.7 -0.1**
comp=Z,64nm,0.6s,mb5.9,baz=119,slow=7.6,SNR=645
MKAR PcP PcP 15 13 03.8 +0.2
comp=Z,32nm,0.7s,baz=110,slow=5.3,SNR=8.5
MKAR ScP ScP 15 16 55.5 0.0
comp=Z,5.1nm,0.7s,baz=115,slow=5.5,SNR=6.4
MKAR PKP2bc 15 42 15.0
comp=Z,1.4nm,1.0s,baz=327,slow=2.0,SNR=6.4
MKAR Makanchi Array 55.90 324 P **P** **15 12 05.7 -0.1**
MKAR PcP PcP 15 13 03.8 +0.2
MKAR ScP ScP 15 16 55.5 0.0
MKAR ⇑*e* 15 42 15.0
MKAR Makanchi Array 55.90 324 P **P** **15 12 05.7 -0.1**
MKAR 15 13 03.8
YAK Yakutsk 56.05 2⇑*i*P **P** **15 12 06.1 -0.5**
YAK Yakutsk 56.05 2 *e*P **P** **15 12 06.0 -0.6**
YAK *e* 15 13 02.7
YAK *e* 15 14 11.9
YAK *e*PPP 15 15 23.0
YAK *e*S **S** **15 19 57.0 +8.4**
YAK *e**SS sS 15 20 15.1 -9.0

YAK *e* 15 21 50.2
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,26nm,1.0s
YAK pmax pmax
comp=Z,75nm,0.8s,mb5.8
YAK pmax pmax
comp=Z,125nm,4.3s
YAK smax
comp=E,285nm,2.8s
YAK smax
comp=N,482nm,4.6s
YAK MLR MLR
comp=Z,122nm,15.0s
KSH Kashi 56.66 314 P **P** **15 12 12.9 +1.5**
KSH AP pP 15 12 32.1 -0.1
KSH XP sP 15 12 40.8 -0.7
KSH *e*PP PP 15 14 20.4 +2.1
KSH *e*S **S** **15 19 54.8 -2.8**
KSH *e*SCS ScS 15 21 51.0 -2.1
KSH AMB AMB
comp=Z,242nm,1.1s,mb6.1
KSH AMB AMB
comp=Z,1μm,4.3s
KSH LR LR
comp=N,520nm,4.8s
KSH LR LR
comp=E,558nm,9.1s
KSH LR LR
comp=Z,861nm,6.2s
KRAR Krasnoyarsk 56.81 338⇓*e*P **P** **15 12 13.7 +1.6**
KRAR pmax pmax
comp=Z,147nm,1.2s,mb5.9
ULHL Ulahol 57.55 317 P **P** **15 12 18.8 +1.2**
SNR=5.6
BHJ Bhuj 57.66 294 *e*P **P** **15 12 17.7 -1.0**
KZA Kyzart 58.16 317 P **P** **15 12 23.3 +1.4**
SNR=24
TKM2 Tokmak 2 58.27 318⇑*e*P **P** **15 12 22.6 0.0**
comp=Z,36nm,0.9s,mb5.4
TKM2 *e*ScP PcP 15 13 13.0 0.0
TKM2 *e*ScP ScP 15 17 06.2 +0.2
TKM2 Tokmak 2 58.27 318⇑*e*P **P** **15 12 22.6 0.0**
TKM2 *e* 15 13 13.0
TKM2 pmax pmax
comp=Z,36nm,0.9s,mb5.4
TKM2 Tokmak 2 58.27 318 P **P** **15 12 22.7 +0.1**
SNR=53
KBK Karagaybulak 58.60 317 P **P** **15 12 25.3 +0.4**
SNR=32
UCH Uchtor 58.73 316 *e*P **P** **15 12 26.4 +0.6**
comp=Z,22nm,0.9s,mb5.2
UCH Uchtor 58.73 316 P **P** **15 12 27.3 +1.5**
SNR=11
ZAA0 Zalesovo Array 58.76 332⇑*e*P **P** **15 12 24.6 -1.2**
ZAA0 *e*PcP PcP 15 13 13.1 -1.6
ZALV Zalesovo Beam 58.76 332 P **P** **15 12 24.7 -1.1**
comp=Z,101nm,0.8s,mb5.9,baz=122,slow=7.2,SNR=147
ZALV LR LR 15 41 28.4
comp=Z,63nm,19.1s,baz=278,slow=40
ZALV PKP2bc 15 42 09.6
comp=Z,3.7nm,0.9s,baz=265,slow=3.7,SNR=8.6
ZALV Zalesovo Beam 58.76 332 P **P** **15 12 24.7 -1.1**
ZALV LR LR 15 41 28.4
ZALV ⇑*e* 15 42 09.6
CHMS Chumysh 58.87 317 P **P** **15 12 26.2 -0.6**
SNR=16
FRU Bishkek 58.89 317 *e*P **P** **15 12 28.0 +1.1**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.4
AAK Ala-Archa 58.90 317 P **P** **15 12 27.8 +0.8**
comp=Z,152nm,0.4s,mb6.4,SNR=23
AAK Ala-Archa 58.90 317 P **P** **15 12 28.0 +1.0**
SNR=8.2
USP Ospenovka 59.14 318 P **P** **15 12 28.5 -0.2**
SNR=87
AML Almayashu 59.25 316⇑*e*P **P** **15 12 29.8 +0.4**
comp=Z,52nm,0.8s,mb5.6
AML *e*PcP PcP 15 13 17.5 +0.6
AML Almayashu 59.25 316 P **P** **15 12 30.9 +1.5**
EKS2 Erkin-Say 59.39 317⇑*i*P **P** **15 12 30.7 +0.3**
comp=Z,44nm,0.8s,mb5.5
EKS2 *e*PcP PcP 15 13 18.6 +1.1
EKS2 Erkin-Say 59.39 317 P **P** **15 12 30.9 +0.5**
SNR=43
SEY Seymchan 59.89 13⇓*e*P **P** **15 12 35.7 +2.3**
KURK Kurchatov 60.03 327 P **P** **15 12 34.7 +0.1**
comp=Z,2μm,0.6s
KURK Kurchatov 60.03 327⇑P **P** **15 12 34.8 +0.2**
SNR=101
KURK Kurchatov 60.03 327⇑*i*P **P** **15 12 34.3 -0.3**
comp=Z,341nm,0.8s,mb6.4
KURK Kurchatov 60.03 327⇑*i*P **P** **15 12 34.3 -0.3**
KURK pmax pmax
comp=Z,341nm,0.8s,mb6.4
NVS Novosibirsk 60.04 333⇑*i*P **P** **15 12 32.8 -1.8**
NVS *e*S **S** **15 20 33.0 -7.9**
NVS *e* 15 22 14.2
NVS pmax pmax
comp=Z,445nm,1.8s,mb6.2
NVS pmax pmax
comp=N,287nm,1.9s
NVS pmax pmax
comp=E,190nm,1.6s
NVS smax
comp=N,66nm,2.3s
NVS smax
comp=E,83nm,2.3s
KBL Kabul 60.37 306 *e*P **P** **15 12 36.3 -1.0**
comp=E,28nm,0.8s,mb5.3
KBL Kabul 60.37 306 *e*P **P** **15 12 36.3 -1.0**
KBL pmax pmax
comp=Z,27nm,0.8s,mb5.3
KK31 Karatay Array 61.79 316 *i*P **P** **15 12 46.0 -0.7**
RPZ Rata Peaks 63.43 146 P **P** **15 12 58.4 +0.9**
comp=Z,20nm,0.8s,mb5.1,baz=239,slow=2.3,SNR=9.2
AFI Afiamalu 63.94 109 LR LR 15 35 30.9
comp=Z,304nm,19.3s,baz=345,slow=31
URZ Urewera 64.00 138 P **P** **15 13 02.1 +0.7**
comp=Z,11nm,0.8s,mb4.7,baz=286,slow=7.7,SNR=3.5
VOSK Vostochnaya 65.17 326 P **P** **15 13 08.1 -0.7**
VOSK pmax pmax
comp=Z,103nm,0.7s,mb5.8
BVA0 Borovoye Array 65.62 326 *i*P **P** **15 13 11.2 -0.5**
BVA0 pmax pmax
comp=Z,61nm,1.3s,mb5.3
BVAR Borovoye Array 65.62 326 PKPPKP 15 41 54.9
comp=Z,1.1nm,0.8s,baz=279,slow=3.9,SNR=5.1
TIXI Tiksi 65.68 1⇑*e*P **P** **15 13 10.8 -1.0**
TIXI Tiksi 65.68 1 *e*P **P** **15 13 10.3 -1.5**
TIXI *e*S S 15 21 54.9 +3.9
TIXI pmax pmax
comp=Z,29nm,0.8s,mb5.2
TIXI MLR MLR
comp=Z,168nm,18.0s
BRVK Borovoye 65.69 326 P **P** **15 13 12.8 +0.6**
comp=Z,1μm,0.8s
BRVK Borovoye 65.69 326⇑P **P** **15 13 12.4 +0.2**
SNR=74
BRVK Borovoye 65.69 326⇑*i*P **P** **15 13 11.9 -0.3**
WBK Wadi Bani Khal 67.41 292⇓P **P** **15 13 23.0 -0.7**
SNR=11
BILL Bilibino 67.42 15⇓*e*P **P** **15 13 23.8 +0.9**
BILL Bilibino 67.42 15⇓*e*P **P** **15 13 23.7 +0.8**
BILL *e**PP pP 15 13 52.3 +8.0
BILL *e* 15 15 51.5
BILL pmax pmax
comp=Z,30nm,0.7s,mb5.2
BILL MLR MLR
comp=Z,100nm,17.0s
JMDO Jabal Madar 68.20 292⇑P **P** **15 13 28.1 -0.6**
SNR=26
BIDO Bidbid 68.23 293⇑P **P** **15 13 28.3 -0.5**
SNR=40
SMDO Samad 68.28 292⇓P **P** **15 13 28.7 -0.5**
SNR=14
HOQ Hoqain 68.98 293⇓P **P** **15 13 33.1 -0.4**
SNR=19
BSY Bisya 69.05 292⇑P **P** **15 13 33.5 -0.5**
SNR=9.8
ABKT Ailbek 69.70 308 P **P** **15 13 38.0 +0.3**
comp=Z,165nm,0.6s,mb6.0,SNR=9.1
NIKO Nikolski 69.95 35 *e*P **P** **15 13 38.1 -0.8**
comp=Z,13nm,0.4s,mb5.1

BANOM Banah 70.02 295 ⇓P P **15 13 39.7 -0.2**
SNR=8.8
HATD Hatta, Dubai 70.11 294 ⇓P P **15 13 40.1 -0.4**
SNR=13
UNV Unalaska Valle 71.55 35 *e*P P **15 13 49.1 +0.5**
comp=Z,44nm,0.8s,mb5.3
WHFO Wadi Hawf 72.19 287 ⇓P P **15 13 52.6 -0.5**
SNR=10
SVE Sverdlovsk 72.22 328⇓ *e*P P **15 13 52.3 -0.3**
SVE *e*S S 15 23 10.0 +1.3
SVE *e* 15 23 55.1
SVE pmax pmax
comp=Z,259nm,1.1s,mb6.0
CASY Casey 72.98 187 *e*P P **15 13 57.2 +0.4**
CASY Casey 72.98 187 *e*P P **15 13 57.0 +0.2**
comp=Z,105nm,0.8s,mb5.7
DRV Dumont d'Urvil 73.00 175 S S 15 23 18.0 +0.9
DRV SS SS 15 27 59.0 -0.6
DRV L 15 33 00.0
DRV R 15 38 00.0
ARU Arti 73.22 327 P P **15 13 57.3 -1.2**
comp=Z,1µm,0.7s,SNR=76
ARU Arti 73.22 327⇑ *i*P P **15 13 57.5 -1.0**
MIR Mirnyy 76.30 193⇑ *i*P P **15 14 16.0 0.0**
MIR *i* pP 15 14 34.0 -3.8
MIR pmax pmax
comp=Z,50nm,1.0s,mb5.2
UMR Umm Al-Rimmam 77.73 299 *e*P P **15 14 23.6 -1.2**
baz=299
UMR AMb AMB 15 14 25.4
comp=Z,106nm,1.4s,mb5.4,baz=299
KBD Kabd 77.75 298 *e*P P **15 14 23.8 -1.2**
baz=298
KBD AMb AMB 15 14 25.8
comp=Z,50nm,0.8s,mb5.3,baz=298
MIB Mutribah 78.06 299 *e*P P **15 14 25.3 -1.4**
baz=299
MIB AMb AMB 15 14 27.2
comp=Z,175nm,0.9s,mb5.8,baz=299
NAY Al-Naaiem 78.14 299 *e*P P **15 14 25.8 -1.4**
baz=299
NAY AMb AMB 15 14 27.4
comp=Z,55nm,1.0s,mb5.2,baz=299
OHAK Old Harbor 79.54 33 *e*P P **15 14 34.9 +0.7**
DGRG David-gareji 79.79 311 P P **15 14 36.9 +1.0**
KDAK Kodiak Island 79.97 32 P P **15 14 37.3 +0.8**
comp=Z,385nm,1.0s,mb6.2,SNR=14
KDAK Kodiak Island 79.97 32 P PcP 15 14 49.8 +6.0
comp=Z,48nm,0.7s,baz=262,slow=5.1,SNR=39
KDAK LR LR 15 50 41.2
comp=Z,202nm,18.2s,baz=273,slow=36
KDAK Kodiak Island 79.97 32 *e*P P **15 14 37.3 +0.8**
comp=Z,34nm,0.6s,mb5.3
KDAK Kodiak Island 79.97 32 *e*P P **15 14 37.3 +0.8**
KDAK pmax pmax
comp=Z,34nm,0.6s,mb5.3
MTA Mtatsminda 80.23 311 P P **15 14 38.6 +0.3**
GNI Garni 80.25 310 ⇓P P **15 14 38.5 +0.1**
SNR=12
GNI Garni 80.25 310⇑ *i*P P **15 14 39.2 +0.8**
TBLG Delisi 80.27 311 P P **15 14 38.9 +0.4**
IMA2 Indian Mountai 80.33 24 *e*P P **15 14 39.6 +1.3**
PPLA Purkeypile 80.63 27 *e*P P **15 14 41.0 +1.1**
comp=Z,18nm,0.6s,mb5.1
CHUM Lake Minchumin 80.67 26 *e*P P **15 14 41.4 +1.2**
comp=Z,24nm,0.7s,mb5.1
GOR Gori 80.74 311 P P **15 14 42.4 +1.4**
CLDR Caldiran 80.88 309 *e*P P **15 14 43.4 +1.6**
ONI Oni 81.23 312 P P **15 14 44.2 +0.5**
BPAW Bear Paw Mtn. 81.27 26 *e*P P **15 14 43.2 -0.2**
comp=Z,52nm,0.8s,mb5.4
SLKM Skilak Lake 81.38 30 *e*P P **15 14 44.0 0.0**
TRF Thorofare Moun 81.53 27 *e*P P **15 14 44.9 +0.2**
comp=Z,43nm,0.9s,mb5.3
AGRB Hanur-Agry 81.59 309 *e*P P **15 14 45.4 -0.2**
RC01 Rabbit Creek A 81.65 29 *e*P P **15 14 44.9 -0.5**
comp=Z,28nm,0.5s,mb5.3
SEW Seward 81.74 30 *e*P P **15 14 45.1 -0.9**
KIV Kislovodsk 81.79 313 P P **15 14 47.9 +1.4**
comp=Z,503nm,0.9s,mb6.3,SNR=9.8
KIV Kislovodsk 81.79 313 P P **15 14 46.7 +0.2**
SNR=19
KIV Kislovodsk 81.79 313⇑ *i*P P **15 14 46.5 0.0**
KIV Kislovodsk 81.79 313⇑ *i*P P **15 14 46.7 +0.2**
COLD Coldfoot 81.83 23 *e*P P **15 14 47.6 +1.3**
comp=Z,41nm,0.8s,mb5.3
PMR Palmer 81.96 29 *e*P P **15 14 46.9 -0.2**
comp=Z,40nm,0.8s,mb5.3
PMR Palmer 81.96 29 *e*P P **15 14 46.9 -0.2**
PMR pmax pmax
comp=Z,40nm,0.8s,mb5.3
MCK McKinley 82.15 27 *e*P P **15 14 47.5 -0.5**
comp=Z,69nm,0.8s,mb5.5
MCK McKinley 82.15 27 *e*P P **15 14 47.5 -0.5**
MCK pmax pmax
comp=Z,69nm,0.8s,mb5.5
ABPO Ambohimpanom 82.22 250 *e*P P **15 14 48.0 -1.3**
comp=Z,15nm,0.8s,mb4.9
ABPO Ambohimpanom 82.22 250 *e*P P **15 14 48.0 -1.2**
ABPO pmax pmax
comp=Z,15nm,0.8s,mb4.9
VRHR Novokhopersk 82.49 321 *e*P P **15 14 49.2 -0.8**
VRHR pmax pmax
comp=Z,170nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,60nm,0.7s
COLA College 82.67 25 *e*P P **15 14 50.4 -0.3**
comp=E,29nm,0.8s,mb5.2
COLA College 82.67 25 *e*P P **15 14 50.4 -0.3**
COLA pmax pmax
comp=Z,29nm,0.8s,mb5.2
EZM Erzurum 82.84 309 *e*P P **15 14 53.9 +1.7**
KLMR Klimovskoe 83.62 331 *i*P P **15 14 54.8 -0.8**
KLMR pmax pmax
comp=Z,438nm,1.1s,mb6.2
SOC Sochi 83.95 313 *i*P P **15 14 57.7 0.0**
SOC Sochi 83.95 313*c i*P P **15 14 56.7 -1.0**
SOC *e* 15 18 07.4
SOC *e*PPP 15 20 10.9
SOC *e*S S 15 25 10.5 -4.5
SOC *e*SS SS 15 30 49.3 +4.7
SOC pmax pmax
comp=Z,46nm,0.6s,mb5.5
VORD Divnogorie 83.96 321 *e*P P **15 14 56.8 -0.8**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=Z,80nm,0.6s,mb5.7
VORD pmax pmax
comp=E,30nm,0.7s
VOR Voronezh 84.00 321⇓ *i*P P **15 14 57.0 -0.8**
VSR Storozhevoye 84.03 321 *e*P P **15 14 57.1 -0.9**
VSR pmax pmax
comp=Z,70nm,1.1s,mb5.4
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR pmax pmax
comp=E,80nm,1.0s
EZC Erzincan 84.04 309 *e*P P **15 15 01.7 +3.4**
GUMT Gumushane 84.26 310 *e*P P **15 15 01.2 +1.8**
PTK Pertek 84.41 308 *e*P P **15 15 02.4 +2.3**
SVRC Sivrice-ELAZID 84.51 308 *e*P P **15 15 01.7 +1.1**
MOS Moscow 84.77 325 *e*P P **15 15 00.1 -1.5**
MOS *e* pP 15 15 17.8 -6.0
MOS *e*S S 15 25 16.3 -6.4
MOS pmax pmax
comp=Z,1µm,1.2s,mb6.7
ESPY Espiye-Giresun 84.81 310 *e*P P **15 15 00.2 -1.9**
URFA Urfa 84.94 307 *e*P P **15 15 03.6 +0.7**
KEMA Kemaliye 85.09 309 *i*P P **15 15 04.4 +0.8**
OBN Obninsk 85.41 325 P P **15 15 05.6 +0.8**
comp=Z,3µm,0.9s,SNR=27
OBN Obninsk 85.41 325⇑ *i*P P **15 15 04.1 -0.7**
OBN LR LR
comp=Z,100nm,17.0s
OBN Obninsk 85.41 325*c i*P P **15 15 04.0 -0.8**
OBN *e**PP pP 15 15 26.0 -1.0
OBN SS SS 15 31 03.8 -1.6
OBN pmax pmax
comp=Z,1µm,1.6s,mb6.5
LVZ Lovozero 85.43 338 P P **15 15 05.6 +1.0**
comp=Z,297nm,0.8s,mb6.3,SNR=5.5
LVZ Lovozero 85.43 338 *i*P P **15 15 04.9 +0.3**
LVZ Lovozero 85.43 338 *i*P P **15 15 04.8 +0.2**
LVZ pmax pmax
comp=Z,32nm,0.6s,mb5.4
ANN Anapa 85.52 314 *e*P P **15 15 04.6 -1.0**
ANN Anapa 85.52 314⇑ *i*P P **15 15 04.4 -1.2**
ANN *e**PP pP 15 15 26.4 -1.4
ANN *e*PPP 15 20 14.9
ANN *e*S S 15 25 21.5 -9.1
ANN pmax pmax
comp=Z,450nm,1.0s,mb6.3
ANN MLR MLR
comp=N,243nm,23.0s
ANN MLR MLR
comp=Z,386nm,23.0s
EGAK Eagle 85.53 25 *e*P P **15 15 04.8 -0.4**
comp=Z,10nm,0.7s,mb4.9
VNDA Vanda 85.54 173 P P **15 15 05.2 +0.2**
comp=Z,29nm,0.9s,mb5.2,baz=316,slow=6.0,SNR=58
VNDA LR LR 15 53 16.8
comp=Z,137nm,18.2s,baz=335,slow=36
AKCD Akcadag 85.60 308 *i*P P **15 15 07.1 +1.0**
PPT Papeete 85.60 108 *e*S S 15 25 43.5 +11
comp=Z,77nm,25.0s
PPT Papeete 85.60 108 *e*LR LR 15 42 25.2
comp=Z,568nm,28.0s
PPT Papeete 85.60 108 LR LR 15 47 57.8
comp=Z,39nm,20.1s,baz=257,slow=32
MAW Mawson 85.84 200 *e*P P **15 15 07.2 +0.6**
comp=Z,19nm,0.8s,mb5.1
MAW Mawson 85.84 200 P P **15 15 07.4 +0.8**
comp=Z,25nm,0.9s,mb5.2,baz=62,slow=6.6,SNR=22
MAW LR LR 15 49 08.2
comp=Z,90nm,20.2s,baz=68,slow=32
APA Apatity 85.93 337⇑ *i*P P **15 15 07.3 +0.2**
APA *i*S S 15 25 34.0 +0.2
APA *e*PS 15 26 40.0
APA pmax pmax
comp=Z,120nm,1.0s,mb5.8
APA MLR MLR
comp=Z,400nm,17.0s
GZT Gaziantep 85.95 307 *i*P P **15 15 08.9 +1.0**
SVSK Karacayir 86.19 310 *e*P P **15 15 09.8 +0.7**
DAWY Dawson 86.36 26 *e*P P **15 15 10.5 +1.2**
SBA Scott Base 86.44 172 *e*P P **15 15 10.2 +0.8**
comp=Z,19nm,0.9s,mb5.0
SBA Scott Base 86.44 172 *e*P P **15 15 10.2 +0.8**
SBA pmax pmax
comp=Z,19nm,0.9s,mb5.0
KMRS Kahramanmaras 86.46 307 *e*P P **15 15 11.0 +0.6**
SARI SarD1z-Kayseri 86.53 308 *e*P P **15 15 12.5 +1.8**
PINB Pinarbasi 86.76 308 *i*P P **15 15 11.7 -0.2**
KVT Kavak 86.82 311 *e*P P **15 15 12.1 0.0**
ANDN Andirin 86.90 307 *i*P P **15 15 13.1 +0.5**
ASF Jabal al Asfar 86.91 302 LR LR 15 59 05.0
comp=Z,53nm,20.0s,baz=310,slow=39
COBT Iskenderun 87.06 306 *i*P P **15 15 12.4 -0.9**
JOF Joensuu 87.34 333 *e*p P **15 15 12.7 -1.4**
comp=Z,69nm,0.5s,mb5.8
BOYT Boyabat 87.65 311 *i*P P **15 15 16.4 +0.4**
CTKT Corum 87.81 310 *i*P P **15 15 16.9 0.0**
KEV Kevo 87.93 340 *e*p P **15 15 14.4 -2.4**
comp=Z,6.9nm,0.6s,mb4.9
KEV Kevo 87.93 340 *e*P P **15 15 14.4 -2.4**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
AVNT Avonos 87.95 309 *i*P P **15 15 14.8 -2.8**
CORM Corum 87.98 310 *e*P P **15 15 17.5 -0.1**
INK Inuvik 88.09 22 *e*P P **15 15 16.5 -1.1**
comp=Z,504nm,1.0s,mb6.5
MMAI Mount Meron Ar 88.09 303 LR LR 16 00 25.0
comp=Z,78nm,21.2s,baz=340,slow=39
CDAG Cicekdag 88.24 309 *i*P P **15 15 19.2 +0.3**
PUL Pulkovo 88.27 330⇓ *e*P P **15 15 19.1 +0.5**
MERS Mersin 88.41 307 *e*P P **15 15 19.6 -0.2**
ARCES ARCESS Array B 88.49 340 P P **15 15 18.1 -1.3**
comp=Z,44nm,0.8s,mb5.5,baz=87,slow=4.4,SNR=84
ARCES PKKP PKKPbc 15 33 01.4 -2.6
comp=Z,2.0nm,0.8s,baz=259,slow=1.2,SNR=7.3
ARCES LR LR 16 01 05.4
comp=Z,111nm,18.1s,baz=83,slow=40
ARE0 ARCESS Array S 88.49 340 *e*P P **15 15 17.5 -1.9**
BALT Daday 88.77 311 *i*P P **15 15 21.4 +0.1**
EIL Elat 88.82 300 LR LR 15 58 37.2
comp=Z,102nm,20.3s,baz=261,slow=38
KTK1 Kautokeino 89.40 340 *e*P P **15 15 23.0 -0.7**
ANTO Ankara 89.42 310 P P **15 15 24.4 -0.1**
ANTO Ankara 89.42 310⇑ *i*P P **15 15 23.8 -0.6**
CSS Prodhromos 89.59 305 *e*P P **15 15 24.1 -1.2**
comp=Z,51nm,0.8s,mb5.7
KAF Kangasniemi 89.77 332 *e*p P **15 15 23.6 -2.0**
comp=Z,22nm,0.4s,mb5.7,baz=73,slow=4.4
KAF Kangasniemi 89.77 332 *e*P P **15 15 23.6 -2.0**
KAF pmax pmax
comp=Z,23nm,0.4s,mb5.7
KDHN Kadinhani 90.11 309 *i*P P **15 15 26.7 -1.0**
VSU Vasula 90.32 329 *i*P P **15 15 27.5 -0.7**
VSU Vasula 90.32 329*d i*P P **15 15 27.4 -0.8**
VSU pmax pmax
comp=Z,55nm,0.9s,mb5.7
AKASG Malin Array Be 90.34 321 P P **15 15 27.0 -1.4**
comp=Z,47nm,0.8s,mb5.7,baz=69,slow=4.4,SNR=88
AKASG LR LR 16 01 00.1
comp=Z,148nm,21.2s,baz=65,slow=39
AKASG Malin Array Be 90.34 321 P P **15 15 27.0 -1.4**
AKASG LR LR 16 01 00.1
AKBB Malin Array Si 90.34 321 *e*P P **15 15 26.8 -1.7**
KIEV Kiev 90.35 321 *e*P P **15 15 26.6 -1.9**
comp=Z,79nm,1.1s,mb5.8
KIEV Kiev 90.35 321 *e*P P **15 15 26.6 -1.9**
KIEV pmax pmax
comp=Z,79nm,1.1s,mb5.8
MNK Minsk 90.50 325 *e*P P **15 15 27.0 -2.1**
TRO Tromso 90.68 341 *e*P P **15 15 29.2 -0.4**
TRO AMb AMB 15 15 31.3
comp=Z,46nm,1.1s,mb5.5
HENT Hendek 90.72 311 *i*P P **15 15 29.6 -0.9**
BOLV Bolvadin 90.99 309 *i*P P **15 15 31.6 -0.2**
KIS Kishinev 91.23 317 *e*P P **15 15 32.3 -0.4**
KIS *e* 15 26 18.0
KIS Kishinev 91.23 317 *e*P P **15 15 32.0 -0.7**
TLCR 91.54 316 P P **15 15 34.6 +0.4**
TIRR Tirgusor 91.95 315⇑ P P **15 15 36.1 0.0**
TIRR Tirgusor 91.95 315⇑ *i*P P **15 15 36.1 0.0**
ULDT Uludag 92.16 311 *i*P P **15 15 36.3 -1.0**
HARR Harsova 92.25 315 P P **15 15 38.0 +0.5**
VRI Vrincioaia 92.86 316 P P **15 15 41.3 +1.1**
VRI Vrincioaia 92.86 316⇑ *i*P P **15 15 41.2 +0.9**
PLOR Plostina 92.92 316⇓ *i*P P **15 15 41.6 +1.1**
SUW Suwalki 93.27 325 *e*P P **15 15 42.0 0.0**
MLR Muntele Rosu 93.47 316 P P **15 15 43.2 +0.1**
MLR Muntele Rosu 93.47 316⇑ *i*P P **15 15 43.6 +0.5**
MOR8 Moi Rana 93.51 338 *e*P P **15 15 42.0 -0.8**
MOR8 AMb AMB 15 15 51.6
comp=Z,50nm,1.9s,mb5.5
BURAR Bucovina Array 93.51 318 ⇓P P **15 15 43.6 +0.4**
BURAR Bucovina Array 93.51 318⇓ *i*P P **15 15 43.6 +0.4**
BUR08 Bucovina Ar. S 93.52 318 *e*P P **15 15 42.4 -0.9**
LVV L'vov 93.78 321 *i*P P **15 15 43.3 -1.1**
LVV *e* 15 15 52.3
VOIR 94.10 316 P P **15 15 45.9 -0.1**
VOIR 94.10 316⇓ *i*P P **15 15 46.2 +0.2**
BMR Baia Mare 94.63 319 P P **15 15 49.7 +1.4**
KWP Kalwaria 94.66 321 *e*P P **15 15 49.1 +0.7**
KWP Kalwaria 94.66 321 *e*P P **15 15 45.6 -2.8**
comp=Z,65nm,1.1s,mb6.0
KWP Kalwaria 94.66 321 *e*P P **15 15 49.1 +0.7**
KWP Kalwaria 94.66 321⇓ *i*P P **15 15 49.1 +0.7**
KOLS Kolonicke sedl 95.11 320 *e*P P **15 15 51.3 +0.8**
NSS Namsos 95.13 337 *e*P P **15 15 49.0 -1.2**
DAG Danmarks Havn 95.14 352⇓ *i*P P **15 15 49.8 -0.3**
DAG pmax pmax
comp=Z,19nm,0.9s,mb5.5
DAG Danmarks Havn 95.14 352⇓ *i*P P **15 15 49.8 -0.3**
comp=Z,19nm,0.9s,mb5.5
CRAR CRAIOVA 95.22 315 P P **15 15 51.4 +0.3**
DRGR 95.37 318 P P **15 15 52.1 +0.4**
DRGR 95.37 318⇑ *i*P P **15 15 51.9 +0.1**
STHS Stebnicka Huta 95.63 321 *e*P P **15 15 53.0 +0.1**
STHS pmax pmax
comp=Z,19nm,0.8s,mb5.6
CRVS Cervenica-Dubn 95.64 320 *e*P P **15 15 53.8 +0.9**
GZR Gura Zlata 95.67 317 P P **15 15 53.2 +0.1**
GZR Gura Zlata 95.67 317⇑ *i*P P **15 15 53.7 +0.5**
QSPA South Pole Qui 95.79 180 LR LR 15 59 17.3
comp=Z,122nm,18.9s,baz=336,slow=36
QSPA South Pole Qui 95.79 180 *e*P P **15 15 53.6 +0.6**
comp=Z,29nm,0.9s,mb5.7
HFS Hagfors 96.19 332 PKKP PKKPbc 15 32 39.9 -4.0
comp=Z,3.9nm,1.0s,baz=141,slow=5.0,SNR=5.2
NIE Niedzica 96.22 321 *e*P P **15 15 56.9 +1.3**
OJC Ojcow 96.31 322 *e*P P **15 15 55.3 -0.6**
OJC *e*S S 15 27 05.8 -3.2
OJC L 15 57 15.7
comp=Z,0.2nm,26.6s
BZS Buzias 96.40 317 P P **15 15 56.7 +0.2**
BZS Buzias 96.40 317⇓ *i*P P **15 15 56.4 -0.1**
PSZ Piszkesteto 96.91 320 P P **15 15 59.0 +0.3**
PSZ Piszkesteto 96.91 320⇑ *i*P P **15 15 58.9 +0.2**
NB2 NORSAR Subarra 96.94 334 P P **15 15 57.1 -1.4**
comp=Z,19nm,0.8s,mb5.6,baz=66,slow=4.6
NOA NORSAR Array B 96.94 334 P P **15 15 56.8 -1.8**
comp=Z,20nm,0.8s,mb5.6,baz=66,slow=4.6,SNR=43
NOA PKKPbc PKKPbc 15 32 39.9 -2.0
comp=Z,0.7nm,0.6s,baz=71,slow=2.9,SNR=3.3
NOA LR LR 16 04 58.9
comp=Z,102nm,19.2s,baz=55,slow=39
NAO01 NORSAR Array S 97.17 334 *e*P P **15 15 57.9 -1.7**
comp=Z,13nm,0.7s,mb5.5
VYHS Vyhne 97.42 320 *e*P P **15 16 00.7 -0.3**
OKC Ostrava-Krasne 97.44 322 *e*P P **15 16 01.6 +0.5**
YKA Yellowknife Ar 97.46 24 P P **15 16 00.1 -0.7**
comp=Z,3.8nm,0.7s,mb4.9,baz=303,slow=4.5,SNR=6.2
YKA PKKPbc PKKPbc 15 32 37.5 -3.0
comp=Z,2.6nm,0.6s,baz=120,slow=3.2,SNR=8.2
YKA LR LR 15 55 08.4
comp=Z,49nm,21.7s,baz=170,slow=32
YKA Yellowknife Ar 97.46 24 P P **15 16 00.1 -0.7**
YKA PKKPbc PKKPbc 15 32 37.5 -3.0
YKA LR LR 15 55 08.4
KOLL Kolacno 97.67 321 *e*P P **15 16 02.7 +0.6**
MORC Moravsky Berou 97.83 322 P P **15 16 03.6 +0.8**
MORC Moravsky Berou 97.83 322⇓ *i*P P **15 16 03.4 +0.6**
PKSM Moragy 98.23 318 P P **15 16 05.3 +0.5**
PKSM Moragy 98.23 318⇑ *i*P P **15 16 05.2 +0.5**
KSP Ksiaz 98.23 323 *e*P P **15 16 05.7 +1.1**
KSP Ksiaz 98.23 323 *e*P P **15 16 05.3 +0.7**
DPC Dobruska-Polom 98.38 323 *e*P P **15 16 05.5 +0.2**
DPC AMS AMS 15 57 40.0
comp=Z,200nm,14.6s
MODS Modra-Piesok 98.44 321 *e*P P **15 16 05.0 -0.6**
MODS pmax pmax
comp=Z,4.0nm,0.8s,mb5.0
MODS Modra-Piesok 98.44 321 PDIF P **15 16 05.0 -0.6**
UPC Upice 98.51 323 *e*P P **15 16 05.7 -0.2**
VRAC Vranov 98.56 322 P P **15 16 06.9 +0.8**
VRAC Vranov 98.56 322⇑ *i*P P **15 16 07.3 +1.2**
ZST Bratislava 98.61 320 *e*P P **15 16 07.1 +0.7**
ZST pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
ZST Bratislava 98.61 320 PDIF P **15 16 07.1 +0.7**
RUE Ruedersdorf 99.11 325 *e*P P **15 16 08.9 +0.4**
comp=Z,68nm,0.9s,mb6.2
TREC Trest 99.25 322 *i*P P **15 16 09.4 +0.2**
TREC Trest 99.25 322 *e*PDIF P **15 16 09.4 +0.2**
PVCC Panska Ves 99.37 323 *e*PDIF P **15 16 10.1 +0.4**
PRU Pruhonice 99.58 323 *e*PDIF Pdif 15 16 10.8 +0.3
PRU AMS AMS 15 58 50.0
comp=Z,100nm,20.0s
BRG Berggiesshubel 99.61 324 *i*P Pdif 15 16 11.1 +0.4
BRG *e* 15 27 35.0
BRG pmax pmax
comp=Z,37nm,0.9s,mb6.0
BRG Berggiesshubel 99.61 324 *e*P Pdif 15 16 11.3 +0.6
comp=Z,62nm,0.9s
BRG Berggiesshubel 99.61 324 *i*P Pdif 15 16 11.1 +0.4
comp=Z,62nm,0.9s
BRG *e* 15 19 29.1
comp=Z,8.2nm,1.3s
BRG *e* S 15 27 35.0 -2.0
RKT Rikitea 99.73 112 *e*LR LR 15 48 55.6
comp=Z,274nm,26.5s
CLL Collm 100.00 324 *i*Pdif Pdif 15 16 12.7 +0.3
comp=Z,36nm,1.0s
CLL *e*Sdif Sdif 15 27 43.0 +3.0
CLL Collm 100.00 324 *i*P Pdif 15 16 12.7 +0.3
CLL *e*S Sdif 15 27 43.0 +3.0
CLL pmax pmax
comp=Z,36nm,1.0s,mb6.0
CLL Collm 100.00 324 *e*P Pdif 15 16 12.6 +0.2
comp=Z,36nm,1.0s
CLL Collm 100.00 324 *i*Pdif Pdif 15 16 12.7 +0.3
comp=Z,36nm,1.0s
CLL *e*Sdif Sdif 15 27 39.0 -1.0
CLL LmV 16 07 00.0
comp=Z,100nm,20.6s
BSEG Bad Segeberg 100.43 327 *e*P Pdif 15 16 14.9 +0.6
BSEG pmax pmax
comp=Z,18nm,0.9s
BSEG Bad Segeberg 100.43 327 *e*P Pdif 15 16 14.9 +0.6
comp=Z,18nm,0.9s
KHC Kasperske Hory 100.48 322⇓ *e*P Pdif 15 16 14.9 +0.4
KHC Kasperske Hory 100.48 322 *e*PDIF Pdif 15 16 14.7 +0.2
KHC AMS AMS 15 59 10.0
comp=Z,300nm,22.6s
GEC2 GERESS Array S 100.51 322 *e*P Pdif 15 16 13.6 -1.0
GEC2 GERESS Array S 100.51 322 *e*P Pdif 15 16 15.3 +0.7
GEC2 pmax pmax
comp=Z,29nm,1.0s
GEC2 GERESS Array S 100.51 322 *e*P Pdif 15 16 15.3 +0.7
comp=Z,29nm,1.0s
GERES GERESS Array B 100.51 322 P Pdif 15 16 15.4 +0.7
comp=Z,14nm,0.9s,baz=73,slow=4.6,SNR=74
GERES PKiKP PKiKP 15 20 41.1 0.0
comp=Z,0.3nm,0.4s,baz=100,slow=1.2,SNR=5.0
MOA Molln 100.52 321⇓ *i*Pdiff Pdif 15 16 15.3 +0.6
comp=Z,24nm,0.8s
TANN Tannenbergstha 100.66 324 *e*P Pdif 15 16 15.9 +0.6
NKC Novy Kostel 100.74 323 *e*PDIF Pdif 15 16 15.7 0.0
WET Wettzell 100.90 322 *e*P Pdif 15 16 17.3 +0.9
WET pmax pmax
comp=Z,22nm,1.2s
WET Wettzell 100.90 322 *e*P Pdif 15 16 17.3 +0.9
comp=Z,22nm,1.2s
ROTZ Rotzenmuhle 101.06 323 *e*P Pdif 15 16 18.2 +1.1
MOX Moxa 101.07 324 *e*P Pdif 15 16 18.5 +1.4
comp=Z,42nm,1.2s
MOX Moxa 101.07 324 *e*P Pdif 15 16 18.5 +1.4
MOX pmax pmax
comp=Z,42nm,1.2s
MOX Moxa 101.07 324 *e*P Pdif 15 16 17.8 +0.7
comp=Z,28nm,0.9s
RJOB Jochberg 101.48 321 *e*P Pdif 15 16 19.2 +0.2
GRF Grafenberg Arr 101.68 323 *e*P Pdif 15 16 20.8 +0.9
GRF pmax pmax
comp=Z,23nm,1.0s
GRF Grafenberg Arr 101.68 323 *e*P Pdif 15 16 20.8 +0.9
GRF pmax pmax
comp=Z,23nm,1.0s
GRF Grafenberg Arr 101.68 323 *e*P Pdif 15 16 20.8 +0.9
comp=Z,23nm,1.0s
FUR Furstenfeldbru 102.26 322 *e*P Pdif 15 16 23.2 +0.8
WTTA Wattenberg 102.39 321⇑ *i*Pdiff Pdif 15 16 23.1 +0.1
comp=Z,22nm,0.8s
IBBN Ibbenburen 102.53 327 *e*P Pdif 15 16 24.4 +0.7
MOTA Moosalm 102.69 321⇓ *i*Pdiff Pdif 15 16 22.1 -2.2
comp=Z,14nm,0.8s
BOSA Boshof 103.03 242 P Pdif 15 16 25.2 -0.6
comp=Z,2.8nm,0.9s,baz=9.5,slow=6.1,SNR=3.2
BOSA PKiKP PKiKP 15 20 45.3 -0.9
comp=Z,4.1nm,1.0s,baz=84,slow=2.8,SNR=3.1
FETA Feichten 103.06 321⇑ *i*Pdiff Pdif 15 16 27.3 +1.3
comp=Z,18nm,1.0s
TNS Taunus Mts 103.08 325 *e*P Pdif 15 16 27.2 +1.1
TNS pmax pmax
comp=Z,25nm,1.3s
TNS Taunus Mts 103.08 325 *e*P Pdif 15 16 27.2 +1.1
comp=Z,25nm,1.3s
STU Stuttgart 103.27 323 *e*P Pdif 15 16 27.6 +0.7
BFO Black Forest 103.98 323 *e*P Pdif 15 16 30.6 +0.5
BFO pmax pmax
comp=Z,23nm,2.0s
BFO Black Forest 103.98 323 *e*P Pdif 15 16 30.6 +0.5
comp=Z,23nm,2.0s
MEM Membach 104.29 326 P Pdif 15 16 33.5 +2.1
CDF Champ du Feu 104.57 323 *e*P Pdif 15 16 33.6 +0.9
comp=Z,26nm,0.9s
CDF Champ du Feu 104.57 323 *e*P Pdif 15 16 33.6 +0.9
comp=Z,13nm,0.9s
CDF Champ du Feu 104.57 323 *e*P Pdif 15 16 33.6 +0.9

CDF pmax pmax
comp=Z,13nm,0.9s
WLF Walferdange 104.66 325 P Pdif 15 16 35.0 +1.9
comp=Z,22nm,1.6s
WLF Walferdange 104.66 325 *eP* Pdif 15 16 34.5 +1.4
BCLA Clavier 104.78 326 P Pdif 15 16 35.5 +1.8
comp=Z,13nm,1.5s
HINF Hinteralfeld 105.10 323 *eP* Pdif 15 16 35.6 +0.6
comp=Z,8.3nm,0.9s
HINF Hinteralfeld 105.10 323 *eP* Pdif 15 16 35.6 +0.6
comp=Z,4.2nm,0.9s
HINF Hinteralfeld 105.10 323 *eP* Pdif 15 16 35.6 +0.6
HINF pmax pmax
comp=Z,4.0nm,0.9s
UCC Uccle 105.12 326 P Pdif 15 16 36.6 +1.4
comp=Z,24nm,1.7s
GIVF Givet 105.20 326 *eP* Pdif 15 16 36.7 +1.2
NVAR Mina Array Bea 105.32 48 PKiKP PKiKP 15 20 52.0 +1.9
comp=Z,0.8nm,0.7s,baz=289,slow=2.8,SNR=5.0
NVAR PKKPbc PKKPbc 15 32 17.6 +0.6
comp=Z,1.0nm,0.7s,baz=122,slow=3.9,SNR=8.4
NVAR PKKPab PKKPab 15 32 33.7 -0.8
comp=Z,2.1nm,0.8s,baz=114,slow=3.7,SNR=10
NVAR Mina Array Bea 105.32 48 PKPdf PKiKP 15 20 52.0 +1.9
NVAR PKKPbc PKKPbc 15 32 17.6 +0.6
NVAR PKKPab PKKPab 15 32 33.7 -0.8
DOU Dourbes 105.33 326 P Pdif 15 16 36.8 +0.7
comp=Z,18nm,3.1s
BAIF Baives 105.57 326 *eP* Pdif 15 16 38.2 +1.1
CABF La Chapelle 106.11 322 *eP* Pdif 15 16 40.2 +0.7
comp=Z,70nm,1.6s
CABF La Chapelle 106.11 322 *eP* Pdif 15 16 40.2 +0.7
comp=Z,35nm,1.6s
CABF La Chapelle 106.11 322 *eP* Pdif 15 16 40.2 +0.7
CABF pmax pmax
comp=Z,35nm,1.6s
LPG La Plagne 106.20 321 *eP* Pdif 15 16 41.4 +1.5
comp=Z,21nm,1.1s
LPG La Plagne 106.20 321 *eP* Pdif 15 16 41.4 +1.5
comp=Z,11nm,1.1s
LPG La Plagne 106.20 321 *eP* Pdif 15 16 41.4 +1.5
LPG pmax pmax
comp=Z,11nm,1.1s
LPL La Plagne 106.20 321 *eP* Pdif 15 16 41.3 +1.3
comp=Z,20nm,1.0s
LPL La Plagne 106.20 321 *eP* Pdif 15 16 41.3 +1.3
comp=Z,9.9nm,1.0s
LPL La Plagne 106.20 321 *eP* Pdif 15 16 41.3 +1.3
LPL pmax pmax
comp=Z,10.0nm,1.0s
SNAA Sanae 107.35 195 *e*PKiKP PP 15 21 11.7 -0.8
SNAA *e* 15 32 08.5
SNAA *e* 15 32 22.3
SSF Saint Saulge 107.45 323 *eP* Pdif 15 16 46.3 +0.8
AVF Avril sur Loir 107.68 323 *eP* Pdif 15 16 47.3 +0.8
comp=Z,16nm,1.1s
AVF Avril sur Loir 107.68 323 *eP* Pdif 15 16 47.3 +0.8
comp=Z,8.1nm,1.1s
AVF Avril sur Loir 107.68 323 *eP* Pdif 15 16 47.3 +0.8
AVF pmax pmax
comp=Z,8.0nm,1.1s
TCF Toulx Ste Croi 108.61 323 *eP* Pdif 15 16 51.8 +1.1
VNA2 Neumayer--Watz 108.96 194 *e*PKiKP PKiKP 15 20 56.9 +1.0
baz=86,slow=1.2
VNA2 *e* 15 20 59.3
VNA2 *e* 15 21 02.3
VNA2 *e* 15 32 03.5
VNA2 *e* 15 32 16.6
VNA2 *e* 15 32 18.7
VNA3 Neumayer Olymp 109.29 194 *e*PKiKP PKiKP 15 20 57.4 +0.9
VNA3 *e* 15 20 59.9
VNA3 *e* 15 21 03.5
VNA3 *e* 15 32 03.5
VNA3 *e* 15 32 15.5
VNA3 *e* 15 32 17.2
VNA1 Neumayer--Stat 109.36 194 *e*PKiKP PKiKP 15 20 58.0 +1.3
VNA1 *e* 15 21 01.1
RJF Les Rejaudoux 109.53 322 *eP* Pdif 15 16 56.5 +1.7
comp=Z,26nm,1.2s
RJF *e*MLR MLR
comp=Z,108nm,21.5s
RJF Les Rejaudoux 109.53 322 *eP* Pdif 15 16 56.5 +1.7
RJF MLR MLR
comp=Z,110nm,21.5s
PDAR Pinedale Array 109.60 41 PKKPbc PKKPbc 15 32 01.4 -2.4
comp=Z,1.1nm,0.8s,baz=122,slow=3.2,SNR=6.0
PDAR PKKPab PKKPab 15 32 13.7 -1.9
comp=Z,1.8nm,0.9s,baz=120,slow=6.3,SNR=8.2
PV01 Paradox Valley 112.44 45 *e*PKPdf PKiKP 15 21 05.1 +1.6
ESDC Sonseca Array 115.95 320 PKP PKPdf 15 21 10.2 0.0
comp=Z,0.3nm,0.3s,baz=40,slow=3.2,SNR=4.0
EVO Evora 119.19 321 *e*PKiKP PKPdf 15 21 17.1 +0.6
comp=Z,12nm,0.8s
EVO *e*MLR MLR
comp=Z,125nm,22.8s
KSU1 Kansas State U 119.81 38 *e*PKPdf PKPdf 15 21 17.3 -0.3
TXAR Lajitas Array 120.12 51 PKP PKPdf 15 21 19.6 +1.1
comp=Z,0.5nm,0.5s,baz=188,slow=0.2,SNR=10
TXAR SKP 15 24 51.1
comp=Z,0.9nm,0.9s,baz=354,slow=1.8,SNR=3.8
JFWS Jewell Farm 120.87 31 *e*PKPdf PKPdf 15 21 18.2 -1.3
TOA0 Torodi Ar. Sit 122.40 290 *e*PKPdf PKPdf 15 21 22.9 -0.4
TORD Torodi Ar. Bea 122.40 290 PKhKP 15 21 16.1
comp=Z,0.4nm,0.6s,baz=4.4,slow=2.0,SNR=4.1
TORD PKP PKPdf 15 21 22.6 -0.6
comp=Z,22nm,0.7s,baz=45,slow=1.9,SNR=131
TORD PKKPab PKKPab 15 31 18.8 -0.4
comp=Z,1.1nm,0.6s,baz=260,slow=2.9,SNR=8.1
JCT Junction City 122.50 48 *e*PKPdf PKPdf 15 21 23.0 -0.1
FVM French Village 124.22 35 *e*PKPdf PKPdf 15 21 24.8 -1.3
MIAR Mount Ida 124.53 41 *e*PKPdf PKPdf 15 21 27.1 +0.2
OLIL Olney 125.00 33 *e*PKPdf PKPdf 15 21 28.4 +0.8
ACSO Alum Creek Sta 126.48 28 *e*PKPdf PKPdf 15 21 30.0 -0.5
WVT Waverly 127.00 35 *e*PKPdf PKPdf 15 21 30.2 -1.3
OXF Oxford 127.17 38 *e*PKPdf PKPdf 15 21 32.1 +0.2
LRAL Lakeview Retre 129.65 37 *e*PKPdf PKPdf 15 21 37.2 +0.5
KIC Kosan Boka 130.24 283 *e*PKiKP PKPdf 15 21 38.6 +0.3
comp=Z,122nm,0.8s
KIC Kosan Boka 130.24 283 *eP* 15 24 55.4
comp=Z,162nm,1.0s
DBIC Dimbokro 130.28 284 PKhKP 15 21 28.1
comp=Z,2.2nm,0.9s,baz=219,slow=3.3,SNR=3.7
DBIC PKP PKPdf 15 21 38.8 +0.4
comp=Z,14nm,0.7s,baz=77,slow=1.9,SNR=21
DBIC SKPbc SKPbc 15 24 54.6 +0.4
comp=Z,20nm,0.8s,baz=62,slow=4.8,SNR=17
DBIC Dimbokro 130.28 284 PKP 15 21 28.1
DBIC *e*PKPdf PKPdf 15 21 38.2 -0.2
DBIC *e*SKP 15 24 53.8
DBIC Dimbokro 130.28 284 PKHKP 15 21 28.1
DBIC *e* 15 21 38.2
TIC Toumodi 130.44 284 *e*PKiKP PKPdf 15 21 39.0 +0.3
comp=Z,48nm,0.2s
TIC Toumodi 130.44 284 *eP* 15 24 54.3
comp=Z,22nm,0.2s
LIC Lamto 130.54 283 *e*PKiKP PKPdf 15 21 39.1 +0.2
comp=Z,97nm,0.9s
LIC Lamto 130.54 283 *eP* 15 24 56.4
comp=Z,88nm,1.0s
LIC Lamto 130.54 283 *e*PKiKP PKPdf 15 21 39.6 +0.7
comp=Z,66nm,0.9s
LIC *e*MLR MLR
comp=Z,98nm,20.8s
LIC Lamto 130.54 283 *e*PKPdf PKPdf 15 21 39.6 +0.7
LIC LR LR
comp=Z,50nm,20.8s
PLCA Paso Flores 141.95 158 PKhKP 15 21 54.6
comp=Z,4.9nm,0.7s,baz=221,slow=4.4,SNR=16
PLCA PKP PKPdf 15 21 58.2 -1.0
comp=Z,10nm,0.6s,baz=251,slow=2.3,SNR=16
PLCA SKPbc SKPbc 15 25 31.8 +2.3
comp=Z,4.9nm,1.0s,baz=125,slow=2.3,SNR=4.1
PLCA Paso Flores 141.95 158 *e*PKPpre 15 21 54.7
PLCA PKP PKPdf 15 21 58.2 -1.0
PLCA *e*SKP 15 25 30.0
PLCA SKPbc SKPbc 15 25 31.8 +2.3
PLCA Paso Flores 141.95 158 *i* PKHKP 15 21 54.6
PLCA 15 21 58.2
PLCA pmax pmax
comp=Z,5.0nm,0.7s
BCIP Isla Barro Col 149.42 61 *e*PKPbc PKPbc 15 22 17.4 +0.1
SDDR Presa de Saban 149.45 36 *e*PKPbc PKPbc 15 22 18.0 +0.8
LCO Las Campanas 151.61 146 *e*PKPdf PKPdf 15 22 17.6 +1.9
LCO *e*PKPbc PKPbc 15 22 23.4 +1.4
MTP Monte Pirata 153.17 27 *e*PKPbc PKPbc 15 22 25.5 -0.3
ROSC El Rosal 156.25 64 PKP PKPdf 15 22 23.3 +0.6
comp=Z,4.2nm,0.4s,baz=259,slow=20,SNR=4.3
LPAZ La Paz 162.00 126 PKP PKPdf 15 22 30.9 +1.6
comp=Z,5.8nm,1.0s,baz=354,slow=1.5,SNR=16
LPAZ PKPab PKPab 15 23 18.5 +2.8
comp=Z,7.0nm,0.8s,baz=156,slow=1.6,SNR=7.9
LPAZ La Paz 162.00 126 PKP PKPdf 15 22 30.9 +1.6
LPAZ PKPab PKPab 15 23 18.5 +2.8
BDFB Brasilia 169.12 207 PKPab PKPab 15 23 47.9 +1.0
comp=Z,12nm,1.0s,baz=139,slow=5.3,SNR=13
BDFB Brasilia 169.12 207 PKP2 PKPab 15 23 47.9 +1.0
BDFB pmax pmax
comp=Z,12nm,1.0s

*SZGRF **17** 15:03:29.1, 1869S×17703W, h33km, Fiji Islands region*
*ISCJB **17** 15:04:08.0±1.1, 1894S±008×17796W±009, h369km±12km, mb4.1/17, Error ellipse: s-maj=14.4km s-min=11.4km az=41.0*
*IDC **17** 15:04:10.3±1.9, 1892S×17794W, h380km±19km, mb3.7/13, mb1 4.0/15, mb1mx4.0/21, mbtmp3.8/15, Error ellipse: s-maj=14.7km s-min=10.0km az=105.0*
*NEIC **17** 15:04:10.2±1.2, 1893S×17796W, h383km±13km, mb4.2/6, Error ellipse: s-maj=14.4km s-min=11.1km az=127.0*

ISC 17 15:04:09.6±1.3, 1893S±007×17797W±010, h372km±14km, n65, σ0§87/32, mb4.1/17, **1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.76**	**51**	P		**Pn**		**15 06 02.1**	**+0.7**
	16nm,0.3s,baz=262,slow=0.4,SNR=20								
AFI				S		**S**		**15 07 27.3**	**-5.3**
	17nm,0.3s,baz=208,slow=23,SNR=5.6								
AFI	**Afiamalu**	**7.76**	**51**	*e*Pn		**Pn**		**15 06 01.8**	**+0.3**
AFI				P				15 06 02.1	
AFI				S		**S**		**15 07 27.3**	**-5.3**
FUNA	**Funafuti**	**10.70**	**345**	*e*Pn		**Pn**		**15 06 35.9**	**-0.1**
	149nm,0.8s								
URZ	**Urewera**	**19.73**	**192**	P		**P**		**15 08 13.4**	**-0.1**
	1.3nm,0.3s,baz=274,slow=4.5,SNR=10								
URZ				S		**S**		**15 11 34.2**	**+1.2**
	0.5nm,0.3s,baz=108,slow=20,SNR=5.0								
RPZ	**Rata Peaks**	**26.38**	**198**	P		**P**		**15 09 11.9**	**-1.5**
	2.7nm,0.7s,mb3.6,baz=297,slow=4.5,SNR=2.6								
CTA	**Charters Tower**	**33.70**	**262**	P		**P**		**15 10 17.0**	**-0.6**
	19nm,0.8s,mb4.4,baz=97,slow=8.1,SNR=2.7								
CTAO	**Charters Tower**	**33.70**	**262**	*eP*		**P**		**15 10 18.5**	**+0.8**
	23nm,0.9s,mb4.4								
WRA	**Warramunga Arr**	**44.87**	**260**	P		**P**		**15 11 48.5**	**-0.3**
	5.2nm,0.8s,mb3.7,baz=93,slow=8.3,SNR=3.2								
ASAR	**Alice Springs**	**44.92**	**255**	P		**P**		**15 11 50.1**	**+0.8**
	17nm,0.5s,mb4.4,baz=90,slow=8.4,SNR=14								
MBWA	**Marble Bar**	**58.23**	**256**	*eP*		**P**		**15 13 25.5**	**-1.2**
SBA	**Scott Base**	**59.43**	**184**	*eP*		**P**		**15 13 36.0**	**+2.0**
	6.5nm,0.7s,mb4.2								
VNDA	**Vanda**	**59.47**	**185**	P		**P**		**15 13 35.3**	**+1.1**
	1.7nm,0.6s,mb3.6,baz=350,slow=7.3,SNR=24								
VNDA	**Vanda**	**59.47**	**185**	*eP*		**P**		**15 13 34.8**	**+0.6**
	11nm,1.6s,mb4.0								
MJAR	**Matsushiro Arr**	**68.97**	**323**	P		**P**		**15 14 36.4**	**+0.5**
	3.7nm,0.6s,mb4.3,baz=150,slow=5.7,SNR=14								
QSPA	**South Pole Qui**	**71.13**	**180**	*eP*		**P**		**15 14 48.7**	**+0.5**
	16nm,0.7s,mb4.8								
PETK	**Petropavlovsk-**	**74.77**	**345**	P		**P**		**15 15 09.4**	**-0.2**
	9.4nm,0.8s,mb4.6,baz=97,slow=6.7,SNR=6.6								
KSRS	**Korea Array**	**75.74**	**318**	P		**P**		**15 15 16.2**	**+0.7**
	1.2nm,0.7s,mb3.7,baz=118,slow=6.6,SNR=3.7								
NVAR	**Mina Array Bea**	**79.87**	**44**	P		**P**		**15 15 38.1**	**+0.1**
	1.6nm,0.7s,mb3.9,baz=223,slow=8.5,SNR=8.9								
TUC	**Tucson**	**82.00**	**52**	*eP*		**P**		**15 15 49.5**	**+0.3**
	2.7nm,0.9s,mb4.1								
TXAR	**Lajitas Array**	**86.19**	**57**	P		**P**		**15 16 10.8**	**+0.5**
	3.7nm,0.7s,mb4.3,baz=217,slow=6.3,SNR=34								
MCMT	**McKenzie Canyo**	**86.74**	**40**	*eP*		**P**		**15 16 12.3**	**-0.2**
PDAR	**Pinedale Array**	**87.81**	**43**	P		**P**		**15 16 17.0**	**-0.6**
	1.2nm,0.7s,mb3.8,baz=237,slow=2.9,SNR=8.9								
SNAA	**Sanae**	**89.57**	**178**	*e*Pdiff		**P**		**15 16 22.5**	**-2.9**
SNAA				*e*				15 16 25.2	
SNAA	**Sanae**	**89.57**	**178**	*eP*		**P**		**15 16 22.2**	**-3.1**
	3.6nm,0.8s,mb4.3								
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P		**P**		**15 16 27.0**	**+0.4**
	1.3nm,0.8s,mb3.9,baz=117,slow=2.7,SNR=2.5								
VNA3	**Neumayer Olymp**	**89.70**	**176**	*e*Pdiff		**P**		**15 16 24.8**	**-1.2**
VNA3				*e*				15 16 27.4	
VNA2	**Neumayer--Watz**	**90.14**	**177**	*e*Pdiff		**P**		**15 16 27.3**	**-0.7**
	baz=202,slow=4.0								
VNA2				*e*				15 16 30.2	
PLCA	**Paso Flores**	**90.33**	**134**	P		**P**		**15 16 29.1**	**-0.5**
	2.5nm,1.0s,mb4.1,baz=277,slow=8.0,SNR=3.4								
VNA1	**Neumayer--Stat**	**90.37**	**177**	*e*Pdiff		**P**		**15 16 28.5**	**-0.6**
VNA1				*e*				15 16 31.3	
MKAR	**Makanchi Array**	**110.14**	**314**	PKiKP	PKiKP			15 21 55.5	-2.1
	0.8nm,0.5s,baz=180,slow=0.4,SNR=14								
BVAR	**Borovoye Array**	**117.90**	**321**	PKP	PKPdf			15 22 10.3	-1.9
	0.8nm,0.5s,baz=108,slow=3.2,SNR=5.5								
ARCES	**ARCESS Array B**	**127.39**	**350**	PKP	PKPdf			15 22 28.6	-1.4
	1.4nm,0.4s,baz=32,slow=0.8,SNR=16								
NOA	**NORSAR Array B**	**137.44**	**353**	PKP	PKPdf			15 22 46.9	-2.2
	0.8nm,0.7s,baz=7.4,slow=3.5,SNR=2.7								
BSEG	**Bad Segeberg**	**144.48**	**352**	*e*PKPbc	PKPdf			15 23 00.6	-1.3
CLL	**Collm**	**146.55**	**347**	*e*PKPbc	PKPbc			15 23 06.9	-0.8
CLL	**Collm**	**146.55**	**347**	*i* PKPdf	PKPdf			15 23 04.1	-1.4
	comp=Z,5.0nm,1.2s								
CLL				⇑*i*PKPbc	PKPbc			15 23 06.4	-1.3
	comp=Z,14nm,0.7s								
CLL				*i* PKPab	PKPab			15 23 08.8	-0.8
	comp=Z,5.0nm,0.8s								
BRG	**Berggiesshubel**	**146.75**	**346**	*e*PKPbc	PKPbc			15 23 07.6	-0.7
BRG	**Berggiesshubel**	**146.75**	**346**	*e*	PKPbc			15 23 07.3	-0.9
	comp=Z,7.2nm,0.8s								
MOX	**Moxa**	**147.45**	**349**	*e*PKPbc	PKPbc			15 23 09.2	-1.0
TANN	**Tannenbergstha**	**147.50**	**348**	*e*PKPbc	PKPbc			15 23 09.5	-0.8
ROTZ	**Rotzenmuhle**	**148.17**	**347**	*e*PKPbc	PKPbc			15 23 11.7	-0.4
TNS	**Taunus Mts**	**148.36**	**352**	*e*PKPbc	PKPbc			15 23 12.1	-0.4
GRF	**Grafenberg Arr**	**148.44**	**349**	*e*PKPbc	PKPbc			15 23 13.3	+0.6
KHC	**Kasperske Hory**	**148.47**	**345**	*eP*	PKPbc			15 23 11.5	-1.3
GERES	**GERESS Array B**	**148.70**	**345**	PKPbc	PKPbc			15 23 12.6	-0.8
	comp=Z,3.1nm,0.8s,baz=29,slow=3.0,SNR=12								
GIVF	**Givet**	**148.82**	**357**	*e*PKP1	PKPbc			15 23 12.4	-1.3
	comp=Z,17nm,0.8s								
BAIF	**Baives**	**148.90**	**357**	*e*PKP1	PKPbc			15 23 12.8	-1.1
	comp=Z,4.7nm,0.7s								
WLF	**Walferdange**	**149.16**	**355**	*e*PKPbc	PKPbc			15 23 14.4	-0.1
FUR	**Furstenfeldbru**	**149.89**	**348**	*e*PKPbc	PKPbc			15 23 15.6	-0.7
FLN	**La Foliniere**	**150.17**	**3**	*e*PKP1	PKPbc			15 23 15.5	-1.5
	comp=Z,24nm,0.8s								
BFO	**Black Forest**	**150.23**	**352**	*e*PKPbc	PKPbc			15 23 16.4	-0.7
CDF	**Champ du Feu**	**150.29**	**353**	*e*PKP1	PKPbc			15 23 15.9	-1.4
	comp=Z,21nm,1.1s								
LDF	**La Druitiere**	**150.36**	**3**	*e*PKP1	PKPbc			15 23 15.6	-1.8
MEZF	**Maizieres J'vi**	**150.40**	**356**	*e*PKP1	PKPbc			15 23 16.5	-1.0
	comp=Z,16nm,0.9s								
GRR	**Gorron**	**150.52**	**4**	*e*PKP1	PKPbc			15 23 16.3	-1.5
	comp=Z,26nm,1.0s								
HAU	**Haudompre**	**150.79**	**354**	*e*PKP1	PKPbc			15 23 17.0	-1.4
	comp=Z,13nm,0.8s								
HINF	**Hinteralfeld**	**150.92**	**353**	*e*PKP1	PKPbc			15 23 17.1	-1.7
	comp=Z,5.3nm,0.6s								
LOR	**Lormes**	**151.70**	**357**	*e*PKP1	PKPbc			15 23 19.2	-1.3
	comp=Z,12nm,0.8s								
SSF	**Saint Saulge**	**151.92**	**358**	*e*PKP1	PKPbc			15 23 20.0	-1.0
	comp=Z,9.1nm,0.8s								
CABF	**La Chapelle**	**152.19**	**354**	*e*PKP1	PKPbc			15 23 20.9	-0.8
	comp=Z,22nm,1.1s								
MFF	**Saint Martin d**	**152.35**	**3**	*e*PKP1	PKPbc			15 23 20.4	-1.6
	comp=Z,7.7nm,0.6s								
BGF	**Bois d'Agland**	**152.44**	**359**	*e*PKP1	PKPbc			15 23 20.7	-1.5
TCF	**Toulx Ste Croi**	**152.72**	**360**	*e*PKP1	PKPbc			15 23 21.2	-1.6
	comp=Z,11nm,1.0s								
DBIC	**Dimbokro**	**166.09**	**150**	PKP	PKPdf			15 23 29.0	-2.6
	comp=Z,2.5nm,0.6s,baz=153,slow=2.3,SNR=3.2								
TORD	**Torodi Ar. Bea**	**174.24**	**177**	PKPab	PKPab			15 25 09.4	-0.7
	comp=Z,1.1nm,0.6s,baz=170,slow=3.4,SNR=4.0								

*TEH **17** 15:26:36.8, 2782N×5749E, h8km, ML3.7*
*IDC **17** 15:26:39.7±1.5, 2780N×5749E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.9/1, Error ellipse: s-maj=37.0km s-min=24.0km az=149.0*
*ISCJB **17** 15:26:42.5±0.5, 2789N±003×5736E±005, h10km, mb3.7/7, Error ellipse: s-maj=6.1km s-min=3.9km az=24.0*
*CSEM **17** 15:26:44.6±0.1, 2795N×5739E, h2km, ML3.7, Error ellipse: s-maj=3.6km s-min=2.5km az=95.0*
*THR **17** 15:26:46.7±0.5, 2801N×5723E, h32km±4km, ML3.7*
*NEIC **17** 15:26:46.0, 2782N×5749E, h8km, mb4.0/2, MN3.7(TEH), After TEH,*

ISC 17 15:26:44.6±0.5, 2783N±003×5739E±004, h10km, n59, σ1§42/66, mb3.7/7, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.84**	**244**	*e*Pg		**Pg**		**15 27 02.7**	**+2.0**
IBND				*e*				15 27 36.0	
BNDS	**Bandar-Abbas**	**1.16**	**249**	*e*Pg		**Pg**		**15 27 07.5**	**+0.7**
BNDS				AML		AML		15 27 31.0	
	comp=E,2μm,0.4s								
BNDS	**Bandar-Abbas**	**1.16**	**249**	*e*Pg		**Pg**		**15 27 07.2**	**+0.4**
	SNR=106								
BNDS				*e*Sg		**Sg**		**15 27 22.5**	**+0.7**
	SNR=106								
BANOM	**Banah**	**2.13**	**207**	Pn		**Pn**		**15 27 19.8**	**-0.4**
	SNR=101								
BANOM				Sn		**Sn**		**15 27 47.8**	**+1.2**
KRBR	**Kerman**	**2.22**	**346**	*e*Pg		**Pg**		**15 27 22.7**	**-4.4**
KRBR				AML		AML		15 28 01.3	
	comp=N,670nm,0.7s								
KRBR				AML		AML		15 28 01.8	
	comp=E,650nm,0.6s								
KRBR	**Kerman**	**2.22**	**346**	*eP*		**Pn**		**15 27 22.9**	**+1.5**
	SNR=54								
NAZ	**Nazwa, Dubai**	**3.22**	**209**	Pn		**Pn**		**15 27 36.0**	**+0.8**
FAQ	**Al Faqa, Dubai**	**3.46**	**208**	Pn		**Pn**		**15 27 38.8**	**+0.3**
	SNR=13								
ZHSF	**Zahedan**	**3.47**	**58**	*e*Pn		**Pn**		**15 27 41.2**	**+2.6**
ZHSF	**Zahedan**	**3.47**	**58**	*e*Pn		**Pn**		**15 27 41.0**	**+2.4**
	SNR=54								
ASUD	**Al Ashush, Dub**	**3.68**	**211**	Pn		**Pn**		**15 27 42.0**	**+0.5**
	SNR=8.2								
GHIR	**Ghir-Karzin**	**3.91**	**278**	*e*Pn		**Pn**		**15 27 44.6**	**-0.2**
GHIR				AML		AML		15 28 46.1	
	comp=N,114nm,0.7s								
GHIR	**Ghir-Karzin**	**3.91**	**278**	*e*Pn		**Pn**		**15 27 45.1**	**+0.4**
	SNR=54								
ISRV	**Sarvestan**	**4.06**	**293**	*e*Sn		**Sn**		**15 28 35.7**	**+1.3**
ISRV	**Sarvestan**	**4.06**	**293**	*e*Sn		**Sn**		**15 28 36.3**	**+1.9**
IBAF	**Bafgh**	**4.07**	**338**	‖*e*Pn		**Pn**		**15 27 48.8**	**+1.9**
IBAF	**Bafgh**	**4.07**	**338**	*e*Pn		**Pn**		**15 27 48.4**	**+1.5**
IBAF				*e*				15 29 06.1	
IMEH	**Mehriz**	**4.29**	**326**	*e*Pn		**Pn**		**15 27 51.3**	**+1.3**
IMEH	**Mehriz**	**4.29**	**326**	*e*Pn		**Pn**		**15 27 51.3**	**+1.3**
IMEH				*e*				15 29 09.2	
IPAR	**Pars**	**4.30**	**299**	*e*Pn		**Pn**		**15 27 52.6**	**+2.5**
IPAR	**Pars**	**4.30**	**299**	*e*Pn		**Pn**		**15 27 52.6**	**+2.5**
IPAR				*e*				15 29 08.5	
IKOO	**Kooshah**	**4.79**	**17**	‖*e*Pn		**Pn**		**15 27 57.6**	**+0.8**
IKOO				*e*Sn		**Sn**		**15 28 51.5**	**-0.9**
IKOO	**Kooshah**	**4.79**	**17**	*e*Pn		**Pn**		**15 27 57.6**	**+0.8**
IKOO				*e*Lg				15 29 14.9	
IKOO				*e*				15 29 32.6	
ISAD	**Sadrabad**	**5.19**	**323**	*e*Sn		**Sn**		**15 29 02.7**	**+0.5**
ISAD	**Sadrabad**	**5.19**	**323**	*e*Pn		**Pn**		**15 28 04.2**	**+1.9**
ISAD				*e*Sn		**Sn**		**15 29 02.7**	**+0.5**
ISAD				*e*				15 29 12.7	
ITEG	**Tejag**	**5.19**	**13**	*e*Pn		**Pn**		**15 28 03.1**	**+0.8**
ITEG				*e*				15 29 41.3	
IDAH	**Dahanechah**	**5.35**	**23**	*e*Pn		**Pn**		**15 28 06.0**	**+1.6**
IDAH				*e*				15 29 54.4	
IMON	**Monand**	**5.70**	**20**	*e*Pn		**Pn**		**15 28 09.8**	**+0.5**
IMON				*e*				15 28 34.8	
NASN	**Na'in**	**6.34**	**323**	*e*Pn		**Pn**		**15 28 17.8**	**-0.3**
IZEF	**Zefreh**	**6.68**	**320**	*e*Sn		**Sn**		**15 29 36.7**	**-2.2**
IZEF	**Zefreh**	**6.68**	**320**	*e*Pn		**Pn**		**15 28 22.8**	**+0.1**
IZEF				*e*				15 28 23.7	
IZEF				*e*Sn		**Sn**		**15 29 37.9**	**-1.0**
SLWS		**6.76**	**245**	P		**Pn**		**15 28 22.7**	**-1.1**
BTHS		**6.99**	**239**	P		**Pn**		**15 28 25.3**	**-1.7**
IPIR	**Pirpir**	**7.41**	**312**	*e*Pn		**Pn**		**15 28 34.9**	**+2.1**
IPIR				*e*Sn		**Sn**		**15 29 55.5**	**-1.5**
IPIR	**Pirpir**	**7.41**	**312**	*e*Pn		**Pn**		**15 28 34.9**	**+2.1**
IPIR				*e*Sn		**Sn**		**15 29 55.5**	**-1.5**
IPIR				*e*				15 29 59.4	
IKLH	**Kolahrood**	**7.42**	**319**	*e*Pn		**Pn**		**15 28 34.3**	**+1.4**
IKLH	**Kolahrood**	**7.42**	**319**	*e*Pn		**Pn**		**15 28 34.3**	**+1.4**
IKLH				*e*				15 30 02.3	
KFJS		**8.36**	**275**	P		**Pn**		**15 28 44.9**	**-0.9**
KBD	**Kabd**	**8.63**	**281**	*e*P		**Pn**		**15 28 48.0**	**-1.6**
UMR	**Umm Al-Rimmam**	**8.66**	**284**	*e*P		**Pn**		**15 28 49.0**	**-1.0**
RDF	**Al-Radifah**	**8.73**	**280**	*e*P		**Pn**		**15 28 49.4**	**-1.5**
	baz=280								
RDF				AML		AML		15 30 24.2	
	comp=Z,14nm,0.4s,baz=280								
MIB	**Mutribah**	**9.03**	**285**	*e*P		**Pn**		**15 28 53.9**	**-1.2**
	baz=285								
MIB				AML		AML		15 30 34.0	
	comp=Z,26nm,0.6s,baz=285								
NAY	**Al-Naaiem**	**9.03**	**281**	*e*P		**Pn**		**15 28 54.4**	**-0.6**
	baz=281								
NAY				AML		AML		15 30 34.3	
	comp=Z,11nm,0.4s,baz=281								
LYLS		**10.85**	**240**	P		**Pn**		**15 29 15.8**	**-4.2**
GNI	**Garni**	**16.14**	**323**	*e*Pn		**Pn**		**15 30 27.4**	**-4.0**
	comp=Z,4.8nm,0.7s								
GNI	**Garni**	**16.14**	**323**	*e*Pn		**Pn**		**15 30 27.4**	**-4.0**

BRG	**Berggiesshubel**	**1.51**	**244**	Pg		**Pg**	**15**	**29**	**25.3 0.0**
BRG				Sg		**Sg**	**15**	**29**	**45.9 +1.0**
BRG	**Berggiesshubel**	**1.51**	**244**	PN		**Pn**	**15**	**29**	**23.9 -0.7**
BRG				PG		**Pg**	**15**	**29**	**25.3 0.0**
BRG				SG		**Sg**	**15**	**29**	**45.8 +0.9**
	comp=Z,138nm,0.4s								
RUE	**Ruedersdorf**	**1.71**	**304**	*e*Pn		**Pn**	**15**	**29**	**26.1 -1.2**
RUE				*e*Sn		**Sn**	**15**	**29**	**49.6 -0.2**
RUE	**Ruedersdorf**	**1.71**	**304**	*e*Pn		**Pn**	**15**	**29**	**26.0 -1.3**
RUE				*e*Sn		**Sn**	**15**	**29**	**49.6 -0.2**
PRU	**Pruhonice**	**1.85**	**213**	*e*PN		**Pn**	**15**	**29**	**28.8 -0.4**
PRU				*e*PG		**Pg**	**15**	**29**	**30.9 -0.8**
PRU				*e*SG		**Sg**	**15**	**29**	**55.1 -0.6**
	comp=Z,45nm,0.4s								
CLL	**Collm**	**1.95**	**264**	*e*Pn		**Pn**	**15**	**29**	**29.7 -0.9**
CLL				*e*Pg		**Pg**	**15**	**29**	**33.0 -0.7**
CLL				*e*Sg		**Sg**	**15**	**29**	**59.1 +0.2**
CLL	**Collm**	**1.95**	**264**	*i* Pn		**Pn**	**15**	**29**	**29.7 -0.9**
CLL				*e*Pg		**Pg**	**15**	**29**	**33.0 -0.7**
CLL				*e*Sg		**Sg**	**15**	**29**	**59.0 +0.1**
CLL	**Collm**	**1.95**	**264**	*i* Pn		**Pn**	**15**	**29**	**29.7 -0.9**
	comp=Z,22nm,0.5s								
CLL				*e*Pg		**Pg**	**15**	**29**	**33.0 -0.7**
CLL				*ex*		x	15	29	37.0
CLL				*e*Sg		**Sg**	**15**	**29**	**59.0 +0.1**
	comp=Z,54nm,0.6s								
RAC	**Raciborz**	**1.98**	**137**	*e*Pg		**Pg**	**15**	**29**	**33.9 -0.4**
RAC				*e*Sg		**Sg**	**15**	**29**	**59.5 -0.5**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn		**Pn**	**15**	**29**	**30.2 -1.1**
MORC				*e*Sn		**Sn**	**15**	**29**	**58.6 +1.6**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn		**Pn**	**15**	**29**	**30.2 -1.1**
MORC				*e*Sn		**Sn**	**15**	**29**	**58.6 +1.6**
OKC	**Ostrava-Krasne**	**2.16**	**142**	Pg		**Pg**	**15**	**29**	**36.7 -0.9**
OKC				Sg		**Sg**	**15**	**30**	**04.5 -1.0**
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*PG		**Pg**	**15**	**29**	**36.7 -0.9**
OKC				*e*SG		**Sg**	**15**	**30**	**04.1 -1.4**
	comp=Z,50nm,0.6s								
VRAC	**Vranov**	**2.27**	**172**	*e*Pn		**Pn**	**15**	**29**	**35.0 0.0**
VRAC				*e*Sg		**Sg**	**15**	**30**	**08.4 -0.7**
	comp=Z,15nm,0.2s								
TREC	**Trest**	**2.29**	**190**	*e*Pn		**Pn**	**15**	**29**	**35.4 +0.1**
TREC	**Trest**	**2.29**	**190**	Pg		**Pg**	**15**	**29**	**39.0 -1.2**
TREC				*e*Sg		**Sg**	**15**	**30**	**09.8 -0.1**
TREC	**Trest**	**2.29**	**190**	*e*PN		**Pn**	**15**	**29**	**35.5 +0.2**
TREC				*e*PG		**Pg**	**15**	**29**	**39.0 -1.2**
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn		**Pn**	**15**	**29**	**38.4 +0.2**
KRUC				*e*Sg		**Sg**	**15**	**30**	**15.3 -1.3**
	comp=Z,12nm,0.3s								
TANN	**Tannenbergstha**	**2.56**	**245**	*e*Pn		**Pn**	**15**	**29**	**39.0 0.0**
WERD	**Werda**	**2.64**	**247**	*e*Pn		**Pn**	**15**	**29**	**39.9 -0.1**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN		**Pn**	**15**	**29**	**40.5 +0.1**
NKC				*e*PG		**Pg**	**15**	**29**	**46.6 -0.7**
NKC				*e*SG		**Sg**	**15**	**30**	**23.1 +1.4**
	comp=Z,79nm,0.4s								
OJC	**Ojcow**	**2.70**	**118**	*e*Pn		**Pn**	**15**	**29**	**35.7 -5.2**
OJC				*e*Pg		**Pg**	**15**	**29**	**47.2 -0.8**
OJC				*e*Sg		**Sg**	**15**	**30**	**22.2 -0.7**
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Sg		**Sg**	**15**	**30**	**30.5 +1.8**
	comp=Z,37nm,0.8s								
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN		**Pn**	**15**	**29**	**43.8 0.0**
KHC				*e*PG		**Pg**	**15**	**29**	**49.9 -2.1**
KHC				*e*SN		**Sn**	**15**	**30**	**19.6 +0.2**
KHC				*e*SG		**Sg**	**15**	**30**	**29.1 -0.6**
	comp=Z,17nm,0.4s								
MGBB	**Grossbuechelbe**	**2.93**	**239**	⇓*i*Pn		**Pn**	**15**	**29**	**44.2 +0.2**
MOX	**Moxa**	**2.97**	**254**	*e*Pn		**Pn**	**15**	**29**	**44.2 -0.4**
MOX				*e*Pg		**Pg**	**15**	**29**	**53.2 +0.1**
MOX				*e*Sg		**Sg**	**15**	**30**	**32.2 +0.7**
MOX	**Moxa**	**2.97**	**254**	*e*PN		**Pn**	**15**	**29**	**45.1 +0.5**
MOX				*e*PG		**Pg**	**15**	**29**	**53.2 +0.1**
MOX				*e*SG		**Sg**	**15**	**30**	**32.9 +1.4**
MANZ	**Manzenberg**	**2.98**	**240**	*e*Pn		**Pn**	**15**	**29**	**45.1 +0.4**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn		**Pn**	**15**	**29**	**47.3 +0.7**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn		**Pn**	**15**	**29**	**46.6 0.0**
GEC2				*e*Sn		**Sn**	**15**	**30**	**25.4 +0.9**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn		**Pn**	**15**	**29**	**46.6 0.0**
GEC2				*e*Sn		**Sn**	**15**	**30**	**25.4 +0.9**
SMOL	**Smolenice**	**3.16**	**164**	*e*PN		**Pn**	**15**	**29**	**50.1 +2.9**
SMOL				*e*PG		**Pg**	**15**	**29**	**56.6 -0.2**
SMOL				*e*SG		**Sg**	**15**	**30**	**38.5 +0.7**
WET	**Wettzell**	**3.17**	**222**	*e*Pn		**Pn**	**15**	**29**	**47.6 +0.2**
MODS	**Modra-Piesok**	**3.27**	**166**	*e*PG		**Pg**	**15**	**29**	**58.5 -0.5**
MODS				*e*SG		**Sg**	**15**	**30**	**41.0 -0.3**
KOLL	**Kolacno**	**3.33**	**153**	*e*PN		**Pn**	**15**	**29**	**53.1 +3.6**
KOLL				*e*PG		**Pg**	**15**	**29**	**59.3 -0.7**
KOLL				*e*SG		**Sg**	**15**	**30**	**41.4 -1.7**
ZST	**Bratislava**	**3.42**	**169**	*e*SG		**Sg**	**15**	**30**	**44.7 -1.5**
NIE	**Niedzica**	**3.44**	**127**	*e*P		**Pg**	**15**	**30**	**03.5 +1.3**
NIE				*e*S		**Sg**	**15**	**30**	**47.4 +0.7**
VYHS	**Vyhne**	**3.53**	**149**	*e*PN		**Pn**	**15**	**29**	**51.8 -0.6**
VYHS				*e*PG		**Pg**	**15**	**30**	**05.0 +1.0**
VYHS				*e*SG		**Sg**	**15**	**30**	**49.7 -0.1**
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pn		**Pn**	**15**	**29**	**53.9 +0.4**
GRA1				Sg		**Sg**	**15**	**30**	**52.5 0.0**
GRF	**Grafenberg Arr**	**3.62**	**241**	*e*Pn		**Pn**	**15**	**29**	**53.9 +0.3**
GRF				*e*Sg		**Sg**	**15**	**30**	**52.5 0.0**
CONA	**Conrad Observa**	**3.63**	**182**	⇓*i*Pn		**Pn**	**15**	**29**	**54.1 +0.4**
CONA				⇑⇑*i*Sg		**Sg**	**15**	**30**	**52.9 0.0**
	comp=Z,29nm,0.5s								
CSNA	**Conrad Observa**	**3.63**	**183**	⇑*i*Pn		**Pn**	**15**	**29**	**54.2 +0.5**
CSNA				⇑⇑*i*Sg		**Sg**	**15**	**30**	**52.9 +0.1**
	comp=Z,29nm,0.6s								
HROE	**Hohe Rhon--Fla**	**3.88**	**257**	⇓*i*Pn		**Pn**	**15**	**29**	**57.0 -0.2**
MOA	**Molln**	**3.89**	**198**	⇓*i*Pn		**Pn**	**15**	**29**	**57.7 +0.4**
MOA				⇑⇑*i*Sg		**Sg**	**15**	**31**	**01.5 +0.3**
	comp=Z,34nm,0.6s								
STHS	**Stebnicka Huta**	**3.92**	**121**	*e*PG		**Pg**	**15**	**30**	**11.9 +0.5**
STHS				*e*SG		**Sg**	**15**	**31**	**06.7 +4.5**
ARSA	**Arzberg**	**4.32**	**185**	⇑*i*Pn		**Pn**	**15**	**30**	**03.7 +0.5**
ARSA				⇑⇑*i*Sg		**Sg**	**15**	**31**	**14.2 -0.8**
	comp=Z,42nm,1.0s								
CRVS	**Cervenica-Dubn**	**4.35**	**125**	*e*PN		**Pn**	**15**	**30**	**04.0 +0.4**
CRVS				*e*PG		**Pg**	**15**	**30**	**20.4 +0.8**
CRVS				*e*SG		**Sg**	**15**	**31**	**17.4 +1.5**
KOLS	**Kolonicke sedl**	**4.75**	**121**	*e*SG		**Sg**	**15**	**31**	**32.5 +3.6**

IDC 17 15:28:57.7±60.0, **1648S**×**17725W**, **h0**km, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.6**/17, **mbtmp3.7**/3, **Error ellipse: s-maj=1115.0km s-min=166.9km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.29**	**240**	P	P	15 36 37.6	+0.8
	0.9nm,0.5s,baz=97,slow=8.1,SNR=4.8						
WRA	**Warramunga Arr**	**45.99**	**258**	P	P	15 37 22.6	-0.5
	0.1nm,0.3s,baz=95,slow=8.2,SNR=3.0						
ASAR	**Alice Springs**	**46.26**	**253**	P	P	15 37 24.8	-0.3
	1.0nm,0.4s,baz=89,slow=7.9,SNR=38						

NEIC ***17*** *15:52:26.4±0.9, 3546N×6884E, h35km, mb3.5/2, Error ellipse: s-maj=18.4km s-min=12.7km az=126.0*
IDC ***17*** *15:52:33.7±12.0, 3580N×69.10E, h98km±110km, mb3.3/6, mb1 3.3/8, mb1mx3.2/22, mbtmp3.2/8, ML3.3/2, Error ellipse: s-maj=57.4km s-min=24.5km az=25.0*
ISCJB ***17*** *15:52:37.6±2.1, 3624N±008×69.1E±02, h133km±21km, mb3.3/5, Error ellipse: s-maj=24.0km s-min=7.5km az=151.8*

ISC 17 15:52:37.4±1.9, **3618N**±008×**690E**±02, **h108**km±19km, **n32, σ0**98/34, **mb3.4**/5, **2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.99**	**30**	*e*Pn	**Pn**	**15 54 16.9**	**-0.1**
	9.1nm,0.5s						
AML				*e*Sn	**Sn**	**15 55 32.9**	**-2.0**
AML	**Almayashu**	**6.99**	**30**	P	**Pn**	**15 54 17.2**	**+0.2**
	SNR=14						
KK31	**Karatay Array**	**7.02**	**9**	⇑Pn	**Pn**	**15 54 17.7**	**+0.3**
	3.4nm,0.5s,baz=206,slow=15,SNR=60						
KK31				⇑Sn	**Sn**	**15 55 32.0**	**-3.6**
	3.9nm,0.5s,baz=192,slow=24,SNR=14						
EKS2	**Erkin-Say**	**7.47**	**28**	*e*Pn	**Pn**	**15 54 23.1**	**-0.4**
	3.0nm,0.6s						
KZA	**Kyzart**	**7.65**	**38**	P	**Pn**	**15 54 26.4**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**7.73**	**32**	P	**Pn**	**15 54 27.7**	**+0.5**
	SNR=7.7						
KBK	**Karagaybulak**	**7.95**	**34**	P	**Pn**	**15 54 31.0**	**+0.9**
	SNR=5.7						
CHMS	**Chumysh**	**8.14**	**31**	P	**Pn**	**15 54 32.8**	**+0.1**
	SNR=5.3						
USP	**Ospenovka**	**8.26**	**29**	P	**Pn**	**15 54 33.6**	**-0.7**
	SNR=8.6						
TKM2	**Tokmak 2**	**8.46**	**35**	⇓*i*Pn	**Pn**	**15 54 36.6**	**-0.3**
	5.7nm,0.5s						
TKM2	**Tokmak 2**	**8.46**	**35**	P	**Pn**	**15 54 36.9**	**0.0**
	SNR=12						
PYUN	**Piuthan**	**14.34**	**120**	*e*P	**Pn**	**15 55 55.2**	**-0.1**
	5.5nm,0.4s						
MKAR	**Makanchi Array**	**14.54**	**39**	P	**Pn**	**15 55 57.1**	**-0.6**
	0.1nm,0.3s,baz=227,slow=15,SNR=7.5						
DANN	**Dangsing**	**14.74**	**118**	*e*P	**Pn**	**15 55 58.9**	**-1.5**
KOLN	**Koldanda**	**14.97**	**120**	*e*P	**Pn**	**15 56 04.6**	**+1.3**
GKN	**Gorkha**	**15.57**	**117**	*e*P	**Pn**	**15 56 11.1**	**+0.3**
	13nm,0.5s						
KURK	**Kurchatov**	**16.11**	**23**	*e*Pn	**Pn**	**15 56 18.7**	**+1.4**
	5.9nm,1.3s						
KKN	**Kakani**	**16.16**	**117**	*e*P	**Pn**	**15 56 17.9**	**-0.2**
	14nm,0.7s						
GUN	**Gumba**	**16.52**	**115**	*e*P	**Pn**	**15 56 21.6**	**-1.0**
	17nm,0.8s						
BVAR	**Borovoye Array**	**16.87**	**3**	P	**Pn**	**15 56 28.1**	**+1.4**
	0.2nm,0.3s,baz=165,slow=9.1,SNR=3.5						
JIRN	**Jiri**	**16.89**	**115**	*e*P	**Pn**	**15 56 26.3**	**-0.9**
	13nm,0.5s						
BRVK	**Borovoye**	**16.90**	**3**	*e*P	**Pn**	**15 56 31.0**	**+3.9**
	1.8nm,0.4s						
RAMN	**Ramite**	**17.60**	**117**	*e*P	**Pn**	**15 56 36.2**	**+0.5**
TAPN	**Taplejung**	**18.18**	**114**	*e*P	**P**	**15 56 42.4**	**+0.8**
	6.0nm,0.5s						
ODAN	**Odare**	**18.23**	**115**	*e*P	**P**	**15 56 43.6**	**+1.5**
	6.2nm,0.6s						
ZALV	**Zalesovo Beam**	**20.91**	**27**	P	**P**	**15 57 11.3**	**+0.4**
	1.5nm,0.5s,baz=220,slow=11,SNR=10						
ARCES	**ARCESS Array B**	**40.82**	**338**	P	**P**	**16 00 08.3**	**+0.5**
	0.7nm,0.5s,mb3.8,baz=107,slow=7.8,SNR=6.7						
NOA	**NORSAR Array B**	**43.65**	**323**	P	**P**	**16 00 30.9**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=100,slow=8.1,SNR=2.6						
ESK	**Eskdalemuir**	**51.40**	**316**	*e*P	**P**	**16 01 30.4**	**-0.4**
	32nm,1.4s						
TORD	**Torodi Ar. Bea**	**64.07**	**268**	P	**P**	**16 02 58.2**	**-1.8**
	0.5nm,0.7s,mb3.5,baz=39,slow=6.5,SNR=4.3						
WRA	**Warramunga Arr**	**83.23**	**121**	P	**P**	**16 04 48.3**	**-3.6**
	0.2nm,0.8s,mb3.0,baz=318,slow=4.2,SNR=4.5						
ASAR	**Alice Springs**	**85.43**	**124**	P	**P**	**16 04 58.7**	**-4.2**
	0.2nm,0.6s,mb3.2,baz=297,slow=4.0,SNR=5.9						

IDC ***17*** *15:59:29.2±2.5, 2321S×7071W, h0km, mb4.1/2, mb1 3.9/3, mb1mx3.6/16, mbtmp3.9/3, ML3.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/16, Error ellipse: s-maj=62.7km s-min=51.7km az=151.0*
NEIC ***17*** *15:59:33.1±0.9, 2322S×7080W, h35km, Error ellipse: s-maj=20.4km s-min=13.8km az=87.0*
ISCJB ***17*** *15:59:34.6±1.0, 2286S±006×7074W±009, h51km±13km, mb3.9/2, Error ellipse: s-maj=14.7km s-min=9.8km az=13.4*
GUC ***17*** *15:59:34.8±0.5, 2293S×7061W, h62km±6km, ML3.5*

ISC 17 15:59:36.1±0.9, **2291S**±006×**7069W**±009, **h47**km±12km, **n15, σ0**971/18, **mb3.9**/2, **1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.66**	**137**	*e*P	**Pn**	**15 59 49.1**	**-0.2**
CEN1				*i* S	**Sn**	**16 00 00.3**	**+1.5**
CEN1				AML	AML	16 00 01.8	
	comp=N,2μm,0.3s						
ANCH	**Antofagasta**	**0.82**	**161**	*e*P	**Pn**	**15 59 50.1**	**-1.2**
ANCH				*i* S	**Sn**	**16 00 01.9**	**-0.4**
ANCH				AML	AML	16 00 03.8	
	comp=N,12μm,0.0s						
LVC	**Limon Verde**	**1.67**	**80**	Pn	**Pn**	**16 00 02.2**	**-0.7**
LVC	**Limon Verde**	**1.67**	**80**	Pn	**Pn**	**16 00 02.2**	**-0.8**
LVC	**Limon Verde**	**1.67**	**80**	⇓*i*P	**Pn**	**16 00 02.2**	**-0.7**
LVC				*i* S	**Sn**	**16 00 22.7**	**-0.5**
LVC				AML	AML	16 00 25.1	
	comp=E,416nm,0.5s						
CPN1	**Cerro Paranal**	**1.73**	**171**	⇑*i*P	**Pn**	**16 00 03.5**	**-0.3**
CPN1				*i* S	**Sn**	**16 00 25.3**	**+0.6**
CPN1				AML	AML	16 00 35.1	
	comp=E,1μm,0.6s						
LCO	**Las Campanas**	**6.08**	**180**	*e*Pn	**Pn**	**16 00 55.4**	**-8.1**
	comp=E,34nm,0.9s						
LCO				*e*Sn	**Sn**	**16 02 06.2**	**-5.5**
LPAZ	**La Paz**	**7.01**	**21**	Pn	**Pn**	**16 01 17.2**	**+0.9**
	comp=E,0.4nm,0.3s,baz=191,slow=7.8,SNR=8.3						
LPAZ				LR	LR	16 04 12.0	
	comp=E,38nm,19.0s,baz=12,slow=39						
LPAZ	**La Paz**	**7.01**	**21**	*e*Pn	**Pn**	**16 01 17.3**	**+1.0**
	comp=E,1.7nm,0.4s						
NNA	**Nana**	**12.34**	**331**	Pn	**Pn**	**16 02 29.2**	**0.0**
	comp=E,24nm,1.3s						
BDFB	**Brasilia**	**22.58**	**75**	LR	LR	16 14 33.7	
	comp=E,37nm,19.9s,baz=95,slow=40						
DBIC	**Dimbokro**	**70.72**	**74**	P	**P**	**16 10 47.7**	**-0.1**
	comp=E,1.6nm,1.0s,mb3.9,baz=225,slow=5.7,SNR=2.4						
DBIC	**Dimbokro**	**70.72**	**74**	P	**P**	**16 10 47.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**79.38**	**71**	P	**P**	**16 11 38.0**	**+0.4**
	comp=E,1.0nm,0.5s,mb4.0,baz=254,slow=5.5,SNR=13						
MKAR	**Makanchi Array**	**147.74**	**36**	PKPbc	PKPbc	16 19 16.9	+1.4
	comp=E,0.3nm,0.6s,baz=292,slow=3.3,SNR=4.2						

DJA ***17*** *17:16:37.0±0.0, 5302N×161.18E, h13km, mB7.0/1, Mw(mB)7.0/1, Mwp6.0/4*
MOS ***17*** *17:16:38.8±1.6, 5253N×15954E, h13km, mb5.3/114, MS4.6/48, Error ellipse: s-maj=9.2km s-min=5.5km az=86.5*
MOS Felt (III-IV) at Petropavlovsk-Kamchatskiy.
BJI ***17*** *17:16:40.9, 5275N×15977E, h40km, mB5.0, mb4.7, Ms4.8, Msz4.6*
KRSC ***17*** *17:16:42.3±1.4, 5258N×15963E, h17km±16km, ML5.7*
ISCJB ***17*** *17:16:42.4±0.1, 5254N±002×15956E±003, h36km, mb5.1/258, MS4.6/62, Error ellipse: s-maj=3.2km s-min=2.3km az=154.1*
BGS ***17*** *17:16:42.9±1.4, 5263N×16094E, h33km, mb5.3*
GCMT ***17*** *17:16:43.1±0.3, 5251N×15998E, h38km±2km, MW5.0/61, Moment Tensor Solution. s29,c39; s61,c89; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.06±.21; Mθθ-1.47±.14; Mϕϕ-0.59±.13; Mrθ2.85±.18; Mrϕ-2.01±.08; Mθϕ0.42±.13; Best double couple: M0 3.94900×10^16 NP1:ϕ202.00000°, δ30.00000°, λ40.00000°. NP2: ϕ76.00000°, δ72.00000°, λ113.00000°. Principal axes: T 3.7460, Plg57.0000°, Azm117.0000°; N 0.4060, Plg22.0000°, Azm248.0000°; P -4.1520, Plg23.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***17*** *17:16:43.1±1.2, 5268N×15948E, h26km±8km, mb5.2/161, MS4.8/7 Error ellipse: s-maj=4.6km s-min=2.4km az=178.0*
IDC ***17*** *17:16:44.5±1.8, 5276N×15936E, h33km±13km, mb4.5/23, mb1 4.7/24, mb1mx4.7/25, mbtmp4.5/24, ML5.0/1, MS4.5/26, Ms1 4.5/26, ms1mx4.3/47, Error ellipse: s-maj=15.8km s-min=10.5km az=156.0*
SZGRF ***17*** *17:16:49.6, 5317N×15877E, h33km, mb5.5, MS4.7, Near east coast of Kamchatka Peninsula, Russia*

ISC 17 17:16:44.6±0.1, **5259N**±002×**15947E**±003, **h38**km, **h38**km±1.7km: **pP-P, n706, σ0**97/704, **mb5.1**/258, **MS4.6**/62, **119C-12D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.59**	**353**	*i* P	**Pn**	**17 16 54.2**	**-2.2**
RUS	**Russkaya**	**0.60**	**255**	*e*P	**Pn**	**17 16 55.2**	**-1.4**
SPN	**Mys Shipunski**	**0.61**	**33**	*i* P	**Pn**	**17 16 54.2**	**-2.5**
PET	**Petropavlovsk**	**0.66**	**312**	*e*Pn	**Pn**	**17 16 55.7**	**-1.7**
PET				*e*Sn	**Sn**	**17 17 02.3**	**-4.2**
PET	**Petropavlovsk**	**0.66**	**312**	*k i*PN	**Pn**	**17 16 55.7**	**-1.7**
PET				*e*S	**Sn**	**17 17 05.2**	**-1.3**
PET				pmax	pmax		
	comp=Z,7μm,1.2s						
PET				pmax	pmax		
	comp=Z,6μm,0.5s						
PET				smax			
	comp=N,19μm,0.9s						
PET				smax			
	comp=N,26μm,0.7s						
PET				smax			
	comp=E,26μm,0.6s						
PET	**Petropavlovsk**	**0.66**	**312**	*i* P	**Pn**	**17 16 56.3**	**-1.1**
INSR	**Institute**	**0.71**	**313**	*e*P	**Pn**	**17 16 56.7**	**-1.4**
INSR				*i* S	**Sn**	**17 17 08.3**	**+0.6**
AVH	**Avacha**	**0.81**	**327**	*i* P	**Pn**	**17 16 58.8**	**-0.6**
GRL	**Gorelyy**	**0.85**	**268**	*e*P	**Pn**	**17 17 00.4**	**+0.4**
PEA0B	**Petropavlovsk-**	**1.19**	**296**	*e*Pn	**Pn**	**17 17 04.6**	**-0.1**
PETK	**Petropavlovsk-**	**1.19**	**296**	Pg	**Pn**	**17 17 04.8**	**+0.1**
	comp=E,405nm,0.3s,baz=103,slow=20,SNR=5761						
GNL	**Ganaly**	**1.44**	**321**	*i* P	**Pn**	**17 17 08.7**	**+0.6**
KII	**Karymskiy**	**1.45**	**360**	*i* P	**Pn**	**17 17 08.6**	**+0.4**
MIPR	**Malaya Ipel'ka**	**1.69**	**260**	*e*P	**Pn**	**17 17 13.5**	**+2.0**
MKZ	**Mys Kozlova**	**2.39**	**34**	*e*P	**Pn**	**17 17 18.4**	**-2.7**
MKZ				*i* S	**Sn**	**17 17 44.7**	**-4.4**
TUMR	**Tumrok**	**2.73**	**8**	*i* P	**Pn**	**17 17 27.3**	**+1.5**
SKR	**Severo-Kuril's**	**2.83**	**229**	*e*PN	**Pn**	**17 17 25.0**	**-2.2**
SKR				*e*S	**Sn**	**17 18 01.2**	**+1.2**
SKR				pmax	pmax		
	comp=N,120nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,360nm,0.5s						
SKR				smax			
	comp=N,6μm,0.9s						
SKR				smax			
	comp=E,7μm,0.9s						
SKR				smax			
	comp=N,12μm,2.0s						
SKR				smax			
	comp=E,17nm,2.0s						
SKR				MLR	MLR		
	comp=N,11μm,12.0s						
SKR				MLR	MLR		
	comp=E,13μm,12.0s						
SKR				MLR	MLR		
	comp=Z,9μm,12.0s						
KMNR	**Kamenistaya**	**3.20**	**8**	*e*P	**Pn**	**17 17 34.1**	**+1.8**
BZMR	**Bezymyannaya**	**3.40**	**10**	*e*P	**Pn**	**17 17 36.8**	**+1.7**
KIRR	**Kirishev**	**3.41**	**8**	*i* P	**Pn**	**17 17 36.8**	**+1.7**
KIRR				*i* S	**Sn**	**17 18 16.6**	**+2.3**
KPT	**Kopyto**	**3.41**	**7**	*i* P	**Pn**	**17 17 36.6**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**3.43**	**12**	*i* P	**Pn**	**17 17 37.1**	**+1.6**
BZGR				*i* S	**Sn**	**17 18 17.5**	**+2.6**
BZWR	**Bezymyannyi-We**	**3.43**	**10**	*i* P	**Pn**	**17 17 37.3**	**+1.8**
KOZ	**Kozyrevsk**	**3.48**	**4**	*e*P	**Pn**	**17 17 38.0**	**+1.8**
KOZ				*i* S	**Sn**	**17 18 18.2**	**+2.1**
KOZR	**Kozyr**	**3.49**	**4**	PN	**Pn**	**17 17 38.0**	**+1.7**
KOZR				S	**Sn**	**17 18 18.2**	**+1.9**
ZLN	**Zelenaya**	**3.52**	**12**	*e*P	**Pn**	**17 17 38.6**	**+1.9**
CIRR	**Tsirk**	**3.61**	**11**	*e*P	**Pn**	**17 17 39.8**	**+1.9**
KRSR	**Krestovskiy**	**3.69**	**10**	*e*P	**Pn**	**17 17 40.3**	**+1.3**
SRDR	**Sredinnyy**	**3.74**	**2**	*e*P	**Pn**	**17 17 40.9**	**+1.2**
KBTR	**Krutoberegovo**	**4.12**	**27**	*i* P	**Pn**	**17 17 44.8**	**-0.1**
KBTR				*i* S	**Sn**	**17 18 31.3**	**-0.5**
SRKR	**Sorokina**	**4.19**	**13**	*i* P	**Pn**	**17 17 47.5**	**+1.6**
SMY	**Shemya**	**8.90**	**83**	*e*Pn	**Pn**	**17 18 48.1**	**-2.4**
SMY				*e*Sn	**Sn**	**17 20 18.3**	**-11**
SMY	**Shemya**	**8.90**	**83**	*e*PN	**Pn**	**17 18 48.7**	**-1.8**
SEY	**Seymchan**	**11.03**	**343**	*i* PN	**Pn**	**17 19 22.6**	**+3.1**
UGL	**Uglegorsk**	**11.55**	**259**	PN	**Pn**	**17 19 39.0**	**+12**
UGL				pmax	pmax		
	comp=Z,96nm,0.8s						
UGL				MLR	MLR		
	comp=E,2μm,18.0s						
UGL				MLR	MLR		
	comp=Z,4μm,18.0s						
UGL				MLR	MLR		
	comp=N,2μm,13.0s						
YSS	**Yuzh-Sakhalins**	**12.18**	**249**	Pn	**Pn**	**17 19 36.9**	**+1.6**
	comp=N,160nm,1.6s						
YSS	**Yuzh-Sakhalins**	**12.18**	**249**	*e*PN	**Pn**	**17 19 41.2**	**+5.9**
YSS				*e*S	**Sn**	**17 21 57.0**	**+7.4**
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
YSS				MLR	MLR		
	comp=E,2μm,17.0s						
ASAJ	**Asahikawa**	**14.03**	**240**	Pn	**Pn**	**17 20 02.8**	**+2.1**
	comp=E,10.0nm,0.3s,baz=72,slow=11

comp=E,1µm,18.3s,MS4.4
MDJ LR LR
comp=Z,2µm,17.5s,MS4.5
MDJ Mudanjiang 21.18 260 *e*P **P 17 21 26.0 -0.5**
comp=Z,30nm,1.3s,mb4.5
MJAR Matsushiro Arr 21.93 231 P **P 17 21 35.8 +1.2**
comp=Z,46nm,1.0s,mb4.9,baz=22,slow=9.9,SNR=72
MJAR LR LR 17 32 00.7
comp=Z,670nm,18.9s,MS4.1,baz=55,slow=42
MJAR Matsushiro Arr 21.93 231 P **P 17 21 35.8 +1.2**
MJAR pmax pmax
comp=Z,47nm,1.0s
MJAR MLR MLR
comp=Z,670nm,18.9s
MAJO Matsushiro 21.94 231 *e*P **P 17 21 35.8 +1.2**
comp=Z,102nm,0.8s,mb5.3
MAT Matsushiro 21.94 231 P **P 17 21 35.2 +0.6**
MAT S **S 17 25 32.0 -2.5**
TIXI Tiksi 23.38 336 *e*P **P 17 21 47.5 -2.0**
TIXI *e*PcP PcP 17 25 33.9 -0.7
TIXI Tiksi 23.38 336*c i*P **P 17 21 47.4 -2.1**
TIXI pmax pmax
comp=Z,44nm,0.9s,mb4.9
TIXI MLR MLR
comp=Z,4µm,19.0s,MS4.9
CN2 Changchun 24.13 262 *e*P **P 17 21 55.0 -1.6**
CN2 *e*XP sP 17 22 12.0 +0.3
CN2 *e*S **S 17 26 05.9 -5.8**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.2
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1µm,19.0s,MS4.5
CN2 LR LR
comp=E,900nm,19.0s,MS4.5
CN2 LR LR
comp=Z,1µm,19.0s,MS4.4
HIA Hailar 25.04 278 *e*P **P 17 22 04.1 -0.7**
comp=Z,34nm,0.9s,mb4.9
HIA Hailar 25.04 278 *e*P **P 17 22 04.1 -0.7**
HIA pmax pmax
comp=Z,34nm,0.9s
SVW2 Sparrevohn 25.54 53 *e*P **P 17 22 09.9 +0.7**
BOD Bodaibo 26.06 300 *e*P **P 17 22 13.6 -0.4**
BOD pmax pmax
comp=Z,14nm,1.3s,mb4.3
SNY Shenyang 26.39 260 ⇓P **P 17 22 12.9 -4.2**
SNY AMB AMB
comp=Z,395nm,3.6s
SNY LR LR
comp=E,896nm,18.0s
SNY LR LR
comp=Z,1µm,14.7s,MS4.6
IMA2 Indian Mountai 26.67 42 *e*P **P 17 22 18.5 -0.9**
IMA2 *e*P 17 22 18.6
IMA2 *e*PcP PcP 17 25 42.7 +0.6
KSRS Korea Array 26.68 248 P **P 17 22 20.8 +1.0**
comp=Z,9.0nm,0.7s,mb4.4,baz=47,slow=9.3,SNR=24
KSRS LR LR 17 34 00.1
comp=Z,716nm,19.1s,MS4.2,baz=55,slow=39
KSRS Korea Array 26.68 248 P **P 17 22 20.8 +1.1**
KSRS pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
KSRS MLR MLR
comp=Z,716nm,19.2s,MS4.2
CHUM Lake Minchumin 27.07 46 *e*P **P 17 22 22.5 -0.6**
comp=Z,128nm,1.7s,mb5.2
KDAK Kodiak Island 27.38 60 P pP 17 22 39.3 +2.9
comp=Z,23nm,0.8s,baz=306,slow=4.9,SNR=18
KDAK LR LR 17 34 03.0
comp=Z,770nm,19.8s,MS4.3,baz=19,slow=38
BPAW Bear Paw Mtn. 27.67 46 *e*P **P 17 22 27.6 -0.8**
comp=Z,24nm,0.8s,mb4.9
KTH Kantishna Hill 27.69 47 *e*P **P 17 22 28.3 -0.3**
comp=Z,161nm,1.6s,mb5.4
TRF Thorofare Moun 27.98 47 *e*P **P 17 22 30.8 -0.3**
comp=Z,56nm,1.1s,mb5.1
COLD Coldfoot 28.18 39 *e*P **P 17 22 31.8 -1.2**
comp=Z,18nm,0.9s,mb4.7
COLD *e*PcP PcP 17 25 45.4 -0.3
CBIJ Chichi jima 28.56 214 LR LR 17 32 58.0
comp=Z,238nm,20.5s,MS3.8,baz=5.9,slow=34
MCK McKinley 28.57 47 *e*P **P 17 22 35.5 -1.0**
comp=Z,37nm,1.0s,mb5.1
MCK *e*P 17 22 36.0
MCK McKinley 28.57 47 *e*P **P 17 22 36.0 -0.5**
PMR Palmer 28.61 51 *e*P **P 17 22 36.1 -0.7**
comp=Z,57nm,1.6s,mb5.0
PMR Palmer 28.61 51 *e*P **P 17 22 36.4 -0.4**
PMR pmax pmax
comp=Z,57nm,1.6s,mb5.0
COLA College 29.03 44 *e*P **P 17 22 39.6 -0.9**
comp=Z,49nm,1.3s,mb5.1
COLA College 29.03 44 P **P 17 22 40.0 -0.5**
COLA pmax pmax
comp=Z,49nm,1.2s,mb5.1
EGAK Eagle 31.89 44 *e*P **P 17 23 04.0 -1.8**
comp=Z,25nm,0.8s,mb5.1
BJI Beijing 31.94 264 P **P 17 23 08.1 +1.7**
BJI S **S 17 28 11.6 -3.2**
BJI LR LR
comp=N,1µm,16.3s,MS4.8
BJI LR LR
comp=E,1µm,17.3s,MS4.8
BJI LR LR
comp=Z,725nm,18.7s,MS4.4
DAWY Dawson 32.74 45 *e*P **P 17 23 12.3 -1.0**
ULN Ulaanbaatar 33.24 283 *e*P **P 17 23 17.4 -0.4**
comp=Z,13nm,1.5s,mb4.6
ULN *e*ScP ScP 17 29 43.0 +2.7
ULN Ulaanbaatar 33.24 283 P **P 17 23 17.4 -0.4**
ULN pmax pmax
comp=Z,13nm,1.5s,mb4.6
ULN Ulaanbaatar 33.24 283 P **P 17 23 19.4 +1.6**
comp=Z,6.5nm,1.1s,mb4.5
TLY Talaya 33.55 291 *e*P **P 17 23 22.7 +2.3**
TLY *e* 17 24 36.7
TLY pmax pmax
comp=Z,11nm,1.2s,mb4.7
TLY MLR MLR
comp=Z,657nm,16.0s,MS4.5
SONM Songino Array 33.65 284 P **P 17 23 22.0 +0.7**
comp=Z,2.2nm,0.6s,mb4.2,baz=62,slow=7.0,SNR=17
SONM PcP PcP 17 26 01.0 +0.5
comp=Z,7.3nm,0.8s,baz=79,slow=1.7,SNR=18
SONM ScP ScP 17 29 46.8 +5.0
comp=Z,3.3nm,1.0s,baz=95,slow=1.8,SNR=8.3
SONM LR LR 17 38 34.9
comp=Z,2µm,18.3s,MS4.8,baz=63,slow=39
HHC Hu-ho-hao-te 34.26 269 *e*P **P 17 23 28.3 +1.6**
HHC AP pP 17 23 40.3 +3.0
HHC XP sP 17 23 45.1 +3.2
HHC PP PP 17 24 43.4 -1.1
HHC PCP PcP 17 26 05.4 +3.1
HHC S **S 17 28 51.9 +1.1**
HHC XS sS 17 29 09.8 +1.2
HHC PCS PcS 17 29 50.3 +1.8
HHC SS SS 17 30 59.3 -20
HHC AMB AMB
comp=Z,11nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,80nm,6.3s
HHC LR LR
comp=N,556nm,20.2s,MS4.4
HHC LR LR
comp=E,481nm,20.2s,MS4.4
HHC LR LR
comp=Z,684nm,19.0s,MS4.4
ZAK Zakamensk 34.31 289 *e*P **P 17 23 24.2 -2.8**
INK Inuvik 34.50 37⇑ *i*P **P 17 23 28.2 -0.2**
INK *e*PcP PcP 17 26 02.2 -0.3
INK Inuvik 34.50 37 *e*P **P 17 23 28.4 -0.1**
JOW Kunigami 34.71 234 LR LR 17 38 40.9
comp=Z,279nm,19.9s,MS4.0,baz=326,slow=38
NJ2 Nanjing 35.73 251 *e*P **P 17 23 41.1 +1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
KRAR Krasnoyarsk 37.66 302⇑ *e*P **P 17 23 55.2 -0.3**
KRAR pmax pmax
comp=Z,15nm,0.9s,mb4.7
KRAR MLR MLR
comp=Z,700nm,15.0s,MS4.6
DLBC Dease Lake 38.65 53 P **P 17 24 05.6 +1.7**
comp=Z,17nm,0.9s,mb4.8,baz=284,slow=12,SNR=12
WHN Wuhan 39.46 254 P **P 17 24 11.8 +0.8**

XAN Xi'an 40.23 263 P **P 17 24 16.5 -0.9**
XAN AP pP 17 24 27.8 -0.4
XAN PP PP 17 25 49.3 -0.9
XAN S **S 17 30 20.8 -0.9**
XAN SS SS 17 33 20.4 -0.2
XAN SCS ScS 17 34 19.6 -0.7
XAN AMB AMB
comp=Z,4.0nm,1.1s,mb4.1
XAN LR LR
comp=N,203nm,27.9s,MS4.2
XAN LR LR
comp=E,406nm,25.6s,MS4.2
XAN LR LR
comp=Z,552nm,18.6s
LZH Lanzhou 41.95 270 *e*P **P 17 24 32.0 +0.5**
LZH AP pP 17 24 44.5 +2.1
LZH XP sP 17 24 49.8 +2.9
LZH PP PP 17 26 13.3 +4.5
LZH *e*S **S 17 30 45.5 -1.8**
LZH XS sS 17 31 07.0 +1.7
LZH *e*SS SS 17 33 47.9 -6.7
LZH AMB AMB
comp=Z,47nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,187nm,4.7s
LZH LR LR
comp=N,819nm,12.5s
LZH LR LR
comp=Z,1µm,17.6s
GTA Gaotai 42.28 276 *e*P **P 17 24 34.8 +0.7**
GTA AP pP 17 24 47.6 +2.6
GTA XP sP 17 24 52.9 +3.4
GTA PCP PcP 17 26 28.3 +1.0
GTA S **S 17 30 53.3 +1.3**
GTA XS sS 17 31 13.3 +3.2
GTA SS SS 17 33 56.8 -4.2
GTA AMB AMB
comp=Z,2.0nm,1.1s,mb3.7
GTA AMB AMB
comp=Z,90nm,5.4s
GTA LR LR
comp=N,580nm,18.0s,MS4.7
GTA LR LR
comp=E,675nm,15.3s,MS4.7
GTA LR LR
comp=Z,1µm,16.2s,MS4.9
ZAA0 Zalesovo Array 42.73 303 *e*P **P 17 24 35.5 -2.1**
ZALV Zalesovo Beam 42.73 303 P **P 17 24 36.3 -1.3**
comp=Z,3.4nm,0.8s,mb4.2,baz=54,slow=8.3,SNR=16
ZALV PP PP 17 26 19.9 +3.1
comp=Z,1.6nm,0.7s,baz=90,slow=4.3,SNR=2.5
ZALV ScP ScP 17 30 15.7 -0.5
comp=Z,1.3nm,0.7s,baz=29,slow=3.4,SNR=4.3
ZALV LR LR 17 43 36.3
comp=Z,528nm,18.7s,MS4.5,baz=25,slow=38
NVS Novosibirsk 43.09 305 *e*P **P 17 24 38.2 -2.2**
NVS *e*S **S 17 30 57.6 -5.9**
NVS *e* 17 34 35.8
NVS pmax pmax
comp=Z,58nm,1.1s,mb5.2
NVS pmax pmax
comp=E,46nm,1.3s
NVS smax
comp=N,26nm,2.1s
ALE Alert 43.47 7 P **P 17 24 42.0 -1.2**
comp=N,151nm,0.8s,mb5.8,SNR=16
YKA Yellowknife Ar 43.79 42 P **P 17 24 45.6 -0.4**
comp=N,7.0nm,0.6s,mb4.5,baz=296,slow=7.9,SNR=9.5
YKA LR LR 17 45 17.5
comp=N,228nm,19.0s,MS4.1,baz=325,slow=39
RES Resolute Bay 43.93 22 *e*P **P 17 24 46.6 -0.4**
comp=N,402nm,0.6s,mb6.3
RES *e*PcP PcP 17 26 32.1 -0.2
CD2 Chengdu 45.54 264 *e*P **P 17 25 02.3 +2.0**
CD2 AP pP 17 25 13.3 +2.0
CD2 XP sP 17 25 17.5 +1.7
CD2 PP PP 17 26 48.3 +1.1
CD2 PCS PcS 17 30 34.3 +1.7
CD2 XS sS 17 31 57.4 -0.4
CD2 SS SS 17 34 53.3 -10
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,660nm,21.4s
CD2 LR LR
comp=E,420nm,15.4s
CD2 LR LR
comp=Z,680nm,16.6s,MS4.7
WMQ Urumqi 46.78 289 *e*P **P 17 25 12.0 +2.1**
WMQ AP pP 17 25 22.0 +1.1
WMQ XP sP 17 25 26.0 +0.6
WMQ PP PP 17 27 01.0 +1.0
WMQ S **S 17 31 58.0 +0.9**
WMQ XS sS 17 32 14.0 -1.3
WMQ SCS ScS 17 35 01.0 0.0
WMQ SS SS 17 35 17.0 -6.4
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,54nm,5.0s
WMQ LR LR
comp=N,354nm,16.0s,MS4.6
WMQ LR LR
comp=E,438nm,15.0s,MS4.6
WMQ LR LR
comp=Z,657nm,16.0s,MS4.7
GYA Guiyang 47.02 257⇓ *i*P **P 17 25 11.9 -0.1**
GYA AP pP 17 25 24.3 +1.3
GYA XP sP 17 25 29.6 +2.1
GYA PCP PcP 17 26 41.9 -1.8
GYA PP PP 17 27 02.8 0.0
GYA SCP ScP 17 30 32.6 -1.6
GYA PCS PcS 17 30 39.5 +0.6
GYA S **S 17 32 01.4 +0.5**
GYA XS sS 17 32 22.0 +2.9
GYA SS SS 17 35 23.4 -4.5
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,110nm,5.1s
GYA LR LR
comp=N,870nm,16.2s,MS4.9
GYA LR LR
comp=E,740nm,15.7s,MS4.9
GYA LR LR
comp=Z,670nm,14.5s,MS4.7
KURK Kurchatov 47.68 302 P **P 17 25 15.8 -1.0**
comp=Z,150nm,0.4s,mb6.4,SNR=19
KURK Kurchatov 47.68 302 P **P 17 25 15.9 -1.0**
SNR=12
KURK Kurchatov 47.68 302 *e*P **P 17 25 14.9 -2.0**
comp=Z,16nm,0.7s,mb5.2
KURK Kurchatov 47.68 302 P **P 17 25 15.0 -1.8**
KURK pmax pmax
comp=Z,16nm,0.7s,mb5.2
JCW Jim Creek 47.97 62 *e*P **P 17 25 19.3 +0.1**
JCW P 17 25 20.2
MK31 Makanchi Array 48.03 296 *e*P **P 17 25 17.4 -2.2**
MK31 *e*ScP ScP 17 30 38.0 -0.2
MK31 Makanchi Array 48.03 296 *i* P **P 17 25 18.3 -1.3**
MK31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
MKAR Makanchi Array 48.03 296 P **P 17 25 17.9 -1.7**
comp=Z,1.0nm,0.4s,mb4.2,baz=54,slow=6.0,SNR=34
MKAR ScP ScP 17 30 40.5 +2.2
comp=Z,0.9nm,0.9s,baz=45,slow=3.6,SNR=3.6
MKAR LR LR 17 46 14.0
comp=Z,324nm,21.6s,MS4.3,baz=147,slow=37
RPW Rockport 48.04 62 *e*P **P 17 25 19.2 -0.5**
WRW Wenatchee Ridg 48.74 62 P **P 17 25 25.4 +0.4**
NLW Nelson Butte 48.90 61 P **P 17 25 26.7 +0.4**
SLFW Sugar Loaf 48.99 62 P **P 17 25 27.4 +0.4**
ETW Entiat 49.19 62 *e*P **P 17 25 27.7 -0.8**
ETW P 17 25 28.7
WTV Waterville 49.33 61 P **P 17 25 29.6 0.0**
EDM Edmonton 49.38 52 *e*P **P 17 25 29.4 -0.5**
EDM Edmonton 49.38 52 P **P 17 25 29.6 -0.2**
EBG Ellensburg 49.48 63 P **P 17 25 31.3 +0.6**
OD2 Odessa Site #2 50.19 61 *e*P **P 17 25 35.5 -0.6**
OD2 *e* pP 17 25 44.9 -2.3
RSW Rattlesnake Hi 50.33 63 *e*P **P 17 25 36.7 -0.5**
RSW *e* pP 17 25 46.0 -2.3

KMI Kunming 50.36 260 P **P 17 25 39.0 +1.3**
KMI AP pP 17 25 50.8 +2.0
KMI XP sP 17 25 56.4 +3.2
KMI PP PP 17 27 34.8 +1.5
KMI S **S 17 32 43.0 -5.0**
KMI XS sS 17 33 06.8 +0.5
KMI SCS ScS 17 35 20.8 -4.7
KMI SS SS 17 36 14.8 -7.0
KMI AMB AMB
comp=Z,4.0nm,0.7s,mb4.6
KMI AMB AMB
comp=Z,79nm,3.5s
KMI LR LR
comp=N,486nm,15.6s,MS4.7
KMI LR LR
comp=E,473nm,18.5s,MS4.7
KMI LR LR
comp=Z,435nm,15.6s,MS4.6
BVA0 Borovoye Array 50.40 308 *i* P **P 17 25 35.8 -1.9**
BRVK Borovoye 50.43 308 P **P 17 25 36.8 -1.1**
comp=Z,83nm,0.6s,mb5.9,SNR=5.1
BRVK Borovoye 50.43 308 *e*P **P 17 25 35.6 -2.3**
comp=Z,14nm,0.7s,mb5.1
BRVK Borovoye 50.43 308 P **P 17 25 36.4 -1.5**
BRVK pmax pmax
comp=Z,14nm,0.7s,mb5.1
QIZ Qiongzhong 50.90 248 P **P 17 25 42.0 +0.2**
QIZ S **S 17 32 56.3 +0.7**
QIZ AMB AMB
comp=Z,240nm,3.1s
QIZ LR LR
comp=N,356nm,14.7s
QIZ LR LR
comp=Z,476nm,17.0s,MS4.6
DAG Danmarks Havn 50.91 359⇑ *i*P **P 17 25 41.2 +0.1**
DAG pmax pmax
comp=Z,19nm,0.9s,mb5.0
DAG Danmarks Havn 50.91 359⇑ *i*P **P 17 25 41.2 +0.1**
comp=Z,19nm,0.9s,mb5.0
VIPM Ingram Point 50.95 65 P **P 17 25 42.4 +0.5**
LNOR Lincton Mounta 51.37 62 *e*P **P 17 25 44.1 -0.9**
LNOR Lincton Mounta 51.37 62 P **P 17 25 45.2 +0.2**
YBH Yreka Blue Hor 51.56 69 P **P 17 25 47.1 +0.6**
comp=Z,16nm,0.8s,mb4.7,baz=3.7,slow=3.0,SNR=13
YBH Yreka Blue Hor 51.56 69 P **P 17 25 47.1 +0.6**
YBH pmax pmax
comp=Z,8.0nm,0.8s
WALA Waterton Lakes 51.65 57 *e*P **P 17 25 46.9 -0.2**
comp=Z,53nm,1.3s,mb5.3
WALA *e*PcP PcP 17 27 00.5 +0.2
WALA *e* 17 27 10.1
BSMT Bassoo Peak 51.97 59 P **P 17 25 49.9 +0.4**
SVE Sverdlovsk 52.38 317 *e*P **P 17 25 51.3 -1.1**
SVE *e*S **S 17 33 17.0 +1.9**
SVE *e*SS SS 17 36 53.3 +0.8
SVE pmax pmax
comp=Z,16nm,1.1s,mb4.9
SVE MLR MLR
comp=Z,979nm,16.0s,MS4.9
BMO Blue Mountains 52.55 63 *e*P **P 17 25 52.9 -0.9**
comp=Z,10nm,0.9s,mb4.8
BMO *e* pP 17 26 03.6 -1.3
MOD Modoc 52.81 67 *e*P **P 17 25 55.5 -0.3**
comp=Z,59nm,1.4s,mb5.3
KEV Kevo 53.17 341 *ep* **P 17 25 55.9 -2.2**
CHMT Chamberlain Mo 53.37 59 *e*P **P 17 25 59.1 -0.7**
ARU Arti 53.51 317 *e*P **P 17 25 58.7 -2.0**
comp=Z,8.0nm,0.5s,mb4.9
ARU Arti 53.51 317*c i*P **P 17 25 58.8 -1.9**
ARU *e* 17 27 58.8
ARU *e*PPP 17 29 05.2
ARU *e*S **S 17 33 29.3 -1.2**
ARU SS SS 17 37 07.0 -3.2
ARU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ARU MLR MLR
comp=Z,562nm,19.0s,MS4.6
ARCES ARCESS Array B 53.65 342 P **P 17 25 59.6 -1.9**
comp=Z,5.0nm,0.7s,mb4.5,baz=37,slow=8.1,SNR=16
ARCES LR LR 17 54 17.8
comp=Z,376nm,18.6s,MS4.5,baz=30,slow=42
ARCES ARCESS Array B 53.65 342 P **P 17 25 59.7 -1.8**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES MLR MLR
comp=Z,376nm,18.6s
FFC Flin Flon 53.65 45 *e*P **P 17 26 01.1 -0.6**
comp=Z,39nm,1.4s,mb5.1
FFC *e*PcP PcP 17 27 06.9 -0.8
FFC Flin Flon 53.65 45 P **P 17 26 02.0 +0.2**
FFC pmax pmax
comp=Z,39nm,1.4s,mb5.1
LSA Lhasa 54.08 273 *e*P **P 17 26 06.4 +1.1**
comp=Z,3.2nm,0.7s,mb4.4
LSA Lhasa 54.08 273 *e*P **P 17 26 06.4 +1.2**
LSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FCC Fort Churchill 54.11 38 *e*P **P 17 26 03.5 -1.5**
comp=Z,16nm,0.6s,mb5.1
FCC Fort Churchill 54.11 38 *e*P **P 17 26 03.6 -1.5**
FCC pmax pmax
comp=Z,16nm,0.6s,mb5.1
TKM2 Tokmak 2 54.16 296 *e*P **P 17 26 03.5 -2.1**
comp=Z,4.0nm,0.8s,mb4.4
TKM2 Tokmak 2 54.16 296 P **P 17 26 05.0 -0.7**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HRY Holter Researc 54.24 58 *e*P **P 17 26 06.2 0.0**
SUMG Summit 54.51 7 *e*P **P 17 26 08.1 +0.3**
comp=Z,48nm,0.9s,mb5.5
PAHR Pah Rah Range 54.79 69 *e*P **P 17 26 10.3 +0.1**
comp=Z,55nm,1.4s,mb5.4
MCMT McKenzie Canyo 54.95 60 *e*P **P 17 26 11.2 -0.2**
AAK Ala-Archa 54.96 296 P **P 17 26 10.1 -1.4**
comp=Z,36nm,0.6s,mb5.6,SNR=6.2
EKS2 Erkin-Say 55.33 297 *e*P **P 17 26 12.8 -1.3**
comp=Z,5.9nm,0.8s,mb4.7
CMB Columbia Colle 55.35 71 *e*P **P 17 26 14.8 +0.5**
comp=Z,25nm,1.3s,mb5.1
CMB Columbia Colle 55.35 71 P **P 17 26 15.3 +0.9**
CMB pmax pmax
comp=Z,25nm,1.2s,mb5.1
BMN Battle Mountai 55.52 67 *e*P **P 17 26 16.4 +0.9**
comp=Z,20nm,0.9s,mb5.2
BMN Battle Mountai 55.52 67 P **P 17 26 17.1 +1.5**
BMN pmax pmax
comp=Z,20nm,0.9s,mb5.2
QLMT Earthquake Lak 55.70 59 *e*P **P 17 26 17.1 +0.3**
AML Almayashu 55.74 296 *e*P **P 17 26 15.9 -1.2**
comp=Z,4.3nm,0.9s,mb4.5
GCMT Greycliff 55.97 58 *e*P **P 17 26 19.1 +0.4**
YMR Madison River 56.06 59 *e*P **P 17 26 19.8 +0.5**
comp=Z,15nm,0.9s,mb5.0
YFT Old Faithful 56.27 59 *e*P **P 17 26 22.7 +1.8**
NVAR Mina Array Bea 56.27 69 P **P 17 26 21.9 +1.0**
comp=Z,7.8nm,0.8s,mb4.8,baz=296,slow=6.9,SNR=48
IMW Indian Meadow 56.59 60 *e*P **P 17 26 23.9 +0.7**
comp=Z,14nm,0.9s,mb5.0
RLMT Red Lodge 56.63 58 *e*P **P 17 26 24.2 +0.7**
comp=Z,17nm,0.8s,mb5.1
DCID1 Drake Creek 56.67 60 *e*P **P 17 26 24.5 +0.8**
comp=Z,30nm,1.1s,mb5.2
KK31 Karatay Array 56.80 299 *i* P **P 17 26 22.5 -2.1**
KK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MTUM Tungsten Hills 56.87 70 *e*P **P 17 26 25.9 +0.7**
MTUM *e* pP 17 26 35.5 -0.9
HVU Hansel Valley 57.06 63 *e*P **P 17 26 26.3 -0.2**
comp=Z,17nm,1.1s,mb5.0
HVU *e* pP 17 26 37.0 -0.8
HVU Hansel Valley 57.06 63 P **P 17 26 27.4 +0.9**
HVU pmax pmax
comp=Z,17nm,1.0s,mb5.0
TPH Tonopah 57.13 69 *e*P **P 17 26 27.3 +0.2**
comp=Z,38nm,1.2s,mb5.3
TPH *e* pP 17 26 37.3 -1.0
TPH Tonopah 57.13 69 P **P 17 26 28.4 +1.3**
TPH pmax pmax
comp=Z,38nm,1.2s,mb5.3
KLMR Klimovskoe 57.19 330 *e*P **P 17 26 25.8 -1.3**
KLMR pmax pmax
comp=Z,14nm,1.1s,mb4.9
CHTO Chiang Mai 57.43 258 *e*P **P 17 26 29.6 +0.2**
comp=Z,5.8nm,0.6s,mb4.8
CHTO Chiang Mai 57.43 258 P **P 17 26 29.9 +0.5**

CHTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SPUT South Promonto 57.56 63 *e*P **P 17 26 30.7 +0.6**
CM31 Chiang Mai Arr 57.70 258 *e*P **P 17 26 32.3 +1.0**
CMAR Chiang Mai Arr 57.70 258 P **P 17 26 32.5 +1.2**
comp=Z,6.2nm,0.7s,mb4.7,baz=26,slow=6.9,SNR=46
CMAR ScP ScP 17 31 26.1 +5.4
comp=Z,0.5nm,0.7s,baz=28,slow=3.5,SNR=4.9
CMAR LR LR 17 54 31.5
comp=Z,334nm,18.7s,MS4.5,baz=249,slow=39
AB31 Akbulak array 57.83 310 P **P 17 26 29.7 -2.1**
HWUT Hardware Ranch 57.83 62 *e*P **P 17 26 32.4 +0.5**
comp=Z,22nm,1.0s,mb5.2
JOF Joensuu 57.86 335 *e*p **P 17 26 29.1 -2.7**
comp=Z,9.2nm,0.6s,mb5.0
JOF Joensuu 57.86 335 *e*P **P 17 26 29.1 -2.7**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
TAPN Taplejung 57.86 274 *e*P **P 17 26 33.6 +1.3**
AKTO Aktyubinsk 57.88 312 LR LR 17 54 07.9
comp=Z,673nm,18.2s,MS4.8,baz=10,slow=39
PDAR Pinedale Array 58.10 60 P **P 17 26 34.5 +0.7**
comp=Z,17nm,0.8s,mb5.1,baz=310,slow=2.8,SNR=98
DUG Dugway 58.13 64 *e*P **P 17 26 34.9 +0.8**
comp=Z,19nm,1.0s,mb5.1
DUG Dugway 58.13 64 P **P 17 26 35.1 +1.0**
DUG pmax pmax
comp=Z,19nm,1.0s,mb5.1
ODAN Odare 58.41 274 *e*P **P 17 26 36.0 -0.2**
TPNV Topopah Spring 58.47 69 *e*P **P 17 26 36.9 +0.4**
comp=Z,18nm,1.0s,mb5.1
TPNV Topopah Spring 58.47 69 P **P 17 26 37.6 +1.1**
TPNV pmax pmax
comp=Z,18nm,1.0s,mb5.1
JIRN Jiri 58.56 275 *e*P **P 17 26 38.0 +0.8**
comp=Z,12nm,0.6s,mb5.1
GUN Gumba 58.57 276 *e*P **P 17 26 38.7 +1.4**
comp=Z,14nm,0.4s,mb5.3
SFJD Kangerlussuaq 58.59 13 P **P 17 26 35.7 -1.2**
SFJD pmax pmax
comp=Z,24nm,0.8s,mb5.3
SFJD Kangerlussuaq 58.59 13 *i* P **P 17 26 35.5 -1.4**
comp=Z,28nm,0.9s,mb5.3
SFJD
comp=Z,470nm,18.0s
JLU Jordanelle 58.60 63 *e*P **P 17 26 37.8 +0.5**
NLU North Lily Min 58.71 64 *e*P **P 17 26 36.7 -1.4**
RAMN Ramite 58.83 274 *e*P **P 17 26 38.1 -1.0**
comp=Z,21nm,0.4s,mb5.5
KKN Kakani 59.02 276 *e*P **P 17 26 40.2 -0.2**
comp=Z,17nm,0.5s,mb5.4
PKI Pulchoki 59.10 276 *e*P **P 17 26 40.6 -0.4**
PKIN Phulchoki 59.10 276 *e*P **P 17 26 40.8 -0.2**
comp=Z,13nm,0.7s,mb5.1
GKN Gorkha 59.25 277 *e*P **P 17 26 42.7 +0.7**
DMN Daman 59.26 276 *e*P **P 17 26 41.9 -0.1**
GSC Goldstone 59.31 71 *e*P **P 17 26 42.4 0.0**
comp=Z,12nm,0.9s,mb4.9
GSC Goldstone 59.31 71 P **P 17 26 43.2 +0.9**
GSC pmax pmax
comp=Z,12nm,1.0s,mb4.9
MWC Mount Wilson 59.35 73 *e*P **P 17 26 42.6 0.0**
comp=Z,20nm,1.1s,mb5.0
MWC *e* pP 17 26 51.2 -2.8
MWC Mount Wilson 59.35 73 P **P 17 26 43.4 +0.8**
MWC pmax pmax
comp=Z,20nm,1.0s,mb5.1
ULM Lac du Bonnet 59.44 46 P **P 17 26 42.8 -0.2**
comp=Z,11nm,0.6s,mb5.0,baz=316,slow=8.2,SNR=6.6
ULM LR LR 17 53 37.6
comp=Z,684nm,18.3s,MS4.8,baz=65,slow=37
ULM Lac du Bonnet 59.44 46 *e*P **P 17 26 42.3 -0.7**
comp=Z,11nm,1.1s,mb4.8
DANN Dangsing 59.53 278 *e*P **P 17 26 44.7 +0.8**
TMUT Trail Mountain 59.65 64 *e*P **P 17 26 45.0 +0.4**
MSU Marysvale 59.66 65 *e*P **P 17 26 45.2 +0.4**
MSU Marysvale 59.66 65 P **P 17 26 46.4 +1.7**
CCUT Cedar City 59.68 67 *e*P **P 17 26 45.5 +0.6**
KAF Kangasniemi 59.80 337 *e*p **P 17 26 43.6 -1.7**
comp=Z,9.7nm,0.6s,mb5.0,baz=32,slow=6.4
KAF Kangasniemi 59.80 337 *e*P **P 17 26 43.6 -1.7**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
RSSD Black Hills 60.00 56 *e*P **P 17 26 47.4 +0.5**
comp=Z,58nm,0.8s,mb5.7
RSSD Black Hills 60.00 56 P **P 17 26 47.4 +0.4**
RSSD pmax pmax
comp=Z,58nm,0.8s,mb5.7
KOLN Koldanda 60.05 277 *e*P **P 17 26 46.5 -1.0**
comp=Z,17nm,0.8s,mb5.1
SRU San Rafael 60.15 64 *e*P **P 17 26 48.8 +0.7**
comp=Z,19nm,0.8s,mb5.2
SRU *e* pP 17 26 59.0 -0.4
SRU San Rafael 60.15 64 P **P 17 26 49.0 +0.9**
SRU pmax pmax
comp=Z,19nm,0.8s,mb5.2
PYUN Piuthan 60.18 278 *e*P **P 17 26 47.8 -0.6**
comp=Z,12nm,0.5s,mb5.2
LDFC Landfair 60.45 70 *e*P **P 17 26 50.3 +0.1**
comp=Z,46nm,1.1s,mb5.4
NSS Namsos 60.53 345 *e*P **P 17 26 51.9 +1.6**
NSS AMb AMB 17 26 57.4
comp=Z,86nm,1.7s,mb5.6
AGMN Agassiz Refuge 60.88 48 *e*P **P 17 26 52.0 -0.8**
comp=Z,6.5nm,0.7s,mb4.9
PV10 Paradox Valley 61.49 63 *e*P **P 17 26 58.0 +0.8**
PV01 Paradox Valley 61.92 63 *e*P **P 17 27 00.2 +0.1**
SMCO Snowmass 62.03 61 *e*P **P 17 27 01.0 +0.2**
comp=Z,16nm,0.9s,mb5.2
WUAZ Wupatki 62.26 67 *e*P **P 17 27 02.7 +0.3**
ISCO Idaho Springs 62.30 60 *e*P **P 17 27 03.5 +0.9**
comp=Z,26nm,1.0s,mb5.3
ISCO Idaho Springs 62.30 60 P **P 17 27 03.8 +1.2**
ISCO pmax pmax
comp=Z,26nm,1.0s,mb5.3
MVCO Mesa Verde 62.62 64 *e*P **P 17 27 05.0 +0.2**
OBN Obninsk 62.73 327 *i* P **P 17 27 03.7 -1.5**
OBN *e* 17 27 41.2
OBN *e* 17 29 19.7
OBN pmax pmax
comp=Z,22nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,800nm,24.0s,MS4.8
BORG Borgarnes 63.00 0 LR LR 17 52 30.2
comp=Z,342nm,21.3s,MS4.5,baz=60,slow=34
OGNE Ogallala 63.33 57 *e*P **P 17 27 10.1 +0.7**
comp=Z,24nm,0.7s,mb5.4
DOMB Dombas 63.33 345 *e*P **P 17 27 09.1 0.0**
DOMB AMb AMB 17 27 14.1
comp=Z,41nm,1.6s,mb5.3
SBUM Sibu 63.42 235 P **P 17 27 14.3 +4.0**
KBL Kabul 63.67 293 *e*P **P 17 27 09.6 -2.2**
comp=Z,7.5nm,0.8s,mb4.8
KBL Kabul 63.67 293 P **P 17 27 10.8 -1.0**
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
NB2 NORSAR Subarra 63.92 343 P **P 17 27 12.0 -1.0**
comp=Z,33nm,1.1s,mb5.3,baz=22,slow=6.9
NOA NORSAR Array B 63.92 343 P **P 17 27 12.2 -0.8**
comp=Z,8.0nm,0.6s,mb4.9,baz=23,slow=6.6,SNR=34
NOA LR LR 18 00 00.9
comp=Z,318nm,18.0s,MS4.5,baz=5.0,slow=41
NOA NORSAR Array B 63.92 343 P **P 17 27 12.2 -0.8**
NOA pmax pmax
comp=Z,8.0nm,0.6s
NOA MLR MLR
comp=Z,319nm,18.0s
VRHR Novokhopersk 64.20 322 *e*P **P 17 27 17.5 +2.5**
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.6
VRHR pmax pmax
comp=N,90nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.9s
VRHR MLR MLR
comp=Z,1μm,21.0s,MS5.0
VRHR MLR MLR
comp=N,1μm,22.0s,MS5.2
VRHR MLR MLR
comp=E,460nm,18.0s,MS5.2
HFS Hagfors 64.31 342 LR LR 18 00 22.6
comp=E,608nm,18.1s,MS4.8,baz=50,slow=41
TUC Tucson 64.93 69 *e*P **P 17 27 20.1 0.0**
comp=E,5.1nm,1.1s,mb4.5
TUC Tucson 64.93 69 P **P 17 27 20.6 +0.6**
TUC pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
VSR Storozhevoye 65.01 323 *e*P **P 17 27 17.6 -2.7**
VSR pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
VSR pmax pmax
comp=N,10.0nm,1.8s
VSR pmax pmax
comp=E,10.0nm,1.4s
VSR MLR MLR
comp=Z,280nm,19.0s,MS4.5
VSR MLR MLR
comp=N,560nm,23.0s,MS4.8
VSR MLR MLR
comp=E,440nm,23.0s,MS4.8
VORD Divnogorie 65.17 323 *e*P **P 17 27 19.3 -2.0**
VORD pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=E,1μm,21.0s,MS5.2
VORD MLR MLR
comp=Z,1μm,21.0s,MS5.0
VORD MLR MLR
comp=N,1μm,22.0s,MS5.2
KSM Kuching 65.22 236 *e*P **P 17 27 23.7 +1.6**
KSM Kuching 65.22 236 P **P 17 27 25.0 +2.9**
comp=N,33nm,1.1s,mb5.3
ANMO Albuquerque 65.40 64 *e*P **P 17 27 23.8 +0.7**
comp=N,7.1nm,1.0s,mb4.7
ANMO Albuquerque 65.40 64 P **P 17 27 23.9 +0.8**
ANMO pmax pmax
comp=Z,7.0nm,1.0s
LAZ Ladron 65.43 65 *e*P **P 17 27 24.2 +0.9**
LENM Lemitar 65.70 65 *e*P **P 17 27 25.8 +0.8**
ODD1 Odda 65.74 345 *e*P **P 17 27 24.4 -0.5**
LPM Los Pinos Moun 65.78 65 *e*P **P 17 27 25.6 +0.1**
STKI Sintang 65.84 235 P **P 17 27 28.7 +2.6**
comp=Z,31nm,1.0s,mb5.3
BNM Barren Site 65.90 65 *e*P **P 17 27 26.9 +0.6**
MNK Minsk 65.97 331 *e*P **P 17 27 25.0 -1.4**
SCHQ Schefferville 66.27 27 P **P 17 27 27.5 -0.9**
comp=Z,7.4nm,0.9s,mb4.7,baz=344,slow=14,SNR=3.0
SCIA State Center 66.94 51 *e*P **P 17 27 32.4 -0.4**
comp=Z,85nm,0.8s,mb5.8
BBKI Banjar Baru 67.30 229 P **P 17 27 37.3 +1.9**
comp=Z,96nm,1.1s,mb5.7
IPM Ipoh 67.68 247 P **P 17 27 38.8 +1.0**
comp=Z,28nm,0.9s,mb5.3
SUW Suwalki 67.71 334 *e*P **P 17 27 36.5 -1.0**
AMTX Amarillo 68.04 61 *e*P **P 17 27 39.7 -0.2**
comp=Z,14nm,0.9s,mb5.0
MUD Monsted U'grnd 68.60 343 *i* P **P 17 27 39.6 -3.4**
MUD pmax pmax
comp=Z,17nm,1.0s,mb4.9
MUD MLR MLR
comp=Z,1μm,21.0s,MS5.1
MUD Monsted U'grnd 68.60 343 *i* P **P 17 27 39.6 -3.4**
comp=Z,17nm,1.0s,mb4.9
MUD
comp=Z,1μm,21.0s
COP Copenhagen 68.71 341 *i* P **P 17 27 43.9 +0.2**
COP pmax pmax
comp=Z,33nm,0.8s,mb5.3
COP MLR MLR
comp=Z,130nm,19.0s,MS4.2
COP Copenhagen 68.71 341 *i* P **P 17 27 43.9 +0.2**
comp=Z,33nm,0.8s,mb5.3
COP
comp=Z,130nm,19.0s
AKASG Malin Array Be 68.85 329 P **P 17 27 43.1 -1.5**
comp=Z,6.0nm,0.5s,mb4.8,baz=30,slow=6.3,SNR=36
AKASG LR LR 18 01 53.3
comp=Z,759nm,18.2s,MS5.0,baz=20,slow=40
AKASG Malin Array Be 68.85 329 P **P 17 27 43.2 -1.4**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG MLR MLR
comp=Z,759nm,18.2s
AKBB Malin Array Si 68.85 329 *e*P **P 17 27 43.0 -1.7**
AKBB Malin Array Si 68.85 329 P **P 17 27 43.2 -1.4**
KIEV Kiev 68.86 329 *e*P **P 17 27 42.9 -1.8**
comp=Z,19nm,0.9s,mb5.0
KIEV Kiev 68.86 329 P **P 17 27 43.6 -1.1**
KIEV pmax pmax
comp=Z,19nm,1.0s,mb5.0
MVH1 Achvaich 69.04 351⇑ *e*P **P 17 27 44.7 -1.0**
KAKA Kakadu 69.08 208 *e*P Px 17 27 34.2
comp=Z,17nm,1.1s
MCD Coleburn Disti 69.28 350⇑ *e*P **P 17 27 46.9 -0.3**
MDO Dochfour 69.53 351⇑ *e*P **P 17 27 48.2 -0.6**
KIV Kislovodsk 69.54 317 *e*P **P 17 27 47.2 -1.9**
KIV Kislovodsk 69.54 317 *e*P **P 17 27 46.1 -3.0**
KIV *e* 17 30 26.9
KIV *e*S SKSac 17 37 49.4 +3.2
KIV pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KIV MLR MLR
comp=Z,200nm,18.0s,MS4.4
KAC Achnashellach 69.56 351⇑ *e*P **P 17 27 48.4 -0.6**
WMOK Wichita Mounta 69.69 59 *e*P **P 17 27 49.4 -0.8**
comp=Z,34nm,0.9s,mb5.3
WMOK Wichita Mounta 69.69 59 P **P 17 27 50.0 -0.1**
WMOK pmax pmax
comp=Z,34nm,0.9s,mb5.3
KPL Plockton 69.76 351 *e*P **P 17 27 49.2 -0.9**
KPL AMb AMB 17 27 59.0
comp=Z,69nm,1.6s,mb5.3
GKP Gorka Klasztor 69.89 337 *e*P **P 17 27 50.9 -0.2**
KAR1 Arisaig 70.19 351⇑ *e*P **P 17 27 52.2 -0.6**
EBH Black Hill 70.62 350⇑ *e*P **P 17 27 54.7 -0.7**
EAB Aberfoyle 70.77 350⇑ *e*P **P 17 27 55.8 -0.6**
BSEG Bad Segeberg 70.77 341 *e*P **P 17 27 56.9 +0.5**
BSEG pmax pmax
comp=Z,66nm,1.1s,mb5.5
BSEG Bad Segeberg 70.77 341 *e*P **P 17 27 56.9 +0.5**
comp=Z,66nm,1.1s,mb5.5
ESY Stoneypath 70.85 349⇑ *e*P **P 17 27 56.1 -0.8**
HYB Hyderabad 70.87 274 *e*P **P 17 27 57.0 -0.6**
HYB Hyderabad 70.87 274 *i* P **P 17 27 57.0 -0.6**
ANN Anapa 70.97 320 *e*P **P 17 27 57.5 -0.3**
ANN *e*S S 17 37 11.1 +0.5
ANN pmax pmax
comp=Z,64nm,1.5s,mb5.3
ANN MLR MLR
comp=N,663nm,20.0s
ANN MLR MLR
comp=Z,386nm,20.0s,MS4.7
EAU Auchinoon 71.01 350⇑ *e*P **P 17 27 57.1 -0.7**
EBL Broad Law 71.04 350⇑ *e*P **P 17 27 57.6 -0.4**
PGBU Glenifferbraes 71.15 351⇑ *e*P **P 17 27 58.1 -0.6**
PGBU AMb AMB 17 28 05.0
comp=Z,130nm,1.6s,mb5.6
TXAR Lajitas Array 71.19 66 P **P 17 27 59.6 +0.3**
comp=Z,14nm,0.7s,mb5.0,baz=300,slow=4.4,SNR=179
TXAR Lajitas Array 71.19 66 P **P 17 27 59.7 +0.3**
TXAR pmax pmax
comp=Z,14nm,0.7s
LVV L'vov 71.21 331 *e*P **P 17 27 57.9 -1.2**
LVV MLR MLR
comp=N,500nm,19.0s,MS4.9
LVV MLR MLR
comp=E,400nm,19.0s,MS4.9
LVV MLR MLR
comp=Z,500nm,19.0s,MS4.8
XSO Sourhope Farm 71.23 349⇑ *e*P **P 17 27 58.8 -0.3**
RUE Ruedersdorf 71.42 339 *e*P **P 17 27 59.6 -0.7**
comp=Z,164nm,1.1s,mb5.9
ESK Eskdalemuir 71.51 350 P **P 17 28 00.1 -0.7**
comp=Z,276nm,0.9s,mb6.2,SNR=6.6
ESK Eskdalemuir 71.51 350 *e*P **P 17 27 59.7 -1.1**
comp=Z,37nm,0.9s,mb5.3
ESK Eskdalemuir 71.51 350⇑ *e*P **P 17 28 00.4 -0.5**
ESK AMb AMB 17 28 06.0
comp=Z,54nm,2.9s,mb5.0
ESK Eskdalemuir 71.51 350 P **P 17 28 00.9 +0.1**
ESK pmax pmax
comp=Z,37nm,1.0s,mb5.3
ECK Cauldkaine Hil 71.63 350⇑ *e*P **P 17 28 01.2 -0.4**
GNI Garni 71.74 313 LR LR 18 04 23.9
comp=Z,348nm,20.6s,MS4.6,baz=19,slow=40
GNI Garni 71.74 313 *i* P **P 17 28 03.2 +0.7**
GNI pmax pmax
comp=Z,9.0nm,1.2s
KWP Kalwaria 71.76 332 *e*P **P 17 28 02.5 +0.1**
KWP Kalwaria 71.76 332 *e*P **P 17 28 02.6 +0.1**
KWP Kalwaria 71.76 332 *e*P **P 17 28 03.0 +0.5**
XAL Allendale 71.84 349 *e*P **P 17 28 02.2 -0.7**
OLIL Olney 71.84 50 *e*P **P 17 28 02.1 -1.0**
comp=Z,16nm,0.9s,mb5.0
OJC Ojcow 72.03 334 *e*P **P 17 28 04.0 -0.1**
OJC *e*pP pP 17 28 11.4 -4.2
OJC *e*S S 17 37 21.7 -0.9
OJC L 18 03 07.1
comp=Z,1.2nm,19.2s
GAL1 Galloway 72.11 350 *e*P **P 17 28 03.2 -1.3**
GAL1 AMb AMB 17 28 08.3
comp=Z,66nm,1.7s,mb5.3
SIUC Southern Illin 72.14 51 *e*P **P 17 28 03.8 -1.1**
comp=Z,51nm,1.0s,mb5.4
KIS Kishinev 72.20 327 *e*P **P 17 28 04.0 -1.2**
KIS *e* 17 38 14.0
KIS MLR MLR
comp=N,400nm,17.0s
KIS MLR MLR
comp=Z,500nm,17.0s,MS4.8
KIS MLR MLR
comp=Z,1μm,16.0s
KSP Ksiaz 72.36 336 *e*P **P 17 28 05.9 -0.1**
KSP Ksiaz 72.36 336 *e*P **P 17 28 05.7 -0.3**
KSP MLR MLR
comp=Z,2μm,17.6s,MS5.3
STHS Stebnicka Huta 72.37 333 *e*P **P 17 28 06.4 +0.3**
STHS pmax pmax
comp=Z,28nm,1.0s,mb5.2
JCT Junction City 72.43 63 *e*P **P 17 28 06.3 -0.5**
comp=Z,28nm,1.2s,mb5.1
JCT Junction City 72.43 63 P **P 17 28 06.7 -0.1**
JCT pmax pmax
comp=Z,28nm,1.1s,mb5.1
KOLS Kolonicke sedl 72.51 332 *e*P **P 17 28 06.8 -0.2**
MIAR Mount Ida 72.52 56 *e*P **P 17 28 06.2 -1.1**
comp=Z,38nm,1.3s,mb5.2
MIAR Mount Ida 72.52 56 P **P 17 28 06.7 -0.6**
MIAR pmax pmax
comp=Z,38nm,1.3s,mb5.2
NIE Niedzica 72.62 333 *e*P **P 17 28 08.4 +0.8**
HPK Haverah Park 72.66 348⇑ *e*P **P 17 28 07.7 -0.1**
HPK AMb AMB 17 28 08.8
comp=Z,80nm,0.9s,mb5.6
USIN University of 72.66 50 *e*P **P 17 28 07.3 -0.8**
comp=Z,42nm,0.9s,mb5.4
CLL Collm 72.69 339⇑ *i*P **P 17 28 07.6 -0.4**
CLL pmax pmax
comp=Z,69nm,0.9s,mb5.6
CLL Collm 72.69 339 *e*P **P 17 28 07.5 -0.5**
comp=Z,69nm,0.9s,mb5.6
CLL Collm 72.69 339⇑ *i*P **P 17 28 07.6 -0.4**
comp=Z,69nm,0.9s,mb5.6
CLL *e*S S 17 37 30.0 -0.1
CLL *e*(SS) 17 42 54.0
PARMO Parma 72.72 52 *e*P **P 17 28 08.2 -0.3**
UPC Upice 72.73 337⇑ *e*P **P 17 28 08.2 -0.1**
CRVS Cervenica-Dubn 72.77 332 *e*P **P 17 28 08.4 -0.1**
BUR08 Bucovina Ar. S 72.80 330 *e*P **P 17 28 08.1 -0.6**
DPC Dobruska-Polom 72.80 336⇑ *i*P **P 17 28 08.9 +0.2**
DPC AMS AMS 18 04 00.0
comp=Z,700nm,15.6s
IBBN Ibbenburen 72.81 342 *e*P **P 17 28 08.8 +0.1**
OKC Ostrava-Krasne 72.82 335⇑ *i*P **P 17 28 08.8 0.0**
OKC AMS AMS 18 03 50.0
comp=Z,1μm,16.5s
BURAR Bucovina Array 72.82 330⇑ *i*P **P 17 28 08.4 -0.4**
BURAR Bucovina Array 72.82 330⇑ *i*P **P 17 28 08.4 -0.4**
BRG Berggiesshubel 72.88 338 *e*P **P 17 28 08.8 -0.3**
BRG pmax pmax
comp=Z,16nm,1.2s,mb4.8
BRG MLR MLR
comp=N,206nm,17.5s,MS4.5
BRG MLR MLR
comp=E,120nm,16.2s,MS4.5
BRG MLR MLR
comp=Z,306nm,15.6s,MS4.7
BRG Berggiesshubel 72.88 338 *e*P **P 17 28 08.8 -0.3**
comp=Z,27nm,1.2s,mb5.0
BRG
comp=N,344nm,17.5s
BRG
comp=E,200nm,16.2s
BRG
comp=Z,511nm,15.6s
ACSO Alum Creek Sta 72.92 45 *e*P **P 17 28 08.8 -0.7**
comp=Z,16nm,0.8s,mb5.0
MORC Moravsky Berou 73.03 335 *e*P **P 17 28 09.2 -0.8**
comp=Z,33nm,0.9s,mb5.3
MORC Moravsky Berou 73.03 335 P **P 17 28 10.5 +0.5**
MORC Moravsky Berou 73.03 335⇑ *i*P **P 17 28 10.4 +0.4**
PVCC Panska Ves 73.06 337⇑ *i*P **P 17 28 10.0 -0.2**
PVCC AMS AMS 18 05 00.0
comp=Z,1μm,14.7s
WCI Wyandotte Cave 73.08 49 *e*P **P 17 28 09.3 -1.2**
comp=Z,16nm,0.8s,mb5.0
WCI Wyandotte Cave 73.08 49 P **P 17 28 09.7 -0.9**
WCI pmax pmax
comp=Z,16nm,0.8s,mb5.0
GNAR Gosnell 73.15 53 *e*P **P 17 28 10.7 -0.3**
comp=Z,810nm,0.9s
DMUB Kingscourt 73.27 352 *e*P **P 17 28 03.4 -8.0**
DMUB Kingscourt 73.27 352⇑ *i*P **P 17 28 10.8 -0.6**
CTA Charters Tower 73.28 193 LR LR 17 59 02.8
comp=Z,217nm,20.8s,MS4.4,baz=51,slow=35
CTAO Charters Tower 73.28 193 P **P 17 28 13.9 +2.2**
BMR Basa Mare 73.29 331 P **P 17 28 12.1 +0.5**
WTSB Winterswijk 73.31 343⇑ *e*P **P 17 28 11.7 +0.1**
comp=Z,72nm,0.8s,mb5.7
KBI1 Birley Grange 73.33 348⇑ *e*P **P 17 28 11.4 -0.4**
PRU Pruhonice 73.57 337⇑ *e*P **P 17 28 13.0 -0.2**
PRU AMS AMS 18 05 10.0
comp=Z,700nm,15.2s
MOX Moxa 73.61 339 *e*P **P 17 28 13.4 -0.1**
comp=Z,45nm,1.3s,mb5.2
MOX
comp=Z,500nm,17.0s
MOX Moxa 73.61 339 *e*P **P 17 28 13.4 -0.1**
MOX pmax pmax
comp=Z,45nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,500nm,17.0s,MS4.9
MOX Moxa 73.61 339 *e*P **P 17 28 13.5 0.0**
comp=Z,32nm,1.0s,mb5.2
TANN Tannenbergstha 73.64 339 *e*P **P 17 28 13.8 +0.2**
VRAC Vranov 73.70 336 LR LR 18 04 50.6
comp=Z,1μm,18.2s,MS5.2,baz=244,slow=39
VRAC Vranov 73.70 336 P **P 17 28 14.7 +0.7**
VRAC Vranov 73.70 336⇑ *i*P **P 17 28 14.6 +0.6**
TLCR 73.79 326⇑ P **P 17 28 14.2 -0.4**
TLCR 73.79 326⇑ *i*P **P 17 28 14.2 -0.4**
CWF Charnwood Fore 73.81 348 *e*P **P 17 28 14.6 0.0**
CWF AMb AMB 17 28 16.4
comp=Z,52nm,1.3s,mb5.3
NKC Novy Kostel 73.82 339⇑ *i*P **P 17 28 14.8 +0.1**
NKC AMS AMS 18 06 30.0
comp=Z,500nm,11.8s
DLF Lyons Farm 73.84 351 *e*P **P 17 28 06.3 -8.4**
DLF Lyons Farm 73.84 351⇑ *i*P **P 17 28 13.9 -0.8**
VYHS Vyhne 73.87 334 *e*P **P 17 28 15.1 +0.1**
VRI Vrincioaia 73.89 328⇑ *i*P **P 17 28 18.7 +3.5**
DBJI Dramaga 73.90 235 P **P 17 28 16.7 +1.1**
comp=Z,46nm,1.2s,mb5.3
KOLL Kolacno 73.90 334 *e*P **P 17 28 15.6 +0.4**
PLOR Plostina 73.93 328⇑ *i*P **P 17 28 15.7 +0.3**
TREC Trest 73.99 336⇑ *i*P **P 17 28 15.7 0.0**
TREC AMS AMS 18 04 40.0
comp=Z,800nm,17.0s
WVT Waverly 74.07 51 *e*P **P 17 28 15.7 -0.7**
comp=Z,25nm,1.1s,mb5.1
WVT Waverly 74.07 51 *e*P **P 17 28 15.7 -0.7**
WVT pmax pmax
comp=Z,25nm,1.1s,mb5.1
PSZ Piszkesteto 74.10 333 *e*P **P 17 28 16.4 0.0**
comp=Z,49nm,1.3s,mb5.3
PSZ Piszkesteto 74.10 333⇑ *e*P **P 17 28 16.9 +0.5**
PSZ Piszkesteto 74.10 333⇑ *i*P **P 17 28 16.6 +0.2**
SMOL Smolenice 74.22 335 *e*P **P 17 28 18.0 +1.0**
ROTZ Rotzenmuhle 74.31 339 *e*P **P 17 28 18.0 +0.5**
DRGR 74.32 331 P **P 17 28 18.0 +0.3**
DRGR 74.32 331⇑ *i*P **P 17 28 17.3 -0.3**
MODS Modra-Piesok 74.39 335 *e*P **P 17 28 18.7 +0.7**
MODS pmax pmax

comp=Z,15nm,1.1s,mb4.8
MLR Muntele Rosu 74.48 328 LR LR 18 05 43.3
comp=Z,792nm,20.2s,MS5.0,baz=206,slow=40
MLR Muntele Rosu 74.48 328 P **P** **17 28 19.6 +1.0**
MLR Muntele Rosu 74.48 328⇑ *i*P **P** **17 28 19.6 +1.0**
KHC Kasperske Hory 74.59 338⇑ *i*P **P** **17 28 19.7 +0.5**
KHC AMS AMS 18 06 10.0
comp=Z,800nm,15.8s
GRF Grafenberg Arr 74.60 339 *e*P **P** **17 28 19.7 +0.5**
GRF pmax pmax
comp=Z,61nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,400nm,18.6s,MS4.7
GRF Grafenberg Arr 74.60 339 *e*P **P** **17 28 19.7 +0.5**
GRF pmax pmax
comp=Z,61nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,400nm,18.6s,MS4.7
GRF Grafenberg Arr 74.60 339 *e*P **P** **17 28 19.7 +0.5**
comp=Z,61nm,0.9s,mb5.5
GRF *e*L 18 05 56.5
comp=Z,382nm,18.6s
ZST Bratislava 74.60 335 *e*P **P** **17 28 19.9 +0.7**
ZST pmax pmax
comp=Z,22nm,0.9s,mb5.1
ZST Bratislava 74.60 335 *e*P **P** **17 28 19.9 +0.7**
OXF Oxford 74.62 53 *e*P **P** **17 28 18.6 -1.0**
comp=Z,57nm,1.0s,mb5.5
OXF Oxford 74.62 53 P **P** **17 28 19.4 -0.2**
OXF pmax pmax
comp=Z,57nm,1.0s,mb5.5
HGN Heimansgroeve 74.62 343⇑ *e*P **P** **17 28 19.4 +0.1**
comp=Z,79nm,1.2s,mb5.5
TNS Taunus Mts 74.67 341 *e*P **P** **17 28 19.9 +0.3**
TNS pmax pmax
comp=Z,37nm,0.9s,mb5.3
TNS Taunus Mts 74.67 341 *e*P **P** **17 28 19.9 +0.3**
comp=Z,37nm,0.9s,mb5.3
HTR Trewern Hill 74.70 349⇑ *e*P **P** **17 28 18.8 -1.0**
SSPA Standing Stone 74.72 42 *e*P **P** **17 28 17.6 -2.5**
comp=Z,30nm,1.2s,mb5.1
MCWV Mont Chateau 74.73 43 *e*P **P** **17 28 19.1 -1.0**
comp=Z,29nm,0.8s,mb5.3
BUD Budapest 74.74 333⇑ *e*P **P** **17 28 20.7 +0.6**
SKP1 Kophill 74.74 347 *e*P **P** **17 28 19.2 -0.8**
WET Wettzell 74.74 338 *e*P **P** **17 28 20.5 +0.4**
WET pmax pmax
comp=Z,38nm,0.9s,mb5.3
WET Wettzell 74.74 338 *e*P **P** **17 28 20.5 +0.4**
comp=Z,38nm,0.9s,mb5.3
MCH1 Michaelchurch 74.75 349 *e*P **P** **17 28 19.7 -0.3**
MCH1 AMb AMB 17 28 20.9
comp=Z,61nm,1.2s,mb5.4
MEM Membach 74.76 343 P **P** **17 28 20.3 +0.2**
comp=Z,86nm,1.1s,mb5.6
VOIR 74.81 329 P **P** **17 28 20.9 +0.4**
VOIR 74.81 329⇑ *i*P **P** **17 28 21.0 +0.5**
GEC2 GERESS Array S 74.83 337 *e*P **P** **17 28 20.4 -0.2**
GEC2 GERESS Array S 74.83 337 *e*P **P** **17 28 20.6 0.0**
GEC2 pmax pmax
comp=Z,22nm,0.9s,mb5.1
GEC2 GERESS Array S 74.83 337 *e*P **P** **17 28 20.6 0.0**
comp=Z,22nm,0.9s,mb5.1
GERES GERESS Array B 74.83 337 P **P** **17 28 20.6 0.0**
comp=Z,10nm,0.6s,mb4.9,baz=33,slow=4.9,SNR=122
GERES LR LR 18 06 26.8
comp=Z,344nm,21.0s,MS4.6,baz=8.9,slow=40
GERES GERESS Array B 74.83 337 P **P** **17 28 20.6 0.0**
GERES pmax pmax
comp=Z,10.0nm,0.6s
GERES MLR MLR
comp=Z,344nm,21.0s
UCC Uccle 74.86 344 P **P** **17 28 20.5 -0.2**
comp=Z,38nm,1.5s,mb5.1
BCLA Clavier 75.06 343 P **P** **17 28 21.9 0.0**
comp=Z,32nm,1.3s,mb5.1
BCLA AP pP 17 28 33.6 +0.1
HGH Gray Hill 75.08 349⇑ *e*P **P** **17 28 21.4 -0.5**
SNF Seneffe 75.15 344 P **P** **17 28 22.4 0.0**
CONA Conrad Observa 75.16 336⇑ *i*P **P** **17 28 23.1 +0.6**
comp=Z,50nm,1.3s,mb5.3,SNR=22
CSNA Conrad Observa 75.16 336⇑ *i*P **P** **17 28 23.1 +0.6**
comp=Z,46nm,1.3s,mb5.1
ABH Altеburg 75.17 342 *e*P **P** **17 28 22.4 -0.1**
TOD Tromm 75.18 341 *e*P **P** **17 28 22.6 0.0**
WOL Wolverton 75.20 348 *e*P **P** **17 28 22.0 -0.7**
SOP Sopron 75.21 335⇑ *e*P **P** **17 28 23.7 +0.9**
RUP Ruppelstein 75.43 342 *e*P **P** **17 28 24.1 +0.1**
MENF Mencas 75.45 345 *e*P **P** **17 28 24.0 -0.1**
WRAB Tennant Creek 75.45 204 P **P** **17 28 24.0 -0.3**
comp=Z,101nm,1.5s,mb5.5,SNR=5.4
WRAB Tennant Creek 75.45 204 *e*P **P** **17 28 24.1 -0.2**
comp=Z,38nm,1.4s,mb5.1
WRAB Tennant Creek 75.45 204 P **P** **17 28 24.8 +0.5**
WRAB pmax pmax
comp=Z,28nm,1.2s,mb5.1
GIVF Givet 75.45 343 *e*P **P** **17 28 24.0 -0.1**
comp=Z,71nm,1.0s,mb5.2
GIVF Givet 75.45 343 *e*P **P** **17 28 24.0 -0.1**
comp=Z,36nm,1.0s,mb5.2
GIVF Givet 75.45 343 *e*P **P** **17 28 24.0 -0.1**
GIVF pmax pmax
comp=Z,36nm,1.0s,mb5.3
WB2 Warramunga Arr 75.46 204 *e*P **P** **17 28 24.7 +0.3**
WB2 Warramunga Arr 75.46 204 *e*P **P** **17 28 24.4 0.0**
WRA Warramunga Arr 75.46 204 P **P** **17 28 24.8 +0.4**
comp=Z,6.0nm,0.7s,mb4.7,baz=19,slow=6.1,SNR=67
WRA LR LR 18 02 59.3
comp=Z,149nm,19.4s,MS4.3,baz=350,slow=37
WRA Warramunga Arr 75.46 204 P **P** **17 28 24.8 +0.4**
WRA pmax pmax
comp=Z,6.0nm,0.7s
WRA MLR MLR
comp=Z,149nm,19.4s
DOU Dourbes 75.50 344 P **P** **17 28 24.3 -0.1**
comp=Z,19nm,1.2s,mb4.9
GZR Gura Zlata 75.56 330 P **P** **17 28 24.9 +0.1**
GZR Gura Zlata 75.56 330⇓ *i*P **P** **17 28 24.5 -0.3**
BAIF Baives 75.60 344 *e*P **P** **17 28 25.0 0.0**
comp=Z,71nm,1.0s,mb5.3
BAIF Baives 75.60 344 *e*P **P** **17 28 25.0 0.0**
comp=Z,36nm,1.0s,mb5.2
BAIF Baives 75.60 344 *e*P **P** **17 28 25.0 0.0**
BAIF pmax pmax
comp=Z,36nm,1.0s,mb5.3
MOA Molln 75.63 337 *i* P **P** **17 28 25.4 +0.2**
comp=Z,16nm,0.8s,mb5.0,SNR=19
WLF Walferdange 75.64 342 *e*P **P** **17 28 24.9 -0.3**
comp=Z,29nm,1.4s,mb5.0
WLF Walferdange 75.64 342 P **P** **17 28 26.0 +0.8**
WLF pmax pmax
comp=Z,29nm,1.3s,mb5.0
WLF Walferdange 75.64 342 *e*P **P** **17 28 25.6 +0.4**
BZS Buzias 75.70 331 P **P** **17 28 25.1 -0.6**
BZS Buzias 75.70 331⇓ *i*P **P** **17 28 25.1 -0.6**
SWET Sewanee 75.71 50 *e*P **P** **17 28 24.7 -1.1**
HEX Exmoor 75.76 349⇑ *e*P **P** **17 28 25.4 -0.4**
ARSA Arzberg 75.88 336 *i* P **P** **17 28 27.2 +0.6**
comp=Z,26nm,0.9s,mb5.2,SNR=14
MVL Millersville 75.88 41 *e*P **P** **17 28 25.1 -1.6**
comp=Z,10nm,0.7s,mb4.9
STU Stuttgart 75.90 340 *e*P **P** **17 28 25.7 -1.0**
comp=Z,33nm,0.9s,mb5.3
STU Stuttgart 75.90 340 P **P** **17 28 26.8 +0.1**
STU pmax pmax
comp=Z,33nm,1.0s,mb5.2
STU Stuttgart 75.90 340 *e*P **P** **17 28 26.3 -0.4**
LANF Langenberg 75.98 341 *e*P **P** **17 28 27.3 +0.1**
PKSM Moragy 76.01 333 P **P** **17 28 27.1 -0.3**
PKSM Moragy 76.01 333⇓ *i*P **P** **17 28 27.0 -0.4**
FUR Furstenfeldbru 76.03 339 *e*P **P** **17 28 27.6 +0.2**
FUR pmax pmax
comp=Z,46nm,0.9s,mb5.4
FUR Furstenfeldbru 76.03 339 *e*P **P** **17 28 27.6 +0.2**
comp=Z,46nm,0.9s,mb5.4
RJOB Jochberg 76.08 338 *e*P **P** **17 28 28.3 +0.5**
CPNY Central Park 76.14 39 *e*P **P** **17 28 27.1 -1.1**
comp=Z,44nm,0.9s,mb5.4
CPCT Cooper Cave 76.17 49 *e*P **P** **17 28 27.2 -1.3**
SDMD Soldier's Deli 76.18 42 *e*P **P** **17 28 27.1 -1.4**
comp=Z,10nm,0.7s,mb4.9
STR Strasbourg 76.36 341 *e*P **P** **17 28 29.9 +0.5**
ELN Prospectdale 76.38 45 *e*P **P** **17 28 28.8 -0.9**
DYA Yadsworthy 76.39 349⇑ *e*P **P** **17 28 29.1 -0.3**
DYA AMb AMB 17 28 29.9
comp=Z,84nm,0.8s,mb5.7
BFO Black Forest 76.49 341 *e*P **P** **17 28 29.8 -0.3**
comp=Z,47nm,1.3s,mb5.3
BFO Black Forest 76.49 341 *e*P **P** **17 28 30.0 -0.1**
BFO pmax pmax
comp=Z,27nm,0.9s,mb5.2
BFO Black Forest 76.49 341 *e*P **P** **17 28 30.0 -0.1**
comp=Z,27nm,0.9s,mb5.2
SOKA Sooth 76.53 336⇑ *i*P **P** **17 28 30.8 +0.4**
comp=Z,32nm,0.9s,mb5.2
BLA Blacksburg 76.54 45 *e*P **P** **17 28 29.4 -1.1**
comp=Z,17nm,0.7s,mb5.1
BLA Blacksburg 76.54 45 P **P** **17 28 30.4 -0.2**
BLA pmax pmax
comp=Z,17nm,0.7s,mb5.1
KBA Koelnbreinsper 76.57 337⇓ *i*P **P** **17 28 31.6 +1.0**
comp=Z,138nm,0.8s,mb5.9,SNR=14
GROS Grobnik 76.61 335 *e*P **P** **17 28 31.0 +0.2**
SPAK Spaichingen-Ko 76.62 340 *e*P **P** **17 28 31.0 +0.2**
CDF Champ du Feu 76.62 341 *e*P **P** **17 28 30.9 +0.1**
comp=Z,101nm,1.0s,mb5.4
CDF Champ du Feu 76.62 341 *e*P **P** **17 28 30.9 +0.1**
comp=Z,51nm,1.0s,mb5.4
CDF Champ du Feu 76.62 341 *e*P **P** **17 28 30.9 +0.1**
CDF pmax pmax
comp=Z,51nm,1.0s,mb5.4
WATA Walderalm 76.74 338⇓ *i*P **P** **17 28 32.1 +0.6**
comp=Z,17nm,0.8s,mb5.0,SNR=10
RETA Reutte 76.78 339⇑ *i*P **P** **17 28 32.1 +0.4**
comp=Z,22nm,0.9s,mb5.1
WTTA Wattenberg 76.80 338 *i* P **P** **17 28 32.7 +0.9**
comp=Z,68nm,1.3s,mb5.4,SNR=18
LIBD Limburg 76.81 341 *e*P **P** **17 28 32.1 +0.2**
OBKA Obir 76.81 336⇑ *i*P **P** **17 28 32.4 +0.4**
comp=Z,67nm,1.4s,mb5.4
ECH Echery 76.84 341 *e*P **P** **17 28 32.1 +0.1**
ECH Echery 76.84 341 *e*P **P** **17 28 31.8 -0.2**
ECH Echery 76.84 341 P **P** **17 28 32.0 0.0**
MOTA Motsalm 76.84 339⇓ *i*P **P** **17 28 32.5 +0.5**
comp=Z,32nm,0.8s,mb5.3,SNR=24
MEZF Maizieres J'vi 76.96 343 *e*P **P** **17 28 33.0 +0.3**
comp=Z,73nm,0.9s,mb5.3
MEZF Maizieres J'vi 76.99 343 *e*P **P** **17 28 33.0 +0.3**
comp=Z,73nm,0.9s,mb5.6
FELD Feldberg im Sc 76.99 341 *e*P **P** **17 28 33.0 +0.1**
THEF They Montfort 77.05 342 *e*P **P** **17 28 33.4 +0.2**
SEST Monte Rota 77.15 338 P **P** **17 28 34.2 +0.4**
DAVA Damuels 77.16 339⇑ *i*P **P** **17 28 34.1 +0.2**
comp=Z,40nm,1.1s,mb5.3
MOF Molkenrain 77.19 341 *e*P **P** **17 28 34.0 0.0**
HAU Haudompre 77.19 342 *e*P **P** **17 28 33.9 -0.1**
comp=Z,89nm,1.0s,mb5.3
HAU *e*MLR MLR
comp=Z,394nm,17.8s,MS4.5
HAU Haudompre 77.19 342 *e*P **P** **17 28 33.9 -0.1**
comp=Z,44nm,1.0s,mb5.3
HAU LR LR
comp=Z,390nm,17.8s,MS4.8
HAU Haudompre 77.19 342 *e*P **P** **17 28 33.9 -0.1**
HAU pmax pmax
comp=Z,45nm,1.0s,mb5.3
HAU MLR MLR
comp=Z,390nm,17.8s,MS4.8
PTCC Patocco-Chiusa 77.20 337 P **P** **17 28 33.7 -0.4**
comp=Z,20nm,0.8s,mb5.1
CRES Cresnjev 77.22 335 *i* P **P** **17 28 34.1 -0.1**
FETA Feichten 77.23 339 *i* P **P** **17 28 34.9 +0.7**
comp=Z,42nm,0.9s,mb5.4,SNR=39
LJU Ljubljana 77.25 336 *e*P **P** **17 28 34.3 -0.1**
HINF Hinteralfeld 77.28 341 *e*P **P** **17 28 34.2 -0.3**
comp=Z,41nm,1.0s,mb5.0
HINF Hinteralfeld 77.28 341 *e*P **P** **17 28 34.2 -0.3**
comp=Z,21nm,1.0s,mb5.0
HINF Hinteralfeld 77.28 341 *e*P **P** **17 28 34.2 -0.3**
HINF pmax pmax
comp=Z,21nm,1.0s,mb5.0
VISS Visnje 77.40 335 *e*P **P** **17 28 34.9 -0.4**
URVA University of 77.46 43 *e*P **P** **17 28 34.5 -1.3**
BBS Basel-Blauen 77.49 341 *e*P **P** **17 28 35.6 -0.1**
BOJS Bojanci 77.57 335 *i* P **P** **17 28 36.2 0.0**
FLN La Foliniere 77.59 347 *e*P **P** **17 28 35.8 -0.5**
comp=Z,70nm,1.0s,mb5.2
FLN *e*MLR MLR
comp=Z,464nm,18.0s,MS4.5
FLN La Foliniere 77.59 347 *e*P **P** **17 28 35.8 -0.5**
comp=Z,35nm,1.0s,mb5.2
FLN LR LR
comp=Z,460nm,18.0s,MS4.8
FLN La Foliniere 77.59 347 *e*P **P** **17 28 35.8 -0.5**
FLN pmax pmax
comp=Z,35nm,1.0s,mb5.2
FLN MLR MLR
comp=Z,460nm,18.0s,MS4.8
APPI Appiano 77.63 338 P **P** **17 28 36.2 -0.3**
comp=Z,48nm,1.2s,mb5.3
LDF La Druitiere 77.71 346⇑ *i*P **P** **17 28 36.4 -0.5**
comp=Z,49nm,1.1s,mb5.0
LDF La Druitiere 77.71 346⇑ *i*P **P** **17 28 36.4 -0.5**
comp=Z,24nm,1.1s,mb5.0
LDF La Druitiere 77.71 346⇑ *i*P **P** **17 28 36.4 -0.5**
LDF pmax pmax
comp=Z,24nm,1.1s,mb5.0
LOMF Lomont 77.73 341 *e*P **P** **17 28 37.3 +0.3**
CTI Castel Tesino 77.94 338 P **P** **17 28 37.9 -0.3**
EIDS Eidsvold 77.97 188 *e*P **P** **17 28 38.7 +0.3**
GRR Gorron 78.01 347⇑ *i*P **P** **17 28 38.4 -0.2**
comp=Z,140nm,1.2s,mb5.5
GRR Gorron 78.01 347⇑ *i*P **P** **17 28 38.4 -0.2**
comp=Z,70nm,1.2s,mb5.5
GRR Gorron 78.01 347⇑ *i*P **P** **17 28 38.4 -0.2**
GRR pmax pmax
comp=Z,70nm,1.2s,mb5.5
TUE Stuetta 78.05 339 *e*P **P** **17 28 39.4 +0.6**
comp=Z,35nm,0.8s,mb5.3
LOR Lormes 78.36 343 *e*P **P** **17 28 40.5 0.0**
comp=Z,106nm,1.0s,mb5.4
LOR *e*MLR MLR
comp=Z,410nm,20.2s,MS4.5
LOR Lormes 78.36 343 *e*P **P** **17 28 40.5 0.0**
comp=Z,53nm,1.0s,mb5.4
LOR LR LR
comp=Z,410nm,20.3s,MS4.8
LOR Lormes 78.36 343 *e*P **P** **17 28 40.5 0.0**
LOR pmax pmax
comp=Z,53nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,410nm,20.3s,MS4.8
SGMF Saint Gilles 78.37 348⇑ *i*P **P** **17 28 40.4 -0.2**
comp=Z,85nm,0.9s,mb5.4
SGMF Saint Gilles 78.37 348⇑ *i*P **P** **17 28 40.4 -0.2**
comp=Z,42nm,0.9s,mb5.4
SGMF Saint Gilles 78.37 348⇑ *i*P **P** **17 28 40.4 -0.2**
SGMF pmax pmax
comp=Z,42nm,0.9s,mb5.4
ROSF Rostrenen 78.38 348 *e*P **P** **17 28 40.5 -0.1**
comp=Z,92nm,1.0s,mb5.4
ROSF Rostrenen 78.38 348 *e*P **P** **17 28 40.5 -0.1**
comp=Z,46nm,1.0s,mb5.4
ROSF Rostrenen 78.38 348 *e*P **P** **17 28 40.5 -0.1**
ROSF pmax pmax
comp=Z,46nm,1.0s,mb5.4
HYF Humbligny 78.57 344 *e*P **P** **17 28 42.0 +0.3**
CABF La Chapelle 78.58 342 *e*P **P** **17 28 42.1 +0.3**
comp=Z,108nm,1.0s,mb5.4
CABF La Chapelle 78.58 342 *e*P **P** **17 28 42.1 +0.3**
comp=Z,54nm,1.0s,mb5.4
CABF La Chapelle 78.58 342 *e*P **P** **17 28 42.1 +0.3**
CABF pmax pmax
comp=Z,54nm,1.0s,mb5.4
SSF Saint Saulge 78.62 343 *e*P **P** **17 28 42.0 0.0**
comp=Z,43nm,0.9s,mb5.1
SSF Saint Saulge 78.62 343 *e*P **P** **17 28 42.0 0.0**
comp=Z,22nm,0.9s,mb5.1
SSF Saint Saulge 78.62 343 *e*P **P** **17 28 42.0 0.0**
SSF pmax pmax
comp=Z,22nm,0.9s,mb5.1
JSC Jenkinsville 78.63 47 *e*P **P** **17 28 41.3 -0.9**
JSC Jenkinsville 78.63 47 P **P** **17 28 41.8 -0.4**
OG01 Vacheresse 78.74 341 *e*P **P** **17 28 43.9 +1.3**
VAI Varese 78.75 340 P **P** **17 28 42.8 +0.1**
comp=Z,60nm,1.0s,mb5.5
VAI Varese 78.75 340 P **P** **17 28 42.8 +0.1**
VAI pmax pmax
comp=Z,60nm,1.0s,mb5.5
QUIF Quistinic 78.78 348⇑ *i*P **P** **17 28 42.6 -0.2**
comp=Z,45nm,0.9s,mb5.1
QUIF Quistinic 78.78 348⇑ *i*P **P** **17 28 42.6 -0.2**
comp=Z,23nm,0.9s,mb5.1
QUIF Quistinic 78.78 348⇑ *i*P **P** **17 28 42.6 -0.2**
QUIF pmax pmax
comp=Z,23nm,0.9s,mb5.1
AVF Avril sur Loir 78.91 344 *e*P **P** **17 28 43.7 +0.1**
comp=Z,112nm,1.0s,mb5.4
AVF Avril sur Loir 78.91 344 *e*P **P** **17 28 43.7 +0.1**
comp=Z,56nm,1.0s,mb5.5
AVF Avril sur Loir 78.91 344 *e*P **P** **17 28 43.7 +0.1**
AVF pmax pmax
comp=Z,56nm,1.0s,mb5.5
UMR Umm Al-Rimmam 78.94 304 *e*P **P** **17 28 42.5 -1.6**
baz=305
UMR AMb AMB 17 28 43.9
comp=Z,34nm,1.1s,mb5.2,baz=305
SMF Signal de Mont 78.96 343 *e*P **P** **17 28 44.0 +0.1**
comp=Z,66nm,1.1s,mb5.3
SMF Signal de Mont 78.96 343 *e*P **P** **17 28 44.0 +0.1**
comp=Z,48nm,1.1s,mb5.3
SMF Signal de Mont 78.96 343 *e*P **P** **17 28 44.0 +0.1**
SMF pmax pmax
comp=Z,48nm,1.1s,mb5.3
ASAR Alice Springs 79.14 204 P **P** **17 28 45.9 +0.9**
comp=Z,4.0nm,0.6s,mb4.5,baz=15,slow=5.0,SNR=139
ASAR Alice Springs 79.14 204 P **P** **17 28 45.9 +1.0**
ASAR pmax pmax
comp=Z,4.0nm,0.6s
BGF Bois d'Agland 79.22 344 *e*P **P** **17 28 45.3 0.0**
comp=Z,43nm,1.2s,mb5.0
BGF Bois d'Agland 79.22 344 *e*P **P** **17 28 45.3 0.0**
comp=Z,22nm,1.2s,mb5.0
BGF Bois d'Agland 79.22 344 *e*P **P** **17 28 45.3 0.0**
BGF pmax pmax
comp=Z,22nm,1.2s,mb5.0
KBD Kabd 79.26 304 *e*P **P** **17 28 44.6 -1.2**
baz=304
KBD AMb AMB 17 28 45.9
comp=Z,27nm,1.0s,mb5.1,baz=304
RSL Roselend 79.36 341 *e*P **P** **17 28 46.9 +0.8**
NAY Al-Naaiem 79.43 305 *e*P **P** **17 28 45.1 -1.6**
baz=305
NAY AMb AMB 17 28 46.6
comp=Z,27nm,1.0s,mb5.1,baz=305
LSD Lago del Serru 79.48 341 P **P** **17 28 46.7 0.0**
comp=Z,32nm,1.0s,mb5.2
LSD Lago del Serru 79.48 341 P **P** **17 28 46.7 0.0**
LSD pmax pmax
comp=Z,32nm,1.0s,mb5.2
LPL La Plagne 79.51 341⇑ *i*P **P** **17 28 48.0 +1.1**
comp=Z,130nm,1.0s,mb5.5
LPL La Plagne 79.51 341⇑ *i*P **P** **17 28 48.0 +1.1**
comp=Z,65nm,1.0s,mb5.5
LPL La Plagne 79.51 341⇑ *i*P **P** **17 28 48.0 +1.1**
LPL pmax pmax
comp=Z,65nm,1.0s,mb5.5
LPG La Plagne 79.52 341⇑ *i*P **P** **17 28 48.3 +1.4**
comp=Z,163nm,1.1s,mb5.6
LPG La Plagne 79.52 341⇑ *i*P **P** **17 28 48.3 +1.4**
comp=Z,81nm,1.1s,mb5.6
LPG La Plagne 79.52 341⇑ *i*P **P** **17 28 48.3 +1.4**
LPG pmax pmax
comp=Z,81nm,1.1s,mb5.6
RDF Al-Radifah 79.53 304 *e*P **P** **17 28 46.4 -0.9**
baz=304
RDF AMb AMB 17 28 48.0
comp=Z,89nm,1.6s,mb5.5,baz=304
TCF Toulx Ste Croi 79.59 344 *e*P **P** **17 28 47.5 +0.2**
comp=Z,40nm,1.0s,mb5.0
TCF Toulx Ste Croi 79.59 344 *e*P **P** **17 28 47.5 +0.2**
comp=Z,20nm,1.0s,mb5.0
TCF Toulx Ste Croi 79.59 344 *e*P **P** **17 28 47.5 +0.2**
TCF pmax pmax
comp=Z,20nm,1.0s,mb5.0
MFF Saint Martin d 79.66 346⇑ *i*P **P** **17 28 47.8 +0.2**
comp=Z,47nm,1.1s,mb5.0
MFF Saint Martin d 79.66 346⇑ *i*P **P** **17 28 47.8 +0.2**
comp=Z,24nm,1.1s,mb5.0
MFF Saint Martin d 79.66 346⇑ *i*P **P** **17 28 47.8 +0.2**
MFF pmax pmax
comp=Z,24nm,1.1s,mb5.0
BNI Bardonecchia 79.96 341 *e*P **P** **17 28 50.4 +1.0**
comp=Z,21nm,0.9s,mb5.1
BNI Bardonecchia 79.96 341 P **P** **17 28 50.8 +1.5**
BNI pmax pmax
comp=Z,21nm,0.9s,mb5.1
COLF Collangettes 80.08 343 *e*P **P** **17 28 50.8 +0.8**
SSB Saint Sauveur 80.16 342 *e*P **P** **17 28 50.8 +0.4**
SSB Saint Sauveur 80.16 342 *e*P **P** **17 28 50.6 +0.3**
ORIF Oris-en-Rattie 80.25 341⇑ *i*P **P** **17 28 51.9 +1.0**
comp=Z,104nm,1.0s,mb5.4
ORIF *e*MLR MLR
comp=Z,265nm,18.5s,MS4.3
ORIF Oris-en-Rattie 80.25 341⇑ *i*P **P** **17 28 51.9 +1.0**
comp=Z,52nm,1.0s,mb5.4
ORIF Oris-en-Rattie 80.25 341⇑ *i*P **P** **17 28 51.9 +1.0**
ORIF pmax pmax
comp=Z,52nm,1.0s,mb5.4
MBDF Montbardon 80.25 341⇑ *i*P **P** **17 28 51.5 +0.6**
comp=Z,39nm,0.9s,mb5.0
MBDF Montbardon 80.25 341⇑ *i*P **P** **17 28 51.5 +0.6**
comp=Z,20nm,0.9s,mb5.0
MBDF Montbardon 80.25 341⇑ *i*P **P** **17 28 51.5 +0.6**
MBDF pmax pmax
comp=Z,20nm,0.9s,mb5.0
VIVF Saint-Julien-l 80.54 342⇑ *i*P **P** **17 28 53.2 +0.7**
comp=Z,96nm,1.0s,mb5.4
VIVF Saint-Julien-l 80.54 342⇑ *i*P **P** **17 28 53.2 +0.7**
comp=Z,48nm,1.0s,mb5.4
VIVF Saint-Julien-l 80.54 342⇑ *i*P **P** **17 28 53.2 +0.7**
VIVF pmax pmax
comp=Z,48nm,1.0s,mb5.4
NRCA Norcia 80.61 336 P **P** **17 28 53.7 +0.8**
comp=Z,80nm,1.1s,mb5.6
RJF Les Rejaudoux 80.66 344⇑ *i*P **P** **17 28 53.5 +0.4**
comp=Z,64nm,1.2s,mb5.1
RJF *e*MLR MLR
comp=Z,496nm,18.8s,MS4.6
RJF Les Rejaudoux 80.66 344⇑ *i*P **P** **17 28 53.5 +0.4**
comp=Z,32nm,1.2s,mb5.1
RJF LR LR
comp=Z,500nm,18.8s,MS4.9
RJF Les Rejaudoux 80.66 344⇑ *i*P **P** **17 28 53.5 +0.4**
RJF pmax pmax
comp=Z,32nm,1.2s,mb5.1
RJF MLR MLR
comp=Z,500nm,18.8s,MS4.9
CAF Calviac 80.94 344⇑ *i*P **P** **17 28 55.4 +0.8**
comp=Z,82nm,1.2s,mb5.2
CAF Calviac 80.94 344⇑ *i*P **P** **17 28 55.4 +0.8**
comp=Z,41nm,1.2s,mb5.2
CAF Calviac 80.94 344⇑ *i*P **P** **17 28 55.4 +0.8**
CAF pmax pmax
comp=Z,41nm,1.2s,mb5.2
SBF Sospel 80.95 340⇑ *i*P **P** **17 28 55.4 +0.8**
comp=Z,49nm,0.8s,mb5.2
SBF Sospel 80.95 340⇑ *i*P **P** **17 28 55.4 +0.8**
comp=Z,24nm,0.8s,mb5.2
SBF Sospel 80.95 340⇑ *i*P **P** **17 28 55.4 +0.8**
SBF pmax pmax
comp=Z,25nm,0.8s,mb5.2
AQU L'Aquila 80.99 335⇓ *i*P **P** **17 28 56.6 +1.8**
AQU L'Aquila 80.99 335⇓ *i*P **P** **17 28 56.7 +1.8**
LFF La Frestale 81.14 345⇑ *i*P **P** **17 28 56.3 +0.6**
SMRF Simiane la Rot 81.22 341 *e*P **P** **17 28 57.0 +0.9**
comp=Z,104nm,1.5s,mb5.2
SMRF Simiane la Rot 81.22 341 *e*P **P** **17 28 57.0 +0.9**
comp=Z,104nm,1.5s,mb5.5
PTQR Pietraquaria 81.30 335 P **P** **17 28 57.3 +0.7**
comp=Z,165nm,1.1s,mb5.9
FRF La Foret Royal 81.40 340⇑ *i*P **P** **17 28 56.7 -0.4**
LASF Ste Croix 81.44 342⇑ *i*P **P** **17 28 58.1 +0.8**
comp=Z,90nm,1.4s,mb5.2
LMR La Mourre 81.64 340⇑ *i*P **P** **17 28 58.3 -0.1**
PGF Pioggiola 81.86 338⇑ *i*P **P** **17 29 00.7 +1.2**
comp=Z,48nm,1.1s,mb5.0
PGF Pioggiola 81.86 338⇑ *i*P **P** **17 29 00.7 +1.2**
comp=Z,24nm,1.1s,mb5.0
PGF Pioggiola 81.86 338⇑ *i*P **P** **17 29 00.7 +1.2**
PGF pmax pmax
comp=Z,24nm,1.1s,mb5.0
MTLF Montolieu 82.45 343⇑ *i*P **P** **17 29 03.3 +0.7**
comp=Z,30nm,1.0s,mb4.9
MTLF Montolieu 82.45 343⇑ *i*P **P** **17 29 03.3 +0.7**
comp=Z,15nm,1.0s,mb4.9
MTLF Montolieu 82.45 343⇑ *i*P **P** **17 29 03.3 +0.7**
MTLF pmax pmax

comp=Z,15nm,1.0s,mb4.9
PPT Papeete 82.59 132 *e*LR LR 17 54 56.6
comp=Z,427nm,23.2s,baz=332
EPF Esparros 83.07 345⇑*i*P **P** **17 29 05.8 0.0**
comp=Z,28nm,1.0s,mb5.0
EPF Esparros 83.07 345⇑*i*P **P** **17 29 05.8 0.0**
comp=Z,14nm,1.0s,mb5.0
EPF Esparros 83.07 345⇑*i*P **P** **17 29 05.8 0.0**
EPF pmax pmax
comp=Z,14nm,1.0s,mb5.0
EALK Alkurruntz 83.17 346 P **P** **17 29 06.9 +0.6**
comp=Z,120nm,1.5s,mb5.7
ELIZ Elizondo 83.22 346 P **P** **17 29 06.3 -0.3**
comp=Z,49nm,0.4s,mb5.9
ELIZ Elizondo 83.22 346 P **P** **17 29 06.3 -0.3**
ELIZ pmax pmax
comp=Z,49nm,0.4s,mb5.9
SJPF Ste Jean 83.23 346⇑*i*P **P** **17 29 07.6 +1.0**
comp=Z,26nm,0.7s,mb5.0
SJPF Ste Jean 83.23 346⇑*i*P **P** **17 29 07.6 +1.0**
comp=Z,13nm,0.7s,mb5.1
SJPF Ste Jean 83.23 346⇑*i*P **P** **17 29 07.6 +1.0**
SJPF pmax pmax
comp=Z,13nm,0.7s,mb5.1
ETSF Etsaut 83.34 345⇑*i*P **P** **17 29 08.0 +0.8**
comp=Z,38nm,0.7s,mb5.2
ETSF Etsaut 83.34 345⇑*i*P **P** **17 29 08.0 +0.8**
comp=Z,19nm,0.7s,mb5.2
ETSF Etsaut 83.34 345⇑*i*P **P** **17 29 08.0 +0.8**
ETSF pmax pmax
comp=Z,19nm,0.7s,mb5.2
ELAN Lanestosa 83.42 348 P **P** **17 29 08.2 +0.5**
comp=Z,97nm,1.4s,mb5.6
EBIE Bielsa 83.43 345 P **P** **17 29 08.9 +1.2**
comp=Z,14nm,0.8s,mb5.1
EARI Arriondas 83.58 349 P **P** **17 29 09.5 +1.1**
comp=Z,63nm,1.2s,mb5.6
EPON Pontenova 83.77 350 P **P** **17 29 08.3 -1.0**
comp=Z,32nm,1.0s,mb5.4
ECRI Cripan 83.91 347 P **P** **17 29 11.6 +1.5**
comp=Z,0.8nm,0.2s,mb4.5
ECRI Cripan 83.91 347 P **P** **17 29 11.6 +1.5**
ECRI pmax pmax
comp=Z,1.0nm,0.2s,mb4.6
STS Santiago 84.34 351 P **P** **17 29 12.6 +0.3**
comp=Z,6.7nm,0.5s,mb5.0
STS Santiago 84.34 351 P **P** **17 29 12.6 +0.3**
STS pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
ESAC San Caprasio 84.47 345 P **P** **17 29 14.1 +1.1**
comp=Z,16nm,0.5s,mb5.4
EPOB Poblet 84.58 344 P **P** **17 29 14.2 +0.6**
comp=Z,7.7nm,0.7s,mb4.9
ERUA La Rua 84.69 350 P **P** **17 29 13.4 -0.7**
comp=Z,0.1nm,0.4s
ECAL Calabor 85.09 350 P **P** **17 29 16.9 +0.7**
comp=Z,4.7nm,0.6s,mb4.8
ELOB Lobios 85.30 351 P **P** **17 29 18.2 +1.0**
comp=Z,13nm,1.0s,mb5.0
STKA Stephens Creek 85.55 195 *e*P **P** **17 29 18.8 +0.6**
comp=Z,4.4nm,0.9s,mb4.7
STKA Stephens Creek 85.55 195 P **P** **17 29 19.1 +0.9**
comp=Z,2.7nm,0.9s,mb4.5,baz=146,slow=9.3,SNR=4.4
STKA LR LR 18 04 06.0
comp=Z,292nm,20.5s,MS4.7,baz=179,slow=33
STKA Stephens Creek 85.55 195 *e*P **P** **17 29 18.5 +0.3**
ETOR Torete 85.60 346 P **P** **17 29 18.5 -0.2**
comp=Z,14nm,0.8s,mb5.2
ETOR Torete 85.60 346 P **P** **17 29 18.5 -0.2**
ETOR pmax pmax
comp=Z,14nm,0.8s,mb5.2
GUD Guadarrama 86.06 348 P **P** **17 29 20.8 -0.2**
comp=Z,4.9nm,0.8s,mb4.8
GUD Guadarrama 86.06 348 P **P** **17 29 20.8 -0.2**
GUD pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
MTE Manteigas 86.70 350 *e*P **P** **17 29 24.2 +0.1**
comp=Z,16nm,0.8s,mb5.3
EIBI Ibiza 86.80 343 P **P** **17 29 27.1 +2.5**
comp=Z,16nm,0.8s,mb5.3
EPLA Plasencia 86.87 349 P **P** **17 29 24.6 -0.4**
comp=Z,19nm,0.8s,mb5.4
EPLA Plasencia 86.87 349 P **P** **17 29 24.6 -0.3**
EPLA pmax pmax
comp=Z,19nm,0.8s,mb5.4
ESDC Sonseca Array 86.99 347 P **P** **17 29 25.4 -0.1**
comp=Z,4.5nm,0.7s,mb4.8,baz=3.5,slow=4.9,SNR=20
ESLA Sonseca Array 86.99 347 *e*P **P** **17 29 24.1 -1.4**
comp=Z,3.4nm,0.9s,mb4.6
EBEN Beniarda 87.38 344 P **P** **17 29 31.5 +4.1**
comp=Z,22nm,1.6s,mb5.1
ETOB Tobarra 87.65 345 P **P** **17 29 28.5 -0.2**
comp=Z,3.5nm,0.7s,mb4.7
EVIA Vianos 87.80 346 P **P** **17 29 29.0 -0.4**
comp=Z,5.1nm,0.7s,mb4.9
EVIA Vianos 87.80 346 P **P** **17 29 29.0 -0.5**
EVIA pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
KEST Kesra 88.27 336 P **P** **17 29 31.6 -0.1**
comp=Z,3.4nm,1.0s,mb4.5,baz=278,slow=19,SNR=4.4
EHUE Huescar 88.62 346 P **P** **17 29 33.4 +0.1**
comp=Z,3.2nm,0.8s,mb4.7
EHUE Huescar 88.62 346 P **P** **17 29 33.4 0.0**
EHUE pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
ELOJ Sierra Loja 89.50 347 P **P** **17 29 36.7 -0.8**
comp=Z,1.7nm,0.6s,mb4.5
ELOJ Sierra Loja 89.50 347 P **P** **17 29 36.7 -0.8**
ELOJ pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
EGUA Guajares 89.73 346 P **P** **17 29 38.5 0.0**
comp=Z,34nm,1.0s,mb5.6
EGUA Guajares 89.73 346 P **P** **17 29 38.6 0.0**
EGUA pmax pmax
comp=Z,34nm,1.0s,mb5.6
EJIF Jimena Fronter 90.36 348 P **P** **17 29 41.4 -0.2**
comp=Z,4.5nm,0.6s,mb5.0
EJIF Jimena Fronter 90.36 348 P **P** **17 29 41.4 -0.1**
EJIF pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
URZ Urewera 91.77 166 LR LR 18 08 50.8
comp=Z,262nm,18.2s,MS4.7,baz=281,slow=34
RKT Rikitea 94.41 123 *e*LR LR 18 00 36.0
comp=Z,625nm,28.5s
DBIC Dimbokro 119.47 342 PKP PKPdf 17 35 30.1 -0.1
comp=Z,7.1nm,0.7s,baz=349,slow=2.4,SNR=13
DBIC Dimbokro 119.47 342 PKIKP PKPdf 17 35 30.1 -0.1
DBIC pmax pmax
comp=Z,7.0nm,0.7s
LIC Lamto 119.94 342 *e*PKIKP PKPdf 17 35 30.4 -0.7
comp=Z,24nm,1.0s
LSZ Lusaka 126.58 295 PKP PKPdf 17 35 44.4 +0.8
comp=Z,2.8nm,0.9s,baz=51,slow=0.8,SNR=5.9
LSZ Lusaka 126.58 295 PKIKP PKPdf 17 35 44.4 +0.8
LSZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ La Paz 128.02 64 PKP PKPdf 17 35 46.7 +0.4
comp=Z,1.7nm,0.8s,baz=28,slow=8.3,SNR=8.2
LPAZ La Paz 128.02 64 PKIKP PKPdf 17 35 46.7 +0.4
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
TSUM Tsumeb 135.45 304 PKP PKPdf 17 36 01.5 +1.2
comp=Z,4.6nm,0.9s,baz=94,slow=5.0,SNR=4.7
LBTB Lobatse 135.79 290 PKP PKPdf 17 36 03.0 +2.3
comp=Z,6.8nm,0.9s,baz=326,slow=5.9,SNR=5.2
LBTB Lobatse 135.79 290 PKIKP PKPdf 17 36 03.1 +2.3
LBTB pmax pmax
comp=Z,7.0nm,1.0s
BDFB Brasilia 137.20 41 PKP PKPdf 17 36 05.1 +1.5
comp=Z,0.5nm,0.4s,baz=0.2,slow=26,SNR=3.8
BDFB Brasilia 137.20 41 PKIKP PKPdf 17 36 05.1 +1.5
BDFB pmax pmax
comp=Z,1.0nm,0.4s
QSPA South Pole Qui 142.33 180 PKhKP 17 36 05.9
comp=Z,5.3nm,1.0s,baz=324,slow=2.5,SNR=9.9
QSPA South Pole Qui 142.33 180 *e*PKPpre 17 36 05.3
PLCA Paso Flores 144.38 91 PKP PKPdf 17 36 14.1 -1.7
comp=Z,9.1nm,0.9s,baz=311,slow=4.6,SNR=11
PLCA PKKP 17 45 24.1
comp=Z,1.8nm,1.0s,baz=135,slow=5.1,SNR=2.9
SPB Sao Paulo 144.53 46 *e*PKPdf PKPdf 17 36 14.8 -1.8
VNA3 Neumayer Olymp 160.66 191 *e*PKPdf PKPdf 17 36 38.0 -0.6
VNA3 *e* 17 37 20.1
VNA3 *e* 17 37 33.8
VNA3 *e* 17 37 38.8
VNA2 Neumayer--Watz 160.67 193 *e*PKPdf PKPdf 17 36 38.7 +0.1
VNA2 *e* 17 37 20.7
VNA2 *e* 17 37 34.3
VNA2 *e* 17 37 39.5

IDC ***17*** *17:28:17.9±0.7, 1356N×1445 9E, h121km±27km, mb3.0/4, mb1 3.2/4, mb1mx3.0/20, mbtmp3.0/4, Error ellipse: s-maj=95.9km s-min=23.0km az=76.0*

ISC 17 17:28:18.0±2.3, 136N×032E, 08, h132km±16km, n5, σ0 32/6, mb3.2/4, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.06**	**109**	P	**Pn**	**17 28 36.1**	**+0.2**
	415nm,0.3s,baz=180,slow=0.6,SNR=140						
GUMO				S	**Sn**	**17 28 49.2**	**-0.1**
	281nm,0.3s,baz=360,slow=22,SNR=18						
WRA	**Warramunga Arr**	**34.90**	**197**	P	**P**	**17 34 56.7**	**-0.3**
	0.4nm,0.8s,mb3.1,baz=12,slow=9.5,SNR=3.0						
ASAR	**Alice Springs**	**38.55**	**196**	P	**P**	**17 35 28.1**	**+0.2**
	0.3nm,0.8s,mb3.0,baz=13,slow=9.2,SNR=4.0						
CMAR	**Chiang Mai Arr**	**44.26**	**283**	P	**P**	**17 36 14.8**	**+0.1**
	0.4nm,0.6s,mb3.2,baz=90,slow=6.8,SNR=4.9						
MKAR	**Makanchi Array**	**61.44**	**316**	P	**P**	**17 38 20.3**	**-0.1**
	0.3nm,0.4s,mb3.5,baz=92,slow=10,SNR=7.0						

PRE 17 17:51:58.3±0.9, 2168S×3337E, h5km, ML3.6, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.17**	**257**	*e*P	Pn	17 52 49.5	+0.6
MSNA				*e*S	Sn	17 53 28.0	+0.8
MSNA				AML	AML	17 53 46.3	
	comp=Z,89nm,0.2s						
POGA	**Pongola**	**5.88**	**195**	*e*P	Pn	17 53 26.2	+0.1
POGA				*e*S	Sn	17 54 30.7	-3.3
POGA				AML	AML	17 55 39.9	
	comp=Z,9.2nm,0.7s						
PRYS	**Parys**	**7.57**	**225**	*e*P	Pn	17 53 51.2	+1.9
PRYS				*e*S	Sn	17 55 12.1	-3.4
PRYS				AML	AML	17 56 12.2	
	comp=Z,7.5nm,0.6s						
LBTB	**Lobatse**	**7.87**	**244**	*e*P	Pn	17 53 54.6	+1.1
LBTB				*e*S	Sn	17 55 18.9	-4.1
LBTB				AML	AML	17 56 11.5	
	comp=Z,10nm,0.6s						
BOSA	**Boshof**	**10.08**	**225**	*e*P	Pn	17 54 24.6	+0.8
BOSA				*e*S	Sn	17 56 12.4	-4.8
BOSA				AML	AML	17 57 34.0	
	comp=Z,5.2nm,0.7s						

GUC ***17*** *17:54:31.3±0.7, 2308S×7090W, h33km±2km, ML5.5, MS5.1, MW5.8(NEIC)*

LDG ***17*** *17:54:31.4±0.3, 2225S×7086W, h10km, Mb5.6/30, Ms5.5/10, Error ellipse: s-maj=29.5km s-min=11.3km az=172.0*

GCMT ***17*** *17:54:32.8±0.1, 2306S×7092W, h15km, MW5.9/100, Moment Tensor Solution. s82,c151; s100,c234; Duration: 1s6 Moment tensor: Scale 10^17 Nm; Mrr 0.50±.03; Mθθ 1.84±.03; Mϕϕ -2.35±.04; Mrθ -0.18±.10; Mθϕ 1.07±.03; Mϕr -7.25±.33; Best double couple: M0 7.48500×10^17 NP1:ϕs 300.00000°, δ 11.00000°, λ 27.00000°. NP2:ϕs 184.00000°, δ 85.00000°, λ 100.00000°. Principal axes: T 6.6080, Plg 49.0000°, Azm 105.0000°; N 1.7480, Plg 10.0000°, Azm 3.0000°; P -8.3620, Plg 39.0000°, Azm 265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***17*** *17:54:32.8±1.3, 2306S×7060W, h15km±8km, mb5.6/178, MS5.6/191, MW5.8, ML5.6(GUC) Error ellipse: s-maj=5.6km s-min=4.3km az=64.0, Moment Tensor Solution. s109 Moment tensor: Scale 10^17 Nm; Mrr -2.37; Mθθ 1.83; Mϕϕ 0.54; Mrθ 0.45; Mθϕ -0.62; Mϕr -6.60; Best double couple: M0 7.00000×10^17 NP1:ϕs 127.00000°, δ 9.00000°, λ -135.00000°. NP2:ϕs 353.00000°, δ 83.00000°, λ -83.00000°. Principal axes: T 5.9800, Plg 38.0000°, Azm 76.0000°; N 1.6900, Plg 6.0000°, Azm 171.0000°; P -7.6700, Plg 51.0000°, Azm 270.0000°;*

NEIC Felt [IV] at Antofagasta, Baquedano, Maria Elena and Mejillones; [II] at Sierra Gorda and Tocopilla.

BJI ***17*** *17:54:32.6, 2301S×7037W, h14km, mB5.9, Ms5.9, Msz5.8*

ISCJB ***17*** *17:54:33.2±0.7, 2302S±002×7065W±004, h27km±4km, mb5.5/192, MS5.6/213, Error ellipse: s-maj=5.9km s-min=3.9km az=161.6*

MOS ***17*** *17:54:35.1±1.2, 2277S×7054W, h33km, mb5.7/80, MS5.5/52, Error ellipse: s-maj=9.7km s-min=5.9km az=94.1*

IDC ***17*** *17:54:35.9±2.5, 2298S×7056W, h30km±17km, mb5.0/19, mb1 5.1/23, mb1mx5.0/25, mbtmp5.0/23, ML4.9/4, MS5.5/26, Ms1 5.5/26, ms1mx5.4/31, Error ellipse: s-maj=14.6km s-min=12.6km az=61.0*

DJA ***17*** *17:54:40, 2394S×6991W, h10km, Mw6.0/4*

ISC 17 17:54:34.3±0.7, 2306S±002×7059W±004, h23km±4km, n692, σ1 9 18/446, mb5.5/192, MS5.6/213, 15C-13D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.14**	**110**	⇓*i*P	**Pb**	**17 54 40.1**	**+1.2**
MECH				*i* S	**Sb**	**17 54 46.4**	**+4.3**
MECH				AML	AML	17 54 53.6	
	comp=E,958μm,0.4s						
ANCH	**Antofagasta**	**0.64**	**165**	*e*P	**Pb**	**17 54 45.9**	**-1.0**
ANCH				*e*S	**Sb**	**17 54 56.8**	**+1.4**
ANCH	**Antofagasta**	**0.64**	**165**	*e*P	**Pb**	**17 54 45.9**	**-0.9**
ANCH				*i* S	**Sb**	**17 54 57.0**	**+1.6**
PB06	**Plate Boundary**	**1.00**	**70**	⇓*i*P	**Pb**	**17 54 53.4**	**+0.5**
PB06				*i* S	**Sb**	**17 55 10.6**	**+4.9**
PB04	**Plate Boundary**	**1.29**	**52**	⇓*i*P	**Pn**	**17 54 49.7**	**-7.2**
PB04				*i* S	**Sn**	**17 55 04.0**	**-9.4**
PB04				AML	AML	17 55 11.2	
	comp=N,184μm,0.6s						
PB07	**Plate Boundary**	**1.48**	**26**	⇑*i*P	**Pn**	**17 54 59.6**	**+0.1**
PB07				*i* S	**Sn**	**17 55 21.1**	**+3.1**
CPN1	**Cerro Paranal**	**1.57**	**174**	⇑*i*P	**Pn**	**17 54 59.6**	**-1.1**
CPN1				*e*S	**Sn**	**17 55 20.8**	**+0.4**
CPN1				AML	AML	17 55 27.6	
	comp=E,127μm,0.7s						
LVC	**Limon Verde**	**1.61**	**74**	Pg	**Pn**	**17 55 04.0**	**+2.7**
	comp=E,1μm,0.3s,baz=254,slow=12,SNR=1072						
LVC				Lg		17 55 27.9	
	comp=E,12μm,0.3s,baz=155,slow=14,SNR=20						
LVC	**Limon Verde**	**1.61**	**74**	*e*Pn	**Pn**	**17 55 04.0**	**+2.7**
LVC	**Limon Verde**	**1.61**	**74**	⇓*i*P	**Pn**	**17 55 03.8**	**+2.6**
LVC				*i* S	**Sn**	**17 55 28.7**	**+7.3**
LVC				AML	AML	17 55 31.6	
	comp=N,52μm,0.4s						
SPCH	**San Pedro de A**	**2.21**	**87**	*e*P	**Pn**	**17 55 16.4**	**+6.9**
SPCH				*i* S	**Sn**	**17 55 50.0**	**+14**
PB01	**Plate Boundary**	**2.25**	**27**	⇑*i*P	**Pn**	**17 55 10.6**	**+0.5**
PB01				*i* S	**Sn**	**17 55 44.5**	**+7.4**
PB01				AML	AML	17 55 49.7	
	comp=E,24μm,0.7s						
CPCH	**Copiapo**	**4.29**	**177**	*e*P	**Pn**	**17 55 36.1**	**-2.0**
CPCH				*i* S	**Sn**	**17 56 26.0**	**-1.5**
LCO	**Las Campanas**	**5.93**	**181**	*e*Pn	**Pn**	**17 55 56.6**	**-4.1**
	comp=E,511nm,0.6s						
ARE	**Arequipa**	**6.62**	**352**	*e*P	**Pn**	**17 56 08.0**	**-2.2**
ARE				*e*S	**Sn**	**17 57 19.0**	**-5.9**
TLL	**Tololo Astrono**	**7.08**	**182**	P	**Pn**	**17 56 13.3**	**-3.3**
LPAZ	**La Paz**	**7.12**	**19**	Pn	**Pn**	**17 56 20.3**	**+3.2**
	comp=E,14nm,0.3s,baz=212,slow=6.6,SNR=112						
LPAZ	**La Paz**	**7.12**	**19**	*e*Pn	**Pn**	**17 56 19.8**	**+2.7**
	comp=E,33nm,0.6s						
LPAZ	**La Paz**	**7.12**	**19**	*e*P	**Pn**	**17 56 19.8**	**+2.7**
LPAZ				pmax	pmax		
	comp=Z,33nm,0.6s						
CFAA	**Coronel Fontan**	**8.77**	**167**	Pn	**Pn**	**17 56 38.6**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=339,slow=13,SNR=40						
CFAA				Sn	**Sn**	**17 58 29.8**	**+12**
	comp=Z,1.2nm,0.3s,baz=139,slow=17,SNR=3.4						
CFAA				LR	LR	17 59 49.0	
	comp=Z,5μm,18.2s,baz=334,slow=36						
PEL	**Peldehue**	**10.05**	**180**	AMS	AMS	18 00 43.0	
	comp=E,50μm,16.7s						
FCH	**Farellones**	**10.24**	**179**	*e*P	**Pn**	**17 56 57.3**	**-2.5**
FCH				AML	AML	18 01 10.2	
	comp=E,25μm,17.6s						
CLCH	**Cerro Calan**	**10.30**	**180**	*e*P	**Pn**	**17 57 03.9**	**+3.3**
CLCH				AML	AML	18 01 53.1	
	comp=N,17μm,17.1s						
LMEL	**Las Melosas**	**10.76**	**178**	P	**Pn**	**17 57 05.0**	**-1.9**
LMEL	**Las Melosas**	**10.76**	**178**	*e*P	**Pn**	**17 57 03.6**	**-3.3**
LMEL				AML	AML	18 01 25.4	
	comp=E,30μm,20.1s						
SIV	**San Ignacio**	**11.39**	**54**	Pn	**Pn**	**17 57 15.3**	**-0.4**
	comp=E,8.6nm,0.3s,baz=249,slow=13,SNR=159						
SIV				Sn	**Sn**	**17 59 29.0**	**+6.6**
	comp=E,0.9nm,0.3s,baz=296,slow=16,SNR=2.5						
NNA	**Nana**	**12.52**	**331**	Pn	**Pn**	**17 57 29.8**	**-1.3**
	comp=E,6.6nm,0.3s,baz=161,slow=15,SNR=10						
NNA				Sn	**Sn**	**17 59 42.6**	**-7.2**
	comp=E,11nm,0.3s,baz=206,slow=18,SNR=5.9						
NNA				LR	LR	18 01 37.8	
	comp=E,25μm,20.8s,baz=160,slow=34						
NNA	**Nana**	**12.52**	**331**	*e*Pn	**Pn**	**17 57 28.1**	**-2.9**
	comp=E,68nm,0.8s						
CCHI	**Chillan**	**13.56**	**185**	P	**Pn**	**17 57 45.4**	**+0.2**
CCHI	**Chillan**	**13.56**	**185**	*e*P	**Pn**	**17 57 45.7**	**+0.5**
CCHI				AML	AML	18 02 31.1	
	comp=E,13μm,18.9s						
LPA	**La Plata**	**16.17**	**140**	*ce*P	**Pn**	**17 58 17.0**	**-3.1**
LPA				*ep*P	pP	17 58 30.0	+0.6
LPA				*es*P	sP	17 58 40.0	+7.7
LPA				*e*S	**Sn**	**18 01 22.0**	**+3.2**
LPA				*e*S	**Sn**	**18 01 26.0**	**+7.2**
LPA	**La Plata**	**16.17**	**140**	⇑*e*P	**Pn**	**17 58 17.0**	**-3.1**
LPA				*e*S	**Sn**	**18 01 22.0**	**+3.2**
PLCA	**Paso Flores**	**17.62**	**180**	P	**Pn**	**17 58 38.8**	**+0.5**
	comp=E,1.3nm,0.3s,baz=7.4,slow=14,SNR=27						
PLCA				LR	LR	18 05 16.3	
	comp=E,12μm,19.6s,baz=356,slow=36						
PLCA	**Paso Flores**	**17.62**	**180**	*e*Pn	**Pn**	**17 58 36.1**	**-2.1**
	comp=E,291nm,1.4s						
PLCA	**Paso Flores**	**17.62**	**180**	*e*P	**Pn**	**17 58 36.2**	**-2.1**
PLCA				pmax	pmax		
	comp=Z,290nm,1.4s						
ATAH	**Atahualpa**	**17.64**	**334**	P	**Pn**	**17 58 36.9**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=147,slow=9.8,SNR=30						
ATAH				LR	LR	18 04 29.5	
	comp=Z,16μm,21.1s,baz=350,slow=34						
SPB	**Sao Paulo**	**21.27**	**96**	*e*P	**P**	**17 59 19.6**	**+0.4**
BDFB	**Brasilia**	**22.52**	**75**	P	**P**	**17 59 32.5**	**-0.1**
	comp=Z,52nm,0.9s,mb5.0,baz=244,slow=16,SNR=33						
BDFB				LR	LR	18 09 59.2	
	comp=Z,14μm,18.5s,MS5.4,baz=63,slow=41						
BDFB	**Brasilia**	**22.52**	**75**	*e*P	**P**	**17 59 31.8**	**-0.8**
	comp=Z,152nm,1.1s,mb5.3						
BDFB				LR	LR		
	comp=Z,28μm,21.0s,MS5.7						
BDFB	**Brasilia**	**22.52**	**75**	*e*P	**P**	**17 59 31.8**	**-0.8**
BDFB				pmax	pmax		
	comp=Z,153nm,1.1s						
BDFB				MLR	MLR		
	comp=Z,28μm,21.0s						
OTAV	**Otavalo**	**24.39**	**341**	*e*P	**P**	**17 59 51.7**	**+0.8**
	comp=Z,163nm,1.3s,mb5.3						
OTAV				LR	LR		
	comp=Z,8μm,21.0s,MS5.2						
CAM4	**Nova Friburgo**	**25.85**	**94**	*e*P	**P**	**18 00 04.2**	**-0.1**
CAM4				*i*		18 00 06.3	
CAM4				*i*	pP	18 00 11.4	+0.4
ROSC	**El Rosal**	**27.98**	**352**	P	**P**	**18 00 24.5**	**+1.1**
	comp=Z,9.7nm,0.3s,mb4.8,baz=108,slow=10,SNR=10						
ROSC				LR	LR	18 11 25.5	
	comp=Z,10μm,19.0s,MS5.4,baz=192,slow=36						
ROSC	**El Rosal**	**27.98**	**352**	*e*P	**P**	**18 00 25.4**	**+1.9**
EFI	**East Falkland**	**30.16**	**164**	*e*P	**P**	**18 00 42.5**	**0.0**
	comp=Z,51nm,0.6s,mb5.4						
EFI				LR	LR		
	comp=Z,8μm,19.0s,MS5.4						
EFI	**East Falkland**	**30.16**	**164**	*e*P	**P**	**18 00 42.5**	**0.0**
EFI				pmax	pmax		
	comp=Z,51nm,0.6s,mb5.4						
EFI				MLR	MLR		
	comp=Z,8μm,19.0s,MS5.4						
USHA	**Ushuaia**	**31.77**	**178**	LR	LR	18 13 50.7	
	comp=Z,7μm,19.6s,MS5.3,baz=342,slow=36						
BCIP	**Isla Barro Col**	**33.28**	**343**	P	**P**	**18 01 10.3**	**+0.1**
	comp=Z,125nm,1.3s,mb5.7						
BCIP				LR	LR		
	comp=Z,7μm,22.0s,MS5.3						
PCRV	**Puerto La Cruz**	**33.54**	**11**	LR	LR	18 15 10.7	
	comp=Z,11μm,18.1s,MS5.6,baz=178,slow=37						
RPN	**Rapa Nui**	**35.23**	**255**	P	**P**	**18 01 29.1**	**+2.0**
	comp=Z,85nm,0.8s,mb5.7,baz=38,slow=4.9,SNR=4.2						
RPN				LR	LR	18 11 56.8	
	comp=Z,12μm,19.3s,MS5.7,baz=88,slow=30						
RCBR	**Riachuelo**	**37.55**	**68**	*e*P	**P**	**18 01 47.9**	**+0.8**
	comp=Z,308nm,1.0s,mb6.0						
RCBR				LR	LR		
	comp=Z,21μm,21.0s,MS5.9						
BBGH	**Gun Hill**	**37.56**	**18**	PFAKE		18 02 00.0	+13
BBGH				LR	LR		
	comp=Z,21μm,21.0s,MS5.9						
FDF	**Fort de France**	**38.68**	**15**	*e*P	**P**	**18 01 55.9**	**-0.5**
TGUH	**Tegucigalpa,Un**	**40.34**	**335**	*e*P	**P**	**18 02 11.0**	**+0.7**
	comp=Z,244nm,1.3s,mb5.8						
TGUH				LR	LR		
	comp=Z,3μm,19.0s,MS5.2						
SJG	**San Juan**	**41.15**	**6**	*e*P	**P**	**18 02 14.4**	**-2.5**
	comp=Z,168nm,0.8s,mb5.7						
SJG				LR	LR		
	comp=Z,12μm,20.0s,MS5.8						
SJG	**San Juan**	**41.15**	**6**	P	**P**	**18 02 14.9**	**-2.0**
SJG				pmax	pmax		
	comp=Z,170nm,0.8s						
MTP	**Monte Pirata**	**41.20**	**7**	*e*P	**P**	**18 02 14.7**	**-2.6**
MTP				*e*PP	PP	18 03 53.2	+0.5
ANWB	**Willy Bob**	**41.38**	**13**	*e*P	**P**	**18 02 14.7**	**-4.2**
AGPR	**Aguadilla, PR**	**41.41**	**5**	*e*P	**P**	**18 02 18.7**	**-0.4**
SDDR	**Presa de Saban**	**41.79**	**359**	PFAKE		18 02 30.0	+7.9
SDDR				LR	LR		
	comp=Z,9μm,19.0s,MS5.7						
PMSA	**Palmer Station**	**41.93**	**176**	P	**P**	**18 02 24.5**	**+1.7**
	comp=Z,60nm,0.9s,mb5.2,baz=357,slow=7.4,SNR=7.1						
PMSA				LR	LR	18 20 32.5	
	comp=Z,6μm,20.0s,MS5.5,baz=149,slow=37						
PMSA	**Palmer Station**	**41.93**	**176**	*e*P	**P**	**18 02 23.9**	**+1.1**
	comp=Z,231nm,1.4s,mb5.6						
PMSA				LR	LR		
	comp=Z,7μm,20.0s,MS5.5						
RCC	**Rio Carpintero**	**43.08**	**353**	*e*P	**P**	**18 02 33.7**	**+1.1**
LMGC	**Las Mercedes**	**43.31**	**351**	*e*P	**P**	**18 02 31.3**	**-3.2**
MOAC	**Moa**	**43.66**	**354**	*e*P	**P**	**18 02 39.2**	**+1.9**
CCCC	**Cccc**	**44.54**	**350**	*e*P	**P**	**18 02 47.5**	**+3.1**
SOR	**Soroa**	**47.15**	**344**	*e*P	**P**	**18 03 07.0**	**+2.0**
TRIS	**Tristan da Cun**	**51.60**	**120**	PFAKE		18 03 50.0	+11
TRIS				LR	LR		
	comp=Z,4μm,20.0s,MS5.4						
DWPF	**Disney**	**51.93**	**348**	P	**P**	**18 03 35.1**	**-6.3**
	comp=Z,165nm,1.4s,mb5.8						
DWPF				LR	LR		
	comp=Z,5μm,19.0s,MS5.5						
PTCN	**Pitcairn Islan**	**53.99**	**255**	PFAKE		18 04 10.0	+13
PTCN				LR	LR		
	comp=Z,6μm,19.0s,MS5.7						
BBSR	**BB Station**	**55.40**	**6**	*e*P	**P**	**18 04 06.0**	**-0.7**
	comp=Z,49nm,0.7s,mb5.7						
BBSR				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
ASCN	**Ascension**	**55.91**	**84**	PFAKE		18 04 20.0	+9.2
ASCN				LR	LR		
	comp=Z,9μm,20.0s,MS5.8						
BRAL	**Brewton**	**56.03**	**343**	*e*P	**P**	**18 04 11.1**	**-0.2**
	comp=Z,163nm,1.0s,mb6.0						
BRAL				LR	LR		
	comp=Z,3μm,20

JSC **Jenkinsville** 57.92 350 P **P** 18 04 24.5 -0.1
LRAL **Lakeview Retre** 57.93 344 *e*P **P** 18 04 23.1 -1.7
comp=Z,52nm,1.1s,mb5.5
LRAL LR LR
comp=Z,4µm,20.0s,MS5.5
HKT **Hockley** 58.02 334 *e*P **P** 18 04 24.9 -0.5
comp=Z,93nm,1.6s,mb5.6
HKT LR LR
comp=Z,23µm,20.0s,MS6.3
HKT **Hockley** 58.02 334 *e*P **P** 18 04 24.9 -0.5
HKT pmax pmax
comp=Z,93nm,1.6s,mb5.6
HKT MLR MLR
comp=Z,23µm,20.0s,MS6.3
VBMS **Vicksburg** 58.17 340 PFAKE 18 04 40.0 +14
VBMS LR LR
comp=Z,2µm,19.0s,MS5.2
CNNC **Cliffs of the** 58.39 353 PFAKE 18 04 40.0 +12
CNNC LR LR
comp=Z,2µm,21.0s,MS5.2
RKT **Rikitea** 58.76 256 *e*S **S** 18 12 35.0 0.0
comp=Z,6µm,25.2s
RKT *e*LQ 18 19 24.3
comp=Z,1µm,27.8s
RKT *e*LR LR 18 21 57.3
comp=Z,18µm,25.8s,baz=109
VNA3 **Neumayer Olymp** 59.12 161 *e*P **P** 18 04 33.0 +0.5
VNA3 *e* 18 04 35.5
VNA3 *e* 18 04 44.0
VNA1 **Neumayer--Stat** 59.35 160 *e*P **P** 18 04 35.0 +0.8
VNA1 *e* 18 04 37.5
VNA1 *e* 18 04 44.8
CPCT **Cooper Cave** 59.66 347 *e*P **P** 18 04 34.9 -1.8
VNA2 **Neumayer--Watz** 59.71 160 *e*P **P** 18 04 37.1 +0.4
baz=299,slow=7.1
VNA2 *e* 18 04 39.8
VNA2 *e* 18 04 48.3
SWET **Sewanee** 59.75 345 *e*P **P** 18 04 35.7 -1.6
OXF **Oxford** 59.98 342 *e*P **P** 18 04 37.5 -1.4
comp=Z,108nm,1.0s,mb5.8
OXF LR LR
comp=Z,2µm,19.0s,MS5.3
OXF **Oxford** 59.98 342 P **P** 18 04 37.9 -1.0
OXF pmax pmax
comp=Z,110nm,1.0s,mb5.8
JCT **Junction City** 60.17 331 *e*P **P** 18 04 39.7 -0.6
comp=Z,52nm,0.8s,mb5.6
JCT LR LR
comp=Z,1µm,22.0s,MS5.1
JCT **Junction City** 60.17 331 P **P** 18 04 40.1 -0.2
JCT pmax pmax
comp=Z,52nm,0.8s,mb5.6
TZTN **Tazewell** 60.53 348 *e*P **P** 18 04 40.3 -2.3
comp=Z,82nm,1.4s,mb5.7
TZTN LR LR
comp=Z,4µm,20.0s,MS5.5
BLA **Blacksburg** 60.66 351 *e*P **P** 18 04 39.9 -3.5
comp=Z,71nm,1.2s,mb5.7
BLA LR LR
comp=Z,4µm,21.0s,MS5.5
BLA **Blacksburg** 60.66 351 *e*P **P** 18 04 43.3 -0.2
BLA pmax pmax
comp=Z,71nm,1.2s,mb5.7
URVA **University of** 60.66 354 *e*P **P** 18 04 42.9 -0.6
ELN **Prospectdale** 60.72 351 *e*P **P** 18 04 43.4 -0.5
TXAR **Lajitas Array** 61.05 327 P **P** 18 04 46.4 +0.1
comp=Z,7.5nm,0.8s,mb4.9,baz=149,slow=6.5,SNR=34
TXAR LR LR 18 27 34.7
comp=Z,4µm,20.6s,MS5.6,baz=240,slow=32
TXAR PKP2ab 18 34 21.7
comp=Z,0.8nm,0.9s,baz=90,slow=1.3,SNR=4.6
TXAR **Lajitas Array** 61.05 327 P **P** 18 04 46.4 +0.1
TXAR LR LR 18 27 34.7
TXAR P'P'ab 18 34 21.7
WVT **Waverly** 61.08 344 *e*P **P** 18 04 44.3 -2.1
comp=Z,96nm,1.1s,mb5.8
WVT LR LR
comp=Z,3µm,20.0s,MS5.4
WVT **Waverly** 61.08 344 *e*P **P** 18 04 44.3 -2.1
WVT pmax pmax
comp=Z,96nm,1.1s,mb5.8
WVT MLR MLR
comp=Z,3µm,20.0s,MS5.4
UALR **University of** 61.11 340 *e*P **P** 18 04 45.9 -0.7
comp=Z,162nm,1.6s,mb5.9
SHEL **Horse Pasture** 61.12 96 PFAKE 18 05 00.0 +13
SHEL LR LR
comp=Z,8µm,20.0s,MS5.9
CBN **Corbin** 61.27 354 *e*P **P** 18 04 47.3 -0.3
comp=Z,71nm,1.0s,mb5.8
CBN LR LR
comp=Z,3µm,21.0s,MS5.5
MIAR **Mount Ida** 61.31 338 *e*P **P** 18 04 46.8 -1.1
comp=Z,47nm,0.9s,mb5.6
MIAR LR LR
comp=Z,2µm,20.0s,MS5.2
MIAR **Mount Ida** 61.31 338 P **P** 18 04 47.7 -0.2
MIAR pmax pmax
comp=Z,47nm,0.9s,mb5.6
SNAA **Sanae** 61.33 161 *e*P **P** 18 04 46.5 -1.2
SNAA *e* 18 04 48.9
SNAA *e* 18 04 57.5
SNAA **Sanae** 61.33 161 *e*P **P** 18 04 46.2 -1.5
comp=Z,110nm,0.9s,mb6.0
SNAA **Sanae** 61.33 161 P **P** 18 04 46.5 -1.2
SNAA pmax pmax
comp=Z,110nm,0.9s
GNAR **Gosnell** 61.51 342 *e*P **P** 18 04 48.4 -0.9
comp=Z,896nm,0.9s
GLAT **Glass** 61.59 343 *e*P **P** 18 04 48.4 -1.5
PARMO **Parma** 62.09 343 *e*P **P** 18 04 52.6 -0.5
SDMD **Soldier's Deli** 62.41 355 *e*P **P** 18 04 54.7 -0.6
comp=Z,24nm,1.0s,mb5.3
WCI **Wyandotte Cave** 62.72 346 *e*P **P** 18 04 55.6 -1.8
comp=Z,37nm,0.7s,mb5.6
WCI LR LR
comp=Z,2µm,22.0s,MS5.3
WCI **Wyandotte Cave** 62.72 346 *e*P **P** 18 04 55.6 -1.8
WCI pmax pmax
comp=Z,37nm,0.7s,mb5.6
WCI MLR MLR
comp=Z,2µm,22.0s,MS5.3
USIN **University of** 62.78 345 *e*P **P** 18 04 55.7 -2.1
comp=Z,84nm,1.0s,mb5.8
SIUC **Southern Illin** 62.94 343 *e*P **P** 18 04 57.1 -1.7
comp=Z,185nm,1.3s,mb6.0
MVL **Millersville** 62.96 355 *e*P **P** 18 04 58.7 -0.2
comp=Z,20nm,0.8s,mb5.3
MCWV **Mont Chateau** 62.98 352 *e*P **P** 18 04 58.6 -0.5
comp=Z,31nm,0.9s,mb5.4
MCWV LR LR
comp=Z,4µm,21.0s,MS5.5
WMOK **Wichita Mounta** 63.41 334 *e*P **P** 18 05 00.5 -1.5
comp=Z,35nm,1.4s,mb5.3
WMOK LR LR
comp=Z,2µm,20.0s,MS5.2
WMOK **Wichita Mounta** 63.41 334 P **P** 18 05 01.4 -0.6
WMOK pmax pmax
comp=Z,35nm,1.4s,mb5.3
LUPA **Lehigh Univers** 63.48 356 *e*P **P** 18 05 02.3 -0.1
FVM **French Village** 63.51 343 *e*P **P** 18 05 01.6 -1.0
comp=Z,104nm,1.1s,mb5.8
FVM **French Village** 63.51 343 *e*P **P** 18 05 01.6 -1.0
FVM pmax pmax
comp=Z,104nm,1.1s,mb5.8
OLIL **Olney** 63.62 345 *e*P **P** 18 05 01.2 -2.1
comp=Z,33nm,0.8s,mb5.4
BLO **Bloomington** 63.67 346 *e*P **P** 18 05 01.1 -2.6
comp=Z,26nm,0.6s,mb5.4
BLO **Bloomington** 63.67 346 P **P** 18 05 02.4 -1.3
BLO pmax pmax
comp=Z,26nm,0.6s,mb5.4
SSPA **Standing Stone** 63.73 354 *e*P **P** 18 05 03.9 -0.1
comp=Z,54nm,1.3s,mb5.4
SSPA LR LR
comp=Z,3µm,20.0s,MS5.4
ACSO **Alum Creek Sta** 64.01 349 *e*P **P** 18 05 04.6 -1.3
comp=Z,82nm,1.0s,mb5.7
ACSO LR LR
comp=Z,2µm,19.0s,MS5.3
SLM **Saint Louis** 64.07 343 *e*P **P** 18 05 04.3 -2.0
comp=Z,20nm,0.6s,mb5.3
SLM **Saint Louis** 64.07 343 P **P** 18 05 07.3 +1.0
SLM pmax pmax
comp=Z,21nm,0.6s,mb5.3
BRYW **Bryant College** 64.65 359 *e*P **P** 18 05 10.4 +0.4
comp=Z,139nm,1.2s,mb5.9
BRYW *e* 18 05 21.6
AMTX **Amarillo** 64.74 332 *e*P **P** 18 05 09.9 -0.8
comp=Z,132nm,1.7s,mb5.7
AMTX LR LR
comp=Z,1µm,19.0s,MS5.1
BBTS **Babate** 64.83 60 LR LR 18 32 48.4
comp=Z,9µm,19.1s,MS6.0,baz=52,slow=35
ALLY **Alegheny Colle** 64.98 352 *e*P **P** 18 05 11.6 -0.6
comp=Z,32nm,0.9s,mb5.3
WES **Weston** 65.11 359 PFAKE 18 05 20.0 +7.0
WES LR LR
comp=Z,2µm,21.0s,MS5.2
BINY **Binghamton** 65.12 356 *e*P **P** 18 05 12.4 -0.7
comp=Z,56nm,1.3s,mb5.4
BINY LR LR
comp=Z,4µm,20.0s,MS5.6
ERPA **Erie** 65.42 352 PFAKE 18 05 30.0 +15
ERPA LR LR
comp=Z,3µm,19.0s,MS5.5
HDIL **Hopedale** 65.64 344 *e*P **P** 18 05 14.6 -1.9
comp=Z,31nm,0.6s,mb5.5
HDIL LR LR
comp=Z,3µm,20.0s,MS5.5
MAIT **Maitri** 65.91 159 *e*P **P** 18 05 16.6 -1.3
NVL **N'lazarevskaya** 65.94 159 *c i*P **P** 18 05 19.1 +1.0
NVL *e**PP pP 18 05 27.8 +2.4
NVL *e*S S 18 14 07.5 +3.6
NVL SS SS 18 18 27.9 +9.3
NVL pmax pmax
comp=Z,123nm,1.3s,mb5.8
AAM **Ann Arbor** 66.14 349 PFAKE 18 05 30.0 +10
AAM LR LR
comp=Z,3µm,22.0s,MS5.5
BNM **Barren Site** 66.42 328 *e*P **P** 18 05 22.8 +1.2
KSU1 **Kansas State U** 66.46 338 P **P** 18 05 20.2 -1.5
comp=Z,49nm,0.3s,mb6.0
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.4
LPM **Los Pinos Moun** 66.55 328 *e*P **P** 18 05 23.2 +0.8
LENM **Lemitar** 66.60 328 *e*P **P** 18 05 23.7 +0.9
MDV **Middlebury** 66.77 358 *e*P **P** 18 05 23.6 0.0
NCB **Newcomb** 66.78 357 PFAKE 18 05 40.0 +16
NCB LR LR
comp=Z,4µm,20.0s,MS5.6
LAZ **Ladron** 66.87 328 *e*P **P** 18 05 25.6 +1.1
LBNH **Lisbon** 66.98 359 *e*P **P** 18 05 25.2 +0.2
LBNH LR LR
comp=Z,2µm,21.0s,MS5.4
ANMO **Albuquerque** 66.98 328 *e*P **P** 18 05 25.8 +0.6
comp=Z,479nm,2.4s,mb6.1
ANMO LR LR
comp=Z,4µm,19.0s,MS5.7
ANMO **Albuquerque** 66.98 328⇑ *e*P **P** 18 05 25.1 -0.1
ANMO pmax pmax
comp=Z,67nm,1.9s
TUC **Tucson** 67.13 324 *e*P **P** 18 05 26.8 +0.5
comp=Z,51nm,1.4s,mb5.4
TUC LR LR
comp=Z,3µm,22.0s,MS5.4
TUC **Tucson** 67.13 324 *e*P **P** 18 05 26.8 +0.6
TUC pmax pmax
comp=Z,51nm,1.4s,mb5.4
TUC MLR MLR
comp=Z,3µm,22.0s,MS5.4
QSPA **South Pole Qui** 67.14 180 *e*P **P** 18 05 25.8 +0.2
comp=Z,84nm,0.9s,mb5.8
QSPA LR LR
comp=Z,3µm,19.0s,MS5.5
CBKS **Cedar Bluff** 67.33 336 *e*P **P** 18 05 26.9 -0.4
comp=Z,96nm,1.0s,mb5.8
CBKS LR LR
comp=Z,2µm,19.0s,MS5.3
CBKS **Cedar Bluff** 67.33 336 *e*P **P** 18 05 26.9 -0.5
CBKS pmax pmax
comp=Z,96nm,1.0s,mb5.8
CBKS MLR MLR
comp=Z,2µm,19.0s,MS5.3
LONY **Lake Ozonia** 67.44 357 *e*P **P** 18 05 27.7 -0.2
comp=Z,43nm,1.3s,mb5.3
LONY LR LR
comp=Z,4µm,19.0s,MS5.7
FRNY **Flat Rock** 67.61 358 *e*P **P** 18 05 29.0 0.0
comp=Z,57nm,1.3s,mb5.4
TAOE **Nuku Hiva Isla** 67.83 270 *e*S S 18 14 30.0 +1.6
comp=Z,12µm,25.1s
TAOE **Nuku Hiva Isla** 67.83 270 *e*LR LR 18 25 57.6
comp=Z,30µm,24.8s,baz=122
SCIA **State Center** 67.94 342 *e*P **P** 18 05 29.9 -1.3
comp=Z,63nm,0.9s,mb5.7
SCIA LR LR
comp=Z,2µm,20.0s,MS5.2
PKME **Peaks-Kenny Pk** 68.00 1 PFAKE 18 05 40.0 +8.6
PKME LR LR
comp=Z,4µm,20.0s,MS5.6
JFWS **Jewell Farm** 68.10 345 *e*P **P** 18 05 30.8 -1.3
comp=Z,34nm,0.6s,mb5.6
JFWS LR LR
comp=Z,3µm,20.0s,MS5.5
JFWS **Jewell Farm** 68.10 345 *e*P **P** 18 05 30.8 -1.3
JFWS pmax pmax
comp=Z,34nm,0.6s,mb5.5
JFWS MLR MLR
comp=Z,3µm,20.0s,MS5.5
GLMI **Grayling** 68.76 349 PFAKE 18 05 50.0 +14
GLMI LR LR
comp=Z,3µm,19.0s,MS5.6
SDCO **Great Sand Dun** 68.81 331 *e*P **P** 18 05 37.5 +0.8
comp=Z,64nm,1.1s,mb5.5
SDCO LR LR
comp=Z,2µm,20.0s,MS5.2
MVCO **Mesa Verde** 69.78 328 *e*P **P** 18 05 43.4 +0.7
comp=Z,89nm,1.4s,mb5.5
MVCO LR LR
comp=Z,4µm,19.0s,MS5.7
WUAZ **Wupatki** 69.90 325 *e*P **P** 18 05 44.6 +1.1
comp=Z,89nm,1.2s,mb5.6
WUAZ LR LR
comp=Z,5µm,21.0s,MS5.7
GLA **Glamis** 69.95 321 *e*P **P** 18 05 45.4 +1.5
comp=Z,158nm,1.7s,mb5.7
GLA LR LR
comp=Z,2µm,19.0s,MS5.3
GLA **Glamis** 69.95 321 *e*P **P** 18 05 45.4 +1.6
GLA pmax pmax
comp=Z,158nm,1.7s,mb5.7
GLA MLR MLR
comp=Z,2µm,19.0s,MS5.3
OGNE **Ogallala** 70.06 335 *e*P **P** 18 05 44.2 -0.1
comp=Z,56nm,1.1s,mb5.4
OGNE LR LR
comp=Z,2µm,19.0s,MS5.3
LIC **Lamto** 70.31 74⇑ *i*P **P** 18 05 46.2 -0.3
comp=Z,62nm,1.0s,mb5.2
LIC *e*MLR MLR
comp=Z,13µm,19.8s,MS5.9
LIC **Lamto** 70.31 74⇑ *i*P **P** 18 05 46.2 -0.3
comp=Z,31nm,1.0s,mb5.2
LIC LR LR
comp=Z,6µm,19.8s,MS5.9
PV01 **Paradox Valley** 70.55 329 *e*P **P** 18 05 48.3 +1.0
ISCO **Idaho Springs** 70.56 332 *e*P **P** 18 05 47.9 +0.5
comp=Z,23nm,1.1s,mb5.0
ISCO LR LR
comp=Z,2µm,20.0s,MS5.3
ISCO **Idaho Springs** 70.56 332 *e*P **P** 18 05 47.9 +0.5
ISCO pmax pmax
comp=Z,23nm,1.1s,mb5.0
ISCO MLR MLR
comp=Z,2µm,20.0s,MS5.3
ECSD **EROS,Sioux Fal** 70.63 340 *e*P **P** 18 05 46.6 -1.1
comp=Z,69nm,1.2s,mb5.5
ECSD LR LR
comp=Z,2µm,20.0s,MS5.3
SMCO **Snowmass** 70.65 331 *e*P **P** 18 05 49.2 +1.3
comp=Z,44nm,1.0s,mb5.3
DBIC **Dimbokro** 70.67 74 P **P** 18 05 48.6 0.0
comp=Z,48nm,0.9s,mb5.4,baz=218,slow=6.4,SNR=48
DBIC LR LR 18 36 21.0
comp=Z,7µm,19.0s,MS5.9,baz=222,slow=36
DBIC **Dimbokro** 70.67 74 *e*P **P** 18 05 48.5 -0.2
comp=Z,95nm,1.0s,mb5.6
DBIC *e*PP PP 18 08 19.2 -6.2
DBIC LR LR
comp=Z,8µm,20.0s,MS5.9
DBIC **Dimbokro** 70.67 74 *e*P **P** 18 05 48.5 -0.2
DBIC pmax pmax
comp=Z,95nm,1.1s
DBIC MLR MLR
comp=Z,8µm,20.0s
COWI **Conover** 70.86 346 PFAKE 18 06 00.0 +11
COWI LR LR
comp=Z,3µm,21.0s,MS5.5
PV10 **Paradox Valley** 70.96 329 *e*P **P** 18 05 50.6 +0.7
PFO **Pinyon Flat Ob** 71.29 321 *e*P **P** 18 05 52.9 +0.9
comp=Z,23nm,1.2s,mb5.0
PFO LR LR
comp=Z,4µm,20.0s,MS5.7
PFO **Pinyon Flat Ob** 71.29 321 *e*P **P** 18 05 52.9 +0.9
PFO pmax pmax
comp=Z,23nm,1.2s,mb5.0
PFO MLR MLR
comp=Z,4µm,20.0s,MS5.7
LDFC **Landfair** 71.59 323 *e*P **P** 18 05 54.9 +1.2
comp=Z,91nm,1.4s,mb5.5
CHIE **El Hierro** 71.62 48 P **P** 18 05 55.8 +1.7
comp=Z,70nm,1.3s,mb5.4
PHWY **Pilot Hill** 71.74 333 *e*P **P** 18 05 55.1 +0.6
comp=Z,12nm,0.6s,mb5.0
SRU **San Rafael** 72.25 328 *e*P **P** 18 05 58.1 +0.4
comp=Z,33nm,1.0s,mb5.2
SRU **San Rafael** 72.25 328 *e*P **P** 18 05 58.1 +0.5
SRU pmax pmax
comp=Z,33nm,1.0s,mb5.2
EGOM **La Gomera** 72.40 48 P **P** 18 05 58.6 -0.2
comp=Z,153nm,1.3s,mb5.8
CCUT **Cedar City** 72.48 326 *e*P **P** 18 06 00.7 +1.6
MSU **Marysvale** 72.60 327 *e*P **P** 18 06 00.7 +1.0
MVU **Marysvale** 72.61 327 PFAKE 18 06 10.0 +10
MVU LR LR
comp=Z,4µm,19.0s,MS5.7
MWC **Mount Wilson** 72.67 320 *e*P **P** 18 06 00.6 +0.3
comp=Z,135nm,1.7s,mb5.6
MWC LR LR
comp=Z,2µm,21.0s,MS5.3
MWC **Mount Wilson** 72.67 320 *e*P **P** 18 06 00.6 +0.4
MWC pmax pmax
comp=Z,135nm,1.7s,mb5.6
MWC MLR MLR
comp=Z,2µm,21.0s,MS5.3
ARUT **Antelope Range** 72.70 326 *e*P **P** 18 06 01.8 +1.5
GSC **Goldstone** 72.71 322 *e*P **P** 18 06 00.7 +0.2
comp=Z,102nm,1.7s,mb5.5
GSC LR LR
comp=Z,2µm,19.0s,MS5.5
GSC **Goldstone** 72.71 322 *e*P **P** 18 06 00.7 +0.3
GSC pmax pmax
comp=Z,102nm,1.7s,mb5.5
GSC MLR MLR
comp=Z,2µm,19.0s,MS5.5
TMUT **Trail Mountain** 72.73 328 *e*P **P** 18 06 00.8 +0.3
RWWY **Rawlins** 72.80 332 *e*P **P** 18 06 01.6 +0.8
comp=Z,41nm,1.0s,mb5.3
CCAN **Las Canadas** 72.86 48 ⇓P **P** 18 06 02.1 +0.6
comp=Z,30nm,1.0s,mb5.2
SNCC **San Nicolas Is** 72.87 319 PFAKE 18 06 10.0 +8.5
SNCC LR LR
comp=Z,2µm,19.0s,MS5.4
EYMN **Ely** 73.13 345 *e*P **P** 18 06 01.2 -1.4
comp=Z,42nm,1.0s,mb5.3
EYMN LR LR
comp=Z,2µm,20.0s,MS5.5
OSI **Osito Adit** 73.33 320 P **P** 18 06 03.6 -0.6
comp=Z,32nm,1.0s,mb5.2
PPT **Papeete** 73.46 258 *e*S S 18 15 33.0 -1.0
comp=Z,6µm,25.0s
PPT **Papeete** 73.46 258 *e*LR LR 18 28 38.6
comp=Z,11µm,25.0s,baz=107
PPT **Papeete** 73.46 258 LR LR 18 29 56.2
comp=Z,4µm,21.3s,MS5.7,baz=47,slow=29
EOSO **Osorio** 73.49 49 P **P** 18 06 06.4 +1.1
comp=Z,287nm,1.5s,mb6.0
MPU **Maple Canyon** 73.49 328 *e*P **P** 18 06 05.7 +0.7
comp=Z,61nm,1.1s,mb5.4
MPU LR LR
comp=Z,4µm,21.0s,MS5.7
RSSD **Black Hills** 73.54 336 *e*P **P** 18 06 05.5 +0.4
comp=Z,21nm,0.8s,mb5.1
RSSD LR LR
comp=Z,2µm,19.0s,MS5.4
RSSD **Black Hills** 73.54 336 *e*P **P** 18 06 05.5 +0.3
RSSD pmax pmax
comp=Z,21nm,0.8s,mb5.1
RSSD MLR MLR
comp=Z,2µm,19.0s,MS5.4
TPNV **Topopah Spring** 73.58 323 *e*P **P** 18 06 06.9 +1.3
comp=Z,202nm,1.8s,mb5.8
TPNV LR LR
comp=Z,2µm,19.0s,MS5.4
TPNV **Topopah Spring** 73.58 323 *e*P **P** 18 06 06.9 +1.3
TPNV pmax pmax
comp=Z,202nm,1.8s,mb5.8
TPNV MLR MLR
comp=Z,2µm,19.0s,MS5.4
DAU **Daniels Canyon** 73.62 329 *e*P **P** 18 06 06.8 +1.0
NLU **North Lily Min** 73.66 328 *e*P **P** 18 06 04.8 -1.2
DAC **Darwin (Calif)** 73.85 322 PFAKE 18 06 20.0 +13
DAC LR LR
comp=Z,4µm,22.0s,MS5.6
JLU **Jordanelle** 73.86 329 *e*P **P** 18 06 07.9 +0.8
ISA **Isabella** 73.92 321 PFAKE 18 06 20.0 +12
ISA LR LR
comp=Z,6µm,21.0s,MS5.8
SBA **Scott Base** 74.02 191 *e*P **P** 18 06 08.9 +1.2
comp=Z,85nm,1.4s,mb5.5
SBA LR LR
comp=Z,2µm,19.0s,MS5.5
SBA **Scott Base** 74.02 191 *e*P **P** 18 06 08.9 +1.2
SBA pmax pmax
comp=Z,85nm,1.4s,mb5.5
SBA MLR MLR
comp=Z,2µm,19.0s,MS5.5
DUG **Dugway** 74.21 328 *e*P **P** 18 06 10.1 +0.9
comp=Z,57nm,1.2s,mb5.4
DUG LR LR
comp=Z,2µm,22.0s,MS5.3
DUG **Dugway** 74.21 328 *e*P **P** 18 06 10.1 +0.9
DUG pmax pmax
comp=Z,57nm,1.2s,mb5.4
DUG MLR MLR
comp=Z,2µm,22.0s,MS5.3
AGMN **Agassiz Refuge** 74.56 343 *e*P **P** 18 06 09.4 -1.6
comp=Z,38nm,0.8s,mb5.4
AGMN LR LR
comp=Z,2µm,20.0s,MS5.4
BW06 **Boulder Array** 74.70 331 PFAKE 18 06 20.0 +8.0
BW06 LR LR
comp=Z,2µm,19.0s,MS5.3
HWUT **Hardware Ranch** 74.70 329 *e*P **P** 18 06 12.3 +0.4
comp=Z,37nm,0.9s,mb5.3
HWUT LR LR
comp=Z,5µm,21.0s,MS5.8
PDAR **Pinedale Array** 74.70 331 P **P** 18 06 12.2 +0.2
comp=Z,4.2nm,0.9s,mb4.4,baz=132,slow=7.6,SNR=16
PDAR LR LR 18 40 13.6
comp=Z,1µm,18.2s,MS5.3,baz=148,slow=37
CFTV **Fuerteventura** 74.73 50 P **P** 18 06 13.3 +0.8
comp=Z,35nm,1.2s,mb5.2
BGU **Big Grassy Mou** 74.87 328 *e*P **P** 18 06 13.7 +0.7
SPUT **South Promonto** 74.89 329 *e*P **P** 18 06 13.7 +0.6
TPH **Tonopah** 74.93 324 *e*P **P** 18 06 13.6 +0.2
comp=Z,66nm,1.5s,mb5.3
TPH LR LR
comp=Z,2µm,19.0s,MS5.4
TPH **Tonopah** 74.93 324 *e*P **P** 18 06 13.6 +0.2
TPH pmax pmax
comp=Z,66nm,1.5s,mb5.3
TPH MLR MLR
comp=Z,2µm,19.0s,MS5.4
VNDA **Vanda** 75.05 190 P **P** 18 06 15.1 +1.4
comp=Z,6.5nm,1.0s,mb4.5,baz=122,slow=4.8,SNR=27
VNDA LR LR 18 39 53.4
comp=Z,3µm,18.4s,MS5.6,baz=132,slow=36
VNDA **Vanda** 75.05 190 *e*P **P** 18 06 14.8 +1.1
comp=Z,14nm,1.0s,mb4.8
VNDA LR LR
comp=Z,3µm,19.0s,MS5.6
VNDA **Vanda** 75.05 190 *e*P **P** 18 06 14.8 +1.2
VNDA pmax pmax
comp=Z,14nm,1.0s
VNDA MLR MLR
comp=Z,3µm,19.0s
MTUM **Tungsten Hills** 75.16 322 *e*P **P** 18 06 15.7 +0.9
AHID **Auburn Hatcher** 75.39 330 *e*P **P** 18 06 15.9 0.0

comp=Z,127nm,1.4s,mb5.7
AHID LR LR

comp=Z,3µm,21.0s,MS5.6
HVU Hansel Valley 75.41 329 *eP* **P 18 06 16.1 0.0**
comp=Z,20nm,0.8s,mb5.1
HVU Hansel Valley 75.41 329 *eP* **P 18 06 16.1 0.0**
HVU pmax pmax

comp=Z,20nm,0.8s,mb5.1
EFAM Famara 75.54 49 P **P 18 06 19.4 +2.2**
comp=Z,161nm,1.5s,mb5.7
SYO Syowa Base 75.60 160⇑ *eP* **P 18 06 15.0 -1.9**
REDW Red Top Meadow 75.75 331 *eP* **P 18 06 18.1 +0.1**
comp=Z,46nm,1.2s,mb5.3
NVAR Mina Array Bea 75.78 323 P **P 18 06 19.3 +1.0**
comp=Z,8.3nm,0.8s,mb4.7,baz=152,slow=5.9,SNR=34
SNOW Snow King Moun 75.78 331 *eP* **P 18 06 18.4 +0.2**
comp=Z,24nm,0.8s,mb5.2
LOHW Long Hollow 75.83 331 *eP* **P 18 06 18.7 +0.2**
comp=Z,31nm,1.1s,mb5.2
ELK Elko 75.84 327 *eP* **P 18 06 19.1 +0.5**
comp=Z,21nm,1.0s,mb5.0
ELK LR LR

comp=Z,4µm,20.0s,MS5.7
ELK Elko 75.84 327 *eP* **P 18 06 19.1 +0.5**
ELK pmax pmax

comp=Z,21nm,1.0s
ELK MLR MLR

comp=Z,4µm,20.0s
TPAW Teton Pass 75.89 331 *eP* **P 18 06 19.5 +0.7**
comp=Z,49nm,1.3s,mb5.3
RRI2 Red Ridge 75.95 331 *eP* **P 18 06 19.4 +0.3**
comp=Z,50nm,1.1s,mb5.4
MOOW Moose Ponds 76.00 331 *eP* **P 18 06 19.6 +0.2**
comp=Z,49nm,1.6s,mb5.2
DCID1 Drake Creek 76.08 331 *eP* **P 18 06 17.5 -2.3**
comp=Z,47nm,1.0s,mb5.4
IMW Indian Meadow 76.21 331 *eP* **P 18 06 20.7 +0.1**
comp=Z,19nm,1.0s,mb5.0
ULM Lac du Bonnet 76.34 344 P **P 18 06 20.6 -0.7**
comp=Z,20nm,0.6s,mb5.2,baz=150,slow=5.1,SNR=12
ULM LR LR 18 42 16.9

comp=Z,2µm,21.3s,MS5.5,baz=342,slow=38
ULM Lac du Bonnet 76.34 344 *eP* **P 18 06 19.8 -1.4**
comp=Z,135nm,1.7s,mb5.6
ULM LR LR

comp=Z,3µm,20.0s,MS5.7
SAO San Andreas Ge 76.42 320 PFAKE 18 06 30.0 +8.0
SAO LR LR

comp=Z,2µm,21.0s,MS5.5
RLMT Red Lodge 76.46 333 *eP* **P 18 06 22.4 +0.4**
comp=Z,121nm,1.6s,mb5.6
RLMT LR LR

comp=Z,2µm,20.0s,MS5.4
LKWY Lake 76.50 332 PFAKE 18 06 30.0 +7.8
LKWY LR LR

comp=Z,3µm,19.0s,MS5.5
LAO LASA Array 76.53 336 *eP* **P 18 06 22.4 0.0**
comp=Z,79nm,1.2s,mb5.5
LAO LR LR

comp=Z,2µm,19.0s,MS5.4
YFT Old Faithful 76.60 332 *eP* **P 18 06 25.2 +2.4**
BMN Battle Mountai 76.63 325 *eP* **P 18 06 23.5 +0.4**
comp=Z,14nm,1.1s,mb4.8
BMN LR LR

comp=Z,3µm,20.0s,MS5.5
BMN Battle Mountai 76.63 325 *eP* **P 18 06 23.5 +0.4**
BMN pmax pmax

comp=Z,14nm,1.1s,mb4.8
BMN MLR MLR

comp=Z,3µm,20.0s,MS5.5
CMB Columbia Colle 76.67 322 *eP* **P 18 06 23.4 0.0**
comp=Z,30nm,1.4s,mb5.0
CMB LR LR

comp=Z,2µm,19.0s,MS5.4
CMB Columbia Colle 76.67 322 *eP* **P 18 06 23.4 0.0**
CMB pmax pmax

comp=Z,29nm,1.4s,mb5.0
CMB MLR MLR

comp=Z,2µm,19.0s,MS5.4
YNR Norris Junctio 76.74 332 *eP* **P 18 06 25.5 +1.9**
YMR Madison River 76.83 332 *eP* **P 18 06 25.6 +1.5**
comp=Z,102nm,1.3s,mb5.6
YMR LR LR

comp=Z,3µm,20.0s,MS5.6
QLMT Earthquake Lak 77.16 331 *eP* **P 18 06 27.4 +1.4**
GCMT Greycliff 77.17 333 *eP* **P 18 06 25.7 -0.3**
PAHR Pah Rah Range 77.27 323 *eP* **P 18 06 27.2 +0.5**
comp=Z,62nm,1.0s,mb5.5
DGMT Dagmar 77.30 338 *eP* **P 18 06 27.3 +0.7**
comp=Z,99nm,0.9s,mb5.7
DGMT LR LR

comp=Z,2µm,19.0s,MS5.3
HLID Hailey 77.55 329 *eP* **P 18 06 28.9 +0.7**
comp=Z,34nm,1.0s,mb5.2
HLID LR LR

comp=Z,1µm,19.0s,MS5.3
SCHQ Schefferville 77.64 2 P **P 18 06 28.2 -0.2**
comp=Z,6.2nm,0.8s,mb4.6,baz=214,slow=4.9,SNR=4.5
SCHQ LR LR 18 40 36.3

comp=Z,2µm,20.7s,MS5.4,baz=10.0,slow=36
SCHQ Schefferville 77.64 2 P **P 18 06 28.2 -0.2**
SCHQ LR LR 18 40 36.3
MCMT McKenzie Canyo 77.79 331 *eP* **P 18 06 30.5 +1.0**
DLMT Dillon 78.09 331 *eP* **P 18 06 32.0 +0.8**
comp=Z,33nm,1.2s,mb5.1
OHCM Honcut 78.19 322 *eP* **P 18 06 32.6 +0.7**
MCCM Marconi Confer 78.19 320 PFAKE 18 06 40.0 +8.1
MCCM LR LR

comp=Z,2µm,21.0s,MS5.3
NSHM Saint Helena R 78.28 321 *eP* **P 18 06 33.3 +1.0**
WVOR Wild Horse Val 78.81 326 *eP* **P 18 06 34.7 -0.5**
comp=Z,35nm,1.4s,mb5.1
WVOR LR LR

comp=Z,3µm,21.0s,MS5.6
WVOR Wild Horse Val 78.81 326 *eP* **P 18 06 34.7 -0.5**
WVOR pmax pmax

comp=Z,35nm,1.4s,mb5.1
WVOR MLR MLR

comp=Z,3µm,21.0s,MS5.6
HRY Holter Researc 78.81 332 *eP* **P 18 06 35.5 +0.4**
HOPS Hopland 78.87 321 PFAKE 18 06 50.0 +14
HOPS LR LR

comp=Z,2µm,20.0s,MS5.5
EGMT Eagleton 79.00 334 *eP* **P 18 06 35.9 -0.2**
comp=Z,52nm,1.1s,mb5.4
EGMT LR LR

comp=Z,2µm,20.0s,MS5.5
SUR Sutherland 79.14 121 P **P 18 06 39.3 +1.9**
comp=Z,368nm,0.8s,mb6.4,SNR=13
SUR Sutherland 79.14 121 *eP* **P 18 06 38.9 +1.5**
comp=Z,47nm,0.8s,mb5.5
SUR LR LR

comp=Z,7µm,21.0s,MS6.0
MOD Modoc 79.31 325 *eP* **P 18 06 38.4 +0.4**
comp=Z,43nm,1.2s,mb5.2
MOD LR LR

comp=Z,2µm,22.0s,MS5.5
TOA0 Torodi Ar. Sit 79.34 71 *eP* **P 18 06 38.3 -0.4**
TORD Torodi Ar. Bea 79.34 71 P **P 18 06 38.5 -0.2**
comp=Z,75nm,1.0s,mb5.6,baz=253,slow=4.9,SNR=232
TORD LR LR 18 40 46.8

comp=Z,3µm,20.1s,MS5.7,baz=215,slow=35
LTIM Timbered Crate 79.45 323 P **P 18 06 39.4 +0.7**
CHMT Chamberlain Mo 79.58 332 *eP* **P 18 06 40.0 +0.7**
WDC Whiskeytown Da 79.63 322 *eP* **P 18 06 37.8 -1.9**
comp=Z,31nm,1.1s,mb5.2
WDC LR LR

comp=Z,2µm,21.0s,MS5.4
WDC Whiskeytown Da 79.63 322 *eP* **P 18 06 37.8 -1.9**
WDC pmax pmax

comp=Z,31nm,1.1s,mb5.2
WDC MLR MLR

comp=Z,2µm,21.0s,MS5.4
MSO Missoula 79.82 331 *eP* **P 18 06 40.4 -0.2**
comp=Z,33nm,1.5s,mb5.0
MSO LR LR

comp=Z,2µm,19.0s,MS5.5
BMO Blue Mountains 79.89 328 *eP* **P 18 06 41.1 +0.1**
comp=Z,43nm,1.3s,mb5.2
BMO LR LR

comp=Z,2µm,19.0s,MS5.6
YBH Yreka Blue Hor 80.50 323 PFAKE 18 07 00.0 +16
YBH LR LR

comp=Z,2µm,20.0s,MS5.4
BSMT Bassoo Peak 80.97 332 P **P 18 06 47.8 +1.1**
TSUM Tsumeb 81.08 107 *eP* **P 18 06 49.0 +0.8**
comp=Z,108nm,1.3s,mb5.6
TSUM LR LR

comp=Z,8µm,20.0s,MS6.1
LNOR Lincton Mounta 81.11 328 *eP* **P 18 06 47.1 -0.5**
HUMO Hull Mountain 81.22 324 PFAKE 18 07 00.0 +12
HUMO LR LR

comp=Z,2µm,20.0s,MS5.5
RAR Rarotonga 81.24 251 PFAKE 18 07 00.0 +11
RAR LR LR

comp=Z,2µm,21.0s,MS5.5
VIPM Ingram Point 81.30 326 P **P 18 06 50.3 +1.7**
WALA Waterton Lakes 81.52 333 *eP* **P 18 06 49.7 0.0**
comp=Z,88nm,1.2s,mb5.6
FFC Flin Flon 82.02 342 *eP* **P 18 06 51.0 -1.1**
comp=Z,44nm,1.3s,mb5.2
FFC LR LR

comp=Z,2µm,20.0s,MS5.5
FFC Flin Flon 82.02 342 *eP* **P 18 06 51.0 -1.1**
FFC pmax pmax

comp=Z,44nm,1.3s,mb5.2
FFC MLR MLR

comp=Z,2µm,20.0s,MS5.5
HAWA Hanford 82.09 328 *eP* **P 18 06 53.0 +0.3**
comp=Z,36nm,0.8s,mb5.3
HAWA LR LR

comp=Z,3µm,20.0s,MS5.6
RSW Rattlesnake Hi 82.12 328 P **P 18 06 53.8 +1.0**
WRD Warden 82.19 329 P **P 18 06 54.8 +1.5**
GBL Gable Mountain 82.20 328 P **P 18 06 54.1 +0.8**
SNIWA Sniwely Ranch 82.20 328 P **P 18 06 54.7 +1.4**
NEW Newport 82.32 331 PFAKE 18 07 10.0 +16
NEW LR LR

comp=Z,2µm,19.0s,MS5.5
HOOD Mount Hood Mea 82.39 326 *eP* **P 18 06 55.4 +1.1**
comp=Z,61nm,0.9s,mb5.5
OD2 Odessa Site #2 82.41 329 P **P 18 06 54.8 +0.4**
COR Corvallis 82.75 325 PFAKE 18 07 10.0 +14
COR LR LR

comp=Z,3µm,20.0s,MS5.6
WTV Waterville 83.22 329 P **P 18 06 59.0 +0.4**
MAW Mawson 83.29 164 *eP* **P 18 06 59.3 +0.5**
comp=Z,30nm,0.8s,mb5.4
MAW Mawson 83.29 164 P **P 18 06 58.8 0.0**
comp=Z,27nm,0.8s,mb5.3,baz=216,slow=6.9,SNR=22
MAW LR LR 18 43 04.4

comp=Z,3µm,19.5s,MS5.7,baz=236,slow=35
MAW Mawson 83.29 164 *eP* **P 18 06 58.5 -0.3**
comp=Z,141nm,1.4s,mb5.8
MAW Mawson 83.29 164 *eP* **P 18 06 58.5 -0.3**
MAW pmax pmax

comp=Z,141nm,1.4s
ETW Entiat 83.33 329 *eP* **P 18 06 59.4 +0.2**
MDT Midelt 83.93 51 P **P 18 07 04.3 +1.7**
comp=Z,46nm,1.2s,mb5.5,baz=247,slow=5.0,SNR=41
BOSA Boshof 84.08 118 P **P 18 07 04.0 +0.3**
comp=Z,22nm,0.6s,mb5.5,baz=251,slow=3.3,SNR=49
BOSA LR LR 18 42 12.2

comp=Z,9µm,18.2s,MS6.2,baz=247,slow=34
BOSA Boshof 84.08 118 *eP* **P 18 07 03.8 +0.1**
comp=Z,34nm,0.8s,mb5.5
BOSA LR LR

comp=Z,9µm,19.0s,MS6.2
BOSA Boshof 84.08 118 *eP* **P 18 07 03.8 +0.1**
BOSA pmax pmax

comp=Z,34nm,0.8s,mb5.5
BOSA MLR MLR

comp=Z,9µm,19.0s,MS6.2
JCW Jim Creek 84.51 328 *eP* **P 18 07 03.8 -1.3**
EDM Edmonton 84.52 336 *eP* **P 18 07 03.5 -1.5**
EGRO El Granado 84.55 45 P **P 18 07 07.7 +2.0**
comp=Z,88nm,0.9s,mb5.9
EVO Evora 84.77 44⇑ *iP* **P 18 07 07.4 +0.7**
comp=Z,257nm,1.5s,mb5.8
EVO *e*MLR MLR

comp=Z,3µm,19.5s,MS5.4
SFS San Fernando 84.80 47 PFAKE 18 07 20.0 +13
SFS LR LR

comp=Z,3µm,19.0s,MS5.7
EMIN Mina Concepcio 85.21 46 P **P 18 07 09.0 0.0**
comp=Z,192nm,1.5s,mb6.0
ESPR Espera 85.26 47 P **P 18 07 10.9 +1.7**
comp=Z,280nm,1.8s,mb6.1
EJIF Jimena Fronter 85.29 47 P **P 18 07 11.2 +1.9**
comp=Z,128nm,1.1s,mb6.0
EJIF Jimena Fronter 85.29 47 P **P 18 07 11.3 +1.9**
EJIF pmax pmax

comp=Z,128nm,1.1s,mb6.0
EBAD Badajoz 85.54 45 P **P 18 07 12.1 +1.6**
comp=Z,127nm,1.2s,mb6.0
LBTB Lobatse 85.77 115 *eP* **P 18 07 12.1 -0.1**
comp=Z,33nm,1.0s,mb5.5
LBTB LR LR

comp=Z,2µm,20.0s,MS5.6
LBTB Lobatse 85.77 115 *eP* **P 18 07 12.1 -0.1**
LBTB pmax pmax

comp=Z,33nm,1.0s,mb5.5
LBTB MLR MLR

comp=Z,2µm,20.0s,MS5.6
EMIJ Mijas 85.82 47 P **P 18 07 12.9 +0.8**
comp=Z,62nm,1.0s,mb5.8
MTE Manteigas 86.13 43 *eP* **P 18 07 13.5 +0.1**
comp=Z,36nm,1.1s,mb5.5
MTE LR LR

comp=Z,3µm,19.0s,MS5.6
ELOJ Sierra Loja 86.56 47 P **P 18 07 17.6 +2.0**
comp=Z,54nm,0.9s,mb5.8
ELOJ Sierra Loja 86.56 47 P **P 18 07 17.6 +2.0**
ELOJ pmax pmax

comp=Z,54nm,0.9s,mb5.8
ELOB Lobios 86.65 42 P **P 18 07 18.7 +2.8**
comp=Z,76nm,1.5s,mb5.7
ELUQ Luque 86.70 47 P **P 18 07 17.5 +1.2**
comp=Z,74nm,1.0s,mb5.9
ELUQ Luque 86.70 47 P **P 18 07 17.5 +1.2**
ELUQ pmax pmax

comp=Z,74nm,1.0s,mb5.9
EGUA Guajares 86.79 48 P **P 18 07 19.4 +2.6**
comp=Z,22nm,0.8s,mb5.4
EGUA Guajares 86.79 48 P **P 18 07 19.4 +2.6**
EGUA pmax pmax

comp=Z,22nm,0.8s,mb5.4
EADA Adamuz 86.82 46 P **P 18 07 18.2 +1.4**
comp=Z,108nm,2.2s,mb5.7
EPLA Plasencia 86.87 44 P **P 18 07 19.3 +2.2**
comp=Z,18nm,0.9s,mb5.3
EPLA Plasencia 86.87 44 P **P 18 07 19.3 +2.2**
EPLA pmax pmax

comp=Z,18nm,0.9s,mb5.3
TAM Tamanrasset 86.90 64 *eP* **P 18 07 18.1 +0.4**
ECOG Cogollos-Vega 87.02 47 P **P 18 07 19.0 +1.1**
comp=Z,4.0nm,0.7s,mb4.8
ECOG Cogollos-Vega 87.02 47 P **P 18 07 19.0 +1.1**
ECOG pmax pmax

comp=Z,4.0nm,0.7s,mb4.8
EBER Berja 87.28 48 P **P 18 07 20.4 +1.2**
comp=Z,49nm,1.4s,mb5.5
EBAN Banos Encina 87.34 46 P **P 18 07 20.7 +1.2**
comp=Z,18nm,1.0s,mb5.2
EBAN Banos Encina 87.34 46 P **P 18 07 20.7 +1.3**
EBAN pmax pmax

comp=Z,18nm,1.0s,mb5.3
ECAL Calabor 87.50 42 P **P 18 07 20.6 +0.5**
comp=Z,25nm,1.2s,mb5.3
ERUA La Rua 87.51 42 P **P 18 07 20.9 +0.7**
DRV Dumont d'Urvil 87.63 192 S S 18 17 49.0 -12
DRV SS SS 18 23 47.0 +1.6
DRV L 18 31 00.0
DRV R 18 37 00.0
EQES Quesada 87.63 47 P **P 18 07 22.9 +2.0**
comp=Z,15nm,0.9s,mb5.2
PAB San Pablo 87.71 45 *eP* **P 18 07 21.3 +0.1**
comp=Z,23nm,1.3s,mb5.2
PAB LR LR

comp=Z,2µm,19.0s,MS5.5
PAB San Pablo 87.71 45 *eP* **P 18 07 21.3 +0.1**
PAB pmax pmax

comp=Z,23nm,1.3s,mb5.2
PAB MLR MLR

comp=Z,2µm,19.0s,MS5.5
ENIJ Nijar 87.79 48 P **P 18 07 24.1 +2.5**
comp=Z,8.1nm,0.7s,mb5.1
ENIJ Nijar 87.79 48 P **P 18 07 24.1 +2.5**
ENIJ pmax pmax

comp=Z,8.0nm,0.7s,mb5.1
EHUE Huescar 87.96 47 P **P 18 07 22.9 +0.4**
comp=Z,3.8nm,0.6s,mb4.8
EHUE Huescar 87.96 47 P **P 18 07 22.9 +0.5**
EHUE pmax pmax

comp=Z,4.0nm,0.6s,mb4.8
ESDC Sonseca Array 88.03 45 P **P 18 07 23.5 +0.8**
comp=Z,2.4nm,0.7s,mb4.5,baz=244,slow=4.6,SNR=9.9
ESDC LR LR 18 48 55.9

comp=Z,2µm,18.4s,MS5.5,baz=240,slow=37
ESDC Sonseca Array 88.03 45 P **P 18 07 23.6 +1.0**
comp=Z,3.5nm,0.9s,mb4.6
ESLA Sonseca Array 88.03 45 *eP* **P 18 07 22.1 -0.6**
comp=Z,2.9nm,1.1s,mb4.4
ESLA LR LR

comp=Z,11µm,19.0s,MS6.3
EPON Pontenova 88.03 41 P **P 18 07 22.9 +0.3**
comp=Z,110nm,1.5s,mb5.9
ETOB Tobarra 89.09 47 P **P 18 07 27.1 -0.6**
comp=Z,29nm,1.2s,mb5.5
ETOR Torete 89.87 45 P **P 18 07 32.5 +1.1**
comp=Z,16nm,0.9s,mb5.3
ETOR Torete 89.87 45 P **P 18 07 32.5 +1.2**
ETOR pmax pmax

comp=Z,16nm,0.9s,mb5.3
ECHE Chera 89.96 46 P **P 18 07 34.0 +2.2**
comp=Z,16nm,1.0s,mb5.3
ECHE Chera 89.96 46 P **P 18 07 34.0 +2.2**
ECHE pmax pmax

comp=Z,16nm,1.0s,mb5.3
CASY Casey 90.94 180 *eP* **P 18 07 36.5 +0.6**
comp=Z,101nm,1.4s,mb6.0
CASY LR LR

comp=Z,2µm,19.0s,MS5.5
SFJD Kangerlussuaq 91.02 8 PFAKE 18 07 50.0 +14
SFJD LR LR

comp=Z,2µm,22.0s,MS5.5
ERTA Horta de San J 91.50 46 P **P 18 07 41.6 +2.7**
comp=Z,27nm,1.2s,mb5.5
SJPF Ste Jean 91.57 43 *eP* **P 18 07 38.6 -0.6**
comp=Z,33nm,1.2s,mb5.3
SJPF Ste Jean 91.57 43 *eP* **P 18 07 38.6 -0.6**
comp=Z,16nm,1.2s,mb5.2
SJPF Ste Jean 91.57 43 *eP* **P 18 07 38.6 -0.6**
SJPF pmax pmax

comp=Z,17nm,1.2s,mb5.2
ETSF Etsaut 91.89 44 *eP* **P 18 07 40.3 -0.4**
comp=Z,79nm,1.6s,mb5.5
ETSF Etsaut 91.89 44 *eP* **P 18 07 40.3 -0.4**
comp=Z,40nm,1.6s,mb5.5
ETSF Etsaut 91.89 44 *eP* **P 18 07 40.3 -0.4**
ETSF pmax pmax

comp=Z,39nm,1.6s,mb5.5
LSZ Lusaka 91.93 107 *eP* **P 18 07 43.4 +1.9**
comp=Z,9.3nm,0.9s,mb5.1
LSZ PP PP 18 11 19.7 -1.3
LSZ LR LR

comp=Z,4µm,20.0s,MS5.8
LSZ Lusaka 91.93 107 *eP* **P 18 07 43.4 +1.8**
LSZ 18 11 19.7
LSZ pmax pmax

comp=Z,9.0nm,0.9s,mb5.1
LSZ MLR MLR

comp=Z,4µm,20.0s,MS5.8
SNZO South Karori 91.94 223 PFAKE 18 07 50.0 +8.8
SNZO LR LR

comp=Z,4µm,20.0s,MS5.8
YKA Yellowknife Ar 92.14 341 P **P 18 07 40.8 -0.5**
comp=Z,15nm,0.7s,mb5.4,baz=138,slow=4.6,SNR=18
YKA LR LR 18 50 24.3

comp=Z,866nm,19.5s,MS5.2,baz=145,slow=36
EPF Esparros 92.53 44 *eP* **P 18 07 42.9 -0.7**
comp=Z,82nm,1.7s,mb5.6
EPF Esparros 92.53 44 *eP* **P 18 07 42.9 -0.7**
comp=Z,41nm,1.7s,mb5.6
EPF Esparros 92.53 44 *eP* **P 18 07 42.9 -0.7**
EPF pmax pmax

comp=Z,41nm,1.7s,mb5.6
RPZ Rata Peaks 92.81 220 P **P 18 07 46.5 +1.4**
comp=Z,19nm,1.1s,mb5.4,baz=163,slow=2.7,SNR=5.2
QUIF Quistinic 92.88 38 *eP* **P 18 07 43.4 -1.7**
comp=Z,185nm,1.8s,mb5.9
QUIF Quistinic 92.88 38 *eP* **P 18 07 43.4 -1.7**
comp=Z,92nm,1.8s,mb5.9
QUIF Quistinic 92.88 38 *eP* **P 18 07 43.4 -1.7**
QUIF pmax pmax

comp=Z,92nm,1.8s,mb5.9
RAO Raoul Island 92.89 237 LR LR 18 40 42.3
comp=Z,1µm,19.6s,MS5.4,baz=142,slow=30
RAO Raoul Island 92.89 237 PFAKE 18 08 00.0 +14
RAO LR LR

comp=Z,3µm,22.0s,MS5.7
ROSF Rostrenen 93.04 38 *eP* **P 18 07 44.7 -1.1**
comp=Z,55nm,1.2s,mb5.5
ROSF Rostrenen 93.04 38 *eP* **P 18 07 44.7 -1.1**
comp=Z,27nm,1.3s,mb5.5
ROSF Rostrenen 93.04 38 *eP* **P 18 07 44.7 -1.1**
ROSF pmax pmax

comp=Z,27nm,1.3s,mb5.5
POHA Pohakuloa 93.12 290 PFAKE 18 08 00.0 +13
POHA LR LR

comp=Z,6µm,19.0s,MS6.0
SGMF Saint Gilles 93.41 38 *eP* **P 18 07 44.5 -3.0**
LFF La Frestale 93.71 42 *eP* **P 18 07 47.8 -1.2**
MFF Saint Martin d 93.98 41 *eP* **P 18 07 48.8 -1.4**
comp=Z,86nm,1.6s,mb5.6
MFF Saint Martin d 93.98 41 *eP* **P 18 07 48.8 -1.4**
comp=Z,43nm,1.6s,mb5.6
MFF Saint Martin d 93.98 41 *eP* **P 18 07 48.8 -1.4**
MFF pmax pmax

comp=Z,43nm,1.6s,mb5.6
RJF Les Rejaudoux 94.37 42 *eP* **P 18 07 50.5 -1.5**
comp=Z,77nm,1.6s,mb5.6
RJF *e*MLR MLR

comp=Z,4µm,17.0s,MS5.7
RJF Les Rejaudoux 94.37 42 *eP* **P 18 07 50.5 -1.5**
comp=Z,38nm,1.6s,mb5.6
RJF LR LR

comp=Z,4µm,17.0s,MS6.0
RJF Les Rejaudoux 94.37 42 *eP* **P 18 07 50.5 -1.5**
RJF pmax pmax

comp=Z,39nm,1.6s,mb5.6
RJF MLR MLR

comp=Z,4µm,17.0s,MS6.0
GRR Gorron 94.45 39 *eP* **P 18 07 50.3 -2.0**
comp=Z,60nm,1.3s,mb5.6
GRR Gorron 94.45 39 *eP* **P 18 07 50.3 -2.0**
comp=Z,30nm,1.3s,mb5.6
GRR Gorron 94.45 39 *eP* **P 18 07 50.3 -2.0**
GRR pmax pmax

comp=Z,30nm,1.3s,mb5.6
CAF Calviac 94.53 43 *eP* **P 18 07 50.7 -2.1**
comp=Z,30nm,1.4s,mb5.2
CAF Calviac 94.53 43 *eP* **P 18 07 50.7 -2.1**
comp=Z,15nm,1.4s,mb5.2
CAF Calviac 94.53 43 *eP* **P 18 07 50.7 -2.1**
CAF pmax pmax

comp=Z,15nm,1.4s,mb5.2
AFI Afiamalu 94.62 253 LR LR 18 41 32.5
comp=Z,2µm,19.1s,MS5.6,baz=82,slow=30
AFI Afiamalu 94.62 253 PFAKE 18 08 00.0 +6.0
AFI LR LR

comp=Z,3µm,20.0s,MS5.7
FLN La Foliniere 94.85 39 *eP* **P 18 07 52.4 -1.8**
comp=Z,181nm,1.8s,mb5.9
FLN *e*MLR MLR

comp=Z,2µm,22.0s,MS5.3
FLN La Foliniere 94.85 39 *eP* **P 18 07 52.4 -1.8**
comp=Z,90nm,1.8s,mb5.9
FLN LR LR

comp=Z,2µm,22.0s,MS5.6
FLN La Foliniere 94.85 39 *eP* **P 18 07 52.4 -1.8**
FLN pmax pmax

comp=Z,90nm,1.8s,mb5.9
FLN MLR MLR

comp=Z,2µm,22.0s,MS5.6
LDF La Druitiere 94.98 39 *eP* **P 18 07 52.9 -1.8**
comp=Z,96nm,1.7s,mb5.7
LDF La Druitiere 94.98 39 *eP* **P 18 07 52.9 -1.8**
comp=Z,48nm,1.7s,mb5.7
LDF La Druitiere 94.98 39 *eP* **P 18 07 52.9 -1.8**
LDF pmax pmax

comp=Z,48nm,1.7s,mb5.7
TCF Toulx Ste Croi 95.26 42 *eP* **P 18 07 54.3 -1.8**
comp=Z,25nm,1.3s,mb5.2
TCF Toulx Ste Croi 95.26 42 *eP* **P 18 07 54.3 -1.8**
comp=Z,12nm,1.3s,mb5.2
TCF Toulx Ste Croi 95.26 42 *eP* **P 18 07 54.3 -1.8**
TCF pmax pmax

comp=Z,12nm,1.3s,mb5.2
KEST Kesra 95.48 54 LR LR 18 55 47.2

comp=Z,2µm,18.0s,MS5.7,baz=198,slow=38
BGF Bois d'Agland 95.78 42 *e*P **P 18 07 57.0 -1.4**
KIP Kipapa 95.90 291 PFAKE 18 08 10.0 +10
KIP LR LR
comp=Z,4µm,19.0s,MS5.9
HYF Humbligny 95.98 41 *e*P **P 18 07 57.8 -1.5**
VIVF Saint-Julien-l 96.15 44 *e*P **P 18 07 58.9 -1.3**
AVF Avril sur Loir 96.19 42 *e*P **P 18 07 58.5 -1.8**
comp=Z,19nm,1.2s,mb5.1
AVF Avril sur Loir 96.19 42 *e*P **P 18 07 58.5 -1.8**
comp=Z,9.6nm,1.2s,mb5.1
AVF Avril sur Loir 96.19 42 *e*P **P 18 07 58.5 -1.8**
AVF pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
SMRF Simiane la Rot 96.34 45 *e*P **P 18 07 59.8 -1.3**
comp=Z,144nm,1.8s,mb5.8
SMRF Simiane la Rot 96.34 45 *e*P **P 18 07 59.8 -1.3**
comp=Z,144nm,1.8s,mb6.1
SIT Sitka 96.39 330 PFAKE 18 08 10.0 +9.0
SIT LR LR
comp=Z,4µm,20.0s,MS5.9
SSF Saint Saulge 96.41 41 *e*P **P 18 07 59.4 -1.9**
comp=Z,17nm,1.2s,mb5.1
SSF Saint Saulge 96.41 41 *e*P **P 18 07 59.4 -1.9**
comp=Z,8.6nm,1.2s,mb5.1
SSF Saint Saulge 96.41 41 *e*P **P 18 07 59.4 -1.9**
SSF pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
SMF Signal de Mont 96.43 42 *e*P **P 18 08 00.1 -1.3**
comp=Z,44nm,1.2s,mb5.5
SMF Signal de Mont 96.43 42 *e*P **P 18 08 00.1 -1.3**
comp=Z,22nm,1.2s,mb5.5
SMF Signal de Mont 96.43 42 *e*P **P 18 08 00.1 -1.3**
SMF pmax pmax
comp=Z,22nm,1.2s,mb5.5
LMR La Mourre 96.67 46 *e*P **P 18 08 00.9 -1.7**
comp=Z,168nm,1.8s,mb5.9
LMR La Mourre 96.67 46 *e*P **P 18 08 00.9 -1.7**
comp=Z,84nm,1.8s,mb5.6
LMR La Mourre 96.67 46 *e*P **P 18 08 00.9 -1.7**
LMR pmax pmax
comp=Z,84nm,1.8s,mb5.9
LOR Lormes 96.72 41 *e*P **P 18 08 00.8 -1.9**
comp=Z,16nm,1.0s,mb5.1
LOR *e*MLR MLR
comp=Z,2µm,20.2s,MS5.3
LOR Lormes 96.72 41 *e*P **P 18 08 00.8 -1.9**
comp=Z,7.8nm,1.0s,mb5.1
LOR LR LR
comp=Z,2µm,20.3s,MS5.6
LOR Lormes 96.72 41 *e*P **P 18 08 00.8 -1.9**
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
LOR MLR MLR
comp=Z,2µm,20.3s,MS5.6
ESK Eskdalemuir 96.72 32 PFAKE 18 08 10.0 +7.5
ESK LR LR
comp=Z,2µm,19.0s,MS5.6
EKA Eskdalemuir Ar 96.75 32 P **P 18 08 02.2 -0.4**
comp=Z,6.3nm,1.1s,mb5.0,baz=251,slow=5.2,SNR=4.7
FRF La Foret Royal 96.86 46 *e*P **P 18 08 02.4 -1.0**
comp=Z,157nm,1.8s,mb5.8
FRF La Foret Royal 96.86 46 *e*P **P 18 08 02.4 -1.0**
comp=Z,79nm,1.8s,mb5.8
FRF La Foret Royal 96.86 46 *e*P **P 18 08 02.4 -1.0**
FRF pmax pmax
comp=Z,79nm,1.8s,mb5.8
ORIF Oris-en-Rattie 96.94 44 *e*P **P 18 08 03.4 -0.4**
comp=Z,57nm,1.5s,mb5.5
ORIF *e*MLR MLR
comp=Z,3µm,18.2s,MS5.5
ORIF Oris-en-Rattie 96.94 44 *e*P **P 18 08 03.4 -0.4**
comp=Z,28nm,1.5s,mb5.5
ORIF Oris-en-Rattie 96.94 44 *e*P **P 18 08 03.4 -0.4**
ORIF pmax pmax
comp=Z,29nm,1.5s,mb5.5
VSL Villasalto 97.04 50 PFAKE 18 08 20.0 +16
VSL LR LR
comp=Z,4µm,19.0s,MS5.9
MBDF Montbardon 97.44 45 *e*P **P 18 08 05.7 -0.3**
comp=Z,99nm,1.8s,mb5.6
MBDF Montbardon 97.44 45 *e*P **P 18 08 05.7 -0.3**
comp=Z,50nm,1.8s,mb5.6
MBDF Montbardon 97.44 45 *e*P **P 18 08 05.7 -0.3**
MBDF pmax pmax
comp=Z,49nm,1.8s,mb5.6
SBF Sospel 97.51 46 *e*P **P 18 08 03.8 -2.6**
comp=Z,272nm,1.7s,mb6.2
SBF Sospel 97.51 46 *e*P **P 18 08 03.8 -2.6**
comp=Z,136nm,1.7s,mb6.2
BNI Bardonecchia 97.51 44 PFAKE 18 08 20.0 +14
BNI LR LR
comp=Z,4µm,19.0s,MS5.9
LPL La Plagne 97.75 44 *e*P **P 18 08 07.2 -0.2**
LPG La Plagne 97.75 44 *e*P **P 18 08 07.3 -0.1**
comp=Z,47nm,1.5s,mb5.5
LPG La Plagne 97.75 44 *e*P **P 18 08 07.3 -0.1**
comp=Z,24nm,1.5s,mb5.5
LPG La Plagne 97.75 44 *e*P **P 18 08 07.3 -0.1**
LPG pmax pmax
comp=Z,24nm,1.5s,mb5.5
SUMG Summit 97.84 9 P **P 18 08 07.9 +0.7**
comp=Z,4.0nm,0.9s,mb5.0
MEZF Maizieres J'vi 97.98 41 *e*P **P 18 08 06.9 -1.5**
comp=Z,22nm,1.0s,mb5.3
MEZF Maizieres J'vi 97.98 41 *e*P **P 18 08 06.9 -1.5**
comp=Z,22nm,1.0s,mb5.6
DOU Dourbes 98.41 39 P **P 18 08 10.1 -0.2**
comp=Z,15nm,2.5s,mb5.1
GIVF Givet 98.54 39 *e*P **P 18 08 09.5 -1.3**
HAU Haudompre 98.55 41 *e*P **P 18 08 09.9 -1.1**
HAU *e*MLR MLR
comp=Z,2µm,20.8s,MS5.3
HAU Haudompre 98.55 41 *e*P **P 18 08 09.9 -1.1**
HAU MLR MLR
comp=Z,2µm,20.8s,MS5.6
UCC Uccle 98.58 38 P **P 18 08 10.1 -0.9**
comp=Z,39nm,3.4s
HINF Hinteralfeld 98.78 42 *e*P **P 18 08 10.2 -1.8**
comp=Z,3.3nm,0.7s,mb4.7
HINF Hinteralfeld 98.78 42 *e*P **P 18 08 10.2 -1.8**
comp=Z,1.6nm,0.7s,mb4.7
HINF Hinteralfeld 98.78 42 *e*P **P 18 08 10.2 -1.8**
HINF pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
BCLA Clavier 98.96 39 P **P 18 08 12.2 -0.5**
WLF Walferdange 99.13 40 P **P 18 08 12.4 -1.1**
comp=Z,19nm,2.2s,mb5.2
WLF Walferdange 99.13 40 PFAKE 18 08 20.0 +6.5
WLF LR LR
comp=Z,2µm,19.0s,MS5.7
CDF Champ du Feu 99.29 41 *e*P **P 18 08 12.6 -1.6**
WDD Wield Dalam 99.40 55 PFAKE 18 08 30.0 +15
WDD LR LR
comp=Z,5µm,21.0s,MS6.0
MEM Membach 99.44 39 P **P 18 08 14.8 -0.1**
VLC Villacollemand 99.58 46 PFAKE 18 08 30.0 +14
VLC LR LR
comp=Z,1µm,19.0s,MS5.4
TUE Stuetta 99.80 44 PFAKE 18 08 30.0 +13
TUE LR LR
comp=Z,4µm,19.0s,MS5.9
BFO Black Forest 99.90 42 PFAKE 18 08 30.0 +13
BFO LR LR
comp=Z,1µm,19.0s,MS5.4
AQU L'Aquila 100.95 49 PFAKE 18 08 30.0 +8.2
AQU LR LR
comp=Z,2µm,19.0s,MS5.6
CEL Celeste 101.28 53 PFAKE 18 08 30.0 +6.8
CEL LR LR
comp=Z,16µm,20.0s,MS6.5
CUC Castrocucco 101.82 52 PFAKE 18 08 40.0 +14
CUC LR LR
comp=Z,3µm,19.0s,MS5.8
TIP Timpagrande 102.23 53 PFAKE 18 08 40.0 +13
TIP LR LR
comp=Z,3µm,19.0s,MS5.9
EGAK Eagle 102.74 336 PFAKE 18 08 40.0 +10
EGAK LR LR
comp=Z,2µm,20.0s,MS5.7
NKC Novy Kostel 103.11 41 *e*SKS SKSac 18 19 14.8 +5.4
NKC *e*SDIF Sdif 18 20 27.6 +11
NKC *e*PS PS 18 21 46.5 -8.6
GERES GERESS Array B 103.40 43 Pdiff Pdif 18 08 33.2 +0.5
comp=Z,0.3nm,0.6s,baz=277,slow=7.7,SNR=4.4
KHC Kasperske Hory 103.42 42 *e*SKS SKSac 18 19 16.4 +5.5
KHC *e*SDIF Sdif 18 20 25.2 +5.8
KHC *e*PS PS 18 22 00.9 +2.4
KHC *e*SS SS 18 27 28.3 -3.7
KHC AMS AMS 19 00 00.0
comp=Z,2µm,17.9s
CLL Collm 103.80 40 *e*Pdif Pdif 18 08 35.0 +0.5
CLL *e*PP PP 18 12 48.0 -3.6
CLL *ex* x 18 14 17.0
CLL *e*SKSac SKSac 18 19 20.0 +7.4
CLL *e*Sdif Sdif 18 20 29.0 +6.4
CLL *e*PS PS 18 22 05.0 +2.6
CLL *e*PPS 18 23 00.0
CLL *e*SS SS 18 27 33.0 -4.1
CLL *e*SSS 18 31 36.0
CLL *ex* x 18 37 54.0
CLL L 18 51 00.0
comp=Z,2µm,21.6s
BRG Berggiesshubel 104.22 41 P Pdif 18 08 41.7 +5.4
comp=Z,7.0nm,1.5s
BRG PP PP 18 12 57.0 +2.3
BRG SKS 18 19 23.0
BRG Sdif Sdif 18 20 36.0 +10
BRG PS PS 18 22 05.0 -1.8
BRG SS SS 18 27 20.0 -23
BRG LR LR
comp=Z,810nm,21.7s,MS5.2
BRG Berggiesshubel 104.22 41 *e*P Pdif 18 08 41.7 +5.4
BRG 18 12 57.0
BRG PS PS 18 22 05.0 -1.8
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG MLR MLR
comp=N,271nm,14.8s,MS5.2
BRG MLR MLR
comp=E,494nm,19.0s,MS5.2
BRG MLR MLR
comp=Z,808nm,21.7s,MS5.2
BRG Berggiesshubel 104.22 41 *e*(P) Pdif 18 08 41.7 +5.4
comp=Z,12nm,1.5s
BRG PP PP 18 12 57.0 +2.3
BRG SKS 18 19 23.0
BRG SDIF Sdif 18 20 36.0 +10
BRG PS PS 18 22 05.0 -1.8
BRG SS SS 18 27 20.0 -23
BRG
comp=N,453nm,14.8s
BRG
comp=E,825nm,19.0s
BRG
comp=Z,1µm,21.7s
PRU Pruhonice 104.30 42 *e*SKS SKSac 18 19 20.5 +5.6
PRU *e*SDIF Sdif 18 20 29.8 +3.1
PRU *e*PS PS 18 22 08.9 +1.2
PRU *e*SS SS 18 27 38.5 -5.4
PRU AMS AMS 19 02 40.0
comp=Z,1µm,18.2s
PVCC Panska Ves 104.49 41 *e*PS PS 18 22 10.4 +0.8
PVCC AMS AMS 18 55 50.0
comp=Z,1µm,22.5s
TREC Trest 104.66 42 *e*SKS SKSac 18 19 19.7 +3.1
TREC *e*SDIF Sdif 18 20 32.3 +2.6
TREC *e*PS PS 18 22 12.2 +0.7
TREC *e*SS SS 18 27 33.6 -15
TREC AMS AMS 19 02 50.0
comp=Z,900nm,17.3s
PMR Palmer 104.74 331 PFAKE 18 08 50.0 +11
PMR LR LR
comp=Z,2µm,19.0s,MS5.6
KONO Kongsberg 104.82 31 PFAKE 18 08 50.0 +11
KONO LR LR
comp=Z,2µm,20.0s,MS5.6
FUNA Funafuti 104.92 254 PFAKE 18 08 50.0 +11
FUNA LR LR
comp=Z,4µm,19.0s,MS6.0
COP Copenhagen 104.93 36 *i* P PKiKP 18 12 59.7 +5.7
COP *i* S Sdif 18 20 38.3 +6.4
COP *i* 18 22 21.6
COP
comp=Z,650nm,18.0s
KDAK Kodiak Island 105.08 327 PFAKE 18 13 10.0 +16
KDAK LR LR
comp=Z,1µm,19.0s,MS5.4
TIR Tirane 105.17 51 PFAKE 18 13 10.0 +15
TIR LR LR
comp=Z,3µm,20.0s,MS5.8
COLA College 105.39 334 PFAKE 18 13 10.0 +15
COLA LR LR
comp=Z,2µm,22.0s,MS5.6
DPC Dobruska-Polom 105.50 42 *e*SDIF Sdif 18 20 39.8 +3.1
DPC *e*SS SS 18 27 53.8 -6.6
DPC AMS AMS 19 04 00.0
comp=Z,1µm,17.4s
TAU Tasmania Unive 105.65 208 PFAKE 18 13 10.0 +14
TAU LR LR
comp=Z,2µm,20.0s,MS5.7
ABPO Ambohimpanom 106.29 119 PFAKE 18 13 10.0 +12
ABPO LR LR
comp=Z,5µm,20.0s,MS6.1
OKC Ostrava-Krasne 106.47 42 *e*SKS SKSac 18 19 32.1 +7.4
OKC *e*SDIF Sdif 18 20 49.9 +5.0
OKC *e*PS PS 18 22 35.1 +4.8
OKC *e*SS SS 18 28 05.4 -8.3
OKC AMS AMS 19 03 20.0
comp=Z,1µm,16.7s
PSZ Piszkesteto 107.06 45 PFAKE 18 13 10.0 +12
PSZ LR LR
comp=Z,2µm,19.0s,MS5.6
KWP Kalwaria 109.29 43 PFAKE 18 13 10.0 +7.7
KWP LR LR
comp=Z,1µm,20.0s,MS5.5
KBS Kingsbay 111.03 12 PFAKE 18 13 20.0 +15
KBS LR LR
comp=Z,1µm,19.0s,MS5.6
ISP Isparta 112.23 57 PFAKE 18 13 20.0 +12
ISP LR LR
comp=Z,2µm,19.0s,MS5.8
KIS Kishinev 112.76 47 *e*PS PS 18 23 38.0 +6.1
KIS LRM 19 05 50.0
comp=Z,1µm,18.0s
KIEV Kiev 113.59 43 PFAKE 18 13 20.0 +10
KIEV LR LR
comp=Z,2µm,19.0s,MS5.7
AKASG Malin Array Be 113.60 43 PKiKP PKiKP 18 13 09.4 -1.0
comp=Z,1.2nm,0.5s,baz=262,slow=3.5,SNR=6.9
KEV Kevo 114.04 22 PFAKE 18 13 20.0 +9.3
KEV LR LR
comp=Z,1µm,20.0s,MS5.4
ANTO Ankara 114.38 55 PFAKE 18 13 20.0 +7.7
ANTO LR LR
comp=Z,2µm,22.0s,MS5.8
MIDW Midway 114.70 292 PFAKE 18 13 20.0 +6.7
MIDW LR LR
comp=Z,4µm,20.0s,MS6.0
MMAI Mount Meron Ar 115.11 63 PKP PKiKP 18 13 14.1 +0.1
comp=Z,2.5nm,0.6s,baz=346,slow=1.4,SNR=5.9
LVZ Lovozero 116.88 24 PFAKE 18 13 30.0 +14
LVZ LR LR
comp=Z,921nm,20.0s,MS5.4
STKA Stephens Creek 117.30 211 PKP PKPdf 18 13 19.0 +0.7
comp=Z,2.3nm,0.8s,baz=170,slow=1.6,SNR=4.6
OBN Obninsk 118.35 39 *i* PKIKP PKPdf 18 13 19.8 +0.4
OBN *e* 18 14 33.7
OBN pmax pmax
comp=Z,13nm,1.2s
OBN MLR MLR
comp=Z,2µm,20.0s,MS5.6
KLMR Klimovskoe 119.64 32 *e*PKIKP PKPdf 18 13 21.5 -0.2
MSEY Mahe Island 120.60 111 PFAKE 18 13 40.0 +15
MSEY LR LR
comp=Z,3µm,20.0s,MS6.0
HNR Honiara 120.94 243 PFAKE 18 13 40.0 +14
HNR LR LR
comp=Z,2µm,21.0s,MS5.7
KIV Kislovodsk 122.15 52 *e*PKPdf PKPdf 18 13 27.1 0.0
KIV LR LR
comp=Z,941nm,21.0s,MS5.4
KIV Kislovodsk 122.15 52⇑ *i*PKIKP PKPdf 18 13 27.3 +0.2
KIV *i* 18 13 38.5
KIV *i* PS PS 18 24 52.0 -5.0
KIV *i* SS SS 18 31 33.5 -7.1
KIV pmax pmax
comp=Z,16nm,1.3s
SMY Shemya 123.27 319 PFAKE 18 13 40.0 +11
SMY LR LR
comp=Z,2µm,19.0s,MS5.8
BILL Bilibino 123.38 338 *e*PKIKP PKPdf 18 13 27.7 -1.0
BILL *e* 18 15 07.7
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,2µm,18.0s,MS5.8
GNI Garni 123.51 56 PKP PKPdf 18 13 30.2 +0.3
comp=Z,2.9nm,0.5s,baz=355,slow=11,SNR=5.8
GNI Garni 123.51 56 *e*PKIKP PKPdf 18 13 30.3 +0.4
GNI MLR MLR
comp=Z,1µm,22.0s
NWAO Narrogin (SRO) 123.83 188 PFAKE 18 13 40.0 +9.2
NWAO LR LR
comp=Z,1µm,21.0s,MS5.6
CTAO Charters Tower 124.05 223 PFAKE 18 13 40.0 +8.4
CTAO LR LR
comp=Z,1µm,22.0s,MS5.6
MUN Mundaring 124.89 187 *e*P PKPdf 18 13 32.7 -0.2
KLBR Kellerberrin 125.08 189 *e*P PKPdf 18 13 32.8 -0.5
comp=Z,69nm,1.6s
ASAR Alice Springs 127.81 209 PKhKP 18 13 29.1
comp=Z,0.3nm,0.7s,baz=147,slow=2.0,SNR=5.2
ASAR PKP PKPdf 18 13 38.0 -0.6
comp=Z,8.2nm,0.8s,baz=129,slow=1.9,SNR=51
TIXI Tiksi 130.12 352 *e*PKPdf PKPdf 18 13 41.1 -0.5
TIXI *e*SKP 18 17 03.5
TIXI LR LR
comp=Z,1µm,20.0s,MS5.7
TIXI Tiksi 130.12 352 *i* PKIKP PKPdf 18 13 40.9 -0.7
TIXI *e* 18 15 57.1
TIXI pmax pmax
comp=Z,11nm,0.9s
ARU Arti 130.31 34⇓ *e*PKP PKPdf 18 13 43.2 +0.9
ARU LR LR
comp=Z,2µm,20.0s,MS5.7
ARU Arti 130.31 34 *i* PKIKP PKPdf 18 13 43.2 +0.9
ARU *e* 18 15 55.8
ARU SS SS 18 33 21.5 0.0
WB2 Warramunga Arr 130.82 212 *e*P PKPdf 18 13 42.0 -2.5
WB2 *e*S SKPbc 18 17 07.6 +0.3
WB2 Warramunga Arr 130.82 212 *e*PKPdf PKPdf 18 13 43.9 -0.6
WB2 *e*SKP SKPbc 18 17 06.0 -1.3
WRA Warramunga Arr 130.82 212 PKhKP 18 13 35.7
comp=Z,0.7nm,0.9s,baz=161,slow=2.7,SNR=5.0
WRA PKP PKPdf 18 13 44.3 -0.2
comp=Z,11nm,0.9s,baz=154,slow=1.6,SNR=31
WRAB Tennant Creek 130.83 212 *e*PKPdf PKPdf 18 13 41.9 -2.6
WRAB LR LR
comp=Z,2µm,20.0s,MS5.8
SEY Seymchan 130.89 336⇓ *e*PKP PKPdf 18 13 43.3 +0.1
SEY Seymchan 130.89 336⇓ *i*PKIKP PKPdf 18 13 43.3 +0.1
PMG Port Moresby 130.95 233 PFAKE 18 14 00.0 +15
PMG LR LR
comp=Z,1µm,20.0s,MS5.6
SVE Sverdlovsk 131.22 33 *i* PKIKP PKPdf 18 13 44.4 +0.4
SVE pmax pmax
comp=Z,29nm,1.7s
SVE MLR MLR
comp=Z,2µm,20.0s,MS5.8
AKTK Aktyubinsk 131.83 42 PKP PKPdf 18 13 45.7 +0.3
AKTO Aktyubinsk 131.83 42 PKP PKPdf 18 13 45.7 +0.3
comp=Z,4.6nm,1.0s,baz=346,slow=1.6,SNR=12
PET Petropavlovsk 132.34 322⇓ *e*PKP PKPdf 18 13 44.7 -1.6
PET LR LR
comp=Z,1µm,20.0s,MS5.6
PET Petropavlovsk 132.34 322⇓ *i*PKIKP PKPdf 18 13 44.7 -1.6
PETK Petropavlovsk- 132.86 322 PKP PKPdf 18 13 48.0 +0.8
comp=Z,21nm,1.1s,baz=95,slow=2.5,SNR=7.5
MBWA Marble Bar 134.92 194 PFAKE 18 14 00.0 +7.8
MBWA LR LR
comp=Z,2µm,19.0s,MS5.7
BRVK Borovoye 137.88 35 *e*PKPdf PKPdf 18 13 56.6 0.0
BRVK LR LR
comp=Z,3µm,20.0s,MS6.0
BVAR Borovoye Array 137.95 35 PKP PKPdf 18 13 56.8 +0.1
comp=Z,7.0nm,0.8s,baz=270,slow=3.0,SNR=17
YAK Yakutsk 138.66 346 *e*PKPpre 18 13 51.0
YAK *i* PKP PKPdf 18 13 56.4 -1.4
YAK LR LR
comp=Z,1µm,22.0s,MS5.5
YAK Yakutsk 138.66 346 *e*PKIKP PKPdf 18 13 55.7 -2.1
YAK pmax pmax
comp=Z,28nm,1.2s
NVS Novosibirsk 142.73 25 *e*PKIKP PKPdf 18 14 01.0 -4.3
NVS pmax pmax
comp=Z,89nm,1.7s
NVS pmax pmax
comp=E,26nm,1.5s
COCO West Island 142.87 159 PFAKE 18 14 20.0 +13
COCO LR LR
comp=Z,962nm,19.0s,MS5.6
KBL Kabul 143.04 63 *e*PKPpre 18 14 02.1
KURK Kurchatov 143.47 33 *e*PKIKP PKPdf 18 14 04.2 -2.6
KURK MLR MLR
comp=Z,2µm,19.0s,MS5.8
BHJ Bhuj 143.52 82 *e*P PKPdf 18 14 05.8 -1.9
ZAA0 Zalesovo Array 144.01 25 *e*PKPdf PKPdf 18 14 05.2 -2.4
ZALV Zalesovo Beam 144.01 25 PKP PKPdf 18 14 05.7 -1.9
comp=Z,22nm,0.7s,baz=332,slow=3.4,SNR=37
BATI Baumata 144.12 204 PKP PKPdf 18 14 09.1 +0.1
comp=Z,32nm,0.9s,baz=112,slow=6.5,SNR=5.4
BATI Baumata 144.12 204 P PKPdf 18 14 11.6 +2.5
YSS Yuzh-Sakhalins 144.17 320⇑ *e*PKP PKPdf 18 14 08.0 -0.1
YSS LR LR
comp=Z,759nm,21.0s,MS5.4
YSS Yuzh-Sakhalins 144.17 320⇑ *i*PKIKP PKPdf 18 14 08.0 -0.1
CLNS Chul'man 144.41 345 *e*PKIKP PKPdf 18 14 05.7 -2.5
CLNS pmax pmax
comp=Z,67nm,1.1s
CLNS pmax pmax
comp=N,28nm,1.1s
CLNS pmax pmax
comp=E,12nm,1.4s
EKS2 Erkin-Say 144.60 48 *e*PKPdf PKPdf 18 14 08.4 -0.6
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.7
EKS2 Erkin-Say 144.60 48 P PKPdf 18 14 09.3 +0.3
SNR=29
AML Almayashu 144.74 49 *e*PKPdf PKPdf 18 14 09.6 +0.4
AML Almayashu 144.74 49 P PKPdf 18 14 09.6 +0.4
SNR=82
USP Ospenovka 144.85 47 P PKPdf 18 14 09.4 0.0
SNR=38
KRAR Krasnoyarsk 144.89 16⇓ *i*PKIKP PKPdf 18 14 08.0 -1.1
AAK Ala-Archa 145.10 48 P PKPbc 18 14 11.1 +1.7
SNR=132
FRU Bishkek 145.10 47⇑ *i*PKIKP PKPdf 18 14 10.0 +0.1
FRU pmax pmax
comp=Z,320nm,1.4s
FRU MLR MLR
comp=Z,2µm,20.0s,MS5.8
BOD Bodaibo 145.11 356⇓ *i*PKIKP PKPdf 18 14 07.9 -1.5
BOD pmax pmax
comp=Z,171nm,0.8s
GUMO Guam 145.13 261 PKP PKPdf 18 14 09.9 -0.9
comp=Z,164nm,0.8s,baz=180,slow=9.8,SNR=5.4
GUMO Guam 145.13 261 PKP2 PKPab 18 14 09.9 -0.4
GUMO MLR MLR
comp=Z,2µm,20.0s,MS5.9
GUMO Guam 145.13 261 P PKiKP 18 14 13.2 -1.4
CHMS Chumysh 145.13 47 P PKPbc 18 14 10.6 +1.1
SNR=42
UCH Uchtor 145.27 48 PFAKE 18 14 20.0 +10
UCH LR LR
comp=Z,854nm,19.0s,MS5.5
UCH Uchtor 145.27 48 P PKPbc 18 14 12.7 +2.7
SNR=13
KBK Karagaybulak 145.40 47 P PKPbc 18 14 11.8 +1.5
SNR=58
ASAJ Asahikawa 145.62 316 PKPbc 18 14 11.7 +0.6
comp=Z,84nm,1.0s,baz=256,slow=8.0,SNR=12
GOA Goa 145.64 96 *e*P PKPdf 18 14 12.2 +0.7
MNGI Mangalore 145.68 101 *e*P PKPdf 18 14 09.3 -2.4
TRD Trivandrum 145.69 110 *e*P PKPdf 18 14 09.8 -2.0
TKM2 Tokmak 2 145.73 47 *e*PKPdf PKPdf 18 14 12.1 +1.1
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.8
TKM2 Tokmak 2 145.73 47 P PKPdf 18 14 12.2 +1.3
SNR=59
KZA Kyzart 145.83 48 P PKPab 18 14 13.6 +1.4
SNR=11
ERM Erimo 146.14 312 PFAKE 18 14 20.0 +8.3
ERM LR LR
comp=Z,3µm,22.0s,MS6.0

KAD	**Karad**	**146.50**	**93**	*e*P		PKPdf	18 14 12.2	-0.8	
POO	**Poona**	**146.50**	**91**	*e*P		PKPdf	18 14 11.1	-1.9	
KOD	**Kodaikanal**	**146.93**	**107**	*e*P		PKPdf	18 14 14.6	+0.7	
KSH	**Kashi**	**147.28**	**52**	PKP		PKPab	18 14 17.0	-0.8	
KSH				PKP2		PKPab	18 14 19.1	+1.3	
KSH				*e*PP		PP	18 17 40.4	-1.3	
KSH				*e*PKS			18 17 51.4		
KSH				*e*SKS		SKSdf	18 21 21.1	+0.1	
KSH				PP		PP			
	comp=Z,2μm,8.5s								
KSH				LR		LR			
	comp=N,3μm,14.4s,MS6.5								
KSH				LR		LR			
	comp=E,6μm,18.6s,MS6.5								
KSH				LR		LR			
	comp=Z,7μm,18.8s,MS6.5								
HABR	**Khabarovsk**	**147.49**	**328**	*e*PKHKP			18 14 11.4		
HABR				*i*			18 14 16.7		
HABR				*e*PPP			18 20 56.2		
HABR				*e*			18 21 18.9		
HABR				*e*			18 30 20.8		
HABR				*e*SS		SS	18 36 41.9	-1.8	
HABR				*e*SSS			18 42 14.4		
AAI	**Ambon**	**147.71**	**217**	P		PKPbc	18 14 17.5	-0.5	
MK31	**Makanchi Array**	**147.80**	**36**	PKPdf		PKPdf	18 14 14.2	0.0	
MKAR	**Makanchi Array**	**147.80**	**36**	PKPbc		PKPbc	18 14 17.1	-0.1	
	comp=Z,18nm,0.7s,baz=311,slow=2.2,SNR=67								
KHKI	**Kahang-Kahang**	**148.19**	**192**	P		PKPab	18 14 24.8	+2.8	
AJM	**Ajmer**	**148.30**	**77**	*e*P		PKPdf	18 14 13.7	-2.1	
KLR	**Kul'dur**	**148.49**	**332**	*e*PKHKP			18 14 11.1		
KLR				pmax		pmax			
	comp=Z,74nm,1.6s								
THN	**Thein Dam**	**148.86**	**65**	*e*P		PKPdf	18 14 15.8	-0.7	
LATR	**Latur**	**148.97**	**92**	*ex*		PKPbc	18 14 20.5	-0.6	
SJI	**Sawahan**	**149.31**	**185**	P		PKPbc	18 14 22.6	+0.5	
AKL	**Akola**	**149.88**	**88**	*e*P		PKPdf	18 14 18.8	+0.3	
SDNR	**Sundarnagar**	**150.05**	**67**	*ex*		PKiKP	18 14 24.0	-0.3	
KDI	**Kendari**	**150.22**	**207**	P		PKPbc	18 14 24.9	+0.5	
SMLA	**Simla**	**150.27**	**67**	*e*P		PKPdf	18 14 19.8	+1.0	
KAPI	**Kappang**	**150.33**	**201**	PKPbc		PKPbc	18 14 24.6	0.0	
	comp=Z,47nm,0.9s,baz=254,slow=3.2,SNR=19								
KAPI	**Kappang**	**150.33**	**201**	*e*PKPbc		PKPbc	18 14 23.8	-0.8	
KAPI				LR		LR			
	comp=Z,605nm,20.0s,MS5.4								
KAPI	**Kappang**	**150.33**	**201**	P		PKPbc	18 14 25.0	+0.4	
HYB	**Hyderabad**	**150.54**	**95**	*e*PKP		PKPdf	18 14 20.0	+0.4	
HYB	**Hyderabad**	**150.54**	**95**	*i* PKP		PKPdf	18 14 20.0	+0.4	
HYB				*e*			18 14 25.5		
HYB				*e*PKPAB		PKPab	18 14 33.0	+1.3	
HYB				*e*SKKS		SKKSac	18 24 52.0	+0.8	
HYB				*e*			18 28 06.0		
NDI	**New Delhi**	**150.55**	**72**	*ex*		PKPab	18 14 32.0	+0.6	
IRK	**Irkutsk**	**150.59**	**6**	*e*PKIKP		PKPdf	18 14 21.3	+2.7	
IRK				*e*			18 14 33.2		
IRK				pmax		pmax			
	comp=Z,84nm,1.9s								
LBMI	**Labuha**	**150.60**	**219**	P		PKPab	18 14 31.0	-0.9	
CBJI	**Citeko**	**150.60**	**175**	P		PKPbc	18 14 24.8	-0.5	
BHPL	**Bhopal**	**150.62**	**83**	*e*P		PKPdf	18 14 20.6	+1.1	
MOY	**Mondy**	**150.71**	**11**	*e*PKIKP		PKPbc	18 14 21.2	-3.1	
MOY				pmax		pmax			
	comp=Z,14nm,1.7s								
CIT	**Chita**	**150.91**	**355**	*e*PKIKP		PKPdf	18 14 20.5	+1.4	
CIT				pmax		pmax			
	comp=Z,171nm,3.1s								
TLY	**Talaya**	**151.08**	**7**	⇓P		PKPdf	18 14 23.0	+3.6	
	SNR=7.3								
TLY	**Talaya**	**151.08**	**7**	*e*PKPdf		PKPdf	18 14 18.9	-0.5	
TLY				*e*PKPbc		PKPbc	18 14 28.1	+2.9	
TLY				LR		LR			
	comp=Z,1μm,20.0s,MS5.7								
TLY	**Talaya**	**151.08**	**7**	*i* PKIKP		PKPbc	18 14 23.3	-1.9	
TLY				*e*			18 18 09.2		
TLY				*e*SS		SS	18 37 16.2	-6.6	
TLY				pmax		pmax			
	comp=Z,38nm,1.1s								
TLY				MLR		MLR			
	comp=Z,1μm,20.0s,MS5.7								
DDI	**Dehra Dun**	**151.13**	**69**	*ex*		x	18 14 16.0		
MJAR	**Matsushiro Arr**	**151.75**	**305**	PKPbc		PKPbc	18 14 27.2	0.0	
	comp=Z,22nm,0.8s,baz=110,slow=1.3,SNR=31								
MAJO	**Matsushiro**	**151.75**	**305**	*e*PKPbc		PKPbc	18 14 26.8	-0.4	
MAJO				LR		LR			
	comp=Z,2μm,21.0s,MS6.0								
MAT	**Matsushiro**	**151.75**	**305**	PKP		PKPbc	18 14 26.9	-0.4	
NGP	**Nagpur**	**151.83**	**88**	*e*P		PKPdf	18 14 19.4	-2.0	
ZAK	**Zakamensk**	**152.31**	**8**	*e*PKIKP		PKPdf	18 14 22.0	+0.7	
ZAK				pmax		pmax			
	comp=Z,40nm,1.3s								
HIA	**Hailar**	**152.60**	**345**	*e*PKPdf		PKPdf	18 14 21.7	0.0	
HIA				*e*PKPbc		PKPbc	18 14 28.1	-0.6	
HIA				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
WMQ	**Urumqi**	**152.63**	**36**	PKP		PKPdf	18 14 23.0	+1.0	
WMQ				PP		PP	18 18 17.0	+5.0	
WMQ				SKS		SKSdf	18 21 25.0	-2.8	
WMQ				PP		PP			
	comp=Z,157nm,10.0s								
WMQ				LR		LR			
	comp=N,1μm,22.0s,MS5.9								
WMQ				LR		LR			
	comp=E,2μm,22.0s,MS5.9								
WMQ				LR		LR			
	comp=Z,1μm,22.0s,MS5.7								
KSI	**Kapahiang**	**152.63**	**165**	P		PKiKP	18 14 32.4	+2.2	
MDJ	**Mudanjiang**	**152.87**	**327**	PKP		PKPdf	18 14 24.3	+2.0	
MDJ				PP		PP	18 18 21.1	+7.9	
MDJ				LR		LR			
	comp=N,273nm,33.1s,MS5.2								
MDJ				LR		LR			
	comp=E,555nm,31.8s,MS5.2								
MDJ				LR		LR			
	comp=Z,899nm,28.0s,MS5.4								
MDJ	**Mudanjiang**	**152.87**	**327**	PFAKE			18 14 30.0	+7.7	
MDJ				LR		LR			
	comp=Z,1μm,20.0s,MS5.7								
PTH	**Pithoragarh**	**153.09**	**70**	*ex*		PKiKP	18 14 31.0	+0.4	
PTH				*ex*		x	18 16 20.0		
LGTI	**Lohaghat**	**153.12**	**70**	*e*P		PKPdf	18 14 23.5	+0.3	
TPI	**Tanjungpandan**	**154.29**	**176**	P		PKiKP	18 14 35.5	+1.9	
SONM	**Songino Array**	**155.16**	**5**	PKP		PKPdf	18 14 26.3	+0.9	
	comp=Z,4.1nm,0.9s,baz=310,slow=0.8,SNR=21								
ULN	**Ulaanbaatar**	**155.17**	**4**	*e*PKPdf		PKPdf	18 14 25.7	+0.2	
ULN				*e*PKPab		PKPab	18 14 50.5	+0.3	
ULN				*e*PP		PP	18 18 23.0	-2.5	
ULN				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
ULN	**Ulaanbaatar**	**155.17**	**4**	P		PKPdf	18 14 28.7	+3.3	
CN2	**Changchun**	**155.44**	**331**	*e*PKP		PKPdf	18 14 27.0	+1.1	
CN2				PKP2		PKPab	18 14 54.9	+3.4	
CN2				PP		PP	18 18 32.4	+4.9	
CN2				PP		PP			
	comp=Z,300nm,6.0s								
CN2				LR		LR			
	comp=N,700nm,19.0s,MS5.7								
CN2				LR		LR			
	comp=E,800nm,19.0s,MS5.7								
CN2				LR		LR			
	comp=Z,1μm,17.0s,MS5.8								
PYUN	**Piuthan**	**155.67**	**73**	*e*P		PKPdf	18 14 26.4	-0.3	
KOLN	**Koldanda**	**156.24**	**73**	*e*P		PKPdf	18 14 27.3	-0.2	
	comp=Z,52nm,1.5s								
DANN	**Dangsing**	**156.31**	**72**	*e*P		PKPdf	18 14 28.1	+0.5	
	comp=Z,45nm,0.8s								
TRSI	**Tarutung**	**156.76**	**153**	P		PKPdf	18 14 27.3	-1.3	
GKN	**Gorkha**	**157.12**	**72**	*e*P		PKPdf	18 14 28.5	-0.1	
	comp=Z,55nm,1.3s								
DMN	**Daman**	**157.58**	**73**	*e*P		PKPdf	18 14 28.9	-0.3	
KKN	**Kakani**	**157.72**	**73**	*e*P		PKPdf	18 14 29.6	+0.2	
DAV	**Davao City (W)**	**157.76**	**227**	PFAKE			18 14 40.0	+10	
DAV				LR		LR			
	comp=Z,1μm,20.0s,MS5.7								
PKIN	**Phulchoki**	**157.84**	**73**	*e*P		PKPdf	18 14 29.5	-0.1	
PKI	**Pulchoki**	**157.85**	**73**	*e*P		PKPdf	18 14 29.8	+0.2	
GUN	**Gumba**	**158.23**	**72**	*e*P		PKPdf	18 14 30.5	+0.5	
BOK	**Bokaro**	**158.40**	**83**	*e*P		PKPdf	18 14 28.7	-1.7	
BOK				AMb		AMB	18 14 34.2		
	comp=Z,25nm,1.3s								
JIRN	**Jiri**	**158.53**	**73**	*e*P		PKPdf	18 14 30.8	+0.4	
	comp=Z,12nm,0.7s								
KSRS	**Korea Array**	**158.57**	**316**	PKP		PKPdf	18 14 30.8	+0.7	
	comp=Z,7.9nm,1.0s,baz=69,slow=0.9,SNR=13								
KSRS				PKPab		PKPab	18 15 06.0	+0.8	
	comp=Z,3.7nm,0.8s,baz=57,slow=4.6,SNR=6.2								
RAMN	**Ramite**	**158.97**	**75**	*e*P		PKPdf	18 14 31.2	+0.3	
ODAN	**Odare**	**159.68**	**75**	*e*P		PKPdf	18 14 31.9	+0.1	
	comp=Z,66nm,1.3s								
TAPN	**Taplejung**	**159.91**	**73**	*e*P		PKPdf	18 14 32.7	+0.7	
	comp=Z,96nm,1.7s								
GTA	**Gaotai**	**161.77**	**24**	PKP		PKPdf	18 14 34.4	+0.8	
GTA				PKS			18 18 06.8		
GTA				PP		PP	18 19 08.0	+6.1	
GTA				SKS		SKSdf	18 21 38.0	+0.8	
GTA				PP		PP			
	comp=Z,494nm,6.6s								
GTA				LR		LR			
	comp=N,1μm,19.8s								
GTA				LR		LR			
	comp=E,780nm,20.4s								
GTA				LR		LR			
	comp=Z,1μm,21.0s								
KKM	**Kota Kinabalu**	**161.86**	**202**	PFAKE			18 14 50.0	+15	
KKM				LR		LR			
	comp=Z,1μm,20.0s								
BJI	**Beijing**	**162.12**	**343**	PKP		PKPdf	18 14 34.0	0.0	
BJI				PP		PP	18 19 07.8	+4.2	
BJI				PP		PP			
	comp=Z,1μm,5.8s								
BJI				LR		LR			
	comp=N,1μm,22.6s								
BJI				LR		LR			
	comp=E,751nm,20.7s								
BJI				LR		LR			
	comp=Z,1μm,21.4s								
BJT	**Baijiatuao**	**162.15**	**343**	PFAKE			18 14 40.0	+6.0	
BJT				LR		LR			
	comp=Z,2μm,21.0s								
HHC	**Hu-ho-hao-te**	**162.17**	**355**	*e*PKP		PKPdf	18 14 35.3	+1.3	
HHC				XPKP			18 14 40.0		
HHC				PKS			18 18 06.9		
HHC				PP		PP	18 19 08.8	+5.1	
HHC				SKS		SKSdf	18 21 38.6	+1.1	
HHC				PP		PP			
	comp=Z,1μm,7.1s								
HHC				LR		LR			
	comp=N,603nm,26.2s								
HHC				LR		LR			
	comp=E,850nm,23.8s								
HHC				LR		LR			
	comp=Z,1μm,25.0s								
LSA	**Lhasa**	**162.36**	**64**	*e*PKPdf		PKPdf	18 14 35.3	+0.8	
LSA				*e*PP		PP	18 19 05.6	-1.0	
LSA				LR		LR			
	comp=Z,2μm,22.0s								
SHL	**Shillong**	**163.83**	**78**	*e*P		PKPdf	18 14 36.1	0.0	
SHL				*ex*		x	18 15 32.0		
TIY	**Taiyuan**	**165.16**	**351**	PKP		PKPdf	18 14 41.8	+4.9	
TIY				PP		PP			
	comp=Z,976nm,7.7s								
TIY				LR		LR			
	comp=N,1μm,15.1s								
TIY				LR		LR			
	comp=E,500nm,14.0s								
TIY				LR		LR			
	comp=Z,756nm,18.3s								
LZH	**Lanzhou**	**166.15**	**19**	*e*PKP		PKPdf	18 14 38.0	+0.3	
LZH				APKP			18 14 41.3		
LZH				PKP2		PKPab	18 15 40.8	+2.5	
LZH				PP		PP	18 19 29.0	+4.2	
LZH				SKS		SKSdf	18 21 39.4	-1.2	
LZH				PP		PP			
	comp=Z,651nm,5.2s								
LZH				LR		LR			
	comp=E,2μm,18.4s								
LZH				LR		LR			
	comp=Z,3μm,20.5s								
SSE	**Sheshan**	**166.81**	**310**	PKP		PKPdf	18 14 42.3	+3.9	
SSE				PKP2		PKPab	18 15 42.4	+0.9	
SSE				PP		PP	18 19 29.6	+0.3	
SSE				PP		PP			
	comp=Z,796nm,6.2s								
SSE				LR		LR			
	comp=N,1μm,22.9s								
SSE				LR		LR			
	comp=E,342nm,23.4s								
SSE				LR		LR			
	comp=Z,2μm,19.1s								
NJ2	**Nanjing**	**167.74**	**319**	*e*PKP		PKPdf	18 14 33.6	-5.5	
NJ2				APKP			18 14 44.4		
NJ2				XPKP			18 14 48.0		
NJ2				PP		PP			
	comp=Z,410nm,11.6s								
NJ2				LR		LR			
	comp=N,2μm,25.5s								
NJ2				LR		LR			
	comp=E,860nm,26.7s								
NJ2				LR		LR			
	comp=Z,850nm,26.6s								
TATO	**Taipei**	**168.80**	**282**	PFAKE			18 14 50.0	+10	
TATO				LR		LR			
	comp=Z,2μm,20.0s								
YHNB	**Yeheng**	**168.93**	**281**	PFAKE			18 14 50.0	+10	
YHNB				LR		LR			
	comp=Z,3μm,22.0s								
XAN	**Xi'an**	**169.05**	**2**	PKP		PKPdf	18 14 39.9	0.0	
XAN				PKP2		PKPab	18 15 55.0	+3.9	
XAN				PKS			18 18 10.3		
XAN				PP		PP	18 19 39.8	+0.4	
XAN				PP		PP			
	comp=Z,736nm,9.7s								
XAN				LR		LR			
	comp=N,239nm,21.4s								
XAN				LR		LR			
	comp=E,733nm,24.6s								
XAN				LR		LR			
	comp=Z,1μm,23.5s								
CM31	**Chiang Mai Arr**	**169.19**	**113**	PFAKE			18 14 50.0	+10	
CM31				LR		LR			
	comp=Z,1μm,20.0s								
CMAR	**Chiang Mai Arr**	**169.19**	**113**	PKP		PKPdf	18 14 40.6	+0.3	
	comp=Z,3.7nm,0.9s,baz=284,slow=2.0,SNR=22								
CMAR				PKPab		PKPab	18 15 52.5	0.0	
	comp=Z,5.7nm,1.0s,baz=249,slow=4.2,SNR=11								
CMAR				PP		PP	18 19 45.2	+3.1	
	comp=Z,3.7nm,1.1s,baz=264,slow=4.6,SNR=4.4								
CHTO	**Chiang Mai**	**169.35**	**111**	*e*PKPdf		PKPdf	18 14 39.1	-1.4	
CHTO				*e*PKPab		PKPab	18 15 52.3	-0.8	
CHTO				*e*SKP			18 18 16.1		
CHTO				*e*PP		PP	18 19 40.7	-2.2	
CHTO				LR		LR			
	comp=Z,1μm,21.0s								
CHTO	**Chiang Mai**	**169.35**	**111**	*e*PKIKP		PKPdf	18 14 39.1	-1.4	
CHTO				*e*			18 15 52.3		
CHTO				*e*			18 19 40.7		
CHTO				MLR		MLR			
	comp=Z,1μm,21.0s								
CD2	**Chengdu**	**170.70**	**32**	*e*PKP		PKPdf	18 14 41.3	+0.4	
CD2				APKP			18 14 45.8		
CD2				XPKP			18 14 49.9		
CD2				PKP2		PKPab	18 16 00.8	+2.2	
CD2				PP		PP	18 19 48.3	0.0	
CD2				SKS		SKSdf	18 21 41.8	-1.4	
CD2				PP		PP			
	comp=Z,660nm,7.2s								
CD2				LR		LR			
	comp=N,1μm,28.2s								
CD2				LR		LR			
	comp=E,1μm,26.4s								
CD2				LR		LR			
	comp=Z,1μm,24.6s								
WHN	**Wuhan**	**171.34**	**330**	PKP		PKPdf	18 14 42.3	+1.0	
WHN				PKP2		PKPab	18 16 02.4	+1.0	
WHN				PP		PP	18 19 52.3	+0.9	
WHN				LR		LR			
	comp=N,1μm,13.9s								
WHN				LR		LR			
	comp=E,4μm,19.7s								
WHN				LR		LR			
	comp=Z,4μm,20.0s								
QZH	**Quanzhou**	**171.40**	**284**	PKP		PKPdf	18 14 41.1	-0.4	
QZH				XPKP			18 14 49.8		
QZH				PP		PP	18 19 52.8	-0.5	
QZH				SKKS		SKKSac	18 26 38.9	+0.1	
QZH				SS		SS	18 40 54.0	-5.1	
QZH				PP		PP			
	comp=Z,2μm,7.7s								
QZH				LR		LR			
	comp=N,3μm,20.8s								
QZH				LR		LR			
	comp=E,3μm,19.7s								
QZH				LR		LR			
	comp=Z,3μm,19.6s								
ENH	**Enshi**	**172.81**	**359**	PFAKE			18 14 50.0	+8.0	
ENH				LR		LR			
	comp=Z,6.0nm,19.0s								
KMI	**Kunming**	**173.57**	**70**	PKP		PKPdf	18 14 42.9	+0.5	
KMI				APKP			18 14 44.3		
KMI				PKP2		PKPab	18 16 14.3	+2.6	
KMI				PKS			18 18 12.8		
KMI				PP		PP	18 20 06.9	+3.0	
KMI				SKS		SKSdf	18 21 42.8	-1.6	
KMI				PP		PP			
	comp=Z,578nm,7.4s								
KMI				LR		LR			
	comp=N,820nm,20.6s								
KMI				LR		LR			
	comp=E,1μm,21.3s								
KMI				LR		LR			
	comp=Z,2μm,20.2s								
GYA	**Guiyang**	**175.79**	**36**	PKP		PKPdf	18 14 39.3	-3.7	
GYA				PKP2		PKPab	18 16 21.3	0.0	
GYA				PKS			18 18 10.0		
GYA				PP		PP	18 20 15.9	+2.5	
GYA				PP		PP			
	comp=Z,560nm,7.2s								
GYA				LR		LR			
	comp=N,1μm,20.1s								
GYA				LR		LR			
	comp=E,830nm,18.2s								
GYA				LR		LR			
	comp=Z,1μm,18.6s								
QIZ	**Qiongzhong**	**175.97**	**186**	PFAKE			18 14 50.0	+6.7	
QIZ				LR		LR			
	comp=Z,2μm,20.0s								

ISCJB ***17*** *18:03:30.8±3.8, 2320S±008×707W±02, h2km±22km, mb4.1/4, Error ellipse: s-maj=31.8km s-min=13.9km az=179.4*

IDC ***17*** *18:03:32.1±0.8, 2318S×7079W, h0km, mb4.1/4, mb1 4.3/7, mb1mx4.1/19, mbtmp4.1/7, ML3.8/3, Error ellipse: s-maj=25.9km s-min=13.7km az=166.0*

ISC 17 18:03:33.1±4.0, 2319S±008×707W±02, h2km±23km, h8km±1km:pP-P, n18, σ0°83/12, mb4.1/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.76**	**71**	Pg		**Pg**		**18 04 06.4**	**-0.5**
	194nm,0.3s,baz=256,slow=13,SNR=20								
LVC				Lg				18 04 29.5	
	639nm,0.3s,baz=2.4,slow=23,SNR=14								
LPAZ	**La Paz**	**7.29**	**20**	Pn		**Pn**		**18 05 22.1**	**+1.5**
	1.8nm,0.3s,baz=181,slow=9.5,SNR=11								
CFAA	**Coronel Fontan**	**8.66**	**166**	Pn		**Pn**		**18 05 39.9**	**+0.5**
	0.1nm,0.3s,baz=14,slow=17,SNR=3.5								
SIV	**San Ignacio**	**11.57**	**53**	Pn		**Pn**		**18 06 19.1**	**-0.1**
	1.0nm,0.3s,baz=254,slow=14,SNR=7.1								
VNA3	**Neumayer Olymp**	**59.03**	**161**	*e*P		**P**		**18 13 34.5**	**+0.5**
VNA3				*e*		pP		18 13 36.9	+2.2
VNA3				*e*				18 13 39.1	
VNA2	**Neumayer--Watz**	**59.63**	**160**	*e*P		**P**		**18 13 38.8**	**+0.7**
	baz=295,slow=8.6								
VNA2				*e*		pP		18 13 41.2	+2.3
VNA2				*e*				18 13 44.6	
TXAR	**Lajitas Array**	**61.09**	**327**	P		**P**		**18 13 47.5**	**-1.1**
	0.8nm,0.8s,mb3.9,baz=149,slow=8.7,SNR=6.5								
SNAA	**Sanae**	**61.24**	**160**	*e*P		**P**		**18 13 47.9**	**-1.3**
SNAA	**Sanae**	**61.24**	**160**	*e*P		**P**		**18 13 47.9**	**-1.3**
SNAA				*e*		pP		18 13 50.4	+0.5
SNAA				*e*				18 13 53.7	
NVAR	**Mina Array Bea**	**75.81**	**323**	P		**P**		**18 15 20.8**	**+0.2**
	0.9nm,0.8s,mb3.8,baz=156,slow=5.8,SNR=6.2								
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P		**P**		**18 15 40.8**	**-0.9**
	3.1nm,0.8s,mb4.3,baz=253,slow=5.0,SNR=7.2								
BOSA	**Boshof**	**84.12**	**118**	P		**P**		**18 16 06.6**	**+0.6**
	2.9nm,0.9s,mb4.4,baz=275,slow=4.2,SNR=4.5								
ASAR	**Alice Springs**	**127.64**	**209**	PKP	PKPdf			18 22 39.5	-1.1
	1.3nm,0.7s,baz=137,slow=2.1,SNR=14								
WRA	**Warramunga Arr**	**130.65**	**212**	PKP	PKPdf			18 22 45.7	-0.8
	1.1nm,0.6s,baz=149,slow=1.5,SNR=13								
ZALV	**Zalesovo Beam**	**144.18**	**25**	PKP	PKPdf			18 23 10.1	-0.1
	1.2nm,0.7s,baz=330,slow=2.4,SNR=4.9								
AML	**Almayashu**	**144.91**	**49**	*e*PKPdf	PKPdf			18 23 10.9	-0.9
MKAR	**Makanchi Array**	**147.98**	**36**	PKPbc	PKPbc			18 23 18.8	-1.2
	1.5nm,0.7s,baz=317,slow=3.2,SNR=9.2								
MJAR	**Matsushiro Arr**	**151.73**	**305**	PKPbc	PKPbc			18 23 28.2	-1.2
	3.2nm,0.9s,baz=106,slow=1.8,SNR=8.3								

ISCJB ***17*** *18:04:33.8±2.0, 2316S±004×7072W±007, h5km±12km, mb4.7/50, Error ellipse: s-maj=11.2km s-min=6.6km az=168.0*

IDC ***17*** *18:04:38.3±3.6, 2311S×7066W, h20km±21km, mb4.4/12, mb1 4.5/15, mb1mx4.5/21, mbtmp4.4/15, ML4.2/3, Error ellipse: s-maj=20.7km s-min=16.3km az=84.0*

NEIC ***17*** *18:04:38.4±2.2, 2318S×7072W, h24km±15km, mb4.9/42, Error ellipse: s-maj=8.9km s-min=5.7km az=77.0*

MOS ***17*** *18:04:38.0±1.5, 2308S×7075W, h33km, mB5.3, Ms5.6, Msz5.5*

BJI ***17*** *18:04:40.4, 2320S×7070W, h35km, mB5.3, Ms5.6, Msz5.5*

ISC 17 18:04:36.2±2.0, 2314S±004×7069W±007, h8km±12km, n145, σ1°05/113, mb4.7/50, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.73**	**73**	Pg		**Pg**		**18 05 09.6**	**+0.2**
	497nm,0.3s,baz=247,slow=14,SNR=8.5								
LVC				Lg				18 05 32.5	
	2μm,0.3s,baz=175,slow=18,SNR=20								
LVC	**Limon Verde**	**1.73**	**73**	*e*Pg		**Pg**		**18 05 08.8**	**-0.5**
LVC				*e*Sg		**Sg**		**18 05 31.8**	**0.0**
LCO	**Las Campanas**	**5.84**	**180**	*e*Pn		**Pn**		**18 06 01.3**	**-1.9**
LPAZ	**La Paz**	**7.23**	**20**	Pn		**Pn**		**18 06 24.9**	**+2.6**
	2.6nm,0.3s,baz=228,slow=2.2,SNR=7.7								
LPAZ	**La Paz**	**7.23**	**20**	*e*P		**Pn**		**18 06 25.6**	**+3.3**
CFAA	**Coronel Fontan**	**8.71**	**166**	Pn		**Pn**		**18 06 42.8**	**+0.3**
	0.4nm,0.3s,baz=350,slow=15,SNR=3.2								
CFAA				Sn		**Sn**		**18 08 38.6**	**+18**
	0.7nm,0.3s,baz=146,slow=14,SNR=9.5								
SIV	**San Ignacio**	**11.52**	**54**	Pn		**Pn

JCT Junction City 60.19 331 *e*P **P 18 14 44.4 -0.4**
comp=Z,23nm,1.0s,mb5.2
JCT Junction City 60.19 331 *e*P **P 18 14 44.4 -0.4**
JCT pmax pmax
comp=Z,23nm,1.0s,mb5.2
TXAR Lajitas Array 61.06 327 P **P 18 14 50.9 +0.1**
comp=Z,2.4nm,0.9s,mb4.3,baz=145,slow=8.9,SNR=7.1
WVT Waverly 61.14 344 *e*P **P 18 14 48.6 -2.5**
comp=Z,347nm,1.0s
SNAA Sanae 61.28 160 *e*P **P 18 14 51.2 -0.5**
SNAA *e* 18 14 57.9
SNAA *e* 18 15 00.8
SNAA Sanae 61.28 160 *e*P **P 18 14 51.0 -0.7**
comp=Z,16nm,0.9s,mb5.2
SNAA Sanae 61.28 160 *e*P **P 18 14 51.0 -0.7**
SNAA pmax pmax
comp=Z,16nm,0.9s
MIAR Mount Ida 61.35 339 *e*P **P 18 14 51.9 -0.7**
comp=Z,17nm,1.2s,mb5.1
MIAR Mount Ida 61.35 339 *e*P **P 18 14 51.9 -0.7**
MIAR pmax pmax
comp=Z,17nm,1.2s,mb5.0
WCI Wyandotte Cave 62.78 346 *e*P **P 18 15 00.4 -1.7**
comp=Z,8.9nm,0.8s,mb5.0
WCI Wyandotte Cave 62.78 346 *e*P **P 18 15 00.4 -1.7**
WCI pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
WMOK Wichita Mounta 63.44 334 P **P 18 15 05.1 -1.4**
FVM French Village 63.57 343 *e*P **P 18 15 05.4 -1.9**
comp=Z,11nm,0.8s,mb4.9
FVM French Village 63.57 343 *e*P **P 18 15 05.4 -1.9**
FVM pmax pmax
comp=Z,11nm,0.8s,mb4.9
ACSO Alum Creek Sta 64.08 350 P **P 18 15 08.7 -1.9**
MAIT Maitri 65.86 159 *e*P **P 18 15 21.0 -1.0**
NVL N'lazarevskaya 65.90 159 P **P 18 15 28.1 +5.9**
NVL pmax pmax
comp=Z,17nm,1.1s,mb5.0
BNM Barren Site 66.44 328 *e*P **P 18 15 27.3 +1.3**
LPM Los Pinos Moun 66.57 328 *e*P **P 18 15 26.6 -0.4**
LPM *e* 18 15 33.7
LAZ Ladron 66.89 328 *e*P **P 18 15 29.1 +0.2**
ANMO Albuquerque 67.00 329 *e*P **P 18 15 30.0 +0.3**
comp=Z,11nm,1.3s,mb4.7
ANMO Albuquerque 67.00 329⇑ *e*P **P 18 15 30.9 +1.2**
QSPA South Pole Qui 67.06 180 *e*P **P 18 15 30.7 +1.2**
comp=Z,25nm,1.3s,mb5.1
TUC Tucson 67.14 324 *e*P **P 18 15 30.9 +0.3**
comp=Z,9.2nm,1.2s,mb4.7
TUC Tucson 67.14 324 *e*P **P 18 15 30.9 +0.3**
TUC pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
CBKS Cedar Bluff 67.37 336 *e*P **P 18 15 31.3 -0.6**
comp=Z,16nm,0.9s,mb5.0
CBKS Cedar Bluff 67.37 336 *e*P **P 18 15 31.3 -0.6**
CBKS pmax pmax
comp=Z,15nm,0.9s,mb5.0
SDCO Great Sand Dun 68.84 331 *e*P **P 18 15 42.0 +0.8**
comp=Z,11nm,1.0s,mb4.8
MVCO Mesa Verde 69.80 329 *e*P **P 18 15 48.0 +0.9**
comp=Z,11nm,1.1s,mb4.7
WUAZ Wupatki 69.91 326 *e*P **P 18 15 49.2 +1.3**
comp=Z,79nm,1.1s,mb5.6
RW3 Ridgway 70.25 330 *e*P **P 18 15 58.4 +8.5**
PV01 Paradox Valley 70.57 329 *e*P **P 18 15 53.0 +1.2**
SMCO Snowmass 70.68 331 *e*P **P 18 15 53.9 +1.4**
comp=Z,12nm,1.0s,mb4.8
DBIC Dimbokro 70.78 74 P **P 18 15 53.5 -0.2**
comp=Z,6.8nm,0.7s,mb4.7,baz=209,slow=5.8,SNR=7.3
DBIC Dimbokro 70.78 74 *e*P **P 18 15 52.4 -1.3**
comp=Z,8.7nm,0.8s,mb4.7
DBIC Dimbokro 70.78 74 *e*P **P 18 15 52.4 -1.3**
DBIC pmax pmax
comp=Z,9.0nm,0.8s
PFO Pinyon Flat Ob 71.30 321 *e*P **P 18 15 55.7 -0.6**
comp=Z,2.9nm,0.8s,mb4.3
PFO *e* 18 16 03.6
PFO Pinyon Flat Ob 71.30 321 *e*P **P 18 15 55.7 -0.7**
PFO *e* 18 16 03.6
PFO pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SRU San Rafael 72.28 328 *e*P **P 18 16 02.1 0.0**
comp=Z,11nm,1.0s,mb4.7
SRU San Rafael 72.28 328 *e*P **P 18 16 02.1 0.0**
SRU pmax pmax
comp=Z,11nm,1.0s,mb4.7
MSU Marysvale 72.62 327 *e*P **P 18 16 05.5 +1.3**
ARUT Antelope Range 72.72 326 *e*P **P 18 16 04.7 -0.1**
RSSD Black Hills 73.58 336 *e*P **P 18 16 09.4 -0.3**
comp=Z,7.9nm,1.0s,mb4.6
RSSD Black Hills 73.58 336 *e*P **P 18 16 09.4 -0.3**
RSSD pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TPNV Topopah Spring 73.59 323 *e*P **P 18 16 10.8 +0.8**
comp=Z,12nm,1.1s,mb4.7
TPNV Topopah Spring 73.59 323 *e*P **P 18 16 10.8 +0.8**
TPNV pmax pmax
comp=Z,12nm,1.1s,mb4.7
SBA Scott Base 73.92 191 *e*P **P 18 16 11.7 +0.3**
comp=Z,33nm,1.7s,mb5.0
SBA Scott Base 73.92 191 *e*P **P 18 16 11.7 +0.3**
SBA pmax pmax
comp=Z,33nm,1.7s,mb5.0
DUG Dugway 74.23 328 *e*P **P 18 16 11.0 -2.7**
comp=Z,7.0nm,1.0s,mb4.5
DUG Dugway 74.23 328 *e*P **P 18 16 11.0 -2.7**
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
HWUT Hardware Ranch 74.72 329 *e*P **P 18 16 16.0 -0.5**
comp=Z,9.0nm,0.9s,mb4.7
PDAR Pinedale Array 74.73 331 P **P 18 16 16.1 -0.3**
comp=Z,1.1nm,1.0s,mb3.8,baz=142,slow=7.5,SNR=4.4
BGU Big Grassy Mou 74.90 328 *e*P **P 18 16 17.4 -0.1**
VNDA Vanda 74.95 190 P **P 18 16 19.0 +1.6**
comp=Z,2.3nm,1.0s,mb4.1,baz=121,slow=5.9,SNR=6.2
VNDA Vanda 74.95 190 *e*P **P 18 16 18.2 +0.8**
comp=Z,5.4nm,1.2s,mb4.3
VNDA Vanda 74.95 190 *e*P **P 18 16 18.2 +0.8**
VNDA pmax pmax
comp=Z,5.0nm,1.2s
AHID Auburn Hatcher 75.42 330 *e*P **P 18 16 20.8 +0.4**
comp=Z,3.2nm,0.5s,mb4.5
SYO Syowa Base 75.55 160⇓ *e*P **P 18 16 18.0 -3.0**
SYO Syowa Base 75.55 160⇓ *e*pP pP 18 16 27.2 +3.7
REDW Red Top Meadow 75.78 331 *e*P **P 18 16 22.6 0.0**
comp=Z,5.6nm,0.8s,mb4.5
NVAR Mina Array Bea 75.79 323 P **P 18 16 23.9 +1.2**
comp=Z,1.9nm,0.8s,mb4.1,baz=165,slow=6.8,SNR=10.0
LOHW Long Hollow 75.86 331 *e*P **P 18 16 23.1 +0.1**
comp=Z,6.7nm,1.0s,mb4.5
TPAW Teton Pass 75.92 331 *e*P **P 18 16 23.3 0.0**
comp=Z,11nm,1.0s,mb4.8
RRI2 Red Ridge 75.97 331 *e*P **P 18 16 24.6 +0.9**
comp=Z,11nm,1.0s,mb4.7
RLMT Red Lodge 76.50 333 *e*P **P 18 16 26.3 -0.2**
comp=Z,7.6nm,0.9s,mb4.6
LAO LASA Array 76.57 336 *e*P **P 18 16 26.3 -0.7**
comp=Z,12nm,0.9s,mb4.8
CMB Columbia Colle 76.68 322 P **P 18 16 27.7 0.0**
YMR Madison River 76.86 332 *e*P **P 18 16 30.0 +1.4**
comp=Z,15nm,1.0s,mb4.9
HLID Hailey 77.57 329 *e*P **P 18 16 33.3 +0.7**
comp=Z,11nm,1.0s,mb4.8
HLID *e* 18 16 40.2
MCMT McKenzie Canyo 77.82 331 *e*P **P 18 16 35.3 +1.3**
DLMT Dillon 78.12 331 *e*P **P 18 16 36.2 +0.6**
comp=Z,4.9nm,0.6s,mb4.6
HRY Holter Researc 78.84 333 *e*P **P 18 16 39.5 -0.1**
SUR Sutherland 79.17 121 P **P 18 16 41.1 -0.9**
comp=Z,18nm,1.0s,mb5.0
TOA0 Torodi Ar. Sit 79.46 71 *e*P **P 18 16 43.2 -0.5**
TORD Torodi Ar. Bea 79.46 71 P **P 18 16 43.3 -0.4**
comp=Z,7.3nm,0.8s,mb4.7,baz=252,slow=5.4,SNR=12
BMO Blue Mountains 79.92 328 *e*P **P 18 16 45.9 +0.3**
comp=Z,9.0nm,1.0s,mb4.7
TSUM Tsumeb 81.15 107 P **P 18 16 52.9 +0.1**
comp=Z,6.1nm,1.0s,mb4.5,baz=244,slow=4.6,SNR=4.9
TSUM Tsumeb 81.15 107 *e*P **P 18 16 52.8 -0.1**
comp=Z,17nm,1.4s,mb4.8
WALA Waterton Lakes 81.55 333 *e*P **P 18 16 54.2 0.0**
comp=Z,9.8nm,0.9s,mb4.7
NEW Newport 82.35 331 P **P 18 16 55.5 -2.8**
OD2 Odessa Site #2 82.44 329 *e*P **P 18 16 59.2 +0.3**
MAW Mawson 83.23 164 P **P 18 17 03.5 +0.7**
comp=Z,3.4nm,0.7s,mb4.5,baz=310,slow=6.5,SNR=4.1
MAW Mawson 83.23 164 *e*P **P 18 17 02.1 -0.8**
comp=Z,19nm,0.9s,mb5.1
MAW Mawson 83.23 164 *e*P **P 18 17 02.1 -0.8**
MAW pmax pmax
comp=Z,19nm,0.9s
BOSA Boshof 84.13 118 P **P 18 17 08.8 +0.5**
comp=Z,3.2nm,0.6s,mb4.6,baz=282,slow=5.1,SNR=9.8
EDM Edmonton 84.56 336 *e*P **P 18 17 08.1 -1.5**
YKA Yellowknife Ar 92.19 341 P **P 18 17 44.1 -1.9**
comp=Z,4.2nm,0.8s,mb4.8,baz=142,slow=4.9,SNR=4.7
OBN Obninsk 118.48 39 *i* PKIKP PKiKP 18 23 30.0 +5.8
OBN pmax pmax
comp=Z,5.0nm,0.9s
BILL Bilibino 123.42 338 *e*PKIKP PKPdf 18 23 34.2 +0.9
BILL pmax pmax
comp=Z,4.0nm,1.3s
ASAR Alice Springs 127.69 209 PKP PKPdf 18 23 42.7 -0.2
comp=Z,3.6nm,0.8s,baz=130,slow=2.2,SNR=18
TIXI Tiksi 130.20 352 *i* PKIKP PKiKP 18 23 50.0 +3.0
WRA Warramunga Arr 130.70 212 PKP PKPdf 18 23 48.5 -0.2
comp=Z,3.6nm,0.9s,baz=160,slow=1.7,SNR=12
KURK Kurchatov 143.60 33 *i* PKIKP PKiKP 18 24 16.7 +1.9
ZAA0 Zalesovo Array 144.13 25 *e*PKPdf PKPdf 18 24 10.3 -2.0
ZALV Zalesovo Beam 144.13 25 PKP PKPdf 18 24 11.4 -0.8
comp=Z,5.3nm,0.9s,baz=304,slow=2.7,SNR=7.2
KRAR Krasnoyarsk 145.00 16 *i* PKIKP PKiKP 18 24 17.8 +0.3
BOD Bodaibo 145.19 356 *e*PKIKP PKPdf 18 24 12.4 -1.6
BOD pmax pmax
comp=Z,26nm,0.8s
MK31 Makanchi Array 147.93 36 *e*PKPbc PKPbc 18 24 20.7 -1.2
MKAR Makanchi Array 147.93 36 PKPbc PKPbc 18 24 22.2 +0.2
comp=Z,3.2nm,0.6s,baz=323,slow=3.2,SNR=9.5
KAPI Kappang 150.21 201 PKPbc PKPbc 18 24 28.6 -0.2
comp=Z,7.9nm,0.4s,baz=214,slow=16,SNR=5.2
KAPI Kappang 150.21 201 *e*PKPbc PKPbc 18 24 28.6 -0.3
HYB Hyderabad 150.63 95 *i* PKP PKPbc 18 24 30.0 +0.4
TLY Talaya 151.18 7 *i* PKIKP PKPbc 18 24 33.1 +3.2
MJAR Matsushiro Arr 151.72 305 PKPbc PKPbc 18 24 31.7 0.0
comp=Z,6.5nm,0.8s,baz=96,slow=1.8,SNR=12
MAT Matsushiro 151.72 305 PKP PKPbc 18 24 31.3 -0.3
ZAK Zakamensk 152.41 8 *e*PKIKP PKPbc 18 24 32.2 -0.5
ZAK pmax pmax
comp=Z,6.0nm,1.2s
HIA Hailar 152.66 345⇑ *i*PKIKP PKPbc 18 24 33.0 -0.3
WMQ Urumqi 152.76 36 *e*PKP PKPdf 18 24 24.0 -2.6
MDJ Mudanjiang 152.89 327 PKP PKPdf 18 24 26.1 -0.7
SONM Songino Array 155.25 5 PKP PKPdf 18 24 31.2 +1.2
comp=Z,0.8nm,0.8s,baz=100,slow=0.8,SNR=3.0
CN2 Changchun 155.47 331 *e*PKP PKPdf 18 24 29.6 -0.8
CN2 APKP 18 24 40.4
CN2 PP PP 18 28 35.4 +3.3
CN2 PP PP
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,700nm,19.0s
CN2 LR LR
comp=E,1μm,19.0s
CN2 LR LR
comp=Z,1μm,21.0s
KSRS Korea Array 158.57 316 PKP PKPdf 18 24 33.0 -1.7
comp=Z,1.8nm,0.8s,baz=115,slow=1.8,SNR=4.8
BJI Beijing 162.18 343 PKP PKPdf 18 24 38.4 -0.1
HHC Hu-ho-hao-te 162.24 354 *e*PKP PKPdf 18 24 35.6 -2.9
HHC APKP 18 24 45.8
HHC XPKP 18 24 49.3
HHC PKS 18 28 07.9
HHC PP PP 18 29 10.9 +2.4
HHC SKS SKSdf 18 31 36.0 -7.7
HHC PP PP
comp=Z,220nm,13.1s
HHC LR LR
comp=N,236nm,19.0s
HHC LR LR
comp=E,300nm,19.0s
HHC LR LR
comp=Z,637nm,20.2s
LZH Lanzhou 166.26 19 *e*PKP PKPdf 18 24 40.0 -2.3
LZH XPKP 18 24 54.6
LZH PKP2 PKPab 18 25 43.4 +0.2
LZH *e*PP PP 18 29 32.0 +2.2
LZH PP PP
comp=Z,83nm,7.9s
LZH LR LR
comp=N,123nm,18.0s
LZH LR LR
comp=Z,167nm,20.3s
NJ2 Nanjing 167.74 318 *e*PKP PKPdf 18 24 41.5 -2.0
CMAR Chiang Mai Arr 169.25 114 PKP PKPdf 18 24 44.7 -0.2
comp=Z,1.6nm,1.2s,baz=248,slow=3.8,SNR=3.8
CMAR PKPab PKPab 18 25 57.8 +0.7
comp=Z,0.5nm,0.9s,baz=210,slow=7.1,SNR=3.4
CD2 Chengdu 170.82 31 *e*PKP PKPdf 18 24 42.8 -2.7
CD2 XPKP 18 24 56.8
CD2 PKP2 PKPab 18 26 03.9 +0.4
CD2 PP PP 18 29 55.4 +2.1
CD2 SKS SKSdf 18 31 41.0 -8.4
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,180nm,18.2s
CD2 LR LR
comp=Z,200nm,16.8s
KMI Kunming 173.69 70 PKP PKPdf 18 24 45.3 -1.6
GYA Guiyang 175.92 35 *e*PKP PKPdf 18 24 45.4 -2.2
GYA APKP 18 24 54.3
GYA XPKP 18 24 58.3
GYA PKP2 PKPab 18 26 25.8 -0.5
GYA PP PP 18 30 19.8 +1.4
GYA PP PP
comp=Z,90nm,7.5s
GYA LR LR
comp=N,179nm,20.8s
GYA LR LR
comp=E,130nm,21.6s
GYA LR LR
comp=Z,160nm,20.5s

GCMT ***17*** *18:13:12.6±0.3,2303S×7090W,h24km±1km,MW5.2/72, Moment Tensor Solution. s12,c16; s72,c105; Duration: 1!0 Moment tensor: Scale 10¹⁷Nm; Mrr0.61±.05; Mθθ-0.02±.03; Mϕϕ-0.59±.03; Mrθ-0.47±.04; Mθϕ-0.17±.01; Mϕr-0.41±.04; Best double couple: M₀0.87800×10¹⁷ NP1:ϕ₁357.00000°,δ28.00000°,λ53.00000°. NP2: ϕ₂217.00000°,δ68.00000°,λ107.00000°. Principal axes: T 0.9160, Plg63.0000°, Azm154.0000°; N -0.0760, Plg16.0000°, Azm30.0000°; P -0.8400, Plg21.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***17*** *18:13:12.6±2.4,2315S×7062W,h7km±14km,mb5.2/81 Error ellipse: s-maj=6.7km s-min=5.0km az=55.0*

IDC ***17*** *18:13:13.8±3.1,2310S×7067W,h12km±18km,mb4.8/17, mb1 4.9/21,mb1mx4.9/24,mbtmp4.8/21,ML4.6/4,MS4.7/4, Ms1 4.6/4,ms1mx4.1/31,Error ellipse: s-maj=16.2km s-min=12.7km az=74.0*

LDG ***17*** *18:13:13.6±0.3,2226S×7086W,h10km,Mb5.2/18, Ms4.4/1,Error ellipse: s-maj=25.7km s-min=9.2km az=169.0*

GUC ***17*** *18:13:13.8±1.4,2312S×7070W,h43km±4km,ML5.2, MS4.2*

ISCJB ***17*** *18:13:13.2±1.5,2311S±003×7062W±004,h19km±10km, mb5.1/98,MS5.1/8,Error ellipse: s-maj=6.3km s-min=4.6km az=178.8*

BJI ***17*** *18:13:15.5,2320S×7060W,h20km,mB5.5,Ms5.7,Msz5.4*

MOS ***17*** *18:13:16.3±1.1,2283S×7060W,h33km,mb5.4/47,Error ellipse: s-maj=11.5km s-min=7.6km az=91.1*

DJA ***17*** *18:13:22.3±0.0,2444S×6994W,h10km,Mwp6.3/1*

ISC 17 18:13:16.5±0.6,2313S±003×7059W±004,h30km±4km, h29km±2.7km:pP-P,n357,σ1!02/257,mb5.1/98,MS5.1/8, 12C-12D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time h m s	Res ISC
				Op	ISC		
MECH	**Mejillones**	**0.13**	**80**⇓	*e*P	**Pb**	**18 13 21.4**	**-0.7**
MECH				*i* S	**Sb**	**18 13 27.6**	**+1.8**
MECH				AML	AML	18 13 28.8	
	comp=N,433μm,0.6s						
PB04	**Plate Boundary**	**1.33**	**50**⇓	*e*P	**Pn**	**18 13 31.6**	**-7.5**
PB04				*e*S	**Sn**	**18 13 45.2**	**-11**
PB04				AML	AML	18 13 48.6	
	comp=E,79μm,0.7s						
CPN1	**Cerro Paranal**	**1.50**	**173**	*e*P	**Pn**	**18 13 39.9**	**-1.6**
CPN1				*i* S	**Sn**	**18 14 00.2**	**+0.2**
CPN1				AML	AML	18 14 04.4	
	comp=E,81μm,0.5s						
PB07	**Plate Boundary**	**1.54**	**25**	*e*P	**Pn**	**18 13 41.0**	**-0.9**
PB07				*i* S	**Sn**	**18 14 00.9**	**0.0**
LVC	**Limon Verde**	**1.63**	**72**	Pg	**Pn**	**18 13 45.8**	**+2.6**
	comp=E,577nm,0.3s,baz=254,slow=11,SNR=205						
LVC				Lg		18 14 08.0	
	comp=E,6μm,0.3s,baz=252,slow=13,SNR=9.9						
LVC	**Limon Verde**	**1.63**	**72**	*e*Pn	**Pn**	**18 13 45.6**	**+2.4**
LVC				*e*Sn	**Sn**	**18 14 06.5**	**+3.2**
SPCH	**San Pedro de A**	**2.21**	**85**	*e*P	**Pn**	**18 13 57.4**	**+6.2**
SPCH				*i* S	**Sn**	**18 14 29.0**	**+11**
PB01	**Plate Boundary**	**2.31**	**26**⇑	*e*P	**Pn**	**18 13 52.3**	**-0.3**
PB01				*e*S	**Sn**	**18 14 19.7**	**-0.4**
PB01				AML	AML	18 14 31.6	
	comp=E,14μm,0.8s						
LCO	**Las Campanas**	**5.86**	**181**	*e*P	**Pn**	**18 14 36.9**	**-4.5**
LPAZ	**La Paz**	**7.19**	**19**	Pn	**Pn**	**18 15 01.7**	**+2.1**
	comp=E,8.1nm,0.3s,baz=228,slow=7.8,SNR=111						
LPAZ				LR	LR	18 17 31.2	
	comp=E,208nm,21.2s,baz=22,slow=36						
CFAA	**Coronel Fontan**	**8.70**	**167**	Pn	**Pn**	**18 15 18.4**	**-1.9**
	comp=E,0.7nm,0.3s,baz=343,slow=11,SNR=27						
CFAA				Sn	**Sn**	**18 17 13.3**	**+16**
	comp=E,1.0nm,0.3s,baz=158,slow=18,SNR=5.0						
CFAA	**Coronel Fontan**	**8.70**	**167**	Pn	**Pn**	**18 15 18.4**	**-1.9**
CFAA				Sn	**Sn**	**18 17 13.3**	**+16**
PEL	**Peldehue**	**9.98**	**180**	*e*P	**Pn**	**18 15 32.0**	**-5.8**
PEL				AMS	AMS	18 19 45.6	
	comp=N,4μm,17.1s						
FCH	**Farellones**	**10.16**	**179**	*e*P	**Pn**	**18 15 37.4**	**-3.0**
FCH				AMS	AMS	18 20 35.5	
	comp=E,3μm,19.8s						
CLCH	**Cerro Calan**	**10.23**	**180**	*e*P	**Pn**	**18 15 44.1**	**+2.8**
CLCH				AMS	AMS	18 20 37.5	
	comp=E,2μm,18.1s						
SIV	**San Ignacio**	**11.44**	**53**	Pn	**Pn**	**18 15 57.2**	**-0.7**
	comp=E,9.4nm,0.3s,baz=252,slow=12,SNR=88						
SIV				Sn	**Sn**	**18 18 06.5**	**+1.8**
	baz=197,slow=13,SNR=3.0						
NNA	**Nana**	**12.58**	**331**	Pn	**Pn**	**18 16 10.1**	**-3.4**
	comp=E,5.1nm,0.3s,baz=173,slow=16,SNR=6.3						
NNA				Sn	**Sn**	**18 18 19.4**	**-13**
	comp=E,2.4nm,0.3s,baz=187,slow=20,SNR=2.9						
NNA				LR	LR	18 20 08.3	
	comp=E,3μm,21.7s,baz=154,slow=33						
NNA	**Nana**	**12.58**	**331**	*e*Pn	**Pn**	**18 16 09.2**	**-4.3**
NNA				*e*Sn	**Sn**	**18 18 19.3**	**-13**
PLCA	**Paso Flores**	**17.55**	**180**	P	**Pn**	**18 17 17.1**	**-1.8**
	comp=E,0.7nm,0.3s,baz=4.9,slow=14,SNR=15						
ATAH	**Atahualpa**	**17.71**	**334**	P	**Pn**	**18 17 18.4**	**-2.6**
	comp=E,1.0nm,0.3s,baz=161,slow=6.5,SNR=8.4						
SPB	**Sao Paulo**	**21.27**	**96**	*e*P	**P**	**18 18 00.4**	**-0.1**
BDFB	**Brasilia**	**22.54**	**75**	P	**P**	**18 18 13.8**	**-0.4**
	comp=E,17nm,0.7s,mb4.6,baz=239,slow=14,SNR=21						
BDFB				LR	LR	18 27 47.5	
	comp=E,1μm,19.4s,MS4.3,baz=237,slow=39						
OTAV	**Otavalo**	**24.45**	**341**	*e*P	**P**	**18 18 33.0**	**+0.1**
	comp=E,92nm,1.5s,mb5.0						
CAM4	**Nova Friburgo**	**25.84**	**94**⇓	*i*P	**P**	**18 18 44.6**	**-0.9**
CAM4				*i*		18 18 48.6	
CAM4				*i*	pP	18 18 51.7	-2.5
CAM4				*i*		18 18 56.3	
CAM4				*i*		18 19 10.1	
CAM4				*i*		18 19 11.3	
CAM4				*i*		18 19 29.4	
CAM4				*i*		18 19 45.9	
CAM4				*i*		18 19 57.7	
USHA	**Ushuaia**	**31.70**	**178**	P	**P**	**18 19 36.9**	**-0.4**
	comp=E,20nm,0.9s,mb5.0,baz=5.3,slow=5.8,SNR=5.6						
RCBR	**Riachuelo**	**37.58**	**68**	*e*P	**P**	**18 20 29.4**	**+0.8**
	comp=E,102nm,0.7s,mb5.7						
CPD	**Cerro la Pandu**	**41.17**	**7**	*e*P	**P**	**18 20 55.9**	**-2.5**
	comp=E,23nm,0.8s,mb4.8						
CPD	**Cerro la Pandu**	**41.17**	**7**	*e*P	**P**	**18 20 55.9**	**-2.5**
CPD				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
SJG	**San Juan**	**41.22**	**6**	*e*P	**P**	**18 20 55.1**	**-3.7**
	comp=Z,80nm,0.9s,mb5.3						
SJG	**San Juan**	**41.22**	**6**	*e*P	**P**	**18 20 55.1**	**-3.7**
SJG				pmax	pmax		
	comp=Z,80nm,0.9s						
MTP	**Monte Pirata**	**41.27**	**7**	*e*P	**P**	**18 20 56.6**	**-2.6**
PMSA	**Palmer Station**	**41.86**	**176**	P	**P**	**18 21 03.2**	**-0.3**
	comp=Z,24nm,0.8s,mb4.9,baz=2.0,slow=11,SNR=4.3						
PMSA				LR	LR	18 36 29.6	
	comp=Z,960nm,19.4s,MS4.7,baz=49,slow=33						
PMSA	**Palmer Station**	**41.86**	**176**	P	**P**	**18 21 03.2**	**-0.3**
PMSA				LR	LR	18 36 29.6	
BRAL	**Brewton**	**56.10**	**343**	*e*P	**P**	**18 22 53.2**	**+0.2**
	comp=Z,86nm,0.6s,mb6.0						
LRAL	**Lakeview Retre**	**58.00**	**344**	*e*P	**P**	**18 23 05.1**	**-1.4**
	comp=Z,17nm,1.1s,mb5.0						
VNA3	**Neumayer Olymp**	**59.05**	**161**	*e*P	**P**	**18 23 13.8**	**+0.4**
VNA3				*e*		18 23 16.5	
VNA3				*e*		18 23 19.6	
VNA3				*e*		18 23 49.8	
VNA1	**Neumayer--Stat**	**59.29**	**160**	*e*P	**P**	**18 23 15.8**	**+0.8**
VNA1				*e*		18 23 19.1	
VNA1				*e*		18 23 20.8	
VNA2	**Neumayer--Watz**	**59.65**	**160**	*e*P	**P**	**18 23 18.0**	**+0.5**
	baz=291,slow=8.7						
VNA2				*e*		18 23 21.7	
VNA2				*e*	pP	18 23 26.2	-0.5
VNA2				*e*		18 25 53.2	
CPCT	**Cooper Cave**	**59.73**	**347**	*e*P	**P**	**18 23 16.4**	**-2.0**
SWET	**Sewanee**	**59.82**	**345**	*e*P	**P**	**18 23 17.4**	**-1.6**
JCT	**Junction City**	**60.23**	**331**	*e*P	**P**	**18 23 21.7**	**-0.3**
	comp=Z,18nm,0.9s,mb5.1						
JCT	**Junction City**	**60.23**	**331**	*e*P	**P**	**18 23 21.7**	**-0.3**
JCT				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
BLA	**Blacksburg**	**60.73**	**351**	*e*P	**P**	**18 23 23.9**	**-1.4**
	comp=Z,19nm,1.0s,mb5.2						
BLA	**Blacksburg**	**60.73**	**351**	*e*P	**P**	**18 23 23.9**	**-1.3**
BLA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
TXAR	**Lajitas Array**	**61.10**	**327**	P	**P**	**18 23 27.6**	**-0.4**
	comp=Z,3.1nm,0.9s,mb4.4,baz=148,slow=8.2,SNR=24						
WVT	**Waverly**	**61.15**	**344**	*e*P	**P**	**18 23 25.9**	**-2.2**
	comp=Z,27nm,0.9s,mb5.4						
WVT	**Waverly**	**61.15**	**344**	*e*P	**P**	**18 23 25.9**	**-2.2**
WVT				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.4						
SNAA	**Sanae**	**61.27**	**160**	*e*P	**P**	**18 23 27.3**	**-1.2**
SNAA				*e*		18 23 30.1	
SNAA				*e*		18 23 31.9	
SNAA				*e*		18 26 04.3	
SNAA	**Sanae**	**61.27**	**160**	*e*P	**P**	**18 23 26.5**	**-2.0**
MIAR	**Mount Ida**	**61.37**	**338**	*e*P	**P**	**18 23 28.4**	**-1.3**
	comp=Z,21nm,1.0s,mb5.2						
MIAR	**Mount Ida**	**61.37**	**338**	*e*P	**P**	**18 23 28.4**	**-1.3**
MIAR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
WCI	**Wyandotte Cave**	**62.79**	**346**	*e*P	**P**	**18 23 36.8**	**-2.3**
	comp=Z,22nm,0.8s,mb5.3						
WCI	**Wyandotte Cave**	**62.79**	**346**	*e*P	**P**	**18 23 36.8**	**-2.3**
WCI				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3						
USIN	**University of**	**62.85**	**345**	*e*P	**P**	**18 23 38.3**	**-1.3**
	comp=Z,38nm,1.0s,mb5.5						
FVM	**French Village**	**63.58**	**343**	*e*P	**P**	**18 23 42.4**	**-1.9**
	comp=Z,25nm,0.7s,mb5.4						
FVM	**French Village**	**63.58**	**343**	*e*P	**P**	**18 23 42.4**	**-2.0**
FVM				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.3						
GDL2	**Guadalupe Moun**	**63.79**	**328**	*e*P	**P**	**18 23 46.6**	**+0.7**
CCM	**Cathedral Cave**	**63.88**	**342**	*e*P	**P**	**18 23 44.7**	**-1.6**
	comp=Z,87nm,0.6s,mb6.0						
ACSO	**Alum Creek Sta**	**64.08**	**349**	*e*P	**P**	**18 23 46.4**	**-1.2**
	comp=Z,36nm,0.8s,mb5.5						
MAIT	**Maitri**	**65.84**	**159**	*e*P	**P**	**18 23 57.3**	**-1.5**
NVL	**N'lazarevskaya**	**65.88**	**159**	*e*P	**P**	**18 23 59.8**	**+0.8**
NVL				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.5						
BNM	**Barren Site**	**66.48**	**328**	*e*P	**P**	**18 24 03.8**	**+0.5**
LPM	**Los Pinos Moun**	**66.61**	**328**	*e*P	**P**	**18 24 04.5**	**+0.4**
LPM				*e*		18 24 20.2	
LAZ	**Ladron**	**66.93**	**328**	*e*P	**P**	**18 24 07.0**	**+0.8**
ANMO	**Albuquerque**	**67.04**	**328**	*e*P	**P**	**18 24 07.7**	**+0.8**
	comp=Z,58nm,2.0s,mb5.3						
ANMO	**Albuquerque**	**67.04**	**328**	*e*P	**P**	**18 24 07.7**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,58nm,2.0s						

QSPA **South Pole Qui** 67.07 180⇑ *iP* P 18 24 07.1 +0.6
comp=Z,45nm,0.8s,mb5.5
QSPA *eP*P PP 18 26 35.6 +1.6
TUC Tucson 67.19 324 *eP* P 18 24 08.4 +0.5
CBKS Cedar Bluff 67.40 336⇓ *iP* P 18 24 08.7 -0.3
comp=Z,38nm,1.0s,mb5.4
CBKS *e* pP 18 24 18.7 +0.4
CBKS Cedar Bluff 67.40 336⇓ *iP* P 18 24 08.7 -0.3
CBKS *e* pP 18 24 18.7 +0.4
CBKS pmax pmax
comp=Z,38nm,1.0s,mb5.4
SCIA State Center 68.01 342 *eP* P 18 24 11.6 -1.2
comp=Z,39nm,1.0s,mb5.4
JFWS Jewell Farm 68.17 345 *eP* P 18 24 12.3 -1.5
comp=Z,172nm,2.0s,mb5.7
JFWS Jewell Farm 68.17 345 *eP* P 18 24 12.3 -1.5
JFWS pmax pmax
comp=Z,172nm,2.0s,mb5.7
SDCO Great Sand Dun 68.88 331 *eP* P 18 24 19.3 +0.9
comp=Z,16nm,0.9s,mb5.0
MVCO Mesa Verde 69.83 328 *eP* P 18 24 24.6 +0.4
comp=Z,14nm,0.9s,mb4.9
WUAZ Wupatki 69.95 325 *eP* P 18 24 26.0 +0.9
LIC Lamto 70.33 74⇑ *iP* P 18 24 27.5 -0.4
comp=Z,25nm,0.7s,mb5.0
LIC Lamto 70.33 74⇑ *iP* P 18 24 27.5 -0.4
comp=Z,12nm,0.7s,mb5.0
PV01 Paradox Valley 70.61 329 *eP* P 18 24 29.9 +0.9
ISCO Idaho Springs 70.62 332 *eP* P 18 24 29.8 +0.8
DBIC Dimbokro 70.69 74 P P 18 24 29.9 -0.1
comp=Z,32nm,0.7s,mb5.4,baz=219,slow=6.1,SNR=63
ECSD EROS,Sioux Fal 70.69 340 *eP* P 18 24 28.1 -1.3
comp=Z,16nm,0.9s,mb5.0
SMCO Snowmass 70.71 331 *eP* P 18 24 30.4 +0.8
comp=Z,14nm,0.9s,mb4.9
PFO Pinyon Flat Ob 71.35 321 *eP* P 18 24 34.6 +1.0
comp=Z,147nm,3.0s
PFO Pinyon Flat Ob 71.35 321 *eP* P 18 24 34.6 +1.0
PFO pmax pmax
comp=Z,147nm,3.0s
LDFC Landfair 71.64 323 *eP* P 18 24 36.6 +1.2
comp=Z,16nm,1.0s,mb4.9
SRU San Rafael 72.31 328⇑ *eP* P 18 24 39.6 +0.3
comp=Z,12nm,0.8s,mb4.9
SRU San Rafael 72.31 328⇑ *eP* P 18 24 39.6 +0.3
SRU pmax pmax
comp=Z,12nm,0.8s,mb4.9
EGOM La Gomera 72.45 48 P P 18 24 40.3 0.0
comp=Z,19nm,0.5s,mb5.3
CCUT Cedar City 72.54 326 *eP* P 18 24 41.8 +1.2
MSU Marysvale 72.66 327 *eP* P 18 24 42.3 +0.9
SHPR Sheep Range 72.72 324 *eP* P 18 24 42.9 +1.1
ARUT Antelope Range 72.76 326 *eP* P 18 24 43.4 +1.4
GSC Goldstone 72.76 322 *eP* P 18 24 43.0 +1.0
comp=Z,42nm,1.9s,mb5.0
GSC Goldstone 72.76 322 *eP* P 18 24 43.0 +1.0
GSC pmax pmax
comp=Z,42nm,1.9s,mb5.0
CCAN Las Canadas 72.91 48 P P 18 24 41.4 -1.6
comp=Z,8.4nm,0.8s,mb4.7
PPT Papeete 73.44 258 LR LR 18 51 03.6
comp=Z,687nm,18.8s,MS5.0,baz=176,slow=31
MPU Maple Canyon 73.55 328 *eP* P 18 24 47.9 +1.3
comp=Z,13nm,0.9s,mb4.9
RSSD Black Hills 73.60 336⇓ *iP* P 18 24 47.2 +0.4
TPNV Topopah Spring 73.64 323 *eP* P 18 24 48.4 +1.2
comp=Z,12nm,1.0s,mb4.8
TPNV Topopah Spring 73.64 323 *eP* P 18 24 48.4 +1.2
TPNV pmax pmax
comp=Z,12nm,1.0s,mb4.8
DAU Daniels Canyon 73.68 329 *eP* P 18 24 43.8 -3.5
JLU Jordanelle 73.92 329 *eP* P 18 24 49.2 +0.5
SBA Scott Base 73.95 191 *eP* P 18 24 49.7 +1.2
DUG Dugway 74.27 328 *eP* P 18 24 51.3 +0.5
AGMN Agassiz Refuge 74.62 343 *eP* P 18 24 51.6 -1.1
comp=Z,25nm,0.8s,mb5.2
HWUT Hardware Ranch 74.76 329 *eP* P 18 24 53.4 -0.2
comp=Z,14nm,0.9s,mb4.9
BW06 Boulder Array 74.76 331 *eP* P 18 24 54.6 +1.0
PDAR Pinedale Array 74.76 331 P P 18 24 53.2 -0.3
comp=Z,1.3nm,0.6s,mb4.0,baz=143,slow=7.8,SNR=8.8
CFTV Fuerteventura 74.78 50 P P 18 24 53.0 -1.0
comp=Z,6.6nm,0.7s,mb4.7
VNDA Vanda 74.98 190 P P 18 24 55.5 +1.0
comp=Z,3.8nm,0.9s,mb4.3,baz=127,slow=4.9,SNR=18
AHID Auburn Hatcher 75.45 330⇓ *eP* P 18 24 57.9 +0.3
HVU Hansel Valley 75.47 329 *eP* P 18 24 58.0 +0.3
comp=Z,9.3nm,0.9s,mb4.7
HVU Hansel Valley 75.47 329 *eP* P 18 24 58.0 +0.3
HVU pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SYO Syowa Base 75.53 160⇑ *eP* P 18 24 56.6 -1.1
REDW Red Top Meadow 75.81 331 *eP* P 18 24 59.6 0.0
comp=Z,9.0nm,0.8s,mb4.7
NVAR Mina Array Bea 75.83 323 P P 18 25 00.7 +0.8
comp=Z,4.0nm,0.8s,mb4.4,baz=155,slow=6.7,SNR=29
SNOW Snow King Moun 75.84 331 *eP* P 18 25 00.7 +0.9
ELK Elko 75.89 327 *eP* P 18 25 00.9 +0.7
LOHW Long Hollow 75.90 331⇑ *eP* P 18 25 00.1 +0.1
RRI2 Red Ridge 76.01 331 *eP* P 18 25 01.1 +0.4
comp=Z,15nm,0.9s,mb4.9
MOOW Moose Ponds 76.07 331 *eP* P 18 25 01.5 +0.5
comp=Z,32nm,2.1s,mb4.9
IMW Indian Meadow 76.27 331 *eP* P 18 25 02.7 +0.5
comp=Z,11nm,1.0s,mb4.7
ULM Lac du Bonnet 76.41 344 P P 18 25 01.8 -1.0
comp=Z,12nm,0.8s,mb4.9,baz=160,slow=4.0,SNR=7.6
WAKR Walker 76.52 323 *eP* P 18 25 05.1 +1.4
LAO LASA Array 76.60 336 *eP* P 18 25 03.9 -0.1
YFT Old Faithful 76.66 332 *eP* P 18 25 07.4 +3.0
CMB Columbia Colle 76.72 322 *eP* P 18 25 05.1 +0.2
YMR Madison River 76.89 332 *eP* P 18 25 06.5 +0.8
comp=Z,10nm,0.8s,mb4.8
PAHR Pah Rah Range 77.33 323 *eP* P 18 25 08.9 +0.7
DGMT Dagmar 77.36 338 *eP* P 18 25 08.9 +0.7
HLID Hailey 77.61 329 *eP* P 18 25 10.4 +0.7
comp=Z,11nm,0.8s,mb4.8
SCHQ Schefferville 77.71 2 P P 18 25 09.4 -0.6
comp=Z,7.1nm,1.0s,mb4.6,baz=249,slow=12,SNR=3.7
MCMT McKenzie Canyo 77.85 331 *eP* P 18 25 11.5 +0.4
DLMT Dillon 78.15 331 *eP* P 18 25 13.6 +0.9
OHCM Honcut 78.24 322 *eP* P 18 25 14.2 +0.8
NSHM Saint Helena R 78.33 321 *eP* P 18 25 14.2 +0.3
LRM Limekiln Ridge 78.45 332 *eP* P 18 25 15.2 +0.9
HRY Holter Researc 78.87 332 *eP* P 18 25 16.9 +0.3
EGMT Eagleton 79.06 334 *eP* P 18 25 17.8 +0.1
SUR Sutherland 79.10 121 P P 18 25 20.2 +1.7
comp=Z,296nm,0.8s,mb6.3,SNR=10
SUR Sutherland 79.10 121 *eP* P 18 25 19.8 +1.3
comp=Z,36nm,0.7s,mb5.4
TOA0 Torodi Ar. Sit 79.36 71⇑ *iP* P 18 25 19.6 -0.5
TORD Torodi Ar. Bea 79.36 71 P P 18 25 19.9 -0.2
comp=Z,42nm,0.8s,mb5.4,baz=253,slow=5.1,SNR=230
MOD Modoc 79.37 325 *eP* P 18 25 20.2 +0.7
WDC Whiskeytown Da 79.68 322 *eP* P 18 25 20.1 -1.1
BMO Blue Mountains 79.95 328 *eP* P 18 25 22.4 -0.2
comp=Z,7.7nm,0.8s,mb4.7
BSMT Basson Peak 81.03 332 *eP* P 18 25 29.2 +0.8
TSUM Tsumeb 81.06 107 P P 18 25 30.4 +1.1
comp=Z,19nm,0.8s,mb5.1,baz=232,slow=5.0,SNR=25
TSUM Tsumeb 81.06 107 *eP* P 18 25 29.7 +0.5
comp=Z,28nm,0.9s,mb5.2
WALA Waterton Lakes 81.58 333 *eP* P 18 25 31.7 +0.5
FFC Flin Flon 82.08 342 *eP* P 18 25 32.2 -1.5
HAWA Hanford 82.15 328 *eP* P 18 25 34.8 +0.5
RSW Rattlesnake Hi 82.18 328 *eP* P 18 25 34.8 +0.4
OD2 Odessa Site #2 82.47 329 *eP* P 18 25 35.7 -0.2
MAW Mawson 83.22 164 P P 18 25 40.3 +0.6
comp=Z,19nm,0.6s,mb5.3,baz=226,slow=6.9,SNR=25
ETW Entiat 83.39 329 *eP* P 18 25 40.7 0.0
BOSA Boshof 84.05 118 P P 18 25 45.0 +0.3
comp=Z,28nm,0.6s,mb5.6,baz=255,slow=4.0,SNR=89
RPW Rockport 84.55 329 *eP* P 18 25 45.3 -1.2
EDM Edmonton 84.58 336 *eP* P 18 25 44.8 -1.8
EGRO El Granado 84.60 45 P P 18 25 47.1 -0.1
comp=Z,73nm,1.1s,mb5.7
EVO Evora 84.82 44⇑ *iP* P 18 25 48.5 +0.3
comp=Z,32nm,0.7s,mb5.2
EMIN Mina Concepcio 85.26 46 P P 18 25 50.1 -0.4
comp=Z,53nm,0.9s,mb5.7
ESPR Espera 85.31 47 P P 18 25 52.1 +1.4
comp=Z,62nm,0.8s,mb5.8
EJIF Jimena Fronter 85.34 47 P P 18 25 52.0 +1.2
comp=Z,33nm,0.7s,mb5.6
EJIF Jimena Fronter 85.34 47 P P 18 25 52.0 +1.1
EJIF pmax pmax
comp=Z,33nm,0.7s,mb5.6
EBAD Badajoz 85.59 45 P P 18 25 52.0 0.0
comp=Z,24nm,0.9s,mb5.4
LBTB Lobatse 85.75 115 *eP* P 18 25 53.3 0.0
comp=Z,6.4nm,0.8s,mb4.9
LBTB Lobatse 85.75 115 *eP* P 18 25 53.3 0.0
LBTB pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
EMIJ Mijas 85.87 47 P P 18 25 54.1 +0.6
comp=Z,42nm,0.8s,mb5.7
ELOJ Sierra Loja 86.61 47 P P 18 25 58.1 +1.0
comp=Z,12nm,0.6s,mb5.3
ELOJ Sierra Loja 86.61 47 P P 18 25 58.2 +1.1
ELOJ pmax pmax
comp=Z,12nm,0.6s,mb5.3
ELOB Lobios 86.70 42 P P 18 25 57.8 +0.4
comp=Z,28nm,1.4s,mb5.3
ELUQ Luque 86.75 47 P P 18 25 59.0 +1.2
comp=Z,9.9nm,0.6s,mb5.2
ELUQ Luque 86.75 47 P P 18 25 59.0 +1.2
ELUQ pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
EADA Adamuz 86.87 46 P P 18 25 59.2 +0.8
comp=Z,8.0nm,0.8s,mb5.0
EPLA Plasencia 86.92 44 P P 18 25 58.5 -0.1
comp=Z,9.3nm,0.7s,mb5.1
EPLA Plasencia 86.92 44 P P 18 25 58.5 -0.1
EPLA pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
EBAN Banos Encina 87.39 46 P P 18 26 02.3 +1.4
comp=Z,3.2nm,0.5s,mb4.8
EBAN Banos Encina 87.39 46 P P 18 26 02.3 +1.4
EBAN pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
EHUE Huescar 88.01 47 P P 18 26 03.7 -0.2
comp=Z,3.9nm,0.9s,mb4.6
EHUE Huescar 88.01 47 P P 18 26 03.7 -0.2
EHUE pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
ESDC Sonseca Array 88.08 45 P P 18 26 04.7 +0.5
comp=Z,1.0nm,0.6s,mb4.2,baz=254,slow=5.2,SNR=7.8
GUD Guadarrama 88.47 44 P P 18 26 05.8 -0.2
comp=Z,2.2nm,0.6s,mb4.6
GUD Guadarrama 88.47 44 P P 18 26 05.8 -0.2
GUD pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
EVIA Vianos 88.50 47 P P 18 26 06.4 +0.3
comp=Z,4.5nm,0.8s,mb4.8
EVIA Vianos 88.50 47 P P 18 26 06.4 +0.2
EVIA pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
ETOB Tobarra 89.14 47 P P 18 26 10.8 +1.6
comp=Z,4.8nm,0.6s,mb5.0
ETOR Torete 89.92 45 P P 18 26 13.6 +0.8
comp=Z,11nm,0.9s,mb5.2
ETOR Torete 89.92 45 P P 18 26 13.6 +0.8
ETOR pmax pmax
comp=Z,11nm,0.9s,mb5.2
ECHE Chera 90.01 46 P P 18 26 12.9 -0.3
comp=Z,4.8nm,0.7s,mb4.9
ECHE Chera 90.01 46 P P 18 26 12.9 -0.3
ECHE pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
CASY Casey 90.87 180 *eP* P 18 26 17.6 +0.7
comp=Z,10nm,1.0s,mb5.1
SJPF Ste Jean 91.63 43 *eP* P 18 26 20.9 +0.2
comp=Z,12nm,1.0s,mb4.8
SJPF Ste Jean 91.63 43 *eP* P 18 26 20.9 +0.2
comp=Z,5.8nm,1.0s,mb4.9
SJPF Ste Jean 91.63 43 *eP* P 18 26 20.9 +0.2
SJPF pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
LSZ Lusaka 91.91 107 P P 18 26 24.4 +1.7
comp=Z,2.2nm,0.6s,mb4.7,baz=244,slow=3.9,SNR=7.9
ETSF Etsaut 91.94 44 *eP* P 18 26 22.5 +0.4
comp=Z,3.6nm,0.7s,mb4.5
ETSF Etsaut 91.94 44 *eP* P 18 26 22.5 +0.4
comp=Z,1.8nm,0.7s,mb4.5
ETSF Etsaut 91.94 44 *eP* P 18 26 22.5 +0.4
ETSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
YKA Yellowknife Ar 92.21 341 P P 18 26 22.0 -0.8
comp=Z,7.4nm,0.7s,mb5.1,baz=136,slow=4.5,SNR=12
ROSF Rostrenen 93.10 38 *eP* P 18 26 26.5 -0.8
comp=Z,16nm,0.9s,mb5.2
ROSF Rostrenen 93.10 38 *eP* P 18 26 26.5 -0.8
comp=Z,8.1nm,0.9s,mb5.2
ROSF Rostrenen 93.10 38 *eP* P 18 26 26.5 -0.8
ROSF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
LFF La Frestale 93.76 42 *eP* P 18 26 30.2 -0.3
comp=Z,16nm,0.7s,mb5.2
LFF La Frestale 93.76 42 *eP* P 18 26 30.2 -0.3
comp=Z,7.9nm,0.7s,mb5.2
LFF La Frestale 93.76 42 *eP* P 18 26 30.2 -0.3
LFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
MFF Saint Martin d 94.04 41 *eP* P 18 26 31.3 -0.4
comp=Z,18nm,1.0s,mb5.2
MFF Saint Martin d 94.04 41 *eP* P 18 26 31.3 -0.4
comp=Z,9.2nm,1.0s,mb5.2
MFF Saint Martin d 94.04 41 *eP* P 18 26 31.3 -0.4
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
RJF Les Rejaudoux 94.42 42 *eP* P 18 26 33.0 -0.5
comp=Z,22nm,1.2s,mb5.2
RJF Les Rejaudoux 94.42 42 *eP* P 18 26 33.0 -0.5
comp=Z,11nm,1.2s,mb5.2
RJF Les Rejaudoux 94.42 42 *eP* P 18 26 33.0 -0.5
RJF pmax pmax
comp=Z,11nm,1.2s,mb5.2
GRR Gorron 94.51 39 *eP* P 18 26 32.8 -1.0
LDF La Druitiere 95.03 39 *eP* P 18 26 35.2 -1.0
comp=Z,32nm,1.2s,mb5.3
LDF La Druitiere 95.03 39 *eP* P 18 26 35.2 -1.0
comp=Z,16nm,1.2s,mb5.3
LDF La Druitiere 95.03 39 *eP* P 18 26 35.2 -1.0
LDF pmax pmax
comp=Z,16nm,1.2s,mb5.3
TCF Toulx Ste Croi 95.31 42 *eP* P 18 26 36.8 -0.8
BGF Bois d'Agland 95.83 42 *eP* P 18 26 39.3 -0.6
comp=Z,16nm,1.0s,mb5.1
BGF Bois d'Agland 95.83 42 *eP* P 18 26 39.3 -0.6
comp=Z,7.8nm,1.0s,mb5.1
BGF Bois d'Agland 95.83 42 *eP* P 18 26 39.3 -0.6
BGF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
AVF Avril sur Loir 96.25 42 *eP* P 18 26 40.9 -0.9
comp=Z,20nm,1.2s,mb5.1
AVF Avril sur Loir 96.25 42 *eP* P 18 26 40.9 -0.9
comp=Z,10nm,1.3s,mb5.1
AVF Avril sur Loir 96.25 42 *eP* P 18 26 40.9 -0.9
AVF pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
SSF Saint Saulge 96.46 41 *eP* P 18 26 41.7 -1.1
SMF Signal de Mont 96.48 42 *eP* P 18 26 42.3 -0.6
comp=Z,29nm,1.2s,mb5.3
SMF Signal de Mont 96.48 42 *eP* P 18 26 42.3 -0.6
comp=Z,14nm,1.2s,mb5.3
SMF Signal de Mont 96.48 42 *eP* P 18 26 42.3 -0.6
SMF pmax pmax
comp=Z,14nm,1.2s,mb5.3
LMR La Mourre 96.72 46 *eP* P 18 26 43.9 -0.2
LOR Lormes 96.77 41 *eP* P 18 26 43.2 -1.0
comp=Z,6.5nm,0.8s,mb4.8
LOR Lormes 96.77 41 *eP* P 18 26 43.2 -1.0
comp=Z,3.3nm,0.8s,mb4.8
LOR Lormes 96.77 41 *eP* P 18 26 43.2 -1.0
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 97.00 44 *eP* P 18 26 45.7 +0.5
comp=Z,26nm,1.2s,mb5.2
ORIF Oris-en-Rattie 97.00 44 *eP* P 18 26 45.7 +0.5
comp=Z,13nm,1.2s,mb5.2
ORIF Oris-en-Rattie 97.00 44 *eP* P 18 26 45.7 +0.5
ORIF pmax pmax
comp=Z,13nm,1.2s,mb5.2
MBDF Montbardon 97.49 45 *eP* P 18 26 46.8 -0.7
comp=Z,35nm,1.4s,mb5.3
MBDF Montbardon 97.49 45 *eP* P 18 26 46.8 -0.7
comp=Z,17nm,1.4s,mb5.3
MBDF Montbardon 97.49 45 *eP* P 18 26 46.8 -0.7
MBDF pmax pmax
comp=Z,17nm,1.4s,mb5.3
LPL La Plagne 97.80 44 *eP* P 18 26 49.5 +0.7
MEZF Maizieres J'vi 98.04 41 *eP* P 18 26 49.1 -0.7
GIVF Givet 98.60 39 *eP* P 18 26 51.7 -0.6
comp=Z,18nm,0.9s,mb5.3
GIVF Givet 98.60 39 *eP* P 18 26 51.7 -0.6
comp=Z,9.3nm,0.9s,mb5.3
GIVF Givet 98.60 39 *eP* P 18 26 51.7 -0.6
GIVF pmax pmax
comp=Z,9.0nm,0.9s,mb5.3
HAU Haudompre 98.61 41 *eP* P 18 26 50.9 -1.5
HINF Hinteralfeld 98.84 42 *eP* P 18 26 52.5 -1.0
CDF Champ du Feu 99.34 41 *eP* P 18 26 55.0 -0.7
CHGN Chignik 107.74 324 *ePdif* Pdif 18 27 29.3 -3.9
AKASG Malin Array Be 113.65 43 PKiKP PKiKP 18 31 50.6 -1.1
comp=Z,1.2nm,0.4s,baz=272,slow=2.6,SNR=11
AKASG Malin Array Be 113.65 43 *i* PKiKP PKiKP 18 31 50.5 -1.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s
MMAI Mount Meron Ar 115.14 63 PKP PKiKP 18 31 55.5 +0.4
comp=Z,2.8nm,0.5s,baz=34,slow=2.1,SNR=9.0
STKA Stephens Creek 117.23 211 PKP PKPdf 18 31 59.2 -0.1
comp=Z,1.9nm,0.7s,baz=136,slow=6.7,SNR=4.1
STKA Stephens Creek 117.23 211 PKP PKPdf 18 31 59.2 -0.1
OBN Obninsk 118.41 39⇓ *i*PKIKP PKPdf 18 32 00.3 -0.4
OBN *e*PS PS 18 42 56.5 -7.9
OBN *e*SS SS 18 49 26.2 -6.2
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR
comp=Z,500nm,18.0s,MS5.2
ANN Anapa 118.49 50 *i* PKIKP PKPdf 18 31 57.8 -3.4
ANN *e* 18 38 49.2
KIV Kislovodsk 122.20 52⇑ *i*PKIKP PKPdf 18 32 08.2 -0.2
KIV *e* 18 33 40.1
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,700nm,18.0s,MS5.3
BILL Bilibino 123.45 338 *e*PKIKP PKPdf 18 32 10.0 -0.1
BILL *e*SS SS 18 50 39.0 +3.0
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,600nm,15.0s,MS5.4
GNI Garni 123.56 56⇓ *i*PKIKP PKPdf 18 32 11.6 +0.5
KLBR Kellerberrin 125.01 189 *eP* PKPdf 18 32 13.6 -0.7
comp=Z,51nm,1.7s
ASAR Alice Springs 127.75 209 PKhKP 18 32 13.6
comp=Z,0.5nm,0.8s,baz=153,slow=0.4,SNR=7.1
ASAR PKP PKPdf 18 32 18.7 -1.1
comp=Z,9.8nm,0.7s,baz=68,slow=0.4,SNR=6.7
TIXI Tiksi 130.19 352 *e*PKPdf PKPdf 18 32 21.4 -1.5
TIXI *e*SKP 18 35 43.8
TIXI Tiksi 130.19 352 *i* PKIKP PKPdf 18 32 21.3 -1.6
TIXI pmax pmax
comp=Z,6.0nm,0.8s
ARU Arti 130.37 34 *i* PKIKP PKPdf 18 32 24.2 +0.6
ARU 18 34 42.7
ARU SS SS 18 52 24.0 +21
WB2 Warramunga Arr 130.76 212 *eP* PKPdf 18 32 25.1 -0.5
WB2 *e*S SKPbc 18 35 48.6 +1.1
WB2 Warramunga Arr 130.76 212 *e*PKPdf PKPdf 18 32 24.7 -0.8
WRA Warramunga Arr 130.76 212 PKhKP 18 32 19.4
comp=Z,3.4nm,0.9s,baz=157,slow=1.4,SNR=9.9
WRA PKP PKPdf 18 32 25.1 -0.5
comp=Z,10nm,0.8s,baz=148,slow=1.5,SNR=53
WRAB Tennant Creek 130.77 212 *e*PKPdf PKPdf 18 32 24.8 -0.8
SVE Sverdlovsk 131.28 33 *e*PKIKP PKPdf 18 32 26.5 +1.2
SVE pmax pmax
comp=Z,9.0nm,1.6s
PETK Petropavlovsk- 132.91 322 PKP PKPdf 18 32 28.8 +0.2
comp=Z,6.2nm,0.9s,baz=89,slow=4.7,SNR=9.2
AB31 Akbulak array 133.40 43 PKIKP PKPdf 18 32 29.7 +0.1
AB31 pmax pmax
comp=Z,5.0nm,0.7s
BRVK Borovoye 137.94 35 *e*PKPdf PKPdf 18 32 38.4 +0.5
BVA0 Borovoye Array 138.01 35 *i* PKIKP PKPdf 18 32 38.5 +0.5
BVAR Borovoye Array 138.01 35 PKP PKPdf 18 32 39.0 +0.9
comp=Z,4.4nm,0.6s,baz=261,slow=2.7,SNR=25
YAK Yakutsk 138.73 346 *e*PKPdf PKPdf 18 32 38.4 -0.7
YAK Yakutsk 138.73 346 *e*PKIKP PKPdf 18 32 37.6 -1.5
YAK pmax pmax
comp=Z,18nm,1.1s
NVS Novosibirsk 142.80 25 *e*PKIKP PKPdf 18 32 42.2 -4.4
NVS pmax pmax
comp=Z,27nm,1.8s
NVS pmax pmax
comp=E,9.0nm,1.6s
KBL Kabul 143.08 63 *e*PKPdf PKPdf 18 32 44.1 -3.7
KURK Kurchatov 143.54 33 *e*PKPdf PKPdf 18 32 45.4 -2.6
KURK Kurchatov 143.54 33 *e*PKIKP PKPdf 18 32 45.9 -2.2
ZAA0 Zalesovo Array 144.08 25 *e*PKPdf PKPdf 18 32 46.6 -2.3
ZALV Zalesovo Beam 144.08 25 PKP PKPdf 18 32 46.7 -2.2
comp=E,17nm,0.7s,baz=328,slow=4.2,SNR=42
CLNS Chul'man 144.48 345 *e*PKHKP 18 32 45.0
CLNS pmax pmax
comp=Z,26nm,0.8s
CLNS pmax pmax
comp=N,10.0nm,0.9s
EKS2 Erkin-Say 144.65 48 P PKPdf 18 32 50.1 -0.1
SNR=16
AML Almayashu 144.79 49 P PKPdf 18 32 51.2 +0.7
SNR=77
USP Ospenovka 144.90 47 P PKPdf 18 32 50.5 -0.2
SNR=24
KRAR Krasnoyarsk 144.96 16⇓ *i*PKIKP PKPdf 18 32 49.4 -1.0
AAK Ala-Archa 145.15 48 P PKPbc 18 32 52.4 +1.6
SNR=60
FRU Bishkek 145.15 47 *e*PKIKP PKPdf 18 32 52.0 +0.9
FRU pmax pmax
comp=Z,120nm,1.0s
CHMS Chumysh 145.18 47 P PKPbc 18 32 51.5 +0.6
SNR=25
BOD Bodaibo 145.19 356⇓ *i*PKIKP PKPdf 18 32 49.2 -1.5
BOD pmax pmax
comp=Z,94nm,0.7s
UCH Uchtor 145.32 48 P PKPbc 18 32 53.5 +2.2
SNR=6.7
KBK Karagaybulak 145.45 47 P PKPdf 18 32 52.9 +1.3
SNR=46
TRD Trivandrum 145.67 110 *eP* PKPdf 18 32 51.1 -1.8
TKM2 Tokmak 2 145.78 47 P PKPdf 18 32 53.2 +1.0
SNR=32
KZA Kyzart 145.88 48 P PKPdf 18 32 53.4 +1.0
SNR=30
ULHL Ulahol 146.49 47 P PKPab 18 32 55.5 -0.4
SNR=7.6
KAD Karad 146.50 93 *eP* PKPdf 18 32 53.7 -0.5
POO Poona 146.50 91 *eP* PKPdf 18 32 53.0 -1.1
KSH Kashi 147.33 52 *e*PKP PKPdf 18 32 56.8 +1.9
KSH *e*PKP2 PKPab 18 33 03.6 +4.4
KSH *e*PP PP 18 36 30.3 +7.1
KSH *e*SKS SKSdf 18 40 00.3 -1.2
KSH *e*SKKS SKKSac 18 43 14.4 +1.6
KSH *e*SS SS 18 55 28.3 +4.5
KSH PP PP
comp=Z,528nm,6.6s
KSH LR LR
comp=N,531nm,4.4s
KSH LR LR
comp=E,496nm,9.4s
KSH LR LR
comp=Z,631nm,4.9s
HABR Khabarovsk 147.54 328 *e*PKHKP 18 32 52.7
HABR *i* 18 32 58.0
HABR *e* 18 36 26.6
HABR *e*PPP 18 39 38.4
HABR *e* 18 40 01.3
HABR *e* 18 49 02.4
HABR SS SS 18 55 25.3 +0.3
HABR *e*SSS 19 00 58.8
AAI Ambon 147.65 217 P PKPdf 18 32 57.9 +1.6
MK31 Makanchi Array 147.86 36 *e*PKPdf PKPdf 18 32 55.4 -0.2
MK31 Makanchi Array 147.86 36 *i* PKIKP PKPdf 18 32 55.7 +0.1
MK31 pmax pmax
comp=Z,14nm,0.5s
MKAR Makanchi Array 147.86 36 PKP PKPdf 18 32 55.7 +0.1
comp=Z,22nm,0.6s,baz=310,slow=1.8,SNR=62
MKAR PKPbc PKPbc 18 32 59.0 +0.4
comp=Z,22nm,0.6s,baz=325,slow=3.3,SNR=111
MKAR Makanchi Array 147.86 36⇑ *i*PKIKP PKPdf 18 32 55.7 +0.1
MKAR pmax pmax
comp=Z,22nm,0.6s
AJM Ajmer 148.32 77 *eP* PKPdf 18 32 54.4 -2.6
KLR Kul'dur 148.55 331 *e*PKHKP 18 32 52.4
THN Thein Dam 148.89 65 *ex* PKPbc 18 33 01.2 -0.5

SJI	**Sawahan**	**149.24**	**185**	P		PKPbc	18 33 03.4	+0.3	
KDI	**Kendari**	**150.15**	**207**	P		PKPbc	18 33 05.5	+0.1	
KAPI	**Kappang**	**150.26**	**201**	*e*PKPdf		PKPdf	18 33 00.2	-0.3	
KAPI				*e*PKPbc		PKPbc	18 33 04.9	-0.8	
KAPI				*e*PKPab		PKPab	18 33 10.8	-0.9	
KAPI	**Kappang**	**150.26**	**201**	P		PKPbc	18 33 04.8	-0.9	
CBJI	**Citeko**	**150.53**	**175**	P		PKPbc	18 33 05.8	-0.5	
HYB	**Hyderabad**	**150.54**	**95**	*e*P		PKPdf	18 33 00.0	-0.8	
HYB	**Hyderabad**	**150.54**	**95**	*i* PKP		PKPdf	18 33 00.0	-0.8	
HYB				*e*			18 33 06.5		
HYB				*e*			18 33 12.5		
NDI	**New Delhi**	**150.57**	**72**	*ex*		PKPbc	18 33 06.0	0.0	
BHPL	**Bhopal**	**150.63**	**83**	*e*P		PKPdf	18 33 00.9	+0.2	
BHPL				AMb		AMB	18 33 07.0		
	comp=Z,44nm,0.5s								
MOY	**Mondy**	**150.78**	**11**	*e*PKIKP		PKPbc	18 33 06.8	+1.1	
MOY				pmax		pmax			
	comp=Z,6.0nm,2.0s								
CIT	**Chita**	**150.98**	**355**	*e*PKIKP		PKPbc	18 33 06.1	0.0	
TLY	**Talaya**	**151.15**	**7**	*e*PKPbc		PKPbc	18 33 07.0	+0.4	
TLY				*e*PKPab		PKPab	18 33 14.4	+0.1	
TLY	**Talaya**	**151.15**	**7**	*e*PKIKP		PKPbc	18 33 04.4	-2.1	
TLY				pmax		pmax			
	comp=Z,20nm,0.8s								
MJAR	**Matsushiro Arr**	**151.79**	**305**	PKPbc		PKPbc	18 33 08.3	-0.2	
	comp=Z,18nm,0.9s,baz=99,slow=1.3,SNR=35								
MAJO	**Matsushiro**	**151.79**	**305**	*e*PKPbc		PKPbc	18 33 08.0	-0.5	
ZAK	**Zakamensk**	**152.38**	**8**	*e*PKIKP		PKPdf	18 33 03.0	+0.4	
ZAK				pmax		pmax			
	comp=Z,11nm,1.3s								
KSI	**Kapahiang**	**152.56**	**165**	P		PKPbc	18 33 11.3	+0.3	
HIA	**Hailar**	**152.67**	**345**	*e*PKPdf		PKPdf	18 33 02.9	-0.1	
HIA				*e*PKPbc		PKPbc	18 33 09.2	-0.9	
WMQ	**Urumqi**	**152.69**	**36**	*e*PKP		PKPdf	18 33 02.0	-1.2	
MDJ	**Mudanjiang**	**152.93**	**327**	PKP		PKPdf	18 33 01.9	-1.7	
MDJ				SS		SS	18 56 22.5	-2.4	
MDJ				LR		LR			
	comp=N,687nm,30.4s,MS5.4								
MDJ				LR		LR			
	comp=E,609nm,27.0s,MS5.4								
MDJ				LR		LR			
	comp=Z,687nm,23.6s,MS5.4								
TPI	**Tanjungpandan**	**154.22**	**176**	P		PKPbc	18 33 15.0	+0.4	
SONM	**Songino Array**	**155.23**	**5**	PKP		PKPdf	18 33 07.5	+0.8	
	comp=Z,3.3nm,0.8s,baz=290,slow=0.7,SNR=25								
SONM				PKPab		PKPab	18 33 32.0	+0.4	
	comp=Z,4.4nm,0.7s,baz=327,slow=3.9,SNR=9.8								
ULN	**Ulaanbaatar**	**155.24**	**4**	*e*PKPdf		PKPdf	18 33 07.3	+0.6	
ULN				*e*PKPab		PKPab	18 33 32.1	+0.4	
CN2	**Changchun**	**155.50**	**331**	*e*PKP		PKPdf	18 33 08.0	+0.8	
CN2				PP		PP	18 37 13.4	+4.3	
CN2				PP		PP			
	comp=Z,200nm,4.0s								
CN2				LR		LR			
	comp=N,500nm,20.0s,MS5.6								
CN2				LR		LR			
	comp=E,700nm,20.0s,MS5.6								
CN2				LR		LR			
	comp=Z,1μm,17.0s,MS5.8								
PYUN	**Piuthan**	**155.69**	**73**	*e*P		PKPdf	18 33 07.7	-0.3	
	comp=Z,12nm,0.9s								
KOLN	**Koldanda**	**156.26**	**73**	*e*P		PKPdf	18 33 08.5	-0.2	
	comp=Z,9.8nm,1.0s								
DANN	**Dangsing**	**156.34**	**72**	*e*P		PKPdf	18 33 09.2	+0.4	
	comp=Z,48nm,0.8s								
GKN	**Gorkha**	**157.15**	**73**	*e*P		PKPdf	18 33 09.5	-0.4	
	comp=Z,15nm,0.7s								
DMN	**Daman**	**157.60**	**73**	*e*P		PKPdf	18 33 10.7	+0.3	
KKN	**Kakani**	**157.74**	**73**	*e*P		PKPdf	18 33 10.3	-0.3	
	comp=Z,12nm,0.8s								
PKIN	**Phulchoki**	**157.86**	**73**	*e*P		PKPdf	18 33 10.0	-0.8	
GUN	**Gumba**	**158.25**	**72**	*e*P		PKPdf	18 33 11.2	0.0	
JIRN	**Jiri**	**158.55**	**73**	*e*P		PKPdf	18 33 11.3	-0.3	
KSRS	**Korea Array**	**158.62**	**316**	PKP		PKPdf	18 33 11.7	+0.3	
	comp=Z,4.4nm,0.8s,baz=78,slow=1.6,SNR=9.0								
RAMN	**Ramite**	**158.99**	**75**	*e*P		PKPdf	18 33 12.3	+0.2	
	comp=Z,27nm,0.8s								
ODAN	**Odare**	**159.70**	**75**	*e*P		PKPdf	18 33 12.9	-0.1	
	comp=Z,18nm,0.8s								
TAPN	**Taplejung**	**159.93**	**73**	*e*P		PKPdf	18 33 13.2	0.0	
	comp=Z,14nm,0.9s								
GTA	**Gaotai**	**161.84**	**24**	PKP		PKPdf	18 33 15.6	+0.7	
GTA				PKS			18 36 48.4		
GTA				PP		PP	18 37 50.0	+6.5	
GTA				SKS		SKSdf	18 40 19.1	+1.4	
GTA				PP		PP			
	comp=Z,138nm,7.5s								
GTA				LR		LR			
	comp=N,1μm,19.5s								
GTA				LR		LR			
	comp=E,988nm,18.9s								
GTA				LR		LR			
	comp=Z,1μm,19.8s								
BJI	**Beijing**	**162.19**	**343**	PKP		PKPdf	18 33 13.0	-2.2	
HHC	**Hu-ho-hao-te**	**162.24**	**355**	*e*PKP		PKPdf	18 33 12.8	-2.5	
HHC				APKP			18 33 20.5		
HHC				XPKP			18 33 26.5		
HHC				PKS			18 36 45.1		
HHC				PP		PP	18 37 46.9	+1.6	
HHC				SKS		SKSdf	18 40 13.3	-4.7	
HHC				SKKS		SKKSac	18 44 32.5	+0.2	
HHC				SS		SS	18 58 03.3	+0.2	
HHC				PP		PP			
	comp=Z,221nm,15.5s								
HHC				LR		LR			
	comp=N,177nm,23.8s								
HHC				LR		LR			
	comp=E,232nm,25.0s								
HHC				LR		LR			
	comp=Z,214nm,25.0s								
LSA	**Lhasa**	**162.39**	**64**	*e*PKPdf		PKPdf	18 33 16.6	+0.8	
LSA				*e*PKPab		PKPab	18 34 04.3	+0.9	
LZH	**Lanzhou**	**166.21**	**19**	*e*PKP		PKPdf	18 33 18.5	-0.5	
LZH				APKP			18 33 21.8		
LZH				XPKP			18 33 23.3		
LZH				PKP2		PKPab	18 34 20.8	+1.0	
LZH				*e*PP		PP	18 38 10.0	+3.6	
LZH				SKS		SKSdf	18 40 19.6	-1.4	
LZH				SKKS		SKKSac	18 44 54.8	+2.1	
LZH				*e*SS		SS	18 58 47.0	+2.6	
LZH				PP		PP			
	comp=Z,135nm,7.2s								
LZH				LR		LR			
	comp=N,235nm,18.0s								
LZH				LR		LR			
	comp=Z,297nm,20.2s								
NJ2	**Nanjing**	**167.79**	**319**	*e*PKP		PKPdf	18 33 15.4	-4.9	
XAN	**Xi'an**	**169.12**	**2**	PKP		PKPdf	18 33 21.1	0.0	
XAN				APKP			18 33 32.3		
CMAR	**Chiang Mai Arr**	**169.17**	**113**	PKP		PKPdf	18 33 21.4	-0.1	
	comp=Z,3.2nm,0.9s,baz=276,slow=2.0,SNR=23								
CMAR				PKPab		PKPab	18 34 33.4	-0.1	
	comp=Z,3.7nm,1.0s,baz=247,slow=4.7,SNR=14								
CMAR				PP		PP	18 38 22.3	-0.9	
	comp=Z,1.8nm,1.1s,baz=238,slow=5.9,SNR=5.7								
CHTO	**Chiang Mai**	**169.32**	**112**	*e*PKPdf		PKPdf	18 33 20.8	-0.9	
CHTO				*e*PKPab		PKPab	18 34 33.7	-0.5	
CD2	**Chengdu**	**170.76**	**32**	*e*PKP		PKPdf	18 33 21.6	-0.5	
CD2				APKP			18 33 27.5		
CD2				XPKP			18 33 31.8		
CD2				PKP2		PKPab	18 34 41.9	+1.8	
CD2				PP		PP	18 38 32.9	+3.0	
CD2				SKS		SKSdf	18 40 19.9	-3.7	
CD2				SKKS		SKKSac	18 45 15.3	-0.1	
CD2				SS		SS	18 59 30.5	-0.1	
CD2				PP		PP			
	comp=Z,160nm,10.8s								
CD2				LR		LR			
	comp=N,180nm,24.6s								
CD2				LR		LR			
	comp=Z,150nm,18.2s								
WHN	**Wuhan**	**171.40**	**330**	PKP		PKPdf	18 33 17.8	-4.7	
KMI	**Kunming**	**173.59**	**71**	PKP		PKPdf	18 33 23.3	-0.3	
KMI				APKP			18 33 25.6		
KMI				XPKP			18 33 27.0		
KMI				PKP2		PKPab	18 34 52.8	-0.3	
KMI				PKS			18 36 53.3		
KMI				PP		PP	18 38 46.8	+1.5	
KMI				SKS		SKSdf	18 40 23.0	-1.9	
KMI				SKKS		SKKSac	18 45 30.9	+1.1	
KMI				SS		SS	18 59 58.3	-2.6	
KMI				PP		PP			
	comp=Z,496nm,15.2s								
KMI				LR		LR			
	comp=N,611nm,17.7s								
KMI				LR		LR			
	comp=E,689nm,16.4s								
KMI				LR		LR			
	comp=Z,456nm,14.8s								
GYA	**Guiyang**	**175.85**	**36**	PKP		PKPdf	18 33 24.1	-0.1	
GYA				PKP2		PKPab	18 35 02.8	0.0	
GYA				PKS			18 36 54.8		
GYA				PP		PP	18 38 56.8	+1.9	
GYA				SKKS		SKKSac	18 45 42.4	+2.5	
GYA				SS		SS	19 00 21.1	+0.8	
GYA				PP		PP			
	comp=Z,230nm,8.1s								
GYA				LR		LR			
	comp=N,210nm,21.5s								
GYA				LR		LR			
	comp=E,160nm,22.1s								
GYA				LR		LR			
	comp=Z,230nm,23.4s								

*CSEM **17** 18:19:38.7±0.1,37.18N×2828E, h20km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.1km az=20.0*
*ISK **17** 18:19:38.8,3725N×2833E, h11km, MD3.2*
*ISCJB **17** 18:19:39.4±0.5,3726N±003×2832E±003, h9km±5km, Error ellipse: s-maj=5.9km s-min=4.2km az=23.3*
*DDA **17** 18:19:39.5,3726N×2831E, h7km±4km, Md3.2*

ISC 17 18:19:39.8±0.4,3726N±004×2830E±004, h10km±5km, n21, σ0°71/35, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**188**	PG		**Pg**		**18 19 42.2**	**-0.6**
YER				*e*SG		**Sg**		**18 19 44.0**	**-0.8**
MLSB	**Milas**	**0.42**	**275**	PG		**Pg**		**18 19 48.9**	**+0.8**
MLSB				*e*SG		**Sg**		**18 19 54.0**	**+0.3**
TURN	**Turunc**	**0.45**	**148**	⇑*i*P		**Pg**		**18 19 48.3**	**-0.4**
TURN				*i* S		**Sg**		**18 19 55.7**	**+1.0**
AYDN	**Tasoluk**	**0.52**	**320**	*i* P		**Pg**		**18 19 50.5**	**+0.5**
AYDN				*i* S		**Sg**		**18 19 57.0**	**+0.1**
AYDN	**Tasoluk**	**0.52**	**320**	*i* P		**Pg**		**18 19 50.5**	**+0.5**
AYDN				*i* S		**Sg**		**18 19 57.0**	**0.0**
BDRM	**Kayabasi**	**0.71**	**255**	*i* P		**Pg**		**18 19 53.0**	**-0.6**
BDRM				*i* S		**Sg**		**18 20 03.5**	**+0.5**
BDRM	**Kayabasi**	**0.71**	**255**	*i* P		**Pg**		**18 19 53.0**	**-0.6**
BDRM				*i* S		**Sg**		**18 20 03.5**	**+0.6**
DENT	**Denizli**	**0.76**	**49**	PG		**Pg**		**18 19 53.9**	**-0.6**
DAT	**Datca**	**0.79**	**228**	*e*PG		**Pg**		**18 19 54.9**	**-0.1**
GCAM	**G?zelcaml?**	**0.96**	**298**	*i* P		**Pg**		**18 19 58.9**	**+0.6**
GCAM				*i* S		**Sg**		**18 20 10.3**	**-0.4**
GOLH	**Golhisar**	**1.00**	**91**	*i* P		**Pg**		**18 19 58.5**	**-0.6**
GOLH				*i* S		**Sg**		**18 20 15.0**	**+2.8**
KULA	**Kula-Manisa**	**1.28**	**13**	*e*PN		**Pn**		**18 20 03.5**	**-0.3**
KULA				*e*SN		**Sn**		**18 20 21.2**	**+0.2**
KDAG	**Bornova**	**1.41**	**325**	*e*P		**Pn**		**18 20 05.6**	**+0.1**
KDAG				*i* S		**Sn**		**18 20 24.2**	**+0.1**
KHL	**Karahalli**	**1.44**	**42**	*e*PN		**Pn**		**18 20 05.1**	**-0.8**
AKHS	**Akhisar**	**1.66**	**347**	*i* P		**Pn**		**18 20 08.7**	**-0.3**
AKHS				*i* S		**Sn**		**18 20 30.1**	**-0.3**
AKS	**Akhisar**	**1.66**	**347**	*e*PN		**Pn**		**18 20 08.7**	**-0.3**
DEMI	**Demirci**	**1.81**	**10**	*i* P		**Pn**		**18 20 11.2**	**+0.2**
DEMI				*i* S		**Sn**		**18 20 33.9**	**-0.1**
BCK	**Bucak**	**1.83**	**83**	*e*PN		**Pn**		**18 20 10.6**	**-0.8**
GDZ	**Gediz**	**2.05**	**27**	*i* P		**Pn**		**18 20 17.6**	**+3.3**
GDZ				*i* S		**Sn**		**18 20 49.0**	**+9.1**
SHUT	**Suhut-Afyon**	**2.20**	**53**	*e*PN		**Pn**		**18 20 16.1**	**-0.3**
HDMB	**Hadim**	**3.36**	**94**	*e*PN		**Pn**		**18 20 33.1**	**+0.8**

MAN 17 18:28:22,706N×12356E, h1km, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.70**	**77**	⇓*i*P		Pg		18 28 35.3	-0.2
CTBH				*i* S		Sg		18 28 43.8	-0.8
PAGZ	**Pagadian**	**0.80**	**348**	*e*P		Pg		18 28 40.0	+2.6
PAGZ				*e*S		Sg		18 28 53.3	+5.5
IPIL	**Ipil**	**1.22**	**307**	*e*P		Pg		18 28 46.6	+1.2
IPIL				*e*S		Sg		18 29 03.8	+2.7
BUKP	**Musuan**	**1.70**	**61**	*e*P		Pn		18 28 53.6	+0.8

*ISCJB **17** 18:33:34.3±1.3,23.12S±003×7088W±005, h11km±7km, mb4.2/9, Error ellipse: s-maj=7.2km s-min=4.8km az=7.6*
*GUC **17** 18:33:36.1±0.7,2312S×7080W, h29km±3km, ML4.4*
*IDC **17** 18:33:36.7±4.6,2320S×7067W, h17km±26km, mb3.9/4, mb1 3.9/7, mb1mx3.8/19, mbtmp3.8/7, ML4.0/3, Error ellipse: s-maj=31.8km s-min=23.4km az=110.0*
*NEIC **17** 18:33:36.4±3.6,2323S×7075W, h16km±22km, mb4.5/6, Error ellipse: s-maj=15.5km s-min=8.5km az=100.0*

ISC 17 18:33:36.3±1.1,2314S±003×7078W±006, h13km±6km, n42, σ1°§02/46, mb4.2/9, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.31**	**84**	⇓*i*P		**Pg**		**18 33 43.5**	**+0.8**
MECH				AML		AML		18 33 55.5	
	comp=N,57μm,0.4s								
CEN1	**Los Morros**	**0.59**	**115**	*e*P		**Pg**		**18 33 47.8**	**-0.1**
CEN1				*i* S		**Sg**		**18 33 56.4**	**+0.7**
ANCH	**Antofagasta**	**0.64**	**148**	⇓*i*P		**Pg**		**18 33 49.0**	**+0.1**
ANCH				*e*S		**Sg**		**18 33 58.3**	**+1.0**
PB06	**Plate Boundary**	**1.20**	**69**	⇓*e*P		**Pn**		**18 33 57.3**	**-1.4**
PB06				*i* S		**Sb**		**18 34 13.1**	**-1.1**
PB04	**Plate Boundary**	**1.48**	**54**	⇓*e*P		**Pn**		**18 33 53.7**	**-8.9**
PB04				*i* S		**Sn**		**18 34 06.9**	**-15**
PB04				AML		AML		18 34 11.4	
	comp=E,9μm,0.6s								
CPN1	**Cerro Paranal**	**1.52**	**167**	⇑*i*P		**Pn**		**18 34 03.1**	**-0.1**
CPN1				*i* S		**Sn**		**18 34 23.5**	**+0.5**
CPN1				AML		AML		18 34 27.8	
	comp=E,11μm,0.3s								
PB07	**Plate Boundary**	**1.63**	**31**	⇑*e*P		**Pn**		**18 34 03.8**	**-0.9**
PB07				*i* S		**Sn**		**18 34 25.1**	**-0.5**
LVC	**Limon Verde**	**1.80**	**74**	Pg		**Pg**		**18 34 08.5**	**-2.4**
	comp=E,159nm,0.3s,baz=253,slow=13,SNR=162								
LVC				Lg				18 34 31.6	
	comp=E,761nm,0.3s,baz=354,slow=20,SNR=33								
LVC	**Limon Verde**	**1.80**	**74**	*e*Pn		**Pn**		**18 34 07.6**	**+0.5**
LVC				Pg		**Pg**		**18 34 08.5**	**-2.4**
LVC				*e*Sn		**Sn**		**18 34 31.2**	**+1.4**
LVC				Lg				18 34 31.6	
LVC	**Limon Verde**	**1.80**	**74**	*e*P		**Pn**		**18 34 07.8**	**+0.7**
LVC				*i* S		**Sn**		**18 34 31.3**	**+1.5**
LVC				AML		AML		18 34 33.6	
	comp=N,4μm,0.4s								
SPCH	**San Pedro de A**	**2.39**	**85**	*e*P		**Pn**		**18 34 19.9**	**+4.7**
SPCH				*e*S		**Sn**		**18 34 52.8**	**+8.5**
SPCH				AML		AML		18 35 03.5	
	comp=N,11μm,0.8s								
PB01	**Plate Boundary**	**2.40**	**30**	⇑*e*P		**Pn**		**18 34 15.0**	**-0.4**
PB01				*i* S		**Sn**		**18 34 45.5**	**+0.9**
LCO	**Las Campanas**	**5.85**	**179**	*e*Pn		**Pn**		**18 34 59.9**	**-2.9**
	comp=N,172nm,1.2s								
LPAZ	**La Paz**	**7.25**	**21**	Pn		**Pn**		**18 35 23.5**	**+1.4**
	comp=N,1.3nm,0.3s,baz=220,slow=6.8,SNR=22								
LPAZ	**La Paz**	**7.25**	**21**	Pn		**Pn**		**18 35 23.5**	**+1.4**
LPAZ				*e*Pn		**Pn**		**18 35 24.4**	**+2.3**
CFAA	**Coronel Fontan**	**8.73**	**166**	Pn		**Pn**		**18 35 41.2**	**-1.1**
	comp=N,0.2nm,0.3s,baz=344,slow=11,SNR=18								
CFAA				Sn		**Sn**		**18 37 25.5**	**+4.8**
	comp=N,0.3nm,0.3s,baz=190,slow=17,SNR=2.4								
PLCA	**Paso Flores**	**17.55**	**179**	P		**Pn**		**18 37 39.4**	**-1.2**
	comp=N,0.3nm,0.3s,baz=352,slow=14,SNR=6.4								
PLCA	**Paso Flores**	**17.55**	**179**	*e*P		**Pn**		**18 37 39.2**	**-1.4**
	comp=N,30nm,1.6s								
BDFB	**Brasilia**	**22.71**	**75**	P		**P**		**18 38 38.3**	**+0.3**
	comp=N,1.2nm,0.5s,mb3.5,baz=248,slow=18,SNR=3.3								
OTAV	**Otavalo**	**24.40**	**341**	P		**P**		**18 38 55.2**	**+0.6**
	comp=N,2.4nm,0.8s,mb3.7								
VNA3	**Neumayer Olymp**	**59.10**	**161**	*e*		**P**		**18 43 36.4**	**+0.4**
VNA3				*e*				18 43 43.9	
VNA1	**Neumayer--Stat**	**59.34**	**160**	*e*		**P**		**18 43 38.7**	**+1.0**
VNA1				*e*				18 43 45.8	
VNA2	**Neumayer--Watz**	**59.70**	**160**	*e*		**P**		**18 43 40.8**	**+0.6**
	baz=294,slow=8.6								
VNA2				*e*				18 43 48.1	
TXAR	**Lajitas Array**	**61.02**	**327**	P		**P**		**18 43 49.9**	**+0.2**
	comp=N,0.2nm,0.7s,mb3.4,baz=130,slow=12,SNR=2.6								
SNAA	**Sanae**	**61.32**	**160**	*e*		**P**		**18 43 50.1**	**-1.1**
SNAA				*e*				18 43 57.4	
SNAA	**Sanae**	**61.32**	**160**	*e*P		**P**		**18 43 50.2**	**-1.0**
	comp=N,13nm,1.0s,mb5.0								
QSPA	**South Pole Qui**	**67.06**	**180**	*e*P		**P**		**18 44 29.9**	**+1.1**
	comp=N,8.7nm,1.0s,mb4.7								
TAOE	**Nuku Hiva Isla**	**67.65**	**270**	*e*LR		LR		18 44 36.8	
	comp=N,3μm,24.3s								
SDCO	**Great Sand Dun**	**68.80**	**331**	P		**P**		**18 44 42.4**	**+2.2**
	comp=N,2.8nm,1.3s,mb4.0								
DBIC	**Dimbokro**	**70.86**	**74**	P		**P**		**18 44 52.6**	**-0.8**
	comp=N,5.6nm,0.8s,mb4.5,baz=206,slow=4.6,SNR=5.6								
TOA0	**Torodi Ar. Sit**	**79.53**	**71**	*e*P		**P**		**18 45 42.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P		**P**		**18 45 42.6**	**-0.7**
	comp=N,5.6nm,0.8s,mb4.5,baz=253,slow=5.2,SNR=30								
TSUM	**Tsumeb**	**81.23**	**107**	P		**P**		**18 45 52.7**	**+0.1**
	comp=N,7.5nm,1.1s,mb4.5								
MAW	**Mawson**	**83.26**	**164**	*e*P		**P**		**18 46 02.0**	**-0.3**
ASAR	**Alice Springs**	**127.66**	**209**	PKP		PKPdf		18 52 41.9	-0.2
	comp=N,0.8nm,0.8s,baz=144,slow=2.8,SNR=9.0								
WRA	**Warrumunga Arr**	**130.67**	**212**	PKP		PKPdf		18 52 48.0	+0.2
	comp=N,1.1nm,0.9s,baz=148,slow=1.6,SNR=8.1								
WRA	**Warramunga Arr**	**130.67**	**212**	PKP		PKPdf		18 52 48.0	+0.1
ZALV	**Zalesovo Beam**	**144.16**	**25**	PKP		PKPdf		18 53 09.5	-2.0
	comp=N,0.8nm,0.4s,baz=281,slow=2.4,SNR=7.3								
AML	**Almayashu**	**144.92**	**49**	*e*PKPdf		PKPdf		18 53 13.8	+0.5
MK31	**Makanchi Array**	**147.97**	**36**	*e*PKPdf		PKPdf		18 53 17.8	-0.4
MK31				*e*PKPbc		PKPbc		18 53 21.3	-0.1
MKAR	**Makanchi Array**	**147.97**	**36**	PKPbc		PKPbc		18 53 18.9	+0.6
	comp=N,2.3nm,0.8s,baz=298,slow=2.6,SNR=16								
SONM	**Songino Array**	**155.25**	**5**	PKPab		PKPab		18 53 55.7	+1.6
	comp=N,0.3nm,0.6s,baz=352,slow=5.8,SNR=3.9								

*ISCJB **17** 18:58:45.8±0.3,3789N±002×2726E±003, h10km, Error ellipse: s-maj=3.6km s-min=2.6km az=164.2*
*DDA **17** 18:58:45.5,3792N×2722E, h4km±3km, Md2.9*
*CSEM **17** 18:58:45.1±0.1,3790N×2725E, h10km, MD2.9, Error ellipse: s-maj=2.6km s-min=2.0km az=107.0*
*ISK **17** 18:58:46.4,3793N×2738E, h10km, MD3.0*
*ATH **17** 18:58:47.0,3791N×2708E, h13km±4km, MD3.4/3*

ISC 17 18:58:46.0±0.4,3791N±002×2723E±003, h6km±4km, n19, σ0°§91/35, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.21**	**180**	⇑*i*P		**Pg**		**18 58 50.2**	**+0.1**
GCAM				*i* S		**Sg**		**18 58 53.2**	**+0.4**
SMG	**Samos**	**0.37**	**238**	*e*PG		**Pg**		**18 58 52.8**	**-0.3**
SMG				*e*SG		**Sg**		**18 58 57.3**	**-0.7**
KDAG	**Bornova**	**0.50**	**3**	*i* P		**Pg**		**18 58 55.5**	**-0.1**
AYDN	**Tasoluk**	**0.57**	**115**	*i* P		**Pg**		**18 58 57.2**	**+0.3**
AYDN				*i* S		**Sg**		**18 59 04.6**	**+0.3**
URLA	**Izmir**	**0.68**	**312**	*i* P		**Pg**		**18 58 58.5**	**-0.4**
URLA				*i* S		**Sg**		**18 59 08.3**	**+0.6**
MLSB	**Milas**	**0.75**	**144**	*e*PG		**Pg**		**18 59 00.3**	**-0.1**
MLSB				*e*SG		**Sg**		**18 59 11.0**	**+1.0**
BDRM	**Kayabasi**	**0.86**	**169**	*i* P		**Pg**		**18 59 01.9**	**-0.5**
BDRM				*i* S		**Sg**		**18 59 15.9**	**+2.4**
AKHS	**Akhisar**	**1.07**	**25**	*i* P		**Pg**		**18 59 05.9**	**-0.7**
AKHS				*i* S		**Sg**		**18 59 21.0**	**+0.5**
AKS	**Akhisar**	**1.07**	**25**	*e*PG		**Pg**		**18 59 06.3**	**-0.3**
AKS				*e*SG		**Sg**		**18 59 20.4**	**-0.1**
YER	**Yerkesik**	**1.14**	**132**	*e*PG		**Pg**		**18 59 07.3**	**-0.5**
YER				*e*SG		**Sg**		**18 59 22.2**	**-0.3**
DAT	**Datca**	**1.21**	**167**	*e*PN		**Pn**		**18 59 09.6**	**+0.2**
DAT				*e*SN		**Sn**		**18 59 26.8**	**+0.7**
KULA	**Kula-Manisa**	**1.28**	**61**	*e*PN		**Pn**		**18 59 09.9**	**-0.5**
AYVA	**Ayvalik**	**1.46**	**343**	*i* P		**Pn**		**18 59 13.5**	**+0.5**
AYVA				*i* S		**Sn**		**18 59 34.1**	**+1.6**
TURN	**Turunc**	**1.50**	**133**	*i* P		**Pn**		**18 59 10.5**	**-3.0**
TURN				*i* S		**Sn**		**18 59 30.3**	**-3.1**
PRK	**Paraskevi**	**1.54**	**331**	*e*PB		**Pb**		**18 59 15.0**	**+0.1**
PRK				*e*SB		**Sb**		**18 59 35.0**	**+0.4**
APE	**Apeiranthos**	**1.59**	**239**	*e*PG		**Pg**		**18 59 15.0**	**-1.5**
APE				*e*SB		**Sb**		**

0.5nm,0.9s,baz=154,slow=1.8,SNR=6.3
ZALV Zalesovo Beam 144.04 24 PKP PKPdf 19 23 58.2 +0.7
0.4nm,0.3s,baz=270,slow=1.4,SNR=3.3
AML Almayashu 144.89 49 *e*PKPdf PKPdf 19 24 01.6 +2.2
MKAR Makanchi Array 147.89 36 PKPbc PKPbc 19 24 09.3 +2.0
0.7nm,0.6s,baz=320,slow=3.1,SNR=11
MKAR Makanchi Array 147.89 36 PKPbc PKPbc 19 24 09.3 +1.9

IDC 17 19:21:52.8±29.0, 2106S×17574W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=529.0km s-min=141.6km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.54**	**265**	P	P	19 28 52.4	+0.6
	2.1nm,0.7s,baz=83,slow=14,SNR=2.8						
STKA	**Stephens Creek**	**39.46**	**245**	P	P	19 29 24.1	-0.9
	3.3nm,1.1s,baz=97,slow=9.6,SNR=2.2						
ASAR	**Alice Springs**	**46.45**	**257**	P	P	19 30 21.6	-0.1
	0.7nm,0.8s,baz=88,slow=7.6,SNR=9.5						
WRA	**Warramunga Arr**	**46.62**	**262**	P	P	19 30 23.2	+0.1
	0.4nm,0.3s,baz=96,slow=8.4,SNR=44						

IDC 17 19:25:41.5±0.6, 2312S×7082W, h0km, mb4.1/10, mb1 4.3/14, mb1mx4.2/20, mbtmp4.1/14, ML4.0/3, MS3.8/4, Ms1 3.8/4, ms1mx3.4/32, Error ellipse: s-maj=18.1km s-min=12.6km az=165.0
ISCJB 17 19:25:45.3±0.3, 2315S±005×7083W±005, h33km, mb4.4/22, MS4.1/2, Error ellipse: s-maj=7.7km s-min=6.6km az=44.8
BJI 17 19:25:47.0, 2310S×7070W, h35km, mB5.1, Ms5.4, Msz4.9
NEIC 17 19:25:47.0±0.3, 2310S×7069W, h35km, mb4.7/14, Error ellipse: s-maj=9.4km s-min=6.8km az=68.0
ISC 17 19:25:47.4±0.3, 2313S±005×7074W±006, h35km, n76, σ1§08/54, mb4.4/22, MS4.1/2, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.76**	**74**	Pg	**Pn**	**19 26 15.8**	**+0.3**
	213nm,0.3s,baz=251,slow=13,SNR=93						
LVC				*e*Pn		19 26 39.8	
	1μm,0.3s,baz=47,slow=14,SNR=27						
LVC	**Limon Verde**	**1.76**	**74**	*e*Pn	**Pn**	**19 26 15.2**	**-0.3**
LVC				*e*Sn	**Sn**	**19 26 39.4**	**+2.7**
LCO	**Las Campanas**	**5.86**	**180**	*e*Pn	**Pn**	**19 27 07.7**	**-4.1**
	85nm,0.7s						
ARE	**Arequipa**	**6.67**	**354**	*i*P	**Pn**	**19 27 19.6**	**-3.3**
ARE				*i*S	**Sn**	**19 28 31.2**	**-6.5**
LPAZ	**La Paz**	**7.23**	**20**	Pn	**Pn**	**19 27 31.0**	**+0.3**
	1.2nm,0.3s,baz=200,slow=8.2,SNR=31						
LPAZ				LR	LR	19 30 02.4	
	comp=Z,218nm,21.7s,baz=312,slow=36						
LPAZ	**La Paz**	**7.23**	**20**	*e*Pn	**Pn**	**19 27 31.5**	**+0.8**
	42nm,1.1s						
CFAA	**Coronel Fontan**	**8.73**	**166**	Pn	**Pn**	**19 27 49.7**	**-1.6**
	0.2nm,0.3s,baz=354,slow=14,SNR=12						
CFAA	**Coronel Fontan**	**8.73**	**166**	Pn	**Pn**	**19 27 49.7**	**-1.6**
SIV	**San Ignacio**	**11.55**	**54**	Pn	**Pn**	**19 28 27.9**	**-1.9**
NNA	**Nana**	**12.51**	**331**	LR	LR	19 33 48.4	
	comp=Z,389nm,19.1s,baz=145,slow=39						
NNA	**Nana**	**12.51**	**331**	Pn	**Pn**	**19 28 41.8**	**-1.2**
PLCA	**Paso Flores**	**17.56**	**180**	P	**Pn**	**19 29 48.1**	**-1.2**
	0.2nm,0.3s,baz=350,slow=9.5,SNR=5.1						
PLCA	**Paso Flores**	**17.56**	**180**	*e*P	**Pn**	**19 29 50.5**	**+1.1**
	29nm,1.4s						
ATAH	**Atahualpa**	**17.64**	**334**	P	**Pn**	**19 29 52.1**	**+1.6**
	baz=124,slow=8.9,SNR=3.7						
BDFB	**Brasilia**	**22.67**	**75**	P	**P**	**19 30 46.3**	**+0.4**
	1.9nm,0.6s,mb3.7,baz=198,slow=21,SNR=4.2						
BDFB				LR	LR	19 40 30.7	
	comp=Z,269nm,18.1s,MS3.7,baz=56,slow=39						
OTAV	**Otavalo**	**24.40**	**341**	*e*Pn	**P**	**19 31 02.7**	**0.0**
	20nm,1.4s,mb4.4						
RCBR	**Riachuelo**	**37.71**	**68**	P	**P**	**19 32 59.6**	**-0.3**
	16nm,0.8s,mb4.8						
VNA3	**Neumayer Olymp**	**59.10**	**161**	*e*P	**P**	**19 35 44.8**	**+0.9**
VNA3				*e*		19 35 49.0	
VNA3				*e*	pP	19 35 53.8	-0.7
VNA3				*e*		19 35 58.7	
VNA1	**Neumayer--Stat**	**59.34**	**160**	*e*P	**P**	**19 35 46.7**	**+1.2**
VNA1				*e*		19 35 50.9	
VNA1				*e*		19 36 00.1	
VNA2	**Neumayer--Watz**	**59.70**	**160**	*e*P	**P**	**19 35 48.6**	**+0.6**
	baz=296,slow=8.1						
VNA2				*e*		19 35 53.3	
VNA2				*e*	pP	19 35 58.0	-0.7
VNA2				*e*		19 36 01.8	
TXAR	**Lajitas Array**	**61.03**	**327**	P	**P**	**19 35 57.5**	**-0.2**
	0.7nm,0.8s,mb3.9,baz=146,slow=9.1,SNR=7.2						
WVT	**Waverly**	**61.11**	**344**	*e*P	**P**	**19 35 55.7**	**-2.4**
	5.8nm,0.7s,mb4.8						
SNAA	**Sanae**	**61.31**	**160**	*e*P	**P**	**19 35 58.7**	**-0.3**
SNAA				*e*		19 36 02.5	
SNAA				*e*		19 36 05.7	
SNAA	**Sanae**	**61.31**	**160**	*e*Pn	**P**	**19 35 57.6**	**-1.4**
	9.2nm,1.1s,mb4.8						
MIAR	**Mount Ida**	**61.32**	**339**	P	**P**	**19 35 58.3**	**-1.1**
BBTS	**Babate**	**64.98**	**60**	LR	LR	20 03 07.0	
	comp=Z,251nm,20.6s,MS4.4,baz=331,slow=34						
LAZ	**Ladron**	**66.85**	**328**	P	**P**	**19 36 36.5**	**+0.6**
ANMO	**Albuquerque**	**66.97**	**329**	*e*P	**P**	**19 36 36.0**	**-0.5**
	4.2nm,1.3s,mb4.3						
QSPA	**South Pole Qui**	**67.07**	**180**	*e*P	**P**	**19 36 37.8**	**+1.1**
	7.3nm,0.9s,mb4.7						
SDCO	**Great Sand Dun**	**68.81**	**331**	*e*P	**P**	**19 36 49.2**	**+1.1**
	29nm,1.8s,mb4.9						
WUAZ	**Wupatki**	**69.87**	**326**	*e*P	**P**	**19 36 55.4**	**+0.7**
	10nm,1.2s,mb4.6						
PV01	**Paradox Valley**	**70.53**	**329**	*e*P	**P**	**19 36 59.5**	**+0.8**
DBIC	**Dimbokro**	**70.82**	**74**	P	**P**	**19 37 00.5**	**-0.5**
	3.3nm,0.8s,mb4.3,baz=263,slow=4.4,SNR=4.5						
DBIC	**Dimbokro**	**70.82**	**74**	*e*P	**P**	**19 36 59.5**	**-1.5**
MSU	**Marysvale**	**72.59**	**327**	*e*P	**P**	**19 37 12.4**	**+1.4**
MWC	**Mount Wilson**	**72.63**	**320**	P	**P**	**19 37 10.2**	**-1.2**
	22nm,1.3s,mb4.9						
ARUT	**Antelope Range**	**72.68**	**326**	*e*P	**P**	**19 37 12.9**	**+1.3**
RSSD	**Black Hills**	**73.55**	**336**	*e*P	**P**	**19 37 16.6**	**0.0**
HWUT	**Hardware Ranch**	**74.69**	**329**	*e*P	**P**	**19 37 23.8**	**+0.5**
	5.0nm,1.0s,mb4.4						
PDAR	**Pinedale Array**	**74.69**	**331**	P	**P**	**19 37 22.4**	**-0.9**
	0.4nm,0.5s,mb3.6,baz=138,slow=8.7,SNR=6.3						
VNDA	**Vanda**	**74.96**	**190**	P	**P**	**19 37 24.6**	**0.0**
	1.3nm,1.0s,mb3.8,baz=162,slow=3.6,SNR=6.0						
VNDA	**Vanda**	**74.96**	**190**	*e*P	**P**	**19 37 26.4**	**+1.9**
	2.7nm,1.1s,mb4.1						
NVAR	**Mina Array Bea**	**75.75**	**323**	P	**P**	**19 37 29.6**	**+0.1**
	0.8nm,0.8s,mb3.7,baz=151,slow=5.5,SNR=5.8						
YMR	**Madison River**	**76.82**	**332**	*e*P	**P**	**19 37 36.9**	**+1.5**
	8.4nm,1.3s,mb4.5						
TOA0	**Torodi Ar. Sit**	**79.49**	**71**	*e*P	**P**	**19 37 49.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**19 37 50.4**	**-0.5**
	2.2nm,0.7s,mb4.2,baz=254,slow=5.2,SNR=28						
WALA	**Waterton Lakes**	**81.52**	**333**	*e*P	**P**	**19 38 01.2**	**+0.2**
	4.5nm,0.7s,mb4.5						
OD2	**Odessa Site #2**	**82.40**	**329**	*e*P	**P**	**19 38 06.2**	**+0.5**
MAW	**Mawson**	**83.26**	**164**	P	**P**	**19 38 10.2**	**+0.2**
	2.5nm,0.5s,mb4.5,baz=277,slow=10,SNR=5.1						
BOSA	**Boshof**	**84.17**	**118**	P	**P**	**19 38 15.5**	**0.0**
	3.0nm,0.5s,mb4.7,baz=316,slow=22,SNR=9.1						
EDM	**Edmonton**	**84.53**	**336**	*e*P	**P**	**19 38 15.7**	**-0.8**
CASY	**Casey**	**90.87**	**181**	P	**P**	**19 38 45.0**	**-2.0**
YKA	**Yellowknife Ar**	**92.16**	**341**	P	**P**	**19 38 52.5**	**-0.3**
	1.0nm,0.5s,mb4.4,baz=147,slow=4.8,SNR=7.1						
YKA	**Yellowknife Ar**	**92.16**	**341**	P	**P**	**19 38 52.5**	**-0.3**
ASAR	**Alice Springs**	**127.69**	**209**	PKP	PKPdf	19 44 48.6	-1.2
	1.2nm,0.7s,baz=135,slow=1.8,SNR=16						
WRA	**Warramunga Arr**	**130.69**	**212**	PKP	PKPdf	19 44 56.0	+0.4
	1.7nm,0.9s,baz=147,slow=1.5,SNR=18						
ZALV	**Zalesovo Beam**	**144.13**	**25**	PKP	PKPdf	19 45 17.7	-1.4
	1.3nm,0.5s,baz=307,slow=3.3,SNR=6.7						
EKS2	**Erkin-Say**	**144.75**	**48**	P	PKPdf	19 45 21.0	+0.4
	SNR=5.0						
AML	**Almayashu**	**144.89**	**49**	*e*PKPdf	PKPdf	19 45 21.3	+0.5
AML	**Almayashu**	**144.89**	**49**	P	PKPdf	19 45 21.9	+1.1
	SNR=9.6						
AAK	**Ala-Archa**	**145.25**	**48**	P	PKPbc	19 45 22.9	+1.7
	SNR=12						
KBK	**Karagaybulak**	**145.55**	**47**	P	PKPdf	19 45 23.8	+1.8
	SNR=7.2						
KZA	**Kyzart**	**145.98**	**48**	P	PKPdf	19 45 25.1	+2.4
	SNR=5.9						
MK31	**Makanchi Array**	**147.94**	**36**	*e*PKPdf	PKPdf	19 45 25.9	+0.1
MK31				*e*PKPbc	PKPbc	19 45 29.1	+0.2
MKAR	**Makanchi Array**	**147.94**	**36**	PKPbc	PKPbc	19 45 26.4	-2.5
	2.2nm,0.6s,baz=299,slow=1.6,SNR=30						
MJAR	**Matsushiro Arr**	**151.67**	**305**	PKPbc	PKPbc	19 45 38.4	0.0
	1.9nm,0.6s,baz=97,slow=1.7,SNR=10						
MAT	**Matsushiro**	**151.68**	**305**	PKP	PKPbc	19 45 38.1	-0.3
WMQ	**Urumqi**	**152.77**	**36**	*e*PKP	PKPdf	19 45 33.0	-0.5
MDJ	**Mudanjiang**	**152.86**	**327**	PKP	PKPdf	19 45 34.1	+0.5
CN2	**Changchun**	**155.44**	**331**	*e*PKP	PKPdf	19 45 30.6	-6.6
GTA	**Gaotai**	**161.89**	**24**	*e*PKP	PKPdf	19 45 46.8	+1.8
GTA				APKP		19 45 57.6	
GTA				XPKP		19 46 01.3	
HHC	**Hu-ho-hao-te**	**162.22**	**354**	*e*PKP	PKPdf	19 45 45.8	+0.5
HHC				APKP		19 45 59.5	
HHC				XPKP		19 46 03.1	
HHC				PP	PP		
	comp=Z,468nm,15.5s						
HHC				LR	LR		
	comp=N,159nm,17.8s						
HHC				LR	LR		
	comp=E,155nm,21.4s						
HHC				LR	LR		
	comp=Z,175nm,23.8s						
LZH	**Lanzhou**	**166.26**	**19**	*e*PKP	PKPdf	19 45 46.8	-2.3
LZH				APKP		19 46 00.6	
LZH				XPKP		19 46 05.8	
LZH				PKP2	PKPab	19 46 48.3	-1.8
LZH				LR	LR		
	comp=E,107nm,18.2s						
LZH				LR	LR		
	comp=Z,152nm,20.5s						
CD2	**Chengdu**	**170.83**	**31**	*e*PKP	PKPdf	19 45 49.3	-3.0
KMI	**Kunming**	**173.72**	**70**	PKP	PKPdf	19 45 51.4	-2.3
GYA	**Guiyang**	**175.93**	**35**	*e*PKP	PKPdf	19 45 52.4	-2.0
GYA				APKP		19 46 07.6	
GYA				XPKP		19 46 12.3	
GYA				PKP2	PKPab	19 47 32.0	-1.3
GYA				PP	PP		
	comp=Z,50nm,7.5s						

BJI 17 19:27:49.8, 2283S×7001W, h41km, mB5.1, Ms5.0, Msz4.9
MOS 17 19:27:50.1±1.5, 2292S×7060W, h33km, mb5.0/11, Error ellipse: s-maj=21.0km s-min=11.1km az=95.7
ISCJB 17 19:27:51.3±1.4, 2297S±005×7052W±009, h45km±12km, mb4.6/27, MS4.3/2, Error ellipse: s-maj=14.1km s-min=7.8km az=158.7
IDC 17 19:27:51.9±3.0, 2304S×7057W, h35km±22km, mb4.1/11, mb1 4.3/16, mb1mx4.2/22, mbtmp4.2/16, ML4.3/5, MS4.3/2, Ms1 4.3/2, ms1mx3.4/32, Error ellipse: s-maj=22.0km s-min=15.5km az=42.0
NEIC 17 19:27:52.1±1.1, 2281S×6999W, h40km±9km, mb4.8/20, Error ellipse: s-maj=15.7km s-min=7.2km az=69.0
ISC 17 19:27:54.3±1.0, 2297S±005×7052W±008, h55km±9km, n110, σ1§05/74, mb4.6/27, MS4.3/2, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.53**	**77**	Pg	**Pn**	**19 28 21.4**	**+2.2**
	283nm,0.3s,baz=247,slow=11,SNR=8.0						
LVC				Lg		19 28 44.0	
	795nm,0.3s,baz=159,slow=20,SNR=12						
LVC	**Limon Verde**	**1.53**	**77**	*e*Pn	**Pn**	**19 28 09.3**	**-10**
LVC				Pg	**Pn**	**19 28 21.4**	**+2.2**
LVC				*e*Sn	**Sn**	**19 28 42.9**	**+4.9**
LVC				Lg		19 28 44.0	
LCO	**Las Campanas**	**6.02**	**182**	*e*Sn	**Sn**	**19 30 15.0**	**-13**
LPAZ	**La Paz**	**7.01**	**19**	Pn	**Pn**	**19 29 35.0**	**+0.6**
	3.0nm,0.3s,baz=190,slow=8.6,SNR=11						
LPAZ	**La Paz**	**7.01**	**19**	*e*P	**Pn**	**19 29 34.5**	**+0.1**
CFAA	**Coronel Fontan**	**8.84**	**167**	Pn	**Pn**	**19 29 59.9**	**+0.5**
	0.4nm,0.3s,baz=186,slow=24,SNR=3.9						
SIV	**San Ignacio**	**11.29**	**54**	Pn	**Pn**	**19 30 32.5**	**-0.5**
	3.0nm,0.3s,baz=245,slow=13,SNR=9.0						
NNA	**Nana**	**12.47**	**330**	Pn	**Pn**	**19 30 49.3**	**+0.3**
	1.5nm,0.3s,baz=164,slow=6.4,SNR=5.9						
NNA	**Nana**	**12.47**	**330**	*e*Pn	**Pn**	**19 30 48.9**	**-0.2**
	13nm,0.6s						
ATAH	**Atahualpa**	**17.59**	**333**	P	**Pn**	**19 31 54.5**	**-1.2**
	0.4nm,0.3s,baz=118,slow=20,SNR=3.8						
PLCA	**Paso Flores**	**17.71**	**180**	P	**Pn**	**19 31 55.1**	**-1.9**
	0.2nm,0.3s,baz=0.6,slow=12,SNR=6.3						
PLCA	**Paso Flores**	**17.71**	**180**	*e*Pn	**Pn**	**19 31 50.9**	**-6.1**
	32nm,1.5s						
PLCA				P		19 31 55.1	
PLCA	**Paso Flores**	**17.71**	**180**	*e*P	**Pn**	**19 31 50.9**	**-6.1**
PLCA				pmax	pmax		
	comp=Z,32nm,1.5s						
BDFB	**Brasilia**	**22.44**	**75**	P	**P**	**19 32 47.9**	**-0.8**
	comp=Z,2.3nm,0.6s,mb3.8,baz=211,slow=16,SNR=3.9						
OTAV	**Otavalo**	**24.32**	**340**	Pn	**P**	**19 33 05.7**	**-1.2**
	comp=Z,10nm,1.1s,mb4.2						
USHA	**Ushuaia**	**31.86**	**178**	LR	LR	19 48 21.2	
	comp=Z,289nm,19.1s,MS4.0,baz=30,slow=39						
RCBR	**Riachuelo**	**37.46**	**68**	*e*P	**P**	**19 35 04.0**	**+1.2**
	comp=Z,60nm,1.3s,mb5.3						
TGUH	**Tegucigalpa,Un**	**40.28**	**334**	P	**P**	**19 35 22.0**	**-4.2**
SJG	**San Juan**	**41.05**	**6**	P	**P**	**19 35 30.8**	**-1.6**
	comp=Z,40nm,1.1s,mb5.0						
SJG	**San Juan**	**41.05**	**6**	P	**P**	**19 35 30.8**	**-1.7**
SJG				pmax	pmax		
	comp=Z,40nm,1.1s						
CMIG	**Matias Romero**	**46.40**	**327**	P	**P**	**19 36 14.9**	**-0.6**
	comp=Z,2.9nm,0.8s,mb4.3,baz=107,slow=6.2,SNR=4.9						
VNA3	**Neumayer Olymp**	**59.18**	**161**	*e*P	**P**	**19 37 48.8**	**-0.3**
VNA3				*e*		19 37 54.8	
VNA3				*e*		19 37 56.9	
VNA1	**Neumayer--Stat**	**59.42**	**160**	*e*P	**P**	**19 37 51.2**	**+0.4**
VNA1				*e*		19 37 56.0	
VNA1				*e*		19 37 58.6	
CPCT	**Cooper Cave**	**59.59**	**347**	*e*P	**P**	**19 37 51.4**	**-0.9**
SWET	**Sewanee**	**59.68**	**345**	*e*P	**P**	**19 37 52.0**	**-0.9**
VNA2	**Neumayer--Watz**	**59.78**	**160**	*e*P	**P**	**19 37 53.1**	**-0.1**
	baz=285,slow=9.0						
VNA2				*e*		19 37 59.1	
VNA2				*e*		19 38 01.0	
OXF	**Oxford**	**59.91**	**342**	*e*P	**P**	**19 37 52.8**	**-1.8**
ELN	**Prospectdale**	**60.64**	**351**	*e*P	**P**	**19 37 59.9**	**+0.4**
TXAR	**Lajitas Array**	**61.00**	**327**	P	**P**	**19 38 01.4**	**-0.7**
	comp=Z,1.6nm,0.9s,mb4.2,baz=155,slow=7.1,SNR=8.6						
WVT	**Waverly**	**61.01**	**344**	*e*P	**P**	**19 38 00.8**	**-1.2**
	comp=Z,10nm,1.1s,mb4.9						
WVT	**Waverly**	**61.01**	**344**	*e*P	**P**	**19 38 00.8**	**-1.2**
WVT				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
MIAR	**Mount Ida**	**61.24**	**338**	*e*P	**P**	**19 38 01.5**	**-2.2**
	comp=Z,5.1nm,0.9s,mb4.7						
MIAR	**Mount Ida**	**61.24**	**338**	*e*P	**P**	**19 38 01.5**	**-2.2**
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
SNAA	**Sanae**	**61.40**	**161**	*e*P	**P**	**19 38 02.3**	**-2.0**
SNAA				*e*		19 38 08.2	
SNAA				*e*		19 38 10.5	
SNAA	**Sanae**	**61.40**	**161**	*e*Pn	**P**	**19 38 02.1**	**-2.1**
SNAA	**Sanae**	**61.40**	**161**	*e*P	**P**	**19 38 02.4**	**-1.9**
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WCI	**Wyandotte Cave**	**62.65**	**346**	*e*P	**P**	**19 38 10.3**	**-2.7**
	comp=Z,34nm,1.6s,mb5.2						
WCI	**Wyandotte Cave**	**62.65**	**346**	*e*P	**P**	**19 38 10.3**	**-2.7**
WCI				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.2						
SIUC	**Southern Illin**	**62.87**	**343**	P	**P**	**19 38 13.9**	**-0.6**
ACSO	**Alum Creek Sta**	**63.93**	**349**	*e*P	**P**	**19 38 20.9**	**-0.5**
ANMO	**Albuquerque**	**66.94**	**328**	*e*P	**P**	**19 38 42.0**	**+1.0**
	comp=Z,25nm,1.8s,mb5.0						
ANMO	**Albuquerque**	**66.94**	**328**	*e*P	**P**	**19 38 42.0**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,25nm,1.8s						
QSPA	**South Pole Qui**	**67.23**	**180**	*e*P	**P**	**19 38 41.8**	**-0.5**
	comp=Z,19nm,1.3s,mb5.0						
SDCO	**Great Sand Dun**	**68.77**	**331**	*e*P	**P**	**19 38 53.8**	**+1.3**
	comp=Z,14nm,1.3s,mb4.8						
WUAZ	**Wupatki**	**69.86**	**325**	*e*P	**P**	**19 39 00.2**	**+0.9**
	comp=Z,11nm,1.0s,mb4.8						
PV01	**Paradox Valley**	**70.50**	**329**	*e*P	**P**	**19 39 04.0**	**+0.8**
DBIC	**Dimbokro**	**70.58**	**74**	P	**P**	**19 39 04.1**	**0.0**
	comp=Z,3.8nm,0.8s,mb4.4,baz=208,slow=8.1,SNR=4.6						
DBIC	**Dimbokro**	**70.58**	**74**	P	**P**	**19 39 04.2**	**+0.1**
	comp=Z,6.9nm,0.9s,mb4.6						
DBIC	**Dimbokro**	**70.58**	**74**	P	**P**	**19 39 04.2**	**0.0**
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SMCO	**Snowmass**	**70.60**	**331**	*e*P	**P**	**19 39 05.3**	**+1.6**
	comp=Z,5.0nm,0.9s,mb4.4						
MSU	**Marysvale**	**72.56**	**327**	*e*P	**P**	**19 39 16.9**	**+1.3**
ARUT	**Antelope Range**	**72.66**	**326**	*e*P	**P**	**19 39 17.5**	**+1.3**
RSSD	**Black Hills**	**73.48**	**335**	*e*P	**P**	**19 39 21.8**	**+1.0**
	comp=Z,4.2nm,0.9s,mb4.4						
RSSD	**Black Hills**	**73.48**	**335**	*e*P	**P**	**19 39 21.8**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
JLU	**Jordanelle**	**73.82**	**329**	*e*P	**P**	**19 39 23.8**	**+0.9**
SBA	**Scott Base**	**74.12**	**191**	*e*P	**P**	**19 39 24.6**	**+0.3**
PDAR	**Pinedale Array**	**74.65**	**331**	P	**P**	**19 39 27.8**	**+0.1**
	comp=Z,1.4nm,1.1s,mb3.8,baz=160,slow=4.7,SNR=4.8						
VNDA	**Vanda**	**75.15**	**190**	P	**P**	**19 39 30.3**	**+0.1**
	comp=Z,0.5nm,0.9s,mb3.4,baz=152,slow=4.8,SNR=4.7						
VNDA	**Vanda**	**75.15**	**190**	*e*P	**P**	**19 39 30.3**	**0.0**
	comp=Z,3.8nm,1.2s,mb4.2						
VNDA	**Vanda**	**75.15**	**190**	*e*P	**P**	**19 39 30.3**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NVAR	**Mina Array Bea**	**75.74**	**323**	P	**P**	**19 39 34.9**	**+0.8**
	comp=Z,1.3nm,0.8s,mb3.9,baz=154,slow=6.9,SNR=8.9						
RLMT	**Red Lodge**	**76.41**	**333**	*e*P	**P**	**19 39 38.5**	**+0.8**
	comp=Z,15nm,1.5s,mb4.7						
YMR	**Madison River**	**76.78**	**332**	*e*P	**P**	**19 39 41.9**	**+2.1**
	comp=Z,32nm,1.8s,mb4.9						
HLID	**Hailey**	**77.50**	**329**	*e*P	**P**	**19 39 45.2**	**+1.3**
	comp=Z,4.8nm,0.9s,mb4.4						
TOA0	**Torodi Ar. Sit**	**79.25**	**71**	*e*P	**P**	**19 39 54.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**79.25**	**71**	P	**P**	**19 39 54.9**	**+0.7**
	comp=Z,5.9nm,0.9s,mb4.5,baz=254,slow=5.1,SNR=10.0						
WALA	**Waterton Lakes**	**81.47**	**333**	*e*P	**P**	**19 40 06.0**	**+0.7**
	comp=Z,15nm,1.0s,mb4.9						
MAW	**Mawson**	**83.36**	**164**	P	**P**	**19 40 14.3**	**-0.7**
	comp=Z,5.4nm,0.9s,mb4.6,baz=257,slow=6.2,SNR=4.1						
MAW	**Mawson**	**83.36**	**164**	P	**P**	**19 40 14.1**	**-0.9**
	comp=Z,12nm,0.9s,mb4.9						
MAW	**Mawson**	**83.36**	**164**	P	**P**	**19 40 14.1**	**-0.9**
MAW				pmax	pmax		
	comp=Z,12nm,0.9s						
BOSA	**Boshof**	**84.07**	**118**	P	**P**	**19 40 19.0**	**-0.5**
	comp=Z,6.5nm,1.2s,mb4.7,baz=217,slow=9.0,SNR=4.1						
EDM	**Edmonton**	**84.46**	**336**	*e*P	**P**	**19 40 19.8**	**-0.9**
YKA	**Yellowknife Ar**	**92.08**	**341**	P	**P**	**19 40 57.2**	**+0.3**
	comp=Z,2.0nm,0.7s,mb4.5,baz=135,slow=5.2,SNR=5.2						
AFI	**Afiamalu**	**94.71**	**253**	LR	LR	20 13 50.4	
	comp=Z,175nm,18.4s,MS4.6,baz=4.3,slow=29						
OBN	**Obninsk**	**118.24**	**39**	*e*PKIKP	PKPdf	19 46 32.2	-2.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ANN	**Anapa**	**118.34**	**50**	*i*PKIKP	PKPdf	19 46 40.6	+5.2
ANN				*e*		19 47 48.4	
BILL	**Bilibino**	**123.32**	**338**	*e*PKIKP	PKPdf	19 46 40.9	-3.4
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ASAR	**Alice Springs**	**127.92**	**209**	PKP	PKPdf	19 46 54.2	-0.3
	comp=Z,2.4nm,0.9s,baz=148,slow=2.5,SNR=11						
TIXI	**Tiksi**	**130.04**	**352**	*i*PKIKP	PKPdf	19 46 57.1	0.0
SEY	**Seymchan**	**130.83**	**336**	*i*PKIKP	PKPdf	19 46 57.9	-0.9
WRA	**Warramunga Arr**	**130.94**	**212**	PKP	PKPdf	19 47 00.4	0.0
	comp=Z,2.6nm,0.9s,baz=159,slow=1.5,SNR=10.0						
YAK	**Yakutsk**	**138.59**	**346**	*i*PKIKP	PKPdf	19 47 12.6	-0.7
KURK	**Kurchatov**	**143.37**	**33**	*i*PKIKP	PKPdf	19 47 20.8	-1.5
ZALV	**Zalesovo Beam**	**143.91**	**25**	PKP	PKPdf	19 47 22.9	-0.2
	comp=Z,3.6nm,0.8s,baz=318,slow=2.0,SNR=7.3						
EKS2	**Erkin-Say**	**144.49**	**48**	P	PKPdf	19 47 25.3	+0.8
	SNR=5.8						
AML	**Almayashu**	**144.63**	**49**	*e*PKPdf	PKPdf	19 47 26.2	+1.4
AML	**Almayashu**	**144.63**	**49**	P	PKPdf	19 47 26.6	+1.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**2.40**	**10**	P	Pn	19 30 11.7	-1.6
PDSI	**Padang**	**2.40**	**10**	S	Sn	19 30 42.3	+0.8
KSI	**Kapahiang**	**2.58**	**98**	P	Pn	19 30 15.4	-0.4
KSI	**Kapahiang**	**2.58**	**98**	S	Sn	19 30 47.2	+1.2
PPI	**Padang Panjang**	**2.84**	**7**	P	Pn	19 30 21.1	+1.8

MOS ***17*** *19:34:00.2±1.1, 5169N×15855E, h59km, mb4.7/7, Error ellipse: s-maj=23.4km s-min=7.3km az=77.5*
ISCJB ***17*** *19:34:01.4±0.7, 5171N±005×15850E±009, h72km±6km, mb3.7/14, Error ellipse: s-maj=11.9km s-min=5.2km az=42.2*
KRSC ***17*** *19:34:01.7±0.4, 5176N×15870E, h40km±40km, ML4.6*
NEIC ***17*** *19:34:04.4±1.2, 5193N×158.14E, h82km±10km, mb4.2/3, Error ellipse: s-maj=20.2km s-min=10.9km az=136.0*
IDC ***17*** *19:34:05.4±1.9, 5194N×158.17E, h89km±15km, mb3.3/11, mb1 3.6/12, mb1mx3.5/23, mbtmp3.3/12, Error ellipse: s-maj=24.3km s-min=15.0km az=132.0*

ISC 17 19:34:02.7±0.6, 5173N±005×15845E±009, h67km±6km, n52, σ1§34/66, mb3.7/14, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.70**	**3**	*e*P	**Pn**	**19 34 16.0**	**-1.4**
RUS				*i* S	**Sn**	**19 34 25.5**	**-2.7**
GRL	**Gorelyy**	**0.85**	**344**	*e*P	**Pn**	**19 34 19.0**	**-0.2**
GRL				*i* S	**Sn**	**19 34 31.8**	**+0.4**
MIPR	**Malaya Ipel'ka**	**1.18**	**298**	*e*P	**Pn**	**19 34 24.1**	**+0.8**
MIPR				*i* S	**Sn**	**19 34 40.2**	**+1.5**
PET	**Petropavlovsk**	**1.30**	**5**	*e*Pn	**Pn**	**19 34 23.7**	**-1.2**
PET				*e*Sn	**Sn**	**19 34 39.8**	**-1.7**
PET	**Petropavlovsk**	**1.30**	**5**	*e*P	**Pn**	**19 34 24.0**	**-0.9**
PET				*i* S	**Sn**	**19 34 40.4**	**-1.1**
PEA0B	**Petropavlovsk-**	**1.45**	**342**	*e*Pn	**Pn**	**19 34 27.1**	**+0.1**
PEA0B				*e*Sn	**Sn**	**19 34 42.4**	**-2.7**
PETK	**Petropavlovsk-** 25nm,0.3s,baz=137,slow=16,SNR=927	**1.45**	**342**	P	**Pn**	**19 34 27.1**	**+0.2**
NLC	**Nalytchevo**	**1.54**	**20**	*e*P	**Pn**	**19 34 25.8**	**-2.3**
NLC				*i* S	**Sn**	**19 34 43.4**	**-3.8**
AVH	**Avacha**	**1.54**	**6**	*e*P	**Pn**	**19 34 28.1**	**0.0**
AVH				*i* S	**Sn**	**19 34 47.7**	**+0.4**
SPN	**Mys Shipunski**	**1.67**	**35**	*e*P	**Pn**	**19 34 28.8**	**-1.0**
SPN				*i* S	**Sn**	**19 34 49.0**	**-1.3**
SKR	**Severo-Kuril's**	**1.81**	**235**	*e*PN	**Pn**	**19 34 30.5**	**-1.1**
SKR				*i* S	**Sn**	**19 34 52.5**	**-1.0**
SKR	comp=Z,310nm,0.4s			pmax	pmax		
SKR	comp=N,140nm,0.2s			pmax	pmax		
SKR	comp=E,160nm,0.4s			pmax	pmax		
SKR	comp=N,960nm,0.4s			smax			
SKR	comp=E,2μm,0.4s			smax			
GNL	**Ganaly**	**1.99**	**351**	*e*P	**Pn**	**19 34 34.6**	**+0.5**
GNL				*i* S	**Sn**	**19 34 59.3**	**+1.3**
KII	**Karymskiy**	**2.39**	**14**	*e*P	**Pn**	**19 34 39.9**	**+0.5**
KII				*i* S	**Sn**	**19 35 08.5**	**+0.9**
MKZ	**Mys Kozlova**	**3.45**	**34**	*e*P	**Pn**	**19 34 52.7**	**-1.2**
MKZ				*i* S	**Sn**	**19 35 28.9**	**-4.6**
TUMR	**Tumrok**	**3.70**	**15**	P	**Pn**	**19 34 57.5**	**+0.2**
TUMR				*i* S	**Sn**	**19 35 38.2**	**-1.4**
KMNR	**Kamenistaya**	**4.17**	**14**	P	**Pn**	**19 35 05.8**	**+2.1**
KPT	**Koypyo**	**4.37**	**13**	P	**Pn**	**19 35 07.9**	**+1.4**
BZMR	**Bezymyannaya**	**4.38**	**15**	*e*P	**Pn**	**19 35 08.4**	**+1.8**
BZWR	**Bezymyannyi-We**	**4.41**	**15**	P	**Pn**	**19 35 08.7**	**+1.7**
KOZ	**Kozyrevsk**	**4.42**	**10**	P	**Pn**	**19 35 08.1**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**4.42**	**17**	*e*P	**Pn**	**19 35 09.9**	**+2.7**
KOZR	**Kozyr**	**4.43**	**11**	PN	**Pn**	**19 35 08.1**	**+0.9**
ZLN	**Zelenaya**	**4.51**	**17**	*i* P	**Pn**	**19 35 11.4**	**+3.0**
KRSR	**Krestovskiy**	**4.66**	**15**	P	**Pn**	**19 35 13.4**	**+2.9**
KBTR	**Krutoberegovo**	**5.17**	**28**	P	**Pn**	**19 35 17.6**	**+0.2**
ASAJ	**Asahikawa** comp=E,0.4nm,0.3s,baz=75,slow=12,SNR=4.2	**13.06**	**241**	P	**Pn**	**19 37 06.7**	**+1.5**
MAJO	**Matsushiro** comp=E,5.2nm,0.6s	**20.91**	**231**	P	**P**	**19 38 38.6**	**-0.9**
MAJO	**Matsushiro** comp=Z,5.0nm,0.6s	**20.91**	**231**	P	**P**	**19 38 38.6**	**-0.9**
MAJO				pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,2.2nm,0.7s,baz=34,slow=7.9,SNR=13	**20.91**	**231**	*e*P	**P**	**19 38 40.4**	**+0.9**
MJAR	**Matsushiro Arr**	**20.91**	**231**	*e*P	**P**	**19 38 43.3**	**+3.8**
MJAR	comp=Z,2.0nm,0.7s			pmax	pmax		
TIXI	**Tiksi**	**23.93**	**337**	⇓*e*P	**P**	**19 39 09.0**	**-1.0**
TIXI	comp=Z,2.0nm,0.7s,mb3.6			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,1.2nm,0.5s,mb4.0	**32.84**	**284**	P	**P**	**19 40 26.0**	**-3.6**
ULN	**Ulaanbaatar** comp=Z,1.0nm,0.5s,mb3.9	**32.84**	**284**	P	**P**	**19 40 26.0**	**-3.6**
ULN				pmax	pmax		
INK	**Inuvik**	**35.56**	**36**	P	**P**	**19 40 51.6**	**-1.3**
YKA	**Yellowknife Ar** comp=Z,1.3nm,0.8s,mb3.7,baz=303,slow=7.9,SNR=3.1	**44.85**	**41**	P	**P**	**19 42 09.7**	**0.0**
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.8s	**44.85**	**41**	P	**P**	**19 42 09.7**	**0.0**
YKA				pmax	pmax		
MKAR	**Makanchi Array** comp=Z,0.2nm,0.6s,mb3.1,baz=61,slow=7.5,SNR=4.7	**47.84**	**296**	P	**P**	**19 42 31.6**	**-1.7**
ARU	**Arti** comp=Z,10nm,0.5s,mb5.1	**53.72**	**317**	*e*P	**P**	**19 43 11.0**	**-6.4**
ARU	**Arti** comp=Z,10.0nm,0.5s,mb5.1	**53.72**	**317**	*e*P	**P**	**19 43 11.0**	**-6.3**
ARU				pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.6s,mb3.8,baz=30,slow=7.1,SNR=8.4	**56.91**	**257**	P	**P**	**19 43 41.5**	**+0.8**
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.6s	**56.91**	**257**	P	**P**	**19 43 41.6**	**+0.8**
CMAR				pmax	pmax		
PDAR	**Pinedale Array** comp=Z,0.5nm,0.8s,mb3.6,baz=357,slow=3.3,SNR=3.6	**59.08**	**59**	P	**P**	**19 43 57.4**	**+1.8**
PDAR	**Pinedale Array**	**59.08**	**59**	P	**P**	**19 43 57.4**	**+1.8**
OBN	**Obninsk**	**63.11**	**327**	*e*P	**P**	**19 44 28.1**	**+5.3**
OBN	comp=Z,3.0nm,0.8s,mb4.3			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,0.7nm,0.7s,mb3.6,baz=21,slow=6.4,SNR=2.7	**64.56**	**343**	P	**P**	**19 44 30.4**	**-1.8**
AKASG	**Malin Array Be** comp=Z,0.5nm,0.4s,mb3.7,baz=29,slow=6.8,SNR=2.9	**69.25**	**328**	P	**P**	**19 45 00.4**	**-1.7**
AKASG	**Malin Array Be** comp=Z,1.0nm,0.4s	**69.25**	**328**	P	**P**	**19 45 00.4**	**-1.7**
AKASG				pmax	pmax		
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,mb3.0,baz=320,slow=5.8,SNR=3.0	**72.11**	**65**	P	**P**	**19 45 20.7**	**+0.9**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.8s,mb3.4,baz=13,slow=6.1,SNR=2.7	**74.42**	**204**	P	**P**	**19 45 33.0**	**-0.3**
WRA	**Warramunga Arr** comp=Z,10.0nm,0.8s	**74.42**	**204**	P	**P**	**19 45 33.0**	**-0.3**
WRA				pmax	pmax		
GERES	**GERESS Array B** comp=Z,0.2nm,0.4s,mb3.2,baz=28,slow=6.0,SNR=4.6	**75.38**	**337**	P	**P**	**19 45 37.7**	**-1.0**
ASAR	**Alice Springs** comp=Z,0.2nm,0.5s,mb3.1,baz=8.2,slow=5.2,SNR=4.2	**78.11**	**203**	P	**P**	**19 45 55.8**	**+1.6**

ISCJB ***17*** *19:41:37.9±1.4, 2317S±005×7100W±008, h22km±9km, mb4.5/6, Error ellipse: s-maj=12.4km s-min=7.3km az=16.2*
NEIC ***17*** *19:41:37.5±5.1, 2321S×7086W, h7km±32km, mb4.6/4, Error ellipse: s-maj=25.0km s-min=12.1km az=100.0*
GUC ***17*** *19:41:40.9±0.8, 2310S×7081W, h27km±5km, ML3.9*
IDC ***17*** *19:41:41.7±5.7, 2342S×7049W, h26km±34km, mb3.7/1, mb1 4.0/4, mb1mx3.6/19, mbtmp3.9/4, ML3.7/4, MS4.5/1, Ms1 4.4/1, ms1mx3.1/28, Error ellipse: s-maj=53.9km s-min=20.2km az=111.0*

ISC 17 19:41:39.3±1.4, 2317S±005×7091W±007, h15km±7km, n29, σ1§22/33, mb4.5/6, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.43**	**82**	⇑*i*P	**Pg**	**19 41 47.8**	**-0.2**
MECH				*i* S	**Sg**	**19 41 53.6**	**-0.2**
MECH	comp=N,48μm,0.3s			AML	AML	19 41 59.5	
ANCH	**Antofagasta**	**0.69**	**138**	⇓*i*P	**Pg**	**19 41 53.2**	**+0.3**
ANCH				*i* S	**Sg**	**19 42 02.5**	**+0.5**
ANCH	comp=E,12μm,0.0s			AML	AML	19 42 05.6	
CEN1	**Los Morros**	**0.69**	**109**	⇑*i*P	**Pg**	**19 41 53.1**	**+0.3**
CEN1				*i* S	**Sg**	**19 42 02.1**	**0.0**
CEN1	comp=N,3μm,0.4s			AML	AML	19 42 06.2	
LVC	**Limon Verde** comp=N,313nm,0.3s,baz=258,slow=11,SNR=52	**1.93**	**74**	Pg	**Pg**	**19 42 12.3**	**-4.0**
LVC				Lg		19 42 35.4	
LVC	comp=N,425nm,0.3s,baz=4.9,slow=23,SNR=12			LR	LR	19 42 50.1	
LVC	**Limon Verde** comp=N,446nm,20.2s,baz=60,slow=41	**1.93**	**74**	*e*Pn	**Pn**	**19 42 11.5**	**-0.1**
LVC				Pg	**Pg**	**19 42 12.3**	**-4.0**
LVC				*e*Sn	**Sn**	**19 42 34.0**	**-1.5**
LVC				Lg		19 42 35.4	
LVC				LR	LR	19 42 50.1	
LVC	**Limon Verde**	**1.93**	**74**	*e*P	**Pn**	**19 42 12.1**	**+0.5**
LVC				*i* S	**Sn**	**19 42 36.3**	**+0.8**
LVC	comp=N,2μm,0.3s			AML	AML	19 42 37.2	
PB01	**Plate Boundary**	**2.49**	**32**	*e*P	**Pn**	**19 42 20.6**	**+1.2**
PB01				*i* S	**Sn**	**19 42 50.2**	**+0.7**
PB01	comp=E,1μm,0.4s			AML	AML	19 42 56.4	
LCO	**Las Campanas**	**5.82**	**178**	Pn	**Pn**	**19 42 59.4**	**-5.8**
ARE	**Arequipa**	**6.69**	**355**	*e*P	**Pn**	**19 43 16.0**	**-1.1**
ARE				*e*S	**Sn**	**19 44 27.0**	**-6.2**
LPAZ	**La Paz** comp=E,0.6nm,0.3s,baz=191,slow=8.4,SNR=6.3	**7.33**	**21**	Pn	**Pn**	**19 43 27.9**	**+2.0**
LPAZ	**La Paz**	**7.33**	**21**	*e*Pn	**Pn**	**19 43 27.1**	**+1.2**
CFAA	**Coronel Fontan** comp=E,0.1nm,0.3s,baz=342,slow=12,SNR=5.1	**8.73**	**165**	Pn	**Pn**	**19 43 43.6**	**-1.5**
SIV	**San Ignacio** comp=E,0.8nm,0.3s,baz=249,slow=12,SNR=14	**11.70**	**54**	Pn	**Pn**	**19 44 24.1**	**-1.7**
PLCA	**Paso Flores** comp=E,0.1nm,0.3s,baz=14,slow=8.3,SNR=1.9	**17.52**	**179**	P	**Pn**	**19 45 42.3**	**-0.7**
RCBR	**Riachuelo** comp=E,20nm,1.2s,mb4.7	**37.87**	**68**	*e*P	**P**	**19 48 56.0**	**0.0**
PMSA	**Palmer Station** comp=E,47nm,0.4s,mb5.5,baz=5.8,slow=11,SNR=10	**41.84**	**176**	P	**P**	**19 49 25.1**	**-3.3**
PMSA	**Palmer Station**	**41.84**	**176**	P	**P**	**19 49 25.1**	**-3.3**
VNA3	**Neumayer Olymp**	**59.11**	**161**	*e*	**P**	**19 51 40.7**	**+1.9**
VNA2	**Neumayer--Watz** baz=296,slow=8.2	**59.71**	**160**	*e*	**P**	**19 51 44.9**	**+2.0**
SNAA	**Sanae**	**61.33**	**160**	*e*	**P**	**19 51 54.2**	**+0.2**
SNAA	**Sanae** comp=E,1.8nm,0.6s,mb4.4	**61.33**	**160**	*e*P	**P**	**19 51 54.2**	**+0.3**
QSPA	**South Pole Qui** comp=E,1.9nm,0.7s,mb4.2	**67.03**	**180**	*e*P	**P**	**19 52 33.8**	**+2.5**
DBIC	**Dimbokro** comp=E,10nm,1.3s,mb4.6	**70.98**	**74**	P	**P**	**19 52 52.5**	**-4.4**
SCHQ	**Schefferville** comp=E,232nm,18.5s,baz=312,slow=36	**77.75**	**2**	LR	LR	20 28 05.6	
TOA0	**Torodi Ar. Sit**	**79.65**	**71**	*e*P	**P**	**19 53 43.3**	**-3.4**
TORD	**Torodi Ar. Bea** comp=E,0.5nm,0.6s,mb3.7,baz=257,slow=4.9,SNR=10	**79.65**	**71**	P	**P**	**19 53 45.8**	**-0.9**
ASAR	**Alice Springs** comp=E,0.3nm,0.9s,baz=135,slow=1.9,SNR=3.7	**127.57**	**209**	PKP	PKPdf	20 00 44.5	-0.1
WRA	**Warramunga Arr** comp=E,0.3nm,0.6s,baz=153,slow=1.8,SNR=4.6	**130.58**	**212**	PKP	PKPdf	20 00 51.8	+1.4
MKAR	**Makanchi Array** comp=E,0.2nm,0.6s,baz=313,slow=2.8,SNR=3.7	**148.06**	**36**	PKPbc	PKPbc	20 01 25.3	+1.0

JMA 17 19:43:56.3, 3314N×13231E, h10km±1km, M3.7, 2C-4D
Broadband fault plane solution: P waves. NP1:
ϕs308.00000°, δ34.00000°, λ-12.00000°. NP2:
ϕs48.00000°, δ83.00000°, λ-124.00000°. Principal axes:
T Plg30.0000°, Azm165.0000°; N Plg33.0000°, Azm53.0000°; P Plg42.0000°, Azm286.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UWA2	**Uwa jima 2**	**0.27**	**74**	⇓P	Pg	19 44 01.8	0.0
UWA2				S	Sg	19 44 05.5	0.0
JNA	**Nagahama**	**0.44**	**19**	⇑P	Pg	19 44 04.9	0.0
JNA				S	Sg	19 44 10.9	+0.1
JUS	**Usuki**	**0.47**	**261**	⇓P	Pg	19 44 05.7	+0.1
JUS				S	Sg	19 44 11.9	0.0
JTO	**Tosashimizu**	**0.50**	**124**	⇓P	Pg	19 44 06.1	+0.1
JTO				S	Sg	19 44 12.6	0.0
JKU	**Kubokawa**	**0.65**	**75**	⇓P	Pg	19 44 08.9	-0.1
JKU				S	Sg	19 44 17.5	0.0
JET	**Tanbara**	**0.89**	**44**	⇑P	Pg	19 44 12.9	-0.5
JET				S	Sg	19 44 24.5	-0.5

ISCJB ***17*** *19:59:19.2±1.1, 2313S±003×7087W±005, h18km±8km, mb4.5/25 Error ellipse: s-maj=8.3km s-min=4.6km az=8.6*
IDC ***17*** *19:59:20.4±4.0, 2313S×7069W, h14km±24km, mb4.2/10, mb1 4.3/13, mb1mx4.3/19, mbtmp4.2/13, ML4.5/3, MS3.4/1, Ms1 3.3/1, ms1mx2.6/23, Error ellipse: s-maj=23.6km s-min=17.9km az=90.0*
NEIC ***17*** *19:59:20.2±3.3, 2316S×7072W, h14km±20km, mb4.7/19, Error ellipse: s-maj=12.0km s-min=7.2km az=78.0*
GUC ***17*** *19:59:20.1±1.0, 2310S×7082W, h32km±4km, ML4.3*
MOS ***17*** *19:59:22.3±1.4, 2294S×7078W, h33km, mb4.8/11, Error ellipse: s-maj=22.1km s-min=11.5km az=92.0*
BJI ***17*** *19:59:24.2, 2320S×7070W, h33km, mB5.1, Ms5.0, Msz4.8*

ISC 17 19:59:21.2±0.9, 2315S±003×7076W±004, h19km±5km, n103, σ1§14/87, mb4.5/25, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.29**	**82**	⇑*i*P	**Pg**	**19 59 27.6**	**-0.2**
MECH				*i* S	**Sg**	**19 59 33.5**	**+1.3**
MECH	comp=E,72μm,0.5s			AML	AML	19 59 39.2	
CEN1	**Los Morros**	**0.57**	**115**	⇓*i*P	**Pb**	**19 59 32.6**	**0.0**
CEN1				*i* S	**Sb**	**19 59 41.8**	**+1.5**
CEN1	comp=E,6μm,0.8s			AML	AML	19 59 45.4	
ANCH	**Antofagasta**	**0.62**	**149**	⇑*i*P	**Pb**	**19 59 32.8**	**-0.7**
ANCH				*i* S	**Sb**	**19 59 42.0**	**+0.1**
ANCH	comp=N,44μm,0.1s			AML	AML	19 59 48.6	
PB06	**Plate Boundary**	**1.18**	**68**	*e*P	**Pn**	**19 59 40.9**	**-1.8**
PB06				*e*S	**Sb**	**19 59 57.2**	**-0.7**
PB04	**Plate Boundary**	**1.47**	**54**	*e*P	**Pn**	**19 59 37.5**	**-9.2**
PB04				*e*S	**Sn**	**19 59 50.4**	**-15**
PB04	comp=E,25μm,0.6s			AML	AML	19 59 55.6	
CPN1	**Cerro Paranal**	**1.51**	**167**	*e*P	**Pn**	**19 59 47.1**	**-0.1**
CPN1				*i* S	**Sn**	**20 00 07.3**	**+0.9**
PB07	**Plate Boundary**	**1.63**	**30**	*e*P	**Pn**	**19 59 47.6**	**-1.3**
PB07				*e*S	**Sn**	**20 00 09.0**	**-0.3**
LVC	**Limon Verde** comp=E,458nm,0.3s,baz=254,slow=12,SNR=42	**1.79**	**73**	Pg	**Pg**	**19 59 51.8**	**-3.9**
LVC	comp=E,2μm,0.3s,baz=341,slow=23,SNR=26			Lg		20 00 15.4	
LVC	**Limon Verde**	**1.79**	**73**	*e*Pn	**Pn**	**19 59 51.9**	**+0.8**
LVC				*e*Sn	**Sn**	**20 00 15.6**	**+2.3**
LVC	**Limon Verde**	**1.79**	**73**	*e*P	**Pn**	**19 59 51.6**	**+0.6**
LVC				*i* S	**Sn**	**20 00 15.8**	**+2.6**
LVC	comp=N,6μm,0.3s			AML	AML	20 00 17.8	
SPCH	**San Pedro de A**	**2.37**	**85**	*e*P	**Pn**	**20 00 04.0**	**+4.9**
SPCH				*i* S	**Sn**	**20 00 36.2**	**+8.6**
PB01	**Plate Boundary**	**2.41**	**30**	*e*P	**Pn**	**19 59 59.5**	**0.0**
PB01				*i* S	**Sn**	**20 00 28.2**	**-0.3**
PB01	comp=E,3μm,0.5s			AML	AML	20 00 39.1	
PB01	**Plate Boundary**	**2.41**	**30**	*e*P	**Pn**	**20 00 00.4**	**+0.9**
PB01				*i* S	**Sn**	**20 00 27.2**	**-1.2**
CPCH	**Copiapo**	**4.21**	**175**	*e*P	**Pn**	**20 00 22.7**	**-1.6**
CPCH				*i* S	**Sn**	**20 01 11.4**	**-1.5**
ARE	**Arequipa**	**6.69**	**354**	*e*P	**Pn**	**20 00 56.0**	**-2.4**
ARE				*e*S	**Sn**	**20 02 07.0**	**-7.1**
LPAZ	**La Paz** comp=E,3.2nm,0.3s,baz=202,slow=5.6,SNR=32	**7.26**	**20**	Pn	**Pn**	**20 01 06.6**	**+0.3**
LPAZ	**La Paz** comp=E,26nm,0.7s	**7.26**	**20**	*e*Pn	**Pn**	**20 01 08.5**	**+2.2**
LPAZ	**La Paz**	**7.26**	**20**	*e*P	**Pn**	**20 01 08.5**	**+2.2**
LPAZ	comp=Z,26nm,0.7s			pmax	pmax		
CFAA	**Coronel Fontan** comp=Z,0.2nm,0.3s,baz=355,slow=14,SNR=11	**8.72**	**166**	Pn	**Pn**	**20 01 25.8**	**-0.4**
SIV	**San Ignacio** comp=Z,1.9nm,0.3s,baz=242,slow=13,SNR=32	**11.58**	**54**	Pn	**Pn**	**20 02 04.8**	**-0.7**
PLCA	**Paso Flores**	**17.54**	**179**	P	**Pn**	**20 03 22.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=15,slow=12,SNR=7.6						
PLCA	**Paso Flores** comp=Z,7.3nm,1.0s	**17.54**	**179**	*e*Pn	**Pn**	**20 03 22.3**	**-2.2**
PLCA	**Paso Flores** comp=Z,7.0nm,1.0s	**17.54**	**179**	*e*P	**Pn**	**20 03 22.3**	**-2.2**
PLCA				pmax	pmax		
BDFB	**Brasilia** comp=Z,1.1nm,0.4s,mb3.6,baz=256,slow=21,SNR=3.7	**22.70**	**75**	P	**P**	**20 04 21.0**	**-0.8**
BDFB				LR	LR	20 14 21.7	
OTAV	**Otavalo** comp=Z,94nm,20.0s,baz=190,slow=40	**24.42**	**341**	P	**P**	**20 04 39.8**	**+1.2**
BCIP	**Isla Barro Col** comp=Z,30nm,0.9s,mb5.2	**33.32**	**344**	P	**P**	**20 06 01.3**	**+3.4**
VNA3	**Neumayer Olymp**	**59.09**	**161**	*e*P	**P**	**20 09 20.6**	**+0.8**
VNA3				*e*		20 09 31.1	
VNA1	**Neumayer--Stat**	**59.33**	**160**	*e*P	**P**	**20 09 22.8**	**+1.4**
VNA1				*e*		20 09 32.9	
VNA2	**Neumayer--Watz** baz=294,slow=8.0	**59.68**	**160**	*e*P	**P**	**20 09 24.8**	**+0.9**
VNA2				*e*		20 09 35.4	
OXF	**Oxford** comp=Z,42nm,1.2s,mb5.3	**60.02**	**342**	*e*P	**P**	**20 09 25.0**	**-1.6**
OXF	**Oxford**	**60.02**	**342**	*e*P	**P**	**20 09 25.0**	**-1.6**
OXF	comp=Z,42nm,1.2s,mb5.3			pmax	pmax		
JCT	**Junction City** comp=Z,3.9nm,0.6s,mb4.6	**60.17**	**331**	*e*P	**P**	**20 09 27.6**	**-0.1**
JCT	**Junction City** comp=Z,4.0nm,0.6s,mb4.6	**60.17**	**331**	*e*P	**P**	**20 09 27.6**	**-0.1**
JCT				pmax	pmax		
WVT	**Waverly** comp=Z,5.9nm,0.8s,mb4.8	**61.12**	**344**	*e*P	**P**	**20 09 32.5**	**-1.7**
WVT	**Waverly**	**61.12**	**344**	*e*P	**P**	**20 09 32.5**	**-1.6**
WVT	comp=Z,6.0nm,0.8s,mb4.8			pmax	pmax		
SNAA	**Sanae**	**61.30**	**160**	*e*P	**P**	**20 09 34.1**	**-0.8**
SNAA				*e*		20 09 44.6	
SNAA	**Sanae** comp=Z,2.9nm,0.6s,mb4.6	**61.30**	**160**	*e*P	**P**	**20 09 33.8**	**-1.1**
SNAA	**Sanae**	**61.30**	**160**	*e*P	**P**	**20 09 33.8**	**-1.1**
SNAA	comp=Z,3.0nm,0.6s			pmax	pmax		
MIAR	**Mount Ida** comp=Z,14nm,1.4s,mb4.9	**61.33**	**339**	*e*P	**P**	**20 09 35.0**	**-0.6**
MIAR	**Mount Ida**	**61.33**	**339**	*e*P	**P**	**20 09 35.0**	**-0.6**
MIAR	comp=Z,14nm,1.4s,mb4.9			pmax	pmax		
MCWV	**Mont Chateau** comp=Z,83nm,0.6s	**63.05**	**352**	*e*P	**P**	**20 09 47.7**	**+0.8**
ANMO	**Albuquerque** comp=Z,1.4nm,1.0s,mb4.0	**66.97**	**329**	*e*P	**P**	**20 10 13.5**	**+0.9**
ANMO	**Albuquerque**	**66.97**	**329**	⇑*e*P	**P**	**20 10 13.3**	**+0.7**
ANMO	comp=Z,9.0nm,2.9s			pmax	pmax		
QSPA	**South Pole Qui** comp=Z,11nm,1.1s,mb4.8	**67.05**	**180**	*e*P	**P**	**20 10 13.8**	**+1.3**
SDCO	**Great Sand Dun** comp=Z,7.1nm,1.1s,mb4.5	**68.82**	**331**	*e*P	**P**	**20 10 25.5**	**+1.4**
WUAZ	**Wupatki** comp=Z,8.5nm,1.1s,mb4.6	**69.88**	**326**	*e*P	**P**	**20 10 30.8**	**0.0**
DBIC	**Dimbokro** comp=Z,2.8nm,0.8s,mb4.3,baz=233,slow=6.2,SNR=4.3	**70.84**	**74**	P	**P**	**20 10 36.2**	**-1.0**
DBIC	**Dimbokro**	**70.84**	**74**	*e*P	**P**	**20 10 35.9**	**-1.3**
ARUT	**Antelope Range**	**72.68**	**326**	*e*P	**P**	**20 10 49.8**	**+2.1**
SBA	**Scott Base** comp=Z,4.5nm,1.2s,mb4.3	**73.90**	**191**	P	**P**	**20 10 55.0**	**+0.6**
SBA	**Scott Base** comp=Z,4.0nm,1.2s,mb4.2	**73.90**	**191**	P	**P**	**20 10 55.0**	**+0.6**
SBA				pmax	pmax		
HWUT	**Hardware Ranch** comp=Z,4.0nm,1.0s,mb4.3	**74.69**	**329**	*e*P	**P**	**20 10 59.9**	**+0.5**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.6s,mb3.6,baz=141,slow=8.4,SNR=4.7	**74.70**	**331**	P	**P**	**20 10 59.6**	**+0.2**
VNDA	**Vanda** comp=Z,1.2nm,1.0s,mb3.8,baz=140,slow=5.2,SNR=6.3	**74.94**	**190**	P	**P**	**20 11 01.2**	**+0.8**
VNDA	**Vanda** comp=Z,12nm,2.1s,mb4.5	**74.94**	**190**	*e*P	**P**	**20 11 01.9**	**+1.5**
VNDA	**Vanda** comp=Z,12nm,2.1s	**74.94**	**190**	*e*P	**P**	**20 11 01.9**	**+1.5**
VNDA				pmax	pmax		
SYO	**Syowa Base**	**75.57**	**160**	⇑*e*P	**P**	**20 11 03.0**	**-1.2**
NVAR	**Mina Array Bea** comp=Z,1.2nm,0.8s,mb3.9,baz=159,slow=7.1,SNR=9.6	**75.75**	**323**	P	**P**	**20 11 07.2**	**+1.6**
ULM	**Lac du Bonnet** comp=Z,2.2nm,0.3s,mb4.5,baz=145,slow=1.4,SNR=2.9	**76.39**	**344**	P	**P**	**20 11 07.6**	**-1.3**
HLID	**Hailey** comp=Z,5.3nm,0.9s,mb4.5	**77.54**	**329**	*e*P	**P**	**20 11 16.3**	**+0.7**
TOA0	**Torodi Ar. Sit**	**79.52**	**71**	*e*P	**P**	**20 11 26.1**	**-1.1**
TORD	**Torodi Ar. Bea** comp=Z,3.7nm,0.8s,mb4.4,baz=258,slow=5.1,SNR=24	**79.52**	**71**	P	**P**	**20 11 26.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.52**	**71**	P	**P**	**20 11 26.7**	**-0.5**
BMO	**Blue Mountains** comp=Z,2.3nm,0.9s,mb4.1	**79.89**	**328**	*e*P	**P**	**20 11 29.3**	**+0.9**
WALA	**Waterton Lakes** comp=Z,14nm,1.2s,mb4.8	**81.53**	**333**	*e*P	**P**	**20 11 37.8**	**+0.6**
OD2	**Odessa Site #2**	**82.41**	**329**	*e*P	**P**	**20 11 42.5**	**+0.7**
MAW	**Mawson** comp=Z,2.6nm,0.8s,mb4.3,baz=231,slow=5.0,SNR=4.1	**83.25**	**164**	P	**P**	**20 11 46.5**	**+0.5**
MAW	**Mawson** comp=Z,5.0nm,0.7s,mb4.7	**83.25**	**164**	*e*P	**P**	**20 11 46.3**	**+0.3**
MAW	**Mawson** comp=Z,5.0nm,0.7s	**83.25**	**164**	*e*P	**P**	**

	comp=E,80nm,19.0s								
HHC					LR	LR			
	comp=Z,86nm,20.2s								
LZH	**Lanzhou**	**166.28**	**19**	*e*PKP	PKPdf	20 19 25.1	-0.2		
LZH				APKP		20 19 36.0			
LZH				XPKP		20 19 39.5			
LZH				PKP2	PKPab	20 20 28.3	+2.0		
LZH				LR	LR				
	comp=N,115nm,17.9s								
LZH				LR	LR				
	comp=Z,158nm,20.2s								
NJ2	**Nanjing**	**167.70**	**318**	*e*PKP	PKPdf	20 19 25.5	-1.0		
CMAR	**Chiang Mai Arr**	**169.30**	**114**	PKP	PKPdf	20 19 28.3	+0.3		
	comp=Z,0.6nm,0.9s,baz=310,slow=2.1,SNR=5.4								
CD2	**Chengdu**	**170.86**	**31**	*e*PKP	PKPdf	20 19 27.0	-1.5		
WHN	**Wuhan**	**171.33**	**329**	PKP	PKPdf	20 19 25.5	-3.3		
KMI	**Kunming**	**173.75**	**70**	PKP	PKPdf	20 19 26.9	-3.1		
GYA	**Guiyang**	**175.96**	**35**	*e*PKP	PKPdf	20 19 30.1	-0.5		
GYA				APKP		20 19 40.3			
GYA				XPKP		20 19 43.8			
GYA				PKP2	PKPab	20 21 09.5	0.0		
GYA				PKS		20 22 58.9			
GYA				PP	PP				
	comp=Z,50nm,7.6s								

CSEM ***17*** *20:00:33.1±1.0, 4546N×2633E, h139km±10km, MD3.8/2, Error ellipse: s-maj=11.8km s-min=5.7km az=22.0, After BUC*
NEIC ***17*** *20:00:34.6, 4540N×2634E, h126km, MG2.9(BUC), After BUC.*

BUC 17 20:00:33.2±0.8, 4547N×2635E, h137km±8km, MD3.7/2, 15C-11D, Error ellipse: s-maj=6.2km s-min=4.4km az=9.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLR	**Muntele Rosu**	**0.28**	**274**	⇑*i*P	Pn	20 00 52.7	+0.7
MLR				*i*S	Sn	20 01 07.0	+0.8
MLR	**Muntele Rosu**	**0.28**	**274**	⇑*i*P	Pn	20 00 52.7	+0.7
MLR				*i*S	Sn	20 01 07.1	+0.8
PLOR	**Plostina**	**0.43**	**29**	⇑*i*P	Pn	20 00 52.8	+0.2
PLOR				*i*S	Sn	20 01 07.6	+0.2
VRI	**Vrincioaia**	**0.47**	**34**	⇑P	Pn	20 00 53.2	+0.4
VRI				S	Sn	20 01 08.0	+0.2
VRI	**Vrincioaia**	**0.47**	**34**	⇑*i*P	Pn	20 00 53.2	+0.4
VRI				*i*S	Sn	20 01 08.0	+0.2
VRI	**Vrincioaia**	**0.47**	**34**	⇑*i*P	Pn	20 00 53.2	+0.4
VRI				*i*S	Sn	20 01 07.3	-0.5
VRI	**Vrincioaia**	**0.47**	**34**	S	Sn	20 01 07.3	-0.5
ODB	**Odobesti**	**0.58**	**59**	⇓P	Pn	20 00 54.7	+1.3
ODB	**Odobesti**	**0.58**	**59**	⇑*i*P	Pn	20 00 54.7	+1.3
VOIR		**0.92**	**268**	⇑P	Pn	20 00 56.0	+0.1
VOIR				S	Sn	20 01 12.6	-0.6
VOIR		**0.92**	**268**	⇑*i*P	Pn	20 00 56.0	+0.1
VOIR				*i*S	Sn	20 01 12.6	-0.6
GHRR		**0.95**	**51**	⇑*i*P	Pn	20 00 57.0	+0.8
GHRR				*i*S	Sn	20 01 13.9	+0.2
VARR		**1.13**	**68**	⇓*i*P	Pn	20 00 58.5	+0.6
VARR				*i*S	Sn	20 01 16.3	-0.4
ONCR	**Oncesti**	**1.18**	**33**	⇑*i*P	Pn	20 00 58.2	-0.1
ONCR				*i*S	Sn	20 01 17.0	-0.6
CFR	**Carcaliu**	**1.30**	**103**	⇑*i*P	Pn	20 00 59.8	+0.3
CFR				*i*S	Sn	20 01 18.5	-1.1
HARR	**Harsova**	**1.37**	**124**	⇓P	Pn	20 01 00.9	+0.6
HARR				S	Sn	20 01 20.8	-0.2
HARR	**Harsova**	**1.37**	**124**	⇓*i*P	Pn	20 01 00.9	+0.6
HARR				*i*S	Sn	20 01 20.8	-0.1
BERR	**Berezeni**	**1.54**	**54**	⇓*i*P	Pn	20 01 02.5	+0.4
BERR				*i*S	Sn	20 01 23.6	-0.6
CVD	**Cernavoda**	**1.67**	**133**	⇓P	Pn	20 01 04.1	+0.5
CVD				S	Sn	20 01 26.1	-0.7
CVD	**Cernavoda**	**1.67**	**133**	⇓*i*P	Pn	20 01 04.1	+0.5
CVD				*i*S	Sn	20 01 26.1	-0.7
TLCR		**1.76**	**99**	⇓P	Pn	20 01 05.3	+0.6
TLCR				S	Sn	20 01 29.1	+0.3
TLCR		**1.76**	**99**	⇑*i*P	Pn	20 01 05.3	+0.6
TLCR				*i*S	Sn	20 01 29.1	+0.3
TIRR	**Tirgusor**	**1.78**	**124**	⇓P	Pn	20 01 05.5	+0.5
TIRR				S	Sn	20 01 28.1	-1.0
TIRR	**Tirgusor**	**1.78**	**124**	⇑*i*P	Pn	20 01 05.5	+0.6
TIRR				*i*S	Sn	20 01 28.1	-1.1
BURAR	**Bucovina Array**	**2.28**	**340**	⇓*i*P	Pn	20 01 11.8	+0.9
GZR	**Gura Zlata**	**2.52**	**269**	⇑*i*P	Pn	20 01 14.7	+0.9
GZR				*i*S	Sn	20 01 45.1	0.0
DRGR		**2.85**	**299**	⇓*i*P	Pn	20 01 17.8	-0.3

IDC 17 21:13:49.9±18.0, 2018S×17846W, h564km±180km, mb3.5/3, mb1 3.7/3, mb1mx3.1/16, mbtmp3.5/3, Error ellipse: s-maj=128.1km s-min=88.4km az=102.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARMA	**Armidale**	**28.82**	**243**	*e*P	P	21 19 03.7	+0.3
CTA	**Charters Tower**	**33.10**	**264**	*e*P	P	21 19 40.8	+0.8
	3.8nm,0.3s						
STKA	**Stephens Creek**	**37.54**	**244**	*e*P	P	21 20 16.4	-0.3
	3.1nm,1.0s						
STKA	**Stephens Creek**	**37.54**	**244**	P	P	21 20 16.5	-0.2
	2.3nm,0.5s,baz=100,slow=9.8,SNR=15						
ASAR	**Alice Springs**	**44.18**	**256**	P	P	21 21 09.7	+0.2
	7.0nm,0.5s,baz=94,slow=7.9,SNR=130						
ASAR				PcP	PcP	21 22 42.1	+0.3
	1.0nm,0.6s,baz=102,slow=4.0,SNR=7.6						
WB2	**Warramunga Arr**	**44.21**	**262**	*e*P	P	21 21 09.5	-0.3
WRA	**Warramunga Arr**	**44.22**	**262**	P	P	21 21 09.5	-0.4
	3.8nm,0.5s,baz=98,slow=8.4,SNR=53						
KAKA	**Kakadu**	**47.54**	**271**	*e*P	Px	21 21 22.7	
	3.8nm,0.4s						
VNA3	**Neumayer Olymp**	**88.48**	**176**	*e*	P	21 25 40.0	-2.2
VNA3				*e*		21 25 43.4	
VNA2	**Neumayer--Watz**	**88.92**	**177**	*e*	P	21 25 42.6	-1.6
	baz=208,slow=3.9						
VNA2				*e*		21 25 46.1	
BVAR	**Borovoye Array**	**118.56**	**320**	PKP	PKPdf	21 31 33.4	-0.3
	0.5nm,0.3s,baz=82,slow=2.4,SNR=4.6						
AKASG	**Malin Array Be**	**142.53**	**331**	PKP	PKPdf	21 32 16.0	-2.7
	2.1nm,0.5s,baz=42,slow=4.2,SNR=14						
GERES	**GERESS Array B**	**149.78**	**344**	PKPbc	PKPbc	21 32 37.2	+0.8
	0.2nm,0.5s,baz=16,slow=1.9,SNR=6.5						

ISCJB ***17*** *21:28:45.0±0.8, 2471N±005×12239E±002, h96km±7km, Error ellipse: s-maj=9.1km s-min=3.6km az=174.3*
TAP ***17*** *21:28:44.6, 2473N×12236E, h102km, MD1.3, C*
JMA ***17*** *21:28:45.0±0.2, 2478N×12241E, h97km±2km, M2.6*

ISC 17 21:28:45.4±0.8, 2471N±005×12239E±002, h96km±7km, n30, σ0§68/53, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.47**	**310**	*i*P	**Pn**	**21 29 00.3**	**-0.1**
	baz=302						
TWB1				S	**Sn**	**21 29 11.8**	**+0.1**
	baz=302						
TWC	**Suao**	**0.50**	**259**	P	**Pn**	**21 29 00.6**	**-0.1**
	baz=256						
TWC				*e*S	**Sn**	**21 29 11.7**	**-0.4**
	baz=256						
ILA	**Ilan**	**0.58**	**276**	*e*P	**Pn**	**21 28 59.8**	**-1.5**
	baz=274						
YOJ	**Yonaguni jima**	**0.62**	**113**	P	**Pn**	**21 29 01.6**	**0.0**
YOJ				S	**Sn**	**21 29 14.0**	**+0.2**
ENA	**Nanau**	**0.65**	**245**	*i*P	**Pn**	**21 29 02.2**	**+0.2**
	baz=240						
ENA				S	**Sn**	**21 29 14.6**	**+0.3**
	baz=240						
TWE	**Neicheng**	**0.65**	**271**	P	**Pn**	**21 29 02.1**	**+0.1**
	baz=276						
TWE				S	**Sn**	**21 29 14.4**	**0.0**
	baz=276						
NWF	**Wu-fen Shan**	**0.66**	**303**	*e*P	**Pn**	**21 29 01.8**	**-0.2**
	baz=297						
NWF				*e*S	**Sn**	**21 29 15.0**	**+0.6**
	baz=297						
ENTT	**Nioudou**	**0.75**	**265**	P	**Pn**	**21 29 03.3**	**+0.5**
	baz=267						
ENTT				*e*S	**Sn**	**21 29 16.1**	**+0.2**
	baz=267						
TWA	**Mucha**	**0.78**	**291**	*e*P	**Pn**	**21 29 02.9**	**-0.2**
	baz=283						
TWA				*e*S	**Sn**	**21 29 15.6**	**-0.8**
	baz=283						
NSK	**Sanguang**	**0.94**	**268**	P	**Pn**	**21 29 04.9**	**+0.2**
	baz=274						
NNS	**Nan Shan**	**0.96**	**254**	P	**Pn**	**21 29 05.2**	**+0.2**
	baz=248						
NNS				S	**Sn**	**21 29 20.0**	**+0.2**
	baz=248						
WHF	**Hehuan Shan**	**1.17**	**241**	*e*P	**Pn**	**21 29 07.7**	**+0.4**
	baz=240						
WHF				*e*S	**Sn**	**21 29 23.9**	**0.0**
	baz=240						
TWT	**Tachien**	**1.19**	**248**	*e*P	**Pn**	**21 29 08.3**	**+0.7**
	baz=247						
TWT				*e*S	**Sn**	**21 29 24.6**	**+0.2**
	baz=247						
ESL	**Shilin**	**1.24**	**225**	*e*P	**Pn**	**21 29 06.7**	**-1.6**
	baz=231						
NSTT	**Nanjuang**	**1.26**	**267**	*e*P	**Pn**	**21 29 08.2**	**-0.2**
	baz=266						
NSTT				*e*S	**Sn**	**21 29 25.2**	**-0.7**
	baz=266						
IRIF	**Iriomote-Funau**	**1.28**	**107**	P	**Pn**	**21 29 08.4**	**-0.3**
IRIF				S	**Sn**	**21 29 26.6**	**+0.3**
HATJ	**Hateruma jima**	**1.45**	**116**	P	**Pn**	**21 29 10.9**	**+0.2**
HATJ				*e*S	**Sn**	**21 29 30.4**	**+0.5**
EHY	**Hungye**	**1.54**	**219**	*e*P	**Pn**	**21 29 10.6**	**-1.3**
	baz=224						
JKRS	**Kuro-shima**	**1.55**	**107**	P	**Pn**	**21 29 12.3**	**+0.3**
JKRS				*e*S	**Sn**	**21 29 32.4**	**+0.1**
SMLT	**Sun Moon Lake**	**1.58**	**239**	*e*P	**Pn**	**21 29 12.9**	**+0.5**
	baz=234						
SMLT				*e*S	**Sn**	**21 29 34.0**	**+1.0**
	baz=234						
TYC	**Yuchr**	**1.61**	**240**	*e*P	**Pn**	**21 29 13.3**	**+0.5**
	baz=244						
TYC				*e*S	**Sn**	**21 29 33.7**	**+0.2**
	baz=244						
JIJ	**Ishigaki jima**	**1.64**	**102**	P	**Pn**	**21 29 12.9**	**-0.2**
JIJ				*e*S	**Sn**	**21 29 33.4**	**-0.8**
TWF1	**Yuli**	**1.68**	**217**	*e*P	**Pn**	**21 29 12.3**	**-1.3**
	baz=222						
TWF1				*e*S	**Sn**	**21 29 32.3**	**-2.8**
	baz=222						
YUS	**Yu-Shan**	**1.79**	**227**	*e*P	**Pn**	**21 29 15.4**	**+0.4**
	baz=219						
CHKT	**Chengkung**	**1.85**	**210**	*e*P	**Pn**	**21 29 13.8**	**-2.1**
	baz=202						
ALS	**Alishan**	**1.87**	**231**	*e*P	**Pn**	**21 29 16.8**	**+0.7**
	baz=223						
ALS				*e*S	**Sn**	**21 29 40.1**	**+0.5**
	baz=223						
CHN5	**Tsauling**	**1.91**	**235**	*e*P	**Pn**	**21 29 17.4**	**+0.7**
	baz=243						
CHN5				*e*S	**Sn**	**21 29 41.1**	**+0.7**
	baz=243						
JTJ	**Tarama**	**2.11**	**91**	P	**Pn**	**21 29 19.4**	**+0.2**
JTJ				S	**Sn**	**21 29 45.7**	**+0.7**
WTP	**Ta-pu**	**2.18**	**228**	*e*P	**Pn**	**21 29 20.6**	**+0.5**
	baz=227						
WTP				*e*S	**Sn**	**21 29 47.3**	**+0.7**
	baz=227						
CHN1	**Nanshi**	**2.28**	**229**	*e*P	**Pn**	**21 29 21.5**	**+0.1**
	baz=227						

ISCJB ***17*** *21:34:00.5±1.6, 189N±0.1×1454E±0.4, h300km, mb3.4/8, Error ellipse: s-maj=56.0km s-min=12.9km az=170.1*
IDC ***17*** *21:34:03.0±5.9, 1892N×14536E, h312km±65km, mb3.1/7, mb1 3.3/8, mb1mx3.1/21, mbtmp3.1/8, Error ellipse: s-maj=54.1km s-min=12.6km az=78.0*
NEIC ***17*** *21:34:03.3±3.3, 1896N×14544E, h319km±36km, mb3.8/1, Error ellipse: s-maj=40.2km s-min=9.5km az=81.0*

ISC 17 21:34:02.5±5.4, 189N±01×1454E±05, h305km±65km, n11, σ0§39/11, mb3.4/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.64**	**342**	P	**P**	**21 37 58.5**	**-0.1**
	0.3nm,0.3s,baz=169,slow=10,SNR=5.3						
WRAB	**Tennant Creek**	**40.10**	**196**	*e*P	**P**	**21 41 09.7**	**+0.3**
	4.2nm,0.7s,mb3.9						
WB2	**Warramunga Arr**	**40.11**	**196**	*e*P	**P**	**21 41 09.8**	**+0.4**
WRA	**Warramunga Arr**	**40.11**	**196**	P	**P**	**21 41 09.7**	**+0.3**
	2.7nm,0.5s,mb3.8,baz=18,slow=9.0,SNR=24						
ASAR	**Alice Springs**	**43.79**	**195**	P	**P**	**21 41 38.5**	**-0.3**
	1.3nm,0.7s,mb3.4,baz=13,slow=7.6,SNR=22						
CMAR	**Chiang Mai Arr**	**43.86**	**277**	P	**P**	**21 41 39.2**	**-0.4**
	0.6nm,0.7s,mb3.0,baz=58,slow=8.5,SNR=6.6						
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**21 42 30.7**	**-0.6**
	0.5nm,0.3s,mb3.3,baz=342,slow=8.1,SNR=3.2						
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**21 42 30.7**	**-0.6**
ZALV	**Zalesovo Beam**	**57.63**	**322**	P	**P**	**21 43 21.1**	**-0.1**
	0.3nm,0.4s,mb3.1,baz=72,slow=4.7,SNR=3.2						
MKAR	**Makanchi Array**	**58.07**	**314**	P	**P**	**21 43 25.0**	**+0.7**
	0.2nm,0.6s,mb2.6,baz=59,slow=8.3,SNR=3.7						
BVAR	**Borovoye Array**	**66.09**	**320**	P	**P**	**21 44 17.0**	**-0.1**
	0.8nm,0.4s,mb3.8,baz=97,slow=7.3,SNR=8.9						

NEIC ***17*** *21:48:43.8±6.0, 1976S×17789W, h528km±69km, mb3.7/3, Error ellipse: s-maj=35.0km s-min=16.9km az=223.0*
ISCJB ***17*** *21:48:46.2±3.0, 199S±02×1780W±0.1, h568km±38km, mb3.9/10, Error ellipse: s-maj=25.6km s-min=20.6km az=19.8*
IDC ***17*** *21:48:48.0±2.9, 1987S×17803W, h576km±36km, mb3.3/7, mb1 3.6/8, mb1mx3.4/18, mbtmp3.4/8, Error ellipse: s-maj=20.0km s-min=17.4km az=157.0*

ISC 17 21:48:47.2±3.2, 199S±02×1780W±01, h564km±40km, n20, σ0§75/17, mb3.9/10, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.80**	**192**	P	**P**	**21 52 29.8**	**-1.8**
	3.8nm,0.3s,baz=288,slow=2.9,SNR=8.3						
RPZ	**Rata Peaks**	**25.47**	**199**	P	**P**	**21 53 31.2**	**0.0**
	3.5nm,0.5s,mb4.2,baz=179,slow=16,SNR=2.2						
CTA	**Charters Tower**	**33.53**	**263**	*e*P	**P**	**21 54 42.1**	**+1.0**
	9.6nm,0.4s						
CTAO	**Charters Tower**	**33.53**	**263**	*e*P	**P**	**21 54 42.2**	**+1.1**
	8.1nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.04**	**243**	*e*P	**P**	**21 55 18.8**	**+0.6**
	1.6nm,0.5s,mb3.8						
STKA	**Stephens Creek**	**38.04**	**243**	P	**P**	**21 55 18.5**	**+0.3**
	2.3nm,0.5s,mb4.0,baz=82,slow=10.0,SNR=9.0						
STKA	**Stephens Creek**	**38.04**	**243**	*e*P	**P**	**21 55 19.3**	**+1.1**
	1.5nm,0.7s,mb3.6						
ASAR	**Alice Springs**	**44.64**	**256**	P	**P**	**21 56 10.8**	**+0.3**
	8.0nm,0.5s,mb4.5,baz=89,slow=7.9,SNR=199						
ASAR				S	**S**	**22 02 05.5**	**-0.8**
	1.3nm,0.7s,baz=90,slow=16,SNR=7.9						
WB2	**Warramunga Arr**	**44.66**	**261**	*e*P	**P**	**21 56 10.4**	**-0.2**
WB2	**Warramunga Arr**	**44.66**	**261**	*e*P	**P**	**21 56 10.5**	**-0.1**
WRAB	**Tennant Creek**	**44.66**	**261**	*e*P	**P**	**21 56 10.4**	**-0.2**
	5.2nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**44.67**	**261**	P	**P**	**21 56 10.2**	**-0.5**
	5.0nm,0.3s,mb4.5,baz=98,slow=7.0,SNR=102						
KAKA	**Kakadu**	**47.94**	**271**	*e*P	Px	21 56 22.8	
	8.3nm,0.6s						
SBA	**Scott Base**	**58.49**	**184**	*e*P	**P**	**21 57 50.4**	**+1.1**
	2.1nm,0.9s,mb3.4						
VNDA	**Vanda**	**58.53**	**185**	P	**P**	**21 57 49.9**	**+0.3**
	0.7nm,0.6s,mb3.1,baz=343,slow=7.9,SNR=11						
MJAR	**Matsushiro Arr**	**69.69**	**324**	P	**P**	**21 59 00.4**	**-0.5**
	1.4nm,0.4s,mb3.8,baz=156,slow=5.8,SNR=11						
TXAR	**Lajitas Array**	**86.74**	**57**	P	**P**	**22 00 32.0**	**-0.1**
	0.3nm,0.6s,mb3.1,baz=193,slow=3.9,SNR=5.1						
AKASG	**Malin Array Be**	**142.46**	**331**	PKhKP		22 07 11.2	
	1.2nm,0.4s,baz=43,slow=4.0,SNR=8.5						
CLL	**Collm**	**147.45**	**347**	⇓*i*PKPbc	PKPbc	22 07 27.3	-0.7
	comp=Z,5.0nm,1.0s						
CLL				*e*PKPab	PKPab	22 07 31.0	-1.0
GERES	**GERESS Array B**	**149.59**	**345**	PKPbc	PKPbc	22 07 32.4	-1.0
	comp=Z,0.8nm,0.7s,baz=42,slow=2.2,SNR=9.1						

ISCJB ***17*** *21:50:19.5±3.1, 199S±03×715W±06, h33km, mb4.0/3, Error ellipse: s-maj=83.2km s-min=18.3km az=26.2*
IDC ***17*** *21:50:22.1±4.2, 1988S×7089W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/18, mbtmp4.2/4, ML4.8/1, MS3.7/1, Ms1 3.6/1, ms1mx2.7/23, Error ellipse: s-maj=88.4km s-min=67.4km az=107.0*

ISC 17 21:50:23.0±2.6, 200S±02×713W±05, h35km, n8, σ1§58/7, mb4.0/3, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.77**	**40**	P	**Pn**	**21 51 31.2**	**-1.2**
	29nm,0.3s,baz=217,slow=7.6,SNR=853						
BDFB	**Brasilia**	**22.58**	**83**	P	**P**	**21 55 20.3**	**-0.1**
	3.4nm,0.5s,mb4.0,baz=245,slow=16,SNR=14						
TXAR	**Lajitas Array**	**58.14**	**327**	LR	LR	22 23 50.8	
	comp=Z,56nm,19.1s,baz=0.0,slow=34						
VNA3	**Neumayer Olymp**	**62.20**	**161**	*e*	**P**	**22 00 39.2**	**-1.3**
VNA3				*e*		22 01 05.0	
VNA1	**Neumayer--Stat**	**62.43**	**160**	*e*	**P**	**22 00 43.5**	**+1.4**
VNA1				*e*		22 01 09.0	
VNA2	**Neumayer--Watz**	**62.80**	**161**	*e*	**P**	**22 00 41.7**	**-2.8**
	baz=202,slow=3.7						
VNA2				*e*		22 01 09.0	
DBIC	**Dimbokro**	**70.48**	**75**	P	**P**	**22 01 35.8**	**+1.3**
	1.1nm,0.6s,mb4.0,baz=243,slow=8.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**78.99**	**72**	P	**P**	**22 02 26.6**	**+2.9**
	0.6nm,0.4s,mb3.9,baz=252,slow=5.3,SNR=19						

ISCJB ***17*** *22:08:57.7±1.3, 12S±02×122W±0.4, h10km, mb3.6/2, MS3.4/2, Error ellipse: s-maj=61.2km s-min=11.8km az=32.9*
IDC ***17*** *22:08:58.3±4.9, 072S×1290W, h0km, mb3.7/2, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, ML3.2/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/31, Error ellipse: s-maj=166.2km s-min=71.5km az=147.0*

ISC 17 22:08:59.5±1.2, 12S±02×123W±03, h10km, n13, σ1§00/10, mb3.6/2, MS3.4/2, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**10.33**	**44**	*e*P	**Pn**	**22 11 34.1**	**+6.3**
	14nm,0.2s						
KIC	**Kosan Boka**	**10.62**	**45**	*e*P	**Pn**	**22 11 34.7**	**+2.9**
	42nm,1.1s						
TIC	**Toumodi**	**10.63**	**43**	*e*P	**Pn**	**22 11 31.5**	**-0.5**
	29nm,0.2s						
DBIC	**Dimbokro**	**10.76**	**43**	Pn	**Pn**	**22 11 34.4**	**+0.7**
	0.2nm,0.3s,baz=228,slow=14,SNR=4.3						
DBIC				Sn	**Sn**	**22 13 33.1**	**-1.3**
	0.2nm,0.3s,baz=327,slow=23,SNR=4.4						
DBIC				LR	LR	22 15 04.9	
	comp=Z,351nm,21.3s,baz=165,slow=34						
BBTS	**Babate**	**16.29**	**345**	LR	LR	22 18 23.9	
	comp=Z,35nm,18.9s,baz=153,slow=36						
TORD	**Torodi Ar. Bea**	**19.87**	**44**	P	**Pn**	**22 13 33.1**	**+0.5**
	0.3nm,0.3s,baz=229,slow=11,SNR=22						
TORD				LR	LR	22 20 52.9	
	comp=Z,176nm,19.2s,baz=230,slow=36						
LSZ	**Lusaka**	**42.32**	**111**	LR	LR	22 32 44.9	
	comp=Z,73nm,18.4s,MS3.6,baz=11,slow=33						
GERES	**GERESS Array B**	**54.67**	**21**	P	**P**	**22 18 27.5**	**-1.0**
	0.3nm,0.7s,mb3.4,baz=219,slow=4.5,SNR=3.7						
CFAA	**Coronel Fontan**	**60.77**	**234**	LR	LR	22 41 58.6	
	comp=Z,13nm,18.4s,MS3.1,baz=134,slow=33						
VNA2	**Neumayer--Watz**	**69.71**	**178**	*e*	**P**	**22 20 08.9**	**-0.2**
	baz=346,slow=7.6						
VNA2				*e*		22 20 16.3	
VNA3	**Neumayer Olymp**	**69.97**	**179**	*e*	**P**	**22 20 10.1**	**-0.6**
VNA3				*e*		22 20 17.4	
MKAR	**Makanchi Array**	**94.00**	**43**	P	**P**	**22 22 18.6**	**+0.8**
	0.3nm,0.7s,mb3.8,baz=274,slow=5.5,SNR=4.0						
ASAR	**Alice Springs**	**138.90**	**129**	PKhKP		22 28 16.7	
	0.2nm,0.5s,baz=229,slow=2.2,SNR=3.5						

GUC ***17*** *22:17:29.1±0.8, 2312S×7083W, h34km±3km, ML4.7*
NEIC ***17*** *22:17:29.7, 2315S×7080W, h30km, mb5.1/56, ML4.6(GUC), After GUC.*
ISCJB ***17*** *22:17:31.0±0.2, 2314S±003×7070W±003, h33km, mb4.9/65, MS4.3/11, Error ellipse: s-maj=4.4km s-min=4.0km az=141.1*
MOS ***17*** *22:17:31.5±1.4, 2301S×7060W, h33km, mb5.2/28, Error ellipse: s-maj=15.8km s-min=7.6km az=99.8*
BJI ***17*** *22:17:32.7, 2310S×7080W, h29km, mB5.1, Ms5.1, Msz4.7*
IDC ***17*** *22:17:32.4±1.9, 2309S×7055W, h33km±14km, mb4.4/15, mb1 4.5/20, mb1mx4.4/24, mbtmp4.4/20, ML4.2/5, MS4.1/15, Ms1 4.1/15, ms1mx3.9/25, Error ellipse: s-maj=15.5km s-min=5.9km az=99.0*
DJA ***17*** *22:19:00.4±0.0, 2773S×6981W, h650km*

ISC 17 22:17:33.2±0.2, 2313S±003×7055W±004, h35km, h35km±1.2km: pP-P, n205, σ1§17/169, mb4.9/65, MS4.3/11, 4C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.09**	**76**	⇓*i*P	**Pb**	**22 17 37.1**	**-2.1**
MECH				*i*S	**Sb**	**22 17 42.9**	**-0.4**
MECH				AML	AML	22 17 49.1	
	comp=N,119μm,0.4s						
CEN1	**Los Morros**	**0.41**	**129**	*e*P	**Pb**	**22 17 41.6**	**-1.0**
CEN1				*i*S	**Sb**	**22 17 50.7**	**+1.6**
ANCH	**Antofagasta**	**0.57**	**167**	P	**Pn**	**22 17 42.7**	**-2.2**
PB06	**Plate Boundary**	**0.99**	**65**	⇓*i*P	**Pn**	**22 17 50.4**	**-0.3**
PB06				*i*S	**Sn**	**22 18 06.8**	**+3.4**
PB04	**Plate Boundary**	**1.30**	**49**	⇓*i*P	**Pn**	**22 17 46.8**	**-8.1**
PB04				*i*S	**Sn**	**22 18 01.5**	**-10**
PB04				AML	AML	22 18 07.1	
	comp=N,55μm,0.8s						
PB07	**Plate Boundary**	**1.52**	**24**	⇑*e*P	**Pn**	**22 17 56.6**	**-1.3**
PB07				*i*S	**Sn**	**22 18 18.6**	**+2.1**
LVC	**Limon Verde**	**1.59**	**72**	Pg	**Pn**	**22 18 01.5**	**+2.6**
	comp=N,411nm,0.3s,baz=253,slow=12,SNR=1359						
LVC				Lg		22 18 24.4	
	comp=N,2μm,0.3s,baz=1.6,slow=11,SN

comp=Z,444nm,18.2s,MS3.9,baz=55,slow=41
BDFB Brasilia 22.50 75 *e*P **P** 22 22 28.9 -1.0
comp=Z,18nm,1.0s,mb4.5
BDFB Brasilia 22.50 75 *e*P **P** 22 22 29.0 -0.9
BDFB pmax pmax
comp=Z,18nm,1.0s
OTAV Otavalo 24.46 341 *e*P **P** 22 22 49.8 +0.7
comp=Z,20nm,1.4s,mb4.4
ROSC El Rosal 28.06 352 P **P** 22 23 21.6 +0.1
comp=Z,4.3nm,0.4s,mb4.5,baz=273,slow=23,SNR=2.3
PCRV Puerto La Cruz 33.60 11 LR LR 22 36 51.8
comp=Z,379nm,20.0s,MS4.1,baz=183,slow=34
RPN Rapa Nui 35.25 255 LR LR 22 34 19.9
comp=Z,294nm,19.6s,MS4.0,baz=273,slow=29
RCBR Riachuelo 37.54 68 *e*P **P** 22 24 43.9 -0.5
comp=Z,57nm,1.0s,mb5.2
BBGH Gun Hill 37.62 18 *e*P **P** 22 24 44.6 -0.2
comp=Z,645nm,1.4s
SJG San Juan 41.21 6 *e*P **P** 22 25 12.0 -2.8
comp=Z,39nm,0.8s,mb5.1
SJG San Juan 41.21 6 *e*P **P** 22 25 12.0 -2.8
SJG pmax pmax
comp=Z,39nm,0.8s
MTP Monte Pirata 41.26 7 *e*P **P** 22 25 08.6 -6.6
CBYP Canovanas 41.40 7 *e*P **P** 22 25 13.6 -2.7
comp=Z,27nm,0.9s,mb4.9
PMSA Palmer Station 41.86 176 P **P** 22 25 21.0 +1.4
comp=Z,6.7nm,0.4s,mb4.6,baz=352,slow=21,SNR=6.3
PMSA Palmer Station 41.86 176 *e*P **P** 22 25 19.8 +0.2
comp=Z,44nm,1.2s,mb5.0
DWPF Disney 52.01 348 *e*P **P** 22 26 39.4 +0.1
comp=Z,84nm,1.5s,mb5.5
LRAL Lakeview Retre 58.01 344 *e*P **P** 22 27 21.8 -0.7
LHS Liberty Hill 58.11 350 *e*pP pP 22 27 32.6 -1.1
RKT Rikitea 58.78 256 *e*LR LR 22 44 54.5
comp=Z,601nm,26.2s,baz=113
VNA3 Neumayer Olymp 59.04 161 *e*P **P** 22 27 29.7 +0.4
VNA3 *e* 22 27 32.1
VNA3 *e* 22 27 45.0
VNA1 Neumayer--Stat 59.28 160 *e*P **P** 22 27 32.7 +1.8
VNA1 *e* 22 27 34.7
VNA2 Neumayer--Watz 59.63 160 *e*P **P** 22 27 34.0 +0.6
VNA2 *e* 22 27 36.5
VNA2 *e* pP 22 27 45.1 +1.2
VNA2 *e* 22 27 47.9
CPCT Cooper Cave 59.74 347 *e*P **P** 22 27 32.5 -2.1
TKL Tuckaleechee C 59.79 348 *e*P **P** 22 27 33.2 -1.6
SWET Sewanee 59.83 345 *e*P **P** 22 27 33.2 -1.9
OXF Oxford 60.06 342 *e*P **P** 22 27 35.5 -1.2
comp=Z,54nm,1.2s,mb5.5
OXF Oxford 60.06 342 *e*P **P** 22 27 35.5 -1.2
OXF pmax pmax
comp=Z,54nm,1.2s,mb5.5
JCT Junction City 60.25 331 *e*P **P** 22 27 38.0 -0.1
comp=Z,24nm,1.3s,mb5.1
JCT Junction City 60.25 331 *e*P **P** 22 27 38.0 -0.1
JCT pmax pmax
comp=Z,24nm,1.3s,mb5.1
ELN Prospectdale 60.80 351 *e*P **P** 22 27 41.7 0.0
ELN *e*pP pP 22 27 51.6 -0.7
TXAR Lajitas Array 61.12 327 P **P** 22 27 43.4 -0.7
comp=Z,3.0nm,0.9s,mb4.4,baz=153,slow=8.4,SNR=17
TXAR LR LR 22 50 31.4
comp=Z,154nm,19.4s,MS4.2,baz=0.0,slow=32
WVT Waverly 61.16 344 *e*P **P** 22 27 41.8 -2.4
comp=Z,22nm,1.1s,mb5.2
WVT Waverly 61.16 344 *e*P **P** 22 27 41.8 -2.4
WVT pmax pmax
comp=Z,22nm,1.1s,mb5.2
SNAA Sanae 61.25 160 *e*P **P** 22 27 53.4 +9.0
SNAA *e* 22 27 57.1
SNAA Sanae 61.25 160 *e*P **P** 22 27 43.4 -1.1
comp=Z,36nm,1.3s,mb5.3
SNAA *e*pP pP 22 27 53.7 -1.3
SNAA Sanae 61.25 160 *e*P **P** 22 27 43.4 -1.0
SNAA *e**PP pP 22 27 53.7 -1.3
SNAA pmax pmax
comp=Z,36nm,1.3s
MIAR Mount Ida 61.38 338 *e*P **P** 22 27 44.8 -1.0
comp=Z,18nm,1.3s,mb5.0
MIAR Mount Ida 61.38 338 *e*P **P** 22 27 44.8 -1.0
MIAR pmax pmax
comp=Z,18nm,1.3s,mb5.0
WCI Wyandotte Cave 62.80 346 *e*P **P** 22 27 53.2 -1.9
comp=Z,12nm,0.8s,mb5.1
WCI Wyandotte Cave 62.80 346 *e*P **P** 22 27 53.2 -1.9
WCI pmax pmax
comp=Z,12nm,0.8s,mb5.1
SIUC Southern Illin 63.01 343 *e*P **P** 22 27 55.2 -1.4
comp=Z,40nm,1.1s,mb5.5
WMOK Wichita Mounta 63.48 334 *e*P **P** 22 27 59.2 -0.6
FVM French Village 63.59 343 *e*P **P** 22 27 58.8 -1.6
comp=Z,25nm,1.2s,mb5.1
FVM *e*pP pP 22 28 09.6 -1.5
FVM French Village 63.59 343 *e*P **P** 22 27 58.8 -1.6
FVM *e**PP pP 22 28 09.6 -1.4
FVM pmax pmax
comp=Z,25nm,1.2s,mb5.1
GDL2 Guadalupe Moun 63.81 328 *e*P **P** 22 28 02.6 +0.6
ACSO Alum Creek Sta 64.09 349 *e*P **P** 22 28 01.4 -2.2
comp=Z,38nm,1.3s,mb5.3
NVL N'lazarevskaya 65.86 159 P **P** 22 28 16.6 +1.7
NVL pmax pmax
comp=Z,25nm,1.1s,mb5.2
BNM Barren Site 66.50 328 *e*P **P** 22 28 20.2 +0.8
LPM Los Pinos Moun 66.63 328 *e*P **P** 22 28 21.0 +0.7
LAZ Ladron 66.95 328 *e*P **P** 22 28 23.4 +1.1
LAZ *e*pP pP 22 28 33.7 +0.7
ANMO Albuquerque 67.06 328 *e*P **P** 22 28 23.1 +0.1
comp=Z,11nm,1.3s,mb4.7
ANMO Albuquerque 67.06 328 *i* P **P** 22 28 23.8 +0.8
ANMO pmax pmax
comp=Z,5.0nm,1.7s
QSPA South Pole Qui 67.07 180 *e*P **P** 22 28 23.1 +0.6
comp=Z,10nm,0.9s,mb4.9
QSPA *e*pP pP 22 28 32.2 -0.9
TUC Tucson 67.21 324 *e*P **P** 22 28 25.4 +1.5
comp=Z,12nm,1.3s,mb4.8
TUC Tucson 67.21 324 *e*P **P** 22 28 25.5 +1.5
TUC pmax pmax
comp=Z,11nm,1.3s,mb4.7
CBKS Cedar Bluff 67.41 336 *e*P **P** 22 28 25.3 +0.2
comp=Z,31nm,1.1s,mb5.3
CBKS Cedar Bluff 67.41 336 *e*P **P** 22 28 25.3 +0.2
CBKS pmax pmax
comp=Z,31nm,1.1s,mb5.2
TAOE Nuku Hiva Isla 67.86 270 *e*LR LR 22 49 06.6
comp=Z,983nm,23.4s
SDCO Great Sand Dun 68.89 331 *e*P **P** 22 28 35.1 +0.6
comp=Z,15nm,1.1s,mb4.8
MVCO Mesa Verde 69.86 328 *e*P **P** 22 28 41.6 +1.2
comp=Z,45nm,1.8s,mb5.1
LIC Lamto 70.29 74 *e*P **P** 22 28 41.5 -2.1
comp=Z,11nm,0.2s,mb5.4
TIC Toumodi 70.49 74 *e*P **P** 22 28 44.4 -0.4
comp=Z,10nm,0.2s,mb5.4
KIC Kosan Boka 70.61 74 *e*P **P** 22 28 45.2 -0.4
comp=Z,116nm,1.2s,mb5.7
PV01 Paradox Valley 70.63 329 *e*P **P** 22 28 46.3 +1.2
ISCO Idaho Springs 70.64 332 *e*P **P** 22 28 45.5 +0.4
comp=Z,8.8nm,1.2s,mb4.6
ISCO Idaho Springs 70.64 332 *e*P **P** 22 28 45.5 +0.4
ISCO pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
DBIC Dimbokro 70.65 74 P **P** 22 28 44.3 -1.5
comp=Z,16nm,1.0s,mb4.9,baz=196,slow=5.6,SNR=7.5
DBIC LR LR 22 59 41.7
comp=Z,237nm,18.0s,MS4.5,baz=199,slow=36
DBIC Dimbokro 70.65 74 *e*P **P** 22 28 45.2 -0.6
comp=Z,34nm,1.4s,mb5.1
DBIC Dimbokro 70.65 74 *e*P **P** 22 28 45.2 -0.6
DBIC pmax pmax
comp=Z,34nm,1.4s
ECSD EROS,Sioux Fal 70.71 340 *e*P **P** 22 28 45.0 -0.5
comp=Z,21nm,1.2s,mb4.9
PV10 Paradox Valley 71.04 329 *e*P **P** 22 28 44.0 -3.7
LDFC Landfair 71.67 323 *e*P **P** 22 28 48.8 -2.7
LDFC *e*pP pP 22 29 04.5 +2.3
SRU San Rafael 72.33 328 *e*P **P** 22 28 55.9 +0.5
comp=Z,5.8nm,0.9s,mb4.5
SRU San Rafael 72.33 328 *e*P **P** 22 28 55.9 +0.5
SRU pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CCUT Cedar City 72.56 326 *e*P **P** 22 28 58.0 +1.3
MSU Marysvale 72.68 327 *e*P **P** 22 28 58.9 +1.4

PPT Papeete 73.48 258 *e*S S 22 38 32.7 +2.3
comp=Z,114nm,25.0s
PPT Papeete 73.48 258 *e*LR LR 22 51 50.0
comp=Z,388nm,25.8s
RSSD Black Hills 73.62 336 *e*P **P** 22 29 03.4 +0.5
comp=Z,11nm,1.2s,mb4.7
RSSD Black Hills 73.62 336 *e*P **P** 22 29 03.4 +0.5
RSSD pmax pmax
comp=Z,11nm,1.2s,mb4.7
TPNV Topopah Spring 73.66 323 *e*P **P** 22 29 04.8 +1.5
comp=Z,17nm,1.3s,mb4.8
TPNV Topopah Spring 73.66 323 *e*P **P** 22 29 04.8 +1.5
TPNV pmax pmax
comp=Z,17nm,1.3s,mb4.8
JLU Jordanelle 73.94 329 *e*P **P** 22 29 06.9 +2.1
JLU *e*pP pP 22 29 23.9 +8.2
SBA Scott Base 73.96 191 *e*P **P** 22 29 04.6 +0.1
comp=Z,11nm,1.4s,mb4.6
SBA Scott Base 73.96 191 *e*P **P** 22 29 04.6 +0.1
SBA pmax pmax
comp=Z,11nm,1.4s,mb4.6
DUG Dugway 74.29 328 *e*P **P** 22 29 07.8 +1.0
comp=Z,15nm,1.4s,mb4.7
DUG Dugway 74.29 328 *e*P **P** 22 29 07.8 +0.9
DUG pmax pmax
comp=Z,15nm,1.4s,mb4.7
HWUT Hardware Ranch 74.78 329 *e*P **P** 22 29 09.8 +0.1
comp=Z,7.7nm,0.9s,mb4.6
PDAR Pinedale Array 74.78 331 P **P** 22 29 08.7 -1.0
comp=Z,0.7nm,0.6s,mb3.8,baz=80,slow=8.1,SNR=3.7
SPUT South Promonto 74.97 329 *e*P **P** 22 29 12.5 +1.7
VNDA Vanda 74.99 190 P **P** 22 29 11.5 +1.0
comp=Z,1.7nm,1.0s,mb3.9,baz=109,slow=5.0,SNR=5.6
VNDA LR LR 23 01 11.8
comp=Z,93nm,18.9s,MS4.1,baz=147,slow=35
VNDA Vanda 74.99 190 *e*P **P** 22 29 11.7 +1.1
comp=Z,2.7nm,1.0s,mb4.1
VNDA Vanda 74.99 190 *e*P **P** 22 29 11.7 +1.2
VNDA pmax pmax
comp=Z,3.0nm,1.0s
TPH Tonopah 75.01 324 *e*P **P** 22 29 11.9 +0.8
comp=Z,12nm,1.4s,mb4.6
TPH Tonopah 75.01 324 *e*P **P** 22 29 11.9 +0.8
TPH pmax pmax
comp=Z,12nm,1.4s,mb4.6
SYO Syowa Base 75.52 160 *e*P **P** 22 29 10.8 -2.9
REDW Red Top Meadow 75.83 331 *e*P **P** 22 29 17.4 +1.7
comp=Z,12nm,1.3s,mb4.7
NVAR Mina Array Bea 75.86 323 P **P** 22 29 15.9 -0.1
comp=Z,7.7nm,1.0s,mb4.0,baz=144,slow=5.8,SNR=6.7
LOHW Long Hollow 75.91 331 *e*P **P** 22 29 16.8 +0.7
comp=Z,5.9nm,1.1s,mb4.4
TPAW Teton Pass 75.97 331 *e*P **P** 22 29 17.6 +1.1
comp=Z,63nm,2.5s,mb5.1
LAO LASA Array 76.61 336 *e*P **P** 22 29 20.2 +0.1
comp=Z,29nm,1.2s,mb5.1
LAO *e*pP pP 22 29 30.6 -0.3
CMB Columbia Colle 76.75 322 *e*P **P** 22 29 21.4 +0.3
GCMT Greycliff 77.25 333 *e*P **P** 22 29 23.9 +0.3
PAHR Pah Rah Range 77.35 323 *e*P **P** 22 29 26.6 +2.2
comp=Z,15nm,1.2s,mb4.8
HLID Hailey 77.63 329 *e*P **P** 22 29 26.8 +1.0
comp=Z,8.4nm,1.1s,mb4.6
MCMT McKenzie Canyo 77.87 331 *e*P **P** 22 29 27.9 +0.7
SUR Sutherland 79.07 121 *e*P **P** 22 29 34.4 +0.1
SUR *e*PcP PcP 22 29 43.1 +0.4
TOA0 Torodi Ar. Sit 79.32 71 *e*P **P** 22 29 35.8 0.0
TORD Torodi Ar. Bea 79.32 71 P **P** 22 29 34.7 -1.2
comp=Z,20nm,1.0s,mb5.0,baz=255,slow=5.1,SNR=46
TORD LR LR 23 05 40.6
comp=Z,162nm,18.8s,MS4.4,baz=220,slow=36
BMO Blue Mountains 79.97 328 *e*P **P** 22 29 39.2 +0.5
comp=Z,18nm,1.4s,mb4.8
BMO *e*pP pP 22 29 49.4 -0.2
TSUM Tsumeb 81.02 107 P **P** 22 29 45.0 0.0
comp=Z,13nm,1.1s,mb4.8,baz=233,slow=7.5,SNR=7.1
TSUM Tsumeb 81.02 107 *e*P **P** 22 29 45.9 +0.8
comp=Z,17nm,1.2s,mb4.9
TSUM *e*pP pP 22 29 55.5 -0.4
RAR Rarotonga 81.25 251 P **P** 22 29 46.9 +0.7
comp=Z,7.9nm,0.4s,mb5.0,baz=104,slow=4.2,SNR=3.0
WALA Waterton Lakes 81.60 333 *e*P **P** 22 29 47.5 +0.3
WALA *e*PcP PcP 22 29 51.9 -1.2
OD2 Odessa Site #2 82.49 329 *e*P **P** 22 29 51.4 -0.6
MAW Mawson 83.21 164 P **P** 22 29 55.1 -0.5
comp=Z,15nm,1.1s,mb4.9,baz=223,slow=7.4,SNR=6.0
MAW Mawson 83.21 164 *e*P **P** 22 29 54.6 -1.0
comp=Z,213nm,2.1s,mb5.8
BOSA Boshof 84.02 118 P **P** 22 30 00.6 +0.1
comp=Z,3.6nm,0.4s,mb4.8,baz=236,slow=4.8,SNR=15
BOSA LR LR 23 04 47.1
comp=Z,222nm,18.1s,MS4.6,baz=65,slow=34
BOSA Boshof 84.02 118 *e*P **P** 22 30 01.8 +1.2
comp=Z,9.2nm,1.0s,mb4.9
BOSA Boshof 84.02 118 *e*P **P** 22 30 01.8 +1.3
BOSA pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
EGRO El Granado 84.57 45 P **P** 22 30 03.5 +0.5
comp=Z,45nm,1.2s,mb5.5
EDM Edmonton 84.60 336 *e*P **P** 22 30 02.6 -0.1
EMIN Mina Concepcio 85.23 46 P **P** 22 30 06.2 -0.1
comp=Z,34nm,1.2s,mb5.3
ESPR Espera 85.28 47 P **P** 22 30 07.4 +0.9
comp=Z,44nm,1.1s,mb5.5
EJIF Jimena Fronter 85.31 47 P **P** 22 30 08.1 +1.4
comp=Z,21nm,0.9s,mb5.3
EJIF Jimena Fronter 85.31 47 P **P** 22 30 08.1 +1.4
EJIF pmax pmax
comp=Z,21nm,0.9s,mb5.3
EBAD Badajoz 85.56 45 P **P** 22 30 08.0 +0.1
comp=Z,24nm,1.2s,mb5.3
LBTB Lobatse 85.71 115 *e*P **P** 22 30 08.9 -0.2
comp=Z,13nm,1.2s,mb5.0
LBTB *e*pP pP 22 30 18.1 -1.9
LBTB Lobatse 85.71 115 *e*P **P** 22 30 08.9 -0.2
LBTB *e**PP pP 22 30 18.1 -1.9
LBTB pmax pmax
comp=Z,13nm,1.2s,mb5.0
EMIJ Mijas 85.84 47 P **P** 22 30 09.8 +0.5
comp=Z,18nm,1.0s,mb5.3
ELOJ Sierra Loja 86.58 47 P **P** 22 30 14.2 +1.3
comp=Z,20nm,1.2s,mb5.2
ELOJ Sierra Loja 86.58 47 P **P** 22 30 14.2 +1.3
ELOJ pmax pmax
comp=Z,20nm,1.2s,mb5.2
ELUQ Luque 86.72 47 P **P** 22 30 14.6 +1.0
comp=Z,28nm,1.2s,mb5.4
ELUQ Luque 86.72 47 P **P** 22 30 14.6 +1.0
ELUQ pmax pmax
comp=Z,28nm,1.2s,mb5.4
EADA Adamuz 86.84 46 P **P** 22 30 14.2 0.0
comp=Z,22nm,1.4s,mb5.2
EBAN Banos Encina 87.36 46 P **P** 22 30 16.8 +0.1
comp=Z,5.3nm,0.8s,mb4.8
EBAN Banos Encina 87.36 46 P **P** 22 30 16.8 +0.1
EBAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
ESDC Sonseca Array 88.05 45 P **P** 22 30 18.7 -1.3
comp=Z,0.2nm,0.7s,baz=259,slow=31,SNR=4.1
ESDC LR LR 23 03 53.6
comp=Z,61nm,21.6s,baz=240,slow=32
ESDC Sonseca Array 88.05 45 P **P** 22 30 18.7 -1.3
ESDC LR LR 23 03 53.6
ESLA Sonseca Array 88.05 45 *e*P **P** 22 30 19.8 -0.1
ESLA *e*pP pP 22 30 30.5 -0.5
YKA Yellowknife Ar 92.22 341 P **P** 22 30 37.0 -1.9
comp=Z,1.9nm,0.8s,mb4.5,baz=137,slow=4.8,SNR=6.4
KEST Kesra 95.49 54 LR LR 23 17 44.0
comp=Z,114nm,18.8s,MS4.4,baz=247,slow=38
OBN Obninsk 118.38 39 *e*PKIKP PKPdf 22 36 16.8 +0.2
OBN *e*PS PS 22 47 23.7 +3.5
OBN *e*SS SS 22 53 57.6 +10
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.5
ANN Anapa 118.46 50 *i* PKIKP PKPdf 22 36 13.1 -4.0
ASAR Alice Springs 127.77 209 PKP PKPdf 22 36 34.5 -1.3
comp=Z,2.3nm,0.9s,baz=128,slow=1.9,SNR=12
TIXI Tiksi 130.20 352 *i* PKIKP PKPdf 22 36 36.5 -2.3
TIXI pmax pmax
comp=Z,6.0nm,1.5s
WRA Warramunga Arr 130.79 212 PKP PKPdf 22 36 40.9 -0.7
comp=Z,4.2nm,1.1s,baz=172,slow=1.6,SNR=8.2
BVAR Borovoye Array 137.99 35 PKP PKPdf 22 36 52.5 -1.4
comp=Z,0.5nm,0.6s,baz=196,slow=36,SNR=5.3

NVS Novosibirsk 142.78 25 *e*PKIKP PKPdf 22 37 01.6 -0.9
NVS pmax pmax
comp=E,6.0nm,1.5s
NVS pmax pmax
comp=Z,15nm,1.5s
ZAA0 Zalesovo Array 144.06 25 *e*PKPdf PKPdf 22 37 03.4 -1.4
ZAA0 *e*pPKPdf pPKPdf 22 37 12.8 -3.4
ZALV Zalesovo Beam 144.06 25 PKP PKPdf 22 37 02.9 -2.0
comp=Z,4.4nm,0.8s,baz=298,slow=3.2,SNR=14
EKS2 Erkin-Say 144.62 48 *e*PKPdf PKPdf 22 37 06.2 0.0
EKS2 *e*pPKPdf pPKPdf 22 37 17.2 -0.3
EKS2 Erkin-Say 144.62 48 P PKPdf 22 36 58.0 -8.2
SNR=5.1
AML Almayashu 144.75 49 P PKPdf 22 37 07.1 +0.7
SNR=8.0
KRAR Krasnoyarsk 144.95 16 *i* PKIKP PKPdf 22 37 05.4 -0.9
AAK Ala-Archa 145.12 48 P PKPbc 22 37 08.2 +1.6
SNR=18
FRU Bishkek 145.12 47 *e*PKIKP PKPdf 22 37 08.0 +1.0
CHMS Chumysh 145.15 47 P PKPbc 22 37 07.8 +1.1
SNR=6.2
UCH Uchtor 145.29 48 *e*PKPbc PKPbc 22 37 08.3 +1.2
KBK Karagaybulak 145.42 47 P PKPbc 22 37 09.1 +1.5
SNR=15
TKM2 Tokmak 2 145.75 47 *e*PKPdf PKPdf 22 37 09.6 +1.5
TKM2 Tokmak 2 145.75 47 P PKPdf 22 37 11.0 +2.9
SNR=8.8
KZA Kyzart 145.85 48 P PKiKP 22 37 12.3 -0.2
SNR=5.9
LEM Lembang 150.18 176 P PKPbc 22 37 23.7 +2.3
HYB Hyderabad 150.50 95 *i* PKP PKiKP 22 37 22.0 -0.7
MJAR Matsushiro Arr 151.82 305 PKPbc PKPbc 22 37 21.6 -2.9
comp=Z,3.6nm,0.8s,baz=82,slow=2.1,SNR=7.6
MAT Matsushiro 151.82 305 PKP PKPbc 22 37 24.2 -0.4
ZAK Zakamensk 152.37 9 *e*PKIKP PKPdf 22 37 12.8 -5.7
WMQ Urumqi 152.66 36 *e*PKP PKPdf 22 37 16.0 -3.2
WMQ PP PP 22 41 10.0 +0.6
WMQ SKS SKSdf 22 44 18.0 -5.7
WMQ SKKS SKKSac 22 47 54.0 -3.4
WMQ PP PP
comp=Z,64nm,9.0s
WMQ LR LR
comp=N,56nm,24.0s,MS4.5
WMQ LR LR
comp=E,58nm,24.0s,MS4.5
WMQ LR LR
comp=Z,48nm,24.0s,MS4.2
MDJ Mudanjiang 152.95 327 PKP PKPdf 22 37 17.4 -2.1
SONM Songino Array 155.22 5 PKP PKPdf 22 37 21.6 -1.0
comp=Z,0.7nm,0.8s,baz=333,slow=1.7,SNR=3.7
SONM PKPab PKPab 22 37 46.4 -1.1
comp=Z,1.3nm,0.8s,baz=337,slow=6.0,SNR=4.2
CN2 Changchun 155.52 331 *e*PKP PKPdf 22 37 22.6 -0.6
GTA Gaotai 161.82 25 *e*PKP PKPdf 22 37 30.6 -0.2
GTA APKP 22 37 41.5
GTA XPKP 22 37 45.3
GTA PP PP 22 42 04.0 +4.6
GTA SKS SKSdf 22 44 30.6 -2.6
GTA SKKS SKKSac 22 48 47.5 +1.7
GTA SS SS 23 02 18.5 +3.6
GTA PP PP
comp=Z,92nm,6.0s
GTA LR LR
comp=N,71nm,14.7s
GTA LR LR
comp=E,69nm,15.3s
GTA LR LR
comp=Z,89nm,17.1s
BJI Beijing 162.20 343 PKP PKPdf 22 37 29.0 -2.2
HHC Hu-ho-hao-te 162.24 355 *e*PKP PKPdf 22 37 29.5 -1.7
HHC APKP 22 37 40.8
HHC XPKP 22 37 44.3
HHC PKS 22 41 01.8
HHC PP PP 22 42 03.6 +2.3
HHC SKS SKSdf 22 44 29.9 -3.5
HHC SKKS SKKSac 22 48 46.8 -1.0
HHC SS SS 23 02 20.1 +1.4
HHC PP PP
comp=Z,121nm,7.1s
HHC LR LR
comp=N,129nm,19.0s
HHC LR LR
comp=E,174nm,17.2s
HHC LR LR
comp=Z,88nm,18.4s
LZH Lanzhou 166.20 19 *e*PKP PKPdf 22 37 35.0 +0.1
LZH APKP 22 37 45.8
LZH XPKP 22 37 49.5
LZH PKP2 PKPab 22 38 37.6 +1.9
LZH *e*PP PP 22 42 26.3 +4.0
LZH SKKS SKKSac 22 49 08.3 +0.2
LZH *e*SS SS 23 03 01.1 +1.3
LZH PP PP
comp=Z,127nm,7.8s
LZH LR LR
comp=N,163nm,17.8s
LZH LR LR
comp=Z,235nm,20.3s
NJ2 Nanjing 167.82 319 *e*PKP PKPdf 22 37 35.4 -0.9
CMAR Chiang Mai Arr 169.13 113 PKP PKPdf 22 37 37.8 +0.3
comp=Z,0.4nm,0.3s,baz=241,slow=1.6,SNR=6.4
CMAR PKPab PKPab 22 38 49.1 -0.2
comp=Z,0.7nm,0.4s,baz=238,slow=3.9,SNR=6.7
CD2 Chengdu 170.74 32 *e*PKP PKPdf 22 37 36.0 -2.1
CD2 APKP 22 37 45.3
CD2 XPKP 22 37 50.1
CD2 PKP2 PKPab 22 38 56.3 +0.4
CD2 PP PP 22 42 47.8 +2.1
CD2 SKS SKSdf 22 44 34.3 -4.8
CD2 SKKS SKKSac 22 49 28.8 -1.9
CD2 SS SS 23 03 43.3 -2.6
CD2 PP PP
comp=Z,150nm,7.4s
CD2 LR LR
comp=N,160nm,18.2s
CD2 LR LR
comp=Z,150nm,16.8s
KMI Kunming 173.55 71 PKP PKPdf 22 37 34.8 -4.7
KMI APKP 22 37 49.5
KMI PKP2 PKPab 22 39 08.8 -0.1
KMI PP PP 22 43 00.6 -0.5
KMI SS SS 23 04 13.0 -3.0
KMI PP PP
comp=Z,78nm,5.6s
KMI LR LR
comp=N,99nm,16.5s
KMI LR LR
comp=E,99nm,15.1s
KMI LR LR
comp=Z,135nm,21.9s
GYA Guiyang 175.82 37 PKP PKPdf 22 37 38.9 -1.3
GYA APKP 22 37 49.6
GYA XPKP 22 37 53.3
GYA PKP2 PKPab 22 39 18.8 +0.1
GYA PKS 22 41 09.6
GYA PP PP 22 43 11.9 +1.1
GYA SKKS SKKSac 22 49 53.3 -2.0
GYA SS SS 23 04 32.1 -3.5
GYA PP PP
comp=Z,100nm,8.5s
GYA LR LR
comp=N,190nm,20.8s
GYA LR LR
comp=E,150nm,21.3s
GYA LR LR
comp=Z,180nm,22.0s
QIZ Qiongzhong 175.91 185 PKP PKPdf 22 37 35.0 -5.4
QIZ PP PP 22 43 16.4 +6.0
QIZ LR LR
comp=N,45nm,23.4s
QIZ LR LR
comp=Z,60nm,21.7s

IDC ***17*** *22:22:03.8±3.7, 128S×1304W, h0km, mb4.1/4, mb1 4.3/6, mb1mx3.9/23, mbtmp4.2/6, ML3.6/2, MS3.5/8, Ms1 3.6/8, ms1mx3.3/28, Error ellipse: s-maj=80.9km s-min=59.6km az=169.0*
ISCJB ***17*** *22:22:05.7±0.8, 1.12S±0.10×128W±0.02, h10km, mb4.1/3, MS3.6/6, Error ellipse: s-maj=23.5km s-min=11.8km az=24.0*
ISC 17 22:22:07.7±0.8,**112S**±010×**129W**±02,**h10**km,**n17,**
σ0.9**96**/13,**mb4.1**/3,**MS3.6**/6,**North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.72**	**47**	*e*P	**Pn**	**22 24 47.3**	**+6.0**
	11nm,0.2s						
TIC	**Toumodi**	**11.01**	**45**	*e*P	**Pn**	**22 24 47.1**	**+1.8**
	21nm,0.2s						
KIC	**Kosan Boka**	**11.02**	**48**	*e*P	**Pn**	**22 24 44.7**	**-0.8**
	58nm,1.2s						
DBIC	**Dimbokro**	**11.14**	**46**	Pn	**Pn**	**22 24 47.1**	**0.0**
	0.2nm,0.3s,baz=214,slow=14,SNR=4.5						
DBIC				Sn	**Sn**	**22 26 41.1**	**-11**
	0.3nm,0.3s,baz=146,slow=9.0,SNR=3.3						
DBIC				LR	LR	22 28 24.7	
	comp=Z,386nm,19.8s,baz=205,slow=34						
BBTS	**Babate**	**16.09**	**347**	Pn	**Pn**	**22 25 54.9**	**+0.8**
	0.4nm,0.3s,baz=162,slow=2.8,SNR=6.5						
BBTS				LR	LR	22 31 10.5	
	comp=Z,47nm,19.1s,baz=179,slow=34						
TORD	**Torodi Ar. Bea**	**20.25**	**45**	P	**P**	**22 26 43.2**	**-0.2**
	5.2nm,0.7s,baz=228,slow=10.0,SNR=29						
TORD				LR	LR	22 33 42.2	
	comp=Z,274nm,21.2s,MS3.6,baz=235,slow=34						
TSUM	**Tsumeb**	**34.85**	**123**	LR	LR	22 40 21.3	
	comp=Z,115nm,19.3s,MS3.6,baz=322,slow=32						
ESDC	**Sonseca Array**	**41.41**	**10**	LR	LR	22 46 36.9	
	comp=Z,42nm,18.1s,MS3.4,baz=320,slow=35						
KEST	**Kesra**	**42.12**	**27**	LR	LR	22 48 56.8	
	comp=Z,48nm,19.6s,MS3.4,baz=234,slow=38						
GERES	**GERESS Array B**	**54.83**	**21**	P	**P**	**22 31 37.7**	**-0.2**
	1.2nm,0.9s,mb3.9,baz=193,slow=5.3,SNR=8.5						
LPAZ	**La Paz**	**56.44**	**251**	LR	LR	22 53 50.9	
	comp=Z,90nm,19.8s,MS3.9,baz=65,slow=34						
PLCA	**Paso Flores**	**65.22**	**225**	LR	LR	22 59 30.3	
	comp=Z,38nm,18.2s,MS3.6,baz=3.5,slow=35						
VNA2	**Neumayer--Watz**	**69.79**	**178**	*e*	**P**	**22 33 18.6**	**+0.8**
	baz=343,slow=8.4						
VNA2				*e*		22 33 25.7	
VNA2				*e*		22 33 37.4	
VNA3	**Neumayer Olymp**	**70.05**	**179**	*e*	**P**	**22 33 19.9**	**+0.5**
VNA3				*e*		22 33 27.0	
VNA3				*e*		22 33 38.5	
SNAA	**Sanae**	**70.74**	**177**	*e*	**P**	**22 33 23.0**	**-0.6**
SNAA				*e*		22 33 30.1	
SNAA				*e*		22 33 41.6	
ARCES	**ARCESS Array B**	**75.08**	**13**	P	**P**	**22 33 46.9**	**-2.5**
	1.6nm,0.7s,mb4.1,baz=275,slow=4.5,SNR=4.3						
BVAR	**Borovoye Array**	**86.83**	**37**	P	**P**	**22 34 52.2**	**-0.2**
	1.6nm,0.7s,mb4.3,baz=299,slow=6.1,SNR=8.0						

*ISCJB **17** 22:24:30.8±3.7, 53S±0.1×1513E±0.2, h89km±31km, mb4.0/9, Error ellipse: s-maj=38.5km s-min=23.8km az=10.1*
*IDC **17** 22:24:31.1±9.6, 535S×15125E, h75km±83km, mb3.9/8, mb1 4.1/9, mb1mx3.9/17, mbtmp3.9/9, ML4.1/1, MS3.4/7, Ms1 3.4/7, ms1mx3.2/25, Error ellipse: s-maj=46.9km s-min=29.9km az=78.0*
*NEIC **17** 22:24:31.5±3.5, 542S×15145E, h87km±29km, mb4.3/1, Error ellipse: s-maj=30.0km s-min=20.2km az=83.0*
ISC 17 22:24:32.5±3.3, 53S±01×1513E±02, h92km±28km, n21, σ0§92/15, mb4.0/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.76**	**225**	*e*Pn	**Pn**	**22 25 54.9**	**-0.6**
	90nm,1.1s						
HNR	**Honiara**	**9.49**	**116**	LR	LR	22 29 39.6	
	comp=Z,187nm,19.8s,baz=20,slow=32						
CTA	**Charters Tower**	**15.46**	**198**	P	**Pn**	**22 28 06.3**	**+0.8**
	0.5nm,0.3s,baz=249,slow=13,SNR=2.6						
CTA				LR	LR	22 33 26.6	
	comp=Z,180nm,20.0s,baz=48,slow=35						
CTA	**Charters Tower**	**15.46**	**198**	P	**Pn**	**22 28 06.3**	**+0.8**
CTA				LR	LR	22 33 26.6	
GUMO	**Guam**	**19.86**	**341**	LR	LR	22 34 39.0	
	comp=Z,86nm,18.4s,baz=149,slow=31						
EIDS	**Eidsvold**	**19.92**	**181**	*e*P	**Pn**	**22 28 53.2**	**-6.3**
	38nm,0.9s						
KAKA	**Kakadu**	**20.00**	**247**	*e*P	Px	22 28 47.2	
	9.3nm,0.6s						
WRAB	**Tennant Creek**	**21.96**	**227**	*e*P	**P**	**22 29 19.6**	**+0.7**
	8.8nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	**21.97**	**227**	*e*P	**P**	**22 29 19.6**	**+0.6**
WB2	**Warramunga Arr**	**21.97**	**227**	*e*P	**P**	**22 29 19.6**	**+0.6**
WRA	**Warramunga Arr**	**21.98**	**227**	P	**P**	**22 29 19.1**	**-0.1**
	12nm,0.9s,mb4.2,baz=53,slow=9.9,SNR=39						
WRA				LR	LR	22 37 57.1	
	comp=Z,82nm,21.1s,baz=70,slow=37						
ASAR	**Alice Springs**	**24.76**	**221**	P	**P**	**22 29 45.9**	**+0.1**
	17nm,0.8s,mb4.5,baz=56,slow=9.0,SNR=104						
STKA	**Stephens Creek**	**27.93**	**198**	P	**P**	**22 30 12.8**	**-1.3**
	1.5nm,0.6s,mb3.7,baz=48,slow=14,SNR=4.3						
STKA				LR	LR	22 39 22.7	
	comp=Z,111nm,21.4s,baz=22,slow=32						
MJAR	**Matsushiro Arr**	**43.42**	**345**	LR	LR	22 47 34.4	
	comp=Z,50nm,20.8s,baz=210,slow=32						
CMAR	**Chiang Mai Arr**	**56.76**	**296**	P	**P**	**22 34 05.7**	**-1.7**
	0.6nm,0.3s,mb4.0,baz=129,slow=2.9,SNR=2.9						
CMAR				LR	LR	22 58 56.3	
	comp=Z,30nm,19.4s,baz=110,slow=36						
SONM	**Songino Array**	**65.99**	**329**	P	**P**	**22 35 11.2**	**+2.2**
	1.3nm,0.7s,mb3.9,baz=151,slow=7.7,SNR=8.8						
ZALV	**Zalesovo Beam**	**80.77**	**327**	P	**P**	**22 36 35.6**	**-0.2**
	0.7nm,0.5s,mb3.8,baz=90,slow=7.4,SNR=4.4						
BVAR	**Borovoye Array**	**88.77**	**323**	P	**P**	**22 37 15.7**	**-0.2**
	1.5nm,0.8s,mb4.1,baz=130,slow=4.6,SNR=5.7						
NVAR	**Mina Array Bea**	**93.59**	**52**	P	**P**	**22 37 38.5**	**-0.2**
	0.2nm,0.3s,mb3.9,baz=246,slow=7.3,SNR=3.6						
GERES	**GERESS Array B**	**123.72**	**328**	PKP	PKPdf	22 43 21.0	+1.4
	0.5nm,0.7s,baz=48,slow=2.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**149.04**	**287**	PKPbc	PKPbc	22 44 11.9	+0.9
	7.5nm,0.8s,baz=83,slow=2.1,SNR=56						

*ATH **17** 22:26:17.9, 3904N×2528E, h49km, MD3.5/3*
*ISCJB **17** 22:26:21.6±0.7, 3880N±003×2555E±006, h10km, Error ellipse: s-maj=6.4km s-min=3.8km az=163.1*
*ISK **17** 22:26:21.6, 3890N×2566E, h5km, MD3.4*
*DDA **17** 22:26:21.9, 3881N×2572E, h7km±4km, Md3.0*
*CSEM **17** 22:26:21.5±0.3, 3889N×2566E, h0km±1km, MD3.0, Error ellipse: s-maj=5.9km s-min=2.2km az=76.0*
ISC 17 22:26:22.6±0.7, 3881N±003×2561E±005, h10km, n35, σ1§23/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.67**	**50**	*e*P	**Pg**	**22 26 34.0**	**-1.7**
PRK				*e*S	**Sg**	**22 26 45.0**	**+0.5**
URLA	**Izmir**	**0.90**	**120**	*i*P	**Pg**	**22 26 37.8**	**-2.1**
URLA				*i*S	**Sg**	**22 26 49.9**	**-1.6**
AYVA	**Ayvalik**	**0.98**	**59**	*i*P	**Pg**	**22 26 39.9**	**-1.5**
AYVA				*i*S	**Sg**	**22 26 52.2**	**-1.9**
BOZC	**Bozcaada**	**1.08**	**18**	*i*P	**Pb**	**22 26 41.9**	**-1.6**
BOZC				*i*S	**Sg**	**22 26 58.0**	**+0.4**
EZN	**Ezine**	**1.15**	**29**	*e*PG	**Pn**	**22 26 42.8**	**-2.0**
EZN				*e*SG	**Sn**	**22 26 58.2**	**-2.5**
KDAG	**Bornova**	**1.36**	**107**	*i*P	**Pn**	**22 26 45.3**	**-2.4**
KDAG				*i*S	**Sb**	**22 27 04.5**	**-1.2**
KDAG	**Bornova**	**1.36**	**107**	*i*P	**Pn**	**22 26 45.3**	**-2.4**
KDAG				*i*S	**Sb**	**22 27 04.4**	**-1.3**
GADA	**Gvkgeada**	**1.39**	**9**	*e*PN	**Pn**	**22 26 47.0**	**-1.1**
GADA				*e*SN	**Sn**	**22 27 06.7**	**+0.1**
SMG	**Samos**	**1.47**	**138**	*e*P	**Pn**	**22 26 48.5**	**-0.6**
GCAM	**G?zelcaml?**	**1.69**	**130**	*i*P	**Pn**	**22 26 53.5**	**+1.3**
GCAM				*i*S	**Sn**	**22 27 14.9**	**+0.9**
AKS	**Akhisar**	**1.72**	**87**	*e*PN	**Pn**	**22 26 53.4**	**+0.7**
AKS				*e*SN	**Sn**	**22 27 16.3**	**+1.6**
AKHS	**Akhisar**	**1.72**	**87**	*i*P	**Pn**	**22 26 52.5**	**-0.1**
AKHS				*i*S	**Sn**	**22 27 15.7**	**+0.9**
AKHS	**Akhisar**	**1.72**	**87**	*i*P	**Pn**	**22 26 52.5**	**-0.1**
AKHS				*i*S	**Sn**	**22 27 15.6**	**+0.9**
APE	**Apeiranthos**	**1.74**	**182**	*e*P	**Pn**	**22 26 50.0**	**-2.9**
LPK	**Lapseki**	**1.79**	**29**	*e*PN	**Pn**	**22 26 53.9**	**+0.3**
LPK				*e*SN	**Sn**	**22 27 17.2**	**+0.8**
BALB	**Balikesir**	**1.95**	**64**	*e*PN	**Pn**	**22 26 56.2**	**+0.4**
ENEZ	**Enez**	**1.96**	**12**	*e*PN	**Pn**	**22 26 55.3**	**-0.7**
RKY	**Sarkoy-Tekirda**	**2.23**	**32**	*e*PN	**Pn**	**22 26 58.9**	**-0.7**
MLSB	**Milas**	**2.29**	**131**	*e*PN	**Pn**	**22 27 02.3**	**+1.9**
EDC	**Edincik**	**2.32**	**48**	*e*PN	**Pn**	**22 27 01.4**	**+0.5**
MRMT	**Marmara Adasi**	**2.35**	**40**	*e*PN	**Pn**	**22 27 01.7**	**+0.3**
BNT	**Bandirma**	**2.36**	**49**	*e*PN	**Pn**	**22 27 01.7**	**+0.3**
KULA	**Kula-Manisa**	**2.41**	**96**	*e*PN	**Pn**	**22 27 02.6**	**+0.5**
DEMI	**Demirci**	**2.44**	**84**	*i*P	**Pb**	**22 27 06.2**	**-0.3**
DEMI				*i*S	**Sb**	**22 27 36.4**	**-0.2**
DST	**Dursunbey**	**2.48**	**70**	*e*PN	**Pn**	**22 27 04.4**	**+1.4**
KCT	**Karacabey**	**2.57**	**55**	*e*PN	**Pn**	**22 27 04.7**	**+0.4**
TKR	**Tekirdag**	**2.63**	**34**	*e*PN	**Pn**	**22 27 05.3**	**+0.2**
YER	**Yerkesik**	**2.70**	**128**	*e*PN	**Pn**	**22 27 07.6**	**+1.6**
ULDT	**Uludag**	**3.04**	**63**	*e*P	**Pg**	**22 27 19.0**	**-1.8**
ULDT				*i*S	**Sb**	**22 27 55.7**	**+1.9**
SLVT	**Silivri**	**3.13**	**39**	*e*PN	**Pn**	**22 27 13.1**	**+1.1**
EDRB	**Edirne**	**3.15**	**16**	*e*PN	**Pn**	**22 27 13.1**	**+0.8**
BGKT	**Bogazkoy**	**3.39**	**45**	*e*PN	**Pn**	**22 27 16.8**	**+1.2**
YLV	**Yalova**	**3.39**	**58**	*e*PN	**Pn**	**22 27 16.4**	**+0.8**
ISK	**Istanbul-Kandi**	**3.48**	**49**	*e*PN	**Pn**	**22 27 17.9**	**+1.1**
ADVT	**Abdulvahap**	**3.58**	**62**	*e*PN	**Pn**	**22 27 19.5**	**+1.4**

NNC 17 22:35:40.9±1.6, 4789N×8338E, h0km, mb3.7, mpv3.5, 5C-3D, Error ellipse: s-maj=11.5km s-min=7.5km az=78.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.32**	**214**	⇑P	Pg	22 36 06.2	0.0
	8.4nm,0.3s,baz=38,slow=18,SNR=6.0						
MK31				⇑S	Sg	22 36 23.6	+0.3
	92nm,0.3s,baz=34,slow=33						
KURBB	**Kurchatov Arra**	**4.19**	**313**	⇓Pn	Pn	22 36 46.1	+0.1
	1.3nm,0.4s						
KURBB				⇓Lg		22 37 51.4	
	60nm,0.8s						
KURK	**Kurchatov**	**4.21**	**314**	⇓Pn	Pn	22 36 45.8	-0.4
	2.7nm,0.4s						
KURK				⇑Lg		22 37 50.6	
	85nm,0.6s						
TKM2	**Tokmak 2**	**7.39**	**231**	⇑Pn	Pn	22 37 30.1	+0.1
	20nm,1.2s						
TKM2				⇑Lg		22 39 33.7	
	13nm,0.9s						

*ISCJB **17** 22:43:22.5±5.3, 232S±0.1×711W±03, h21km±38km, Error ellipse: s-maj=45.5km s-min=18.6km az=15.8*
*IDC **17** 22:43:26.2±6.3, 2328S×7051W, h24km±35km, mb4.1/1, mb1 3.9/3, mb1mx3.5/18, mbtmp3.8/3, ML4.1/2, Error ellipse: s-maj=51.5km s-min=31.5km az=111.0*
ISC 17 22:43:24.1±6.1, 233S±01×706W±04, h6km±33km, h8km±.5km:pP-P, n8, σ1§06/7, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.70**	**66**	Pg	**Pg**	**22 43 56.7**	**+0.1**
	46nm,0.3s,baz=251,slow=12,SNR=24						
LVC				Lg		22 44 17.6	
	234nm,0.3s,baz=350,slow=22,SNR=5.2						
LPAZ	**La Paz**	**7.35**	**19**	Pn	**Pn**	**22 45 12.3**	**+0.2**
	0.7nm,0.3s,baz=210,slow=7.0,SNR=12						
PLCA	**Paso Flores**	**17.38**	**180**	P	**Pn**	**22 47 26.6**	**-0.7**
	0.2nm,0.3s,baz=354,slow=17,SNR=4.0						
VNA3	**Neumayer Olymp**	**58.89**	**161**	*e*	**P**	**22 53 24.5**	**+1.0**
VNA3				*e*	pP	22 53 27.3	+1.9
VNA2	**Neumayer--Watz**	**59.48**	**160**	*e*	**P**	**22 53 28.7**	**+1.1**
	baz=304,slow=8.0						
VNA2				*e*	pP	22 53 31.1	+1.6
SNAA	**Sanae**	**61.10**	**160**	*e*	**P**	**22 53 38.1**	**-0.6**
SNAA				*e*	pP	22 53 40.3	-0.3
TORD	**Torodi Ar. Bea**	**79.42**	**71**	P	**P**	**22 55 30.8**	**-1.0**
	2.1nm,0.8s,baz=259,slow=5.2,SNR=11						
MKAR	**Makanchi Array**	**148.00**	**36**	PKPbc	PKPbc	23 03 08.3	-2.1
	0.7nm,0.8s,baz=311,slow=3.0,SNR=6.6						

GUC 17 22:52:19.4±0.8, 2304S×6998W, h52km±21km, ML3.6, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.44**	**261**	*e*P	Pn	22 52 29.6	-0.5
MECH				*i*S	Sn	22 52 38.3	+0.6
MECH				AML	AML	22 52 38.5	
	comp=N,12µm,0.3s						
ANCH	**Antofagasta**	**0.76**	**211**	*i*P	Pn	22 52 34.0	+0.1
ANCH				*i*S	Sn	22 52 45.2	+0.6
ANCH				AML	AML	22 52 47.9	
	comp=N,9µm,0.1s						
LVC	**Limon Verde**	**1.07**	**67**	⇓*i*P	Pn	22 52 39.5	+1.4
LVC				*i*S	Sn	22 52 53.9	+1.9
LVC				AML	AML	22 52 56.0	
	comp=E,771nm,0.2s						

*THE **17** 22:56:45.8, 3928N×2022E, h0km±2km, ML3.9/5, Error ellipse: s-maj=3.5km s-min=0.9km az=258.0*
*NEIC **17** 22:56:45.8, 3932N×2023E, h14km, MD3.7(ATH), After ATH.*
*ATH **17** 22:56:45.8, 3932N×2023E, h14km±3km, MD3.7/5*
*ISCJB **17** 22:56:46.5±0.4, 3930N±002×2019E±004, h10km, Error ellipse: s-maj=4.2km s-min=3.3km az=171.6*
*CSEM **17** 22:56:46.4±0.2, 3930N×2026E, h8km, ML3.9/5, Error ellipse: s-maj=3.9km s-min=3.6km az=82.0*
ISC 17 22:56:46.9±0.4, 3928N±002×2019E±004, h10km, n45, σ1§14/71, 1C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.28**	**24**	P	**Pg**	**22 56 50.5**	**-2.0**
IGT				S	**Sg**	**22 56 54.3**	**-1.9**
KEK	**Kerkira**	**0.53**	**325**	*e*PB	**Pg**	**22 56 56.5**	**-0.7**
KEK				*e*SB	**Sg**	**22 57 03.0**	**-1.1**
SRN	**Sarande**	**0.62**	**346**	*e*PG	**Pg**	**22 56 57.6**	**-1.3**
SRN	**Sarande**	**0.62**	**346**	*e*PG	**Pg**	**22 56 57.6**	**-1.3**
JAN	**Janina**	**0.64**	**54**	*e*PB	**Pb**	**22 56 56.5**	**-3.6**
JAN				*e*SB	**Sb**	**22 57 05.0**	**-4.1**
TPE	**Tepelena**	**1.02**	**352**	*e*PG	**Pg**	**22 57 06.7**	**+0.1**
TPE				*i*SG	**Sg**	**22 57 24.6**	**+4.7**
TPE	**Tepelena**	**1.02**	**352**	*e*PG	**Pg**	**22 57 06.7**	**+0.1**
TPE				*i*SG	**Sg**	**22 57 24.6**	**+4.7**
VLS	**Valsamata**	**1.15**	**164**	P	**Pb**	**22 57 06.5**	**-2.3**
VLS				S	**Sb**	**22 57 23.9**	**+0.2**
VLS	**Valsamata**	**1.15**	**164**	*e*Pb	**Pb**	**22 57 08.5**	**-0.3**
VLS				S	**Sb**	**22 57 23.9**	**+0.2**
VLS				*e*Sb	**Sb**	**22 57 24.5**	**+0.8**
KFL	**Anninata**	**1.26**	**158**	P	**Pn**	**22 57 09.1**	**-1.4**
KFL				S	**Sb**	**22 57 27.7**	**+0.7**
KBN	**Korca**	**1.42**	**19**	*e*PG	**Pg**	**22 57 14.1**	**-0.1**
KBN	**Korca**	**1.42**	**19**	*e*PG	**Pg**	**22 57 14.1**	**-0.1**
KZN	**Kozani**	**1.59**	**49**	*e*PB	**Pb**	**22 57 15.5**	**-0.9**
KZN				*e*SB	**Sb**	**22 57 36.5**	**-0.1**
AGG	**Agios Georgios**	**1.69**	**98**	P	**Pn**	**22 57 15.0**	**-1.4**
AGG				S	**Sn**	**22 57 38.9**	**+0.9**
FNA	**Florina**	**1.76**	**31**	P	**Pn**	**22 57 17.1**	**-0.3**
FNA				S	**Sn**	**22 57 41.1**	**+1.3**
OHR	**Ohrid**	**1.89**	**14**	P	**Pn**	**22 57 17.7**	**-1.5**
OHR				S	**Sn**	**22 57 42.9**	**-0.2**
OHR	**Ohrid**	**1.89**	**14**	*e*Pn	**Pn**	**22 57 21.3**	**+2.1**
OHR				S	**Sn**	**22 57 42.9**	**-0.2**
OHR				*e*Sn	**Sn**	**22 57 44.8**	**+1.7**
OHR	**Ohrid**	**1.89**	**14**	*e*Pn	**Pn**	**22 57 21.4**	**+2.1**
OHR				*e*Sn	**Sn**	**22 57 44.9**	**+1.8**
BIA	**Bitola**	**1.94**	**26**	P	**Pn**	**22 57 20.1**	**+0.1**
BIA				S	**Sn**	**22 57 45.9**	**+1.5**
BIA	**Bitola**	**1.94**	**26**	*e*Pn	**Pn**	**22 57 21.6**	**+1.6**
BIA				S	**Sn**	**22 57 45.9**	**+1.5**
BIA				*e*Sn	**Sn**	**22 57 47.0**	**+2.6**
BIA	**Bitola**	**1.94**	**26**	*e*Pn	**Pn**	**22 57 21.7**	**+1.7**
BIA				*e*Sn	**Sn**	**22 57 47.1**	**+2.6**
LIT	**Litokhoron**	**1.96**	**64**	P	**Pn**	**22 57 19.9**	**-0.2**
LIT				S	**Sn**	**22 57 46.1**	**+1.4**
TIR	**Tirane**	**2.08**	**353**	P	**Pn**	**22 57 21.3**	**-0.6**
TIR				S	**Sn**	**22 57 50.1**	**+2.3**
TIR	**Tirane**	**2.08**	**353**	*e*Pn	**Pn**	**22 57 22.1**	**+0.2**
TIR	**Tirane**	**2.08**	**353**	*e*PN	**Pn**	**22 57 22.8**	**+0.9**
TIR	**Tirane**	**2.08**	**353**	*e*PN	**Pn**	**22 57 22.8**	**+0.9**
TIR	**Tirane**	**2.08**	**353**	*e*Pn	**Pn**	**22 57 22.1**	**+0.2**
TIR				S	**Sn**	**22 57 50.1**	**+2.3**
KRUS	**Krusevo**	**2.24**	**21**	*e*Pn	**Pn**	**22 57 24.8**	**+0.8**
KRUS	**Krusevo**	**2.24**	**21**	*e*Pn	**Pn**	**22 57 24.9**	**+0.9**
XOR	**Xorichti**	**2.33**	**87**	P	**Pn**	**22 57 24.4**	**-0.9**
GRG	**Griva**	**2.38**	**45**	P	**Pn**	**22 57 25.7**	**-0.3**
GRG				S	**Sn**	**22 57 57.1**	**+1.8**
HORT	**Hortiatis**	**2.60**	**59**	P	**Pn**	**22 57 28.2**	**-0.7**
PE1	**Pezze di Greco**	**2.61**	**307**	*e*Pn	**Pn**	**22 57 30.4**	**+1.2**
TIP	**Timpagrande**	**2.67**	**269**	*e*Pn	**Pn**	**22 57 30.5**	**+0.6**
TIP	**Timpagrande**	**2.67**	**269**	*e*Pn	**Pn**	**22 57 30.5**	**+0.6**
VAY	**Valandovo**	**2.73**	**41**	*e*Pn	**Pn**	**22 57 32.2**	**+1.4**
VAY				*e*Sn	**Sn**	**22 58 02.6**	**-1.3**
PUK	**Puka**	**2.77**	**355**	*e*PN	**Pn**	**22 57 31.3**	**0.0**
PUK	**Puka**	**2.77**	**355**	*e*PN	**Pn**	**22 57 31.3**	**0.0**
STIP	**Stip**	**2.85**	**32**	P	**Pn**	**22 57 32.4**	**-0.1**
STIP	**Stip**	**2.85**	**32**	*e*Pn	**Pn**	**22 57 32.1**	**-0.4**
STIP	**Stip**	**2.85**	**32**	P	**Pn**	**22 57 32.4**	**-0.1**
SOH	**Sokhos**	**2.88**	**57**	P	**Pn**	**22 57 32.0**	**-0.8**
SOH				S	**Sn**	**22 58 06.9**	**-0.5**
SG1	**Sgolgore (BA)**	**3.11**	**301**	*e*PN	**Pn**	**22 57 36.4**	**+0.4**
VLI	**Veliai**	**3.35**	**139**	*e*PN	**Pn**	**22 57 40.5**	**+1.1**
BARS	**Barje**	**3.74**	**19**	⇑*i*Pn	**Pn**	**22 57 44.0**	**-0.7**

*BJI **17** 22:59:28.1, 5280N×16760W, h17km, mB4.9, mb4.5, Ms4.0, Msz3.8*
*ISCJB **17** 22:59:30.4±0.9, 5288N±008×16769W±007, h48km±7km, mb4.0/18, MS3.6/8, Error ellipse: s-maj=14.8km s-min=5.9km az=161.7*
*NEIC **17** 22:59:30.1, 5279N×16762W, h17km, ML4.1(AEIC), After AEIC.*
*IDC **17** 22:59:44.6±3.7, 5299N×16769W, h164km±34km, mb3.5/16, mb1 3.8/17, mb1mx3.7/27, mbtmp3.5/17, MS3.6/7, Ms1 3.6/7, ms1mx3.2/34, Error ellipse: s-maj=24.2km s-min=12.0km az=10.0*
ISC 17 22:59:28.6±1.2, 5277N±005×16761W±007, h18km±7km, n40, σ1§44/45, mb4.0/18, MS3.6/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.67**	**344**	P	**Pg**	**22 59 42.2**	**+0.4**
OKFG				S	**Sg**	**22 59 51.1**	**+0.4**
OKCD	**Okmok Cone D**	**0.73**	**336**	P	**Pb**	**22 59 43.1**	**+0.3**
OKCD				S	**Sb**	**22 59 53.3**	**+0.8**
OKCE	**Okmok Cone E**	**0.74**	**334**	P	**Pb**	**22 59 43.3**	**+0.3**
NIKO	**Nikolski**	**0.78**	**286**	*e*Pg	**Pg**	**22 59 43.3**	**-0.6**
NIKO				*e*Sg	**Sg**	**22 59 53.2**	**-1.1**
UNV	**Unalaska Valle**	**1.27**	**31**	*e*Pn	**Pn**	**22 59 50.6**	**-0.8**
AKLV	**Akutan Long Va**	**1.71**	**35**	P	**Pn**	**22 59 57.0**	**-0.6**
AKGG	**Akutan Green G**	**1.73**	**33**	P	**Pn**	**22 59 57.3**	**-0.5**
AKUT	**Akutan**	**1.76**	**38**	*e*Pn	**Pn**	**22 59 58.2**	**0.0**
AKUT				*e*Sn	**Sn**	**23 00 22.4**	**+2.3**
AKA	**Akutan**	**1.76**	**38**	P	**Pn**	**22 59 58.3**	**+0.1**
AKA				S	**Sn**	**23 00 19.1**	**-1.0**
SDPT	**Sand Point**	**4.94**	**56**	*e*P	**Pn**	**23 00 43.4**	**+1.6**
ADK	**Adak**	**5.63**	**265**	*e*Pn	**Pn**	**23 00 53.8**	**+2.4**
ADK				*e*Sn	**Sn**	**23 02 00.7**	**+5.1**
AMKA	**Amchitka**	**8.18**	**265**	*e*Pn	**Pn**	**23 01 28.6**	**+2.2**
KDAK	**Kodiak Island**	**9.93**	**54**	P	**Pn**	**23 02 03.5**	**+13**
	0.2nm,0.3s,baz=234,slow=8.7,SNR=6.0						
PETK	**Petropavlovsk-**	**20.79**	**285**	P	**P**	**23 04 11.6**	**+3.0**
	2.9nm,0.5s,baz=85,slow=12,SNR=5.4						
PETK				LR	LR	23 10 59.8	
	comp=Z,74nm,21.2s,MS3.0,baz=348,slow=33						
PETK	**Petropavlovsk-**	**20.79**	**285**	P	**P**	**23 04 11.6**	**+3.0**
PETK				LR	LR	23 10 59.8	
DLBC	**Dease Lake**	**21.76**	**60**	P	**P**	**23 04 23.2**	**+4.4**
	4.9nm,0.9s,mb3.9,baz=259,slow=12,SNR=3.6						
YKA	**Yellowknife Ar**	**29.17**	**50**	P	**P**	**23 05 28.9**	**+0.5**
	0.6nm,0.5s,mb3.6,baz=82,slow=10.0,SNR=5.3						
YKA				LR	LR	23 18 19.1	
	comp=Z,36nm,18.1s,MS3.0,baz=135,slow=38						
YBH	**Yreka Blue Hor**	**31.91**	**92**	LR	LR	23 15 26.2	
	comp=Z,175nm,21.7s,MS3.7,baz=4.7,slow=30						
NVAR	**Mina Array Bea**	**36.61**	**93**	P	**P**	**23 06 34.9**	**+1.4**
	1.3nm,0.7s,mb3.9,baz=299,slow=8.1,SNR=13						
NVAR	**Mina Array Bea**	**36.61**	**93**	P	**P**	**23 06 34.9**	**+1.4**
PDAR	**Pinedale Array**	**39.28**	**81**	P	**P**	**23 06 56.5**	**+0.4**
	1.1nm,0.7s,mb3.7,baz=307,slow=5.4,SNR=8.0						
MDJ	**Mudanjiang**	**41.04**	**285**	P	**P**	**23 07 12.1**	**+1.5**
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,88nm,3.4s						
TXAR	**Lajitas Array**	**51.67**	**91**	P	**P**	**23 08 35.0**	**+0.7**
	comp=Z,4.6nm,0.7s,mb4.5,baz=300,slow=5.5,S

MTO2	Montecristo 2	2.37	79	eP	x		23 10 15.1	
BOQS	Boqueron	2.42	95	eP	x		23 10 16.0	
LFRS	El Faro	2.64	97	eP	x		23 10 19.4	
LFRS				eS	x		23 10 48.5	
SNVI	San Vicente	2.86	96	eP	x		23 10 23.3	
SNVI				eS	x		23 10 54.9	
SNVI				AML	x		23 10 59.5	
	comp=Z,74nm,0.2s							
SCX	San Cristobal	2.91	343	iP	Pn		23 10 29.4	+4.8
TGIG		3.11	335	iP	Pn		23 10 28.7	+1.2
TGIG				iS	Sn		23 11 04.6	+0.4
VSM	San Miguel	3.43	98	eP	x		23 10 32.8	
CAHU	Cacacuatique	3.45	92	eP	x		23 10 36.8	
CNCH	Conchagua	3.87	99	eP	x		23 10 36.9	
CMIG	Matias Romero	4.35	317	Pn	Pn		23 10 44.9	+0.4
	comp=Z,4.8nm,0.3s,baz=144,slow=13,SNR=3.9							
CMIG				Sn	Sn		23 11 33.1	-1.5
	comp=Z,7.1nm,0.3s,baz=113,slow=16,SNR=3.9							
CMIG	Matias Romero	4.35	317	Pn	Pn		23 10 44.9	+0.4
CMIG				Sn	Sn		23 11 33.1	-1.5
CMIG				iS	Sn		23 11 33.4	-1.2
CMIG	Matias Romero	4.35	317	eP	Pn		23 10 44.7	+0.2
CMIG				iS	Sn		23 11 33.4	-1.2
TGUH	Tegucigalpa,Un	4.36	88	ePn	Pn		23 10 56.2	+12
VHO	Vista Hermosa	5.72	304	iP	Pn		23 11 03.6	+0.2
VHO				eS	Sn		23 12 07.0	-1.5
PNIG	Pinotepa	6.61	292	iP	Pn		23 11 16.4	+0.7
PNIG				iS	Sn		23 12 29.9	-0.7
UTMO	Huajuapan	6.98	304	iP	Pn		23 11 22.0	+1.2
UTMO				iS	Sn		23 12 39.0	-0.6
TPIG	Tehuac#an	6.99	310	iS	Sn		23 12 40.6	+0.9
PPM	Popocatepetl	8.33	309	iP	Pn		23 11 40.5	+1.3
PPM				iS	Sn		23 13 14.2	+1.5
TXAR	Lajitas Array	18.88	326	P	Pn		23 13 58.5	-0.8
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=9.4							
TXAR	Lajitas Array	18.88	326	P	Pn		23 13 58.5	-0.8
ANMO	Albuquerque	24.77	330	LR	LR		23 24 22.1	
	comp=Z,83nm,22.0s,baz=159,slow=35							
NVAR	Mina Array Bea	33.86	321	P	P		23 16 20.2	-0.7
	comp=Z,1.0nm,0.7s,baz=153,slow=8.8,SNR=8.5							
NVAR	Mina Array Bea	33.86	321	P	P		23 16 20.2	-0.7
CMAR	Chiang Mai Arr	146.12	342	PKPbc	PKPdf		23 29 14.3	-4.0
	comp=Z,0.9nm,0.3s,baz=324,slow=2.7,SNR=5.8							

IDC 17 23:15:10.0±4.6, 1351N×14381E, h103km±77km, mb3.4/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, Error ellipse: s-maj=124.4km s-min=24.2km az=83.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.04	85	P	Pn	23 15 32.4	+1.4
	101nm,0.3s,baz=180,slow=0.5,SNR=38						
GUMO				S	Sn	23 15 47.1	+0.2
	270nm,0.3s,baz=180,slow=22,SNR=74						
WRA	Warramunga Arr	34.52	196	P	P	23 21 48.7	+0.1
	1.0nm,0.5s,baz=17,slow=9.8,SNR=5.2						
ASAR	Alice Springs	38.19	195	P	P	23 22 19.7	-0.1
	0.7nm,0.4s,baz=17,slow=15,SNR=19						
MKAR	Makanchi Array	50.83	316	P	P	23 25 11.4	0.0
	0.3nm,0.4s,baz=96,slow=8.2,SNR=9.3						

IDC 17 23:17:40.1±1.1, 093N×12267E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.7/18, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=59.5km s-min=18.5km az=71.0
NEIC 17 23:17:45.6±1.3, 085N×12253E, h39km±14km, mb3.6/2, Error ellipse: s-maj=19.5km s-min=9.1km az=89.0
DJA 17 23:17:50.8±0.0, 054N×12207E, h30km, mB5.2/1, Mjma3.6/5, MLv4.1/5, Mw(mB)5.0/1

ISC 17 23:17:45.3±1.3, 086N±006×1225E±01, h36km±15km, n19, σ0s81/16, mb3.6/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	2.45	76	P	x	23 18 35.3	
MNI	Manado	2.45	76	S	x	23 19 08.8	
PCI	Palu	3.15	236	P	Pn	23 18 31.4	-1.1
PCI	Palu	3.15	236	S	Sn	23 19 02.0	-6.9
KDI	Kendari	4.79	178	P	Pn	23 18 59.7	+4.8
KDI	Kendari	4.79	178	S	Sn	23 19 49.9	+0.7
LBMI	Labuha	5.26	106	S	x	23 20 18.4	
MYLDM	Lahad Datu	5.83	317	P	Pn	23 19 17.8	+8.5
MYLDM	Lahad Datu	5.83	317	S	Sn	23 20 23.8	+8.8
KAPI	Kappang	6.43	205	Pn	Pn	23 19 18.6	+1.1
	1.3nm,0.3s,baz=251,slow=9.1,SNR=9.0						
DAV	Davao City (W)	6.91	27	Pn	Pn	23 19 23.8	-0.4
MBWA	Marble Bar	22.04	187	eP	P	23 22 35.9	-1.0
	1.6nm,0.5s,mb3.7						
WRAB	Tennant Creek	23.73	151	eP	P	23 22 54.5	+0.2
	1.0nm,0.6s,mb3.4						
WRA	Warramunga Arr	23.73	151	P	P	23 22 53.9	-0.5
	3.3nm,0.9s,mb3.8,baz=330,slow=10,SNR=7.6						
WB2	Warramunga Arr	23.73	151	eP	P	23 22 54.4	0.0
ASAR	Alice Springs	26.80	156	P	P	23 23 21.7	-0.5
	0.5nm,0.4s,mb3.4,baz=352,slow=12,SNR=5.3						
SONM	Songino Array	48.82	346	P	P	23 26 28.8	+1.8
	0.3nm,0.5s,mb3.6,baz=165,slow=10,SNR=3.2						
MKAR	Makanchi Array	57.60	328	P	P	23 27 31.9	+0.3
	0.3nm,0.4s,mb3.7,baz=128,slow=8.9,SNR=8.3						
ZALV	Zalesovo Beam	61.31	336	P	P	23 27 56.5	-0.6
	0.3nm,0.3s,mb3.9,baz=108,slow=7.9,SNR=2.4						

NEIC 17 23:28:21.0±0.8, 195N×12567E, h35km, mb4.1/2, Error ellipse: s-maj=145.0km s-min=11.3km az=68.0

IDC 17 23:28:15.4±1.2, 243N×12672E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/16, mbtmp3.9/5, Error ellipse: s-maj=115.5km s-min=18.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	16.08	159	Pn	Px	23 31 59.8	
	4.1nm,0.6s						
WRAB	Tennant Creek	23.45	162	eP	P	23 33 26.7	0.0
	7.4nm,0.6s						
WRA	Warramunga Arr	23.46	162	P	P	23 33 26.6	-0.2
	6.3nm,0.6s,baz=343,slow=10,SNR=19						
WB2	Warramunga Arr	23.46	162	eP	P	23 33 26.6	-0.2
WB2	Warramunga Arr	23.46	162	eP	P	23 33 26.8	0.0
ASAR	Alice Springs	26.87	165	P	P	23 33 58.0	+0.1
	0.9nm,0.7s,baz=341,slow=6.5,SNR=13						
STKA	Stephens Creek	36.93	159	eP	P	23 35 26.3	+0.1
	2.8nm,0.8s						
STKA	Stephens Creek	36.93	159	P	P	23 35 25.9	-0.3
	2.6nm,0.6s,baz=334,slow=4.2,SNR=6.1						
SONM	Songino Array	48.52	342	P	P	23 37 02.0	+2.0
	0.5nm,0.8s,baz=142,slow=7.3,SNR=3.4						
MKAR	Makanchi Array	58.61	326	P	P	23 38 12.9	-1.3
	0.5nm,0.6s,baz=122,slow=7.2,SNR=9.6						

BJI 17 23:40:59.2, 980N×86.10W, h31km, mB5.0, Ms5.0, Msz4.6
NEIC 17 23:41:00.3±0.5, 980N×8608W, mb4.7/30, Error ellipse: s-maj=13.7km s-min=9.3km az=70.0
CASC 17 23:41:09.8±2.2, 1104N×8703W, h4km±14km, MD4.9, ML4.1, mb4.7(NEIC)
IDC 17 23:41:09.8±1.1, 1216N×8597W, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.0/20, mbtmp4.0/10, MS3.9/12, Ms1 3.9/12, ms1mx3.6/33, Error ellipse: s-maj=43.0km s-min=19.5km az=41.0
ISCJB 17 23:41:12.4±0.6, 1109N±005×8695W±005, h44km±5km, mb4.5/33, MS4.2/13, Error ellipse: s-maj=10.1km s-min=4.7km az=137.3

ISC 17 23:41:13.9±0.6, 1116N±005×8688W±005, h38km±5km, h34km±1.1km; pP-P, n120, σ1s07/95, mb4.5/33, MS4.2/13, 10C-7D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.06	15	eP	Pn	23 41 32.4	+0.2
TICN	Ticuantepe	1.08	36	eP	Pn	23 41 33.7	+1.1
MASN	Masaya	1.09	41	eP	Pn	23 41 33.3	+0.6
APON	Apoyo	1.10	46	eP	Pn	23 41 33.6	+0.7
CSAN		1.12	24	eP	Pn	23 41 33.0	-0.1
XAVN	Gruta Xavier	1.13	29	eP	Pn	23 41 33.6	+0.3
TISN	Laguna Tiscapa	1.15	31	eP	Pn	23 41 33.7	+0.2
MGAN	Managua	1.16	32	eP	Pn	23 41 33.9	+0.2
APYN	Apoyeque	1.19	26	eP	Pn	23 41 34.6	+0.5
WILN	Americas 2	1.21	34	eP	Pn	23 41 34.7	+0.3
MIRN	Miramar	1.29	7	eP	Pn	23 41 35.6	+0.2
MIRN				AML	AML	23 42 00.7	
	comp=Z,3μm,0.5s						
MOMN	Momotombo	1.29	15	eP	Pn	23 41 35.9	+0.4
CONN	Concepcion	1.29	72	eP	Pn	23 41 35.5	0.0
CNGN	Cerro Negro	1.35	8	eP	Pn	23 41 36.1	-0.2
HUEN		1.36	30	eP	Pn	23 41 36.5	0.0
TEL3	Telica 3	1.41	1	eP	Pn	23 41 37.9	+0.7
CRIN	San Cristobal	1.54	354	eP	Pn	23 41 38.8	-0.2
VCR	Vista de Mar	1.60	130	eP	Pn	23 41 38.1	-1.6
LIM1	Limonal	1.66	106	eP	Pn	23 41 39.7	-0.9
2RIO	Dos Rios de Up	1.70	111	eP	Pn	23 41 38.6	-2.9
CUI	Cuipilapa	1.75	106	eP	Pn	23 41 41.1	-0.8
JCR	Jicaral	2.17	127	eP	Pn	23 41 45.6	-1.9
FORC	Fortuna	2.28	107	eP	Pn	23 41 49.9	+0.9
FORC				eP		23 41 51.2	
CNCH	Conchagua	2.31	336	eP	Pn	23 41 49.0	-0.4
CGA2	Cerro Gallo 2	2.63	115	eP	Pn	23 41 55.0	+1.1
BLLM	Bellamira	2.63	330	eP	Pn	23 41 53.8	-0.1
BLLM				eS	x	23 42 28.2	
VSM	San Miguel	2.64	329	eP	Pn	23 41 53.7	-0.3
PRS1	Puriscal	2.78	115	eP	Pn	23 41 56.8	+0.9
CAHU	Cacacuatique	2.91	334	eP	Pn	23 41 57.8	0.0
TGUH	Tegucigalpa,Un	2.91	352	ePn	Pn	23 41 58.4	+0.6
TGUH				epPn		23 42 06.0	
TGUH	Tegucigalpa,Un	2.91	352	eP	Pn	23 41 58.1	+0.4
LAJ	Bijagual	3.00	115	eP	Pn	23 41 54.6	-4.4
SNVI	San Vicente	3.10	322	eP	Pn	23 41 59.6	-0.9
LCR2	La Lucha 2	3.16	116	eP	Pn	23 42 03.9	+2.7
QCR	Quepos	3.18	123	eP	Pn	23 42 02.4	+1.0
LFRS	El Faro	3.25	319	eP	Pn	23 42 01.4	-1.0
URSC	Urasca	3.32	113	eP	Pn	23 42 05.1	+1.7
BOQS	Boqueron	3.48	318	eP	Pn	23 42 05.6	0.0
SBLS	San Blas	3.78	315	eP	Pn	23 42 08.1	-1.7
SBLS				eS	x	23 42 53.4	
ACR	Cerro Adams	4.42	124	eP	Pn	23 42 18.3	-0.3
CMIG	Matias Romero	9.75	308	Pn	Pn	23 43 30.6	-1.1
	comp=Z,1.0nm,0.3s,baz=128,slow=13,SNR=11						
ROSC	El Rosal	13.91	116	LR	LR	23 49 57.4	
	comp=Z,210nm,20.7s,baz=355,slow=39						
DWPF	Disney	17.62	16	eP	Pn	23 45 15.0	-1.7
	comp=Z,39nm,1.1s						
BRAL	Brewton	19.76	360	eP	Pn	23 45 40.6	-1.8
	comp=Z,122nm,1.5s						
ATAH	Atahualpa	19.91	155	LR	LR	23 52 31.8	
	comp=Z,471nm,19.6s,baz=144,slow=33						
HKT	Hockley	20.48	337	eP	P	23 45 50.4	+1.9
	comp=Z,81nm,1.9s						
LRAL	Lakeview Retre	21.78	360	eP	P	23 46 03.1	+0.6
GOGA	Godfrey	22.37	8	eP	P	23 46 09.6	+0.8
	comp=Z,18nm,0.8s,mb4.6						
OXF	Oxford	23.36	355	eP	P	23 46 18.6	-0.7
	comp=Z,23nm,1.0s,mb4.6						
JSC	Jenkinsville	23.59	12	eP	P	23 46 21.2	-0.1
TXAR	Lajitas Array	23.93	322	P	P	23 46 24.0	-0.5
	comp=Z,4.8nm,0.8s,mb4.0,baz=138,slow=9.8,SNR=36						
TXAR				PcP	PcP	23 50 09.2	+2.7
	comp=Z,2.4nm,1.0s,baz=147,slow=4.5,SNR=8.2						
TXAR				ScP	ScP	23 53 49.7	+7.6
	comp=Z,0.9nm,0.9s,baz=101,slow=5.2,SNR=5.6						
TXAR	Lajitas Array	23.93	322	P	P	23 46 24.0	-0.5
TXAR				PcP	PcP	23 50 09.2	+2.7
TXAR				ScP	ScP	23 53 49.7	+7.6
SWET	Sewanee	23.97	2	eP	P	23 46 24.3	-0.5
SWET				epP		23 46 31.9	
MIAR	Mount Ida	24.07	346	eP	P	23 46 26.6	+0.8
	comp=Z,15nm,0.8s,mb4.5						
CPCT	Cooper Cave	24.28	5	eP	P	23 46 27.4	-0.2
TKL	Tuckaleechee C	24.56	6	P	P	23 46 29.6	-0.6
	comp=Z,8.1nm,0.8s,mb4.3,baz=178,slow=12,SNR=9.3						
TKL	Tuckaleechee C	24.56	6	eP	P	23 46 29.9	-0.3
TKL				epP		23 46 38.6	
WVT	Waverly	24.88	358	eP	P	23 46 32.8	-0.3
	comp=Z,2.1nm,0.7s,mb3.8						
LPIG	La Paz	25.72	303	LR	LR	23 58 11.4	
	comp=Z,215nm,18.5s,MS3.7,baz=133,slow=39						
WMOK	Wichita Mounta	25.86	337	eP	P	23 46 43.3	+1.2
	comp=Z,22nm,0.9s,mb4.7						
AMTX	Amarillo	27.20	333	eP	P	23 46 55.2	+1.1
	comp=Z,13nm,0.9s,mb4.5						
CBN	Corbin	28.25	16	eP	P	23 46 59.4	-4.1
	comp=Z,66nm,0.4s,mb5.6						
KSU1	Kansas State U	29.15	344	eP	P	23 47 10.8	-0.6
KSU1				eP		23 47 11.4	
ACSO	Alum Creek Sta	29.16	6	eP	P	23 47 09.6	-2.0
	comp=Z,22nm,1.0s,mb4.8						
ANMO	Albuquerque	29.64	326	P	P	23 47 15.6	-0.3
	comp=Z,1.0nm,0.6s,mb3.8,baz=156,slow=7.2,SNR=3.6						
ANMO	Albuquerque	29.64	326	eP	P	23 47 17.3	+1.4
	comp=Z,3.1nm,1.0s,mb4.0						
ANMO				epP	pP	23 47 26.4	-0.1
SSPA	Standing Stone	30.42	14	eP	P	23 47 19.5	-3.1
	comp=Z,24nm,1.3s,mb4.8						
SDCO	Great Sand Dun	31.31	331	eP	P	23 47 31.2	+0.7
SDCO				eP		23 47 31.8	
BINY	Binghamton	32.36	15	eP	P	23 47 37.8	-2.0
	comp=Z,21nm,0.9s,mb5.0						
WUAZ	Wupatki	32.89	321	eP	P	23 47 46.5	+1.9
	comp=Z,8.0nm,1.0s,mb4.6						
LPAZ	La Paz	32.98	145	LR	LR	00 01 30.8	
	comp=Z,145nm,18.5s,MS3.7,baz=209,slow=37						
SMCO	Snowmass	33.15	331	eP	P	23 47 47.0	+0.3
	comp=Z,7.3nm,1.3s,mb4.5						
ECSD	EROS,Sioux Fal	33.54	347	eP	P	23 47 48.4	-1.6
	comp=Z,9.6nm,0.8s,mb4.8						
SRU	San Rafael	34.90	327	eP	P	23 48 02.6	+0.7
	comp=Z,9.5nm,1.2s,mb4.6						
LONY	Lake Ozonia	34.98	15	eP	P	23 48 01.0	-1.5
	comp=Z,22nm,1.1s,mb5.0						
MSU	Marysvale	35.39	325	eP	P	23 48 07.6	+1.5
MSU				epP	pP	23 48 16.6	-0.3
TMUT	Trail Mountain	35.40	327	eP	P	23 48 06.5	+0.3
RSSD	Black Hills	36.03	339	eP	P	23 48 12.1	+0.6
RSSD				epP	pP	23 48 21.1	-1.2
DAU	Daniels Canyon	36.23	328	eP	P	23 48 14.1	+0.8
DAU				epP	pP	23 48 24.4	+0.3
TPNV	Topopah Spring	36.85	319	eP	P	23 48 23.0	+4.3
	comp=Z,69nm,2.8s,mb5.0						
PDAR	Pinedale Array	37.17	332	P	P	23 48 17.3	-4.0
	comp=Z,1.1nm,0.7s,mb3.8,baz=134,slow=8.5,SNR=7.7						
PDAR				ScP	ScP	23 54 31.4	+6.3
	comp=Z,0.7nm,0.9s,baz=172,slow=3.0,SNR=4.2						
HWUT	Hardware Ranch	37.27	329	eP	P	23 48 22.5	+0.4
	comp=Z,6.7nm,0.8s,mb4.5						
HWUT				epP	pP	23 48 31.6	-1.3
SPUT	South Promonto	37.51	328	eP	P	23 48 25.9	+1.8
AGMN	Agassiz Refuge	37.78	350	eP	P	23 48 24.8	-1.6
	comp=Z,22nm,1.2s,mb4.8						
REDW	Red Top Meadow	38.23	331	eP	P	23 48 30.3	0.0
	comp=Z,11nm,1.1s,mb4.5						
REDW				epP	pP	23 48 40.0	-1.1
MOOW	Moose Ponds	38.48	332	eP	P	23 48 33.2	+0.9
	comp=Z,3.2nm,0.9s,mb4.0						
MTUM	Tungsten Hills	38.59	318	eP	P	23 48 35.9	+2.5
MTUM				epP	pP	23 48 46.3	+2.1
NVAR	Mina Array Bea	39.04	319	P	P	23 48 37.5	+0.4
	comp=Z,2.3nm,1.0s,mb3.9,baz=138,slow=8.3,SNR=7.8						
NVAR				PcP	PcP	23 50 46.8	+0.1
	comp=Z,1.9nm,0.8s,baz=134,slow=3.9,SNR=7.2						
NVAR	Mina Array Bea	39.04	319	P	P	23 48 37.5	+0.3
NVAR				PcP	PcP	23 50 46.8	+0.1
ULM	Lac du Bonnet	39.68	351	P	P	23 48 37.0	-5.2
	comp=Z,5.4nm,0.7s,mb4.4,baz=152,slow=10,SNR=2.7						
HLID	Hailey	40.13	329	eP	P	23 48 46.2	+0.1
	comp=Z,1.8nm,0.9s,mb3.8						
MCMT	McKenzie Canyo	40.28	331	eP	P	23 48 47.7	+0.3
SCHQ	Schefferville	46.36	16	P	P	23 49 26.9	-9.3
	comp=Z,5.4nm,0.9s,mb4.5,baz=127,slow=10,SNR=1.9						
SCHQ				LR	LR	00 08 38.7	
	comp=Z,295nm,18.3s,MS4.3,baz=230,slow=36						
BDFB	Brasilia	46.79	124	P	P	23 49 39.9	-0.3
	comp=Z,2.4nm,0.8s,mb4.2,baz=265,slow=20,SNR=5.5						
BDFB				LR	LR	00 10 02.4	
	comp=Z,165nm,18.4s,MS4.0,baz=135,slow=37						
YKA	Yellowknife Ar	55.00	345	P	P	23 50 38.0	-3.2
	comp=Z,0.9nm,0.8s,mb3.8,baz=141,slow=7.1,SNR=4.0						
RKT	Rikitea	58.10	234	eLR	LR	00 08 14.6	
	comp=Z,106nm,29.5s						
RKT	Rikitea	58.10	234	eT		00 53 32.3	
	comp=Z,1.2nm,0.2s						
MCK	McKinley	67.87	335	eP	P	23 52 04.2	-3.9
	comp=Z,69nm,2.1s,mb5.3						
PPT	Papeete	68.18	246	eP	P	23 52 55.4	-9.1
	comp=Z,108nm,24.5s						
ESK	Eskdalemuir	77.32	36	eP	P	23 52 55.4	-9.1
	comp=Z,14nm,1.0s,mb4.9						
ESDC	Sonseca Array	77.55	52	P	P	23 53 01.9	-4.2
	comp=Z,0.1nm,0.5s,baz=263,slow=4.4,SNR=4.1						
MDT	Midelt	77.59	59	LR	LR	00 23 52.4	
	comp=Z,148nm,18.2s,MS4.3,baz=16,slow=34						
DBIC	Dimbokro	80.94	85	LR	LR	00 27 22.0	
	comp=Z,53nm,20.0s,MS3.9,baz=309,slow=35						
NOA	NORSAR Array B	84.22	29	LR	LR	00 27 56.3	
	comp=Z,61nm,19.1s,MS4.0,baz=230,slow=34						
TORD	Torodi Ar. Bea	86.14	77	P	P	23 53 48.1	-3.7
	comp=Z,0.4nm,0.9s,mb3.6,baz=259,slow=9.3,SNR=2.6						
TORD				LR	LR	00 26 18.6	
	comp=Z,39nm,19.9s,MS3.8,baz=295,slow=32						
ARCES	ARCESS Array B	87.22	19	LR	LR	00 35 10.4	
	comp=Z,65nm,20.9s,MS4.0,baz=192,slow=38						
AKASG	Malin Array Be	97.25	35	LR	LR	00 36 23.6	
	comp=Z,99nm,18.1s,MS4.3,baz=335,slow=34						
LSZ	Lusaka	116.85	102	ePKPdf		23 59 40.8	
CN2	Changchun	117.90	334	ePKP		23 59 45.8	
MKAR	Makanchi Array	121.51	9	PKP	PKPdf	00 00 03.2	-0.3
	comp=Z,0.2nm,0.7s,baz=0.0,slow=1.6,SNR=3.2						
CASY	Casey	123.68	188	ePKPdf		23 59 52.7	
WMQ	Urumqi	125.07	5	ePKP		23 59 59.0	
HHC	Hu-ho-hao-te	125.52	343	ePKP		00 00 00.5	
HHC				XPKP		00 00 14.3	
HHC				PP	PP	00 02 01.3	-0.2
HHC				PKS		00 03 36.4	
HHC				SKS	SKSdf	00 07 06.9	-14
HHC				SKKS	SKKSac	00 08 49.3	-8.8
HHC				SS	SS	00 19 03.4	+6.4
HHC				PP	PP		
	comp=Z,49nm,10.7s						
HHC				LR	LR		
	comp=N,120nm,19.0s,MS4.7						
HHC				LR	LR		
	comp=E,94nm,19.0s,MS4.7						
HHC				LR	LR		
	comp=Z,83nm,23.8s,MS4.3						
NJ2	Nanjing	130.48	331	ePKP		00 00 10.4	
CD2	Chengdu	136.95	347	ePKP		00 00 21.6	
CD2				XPKP		00 00 35.9	
CD2				PP	PP	00 03 14.8	-0.5
CD2				PKS		00 03 56.3	
CD2				SKS	SKSdf	00 07 26.8	-15
CD2				SKKS	SKKSac	00 10 00.1	-8.6
CD2				SS	SS	00 21 19.3	+2.7
CD2				PP	PP		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,130nm,16.2s						
CD2				LR	LR		
	comp=Z,150nm,18.2s,MS4.8						
ASAR	Alice Springs	139.29	247	PKhKP		00 00 35.9	
	comp=Z,0.3nm,0.7s,baz=73,slow=33,SNR=2.8						
WRA	Warramunga Arr	139.43	252	PKhKP		00 00 36.1	
	comp=Z,1.1nm,1.0s,baz=73,slow=1.5,SNR=2.5						
GYA	Guiyang	140.36	341	ePKP		00 00 27.1	
GYA				XPKP		00 00 41.5	
GYA				PP	PP	00 03 35.8	-0.7
GYA				PP	PP		
	comp=Z,80nm,8.6s						
KMI	Kunming	142.74	346	PKP		00 00 33.3	
KMI				APKP		00 00 41.8	
KMI				XPKP		00 00 44.8	
KMI				PP	PP	00 03 51.8	+0.9
KMI				SKKS	SKKSac	00 10 33.9	-8.9
KMI				SS	SS	00 22 29.3	+4.6
KMI				LR	LR		
	comp=N,96nm,15.2s,MS4.8						
KMI				LR	LR		
	comp=E,80nm,18.4s,MS4.8						
KMI				LR	LR		
	comp=Z,86nm,15.4s,MS4.6						
CMAR	Chiang Mai Arr	150.02	349	PKPbc	PKPbc	00 00 59.2	-2.2
	comp=Z,1.5nm,0.4s,baz=330,slow=3.1,SNR=17						

NEIC 17 23:49:52.5±6.8, 623S×12777E, h163km±38km, mb3.7/3, Error ellipse: s-maj=71.0km s-min=23.5km az=163.0
ISCJB 17 23:50:06.7±2.3, 67S±02×128E±02, h372km±26km, mb3.2/2, Error ellipse: s-maj=33.9km s-min=19.4km az=33.9
IDC 17 23:50:06.8±6.3, 657S×12792E, h350km±73km, mb2.8/1, mb1 3.1/4, mb1mx2.9/14, mbtmp3.0/4, Error ellipse: s-maj=87.9km s-min=23.1km az=47.0

ISC 17 23:50:07.6±2.3, 66S±02×1279E±02, h359km±27km, n10, σ0s20/10, mb3.2/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.48	229	P	Pn	23 51 33.1	+0.2
	14nm,0.3s,baz=17,slow=6.7,SNR=16						
BATI				S	S	23 52 41.9	-0.1
	7.7nm,0.3s,baz=261,slow=23,SNR=8.4						
KAKA	Kakadu	7.52	144	ePn	Px	23 51 43.5	
	17nm,0.4s						
WRAB	Tennant Creek	14.63	155	eP	P	23 53 17.5	-0.3
	2.2nm,0.4s						
WRA	Warramunga Arr	14.63	155	P	P	23 53 17.8	-0.1
	0.9nm,0.3s,baz=335,slow=12,SNR=21						
WB2	Warramunga Arr	14.64	155	eP	P	23 53 17.8	0.0
MBWA	Marble Bar	16.45	208	eP	P	23 53 37.6	0.0
	1.3nm,0.3s						

DZM Mont Dzumac 15.81 266 *e*P P **Pn 00 35 37.1 +5.3**
NOUC Port Laguerre 15.94 266 *e*P P **Pn 00 35 40.0 +6.5**
URZ Urewera 17.29 197 P P **Pn 00 35 48.6 -1.1**
comp=Z,8.4nm,0.3s,baz=18,slow=5.2,SNR=54
URZ S **S 00 38 51.6 -10**
comp=Z,2.9nm,0.3s,baz=239,slow=20,SNR=7.8
URZ Urewera 17.29 197 P P **Pn 00 35 49.1 -0.6**
MRZ Mangatainoka R 19.96 198 P P **00 36 16.7 -1.2**
SNZO South Karori 20.81 199 *e*P P **00 36 28.9 +1.8**
comp=Z,42nm,0.6s
NNZ Nelson 21.15 202 P P **00 36 28.3 -2.4**
THZ Tophouse 21.80 202 P P **00 36 35.8 -1.8**
DSZ Denniston Nort 22.18 204 P P **00 36 40.9 -0.7**
LTZ Lake Taylor 22.92 202 P P **00 36 47.6 -1.0**
WVZ Waitaha Valley 23.73 204 P P **00 36 55.5 -0.4**
RPZ Rata Peaks 24.17 202 P P **00 36 58.5 -1.4**
comp=Z,49nm,0.6s,mb5.2,baz=264,slow=3.4,SNR=31
FOZ Fox Glacier 24.54 205 P P **00 37 01.6 -1.7**
TARA Tarawa 25.22 335 *e*P P **00 37 08.7 -1.1**
comp=Z,208nm,1.0s,mb5.6
JCZ Jackson Bay 25.34 205 P P **00 37 10.2 -0.3**
PPT Papeete 25.70 85 *e*LR LR 00 44 01.0
comp=Z,182nm,24.0s
PPT Papeete 25.70 85 LR LR 00 44 32.0
comp=Z,184nm,18.9s,baz=249,slow=29
PMOR Pomariorio Ree 27.96 81 *e*P P **00 37 41.5 +7.2**
comp=Z,107nm,1.0s,mb5.5
ARMA Armidale 29.78 247 *e*P P **00 37 52.2 +1.9**
comp=Z,0.3nm,0.8s
EIDS Eidsvold 29.86 257 *e*P P **00 37 52.1 +1.0**
comp=Z,21nm,0.8s,mb4.9
CTA Charters Tower 34.76 266 P P **00 38 35.2 +1.4**
comp=Z,29nm,0.7s,mb5.0,baz=97,slow=12
CTAO Charters Tower 34.76 266 *e*P P **00 38 35.0 +1.1**
comp=Z,31nm,0.7s,mb5.0
CTAO Charters Tower 34.76 266 *e*P P **00 38 35.0 +1.1**
CTAO pmax pmax
comp=Z,31nm,0.7s,mb5.0
CTAO Charters Tower 34.76 266 P P **00 38 35.3 +1.4**
comp=Z,60nm,1.3s,mb5.1
PMG Port Moresby 36.99 284 *e*P P **00 38 52.7 -0.2**
PMG Port Moresby 36.99 284⇓ *e*P P **00 38 53.3 +0.4**
PMG pmax pmax
comp=Z,75nm,0.8s
PMG Port Moresby 36.99 284 P P **00 38 53.8 +0.9**
comp=Z,114nm,1.0s,mb5.5
STKA Stephens Creek 38.49 246 P P **00 39 05.8 +0.4**
comp=Z,7.1nm,0.6s,mb4.5,baz=91,slow=9.9,SNR=20
STKA PcP PcP 00 41 14.6 -0.9
comp=Z,4.9nm,0.7s,baz=31,slow=3.9,SNR=4.0
STKA ScP ScP 00 44 49.1 -1.2
comp=Z,4.9nm,0.8s,baz=84,slow=2.6,SNR=7.0
STKA Stephens Creek 38.49 246 *e*P P **00 39 06.0 +0.5**
comp=Z,9.9nm,0.8s,mb4.5
COEN Coen 39.06 275 *e*P P **00 39 10.6 +0.3**
comp=Z,9.0nm,0.7s,mb4.5
COEN Coen 39.06 275 P P **00 39 11.8 +1.5**
comp=Z,21nm,1.3s,mb4.6
ASAR Alice Springs 45.58 258 P P **00 40 03.1 +0.1**
comp=Z,67nm,0.8s,mb5.3,baz=100,slow=8.1,SNR=497
ASAR PcP PcP 00 41 38.6 -0.5
comp=Z,6.3nm,0.8s,baz=105,slow=4.5,SNR=7.2
ASAR ScP ScP 00 45 17.6 -1.2
comp=Z,2.2nm,0.9s,baz=108,slow=4.2,SNR=6.6
ASAR S **S 00 46 28.8 -6.0**
comp=Z,4.5nm,1.0s,baz=90,slow=16,SNR=14
ASAR Alice Springs 45.58 258 P P **00 40 03.2 +0.2**
ASAR 00 41 38.7
ASAR S **S 00 46 28.8 -6.0**
WB2 Warramunga Arr 45.79 263 *e*P P **00 40 04.3 -0.3**
WRAB Tennant Creek 45.80 263 *e*P P **00 40 04.0 -0.7**
WRAB Tennant Creek 45.80 263 P P **00 40 04.3 -0.4**
comp=Z,44nm,1.0s,mb5.0
WRA Warramunga Arr 45.80 263 P P **00 40 04.2 -0.6**
comp=Z,28nm,0.9s,mb4.9,baz=98,slow=7.7,SNR=116
WRA pP pP 00 40 43.1 +6.2
comp=Z,1.7nm,0.4s,baz=99,slow=8.0,SNR=1.5
WRA PcP PcP 00 41 39.6 -0.4
comp=Z,3.7nm,0.9s,baz=95,slow=3.9,SNR=3.0
WRA ScP ScP 00 45 18.3 -1.6
comp=Z,0.4nm,0.4s,baz=94,slow=3.7,SNR=5.4
WRA S **S 00 46 31.2 -6.9**
comp=Z,1.0nm,0.7s,baz=103,slow=13,SNR=4.9
WRA Warramunga Arr 45.80 263 P P **00 40 04.2 -0.6**
WRA *PP pP 00 40 43.1 +6.2
WRA 00 41 39.6
WRA S **S 00 46 31.2 -6.8**
FORT Forrest 50.06 248 *e*P P **00 40 37.1 -0.4**
GUMO Guam 51.70 309 *e*P P **00 40 48.2 -1.5**
SWI Sorong 54.92 285 P P **00 41 13.2 -0.2**
comp=Z,190nm,0.9s,comp=Z,1µm,mb5.8
SBA Scott Base 56.67 184 *e*P P **00 41 28.1 +3.2**
VNDA Vanda 56.74 186 P P **00 41 27.8 +2.4**
comp=Z,14nm,0.8s,mb4.8,baz=358,slow=7.5,SNR=97
VNDA PcP PcP 00 42 20.4 +0.7
comp=Z,6.0nm,0.9s,baz=0.0,slow=1.0,SNR=3.8
LBMI Labuha 58.40 283 P P **00 41 40.6 +2.6**
comp=Z,72nm,1.2s,mb5.4
MBWA Marble Bar 58.93 258 *e*P P **00 41 41.1 -0.5**
MBWA Marble Bar 58.93 258 P P **00 41 42.5 +0.9**
comp=Z,35nm,1.3s,mb5.0
CASY Casey 63.39 206 *e*P P **00 42 11.9 +1.1**
comp=Z,96nm,1.4s,mb5.4
PCI Palu 65.27 279 P P **00 42 26.6 +2.6**
comp=Z,63nm,1.2s,mb5.3
MJAR Matsushiro Arr 72.08 323 P P **00 43 04.0 -1.6**
comp=Z,5.9nm,0.5s,mb4.5,baz=155,slow=6.0,SNR=19
MAT Matsushiro 72.08 323 P P **00 43 02.8 -2.9**
KSM Kuching 74.96 278 *e*P P **00 43 23.6 +0.5**
KSM Kuching 74.96 278 P P **00 43 24.3 +1.2**
comp=Z,16nm,0.8s,mb4.7
PETK Petropavlovsk- 77.89 344 P P **00 43 36.9 -1.7**
comp=Z,5.2nm,0.8s,mb4.2,baz=141,slow=7.8,SNR=5.4
PETK LR LR 01 20 24.1
comp=Z,25nm,18.1s,baz=311,slow=37
KSRS Korea Array 78.78 318 P P **00 43 43.7 -0.2**
comp=Z,0.7nm,0.6s,baz=123,slow=5.9,SNR=5.5
ISA Isabella 79.27 45 *e*P P **00 43 47.0 +0.4**
PFO Pinyon Flat Ob 79.42 47 P P **00 43 47.5 0.0**
comp=Z,2.6nm,0.7s,mb4.0,baz=283,slow=6.6,SNR=3.9
CMB Columbia Colle 79.49 42 *e*P P **00 43 47.5 -0.3**
comp=Z,9.5nm,0.9s,mb4.4
CMB Columbia Colle 79.49 42 *e*P P **00 43 47.5 -0.3**
CMB pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
OHCM Honcut 79.64 40 *e*P P **00 43 48.3 -0.2**
GLA Glamis 80.23 49 *e*P P **00 43 52.5 +0.7**
comp=Z,6.3nm,0.8s,mb4.3
GLA Glamis 80.23 49 *e*P P **00 43 52.5 +0.6**
GLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
MAW Mawson 80.81 200 P P **00 43 55.3 +0.9**
comp=Z,30nm,0.7s,mb5.0,baz=124,slow=7.3,SNR=42
MAW Mawson 80.81 200 *e*P P **00 43 55.4 +1.0**
comp=Z,61nm,1.0s,mb5.2
MAW Mawson 80.81 200 *e*P P **00 43 55.4 +1.0**
MAW pmax pmax
comp=Z,61nm,1.0s
NVAR Mina Array Bea 81.03 43 P P **00 43 56.4 +0.4**
comp=Z,3.9nm,0.9s,mb4.0,baz=224,slow=8.7,SNR=18
NVAR pP pP 00 44 38.8 +7.3
comp=Z,1.6nm,0.7s,baz=221,slow=8.7,SNR=2.6
LDFC Landfair 81.17 47 *e*P P **00 43 57.4 +0.5**
comp=Z,50nm,1.4s,mb5.0
NJ2 Nanjing 81.77 309 *e*P P **00 44 00.3 +0.2**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
HABR Khabarovsk 82.26 330 *e*P P **00 44 01.0 -1.2**
HABR *e* 00 47 12.2
HABR *e*PPP 00 49 04.0
HABR *e*S S 00 54 03.0 -2.7
HABR *e*SS SS 00 59 28.7 -1.0
HABR *e*SSS 01 02 58.4
MDJ Mudanjiang 82.38 324 P P **00 44 03.3 +0.4**
MDJ AMB AMB
comp=Z,14nm,1.1s,mb4.5
MDJ AMB AMB
comp=Z,88nm,3.6s
WVOR Wild Horse Val 83.25 39 *e*P P **00 44 07.3 -0.1**
comp=Z,15nm,1.1s,mb4.6
WVOR Wild Horse Val 83.25 39 *e*P P **00 44 07.3 -0.2**
WVOR pmax pmax
comp=Z,15nm,1.1s,mb4.6
CCUT Cedar City 83.72 46 *e*P P **00 44 10.8 +0.8**
ARUT Antelope Range 83.80 45 *e*P P **00 44 11.3 +1.0**
CN2 Changchun 84.17 322 *e*P P **00 44 11.4 -0.7**

CN2 *e*AP pP 00 44 51.5 +3.6
CN2 *e*S S 00 54 21.3 -3.9
CN2 AMB AMB
comp=Z,20nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
IPM Ipoh 84.67 277 P P **00 44 15.9 +0.5**
comp=Z,24nm,0.9s,mb4.9
MSU Marysvale 85.03 45 *e*P P **00 44 17.3 +0.8**
ETW Entiat 85.52 34 *e*P P **00 44 18.9 +0.2**
SYO Syowa Base 85.76 192‖ *e*P P **00 44 17.6 -2.2**
SYO Syowa Base 85.76 192‖ *e*PcP PcP 00 44 21.0 -1.4
TMUT Trail Mountain 86.08 45 *e*P P **00 44 22.3 +0.5**
LAZ Ladron 86.39 51 *e*P P **00 44 23.8 +0.4**
LENM Lemitar 86.39 51 *e*P P **00 44 24.2 +0.8**
SRU San Rafael 86.44 45 *e*P P **00 44 23.7 +0.2**
comp=Z,6.2nm,0.7s,mb4.5
SRU San Rafael 86.44 45 *e*P P **00 44 23.7 +0.2**
SRU pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
TXAR Lajitas Array 86.60 57 P P **00 44 24.8 +0.2**
comp=Z,11nm,0.9s,mb4.7,baz=214,slow=7.7,SNR=71
TXAR pP pP 00 45 08.5 +8.0
comp=Z,3.6nm,1.1s,baz=204,slow=6.7,SNR=1.7
TXAR Lajitas Array 86.60 57 P P **00 44 24.8 +0.2**
TXAR pP pP 00 45 08.5 +8.0
BNM Barren Site 86.64 51 *e*P P **00 44 22.9 -1.7**
SNAA Sanae 86.67 178 *e*P P **00 44 22.2 -2.0**
SNAA *e* 00 44 26.0
SNAA *e* 00 44 34.9
SNAA *e* 00 45 06.0
SNAA *e* 00 45 22.3
SNAA Sanae 86.67 178 *e*P P **00 44 22.3 -1.9**
comp=Z,13nm,0.9s,mb4.8
SNAA Sanae 86.67 178 *e*P P **00 44 22.3 -1.9**
SNAA pmax pmax
comp=Z,13nm,0.9s
LPM Los Pinos Moun 86.71 51 *e*P P **00 44 25.5 +0.6**
VNA3 Neumayer Olymp 86.75 176 *e*P P **00 44 24.1 -0.5**
VNA3 *e* 00 44 28.6
VNA3 *e* 00 44 37.7
VNA3 *e* 00 45 07.4
VNA3 *e* 00 45 22.9
ANMO Albuquerque 87.15 51 *e*P P **00 44 27.3 +0.3**
comp=Z,10nm,1.3s,mb4.5
ANMO Albuquerque 87.15 51 *e*P P **00 44 27.3 +0.3**
ANMO pmax pmax
comp=Z,10.0nm,1.3s
VNA2 Neumayer--Watz 87.21 176 *e*P P **00 44 26.9 +0.1**
baz=208,slow=3.3
VNA2 *e* 00 44 31.4
VNA2 *e* 00 44 39.8
VNA2 *e* 00 45 09.7
VNA2 *e* 00 45 24.5
PLCA Paso Flores 87.38 133 P P **00 44 28.9 +0.7**
comp=Z,8.3nm,0.7s,mb4.7,baz=230,slow=4.7,SNR=24
PLCA Paso Flores 87.38 133 *e*P P **00 44 28.9 +0.7**
comp=Z,17nm,1.2s,mb4.8
PLCA Paso Flores 87.38 133 *e*P P **00 44 28.9 +0.7**
PLCA pmax pmax
comp=Z,17nm,1.2s
VNA1 Neumayer--Stat 87.43 176 *e*P P **00 44 28.0 +0.2**
VNA1 *e* 00 44 31.8
VNA1 *e* 00 44 40.6
VNA1 *e* pP 00 45 08.1 +4.2
BJI Beijing 87.79 315 P P **00 44 29.9 -0.1**
BJI AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
BJI AMB AMB
comp=Z,103nm,3.6s
SEY Seymchan 87.96 346‖ *e*P P **00 44 29.1 -1.1**
MCMT McKenzie Canyo 88.06 40 *e*P P **00 44 31.3 +0.2**
GYA Guiyang 88.49 299 *e*P P **00 44 33.9 +0.3**
GYA AP pP 00 45 14.8 +5.0
GYA XP sP 00 45 32.8 +8.1
GYA PP PP 00 48 05.4 +1.4
GYA SKS 00 54 44.3
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,80nm,5.9s
CMIG Matias Romero 88.77 71 P P **00 44 35.1 0.0**
comp=Z,3.4nm,0.7s,mb4.4,baz=278,slow=4.4,SNR=11
SMCO Snowmass 88.85 47 *e*P P **00 44 35.0 0.0**
comp=Z,5.7nm,0.9s,mb4.5
QLMT Earthquake Lak 88.91 40 *e*P P **00 44 35.8 +0.7**
PDAR Pinedale Array 88.97 43 P P **00 44 34.9 -0.5**
comp=Z,3.2nm,1.0s,mb4.2,baz=209,slow=3.8,SNR=10.0
CHMT Chamberlain Mo 88.98 38 *e*P P **00 44 35.1 -0.3**
COLA College 89.19 12‖ *e*P P **00 44 34.4 -1.5**
HRY Holter Researc 89.69 38 *e*P P **00 44 38.6 -0.1**
XAN Xi'an 90.02 307 P P **00 44 41.0 +0.4**
XAN AP pP 00 45 20.6 +3.8
XAN XP sP 00 45 37.6 +5.9
XAN AMB AMB
comp=Z,8.0nm,0.9s,mb4.7
BSI Banda Aceh 90.34 276 P P **00 44 43.8 +1.2**
DAWY Dawson 90.34 15 *e*P P **00 44 41.1 -0.3**
RLMT Red Lodge 90.36 41 *e*P P **00 44 42.1 +0.2**
comp=Z,8.3nm,1.2s,mb4.5
AMTX Amarillo 90.60 53 *e*P P **00 44 42.5 -0.8**
comp=Z,10.0nm,1.0s,mb4.8
COLD Coldfoot 90.91 10 *e*P P **00 44 45.5 +1.6**
comp=Z,5.3nm,1.2s,mb4.5
KMI Kunming 91.17 297 P P **00 44 46.3 +0.1**
KMI AMB AMB
comp=Z,5.0nm,0.5s,mb4.8
HHC Hu-ho-hao-te 91.25 314 *e*P P **00 44 45.8 -0.3**
HHC PP PP 00 48 26.5 +0.9
HHC SKS 00 55 02.6
HHC S S 00 55 28.8 -3.8
HHC SS SS 01 01 40.6 -0.8
HHC AMB AMB
comp=Z,13nm,0.6s,mb5.1
HHC AMB AMB
comp=Z,102nm,6.7s
CMAR Chiang Mai Arr 91.85 289 P P **00 44 50.0 +0.6**
comp=Z,2.9nm,0.8s,mb4.4,baz=120,slow=3.3,SNR=16
CMAR pP pP 00 45 33.0 +7.4
comp=Z,1.9nm,0.6s,baz=137,slow=3.4,SNR=2.6
CMAR PKKPbc PKKPbc 01 02 05.3 -1.3
comp=Z,0.8nm,0.3s,baz=289,slow=4.8,SNR=4.1
CMAR Chiang Mai Arr 91.85 289⇑ *e*P P **00 44 50.7 +1.3**
EDM Edmonton 92.45 32 *e*P P **00 44 50.4 -1.0**
LAO LASA Array 92.99 40 *e*P P **00 44 54.1 +0.1**
comp=Z,13nm,0.9s,mb5.1
RSSD Black Hills 93.14 43 *e*P P **00 44 53.8 -1.0**
comp=Z,16nm,0.9s,mb5.2
RSSD Black Hills 93.14 43 *e*P P **00 44 53.8 -1.0**
RSSD pmax pmax
comp=Z,16nm,0.9s,mb5.2
LZH Lanzhou 94.66 307 *e*P P **00 45 03.0 +1.0**
LZH AP pP 00 45 44.5 +6.3
LZH XP sP 00 46 01.3 +8.2
LZH AMB AMB
comp=Z,17nm,1.3s,mb5.1
LZH AMB AMB
comp=Z,73nm,4.5s
SONM Songino Array 97.64 319 PP PP 00 49 11.5 -3.6
comp=Z,0.8nm,0.9s,baz=131,slow=6.7,SNR=4.6
SONM PKKPbc PKKPbc 01 01 50.2 -2.2
comp=Z,0.7nm,0.9s,baz=318,slow=2.0,SNR=3.7
LPAZ La Paz 100.29 112 P Pdif 00 45 29.5 +2.3
comp=Z,2.1nm,0.7s,baz=253,slow=5.0,SNR=7.6
ZAA0 Zalesovo Array 112.37 321 *e*PKP PKiKP 00 50 14.3 -1.4
ZALV Zalesovo Beam 112.37 321 PKiKP PKiKP 00 50 13.8 -1.8
comp=Z,1.0nm,0.4s,baz=108,slow=0.8,SNR=14
MK31 Makanchi Array 113.09 313 *e*PKP PKiKP 00 50 15.6 -1.7
MKAR Makanchi Array 113.09 313 PKiKP PKiKP 00 50 15.3 -1.9
comp=Z,1.4nm,0.6s,baz=130,slow=0.4,SNR=18
MKAR pPKiKP 00 51 01.8
comp=Z,0.4nm,0.5s,baz=126,slow=3.1,SNR=3.7
MKAR PKKPbc PKKPbc 01 01 03.9 -1.1
comp=Z,1.0nm,0.8s,baz=277,slow=4.8,SNR=9.5
MKAR Makanchi Array 113.09 313⇑ *i*PKIKP PKiKP 00 50 15.8 -1.5
MIV Mineville/With 113.98 50 *e*PKP PKiKP 00 50 21.1 +2.0
KURK Kurchatov 115.89 317 *e*PKPdf PKPdf 00 50 20.8 -1.7
BVAR Borovoye Array 120.96 320 PKP PKPdf 00 50 30.7 -1.5
comp=Z,3.4nm,0.7s,baz=107,slow=1.8,SNR=20
OPO Ambohidratompo121.36 230 PKP PKPdf 00 50 33.4 -0.7
comp=Z,2.1nm,0.7s,baz=308,slow=0.8,SNR=5.5
KBL Kabul 121.72 298 *e*PKPdf PKPdf 00 50 34.1 -0.2
BOSA Boshof 125.65 204 PKP PKPdf 00 50 42.1 0.0
comp=Z,5.1nm,1.0s,baz=190,slow=4.9,SNR=5.2

SVE Sverdlovsk 125.84 325 *e*PKIKP PKPdf 00 50 40.9 -0.6
SVE pmax pmax
comp=Z,10.0nm,1.1s
ARU Arti 127.06 325 *e*PKPdf PKPdf 00 50 43.4 -0.4
ARU Arti 127.06 325 *i* PKIKP PKPdf 00 50 43.1 -0.7
ARU 00 52 43.8
AKTK Aktyubinsk 128.96 318 PKP PKPdf 00 50 46.4 -1.2
AKTO Aktyubinsk 128.96 318 PKP PKPdf 00 50 46.4 -1.2
comp=Z,2.8nm,0.6s,baz=81,slow=1.8,SNR=14
ARCES ARCESS Array B 130.44 350 PKP PKPdf 00 50 49.1 -0.8
comp=Z,3.5nm,0.7s,baz=30,slow=1.0,SNR=13
ARCES SKPbc SKPbc 00 53 58.7 -1.5
comp=Z,2.1nm,0.6s,baz=27,slow=3.3,SNR=5.3
KLMR Klimovskoe 133.62 337 *e*PKHKP 00 50 48.6
LSZ Lusaka 135.90 215 PKP PKPdf 00 51 01.7 -0.1
comp=Z,3.0nm,0.7s,baz=129,slow=0.9,SNR=8.7
LSZ Lusaka 135.90 215 *e*PKIKP PKPdf 00 51 01.5 -0.3
OBN Obninsk 138.56 332⇓ *i*PKIKP PKPdf 00 51 07.8 +2.4
OBN *e* 00 53 55.5
OBN *e* 00 57 53.8
OBN *e*SS SS 01 11 56.5 -2.8
OBN *e*SSS 01 17 10.2
OBN pmax pmax
comp=Z,5.0nm,0.7s
NB2 NORSAR Subarra140.43 354 PKP PKPdf 00 51 00.9 -7.8
comp=Z,1.0nm,0.8s,baz=16,slow=3.2
NOA NORSAR Array B140.43 354 PKhKP 00 50 57.9
comp=Z,1.0nm,0.8s,baz=17,slow=4.4,SNR=3.5
NOA PKP PKPdf 00 51 07.0 -1.7
comp=Z,1.5nm,0.8s,baz=17,slow=4.3,SNR=4.7
NOA SKPbc SKPbc 00 54 29.4 -2.4
comp=Z,3.9nm,0.9s,baz=14,slow=4.4,SNR=5.1
NOA NORSAR Array B140.43 354 PKP PKPdf 00 51 07.0 -1.7
NOA SKPbc SKPbc 00 54 29.4 -2.4
GNI Garni 140.59 307 *i* PKIKP PKPdf 00 51 12.4 +2.8
KIV Kislovodsk 140.85 314⇑ P PKPdf 00 51 11.2 +1.2
KIV Kislovodsk 140.85 314 *e*PKIKP PKPdf 00 51 10.8 +0.8
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 140.85 314⇑ *i*P PKPdf 00 51 11.2 +1.2
MARD Mardin 144.32 304 *e*P PKPdf 00 51 15.2 -1.2
SUW Suwalki 144.54 340 *e*PKP PKPdf 00 51 14.7 -1.5
AKASG Malin Array Be 144.82 331 PKP PKPdf 00 51 14.3 -2.4
comp=Z,7.3nm,0.6s,baz=41,slow=4.0,SNR=8.8
AKASG SKPbc SKPbc 00 54 40.2 -2.7
comp=Z,0.2nm,0.3s,baz=47,slow=1.3,SNR=5.9
AKASG Malin Array Be 144.82 331 *i* PKHKP 00 51 13.1
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 144.82 331 *e*PKPbc PKPdf 00 51 14.2 -2.6
MUD Monsted U'grnd 145.14 354 *i* P PKPbc 00 51 16.2 -0.8
comp=Z,20nm,0.9s
MUD
comp=Z,310nm,19.0s
KEMA Kemaliye 145.45 308 *i* P PKPdf 00 51 18.8 +0.5
COP Copenhagen 145.51 351 *i* P PKPdf 00 51 17.6 -0.2
comp=Z,11nm,0.9s
COP
comp=Z,170nm,19.0s
BSD Bornholm Skovb 145.65 348 *i* P PKPdf 00 51 17.8 -0.3
comp=Z,29nm,0.8s
BSD
comp=Z,440nm,18.0s
GKP Gorka Klasztor 146.87 345 *e*PKP PKPdf 00 51 21.9 +1.7
BSEG Bad Segeberg 147.50 352 *e*PKPbc PKPbc 00 51 23.6 -0.4
BSEG epPKPbc pPKPab 00 52 09.3 +6.2
ANDN Andirin 147.61 306 *e*P PKPdf 00 51 22.4 +0.5
AVNT Avonos 148.27 309 *i* P PKPdf 00 51 24.0 +1.0
KWP Kalwaria 148.34 336 *e*PKP PKPbc 00 51 26.2 -0.1
KWP Kalwaria 148.34 336 *e*PKP PKPbc 00 51 26.2 -0.1
KWP Kalwaria 148.34 336⇑ *i*P PKPbc 00 51 26.3 0.0
ASF Jabal al Asfar 148.60 296 PKPbc PKPbc 00 51 27.2 -0.3
comp=Z,5.9nm,0.8s,baz=262,slow=2.5,SNR=12
TLCR 148.77 324⇑ P PKPbc 00 51 27.4 -0.2
TLCR 148.77 324⇑ *i*P PKPbc 00 51 27.4 -0.2
BUR08 Bucovina Ar. S 148.86 331 *e*PKPbc PKPbc 00 51 27.8 +0.1
OJC Ojcow 148.87 340 *e*PKP PKPbc 00 51 26.9 -0.8
BURAR Bucovina Array 148.87 331⇓ P PKPbc 00 51 28.2 +0.5
BURAR Bucovina Array 148.87 331⇓ *i*P PKPbc 00 51 28.2 +0.5
STHS Stebnicka Huta 149.05 337 *e*PKP PKPbc 00 51 28.5 +0.4
KOLS Kolonicke sedl 149.07 336 *e*PKP PKPbc 00 51 28.0 -0.2
ANTO Ankara 149.25 313⇓ P PKPbc 00 51 29.1 +0.1
ANTO Ankara 149.25 313⇓ *i*P PKPbc 00 51 29.1 +0.1
KSP Ksiaz 149.33 344 *e*PKP PKPbc 00 51 29.2 +0.4
KSP Ksiaz 149.33 344 *e*PKP PKPbc 00 51 28.6 -0.2
KSP epPKP pPKPab 00 52 15.5 +5.0
NIE Niedzica 149.38 338 *e*PKP PKPbc 00 51 29.2 +0.2
CRVS Cervenica-Dubn 149.40 336 *e*PKP PKPbc 00 51 29.3 +0.3
VRI Vrincioaia 149.41 327⇑ P PKPbc 00 51 28.8 -0.4
VRI Vrincioaia 149.41 327⇑ *i*P PKPbc 00 51 28.8 -0.3
PLOR Plostina 149.46 327⇑ *i*P PKPbc 00 51 29.0 -0.3
HARR Harsova 149.57 324⇑ *i*P PKPbc 00 51 29.7 +0.1
BMR Baia Mare 149.58 333⇓ P PKPbc 00 51 28.8 -0.7
BMR Baia Mare 149.58 333⇓ *i*P PKPbc 00 51 28.8 -0.7
CLL Collm 149.63 348 *e*PKP PKPdf 00 51 25.0 +0.2
CLL *i* PKP PKPbc 00 51 29.0 -0.5
CLL *i* pPKP pPKPdf 00 52 12.2 +9.5
CLL Collm 149.63 348 *e*PKIKP PKPdf 00 51 25.0 +0.2
CLL *i* 00 51 29.0
CLL Collm 149.63 348 *e*PKPbc PKPbc 00 51 29.2 -0.3
CLL Collm 149.63 348 *e*PKPdf PKPdf 00 51 25.0 +0.2
comp=Z,4.0nm,1.3s
CLL *i* PKPbc PKPbc 00 51 29.0 -0.5
comp=Z,32nm,1.1s
CLL *i* PKiKP PKiKP 00 51 31.3 +0.8
comp=Z,23nm,0.8s
CLL *i* PKPab PKPab 00 51 33.4 -1.6
comp=Z,16nm,0.7s
CLL *i* pPKPbc pPKPab 00 52 12.2 +0.5
comp=Z,38nm,1.3s
MMAI Mount Meron Ar 149.66 298 PKPbc PKPbc 00 51 30.3 +0.1
comp=Z,9.7nm,0.6s,baz=64,slow=5.8,SNR=30
UPC Upice 149.71 344 *e*PKPbc PKPbc 00 51 29.6 -0.1
UPC epPKP pPKPab 00 52 11.6 -0.4
OKC Ostrava-Krasne 149.72 341 *e*PKPbc PKPbc 00 51 28.9 -0.9
OKC epPKP pPKPab 00 52 16.2 +4.1
DPC Dobruska-Polom 149.77 344 *e*PKPbc PKPbc 00 51 29.8 -0.1
DPC epPKP pPKPab 00 52 12.3 0.0
BRG Berggiesshubel 149.85 347 *e*PKPbc PKPbc 00 51 29.7 -0.4
BRG Berggiesshubel 149.85 347 *i* PKP PKPbc 00 51 29.9 -0.1
comp=Z,16nm,0.9s
BRG *e* 00 52 13.4
comp=Z,29nm,1.4s
BRG Berggiesshubel 149.85 347 *e*(P) pPKPab 00 52 13.4 +0.8
comp=Z,29nm,1.4s
MORC Moravsky Berou 149.95 342 *e*PKPbc PKPbc 00 51 29.4 -0.9
MORC Moravsky Berou 149.95 342 PKHKP 00 51 30.5
MORC Moravsky Berou 149.95 342⇑ *i*P PKPbc 00 51 29.9 -0.4
PVCC Panska Ves 150.04 346 *e*PKPbc PKPbc 00 51 29.9 -0.6
PVCC epPKP pPKPab 00 52 13.6 +0.2
MLR Muntele Rosu 150.06 327 PKPbc PKPbc 00 51 30.6 -0.1
comp=Z,10nm,0.8s,baz=304,slow=10,SNR=19
MLR Muntele Rosu 150.06 327⇓ P PKPbc 00 51 31.5 +0.7
MLR Muntele Rosu 150.06 327⇓ *i*P PKPbc 00 51 30.2 -0.6
MOX Moxa 150.52 349 *e*PKP PKPdf 00 51 19.6 -6.6
MOX *e* 00 51 31.4
comp=Z,24nm,1.6s
MOX *e* 00 52 15.2
MOX Moxa 150.52 349 *e*PKIKP PKPdf 00 51 19.6 -6.6
MOX *e* 00 51 31.4
MOX *e* 00 52 15.2
MOX pmax pmax
comp=Z,24nm,1.6s
MOX Moxa 150.52 349 *e*PKPbc PKPbc 00 51 31.5 -0.2
MOX *e*PKPab PKPab 00 51 35.7 -3.0
VOIR 150.55 328⇓ *i*P PKPbc 00 51 31.3 -0.6
PRU Pruhonice 150.55 345 *e*PKPbc PKPbc 00 51 31.1 -0.7
PRU epPKP pPKPab 00 52 15.0 -0.5
TANN Tannenbergstha 150.59 348 *e*PKPbc PKPbc 00 51 31.8 0.0
TANN *e*PKPab PKPab 00 51 36.3 -2.7
DRGR 150.60 333⇓ *i*P PKPbc 00 51 31.5 -0.5
VRAC Vranov 150.65 342 PKPbc PKPbc 00 51 31.4 -0.6
baz=291,slow=18
EIL Elat 150.66 292 PKPbc PKPbc 00 51 31.9 -0.8
comp=Z,14nm,0.8s,baz=12,slow=1.8,SNR=18
VYHS Vyhne 150.68 339 *e*PKP PKPbc 00 51 31.5 -0.6
VYHS *e* 00 52 16.2
KOLL Kolacno 150.75 340 *e*PKP PKPbc 00 51 31.9 -0.4
NKC Novy Kostel 150.76 348 *e*PKPbc PKPbc 00 51 32.1 -0.1
NKC epPKP pPKPab 00 52 16.2 -0.2
PSZ Piszkesteto 150.80 337 *e*PKPbc PKPbc 00 51 32.0 -0.4
PSZ *e*PKPab PKPab 00 51 39.7 -0.3
PSZ Piszkesteto 150.80 337⇓ *i*P PKPbc 00 51 32.0 -0.4

TREC	**Trest**	**150.96**	**344**	*e*PKPbc	PKPbc	00 51 31.8	-0.9
TREC				*ep*PKP	pPKPab	00 52 14.0	-3.2
UCC	**Uccle**	**151.06**	**359**	PKPbc	PKPbc	00 51 32.0	-0.9
SMOL	**Smolenice**	**151.11**	**341**	*e*PKP	PKPbc	00 51 33.6	+0.5
MEM	**Membach**	**151.18**	**357**	PKPbc	PKPbc	00 51 32.8	-0.4
MODS	**Modra-Piesok**	**151.28**	**341**	*e*PKIKP	PKPbc	00 51 33.6	+0.1
MODS	**Modra-Piesok**	**151.28**	**341**	*e*PKP	PKPbc	00 51 33.5	0.0
SNF	**Seneffe**	**151.35**	**359**	PKPbc	PKPbc	00 51 33.2	-0.4
TNS	**Taunus Mts**	**151.37**	**353**	*e*PKPbc	PKPbc	00 51 33.3	-0.4
BCLA	**Clavier**	**151.41**	**358**	E		00 51 34.6	
GRF	**Grafenberg Arr**	**151.50**	**349**	*e*PKPbc	PKPbc	00 51 33.5	-0.5
GRF				*e*PKPab	PKPab	00 51 43.1	+0.3
GRF				*ep*PKPbc	pPKPab	00 52 18.6	-0.8
KHC	**Kasperske Hory**	**151.57**	**346**	*e*PKPbc	PKPbc	00 51 33.8	-0.4
KHC				*e*PKPab	PKPab	00 51 43.0	-0.1
KHC				*ep*PKP	pPKPab	00 52 17.6	-2.2
GZR	**Gura Zlata**	**151.65**	**331** ⇑	*i*P	PKPbc	00 51 34.0	-0.5
GIVF	**Givet**	**151.74**	**358**	*e*PKP1	PKPbc	00 51 34.1	-0.4
	comp=Z,14nm,0.7s						
DOU	**Dourbes**	**151.75**	**358**	PKPbc	PKPbc	00 51 34.0	-0.5
ISP	**Isparta**	**151.76**	**311** ⇑	*i*P	PKPbc	00 51 34.1	-0.9
BAIF	**Baives**	**151.80**	**359**	*e*PKP1	PKPbc	00 51 34.3	-0.3
	comp=Z,16nm,0.7s						
GEC2	**GERESS Array S**	**151.81**	**346**	*e*PKPbc	PKPbc	00 51 34.4	-0.3
GEC2	**GERESS Array S**	**151.81**	**346**	*e*PKPbc	PKPbc	00 51 34.3	-0.4
GERES	**GERESS Array B**	**151.81**	**346**	PKP	PKPdf	00 51 26.8	-1.4
	comp=Z,0.4nm,0.7s,baz=23,slow=5.3						
GERES				PKPbc	PKPbc	00 51 34.2	-0.5
	comp=Z,2.0nm,0.7s,baz=90,slow=0.4,SNR=18						
GERES				pPKPbc	pPKPab	00 52 18.3	-2.5
	comp=Z,3.5nm,1.1s,baz=29,slow=2.2,SNR=2.7						
BZS	**Buzias**	**152.00**	**332**	PKIKP	PKPbc	00 51 34.6	-0.6
BZS	**Buzias**	**152.00**	**332** ⇑	*i*P	PKPbc	00 51 34.5	-0.7
WLF	**Walferdange**	**152.12**	**356**	PKPbc	PKPbc	00 51 34.6	-0.8
PKSM	**Moragy**	**152.70**	**337**	PKIKP	PKPbc	00 51 35.9	-0.9
FLN	**La Foliniere**	**152.92**	**6**	*e*PKP1	PKPbc	00 51 36.3	-0.9
	comp=Z,23nm,0.8s						
FUR	**Furstenfeldbru**	**152.97**	**348**	*e*PKPab	PKPbc	00 51 47.7	-1.3
RJOB	**Jochberg**	**153.06**	**346**	*e*PKPbc	PKPbc	00 51 37.7	+0.2
RJOB				*e*PKPab	PKPbc	00 51 49.1	-0.3
GRR	**Gorron**	**153.25**	**6**	*e*PKP1	PKPbc	00 51 37.1	-0.8
	comp=Z,30nm,0.8s						
BFO	**Black Forest**	**153.25**	**353**	*e*PKPbc	PKPbc	00 51 37.0	-0.9
CDF	**Champ du Feu**	**153.28**	**354**	*e*PKP1	PKPbc	00 51 37.3	-0.7
HAU	**Haudompre**	**153.76**	**356**	*e*PKP1	PKPbc	00 51 38.3	-0.7
HINF	**Hinteralfeld**	**153.91**	**355**	*e*PKP1	PKPbc	00 51 38.4	-1.0
SSF	**Saint Saulge**	**154.80**	**360**	*e*PKP1	PKPbc	00 51 41.7	+0.4
EVO	**Evora**	**160.62**	**28**	*e*PKIKP	PKPdf	00 51 39.4	-0.6
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	**161.09**	**18**	PKP	PKPdf	00 51 39.9	-0.6
	comp=Z,0.9nm,0.7s,baz=346,slow=3.1,SNR=11						
ESDC				PKPab	PKPab	00 52 24.0	-0.2
	comp=Z,1.3nm,0.7s,baz=328,slow=4.2,SNR=10						
LIC	**Lamto**	**162.46**	**151**	*e*PKIKP	PKPdf	00 51 41.2	-1.5
	comp=Z,36nm,1.0s						
LIC	**Lamto**	**162.46**	**151** ⇑	*i*PKIKP	PKPdf	00 51 41.2	-1.5
	comp=Z,28nm,1.0s						
KIC	**Kosan Boka**	**162.71**	**151**	*e*PKIKP	PKPdf	00 51 41.5	-1.4
	comp=Z,56nm,1.0s						
TIC	**Toumodi**	**162.83**	**150**	*e*PKIKP	PKPdf	00 51 41.6	-1.5
	comp=Z,48nm,0.9s						
DBIC	**Dimbokro**	**162.93**	**151**	PKP	PKPdf	00 51 41.9	-1.2
	comp=Z,5.5nm,0.8s,baz=167,slow=3.4,SNR=8.8						
DBIC				PKPab	PKPab	00 52 32.6	-0.4
	comp=Z,8.8nm,0.9s,baz=199,slow=4.6,SNR=9.2						
TORD	**Torodi Ar. Bea**	**171.22**	**169**	PKP	PKPdf	00 51 47.4	-1.8
	comp=Z,4.8nm,0.9s,baz=309,slow=0.8,SNR=30						
TORD				PKPab	PKPab	00 53 10.2	+0.7
	comp=Z,13nm,0.9s,baz=174,slow=4.1,SNR=40						
TORD				PP	PP	00 56 58.3	-0.6
	comp=Z,1.2nm,0.7s,baz=180,slow=5.8,SNR=6.2						
TAM	**Tamanrasset**	**177.87**	**298**	*e*PKPdf	PKPdf	00 51 51.3	+0.3

IDC 18 01:12:42.9±4.7, 2321S×17978E, h500km±37km, mb3.3/3, mb1 3.6/3, mb1mx3.1/16, mbtmp3.3/3, Error ellipse: s-maj=225.7km s-min=26.9km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.95**	**260**	P	P	01 19 49.5	0.0
	1.1nm,0.4s,baz=96,slow=7.5,SNR=20						
ASAR				ScP	ScP	01 24 35.7	-0.4
	0.8nm,0.8s,baz=111,slow=4.7,SNR=6.7						
WRA	**Warramunga Arr**	**42.25**	**265**	P	P	01 19 51.8	-0.1
	1.8nm,0.4s,baz=103,slow=8.3,SNR=30						
TXAR	**Lajitas Array**	**90.24**	**58**	P	P	01 24 50.1	+0.1
	0.5nm,0.7s,baz=215,slow=6.8,SNR=8.5						

*IDC **18** 01:49:27.8±1.3, 2323S×7075W, h0km, mb4.0/2, mb1 4.1/4, mb1mx3.7/18, mbtmp4.1/4, ML4.0/2, Error ellipse: s-maj=36.2km s-min=16.0km az=153.0*
*ISCJB **18** 01:49:29.4±0.8, 2310S±004×7089W±006, h33km, mb3.9/2, Error ellipse: s-maj=8.5km s-min=5.9km az=6.7*
*GUC **18** 01:49:30.1±0.5, 2307S×7061W, h47km±3km, ML3.8*
*NEIC **18** 01:49:33.2±0.8, 2324S×7060W, h35km, Error ellipse: s-maj=22.5km s-min=9.1km az=109.0*

ISC 18 01:49:27.5±1.4, 2307S±004×7096W±007, h9km±7km, n16, σ0s88/22, mb3.9/2, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.47**	**95** ⇓	*i*P	**Pg**	**01 49 37.8**	**+1.0**
MECH				*i* S	**Sg**	**01 49 43.9**	**+0.9**
MECH				AML	AML	01 49 51.1	
	comp=N,21μm,0.9s						
CEN1	**Los Morros**	**0.77**	**115** ⇓	*i*P	**Pg**	**01 49 42.0**	**-0.3**
CEN1				*i* S	**Sg**	**01 49 51.4**	**-1.0**
CEN1				AML	AML	01 49 55.2	
	comp=N,3μm,0.4s						
ANCH	**Antofagasta**	**0.80**	**141** ⇓	*e*P	**Pg**	**01 49 43.1**	**+0.3**
ANCH				*e*S	**Sg**	**01 49 52.8**	**-0.4**
ANCH				AML	AML	01 49 55.9	
	comp=N,10μm,0.1s						
CPN1	**Cerro Paranal**	**1.63**	**162** ⇑	*i*P	**Pn**	**01 49 56.9**	**+0.4**
CPN1				*i* S	**Sn**	**01 50 17.5**	**-0.2**
CPN1				AML	AML	01 50 21.2	
	comp=E,3μm,0.4s						
LVC	**Limon Verde**	**1.94**	**77**	Pg	**Pg**	**01 50 01.7**	**-3.1**
	comp=E,79nm,0.3s,baz=247,slow=15,SNR=515						
LVC				Lg		01 50 25.2	
	comp=E,477nm,0.3s,baz=350,slow=16,SNR=38						
LVC	**Limon Verde**	**1.94**	**77** ⇓	*i*P	**Pn**	**01 50 01.7**	**+0.9**
LVC				*i* S	**Sn**	**01 50 24.6**	**-0.7**
LVC				AML	AML	01 50 28.6	
	comp=N,2μm,0.4s						
LCO	**Las Campanas**	**5.92**	**178**	*e*Pn	**Pn**	**01 50 56.0**	**+0.5**
ARE	**Arequipa**	**6.59**	**356**	*e*P	**Pn**	**01 51 05.0**	**+0.4**
ARE				*e*S	**Sn**	**01 52 17.0**	**-2.9**
LPAZ	**La Paz**	**7.25**	**22**	Pn	**Pn**	**01 51 18.1**	**+4.4**
	comp=N,0.9nm,0.3s,baz=207,slow=7.1,SNR=36						
CFAA	**Coronel Fontan**	**8.84**	**165**	Pn	**Pn**	**01 51 35.1**	**-0.5**
	comp=N,0.0nm,0.3s,baz=337,slow=13,SNR=4.9						
CFAA				Sn	**Sn**	**01 53 27.5**	**+12**
	comp=N,0.1nm,0.3s,baz=264,slow=19,SNR=2.0						
SIV	**San Ignacio**	**11.68**	**55**	Pn	**Pn**	**01 52 13.6**	**-0.8**
	comp=N,0.8nm,0.3s,baz=241,slow=13,SNR=24						
SIV				Sn	**Sn**	**01 54 26.0**	**+1.0**
	comp=N,0.0nm,0.3s,baz=143,slow=20,SNR=2.4						
DBIC	**Dimbokro**	**71.00**	**74**	P	**P**	**02 00 46.1**	**-0.1**
	comp=N,1.3nm,0.7s,mb4.0,baz=233,slow=5.1,SNR=2.9						
TOA0	**Torodi Ar. Sit**	**79.67**	**71**	*e*P	**P**	**02 01 36.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**79.67**	**71**	P	**P**	**02 01 36.4**	**+0.4**
	comp=N,1.1nm,0.8s,mb3.8,baz=250,slow=5.1,SNR=8.3						
WRA	**Warramunga Arr**	**130.64**	**212**	PKP	PKPdf	02 08 41.5	+1.8
	comp=N,0.3nm,0.8s,baz=158,slow=1.7,SNR=3.1						
MKAR	**Makanchi Array**	**148.01**	**36**	PKP	PKPdf	02 09 12.2	+1.9
	comp=N,0.2nm,0.6s,baz=279,slow=2.1,SNR=4.0						
MKAR				PKPbc	PKPbc	02 09 14.9	+1.6
	comp=N,0.3nm,0.6s,baz=291,slow=3.2,SNR=4.0						

IDC 18 02:19:34.3±2.2, 693S×12919E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.5/14, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=113.4km s-min=32.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.86**	**159**	Pn	Pn	02 22 52.1	-0.1
	0.4nm,0.3s,baz=338,slow=13,SNR=28						
WRA				Sn	Sn	02 25 12.7	-14
	0.8nm,0.3s,baz=337,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.24**	**165**	P	Pn	02 23 36.9	+0.2
	0.3nm,0.3s,baz=344,slow=10,SNR=18						
ASAR				S	Sn	02 26 35.7	-14
	0.2nm,0.3s,baz=346,slow=26,SNR=4.6						
MKAR	**Makanchi Array**	**67.73**	**327**	P	P	02 30 33.7	+0.1
	0.3nm,0.8s,baz=124,slow=8.2,SNR=4.1						

IDC 18 02:25:21.1±1.0, 2187N×14311E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.8/22, mbtmp3.7/8, MS3.1/2, Ms1 3.1/2, ms1mx2.6/33, Error ellipse: s-maj=36.9km s-min=20.9km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**14.39**	**293**	LR	LR	02 33 46.3	
	comp=Z,93nm,18.5s,baz=41,slow=35						
MJAR	**Matsushiro Arr**	**15.23**	**345**	LR	LR	02 34 27.9	
	comp=Z,56nm,19.9s,baz=155,slow=36						
SONM	**Songino Array**	**39.16**	**320**	P	P	02 32 51.4	+0.9
	0.5nm,0.5s,baz=132,slow=8.2,SNR=4.5						
WRA	**Warramunga Arr**	**42.43**	**192**	P	P	02 33 18.2	+0.5
	1.0nm,0.7s,baz=20,slow=8.9,SNR=6.8						
ASAR	**Alice Springs**	**46.13**	**192**	P	P	02 33 46.8	-0.5
	0.5nm,0.6s,baz=16,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**54.03**	**322**	P	P	02 34 46.2	-0.9
	0.7nm,0.6s,baz=125,slow=7.4,SNR=5.7						
MKAR	**Makanchi Array**	**54.53**	**313**	P	P	02 34 50.2	-0.6
	0.4nm,0.7s,baz=91,slow=7.4,SNR=4.9						
BVAR	**Borovoye Array**	**62.50**	**319**	P	P	02 35 46.9	+0.7
	1.8nm,0.7s,baz=76,slow=6.1,SNR=8.2						
YKA	**Yellowknife Ar**	**76.34**	**28**	P	P	02 37 11.3	-0.5
	0.9nm,0.7s,baz=292,slow=6.0,SNR=3.3						
NVAR	**Mina Array Bea**	**83.09**	**51**	P	P	02 37 49.7	+0.8
	0.5nm,0.7s,baz=256,slow=6.0,SNR=5.1						

*ISK **18** 02:27:52.2, 3902N×41.12E, h7km, MD2.9*
*DDA **18** 02:27:52.9, 3899N×41.13E, h14km±1km, Md2.8*
*CSEM **18** 02:27:52.5±0.1, 3903N×41.13E, h10km, MD2.9, Error ellipse: s-maj=3.5km s-min=2.4km az=138.0*
*ISCJB **18** 02:27:53.3±0.7, 3902N±002×41.10E±004, h3km±5km, Error ellipse: s-maj=5.7km s-min=3.6km az=10.3*

ISC 18 02:27:53.8±0.5, 3901N±002×4113E±004, h8km±4km, n16, σ0s95/29, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNGL	**BINGOL**	**0.06**	**168** ⇓	*i*P	**Pg**	**02 27 55.3**	**-0.3**
BNGL				*i* S	**Sg**	**02 27 57.4**	**+0.5**
EZM	**Erzurum**	**0.91**	**11**	*e*PG	**Pg**	**02 28 10.4**	**-0.8**
EZM				*e*SG	**Sg**	**02 28 23.0**	**-0.1**
ERZM	**Erzurum**	**0.91**	**11**	*i* P	**Pg**	**02 28 10.8**	**-0.4**
ERZM				*i* S	**Sg**	**02 28 23.8**	**+0.6**
KOPT	**Kop Dagi**	**1.12**	**334**	*e*P	**Pg**	**02 28 14.3**	**-1.0**
KOPT				*i* S	**Sg**	**02 28 30.5**	**+0.7**
BEST	**Besiri**	**1.12**	**174**	*i* P	**Pg**	**02 28 14.7**	**-0.6**
BEST				*i* S	**Sg**	**02 28 30.3**	**+0.4**
HOMI	**Horasan**	**1.19**	**30**	*e*P	**Pg**	**02 28 16.5**	**-0.1**
HOMI				*i* S	**Sg**	**02 28 33.9**	**+1.7**
EZC	**Erzincan**	**1.26**	**306**	*e*PN	**Pn**	**02 28 21.5**	**+3.9**
DIYA	**Diyarbakir**	**1.35**	**217**	*e*P	**Pn**	**02 28 18.2**	**-0.6**
DIYA				*i* S	**Sb**	**02 28 36.5**	**0.0**
DIYA	**Diyarbakir**	**1.35**	**217**	*e*P	**Pn**	**02 28 18.2**	**-0.6**
DIYA				*i* S	**Sb**	**02 28 36.5**	**0.0**
PTK	**Pertek**	**1.36**	**266**	*e*PN	**Pn**	**02 28 18.3**	**-0.7**
PTK				*e*SN	**Sn**	**02 28 36.6**	**-0.6**
TUTA	**Tutak**	**1.36**	**73**	*i* P	**Pn**	**02 28 17.7**	**-1.3**
TUTA				*i* S	**Sb**	**02 28 37.4**	**+0.4**
AGRB	**Hanur-Agry**	**1.55**	**68**	*e*PN	**Pn**	**02 28 21.1**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.56**	**247**	*e*PN	**Pn**	**02 28 20.1**	**-1.7**
SVRC				*e*SN	**Sn**	**02 28 42.1**	**-0.1**
MARD	**Mardin**	**1.72**	**189**	*e*P	**Pn**	**02 28 24.7**	**+0.8**
MARD				*i* S	**Sn**	**02 28 47.5**	**+1.5**
GUMT	**Gumushane**	**1.93**	**319**	*e*PN	**Pn**	**02 28 25.6**	**-1.2**
KEMA	**Kemaliye**	**2.07**	**278**	*e*P	**Pn**	**02 28 30.1**	**+1.4**
KEMA				*e*S	**Sn**	**02 28 56.9**	**+2.2**

*BJI **18** 02:33:52.1, 1697S×17336W, h90km, mB5.2, mb4.9, Ms4.9, Msz4.6*
*ISCJB **18** 02:33:55.5±1.4, 1672S±006×17409W±006, h94km±12km, mb4.4/51, Error ellipse: s-maj=11.5km s-min=7.1km az=142.4*
*NEIC **18** 02:33:57.2±1.0, 1674S×17409W, h100km±9km, mb4.5/30, Error ellipse: s-maj=9.0km s-min=5.0km az=145.0*
*MOS **18** 02:33:58.3±1.7, 1674S×17409W, h113km, mb4.6/14, Error ellipse: s-maj=14.1km s-min=10.4km az=144.6*
*IDC **18** 02:34:01.3±0.7, 1673S×17421W, h135km±6km, mb4.2/16, mb1 4.4/16, mb1mx4.3/21, mbtmp4.2/16, MS3.4/6, Ms1 3.4/6, ms1mx3.1/32, Error ellipse: s-maj=15.4km s-min=10.3km az=124.0*

ISC 18 02:33:57.2±1.2, 1676S±006×17407W±006, h97km±11km, h97km±1.1km: pP-P, n134, σ0s85/95, mb4.4/51, 7C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.60**	**38**	P	**Pn**	**02 34 50.2**	**-0.7**
	86nm,0.3s,baz=42,slow=1.8,SNR=111						
AFI				S	**Sn**	**02 35 26.6**	**-5.8**
	293nm,0.3s,baz=72,slow=23,SNR=5.4						
AFI	**Afiamalu**	**3.60**	**38**	*e*Pn	**Pn**	**02 34 50.3**	**-0.6**
AFI				*e*Sn	**Sn**	**02 35 27.0**	**-5.4**
RAR	**Rarotonga**	**14.23**	**110**	P	**Pn**	**02 37 15.3**	**+1.0**
	1.7nm,0.3s,baz=262,slow=14,SNR=3.4						
DZM	**Mont Dzumac**	**19.11**	**251**	*e*P	**Pn**	**02 38 14.8**	**+0.4**
URZ	**Urewera**	**22.78**	**198**	P	**P**	**02 38 50.7**	**-0.9**
	11nm,0.4s,mb4.5,baz=9.9,slow=4.1,SNR=18						
URZ				S	**S**	**02 42 51.4**	**-1.6**
	7.9nm,0.6s,baz=276,slow=23,SNR=8.8						
PPT	**Papeete**	**23.42**	**96**	LR	LR	02 46 17.0	
	comp=Z,22nm,18.0s,baz=252,slow=31						
HNR	**Honiara**	**26.31**	**283**	LR	LR	02 48 05.0	
	comp=Z,90nm,20.3s,baz=128,slow=32						
RPZ	**Rata Peaks**	**29.68**	**202**	P	**P**	**02 39 54.4**	**+0.6**
	2.2nm,0.5s,mb4.0,baz=18,slow=20,SNR=1.8						
ARMA	**Armidale**	**34.10**	**240**	*e*P	**P**	**02 40 31.9**	**-0.8**
	0.3nm,0.7s						
CTAO	**Charters Tower**	**37.73**	**259**	*e*P	**P**	**02 41 04.3**	**+0.5**
	4.4nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**37.73**	**259**	*e*P	**P**	**02 41 04.3**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
PMG	**Port Moresby**	**38.41**	**276**	*e*P	**P**	**02 41 10.4**	**+0.8**
	comp=Z,18nm,0.9s,mb4.9						
PMG	**Port Moresby**	**38.41**	**276**	*e*P	**P**	**02 41 10.4**	**+0.8**
PMG				pmax	pmax		
	comp=Z,18nm,0.9s						
COEN	**Coen**	**41.26**	**268**	*e*P	**P**	**02 41 34.6**	**+1.3**
	comp=Z,4.3nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**42.81**	**241**	P	**P**	**02 41 45.7**	**+0.1**
	comp=Z,16nm,0.8s,mb4.8,baz=89,slow=9.2,SNR=29						
STKA	**Stephens Creek**	**42.81**	**241**	*e*P	**P**	**02 41 45.3**	**-0.3**
	comp=Z,18nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**48.91**	**258**	*e*P	**P**	**02 42 32.6**	**-1.1**
WRAB	**Tennant Creek**	**48.91**	**258**	*e*P	**P**	**02 42 32.4**	**-1.3**
	comp=Z,15nm,1.4s,mb4.7						
WRAB	**Tennant Creek**	**48.91**	**258**	*e*P	**P**	**02 42 32.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
WRA	**Warramunga Arr**	**48.92**	**258**	P	**P**	**02 42 32.4**	**-1.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=95,slow=7.5,SNR=65						
ASAR	**Alice Springs**	**49.09**	**253**	P	**P**	**02 42 34.4**	**-0.7**
	comp=Z,41nm,0.6s,baz=89,slow=8.3,SNR=735						
ASAR				ScP	ScP	02 47 40.5	-3.3
	comp=Z,1.5nm,0.9s,baz=114,slow=3.5,SNR=7.6						
ASAR				S	**S**	**02 49 26.9**	**-6.1**
	comp=Z,0.6nm,1.0s,baz=88,slow=15,SNR=4.3						
ASAR	**Alice Springs**	**49.09**	**253**	P	**P**	**02 42 34.4**	**-0.7**
ASAR				ScP	ScP	02 47 40.5	-3.3
ASAR				S	**S**	**02 49 26.9**	**-6.1**
FORT	**Forrest**	**54.23**	**244**	*e*P	**P**	**02 43 11.9**	**-1.4**
	comp=Z,2.8nm,0.7s,mb4.4						
SBA	**Scott Base**	**61.85**	**185**	*e*P	**P**	**02 44 08.0**	**+2.3**
	comp=Z,8.0nm,0.8s,mb4.8						
SBA	**Scott Base**	**61.85**	**185**	*e*P	**P**	**02 44 08.0**	**+2.3**
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
VNDA	**Vanda**	**61.96**	**186**	P	**P**	**02 44 08.0**	**+1.5**
	comp=Z,6.1nm,0.9s,mb4.6,baz=6.3,slow=6.9,SNR=34						
MBWA	**Marble Bar**	**62.37**	**255**	*e*P	**P**	**02 44 08.8**	**-1.3**
	comp=Z,6.3nm,0.5s,mb4.9						
MJAR	**Matsushiro Arr**	**69.56**	**321**	P	**P**	**02 44 55.4**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.7,baz=153,slow=6.3,SNR=4.8						
QSPA	**South Pole Qui**	**73.29**	**180**	P	**P**	**02 45 18.4**	**+0.8**
	comp=Z,9.3nm,0.7s,mb4.8,baz=32,slow=1.6,SNR=37						
PETK	**Petropavlovsk-**	**73.72**	**343**	P	**P**	**02 45 20.3**	**-0.1**
	comp=Z,6.7nm,0.7s,mb4.5,baz=108,slow=9.5,SNR=6.4						
MTUM	**Tungsten Hills**	**74.98**	**43**	*e*P	**P**	**02 45 28.1**	**+0.1**
GSC	**Goldstone**	**75.00**	**45**	*e*P	**P**	**02 45 28.1**	**-0.1**
	comp=Z,33nm,2.2s,mb4.7						
GSC	**Goldstone**	**75.00**	**45**	*e*P	**P**	**02 45 28.1**	**-0.1**
GSC				pmax	pmax		
	comp=Z,33nm,2.2s,mb4.7						
YBH	**Yreka Blue Hor**	**75.07**	**37**	P	**P**	**02 45 29.2**	**+0.8**
	comp=Z,3.1nm,1.1s,mb4.0,baz=115,slow=1.0,SNR=6.5						
NVAR	**Mina Array Bea**	**75.77**	**42**	P	**P**	**02 45 32.5**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.3,baz=225,slow=9.6,SNR=33						
NVAR				pP	pP	02 46 06.5	+9.1
	comp=Z,1.3nm,0.8s,baz=234,slow=12,SNR=2.7						
NVAR				sP	sP	02 46 21.4	+14
	comp=Z,1.3nm,0.8s,baz=227,slow=9.0,SNR=2.9						
NVAR	**Mina Array Bea**	**75.77**	**42**	P	**P**	**02 45 32.5**	**0.0**
NVAR				pP	pP	02 46 06.5	+9.1
NVAR				sP	sP	02 46 21.4	+14
LDFC	**Landfair**	**76.04**	**46**	*e*P	**P**	**02 45 34.0**	**-0.2**
	comp=Z,6.2nm,0.7s,mb4.5						
TPNV	**Topopah Spring**	**76.28**	**44**	*e*P	**P**	**02 45 35.6**	**+0.2**
	comp=Z,4.7nm,0.9s,mb4.2						
TPNV	**Topopah Spring**	**76.28**	**44**	*e*P	**P**	**02 45 35.6**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
TUC	**Tucson**	**77.75**	**51**	*e*P	**P**	**02 45 44.2**	**+0.4**
	comp=Z,3.5nm,1.0s,mb4.0						
TUC	**Tucson**	**77.75**	**51**	*e*P	**P**	**02 45 44.2**	**+0.4**
TUC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
WVOR	**Wild Horse Val**	**77.89**	**39**	*e*P	**P**	**02 45 44.0**	**-0.4**
	comp=Z,9.7nm,1.3s,mb4.4						
WVOR	**Wild Horse Val**	**77.89**	**39**	*e*P	**P**	**02 45 44.0**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
ARUT	**Antelope Range**	**78.62**	**45**	*e*P	**P**	**02 45 48.5**	**0.0**
WUAZ	**Wupatki**	**78.89**	**48**	*e*P	**P**	**02 45 50.5**	**+0.5**
	comp=Z,6.8nm,1.4s,mb4.3						
ELK	**Elko**	**79.03**	**41**	*e*P	**P**	**02 45 50.0**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.0						
ELK	**Elko**	**79.03**	**41**	*e*P	**P**	**02 45 50.0**	**-0.6**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MSU	**Marysvale**	**79.84**	**45**	*e*P	**P**	**02 45 56.0**	**+0.9**
DUG	**Dugway**	**80.29**	**43**	*e*P	**P**	**02 45 56.9**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.8						
DUG	**Dugway**	**80.29**	**43**	*e*P	**P**	**02 45 56.9**	**-0.6**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
NJ2	**Nanjing**	**80.47**	**308**	*e*P	**P**	**02 45 59.8**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
TMUT	**Trail Mountain**	**80.89**	**44**	*e*P	**P**	**02 46 00.8**	**0.0**
HLID	**Hailey**	**81.08**	**39**	*e*P	**P**	**02 46 01.5**	**-0.1**
	comp=Z,3.6nm,0.9s,mb4.2						
CN2	**Changchun**	**81.71**	**320**	*e*P	**P**	**02 46 07.3**	**+2.3**
HWUT	**Hardware Ranch**	**81.83**	**42**	*e*P	**P**	**02 46 04.8**	**-0.9**
	comp=Z,1.1nm,0.7s,mb3.8						
TXAR	**Lajitas Array**	**81.90**	**56**	P	**P**	**02 46 06.5**	**+0.2**
	comp=Z,1.7nm

CHTO					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.8							
ATAH	**Atahualpa**	**93.41**	**98**		LR	LR	03 19 48.0	
	comp=Z,29nm,20.1s,baz=198,slow=29							
LZH	**Lanzhou**	**93.51**	**307**	*eP*		**P**	**02 47 02.5**	**+0.2**
LZH					AP	pP	02 47 28.0	+0.1
LZH					XP	sP	02 47 37.5	-0.7
LZH					AMB	AMB		
	comp=Z,13nm,1.0s,mb5.2							
LZH					AMB	AMB		
	comp=Z,57nm,4.3s							
CFAA	**Coronel Fontan**	**94.22**	**125**		P	**P**	**02 47 06.3**	**+0.4**
	baz=278,slow=7.1							
CFAA					LR	LR	03 23 16.2	
	comp=Z,4.2nm,18.6s,baz=57,slow=31							
SONM	**Songino Array**	**95.42**	**318**		P	**P**	**02 47 11.1**	**+0.3**
	comp=Z,0.4nm,0.6s,mb4.0,baz=101,slow=4.6,SNR=3.3							
MKAR	**Makanchi Array**	**111.31**	**314**		PKiKP	PKiKP		
	comp=Z,0.4nm,0.6s,baz=63,slow=0.5,SNR=4.6						02 52 18.6	-1.3
KWP	**Kalwaria**	**144.51**	**341**	*e*	PKPdf	PKPdf	02 53 21.8	-0.4
KWP	**Kalwaria**	**144.51**	**341**	⇑	*i*P	PKPdf	02 53 23.0	+0.8
OJC	**Ojcow**	**144.80**	**345**	*e*	PKP	PKPdf	02 53 24.7	+2.0
CLL	**Collm**	**145.07**	**352**	*e*	PKPbc	PKPbc	02 53 23.0	+0.3
STHS	**Stebnicka Huta**	**145.13**	**342**	*e*	PKP	PKPdf	02 53 25.9	+2.6
STHS				*e*			02 53 29.6	
KOLS	**Kolonicke sedl**	**145.26**	**341**	*e*	PKP	PKPdf	02 53 25.0	+1.5
BUR08	**Bucovina Ar. S**	**145.35**	**337**	*e*	PKPbc	PKPbc	02 53 24.3	+0.5
BURAR	**Bucovina Array**	**145.37**	**337**	⇓	*i*P	PKPdf	02 53 24.3	+0.6
BURAR	**Bucovina Array**	**145.37**	**337**	⇓	*i*P	PKPdf	02 53 24.3	+0.5
NIE	**Niedzica**	**145.40**	**343**	*e*	PKP	PKPab	02 53 26.9	+2.8
CRVS	**Cervenica-Dubn**	**145.53**	**342**	*e*	PKP	PKPdf	02 53 24.8	+0.8
MORC	**Moravsky Berou**	**145.75**	**347**	*e*	PKPbc	PKPbc	02 53 25.5	+0.6
MORC	**Moravsky Berou**	**145.75**	**347**	⇓	*i*P	PKPab	02 53 27.5	+2.1
TLCR		**145.77**	**331**	⇑	P	PKPdf	02 53 25.1	+0.6
TLCR		**145.77**	**331**	⇑	P	PKPdf	02 53 25.1	+0.6
VRI	**Vrincioaia**	**146.18**	**334**	⇑	*i*P	PKPab	02 53 28.4	+1.2
VRI	**Vrincioaia**	**146.18**	**334**	⇑	*i*P	PKPab	02 53 28.4	+1.2
VYHS	**Vyhne**	**146.63**	**344**	*e*	PKP	PKPab	02 53 30.1	+1.3
VYHS				*e*			02 53 36.1	
KOLL	**Kolacno**	**146.67**	**345**	*e*	PKP	PKPdf	02 53 27.0	+1.1
GIVF	**Givet**	**146.73**	**1**	*e*	PKP1	PKPbc	02 53 27.0	-0.8
BAIF	**Baives**	**146.76**	**2**	*e*	PKP1	PKPbc	02 53 28.1	+0.2
	comp=Z,28nm,1.2s							
MLR	**Muntele Rosu**	**146.81**	**334**	⇓	P	PKPbc	02 53 29.0	+0.8
MLR	**Muntele Rosu**	**146.81**	**334**	⇓	*i*P	PKPbc	02 53 29.0	+0.8
DRGR		**146.98**	**339**	⇓	P	PKPbc	02 53 28.9	+0.3
DRGR		**146.98**	**339**	⇓	*i*P	PKPbc	02 53 28.9	+0.3
KHC	**Kasperske Hory**	**147.12**	**351**	*e*	PKP	PKPdf	02 53 20.0	-6.7
KHC				*ex*		x	02 53 31.5	
MODS	**Modra-Piesok**	**147.13**	**346**	*e*	PKP	PKPbc	02 53 30.6	+1.6
GERES	**GERESS Array B**	**147.38**	**350**		PKPbc	PKPbc	02 53 28.7	-1.0
	comp=Z,1.3nm,0.8s,baz=11,slow=3.4,SNR=8.1							
FLN	**La Foliniere**	**147.66**	**8**	*e*	PKP1	PKPbc	02 53 31.0	+0.6
LDF	**La Druitiere**	**147.87**	**8**	*e*	PKP1	PKPbc	02 53 31.7	+0.7
GRR	**Gorron**	**147.97**	**9**	*e*	PKP1	PKPab	02 53 33.9	-0.2
BZS	**Buzias**	**148.38**	**339**	⇑	P	PKPbc	02 53 33.0	+0.6
BZS	**Buzias**	**148.38**	**339**	⇑	*i*P	PKPbc	02 53 33.0	+0.6
CDF	**Champ du Feu**	**148.41**	**358**	*e*	PKP1	PKPab	02 53 35.0	-0.9
	comp=Z,6.2nm,0.8s							
HINF	**Hinteralfeld**	**149.02**	**359**	*e*	PKP1	PKPbc	02 53 36.1	+2.1
LOR	**Lormes**	**149.53**	**3**	*e*	PKP1	PKPab	02 53 37.9	-2.5
	comp=Z,5.9nm,0.7s							
SSF	**Saint Saulge**	**149.72**	**3**	*e*	PKP1	PKPab	02 53 38.5	-2.7
	comp=Z,3.1nm,0.6s							
ESDC	**Sonseca Array**	**155.60**	**19**		PKPab	PKPab	02 54 06.3	+0.1
	comp=Z,0.1nm,0.3s,baz=339,slow=2.9,SNR=5.0							
TORD	**Torodi Ar. Bea**	**174.56**	**131**		PKP	PKPdf	02 53 53.8	-2.7
	comp=Z,1.3nm,0.9s,baz=256,slow=0.7,SNR=6.5							
TORD					PKPab	PKPab	02 55 29.6	-0.5
	comp=Z,2.1nm,0.8s,baz=267,slow=4.7,SNR=10							

DJA 18 02:40:58.5±0.0, 875S×111.48E, h60km, MLv 3.8/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJI	**Sawahan**	**1.05**	**16**	P	Pn	02 41 16.9	-0.3
SJI	**Sawahan**	**1.05**	**16**	S	Sn	02 41 32.0	+1.0
KRKI	**Karangkates**	**1.13**	**59**	P	Pn	02 41 18.0	-0.2
KRKI	**Karangkates**	**1.13**	**59**	S	Sn	02 41 33.9	+1.0
UGM	**Wanagama**	**1.26**	**311**	P	Pn	02 41 19.4	-0.6
UGM	**Wanagama**	**1.26**	**311**	S	Sn	02 41 36.5	+0.5

*ISCJB **18** 02:46:34.6±1.1, 2027S×007.7×177.64W×0.07, h357km±12km, mb4.4/38, Error ellipse: s-maj=12.5km s-min=8.4km az=145.5*
*NEIC **18** 02:46:36.0±1.1, 2023S×177.62W, h361km±11km, mb4.3/17, Error ellipse: s-maj=13.6km s-min=6.5km az=151.0*
*IDC **18** 02:46:36.8±1.8, 2022S×177.64W, h368km±17km, mb4.0/10, mb1 4.1/12, mb1mx4.0/18, mbtmp3.9/12, Error ellipse: s-maj=18.9km s-min=12.0km az=140.0*
*BJI **18** 02:46:41.0, 2020S×177.60W, h421km, mB4.6, mb4.5*
*DJA **18** 02:47:13, 2060S×179.89E, h631km, mb4.9/13*

ISC 18 02:46:35.1±1.2, 2034S±007×1775.8W±007, h351km±13km, n79, σ0.9t1/63, mb4.4/38, 1C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.46**	**42**	P	**Pn**	**02 48 34.6**	**-0.2**
	2.7nm,0.3s,baz=307,slow=20,SNR=3.5						
AFI				S	**Sn**	**02 50 04.4**	**-8.2**
	2.3nm,0.3s,baz=143,slow=20,SNR=3.5						
RAO	**Raoul Island**	**8.88**	**182**	S	**Sn**	**02 50 20.8**	**-0.7**
	68nm,0.3s,baz=90,slow=20,SNR=3.7						
URZ	**Urewera**	**18.45**	**193**	P	**P**	**02 50 28.2**	**+1.5**
	1.0nm,0.3s,baz=32,slow=4.9,SNR=6.9						
URZ				S	**S**	**02 53 44.8**	**+6.2**
	1.9nm,0.3s,baz=116,slow=21,SNR=8.6						
EIDS	**Eidsvold**	**29.27**	**254**	*e*P	**P**	**02 52 07.0**	**+0.7**
	43nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**33.90**	**264**	*e*P	**P**	**02 52 47.3**	**+0.8**
	45nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**33.90**	**264**	P	**P**	**02 52 47.2**	**+0.7**
	61nm,1.1s,mb4.7						
PMG	**Port Moresby**	**35.69**	**282**	*e*P	**P**	**02 53 01.6**	**-0.1**
	52nm,0.9s,mb4.8						
PMG	**Port Moresby**	**35.69**	**282**	P	**P**	**02 53 02.5**	**+0.8**
	78nm,1.0s,mb4.9						
COEN	**Coen**	**37.97**	**273**	*e*P	**P**	**02 53 20.8**	**+0.1**
	9.6nm,0.8s,mb4.1						
COEN	**Coen**	**37.97**	**273**	P	**P**	**02 53 21.4**	**+0.7**
	19nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**38.22**	**244**	P	**P**	**02 53 23.3**	**+0.7**
	5.4nm,0.5s,mb4.1,baz=90,slow=9.6,SNR=21						
STKA				PcP	PcP	02 55 27.8	-1.0
	2.0nm,0.6s,baz=77,slow=5.8,SNR=3.5						
ASAR	**Alice Springs**	**44.94**	**257**	P	**P**	**02 54 16.5**	**-0.2**
	57nm,0.7s,mb4.8,baz=95,slow=8.2,SNR=816						
ASAR				PcP	PcP	02 55 50.5	-0.8
	4.6nm,0.7s,baz=103,slow=4.3,SNR=8.0						
ASAR				ScP	ScP	02 59 06.4	-3.3
	1.2nm,0.8s,baz=100,slow=3.4,SNR=6.3						
ASAR				S	**S**	**03 00 22.1**	**-5.9**
	2.8nm,0.9s,baz=96,slow=16,SNR=12						
WB2	**Warramunga Arr**	**45.00**	**262**	*e*P	**P**	**02 54 16.5**	**-0.8**
WRAB	**Tennant Creek**	**45.01**	**262**	*e*P	**P**	**02 54 16.4**	**-0.9**
	20nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**45.01**	**262**	P	**P**	**02 54 16.2**	**-1.1**
	34nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**45.01**	**262**	P	**P**	**02 54 16.5**	**-0.8**
	22nm,0.8s,mb4.3,baz=93,slow=6.3,SNR=182						
WRA				PcP	PcP	02 55 50.7	-0.9
	2.5nm,0.8s,baz=94,slow=3.7,SNR=5.3						
WRA				ScP	ScP	02 59 07.5	-2.6
	0.2nm,0.3s,baz=89,slow=3.4,SNR=6.8						
WRA				S	**S**	**03 00 22.2**	**-7.0**
	1.2nm,0.7s,baz=97,slow=14,SNR=6.8						
FORT	**Forrest**	**49.72**	**246**	*e*P	**P**	**02 54 52.9**	**-0.2**
	1.7nm,0.6s,mb3.5						
GUMO	**Guam**	**50.00**	**309**	P	**P**	**02 54 55.6**	**+0.3**
	108nm,0.9s,mb5.0,baz=180,slow=5.5,SNR=5.2						
SWI	**Sorong**	**53.59**	**285**	P	**P**	**02 55 21.7**	**+0.1**
	210nm,0.9s,1μm,mb5.5						
VNDA	**Vanda**	**58.11**	**185**	P	**P**	**02 55 53.6**	**+1.2**
	0.2nm,0.3s,baz=15,slow=7.0,SNR=3.7						
MBWA	**Marble Bar**	**58.27**	**257**	*e*P	**P**	**02 55 53.3**	**-1.2**
	22nm,0.8s,mb4.5						
MBWA	**Marble Bar**	**58.27**	**257**	P	**P**	**02 55 53.6**	**-0.9**
	43nm,1.4s,mb4.6						
PCI	**Palu**	**64.06**	**279**	P	**P**	**02 56 34.6**	**+1.5**
	94nm,1.1s,1μm,mb5.3						
KKM	**Kota Kinabalu**	**70.10**	**285**	*e*P	**P**	**02 57 10.4**	**-0.4**
MJAR	**Matsushiro Arr**	**70.31**	**323**	P	**P**	**02 57 10.3**	**-1.2**
	3.0nm,0.8s,mb4.1,baz=154,slow=5.9,SNR=5.7						
LEM	**Lembang**	**73.44**	**269**	P	**P**	**02 57 30.8**	**+0.3**
	76nm,1.0s,mb5.4						
KSM	**Kuching**	**73.78**	**278**	*e*P	**P**	**02 57 32.4**	**-0.1**
KSM	**Kuching**	**73.78**	**278**	P	**P**	**02 57 32.5**	**+0.1**
	40nm,1.0s,mb5.1						
TPI	**Tanjungpandan**	**74.77**	**273**	P	**P**	**02 57 38.2**	**+0.1**
	26nm,1.1s,mb4.9						
PETK	**Petropavlovsk-**	**76.21**	**345**	P	**P**	**02 57 44.6**	**-0.6**
	11nm,0.9s,mb4.6,baz=141,slow=4.9,SNR=6.4						
CMB	**Columbia Colle**	**79.07**	**43**	*e*P	**P**	**02 58 01.6**	**+0.3**
	34nm,2.1s,mb4.7						
KSI	**Kapahiang**	**79.21**	**270**	P	**P**	**02 58 02.1**	**-0.5**
	122nm,0.6s						
MYKOM	**Kota Tinggi**	**79.91**	**276**	P	**P**	**02 58 06.8**	**+0.4**
YBH	**Yreka Blue Hor**	**79.91**	**38**	P	**P**	**02 58 06.4**	**+0.7**
	3.1nm,0.9s,mb4.0,baz=43,slow=16,SNR=5.6						
NVAR	**Mina Array Bea**	**80.63**	**43**	P	**P**	**02 58 09.8**	**+0.2**
	1.6nm,0.7s,mb3.9,baz=224,slow=8.2,SNR=15						
LDFC	**Landfair**	**80.90**	**47**	*e*P	**P**	**02 58 11.9**	**+0.8**
CN2	**Changchun**	**82.41**	**322**	*e*P	**P**	**02 58 20.8**	**+2.1**
TUC	**Tucson**	**82.57**	**52**	*e*P	**P**	**02 58 20.2**	**+0.5**
	3.0nm,0.9s,mb4.1						
WVOR	**Wild Horse Val**	**82.75**	**40**	*e*P	**P**	**02 58 20.6**	**+0.2**
	3.8nm,0.9s,mb4.2						
IPM	**Ipoh**	**83.50**	**277**	P	**P**	**02 58 25.2**	**+0.2**
ELK	**Elko**	**83.89**	**43**	*e*P	**P**	**02 58 26.6**	**+0.4**
HLID	**Hailey**	**85.94**	**41**	*e*P	**P**	**02 58 36.5**	**+0.2**
	1.2nm,1.0s,mb3.7						
BJI	**Beijing**	**86.05**	**315**	P	**P**	**02 58 36.6**	**-0.3**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**86.64**	**57**	P	**P**	**02 58 40.7**	**+0.7**
	comp=Z,1.2nm,0.8s,mb3.8,baz=212,slow=5.7,SNR=14						
TXAR	**Lajitas Array**	**86.64**	**57**	P	**P**	**02 58 40.7**	**+0.7**
MCK	**McKinley**	**86.73**	**12**	*e*P	**P**	**02 58 38.5**	**-1.1**
	comp=Z,11nm,1.1s,mb4.6						
GYA	**Guiyang**	**86.91**	**300**	P	**P**	**02 58 40.4**	**-1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
ANMO	**Albuquerque**	**86.99**	**51**	*e*P	**P**	**02 58 41.6**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.0						
VNA3	**Neumayer Olymp**	**88.28**	**176**	*e*P	**P**	**02 58 45.9**	**-1.1**
VNA3				*e*		02 58 48.7	
VNA3				*e*		02 58 54.4	
XAN	**Xi'an**	**88.35**	**307**	P	**P**	**02 58 47.8**	**-0.2**
XAN				AP	pP	03 00 23.8	+14
XAN				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.5						
BW06	**Boulder Array**	**88.57**	**43**	*e*P	**P**	**02 58 48.1**	**-0.7**
	comp=Z,1.6nm,0.8s,mb3.9						
PDAR	**Pinedale Array**	**88.57**	**43**	P	**P**	**02 58 48.4**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=229,slow=2.2,SNR=10.0						
VNA2	**Neumayer--Watz**	**88.73**	**177**	*e*P	**P**	**02 58 48.2**	**-0.9**
VNA2				*e*		02 58 51.2	
VNA2				*e*		02 58 57.5	
SDCO	**Great Sand Dun**	**88.95**	**49**	*e*P	**P**	**02 58 50.7**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.7						
KMI	**Kunming**	**89.63**	**297**	P	**P**	**02 58 54.3**	**+0.1**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
CMAR	**Chiang Mai Arr**	**90.43**	**289**	P	**P**	**02 58 58.5**	**+0.5**
	comp=Z,1.8nm,0.4s,mb4.4,baz=130,slow=3.0,SNR=13						
CHTO	**Chiang Mai**	**90.56**	**290**	*e*P	**P**	**02 58 58.2**	**-0.4**
	comp=Z,5.2nm,0.8s,mb4.5						
CD2	**Chengdu**	**91.03**	**303**	*e*P	**P**	**02 59 00.5**	**-0.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.8s						
RSSD	**Black Hills**	**92.76**	**44**	*e*P	**P**	**02 59 07.5**	**-0.7**
	comp=Z,2.6nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	**143.06**	**332**		PKhKP		03 05 22.1	
	comp=Z,4.9nm,0.7s,baz=41,slow=4.3,SNR=16							
KWP	**Kalwaria**	**146.59**	**336**	*e*	PKP	PKPdf	03 05 34.7	+1.2
KWP				*e*			03 05 37.5	
KWP	**Kalwaria**	**146.59**	**336**	*e*	PKP	PKPdf	03 05 34.7	+1.2
KWP				*e*			03 05 37.5	
KWP	**Kalwaria**	**146.59**	**336**	⇑	*i*P	PKPdf	03 05 34.5	+1.0
BUR08	**Bucovina Ar. S**	**147.10**	**331**	*e*	PKPbc	PKPbc	03 05 37.1	-0.1
BURAR	**Bucovina Array**	**147.11**	**331**	⇓	*i*P	PKPbc	03 05 36.3	-0.9
CLL	**Collm**	**147.99**	**347**	*i*	PKPbc	PKPbc	03 05 37.8	-1.5
	comp=Z,9.0nm,0.8s							
CLL				*i*	PKPab	PKPab	03 05 42.0	-1.1
OKC	**Ostrava-Krasne**	**148.01**	**341**	*e*	PKPbc	PKPbc	03 05 38.0	-1.4
DPC	**Dobruska-Polom**	**148.09**	**343**	*e*	PKPbc	PKPbc	03 05 38.7	-0.9
DPC				*e*	PKPab	PKPab	03 05 43.2	-0.3
BRG	**Berggiesshubel**	**148.20**	**346**	*e*	(P)	PKPbc	03 05 38.2	-1.7
	comp=Z,3.5nm,0.8s							
PVCC	**Panska Ves**	**148.37**	**345**	*e*	PKPbc	PKPbc	03 05 38.8	-1.5
DRGR		**148.85**	**333**	⇓	*i*P	PKPbc	03 05 40.0	-1.7
PRU	**Pruhonice**	**148.88**	**345**	*e*	PKPbc	PKPbc	03 05 40.5	-1.1
PRU				*e*	PKPab	PKPab	03 05 45.8	-1.0
TREC	**Trest**	**149.27**	**343**	*e*	PKPbc	PKPbc	03 05 41.1	-1.5
MEM	**Membach**	**149.66**	**355**		PKPbc	PKPbc	03 05 42.2	-1.3
KHC	**Kasperske Hory**	**149.91**	**345**	*e*	PKPbc	PKPbc	03 05 42.9	-1.3
KHC				*e*	PKPab	PKPab	03 05 48.3	-2.8
GERES	**GERESS Array B**	**150.15**	**345**		PKPbc	PKPbc	03 05 43.0	-1.7
	comp=Z,1.9nm,0.7s,baz=38,slow=2.4,SNR=21							
DOU	**Dourbes**	**150.25**	**357**		PKPbc	PKPbc	03 05 43.7	-1.2
DOU					PKPab	PKPab	03 05 52.5	+0.1
WLF	**Walferdange**	**150.58**	**355**	*e*	PKPbc	PKPbc	03 05 43.1	-2.6
TORD	**Torodi Ar. Bea**	**172.82**	**174**		PKP	PKPdf	03 06 00.9	-2.5
	comp=Z,0.7nm,1.0s,baz=224,slow=2.0,SNR=3.2							
TORD					PKPab	PKPab	03 07 32.2	+0.7
	comp=Z,0.9nm,1.1s,baz=186,slow=1.9,SNR=2.8							

*IDC **18** 03:02:59.1±1.5, 569S×147.22E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.8/16, mbtmp4.0/5, ML4.0/1, Error ellipse: s-maj=54.7km s-min=35.8km az=109.0*
*NEIC **18** 03:03:11.4±2.8, 586S×146.86E, h90km±18km, mb3.8/3, Error ellipse: s-maj=29.8km s-min=16.7km az=176.0*

ISC 18 03:03:14.0±4.7, 61S±03×146.8E±02, h99km±27km, n13, σ0.5t4/12, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.34**	**173**	*e*P	**Pn**	**03 04 04.0**	**-0.3**
PMG				*e*S	**Sn**	**03 04 42.9**	**-0.2**
COEN	**Coen**	**8.60**	**204**	*e*P	**Pn**	**03 05 16.6**	**+0.9**
	3.4nm,0.4s						
WRAB	**Tennant Creek**	**18.32**	**220**	*e*P	**Pn**	**03 07 21.1**	**-0.6**
	4.0nm,0.8s						
WRA	**Warramunga Arr**	**18.33**	**220**	P	**Pn**	**03 07 21.0**	**-0.8**
	0.5nm,0.3s,baz=41,slow=11,SNR=32						
WRA				PcP	PcP	03 11 47.7	-0.7
	0.1nm,0.3s,baz=24,slow=1.7,SNR=6.0						
ASAR	**Alice Springs**	**21.43**	**214**	P	**P**	**03 07 55.0**	**+0.9**
	1.0nm,0.4s,mb3.5,baz=49,slow=9.2,SNR=23						
STKA	**Stephens Creek**	**26.13**	**190**	P	**P**	**03 08 39.1**	**+0.3**
	1.5nm,0.5s,mb3.7,baz=3.6,slow=7.8,SNR=11						
MBWA	**Marble Bar**	**30.18**	**238**	*e*P	**P**	**03 09 15.0**	**-0.1**
	4.2nm,0.6s,mb4.2						
VNDA	**Vanda**	**71.86**	**177**	P	**P**	**03 14 26.0**	**+0.3**
	0.6nm,0.5s,mb3.7,baz=334,slow=6.8,SNR=10						
VNDA	**Vanda**	**71.86**	**177**	*e*P	**P**	**03 14 25.6**	**-0.1**
	0.7nm,0.6s,mb3.7						
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**03 15 32.1**	**-0.2**
	1.2nm,0.5s,mb4.0,baz=299,slow=1.4,SNR=11						
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**03 15 32.1**	**-0.2**
SIV	**San Ignacio**	**144.79**	**129**	PKP	PKPdf	03 22 38.4	-1.9
	0.6nm,0.5s,baz=269,slow=4.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**144.88**	**284**	PKPbc	PKPdf	03 22 38.9	-1.7
	0.8nm,0.7s,baz=66,slow=3.8,SNR=12						

*ISCJB **18** 03:03:29.7±0.6, 2968N±009×1413E±04, h107km±12km, mb3.9/4, Error ellipse: s-maj=55.6km s-min=6.0km az=165.6*
*JMA **18** 03:03:29.6±0.1, 2984N×141.70E, h50km, M4.2*
*IDC **18** 03:03:32.4±4.4, 2958N×141.02E, h108km±41km, mb3.4/4, mb1 3.5/5, mb1mx3.2/21, mbtmp3.4/5, Error ellipse: s-maj=94.4km s-min=24.9km az=76.0*

ISC 18 03:03:31.1±0.6, 2968N±010×1413E±04, h101km±12km, n13, σ0.9t9/16, mb3.9/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.69**	**163**	P	**Pn**	**03 04 12.7**	**-0.1**
CBIJ				*e*S	**Sn**	**03 04 44.4**	**-0.4**
JHHJ	**Haha-jima-NKT**	**3.14**	**165**	P	**Pn**	**03 04 19.2**	**+0.5**
JHHJ				*e*S	**Sn**	**03 04 55.5**	**+0.1**
JHJ2	**Mitsune**	**3.65**	**340**	P	**Pn**	**03 04 25.5**	**0.0**
JHJ2				*e*S	**Sn**	**03 05 06.6**	**-1.0**
BSO3	**Boso 3**	**5.15**	**353**	P	**Pn**	**03 04 45.1**	**-0.7**
JHU	**Hanno**	**6.38**	**345**	P	**Pn**	**03 05 03.2**	**+0.6**
JYT	**Yasato**	**6.60**	**352**	P	**Pn**	**03 05 05.5**	**+0.1**
JRY	**Ryogami san**	**6.63**	**343**	P	**Pn**	**03 05 07.2**	**+1.3**
JHO	**Hitachi**	**6.94**	**355**	P	**Pn**	**03 05 09.1**	**-1.0**
MJAR	**Matsushiro Arr**	**7.32**	**340**	P	**Pn**	**03 05 16.4**	**+1.2**
	0.9nm,0.3s,baz=156,slow=13,SNR=11						
MKAR	**Makanchi Array**	**48.25**	**308**	P	**P**	**03 12 00.8**	**-0.8**
	0.2nm,0.3s,mb3.4,baz=92,slow=8.1,SNR=6.6						
WRA	**Warramunga Arr**	**49.78**	**189**	P	**P**	**03 12 13.0**	**-0.5**
	0.4nm,0.4s,mb3.7,baz=5.9,slow=7.7,SNR=7.5						
BVAR	**Borovoye Array**	**55.63**	**316**	P	**P**	**03 12 56.5**	**+0.2**
	1.2nm,0.6s,mb4.1,baz=99,slow=8.9,SNR=6.6						
ARCES	**ARCESS Array B**	**70.85**	**340**	P	**P**	**03 14 37.0**	**+0.6**
	3.5nm,0.9s,mb4.2,baz=50,slow=8.4,SNR=3.1						

*ISCJB **18** 03:13:09.0±0.6, 2243S±004×7041W±008, h53km±7km, mb3.8/4, Error ellipse: s-maj=12.2km s-min=6.0km az=11.8*
*GUC **18** 03:13:09.5±1.1, 2250S×7026W, h43km±28km, ML3.4*
*NEIC **18** 03:13:09.3±0.6, 2250S×7035W, h35km, mb3.8/1, Error ellipse: s-maj=15.3km s-min=10.3km az=92.0*
*IDC **18** 03:13:10.1±0.9, 2254S×7019W, h35km±6km, mb3.6/3, mb1 3.8/5, mb1mx3.5/19, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=21.5km s-min=13.8km az=178.0*

ISC 18 03:13:10.0±0.6, 2246S±003×7039W±007, h43km±8km, n22, σ1.9t17/26, mb3.8/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.65**	**185**	*e*P	**Pn**	**03 13 21.9**	**-1.0**
MECH				*i*S	**Sn**	**03 13 31.5**	**-0.6**
MECH				AML	AML	03 13 35.9	
	comp=N,4μm,0.4s						
CEN1	**Los Morros**	**0.95**	**170**	*e*P	**Pn**	**03 13 28.6**	**+1.7**
CEN1				*i*S	**Sn**	**03 13 42.7**	**+3.5**
CEN1				AML	AML	03 13 43.0	
	comp=E,928nm,0.3s						
ANCH	**Antofagasta**	**1.22**	**181**	*e*P	**Pn**	**03 13 30.3**	**-0.3**
ANCH				*i*S	**Sn**	**03 13 46.8**	**+0.8**
ANCH				AML	AML	03 13 49.3	
	comp=N,2μm,0.3s						
LVC	**Limon Verde**	**1.37**	**97**	Pg	**Pn**	**03 13 32.5**	**-0.2**
	baz=269,slow=13						
LVC				Lg		03 13 48.8	
	comp=N,170nm,0.3s,baz=69,slow=17,SNR=17						
LVC	**Limon Verde**	**1.37**	**97**	*e*P	**Pn**	**03 13 32.5**	**-0.3**
LVC				*i*S	**Sn**	**03 13 49.3**	**-0.4**
LVC				AML	AML	03 13 57.3	
	comp=N,748nm,0.5s						
PB01	**Plate Boundary**	**1.64**	**31**	*e*P	**Pn**	**03 13 36.5**	**+0.2**
PB01				*i*S	**Sn**	**03 13 57.7**	**+1.5**
PB01				AML	AML	03 14 00.4	
	comp=E,2μm,0.5s						
ARE	**Arequipa**	**6.05**	**350**	*e*P	**Pn**	**03 14 36.0**	**-1.0**
ARE				*e*S

ISC 18 04:03:37.8±0.6, 2024S±009×17398W±009, h35km, n28, σ1§18/23, mb4.4/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.64**	**19**	**Pn**	**Pn**	**04 05 12.1**	**-0.8**
	5.8nm,0.3s,baz=128,slow=23,SNR=14						
AFI				Sn	**Sn**	**04 06 18.4**	**-9.1**
	36nm,0.3s,baz=89,slow=18,SNR=7.2						
RAR	**Rarotonga**	**13.33**	**97**	Pn	**Pn**	**04 06 42.5**	**-2.0**
	2.1nm,0.3s,baz=284,slow=8.3,SNR=5.0						
RAR				Sn	**Sn**	**04 08 56.3**	**-15**
	7.6nm,0.3s,baz=88,slow=23,SNR=5.7						
URZ	**Urewera**	**19.55**	**201**	P	**Pn**	**04 08 04.2**	**+0.3**
	2.8nm,0.3s,baz=358,slow=3.6,SNR=19						
PPT	**Papeete**	**23.23**	**88**	*e*LR	LR	04 14 02.6	
	211nm,28.2s						
RPZ	**Rata Peaks**	**26.54**	**205**	P	**P**	**04 09 15.1**	**+2.9**
	12nm,0.6s,mb4.6,baz=184,slow=2.8,SNR=14						
CTA	**Charters Tower**	**37.27**	**263**	P	**P**	**04 10 46.8**	**+0.2**
	5.8nm,0.4s,mb4.8,baz=91,slow=13,SNR=12						
CTAO	**Charters Tower**	**37.27**	**263**	*e*P	**P**	**04 10 46.5**	**0.0**
	5.6nm,0.4s,mb4.8						
PMG	**Port Moresby**	**38.99**	**280**	*e*P	**P**	**04 11 01.5**	**+0.4**
	15nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**41.30**	**244**	P	**P**	**04 11 20.0**	**-0.1**
	4.7nm,0.6s,mb4.3,baz=90,slow=10,SNR=11						
COEN	**Coen**	**41.34**	**272**	*e*P	**P**	**04 11 20.9**	**+0.2**
	2.4nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**48.25**	**256**	P	**P**	**04 12 15.0**	**-0.6**
	5.2nm,0.8s,mb4.6,baz=90,slow=7.8,SNR=43						
ASAR				PcP	PcP	04 13 43.4	+1.0
	1.1nm,0.6s,baz=109,slow=3.6,SNR=6.4						
WB2	**Warramunga Arr**	**48.36**	**261**	*e*P	**P**	**04 12 15.5**	**-1.0**
WRAB	**Tennant Creek**	**48.36**	**261**	*e*P	**P**	**04 12 15.7**	**-0.8**
	6.0nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**48.37**	**261**	P	**P**	**04 12 15.0**	**-1.5**
	2.6nm,0.6s,mb4.5,baz=94,slow=5.4,SNR=36						
WRA				PcP	PcP	04 13 43.8	+0.9
	0.6nm,0.5s,baz=100,slow=3.3,SNR=3.1						
FORT	**Forrest**	**52.86**	**246**	*e*P	**P**	**04 12 49.6**	**-0.7**
	1.8nm,0.6s,mb4.2						
VNDA	**Vanda**	**58.53**	**186**	P	**P**	**04 13 32.5**	**+2.3**
	0.5nm,0.8s,mb3.6,baz=346,slow=5.3,SNR=4.2						
VNDA	**Vanda**	**58.53**	**186**	*e*P	**P**	**04 13 33.3**	**+3.1**
	1.2nm,1.1s,mb3.8						
MBWA	**Marble Bar**	**61.59**	**256**	*e*P	**P**	**04 13 51.1**	**-1.0**
	5.2nm,0.6s,mb4.8						
MJAR	**Matsushiro Arr**	**72.31**	**321**	P	**P**	**04 15 00.6**	**+0.7**
	1.7nm,0.5s,mb4.2,baz=148,slow=6.0,SNR=7.2						
PETK	**Petropavlovsk-**	**77.06**	**343**	P	**P**	**04 15 28.6**	**+1.6**
	5.5nm,1.0s,mb4.4,baz=130,slow=9.6,SNR=5.2						
NVAR	**Mina Array Bea**	**78.29**	**41**	P	**P**	**04 15 36.1**	**+1.9**
	0.4nm,0.6s,mb3.5,baz=220,slow=9.6,SNR=5.2						
COLA	**College**	**87.20**	**11**	*e*P	**P**	**04 16 20.7**	**+0.8**
	3.6nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**113.77**	**313**	PKiKP	PKiKP	04 22 12.5	-0.1
	0.2nm,0.6s,baz=119,slow=1.5,SNR=3.7						
ARCES	**ARCESS Array B**	**129.30**	**351**	PKP	PKPdf	04 22 42.2	+0.5
	3.4nm,0.8s,baz=35,slow=4.4,SNR=3.9						
ARCES	**ARCESS Array B**	**129.30**	**351**	PKP	PKPdf	04 22 42.2	+0.4
AKASG	**Malin Array Be**	**144.52**	**334**	PKP	PKPdf	04 23 09.4	-0.9
	3.8nm,0.5s,baz=40,slow=4.1,SNR=23						
CLL	**Collm**	**148.52**	**352**	*e*PKPbc	PKPbc	04 23 22.0	+1.3
CLL				*e*PKPab	PKPab	04 23 25.0	+0.9
CLL				*es*PKPbc		04 23 34.0	
GERES	**GERESS Array B**	**150.81**	**350**	PKPbc	PKPbc	04 23 27.8	+1.4
	0.8nm,0.7s,baz=29,slow=3.0,SNR=8.1						
GERES				PKPab	PKPab	04 23 34.5	+1.0
	0.5nm,0.8s,baz=25,slow=3.2,SNR=3.4						

*ISCJB **18** 04:10:42.6±0.9, 3754S±007×17706E±0.10, h161km±6km, mb3.2/2, Error ellipse: s-maj=13.4km s-min=10.1km az=151.7*

*NEIC **18** 04:10:43.9, 3736S×177.11E, h141km, MG4.0(WEL), After WEL.*

*IDC **18** 04:10:45.4±1.1, 3774S×17669E, h143km±12km, mb3.0/2, mb1 3.2/3, mb1mx3.1/15, mbtmp3.0/3, MS3.7/1, Ms1 3.7/1, ms1mx3.1/7, Error ellipse: s-maj=36.4km s-min=27.2km az=121.0*

ISC 18 04:10:43.4±0.9, 3754S±007×17708E±010, h156km±6km, n33, σ1§16/34, mb3.2/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDRZ	**Edgecumbe**	**0.63**	**205**	P	**Pn**	**04 11 06.5**	**+0.4**
URZ	**Urewera**	**0.72**	**178**	P	**Pn**	**04 11 06.7**	**0.0**
	24nm,0.3s,baz=319,slow=1.6,SNR=152						
URZ				S	**Sn**	**04 11 24.1**	**-0.4**
	34nm,0.3s,baz=319,slow=6.6,SNR=10						
URZ	**Urewera**	**0.72**	**178**	P	**Pn**	**04 11 06.3**	**-0.3**
TAZ	**Tarawera**	**0.83**	**213**	P	**Pn**	**04 11 08.4**	**+1.0**
MWZ	**Matawai**	**0.87**	**156**	P	**Pn**	**04 11 07.9**	**+0.2**
MXZ	**Matakaoa Point**	**0.97**	**92**	P	**Pn**	**04 11 07.9**	**-0.6**
PUZ	**Puketiti**	**1.07**	**120**	P	**Pn**	**04 11 09.1**	**-0.2**
KUZ	**Kuaotunu**	**1.34**	**305**	P	**Pn**	**04 11 09.8**	**-2.0**
KNZ	**Kokohu**	**1.56**	**163**	P	**Pn**	**04 11 14.6**	**+0.7**
MKAZ	**Moumakai**	**1.58**	**285**	P	**Pn**	**04 11 13.8**	**-0.4**
MKAZ				S	**Sn**	**04 11 37.0**	**-0.9**
BKZ	**Black Stump Fm**	**1.69**	**196**	P	**Pn**	**04 11 16.3**	**+0.9**
TWVZ	**Taurewa**	**2.01**	**220**	P	**Pn**	**04 11 20.7**	**+1.8**
NGZ	**Ngauruhoe**	**2.01**	**215**	P	**Pn**	**04 11 20.9**	**+2.0**
TUVZ	**Tukino**	**2.06**	**212**	P	**Pn**	**04 11 21.1**	**+1.6**
FWVZ	**Far West T-bar**	**2.10**	**214**	P	**Pn**	**04 11 21.6**	**+1.7**
WNVZ	**Wahianoa**	**2.14**	**213**	P	**Pn**	**04 11 21.8**	**+1.4**
MOVZ	**Moawhango**	**2.14**	**209**	P	**Pn**	**04 11 21.2**	**+0.8**
TSZ	**Takapari Road**	**2.67**	**199**	P	**Pn**	**04 11 27.2**	**+0.4**
WAZ	**Wanganui**	**2.76**	**216**	P	**Pn**	**04 11 29.3**	**+1.4**
BFZ	**Birch Farm**	**3.21**	**191**	P	**Pn**	**04 11 33.5**	**0.0**
MRZ	**Mangatainoka R**	**3.33**	**200**	P	**Pn**	**04 11 34.7**	**-0.4**
KIW	**Kapiti Island**	**3.73**	**206**	P	**Pn**	**04 11 39.4**	**-0.8**
MTW	**Mount Morrison**	**3.82**	**198**	P	**Pn**	**04 11 40.2**	**-1.2**
PAWZ	**Paruwai Farm**	**4.05**	**198**	P	**Pn**	**04 11 43.0**	**-1.3**
MSWZ	**Moikau Station**	**4.13**	**200**	P	**Pn**	**04 11 43.8**	**-1.5**
SNZO	**South Karori**	**4.20**	**205**	P	**Pn**	**04 11 44.8**	**-1.4**
BHW	**Baring Head**	**4.23**	**203**	P	**Pn**	**04 11 45.1**	**-1.6**
TCW	**Tory Channel**	**4.27**	**210**	P	**Pn**	**04 11 45.7**	**-1.5**
RPZ	**Rata Peaks**	**7.69**	**215**	P	**Pn**	**04 12 30.4**	**-2.1**
	0.5nm,0.3s,baz=31,slow=18,SNR=3.5						
RPZ				S	**Sn**	**04 13 51.8**	**-6.5**
	0.5nm,0.3s,baz=346,slow=12,SNR=3.0						
RAO	**Raoul Island**	**9.26**	**28**	LR	LR	04 16 11.2	
	comp=Z,424nm,19.9s,baz=124,slow=34						
ASAR	**Alice Springs**	**39.31**	**278**	P	**P**	**04 17 58.7**	**+1.4**
	0.4nm,0.5s,mb3.3,baz=121,slow=8.1,SNR=6.8						
WRA	**Warramunga Arr**	**40.98**	**283**	P	**P**	**04 18 11.6**	**+0.5**
	0.2nm,0.3s,mb3.2,baz=122,slow=8.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**155.37**	**191**	PKP	PKPdf	04 30 25.3	+6.7
	0.2nm,0.8s,baz=223,slow=1.7,SNR=3.2						
TORD				PKPab	PKPab	04 30 46.5	+2.1
	0.2nm,0.8s,baz=166,slow=3.7,SNR=3.2						

*ISCJB **18** 04:17:40.0±0.4, 975N×003×12458E±003, h53km±4km, mb4.0/12, MS3.4/8, Error ellipse: s-maj=5.6km s-min=5.2km az=174.7*

*MAN **18** 04:17:39, 975N×12456E, h22km, mb4.9, ML3.8, MS3.9*

MAN INTENSITY III - GUINDULMAN, BOHOL; INTENSITY II - JAGNA, BOHOL, GARCIA, HERNANDEZ, CEBU CITY; INTENSITY I - HIBOK-HIBOK.

*NEIC **18** 04:17:48.9±1.8, 991N×12502E, h127km±16km, mb4.4/3, Error ellipse: s-maj=47.9km s-min=11.6km az=63.0*

NEIC Felt [III PIVS] at Guindulman and [II PIVS] at Garcia Hernandez and Jagna, Bohol. Also felt [II PIVS] at Cebu City, Cebu and at Hibok-Hibok, Camiguin.

*IDC **18** 04:17:50.2±1.7, 984N×12487E, h134km±17km, mb3.5/9, mb1 3.6/10, mb1mx3.5/19, mbtmp3.5/10, MS3.4/11, Ms1 3.4/11, ms1mx3.3/26, Error ellipse: s-maj=44.2km s-min=13.7km az=69.0*

ISC 18 04:17:40.9±0.4, 974N±003×12458E±003, h43km±5km, n43, σ1§06/51, mb4.0/12, MS3.4/8, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.48**	**36**	*e*P	**Pn**	**04 17 50.5**	**-0.9**
MSLP				*e*S	**Sn**	**04 18 00.6**	**+1.6**
TBP	**Tagbilaran**	**0.70**	**266**	*i* P	**Pn**	**04 17 52.9**	**-1.5**
TBP				*i* S	**Sn**	**04 18 02.5**	**-1.7**
LLP	**Lapu-Lapu**	**0.83**	**314**↑	*e*P	**Pn**	**04 17 54.9**	**-1.2**
LLP				*e*S	**Sn**	**04 18 06.7**	**-0.5**
SCPH	**Surigao**	**0.90**	**87**↓	*e*P	**Pn**	**04 17 55.2**	**-1.9**
SCPH				*e*S	**Sn**	**04 18 08.9**	**-0.1**
BUTP	**Butuan**	**1.29**	**127**	*e*P	**Pn**	**04 18 01.5**	**-0.8**
BUTP				*e*S	**Sn**	**04 18 24.4**	**+6.0**
OCLP	**Ormoc**	**1.30**	**1**	*e*P	**Pn**	**04 18 01.6**	**-1.0**
OCLP				*e*S	**Sn**	**04 18 23.1**	**+4.3**
SNPH	**Sibulan**	**1.38**	**253**	*i* P	**Pn**	**04 18 04.0**	**+0.4**
SNPH				*i* S	**Sn**	**04 18 07.0**	**-14**
PLP	**Palo**	**1.47**	**16**↑	*e*P	**Pn**	**04 18 04.8**	**-0.1**
PLP				*e*S	**Sn**	**04 18 22.7**	**-0.3**
DCPH	**Dipolog City**	**1.67**	**226**↑	*i* P	**Pn**	**04 18 06.9**	**-0.7**
DCPH				*i* S	**Sn**	**04 18 27.6**	**-0.2**
BUKP	**Musuan**	**1.91**	**165**	*e*P	**Pn**	**04 18 12.7**	**+1.7**
BUKP				*e*S	**Sn**	**04 18 40.4**	**+6.5**
GUIM	**Jordan**	**2.14**	**294**	*e*P	**Pn**	**04 18 13.3**	**-0.8**
GUIM				*e*S	**Sn**	**04 18 40.8**	**+1.3**
PAGZ	**Pagadian**	**2.22**	**212**	*e*P	**Pn**	**04 18 16.3**	**+1.1**
RCP	**Roxas**	**2.55**	**315**↑	*e*P	**Pn**	**04 18 20.1**	**+0.3**
RCP				*i* S	**Sn**	**04 18 50.8**	**+1.3**
CNP	**Catarman**	**2.75**	**2**	*e*P	**Pn**	**04 18 23.9**	**+1.4**
MMPH	**Masbate**	**2.76**	**340**	*e*P	**Pn**	**04 18 30.2**	**+7.5**
MMPH				*e*S	**Sn**	**04 18 50.3**	**-4.5**
IPIL	**Ipil**	**2.77**	**226**	*e*P	**Pn**	**04 18 24.2**	**+1.4**
DAV	**Davao City (W)**	**2.83**	**159**	P	**Pn**	**04 18 33.7**	**+10**
	94nm,0.3s,baz=80,slow=6.5,SNR=6.2						
DAV				S	**Sn**	**04 19 10.3**	**+14**
	84nm,0.3s,baz=242,slow=24,SNR=5.7						
DAV				LR	LR	04 19 40.8	
	comp=Z,673nm,20.1s,baz=299,slow=39						
KALP	**Kalibo**	**2.92**	**311**↑	*e*P	**Sn**	**04 18 48.2**	**-11**
SJMP	**San Jose**	**4.34**	**309**	*e*P	**Pn**	**04 18 45.6**	**+1.3**
ENPP	**El Nido**	**5.27**	**286**	*e*P	**Pn**	**04 18 57.2**	**+0.1**
LUBP	**Lubang**	**5.81**	**314**	*e*P	**Pn**	**04 18 59.3**	**-5.2**
KAPI	**Kappang**	**15.43**	**198**	LR	LR	04 28 52.8	
	comp=Z,68nm,18.9s,baz=25,slow=42						
JOW	**Kunigami**	**17.36**	**11**	LR	LR	04 27 42.5	
	comp=Z,88nm,20.2s,baz=282,slow=34						
CMAR	**Chiang Mai Arr**	**26.30**	**292**	P	**P**	**04 23 16.3**	**+3.6**
	0.8nm,0.3s,mb3.7,baz=105,slow=6.8,SNR=3.2						
KSRS	**Korea Array**	**27.76**	**6**	P	**P**	**04 23 25.9**	**+0.3**
	1.7nm,0.7s,mb3.8,baz=188,slow=10.0,SNR=3.8						
KSRS				LR	LR	04 33 50.1	
	comp=Z,64nm,18.5s,MS3.2,baz=344,slow=35						
MJAR	**Matsushiro Arr**	**29.41**	**23**	LR	LR	04 33 53.7	
	comp=Z,52nm,20.2s,MS3.1,baz=190,slow=33						
WRA	**Warramunga Arr**	**31.02**	**162**	P	**P**	**04 23 53.6**	**-1.1**
	0.4nm,0.7s,mb3.4,baz=345,slow=9.1,SNR=4.0						
ASAR	**Alice Springs**	**34.43**	**165**	P	**P**	**04 24 25.0**	**+0.5**
	0.7nm,0.7s,mb3.7,baz=342,slow=7.0,SNR=14						
SONM	**Songino Array**	**40.95**	**341**	P	**P**	**04 25 19.3**	**0.0**
	0.3nm,0.5s,mb3.1,baz=169,slow=8.5,SNR=3.3						
SONM				LR	LR	04 43 15.0	
	comp=Z,89nm,20.2s,MS3.6,baz=150,slow=37						
SONM	**Songino Array**	**40.95**	**341**	P	**P**	**04 25 19.3**	**0.0**
SONM				LR	LR	04 43 14.9	
STKA	**Stephens Creek**	**44.47**	**159**	P	**P**	**04 25 49.4**	**+1.4**
	2.9nm,0.9s,mb4.0,baz=310,slow=13,SNR=4.4						
STKA				LR	LR	04 45 00.3	
	comp=Z,81nm,18.4s,MS3.7,baz=24,slow=37						
STKA	**Stephens Creek**	**44.47**	**159**	P	**P**	**04 25 49.4**	**+1.4**
STKA				LR	LR	04 45 00.2	
PETK	**Petropavlovsk-**	**50.81**	**25**	LR	LR	04 49 43.6	
	comp=Z,24nm,18.4s,MS3.2,baz=45,slow=38						
MK31	**Makanchi Array**	**51.45**	**324**	*e*P	**P**	**04 26 42.4**	**+0.5**
MKAR	**Makanchi Array**	**51.45**	**324**	P	**P**	**04 26 42.4**	**+0.6**
	2.4nm,0.9s,mb4.2,baz=126,slow=7.1,SNR=21						
MKAR				LR	LR	04 50 17.2	
	comp=Z,41nm,19.4s,MS3.5,baz=352,slow=38						
MKAR	**Makanchi Array**	**51.45**	**324**	P	**P**	**04 26 42.4**	**+0.6**
MKAR				LR	LR	04 50 17.2	
ZALV	**Zalesovo Beam**	**54.30**	**332**	P	**P**	**04 27 02.0**	**-0.7**
	1.2nm,0.7s,mb3.9,baz=139,slow=7.0,SNR=5.1						
ZALV				LR	LR	04 51 24.3	
	comp=Z,28nm,18.1s,MS3.4,baz=89,slow=37						
KURK	**Kurchatov**	**55.57**	**326**	*e*P	**P**	**04 27 12.1**	**+0.1**
	1.6nm,0.3s,mb4.5						
BRVK	**Borovoye**	**61.23**	**326**	*e*P	**P**	**04 27 51.4**	**0.0**
	2.5nm,0.4s,mb4.7						
AKASG	**Malin Array Be**	**85.91**	**321**	P	**P**	**04 30 15.5**	**-0.8**
	0.3nm,0.3s,mb4.0,baz=72,slow=4.4,SNR=3.6						
NOA	**NORSAR Array B**	**92.49**	**333**	LR	LR	05 15 35.3	
	comp=Z,24nm,18.4s,MS3.7,baz=300,slow=37						
PSZ	**Piszkesteto**	**92.50**	**319**	*e*P	**P**	**04 30 45.0**	**-2.6**
	0.9nm,0.5s,mb4.5						
TORD	**Torodi Ar. Bea**	**118.90**	**291**	PKP	PKPdf	04 36 24.3	-1.4
	0.4nm,0.9s,baz=98,slow=2.0,SNR=2.5						

ISC 18 04:34:00.2±1.0, 3877N±007×3129E±007, h12km±16km, n5, σ0§59/7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLV	**Bolvadin**	**0.27**	**258**	*i* P	**Pg**	**04 34 06.2**	**+0.4**
KIZT	**Kizilcal**	**0.48**	**77**	*e*PG	**Pg**	**04 34 09.7**	**+0.1**
KIZT				*e*SG	**Sg**	**04 34 16.4**	**+0.4**
ESKT	**Eskisehir**	**0.82**	**336**	*i* P	**Pg**	**04 34 16.1**	**0.0**
ESKT				*i* S	**Sg**	**04 34 26.5**	**-0.3**
LADK	**Ladik-KONYA**	**1.02**	**124**	*e*PG	**Pg**	**04 34 19.1**	**-0.9**
KONT	**Konya--Tatoy**	**1.18**	**134**	*e*PN	**Pn**	**04 34 22.8**	**+0.2**

*ISCJB **18** 04:37:25.0±5.7, 109S±008×12678E±008, h15km±37km, mb4.1/6, Error ellipse: s-maj=14.4km s-min=13.9km az=146.2*

*IDC **18** 04:37:25.0±1.1, 104S×12679E, h0km, mb3.9/6, mb1 4.2/7, mb1mx4.0/17, mbtmp4.0/7, ML4.2/1, Error ellipse: s-maj=36.2km s-min=17.7km az=64.0*

*NEIC **18** 04:37:30.3±3.4, 1.12S×12676E, h38km±34km, mb3.9/3, Error ellipse: s-maj=32.3km s-min=8.5km az=49.0*

ISC 18 04:37:26.6±6.8, 106S±008×12681E±008, h11km±45km, n12, σ0§49/13, mb4.1/6, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**8.07**	**241**	Pn	**Pn**	**04 39 24.3**	**+0.4**
	3.5nm,0.3s,baz=138,slow=7.2,SNR=9.5						
KAPI				Sn	**Sn**	**04 40 55.2**	**+0.1**
	1.5nm,0.3s,baz=196,slow=17,SNR=2.7						
WRAB	**Tennant Creek**	**20.16**	**159**	*e*P	**P**	**04 42 00.5**	**-0.7**
	5.5nm,1.0s						
WRA	**Warramunga Arr**	**20.16**	**159**	P	**P**	**04 42 00.8**	**-0.4**
	3.7nm,0.8s,baz=341,slow=12,SNR=33						
WB2	**Warramunga Arr**	**20.17**	**159**	*e*P	**P**	**04 42 00.6**	**-0.6**
COEN	**Coen**	**20.65**	**129**	*e*P	**P**	**04 42 07.4**	**+0.9**
	2.5nm,0.7s						
ASAR	**Alice Springs**	**23.50**	**164**	P	**P**	**04 42 36.8**	**-0.1**
	2.7nm,0.7s,mb3.8,baz=345,slow=13,SNR=22						
CMAR	**Chiang Mai Arr**	**33.57**	**307**	P	**P**	**04 44 06.5**	**-0.5**
	1.1nm,0.4s,mb4.2,baz=134,slow=7.6,SNR=5.1						
STKA	**Stephens Creek**	**33.68**	**157**	P	**P**	**04 44 08.6**	**+0.8**
	5.5nm,0.9s,mb4.5,baz=322,slow=9.8,SNR=8.4						
SONM	**Songino Array**	**51.85**	**343**	P	**P**	**04 46 34.7**	**-0.1**
	0.6nm,0.7s,mb3.6,baz=151,slow=6.5,SNR=4.1						
MKAR	**Makanchi Array**	**61.55**	**327**	P	**P**	**04 47 44.0**	**+0.2**
	0.7nm,0.5s,mb4.0,baz=120,slow=8.5,SNR=11						
MKAR	**Makanchi Array**	**61.55**	**327**	P	**P**	**04 47 44.0**	**+0.2**
KURK	**Kurchatov**	**65.82**	**329**	*e*P	**P**	**04 48 12.0**	**0.0**
	1.2nm,0.4s,mb4.3						

*IDC **18** 04:39:02.2±4.6, 2355S×69.85W, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.4/17, mbtmp3.6/2, ML3.7/1, Error ellipse: s-maj=146.3km s-min=62.2km az=84.0*

*ISCJB **18** 04:39:08.1±1.1, 23.11S±007×7026W±008, h52km±8km, Error ellipse: s-maj=13.4km s-min=10.8km az=37.5*

*GUC **18** 04:39:08.3±0.8, 2312S×7018W, h37km±2km, ML3.1*

ISC 18 04:39:09.0±1.1, 2311S±007×7025W±008, h46km±9km, n9, σ1§34/13, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.18**	**273**	*e*P	**Pn**	**04 39 15.1**	**-1.7**
MECH				*i* S	**Sn**	**04 39 21.3**	**-1.0**
MECH				AML	AML	04 39 21.9	
	comp=E,4μm,0.3s						
CEN1	**Los Morros**	**0.28**	**170**	*e*P	**Pn**	**04 39 18.4**	**+0.8**
CEN1				*i* S	**Sn**	**04 39 25.7**	**+2.0**
CEN1				AML	AML	04 39 26.3	
	comp=N,2μm,0.4s						
PB06	**Plate Boundary**	**0.75**	**57**↓	*i* P	**Pn**	**04 39 21.6**	**-1.6**
PB06				*i* S	**Sn**	**04 39 31.8**	**-1.7**
PB04	**Plate Boundary**	**1.10**	**40**	*e*P	**Pn**	**04 39 22.2**	**-5.9**
PB04				AML	AML	04 39 35.3	
	comp=E,3μm,0.5s						
LVC	**Limon Verde**	**1.33**	**68**↓	*i* P	**Pn**	**04 39 31.3**	**+0.1**
LVC				*i* S	**Sn**	**04 39 48.1**	**+0.3**
LVC				AML	AML	04 39 52.7	
	comp=E,335nm,0.2s						
PB07	**Plate Boundary**	**1.42**	**14**	*e*P	**Pn**	**04 39 33.0**	**+0.6**
PB07				*e*S	**Sn**	**04 39 51.5**	**+1.6**
LPAZ	**La Paz**	**7.08**	**17**	Pn	**Pn**	**04 40 52.2**	**+2.1**
	comp=E,0.5nm,0.3s,baz=186,slow=6.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**79.06**	**71**	P	**P**	**04 51 07.9**	**-1.0**
	comp=E,0.5nm,0.8s,baz=248,slow=6.4,SNR=5.4						
MKAR	**Makanchi Array**	**147.66**	**36**	PKPbc	PKPbc	04 58 48.3	-0.1
	comp=E,0.3nm,0.8s,baz=279,slow=2.8,SNR=3.3						

IDC 18 04:49:20.6±5.0, 4927S×16512E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=100.3km s-min=33.4km az=155.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**6.90**	**39**	Pn	Pn	04 51 04.2	+1.2
	1.4nm,0.3s,baz=208,slow=5.7,SNR=6.0						
RPZ				Sn	Sn	04 52 21.3	-0.7
	4.5nm,0.3s,baz=19,slow=15,SNR=7.9						
ASAR	**Alice Springs**	**35.39**	**305**	P	P	04 56 18.6	+0.6
	0.7nm,0.6s,baz=139,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**38.22**	**309**	P	P	04 56 41.5	-0.7
	0.7nm,0.7s,baz=141,slow=8.7,SNR=7.0						
TORD	**Torodi Ar. Bea**	**141.48**	**206**	PKP	PKPdf	05 08 52.5	-1.3
	0.5nm,0.9s,baz=173,slow=3.4,SNR=4.1						

DHMR 18 04:50:00.4±1.2, 1325N×4150E, h8km±12km, ML3.6, 1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMRY	**Kamaran Island**	**2.34**	**27**	*i* P	Pn	04 50 41.1	+2.0
KAMRY				*i* S	Sn	04 51 12.3	+4.2
KAMRY				AML	AML	04 51 28.7	
	comp=N,735nm,0.6s						
UDYN	**Al 'Udayn**	**2.50**	**73**	*i* P	Pn	04 50 44.4	+3.0
UDYN				*i* S	Sn	04 51 18.2	+6.1
UDYN				AML	AML	04 51 34.1	
	comp=N,315nm,0.6s						
TRBA	**At Turbah**	**2.55**	**90**↓	*i* P	Pn	04 50 45.0	+2.9
TRBA				*i* S	Sn	04 51 18.7	+5.5
TRBA				AML	AML	04 51 44.9	
	comp=N,417nm,0.7s						
DHBB	**Dhamar BB**	**3.10**	**65**	*i* P	Pn	04 50 52.6	+2.9
DHBB				*i* S	Sn	04 51 34.2	+7.4
LBOS		**3.70**	**80**	*i* P	Pn	04 50 59.8	+1.9
LBOS				*i* S	Sn	04 51 47.5	+5.9
BDHA	**Al Bayda'**	**4.02**	**79**	*i* P	Pn	04 51 05.1	+2.8
BDHA				*i* S	Sn	04 51 55.0	+5.4

*CSEM **18** 04:57:45.2±0.7, 3800N×2644W, h3km±5km, ML3.0, Error ellipse: s-maj=3.5km s-min=3.5km az=33.0, After PDA*

PDA 18 04:57:45.2±0.7, 3800N×2644W, h3km±5km, MD3.6, ML3.0, Error ellipse: s-maj=3.5km s-min=3.5km az=33.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDA	**Ponta Delgada**	**0.66**	**112**	*e*P	Pg	04 57 56.5	-1.4
PDA				*e*S	Sg	04 58 05.1	-1.4
PSBA	**Serra de Santa**	**1.04**	**318**	*e*P	Pg	04 58 01.5	-3.6
PSBA				*e*S	Sg	04 58 14.1	-4.5
PSBA				A		04 58 16.4	
	242nm,0.2s						
PSBA	**Serra de Santa**	**1.04**	**318**	*e*P	Pg	04 58 01.5	-3.6
PSBA				*e*S	Sg	04 58 14.1	-4.5
PSMN	**Pico do Norte,**	**1.47**	**132**	*e*P	Pn	04 58 07.8	-4.8
PSMN				*e*S	Sb	04 58 24.4	-7.9
PICO	**Pico**	**1.64**	**288**	*e*P	Pn	04 58 10.3	-4.6
PICO

baz=321,slow=18,SNR=2.3
LPAZ ScS ScS 05 54 56.6 -2.9
comp=N,0.1nm,0.3s,baz=256,slow=23,SNR=3.6
LPAZ La Paz 6.57 344 ⇑*i*Pn **Pn** **05 41 46.4 +2.5**
comp=N,19nm,0.8s
LPAZ *e*Sn **S** **05 43 03.8 +4.4**
LCO Las Campanas 7.49 211 *e*Pn **Pn** **05 41 53.1 -2.6**
comp=N,480nm,0.6s
LCO *e*S **S** **05 43 03.1 -18**
ARE Arequipa 7.88 320 ⇑*i*P **Pn** **05 41 59.4 -1.4**
SIV San Ignacio 8.24 37 P **Pn** **05 42 07.4 +2.0**
comp=N,204nm,0.3s,baz=228,slow=11,SNR=2658
SIV S **S** **05 43 36.1 -2.6**
baz=245,slow=17,SNR=1.6
SIV ScP ScP 05 51 25.8 -1.9
baz=241,slow=22,SNR=3.5
SIV ScS ScS 05 54 57.4 -4.4
comp=N,0.2nm,0.3s,baz=307,slow=20,SNR=3.0
CFAA Coronel Fontan 9.09 191 P **Pn** **05 42 13.9 -2.4**
comp=N,8.7nm,0.3s,baz=16,slow=10,SNR=180
CFAA S **S** **05 43 50.9 -7.7**
comp=N,22nm,0.3s,baz=287,slow=23,SNR=15
CFAA ScS ScS 05 54 59.1 -3.6
comp=N,0.1nm,0.3s,baz=237,slow=23,SNR=14
LPA La Plata 14.22 151 *ce*P **Pn** **05 43 19.0 -2.1**
LPA La Plata 14.22 151 *de*P **Pn** **05 43 21.3 +0.2**
comp=N,968nm,0.9s
LPA *e*S **S** **05 45 54.0 -5.0**
LPA *i* ScS ScS 05 55 11.0 -2.1
LPA La Plata 14.22 151 ⇑*e*P **Pn** **05 43 19.0 -2.1**
LPA *e*P 05 43 21.3
LPA *e*S **S** **05 45 54.0 -5.0**
LPA *i* ScS ScS 05 55 11.0 -2.1
LPA La Plata 14.22 151 ⇑*e*P **Pn** **05 43 19.0 -2.1**
LPA *e*S **S** **05 45 54.0 -5.0**
NNA Nana 14.63 315 P **Pn** **05 43 26.7 +0.5**
comp=N,23nm,0.3s,baz=158,slow=11,SNR=184
NNA S **S** **05 46 04.2 -4.4**
comp=N,24nm,0.3s,baz=204,slow=19,SNR=5.1
NNA ScP ScP 05 51 34.4 -2.3
comp=N,0.7nm,0.3s,baz=27,slow=2.3,SNR=15
NNA ScS ScS 05 55 12.1 -2.6
comp=N,0.8nm,0.3s,baz=137,slow=18,SNR=6.7
NNA Nana 14.63 315 Pn **Pn** **05 43 27.0 +0.8**
comp=N,4μm,0.7s
NNA Nana 14.63 315 *e*Pn **Pn** **05 43 26.5 +0.3**
NNA *e*S **S** **05 46 04.6 -4.0**
SPB Sao Paulo 17.35 97 *e*Pn **Pn** **05 43 58.4 -0.3**
SPB *e*S **S** **05 47 06.2 +0.1**
PLCA Paso Flores 18.39 190 P **P** **05 44 07.5 -0.4**
comp=N,12nm,0.3s,baz=12,slow=13,SNR=281
PLCA S **S** **05 47 22.5 -3.9**
comp=N,0.7nm,0.3s,baz=187,slow=21,SNR=2.1
PLCA PcP PcP 05 48 29.6 +0.8
comp=N,4.3nm,0.3s,baz=23,slow=2.1,SNR=8.1
PLCA ScP ScP 05 51 42.4 -1.3
comp=N,0.2nm,0.3s,baz=43,slow=2.3,SNR=3.0
PLCA ScS ScS 05 55 21.6 -3.1
baz=240,slow=23,SNR=6.0
PLCA Paso Flores 18.39 190 *e*P **P** **05 44 07.0 -0.9**
comp=N,470nm,1.0s
PLCA *e*S **S** **05 47 26.3 0.0**
PLCA *e*PcP PcP 05 48 29.2 +0.4
PLCA *e*ScP ScP 05 51 41.5 -2.2
PLCA Paso Flores 18.39 190 P **P** **05 44 07.5 -0.4**
PLCA S **S** **05 47 22.5 -3.9**
PLCA pmax pmax
comp=Z,12nm,0.3s
PLCA smax
comp=N,1.0nm,0.3s
BDFB Brasilia 18.59 71 P **P** **05 44 11.9 +1.7**
comp=N,123nm,0.3s,baz=240,slow=17,SNR=928
BDFB S **S** **05 47 28.6 -2.2**
baz=161,slow=24,SNR=1.5
BDFB ScS ScS 05 55 21.8 -4.3
comp=N,0.1nm,0.3s,baz=197,slow=19,SNR=2.0
ATAH Atahualpa 19.46 321 P **P** **05 44 19.9 +0.3**
comp=N,8.4nm,0.3s,baz=156,slow=7.3,SNR=100
ATAH S **S** **05 47 47.1 -0.8**
comp=N,0.9nm,0.3s,baz=284,slow=20,SNR=1.7
ATAH ScP ScP 05 51 45.6 -0.9
comp=N,1.1nm,0.3s,baz=178,slow=3.8,SNR=8.4
CAM4 Nova Friburgo 21.90 94 ⇑*i*P **P** **05 44 45.1 +0.1**
CAM4 *i* 05 44 46.5
CAM4 *i* 05 44 47.4
CAM4 *i* 05 44 52.0
CAM4 *i* 05 44 56.8
CAM3 Guarapari 23.99 90 ⇑*i*P **P** **05 45 03.9 -0.2**
CAM3 *i* 05 45 05.7
CAM3 *i* 05 45 06.7
CAM3 *i* 05 45 13.0
OTAV Otavalo 25.66 331 *e*P **P** **05 45 20.5 +1.4**
comp=N,120nm,0.9s,mb5.5
OTAV *e*PcP PcP 05 48 45.2 +1.4
OTAV *e*S **S** **05 49 34.5 +3.2**
OTAV *e*ScP ScP 05 52 01.9 -0.8
CHI2 28.09 344 *e*P Px 05 47 28.0
ROSC El Rosal 28.45 343 P **P** **05 45 43.8 -0.2**
comp=N,38nm,0.7s,mb5.1,baz=136,slow=2.6,SNR=21
ROSC S **S** **05 50 18.0 +2.7**
comp=N,21nm,0.8s,baz=86,slow=21,SNR=1.8
ROSC ScP ScP 05 52 09.5 -1.6
comp=N,70nm,0.7s,baz=104,slow=10,SNR=8.1
ROSC El Rosal 28.45 343 *e*P **P** **05 45 44.4 +0.3**
ROSC *e*S **S** **05 50 21.0 +5.6**
ROSC *e*ScP ScP 05 52 09.5 -1.6
EFI East Falkland 29.66 170 *e*P **P** **05 45 54.0 -0.4**
comp=N,538nm,1.1s,mb6.1
EFI *e*PcP PcP 05 48 53.4 +0.5
EFI *e*ScP ScP 05 52 12.9 -1.4
EFI East Falkland 29.66 170 *e*P **P** **05 45 54.0 -0.3**
EFI *e* 05 48 53.4
EFI pmax pmax
comp=Z,538nm,1.1s,mb6.1
LAPE La Pedrera 30.47 350 *e*P Px 05 47 08.5
USHA Ushuaia 32.18 182 P **P** **05 46 16.2 -0.2**
comp=Z,90nm,0.8s,mb5.4,baz=347,slow=5.8,SNR=39
USHA PcP PcP 05 49 00.1 +0.5
comp=Z,57nm,0.8s,baz=331,slow=4.0,SNR=5.7
USHA S **S** **05 51 10.6 -2.1**
comp=Z,9.9nm,0.9s,baz=95,slow=23,SNR=2.1
USHA ScP ScP 05 52 20.7 -1.9
comp=Z,21nm,0.8s,baz=306,slow=3.5,SNR=5.8
BUAY Buenos Aires 32.86 8 *e*P **P** **05 46 27.8 +5.1**
SIPA Siparia 32.92 9 *e*P **P** **05 46 28.1 +4.9**
ALNG Atlantic LNG 32.93 8 *e*P **P** **05 46 27.8 +4.5**
TPP Pointe-a-Pierr 33.10 9 *e*P **P** **05 46 27.6 +2.9**
TBH Brigand Hill 33.32 9 *e*P **P** **05 46 28.5 +1.8**
TRN Trinidad (W) 33.43 9 *e*P **P** **05 46 29.8 +2.2**
TCE Chacachacare 33.43 8 *e*P **P** **05 46 29.2 +1.6**
RCBR Riachuelo 33.73 65 *e*P **P** **05 46 30.6 +0.3**
comp=Z,2μm,1.6s,mb6.4
TPR Prospect 34.05 10 *e*P **P** **05 46 33.7 +0.8**
BCIP Isla Barro Col 34.30 336 *e*P **P** **05 46 35.7 +0.6**
comp=Z,2μm,2.1s,mb6.2
GRGR Grenville 34.86 8 *e*P **P** **05 46 40.3 +0.4**
comp=Z,2μm,0.7s,mb6.7
GRW Mount Saint Ca 34.88 8 *e*P **P** **05 46 40.3 +0.2**
ACR Cerro Adams 35.24 330 *e*P **P** **05 46 44.9 +1.7**
BAR1 35.82 330 *e*P **P** **05 46 49.9 +1.7**
BBGH Gun Hill 36.17 11 *e*P **P** **05 46 49.4 -1.6**
comp=Z,991nm,1.4s,mb6.2
QCR Quepos 36.38 329 *e*P **P** **05 46 53.9 +1.0**
URSC Urasca 36.56 330 *e*P **P** **05 46 56.0 +1.6**
LCR2 La Lucha 2 36.58 330 *e*P **P** **05 46 56.3 +1.8**
LAJ Bijagual 36.74 330 *e*P **P** **05 46 57.7 +1.8**
PRS1 Puriscal 36.94 329 *e*P **P** **05 46 58.3 +0.8**
CGA2 Cerro Gallo 2 37.04 329 *e*P **P** **05 47 00.9 +2.5**
JCR Jicaral 37.20 328 *e*P **P** **05 47 00.8 +1.0**
BIM Bigot 37.28 8⇑*e*P **P** **05 46 59.7 -0.7**
MVM Montagne Vaucl 37.34 9 *e*P **P** **05 47 00.6 -0.3**
FDF Fort de France 37.49 8⇑*e*P **P** **05 47 01.8 -0.3**
FORC Fortuna 37.53 329 *e*P **P** **05 47 03.9 +1.3**
VCR Vista de Mar 37.70 328 *e*P **P** **05 47 04.5 +0.5**
2RIO Dos Rios de Up 37.85 329 *e*P **P** **05 47 10.2 +5.0**
CUI Cuipilapa 37.93 329 *e*P **P** **05 47 07.4 +1.6**
LIM1 Limonal 38.01 329 *e*P **P** **05 47 06.1 -0.4**
DWS Wesley 38.29 8 *e*P **P** **05 47 07.9 -0.9**
CONN Concepcion 38.94 329 ⇓*e*P **P** **05 47 14.4 +0.1**
RPN Rapa Nui 39.19 254 P **P** **05 47 16.0 -0.3**
comp=Z,234nm,1.0s,mb5.7,baz=87,slow=4.3,SNR=7.0
WILN Americas 2 39.72 329 *e*P **P** **05 47 20.1 -0.6**
MGAN Managua 39.74 328 *e*P **P** **05 47 20.4 -0.5**
TISN Laguna Tiscapa 39.75 328 *e*P **P** **05 47 20.4 -0.6**

XAVN Gruta Xavier 39.78 328 *e*P **P** **05 47 20.6 -0.6**
HUEN 39.87 329 *e*P **P** **05 47 21.3 -0.6**
COPN Copaltepe 39.94 328 *e*P **P** **05 47 23.2 +0.7**
MOMN Momotombo 40.11 328 *e*P **P** **05 47 24.4 +0.5**
MIRN Miramar 40.22 328 *e*P **P** **05 47 23.7 -1.1**
ANWB Willy Bob 40.31 7 *e*P **P** **05 47 22.6 -2.8**
TEL3 Telica 3 40.40 328 *e*P **P** **05 47 25.4 -0.9**
CPD Cerro la Pandu 40.44 1 *e*P **P** **05 47 24.4 -2.1**
comp=Z,68nm,0.8s,mb5.1
CPD Cerro la Pandu 40.44 1 *e*P **P** **05 47 24.4 -2.1**
CPD pmax pmax
comp=Z,68nm,0.8s,mb5.1
SJG San Juan 40.51 0 *e*P **P** **05 47 24.7 -2.4**
comp=Z,136nm,0.7s,mb5.5
SJG San Juan 40.51 0 *e*P **P** **05 47 25.0 -2.1**
SJG San Juan 40.51 0 *e*P **P** **05 47 24.2 -2.9**
HUMP Col San Antoni 40.54 1 *e*P **P** **05 47 25.8 -1.5**
comp=Z,100nm,1.0s,mb5.2
MPR Mayaguez 40.62 359 *e*P **P** **05 47 26.1 -1.9**
CBYP Canovanas 40.67 1 *e*P **P** **05 47 26.6 -1.8**
comp=Z,84nm,0.8s,mb5.2
AOPR Arecibo Observ 40.74 359 *e*P **P** **05 47 27.5 -1.5**
comp=Z,58nm,0.8s,mb5.1
AGPR Aguadilla, PR 40.87 359 *e*P **P** **05 47 27.5 -2.5**
AGPR *e*S **S** **05 53 23.0 -2.0**
CNCH Conchagua 41.49 327 *e*P x 05 47 34.0
SDDR Presa de Saban 41.66 353 *e*P **P** **05 47 34.7 -1.8**
comp=Z,80nm,0.8s,mb5.2
TGUH Tegucigalpa,Un 41.88 329 *e*P **P** **05 47 38.4 +0.1**
comp=Z,585nm,1.0s,mb6.0
TGUH *e*ScP ScP 05 52 56.5 -3.0
CAHU Cacacuatique 42.10 327 *e*P x 05 47 40.0
PMSA Palmer Station 42.14 179 P **P** **05 47 39.8 0.0**
comp=Z,110nm,0.7s,mb5.4,baz=4.9,slow=8.3,SNR=42
PMSA PcP PcP 05 49 30.9 +1.0
comp=Z,38nm,0.5s,baz=16,slow=4.2,SNR=8.6
PMSA ScP ScP 05 52 58.6 -1.1
comp=Z,54nm,1.1s,baz=37,slow=0.8,SNR=3.7
PMSA S **S** **05 53 38.6 -4.0**
comp=Z,25nm,1.1s,baz=39,slow=12,SNR=1.7
PMSA Palmer Station 42.14 179 *e*P **P** **05 47 40.5 +0.7**
comp=Z,158nm,0.8s,mb5.5
PMSA *e*PcP PcP 05 49 29.9 -0.1
PMSA *e*ScP ScP 05 52 58.6 -1.1
BOQS Boqueron 42.61 326 *e*P x 05 47 44.5
SBLS San Blas 42.88 326 *e*P x 05 47 47.1
TRIS Tristan da Cun 48.35 120 *e*P **P** **05 48 28.4 -0.5**
comp=Z,240nm,0.9s,mb5.5
VHO Vista Hermosa 49.47 320 *i*P **P** **05 48 38.4 +0.8**
VHO *i*S **S** **05 55 26.2 -2.1**
PNIG Pinotepa 49.78 318 *e*P **P** **05 48 39.5 -0.5**
PNIG *i*S **S** **05 55 31.9 -0.7**
LVIG Laguna Verde 51.38 323 *i*P **P** **05 48 49.0 -3.0**
CAIG El Cayaco 51.61 317 *e*P **P** **05 48 51.7 -2.0**
ASCN Ascension 51.90 82 *e*P **P** **05 48 45.7 -10**
PPM Popocatepetl 52.14 320 *e*P **P** **05 48 58.0 +0.5**
PLIG Platanillo 52.15 319 *i*P **P** **05 48 58.3 +0.7**
DWPF Disney 52.54 343 *e*P **P** **05 48 59.5 -0.8**
comp=Z,199nm,1.0s,mb5.5
UNM Universidad Na 52.67 320 *i*P **P** **05 49 02.5 +1.1**
ZIIG Zihuatanejo 52.78 316 *e*P **P** **05 49 00.0 -2.2**
MOIG Morelia 54.15 318 *i*P **P** **05 49 12.9 +0.7**
BBSR BB Station 54.73 2 *e*P **P** **05 49 15.4 -0.7**
comp=Z,142nm,1.2s,mb5.4
CJM Chamela 56.47 315 *i*P **P** **05 49 28.7 0.0**
BRAL Brewton 56.96 339 *e*P **P** **05 49 32.3 +0.4**
comp=Z,725nm,1.0s,mb6.3
NHSC New Hope 57.01 346 *e*P **P** **05 49 32.3 0.0**
comp=Z,624nm,1.0s,mb6.2
SHEL Horse Pasture 57.18 95 P **P** **05 49 34.2 +0.3**
comp=Z,2μm,0.6s,mb6.8,SNR=11
SHEL Horse Pasture 57.18 95 *e*P **P** **05 49 33.9 0.0**
comp=Z,140nm,0.6s,mb5.8
ZAIG Zacatecas 57.33 320 *i*P **P** **05 49 35.4 +0.7**
COW Cow Castle Cre 57.39 346 *e*P **P** **05 49 34.7 -0.2**
GOGA Godfrey 58.11 343 *e*P **P** **05 49 38.8 -1.1**
comp=Z,256nm,1.2s,mb5.7
GOGA *e*PcP PcP 05 50 28.7 -0.4
GOGA Godfrey 58.11 343 *e*P **P** **05 49 38.8 -1.1**
GOGA pmax pmax
comp=Z,260nm,1.2s,mb5.7
VNA3 Neumayer Olymp 58.21 161 *e*P **P** **05 49 40.2 +0.1**
VNA3 *e* 05 49 41.6
VNA3 *e* 05 49 46.3
VNA3 *e* 05 49 50.9
VNA3 *e* pP 05 50 29.4 +0.5
VNA3 *e* 05 54 06.4
VNA3 *e*S **S** **05 57 23.6 -0.6**
JSC Jenkinsville 58.38 345 *e*P **P** **05 49 41.4 -0.3**
JSC *e* pP 05 50 31.3 +0.6
VNA1 Neumayer--Stat 58.39 161 *e*P **P** **05 49 42.0 +0.6**
VNA1 *e* 05 49 43.5
VNA1 *e* 05 49 48.0
VNA1 *e* pP 05 50 30.9 +0.7
VNA1 *e* 05 54 08.5
VNA1 *e* 05 57 29.1
LHS Liberty Hill 58.47 346 *e*P **P** **05 49 42.2 -0.2**
LHS Liberty Hill 58.47 346 *e*P **P** **05 49 42.6 +0.3**
KVTX Kingsville 58.51 327 *e*P **P** **05 49 43.4 +0.6**
comp=Z,708nm,1.1s,mb6.2
KVTX *e* pP 05 50 33.3 +1.6
CNNC Cliffs of the 58.62 349 *e*P **P** **05 49 42.7 -0.7**
comp=Z,103nm,0.8s,mb5.5
CNNC *e* pP 05 50 31.7 -0.6
CNNC *e*ScP ScP 05 54 09.5 -1.0
VNA2 Neumayer--Watz 58.76 161 *e*P **P** **05 49 44.3 +0.3**
baz=284,slow=9.0
VNA2 *e* 05 49 45.7
VNA2 *e* 05 49 50.2
VNA2 *e* 05 49 54.5
VNA2 *e* pP 05 50 32.0 -0.9
VNA2 *e* 05 54 09.2
VNA2 *e*S **S** **05 57 28.0 -3.4**
LRAL Lakeview Retre 58.80 340 *e*P **P** **05 49 43.0 -1.6**
comp=Z,174nm,0.7s,mb5.8
VBMS Vicksburg 59.28 336 *e*P **P** **05 49 47.2 -0.8**
comp=Z,430nm,1.3s,mb5.9
HKT Hockley 59.52 330 *e*P **P** **05 49 49.4 -0.3**
comp=Z,158nm,1.0s,mb5.6
HKT Hockley 59.52 330 *e*P **P** **05 49 49.4 -0.3**
HKT pmax pmax
comp=Z,159nm,1.0s,mb5.6
MAIG Mazatlaan 60.02 317 *e*P **P** **05 49 53.5 +0.3**
TKL Tuckaleechee C 60.31 344 S **S** **05 57 47.1 -4.8**
comp=Z,6.9nm,0.9s,baz=14,slow=20,SNR=9.1
TKL ScS ScS 05 59 18.2 -5.6
comp=Z,2.3nm,0.9s,baz=286,slow=20,SNR=5.2
TKL Tuckaleechee C 60.31 344 *e*P **P** **05 49 53.8 -1.2**
CPCT Cooper Cave 60.31 343 *e*P **P** **05 49 53.7 -1.2**
CPCT *e*PcP PcP 05 50 37.3 -0.5
SNAA Sanae 60.40 161 *e*P **P** **05 49 52.8 -2.3**
SNAA *e* 05 49 54.9
SNAA *e* 05 49 59.2
SNAA *e* 05 50 03.6
SNAA *e* 05 50 36.7
SNAA *e* 05 54 15.4
SNAA *e*S **S** **05 57 51.5 -0.8**
SNAA Sanae 60.40 161 *e*P **P** **05 49 53.9 -1.3**
comp=Z,368nm,1.1s,mb5.9
SNAA *e*PcP PcP 05 50 37.0 -0.8
SNAA *e*ScP ScP 05 54 15.4 -2.6
SNAA Sanae 60.40 161 *e*P **P** **05 49 53.9 -1.2**
SNAA *e* 05 50 37.0
SNAA pmax pmax
comp=Z,368nm,1.1s
SWET Sewanee 60.49 342 *e*P **P** **05 49 55.2 -1.0**
URVA University of 60.83 350 *e*P **P** **05 49 57.6 -0.8**
URVA *e*PcP PcP 05 50 39.3 -0.6
OXF Oxford 60.95 338 *e*P **P** **05 49 57.3 -2.0**
comp=Z,930nm,0.9s,mb6.4
OXF Oxford 60.95 338 *e*P **P** **05 49 57.3 -2.0**
OXF pmax pmax
comp=Z,930nm,0.9s,mb6.4
BLA Blacksburg 61.01 347 *e*P **P** **05 49 59.6 -0.1**
comp=Z,396nm,1.1s,mb6.0
BLA *e*S **S** **05 58 01.3 +0.5**
BLA Blacksburg 61.01 347 P **P** **05 49 59.6 0.0**
BLA pmax pmax
comp=Z,400nm,1.1s,mb6.0
TZTN Tazewell 61.09 344 *e*P **P** **05 49 59.1 -1.1**
comp=Z,154nm,0.9s,mb5.6
ELN Prospectdale 61.10 347 *e*P **P** **05 50 00.2 0.0**
BBTS Babate 61.21 57 S **S** **05 58 00.8 -3.3**

comp=Z,4.1nm,0.3s,baz=330,slow=19,SNR=5.7
BBTS ScS ScS 05 59 30.9 -0.6
comp=Z,5.3nm,0.4s,baz=282,slow=20,SNR=4.0
CBN Corbin 61.42 350 *e*P **P** **05 50 01.8 -0.6**
comp=Z,56nm,0.6s,mb5.4
CBN *e*PcP PcP 05 50 42.6 +0.4
MET Memphis--Engin 61.69 338 *e*P **P** **05 50 03.1 -1.0**
JCT Junction City 61.87 327 *e*P **P** **05 50 04.7 -0.8**
comp=Z,336nm,0.9s,mb6.0
WVT Waverly 61.91 340 *e*P **P** **05 50 04.0 -1.7**
comp=Z,599nm,0.9s,mb6.2
HALT Halls 62.20 339 *e*P **P** **05 50 06.0 -1.6**
UALR University of 62.25 336 *e*P **P** **05 50 06.5 -1.5**
comp=Z,199nm,1.0s,mb5.7
UALR *e*ScP ScP 05 54 24.4 -2.4
HBAR Harrisburg 62.33 338 *e*P **P** **05 50 07.4 -1.0**
UTMT University of 62.44 340 *e*P **P** **05 50 07.2 -2.0**
comp=Z,1μm,0.9s,mb6.6
GNAR Gosnell 62.48 338 *e*P **P** **05 50 09.0 -0.4**
comp=Z,6μm,0.9s
GNAR *e*PcP PcP 05 50 46.7 +0.1
GNAR *e*ScP ScP 05 54 25.7 -2.0
GLAT Glass 62.51 339 *e*P **P** **05 50 08.6 -1.1**
MIAR Mount Ida 62.52 335 *e*P **P** **05 50 08.7 -1.0**
comp=Z,194nm,0.8s,mb5.8
SDMD Soldier's Deli 62.52 351 *e*P **P** **05 50 09.1 -0.6**
comp=Z,76nm,0.9s,mb5.3
SDMD *e*PcP PcP 05 50 47.3 +0.7
RKT Rikitea 62.72 255 *e*S **S** **05 58 22.3 -0.7**
comp=Z,2μm,27.5s
RKT Rikitea 62.72 255 *e*LR LR 06 08 55.8
comp=Z,2μm,26.2s
PVMO Portageville 62.78 339 *e*P **P** **05 50 11.1 -0.3**
comp=Z,408nm,0.5s,mb6.3
TXAR Lajitas Array 62.99 323 P **P** **05 50 12.3 -0.7**
comp=Z,42nm,0.8s,mb5.2,baz=147,slow=8.1,SNR=426
TXAR S **S** **05 58 22.1 -3.7**
comp=Z,1.6nm,1.0s,baz=115,slow=19,SNR=2.8
TXAR PKP2bc 06 19 15.2
comp=Z,2.0nm,0.9s,baz=246,slow=2.2,SNR=9.0
TXAR Lajitas Array 62.99 323 P **P** **05 50 12.3 -0.7**
TXAR S **S** **05 58 22.1 -3.7**
TXAR ⇑*e* 06 19 15.2
TXAR Lajitas Array 62.99 323 P **P** **05 50 12.3 -0.6**
TXAR S **S** **05 58 22.1 -3.7**
TXAR pmax pmax
comp=Z,42nm,0.8s
TXAR smax
comp=N,2.0nm,1.0s
PARMO Parma 63.02 339 *e*P **P** **05 50 12.2 -0.8**
MVL Millersville 63.03 351 *e*P **P** **05 50 12.7 -0.3**
comp=N,62nm,0.8s,mb5.3
MVL *e*PcP PcP 05 50 49.0 +0.2
LPIG La Paz 63.17 315 *i*P **P** **05 50 14.2 -0.1**
MCWV Mont Chateau 63.27 348 *e*P **P** **05 50 14.4 -0.1**
comp=N,253nm,0.9s,mb5.8
WCI Wyandotte Cave 63.41 342 *e*P **P** **05 50 13.7 -1.8**
comp=N,351nm,0.9s,mb6.0
WCI Wyandotte Cave 63.41 342 *e*P **P** **05 50 13.7 -1.8**
WCI pmax pmax
comp=Z,351nm,0.9s,mb6.0
BRNJ Basking Ridge 63.48 353 *e*P **P** **05 50 16.7 +0.8**
comp=Z,87nm,0.8s,mb5.4
LUPA Lehigh Univers 63.49 352 *e*P **P** **05 50 15.7 -0.3**
LUPA *e*PcP PcP 05 50 51.1 +0.5
CPNY Central Park 63.52 353 *e*P **P** **05 50 15.9 -0.2**
comp=Z,43nm,0.8s,mb5.1
USIN University of 63.56 341 *e*P **P** **05 50 14.3 -2.1**
comp=Z,291nm,1.0s,mb5.9
PAL Palisades 63.72 354 *e*P **P** **05 50 17.2 -0.3**
comp=Z,74nm,1.0s,mb5.3
PAL *e*PcP PcP 05 50 51.5 -0.1
SIUC Southern Illin 63.81 340 *e*P **P** **05 50 16.5 -1.6**
comp=Z,274nm,0.9s,mb5.9
SIUC *e*PcP PcP 05 50 51.7 -0.3
SSPA Standing Stone 63.88 350 *e*P **P** **05 50 18.3 -0.2**
comp=Z,50nm,0.7s,mb5.3
SSPA *e*PcP PcP 05 50 52.0 -0.2
BLO Bloomington 64.35 343 *e*P **P** **05 50 20.1 -1.6**
comp=Z,197nm,0.6s,mb5.9
BLO *e*PcP PcP 05 50 54.1 -0.1
BLO *e*S **S** **05 58 36.6 -5.6**
BLO Bloomington 64.35 343 *e*P **P** **05 50 20.1 -1.5**
BLO *e* 05 50 54.1
BLO *e*S **S** **05 58 36.6 -5.6**
BLO pmax pmax
comp=Z,197nm,0.6s,mb5.9
OLIL Olney 64.40 341 *e*P **P** **05 50 19.7 -2.3**
comp=Z,162nm,1.0s,mb5.6
BRYW Bryant College 64.42 356 *e*P **P** **05 50 22.0 -0.1**
comp=Z,413nm,0.9s,mb6.1
BRYW *e*PcP PcP 05 50 54.6 +0.2
FVM French Village 64.44 339 *e*P **P** **05 50 21.0 -1.3**
comp=Z,308nm,0.8s,mb6.0
ACSO Alum Creek Sta 64.47 346 *e*P **P** **05 50 21.2 -1.1**
comp=Z,562nm,0.8s,mb6.2
QUA2 Belchertown 64.84 355 *e*P **P** **05 50 24.1 -0.6**
comp=Z,79nm,0.8s,mb5.4
MAIT Maitri 64.86 159 *e*P **P** **05 50 23.4 -1.1**
WES Weston 64.87 356 *e*P **P** **05 50 24.9 0.0**
comp=Z,69nm,0.8s,mb5.3
WMOK Wichita Mounta 64.89 331 *e*P **P** **05 50 23.5 -1.7**
comp=Z,73nm,1.1s,mb5.2
WMOK *e*PcP PcP 05 50 56.9 +0.3
NVL N'lazarevskaya 64.89 159 *c i*P **P** **05 50 25.5 +0.8**
NVL *e*S **S** **05 58 46.8 -1.3**
NVL pmax pmax
comp=Z,547nm,1.5s,mb6.0
SLM Saint Louis 64.97 339 *e*P **P** **05 50 24.0 -1.7**
comp=Z,163nm,0.9s,mb5.7
BINY Binghamton 65.14 352 *e*P **P** **05 50 26.8 +0.2**
comp=Z,390nm,0.9s,mb6.0
ALLY Alegheny Colle 65.25 349 *e*P **P** **05 50 26.9 -0.4**
comp=Z,472nm,0.9s,mb6.1
GDL2 Guadalupe Moun 65.59 325 *e*P **P** **05 50 29.5 -0.3**
ERPA Erie 65.68 349 *e*P **P** **05 50 29.8 -0.3**
comp=Z,643nm,0.8s,mb6.3
FFD Franklin Falls 65.97 356 *e*P **P** **05 50 32.4 +0.4**
comp=Z,227nm,1.0s,mb5.8
ACCN Adirondack Com 66.06 354 *e*P **P** **05 50 32.5 0.0**
comp=Z,33nm,0.6s,mb5.1
HNH Hanover 66.25 355 *e*P **P** **05 50 34.1 +0.4**
comp=Z,256nm,1.0s,mb5.8
AMTX Amarillo 66.36 329 *e*P **P** **05 50 33.6 -1.0**
comp=Z,180nm,0.9s,mb5.7
LIC Lamto 66.38 72 *e*P **P** **05 50 33.8 -1.4**
comp=Z,725nm,1.4s,mb6.1
LIC Lamto 66.38 72 *e*P **P** **05 50 33.9 -1.3**
comp=Z,98nm,0.5s,mb5.4
LIC *e*MLR MLR
comp=Z,1μm,19.2s
LIC Lamto 66.38 72 *e*P **P** **05 50 33.9 -1.3**
comp=Z,49nm,0.5s,mb5.4
LIC LR LR
comp=Z,630nm,19.3s
HDIL Hopedale 66.43 341 *e*P **P** **05 50 33.2 -1.8**
comp=Z,412nm,0.9s,mb6.1
TIC Toumodi 66.58 72 *e*P **P** **05 50 35.3 -1.2**
comp=Z,1μm,1.2s,mb6.5
TIC Toumodi 66.58 72 *e*P **P** **05 50 35.3 -1.2**
TIC pmax pmax
comp=Z,1μm,1.2s,mb6.4
AAM Ann Arbor 66.59 346 *e*P **P** **05 50 34.7 -1.2**
comp=Z,129nm,0.7s,mb5.7
AAM *e*PcP PcP 05 51 03.9 +0.5
MDV Middlebury 66.62 355 *e*P **P** **05 50 35.9 -0.2**
MDV *e*PcP PcP 05 51 03.4 -0.1
NCB Newcomb 66.69 354 *e*P **P** **05 50 36.5 0.0**
comp=Z,112nm,0.8s,mb5.5
KIC Kosan Boka 66.69 72 *e*P **P** **05 50 35.9 -1.3**
comp=Z,1μm,0.8s,mb6.6
DBIC Dimbokro 66.74 72 P **P** **05 50 36.4 -1.1**
comp=Z,234nm,0.8s,mb5.9,baz=218,slow=6.7,SNR=137
DBIC S S 05 59 04.1 -8.1
comp=Z,17nm,0.9s,baz=3.9,slow=21,SNR=18
DBIC ScS ScS 06 00 08.1 -5.9
comp=Z,15nm,1.1s,baz=71,slow=21,SNR=9.7
DBIC PKPPKP 06 19 01.0
comp=Z,4.5nm,0.8s,baz=67,slow=2.9,SNR=6.3
DBIC Dimbokro 66.74 72 *e*P **P** **05 50 36.4 -1.1**
comp=Z,348nm,0.9s,mb6.0
DBIC Dimbokro 66.74 72 P **P** **05 50 36.4 -1.1**
DBIC S S 05 59 04.1 -8.1
DBIC 06 00 08.1
DBIC pmax pmax
comp=Z,235nm,0.8s

DBIC smax
comp=N,17nm,0.9s
LBNH Lisbon 66.76 356 *e*P **P** **05 50 37.1 +0.2**
comp=N,146nm,0.8s,mb5.7
WVL Waterville 66.95 357 *e*P **P** **05 50 38.6 +0.4**
EMMW East Machias 67.04 359 *e*P **P** **05 50 38.7 0.0**
LONY Lake Ozonia 67.37 354 *e*P **P** **05 50 40.6 -0.1**
comp=N,226nm,0.9s,mb5.8
FRNY Flat Rock 67.49 354 *e*P **P** **05 50 41.3 -0.1**
comp=N,102nm,0.9s,mb5.5
QSPA South Pole Qui 67.55 180 P **P** **05 50 41.8 +0.3**
comp=N,418nm,0.6s,mb6.3,baz=156,slow=2.2,SNR=984
QSPA S S 05 59 11.5 -8.4
comp=N,14nm,1.1s,baz=160,slow=4.8,SNR=2.3
QSPA South Pole Qui 67.55 180 P **P** **05 50 41.8 +0.3**
QSPA S S 05 59 11.5 -8.4
PKME Peaks-Kenny Pk 67.64 358 *e*P **P** **05 50 42.2 -0.2**
comp=N,88nm,0.6s,mb5.6
SADO Sadowa 68.11 350 S S 05 59 20.1 -7.2
comp=N,4.5nm,0.9s,baz=339,slow=7.6,SNR=3.7
BNM Barren Site 68.30 325 *e*P **P** **05 50 47.2 +0.5**
LPM Los Pinos Moun 68.42 325 *e*P **P** **05 50 47.9 +0.3**
CHIE El Hierro 68.44 45 P **P** **05 50 47.1 -0.7**
comp=N,58nm,1.0s,mb5.2
LENM Lemitar 68.49 324 *e*P **P** **05 50 48.4 +0.4**
CBKS Cedar Bluff 68.71 332 *e*P **P** **05 50 49.3 0.0**
comp=N,666nm,0.9s,mb6.3
LAZ Ladron 68.76 325 *e*P **P** **05 50 50.2 +0.6**
ANMO Albuquerque 68.82 325 *e*P **P** **05 50 50.1 +0.1**
comp=N,221nm,0.9s,mb5.8
JFWS Jewell Farm 68.88 341 *e*P **P** **05 50 49.2 -1.0**
comp=N,546nm,1.0s,mb6.1
SCIA State Center 68.90 339 *e*P **P** **05 50 49.2 -1.1**
comp=N,402nm,0.9s,mb6.0
EHIG Higuera 69.09 45 P **P** **05 50 51.0 -0.8**
comp=N,184nm,0.9s,mb5.7
GLMI Grayling 69.21 346 *e*P **P** **05 50 51.3 -0.8**
comp=N,614nm,0.9s,mb6.2
EGOM La Gomera 69.22 46 P **P** **05 50 51.9 -0.7**
comp=N,349nm,1.4s,mb5.8
TUC Tucson 69.26 321 *e*P **P** **05 50 52.9 +0.1**
comp=N,183nm,1.0s,mb5.7
TUC Tucson 69.26 321 *e*P **P** **05 50 52.9 +0.1**
TUC pmax pmax
comp=Z,183nm,1.0s,mb5.7
CCAN Las Canadas 69.66 46 P **P** **05 50 54.8 -0.5**
comp=Z,39nm,1.0s,mb5.0
EBAJ Bajamar 70.04 46 P **P** **05 50 57.7 +0.1**
comp=Z,148nm,1.7s,mb5.3
EOSO Osorio 70.26 47 P **P** **05 50 58.4 -0.5**
comp=Z,320nm,1.3s,mb5.8
SDCO Great Sand Dun 70.50 328 *e*P **P** **05 51 00.7 +0.5**
comp=Z,301nm,1.0s,mb5.9
OGNE Ogallala 71.47 332 *e*P **P** **05 51 05.7 -0.2**
comp=Z,235nm,0.8s,mb5.9
CFTV Fuerteventura 71.47 47 P **P** **05 51 05.8 -0.4**
comp=Z,69nm,0.9s,mb5.3
MVCO Mesa Verde 71.61 326 *e*P **P** **05 51 07.3 +0.5**
comp=Z,432nm,1.0s,mb6.0
ECSD EROS,Sioux Fal 71.69 337 *e*P **P** **05 51 06.1 -1.1**
TAOE Nuku Hiva Isla 71.82 268⇓*i*P **P** **05 51 09.2 +0.5**
comp=Z,2μm,1.2s,mb6.7
TAOE Nuku Hiva Isla 71.82 268 *e*LR LR 06 13 13.3
comp=Z,4μm,24.3s
WUAZ Wupatki 71.91 323 *e*P **P** **05 51 09.6 +0.9**
comp=Z,336nm,0.9s,mb6.0
ISCO Idaho Springs 72.17 329 *e*P **P** **05 51 10.7 +0.6**
comp=Z,142nm,0.9s,mb5.6
ISCO *e*PP PP 05 53 47.0 -6.9
GLA Glamis 72.20 319 *e*P **P** **05 51 10.8 +0.3**
comp=Z,126nm,0.9s,mb5.5
GLA *e*PcP PcP 05 51 28.4 +1.0
EFAM Famara 72.30 47 P **P** **05 51 10.0 -1.1**
comp=Z,231nm,1.3s,mb5.7
SMCO Snowmass 72.34 328 *e*P **P** **05 51 12.1 +1.0**
comp=Z,172nm,0.8s,mb5.7
PV01 Paradox Valley 72.34 326 *e*P **P** **05 51 12.0 +0.8**
PV10 Paradox Valley 72.77 326 *e*P **P** **05 51 13.9 +0.3**
PHWY Pilot Hill 73.28 330 *e*P **P** **05 51 17.1 +0.5**
comp=Z,181nm,1.0s,mb5.7
PFO Pinyon Flat Ob 73.58 318 S S 06 00 26.2 -4.6
comp=Z,0.7nm,0.5s,baz=91,slow=24,SNR=1.8
PFO Pinyon Flat Ob 73.58 318 *e*P **P** **05 51 19.0 +0.5**
comp=Z,148nm,1.0s,mb5.6
PFO *e*PP PP 05 54 06.7 +0.6
PFO Pinyon Flat Ob 73.58 318 *e*P **P** **05 51 19.0 +0.5**
PFO *e* 05 54 06.7
PFO pmax pmax
comp=Z,147nm,1.0s,mb5.6
LDFC Landfair 73.76 320 *e*P **P** **05 51 20.7 +1.1**
comp=Z,299nm,0.9s,mb5.9
LDFC *e*PcP PcP 05 51 35.3 +1.2
EYMN Ely 73.83 343 *e*P **P** **05 51 18.4 -1.3**
comp=Z,131nm,0.9s,mb5.6
SRU San Rafael 74.08 326 *e*P **P** **05 51 21.7 +0.3**
comp=Z,258nm,0.9s,mb5.9
RWWY Rawlins 74.40 329 *e*P **P** **05 51 23.8 +0.7**
CCUT Cedar City 74.48 323 *e*P **P** **05 51 25.0 +1.4**
MSU Marysvale 74.52 324 *e*P **P** **05 51 24.6 +0.7**
SYO Syowa Base 74.56 159‖*e*P **P** **05 51 22.2 -1.5**
SYO Syowa Base 74.56 159‖*i*P **P** **05 51 23.5 -0.2**
TMUT Tmut Mountain 74.70 325 *e*P **P** **05 51 24.9 +0.7**
ARUT Antelope Range 74.70 323 *e*P **P** **05 51 26.0 +1.1**
SHPR Sheep Range 74.78 321 *e*P **P** **05 51 26.0 +0.6**
RSSD Black Hills 74.91 333 *e*P **P** **05 51 25.4 -0.6**
GSC Goldstone 74.93 319 *e*P **P** **05 51 26.8 +0.5**
comp=Z,183nm,0.9s,mb5.7
MWC Mount Wilson 74.98 318 *e*P **P** **05 51 27.0 +0.4**
comp=Z,176nm,1.1s,mb5.6
MWC *e*PcP PcP 05 51 39.6 +0.3
SBA Scott Base 75.14 190 *e*P **P** **05 51 27.5 +0.6**
comp=Z,229nm,1.2s,mb5.7
SNCC San Nicolas Is 75.28 316 *e*P **P** **05 51 28.4 +0.1**
comp=Z,285nm,1.0s,mb5.8
MPU Maple Canyon 75.33 326 *e*P **P** **05 51 29.0 +0.6**
comp=Z,275nm,0.9s,mb5.9
DAU Daniels Canyon 75.43 326 *e*P **P** **05 51 29.8 +0.8**
AGMN Agassiz Refuge 75.44 340 *e*P **P** **05 51 27.9 -0.9**
comp=Z,166nm,0.9s,mb5.7
TOA0 Torodi Ar. Sit 75.45 69 *e*P **P** **05 51 28.4 -1.3**
TORD Torodi Ar. Bea 75.45 69 P **P** **05 51 28.6 -1.1**
comp=Z,143nm,0.3s,mb6.1,baz=254,slow=5.4,SNR=585
TORD pP pP 05 52 26.4 +5.3
comp=Z,98nm,0.9s,baz=251,slow=5.4,SNR=2.5
TORD S S 06 00 46.7 -5.5
comp=Z,11nm,0.9s,baz=247,slow=11,SNR=11
TORD PKKPbc PKKPbc 06 10 47.3 -0.5
comp=Z,1.0nm,0.8s,baz=69,slow=2.2,SNR=4.4
TORD PKP2ab 06 18 27.8
comp=Z,0.6nm,0.9s,baz=71,slow=2.1,SNR=3.7
TORD PKPPKP 06 18 45.1
comp=Z,2.5nm,1.1s,baz=48,slow=2.2,SNR=4.0
NLU North Lily Min 75.52 325 *e*P **P** **05 51 28.2 -1.3**
comp=Z,11nm,1.1s,mb4.4
NLU *e*PcP PcP 05 51 42.2 +0.7
OSI Osito Adit 75.65 318 *e*P **P** **05 51 30.5 0.0**
comp=Z,140nm,0.8s,mb5.6
JLU Jordanelle 75.67 326 *e*P **P** **05 51 31.0 +0.7**
TPNV Topopah Spring 75.72 321 *e*P **P** **05 51 31.5 +0.7**
comp=Z,384nm,1.0s,mb6.0
TPNV Topopah Spring 75.72 321 *e*P **P** **05 51 31.5 +0.8**
TPNV pmax pmax
comp=Z,384nm,1.0s,mb6.0
SUR Sutherland 75.88 119 P **P** **05 51 32.6 +0.6**
comp=Z,349nm,1.1s,mb5.9,SNR=12
SUR Sutherland 75.88 119 *e*P **P** **05 51 31.8 -0.1**
comp=Z,144nm,1.4s,mb5.4
CTU Camp Tracy 75.89 326 *e*P **P** **05 51 32.4 +0.8**
NOQ North Oquirrh 76.05 326 *e*P **P** **05 51 33.1 +0.6**
DUG Dugway 76.08 325 *e*P **P** **05 51 33.2 +0.4**
comp=Z,220nm,0.9s,mb5.8
VNDA Vanda 76.14 190 P **P** **05 51 33.2 +0.6**
comp=Z,81nm,1.0s,mb5.3,baz=140,slow=4.7,SNR=216
VNDA PP PP 05 54 27.7 +1.6
comp=Z,12nm,1.0s,baz=185,slow=8.1,SNR=3.1
VNDA S S 06 00 54.6 -3.3
comp=Z,0.8nm,1.0s,baz=313,slow=6.2,SNR=1.9
VNDA PKKPbc PKKPbc 06 10 43.5 -4.0
comp=Z,1.3nm,0.6s,baz=312,slow=4.5,SNR=15
VNDA PKPPKP 06 18 44.3
comp=Z,0.9nm,0.7s,baz=304,slow=8.9,SNR=4.2
VNDA Vanda 76.14 190 P **P** **05 51 33.2 +0.6**
VNDA PP PP 05 54 27.7 +1.6
VNDA S S 06 00 54.6 -3.3
VNDA PKKPbc PKKPbc 06 10 43.5 -4.0
VNDA P'P' 06 18 44.3
VNDA Vanda 76.14 190 P **P** **05 51 33.2 +0.6**
VNDA 05 54 27.7
VNDA S S 06 00 54.6 -3.3
VNDA pmax pmax
comp=Z,81nm,1.0s
VNDA pmax pmax
comp=Z,12nm,1.0s
VNDA smax
comp=N,1.0nm,1.0s
ISA Isabella 76.19 318 *e*P **P** **05 51 34.1 +0.6**
comp=N,255nm,0.9s,mb5.8
BW06 Boulder Array 76.34 329 *e*P **P** **05 51 33.9 -0.2**
comp=N,129nm,1.1s,mb5.5
BW06 *e*PcP PcP 05 51 44.8 -0.2
PDAR Pinedale Array 76.34 329 P **P** **05 51 34.0 -0.2**
comp=N,43nm,0.8s,mb5.2,baz=142,slow=7.5,SNR=206
PDAR S S 06 00 56.0 -4.7
comp=N,1.7nm,1.1s,baz=40,slow=2.5,SNR=2.3
PDAR PKKPbc PKKPbc 06 10 44.9 -3.0
comp=N,0.4nm,0.4s,baz=69,slow=1.5,SNR=6.0
PDAR PKPPKP 06 18 45.4
comp=N,1.2nm,1.0s,baz=349,slow=3.0,SNR=6.5
HWUT Hardware Ranch 76.47 327 *e*P **P** **05 51 35.0 +0.1**
comp=N,239nm,0.9s,mb5.8
VAH Vaihoa 76.47 259⇓*i*P **P** **05 51 36.3 +0.8**
comp=N,728nm,1.1s,mb6.2
SPUT South Promonto 76.70 326 *e*P **P** **05 51 36.5 +0.4**
BGU Big Grassy Mou 76.72 325 *e*P **P** **05 51 36.4 +0.1**
PMOR Pomariorio Ree 76.79 259⇓*i*P **P** **05 51 38.2 +0.9**
comp=N,576nm,1.1s,mb6.1
TPH Tonopah 77.05 321 *e*P **P** **05 51 38.5 +0.3**
comp=N,322nm,1.1s,mb5.9
TPH Tonopah 77.05 321 *e*P **P** **05 51 38.5 +0.3**
TPH pmax pmax
comp=Z,322nm,1.1s,mb5.9
AHID Auburn Hatcher 77.09 328 *e*P **P** **05 51 38.5 +0.2**
comp=Z,328nm,0.8s,mb6.0
SCHQ Schefferville 77.16 360 P **P** **05 51 37.9 -0.5**
comp=Z,128nm,0.8s,mb5.6,baz=184,slow=4.4,SNR=76
SCHQ S S 06 01 03.6 -5.5
comp=Z,21nm,1.1s,baz=39,slow=17,SNR=7.7
SCHQ Schefferville 77.16 360 *e*P **P** **05 51 37.7 -0.7**
comp=Z,121nm,0.8s,mb5.6
SCHQ *e*PcP PcP 05 51 47.8 -0.4
ULM Lac du Bonnet 77.17 341 P **P** **05 51 37.5 -1.1**
comp=Z,126nm,0.7s,mb5.7,baz=154,slow=6.0,SNR=73
ULM S S 06 01 00.5 -9.0
comp=Z,14nm,1.0s,baz=284,slow=20,SNR=10.0
ULM Lac du Bonnet 77.17 341 *e*P **P** **05 51 37.3 -1.2**
comp=Z,128nm,0.8s,mb5.6
HVU Hansel Valley 77.21 326 *e*P **P** **05 51 39.1 +0.2**
TIAR Tiarei 77.23 256⇓*i*P **P** **05 51 40.1 +0.3**
comp=Z,1μm,1.1s,mb6.4
PTRM Twissleman Ran 77.25 318 *e*P **P** **05 51 39.9 +0.5**
MTUM Tungsten Hills 77.36 320 *e*P **P** **05 51 40.3 +0.4**
TSUM Tsumeb 77.37 106 *e*P **P** **05 51 39.9 -0.6**
comp=Z,141nm,0.9s,mb5.6
TSUM *e*pP pP 05 52 37.2 +5.1
TSUM *e*S S 06 01 04.7 -8.3
PAE Paea 77.41 256⇓*i*P **P** **05 51 41.3 +0.6**
comp=Z,3μm,1.1s,mb6.8
REDW Red Top Meadow 77.41 328 *e*P **P** **05 51 40.4 +0.3**
comp=Z,170nm,0.8s,mb5.7
PPT Papeete 77.44 256⇓*i*P **P** **05 51 41.8 +0.9**
comp=Z,296nm,1.3s,mb5.8
PPT *e*S S 06 01 10.5 -3.3
comp=Z,5μm,26.2s
PPT Papeete 77.44 256 *e*LQ 06 12 47.9
comp=Z,3μm,28.0s
PPT *e*LR LR 06 15 51.7
comp=Z,1μm,24.5s
PPT Papeete 77.44 256 P **P** **05 51 41.2 +0.3**
comp=Z,208nm,1.0s,mb5.7,baz=107,slow=7.7,SNR=12
PPT Papeete 77.44 256 P **P** **05 51 41.2 +0.3**
PPT pmax pmax
comp=Z,208nm,1.0s
SNOW Snow King Moun 77.44 328 *e*P **P** **05 51 40.4 +0.2**
LOHW Long Hollow 77.48 329 *e*P **P** **05 51 40.9 +0.4**
comp=Z,130nm,0.9s,mb5.6
TPAW Teton Pass 77.56 328 *e*P **P** **05 51 41.3 +0.4**
RRI2 Red Ridge 77.63 328 *e*P **P** **05 51 41.8 +0.6**
comp=Z,304nm,1.0s,mb5.9
MOOW Moose Ponds 77.65 329 *e*P **P** **05 51 41.8 +0.4**
DCID1 Drake Creek 77.75 328 *e*P **P** **05 51 42.9 +1.0**
ELK Elko 77.77 324 *e*P **P** **05 51 42.4 +0.3**
comp=Z,229nm,0.9s,mb5.8
ELK Elko 77.77 324 *e*P **P** **05 51 42.4 +0.3**
ELK pmax pmax
comp=Z,229nm,0.9s
IMW Indian Meadow 77.86 329 *e*P **P** **05 51 42.9 +0.4**
LAO LA Array 77.89 333 *e*P **P** **05 51 42.5 -0.2**
comp=Z,247nm,1.0s,mb5.6
NVAR Mina Array Bea 77.92 321 P **P** **05 51 43.4 +0.4**
comp=Z,172nm,0.9s,mb5.7,baz=149,slow=5.4,SNR=382
NVAR PKKPbc PKKPbc 06 10 43.6 -0.4
comp=Z,1.0nm,0.5s,baz=306,slow=2.0,SNR=7.1
NVAR PKPPKP 06 18 45.0
comp=Z,1.3nm,0.9s,baz=278,slow=3.6,SNR=4.2
NVAR Mina Array Bea 77.92 321 P **P** **05 51 43.4 +0.4**
NVAR PKKPbc PKKPbc 06 10 43.6 -0.4
NVAR P'P' 06 18 45.0
RLMT Red Lodge 78.00 330 *e*P **P** **05 51 43.6 +0.3**
comp=Z,236nm,1.0s,mb5.8
LKWY Lake 78.10 329 *e*P **P** **05 51 45.7 +1.9**
comp=Z,616nm,1.7s,mb6.0
LKWY *e*PP pP 05 52 28.2 -7.4
LKWY Lake 78.10 329 P **P** **05 51 45.8 +2.0**
LKWY pmax pmax
comp=Z,620nm,1.7s,mb6.0
YFT Old Faithful 78.22 329 *e*P **P** **05 51 46.4 +1.9**
YNR Norris Junctio 78.34 329 *e*P **P** **05 51 46.6 +1.5**
YMR Madison River 78.44 329 *e*P **P** **05 51 46.8 +1.1**
comp=Z,940nm,1.4s,mb6.2
DGMT Dagmar 78.51 335 *e*P **P** **05 51 46.3 +0.3**
WAKR Walker 78.63 320 *e*P **P** **05 51 47.6 +0.7**
BMN Battle Mountai 78.65 323 *e*P **P** **05 51 46.8 -0.2**
GCMT Greycliff 78.69 331 *e*P **P** **05 51 47.2 +0.2**
SAO San Andreas Ge 78.73 318 *e*P **P** **05 51 47.3 -0.2**
comp=Z,106nm,1.0s,mb5.4
SAO San Andreas Ge 78.73 318 *e*P **P** **05 51 47.3 -0.2**
SAO pmax pmax
comp=Z,106nm,1.0s,mb5.4
QLMT Earthquake Lak 78.79 329 *e*P **P** **05 51 48.4 +0.8**
CMB Columbia Colle 78.89 319 *e*P **P** **05 51 48.2 -0.2**
comp=Z,104nm,0.9s,mb5.5
CMB Columbia Colle 78.89 319 *e*P **P** **05 51 48.2 -0.1**
CMB pmax pmax
comp=Z,104nm,0.9s,mb5.5
HLID Hailey 79.33 327 *e*P **P** **05 51 51.5 +0.9**
comp=Z,502nm,0.9s,mb6.2
PAHR Pah Rah Range 79.39 321 *e*P **P** **05 51 51.7 +0.7**
MCMT McKenzie Canyo 79.47 328 *e*P **P** **05 51 52.3 +1.0**
DLMT Dillon 79.73 329 *e*P **P** **05 51 53.2 +0.5**
comp=Z,351nm,1.3s,mb5.8
SAC San Andreas 79.85 318 *e*P **P** **05 51 53.9 +0.4**
LRM Limekiln Ridge 80.00 329 *e*P **P** **05 51 54.5 +0.3**
HRY Holter Researc 80.37 330 *e*P **P** **05 51 56.4 +0.4**
HRY *e*pP pP 05 52 45.2 -2.8
OHCM Honcut 80.39 320 *e*P **P** **05 51 56.2 -0.1**
EGMT Eagleton 80.44 332 *e*P **P** **05 51 55.9 -0.5**
comp=Z,205nm,0.9s,mb5.8
MCCM Marconi Confer 80.48 318 *e*P **P** **05 51 56.9 0.0**
comp=Z,346nm,1.0s,mb5.9
NSHM Saint Helena R 80.55 319 *e*P **P** **05 51 57.3 +0.1**
MDT Midelt 80.63 49 P **P** **05 51 58.0 +0.3**
comp=Z,195nm,1.1s,mb5.7,baz=258,slow=6.3,SNR=192
MDT S S 06 01 42.9 -3.8
comp=Z,1.2nm,0.8s,baz=196,slow=16,SNR=1.8
BOSA Boshof 80.75 117 P **P** **05 51 57.6 -1.1**
comp=Z,72nm,0.9s,mb5.3,baz=250,slow=5.3,SNR=38
BOSA S S 06 01 42.6 -5.8
comp=Z,13nm,1.1s,baz=132,slow=19,SNR=9.0
BOSA PKKPbc PKKPbc 06 10 36.0 +0.1
comp=Z,4.0nm,0.5s,baz=3.8,slow=6.0,SNR=16
BOSA Boshof 80.75 117 *e*P **P** **05 51 57.6 -1.0**
comp=Z,61nm,0.8s,mb5.3
BOSA *e*pP pP 05 52 57.0 +6.4
BOSA Boshof 80.75 117 P **P** **05 51 57.6 -1.1**
BOSA S S 06 01 42.6 -5.8
BOSA 06 10 36.0
BOSA pmax pmax
comp=Z,72nm,0.9s,mb5.3
BOSA smax
comp=N,13nm,1.1s
WVOR Wild Horse Val 80.78 324 *e*P **P** **05 51 58.2 -0.2**
comp=N,307nm,1.6s,mb5.7
WVOR *e*PP PP 05 55 06.5 +0.5
WVOR Wild Horse Val 80.78 324 *e*P **P** **05 51 58.2 -0.2**
WVOR *e* 05 55 06.5
WVOR pmax pmax
comp=Z,307nm,1.6s,mb5.7
HOPS Hopland 81.13 319 *e*P **P** **05 52 00.5 +0.2**
comp=Z,160nm,1.1s,mb5.6
LIS Lisbon 81.15 42 *e*P **P** **05 51 59.6 -0.8**
LIS *e*S S 06 01 51.0 -0.9
LIS *e*S S 06 01 51.2 -0.7
LIS AMS AMS 06 15 42.5
comp=N,960nm,17.3s
CHMT Chamberlain Mo 81.18 330 *e*P **P** **05 52 00.5 +0.1**
LBCM Butte Creek Ri 81.27 321 P **P** **05 52 00.5 -0.5**
MOD Modoc 81.36 322 *e*P **P** **05 52 01.5 +0.1**
comp=N,357nm,1.0s,mb6.0
MSO Missoula 81.44 329 *e*P **P** **05 52 01.9 +0.2**
comp=N,207nm,1.6s,mb5.5
EGRO El Granado 81.47 43 P **P** **05 52 02.7 +0.6**
comp=N,126nm,1.2s,mb5.4
EVO Evora 81.74 42⇑*i*P **P** **05 52 03.5 0.0**
comp=N,328nm,1.2s,mb5.5
EVO *e*MLR MLR
comp=Z,1μm,22.2s
ALMR Almeirim 81.77 42 *e*P **P** **05 52 03.0 -0.6**
WDC Whiskeytown Da 81.80 320 *e*P **P** **05 52 02.1 -1.6**
comp=Z,156nm,0.9s,mb5.6
WDC Whiskeytown Da 81.80 320 *e*P **P** **05 52 02.1 -1.7**
WDC pmax pmax
comp=Z,156nm,0.9s,mb5.6
KCPM Cahto Peak 81.87 319‖*e*P **P** **05 52 04.6 +0.5**
KIPM Iron Peak 81.88 319 *e*P **P** **05 52 04.5 +0.2**
ESPR Espera 82.12 45 P **P** **05 52 06.1 +0.6**
comp=Z,334nm,1.3s,mb5.8
EMIN Mina Concepcio 82.12 44 P **P** **05 52 05.9 +0.4**
comp=Z,104nm,1.1s,mb5.4
EJIF Jimena Fronter 82.13 45 P **P** **05 52 06.1 +0.5**
comp=Z,86nm,0.7s,mb5.5
EJIF Jimena Fronter 82.13 45 P **P** **05 52 06.1 +0.5**
EJIF pmax pmax
comp=Z,86nm,0.7s,mb5.5
LBTB Lobatse 82.31 114 PKKPbc PKKPbc 06 10 31.9 -0.4
comp=Z,8.3nm,0.9s,baz=57,slow=2.3,SNR=8.7
LBTB Lobatse 82.31 114⇑*i*P **P** **05 52 06.0 -1.0**
comp=Z,108nm,1.1s,mb5.4
LBTB *e*pP pP 05 53 00.8 +1.7
LBTB Lobatse 82.31 114⇑*i*P **P** **05 52 06.0 -0.9**
LBTB *e**PP pP 05 53 00.8 +1.6
LBTB pmax pmax
comp=Z,108nm,1.1s,mb5.4
HOG Hogback Mounta 82.37 322 P **P** **05 52 06.9 +0.2**
EBAD Badajoz 82.50 43 P **P** **05 52 08.0 +0.6**
comp=Z,246nm,1.1s,mb5.8
MAW Mawson 82.52 163 P **P** **05 52 07.3 +0.1**
comp=Z,141nm,0.8s,mb5.7,baz=223,slow=6.5,SNR=105
MAW S S 06 02 02.4 -2.7
comp=Z,2.3nm,0.8s,baz=329,slow=22,SNR=2.3
MAW PKKPbc PKKPbc 06 10 30.6 -2.6
comp=Z,2.4nm,0.6s,baz=300,slow=5.6,SNR=7.0
MAW Mawson 82.52 163 P **P** **05 52 07.3 +0.2**
MAW S S 06 02 02.4 -2.7
MAW pmax pmax
comp=Z,141nm,0.9s
MAW smax
comp=N,2.0nm,0.8s
BSMT Bassoo Peak 82.58 329 *e*P **P** **05 52 07.7 0.0**
YBH Yreka Blue Hor 82.63 321 S S 06 02 02.8 -4.1
comp=N,2.3nm,0.9s,baz=354,slow=21,SNR=3.7
YBH Yreka Blue Hor 82.63 321 *e*P **P** **05 52 06.7 -1.3**
comp=N,92nm,0.8s,mb5.6
YBH Yreka Blue Hor 82.63 321 *e*P **P** **05 52 06.7 -1.3**
YBH pmax pmax
comp=Z,92nm,0.8s
EMIJ Mijas 82.65 46 P **P** **05 52 08.8 +0.6**
comp=Z,129nm,1.2s,mb5.5
LNOR Lincton Mounta 82.92 326 *e*P **P** **05 52 08.2 -1.2**
FFC Flin Flon 82.92 340 P **P** **05 52 08.5 -0.7**
comp=Z,520nm,1.2s,mb6.1,SNR=21
FFC Flin Flon 82.92 340 *e*P **P** **05 52 08.3 -0.9**
comp=Z,134nm,1.1s,mb5.6
FFC Flin Flon 82.92 340 *e*P **P** **05 52 08.3 -0.9**
FFC pmax pmax
comp=Z,134nm,1.1s,mb5.6
WALA Waterton Lakes 83.05 331 *e*P **P** **05 52 09.5 -0.5**
KTRM Thompson Ridge 83.13 321 P **P** **05 52 10.9 +0.3**
MTE Manteigas 83.16 41 *e*P **P** **05 52 10.8 0.0**
comp=Z,170nm,1.0s,mb5.7
TAM Tamanrasset 83.17 62⇑*i*P **P** **05 52 11.6 +0.4**
TAM *e*pP pP 05 53 04.5 +0.9
TAM *e*S S 06 02 10.0 -3.1
KRMB Red Mountain 83.20 320 *e*P **P** **05 52 11.1 +0.2**
VIPM Ingram Point 83.24 324 P **P** **05 52 11.6 +0.5**
HUMO Hull Mountain 83.32 322 *e*P **P** **05 52 10.6 -1.0**
comp=Z,56nm,0.6s,mb5.5
ELOJ Sierra Loja 83.39 45 P **P** **05 52 13.0 +0.9**
comp=Z,111nm,1.1s,mb5.5
ELOJ Sierra Loja 83.39 45 P **P** **05 52 13.0 +0.9**
ELOJ pmax pmax
comp=Z,111nm,1.1s,mb5.5
EALB Alboran 83.46 47 P **P** **05 52 12.2 -0.2**
comp=Z,153nm,1.5s,mb5.5
ERON Agron 83.55 46 P **P** **05 52 12.9 +0.1**
comp=Z,9.4nm,0.5s,mb4.8
ELUQ Luque 83.55 45 P **P** **05 52 13.8 +0.9**
comp=Z,180nm,1.0s,mb5.8
ELUQ Luque 83.55 45 P **P** **05 52 13.8 +0.9**
ELUQ pmax pmax
comp=Z,180nm,1.0s,mb5.8
EGUA Guajares 83.60 46 P **P** **05 52 12.9 -0.2**
comp=Z,209nm,1.3s,mb5.7
EGUA Guajares 83.60 46 P **P** **05 52 12.9 -0.2**
EGUA pmax pmax
comp=Z,209nm,1.3s,mb5.7
EADA Adamuz 83.70 44 P **P** **05 52 13.0 -0.6**
comp=Z,48nm,1.2s,mb5.1
ELOB Lobios 83.74 40 P **P** **05 52 13.9 +0.2**
comp=Z,161nm,1.1s,mb5.7
KBO Bosley Butte 83.81 321 *e*P **P** **05 52 14.5 +0.5**
ECOG Cogollos-Vega 83.85 45 P **P** **05 52 14.6 +0.3**
comp=Z,103nm,1.2s,mb5.4
ECOG Cogollos-Vega 83.85 45 P **P** **05 52 14.6 +0.2**
ECOG pmax pmax
comp=Z,103nm,1.2s,mb5.4
EPLA Plasencia 83.86 42 P **P** **05 52 14.7 +0.4**
comp=Z,300nm,1.1s,mb5.9
EPLA Plasencia 83.86 42 P **P** **05 52 14.7 +0.4**
EPLA pmax pmax
comp=Z,300nm,1.1s,mb5.9
EMAZ Mazaricos 83.88 38 P **P** **05 52 14.5 +0.1**
comp=Z,149nm,1.3s,mb5.6
HAWA Hanford 83.91 326 *e*P **P** **05 52 14.3 -0.1**
comp=Z,252nm,1.0s,mb5.9
RSW Rattlesnake Hi 83.94 326 *e*P **P** **05 52 14.8 +0.2**
NEW Newport 83.98 329 *e*P **P** **05 52 13.8 -0.9**
comp=Z,44nm,0.7s,mb5.3
NEW Newport 83.98 329 *e*P **P** **05 52 13.8 -1.0**
NEW pmax pmax
comp=Z,44nm,0.7s
STS Santiago 84.08 39 P **P** **05 52 15.4 0.0**
comp=Z,125nm,1.4s,mb5.5
STS Santiago 84.08 39 P **P** **05 52 15.4 0.0**
STS pmax pmax
comp=Z,125nm,1.4s,mb5.5
EBER Berja 84.09 46 P **P** **05 52 14.8 -0.8**
comp=Z,155nm,1.2s,mb5.6
OD2 Odessa Site #2 84.16 327 P **P** **05 52 15.5 -0.2**
EBAN Banos Encina 84.21 45 P **P** **05 52 16.9 +0.8**
comp=Z,462nm,1.2s,mb6.1
EBAN Banos Encina 84.21 45 P **P** **05 52 16.9 +0.7**
EBAN pmax pmax
comp=Z,462nm,1.2s,mb6.1
KEBM Edson Butte 84.28 321 *e*P **P** **05 52 16.8 +0.4**
FCC Fort Churchill 84.32 346 *e*P **P** **05 52 15.9 -0.3**
comp=Z,464nm,0.8s,mb6.3
FCC Fort Churchill 84.32 346 *e*P **P** **05 52 15.9 -0.3**
FCC pmax pmax
comp=Z,464nm,0.8s,mb6.3
HOOD Mount Hood Mea 84.32 324 *e*P **P** **05 52 16.8 +0.3**
comp=Z,318nm,1.0s,mb6.0
ODZI Dziouia 84.33 48 P **P** **05 52 28.0 +11**
EQES Quesada 84.47 45 P **P** **05 52 17.0 -0.5**
comp=Z,226nm,1.2s,mb5.8
ECAL Calabor 84.57 40 P **P** **05 52 18.0 +0.1**
comp=Z,270nm,1.3s,mb5.8
ENIJ Nijar 84.58 46 P **P** **05 52 17.6 -0.5**
comp=Z,76nm,1.0s,mb5.4

ENIJ Nijar 84.58 46 P **P** 05 52 17.6 -0.5
ENIJ pmax pmax
comp=Z,76nm,1.0s,mb5.4
ERUA La Rua 84.60 40 P **P** 05 52 18.6 +0.6
comp=Z,156nm,1.2s,mb5.6
ERUA La Rua 84.60 40 P **P** 05 52 18.6 +0.6
ERUA pmax pmax
comp=Z,156nm,1.2s,mb5.6
PAB San Pablo 84.64 43 *e*P **P** 05 52 18.8 +0.5
comp=Z,322nm,1.1s,mb6.0
PAB San Pablo 84.64 43 *e*P **P** 05 52 18.8 +0.5
PAB pmax pmax
comp=Z,322nm,1.1s,mb6.0
COR Corvallis 84.76 323 *e*P **P** 05 52 18.3 -0.4
comp=Z,297nm,1.1s,mb5.9
COR Corvallis 84.76 323 *e*P **P** 05 52 18.3 -0.4
COR pmax pmax
comp=Z,297nm,1.1s,mb5.9
EBG Ellensburg 84.79 326 P **P** 05 52 19.1 +0.2
EHUE Huescar 84.79 45 P **P** 05 52 18.5 -0.6
comp=Z,85nm,1.0s,mb5.4
EHUE Huescar 84.79 45 P **P** 05 52 18.5 -0.6
EHUE pmax pmax
comp=Z,85nm,1.0s,mb5.4
ESDC Sonseca Array 84.95 43 P **P** 05 52 20.2 +0.4
comp=Z,192nm,1.1s,mb5.7,baz=236,slow=4.7,SNR=258
ESDC PKiKP PKiKP 05 57 30.9 +0.4
comp=Z,1.1nm,0.8s,baz=238,slow=2.1,SNR=3.5
ESDC S S 06 02 21.9 -8.2
comp=Z,0.2nm,0.6s,baz=326,slow=7.2,SNR=2.3
ESDC PKKPbc PKKPbc 06 10 26.8 -1.0
comp=Z,1.3nm,0.6s,baz=18,slow=2.7,SNR=14
ESDC Sonseca Array 84.95 43 P **P** 05 52 20.2 +0.3
comp=Z,225nm,1.1s,mb5.8
ESLA Sonseca Array 84.95 43 *e*P **P** 05 52 20.1 +0.3
comp=Z,94nm,1.2s,mb5.4
ESLA *e*pP pP 05 53 10.4 -2.0
WTV Waterville 85.00 327 P **P** 05 52 19.5 -0.3
USIO Oran 85.04 48 P **P** 05 52 23.0 +2.6
ODJA Bouhanifia 85.10 49 P **P** 05 52 22.0 +1.3
ETW Entiat 85.12 327 *e*P **P** 05 52 20.2 -0.2
EPON Pontenova 85.17 39 P **P** 05 52 21.1 +0.3
comp=Z,278nm,1.6s,mb5.7
EVIA Vianos 85.31 45 P **P** 05 52 22.1 +0.4
comp=Z,62nm,0.9s,mb5.3
EVIA Vianos 85.31 45 P **P** 05 52 22.1 +0.5
EVIA pmax pmax
comp=Z,62nm,0.9s,mb5.3
GUD Guadarrama 85.39 42 P **P** 05 52 22.4 +0.4
comp=Z,75nm,0.8s,mb5.5
GUD Guadarrama 85.39 42 P **P** 05 52 22.4 +0.4
GUD pmax pmax
comp=Z,75nm,0.8s,mb5.5
HEBO Mount Hebo 85.40 323 *e*P **P** 05 52 22.5 +0.5
comp=Z,289nm,1.1s,mb5.9
HEBO *e*pP pP 05 53 12.2 -2.4
OJBR Djebel Berber 85.58 49 P **P** 05 52 25.0 +2.0
EMUR La Murta 85.70 46 P **P** 05 52 22.5 -1.1
comp=Z,88nm,1.2s,mb5.4
CART Cartagena 85.72 46 *e*P **P** 05 52 22.9 -0.8
comp=Z,207nm,1.3s,mb5.7
OJGS Djebel Guires 85.81 49 P **P** 05 52 27.0 +2.8
EDM Edmonton 85.85 334 *e*P **P** 05 52 22.3 -1.6
BMW Boistfort Moun 85.91 324 *e*P **P** 05 52 24.1 -0.2
ETOB Tobarra 85.94 45 P **P** 05 52 24.4 -0.3
comp=Z,171nm,1.5s,mb5.6
OKGL Djebel Kef Gue 86.02 48 P **P** 05 52 26.0 +0.8
ETRT Tiaret 86.14 49 P **P** 05 52 26.3 +0.5
RPW Rockport 86.28 327 *e*P **P** 05 52 25.0 -1.1
EARI Arriondas 86.29 40 P **P** 05 52 27.7 +1.3
comp=Z,111nm,1.8s,mb5.3
EANR `Ain N'Sour 86.29 49 P **P** 05 52 27.7 +1.2
JCW Jim Creek 86.32 326 *e*P **P** 05 52 25.1 -1.2
ECHA Ech Chlef 86.58 49 P **P** 05 52 29.0 +1.3
EBNR Beni Rached 86.76 49 P **P** 05 52 30.2 +1.4
ETOR Torete 86.81 43 P **P** 05 52 29.7 +0.8
comp=Z,129nm,1.1s,mb5.6
ETOR Torete 86.81 43 P **P** 05 52 29.7 +0.8
ETOR pmax pmax
comp=Z,129nm,1.1s,mb5.6
ECHE Chera 86.83 45 P **P** 05 52 30.3 +1.3
comp=Z,83nm,1.0s,mb5.4
ECHE Chera 86.83 45 P **P** 05 52 30.3 +1.3
ECHE pmax pmax
comp=Z,83nm,1.0s,mb5.4
EBEN Beniarda 86.84 46 P **P** 05 52 29.6 +0.4
comp=Z,268nm,1.3s,mb5.8
ELAN Lanestosa 87.31 41 P **P** 05 52 33.0 +1.8
comp=Z,42nm,0.9s,mb5.2
PGC Sidney 87.40 326 *e*P **P** 05 52 31.1 -0.4
comp=Z,497nm,0.9s,mb6.2
ECRI Cripan 87.52 42 P **P** 05 52 33.3 +1.1
comp=Z,16nm,0.6s,mb5.0
ECRI Cripan 87.52 42 P **P** 05 52 33.3 +1.1
ECRI pmax pmax
comp=Z,16nm,0.6s,mb5.0
EMOS Mosqueruela 87.57 44 P **P** 05 52 34.4 +1.8
comp=Z,36nm,1.3s,mb5.0
EMHD Djebel Mahouad 87.71 49 P **P** 05 52 33.8 +0.5
EIBI Ibiza 88.05 46 P **P** 05 52 36.5 +1.7
comp=Z,151nm,1.4s,mb5.6
LSZ Lusaka 88.22 106 P **P** 05 52 37.9 +1.6
SNR=44
LSZ Lusaka 88.22 106 *e*P **P** 05 52 37.3 +1.0
comp=Z,197nm,1.3s,mb5.8
LSZ *e*pP pP 05 53 38.1 +8.9
LSZ Lusaka 88.22 106 *e*P **P** 05 52 37.3 +1.0
LSZ *e**PP pP 05 53 38.1 +8.9
LSZ pmax pmax
comp=Z,197nm,1.3s,mb5.8
ESAC San Caprasio 88.30 43 P **P** 05 52 36.2 +0.2
comp=Z,97nm,1.0s,mb5.6
ERTA Horta de San J 88.40 44 P **P** 05 52 37.1 +0.6
comp=Z,47nm,1.4s,mb5.1
EALK Alkurruntz 88.47 41 P **P** 05 52 38.1 +1.4
comp=Z,220nm,0.8s,mb5.0
SJPF Ste Jean 88.58 42 *e*P **P** 05 52 37.2 0.0
comp=Z,46nm,0.7s,mb5.1
SJPF Ste Jean 88.58 42 *e*P **P** 05 52 37.2 0.0
comp=Z,23nm,0.7s,mb5.1
SJPF Ste Jean 88.58 42 *e*P **P** 05 52 37.2 0.0
SJPF pmax pmax
comp=Z,23nm,0.7s,mb5.1
LARF Larrau 88.69 42 *e*P **P** 05 52 38.0 +0.3
DRV Dumont d'Urvil 88.79 190 P **P** 05 52 42.0 +4.1
DRV Dumont d'Urvil 88.79 190 PP PP 05 56 14.0 +4.7
DRV S S 06 02 55.0 -11
DRV SS SS 06 09 05.0 +3.1
DRV L 06 17 00.0
ETSF Etsaut 88.88 42 *e*P **P** 05 52 38.6 0.0
comp=Z,51nm,0.7s,mb5.2
ETSF Etsaut 88.88 42 *e*P **P** 05 52 38.6 0.0
comp=Z,26nm,0.7s,mb5.2
ETSF Etsaut 88.88 42 *e*P **P** 05 52 38.6 0.0
ETSF pmax pmax
comp=Z,26nm,0.7s,mb5.2
REYF Montagne du Re 89.07 42 *e*P **P** 05 52 40.5 +1.0
EPOB Poblet 89.09 44 P **P** 05 52 40.4 +0.7
comp=Z,24nm,0.9s,mb5.0
EBIE Bielsa 89.20 43 P **P** 05 52 40.4 +0.3
comp=Z,27nm,0.9s,mb5.1
LABF Labassere 89.35 42 *e*P **P** 05 52 41.6 +0.8
RESF Ens 89.39 42 *e*P **P** 05 52 42.1 +1.1
ETOS Mallorca 89.41 46 P **P** 05 52 41.6 +0.4
comp=Z,42nm,1.1s,mb5.2
EPF Esparros 89.50 42 *e*P **P** 05 52 41.4 -0.2
comp=Z,33nm,0.7s,mb5.0
EPF Esparros 89.50 42 *e*P **P** 05 52 41.4 -0.2
comp=Z,17nm,0.7s,mb5.0
EPF Esparros 89.50 42 *e*P **P** 05 52 41.4 -0.2
EPF pmax pmax
comp=Z,17nm,0.7s,mb5.0
EMIR Miracle 89.67 44 P **P** 05 52 44.0 +1.6
comp=Z,19nm,0.8s,mb5.0
MELF Melles 89.68 43 *e*P **P** 05 52 43.5 +1.1
MIR Mirnyy 89.71 172 μ*i*P **P** 05 52 43.0 +0.8
MIR *i* pP 05 53 40.0 +4.7
MIR *i* S S 06 03 08.0 -6.7
MIR *e*PS SP 06 04 18.0 -2.6
MIR pmax pmax
comp=Z,400nm,1.5s,mb6.0
SALF Salau 89.89 43 *e*P **P** 05 52 42.8 -0.6
MLS Moulis 89.94 43 *e*P **P** 05 52 44.3 +0.7
QUIF Quistinic 90.12 37 *e*P **P** 05 52 43.3 -1.0
comp=Z,101nm,1.1s,mb5.3
QUIF Quistinic 90.12 37 *e*P **P** 05 52 43.3 -1.0
comp=Z,50nm,1.1s,mb5.3
QUIF Quistinic 90.12 37 *e*P **P** 05 52 43.3 -1.0
QUIF pmax pmax
comp=Z,50nm,1.1s,mb5.3
SFJD Kangerlussuaq 90.14 6 P **P** 05 52 43.9 0.0
comp=Z,23nm,0.9s,mb5.0,baz=166,slow=6.4,SNR=4.9
SFJD Kangerlussuaq 90.14 6 *e*P **P** 05 52 44.3 +0.4
SFJD *i* S S 06 03 15.6 -2.5
SFJD MLR MLR
comp=Z,320nm,18.0s
SFJD Kangerlussuaq 90.14 6 *i*P **P** 05 52 44.3 +0.4
SFJD *i* S S 06 03 15.6 -2.5
SFJD
comp=Z,320nm,18.0s
ROSF Rostrenen 90.30 36 *e*P **P** 05 52 44.2 -0.9
comp=Z,256nm,1.2s,mb5.6
ROSF Rostrenen 90.30 36 *e*P **P** 05 52 44.2 -0.9
comp=Z,128nm,1.2s,mb5.6
ROSF Rostrenen 90.30 36 *e*P **P** 05 52 44.2 -0.9
ROSF pmax pmax
comp=Z,128nm,1.2s,mb5.6
CARF Carcanieres 90.45 43 *e*P **P** 05 52 46.2 +0.2
SGMF Saint Gilles 90.65 37 *e*P **P** 05 52 45.5 -1.3
FILF Fillols 90.66 44 *e*P **P** 05 52 47.1 +0.2
LFF La Frestale 90.76 41 *e*P **P** 05 52 46.8 -0.5
comp=Z,93nm,0.8s,mb5.5
LFF La Frestale 90.76 41 *e*P **P** 05 52 46.8 -0.5
comp=Z,46nm,0.8s,mb5.5
LFF La Frestale 90.76 41 *e*P **P** 05 52 46.8 -0.5
LFF pmax pmax
comp=Z,47nm,0.8s,mb5.5
EJON La Jonquera 90.81 44 P **P** 05 52 47.1 -0.5
comp=Z,52nm,1.6s,mb5.2
MTLF Montolieu 90.84 43 *e*P **P** 05 52 46.9 -0.9
comp=Z,110nm,1.3s,mb5.3
MTLF Montolieu 90.84 43 *e*P **P** 05 52 46.9 -0.9
comp=Z,55nm,1.3s,mb5.3
MTLF Montolieu 90.84 43 *e*P **P** 05 52 46.9 -0.9
MTLF pmax pmax
comp=Z,55nm,1.3s,mb5.3
MFF Saint Martin d 91.11 39 *e*P **P** 05 52 48.1 -0.8
comp=Z,102nm,0.9s,mb5.5
MFF Saint Martin d 91.11 39 *e*P **P** 05 52 48.1 -0.8
comp=Z,51nm,0.9s,mb5.5
MFF Saint Martin d 91.11 39 *e*P **P** 05 52 48.1 -0.8
MFF pmax pmax
comp=Z,51nm,0.9s,mb5.5
CASY Casey 91.32 179 *e*P **P** 05 52 50.0 +0.3
comp=Z,463nm,0.8s,mb6.5
RJF Les Rejaudoux 91.42 41 *e*P **P** 05 52 49.5 -0.9
comp=Z,138nm,1.6s,mb5.3
RJF *e*MLR MLR
comp=Z,1μm,21.0s
RJF Les Rejaudoux 91.42 41 *e*P **P** 05 52 49.5 -0.9
comp=Z,69nm,1.6s,mb5.3
RJF LR LR
comp=Z,1μm,21.0s
RJF Les Rejaudoux 91.42 41 *e*P **P** 05 52 49.5 -0.9
RJF pmax pmax
comp=Z,69nm,1.6s,mb5.3
RJF MLR MLR
comp=Z,1μm,21.0s
DLF Lyons Farm 91.53 31 *e*P pP 05 53 46.0 +2.1
CAF Calviac 91.55 41 *e*P **P** 05 52 50.4 -0.6
comp=Z,31nm,0.8s,mb5.0
CAF Calviac 91.55 41 *e*P **P** 05 52 50.4 -0.6
comp=Z,16nm,0.8s,mb5.0
CAF Calviac 91.55 41 *e*P **P** 05 52 50.4 -0.6
CAF pmax pmax
comp=Z,16nm,0.8s,mb5.0
GRR Gorron 91.67 37 *e*P **P** 05 52 50.4 -1.1
comp=Z,132nm,1.0s,mb5.5
GRR Gorron 91.67 37 *e*P **P** 05 52 50.4 -1.1
comp=Z,66nm,1.0s,mb5.5
GRR Gorron 91.67 37 *e*P **P** 05 52 50.4 -1.1
GRR pmax pmax
comp=Z,66nm,1.0s,mb5.5
DMUB Kingscourt 91.72 31 *e*P pP 05 53 46.0 +1.3
KEST Kesra 92.05 52 P **P** 05 52 54.5 +0.9
comp=Z,18nm,1.0s,mb5.0,baz=142,slow=1.7,SNR=29
KEST PKKPbc PKKPbc 06 10 10.4 +0.4
comp=Z,3.4nm,0.8s,baz=12,slow=5.6,SNR=7.4
FLN La Foliniere 92.08 37 *e*P **P** 05 52 52.4 -1.0
comp=Z,102nm,1.2s,mb5.3
FLN *e*MLR MLR
comp=Z,538nm,19.5s
FLN La Foliniere 92.08 37 *e*P **P** 05 52 52.4 -1.0
comp=Z,51nm,1.2s,mb5.3
FLN LR LR
comp=Z,540nm,19.5s
FLN La Foliniere 92.08 37 *e*P **P** 05 52 52.4 -1.0
FLN pmax pmax
comp=Z,51nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,540nm,19.5s
LDF La Druitiere 92.19 37 *e*P **P** 05 52 52.8 -1.1
comp=Z,111nm,1.2s,mb5.4
LDF La Druitiere 92.19 37 *e*P **P** 05 52 52.8 -1.1
comp=Z,56nm,1.2s,mb5.4
LDF La Druitiere 92.19 37 *e*P **P** 05 52 52.8 -1.1
LDF pmax pmax
comp=Z,56nm,1.2s,mb5.4
LASF Ste Croix 92.23 43 *e*P **P** 05 52 53.7 -0.5
comp=Z,25nm,0.9s,mb4.8
TCF Toulx Ste Croi 92.34 40 *e*P **P** 05 52 53.6 -1.0
comp=Z,41nm,1.2s,mb5.0
TCF Toulx Ste Croi 92.34 40 *e*P **P** 05 52 53.6 -1.0
comp=Z,21nm,1.2s,mb4.9
TCF Toulx Ste Croi 92.34 40 *e*P **P** 05 52 53.6 -1.0
TCF pmax pmax
comp=Z,21nm,1.2s,mb4.9
LBL Lubilhac 92.43 41 *e*P **P** 05 52 57.4 +2.3
AGO Saint Agoulin 92.77 41 *e*P **P** 05 52 57.4 +0.8
BGF Bois d'Agland 92.86 40 *e*P **P** 05 52 56.1 -0.9
PLDF La Plantade 93.03 41 *e*P **P** 05 52 58.5 +0.7
YKA Yellowknife Ar 93.09 340 P **P** 05 52 56.9 -0.8
comp=Z,93nm,0.9s,mb5.8,baz=131,slow=4.5,SNR=143
YKA PKiKP PKiKP 05 57 43.0 -0.4
comp=Z,1.8nm,0.7s,baz=154,slow=1.4,SNR=4.8
YKA PKKPbc PKKPbc 06 10 05.7 -2.9
comp=Z,2.3nm,0.6s,baz=319,slow=3.3,SNR=10
YKA Yellowknife Ar 93.09 340 P **P** 05 52 56.9 -0.8
YKA Yellowknife Ar 93.09 340 P **P** 05 52 56.9 -0.8
YKA 06 10 05.7
YKA pmax pmax
comp=Z,93nm,0.9s
VIVF Saint-Julien-l 93.13 42 *e*P **P** 05 52 58.0 -0.3
comp=Z,32nm,0.9s,mb5.1
VIVF Saint-Julien-l 93.13 42 *e*P **P** 05 52 58.0 -0.3
comp=Z,16nm,0.9s,mb5.0
SSB Saint Sauveur 93.25 42 *e*P **P** 05 52 59.3 +0.4
SSB Saint Sauveur 93.25 42 *e*P **P** 05 52 59.4 +0.5
SMRF Simiane la Rot 93.27 43 *e*P **P** 05 52 59.1 +0.1
comp=Z,40nm,0.9s,mb5.2
SMRF Simiane la Rot 93.27 43 *e*P **P** 05 52 59.1 +0.1
comp=Z,40nm,0.9s,mb5.4
AVF Avril sur Loir 93.27 40 *e*P **P** 05 52 57.9 -1.0
comp=Z,40nm,1.2s,mb5.0
AVF Avril sur Loir 93.27 40 *e*P **P** 05 52 57.9 -1.0
comp=Z,220nm,1.2s,mb5.0
SMF Signal de Mont 93.49 40 *e*P **P** 05 52 59.1 -0.8
comp=Z,123nm,1.3s,mb5.5
SMF Signal de Mont 93.49 40 *e*P **P** 05 52 59.1 -0.8
comp=Z,62nm,1.3s,mb5.5
SSF Saint Saulge 93.50 40 *e*P **P** 05 52 58.7 -1.2
comp=Z,46nm,1.2s,mb5.1
SSF Saint Saulge 93.50 40 *e*P **P** 05 52 58.7 -1.2
comp=Z,23nm,1.2s,mb5.1
LMR La Mourre 93.56 44 *e*P **P** 05 52 59.9 -0.5
comp=Z,42nm,0.7s,mb5.3
LMR La Mourre 93.56 44 *e*P **P** 05 52 59.9 -0.5
comp=Z,21nm,0.7s,mb5.3
FRF La Foret Royal 93.76 44 *e*P **P** 05 53 00.8 -0.4
comp=Z,30nm,0.8s,mb5.1
FRF La Foret Royal 93.76 44 *e*P **P** 05 53 00.8 -0.4
comp=Z,15nm,0.8s,mb5.1
OG25 Le Caire 93.77 43 *e*P **P** 05 53 02.0 +0.7
LOR Lormes 93.81 40 *e*P **P** 05 53 00.1 -1.3
comp=Z,98nm,1.4s,mb5.3
LOR *e*MLR MLR
comp=Z,558nm,18.8s
LOR Lormes 93.81 40 *e*P **P** 05 53 00.1 -1.3
comp=Z,49nm,1.4s,mb5.3
LOR LR LR
comp=Z,560nm,18.8s
ORIF Oris-en-Rattie 93.91 43 *e*P **P** 05 53 02.0 +0.1
comp=Z,57nm,0.8s,mb5.4
ORIF *e*MLR MLR
comp=Z,1μm,21.5s
ORIF Oris-en-Rattie 93.91 43 *e*P **P** 05 53 02.0 +0.1
comp=Z,28nm,0.8s,mb5.3
CALN Calern 94.00 44 *e*P **P** 05 53 04.0 +1.6
MVIF Mont Vial 94.24 44 *e*P **P** 05 53 05.1 +1.7
REVF Revere 94.31 44 *e*P **P** 05 53 04.2 +0.5
EKA Eskdalemuir Ar 94.33 31 P **P** 05 53 03.6 +0.1
comp=Z,7.5nm,1.0s,mb4.7,baz=237,slow=3.2,SNR=9.8
EKA Eskdalemuir Ar 94.33 31 P **P** 05 53 03.7 +0.2
EKA pmax pmax
comp=Z,8.0nm,1.0s
TOUF Mont Tournerai 94.36 44 *e*P **P** 05 53 05.3 +1.3
LUCF Luceram 94.36 44 *e*P **P** 05 53 04.2 +0.2
MBDF Montbardon 94.38 43 *e*P **P** 05 53 04.1 0.0
comp=Z,43nm,1.0s,mb5.1
MBDF Montbardon 94.38 43 *e*P **P** 05 53 04.1 0.0
comp=Z,21nm,1.0s,mb5.1
SBF Sospel 94.41 44 *e*P **P** 05 53 03.9 -0.3
AUTN L'Aution 94.46 44 *e*P **P** 05 53 05.9 +1.5
BNI Bardonecchia 94.47 43 *e*P **P** 05 53 06.0 +1.6
comp=Z,18nm,1.2s,mb5.0
MENF Mencas 94.48 37 *e*P **P** 05 53 05.0 +0.6
PZZ Stroppo 94.50 43 P **P** 05 53 05.6 +1.0
comp=Z,60nm,1.3s,mb5.5
SAOF Saorge 94.54 44 *e*P **P** 05 53 05.9 +1.1
LPL La Plagne 94.72 42 *e*P **P** 05 53 05.8 +0.2
comp=Z,71nm,1.2s,mb5.4
LPL La Plagne 94.72 42 *e*P **P** 05 53 05.8 +0.2
comp=Z,35nm,1.2s,mb5.4
LPG La Plagne 94.72 42 *e*P **P** 05 53 06.0 +0.4
comp=Z,52nm,0.9s,mb5.3
LPG La Plagne 94.72 42 *e*P **P** 05 53 06.0 +0.4
comp=Z,26nm,0.9s,mb5.4
RSL Roselend 94.73 42 *e*P **P** 05 53 05.8 +0.1
CABF La Chapelle 94.83 41 *e*P **P** 05 53 05.4 -0.7
comp=Z,25nm,0.9s,mb5.0
CABF La Chapelle 94.83 41 *e*P **P** 05 53 05.4 -0.7
comp=Z,12nm,0.9s,mb5.0
PGF Piegogila 94.84 46 *e*P **P** 05 53 05.6 -0.6
RSP Reno Superiore 94.89 43 P **P** 05 53 07.2 +0.8
comp=Z,39nm,1.2s,mb5.4
MEZF Maizieres J'vi 95.11 39 *e*P **P** 05 53 06.3 -1.0
comp=Z,108nm,1.4s,mb5.5
MEZF Maizieres J'vi 95.11 39 *e*P **P** 05 53 06.3 -1.0
comp=Z,108nm,1.4s,mb5.8
URZ Urewera 95.15 225 P **P** 05 53 08.7 +0.7
comp=Z,36nm,1.1s,mb5.4,baz=29,slow=1.3,SNR=9.7
URZ S SKSac 06 03 23.4 +0.5
comp=Z,14nm,1.2s,baz=357,slow=11,SNR=3.5
BAIF Baives 95.38 38 *e*P **P** 05 53 07.5 -1.0
comp=Z,55nm,1.3s,mb5.2
BAIF Baives 95.38 38 *e*P **P** 05 53 07.5 -1.0
comp=Z,28nm,1.3s,mb5.2
BAIF Baives 95.38 38 *e*P **P** 05 53 07.5 -1.0
BAIF pmax pmax
comp=Z,28nm,1.3s,mb5.2
DOU Dourbes 95.61 38 P **P** 05 53 10.7 +1.2
comp=Z,21nm,2.6s,mb4.9
DOU AP pP 05 54 02.2 -0.6
SNF Seneffe 95.64 37 P **P** 05 53 10.2 +0.5
comp=Z,19nm,1.5s,mb5.1
HAU Haudompre 95.64 40 *e*P **P** 05 53 08.5 -1.2
comp=Z,20nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,660nm,21.8s
HAU Haudompre 95.64 40 *e*P **P** 05 53 08.5 -1.2
comp=Z,10.0nm,0.9s,mb5.0
HAU LR LR
comp=Z,660nm,21.8s
HAU Haudompre 95.64 40 *e*P **P** 05 53 08.5 -1.2
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,660nm,21.8s
GIVF Givet 95.75 38 *e*P **P** 05 53 09.4 -0.7
comp=Z,109nm,1.2s,mb5.6
GIVF Givet 95.75 38 *e*P **P** 05 53 09.4 -0.7
comp=Z,55nm,1.2s,mb5.7
GIVF Givet 95.75 38 *e*P **P** 05 53 09.4 -0.7
GIVF pmax pmax
comp=Z,55nm,1.2s,mb5.7
UCC Uccle 95.82 37 P **P** 05 53 10.1 -0.4
comp=Z,34nm,1.3s,mb5.4
HINF Hinteralfeld 95.86 40 *e*P **P** 05 53 09.4 -1.3
comp=Z,32nm,1.2s,mb5.1
HINF Hinteralfeld 95.86 40 *e*P **P** 05 53 09.4 -1.3
comp=Z,16nm,1.2s,mb5.1
HINF Hinteralfeld 95.86 40 *e*P **P** 05 53 09.4 -1.3
HINF pmax pmax
comp=Z,16nm,1.2s,mb5.1
MOF Molkenrain 96.04 40 *e*P **P** 05 53 12.0 +0.5
BBS Basel-Blauen 96.09 41 *e*P **P** 05 53 15.4 +3.6
VAI Varese 96.15 43 P **P** 05 53 11.5 -0.6
comp=Z,28nm,0.9s,mb5.5
VAI Varese 96.15 43 P **P** 05 53 11.5 -0.6
VAI pmax pmax
comp=Z,29nm,0.9s,mb5.5
BCLA Clavier 96.17 38 P **P** 05 53 12.7 +0.7
comp=Z,28nm,2.6s,mb5.0
ECH Echery 96.22 40 *e*P **P** 05 53 13.5 +1.2
ECH Echery 96.22 40 *e*P **P** 05 53 12.1 -0.2
WLF Walferdange 96.30 39 P **P** 05 53 13.5 +0.9
comp=Z,35nm,1.4s,mb5.4
WLF Walferdange 96.30 39 P **P** 05 53 13.4 +0.8
comp=Z,46nm,1.1s,mb5.6
WLF Walferdange 96.30 39 P **P** 05 53 13.4 +0.7
WLF pmax pmax
comp=Z,45nm,1.1s,mb5.6
WLF Walferdange 96.30 39 *e*P **P** 05 53 14.1 +1.4
DLBC Dease Lake 96.36 332 PKKPbc PKKPbc 06 09 58.7 -0.9
comp=Z,1.5nm,0.6s,baz=308,slow=14,SNR=4.8
DLBC Dease Lake 96.36 332 *e*P **P** 05 53 12.8 +0.1
DLBC *e*PP PP 05 57 11.6 +1.9
CDF Champ du Feu 96.38 40 *e*P **P** 05 53 12.1 -1.0
comp=Z,31nm,1.1s,mb5.2
CDF Champ du Feu 96.38 40 *e*P **P** 05 53 12.1 -1.0
comp=Z,16nm,1.1s,mb5.2
CDF Champ du Feu 96.38 40 *e*P **P** 05 53 12.1 -1.0
CDF pmax pmax
comp=Z,16nm,1.1s,mb5.2
FELD Feldberg im Sc 96.57 41 *e*P **P** 05 53 14.3 +0.3
MEM Membach 96.65 38 P **P** 05 53 14.2 0.0
comp=Z,11nm,1.6s,mb4.8
GSCL Gusciola 96.66 45 P **P** 05 53 16.0 +1.6
HGN Heimansgroeve 96.68 38 *e*P **P** 05 53 14.9 +0.5
HGN Heimansgroeve 96.68 38 *e*PP PP 05 57 24.9 +12
POHA Pohakuloa 96.75 288 *e*P **P** 05 53 15.8 +0.4
comp=Z,170nm,1.0s,mb6.2
TUE Stuetta 96.78 42 *e*P **P** 05 53 15.2 +0.2
comp=Z,18nm,0.8s,mb5.3
SUMG Summit 96.83 8 *e*P **P** 05 53 15.1 +0.5
comp=Z,21nm,1.1s,mb5.3
RUP Ruppelstein 96.84 39 *e*P **P** 05 53 16.3 +1.2
BFO Black Forest 96.97 40 *e*P **P** 05 53 15.9 +0.2
comp=Z,18nm,1.4s,mb5.1
BFO Black Forest 96.97 40 *e*P **P** 05 53 15.9 +0.2
BFO pmax pmax
comp=Z,18nm,1.4s,mb5.1
MTCE Montecelio 97.13 47 P **P** 05 53 18.1 +1.5
comp=Z,168nm,2.1s,mb5.9
DAVOS Davos 97.22 42 P **P** 05 53 17.0 +0.1
DAVOS 05 57 14.6
DAVOS S SKSac 06 03 33.3 +0.4
DAVOX Davos/Dischmat 97.24 42 P **P** 05 53 17.0 0.0
comp=Z,13nm,0.8s,mb5.2,baz=219,slow=7.2,SNR=16
DAVOX PP PP 05 57 14.6 -2.2
comp=Z,4.0nm,0.9s,baz=260,slow=9.9,SNR=3.3
DAVOX S SKSac 06 03 33.2 +0.2
comp=Z,10nm,1.3s,baz=224,slow=22,SNR=8.8
DAVOX PKKPbc PKKPbc 06 09 55.3 -1.4
comp=Z,6.7nm,0.5s,baz=187,slow=1.5,SNR=16
BRMO Bormio 97.42 43 P **P** 05 53 17.4 -0.4
comp=Z,31nm,1.6s,mb5.3
DAVA Damuels 97.46 42 ⇑*i*Pdiff **P** 05 53 18.7 +0.7
comp=Z,54nm,1.6s,mb5.5,SNR=12
STU Stuttgart 97.68 40 *e*P **P** 05 53 18.9 0.0
comp=Z,28nm,1.1s,mb5.5
STU Stuttgart 97.68 40 *e*P **P** 05 53 18.9 0.0
STU pmax pmax
comp=Z,27nm,1.1s,mb5.5
STU Stuttgart 97.68 40 *e*P **P** 05 53 19.9 +1.0
STU *e*PKKPbc PKKPbc 06 09 53.8 -1.7
TNS Taunus Mts 97.87 39 *e*P **P** 05 53 20.9 +1.2
TNS *e*PKKPbc PKKPbc 06 09 53.4 -1.7

FETA Feichten 97.87 42 ⇑ *i*Pdiff **P 05 53 19.8 0.0**
comp=Z,33nm,1.3s,mb5.5,SNR=7.0
CTI Castel Tesino 98.05 43 P **P 05 53 20.5 -0.1**
RETA Reutte 98.09 42 *i* Pdiff **P 05 53 21.0 +0.3**
comp=Z,27nm,0.9s,mb5.6,SNR=8.5
MOTA Moosalm 98.24 42 ⇓ *i*Pdiff **P 05 53 21.3 -0.2**
comp=Z,25nm,0.8s,mb5.6,SNR=17
MOTA Moosalm 98.24 42 ⇑ *i*PKKPdf PKKPdf 06 09 52.0 -4.9
comp=Z,20nm,0.8s
IBBN Ibbenburen 98.40 37 *e*P **P 05 53 23.2 +1.2**
WATA Walderalm 98.53 42 ⇑ *i*Pdiff **P 05 53 22.4 -0.3**
comp=Z,13nm,0.7s,mb5.3,SNR=8.8
WTTA Wattenberg 98.54 42 ⇑ *i*Pdiff **P 05 53 23.1 +0.3**
comp=Z,48nm,1.1s,mb5.8,SNR=10
WTTA Wattenberg 98.54 42 ⇑ *i*PKKPdf PKKPdf 06 09 51.4 -5.0
comp=Z,14nm,0.8s
FUR Furstenfeldbru 98.68 41 *e*P **P 05 53 24.7 +1.3**
FUR *e*PKKPbc PKKPbc 06 09 50.8 -1.9
RES Resolute Bay 98.84 353 *e*P **P 05 53 23.3 -0.2**
comp=Z,1μm,1.1s
GRF Grafenberg Arr 99.27 40 *e*P Pdif 05 53 26.8 +0.6
GRF *e**PP pP 05 54 26.7 +7.3
GRF *e* 06 03 42.4
GRF *e*SP SP 06 05 58.2 -8.5
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.4
GRF Grafenberg Arr 99.27 40 *e*P Pdif 05 53 26.8 +0.6
GRF *e**PP pP 05 54 26.7 +7.3
GRF *e* 06 03 42.4
GRF *e*SP SP 06 05 58.2 -8.5
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.4
GRF Grafenberg Arr 99.27 40 *e*P Pdif 05 53 26.8 +0.6
comp=Z,21nm,1.1s
GRF *e*pP pP 05 54 26.7 +7.3
GRF *e*SKSac SKSac 06 03 42.4 -0.7
GRF *e*SP SP 06 05 58.2 -8.5
GRF *e*PKKPbc PKKPbc 06 09 51.1 0.0
GRF *e* 06 10 17.9
PTCC Patocco-Chiusa 99.28 44 P Pdif 05 53 26.3 +0.1
RJOB Jochberg 99.45 42 *e*PKKPbc PKKPbc 06 09 48.7 -1.8
CADS Cadrg 99.45 44 *e*SKSac SKSac 06 03 43.6 -0.5
CADS *e* 06 04 16.8
CADS *e*Sdiff Sdif 06 04 41.4 +1.3
LJU Ljubljana 99.89 44 *e*Pdiff Pdif 05 53 34.4 +5.5
LJU *e*SKSac SKSac 06 03 45.5 -0.9
LJU *e* 06 04 17.5
LJU *e* 06 06 15.4
LJU *i* PKKPbc PKKPbc 06 09 48.5 -0.7
MOX Moxa 99.89 39 *e*P Pdif 05 53 31.0 +2.1
comp=Z,13nm,1.3s
MOX *e* 05 54 29.0
MOX
comp=Z,400nm,21.0s
MOX Moxa 99.89 39 *e*P Pdif 05 53 31.0 +2.1
MOX *e* 05 54 29.0
MOX pmax pmax
comp=Z,13nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,400nm,21.0s
MOX Moxa 99.89 39 *e*P Pdif 05 53 30.3 +1.4
ROTZ Rotzenmuhle 99.89 40 *e*P Pdif 05 53 30.5 +1.6
WET Wettzell 100.05 41 *e*P Pdif 05 53 30.9 +1.3
WET *e*PKKPbc PKKPbc 06 09 47.8 -1.1
BOJS Bojanci 100.16 45 *i* PKKPbc PKKPbc 06 09 48.0 -0.5
NKC Novy Kostel 100.22 40 *i* P Pdif 05 53 31.4 +1.0
NKC *e* 06 03 50.6
NKC *e* 06 04 47.3
NKC *e*SP SP 06 06 14.2 -2.6
NKC Novy Kostel 100.22 40 *e*PDIF Pdif 05 53 31.4 +1.0
NKC *e*PP PP 05 57 32.2 -7.1
NKC *e*SKS 06 03 50.6
NKC *e*SKKS SKKSac 06 04 21.1 -1.4
NKC *e*SDIF Sdif 06 04 47.3 +0.7
NKC *e*SP SP 06 06 14.2 -2.6
NKC *e*PKKP PKKPbc 06 09 46.4 -2.0
TANN Tannenbergstha 100.30 40 *e*P Pdif 05 53 32.4 +1.7
TANN *e*pP pP 05 54 26.0 +2.1
TANN *e*PKKPbc PKKPbc 06 09 47.2 -1.0
MOA Molln 100.41 42 ⇓ *i*Pdiff Pdif 05 53 30.8 -0.5
comp=Z,13nm,0.8s,SNR=15
GEC2 GERESS Array S 100.43 41 *e*P Pdif 05 53 32.5 +1.1
GEC2 *e*PKKPbc PKKPbc 06 09 46.2 -1.6
GERES GERESS Array B 100.43 41 P Pdif 05 53 31.2 -0.2
comp=Z,1.7nm,0.7s,baz=205,slow=2.8,SNR=16
GERES PP PP 05 57 38.7 -2.3
comp=Z,1.8nm,0.9s,baz=229,slow=5.1,SNR=4.1
GERES PKiKP PKiKP 05 57 57.3 +0.5
comp=Z,1.8nm,0.7s,baz=264,slow=1.0,SNR=7.3
GERES S SKSac 06 03 45.9 -2.9
comp=Z,0.3nm,0.6s,baz=202,slow=10,SNR=2.6
GERES PKKPbc PKKPbc 06 09 45.9 -1.8
comp=Z,5.9nm,0.9s,baz=70,slow=1.6,SNR=22
GERES PKKPab 06 10 11.9
comp=Z,3.1nm,1.0s,baz=64,slow=6.1,SNR=8.2
GERES PKPPKP 06 17 58.7
comp=Z,1.2nm,0.9s,baz=17,slow=1.4,SNR=5.1
GERES GERESS Array B 100.43 41 P Pdif 05 53 31.2 -0.2
GERES PP PP 05 57 38.7 -2.3
GERES GERESS Array B 100.43 41 P Pdif 05 53 31.2 -0.2
GERES 05 57 38.7
GERES S SKSac 06 03 45.9 -2.9
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES pmax pmax
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 100.47 41 *i* P Pdif 05 53 32.7 +1.2
KHC *e* 06 03 48.3
KHC *e* 06 04 48.9
KHC *e*SP SP 06 06 13.0 -6.5
KHC Kasperske Hory 100.47 41 *e*PDIF Pdif 05 53 32.7 +1.2
KHC *e*SKS 06 03 48.3
KHC *e*SDIF Sdif 06 04 48.9 +0.2
KHC *ex* x 06 06 13.0
KHC *e*PKKP PKKPbc 06 09 46.5 -1.2
KHC *ex* x 06 10 12.1
KHC *e*PKPPKP 06 18 00.5
BSEG Bad Segeberg 100.49 36 *e*P Pdif 05 53 33.1 +1.5
GCIS Gornji Cirnik 100.54 45 *i* PKKPbc PKKPbc 06 09 46.9 -0.4
CLL Collm 100.96 39 *i* Pdif Pdif 05 53 34.4 +0.7
comp=Z,15nm,1.3s
CLL *e*Sdif Sdif 06 04 52.0 -0.7
CLL *i* PKKP PKKPbc 06 09 44.5 -1.9
CLL Collm 100.96 39 *i* P Pdif 05 53 34.4 +0.7
CLL *e*S Sdif 06 04 52.0 -0.7
CLL pmax pmax
comp=Z,15nm,1.3s
CLL Collm 100.96 39 *e*P Pdif 05 53 34.9 +1.2
CLL *e*pP 05 54 31.0
CLL *e*PKKPbc PKKPbc 06 09 44.8 -1.6
CLL Collm 100.96 39 *i* Pdif Pdif 05 53 34.4 +0.7
comp=Z,15nm,1.3s
CLL *e*pPdif 05 54 34.0
CLL *e*PP PP 05 57 42.0 -2.8
CLL *e*pPP 05 58 41.0
CLL *e*SKSac SKSac 06 03 56.0 +4.7
CLL *e*Sdif Sdif 06 04 52.0 -0.7
comp=N,800nm,18.1s
CLL *e*SP SP 06 06 19.0 -5.6
CLL *i* PKKPbc PKKPbc 06 09 44.5 -1.9
comp=Z,7.0nm,0.7s
CLL *e*PKKPdf PKKPdf 06 09 51.0 -1.0
CLL *ex* x 06 10 09.0
CLL *e*SS SS 06 11 48.0 -8.7
CLL *e*PKPPKPdf 06 17 59.0
CLL LmV 06 30 00.0
comp=Z,500nm,21.2s
KOGS Kog 101.15 44 *e*SKSac SKSac 06 03 51.6 -0.8
KOGS *e*Sdiff Sdif 06 04 56.8 +2.4
BRG Berggiesshubel 101.34 40 *e*PKKPbc PKKPbc 06 09 43.5 -1.7
BRG Berggiesshubel 101.34 40 *e* Pdif 05 53 36.1 +0.7
comp=Z,24nm,1.8s
BRG sP 05 54 34.0
BRG *e* 05 56 52.4
comp=Z,8.7nm,1.5s
BRG PP PP 05 57 40.9 -6.9
comp=Z,16nm,1.5s
BRG SKS 06 03 50.0
BRG SDIF Sdif 06 04 56.0 +0.1
BRG *i* 06 06 24.0
BRG
comp=N,292nm,24.1s
BRG
comp=E,332nm,18.4s
BRG
comp=Z,536nm,18.9s
BRG Berggiesshubel 101.34 40 *i* PKP PKKPbc 06 09 43.4 -1.8
comp=Z,16nm,1.0s
BRG *e* 06 10 07.8
comp=Z,9.9nm,1.0s
BRG *i* 06 11 57.0
PRU Pruhonice 101.37 41 *i* P Pdif 05 53 35.7 +0.2
PRU *e* 06 03 53.5
PRU *e* 06 04 54.8
PRU *e*SP SP 06 06 23.6 -5.5
PRU Pruhonice 101.37 41 *e*PDIF Pdif 05 53 35.7 +0.2
PRU *e*PP PP 05 57 37.3 -11
PRU *e*SKS 06 03 53.5
PRU *e*SKKS SKKSac 06 04 26.7 -4.1
PRU *e*SDIF Sdif 06 04 54.8 -1.4
PRU *e*SP SP 06 06 23.6 -5.5
PRU *e*PKKP PKKPbc 06 09 43.9 -1.2
PRU *ex* x 06 10 08.4
PVCC Panska Ves 101.58 40 *i* P Pdif 05 53 38.7 +2.2
PVCC *e* 06 03 54.9
PVCC *e*SP SP 06 06 25.6 -5.7
PVCC Panska Ves 101.58 40 *e*PDIF Pdif 05 53 38.7 +2.2
PVCC *e*SKS 06 03 54.9
PVCC *e*SP SP 06 06 25.6 -5.7
PVCC *e*PKKP PKKPbc 06 09 43.6 -0.9
TREC Trest 101.69 41 *i* P Pdif 05 53 37.9 +1.0
TREC *e* 05 57 47.0
TREC *e* 06 03 55.4
TREC *e* 06 04 57.0
TREC *e*SP SP 06 06 28.9 -3.6
TREC Trest 101.69 41 *e*PDIF Pdif 05 53 37.9 +1.0
TREC *e*PP PP 05 57 47.0 -3.4
TREC *e*SKS 06 03 55.4
TREC *e*SKKS SKKSac 06 04 31.0 -2.2
TREC *e*SDIF Sdif 06 04 57.0 -1.9
TREC *e*SP SP 06 06 28.9 -3.6
TREC *e*PKKP PKKPbc 06 09 43.2 -0.9
TREC *ex* x 06 10 07.0
ZST Bratislava 102.31 43 *e*PP PP 05 57 47.2 -7.9
VRAC Vranov 102.37 42 P Pdif 05 53 42.1 +2.1
comp=Z,1.6nm,0.5s,baz=169,slow=5.2,SNR=2.4
VRAC PP PP 05 57 52.5 -3.0
comp=Z,3.4nm,0.8s,baz=189,slow=11,SNR=4.2
VRAC PKiKP PKiKP 05 58 00.7 +0.4
comp=Z,3.7nm,0.7s,baz=247,slow=7.6,SNR=4.3
VRAC S SKSac 06 03 58.2 +0.1
comp=Z,2.5nm,0.3s,baz=337,slow=21,SNR=5.4
VRAC PKKPbc PKKPbc 06 09 41.1 -1.0
comp=Z,2.2nm,0.5s,baz=21,slow=8.9,SNR=3.9
VRAC PKKPab 06 10 03.9
comp=Z,10.0nm,0.9s,baz=68,slow=3.5,SNR=8.6
VRAC Vranov 102.37 42 P Pdif 05 53 42.1 +2.1
VRAC PP PP 05 57 52.5 -3.0
VRAC Vranov 102.37 42 P Pdif 05 53 42.1 +2.1
VRAC *i* 05 58 00.7
VRAC S SKSac 06 03 58.2 +0.1
VRAC pmax pmax
comp=Z,2.0nm,0.5s
VRAC pmax pmax
comp=Z,4.0nm,0.7s
VRAC smax
comp=N,3.0nm,0.3s
VRAC Vranov 102.37 42 ⇑ *i*P Pdif 05 53 46.8 +6.8
UPC Upice 102.44 40 *i* P Pdif 05 53 41.4 +1.1
UPC Upice 102.44 40 *e*PDIF Pdif 05 53 41.4 +1.1
UPC *e*PP PP 05 57 48.7 -7.3
UPC *e*PKKP PKKPbc 06 09 40.9 -1.1
MODS Modra-Piesok 102.48 43 *e*PP PP 05 57 52.9 -3.4
DPC Dobruska-Polom 102.57 41 *i* P Pdif 05 53 40.9 +0.1
DPC *e* 06 03 59.7
DPC *e* 06 04 40.1
DPC *e* 06 05 06.1
DPC *e*SP SP 06 06 34.2 -7.5
DPC Dobruska-Polom 102.57 41 *e*PDIF Pdif 05 53 40.9 +0.1
DPC *e*SKS 06 03 59.7
DPC *e*SKKS SKKSac 06 04 40.1 +0.7
DPC *e*SDIF Sdif 06 05 06.1 -0.1
DPC *ex* x 06 06 34.2
DPC *e*PKKP PKKPbc 06 09 40.7 -0.9
DPC *ex* x 06 10 02.6
PKSM Moragy 102.62 45 ⇑ *i*P Pdif 05 53 41.1 0.0
INK Inuvik 102.86 339 *e*Pdif Pdif 05 53 40.6 -1.6
comp=N,1μm,1.6s
INK Inuvik 102.86 339 *e*P Pdif 05 53 40.6 -1.6
INK pmax pmax
comp=Z,1μm,1.6s
DAWY Dawson 103.06 334 *e*Pdif Pdif 05 53 41.7 -1.3
MORC Moravsky Berou 103.11 41 *e*Pdif Pdif 05 53 41.0 -2.2
comp=Z,7.1nm,1.0s
MORC Moravsky Berou 103.11 41 *e*P Pdif 05 53 41.0 -2.3
MORC pmax pmax
comp=Z,7.0nm,1.0s
OPO Ambohidratompo 103.15 117 PKPbc PKKPbc 06 09 37.1 -1.5
comp=Z,1.0nm,0.3s,baz=79,slow=13,SNR=5.1
OPO PKKPab 06 10 00.0
comp=Z,4.1nm,1.0s,baz=79,slow=7.0,SNR=3.0
VYHS Vyhne 103.50 43 *e*PP PKiKP 05 57 53.1 -9.3
OKC Ostrava-Krasne 103.50 42 *e*SKS SKSac 06 04 04.0 +0.7
OKC *e*SKKS SKKSac 06 04 44.5 -1.6
OKC *e*SDIF Sdif 06 05 16.3 +2.3
OKC *e*SP SP 06 06 49.4 -2.1
NOA NORSAR Array B 103.71 29 PP PP 05 58 05.6 +0.5
comp=Z,1.5nm,0.9s,baz=243,slow=7.9,SNR=3.2
NOA PKKPab 06 09 55.7
comp=Z,6.7nm,0.8s,baz=69,slow=4.6,SNR=14
NOA PKPPKP 06 17 53.4
comp=Z,3.3nm,1.0s,baz=259,slow=3.3,SNR=4.1
PSZ Piszkesteto 103.98 44 ⇓ *i*P Pdif 05 53 37.2 -10
PSZ Piszkesteto 103.98 44 ⇑ *i*P PKiKP 05 58 04.8 +1.5
BZS Buzias 104.40 46 ⇓ *i*P Pdif 05 53 50.9 +1.9
BZS Buzias 104.40 46 ⇓ *i*P PKiKP 05 58 04.3 +0.2
HFS Hagfors 104.53 31 Pdiff Pdif 05 53 49.2 -0.4
comp=Z,1.7nm,0.9s,baz=298,slow=3.1,SNR=2.9
HFS PKiKP PKiKP 05 58 03.2 -0.6
comp=Z,5.3nm,1.0s,baz=176,slow=4.3,SNR=3.3
HFS PP PP 05 58 15.4 +4.2
comp=Z,7.4nm,0.7s,baz=233,slow=7.2,SNR=7.2
HFS PKKPbc PKKPbc 06 09 32.9 -3.2
comp=Z,3.2nm,0.8s,baz=99,slow=9.2,SNR=4.7
HFS PKKPab PKKPab 06 09 52.2 +0.7
comp=Z,5.2nm,0.6s,baz=103,slow=4.7,SNR=15
HFS Hagfors 104.53 31 P Pdif 05 53 49.2 -0.4
HFS 05 58 15.4
HFS pmax pmax
comp=Z,2.0nm,0.9s
GZR Gura Zlata 105.12 47 ⇑ *i*P PKiKP 05 58 12.1 +6.7
STHS Stebnicka Huta 105.29 43 *e*PP PKiKP 05 58 06.4 +0.8
DRGR 105.48 45 ⇓ P PKiKP 05 58 06.4 +0.4
DRGR 105.48 45 ⇓ *i*P Pdif 05 53 59.9 +6.1
DRGR 105.48 45 ⇓ *i*P PKiKP 05 58 06.4 +0.3
TRPA Tarpa 105.74 44 ⇑ *i*P PKiKP 05 58 06.8 +0.3
COLA College 106.77 334 *e*Pdif Pdif 05 53 58.1 -1.4
comp=Z,2.5nm,0.4s
COLA College 106.77 334 *e*P Pdif 05 53 58.1 -1.4
COLA pmax pmax
comp=Z,2.0nm,0.4s
KDAK Kodiak Island 106.95 326 PKKPab PKKPab 06 09 41.7 +0.9
comp=Z,16nm,0.8s,baz=86,slow=9.9,SNR=12
MLR Muntele Rosu 107.29 47 ⇓ P PKiKP 05 58 09.6 +0.1
MLR Muntele Rosu 107.29 47 ⇓ *i*P PKiKP 05 58 09.6 +0.1
BURAR Bucovina Array 107.34 45 ⇓ P PKiKP 05 58 11.2 +1.7
BURAR Bucovina Array 107.34 45 ⇓ *i*P Pdif 05 53 53.0 -9.1
BURAR Bucovina Array 107.34 45 ⇓ *i*P PKiKP 05 58 11.2 +1.7
PLOR Plostina 107.86 47 ⇑ *i*P PKiKP 05 58 10.5 0.0
ODB Odobesti 108.11 47 ⇓ P PKiKP 05 58 10.3 -0.6
ODB Odobesti 108.11 47 ⇓ *i*P PKiKP 05 58 10.4 -0.6
TLCR 109.18 48 ⇑ P PKiKP 05 58 13.3 +0.3
TLCR 109.18 48 ⇑ *i*P PKiKP 05 58 13.3 +0.3
KIS Kishinev 109.58 46 *e*PKP PKiKP 05 58 14.0 +0.3
KIS *e*pPKP 05 59 32.0
KIS *e*SKS SKSac 06 04 26.0 -4.1
KIS *e*SKKS SKKSac 06 05 18.0 -11
KIS *e*S Sdif 06 06 05.0 +0.3
EIL Elat 110.18 65 PKKPab PKKPab 06 09 28.0 +0.2
comp=Z,8.3nm,0.9s,baz=8.5,slow=5.0,SNR=6.1
VSU Vasula 110.56 34 ⇓ *i*PKIKP PKiKP 05 58 15.1 -0.1
KIEV Kiev 110.58 43 *e*PKPdf PKiKP 05 58 15.3 -0.2
AKASG Malin Array Be 110.59 43 PKiKP PKiKP 05 58 15.0 -0.5
comp=Z,8.3nm,0.4s,baz=260,slow=2.8,SNR=29
AKASG PP PP 05 58 51.7 -3.9
comp=Z,18nm,1.2s,baz=253,slow=8.5,SNR=11
AKASG SKP 06 01 27.1
comp=Z,1.4nm,0.5s,baz=263,slow=3.3,SNR=4.6
AKASG PKKPbc PKKPbc 06 09 15.2 -1.5
comp=Z,15nm,0.7s,baz=70,slow=3.8,SNR=38
AKASG PKKPab PKKPab 06 09 24.8 -0.2
comp=Z,5.4nm,0.8s,baz=66,slow=4.1,SNR=4.2
AKASG Malin Array Be 110.59 43 PKPdf PKiKP 05 58 15.0 -0.5
AKASG PP PP 05 58 51.7 -3.9
AKASG SKP 06 01 27.1
AKASG PKKPbc PKKPbc 06 09 15.2 -1.5
AKASG PKKPab PKKPab 06 09 24.8 -0.2
AKASG Malin Array Be 110.59 43 *i* PKIKP PKiKP 05 58 15.0 -0.5
AKASG 05 58 51.7
AKASG 06 01 27.2
AKASG 06 09 15.2
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG pmax pmax
comp=Z,18nm,1.2s
AKBB Malin Array Si 110.59 43 *e*PKPdf PKiKP 05 58 15.2 -0.3
ANTO Ankara 110.88 54 ⇓ P PKiKP 05 58 17.6 +1.2
ANTO Ankara 110.88 54 ⇓ *i*P PKiKP 05 58 17.6 +1.2
KAF Kangasniemi 110.94 30 *e*p PKiKP 05 58 15.2 -0.6
comp=Z,3.0nm,0.4s
KAF Kangasniemi 110.94 30 *e*PKIKP PKiKP 05 58 15.2 -0.6
KAF pmax pmax
comp=Z,3.0nm,0.4s
MMAI Mount Meron Ar 111.38 62 PKiKP PKiKP 05 58 18.1 +0.6
comp=Z,3.8nm,0.5s,baz=336,slow=1.0,SNR=7.1
MMAI PP PP 05 59 05.1 +3.3
comp=Z,0.6nm,0.3s,baz=79,slow=4.3,SNR=4.5
MMAI PKKPbc PKKPbc 06 09 12.7 -0.8
comp=Z,5.2nm,0.6s,baz=51,slow=6.6,SNR=7.0
MMAI PKKPab PKKPab 06 09 22.5 +0.2
comp=Z,18nm,1.1s,baz=44,slow=4.9,SNR=6.7
ARCES ARCESS Array B 111.62 22 PKiKP PKiKP 05 58 17.0 +0.1
comp=Z,2.4nm,0.5s,baz=228,slow=2.7,SNR=16
ARCES PP PP 05 59 02.4 -0.1
comp=Z,14nm,1.0s,baz=269,slow=8.5,SNR=6.2
ARCES PKKPbc PKKPbc 06 09 11.8 -2.1
comp=Z,5.3nm,0.5s,baz=82,slow=4.0,SNR=35
ARCES PKKPab PKKPab 06 09 20.1 +0.3
comp=Z,19nm,0.8s,baz=97,slow=6.2,SNR=16
ARCES ARCESS Array B 111.62 22 PKPdf PKiKP 05 58 17.0 +0.1
ARCES PP PP 05 59 02.4 -0.1
ARCES PKKPbc PKKPbc 06 09 11.8 -2.1
ARCES PKKPab PKKPab 06 09 20.1 +0.3
ARCES ARCESS Array B 111.62 22 *i* PKIKP PKiKP 05 58 17.0 +0.1
ARCES 05 59 02.4
ARCES 06 09 20.2
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES pmax pmax
comp=Z,14nm,1.0s
ASF Jabal al Asfar 112.41 63 PKiKP PKiKP 05 58 20.0 +0.5
comp=Z,5.3nm,0.9s,baz=102,slow=2.0,SNR=6.6
ASF PP PP 05 59 07.2 -2.0
comp=Z,6.6nm,1.1s,baz=306,slow=6.3,SNR=3.7
ASF PKKPab PKKPab 06 09 17.8 0.0
comp=Z,6.5nm,0.9s,baz=275,slow=0.2,SNR=8.0
ASF Jabal al Asfar 112.41 63 *i* PKIKP PKiKP 05 58 20.0 +0.4
ASF 05 59 07.2
ASF pmax pmax
comp=Z,5.0nm,0.9s
ASF pmax pmax
comp=Z,7.0nm,1.2s
ASF pmax pmax
comp=Z,7.0nm,0.9s
JOF Joensuu 113.34 30 *e*p PKiKP 05 58 20.1 -0.2
comp=Z,2.0nm,0.4s
JOF Joensuu 113.34 30 *e*P PKiKP 05 58 20.1 -0.2
APA Apatity 114.40 25 ⇓ *i*PKIKP PKiKP 05 58 22.8 +0.5
APA *i* 05 59 19.0
APA *i* 06 04 46.0
APA *e*SS SS 06 14 46.0 -11
APA pmax pmax
comp=Z,18nm,1.0s
APA MLR MLR
comp=Z,900nm,24.0s
ANN Anapa 115.13 50 *i* P Pdif 05 54 41.1 +4.4
ANN *i* 05 58 23.8
ANN *e* 05 59 26.7
ANN *i* 06 04 50.9
ANN *e* 06 08 45.2
ANN pmax pmax
comp=Z,66nm,1.0s
OBN Obninsk 115.55 38 *e*PKPdf PKPdf 05 58 24.4 -0.4
OBN Obninsk 115.55 38 ⇑ *i*PKIKP PKPdf 05 58 24.2 -0.6
OBN *e* 05 59 22.5
OBN *e* 05 59 28.8
OBN *e* 06 04 51.2
OBN *i* PS PS 06 08 49.8 -24
OBN pmax pmax
comp=Z,83nm,1.2s
MOS Moscow 116.18 38 *e*PKIKP PKPdf 05 58 23.8 -2.2
MOS *e* 05 59 29.6
MOS *i* 06 04 52.7
MOS pmax pmax
comp=Z,77nm,1.0s
VSR Storozhevoye 116.89 43 *d i*PKIKP PKPdf 05 58 27.3 -0.2
VSR *e* 06 04 53.7
VSR *e*SP SP 06 09 00.1 -0.2
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,9.0nm,0.6s
VORD Divnogorie 116.95 43 *d i*PKIKP PKPdf 05 58 27.4 -0.3
VORD *e* 06 04 50.1
VORD *e*SP SP 06 08 59.5 -1.4
VORD pmax pmax
comp=Z,30nm,0.8s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.6s
VRHR Novokhopersk 118.43 43 *e*PKIKP PKPdf 05 58 30.9 +0.4
VRHR *e* 06 05 00.9
VRHR pmax pmax
comp=Z,60nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.6s
KIV Kislovodsk 118.78 51 P PKPdf 05 58 32.2 +0.8
SNR=9.1
KIV Kislovodsk 118.78 51 *e*PKPdf PKPdf 05 58 31.4 -0.1
KIV *e*SKPdf SKPdf 06 01 44.7 -1.5
KIV Kislovodsk 118.78 51 *i* PKIKP PKPdf 05 58 31.7 +0.3
KIV *e* 05 59 50.0
KIV *e* 06 05 05.3
KIV *e*SP SP 06 09 17.1 -0.8
KIV *e*PS PS 06 09 43.2 -0.2
KIV *e*SS SS 06 15 52.8 -2.4
KIV pmax pmax
comp=Z,47nm,0.9s
KIV Kislovodsk 118.78 51 ⇓ *i*P PKPdf 05 58 32.0 +0.6
GOF Gofitskoye 119.11 50 *e*PKIKP PKPdf 05 58 31.6 -0.4
GOF *i* 06 05 06.4
GOF pmax pmax
comp=Z,80nm,0.9s
ONI Oni 119.23 53 P PKPdf 05 58 35.9 +3.6
STKA Stephens Creek 119.58 207 PKP PKPdf 05 58 33.2 -0.3
comp=Z,24nm,0.8s,baz=109,slow=1.4,SNR=39
STKA PP PP 05 59 55.9 -1.7
comp=Z,10nm,1.1s,baz=149,slow=8.8,SNR=5.3
STKA PKKPbc PKKPbc 06 08 44.7 -0.9
comp=Z,4.7nm,0.7s,baz=322,slow=3.8,SNR=11
STKA Stephens Creek 119.58 207 *e*PKPdf PKPdf 05 58 32.5 -1.0
GNI Garni 119.98 56 P PKPdf 05 58 35.6 +1.8
SNR=5.1
GNI Garni 119.98 56 PKP PKPdf 05 58 34.0 +0.1
comp=Z,19nm,0.6s,baz=311,slow=3.0,SNR=13
GNI Garni 119.98 56 *e*PKPdf PKPdf 05 58 33.7 -0.1
GNI *e*SKPdf SKPdf 06 01 47.6 -1.0
GNI Garni 119.98 56 *d i*PKIKP PKPdf 05 58 34.9 +1.1
DGRG David-gareji 120.57 54 P PKPdf 05 58 32.9 -2.0
NWAO Narrogin (SRO) 124.64 184 PKP PKPdf 05 58 42.3 -0.9
comp=Z,63nm,0.7s,baz=164,slow=3.3,SNR=37
NWAO Narrogin (SRO) 124.64 184 *e*PKIKP PKPdf 05 58 42.4 -0.8
FORT Forrest 125.13 195 *e*PKPdf PKPdf 05 58 42.9 -1.2
CTA Charters Tower 126.97 219 PKP PKPdf 05 58 47.3 -0.7
comp=Z,69nm,0.9s,baz=144,slow=0.9,SNR=40

CTA Charters Tower 126.97 219 PKIKP PKPdf 05 58 47.3 -0.6
CTA pmax pmax
comp=Z,69nm,0.9s
CTAO Charters Tower 126.97 219 *e*PKPdf PKPdf 05 58 47.4 -0.5
CTAO Charters Tower 126.97 219 P PKPdf 05 58 47.7 -0.2
ARQ Araqi 127.64 77 P PKPdf 05 58 49.6 +0.5
SNR=5.2
ARU Arti 127.69 35 *e*PKPdf PKPdf 05 58 48.2 +0.1
ARU Arti 127.69 35 *i* PKIKP PKPdf 05 58 48.6 +0.5
ARU 06 00 50.2
BSY Bisya 128.13 78 P PKPdf 05 58 50.5 +0.5
SNR=12
HOQ Hoqain 128.39 77 P PKPdf 05 58 50.4 -0.1
SNR=6.1
SVE Sverdlovsk 128.66 34 *e*PKIKP PKPdf 05 58 50.2 +0.3
SVE pmax pmax
comp=Z,49nm,1.0s
AKTK Aktyubinsk 128.84 43 PKP PKPdf 05 58 50.9 +0.4
AKTK PP PP 06 00 59.8 -0.5
AKTK SKPbc 06 01 48.7
AKTK PKKPbc 06 08 07.8
AKTO Aktyubinsk 128.84 43 PKP PKPdf 05 58 50.9 +0.4
comp=Z,35nm,0.9s,baz=310,slow=3.4,SNR=58
AKTO PP PP 06 00 59.8 -0.5
comp=Z,6.4nm,1.0s,baz=301,slow=7.5,SNR=6.4
AKTO SKPbc 06 01 48.7
comp=Z,41nm,0.8s,baz=285,slow=4.0,SNR=26
AKTO PKKPbc 06 08 07.8
comp=Z,2.8nm,0.4s,baz=100,slow=9.8,SNR=12
JMDO Jabal Madar 128.87 79 P PKPdf 05 58 51.4 0.0
SNR=5.4
SMDO Samad 128.96 78 P PKPdf 05 58 52.2 +0.6
SNR=21
BIDO Bidbid 129.12 77 P PKPdf 05 58 52.6 +0.7
SNR=7.2
WBK Wadi Bani Khal 129.71 79 P PKPdf 05 58 54.1 +1.1
SNR=16
ASAR Alice Springs 129.96 204 PKP PKPdf 05 58 52.4 -1.2
comp=Z,104nm,0.8s,baz=146,slow=2.1,SNR=32
ASAR PP PP 06 01 02.8 -4.0
comp=Z,8.8nm,0.9s,baz=156,slow=5.9,SNR=5.7
ASAR SKPbc SKPbc 06 01 52.4 -3.3
comp=Z,30nm,0.9s,baz=149,slow=4.4,SNR=13
ASAR PKKP 06 08 55.2
comp=Z,1.8nm,0.6s,baz=355,slow=1.8,SNR=11
ASAR SKKPbc 06 11 34.8
comp=Z,4.2nm,0.8s,baz=346,slow=2.5,SNR=8.2
TIXI Tiksi 130.21 354⇑ *e*PKP PKPdf 05 58 50.6 -1.9
TIXI Tiksi 130.21 354 *i* PKIKP PKPdf 05 58 51.0 -1.5
TIXI pmax pmax
comp=Z,85nm,1.0s
AB31 Akbulak array 130.30 44 PKIKP PKPdf 05 58 53.8 +0.5
AB31 pmax pmax
comp=Z,106nm,1.0s
SEY Seymchan 132.11 337⇓ *e*PKP PKPdf 05 58 56.1 -0.2
SEY Seymchan 132.11 337⇓ *i* PKIKP PKPdf 05 58 56.1 -0.2
WB2 Warramunga Arr 133.13 207 *e*PKPdf PKPdf 05 58 59.6 0.0
WB2 *e*SKPbc SKPbc 06 02 04.0 -3.2
WRA Warramunga Arr 133.13 207 PKhKP 05 58 39.5
comp=Z,1.2nm,0.4s,baz=152,slow=2.6,SNR=11
WRA PKP PKPdf 05 58 59.0 -0.6
comp=Z,59nm,0.6s,baz=166,slow=1.7,SNR=64
WRA PP PP 06 01 25.2 -2.0
comp=Z,11nm,1.0s,baz=155,slow=5.5,SNR=10.0
WRA SKPbc SKPbc 06 02 03.2 -4.0
comp=Z,101nm,1.2s,baz=156,slow=3.3,SNR=21
WRA PKKP 06 08 47.9
comp=Z,0.8nm,0.7s,baz=325,slow=2.5,SNR=5.2
WRA SKKPbc 06 11 23.5
comp=Z,5.6nm,1.0s,baz=321,slow=2.2,SNR=7.5
WRA Warramunga Arr 133.13 207 PKP PKPdf 05 58 59.0 -0.6
WRA PP PP 06 01 25.2 -2.0
WRA SKPbc SKPbc 06 02 03.2 -4.0
WRA PKKP 06 08 47.9
WRA SKKPbc 06 11 23.5
WRAB Tennant Creek 133.14 207 *e*PKPdf PKPdf 05 58 59.5 -0.1
WRAB *e*SKPbc SKPbc 06 02 03.2 -4.0
COEN Coen 133.57 221 *e*PKPdf PKPdf 05 59 00.8 +0.2
COEN Coen 133.57 221 P PKPdf 05 59 01.1 +0.6
PMG Port Moresby 134.32 229 *e*PKPdf PKPdf 05 59 03.0 +1.0
PMG *e*SKPbc SKPbc 06 02 08.3 -2.9
PMG Port Moresby 134.32 229⇑ *i* PKIKP PKPdf 05 59 03.1 +1.1
PMG Port Moresby 134.32 229 P PKPdf 05 59 03.9 +1.9
PET Petropavlovsk 134.45 323 *e*PKIKP PKPdf 05 59 01.1 +0.1
PET pmax pmax
comp=Z,35nm,0.6s
PEA0B Petropavlovsk- 134.94 324 *e*PKPdf PKPdf 05 59 01.9 -0.1
PETK Petropavlovsk- 134.94 324 PKhKP 05 58 47.8
comp=Z,5.6nm,1.0s,baz=118,slow=19,SNR=2.9
PETK PKP PKPdf 05 59 01.6 -0.3
comp=Z,24nm,0.6s,baz=69,slow=4.2,SNR=24
PETK PP PP 06 01 36.9 -2.2
comp=Z,18nm,1.1s,baz=83,slow=12,SNR=3.3
PETK SKPbc SKPbc 06 02 09.3 -2.6
comp=Z,106nm,0.8s,baz=86,slow=6.6,SNR=33
PETK Petropavlovsk- 134.94 324 PKP PKPdf 05 59 01.6 -0.3
PETK PP PP 06 01 36.9 -2.2
PETK SKPbc SKPbc 06 02 09.3 -2.6
BRVK Borovoye 135.24 36 P PKPdf 05 59 03.6 +1.1
SNR=15
BRVK Borovoye 135.24 36 *e*PKIKP PKPdf 05 59 03.1 +0.6
BVA0 Borovoye Array 135.31 36 *i* PKIKP PKPdf 05 59 03.3 +0.7
BVA0 pmax pmax
comp=Z,16nm,1.2s
BVAR Borovoye Array 135.31 36 PKP PKPdf 05 59 02.6 0.0
comp=Z,38nm,0.8s,baz=272,slow=2.5,SNR=88
BVAR PP PP 06 01 40.3 -1.1
comp=Z,0.7nm,0.4s,baz=332,slow=9.2,SNR=2.9
BVAR SKPbc SKPbc 06 02 12.6 -0.5
comp=Z,34nm,1.0s,baz=292,slow=4.0,SNR=14
BVAR SKKPbc 06 11 19.9
comp=Z,3.6nm,0.9s,baz=134,slow=4.2,SNR=4.4
VOSK Vostochnaya 135.76 36 PKIKP PKPdf 05 59 04.1 +0.6
VOSK pmax pmax
comp=Z,105nm,1.0s
MBWA Marble Bar 136.07 188 P PKPdf 05 59 05.3 +0.2
SNR=6.4
MBWA Marble Bar 136.07 188 *e*PKPdf PKPdf 05 59 04.4 -0.7
MBWA *e*SKPbc SKPbc 06 02 13.6 -3.0
MBWA Marble Bar 136.07 188 P PKPdf 05 59 04.4 -0.7
KK31 Karatay Array 138.91 50 *i* PKIKP PKPdf 05 59 09.5 -0.1
KK31 pmax pmax
comp=Z,2.0nm,0.4s
YAK Yakutsk 139.15 349 *e*PKPdf 05 59 00.3
YAK Yakutsk 139.15 349 *e*PKHKP 05 58 58.9
YAK *e* 05 59 06.5
YAK pmax pmax
comp=Z,69nm,1.2s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,17nm,1.5s
BHJ Bhuj 139.52 80 *e*P PKPdf 05 59 10.6 -0.7
NVS Novosibirsk 140.60 28 *e*PKHKP 05 59 05.5
NVS pmax pmax
comp=Z,168nm,1.2s
NVS pmax pmax
comp=E,76nm,1.3s
KURK Kurchatov 140.89 35 P PKPdf 05 59 14.4 +1.5
SNR=20
KURK Kurchatov 140.89 35 *e*PKPdf PKPdf 05 59 08.6 -4.3
KURK ⇑*e*PKP PKPdf 05 59 13.8 +0.9
EKS2 Erkin-Say 141.34 49 *e*PKPdf PKPdf 05 59 10.1 -3.9
EKS2 Erkin-Say 141.34 49 P PKPdf 05 59 10.3 -3.7
SNR=29
AML Almayashu 141.44 50 *e*PKPdf PKPdf 05 59 09.9 -4.3
AML Almayashu 141.44 50 P PKPdf 05 59 16.8 +2.6
SNR=16
USP Ospenovka 141.64 48 P PKPdf 05 59 16.3 +1.8
SNR=26
AAK Ala-Archa 141.85 49 P PKPdf 05 59 10.6 -4.3
SNR=20
FRU Bishkek 141.87 49 *e*PKIKP PKPdf 05 59 12.0 -2.9
FRU pmax pmax
comp=Z,130nm,2.1s
ZALV Zalesovo Beam 141.89 28 PKhKP 05 59 09.2
comp=Z,42nm,0.6s,baz=311,slow=4.1,SNR=90
ZALV PKP PKPdf 05 59 14.8 +0.2
comp=Z,88nm,0.5s,baz=291,slow=2.7,SNR=54
ZALV SKP 06 02 26.9
comp=Z,51nm,1.0s,baz=276,slow=2.7,SNR=13
ZALV SKPbc SKPbc 06 02 30.4 -1.0
comp=Z,38nm,0.8s,baz=298,slow=3.2,SNR=9.7
ZALV SKKPbc 06 10 49.9
comp=Z,6.0nm,0.8s,baz=95,slow=5.1,SNR=5.8

ZALV Zalesovo Beam 141.89 28 *i* PKHKP 05 59 09.2
ZALV 05 59 14.9
ZALV 06 02 27.0
CHMS Chumysh 141.91 48 P PKPdf 05 59 13.8 -1.2
SNR=9.8
TRD Trivandrum 142.02 106 *e*P PKPdf 05 59 13.3 -2.7
KBK Karagaybulak 142.16 49 P PKPdf 05 59 09.9 -5.5
SNR=8.4
POO Poona 142.51 89 *ex* x 05 59 08.0
TKM2 Tokmak 2 142.52 48 *e*PKPdf PKPdf 05 59 13.8 -2.3
TKM2 Tokmak 2 142.52 48 P PKPdf 05 59 14.1 -2.0
SNR=11
KOD Kodaikanal 143.20 104 *e*P PKPdf 05 59 15.3 -2.9
KRAR Krasnoyarsk 143.28 20 *i* PKIKP PKPdf 05 59 16.7 -0.3
KSH Kashi 143.86 53 PKP PKPdf 05 59 17.4 -1.2
KSH *e*XPKP 06 00 38.3
KSH *e*PKS 06 02 52.8
KSH *e*SKS SKSdf 06 06 05.4 -2.0
KSH PP PP
comp=Z,1μm,3.8s
KSH LR LR
comp=N,2μm,10.4s
KSH LR LR
comp=E,2μm,5.8s
KSH LR LR
comp=Z,1μm,5.6s
AJM Ajmer 144.33 76 *e*P PKPdf 05 59 17.6 -2.2
BOD Bodaibo 144.87 360⇑ *i* PKIKP PKPdf 05 59 18.0 -1.7
BOD pmax pmax
comp=Z,1μm,1.0s
LATR Latur 144.99 90 *e*P PKPdf 05 59 21.5 +0.4
MK31 Makanchi Array 145.05 39 *e*PKPbc PKPbc 05 59 20.6 +0.3
MKAR Makanchi Array 145.05 39 PKPbc PKPbc 05 59 20.3 0.0
comp=Z,199nm,0.8s,baz=319,slow=2.5,SNR=373
MKAR SKPbc SKPbc 06 02 37.8 -1.5
comp=Z,26nm,0.8s,baz=304,slow=2.0,SNR=5.9
MKAR SKKPbc 06 10 36.1
comp=Z,16nm,1.0s,baz=123,slow=5.3,SNR=13
THN Thein Dam 145.06 65 *e*P PKPbc 05 59 19.6 -1.2
DLH Dalhousie 145.26 65 *e*P PKPdf 05 59 20.0 -1.2
AKL Akola 145.88 86 *e*P PKPdf 05 59 20.2 -2.4
BATI Baumata 145.93 198 PKPbc PKPbc 05 59 24.0 0.0
comp=Z,435nm,0.6s,baz=241,slow=1.1,SNR=48
BATI Baumata 145.93 198 P PKPdf 05 59 24.4 +1.5
XMIS Christmas Isla 146.14 166 *e*PKPbc PKPbc 05 59 24.0 -0.5
XMIS Christmas Isla 146.14 166 P PKPdf 05 59 24.2 +0.9
SDNR Sundarnagar 146.22 67 *ex* x 05 59 24.0
YSS Yuzh-Sakhalins 146.34 323 *e*PKPbc PKPbc 05 59 23.5 -0.7
YSS Yuzh-Sakhalins 146.34 323K *i* PKIKP PKPdf 05 59 22.0 -0.6
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,290nm,1.0s
YSS pmax pmax
comp=Z,340nm,1.0s
YSS pmax pmax
comp=Z,2μm,8.0s
SMLA Simla 146.43 68 *e*P PKPdf 05 59 22.2 -1.0
SMLA *i* x 06 02 52.1
HYB Hyderabad 146.59 92 *e*PKP PKPdf 05 59 25.0 +1.1
HYB Hyderabad 146.59 92 *i* PKP PKPdf 05 59 25.0 +1.1
HYB *e* 05 59 30.0
HYB *e* 06 00 24.0
HYB *e*SKP 06 02 34.0
HYB *e* 06 02 42.0
HYB *e*SKKS SKKSac 06 09 16.0 -5.6
BHPL Bhopal 146.61 82 *e*P PKPdf 05 59 22.1 -1.7
BHPL AMb AMB 05 59 32.9
comp=Z,176nm,0.4s
NDI New Delhi 146.63 72 *e*P PKPdf 05 59 24.0 +0.3
MDRS Chennai 146.80 101 *ex* x 05 59 48.0
DDI Dehra Dun 147.26 69 *ex* x 05 59 19.8
DDI *ex* x 06 02 35.2
NGP Nagpur 147.82 86 *e*P PKPdf 05 59 21.9 -3.9
ASAJ Asahikawa 148.03 319 PKPbc PKPdf 05 59 26.4 +0.9
comp=Z,300nm,0.9s,baz=244,slow=5.5,SNR=61
ASAJ Asahikawa 148.03 319 PKIKP PKPdf 05 59 26.4 +0.9
ASAJ pmax pmax
comp=Z,300nm,1.0s
ERM Erimo 148.75 315 *e*PKPbc PKPbc 05 59 31.5 +0.7
ERM *e*PKPab PKPab 05 59 36.5 +1.3
ERM Erimo 148.75 315 *i* PKIKP PKPbc 05 59 28.9 -1.9
DNP Denpasar 148.84 183 P PKPbc 05 59 33.2 +1.3
GUMO Guam 149.12 258 PKPbc PKPbc 05 59 30.8 -1.7
comp=Z,1μm,0.9s,baz=180,slow=4.6,SNR=34
GUMO Guam 149.12 258 *e*PKPbc PKPbc 05 59 31.3 -1.2
GUMO Guam 149.12 258 P PKPbc 05 59 31.4 -1.1
KHKI Kahang-Kahang 149.13 184 P PKPbc 05 59 31.7 -0.9
HABR Khabarovsk 149.15 332 *i* PKHKP 05 59 26.3
HABR *e* 06 03 01.3
HABR *e* 06 06 13.3
HABR *e*SS SS 06 21 55.4 -2.8
NBBI Negara 149.16 182 P PKPbc 05 59 32.4 -0.3
PTH Pithoragarh 149.20 70 *e*P PKPdf 05 59 28.0 +0.1
LGTI Lohaghat 149.23 70 *e*P PKPdf 05 59 28.3 +0.4
LGTI *ex* x 06 00 38.2
KRKI Karangkates 149.36 178 P PKPbc 05 59 33.6 +0.4
MOY Mondy 149.40 16 *e*PKHKP PKPdf 05 59 29.8 +2.4
MOY pmax pmax
comp=Z,61nm,1.5s
IRK Irkutsk 149.57 12 *i* PKHKP PKPdf 05 59 27.8 +0.1
IRK pmax pmax
comp=Z,529nm,1.6s
SJI Sawahan 149.74 176 P PKPdf 05 59 29.5 +0.3
WMQ Urumqi 149.88 39 PKP PKPdf 05 59 29.5 +1.0
WMQ PP PP 06 03 12.5 +3.3
WMQ SS SS 06 22 11.5 +4.5
WMQ PP PP
comp=Z,156nm,9.0s
WMQ LR LR
comp=N,457nm,24.0s
WMQ LR LR
comp=E,436nm,24.0s
WMQ LR LR
comp=Z,368nm,24.0s
KLR Kul'dur 149.89 336 *e*PKIKP PKPdf 05 59 23.7 -4.6
KLR pmax pmax
comp=E,65nm,1.6s
KLR pmax pmax
comp=Z,450nm,1.6s
BJII Banjamegara 149.94 172 P PKPbc 05 59 32.0 -2.6
TLY Talaya 149.98 13 P PKPbc 05 59 30.3 -3.2
SNR=22
TLY Talaya 149.98 13 *e*PKPdf PKPdf 05 59 29.8 +1.5
TLY *e*PKPbc PKPbc 05 59 34.7 +1.2
TLY *e*PKPab PKPab 05 59 41.6 +1.7
TLY Talaya 149.98 13 *e*PKHKP PKPdf 05 59 29.9 +1.5
TLY *e*SS SS 06 21 56.7 -10
TLY pmax pmax
comp=Z,77nm,1.3s
TLY MLR MLR
comp=Z,449nm,22.0s
LEM Lembang 150.10 168 P PKPdf 05 59 30.6 +0.8
DBJI Dramaga 150.18 166 P PKPdf 05 59 30.6 +0.7
AAI Ambon 150.26 210 P PKPdf 05 59 29.9 -0.1
CBJI Citeko 150.34 166 P PKPdf 05 59 30.3 +0.2
KMMI Kalianget 150.49 180 P PKPbc 05 59 36.1 +0.2
TNG Tangerang 150.53 166 P PKPbc 05 59 36.7 +0.7
JCJI Jatiwangi 150.55 169 P PKPbc 05 59 34.4 -1.7
ALBI Allahabad 150.74 78 *e*P PKPdf 05 59 29.0 -1.4
SWI Sorong 151.06 218 P PKPbc 05 59 36.6 -0.7
VIS Vishakhapatnam 151.07 94 *e*P PKPdf 05 59 28.9 -2.2
ZAK Zakamensk 151.13 14 *e*PKIKP PKPdf 05 59 30.8 +0.6
ZAK pmax pmax
comp=Z,98nm,1.0s
KLI Kotabumi 151.31 161 P PKPdf 05 59 32.4 +0.8
KSI Kapahiang 151.69 156 P PKPdf 05 59 32.7 +0.5
PYUN Piuthan 151.74 73 *e*P PKPdf 05 59 32.5 +0.7
KAPI Kappang 151.89 193 PKP PKPdf 05 59 31.5 -1.0
comp=Z,58nm,1.1s,baz=238,slow=1.8,SNR=17
KAPI PKPbc PKPbc 05 59 38.6 -0.6
comp=Z,232nm,0.6s,baz=191,slow=3.7,SNR=92
KAPI Kappang 151.89 193 *e*PKPdf PKPdf 05 59 31.4 -1.1
KAPI *e*PKPbc PKPbc 05 59 38.4 -0.7
KAPI *e*PKPab PKPab 05 59 48.8 0.0
KAPI Kappang 151.89 193 P PKPdf 05 59 32.0 -0.5
KDI Kendari 152.17 199 P PKPdf 05 59 33.5 +0.6
KOLN Koldanda 152.30 73 *e*P PKPdf 05 59 33.2 +0.5
DANN Dangsing 152.40 72 *e*P PKPdf 05 59 32.9 +0.1
GKN Gorkha 153.20 72 *e*P PKPdf 05 59 34.3 +0.3
PDSI Padang 153.25 149 P PKPdf 05 59 34.4 -0.1
LBMI Labuha 153.25 212 P PKPbc 05 59 42.9 +0.7
PPI Padang Panjang 153.62 149 P PKPdf 05 59 35.0 0.0

DMN Daman 153.65 73 *e*P PKPdf 05 59 35.2 +0.6
KKN Kakani 153.78 73 *e*P PKPdf 05 59 35.2 +0.4
CBIJ Chichi jima 153.84 286 PKPbc PKPbc 05 59 42.2 -0.8
comp=Z,94nm,0.6s,baz=261,slow=4.7,SNR=6.9
CBIJ PKPab PKPab 05 59 56.9 -0.2
comp=Z,299nm,1.0s,baz=112,slow=7.2,SNR=5.7
PKIN Phulchoki 153.91 73 *e*P PKPdf 05 59 35.1 +0.1
PKI Pulchoki 153.92 73 *e*P PKPdf 05 59 35.4 +0.4
BBKI Banjar Baru 154.03 183 P PKPdf 05 59 37.2 +1.6
TPI Tanjungpandan 154.06 166 P PKPdf 05 59 36.0 +0.3
SONM Songino Array 154.19 11 PKP PKPdf 05 59 35.0 +0.3
comp=Z,68nm,0.9s,baz=313,slow=0.8,SNR=182
SONM PKPbc PKPbc 05 59 42.8 -0.2
comp=Z,155nm,1.1s,baz=299,slow=1.3,SNR=43
SONM PKPab PKPab 05 59 58.4 +0.7
comp=Z,36nm,0.7s,baz=326,slow=3.5,SNR=11
PPBI Pangkal Pinang 154.25 162 P PKPdf 05 59 35.9 0.0
GUN Gumba 154.30 72 *e*P PKPdf 05 59 36.2 +0.7
MDJ Mudanjiang 154.51 333 PKP PKPdf 05 59 33.9 -1.4
MDJ APKP 06 00 30.8
MDJ XPKP 06 00 53.3
MDJ PKS 06 03 08.3
MDJ PP PP 06 03 34.6 -0.3
MDJ LR LR
comp=N,352nm,22.0s
MDJ LR LR
comp=E,306nm,24.0s
MDJ LR LR
comp=Z,365nm,22.0s
JIRN Jiri 154.60 73 *e*P PKPdf 05 59 36.3 +0.3
MJAR Matsushiro Arr 154.70 309 PKP PKPdf 05 59 36.0 +0.2
comp=Z,8.2nm,0.7s,baz=56,slow=1.0,SNR=20
MJAR PKPbc PKPbc 05 59 44.0 -0.6
comp=Z,35nm,0.7s,baz=72,slow=1.9,SNR=39
MJAR PKPab PKPab 05 59 58.9 -1.5
comp=Z,65nm,1.0s,baz=166,slow=1.8,SNR=4.7
MJAR Matsushiro Arr 154.70 309 PKP PKPdf 05 59 36.0 +0.2
MJAR PKPbc PKPbc 05 59 44.0 -0.6
MJAR PKPab PKPab 05 59 58.9 -1.5
MJAR Matsushiro Arr 154.70 309 PKIKP PKPdf 05 59 36.0 +0.2
MJAR 05 59 58.9
MJAR pmax pmax
comp=Z,8.0nm,0.7s
MAJO Matsushiro 154.70 309 *e*PKPdf PKPdf 05 59 35.4 -0.4
MAJO *e*PKPbc PKPbc 05 59 44.6 0.0
MAJO *e*PKPab PKPab 05 59 59.7 -0.7
MAT Matsushiro 154.70 309 PKP PKPdf 05 59 34.9 -0.9
JHJ Hachijo jima 2 154.79 300 PKP PKPdf 05 59 37.2 +1.1
comp=Z,187nm,0.9s,baz=135,slow=8.6,SNR=2.6
JHJ PKPbc PKPbc 05 59 43.5 -1.3
comp=Z,251nm,0.7s,baz=138,slow=5.5,SNR=4.8
JHJ PKPab PKPab 05 59 59.9 -1.0
comp=Z,218nm,0.7s,baz=169,slow=5.2,SNR=3.2
RAMN Ramite 155.02 75 *e*P PKPdf 05 59 37.2 +0.6
PLKI Palangkaraya 155.28 181 P PKPdf 05 59 36.0 -1.3
BSI Banda Aceh 155.34 131 P PKPdf 05 59 36.9 -0.5
ODAN Odare 155.73 75 *e*P PKPdf 05 59 38.1 +0.6
TAPN Taplejung 155.97 73 *e*P PKPdf 05 59 38.6 +0.8
CN2 Changchun 156.79 338 *e*PKP PKPdf 05 59 37.8 -0.6
CN2 APKP 06 00 35.8
CN2 PP PP 06 03 50.0 +2.6
CN2 *e*SS SS 06 23 20.0 -1.2
CN2 PP PP
comp=Z,200nm,6.0s
KGM Kluang 157.13 152⇑ P PKPdf 05 59 40.3 +0.5
MYKOM Kota Tinggi 157.15 154⇓ P PKPdf 05 59 40.1 +0.4
MYKOM Kota Tinggi 157.15 154 P PKPdf 05 59 39.8 0.0
FRIM Kepong 157.41 147⇓ P PKPdf 05 59 40.0 -0.1
STKI Sintang 157.45 174 P PKPdf 05 59 41.5 +1.3
IPM Ipoh 158.15 144⇓ P PKPdf 05 59 41.3 +0.3
IPM Ipoh 158.15 144 P PKPdf 05 59 40.8 -0.2
KULM Kulim 158.61 142⇓ P PKPdf 05 59 42.1 +0.6
KSM Kuching 158.69 171 *e*PKPdf PKPdf 05 59 41.4 -0.3
KSM *e*PKPab PKPab 06 00 19.1 +1.1
KSM Kuching 158.69 171⇓ P PKPdf 05 59 42.3 +0.6
KSM Kuching 158.69 171 P PKPdf 05 59 41.7 0.0
SNY Shenyang 159.17 339⇑ PKP PKPdf 05 59 39.4 -1.9
SNY PP PP 06 04 00.3 -0.1
SNY PP PP
comp=Z,439nm,7.8s
GTA Gaotai 159.51 32 PKP PKPdf 05 59 41.9 +0.1
GTA PKP2 PKPab 06 00 23.9 +2.9
GTA APKP 06 00 40.0
GTA XPKP 06 01 03.3
GTA PP PP 06 04 06.3 +3.7
GTA SKS SKSdf 06 06 23.3 -3.3
GTA SKKS SKKSac 06 10 30.5 +0.2
GTA SS SS 06 23 52.8 +2.1
GTA PP PP
comp=Z,171nm,7.5s
GTA LR LR
comp=N,278nm,18.9s
GTA LR LR
comp=E,321nm,18.9s
GTA LR LR
comp=Z,337nm,22.2s
SHL Shillong 159.84 77 *ex* x 05 59 37.7
SBUM Sibu 159.87 176⇓ P PKPdf 05 59 43.7 +0.7
SBUM Sibu 159.87 176 P PKPdf 05 59 43.4 +0.4
BTM Bintulu 160.66 178⇓ P PKPdf 05 59 44.4 +0.5
KSRS Korea Array 160.84 324 PKP PKPdf 05 59 43.2 -0.1
comp=Z,46nm,1.0s,baz=75,slow=0.7,SNR=65
KSRS PKPab PKPab 06 00 26.6 -0.2
comp=Z,42nm,1.0s,baz=58,slow=4.3,SNR=16
KSRS PP PP 06 04 10.8 +0.9
comp=Z,10nm,1.0s,baz=14,slow=5.4,SNR=7.1
KSRS Korea Array 160.84 324 PKP2 PKPab 06 00 26.7 -0.1
KSRS 06 04 10.8
KSRS pmax pmax
comp=Z,42nm,1.0s
KSRS pmax pmax
comp=Z,11nm,1.0s
TSM Tawau 161.32 193⇓ P PKPdf 05 59 45.2 +0.6
IMP Imphal 161.74 79 *e*P PKPdf 05 59 45.0 +0.3
IMP *ex* x 06 00 32.0
HHC Hu-ho-hao-te 161.76 5 *e*PKP PKPdf 05 59 45.3 +1.1
HHC APKP 06 00 43.3
HHC PKS 06 03 17.9
HHC PP PP 06 04 18.6 +4.6
HHC SKS SKSdf 06 06 27.0 -1.5
HHC SKKS SKKSac 06 10 41.5 -0.1
HHC PP PP
comp=Z,453nm,12.4s
HHC LR LR
comp=N,315nm,22.6s
HHC LR LR
comp=E,256nm,23.8s
HHC LR LR
comp=Z,462nm,26.2s
BTO Baotou 161.82 9 *e*PKP PKPdf 05 59 44.4 +0.1
MYLDM Lahad Datu 162.03 196 P PKPdf 05 59 48.0 +2.7
DL2 Dalian 162.45 339 PKP PKPdf 05 59 44.1 -0.8
DL2 PKP2 PKPab 06 00 32.8 -1.0
DL2 APKP 06 00 43.6
DL2 PP PP 06 04 18.0 +0.1
DL2 PP PP
comp=Z,350nm,6.3s
BJI Beijing 162.54 354 PKP PKPdf 05 59 45.0 0.0
BJI PP PP 06 04 17.9 -0.2
BJI SS SS 06 24 22.0 +0.9
BJI LR LR
comp=N,235nm,25.7s
BJI LR LR
comp=E,253nm,25.7s
BJI LR LR
comp=Z,319nm,30.6s
KKM Kota Kinabalu 163.32 189⇓ P PKPdf 05 59 47.4 +0.8
LZH Lanzhou 164.09 30 *e*PKP PKPdf 05 59 47.5 +0.9
LZH PKP2 PKPab 06 00 40.3 -0.8
LZH XPKP 06 01 10.0
LZH PP PP 06 04 27.3 +0.5
LZH SKKS SKKSac 06 10 50.0 -3.9
LZH SS SS 06 24 35.0 -3.0
LZH PP PP
comp=Z,365nm,5.7s
BDT Bhumibol Dam 165.15 109 P PKPdf 05 59 48.5 +0.5
comp=Z,24nm,1.0s
CMAR Chiang Mai Arr 165.53 104 PKP PKPdf 05 59 48.4 0.0
comp=Z,26nm,0.9s,baz=267,slow=2.1,SNR=100
CMAR PKPab PKPab 06 00 47.8 -0.4
comp=Z,35nm,0.9s,baz=256,slow=4.9,SNR=27
CMAR PP PP 06 04 36.1 +0.2
comp=Z,12nm,1.1s,baz=260,slow=5.0,SNR=6.9

CMAR	**Chiang Mai Arr**	**165.53**	**104**	PKP2	PKPab	06 00 47.8	-0.3
CMAR						06 04 36.1	
CMAR				pmax	pmax		
	comp=Z,35nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,12nm,1.1s						
CHG	**Chiang Mai**	**165.65**	**103**	⇓P	PKPdf	05 59 47.6	-0.8
	comp=Z,52nm,0.9s						
CHTO	**Chiang Mai**	**165.65**	**103**	P	PKPdf	05 59 48.1	-0.3
	SNR=20						
CHTO	**Chiang Mai**	**165.65**	**103**	*e*PKIKP	PKPdf	05 59 48.0	-0.4
JOW	**Kunigami**	**166.15**	**290**	PKP	PKPdf	05 59 49.4	+0.7
	comp=Z,52nm,1.1s,baz=313,slow=4.6,SNR=3.8						
JOW				PKPab	PKPab	06 00 49.1	-1.5
	comp=Z,28nm,0.9s,baz=68,slow=7.6,SNR=3.6						
NANT	**Nan**	**167.22**	**105**	⇑P	PKPdf	05 59 47.0	-2.6
	comp=Z,631nm,1.0s						
CD2	**Chengdu**	**167.88**	**45**	PKP	PKPdf	05 59 49.8	0.0
CD2				PKP2	PKPab	06 01 00.3	+2.2
CD2				PKS		06 03 21.0	
CD2				PP	PP	06 04 49.3	+2.4
CD2				SKKS	SKKSac	06 11 16.8	+3.6
CD2				PP	PP		
	comp=Z,480nm,7.8s						
CD2				LR	LR		
	comp=N,680nm,24.4s						
CD2				LR	LR		
	comp=E,750nm,21.2s						
CD2				LR	LR		
	comp=Z,500nm,23.4s						
XAN	**Xi'an**	**167.89**	**19**	PKP	PKPdf	05 59 49.4	-0.3
XAN				APKP		06 00 47.1	
XAN				PKP2	PKPab	06 00 57.4	-0.5
XAN				XPKP		06 01 10.4	
XAN				PP	PP	06 04 47.9	+1.8
XAN				SKS	SKSdf	06 06 29.3	-3.7
XAN				SKKS	SKKSac	06 11 10.0	-2.8
XAN				SS	SS	06 25 11.4	-4.5
XAN				PP	PP		
	comp=Z,173nm,6.1s						
XAN				LR	LR		
	comp=N,102nm,30.2s						
XAN				LR	LR		
	comp=E,108nm,23.6s						
XAN				LR	LR		
	comp=Z,539nm,27.4s						
SSE	**Sheshan**	**169.28**	**323**	PKP	PKPdf	05 59 50.8	+0.1
SSE				PKP2	PKPab	06 01 01.6	-2.6
SSE				PP	PP	06 04 52.9	-0.8
SSE				PP	PP		
	comp=Z,498nm,6.0s						
SSE				LR	LR		
	comp=N,747nm,24.3s						
SSE				LR	LR		
	comp=E,654nm,24.4s						
SSE				LR	LR		
	comp=Z,200nm,23.7s						
NJ2	**Nanjing**	**169.59**	**335**	*e*PKP	PKPdf	05 59 49.8	-1.0
KMI	**Kunming**	**169.64**	**74**	PKP	PKPdf	05 59 51.8	+0.7
KMI				APKP		06 00 46.8	
KMI				PKP2	PKPab	06 01 06.8	+0.6
KMI				XPKP		06 01 09.8	
KMI				PKS		06 03 20.5	
KMI				PP	PP	06 04 57.9	+1.1
KMI				SKS	SKSdf	06 06 30.8	-3.4
KMI				SKKS	SKKSac	06 11 20.0	-2.4
KMI				LR	LR		
	comp=N,285nm,20.9s						
KMI				LR	LR		
	comp=E,323nm,23.7s						
KMI				LR	LR		
	comp=Z,352nm,31.4s						
WHN	**Wuhan**	**172.12**	**356**	PKP	PKPdf	05 59 51.5	-0.7
WHN				PKP2	PKPab	06 01 14.5	-2.1
WHN				PP	PP	06 05 02.3	-4.6
WHN				LR	LR		
	comp=Z,850nm,22.4s						
GYA	**Guiyang**	**172.53**	**58**	PKP	PKPdf	05 59 52.1	-0.4
GYA				APKP		06 00 49.0	
GYA				XPKP		06 01 13.0	
GYA				PKP2	PKPab	06 01 18.8	-0.1
GYA				PKS		06 03 20.6	
GYA				PP	PP	06 05 10.4	-0.2
GYA				SKS	SKSdf	06 06 31.3	-4.0
GYA				SKKS	SKKSac	06 11 32.5	-3.6
GYA				PP	PP		
	comp=Z,790nm,9.5s						
GYA				LR	LR		
	comp=N,9μm,25.8s						
GYA				LR	LR		
	comp=E,5μm,24.3s						
GYA				LR	LR		
	comp=Z,4μm,25.0s						
QIZ	**Qingzhong**	**174.88**	**134**	PKP	PKPdf	05 59 52.5	-1.0
QIZ				APKP		06 00 51.4	
QIZ				PKP2	PKPab	06 01 32.9	+3.5
QIZ				PP	PP	06 05 31.4	+10
QIZ				PP	PP		
	comp=Z,421nm,3.1s						
QZH	**Quanzhou**	**175.00**	**298**	PKP	PKPdf	05 59 51.8	-1.6
QZH				PKP2	PKPab	06 01 29.8	-0.1
QZH				PP	PP	06 05 21.1	-1.6
QZH				PP	PP		
	comp=Z,2μm,3.6s						
QZH				LR	LR		
	comp=Z,1μm,20.0s						

*MOS **18** 05:49:21.5±1.3,2922N×92.18E,h23km,mb4.5/8,Error ellipse: s-maj=23.9km s-min=10.2km az=110.1*
*NEIC **18** 05:49:22.5±0.7,2932N×9230E,h10km,mb4.8/4,Error ellipse: s-maj=16.2km s-min=10.6km az=27.0*
*BJI **18** 05:49:23.0,2952N×9227E,h6km,mB4.9,mb4.5,ML4.2,Ms4.2,Msz3.9*
*ISCJB **18** 05:49:24.6±1.1,2961N±007×92.12E±005,h15km±6km,mb4.2/12,Error ellipse: s-maj=12.5km s-min=4.7km az=151.6*
*IDC **18** 05:49:26.5±4.0,2926N×92.44E,h46km±44km,mb3.9/9,mb1 3.9/11,mb1mx3.8/25,mbtmp3.8/11,ML4.0/2,Error ellipse: s-maj=33.8km s-min=22.9km az=19.0*

ISC 18 05:49:25.6±1.2,2966N±006×9213E±005,h8km±6km,n45,σ1§14/56,mb4.2/12,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**0.86**	**273**	PG	**Pg**	**05 49 40.0**	**-2.0**
LSA				SG	**Sg**	**05 49 53.0**	**-0.2**
LSA				Smax			
	comp=N,5μm,0.6s						
LSA				Smax			
	comp=E,9μm,0.5s						
LSA	**Lhasa**	**0.86**	**273**	*e*Pg	**Pg**	**05 49 40.3**	**-1.7**
LSA				*e*Sg	**Sg**	**05 49 53.7**	**+0.5**
TAPN	**Taplejung**	**4.52**	**241**	*e*Pn	**Pn**	**05 50 35.0**	**+0.7**
ODAN	**Odare**	**5.03**	**237**	*e*Pn	**Pn**	**05 50 42.3**	**+1.0**
RAMN	**Ramite**	**5.57**	**242**	*e*Pn	**Pn**	**05 50 49.0**	**+0.2**
JIRN	**Jiri**	**5.59**	**251**	*e*Pn	**Pn**	**05 50 50.7**	**+1.7**
GUN	**Gumba**	**5.76**	**254**	*e*Pn	**Pn**	**05 50 52.5**	**+1.2**
GUN				*e*Sn	**Sn**	**05 51 59.7**	**+2.1**
	comp=E,215nm,0.7s						
PKI	**Pulchoki**	**6.27**	**252**	*e*Pn	**Pn**	**05 50 58.8**	**+0.5**
PKI				*e*Sn	**Sn**	**05 52 10.8**	**+0.7**
	comp=E,100nm,0.6s						
PKIN	**Phulchoki**	**6.27**	**252**	*e*Pn	**Pn**	**05 50 59.4**	**+1.0**
KKN	**Kakani**	**6.30**	**254**	*e*Pn	**Pn**	**05 50 59.3**	**+0.5**
KKN				*e*Sn	**Sn**	**05 52 11.0**	**+0.1**
	comp=E,173nm,0.6s						
DMN	**Daman**	**6.50**	**253**	*e*Pn	**Pn**	**05 51 02.5**	**+0.9**
DMN				*e*Sn	**Sn**	**05 52 16.4**	**+0.4**
	comp=E,65nm,0.6s						
GKN	**Gorkha**	**6.78**	**258**	*e*Pn	**Pn**	**05 51 04.6**	**-0.8**
GKN				*e*Sn	**Sn**	**05 52 21.6**	**-1.2**
	comp=E,60nm,0.4s						
DANN	**Dangsing**	**7.45**	**262**	*e*Pn	**Pn**	**05 51 13.5**	**-1.0**
DANN				*e*Sn	**Sn**	**05 52 37.1**	**-2.1**
	comp=E,86nm,0.6s						
KOLN	**Koldanda**	**7.73**	**258**	*e*Pn	**Pn**	**05 51 17.2**	**-1.1**
KOLN				*e*Sn	**Sn**	**05 52 44.7**	**-1.4**
	comp=E,178nm,0.8s						
PYUN	**Piuthan**	**8.17**	**261**	*e*Pn	**Pn**	**05 51 23.3**	**-1.1**
PYUN				*e*Sn	**Sn**	**05 52 55.8**	**-1.1**
	comp=E,94nm,0.6s						
LZH	**Lanzhou**	**11.74**	**54**	*e*P	**Pn**	**05 52 16.0**	**+2.6**
LZH				AP		05 52 20.0	
LZH				XP		05 52 22.5	
LZH				AMB	AMB		
	comp=Z,25nm,1.0s						
LZH				AMB	AMB		
	comp=Z,140nm,4.0s						
CMAR	**Chiang Mai Arr**	**12.76**	**149**	P	**Pn**	**05 52 19.2**	**-8.1**
	comp=Z,0.5nm,0.3s,baz=326,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**12.76**	**149**	P	**Pn**	**05 52 19.3**	**-8.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GYA	**Guiyang**	**13.22**	**100**	P	**Pn**	**05 52 31.1**	**-2.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MK31	**Makanchi Array**	**18.75**	**339**	*e*P	**Pn**	**05 53 44.9**	**-0.3**
MKAR	**Makanchi Array**	**18.75**	**339**	P	**Pn**	**05 53 44.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=148,slow=14,SNR=11						
EKS2	**Erkin-Say**	**19.65**	**316**	*e*P	**Pn**	**05 53 56.8**	**+0.8**
	comp=Z,5.3nm,1.0s						
KBL	**Kabul**	**20.14**	**290**	*e*Pn	**P**	**05 54 02.3**	**+2.2**
	comp=Z,155nm,1.4s						
SONM	**Songino Array**	**21.23**	**27**	P	**P**	**05 54 11.6**	**-0.2**
	comp=Z,9.4nm,1.0s,mb4.1,baz=214,slow=12,SNR=37						
SONM	**Songino Array**	**21.23**	**27**	P	**P**	**05 54 11.6**	**-0.1**
SONM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZAK	**Zakamensk**	**22.34**	**19**	*e*P	**P**	**05 54 24.7**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1						
KURK	**Kurchatov**	**23.36**	**338**	*e*P	**P**	**05 54 34.9**	**+0.4**
	comp=Z,32nm,1.4s,mb4.6						
KURK				*e*pP		05 54 40.1	
KURK	**Kurchatov**	**23.36**	**338**	*e*P	**P**	**05 54 34.9**	**+0.5**
KURK				*e**PP		05 54 40.1	
KURK				pmax	pmax		
	comp=Z,32nm,1.4s,mb4.6						
ZAA0	**Zalesovo Array**	**24.85**	**350**	*e*P	**P**	**05 54 48.8**	**+0.6**
ZAA0				*e*S	**S**	**05 59 11.2**	**+0.1**
ZALV	**Zalesovo Beam**	**24.85**	**350**	P	**P**	**05 54 49.0**	**+0.8**
	comp=Z,2.1nm,0.7s,mb3.8,baz=167,slow=7.0,SNR=12						
ZALV	**Zalesovo Beam**	**24.85**	**350**	P	**P**	**05 54 49.0**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
NVS	**Novosibirsk**	**25.97**	**348**	*e*P	**P**	**05 54 58.0**	**-0.4**
BVAR	**Borovoye Array**	**28.27**	**332**	P	**P**	**05 55 19.2**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.3,baz=99,slow=9.6,SNR=3.7						
AKTK	**Aktyubinsk**	**32.93**	**319**	P	**P**	**05 56 00.8**	**+0.5**
AKTO	**Aktyubinsk**	**32.93**	**319**	P	**P**	**05 56 00.8**	**+0.5**
	comp=Z,3.0nm,0.9s,mb4.2,baz=106,slow=7.1,SNR=8.6						
AKTO	**Aktyubinsk**	**32.93**	**319**	P	**P**	**05 56 00.8**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MJAR	**Matsushiro Arr**	**38.91**	**67**	P	**P**	**05 56 46.3**	**-5.5**
	comp=Z,2.7nm,0.9s,mb4.0,baz=302,slow=7.0,SNR=3.3						
CSS	**Prodhromos**	**49.37**	**292**	*e*P	**P**	**05 58 16.5**	**+0.8**
	comp=Z,10nm,0.7s,mb5.0						
PETK	**Petropavlovsk-**	**52.42**	**44**	P	**P**	**05 58 35.5**	**-2.8**
	comp=Z,5.9nm,1.0s,mb4.5,baz=280,slow=4.4,SNR=4.2						
HFS	**Hagfors**	**59.10**	**325**	P	**P**	**05 59 25.2**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.6,baz=110,slow=8.7,SNR=4.6						
HFS	**Hagfors**	**59.10**	**325**	P	**P**	**05 59 25.2**	**-1.0**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NB2	**NORSAR Subarra**	**60.20**	**326**	P	**P**	**05 59 32.4**	**-1.3**
	comp=Z,12nm,1.4s,mb4.7,baz=83,slow=6.9						
NOA	**NORSAR Array B**	**60.20**	**326**	P	**P**	**05 59 32.4**	**-1.4**
	comp=Z,2.0nm,0.8s,mb4.2,baz=83,slow=6.7,SNR=4.8						
NOA	**NORSAR Array B**	**60.20**	**326**	P	**P**	**05 59 32.4**	**-1.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ESDC	**Sonseca Array**	**76.02**	**308**	P	**P**	**06 01 11.8**	**-1.6**
	comp=Z,0.1nm,0.3s,mb3.3,baz=70,slow=7.5,SNR=4.6						

*ISCJB **18** 05:59:43.9±0.7,24.36S±005×6706W±008,h153km±10km,mb3.9/7,Error ellipse: s-maj=12.4km s-min=6.6km az=18.5*
*IDC **18** 05:59:45.0±1.2,2430S×6703W,h148km±13km,mb3.8/7,mb1 3.9/12,mb1mx3.8/22,mbtmp3.9/12,Error ellipse: s-maj=18.0km s-min=10.7km az=103.0*
*NEIC **18** 05:59:45.4±0.7,2431S×6707W,h156km±8km,Error ellipse: s-maj=17.4km s-min=7.9km az=109.0*
*GUC **18** 05:59:47.4±0.7,2438S×6751W,h177km±11km,ML4.5*

ISC 18 05:59:44.8±0.6,2435S±004×6703W±007,h143km±9km,n30,σ1§04/35,mb3.9/7,1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.79**	**323**	*e*P	**Pn**	**06 00 21.1**	**+4.0**
SPCH				*i* S	**Sn**	**06 00 47.5**	**+5.7**
SPCH				AML	AML	06 00 48.0	
	comp=N,3μm,0.7s						
LVC	**Limon Verde**	**2.44**	**315**	P	**Pn**	**06 00 27.0**	**+2.1**
	comp=N,23nm,0.3s,baz=142,slow=4.9,SNR=421						
LVC				S	**Sn**	**06 00 56.6**	**+0.9**
	comp=N,125nm,0.3s,baz=114,slow=4.5,SNR=126						
LVC	**Limon Verde**	**2.44**	**315**	P	**Pn**	**06 00 27.0**	**+2.1**
LVC				S	**Sn**	**06 00 56.6**	**+0.9**
CEN1	**Los Morros**	**3.06**	**288**	⇓*i*P	**Pn**	**06 00 34.1**	**+1.5**
CEN1				*i* S	**Sn**	**06 01 09.0**	**-0.6**
CEN1				AML	AML	06 01 10.0	
	comp=N,1μm,0.5s						
CPN1	**Cerro Paranal**	**3.09**	**264**	*e*P	**Pn**	**06 00 33.5**	**+0.5**
CPN1				*i* S	**Sn**	**06 01 08.9**	**-1.4**
CPN1				AML	AML	06 01 10.5	
	comp=E,575nm,0.4s						
MECH	**Mejillones**	**3.37**	**291**	*e*P	**Pn**	**06 00 37.1**	**+0.5**
MECH				*i* S	**Sn**	**06 01 14.6**	**-2.2**
MECH				AML	AML	06 01 21.7	
	comp=E,2μm,0.7s						
LCO	**Las Campanas**	**5.69**	**214**	*e*Pn	**Pn**	**06 01 06.6**	**-0.7**
	comp=E,72nm,0.7s						
LCO				*e*Sn	**Sn**	**06 02 02.7**	**-8.9**
CFAA	**Coronel Fontan**	**7.31**	**188**	P	**Pn**	**06 01 30.2**	**+1.3**
	comp=E,0.2nm,0.3s,baz=359,slow=11,SNR=11						
CFAA				S	**Sn**	**06 02 49.0**	**-1.5**
	comp=E,0.7nm,0.3s,baz=228,slow=17,SNR=15						
LPAZ	**La Paz**	**8.08**	**352**	P	**Pn**	**06 01 40.2**	**+0.8**
	comp=E,5.3nm,0.3s,baz=161,slow=7.3,SNR=57						
LPAZ				S	**Sn**	**06 03 05.6**	**-3.8**
	comp=E,0.3nm,0.3s,baz=189,slow=10,SNR=2.6						
SIV	**San Ignacio**	**10.02**	**35**	P	**Pn**	**06 02 04.8**	**-0.4**
	comp=E,1.8nm,0.3s,baz=226,slow=13,SNR=25						
SIV				S	**Sn**	**06 03 54.8**	**-1.3**
	comp=E,0.4nm,0.3s,baz=288,slow=20,SNR=3.3						
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**06 03 29.5**	**+0.4**
	comp=E,0.6nm,0.3s,baz=12,slow=14,SNR=16						
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**06 03 29.5**	**+0.4**
BDFB	**Brasilia**	**19.84**	**68**	P	**P**	**06 04 05.3**	**+0.7**
	comp=E,1.9nm,0.3s,baz=235,slow=17,SNR=58						
VNA3	**Neumayer Olymp**	**56.84**	**161**	*e*	**P**	**06 09 14.4**	**+0.6**
VNA3				*e*		06 09 17.7	
VNA1	**Neumayer--Stat**	**57.03**	**160**	*e*	**P**	**06 09 14.9**	**-0.4**
VNA1				*e*		06 09 18.9	
VNA2	**Neumayer--Watz**	**57.40**	**160**	*e*	**P**	**06 09 18.8**	**+1.0**
	baz=286,slow=6.7						
VNA2				*e*		06 09 22.0	
SNAA	**Sanae**	**59.03**	**161**	*e*	**P**	**06 09 28.1**	**-1.1**
SNAA				*e*		06 09 31.8	
QSPA	**South Pole Qui**	**65.86**	**180**	P	**P**	**06 10 15.4**	**+1.0**
	comp=E,6.2nm,0.5s,mb4.7,baz=158,slow=1.4,SNR=41						
DBIC	**Dimbokro**	**67.94**	**71**	P	**P**	**06 10 28.6**	**0.0**
	comp=E,1.2nm,0.4s,mb4.0,baz=345,slow=16,SNR=5.5						
VNDA	**Vanda**	**74.36**	**190**	P	**P**	**06 11 07.0**	**+0.9**
	comp=E,1.7nm,0.9s,mb3.8,baz=117,slow=3.6,SNR=4.9						
TOA0	**Torodi Ar. Sit**	**76.72**	**69**	*e*P	**P**	**06 11 19.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**76.72**	**69**	P	**P**	**06 11 19.8**	**-0.8**
	comp=E,2.6nm,0.5s,mb4.2,baz=262,slow=5.8,SNR=34						
MAW	**Mawson**	**81.11**	**163**	P	**P**	**06 11 43.9**	**+0.1**
	comp=E,3.3nm,0.6s,mb4.1,baz=231,slow=7.6,SNR=5.7						
MDT	**Midelt**	**82.27**	**49**	P	**P**	**06 11 50.7**	**+0.4**
	comp=E,0.7nm,0.6s,mb3.5,baz=252,slow=6.4,SNR=3.2						
ESDC	**Sonseca Array**	**86.66**	**44**	P	**P**	**06 12 10.8**	**-1.4**
	comp=E,0.1nm,0.4s,mb3.0,baz=266,slow=4.5,SNR=3.6						
ASAR	**Alice Springs**	**128.13**	**205**	PKP	PKPdf	06 18 33.1	-1.5
	comp=E,1.1nm,0.7s,baz=149,slow=2.1,SNR=8.3						
WRA	**Warramunga Arr**	**131.31**	**207**	PKP	PKPdf	06 18 39.2	-1.6
	comp=E,0.6nm,0.4s,baz=164,slow=1.4,SNR=12						
ZALV	**Zalesovo Beam**	**143.71**	**28**	PKP	PKPdf	06 19 00.1	-2.2
	comp=E,0.4nm,0.4s,baz=353,slow=3.6,SNR=2.3						
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc	PKPbc	06 19 09.0	-0.9
	comp=E,1.0nm,0.7s,baz=284,slow=2.7,SNR=7.3						
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc	PKPbc	06 19 09.0	-0.9

*NIC **18** 06:21:54.9±0.3,3561N×3093E,h25km,ML3.6,MW3.4*
*ISK **18** 06:21:54.3,3538N×3126E,h5km,ML3.4*
*CSEM **18** 06:21:55.0±0.1,3549N×3129E,h2km,Mw3.4,Error ellipse: s-maj=3.6km s-min=1.3km az=50.0*
*ISCJB **18** 06:21:57.2±1.0,3537N±006×31.17E±008,h33km,Error ellipse: s-maj=12.2km s-min=4.7km az=138.0*

ISC 18 06:21:56.0±1.3,3539N±007×3119E±008,h10km±8km,n26,σ0§99/33,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**1.00**	**111**	P	**Pg**	**06 22 15.0**	**-0.2**
	20nm,0.3s						
PPCY	**Paphos**	**1.07**	**118**	P	**Pg**	**06 22 16.7**	**+0.1**
	12nm,0.2s						
ALFC	**Alevga**	**1.17**	**101**	P	**Pb**	**06 22 17.8**	**-0.6**
	46nm,0.2s						
ALFC				S	**Sg**	**06 22 35.3**	**+1.5**
LEF	**Lefka**	**1.41**	**100**	*e*PN	**Pn**	**06 22 19.4**	**-2.5**
LEF				*e*SN	**Sn**	**06 22 38.9**	**-1.6**
SZAC	**Souni-Zanaja**	**1.52**	**114**	P	**Pn**	**06 22 23.2**	**-0.1**
	17nm,0.2s						
SZAC				S	**Sn**	**06 22 45.5**	**+2.3**
ANTB	**Antalya**	**1.57**	**344**	*e*PN	**Pn**	**06 22 23.9**	**-0.1**
ANTB				*e*SN	**Sn**	**06 22 45.2**	**+0.9**
MAMC	**Mammari**	**1.67**	**97**	P	**Pn**	**06 22 24.6**	**-0.7**
	16nm,0.4s						
CSS	**Prodhromos**	**1.80**	**103**	P	**Pn**	**06 22 27.0**	**-0.1**
	4.8nm,0.4s						
CSS				S	**Sn**	**06 22 51.3**	**+1.3**
HDMB	**Hadim**	**1.89**	**33**	*e*PN	**Pn**	**06 22 27.0**	**-1.4**
HDMB				*e*SN	**Sn**	**06 22 52.0**	**-0.1**
LFK	**Lefkose**	**1.92**	**93**	*e*PN	**Pn**	**06 22 27.5**	**-1.2**
BCK	**Bucak**	**2.12**	**347**	*e*PN	**Pn**	**06 22 32.1**	**+0.5**
IKL	**Isikli**	**2.19**	**67**	*e*PN	**Pn**	**06 22 32.3**	**-0.2**
PHNC	**Paralimni**	**2.36**	**99**	P	**Pn**	**06 22 36.9**	**+2.1**
PHNC				S	**Sn**	**06 23 08.7**	**+5.0**
ERZN	**Erenkoy**	**2.43**	**86**	*e*PN	**Pn**	**06 22 35.3**	**-0.5**
KONT	**Konya--Tatoy**	**2.72**	**20**	*e*PN	**Pn**	**06 22 38.9**	**-0.9**
LADK	**Ladik-KONYA**	**2.96**	**18**	*e*PN	**Pn**	**06 22 43.0**	**-0.1**
MERS	**Mersin**	**3.07**	**60**	*e*PN	**Pn**	**06 22 44.6**	**0.0**
SHUT	**Suhut-Afyon**	**3.20**	**351**	*e*PN	**Pn**	**06 22 46.8**	**+0.5**
KHL	**Karahalli**	**3.22**	**336**	*e*PN	**Pn**	**06 22 47.5**	**+0.8**
KIZT	**Kizilcal**	**3.53**	**9**	*e*PN	**Pn**	**06 22 51.1**	**+0.3**
KARA	**Karaisali**	**3.63**	**58**	*e*PN	**Pn**	**06 22 52.5**	**+0.2**
NIG	**Nigde**	**3.86**	**44**	*e*PN	**Pn**	**06 22 56.6**	**+1.1**
HTY	**Hatay**	**4.09**	**78**	*e*PN	**Pn**	**06 22 58.4**	**-0.2**
RCY	**Rachaya**	**4.27**	**115**	*e*Pn	**Pn**	**06 23 00.6**	**-0.5**
KMRS	**Kahramanmaras**	**5.06**	**64**	*e*PN	**Pn**	**06 23 12.1**	**+0.1**
SARI	**SarD1z-Kayseri**	**5.49**	**52**	*e*PN	**Pn**	**06 23 14.6**	**-3.3**

*IDC **18** 06:55:59.6±3.0,2343S×7050W,h0km,mb3.5/1,mb1 3.7/2,mb1mx3.4/17,mbtmp3.6/2,ML3.6/1,Error ellipse: s-maj=94.6km s-min=55.5km az=113.0*
*GUC **18** 06:56:01.6±1.0,2315S×7084W,h32km±4km,ML3.5*
*ISCJB **18** 06:56:03.0±1.3,2310S±006×707W±010,h33km,Error ellipse: s-maj=14.3km s-min=8.4km az=1.3*

ISC 18 06:56:01.3±2.0,2317S±006×7088W±010,h12km±8km,n8,σ0§88/11,1C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.41**	**80**	*e*P	**Pg**	**06 56 09.2**	**-0.2**
MECH				*i* S	**Sg**	**06 56 15.3**	**+0.5**
MECH				AML	AML	06 56 21.2	
	comp=N,25μm,0.3s						
CEN1	**Los Morros**	**0.66**	**109**	⇑*i*P	**Pg**	**06 56 13.8**	**-0.4**
CEN1				*i* S	**Sg**	**06 56 22.9**	**-0.1**
CEN1				AML	AML	06 56 23.2	
	comp=E,2μm,0.4s						
CPN1	**Cerro Paranal**	**1.51**	**163**	*e*P	**Pn**	**06 56 28.4**	**+0.1**
CPN1				*i* S	**Sn**	**06 56 48.4**	**+0.5**
CPN1				AML	AML	06 56 53.9	
	comp=E,1μm,0.5s						
LVC	**Limon Verde**	**1.90**	**73**	*e*P	**Pn**	**06 56 34.0**	**+0.4**
LVC				*i* S	**Sn**	**06 56 57.6**	**+0.1**
LVC				AML	AML	06 56 59.7	
	comp=N,577nm,0.5s						
LPAZ	**La Paz**	**7.32**	**21**	Pn	**Pn**	**06 57 50.1**	**+2.0**
	comp=N,0.5nm,0.3s,baz=201,slow=8.4,SNR=6.4						
SIV	**San Ignacio**	**11.68**	**54**	Pn	**Pn**	**06 58 46.1**	**-1.8**
	baz=235,slow=12						
TORD	**Torodi Ar. Bea**	**79.63**	**71**	P	**P**	**07 08 08.0**	**-1.1**
	comp=N,0.2nm,0.4s,baz=252,slow=4.9,SNR=3.5						
MKAR	**Makanchi Array**	**148.05**	**36**	PKPbc	PKPbc	07 15 46.5	-0.2
	comp=N,0.5nm,0.6s,baz=310,slow=3.2,SNR=5.4						

*BJI **18** 07:02:39.1,1857S×6947W,h75km,mB5.4,Ms5.8,Msz5.4*
*ISCJB **18** 07:02:40.3±0.2,1854S±004×6958W±004,h97km,mb5.3/190,Error ellipse: s-maj=6.1km s-min=3.7km az=135.6*
*MOS **18** 07:02:40.0±1.1,1835S×6953W,h86km,mb5.3/58,Error ellipse: s-maj=9.1km s-min=6.0km az=102.7*
*NEIC **18** 07:02:41.7±0.2,1863S×6958W,mb5.3/167,Error ellipse: s-maj=5.5km s-min=3.8km az=219.0*
NEIC Felt [IV] at Arica and Putre. Felt [III] at Tacna and also felt at Arequipa, Peru.
*GCMT **18** 07:02:41.7±0.3,1912S×6990W,h98km±3km,MW5.3/74,Moment Tensor Solution. s29,c36; s74,c114; Duration: 1§0 Moment tensor: Scale 10^17Nm; Mrr-0.29±.04; Mθθ-0.25±.04; Mφφ0.54±.04; Mrθ0.26±.02; Mθφ0.56±.04; Mφr-0.63±.03; Best double couple: Mo1.00200×10^17 NP1:φs246.00000°,δ44.00000°,λ-17.00000°. NP2: φs349.00000°,δ78.00000°,λ-133.00000°. Principal axes: T 1.0080, Plg21.0000°, Azm110.0000°; N -0.0130, Plg42.0000°, Azm359.0000°; P -0.9950, Plg41.0000°, Azm219.0000°; nsta1

LCO eSn Sn 07 06 53.4 -10
CFAA Coronel Fontan 13.02 175 P Pn 07 05 37.3 -6.0
0.3nm,0.3s,baz=352,slow=14,SNR=38
CFAA S Sn 07 07 52.9 -14
0.2nm,0.3s,baz=163,slow=19,SNR=3.2
ATAH Atahualpa 14.39 322 P Pn 07 05 58.1 -3.1
0.7nm,0.3s,baz=334,slow=16,SNR=6.9
LPA La Plata 19.25 150 ceP Pn 07 06 57.0 -3.8
LPA eS S 07 10 29.0 -2.5
LPA eS S 07 10 38.0 +6.5
LPA eS S 07 10 42.0 +10
LPA La Plata 19.25 150⇑ eP Pn 07 06 57.0 -3.8
LPA eS S 07 10 29.0 -2.5
LPA eS S 07 10 38.0 +6.5
OTAV Otavalo 20.66 334 eP P 07 07 14.9 +0.7
38nm,0.8s
BDFB Brasilia 20.77 85 P P 07 07 14.8 -0.6
60nm,0.9s,baz=250,slow=16,SNR=40
BDFB Brasilia 20.77 85 eP P 07 07 14.5 -0.8
11nm,0.9s
SPB Sao Paulo 21.20 107 eP P 07 07 18.7 -1.2
PLCA Paso Flores 22.09 182 P P 07 07 27.4 -1.9
59nm,1.0s,mb4.9,baz=358,slow=11,SNR=76
PLCA Paso Flores 22.09 182 eP P 07 07 27.8 -1.4
107nm,1.2s,mb5.0
PLCA Paso Flores 22.09 182 eP P 07 07 27.8 -1.4
PLCA pmax pmax
comp=Z,110nm,1.1s
ROSC El Rosal 23.77 348 P P 07 07 45.5 -0.2
comp=Z,14nm,0.6s,mb4.5,baz=101,slow=13,SNR=15
ROSC LR LR 07 16 43.0
comp=Z,506nm,18.8s,baz=200,slow=35
ROSC El Rosal 23.77 348 eP P 07 07 45.0 -0.7
CAM4 Nova Friburgo 25.52 103⇑ iP P 07 08 00.3 -1.3
CAM4 i 07 08 01.8
CAM4 i 07 08 09.8
CAM4 i 07 08 16.3
CAM4 i 07 08 28.1
SDV Santo Domingo 27.31 358 P P 07 08 16.2 -1.6
comp=Z,14nm,0.5s,mb4.7,baz=197,slow=3.3,SNR=13
SDV LR LR 07 19 32.1
comp=Z,285nm,20.5s,baz=6.0,slow=37
PCRV Puerto La Cruz 28.98 10 P P 07 08 32.8 +0.3
comp=Z,7.7nm,0.5s,mb4.6,baz=245,slow=3.4,SNR=12
PCRV LR LR 07 21 20.4
comp=Z,508nm,19.6s,baz=41,slow=39
RCBR Riachuelo 35.14 73 eP P 07 09 26.0 -0.6
comp=Z,60nm,0.8s,mb5.5
USHA Ushuaia 36.20 179 P P 07 09 34.0 -1.1
comp=Z,15nm,0.7s,mb5.0,baz=333,slow=9.7,SNR=7.6
CPD Cerro la Pandu 36.56 6 eP P 07 09 36.6 -2.0
comp=Z,40nm,0.9s,mb5.3
CPD Cerro la Pandu 36.56 6 eP P 07 09 36.6 -2.0
CPD pmax pmax
comp=Z,40nm,0.9s,mb5.3
SJG San Juan 36.61 5 eP P 07 09 36.1 -2.9
comp=Z,32nm,0.6s,mb5.4
MPR Mayaguez 36.64 4 eP P 07 09 40.1 +0.9
MTP Monte Pirata 36.66 6 eP P 07 09 36.5 -2.9
MTP ePP PP 07 11 07.2 +2.3
HUMP Col San Antoni 36.67 6 eP P 07 09 38.2 -1.3
comp=Z,35nm,0.9s,mb5.3
AOPR Arecibo Observ 36.80 4 eP P 07 09 39.9 -0.7
comp=Z,25nm,0.9s,mb5.2
CBYP Canovanas 36.80 6 eP P 07 09 39.2 -1.4
comp=Z,60nm,0.9s,mb5.5
TGUH Tegucigalpa,Un 36.85 330 eP P 07 09 41.1 0.0
comp=Z,77nm,0.8s,mb5.7
SDDR Presa de Saban 37.37 357 eP P 07 09 43.8 -1.6
comp=Z,21nm,0.8s,mb5.1
CMIG Matias Romero 43.34 323 P P 07 10 34.6 -0.1
comp=Z,33nm,0.7s,mb5.2,baz=128,slow=5.9,SNR=91
CMIG pP pP 07 10 55.1 -2.8
comp=Z,21nm,0.7s,baz=127,slow=3.9,SNR=5.7
CMIG LR LR 07 28 40.5
comp=Z,81nm,19.7s,baz=129,slow=36
VHO Vista Hermosa 44.40 321 iP P 07 10 42.8 -0.4
PNIG Pinotepa 44.72 319 iP P 07 10 43.7 -2.1
CAIG El Cayaco 46.56 318 iP P 07 10 59.9 -0.3
PPM Popocatepetl 47.08 321 iP P 07 11 05.7 +1.5
ZIIG Zihuatanejo 47.74 317 iP P 07 11 09.0 -0.4
DWPF Disney 47.82 346 eP P 07 11 09.2 -0.7
comp=Z,59nm,0.8s,mb5.5
MOIG Morelia 49.10 319 iP P 07 11 20.7 +0.9
BRAL Brewton 52.11 341 eP P 07 11 43.0 +0.8
comp=Z,238nm,0.8s,mb6.3
ZAIG Zacatecas 52.26 320 iP P 07 11 44.5 +0.9
NHSC New Hope 52.39 349 eP P 07 11 44.3 0.0
comp=Z,102nm,0.8s,mb5.9
GOGA Godfrey 53.38 345 eP P 07 11 50.7 -0.9
comp=Z,46nm,1.0s,mb5.5
GOGA Godfrey 53.38 345 eP P 07 11 50.7 -0.9
GOGA pmax pmax
comp=Z,46nm,1.0s,mb5.5
KVTX Kingsville 53.46 328 eP P 07 11 52.2 0.0
comp=Z,208nm,1.0s,mb6.1
JSC Jenkinsville 53.74 348 eP P 07 11 53.7 -0.5
JSC epP pP 07 12 18.9 +0.7
JSC Jenkinsville 53.74 348 P P 07 11 53.9 -0.3
JSC e pP 07 12 19.1 +0.9
LRAL Lakeview Retre 53.97 342 eP P 07 11 54.6 -1.3
comp=Z,21nm,0.6s,mb5.3
LRAL epP pP 07 12 17.7 -2.2
VBMS Vicksburg 54.37 338 eP P 07 11 58.1 -0.6
HKT Hockley 54.50 332 eP P 07 11 58.6 -1.2
comp=Z,79nm,1.3s,mb5.6
HKT Hockley 54.50 332 P P 07 11 58.9 -0.9
HKT pmax pmax
comp=Z,79nm,1.2s,mb5.6
CPCT Cooper Cave 55.58 345 eP P 07 12 06.0 -1.5
CPCT epP pP 07 12 29.2 -2.4
TKL Tuckaleechee C 55.61 346 eP P 07 12 06.5 -1.1
TKL epP pP 07 12 30.0 -1.7
SWET Sewanee 55.72 344 eP P 07 12 07.3 -1.2
SWET epP pP 07 12 30.6 -2.0
SWET esP sP 07 12 41.4 -2.1
OXF Oxford 56.09 340 eP P 07 12 09.0 -2.0
comp=Z,120nm,0.9s,mb5.9
OXF Oxford 56.09 340 P P 07 12 09.3 -1.8
URVA University of 56.36 352 eP P 07 12 12.3 -0.7
TZTN Tazewell 56.40 346 eP P 07 12 12.3 -1.0
comp=Z,53nm,1.1s,mb5.5
BLA Blacksburg 56.43 350 eP P 07 12 13.1 -0.4
comp=Z,107nm,1.4s,mb5.7
BLA Blacksburg 56.43 350 P P 07 12 13.4 -0.1
BLA pmax pmax
comp=Z,110nm,1.4s,mb5.7
ELN Prospectdale 56.51 349 eP P 07 12 13.7 -0.3
ELN epP pP 07 12 39.4 +1.2
JCT Junction City 56.82 329 eP P 07 12 15.5 -0.8
comp=Z,82nm,0.9s,mb5.8
JCT Junction City 56.82 329 eP P 07 12 15.5 -0.9
JCT pmax pmax
comp=Z,82nm,1.0s,mb5.7
CBN Corbin 56.96 353 eP P 07 12 16.8 -0.5
comp=Z,16nm,0.6s,mb5.2
WVT Waverly 57.10 342 eP P 07 12 16.4 -1.9
comp=Z,98nm,0.8s,mb5.9
WVT Waverly 57.10 342 eP P 07 12 16.4 -1.9
WVT pmax pmax
comp=Z,98nm,0.8s,mb5.9
UALR University of 57.32 338 eP P 07 12 18.6 -1.2
comp=Z,66nm,1.2s,mb5.5
HALT Halls 57.35 341 eP P 07 12 18.6 -1.4
HALT epP pP 07 12 42.5 -1.8
HBAR Harrisburg 57.45 340 eP P 07 12 19.5 -1.2
HBAR epP pP 07 12 43.5 -1.4
HBAR esP sP 07 12 55.1 -0.8
MIAR Mount Ida 57.57 337 eP P 07 12 20.4 -1.2
comp=Z,52nm,0.8s,mb5.6
MIAR epP pP 07 12 44.3 -1.6
MIAR Mount Ida 57.57 337 eP P 07 12 20.4 -1.2
MIAR e*PP pP 07 12 44.3 -1.6
MIAR pmax pmax
comp=Z,52nm,0.8s,mb5.6
UTMT University of 57.60 342 eP P 07 12 20.8 -1.0
comp=Z,233nm,1.1s,mb6.1
GNAR Gosnell 57.62 340 eP P 07 12 21.1 -0.7
comp=Z,2μm,1.3s
GLAT Glass 57.67 341 eP P 07 12 20.6 -1.6
GLAT epP pP 07 12 43.6 -2.9
GLAT esP sP 07 12 56.1 -1.3
TXAR Lajitas Array 57.92 325 P P 07 12 23.4 -0.7
comp=Z,13nm,0.7s,mb5.1,baz=149,slow=8.9,SNR=155
TXAR pP pP 07 12 46.2 -2.2
comp=Z,9.8nm,1.0s,baz=138,slow=9.5,SNR=4.0
TXAR LR LR 07 36 09.6
comp=Z,112nm,20.0s,baz=185,slow=35
TXAR Lajitas Array 57.92 325 P P 07 12 23.4 -0.7
TXAR *PP pP 07 12 46.2 -2.2
PVMO Portageville 57.93 341 eP P 07 12 23.1 -1.0
comp=Z,300nm,0.9s,mb6.3
PVMO epP pP 07 12 47.7 -0.6
PVMO esP sP 07 12 57.3 -1.9
PVMO eScP ScP 07 17 05.8 -0.6
PARMO Parma 58.17 341 eP P 07 12 24.8 -1.0
PARMO epP pP 07 12 48.6 -1.5
PARMO esP sP 07 12 58.9 -2.1
MVL Millersville 58.62 354 eP P 07 12 28.7 -0.1
comp=Z,66nm,1.6s,mb5.4
WCI Wyandotte Cave 58.66 345 eP P 07 12 27.3 -1.9
comp=Z,56nm,0.7s,mb5.7
WCI Wyandotte Cave 58.66 345 eP P 07 12 27.3 -1.8
WCI pmax pmax
comp=Z,56nm,0.7s,mb5.7
MCWV Mont Chateau 59.73 351 eP P 07 12 29.6 +0.1
comp=Z,56nm,0.8s,mb5.6
USIN University of 58.77 343 eP P 07 12 28.6 -1.3
comp=Z,62nm,0.8s,mb5.7
SIUC Southern Illin 58.98 342 eP P 07 12 30.1 -1.2
comp=Z,290nm,0.8s,mb6.4
SSPA Standing Stone 59.42 353 eP P 07 12 34.0 -0.3
comp=Z,383nm,3.0s
FVM French Village 59.60 341 eP P 07 12 34.5 -1.1
comp=Z,114nm,0.7s,mb6.0
FVM French Village 59.60 341 eP P 07 12 34.5 -1.1
FVM pmax pmax
comp=Z,110nm,0.7s,mb6.0
BLO Bloomington 59.61 345 eP P 07 12 34.2 -1.4
comp=Z,114nm,1.3s,mb5.7
BLO Bloomington 59.61 345 eP P 07 12 34.2 -1.5
BLO pmax pmax
comp=Z,110nm,1.3s,mb5.7
OLIL Olney 59.61 343 eP P 07 12 33.5 -2.2
comp=Z,24nm,0.7s,mb5.3
OLIL epP pP 07 12 59.1 -0.9
ACSO Alum Creek Sta 59.84 348 eP P 07 12 36.2 -1.0
comp=Z,97nm,0.9s,mb5.8
WMOK Wichita Mounta 59.88 332 eP P 07 12 36.2 -1.4
comp=Z,114nm,1.9s,mb5.6
WMOK Wichita Mounta 59.88 332 eP P 07 12 36.2 -1.4
WMOK pmax pmax
comp=Z,110nm,1.9s,mb5.6
BRYW Bryant College 60.22 358 eP P 07 12 39.7 0.0
GDL2 Guadalupe Moun 60.52 326 eP P 07 12 42.0 -0.1
ALLY Allegheny Colle 60.73 351 eP P 07 12 42.9 -0.3
comp=Z,120nm,0.8s,mb6.0
BINY Binghamton 60.77 355 eP P 07 12 43.7 +0.2
comp=Z,54nm,1.1s,mb5.5
ERPA Erie 61.16 351 eP P 07 12 45.8 -0.3
comp=Z,144nm,0.7s,mb6.1
AMTX Amarillo 61.32 330 eP P 07 12 46.3 -1.1
comp=Z,52nm,1.2s,mb5.4
HDIL Hopedale 61.64 343 eP P 07 12 47.6 -1.8
comp=Z,115nm,0.6s,mb6.1
HDIL epP pP 07 13 12.7 -1.2
HDIL esP sP 07 13 22.6 -2.2
AAM Ann Arbor 61.97 348 eP P 07 12 50.7 -0.9
comp=Z,28nm,0.7s,mb5.4
AAM Ann Arbor 61.97 348 eP P 07 12 50.7 -0.8
AAM pmax pmax
comp=Z,28nm,0.7s,mb5.4
MDV Middlebury 62.36 357 eP P 07 12 54.1 -0.1
NCB Newcomb 62.39 356 eP P 07 12 54.4 0.0
comp=Z,69nm,1.7s,mb5.4
LBNH Lisbon 62.55 358 eP P 07 12 55.9 +0.5
comp=Z,453nm,2.8s,mb5.9
LBNH Lisbon 62.55 358 eP P 07 12 55.9 +0.5
LBNH pmax pmax
comp=Z,450nm,2.7s,mb5.9
KSU1 Kansas State U 62.73 337 eP P 07 12 55.6 -1.1
comp=Z,98nm,0.9s,mb5.7
VNA3 Neumayer Olymp 63.01 162 eP P 07 12 58.2 0.0
VNA3 e 07 13 02.1
VNA3 e pP 07 13 19.1 -3.7
VNA3 e pP 07 13 23.9 +1.1
VNA3 e 07 13 33.7
LONY Lake Ozonia 63.06 356 eP P 07 12 58.9 +0.2
comp=Z,81nm,1.7s,mb5.4
FRNY Flat Rock 63.22 357 eP P 07 13 00.0 +0.2
comp=Z,92nm,1.7s,mb5.4
VNA1 Neumayer--Stat 63.22 161 eP P 07 13 00.3 +0.7
VNA1 e 07 13 03.3
VNA1 e pP 07 13 19.9 -4.3
VNA1 e pP 07 13 25.6 +1.4
VNA1 e 07 13 34.9
BNM Barren Site 63.23 326 eP P 07 13 00.1 0.0
LPM Los Pinos Moun 63.36 326 eP P 07 13 01.1 +0.1
LENM Lemitar 63.43 326 eP P 07 13 01.7 +0.2
PKME Peaks-Kenny Pk 63.54 0 eP P 07 13 02.1 +0.2
comp=Z,369nm,2.5s,mb5.8
VNA2 Neumayer--Watz 63.59 161 eP P 07 13 02.4 +0.4
baz=297,slow=9.4
VNA2 e 07 13 05.6
VNA2 e pP 07 13 23.0 -3.6
VNA2 e pP 07 13 27.4 +0.8
VNA2 e 07 13 37.0
VNA2 e 07 13 43.6
SADO Sadowa 63.65 352 LR LR 07 42 02.3
comp=Z,109nm,18.2s,baz=334,slow=37
LAZ Ladron 63.69 326 eP P 07 13 03.4 +0.2
CBKS Cedar Bluff 63.73 334 eP P 07 13 03.1 -0.2
comp=Z,115nm,0.9s,mb5.7
CBKS Cedar Bluff 63.73 334 eP P 07 13 03.1 -0.2
CBKS pmax pmax
comp=Z,120nm,1.0s,mb5.7
ANMO Albuquerque 63.76 327 eP P 07 13 03.5 -0.1
comp=Z,24nm,0.8s,mb5.1
ANMO Albuquerque 63.76 327 eP P 07 13 03.6 0.0
ANMO pmax pmax
comp=Z,24nm,0.8s
SCIA State Center 64.05 341 eP P 07 13 04.4 -1.0
comp=Z,101nm,0.6s,mb5.8
JFWS Jewell Farm 64.09 343 eP P 07 13 04.7 -1.0
comp=Z,85nm,0.6s,mb5.8
JFWS Jewell Farm 64.09 343 eP P 07 13 04.7 -0.9
JFWS pmax pmax
comp=Z,85nm,0.7s,mb5.7
TUC Tucson 64.19 322 eP P 07 13 06.3 -0.2
comp=Z,81nm,1.8s,mb5.2
TUC Tucson 64.19 322 eP P 07 13 06.3 -0.2
TUC pmax pmax
comp=Z,81nm,1.8s,mb5.2
GLMI Grayling 64.58 348 eP P 07 13 07.5 -1.3
comp=Z,163nm,0.9s,mb5.9
SNAA Sanae 65.22 161 eP P 07 13 11.0 -1.6
SNAA e 07 13 14.5
SNAA e pP 07 13 31.7 -5.7
SNAA e pP 07 13 36.4 -1.0
SNAA e 07 13 45.4
SNAA Sanae 65.22 161 eP P 07 13 11.2 -1.4
comp=Z,46nm,1.2s,mb5.2
SNAA epP pP 07 13 32.6 -4.7
SNAA Sanae 65.22 161 P P 07 13 11.3 -1.3
SNAA pmax pmax
comp=Z,45nm,1.2s
SDCO Great Sand Dun 65.45 329 eP P 07 13 14.8 +0.3
comp=Z,76nm,0.8s,mb5.6
SDCO epP pP 07 13 39.5 +0.1
OGNE Ogallala 66.47 334 eP P 07 13 20.8 -0.2
comp=Z,41nm,0.6s,mb5.4
MVCO Mesa Verde 66.55 327 eP P 07 13 21.1 -0.5
comp=Z,55nm,0.8s,mb5.4
ECSD EROS,Sioux Fal 66.80 339 eP P 07 13 22.3 -0.8
comp=Z,108nm,1.3s,mb5.5
WUAZ Wupatki 66.84 324 eP P 07 13 24.2 +0.7
comp=Z,71nm,1.1s,mb5.5
ISCO Idaho Springs 67.13 330 eP P 07 13 25.7 +0.5
comp=Z,55nm,1.0s,mb5.3
ISCO Idaho Springs 67.13 330 eP P 07 13 25.7 +0.4
ISCO pmax pmax
comp=Z,55nm,1.0s,mb5.3
GLA Glamis 67.14 320 eP P 07 13 26.3 +0.8
comp=Z,30nm,1.0s,mb5.1
GLA Glamis 67.14 320 eP P 07 13 26.3 +0.8
GLA pmax pmax
comp=Z,30nm,1.0s,mb5.1
PV01 Paradox Valley 67.28 327 eP P 07 13 26.9 +0.6
SMCO Snowmass 67.29 329 eP P 07 13 27.0 +0.7
comp=Z,55nm,0.8s,mb5.4
PV10 Paradox Valley 67.71 327 eP P 07 13 29.0 0.0
LIC Lamto 68.17 75 eP P 07 13 31.3 -1.1
comp=Z,296nm,1.1s,mb6.0
LIC Lamto 68.17 75 eP P 07 13 31.2 -1.2
LIC epP pP 07 13 57.1 -0.2
LIC eMLR MLR
comp=Z,178nm,22.8s
LIC Lamto 68.17 75 eP P 07 13 31.2 -1.2
LIC epP pP 07 13 57.1 -0.2
LIC LR LR
comp=Z,90nm,22.8s
PHWY Pilot Hill 68.26 332 eP P 07 13 33.0 +0.7
TIC Toumodi 68.34 75 eP P 07 13 32.4 -1.0
comp=Z,720nm,1.2s,mb6.4
TIC Toumodi 68.34 75 eP P 07 13 32.4 -1.0
TIC pmax pmax
comp=Z,720nm,1.2s,mb6.4
KIC Kosan Boka 68.48 75 eP P 07 13 33.4 -0.9
comp=Z,870nm,0.9s,mb6.6
DBIC Dimbokro 68.50 75 P P 07 13 33.5 -0.9
comp=Z,18nm,0.7s,mb5.0,baz=225,slow=6.4,SNR=40
DBIC pP pP 07 13 59.1 -0.2
comp=Z,174nm,0.9s,baz=224,slow=6.3,SNR=36
DBIC LR LR 07 43 56.2
comp=Z,84nm,19.5s,baz=188,slow=36
DBIC Dimbokro 68.50 75 eP P 07 13 33.5 -0.9
comp=Z,228nm,0.9s,mb6.0
DBIC epP pP 07 13 59.3 0.0
DBIC Dimbokro 68.50 75 eP P 07 13 33.5 -0.9
DBIC e*PP pP 07 13 59.3 -0.1
DBIC pmax pmax
comp=Z,228nm,0.9s
PFO Pinyon Flat Ob 68.53 319 P P 07 13 35.0 +0.8
comp=Z,295nm,0.9s,mb6.1,SNR=18
PFO Pinyon Flat Ob 68.53 319 eP P 07 13 35.0 +0.8
comp=Z,39nm,0.8s,mb5.3
PFO Pinyon Flat Ob 68.53 319 eP P 07 13 35.0 +0.8
PFO pmax pmax
comp=Z,39nm,0.8s,mb5.3
LDFC Landfair 68.70 321 eP P 07 13 36.4 +1.2
EGOM La Gomera 68.70 49 P P 07 13 35.6 +0.2
comp=Z,71nm,0.7s,mb5.6
SRU San Rafael 69.02 327 eP P 07 13 37.4 +0.3
comp=Z,36nm,0.8s,mb5.2
SRU San Rafael 69.02 327 eP P 07 13 37.4 +0.3
SRU pmax pmax
comp=Z,36nm,0.8s,mb5.2
EYMN Ely 69.09 344 eP P 07 13 36.5 -0.8
comp=Z,41nm,0.8s,mb5.3
CCAN Las Canadas 69.17 49 P P 07 13 39.7 +1.5
comp=Z,60nm,0.8s,mb5.6
CCUT Cedar City 69.42 324 eP P 07 13 41.1 +1.5
MSU Marysvale 69.46 325 eP P 07 13 40.7 +0.9
TMUT Trail Mountain 69.52 327 eP P 07 13 40.8 +0.7
EBAJ Bajamar 69.54 49 P P 07 13 41.4 +0.8
comp=Z,65nm,1.2s,mb5.3
ARUT Antelope Range 69.63 324 eP P 07 13 42.2 +1.3
SHPR Sheep Range 69.71 322 eP P 07 13 42.2 +0.8
MAIT Maitri 69.72 160⇑ iP P 07 13 39.5 -1.5
NVL N'lazarevskaya 69.75 160 P P 07 13 41.6 +0.4
NVL e pP 07 14 06.7 +0.5
NVL pmax pmax
comp=Z,50nm,1.2s,mb5.2
EOSO Osorio 69.83 50 P P 07 13 44.4 +2.1
comp=Z,61nm,1.2s,mb5.3
GSC Goldstone 69.87 320 eP P 07 13 43.2 +0.8
comp=Z,82nm,1.4s,mb5.4
GSC Goldstone 69.87 320 eP P 07 13 43.2 +0.8
GSC pmax pmax
comp=Z,82nm,1.4s,mb5.4
RSSD Black Hills 69.93 334 eP P 07 13 42.7 +0.1
comp=Z,38nm,0.9s,mb5.2
RSSD Black Hills 69.93 334 eP P 07 13 42.7 +0.1
RSSD pmax pmax
comp=Z,38nm,0.9s,mb5.2
MWC Mount Wilson 69.93 319 eP P 07 13 43.6 +0.8
comp=Z,46nm,0.9s,mb5.3
MWC Mount Wilson 69.93 319 eP P 07 13 43.7 +0.9
MWC pmax pmax
comp=Z,46nm,0.9s,mb5.3
MPU Maple Canyon 70.27 327 eP P 07 13 45.3 +0.5
comp=Z,65nm,1.0s,mb5.4
DAU Daniels Canyon 70.37 327 eP P 07 13 46.1 +0.8
NLU North Lily Min 70.45 327 eP P 07 13 44.6 -1.3
OSI Osito Adit 70.60 319 eP P 07 13 47.5 +0.6
comp=Z,52nm,1.1s,mb5.3
JLU Jordanelle 70.61 327 eP P 07 13 47.5 +0.7
JLU epP pP 07 14 12.4 +0.5
JLU esP sP 07 14 21.7 -0.9
AGMN Agassiz Refuge 70.62 342 eP P 07 13 45.7 -1.0
comp=Z,52nm,0.8s,mb5.4
TPNV Topopah Spring 70.65 322 eP P 07 13 47.8 +0.6
comp=Z,62nm,0.9s,mb5.4
TPNV Topopah Spring 70.65 322 eP P 07 13 47.8 +0.7
TPNV pmax pmax
comp=Z,62nm,1.0s,mb5.4
NOQ North Oquirrh 70.99 327 eP P 07 13 49.7 +0.6
comp=Z,34nm,1.1s,mb5.1
DUG Dugway 71.02 326 eP P 07 13 50.0 +0.7
comp=Z,66nm,1.0s,mb5.4
DUG Dugway 71.02 326 eP P 07 13 50.0 +0.7
DUG pmax pmax
comp=Z,66nm,1.0s,mb5.4
CFTV Fuerteventura 71.09 50 P P 07 13 51.5 +1.5
comp=Z,5.5nm,0.6s,mb4.6
ISA Isabella 71.13 320 eP P 07 13 51.1 +1.0
comp=Z,44nm,0.8s,mb5.3
ISA Isabella 71.13 320 eP P 07 13 51.1 +1.0
ISA pmax pmax
comp=Z,44nm,0.9s,mb5.3
BW06 Boulder Array 71.30 330 eP P 07 13 50.6 -0.4
comp=Z,67nm,1.7s,mb5.2
PDAR Pinedale Array 71.30 330 P P 07 13 50.5 -0.4
comp=Z,10nm,0.9s,mb4.7,baz=148,slow=6.8,SNR=51
PDAR pP pP 07 14 14.7 -1.4
comp=Z,7.0nm,1.0s,baz=128,slow=9.6,SNR=3.5
PDAR LR LR 07 45 51.1
comp=Z,91nm,20.7s,baz=252,slow=36
HWUT Hardware Ranch 71.41 328 eP P 07 13 51.7 +0.1
comp=Z,28nm,0.8s,mb5.1
SPUT South Promonto 71.64 327 eP P 07 13 53.3 +0.3
BGU Big Grassy Mou 71.66 327 eP P 07 13 53.4 +0.2
BGU epP pP 07 14 17.8 -0.5
BGU esP sP 07 14 28.0 -1.0
EFAM Famara 71.90 50 P P 07 13 55.6 +0.8
comp=Z,111nm,1.2s,mb5.6
TPH Tonopah 71.98 322 eP P 07 13 56.4 +1.2
comp=Z,33nm,0.9s,mb5.2
TPH Tonopah 71.98 322 eP P 07 13 56.4 +1.3
TPH pmax pmax
comp=Z,33nm,1.0s,mb5.1
AHID Auburn Hatcher 72.04 329 eP P 07 13 55.4 0.0
comp=Z,42nm,0.9s,mb5.3
HVU Hansel Valley 72.15 327 eP P 07 13 56.2 +0.1
comp=Z,60nm,1.2s,mb5.3
HVU Hansel Valley 72.15 327 eP P 07 13 56.2 +0.1
HVU pmax pmax
comp=Z,60nm,1.1s,mb5.3
PTRM Twissleman Ran 72.20 319 eP P 07 13 57.6 +1.0
MTUM Tungsten Hills 72.29 321 eP P 07 13 57.8 +0.8
ULM Lac du Bonnet 72.37 343 P P 07 13 56.0 -1.2
comp=Z,56nm,0.7s,mb5.5,baz=154,slow=5.9,SNR=42
ULM pP pP 07 14 20.4 -1.9
comp=Z,19nm,0.6s,baz=152,slow=5.1,SNR=2.6
ULM LR LR 07 44 30.4
comp=Z,106nm,18.8s,baz=43,slow=35
ULM Lac du Bonnet 72.37 343 eP P 07 13 56.0 -1.2
comp=Z,44nm,0.6s,mb5.5
REDW Red Top Meadow 72.37 330 eP P 07 13 57.6 +0.3
comp=Z,71nm,1.4s,mb5.3
SNOW Snow King Moun 72.40 330 eP P 07 13 57.9 +0.4
comp=Z,28nm,0.9s,mb5.1
LOHW Long Hollow 72.44 330 eP P 07 13 58.1 +0.3
comp=Z,28nm,1.1s,mb5.0
TPAW Teton Pass 72.52 330 eP P 07 13 58.8 +0.6
comp=Z,29nm,0.9s,mb5.1
RRI2 Red Ridge 72.59 329 eP P 07 13 59.3 +0.7
comp=Z,81nm,0.9s,mb5.5
MOOW Moose Ponds 72.61 330 eP P 07 13 59.0 +0.2
comp=Z,82nm,1.8s,mb5.3
MOOW epP pP 07 14 23.1 -0.8
ELK Elko 72.70 325 eP P 07 13 59.1 -0.3
DCID1 Drake Creek 72.71 330 eP P 07 14 00.3 +1.0
IMW Indian Meadow 72.82 330 eP P 07 14 00.5 +0.5
comp=Z,75nm,1.3s,mb5.4
NVAR Mina Array Bea 72.85 322 P P 07 14 01.1 +0.8

comp=Z,17nm,0.8s,mb4.9,baz=149,slow=6.7,SNR=114
NVAR pP pP 07 14 25.5 0.0
comp=Z,8.3nm,0.8s,baz=152,slow=6.3,SNR=5.3
NVAR Mina Array Bea 72.85 322 P **P**
NVAR pP pP 07 14 25.5 0.0
LAO LASA Array 72.91 335 *eP* **P** **07 14 00.5 0.0**
comp=Z,108nm,1.2s,mb5.5
LAO *epP* pP 07 14 26.1 +0.5
LAO *esP* sP 07 14 36.8 +0.4
RLMT Red Lodge 72.98 332 *eP* **P** **07 14 01.3 +0.4**
comp=Z,147nm,1.6s,mb5.6
SCHQ Schefferville 73.15 2 P **P** **07 14 01.2 -0.5**
comp=Z,5.0nm,0.5s,mb4.6,baz=115,slow=11,SNR=6.7
SCHQ pP pP 07 14 25.5 -1.4
comp=Z,23nm,1.0s,baz=186,slow=7.7,SNR=4.1
YFT Old Faithful 73.19 330 *eP* **P** **07 14 04.3 +2.2**
YNR Norris Junctio 73.31 331 *eP* **P** **07 14 04.5 +1.6**
WAKR Walker 73.57 321 *eP* **P** **07 14 05.6 +1.1**
DGMT Dagmar 73.57 337 *eP* **P** **07 14 04.8 +0.5**
comp=Z,87nm,0.8s,mb5.5
BMN Battle Mountai 73.58 324 *eP* **P** **07 14 06.1 +1.6**
comp=Z,15nm,1.2s,mb4.6
BMN Battle Mountai 73.58 324 *eP* **P** **07 14 06.1 +1.6**
BMN pmax pmax
comp=Z,15nm,1.2s,mb4.6
GCMT Greycliff 73.68 332 *eP* **P** **07 14 05.0 +0.1**
GCMT *epP* pP 07 14 30.3 0.0
QLMT Earthquake Lak 73.75 330 *eP* **P** **07 14 06.6 +1.2**
CMB Columbia Colle 73.83 320 *eP* **P** **07 14 06.3 +0.2**
comp=Z,12nm,0.9s,mb4.6
CMB Columbia Colle 73.83 320 *eP* **P** **07 14 06.3 +0.2**
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.6
HLID Hailey 74.28 328 *eP* **P** **07 14 09.4 +0.9**
comp=Z,54nm,1.0s,mb5.2
PAHR Pah Rah Range 74.32 322 *eP* **P** **07 14 10.1 +1.2**
comp=Z,84nm,0.8s,mb5.5
MCMT McKenzie Canyo 74.42 330 *eP* **P** **07 14 10.3 +0.9**
MCMT *epP* pP 07 14 35.0 +0.3
DLMT Dillon 74.70 330 *eP* **P** **07 14 11.9 +1.0**
comp=Z,76nm,1.5s,mb5.2
LRM Limekiln Ridge 74.97 330 *eP* **P** **07 14 13.0 +0.6**
OHCM Honcut 75.32 321 *eP* **P** **07 14 15.1 +0.4**
OHCM *epP* pP 07 14 38.7 -1.4
HRY Holter Researc 75.35 331 *eP* **P** **07 14 15.4 +0.7**
EGMT Eagleton 75.44 333 *eP* **P** **07 14 15.1 -0.1**
comp=Z,54nm,0.9s,mb5.3
PPT Papeete 75.44 256 LR LR 07 39 04.1
comp=Z,121nm,18.9s,baz=219,slow=29
NSHM Saint Helena R 75.49 320 *eP* **P** **07 14 16.3 +0.6**
CHMT Chamberlain Mo 76.15 331 *eP* **P** **07 14 20.2 +1.0**
LBCM Butte Creek Ri 76.20 322 P **P** **07 14 19.8 +0.1**
MOD Modoc 76.29 323 *eP* **P** **07 14 20.7 +0.6**
comp=Z,135nm,1.7s,mb5.4
MSO Missoula 76.41 330 *eP* **P** **07 14 21.2 +0.6**
comp=Z,37nm,1.4s,mb4.9
WDC Whiskeytown Da 76.74 321 *eP* **P** **07 14 21.8 -0.9**
comp=Z,18nm,0.7s,mb4.9
WDC Whiskeytown Da 76.74 321 *eP* **P** **07 14 21.8 -0.9**
WDC pmax pmax
comp=Z,18nm,0.7s,mb4.9
TOA0 Torodi Ar. Sit 76.95 71 *eP* **P** **07 14 23.2 -1.2**
TOA0 *epP* pP 07 14 50.0 +0.2
TORD Torodi Ar. Bea 76.95 71 P **P** **07 14 23.3 -1.1**
comp=Z,35nm,0.6s,mb5.3,baz=254,slow=5.2,SNR=180
TORD pP pP 07 14 49.9 0.0
comp=Z,130nm,0.8s,baz=254,slow=5.3,SNR=22
TORD LR LR 07 48 03.7
comp=Z,174nm,18.5s,baz=230,slow=35
TORD Torodi Ar. Bea 76.95 71 P **P** **07 14 23.3 -1.1**
TORD pP pP 07 14 49.9 0.0
TORD LR LR 07 48 03.7
BSMT Bassoo Peak 77.55 331 *eP* **P** **07 14 27.8 +0.7**
LNOR Lincton Mounta 77.86 327 *eP* **P** **07 14 28.3 -0.5**
LNOR Lincton Mounta 77.86 327 P **P** **07 14 28.4 -0.4**
WALA Waterton Lakes 78.03 332 *eP* **P** **07 14 29.8 +0.2**
comp=Z,46nm,1.0s,mb5.2
WALA *epP* pP 07 14 54.7 -0.5
WALA *esP* sP 07 15 05.1 -0.7
FFC Flin Flon 78.09 341 *eP* **P** **07 14 29.6 -0.3**
comp=Z,23nm,1.0s,mb4.9
FFC Flin Flon 78.09 341 *eP* **P** **07 14 29.6 -0.3**
FFC pmax pmax
comp=Z,23nm,1.0s,mb4.9
HUMO Hull Mountain 78.25 323 *eP* **P** **07 14 30.8 -0.3**
comp=Z,80nm,2.1s,mb5.1
SBA Scott Base 78.58 190 *eP* **P** **07 14 33.3 +0.9**
comp=Z,20nm,1.1s,mb4.9
SBA Scott Base 78.58 190 P **P** **07 14 33.4 +1.0**
SBA pmax pmax
comp=Z,21nm,1.1s,mb4.9
HAWA Hanford 78.85 327 *eP* **P** **07 14 34.9 +0.7**
comp=Z,56nm,1.0s,mb5.3
RSW Rattlesnake Hi 78.88 327 *eP* **P** **07 14 35.2 +0.8**
RSW *epP* pP 07 15 00.2 +0.2
NEW Newport 78.94 330 *eP* **P** **07 14 34.4 -0.3**
comp=Z,69nm,1.8s,mb5.2
NEW Newport 78.94 330 *eP* **P** **07 14 34.4 -0.3**
NEW pmax pmax
comp=Z,69nm,1.8s
OD2 Odessa Site #2 79.11 328 *eP* **P** **07 14 36.2 +0.5**
OD2 *esP* sP 07 15 11.5 -0.3
HOOD Mount Hood Mea 79.26 325 *eP* **P** **07 14 37.8 +1.3**
comp=Z,70nm,0.9s,mb5.5
SYO Syowa Base 79.43 160⇑ *eP* **P** **07 14 36.0 -1.1**
SYO Syowa Base 79.43 160⇓ *ePcP* PcP 07 14 40.9 -4.0
VNDA Vanda 79.61 190 P **P** **07 14 38.4 +0.3**
comp=Z,9.1nm,0.9s,mb4.6,baz=134,slow=4.5,SNR=41
VNDA pP pP 07 15 04.0 +0.4
comp=Z,4.1nm,0.8s,baz=263,slow=2.3,SNR=4.3
EBG Ellensburg 79.73 327 P **P** **07 14 40.0 +1.0**
MPOR Mary's Peak 79.78 324 P **P** **07 14 40.6 +1.3**
WTV Waterville 79.94 328 P **P** **07 14 40.6 +0.5**
ETW Entiat 80.07 328 *eP* **P** **07 14 41.6 +0.8**
ETW *epP* pP 07 15 06.4 0.0
EGRO El Granado 80.71 45 P **P** **07 14 45.2 +0.6**
comp=Z,30nm,1.1s,mb5.0
EDM Edmonton 80.88 335 *eP* **P** **07 14 44.1 -0.9**
EVO Evora 80.89 44⇑ *iP* **P** **07 14 45.5 0.0**
comp=Z,26nm,0.8s,mb4.8
EVO *epP* pP 07 15 12.0 +0.9
EVO *eMLR* MLR
comp=Z,144nm,21.2s
RPW Rockport 81.22 328 *eP* **P** **07 14 46.6 -0.4**
JCW Jim Creek 81.27 328 *eP* **P** **07 14 46.7 -0.5**
JCW *epP* pP 07 15 11.7 -1.1
EMIN Mina Concepcio 81.38 46 P **P** **07 14 49.0 +0.9**
comp=Z,23nm,0.8s,mb5.1
TSUM Tsumeb 81.45 107 *eP* **P** **07 14 49.2 +0.3**
comp=Z,13nm,0.9s,mb4.8
TSUM *epP* pP 07 15 15.5 +0.9
ESPR Espera 81.48 47 P **P** **07 14 50.7 +2.1**
comp=Z,31nm,1.0s,mb5.1
EJIF Jimena Fronter 81.53 47 P **P** **07 14 50.4 +1.4**
comp=Z,7.7nm,0.8s,mb4.6
EJIF Jimena Fronter 81.53 47 P **P** **07 14 50.4 +1.5**
EJIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
EBAD Badajoz 81.67 45 P **P** **07 14 50.4 +0.8**
comp=Z,17nm,0.8s,mb4.9
EMIJ Mijas 82.08 47 P **P** **07 14 52.1 +0.3**
comp=Z,25nm,0.9s,mb5.0
MTE Manteigas 82.19 43 *eP* **P** **07 14 51.5 -0.7**
comp=Z,17nm,0.8s,mb4.7
PGC Sidney 82.34 327 *eP* **P** **07 14 53.6 +0.8**
comp=Z,85nm,0.9s,mb5.6
ELOB Lobios 82.66 41 P **P** **07 14 55.1 +0.5**
comp=Z,6.2nm,0.6s,mb4.6
ELOJ Sierra Loja 82.80 47 P **P** **07 14 56.6 +1.1**
comp=Z,27nm,0.8s,mb5.1
ELOJ Sierra Loja 82.80 47 P **P** **07 14 56.6 +1.1**
ELOJ pmax pmax
comp=Z,27nm,0.8s,mb5.1
EADA Adamuz 83.01 46 P **P** **07 14 56.8 +0.2**
comp=Z,25nm,1.0s,mb5.0
ECOG Cogollos-Vega 83.27 47 P **P** **07 15 01.0 +3.1**
comp=Z,6.6nm,0.8s,mb4.5
ECOG Cogollos-Vega 83.27 47 P **P** **07 15 01.0 +3.1**
ECOG pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ERUA La Rua 83.51 41 P **P** **07 14 59.8 +0.7**
comp=Z,18nm,0.8s,mb5.0
ERUA La Rua 83.51 41 P **P** **07 14 59.8 +0.7**
ERUA pmax pmax
comp=Z,19nm,0.8s,mb5.0

ECAL Calabor 83.53 42 P **P** **07 14 60.0 +0.8**
comp=Z,38nm,0.9s,mb5.2
EBAN Banos Encina 83.55 46 P **P** **07 15 00.4 +1.0**
comp=Z,23nm,0.8s,mb5.1
EBAN Banos Encina 83.55 46 P **P** **07 15 00.4 +1.0**
EBAN pmax pmax
comp=Z,23nm,0.8s,mb5.1
EBER Berja 83.56 48 P **P** **07 14 59.9 +0.5**
comp=Z,35nm,0.9s,mb5.2
RAR Rarotonga 83.68 250 P **P** **07 15 02.5 +2.0**
comp=Z,19nm,0.7s,mb5.1,baz=117,slow=11
PAB San Pablo 83.86 45 *eP* **P** **07 15 01.6 +0.7**
comp=Z,43nm,0.9s,mb5.3
PAB *epP* pP 07 15 28.5 +1.8
PAB *esP* sP 07 15 38.5 +1.3
PAB San Pablo 83.86 45 *eP* **P** **07 15 01.6 +0.7**
PAB *e*PP* pP 07 15 28.5 +1.8
PAB *e*SP* sP 07 15 38.5 +1.3
PAB pmax pmax
comp=Z,43nm,0.9s,mb5.3
EQES Quesada 83.87 47 P **P** **07 15 01.4 +0.4**
comp=Z,30nm,0.7s,mb5.2
EPON Pontenova 84.01 41 P **P** **07 15 01.9 +0.3**
comp=Z,86nm,1.4s,mb5.4
TAM Tamanrasset 84.04 64 *eP* **P** **07 15 02.8 +0.6**
TAM *epP* pP 07 15 29.1 +1.1
ENIJ Nijar 84.07 48 P **P** **07 15 04.2 +2.1**
comp=Z,18nm,1.0s,mb4.8
ENIJ Nijar 84.07 48 P **P** **07 15 04.2 +2.2**
ENIJ pmax pmax
comp=Z,18nm,1.0s,mb4.9
ESDC Sonseca Array 84.18 45 P **P** **07 15 03.0 +0.5**
comp=Z,23nm,0.9s,mb5.0,baz=252,slow=5.1,SNR=47
ESDC pP pP 07 15 28.9 +0.6
comp=Z,14nm,0.8s,baz=253,slow=5.1,SNR=7.4
ESDC LR LR 07 49 22.2
comp=Z,123nm,21.2s,baz=350,slow=33
ESDC Sonseca Array 84.18 45 P **P** **07 15 03.5 +1.0**
comp=Z,18nm,0.8s,mb4.9
ESLA Sonseca Array 84.18 45 *eP* **P** **07 15 03.5 +1.0**
comp=Z,8.2nm,0.9s,mb4.6
ESLA *epP* pP 07 15 30.0 +1.7
EHUE Huescar 84.21 47 P **P** **07 15 03.1 +0.4**
comp=Z,8.8nm,0.7s,mb4.7
EHUE Huescar 84.21 47 P **P** **07 15 03.1 +0.4**
EHUE pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
GUD Guadarrama 84.53 44 P **P** **07 15 05.4 +1.1**
comp=Z,16nm,1.1s,mb4.8
GUD Guadarrama 84.53 44 P **P** **07 15 05.4 +1.1**
GUD pmax pmax
comp=Z,16nm,1.1s,mb4.9
EVIA Vianos 84.66 46 P **P** **07 15 06.7 +1.7**
comp=Z,10nm,0.6s,mb4.9
EVIA Vianos 84.66 46 P **P** **07 15 06.7 +1.7**
EVIA pmax pmax
comp=Z,11nm,0.6s,mb5.0
EARI Arriondas 85.20 41 P **P** **07 15 08.4 +0.8**
comp=Z,83nm,1.8s,mb5.4
ETOB Tobarra 85.32 47 P **P** **07 15 09.6 +1.3**
comp=Z,29nm,1.1s,mb5.1
BOSA Boshof 85.33 118 P **P** **07 15 08.7 0.0**
comp=Z,10.0nm,1.0s,mb4.7,baz=296,slow=1.8,SNR=8.0
BOSA pP pP 07 15 34.0 -0.6
comp=Z,13nm,1.0s,baz=264,slow=6.3,SNR=5.8
BOSA LR LR 07 51 12.2
comp=Z,122nm,19.0s,baz=88,slow=34
BOSA Boshof 85.33 118 P **P** **07 15 09.3 +0.6**
BOSA *e* pP 07 15 35.4 +0.8
BOSA pmax pmax
comp=Z,32nm,1.3s,mb5.1
ETOR Torete 86.01 45 P **P** **07 15 13.5 +1.9**
comp=Z,13nm,0.5s,mb5.1
ETOR Torete 86.01 45 P **P** **07 15 13.5 +1.9**
ETOR pmax pmax
comp=Z,13nm,0.5s,mb5.1
ECHE Chera 86.17 46 P **P** **07 15 14.4 +2.0**
comp=Z,4.9nm,0.5s,mb4.7
ECHE Chera 86.17 46 P **P** **07 15 14.4 +2.0**
ECHE pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
EBEN Beniarda 86.27 47 P **P** **07 15 14.8 +1.8**
ELAN Lanestosa 86.28 42 P **P** **07 15 14.2 +1.3**
comp=Z,20nm,0.8s,mb5.1
SFJD Kangerlussuaq 86.48 7 P **P** **07 15 11.7 -1.5**
comp=Z,17nm,0.9s,mb5.0,baz=149,slow=12,SNR=2.3
ECRI Cripan 86.57 43 P **P** **07 15 16.4 +2.1**
comp=Z,15nm,0.6s,mb5.1
ECRI Cripan 86.57 43 P **P** **07 15 16.4 +2.1**
ECRI pmax pmax
comp=Z,15nm,0.6s,mb5.1
LBTB Lobatse 86.77 115 *eP* **P** **07 15 16.9 +1.0**
comp=Z,16nm,1.2s,mb4.8
LBTB *epP* pP 07 15 41.4 -0.4
LBTB Lobatse 86.77 115 P **P** **07 15 17.4 +1.5**
LBTB *e* pP 07 15 42.2 +0.4
LBTB pmax pmax
comp=Z,15nm,1.1s,mb4.8
EMOS Mosqueruela 86.86 46 P **P** **07 15 17.7 +1.9**
comp=Z,11nm,0.7s,mb4.9
MAW Mawson 87.28 164 P **P** **07 15 16.8 -0.6**
comp=Z,21nm,1.1s,mb5.0,baz=231,slow=8.5,SNR=7.6
MAW pP pP 07 15 42.5 -0.9
comp=Z,14nm,1.0s,baz=270,slow=12,SNR=2.4
MAW Mawson 87.28 164 *eP* **P** **07 15 17.7 +0.3**
comp=Z,27nm,1.1s,mb5.1
MAW Mawson 87.28 164 P **P** **07 15 17.8 +0.4**
MAW pmax pmax
comp=Z,27nm,1.0s
SJPF Ste Jean 87.64 43 *eP* **P** **07 15 19.7 +0.2**
comp=Z,20nm,0.9s,mb4.9
SJPF *epP* pP 07 15 46.2 +0.7
SJPF Ste Jean 87.64 43 *eP* **P** **07 15 19.7 +0.2**
comp=Z,10nm,0.9s,mb4.8
SJPF *epP* pP 07 15 46.2 +0.7
SJPF Ste Jean 87.64 43 *eP* **P** **07 15 19.7 +0.2**
SJPF *e*PP* pP 07 15 46.2 +0.7
SJPF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ERTA Horta de San J 87.68 45 P **P** **07 15 21.6 +1.9**
comp=Z,23nm,1.1s,mb5.1
ETSF Etsaut 87.97 43 *eP* **P** **07 15 21.1 0.0**
comp=Z,13nm,0.7s,mb4.8
ETSF *epP* pP 07 15 47.7 +0.6
ETSF Etsaut 87.97 43 *eP* **P** **07 15 21.1 0.0**
comp=Z,6.7nm,0.7s,mb4.8
ETSF *epP* pP 07 15 47.7 +0.6
ETSF Etsaut 87.97 43 *eP* **P** **07 15 21.1 0.0**
ETSF *e*PP* pP 07 15 47.7 +0.6
ETSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
YKA Yellowknife Ar 88.25 341 P **P** **07 15 21.6 -0.3**
comp=Z,62nm,0.7s,mb5.8,baz=134,slow=4.8,SNR=202
YKA pP pP 07 15 46.3 -1.7
comp=Z,33nm,0.8s,baz=135,slow=4.8,SNR=6.8
YKA sP sP 07 15 56.8 -1.6
comp=Z,27nm,0.6s,baz=134,slow=4.8,SNR=6.4
YKA LR LR 07 57 16.1
comp=Z,45nm,18.6s,baz=155,slow=37
YKA Yellowknife Ar 88.25 341 P **P** **07 15 21.6 -0.3**
YKA pP pP 07 15 46.3 -1.7
YKA sP sP 07 15 56.9 -1.6
YKA LR LR 07 57 16.1
YKA Yellowknife Ar 88.25 341 P **P** **07 15 21.6 -0.3**
YKA **PP* pP 07 15 46.3 -1.7
YKA **SP* sP 07 15 56.9 -1.6
YKW3 Yellowknife Ar 88.31 341 *eP* **P** **07 15 21.9 -0.2**
EBIE Bielsa 88.33 44 P **P** **07 15 23.6 +0.8**
comp=Z,3.1nm,0.6s,mb4.5
EPF Esparros 88.62 44 *eP* **P** **07 15 23.3 -0.8**
comp=Z,14nm,0.9s,mb4.7
EPF Esparros 88.62 44 *eP* **P** **07 15 23.3 -0.8**
comp=Z,7.1nm,0.9s,mb4.7
EPF Esparros 88.62 44 *eP* **P** **07 15 23.3 -0.8**
EPF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
LFF La Frestale 89.74 42 *eP* **P** **07 15 28.8 -0.5**
comp=Z,20nm,0.6s,mb5.1
LFF La Frestale 89.74 42 *eP* **P** **07 15 28.8 -0.5**
comp=Z,9.9nm,0.6s,mb5.1
LFF La Frestale 89.74 42 *eP* **P** **07 15 28.8 -0.5**
LFF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
MFF Saint Martin d 89.95 40 *eP* **P** **07 15 29.4 -0.3**
comp=Z,33nm,1.2s,mb5.0
MFF Saint Martin d 89.95 40 *eP* **P** **07 15 29.4 -0.8**
comp=Z,16nm,1.2s,mb5.0
MFF pmax pmax
comp=Z,16nm,1.2s,mb5.0
MTLF Montolieu 89.99 44 *eP* **P** **07 15 29.7 -0.8**
comp=Z,12nm,1.0s,mb4.7
MTLF *epP* pP 07 15 56.2 -0.4
MTLF Montolieu 89.99 44 *eP* **P** **07 15 29.7 -0.8**
comp=Z,5.9nm,1.0s,mb4.7
MTLF *epP* pP 07 15 56.2 -0.4
MTLF Montolieu 89.99 44 *eP* **P** **07 15 29.7 -0.8**
MTLF *e*PP* pP 07 15 56.2 -0.4
MTLF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
GRR Gorron 90.35 38 *eP* **P** **07 15 31.5 -0.6**
RJF Les Rejaudoux 90.40 42 *eP* **P** **07 15 31.4 -1.0**
comp=Z,28nm,1.2s,mb5.0
RJF *eMLR* MLR
comp=Z,89nm,20.4s
RJF Les Rejaudoux 90.40 42 *eP* **P** **07 15 31.4 -1.0**
comp=Z,14nm,1.2s,mb5.0
RJF LR LR
comp=Z,90nm,20.4s
RJF Les Rejaudoux 90.40 42 *eP* **P** **07 15 31.4 -1.0**
RJF pmax pmax
comp=Z,14nm,1.2s,mb5.0
RJF MLR MLR
comp=Z,90nm,20.4s
CAF Calviac 90.58 42 *eP* **P** **07 15 32.6 -0.6**
comp=Z,9.8nm,0.7s,mb4.8
CAF *epP* pP 07 15 59.1 -0.2
CAF Calviac 90.58 42 *eP* **P** **07 15 32.6 -0.6**
comp=Z,4.9nm,0.7s,mb4.8
CAF *epP* pP 07 15 59.1 -0.2
CAF Calviac 90.58 42 *eP* **P** **07 15 32.6 -0.6**
CAF *e*PP* pP 07 15 59.1 -0.2
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LDF La Druitiere 90.88 38 *eP* **P** **07 15 33.3 -1.2**
comp=Z,54nm,1.1s,mb5.3
LDF La Druitiere 90.88 38 *eP* **P** **07 15 33.3 -1.2**
comp=Z,27nm,1.1s,mb5.3
LDF La Druitiere 90.88 38 *eP* **P** **07 15 33.3 -1.2**
LDF pmax pmax
comp=Z,27nm,1.1s,mb5.3
TCF Toulx Ste Croi 91.26 41 *eP* **P** **07 15 35.3 -1.1**
TCF *epP* pP 07 16 02.0 -0.5
DLBC Dease Lake 91.36 333 *eP* **P** **07 15 36.6 +0.1**
DLBC *epP* pP 07 16 02.4 -0.2
BGF Bois d'Agland 91.78 41 *eP* **P** **07 15 37.8 -1.0**
comp=Z,21nm,0.9s,mb5.1
BGF Bois d'Agland 91.78 41 *eP* **P** **07 15 37.8 -1.0**
comp=Z,11nm,0.9s,mb5.1
BGF Bois d'Agland 91.78 41 *eP* **P** **07 15 37.8 -1.0**
BGF pmax pmax
comp=Z,11nm,0.9s,mb5.1
KEST Kesra 92.02 53 P **P** **07 15 40.8 +0.6**
comp=Z,3.1nm,0.8s,mb4.6,baz=312,slow=23,SNR=5.5
KEST LR LR 07 54 21.1
comp=Z,57nm,21.9s,baz=233,slow=34
SSF Saint Saulge 92.40 41 *eP* **P** **07 15 41.4 -0.2**
SSF *epP* pP 07 16 07.9 +0.2
SMF Signal de Mont 92.44 41 *eP* **P** **07 15 40.9 -0.9**
SMF *epP* pP 07 16 07.5 -0.4
EKA Eskdalemuir Ar 92.44 32 P **P** **07 15 42.5 +0.9**
comp=Z,1.1nm,0.8s,mb4.1,baz=233,slow=6.1,SNR=2.7
ORIF Oris-en-Rattie 93.04 44 *eP* **P** **07 15 44.8 +0.2**
comp=Z,14nm,0.8s,mb5.0
ORIF *epP* pP 07 16 11.2 +0.5
ORIF *eMLR* MLR
comp=Z,173nm,20.2s
ORIF Oris-en-Rattie 93.04 44 *eP* **P** **07 15 44.8 +0.2**
comp=Z,7.0nm,0.8s,mb5.0
ORIF *epP* pP 07 16 11.2 +0.5
ORIF Oris-en-Rattie 93.04 44 *eP* **P** **07 15 44.8 +0.2**
ORIF *e*PP* pP 07 16 11.2 +0.5
ORIF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
SUMG Summit 93.28 9 *eP* **P** **07 15 46.1 +1.0**
comp=Z,11nm,0.9s,mb5.2
LPL La Plagne 93.83 43 *eP* **P** **07 15 48.5 +0.2**
comp=Z,8.6nm,0.7s,mb4.9
LPL La Plagne 93.83 43 *eP* **P** **07 15 48.5 +0.2**
comp=Z,4.3nm,0.7s,mb4.9
LPL La Plagne 93.83 43 *eP* **P** **07 15 48.5 +0.2**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
LPG La Plagne 93.83 43 *eP* **P** **07 15 47.9 -0.4**
CABF La Chapelle 93.84 42 *eP* **P** **07 15 47.6 -0.7**
HAU Haudompre 94.54 41 *eP* **P** **07 15 50.2 -1.3**
HAU *eMLR* MLR
comp=Z,106nm,21.0s
HAU Haudompre 94.54 41 *eP* **P** **07 15 50.2 -1.3**
HAU MLR MLR
comp=Z,110nm,21.0s
HINF Hinteralfeld 94.79 41 *eP* **P** **07 15 51.3 -1.3**
CDF Champ du Feu 95.27 41 *eP* **P** **07 15 53.9 -0.9**
comp=Z,20nm,1.2s,mb5.1
CDF Champ du Feu 95.27 41 *eP* **P** **07 15 53.9 -0.9**
comp=Z,10nm,1.2s,mb5.1
CDF Champ du Feu 95.27 41 *eP* **P** **07 15 53.9 -0.9**
CDF pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
DAVOS Davos 96.29 43 P **P** **07 16 00.0 +0.5**
DAVOX Davos/Dischmat 96.33 43 P **P** **07 16 00.0 +0.4**
comp=Z,2.1nm,0.9s,mb4.6,baz=300,slow=20,SNR=2.8
DAVOX LR LR 07 55 55.2
comp=Z,79nm,18.0s,baz=100,slow=33
GERES GERESS Array B 99.43 42 P Pdif 07 16 14.8 +1.2
comp=Z,0.5nm,0.6s,baz=238,slow=4.6,SNR=4.7
GERES pP pP 07 16 38.2 -1.6
comp=Z,1.0nm,0.8s,baz=251,slow=4.1,SNR=4.8
GERES LR LR 07 59 02.9
comp=Z,66nm,18.8s,baz=97,slow=34
GERES GERESS Array B 99.43 42 P Pdif 07 16 14.8 +1.2
GERES **PP* pP 07 16 38.2 -1.5
KONO Kongsberg 100.48 30 *eP* Pdif 07 16 18.4 +0.1
ARCES ARCESS Array B 109.01 22 PKKPbc PKKPbc 07 32 04.9 -4.9
comp=Z,4.3nm,0.9s,baz=68,slow=3.4,SNR=6.7
AKASG Malin Array Be 109.64 42 PP PP 07 21 30.2 -3.8
comp=Z,0.2nm,0.3s,baz=268,slow=6.9,SNR=5.1
OBN Obninsk 114.22 37 *e*PKP PKiKP 07 21 08.5 -1.3
OBN Obninsk 114.22 37⇑ *i*PKIKP PKiKP 07 21 08.0 -1.8
OBN *e* 07 21 39.2
OBN *e* 07 22 03.9
OBN *e* 07 28 17.2
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,100nm,19.0s
KIV Kislovodsk 118.56 50 *e*PKIKP PKPdf 07 21 18.0 -0.5
KIV pmax pmax
comp=Z,5.0nm,1.0s
STKA Stephens Creek 121.63 211 PKP PKPdf 07 21 23.8 -1.1
comp=Z,4.6nm,0.8s,baz=94,slow=4.1,SNR=8.4
STKA pPKP pPKPdf 07 21 50.4 -1.7
comp=Z,1.1nm,0.4s,baz=154,slow=7.3,SNR=2.7
TIXI Tiksi 125.84 353⇑ *e*PKIKP PKPdf 07 21 31.4 -0.3
TIXI Tiksi 125.84 353 *i* PKIKP PKPdf 07 21 29.9 -1.8
TIXI *e* 07 21 57.4
TIXI pmax pmax
comp=Z,5.0nm,0.9s
ARU Arti 126.04 33 *e*PKPdf PKPdf 07 21 33.1 +0.6
ARU Arti 126.04 33 *i* PKIKP PKPdf 07 21 33.0 +0.6
ARU 07 23 31.3
ARU SS SS 07 40 17.8 -3.6
SEY Seymchan 127.20 337⇑ *e*PKIKP PKPdf 07 21 34.1 -0.4
AKTK Aktyubinsk 127.81 40 PKP PKPdf 07 21 35.8 -0.2
AKTK pPKP pPKPdf 07 22 02.6 -0.6
AKTO Aktyubinsk 127.81 40 PKP PKPdf 07 21 35.8 -0.2
comp=Z,2.8nm,0.8s,baz=349,slow=1.5,SNR=7.3
AKTO pPKP pPKPdf 07 22 02.6 -0.6
comp=Z,4.1nm,0.8s,baz=325,slow=2.7,SNR=4.6
CTA Charters Tower 127.96 224 PKP PKPdf 07 21 36.7 -0.6
comp=Z,9.2nm,0.8s,baz=228,slow=4.0,SNR=6.2
NWAO Narrogin (SRO) 128.38 187 PKP PKPdf 07 21 36.4 -1.4
comp=Z,7.1nm,0.8s,baz=287,slow=15,SNR=2.7
NWAO pPKP pPKPdf 07 22 05.1 +0.1
comp=Z,9.0nm,0.7s,baz=194,slow=6.7,SNR=2.6
AB31 Akbulak array 129.37 41 PKIKP PKPdf 07 21 38.9 -0.1
AB31 pmax pmax
comp=Z,11nm,0.9s
PETK Petropavlovsk- 129.87 325 PKP PKPdf 07 21 38.2 -1.6
comp=Z,8.2nm,0.9s,baz=4.8,slow=3.6,SNR=4.8
PETK pPKP pPKPdf 07 22 07.4 +0.4

comp=Z,4.9nm,0.7s,baz=71,slow=11,SNR=3.7
ASAR Alice Springs 132.19 209 PKP PKPdf 07 21 44.1 -1.1
comp=Z,9.7nm,0.9s,baz=149,slow=2.4,SNR=38
ASAR pPKP pPKPdf 07 22 11.4 -1.0
comp=Z,6.4nm,0.9s,baz=143,slow=2.2,SNR=7.1
ASAR PP PP 07 24 03.6 -3.4
comp=Z,1.3nm,1.1s,baz=144,slow=5.6,SNR=5.8
ASAR Alice Springs 132.19 209 PKIKP PKPdf 07 21 44.2 -1.0
ASAR 07 22 11.5
BVA0 Borovoye Array 133.69 33 *i* PKIKP PKPdf 07 21 47.4 +0.3
BVA0 pmax pmax
comp=Z,5.0nm,1.8s
BVAR Borovoye Array 133.69 33 PKP PKPdf 07 21 47.4 +0.3
comp=Z,2.1nm,0.7s,baz=263,slow=2.3,SNR=12
BVAR pPKP pPKPdf 07 22 14.9 +0.6
comp=Z,2.4nm,0.8s,baz=270,slow=3.0,SNR=4.1
VOSK Vostochnaya 134.16 33 PKIKP PKPdf 07 21 47.3 -0.7
VOSK pmax pmax
comp=Z,13nm,1.1s
YAK Yakutsk 134.56 347⇑ *e*PKP PKPdf 07 21 48.9 +0.5
YAK Yakutsk 134.56 347⇑ *i*PKIKP PKPdf 07 21 48.9 +0.5
WB2 Warramunga Arr 135.12 213 *e*PKPdf PKPdf 07 21 49.9 -0.9
WRA Warramunga Arr 135.13 213 PKP PKPdf 07 21 50.2 -0.6
comp=Z,11nm,0.8s,baz=148,slow=1.5,SNR=6.8
WRA pPKP pPKPdf 07 22 17.0 -1.0
comp=Z,7.1nm,0.8s,baz=162,slow=1.6,SNR=5.4
WRA SKPbc SKPbc 07 25 10.7 -2.1
comp=Z,2.3nm,1.0s,baz=139,slow=3.7,SNR=4.9
WRA Warramunga Arr 135.13 213 PKIKP PKPdf 07 21 50.2 -0.6
WRA 07 22 17.0
WRAB Tennant Creek 135.13 213 *e*PKPdf PKPdf 07 21 50.1 -0.7
WRAB Tennant Creek 135.13 213 PKIKP PKPdf 07 21 50.4 -0.5
WRAB *e* 07 22 17.0
NVS Novosibirsk 138.26 23 *e*PKIKP PKPdf 07 21 55.1 -0.4
NVS *e* 07 22 22.6
NVS pmax pmax
comp=Z,22nm,1.2s
NVS pmax pmax
comp=E,11nm,1.6s
KURK Kurchatov 139.17 31 *e*PKPdf PKPdf 07 21 54.9 -2.4
KURK Kurchatov 139.17 31 PKIKP PKPdf 07 21 57.8 +0.5
KURK *e* 07 22 24.1
ZALV Zalesovo Beam 139.54 23 PKhKP 07 21 51.6
comp=E,1.3nm,0.5s,baz=324,slow=6.4,SNR=7.2
ZALV PKP PKPdf 07 21 58.4 +0.5
comp=E,10nm,0.7s,baz=324,slow=3.1,SNR=30
ZALV pPKP pPKPdf 07 22 24.6 -0.4
comp=E,15nm,0.8s,baz=297,slow=2.2,SNR=7.6
ZALV Zalesovo Beam 139.54 23 PKIKP PKPdf 07 21 58.4 +0.5
ZALV 07 22 24.7
BOD Bodaibo 140.73 357 *e*PKHKP 07 21 48.8
EKS2 Erkin-Say 140.79 44 *e*PKPdf PKPdf 07 22 01.8 +1.2
YSS Yuzh-Sakhalins 141.27 324⇑ *e*PKP PKPdf 07 22 02.0 +0.8
YSS Yuzh-Sakhalins 141.27 324⇑ *i*PKIKP PKPdf 07 22 01.9 +0.7
MK31 Makanchi Array 143.57 33 *e*PKPdf PKPdf 07 22 03.0 -2.4
MK31 Makanchi Array 143.57 33 *i* PKIKP PKPdf 07 22 04.4 -0.9
MK31 pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 143.57 33 PKP PKPdf 07 22 02.6 -2.7
comp=Z,7.9nm,0.9s,baz=336,slow=2.7,SNR=20
MKAR pPKP pPKPdf 07 22 30.9 -1.7
comp=Z,5.1nm,0.8s,baz=329,slow=2.9,SNR=5.2
MKAR SKPbc SKPbc 07 25 35.1 +0.1
comp=Z,2.4nm,0.8s,baz=285,slow=4.8,SNR=3.8
MKAR Makanchi Array 143.57 33 PKIKP PKPdf 07 22 02.6 -2.7
MKAR 07 22 30.9
HABR Khabarovsk 144.14 332 *e*PKIKP PKPdf 07 22 04.3 -2.0
HABR *e*PPP 07 28 30.1
HABR *e* 07 29 08.3
HABR *e*SS SS 07 43 58.8 +1.0
HABR *e*SSS 07 49 23.6
KLR Kul'dur 144.94 336 *e*PKHKP 07 22 02.3
KLR pmax pmax
comp=Z,110nm,1.4s
POO Poona 145.32 84⇓ *i*P PKPdf 07 22 07.0 -2.2
KAD Karad 145.49 86 *i* P PKPdf 07 22 10.6 +1.1
IRK Irkutsk 146.06 7 *e*PKP2 PKPab 07 22 09.3 -1.9
IRK pmax pmax
comp=Z,80nm,2.0s
MOY Mondy 146.15 11 *e*PKP2 PKPab 07 22 09.7 -1.8
TLY Talaya 146.53 8 *e*PKPbc PKPbc 07 22 12.4 +0.5
TLY Talaya 146.53 8 *e*PKP2 PKPab 07 22 12.2 -0.8
TLY pmax pmax
comp=Z,27nm,1.1s
GUMO Guam 146.62 267 PKPbc PKPbc 07 22 11.8 -1.4
comp=Z,252nm,0.8s,baz=180,slow=9.4,SNR=9.1
GUMO pPKPbc pPKPbc 07 22 38.2 -1.9
comp=Z,213nm,0.9s,baz=180,slow=2.1,SNR=4.5
SMLA Simla 147.43 61 *e*P PKPdf 07 22 11.8 -0.6
SMLA *ex* x 07 22 20.5
comp=Z,73nm,0.7s
SMLA *i* x x 07 26 08.7
ZAK Zakamensk 147.76 9 *e*PKIKP PKPdf 07 22 13.1 +0.7
ZAK *e* 07 22 43.4
ZAK pmax pmax
comp=Z,16nm,1.2s
NDI New Delhi 148.01 65 *e*P PKPdf 07 22 13.0 -0.5
WMQ Urumqi 148.38 32 PKP PKPdf 07 22 14.0 +0.4
WMQ PP PP 07 25 51.0 +4.6
WMQ SKS SKSdf 07 29 14.0 +1.0
WMQ SKKS SKKSac 07 32 32.0 +3.1
WMQ SS SS 07 44 51.0 +4.8
WMQ PP PP
comp=Z,67nm,9.0s
WMQ LR LR
comp=N,102nm,24.0s
WMQ LR LR
comp=E,116nm,24.0s
WMQ LR LR
comp=Z,97nm,24.0s
MDJ Mudanjiang 149.51 333 PKP PKPdf 07 22 15.4 0.0
HYB Hyderabad 149.64 87 *e*P PKPdf 07 22 16.5 +0.1
HYB Hyderabad 149.64 87 *i* PKP PKPdf 07 22 16.5 +0.1
HYB *e*PKPAB PKPab 07 22 29.0 +2.4
HYB *e* 07 22 36.0
HYB *e*pPKP pPKPdf 07 22 53.5 +10
HYB *e*pPKPAB 07 23 08.0
HYB *e*sPKP 07 23 14.0
MJAR Matsushiro Arr 149.75 312 PKPbc PKPbc 07 22 19.8 -1.1
comp=Z,19nm,0.8s,baz=102,slow=0.7,SNR=29
MJAR pPKPbc pPKPbc 07 22 46.5 -1.4
comp=Z,13nm,0.9s,baz=104,slow=1.3,SNR=4.6
MAJO Matsushiro 149.75 312 *e*PKPbc PKPbc 07 22 20.5 -0.3
MAJO *e*PKPab PKPab 07 22 25.6 -0.9
MAJO Matsushiro 149.75 312 PKP2 PKPbc 07 22 20.6 -0.3
MAT Matsushiro 149.75 312 PKP PKPbc 07 22 20.5 -0.4
PTH Pithoragarh 150.38 63 *e*P PKPdf 07 22 16.8 -0.5
PTH *ex* x 07 22 50.2
LGTI Lohaghat 150.43 63 *ex* x 07 22 22.5
SONM Songino Array 150.63 6 PKP PKPdf 07 22 17.6 +0.5
comp=Z,25nm,0.7s,baz=289,slow=2.4,SNR=22
SONM PKPbc PKPbc 07 22 22.9 +0.3
comp=Z,25nm,0.7s,baz=317,slow=1.5,SNR=113
SONM pPKPbc pPKPbc 07 22 48.9 -0.7
comp=Z,12nm,0.8s,baz=327,slow=0.7,SNR=3.9
KAPI Kappang 154.83 202 PKPbc PKPbc 07 22 32.6 -0.4
comp=Z,4.6nm,0.3s,baz=169,slow=18,SNR=4.8
KAPI PKPab PKPab 07 22 46.8 -1.5
comp=Z,49nm,0.8s,baz=201,slow=4.8,SNR=17
KSRS Korea Array 155.77 324 PKP PKPdf 07 22 25.2 +0.4
comp=Z,0.5nm,0.3s,baz=203,slow=27,SNR=4.9
KSRS PKPbc PKPdf 07 22 34.5 +10
comp=Z,4.5nm,0.8s,baz=19,slow=2.7,SNR=5.8
KSRS PKPab PKPab 07 22 50.7 -1.0
comp=Z,13nm,1.0s,baz=53,slow=3.4,SNR=12
GTA Gaotai 157.28 22 PKP PKPdf 07 22 27.9 +1.2
GTA APKP 07 22 46.6
GTA XPKP 07 22 54.8
GTA PP PP 07 26 42.3 +5.9
GTA PP PP
comp=Z,139nm,4.8s
GTA LR LR
comp=N,162nm,16.8s
GTA LR LR
comp=E,232nm,18.3s
GTA LR LR
comp=Z,67nm,16.5s
HHC Hu-ho-hao-te 157.79 358 *e*PKP PKPdf 07 22 25.9 -1.4
HHC APKP 07 22 45.5
HHC XPKP 07 22 51.4
HHC PKS 07 22 58.1
HHC PP PP 07 26 43.3 +4.5
HHC SKS SKSdf 07 29 26.3 +2.1
HHC SS SS 07 46 33.8 +6.0
HHC LR LR
comp=N,254nm,21.4s
HHC LR LR
comp=E,336nm,23.8s
HHC LR LR
comp=Z,216nm,22.6s
BJI Beijing 158.06 348 PKP PKPdf 07 22 26.3 -1.4
LZH Lanzhou 161.60 17 *e*PKP PKPdf 07 22 32.0 +0.2
LZH APKP 07 22 46.6
LZH PKP2 PKPab 07 23 20.0 +3.0
LZH PP PP 07 27 02.0 +2.3
LZH SKKS SKKSac 07 33 45.4 +5.6
LZH PP PP
comp=Z,190nm,4.4s
LZH LR LR
comp=N,536nm,19.3s
LZH LR LR
comp=Z,765nm,20.5s
XAN Xi'an 164.54 5 PKP PKPdf 07 22 35.0 +0.3
NJ2 Nanjing 164.61 332 *e*PKP PKPdf 07 22 29.9 -4.9
CD2 Chengdu 166.30 25 *e*PKP PKPdf 07 22 35.3 -0.9
CD2 APKP 07 22 51.3
CD2 XPKP 07 23 00.3
CD2 PKP2 PKPab 07 23 38.3 +0.6
CD2 PP PP 07 27 26.8 +2.3
CD2 SKS SKSdf 07 29 31.3 -0.2
CD2 SKKS SKKSac 07 34 05.8 +2.0
CD2 SS SS 07 47 58.3 +1.3
CD2 PP PP
comp=Z,240nm,8.2s
CD2 LR LR
comp=N,260nm,16.8s
CD2 LR LR
comp=E,310nm,18.2s
CD2 LR LR
comp=Z,280nm,21.2s
WHN Wuhan 167.58 344 PKP PKPdf 07 22 37.5 +0.3
WHN PKP2 PKPab 07 23 41.5 -1.9
CMAR Chiang Mai Arr 169.06 89 PKP PKPdf 07 22 38.2 -0.3
comp=Z,1.1nm,0.3s,baz=291,slow=1.6,SNR=9.7
CMAR pPKP pPKPdf 07 23 05.0 -0.8
comp=Z,0.8nm,0.3s,baz=269,slow=1.8,SNR=1.9
CMAR PKPab PKPab 07 23 50.4 -0.2
comp=Z,3.7nm,0.8s,baz=274,slow=5.8,SNR=11
CMAR pPKPab pPKPab 07 24 16.9 +0.2
comp=Z,2.9nm,0.7s,baz=273,slow=5.6,SNR=3.1
CMAR Chiang Mai Arr 169.06 89 PKIKP PKPdf 07 22 38.2 -0.3
CMAR 07 23 05.1
CMAR 07 23 50.4
KMI Kunming 170.31 46 PKP PKPdf 07 22 39.8 +0.7
KMI PP PP 07 27 48.6 +2.9
KMI SS SS 07 48 38.3 -0.4
GYA Guiyang 171.41 23 PKP PKPdf 07 22 39.0 -0.6
GYA APKP 07 22 57.0
GYA PKP2 PKPab 07 24 01.8 +1.4
GYA PKS 07 26 09.4
GYA SKKS SKKSac 07 34 33.0 +4.0
GYA SS SS 07 48 48.0 +0.2
GYA PP PP
comp=Z,170nm,4.5s
GYA LR LR
comp=N,390nm,24.8s
GYA LR LR
comp=E,250nm,25.3s
GYA LR LR
comp=Z,280nm,23.0s

IDC 18 07:20:30.5±1.8, 227N×12775E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, Error ellipse: s-maj=139.3km s-min=23.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.00**	**164**	P	P	07 25 38.0	+0.9
	4.6nm,0.5s,baz=344,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.47**	**167**	P	P	07 26 09.7	+0.2
	0.5nm,0.3s,baz=344,slow=7.8,SNR=12						
STKA	**Stephens Creek**	**36.42**	**160**	P	P	07 27 35.9	-1.1
	1.5nm,0.6s,baz=315,slow=10.0,SNR=5.0						
MKAR	**Makanchi Array**	**59.32**	**325**	P	P	07 30 34.5	+0.2
	0.5nm,0.3s,baz=121,slow=7.8,SNR=8.4						

*ISCJB **18** 07:33:31.5±0.8, 2826N±006×5406E±005, h10km, Error ellipse: s-maj=9.3km s-min=6.5km az=177.6*
*CSEM **18** 07:33:33.5±0.1, 2836N×5401E, h30km, ML4.1, Error ellipse: s-maj=2.8km s-min=2.1km az=148.0*
*THR **18** 07:33:33.2±0.7, 2823N×5396E, h46km±6km, ML3.3*
ISC 18 07:33:32.3±1.4, 2830N±007×5405E±006, h3km±11km, n9, σ0§57/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**0.94**	**269**	*e*Pg	**Pg**	**07 33 50.5**	**+0.2**
GHIR				AML	AML	07 34 16.4	
	comp=N,786nm,0.5s						
BNDS	**Bandar-Abbas**	**2.08**	**115**	*e*Pn	**Pn**	**07 34 07.3**	**-0.8**
BNDS				*e*Sg	**Sg**	**07 34 39.2**	**0.0**
BNDS				AML	AML	07 34 45.9	
	comp=E,211nm,0.8s						
BNDS	**Bandar-Abbas** SNR=54	**2.08**	**115**	*e*Pn	**Pn**	**07 34 08.0**	**-0.1**
BNDS	SNR=97			*e*Sg	**Sg**	**07 34 39.2**	**-0.1**
KRBR	**Kerman**	**2.90**	**54**	*e*Pn	**Pn**	**07 34 20.1**	**+0.7**
KRBR				AML	AML	07 35 09.3	
	comp=N,74nm,0.6s						
KRBR				AML	AML	07 35 12.3	
	comp=E,83nm,0.4s						
NASN	**Na'in**	**4.61**	**347**	*e*P	**Pn**	**07 34 42.4**	**-0.5**
NASN	**Na'in** SNR=54	**4.61**	**347**	*e*P	**Pn**	**07 34 42.6**	**-0.3**
BTHS		**5.12**	**215**	P	**Pn**	**07 34 50.6**	**+0.7**
BTHS		**5.12**	**215**	P	**Pn**	**07 34 50.7**	**+0.7**
BTHS				S	**Sn**	**07 35 49.9**	**+0.3**
LYLS		**8.77**	**226**	P	**Pn**	**07 35 39.0**	**-1.0**
LYLS				S	**Sn**	**07 37 14.6**	**-4.8**

*IDC **18** 07:36:43.3±2.5, 1293S×16924E, h636km±29km, mb3.5/12, mb1 3.6/12, mb1mx3.4/21, mbtmp3.5/12, Error ellipse: s-maj=24.4km s-min=16.1km az=51.0*
*ISCJB **18** 07:36:44.8±1.6, 1313S±01×169.1E±02, h677km±18km, mb4.2/15, Error ellipse: s-maj=25.5km s-min=15.8km az=148.8*
*NEIC **18** 07:36:45.2±1.4, 1298S×16922E, h668km±18km, mb4.3/4, Error ellipse: s-maj=20.5km s-min=12.5km az=55.0*
ISC 18 07:36:45.2±1.5, 130S±01×1692E±02, h658km±17km, n22, σ0§63/18, mb4.2/14, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.40**	**196**	*e*P	**P**	**07 38 58.6**	**-0.7**
HNR	**Honiara**	**9.72**	**290**	*e*P	**P**	**07 39 03.0**	**+0.4**
PMG	**Port Moresby** 11nm,0.7s,mb4.4	**21.89**	**277**	*e*P	**P**	**07 40 53.4**	**-0.1**
CTA	**Charters Tower** 4.7nm,0.5s,mb4.2,baz=79,slow=13,SNR=9.4	**23.06**	**249**	P	**P**	**07 41 03.8**	**0.0**
CTAO	**Charters Tower** 4.4nm,0.6s,mb4.1	**23.06**	**249**	*e*P	**P**	**07 41 04.2**	**+0.5**
URZ	**Urewera** 5.0nm,0.5s,mb4.3,baz=20,slow=2.7,SNR=7.5	**26.14**	**166**	P	**P**	**07 41 31.2**	**+0.7**
RPZ	**Rata Peaks** 6.1nm,0.7s,mb4.2,baz=71,slow=10,SNR=4.5	**30.66**	**177**	P	**P**	**07 42 09.9**	**+0.6**
STKA	**Stephens Creek** 3.6nm,0.3s,mb4.3,baz=43,slow=8.1,SNR=11	**31.52**	**229**	P	**P**	**07 42 17.9**	**+1.1**
WB2	**Warramunga Arr**	**34.06**	**254**	*e*P	**P**	**07 42 37.4**	**-0.8**
WRAB	**Tennant Creek** 18nm,0.4s,mb5.0	**34.06**	**254**	*e*P	**P**	**07 42 38.6**	**+0.4**
WRA	**Warramunga Arr** 20nm,0.4s,mb5.0,baz=84,slow=8.6,SNR=319	**34.07**	**254**	P	**P**	**07 42 37.7**	**-0.6**
ASAR	**Alice Springs** 26nm,0.5s,mb5.1,baz=74,slow=9.4,SNR=460	**35.03**	**247**	P	**P**	**07 42 46.2**	**0.0**
ASAR	1.0nm,0.6s,baz=93,slow=3.7,SNR=4.9			ScP	ScP	07 47 47.0	+3.7
MBWA	**Marble Bar** 7.2nm,0.8s,mb4.0	**47.80**	**253**	*e*P	**P**	**07 44 25.4**	**-0.6**
NWAO	**Narrogin (SRO)** 17nm,1.2s,mb4.2,baz=75,slow=20,SNR=3.3	**51.23**	**238**	P	**P**	**07 44 50.8**	**0.0**
VNDA	**Vanda** 1.9nm,0.9s,mb3.4,baz=4.2,slow=7.5,SNR=11	**64.64**	**182**	P	**P**	**07 46 18.8**	**-1.1**
PETK	**Petropavlovsk-**	**66.57**	**352**	P	**P**	**07 46 31.5**	**-0.6**
	7.8nm,1.0s,mb4.0,baz=162,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**75.96**	**293**	P	**P**	**07 47 28.2**	**+0.9**
	3.2nm,0.9s,mb3.8,baz=114,slow=4.0,SNR=12						
SONM	**Songino Array**	**82.22**	**323**	P	**P**	**07 47 59.8**	**+0.2**
	0.4nm,0.6s,mb3.1,baz=158,slow=4.8,SNR=3.6						
MKAR	**Makanchi Array**	**97.23**	**316**	P	Pdif	07 49 09.6	+0.1
	0.4nm,0.5s,baz=97,slow=5.6,SNR=6.0						
MKAR	**Makanchi Array**	**97.23**	**316**	P	Pdif	07 49 09.6	+0.1
GERES	**GERESS Array B**	**138.90**	**335**	SKPbc	SKPbc	07 57 35.6	+2.4
	0.8nm,0.9s,baz=37,slow=3.9,SNR=5.1						
MTE	**Manteigas**	**152.55**	**355**	*e*PKPdf	PKPdf	07 55 18.6	-3.0

IDC 18 07:41:22.5±7.8, 758S×12909E, h150km±83km, mb3.6/1, mb1 3.9/4, mb1mx3.5/15, mbtmp3.8/4, Error ellipse: s-maj=76.7km s-min=25.9km az=33.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.96**	**244**	P	Pn	07 42 49.7	+0.9
	22nm,0.3s,baz=90,slow=19,SNR=23						
BATI				S	Sn	07 43 56.3	0.0
	26nm,0.3s,baz=276,slow=24,SNR=10						
WRA	**Warramunga Arr**	**13.30**	**158**	P	Pn	07 44 24.1	-1.5
	1.8nm,0.3s,baz=340,slow=13,SNR=14						
WRA				S	Sn	07 46 44.6	-8.3
	1.8nm,0.3s,baz=337,slow=22,SNR=11						
ASAR	**Alice Springs**	**16.65**	**164**	P	Pn	07 45 08.5	+1.4
	0.6nm,0.3s,baz=340,slow=10,SNR=11						
ASAR				S	S	07 48 00.3	-12
	0.1nm,0.3s,baz=334,slow=17,SNR=4.2						
MKAR	**Makanchi Array**	**68.22**	**327**	P	P	07 52 06.8	0.0
	0.7nm,0.3s,baz=121,slow=8.0,SNR=11						

*ISCJB **18** 07:51:02.8±0.8, 1846S±008×67.1W±02, h263km±14km, mb3.5/2, Error ellipse: s-maj=26.9km s-min=10.7km az=18.2*
*IDC **18** 07:51:02.7±0.8, 1844S×67.15W, h256km±14km, mb3.2/2, mb1 3.0/7, mb1mx2.9/22, mbtmp2.9/7, Error ellipse: s-maj=27.2km s-min=10.6km az=104.0*
ISC 18 07:51:03.6±0.8, 1848S±008×671W±02, h255km±13km, n7, σ0§93/9, mb3.5/2, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.40**	**335**	P	**Pn**	**07 51 51.5**	**+1.2**
	18nm,0.3s,baz=127,slow=7.3,SNR=388						
LPAZ				S	**S**	**07 52 26.5**	**-0.7**
	3.4nm,0.3s,baz=48,slow=19,SNR=8.4						
LVC	**Limon Verde**	**4.46**	**202**	P	**Pn**	**07 52 14.3**	**+1.3**
	1.3nm,0.3s,baz=23,slow=7.7,SNR=4.6						
LVC				S	**S**	**07 53 06.9**	**-1.4**
	9.9nm,0.3s,baz=124,slow=20,SNR=18						
SIV	**San Ignacio**	**6.25**	**68**	P	**Pn**	**07 52 34.7**	**-0.2**
	0.5nm,0.3s,baz=248,slow=12,SNR=16						
CFAA	**Coronel Fontan**	**13.11**	**184**	P	**Pn**	**07 54 01.1**	**+0.4**
	0.1nm,0.3s,baz=2.3,slow=13,SNR=22						
BDFB	**Brasilia**	**18.44**	**84**	P	**P**	**07 55 01.2**	**+0.5**
	0.1nm,0.3s,baz=255,slow=20,SNR=2.9						
PLCA	**Paso Flores**	**22.38**	**187**	P	**P**	**07 55 40.8**	**+0.3**
	1.0nm,0.5s,mb3.4,baz=5.9,slow=13,SNR=4.9						
TORD	**Torodi Ar. Bea**	**74.72**	**70**	P	**P**	**08 02 14.6**	**-1.4**
	0.6nm,0.4s,mb3.6,baz=252,slow=5.3,SNR=9.5						

*ISCJB **18** 07:53:26.3±0.8, 2946S±007×7215W±008, h10km, mb3.7/4, Error ellipse: s-maj=9.8km s-min=9.5km az=16.4*
*IDC **18** 07:53:28.2±1.4, 2936S×7186W, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.7/5, MS3.5/2, Ms1 3.5/2, ms1mx2.8/25, Error ellipse: s-maj=49.2km s-min=23.1km az=38.0*
*NEIC **18** 07:53:30.1±4.2, 2935S×7193W, h13km±22km, Error ellipse: s-maj=29.7km s-min=14.4km az=74.0*
ISC 18 07:53:27.7±3.0, 2945S±009×721W±01, h4km±16km, n20, σ1§09/19, mb3.7/4, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.28**	**71**	*e*Pg	**Pg**	**07 53 51.6**	**-0.7**
LCO				*e*S	**Sg**	**07 54 09.4**	**+0.5**
CFAA	**Coronel Fontan**	**3.95**	**124**	Pn	**Pn**	**07 54 30.6**	**+1.4**
	1.2nm,0.3s,baz=307,slow=11,SNR=48						
CFAA				Pg	**Pg**	**07 54 38.7**	**-4.8**
	2.0nm,0.3s,baz=240,slow=18,SNR=25						
CFAA				Sn	**Sn**	**07 55 15.9**	**-0.1**
	1.2nm,0.3s,baz=34,slow=22,SNR=4.1						
CFAA				Lg		07 55 26.8	
	3.3nm,0.3s,baz=34,slow=14,SNR=8.9						
CFAA	**Coronel Fontan**	**3.95**	**124**	Pn	**Pn**	**07 54 30.6**	**+1.4**
CFAA				Pg	**Pg**	**07 54 38.7**	**-4.8**
CFAA				Sn	**Sn**	**07 55 15.9**	**-0.1**
CFAA				Lg		07 55 26.8	
LVC	**Limon Verde**	**7.38**	**23**	*e*Pn	**Pn**	**07 55 15.4**	**-0.8**
	35nm,0.5s						
LPAZ	**La Paz**	**13.59**	**16**	Pn	**Pn**	**07 56 45.9**	**+4.5**
	0.2nm,0.3s,baz=183,slow=7.0,SNR=5.8						
LPAZ				LR	LR	08 01 18.7	
	comp=Z,52nm,19.1s,baz=285,slow=35						
LPAZ	**La Paz**	**13.59**	**16**	*e*Pn	**Pn**	**07 56 40.3**	**-1.1**
LPAZ				LR	LR	08 01 18.7	
SIV	**San Ignacio**	**16.79**	**39**	Pn	**Pn**	**07 57 25.4**	**+1.5**
	0.2nm,0.3s,baz=221,slow=11,SNR=9.1						
BDFB	**Brasilia**	**26.06**	**63**	P	**P**	**07 59 01.5**	**-0.9**
	1.1nm,0.7s,mb3.5,baz=220,slow=18,SNR=3.8						
VNA3	**Neumayer Olymp**	**53.60**	**159**	*e*	**P**	**08 02 49.8**	**+0.2**
VNA2	**Neumayer--Watz** baz=294,slow=9.0	**54.23**	**159**	*e*	**P**	**08 02 54.6**	**+0.4**
SNAA	**Sanae**	**55.82**	**159**	*e*	**P**	**08 03 03.8**	**-1.9**
TXAR	**Lajitas Array**	**65.77**	**330**	P	**P**	**08 04 16.6**	**+2.6**
	0.1nm,0.5s,mb3.1,baz=156,slow=11,SNR=3.3						
DBIC	**Dimbokro**	**73.80**	**73**	P	**P**	**08 05 03.1**	**-0.7**
	2.1nm,0.8s,mb4.1,baz=184,slow=5.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**82.71**	**71**	P	**P**	**08 05 53.1**	**-0.1**
	1.2nm,0.7s,mb4.0,baz=267,slow=4.2,SNR=8.4						
URZ	**Urewera**	**86.69**	**227**	LR	LR	08 37 35.0	
	comp=Z,102nm,21.2s,baz=218,slow=30						
WRA	**Warramunga Arr**	**124.68**	**211**	PKP	PKPdf	08 12 29.3	0.0
	0.7nm,1.1s,baz=154,slow=1.7,SNR=3.3						
ZAA0	**Zalesovo Array**	**150.31**	**28**	*e*PKPbc	PKPbc	08 13 21.0	+1.2
ZALV	**Zalesovo Beam**	**150.31**	**28**	PKPbc	PKPbc	08 13 20.7	+0.9
	2.7nm,0.6s,baz=306,slow=4.8,SNR=10						
ZALV	**Zalesovo Beam**	**150.31**	**28**	PKPbc	PKPbc	08 13 20.7	+0.9
MKAR	**Makanchi Array**	**153.60**	**42**	PKPbc	PKPbc	08 13 27.6	0.0
	0.3nm,0.7s,baz=318,slow=1.9,SNR=2.9						

*ISCJB **18** 07:55:16.5±2.6, 244N±01.0×1417E±03, h48km±23km, mb3.7/7, Error ellipse: s-maj=39.2km s-min=18.6km az=5.2*
*IDC **18** 07:55:18.3±3.2, 2440N×14178E, h47km±31km, mb3.5/7, mb1 3.7/8, mb1mx3.5/21, mbtmp3.5/8, ML4.2/1, Error ellipse: s-maj=39.1km s-min=19.4km az=91.0*
ISC 18 07:55:17.9±2.5, 244N±01×1418E±03, h44km±23km, n8, σ0§53/9, mb3.7/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.68**	**8**	P	**Pn**	**07 55 59.5**	**+1.0**
	41nm,0.3s,baz=110,slow=18,SNR=20						
CBIJ				S	**Sn**	**07 56 28.8**	**-1.0**
	37nm,0.3s,baz=286,slow=22,SNR=13						
WRA	**Warramunga Arr**	**44.70**	**190**	P	**P**	**08 03 26.1**	**-0.6**
	0.7nm,0.4s,mb3.8,baz=7.6,slow=8.2,SNR=21						
WRA				pP	pP	08 03 39.8	+0.9
	0.4nm,0.4s,baz=9.7,slow=8.4,SNR=6.1						
WRA				PcP	PcP	08 05 09.1	+0.5
	0.3nm,0.6s,baz=5.3,slow=3.4,SNR=3.3						
WRA				pPcP		08 05 24.3	
	0.2nm,0.6s,baz=4.9,slow=3.3,SNR=4.6						
ASAR	**Alice Springs**	**48.42**	**190**	P	**P**	**08 03 55.6**	**-0.1**
	0.3nm,0.7s,mb3.5,baz=17,slow=9.6,SNR=4.8						
MKAR	**Makanchi Array**	**51.92**	**311**	P	**P**	**08 04 22.1**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=97,slow=7.4,SNR=3.9						
BVAR	**Borovoye Array**	**59.77**	**319**	P	**P**	**08 05 18.4**	**+0.2**
	0.5nm,0.3s,mb4.0,baz=94,slow=8.1,SNR=4.8						
YKA	**Yellowknife Ar**	**74.65**	**28**	P	**P**	**08 06 52.4**	**+0.1**
	0.5nm,0.5s,mb3.7,baz=296,slow=6.1,SNR=4.4						
ARCES	**ARCESS Array B**	**75.93**	**341**	P	**P**	**08 06 59.9**	**+0.3**
	6.4nm,1.1s,mb4.5,baz=48,slow=3.6,SNR=5.3						
NVAR	**Mina Array Bea**	**82.45**	**51**	P	**P**	**08 07 36.0**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=275,slow=4.3,SNR=3.0						

*CSEM **18** 07:57:47.3±0.1, 4023N×4202E, h5km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.6km az=33.0*
*ISCJB **18** 07:57:48.4±0.5, 4024N×4205E×004, h4km±5km, Error ellipse: s-maj=4.5km s-min=3.3km az=2.4*
*ISK **18** 07:57:48.0, 4024N×4205E, h5km, MD3.0*
*DDA **18** 07:57:48.6, 4023N×4200E, h7km±3km, Md3.1*
ISC 18 07:57:49.0±0.4, 4023N±002×4203E±003, h6km±6km, n19, σ0°86/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.21**	**208**	*i* P	**Pg**	**07 57 52.6**	**-0.6**
HOMI				*i* S	**Sg**	**07 57 56.0**	**+0.1**
ERZM	**Erzurum**	**0.61**	**238**	*i* P	**Pg**	**07 58 00.3**	**-0.3**
EZM	**Erzurum**	**0.61**	**238**	*e*PG	**Pg**	**07 58 00.6**	**-0.1**
EZM				*e*SG	**Sg**	**07 58 09.5**	**+0.9**
DDEM	**Demirkent**	**0.69**	**342**	*i* P	**Pg**	**07 58 02.4**	**+0.1**
DDEM				*i* S	**Sg**	**07 58 11.9**	**+0.5**
DBAD	**Bademkaya**	**0.83**	**342**	*i* P	**Pg**	**07 58 04.6**	**-0.3**
DBAD				*i* S	**Sg**	**07 58 17.1**	**+1.5**
DAGI	**Agillar**	**0.85**	**354**	*i* P	**Pg**	**07 58 04.9**	**-0.4**
DAGI				*i* S	**Sg**	**07 58 18.4**	**+2.1**
KARS	**Kars**	**0.90**	**65**	*e*PG	**Pg**	**07 58 05.6**	**-0.5**
KARS				*e*SG	**Sg**	**07 58 17.8**	**0.0**
ARTV	**Artvin**	**0.95**	**355**	*i* P	**Pg**	**07 58 06.7**	**-0.7**
ARTV				*i* S	**Sg**	**07 58 19.1**	**-0.7**
AGRB	**Hanur-Agry**	**0.99**	**131**	*e*PG	**Pg**	**07 58 07.0**	**-0.9**
AGRB				*e*SG	**Sg**	**07 58 21.5**	**+0.8**
TUTA	**Tutak**	**1.02**	**144**	*i* P	**Pg**	**07 58 07.8**	**-0.8**
TUTA				*i* S	**Sg**	**07 58 23.7**	**+1.8**
TUTA	**Tutak**	**1.02**	**144**	*i* P	**Pg**	**07 58 07.8**	**-0.8**
TUTA				*i* S	**Sg**	**07 58 23.7**	**+1.8**
DBOC	**Borcka**	**1.15**	**346**	*i* P	**Pg**	**07 58 10.1**	**-0.9**
DBOC				*i* S	**Sg**	**07 58 26.6**	**+0.7**
KOPT	**Kop Dagi**	**1.20**	**260**	*i* P	**Pg**	**07 58 11.2**	**-0.7**
KOPT				*i* S	**Sg**	**07 58 27.1**	**-0.4**
KOPT	**Kop Dagi**	**1.20**	**260**	*i* P	**Pg**	**07 58 11.2**	**-0.7**
KOPT				*i* S	**Sg**	**07 58 27.0**	**-0.4**
BCA	**Borcka**	**1.25**	**346**	*e*PN	**Pn**	**07 58 12.0**	**-1.0**
PZAR	**Pazar-Rize**	**1.28**	**318**	*e*PN	**Pn**	**07 58 13.2**	**-0.2**
BNGL	**BINGOL**	**1.45**	**208**	*i* P	**Pn**	**07 58 14.6**	**-1.1**
BNGL				*i* S	**Sn**	**07 58 36.7**	**+1.7**
EZC	**Erzincan**	**1.77**	**255**	*e*PN	**Pn**	**07 58 25.2**	**+5.1**
GUMT	**Gumushane**	**1.96**	**277**	*e*PN	**Pn**	**07 58 23.2**	**+0.4**

IDC 18 08:11:17.9±51.0, 1930S×17609W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=946.0km s-min=170.4km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.93**	**243**	P	P	08 18 54.2	+0.1
	0.9nm,0.6s,baz=84,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**46.56**	**255**	P	P	08 19 47.6	-0.1
	1.0nm,0.5s,baz=92,slow=8.1,SNR=23						
WRA	**Warramunga Arr**	**46.56**	**260**	P	P	08 19 47.7	-0.1
	0.4nm,0.3s,baz=98,slow=7.4,SNR=21						

*NEIC **18** 08:22:06.2, 13.11N×6054W, h22km, MD3.8(TRN), After TRN.*
*FUNV **18** 08:22:08.3, 1299N×6019W, h66km, MW3.5*
TRN 18 08:22:03.4, 1317N×6049W, h9km, MD3.8, M3.8(FDF), 3C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVB	**Belmont**	**0.75**	**278**	⇑*e*P	Pg	08 22 21.4	+3.5
SVB				*e*S	Sg	08 22 33.0	+5.2
BBGH	**Gun Hill**	**0.90**	**91**	*e*Pg	Pg	08 22 21.1	+0.3
MVM	**Montagne Vaucl**	**1.44**	**344**	*e*P	Pn	08 22 29.7	+0.2
BIM	**Bigot**	**1.46**	**337**	⇑*e*P	Pn	08 22 30.6	+0.8
BIM				⇑*e*S	Sn	08 22 48.9	-0.1
GRW	**Mount Saint Ca**	**1.52**	**229**	⇓*i*P	Pn	08 22 32.6	+1.9
GRW				*e*S	Sn	08 22 53.0	+2.4
GRW	**Mount Saint Ca**	**1.52**	**229**	*e*	Pn	08 22 42.0	+11
GRW				*e*S	Sn	08 22 53.0	+2.4
GRGR	**Grenville**	**1.54**	**228**	*e*Pn	Pn	08 22 32.4	+1.5
GRGR				*e*Sn	Sn	08 22 52.3	+1.4
FDF	**Fort de France**	**1.69**	**338**	*e*Pn	Pn	08 22 34.1	+1.2
FDF				*e*Sn	Sn	08 22 54.1	-0.5
FDF	**Fort de France**	**1.69**	**338**	⇓*e*P	Pn	08 22 33.9	+1.0
FDF				⇓*e*S	Sn	08 22 54.9	+0.2
TOSP	**Speyside**	**1.86**	**182**	⇓*i*P	Pn	08 22 37.1	+1.8
TOSP				*e*S	Sn	08 22 56.0	-2.9
TPR	**Prospect**	**1.99**	**188**	*e*P	Pn	08 22 38.6	+1.4
TPR				*e*S	Sn	08 22 59.7	-2.4
TPR	**Prospect**	**1.99**	**188**	*e*	Pn	08 22 53.0	+16
TRN	**Trinidad (W)**	**2.66**	**200**	*e*P	Pn	08 22 49.2	+2.9
TRN				*e*S	Sn	08 23 15.2	-3.6
TRN	**Trinidad (W)**	**2.66**	**200**	*e*P	Pn	08 22 47.4	+1.0
TRN	**Trinidad (W)**	**2.66**	**200**	*e*	Pn	08 22 59.3	+13
GUIV	**Guiria**	**3.03**	**214**	*e*P	Pn	08 22 53.2	+1.8
GUIV				*e*S	Sn	08 23 27.1	-0.7
SCG	**Saint Claude**	**3.07**	**338**	*e*P	Pn	08 22 55.1	+3.1
CRUV	**Carupano**	**3.66**	**228**	*e*P	Pn	08 23 02.3	+2.2
CRUV				*e*S	Sn	08 23 43.5	+0.1
SKI	**Saint Kitts**	**4.68**	**333**	*e*P	Pn	08 23 17.3	+3.2
SKI				*e*S	Sn	08 24 10.3	+1.7
PCRV	**Puerto La Cruz**	**5.04**	**234**	*e*P	Pn	08 23 20.7	+1.6
PCRV				*e*S	Sn	08 24 14.2	-3.2
CUPV	**Cœpira**	**6.04**	**240**	*e*P	Pn	08 23 36.2	+3.2
CUPV				*e*S	Sn	08 24 39.9	-2.4
MERV	**Las Mercedes**	**6.90**	**236**	*e*P	Pn	08 23 46.9	+2.2
MERV				*e*S	Sn	08 25 00.1	-3.3
LUEV	**Luepa**	**7.34**	**188**	*e*P	Pn	08 23 49.2	-1.6
LUEV				*e*S	Sn	08 25 03.4	-11
CAOV	**Caicara del Or**	**8.16**	**225**	*e*P	Pn	08 24 03.2	+1.2

IDC 18 08:24:18.9±3.9, 481S×14974E, h0km, mb3.7/2, mb1 4.1/2, mb1mx3.6/15, mbtmp3.8/2, Error ellipse: s-maj=136.0km s-min=51.6km az=113.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.24**	**224**	P	P	08 29 07.5	+0.8
	2.7nm,0.4s,baz=50,slow=10,SNR=35						
ASAR	**Alice Springs**	**24.18**	**218**	P	P	08 29 36.9	-0.3
	0.7nm,0.3s,baz=50,slow=8.8,SNR=34						
TORD	**Torodi Ar. Bea**	**147.40**	**287**	PKPbc	PKPbc	08 44 04.9	-0.9
	0.1nm,0.3s,baz=69,slow=3.2,SNR=2.8						

*ISCJB **18** 08:27:18.7±2.3, 45S±04×1008E±05, h26km, mb4.0/8, Error ellipse: s-maj=92.0km s-min=12.3km az=146.0*
*IDC **18** 08:27:21.7±2.5, 434S×10096E, h28km±5km, mb3.7/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=114.5km s-min=15.0km az=56.0*
*NEIC **18** 08:27:21.6±1.5, 433S×10097E, mb4.4/1, Error ellipse: s-maj=65.8km s-min=9.4km az=56.0*
ISC 18 08:27:21.6±2.2, 44S±03×1009E±05, h28km, h28km±3km:pP-P, n13, σ0°62/11, mb4.0/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.76**	**355**	P	**P**	**08 32 21.8**	**-0.1**
	2.1nm,0.6s,mb3.7,baz=186,slow=8.9,SNR=12						
WRA	**Warramunga Arr**	**36.04**	**118**	P	**P**	**08 34 20.0**	**-0.9**
	0.8nm,0.8s,mb3.7,baz=298,slow=11,SNR=5.6						
WRAB	**Tennant Creek**	**36.04**	**118**	P	**P**	**08 34 20.4**	**-0.5**
	6.0nm,1.1s,mb4.4						
WB2	**Warramunga Arr**	**36.05**	**118**	*e*P	**P**	**08 34 22.5**	**+1.6**
ASAR	**Alice Springs**	**37.15**	**124**	P	**P**	**08 34 30.0**	**-0.3**
	0.6nm,0.6s,mb3.6,baz=297,slow=7.4,SNR=9.3						
ASAR				pP	pP	08 34 38.0	-0.6
	0.4nm,0.3s,baz=297,slow=8.4,SNR=4.1						
STKA	**Stephens Creek**	**46.91**	**131**	P	**P**	**08 35 50.0**	**+0.2**
	0.7nm,0.6s,mb3.8,baz=333,slow=4.5,SNR=3.0						
SONM	**Songino Array**	**52.20**	**5**	P	**P**	**08 36 30.1**	**+0.2**
	1.7nm,0.8s,mb4.0,baz=186,slow=8.6,SNR=7.3						
MK31	**Makanchi Array**	**53.54**	**344**	*e*P	**P**	**08 36 40.1**	**+0.3**
MK31				*e*pP	pP	08 36 48.1	-0.3
MK31				*e*sP	sP	08 36 51.3	-0.5
MKAR	**Makanchi Array**	**53.54**	**344**	P	**P**	**08 36 39.8**	**+0.1**
	2.0nm,0.7s,mb4.2,baz=148,slow=8.0,SNR=24						
MKAR				pP	pP	08 36 48.1	-0.3
	1.3nm,0.5s,baz=155,slow=8.0,SNR=10						
HNR	**Honiara**	**58.76**	**98**	*e*P	**P**	**08 37 26.6**	**+8.9**
	168nm,1.0s						
ZALV	**Zalesovo Beam**	**59.65**	**349**	P	**P**	**08 37 22.6**	**-0.5**
	1.6nm,0.6s,mb4.2,baz=189,slow=5.6,SNR=8.6						
ZALV				pP	pP	08 37 30.6	-1.2
	0.9nm,0.4s,baz=183,slow=5.9,SNR=4.2						
TXAR	**Lajitas Array**	**145.95**	**40**	PKPbc	PKPbc	08 46 59.6	+0.3
	2.1nm,1.0s,baz=246,slow=1.5,SNR=12						
TXAR				pPKPbc	pPKPbc	08 47 09.0	+0.4
	0.5nm,0.6s,baz=316,slow=0.9,SNR=6.5						
JCT	**Junction City**	**147.49**	**35**	*e*PKPbc	PKPbc	08 47 04.6	+0.9

*DJA **18** 08:33:03, 1328S×17026E, h553km, mb5.0/8*
*BJI **18** 08:33:13.7, 1290S×16910E, h629km, mB5.0, mb4.4*
*MOS **18** 08:33:14.7±1.2, 1281S×16912E, h632km, mb4.5/8, Error ellipse: s-maj=13.7km s-min=11.4km az=6.2*
*NEIC **18** 08:33:15.8±0.9, 1285S×16913E, h630km±10km, mb4.9/8, Error ellipse: s-maj=9.5km s-min=8.9km az=62.0*
*IDC **18** 08:33:16.3±1.1, 1292S×16908E, h638km±13km, mb3.8/17, mb1 3.9/19, mb1mx3.8/23, mbtmp3.9/19, Error ellipse: s-maj=10.1km s-min=9.7km az=89.0*
*ISCJB **18** 08:33:16.1±0.8, 1291S±006×169.15E±007, h662km±11km, mb4.5/34, Error ellipse: s-maj=11.3km s-min=9.2km az=152.2*
*LDG **18** 08:33:19.5±0.1, 1294S×168.10E, h660km, Mb4.6/3, Error ellipse: s-maj=12.7km s-min=4.9km az=88.0*
ISC 18 08:33:16.6±0.8, 1292S±006×16916E±007, h647km±9km, n109, σ0°90/72, mb4.5/33, 1D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.47**	**196**	*e*P	**P**	**08 35 31.0**	**-0.2**
DZM	**Mont Dzumac**	**9.47**	**196**	*e*P	**P**	**08 35 31.8**	**+0.6**
DZM				*e*S	**S**	**08 37 20.3**	**-1.2**
NOUC	**Port Laguerre**	**9.53**	**196**	*e*P	**P**	**08 35 32.4**	**+0.6**
HNR	**Honiara**	**9.68**	**290**	P	**P**	**08 35 32.4**	**-1.0**
	47nm,0.3s,baz=203,slow=2.3,SNR=12						
HNR				S	**S**	**08 37 25.6**	**+0.2**
	8.1nm,0.3s,baz=110,slow=23,SNR=4.8						
AFI	**Afiamalu**	**18.57**	**95**	P	**P**	**08 36 55.8**	**+0.2**
	1.2nm,0.3s,baz=70,slow=8.7,SNR=3.8						
EIDS	**Eidsvold**	**21.07**	**231**	*e*P	**P**	**08 37 17.9**	**+0.1**
	31nm,0.7s,mb4.7						
PMG	**Port Moresby**	**21.86**	**277**	*e*P	**P**	**08 37 25.6**	**+0.5**
CTA	**Charters Tower**	**23.08**	**249**	P	**P**	**08 37 36.1**	**+0.4**
	26nm,0.6s,mb4.8,baz=75,slow=11,SNR=35						
CTAO	**Charters Tower**	**23.08**	**249**	*e*P	**P**	**08 37 36.1**	**+0.3**
	29nm,0.8s,mb4.8						
CTAO	**Charters Tower**	**23.08**	**249**	*e*P	**P**	**08 37 36.1**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,29nm,0.8s,mb4.8						
CTAO	**Charters Tower**	**23.08**	**249**	P	**P**	**08 37 36.2**	**+0.5**
	comp=Z,56nm,0.9s,mb5.0						
ARMA	**Armidale**	**23.79**	**220**	*e*P	**P**	**08 37 43.1**	**+1.2**
	comp=Z,0.3nm,0.6s						
COEN	**Coen**	**25.29**	**265**	P	**P**	**08 37 56.1**	**+0.7**
	comp=Z,23nm,0.9s,mb4.7						
URZ	**Urewera**	**26.21**	**166**	P	**P**	**08 38 02.5**	**-0.5**
	comp=Z,28nm,0.8s,mb4.8,baz=351,slow=3.6,SNR=19						
SNZO	**South Karori**	**28.70**	**171**	*e*P	**P**	**08 38 24.2**	**-0.3**
	comp=Z,94nm,0.7s,mb5.4						
RPZ	**Rata Peaks**	**30.73**	**177**	P	**P**	**08 38 41.7**	**-0.3**
	comp=Z,25nm,0.8s,mb4.8,baz=319,slow=1.7,SNR=16						
STKA	**Stephens Creek**	**31.56**	**229**	P	**P**	**08 38 50.1**	**+1.0**
	comp=Z,18nm,0.3s,mb5.0,baz=50,slow=7.6,SNR=134						
STKA				ScP	ScP	08 44 06.3	+2.2
	comp=Z,3.8nm,0.7s,baz=38,slow=4.1,SNR=7.5						
STKA	**Stephens Creek**	**31.56**	**229**	*e*P	**P**	**08 38 49.9**	**+0.7**
	comp=Z,18nm,0.5s,mb4.8						
STKA				*e*pP		08 40 27.8	
STKA				ScP	ScP	08 44 06.3	+2.2
WB2	**Warramunga Arr**	**34.06**	**254**	*e*P	**P**	**08 39 09.7**	**-0.6**
WRAB	**Tennant Creek**	**34.06**	**254**	*e*P	**P**	**08 39 10.7**	**+0.5**
	comp=Z,73nm,0.4s,mb5.6						
WRAB	**Tennant Creek**	**34.06**	**254**	*e*P	**P**	**08 39 10.7**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,73nm,0.4s,mb5.6						
WRAB	**Tennant Creek**	**34.06**	**254**	P	**P**	**08 39 09.4**	**-0.9**
	comp=Z,146nm,0.9s,comp=Z,1μm,mb5.5						
WRA	**Warramunga Arr**	**34.07**	**254**	P	**P**	**08 39 09.5**	**-0.8**
	comp=Z,101nm,0.5s,mb5.6,baz=84,slow=8.6,SNR=1480						
WRA				S	**S**	**08 43 49.7**	**-3.2**
	comp=Z,2.8nm,0.8s,baz=88,slow=13,SNR=7.9						
WRA				ScP	ScP	08 44 16.3	+3.2
	comp=Z,3.2nm,0.8s,baz=77,slow=4.3,SNR=8.2						
WRA	**Warramunga Arr**	**34.07**	**254**	P	**P**	**08 39 09.5**	**-0.9**
WRA				S	**S**	**08 43 49.7**	**-3.1**
ASAR	**Alice Springs**	**35.05**	**247**	P	**P**	**08 39 18.2**	**-0.2**
	comp=Z,114nm,0.4s,baz=74,slow=9.4,SNR=2071						
ASAR				S	**S**	**08 44 05.0**	**-2.4**
	comp=Z,3.0nm,0.8s,baz=77,slow=15,SNR=7.5						
ASAR				ScP	ScP	08 44 19.3	+2.6
	comp=Z,4.0nm,1.0s,baz=102,slow=3.9,SNR=7.8						
ASAR	**Alice Springs**	**35.05**	**247**	P	**P**	**08 39 18.2**	**-0.2**
ASAR				S	**S**	**08 44 05.0**	**-2.3**
KAKA	**Kakadu**	**35.79**	**266**	*e*P	Px	08 39 11.2	
FORT	**Forrest**	**41.80**	**238**	*e*P	**P**	**08 40 12.3**	**-0.2**
	comp=Z,12nm,0.6s,mb4.5						
BATI	**Baumata**	**44.61**	**268**	P	**P**	**08 40 35.9**	**+1.5**
	comp=Z,113nm,0.5s,mb5.5,baz=152,slow=2.8,SNR=18						
BATI	**Baumata**	**44.61**	**268**	P	**P**	**08 40 36.2**	**+1.9**
	comp=Z,118nm,0.7s,comp=Z,906nm,mb5.3						
MBWA	**Marble Bar**	**47.81**	**253**	*e*P	**P**	**08 40 58.2**	**0.0**
	comp=Z,19nm,0.6s,mb4.6						
MBWA	**Marble Bar**	**47.81**	**253**	P	**P**	**08 40 58.5**	**+0.3**
	comp=Z,48nm,0.7s,mb5.0						
KAPI	**Kappang**	**49.36**	**274**	P	**P**	**08 41 08.7**	**-1.0**
	comp=Z,9.9nm,0.7s,mb4.3,baz=183,slow=2.3,SNR=6.6						
NWAO	**Narrogin (SRO)**	**51.26**	**238**	P	**P**	**08 41 22.8**	**-0.4**
	comp=Z,30nm,0.8s,mb4.6,baz=89,slow=5.3,SNR=15						
JOW	**Kunigami**	**56.02**	**315**	P	**P**	**08 41 57.0**	**+0.4**
	baz=155,slow=17,SNR=1.0						
SJI	**Sawahan**	**56.61**	**269**	P	**P**	**08 42 02.0**	**+1.1**
MJAR	**Matsushiro Arr**	**57.20**	**330**	P	**P**	**08 42 03.9**	**-0.5**
	comp=Z,2.6nm,0.6s,mb3.5,baz=88,slow=2.1,SNR=13						
ERM	**Erimo**	**59.67**	**338**	*e*P	**P**	**08 42 24.3**	**+3.5**
ERM				pmax	pmax		
	comp=Z,92nm,1.3s,mb4.8						
KSM	**Kuching**	**60.10**	**279**	P	**P**	**08 42 25.6**	**+1.4**
	comp=Z,11nm,1.4s,mb3.8						
YSS	**Yuzh-Sakhalins**	**64.12**	**340**	*e*P	**P**	**08 42 49.9**	**+0.5**
YSS				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.3						
VNDA	**Vanda**	**64.71**	**182**	P	**P**	**08 42 53.5**	**+0.8**
	comp=Z,2.5nm,0.6s,mb3.7,baz=358,slow=6.5,SNR=44						
NJ2	**Nanjing**	**65.70**	**314**	*e*P	**P**	**08 42 58.5**	**-1.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
PET	**Petropavlovsk**	**66.29**	**353**	*e*P	**P**	**08 42 58.8**	**-3.9**
PET				pmax	pmax		
	comp=Z,62nm,1.0s,mb4.9						
PETK	**Petropavlovsk-**	**66.49**	**352**	P	**P**	**08 43 04.0**	**+0.1**
	comp=Z,6.9nm,0.7s,mb4.1,baz=142,slow=5.0,SNR=12						
WHN	**Wuhan**	**68.13**	**311**	P	**P**	**08 43 14.5**	**+0.1**
NANT	**Nan**	**74.46**	**294**	P	**P**	**08 43 48.5**	**-2.9**
HIA	**Hailar**	**75.66**	**329**	*e*P	**P**	**08 43 56.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**75.92**	**293**	P	**P**	**08 44 00.7**	**+1.2**
	comp=Z,8.6nm,0.8s,mb4.3,baz=115,slow=4.0,SNR=39						
CMAR	**Chiang Mai Arr**	**75.92**	**293**	*i* P	**P**	**08 44 00.9**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHG	**Chiang Mai**	**76.03**	**293**	⇓P	**P**	**08 44 00.7**	**+0.6**
	comp=Z,11nm,0.7s,mb4.5						
CHTO	**Chiang Mai**	**76.03**	**293**	*e*P	**P**	**08 43 60.0**	**-0.1**
	comp=Z,12nm,1.1s,mb4.3						
CHTO	**Chiang Mai**	**76.03**	**293**	*e*P	**P**	**08 44 00.0**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.3						
SEY	**Seymchan**	**76.73**	**352**	*e*P	**P**	**08 44 01.8**	**-1.1**
QSPA	**South Pole Qui**	**77.10**	**180**	P	**P**	**08 44 06.0**	**+1.2**
	comp=Z,17nm,0.9s,mb4.6,baz=18,slow=1.5,SNR=41						
YAK	**Yakutsk**	**80.85**	**342**	*e*P	**P**	**08 44 24.6**	**0.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
SONM	**Songino Array**	**82.15**	**323**	P	**P**	**08 44 31.7**	**+0.1**
	comp=Z,2.2nm,0.6s,mb3.8,baz=136,slow=4.1,SNR=8.4						
GTA	**Gaotai**	**82.76**	**313**	P	**P**	**08 44 36.1**	**+1.3**
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.4						
IMA2	**Indian Mountai**	**83.44**	**14**	*e*P	**P**	**08 44 38.0**	**+0.5**
COLA	**College**	**84.05**	**17**	*e*P	**P**	**08 44 39.4**	**-1.2**
MAW	**Mawson**	**84.24**	**202**	P	**P**	**08 44 42.2**	**+0.6**
	comp=Z,1.8nm,0.6s,mb3.8,baz=90,slow=10,SNR=4.3						
NVAR	**Mina Array Bea**	**84.70**	**49**	P	**P**	**08 44 45.5**	**+1.1**
	comp=Z,1.5nm,0.8s,mb3.7,baz=151,slow=6.7,SNR=11						
TIXI	**Tiksi**	**88.57**	**348**	*e*P	**P**	**08 45 01.7**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.0						
YKA	**Yellowknife Ar**	**95.10**	**27**	P	**P**	**08 45 31.4**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.3,baz=264,slow=4.3,SNR=4.0						
SNAA	**Sanae**	**95.44**	**183**	*e*P	**P**	**08 45 32.7**	**-0.7**
SNAA				*e*		08 45 39.2	
VNA3	**Neumayer Olymp**	**96.04**	**180**	*e*P	**P**	**08 45 35.0**	**-1.1**
VNA3				*e*		08 45 42.2	
VNA2	**Neumayer--Watz**	**96.33**	**181**	*e*P	**P**	**08 45 37.6**	**+0.2**
	baz=194,slow=5.0						
VNA2				*e*		08 45 44.5	
ZALV	**Zalesovo Beam**	**97.03**	**324**	P	**P**	**08 45 39.4**	**-1.4**
	comp=Z,0.5nm,0.4s,mb4.1,baz=145,slow=3.6,SNR=4.4						
MKAR	**Makanchi Array**	**97.17**	**316**	P	Pdif	08 45 41.6	+0.1
	comp=Z,1.3nm,0.5s,baz=80,slow=6.6,SNR=17						
ARCES	**ARCESS Array B**	**118.95**	**346**	PKP	PKPdf	08 50 52.0	-0.7
	comp=Z,5.4nm,1.0s,baz=45,slow=2.4,SNR=29						
NOA	**NORSAR Array B**	**129.33**	**346**	SKPbc	SKPbc	08 53 36.7	+1.3
	comp=Z,4.4nm,0.8s,baz=30,slow=3.1,SNR=12						
AKASG	**Malin Array Be**	**130.24**	**328**	SKPbc	SKPbc	08 53 40.7	+1.5
	comp=Z,5.3nm,0.9s,baz=45,slow=4.2,SNR=13						
CLL	**Collm**	**137.11**	**338**	*e*SKPbc	SKPbc	08 54 03.0	+1.6
GERES	**GERESS Array B**	**138.82**	**335**	SKPbc	SKPbc	08 54 07.9	+1.6
	comp=Z,1.9nm,0.9s,baz=46,slow=3.9,SNR=11						
GIVF	**Givet**	**140.76**	**344**	*e*PKP1	PKPdf	08 51 35.6	+1.3
CDF	**Champ du Feu**	**141.54**	**341**	*e*PKP1	PKPdf	08 51 31.6	-4.2
HAU	**Haudompre**	**142.19**	**341**	*e*PKP1	PKPdf	08 51 34.2	-2.8
HINF	**Hinteralfeld**	**142.20**	**340**	*e*PKP1	PKPdf	08 51 33.9	-3.1
	comp=Z,3.1nm,0.7s						
FLN	**La Foliniere**	**143.24**	**349**	*e*PKP1	PKPdf	08 51 36.8	-2.0
	comp=Z,18nm,0.6s						
LDF	**La Druitiere**	**143.33**	**348**	*e*PKP1	PKPdf	08 51 37.3	-1.6
CABF	**La Chapelle**	**143.51**	**340**	*e*PKP1	PKPdf	08 51 38.7	-0.6
	comp=Z,28nm,0.8s						
LOR	**Lormes**	**143.60**	**343**	*e*PKP1	PKPdf	08 51 38.5	-1.0
GRR	**Gorron**	**143.67**	**349**	*e*PKP1	PKPdf	08 51 38.8	-0.7
	comp=Z,38nm,0.7s						
SSF	**Saint Saulge**	**143.89**	**343**	*e*PKP1	PKPdf	08 51 39.7	-0.3
	comp=Z,31nm,0.9s						
SGMF	**Saint Gilles**	**144.10**	**351**	*e*PKP1	PKPdf	08 51 40.0	-0.3
ROSF	**Rostrenen**	**144.13**	**351**	*e*PKP1	PKPdf	08 51 40.3	0.0
SMF	**Signal de Mont**	**144.17**	**343**	*e*PKP1	PKPdf	08 51 40.2	-0.3
	comp=Z,24nm,0.6s						
AVF	**Avril sur Loir**	**144.18**	**343**	*e*PKP1	PKPdf	08 51 40.3	-0.2
	comp=Z,11nm,0.6s						
LPL	**La Plagne**	**144.24**	**339**	*e*PKP1	PKPdf	08 51 41.2	+0.6
	comp=Z,6.9nm,0.7s						
LPG	**La Plagne**	**144.25**	**339**	*e*PKP1	PKPdf	08 51 41.4	+0.8
	comp=Z,8.1nm,0.6s						
BGF	**Bois d'Agland**	**144.53**	**344**	*e*PKP1	PKPdf	08 51 41.6	+0.5
	comp=Z,13nm,0.5s						
MBDF	**Montbardon**	**144.91**	**338**	*e*PKP1	PKPdf	08 51 42.7	+0.9
	comp=Z,5.3nm,0.6s						
TCF	**Toulx Ste Croi**	**144.95**	**344**	*e*PKP1	PKPdf	08 51 42.8	+1.0
ORIF	**Oris-en-Rattie**	**145.06**	**339**	*e*PKP1	PKPbc	08 51 43.5	+0.4
	comp=Z,15nm,0.7s						
MFF	**Saint Martin d**	**145.23**	**347**	*e*PKP1	PKPbc	08 51 43.6	0.0
	comp=Z,16nm,0.5s						
SBF	**Sospel**	**145.39**	**336**	*e*PKP1	PKPbc	08 51 45.0	+0.9
	comp=Z,29nm,0.6s						
VIVF	**Saint-Julien-l**	**145.52**	**340**	*e*PKP1	PKPbc	08 51 44.7

CMAR	**Chiang Mai Arr**	**73.60**	**294**	P	**P**	**09 51 31.2**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=119,slow=5.2,SNR=4.0						
QSPA	**South Pole Qui**	**76.28**	**180**	P	**P**	**09 51 44.2**	**-1.3**
	1.7nm,0.8s,mb4.0,baz=330,slow=2.8,SNR=3.5						
VNA3	**Neumayer Olymp**	**95.18**	**181**	*e*	**P**	**09 53 22.0**	**+1.7**
VNA2	**Neumayer--Watz**	**95.43**	**182**	*e*	**P**	**09 53 24.1**	**+2.7**
	baz=183,slow=4.9						
MKAR	**Makanchi Array**	**95.77**	**317**	P	**P**	**09 53 22.7**	**-0.6**
	0.4nm,0.6s,mb4.0,baz=101,slow=6.0,SNR=3.3						
ARCES	**ARCESS Array B**	**119.03**	**345**	PKP	PKPdf	09 58 41.9	-3.3
	2.2nm,0.8s,baz=29,slow=2.1,SNR=4.8						

IDC 18 09:49:18.7±1.3, 3555N×7081E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/25, 1C-3D, Error ellipse: s-maj=75.5km s-min=32.3km az=32.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.55**	**358**	⇑Pn	Pn	09 51 14.6	+4.7
	0.7nm,0.2s,baz=180,slow=13,SNR=58						
KK31				⇓Sn	Sn	09 52 24.1	-12
	29nm,0.6s,baz=186,slow=21						
AB07	**Akbulak array**	**15.83**	**333**	⇓P	Pn	09 53 02.8	0.0
	0.8nm,0.6s						
AB07				⇓S	Sn	09 55 41.4	-18
	0.6nm,0.6s						
AKTO	**Aktyubinsk**	**17.54**	**332**	P	Pn	09 53 24.5	+0.1
	0.5nm,0.3s,baz=141,slow=11,SNR=9.4						
GERES	**GERESS Array B**	**43.36**	**306**	LR	LR	10 18 01.9	
	comp=Z,36nm,19.9s,baz=78,slow=40						
KAPI	**Kappang**	**61.10**	**121**	LR	LR	10 28 52.5	
	comp=Z,53nm,18.1s,baz=353,slow=39						
TORD	**Torodi Ar. Bea**	**65.54**	**269**	P	P	10 00 04.4	0.0
	0.1nm,0.4s,baz=60,slow=7.7,SNR=2.8						
WRA	**Warramunga Arr**	**81.62**	**122**	P	P	10 01 38.9	+0.1
	0.2nm,0.6s,baz=324,slow=4.9,SNR=6.1						
ASAR	**Alice Springs**	**83.84**	**125**	P	P	10 01 50.4	+0.1
	0.2nm,0.6s,baz=313,slow=5.4,SNR=6.8						

MAN 18 09:50:12, 1529N×12195E, h1km, mb4.5, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.56**	**181**	*e*P	Pg	09 50 23.5	+0.7
POLP				*e*S	Sg	09 50 34.2	+4.2
BALP	**Baler**	**0.57**	**321**	*e*P	Pg	09 50 23.7	+0.7
GQP	**Guinayangan**	**1.46**	**161⇑**	*e*P	Pn	09 50 48.4	+8.8
GQP				*i* S	Sg	09 51 01.1	+2.1
CAUP	**Cauayan**	**1.65**	**356**	*e*P	Pn	09 50 41.0	-1.1
CAUP				*e*S	Sn	09 51 05.3	+1.4
LUBP	**Lubang**	**2.26**	**227**	*e*P	Pn	09 50 52.1	+1.6
ABRA	**Dolores**	**2.63**	**333**	*e*P	Sn	09 51 26.3	-1.8
APYP	**Conner**	**2.64**	**345**	*e*P	Pn	09 51 00.7	+4.9
OCLP	**Ormoc**	**4.95**	**148**	*e*P	Pn	09 51 35.6	+8.1

NEIC 18 10:04:06.3, 4068S×17582E, h28km, ML3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRZ	**Mangatainoka R**	**0.18**	**275**	P	Pb	10 04 10.7	-1.4
MRZ				S	Sb	10 04 15.6	-0.4
BFZ	**Birch Farm**	**0.32**	**90**	P	Pb	10 04 14.7	+0.8
MTW	**Mount Morrison**	**0.54**	**207**	P	Pb	10 04 17.7	+0.5
TSZ	**Takapari Road**	**0.63**	**10**	P	Pb	10 04 17.5	-1.2
CAW	**Cannon Point**	**0.71**	**233**	P	Pb	10 04 19.9	-0.3
KIW	**Kapiti Island**	**0.71**	**255**	P	Pb	10 04 19.8	-0.4
PAWZ	**Paruwai Farm**	**0.76**	**203**	P	Pb	10 04 20.8	-0.2
MSWZ	**Moikau Station**	**0.85**	**210**	P	Pn	10 04 21.7	-0.7
WEL	**Wellington**	**1.00**	**232**	P	Pn	10 04 23.8	-0.6
BHW	**Baring Head**	**1.02**	**224**	P	Pn	10 04 23.9	-0.9
SNZO	**South Karori**	**1.05**	**233**	*e*Pn	Pn	10 04 24.7	-0.5
SNZO				*e*Sn	Sn	10 04 38.8	-0.1
WAZ	**Wanganui**	**1.12**	**325**	P	Pn	10 04 26.2	+0.1
MOVZ	**Moawhango**	**1.27**	**358**	P	Pn	10 04 27.5	-0.7
TCW	**Tory Channel**	**1.28**	**245**	P	Pn	10 04 27.4	-1.0
WNVZ	**Wahianoa**	**1.36**	**353**	P	Pn	10 04 29.2	-0.2
TUVZ	**Tukino**	**1.42**	**355**	P	Pn	10 04 30.1	0.0
FWVZ	**Far West T-bar**	**1.44**	**352**	P	Pn	10 04 30.5	+0.1
NGZ	**Ngauruhoe**	**1.51**	**354**	P	Pn	10 04 31.4	-0.1
WTVZ	**West Tongariro**	**1.57**	**353**	P	Pn	10 04 32.1	-0.2
BKZ	**Black Stump Fm**	**1.60**	**19**	P	Pn	10 04 31.3	-1.3
TWVZ	**Taurewa**	**1.63**	**349**	P	Pn	10 04 32.7	-0.4
KATZ	**Kakaramea**	**1.70**	**357**	P	Pn	10 04 35.7	+1.6
VRZ	**Vera Road**	**1.75**	**332**	P	Pn	10 04 34.8	0.0
RAEZ	**Rainy Point**	**1.77**	**321**	P	Pn	10 04 35.7	+0.7
BSWZ	**Blackbirch Sta**	**1.79**	**234**	P	Pn	10 04 34.2	-1.2
NNZ	**Nelson**	**1.93**	**253**	P	Pn	10 04 36.1	-1.1
NEZ	**North Egmont**	**1.93**	**316**	P	Pn	10 04 38.4	+1.1
NWEZ	**Newall Road**	**2.06**	**312**	P	Pn	10 04 40.6	+1.7
KNZ	**Kokohu**	**2.19**	**41**	P	Pn	10 04 38.5	-2.3
HIZ	**Hauiti**	**2.29**	**341**	P	Pn	10 04 41.7	-0.4
THZ	**Tophouse**	**2.45**	**243**	P	Pn	10 04 42.7	-1.7
URZ	**Urewera**	**2.62**	**23**	P	Pn	10 04 43.7	-2.9
MWZ	**Matawai**	**2.69**	**30**	P	Pn	10 04 44.8	-2.9
DSZ	**Denniston Nort**	**3.21**	**249**	P	Pn	10 04 53.1	-1.7
PUZ	**Puketiti**	**3.22**	**37**	P	Pn	10 04 51.6	-3.3
LTZ	**Lake Taylor**	**3.39**	**231**	P	Pn	10 04 54.9	-2.4
MKAZ	**Moumakai**	**3.60**	**352**	P	Pn	10 05 00.8	+0.6
MXZ	**Matakaoa Point**	**3.66**	**33**	P	Pn	10 04 59.1	-2.0

IDC 18 10:09:14.6±4.8, 230S×9920E, h33km±7km, mb3.3/4, mb1 3.4/4, mb1mx3.3/19, mbtmp3.3/4, Error ellipse: s-maj=229.4km s-min=18.4km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.54**	**120**	P	P	10 16 33.4	-1.0
	0.3nm,0.5s,baz=292,slow=8.4,SNR=6.1						
WRA				pP	pP	10 16 43.8	-0.2
	0.2nm,0.5s,baz=293,slow=8.1,SNR=2.2						
ASAR	**Alice Springs**	**39.73**	**125**	P	P	10 16 43.9	-0.5
	0.2nm,0.4s,baz=301,slow=8.0,SNR=6.4						
ASAR				pP	pP	10 16 55.2	+1.3
	0.2nm,0.4s,baz=304,slow=8.0,SNR=2.2						
MKAR	**Makanchi Array**	**51.11**	**345**	P	P	10 18 14.9	+0.8
	0.6nm,0.6s,baz=153,slow=8.2,SNR=8.0						
MKAR				pP	pP	10 18 23.1	-0.7
	0.4nm,0.6s,baz=151,slow=8.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**57.32**	**350**	P	P	10 18 58.1	-1.1
	0.9nm,0.5s,baz=158,slow=7.4,SNR=6.3						
TXAR	**Lajitas Array**	**145.43**	**37**	PKPbc	PKPbc	10 28 50.7	+0.8
	0.5nm,0.7s,baz=259,slow=0.5,SNR=8.0						

*IDC **18** 10:40:02.9±1.2, 2379N×12680E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/27, Error ellipse: s-maj=52.3km s-min=20.7km az=73.0*

*ISCJB **18** 10:40:05.7±0.7, 2390N±005×12676E±004, h33km, mb3.7/4, Error ellipse: s-maj=7.7km s-min=4.9km az=159.2*

*JMA **18** 10:40:07.5±0.3, 2412N×12661E, h115km, M3.5*

ISC 18 10:40:07.3±0.7, 2394N±005×12674E±004, h35km, n18, σ1s02/27, mb3.7/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.46**	**304**	P	**Pn**	**10 40 32.1**	**+0.9**
JOGS				*e*S	**Sn**	**10 40 50.4**	**+1.2**
JMJ	**Miyako jima 2**	**1.58**	**304**	P	**Pn**	**10 40 33.8**	**+1.0**
JMJ				*e*S	**Sn**	**10 40 52.8**	**+0.8**
JTJ	**Tarama**	**1.99**	**291**	P	**Pn**	**10 40 38.5**	**+0.1**
JTJ				S	**Sn**	**10 41 01.4**	**-0.6**
JJT2	**Tamagusuku 2**	**2.37**	**22**	P	**Pn**	**10 40 43.7**	**0.0**
JKE	**Kume jima 2**	**2.37**	**1**	P	**Pn**	**10 40 43.9**	**+0.2**
JKE				S	**Sn**	**10 41 11.4**	**-0.2**
JIJ	**Ishigaki jima**	**2.41**	**281**	P	**Pn**	**10 40 44.4**	**+0.2**
JIJ				S	**Sn**	**10 41 12.0**	**-0.5**
JKRS	**Kuro-shima**	**2.51**	**277**	P	**Pn**	**10 40 46.0**	**+0.4**
JKRS				S	**Sn**	**10 41 14.2**	**-0.9**
JAGN	**Aguni-jima**	**2.67**	**10**	*e*S	**Sn**	**10 41 19.0**	**0.0**
HATJ	**Hateruma jima**	**2.69**	**273**	S	**Sn**	**10 41 17.1**	**-2.2**
IRIF	**Iriomote-Funau**	**2.78**	**279**	P	**Pn**	**10 40 49.1**	**-0.2**
IRIF				S	**Sn**	**10 41 20.9**	**-0.7**
JOW	**Kunigami**	**3.19**	**25**	Pn	**Pn**	**10 40 55.2**	**+0.2**
	5.8nm,0.3s,baz=153,slow=16,SNR=5.2						
JOW				Sn	**Sn**	**10 41 27.2**	**-4.6**
	5.2nm,0.3s,baz=57,slow=29,SNR=6.6						
JOW	**Kunigami**	**3.19**	**25**	P	**Pn**	**10 40 55.7**	**+0.7**
JOW				S	**Sn**	**10 41 27.7**	**-4.2**
JIH	**Iheya**	**3.27**	**20**	P	**Pn**	**10 40 54.9**	**-1.2**
JIH				*e*S	**Sn**	**10 41 31.4**	**-2.4**
SONM	**Songino Array**	**28.81**	**331**	LR	LR	10 59 14.6	
	comp=Z,33nm,20.6s,baz=289,slow=40						
MKAR	**Makanchi Array**	**42.10**	**314**	P	**P**	**10 47 57.9**	**+2.0**
	1.2nm,0.9s,mb3.5,baz=99,slow=9.3,SNR=9.7						
ZALV	**Zalesovo Beam**	**43.29**	**325**	P	**P**	**10 48 07.5**	**+2.1**
	0.9nm,0.5s,mb3.8,baz=128,slow=6.6,SNR=4.9						
WRA	**Warramunga Arr**	**44.24**	**170**	P	**P**	**10 48 12.6**	**-0.8**
	1.2nm,0.4s,mb4.0,baz=348,slow=8.9,SNR=32						
ASAR	**Alice Springs**	**47.83**	**171**	P	**P**	**10 48 41.5**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=357,slow=7.5,SNR=5.5						

*CSEM **18** 10:48:22.8±0.0, 3895N×2984E, h2km, MD3.3, Error ellipse: s-maj=1.2km s-min=1.0km az=27.0*

*DDA **18** 10:48:23.7, 3898N×2983E, h7km±3km, Md3.3*

*ISK **18** 10:48:23.7, 3896N×2984E, h6km, ML4.1*

*ISCJB **18** 10:48:24.1±0.5, 3896N±002×2981E±002, h9km±4km, mb3.9/8, Error ellipse: s-maj=3.3km s-min=2.5km az=25.8*

*MOS **18** 10:48:24.1±1.2, 3904N×2961E, h10km, mb4.2/7, Error ellipse: s-maj=9.3km s-min=5.6km az=103.2*

*NEIC **18** 10:48:28.8±0.6, 3897N×2968E, h38km±9km, mb4.0/8, ML4.1(ISK), Error ellipse: s-maj=8.6km s-min=6.3km az=47.0*

*IDC **18** 10:48:29.9±2.0, 3883N×2985E, h54km±22km, mb3.6/6, mb1 3.8/12, mb1mx3.6/28, mbtmp3.6/12, ML3.7/6, MS2.9/6, Ms1 2.9/6, ms1mx2.6/38, Error ellipse: s-maj=18.6km s-min=15.6km az=139.0*

ISC 18 10:48:24.5±0.5, 3898N±002×2981E±002, h2km±3km, n161, σ0s89/175, mb3.9/8, 14C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.28**	**294**	*i* P	**Pg**	**10 48 29.5**	**-0.4**
GDZ				*i* S	**Sg**	**10 48 33.9**	**+0.2**
KHL	**Karahalli**	**0.69**	**199**	PG	**Pg**	**10 48 37.5**	**-0.2**
KHL				*e*SG	**Sg**	**10 48 46.5**	**-0.1**
SHUT	**Suhut-Afyon**	**0.71**	**126**	*e*PG	**Pg**	**10 48 38.3**	**+0.1**
SHUT				*e*SG	**Sg**	**10 48 47.2**	**-0.2**
DEMI	**Demirci**	**0.86**	**275**	*i* P	**Pg**	**10 48 41.0**	**0.0**
DEMI				*i* S	**Sg**	**10 48 52.8**	**+0.7**
BOLV	**Bolvadin**	**0.92**	**106**	*i* P	**Pg**	**10 48 41.9**	**-0.3**
BOLV				*i* S	**Sg**	**10 48 54.3**	**+0.1**
KULA	**Kula-Manisa**	**1.01**	**243**	*e*PG	**Pg**	**10 48 43.4**	**-0.5**
KULA				*e*SG	**Sg**	**10 48 58.1**	**+1.1**
BORA	**Eskisehir**	**1.03**	**28**	*i* P	**Pg**	**10 48 43.1**	**-1.2**
BORA				*i* S	**Sg**	**10 48 57.4**	**-0.3**
DST	**Dursunbey**	**1.11**	**305**	*e*Pn	**Pn**	**10 48 45.7**	**-1.4**
CAVI	**Cavuskoy**	**1.23**	**1**	*e*Pn	**Pn**	**10 48 47.6**	**-1.1**
ISP	**Isparta**	**1.25**	**154**	*e*Pn	**Pn**	**10 48 48.2**	**-0.8**
ISP				*e*Sn	**Sn**	**10 49 08.3**	**+1.8**
ULDT	**Uludag**	**1.28**	**336**	*i* P	**Pg**	**10 48 48.5**	**-0.6**
ULDT				*i* S	**Sg**	**10 49 06.9**	**+1.3**
DENT	**Denizli**	**1.36**	**207**	*e*PN	**Pn**	**10 48 50.6**	**0.0**
GPA	**Golpazari**	**1.37**	**16**	*e*PN	**Pn**	**10 48 49.5**	**-1.1**
ADVT	**Abdulvahap**	**1.46**	**358**	*e*PN	**Pn**	**10 48 51.3**	**-0.6**
GEMT	**Gemlik**	**1.54**	**342**	*e*PN	**Pn**	**10 48 52.5**	**-0.5**
GULT	**Gulveren**	**1.55**	**20**	*e*PN	**Pn**	**10 48 53.1**	**0.0**
AKHS	**Akhisar**	**1.56**	**267**	*i* P	**Pn**	**10 48 52.9**	**-0.4**
AKHS				*i* S	**Sn**	**10 49 15.0**	**+0.9**
AKS	**Akhisar**	**1.56**	**267**	*e*PN	**Pn**	**10 48 52.9**	**-0.4**
EYL	**Eskiyayla**	**1.61**	**9**	*e*PN	**Pn**	**10 48 53.7**	**-0.3**
KIZT	**Kizilcal**	**1.61**	**93**	*e*PN	**Pn**	**10 48 53.6**	**-0.4**
YLV	**Yalova**	**1.63**	**348**	*e*PN	**Pn**	**10 48 54.0**	**-0.2**
BCK	**Bucak**	**1.63**	**158**	*e*PN	**Pn**	**10 48 53.4**	**-0.8**
BALB	**Balikesir**	**1.64**	**294**	*e*PN	**Pn**	**10 48 54.7**	**+0.4**
KCT	**Karacabey**	**1.71**	**319**	*e*PN	**Pn**	**10 48 54.6**	**-0.7**
MDU	**Mudurnu**	**1.84**	**36**	*e*PN	**Pn**	**10 48 56.9**	**-0.2**
HRT	**Hereke**	**1.85**	**357**	*e*PN	**Pn**	**10 48 57.7**	**+0.5**
BNT	**Bandirma**	**2.01**	**314**	*e*PN	**Pn**	**10 48 59.0**	**-0.5**
EDC	**Edincik**	**2.04**	**313**	*e*PN	**Pn**	**10 48 59.9**	**+0.1**
LADK	**Ladik-KONYA**	**2.14**	**110**	*e*PN	**Pn**	**10 49 00.9**	**-0.4**
ISK	**Istanbul-Kandi**	**2.17**	**345**	*e*PN	**Pn**	**10 49 01.4**	**-0.2**
SILT	**Sile**	**2.18**	**357**	*e*PN	**Pn**	**10 49 02.0**	**+0.2**
YER	**Yerkesik**	**2.20**	**214**	*e*PN	**Pn**	**10 49 01.4**	**-0.6**
KONT	**Konya--Tatoy**	**2.25**	**116**	*e*PN	**Pn**	**10 49 02.0**	**-0.7**
MLSB	**Milas**	**2.32**	**224**	*e*PN	**Pn**	**10 49 03.1**	**-0.6**
BGKT	**Bogazkoy**	**2.34**	**340**	*e*PN	**Pn**	**10 49 04.2**	**+0.2**
KLYT	**Kilyos**	**2.35**	**346**	*e*PN	**Pn**	**10 49 04.6**	**+0.4**
MRMT	**Marmara Adasi**	**2.36**	**314**	*e*PN	**Pn**	**10 49 05.4**	**+1.1**
CTT	**Catalca**	**2.42**	**334**	*e*PN	**Pn**	**10 49 05.8**	**+0.8**
LOD	**Lodumlu**	**2.46**	**67**	*e*PN	**Pn**	**10 49 04.7**	**-0.9**
ANTO	**Ankara**	**2.47**	**68**	⇑P	**Pn**	**10 49 10.7**	**+4.9**
ANTO	**Ankara**	**2.47**	**68**	⇑P	**Pn**	**10 49 10.7**	**+4.9**
SLVT	**Silivri**	**2.57**	**332**	*e*PN	**Pn**	**10 49 07.5**	**+0.4**
KDZE	**Karadeniz Ereo**	**2.65**	**28**	*e*PN	**Pn**	**10 49 08.5**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.66**	**311**	*e*PN	**Pn**	**10 49 08.6**	**+0.3**
MFT	**Murefte**	**2.66**	**314**	*e*PN	**Pn**	**10 49 08.8**	**+0.4**
TKR	**Tekirdag**	**2.67**	**320**	*e*PN	**Pn**	**10 49 09.2**	**+0.7**
CRLT	**Corlu**	**2.68**	**324**	*e*PN	**Pn**	**10 49 09.2**	**+0.6**
LPK	**Lapseki**	**2.74**	**302**	*e*PN	**Pn**	**10 49 09.8**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.76**	**335**	*e*PN	**Pn**	**10 49 09.7**	**0.0**
EZN	**Ezine**	**2.83**	**289**	*e*PN	**Pn**	**10 49 11.8**	**+1.1**
DAT	**Datca**	**2.86**	**219**	*e*PN	**Pn**	**10 49 11.9**	**+0.8**
HDMB	**Hadim**	**2.91**	**133**	*e*PN	**Pn**	**10 49 11.4**	**-0.5**
KAMT	**Kaman**	**3.06**	**81**	*e*PN	**Pn**	**10 49 13.6**	**-0.2**
SAFT	**Safranbolu**	**3.16**	**43**	*e*PN	**Pn**	**10 49 15.0**	**-0.2**
GADA	**Gvkgeada**	**3.26**	**293**	*e*PN	**Pn**	**10 49 17.4**	**+0.8**
ENEZ	**Enez**	**3.32**	**303**	*e*PN	**Pn**	**10 49 17.8**	**+0.3**
CANT	**Cankiri**	**3.35**	**60**	*e*PN	**Pn**	**10 49 18.0**	**+0.1**
EDRB	**Edirne**	**3.70**	**322**	*e*PN	**Pn**	**10 49 22.9**	**+0.2**
TOS	**Tosya**	**3.83**	**56**	*e*PN	**Pn**	**10 49 24.6**	**+0.1**
NIG	**Nigde**	**3.86**	**101**	*e*PN	**Pn**	**10 49 24.9**	**0.0**
CORM	**Corum**	**3.91**	**71**	*e*PN	**Pn**	**10 49 25.7**	**+0.1**
IKL	**Isikli**	**4.11**	**130**	*e*PN	**Pn**	**10 49 29.0**	**+0.7**
JMB	**Yambol**	**4.26**	**326**	*i* P	**Pn**	**10 49 32.1**	**+1.7**
MERS	**Mersin**	**4.28**	**118**	*e*PN	**Pn**	**10 49 30.7**	**+0.1**
KDZ	**Kurdzhali**	**4.29**	**310**	*i* P	**Pn**	**10 49 31.5**	**+0.7**
YOZ	**Yozgat**	**4.32**	**79**	*e*PN	**Pn**	**10 49 31.5**	**+0.2**
BZK	**Bozkurt**	**4.37**	**46**	*e*PN	**Pn**	**10 49 32.3**	**+0.5**
KARA	**Karaisali**	**4.47**	**111**	*e*PN	**Pn**	**10 49 34.5**	**+1.3**
DIM	**Dimitrovgrad**	**4.48**	**315**	*i* P	**Pn**	**10 49 33.9**	**+0.5**
BYBT	**Boyabat**	**4.54**	**55**	*e*PN	**Pn**	**10 49 35.3**	**+1.2**
LEF	**Lefka**	**4.57**	**146**	*e*PN	**Pn**	**10 49 34.4**	**-0.2**
BNN	**Bunyan**	**4.71**	**90**	*e*PN	**Pn**	**10 49 36.8**	**+0.3**
LFK	**Lefkose**	**4.74**	**140**	*e*PN	**Pn**	**10 49 37.6**	**+0.7**
EREN	**Erenkoy**	**4.89**	**133**	*e*PN	**Pn**	**10 49 39.5**	**+0.5**
CSS	**Prodhromos**	**4.89**	**144**	*e*Pn	**Pn**	**10 49 42.4**	**+3.3**
DIKM	**Dikmen**	**4.95**	**56**	*e*PN	**Pn**	**10 49 41.7**	**+1.9**
KVT	**Kavak**	**5.23**	**64**	*e*PN	**Pn**	**10 49 45.6**	**+2.0**
MMB	**Musomiste**	**5.34**	**301**	*i* P	**Pn**	**10 49 45.0**	**-0.1**
SARI	**SarD1z-Kayseri**	**5.38**	**91**	*e*PN	**Pn**	**10 49 43.9**	**-1.9**
IDI	**Anoyia**	**5.39**	**228**	P	**Pn**	**10 49 45.9**	**0.0**
	2.3nm,0.3s,baz=43,slow=9.6,SNR=12						
PVL	**Pavlikeni**	**5.42**	**323**	*i* P	**Pn**	**10 49 46.0**	**-0.3**
TIRR	**Tirgusor**	**5.58**	**350**	⇓P	**Pn**	**10 49 47.8**	**-0.7**
TIRR	**Tirgusor**	**5.58**	**350**	⇓*i*P	**Pn**	**10 49 47.8**	**-0.7**
SVSK	**Karacayir**	**5.64**	**78**	*e*PN	**Pn**	**10 49 50.5**	**+1.2**
VTS	**Vitosha**	**6.18**	**308**	*i* P	**Pn**	**10 49 58.0**	**+1.3**
TLCR		**6.25**	**353**	⇑*i*P	**Pn**	**10 49 56.6**	**-1.1**
SEV	**Sevastopol'**	**6.27**	**26**	⇑*e*P	**Pn**	**10 49 56.4**	**-1.5**
SEV				*e*S	**Sn**	**10 51 03.4**	**-6.6**
SEV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SEV				smax			
	comp=N,20nm,0.5s						
SEV				smax			
	comp=E,100nm,0.5s						
SEV	**Sevastopol'**	**6.27**	**26**	*e*P	**Pn**	**10 49 56.4**	**-1.5**
	comp=E,5.0nm,0.3s						
YAL	**Yalta**	**6.39**	**29**	⇑*e*P	**Pn**	**10 49 59.8**	**+0.2**
YAL				pmax	pmax		
	comp=Z,37nm,0.3s						
YAL	**Yalta**	**6.39**	**29**	*e*P	**Pn**	**10 49 59.8**	**+0.2**
	comp=Z,37nm,0.3s						
ALU	**Alushta**	**6.65**	**30**	*e*P	**Pn**	**10 50 00.1**	**-3.1**
ALU				pmax	pmax		
	comp=Z,26nm,0.7s						
SIM	**Simferopol'**	**6.78**	**27**	*e*P	**Pn**	**10 50 07.0**	**+2.1**
SIM				*e*S	**Sn**	**10 51 17.0**	**-5.6**
SIM				pmax	pmax		
	comp=Z,60nm,0.8s						
SIM				smax			
	comp=N,50nm,0.8s						
SIM				smax			
	comp=E,60nm,0.7s						
SIM	**Simferopol'**	**6.78**	**27**	*e*P	**Pn**	**10 50 07.0**	**+2.1**
	comp=E,60nm,0.8s						
SUDU	**Sudak**	**7.06**	**32**	*e*P	**Pn**	**10 50 09.1**	**+0.3**
SUDU				*e*S	**Sn**	**10 51 23.4**	**-6.2**
SUDU				pmax	pmax		
	comp=Z,56nm,0.6s						
SUDU				smax			
	comp=N,70nm,0.7s						
SUDU				smax			
	comp=E,10.0nm,0.7s						
SUDU	**Sudak**	**7.06**	**32**	*e*P	**Pn**	**10 50 09.1**	**+0.3**
	comp=E,56nm,0.6s						
MLR	**Muntele Rosu**	**7.12**	**337**	P	**Pn**	**10 50 13.2**	**+3.7**
	comp=E,0.7nm,0.3s,baz=202,slow=11,SNR=7.8						
MLR				LR	LR	10 52 44.5	
	comp=E,90nm,20.5s,baz=291,slow=35						
MLR	**Muntele Rosu**	**7.12**	**337**	⇑*i*P	**Pn**	**10 50 10.4**	**+0.8**
BARS	**Barje**	**7.17**	**305**	⇑*i*Pn	**Pn**	**10 50 11.0**	**+0.7**
VRI	**Vrincioaia**	**7.25**	**343**	⇓P	**Pn**	**10 50 11.5**	**0.0**
VRI	**Vrincioaia**	**7.25**	**343**	⇓*i*P	**Pn**	**10 50 11.5**	**0.0**
PLOR	**Plostina**	**7.26**	**342**	⇑*i*P	**Pn**	**10 50 11.9**	**+0.4**
MMAI	**Mount Meron Ar**	**7.47**	**141**	P	**Pn**	**10 50 13.6**	**-1.0**
	comp=E,2.5nm,0.3s,baz=337,slow=13,SNR=5.1						
GZR	**Gura Zlata**	**8.27**	**323**	⇑P	**Pn**	**10 50 25.4**	**0.0**
GZR	**Gura Zlata**	**8.27**	**323**	⇑*i*P	**Pn**	**10 50 25.4**	**0.0**
ASF	**Jabal al Asfar**	**8.90**	**138**	LR	LR	10 54 42.1	
	comp=E,76nm,18.0s,baz=187,slow=42						
BZS	**Buzias**	**8.99**	**320**	⇑P	**Pn**	**10 50 34.8**	**-0.6**
BZS	**Buzias**	**8.99**	**320**	⇑*i*P	**Pn**	**10 50 34.8**	**-0.5**
BURAR	**Bucovina Array**	**9.26**	**340**	⇓P	**Pn**	**10 50 37.4**	**-1.6**
BURAR	**Bucovina Array**	**9.26**	**340**	⇓*i*P	**Pn**	**10 50 37.4**	**-1.6**
BUR08	**Bucovina Ar. S**	**9.29**	**340**	*e*Pn	**Pn**	**10 50 40.1**	**+0.7**
BUR08	**Bucovina Ar. S**	**9.29**	**340**	*e*Pn	**Pn**	**10 50 40.1**	**+0.7**
DRGR		**9.39**	**329**	⇑P	**Pn**	**10 50 40.0**	**-0.7**
DRGR		**9.39**	**329**	⇑*i*P	**Pn**	**10 50 40.0**	**-0.7**
EIL	**Elat**	**10.21**	**154**	P	**Pn**	**10 50 53.3**	**+1.3**
	comp=E,0.4nm,0.3s,baz=341,slow=9.7,SNR=5.0						
EIL				LR	LR	10 55 08.9	
	comp=E,42nm,19.9s,baz=321,slow=40						
KIV	**Kislovodsk**	**10.86**	**59**	*e*P	**Pn**	**10 51 06.5**	**+5.6**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,71nm,11.0s						
GNI	**Garni**	**11.59**	**79**	LR	LR	10 55 44.8	
	comp=Z,110nm,19.5s,baz=201,slow=38						
AKASG	**Malin Array Be**	**11.73**	**358**	P	**Pn**	**10 51 16.2**	**+3.4**
	comp=Z,0.7nm,0.3s,baz=171,slow=12,SNR=2.7						
AKASG				S	**Sn**	**10 53

CAIG	**El Cayaco**	**1.35 290**	*i* P		Pn	10 51 09.9	-4.1
CAIG			*i* S		Sg	10 51 27.3	-4.4
MEIG	**Mezcala**	**1.47 334**	*e*P		Pn	10 51 11.8	-3.9
MEIG			*i* S		Sn	10 51 30.5	-4.9
PLIG	**Platanillo**	**1.86 343**	*i* S		Sn	10 51 39.8	-5.2
VHO	**Vista Hermosa**	**2.17 77**	*e*P		Pn	10 51 22.9	-2.4
VHO			*i* S		Sn	10 51 48.9	-3.6
TPIG	**Tehuac#an**	**2.36 40**	*i* P		Pn	10 51 26.4	-1.5
TPIG			*i* S		Sn	10 51 53.6	-3.6
ZIIG	**Zihuatanejo**	**2.61 293**	*i* S		Sn	10 51 57.4	-6.2

SGS ***18*** *11:13:36.4, 3022N×3628E, h7km*
ISCJB ***18*** *11:13:37.5±1.1, 2992N±005×3626E±008, h0km, Error ellipse: s-maj=9.6km s-min=6.9km az=5.8*
HLW ***18*** *11:13:37.5, 2985N×3654E, h15km, Mb3.1*
GII ***18*** *11:13:38.8±0.8, 2991N×3616E, h0km, ML2.4/3, EXPLOSION*
CSEM ***18*** *11:13:39.4±1.0, 2975N×3618E, h2km, ML2.5, Error ellipse: s-maj=24.8km s-min=12.5km az=49.0*

ISC 18 11:13:37.6±1.1, 2990N±005×3629E±007, h0km, n18, σ0§75/21, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**261**	Pg	**Pg**	**11 13 58.5**	**-0.1**
HRFI	**Mount Harif**	**1.10**	**277**	Pg	**Pg**	**11 13 58.0**	**-0.6**
EIL	**Elat**	**1.19**	**259**	Pg	**Pg**	**11 14 00.3**	**-0.1**
MBRI	**Mt Berech**	**1.20**	**265**	Pg	**Pg**	**11 14 00.3**	**-0.4**
MBRI				Sg	**Sg**	**11 14 17.1**	**+0.8**
PRNI	**Paran**	**1.20**	**292**	Pg	**Pg**	**11 14 00.5**	**-0.2**
HQLS		**1.23**	**241**	P	**Pg**	**11 14 00.3**	**-0.8**
HQLS		**1.23**	**241**	P	**Pg**	**11 14 00.3**	**-0.9**
HQLS				S	**Sg**	**11 14 16.6**	**-0.5**
JLOS		**1.36**	**211**	P	**Pg**	**11 14 03.5**	**-0.1**
KRMI	**Paran Flat**	**1.38**	**279**	Pg	**Pg**	**11 14 02.8**	**-1.2**
HBST	**Basata**	**1.52**	**244**	P	**Pn**	**11 14 06.1**	**+0.1**
MZDA	**Masada**	**1.61**	**330**	Pn	**Pn**	**11 14 08.1**	**+0.7**
BDAS	**Al Bad'**	**1.80**	**216**	S	**Sn**	**11 14 34.2**	**+0.8**
BDAS	**Al Bad'**	**1.80**	**216**	P	**Pn**	**11 14 09.6**	**-0.3**
DSI	**Dead Sea**	**1.84**	**335**	Pn	**Pn**	**11 14 11.2**	**+0.7**
HNKL	**Nakhl**	**2.01**	**271**	P	**Pn**	**11 14 13.2**	**+0.4**
HNKL				S	**Sn**	**11 14 39.3**	**+0.7**
RSHS		**2.06**	**220**	S	**Sn**	**11 14 42.8**	**+2.8**
RSHS		**2.06**	**220**	P	**Pn**	**11 14 12.7**	**-0.8**
TR2		**2.71**	**237**	P	**Pn**	**11 14 21.9**	**-0.5**

IDC 18 11:21:16.1±6.3, 722S×15522E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/20, Error ellipse: s-maj=112.1km s-min=84.4km az=177.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**236**	P	P	11 26 32.4	+0.9
	1.1nm,0.9s,baz=60,slow=9.8,SNR=6.2						
ASAR	**Alice Springs**	**26.19**	**229**	P	P	11 26 52.4	-0.2
	0.2nm,0.6s,baz=57,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**27.63**	**206**	P	P	11 27 04.8	-0.6
	1.7nm,0.8s,baz=32,slow=7.5,SNR=3.2						
KAPI	**Kappang**	**35.33**	**272**	LR	LR	11 42 27.5	
	comp=Z,51nm,20.1s,baz=213,slow=36						
VNDA	**Vanda**	**70.35**	**178**	LR	LR	11 55 39.1	
	comp=Z,31nm,20.5s,baz=35,slow=29						

SOF ***18*** *11:27:23.5, 4037N×2251E, h10km, MD2.6*
ISCJB ***18*** *11:27:25.7±0.4, 4044N±002×2265E±003, h10km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=176.0*
THE ***18*** *11:27:25.9, 4046N×2265E, h16km, ML3.4/7, Error ellipse: s-maj=0.8km s-min=0.4km az=63.0*
CSEM ***18*** *11:27:25.1±0.1, 4049N×2269E, h20km, ML3.4/7, Error ellipse: s-maj=2.5km s-min=1.7km az=88.0*
SKO ***18*** *11:27:26.9, 4043N×2267E, h8km*

ISC 18 11:27:26.0±0.4, 4043N±002×2265E±003, h12km±3km, n57, σ0§80/109, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.31**	**49**	P	**Pg**	**11 27 31.8**	**-0.6**
THE				S	**Sg**	**11 27 36.5**	**-0.2**
LIT	**Litokhoron**	**0.35**	**201**	P	**Pg**	**11 27 33.1**	**0.0**
LIT				S	**Sg**	**11 27 39.5**	**+1.7**
HORT	**Hortiatis**	**0.38**	**63**	P	**Pg**	**11 27 33.5**	**-0.1**
HORT				S	**Sg**	**11 27 39.4**	**+0.7**
GRG	**Griva**	**0.56**	**340**	P	**Pg**	**11 27 36.0**	**-1.0**
GRG				S	**Sg**	**11 27 44.3**	**-0.1**
PLG	**Polygyros**	**0.61**	**95**	P	**Pg**	**11 27 37.8**	**-0.1**
PLG				S	**Sg**	**11 27 46.8**	**+0.9**
SOH	**Sokhos**	**0.66**	**53**	P	**Pg**	**11 27 38.7**	**-0.2**
SOH				S	**Sg**	**11 27 48.3**	**+0.7**
SOH	**Sokhos**	**0.66**	**53**	*i* P	**Pg**	**11 27 41.2**	**+2.3**
SOH				*i* S	**Sg**	**11 27 49.6**	**+2.0**
KNT	**Kendrikon**	**0.76**	**14**	P	**Pg**	**11 27 39.6**	**-1.1**
KNT				S	**Sg**	**11 27 50.4**	**-0.2**
VAY	**Valandovo**	**0.89**	**356**	P	**Pg**	**11 27 41.3**	**-2.0**
VAY				S	**Sg**	**11 27 54.1**	**-0.9**
VAY	**Valandovo**	**0.89**	**356**	*e*Pg	**Pg**	**11 27 42.7**	**-0.6**
VAY				*e*Sg	**Sg**	**11 27 54.1**	**-0.9**
VAY				*e*Sg	**Sg**	**11 27 55.3**	**+0.3**
VAY	**Valandovo**	**0.89**	**356**	*e*Pg	**Pg**	**11 27 42.8**	**-0.5**
VAY				*e*Sg	**Sg**	**11 27 55.3**	**+0.3**
VAY	**Valandovo**	**0.89**	**356**	*i* P	**Pg**	**11 27 43.8**	**+0.5**
VAY				*i* S	**Sg**	**11 27 55.8**	**+0.8**
THL	**Klokotos Trika**	**0.99**	**210**	P	**Pb**	**11 27 44.5**	**-0.6**
THL				S	**Sb**	**11 27 59.1**	**+0.9**
OUR	**Ouranopolis**	**1.02**	**95**	P	**Pb**	**11 27 44.9**	**-0.7**
FNA	**Florina**	**1.03**	**290**	P	**Pb**	**11 27 45.3**	**-0.6**
FNA				S	**Sb**	**11 27 59.6**	**+0.2**
XOR	**Xorichti**	**1.14**	**159**	P	**Pb**	**11 27 47.0**	**-0.6**
XOR				S	**Sb**	**11 28 02.4**	**0.0**
BIA	**Bitola**	**1.17**	**301**	*e*Pg	**Pg**	**11 27 47.9**	**-0.7**
BIA				*e*Sg	**Sg**	**11 28 04.6**	**+0.8**
BIA	**Bitola**	**1.17**	**301**	*e*Pg	**Pg**	**11 27 47.9**	**-0.6**
BIA				*e*Sg	**Sg**	**11 28 04.7**	**+0.9**
STIP	**Stip**	**1.31**	**345**	*e*Pg	**Pg**	**11 27 51.1**	**-0.2**
STIP				*e*Sg	**Sg**	**11 28 08.8**	**+0.5**
STIP	**Stip**	**1.31**	**345**	*e*Pg	**Pg**	**11 27 51.2**	**-0.1**
STIP				*e*Sg	**Sg**	**11 28 08.8**	**+0.5**
MMB	**Musomiste**	**1.42**	**35**	*i* P	**Pn**	**11 27 51.0**	**-0.6**
MMB				*i* S	**Sn**	**11 28 12.0**	**+1.9**
KRUS	**Krusevo**	**1.42**	**312**	*e*Pn	**Pn**	**11 27 52.4**	**+0.8**
KRUS				*e*Sg	**Sg**	**11 28 11.6**	**-0.2**
KRUS	**Krusevo**	**1.42**	**312**	*e*Pn	**Pn**	**11 27 52.5**	**+0.9**
KRUS				*e*Sg	**Sg**	**11 28 11.7**	**-0.1**
AGG	**Agios Georgios**	**1.43**	**190**	P	**Pn**	**11 27 51.4**	**-0.3**
AGG				S	**Sn**	**11 28 09.9**	**-0.5**
AOS	**Alonnisos**	**1.57**	**143**	P	**Pn**	**11 27 53.0**	**-0.7**
VTS	**Vitosha**	**2.20**	**11**	*i* P	**Pn**	**11 28 03.0**	**+0.6**
VTS				*i* S	**Sn**	**11 28 31.0**	**+1.5**
ALN	**Alexandroupoli**	**2.62**	**79**	P	**Pn**	**11 28 07.7**	**-0.4**
ALN				S	**Sn**	**11 28 38.9**	**-1.0**

IDC ***18*** *11:35:14.6±0.7, 4225N×8812E, h0km, mb4.1/9, mb1 4.2/12, mb1mx4.0/25, mbtmp4.0/12, ML3.7/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/46, Error ellipse: s-maj=35.2km s-min=13.1km az=51.0*
ISCJB ***18*** *11:35:16.9±1.8, 4235N±005×8818E±005, h29km±14km, mb4.1/13, Error ellipse: s-maj=9.7km s-min=4.1km az=35.1*
BJI ***18*** *11:35:16.3, 4224N×8820E, h9km, mB4.5, mb4.4, ML4.2, Ms3.9, Msz3.8*
NNC ***18*** *11:35:17.7±1.6, 4241N×8793E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=14.1km s-min=11.1km az=87.0*
NEIC ***18*** *11:35:20.7±1.1, 4239N×8818E, h36km±12km, mb4.1/3, Error ellipse: s-maj=11.5km s-min=9.7km az=184.0*

ISC 18 11:35:18.4±1.8, 4228N±005×8812E±005, h21km±14km, n42, σ1§00/54, mb4.1/13, 12C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.57**	**349**	PG	**Pn**	**11 35 46.5**	**+1.4**
WMQ				SG	**Sn**	**11 36 07.4**	**+2.6**
WMQ				Smax			
	comp=N,3μm,0.5s						
WMQ				Smax			
	comp=E,2μm,0.5s						
MK31	**Makanchi Array**	**6.14**	**319**	⇑Pn	**Pn**	**11 36 48.4**	**+0.5**
	comp=E,6.9nm,0.5s,baz=134,slow=14,SNR=204						
MK31				⇑Sn	**Sn**	**11 37 57.2**	**-0.2**
	comp=E,5.6nm,0.3s,baz=125,slow=24,SNR=4.5						
MK31				⇑Lg		11 38 27.6	
	comp=E,77nm,0.8s,baz=135,slow=33,SNR=3.7						
MK31	**Makanchi Array**	**6.14**	**319**	*e*Pn	**Pn**	**11 36 49.6**	**+1.7**
MK31				*e*Sn	**Sn**	**11 37 58.5**	**+1.1**
MKAR	**Makanchi Array**	**6.14**	**319**	Pn	**Pn**	**11 36 48.5**	**+0.7**
	comp=E,3.4nm,0.3s,baz=136,slow=13,SNR=127						
MKAR				Sn	**Sn**	**11 37 58.0**	**+0.6**
	comp=E,3.0nm,0.3s,baz=142,slow=22,SNR=3.9						
MKAR				Lg		11 38 29.1	
	comp=E,3.7nm,0.3s,baz=130,slow=32,SNR=5.6						
MKAR				LR	LR	11 39 36.5	
	comp=E,114nm,21.0s,baz=252,slow=42						
TKM2	**Tokmak 2**	**9.26**	**278**	⇓Pn	**Pn**	**11 37 31.1**	**+0.4**
TKM2				⇑Sn	**Sn**	**11 39 14.9**	**+0.8**
	comp=E,15nm,0.8s						
TKM2				⇓Lg		11 40 07.4	
	comp=E,35nm,1.1s						
TKM2	**Tokmak 2**	**9.26**	**278**	*e*Pn	**Pn**	**11 37 32.0**	**+1.3**
	comp=E,20nm,0.8s						
GTA	**Gaotai**	**9.31**	**104**	*e*P	**Pn**	**11 37 32.4**	**+1.1**
GTA				AP		11 37 35.9	
GTA				XP		11 37 37.4	
GTA				S	**Sn**	**11 39 17.0**	**+1.6**
GTA				LG2		11 40 09.6	
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s						
GTA				AMB	AMB		
	comp=Z,32nm,3.9s						
GTA				LR	LR		
	comp=N,241nm,6.0s						
GTA				LR	LR		
	comp=E,228nm,6.6s						
GTA				LR	LR		
	comp=Z,115nm,8.4s						
KURBB	**Kurchatov Arra**	**10.64**	**325**	⇑Pn	**Pn**	**11 37 48.5**	**-1.0**
	comp=Z,1.0nm,0.6s						
KURBB				⇑Sn	**Sn**	**11 39 47.4**	**-0.5**
	comp=Z,4.4nm,0.8s						
KURBB				⇑Lg		11 40 48.1	
	comp=Z,17nm,0.9s						
KURK	**Kurchatov**	**10.67**	**325**	⇑Pn	**Pn**	**11 37 48.6**	**-1.3**
	comp=Z,1.1nm,0.3s						
KURK				⇑Sn	**Sn**	**11 39 47.8**	**-0.8**
	comp=Z,16nm,0.9s						
KURK				⇑Lg		11 40 50.1	
	comp=Z,42nm,0.9s						
KURK	**Kurchatov**	**10.67**	**325**	*e*Pn	**Pn**	**11 37 50.1**	**+0.1**
	comp=Z,4.4nm,0.6s						
ZAA0	**Zalesovo Array**	**11.88**	**350**	*e*Pn	**Pn**	**11 38 05.1**	**-1.3**
ZAA0				*e*Sn	**Sn**	**11 40 13.1**	**-5.2**
ZALV	**Zalesovo Beam**	**11.88**	**350**	Pn	**Pn**	**11 38 05.0**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=169,slow=13,SNR=20						
ZALV				Sn	**Sn**	**11 40 12.6**	**-5.7**
	comp=Z,0.6nm,0.3s,baz=167,slow=27,SNR=5.4						
ZALV				LR	LR	11 43 20.4	
	comp=Z,67nm,19.6s,baz=45,slow=41						
LZH	**Lanzhou**	**13.66**	**112**	*e*P	**Pn**	**11 38 31.0**	**+0.1**
LZH				AP		11 38 35.0	
LZH				XP		11 38 37.3	
LZH				PP		11 38 44.0	
LZH				*e*S	**Sn**	**11 41 01.4**	**-0.6**
LZH				SS		11 41 18.3	
LZH				AMB	AMB		
	comp=Z,26nm,1.3s						
LZH				AMB	AMB		
	comp=Z,114nm,4.2s						
LZH				LR	LR		
	comp=N,308nm,10.0s						
LZH				LR	LR		
	comp=Z,425nm,11.4s						
SONM	**Songino Array**	**14.05**	**60**	Pn	**Pn**	**11 38 36.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=239,slow=14,SNR=4.7						
SONM				Lg		11 42 36.5	
	comp=Z,0.2nm,0.3s,baz=245,slow=27,SNR=5.5						
SONM				LR	LR	11 44 18.6	
	comp=Z,154nm,18.7s,baz=235,slow=39						
SONM	**Songino Array**	**14.05**	**60**	Pn	**Pn**	**11 38 36.6**	**+0.6**
SONM				Lg		11 42 36.5	
SONM				LR	LR	11 44 18.6	
CEP	**Cherat**	**15.29**	**242**	P	**Pn**	**11 38 51.8**	**-1.1**
CEP				S	**Sn**	**11 41 34.0**	**-7.6**
VOSK	**Vostochnaya**	**15.56**	**318**	⇓P	**Pn**	**11 38 53.9**	**-2.4**
	comp=Z,12nm,0.8s						
BVA0	**Borovoye Array**	**16.03**	**318**	⇑P	**Pn**	**11 39 02.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=126,slow=12,SNR=26						
BVAR	**Borovoye Array**	**16.03**	**318**	Pn	**Pn**	**11 39 01.4**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=133,slow=10,SNR=14						
THW	**Thamme Wali**	**16.05**	**239**	P	**Pn**	**11 39 07.0**	**+4.2**
BRVK	**Borovoye**	**16.10**	**318**	*e*Pn	**Pn**	**11 39 03.4**	**+0.2**
	comp=Z,14nm,0.8s						
KBL	**Kabul**	**16.81**	**249**	*e*Pn	**Pn**	**11 39 14.7**	**+2.3**
	comp=Z,6.9nm,0.6s						
CD2	**Chengdu**	**16.89**	**127**	*e*P	**Pn**	**11 39 12.3**	**-1.2**
CD2				AP	pP	11 39 15.3	-5.9
CD2				XP	sP	11 39 19.3	-4.7
CD2				PP		11 39 25.0	
CD2				S	**Sn**	**11 42 16.6**	**-3.9**
CD2				XS	sS	11 42 29.0	-11
CD2				SS		11 42 35.0	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CD2				AMB	AMB		
	comp=Z,20nm,3.8s						
CD2				LR	LR		
	comp=N,130nm,12.2s						
CD2				LR	LR		
	comp=Z,120nm,11.2s						
AB09	**Akbulak array**	**20.80**	**299**	⇓P	**P**	**11 39 57.4**	**-0.7**
	comp=Z,1.5nm,0.5s						
KMI	**Kunming**	**20.94**	**140**	P	**P**	**11 39 59.9**	**+0.1**
KMI				AP		11 40 07.5	
KMI				AMB	AMB		
	comp=Z,17nm,0.7s						
AKTK	**Aktyubinsk**	**22.20**	**302**	P	**P**	**11 40 13.0**	**-0.2**
AKTO	**Aktyubinsk**	**22.20**	**302**	⇑P	**P**	**11 40 12.5**	**-0.6**
	comp=Z,0.9nm,0.9s,mb3.2						
AKTO	**Aktyubinsk**	**22.20**	**302**	P	**P**	**11 40 13.0**	**-0.1**
	comp=Z,1.8nm,0.7s,mb3.6,baz=90,slow=11,SNR=5.0						
ARU	**Arti**	**23.66**	**317**	*e*P	**P**	**11 40 28.9**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**25.47**	**156**	P	**P**	**11 40 45.6**	**+0.6**
	comp=Z,3.2nm,0.8s,mb3.9,baz=333,slow=9.9,SNR=21						
ARCES	**ARCESS Array B**	**41.63**	**332**	P	**P**	**11 43 05.2**	**+0.6**
	comp=Z,4.3nm,0.8s,mb4.1,baz=81,slow=8.3,SNR=4.0						
ARCES				PcP	PcP	11 44 59.2	-1.9
	comp=Z,2.9nm,0.9s,baz=87,slow=2.7,SNR=7.4						
PETK	**Petropavlovsk-**	**46.30**	**51**	LR	LR	12 05 27.4	
	comp=Z,30nm,18.5s,baz=335,slow=39						
NOA	**NORSAR Array B**	**48.14**	**320**	P	**P**	**11 43 55.9**	**-0.6**
	comp=Z,0.9nm,0.8s,mb3.9,baz=74,slow=7.9,SNR=2.4						
LPG	**La Plagne**	**56.31**	**303**	*e*P	**P**	**11 44 58.1**	**+0.8**
	comp=Z,3.9nm,0.5s,mb4.4						
LPL	**La Plagne**	**56.31**	**303**	*e*P	**P**	**11 44 58.1**	**+0.7**
	comp=Z,3.5nm,0.5s,mb4.3						
MBDF	**Montbardon**	**56.66**	**302**	*e*P	**P**	**11 44 59.5**	**-0.4**
SMF	**Signal de Mont**	**57.54**	**306**	*e*P	**P**	**11 45 09.8**	**+3.7**
	comp=Z,7.2nm,0.9s,mb4.4						
YKA	**Yellowknife Ar**	**73.99**	**11**	P	**P**	**11 46 51.5**	**-0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=346,slow=5.7,SNR=3.1						
WRA	**Warramunga Arr**	**75.18**	**135**	P	**P**	**11 46 58.5**	**-0.7**
	comp=Z,0.9nm,0.4s,mb4.0,baz=336,slow=6.5,SNR=25						
ASAR	**Alice Springs**	**78.05**	**138**	P	**P**	**11 47 15.1**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=334,slow=6.0,SNR=23						
TORD	**Torodi Ar. Bea**	**78.67**	**277**	P	**P**	**11 47 18.3**	**-0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=41,slow=4.9,SNR=7.7						
STKA	**Stephens Creek**	**88.65**	**137**	P	**P**	**11 48 08.6**	**-1.1**
	comp=Z,0.8nm,0.5s,mb4.3,baz=10,slow=5.7,SNR=3.3						

CRAAG ***18*** *11:59:09.5, 3604N×127E, Ml3.8*
CSEM ***18*** *11:59:10.5±0.1, 3612N×118E, h2km, ML3.8, Error ellipse: s-maj=3.7km s-min=3.0km az=1.0*
MDD ***18*** *11:59:11.3±0.5, 3603N×130E, h0km, mb3.9/7, Error ellipse: s-maj=6.6km s-min=4.0km az=137.0, PRIMO*
ISCJB ***18*** *11:59:11.4±0.4, 3624N±003×124E±003, h10km, Error ellipse: s-maj=4.1km s-min=3.3km az=2.9*
NEIC ***18*** *11:59:12.6, 3618N×127E, h0km, MG3.8(MDD), After MDD.*

LDG ***18*** *11:59:14.5±0.3, 3612N×130E, h10km, Ml2.8/2, Error ellipse: s-maj=6.0km s-min=3.5km az=167.0*

ISC 18 11:59:12.4±0.5, 3616N±005×124E±004, h12km±5km, n61, σ1§30/95, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	**Ech Chlef**	**0.08**	**93**	P	**Pg**	**11 59 14.0**	**-0.9**
ECHA	**Ech Chlef**	**0.10**	**96**	P	**Pg**	**11 59 14.0**	**-1.2**
EANR	**`Ain N'Sour**	**0.24**	**209**	P	**Pg**	**11 59 14.2**	**-3.2**
EBNR	**Beni Rached**	**0.27**	**61**	P	**Pg**	**11 59 17.8**	**-0.1**
OKGL	**Djebel Kef Gue**	**0.50**	**256**	P	**Pg**	**11 59 22.0**	**-0.1**
OJGS	**Djebel Guires**	**0.77**	**212**	P	**Pg**	**11 59 24.0**	**-3.2**
ETRT	**Tiaret**	**0.77**	**176**	P	**Pg**	**11 59 19.2**	**-8.0**
OJBR	**Djebel Berber**	**0.93**	**232**	P	**Pg**	**11 59 23.0**	**-7.2**
EMHD	**Djebel Mahouad**	**1.39**	**88**	P	**Pn**	**11 59 35.1**	**-2.4**
ODJA	**Bouhanifia**	**1.40**	**234**	P	**Pn**	**11 59 38.0**	**+0.3**
USTO	**Oran**	**1.52**	**254**	P	**Sg**	**12 00 05.0**	**+3.9**
ADJB	**Djebel Djouab**	**1.78**	**89**	P	**Pn**	**11 59 41.4**	**-1.5**
AKET	**Djebel Ketaf**	**2.14**	**92**	P	**Pn**	**11 59 54.5**	**+6.6**
ATAF	**Djebel Tarf**	**2.48**	**96**	P	**Pn**	**11 59 55.9**	**+3.4**
EMUR	**La Murta**	**2.60**	**311**	P	**Pn**	**11 59 54.0**	**-0.2**
	3.2nm,0.3s,SNR=12						
EMUR				S	**Sn**	**12 00 25.8**	**0.0**
	3.1nm,0.2s						
EMUR	**La Murta**	**2.60**	**311**	P	**Pn**	**11 59 54.0**	**-0.2**
	3.2nm,0.3s,SNR=12						
EMUR				S	**Sn**	**12 00 25.8**	**0.0**
	3.1nm,0.2s						
AKF	**Akfadou**	**2.72**	**79**	P	**Pn**	**11 59 59.1**	**+3.2**
EBEN	**Beniarda**	**2.79**	**336**	P	**Pn**	**11 59 57.3**	**+0.4**
	3.1nm,0.3s,SNR=9.9						
EBEN				S	**Sn**	**12 00 29.5**	**-1.0**
	2.0nm,0.2s						
EBEN	**Beniarda**	**2.79**	**336**	P	**Pn**	**11 59 57.3**	**+0.5**
	3.1nm,0.3s,SNR=9.9						
EBEN				S	**Sn**	**12 00 29.5**	**-1.1**
	2.0nm,0.2s						
EIBI	**Ibiza**	**2.86**	**2**	P	**Pn**	**11 59 58.5**	**+0.7**
	22nm,0.7s,SNR=8.5						
EIBI				S	**Sn**	**12 00 30.5**	**-1.7**
	5.9nm,0.1s						
EIBI	**Ibiza**	**2.86**	**2**	P	**Pn**	**11 59 58.5**	**+0.6**
	22nm,0.7s,SNR=8.5						
EIBI				S	**Sn**	**12 00 30.5**	**-1.7**
	5.9nm,0.1s						
ETOB	**Tobarra**	**3.33**	**319**	P	**Pn**	**12 00 05.1**	**+0.9**
	2.3nm,0.1s,SNR=33						
ETOB				S	**Sn**	**12 00 42.4**	**-1.3**
	4.1nm,0.3s,SNR=5.0						
ETOB	**Tobarra**	**3.33**	**319**	P	**Pn**	**12 00 05.1**	**+0.9**
	2.3nm,0.1s,SNR=33						
ETOB				S	**Sn**	**12 00 42.4**	**-1.3**
	4.1nm,0.3s,SNR=5.0						
EBER	**Berja**	**3.41**	**284**	P	**Pn**	**12 00 04.6**	**-0.7**
	0.8nm,0.1s,SNR=28						
EBER				S	**Sn**	**12 00 44.7**	**-1.0**
	1.5nm,0.2s						
EBER	**Berja**	**3.41**	**284**	P	**Pn**	**12 00 04.6**	**-0.7**
	0.8nm,0.1s,SNR=28						
EBER				S	**Sn**	**12 00 44.7**	**-0.9**
	1.5nm,0.2s						
EHUE	**Huescar**	**3.49**	**299**	P	**Pn**	**12 00 07.5**	**+1.1**
	0.4nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**12 00 47.0**	**-0.6**
	0.7nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.81**	**19**	P	**Pn**	**12 00 10.2**	**-0.7**
	0.8nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.81**	**19**	P	**Pn**	**12 00 10.2**	**-0.7**
	0.8nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**12 00 53.5**	**-2.1**
	1.4nm,0.2s,SNR=6.3						
EQES	**Quesada**	**3.82**	**297**	P	**Pn**	**12 00 12.3**	**+1.3**
	3.4nm,0.1s,SNR=12						
EQES				S	**Sn**	**12 00 56.4**	**+0.5**
	1.0nm,0.1s						
EQES	**Quesada**	**3.82**	**297**	P	**Pn**	**12 00 12.3**	**+1.3**
	3.4nm,0.1s,SNR=12						
EQES				S	**Sn**	**12 00 56.4**	**+0.5**
	1.0nm,0.1s						
ECHE	**Chera**	**3.84**	**334**	P	**Pn**	**12 00 13.1**	**+1.8**
	0.8nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**12 00 56.4**	**0.0**
	0.8nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**3.87**	**311**	P	**Pn**	**12 00 13.3**	**+1.6**
	0.6nm,0.1s,SNR=7.8						
EVIA				S	**Sn**	**12 00 57.6**	**+0.4**
	0.8nm,0.1s,SNR=7.1						
EQUE	**Quentar**	**3.91**	**287**	P	**Pn**	**12 00 12.8**	**+0.6**
	7.2nm,0.3s,SNR=39						
EQUE				S	**Sn**	**12 00 58.5**	**+0.6**
	0.7nm,0.1s,SNR=4.8						
EGUA	**Guajares**	**3.93**	**281**	P	**Pn**	**12 00 13.1**	**+0.6**
	1.2nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**12 00 57.3**	**-1.3**
	1.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.41**	**343**	P	**Pn**	**12 00 20.7**	**+1.6**
	0.9nm,0.1s,SNR=7.4						
EMOS				S	**Sn**	**12 01 09.4**	**-0.9**
	1.3nm,0.2s						
EMOS	**Mosqueruela**	**4.41**	**343**	P	**Pn**	**12 00 20.7**	**+1.6**
	0.9nm,0.1s,SNR=7.4						
EMOS				S	**Sn**	**12 01 09.4**	**-1.0**
	1.3nm,0.2s						
EBAN	**Banos Encina**	**4.49**	**298**	P	**Pn**	**12 00 21.3**

ISCJB ***18*** *12:02:06.5±1.0, 248N±02×1254E±0.1, h50km±7km, mb3.3/5, Error ellipse: s-maj=34.2km s-min=6.0km az=147.5*
JMA ***18*** *12:02:06.3±0.1, 2475N×12545E, h47km±1km, M3.5*
JMA Felt I J1.
IDC ***18*** *12:02:06.9±1.0, 2544N×12475E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.6/22, mbtmp3.5/9, ML3.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.2/24, Error ellipse: s-maj=29.4km s-min=19.9km az=63.0*
NEIC ***18*** *12:02:08.5±0.6, 2541N×12479E, h10km, MG3.6(JMA), Error ellipse: s-maj=15.3km s-min=10.9km az=150.0*

ISC 18 12:02:07.0±1.1, 248N±02×1254E±01, h46km±5km, n20, σ0§81/25, mb3.3/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res ISC
JOGS	**Gusukube**	**0.02**	**196**	P			**Pn**	**12 02 13.5**	**-0.6**
JOGS				S			**Sn**	**12 02 18.8**	**-0.3**
JMJ	**Miyako jima 2**	**0.11**	**288**	P			**Pn**	**12 02 13.9**	**-0.5**
JMJ				S			**Sn**	**12 02 19.4**	**-0.1**
JTJ	**Tarama**	**0.66**	**258**	P			**Pn**	**12 02 19.6**	**-0.5**
JTJ				S			**Sn**	**12 02 29.4**	**-0.1**
JIJ	**Ishigaki jima**	**1.23**	**251**	P			**Pn**	**12 02 27.8**	**+0.1**
JIJ				S			**Sn**	**12 02 43.8**	**+0.6**
JKRS	**Kuro-shima**	**1.39**	**247**	P			**Pn**	**12 02 30.4**	**+0.5**
JKRS				S			**Sn**	**12 02 47.6**	**+0.5**
IRIF	**Iriomote-Funau**	**1.59**	**254**	P			**Pn**	**12 02 33.2**	**+0.4**
IRIF				S			**Sn**	**12 02 52.9**	**+0.7**
HATJ	**Hateruma jima**	**1.63**	**244**	P			**Pn**	**12 02 34.8**	**+1.5**
JKE	**Kume jima 2**	**1.98**	**39**	P			**Pn**	**12 02 39.3**	**+1.3**
JKE				S		*e*	**Sn**	**12 03 02.4**	**+0.8**
JOW	**Kunigami**	**3.29**	**51**	Pn			**Pn**	**12 03 00.8**	**+4.7**
	2.3nm,0.3s,baz=177,slow=19,SNR=3.1								
JOW				Sn			**Sn**	**12 03 51.0**	**+17**
	4.4nm,0.3s,baz=126,slow=19,SNR=3.0								
NACB	**Ninganchiao**	**3.53**	**261**	*e*Pn			**Pn**	**12 02 58.4**	**-0.9**
TWG	**Pinlang**	**4.43**	**245**	Pn			**Pn**	**12 03 09.5**	**-2.2**
MJAR	**Matsushiro Arr**	**16.06**	**40**	Pn			**Pn**	**12 05 54.4**	**+4.7**
	0.2nm,0.3s,baz=223,slow=5.7,SNR=4.3								
GUMO	**Guam**	**21.45**	**118**	LR			LR	12 14 15.7	
	comp=Z,52nm,18.2s,baz=360,slow=33								
CMAR	**Chiang Mai Arr**	**25.37**	**261**	P			**P**	**12 07 30.7**	**+0.6**
	0.3nm,0.6s,mb3.0,baz=66,slow=23,SNR=3.0								
SONM	**Songino Array**	**27.50**	**332**	P			**P**	**12 07 48.4**	**-0.6**
	0.3nm,0.5s,mb3.1,baz=140,slow=9.8,SNR=2.5								
MKAR	**Makanchi Array**	**40.65**	**314**	P			**P**	**12 09 42.5**	**0.0**
	0.5nm,0.5s,mb3.4,baz=100,slow=10,SNR=12								
ZALV	**Zalesovo Beam**	**41.91**	**325**	P			**P**	**12 09 51.5**	**-1.3**
	0.3nm,0.4s,mb3.3,baz=127,slow=9.2,SNR=3.4								
WRA	**Warramunga Arr**	**45.29**	**168**	P			pP	12 10 32.4	-0.5
	1.7nm,0.9s,baz=350,slow=8.8,SNR=6.8								
ASAR	**Alice Springs**	**48.86**	**170**	P			pP	12 11 00.9	+0.1
	0.2nm,0.5s,baz=356,slow=7.1,SNR=6.7								
AKASG	**Malin Array Be**	**74.97**	**319**	P			**P**	**12 13 42.9**	**-0.4**
	0.7nm,0.6s,mb3.8,baz=56,slow=6.8,SNR=5.0								

SGS ***18*** *12:07:17.6, 3022N×3629E, h5km*
ISCJB ***18*** *12:07:18.1±0.9, 2990N±004×3637E±006, h0km, Error ellipse: s-maj=7.8km s-min=5.4km az=152.2*
CSEM ***18*** *12:07:18.3±0.7, 2996N×3646E, h20km, ML2.9, Error ellipse: s-maj=15.7km s-min=7.5km az=68.0*
GII ***18*** *12:07:18.2±0.0, 2985N×3638E, h0km, ML2.2/1, EXPLOSION*
HLW ***18*** *12:07:19.0, 2993N×3643E, h10km, Mb2.9*

ISC 18 12:07:18.2±0.9, 2989N±004×3640E±006, h0km, n22, σ0§87/28, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res ISC
AQBJ	**Aqaba**	**1.18**	**262**	Pg			**Pg**	**12 07 40.0**	**-0.9**
HRFI	**Mount Harif**	**1.19**	**277**	Pg			**Pg**	**12 07 40.4**	**-0.6**
HRFI				Sg			**Sg**	**12 07 58.1**	**+1.6**
ZFRI	**Zfri**	**1.25**	**302**	Pg			**Pg**	**12 07 41.7**	**-0.4**
EIL	**Elat**	**1.28**	**260**	Pg			**Pg**	**12 07 42.2**	**-0.5**
EIL				Sg			**Sg**	**12 08 00.8**	**+1.5**
PRNI	**Paran**	**1.29**	**291**	Pg			**Pg**	**12 07 42.0**	**-1.0**
PRNI				Sg			**Sg**	**12 08 01.0**	**+1.3**
MBRI	**Mt Berech**	**1.29**	**266**	Pg			**Pg**	**12 07 42.3**	**-0.8**
HQLS		**1.31**	**243**	P			**Pg**	**12 07 42.0**	**-1.3**
JLOS		**1.40**	**215**	P			**Pn**	**12 07 44.9**	**-0.1**
JLOS		**1.40**	**215**	P			**Pn**	**12 07 44.9**	**-0.1**
JLOS				S			**Sg**	**12 08 03.5**	**+0.3**
KRMI	**Paran Flat**	**1.47**	**279**	Pn			**Pn**	**12 07 45.2**	**-0.8**
KRMI				Sn			**Sn**	**12 08 04.7**	**-1.2**
RMNI	**Mount Ramon**	**1.58**	**297**	Pn			**Pn**	**12 07 48.0**	**+0.5**
HBST	**Basata**	**1.60**	**246**	P			**Pn**	**12 07 47.6**	**-0.1**
TBKS	**Tabuk**	**1.67**	**176**	P			**Pn**	**12 07 50.2**	**+1.5**
BDAS	**Al Bad'**	**1.85**	**218**	S			**Sn**	**12 08 16.1**	**+0.8**
BDAS	**Al Bad'**	**1.85**	**218**	P			**Pn**	**12 07 51.2**	**0.0**
RTMI	**Retamim**	**1.88**	**309**	Pn			**Pn**	**12 07 52.5**	**+0.9**
DSI	**Dead Sea**	**1.89**	**333**	Pn			**Pn**	**12 07 53.1**	**+1.4**
HNKL	**Nakhl**	**2.10**	**272**	P			**Pn**	**12 07 54.8**	**+0.2**
HNKL				S			**Sn**	**12 08 20.7**	**-0.8**
RSHS		**2.12**	**222**	P			**Pn**	**12 07 54.3**	**-0.6**
HKAT	**Jabal Katrina**	**2.51**	**238**	P			**Pn**	**12 08 00.4**	**+0.1**
TR2		**2.78**	**238**	P			**Pn**	**12 08 03.8**	**-0.2**
AMAG	**Maghara**	**2.86**	**286**	P			**Pn**	**12 08 04.4**	**-0.7**

GUC ***18*** *12:15:37.1±3.0, 2308S×7076W, h37km±9km, ML5.5, MW5.6(NEIC)*
ISCJB ***18*** *12:15:38.7±0.7, 2309S±003×7063W±003, h29km±4km, mb5.4/137, MS5.2/186, Error ellipse: s-maj=4.9km s-min=4.5km az=152.7*
IDC ***18*** *12:15:39.3±1.8, 2306S×7056W, h23km±11km, mb5.0/21, mb1 5.1/26, mb1mx5.0/28, mbtmp5.0/26, ML4.7/3, MS5.1/26, Ms1 5.1/26, ms1mx5.0/31, Error ellipse: s-maj=11.8km s-min=10.2km az=149.0*
BJI ***18*** *12:15:40.7, 2310S×7060W, h33km, mB5.7, Ms5.7, Msz5.4*
GCMT ***18*** *12:15:40.7±0.1, 2303S×7094W, h20km, MW5.7/98, Moment Tensor Solution. s76,c123; s98,c221; Duration: 1§6 Moment tensor: Scale 10^17Nm; Mrr1.92±.05; Mθθ0.82±.03; Mϕϕ-2.75±.04; Mrθ0.48±.08; Mθϕ1.20±.03; Mϕr-2.88±.13; Best double couple: Mo3.86700×10^17 NP1:ϕs328.00000°, δ22.00000°, λ68.00000°. NP2:ϕs171.00000°, δ70.00000°, λ98.00000°. Principal axes: T 3.2960, Plg64.0000°, Azm95.0000°; N 1.1350, Plg8.0000°, Azm348.0000°; P -4.4380, Plg25.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***18*** *12:15:40.7±0.1, 2310S×7055W, mb5.4/120, MS5.2/163, MW5.6 Error ellipse: s-maj=4.8km s-min=3.5km az=57.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^17Nm; Mrr1.15; Mθθ0.98; Mϕϕ-2.14; Mrθ0.02; Mθϕ-0.69; Mϕr-2.00; Best double couple: Mo2.80000×10^17 NP1: ϕs42.00000°, δ26.00000°, λ134.00000°. NP2: ϕs175.00000°, δ72.00000°, λ71.00000°. Principal axes: T 2.1800, Plg59.0000°, Azm58.0000°; N 0.9900, Plg17.0000°, Azm180.0000°; P -3.1800, Plg24.0000°, Azm279.0000°;*
NEIC Felt [III] at Antofagasta and Mejillones; [II] at Tocopilla.
MOS ***18*** *12:15:40.1±1.1, 2285S×7062W, h33km, mb5.5/60, MS5.2/35 Error ellipse: s-maj=10.8km s-min=6.6km az=90.7*
DJA ***18*** *12:15:50.3±0.0, 2512S×6922W, h10km, mB6.2/1, Mw(mB)5.9/1, Mwp5.2/3*

ISC 18 12:15:40.1±0.5, 2311S±002×7058W±003, h27km±3km, h30km±17km; pP-P, n556, σ0§94/335, mb5.4/137, MS5.2/186, 25C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res ISC
MECH	**Mejillones**	**0.12**	**87**	*e*P			**Pb**	**12 15 44.5**	**-0.8**
MECH				*i* S			**Sb**	**12 15 50.3**	**+1.6**
MECH				AML			AML	12 15 55.5	
	comp=N,776μm,0.8s								
CEN1	**Los Morros**	**0.45**	**128**	*e*P			**Pb**	**12 15 49.4**	**-0.1**
CEN1				*e*S			**Sb**	**12 15 58.0**	**+2.0**
CEN1				AML			AML	12 16 01.2	
	comp=E,115μm,0.6s								
ANCH	**Antofagasta**	**0.59**	**165**	*e*P			**Pb**	**12 15 50.5**	**-1.4**
ANCH				*i* S			**Sb**	**12 15 60.0**	**0.0**
ANCH	**Antofagasta**	**0.59**	**165**	*e*P			**Pb**	**12 15 50.5**	**-1.4**
ANCH				*i* S			**Sb**	**12 15 60.0**	**0.0**
ANCH				AML			AML	12 16 02.8	
	comp=N,126μm,0.8s								
PB06	**Plate Boundary**	**1.01**	**67**	⇓*i*P			**Pn**	**12 15 57.8**	**-0.8**
PB06				*i* S			**Sb**	**12 16 13.3**	**+1.3**
PB04	**Plate Boundary**	**1.31**	**50**	⇓*i*P			**Pn**	**12 15 54.0**	**-8.6**
PB04				*i* S			**Sn**	**12 16 07.4**	**-12**
PB04				AML			AML	12 16 10.4	
	comp=E,275μm,0.6s								
CPN1	**Cerro Paranal**	**1.52**	**174**	*e*P			**Pn**	**12 16 04.5**	**-1.0**
CPN1				AML			AML	12 16 30.2	
	comp=E,68μm,0.6s								
PB07	**Plate Boundary**	**1.52**	**25**	*e*P			**Pn**	**12 16 04.3**	**-1.2**
PB07				*i* S			**Sn**	**12 16 24.9**	**+0.5**
LVC	**Limon Verde**	**1.62**	**73**	Pg			**Pn**	**12 16 07.9**	**+1.1**
	comp=E,3μm,0.3s,baz=255,slow=13,SNR=3734								
LVC				Lg				12 16 30.8	
	comp=E,15μm,0.3s,baz=136,slow=14,SNR=31								
LVC	**Limon Verde**	**1.62**	**73**	*e*Pn			**Pn**	**12 16 08.1**	**+1.2**
LVC	**Limon Verde**	**1.62**	**73**	⇓*e*P			**Pn**	**12 16 07.8**	**+1.0**
LVC				*e*S			**Sn**	**12 16 30.6**	**+3.8**
LVC				AML			AML	12 16 36.3	
	comp=N,735μm,0.5s								
SPCH	**San Pedro de A**	**2.20**	**85**	P			**Pn**	**12 16 20.4**	**+5.4**
SPCH				S			**Sn**	**12 16 51.5**	**+10**
PB01	**Plate Boundary**	**2.29**	**26**	*e*P			**Pn**	**12 16 16.7**	**+0.5**
PB01				*i* S			**Sn**	**12 16 49.1**	**+5.6**
PB01				AML			AML	12 16 56.3	
	comp=E,42μm,0.5s								
LCO	**Las Campanas**	**5.88**	**181**	*e*Pn			**Pn**	**12 17 02.3**	**-3.1**
	comp=E,967nm,0.8s								
ARE	**Arequipa**	**6.67**	**352**	⇓*i*P			**Pn**	**12 17 12.9**	**-3.4**
ARE				*i* S			**Sn**	**12 18 13.4**	**-18**
LPAZ	**La Paz**	**7.17**	**19**	Pn			**Pn**	**12 17 23.8**	**+0.6**
	comp=E,9.9nm,0.3s,baz=204,slow=10,SNR=213								
LPAZ				Sn			**Sn**	**12 18 50.8**	**+7.0**
	baz=20,slow=16,SNR=0.9								
LPAZ				Lg				12 19 27.2	
	comp=E,2.8nm,0.3s,baz=99,slow=19,SNR=2.4								
LPAZ				LR			LR	12 20 22.6	
	comp=E,16μm,18.7s,baz=195,slow=40								
LPAZ	**La Paz**	**7.17**	**19**	*e*Pn			**Pn**	**12 17 24.2**	**+1.0**
	comp=E,5.6nm,0.9s								
LPAZ				*e*Sn			**Sn**	**12 18 45.6**	**+1.8**
LPAZ	**La Paz**	**7.17**	**19**	*e*P			**Pn**	**12 17 24.2**	**+1.0**
LPAZ				*e*				12 18 45.6	
LPAZ				pmax			pmax		
	comp=Z,6.0nm,0.9s								
CFAA	**Coronel Fontan**	**8.71**	**167**	Pn			**Pn**	**12 17 43.0**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=343,slow=12,SNR=45								
CFAA				Sn			**Sn**	**12 19 31.1**	**+9.4**
	baz=188,slow=20,SNR=2.8								
CFAA				LR			LR	12 21 15.6	
	comp=Z,3μm,19.6s,baz=333,slow=38								
LMEL	**Las Melosas**	**10.70**	**178**	P			**Pn**	**12 18 11.4**	**-0.3**
SIV	**San Ignacio**	**11.42**	**53**	Pn			**Pn**	**12 18 19.7**	**-1.8**
	comp=Z,9.2nm,0.3s,baz=248,slow=13,SNR=166								
SIV				Sn			**Sn**	**12 20 28.2**	**0.0**
	baz=275,slow=11,SNR=1.7								
NNA	**Nana**	**12.57**	**331**	Pn			**Pn**	**12 18 33.5**	**-3.7**
	comp=Z,5.1nm,0.3s,baz=179,slow=16,SNR=11								
NNA				Sn			**Sn**	**12 20 46.0**	**-10**
	comp=Z,14nm,0.3s,baz=215,slow=18,SNR=8.6								
NNA				LR			LR	12 22 32.4	
	comp=Z,10μm,21.7s,baz=164,slow=33								
NNA	**Nana**	**12.57**	**331**	Pn			**Pn**	**12 18 33.0**	**-4.2**
	comp=Z,533nm,0.7s,SNR=6.7								
NNA	**Nana**	**12.57**	**331**	*e*Pn			**Pn**	**12 18 33.6**	**-3.6**
LPA	**La Plata**	**16.13**	**140**	*ce*P			**Pn**	**12 19 23.0**	**-1.9**
LPA	**La Plata**	**16.13**	**140**	*e*P			**Pn**	**12 19 28.0**	**+3.1**
LPA				*e*PP				12 20 19.0	
LPA				*es*S			sS	12 22 47.0	-0.2
LPA	**La Plata**	**16.13**	**140**	⇑*e*P			**Pn**	**12 19 23.0**	**-1.9**
LPA				*e*P				12 19 28.0	
LPA				*e*PP				12 20 19.0	
LPA				*es*S			sS	12 22 47.0	-0.2
PLCA	**Paso Flores**	**17.57**	**180**	P			**Pn**	**12 19 41.5**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=350,slow=14,SNR=23								
PLCA				S			**Sn**	**12 23 04.3**	**+6.5**
	comp=Z,0.2nm,0.3s,baz=306,slow=5.8,SNR=3.4								
PLCA				LR			LR	12 25 51.9	
	comp=Z,5μm,20.8s,baz=356,slow=35								
PLCA	**Paso Flores**	**17.57**	**180**	*e*Pn			**Pn**	**12 19 42.0**	**-1.0**
	comp=Z,75nm,1.2s								
PLCA	**Paso Flores**	**17.57**	**180**	*e*P			**Pn**	**12 19 42.0**	**-1.0**
PLCA				pmax			pmax		
	comp=Z,75nm,1.2s								
ATAH	**Atahualpa**	**17.69**	**334**	P			**Pn**	**12 19 43.4**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=156,slow=8.0,SNR=25								
ATAH				S			**Sn**	**12 23 01.9**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=305,slow=16,SNR=2.1								
SPB	**Sao Paulo**	**21.26**	**96**	*e*P			**P**	**12 20 23.3**	**-1.1**
BDFB	**Brasilia**	**22.53**	**75**	P			**P**	**12 20 36.5**	**-1.5**
	comp=Z,36nm,0.7s,mb4.9,baz=249,slow=17,SNR=37								
BDFB				S			**S**	**12 24 43.6**	**-0.6**
	comp=Z,8.6nm,0.8s,baz=74,slow=26,SNR=1.8								
BDFB				LR			LR	12 30 22.0	
	comp=Z,3μm,21.8s,MS4.8,baz=66,slow=39								
BDFB	**Brasilia**	**22.53**	**75**	*e*P			**P**	**12 20 36.5**	**-1.5**
	comp=Z,37nm,0.7s,mb4.9								
BDFB				LR			LR		
	comp=Z,10μm,21.0s,MS5.2								
BDFB	**Brasilia**	**22.53**	**75**	*e*P			**P**	**12 20 36.5**	**-1.5**
BDFB				pmax			pmax		
	comp=Z,37nm,0.7s								
BDFB				MLR			MLR		
	comp=Z,10μm,21.0s								
OTAV	**Otavalo**	**24.44**	**341**	*e*P			**P**	**12 20 57.0**	**+0.3**
OTAV				LR			LR		
	comp=Z,3μm,22.0s,MS4.8								
CAM4	**Nova Friburgo**	**25.84**	**94**	⇑*i*P			**P**	**12 21 08.3**	**-1.1**
CAM4				*i*				12 21 12.5	
CAM4				*i*				12 21 19.5	
CAM4				*i*				12 21 26.9	
CAM4				*i*				12 21 33.2	
CAM4				*i*				12 21 40.5	
CAM3	**Guarapari**	**27.96**	**91**	⇑*i*P			**P**	**12 21 27.5**	**-1.1**
CAM3				*i*				12 21 29.9	
CAM3				*i*			pP	12 21 33.9	-2.7
CAM3				*i*				12 21 38.7	
CAM3				*i*				12 21 43.0	
CAM3				*i*				12 21 49.9	
CAM3				*i*				12 21 54.3	
CAM3				*i*				12 22 06.8	
ROSC	**El Rosal**	**28.04**	**352**	P			**P**	**12 21 28.3**	**-0.9**
	comp=Z,9.0nm,0.3s,mb4.8,baz=275,slow=22,SNR=10								
ROSC				LR			LR	12 32 28.1	
	comp=Z,5μm,18.5s,MS5.1,baz=187,slow=36								
ROSC	**El Rosal**	**28.04**	**352**	*e*P			**P**	**12 21 30.0**	**+0.8**
EFI	**East Falkland**	**30.11**	**164**	PFAKE				12 22 00.0	+13
EFI				LR			LR		
	comp=Z,5μm,21.0s,MS5.2								
EFI	**East Falkland**	**30.11**	**164**	*e*P			**P**	**12 21 47.4**	**+0.1**
USHA	**Ushuaia**	**31.72**	**178**	P			**P**	**12 22 01.0**	**-0.4**
	comp=Z,22nm,0.9s,mb5.0,baz=6.1,slow=6.6,SNR=4.4								
BCIP	**Isla Barro Col**	**33.33**	**343**	PFAKE				12 22 30.0	+14
BCIP				LR			LR		
	comp=Z,2μm,19.0s,MS4.8								
PCRV	**Puerto La Cruz**	**33.59**	**11**	LR			LR	12 36 04.7	
	comp=Z,3μm,18.3s,MS5.0,baz=23,slow=36								
RPN	**Rapa Nui**	**35.22**	**255**	P			**P**	**12 22 31.1**	**-1.2**
	comp=Z,41nm,0.7s,mb5.5,baz=104,slow=1.0,SNR=4.5								
RPN				LR			LR	12 33 03.3	
	comp=Z,4μm,19.6s,MS5.2,baz=90,slow=30								
RPN	**Rapa Nui**	**35.22**	**255**	*e*P			**P**	**12 22 31.4**	**-1.0**
	comp=Z,71nm,0.7s,mb5.7								
RPN				LR			LR		
	comp=Z,4μm,21.0s,MS5.2								
GRGR	**Grenville**	**36.10**	**15**	PFAKE				12 22 50.0	+10
GRGR				LR			LR		
	comp=Z,3μm,19.0s,MS5.0								
RCBR	**Riachuelo**	**37.57**	**68**	*e*P			**P**	**12 22 52.3**	**-0.1**
	comp=Z,359nm,0.8s,mb6.2								
RCBR				LR			LR		
	comp=Z,9μm,21.0s,MS5.5								
BBGH	**Gun Hill**	**37.61**	**18**	PFAKE				12 23 00.0	+7.3
BBGH				LR			LR		
	comp=Z,11μm,20.0s,MS5.6								
FDF	**Fort de France**	**38.73**	**15**	*e*P			**P**	**12 22 59.3**	**-2.7**
TGUH	**Tegucigalpa,Un**	**40.39**	**335**	*e*P			**P**	**12 23 15.3**	**-0.7**
	comp=Z,81nm,0.8s,mb5.5								
TGUH				LR			LR		
	comp=Z,1μm,19.0s,MS4.9								
CPD	**Cerro la Pandu**	**41.15**	**7**	*e*P			**P**	**12 23 19.7**	**-2.5**
	comp=Z,256nm,1.8s,mb5.5								
CPD	**Cerro la Pandu**	**41.15**	**7**	*e*P			**P**	**12 23 19.7**	**-2.5**
CPD				pmax			pmax		
	comp=Z,256nm,1.8s,mb5.5								
SJG	**San Juan**	**41.20**	**6**	*e*P			**P**	**12 23 20.1**	**-2.4**
	comp=Z,307nm,1.6s,mb5.7								
SJG				LR			LR		
	comp=Z,3μm,20.0s,MS5.2								
SJG	**San Juan**	**41.20**	**6**	*e*P			**P**	**12 23 20.1**	**-2.5**
SJG				pmax			pmax		
	comp=Z,307nm,1.6s								
SJG				MLR			MLR		
	comp=Z,3μm,20.0s								
MPR	**Mayaguez**	**41.21**	**5**	*e*P			**P**	**12 23 21.1**	**-1.5**
MTP	**Monte Pirata**	**41.25**	**7**	*e*P			**P**	**12 23 20.6**	**-2.4**
MTP				*e*pP			pP	12 23 31.4	+0.2
HUMP	**Col San Antoni**	**41.26**	**7**	*e*P			**P**	**12 23 21.1**	**-2.0**
	comp=Z,103nm,1.4s,mb5.3								
AOPR	**Arecibo Observ**	**41.37**	**6**	*e*P			**P**	**12 23 22.6**	**-1.4**
	comp=Z,101nm,1.4s,mb5.3								
CBYP	**Canovanas**	**41.39**	**7**	*e*P			**P**	**12 23 22.3**	**-1.9**
	comp=Z,300nm,1.4s,mb5.7								
ANWB	**Willy Bob**	**41.43**	**13**	*e*P			**P**	**12 23 20.9**	**-3.6**
SDDR	**Presa de Saban**	**41.84**	**359**	PFAKE				12 23 40.0	+12
SDDR				LR			LR		
	comp=Z,3μm,19.0s,MS5.1								
PMSA	**Palmer Station**	**41.87**	**176**	P			**P**	**12 23 28.4**	**+0.8**
	comp=Z,30nm,0.8s,mb5.0,baz=359,slow=7.9,SNR=8.0								
PMSA				LR			LR	12 41 37.0	
	comp=Z,3μm,18.1s,MS5.2,baz=346,slow=37								
VHO	**Vista Hermosa**	**47.42**	**325**	*i* P			**P**	**12 24 12.8**	**+0.4**
PNIG	**Pinotepa**	**47.62**	**323**	*e*P			**P**	**12 24 13.6**	**-0.4**
CAIG	**El Cayaco**	**49.35**	**321**	*e*P			**P**	**12 24 26.8**	**-0.6**
LVIG	**Laguna Verde**	**49.48**	**327**	*i* P			**P**	**12 24 27.9**	**-0.3**
PPM	**Popocatepetl**	**50.07**	**325**	*i* P			**P**	**12 24 39.8**	**+7.0**
ZIIG	**Zihuatanejo**	**50.48**	**321**	*i* P			**P**	**12 24 31.1**	**-4.8**
TRIS	**Tristan da Cun**	**51.57**	**120**	*e*P			**P**	**12 24 45.4**	**+1.4**
	comp=Z,113nm,0.8s,mb5.8								
TRIS				LR			LR		
	comp=Z,1μm,22.0s,MS5.0								
MOIG	**Morelia**	**51.97**	**322**	*e*P			**P**	**12 24 47.4**	**+0.3**
DWPF	**Disney**	**51.99**	**348**	PFAKE				12 25 00.0	+13
DWPF				LR			LR		
	comp=Z,2μm,19.0s,MS5.1								
PTCN	**Pitcairn Islan**	**53.98**	**255**	PFAKE				12 25 10.0	+8.0
PTCN				LR			LR		
	comp=Z,2μm,19.0s,MS5.2								
ZAIG	**Zacatecas**	**55.21**	**323**	*i* P			**P**	**12 25 11.7**	**+0.9**
BBSR	**BB Station**	**55.45**	**6**	*e*P			**P**	**12 25 14.0**	**+1.6**
BBSR				LR			LR		
	comp=Z,1μm,21.0s,MS4.9								
ASCN	**Ascension**	**55.91**	**84**	PFAKE				12 25 30.0	+14
ASCN				LR			LR		
	comp=Z,4μm,20.0s,MS5.5								
BRAL	**Brewton**	**56.08**	**343**	PFAKE				12 25 30.0	+13
BRAL				LR			LR		
	comp=Z,1μm,20.0s,MS5.0								
NHSC	**New Hope**	**56.65**	**350**	PFAKE				12 25 30.0	+9.2
NHSC				LR			LR		
	comp=Z,2μm,21.0s,MS5.2								
KVTX	**Kingsville**	**56.85**	**331**	PFAKE				12 25 30.0	+7.6
KVTX				LR			LR		
	comp=Z,966nm,19.0s,MS4.9								
GOGA	**Godfrey**	**57.53**	**347**	PFAKE				12 25 40.0	+13
GOGA				LR			LR		
	comp=Z,1μm,19.0s,MS5.0								
JSC	**Jenkinsville**	**57.97**	**350**	*e*P			**P**	**12 25 29.3**	**-0.9**
LRAL	**Lakeview Retre**	**57.99**	**344**	PFAKE				12 25 40.0	+10
LRAL				LR			LR		
	comp=Z,1μm,20.0s,MS5.0								
HKT	**Hockley**	**58.07**	**334**	*e*P			**P**	**12 25 30.3**	**-0.7**
	comp=Z,34nm,1.1s,mb5.3								
HKT				LR			LR		
	comp=Z,723nm,19.0s,MS4.8								
HKT	**Hockley**	**58.07**	**334**	*e*P			**P**	**12 25 30.3**	**-0.7**
HKT				pmax			pmax		
	comp=Z,34nm,1.1s,mb5.3								
HKT				MLR			MLR		
	comp=Z,723nm,19.0s,MS4.8								
VBMS	**Vicksburg**	**58.23**	**340**	*e*P			**P**	**12 25 31.1**	**-0.9**
	comp=Z,74nm,1.2s,mb5.6								
VBMS				LR			LR		
	comp=Z,942nm,20.0s,MS4.9								
CNNC	**Cliffs of the**	**58.44**	**353**	PFAKE				12 25 50.0	+17
CNNC				LR			LR		
	comp=Z,1μm,20.0s,MS5.1								
RKT	**Rikit

MCWV LR LR
comp=Z,2µm,20.0s,MS5.3
WMOK Wichita Mounta 63.46 334 PFAKE 12 26 20.0 +12
WMOK LR LR
comp=Z,664nm,21.0s,MS4.8
OLIL Olney 63.67 345 *eP* **P 12 26 06.8 -2.1**
comp=Z,109nm,1.3s,mb5.7
SSPA Standing Stone 63.78 354 PFAKE 12 26 20.0 +10
SSPA LR LR
comp=Z,2µm,19.0s,MS5.2
ACSO Alum Creek Sta 64.06 349 PFAKE 12 26 20.0 +8.6
ACSO LR LR
comp=Z,2µm,22.0s,MS5.2
BRYW Bryant College 64.70 359 *eP* **P 12 26 14.5 -1.1**
AMTX Amarillo 64.79 332 PFAKE 12 26 30.0 +14
AMTX LR LR
comp=Z,923nm,20.0s,MS5.0
BBTS Babate 64.85 60 P **P 12 26 16.8 -0.3**
comp=Z,32nm,0.7s,mb5.4,baz=284,slow=0.8,SNR=13
WES Weston 65.17 359 PFAKE 12 26 30.0 +11
WES LR LR
comp=Z,2µm,22.0s,MS5.2
BINY Binghamton 65.17 356 PFAKE 12 26 30.0 +11
BINY LR LR
comp=Z,2µm,22.0s,MS5.2
ERPA Erie 65.48 352 PFAKE 12 26 30.0 +9.4
ERPA LR LR
comp=Z,1µm,20.0s,MS5.1
HDIL Hopedale 65.69 344 PFAKE 12 26 30.0 +8.0
HDIL LR LR
comp=Z,1µm,20.0s,MS5.2
MAIT Maitri 65.86 159⇑ *iP* **P 12 26 21.1 -1.7**
NVL N'lazarevskaya 65.89 159*c i*P **P 12 26 23.8 +0.8**
NVL *e**PP pP 12 26 33.0 +1.4
NVL *eS S 12 35 09.2 +1.1
NVL pmax pmax
comp=Z,79nm,1.0s,mb5.7
NVL MLR MLR
comp=N,537nm,13.0s,MS5.3
NVL MLR MLR
comp=E,1µm,13.0s,MS5.3
NVL MLR MLR
comp=Z,2µm,13.0s,MS5.4
AAM Ann Arbor 66.19 349 PFAKE 12 26 40.0 +15
AAM LR LR
comp=Z,1µm,19.0s,MS5.0
BNM Barren Site 66.47 328 *eP* **P 12 26 27.9 +0.8**
KSU1 Kansas State U 66.51 338 PFAKE 12 26 40.0 +13
KSU1 LR LR
comp=Z,1µm,19.0s,MS5.2
NCB Newcomb 66.83 357 PFAKE 12 26 40.0 +11
NCB LR LR
comp=Z,2µm,21.0s,MS5.3
LAZ Ladron 66.92 328 *eP* **P 12 26 30.5 +0.4**
ANMO Albuquerque 67.03 328 PFAKE 12 26 40.0 +9.3
ANMO LR LR
comp=Z,1µm,20.0s,MS5.2
ANMO Albuquerque 67.03 328⇑ *eP* **P 12 26 30.9 +0.2**
LBNH Lisbon 67.03 359 PFAKE 12 26 40.0 +9.5
LBNH LR LR
comp=Z,1µm,19.0s,MS5.1
QSPA South Pole Qui 67.09 180 PFAKE 12 26 40.0 +9.5
QSPA LR LR
comp=Z,2µm,19.0s,MS5.2
TUC Tucson 67.18 324 *eP* **P 12 26 31.9 +0.2**
comp=Z,43nm,1.3s,mb5.3
TUC LR LR
comp=Z,960nm,21.0s,MS5.0
TUC Tucson 67.18 324 *eP* **P 12 26 31.9 +0.2**
TUC pmax pmax
comp=Z,43nm,1.3s,mb5.3
TUC MLR MLR
comp=Z,960nm,21.0s,MS5.0
CBKS Cedar Bluff 67.39 336 PFAKE 12 26 40.0 +7.1
CBKS LR LR
comp=Z,761nm,19.0s,MS4.9
LONY Lake Ozonia 67.50 357 PFAKE 12 26 50.0 +17
LONY LR LR
comp=Z,2µm,19.0s,MS5.3
SCIA State Center 68.00 342 *eP* **P 12 26 35.5 -1.1**
comp=Z,94nm,1.1s,mb5.7
SCIA LR LR
comp=Z,1µm,19.0s,MS5.1
PKME Peaks-Kenny Pk 68.05 1 *eP* **P 12 26 37.4 +0.4**
comp=Z,48nm,1.2s,mb5.4
PKME LR LR
comp=Z,992nm,20.0s,MS5.0
JFWS Jewell Farm 68.15 345 *eP* **P 12 26 36.4 -1.2**
comp=Z,60nm,0.9s,mb5.6
JFWS LR LR
comp=Z,1µm,20.0s,MS5.2
JFWS Jewell Farm 68.15 345 *eP* **P 12 26 36.4 -1.2**
JFWS pmax pmax
comp=Z,60nm,0.9s,mb5.6
JFWS MLR MLR
comp=Z,1µm,20.0s,MS5.2
GLMI Grayling 68.81 349 PFAKE 12 26 50.0 +8.3
GLMI LR LR
comp=Z,2µm,21.0s,MS5.3
SDCO Great Sand Dun 68.86 331 *eP* **P 12 26 42.5 +0.3**
comp=Z,87nm,1.2s,mb5.6
SDCO LR LR
comp=Z,610nm,20.0s,MS4.8
MVCO Mesa Verde 69.83 328 PFAKE 12 27 00.0 +12
MVCO LR LR
comp=Z,1µm,20.0s,MS5.2
WUAZ Wupatki 69.94 325 *eP* **P 12 26 49.7 +0.7**
comp=Z,154nm,1.5s,mb5.7
WUAZ LR LR
comp=Z,2µm,21.0s,MS5.3
GLA Glamis 70.00 321 PFAKE 12 27 00.0 +11
GLA LR LR
comp=Z,815nm,19.0s,MS5.0
OGNE Ogallala 70.11 335 *eP* **P 12 26 49.8 0.0**
comp=Z,82nm,1.3s,mb5.5
OGNE LR LR
comp=Z,914nm,21.0s,MS5.0
LIC Lamto 70.32 74 *eP* **P 12 26 50.9 -0.9**
comp=Z,93nm,0.7s,mb5.8
LIC Lamto 70.32 74⇑ *iP* **P 12 26 50.8 -1.0**
comp=Z,57nm,0.7s,mb5.3
LIC Lamto 70.32 74⇑ *iP* **P 12 26 50.8 -1.0**
comp=Z,29nm,0.7s,mb5.3
TIC Toumodi 70.52 74 *eP* **P 12 26 52.2 -0.8**
comp=Z,136nm,0.8s,mb5.9
TIC Toumodi 70.52 74 *eP* **P 12 26 52.2 -0.8**
TIC pmax pmax
comp=Z,136nm,0.8s,mb5.9
PV01 Paradox Valley 70.59 329 *eP* **P 12 26 53.4 +0.5**
ISCO Idaho Springs 70.61 332 *eP* **P 12 26 53.1 +0.2**
comp=Z,20nm,1.0s,mb5.0
ISCO LR LR
comp=Z,836nm,19.0s,MS5.0
ISCO Idaho Springs 70.61 332 *eP* **P 12 26 53.1 +0.2**
ISCO pmax pmax
comp=Z,20nm,1.0s,mb5.0
ISCO MLR MLR
comp=Z,836nm,19.0s,MS5.0
KIC Kosan Boka 70.64 74 *eP* **P 12 26 53.0 -0.7**
comp=Z,306nm,0.7s,mb6.3
DBIC Dimbokro 70.67 74 P **P 12 26 53.2 -0.7**
comp=Z,69nm,0.7s,mb5.7,baz=217,slow=6.4,SNR=129
DBIC LR LR 12 57 02.9
comp=Z,3µm,19.1s,MS5.6,baz=220,slow=35
DBIC Dimbokro 70.67 74 *eP* **P 12 26 53.0 -1.0**
comp=Z,72nm,0.7s,mb5.7
DBIC LR LR
comp=Z,3µm,19.0s,MS5.6
DBIC Dimbokro 70.67 74 *eP* **P 12 26 53.0 -0.9**
DBIC pmax pmax
comp=Z,72nm,0.7s
DBIC MLR MLR
comp=Z,3µm,19.0s
ECSD EROS,Sioux Fal 70.68 340 PFAKE 12 27 10.0 +17
ECSD LR LR
comp=Z,1µm,19.0s,MS5.1
SMCO Snowmass 70.70 331 *eP* **P 12 26 54.7 +1.2**
comp=Z,40nm,1.0s,mb5.3
PV10 Paradox Valley 71.01 329 *eP* **P 12 26 55.4 0.0**
PFO Pinyon Flat Ob 71.34 321 *eP* **P 12 26 58.0 +0.4**
comp=Z,32nm,1.1s,mb5.2
PFO *ePP pP 12 29 37.2 +0.9
PFO LR LR
comp=Z,2µm,20.0s,MS5.2
PFO Pinyon Flat Ob 71.34 321 *eP* **P 12 26 58.0 +0.5**
PFO *e* 12 29 37.2
PFO pmax pmax
comp=Z,32nm,1.1s,mb5.2
PFO MLR MLR
comp=Z,2µm,20.0s,MS5.2
LDFC Landfair 71.63 323 *eP* **P 12 27 00.2 +1.0**
comp=Z,76nm,1.2s,mb5.5
CHIE El Hierro 71.65 48 P **P 12 26 58.9 -0.6**
comp=Z,16nm,0.8s,mb5.0
PHWY Pilot Hill 71.79 333 *eP* **P 12 27 00.1 0.0**
comp=Z,60nm,1.4s,mb5.3
SRU San Rafael 72.30 328 *eP* **P 12 27 03.1 -0.1**
comp=Z,33nm,0.9s,mb5.3
SRU San Rafael 72.30 328 *eP* **P 12 27 03.1 -0.1**
SRU pmax pmax
comp=Z,33nm,0.9s,mb5.3
EGOM La Gomera 72.44 48 P **P 12 27 04.0 -0.2**
comp=Z,76nm,0.7s,mb5.7
CCUT Cedar City 72.53 326 *eP* **P 12 27 05.9 +1.4**
MVU Marysvale 72.66 327 PFAKE 12 27 20.0 +15
MVU LR LR
comp=Z,1µm,19.0s,MS5.2
MWC Mount Wilson 72.71 320 PFAKE 12 27 20.0 +14
MWC LR LR
comp=Z,744nm,20.0s,MS5.0
ARUT Antelope Range 72.75 326 *eP* **P 12 27 07.2 +1.4**
GSC Goldstone 72.75 322 *eP* **P 12 27 06.3 +0.4**
comp=Z,57nm,1.5s,mb5.3
GSC LR LR
comp=Z,1µm,21.0s,MS5.2
GSC Goldstone 72.75 322 *eP* **P 12 27 06.3 +0.4**
GSC pmax pmax
comp=Z,57nm,1.5s,mb5.3
GSC MLR MLR
comp=Z,1µm,21.0s,MS5.2
PASC Pasadena Art C 72.75 320 *eP* **P 12 27 06.6 +0.6**
comp=Z,22nm,0.6s,mb5.2
TMUT Trail Mountain 72.78 328 *eP* **P 12 27 06.8 +0.8**
RWWY Rawlins 72.85 332 *eP* **P 12 27 07.0 +0.6**
comp=Z,144nm,1.6s,mb5.7
CCAN Las Canadas 72.89 48 P **P 12 27 06.8 -0.1**
comp=Z,26nm,0.7s,mb5.3
EYMN Ely 73.18 345 *eP* **P 12 27 06.8 -1.3**
EYMN LR LR
comp=Z,53nm,1.2s,mb5.3
EBAJ Bajamar 73.27 48 P **P 12 27 10.0 +0.9**
comp=Z,62nm,1.0s,mb5.5
PPT Papeete 73.46 258 *eS* S 12 36 37.7 -1.0
comp=Z,5µm,26.5s
PPT Papeete 73.46 258 *eLR* LR 12 49 55.7
comp=Z,5µm,27.0s,baz=108
PPT Papeete 73.46 258 LR LR 12 51 02.9
comp=Z,2µm,19.7s,MS5.3,baz=107,slow=29
MPU Maple Canyon 73.54 328 *eP* **P 12 27 10.9 +0.4**
comp=Z,59nm,1.1s,mb5.4
MPU LR LR
comp=Z,2µm,21.0s,MS5.3
RSSD Black Hills 73.59 336 *eP* **P 12 27 10.6 0.0**
comp=Z,35nm,1.3s,mb5.1
RSSD Black Hills 73.59 336 *eP* **P 12 27 10.6 -0.1**
RSSD pmax pmax
comp=Z,35nm,1.3s,mb5.1
TPNV Topopah Spring 73.63 323 *eP* **P 12 27 11.9 +0.8**
comp=Z,40nm,1.0s,mb5.3
TPNV LR LR
comp=Z,968nm,19.0s,MS5.1
TPNV Topopah Spring 73.63 323 *eP* **P 12 27 11.9 +0.8**
TPNV pmax pmax
comp=Z,41nm,1.0s,mb5.3
TPNV MLR MLR
comp=Z,968nm,19.0s,MS5.1
NLU North Lily Min 73.71 328 *eP* **P 12 27 09.8 -1.7**
DAC Darwin (Calif) 73.90 322 PFAKE 12 27 20.0 +7.3
DAC LR LR
comp=Z,1µm,19.0s,MS5.2
JLU Jordanelle 73.91 329 *eP* **P 12 27 13.1 +0.5**
ISA Isabella 73.97 321 *eP* **P 12 27 13.6 +0.5**
comp=Z,19nm,0.9s,mb5.0
ISA LR LR
comp=Z,765nm,19.0s,MS5.0
ISA Isabella 73.97 321 *eP* **P 12 27 13.6 +0.5**
ISA pmax pmax
comp=Z,19nm,0.9s,mb5.0
ISA MLR MLR
comp=Z,765nm,19.0s,MS5.0
SBA Scott Base 73.97 191 *eP* **P 12 27 14.3 +1.7**
comp=Z,126nm,1.7s,mb5.6
SBA LR LR
comp=Z,725nm,19.0s,MS5.0
SBA Scott Base 73.97 191 *eP* **P 12 27 14.3 +1.7**
SBA pmax pmax
comp=Z,126nm,1.7s,mb5.6
SBA MLR MLR
comp=Z,725nm,19.0s,MS5.0
DUG Dugway 74.26 328 *eP* **P 12 27 15.3 +0.7**
comp=Z,38nm,1.0s,mb5.3
DUG LR LR
comp=Z,937nm,19.0s,MS5.1
DUG Dugway 74.26 328 *eP* **P 12 27 15.3 +0.6**
DUG pmax pmax
comp=Z,38nm,1.0s,mb5.3
DUG MLR MLR
comp=Z,937nm,19.0s,MS5.1
AGMN Agassiz Refuge 74.61 343 *eP* **P 12 27 15.6 -0.9**
comp=Z,53nm,1.0s,mb5.4
HWUT Hardware Ranch 74.75 329 *eP* **P 12 27 17.2 -0.3**
comp=Z,34nm,0.9s,mb5.3
HWUT LR LR
comp=Z,2µm,21.0s,MS5.3
BW06 Boulder Array 74.75 331 PFAKE 12 27 30.0 +13
BW06 LR LR
comp=Z,944nm,19.0s,MS5.1
PDAR Pinedale Array 74.75 331 P **P 12 27 17.3 -0.2**
comp=Z,4.4nm,0.9s,mb4.4,baz=149,slow=6.9,SNR=16
PDAR LR LR 13 02 20.8
comp=Z,501nm,20.7s,MS4.8,baz=150,slow=38
CFTV Fuerteventura 74.76 50 P **P 12 27 18.5 +0.6**
comp=Z,21nm,0.9s,mb5.1
BGU Big Grassy Mou 74.92 328 *eP* **P 12 27 18.9 +0.4**
SPUT South Promonto 74.94 329 *eP* **P 12 27 18.9 +0.3**
TPH Tonopah 74.98 324 *eP* **P 12 27 19.6 +0.7**
comp=Z,25nm,1.3s,mb5.0
TPH LR LR
comp=Z,686nm,19.0s,MS5.0
TPH Tonopah 74.98 324 *eP* **P 12 27 19.6 +0.7**
TPH pmax pmax
comp=Z,25nm,1.3s,mb5.0
TPH MLR MLR
comp=Z,686nm,19.0s,MS5.0
VNDA Vanda 75.00 190 P **P 12 27 19.8 +1.2**
comp=Z,8.6nm,1.0s,mb4.6,baz=129,slow=4.0,SNR=36
VNDA LR LR 13 01 25.4
comp=Z,1µm,18.5s,MS5.3,baz=139,slow=37
VNDA Vanda 75.00 190 *eP* **P 12 27 19.5 +1.0**
comp=Z,27nm,1.2s,mb5.0
VNDA *ePcP PcP 12 27 30.4 -1.8
VNDA LR LR
comp=Z,885nm,21.0s,MS5.0
VNDA Vanda 75.00 190 *eP* **P 12 27 19.5 +0.9**
VNDA *e* 12 27 30.4
VNDA pmax pmax
comp=Z,27nm,1.2s
VNDA MLR MLR
comp=Z,885nm,21.0s
MTUM Tungsten Hills 75.21 322 *eP* **P 12 27 21.1 +0.8**
AHID Auburn Hatcher 75.44 330 *eP* **P 12 27 21.8 +0.3**
comp=Z,27nm,0.8s,mb5.2
AHID LR LR
comp=Z,1µm,21.0s,MS5.2
HVU Hansel Valley 75.45 329 *eP* **P 12 27 21.6 +0.1**
comp=Z,46nm,1.3s,mb5.2
HVU Hansel Valley 75.45 329 *eP* **P 12 27 21.6 0.0**
HVU pmax pmax
comp=Z,47nm,1.3s,mb5.3
SYO Syowa Base 75.54 160⇑ *eP* **P 12 27 20.5 -1.3**
REDW Red Top Meadow 75.80 331 *eP* **P 12 27 24.1 +0.6**
comp=Z,25nm,0.9s,mb5.1
NVAR Mina Array Bea 75.82 323 P **P 12 27 24.5 +0.7**
comp=Z,5.7nm,0.8s,mb4.6,baz=155,slow=6.2,SNR=51
SNOW Snow King Moun 75.83 331 *eP* **P 12 27 24.0 +0.3**
comp=Z,29nm,0.9s,mb5.2
ELK Elko 75.89 327 *eP* **P 12 27 24.1 0.0**
comp=Z,23nm,1.1s,mb5.0
ELK LR LR
comp=Z,2µm,21.0s,MS5.4
ELK Elko 75.89 327 *eP* **P 12 27 24.1 +0.1**
ELK pmax pmax
comp=Z,23nm,1.1s
ELK MLR MLR
comp=Z,2µm,21.0s
LOHW Long Hollow 75.89 331 *eP* **P 12 27 24.2 +0.2**
comp=Z,29nm,1.1s,mb5.1
TPAW Teton Pass 75.94 331 *eP* **P 12 27 24.6 +0.3**
comp=Z,27nm,0.9s,mb5.2
RRI2 Red Ridge 76.00 331 *eP* **P 12 27 24.9 +0.2**
comp=Z,129nm,1.4s,mb5.7
MOOW Moose Ponds 76.06 331 *eP* **P 12 27 25.4 +0.4**
comp=Z,9.6nm,0.8s,mb4.8
DCID1 Drake Creek 76.13 331 *eP* **P 12 27 26.2 +0.9**
comp=Z,29nm,0.8s,mb5.3
IMW Indian Meadow 76.26 331 *eP* **P 12 27 26.6 +0.5**
comp=Z,70nm,1.4s,mb5.4
ULM Lac du Bonnet 76.40 344 P **P 12 27 25.1 -1.6**
comp=Z,9.7nm,0.7s,mb4.9,baz=158,slow=5.9,SNR=6.4
ULM LR LR 13 03 31.4
comp=Z,749nm,18.5s,MS5.0,baz=114,slow=38
RLMT Red Lodge 76.51 333 *eP* **P 12 27 27.4 -0.1**
comp=Z,50nm,1.2s,mb5.3
RLMT LR LR
comp=Z,1µm,20.0s,MS5.1
LKWY Lake 76.55 332 PFAKE 12 27 40.0 +12
LKWY LR LR
comp=Z,1µm,19.0s,MS5.3
LAO LASA Array 76.58 336 *eP* **P 12 27 28.2 +0.3**
comp=Z,85nm,1.1s,mb5.6
LAO LR LR
comp=Z,847nm,20.0s,MS5.0
YFT Old Faithful 76.65 332 *eP* **P 12 27 30.2 +1.9**
BMN Battle Mountai 76.68 325 PFAKE 12 27 40.0 +11
BMN LR LR
comp=Z,1µm,22.0s,MS5.2
CMB Columbia Colle 76.72 322 *eP* **P 12 27 29.0 +0.2**
comp=Z,28nm,1.4s,mb5.0
CMB LR LR
comp=Z,714nm,20.0s,MS5.0
CMB Columbia Colle 76.72 322 *eP* **P 12 27 29.0 +0.2**
CMB pmax pmax
comp=Z,28nm,1.4s,mb5.0
CMB MLR MLR
comp=Z,714nm,20.0s,MS5.0
YMR Madison River 76.88 332 *eP* **P 12 27 31.1 +1.5**
comp=Z,207nm,1.5s,mb5.8
YMR LR LR
comp=Z,1µm,21.0s,MS5.1
QLMT Earthquake Lak 77.21 331 *eP* **P 12 27 32.7 +1.3**
GCMT Greycliff 77.22 333 *eP* **P 12 27 29.7 -1.8**
PAHR Pah Rah Range 77.32 323 *eP* **P 12 27 32.8 +0.6**
comp=Z,66nm,1.1s,mb5.5
DGMT Dagmar 77.35 338 *eP* **P 12 27 32.5 +0.4**
comp=Z,120nm,1.0s,mb5.8
DGMT LR LR
comp=Z,1µm,22.0s,MS5.1
HLID Hailey 77.59 329 *eP* **P 12 27 34.3 +0.7**
comp=Z,39nm,1.1s,mb5.2
HLID LR LR
comp=Z,788nm,19.0s,MS5.0
SCHQ Schefferville 77.69 2 LR LR 13 01 09.5
comp=Z,830nm,19.7s,MS5.1,baz=267,slow=35
MCMT McKenzie Canyo 77.84 331 *eP* **P 12 27 36.1 +1.1**
DLMT Dillon 78.14 331 *eP* **P 12 27 37.3 +0.7**
comp=Z,54nm,1.3s,mb5.3
OHCM Honcut 78.23 322 *eP* **P 12 27 37.5 +0.2**
NSHM Saint Helena R 78.33 321 *eP* **P 12 27 38.2 +0.4**
WVOR Wild Horse Val 78.86 326 PFAKE 12 27 50.0 +9.3
WVOR LR LR
comp=Z,1µm,20.0s,MS5.2
HRY Holter Researc 78.86 332 *eP* **P 12 27 41.2 +0.6**
HOPS Hopland 78.91 321 PFAKE 12 27 50.0 +9.0
HOPS LR LR
comp=Z,878nm,19.0s,MS5.1
EGMT Eagleton 79.05 334 *eP* **P 12 27 41.4 -0.2**
comp=Z,51nm,1.2s,mb5.3
EGMT LR LR
comp=Z,932nm,19.0s,MS5.1
SUR Sutherland 79.10 121 *eP* **P 12 27 43.9 +1.4**
comp=Z,71nm,0.8s,mb5.7
SUR LR LR
comp=Z,3µm,21.0s,MS5.5
TOA0 Torodi Ar. Sit 79.35 71 *eP* **P 12 27 43.4 -0.6**
TORD Torodi Ar. Bea 79.35 71 P **P 12 27 43.3 -0.7**
comp=Z,87nm,0.8s,mb5.8,baz=252,slow=5.0,SNR=483
TORD PKKPbc PKKPbc 12 46 33.6 +0.1
comp=Z,0.2nm,0.4s,baz=24,slow=1.8,SNR=5.0
TORD LR LR 13 01 36.7
comp=Z,1µm,19.0s,MS5.3,baz=235,slow=35
MOD Modoc 79.36 325 *eP* **P 12 27 43.5 +0.1**
comp=Z,28nm,0.9s,mb5.2
MOD LR LR
comp=Z,966nm,21.0s,MS5.1
LTIM Timbered Crate 79.50 323 P **P 12 27 44.4 +0.3**
CHMT Chamberlain Mo 79.63 332 *eP* **P 12 27 45.2 +0.5**
WDC Whiskeytown Da 79.67 322 *eP* **P 12 27 43.9 -1.3**
comp=Z,16nm,1.0s,mb4.9
WDC LR LR
comp=Z,702nm,19.0s,MS5.0
WDC Whiskeytown Da 79.67 322 *eP* **P 12 27 43.9 -1.3**
WDC pmax pmax
comp=Z,16nm,1.0s,mb4.9
WDC MLR MLR
comp=Z,702nm,19.0s,MS5.0
MSO Missoula 79.87 331 *eP* **P 12 27 46.9 +0.8**
comp=Z,28nm,1.4s,mb5.0
MSO LR LR
comp=Z,863nm,20.0s,MS5.1
YBH Yreka Blue Hor 80.55 323 PFAKE 12 28 00.0 +10
YBH LR LR
comp=Z,766nm,19.0s,MS5.1
BSMT Bassoo Peak 81.02 332 P **P 12 27 53.0 +0.8**
TSUM Tsumeb 81.06 107 *eP* **P 12 27 53.8 +0.6**
comp=Z,59nm,0.9s,mb5.5
TSUM LR LR
comp=Z,3µm,20.0s,MS5.6
LNOR Lincton Mounta 81.16 328 *eP* **P 12 27 52.7 -0.3**
RAR Rarotonga 81.23 251 LR LR 12 54 15.9
comp=Z,582nm,19.6s,MS4.9,baz=283,slow=28
HUMO Hull Mountain 81.27 324 PFAKE 12 28 00.0 +6.3
HUMO LR LR
comp=Z,860nm,21.0s,MS5.1
VIPM Ingram Point 81.34 326 P **P 12 27 54.9 +0.9**
WALA Waterton Lakes 81.57 333 *eP* **P 12 27 55.4 +0.3**
comp=Z,62nm,0.9s,mb5.5
WALA *ePcP PcP 12 28 00.2 -0.7
CROR Criterion Ridg 81.86 326 P **P 12 27 57.8 +1.0**
FFC Flin Flon 82.07 342 *eP* **P 12 27 56.9 -0.7**
comp=Z,30nm,1.1s,mb5.1
FFC LR LR
comp=Z,1µm,22.0s,MS5.2
FFC Flin Flon 82.07 342 *eP* **P 12 27 56.9 -0.7**
FFC pmax pmax
comp=Z,30nm,1.1s,mb5.1
FFC MLR MLR
comp=Z,1µm,22.0s,MS5.2
PRW Prosser 82.08 328 P **P 12 27 58.7 +0.8**
H2OWA Water 82.09 328 P **P 12 27 58.2 +0.3**
HAWA Hanford 82.14 328 *eP* **P 12 27 58.5 +0.4**
comp=Z,61nm,1.1s,mb5.5
RSW Rattlesnake Hi 82.17 328 *eP* **P 12 27 58.9 +0.6**
WRD Warden 82.24 329 P **P 12 27 60.0 +1.2**
GBL Gable Mountain 82.25 328 P **P 12 27 59.0 +0.3**
NEW Newport 82.37 331 PFAKE 12 28 10.0 +11
NEW LR LR
comp=Z,836nm,19.0s,MS5.1
OD2 Odessa Site #2 82.46 329 P **P 12 28 00.0 +0.2**
TBM Table Mountain 83.20 328 P **P 12 28 04.0 +0.3**
MAW Mawson 83.23 164 P **P 12 28 03.9 +0.2**
comp=Z,48nm,0.8s,mb5.6,baz=232,slow=6.9,SNR=38
MAW LR LR 13 05 10.9
comp=Z,1µm,18.0s,MS5.3,baz=233,slow=36
MAW Mawson 83.23 164 *eP* **P 12 28 03.1 -0.6**
comp=Z,70nm,1.0s,mb5.7
MAW Mawson 83.23 164 *eP* **P 12 28 03.1 -0.6**
MAW pmax pmax
comp=Z,70nm,1.0s
WTV Waterville 83.27 329 P **P 12 28 04.0 0.0**
ETW Entiat 83.38 329 *eP* **P 12 28 04.8 +0.2**
MDT Midelt 83.96 51 P **P 12 28 09.0 +1.1**
comp=Z,23nm,0.8s,mb5.3,baz=244,slow=5.5,SNR=32
BOSA Boshof 84.05 118 P **P 12 28 08.5 -0.2**
comp=Z,48nm,0.8s,mb5.7,baz=256,slow=4.0,SNR=87
BOSA LR LR 13 02 26.4
comp=Z,2µm,18.7s,MS5.6,baz=247,slow=33
BOSA Boshof 84.05 118 *eP* **P 12 28 08.6 -0.1**
comp=Z,28nm,0.7s,mb5.5

BOSA LR LR
comp=Z,2µm,19.0s,MS5.6
BOSA Boshof 84.05 118 *e*P **P** **12 28 08.6 -0.1**
BOSA pmax pmax
comp=Z,28nm,0.7s,mb5.5
BOSA MLR MLR
comp=Z,2µm,19.0s,MS5.6
RPW Rockport 84.54 329 *e*P **P** **12 28 09.7 -0.8**
JCW Jim Creek 84.56 328 *e*P **P** **12 28 09.6 -1.0**
EDM Edmonton 84.57 336 *e*P **P** **12 28 09.2 -1.3**
EGRO El Granado 84.58 45 P **P** **12 28 11.8 +0.8**
comp=Z,121nm,1.5s,mb5.8
EVO Evora 84.81 44⇑ *i*P **P** **12 28 12.3 +0.2**
comp=Z,61nm,1.1s,mb5.4
SFS San Fernando 84.83 47 PFAKE 12 28 20.0 +7.7
SFS LR LR
comp=Z,1µm,19.0s,MS5.2
EMIN Mina Concepcio 85.25 46 P **P** **12 28 15.1 +0.8**
comp=Z,104nm,1.0s,mb5.9
ESPR Espera 85.29 47 P **P** **12 28 15.7 +1.2**
comp=Z,73nm,0.7s,mb5.9
EJIF Jimena Fronter 85.32 47 P **P** **12 28 16.4 +1.7**
comp=Z,47nm,0.8s,mb5.7
EJIF Jimena Fronter 85.32 47 P **P** **12 28 16.4 +1.7**
EJIF pmax pmax
comp=Z,47nm,0.8s,mb5.7
EBAD Badajoz 85.58 45 P **P** **12 28 16.4 +0.5**
comp=Z,108nm,1.3s,mb5.9
LBTB Lobatse 85.75 115 *e*P **P** **12 28 17.3 0.0**
comp=Z,24nm,0.9s,mb5.4
LBTB LR LR
comp=Z,1µm,20.0s,MS5.4
LBTB Lobatse 85.75 115 *e*P **P** **12 28 17.3 0.0**
LBTB pmax pmax
comp=Z,24nm,0.9s,mb5.4
LBTB MLR MLR
comp=Z,1µm,20.0s,MS5.4
EMIJ Mijas 85.86 47 P **P** **12 28 17.7 +0.3**
comp=Z,80nm,1.0s,mb5.9
MTE Manteigas 86.17 43 *e*P **P** **12 28 18.8 -0.1**
comp=Z,20nm,0.8s,mb5.4
MTE LR LR
comp=Z,1µm,20.0s,MS5.4
ELOJ Sierra Loja 86.59 47 P **P** **12 28 22.1 +1.1**
comp=Z,27nm,0.8s,mb5.5
ELOJ Sierra Loja 86.59 47 P **P** **12 28 22.1 +1.1**
ELOJ pmax pmax
comp=Z,27nm,0.8s,mb5.5
ELUQ Luque 86.73 47 P **P** **12 28 22.0 +0.3**
comp=Z,29nm,1.0s,mb5.5
ELUQ Luque 86.73 47 P **P** **12 28 22.0 +0.3**
ELUQ pmax pmax
comp=Z,29nm,1.0s,mb5.5
EADA Adamuz 86.85 46 P **P** **12 28 22.7 +0.4**
comp=Z,56nm,1.1s,mb5.7
TAM Tamanrasset 86.92 64 *e*P **P** **12 28 23.3 +0.4**
EBER Berja 87.31 48 P **P** **12 28 24.7 +0.2**
comp=Z,5.3nm,0.7s,mb4.9
EBAN Banos Encina 87.38 46 P **P** **12 28 26.4 +1.6**
comp=Z,10nm,1.0s,mb5.0
EBAN Banos Encina 87.38 46 P **P** **12 28 26.4 +1.6**
EBAN pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
ERUA La Rua 87.55 42 P **P** **12 28 25.4 -0.1**
comp=Z,15nm,0.9s,mb5.2
ERUA La Rua 87.55 42 P **P** **12 28 25.4 -0.1**
ERUA pmax pmax
comp=Z,15nm,0.9s,mb5.2
DRV Dumont d'Urvil 87.58 192 P **P** **12 28 31.0 +5.6**
DRV S S 12 38 54.0 -11
DRV SS SS 12 44 52.0 +2.5
DRV L 12 53 00.0
DRV R 12 58 00.0
EQES Quesada 87.66 47 P **P** **12 28 26.6 +0.4**
comp=Z,9.2nm,1.1s,mb4.9
PAB San Pablo 87.74 45 *e*P **P** **12 28 26.9 +0.4**
comp=Z,15nm,1.0s,mb5.2
PAB LR LR
comp=Z,1µm,19.0s,MS5.3
PAB San Pablo 87.74 45 *e*P **P** **12 28 26.9 +0.4**
PAB pmax pmax
comp=Z,15nm,1.0s,mb5.2
PAB MLR MLR
comp=Z,1µm,19.0s,MS5.3
ENIJ Nijar 87.82 48 P **P** **12 28 27.2 +0.2**
comp=Z,7.9nm,0.6s,mb5.1
ENIJ Nijar 87.82 48 P **P** **12 28 27.2 +0.2**
ENIJ pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
EHUE Huescar 87.99 47 P **P** **12 28 27.7 -0.1**
comp=Z,2.1nm,0.5s,mb4.6
EHUE Huescar 87.99 47 P **P** **12 28 27.7 -0.1**
EHUE pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
ESDC Sonseca Array 88.06 45 P **P** **12 28 28.5 +0.4**
comp=Z,3.2nm,0.8s,mb4.6,baz=254,slow=4.9,SNR=12
ESDC LR LR 13 08 26.0
comp=Z,649nm,18.6s,MS5.1,baz=235,slow=36
ESDC Sonseca Array 88.06 45 P **P** **12 28 28.5 +0.5**
comp=Z,3.1nm,0.8s,mb4.6
ESLA Sonseca Array 88.06 45 *e*pP pP 12 28 38.4 +1.6
comp=Z,28nm,1.8s
ESLA LR LR
comp=Z,4µm,19.0s,MS5.8
EVIA Vianos 88.48 47 P **P** **12 28 29.9 -0.1**
comp=Z,8.6nm,0.9s,mb5.0
EVIA Vianos 88.48 47 P **P** **12 28 29.9 -0.1**
EVIA pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
ETOB Tobarra 89.13 47 P **P** **12 28 33.1 0.0**
comp=Z,45nm,1.5s,mb5.6
MIR Mirnyy 89.76 174⇑ *i*P pP 12 28 46.0 +1.5
MIR *i* 12 29 02.0
MIR pmax pmax
comp=Z,100nm,1.8s,mb5.8
ETOR Torete 89.90 45 P **P** **12 28 37.2 +0.5**
comp=Z,16nm,0.9s,mb5.3
ETOR Torete 89.90 45 P **P** **12 28 37.2 +0.5**
ETOR pmax pmax
comp=Z,16nm,0.9s,mb5.3
ECHE Chera 89.99 46 P **P** **12 28 37.2 +0.1**
comp=Z,7.1nm,0.8s,mb5.0
ECHE Chera 89.99 46 P **P** **12 28 37.2 +0.1**
ECHE pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
CASY Casey 90.89 180 *e*P **P** **12 28 42.0 +1.1**
comp=Z,107nm,1.6s,mb5.9
CASY *e*pP pP 12 28 51.1 +1.4
CASY LR LR
comp=Z,920nm,20.0s,MS5.2
SFJD Kangerlussuaq 91.07 8 PFAKE 12 28 50.0 +8.5
SFJD LR LR
comp=Z,853nm,20.0s,MS5.2
SJPF Ste Jean 91.61 43 *e*P **P** **12 28 43.7 -0.8**
comp=Z,21nm,1.0s,mb5.1
SJPF Ste Jean 91.61 43 *e*P **P** **12 28 43.7 -0.8**
comp=Z,10nm,1.0s,mb5.1
SJPF Ste Jean 91.61 43 *e*P **P** **12 28 43.7 -0.8**
SJPF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
LSZ Lusaka 91.91 107 *e*P **P** **12 28 48.6 +2.0**
comp=Z,8.2nm,0.8s,mb5.1
LSZ LR LR
comp=Z,1µm,19.0s,MS5.4
LSZ Lusaka 91.91 107 *e*P **P** **12 28 48.6 +2.0**
LSZ pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
LSZ MLR MLR
comp=Z,1µm,19.0s,MS5.4
SNZO South Karori 91.91 223 PFAKE 12 29 00.0 +14
SNZO LR LR
comp=Z,1µm,19.0s,MS5.4
ETSF Etsaut 91.92 44 *e*P **P** **12 28 46.6 +0.6**
comp=Z,12nm,0.9s,mb4.9
ETSF Etsaut 91.92 44 *e*P **P** **12 28 46.6 +0.6**
comp=Z,5.9nm,0.9s,mb4.9
ETSF Etsaut 91.92 44 *e*P **P** **12 28 46.6 +0.6**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
URZ Urewera 91.97 227 P **P** **12 28 47.7 +1.1**
comp=Z,4.2nm,0.9s,mb4.8,baz=172,slow=17,SNR=2.4
URZ LR LR 13 01 45.7
comp=Z,2µm,19.9s,MS5.5,baz=215,slow=30
YKA Yellowknife Ar 92.19 341 P **P** **12 28 45.9 -0.9**
comp=Z,6.0nm,0.7s,mb5.0,baz=139,slow=4.3,SNR=13
YKA LR LR 13 15 45.6
comp=Z,347nm,18.5s,MS4.8,baz=135,slow=39

EPF Esparros 92.56 44 *e*P **P** **12 28 48.3 -0.7**
RPZ Rata Peaks 92.77 220 P **P** **12 28 50.0 -0.1**
comp=Z,16nm,1.0s,mb5.4,baz=156,slow=3.8,SNR=7.2
RAO Raoul Island 92.87 237 LR LR 13 00 16.0
comp=Z,499nm,20.9s,MS5.0,baz=152,slow=29
RAO Raoul Island 92.87 237 PFAKE 12 29 00.0 +9.1
RAO LR LR
comp=Z,1µm,19.0s,MS5.3
POHA Pohakuloa 93.14 290 PFAKE 12 29 00.0 +7.8
POHA LR LR
comp=Z,3µm,19.0s,MS5.7
LFF La Frestale 93.75 42 *e*P **P** **12 28 54.3 -0.1**
comp=Z,26nm,0.8s,mb5.4
CAF Calviac 94.56 43 *e*P **P** **12 28 57.9 -0.2**
AFI Afiamalu 94.61 253 LR LR 13 02 38.7
comp=Z,698nm,18.7s,MS5.2,baz=69,slow=30
DLBC Dease Lake 94.92 333 *e*P **P** **12 28 59.2 -0.2**
TCF Toulx Ste Croi 95.30 42 *e*P **P** **12 29 00.1 -1.3**
KEST Kesra 95.50 54 P **P** **12 29 03.0 +0.3**
comp=Z,3.8nm,0.8s,mb4.9,baz=270,slow=4.2,SNR=5.3
KEST LR LR 13 16 00.5
comp=Z,1µm,18.7s,MS5.3,baz=2.9,slow=38
BGF Bois d'Agland 95.81 42 *e*P **P** **12 29 02.6 -1.2**
comp=Z,26nm,1.0s,mb5.3
BGF Bois d'Agland 95.81 42 *e*P **P** **12 29 02.6 -1.2**
comp=Z,13nm,1.0s,mb5.3
BGF Bois d'Agland 95.81 42 *e*P **P** **12 29 02.6 -1.2**
BGF pmax pmax
comp=Z,13nm,1.0s,mb5.3
AVF Avril sur Loir 96.23 42 *e*P **P** **12 29 05.7 0.0**
SIT Sitka 96.44 330 PFAKE 12 29 20.0 +14
SIT LR LR
comp=Z,1µm,21.0s,MS5.3
SSF Saint Saulge 96.44 41 *e*P **P** **12 29 05.2 -1.5**
comp=Z,6.3nm,0.8s,mb4.8
SSF Saint Saulge 96.44 41 *e*P **P** **12 29 05.2 -1.5**
comp=Z,3.2nm,0.8s,mb4.8
SSF Saint Saulge 96.44 41 *e*P **P** **12 29 05.2 -1.5**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
SMF Signal de Mont 96.46 42 *e*P **P** **12 29 06.4 -0.3**
comp=Z,11nm,0.8s,mb5.0
SMF Signal de Mont 96.46 42 *e*P **P** **12 29 06.4 -0.3**
comp=Z,5.4nm,0.8s,mb5.0
SMF Signal de Mont 96.46 42 *e*P **P** **12 29 06.4 -0.3**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LOR Lormes 96.75 41 *e*P **P** **12 29 07.3 -0.7**
ESK Eskdalemuir 96.76 32 PFAKE 12 29 20.0 +12
ESK LR LR
comp=Z,907nm,22.0s,MS5.2
ORIF Oris-en-Rattie 96.98 44 *e*P **P** **12 29 10.4 +1.3**
comp=Z,18nm,1.0s,mb5.2
ORIF Oris-en-Rattie 96.98 44 *e*P **P** **12 29 10.4 +1.3**
comp=Z,9.0nm,1.0s,mb5.2
ORIF Oris-en-Rattie 96.98 44 *e*P **P** **12 29 10.4 +1.3**
ORIF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
VSL Villasalto 97.07 50 PFAKE 12 29 20.0 +10
VSL LR LR
comp=Z,1µm,19.0s,MS5.5
BNI Bardonecchia 97.55 44 PFAKE 12 29 20.0 +8.3
BNI LR LR
comp=Z,2µm,19.0s,MS5.5
LPL La Plagne 97.78 44 *e*P **P** **12 29 14.1 +1.4**
comp=Z,9.3nm,0.9s,mb5.0
LPL La Plagne 97.78 44 *e*P **P** **12 29 14.1 +1.4**
comp=Z,4.7nm,0.9s,mb5.0
LPL La Plagne 97.78 44 *e*P **P** **12 29 14.1 +1.4**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb5.0
LPG La Plagne 97.78 44 *e*P **P** **12 29 13.6 +0.8**
comp=Z,20nm,1.1s,mb5.3
LPG La Plagne 97.78 44 *e*P **P** **12 29 13.6 +0.8**
comp=Z,9.9nm,1.1s,mb5.2
LPG La Plagne 97.78 44 *e*P **P** **12 29 13.6 +0.8**
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
BAIF Baives 98.20 39 *e*P **P** **12 29 13.7 -0.8**
comp=Z,21nm,1.1s,mb5.3
BAIF Baives 98.20 39 *e*P **P** **12 29 13.7 -0.8**
comp=Z,11nm,1.1s,mb5.3
BAIF Baives 98.20 39 *e*P **P** **12 29 13.7 -0.8**
BAIF pmax pmax
comp=Z,11nm,1.1s,mb5.3
WLF Walferdange 99.17 40 PFAKE 12 29 30.0 +11
WLF LR LR
comp=Z,1µm,22.0s,MS5.4
WDD Wield Dalam 99.43 55 PFAKE 12 29 30.0 +10
WDD LR LR
comp=Z,1µm,21.0s,MS5.4
VLC Villacollemand 99.61 46 PFAKE 12 29 30.0 +9.0
VLC LR LR
comp=Z,620nm,19.0s,MS5.1
TUE Stuetta 99.83 44 PFAKE 12 29 30.0 +8.0
TUE LR LR
comp=Z,1µm,19.0s,MS5.5
BFO Black Forest 99.93 42 PFAKE 12 29 30.0 +7.6
BFO LR LR
comp=Z,722nm,19.0s,MS5.2
AQU L'Aquila 100.98 49 PFAKE 12 29 40.0 +13
AQU LR LR
comp=Z,938nm,20.0s,MS5.3
CUC Castrocucco 101.85 52 PFAKE 12 29 40.0 +9.0
CUC LR LR
comp=Z,1µm,19.0s,MS5.4
TIP Timpagrande 102.26 53 PFAKE 12 29 40.0 +7.2
TIP LR LR
comp=Z,1µm,20.0s,MS5.3
EGAK Eagle 102.79 336 PFAKE 12 29 50.0 +15
EGAK LR LR
comp=Z,1µm,21.0s,MS5.3
GERES GERESS Array B 103.44 43 Pdiff Pdiff 12 29 36.7 -1.3
comp=Z,0.8nm,0.8s,baz=204,slow=2.9,SNR=6.4
CLL Collm 103.84 40 *e*PP PP 12 33 55.0 -2.1
*e*SKSac SKSac 12 40 25.0 +7.5
*e*Sdif Sdif 12 41 31.0 +3.4
*e*PS PS 12 43 12.0 +3.9
ex x 12 44 24.0
*e*SS SS 12 48 44.0 +1.6
BRG Berggiesshubel 104.26 41 PP PP 12 34 00.0 -0.3
SKS 12 40 35.0
SDIF Sdif 12 41 38.0 +6.9
PS PS 12 43 14.0 +1.5
SS SS 12 48 27.0 -21
comp=N,386nm,23.0s
comp=E,506nm,24.8s
comp=Z,683nm,21.9s
KONO Kongsberg 104.86 31 PFAKE 12 30 00.0 +16
KONO LR LR
comp=Z,791nm,22.0s,MS5.2
FUNA Funafuti 104.91 254 PFAKE 12 30 00.0 +15
FUNA LR LR
comp=Z,4µm,19.0s,MS6.0
TIR Tirane 105.20 51 PFAKE 12 34 10.0 +10
TIR LR LR
comp=Z,1µm,20.0s,MS5.4
COLA College 105.44 334 PFAKE 12 34 10.0 +10
COLA LR LR
comp=Z,834nm,19.0s,MS5.3
TAU Tasmania Unive 105.61 208 PFAKE 12 34 10.0 +9.0
TAU LR LR
comp=Z,745nm,19.0s,MS5.2
ABPO Ambohimpanom 106.26 119 PFAKE 12 34 10.0 +7.2
ABPO LR LR
comp=Z,2µm,19.0s,MS5.7
PSZ Piszkesteto 107.09 45 PFAKE 12 34 10.0 +6.6
PSZ LR LR
comp=Z,646nm,20.0s,MS5.2
KWP Kalwaria 109.32 43 PFAKE 12 34 20.0 +12
KWP LR LR
comp=Z,756nm,21.0s,MS5.2
ISP Isparta 112.25 57 PFAKE 12 34 20.0 +6.5
ISP LR LR
comp=Z,788nm,20.0s,MS5.3
KIS Kishinev 112.80 47 *e* PS 12 44 36.0 -1.4
KIS LRM 13 26 54.0
comp=Z,900nm,18.0s
ARCES ARCESS Array B 113.56 22 PKKPbc PKKPbc 12 45 06.2 +5.1
comp=Z,6.3nm,1.0s,baz=46,slow=5.2,SNR=4.3
KIEV Kiev 113.62 43 PFAKE 12 34 30.0 +14
KIEV LR LR
comp=Z,731nm,19.0s,MS5.3

AKASG Malin Array Be 113.64 43 PKiKP PKiKP 12 34 14.3 -1.4
comp=Z,1.2nm,0.5s,baz=269,slow=2.8,SNR=5.7
AKASG PKKPbc PKKPbc 12 44 59.3 -1.1
comp=Z,1.1nm,0.5s,baz=73,slow=2.6,SNR=4.7
CSS Prodhromos 113.86 61 PFAKE 12 34 30.0 +13
CSS LR LR
comp=Z,760nm,22.0s,MS5.2
ANTO Ankara 114.40 55 PFAKE 12 34 30.0 +12
ANTO LR LR
comp=Z,918nm,22.0s,MS5.3
TARA Tarawa 114.82 260 PFAKE 12 34 30.0 +11
TARA LR LR
comp=Z,1µm,20.0s,MS5.6
LVZ Lovozero 116.92 24 PFAKE 12 34 30.0 +8.5
LVZ LR LR
comp=Z,710nm,21.0s,MS5.3
STKA Stephens Creek 117.25 211 PKP PKPdf 12 34 22.3 -1.1
comp=Z,1.4nm,0.7s,baz=113,slow=7.5,SNR=4.4
STKA Stephens Creek 117.25 211 PKP PKPdf 12 34 22.3 -1.1
OBN Obninsk 118.39 39⇑ *e*PKP PKPdf 12 34 23.6 -1.1
OBN LR LR
comp=Z,771nm,22.0s,MS5.3
OBN Obninsk 118.39 39⇑ *i*PKIKP PKPdf 12 34 23.6 -1.1
OBN *e* 12 35 39.1
OBN *e* 12 41 09.5
OBN pmax pmax
comp=Z,13nm,0.7s
ANN Anapa 118.47 50 *e*PKIKP PKPdf 12 34 28.1 +2.9
ANN pmax pmax
comp=Z,77nm,4.6s
KLMR Klimovskoe 119.68 32 *e*PKIKP PKPdf 12 34 26.2 -0.8
SOC Sochi 120.01 52 *i* PKIKP PKPdf 12 34 26.9 -1.3
SOC *e*PPP 12 38 23.0
SOC *e* 12 41 22.6
SOC *e*PS PS 12 45 42.2 -1.0
SOC *e*SS SS 12 52 20.3 +2.2
SOC pmax pmax
comp=Z,18nm,0.9s
MSEY Mahe Island 120.57 111 PFAKE 12 34 40.0 +10
MSEY LR LR
comp=Z,2µm,20.0s,MS5.7
HNR Honiara 120.93 243 PFAKE 12 34 40.0 +9.1
HNR LR LR
comp=Z,610nm,20.0s,MS5.2
KIV Kislovodsk 122.18 52⇑ *e*PKP PKPdf 12 34 31.7 -0.6
KIV LR LR
comp=Z,424nm,20.0s,MS5.1
KIV Kislovodsk 122.18 52 *i* PKIKP PKPdf 12 34 31.7 -0.6
KIV *e* 12 36 05.5
KIV *e* 12 41 28.5
KIV *e*PS PS 12 46 01.0 -1.5
KIV *e*SS SS 12 52 44.5 -1.3
KIV pmax pmax
comp=Z,7.0nm,0.8s
GNI Garni 123.54 56⇑ *e*PKP PKPdf 12 34 35.1 0.0
GNI LR LR
comp=Z,512nm,21.0s,MS5.2
NWAO Narrogin (SRO) 123.78 188 PFAKE 12 34 50.0 +14
NWAO LR LR
comp=Z,882nm,21.0s,MS5.4
CTA Charters Tower 124.01 223 PKP PKPdf 12 34 36.1 -0.5
comp=Z,6.0nm,0.9s,baz=270,slow=1.0,SNR=4.5
CTAO Charters Tower 124.01 223 PFAKE 12 34 50.0 +13
CTAO LR LR
comp=Z,562nm,21.0s,MS5.2
ASAR Alice Springs 127.77 209 PKP PKPdf 12 34 43.0 -0.7
comp=Z,15nm,0.9s,baz=139,slow=1.8,SNR=83
TIXI Tiksi 130.18 352⇑ *e*PKP PKPdf 12 34 45.3 -1.5
TIXI LR LR
comp=Z,638nm,21.0s,MS5.3
TIXI Tiksi 130.18 352 *i* PKIKP PKPdf 12 34 45.1 -1.7
TIXI pmax pmax
comp=Z,9.0nm,0.9s
ARU Arti 130.35 34 *e*PKPdf PKPdf 12 34 48.0 +0.4
ARU LR LR
comp=Z,610nm,20.0s,MS5.3
ARU Arti 130.35 34 *i* PKIKP PKPdf 12 34 47.1 -0.4
ARU 12 37 01.2
ARU SS SS 12 54 27.8 +1.0
WB2 Warramunga Arr 130.78 212 *e*PKPdf PKPdf 12 34 49.4 -0.2
WRA Warramunga Arr 130.78 212 PKP PKPdf 12 34 49.1 -0.5
comp=Z,16nm,1.0s,baz=149,slow=1.6,SNR=68
WRA SKPbc SKPbc 12 38 11.1 -0.7
comp=Z,4.4nm,1.1s,baz=161,slow=3.2,SNR=6.0
WRAB Tennant Creek 130.79 212 *e*PKPdf PKPdf 12 34 50.1 +0.5
WRAB LR LR
comp=Z,992nm,19.0s,MS5.5
WRAB Tennant Creek 130.79 212 *i* PKIKP PKPdf 12 34 49.7 +0.1
PMG Port Moresby 130.92 233 PFAKE 12 35 00.0 +10
PMG LR LR
comp=Z,382nm,20.0s,MS5.1
SEY Seymchan 130.94 336⇑ *e*PKP PKPdf 12 34 48.0 -0.5
SEY Seymchan 130.94 336⇑ *i*PKIKP PKPdf 12 34 47.9 -0.6
SVE Sverdlovsk 131.26 33 *i* PKIKP PKPdf 12 34 55.4 +6.1
SVE pmax pmax
comp=Z,22nm,1.5s
SVE MLR MLR
comp=Z,831nm,19.0s,MS5.5
AKTO Aktyubinsk 131.86 42 PKIKP PKPdf 12 34 50.8 +0.2
AKTO pmax pmax
comp=Z,4.0nm,1.7s
PETK Petropavlovsk- 132.90 322 PKP PKPdf 12 34 52.1 -0.4
comp=Z,6.4nm,0.9s,baz=37,slow=7.6,SNR=6.0
AB31 Akbulak array 133.38 43 PKIKP PKPdf 12 34 52.7 -0.8
AB31 pmax pmax
comp=Z,54nm,1.6s
MBWA Marble Bar 134.87 194 *e*PKPdf PKPdf 12 34 56.9 -0.4
MBWA LR LR
comp=Z,953nm,20.0s,MS5.5
KAKA Kakadu 137.86 215 *e*PKPdf Px 12 34 50.1
BRVK Borovoye 137.92 35 *e*PKPdf PKPdf 12 35 02.2 +0.4
BRVK LR LR
comp=Z,2µm,20.0s,MS5.8
BRVK Borovoye 137.92 35 PKIKP PKPdf 12 35 01.9 +0.1
BRVK pmax pmax
comp=Z,18nm,1.5s
VOSK Vostochnaya 138.45 35 PKIKP PKPdf 12 35 02.8 0.0
VOSK pmax pmax
comp=Z,200nm,3.0s
YAK Yakutsk 138.71 346⇑ *e*PKP PKPdf 12 35 02.2 -0.8
YAK LR LR
comp=Z,571nm,21.0s,MS5.3
YAK Yakutsk 138.71 346 *e*PKIKP PKPdf 12 35 02.0 -1.0
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.3s
NVS Novosibirsk 142.78 25 *e*PKHKP PKPdf 12 35 05.9 -4.7
NVS pmax pmax
comp=N,46nm,2.4s
NVS pmax pmax
comp=Z,120nm,2.4s
NVS pmax pmax
comp=E,2.0nm,1.3s
KURK Kurchatov 143.52 33 *e*PKPdf PKPdf 12 35 09.3 -2.7
KURK LR LR
comp=Z,490nm,20.0s,MS5.3
BHJ Bhuj 143.53 82⇑ *i*P PKPdf 12 35 09.9 -3.0
BHJ *i* x x 12 38 37.5
BHJ AMS AMS 13 36 34.4
comp=N,455nm,22.6s
BHJ AMS AMS 13 36 48.9
comp=E,211nm,6.5s
BHJ AMS AMS 13 37 01.8
comp=Z,682nm,19.4s,MS5.4
ZAA0 Zalesovo Array 144.06 25 *e*PKPdf PKPdf 12 35 10.7 -2.2
ZALV Zalesovo Beam 144.06 25 PKP PKPdf 12 35 10.8 -2.0
comp=Z,14nm,0.8s,baz=346,slow=3.3,SNR=28
YSS Yuzh-Sakhalins 144.22 320 *i* PKP PKPdf 12 35 11.6 -1.8
YSS Yuzh-Sakhalins 144.22 320 *i* PKIKP PKPdf 12 35 11.5 -1.9
CLNS Chul'man 144.46 345 *e*PKIKP PKPdf 12 35 11.6 -1.9
CLNS pmax pmax
comp=Z,25nm,1.2s
CLNS pmax pmax
comp=N,11nm,1.3s
CLNS pmax pmax
comp=E,14nm,1.3s
EKS2 Erkin-Say 144.63 48 *e*PKPdf PKPdf 12 35 13.8 -0.4
EKS2 LR LR
comp=Z,594nm,19.0s,MS5.4
EKS2 Erkin-Say 144.63 48 P PKPdf 12 35 13.9 -0.3
SNR=38
AML Almayashu 144.77 49 *e*PKPdf PKPdf 12 35 14.7 +0.2
AML Almayashu 144.77 49 P PKPdf 12 35 14.7 +0.2
SNR=83

USP	**Ospenovka**	**144.88**	**47**	P		PKPdf	12 35 14.2	-0.4	
	SNR=13								
AAK	**Ala-Archa**	**145.13**	**48**	P		PKPbc	12 35 15.9	+1.2	
	SNR=85								
FRU	**Bishkek**	**145.14**	**47**α	*i*PKIKP		PKPdf	12 35 15.5	+0.4	
FRU				pmax		pmax			
	comp=Z,470nm,2.3s								
CHMS	**Chumysh**	**145.16**	**47**	P		PKPbc	12 35 15.4	+0.7	
	SNR=27								
BOD	**Bodaibo**	**145.17**	**356**$\Uparrow$	*i*PKIKP		PKPdf	12 35 13.1	-1.6	
BOD				pmax		pmax			
	comp=Z,74nm,1.0s								
UCH	**Uchtor**	**145.30**	**48**	*e*PKPbc		PKPbc	12 35 16.9	+1.7	
UCH	**Uchtor**	**145.30**	**48**	P		PKPbc	12 35 17.1	+1.8	
	SNR=7.7								
KBK	**Karagaybulak**	**145.43**	**47**	P		PKPdf	12 35 16.8	+1.2	
	SNR=31								
TRD	**Trivandrum**	**145.67**	**110**	*e*P		PKPdf	12 35 16.8	-0.1	
TRD				AMS		AMS	13 33 44.5		
	comp=N,334nm,18.1s,MS5.5								
TRD				AMS		AMS	13 33 47.9		
	comp=E,534nm,13.6s,MS5.5								
TKM2	**Tokmak 2**	**145.76**	**47**	*e*PKP		PKPdf	12 35 17.9	+1.7	
TKM2				LR		LR			
	comp=Z,741nm,22.0s,MS5.4								
TKM2	**Tokmak 2**	**145.76**	**47**	P		PKPdf	12 35 18.0	+1.8	
	SNR=12								
KZA	**Kyzart**	**145.86**	**48**	P		PKPdf	12 35 18.8	+2.4	
	SNR=33								
ERM	**Erimo**	**146.18**	**312**	PFAKE			12 35 30.0	+13	
ERM				LR		LR			
	comp=Z,1μm,21.0s,MS5.6								
ULHL	**Ulahol**	**146.47**	**47**	P		PKPdf	12 35 18.8	+1.4	
	SNR=36								
KAD	**Karad**	**146.49**	**93**	*e*P		PKPdf	12 35 16.9	-1.2	
KAD				AMS		AMS	13 36 57.0		
	comp=E,437nm,16.1s								
KAD				AMS		AMS	13 37 00.2		
	comp=N,235nm,9.7s								
KAD				AMS		AMS	13 37 06.6		
	comp=Z,776nm,32.3s								
POO	**Poona**	**146.50**	**91**	*e*P		PKPdf	12 35 16.6	-1.5	
NIL	**Nilore**	**146.64**	**64**	PFAKE			12 35 30.0	+12	
NIL				LR		LR			
	comp=Z,92nm,21.0s,MS4.5								
KOD	**Kodaikanal**	**146.91**	**107**	*e*P		PKPdf	12 35 19.7	+0.8	
KSH	**Kashi**	**147.31**	**52**	PKP		PKPdf	12 35 20.0	+1.1	
KSH				*e*PKP2		PKPab	12 35 27.4	+4.3	
KSH				*e*APKP			12 35 30.8		
KSH				*e*XPKP			12 35 34.5		
KSH				*e*PP		PP	12 38 54.0	+7.0	
KSH				*e*SKS		SKSdf	12 42 23.3	-2.5	
KSH				*e*SKKS		SKKSac	12 45 38.4	+1.4	
KSH				PP		PP			
	comp=Z,2μm,5.4s								
HABR	**Khabarovsk**	**147.53**	**328**	*e*PKHKP			12 35 16.0		
HABR				*i*			12 35 21.6		
HABR				*e*			12 38 51.1		
HABR				*e*			12 42 22.0		
HABR				*e*			12 51 23.1		
HABR				*e*SS		SS	12 57 47.4	-1.7	
HABR				*e*SSS			13 03 20.1		
AAI	**Ambon**	**147.67**	**217**	P		PKPbc	12 35 22.9	-0.1	
MK31	**Makanchi Array**	**147.84**	**36**	*e*PKPdf		PKPdf	12 35 19.8	+0.2	
MK31	**Makanchi Array**	**147.84**	**36**	*i* PKIKP		PKPdf	12 35 19.2	-0.3	
MK31				pmax		pmax			
	comp=Z,128nm,1.4s								
MKAR	**Makanchi Array**	**147.84**	**36**	PKPbc		PKPdf	12 35 19.7	+0.2	
	comp=Z,26nm,0.8s,baz=321,slow=1.7,SNR=48								
AJM	**Ajmer**	**148.31**	**77**	*e*P		PKPdf	12 35 20.8	-0.1	
AJM				*i* PP		PP	12 38 52.2	-1.4	
	comp=Z,26nm,0.8s								
KLR	**Kul'dur**	**148.54**	**331**	*e*PKHKP			12 35 18.4		
THN	**Thein Dam**	**148.88**	**65**	*e*P		PKPdf	12 35 21.0	-0.7	
LATR	**Latur**	**148.96**	**92**	*ex*		PKiKP	12 35 27.0	-0.6	
DLH	**Dalhousie**	**149.07**	**65**	*ex*		PKiKP	12 35 25.0	-2.4	
KMMI	**Kalianget**	**149.70**	**189**	P			12 35 38.0		
AKL	**Akola**	**149.87**	**88**	*e*P		PKPdf	12 35 22.4	-1.2	
KAPI	**Kappang**	**150.28**	**201**	*e*PKPbc		PKPbc	12 35 29.3	-0.4	
KAPI				*e*PKPab		PKPab	12 35 35.1	-0.6	
KAPI				LR		LR			
	comp=Z,305nm,22.0s,MS5.1								
SMLA	**Simla**	**150.28**	**67**	*e*P		PKPdf	12 35 23.9	-0.1	
DBJI	**Dramaga**	**150.40**	**175**	P		PKPbc	12 35 30.2	+0.2	
HYB	**Hyderabad**	**150.53**	**95**	*e*P		PKPdf	12 35 25.0	+0.3	
HYB	**Hyderabad**	**150.53**	**95**	*i* PKP		PKPdf	12 35 25.0	+0.3	
HYB				*e*			12 35 30.5		
HYB				*e*PKPAB		PKPab	12 35 38.0	+1.2	
NDI	**New Delhi**	**150.56**	**72**	*ex*		PKPbc	12 35 28.5	-1.4	
BHPL	**Bhopal**	**150.62**	**83**	*e*P		PKPdf	12 35 24.3	-0.4	
BHPL				*ex*		x	12 36 24.1		
BHPL				AMS		AMS	13 38 33.8		
	comp=N,394nm,22.6s								
BHPL				AMS		AMS	13 39 02.9		
	comp=Z,714nm,22.6s,MS5.4								
IRK	**Irkutsk**	**150.65**	**6**$\Uparrow$	*i*PKIKP		PKPdf	12 35 25.5	+1.6	
IRK				*e*			12 35 33.2		
IRK				pmax		pmax			
	comp=Z,48nm,2.0s								
MOY	**Mondy**	**150.76**	**11**	*e*PKIKP		PKiKP	12 35 30.6	+0.3	
MOY				pmax		pmax			
	comp=Z,22nm,2.1s								
TLY	**Talaya**	**151.13**	**7**	*e*PKPdf		PKPdf	12 35 24.6	0.0	
TLY				LR		LR			
	comp=Z,652nm,20.0s,MS5.4								
TLY	**Talaya**	**151.13**	**7**	*e*PKIKP		PKPdf	12 35 24.7	+0.1	
TLY				*i*			12 35 30.6		
TLY				*e*SS		SS	12 58 27.7	-0.5	
TLY				pmax		pmax			
	comp=Z,8.0nm,1.3s								
MJAR	**Matsushiro Arr**	**151.78**	**305**	PKPbc		PKPbc	12 35 32.5	0.0	
	comp=Z,23nm,1.0s,baz=97,slow=1.6,SNR=27								
MAJO	**Matsushiro**	**151.79**	**305**	*e*PKPbc		PKPbc	12 35 32.2	-0.3	
MAJO				LR		LR			
	comp=Z,1μm,19.0s,MS5.8								
MAT	**Matsushiro**	**151.79**	**305**	PKP		PKPbc	12 35 32.1	-0.4	
ZAK	**Zakamensk**	**152.36**	**8**	*e*PKIKP		PKPdf	12 35 27.0	+0.5	
ZAK				pmax		pmax			
	comp=Z,20nm,1.1s								
HIA	**Hailar**	**152.65**	**345**	*e*PKPbc		PKPbc	12 35 33.5	-0.5	
HIA				LR		LR			
	comp=Z,815nm,22.0s,MS5.5								
WMQ	**Urumqi**	**152.67**	**36**	*e*PKP		PKPdf	12 35 23.0	-4.2	
WMQ				PP		PP	12 39 17.0	-0.4	
WMQ				SKS		SKSdf	12 42 25.0	-7.5	
WMQ				SKKS		SKKSac	12 46 01.0	-5.2	
WMQ				SS		SS	12 58 43.0	-3.4	
WMQ				PP		PP			
	comp=Z,54nm,8.0s								
WMQ				LR		LR			
	comp=N,482nm,24.0s,MS5.4								
WMQ				LR		LR			
	comp=E,467nm,24.0s,MS5.4								
WMQ				LR		LR			
	comp=Z,584nm,24.0s,MS5.3								
MDJ	**Mudanjiang**	**152.92**	**327**	PKP		PKPdf	12 35 26.4	-1.1	
MDJ				PP		PP	12 39 18.5	-0.2	
MDJ				SS		SS	12 58 52.0	+3.0	
MDJ				LR		LR			
	comp=N,138nm,28.6s,MS5.0								
MDJ				LR		LR			
	comp=E,327nm,28.0s,MS5.0								
MDJ				LR		LR			
	comp=Z,262nm,24.9s,MS5.0								
MDJ	**Mudanjiang**	**152.92**	**327**	PFAKE			12 35 40.0	+12	
MDJ				LR		LR			
	comp=Z,568nm,21.0s,MS5.4								
PTH	**Pithoragarh**	**153.10**	**70**	*ex*		PKPbc	12 35 35.0	-0.7	
LGTI	**Lohaghat**	**153.14**	**70**	*ex*		PKPbc	12 35 34.6	-1.2	
TPI	**Tanjungpandan**	**154.23**	**176**	P		PKPbc	12 35 39.7	+1.1	
PDSI	**Padang**	**154.58**	**159**	P		PKPbc	12 35 41.6	+2.2	
SONM	**Songino Array**	**155.21**	**5**	PKP		PKPdf	12 35 31.3	+0.6	
	comp=Z,3.4nm,0.8s,baz=327,slow=0.6,SNR=19								
CN2	**Changchun**	**155.49**	**331**	*e*PKP		PKPdf	12 35 26.8	-4.4	
CN2				PP		PP	12 39 33.0	0.0	
CN2				*e*SS		SS	12 59 13.3	-3.4	
CN2				PP		PP			
	comp=Z,200nm,6.0s								
CN2				LR		LR			
	comp=N,300nm,22.0s,MS5.3								
CN2				LR		LR			
	comp=E,400nm,22.0s,MS5.3								
CN2				LR		LR			
	comp=Z,500nm,24.0s,MS5.3								
PYUN	**Piuthan**	**155.68**	**73**	*e*P		PKPdf	12 35 31.8	-0.1	
KOLN	**Koldanda**	**156.25**	**73**	*e*P		PKPdf	12 35 32.0	-0.7	
DANN	**Dangsing**	**156.32**	**72**	*e*P		PKPdf	12 35 32.9	+0.1	
	comp=Z,57nm,0.8s								
GKN	**Gorkha**	**157.13**	**73**	*e*P		PKPdf	12 35 33.3	-0.5	
	comp=Z,26nm,0.9s								
DMN	**Daman**	**157.59**	**73**	*e*P		PKPdf	12 35 34.1	-0.3	
KKN	**Kakani**	**157.72**	**73**	*e*P		PKPdf	12 35 34.9	+0.3	
PKIN	**Phulchoki**	**157.85**	**73**	*e*P		PKPdf	12 35 34.1	-0.6	
PKI	**Pulchoki**	**157.86**	**73**	*e*P		PKPdf	12 35 35.1	+0.3	
GUN	**Gumba**	**158.24**	**72**	*e*P		PKPdf	12 35 35.1	-0.1	
KSM	**Kuching**	**158.47**	**182**	*e*PKPdf		PKPdf	12 35 34.3	-1.7	
JIRN	**Jiri**	**158.54**	**73**	*e*P		PKPdf	12 35 35.3	-0.3	
KSRS	**Korea Array**	**158.62**	**316**	PKP		PKPdf	12 35 35.6	+0.3	
	comp=Z,4.9nm,0.9s,baz=118,slow=1.5,SNR=9.7								
RAMN	**Ramite**	**158.98**	**75**	*e*P		PKPdf	12 35 36.0	-0.1	
SBUM	**Sibu**	**159.28**	**188**	P		pPKPdf	12 35 45.3	-0.7	
ODAN	**Odare**	**159.69**	**75**	*e*P		PKPdf	12 35 36.8	-0.1	
TAPN	**Taplejung**	**159.92**	**73**	*e*P		PKPdf	12 35 37.3	+0.1	
KKM	**Kota Kinabalu**	**161.81**	**202**	PFAKE			12 35 50.0	+10	
KKM				LR		LR			
	comp=Z,657nm,22.0s								
GTA	**Gaotai**	**161.81**	**24**	PKP		PKPdf	12 35 39.3	+0.4	
GTA				PP		PP	12 40 13.5	+6.1	
GTA				SKS		SKSdf	12 42 42.9	+0.9	
GTA				PP		PP			
	comp=Z,175nm,5.7s								
GTA				LR		LR			
	comp=N,535nm,21.0s								
GTA				LR		LR			
	comp=E,454nm,19.8s								
GTA				LR		LR			
	comp=Z,884nm,20.7s								
BJI	**Beijing**	**162.18**	**343**	PKP		PKPdf	12 35 38.0	-1.2	
BJI				PP		PP	12 40 09.3	+0.2	
BJI				SKS		SKSdf	12 42 38.0	-4.2	
BJI				SS		SS	13 00 27.8	+0.8	
BJI				PP		PP			
	comp=Z,269nm,7.6s								
BJI				LR		LR			
	comp=N,568nm,24.8s								
BJI				LR		LR			
	comp=E,360nm,25.8s								
BJI				LR		LR			
	comp=Z,586nm,26.0s								
BJT	**Baijiatuan**	**162.20**	**343**	PFAKE			12 35 50.0	+11	
BJT				LR		LR			
	comp=Z,977nm,21.0s								
HHC	**Hu-ho-hao-te**	**162.22**	**355**	*e*PKP		PKPdf	12 35 35.6	-3.6	
HHC				APKP			12 35 43.8		
HHC				XPKP			12 35 49.0		
HHC				PKS			12 39 08.0		
HHC				PP		PP	12 40 11.1	+1.9	
HHC				SKS		SKSdf	12 42 35.0	-7.2	
HHC				SKKS		SKKSac	12 46 52.4	-4.1	
HHC				SS		SS	13 00 24.8	-2.4	
HHC				PP		PP			
	comp=Z,319nm,8.3s								
HHC				LR		LR			
	comp=N,428nm,19.6s								
HHC				LR		LR			
	comp=E,491nm,17.8s								
LSA	**Lhasa**	**162.38**	**64**	PKP		PKPdf	12 35 39.4	-0.3	
LSA	**Lhasa**	**162.38**	**64**	*e*PKIKP		PKPdf	12 35 41.2	+1.5	
LSA				MLR		MLR			
	comp=Z,753nm,21.0s								
SHL	**Shillong**	**163.83**	**78**	*e*P		PKPdf	12 35 37.7	-3.5	
LZH	**Lanzhou**	**166.19**	**19**	*e*PKP		PKPdf	12 35 39.0	-4.0	
LZH				APKP			12 35 49.5		
LZH				XPKP			12 35 53.3		
LZH				PKP2		PKPab	12 36 40.0	-3.7	
LZH				SKKS		SKKSac	12 47 11.0	-5.8	
LZH				SS		SS	13 01 08.0	-0.4	
LZH				PP		PP			
	comp=Z,482nm,5.6s								
LZH				LR		LR			
	comp=N,856nm,18.9s								
LZH				LR		LR			
	comp=Z,1μm,20.0s								
NJ2	**Nanjing**	**167.79**	**319**	*e*PKP		PKPdf	12 35 39.5	-4.8	
NJ2				APKP			12 35 51.3		
NJ2				XPKP			12 35 53.9		
NJ2				PP		PP	12 40 37.0	-2.2	
NJ2				LR		LR			
	comp=N,870nm,22.2s								
NJ2				LR		LR			
	comp=E,630nm,21.0s								
NJ2				LR		LR			
	comp=Z,400nm,21.6s								
YHNB	**Yeheng**	**168.95**	**280**	PFAKE			12 36 00.0	+15	
YHNB				LR		LR			
	comp=Z,1μm,19.0s								
XAN	**Xi'an**	**169.10**	**2**	PKP		PKPdf	12 35 43.6	-1.5	
XAN				PKP2		PKPab	12 36 54.6	-1.9	
XAN				PKS			12 39 15.0		
XAN				PP		PP	12 40 44.9	0.0	
XAN				SKS		SKSdf	12 42 46.0	-1.0	
XAN				SKKS		SKKSac	12 47 30.4	-0.8	
XAN				SS		SS	13 01 33.5	-3.7	
XAN				LR		LR			
	comp=N,118nm,23.9s								
XAN				LR		LR			
	comp=E,328nm,25.5s								
XAN				LR		LR			
	comp=Z,566nm,25.5s								
CM31	**Chiang Mai Arr**	**169.16**	**113**	PFAKE			12 36 00.0	+14	
CM31				LR		LR			
	comp=Z,625nm,19.0s								
CMAR	**Chiang Mai Arr**	**169.16**	**113**	PKP		PKPdf	12 35 44.7	-0.9	
	comp=Z,3.9nm,0.9s,baz=281,slow=1.7,SNR=21								
CMAR				PKPab		PKPab	12 36 57.1	-0.4	
	comp=Z,6.1nm,0.8s,baz=247,slow=4.6,SNR=13								
CMAR				PP		PP	12 40 46.3	-0.8	
	comp=Z,1.7nm,0.8s,baz=247,slow=4.9,SNR=4.8								
CHTO	**Chiang Mai**	**169.32**	**112**	*e*PKPdf		PKPdf	12 35 44.6	-1.0	
CHTO				LR		LR			
	comp=Z,566nm,19.0s								
NANT	**Nan**	**170.79**	**116**	P		PKPab	12 37 02.0	-2.7	
KMI	**Kunming**	**173.58**	**70**	PKP		PKPdf	12 35 46.8	-0.8	
KMI				PKP2		PKPab	12 37 17.0	0.0	
KMI				PKS			12 39 17.3		
KMI				PP		PP	12 41 09.8	+0.6	
KMI				SKS		SKSdf	12 42 47.0	-2.1	
KMI				SKKS		SKKSac	12 47 55.5	+1.6	
KMI				SS		SS	13 02 24.3	-0.6	
KMI				PP		PP			
	comp=Z,488nm,5.9s								
KMI				LR		LR			
	comp=N,736nm,18.5s								
KMI				LR		LR			
	comp=E,645nm,22.9s								
KMI				LR		LR			
	comp=Z,901nm,24.1s								
GYA	**Guiyang**	**175.83**	**36**	PKP		PKPdf	12 35 48.5	+0.3	
GYA				PKP2		PKPab	12 37 23.0	-3.7	
GYA				PKS			12 39 19.3		
GYA				PP		PP	12 41 23.0	+4.2	
GYA				SKKS		SKKSac	12 48 06.1	+2.0	
GYA				PP		PP			
	comp=Z,620nm,7.9s								
GYA				LR		LR			
	comp=N,610nm,21.0s								
GYA				LR		LR			
	comp=E,310nm,19.0s								
GYA				LR		LR			
	comp=Z,450nm,20.5s								
QIZ	**Qiongzhong**	**175.92**	**186**	PKP		PKPdf	12 35 44.3	-4.1	
QIZ				PP		PP	12 41 18.9	+0.5	
QIZ				SS		SS	13 02 41.9	-1.8	
QIZ				PP		PP			
	comp=Z,486nm,5.3s								
QIZ				LR		LR			
	comp=N,690nm,20.4s								
QIZ				LR		LR			
	comp=Z,832nm,25.0s								
QIZ	**Qiongzhong**	**175.92**	**186**	PFAKE			12 36 00.0	+12	
QIZ				LR		LR			
	comp=Z,962nm,21.0s								

*ISCJB **18** 12:27:10.7±0.7,2409S±004×668W±0.1,h190km±9km, mb3.5/5, Error ellipse: s-maj=16.8km s-min=7.2km az=0.4*
*IDC **18** 12:27:11.1±1.1,2411S×6677W,h184km±10km,mb3.4/5, mb1 3.8/9,mb1mx3.6/19,mbtmp3.5/9, Error ellipse: s-maj=17.4km s-min=13.1km az=80.0*
*NEIC **18** 12:27:11.7±0.8,2406S×6675W,h189km±8km,mb4.0/2, Error ellipse: s-maj=15.9km s-min=9.4km az=104.0*

ISC 18 12:27:11.7±0.7,2407S±005×667W±01,h181km±9km,n23, σ1s18/23,mb3.5/5,Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.47**	**305**	P		**Pn**	**12 27 55.6**	**+1.4**
	68nm,0.3s,baz=227,slow=8.4,SNR=3.0							
LVC				S		**Sn**	**12 28 28.1**	**+1.1**
	32nm,0.3s,baz=258,slow=22,SNR=2.8							
LCO	**Las Campanas**	**6.07**	**215**	*e*Pn		**Pn**	**12 28 40.2**	**+0.7**
	37nm,0.6s							
LCO				*e*Sn		**Sn**	**12 29 40.3**	**-8.5**
CFAA	**Coronel Fontan**	**7.62**	**190**	P		**Pn**	**12 28 58.1**	**-1.8**
	0.2nm,0.3s,baz=348,slow=13,SNR=34							
CFAA				S		**Sn**	**12 30 22.8**	**-2.9**
	0.5nm,0.3s,baz=135,slow=22,SNR=20							
LPAZ	**La Paz**	**7.85**	**350**	P		**Pn**	**12 29 02.9**	**-0.1**
	1.2nm,0.3s,baz=210,slow=8.7,SNR=9.0							
LPAZ				S		**Sn**	**12 30 29.9**	**-1.4**
	0.5nm,0.3s,baz=257,slow=19,SNR=3.6							
LPAZ	**La Paz**	**7.85**	**350**	P		**Pn**	**12 29 02.9**	**-0.1**
LPAZ				S		**Sn**	**12 30 29.9**	**-1.4**
SIV	**San Ignacio**	**9.64**	**35**	P		**Pn**	**12 29 26.1**	**-0.4**
	1.1nm,0.3s,baz=229,slow=21,SNR=8.8							
PLCA	**Paso Flores**	**16.92**	**190**	P		**Pn**	**12 30 58.3**	**+0.5**
	0.5nm,0.5s							
BDFB	**Brasilia**	**19.49**	**68**	P		**P**	**12 31 26.0**	**+1.0**
	0.6nm,0.3s,baz=233,slow=20,SNR=9.6							
VNA3	**Neumayer Olymp**	**57.01**	**161**	*e*		**P**	**12 36 40.1**	**+2.1**
VNA3				*e*			12 36 42.8	
VNA2	**Neumayer--Watz**	**57.57**	**160**	*e*		**P**	**12 36 43.7**	**+1.8**
VNA2				*e*			12 36 46.2	
SNAA	**Sanae**	**59.20**	**161**	*e*		**P**	**12 36 53.5**	**+0.3**
SNAA				*e*			12 36 56.3	
TXAR	**Lajitas Array**	**63.88**	**324**	P		**P**	**12 37 23.7**	**-1.3**
	0.2nm,0.5s,mb3.2,baz=132,slow=5.6,SNR=6.3							
TXAR	**Lajitas Array**	**63.88**	**324**	P		**P**	**12 37 23.7**	**-1.4**
TORD	**Torodi Ar. Bea**	**76.37**	**69**	P		**P**	**12 38 40.8**	**-0.5**
	1.6nm,0.6s,mb3.8,baz=257,slow=5.9,SNR=13							
PDAR	**Pinedale Array**	**77.33**	**329**	P		**P**	**12 38 45.8**	**-0.3**
	0.5nm,0.7s,mb3.3,baz=139,slow=8.4,SNR=4.1							
NVAR	**Mina Array Bea**	**78.74**	**321**	P		**P**	**12 38 53.8**	**-0.2**
	0.3nm,0.6s,mb3.1,baz=122,slow=5.7,SNR=3.4							
YKA	**Yellowknife Ar**	**94.27**	**340**	P		**P**	**12 40 09.0**	**-0.7**
	1.0nm,0.6s,mb4.1,baz=130,slow=4.6,SNR=5.9							
YKA	**Yellowknife Ar**	**94.27**	**340**	P		**P**	**12 40 09.0**	**-0.7**
ASAR	**Alice Springs**	**128.49**	**204**	PKP		PKPdf	12 45 57.1	-0.5
	0.6nm,0.7s,baz=125,slow=1.6,SNR=8.7							
WRA	**Warramunga Arr**	**131.68**	**207**	PKP		PKPdf	12 46 03.3	-0.3
	0.4nm,0.5s,baz=159,slow=1.7,SNR=13							
ZALV	**Zalesovo Beam**	**143.34**	**28**	PKP		PKPdf	12 46 21.1	-2.8
	1.2nm,0.6s,baz=286,slow=4.4,SNR=5.4							
MKAR	**Makanchi Array**	**146.42**	**40**	PKPbc		PKPbc	12 46 29.7	-1.5
	1.5nm,0.5s,baz=313,slow=3.3,SNR=11							
MKAR	**Makanchi Array**	**146.42**	**40**	PKPbc		PKPbc	12 46 29.7	-1.5

*ISCJB **18** 12:34:34.4±1.5, 1358S±007×768W±0.1,h45km±13km, mb4.1/11, Error ellipse: s-maj=21.2km s-min=8.8km az=154.6*
*NEIC **18** 12:34:36.4±1.4, 1349S×7674W, h45km±11km, mb4.3/1, Error ellipse: s-maj=17.6km s-min=8.6km az=58.0*
NEIC Felt [III] at Pisco.
*IDC **18** 12:34:37.0±1.8, 1352S×7675W, h48km±15km, mb3.8/9, mb1 4.0/14,mb1mx3.9/22,mbtmp3.8/14,ML3.6/4, Error ellipse: s-maj=28.4km s-min=10.5km az=69.0*

ISC 18 12:34:36.5±1.2,1354S±007×768W±01,h46km±11km, h39km±6.9km:pP-P,n33,σ0s92/31,mb4.1/11,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.54**	**358**	P		**Pn**	**12 34 60.0**	**-1.6**
	65nm,0.3s,baz=188,slow=12,SNR=105							
NNA				S		**Sn**	**12 35 20.9**	**+0.5**
	279nm,0.3s,baz=214,slow=13,SNR=32							
NNA	**Nana**	**1.54**	**358**	*e*Pn		**Pn**	**12 34 59.9**	**-1.7**
NNA				*e*Sn		**Sn**	**12 35 21.4**	**+1.0**
ATAH	**Atahualpa**	**6.69**	**346**	P		**Pn**	**12 36 11.7**	**-0.5**
	2.3nm,0.3s,baz=161,slow=7.4,SNR=6.2							
ATAH				S		**Sn**	**12 37 41.8**	**+15**
	1.3nm,0.3s,baz=67,slow=22,SNR=4.9							
LPAZ	**La Paz**	**8.79**	**109**	P		**Pn**	**12 36 43.7**	**+2.5**
	0.6nm,0.3s,baz=304,slow=13,SNR=17							
LPAZ				S		**Sn**	**12 38 29.1**	**+10**
	baz=9.8,slow=19,SNR=2.0							
LPAZ	**La Paz**	**8.79**	**109**	*e*Pn		**Pn**	**12 36 42.8**	**+1.7**
	18nm,1.0s							
LVC	**Limon Verde**	**11.72**	**141**	P		**Pn**	**12 37 22.7**	**+1.6**
	1.4nm,0.3s,baz=332,slow=7.9,SNR=6.3							
LVC	**Limon Verde**	**11.72**	**141**	*e*Pn		**Pn**	**12 37 14.7**	**-6.4**
	9.7nm,0.6s							
OTAV	**Otavalo**	**13.79**	**353**	P		**Pn**	**12 37 54.7**	**+5.3**
	6.9nm,0.9s							
SIV	**San Ignacio**	**15.38**	**101**	P		**Pn**	**12 38 09.1**	**-1.6**
	0.1nm,0.3s,baz=280,slow=17,SNR=2.6							
CFAA	**Coronel Fontan**	**19.62**	**158**	P		**Pn**	**12 39 02.4**	**-0.5**
	0.0nm,0.3s,baz=337,slow=9.5,SNR=8.7							
SDV	**Santo Domingo**	**23.10**	**16**	P		**P**	**12 39 39.1**	**+0.5**
	6.1nm,0.9s,mb4.0,baz=113,slow=15,SNR=5.2							
PLCA	**Paso Flores**	**27.64**	**170**	P		**P**	**12 40 19.5**	**-0.3**
	3.0nm,1.1s,mb3.9,baz=347,slow=6.7,SNR=3.2							
TXAR	**Lajitas Array**	**49.90**	**329**	P		**P**	**12 43 26.1**	**+0.4**
	0.2nm,0.6s,mb3.4,baz=158,slow=8.1,SNR=4.5							
HWUT	**Hardware Ranch**	**63.57**	**331**	*e*P		**P**	**12 45 03.2**	**+0.8**
	3.0nm,1.1s,mb4.2							
PDAR	**Pinedale Array**	**63.59**	**334**	P		**P**	**12 45 02.1**	**-0.4**
	0.4nm,0.8s,mb3.5,baz=93,slow=12,SN

ZALV	**Zalesovo Beam**	**137.15**	**16**	PKP	PKPdf	12 53 54.6	+0.1
	1.1nm,0.8s,baz=225,slow=0.8,SNR=4.2						
MKAR	**Makanchi Array**	**142.48**	**24**	PKP	PKPdf	12 54 04.5	+0.1
	0.2nm,0.5s,baz=262,slow=2.9,SNR=3.8						
SONM	**Songino Array**	**145.71**	**356**	PKPbc	PKPbc	12 54 10.8	+0.4
	2.6nm,0.9s,baz=6.1,slow=2.2,SNR=11						
CMAR	**Chiang Mai Arr**	**173.61**	**40**	PKP	PKPdf	12 54 39.7	-2.1
	0.4nm,0.8s,baz=253,slow=1.5,SNR=3.9						

IDC 18 12:53:51.5±3.9, 403S×15338E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.5/16, mbtmp3.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/25, Error ellipse: s-maj=171.0km s-min=50.4km az=118.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**19.43**	**334**	LR	LR	13 04 16.7	
	comp=Z,132nm,19.4s,baz=180,slow=32						
WRA	**Warramunga Arr**	**24.38**	**228**	P	P	12 59 12.4	+0.8
	3.0nm,0.7s,baz=53,slow=9.8,SNR=27						
ASAR	**Alice Springs**	**27.10**	**222**	P	P	12 59 36.0	-0.3
	0.7nm,0.6s,baz=54,slow=8.5,SNR=15						
TORD	**Torodi Ar. Bea**	**150.60**	**290**	PKPbc	PKPbc	13 13 46.0	-0.5
	0.2nm,0.4s,baz=100,slow=2.2,SNR=5.0						

*ISCJB **18** 13:01:30.7±0.3, 5553N±003×16084E±009, h163km±2km, mb3.7/13, Error ellipse: s-maj=8.9km s-min=4.7km az=19.7*
*MOS **18** 13:01:30.4±0.9, 5561N×16067E, h161km, mb4.4/4, Error ellipse: s-maj=23.3km s-min=9.5km az=84.8*
*KRSC **18** 13:01:31.4±1.0, 5543N×16103E, h150km±40km, ML4.2*
*NEIC **18** 13:01:32.9±1.0, 5550N×16062E, h173km±11km, mb3.9/4, Error ellipse: s-maj=16.5km s-min=11.9km az=174.0*
*IDC **18** 13:01:33.8±1.5, 5566N×16049E, h177km±16km, mb3.5/9, mb1 3.7/10, mb1mx3.4/24, mbtmp3.4/10, Error ellipse: s-maj=22.9km s-min=14.5km az=152.0*

ISC 18 13:01:31.8±0.3, 5552N±003×16085E±009, h158km±2km, n48, σ1§05/64, mb3.7/13, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMNR	**Kamenistaya**	**0.42**	**305**	*i* P	**Pn**	**13 01 54.4**	**+0.7**
TUMR	**Tumrok**	**0.46**	**240**	*i* P	**Pn**	**13 01 54.7**	**+0.8**
BZMR	**Bezymyannaya**	**0.47**	**334**	*i* P	**Pn**	**13 01 54.4**	**+0.6**
BZMR				*i* S	**Sn**	**13 02 11.7**	**+0.9**
ZLN	**Zelenaya**	**0.50**	**357**	*i* P	**Pn**	**13 01 54.7**	**+0.7**
ZLN				*i* S	**Sn**	**13 02 11.9**	**+0.8**
KPT	**Kopyto**	**0.57**	**322**	*i* P	**Pn**	**13 01 54.3**	**-0.1**
KRSR	**Krestovskiy**	**0.72**	**347**	*e*P	**Pn**	**13 01 55.3**	**+0.1**
KRSR				*i* S	**Sn**	**13 02 13.2**	**-0.1**
KOZR	**Kozyr**	**0.77**	**316**	PN	**Pn**	**13 01 56.1**	**+0.5**
KOZR				S	**Sn**	**13 02 14.1**	**+0.3**
KOZ	**Kozyrevsk**	**0.77**	**315**	*i* P	**Pn**	**13 01 56.1**	**+0.5**
KOZ				*e*S	**Sn**	**13 02 14.1**	**+0.3**
KLY	**Klyuchi**	**0.81**	**352**	P	**Pn**	**13 01 55.1**	**-0.7**
SRDR	**Sredinnyy**	**1.02**	**322**	*i* P	**Pn**	**13 01 57.7**	**+0.2**
SRDR				*i* S	**Sn**	**13 02 16.7**	**-0.5**
MKZ	**Mys Kozlova**	**1.09**	**152**	*e*P	**Pn**	**13 01 57.3**	**-0.7**
MKZ				*i* S	**Sn**	**13 02 16.3**	**-1.8**
SRKR	**Sorokina**	**1.15**	**9**	*e*P	**Pn**	**13 01 58.7**	**+0.1**
SRKR				*i* S	**Sn**	**13 02 18.5**	**-0.7**
KBTR	**Krutoberegovo**	**1.31**	**57**	*i* P	**Pn**	**13 01 59.2**	**-0.8**
KBTR				*i* S	**Sn**	**13 02 19.4**	**-2.3**
KII	**Karymskiy**	**1.69**	**209**	*i* P	**Pn**	**13 02 04.8**	**+0.9**
KII				*i* S	**Sn**	**13 02 29.4**	**+0.8**
SPN	**Mys Shipunski**	**2.47**	**192**	*e*P	**Pn**	**13 02 11.6**	**-1.3**
SPN				*i* S	**Sn**	**13 02 41.0**	**-3.6**
GNL	**Ganaly**	**2.49**	**224**	*i* P	**Pn**	**13 02 14.3**	**+1.2**
GNL				*i* S	**Sn**	**13 02 45.9**	**+0.9**
NLC	**Nalytchevo**	**2.51**	**201**	*e*P	**Pn**	**13 02 13.0**	**-0.4**
NLC				*i* S	**Sn**	**13 02 43.4**	**-2.1**
AVH	**Avacha**	**2.57**	**210**	*i* P	**Pn**	**13 02 15.3**	**+1.2**
AVH				*e*S	**Sn**	**13 02 47.9**	**+1.1**
PET	**Petropavlovsk**	**2.81**	**208**	*e*Pn	**Pn**	**13 02 17.4**	**+0.3**
PET	**Petropavlovsk**	**2.81**	**208**	*e*P	**Pn**	**13 02 17.4**	**+0.3**
PET				*i* S	**Sn**	**13 02 50.8**	**-1.2**
PEA0B	**Petropavlovsk-**	**3.04**	**219**	*e*Pn	**Pn**	**13 02 20.7**	**+0.8**
PETK	**Petropavlovsk-**	**3.04**	**219**	P	**Pn**	**13 02 20.8**	**+0.9**
	2.4nm,0.3s,baz=69,slow=16,SNR=51						
PETK				S	**Sn**	**13 03 01.7**	**+4.6**
	2.7nm,0.3s,baz=349,slow=13,SNR=4.8						
RUS	**Russkaya**	**3.38**	**205**	P	**Pn**	**13 02 23.5**	**-0.8**
RUS				*i* S	**Sn**	**13 03 01.9**	**-3.0**
YAK	**Yakutsk**	**17.29**	**305**	*e*P	**Pn**	**13 05 23.2**	**-0.1**
	14nm,0.6s						
YAK	**Yakutsk**	**17.29**	**305**	*e*P	**Pn**	**13 05 21.2**	**-2.1**
TIXI	**Tiksi**	**21.10**	**332**	*e*P	**P**	**13 06 00.9**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
IMA2	**Indian Mountai**	**23.98**	**46**	*e*P	**P**	**13 06 31.2**	**0.0**
YKA	**Yellowknife Ar**	**41.10**	**45**	P	**P**	**13 09 00.2**	**+0.8**
	comp=Z,1.3nm,0.7s,mb3.7,baz=297,slow=7.4,SNR=2.7						
YKA	**Yellowknife Ar**	**41.10**	**45**	P	**P**	**13 09 00.2**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**46.86**	**300**	*e*P	**P**	**13 09 44.1**	**-1.3**
	comp=Z,1.2nm,0.4s,mb3.9						
KURK	**Kurchatov**	**46.86**	**300**	*e*P	**P**	**13 09 44.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
MKAR	**Makanchi Array**	**47.54**	**294**	P	**P**	**13 09 48.4**	**-2.3**
	comp=Z,0.5nm,0.8s,mb3.2,baz=64,slow=5.5,SNR=3.8						
MKAR	**Makanchi Array**	**47.54**	**294**	*e*P	**P**	**13 09 49.6**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**49.25**	**307**	P	**P**	**13 10 02.3**	**-1.4**
	comp=Z,1.1nm,0.5s,mb3.7,baz=51,slow=7.0,SNR=8.7						
BVAR	**Borovoye Array**	**49.25**	**307**	P	**P**	**13 10 02.3**	**-1.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**49.28**	**307**	*e*P	**P**	**13 10 02.7**	**-1.2**
	comp=Z,2.3nm,0.7s,mb3.9						
BRVK	**Borovoye**	**49.28**	**307**	*e*P	**P**	**13 10 02.7**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
NVAR	**Mina Array Bea**	**54.54**	**72**	P	**P**	**13 10 44.5**	**+1.5**
	comp=Z,1.7nm,0.7s,mb3.9,baz=299,slow=7.3,SNR=15						
NVAR	**Mina Array Bea**	**54.54**	**72**	P	**P**	**13 10 44.5**	**+1.4**
BW06	**Boulder Array**	**55.98**	**63**	*e*P	**P**	**13 10 54.5**	**+1.2**
	comp=Z,1.2nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**55.98**	**63**	P	**P**	**13 10 54.4**	**+1.1**
	comp=Z,1.2nm,0.6s,mb3.9,baz=342,slow=2.2,SNR=10.0						
ULM	**Lac du Bonnet**	**56.85**	**48**	P	**P**	**13 10 59.7**	**+0.4**
	comp=Z,2.4nm,0.3s,mb4.5,baz=325,slow=4.3,SNR=4.1						
TXAR	**Lajitas Array**	**69.30**	**68**	P	**P**	**13 12 22.8**	**+1.1**
	comp=Z,2.0nm,0.7s,mb4.0,baz=292,slow=5.1,SNR=33						
TXAR	**Lajitas Array**	**69.30**	**68**	*e*P	**P**	**13 12 23.0**	**+1.3**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**78.47**	**205**	P	**P**	**13 13 15.1**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.1,baz=22,slow=5.7,SNR=3.2						
ASAR	**Alice Springs**	**82.15**	**205**	P	**P**	**13 13 35.1**	**+0.7**
	comp=Z,0.8nm,0.9s,mb3.4,baz=15,slow=5.6,SNR=6.8						
ASAR	**Alice Springs**	**82.15**	**205**	*e*P	**P**	**13 13 35.4**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
QSPA	**South Pole Qui**	**145.27**	**180**	PKP	PKPdf	13 20 45.8	-2.7
	comp=Z,1.0nm,0.3s,baz=320,slow=1.7,SNR=5.4						
QSPA				PKPbc	PKPbc	13 20 48.5	-0.2
	comp=Z,1.0nm,0.3s,baz=300,slow=1.1,SNR=5.5						

*ISCJB **18** 13:03:25.6±0.7, 2454S±004×6948W±009, h33km, Error ellipse: s-maj=12.1km s-min=5.6km az=163.2*
*GUC **18** 13:03:26.4±1.1, 2442S×6945W, h33km±8km, ML3.1*
*IDC **18** 13:03:30.6±1.7, 2431S×6850W, h82km±22km, mb3.2/1, mb1 3.2/4, mb1mx3.1/19, mbtmp3.2/4, Error ellipse: s-maj=44.4km s-min=16.2km az=88.0*

ISC 18 13:03:26.6±3.3, 2450S±005×6953W±009, h29km±28km, n11, σ1§11/16, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANCH	**Antofagasta**	**1.15**	**315**	*e*P	**Pn**	**13 03 46.3**	**-0.4**
ANCH				*i* S	**Sn**	**13 04 01.8**	**+0.4**
ANCH				AML	AML	13 04 04.3	
	comp=N,1μm,0.1s						
CEN1	**Los Morros**	**1.27**	**331**	↑ *i*P	**Pn**	**13 03 46.9**	**-1.4**
CEN1				*i* S	**Sn**	**13 04 02.9**	**-1.4**
CEN1				AML	AML	13 04 03.8	
	comp=E,416nm,0.6s						

MECH	**Mejillones**	**1.63**	**328**	*e*P	**Pn**	**13 03 54.5**	**+1.2**
MECH				*i* S	**Sn**	**13 04 14.3**	**+1.1**
MECH				AML	AML	13 04 22.7	
	comp=E,582nm,0.4s						
LVC	**Limon Verde**	**1.96**	**17**	P	**Pn**	**13 03 57.7**	**-0.2**
	comp=E,12nm,0.3s,baz=180,slow=10,SNR=79						
LVC				S	**Sn**	**13 04 21.6**	**+0.1**
	comp=E,24nm,0.3s,baz=216,slow=19,SNR=9.7						
LVC	**Limon Verde**	**1.96**	**17**	↑ *i*P	**Pn**	**13 03 57.9**	**0.0**
LVC				*i* S	**Sn**	**13 04 22.1**	**+0.6**
LVC				AML	AML	13 04 25.3	
	comp=N,320nm,0.5s						
CFAA	**Coronel Fontan**	**7.17**	**171**	P	**Pn**	**13 05 12.3**	**+2.8**
	comp=N,0.1nm,0.3s,baz=356,slow=13,SNR=8.9						
CFAA				S	**Sn**	**13 06 28.6**	**-1.3**
	comp=N,0.0nm,0.3s,baz=288,slow=19,SNR=2.9						
LPAZ	**La Paz**	**8.27**	**9**	P	**Pn**	**13 05 24.1**	**-0.5**
	comp=N,0.1nm,0.3s,baz=194,slow=4.2,SNR=4.1						
SIV	**San Ignacio**	**11.60**	**45**	P	**Pn**	**13 06 03.6**	**-6.7**
	comp=N,0.2nm,0.3s,baz=233,slow=14,SNR=4.2						
PMSA	**Palmer Station**	**40.43**	**176**	P	**P**	**13 11 02.9**	**+0.9**
	comp=N,11nm,0.3s,baz=5.8,slow=11,SNR=18						
TORD	**Torodi Ar. Bea**	**78.90**	**70**	P	**P**	**13 15 21.0**	**-6.7**
	comp=N,0.2nm,0.5s,baz=260,slow=4.8,SNR=3.1						
MKAR	**Makanchi Array**	**148.36**	**38**	PKPbc	PKPbc	13 23 03.2	-6.8
	comp=N,0.4nm,1.0s,baz=278,slow=1.0,SNR=2.7						

IDC 18 13:08:20.1±2.5, 689S×12875E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.3/14, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=201.8km s-min=32.6km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.06**	**158**	Pn	Pn	13 11 39.7	-1.1
	0.2nm,0.3s,baz=331,slow=14,SNR=19						
WRA				Sn	Sn	13 14 05.8	-12
	0.1nm,0.3s,baz=340,slow=22,SNR=5.8						
ASAR	**Alice Springs**	**17.40**	**164**	P	Pn	13 12 25.3	+0.8
	0.1nm,0.3s,baz=346,slow=11,SNR=12						
ASAR				S	Sn	13 15 28.8	-10
	0.0nm,0.3s,baz=354,slow=21,SNR=2.8						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	13 19 17.8	+0.1
	0.1nm,0.3s,baz=123,slow=8.2,SNR=3.6						

*NEIC **18** 13:15:08.9±1.8, 1372S×7620W, h50km±16km, Error ellipse: s-maj=42.9km s-min=13.9km az=50.0*
*ISCJB **18** 13:15:09.9±2.1, 1395S±02×7613W±03, h76km±22km, Error ellipse: s-maj=50.8km s-min=13.2km az=145.9*
*IDC **18** 13:15:11.5±3.2, 1385S×7607W, h66km±21km, mb3.4/1, mb1 3.3/4, mb1mx3.2/19, mbtmp3.3/4, Error ellipse: s-maj=75.0km s-min=14.7km az=53.0*

ISC 18 13:15:11.3±1.9, 1395S±02×7629W±03, h77km±19km, n9, σ0§98/10, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.00**	**340**	P	**Pn**	**13 15 42.4**	**-0.8**
	8.4nm,0.3s,baz=177,slow=11,SNR=16						
NNA				S	**Sn**	**13 16 07.9**	**+0.5**
	10nm,0.3s,baz=220,slow=15,SNR=7.2						
NNA	**Nana**	**2.00**	**340**	*e*Pn	**Pn**	**13 15 37.9**	**-5.3**
NNA				*e*Sn	**Sn**	**13 16 07.3**	**-0.1**
LPAZ	**La Paz**	**8.10**	**108**	P	**Pn**	**13 17 07.9**	**+1.6**
	0.1nm,0.3s,baz=296,slow=11,SNR=2.5						
LPAZ	**La Paz**	**8.10**	**108**	*e*Pn	**Pn**	**13 17 07.7**	**+1.3**
LVC	**Limon Verde**	**11.07**	**143**	P	**Pn**	**13 17 46.7**	**-0.1**
	11nm,0.3s,baz=246,slow=20,SNR=2.4						
LVC	**Limon Verde**	**11.07**	**143**	*e*Pn	**Pn**	**13 17 46.5**	**-0.3**
SIV	**San Ignacio**	**14.72**	**100**	P	**Pn**	**13 18 34.0**	**-1.6**
	baz=242,slow=13						
TORD	**Torodi Ar. Bea**	**81.64**	**74**	P	**P**	**13 27 22.2**	**+0.5**
	0.8nm,1.0s,baz=270,slow=5.2,SNR=3.7						
SONM	**Songino Array**	**146.08**	**357**	PKPbc	PKPbc	13 34 43.9	+1.3
	0.4nm,0.7s,baz=357,slow=3.2,SNR=2.9						

*HLW **18** 13:20:04.9, 3186N×3545E, h20km, Mb3.3*
*GII **18** 13:20:07.1, 3160N×3515E, ML2.3/5, POSSIBLY AN EXPLOSION*
*ISCJB **18** 13:20:08.5±0.5, 3159N±002×3511E±005, h6km±4km, Error ellipse: s-maj=7.0km s-min=3.2km az=9.3*
*CSEM **18** 13:20:08.4±0.1, 3160N×3516E, h15km, ML3.7, Error ellipse: s-maj=3.5km s-min=2.1km az=120.0*

ISC 18 13:20:09.2±0.4, 3158N±002×3513E±005, h9km±4km, n28, σ0§80/36, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSI	**Dead Sea**	**0.21**	**93**	Pg	**Pg**	**13 20 13.9**	**+0.4**
DSI				Sg	**Sg**	**13 20 16.5**	**0.0**
YTIR	**Yattir**	**0.22**	**184**	Pg	**Pg**	**13 20 14.7**	**+1.1**
MZDA	**Masada**	**0.33**	**144**	Pg	**Pg**	**13 20 15.1**	**-0.7**
MZDA				Sg	**Sg**	**13 20 26.6**	**+0.4**
RTMI	**Retamim**	**0.65**	**216**	Pg	**Pg**	**13 20 22.2**	**+0.6**
SLTI	**Sal'it**	**0.66**	**353**	Pg	**Pg**	**13 20 22.1**	**+0.1**
SLTI				Sg	**Sg**	**13 20 31.7**	**+1.0**
HMDT	**Nahal Hemdat**	**0.75**	**26**	Pg	**Pg**	**13 20 23.2**	**-0.5**
HMDT				Sg	**Sg**	**13 20 34.0**	**+0.6**
MMLI	**Mount Malkishu**	**0.89**	**16**	Pg	**Pg**	**13 20 25.4**	**-0.9**
MMLI				Sg	**Sg**	**13 20 38.1**	**+0.2**
ZFRI	**Zfri**	**1.02**	**178**	Pg	**Pg**	**13 20 28.4**	**-0.4**
RMNI	**Mount Ramon**	**1.03**	**198**	Pg	**Pg**	**13 20 28.9**	**-0.1**
OFRI	**'Ofer**	**1.04**	**353**	Pg	**Pg**	**13 20 28.6**	**-0.7**
HRSH	**Kfar Ka'horesh**	**1.12**	**6**	P	**Pg**	**13 20 34.0**	**+3.2**
PRNI	**Paran**	**1.23**	**185**	Pg	**Pg**	**13 20 31.9**	**-0.8**
RSH		**1.36**	**243**	P	**Pn**	**13 20 34.0**	**-0.3**
MMA0	**Mount Meron ar**	**1.45**	**9**	Pn	**Pn**	**13 20 35.0**	**-0.6**
MMA0B	**Mount Meron ar**	**1.45**	**9**	Pn	**Pn**	**13 20 35.0**	**-0.6**
MMA1	**Mount Meron ar**	**1.45**	**9**	Pn	**Pn**	**13 20 35.0**	**-0.6**
KRMI	**Paran Flat**	**1.50**	**194**	Pn	**Pn**	**13 20 36.2**	**-0.1**
KSHT	**Keshet**	**1.51**	**22**	Pn	**Pn**	**13 20 35.8**	**-0.6**
HRFI	**Mount Harif**	**1.54**	**183**	Pn	**Pn**	**13 20 36.4**	**-0.4**
KSDI	**Kefar Szold**	**1.67**	**15**	Pn	**Pn**	**13 20 38.3**	**-0.3**
HRI	**Mount Hermon**	**1.76**	**17**	Pn	**Pn**	**13 20 39.5**	**-0.3**
HRI				Sn	**Sn**	**13 21 03.2**	**+0.9**
AMAG	**Maghara**	**1.90**	**241**	P	**Pn**	**13 20 41.4**	**-0.3**
EIL	**Elat**	**1.91**	**185**	Pn	**Pn**	**13 20 41.6**	**-0.2**
EIL				Sn	**Sn**	**13 21 08.1**	**+2.1**
HNKL	**Nakhl**	**1.92**	**211**	P	**Pn**	**13 20 41.2**	**-0.8**
HNKL				S	**Sn**	**13 21 09.1**	**+2.7**
RCY	**Rachaya**	**1.99**	**17**	*e*Pn	**Pn**	**13 20 43.5**	**+0.6**
BHL	**Bhannes**	**2.36**	**11**	*e*Pn	**Pn**	**13 20 48.6**	**+0.5**
HKAT	**Jabal Katrina**	**3.20**	**198**	P	**Pn**	**13 20 58.9**	**-0.8**
TR2		**3.41**	**201**	P	**Pn**	**13 21 01.9**	**-0.6**

IDC 18 13:32:56.4±4.3, 878S×12437E, h74km±43km, mb3.4/4, mb1 3.7/6, mb1mx3.5/16, mbtmp3.5/6, ML4.0/2, Error ellipse: s-maj=44.5km s-min=28.7km az=48.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.58**	**206**	P	Pn	13 33 23.5	+1.0
	84nm,0.3s,baz=29,slow=3.4,SNR=217						
BATI				S	Sn	13 33 42.0	-0.2
	189nm,0.3s,baz=17,slow=17,SNR=70						
WRA	**Warramunga Arr**	**14.71**	**140**	P	Pn	13 36 20.2	-0.3
	0.7nm,0.3s,baz=324,slow=14,SNR=55						
WRA				S	Sn	13 38 53.8	-8.6
	0.6nm,0.3s,baz=313,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**17.39**	**149**	P	Pn	13 36 55.3	+1.1
	0.6nm,0.3s,baz=319,slow=11,SNR=78						
ASAR				S	S	13 40 02.8	-8.8
	0.2nm,0.3s,baz=312,slow=21,SNR=5.3						
CMAR	**Chiang Mai Arr**	**36.90**	**317**	P	P	13 39 59.4	+1.3
	0.2nm,0.3s,baz=155,slow=6.9,SNR=2.7						
MKAR	**Makanchi Array**	**66.80**	**330**	P	P	13 43 40.0	0.0
	0.4nm,0.7s,baz=125,slow=10,SNR=4.6						
ZALV	**Zalesovo Beam**	**70.84**	**337**	P	P	13 44 03.4	-1.5
	0.4nm,0.6s,baz=128,slow=9.3,SNR=2.5						
AKTO	**Aktyubinsk**	**82.12**	**324**	P	P	13 45 09.0	+0.2
	1.0nm,0.6s,baz=108,slow=9.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**123.64**	**280**	PKP	PKPdf	13 51 46.9	+0.4
	0.3nm,0.6s,baz=43,slow=1.6,SNR=2.8						

*ISCJB **18** 13:44:51.5±0.4, 1550S±005×7014W±005, h228km±4km, mb4.2/25, Error ellipse: s-maj=9.3km s-min=5.9km az=138.5*
*BJI **18** 13:44:52.1, 1550S×7010W, h217km, mB4.8*

*NEIC **18** 13:44:52.2±0.6, 1547S×7007W, h218km±6km, mb4.5/14, Error ellipse: s-maj=9.8km s-min=6.6km az=53.0*
*IDC **18** 13:44:53.0±0.7, 1540S×7003W, h224km±5km, mb3.9/15, mb1 4.0/20, mb1mx4.0/27, mbtmp3.9/20, Error ellipse: s-maj=13.3km s-min=8.9km az=48.0*

ISC 18 13:44:52.4±0.5, 1547S±005×7010W±005, h219km±4km, n72, σ1§08/62, mb4.2/25, 2C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**1.66**	**233**	↑ *i*P	**Pn**	**13 45 28.6**	**-0.6**
ARE				*i* S	**Sn**	**13 45 56.9**	**-1.1**
LPAZ	**La Paz**	**2.06**	**114**	P	**Pn**	**13 45 35.6**	**+2.6**
	131nm,0.3s,baz=299,slow=8.5,SNR=2545						
LPAZ				S	**S**	**13 46 07.5**	**+2.7**
	35nm,0.3s,baz=197,slow=19,SNR=29						
LPAZ	**La Paz**	**2.06**	**114**	↑ *i*Pn	**Pn**	**13 45 35.6**	**+2.6**
LPAZ				*e*S	**S**	**13 46 06.6**	**+1.9**
LVC	**Limon Verde**	**7.20**	**171**	P	**Pn**	**13 46 33.9**	**-1.4**
	30nm,0.3s,baz=337,slow=7.8,SNR=85						
LVC				S	**S**	**13 47 49.7**	**-7.8**
	36nm,0.3s,baz=128,slow=20,SNR=14						
LVC	**Limon Verde**	**7.20**	**171**	*e*Pn	**Pn**	**13 46 33.9**	**-1.4**
	188nm,0.6s						
LVC				*e*Sn	Px	13 46 46.1	
NNA	**Nana**	**7.41**	**297**	P	**Pn**	**13 46 37.4**	**-0.6**
	13nm,0.3s,baz=127,slow=11,SNR=25						
NNA				S	**S**	**13 48 02.0**	**-0.4**
	10nm,0.3s,baz=233,slow=15,SNR=2.7						
NNA	**Nana**	**7.41**	**297**	*e*Pn	**Pn**	**13 46 37.0**	**-1.0**
	98nm,0.3s						
NNA				*e*S	**S**	**13 47 58.9**	**-3.5**
SIV	**San Ignacio**	**8.71**	**95**	P	**Pn**	**13 46 54.3**	**-0.5**
	2.5nm,0.3s,baz=280,slow=12,SNR=65						
SIV				S	**S**	**13 48 47.1**	**+14**
	0.4nm,0.3s,baz=359,slow=17,SNR=3.1						
ATAH	**Atahualpa**	**11.70**	**315**	P	**Pn**	**13 47 33.1**	**+0.1**
	0.5nm,0.3s,baz=142,slow=10,SNR=7.1						
LCO	**Las Campanas**	**13.49**	**182**	*e*Pn	**Pn**	**13 47 55.1**	**-0.2**
	24nm,0.6s						
CFAA	**Coronel Fontan**	**16.16**	**174**	P	**P**	**13 48 27.3**	**+0.6**
	0.2nm,0.3s,baz=345,slow=10,SNR=26						
CFAA				S	**S**	**13 51 17.8**	**-7.1**
	0.1nm,0.3s,baz=335,slow=12,SNR=3.4						
CFAA	**Coronel Fontan**	**16.16**	**174**	P	**P**	**13 48 27.3**	**+0.6**
CFAA				S	**S**	**13 51 17.8**	**-7.1**
OTAV	**Otavalo**	**17.65**	**331**	*e*P	**P**	**13 48 45.3**	**+2.0**
	15nm,0.6s						
BDFB	**Brasilia**	**21.28**	**93**	P	**P**	**13 49 21.8**	**-0.3**
	4.9nm,0.4s,mb4.4,baz=258,slow=18,SNR=22						
BDFB	**Brasilia**	**21.28**	**93**	*e*P	**P**	**13 49 22.0**	**-0.1**
SPB	**Sao Paulo**	**22.82**	**114**	*e*P	**P**	**13 49 36.4**	**-0.1**
SDV	**Santo Domingo**	**24.20**	**359**	P	**P**	**13 49 48.2**	**-0.9**
	3.3nm,0.3s,mb4.4,baz=180,slow=2.0,SNR=9.9						
PLCA	**Paso Flores**	**25.18**	**181**	P	**P**	**13 49 56.9**	**-0.8**
	7.5nm,0.6s,mb4.5,baz=349,slow=9.5,SNR=31						
PLCA				PcP	PcP	13 53 26.6	+1.2
	2.1nm,1.0s,baz=9.2,slow=2.0,SNR=4.1						
PLCA	**Paso Flores**	**25.18**	**181**	*e*P	**P**	**13 49 57.5**	**-0.2**
	9.8nm,0.8s,mb4.5						
USHA	**Ushuaia**	**39.30**	**178**	P	**P**	**13 52 00.7**	**+0.8**
	7.3nm,0.6s,mb4.4,baz=359,slow=6.6,SNR=3.3						
LRAL	**Lakeview Retre**	**50.86**	**342**	*e*P	**P**	**13 53 29.2**	**-1.7**
TXAR	**Lajitas Array**	**55.08**	**324**	P	**P**	**13 54 02.1**	**+0.3**
	1.2nm,0.6s,mb3.6,baz=146,slow=9.2,SNR=20						
FVM	**French Village**	**56.49**	**341**	*e*P	**P**	**13 54 10.0**	**-1.6**
	5.5nm,0.6s,mb4.3						
ANMO	**Albuquerque**	**60.87**	**326**	*e*P	**P**	**13 54 42.9**	**+1.0**
	2.9nm,1.0s,mb3.9						
SDCO	**Great Sand Dun**	**62.51**	**329**	*e*P	**P**	**13 54 53.7**	**+1.0**
	7.9nm,0.8s,mb4.4						
SDCO				*e*pP	pP	13 55 46.5	+3.6
PV01	**Paradox Valley**	**64.38**	**327**	*e*P	**P**	**13 55 05.2**	**+0.2**
PV01		

GYA				XPKP		14 05 54.3		
GYA				PKS		14 08 01.6		
GYA				PP	PP	14 09 34.4	+1.6	
GYA				PP	PP			
	comp=Z,60nm,8.7s							
CMAR	**Chiang Mai Arr**	**169.10**	**73**	PKP	PKPdf	14 04 34.1	+0.1	
	comp=Z,0.3nm,0.7s,baz=270,slow=2.3,SNR=4.3							

IDC ***18*** *13:45:43.1±1.1, 141N×12621E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.1/6, Error ellipse: s-maj=72.2km s-min=17.7km az=71.0*

NEIC ***18*** *13:45:44.5±0.6, 145N×12640E, h10km, mb4.3/2, Error ellipse: s-maj=47.1km s-min=8.4km az=68.0*

ISCJB ***18*** *13:45:45.9±0.8, 14N±02×1263E±04, h33km, mb4.1/8, Error ellipse: s-maj=63.1km s-min=11.5km az=158.4*

ISC 18 13:45:48.1±0.8, 14N±02×1264E±04, h35km, n12, σ0§49/12, mb4.1/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**22.61**	**160**	*e*P	**P**	**13 50 46.6**	**+0.7**
	12nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**13 50 45.4**	**-0.6**
	3.8nm,0.4s,mb4.2,baz=336,slow=10,SNR=75						
WB2	**Warramunga Arr**	**22.62**	**160**	*e*P	**P**	**13 50 45.5**	**-0.6**
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**13 51 17.9**	**+0.1**
	1.6nm,0.4s,mb4.0,baz=346,slow=12,SNR=48						
ASAR				PcP	PcP	13 54 46.5	+0.8
	0.3nm,0.5s,baz=350,slow=2.2,SNR=6.1						
NWAO	**Narrogin (SRO)**	**35.26**	**193**	P	**P**	**13 52 39.3**	**-0.3**
	14nm,1.0s,mb4.8,baz=22,slow=11,SNR=4.0						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**13 52 47.6**	**+0.6**
	2.1nm,0.6s,mb4.2,baz=332,slow=8.9,SNR=8.4						
STKA	**Stephens Creek**	**36.12**	**158**	*e*P	**P**	**13 52 47.5**	**+0.6**
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**13 54 33.3**	**-0.8**
	0.2nm,0.5s,mb3.4,baz=164,slow=5.0,SNR=2.9						
MK31	**Makanchi Array**	**59.27**	**326**	*e*P	**P**	**13 55 46.2**	**0.0**
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**13 55 46.5**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=126,slow=7.4,SNR=9.6						
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**13 55 46.5**	**+0.3**
KURK	**Kurchatov**	**63.51**	**328**	*e*P	**P**	**13 56 15.2**	**+0.5**
	2.3nm,0.8s,mb4.3						

IDC 18 13:49:30.4±51.0, 1672S×17682W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/17, mbtmp4.0/3, Error ellipse: s-maj=947.7km s-min=154.3km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.53**	**240**	P	P	13 57 11.8	+0.3
	2.8nm,1.1s,baz=98,slow=7.1,SNR=3.7						
WRA	**Warramunga Arr**	**46.35**	**258**	P	P	13 57 58.6	0.0
	0.7nm,0.4s,baz=95,slow=7.4,SNR=31						
ASAR	**Alice Springs**	**46.58**	**253**	P	P	13 58 00.0	-0.4
	1.6nm,0.5s,baz=88,slow=8.4,SNR=39						

IDC 18 14:09:42.3±1.8, 837S×12448E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=54.7km s-min=26.2km az=76.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.99**	**204**	Pn	Pn	14 10 17.6	+0.4
	96nm,0.3s,baz=29,slow=4.0,SNR=221						
BATI				Sn	Sn	14 10 34.3	-8.6
	78nm,0.3s,baz=115,slow=7.4,SNR=37						
WRA	**Warramunga Arr**	**14.95**	**141**	Pn	Pn	14 13 15.0	0.0
	0.2nm,0.3s,baz=314,slow=13,SNR=14						
WRA				Sn	Sn	14 15 50.6	-11
	0.7nm,0.3s,baz=319,slow=25,SNR=14						
ASAR	**Alice Springs**	**17.68**	**150**	P	Pn	14 13 49.8	-0.4
	0.2nm,0.3s,baz=321,slow=11,SNR=16						
ASAR				S	Sn	14 16 54.4	-13
	0.3nm,0.3s,baz=310,slow=21,SNR=9.5						
MKAR	**Makanchi Array**	**66.51**	**330**	P	P	14 20 33.9	+0.1
	0.3nm,0.8s,baz=134,slow=6.2,SNR=3.3						

VIE ***18*** *14:22:36.6±0.9, 48.16N×1957E, h8km, mb2.3/3, ML2.4/5, Error ellipse: s-maj=9.0km s-min=5.3km az=49.0*

ISCJB ***18*** *14:22:37.6±0.4, 4804N±002×1960E±003, h11km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=37.0*

NEIC ***18*** *14:22:37.8±1.0, 4798N×1957E, h4km±8km, ML2.9(BUC), Error ellipse: s-maj=7.9km s-min=4.3km az=217.0*

PRU ***18*** *14:22:38.2, 4803N×1956E, h3km*

IPEC ***18*** *14:22:38.8±0.1, 4807N×1963E, h14km±1km, ML2.3/3, Error ellipse: s-maj=3.2km s-min=0.9km az=42.0*

CSEM ***18*** *14:22:38.2±0.1, 4799N×1965E, h9km±1km, ML2.3/3, Error ellipse: s-maj=2.7km s-min=2.4km az=26.0*

ISC 18 14:22:38.5±0.4, 4804N±002×1956E±003, h9km±3km, n65, σ1§04/100, 20C-18D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.25**	**118**	⇓P	**Pg**	**14 22 42.8**	**-0.8**
PSZ				S	**Sg**	**14 22 46.6**	**-0.4**
PSZ	**Piszkesteto**	**0.25**	**118**	⇑*e*P	**Pg**	**14 22 46.0**	**-0.6**
PSZ				*e*		14 22 46.7	
PSZ	**Piszkesteto**	**0.25**	**118**	*e*Pg	**Pg**	**14 22 43.0**	**-0.6**
PSZ				*e*Sg	**Sg**	**14 22 46.5**	**-0.5**
	922nm,0.4s						
PSZ	**Piszkesteto**	**0.25**	**118**	⇓*i*P	**Pg**	**14 22 42.8**	**-0.8**
PSZ				S	**Sg**	**14 22 46.6**	**-0.4**
PENC	**Penc**	**0.31**	**218**	⇓*e*Pn	**Pg**	**14 22 44.4**	**-0.3**
PENC	**Penc**	**0.31**	**218**	*e*Pg	**Pg**	**14 22 44.8**	**+0.1**
PENC				*e*Sn	**Sg**	**14 22 50.6**	**+1.8**
BUD	**Budapest**	**0.66**	**214**	⇓*e*Pg	**Pg**	**14 22 51.6**	**+0.3**
BUD				*e*Sg	**Sg**	**14 23 02.2**	**+2.3**
VYHS	**Vyhne**	**0.67**	**314**	*i* PG	**Pg**	**14 22 51.8**	**+0.4**
VYHS				*e*SG	**Sg**	**14 23 00.5**	**+0.4**
VYHS	**Vyhne**	**0.67**	**314**	*e*Pg	**Pg**	**14 22 51.8**	**+0.4**
VYHS				*e*Sg	**Sg**	**14 23 00.7**	**+0.6**
KOLL	**Kolacno**	**0.95**	**305**	*i* PN	**Pn**	**14 22 56.9**	**-1.0**
KOLL				*e*SN	**Sn**	**14 23 09.7**	**-1.8**
PKSN	**Nyarlorinc**	**1.16**	**170**	⇑*i*P	**Pb**	**14 23 01.7**	**+1.0**
PKSN				S	**Sb**	**14 23 17.4**	**+1.7**
	25nm,0.3s						
NIE	**Niedzica**	**1.47**	**19**	*e*Pg	**Pg**	**14 23 06.2**	**-0.5**
NIE				*e*Sg	**Sg**	**14 23 25.2**	**-0.6**
JAVC	**Velka Javorina**	**1.50**	**304**	*e*Pn	**Pn**	**14 23 06.1**	**+0.5**
CRVS	**Cervenica-Dubn**	**1.53**	**55**	*e*PN	**Pn**	**14 23 05.9**	**-0.1**
CRVS				*e*SN	**Sn**	**14 23 28.9**	**+2.9**
MODS	**Modra-Piesok**	**1.57**	**283**	*e*PN	**Pn**	**14 23 06.2**	**-0.3**
MODS				*e*SN	**Sn**	**14 23 28.9**	**+2.1**
ZST	**Bratislava**	**1.66**	**276**	*e*PN	**Pn**	**14 23 07.6**	**-0.1**
ZST				*e*SN	**Sn**	**14 23 31.9**	**+2.8**
STHS	**Stebnicka Huta**	**1.77**	**38**	*e*PN	**Pn**	**14 23 10.5**	**+1.2**
STHS				*e*SN	**Sn**	**14 23 35.2**	**+3.2**
PKSM	**Moragy**	**1.93**	**199**	⇑P	**Pn**	**14 23 10.3**	**-1.1**
PKSM				S	**Sn**	**14 23 34.6**	**-1.2**
PKSM	**Moragy**	**1.93**	**199**	⇑*e*Pg	**Pn**	**14 23 10.5**	**-1.0**
PKSM				S	**Sn**	**14 23 34.6**	**-1.2**
PKSM	**Moragy**	**1.93**	**199**	⇑*i*P	**Pn**	**14 23 10.3**	**-1.2**
TRPA	**Tarpa**	**2.00**	**86**	⇓*i*P	**Pn**	**14 23 16.2**	**+3.8**
TRPA	**Tarpa**	**2.00**	**86**	S	**Sn**	**14 23 44.5**	**+7.0**
KOLS	**Kolonicke sedl**	**2.01**	**63**	*e*PN	**Pn**	**14 23 13.2**	**+0.6**
OKC	**Ostrava-Krasne**	**2.03**	**333**	*e*SG	**Sg**	**14 23 42.9**	**-0.8**
	comp=Z,14nm,0.6s						
SOP	**Sopron**	**2.05**	**261**	⇓*e*Pn	**Pn**	**14 23 12.7**	**-0.5**
SOP				*e*Sn	**Sn**	**14 23 37.5**	**-1.4**
OJC	**Ojcow**	**2.19**	**4**	*e*Pg	**Pg**	**14 23 20.9**	**+0.4**
OJC				*e*Sg	**Sg**	**14 23 49.0**	**+0.1**
MORC	**Moravsky Berou**	**2.19**	**323**	⇓P	**Pn**	**14 23 15.7**	**+0.6**
MORC				S	**Sn**	**14 23 42.9**	**+0.6**
MORC	**Moravsky Berou**	**2.19**	**323**	*e*Pn	**Pn**	**14 23 15.5**	**+0.4**
MORC				*e*Sn	**Sn**	**14 23 42.0**	**-0.3**
MORC				S	**Sn**	**14 23 42.9**	**+0.6**
MORC	**Moravsky Berou**	**2.19**	**323**	⇓*i*P	**Pn**	**14 23 15.7**	**+0.6**
RHK3	**Tenkes**	**2.33**	**203**	⇑*e*Pn	**Pn**	**14 23 16.4**	**-0.5**
RHK3				*e*Sn	**Sn**	**14 23 44.4**	**-1.2**
KRUC	**Moravsky**	**2.34**	**297**	*e*Pn	**Pn**	**14 23 16.7**	**-0.4**
VRAC	**Vranov**	**2.34**	**304**	⇑P	**Pn**	**14 23 17.2**	**+0.1**
VRAC				S	**Sn**	**14 23 46.2**	**+0.2**
VRAC	**Vranov**	**2.34**	**304**	*e*Pn	**Pn**	**14 23 17.3**	**+0.1**
VRAC				*e*Sn	**Sn**	**14 23 45.8**	**-0.2**
VRAC				S	**Sn**	**14 23 46.2**	**+0.2**
VRAC	**Vranov**	**2.34**	**304**	⇑*i*P	**Pn**	**14 23 17.3**	**+0.1**
DRGR		**2.47**	**119**	⇑P	**Pn**	**14 23 17.8**	**-1.1**
DRGR				S	**Sn**	**14 23 49.0**	**-0.2**
DRGR		**2.47**	**119**	⇑P	**Pn**	**14 23 17.8**	**-1.1**
DRGR				S	**Sn**	**14 23 49.0**	**-0.2**
DRGR		**2.47**	**119**	⇑*i*P	**Pn**	**14 23 17.8**	**-1.1**
CONA	**Conrad Observa**	**2.49**	**269**	⇑*i*Pn	**Pn**	**14 23 19.2**	**+0.1**
CSNA	**Conrad Observa**	**2.49**	**269**	⇓*i*Pn	**Pn**	**14 23 19.3**	**+0.1**
KWP	**Kalwaria**	**2.62**	**51**	⇑P	**Pn**	**14 23 22.1**	**+1.2**
KWP	**Kalwaria**	**2.62**	**51**	⇑*i*P	**Pn**	**14 23 22.1**	**+1.1**
BMR	**Baia Mare**	**2.67**	**96**	⇑P	**Pn**	**14 23 19.6**	**-2.1**
BMR	**Baia Mare**	**2.67**	**96**	⇑*i*P	**Pn**	**14 23 19.6**	**-2.1**
BMR	**Baia Mare**	**2.67**	**96**	S	**Sg**	**14 24 04.2**	**-0.2**
BZS	**Buzias**	**2.80**	**149**	⇑P	**Pn**	**14 23 22.6**	**-0.9**
BZS	**Buzias**	**2.80**	**149**	⇑P	**Pn**	**14 23 22.5**	**-0.9**
BZS				S	**Sn**	**14 23 57.1**	**-0.2**
BZS	**Buzias**	**2.80**	**149**	⇑*i*P	**Pn**	**14 23 22.5**	**-0.9**
ARSA	**Arzberg**	**2.84**	**255**	*e*Pn	**Pn**	**14 23 25.2**	**+1.2**
FGSL	**Fruska Gora**	**2.88**	**177**	⇑*i*Pn	**Pn**	**14 23 24.4**	**-0.2**
TREC	**Trest**	**2.98**	**297**	*e*PN	**Pn**	**14 23 26.3**	**+0.4**
DPC	**Dobruska-Polom**	**3.14**	**319**	*e*PN	**Pn**	**14 23 29.0**	**+0.9**
DPC				*e*SG	**Sg**	**14 24 17.2**	**-2.2**
	comp=Z,8.4nm,0.8s						
SOKA	**Soboth**	**3.37**	**248**	⇓*i*Pn	**Pn**	**14 23 30.1**	**-1.1**
SOKA				⇓*i*Sn	**Sn**	**14 24 11.4**	**+0.2**
GZR	**Gura Zlata**	**3.45**	**139**	⇓P	**Pn**	**14 23 32.1**	**-0.2**
GZR				S	**Sn**	**14 24 11.0**	**-2.2**
GZR	**Gura Zlata**	**3.45**	**139**	⇓P	**Pn**	**14 23 32.1**	**-0.2**
GZR				S	**Sn**	**14 24 11.0**	**-2.2**
GZR	**Gura Zlata**	**3.45**	**139**	⇓*i*P	**Pn**	**14 23 32.1**	**-0.2**
MOA	**Molln**	**3.56**	**269**	⇓*i*Pn	**Pn**	**14 23 34.5**	**+0.6**
BUR08	**Bucovina Ar. S**	**3.82**	**94**	*e*Pn	**Pn**	**14 23 37.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**3.82**	**94**	*e*Pn	**Pn**	**14 23 37.8**	**+0.4**
BURAR	**Bucovina Array**	**3.83**	**94**	⇓P	**Pn**	**14 23 38.2**	**+0.6**
BURAR				S	**Sn**	**14 24 22.9**	**+0.2**
BURAR	**Bucovina Array**	**3.83**	**94**	⇓P	**Pn**	**14 23 38.2**	**+0.6**
BURAR				S	**Sn**	**14 24 22.9**	**+0.2**
BURAR	**Bucovina Array**	**3.83**	**94**	⇓*i*P	**Pn**	**14 23 38.2**	**+0.6**
GEC2	**GERESS Array S**	**3.98**	**284**	*e*Pn	**Pn**	**14 23 39.8**	**+0.1**
GEC2	**GERESS Array S**	**3.98**	**284**	*e*Pn	**Pn**	**14 23 39.8**	**+0.1**
KHC	**Kasperske Hory**	**4.12**	**288**	*e*Pn	**Pn**	**14 23 42.3**	**+0.7**
KHC				*e*Sg	**Sg**	**14 24 48.7**	**-2.1**
CLL	**Collm**	**5.37**	**310**	*i* Pn	**Pn**	**14 23 59.0**	**+0.3**
	comp=Z,5.0nm,0.5s						

CSEM ***18*** *14:31:11.7±0.2, 3921N×2771E, h12km, MD2.5, Error ellipse: s-maj=5.5km s-min=3.2km az=79.0*

ISCJB ***18*** *14:31:12.5±0.7, 3925N±003×2777E±004, h3km±7km, Error ellipse: s-maj=5.9km s-min=5.2km az=28.3*

ISK ***18*** *14:31:12.4, 3923N×2777E, h5km, MD2.9*

DDA ***18*** *14:31:12.8, 3921N×2776E, h7km±3km, Md2.5*

ISC 18 14:31:13.2±0.6, 3924N±004×2777E±004, h9km±6km, n13, σ0§76/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.37**	**175**	*i* P	**Pg**	**14 31 19.4**	**-1.0**
AKHS				*i* S	**Sg**	**14 31 25.5**	**+0.3**
AKS	**Akhisar**	**0.37**	**175**	*e*PG	**Pg**	**14 31 19.7**	**-0.6**
AKS				*e*SG	**Sg**	**14 31 25.3**	**+0.1**
DST	**Dursunbey**	**0.76**	**61**	*e*PG	**Pg**	**14 31 28.0**	**+0.2**
DEMI	**Demirci**	**0.76**	**105**	*i* P	**Pg**	**14 31 27.3**	**-0.6**
DEMI				*i* S	**Sg**	**14 31 38.9**	**+1.0**
AYVA	**Ayvalik**	**0.84**	**275**	*i* P	**Pg**	**14 31 30.5**	**+1.2**
AYVA				*i* S	**Sg**	**14 31 41.0**	**+0.8**
KULA	**Kula-Manisa**	**1.01**	**136**	*e*PG	**Pg**	**14 31 31.6**	**-0.9**
KULA				*e*SG	**Sg**	**14 31 45.3**	**-0.3**
EDC	**Edincik**	**1.10**	**4**	*e*PN	**Pn**	**14 31 33.7**	**-1.1**
KCT	**Karacabey**	**1.12**	**24**	*e*PN	**Pn**	**14 31 34.7**	**-0.3**
BNT	**Bandirma**	**1.12**	**6**	*e*PN	**Pn**	**14 31 34.2**	**-0.7**
GDZ	**Gediz**	**1.34**	**96**	*i* P	**Pn**	**14 31 38.4**	**+0.4**
GDZ				*i* S	**Sb**	**14 31 56.9**	**+1.2**
GDZ	**Gediz**	**1.34**	**96**	*i* P	**Pn**	**14 31 38.4**	**+0.4**
GDZ				*i* S	**Sb**	**14 31 56.8**	**+1.1**
AYDN	**Tasoluk**	**1.58**	**177**	*i* P	**Pn**	**14 31 40.5**	**-0.9**
AYDN				*i* S	**Sn**	**14 32 02.4**	**+0.5**
KHL	**Karahalli**	**1.65**	**123**	*e*PN	**Pn**	**14 31 43.2**	**+0.9**

TEH ***18*** *14:34:33.5, 2780N×5736E, h25km, ML4.7*

ISCJB ***18*** *14:35:02.6±0.2, 2774N±002×5740E±002, h28km, mb4.6/106, MS4.1/21, Error ellipse: s-maj=3.5km s-min=2.5km az=10.8*

MOS ***18*** *14:35:03.0±0.9, 2786N×5745E, h33km, mb4.7/51, Error ellipse: s-maj=7.8km s-min=4.3km az=123.7*

IDC ***18*** *14:35:03.3±0.5, 2790N×5752E, h24km±2km, mb4.1/20, mb1 4.3/24, mb1mx4.2/31, mbtmp4.2/24, ML4.4/3, MS4.0/16, Ms1 4.0/16, ms1mx3.9/32, Error ellipse: s-maj=11.2km s-min=10.3km az=155.0*

CSEM ***18*** *14:35:05.4±0.1, 2774N×5743E, h45km, mb4.9/14, Ms3.9, Error ellipse: s-maj=2.8km s-min=1.5km az=137.0*

BJI ***18*** *14:35:05.5, 2856N×5710E, h42km, mB5.2, mb4.8, Ms4.8, Msz4.5*

NEIC ***18*** *14:35:07.1, 2782N×5729E, h40km, mb4.7/54, MS4.1/1, After THR.*

THR ***18*** *14:35:07.1±0.8, 2782N×5727E, h43km±6km, ML4.7*

ISC 18 14:35:04.7±0.2, 2772N±002×5744E±002, h30km, h30km±1.5km: pP-P, n423, σ1§27/450, mb4.6/106, MS4.1/21, 8C-9D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.84**	**251**	*e*Pg	**Pn**	**14 35 22.2**	**+1.7**
IBND	**Bandar-abas**	**0.84**	**251**	*e*Pg	**Pn**	**14 35 22.2**	**+1.7**
IBND				*e*		14 35 57.2	
BNDS	**Bandar-Abbas**	**1.17**	**254**	*e*Pg	**Pn**	**14 35 27.6**	**+2.6**
BNDS				*e*Sg	**Sn**	**14 35 42.3**	**+2.3**
BNDS	**Bandar-Abbas**	**1.17**	**254**	*e*Pg	**Pn**	**14 35 27.3**	**+2.3**
BNDS				AML	AML	14 35 47.7	
	comp=E,12μm,0.5s						
BNDS				AML	AML	14 35 53.1	
	comp=N,15μm,0.6s						
BNDS	**Bandar-Abbas**	**1.17**	**254**	*e*Pg	**Pn**	**14 35 27.6**	**+2.6**
	SNR=105						
BNDS				*e*Sg	**Sn**	**14 35 42.3**	**+2.3**
	SNR=105						
KRBR	**Kerman**	**2.33**	**345**	*e*Pn	**Pn**	**14 35 43.1**	**+2.1**
KRBR				*e*Sg	**Sn**	**14 36 15.6**	**+7.1**
KRBR	**Kerman**	**2.33**	**345**	*e*Pn	**Pn**	**14 35 42.9**	**+2.0**
KRBR				*e*Sg	**Sn**	**14 36 15.6**	**+7.0**
KRBR				AML	AML	14 36 21.5	
	comp=N,5μm,0.4s						
KRBR				AML	AML	14 36 25.2	
	comp=E,6μm,0.5s						
KRBR	**Kerman**	**2.33**	**345**	*e*Pn	**Pn**	**14 35 43.1**	**+2.2**
	SNR=54						
KRBR				*e*Sg	**Sn**	**14 36 15.6**	**+7.1**
	SNR=96						
HATD	**Hatta, Dubai**	**3.12**	**202**	P	**Pn**	**14 35 52.6**	**+0.8**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**3.40**	**210**	P	**Pn**	**14 35 58.8**	**+3.1**
	SNR=65						
ZHSF	**Zahedan**	**3.48**	**57**	*e*Pn	**Pn**	**14 36 01.4**	**+4.6**
ASUD	**Al Ashush, Dub**	**3.62**	**212**	P	**Pn**	**14 36 02.1**	**+3.4**
	SNR=142						
GHIR	**Ghir-Karzin**	**3.98**	**279**	*e*Pn	**Pn**	**14 36 05.5**	**+1.9**
GHIR				AML	AML	14 37 41.7	
	comp=E,709nm,0.6s						
HOQ	**Hoqain**	**4.12**	**182**	P	**Pn**	**14 36 05.3**	**-0.4**
	SNR=48						
ISRV	**Sarvestan**	**4.15**	**294**	Pn	**Pn**	**14 36 08.0**	**+2.0**
ISRV				Sn	**Sn**	**14 36 51.8**	**-1.7**
ISRV	**Sarvestan**	**4.15**	**294**	⇓*e*Pn	**Pn**	**14 36 08.1**	**+2.1**
ISRV				*e*Sn	**Sn**	**14 36 52.5**	**-1.0**
ISRV	**Sarvestan**	**4.15**	**294**	*e*Pn	**Pn**	**14 36 08.1**	**+2.1**
ISRV				*e*Sn	**Sn**	**14 36 51.8**	**-1.7**
ISRV				*e*		14 38 10.1	
IBAF	**Bafgh**	**4.18**	**338**	Pn	**Pn**	**14 36 07.9**	**+1.4**
IBAF	**Bafgh**	**4.18**	**338**	*e*Pn	**Pn**	**14 36 08.0**	**+1.5**
IBAF				*e*Sn	**Sn**	**14 36 51.5**	**-2.8**
IBAF	**Bafgh**	**4.18**	**338**	*e*Pn	**Pn**	**14 36 08.0**	**+1.5**
IBAF				*e*		14 36 20.8	
IBAF				*e*Sn	**Sn**	**14 36 51.5**	**-2.8**
IPAR	**Pars**	**4.39**	**300**	Pn	**Pn**	**14 36 10.9**	**+1.5**
IPAR				Sn	**Sn**	**14 36 57.9**	**-1.6**
IPAR	**Pars**	**4.39**	**300**	*e*Pn	**Pn**	**14 36 11.0**	**+1.6**
IPAR				*e*Sn	**Sn**	**14 36 57.9**	**-1.6**
IPAR	**Pars**	**4.39**	**300**	*e*Pn	**Pn**	**14 36 11.0**	**+1.6**
IPAR				*e*Sn	**Sn**	**14 36 57.9**	**-1.6**
IPAR				*e*		14 37 28.8	
IMEH	**Mehriz**	**4.41**	**327**	*e*Pn	**Pn**	**14 36 10.7**	**+1.2**
IMEH				*e*		14 37 38.2	
SMDO	**Samad**	**4.68**	**173**	P	**Pn**	**14 36 14.4**	**+1.1**
	SNR=40						
IKOO	**Kooshah**	**4.88**	**16**	*e*Pn	**Pn**	**14 36 17.4**	**+1.4**
IKOO	**Kooshah**	**4.88**	**16**	*e*Pn	**Pn**	**14 36 17.4**	**+1.4**
IKOO				*e*		14 37 47.2	
ICHK	**Chekchek**	**5.22**	**330**	*e*Pn	**Pn**	**14 36 22.3**	**+1.6**
ICHK				*e*		14 38 02.3	
ITEG	**Tejag**	**5.28**	**12**	*e*Pn	**Pn**	**14 36 23.0**	**+1.5**
ITEG	**Tejag**	**5.28**	**12**	*e*Pn	**Pn**	**14 36 23.0**	**+1.5**
ITEG				*e*		14 38 07.5	
ISAD	**Sadrabad**	**5.30**	**323**	Pn	**Pn**	**14 36 23.3**	**+1.5**
ISAD	**Sadrabad**	**5.30**	**323**	*e*Pn	**Pn**	**14 36 23.4**	**+1.6**
ISAD				*e*		14 37 33.6	
JMDO	**Jabal Madar**	**5.36**	**173**	P	**Pn**	**14 36 24.6**	**+1.8**
	SNR=18						
JMDO	**Jabal Madar**	**5.36**	**173**	P	**Pn**	**14 36 24.5**	**+1.8**
	SNR=18						
IDAH	**Dahanechah**	**5.42**	**22**	*e*Pn	**Pn**	**14 36 24.9**	**+1.4**
IDAH	**Dahanechah**	**5.42**	**22**	*e*Pn	**Pn**	**14 36 24.9**	**+1.4**
IDAH				*e*		14 38 07.8	
IMON	**Monand**	**5.78**	**19**	*e*Pn	**Pn**	**14 36 30.0**	**+1.6**
IMON	**Monand**	**5.78**	**19**	*e*Pn	**Pn**	**14 36 30.0**	**+1.6**
IMON				*e*		14 36 44.9	
NASN	**Na'in**	**6.45**	**323**	*e*Pn	**Pn**	**14 36 38.9**	**+1.2**
IGAR	**Gharneh**	**6.61**	**316**	*e*Pn	**Pn**	**14 36 40.7**	**+1.0**
IGAR	**Gharneh**	**6.61**	**316**	*e*Pn	**Pn**	**14 36 40.7**	**+1.0**
IGAR				*e*		14 38 00.0	
SLWS		**6.76**	**246**	P	**Pn**	**14 36 42.2**	**+0.3**
IZEF	**Zefreh**	**6.79**	**321**	*e*Pn	**Pn**	**14 36 43.1**	**+0.9**
IZEF				*e*		14 36 43.9	
BTHS		**6.98**	**240**	P	**Pn**	**14 36 44.6**	**-0.2**
IPIR	**Pirpir**	**7.52**	**313**	*e*Pn	**Pn**	**14 36 53.1**	**+0.8**
IPIR				*e*		14 38 25.6	
IKLH	**Kolahrood**	**7.53**	**319**	Pn	**Pn**	**14 36 53.1**	**+0.7**
IKLH	**Kolahrood**	**7.53**	**319**	*e*Pn	**Pn**	**14 36 53.2**	**+0.8**
IKLH				*e*		14 39 38.7	
ISFB	**Sefidab**	**7.97**	**327**	Pn	**Pn**	**14 36 59.6**	**+1.1**
ISFB	**Sefidab**	**7.97**	**327**	*e*Pn	**Pn**	**14 36 59.7**	**+1.2**
ISFB				*e*		14 39 24.0	
IANJ	**Anjilo**	**8.28**	**340**	Pn	**Pn**	**14 37 03.6**	**+0.8**
IANJ	**Anjilo**	**8.28**	**340**	*e*Pn	**Pn**	**14 37 03.7**	**+0.9**
IANJ				*e*		14 40 01.6	
KFJS		**8.41**	**275**	P	**Pn**	**14 37 04.3**	**-0.3**
QRN	**Al-Qurain**	**8.46**	**279**	*e*P	**Pn**	**14 37 05.1**	**-0.1**
	baz=278						
QRN				AML	AML	14 38 39.2	
	comp=Z,452nm,0.3s,baz=278						
IMOG	**Moghan**	**8.51**	**10**	*e*Pn	**Pn**	**14 37 07.2**	**+1.3**
IMOG	**Moghan**	**8.51**	**10**	*e*Pn	**Pn**	**14 37 07.2**	**+1.3**
SHGR	**Shooshtar-Gavs**	**8.68**	**302**	*e*Pn	**Pn**	**14 37 09.0**	**+0.9**
KBD	**Kabd**	**8.70**	**282**	*e*P	**Pn**	**14 37 08.8**	**+0.3**
	baz=281						
KBD				AML	AML	14 38 45.5	
	comp=Z,248nm,0.3s,baz=281						
ISRO	**Mashad**	**8.73**	**11**	*e*Pn	**Pn**	**14 37 09.9**	**+1.0**
UMR	**Umm Al-Rimmam**	**8.74**	**284**	*e*P	**Pn**	**14 37 09.5**	**+0.5**
	baz=284						
UMR				AML	AML	14 38 46.0	
	comp=Z,286nm,0.4s,baz=284						
IVRN	**Varamin**	**8.74**	**327**	*e*Pn	**Pn**	**14 37 10.0**	**+1.0**
IVRN	**Varamin**	**8.74**	**327**	*e*Pn	**Pn**	**14 37 09.8**	**+0.8**
IVRN				*e*Pn	**Pn**	**14 37 10.0**	**+1.0**
IVRN				*e*		14 40 14.3	
RDF	**Al-Radifah**	**8.80**	**280**	*e*P	**Pn**	**14 37 09.9**	**0.0**
	baz=279				

ASF S Sn 14 42 29.4 -11
comp=Z,0.6nm,0.3s,baz=156,slow=19,SNR=4.2
ASF LR LR 14 48 06.7
comp=Z,416nm,18.5s,baz=330,slow=43
ASF Jabal al Asfar 18.34 289 P Pn 14 39 14.8 -2.0
ASF S Sn 14 42 29.4 -11
ASF LR LR 14 48 06.7
ASF Jabal al Asfar 18.34 289 P Pn 14 39 14.8 -2.0
ASF S Sn 14 42 29.4 -11
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF smax
comp=N,1.0nm,0.3s
ASF MLR MLR
comp=Z,417nm,18.5s
URFA Urfa 18.41 306 *eP* Pn 14 39 17.7 0.0
KLP Kalpa 18.48 73 *eP* Pn 14 39 18.9 +0.4
KLP AMb AMB 14 39 25.6
comp=Z,22nm,0.6s
SVRC Sivrice-ELAZID 18.51 310 *eP* Pn 14 39 20.2 +1.3
KK31 Karatay Array 18.64 31 ⇑Pn Pn 14 39 20.6 +0.2
comp=Z,6.2nm,0.7s,baz=183,slow=14,SNR=66
ONI Oni 18.68 326 P Pn 14 39 14.5 -6.3
PTK Pertek 18.72 311 *eP* Pn 14 39 20.3 -1.0
BCA Borcka 18.85 321 *eP* Pn 14 39 23.8 +0.9
EZC Erzincan 18.90 314 *eP* Pn 14 39 26.9 +3.4
AKL Akola 19.16 107 *ex* x 14 40 16.7
GAZ Gaziantep 19.47 304 *eP* Pn 14 39 30.1 -0.2
GOA Goa 19.47 125 *eP* Pn 14 39 32.5 +1.9
GUMT Gumushane 19.52 315 *eP* Pn 14 39 31.6 +0.7
JOSI Joshimath 19.52 76 *eP* Pn 14 39 31.6 +0.5
HWQ Hawqa 19.53 295 *eP* Pn 14 39 32.2 +1.0
KTUT Trabzon 19.65 317 *eP* Pn 14 39 33.1 +0.6
BHL Bhannes 19.68 294 *eP* Pn 14 39 32.4 -0.6
MMAI Mount Meron Ar 19.72 291 P Pn 14 39 32.7 -0.8
comp=Z,1.4nm,0.3s,baz=99,slow=18,SNR=4.8
MMAI S Sn 14 43 02.9 -11
comp=Z,1.1nm,0.3s,baz=121,slow=25,SNR=5.9
MMAI LR LR 14 49 01.1
comp=Z,492nm,18.2s,baz=110,slow=42
EIL Elat 19.82 281 P Pn 14 39 34.6 -0.1
comp=Z,0.7nm,0.3s,baz=86,slow=3.3,SNR=19
EIL S Sn 14 43 12.1 -4.5
comp=Z,0.8nm,0.3s,baz=69,slow=17,SNR=3.1
EIL LR LR 14 47 49.5
comp=Z,150nm,20.0s,baz=277,slow=39
EIL Elat 19.82 281 P Pn 14 39 34.6 -0.1
EIL S Sn 14 43 12.1 -4.5
EIL LR LR 14 47 49.5
EIL Elat 19.82 281 P Pn 14 39 34.6 0.0
EIL S Sn 14 43 12.1 -4.5
KMRS Kahramanmaras 19.83 305 *eP* Pn 14 39 34.6 0.0
EKS2 Erkin-Say 19.96 37 *eP* Pn 14 39 33.7 -2.4
comp=Z,69nm,1.3s
EKS2 Erkin-Say 19.96 37 *eP* Pn 14 39 33.7 -2.4
comp=Z,69nm,1.3s
KIV Kislovodsk 20.08 328 *eP* P 14 39 36.3 +0.7
KIV *eS* S 14 43 10.7 -9.0
KIV pmax pmax
comp=Z,28nm,0.9s
KIV MLR MLR
comp=Z,84nm,13.0s
KIV Kislovodsk 20.08 328 *eP* P 14 39 35.8 +0.2
comp=Z,60nm,1.1s
SARI SarD1z-Kayseri 20.46 308 *eP* P 14 39 42.1 +2.3
CEYT Ceyhan 20.49 302 *eP* P 14 39 42.9 +2.7
FRU Bishkek 20.53 38 *eP* P 14 39 42.0 +1.5
FRU pmax pmax
comp=Z,320nm,3.6s
SVSK Karacayir 20.83 311 *eP* P 14 39 42.1 -1.7
SOC Sochi 21.33 323 *eP* P 14 39 48.5 -0.6
SOC *eS* S 14 43 33.2 -11
SOC pmax pmax
comp=Z,17nm,1.1s,mb4.3
SOC MLR MLR
comp=Z,332nm,14.0s,MS3.9
SOC Sochi 21.33 323 *eP* P 14 39 48.5 -0.6
comp=Z,332nm,14.0s
MERS Mersin 21.37 301 *eP* P 14 39 51.2 +1.6
AB31 Akbulak array 21.59 4 P P 14 39 50.5 -1.3
AB31 pmax pmax
comp=Z,32nm,0.9s,mb4.8
AB31 Akbulak array 21.59 4 P P 14 39 50.5 -1.3
comp=Z,32nm,0.9s,mb4.8
HYB Hyderabad 22.00 113 *eP* P 14 39 56.0 -0.5
HYB Hyderabad 22.00 113 *i P* P 14 40 01.0 +4.5
AKTK Aktyubinsk 22.68 1 P P 14 40 02.9 -0.7
AKTK S S 14 44 08.0 -2.1
AKTK LR LR 14 50 28.0
AKTK Aktyubinsk 22.68 1 P P 14 40 02.8 -0.7
AKTK S S 14 44 08.0 -2.1
AKTO Aktyubinsk 22.68 1 P P 14 40 02.9 -0.7
comp=Z,22nm,0.8s,mb4.7,baz=190,slow=9.8,SNR=58
AKTO S S 14 44 08.0 -2.1
comp=Z,0.4nm,0.4s,baz=176,slow=15,SNR=2.8
AKTO LR LR 14 50 28.0
comp=Z,588nm,18.6s,MS4.0,baz=173,slow=41
AKTO Aktyubinsk 22.68 1 *i P* P 14 40 02.9 -0.6
AKTO pmax pmax
comp=Z,9.0nm,1.3s,mb4.0
KOLN Koldanda 23.14 84 *eP* P 14 40 08.9 +0.3
DANN Dangsing 23.23 82 *eP* P 14 40 10.0 +0.5
LADK Ladik-KÖNYA 23.42 303 *eP* P 14 40 13.5 +2.0
KIZT Kizilcal 24.01 304 *eP* P 14 40 18.3 +1.5
GKN Gorkha 24.03 83 *eP* P 14 40 16.6 -0.5
comp=Z,21nm,0.8s,mb4.6
DMN Daman 24.49 84 *eP* P 14 40 20.9 -0.4
comp=Z,8.6nm,0.5s,mb4.4
KKN Kakani 24.62 83 *eP* P 14 40 21.8 -0.7
ISP Isparta 24.71 301 *eP* P 14 40 24.3 +1.0
comp=Z,24nm,0.8s,mb4.8
ISP Isparta 24.71 301 *eP* P 14 40 24.3 +1.1
ISP pmax pmax
comp=Z,23nm,0.8s,mb4.8
PKIN Phulchoki 24.75 84 *eP* P 14 40 23.2 -0.4
comp=Z,22nm,0.7s,mb4.8
PKI Pulchoki 24.76 84 *eP* P 14 40 23.0 -0.7
comp=Z,26nm,0.6s,mb4.9
GUN Gumba 25.13 83 *eP* P 14 40 26.8 -0.3
comp=Z,53nm,0.8s,mb5.1
JIRN Jiri 25.43 83 *eP* P 14 40 29.7 -0.2
comp=Z,28nm,0.7s,mb4.9
KOD Kodaikanal 25.64 129 *ex* x 14 40 21.0
RAMN Ramite 25.89 85 *eP* P 14 40 33.8 -0.2
VRHR Novokhopersk 26.23 337 *eP* P 14 40 35.6 -1.3
VRHR pmax pmax
comp=Z,40nm,1.1s,mb4.9
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,50nm,1.3s
VRHR Novokhopersk 26.23 337 *eP* P 14 40 35.6 -1.3
comp=E,40nm,0.8s,mb5.0
ODAN Odare 26.60 85 *eP* P 14 40 40.3 -0.2
VOSK Vostochnaya 26.93 18 P P 14 40 41.1 -2.0
VOSK pmax pmax
comp=Z,40nm,2.1s,mb4.6
VOSK Vostochnaya 26.93 18 P P 14 40 41.1 -2.0
comp=Z,40nm,2.1s,mb4.6
VORD Divnogorie 26.98 334 *eP* P 14 40 41.8 -1.8
VORD pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,20nm,0.8s
VORD Divnogorie 26.98 334 *eP* P 14 40 41.8 -1.8
comp=E,10.0nm,1.0s,mb4.3
BVA0 Borovoye Array 27.04 17 *i* P P 14 40 41.6 -2.5
BVA0 pmax pmax
comp=Z,7.0nm,1.6s,mb3.9
BVA0 Borovoye Array 27.04 17 *i* P P 14 40 41.6 -2.5
comp=Z,7.0nm,1.6s,mb3.9
BVAR Borovoye Array 27.04 17 P P 14 40 42.2 -1.9
comp=Z,4.1nm,0.7s,mb4.1,baz=196,slow=8.8,SNR=25
BVAR PcP PcP 14 44 05.1 +0.3
comp=Z,0.8nm,0.5s,baz=234,slow=3.7,SNR=3.3
BVAR LR LR 14 52 50.5
comp=Z,1μm,19.2s,MS4.4,baz=210,slow=40
BVAR Borovoye Array 27.04 17 P P 14 40 42.2 -1.9
BVAR 14 44 05.1
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR MLR MLR
comp=Z,1μm,19.3s

BRVK Borovoye 27.05 17 *eP* P 14 40 42.8 -1.4
comp=Z,21nm,1.2s,mb4.5
BRVK Borovoye 27.05 17 *eP* P 14 40 42.8 -1.4
BRVK pmax pmax
comp=Z,21nm,1.2s,mb4.5
BRVK Borovoye 27.05 17 *eP* P 14 40 42.8 -1.4
comp=Z,21nm,1.2s,mb4.5
VSR Storozhevoye 27.23 334 *eP* P 14 40 44.4 -1.4
VSR pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.2s
MK31 Makanchi Array 27.26 39 *eP* P 14 40 44.5 -1.6
MK31 Makanchi Array 27.26 39 *eP* P 14 40 44.5 -1.7
MKAR Makanchi Array 27.26 39 P P 14 40 44.0 -2.1
comp=E,3.4nm,0.8s,mb3.9,baz=219,slow=7.7,SNR=15
MKAR LR LR 14 52 37.7
comp=E,258nm,18.2s,MS3.8,baz=121,slow=39
MKAR Makanchi Array 27.26 39 P P 14 40 44.0 -2.1
MKAR LR LR 14 52 37.6
MKAR Makanchi Array 27.26 39⇑ *eP* P 14 40 44.5 -1.7
KURK Kurchatov 28.03 29 *eP* P 14 40 50.2 -2.8
comp=E,7.8nm,1.0s,mb4.3
KURK Kurchatov 28.03 29⇑ *eP* P 14 40 51.7 -1.3
KURK pmax pmax
comp=Z,9.0nm,1.7s,mb4.1
KURK Kurchatov 28.03 29 *eP* P 14 40 50.2 -2.8
comp=Z,7.8nm,1.0s,mb4.3
IDI Anoyia 28.67 293 P P 14 40 59.9 +1.1
comp=Z,16nm,0.8s,mb4.8,baz=94,slow=13,SNR=4.8
IDI pP pP 14 41 06.7 -0.9
comp=Z,11nm,0.5s,baz=72,slow=14,SNR=2.7
ARU Arti 28.70 1 *eP* P 14 40 58.0 -0.9
WMQ Urumqi 29.12 49 P P 14 41 04.0 +1.2
WMQ AP pP 14 41 16.0 +4.4
WMQ XP sP 14 41 21.0 +5.7
WMQ PP PP 14 41 59.0 -10
WMQ S S 14 45 52.0 -0.8
WMQ AMB AMB
comp=Z,25nm,0.8s,mb5.0
WMQ AMB AMB
comp=Z,64nm,3.0s
WMQ LR LR
comp=N,298nm,5.0s
WMQ LR LR
comp=E,369nm,5.0s
WMQ LR LR
comp=Z,504nm,5.0s
OBN Obninsk 31.28 337⇓ *eP* P 14 41 21.1 -0.6
OBN *e* 14 42 24.5
OBN *eSS* SS 14 48 11.1 -30
OBN pmax pmax
comp=Z,33nm,1.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.5
OBN Obninsk 31.28 337 *eP* P 14 41 21.1 -0.6
comp=Z,33nm,1.6s,mb4.9
AKASG Malin Array Be 31.36 325 P P 14 41 20.4 -2.2
comp=Z,0.7nm,0.4s,mb3.9,baz=127,slow=8.2,SNR=8.5
AKASG pP pP 14 41 27.6 -3.7
comp=Z,2.5nm,0.5s,baz=132,slow=8.5,SNR=6.4
AKASG Malin Array Be 31.36 325 P P 14 41 20.4 -2.1
AKASG *PP pP 14 41 27.6 -3.7
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BURAR Bucovina Array 31.99 317 *i P* P 14 41 28.2 +0.1
BUR08 Bucovina Ar. S 32.01 317 *eP* P 14 41 28.0 -0.3
BUR08 Bucovina Ar. S 32.01 317 *eP* P 14 41 28.0 -0.3
KRUS Krusevo 32.52 304 *eP* P 14 41 33.5 +0.6
GZR Gura Zlata 32.63 312⇓ P P 14 41 41.1 +7.4
GZR Gura Zlata 32.63 312⇓ *P* P 14 41 41.1 +7.3
NVS Novosibirsk 32.95 28 *eP* P 14 41 33.4 -3.0
NVS pmax pmax
comp=N,5.0nm,1.0s
NVS pmax pmax
comp=Z,14nm,1.0s,mb4.8
NVS pmax pmax
comp=E,2.0nm,1.1s
ZAA0 Zalesovo Array 33.01 30 *eP* P 14 41 34.9 -2.0
ZAA0 Zalesovo Array 33.01 30 *eP* P 14 41 34.9 -2.0
ZALV Zalesovo Beam 33.01 30 P P 14 41 34.5 -2.4
comp=E,2.5nm,0.3s,mb4.7,baz=245,slow=9.7,SNR=18
ZALV pP pP 14 41 40.9 -4.8
comp=E,7.4nm,0.4s,baz=240,slow=11,SNR=13
ZALV LR LR 14 56 43.5
comp=E,205nm,19.1s,MS3.9,baz=254,slow=40
ZALV Zalesovo Beam 33.01 30 P P 14 41 34.5 -2.4
ZALV *PP pP 14 41 40.9 -4.8
ZALV pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
ZALV MLR MLR
comp=Z,205nm,19.1s,MS3.9
DRGR 33.20 314⇓ *iP* P 14 41 39.5 +0.9
BZS Buzias 33.48 312⇑ *P* P 14 41 40.0 -1.1
BZS Buzias 33.48 312⇑ *iP* P 14 41 40.0 -1.1
KOLS Kolonicke sedl 34.33 318 *eP* P 14 41 48.5 0.0
CRVS Cervenica-Dubn 34.81 317 *eP* P 14 41 52.1 -0.5
STHS Stebnicka Huta 35.15 318 *eP* P 14 41 58.6 +3.0
STHS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KLMR Klimovskoe 35.27 345 *eP* P 14 41 53.7 -2.7
KLMR pmax pmax
comp=Z,20nm,1.4s,mb4.8
TIP Timpagrande 35.54 299 *eP* P 14 42 00.6 +1.5
comp=Z,49nm,1.6s,mb5.2
TIP Timpagrande 35.54 299 *eP* P 14 42 00.6 +1.5
comp=Z,49nm,1.6s,mb5.2
PKSM Moragy 35.63 312⇓ *P* P 14 41 59.5 -0.2
PKSM Moragy 35.63 312⇓ *iP* P 14 41 59.5 -0.3
VYHS Vyhne 36.26 315 *eP* P 14 42 04.1 -1.0
VYHS *ep*P pP 14 42 13.9 0.0
OJC Ojcow 36.33 319 *eP* P 14 42 05.1 -0.6
KOLL Kolacno 36.56 315 *eP* P 14 42 07.2 -0.4
KOLL Kolacno 36.56 315 *eP* P 14 42 07.3 -0.3
GTA Gaotai 36.87 60 *eP* P 14 42 09.8 -0.6
GTA AP pP 14 42 22.0 +2.7
GTA XP sP 14 42 27.4 +4.4
GTA S S 14 47 49.8 -3.4
GTA XS sS 14 48 09.8 +2.0
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.3
GTA AMB AMB
comp=Z,244nm,4.5s
GTA LR LR
comp=N,153nm,18.9s,MS4.1
GTA LR LR
comp=E,212nm,16.8s,MS4.1
GTA LR LR
comp=Z,149nm,17.4s,MS3.8
MODS Modra-Piesok 37.20 315 *eP* P 14 42 12.3 -0.8
MODS pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
MODS Modra-Piesok 37.20 315 *eP* P 14 42 12.3 -0.8
comp=Z,6.0nm,1.4s,mb4.2
ZST Bratislava 37.25 314 *eP* P 14 42 10.9 -2.6
ZST pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
ZST Bratislava 37.25 314 *eP* P 14 42 10.9 -2.6
comp=Z,7.0nm,0.5s,mb4.8
MORC Moravsky Berou 37.51 317⇓ *P* P 14 42 14.8 -0.9
MORC Moravsky Berou 37.51 317⇓ *iP* P 14 42 14.8 -0.9
VRAC Vranov 37.93 316 *eP* P 14 42 19.0 -0.2
DPC Dobruska-Polom 38.45 317 *eP* P 14 42 22.5 -1.1
DPC *ep*P pP 14 42 31.8 -0.7
TREC Trest 38.61 315 *eP* P 14 42 24.2 -0.8
TREC *ep*P pP 14 42 32.9 -1.0
UPC Upice 38.69 317 *eP* P 14 42 23.7 -1.9
UPC *ep*P pP 14 42 31.9 -2.6
CMAR Chiang Mai Arr 39.12 95 P P 14 42 29.4 -0.3
comp=Z,0.2nm,0.3s,baz=290,slow=9.3,SNR=3.0
CMAR PcP PcP 14 44 38.3 -0.7
comp=Z,0.5nm,0.6s,baz=299,slow=4.0,SNR=3.3
CMAR LR LR 15 01 47.0
comp=Z,86nm,18.6s,baz=280,slow=41
JOF Joensuu 39.13 341 *ep* P 14 42 27.7 -1.4
comp=Z,1.1nm,0.3s,mb4.1
JOF Joensuu 39.13 341 *eP* P 14 42 27.7 -1.4
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
PTCC Patocco-Chiusa 39.22 310 P P 14 42 37.9 +7.7
comp=Z,4.0nm,0.4s,mb4.5
PRU Pruhonice 39.41 316 *eP* P 14 42 29.3 -2.4
PVCC Panska Ves 39.56 317 *eP* P 14 42 31.6 -1.3

GEC2 GERESS Array S 39.60 314 *eP* P 14 42 31.8 -1.5
GEC2 GERESS Array S 39.60 314 *eP* P 14 42 31.8 -1.5
GERES GERESS Array B 39.60 314 P P 14 42 31.5 -1.8
comp=Z,1.4nm,0.7s,mb3.8,baz=119,slow=4.7,SNR=17
GERES pP pP 14 42 38.3 -3.9
comp=Z,1.8nm,0.8s,baz=116,slow=9.1,SNR=9.5
GERES LR LR 15 00 08.5
comp=Z,111nm,20.8s,MS3.7,baz=102,slow=38
GERES GERESS Array B 39.60 314 P P 14 42 31.5 -1.8
GERES *PP pP 14 42 38.3 -3.9
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,111nm,20.8s
KHC Kasperske Hory 39.76 315⇑ *eP* P 14 42 33.7 -0.9
KHC Kasperske Hory 39.76 315 *eP* P 14 42 33.5 -1.1
KHC *ep*P pP 14 42 40.8 -2.7
LZH Lanzhou 39.96 66 *eP* P 14 42 39.5 +3.1
LZH AP pP 14 42 51.8 +6.4
LZH XP sP 14 42 57.3 +8.3
LZH *e*PP PP 14 44 16.0 +7.5
LZH S S 14 48 41.8 +1.9
LZH XS sS 14 49 02.3 +7.7
LZH *e*SS SS 14 51 34.0 -3.2
LZH AMB AMB
comp=Z,29nm,1.6s,mb4.8
LZH AMB AMB
comp=Z,187nm,5.5s
LZH LR LR
comp=N,456nm,14.0s
LZH LR LR
comp=Z,1μm,15.7s,MS4.8
VMG Vicchio 40.04 306 P P 14 42 38.3 +1.3
BRG Berggiesshubel 40.05 317 *eP* P 14 42 45.2 +8.2
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BRG Berggiesshubel 40.05 317 *e*(P) P 14 42 45.2 +8.3
comp=Z,3.7nm,0.9s,mb4.1
KAF Kangasniemi 40.08 338 *ep* P 14 42 37.3 +0.3
comp=Z,0.7nm,0.4s,mb3.7
KAF Kangasniemi 40.08 338 *eP* P 14 42 37.3 +0.3
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
SEI Scarperia 40.18 306 P P 14 42 39.7 +1.5
comp=Z,79nm,0.7s,mb5.5
CD2 Chengdu 40.29 74 *eP* P 14 42 42.3 +3.0
CD2 AP pP 14 42 52.8 +4.6
CD2 XP sP 14 42 57.5 +5.7
CD2 PP PP 14 44 19.3 +7.1
CD2 S S 14 48 48.0 +3.0
CD2 XS sS 14 49 04.4 +4.7
CD2 SS SS 14 51 42.3 -1.7
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CD2 AMB AMB
comp=Z,30nm,4.6s
CD2 LR LR
comp=N,120nm,12.8s
CD2 LR LR
comp=Z,150nm,15.6s,MS4.0
FNVD Fontana Vidola 40.37 307 P P 14 42 40.5 +0.8
comp=Z,68nm,1.4s,mb5.2
KMI Kunming 40.48 83 P P 14 42 43.8 +2.9
KMI AMB AMB
comp=Z,10.0nm,2.0s,mb4.2
CLL Collm 40.75 318 *i P* P 14 42 41.6 -1.2
comp=Z,16nm,1.3s,mb4.5
CLL *ep*P pP 14 42 51.0 -0.7
CLL LmV 15 01 00.0
comp=Z,100nm,21.8s
BSD Bornholm Skovb 41.05 324 *i P* P 14 42 42.6 -2.6
BSD pmax pmax
comp=Z,12nm,1.1s,mb4.4
BSD Bornholm Skovb 41.05 324 *i P* P 14 42 42.6 -2.6
comp=Z,12nm,1.1s,mb4.4
FETA Feichten 41.12 311⇑ *iP* P 14 42 45.3 -0.5
comp=Z,6.6nm,1.1s,mb4.2
FETA Feichten 41.12 311 P P 14 42 43.7 -2.2
comp=Z,6.6nm,1.1s,mb4.2
ZAK Zakamensk 41.33 44 *eP* P 14 42 47.6 0.0
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb3.9
ZAK Zakamensk 41.33 44 *eP* P 14 42 47.6 0.0
comp=Z,4.0nm,1.2s,mb3.9
PGF Pioggiola 41.73 304 *eP* P 14 42 49.9 -1.0
TUE Stuetta 41.96 310 P P 14 42 52.8 +0.1
comp=Z,4.5nm,0.8s,mb4.2
SONM Songino Array 42.76 48 P P 14 42 57.8 -1.5
comp=Z,2.6nm,1.1s,mb3.9,baz=248,slow=9.3,SNR=8.1
SONM pP pP 14 43 03.5 -4.7
comp=Z,2.7nm,0.9s,baz=262,slow=7.6,SNR=8.7
SONM LR LR 15 02 56.2
comp=Z,438nm,19.6s,MS4.4,baz=264,slow=39
SONM Songino Array 42.76 48 P P 14 42 57.8 -1.5
SONM *PP pP 14 43 03.5 -4.8
SONM pmax pmax
comp=Z,3.0nm,1.1s
SONM MLR MLR
comp=Z,438nm,19.6s
SBF Sospel 42.98 306 *eP* P 14 42 59.9 -1.2
FRF La Foret Royal 43.52 305 *eP* P 14 43 04.3 -1.2
MBDF Montbardon 43.53 307 *eP* P 14 43 04.8 -0.7
comp=Z,15nm,0.7s,mb4.5
MBDF Montbardon 43.53 307 *eP* P 14 43 04.8 -0.7
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
MBDF Montbardon 43.53 307 *eP* P 14 43 04.8 -0.7
comp=Z,7.4nm,0.7s,mb4.5
GYA Guiyang 43.61 80 P P 14 43 08.4 +2.0
GYA AP pP 14 43 20.4 +5.0
GYA XP sP 14 43 25.3 +6.3
GYA PCP PcP 14 44 59.9 +6.3
GYA SCP ScP 14 48 47.0 +4.0
GYA S S 14 49 32.3 -1.8
GYA XS sS 14 49 52.4 +3.5
GYA SS SS 14 52 44.4 -5.2
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,110nm,5.1s
GYA LR LR
comp=N,280nm,11.7s,MS4.5
GYA LR LR
comp=E,240nm,12.0s,MS4.5
GYA LR LR
comp=Z,360nm,12.5s,MS4.5
LPG La Plagne 43.62 308 *eP* P 14 43 05.6 -0.6
comp=Z,23nm,0.8s,mb4.6
LPG La Plagne 43.62 308 *eP* P 14 43 05.6 -0.6
LPG pmax pmax
comp=Z,12nm,0.8s,mb4.7
LPG La Plagne 43.62 308 *eP* P 14 43 05.6 -0.6
comp=Z,12nm,0.8s,mb4.6
BNI Bardonecchia 43.62 307 *eP* P 14 43 05.3 -1.0
comp=Z,37nm,1.3s,mb5.0
BNI Bardonecchia 43.62 307 *eP* P 14 43 05.3 -1.0
BNI pmax pmax
comp=Z,37nm,1.3s,mb5.0
BNI Bardonecchia 43.62 307 *eP* P 14 43 05.3 -1.0
comp=Z,37nm,1.3s,mb5.0
LPL La Plagne 43.63 308 *eP* P 14 43 06.0 -0.4
comp=Z,16nm,0.7s,mb4.6
LPL La Plagne 43.63 308 *eP* P 14 43 06.0 -0.4
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
LPL La Plagne 43.63 308 *eP* P 14 43 06.0 -0.4
comp=Z,7.9nm,0.7s,mb4.6
CDF Champ du Feu 43.66 312 *eP* P 14 43 05.3 -1.2
CABF La Chapelle 44.20 309 *eP* P 14 43 09.4 -1.5
XAN Xi'an 44.25 69 P P 14 43 17.8 +6.3
XAN AP pP 14 43 25.1 +4.6
XAN AMB AMB
comp=Z,4.0nm,0.8s,mb4.2
SMRF Simiane la Rot 44.32 306 *eP* P 14 43 10.9 -1.0
VIVF Saint-Julien-l 45.03 307 *eP* P 14 43 17.0 -0.5
comp=Z,18nm,1.0s,mb4.5
VIVF Saint-Julien-l 45.03 307 *eP* P 14 43 17.0 -0.5
VIVF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
VIVF Saint-Julien-l 45.03 307 *eP* P 14 43 17.0 -0.5
comp=Z,9.0nm,1.0s,mb4.5
NB2 NORSAR Subarra 45.35 330 P P 14 43 17.9 -1.9
comp=Z,1.4nm,0.6s,mb4.0,baz=114,slow=8.6
NOA NORSAR Array B 45.35 330 P P 14 43 17.0 -2.8
comp=Z,3.1nm,0.9s,mb4.2,baz=115,slow=7.9,SNR=7.7

NOA LR LR 15 04 57.7
comp=Z,116nm,20.4s,MS3.8,baz=330,slow=40
NOA NORSAR Array B 45.35 330 P **P** **14 43 17.0 -2.8**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA MLR MLR
comp=Z,117nm,20.4s
GIVF Givet 45.52 314 *eP* **P** **14 43 19.5 -1.9**
LASF Ste Croix 45.57 306 *eP* **P** **14 43 21.7 -0.1**
KEV Kevo 45.58 346 *ep* **P** **14 43 20.5 -1.1**
comp=Z,1.6nm,0.3s,mb4.4
KEV Kevo 45.58 346 *eP* **P** **14 43 20.5 -1.1**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
SMF Signal de Mont 45.75 309 *eP* **P** **14 43 21.6 -1.6**
comp=Z,45nm,1.1s,mb5.0
SMF Signal de Mont 45.75 309 *eP* **P** **14 43 21.6 -1.6**
SMF pmax pmax
comp=Z,23nm,1.1s,mb5.0
SMF Signal de Mont 45.75 309 *eP* **P** **14 43 21.6 -1.6**
comp=Z,22nm,1.1s,mb5.0
ARCES ARCESS Array B 45.75 345 P **P** **14 43 21.7 -1.2**
comp=Z,1.7nm,0.3s,mb4.4,baz=143,slow=8.5,SNR=42
ARCES LR LR 15 05 21.2
comp=Z,163nm,18.6s,MS4.0,baz=246,slow=40
ARCES ARCESS Array B 45.75 345 P **P** **14 43 21.7 -1.2**
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES MLR MLR
comp=Z,163nm,18.6s
LOR Lormes 45.79 310 *eP* **P** **14 43 22.4 -1.1**
LOR *e*MLR MLR
comp=Z,118nm,17.5s,MS3.6
LOR Lormes 45.79 310 *eP* **P** **14 43 22.4 -1.1**
LOR MLR MLR
comp=Z,120nm,17.5s,MS3.9
BAIF Baives 45.91 314 *eP* **P** **14 43 23.5 -0.9**
HHC Hu-ho-hao-te 45.92 59 *eP* **P** **14 43 26.6 +1.9**
HHC AP pP 14 43 37.1 +3.4
HHC XP sP 14 43 43.0 +5.7
HHC PCP PcP 14 45 02.8 +1.5
HHC PP PP 14 45 14.6 +2.1
HHC PCS PcS 14 48 58.3 +2.7
HHC S **S** **14 50 08.4 +1.1**
HHC XS sS 14 50 27.4 +5.2
HHC SCS ScS 14 53 16.3 -2.1
HHC AMB AMB
comp=Z,12nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,117nm,7.9s
HHC LR LR
comp=N,324nm,16.6s,MS4.6
HHC LR LR
comp=E,452nm,16.7s,MS4.6
HHC LR LR
comp=Z,210nm,17.8s,MS4.1
SSF Saint Saulge 46.01 310 *eP* **P** **14 43 23.6 -1.7**
comp=Z,10nm,0.5s,mb4.7
SSF Saint Saulge 46.01 310 *eP* **P** **14 43 23.6 -1.7**
SSF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
SSF Saint Saulge 46.01 310 *eP* **P** **14 43 23.6 -1.7**
comp=Z,5.1nm,0.5s,mb4.7
AVF Avril sur Loir 46.09 309 *eP* **P** **14 43 24.3 -1.6**
comp=Z,7.5nm,0.6s,mb4.5
AVF Avril sur Loir 46.09 309 *eP* **P** **14 43 24.3 -1.6**
AVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AVF Avril sur Loir 46.09 309 *eP* **P** **14 43 24.3 -1.6**
comp=Z,3.8nm,0.6s,mb4.5
EJON La Jonquera 46.23 303 P **P** **14 43 18.7 -8.4**
comp=Z,30nm,2.6s,mb4.8
BGF Bois d'Agland 46.42 309 *eP* **P** **14 43 27.3 -1.2**
comp=Z,14nm,0.7s,mb4.7
BGF Bois d'Agland 46.42 309 *eP* **P** **14 43 27.3 -1.2**
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BGF Bois d'Agland 46.42 309 *eP* **P** **14 43 27.3 -1.2**
comp=Z,7.1nm,0.7s,mb4.7
MTLF Montolieu 46.73 305 *eP* **P** **14 43 30.4 -0.6**
comp=Z,21nm,1.0s,mb4.7
MTLF Montolieu 46.73 305 *eP* **P** **14 43 30.4 -0.6**
MTLF pmax pmax
comp=Z,11nm,1.0s,mb4.7
MTLF Montolieu 46.73 305 *eP* **P** **14 43 30.4 -0.6**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 46.84 309 *eP* **P** **14 43 30.5 -1.3**
comp=Z,6.6nm,0.6s,mb4.4
TCF Toulx Ste Croi 46.84 309 *eP* **P** **14 43 30.5 -1.3**
TCF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TCF Toulx Ste Croi 46.84 309 *eP* **P** **14 43 30.5 -1.3**
comp=Z,3.3nm,0.6s,mb4.4
CAF Calviac 46.88 307 *eP* **P** **14 43 31.2 -0.9**
TAM Tamanrasset 46.94 276 *eP* **P** **14 43 34.5 +1.6**
OPO Ambohidratompo 47.08 193 P **P** **14 43 35.1 +1.3**
comp=Z,3.5nm,0.9s,mb4.3,baz=27,slow=12,SNR=3.8
OPO pP pP 14 43 41.4 -1.5
comp=Z,3.5nm,0.9s,baz=309,slow=5.6,SNR=3.5
EMIR Miracle 47.25 303 P **P** **14 43 35.9 +0.8**
comp=Z,12nm,0.7s,mb4.9
RJF Les Rejaudoux 47.28 307 *eP* **P** **14 43 34.5 -0.8**
comp=Z,53nm,1.3s,mb5.0
RJF *e*MLR MLR
comp=Z,209nm,20.2s,MS3.8
RJF Les Rejaudoux 47.28 307 *eP* **P** **14 43 34.5 -0.8**
comp=Z,26nm,1.3s,mb5.0
RJF LR LR
comp=Z,210nm,20.3s,MS4.1
RJF Les Rejaudoux 47.28 307 *eP* **P** **14 43 34.5 -0.8**
RJF pmax pmax
comp=Z,27nm,1.3s,mb5.0
RJF MLR MLR
comp=Z,210nm,20.3s,MS4.1
EPOB Poblet 47.60 302 P **P** **14 43 37.6 -0.2**
comp=Z,34nm,1.5s,mb5.2
EPOB Poblet 47.60 302 P **P** **14 43 37.7 -0.1**
comp=Z,34nm,1.5s,mb5.2
LFF La Frestale 47.82 307 *eP* **P** **14 43 39.0 -0.5**
ERTA Horta de San J 48.18 301 P **P** **14 43 42.4 +0.1**
comp=Z,38nm,1.3s,mb5.3
ERTA Horta de San J 48.18 301 P **P** **14 43 42.4 +0.1**
comp=Z,38nm,1.3s,mb5.3
EBIE Bielsa 48.26 304 P **P** **14 43 42.6 -0.3**
comp=Z,85nm,2.4s,mb5.3
EBIE Bielsa 48.26 304 P **P** **14 43 42.6 -0.3**
comp=Z,85nm,2.4s,mb5.3
LDF La Druitiere 48.57 312 *eP* **P** **14 43 44.6 -0.5**
EBEN Beniarda 48.76 298 P **P** **14 43 52.3 +5.5**
comp=Z,84nm,1.6s,mb5.5
ETSF Etsaut 48.77 304 *eP* **P** **14 43 46.4 -0.4**
comp=Z,16nm,1.0s,mb4.7
ETSF Etsaut 48.77 304 *eP* **P** **14 43 46.4 -0.4**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ETSF Etsaut 48.77 304 *eP* **P** **14 43 46.4 -0.4**
comp=Z,8.2nm,1.0s,mb4.7
EMOS Mosqueruela 48.83 301 P **P** **14 43 48.3 +1.0**
comp=Z,60nm,1.6s,mb5.4
EMOS Mosqueruela 48.83 301 P **P** **14 43 48.3 +1.0**
comp=Z,60nm,1.6s,mb5.4
SJPF Ste Jean 49.25 304 *eP* **P** **14 43 49.9 -0.6**
comp=Z,17nm,0.8s,mb4.8
SJPF Ste Jean 49.25 304 *eP* **P** **14 43 49.9 -0.6**
SJPF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
SJPF Ste Jean 49.25 304 *eP* **P** **14 43 49.9 -0.6**
comp=Z,8.4nm,0.8s,mb4.8
BOD Bodaibo 49.28 36 *eP* **P** **14 43 41.9 -8.6**
BOD pmax pmax
comp=Z,17nm,1.0s,mb5.0
BJI Beijing 49.48 60 P **P** **14 43 52.9 +0.6**
BJI S **S** **14 50 57.3 -0.5**
BJI SS SS 14 54 21.8 -7.9
BJI AMB AMB
comp=Z,12nm,0.4s,mb5.3
BJI AMB AMB
comp=Z,310nm,4.5s
BJI LR LR
comp=N,316nm,15.2s,MS4.7
BJI LR LR
comp=E,422nm,15.1s,MS4.7
BJI LR LR
comp=Z,118nm,19.7s,MS3.9
ETOB Tobarra 49.80 299 P **P** **14 43 55.2 +0.5**
comp=Z,16nm,1.1s,mb5.0
ETOB Tobarra 49.80 299 P **P** **14 43 55.2 +0.5**
comp=Z,16nm,1.1s,mb5.0
ETOR Torete 50.00 301 P **P** **14 43 54.6 -1.6**
comp=Z,8.1nm,1.3s,mb4.6
ETOR Torete 50.00 301 P **P** **14 43 54.6 -1.6**
ETOR pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
ETOR Torete 50.00 301 P **P** **14 43 54.6 -1.6**
comp=Z,8.1nm,1.3s,mb4.6
EVIA Vianos 50.55 299 P **P** **14 44 01.8 +1.4**
EVIA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
EVIA Vianos 50.55 299 P **P** **14 44 01.8 +1.4**
comp=Z,4.2nm,0.7s,mb4.5
EHUE Huescar 50.71 298 P **P** **14 44 02.0 +0.3**
comp=Z,9.7nm,1.3s,mb4.6
EHUE Huescar 50.71 298 P **P** **14 44 02.0 +0.3**
EHUE pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
EHUE Huescar 50.71 298 P **P** **14 44 02.0 +0.3**
comp=Z,9.7nm,1.3s,mb4.6
EBER Berja 51.07 296 P **P** **14 44 05.0 +0.7**
comp=Z,33nm,1.4s,mb5.1
EBER Berja 51.07 296 P **P** **14 44 05.0 +0.7**
comp=Z,33nm,1.4s,mb5.1
EQES Quesada 51.09 298 P **P** **14 44 03.4 -1.1**
comp=Z,13nm,1.0s,mb4.8
EQES Quesada 51.09 298 P **P** **14 44 03.4 -1.1**
comp=Z,13nm,1.0s,mb4.8
ESDC Sonseca Array 51.56 300 P **P** **14 44 07.4 -0.6**
comp=Z,0.9nm,0.4s,mb4.0,baz=68,slow=7.5,SNR=11
ESDC pP pP 14 44 15.8 -1.3
comp=Z,0.9nm,0.5s,baz=76,slow=7.4,SNR=6.0
ESDC Sonseca Array 51.56 300 P **P** **14 44 07.9 0.0**
comp=Z,3.3nm,1.4s,mb4.1
ESDC Sonseca Array 51.56 300 P **P** **14 44 07.9 -0.1**
comp=Z,3.3nm,1.4s,mb4.1
EBAN Banos Encina 51.60 298 P **P** **14 44 09.1 +0.8**
comp=Z,5.8nm,0.8s,mb4.6
EBAN Banos Encina 51.60 298 P **P** **14 44 09.1 +0.8**
EBAN pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
EBAN Banos Encina 51.60 298 P **P** **14 44 09.1 +0.8**
comp=Z,5.8nm,0.8s,mb4.6
EGUA Guajares 51.61 296 P **P** **14 44 08.9 +0.5**
comp=Z,56nm,0.9s,mb5.5
EGUA Guajares 51.61 296 P **P** **14 44 08.9 +0.5**
EGUA pmax pmax
comp=Z,56nm,0.9s,mb5.5
EGUA Guajares 51.61 296 P **P** **14 44 08.9 +0.5**
comp=Z,56nm,0.9s,mb5.5
EADA Adamuz 52.22 298 P **P** **14 44 12.3 -0.6**
comp=Z,13nm,1.2s,mb4.7
TZK Tazeka 52.57 293 *eP* **P** **14 44 17.0 +1.4**
EMIJ Mijas 52.61 296 P **P** **14 44 14.4 -1.5**
comp=Z,19nm,1.3s,mb4.9
EMIJ Mijas 52.61 296 P **P** **14 44 14.4 -1.5**
comp=Z,19nm,1.3s,mb4.9
NJ2 Nanjing 52.80 69 *eP* **P** **14 44 20.8 +3.5**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
ZFT Errachidia 53.12 291 *i* P **P** **14 44 21.0 +1.3**
ECAL Calabor 53.40 303 P **P** **14 44 21.5 -0.1**
comp=Z,32nm,1.5s,mb5.0
ECAL Calabor 53.40 303 P **P** **14 44 21.5 -0.1**
comp=Z,32nm,1.5s,mb5.0
ESPR Espera 53.42 297 P **P** **14 44 22.9 +1.0**
comp=Z,6.5nm,0.7s,mb4.7
ESPR Espera 53.42 297 P **P** **14 44 22.9 +1.1**
comp=Z,6.5nm,0.7s,mb4.7
TOA0 Torodi Ar. Sit 53.80 266 *eP* **P** **14 44 24.5 -0.3**
TOA0 Torodi Ar. Sit 53.80 266 *eP* **P** **14 44 24.5 -0.4**
TORD Torodi Ar. Bea 53.80 266 P **P** **14 44 24.1 -0.8**
comp=Z,6.5nm,0.4s,mb4.9,baz=63,slow=7.3,SNR=98
TORD pP pP 14 44 32.5 -1.5
comp=Z,7.7nm,0.5s,baz=62,slow=7.3,SNR=15
TORD LR LR 15 10 53.6
comp=Z,182nm,18.2s,MS4.2,baz=80,slow=40
TORD Torodi Ar. Bea 53.80 266 P **P** **14 44 24.1 -0.7**
TORD pP pP 14 44 32.5 -1.5
TORD LR LR 15 10 53.6
EMIN Mina Concepcio 53.92 298 P **P** **14 44 23.6 -1.9**
comp=Z,9.7nm,1.2s,mb4.6
EMIN Mina Concepcio 53.92 298 P **P** **14 44 23.6 -1.9**
comp=Z,9.7nm,1.2s,mb4.6
EBAD Badajoz 54.03 299 P **P** **14 44 23.6 -2.6**
comp=Z,14nm,1.2s,mb4.8
EBAD Badajoz 54.03 299 P **P** **14 44 23.6 -2.6**
comp=Z,14nm,1.2s,mb4.8
EVO Evora 54.84 299 *eP* **P** **14 44 32.4 +0.3**
comp=Z,5.5nm,0.6s,mb4.5
EVOP Sao Brissos 54.92 299 *eP* **P** **14 44 32.4 -0.3**
comp=Z,2.8nm,0.6s,mb4.5
CN2 Changchun 55.98 54 *eP* **P** **14 44 43.0 +2.8**
YAK Yakutsk 57.62 32 *eP* **P** **14 44 50.0 -1.6**
YAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
YAK Yakutsk 57.62 32 *eP* **P** **14 44 50.0 -1.6**
comp=Z,5.0nm,1.3s,mb4.4
TIXI Tiksi 58.10 21 *eP* **P** **14 44 53.7 -1.2**
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TIXI Tiksi 58.10 21 *eP* **P** **14 44 53.7 -1.2**
comp=Z,3.0nm,0.8s,mb4.4
KSRS Korea Array 58.94 61 P **P** **14 44 59.5 -1.8**
comp=Z,1.3nm,0.6s,mb4.1,baz=270,slow=6.7,SNR=4.3
KSRS pP pP 14 45 08.2 -2.4
comp=Z,1.2nm,0.6s,baz=278,slow=6.1,SNR=2.4
KSRS LR LR 15 13 58.4
comp=Z,108nm,20.1s,MS4.0,baz=295,slow=40
KSRS Korea Array 58.94 61 P **P** **14 44 59.5 -1.8**
KSRS *PP pP 14 45 08.2 -2.3
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
KSRS MLR MLR
comp=Z,108nm,20.1s,MS4.0
DBIC Dimbokro 62.44 263 P **P** **14 45 24.6 -0.8**
comp=Z,2.9nm,0.8s,mb4.5,baz=45,slow=3.1,SNR=7.5
DBIC Dimbokro 62.44 263 P **P** **14 45 24.6 -0.8**
DBIC pmax pmax
comp=Z,3.0nm,0.8s
LIC Lamto 62.79 262 *eP* **P** **14 45 34.6 +6.8**
BOSA Boshof 63.95 211 P **P** **14 45 35.4 +0.4**
comp=Z,4.2nm,0.7s,mb4.6,baz=41,slow=8.1,SNR=12
BOSA pP pP 14 45 44.4 0.0
comp=Z,3.9nm,0.5s,baz=52,slow=4.3,SNR=4.6
BOSA Boshof 63.95 211 P **P** **14 45 35.4 +0.4**
BOSA *PP pP 14 45 44.4 0.0
BOSA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
SUMG Summit 65.56 341 *eP* **P** **14 45 44.9 -0.1**
comp=Z,4.6nm,0.9s,mb4.5
WRA Warramunga Arr 88.16 114 P **P** **14 47 53.0 0.0**
comp=Z,1.1nm,0.6s,mb4.3,baz=318,slow=4.0,SNR=19
WRA pP pP 14 48 00.1 -2.6
comp=Z,1.9nm,0.6s,baz=316,slow=4.0,SNR=13
WRA Warramunga Arr 88.16 114 *i* P **P** **14 47 53.0 0.0**
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRAB Tennant Creek 88.16 114 *eP* **P** **14 47 53.1 0.0**
comp=Z,4.2nm,0.8s,mb4.7
WRAB Tennant Creek 88.16 114 *eP* **P** **14 47 53.2 +0.2**
WB2 Warramunga Arr 88.17 114 *eP* **P** **14 47 53.0 -0.1**
ASAR Alice Springs 89.68 117 P **P** **14 48 00.0 -0.1**
comp=Z,0.6nm,0.7s,mb4.0,baz=310,slow=5.1,SNR=5.4
ASAR pP pP 14 48 08.2 -1.6
comp=Z,0.9nm,0.6s,baz=304,slow=4.8,SNR=5.9
ASAR Alice Springs 89.68 117 P **P** **14 48 00.0 -0.1**
ASAR *PP pP 14 48 08.2 -1.6
ASAR pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 89.87 356 P **P** **14 47 58.6 -1.8**
comp=Z,2.3nm,0.8s,mb4.6,baz=358,slow=4.6,SNR=4.1
YKA pP pP 14 48 07.2 -2.8
comp=Z,2.3nm,0.9s,baz=358,slow=5.7,SNR=3.6
YKA Yellowknife Ar 89.87 356 P **P** **14 47 58.6 -1.8**
YKA *PP pP 14 48 07.2 -2.9
YKA pmax pmax
comp=Z,2.0nm,0.8s
ULM Lac du Bonnet 98.84 343 LR LR 15 42 18.6
comp=Z,222nm,18.5s,MS4.7,baz=8.1,slow=41
TXAR Lajitas Array 120.45 341 PKP PKPdf 14 53 51.2 -2.4
comp=Z,0.4nm,0.9s,baz=65,slow=5.1,SNR=4.7
TXAR pPKP pPKPdf 14 53 59.6 -4.0
comp=Z,0.2nm,0.5s,baz=50,slow=2.8,SNR=3.0
TXAR Lajitas Array 120.45 341 PKIKP PKPdf 14 53 51.2 -2.5

ISCJB ***18*** *14:42:55.4±0.4, 55.14S×0.06×1297.W±0.2, h10km, mb4.8/19, MS4.7/23, Error ellipse: s-maj=13.6km s-min=9.1km az=171.5*

IDC ***18*** *14:42:55.5±0.5, 54.95S×12986W, h0km, mb4.5/11, mb1 4.7/11, mb1mx4.6/15, mbtmp4.5/11, MS4.7/16, Ms1 4.7/16, ms1mx4.5/24, Error ellipse: s-maj=23.9km s-min=15.3km az=155.0*

GCMT ***18*** *14:42:57.5±0.1, 55.15S×12965W, h17km, MW5.4/97, Moment Tensor Solution. s83,c156; s97,c181; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr-0.13±.02; Mθθ1.16±.03; Mϕϕ-1.03±.02; Mrθ-0.07±.06; Mθϕ1.38±.02; Mϕr0.17±.05; Best double couple: M0 1.77200×10^17 NP1:ϕs109.00000°, δ85.00000°, λ-4.00000°. NP2:ϕs199.00000°, δ86.00000°, λ-175.00000°. Principal axes: T 1.8270, Plg0.0000°, Azm334.0000°; N -0.1070, Plg84.0000°, Azm242.0000°; P -1.7170, Plg6.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***18*** *14:42:57.4, 55.10S×129.70W, h10km, mB5.7, Ms5.6, Msz5.0*

NEIC ***18*** *14:42:57.5±0.3, 55.07S×12968W, h10km, mb5.0/11, MS4.6/5, Error ellipse: s-maj=12.3km s-min=10.3km az=96.0*

ISC 18 14:42:57.3±0.4, 5511S×006×1297W±02, h10km, n85, σ1§06/34, mb4.8/19, MS4.7/23, 1C-2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.34**	**201**	*eP*		**P**		**14 49 18.5**	**+1.3**
	17nm,1.1s,mb4.8								
SBA				LR		LR			
	comp=Z,938nm,22.0s,MS4.4								
RPN	**Rapa Nui**	**31.66**	**36**	LR		LR		14 58 52.5	
	comp=Z,675nm,20.4s,MS4.3,baz=29,slow=30								
RKT	**Rikitea**	**32.18**	**351**	*eS*		**S**		**14 54 38.4**	**+0.6**
	comp=Z,462nm,27.8s								
RKT				*e*LQ				14 56 26.2	
	comp=Z,857nm,31.5s								
RKT				*e*LR		LR		14 57 45.7	
	comp=Z,5μm,29.5s,baz=172								
VNDA	**Vanda**	**32.35**	**202**	P		**P**		**14 49 28.7**	**+2.6**
	comp=Z,7.6nm,0.9s,mb4.5,baz=92,slow=8.7,SNR=13								
VNDA				PcP		PcP		14 52 14.9	+1.5
	comp=Z,1.3nm,0.9s,baz=104,slow=4.2,SNR=3.6								
VNDA				LR		LR		14 58 38.6	
	comp=Z,795nm,21.8s,MS4.4,baz=82,slow=29								
VNDA	**Vanda**	**32.35**	**202**	*eP*		**P**		**14 49 29.4**	**+3.3**
	comp=Z,20nm,1.3s,mb4.8								
VNDA				LR		LR			
	comp=Z,1μm,19.0s,MS4.6								
USHA	**Ushuaia**	**34.20**	**115**	LR		LR		14 58 29.4	
	comp=Z,679nm,19.9s,MS4.4,baz=225,slow=27								
QSPA	**South Pole Qui**	**35.07**	**180**	P		**P**		**14 49 51.6**	**+1.9**
	comp=Z,27nm,1.1s,mb5.1,baz=97,slow=3.7,SNR=21								
QSPA	**South Pole Qui**	**35.07**	**180**	P		**P**		**14 49 51.6**	**+1.9**
URZ	**Urewera**	**39.10**	**273**	LR		LR		15 02 39.0	
	comp=Z,2μm,20.7s,MS4.8,baz=137,slow=30								
PAE	**Paea**	**40.34**	**330**	*eP*		**P**		**14 50 35.2**	**+0.3**
	comp=Z,490nm,1.2s,mb6.1								
PPT	**Papeete**	**40.43**	**330**	*eP*		**P**		**14 50 36.1**	**+0.5**
	comp=Z,58nm,1.3s,mb5.1								
PPT				*e*S		**S**		**14 56 42.0**	**-1.9**
	comp=Z,723nm,25.5s								
PPT				*e*LQ				14 59 44.8	
	comp=Z,937nm,24.3s								
PPT				*e*LR		LR		15 01 38.5	
	comp=Z,5μm,26.2s,baz=170								
PPT	**Papeete**	**40.43**	**330**	LR		LR		15 02 32.2	
	comp=Z,2μm,21.7s,MS4.8,baz=146,slow=29								
PPT	**Papeete**	**40.43**	**330**	*eP*		**P**		**14 50 36.1**	**+0.5**
	comp=Z,58nm,1.3s,mb5.2								
PPT				*e*S		**S**		**14 56 42.0**	**-1.9**
PPT				*e*LQ				14 59 44.8	
RAR	**Rarotonga**	**40.66**	**314**	LR		LR		15 02 42.3	
	comp=Z,711nm,21.6s,MS4.5,baz=148,slow=29								
PLCA	**Paso Flores**	**40.92**	**95**	P		**P**		**14 50 38.5**	**-0.9**
	comp=Z,7.2nm,1.1s,mb4.2,baz=218,slow=7.4,SNR=7.0								
PLCA				LR		LR		15 03 17.2	
	comp=Z,798nm,18.9s,MS4.6,baz=228,slow=30								
PLCA	**Paso Flores**	**40.92**	**95**	*eP*		**P**		**14 50 39.3**	**-0.2**
	comp=Z,11nm,1.1s,mb4.4								
PLCA				LR		LR			
	comp=Z,850nm,19.0s,MS4.6								
VAH	**Vaihoa**	**42.13**	**334**	*eP*		**P**		**14 50 50.3**	**+0.7**
	comp=Z,93nm,1.0s,mb5.4								
PMOR	**Pomariorio Ree**	**42.42**	**333**	*eP*		**P**		**14 50 52.8**	**+0.9**
	comp=Z,170nm,1.4s,mb5.5								
VNA3	**Neumayer Olymp**	**47.06**	**158**	*e*		**P**		**14 51 28.6**	**+0.3**
VNA3				*e*				14 51 35.3	
VNA3				*e*				14 51 39.6	
VNA3				*e*				14 53 06.4	
SNAA	**Sanae**	**48.15**	**160**	*e*PKiKP		**P**		**14 51 34.4**	**-2.4**
SNAA				*e*				14 51 41.0	
SNAA				*e*				14 51 44.9	
SNAA	**Sanae**	**48.15**	**160**	*eP*		**P**		**14 51 34.4**	**-2.4**
	comp=Z,14nm,1.3s,mb4.8								
SYO	**Syowa Base**	**55.95**	**175↑**	*eP*		**P**		**14 52 33.7**	**-1.1**
MAW	**Mawson**	**57.25**	**186**	P		**P**		**14 52 45.0**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.5,baz=193,slow=14,SNR=2.5								
MAW				LR		LR		15 14 47.4	
	comp=Z,831nm,19.7s,MS4.8,baz=165,slow=33								
MAW	**Mawson**	**57.25**	**186**	P		**P**		**14 52 45.0**	**+0.9**
MAW				LR		LR		15 14 47.4	
LPAZ	**La Paz**	**60.63**	**76**	P		**P**		**14 53 07.6**	**-0.6**
	comp=Z,10nm,1.2s,mb4.8,baz=216,slow=4.8,SNR=16								
LPAZ	**La Paz**	**60.63**	**76**	*eP*		**P**		**14 53 07.9**	**-0.3**
	comp=Z,11nm,1.1s,mb4.9								
STKA	**Stephens Creek**	**63.80**	**251**	P		**P**		**14 53 28.3**	**-1.1**
	comp=Z,8.2nm,0.8s,mb4.8,baz=132,slow=5.1,SNR=14								
STKA				LR		LR		15 15 43.9	
	comp=Z,1μm,21.4s,MS5.0,baz=95,slow=31								
STKA	**Stephens Creek**	**63.80**	**251**	*eP*		**P**		**14 53 29.3**	**-0.1**
	comp=Z,18nm,1.1s,mb5.0								
OTAV	**Otavalo**	**69.15**	**57**	*eP*		**P**		**14 54 03.3**	**-0.4**
	comp=Z,14nm,1.4s,mb4.7								
CTA	**Charters Tower**	**70.38**	**263**	LR		LR		15 22 44.3	
	comp=Z,408nm,18.5s,MS4.7,baz=145,slow=34								
ASAR	**Alice Springs**	**74.43**	**251**	P		**P**		**14 54 34.3**	**-1.1**
	comp=Z,7.0nm,0.8s,mb4.7,baz=144,slow=6.3,SNR=78								
ROSC	**El Rosal**	**75.15**	**58**	P		**P**		**14 54 40.6**	**+1.0**
	comp=Z,4.9nm,0.7s,mb4.6,baz=225,slow=7.1,SNR=5.0								
ROSC				LR		LR		15 21 49.9	
	comp=Z,284nm,19.4s,MS4.6,baz=197,slow=31								
ROSC	**El Rosal**	**75.15**	**58**	*eP*		**P**		**14 54 40.3**	**+0.6**
WB2	**Warramunga Arr**	**77.18**	**254**	*eP*		**P**		**14 54 50.1**	**-1.1**
WRA	**Warramunga Arr**	**77.19**	**254**	P		**P**		**14 54 49.9**	**-1.4**
	comp=Z,4.7nm,0.7s,mb4.5,baz=144,slow=5.1,SNR=63								
WRA				LR		LR		15 27 18.9	
	comp=Z,474nm,18.2s,MS4.8,baz=140,slow=34								
TXAR	**Lajitas Array**	**87.03**	**23**	P		**P**		**14 55 42.3**	**-0.1**
	comp=Z,1.1nm,0.8s,mb4.1,baz=192,slow=7.5,SNR=7.9								
TXAR				LR		LR		15 26 21.3	
	comp=Z,109nm,20.1s,MS4.3,baz=175,slow=30								
TUC	**Tucson**	**88.57**	**16**	P		**P**		**14 55 49.5**	**-0.2**
	comp=Z,7.7nm,1.1s,mb5.0								
BATI	**Baumata**	**91.00**	**251**	LR		LR		15 33 34.4	
	comp=Z,763nm,19.3s,MS5.2,baz=143,slow=33								
NVAR	**Mina Array Bea**	**93.68**	**9**	P		**P**		**14 56 13.9**	**+0.6**
	comp=Z,0.8nm,0.8s,mb4.2,baz=190,slow=5.8,SNR=4.9								
BOSA	**Boshof**	**93.90**	**158**	LR		LR		15 33 10.6	
	comp=Z,540nm,20.8s,MS5.0,baz=195,slow=32								
ELK	**Elko**	**96.28**	**11**	PFAKE				14 56 40.0	+15
ELK				LR		LR			
	comp=Z,178nm,22.0s,MS4.5								
PDAR	**Pinedale Array**	**99.00**	**15**	LR		LR		15 32 18.9	
	comp=Z,490nm,20.6s,MS5.0,baz=206,slow=30								
DIB	**Dawson Inlet,**	**107.97**	**358**	T				16 57 54.7	
	SNR=11								
VIB	**Van Inlet**	**108.02**	**358**	T				16 58 03.6	
	SNR=6.7								
PETK	**Petropavlovsk-**	**123.31**	**317**	PKP		PKPdf		15 01 52.4	-0.7
	comp=Z,7.6nm,0.8s,baz=121,slow=5.9,SNR=4.8								
TORD	**Torodi Ar. Bea**	**123.74**	**119**	PKP		PKPdf		15 01 56.0	+0.9
	comp=Z,1.2nm,0.7s,baz=218,slow=0.6,SNR=8.5								
NJ2	**Nanjing**	**127.61**	**274**	*e*PKP		PKPdf		15 01 59.0	-3.1
CMAR	**Chiang Mai Arr**	**128.15**	**245**	PKP		PKPdf		15 02 04.1	+0.6
	comp=Z,2.1nm,0.8s,baz=200,slow=1.8,SNR=16								
GYA	**Guiyang**	**130.37**	**259**	PDIF		Pdif		14 58 57.6	0.0
GYA				PKP		PKPdf		15 02 07.6	+0.1
GYA				PP		PP		15 04 23.9	+2.3

GYA				PKS		15 05 42.5		
GYA				SKS	SKSdf	15 09 15.8	-3.1	
GYA				SKKS	SKKSac	15 11 15.0	-3.0	
GYA				SS	SS	15 21 50.4	+1.6	
GYA				LR	LR			
	comp=N,280nm,20.7s,MS5.1							
GYA				LR	LR			
	comp=E,240nm,21.0s,MS5.1							
GYA				LR	LR			
	comp=Z,360nm,20.5s,MS5.1							
KMI	**Kunming**	**131.51**	**254**	PKP	PKPdf	15 02 10.8	+1.1	
KMI				XPKP		15 02 14.8		
KMI				PP	PP	15 04 32.1	+3.1	
KMI				SS	SS	15 22 06.4	+3.7	
KMI				PP	PP			
	comp=Z,189nm,6.0s							
KMI				LR	LR			
	comp=N,294nm,12.7s							
KMI				LR	LR			
	comp=E,192nm,23.7s							
KMI				LR	LR			
	comp=Z,160nm,23.7s							
CD2	**Chengdu**	**135.41**	**260**	*e*PKP	PKPdf	15 02 17.1	+0.3	
CD2				XPKP		15 02 24.3		
CD2				PP	PP	15 04 58.8	+4.9	
CD2				PKS		15 05 52.3		
CD2				SKS	SKSdf	15 09 22.8	-4.9	
CD2				SKKS	SKKSac	15 11 45.8	-2.8	
CD2				SS	SS	15 22 50.9	+1.0	
CD2				PP	PP			
	comp=Z,210nm,10.2s							
CD2				LR	LR			
	comp=N,350nm,18.8s,MS5.2							
CD2				LR	LR			
	comp=E,260nm,16.8s,MS5.2							
CD2				LR	LR			
	comp=Z,280nm,20.2s,MS5.0							
ESDC	**Sonseca Array**	**141.23**	**90**	PKP	PKPdf	15 02 28.1	+0.8	
	comp=Z,1.2nm,0.8s,baz=236,slow=3.9,SNR=7.6							
LSA	**Lhasa**	**141.39**	**246**	PKPdf	PKPdf	15 02 28.9	+1.1	
GTA	**Gaotai**	**143.73**	**265**	PKP	PKPdf	15 02 29.6	-2.1	
GTA				APKP		15 02 33.1		
TIXI	**Tiksi**	**144.31**	**328**	*e*PKP	PKPdf	15 02 29.0	-2.7	
SONM	**Songino Array**	**145.13**	**282**	PKPbc	PKPbc	15 02 33.3	-0.2	
	comp=Z,15nm,0.8s,baz=132,slow=3.1,SNR=35							
ETSF	**Etsaut**	**145.27**	**89**	*e*PKP1	PKPbc	15 02 34.1	0.0	
	comp=Z,48nm,1.2s							
EPF	**Esparros**	**145.87**	**90**	*e*PKP1	PKPbc	15 02 36.1	+0.2	
	comp=Z,32nm,1.1s							
KEST	**Kesra**	**146.01**	**108**	PKPbc	PKPbc	15 02 37.5	+0.9	
	comp=Z,2.2nm,0.8s,baz=254,slow=1.7,SNR=4.1							
MTLF	**Montolieu**	**147.14**	**91**	*e*PKP1	PKPbc	15 02 38.8	-0.8	
	comp=Z,49nm,1.5s							
DAG	**Danmarks Havn**	**147.57**	**24**↓	*e*P	PKPbc	15 02 41.1	+1.2	
DAG	**Danmarks Havn**	**147.57**	**24**↓	*i*P	PKPbc	15 02 41.1	+1.2	
	comp=Z,2.7nm,0.7s							
CAF	**Calviac**	**148.01**	**88**	*e*PKP1	PKPbc	15 02 40.3	-1.6	
	comp=Z,49nm,1.2s							
TCF	**Toulx Ste Croi**	**148.88**	**86**	*e*PKP1	PKPbc	15 02 42.9	-1.2	
	comp=Z,87nm,1.5s							
VIVF	**Saint-Julien-l**	**149.47**	**90**	*e*PKP1	PKPbc	15 02 44.0	-1.6	
	comp=Z,28nm,1.1s							
AVF	**Avril sur Loir**	**149.81**	**86**	*e*PKP1	PKPbc	15 02 46.6	+0.2	
	comp=Z,65nm,1.5s							
SMF	**Signal de Mont**	**150.01**	**87**	*e*PKP1	PKPbc	15 02 46.6	-0.3	
	comp=Z,48nm,1.3s							
ORIF	**Oris-en-Rattie**	**150.20**	**91**	*e*PKP1	PKPbc	15 02 47.9	+0.5	
	comp=Z,33nm,1.1s							
ORIF				*e*MLR	MLR			
	comp=Z,162nm,22.5s,MS4.5							
LOR	**Lormes**	**150.36**	**86**	*e*PKP1	PKPbc	15 02 48.1	+0.4	
	comp=Z,30nm,1.1s							
LOR				*e*MLR	MLR			
	comp=Z,239nm,22.5s,MS4.6							
LOR	**Lormes**	**150.36**	**86**	*e*PKP	PKPbc	15 02 48.1	+0.4	
LOR				LR	LR			
	comp=Z,240nm,22.5s,MS4.9							
MBDF	**Montbardon**	**150.59**	**92**	*e*PKP1	PKPbc	15 02 47.4	-1.0	
	comp=Z,14nm,1.0s							
LPG	**La Plagne**	**151.03**	**91**	*e*PKP1	PKPbc	15 02 49.7	+0.3	
MEZF	**Maizieres J'vi**	**151.69**	**84**	*e*PKP1	PKPbc	15 02 51.1	+0.3	
BAIF	**Baives**	**151.98**	**81**	*e*PKP1	PKPbc	15 02 52.3	+0.9	
HAU	**Haudompre**	**152.18**	**86**	*e*PKP1	PKPbc	15 02 52.8	+0.9	
	comp=Z,107nm,1.8s							
HAU				*e*MLR	MLR			
	comp=Z,163nm,20.8s,MS4.5							
HAU	**Haudompre**	**152.18**	**86**	*e*PKP	PKPbc	15 02 52.8	+0.9	
HAU				LR	LR			
	comp=Z,160nm,20.8s,MS4.8							
HINF	**Hinteralfeld**	**152.37**	**87**	*e*PKP1	PKPbc	15 02 52.9	+0.5	
	comp=Z,23nm,1.1s							
TUE	**Stuetta**	**153.08**	**92**	PKPbc	PKPbc	15 02 54.5	+0.5	
GERES	**GERESS Array B**	**156.83**	**90**	PKP	PKPdf	15 02 52.2	+0.5	
	comp=Z,1.3nm,0.9s,baz=243,slow=0.3,SNR=8.2							
GERES				PKPab	PKPab	15 03 20.1	-1.5	
	comp=Z,2.6nm,1.0s,baz=247,slow=2.0,SNR=5.0							
KHC	**Kasperske Hory**	**156.90**	**90**	*e*PKP	PKPdf	15 02 52.0	+0.3	
MKAR	**Makanchi Array**	**158.33**	**261**	PKP	PKPdf	15 02 55.0	+1.3	
	comp=Z,0.8nm,1.0s,baz=99,slow=4.5,SNR=3.7							
MKAR				PKPab	PKPab	15 03 26.7	-1.4	
	comp=Z,4.2nm,0.7s,baz=119,slow=4.3,SNR=14							
MKAR				PP	PP	15 07 11.4	+2.6	
	comp=Z,1.6nm,1.0s,baz=118,slow=4.4,SNR=3.6							
NOA	**NORSAR Array B**	**158.77**	**58**	PKPab	PKPab	15 03 30.2	+0.6	
	comp=Z,1.2nm,0.9s,baz=268,slow=4.2,SNR=2.8							
ZALV	**Zalesovo Beam**	**160.03**	**281**	PKPab	PKPab	15 03 36.6	+1.3	
	comp=Z,4.5nm,0.9s,baz=108,slow=4.8,SNR=11							
AKASG	**Malin Array Be**	**166.58**	**100**	PKP	PKPdf	15 03 01.6	0.0	
	comp=Z,0.2nm,0.3s,baz=250,slow=0.7,SNR=3.7							
AKASG				PKPab	PKPab	15 04 03.8	-0.4	
	comp=Z,0.1nm,0.3s,baz=248,slow=3.3,SNR=4.2							
BVAR	**Borovoye Array**	**168.00**	**268**	PKPab	PKPab	15 04 08.6	-1.8	
	comp=Z,0.7nm,0.7s,baz=75,slow=1.6,SNR=3.6							

*IDC **18** 15:16:24.1±1.4, 642S×143.81E, h0km, mb3.8/6, mb1 4.2/8, mb1mx4.0/14, mbtmp4.0/8, ML4.3/2, Error ellipse: s-maj=49.9km s-min=20.2km az=89.0*
*NEIC **18** 15:16:25.9±1.1, 645S×14374E, h10km, mb4.3/1, Error ellipse: s-maj=33.9km s-min=11.5km az=96.0*
*ISCJB **18** 15:16:27.9±1.2, 649S±009×1437E±03, h33km, mb3.7/6, Error ellipse: s-maj=36.4km s-min=12.5km az=5.6*
ISC 18 15:16:29.9±1.2, 650S±009×1436E±03, h35km, n11, σ0§96/11, mb3.7/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**16.11**	**213**	*e*Pn	**Pn**	**15 20 13.4**	**-0.5**
	30nm,1.3s						
WB2	**Warramunga Arr**	**16.12**	**213**	*e*P	**Pn**	**15 20 13.2**	**-0.8**
WRA	**Warramunga Arr**	**16.13**	**213**	Pn	**Pn**	**15 20 13.4**	**-0.7**
	0.8nm,0.3s,baz=30,slow=13,SNR=77						
WRA				Lg		15 24 58.1	
	0.2nm,0.3s,baz=38,slow=28,SNR=3.9						
ASAR	**Alice Springs**	**19.47**	**208**	Pn	**Pn**	**15 20 57.1**	**+1.9**
	1.8nm,0.3s,baz=34,slow=11,SNR=482						
ASAR				Lg		15 26 44.4	
	0.1nm,0.3s,baz=29,slow=29,SNR=4.6						
STKA	**Stephens Creek**	**25.32**	**184**	P	**P**	**15 21 53.1**	**-0.3**
	1.6nm,0.9s,mb3.5,baz=340,slow=12,SNR=3.3						
CMAR	**Chiang Mai Arr**	**50.57**	**300**	P	**P**	**15 25 27.2**	**+1.7**
	0.6nm,0.7s,mb3.6,baz=111,slow=6.6,SNR=5.9						
VNDA	**Vanda**	**71.64**	**176**	P	**P**	**15 27 48.2**	**+0.7**
	0.7nm,0.9s,mb3.6,baz=323,slow=11,SNR=3.9						
MK31	**Makanchi Array**	**75.78**	**322**	*e*P	**P**	**15 28 12.2**	**-0.1**
MKAR	**Makanchi Array**	**75.78**	**322**	P	**P**	**15 28 12.3**	**0.0**
	0.5nm,0.6s,mb3.6,baz=107,slow=6.9,SNR=5.9						
ZALV	**Zalesovo Beam**	**77.68**	**329**	P	**P**	**15 28 21.3**	**-1.5**
	0.4nm,0.3s,mb3.8,baz=71,slow=6.2,SNR=2.7						
BVAR	**Borovoye Array**	**85.22**	**325**	P	**P**	**15 29 02.5**	**-0.2**
	1.1nm,0.6s,mb4.2,baz=122,slow=5.2,SNR=7.3						

*CSEM **18** 15:22:15.8±0.2, 3804N×3877E, h0km±1km, MD2.8, Error ellipse: s-maj=2.8km s-min=1.8km az=136.0*
*ISK **18** 15:22:16.0, 3808N×3872E, h5km, MD2.9*
*ISCJB **18** 15:22:17.6±0.6, 3807N±003×3876E±003, h1km±5km, Error ellipse: s-maj=4.9km s-min=3.9km az=148.0*
*DDA **18** 15:22:17.6, 3808N×3877E, h7km±4km, Md2.8*
ISC 18 15:22:18.5±0.5, 3808N±003×3876E±003, h9km±5km, n14, σ1§07/25, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.46**	**23**	*i*P	**Pg**	**15 22 26.5**	**-0.8**
ELZG				*i*S	**Sg**	**15 22 33.6**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.52**	**55**	*e*PG	**Pg**	**15 22 27.8**	**-0.8**
SVRC				*e*SG	**Sg**	**15 22 36.2**	**+0.8**
URFA	**Urfa**	**0.64**	**176**	*e*PG	**Pg**	**15 22 28.9**	**-1.8**
URFA				*e*SG	**Sg**	**15 22 40.1**	**+1.1**
AKCD	**Akcadag**	**0.70**	**288**	*i*P	**Pg**	**15 22 30.8**	**-1.1**
AKCD				*i*S	**Sg**	**15 22 41.5**	**+0.5**
PTK	**Pertek**	**0.95**	**31**	*e*PG	**Pg**	**15 22 35.5**	**-1.2**
PTK				*e*SG	**Sg**	**15 22 50.6**	**+1.5**
DIYA	**Diyarbakir**	**1.08**	**98**	*i*P	**Pg**	**15 22 37.7**	**-1.5**
DIYA				*i*S	**Sg**	**15 22 54.7**	**+1.4**
GZT	**Gaziantep**	**1.19**	**233**	*i*P	**Pb**	**15 22 41.5**	**+0.3**
GZT				*i*S	**Sg**	**15 22 57.9**	**+1.1**
KEMA	**Kemaliye**	**1.21**	**350**	*i*P	**Pb**	**15 22 39.9**	**-1.6**
KEMA				*i*S	**Sg**	**15 22 59.0**	**+1.7**
GAZ	**Gaziantep**	**1.53**	**234**	*e*PN	**Pn**	**15 22 44.9**	**-1.0**
GAZ				*e*SN	**Sn**	**15 23 06.2**	**+0.3**
KMRS	**Kahramanmaras**	**1.58**	**249**	*e*PN	**Pn**	**15 22 46.3**	**-0.4**
KMRS				*e*SN	**Sn**	**15 23 07.6**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.73**	**291**	*e*PN	**Pn**	**15 22 50.0**	**+1.2**
MARD	**Mardin**	**1.77**	**115**	*i*P	**Pn**	**15 22 49.3**	**0.0**
MARD				*i*S	**Sn**	**15 23 13.0**	**+1.0**
EZC	**Erzincan**	**1.86**	**26**	*e*PN	**Pn**	**15 22 49.0**	**-1.5**
SVSK	**Karacayir**	**2.29**	**324**	*e*PN	**Pn**	**15 22 56.9**	**+0.4**

*GUC **18** 15:24:53.3±0.5, 2277S×7077W, h40km±1km, ML4.7, mb5.1(NEIC)*
*BJI **18** 15:24:54.2, 2280S×7070W, h19km, mB5.2, Ms5.5, Msz5.0*
*ISCJB **18** 15:24:54.8±0.7, 2281S±003×7074W±005, h37km±6km, mb5.0/42, MS4.3/9, Error ellipse: s-maj=8.4km s-min=5.2km az=178.0*
*NEIC **18** 15:24:54.2±2.1, 2278S×7065W, h20km±13km, mb5.2/34, ML4.9(GUC), Error ellipse: s-maj=7.9km s-min=5.8km az=74.0*
*MOS **18** 15:24:55.1±1.5, 2263S×7071W, h33km, mb5.2/15, Error ellipse: s-maj=16.1km s-min=8.9km az=93.0*
*IDC **18** 15:24:55.3±3.1, 2267S×7057W, h27km±20km, mb4.3/12, mb1 4.5/14, mb1mx4.4/18, mbtmp4.3/14, ML4.2/2, MS4.2/12, Ms1 4.2/12, ms1mx3.9/27, Error ellipse: s-maj=19.3km s-min=16.9km az=75.0*
ISC 18 15:24:55.6±0.8, 2278S±004×7064W±005, h28km±5km, n165, σ1§07/119, mb5.0/42, MS4.3/9, 9C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.37**	**151**↓	*e*P	**Pb**	**15 25 02.9**	**-0.9**
MECH				*e*S	**Sb**	**15 25 10.3**	**+0.8**
CEN1	**Los Morros**	**0.73**	**146**↑	*i*P	**Pb**	**15 25 09.7**	**-0.1**
CEN1				*e*S	**Sb**	**15 25 22.3**	**+2.9**
CEN1				AML	AML	15 25 27.8	
	comp=E,32μm,0.6s						
ANCH	**Antofagasta**	**0.92**	**167**↑	*e*P	**Pn**	**15 25 11.3**	**-1.4**
ANCH				*i*S	**Sb**	**15 25 24.4**	**-0.5**
PB04	**Plate Boundary**	**1.18**	**65**↓	*i*P	**Pn**	**15 25 07.4**	**-8.9**
PB04				*i*S	**Sn**	**15 25 17.7**	**-14**
PB04				AML	AML	15 25 23.5	
	comp=E,50μm,0.4s						
PB07	**Plate Boundary**	**1.26**	**34**↑	*i*P	**Pn**	**15 25 16.6**	**-0.7**
PB07				*e*S	**Sn**	**15 25 34.2**	**+0.9**
PB07				AML	AML	15 25 42.7	
	comp=N,21μm,0.7s						
LVC	**Limon Verde**	**1.61**	**84**	Pg	**Pn**	**15 25 23.7**	**+1.6**
	comp=N,739nm,0.3s,baz=259,slow=15,SNR=1036						
LVC				Lg		15 25 45.3	
	comp=N,479nm,0.3s,baz=71,slow=16,SNR=7.7						
LVC	**Limon Verde**	**1.61**	**84**↑	*i*P	**Pn**	**15 25 23.6**	**+1.5**
LVC				*e*S	**Sn**	**15 25 47.5**	**+5.7**
LVC	**Limon Verde**	**1.61**	**84**↑	*e*P	**Pn**	**15 25 22.7**	**+0.6**
LVC				*e*S	**Sn**	**15 25 45.1**	**+3.2**
LVC				AML	AML	15 25 51.2	
	comp=N,8μm,0.6s						
PB01	**Plate Boundary**	**2.03**	**32**↑	*e*P	**Pn**	**15 25 27.5**	**-0.4**
PB01				*e*S	**Sn**	**15 25 56.5**	**+4.1**
PB01				AML	AML	15 26 04.4	
	comp=E,9μm,0.9s						
SPCH	**San Pedro de A**	**2.26**	**94**	P	**Pn**	**15 25 36.8**	**+5.7**
LCO	**Las Campanas**	**6.21**	**180**	*e*Pn	**Pn**	**15 26 20.9**	**-4.4**
	comp=E,127nm,0.4s						
ARE	**Arequipa**	**6.33**	**353**	*e*P	**Pn**	**15 26 25.0**	**-2.1**
ARE				*e*S	**Sn**	**15 27 35.0**	**-3.6**
LPAZ	**La Paz**	**6.88**	**21**	Pn	**Pn**	**15 26 37.2**	**+2.7**
	comp=E,3.9nm,0.3s,baz=212,slow=7.9,SNR=85						
LPAZ				LR	LR	15 29 23.2	
	comp=E,2μm,19.8s,baz=198,slow=40						
LPAZ	**La Paz**	**6.88**	**21**	*e*Pn	**Pn**	**15 26 36.9**	**+2.3**
	comp=E,97nm,0.9s						
LPAZ	**La Paz**	**6.88**	**21**	*e*P	**Pn**	**15 26 36.9**	**+2.3**
LPAZ				pmax	pmax		
	comp=Z,97nm,0.9s						
CFAA	**Coronel Fontan**	**9.05**	**167**	Pn	**Pn**	**15 27 03.3**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=347,slow=16,SNR=7.5						
CFAA				Sn	**Sn**	**15 28 58.0**	**+13**
	comp=Z,0.6nm,0.3s,baz=2.3,slow=16,SNR=4.2						
CFAA				LR	LR	15 30 36.7	
	comp=Z,247nm,19.2s,baz=330,slow=37						
SIV	**San Ignacio**	**11.27**	**55**	Pn	**Pn**	**15 27 33.7**	**-1.1**
	comp=Z,2.6nm,0.3s,baz=241,slow=13,SNR=134						
SIV				Sn	**Sn**	**15 29 46.5**	**+6.5**
	baz=316,slow=24,SNR=6.0						
ATAH	**Atahualpa**	**17.37**	**333**	P	**Pn**	**15 28 58.8**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=162,slow=6.4,SNR=3.1						
PLCA	**Paso Flores**	**17.90**	**180**	P	**Pn**	**15 29 02.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=8.7,slow=13,SNR=5.3						
PLCA				LR	LR	15 35 35.5	
	comp=Z,747nm,20.4s,baz=359,slow=36						
BDFB	**Brasilia**	**22.50**	**76**	P	**P**	**15 29 51.3**	**-1.8**
	comp=Z,8.3nm,0.5s,mb4.4,baz=246,slow=16,SNR=38						
BDFB				LR	LR	15 39 57.0	
	comp=Z,792nm,18.5s,MS4.2,baz=80,slow=40						
OTAV	**Otavalo**	**24.11**	**341**	P	**P**	**15 30 10.1**	**+1.0**
	comp=Z,10nm,0.9s,mb4.3						
CAM4	**Nova Friburgo**	**25.92**	**95**↓	*i*P	**P**	**15 30 25.0**	**-0.5**
CAM4				*i*		15 30 28.0	
CAM4				*i*	pP	15 30 32.8	-0.9
CAM4				*i*		15 30 35.5	
CAM4				*i*		15 30 49.7	
ROSC	**El Rosal**	**27.70**	**352**	LR	LR	15 42 04.1	
	comp=Z,92nm,19.4s,MS3.4,baz=206,slow=37						
EFI	**East Falkland**	**30.44**	**164**	*e*P	**P**	**15 30 59.8**	**-5.8**
RCBR	**Riachuelo**	**37.50**	**69**	*e*P	**P**	**15 32 07.2**	**-0.1**
	comp=Z,80nm,0.9s,mb5.5						
JSC	**Jenkinsville**	**57.64**	**350**	P	**P**	**15 34 42.5**	**-0.7**
RKT	**Rikitea**	**58.78**	**256**	*e*S	**S**	**15 42 47.2**	**-8.1**
	comp=Z,278nm,24.8s						
RKT				eLR	LR	15 52 06.2	
	comp=Z,481nm,24.8s						
VNA3	**Neumayer Olymp**	**59.39**	**161**	*e*P	**P**	**15 34 55.2**	**+0.2**
SWET	**Sewanee**	**59.47**	**345**	*e*P	**P**	**15 34 54.1**	**-1.8**
VNA1	**Neumayer--Stat**	**59.63**	**160**	*e*P	**P**	**15 34 57.2**	**+0.5**
VNA1				*e*		15 34 59.5	
VNA1				*e*		15 35 02.6	
VNA1				*e*		15 35 44.5	
OXF	**Oxford**	**59.70**	**342**	*e*P	**P**	**15 34 56.0**	**-1.6**
	comp=Z,34nm,1.2s,mb5.2						
OXF	**Oxford**	**59.70**	**342**	*e*P	**P**	**15 34 56.0**	**-1.6**
OXF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
JCT	**Junction City**	**59.90**	**331**	*e*P	**P**	**15 34 58.9**	**-0.1**
	comp=Z,6.6nm,0.6s,mb4.8						
JCT	**Junction City**	**59.90**	**331**	*e*P	**P**	**15 34 58.9**	**-0.1**
JCT				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
VNA2	**Neumayer--Watz**	**59.99**	**160**	*e*P	**P**	**15 34 59.3**	**+0.2**
VNA2				*e*		15 35 04.8	
VNA2				*e*		15 35 44.2	
ELN	**Prospectdale**	**60.44**	**351**	*e*P	**P**	**15 35 01.9**	**-0.6**
TXAR	**Lajitas Array**	**60.79**	**327**	P	**P**	**15 35 04.7**	**-0.4**
	comp=Z,1.1nm,0.6s,mb4.1,baz=151,slow=8.4,SNR=19						
WVT	**Waverly**	**60.80**	**344**	*e*P	**P**	**15 35 02.9**	**-2.2**
	comp=Z,16nm,0.9s,mb5.1						
WVT	**Waverly**	**60.80**	**344**	*e*P	**P**	**15 35 02.9**	**-2.2**
WVT				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
SNAA	**Sanae**	**61.61**	**161**	*e*P	**P**	**15 35 08.7**	**-1.4**
SNAA				*e*		15 35 14.1	
SNAA				*e*	pP	15 35 16.5	-2.4
SNAA	**Sanae**	**61.61**	**161**	*e*P	**P**	**15 35 08.4**	**-1.7**
	comp=Z,14nm,0.9s,mb5.1						
SNAA	**Sanae**	**61.61**	**161**	*e*P	**P**	**15 35 08.6**	**-1.5**
SNAA				pmax	pmax		

	comp=Z,25nm,1.7s						
WCI	**Wyandotte Cave**	**62.44**	**346**	*e*P	**P**	**15 35 14.2**	**-1.9**
	comp=Z,7.2nm,0.6s,mb5.0						
WCI	**Wyandotte Cave**	**62.44**	**346**	*e*P	**P**	**15 35 14.2**	**-1.9**
WCI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
FVM	**French Village**	**63.24**	**343**	*e*P	**P**	**15 35 19.9**	**-1.5**
	comp=Z,19nm,1.0s,mb5.2						
FVM	**French Village**	**63.24**	**343**	*e*P	**P**	**15 35 19.9**	**-1.5**
FVM				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
BNM	**Barren Site**	**66.16**	**328**	*e*P	**P**	**15 35 41.4**	**+0.9**
LPM	**Los Pinos Moun**	**66.29**	**328**	*e*P	**P**	**15 35 42.1**	**+0.8**
ANMO	**Albuquerque**	**66.72**	**328**	*e*P	**P**	**15 35 44.8**	**+0.7**
TUC	**Tucson**	**66.88**	**324**	*e*P	**P**	**15 35 45.6**	**+0.4**
	comp=Z,9.2nm,1.4s,mb4.6						
TUC	**Tucson**	**66.88**	**324**	*e*P	**P**	**15 35 45.6**	**+0.4**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
QSPA	**South Pole Qui**	**67.42**	**180**	*e*P	**P**	**15 35 48.8**	**+0.8**
	comp=Z,8.8nm,0.8s,mb4.8						
MVCO	**Mesa Verde**	**69.52**	**328**	*e*P	**P**	**15 36 01.9**	**+0.3**
	comp=Z,19nm,1.3s,mb4.9						
WUAZ	**Wupatki**	**69.64**	**325**	*e*P	**P**	**15 36 03.3**	**+0.9**
	comp=Z,8.4nm,0.9s,mb4.7						
LIC	**Lamto**	**70.28**	**74**	*e*P	**P**	**15 36 05.7**	**-1.2**
	comp=Z,27nm,0.9s,mb5.2						
PV01	**Paradox Valley**	**70.28**	**329**	*e*P	**P**	**15 36 07.3**	**+1.0**
TIC	**Toumodi**	**70.48**	**74**	*e*P	**P**	**15 36 07.0**	**-1.1**
	comp=Z,67nm,1.1s,mb5.5						
TIC	**Toumodi**	**70.48**	**74**	*e*P	**P**	**15 36 07.0**	**-1.1**
TIC				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.5						
KIC	**Kosan Boka**	**70.60**	**74**	*e*P	**P**	**15 36 08.0**	**-0.8**
	comp=Z,43nm,0.5s,mb5.6						
DBIC	**Dimbokro**	**70.63**	**74**	P	**P**	**15 36 08.3**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0,baz=222,slow=6.4,SNR=38						
DBIC				LR	LR	16 05 02.6	
	comp=Z,234nm,21.2s,MS4.4,baz=203,slow=34						
DBIC	**Dimbokro**	**70.63**	**74**	*e*P	**P**	**15 36 08.1**	**-1.0**
	comp=Z,26nm,1.0s,mb5.1						
DBIC	**Dimbokro**	**70.63**	**74**	*e*P	**P**	**15 36 08.1**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,26nm,1.0s						
PV10	**Paradox Valley**	**70.70**	**329**	*e*P	**P**	**15 36 09.6**	**+0.7**
CHIE	**El Hierro**	**71.47**	**48**	P	**P**	**15 36 04.4**	**-9.4**
	comp=Z,14nm,0.8s,mb5.0						
SRU	**San Rafael**	**71.99**	**328**	*e*P	**P**	**15 36 17.3**	**+0.7**
	comp=Z,4.0nm,0.7s,mb4.5						
SRU	**San Rafael**	**71.99**	**328**	*e*P	**P**	**15 36 17.3**	**+0.7**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MSU	**Marysvale**	**72.35**	**327**	*e*P	**P**	**15 36 19.9**	**+1.1**
ARUT	**Antelope Range**	**72.44**	**326**	*e*P	**P**	**15 36 21.1**	**+1.7**
PPT	**Papeete**	**73.47**	**258**	*e*S	S	15 45 47.9	-6.3
	comp=Z,117nm,25.2s						
PPT	**Papeete**	**73.47**	**258**	*e*LR	LR	15 58 58.0	
	comp=Z,307nm,25.8s						
PPT	**Papeete**	**73.47**	**258**	LR	LR	15 59 58.1	
	comp=Z,234nm,20.2s,MS4.5,baz=211,slow=29						
PDAR	**Pinedale Array**	**74.43**	**331**	P	**P**	**15 36 30.6**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=115,slow=8.0,SNR=5.2						
CFTV	**Fuerteventura**	**74.59**	**50**	P	**P**	**15 36 31.6**	**-0.7**
	comp=Z,6.8nm,0.7s,mb4.7						
VNDA	**Vanda**	**75.31**	**190**	P	**P**	**15 36 37.4**	**+1.7**
	comp=Z,1.9nm,0.9s,mb4.0,baz=297,slow=1.9,SNR=14						
VNDA				LR	LR	16 08 35.5	
	comp=Z,134nm,18.2s,MS4.3,baz=133,slow=35						
NVAR	**Mina Array Bea**	**75.53**	**323**	P	**P**	**15 36 37.3**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=143,slow=5.6,SNR=7.9						
SYO	**Syowa Base**	**75.87**	**160**↓	*e*P	**P**	**15 36 37.4**	**-1.6**
SYO	**Syowa Base**	**75.87**	**160**↑	*e*pP	pP	15 36 42.4	-5.5
SYO	**Syowa Base**	**75.87**	**160**↑	*e*PcP	PcP	15 36 48.6	-2.8
ULM	**Lac du Bonnet**	**76.06**	**344**	P	**P**	**15 36 39.1**	**-1.1**
	comp=Z,2.9nm,0.6s,mb4.4,baz=142,slow=10.0,SNR=2.9						
DGMT	**Dagmar**	**77.02**	**338**	*e*P	**P**	**15 36 45.2**	**-0.5**
	comp

EKS2	**Erkin-Say**	**144.45**	**48**	*e*PKP	PKPdf	15 44 28.6	-0.6
EKS2	**Erkin-Say**	**144.45**	**48**	P	PKPdf	15 44 28.8	-0.5
	SNR=9.3						
AML	**Almayashu**	**144.59**	**48**	*e*PKP	PKPdf	15 44 29.3	-0.2
AML	**Almayashu**	**144.59**	**48**	P	PKPdf	15 44 29.7	+0.2
	SNR=30						
USP	**Ospenovka**	**144.70**	**46**	P	PKPdf	15 44 29.4	-0.2
	SNR=7.8						
BOD	**Bodaibo**	**144.84**	**356**	*i* PKIKP	PKPdf	15 44 27.5	-1.9
BOD				pmax	pmax		
	comp=Z,24nm,0.9s						
AAK	**Ala-Archa**	**144.95**	**47**	P	PKPdf	15 44 30.8	+0.6
	SNR=34						
FRU	**Bishkek**	**144.95**	**47**	*e*PKIKP	PKPdf	15 44 29.0	-1.1
CHMS	**Chumysh**	**144.97**	**47**	P	PKPdf	15 44 30.4	+0.2
	SNR=9.9						
KBK	**Karagaybulak**	**145.25**	**47**	P	PKPbc	15 44 31.7	+1.3
	SNR=24						
TKM2	**Tokmak 2**	**145.57**	**46**	PKP	PKPdf	15 44 31.4	+0.2
KZA	**Kyzart**	**145.68**	**48**	P	PKPab	15 44 33.6	+1.5
	SNR=17						
ULHL	**Ulahol**	**146.29**	**47**	P		15 44 47.0	
	SNR=5.3						
KSH	**Kashi**	**147.15**	**52**	*e*PKP	PKPdf	15 44 35.6	+1.6
KSH				*e*PKP2	PKiKP	15 44 41.6	+3.0
KSH				*e*PP	SKPdf	15 48 05.8	-0.4
KSH				*e*PKS		15 48 09.5	
KSH				*e*SKS	SKSdf	15 51 39.1	-1.7
KSH				*e*SKKS	SKKSac	15 54 51.3	0.0
KSH				*e*SS	SS	16 07 01.3	0.0
KSH				PP	PP		
	comp=Z,760nm,5.5s						
KSH				LR	LR		
	comp=N,584nm,4.4s						
KSH				LR	LR		
	comp=E,701nm,4.4s						
KSH				LR	LR		
	comp=Z,356nm,4.4s						
HABR	**Khabarovsk**	**147.23**	**328**	*i* PKP2	PKPbc	15 44 35.0	-1.1
HABR				*e*		15 48 04.8	
HABR				*e*		15 51 35.7	
HABR				*e*		16 00 36.5	
HABR				*e*SS	SS	16 07 00.8	0.0
MK31	**Makanchi Array**	**147.61**	**36**	*e*PKPdf	PKPdf	15 44 34.6	+0.1
MK31				*e*PKPbc	PKPbc	15 44 37.0	-0.2
MKAR	**Makanchi Array**	**147.61**	**36**	PKPbc	PKPdf	15 44 35.0	+0.5
	comp=Z,8.4nm,0.6s,baz=304,slow=3.6,SNR=77						
NDI	**New Delhi**	**150.51**	**72**	*e*P	PKPbc	15 44 43.0	-2.1
KAPI	**Kappang**	**150.57**	**201**	PKPbc	PKPbc	15 44 45.2	-0.5
	comp=Z,4.5nm,0.6s,baz=281,slow=4.4,SNR=4.2						
HYB	**Hyderabad**	**150.62**	**95**	*e*PKP	PKPbc	15 44 45.0	-0.7
HYB	**Hyderabad**	**150.62**	**95**	*i* PKP	PKPbc	15 44 45.0	-0.7
TLY	**Talaya**	**150.81**	**7**	*e*PKIKP	PKPab	15 44 52.2	0.0
TLY				*e*		15 45 02.1	
TLY				pmax	pmax		
	comp=Z,16nm,1.6s						
MJAR	**Matsushiro Arr**	**151.55**	**305**	PKPbc	PKPbc	15 44 47.1	-0.2
	comp=Z,3.3nm,0.7s,baz=117,slow=1.6,SNR=7.6						
MAJO	**Matsushiro**	**151.55**	**305**	*e*PKPbc	PKPbc	15 44 47.3	0.0
ZAK	**Zakamensk**	**152.04**	**8**	*e*PKIKP	PKPbc	15 44 47.5	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMQ	**Urumqi**	**152.43**	**35**	*e*PKP	PKPdf	15 44 41.0	-1.2
SONM	**Songino Array**	**154.89**	**5**	PKP	PKPdf	15 44 46.4	+0.8
	comp=Z,1.3nm,0.8s,baz=302,slow=1.4,SNR=8.2						
SONM				PKPbc	PKPbc	15 44 54.4	+0.2
	comp=Z,1.2nm,0.8s,baz=325,slow=1.8,SNR=5.5						
SONM				PKPab	PKPab	15 45 08.7	-0.7
	comp=Z,1.8nm,0.8s,baz=341,slow=1.8,SNR=6.3						
CN2	**Changchun**	**155.18**	**331**	*e*PKP	PKPdf	15 44 42.5	-3.6
GTA	**Gaotai**	**161.54**	**24**	*e*PKP	PKPdf	15 44 54.4	+0.5
GTA				PP	PP	15 49 28.9	+7.7
GTA				PP	PP		
	comp=Z,129nm,4.2s						
GTA				LR	LR		
	comp=N,69nm,17.1s						
GTA				LR	LR		
	comp=E,97nm,16.5s						
GTA				LR	LR		
	comp=Z,124nm,16.8s						
BJI	**Beijing**	**161.85**	**343**	PKP	PKPdf	15 44 52.3	-1.9
HHC	**Hu-ho-hao-te**	**161.89**	**355**	*e*PKP	PKPdf	15 44 52.0	-2.2
HHC				APKP		15 45 00.8	
HHC				XPKP		15 45 05.5	
HHC				PKS		15 48 24.1	
HHC				PP	PP	15 49 27.3	+4.6
HHC				SKS	SKSdf	15 51 52.3	-4.9
HHC				SKKS	SKKSac	15 56 09.4	-0.6
HHC				SS	SS	16 09 40.6	+1.6
HHC				PP	PP		
	comp=Z,191nm,8.3s						
HHC				LR	LR		
	comp=N,292nm,22.6s						
HHC				LR	LR		
	comp=E,363nm,21.4s						
HHC				LR	LR		
	comp=Z,125nm,22.6s						
CMAR	**Chiang Mai Arr**	**169.34**	**112**	PKP	PKPdf	15 45 01.0	0.0
	comp=Z,0.3nm,0.3s,baz=312,slow=0.9,SNR=4.6						
CMAR				PKPab	PKPab	15 46 12.8	-0.8
	comp=Z,1.5nm,0.9s,baz=253,slow=4.9,SNR=8.0						
CD2	**Chengdu**	**170.49**	**30**	*e*PKP	PKPdf	15 44 59.5	-1.8
CD2				APKP		15 45 04.5	
CD2				XPKP		15 45 06.8	
CD2				PKP2	PKPab	15 46 19.0	+0.8
CD2				PP	PP	15 50 09.9	+2.1
CD2				SKS	SKSdf	15 52 01.1	-1.9
CD2				SKKS	SKKSac	15 56 54.3	+0.8
CD2				SS	SS	16 11 07.3	0.0
CD2				PP	PP		
	comp=Z,130nm,8.2s						
CD2				LR	LR		
	comp=N,210nm,16.8s						
CD2				LR	LR		
	comp=E,250nm,18.2s						
CD2				LR	LR		
	comp=Z,180nm,16.4s						
KMI	**Kunming**	**173.51**	**68**	PKP	PKPdf	15 44 59.8	-3.1
KMI				APKP		15 45 06.6	
KMI				PKP2	PKPab	15 46 32.8	+0.8
KMI				PKS		15 48 32.3	
KMI				PP	PP	15 50 24.4	+0.3
KMI				SKS	SKSdf	15 52 01.1	-3.3
KMI				SKKS	SKKSac	15 57 06.6	-2.2
KMI				PP	PP		
	comp=Z,136nm,5.8s						
KMI				LR	LR		
	comp=Z,74nm,34.0s						
GYA	**Guiyang**	**175.59**	**33**	*e*PKP	PKPdf	15 45 03.3	-0.2
GYA				PKS		15 48 31.9	
GYA				PP	PP	15 50 34.0	+1.1
GYA				SKS	SKSdf	15 52 00.8	-4.0
GYA				SKKS	SKKSac	15 57 18.6	+0.4
GYA				PP	PP		
	comp=Z,110nm,8.2s						
GYA				LR	LR		
	comp=N,280nm,24.7s						
GYA				LR	LR		
	comp=E,140nm,23.0s						
GYA				LR	LR		
	comp=Z,260nm,24.5s						

IDC 18 15:37:23.5±31.0, 1577S×17590E, h0km, mb4.5/4, mb1 4.7/4, mb1mx4.0/17, mbtmp4.5/4, Error ellipse: s-maj=536.2km s-min=117.3km az=69.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.92**	**234**	*e*P	Pn	15 39 51.4	-10
NOUC	**Port Laguerre**	**11.05**	**234**	*e*P	Pn	15 39 53.0	-10
CTA	**Charters Tower**	**28.51**	**257**	P	P	15 43 20.7	-0.2
	2.6nm,0.6s,baz=84,slow=11,SNR=6.7						
STKA	**Stephens Creek**	**35.06**	**237**	P	P	15 44 17.4	-0.9
	3.5nm,0.6s,baz=74,slow=9.9,SNR=15						
WRA	**Warramunga Arr**	**39.71**	**258**	P	P	15 44 58.6	+0.7
	1.7nm,0.4s,baz=89,slow=8.4,SNR=78						
ASAR	**Alice Springs**	**40.19**	**252**	P	P	15 45 02.0	+0.1
	12nm,0.4s,baz=81,slow=8.8,SNR=382						

ISC 18 15:51:19.5±3.8, 1822S±009×1679E±05, h35km, n5, σ0§69/7, mb3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.07**	**200**	*e*P	Pn	**15 52 19.0**	**-0.2**
DZM				*e*S	Sn	**15 53 05.1**	**-0.6**
NOUC	**Port Laguerre**	**4.15**	**201**	*e*P	Pn	**15 52 20.2**	**-0.1**
NOUC				*e*S	Sn	**15 53 08.1**	**+0.6**
STKA	**Stephens Creek**	**27.36**	**235**	P	P	**15 57 02.8**	**+1.4**
	2.0nm,0.7s,mb3.7,baz=55,slow=8.9,SNR=6.6						
WRA	**Warramunga Arr**	**31.75**	**261**	P	P	**15 57 39.6**	**-0.9**
	0.4nm,0.4s,mb3.6,baz=90,slow=8.5,SNR=16						
ASAR	**Alice Springs**	**32.17**	**254**	P	P	**15 57 44.0**	**-0.1**
	1.3nm,0.4s,mb4.2,baz=83,slow=8.4,SNR=88						

*ISCJB **18** 16:04:43.9±2.2, 3431N±004×9479E±007, h15km±19km, mb4.0/9, MS3.0/2, Error ellipse: s-maj=9.5km s-min=7.2km az=15.1*
*IDC **18** 16:04:43.3±0.8, 3430N×9496E, h0km, mb3.8/7, mb1 3.9/10, mb1mx3.8/23, mbtmp3.7/10, ML3.7/2, MS3.1/3, Ms1 3.1/3, ms1mx3.0/35, Error ellipse: s-maj=47.9km s-min=16.8km az=56.0*
*BJI **18** 16:04:43.2, 3426N×9464E, h15km, mB4.8, mb4.5, ML4.0, Ms3.7, Msz3.4*
*NEIC **18** 16:04:44.9±4.5, 3437N×9499E, h9km±30km, mb3.9/4, Error ellipse: s-maj=14.4km s-min=7.9km az=78.0*

ISC 18 16:04:46.9±2.2, 3436N±004×9486E±006, h22km±19km, n40, σ1§20/39, mb4.0/9, MS3.0/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.61**	**215**	*e*Pn	Pn	**16 06 11.3**	**+2.2**
	69nm,0.9s						
GTA	**Gaotai**	**6.42**	**37**	*e*P	Pn	**16 06 22.3**	**+2.2**
GTA				S	Sn	**16 07 30.6**	**-2.1**
GTA				LG2		16 08 19.4	
GTA				LR	LR		
	comp=N,807nm,15.3s						
GTA				LR	LR		
	comp=E,869nm,14.4s						
GTA				LR	LR		
	comp=Z,461nm,14.4s						
SHL	**Shillong**	**9.13**	**197**	*e*P	Pn	**16 07 01.2**	**+3.8**
TAPN	**Taplejung**	**9.30**	**223**	*e*P	Pn	**16 07 01.3**	**+1.6**
ODAN	**Odare**	**9.86**	**223**	*e*P	Pn	**16 07 09.2**	**+1.8**
	comp=Z,14nm,0.4s						
JIRN	**Jiri**	**9.99**	**230**	*e*P	Pn	**16 07 09.7**	**+0.5**
GUN	**Gumba**	**10.02**	**233**	*e*P	Pn	**16 07 09.8**	**+0.2**
	comp=Z,38nm,0.6s						
RAMN	**Ramite**	**10.25**	**226**	*e*P	Pn	**16 07 13.6**	**+0.9**
	comp=Z,15nm,0.5s						
KKN	**Kakani**	**10.50**	**234**	*e*P	Pn	**16 07 15.8**	**-0.4**
	comp=Z,22nm,0.7s						
PKI	**Pulchoki**	**10.56**	**233**	*e*P	Pn	**16 07 16.5**	**-0.5**
	comp=Z,37nm,0.5s						
PKIN	**Phulchoki**	**10.56**	**233**	*e*P	Pn	**16 07 16.3**	**-0.7**
	comp=Z,38nm,0.6s						
DMN	**Daman**	**10.73**	**234**	*e*P	Pn	**16 07 18.8**	**-0.6**
	comp=Z,18nm,0.6s						
GKN	**Gorkha**	**10.80**	**237**	*e*P	Pn	**16 07 19.1**	**-1.2**
	comp=Z,9.1nm,0.5s						
WMQ	**Urumqi**	**10.96**	**332**	*e*P	Pn	**16 07 23.0**	**+0.5**
DANN	**Dangsing**	**11.22**	**241**	*e*P	Pn	**16 07 24.9**	**-1.1**
	comp=Z,25nm,0.6s						
KOLN	**Koldanda**	**11.67**	**239**	*e*P	Pn	**16 07 30.7**	**-1.5**
	comp=Z,26nm,0.9s						
PYUN	**Piuthan**	**11.92**	**242**	*e*P	Pn	**16 07 33.5**	**-2.1**
	comp=Z,9.9nm,0.6s						
GYA	**Guiyang**	**12.87**	**125**	P	Pn	**16 07 49.8**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
MK31	**Makanchi Array**	**15.64**	**326**	*e*P	Pn	**16 08 24.8**	**-1.1**
MKAR	**Makanchi Array**	**15.64**	**326**	Pn	Pn	**16 08 24.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=128,slow=14,SNR=11						
CHTO	**Chiang Mai**	**15.90**	**166**	*e*P	Pn	**16 08 27.6**	**-1.8**
	comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**16.00**	**29**	Pn	Pn	**16 08 30.1**	**-0.4**
	baz=212,slow=14,SNR=6.3						
SONM				LR	LR	16 15 00.7	
	comp=Z,115nm,19.0s,baz=181,slow=39						
CMAR	**Chiang Mai Arr**	**16.25**	**166**	Pn	Pn	**16 08 33.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=11						
KURK	**Kurchatov**	**20.19**	**329**	*e*P	P	**16 09 20.2**	**+0.3**
	comp=Z,2.2nm,0.6s						
ZAA0	**Zalesovo Array**	**20.83**	**343**	*e*P	P	**16 09 29.5**	**+2.6**
ZALV	**Zalesovo Beam**	**20.83**	**343**	P	P	**16 09 27.6**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=165,slow=12,SNR=8.4						
KBL	**Kabul**	**21.28**	**278**	*e*P	P	**16 09 31.3**	**-0.6**
	comp=Z,9.8nm,0.6s,mb4.3						
HYB	**Hyderabad**	**22.30**	**225**	*e*P	P	**16 09 45.5**	**+2.5**
HYB	**Hyderabad**	**22.30**	**225**	*i* P	P	**16 09 45.5**	**+2.5**
BVAR	**Borovoye Array**	**25.51**	**324**	P	P	**16 10 14.0**	**+0.4**
	comp=Z,1.8nm,0.8s,mb3.7,baz=128,slow=11,SNR=10						
BRVK	**Borovoye**	**25.58**	**324**	*e*P	P	**16 10 14.9**	**+0.6**
	comp=Z,3.8nm,0.8s,mb4.0						
KSRS	**Korea Array**	**26.88**	**74**	LR	LR	16 20 44.9	
	comp=Z,5.5nm,21.3s,MS2.1,baz=154,slow=36						
BATI	**Baumata**	**52.07**	**143**	LR	LR	16 39 09.9	
	comp=Z,102nm,19.3s,MS3.9,baz=150,slow=40						
NOA	**NORSAR Array B**	**57.64**	**325**	P	P	**16 14 35.0**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=77,slow=7.3,SNR=3.1						
NOA	**NORSAR Array B**	**57.64**	**325**	P	P	**16 14 35.0**	**-0.1**
GERES	**GERESS Array B**	**59.62**	**311**	P	P	**16 14 49.8**	**+0.7**
	comp=Z,0.9nm,0.8s,mb3.8,baz=54,slow=6.8,SNR=5.2						
WRA	**Warramunga Arr**	**65.78**	**139**	P	P	**16 15 29.7**	**-0.8**
	comp=Z,0.9nm,0.8s,mb3.8,baz=338,slow=7.0,SNR=3.7						
ASAR	**Alice Springs**	**68.60**	**142**	P	P	**16 15 47.6**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.9,baz=326,slow=6.4,SNR=15						
COLA	**College**	**69.76**	**24**	*e*P	P	**16 15 54.7**	**-0.3**
	comp=Z,9.4nm,0.6s,mb4.9						
TORD	**Torodi Ar. Bea**	**85.27**	**283**	P	P	**16 17 23.1**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.7,baz=35,slow=5.5,SNR=3.0						

IDC 18 16:09:41.2±3.7, 697S×15216E, h0km, mb3.3/2, mb1 3.7/2, mb1mx3.4/15, mbtmp3.4/2, Error ellipse: s-maj=150.4km s-min=42.9km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.57**	**232**	P	P	16 14 33.9	+1.3
	2.3nm,0.7s,baz=54,slow=10.0,SNR=21						
ASAR	**Alice Springs**	**24.15**	**225**	P	P	16 14 57.8	-1.4
	0.5nm,0.8s,baz=58,slow=8.6,SNR=6.8						
TORD	**Torodi Ar. Bea**	**150.30**	**284**	PKPbc	PKPbc	16 29 35.1	-0.4
	0.3nm,0.8s,baz=75,slow=1.5,SNR=2.7						
TORD				PKPab	PKPab	16 29 41.8	0.0
	1.1nm,0.9s,baz=79,slow=2.4,SNR=5.9						

IDC 18 16:10:57.1±8.3, 753S×6932E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.3/21, mbtmp3.7/2, Error ellipse: s-maj=493.6km s-min=51.9km az=42.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**63.76**	**113**	P	P	16 21 31.1	-0.2
	0.5nm,0.7s,baz=278,slow=6.3,SNR=10.0						
WRA	**Warramunga Arr**	**64.02**	**108**	P	P	16 21 33.4	+0.3
	0.8nm,0.7s,baz=278,slow=5.9,SNR=11						
NVAR	**Mina Array Bea**	**148.48**	**11**	PKPbc	PKPbc	16 30 45.9	-0.3
	0.2nm,0.3s,baz=318,slow=2.6,SNR=3.2						

IDC 18 16:30:55.9±6.7, 2278S×17577W, h433km±141km, mb3.4/4, mb1 3.6/5, mb1mx3.2/19, mbtmp3.5/5, Error ellipse: s-maj=121.5km s-min=59.3km az=113.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.60**	**24**	P	P	16 33 09.3	+0.6
	6.7nm,0.3s,baz=304,slow=23,SNR=10						
AFI				S	S	16 34 59.0	+1.1
	3.8nm,0.3s,baz=55,slow=19,SNR=4.4						
CTA	**Charters Tower**	**35.39**	**267**	P	P	16 37 13.7	+0.1
	5.4nm,0.3s,baz=97,slow=9.4,SNR=20						
STKA	**Stephens Creek**	**38.74**	**247**	P	P	16 37 39.7	-1.5
	1.2nm,0.4s,baz=91,slow=12,SNR=12						
ASAR	**Alice Springs**	**46.06**	**259**	P	P	16 38 39.6	+0.4
	0.9nm,0.3s,baz=93,slow=6.7,SNR=59						
WRA	**Warramunga Arr**	**46.38**	**264**	P	P	16 38 42.3	+0.5
	0.8nm,0.3s,baz=90,slow=6.0,SNR=110						

*IDC **18** 16:33:23.4±3.1, 2435S×9670E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=113.5km s-min=30.3km az=58.0*
*ISCJB **18** 16:33:27.4±2.4, 2358S±003×9688E±05, h33km, mb3.7/5, Error ellipse: s-maj=76.3km s-min=22.0km az=150.2*
*NEIC **18** 16:33:28.8±1.6, 2375S×9677E, h35km, mb3.7/1, Error ellipse: s-maj=56.4km s-min=17.8km az=63.0*

ISC 18 16:33:29.8±2.2, 23S±03×969E±04, h35km, n9, σ0§26/8, mb3.7/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.71**	**6**	P	P	**16 38 07.4**	**+0.2**
	2.6nm,0.8s,baz=193,slow=9.9,SNR=7.5						
CHTO	**Chiang Mai**	**21.06**	**5**	*e*P	P	**16 38 10.9**	**-0.1**
	2.5nm,0.7s,mb3.6						
WRA	**Warramunga Arr**	**40.59**	**118**	P	P	**16 41 06.4**	**+0.1**
	0.6nm,1.0s,mb3.2,baz=303,slow=8.9,SNR=2.5						
MKAR	**Makanchi Array**	**50.53**	**347**	P	P	**16 42 25.0**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=148,slow=7.9,SNR=7.6						
MKAR	**Makanchi Array**	**50.53**	**347**	P	P	**16 42 25.0**	**+0.5**
SONM	**Songino Array**	**50.60**	**8**	P	P	**16 42 24.9**	**-0.2**
	0.4nm,0.7s,mb3.5,baz=188,slow=6.8,SNR=2.7						
ZAA0	**Zalesovo Array**	**56.92**	**352**	*e*P	P	**16 43 10.9**	**-0.3**
ZALV	**Zalesovo Beam**	**56.92**	**352**	P	P	**16 43 11.1**	**-0.2**
	1.5nm,0.4s,mb4.3,baz=172,slow=7.1,SNR=8.9						
TXAR	**Lajitas Array**	**146.76**	**34**	PKPbc	PKPbc	16 53 06.8	-2.0
	0.2nm,0.6s,baz=342,slow=0.9,SNR=3.7						

MAN 18 16:45:39, 1126N×12549E, h31km, mb4.4, ML3.3, MS3.1, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.34**	**351**	*e*P	Pb	16 45 49.0	+1.8
PLP	**Palo**	**0.51**	**260**	*i*P	Pb	16 45 50.8	+1.2
PLP				*i* S	Sb	16 45 59.7	+2.7
OCLP	**Ormoc**	**0.89**	**257**	*e*P	Pn	16 45 56.1	+0.7
OCLP				*e*S	Sn	16 46 02.7	-4.5
MSLP	**Maasin**	**1.28**	**209**	*e*P	Pn	16 46 01.9	+1.2
MSLP				*e*S	Sn	16 46 21.7	+4.9
SCPH	**Surigao**	**1.47**	**180**	*e*P	Pn	16 46 03.4	+0.1
SCPH				*e*S	Sn	16 46 22.4	+0.9

*IDC **18** 16:50:21.6±0.7, 5155N×17604W, h0km, mb3.8/8, mb1 4.2/8, mb1mx3.9/23, mbtmp3.8/8, Error ellipse: s-maj=35.9km s-min=18.4km az=177.0*
*BJI **18** 16:50:26.8, 5184N×17551W, h46km, mB4.8, mb4.7, Ms4.8, Msz4.5*
*ISCJB **18** 16:50:27.3±1.2, 515N±0.1×17578W±007, h49km±11km, mb4.1/11, Error ellipse: s-maj=21.4km s-min=6.2km az=169.2*
*NEIC **18** 16:50:29.1±1.1, 5152N×17585W, h54km±10km, ML4.0(AEIC), Error ellipse: s-maj=21.2km s-min=7.5km az=166.0*

ISC 18 16:50:29.0±1.1, 515N±01×17586W±007, h48km±10km, n29, σ1§11/31, mb4.1/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.65**	**308**	P	Pn	**16 50 40.8**	**-1.3**
ADK				S	Sn	**16 50 51.3**	**-0.2**
AMKA	**Amchitka**	**3.03**	**270**	*e*P	Pn	**16 51 14.7**	**+0.3**
NIKO	**Nikolski**	**4.56**	**68**	P	Pn	**16 51 35.3**	**0.0**
UNV	**Unalaska Valle**	**6.16**	**64**	P	Pn	**16 51 58.2**	**+0.9**
UNV				S	Sn	**16 53 07.0**	**+0.6**
SPIA	**Saint Paul Isl**	**6.58**	**28**	P	Pn	**16 52 05.2**	**+2.2**
FX1	**Attu Island--F**	**6.90**	**286**	P	Pn	**16 52 08.5**	**+1.2**
FALS	**False Pass**	**8.20**	**61**	P	Pn	**16 52 25.6**	**+0.3**
SDPT	**Sand Point**	**9.96**	**61**	P	Pn	**16 52 48.0**	**-1.2**
CHGN	**Chignik**	**11.36**	**58**	*e*P	Pn	**16 53 07.2**	**-1.1**
SVW2	**Sparrevohn**	**14.75**	**41**	P	Pn	**16 53 51.2**	**-3.0**
KDAK	**Kodiak Island**	**14.83**	**56**	Pn	Pn	**16 54 03.9**	**+8.5**
	0.7nm,0.3s,baz=272,slow=9.4,SNR=41						
KDAK				Sn	Sn	**16 56 46.6**	**+8.3**
	0.2nm,0.3s,baz=321,slow=21,SNR=2.2						
KDAK	**Kodiak Island**	**14.83**	**56**	*e*Pn	Pn	**16 53 52.8**	**-2.6**
KDAK				Sn	Sn	**16 56 46.6**	**+8.3**
SLKM	**Skilak Lake**	**16.84**	**48**	*e*P	Pn	**16 54 20.2**	**-0.8**
KTH	**Kantishna Hill**	**17.89**	**38**	*e*P	Pn	**16 54 34.8**	**+0.9**
IMA2	**Indian Mountai**	**18.43**	**29**	*e*P	Pn	**16 54 40.5**	**+0.1**
NVAR	**Mina Array Bea**	**41.71**	**85**	P	P	**16 58 13.8**	**+0.9**
	0.8nm,0.8s,mb3.4,baz=286,slow=7.2,SNR=6.8						
NVAR				PcP	PcP	17 00 09.5	+0.9
	0.6nm,0.8s,baz=270,slow=2.3,SNR=4.4						
NVAR	**Mina Array Bea**	**41.71**	**85**	P	P	**16 58 13.8**	**+0.9**
NVAR				PcP	PcP	17 00 09.5	+0.9
PDAR	**Pinedale Array**	**44.52**	**74**	P	P	**16 58 35.7**	**+0.2**
	3.1nm,0.5s,mb4.4,baz=309,slow=3.5,SNR=31						
BJI	**Beijing**	**47.15**	**284**	P	P	**16 58 58.5**	**+2.3**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.8						
SONM	**Songino Array**	**48.24**	**298**	P	P	**16 59 04.5**	**-0.1**
	comp=Z,0.5nm,0.9s,mb3.5,baz=61,slow=13,SNR=2.9						
SONM				PcP	PcP	17 00 28.7	-2.2
	comp=Z,0.6nm,0.9s,baz=48,slow=2.3,SNR=3.6						
XAN	**Xi'an**	**55.44**	**283**	P	P	**16 59 57.5**	**-0.9**
XAN				AP	pP	17 00 10.0	-1.8
XAN				AMB	AMB		
	comp=Z,2.0nm,0.4s,mb4.5						
TXAR	**Lajitas Array**	**56.81**	**83**	P	P	**17 00 08.2**	**-0.1**
	comp=Z,1.7nm,0.5s,mb4.3,baz=304,slow=6.0,SNR=34						
MKAR	**Makanchi Array**	**61.40**	**310**	P	P	**17 00 38.0**	**-1.7**
	comp=Z,0.3nm,0.5s,mb3.7,baz=51,slow=6.2,SNR=6.0						
GYA	**Guiyang**	**62.14**	**278**	P	P	**17 00 48.4**	**+3.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**83.39**	**226**	P	P	**17 02 50.0**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=35,slow=5.7,SNR=7.4						
ASAR	**Alice Springs**	**86.83**	**225**	P	P	**17 03 07.8**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.9,baz=20,slow=4.7,SNR=16						
STKA

WRA					Sn	Sn	18 12 48.8	-10		
	0.2nm,0.3s,baz=335,slow=22,SNR=6.4									
ASAR	**Alice Springs**	**16.45**	**172**		Pn	Pn	18 11 22.1	-0.1		
	0.1nm,0.3s,baz=354,slow=9.8,SNR=11									
ASAR					Sn	Sn	18 14 16.6	-8.9		
	0.1nm,0.3s,baz=0.0,slow=29,SNR=4.6									
MKAR	**Makanchi Array**	**69.19**	**326**		P	P	18 18 38.4	+0.1		
	0.2nm,0.4s,baz=116,slow=8.1,SNR=3.9									

BJI ***18*** *18:14:36.2, 52.10N×174.10E, h25km, mB5.1, mb4.6, Ms4.7, Msz4.3*

ISCJB ***18*** *18:14:37.6±1.3, 5201N±006×17402E±005, h22km±8km, mb4.6/59, MS3.5/3, Error ellipse: s-maj=10.2km s-min=5.4km az=4.1*

MOS ***18*** *18:14:39.0±1.1, 5198N×17398E, h33km, mb4.8/30, Error ellipse: s-maj=13.9km s-min=6.8km az=101.9*

NEIC ***18*** *18:14:41.2±0.3, 5208N×174.10E, h35km, mb4.7/24, Error ellipse: s-maj=9.2km s-min=4.9km az=186.0*

IDC ***18*** *18:14:41.1±6.8, 5207N×17401E, h33km±50km, mb4.1/20, mb1 4.3/21, mb1mx4.3/26, mbtmp4.1/21, ML4.1/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/35, Error ellipse: s-maj=18.8km s-min=12.3km az=164.0*

ISC 18 18:14:39.5±1.3, 5206N±006×17399E±005, h21km±8km, n171, σ0°92/170, mb4.6/59, MS3.5/3, 21C, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMY	**Shemya**	**0.68**	**5**	P		**Pb**	**18 14 53.0**	**+0.4**
SMY				S		**Sb**	**18 15 02.8**	**+1.3**
FX1	**Attu Island--F**	**0.97**	**329**	P		**Pb**	**18 14 56.6**	**-1.0**
FX1				S		**Sb**	**18 15 06.5**	**-3.4**
AMKA	**Amchitka**	**3.37**	**100**	P		**Pn**	**18 15 32.4**	**+1.6**
AMKA				S		**Sn**	**18 16 11.0**	**+0.9**
ADK	**Adak**	**5.77**	**88**	P		**Pn**	**18 16 02.8**	**-0.8**
PET	**Petropavlovsk**	**9.40**	**282**	*eP*		**Pn**	**18 16 52.7**	**-0.8**
PET				MLR		MLR		
	comp=Z,200nm,18.0s							
PEA0B	**Petropavlovsk-**	**9.98**	**282**	*e*Pn		**Pn**	**18 17 04.0**	**+2.7**
PEA0B				*e*Sn		**Sn**	**18 18 50.8**	**-1.7**
PETK	**Petropavlovsk-**	**9.98**	**282**	Pn		**Pn**	**18 17 03.6**	**+2.3**
	comp=Z,1.7nm,0.3s,baz=91,slow=18,SNR=28							
PETK				Sn		**Sn**	**18 18 50.4**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=135,slow=16,SNR=4.2							
PETK				LR		LR	18 19 43.7	
	comp=Z,44nm,19.9s,baz=60,slow=30							
PETK	**Petropavlovsk-**	**9.98**	**282**	Pn		**Pn**	**18 17 03.6**	**+2.3**
PETK				Sn		**Sn**	**18 18 50.4**	**-2.2**
PETK				LR		LR	18 19 43.7	
TNA	**Tin City**	**16.36**	**27**	*e*Pn		**Pn**	**18 18 18.9**	**-8.6**
	comp=Z,50nm,1.2s							
SVW2	**Sparrevohn**	**18.88**	**49**	*e*P		**Pn**	**18 18 58.6**	**-0.1**
OHAK	**Old Harbor**	**19.50**	**62**	*e*P		**Pn**	**18 19 01.3**	**-4.9**
KDAK	**Kodiak Island**	**19.90**	**60**	P		pP	18 19 21.6	+6.4
	comp=Z,3.5nm,0.3s,baz=254,slow=7.5,SNR=28							
IMA2	**Indian Mountai**	**21.40**	**37**	*e*P		**P**	**18 19 25.8**	**+0.4**
MCK	**McKinley**	**22.53**	**44**	*e*P		**P**	**18 19 28.4**	**-9.1**
	comp=Z,28nm,1.3s,mb4.5							
MCK	**McKinley**	**22.53**	**44**	*e*P		**P**	**18 19 28.4**	**-9.0**
MCK				pmax		pmax		
	comp=Z,27nm,1.3s,mb4.5							
COLD	**Coldfoot**	**23.14**	**35**	*e*P		**P**	**18 19 42.9**	**-1.0**
	comp=Z,5.6nm,0.8s,mb4.0							
YAK	**Yakutsk**	**25.58**	**310**	*e*P		**P**	**18 20 05.2**	**-1.4**
	comp=Z,27nm,1.0s,mb4.7							
YAK	**Yakutsk**	**25.58**	**310**	*e*P		**P**	**18 20 05.6**	**-0.9**
YAK				pmax		pmax		
	comp=Z,16nm,0.9s,mb4.5							
YAK				pmax		pmax		
	comp=E,11nm,1.1s							
YAK				pmax		pmax		
	comp=N,3.0nm,0.9s							
EGAK	**Eagle**	**26.06**	**43**	*e*P		**P**	**18 20 09.6**	**-1.3**
	comp=N,12nm,0.9s,mb4.4							
DAWY	**Dawson**	**26.75**	**45**	*e*P		**P**	**18 20 16.7**	**-0.5**
TIXI	**Tiksi**	**27.86**	**331**	*e*P		**P**	**18 20 26.9**	**0.0**
	comp=N,51nm,2.4s,mb4.7							
TIXI	**Tiksi**	**27.86**	**331**⇑	*e*P		**P**	**18 20 34.1**	**+7.1**
TIXI				pmax		pmax		
	comp=Z,1.0nm,1.0s,mb3.4							
DLBC	**Dease Lake**	**31.71**	**56**	P		**P**	**18 21 02.2**	**+1.0**
	comp=Z,1.3nm,0.7s,mb3.9,baz=300,slow=9.4,SNR=4.6							
DLBC	**Dease Lake**	**31.71**	**56**	P		**P**	**18 21 02.2**	**+1.0**
KSRS	**Korea Array**	**35.19**	**264**	P		**P**	**18 21 31.2**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=50,slow=8.4,SNR=4.1							
KSRS	**Korea Array**	**35.19**	**264**	P		**P**	**18 21 31.2**	**-0.5**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.7s,mb3.9							
YKA	**Yellowknife Ar**	**37.99**	**46**	P		**P**	**18 21 55.2**	**0.0**
	comp=Z,4.4nm,0.6s,mb4.3,baz=287,slow=7.5,SNR=13							
YKA	**Yellowknife Ar**	**37.99**	**46**	P		**P**	**18 21 55.2**	**0.0**
YKA	**Yellowknife Ar**	**37.99**	**46**	P		**P**	**18 21 55.2**	**-0.1**
YKA				pmax		pmax		
	comp=Z,4.0nm,0.6s							
BJI	**Beijing**	**40.84**	**276**	P		**P**	**18 22 16.0**	**-3.3**
BJI				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.7							
SONM	**Songino Array**	**42.28**	**292**	LR		LR	18 42 19.9	
	comp=Z,42nm,18.6s,MS3.4,baz=163,slow=39							
RSW	**Rattlesnake Hi**	**42.38**	**70**	*e*P		**P**	**18 22 31.6**	**-0.2**
CHMT	**Chamberlain Mo**	**45.72**	**66**	*e*P		**P**	**18 22 56.3**	**-2.3**
HRY	**Holter Researc**	**46.64**	**66**	*e*P		**P**	**18 23 04.9**	**-0.9**
MCMT	**McKenzie Canyo**	**47.16**	**68**	*e*P		**P**	**18 23 08.6**	**-1.3**
NVAR	**Mina Array Bea**	**47.86**	**79**	P		**P**	**18 23 15.3**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.3,baz=291,slow=7.7,SNR=21							
NVAR				PcP		PcP	18 24 44.3	+0.4
	comp=Z,1.4nm,0.7s,baz=284,slow=3.9,SNR=6.3							
NVAR	**Mina Array Bea**	**47.86**	**79**	P		**P**	**18 23 15.3**	**-0.2**
NVAR				PcP		PcP	18 24 44.3	+0.4
SPITS	**Spitsbergen Ar**	**49.31**	**354**	P		**P**	**18 23 26.1**	**-0.1**
	comp=Z,4.0nm,0.4s,mb4.8,baz=64,slow=8.9,SNR=40							
SPITS	**Spitsbergen Ar**	**49.31**	**354**	P		**P**	**18 23 26.1**	**0.0**
SPITS				pmax		pmax		
	comp=Z,4.0nm,0.4s							
TPNV	**Topopah Spring**	**50.06**	**79**	*e*P		**P**	**18 23 31.7**	**-0.7**
	comp=Z,5.9nm,0.8s,mb4.7							
TPNV	**Topopah Spring**	**50.06**	**79**	*e*P		**P**	**18 23 31.7**	**-0.7**
TPNV				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
ZALV	**Zalesovo Beam**	**50.23**	**310**	P		**P**	**18 23 31.9**	**-1.5**
	comp=Z,0.3nm,0.3s,mb3.8,baz=61,slow=12,SNR=2.9							
ZALV				PcP		PcP	18 24 52.9	+0.7
	comp=Z,0.9nm,0.6s,baz=32,slow=5.8,SNR=2.8							
ZALV				LR		LR	18 45 53.0	
	comp=Z,28nm,19.7s,MS3.3,baz=81,slow=37							
PDAR	**Pinedale Array**	**50.30**	**69**	P		**P**	**18 23 33.8**	**-0.3**
	comp=Z,3.3nm,0.6s,mb4.6,baz=295,slow=4.0,SNR=16							
PDAR				PcP		PcP	18 24 52.2	-0.5
	comp=Z,0.5nm,0.6s,baz=255,slow=1.8,SNR=2.0							
GSC	**Goldstone**	**50.81**	**81**	*e*P		**P**	**18 23 37.5**	**-0.6**
	comp=Z,3.8nm,0.6s,mb4.5							
GSC	**Goldstone**	**50.81**	**81**	*e*P		**P**	**18 23 37.5**	**-0.6**
GSC				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.5							
LZH	**Lanzhou**	**50.87**	**281**	*e*P		**P**	**18 23 39.1**	**+0.6**
LZH				AP		pP	18 23 44.3	-0.9
LZH				XP		sP	18 23 46.5	-1.3
LZH				AMB		AMB		
	comp=Z,19nm,1.4s,mb4.8							
LZH				AMB		AMB		
	comp=Z,85nm,4.3s							
GTA	**Gaotai**	**51.11**	**287**	*e*P		**P**	**18 23 41.8**	**+1.5**
GTA				AP		pP	18 23 46.4	-0.6
GTA				XP		sP	18 23 48.8	-0.8
GTA				AMB		AMB		
	comp=Z,4.0nm,0.9s,mb4.3							
TMUT	**Trail Mountain**	**51.55**	**73**	*e*P		**P**	**18 23 42.7**	**-0.9**
ULM	**Lac du Bonnet**	**52.97**	**54**	P		**P**	**18 23 53.5**	**-0.5**
	comp=Z,2.9nm,0.3s,mb4.7,baz=314,slow=6.9,SNR=3.0							
ULM				LR		LR	18 47 03.0	
	comp=Z,116nm,19.2s,MS3.9,baz=332,slow=37							
PV10	**Paradox Valley**	**53.43**	**72**	*e*P		**P**	**18 23 56.9**	**-0.6**
KURK	**Kurchatov**	**55.22**	**310**	*e*P		**P**	**18 24 09.8**	**-0.5**
	comp=Z,14nm,1.1s,mb4.9							
KURK	**Kurchatov**	**55.22**	**310**⇑	*e*P		**P**	**18 24 10.3**	**0.0**
KURK				pmax		pmax		
	comp=Z,12nm,1.1s,mb4.8							
GYA	**Guiyang**	**55.81**	**270**	P		**P**	**18 24 12.5**	**-2.4**
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.8							
MK31	**Makanchi Array**	**56.02**	**304**	*e*P		**P**	**18 24 14.5**	**-1.6**
MKAR	**Makanchi Array**	**56.02**	**304**	P		**P**	**18 24 15.6**	**-0.5**
	comp=Z,1.5nm,0.5s,mb4.3,baz=53,slow=6.4,SNR=41							
MKAR	**Makanchi Array**	**56.02**	**304**⇑	*e*P		**P**	**18 24 15.6**	**-0.5**
KEV	**Kevo**	**56.14**	**347**	*ep*		**P**	**18 24 16.3**	**-0.4**
	comp=Z,0.8nm,0.3s,mb4.2							
KEV	**Kevo**	**56.14**	**347**	*e*P		**P**	**18 24 16.3**	**-0.4**
KEV				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.3							
ARCES	**ARCESS Array B**	**56.55**	**347**	P		**P**	**18 24 19.4**	**-0.2**
	comp=Z,2.2nm,0.5s,mb4.5,baz=34,slow=8.1,SNR=26							
ARCES				PcP		PcP	18 25 15.8	-0.1
	comp=Z,3.1nm,0.7s,baz=39,slow=5.8,SNR=3.2							
ARCES	**ARCESS Array B**	**56.55**	**347**	P		**P**	**18 24 19.4**	**-0.2**
ARCES							18 25 15.8	
ARCES				pmax		pmax		
	comp=Z,2.0nm,0.5s							
BRVK	**Borovoye**	**57.40**	**316**	*e*P		**P**	**18 24 25.5**	**-0.3**
	comp=Z,7.5nm,0.6s,mb4.9							
BRVK	**Borovoye**	**57.40**	**316**	*e*P		**P**	**18 24 25.5**	**-0.3**
BRVK				pmax		pmax		
	comp=Z,8.0nm,0.6s,mb4.9							
ARU	**Arti**	**59.55**	**324**⇑	*e*P		**P**	**18 24 41.2**	**+0.4**
ARU				pmax		pmax		
	comp=Z,8.0nm,0.7s,mb4.9							
JOF	**Joensuu**	**61.66**	**342**	*ep*		**P**	**18 24 54.8**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.4							
JOF	**Joensuu**	**61.66**	**342**	*e*P		**P**	**18 24 54.8**	**-0.3**
JOF				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.3							
SCHQ	**Schefferville**	**62.13**	**35**	P		**P**	**18 24 57.9**	**-0.4**
	comp=Z,16nm,0.6s,mb5.3,baz=336,slow=8.3,SNR=26							
SCHQ	**Schefferville**	**62.13**	**35**	P		**P**	**18 24 57.9**	**-0.4**
TXAR	**Lajitas Array**	**62.92**	**76**	P		**P**	**18 25 04.1**	**+0.1**
	comp=Z,8.8nm,0.8s,mb5.0,baz=302,slow=4.3,SNR=111							
TXAR	**Lajitas Array**	**62.92**	**76**	P		**P**	**18 25 04.1**	**+0.1**
TXAR				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KAF	**Kangasniemi**	**63.33**	**344**	*ep*		**P**	**18 25 05.7**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.3,baz=18,slow=5.9							
KAF	**Kangasniemi**	**63.33**	**344**	*e*P		**P**	**18 25 05.7**	**-0.5**
KAF				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.3							
JCT	**Junction City**	**64.39**	**73**	*e*P		**P**	**18 25 12.7**	**-1.0**
	comp=Z,4.3nm,0.6s,mb4.7							
JCT	**Junction City**	**64.39**	**73**	*e*P		**P**	**18 25 12.7**	**-1.0**
JCT				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
WCI	**Wyandotte Cave**	**66.25**	**58**	*e*P		**P**	**18 25 24.5**	**-1.1**
	comp=Z,7.8nm,0.7s,mb4.8							
WCI	**Wyandotte Cave**	**66.25**	**58**	*e*P		**P**	**18 25 24.5**	**-1.2**
WCI				pmax		pmax		
	comp=Z,8.0nm,0.7s,mb4.9							
NB2	**NORSAR Subarra**	**66.41**	**351**	P		**P**	**18 25 26.2**	**-0.1**
	comp=Z,4.4nm,0.5s,mb4.7,baz=11,slow=6.5							
NOA	**NORSAR Array B**	**66.41**	**351**	P		**P**	**18 25 26.3**	**0.0**
	comp=Z,5.0nm,0.6s,mb4.7,baz=12,slow=6.4,SNR=24							
NOA	**NORSAR Array B**	**66.41**	**351**	P		**P**	**18 25 26.3**	**0.0**
NOA				pmax		pmax		
	comp=Z,5.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**66.50**	**270**	P		**P**	**18 25 28.1**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.2,baz=25,slow=6.9,SNR=15							
CMAR	**Chiang Mai Arr**	**66.50**	**270**	*i* P		**P**	**18 25 28.1**	**+0.6**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
TAPN	**Taplejung**	**66.73**	**285**	*e*P		**P**	**18 25 29.9**	**+1.0**
	comp=Z,27nm,1.2s,mb5.2							
OXF	**Oxford**	**67.35**	**63**	*e*P		**P**	**18 25 31.5**	**-1.2**
	comp=Z,36nm,0.9s,mb5.4							
OXF	**Oxford**	**67.35**	**63**	*e*P		**P**	**18 25 31.5**	**-1.2**
OXF				pmax		pmax		
	comp=Z,36nm,0.9s,mb5.4							
GUN	**Gumba**	**67.40**	**287**	*e*P		**P**	**18 25 34.4**	**+1.3**
	comp=Z,29nm,0.9s,mb5.3							
JIRN	**Jiri**	**67.40**	**286**	*e*P		**P**	**18 25 34.4**	**+1.3**
	comp=Z,16nm,0.8s,mb5.1							
OBN	**Obninsk**	**67.50**	**335**⇑	*e*P		**P**	**18 25 33.8**	**+0.5**
OBN				pmax		pmax		
	comp=Z,17nm,1.7s,mb4.8							
KKN	**Kakani**	**67.85**	**287**	*e*P		**P**	**18 25 36.5**	**+0.6**
	comp=Z,13nm,0.9s,mb5.0							
PKIN	**Phulchoki**	**67.94**	**287**	*e*P		**P**	**18 25 36.6**	**+0.1**
	comp=Z,9.4nm,0.7s,mb4.9							
GKN	**Gorkha**	**68.07**	**288**	*e*P		**P**	**18 25 37.9**	**+0.6**
	comp=Z,14nm,1.0s,mb5.0							
DANN	**Dangsing**	**68.32**	**288**	*e*P		**P**	**18 25 39.7**	**+0.8**
	comp=Z,12nm,0.8s,mb5.0							
PYUN	**Piuthan**	**68.96**	**289**	*e*P		**P**	**18 25 43.3**	**+0.4**
	comp=Z,10.0nm,0.9s,mb4.8							
CPCT	**Cooper Cave**	**69.28**	**59**	*e*P		**P**	**18 25 37.5**	**-7.3**
KBL	**Kabul**	**71.79**	**303**	*e*P		**P**	**18 25 58.2**	**-1.9**
	comp=Z,2.0nm,0.6s,mb4.2							
KBL	**Kabul**	**71.79**	**303**	*e*P		**P**	**18 25 58.2**	**-1.9**
KBL				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
AKASG	**Malin Array Be**	**73.36**	**337**	P		**P**	**18 26 09.2**	**+0.1**
	comp=Z,3.2nm,0.4s,mb4.6,baz=23,slow=6.0,SNR=14							
AKASG	**Malin Array Be**	**73.36**	**337**	P		**P**	**18 26 09.2**	**0.0**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.4s							
KWP	**Kalwaria**	**75.79**	**341**	⇑P		**P**	**18 26 24.7**	**+1.4**
KWP	**Kalwaria**	**75.79**	**341**	⇑P		**P**	**18 26 24.7**	**+1.4**
STHS	**Stebnicka Huta**	**76.28**	**342**	*e*P		**P**	**18 26 25.6**	**-0.5**
STHS				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
STHS	**Stebnicka Huta**	**76.28**	**342**	*e*P		**P**	**18 26 25.6**	**-0.5**
STHS				*e*PP		PP	18 29 17.5	+0.9
KOLS	**Kolonicke sedl**	**76.54**	**341**	*e*P		**P**	**18 26 28.7**	**+1.1**
MORC	**Moravsky Berou**	**76.59**	**345**	⇑P		**P**	**18 26 28.5**	**+0.7**
MORC	**Moravsky Berou**	**76.59**	**345**	⇑*i*P		**P**	**18 26 28.5**	**+0.7**
CRVS	**Cervenica-Dubn**	**76.73**	**342**	*e*P		**P**	**18 26 27.8**	**-0.8**
BUR08	**Bucovina Ar. S**	**77.15**	**339**	*e*P		**P**	**18 26 31.8**	**+0.8**
BURAR	**Bucovina Array**	**77.17**	**339**	⇑P		**P**	**18 26 32.0**	**+0.9**
BURAR	**Bucovina Array**	**77.17**	**339**	⇑*i*P		**P**	**18 26 32.0**	**+0.8**
VRAC	**Vranov**	**77.19**	**345**	⇑P		**P**	**18 26 32.2**	**+1.0**
VRAC	**Vranov**	**77.19**	**345**	⇑*i*P		**P**	**18 26 32.3**	**+1.1**
TRPA	**Tarpa**	**77.25**	**341**	⇑*i*P		**P**	**18 26 33.0**	**+1.4**
VYHS	**Vyhne**	**77.61**	**343**	*e*P		**P**	**18 26 32.6**	**-1.0**
VYHS	**Vyhne**	**77.61**	**343**	*e*P		**P**	**18 26 32.5**	**-1.1**
KHC	**Kasperske Hory**	**77.82**	**347**	⇑*e*P		**P**	**18 26 35.6**	**+0.9**
KHC	**Kasperske Hory**	**77.82**	**347**	*e*P		**P**	**18 26 35.0**	**+0.3**
MODS	**Modra-Piesok**	**77.99**	**344**	*e*P		**P**	**18 26 35.4**	**-0.3**
GERES	**GERESS Array B**	**78.08**	**347**	P		**P**	**18 26 37.0**	**+0.8**
	comp=Z,0.9nm,0.9s,mb3.7,baz=28,slow=6.0,SNR=6.4							
GERES	**GERESS Array B**	**78.08**	**347**	P		**P**	**18 26 37.0**	**+0.8**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.9s							
DRGR			**78.49**	**340**	⇑P		**P**	**18 26 39.6**	**+1.1**
DRGR			**78.49**	**340**	⇑*i*P		**P**	**18 26 39.6**	**+1.1**
CDF	**Champ du Feu**	**79.27**	**351**	*e*P		**P**	**18 26 42.7**	**0.0**
MEZF	**Maizieres J'vi**	**79.38**	**353**	*e*P		**P**	**18 26 43.5**	**+0.2**
WRAB	**Tennant Creek**	**79.59**	**218**	*i* P		**P**	**18 26 44.1**	**-0.6**
WRA	**Warramunga Arr**	**79.60**	**218**	P		**P**	**18 26 44.4**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=30,slow=5.8,SNR=17							
WRA	**Warramunga Arr**	**79.60**	**218**	*i* P		**P**	**18 26 44.4**	**-0.4**
WRA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
HAU	**Haudompre**	**79.76**	**352**	*e*P		**P**	**18 26 45.2**	**-0.2**
GZR	**Gura Zlata**	**79.81**	**340**	⇑P		**P**	**18 26 46.7**	**+0.9**
GZR	**Gura Zlata**	**79.81**	**340**	⇑*i*P		**P**	**18 26 46.7**	**+0.9**
BZS	**Buzias**	**79.84**	**341**	⇑P		**P**	**18 26 46.5**	**+0.6**
BZS	**Buzias**	**79.84**	**341**	⇑*i*P		**P**	**18 26 46.5**	**+0.6**
LOR	**Lormes**	**80.69**	**353**	*e*P		**P**	**18 26 50.3**	**-0.2**
SSF	**Saint Saulge**	**80.92**	**353**	*e*P		**P**	**18 26 51.6**	**-0.1**
	comp=Z,6.6nm,0.7s,mb4.4							
SSF	**Saint Saulge**	**80.92**	**353**	*e*P		**P**	**18 26 51.6**	**-0.1**
	comp=Z,3.9nm,0.7s,mb4.4							
SSF	**Saint Saulge**	**80.92**	**353**	*e*P		**P**	**18 26 51.6**	**-0.1**
SSF				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
CABF	**La Chapelle**	**81.16**	**352**	*e*P		**P**	**18 26 53.2**	**+0.2**
SMF	**Signal de Mont**	**81.31**	**353**	*e*P		**P**	**18 26 53.1**	**-0.7**
	comp=Z,15nm,0.9s,mb4.6							
SMF	**Signal de Mont**	**81.31**	**353**	*e*P		**P**	**18 26 53.1**	**-0.7**
	comp=Z,7.6nm,0.9s,mb4.6							
SMF	**Signal de Mont**	**81.31**	**353**	*e*P		**P**	**18 26 53.1**	**-0.7**
SMF				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.7							
BGF	**Bois d'Agland**	**81.47**	**354**	*e*P		**P**	**18 26 55.1**	**+0.5**
LPL	**La Plagne**	**82.19**	**351**	*e*P		**P**	**18 26 58.9**	**+0.5**
LPG	**La Plagne**	**82.20**	**351**	*e*P		**P**	**18 26 59.2**	**+0.7**
ORIF	**Oris-en-Rattie**	**82.86**	**352**	*e*P		**P**	**18 27 02.9**	**+1.0**
MBDF	**Montbardon**	**82.97**	**351**	*e*P		**P**	**18 27 03.4**	**+0.9**
	comp=Z,7.1nm,0.7s,mb4.5							
MBDF	**Montbardon**	**82.97**	**351**	*e*P		**P**	**18 27 03.4**	**+0.9**
	comp=Z,3.5nm,0.7s,mb4.5							
MBDF	**Montbardon**	**82.97**	**351**	*e*P		**P**	**18 27 03.4**	**+0.9**
MBDF				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
VIVF	**Saint-Julien-l**	**83.03**	**352**	*e*P		**P**	**18 27 03.2**	**+0.4**
ASAR	**Alice Springs**	**83.16**	**216**	P		**P**	**18 27 04.0**	**+0.5**
	comp=Z,1.1nm,0.8s,mb4.0,baz=21,slow=5.5,SNR=15							
ASAR	**Alice Springs**	**83.16**	**216**	P		**P**	**18 27 04.1**	**+0.6**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
SBF	**Sospel**	**83.75**	**350**	*e*P		**P**	**18 27 07.3**	**+0.7**
	comp=Z,21nm,0.8s,mb5.0							
SBF	**Sospel**	**83.75**	**350**	*e*P		**P**	**18 27 07.3**	**+0.7**
	comp=Z,10nm,0.8s,mb5.0							
SBF	**Sospel**	**83.75**	**350**	*e*P		**P**	**18 27 07.3**	**+0.7**
SBF				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb5.0							
SMRF	**Simiane la Rot**	**83.82**	**352**	*e*P		**P**	**18 27 06.8**	**-0.1**
	comp=Z,6.7nm,0.7s,mb4.6							
SMRF	**Simiane la Rot**	**83.82**	**352**	*e*P		**P**	**18 27 06.8**	**-0.1**
	comp=Z,6.7nm,0.7s,mb4.9							
FRF	**La Foret Royal**	**84.13**	**351**	*e*P		**P**	**18 27 08.6**	**+0.1**
	comp=Z,3.6nm,0.6s,mb4.4							
FRF	**La Foret Royal**	**84.13**	**351**	*e*P		**P**	**18 27 08.6**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.4							
FRF	**La Foret Royal**	**84.13**	**351**	*e*P		**P**	**18 27 08.6**	**+0.1**
FRF				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.4							
LMR	**La Mourre**	**84.37**	**351**	*e*P		**P**	**18 27 09.4**	**-0.3**
MTLF	**Montolieu**	**84.71**	**354**	*e*P		**P**	**18 27 12.0**	**+0.6**
PGF	**Pioggiola**	**84.88**	**349**	*e*P		**P**	**18 27 12.7**	**+0.4**
	comp=Z,25nm,0.8s,mb5.1							
PGF	**Pioggiola**	**84.88**	**349**	*e*P		**P**	**18 27 12.7**	**+0.4**
	comp=Z,12nm,0.8s,mb5.1							
PGF	**Pioggiola**	**84.88**	**349**	*e*P		**P**	**18 27 12.7**	**+0.4**
PGF				pmax		pmax		
	comp=Z,12nm,0.8s,mb5.1							
ETSF	**Etsaut**	**85.31**	**356**	*e*P		**P**	**18 27 15.0**	**+0.6**
	comp=Z,11nm,0.7s,mb4.8							
ETSF	**Etsaut**	**85.31**	**356**	*e*P		**P**	**18 27 15.0**	**+0.6**
	comp=Z,5.7nm,0.7s,mb4.8							
ETSF	**Etsaut**	**85.31**	**356**	*e*P		**P**	**18 27 15.0**	**+0.6**
ETSF				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.8							
STKA	**Stephens Creek**	**88.27**	**207**	P		**P**	**18 27 29.2**	**+0.5**
	comp=Z,1.3nm,0.9s,mb4.2,baz=8.1,slow=7.1,SNR=3.1							
STKA	**Stephens Creek**	**88.27**	**207**	P		**P**	**18 27 29.2**	**+0.5**
ESDC	**Sonseca Array**	**88.63**	**358**	P		**P**	**18 27 30.7**	**+0.1**
	comp=Z,0.8nm,0.7s,mb4.2,baz=355,slow=4.6,SNR=5.5							
LBTB	**Lobatse**	**143.89**	**306**	PKP		PKPdf	18 34 09.9	-3.0
	comp=Z,1.4nm,0.6

PB01 *i* S Sn 18 46 34.5 +1.0
PB01 AML AML 18 46 37.7
comp=E,542nm,0.6s
ANCH Antofagasta 1.88 230 *e*P Pn 18 46 16.9 +0.4
ANCH *i* S Sn 18 46 41.4 +1.0
ANCH AML AML 18 46 45.0
comp=E,3μm,0.0s

BJI **18** *18:46:31.1, 186S×10066E, h35km, mB5.2, mb5.2, Ms4.8, Msz4.6*
MOS **18** *18:46:37.7±1.1, 085S×10063E, h33km, mb5.2/34, Error ellipse: s-maj=12.0km s-min=5.6km az=113.5*
ISCJB **18** *18:46:47.5±0.2, 085S±003×10050E±003, h113km, mb5.1/112, Error ellipse: s-maj=5.0km s-min=2.9km az=35.5*
DJA **18** *18:46:47, 107S×100.16E, h111km, Mw5.3/23*
GCMT **18** *18:46:47.6±0.3, 0.90S×100.45E, h133km±2km, MW5.0/68, Moment Tensor Solution. s29,c37; s68,c101; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.92±.14; Mθθ -1.18±.14; Mφφ 0.26±.18; Mrθ -0.02±.09; Mθφ -2.34±.13; Mφr -3.02±.11; Best double couple: Ms 3.95800×10^16 NP1 φ92.00000°, δ40.00000°, λ166.00000°. NP2: φ192.00000°, δ81.00000°, λ51.00000°. Principal axes: T 4.1230, Plg41.0000°, Azm66.0000°; N -0.3270, Plg39.0000°, Azm200.0000°; P -3.7930, Plg26.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **18** *18:46:47.6±1.8, 088S×10069E, h107km±15km, mb4.9/30 Error ellipse: s-maj=9.6km s-min=5.4km az=55.0*
NEIC Felt [V] at Bengkulu and [III] at Padang, Painan and Pesisir Barat.
IDC **18** *18:46:49.2±0.4, 086S×10077E, h119km±3km, mb4.6/21, mb1 4.7/23, mb1mx4.6/24, mbtmp4.6/23, MS3.6/8, Ms1 3.6/8, ms1mx3.2/29, Error ellipse: s-maj=11.8km s-min=8.3km az=57.0*
ISC 18 18:46:49.2±0.2, 092S±003×10050E±003, h115km, h115km±1.5km: pP-P, n336, σ1§18/317, mb5.1/112, 29C-21D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PDSI	**Padang**	**0.04**	**284**	P	**Pn**	**18 47 04.6**	**-0.2**
PDSI	**Padang**	**0.04**	**284**	S	**Sn**	**18 47 16.7**	**+0.1**
PPI	**Padang Panjang**	**0.47**	**347**	P	**Pn**	**18 47 06.5**	**+0.1**
PPI	**Padang Panjang**	**0.47**	**347**	S	**Sn**	**18 47 20.6**	**+1.3**
RGRI	**Rengat**	**1.92**	**73**	P	**Pn**	**18 47 22.3**	**+1.0**
TRSI	**Tarutung**	**3.31**	**332**	P	**Pn**	**18 47 40.6**	**+1.2**
KSI	**Kapahiang**	**3.42**	**142**	P	**Pn**	**18 47 40.8**	**-0.1**
KSI	**Kapahiang**	**3.42**	**142**	S	**Sn**	**18 48 23.2**	**+2.3**
GSI	**Gunungsitoli**	**3.67**	**307**	S	**Sn**	**18 48 22.1**	**-4.7**
KGM	**Kluang**	**4.05**	**44**	⇓P	**Pn**	**18 47 50.9**	**+1.6**
FRIM	**Kepong**	**4.28**	**15**	⇑P	**Pn**	**18 47 54.5**	**+2.1**
MYKOM	**Kota Tinggi**	**4.30**	**51**	⇓P	**Pn**	**18 47 54.2**	**+1.6**
MYKOM	**Kota Tinggi**	**4.30**	**51**	P	**Pn**	**18 47 53.6**	**+1.0**
IPM	**Ipoh**	**5.39**	**6**	⇓P	**Pn**	**18 48 10.1**	**+2.8**
IPM	**Ipoh**	**5.39**	**6**	P	**Pn**	**18 48 09.5**	**+2.1**
	692nm,1.1s,5μm2.0nm						
PPBI	**Pangkal Pinang**	**5.76**	**102**	P	**Pn**	**18 48 13.4**	**+1.0**
	306nm,0.9s,2μm0.8nm						
KLI	**Kotabumi**	**5.85**	**132**	P	**Pn**	**18 48 15.0**	**+1.4**
	472nm,0.9s,5μm2.0nm						
KULM	**Kulim**	**6.17**	**1**	⇓P	**Pn**	**18 48 19.2**	**+1.3**
TPI	**Tanjungpandan**	**7.38**	**104**	P	**Pn**	**18 48 35.9**	**+1.7**
	539nm,0.9s,5μm1.4nm						
SNG	**Songkhla**	**8.05**	**1**	P	**Pn**	**18 48 44.0**	**+0.6**
	520nm,1.0s						
BSI	**Banda Aceh**	**8.23**	**321**	P	**Pn**	**18 48 43.6**	**-2.2**
	634nm,1.3s,6μm4.0nm						
CBJI	**Citeko**	**8.36**	**131**	P	**Pn**	**18 48 49.6**	**+2.0**
	721nm,0.9s,3.2nm						
DBJI	**Dramaga**	**8.37**	**132**	P	**Pn**	**18 48 46.6**	**-1.2**
	225nm,1.0s,3μm1.0nm						
LEM	**Lembang**	**9.21**	**130**	P	**Pn**	**18 49 01.5**	**+2.4**
	163nm,1.0s,3μm						
KSM	**Kuching**	**10.09**	**76**	⇑*i*Pn	**Pn**	**18 49 12.9**	**+1.9**
KSM				*e*Sn	**Sn**	**18 50 59.0**	**-3.4**
KSM	**Kuching**	**10.09**	**76**	⇓P	**Pn**	**18 49 13.2**	**+2.2**
KSM	**Kuching**	**10.09**	**76**	P	**Pn**	**18 49 13.0**	**+1.9**
	122nm,1.2s,1μm						
XMIS	**Christmas Isla**	**10.79**	**152**	*e*Pn	**Pn**	**18 49 11.7**	**-8.7**
XMIS	**Christmas Isla**	**10.79**	**152**	P	**Pn**	**18 49 11.3**	**-9.1**
	0.0nm,0.5s,0.0nm						
STKI	**Sintang**	**11.02**	**85**	P	**Pn**	**18 49 25.8**	**+2.3**
	109nm,1.0s,960nm						
BJII	**Banjamegara**	**11.17**	**125**	P	**Pn**	**18 49 25.4**	**-0.1**
PBKI	**Pangkalan Bun**	**11.30**	**99**	P	**Pn**	**18 49 30.8**	**+3.5**
	530nm,1.2s,3μm						
SBUM	**Sibu**	**12.18**	**74**	⇑P	**Pn**	**18 49 41.6**	**+2.6**
SBUM	**Sibu**	**12.18**	**74**	P	**Pn**	**18 49 41.3**	**+2.3**
SJI	**Sawahan**	**13.11**	**121**	P	**Pn**	**18 49 49.3**	**-1.8**
BTM	**Bintulu**	**13.22**	**72**	⇑P	**Pn**	**18 49 54.9**	**+2.3**
KRKI	**Karangkates**	**13.91**	**121**	P	**Pn**	**18 50 02.1**	**+0.7**
BBKI	**Banjar Baru**	**14.55**	**100**	P	**Pn**	**18 50 11.2**	**+1.6**
	679nm,0.8s,4μm						
KMMI	**Kalianget**	**14.74**	**115**	P	**Pn**	**18 50 12.4**	**+0.3**
	173nm,1.2s						
KHKI	**Kahang-Kahang**	**16.76**	**117**	P	**Pn**	**18 50 35.5**	**-1.7**
KKM	**Kota Kinabalu**	**17.14**	**66**	*e*Pn	**Pn**	**18 50 42.3**	**+0.4**
KKM	**Kota Kinabalu**	**17.14**	**66**	⇓P	**Pn**	**18 50 42.9**	**+1.1**
KKM	**Kota Kinabalu**	**17.14**	**66**	P	**Pn**	**18 50 42.3**	**+0.4**
	113nm,1.0s,1μm						
KKTK	**Khon Kaen**	**17.30**	**8**	P	**Pn**	**18 50 43.0**	**-0.7**
SDKM	**Sandakan**	**17.90**	**68**	⇓P	**Pn**	**18 50 51.3**	**+0.3**
KDM	**Kudat**	**18.06**	**64**	⇑P	**P**	**18 50 53.7**	**+1.9**
BDT	**Bhumibol Dam**	**18.11**	**355**	P	**P**	**18 50 52.5**	**+0.2**
TSM	**Tawau**	**18.11**	**73**	⇓P	**P**	**18 50 53.6**	**+1.2**
MYLDM	**Lahad Datu**	**18.97**	**71**	P	**P**	**18 51 03.1**	**+1.4**
CM31	**Chiang Mai Arr**	**19.32**	**356**	*e*P	**P**	**18 51 02.8**	**-2.6**
	43nm,1.2s						
CMAR	**Chiang Mai Arr**	**19.32**	**356**	P	**P**	**18 51 04.1**	**-1.3**
	1.3nm,0.3s,baz=186,slow=10,SNR=55						
CMAR				PcP	PcP	18 55 23.5	+0.1
	0.1nm,0.3s,baz=216,slow=3.9,SNR=5.1						
CMAR				ScP	ScP	18 58 46.6	-2.4
	0.1nm,0.3s,baz=222,slow=3.1,SNR=22						
PCI	**Palu**	**19.33**	**90**	P	**P**	**18 51 06.7**	**+1.0**
	215nm,0.9s,2μm						
NANT	**Nan**	**19.60**	**1**	⇑P	**P**	**18 51 06.0**	**-2.5**
	225nm,1.0s						
KAPI	**Kappang**	**19.64**	**102**	Pn	**Pn**	**18 51 08.8**	**-2.8**
	641nm,0.6s,SNR=17						
KAPI	**Kappang**	**19.64**	**102**	P	**P**	**18 51 09.0**	**-0.1**
	SNR=9.4						
KAPI	**Kappang**	**19.64**	**102**	P	**P**	**18 51 06.3**	**-2.8**
	3.0nm,0.3s,baz=268,slow=6.9,SNR=21						
KAPI				LR	LR	18 59 35.3	
	comp=Z,171nm,18.2s,baz=166,slow=40						
KAPI	**Kappang**	**19.64**	**102**	*e*Pn	**Pn**	**18 51 08.0**	**-3.6**
KAPI	**Kappang**	**19.64**	**102**	P	**P**	**18 51 08.2**	**-0.9**
	55nm,1.1s,678nm						
CHG	**Chiang Mai**	**19.67**	**356**	⇑P	**P**	**18 51 10.3**	**+1.0**
	12nm,1.0s						
CHTO	**Chiang Mai**	**19.67**	**356**	*e*P	**P**	**18 51 08.0**	**-1.3**
	10nm,0.9s						
CHTO	**Chiang Mai**	**19.67**	**356**	*e*P	**P**	**18 51 08.0**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**19.67**	**356**	P	**P**	**18 51 07.4**	**-1.9**
	comp=Z,10.0nm,0.9s						
QIZ	**Qiongzhong**	**21.85**	**24**	P	**P**	**18 51 30.8**	**-1.8**
QIZ				S	**S**	**18 55 29.4**	**+2.2**
QIZ				AMB	AMB		
	comp=Z,85nm,1.1s,mb5.0						
QIZ	**Qiongzhong**	**21.85**	**24**	*e*P	**P**	**18 51 31.0**	**-1.6**
	comp=Z,52nm,0.8s,mb4.9						
KDI	**Kendari**	**22.30**	**98**	P	**P**	**18 51 37.0**	**-0.5**
	comp=Z,68nm,1.0s,comp=Z,4μm,mb5.0						
BATI	**Baumata**	**24.80**	**113**	P	**P**	**18 51 57.5**	**-3.2**
	comp=Z,22nm,0.4s,mb4.9,baz=292,slow=3.5,SNR=11						
VIS	**Vishakhapatnam**	**25.08**	**318**	*e*P	**P**	**18 52 04.8**	**+1.6**
VIS				AMb	AMB	18 52 08.4	
	comp=Z,68nm,1.5s,mb4.8						
TRD	**Trivandrum**	**25.27**	**292**	*e*P	**P**	**18 52 07.2**	**+2.2**
TRD				AMb	AMB	18 52 11.2	
	comp=Z,51nm,1.2s,mb4.8						
TRD				*ex*	x	18 56 42.0	
BWNR	**Bhubaneshwar**	**25.53**	**326**	*ex*	x	18 52 02.0	
KMI	**Kunming**	**25.98**	**5**	P	**P**	**18 52 13.0**	**+1.7**
KMI				AP	pP	18 52 22.1	-14
KMI				XP	sP	18 52 26.3	-23
KMI				PP		18 52 55.3	
KMI				S	**S**	**18 56 39.1**	**+5.6**
KMI				XS	sS	18 56 56.5	-21
KMI				AMB	AMB		
	comp=Z,121nm,4.3s						
LBMI	**Labuha 27.00 90**			P	**P**	**18 52 21.0**	**+0.4**
	comp=Z,95nm,1.3s,comp=Z,1μm,mb5.2						
MBWA	**Marble Bar 27.51 138**			*e*P	**P**	**18 52 24.1**	**-0.9**
	comp=Z,30nm,1.0s,mb4.8						
SHL	**Shillong 27.62 343**			*e*P	**P**	**18 52 27.2**	**+1.2**
SHL				*ex*	x	18 56 56.2	
GYA	**Guiyang 27.86 12**			⇑*i*P	**P**	**18 52 26.8**	**-1.3**
GYA				AP	pP	18 52 36.4	-17
GYA				XP	sP	18 52 40.5	-26
GYA				PP	PP	18 53 16.3	-17
GYA				PCP	PcP	18 55 41.3	-0.1
GYA				SCP	ScP	18 59 09.1	-2.7
GYA				SCS	ScS	19 03 01.3	-3.0
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,150nm,4.5s						
GYA				LR	LR		
	comp=N,650nm,10.2s						
GYA				LR	LR		
	comp=E,450nm,11.3s						
GYA				LR	LR		
	comp=Z,670nm,10.9s						
HYB	**Hyderabad 28.28 311**			*e*P	**P**	**18 52 31.5**	**-0.4**
HYB	**Hyderabad 28.28 311**			*i* P	**P**	**18 52 32.0**	**+0.1**
HYB				*e*	pP	18 52 57.5	+0.5
BOK	**Bokaro 28.38 331**			*e*P	**P**	**18 52 33.2**	**+0.5**
BOK				AMb	AMB	18 52 35.6	
	comp=Z,107nm,0.8s,mb5.4						
ODAN	**Odare 30.37 336**			*e*P	**P**	**18 52 50.7**	**+0.3**
	comp=Z,55nm,0.8s,mb5.2						
TAPN	**Taplejung 30.69 337**			*e*P	**P**	**18 52 54.1**	**+1.0**
	comp=Z,140nm,0.9s,mb5.7						
RAMN	**Ramite 30.78 335**			*e*P	**P**	**18 52 54.6**	**+0.7**
	comp=Z,21nm,0.4s,mb5.2						
GOA	**Goa 31.00 303**			*e*P	**P**	**18 52 56.9**	**+0.8**
GOA				AMb	AMB	18 52 59.0	
	comp=Z,48nm,1.0s,mb5.2						
AKL	**Akola 31.47 314**			*e*P	**P**	**18 52 58.7**	**-1.4**
AKL				AMb	AMB	18 53 02.3	
	comp=Z,28nm,2.7s,mb4.5						
JIRN	**Jiri 31.57 335**			*e*P	**P**	**18 53 01.8**	**+0.9**
	comp=Z,88nm,0.8s,mb5.6						
KAD	**Karad 31.63 306**			*e*P	**P**	**18 53 02.1**	**+0.5**
KAD				AMb	AMB	18 53 02.8	
	comp=Z,17nm,1.1s,mb4.7						
LSA	**Lhasa 31.73 344**			P	**P**	**18 53 02.6**	**+0.3**
LSA	**Lhasa 31.73 344**			*e*P	**P**	**18 53 01.6**	**-0.7**
	comp=Z,11nm,0.8s,mb4.7						
LSA	**Lhasa 31.73 344**			*e*P	**P**	**18 53 01.6**	**-0.7**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
CD2	**Chengdu 31.81 5**			*e*P	**P**	**18 53 04.3**	**+1.4**
CD2				AP	pP	18 53 13.8	-14
CD2				XP	sP	18 53 18.3	-23
CD2				PP	PP	18 54 10.8	-6.3
CD2				S	**S**	**18 58 12.3**	**+7.4**
CD2				XS	sS	18 58 28.4	-21
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,120nm,8.2s						
CD2				LR	LR		
	comp=N,210nm,14.8s						
CD2				LR	LR		
	comp=E,260nm,14.8s						
CD2				LR	LR		
	comp=Z,180nm,18.2s						
PKI	**Pulchoki 31.83 334**			*e*P	**P**	**18 53 03.7**	**+0.5**
	comp=Z,19nm,0.5s,mb5.1						
PKIN	**Phulchoki 31.84 334**			*e*P	**P**	**18 53 03.6**	**+0.3**
	comp=Z,18nm,0.6s,mb5.0						
GUN	**Gumba 31.92 335**			*e*P	**P**	**18 53 04.9**	**+0.9**
	comp=Z,138nm,0.7s,mb5.8						
DMN	**Daman 32.00 334**			*e*P	**P**	**18 53 05.2**	**+0.6**
	comp=Z,16nm,0.4s,mb5.1						
KKN	**Kakani 32.08 334**			*e*P	**P**	**18 53 05.8**	**+0.5**
	comp=Z,46nm,0.5s,mb5.5						
GKN	**Gorkha 32.55 333**			*e*P	**P**	**18 53 10.0**	**+0.6**
	comp=Z,44nm,0.5s,mb5.6						
POO	**Poona 32.56 308**			*e*P	**P**	**18 53 08.0**	**-1.7**
KOLN	**Koldanda 32.83 332**			*e*P	**P**	**18 53 12.7**	**+0.8**
	comp=Z,191nm,0.9s,mb5.9						
BHPL	**Bhopal 32.88 318**			*e*P	**P**	**18 53 12.9**	**+0.5**
BHPL				AMb	AMB	18 53 14.5	
	comp=Z,20nm,1.1s,mb4.9						
DANN	**Dangsing 33.24 332**			*e*P	**P**	**18 53 16.2**	**+0.7**
	comp=Z,83nm,0.4s,mb5.9						
PYUN	**Piuthan 33.40 331**			*e*P	**P**	**18 53 17.5**	**+0.7**
	comp=Z,37nm,0.2s,mb5.8						
KAKA	**Kakadu 33.75 112**			*e*P	Px	18 53 03.1	
WHN	**Wuhan 33.95 22**			⇑P	**P**	**18 53 21.0**	**-0.6**
WHN				AMB	AMB		
	comp=Z,66nm,0.7s,mb5.6						
NWAO	**Narrogin (SRO) 35.51 155**			LR	LR	19 06 30.9	
	comp=Z,94nm,20.4s,baz=11,slow=33						
NWAO	**Narrogin (SRO) 35.51 155**			*e*P	**P**	**18 53 33.8**	**-1.3**
	comp=Z,16nm,0.9s,mb4.9						
NWAO	**Narrogin (SRO) 35.51 155**			*e*P	**P**	**18 53 33.8**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN	**Xi'an 35.66 12**			P	**P**	**18 53 34.3**	**-2.0**
XAN				AP	pP	18 53 43.4	-18
XAN				PP	PP	18 54 56.0	-3.7
XAN				S	**S**	**18 59 10.3**	**+5.9**
XAN				AMB	AMB		
	comp=Z,28nm,0.9s,mb5.2						
PTH	**Pithoragarh 35.97 329**			*e*P	**P**	**18 53 39.0**	**0.0**
PTH				*ex*	x	18 59 39.0	
AJM	**Ajmer 36.93 319**			*e*P	**P**	**18 53 47.3**	**+0.1**
NDI	**New Delhi 36.93 325**			*e*P	**P**	**18 53 45.0**	**-2.2**
LZH	**Lanzhou 36.95 5**			*e*P	**P**	**18 53 46.5**	**-0.7**
LZH				AP	pP	18 53 56.3	-17
LZH				XP	sP	18 54 00.3	-26
LZH				PP	PP	18 55 14.0	+0.2
LZH				*e*S	**S**	**18 59 30.0**	**+6.1**
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,85nm,4.5s						
LZH				LR	LR		
	comp=N,1μm,15.6s						
LZH				LR	LR		
	comp=Z,2μm,17.1s						
NJ2	**Nanjing 37.11 26**			*e*P	**P**	**18 53 49.1**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
WRA	**Warramunga Arr 38.12 122**			P	**P**	**18 53 54.1**	**-3.2**
	comp=Z,34nm,0.6s,mb5.3,baz=302,slow=9.1,SNR=347						
WRA				PcP	PcP	18 56 09.1	-1.1
	comp=Z,5.9nm,0.5s,baz=315,slow=2.6,SNR=10						
WRA				S	**S**	**18 59 33.0**	**-9.1**
	comp=Z,1.8nm,0.7s,baz=292,slow=16,SNR=6.9						
WRA	**Warramunga Arr 38.12 122**			*i* P	**P**	**18 53 54.0**	**-3.3**
WRA				pmax	pmax		
	comp=Z,34nm,0.6s						
WRAB	**Tennant Creek 38.12 122**			P	**P**	**18 53 54.0**	**-3.3**
	comp=Z,412nm,0.7s,mb6.4,SNR=71						
WRAB	**Tennant Creek 38.12 122**			*e*P	**P**	**18 53 54.1**	**-3.2**
	comp=Z,45nm,0.7s,mb5.4						
WRAB	**Tennant Creek 38.12 122**			*e*P	**P**	**18 53 54.5**	**-2.8**
WB2	**Warramunga Arr 38.13 122**			*e*P	**P**	**18 53 53.9**	**-3.5**
WB2				*e*PcP	PcP	18 56 08.7	-1.4
JOW	**Kunigami 38.43 42**			P	**P**	**18 53 59.2**	**-0.6**
	comp=Z,14nm,0.5s,mb5.1,baz=231,slow=20,SNR=3.2						
SMLA	**Simla 38.82 327**			*i* P	**P**	**18 54 02.9**	**-0.1**
	comp=Z,90nm,0.2s,mb6.2						
SMLA				*ex*	x	18 54 05.8	
	comp=Z,92nm,0.3s						
SMLA				*i* x	x	18 59 48.8	
ASAR	**Alice Springs 39.49 127**			P	**P**	**18 54 06.3**	**-2.4**
	comp=Z,9.9nm,0.4s,mb5.0,baz=301,slow=7.7,SNR=223						
ASAR				pP	pP	18 54 33.9	-0.8
	comp=Z,7.2nm,0.7s,baz=310,slow=7.9,SNR=4.2						
ASAR				PcP	PcP	18 56 13.7	-0.7
	comp=Z,13nm,0.7s,baz=310,slow=3.0,SNR=15						
ASAR				ScP	ScP	18 59 49.4	-3.3
	comp=Z,1.4nm,0.7s,baz=316,slow=3.7,SNR=5.7						
ASAR				S	**S**	**18 59 56.5**	**-6.1**
	comp=Z,2.3nm,0.7s,baz=295,slow=14,SNR=7.0						
ASAR	**Alice Springs 39.49 127**			P	**P**	**18 54 06.4**	**-2.3**
ASAR						18 56 13.7	
ASAR				S	**S**	**18 59 56.6**	**-6.0**
FORT	**Forrest 39.55 141**			*e*P	**P**	**18 54 08.7**	**-0.4**
	comp=Z,17nm,0.7s,mb5.0						
GTA	**Gaotai 40.14 359**			*e*P	**P**	**18 54 13.8**	**0.0**
GTA				AP	pP	18 54 23.6	-16
GTA				XP	sP	18 54 27.8	-25
THN	**Thein Dam 40.61 327**			*e*P	**P**	**18 54 16.7**	**-1.2**
HHC	**Hu-ho-hao-te 42.78 12**			*e*P	**P**	**18 54 36.0**	**+0.7**
HHC				AP	pP	18 54 45.9	-16
HHC				XP	sP	18 54 50.8	-24
HHC				PP	PP	18 56 18.8	+1.9
HHC				PCP	PcP	18 56 25.8	+1.1
HHC				S	**S**	**19 00 59.4**	**+8.7**
HHC				XS	sS	19 01 17.3	-19
HHC				SS	SS	19 04 04.9	-1.3
HHC				SCS	ScS	19 04 31.0	+6.4
HHC				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
HHC				LR	LR		
	comp=N,259nm,16.6s						
HHC				LR	LR		
	comp=E,408nm,16.6s						
HHC				LR	LR		
	comp=Z,246nm,16.7s						
BJT	**Baijiatuan 43.19 18**			*e*P	**P**	**18 54 37.9**	**-0.8**
	comp=Z,20nm,0.4s,mb5.2						
BJT	**Baijiatuan 43.19 18**			*e*P	**P**	**18 54 37.9**	**-0.8**
BJT				pmax	pmax		
	comp=Z,20nm,0.4s						
BJI	**Beijing 43.21 18**			P	**P**	**18 54 38.6**	**-0.2**
BJI				S	**S**	**19 01 02.8**	**+5.7**
BJI				AMB	AMB		
	comp=Z,34nm,0.7s,mb5.2						
BJI				AMB	AMB		
	comp=Z,245nm,4.8s						
BJI				LR	LR		
	comp=N,404nm,24.7s						
BJI				LR	LR		
	comp=E,387nm,25.5s						
KS15	**Wonju Array Si 45.81 31**			*e*P	**P**	**18 54 59.1**	**-0.5**
KSRS	**Korea Array 45.84 31**			P	**P**	**18 54 58.8**	**-1.1**
	comp=E,34nm,0.8s,mb5.1,baz=225,slow=8.4,SNR=90						
KSRS				PcP	PcP	18 56 34.5	-0.9
	comp=E,4.1nm,0.9s,baz=240,slow=3.9,SNR=6.1						
KSRS				ScP	ScP	19 00 14.4	-3.6
	comp=E,1.4nm,0.9s,baz=215,slow=4.5,SNR=3.4						
KSRS				LR	LR	19 15 02.9	
	comp=E,29nm,19.5s,baz=200,slow=37						
KBL	**Kabul 45.97 323**			*e*P	**P**	**18 55 00.1**	**-0.7**
	comp=E,14nm,0.6s,mb4.9						
KBL	**Kabul 45.97 323**			*e*P	**P**	**18 55 00.2**	**-0.7**
KBL				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
WMQ	**Urumqi 46.00 347**			P	**P**	**18 55 01.5**	**+0.6**
WMQ				AP	pP	18 55 11.5	-16
WMQ				XP	sP	18 55 15.5	-25
WMQ				PP	PP	18 56 49.5	-1.5
WMQ				S	**S**	**19 01 43.5**	**+6.2**
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,65nm,4.0s						
WMQ				LR	LR		
	comp=N,58nm,14.0s						
WMQ				LR	LR		
	comp=E,56nm,14.0s						
WMQ				LR	LR		
	comp=Z,45nm,14.0s						
KSH	**Kashi 46.09 334**			*e*P	**P**	**18 55 01.8**	**+0.1**
KSH				*e*AP	pP	18 55 11.0	-17
KSH				*e*XP	sP	18 55 15.3	-26
KSH				*e*PP	PP	18 56 48.8	-3.3
KSH				*e*S	**S**	**19 01 41.3**	**+2.5**
KSH				*e*SCS	ScS	19 04 52.6	+6.8
KSH				AMB	AMB		
	comp=Z,68nm,0.3s,mb5.9						
KSH				AMB	AMB		
	comp=Z,910nm,5.4s						
KSH				LR	LR		
	comp=N,847nm,6.0s						
KSH				LR	LR		
	comp=E,1μm,5.0s						
GUMO	**Guam 46.27 70**			LR	LR	19 16 06.6	
	comp=E,109nm,20.7s,baz=2.3,slow=38						
WBK	**Wadi Bani Khal 46.72 303**			P	**P**	**18 55 08.0**	**+1.1**
	SNR=10						
JMDO	**Jabal Madar 47.36 302**			P	**P**	**18 55 12.7**	**+0.8**
	SNR=7.4						
SMDO	**Samad 47.68 303**			P	**P**	**18 55 15.5**	**+1.1**
	SNR=7.0						
BIDO	**Bidbid 47.80 303**			P	**P**	**18 55 16.2**	**+0.8**
	SNR=12						
BSY	**Bisya 48.27 302**			⇑P	**P**	**18 55 20.0**	**+1.0**
	SNR=9.8						
KZA	**Kyzart 48.50 335**			P	**P**	**18 55 21.6**	**+1.2**
	SNR=19						
HOQ	**Hoqain 48.51 303**			P	**P**	**18 55 21.9**	**+1.1**
	SNR=9.7						
CTA	**Charters Tower 48.61 116**			PcP	PcP	18 56 44.5	-1.0
	comp=E,4.7nm,0.6s,baz=284,slow=8.8,SNR=4.8						
CBIJ	**Chichi jima 48.82 52**			P	**P**	**18 55 21.9**	**-1.2**
	comp=E,61nm,0.4s,mb5.8,baz=274,slow=23,SNR=7.2						
SONM	**Songino Array 48.83 5**			P	**P**	**18 55 22.2**	**-0.6**
	comp=E,48nm,0.8s,mb5.5,baz=187,slow=9.1,SNR=289						
SONM				PcP	PcP	18 56 45.0	-0.8
	comp=E,15nm,0.8s,baz=185,slow=3.7,SNR=9.3						
SONM				ScP	ScP	19 00 27.6	-2.7
	comp=E,16nm,0.9s,baz=185,slow=3.5,SNR=34						
SONM	**Songino Array 48.83 5**			P	**P**	**18 55 22.2**	**-0.6**
SONM						18 56 45.0	
TKM2	**Tokmak 2 49.05 336**			*e*P	**P**	**18 55 22.4**	**-2.2**
	comp=E,21nm,0.5s,mb5.3						
TKM2	**Tokmak 2 49.05 336**			*e*P	**P**	**18 55 22.4**	**-2.2**
TKM2				pmax	pmax		
	comp=Z,21nm,0.5s,mb5.3						
TKM2	**Tokmak 2 49.05 336**			P	**P**	**18 55 25.4**	**+0.8**
	SNR=6.7		

	comp=Z,10nm,0.6s,mb5.0,baz=155,slow=8.6,SNR=83									
MKAR						pP	pP	18 55 58.6	-1.1	
	comp=Z,18nm,0.6s,baz=154,slow=8.6,SNR=11									
MKAR						ScP	ScP	19 00 33.2	-2.8	
	comp=Z,1.1nm,0.7s,baz=150,slow=5.2,SNR=3.8									
MKAR						S	**S**	**19 02 33.2**	**-2.4**	
	comp=Z,1.7nm,0.9s,baz=168,slow=14,SNR=4.9									
MKAR						LR	LR	19 19 28.8		
	comp=Z,45nm,18.1s,baz=177,slow=39									
MKAR	**Makanchi Array**	**50.14**	**344**			P	**P**	**18 55 32.2**	**-0.5**	
MKAR						pP	pP	18 55 58.6	-1.1	
MKAR						ScP	ScP	19 00 33.2	-2.8	
MKAR						S	**S**	**19 02 33.2**	**-2.4**	
MKAR						LR	LR	19 19 28.8		
MKAR	**Makanchi Array**	**50.14**	**344**			P	**P**	**18 55 32.2**	**-0.5**	
MKAR						S	**S**	**19 02 33.2**	**-2.4**	
MAJO	**Matsushiro**	**51.13**	**39**	*e*	P		**P**	**18 55 39.6**	**-0.8**	
MAT	**Matsushiro**	**51.13**	**39**		P		**P**	**18 55 38.3**	**-2.1**	
MJAR	**Matsushiro Arr**	**51.13**	**39**		P		**P**	**18 55 38.8**	**-1.6**	
	comp=Z,4.1nm,0.5s,mb4.8,baz=220,slow=7.8,SNR=28									
ZAK	**Zakamensk**	**51.16**	**2**	⇑	*i* P		**P**	**18 55 39.6**	**-0.8**	
ZAK					*e*			18 56 53.1		
ZAK						pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.7									
KK31	**Karatay Array**	**51.44**	**332**		*i* P		**P**	**18 55 41.6**	**-0.9**	
KK31						pmax	pmax			
	comp=Z,11nm,0.5s,mb5.1									
MDJ	**Mudanjiang**	**52.20**	**26**		P		**P**	**18 55 47.8**	**-0.4**	
MDJ						AP	pP	18 55 56.9	-18	
MDJ						XP	sP	18 56 00.8	-27	
MDJ						PCP	PcP	18 56 54.9	-3.4	
MDJ						PP	PP	18 57 48.0	+0.1	
MDJ						S	**S**	**19 03 12.8**	**+8.6**	
MDJ						SCS	ScS	19 05 33.6	+6.8	
MDJ						AMB	AMB			
	comp=Z,25nm,1.2s,mb5.1									
MDJ						AMB	AMB			
	comp=Z,181nm,4.9s									
MDJ						LR	LR			
	comp=N,66nm,31.0s									
MDJ						LR	LR			
	comp=E,67nm,29.2s									
TLY	**Talaya**	**52.48**	**2**	*e*	P		**P**	**18 55 50.0**	**-0.1**	
TLY	**Talaya**	**52.48**	**2**	*e*	P		**P**	**18 55 49.2**	**-0.9**	
TLY						pmax	pmax			
	comp=Z,16nm,0.8s,mb5.1									
EIDS	**Eidsvold**	**54.46**	**121**	*e*	P		**P**	**18 56 02.8**	**-2.3**	
KURK	**Kurchatov**	**54.72**	**343**		P		**P**	**18 56 05.1**	**-1.4**	
	comp=Z,137nm,1.0s,mb5.9,SNR=17									
KURK	**Kurchatov**	**54.72**	**343**		P		**P**	**18 56 06.3**	**-0.2**	
	SNR=7.4									
KURK	**Kurchatov**	**54.72**	**343**	*e*	P		**P**	**18 56 05.8**	**-0.7**	
	comp=Z,21nm,0.8s,mb5.2									
KURK					*e*		pP	18 56 33.0	-0.8	
KURK	**Kurchatov**	**54.72**	**343**	*e*	P		**P**	**18 56 05.8**	**-0.7**	
KURK						pmax	pmax			
	comp=Z,21nm,0.8s,mb5.2									
OPO	**Ambohidratompo**	**55.13**	**248**		P		**P**	**18 56 11.9**	**+1.9**	
	comp=Z,8.2nm,0.8s,mb4.8,baz=40,slow=5.6,SNR=12									
ZAA0	**Zalesovo Array**	**56.21**	**349**	⇑	*e*	P	**P**	**18 56 15.4**	**-1.7**	
ZALV	**Zalesovo Beam**	**56.21**	**349**		P		**P**	**18 56 15.9**	**-1.2**	
	comp=Z,38nm,0.8s,mb5.5,baz=165,slow=6.2,SNR=187									
ZALV						pP	pP	18 56 43.5	-1.1	
	comp=Z,17nm,0.8s,baz=185,slow=7.3,SNR=4.0									
ZALV						ScP	ScP	19 00 58.4	-3.9	
	comp=Z,2.1nm,0.8s,baz=184,slow=2.3,SNR=4.0									
ZALV						S	**S**	**19 03 53.3**	**-4.4**	
	comp=Z,7.3nm,1.0s,baz=158,slow=13,SNR=15									
CAN	**Canberra**	**56.56**	**133**	⇑	*e*	P	**P**	**18 56 19.1**	**-0.9**	
KLR	**Kul'dur**	**56.75**	**24**		*e*	P	**P**	**18 56 16.0**	**-5.0**	
KLR						pmax	pmax			
	comp=E,20nm,1.2s									
KLR						pmax	pmax			
	comp=Z,64nm,1.2s,mb5.5									
NVS	**Novosibirsk**	**57.37**	**348**		*i* P		**P**	**18 56 22.3**	**-2.9**	
NVS						pmax	pmax			
	comp=N,20nm,1.3s									
NVS						pmax	pmax			
	comp=E,9.0nm,1.3s									
NVS						pmax	pmax			
	comp=Z,11nm,1.3s,mb4.7									
HABR	**Khabarovsk**	**57.58**	**27**		*e*P	P	**P**	**18 56 22.9**	**-4.0**	
HABR					*e**SP		sP	18 56 37.6	-30	
HABR					*e*			18 57 15.8		
HABR					*e*			18 58 30.6		
HABR					*e*S		**S**	**19 04 19.2**	**+3.3**	
HABR					*e**SS		sS	19 04 36.3	-27	
HABR					*e*			19 06 10.1		
HABR					*e*SS		SS	19 08 11.3	+3.4	
QRN	**Al-Qurain**	**58.28**	**305**		*e*P		**P**	**18 56 31.8**	**-0.3**	
	baz=305									
QRN						AMb	AMB	18 56 32.6		
	comp=Z,103nm,0.8s,mb5.9,baz=305									
RDF	**Al-Radifah**	**58.64**	**305**		*e*P		**P**	**18 56 34.4**	**-0.3**	
	baz=305									
RDF						AMb	AMB	18 56 35.6		
	comp=Z,131nm,1.1s,mb5.9,baz=305									
UMR	**Umm Al-Rimmam**	**58.73**	**306**		*e*P		**P**	**18 56 35.0**	**-0.3**	
	baz=306									
UMR						AMb	AMB	18 56 36.3		
	comp=Z,120nm,1.1s,mb5.8,baz=306									
NAY	**Al-Naaiem**	**59.01**	**305**		*e*P		**P**	**18 56 36.7**	**-0.5**	
	baz=305									
NAY						AMb	AMB	18 56 37.5		
	comp=Z,62nm,0.8s,mb5.7,baz=305									
MIB	**Mutribah**	**59.13**	**306**		*e*P		**P**	**18 56 37.8**	**-0.2**	
	baz=306									
MIB						AMb	AMB	18 56 39.1		
	comp=Z,173nm,0.9s,mb6.1,baz=306									
BVA0	**Borovoye Array**	**59.35**	**339**		*i* P		**P**	**18 56 37.8**	**-1.3**	
BVA0						pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3									
BRVK	**Borovoye**	**59.42**	**339**		P		**P**	**18 56 38.2**	**-1.3**	
	comp=Z,74nm,0.4s,mb6.1,SNR=12									
BRVK	**Borovoye**	**59.42**	**339**	*e*	P		**P**	**18 56 38.4**	**-1.1**	
	comp=Z,17nm,0.7s,mb5.2									
BRVK					*e*		pP	18 57 05.7	-1.7	
BRVK	**Borovoye**	**59.42**	**339**	*e*	P		**P**	**18 56 38.4**	**-1.1**	
BRVK						pmax	pmax			
	comp=Z,17nm,0.7s,mb5.2									
BOD	**Bodaibo**	**59.55**	**8**	⇑	*i* P		**P**	**18 56 39.6**	**-0.7**	
BOD						pmax	pmax			
	comp=Z,20nm,1.2s,mb5.0									
YSS	**Yuzh-Sakhalins**	**60.31**	**32**		*e*P		**P**	**18 56 45.2**	**-0.5**	
YSS	**Yuzh-Sakhalins**	**60.31**	**32**	⇓	*i* P		**P**	**18 56 45.0**	**-0.7**	
YSS						pmax	pmax			
	comp=Z,120nm,1.0s,mb5.9									
CLNS	**Chul'man**	**60.85**	**15**		*e*P		**P**	**18 56 48.7**	**-0.5**	
CLNS						pmax	pmax			
	comp=Z,28nm,1.1s,mb5.2									
CLNS						pmax	pmax			
	comp=E,16nm,1.1s									
CLNS						pmax	pmax			
	comp=N,15nm,1.0s									
AB31	**Akbulak array**	**60.95**	**331**		P		**P**	**18 56 48.9**	**-1.1**	
AB31						pmax	pmax			
	comp=Z,26nm,0.5s,mb5.5									
AKTO	**Aktyubinsk**	**62.66**	**331**		*i* P		**P**	**18 56 59.0**	**-2.5**	
AKTO						pmax	pmax			
	comp=Z,3.0nm,1.2s,mb4.1									
HAKT	**HAKKARI**	**64.82**	**313**		*i* P		**P**	**18 57 18.2**	**+2.2**	
GNI	**Garni**	**65.11**	**316**		*e*P		**P**	**18 57 18.0**	**+0.3**	
	comp=Z,9.4nm,0.7s,mb4.7									
GNI	**Garni**	**65.11**	**316**		*e*P		**P**	**18 57 18.0**	**+0.2**	
GNI						pmax	pmax			
	comp=Z,9.0nm,0.7s									
SVE	**Sverdlovsk**	**65.89**	**337**	⇑	*e*P		**P**	**18 57 21.9**	**-0.5**	
SVE						pmax	pmax			
	comp=Z,21nm,0.9s,mb5.0									
TUTA	**Tutak**	**66.17**	**314**		*i* P		**P**	**18 57 25.4**	**+0.7**	
ARU	**Arti**	**66.43**	**336**		P		**P**	**18 57 25.0**	**-0.9**	
	comp=Z,84nm,0.5s,mb5.8,SNR=7.1									
ARU	**Arti**	**66.43**	**336**	*e*	P		**P**	**18 57 24.4**	**-1.5**	
	comp=Z,17nm,0.9s,mb4.9									
ARU					*e*		pP	18 57 51.9	-2.3	
ARU	**Arti**	**66.43**	**336**	⇑	*e*P		**P**	**18 57 25.1**	**-0.8**	
ARU						pmax	pmax			
	comp=Z,16nm,1.2s,mb4.7									
YAK	**Yakutsk**	**66.58**	**15**		*e*P		**P**	**18 57 24.1**	**-2.6**	
YAK						pmax	pmax			
	comp=Z,78nm,0.9s,mb5.5									
YAK						pmax	pmax			
	comp=E,20nm,1.2s									
YAK						pmax	pmax			
	comp=N,27nm,1.2s									
MARD	**Mardin**	**66.90**	**312**		*i* P		**P**	**18 57 29.8**	**+0.4**	
HOMI	**Horasan**	**67.06**	**315**		*i* P		**P**	**18 57 30.6**	**+0.3**	
DAGI	**Agillar**	**67.45**	**316**		*e*P		**P**	**18 57 33.0**	**+0.3**	
DDEM	**Demirkent**	**67.49**	**315**		*e*P		**P**	**18 57 33.2**	**+0.2**	
DBAD	**Bademkaya**	**67.58**	**316**		*e*P		**P**	**18 57 33.7**	**+0.2**	
KIV	**Kislovodsk**	**68.06**	**319**	⇑	P		**P**	**18 57 36.8**	**+0.3**	
KIV	**Kislovodsk**	**68.06**	**319**		*e*P		**P**	**18 57 35.8**	**-0.7**	
KIV						pmax	pmax			
	comp=Z,11nm,0.7s,mb4.8									
KIV	**Kislovodsk**	**68.06**	**319**	⇑	*i* P		**P**	**18 57 36.8**	**+0.3**	
GOF	**Gofitskoye**	**68.30**	**320**		*e*P		**P**	**18 57 36.2**	**-1.7**	
GZT	**Gaziantep**	**69.34**	**311**		*e*P		**P**	**18 57 45.2**	**+0.7**	
SOC	**Sochi**	**69.90**	**318**	*c*	*i* P		**P**	**18 57 45.7**	**-2.2**	
SOC					*e*			19 00 18.9		
SOC					*e*	PPP		19 02 05.6		
SOC					*e*	S	S	19 06 56.0	+7.3	
SOC						pmax	pmax			
	comp=Z,37nm,0.8s,mb5.3									
PETK	**Petropavlovsk-**	**71.71**	**32**		P		**P**	**18 57 57.8**	**-0.8**	
	comp=Z,12nm,0.8s,mb4.8,baz=320,slow=0.9,SNR=11									
VRHR	**Novokhopersk**	**71.73**	**325**		*e*P		**P**	**18 57 57.6**	**-1.2**	
VRHR						pmax	pmax			
	comp=Z,70nm,0.7s,mb5.6									
VRHR						pmax	pmax			
	comp=N,10.0nm,0.4s									
VRHR						pmax	pmax			
	comp=E,40nm,0.6s									
CSS	**Prodhromos**	**71.97**	**307**		*e*P		**P**	**18 58 00.3**	**-0.2**	
	comp=E,14nm,0.8s,mb4.8									
PET	**Petropavlovsk**	**72.18**	**33**		*e*P		**P**	**18 58 00.2**	**-1.2**	
PET						pmax	pmax			
	comp=Z,67nm,1.3s,mb5.3									
LSZ	**Lusaka**	**72.70**	**254**		*e*P		**P**	**18 58 05.8**	**+0.6**	
	comp=Z,4.9nm,0.8s,mb4.4									
LSZ	**Lusaka**	**72.70**	**254**		*e*P		**P**	**18 58 05.8**	**+0.5**	
LSZ						pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.4									
VORD	**Divnogorie**	**73.02**	**325**		*e*P		**P**	**18 58 04.9**	**-1.5**	
VORD						pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.8									
VORD						pmax	pmax			
	comp=N,10.0nm,0.7s									
VORD						pmax	pmax			
	comp=E,10.0nm,0.8s									
VSR	**Storozhevoye**	**73.19**	**325**		*e*P		**P**	**18 58 06.0**	**-1.4**	
VSR						pmax	pmax			
	comp=Z,10.0nm,0.5s,mb4.9									
VSR						pmax	pmax			
	comp=N,4.0nm,0.8s									
VSR						pmax	pmax			
	comp=E,6.0nm,0.6s									
SEY	**Seymchan**	**74.44**	**22**	⇑	*e*P		**P**	**18 58 14.0**	**-0.5**	
TIXI	**Tiksi**	**74.72**	**9**		*e*P		**P**	**18 58 13.9**	**-2.0**	
	comp=E,39nm,1.0s,mb5.1									
TIXI	**Tiksi**	**74.72**	**9**		*e*P		**P**	**18 58 13.9**	**-2.0**	
TIXI						pmax	pmax			
	comp=Z,39nm,1.0s,mb5.1									
OBN	**Obninsk**	**76.15**	**328**	⇑	*e*P		**P**	**18 58 23.8**	**-0.6**	
OBN					*e*			19 01 17.0		
OBN					*e*	S	S	19 07 56.2	-2.8	
OBN						pmax	pmax			
	comp=Z,15nm,0.6s,mb4.9									
BOSA	**Boshof**	**76.62**	**241**		P		**P**	**18 58 28.8**	**+1.2**	
	comp=Z,8.8nm,0.8s,mb4.6,baz=100,slow=6.1,SNR=16									
BOSA						pP	pP	18 58 56.2	-0.4	
	comp=Z,8.1nm,0.9s,baz=86,slow=6.9,SNR=4.9									
BOSA	**Boshof**	**76.62**	**241**		*e*P		**P**	**18 58 28.1**	**+0.5**	
	comp=Z,12nm,1.0s,mb4.6									
BOSA	**Boshof**	**76.62**	**241**		*e*P		**P**	**18 58 28.1**	**+0.4**	
BOSA						pmax	pmax			
	comp=Z,12nm,1.0s,mb4.6									
KLMR	**Klimovskoe**	**77.09**	**334**		P		**P**	**18 58 27.0**	**-2.6**	
KLMR						pmax	pmax			
	comp=Z,25nm,1.4s,mb4.8									
AKASG	**Malin Array Be**	**78.94**	**322**		P		**P**	**18 58 39.0**	**-1.0**	
	comp=Z,5.9nm,0.6s,mb4.6,baz=90,slow=5.1,SNR=18									
AKASG						S	S	19 08 22.8	-6.4	
	comp=Z,1.4nm,0.9s,baz=95,slow=11,SNR=6.3									
AKASG	**Malin Array Be**	**78.94**	**322**		*i* P		**P**	**18 58 41.7**	**+1.6**	
AKASG						pmax	pmax			
	comp=Z,6.0nm,0.6s									
AKBB	**Malin Array Si**	**78.94**	**322**		*e*P		**P**	**18 58 38.1**	**-2.0**	
KIEV	**Kiev**	**78.95**	**322**		*e*P		**P**	**18 58 38.1**	**-2.0**	
	comp=Z,8.0nm,0.6s,mb4.7									
KIEV	**Kiev**	**78.95**	**322**		*e*P		**P**	**18 58 38.1**	**-2.0**	
KIEV						pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.7									
VRI	**Vrincioaia**	**79.41**	**317**	⇑	P		**P**	**18 58 43.1**	**+0.4**	
VRI	**Vrincioaia**	**79.41**	**317**	⇑	*i* P		**P**	**18 58 43.1**	**+0.4**	
PLOR	**Plostina**	**79.46**	**317**	⇓	*i* P		**P**	**18 58 44.2**	**+1.2**	
MLR	**Muntele Rosu**	**79.87**	**316**	⇓	P		**P**	**18 58 45.2**	**0.0**	
MLR	**Muntele Rosu**	**79.87**	**316**	⇓	*i* P		**P**	**18 58 45.2**	**0.0**	
BURAR	**Bucovina Array**	**80.79**	**318**	⇓	P		**P**	**18 58 51.0**	**+0.9**	
BURAR	**Bucovina Array**	**80.79**	**318**	⇓	*i* P		**P**	**18 58 51.0**	**+0.9**	
BUR08	**Bucovina Ar. S**	**80.81**	**319**		*e*P		**P**	**18 58 50.8**	**+0.6**	
JOF	**Joensuu**	**81.47**	**334**		*e*p		**P**	**18 58 54.3**	**+1.0**	
	comp=Z,8.2nm,0.7s,mb4.7									
BMR	**Baia Mare**	**81.94**	**318**	⇑	*i* P		**P**	**18 58 57.4**	**+1.2**	
GZR	**Gura Zlata**	**82.04**	**316**	⇑	P		**P**	**18 58 58.2**	**+1.5**	
GZR	**Gura Zlata**	**82.04**	**316**	⇑	*i* P		**P**	**18 58 58.2**	**+1.4**	
KRUS	**Krusevo**	**82.54**	**312**		*e*P		**P**	**18 58 57.9**	**-1.6**	
TRPA	**Tarpa**	**82.66**	**319**	⇓	*i* P		**P**	**18 59 00.0**	**+0.1**	
KWP	**Kalwaria**	**82.80**	**320**	⇓	P		**P**	**18 59 01.2**	**+0.6**	
KWP	**Kalwaria**	**82.80**	**320**	⇓	*i* P		**P**	**18 59 01.2**	**+0.6**	
BZS	**Buzias**	**82.88**	**316**	⇑	P		**P**	**18 59 01.1**	**-0.1**	
BZS	**Buzias**	**82.88**	**316**	⇑	*i* P		**P**	**18 59 01.0**	**-0.1**	
KOLS	**Kolonicke sedl**	**82.97**	**319**		*e*P		**P**	**18 59 02.2**	**+0.7**	
KOLS					*e*	PCP	PcP	18 59 06.1	+0.2	
TSUM	**Tsumeb**	**83.01**	**251**		*e*P		**P**	**18 59 03.1**	**+0.8**	
	comp=Z,15nm,1.1s,mb4.7									
VNDA	**Vanda**	**83.11**	**169**		P		**P**	**18 59 01.8**	**+0.1**	
	comp=Z,4.8nm,0.6s,mb4.5,baz=306,slow=5.5,SNR=68									
KAF	**Kangasniemi**	**83.46**	**333**		*ep*		**P**	**18 59 03.3**	**-0.4**	
	comp=Z,17nm,0.5s,mb5.1,baz=98,slow=4.8									
KAF	**Kangasniemi**	**83.46**	**333**		*e*P		**P**	**18 59 03.3**	**-0.4**	
KAF						pmax	pmax			
	comp=Z,17nm,0.5s,mb5.1									
CRVS	**Cervenica-Dubn**	**83.49**	**319**		*e*P		**P**	**18 59 04.2**	**+0.1**	
SBA	**Scott Base**	**84.21**	**169**		*e*P		**P**	**18 59 07.9**	**+0.6**	
	comp=Z,8.5nm,0.8s,mb4.6									
SBA	**Scott Base**	**84.21**	**169**		*e*P		**P**	**18 59 07.9**	**+0.6**	
SBA						pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.6									
PKSM	**Moragy**	**85.02**	**316**	⇓	*i* P		**P**	**18 59 11.6**	**-0.4**	
VYHS	**Vyhne**	**85.16**	**319**		*e*P		**P**	**18 59 12.0**	**-0.6**	
ARCES	**ARCESS Array B**	**85.64**	**340**		P		**P**	**18 59 14.6**	**+0.1**	
	comp=Z,6.8nm,0.5s,mb4.8,baz=103,slow=4.2,SNR=56									
ARCES						pP	pP	18 59 43.4	-0.7	
	comp=Z,2.5nm,0.5s,baz=103,slow=3.8,SNR=1.9									
MORC	**Moravsky Berou**	**86.14**	**320**	⇓	P		**P**	**18 59 17.6**	**+0.2**	
MORC	**Moravsky Berou**	**86.14**	**320**	⇓	*i* P		**P**	**18 59 17.6**	**+0.2**	
MODS	**Modra-Piesok**	**86.17**	**318**		*e*P		**P**	**18 59 17.0**	**-0.6**	
ZST	**Bratislava**	**86.27**	**318**		*e*P		**P**	**18 59 17.8**	**-0.3**	
ZST						pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7									
DPC	**Dobruska-Polom**	**86.98**	**320**		*e*P		**P**	**18 59 22.3**	**+0.8**	
DPC					*ep*		pP	18 59 52.1	+0.9	
UPC	**Upice**	**87.19**	**320**		*e*P		**P**	**18 59 23.6**	**+1.1**	
TREC	**Trest**	**87.43**	**319**		*e*P		**P**	**18 59 23.6**	**-0.1**	
PRU	**Pruhonice**	**88.09**	**320**		*e*P		**P**	**18 59 22.3**	**-4.5**	
PRU					*ep*		pP	18 59 57.5	+0.9	
PVCC	**Panska Ves**	**88.11**	**320**		*e*P		**P**	**18 59 28.2**	**+1.3**	
PVCC					*ep*		pP	18 59 56.3	-0.3	
BRG	**Berggiesshubel**	**88.53**	**321**		*e*P		**P**	**18 59 29.2**	**+0.3**	
	comp=Z,5.0nm,0.9s,mb4.5									
BRG					*i*			18 59 32.9		
	comp=Z,10.0nm,0.8s									
BRG					*e*		pP	19 00 02.0	+3.3	
	comp=Z,3.7nm,0.9s									
GERES	**GERESS Array B**	**88.58**	**319**		P		**P**	**18 59 29.6**	**+0.5**	
	comp=Z,2.1nm,0.8s,mb4.2,baz=76,slow=5.6,SNR=14									
GERES						pP	pP	18 59 59.3	+0.4	
	comp=Z,1.8nm,0.8s,baz=72,slow=4.3,SNR=3.8									
GERES						LR	LR	19 46 26.1		
	comp=Z,59nm,20.1s,baz=289,slow=40									
KHC	**Kasperske Hory**	**88.67**	**319**		*e*P		**P**	**18 59 29.5**	**-0.1**	
KHC					*ep*		pP	18 59 59.6	+0.3	
QSPA	**South Pole Qui**	**89.03**	**180**		*e*P		**P**	**18 59 31.6**	**+0.9**	
	comp=Z,7.3nm,0.8s,mb4.8									
CLL	**Collm**	**89.14**	**321**		*i* P		**P**	**18 59 31.9**	**+0.2**	
CLL						pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.7									
CLL	**Collm**	**89.14**	**321**		*i* P		**P**	**18 59 31.9**	**+0.2**	
	comp=Z,9.0nm,1.1s,mb4.7									
NB2	**NORSAR Subarra**	**90.45**	**331**		P		**P**	**18 59 38.9**	**+1.3**	
	comp=Z,1.5nm,0.8s,mb4.2,baz=93,slow=4.6									
NOA	**NORSAR Array B**	**90.45**	**331**		P		**P**	**18 59 39.0**	**+1.3**	
	comp=Z,2.2nm,0.8s,mb4.3,baz=93,slow=4.6,SNR=6.7									
NOA						pP	pP	19 00 07.9	+0.5	
	comp=Z,1.2nm,0.8s,baz=93,slow=5.0,SNR=2.8									
NOA	**NORSAR Array B**	**90.45**	**331**		P		**P**	**18 59 39.0**	**+1.3**	
NOA						pP	pP	19 00 07.9	+0.5	
KEST	**Kesra**	**91.47**	**306**		P		**P**	**18 59 44.6**	**+1.7**	
	comp=Z,1.9nm,0.7s,mb4.3,baz=78,slow=1.1,SNR=7.2									
KEST						pP	pP	19 00 13.4	+0.6	
	comp=Z,6.2nm,1.1s,baz=344,slow=4.7,SNR=4.9									
PGF	**Pioggiola**	**91.73**	**312**		*e*P		**P**	**18 59 42.6**	**-1.4**	
	comp=Z,56nm,1.1s,mb5.4									
PGF	**Pioggiola**	**91.73**	**312**		*e*P		**P**	**18 59 42.6**	**-1.4**	
	comp=Z,28nm,1.1s,mb5.4									
PGF	**Pioggiola**	**91.73**	**312**		*e*P		**P**	**18 59 42.6**	**-1.4**	
PGF						pmax	pmax			
	comp=Z,28nm,1.1s,mb5.4									
LPG	**La Plagne**	**93.29**	**315**		*e*P		**P**	**18 59 50.6**	**-0.5**	
	comp=Z,4.8nm,0.8s,mb4.6									
LPG	**La Plagne**	**93.29**	**315**		*e*P		**P**	**18 59 50.6**	**-0.5**	
	comp=Z,2.4nm,0.8s,mb4.6									
LPG	**La Plagne**	**93.29**	**315**		*e*P		**P**	**18 59 50.6**	**-0.5**	
LPG						pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.5									
LPL	**La Plagne**	**93.30**	**315**		*e*P		**P**	**18 59 50.7**	**-0.5**	
	comp=Z,2.1nm,0.5s,mb4.4									
LPL	**La Plagne**	**93.30**	**315**		*e*P		**P**	**18 59 50.7**	**-0.5**	
	comp=Z,1.0nm,0.5s,mb4.4									
LPL	**La Plagne**	**93.30**	**315**		*e*P		**P**	**18 59 50.7**	**-0.5**	
LPL						pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.4									
HAU	**Haudompre**	**93.47**	**318**		*e*P		**P**	**18 59 51.4**	**-0.5**	
TORD	**Torodi Ar. Bea**	**98.79**	**283**		P		**P**	**19 00 16.6**	**-0.1**	
	comp=Z,0.8nm,0.8s,mb4.3,baz=88,slow=4.9,SNR=4.8									
TORD						LR	LR	19 43 37.8		
	comp=Z,33nm,18.8s,baz=355,slow=34									
EDM	**Edmonton**	**120.80**	**23**		*e*P		PKPdf	19 05 26.5	-1.3	
HUMO	**Hull Mountain**	**123.13**	**37**		*e*P		PKPdf	19 05 31.8	-0.8	
LNOR	**Lincton Mounta**	**123.78**	**32**		*e*PKPdf		PKPdf	19 05 32.3	-1.4	
SCHQ	**Schefferville**	**125.27**	**351**		PKP		PKPdf	19 05 34.6	-1.7	
	comp=Z,6.2nm,0.8s,baz=74,slow=7.4,SNR=3.6									
DLMT	**Dillon**	**127.00**	**29**		*e*PKPdf		PKPdf	19 05 39.3	-0.6	
NVAR	**Mina Array Bea**	**128.45**	**39**		PKP		PKPdf	19 05 43.6	+0.7	
	comp=Z,2.5nm,0.6s,baz=287,slow=2.5,SNR=21									
NVAR						pPKP	pPKPdf	19 06 16.0	+2.0	
	comp=Z,0.8nm,0.8s,baz=240,slow=2.1,SNR=2.8									
NVAR						SKPbc		19 08 49.9		
	comp=Z,2.2nm,0.8s,baz=305,slow=3.2,SN

ZIIG				*i* S		**Sn**	**18 48 59.5**	**-0.4**
CMIG	**Matias Romero**	**3.90**	**67**	P	n	**Pn**	**18 48 29.1**	**+1.7**
	1.6nm,0.3s,baz=255,slow=11,SNR=23							
CMIG				S	n	**Sn**	**18 49 12.0**	**-1.2**
	13nm,0.3s,baz=295,slow=7.8,SNR=4.6							
CMIG	**Matias Romero**	**3.90**	**67**	*e*P	n	**Pn**	**18 48 28.8**	**+1.4**
CMIG				P	n	**Pn**	**18 48 29.1**	**+1.7**
CMIG				S	n	**Sn**	**18 49 12.0**	**-1.2**
CMIG				*i* S		**Sn**	**18 49 12.3**	**-0.9**
CMIG	**Matias Romero**	**3.90**	**67**	*e*P	n	**Pn**	**18 48 28.8**	**+1.4**
CMIG				*i* S		**Sn**	**18 49 12.3**	**-0.9**
TXAR	**Lajitas Array**	**14.42**	**342**	P	n	**Pn**	**18 50 55.1**	**+3.4**
	0.0nm,0.3s,baz=145,slow=14,SNR=3.6							
VBMS	**Vicksburg**	**18.11**	**23**	*e*P		**Pn**	**18 51 40.8**	**+1.6**
	11nm,0.6s							
AMTX	**Amarillo**	**19.38**	**352**	*e*P		**Pn**	**18 51 56.2**	**+1.5**
	8.5nm,0.9s							
ANMO	**Albuquerque**	**20.50**	**341**	P		**P**	**18 52 08.7**	**+3.0**
	0.1nm,0.3s,baz=150,slow=12,SNR=3.8							
ANMO	**Albuquerque**	**20.50**	**341**	*e*P		**P**	**18 52 06.1**	**+0.5**
	5.1nm,1.3s							
WUAZ	**Wupatki**	**22.86**	**332**	*e*P		**P**	**18 52 34.6**	**+3.5**
	8.6nm,1.0s,mb4.1							
PV01	**Paradox Valley**	**24.09**	**341**	*e*P		**P**	**18 52 44.8**	**+1.7**
PV10	**Paradox Valley**	**24.46**	**340**	*e*P		**P**	**18 52 45.9**	**-0.7**
NVAR	**Mina Array Bea**	**28.57**	**326**	P		**P**	**18 53 28.2**	**+4.5**
	0.2nm,0.6s,mb3.0,baz=165,slow=14,SNR=3.5							
NVAR	**Mina Array Bea**	**28.57**	**326**	P		**P**	**18 53 28.2**	**+4.5**
PDAR	**Pinedale Array**	**28.64**	**343**	P		**P**	**18 53 28.1**	**+3.9**
	1.0nm,0.9s,mb3.5,baz=162,slow=9.3,SNR=3.0							
ELK	**Elko**	**28.90**	**333**	LR		LR	19 04 47.4	
	comp=Z,80nm,18.4s,baz=28,slow=36							

ISCJB ***18*** *19:23:25.2±1.0, 188S±02×1778W±0.2, h530km±17km, mb4.0/13, Error ellipse: s-maj=29.5km s-min=13.5km az=138.5*
IDC ***18*** *19:23:26.9±1.6, 1885S×1776W, h544km±18km, mb3.6/10, mb1 3.8/12, mb1mx3.5/21, mbtmp3.6/12, Error ellipse: s-maj=24.4km s-min=13.0km az=143.0*
NEIC ***18*** *19:23:26.7±1.2, 1880S×1777W, h543km±15km, mb4.2/4, Error ellipse: s-maj=25.3km s-min=12.7km az=145.0*
ISC 18 19:23:25.7±1.1, 188S±02×1777W±01, h524km±16km, n35, σ1§10/17, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AFI	**Afiamalu**	**7.49**	**51**	P		**P**	**19 25 19.6**	**+1.9**
	9.4nm,0.3s,baz=22,slow=5.2,SNR=13							
AFI				S		**S**	**19 26 48.2**	**-1.1**
	baz=87,slow=23,SNR=3.6							
URZ	**Urewera**	**19.93**	**192**	P		**P**	**19 27 20.9**	**-1.3**
	0.4nm,0.3s,baz=65,slow=4.8,SNR=5.0							
CTA	**Charters Tower**	**33.94**	**262**	P		**P**	**19 29 26.2**	**+0.9**
	17nm,0.7s,mb4.7,baz=88,slow=11,SNR=20							
CTAO	**Charters Tower**	**33.94**	**262**	*e*P		**P**	**19 29 25.4**	**0.0**
	23nm,0.9s,mb4.7							
STKA	**Stephens Creek**	**38.78**	**242**	P		**P**	**19 30 06.4**	**+1.2**
	8.7nm,0.8s,mb4.3,baz=93,slow=9.4,SNR=20							
WRAB	**Tennant Creek**	**45.10**	**260**	*e*P		**P**	**19 30 54.5**	**-0.6**
	4.0nm,0.5s,mb4.2							
WRA	**Warramunga Arr**	**45.11**	**260**	P		**P**	**19 30 54.8**	**-0.5**
	7.6nm,0.6s,mb4.4,baz=96,slow=8.4,SNR=143							
WRA				PcP		PcP	19 32 24.3	-0.6
	1.2nm,0.7s,baz=92,slow=3.7,SNR=4.6							
ASAR	**Alice Springs**	**45.18**	**255**	P		**P**	**19 30 55.8**	**+0.1**
	15nm,0.7s,mb4.6,baz=86,slow=8.2,SNR=165							
ASAR				PcP		PcP	19 32 23.9	-1.1
	1.3nm,0.6s,baz=97,slow=4.7,SNR=5.7							
ASAR				ScP		ScP	19 35 25.6	-2.0
	0.4nm,0.6s,baz=107,slow=4.4,SNR=4.6							
KAKA	**Kakadu**	**48.21**	**270**	*e*P		Px	19 31 05.5	
BATI	**Baumata**	**57.16**	**270**	P		**P**	**19 32 24.3**	**+1.4**
	11nm,0.5s,mb4.3,baz=180,slow=6.1,SNR=4.9							
MBWA	**Marble Bar**	**58.49**	**256**	*e*P		**P**	**19 32 30.7**	**-1.0**
	3.4nm,0.3s,mb4.0							
MJAR	**Matsushiro Arr**	**68.98**	**323**	P		**P**	**19 33 37.9**	**-0.5**
	2.1nm,0.6s,mb3.8,baz=150,slow=5.6,SNR=7.6							
MAJO	**Matsushiro**	**68.98**	**323**	P		**P**	**19 33 35.9**	**-2.5**
	2.5nm,0.6s,mb3.9							
PETK	**Petropavlovsk-**	**74.68**	**345**	P		**P**	**19 34 11.1**	**0.0**
	4.8nm,0.7s,mb4.1,baz=119,slow=7.0,SNR=7.4							
NVAR	**Mina Array Bea**	**79.61**	**43**	P		**P**	**19 34 38.0**	**-0.3**
	0.5nm,0.7s,mb2.9,baz=215,slow=11,SNR=4.0							
TXAR	**Lajitas Array**	**85.92**	**57**	P		**P**	**19 35 11.6**	**+1.3**
	0.3nm,1.0s,mb2.9,baz=210,slow=8.9,SNR=5.5							
CMAR	**Chiang Mai Arr**	**89.78**	**289**	P		**P**	**19 35 29.5**	**+0.9**
	1.6nm,0.8s,mb3.9,baz=123,slow=2.8,SNR=12							
MKAR	**Makanchi Array**	**110.19**	**314**	PKiKP		PKiKP	19 40 55.1	-2.6
	0.4nm,0.5s,baz=196,slow=0.6,SNR=8.8							
ARCES	**ARCESS Array B**	**127.28**	**350**	PKP		PKPdf	19 41 28.4	-1.4
	6.9nm,1.1s,baz=50,slow=1.2,SNR=14							
NOA	**NORSAR Array B**	**137.31**	**354**	PKP		PKPdf	19 41 49.4	+0.5
	0.8nm,0.8s,baz=14,slow=3.8,SNR=2.9							
AKASG	**Malin Array Be**	**141.62**	**332**	PKhKP			19 41 50.4	
	0.6nm,0.4s,baz=39,slow=4.0,SNR=4.9							
BUR08	**Bucovina Ar. S**	**145.66**	**332**	*e*PKPdf		PKPdf	19 42 03.6	-0.5
GERES	**GERESS Array B**	**148.61**	**345**	PKPbc		PKPbc	19 42 12.4	-1.0
	1.3nm,0.8s,baz=29,slow=3.0,SNR=11							
BAIF	**Baives**	**148.75**	**358**	*e*PKP1		PKPbc	19 42 12.8	-0.9
	2.5nm,0.5s							
FLN	**La Foliniere**	**150.00**	**4**	*e*PKP1		PKPbc	19 42 15.9	-0.8
CDF	**Champ du Feu**	**150.16**	**353**	*e*PKP1		PKPbc	19 42 16.0	-1.1
LDF	**La Druitiere**	**150.19**	**3**	*e*PKP1		PKPbc	19 42 15.7	-1.5
GRR	**Gorron**	**150.35**	**4**	*e*PKP1		PKPbc	19 42 16.4	-1.2
HAU	**Haudompre**	**150.66**	**354**	*e*PKP1		PKPbc	19 42 17.1	-1.2
	7.0nm,0.6s							
HINF	**Hinteralfeld**	**150.79**	**354**	*e*PKP1		PKPbc	19 42 16.7	-1.9
LOR	**Lormes**	**151.55**	**358**	*e*PKP1		PKPbc	19 42 19.2	-1.1
	3.1nm,0.6s							
SSF	**Saint Saulge**	**151.77**	**358**	*e*PKP1		PKPbc	19 42 19.9	-0.9
	7.5nm,0.8s							
LPL	**La Plagne**	**153.08**	**353**	*e*PKP1		PKPbc	19 42 23.9	+0.2
LPG	**La Plagne**	**153.09**	**353**	*e*PKP1		PKPbc	19 42 24.0	+0.2
MBDF	**Montbardon**	**153.85**	**353**	*e*PKP1		PKPbc	19 42 25.6	+0.2
	3.1nm,0.7s							

ISCJB ***18*** *19:28:30.3±0.8, 2423S±005×671W±0.1, h175km±17km, mb3.8/2, Error ellipse: s-maj=19.3km s-min=8.1km az=7.4*
IDC ***18*** *19:28:30.5±1.2, 2426S×6703W, h157km±16km, mb3.8/2, mb1 3.7/7, mb1mx3.4/20, mbtmp3.7/7, Error ellipse: s-maj=22.9km s-min=12.7km az=89.0*
NEIC ***18*** *19:28:31.4±0.8, 2420S×6706W, h169km±10km, mb4.2/2, Error ellipse: s-maj=17.6km s-min=9.4km az=105.0*
GUC ***18*** *19:28:33.0±1.0, 2395S×6756W, h211km±16km, ML4.5*
ISC 18 19:28:30.9±0.8, 2424S±005×671W±01, h162km±16km, n21, σ1§19/29, mb3.8/2, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LVC	**Limon Verde**	**2.34**	**314**	P		**P**	**19 29 12.4**	**+1.6**
	25nm,0.3s,baz=143,slow=5.8,SNR=408							
LVC				S		**Sn**	**19 29 42.2**	**+0.8**
	78nm,0.3s,baz=12,slow=21,SNR=62							
LVC	**Limon Verde**	**2.34**	**314**	*e*Pn		**Pn**	**19 29 12.2**	**+1.5**
LVC				*e*Sn		**Sn**	**19 29 42.6**	**+1.2**
LVC	**Limon Verde**	**2.34**	**314**	*e*P		**Pn**	**19 29 12.2**	**+1.5**
LVC				*i* S		**Sn**	**19 29 42.2**	**+0.8**
LVC				AML		AML	19 29 43.9	
	comp=N,477nm,0.6s							
CEN1	**Los Morros**	**2.98**	**286**	*e*P		**Pn**	**19 29 20.2**	**+1.7**
CEN1				*i* S		**Sn**	**19 29 56.0**	**+0.6**
CEN1				AML		AML	19 29 57.9	
	comp=N,584nm,0.4s							
ANCH	**Antofagasta**	**3.10**	**280**	*e*P		**Pn**	**19 29 20.5**	**+0.6**
ANCH				*i* S		**Sn**	**19 29 55.9**	**-2.1**
ANCH				AML		AML	19 30 04.0	
	comp=E,4μm,0.0s							
PB01	**Plate Boundary**	**3.88**	**325**	*e*P		**Pn**	**19 29 29.6**	**-0.4**
PB01				*i* S		**Sn**	**19 30 13.4**	**-2.6**
PB01				AML		AML	19 30 15.9	
	comp=N,558nm,0.3s							
CFAA	**Coronel Fontan**	**7.40**	**188**	P		**Pn**	**19 30 16.5**	**+0.2**
	comp=N,0.2nm,0.3s,baz=6.1,slow=11,SNR=25							
CFAA				S		**Sn**	**19 31 36.7**	**-2.5**
	comp=N,0.2nm,0.3s,baz=226,slow=20,SNR=6.7							
CFAA	**Coronel Fontan**	**7.40**	**188**	P		**Pn**	**19 30 16.5**	**+0.2**
CFAA				S		**Sn**	**19 31 36.7**	**-2.5**
LPAZ	**La Paz**	**7.98**	**353**	P		**Pn**	**19 30 24.8**	**+0.8**
	comp=N,7.1nm,0.3s,baz=153,slow=8.5,SNR=77							
LPAZ				S		**Sn**	**19 31 53.0**	**-0.2**
	comp=N,0.2nm,0.3s,baz=150,slow=3.2,SNR=2.0							
LPAZ	**La Paz**	**7.98**	**353**	*e*Pn		**Pn**	**19 30 24.0**	**0.0**
	comp=N,8.1nm,1.3s							
LPAZ				S	n	**Sn**	**19 31 50.9**	**-2.2**
SIV	**San Ignacio**	**9.96**	**36**	P		**Pn**	**19 30 50.1**	**-0.2**
	comp=N,1.0nm,0.3s,baz=247,slow=13,SNR=10							
SIV				S		**Sn**	**19 32 30.7**	**-10**
	comp=N,0.1nm,0.3s,baz=213,slow=18,SNR=2.8							
SIV	**San Ignacio**	**9.96**	**36**	P		**Pn**	**19 30 50.1**	**-0.2**
SIV				S		**Sn**	**19 32 30.7**	**-10**
PLCA	**Paso Flores**	**16.70**	**189**	P		**Pn**	**19 32 16.2**	**+0.9**
	comp=N,0.1nm,0.3s,baz=18,slow=16,SNR=2.9							
BDFB	**Brasilia**	**19.85**	**68**	P		**P**	**19 32 49.6**	**+0.1**
	comp=N,0.6nm,0.3s,baz=236,slow=16,SNR=19							
BDFB	**Brasilia**	**19.85**	**68**	*e*P		**P**	**19 32 49.5**	**+0.1**
	comp=N,8.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**76.73**	**69**	P		**P**	**19 40 04.2**	**-0.5**
	comp=N,1.0nm,0.5s,mb3.7,baz=260,slow=5.4,SNR=11							
BOSA	**Boshof**	**80.69**	**117**	P		**P**	**19 40 26.5**	**+0.3**
	comp=N,4.3nm,1.1s,mb4.0,baz=323,slow=5.1,SNR=4.7							
CLL	**Collm**	**102.66**	**39**	*i* PKPbc		Pdif	19 42 06.7	-2.6
	comp=Z,6.0nm,0.6s							
WRA	**Warramunga Arr**	**131.38**	**207**	PKP		PKPdf	19 47 25.0	+0.3
	comp=Z,0.4nm,1.0s,baz=182,slow=5.0,SNR=4.2							
ZALV	**Zalesovo Beam**	**143.64**	**28**	PKP		PKPdf	19 47 44.2	-1.8
	comp=Z,0.6nm,0.5s,baz=336,slow=3.2,SNR=3.1							
MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc		PKPbc	19 47 53.7	+0.1
	comp=Z,0.6nm,0.5s,baz=316,slow=2.9,SNR=8.2							

ISCJB ***18*** *19:29:44.3±1.8, 06N±02×97.1E±04, h33km, mb3.5/5, Error ellipse: s-maj=66.3km s-min=13.2km az=150.6*
IDC ***18*** *19:29:45.3±2.7, 073N×9727E, h20km±5km, mb3.4/4, mb1 3.5/5, mb1mx3.3/20, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=116.6km s-min=17.3km az=57.0*
NEIC ***18*** *19:29:46.8±1.3, 064N×9720E, h35km, mb3.7/1, Error ellipse: s-maj=49.5km s-min=9.7km az=60.0*
ISC 18 19:29:46.9±1.8, 07N±02×972E±04, h35km, n9, σ0§24/9, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CMAR	**Chiang Mai Arr**	**17.78**	**5**	P		**Pn**	**19 33 51.9**	**+0.1**
	0.1nm,0.3s,baz=197,slow=11,SNR=5.9							
WRA	**Warramunga Arr**	**41.74**	**121**	P		**P**	**19 37 32.9**	**0.0**
	0.1nm,0.3s,mb2.9,baz=310,slow=9.0,SNR=6.8							
WRA				sP		sP	19 37 42.4	-5.1
	0.5nm,0.7s,baz=304,slow=9.0,SNR=4.5							
WRAB	**Tennant Creek**	**41.75**	**121**	P		**P**	**19 37 32.9**	**-0.2**
	1.1nm,0.8s,mb3.5							
WB2	**Warramunga Arr**	**41.75**	**121**	*e*P		**P**	**19 37 32.7**	**-0.3**
ASAR	**Alice Springs**	**43.06**	**127**	P		**P**	**19 37 44.2**	**+0.5**
	0.2nm,0.4s,mb3.2,baz=296,slow=7.5,SNR=7.4							
MK31	**Makanchi Array**	**47.78**	**346**	*e*P		**P**	**19 38 20.7**	**+0.1**
MKAR	**Makanchi Array**	**47.78**	**346**	P		**P**	**19 38 20.7**	**0.0**
	0.6nm,0.5s,mb3.9,baz=162,slow=9.2,SNR=8.4							
MKAR				pP		pP	19 38 26.6	-4.5
	0.3nm,0.4s,baz=160,slow=9.2,SNR=5.4							
MKAR	**Makanchi Array**	**47.78**	**346**	P		**P**	**19 38 20.7**	**0.0**
MKAR				pP		pP	19 38 26.6	-4.5
ZALV	**Zalesovo Beam**	**54.10**	**351**	P		**P**	**19 39 07.9**	**-0.2**
	0.7nm,0.3s,mb4.0,baz=157,slow=5.5,SNR=6.5							
ZALV				pP		pP	19 39 14.2	-4.4
	0.5nm,0.4s,baz=155,slow=6.7,SNR=3.9							

NEIC ***18*** *20:13:06.8, 1579N×9854W, h16km, MD4.1(MEX), After MEX.*
MEX 18 20:13:06.8±1.0, 1579N×9854W, h16km±93km, MD4.1, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PNIG	**Pinotepa**	**0.71**	**33**	*i* P		Pg	20 13 18.2	-2.5
PNIG				*i* S		Sg	20 13 26.7	-3.6
ACX	**Acapulco**	**1.70**	**309**	*i* P		Pn	20 13 32.0	-3.9
CAIG	**El Cayaco**	**2.08**	**307**	*e*P		Pn	20 13 39.0	-2.0
CAIG				*i* S		Sn	20 14 01.8	-4.8
UTMO	**Huajuapan**	**2.14**	**19**	*e*P		Pn	20 13 40.2	-1.7
UTMO				*i* S		Sn	20 14 05.2	-3.0
VHO	**Vista Hermosa**	**2.15**	**53**	*i* P		Pn	20 13 40.5	-1.4
VHO				*i* S		Sn	20 14 03.1	-5.2
OXX	**Oaxaca**	**2.16**	**53**	*i* P		Pn	20 13 44.8	+2.7
MEIG	**Mezcala**	**2.36**	**334**	*i* P		Pn	20 13 42.3	-2.6
MEIG				*i* S		Sn	20 14 08.6	-5.0
TPIG	**Tehuac#an**	**2.84**	**23**	*i* S		Sn	20 14 22.1	-3.3
PPM	**Popocatepetl**	**3.26**	**358**	*i* P		Pn	20 13 56.3	-0.9
PPM				*i* S		Sn	20 14 31.8	-3.9
ZIIG	**Zihuatanejo**	**3.34**	**303**	*i* P		Pn	20 13 54.9	-3.4
LVIG	**Laguna Verde**	**4.40**	**27**	*i* P		Pn	20 14 11.3	-1.7
LVIG				*i* S		Sn	20 14 58.4	-5.5

IDC 18 20:40:42.7±4.1, 382S×13157E, h0km, mb3.9/1, mb1 4.1/3, mb1mx3.5/14, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=280.2km s-min=42.6km az=89.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**16.25**	**171**	Pn		Pn	20 44 33.2	+0.7
	0.2nm,0.3s,baz=350,slow=12,SNR=17							
ASAR	**Alice Springs**	**19.86**	**174**	P		Pn	20 45 15.6	-1.4
	0.4nm,0.3s,baz=350,slow=10,SNR=69							
STKA	**Stephens Creek**	**29.46**	**162**	P		P	20 46 48.0	-0.3
	1.0nm,0.7s,baz=14,slow=4.2,SNR=3.0							
TXAR	**Lajitas Array**	**121.94**	**58**	PKP		PKPdf	20 59 39.8	0.0
	0.1nm,0.4s,baz=298,slow=4.0,SNR=3.9							

ISK ***18*** *20:56:08.9, 3441N×3427E, h17km, MD3.3*
CSEM ***18*** *20:56:10.8±0.2, 3464N×3431E, h8km, MD3.3, Error ellipse: s-maj=6.4km s-min=2.0km az=68.0*
ISCJB ***18*** *20:56:11.4±1.4, 3458N±005×343E±0.1, h13km±9km, Error ellipse: s-maj=14.7km s-min=6.1km az=160.3*
HLW ***18*** *20:56:17.4, 3449N×3422E, h25km, Mb2.5*
ISC 18 20:56:12.7±1.5, 3460N±004×343E±01, h17km±9km, n9, σ1§40/14, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LFK	**Lefkose**	**0.94**	**317**	PG		**Pg**	**20 56 29.2**	**-1.7**
LFK				SG		**Sg**	**20 56 44.5**	**+1.3**
EREN	**Erenkoy**	**0.94**	**353**	*e*Pn		**Pn**	**20 56 30.3**	**-0.8**
EREN				*e*Sn		**Sn**	**20 56 46.9**	**+2.8**
LEF	**Lefka**	**1.28**	**294**	*e*PN		**Pn**	**20 56 34.5**	**-1.4**
LEF				*e*SN		**Sn**	**20 56 52.0**	**-0.7**
IKL	**Isikli**	**1.71**	**343**	*e*PN		**Pn**	**20 56 41.0**	**-0.8**
IKL				*e*SN		**Sn**	**20 57 03.9**	**+0.6**
HRSH	**Kfar Ka'horesh**	**2.06**	**157**	P		**Sn**	**20 57 10.0**	**-1.8**
MERS	**Mersin**	**2.27**	**4**	*e*PN		**Pn**	**20 56 48.8**	**-0.7**
RSH		**3.66**	**188**	P		**Pn**	**20 57 10.0**	**+1.4**
AMAG	**Maghara**	**4.05**	**194**	P		**Pn**	**20 57 15.3**	**+1.4**
AMAG				S		**Sn**	**20 57 57.8**	**-3.3**
HNKL	**Nakhl**	**4.67**	**184**	P		**Pn**	**20 57 24.0**	**+1.6**

ISCJB ***18*** *21:31:16.2±2.7, 3412N±005×9498E±007, h2km±18km, mb3.7/8, Error ellipse: s-maj=10.1km s-min=6.7km az=29.8*
IDC ***18*** *21:31:18.2±1.2, 3405N×9500E, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.4/23, mbtmp3.4/7, ML3.2/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/21, Error ellipse: s-maj=66.0km s-min=19.9km az=62.0*
BJI ***18*** *21:31:19.1, 3445N×9487E, h16km, mb4.3, ML3.0*
NEIC ***18*** *21:31:20.0±4.3, 3409N×9494E, h15km±29km, mb4.2/4, Error ellipse: s-maj=11.0km s-min=7.3km az=60.0*
MOS ***18*** *21:31:20.6±0.8, 3407N×9495E, h33km, mb4.1/4, Error ellipse: s-maj=18.2km s-min=10.5km az=108.2*
ISC 18 21:31:19.2±3.0, 3415N±005×9502E±007, h8km±20km, n37, σ0§94/38, mb3.7/8, 1C, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LSA	**Lhasa**	**5.53**	**218**	P		**Pn**	**21 32 46.0**	**+4.3**
LSA	**Lhasa**	**5.53**	**218**	Pn		**Pn**	**21 32 41.5**	**-0.1**
	16nm,0.9s							
LSA				*e*Sn		**Sn**	**21 33 45.5**	**+0.2**
LSA	**Lhasa**	**5.53**	**218**	P		**Pn**	**21 32 41.5**	**-0.2**
LSA				*e*			21 33 45.5	
LSA				pmax		pmax		
	comp=Z,16nm,0.9s							
GTA	**Gaotai**	**6.51**	**35**	*i* P		**Pn**	**21 32 53.9**	**-1.2**
TAPN	**Taplejung**	**9.24**	**225**	*e*P		**Pn**	**21 33 36.3**	**+3.6**
	comp=Z,2.9nm,0.4s							
ODAN	**Odare**	**9.80**	**224**	*e*P		**Pn**	**21 33 43.9**	**+3.5**
	comp=Z,5.4nm,0.4s							
JIRN	**Jiri**	**9.97**	**232**	*e*P		**Pn**	**21 33 43.7**	**+1.1**
	comp=Z,3.9nm,0.4s							
GUN	**Gumba**	**10.01**	**234**	*e*P		**Pn**	**21 33 43.4**	**+0.2**
	comp=Z,10nm,0.5s							
KKN	**Kakani**	**10.49**	**235**	*e*P		**Pn**	**21 33 50.0**	**+0.2**
	comp=Z,8.9nm,0.8s							
PKI	**Pulchoki**	**10.54**	**234**	*e*P		**Pn**	**21 33 50.8**	**+0.3**
	comp=Z,17nm,0.7s							
PKIN	**Phulchoki**	**10.55**	**234**	*e*P		**Pn**	**21 33 50.9**	**+0.3**
	comp=Z,12nm,0.6s							
DMN	**Daman**	**10.72**	**235**	*e*P		**Pn**	**21 33 52.8**	**-0.2**
	comp=Z,5.8nm,0.5s							
DANN	**Dangsing**	**11.23**	**242**	*e*P		**Pn**	**21 33 59.4**	**-0.6**
	comp=Z,10nm,0.9s							
PYUN	**Piuthan**	**11.94**	**243**	*e*P		**Pn**	**21 34 08.6**	**-1.0**
	comp=Z,6.5nm,0.9s							
MK31	**Makanchi Array**	**15.89**	**326**	*e*Pn		**Pn**	**21 35 03.8**	**+0.9**
MKAR	**Makanchi Array**	**15.89**	**326**	Pn		**Pn**	**21 35 01.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=3.3							
CMAR	**Chiang Mai Arr**	**16.02**	**166**	Pn		**Pn**	**21 35 04.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=5.3							
SONM	**Songino Array**	**16.12**	**29**	Pn		**Pn**	**21 35 07.2**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=6.2							
EKS2	**Erkin-Say**	**18.66**	**303**	*e*P		**Pn**	**21 35 36.1**	**-1.5**
	comp=Z,0.5nm,0.4s							
KURK	**Kurchatov**	**20.43**	**329**	P		**P**	**21 35 57.1**	**+0.4**
ZALV	**Zalesovo Beam**	**21.06**	**343**	P		**P**	**21 36 05.5**	**+2.0**
	comp=Z,0.3nm,0.4s,mb3.0,baz=145,slow=11,SNR=3.1							
ZALV				LR		LR	21 44 46.8	
	comp=Z,15nm,18.5s,baz=294,slow=38							
KBL	**Kabul**	**21.44**	**278**	*e*P		**P**	**21 36 06.3**	**-1.4**
	comp=Z,4.6nm,0.8s,mb3.9							
KBL	**Kabul**	**21.44**	**278**	*e*P		**P**	**21 36 06.3**	**-1.4**
KBL				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb3.9							
YHNB	**Yeheng**	**24.77**	**105**	*e*P		**P**	**21 36 41.0**	**-0.4**
BVAR	**Borovoye Array**	**25.75**	**325**	P		**P**	**21 36 50.4**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.2,baz=120,slow=8.5,SNR=3.5							
BRVK	**Borovoye**	**25.82**	**325**	*e*P		**P**	**21 36 51.0**	**+0.4**
	comp=Z,2.2nm,0.8s,mb3.7							
BRVK	**Borovoye**	**25.82**	**325**	*e*P		**P**	**21 36 51.0**	**+0.4**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb3.7							
MAJO	**Matsushiro**	**35.09**	**73**	P		**P**	**21 38 13.0**	**+0.2**
KIV	**Kislovodsk**	**41.19**	**300**	P		**P**	**21 39 04.7**	**+0.6**
PSZ	**Piszkesteto**	**56.17**	**308**	P		**P**	**21 40 57.6**	**-1.7**
WLF	**Walferdange**	**64.19**	**314**	*e*P		**P**	**21 41 54.8**	**+0.6**
	comp=Z,4.0nm,0.6s,mb4.6							
WLF	**Walferdange**	**64.19**	**314**	*e*P		**P**	**21 41 54.8**	**+0.7**
WLF				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
WRAB	**Tennant Creek**	**65.53**	**139**	*e*P		**P**	**21 42 02.7**	**-0.5**
	comp=Z,3.3nm,1.0s,mb4.3							
WRAB	**Tennant Creek**	**65.53**	**139**	*e*P		**P**	**21 42 02.7**	**-0.5**
WRAB				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.3							
WRA	**Warramunga Arr**	**65.54**	**139**	P		**P**	**21 42 02.4**	**-0.8**
	comp=Z,0.2nm,0.5s,mb3.4,baz=336,slow=6.8,SNR=5.2							
ASAR	**Alice Springs**	**68.36**	**142**	P		**P**	**21 42 21.8**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.7,baz=326,slow=6.6,SNR=5.9							
ASAR	**Alice Springs**	**68.36**	**142**	P		**P**	**21 42

ISC 18 21:45:43.9±0.8, 5342N±008×15792W±006, h35km, n25, σ1°22/34, mb3.9/7, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**2.45**	**323**	P	**Pn**	**21 46 20.8**	**-0.4**
SDPT				S	**Sn**	**21 46 50.9**	**+1.0**
FALS	**False Pass**	**3.54**	**296**	P	**Pn**	**21 46 36.0**	**-0.2**
FALS				S	**Sn**	**21 47 17.5**	**+0.7**
OHAK	**Old Harbor**	**4.64**	**33**	P	**Pn**	**21 46 50.1**	**-1.2**
AKLV	**Akutan Long Va**	**4.82**	**282**	P	**Pn**	**21 46 53.9**	**+0.1**
AKLV				S	**Sn**	**21 47 46.2**	**-2.2**
AKGG	**Akutan Green G**	**4.85**	**283**	P	**Pn**	**21 46 54.4**	**+0.2**
UNV	**Unalaska Valle**	**5.12**	**278**	P	**Pn**	**21 46 57.2**	**-0.9**
UNV				S	**Sn**	**21 47 53.1**	**-2.8**
KDAK	**Kodiak Island**	**5.32**	**33**	Pn	**Pn**	**21 47 13.3**	**+13**
KDAK	7.1nm,0.3s,baz=220,slow=9.6,SNR=48			Sn	**Sn**	**21 48 09.6**	**+9.0**
	4.9nm,0.3s,baz=283,slow=9.8,SNR=9.9						
SEW	**Seward**	**8.15**	**31**	*e*Pn	**Pn**	**21 47 37.8**	**-1.8**
SEW				*e*Sn	**Sn**	**21 49 01.9**	**-8.4**
SLKM	**Skilak Lake**	**8.25**	**28**	*e*Pn	**Pn**	**21 47 39.6**	**-1.2**
SLKM				*e*Sn	**Sn**	**21 49 06.0**	**-6.8**
RC01	**Rabbit Creek A**	**8.87**	**27**	P	**Pn**	**21 47 48.6**	**-0.7**
EYAK	**Cordova Ski Ar**	**9.74**	**38**	P	**Pn**	**21 48 01.3**	**0.0**
PNL	**Peninsula**	**11.96**	**51**	P	**Pn**	**21 48 30.0**	**-1.6**
	150nm,0.4s						
EGAK	**Eagle**	**14.21**	**30**	*e*Pn	**Pn**	**21 49 02.8**	**+0.5**
	3.8nm,0.6s						
EGAK				Sn	**Sn**	**21 51 40.0**	**+1.6**
DAWY	**Dawson**	**14.30**	**34**	*e*Pn	**Pn**	**21 49 04.0**	**+0.6**
DLBC	**Dease Lake**	**16.35**	**61**	Pn	**Pn**	**21 49 29.0**	**-1.3**
	0.4nm,0.3s,baz=252,slow=18,SNR=4.1						
DLBC				LR	LR	21 55 53.5	
	comp=Z,53nm,18.7s,baz=279,slow=38						
DLBC	**Dease Lake**	**16.35**	**61**	Pn	**Pn**	**21 49 29.0**	**-1.3**
DLBC				LR	LR	21 55 53.5	
INK	**Inuvik**	**18.86**	**28**	*e*P	**Pn**	**21 50 01.0**	**-0.3**
	614nm,1.4s						
YKA	**Yellowknife Ar**	**24.26**	**51**	P	**P**	**21 50 58.7**	**+1.5**
	1.4nm,0.6s,mb3.6,baz=266,slow=7.0,SNR=5.1						
YKA	**Yellowknife Ar**	**24.26**	**51**	P	**P**	**21 50 58.7**	**+1.5**
PETK	**Petropavlovsk-**	**26.23**	**287**	P	**P**	**21 51 17.7**	**+2.6**
	2.4nm,0.8s,mb3.8,baz=82,slow=14,SNR=3.5						
TXAR	**Lajitas Array**	**45.91**	**99**	P	**P**	**21 54 03.3**	**+0.4**
	0.5nm,0.7s,mb3.5,baz=306,slow=4.6,SNR=9.0						
BJI	**Beijing**	**56.90**	**294**	P	**P**	**21 55 26.3**	**+1.3**
BJI				S	**S**	**22 03 20.8**	**+4.7**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.8						
BJI				AMB	AMB		
	comp=Z,112nm,3.6s						
BJI				LR	LR		
	comp=N,358nm,25.8s						
BJI				LR	LR		
	comp=E,305nm,25.3s						
KMI	**Kunming**	**75.51**	**293**	P	**P**	**21 57 28.0**	**+3.5**
KMI				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.2						
AKASG	**Malin Array Be**	**76.08**	**355**	P	**P**	**21 57 28.1**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.8,baz=354,slow=4.2,SNR=2.9						
GERES	**GERESS Array B**	**77.87**	**6**	P	**P**	**21 57 38.6**	**+1.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=355,slow=3.4,SNR=2.7						

*IDC **18** 21:52:35.0±0.9, 136S×134.24E, h0km, mb4.0/7, mb1 4.3/10, mb1mx4.2/16, mbtmp4.2/10, ML4.5/3, MS3.7/3, Ms1 3.7/3, ms1mx3.1/23, Error ellipse: s-maj=40.4km s-min=16.2km az=72.0*

*ISCJB **18** 21:52:35.1±2.8, 133S±006×134.36E±008, h17km±20km, mb4.2/15, MS3.7/3, Error ellipse: s-maj=15.3km s-min=7.4km az=154.0*

*NEIC **18** 21:52:37.9±3.0, 130S×134.39E, h24km±22km, mb4.3/8, Error ellipse: s-maj=13.3km s-min=6.0km az=57.0*

NEIC Felt [II] at Ransiki.

*BJI **18** 21:52:37.0, 124S×134.47E, h28km, mB5.4, mb4.5*

ISC 18 21:52:37.9±3.6, 135S±007×134.35E±009, h23km±26km, n41, σ0°92/39, mb4.2/15, MS3.7/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**12.10**	**314**	*e*Pn	**Pn**	**21 55 29.2**	**+0.1**
BATI	**Baumata**	**13.79**	**230**	Pn	**Pn**	**21 55 50.7**	**-1.4**
	1.6nm,0.3s,baz=49,slow=9.3,SNR=2.5						
KAPI	**Kappang**	**15.02**	**256**	Pn	**Pn**	**21 56 07.9**	**-1.0**
	1.6nm,0.3s,baz=72,slow=14,SNR=5.7						
COEN	**Coen**	**15.27**	**146**	*e*P	**Pn**	**21 56 12.2**	**0.0**
	13nm,1.0s						
WRAB	**Tennant Creek**	**18.47**	**180**	*e*P	**Pn**	**21 56 52.9**	**+0.4**
	15nm,0.6s						
WRAB				*e*S	**Sn**	**22 00 09.5**	**-8.9**
WB2	**Warramunga Arr**	**18.48**	**180**	*e*P	**Pn**	**21 56 52.5**	**-0.1**
WRA	**Warramunga Arr**	**18.48**	**180**	P	**Pn**	**21 56 52.6**	**0.0**
	2.2nm,0.3s,baz=359,slow=11,SNR=77						
WRA				S	**Sn**	**22 00 07.3**	**-11**
	0.2nm,0.3s,baz=359,slow=23,SNR=5.0						
KKM	**Kota Kinabalu**	**19.54**	**292**	P	**Pn**	**21 57 06.9**	**+1.5**
CTAO	**Charters Tower**	**21.97**	**149**	*e*P	**P**	**21 57 32.0**	**+1.7**
	5.3nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**22.19**	**181**	P	**P**	**21 57 32.9**	**+0.2**
	14nm,0.8s,mb4.5,baz=7.4,slow=12,SNR=119						
ASAR				S	**S**	**22 01 30.3**	**-5.8**
	2.1nm,0.9s,baz=357,slow=14,SNR=4.8						
KSM	**Kuching**	**24.20**	**277**	*e*P	**P**	**21 57 52.8**	**-0.2**
MBWA	**Marble Bar**	**24.31**	**215**	*e*P	**P**	**21 57 54.4**	**+0.5**
HNR	**Honiara**	**26.70**	**106**	*e*P	**P**	**21 58 14.7**	**-1.1**
YHNB	**Yeheng**	**28.76**	**335**	P	**P**	**21 58 31.9**	**-2.1**
STKA	**Stephens Creek**	**31.13**	**168**	P	**P**	**21 58 54.6**	**-0.3**
	2.7nm,0.6s,mb4.2,baz=339,slow=12,SNR=7.1						
STKA				LR	LR	22 13 08.4	
	comp=Z,216nm,19.1s,MS3.8,baz=209,slow=40						
STKA	**Stephens Creek**	**31.13**	**168**	*e*P	**P**	**21 58 54.5**	**-0.3**
	3.5nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**37.87**	**5**	LR	LR	22 12 13.6	
	comp=Z,100nm,19.6s,MS3.6,baz=185,slow=31						
CMAR	**Chiang Mai Arr**	**39.99**	**301**	P	**P**	**22 00 11.6**	**+0.4**
	1.2nm,0.8s,mb3.7,baz=120,slow=6.4,SNR=9.5						
CHTO	**Chiang Mai**	**40.15**	**302**	*e*P	**P**	**22 00 12.1**	**-0.4**
	3.8nm,0.8s,mb4.2						
XAN	**Xi'an**	**42.54**	**328**	P	**P**	**22 00 32.0**	**+0.1**
XAN				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.3						
TAU	**Tasmania Unive**	**42.98**	**166**	*e*P	**P**	**22 00 35.4**	**0.0**
LZH	**Lanzhou**	**46.84**	**326**	*e*P	**P**	**22 01 08.0**	**+1.8**
LZH				AP	pP	22 01 13.5	+0.2
LZH				XP	sP	22 01 16.0	-0.1
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,180nm,5.0s						
GTA	**Gaotai**	**51.44**	**326**	*e*P	**P**	**22 01 42.8**	**+1.4**
GTA				AP	pP	22 01 52.4	+3.9
GTA				XP	sP	22 01 56.6	+5.3
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.4						
LSA	**Lhasa**	**51.49**	**310**	*e*P	**P**	**22 01 42.9**	**+0.9**
	comp=Z,3.4nm,0.7s,mb4.4						
LSA				*e*		22 01 51.7	
SONM	**Songino Array**	**54.71**	**337**	P	**P**	**22 02 06.3**	**+1.0**
	comp=Z,1.8nm,0.7s,mb4.2,baz=153,slow=7.5,SNR=13						
SONM				LR	LR	22 25 02.1	
	comp=Z,43nm,18.4s,MS3.6,baz=137,slow=36						
MK31	**Makanchi Array**	**66.08**	**324**	*e*P	**P**	**22 03 23.7**	**+0.6**
MKAR	**Makanchi Array**	**66.08**	**324**	P	**P**	**22 03 23.8**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.3,baz=113,slow=8.2,SNR=14						
MKAR	**Makanchi Array**	**66.08**	**324**	P	**P**	**22 03 23.8**	**+0.7**
ZALV	**Zalesovo Beam**	**68.61**	**331**	P	**P**	**22 03 37.8**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.7,baz=120,slow=7.4,SNR=4.4						
EKS2	**Erkin-Say**	**69.72**	**317**	*e*P	**P**	**22 03 45.9**	**-0.2**
KURK	**Kurchatov**	**70.13**	**326**	*e*P	**P**	**22 03 47.4**	**-1.0**
	comp=Z,6.5nm,1.3s,mb4.4						
BRVK	**Borovoye**	**75.80**	**326**	*e*P	**P**	**22 04 21.7**	**-0.2**
	comp=Z,4.9nm,1.0s,mb4.4						
VNDA	**Vanda**	**77.55**	**174**	P	**P**	**22 04 32.2**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=331,slow=5.0,SNR=2.9						
VNDA	**Vanda**	**77.55**	**174**	P	**P**	**22 04 32.2**	**+0.8**
MAW	**Mawson**	**81.76**	**202**	*e*P	**P**	**22 04 53.9**	**-0.6**
ARU	**Arti**	**83.28**	**327**	P	**P**	**22 05 01.3**	**-1.3**
MCK	**McKinley**	**85.34**	**26**	P	**P**	**22 05 11.6**	**-1.3**
SUR	**Sutherland**	**108.99**	**235**	PKiKP	PKiKP	22 11 06.7	+0.4
MSU	**Marysvale**	**109.08**	**50**	PKiKP	PKiKP	22 11 07.4	+1.1
TORD	**Torodi Ar. Bea**	**131.69**	**286**	PKP	PKPdf	22 11 49.8	-0.2
	comp=Z,0.2nm,0.5s,baz=87,slow=2.2,SNR=3.9						
LPAZ	**La Paz**	**151.72**	**129**	PKPbc	PKPbc	22 12 35.2	+3.5
	comp=Z,0.6nm,0.5s,baz=204,slow=2.3,SNR=4.2						

IDC 18 22:01:24.9±57.0, 1651S×17435W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/17, mbtmp4.0/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/30, Error ellipse: s-maj=1078.0km s-min=190.6km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.52**	**258**	LR	LR	22 22 02.1	
	comp=Z,38nm,19.6s,baz=232,slow=33						
STKA	**Stephens Creek**	**42.70**	**241**	P	P	22 09 23.8	0.0
	1.0nm,0.5s,baz=96,slow=8.3,SNR=3.4						
WRA	**Warramunga Arr**	**48.71**	**258**	P	P	22 10 11.3	-0.2
	0.5nm,0.5s,baz=94,slow=7.4,SNR=16						
ASAR	**Alice Springs**	**48.91**	**253**	P	P	22 10 13.0	0.0
	4.4nm,0.5s,baz=88,slow=8.2,SNR=61						
CFAA	**Coronel Fontan**	**94.58**	**125**	LR	LR	22 48 46.3	
	comp=Z,6.3nm,21.1s,baz=303,slow=30						

IDC 18 22:22:49.4±10.0, 1223S×16775E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, MS3.0/2, Ms1 3.0/2, ms1mx2.6/22, Error ellipse: s-maj=325.1km s-min=58.6km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.15**	**289**	LR	LR	22 27 09.2	
	comp=Z,71nm,21.7s,baz=167,slow=32						
WRA	**Warramunga Arr**	**32.96**	**252**	P	P	22 29 26.0	-0.2
	0.9nm,0.9s,baz=84,slow=9.5,SNR=4.8						
WRA				LR	LR	22 41 08.1	
	comp=Z,40nm,19.7s,baz=180,slow=33						
ASAR	**Alice Springs**	**34.06**	**246**	P	P	22 29 36.0	+0.2
	0.5nm,0.7s,baz=72,slow=9.0,SNR=6.3						
MKAR	**Makanchi Array**	**95.72**	**316**	P	P	22 36 17.2	-0.1
	1.0nm,0.3s,baz=95,slow=6.1,SNR=4.0						
USHA	**Ushuaia**	**98.23**	**151**	LR	LR	23 11 12.9	
	comp=Z,270nm,18.2s,baz=54,slow=30						

*IDC **18** 22:42:12.0±0.7, 2730S×6333W, h558km±7km, mb3.7/10, mb1 3.8/16, mb1mx3.7/21, mbtmp3.8/16, Error ellipse: s-maj=13.5km s-min=12.4km az=43.0*

*ISCJB **18** 22:42:12.1±0.5, 2733S±004×6333W±007, h573km±6km, mb4.2/23, Error ellipse: s-maj=9.2km s-min=6.7km az=166.6*

*NEIC **18** 22:42:12.2±0.5, 2734S×6331W, h562km±5km, mb4.3/18, Error ellipse: s-maj=8.7km s-min=6.8km az=56.0*

*BJI **18** 22:42:14.2, 2730S×6330W, h561km, mB4.2*

ISC 18 22:42:12.2±0.5, 2729S±004×6330W±006, h556km±6km, n107, σ0°93/86, mb4.1/23, 2C, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**6.08**	**224**	P	**P**	**22 43 52.5**	**+0.8**
	5.3nm,0.3s,baz=44,slow=9.1,SNR=499						
CFAA				S	**S**	**22 45 13.1**	**-0.2**
	0.6nm,0.3s,baz=214,slow=16,SNR=17						
LCO	**Las Campanas**	**6.76**	**254**	*e*P	**P**	**22 43 58.4**	**+0.4**
	44nm,0.8s						
LCO				*e*S	**S**	**22 45 24.8**	**+0.1**
LVC	**Limon Verde**	**6.90**	**311**	P	**P**	**22 44 00.1**	**+0.6**
	28nm,0.3s,baz=132,slow=5.9,SNR=214						
LVC				S	**S**	**22 45 25.7**	**-1.7**
	9.3nm,0.3s,baz=204,slow=4.9,SNR=5.6						
LVC	**Limon Verde**	**6.90**	**311**	*e*P	**P**	**22 44 00.3**	**+0.8**
LVC				*e*S	**S**	**22 45 20.0**	**-7.3**
SIV	**San Ignacio**	**11.43**	**11**	P	**P**	**22 44 45.3**	**+0.2**
	2.1nm,0.3s,baz=202,slow=9.3,SNR=189						
SIV				S	**S**	**22 46 50.7**	**+0.1**
	baz=184,slow=18						
LPAZ	**La Paz**	**11.83**	**337**	P	**P**	**22 44 49.6**	**+0.5**
	2.7nm,0.3s,baz=142,slow=5.8,SNR=77						
LPAZ				S	**S**	**22 46 55.6**	**-2.5**
	0.3nm,0.3s,baz=301,slow=23,SNR=7.6						
LPAZ	**La Paz**	**11.83**	**337**	*e*P	**P**	**22 44 49.7**	**+0.6**
	9.8nm,0.5s						
LPAZ				*e*S	**S**	**22 46 55.6**	**-2.5**
PLCA	**Paso Flores**	**14.69**	**202**	P	**P**	**22 45 16.5**	**-1.6**
	1.1nm,0.3s,baz=14,slow=11,SNR=27						
PLCA	**Paso Flores**	**14.69**	**202**	*e*P	**P**	**22 45 16.7**	**-1.4**
	10nm,0.9s						
SPB	**Sao Paulo**	**14.80**	**79**	*e*P	**P**	**22 45 20.6**	**+1.1**
BDFB	**Brasilia**	**18.33**	**54**	P	**P**	**22 45 53.5**	**+0.6**
	3.3nm,0.3s,baz=227,slow=15,SNR=60						
BDFB	**Brasilia**	**18.33**	**54**	*e*P	**P**	**22 45 53.4**	**+0.6**
OTAV	**Otavalo**	**31.00**	**330**	*e*P	**P**	**22 47 47.3**	**+2.2**
RCBR	**Riachuelo**	**33.69**	**56**	*e*P	**P**	**22 48 08.4**	**+0.6**
	18nm,0.9s,mb4.6						
ROSC	**El Rosal**	**33.69**	**340**	P	**P**	**22 48 08.2**	**+0.4**
	5.7nm,0.5s,mb4.3,baz=98,slow=19,SNR=5.0						
ROSC	**El Rosal**	**33.69**	**340**	*e*P	**P**	**22 48 08.2**	**+0.4**
PMSA	**Palmer Station**	**37.50**	**181**	P	**P**	**22 48 37.5**	**-1.1**
MTP	**Monte Pirata**	**45.17**	**357**	P	**P**	**22 49 37.4**	**-2.5**
SJG	**San Juan**	**45.21**	**356**	*e*P	**P**	**22 49 40.4**	**+0.2**
VNA3	**Neumayer Olymp**	**52.97**	**161**	*e*P	**P**	**22 50 38.2**	**+1.5**
VNA3				*e*		22 50 47.6	
VNA2	**Neumayer--Watz**	**53.51**	**160**	*e*P	**P**	**22 50 41.1**	**+0.6**
	baz=297,slow=7.3						
VNA2				*e*		22 50 50.5	
SNAA	**Sanae**	**55.15**	**160**	*e*P	**P**	**22 50 50.6**	**-1.4**
BBSR	**BB Station**	**59.34**	**359**	*e*P	**P**	**22 51 20.9**	**-0.2**
NHSC	**New Hope**	**62.17**	**344**	*e*P	**P**	**22 51 40.3**	**+0.7**
	49nm,1.1s,mb4.8						
TKL	**Tuckaleechee C**	**65.52**	**342**	*e*P	**P**	**22 51 59.7**	**-1.2**
CPCT	**Cooper Cave**	**65.54**	**341**	*e*P	**P**	**22 52 00.4**	**-0.7**
SWET	**Sewanee**	**65.75**	**340**	*e*P	**P**	**22 52 01.5**	**-0.8**
DBIC	**Dimbokro**	**65.79**	**68**	P	**P**	**22 52 02.6**	**-0.5**
	8.4nm,0.6s,mb4.4,baz=221,slow=7.5,SNR=24						
DBIC	**Dimbokro**	**65.79**	**68**	*e*P	**P**	**22 52 02.6**	**-0.5**
	7.5nm,0.6s,mb4.4						
ELN	**Prospectdale**	**66.24**	**345**	*e*P	**P**	**22 52 05.9**	**+0.6**
OXF	**Oxford**	**66.25**	**337**	*e*P	**P**	**22 52 04.6**	**-0.9**
WVT	**Waverly**	**67.19**	**339**	*e*P	**P**	**22 52 10.0**	**-1.2**
	9.1nm,0.6s,mb4.5						
JCT	**Junction City**	**67.21**	**326**	*e*P	**P**	**22 52 11.6**	**+0.2**
	10.0nm,0.6s,mb4.5						
MIAR	**Mount Ida**	**67.85**	**333**	*e*P	**P**	**22 52 15.3**	**0.0**
TXAR	**Lajitas Array**	**68.30**	**323**	P	**P**	**22 52 18.1**	**0.0**
	1.2nm,0.5s,mb3.7,baz=150,slow=8.2,SNR=17						
PARMO	**Parma**	**68.31**	**337**	*e*P	**P**	**22 52 17.5**	**-0.5**
BRNJ	**Basking Ridge**	**68.43**	**351**	*e*P	**P**	**22 52 17.9**	**-0.7**
WCI	**Wyandotte Cave**	**68.64**	**341**	*e*P	**P**	**22 52 18.5**	**-1.5**
SIUC	**Southern Illin**	**69.08**	**338**	*e*P	**P**	**22 52 21.7**	**-0.9**
	14nm,0.6s,mb4.7						
SYO	**Syowa Base**	**69.28**	**158**	↑*e*P	**P**	**22 52 22.2**	**-1.2**
SYO	**Syowa Base**	**69.28**	**158**	↑pP	pP	22 54 17.4	+0.2
ACSO	**Alum Creek Sta**	**69.63**	**344**	*e*P	**P**	**22 52 25.3**	**-0.5**
FVM	**French Village**	**69.73**	**337**	*e*P	**P**	**22 52 25.8**	**-0.8**
WMOK	**Wichita Mounta**	**70.24**	**329**	*e*P	**P**	**22 52 29.8**	**+0.2**
SBA	**Scott Base**	**71.06**	**190**	*e*P	**P**	**22 52 40.7**	**+6.8**
SUR	**Sutherland**	**71.32**	**117**	P	**P**	**22 52 37.3**	**+1.1**
VNDA	**Vanda**	**72.03**	**189**	*e*P	**P**	**22 52 35.4**	**-4.1**
KSU1	**Kansas State U**	**73.01**	**333**	*e*P	**P**	**22 52 45.2**	**-0.4**
TSUM	**Tsumeb**	**73.60**	**103**	*e*P	**P**	**22 52 48.2**	**-1.3**
CBKS	**Cedar Bluff**	**74.06**	**331**	*e*P	**P**	**22 52 52.3**	**+0.7**
ANMO	**Albuquerque**	**74.14**	**324**	*e*P	**P**	**22 52 53.1**	**+0.9**
	6.8nm,1.3s,mb3.9						
TOA0	**Torodi Ar. Sit**	**74.73**	**66**	*e*P	**P**	**22 52 55.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**74.73**	**66**	P	**P**	**22 52 55.1**	**-0.8**
	12nm,0.7s,mb4.5,baz=275,slow=6.0,SNR=166						
TORD				pP	pP	22 54 53.6	+1.5
	1.3nm,0.8s,baz=247,slow=5.2,SNR=4.7						
SDCO	**Great Sand Dun**	**75.84**	**327**	*e*P	**P**	**22 53 02.7**	**+1.1**
	5.3nm,1.3s,mb3.8						
BOSA	**Boshof**	**76.29**	**115**	P	**P**	**22 53 04.0**	**-0.5**
	3.7nm,0.6s,mb4.0,baz=209,slow=3.8,SNR=11						
ISCO	**Idaho Springs**	**77.51**	**328**	*e*P	**P**	**22 53 11.9**	**+1.2**
PV01	**Paradox Valley**	**77.67**	**325**	P	**P**	**22 53 11.8**	**+0.2**
SMCO	**Snowmass**	**77.68**	**327**	*e*P	**P**	**22 53 13.3**	**+1.7**
LBTB	**Lobatse**	**78.03**	**112**	*e*P	**P**	**22 53 13.9**	**-0.1**
	5.4nm,0.8s,mb3.9						
SRU	**San Rafael**	**79.41**	**324**	*e*P	**P**	**22 53 21.9**	**+1.0**
CCUT	**Cedar City**	**79.79**	**322**	*e*P	**P**	**22 53 23.8**	**+0.9**
MSU	**Marysvale**	**79.84**	**323**	*e*P	**P**	**22 53 24.7**	**+1.6**
RSSD	**Black Hills**	**80.25**	**332**	*e*P	**P**	**22 53 25.5**	**+0.4**
	2.6nm,0.6s,mb3.7						
JLU	**Jordanelle**	**81.00**	**325**	*e*P	**P**	**22 53 30.4**	**+1.3**
PDAR	**Pinedale Array**	**81.69**	**327**	P	**P**	**22 53 32.8**	**+0.2**
	3.0nm,0.7s,mb3.8,baz=131,slow=8.6,SNR=21						
HWUT	**Hardware Ranch**	**81.80**	**326**	*e*P	**P**	**22 53 33.4**	**+0.2**
	4.6nm,0.7s,mb4.0						
SCHQ	**Schefferville**	**81.84**	**358**	P	**P**	**22 53 31.5**	**-1.5**
	7.9nm,0.7s,mb4.3,baz=208,slow=7.8,SNR=7.0						
SCHQ	**Schefferville**	**81.84**	**358**	*e*P	**P**	**22 53 32.7**	**-0.3**
	6.3nm,0.5s,mb4.3						
ULM	**Lac du Bonnet**	**82.43**	**340**	P	**P**	**22 53 34.8**	**-1.3**
	6.5nm,0.7s,mb4.2,baz=150,slow=5.8,SNR=3.7						
MTUM	**Tungsten Hills**	**82.61**	**319**	*e*P	**P**	**22 53 31.9**	**-5.5**
TAM	**Tamanrasset**	**83.05**	**60**	*e*P	**P**	**22 53 40.2**	**+0.3**
NVAR	**Mina Array Bea**	**83.19**	**320**	P	**P**	**22 53 41.0**	**+0.7**
	1.0nm,0.8s,mb3.4,baz=128,slow=3.6,SNR=6.8						
LSZ	**Lusaka**	**84.43**	**104**	*e*P	**P**	**22 53 47.9**	**+0.9**
	3.0nm,0.7s,mb3.9						
HLID	**Hailey**	**84.67**	**325**	*e*P	**P**	**22 53 48.7**	**+1.3**
	9.3nm,1.1s,mb4.2						
MCMT	**McKenzie Canyo**	**84.81**	**327**	P	**P**	**22 53 47.5**	**-0.5**
CHMT	**Chamberlain Mo**	**86.53**	**328**	*e*P	**P**	**22 53 56.7**	**+0.5**
ESDC	**Sonseca Array**	**86.54**	**42**	P	**P**	**22 53 56.7**	**+0.2**
	1.1nm,0.6s,mb3.6,baz=239,slow=4.3,SNR=9.4						
ESLA	**Sonseca Array**	**86.54**	**42**	*e*P	**P**	**22 53 56.3**	**-0.2**
WALA	**Waterton Lakes**	**88.39**	**329**	*e*P	**P**	**22 54 04.7**	**-0.2**
	4.5nm,0.7s,mb4.3						
NEW	**Newport**	**89.33**	**327**	*e*P	**P**	**22 54 08.9**	**-0.3**
SUMG	**Summit**	**101.04**	**7**	*e*Pdif	Pdif	22 55 03.4	+0.8
DLBC	**Dease Lake**	**101.71**	**330**	*e*Pdif	Pdif	22 55 02.5	-3.0
INK	**Inuvik**	**108.14**	**338**	PKiKP	PKiKP	22 59 36.4	+0.1
ASAR	**Alice Springs**	**126.69**	**200**	PKP	PKPdf	23 00 12.4	-0.9
	1.1nm,0.6s,baz=134,slow=1.8,SNR=15						
ASAR				pPKP	pPKPdf	23 02 21.6	-1.6
	0.4nm,0.8s,baz=141,slow=3.1,SNR=3.1						
WRA	**Warramunga Arr**	**130.04**	**202**	PKP	PKPdf	23 00 18.9	-0.8
	0.5nm,0.4s,baz=167,slow=1.8,SNR=9.3						
WRA				pPKP	pPKPdf	23 02 29.8	+0.2
	1.0nm,0.9s,baz=158,slow=1.4,SNR=3.2						
WRA				SKPbc	SKPbc	23 02 48.9	-2.1
	1.9nm,0.5s,baz=162,slow=3.4,SNR=11						
WRAB	**Tennant Creek**	**130.04**	**202**	*e*PKPdf	PKPdf	23 00 18.9	-0.8
KURK	**Kurchatov**	**142.88**	**41**	*e*PKPdf	PKPdf	23 00 40.1	-2.2
TKM2	**Tokmak 2**	**143.33**	**54**	*e*PKP	PKPdf	23 00 42.2	-1.2
HYB	**Hyderabad**	**143.50**	**98**	*i*PKP	PKPdf	23 00 44.0	-0.4
ZAO	**Zalesovo Array**	**144.54**	**33**	*e*PKPdf	PKPdf	23 00 45.0	-0.1
ZALV	**Zalesovo Beam**	**144.54**	**33**	PKP	PKPdf	23 00 45.1	0.0
	15nm,0.7s,baz=304,slow=3.4,SNR=60						
ZALV				SKPbc	SKPbc	23 03 32.2	+0.2
	0.4nm,0.4s,baz=336,slow=3.3,SNR=4.1						
MK31	**Makanchi Array**	**146.70**	**45**	*e*PKPdf	PKPdf	23 00 49.6	+0.6
MK31				*e*PKPbc	PKPbc	23 00 51.8	+0.1
MKAR	**Makanchi Array**	**146.70**	**45**	PKP	PKPdf	23 00 49.4	+0.3
	8.6nm,0.6s,baz=236,slow=0.6,SNR=41						
MKAR				PKPbc	PKPbc	23 00 51.5	-0.2
	8.8nm,0.6s,baz=287,slow=3.6,SNR=44						
PYUN	**Piuthan**	**150.19**	**81**	*e*P	PKPdf	23 00 54.9	-0.3
	15nm,0.5s						
DANN	**Dangsing**	**150.89**	**80**	*e*P	PKPdf	23 00 56.6	+0.3
	45nm,0.8s						
WMQ	**Urumqi**	**151.41**	**47**	*e*PKP	PKPdf	23 00 57.0	+0.4
GKN	**Gorkha**	**151.63**	**81**	*e*P	PKPdf	23 00 57.3

COLD	**Coldfoot** 10nm,0.4s	**5.11**	**331**	*e*Pn	Pn	22 58 04.3	+2.6
COLD				*e*Sn	Sn	22 59 06.6	+5.7
IM3	**Indian Mountai**	**5.27**	**310**	P	Pn	22 58 06.3	+2.4
IMA2	**Indian Mountai**	**5.30**	**311**	*e*P	Pn	22 58 07.2	+2.9
IMA2				*e*Sn	Sn	22 59 06.1	+0.5
TT01	**Tatalina**	**5.54**	**276**	P	Pn	22 58 11.8	+4.1
SVW2	**Sparrevohn**	**5.79**	**257**	*e*P	Pn	22 58 16.9	+5.8
INK	**Inuvik**	**6.93**	**34**	⇑Pn	Pn	22 58 26.2	-0.5
INK				⇑Sn	Sn	22 59 39.8	-5.9
INK				⇑Sg	Sg	23 00 18.7	-8.1

*ISCJB **18** 23:22:06.9±0.8, 34S±02×108W±02, h10km, mb4.2/5, MS3.5/7, Error ellipse: s-maj=34.3km s-min=10.4km az=38.3*
*NEIC **18** 23:22:10.1±0.7, 338S×1102W, h10km, mb4.2/4, Error ellipse: s-maj=26.1km s-min=10.9km az=131.0*
*IDC **18** 23:22:18.0±21.0, 100S×1265W, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.7/22, mbtmp4.0/4, ML3.4/1, MS3.4/8, Ms1 3.5/8, ms1mx3.3/26, Error ellipse: s-maj=511.9km s-min=75.3km az=165.0*

ISC 18 23:22:10.0±0.7, 33S±01×110W±01, h10km, n24, σ1$45/18, mb4.2/5, MS3.5/7, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIC	**Lamto** 54nm,1.6s	**11.22**	**32**	*e*P		**Pn**		**23 24 50.8**	**+0.2**
KIC	**Kosan Boka** 32nm,0.8s	**11.49**	**33**	*e*P		**Pn**		**23 24 53.7**	**-0.5**
TIC	**Toumodi** 9.6nm,0.2s	**11.58**	**31**	*e*P		**Pn**		**23 24 51.8**	**-3.7**
DBIC	**Dimbokro** 0.3nm,0.3s,baz=204,slow=14,SNR=5.7	**11.69**	**32**	Pn		**Pn**		**23 24 55.3**	**-1.7**
DBIC	0.2nm,0.3s,baz=157,slow=7.7,SNR=2.0			Sn		**Sn**		**23 26 50.9**	**-17**
BBTS	**Babate** comp=Z,47nm,18.5s,baz=233,slow=34	**18.71**	**343**	LR		LR		23 31 30.6	
TOA0	**Torodi Ar. Sit**	**20.67**	**37**	*e*P		**P**		**23 26 52.9**	**+2.6**
TORD	**Torodi Ar. Bea** 5.5nm,0.7s,baz=234,slow=11,SNR=37	**20.67**	**37**	P		**P**		**23 26 52.5**	**+2.2**
TORD	comp=Z,187nm,18.1s,MS3.5,baz=240,slow=36			LR		LR		23 34 10.3	
CART	**Cartagena** 26nm,0.8s,mb4.9	**41.77**	**12**	*e*P		**P**		**23 30 00.6**	**+1.0**
MBAR	**Mbarara** 0.5nm,0.9s	**41.80**	**87**	*e*P		**P**		**23 30 01.7**	**+1.4**
KEST	**Kesra** comp=Z,48nm,18.1s,MS3.4,baz=218,slow=38	**43.29**	**24**	LR		LR		23 49 06.4	
ESLA	**Sonseca Array**	**43.29**	**8**	P		**P**		**23 30 13.7**	**+1.7**
DAVOX	**Davos/Dischmat** 1.7nm,0.8s,mb4.0,baz=204,slow=20,SNR=5.3	**53.20**	**18**	P		**P**		**23 31 26.0**	**-2.4**
GERES	**GERESS Array B** 1.1nm,0.8s,mb4.0,baz=202,slow=5.7,SNR=9.4	**56.24**	**19**	P		**P**		**23 31 48.4**	**-2.1**
MMAI	**Mount Meron Ar** comp=Z,28nm,19.8s,MS3.4,baz=160,slow=40	**56.84**	**47**	LR		LR		23 59 44.9	
LPAZ	**La Paz** comp=Z,32nm,18.2s,MS3.5,baz=73,slow=37	**57.56**	**253**	LR		LR		23 57 04.0	
LPAZ	**La Paz** 0.2nm,0.3s,mb3.6	**57.56**	**253**	*e*P		**P**		**23 32 00.1**	**-0.2**
CFAA	**Coronel Fontan** comp=Z,6.7nm,18.1s,MS2.8,baz=346,slow=33	**60.58**	**235**	LR		LR		23 55 32.0	
BBSR	**BB Station**	**62.01**	**309**	P		**P**		**23 32 31.8**	**+1.0**
EFI	**East Falkland** 48nm,1.0s	**62.05**	**211**	P		**P**		**23 32 30.4**	**-0.3**
PLCA	**Paso Flores** comp=Z,96nm,20.1s,MS4.0,baz=184,slow=31	**65.03**	**226**	LR		LR		23 56 25.1	
OTAV	**Otavalo**	**67.51**	**272**	*e*P		**P**		**23 33 07.7**	**+0.6**
PMSA	**Palmer Station** 6.3nm,0.7s,mb4.7	**71.97**	**201**	*e*P		**P**		**23 33 32.3**	**-1.2**
ARCES	**ARCESS Array B** comp=Z,61nm,18.7s,MS3.9,baz=252,slow=39	**76.82**	**12**	LR		LR		00 10 35.5	

*ISCJB **18** 23:35:34.4±0.5, 39.38N±002×2767E±003, h10km±4km, Error ellipse: s-maj=4.4km s-min=3.7km az=26.1*
*ISK **18** 23:35:34.0, 39.36N×2765E, h14km, MD3.0*
*DDA **18** 23:35:34.3, 39.36N×2774E, h6km±6km, Md3.1*
*CSEM **18** 23:35:34.1±0.1, 39.37N×2765E, h15km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.4km az=87.0*

ISC 18 23:35:34.9±0.4, 3937N±002×2767E±003, h13km±3km, n28, σ0$57/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.32**	**32**	*e*PG		**Pg**		**23 35 41.6**	**+0.3**
BALB				*e*SG		**Sg**		**23 35 46.9**	**+1.2**
AKS	**Akhisar**	**0.50**	**167**	*e*PG		**Pg**		**23 35 44.6**	**-0.2**
AKS				*e*SG		**Sg**		**23 35 51.6**	**+0.2**
AKHS	**Akhisar**	**0.51**	**167**	*i* P		**Pg**		**23 35 44.3**	**-0.4**
AKHS				*i* S		**Sg**		**23 35 51.6**	**+0.1**
DURS	**Dursunbey**	**0.67**	**70**	*i* P		**Pg**		**23 35 47.4**	**-0.4**
DURS				*i* S		**Sg**		**23 35 56.5**	**-0.1**
AYVA	**Ayvalik**	**0.76**	**266**	*i* P		**Pg**		**23 35 50.8**	**+1.3**
AYVA				*i* S		**Sg**		**23 35 59.3**	**-0.2**
DST	**Dursunbey**	**0.78**	**72**	*e*PG		**Pg**		**23 35 49.1**	**-0.9**
DST				*e*SG		**Sg**		**23 36 00.3**	**+0.1**
DEMI	**Demirci**	**0.88**	**112**	*i* P		**Pg**		**23 35 51.0**	**-0.8**
DEMI				*i* S		**Sg**		**23 36 02.8**	**-0.5**
DEMI	**Demirci**	**0.88**	**112**	*i* P		**Pg**		**23 35 51.0**	**-0.8**
DEMI				*i* S		**Sg**		**23 36 02.8**	**-0.5**
BNT	**Bandirma**	**1.00**	**11**	*e*PG		**Pg**		**23 35 54.0**	**-0.2**
KDAG	**Bornova**	**1.02**	**198**	*i* P		**Pb**		**23 35 54.0**	**-0.3**
KDAG				*i* S		**Sb**		**23 36 08.0**	**+0.5**
KCT	**Karacabey**	**1.04**	**31**	*e*PG		**Pg**		**23 35 54.7**	**-0.2**
KULA	**Kula-Manisa**	**1.16**	**137**	*e*PN		**Pn**		**23 35 56.5**	**-0.2**
LPK	**Lapseki**	**1.22**	**325**	*e*PN		**Pn**		**23 35 56.7**	**-0.9**
MRMT	**Marmara Adasi**	**1.23**	**358**	*e*PN		**Pn**		**23 35 57.5**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.37**	**344**	*e*PN		**Pn**		**23 35 58.8**	**-0.8**
ULDT	**Uludag**	**1.37**	**55**	*i* P		**Pn**		**23 36 00.1**	**+0.4**
ULDT				*i* S		**Sn**		**23 36 17.0**	**-0.7**
GDZ	**Gediz**	**1.44**	**101**	*i* P		**Pn**		**23 36 01.4**	**+0.8**
GDZ				*i* S		**Sn**		**23 36 19.4**	**+0.1**
MFT	**Murefte**	**1.45**	**348**	*e*PN		**Pn**		**23 36 00.3**	**-0.4**
GEMT	**Gemlik**	**1.58**	**47**	*e*PN		**Pn**		**23 36 02.3**	**-0.3**
GADA	**Gvkgeada**	**1.59**	**302**	*e*PN		**Pn**		**23 36 02.5**	**-0.2**
YLV	**Yalova**	**1.77**	**47**	*e*PN		**Pn**		**23 36 05.8**	**+0.5**
KHL	**Karahalli**	**1.79**	**125**	*e*PN		**Pn**		**23 36 05.7**	**+0.3**
ENEZ	**Enez**	**1.79**	**320**	*e*PN		**Pn**		**23 36 05.3**	**-0.2**
ADVT	**Abdulvahap**	**1.92**	**56**	*e*PN		**Pn**		**23 36 07.6**	**+0.4**
MLSB	**Milas**	**2.07**	**178**	*e*PN		**Pn**		**23 36 09.4**	**0.0**
GPA	**Golpazari**	**2.23**	**65**	*e*PN		**Pn**		**23 36 12.2**	**+0.6**
SHUT	**Suhut-Afyon**	**2.39**	**109**	*e*PN		**Pn**		**23 36 13.7**	**0.0**
GULT	**Gulveren**	**2.43**	**63**	*e*PN		**Pn**		**23 36 15.8**	**+1.5**

MAN 18 23:35:47, 1159N×12534E, h18km, mb3.9, ML2.7, MS2.3, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.10**	**84**	*e*P		Pg		23 35 51.4	+0.8
BESP				*e*S		Sg		23 35 56.3	+3.2
PLP	**Palo**	**0.55**	**220**	⇓*i*P		Pg		23 35 58.9	+0.9
PLP				*e*S		Sg		23 36 09.2	+3.8
MSLP	**Maasin**	**1.52**	**198**	*e*P		Pn		23 36 13.4	+0.1
MSLP				*e*S		Sn		23 36 37.7	+5.0
SCPH	**Surigao**	**1.80**	**175**	⇓*e*P		Pn		23 36 18.0	+0.8
PVCP	**Virac**	**2.31**	**330**	*e*P		Pn		23 36 24.8	+0.7

IDC 18 23:41:32.2±8.9, 1686N×14508E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=340.1km s-min=23.7km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=18,slow=8.5,SNR=3.4	**38.06**	**197**	P		P		23 48 52.5	-0.1
ASAR	**Alice Springs** 0.2nm,0.5s,baz=32,slow=8.8,SNR=3.1	**41.73**	**195**	P		P		23 49 23.2	+0.1
SONM	**Songino Array** 1.0nm,0.7s,baz=134,slow=7.0,SNR=7.8	**44.22**	**323**	P		P		23 49 44.0	+0.8
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=98,slow=7.7,SNR=8.4	**59.32**	**315**	P		P		23 51 35.3	-0.6

*JMA **18** 23:46:12.9±0.2, 4299N×14684E, h54km±4km, M4.1*
*ISCJB **18** 23:46:13.4±1.2, 4301N±006×14682E±009, h54km±8km, mb4.2/9, Error ellipse: s-maj=12.9km s-min=8.0km az=38.0*
*IDC **18** 23:46:14.8±5.8, 4293N×14701E, h60km±41km, mb3.8/6, mb1 4.0/7, mb1mx3.6/21, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=82.7km s-min=32.9km az=8.0*
*MOS **18** 23:46:14.3±1.2, 43.11N×14683E, h59km, mb4.5/8, Error ellipse: s-maj=19.6km s-min=12.4km az=127.7*
*NEIC **18** 23:46:15.2±1.5, 4291N×14696E, h62km±11km, mb4.3/3, Error ellipse: s-maj=17.4km s-min=10.0km az=138.0*

ISC 18 23:46:14.3±1.2, 4302N±006×14682E±010, h45km±9km, n42, σ0$86/53, mb4.2/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.86**	**294**	P		**Pn**		**23 46 29.5**	**-0.5**
NEM2				*e*S		**Sn**		**23 46 41.5**	**0.0**
YUK	**Yuzh-Kuril'sk**	**1.23**	**326**	*e*PN		**Pn**		**23 46 33.5**	**-1.6**
YUK				*i* S		**Sn**		**23 46 49.3**	**-1.2**
YUK	comp=N,340nm,0.3s			pmax	pmax				
YUK	comp=E,360nm,0.3s			pmax	pmax				
YUK	comp=Z,910nm,0.3s			pmax	pmax				
YUK	comp=N,3μm,0.5s			smax					
YUK	comp=E,4μm,0.5s			smax					
YUK	comp=N,5μm,1.0s			smax					
YUK	comp=E,4μm,0.8s			smax					
JRA	**Rausu**	**1.54**	**307**	P		**Pn**		**23 46 39.1**	**-0.2**
JRA				*e*S		**Sn**		**23 46 58.5**	**+0.4**
JAK	**Akkeshi**	**1.56**	**270**	P		**Pn**		**23 46 39.3**	**-0.3**
JAK				*e*S		**Sn**		**23 46 58.5**	**-0.1**
JNK	**Nakash**	**1.64**	**291**	P		**Pn**		**23 46 40.2**	**-0.4**
JNK				*e*S		**Sn**		**23 46 59.9**	**-0.5**
JOB	**Onbets**	**2.20**	**268**	P		**Pn**		**23 47 47.9**	**-0.4**
JOB				*e*S		**Sn**		**23 47 14.0**	**-0.2**
JAR	**Ashorobuto**	**2.25**	**278**	P		**Pn**		**23 46 48.9**	**-0.1**
JAR				*e*S		**Sn**		**23 47 15.9**	**+0.3**
JTKR	**Abashiri--Toko**	**2.32**	**295**	P		**Pn**		**23 46 50.6**	**+0.6**
JCH	**Churui**	**2.58**	**262**	P		**Pn**		**23 46 52.9**	**-0.6**
JCH				*e*S		**Sn**		**23 47 23.5**	**-0.1**
ERM	**Erimo**	**2.89**	**251**	*e*Pn		**Pn**		**23 46 59.1**	**+1.2**
ERM				*e*Sn		**Sn**		**23 47 29.4**	**-1.9**
JEM	**Erimo**	**2.89**	**251**	P		**Pn**		**23 46 58.9**	**+1.1**
JKK2	**Kamakawa 2**	**3.09**	**287**	P		**Pn**		**23 47 01.5**	**+1.0**
JNBK	**Urakawa-nobuka**	**3.09**	**258**	P		**Pn**		**23 47 00.0**	**-0.6**
JFR	**Furan**	**3.10**	**274**	P		**Pn**		**23 47 01.1**	**+0.4**
ASAJ	**Asahikawa** comp=E,7.0nm,0.3s,baz=97,slow=8.0,SNR=13	**3.26**	**291**	P		**Pn**		**23 47 04.9**	**+2.0**
ASAJ	comp=E,3.6nm,0.3s,baz=226,slow=29,SNR=7.7			S		**Sn**		**23 47 45.6**	**+5.2**
ASAJ	**Asahikawa**	**3.26**	**291**	PN		**Pn**		**23 47 04.9**	**+2.0**
ASAJ				S		**Sn**		**23 47 45.7**	**+5.3**
ASAJ	comp=Z,7.0nm,0.3s			pmax	pmax				
ASAJ	comp=N,4.0nm,0.3s			smax					
YSS	**Yuzh-Sakhalins**	**4.88**	**325**	Pn		**Pn**		**23 47 27.6**	**+2.5**
MDJ	**Mudanjiang**	**12.55**	**283**	*e*Pn		**Pn**		**23 49 13.7**	**+3.6**
TATO	**Taipei**	**27.50**	**237**	P		**P**		**23 51 55.9**	**-0.5**
SONM	**Songino Array** comp=N,1.7nm,0.5s,mb4.0,baz=90,slow=8.4,SNR=13	**28.54**	**294**	P		**P**		**23 52 05.8**	**+0.4**
SONM	**Songino Array**	**28.54**	**294**	P		**P**		**23 52 05.8**	**+0.3**
SONM	comp=Z,2.0nm,0.5s			pmax	pmax				
MCK	**McKinley**	**41.36**	**37**	P		**P**		**23 53 54.0**	**-1.3**
MKAR	**Makanchi Array** comp=Z,1.9nm,0.5s,mb4.2,baz=80,slow=9.3,SNR=25	**44.72**	**298**	P		**P**		**23 54 23.4**	**+0.6**
MKAR	**Makanchi Array**	**44.72**	**298**	P		**P**		**23 54 23.4**	**+0.7**
MKAR	comp=Z,2.0nm,0.5s			pmax	pmax				
KURK	**Kurchatov** 0.2nm,0.4s,mb4.3	**45.74**	**304**	*e*P		**P**		**23 54 30.9**	**+0.1**
KURK	**Kurchatov**	**45.74**	**304**	*e*P		**P**		**23 54 30.9**	**+0.1**
KURK	comp=Z,2.0nm,0.4s,mb4.4			pmax	pmax				
LSA	**Lhasa**	**45.98**	**272**	*e*P		**P**		**23 54 33.9**	**+0.9**
CM31	**Chiang Mai Arr**	**47.09**	**254**	P		**P**		**23 54 41.4**	**-0.4**
INK	**Inuvik** comp=Z,63nm,0.5s	**47.15**	**30**	*e*P		**P**		**23 54 42.6**	**+1.0**
BRVK	**Borovoye** comp=Z,1.4nm,0.5s,mb4.2	**49.83**	**310**	*e*P		**P**		**23 55 03.0**	**+0.6**
BRVK	**Borovoye**	**49.83**	**310**	*e*P		**P**		**23 55 03.0**	**+0.6**
BRVK	comp=Z,1.0nm,0.5s,mb4.1			pmax	pmax				
ARU	**Arti** comp=Z,2.3nm,0.5s,mb4.5	**54.72**	**317**	*e*P		**P**		**23 55 38.3**	**-0.3**
ARU	**Arti**	**54.72**	**317**	*e*P		**P**		**23 55 38.3**	**-0.3**
ARU	comp=Z,2.0nm,0.5s,mb4.4			pmax	pmax				
ARCES	**ARCESS Array B** comp=Z,6.1nm,1.0s,mb4.6,baz=40,slow=6.1,SNR=5.7	**59.85**	**340**	P		**P**		**23 56 14.2**	**-0.4**
ARCES	**ARCESS Array B**	**59.85**	**340**	P		**P**		**23 56 14.2**	**-0.4**
ARCES	comp=Z,6.0nm,1.0s			pmax	pmax				
NB2	**NORSAR Subarra** comp=Z,1.4nm,0.4s,mb4.2,baz=32,slow=6.5	**70.20**	**339**	P		**P**		**23 57 21.8**	**-0.1**
NOA	**NORSAR Array B** comp=Z,1.1nm,0.4s,mb4.1,baz=32,slow=6.4,SNR=16	**70.20**	**339**	P		**P**		**23 57 21.8**	**-0.1**
NOA	**NORSAR Array B**	**70.20**	**339**	P		**P**		**23 57 21.8**	**-0.1**
NOA	**NORSAR Array B**	**70.20**	**339**	P		**P**		**23 57 21.8**	**-0.1**
NOA	comp=Z,1.0nm,0.4s			pmax	pmax				
AKASG	**Malin Array Be** comp=Z,2.4nm,0.7s,mb4.2,baz=42,slow=6.3,SNR=5.0	**72.03**	**324**	P		**P**		**23 57 32.8**	**-0.3**
AKASG	**Malin Array Be**	**72.03**	**324**	P		**P**		**23 57 32.8**	**-0.3**
AKASG	comp=Z,2.0nm,0.7s			pmax	pmax				
TXAR	**Lajitas Array** comp=Z,0.4nm,1.0s,mb3.4,baz=258,slow=3.6,SNR=3.4	**83.25**	**56**	P		**P**		**23 58 35.1**	**-1.0**
TXAR	comp=Z,0.3nm,0.7s,baz=252,slow=1.2,SNR=4.4			pP	pP			23 58 52.2	+2.8

*DDA **19** 00:16:51.0, 3879N×4188E, h19km±2km, Md3.3*
*CSEM **19** 00:16:50.3±0.2, 3888N×4193E, h1km±1km, MD3.3, Error ellipse: s-maj=2.8km s-min=1.3km az=160.0*
*ISCJB **19** 00:16:51.4±0.7, 3883N±003×4191E±003, h1km±5km, Error ellipse: s-maj=5.2km s-min=3.9km az=164.5*
*ISK **19** 00:16:51.4, 3884N×4192E, h3km, MD3.0*

ISC 19 00:16:52.0±0.7, 3883N±003×4192E±003, h3km±5km, n16, σ1$03/27, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.42**	**139**	*i* P		**Pg**		**00 16 59.4**	**-0.6**
TATV				*i* S		**Sg**		**00 17 06.3**	**+0.8**
BNGL	**BINGOL**	**0.61**	**282**	⇓*i*P		**Pg**		**00 17 02.1**	**-1.6**
BNGL				*i* S		**Sg**		**00 17 12.0**	**+0.4**
TUTA	**Tutak**	**0.90**	**50**	*e*P		**Pg**		**00 17 08.8**	**-0.5**
TUTA				*i* S		**Sg**		**00 17 22.7**	**+1.7**
AGRB	**Hanur-Agry**	**1.12**	**48**	*e*PN		**Pn**		**00 17 13.8**	**-0.7**
AGRB				*e*SN		**Sn**		**00 17 29.8**	**-0.7**
ERZM	**Erzurum**	**1.16**	**338**	⇓*i*P		**Pg**		**00 17 13.2**	**-1.0**
EZM	**Erzurum**	**1.16**	**338**	*e*PN		**Pn**		**00 17 13.2**	**-1.9**
VANB	**Van**	**1.18**	**101**	*e*PN		**Pn**		**00 17 14.6**	**-0.7**
VANB				*e*SN		**Sn**		**00 17 31.6**	**-0.3**
HOMI	**Horasan**	**1.22**	**360**	*i* P		**Pg**		**00 17 14.4**	**-0.8**
HOMI				*e*S		**Sg**		**00 17 32.9**	**+1.8**
CLDR	**Caldiran**	**1.59**	**78**	*e*PN		**Pn**		**00 17 20.7**	**-0.3**
CLDR				*e*SN		**Sn**		**00 17 42.5**	**+0.4**
DIYA	**Diyarbakir**	**1.68**	**238**	*e*P		**Pn**		**00 17 21.4**	**-0.9**
DIYA				*i* S		**Sn**		**00 17 44.2**	**0.0**
MARD	**Mardin**	**1.76**	**211**	*e*P		**Pn**		**00 17 26.0**	**+2.6**
MARD				*i* S		**Sn**		**00 17 45.6**	**-0.7**
HAKT	**HAKKARI**	**1.90**	**131**	*e*P		**Pn**		**00 17 29.3**	**+4.1**
HAKT				*e*S		**Sn**		**00 18 00.8**	**+11**
PTK	**Pertek**	**1.97**	**273**	*e*PN		**Pn**		**00 17 26.4**	**+0.1**
PTK				*e*SN		**Sn**		**00 17 52.6**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.09**	**258**	*e*PN		**Pn**		**00 17 28.8**	**+0.8**
DAGI	**Agillar**	**2.25**	**360**	*e*P		**Pn**		**00 17 31.1**	**+1.0**
URFA	**Urfa**	**2.81**	**241**	*e*PN		**Pn**		**00 17 38.7**	**+0.9**

*CSEM **19** 00:28:22.7±0.1, 3890N×4190E, h2km, MD3.0, Error ellipse: s-maj=3.7km s-min=2.0km az=152.0*
*DDA **19** 00:28:23.6, 3882N×4186E, h13km±3km, Md3.0*
*ISCJB **19** 00:28:24.5±0.4, 3884N±003×4190E±004, h10km, Error ellipse: s-maj=4.5km s-min=3.9km az=163.4*
*ISK **19** 00:28:25.0, 3894N×4185E, h10km, MD3.1*

ISC 19 00:28:24.1±0.7, 3884N±003×4190E±004, h1km±6km, n18, σ0$87/27, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.44**	**139**	⇓*i*P		**Pg**		**00 28 31.6**	**-0.9**
TATV				*i* S		**Sg**		**00 28 38.6**	**+0.3**
TATV	**Tatvan**	**0.44**	**139**	*i* P		**Pg**		**00 28 31.6**	**-1.0**
BNGL	**BINGOL**	**0.59**	**281**	⇑*i*P		**Pg**		**00 28 34.2**	**-1.2**
BNGL				*i* S		**Sg**		**00 28 44.0**	**+0.9**
TUTA	**Tutak**	**0.91**	**52**	*i* P		**Pg**		**00 28 41.4**	**-0.1**
TUTA				*i* S		**Sg**		**00 28 55.0**	**+1.8**
AGRB	**Hanur-Agry**	**1.12**	**49**	*e*PN		**Pn**		**00 28 46.0**	**-0.9**
AGRB				*e*SN		**Sn**		**00 29 01.9**	**-1.0**
ERZM	**Erzurum**	**1.14**	**339**	*i* P		**Pg**		**00 28 45.4**	**-0.5**
EZM	**Erzurum**	**1.14**	**339**	*e*PG		**Pg**		**00 28 45.4**	**-0.5**
HOMI	**Horasan**	**1.20**	**0**	*i* P		**Pg**		**00 28 46.6**	**-0.5**
KOPT	**Kop Dagi**	**1.60**	**318**	*e*P		**Pn**		**00 28 54.6**	**+1.2**
KOPT				*e*S		**Sn**		**00 29 14.6**	**0.0**
CLDR	**Caldiran**	**1.60**	**79**	*e*PN		**Pn**		**00 28 54.3**	**+0.8**
DIYA	**Diyarbakir**	**1.67**	**237**	*i* P		**Pn**		**00 28 53.6**	**-0.7**
DIYA				*i* S		**Sn**		**00 29 16.1**	**-0.2**
DIYA	**Diyarbakir**	**1.67**	**237**	*i* P		**Pn**		**00 28 53.7**	**-0.7**
DIYA				*i* S		**Sn**		**00 29 16.1**	**-0.3**
MARD	**Mardin**	**1.76**	**210**	*e*P		**Pn**		**00 28 55.7**	**0.0**
MARD				*i* S		**Sn**		**00 29 18.1**	**-0.6**
HAKT	**HAKKARI**	**1.92**	**131**	*i* P		**Pn**		**00 29 02.1**	**+4.3**
HAKT				*i* S		**Sn**		**00 29 30.3**	**+7.7**
PTK	**Pertek**	**1.95**	**272**	*e*PN		**Pn**		**00 28 58.4**	**+0.1**
SVRC	**Sivrice-ELAZID**	**2.08**	**258**	*e*PN		**Pn**		**00 29 01.1**	**+1.1**
GUMT	**Gumushane**	**2.47**	**312**	*e*PN		**Pn**		**00 29 04.8**	**-0.5**
URFA	**Urfa**	**2.80**	**241**	*e*PN		**Pn**		**00 29 11.7**	**+1.8**

*DJA **19** 00:52:04.2±0.0, 21.18S×17859W, h471km, mB6.8/45, Mw(mB)6.7/45, Mwp6.1/43*
*IDC **19** 00:52:10.7±0.6, 2109S×17871W, h533km±6km, mb5.4/31, mb1 5.5/32, mb1mx5.5/32, mbtmp5.5/32, Error ellipse: s-maj=6.3km s-min=5.6km az=38.0*
*ISCJB **19** 00:52:11.5±0.1, 21.18S±002×17871W±002, h557km, mb6.0/211, Error ellipse: s-maj=3.0km s-min=1.9km az=41.6*
*BJI **19** 00:52:11.1, 2059S×17826W, h548km, mB6.1, mb6.0*
*MOS **19** 00:52:11.2±0.9, 2109S×17877W, h547km, mb6.1/55, MS5.2/11, Error ellipse: s-maj=8.1km s-min=6.6km az=49.8*
*BGS **19** 00:52:12.5±3.1, 21.19S×17875W, h558km, mb6.2(NEIC)*
*GCMT **19** 00:52:12.5±0.1, 21.05S×17863W, h562km, MW6.3/114, Moment Tensor Solution. s114,c287; s94,c144; Duration: 3s4 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.91±.02; $M_{\theta\theta}$3.01±.03; $M_{\phi\phi}$-0.09±.03; $M_{r\theta}$-1.02±.03; $M_{\theta\phi}$-0.50±.03; $M_{\phi r}$-0.78±.03; Best double couple: M_o3.26500×10^{18} NP1:ϕ_s295.00000°, δ39.00000°, λ-64.00000°. NP2:ϕ_s83.00000°, δ55.00000°, λ-109.00000°. Principal axes: T 3.2220, Plg9.0000°, Azm187.0000°; N 0.0900, Plg16.0000°, Azm94.0000°; P -3.3080, Plg72.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
*NEIC **19** 00:52:12.5±0.1, 21.19S×17875W, mb6.2/137, ME6.4, MW6.3 Error ellipse: s-maj=4.2km s-min=2.4km az=117.0 Broadband fault plane solution: P waves. NP1: ϕ_s80.00000°, δ55.00000°, λ-130.00000°. NP2: ϕ_s316.00000°, δ51.00000°, λ-47.00000°. Principal axes: T Plg2.0000°, Azm197.0000°; N Plg0.0000°, Azm0.0000°; P Plg58.0000°, Azm291.0000°; Moment Tensor Solution. s68 Moment tensor: Scale 10^{18} Nm; M_{rr}-3.58; $M_{\theta\theta}$3.83; $M_{\phi\phi}$-0.25; $M_{r\theta}$-1.41; $M_{\theta\phi}$-0.25; $M_{\phi r}$-0.74; Best double couple: M_o4.00000×10^{18} NP1: ϕ_s286.00000°, δ36.00000°, λ-70.00000°. NP2:ϕ_s81.00000°, δ56.00000°, λ-104.00000°. Principal axes: T 4.0900, Plg10.0000°, Azm181.0000°; N -0.0900, Plg11.0000°, Azm89.0000°; P -4.0000, Plg74.0000°, Azm311.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
*SZGRF **19** 00:52:15.7, 2094S×17898W, h564km, Fiji Islands region*

ISC 19 00:52:12.7±0.1, 2121S±002×17867W±002, h559km, h559km±1.5km:pP-P, n1881, σ0$79/963, mb6.0/210, 349C-278D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 644nm,0.3s,baz=106,slow=16,SNR=22	**8.04**	**175**	P		**P**		**00 54 08.6**	**-2.2**
RAO	521nm,0.3s,baz=124,slow=23,SNR=6.3			S		**S**		**00 55 46.5**	**-1.4**
RAO	**Raoul Island** 2μm,0.4s	**8.04**	**175**	*e*P		**P**		**00 54 09.2**	**-1.7**
RAO				S		**S**		**00 55 45.7**	**-2.2**
RAO	**Raoul Island**	**8.04**	**175**	*e*P		**P**		**00 54 09.2**	**-1.7**
RAO				S		**S**		**00 55 45.7**	**-2.2**
RAO	comp=Z,2μm,0.4s			pmax	pmax

FWVZ Far West T-bar 18.66 194 P **P** **00 55 55.9 0.0**
WNVZ Wahianoa 18.71 194 P **P** **00 55 56.1 -0.3**
WNVZ S **S** **00 59 01.6 +3.3**
VRZ Vera Road 18.73 196 P **P** **00 55 57.5 +1.0**
MOVZ Moawhango 18.76 194 *e*P **P** **00 55 55.3 -1.5**
RAEZ Rainy Point 18.97 197 P **P** **00 56 03.1 +4.3**
PKE Pukeiti 19.00 198 *e*P **P** **00 56 02.3 +3.3**
NEZ North Egmont 19.04 197 *e*P **P** **00 56 02.9 +3.5**
NWEZ Newall Road 19.11 198 *e*P **P** **00 56 04.2 +4.2**
WAZ Wanganui 19.26 195 P **P** **00 56 00.9 -0.5**
TSZ Takapari Road 19.34 193 P **P** **00 56 00.1 -2.0**
MRZ Mangatainoka R 20.00 193 P **P** **00 56 06.1 -2.0**
KIW Kapiti Island 20.33 194 P **P** **00 56 09.7 -1.4**
MTW Mount Morrison 20.49 193 *e*P **P** **00 56 11.9 -0.6**
MTW S **S** **00 59 24.3 -2.3**
CAW Cannon Point 20.53 194 P **P** **00 56 12.0 -0.9**
MSWZ Moikau Station 20.79 193 P **P** **00 56 14.1 -1.1**
SNZO South Karori 20.81 194 P **P** **00 56 15.1 -0.3**
TCW Tory Channel 20.82 195 P **P** **00 56 14.6 -0.9**
QRZ Quartz Range 20.93 199 P **P** **00 56 16.6 +0.1**
NNZ Nelson 21.05 197 P **P** **00 56 16.9 -0.7**
THZ Tophouse 21.69 197 P **P** **00 56 22.5 -0.8**
DSZ Denniston Nort 22.00 199 P **P** **00 56 25.8 -0.3**
LTZ Lake Taylor 22.81 197 P **P** **00 56 31.6 -1.7**
WVZ Waitaha Valley 23.53 200 P **P** **00 56 38.3 -1.4**
MQZ McQueen's Vall 23.57 196 P **P** **00 56 38.8 -1.2**
HNR Honiara 23.68 296 P **P** **00 56 40.8 -0.7**
comp=Z,667nm,0.7s,mb6.4,baz=212,slow=7.5,SNR=24
HNR sP sP 00 59 08.3 -3.6
comp=Z,91nm,0.2s,baz=209,slow=18,SNR=1.4
HNR S **S** **01 00 16.0 -1.6**
comp=Z,106nm,0.3s,baz=310,slow=18,SNR=3.7
HNR Honiara 23.68 296 *e*P **P** **00 56 41.0 -0.5**
comp=Z,755nm,0.8s,mb6.4
HNR Honiara 23.68 296 P **P** **00 56 41.0 -0.4**
HNR pmax pmax
comp=Z,760nm,0.9s,mb6.3
TARA Tarawa 23.89 339 *e*P **P** **00 56 40.6 -2.7**
comp=Z,2µm,1.1s,mb6.6
RPZ Rata Peaks 24.02 199 P **P** **00 56 43.1 -0.9**
comp=Z,260nm,0.6s,mb6.1,baz=351,slow=1.4,SNR=60
RPZ sP sP 00 59 13.6 -1.9
comp=Z,70nm,0.7s,baz=278,slow=10,SNR=1.2
RPZ S **S** **01 00 23.0 +0.9**
comp=Z,301nm,0.9s,baz=30,slow=20,SNR=3.6
RPZ ScP ScP 01 02 54.9 +2.8
comp=Z,248nm,1.1s,baz=36,slow=4.1,SNR=6.4
RPZ P3KPbc 01 29 45.8
comp=Z,8.2nm,0.8s,baz=217,slow=5.5,SNR=8.0
RPZ P3KP 01 30 36.1
comp=Z,4.9nm,0.6s,baz=55,slow=6.4,SNR=3.0
RPZ Rata Peaks 24.02 199 P **P** **00 56 43.1 -0.9**
RPZ sP sP 00 59 13.6 -1.9
RPZ S **S** **01 00 23.0 +0.9**
RPZ ScP ScP 01 02 54.9 +2.8
FOZ Fox Glacier 24.31 201 P **P** **00 56 44.6 -2.0**
LBZ Lake Benmore 24.89 199 P **P** **00 56 50.0 -1.7**
JCZ Jackson Bay 25.08 202 P **P** **00 56 52.5 -0.9**
JCZ S **S** **01 00 37.7 -1.1**
ODZ Otahua Downs 25.35 198 P **P** **00 56 54.8 -1.0**
WKZ Wanaka 25.66 201 P **P** **00 56 58.1 -0.4**
MSZ Milford Sound 25.89 202 P **P** **00 57 02.4 +1.9**
EAZ Earnscleugh 25.92 200 P **P** **00 57 00.9 +0.1**
MLZ Mavora Lakes 26.39 201 P **P** **00 57 05.4 +0.4**
TUZ Tuapeka 26.48 198 P **P** **00 57 05.9 +0.2**
DCZ Deep Cove 26.86 202 P **P** **00 57 08.7 -0.4**
WHZ Wether Hill Ro 26.95 201 P **P** **00 57 10.9 +1.0**
PAE Paea 27.64 88⇓*iP* **P** **00 57 16.8 +0.5**
comp=Z,1µm,1.0s,mb6.4
PAE *e*pP 00 58 41.0
comp=Z,7µm,1.8s
PAE *e*ScP ScP 01 03 06.4 +3.1
comp=Z,968nm,0.9s
PPT Papeete 27.67 88⇓*iP* **P** **00 57 17.4 +0.9**
comp=Z,168nm,1.1s,mb5.6
PPT *e*pP 00 58 41.3
comp=Z,330nm,1.5s
PPT *e*ScP ScP 01 03 06.8 +3.4
comp=Z,227nm,1.1s
PPT Papeete 27.67 88 P **P** **00 57 16.8 +0.3**
comp=Z,127nm,0.9s,mb5.5,baz=215,slow=5.3,SNR=12
PPT pP 00 58 41.3
comp=Z,144nm,1.1s,baz=243,slow=5.2,SNR=3.0
PPT S **S** **01 01 21.4 +1.4**
comp=Z,6.9nm,0.4s,baz=178,slow=13,SNR=1.0
PPT ScP ScP 01 03 06.9 +3.6
comp=Z,179nm,0.9s,baz=36,slow=0.9,SNR=15
PPT Papeete 27.67 88 P **P** **00 57 16.8 +0.3**
PPT S **S** **01 01 21.4 +1.5**
PPT pmax pmax
comp=Z,127nm,0.9s
PPT smax
comp=N,7.0nm,0.4s
TVO Taravao 27.92 88⇓*iP* **P** **00 57 19.6 +0.8**
comp=N,845nm,0.9s,mb6.4
TVO *e*pP 00 58 44.2
comp=N,8µm,1.6s
TVO *e*ScP ScP 01 03 07.6 +3.4
comp=N,1µm,0.9s
EIDS Eidsvold 28.06 256 *e*P **P** **00 57 19.6 -0.3**
comp=N,2µm,1.6s,mb6.4
EIDS *e*S **S** **01 01 27.6 +1.8**
ARMA Armidale 28.19 245 *e*P **P** **00 57 21.9 +0.9**
comp=N,17nm,1.4s,mb4.5
ARMA *e*S **S** **01 01 32.4 +4.5**
PMOR Pomariorio Ree 29.86 83 *e*PcP PcP 01 00 22.6 +1.6
comp=N,305nm,1.1s
PMOR *e*ScP ScP 01 03 14.1 +3.6
comp=N,331nm,1.0s
PMOR Pomariorio Ree 29.86 83⇓*iP* **P** **00 57 36.1 +0.4**
comp=N,544nm,1.3s,mb5.9
PMOR *e*PcP PcP 01 00 22.6 +1.6
PMOR *e*ScP ScP 01 03 14.1 +3.6
VAH Vaihoa 30.05 84⇓*iP* **P** **00 57 37.4 +0.2**
comp=N,240nm,1.0s,mb5.7
VAH *e*ScP ScP 01 03 14.3 +3.2
comp=N,163nm,1.0s
VAH *e*ScS ScS 01 07 15.8 +7.5
comp=N,134nm,1.3s
CAN Canberra 31.59 237 *e*P **P** **00 57 50.9 +0.7**
CAN *e*S **S** **01 02 24.5 +4.4**
CAN *e*ScP ScP 01 03 21.0 +5.0
CTA Charters Tower 32.80 266 P **P** **00 58 00.3 -0.3**
comp=N,925nm,0.5s,mb6.6,baz=92,slow=12
CTA PcP PcP 01 00 30.6 +1.6
comp=N,226nm,0.8s,baz=76,slow=2.6,SNR=7.3
CTA S **S** **01 02 40.1 +1.3**
comp=N,72nm,1.0s,baz=294,slow=19,SNR=15
CTA ScP ScP 01 03 26.3 +5.9
comp=N,65nm,1.0s,baz=106,slow=8.1,SNR=3.2
CTA ScS ScS 01 07 27.8 +5.5
comp=N,10.0nm,0.8s,baz=331,slow=23,SNR=10
CTA Charters Tower 32.80 266 P **P** **00 58 00.3 -0.3**
CTA PcP PcP 01 00 30.6 +1.6
CTA S **S** **01 02 40.1 +1.3**
CTA ScP ScP 01 03 26.3 +5.9
CTA ScS ScS 01 07 27.8 +5.5
CTA Charters Tower 32.80 266 P **P** **00 58 00.4 -0.3**
CTA 01 00 30.6
CTA S **S** **01 02 40.2 +1.3**
CTA 01 07 27.8
CTA pmax pmax
comp=Z,925nm,0.5s
CTA smax
comp=N,72nm,1.0s
CTAO Charters Tower 32.80 266 *e*P **P** **00 58 00.4 -0.2**
comp=N,2µm,1.2s,mb6.6
CTAO *e*PcP PcP 01 00 30.2 +1.2
CTAO *e*S **S** **01 02 40.6 +1.7**
CTAO Charters Tower 32.80 266 *e*P **P** **00 58 00.7 0.0**
CTAO pmax pmax
comp=Z,2µm,1.2s,mb6.6
CTAO Charters Tower 32.80 266 P **P** **00 58 00.1 -0.6**
comp=Z,2µm,1.4s,mb6.5
PMG Port Moresby 34.90 284 *e*P **P** **00 58 17.5 -0.8**
comp=Z,4µm,1.3s,mb6.8
PMG *e*PcP PcP 01 00 37.0 +1.8
PMG *e*S **S** **01 03 08.9 -1.8**
PMG Port Moresby 34.90 284 *e*P **P** **00 58 17.5 -0.8**
PMG *e* 01 00 37.0
PMG *e*S **S** **01 03 08.9 -1.8**
PMG pmax pmax
comp=Z,4µm,1.3s
PMG Port Moresby 34.90 284 P **P** **00 58 17.1 -1.2**
comp=Z,3µm,1.3s,mb6.7
TAU Tasmania Unive 35.68 225 *e*P **P** **00 58 25.2 +0.8**
comp=Z,152nm,1.0s,mb5.5
TAU Tasmania Unive 35.68 225 *e*P **P** **00 58 25.9 +1.5**
TAU pmax pmax
comp=Z,150nm,1.0s,mb5.5
STKA Stephens Creek 36.92 245 P **P** **00 58 35.0 +0.3**
comp=Z,188nm,0.6s,mb5.8,baz=91,slow=9.4,SNR=270
STKA PcP PcP 01 00 43.5 +2.4
comp=Z,118nm,0.7s,baz=96,slow=4.5,SNR=4.2
STKA S **S** **01 03 41.2 +0.8**
comp=Z,49nm,0.7s,baz=1.8,slow=4.3,SNR=8.9
STKA SS SS 01 07 04.8 +8.0
comp=Z,17nm,0.9s,baz=185,slow=8.6,SNR=1.5
STKA ScS ScS 01 07 49.2 +4.7
comp=Z,13nm,0.9s,baz=206,slow=22,SNR=1.7
STKA PKiKP PKiKP 01 07 57.3 +0.1
comp=Z,15nm,0.6s,baz=64,slow=8.3,SNR=5.7
STKA P3KPbc 01 28 49.6
comp=Z,29nm,0.9s,baz=295,slow=5.3,SNR=33
STKA PKPPKP 01 31 05.3
comp=Z,6.8nm,1.0s,baz=228,slow=4.0,SNR=3.7
STKA Stephens Creek 36.92 245 *e*P **P** **00 58 35.2 +0.4**
comp=Z,105nm,1.1s,mb5.3
STKA S **S** **01 03 41.5 +1.1**
COEN Coen 37.01 275 *e*P **P** **00 58 35.5 -0.2**
comp=Z,2µm,1.1s,mb6.6
COEN Coen 37.01 275 P **P** **00 58 35.3 -0.4**
comp=Z,1µm,1.3s,mb6.3
MCQ Macquarie Isla 37.30 201 *e*P **P** **00 58 39.4 +1.9**
comp=Z,52µm,1.4s
TAOE Nuku Hiva Isla 39.07 78⇓*iP* **P** **00 58 53.3 +0.8**
comp=Z,3µm,1.0s,mb6.8
TAOE Nuku Hiva Isla 39.07 78 *eP* **P** **00 58 53.7 +1.2**
RKT Rikitea 40.41 101 *eP* **P** **00 59 04.6 +1.5**
comp=Z,133nm,1.2s,mb5.4
RKT *e*ScP ScP 01 03 53.5 +4.6
comp=Z,214nm,1.3s
MMPI Merauke 41.42 282 P **P** **00 59 11.4 +0.1**
comp=Z,5µm,1.0s,mb7.0
JAY Jayapura 43.68 290 P **P** **00 59 25.6 -3.3**
ASAR Alice Springs 43.75 258 P **P** **00 59 28.8 -0.6**
comp=Z,824nm,0.8s,mb6.3,baz=94,slow=8.0,SNR=931
ASAR PcP PcP 01 01 03.5 -0.2
comp=Z,243nm,0.7s,baz=96,slow=4.5,SNR=7.9
ASAR ScP ScP 01 04 05.7 +3.3
comp=Z,26nm,0.9s,baz=120,slow=4.6,SNR=4.3
ASAR S **S** **01 05 19.6 -0.1**
comp=Z,164nm,1.0s,baz=93,slow=16,SNR=26
ASAR PKiKP PKiKP 01 08 03.4 0.0
comp=Z,12nm,0.6s,baz=91,slow=1.4,SNR=6.4
ASAR P3KPbc 01 28 21.6
comp=Z,3.0nm,0.7s,baz=275,slow=3.9,SNR=12
ASAR PKPPKP 01 30 56.5
comp=Z,5.0nm,1.0s,baz=270,slow=2.6,SNR=5.8
ASAR P4KPbc 01 37 16.9
comp=Z,1.6nm,0.8s,baz=103,slow=4.5,SNR=8.8
ASAR Alice Springs 43.75 258 P **P** **00 59 28.8 -0.6**
ASAR PcP PcP 01 01 03.5 -0.2
ASAR ScP ScP 01 04 05.7 +3.3
ASAR S **S** **01 05 19.6 -0.1**
ASAR Alice Springs 43.75 258 P **P** **00 59 28.8 -0.5**
ASAR 01 01 03.5
ASAR S **S** **01 05 19.6 -0.1**
ASAR pmax pmax
comp=Z,824nm,0.8s
ASAR smax
comp=N,164nm,1.0s
WB2 Warramunga Arr 43.87 263 *eP* **P** **00 59 29.3 -1.1**
WB2 *eS* **S** **01 05 22.1 +0.6**
WRAB Tennant Creek 43.88 263 *eP* **P** **00 59 29.3 -1.1**
comp=N,3µm,1.3s,mb6.6
WRAB LR LR
comp=Z,3µm,19.0s
WRAB Tennant Creek 43.88 263*d iP* **P** **00 59 28.6 -1.8**
WRAB Tennant Creek 43.88 263 P **P** **00 59 28.7 -1.7**
comp=Z,2µm,1.3s,mb6.5
WRA Warramunga Arr 43.88 263 P **P** **00 59 29.0 -1.4**
comp=Z,1µm,0.9s,mb6.3,baz=96,slow=7.7,SNR=469
WRA PcP PcP 01 01 04.1 -0.1
comp=Z,188nm,1.0s,baz=101,slow=3.7,SNR=8.5
WRA S **S** **01 05 20.1 -1.6**
comp=Z,37nm,0.7s,baz=99,slow=13,SNR=14
WRA PKiKP PKiKP 01 08 03.8 +0.2
comp=Z,25nm,0.8s,baz=61,slow=0.7,SNR=6.6
WRA ScS ScS 01 08 29.1 +1.6
comp=Z,46nm,1.2s,baz=98,slow=9.4,SNR=4.7
WRA P3KPbc 01 28 22.0
comp=Z,1.8nm,1.0s,baz=289,slow=2.9,SNR=5.5
WRA PKPPKP 01 30 57.0
comp=Z,3.9nm,1.0s,baz=286,slow=2.6,SNR=6.5
WRA P4KPbc 01 37 19.3
comp=Z,3.4nm,1.1s,baz=92,slow=4.5,SNR=9.1
WRA Warramunga Arr 43.88 263 P **P** **00 59 29.0 -1.4**
WRA PcP PcP 01 01 04.1 -0.1
WRA S **S** **01 05 20.1 -1.6**
WRA Warramunga Arr 43.88 263 P **P** **00 59 29.0 -1.4**
WRA 01 01 04.1
WRA S **S** **01 05 20.1 -1.6**
WRA 01 08 29.1
WRA smax
comp=N,37nm,0.7s
POHA Pohakuloa 46.59 31 *eP* **P** **00 59 51.7 +0.7**
comp=N,516nm,1.4s,mb5.9
HON Honolulu 46.85 27 *eP* **P** **00 59 53.4 +0.5**
HKL Haleakala 47.07 29 *eP* **P** **00 59 54.1 -0.6**
HKL Haleakala 47.07 29 P **P** **00 59 55.8 +1.2**
FORT Forrest 48.44 247 *eP* **P** **01 00 04.1 -0.7**
comp=N,1µm,0.6s,mb6.6
FORT *e*ScP ScP 01 04 28.1 +6.2
FORT *e*S **S** **01 06 25.4 +0.6**
MIDW Midway 49.15 2 *eP* **P** **01 00 09.9 0.0**
comp=N,636nm,1.6s,mb5.9
MIDW *e*PcP PcP 01 01 24.7 +1.9
TLE Tual 49.51 281 P **P** **01 00 12.5 -0.5**
comp=N,4µm,1.2s,mb6.7
GUMO Guam 49.78 311 P **P** **01 00 14.7 -0.1**
comp=N,2µm,1.1s,mb6.5,baz=180,slow=9.0,SNR=36
GUMO PcP PcP 01 01 25.3 -0.1
comp=N,304nm,1.0s,baz=180,slow=3.7,SNR=1.3
GUMO ScP ScP 01 04 31.7 +3.9
comp=N,251nm,1.0s,baz=0.0,slow=1.1,SNR=3.6
GUMO S **S** **01 06 41.5 -1.9**
comp=N,35nm,0.4s,baz=180,slow=9.1,SNR=1.4
GUMO Guam 49.78 311 *eP* **P** **01 00 16.4 +1.6**
comp=N,5µm,1.4s,mb6.8
GUMO *e*ScP ScP 01 04 31.4 +3.5
GUMO Guam 49.78 311 *eP* **P** **01 00 16.4 +1.6**
GUMO pmax pmax
comp=Z,5µm,1.4s,mb6.8
GUMO Guam 49.78 311 P **P** **01 00 15.8 +1.0**
comp=Z,4µm,1.4s,mb6.7
DRV Dumont d'Urvil 52.48 199 P **P** **01 00 40.0 +6.5**
DRV Dumont d'Urvil 52.48 199 PP PP 01 03 18.0 +38
DRV S **S** **01 07 24.0 +5.9**
DRV SS SS 01 11 16.0 +10
DRV L 01 14 00.0
SWI Sorong 52.83 286 P **P** **01 00 35.7 -1.3**
comp=Z,9µm,1.1s,mb7.0
MSAI Masohi 53.90 282 P **P** **01 00 50.5 +5.9**
AAI Ambon 54.43 281 P **S** **01 07 48.6 +3.1**
comp=Z,642nm,1.5s,comp=Z,10µm
AAI Ambon 54.43 281 P **P** **01 00 47.3 -1.0**
comp=Z,3µm,1.4s,mb6.4
LBMI Labuha 56.31 284 P **P** **01 01 00.8 -0.6**
comp=Z,3µm,1.2s,mb6.5
BATI Baumata 56.32 272 S **S** **01 08 14.4 +4.5**
comp=Z,12nm,0.3s,baz=262,slow=23,SNR=1.4
BATI Baumata 56.32 272 P **P** **01 01 01.9 +0.5**
comp=Z,2µm,1.0s,mb6.2
MBWA Marble Bar 57.09 258 *eP* **P** **01 01 05.9 -0.6**
comp=Z,1µm,0.7s,mb6.2
MBWA *e*PcP PcP 01 01 56.0 +2.4
MBWA *e*S **S** **01 08 17.7 -1.9**
MBWA Marble Bar 57.09 258 P **P** **01 01 05.4 -1.2**
comp=Z,2µm,1.2s,mb6.3
SBA Scott Base 57.12 184 *eP* **P** **01 01 09.2 +3.4**
comp=Z,2.5nm,0.9s
SBA *e*PcP PcP 01 01 54.3 +1.6
SBA *e*ScP ScP 01 05 03.3 +4.4
VNDA Vanda 57.15 185 P **P** **01 01 08.1 +2.0**
comp=Z,64nm,0.8s,mb4.9,baz=356,slow=7.7,SNR=194
VNDA PcP PcP 01 01 55.7 +2.9
comp=Z,59nm,0.8s,baz=336,slow=5.2,SNR=6.3
VNDA ScP ScP 01 05 01.2 +2.1
comp=Z,169nm,0.9s,baz=349,slow=4.4,SNR=22
VNDA S **S** **01 08 22.6 +3.9**
comp=Z,5.2nm,1.1s,baz=0.0,slow=5.1,SNR=3.2
VNDA PKP2bc 01 30 58.4
comp=Z,24nm,1.4s,baz=246,slow=3.4,SNR=5.0
VNDA P4KPbc 01 38 12.2
comp=Z,3.2nm,0.9s,baz=346,slow=4.0,SNR=16
VNDA Vanda 57.15 185 P **P** **01 01 08.1 +2.0**
VNDA PcP PcP 01 01 55.7 +2.9
VNDA ScP ScP 01 05 01.2 +2.1
VNDA S **S** **01 08 22.6 +3.9**
VNDA ⇑*e* 01 30 58.4
NWAO Narrogin (SRO) 57.49 244 S **S** **01 08 27.0 +2.5**
comp=Z,12nm,1.0s,baz=331,slow=19,SNR=4.1
NWAO Narrogin (SRO) 57.49 244 *eP* **P** **01 01 09.4 +0.2**
comp=Z,488nm,1.1s,mb5.7
NWAO Narrogin (SRO) 57.49 244 *eP* **P** **01 01 09.4 +0.3**
NWAO pmax pmax
comp=Z,488nm,1.1s
KDI Kendari 59.46 278 P **P** **01 01 21.3 -1.4**
comp=Z,1µm,1.4s,mb5.9
MNI Manado 59.60 285 P **P** **01 01 24.2 +0.6**
comp=Z,2µm,1.1s,mb6.4
CBIJ Chichi jima 61.17 320 P **P** **01 01 32.8 -0.9**
comp=Z,597nm,0.8s,mb6.0,baz=192,slow=4.2,SNR=18
CBIJ S **S** **01 09 12.2 +1.7**
comp=Z,63nm,0.9s,baz=272,slow=18,SNR=1.8
DAV Davao City (W) 61.49 291 ⇑P **P** **01 01 36.5 +0.4**
SNR=28
DAV Davao City (W) 61.49 291 P **P** **01 01 36.4 +0.3**
comp=Z,903nm,0.8s,mb6.2,baz=86,slow=4.4
DAV PcP PcP 01 02 13.1 +1.7
comp=Z,265nm,0.4s,baz=117,slow=9.0,SNR=2.3
DAV S **S** **01 09 17.5 +2.4**
comp=Z,185nm,0.3s,baz=58,slow=13,SNR=3.2
DAV Davao City (W) 61.49 291 *eP* **P** **01 01 37.0 +0.9**
comp=Z,640nm,0.8s,mb6.0
DAV Davao City (W) 61.49 291⇓*iP* **P** **01 01 35.4 -0.6**
DAV Davao City (W) 61.49 291 P **P** **01 01 37.6 +1.5**
comp=Z,2µm,1.3s,mb6.2
KAPI Kappang 61.73 276 S **S** **01 09 18.1 +0.1**
comp=Z,13nm,1.0s,baz=238,slow=23,SNR=2.2
KAPI Kappang 61.73 276 *eP* **P** **01 01 36.0 -1.6**
comp=Z,1µm,1.4s,mb6.1
KAPI Kappang 61.73 276 P **S** **01 09 23.7 +5.7**
comp=Z,31nm,1.9s
KAPI Kappang 61.73 276 P **P** **01 01 35.9 -1.7**
comp=Z,266nm,1.9s,comp=Z,5µm,mb5.3
CTBH Cotabato--PC H 62.73 290⇑*eP* **P** **01 01 43.3 -0.8**
RPN Rapa Nui 62.84 110 P **P** **01 01 47.6 +3.0**
comp=Z,174nm,1.0s,mb5.5,baz=307,slow=5.3,SNR=7.0
RPN PcP PcP 01 02 20.5 +3.8
comp=Z,54nm,0.9s,baz=268,slow=4.3,SNR=3.9
RPN S **S** **01 09 40.5 +9.3**
comp=Z,23nm,0.6s,baz=320,slow=9.1,SNR=2.5
RPN Rapa Nui 62.84 110 P **P** **01 01 47.6 +3.0**
RPN PcP PcP 01 02 20.5 +3.7
RPN S **S** **01 09 40.5 +9.3**
SCPH Surigao 62.89 294⇓*eP* **P** **01 01 43.7 -1.4**
CASY Casey 63.05 205 *eP* **P** **01 01 46.2 +1.0**
comp=Z,153nm,0.9s,mb5.4
PCI Palu 63.20 280 P **P** **01 01 47.5 +0.4**
comp=Z,4µm,1.3s,mb6.7
PLP Palo 64.01 295⇓*eP* **P** **01 01 49.8 -2.4**
TBP Tagbilaran 64.24 293 *eP* **P** **01 01 52.6 -1.1**
KHKI Kahang-Kahang 64.43 271 P **P** **01 01 53.4 -1.6**
LLP Lapu-Lapu 64.46 293 *eP* **P** **01 01 54.4 -0.7**
DNP Denpasar 64.70 270 P **P** **01 01 57.9 +1.3**
comp=Z,4µm,1.0s,mb6.8
NBBI Negara 65.35 270 P S 01 10 14.8 +13
comp=Z,351nm,1.1s
NBBI Negara 65.35 270 P **P** **01 02 01.1 +0.4**
comp=Z,1µm,1.0s,mb6.2
SMKI Samarinda 65.79 279 P **P** **01 02 06.5 +3.0**
comp=Z,2µm,1.6s,mb6.3
PVCP Virac 65.93 297⇑*eP* **P** **01 02 04.8 +0.5**
RCP Roxas 66.11 294⇑*eP* **P** **01 02 05.6 +0.2**
KMMI Kalianget 66.40 271 P **P** **01 02 08.1 +0.8**
comp=Z,2µm,1.5s,mb6.3
BBKI Banjar Baru 66.85 275 P **P** **01 02 10.0 -0.1**
comp=Z,2µm,1.3s,mb6.4
MYLDM Lahad Datu 66.91 286 ⇑P **P** **01 02 14.4 +4.0**
MYLDM Lahad Datu 66.91 286 P **P** **01 02 13.3 +2.9**
JHJ Hachijo jima 2 67.02 323 P **P** **01 02 10.2 -0.4**
comp=Z,3µm,1.1s,mb6.7,baz=172,slow=4.8,SNR=18
JHJ S S 01 10 20.8 +0.1
comp=Z,155nm,0.9s,baz=73,slow=17,SNR=1.8
TSM Tawau 67.10 284 ⇑P **P** **01 02 14.4 +2.8**
KRKI Karangkates 67.44 270 P **P** **01 02 14.8 +1.1**
GQP Guinayangan 67.52 296⇑*eP* **P** **01 02 13.6 -0.4**
PLKI Palangkaraya 68.13 276 P **P** **01 02 18.7 +0.8**
comp=Z,3µm,1.3s,mb6.7
SJI Sawahan 68.22 270 P **P** **01 02 17.8 -0.6**
SDKM Sandakan 68.28 285 ⇑P **P** **01 02 21.0 +2.2**
PPR Puerto Princes 68.74 290⇓*eP* **P** **01 02 24.0 +2.5**
QSPA South Pole Qui 68.86 180 P **P** **01 02 22.5 +1.4**
comp=Z,273nm,0.8s,mb5.8,baz=25,slow=1.4,SNR=288
QSPA PcP PcP 01 02 43.9 +3.0
comp=Z,89nm,0.7s,baz=3.8,slow=3.1,SNR=7.5
QSPA pP pP 01 04 16.7 +1.6
comp=Z,55nm,1.1s,baz=24,slow=5.7,SNR=1.6
QSPA PP PP 01 05 04.2 +1.5
comp=Z,47nm,0.9s,baz=111,slow=3.0,SNR=1.8
QSPA S S 01 10 44.5 +3.8
comp=Z,48nm,1.2s,baz=74,slow=19,SNR=5.4
QSPA PKP2bc 01 30 27.8
comp=Z,48nm,1.0s,baz=262,slow=13,SNR=9.8
QSPA South Pole Qui 68.86 180 P **P** **01 02 22.5 +1.4**
QSPA PcP PcP 01 02 43.9 +3.0
QSPA pP pP 01 04 16.7 +1.6
QSPA PP PP 01 05 04.2 +1.5
QSPA S S 01 10 44.5 +3.8
QSPA ⇑*e* 01 30 27.8
PALP Palanan 69.14 299⇑*eP* **P** **01 02 24.6 +0.7**
KDM Kudat 69.15 286 ⇓P **P** **01 02 26.3 +2.2**
KKM Kota Kinabalu 69.34 285 *eP* **P** **01 02 25.2 +0.1**
KKM Kota Kinabalu 69.34 285 ⇑P **P** **01 02 27.9 +2.7**
KKM Kota Kinabalu 69.34 285 P **P** **01 02 25.6 +0.5**
comp=Z,1µm,1.5s,mb6.2
PCPH Palayan 69.48 297⇓*eP* **P** **01 02 26.1 +0.3**
CVP Callao Caves 69.96 299 *eP* **P** **01 02 29.6 +0.8**
PBKI Pangkalan Bun 70.07 275 P **P** **01 02 30.9 +1.4**
comp=Z,3µm,1.3s,mb6.6
MIR Mirnyy 70.08 205⇓*iP* **P** **01 02 30.0 +1.4**
MIR *i* pP 01 04 25.0 +1.8
MIR *i* S S 01 10 58.0 +2.9
MIR pmax pmax
comp=Z,400nm,1.0s,mb5.9
MIR pmax pmax
comp=E,1µm,4.0s
JOW Kunigami 70.14 311 P **P** **01 02 29.4 -0.2**
comp=E,499nm,0.8s,mb6.1,baz=141,slow=6.7,SNR=44
JOW S S 01 11 00.3 +3.3
comp=E,14nm,0.2s,baz=30,slow=18,SNR=3.1
BJII Banjamegara 70.28 270 P **P** **01 02 31.1 +0.3**
MJAR Matsushiro Arr 70.41 324 P **P** **01 02 29.4 -1.6**
comp=E,267nm,1.0s,mb5.7,baz=158,slow=5.3,SNR=183
MJAR pP pP 01 04 29.9 +4.0
comp=E,23nm,0.9s,baz=159,slow=4.9,SNR=4.4
MJAR PKiKP PKiKP 01 08 35.1 +0.4
comp=E,4.2nm,0.9s,baz=129,slow=3.0,SNR=4.5
MJAR PKP2bc 01 30 23.3
comp=E,11nm,1.1s,baz=282,slow=4.4,SNR=7.4
MJAR Matsushiro Arr 70.41 324 P **P** **01 02 29.4 -1.6**
MJAR pP pP 01 04 29.9 +4.0
MAJO Matsushiro 70.41 324 *eP* **P** **01 02 31.0 0.0**
comp=E,655nm,1.1s,mb6.1
MAJO Matsushiro 70.41 324 *eP* **P** **01 02 31.0 0.0**
MAJO pmax pmax
comp=Z,655nm,1.1s,mb6.1
MAT Matsushiro 70.41 324 P **P** **01 02 30.8 -0.2**
MAT S S 01 10 58.0 -1.6
CLJI Cilicap 70.80 269 P **P** **01 02 34.9 +1.1**
comp=Z,2µm,1.0s,mb6.7
BTM Bintulu 71.01 281 ⇑P **P** **01 02 38.0 +3.0**
PIP Pasuquin 71.26 299⇑*eP* **P** **01 02 36.5 +0.1**
STKI Sintang 71.28 278 P **P** **01 02 36.7 +0.1**
comp=Z,1µm,1.4s,mb6.3
SBUM Sibu 71.51 280 ⇑P **P** **01 02 40.7 +2.7**
SBUM Sibu 71.51 280 P **P** **01 02 37.8 -0.2**
JCJI Jatiwangi 71.91 270 P **P** **01 02 39.9 -0.4**
comp=Z,3µm,1.6s,mb6.5
ERM Erimo 72.13 331 *eP* **P** **01 02 37.7 -3.2**
ERM Erimo 72.13 331 P **P** **01 02 43.2 +2.3**
ERM pmax pmax
comp=Z,290nm,1.2s,mb5.6

AMKA Amchitka 72.29 359 *e*P **P 01 02 41.8 +0.2**
LEM Lembang 72.40 269 P **P 01 02 42.9 -0.3**
comp=Z,3μm,1.3s,mb6.6
ADK Adak 72.80 1 *e*P **P 01 02 43.2 -1.3**
comp=Z,1μm,1.0s,mb6.2
ADK Adak 72.80 1 *e*P **P 01 02 43.2 -1.3**
ADK pmax pmax
comp=Z,1μm,1.0s,mb6.2
KSM Kuching 72.89 278 *e*P **P 01 02 46.2 +0.2**
KSM Kuching 72.89 278 ⇑P **P 01 02 48.6 +2.6**
KSM Kuching 72.89 278 P **P 01 02 45.5 -0.5**
comp=Z,2μm,1.3s,mb6.4
XMIS Christmas Isla 73.02 265 *e*P **P 01 02 46.5 -0.2**
comp=Z,709nm,1.0s,mb6.0
XMIS Christmas Isla 73.02 265 P **P 01 02 47.2 +0.5**
comp=Z,935nm,1.4s,mb6.0
CBJI Citeko 73.25 270 P **P 01 02 46.6 -1.5**
comp=Z,3μm,1.4s,mb6.6
DBJI Dramaga 73.30 269 P **P 01 02 47.4 -0.9**
comp=Z,2μm,1.5s,mb6.4
SKJI Sukabumi 73.33 269 P **P 01 02 54.8 +6.3**
NACB Ninganchiao 73.56 305 *e*P **P 01 02 49.2 -0.3**
comp=Z,2μm,1.2s,mb6.4
TPI Tanjungpandan 73.79 273 P **P 01 02 50.5 -0.6**
comp=Z,883nm,1.4s,mb6.0
SMY Shemya 73.89 355 *e*P **P 01 02 50.1 -0.6**
comp=Z,1μm,1.0s,mb6.2
SMY PcP PcP 01 03 03.9 +1.2
SMY Shemya 73.89 355 *e*P **P 01 02 50.1 -0.6**
SMY 01 03 03.9
SMY pmax pmax
comp=Z,1μm,1.0s,mb6.2
YHNB Yeheng 73.99 305 *e*P **P 01 02 52.8 +0.8**
comp=Z,3μm,1.4s,mb6.5
YHNB *e*PcP PcP 01 03 02.3 -1.6
ASAJ Asahikawa 74.05 332 P **P 01 02 52.5 +0.6**
comp=Z,399nm,0.9s,mb5.8,baz=207,slow=7.5,SNR=53
ASAJ S S 01 11 43.0 +3.2
comp=Z,24nm,1.1s,baz=107,slow=19,SNR=3.3
ASAJ Asahikawa 74.05 332 P **P 01 02 52.5 +0.7**
ASAJ S S 01 11 43.0 +3.2
ASAJ pmax pmax
comp=Z,399nm,0.9s
ASAJ smax
comp=N,24nm,1.1s
TATO Taipei 74.07 305 *e*P **P 01 02 53.5 +1.1**
comp=N,2μm,1.0s,mb6.4
NIKO Nikolski 74.36 6 *e*P **P 01 02 51.9 -1.4**
comp=N,2μm,1.1s,mb6.5
UNV Unalaska Valle 75.48 7 *e*P **P 01 02 58.5 -1.1**
comp=N,622nm,0.9s,mb6.0
YSS Yuzh-Sakhalins 76.25 334 P **P 01 03 05.3 +1.3**
comp=N,941nm,1.5s,mb6.0
YSS Yuzh-Sakhalins 76.25 334 α *i*P **P 01 03 04.6 +0.6**
YSS *i* *PP pP 01 05 02.7 +1.3
YSS *e**SP sP 01 05 54.0 -4.7
YSS *e*S S 01 12 04.0 +0.7
YSS *e* 01 12 32.0
YSS *e*SS SS 01 17 10.0 -3.7
YSS pmax pmax
comp=N,990nm,1.8s
YSS pmax pmax
comp=Z,3μm,1.8s,mb6.4
YSS pmax pmax
comp=E,1μm,1.6s
YSS pmax pmax
comp=Z,5μm,4.0s
YSS smax
comp=N,8μm,6.0s
QZH Quanzhou 76.28 304 ⇑ *i*P **P 01 03 05.4 +0.7**
QZH AMB AMB
comp=Z,2μm,1.1s,mb6.5
QZH AMB AMB
comp=Z,9μm,3.0s
PET Petropavlovsk 76.50 346 *e*P **P 01 03 04.8 -0.5**
comp=Z,1μm,1.8s,mb6.1
PET Petropavlovsk 76.50 346 *e*P **P 01 03 04.7 -0.6**
PET *e* 01 06 05.2
PET *e*S S 01 12 03.4 -2.3
PET *e* 01 12 57.0
PET *e*SSS 01 20 36.1
PET pmax pmax
comp=Z,101nm,0.8s,mb5.3
PET pmax pmax
comp=Z,1μm,13.4s
PEA0B Petropavlovsk- 76.80 346 *e*P **P 01 03 08.1 +1.2**
PETK Petropavlovsk- 76.80 346 P **P 01 03 05.5 -1.4**
comp=Z,362nm,0.9s,mb5.8,baz=122,slow=6.9,SNR=85
PETK pP pP 01 05 10.4 +6.0
comp=Z,19nm,0.9s,baz=157,slow=6.2,SNR=2.6
PETK PKiKP PKiKP 01 08 44.0 +0.5
comp=Z,18nm,0.7s,baz=134,slow=3.0,SNR=10.0
PETK Petropavlovsk- 76.80 346 P **P 01 03 05.5 -1.4**
PETK pP pP 01 05 10.4 +6.0
KSRS Korea Array 77.00 319 P **P 01 03 08.0 -0.4**
comp=Z,199nm,1.1s,mb5.5,baz=139,slow=5.5,SNR=183
KSRS pP pP 01 05 09.3 +3.3
comp=Z,16nm,1.1s,baz=136,slow=4.3,SNR=3.0
KSRS PP PP 01 06 10.4 -1.9
comp=Z,13nm,1.2s,baz=137,slow=4.7,SNR=2.0
KSRS PKiKP PKiKP 01 08 44.9 +0.6
comp=Z,3.4nm,0.8s,baz=147,slow=2.1,SNR=5.9
SSE Sheshan 77.66 310 ⇓P **P 01 03 13.3 +1.2**
SSE AP pP 01 05 10.0 0.0
SSE XP sP 01 06 06.3 -0.9
SSE PP PP 01 06 16.6 -1.3
SSE S S 01 12 20.0 +1.0
SSE SCS ScS 01 12 43.1 +3.4
SSE XS sS 01 15 47.3 -1.8
SSE AMB AMB
comp=Z,213nm,1.3s,mb5.3
SSE AMB AMB
comp=Z,2μm,12.0s
SNCC San Nicolas Is 78.19 47 *e*P **P 01 03 16.4 +1.5**
comp=Z,466nm,1.1s,mb5.7
SNCC San Nicolas Is 78.19 47 ⇓P **P 01 03 14.7 -0.2**
baz=78,SNR=15
SNCC ⇓S S 01 12 32.2 +7.8
baz=78
BSC Santa Cruz Isl 78.54 47 ⇓P **P 01 03 17.0 +0.2**
baz=79,SNR=83
BSC ⇓S S 01 12 36.0 +7.9
baz=79
FARB Farallon Islan 78.56 42 ⇓P **P 01 03 16.6 -0.2**
baz=79,SNR=40
FARB ⇑S S 01 12 34.5 +6.4
baz=79
V03C Hunter Liggett 78.67 44 ⇑P **P 01 03 17.0 -0.4**
baz=79,SNR=27
V03C ⇓S S 01 12 36.4 +7.2
baz=79
SCI San Clemente I 78.71 48 P **P 01 03 17.4 -0.3**
baz=79,SNR=63
SBC Santa Barbara 78.75 46 ⇑P **P 01 03 17.7 -0.2**
baz=79,SNR=14
SBC ⇓S S 01 12 35.2 +5.1
baz=79
JRSC Jasper Ridge 78.86 43 ⇑P **P 01 03 18.3 0.0**
baz=79,SNR=62
JRSC ⇓S S 01 12 36.3 +5.1
baz=79
MCCM Marconi Confer 78.91 42 *e*P **P 01 03 19.6 +0.9**
comp=Z,676nm,1.3s,mb5.8
MCCM Marconi Confer 78.91 42 ⇓P **P 01 03 18.2 -0.4**
baz=79,SNR=34
MCCM ⇑S S 01 12 36.1 +4.4
baz=79
PKM Peak Mountain 78.94 46 ⇓P **P 01 03 18.9 0.0**
baz=79,SNR=52
PKM ⇑S S 01 12 39.0 +6.9
baz=79
SAO San Andreas Ge 78.97 43 *e*P **P 01 03 20.2 +1.2**
comp=Z,506nm,1.0s,mb5.8
SAO LR LR
comp=Z,358nm,21.0s
SAO San Andreas Ge 78.97 43 *e*P **P 01 03 20.2 +1.2**
SAO pmax pmax
comp=Z,506nm,1.0s,mb5.8
SAO MLR MLR
comp=Z,358nm,21.0s
MYKOM Kota Tinggi 78.99 276 ⇓P **P 01 03 22.5 +2.8**
BLG Laguna Peak 79.00 47 ⇑P **P 01 03 18.5 -0.7**
baz=79,SNR=18
BLG ⇑S S 01 12 38.6 +5.8
baz=79
CIS Catalina Islan 79.05 48 ⇓P **P 01 03 19.1 -0.4**
baz=79,SNR=59
CIS ⇓S S 01 12 39.3 +6.0
baz=79
SMMC Simmler 79.06 45 ⇑P **P 01 03 19.9 +0.5**
baz=79,SNR=34
SMMC ⇓S S 01 12 39.9 +6.6
baz=79
PKD Parkfield 79.07 45 ⇑P **P 01 03 19.1 -0.5**
baz=79,SNR=48
PKD ⇑S S 01 12 39.7 +6.3
baz=79
PTRM Twissleman Ran 79.12 45 *e*P **P 01 03 20.6 +0.8**
U04C Hernandez Rese 79.16 44 ⇑P **P 01 03 20.3 +0.3**
baz=79,SNR=97
U04C ⇑S S 01 12 41.7 +7.3
baz=79
WENL Wente Vineyard 79.29 43 ⇓P **P 01 03 21.0 +0.4**
baz=79,SNR=53
CVS Carmenet Viney 79.29 42 ⇑P **P 01 03 20.5 -0.2**
baz=79,SNR=133
CVS ⇑S S 01 12 40.8 +5.2
baz=79
FMP Fort Macarthur 79.30 48 ⇑P **P 01 03 20.4 -0.4**
baz=79,SNR=14
NSHM Saint Helena R 79.31 41 *e*P **P 01 03 20.7 0.0**
HOPS Hopland 79.32 41 P **P 01 03 21.6 +0.9**
comp=Z,754nm,1.0s,mb6.0
HOPS Hopland 79.32 41 ⇓P **P 01 03 20.6 -0.1**
baz=80,SNR=110
HOPS ⇑S S 01 12 41.5 +5.6
baz=80
BDM Black Diamond 79.43 42 ⇑P **P 01 03 21.3 0.0**
baz=80,SNR=16
KCPM Cahto Peak 79.44 40 *e*P **P 01 03 22.6 +1.2**
V05C Boulder Hill, 79.45 45 ⇓P **P 01 03 22.1 +0.5**
baz=80,SNR=19
OSI Osito Adit 79.52 47 *e*P **P 01 03 22.6 +0.8**
comp=Z,538nm,1.3s,mb5.7
OSI Osito Adit 79.52 47 ⇑P **P 01 03 21.8 -0.1**
baz=80,SNR=17
KGM Kluang 79.56 276 ⇓P **P 01 03 25.8 +3.1**
DECC Green Verdugo 79.58 47 ⇑P **P 01 03 21.4 -0.8**
baz=80,SNR=18
KIPM Iron Peak 79.58 40 *e*P **P 01 03 22.7 +0.6**
U05C Westside ANR, 79.58 44 ⇑P **P 01 03 22.7 +0.5**
baz=80,SNR=5.1
MNRC McLaughlin Nat 79.63 41 ⇑P **P 01 03 23.0 +0.6**
baz=80,SNR=305
ARVC Arvin 79.74 46 ⇑P **P 01 03 22.7 -0.4**
baz=80,SNR=46
Q03C Winters 79.75 42 ⇓P **P 01 03 23.6 +0.6**
baz=80,SNR=89
MWC Mount Wilson 79.75 47 *e*P **P 01 03 23.1 0.0**
comp=Z,464nm,1.0s,mb5.8
MWC Mount Wilson 79.75 47 *e*P **P 01 03 23.2 +0.1**
MWC pmax pmax
comp=Z,464nm,1.0s,mb5.8
NJ2 Nanjing 79.85 310 *e*P **P 01 03 25.3 +1.6**
NJ2 AP pP 01 05 20.3 -2.2
NJ2 XP sP 01 06 15.5 -3.9
NJ2 PP PP 01 06 36.4 +0.6
NJ2 S S 01 12 43.5 +1.9
NJ2 XS sS 01 16 07.0 -6.3
NJ2 AMB AMB
comp=Z,720nm,1.2s,mb5.9
NJ2 AMB AMB
comp=Z,2μm,7.4s
JCC Jacoby Creek 79.89 39 ⇓P **P 01 03 23.8 +0.2**
baz=80,SNR=20
GASB Alder Springs 79.94 41 ⇓P **P 01 03 25.0 +1.0**
baz=80,SNR=223
VES Vestal, Richgr 79.97 45 ⇑P **P 01 03 23.7 -0.6**
baz=80,SNR=171
MURC Murrieta 79.99 48 ⇑P **P 01 03 24.0 -0.4**
baz=80,SNR=117
BFSC Mount Baldy St 80.03 47 ⇑P **P 01 03 24.4 -0.2**
baz=80,SNR=118
S05C Merced 80.04 44 ⇑P **P 01 03 23.8 -0.7**
baz=80,SNR=119
RCTC Rector, Farmer 80.14 45 ⇑P **P 01 03 24.6 -0.5**
baz=80,SNR=25
MONP Monument Peak 80.15 49 ⇓P **P 01 03 25.1 -0.1**
baz=80,SNR=264
EDW2 Edwards Air Fo 80.16 47 ⇓P **P 01 03 24.6 -0.7**
baz=80,SNR=432
R04C Big Horse Ranc 80.19 42 ⇓P **P 01 03 24.5 -0.9**
baz=80,SNR=15
T06C Millerton Lake 80.24 44 ⇑P **P 01 03 25.0 -0.7**
baz=80,SNR=380
DVTC Desert V Tower 80.25 49 ⇑P **P 01 03 25.4 -0.3**
baz=80,SNR=120
ISA Isabella 80.28 46 *e*P **P 01 03 26.6 +0.7**
comp=Z,691nm,1.3s,mb5.8
ISA Isabella 80.28 46 *e*P **P 01 03 26.6 +0.7**
ISA pmax pmax
comp=Z,691nm,1.3s,mb5.8
ISA Isabella 80.28 46 ⇓P **P 01 03 25.9 0.0**
baz=80,SNR=226
LPIG La Paz 80.31 60 *i* P **P 01 03 26.4 +0.1**
N02C Big Bar 80.32 39 ⇑P **P 01 03 25.8 -0.1**
baz=80,SNR=120
KRMB Red Mountain 80.41 38 *e*P **P 01 03 27.6 +1.2**
CMB Columbia Colle 80.41 43 *e*P **P 01 03 26.9 +0.4**
comp=Z,684nm,1.3s,mb5.8
CMB Columbia Colle 80.41 43 *e*P **P 01 03 26.9 +0.4**
CMB pmax pmax
comp=Z,684nm,1.3s,mb5.8
CMB Columbia Colle 80.41 43 ⇓P **P 01 03 26.1 -0.4**
baz=81,SNR=368
OHCM Honcut 80.50 41 *e*P **P 01 03 27.1 +0.2**
PFO Pinyon Flat Ob 80.52 48 P **P 01 03 26.9 -0.2**
comp=Z,139nm,1.0s,mb5.4,baz=260,slow=3.6,SNR=109
PFO pP pP 01 05 25.6 -0.5
comp=Z,5.9nm,1.0s,baz=33,slow=3.7,SNR=1.0
PFO PKKPbc PKKPbc 01 22 06.8 +2.8
comp=Z,7.9nm,0.7s,baz=357,slow=2.2,SNR=10
PFO Pinyon Flat Ob 80.52 48 *e*P **P 01 03 27.7 +0.6**
comp=Z,372nm,1.3s,mb5.7
PFO Pinyon Flat Ob 80.52 48 ⇓P **P 01 03 26.7 -0.4**
baz=81,SNR=112
BBRC Big Bear Sol-O 80.55 48 ⇑P **P 01 03 27.2 -0.1**
baz=81,SNR=7.6
QIZ Qiongzhong 80.58 295 P **P 01 03 27.4 -0.4**
QIZ AP pP 01 05 27.1 +0.3
QIZ XP sP 01 06 21.0 -2.7
QIZ PP PP 01 06 40.5 -1.4
QIZ S S 01 12 49.5 0.0
QIZ XS sS 01 16 20.6 -1.0
QIZ AMB AMB
comp=Z,210nm,1.6s,mb5.3
QIZ AMB AMB
comp=Z,2μm,8.0s
LAVA Lava Cap Winer 80.61 42 ⇓P **P 01 03 27.2 -0.3**
baz=81,SNR=133
SWSC Sam W. Stewart 80.62 49 ⇓P **P 01 03 27.6 -0.1**
baz=81,SNR=216
COCO West Island 80.62 261 *e*P **P 01 03 30.4 +2.3**
comp=Z,2μm,1.3s,mb6.3
WDC Whiskeytown Da 80.62 40 *e*P **P 01 03 28.4 +0.9**
comp=Z,788nm,1.2s,mb6.0
WDC Whiskeytown Da 80.62 40 *e*P **P 01 03 28.4 +0.9**
WDC pmax pmax
comp=Z,788nm,1.2s,mb6.0
WDC Whiskeytown Da 80.62 40 ⇓P **P 01 03 27.6 +0.1**
baz=81,SNR=185
ORV Oroville 80.62 41 ⇑P **P 01 03 26.8 -0.8**
baz=81,SNR=254
KCC Kaiser Creek 80.68 44 ⇓P **P 01 03 27.5 -0.4**
baz=81,SNR=437
MAW Mawson 80.69 200 P **P 01 03 28.0 +0.6**
comp=Z,121nm,0.8s,mb5.4,baz=124,slow=6.8,SNR=64
MAW pP pP 01 05 27.2 +0.8
comp=Z,15nm,0.8s,baz=119,slow=13,SNR=1.9
MAW S S 01 12 51.3 +2.4
comp=Z,19nm,1.1s,baz=14,slow=22,SNR=3.2
MAW PKKPbc PKKPbc 01 22 02.7 -1.7
comp=Z,6.3nm,0.7s,baz=312,slow=5.1,SNR=7.0
MAW Mawson 80.69 200 *e*P **P 01 03 28.4 +0.9**
comp=Z,51nm,1.0s,mb4.9
MAW Mawson 80.69 200 P **P 01 03 28.0 +0.5**
MAW *PP pP 01 05 27.2 +0.8
MAW S S 01 12 51.3 +2.3
MAW pmax pmax
comp=Z,121nm,0.8s
MAW smax
comp=N,19nm,1.1s
LRMC Laurel Mountai 80.70 46 ⇓P **P 01 03 27.8 -0.3**
baz=81,SNR=75
MDJ Mudanjiang 80.74 325 P **P 01 03 28.9 +0.9**
MDJ XP sP 01 06 23.3 -0.7
MDJ S S 01 12 53.0 +2.9
MDJ SS SS 01 18 22.8 +2.4
MDJ AMB AMB
comp=Z,577nm,1.3s,mb5.8
MDJ AMB AMB
comp=Z,3μm,9.6s
MDJ Mudanjiang 80.74 325 *e*P **P 01 03 28.6 +0.6**
comp=Z,820nm,1.2s,mb6.0
MDJ LR LR
comp=Z,857nm,19.0s
HABR Khabarovsk 80.75 331 ⇓ *e*P **P 01 03 28.2 +0.2**
HABR *e* 01 06 38.1
HABR *e*PPP 01 08 32.1
HABR *e*S S 01 12 54.2 +4.2
HABR *e*SS SS 01 18 19.4 -1.1
HABR pmax pmax
comp=Z,2μm,1.7s,mb6.2
RRX Edison Barstow 80.84 47 ⇓P **P 01 03 28.4 -0.4**
baz=81,SNR=5.5
PMSA Palmer Station 80.89 157 P **P 01 03 29.6 +1.0**
comp=Z,141nm,1.0s,mb5.4,baz=245,slow=4.6,SNR=28
PMSA S S 01 12 56.9 +5.8
comp=Z,15nm,0.9s,baz=12,slow=22,SNR=2.1
PMSA PKKPbc PKKPbc 01 22 02.3 -1.5
comp=Z,20nm,0.8s,baz=140,slow=4.5,SNR=6.6
PMSA Palmer Station 80.89 157 *e*P **P 01 03 29.7 +1.2**
comp=Z,150nm,0.9s,mb5.4
K01A Sixes 80.91 37 ⇓P **P 01 03 29.5 +0.5**
baz=81,SNR=7.1
CWC Cottonwood Cre 80.98 45 ⇓P **P 01 03 29.4 -0.1**
baz=81
L02A Cave Junction 80.98 38 ⇑P **P 01 03 29.8 +0.4**
baz=81,SNR=16
OHAK Old Harbor 80.98 14 *e*P **P 01 03 28.9 -0.1**
BELC Belle Mtn. 81.05 48 ⇓P **P 01 03 30.0 +0.1**
baz=81,SNR=293
MPMC Manual Prospec 81.16 46 ⇑P **P 01 03 30.3 -0.2**
baz=81,SNR=353
MLAC Mammoth Lakes 81.17 44 ⇓P **P 01 03 30.7 +0.3**
baz=81,SNR=82
MTUM Tungsten Hills 81.19 44 *e*P **P 01 03 31.0 +0.5**
MTUM *e*pP pP 01 05 34.0 +4.2
GSC Goldstone 81.20 47 *e*P **P 01 03 31.1 +0.5**
comp=Z,465nm,1.2s,mb5.8
GSC Goldstone 81.20 47 *e*P **P 01 03 31.2 +0.5**
GSC pmax pmax
comp=Z,465nm,1.2s,mb5.8
GSC Goldstone 81.20 47 ⇓P **P 01 03 30.2 -0.4**
baz=81,SNR=303
LAMM Antelope Mount 81.21 39 P **P 01 03 31.0 +0.5**
O05C Quincy 81.23 41 ⇓P **P 01 03 30.5 -0.2**
baz=81,SNR=217
TIN Tinemaha 81.23 45 ⇑P **P 01 03 30.6 -0.1**
baz=81,SNR=153
YBH Yreka Blue Hor 81.23 39 P **P 01 03 30.1 -0.5**
comp=Z,505nm,0.8s,mb6.0,baz=203,slow=2.4,SNR=184
YBH pP pP 01 05 30.6 +0.6
comp=Z,6.5nm,0.9s,baz=122,slow=11,SNR=0.9
YBH S S 01 12 58.3 +3.0
comp=Z,8.9nm,1.2s,baz=129,slow=13,SNR=1.7
YBH Yreka Blue Hor 81.23 39 *e*P **P 01 03 31.4 +0.8**
comp=Z,756nm,1.0s,mb6.1
YBH Yreka Blue Hor 81.23 39 *e*P **P 01 03 31.4 +0.7**
YBH pmax pmax
comp=Z,756nm,1.0s
YBH Yreka Blue Hor 81.23 39 ⇑P **P 01 03 31.1 +0.4**
baz=81,SNR=222
BC3 Big Chuckw Mtn 81.24 49 ⇓P **P 01 03 31.0 +0.1**
baz=81,SNR=253
112A Yuma 81.27 50 ⇓P **P 01 03 31.2 +0.2**
baz=81,SNR=163
HEC Hector,Ludlow 81.27 47 ⇓P **P 01 03 30.5 -0.5**
baz=81,SNR=234
R06C Coleville 81.29 43 ⇓P **P 01 03 30.8 -0.2**
baz=81,SNR=169
O04C Chester 81.34 41 ⇑P **P 01 03 31.1 -0.1**
baz=82,SNR=167
GLA Glamis 81.36 50 *e*P **P 01 03 32.6 +1.1**
comp=Z,762nm,1.0s,mb6.1
GLA Glamis 81.36 50 *e*P **P 01 03 32.6 +1.1**
GLA pmax pmax
comp=Z,762nm,1.0s,mb6.1
GLA Glamis 81.36 50 ⇓P **P 01 03 31.9 +0.4**
baz=82,SNR=249
K02A Glendale 81.43 38 ⇑P **P 01 03 32.0 +0.4**
baz=82,SNR=60
BEKR Beckwourth 81.51 41 ⇓P **P 01 03 32.1 0.0**
baz=82,SNR=317
WCN Washoe City 81.56 42 ⇑P **P 01 03 32.5 +0.2**
baz=82
FRIM Kepong 81.58 277 ⇓P **P 01 03 35.5 +2.3**
HUMO Hull Mountain 81.64 38 *e*P **P 01 03 33.8 +1.1**
comp=Z,1μm,1.1s,mb6.2
HUMO PcP PcP 01 03 36.1 -0.7
HUMO *e*pP pP 01 05 33.6 +1.4
HUMO Hull Mountain 81.64 38 ⇓P **P 01 03 33.0 +0.3**
baz=82,SNR=222
KDAK Kodiak Island 81.65 14 P PcP 01 03 46.0 +10
comp=Z,255nm,0.9s,baz=208,slow=2.4,SNR=53
KDAK Kodiak Island 81.65 14 *e*P **P 01 03 32.7 +0.3**
comp=Z,880nm,1.4s,mb6.0
KDAK LR LR
comp=Z,747nm,20.0s
P06A Stead Airport, 81.69 42 ⇑P **P 01 03 33.0 -0.1**
baz=82,SNR=63
GMRC Granite Mounta 81.70 48 ⇓P **P 01 03 33.0 -0.2**
baz=82
IRM Iron Mountain 81.72 49 ⇑P **P 01 03 33.2 -0.1**
baz=82,SNR=440
J02A Umpqua 81.76 37 ⇑P **P 01 03 33.5 +0.2**
baz=82,SNR=74
GRAC Grapevine Rang 81.77 45 ⇓P **P 01 03 33.5 0.0**
baz=82,SNR=390
FURC Furnace Creek, 81.81 46 ⇓P **P 01 03 33.3 -0.4**
baz=82,SNR=101
DL2 Dalian 81.82 317 *i* P **P 01 03 35.5 +1.8**
DL2 AP pP 01 05 32.9 -0.3
DL2 XP sP 01 06 29.5 -0.5
DL2 S S 01 13 03.8 +2.6
DL2 SS SS 01 18 36.6 +0.1
DL2 AMB AMB
comp=Z,260nm,1.5s,mb5.4
TUQ Turquoise Moun 81.88 47 ⇑P **P 01 03 33.9 -0.2**
baz=82,SNR=209
SHOC Shoshone 81.89 47 ⇓P **P 01 03 33.8 -0.4**
baz=82,SNR=164
Q07A Schurz 81.94 43 ⇓P **P 01 03 34.4 +0.1**
baz=82,SNR=5.4
Y12C Blythe 81.95 49 ⇓P **P 01 03 34.4 -0.1**
baz=82,SNR=172
NVAR Mina Array Bea 81.97 44 P **P 01 03 34.0 -0.5**
comp=Z,306nm,0.8s,mb5.8,baz=224,slow=8.4,SNR=201
NVAR pP pP 01 05 36.1 +2.0
comp=Z,27nm,1.0s,baz=224,slow=6.2,SNR=4.2
NVAR PKiKP PKiKP 01 08 54.0 +2.0
comp=Z,4.2nm,0.7s,baz=230,slow=3.0,SNR=5.5
NVAR S S 01 13 03.9 +1.1
comp=Z,1.5nm,0.8s,baz=256,slow=3.6,SNR=2.8
NVAR PKKP PKKPdf 01 21 50.3 -1.3
comp=Z,1.8nm,0.8s,baz=102,slow=3.5,SNR=4.2
NVAR PKKPbc PKKPbc 01 22 00.6 -0.4
comp=Z,20nm,0.7s,baz=70,slow=2.6,SNR=40
NVAR PKP2bc 01 29 48.8
comp=Z,1.2nm,0.8s,baz=67,slow=2.1,SNR=4.3
NVAR Mina Array Bea 81.97 44 P **P 01 03 34.0 -0.5**
NVAR pP pP 01 05 36.1 +2.0
113A Mohawk Valley, 81.97 50 ⇑P **P 01 03 34.6 0.0**
baz=82,SNR=237
O06A Flanigan 82.02 41 ⇓P **P 01 03 34.5 -0.2**
baz=82,SNR=430
PAHR Pah Rah Range 82.03 42 *e*P **P 01 03 34.9 +0.1**
comp=Z,771nm,1.1s,mb6.0
PAHR *e*PcP PcP 01 03 37.8 -0.7
I02A Mapleton 82.03 37 ⇑P **P 01 03 34.6 -0.1**
baz=82,SNR=98
R08A Mina 82.05 44 ⇑P **P 01 03 34.7 -0.2**
baz=82,SNR=24
HOG Hogback Mounta 82.14 39 P **P 01 03 35.5 +0.2**
U10A Ash Meadows, A 82.14 46 ⇑P **P 01 03 35.3 -0.2**
baz=82,SNR=249
P07A Fallon 82.24 42 ⇑P **P 01 03 35.8 0.0**
baz=82,SNR=32
LDFC Landfair 82.25 48 *e*P **P 01 03 36.4 +0.5**
comp=Z,1μm,0.9s,mb6.3

LDFC					ePcP	PcP	01 03 39.0	-0.6
214A	Organ Pipe Nat	82.25	52	⇓P	P		01 03 36.1	+0.1
	baz=82,SNR=217							
S09A	Goldfield	82.27	45	⇓P	P		01 03 35.8	-0.3
	baz=82,SNR=70							
I03A	Eugene	82.31	37	⇓P	P		01 03 35.9	-0.2
	baz=82,SNR=68							
SNY	Shenyang	82.35	320	⇑P	P		01 03 36.6	+0.3
SNY				AP	pP		01 05 32.0	-4.0
SNY				XP	sP		01 06 28.8	-4.0
SNY				S	S		01 13 11.3	+4.9
SNY				AMB	AMB			
	comp=Z,323nm,2.2s,mb5.4							
SNY				AMB	AMB			
	comp=Z,4μm,10.8s							
N06A	Buffalo Meadow	82.36	41	⇓P	P		01 03 36.1	-0.3
	baz=82,SNR=359							
WHN	Wuhan	82.36	307	P	P		01 03 36.3	-0.4
WHN				AMB	AMB			
	comp=Z,7μm,7.6s							
H02A	Toledo	82.36	36	⇑P	P		01 03 36.4	+0.1
	baz=82,SNR=22							
NEE2	Needles Airpor	82.42	48	⇑P	P		01 03 36.6	-0.2
	baz=83							
V11A	Goodsprings	82.43	47	⇑P	P		01 03 36.4	-0.5
	baz=83,SNR=217							
Q08A	Gabbs	82.46	43	⇑P	P		01 03 36.8	-0.2
	baz=83,SNR=225							
TPH	Tonopah	82.47	44	eP	P		01 03 38.0	+1.0
	comp=Z,665nm,1.0s,mb6.0							
TPH				PcP	PcP		01 03 40.4	-0.2
TPH	Tonopah	82.47	44	eP	P		01 03 38.0	+1.0
TPH				pmax	pmax			
	comp=Z,665nm,1.0s,mb6.0							
Y13A	Salome	82.47	49	⇓P	P		01 03 37.3	+0.1
	baz=83,SNR=552							
CN2	Changchun	82.48	323	⇓P	P		01 03 36.0	-0.9
CN2				eS	S		01 13 08.5	+0.9
TPNV	Topopah Spring	82.49	46	eP	P		01 03 37.5	+0.4
	comp=Z,597nm,0.9s,mb6.0							
TPNV				ePcP	PcP		01 03 40.2	-0.4
TPNV	Topopah Spring	82.49	46	eP	P		01 03 37.5	+0.4
TPNV				pmax	pmax			
	comp=Z,597nm,0.9s,mb6.0							
TPNV	Topopah Spring	82.49	46	⇑P	P		01 03 36.8	-0.3
	baz=83							
PDMCI	Parker Dam,Lak	82.51	49	⇑P	P		01 03 37.4	+0.1
	baz=83,SNR=226							
W12A	Cal Nev Ari	82.53	48	⇑P	P		01 03 37.0	-0.4
	baz=83,SNR=20							
IPM	Ipoh	82.60	278	⇑P	P		01 03 39.2	+0.9
CJM	Chamela	82.60	66	eP	P		01 03 38.5	+0.3
COR	Corvallis	82.69	36	eP	P		01 03 38.1	+0.1
	comp=Z,708nm,1.1s,mb6.1							
COR				ePcP	PcP		01 03 41.1	-0.2
COR	Corvallis	82.69	36	eP	P		01 03 38.1	+0.1
COR				pmax	pmax			
	comp=Z,708nm,1.1s,mb6.1							
H03A	Soap Creek Ran	82.75	36	⇑P	P		01 03 38.4	+0.1
	baz=83,SNR=114							
MOD	Modoc	82.76	40	eP	P		01 03 39.2	+0.8
	comp=Z,811nm,1.1s,mb6.2							
MOD				ePcP	PcP		01 03 41.2	-0.5
MOD				epP	pP		01 05 42.5	+4.2
MOD	Modoc	82.76	40	⇑P	P		01 03 38.1	-0.3
	baz=83,SNR=179							
V12A	Nelson	82.77	47	⇑P	P		01 03 38.3	-0.3
	baz=83,SNR=260							
U11A	Corn Creek	82.78	47	⇑P	P		01 03 38.3	-0.3
	baz=83,SNR=68							
S10A	Tonopah Range,	82.80	45	⇑P	P		01 03 38.3	-0.4
	baz=83,SNR=300							
KLR	Kul'dur	82.82	330	eP	P		01 03 35.5	-3.0
KLR				eS	S		01 13 11.0	+0.3
KLR				eSS	SS		01 18 47.0	-3.8
KLR				pmax	pmax			
	comp=Z,4μm,8.0s							
KLR				smax				
	comp=N,1μm,15.0s							
KLR				smax				
	comp=E,3μm,15.0s							
P08A	Dixie Valley	82.84	43	⇓P	P		01 03 38.9	0.0
	baz=83,SNR=70							
HEBO	Mount Hebo	82.84	36	eP	P		01 03 39.3	+0.6
	comp=E,1μm,1.1s,mb6.4							
HEBO				ePcP	PcP		01 03 42.0	0.0
Z14A	Wintersburg	82.87	50	⇑P	P		01 03 39.3	+0.1
	baz=83,SNR=274							
X13A	Yucca	82.88	49	⇓P	P		01 03 39.3	+0.1
	baz=83,SNR=423							
N07B	Gerlach	82.91	41	⇓P	P		01 03 38.9	-0.3
	baz=83,SNR=199							
K05A	Summer Lake	82.91	39	⇑P	P		01 03 39.3	+0.2
	baz=83,SNR=289							
IRO	Indian Ridge	82.91	37	P	P		01 03 39.7	+0.6
Q09A	Carvers	82.92	44	⇑P	P		01 03 38.8	-0.5
	baz=83,SNR=65							
115A	Sonoran Desert	83.05	51	⇑P	P		01 03 40.0	-0.1
	baz=83,SNR=166							
MAIG	Mazatlaan	83.05	62	i P	P		01 03 39.7	-0.6
W13A	Hualapai Mount	83.11	48	⇑P	P		01 03 40.6	+0.3
	baz=83,SNR=438							
Y14A	Wickenburg	83.12	50	⇑P	P		01 03 40.2	-0.2
	baz=83,SNR=397							
O08A	Rochester Mine	83.13	42	⇑P	P		01 03 40.2	0.0
	baz=83,SNR=396							
G03A	Yamhill	83.16	36	⇓P	P		01 03 40.0	-0.3
	baz=83,SNR=59							
R10A	Warm Springs	83.19	45	⇑P	P		01 03 40.8	+0.2
	baz=83,SNR=86							
S11A	Rachel	83.20	45	⇑P	P		01 03 40.1	-0.6
	baz=83,SNR=70							
KMOR	Kings Mountain	83.25	35	P	P		01 03 40.7	-0.1
216A	Three Points,	83.26	52	⇓P	P		01 03 41.3	+0.2
	baz=83,SNR=139							
TIA	Tai'an	83.29	313	eP	P		01 03 40.1	-1.1
T11A	Corn Creek, Al	83.33	46	⇑P	P		01 03 41.5	+0.1
	baz=84,SNR=400							
P09A	Austin	83.35	43	⇑P	P		01 03 41.2	-0.3
	baz=84,SNR=53							
U12A	Valley of Fire	83.36	47	⇑P	P		01 03 41.6	+0.1
	baz=84,SNR=163							
116A	Eloy	83.36	51	⇑P	P		01 03 41.6	-0.1
	baz=84,SNR=188							
H04A	Detroit Lake	83.37	37	⇑P	P		01 03 40.8	-0.5
	baz=84,SNR=105							
T12A	Moapa	83.40	47	⇑P	P		01 03 41.5	-0.2
	baz=84,SNR=28							
Z15A	Gila River Ind	83.40	51	⇓P	P		01 03 41.4	-0.4
	baz=84,SNR=61							
F03A	Seaside	83.40	35	⇑P	P		01 03 41.3	-0.2
	baz=84,SNR=46							
L07A	Adell	83.41	40	⇓P	P		01 03 42.0	+0.4
	baz=84,SNR=116							
Q10A	Clear Creek Ra	83.42	44	⇑P	P		01 03 41.4	-0.4
	baz=84							
N08A	GE Springer Mi	83.43	42	⇑P	P		01 03 41.6	-0.2
	baz=84,SNR=335							
V13A	Grand Canyon W	83.43	48	⇑P	P		01 03 41.9	0.0
	baz=84,SNR=485							
X14A	Yava	83.48	49	⇓P	P		01 03 42.1	-0.1
	baz=84,SNR=400							
G04A	Mulino	83.53	36	⇓P	P		01 03 42.0	-0.2
	baz=84,SNR=168							
I05A	Bend	83.57	38	⇓P	P		01 03 42.4	+0.1
	baz=84,SNR=202							
Y15A	Casa Rosa Ranc	83.61	50	⇑P	P		01 03 42.8	0.0
	baz=84,SNR=599							
217A	Green Valley	83.62	53	⇓P	P		01 03 43.0	0.0
	baz=84,SNR=572							
J06A	Christmas Vall	83.66	39	⇑P	P		01 03 42.7	-0.1
	baz=84,SNR=395							
M08A	Happy Creek Ra	83.66	41	⇑P	P		01 03 42.7	-0.2
	baz=84,SNR=183							
O09A	Fish Creek Ran	83.67	43	⇓P	P		01 03 42.7	-0.3
	baz=84,SNR=147							
R11A	Troy Canyon, C	83.69	45	⇑P	P		01 03 42.6	-0.5
	baz=84,SNR=152							
W14A	Seligman	83.73	49	⇑P	P		01 03 43.6	+0.2
	baz=84,SNR=529							
U13A	Pakoon Wash	83.74	47	⇓P	P		01 03 43.4	0.0
	baz=84,SNR=566							
S12A	Delamar Landin	83.78	46	⇑P	P		01 03 43.8	+0.3
	baz=84,SNR=174							
E03A	Lebam	83.79	35	⇓P	P		01 03 43.3	-0.1
	baz=84							
BMN	Battle Mountai	83.80	42	eP	P		01 03 44.3	+0.7
	comp=E,543nm,1.0s,mb6.0							
BMN	Battle Mountai	83.80	42	eP	P		01 03 44.3	+0.7
BMN				pmax	pmax			
	comp=Z,543nm,1.0s,mb6.0							
P10A	Eureka	83.83	43	⇓P	P		01 03 43.5	-0.2
	baz=84,SNR=13							
N09A	Rock Creek Ran	83.85	42	⇓P	P		01 03 43.7	-0.1
	baz=84,SNR=34							
K07A	Rock Creek Ran	83.86	40	⇓P	P		01 03 44.0	+0.1
	baz=84,SNR=267							
USHA	Ushuaia	83.88	147	P	P		01 03 44.9	+1.0
	comp=Z,49nm,0.9s,mb5.0,baz=222,slow=7.2,SNR=7.0							
H05A	Madras	83.89	37	⇓P	P		01 03 43.8	-0.2
	baz=84,SNR=67							
TUC	Tucson	83.91	52	eP	P		01 03 45.4	+1.1
	comp=Z,468nm,1.0s,mb6.0							
TUC	Tucson	83.91	52	eP	P		01 03 45.4	+1.0
TUC				pmax	pmax			
	comp=Z,468nm,1.0s,mb6.0							
BMW	Boistfort Moun	83.93	35	eP	P		01 03 44.9	+0.8
V14A	Boquillas Ranc	83.93	48	⇑P	P		01 03 44.6	+0.2
	baz=84,SNR=649							
X15A	Humboldt	83.95	50	⇑P	P		01 03 44.3	-0.2
	baz=84,SNR=498							
Z16A	Peralta Trail,	83.95	51	⇑P	P		01 03 44.4	-0.2
	baz=84,SNR=182							
SNG	Songkhla	83.98	280	P	P		01 03 45.0	-0.2
VLMM	Larch Mountain	83.98	36	P	P		01 03 45.0	+0.6
F04A	Amboy	84.02	36	⇓P	P		01 03 44.4	-0.1
	baz=84,SNR=160							
I06A	Prineville	84.04	38	⇓P	P		01 03 44.6	-0.1
	baz=84,SNR=398							
D03A	Wishkah Elem.	84.05	34	⇑P	P		01 03 45.3	+0.6
	baz=84,SNR=57							
HOOD	Mount Hood Mea	84.06	37	eP	P		01 03 45.6	+0.9
	comp=Z,1μm,1.1s,mb6.3							
HOOD				ePcP	PcP		01 03 47.6	+0.3
117A	Oracle	84.07	52	⇓P	P		01 03 45.4	+0.3
	baz=84,SNR=442							
318A	Bisbee	84.07	53	⇑P	P		01 03 45.4	+0.2
	baz=84,SNR=733							
WVOR	Wild Horse Val	84.08	40	eP	P		01 03 45.5	+0.6
	comp=Z,635nm,1.2s,mb6.0							
WVOR	Wild Horse Val	84.08	40	eP	P		01 03 45.5	+0.6
WVOR				pmax	pmax			
	comp=Z,635nm,1.2s,mb6.0							
T13A	Saint George	84.10	47	⇑P	P		01 03 44.7	-0.5
	baz=84,SNR=219							
L08A	Fields	84.11	40	⇑P	P		01 03 45.3	+0.2
	baz=84,SNR=165							
SVW2	Sparrevohn	84.11	11	eP	P		01 03 43.3	-1.4
SVW2				ePcP	PcP		01 03 46.4	-0.7
LVP	Lakeview Peak	84.11	36	P	P		01 03 44.8	-0.2
C03A	Quillayute Air	84.17	33	⇓P	P		01 03 45.4	+0.2
	baz=84,SNR=28							
O10A	Cortez Mining,	84.18	43	⇑P	P		01 03 45.4	-0.1
	baz=84,SNR=73							
Y16A	Circle Bar Ran	84.19	50	⇑P	P		01 03 45.7	0.0
	baz=84,SNR=707							
M09A	Marrel Ranch,	84.22	41	⇑P	P		01 03 45.6	0.0
	baz=84							
J07A	Hines	84.23	39	⇓P	P		01 03 45.4	-0.2
	baz=84,SNR=124							
P11A	Circle Ranch,	84.25	44	⇑P	P		01 03 45.2	-0.6
	baz=84							
E04A	Onalaska	84.27	35	⇑P	P		01 03 46.1	+0.4
	baz=84,SNR=69							
W15A	Williams	84.28	49	⇓P	P		01 03 46.5	+0.4
	baz=84,SNR=42							
U14A	Mt Trumbull	84.28	48	⇓P	P		01 03 46.6	+0.5
	baz=84,SNR=738							
218A	Dragoon	84.29	53	⇑P	P		01 03 46.6	+0.3
	baz=84,SNR=202							
R12A	Pony Springs,	84.33	45	⇓P	P		01 03 46.4	+0.1
	baz=84,SNR=174							
K08A	Mann Creek Ran	84.34	40	⇑P	P		01 03 46.5	+0.3
	baz=84,SNR=161							
N10A	Dunphy	84.41	42	⇑P	P		01 03 46.8	+0.2
	baz=85,SNR=61							
L09A	Wilkinson Ranc	84.43	41	⇓P	P		01 03 46.6	0.0
	baz=85,SNR=32							
S13A	Holt Ranch, En	84.43	46	⇑P	P		01 03 46.7	-0.1
	baz=85,SNR=151							
H06A	Lindquist Farm	84.45	38	⇓P	P		01 03 46.4	-0.3
	baz=85,SNR=472							
SEW	Seward	84.45	14	eP	P		01 03 45.9	-0.5
SEW				ePcP	PcP		01 03 47.6	-1.1
X16A	Lo Mia Camp, P	84.48	50	⇓P	P		01 03 47.3	+0.2
	baz=85,SNR=397							
I07A	Izee	84.53	38	⇓P	P		01 03 47.4	+0.3
	baz=85,SNR=358							
Y17A	Roosevelt	84.55	51	⇑P	P		01 03 47.4	0.0
	baz=85,SNR=176							
D04A	Dobbs Creek Ra	84.56	35	⇓P	P		01 03 47.7	+0.5
	baz=85,SNR=36							
Q12A	Wilow Creek R	84.57	45	⇓P	P		01 03 47.0	-0.4
	baz=85,SNR=156							
319A	Douglas	84.58	54	⇓P	P		01 03 47.9	+0.2
	baz=85,SNR=571							
O11A	Cowboy Ranch,	84.62	43	⇓P	P		01 03 47.5	-0.1
	baz=85,SNR=127							
Z17A	San Carlos Hig	84.62	51	⇓P	P		01 03 47.5	-0.4
	baz=85,SNR=28							
SLKM	Skilak Lake	84.64	14	eP	P		01 03 46.5	-0.7
SLKM				ePcP	PcP		01 03 48.9	-0.6
118A	Homack Ranch,	84.67	52	⇑P	P		01 03 48.1	0.0
	baz=85,SNR=440							
V15A	Kaibab Nationa	84.67	48	⇓P	P		01 03 48.1	+0.1
	baz=85,SNR=288							
R13A	O'Grain Ranch,	84.68	46	⇓P	P		01 03 48.1	+0.1
	baz=85,SNR=47							
T14A	Hurricane	84.69	47	⇑P	P		01 03 47.9	-0.2
	baz=85,SNR=197							
J08A	Circle Bar Ran	84.71	39	⇓P	P		01 03 48.0	0.0
	baz=85							
CCUT	Cedar City	84.75	46	eP	P		01 03 49.0	+0.6
CCUT				ePcP	PcP		01 03 51.4	+0.8
W16A	Flagstaff	84.76	49	⇑P	P		01 03 48.2	-0.2
	baz=85,SNR=313							
HDW	Hoodsport	84.76	34	P	P		01 03 48.2	0.0
E05A	Randle	84.77	35	⇓P	P		01 03 48.0	-0.2
	baz=85							
K09A	Rome	84.78	40	⇑P	P		01 03 48.2	-0.1
	baz=85,SNR=395							
B04A	Port Angeles	84.79	34	⇑P	P		01 03 48.8	+0.5
	baz=85,SNR=91							
F06A	Goldendale	84.82	37	⇑P	P		01 03 48.4	-0.1
	baz=85,SNR=126							
ARUT	Antelope Range	84.82	46	eP	P		01 03 49.3	+0.6
M10A	I.L. Ranch, Tu	84.84	42	⇑P	P		01 03 48.3	-0.3
	baz=85							
Z18A	Geronimo	84.84	52	⇓P	P		01 03 48.9	0.0
	baz=85,SNR=14							
C04A	Brinnon	84.85	34	⇓P	P		01 03 48.5	-0.1
	baz=85,SNR=22							
219A	White Tail Can	84.89	53	⇑P	P		01 03 49.8	+0.6
	baz=85							
X17A	Forest Lakes	84.90	50	⇓P	P		01 03 49.6	+0.5
	baz=85,SNR=180							
ZIIG	Zihuatanejo	84.90	69	eP	P		01 03 48.5	-1.0
U15A	North Rim	84.90	48	⇓P	P		01 03 49.3	+0.1
	baz=85,SNR=615							
N11A	Elko Archery C	84.95	43	⇑P	P		01 03 49.2	0.0
	baz=85,SNR=47							
I08A	Drewsey	84.98	39	⇓P	P		01 03 49.4	+0.1
	baz=85							
S14A	Cedar City	84.99	46	⇓P	P		01 03 49.7	+0.2
	baz=85,SNR=85							
D05A	Enumclaw	85.04	35	⇑P	P		01 03 49.7	+0.2
	baz=85,SNR=149							
Q13A	Wheeler Ranch,	85.05	45	⇑P	P		01 03 50.1	+0.4
	baz=85							
WUAZ	Wupatki	85.08	49	eP	P		01 03 50.6	+0.5
	comp=Z,350nm,1.1s,mb5.8							
WUAZ				ePcP	PcP		01 03 52.8	+0.7
WUAZ	Wupatki	85.08	49	⇑P	P		01 03 49.9	-0.1
	baz=85							
J09A	Fry Pan Ranch,	85.13	40	⇑P	P		01 03 50.2	+0.1
	baz=85							
G07A	Ruggs Ranch, H	85.14	37	⇑P	P		01 03 49.7	-0.3
	baz=85							
T15A	Red Dirt Ranch	85.14	47	⇑P	P		01 03 50.2	-0.1
	baz=85,SNR=347							
Y18A	Canyon Day Jun	85.18	51	⇓P	P		01 03 50.7	+0.1
	baz=85,SNR=562							
L10A	Juniper Basin	85.19	41	⇓P	P		01 03 50.2	-0.2
	baz=85,SNR=192							
PGC	Sidney	85.20	33	eP	P		01 03 50.4	+0.2
	comp=Z,1μm,1.0s,mb6.4							
PGC				ePcP	PcP		01 03 52.6	+0.4
119A	Ashpeak Ranch,	85.22	52	⇓P	P		01 03 50.9	+0.2
	baz=85,SNR=239							
ELK	Elko	85.23	43	eP	P		01 03 50.6	0.0
	comp=Z,196nm,0.9s,mb5.6							
ELK				ePcP	PcP		01 03 52.8	+0.2
ELK	Elko	85.23	43	eP	P		01 03 50.6	0.0
ELK				pmax	pmax			
	comp=Z,196nm,0.9s							
FIB	Fire Island	85.24	13	eP	P		01 03 50.7	+0.6
	comp=Z,1μm,1.0s,mb6.4							
FIB				ePcP	PcP		01 03 52.0	-0.2
FIB	Fire Island	85.24	13	eP	P		01 03 50.7	+0.6
FIB				pmax	pmax			
	comp=Z,1μm,1.0s,mb6.4							
M11A	Holland Ranch,	85.26	42	⇑P	P		01 03 50.5	-0.2
	baz=85,SNR=90							
RC01	Rabbit Creek A	85.27	14	eP	P		01 03 49.6	-0.6
	comp=Z,1μm,1.2s,mb6.3							
RC01				ePcP	PcP		01 03 51.6	-0.7
H08A	Prairie City	85.27	38	⇓P	P		01 03 50.7	0.0
	baz=85							
O12A	Currie	85.28	44	⇓P	P		01 03 51.1	+0.2
	baz=85							
P13A	Bates Ranch, G	85.32	45	⇑P	P		01 03 51.3	+0.2
	baz=86							
W17A	Winslow	85.33	50	⇓P	P		01 03 51.3	+0.1
	baz=86,SNR=25							
K10A	MacKenzie Ranc	85.34	41	⇓P	P		01 03 51.1	0.0
	baz=86							
R14A	James Farms, M	85.37	46	⇑P	P		01 03 51.4	+0.1
	baz=86,SNR=27							
F07A	Phinny Hill Vi	85.37	37	⇑P	P		01 03 51.0	-0.1
	baz=86,SNR=34							
N12A	Clover Valley,	85.41	43	⇓P	P		01 03 51.6	+0.1
	baz=86,SNR=134							
S15A	Panguitch	85.50	47	⇓P	P		01 03 52.6	+0.6
	baz=86,SNR=138							
I09A	Lost Marbles R	85.50	39	⇑P	P		01 03 51.7	-0.1
	baz=86							
Z19A	T-Link Ranch,	85.50	52	⇑P	P		01 03 52.3	+0.2
	baz=86							
C05A	Tolt Reservoir	85.51	35	⇓P	P		01 03 51.6	-0.2
	baz=86,SNR=115							
KKTK	Khon Kaen	85.53	289	P	P		01 03 52.5	-0.1
G08A	Pilot Rock	85.56	38	⇓P	P		01 03 51.9	-0.2
	baz=86,SNR=560							
Q14A	Sevier Lake (B	85.56	45	⇑P	P		01 03 52.4	+0.1
	baz=86,SNR=211							
U16A	Tuba City	85.57	49	⇑P	P		01 03 52.4	0.0
	baz=86							
X18A	Snowflake	85.61	50	⇑P	P		01 03 52.6	0.0
	baz=86,SNR=238							
CRAG	Craig	85.62	24	eP	P		01 03 53.2	+1.1
	comp=Z,822nm,1.3s,mb6.2							
A04A	Legoe Bay, Lum	85.62	33	⇑P	P		01 03 52.2	-0.1
	baz=86,SNR=348							
B05A	Bryant	85.65	34	⇑P	P		01 03 51.9	-0.5
	baz=86,SNR=241							
D06A	Cle Elum	85.66	35	⇓P	P		01 03 52.2	-0.3
	baz=86,SNR=204							
L11A	Cat Creek Ranc	85.69	42	⇑P	P		01 03 52.6	-0.1
	baz=86							
JCW	Jim Creek	85.69	34	eP	P		01 03 53.3	+0.7
O13A	Hicks Ranch, I	85.70	44	⇑P	P		01 03 52.6	-0.3
	baz=86,SNR=47							
CAIG	El Cayaco	85.72	70	eP	P		01 03 52.0	-1.5
T16A	Glen Canyon Da	85.73	48	⇑P	P		01 03 53.5	+0.5
	baz=86,SNR=178							
J10A	Berg Farm, Mel	85.77	40	⇓P	P		01 03 52.7	-0.4
	baz=86,SNR=59							
M12A	Wells	85.80	43	⇑P	P		01 03 53.5	+0.2
	baz=86,SNR=108							
E07A	Sunnyside	85.81	36	⇓P	P		01 03 53.3	+0.1
	baz=86,SNR=273							
R15A	Junction	85.83	46	⇑P	P		01 03 53.8	+0.3
	baz=86,SNR=45							
Y19A	Nutrioso	85.83	51	⇑P	P		01 03 54.0	+0.4
	baz=86,SNR=322							
K11A	Parker Ranch,	85.85	41	⇓P	P		01 03 53.3	-0.2
	baz=86,SNR=223							
PMR	Palmer	85.85	14	eP	P		01 03 52.8	-0.3
	comp=Z,1μm,1.5s,mb6.3							
PMR	Palmer	85.85	14	eP	P		01 03 52.8	-0.3
PMR				pmax	pmax			
	comp=Z,1μm,1.5s,mb6.3							
RSW	Rattlesnake Hi	85.86	37	eP	P		01 03 54.1	+0.7
HAWA	Hanford	85.89	37	eP	P		01 03 54.3	+0.7
	comp=Z,932nm,1.1s,mb6.3							
HAWA				ePcP	PcP		01 03 56.1	+0.7
SYO	Syowa Base	85.90	193	i P	P		01 03 51.2	-2.2
H09A	Durkee	85.94	39	⇑P	P		01 03 53.8	-0.1
	baz=86,SNR=362							
BJT	Baijiatuao	85.95	316	eP	P		01 03 54.0	-0.1
BJT				LR	LR			
	comp=Z,907nm,19.0s							
BJT	Baijiatuao	85.95	316	eP	P		01 03 54.0	0.0
BJT				pmax	pmax			
	comp=Z,1μm,1.5s							
BJT				MLR	MLR			
	comp=Z,907nm,19.0s							
BJI	Beijing	85.96	316	P	P		01 03 54.4	+0.3
BJI				S	S		01 13 42.6	+1.1
BJI				AMB	AMB			
	comp=Z,520nm,1.6s,mb5.9							
BJI				AMB	AMB			
	comp=Z,6μm,3.6s							
F08A	Pendleton	85.96	37	⇓P	P		01 03 53.6	-0.4
	baz=86,SNR=241							
MOIG	Morelia	85.98	67	eP	P		01 03 53.2	-1.4
P14A	Drum Mountains	86.02	45	⇓P	P		01 03 53.9	-0.5
	baz=86							
SIT	Sitka	86.02	22	eP	P		01 03 54.9	+1.0
	comp=Z,1μm,1.8s,mb6.2							
SIT	Sitka	86.02	22	eP	P		01 03 54.9	+1.0
SIT				pmax	pmax			
	comp=Z,1μm,1.8s,mb6.2							
X19A

F09A S2 Ranch, Elgi 86.41 38 ⇑P P 01 03 55.3 -0.8
baz=86,SNR=210
H10A Noah's Angus R 86.44 39 ⇑P P 01 03 55.5 -0.7
baz=87
GYA Guiyang 86.45 300 ⇓iP P 01 03 56.8 0.0
GYA AP pP 01 05 57.3 -0.7
GYA XP sP 01 06 50.8 -3.6
GYA PP PP 01 07 29.4 +0.4
GYA SKS 01 13 32.9
GYA S S 01 13 46.0 -0.8
GYA AMB AMB
comp=Z,290nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,2μm,6.9s
K12A Draper Farm, C 86.47 42 ⇓P P 01 03 56.3 -0.2
baz=87,SNR=144
DUG Dugway 86.50 44 eP P 01 03 56.8 +0.1
comp=Z,76nm,1.0s,mb5.3
DUG ePcP PcP 01 03 58.7 +0.4
DUG Dugway 86.50 44 eP P 01 03 56.8 +0.2
DUG pmax pmax
comp=Z,76nm,1.0s,mb5.3
DUG Dugway 86.50 44 ⇑P P 01 03 56.2 -0.5
baz=87
P15A Leamington 86.53 45 ⇓P P 01 03 56.5 -0.3
baz=87,SNR=67
I11A Placerville 86.53 40 ⇓P P 01 03 55.9 -0.8
baz=87
S17A Black Ridge (B 86.54 47 ⇑P P 01 03 55.8 -1.1
baz=87,SNR=218
U18A Rough Rock, Ch 86.59 49 ⇑P P 01 03 57.0 -0.2
baz=87
N14A Grayback Hills 86.60 44 ⇓P P 01 03 56.4 -0.7
baz=87,SNR=47
WRAK Wrangell Islan 86.62 24 eP P 01 03 57.4 +0.6
comp=Z,627nm,1.0s,mb6.2
G10A Bishop Farm, J 86.62 38 ⇑P P 01 03 56.3 -0.8
baz=87,SNR=588
D08A Wollman Farm, 86.62 36 ⇑P P 01 03 56.7 -0.4
baz=87,SNR=460
J12A Stokes Ranch, 86.69 41 ⇓P P 01 03 57.2 -0.2
baz=87,SNR=420
E09A Wood Farm, Sta 86.74 37 ⇓P P 01 03 57.0 -0.6
baz=87
BGU Big Grassy Mou 86.74 44 eP P 01 03 58.0 +0.2
PNL Peninsula 86.75 19 eP P 01 03 58.0 +0.7
comp=Z,1μm,1.0s,mb6.4
O15A The Old Anders 86.77 45 ⇑P P 01 03 57.6 -0.3
baz=87,SNR=50
L13A Double Diamond 86.77 42 ⇓P P 01 03 57.8 0.0
baz=87
B07A Winthrop 86.81 35 ⇓P P 01 03 57.1 -0.8
baz=87,SNR=375
V19A Window Rock 86.83 50 ⇓P P 01 03 57.9 -0.5
baz=87,SNR=28
NNT Nongplab 86.83 285 P P 01 04 01.5 +2.7
M14A Sheep Mountain 86.84 43 ⇑P P 01 03 57.7 -0.5
baz=87,SNR=192
NLU North Lily Min 86.86 45 eP P 01 03 57.0 -1.4
TNA Tin City 86.89 4 eP P 01 03 58.0 +0.2
comp=Z,263nm,0.9s,mb5.9
SEY Seymchan 86.92 347 ⇑eP P 01 03 57.0 -1.1
SEY Seymchan 86.92 347 ⇑eP P 01 03 57.9 -0.2
PLIG Platanillo 86.92 69 eP P 01 03 59.4 +0.3
Q16A Castle Valley 86.93 46 ⇓P P 01 03 58.7 0.0
baz=87,SNR=203
OD2 Odessa Site #2 86.94 36 P P 01 03 58.1 -0.4
T18A Mexican Hat 86.94 48 ⇑P P 01 03 58.5 -0.3
baz=87,SNR=1000
H11A Donnelly 86.94 39 ⇑P P 01 03 57.8 -0.7
baz=87,SNR=710
F10A Beach Ranch, E 86.95 38 ⇑P P 01 03 57.8 -0.8
baz=87
P16A Fountain Green 86.96 45 ⇓P P 01 03 59.4 +0.6
baz=87,SNR=24
D09A Jones Farm, Ri 86.97 37 ⇓P P 01 03 58.6 -0.1
baz=87,SNR=516
K13A Stover Farm, H 86.98 42 ⇑P P 01 03 58.8 -0.1
baz=87,SNR=230
C08A Higginbotham F 86.99 36 ⇓P P 01 03 57.7 -1.0
baz=87
R17A Hanksville Air 87.00 47 ⇑P P 01 03 58.6 -0.5
baz=87
A07A Ashnola River, 87.03 34 ⇓P P 01 03 58.5 -0.4
baz=87
N15A Stansbury Isla 87.05 44 ⇑P P 01 03 58.7 -0.5
baz=87,SNR=145
TMUT Trail Mountain 87.10 46 eP P 01 04 00.4 +0.9
S18A Hurst Farm, Bl 87.12 48 ⇓P P 01 03 58.9 -0.8
baz=87,SNR=90
B08A Colville Reser 87.17 35 ⇓P P 01 03 58.4 -1.2
baz=87,SNR=561
G11A Walters Elk Ra 87.18 39 ⇓P P 01 03 58.8 -0.9
baz=87,SNR=1000
MPU Maple Canyon 87.18 45 eP P 01 04 00.7 +0.8
comp=Z,848nm,1.8s,mb6.1
MPU epP pP 01 06 03.0 +1.6
L14A Malta 87.19 43 ⇑P P 01 03 59.2 -0.7
baz=87
NOQ North Oquirrh 87.19 44 eP P 01 04 00.3 +0.4
comp=Z,1μm,1.8s,mb6.2
KTH Kantishna Hill 87.24 12 eP P 01 03 58.7 -0.9
comp=Z,630nm,0.9s,mb6.2
HLID Hailey 87.27 41 eP P 01 04 00.5 +0.3
comp=Z,236nm,0.6s,mb6.0
HLID Hailey 87.27 41 ⇑P P 01 04 00.3 +0.1
baz=87
TRF Thorofare Moun 87.27 12 eP P 01 03 58.5 -1.2
comp=Z,1μm,0.8s,mb6.5
TRF epP pP 01 05 59.3 -2.0
CHUM Lake Minchumin 87.28 11 eP P 01 03 57.6 -2.1
comp=Z,547nm,1.0s,mb6.1
TIY Taiyuan 87.28 312 P P 01 04 05.1 +4.7
TIY XP sP 01 06 57.8 -0.4
TIY AMB AMB
comp=Z,4μm,2.4s,mb6.6
E10A Myers Farm, Un 87.31 37 ⇑P P 01 03 59.7 -0.5
baz=87,SNR=255
SPUT South Promonto 87.31 44 eP P 01 04 01.1 +0.6
SPUT epP pP 01 06 02.2 +0.2
SNAA Sanae 87.32 179 eP P 01 03 57.0 -3.0
SNAA e 01 03 59.3
SNAA e 01 04 05.5
SNAA e pP 01 05 59.5 -2.0
SNAA e pP 01 06 02.9 +1.4
SNAA e 01 06 25.5
SNAA e 01 13 33.8
SNAA e 01 21 43.9
J13A Cove Ranch, Pi 87.33 41 ⇑P P 01 04 00.3 -0.2
baz=88,SNR=618
HVU Hansel Valley 87.35 43 eP P 01 04 01.0 +0.4
comp=Z,838nm,1.6s,mb6.1
HVU epP pP 01 06 03.3 +1.1
HVU Hansel Valley 87.35 43 eP P 01 04 01.0 +0.4
HVU e*PP pP 01 06 03.3 +1.1
HVU pmax pmax
comp=Z,837nm,1.6s,mb6.1
PNIG Pinotepa 87.35 71 eP P 01 03 59.1 -2.0
O16A Springville 87.36 45 ⇑P P 01 04 00.2 -0.5
baz=88,SNR=65
T19A Beclabito 87.38 49 ⇓P P 01 04 00.1 -0.7
baz=88,SNR=126
M15A Larsen Ranch, 87.39 44 ⇑P P 01 04 00.4 -0.5
baz=88,SNR=189
C09A Chrisman Ranch 87.42 36 ⇑P P 01 04 00.2 -0.5
baz=88
CTU Camp Tracy 87.45 44 eP P 01 04 01.6 +0.5
comp=Z,366nm,1.6s,mb5.8
SRU San Rafael 87.47 46 eP P 01 04 01.3 +0.1
comp=Z,505nm,1.0s,mb6.1
SRU San Rafael 87.47 46 eP P 01 04 01.3 +0.1
SRU pmax pmax
comp=Z,505nm,1.0s,mb6.1
SRU San Rafael 87.47 46 ⇓P P 01 04 00.5 -0.7
baz=88
VNA3 Neumayer Olymp 87.48 176 eP P 01 04 00.5 -0.3
VNA3 e 01 04 02.6
VNA3 e pP 01 06 01.5 -0.8
VNA3 e pP 01 06 05.6 +3.3
VNA3 e 01 06 29.6
VNA3 e 01 09 01.9
VNA3 e 01 12 29.6
VNA3 e 01 21 46.3
YAIG Yautepec 87.49 69 eP P 01 04 01.3 -0.5
K14A Jones Ranch, D 87.50 42 ⇓P P 01 04 01.2 0.0
baz=88,SNR=188

P17A Butcher Ranch, 87.50 46 ⇑P P 01 04 01.3 0.0
baz=88
F11A Grangeville 87.52 38 ⇑P P 01 03 59.4 -1.9
baz=88,SNR=426
R18A Canyonlands Na 87.54 47 ⇑P P 01 04 00.9 -0.7
baz=88
H12A Diamond D Ranc 87.54 40 ⇓P P 01 04 00.6 -0.8
baz=88
A08A Turner Farm, O 87.56 35 ⇓P P 01 04 01.0 -0.4
baz=88,SNR=631
UNM Universidad Na 87.58 68 iP P 01 04 03.6 +1.4
G12A Big Creek, Yel 87.58 39 ⇓P P 01 04 01.3 -0.3
baz=88
LAZ Ladron 87.59 52 eP P 01 04 02.5 +0.6
LAZ epP pP 01 06 04.8 +1.2
Y22D IRIS PASSCAL I 87.60 52 ⇑P P 01 04 02.1 +0.1
baz=88
JLU Jordanelle 87.60 45 eP P 01 04 02.4 +0.6
JLU epP pP 01 06 05.3 +1.8
LENM Lemitar 87.60 52 eP P 01 04 02.4 +0.4
DAU Daniels Canyon 87.63 45 eP P 01 04 03.3 +1.4
I13A Wildhorse Cree 87.64 41 ⇓P P 01 04 01.6 -0.3
baz=88
NST Nakhon Sawan 87.65 288 P P 01 04 03.0 +0.4
J14A Carey 87.70 42 ⇑P P 01 04 02.7 +0.5
baz=88
L15A Malad City 87.72 43 ⇓P P 01 04 02.2 -0.1
baz=88
BPAW Bear Paw Mtn. 87.72 12 eP P 01 04 00.1 -1.7
comp=Z,567nm,1.6s,mb6.0
Q18A Rafter H Ranch 87.73 46 ⇑P P 01 04 02.2 -0.3
baz=88
E11A Bogner Ranch, 87.75 38 ⇑P P 01 04 01.3 -1.1
baz=88
N16A Rees Ranch, Co 87.75 44 ⇑P P 01 04 03.1 +0.5
baz=88
MCK McKinley 87.80 13 eP P 01 04 01.4 -0.7
comp=Z,981nm,1.0s,mb6.5
MCK McKinley 87.80 13 eP P 01 04 01.5 -0.7
MCK pmax pmax
comp=Z,981nm,1.0s,mb6.5
M16A Huntsville 87.85 44 ⇓P P 01 04 02.7 -0.2
baz=88
B09A Rice 87.85 35 ⇑P P 01 04 02.3 -0.5
baz=88
BNM Barren Site 87.85 52 eP P 01 04 03.7 +0.5
BNM pP pP 01 06 07.0 +2.1
O17A Robinson Place 87.86 45 ⇑P P 01 04 03.0 0.0
baz=88
VNA2 Neumayer--Watz 87.91 177 eP P 01 04 02.7 -0.1
baz=170,slow=2.3
VNA2 e 01 04 05.2
VNA2 e 01 04 12.3
VNA2 e pP 01 06 03.3 -1.2
VNA2 e pP 01 06 07.6 +3.1
VNA2 e 01 06 31.6
VNA2 e 01 09 02.1
VNA2 e 01 12 33.9
VNA2 e 01 13 40.7
VNA2 e 01 21 45.8
H13A Challis 87.91 40 ⇑P P 01 04 03.2 0.0
baz=88
P18A Preston Nutter 87.91 46 ⇓P P 01 04 03.3 0.0
baz=88
LPM Los Pinos Moun 87.92 52 eP P 01 04 03.7 +0.3
R19A Curley Farm, L 87.92 47 ⇓P P 01 04 03.1 -0.3
baz=88
MVCO Mesa Verde 87.93 49 eP P 01 04 03.6 +0.2
comp=Z,52nm,0.8s,mb5.3
MVCO Mesa Verde 87.93 49 ⇓P P 01 04 03.5 0.0
baz=88
A09A Danville 87.94 35 ⇑P P 01 04 02.9 -0.3
baz=88
PPM Popocatepetl 87.95 69 iP P 01 04 05.7 +1.8
C10A Spiller Farm, 87.96 36 ⇑P P 01 04 03.1 -0.2
baz=88
TXAR Lajitas Array 87.97 58 P P 01 04 04.0 +0.1
comp=Z,351nm,0.9s,mb6.1,baz=217,slow=4.9,SNR=301
TXAR PKiKP PKiKP 01 09 02.9 +0.8
comp=Z,2.6nm,0.8s,baz=184,slow=3.6,SNR=4.5
TXAR S SKSac 01 13 42.2 +2.9
comp=Z,1.7nm,1.1s,baz=210,slow=5.2,SNR=5.9
TXAR PKKPbc PKKPbc 01 21 46.8 +0.4
comp=Z,7.1nm,0.8s,baz=169,slow=5.2,SNR=3.8
TXAR PKP2ab 01 29 38.8
comp=Z,1.5nm,0.9s,baz=142,slow=4.7,SNR=4.0
MAIT Maitri 87.97 183 eP P 01 04 00.9 -2.2
NVL N'lazarevskaya 87.97 183 iP P 01 04 02.8 -0.3
NVL e*PP pP 01 06 04.6 -0.2
NVL e*SP sP 01 07 01.2 0.0
NVL iS SKSac 01 13 38.3 +0.2
NVL SP SP 01 15 08.4 +2.9
NVL pmax pmax
comp=Z,335nm,1.2s,mb6.0
K15A Arbon 87.98 42 ⇓P P 01 04 03.6 +0.1
baz=88
HWUT Hardware Ranch 88.04 44 eP P 01 04 03.9 0.0
comp=Z,309nm,1.3s,mb5.9
I14A Mackay 88.06 41 ⇑P P 01 04 04.1 +0.2
baz=88
D11A Klaveano Farm, 88.06 37 ⇑P P 01 04 03.3 -0.5
baz=88
XAN Xi'an 88.06 308 P P 01 04 03.8 -0.3
XAN AP pP 01 06 03.0 -3.0
XAN XP sP 01 06 56.3 -5.9
XAN PP PP 01 07 45.0 +3.4
XAN SKS 01 13 41.0
XAN S S 01 14 04.1 +2.6
XAN XS sS 01 17 35.0 -3.6
XAN AMB AMB
comp=Z,672nm,1.5s,mb6.2
XAN AMB AMB
comp=Z,2μm,8.3s
PV10 Paradox Valley 88.12 47 eP P 01 04 03.9 -0.4
VNA1 Neumayer--Stat 88.14 177 eP P 01 04 03.9 0.0
VNA1 e 01 04 06.4
VNA1 e 01 04 12.9
VNA1 e pP 01 06 04.4 -1.2
VNA1 e pP 01 06 08.7 +3.1
VNA1 e 01 06 33.7
VNA1 e 01 12 34.8
VNA1 e 01 21 45.2
N17A Moffit Pass 88.18 45 ⇑P P 01 04 04.6 +0.1
baz=88
G13A Cobalt 88.21 40 ⇑P P 01 04 04.9 +0.3
baz=88
Q19A Hogan Spring (88.25 47 ⇑P P 01 04 04.9 0.0
baz=88
B10A Chitwood Farm, 88.28 36 ⇑P P 01 04 04.6 -0.2
baz=88
NEW Newport 88.31 36 eP P 01 04 04.8 -0.2
comp=Z,271nm,1.0s,mb5.9
NEW Newport 88.31 36 eP P 01 04 04.8 -0.1
NEW pmax pmax
comp=Z,271nm,1.0s
PV01 Paradox Valley 88.33 48 eP P 01 04 05.4 +0.1
L16A Fish Haven 88.33 43 ⇑P P 01 04 05.0 -0.2
baz=88
ANMO Albuquerque 88.34 51 eP P 01 04 05.4 0.0
comp=Z,412nm,1.2s,mb6.0
ANMO epP pP 01 06 08.2 +0.9
ANMO Albuquerque 88.34 51 eP P 01 04 05.4 0.0
ANMO e*PP pP 01 06 08.2 +0.9
ANMO pmax pmax
comp=Z,412nm,1.2s
O18A Roosevelt 88.38 45 ⇓P P 01 04 05.4 -0.1
baz=88
J15A Blackfoot 88.41 42 ⇑P P 01 04 05.7 +0.2
baz=88
H14A Leadore 88.47 40 ⇑P P 01 04 05.9 +0.2
baz=89
A10A Northport 88.49 35 ⇑P P 01 04 05.5 -0.2
baz=89
F13A Darby 88.53 39 ⇓P P 01 04 05.7 -0.3
baz=89
M17A Scullys Gap (B 88.55 44 ⇑P P 01 04 05.6 -0.6
baz=89
K16A Soda Springs 88.65 43 ⇑P P 01 04 06.8 +0.2
baz=89
I15A Monteview 88.69 41 ⇓P P 01 04 07.6 +0.8
baz=89
G14A Jackson 88.75 40 ⇑P P 01 04 07.1 0.0
baz=89
P19A Cripple Cowboy 88.76 46 ⇑P P 01 04 07.0 -0.2
baz=89
B11A Sandpoint 88.83 36 ⇑P P 01 04 07.4 +0.1
baz=89
VHO Vista Hermosa 88.84 71 eP P 01 04 09.8 +1.7
VHO iS SKSac 01 13 47.6 +2.7
J16A Bone 88.86 42 ⇓P P 01 04 07.7 +0.1
baz=89
MCMT McKenzie Canyo 88.90 40 eP P 01 04 08.4 +0.6
HIA Hailar 88.91 325 eP P 01 04 07.9 +0.2
comp=Z,274nm,1.1s,mb6.0
HIA Hailar 88.91 325 eP P 01 04 07.9 +0.2
HIA pmax pmax
comp=Z,274nm,1.1s
H15A Lima 88.91 41 ⇑P P 01 04 08.0 +0.2
baz=89
C12B Naegeli Ranch, 88.92 37 ⇓P P 01 04 07.8 +0.1
baz=89
M18A Lyman 88.92 44 ⇑P P 01 04 08.2 +0.3
baz=89
AHID Auburn Hatcher 88.92 43 eP P 01 04 08.6 +0.6
comp=Z,610nm,1.1s,mb6.3
AHID epP pP 01 06 11.4 +1.4
AHID LR LR
comp=Z,546nm,20.0s
DLBC Dease Lake 88.95 23 eP P 01 04 08.0 +0.3
N18A Larsen Ranch, 88.96 45 ⇓P P 01 04 07.9 -0.3
baz=89
E13A Victor 88.96 39 ⇑P P 01 04 06.8 -1.2
baz=89
O19A Miners Draw (B 88.99 46 ⇓P P 01 04 07.9 -0.4
baz=89
COLA College 89.03 13 eP P 01 04 07.4 -0.5
comp=Z,1μm,1.0s,mb6.6
COLA College 89.03 13 eP P 01 04 07.4 -0.5
COLA pmax pmax
comp=Z,1μm,1.0s,mb6.6
RRI2 Red Ridge 89.08 42 eP P 01 04 08.9 +0.3
comp=Z,645nm,0.9s,mb6.5
F14A Wisdom 89.11 39 ⇑P P 01 04 08.6 0.0
baz=89
KMI Kunming 89.11 297 P P 01 04 09.8 +0.6
KMI AP pP 01 06 08.4 -2.9
KMI XP sP 01 07 03.9 -3.5
KMI SKS 01 13 47.8
KMI S S 01 14 12.0 +0.6
KMI SP SP 01 15 19.8 -0.9
KMI XS sS 01 17 46.5 -2.7
KMI AMB AMB
comp=Z,474nm,1.7s,mb6.0
KMI AMB AMB
comp=Z,3μm,3.1s
A11A Hall Mountain, 89.12 36 ⇓P P 01 04 08.7 0.0
baz=89
D13A Huson 89.16 38 ⇑P P 01 04 07.8 -1.1
baz=89
L18A Fontenelle, Gr 89.19 44 ⇓P P 01 04 08.9 -0.2
baz=89
PLCA Paso Flores 89.24 134 P P 01 04 10.6 +1.0
comp=Z,53nm,0.9s,mb5.4,baz=229,slow=5.0,SNR=51
PLCA pP pP 01 06 12.2 +0.5
comp=Z,45nm,1.3s,baz=251,slow=6.6,SNR=5.5
PLCA PKiKP PKiKP 01 09 05.2 +1.3
comp=Z,3.9nm,0.8s,baz=269,slow=5.6,SNR=4.5
PLCA S SKSac 01 13 48.3 +1.7
comp=Z,1.8nm,0.9s,baz=115,slow=22,SNR=1.5
PLCA PKKP PKKPbc 01 21 35.3 -8.2
comp=Z,3.3nm,0.9s,baz=238,slow=6.1,SNR=3.2
PLCA PKP2ab 01 29 28.2
comp=Z,2.9nm,0.8s,baz=68,slow=4.5,SNR=3.7
PLCA Paso Flores 89.24 134 eP P 01 04 10.9 +1.3
comp=Z,90nm,1.0s,mb5.6
PLCA Paso Flores 89.24 134 P P 01 04 10.6 +1.0
PLCA *PP pP 01 06 12.2 +0.5
PLCA S SKSac 01 13 48.3 +1.7
PLCA pmax pmax
comp=Z,53nm,0.9s
PLCA smax
comp=N,2.0nm,0.9s
I16A Newdale 89.24 42 ⇓P P 01 04 09.5 +0.1
baz=89
N19A John Jarvie Ra 89.24 45 ⇓P P 01 04 09.0 -0.5
baz=89
BDT Bhumibol Dam 89.25 289 ⇑P P 01 04 10.8 +0.8
B12A Libby 89.28 36 ⇑P P 01 04 09.3 -0.1
baz=89
DCID1 Drake Creek 89.29 42 eP P 01 04 10.6 +1.0
comp=N,282nm,0.9s,mb6.1
G15A Dillon 89.29 40 ⇑P P 01 04 09.3 -0.3
baz=89
MSO Missoula 89.31 38 eP P 01 04 09.3 -0.3
comp=N,120nm,1.3s,mb5.6
MSO epP pP 01 06 12.2 +0.4
DLMT Dillon 89.33 40 eP P 01 04 10.4 +0.7
comp=N,421nm,1.1s,mb6.2
DLMT epP pP 01 06 13.4 +1.5
E14A Clinton 89.36 39 ⇓P P 01 04 09.6 -0.2
baz=90
REDW Red Top Meadow 89.38 42 eP P 01 04 10.8 +0.7
comp=N,13nm,1.0s,mb4.7
TPAW Teton Pass 89.38 42 eP P 01 04 10.4 +0.4
comp=N,456nm,1.0s,mb6.3
HHC Hu-ho-hao-te 89.40 315 eP P 01 04 11.3 +1.1
HHC AP pP 01 06 15.1 +2.7
HHC XP sP 01 07 07.4 -1.0
HHC PP PP 01 07 53.8 +1.8
HHC SKS 01 13 48.8
HHC S S 01 14 16.3 +3.0
HHC XS sS 01 17 49.1 -2.3
HHC SS SS 01 20 30.1 +3.8
HHC AMB AMB
comp=Z,362nm,1.4s,mb6.0
C13A Hot Springs 89.41 37 ⇓P P 01 04 09.7 -0.4
baz=90
J17A Brown Place, J 89.47 43 ⇑P P 01 04 10.6 +0.2
baz=90
SNOW Snow King Moun 89.49 42 eP P 01 04 10.8 +0.3
comp=Z,661nm,0.9s,mb6.5
A12A Yaak River Ran 89.50 36 ⇓P P 01 04 10.7 +0.3
baz=90
M19A Rock Springs 89.55 45 ⇑P P 01 04 10.7 -0.2
baz=90
IMW Indian Meadow 89.59 42 eP P 01 04 11.4 +0.4
comp=Z,510nm,0.9s,mb6.3
IMW epP pP 01 06 14.2 +0.9
MOOW Moose Ponds 89.64 42 eP P 01 04 11.2 0.0
comp=Z,394nm,1.4s,mb6.0
MOOW epP pP 01 06 13.5 +0.1
F15A Butte 89.64 40 ⇓P P 01 04 11.4 +0.3
baz=90
LOHW Long Hollow 89.66 42 eP P 01 04 11.4 +0.1
comp=Z,287nm,0.9s,mb6.1
BILL Bilibino 89.68 354 eP P 01 04 13.6 +2.8
D14A Greenough 89.70 38 ⇑P P 01 04 11.2 -0.2
baz=90
L19A Farson 89.71 44 ⇑P P 01 04 11.7 +0.1
baz=90
G16A Moss Hill, Enn 89.74 41 ⇓P P 01 04 11.8 +0.2
baz=90
CHMT Chamberlain Mo 89.76 39 eP P 01 04 11.4 -0.2
CHMT epP pP 01 06 14.0 +0.1
CM31 Chiang Mai Arr 89.76 290 eP P 01 04 13.9 +1.5
comp=Z,671nm,1.2s,mb6.3
CMAR Chiang Mai Arr 89.76 290 P P 01 04 13.0 +0.6
comp=Z,394nm,1.0s,mb6.2,baz=124,slow=2.7,SNR=190
CMAR pP pP 01 06 16.0 +1.4
comp=Z,55nm,1.2s,baz=120,slow=3.1,SNR=7.3
CMAR PP PP 01 07 53.2 -1.9
comp=Z,5.2nm,1.0s,baz=41,slow=24,SNR=5.3
CMAR PKiKP PKiKP 01 09 06.7 +1.4
comp=Z,11nm,0.8s,baz=205,slow=0.9,SNR=7.2
CMAR PKKPbc PKKPbc 01 21 44.2 +2.6
comp=Z,16nm,0.8s,baz=281,slow=4.1,SNR=22
CMAR PKPPKP 01 29 49.6
comp=Z,3.5nm,0.8s,baz=290,slow=4.1,SNR=7.3
CMAR Chiang Mai Arr 89.76 290 P P 01 04 13.0 +0.6
CMAR pP pP 01 06 16.0 +1.4
CMAR PP PP 01 07 53.2 -1.9
CMAR Chiang Mai Arr 89.76 290 P P 01 04 13.0 +0.6
CMAR *PP pP 01 06 16.0 +1.4
CMAR 01 07 53.2
CMAR pmax pmax
comp=Z,394nm,1.0s
QLMT Earthquake Lak 89.77 41 eP P 01 04 12.6 +0.8
QLMT epP pP 01 06 16.3 +2.3
H16A Russell Place, 89.81 41 ⇓P P 01 04 12.6 +0.6
baz=90
I17A Pilgram Creek 89.83 42 ⇑P P 01 04 12.6 +0.5
baz=90

B13A Whitefish 89.85 37 ⇑P **P 01 04 11.4 -0.6**
baz=90
E15A Deer Lodge 89.86 39 ⇓P **P 01 04 12.0 -0.2**
baz=90
CHG Chiang Mai 89.89 290 ⇓P **P 01 04 13.7 +0.7**
CHTO Chiang Mai 89.89 290 P **P 01 04 13.9 +0.9**
SNR=223
CHTO Chiang Mai 89.89 290 *e*P **P 01 04 13.9 +1.0**
comp=Z,711nm,1.2s,mb6.4
CHTO Chiang Mai 89.89 290 *e*P **P 01 04 14.0 +1.0**
CHTO pmax pmax
comp=Z,711nm,1.2s,mb6.4
BW06 Boulder Array 89.91 43 *e*P **P 01 04 12.0 -0.5**
comp=Z,365nm,0.9s,mb6.2
BW06 Boulder Array 89.91 43 ⇑P **P 01 04 12.2 -0.3**
baz=90
PDAR Pinedale Array 89.91 43 P **P 01 04 11.7 -0.8**
comp=Z,306nm,0.8s,mb6.2,baz=209,slow=2.5,SNR=240
PDAR pP pP 01 06 14.6 -0.2
comp=Z,3.5nm,0.9s,baz=173,slow=2.4,SNR=1.3
PDAR PKiKP PKiKP 01 09 05.8 +0.9
comp=Z,2.7nm,0.9s,baz=174,slow=2.5,SNR=3.8
PDAR PKKPbc PKKPbc 01 21 42.1 -0.1
comp=Z,19nm,0.8s,baz=90,slow=4.0,SNR=23
PDAR PKP2ab 01 29 31.9
comp=Z,1.5nm,0.9s,baz=116,slow=3.4,SNR=5.9
PDAR PKPPKP 01 29 43.9
comp=Z,2.0nm,0.9s,baz=128,slow=2.4,SNR=5.6
PDAR Pinedale Array 89.91 43 P **P 01 04 11.7 -0.8**
PDAR pP pP 01 06 14.6 -0.2
C14A Swan Lake 89.93 38 ⇓P **P 01 04 11.8 -0.6**
baz=90
YFT Old Faithful 89.94 42 *e*P **P 01 04 15.3 +2.7**
YMR Madison River 89.97 41 *e*P **P 01 04 14.2 +1.4**
comp=Z,521nm,1.1s,mb6.3
H17A Grant Village 90.07 42 ⇓P **P 01 04 13.9 +0.7**
baz=90
LVIG Laguna Verde 90.13 69 *i* P **P 01 04 12.3 -1.7**
LVIG *i* S pP 01 06 11.8 -4.5
F16A Kennard Place, 90.13 40 ⇑P **P 01 04 13.3 -0.1**
baz=90
YNR Norris Junctio 90.17 41 *e*P **P 01 04 15.4 +1.7**
M20A Sweetwater, Wa 90.19 45 ⇓P **P 01 04 13.5 -0.3**
baz=90
I18A Diamond G Ranc 90.20 43 ⇓P **P 01 04 13.8 -0.1**
baz=90
D15A Lincoln 90.25 39 ⇓P **P 01 04 14.2 +0.2**
baz=90
LKWY Lake 90.27 42 *e*P **P 01 04 16.4 +2.4**
comp=Z,300nm,1.2s,mb6.0
LKWY Lake 90.27 42 *e*P **P 01 04 16.5 +2.4**
LKWY pmax pmax
comp=Z,300nm,1.2s,mb6.0
SDCO Great Sand Dun 90.29 49 *e*P **P 01 04 14.7 +0.3**
comp=Z,231nm,1.1s,mb5.9
SDCO *e*pP pP 01 06 17.4 +0.7
DAWY Dawson 90.31 16 *e*P **P 01 04 13.1 -0.7**
BTO Baotou 90.32 314 *e*P **P 01 04 14.3 -0.1**
BTO AMB AMB
comp=Z,90nm,1.5s,mb5.4
L20A Wamsutter 90.33 45 ⇓P **P 01 04 14.5 +0.1**
baz=90
G17A Pierce Place, 90.44 41 ⇓P **P 01 04 15.2 +0.4**
baz=91
EGAK Eagle 90.45 15 *e*P **P 01 04 13.5 -0.9**
comp=Z,813nm,1.1s,mb6.5
HRY Holter Researc 90.49 39 *e*P **P 01 04 15.2 +0.1**
HRY *e*pP pP 01 06 16.7 -0.7
E16A East Helena 90.49 39 ⇓P **P 01 04 14.7 -0.3**
baz=91
CMIG Matias Romero 90.49 72 PKKPbc PKKPbc 01 21 42.0 +2.3
comp=Z,7.9nm,0.7s,baz=45,slow=3.8,SNR=8.8
B14A Marquette Ranc 90.51 37 ⇑P **P 01 04 14.5 -0.6**
baz=91
WALA Waterton Lakes 90.53 37 P **P 01 04 15.6 +0.4**
comp=Z,263nm,1.0s,mb6.1
C15A Salmond Ranch, 90.58 38 ⇓P **P 01 04 15.5 0.0**
baz=91
CD2 Chengdu 90.64 303 P **P 01 04 17.1 +0.9**
CD2 PP PP 01 08 03.4 +1.5
CD2 SKS 01 13 59.8
CD2 S S 01 14 27.8 +2.9
CD2 SS SS 01 20 48.6 +4.2
CD2 AMB AMB
comp=Z,230nm,1.4s,mb5.9
CD2 AMB AMB
comp=Z,2μm,11.2s
COLD Coldfoot 90.69 11 *e*P **P 01 04 15.3 -0.2**
comp=Z,520nm,1.1s,mb6.4
COLD *e*PKPdf PKiKP 01 09 07.6 +2.2
A14A Double T Ranch 90.75 37 ⇓P **P 01 04 16.2 -0.1**
baz=91
F17A Fitzpatrick Pl 90.78 40 ⇑P **P 01 04 16.9 +0.5**
baz=91
D16A Dana Ranch, Ca 90.82 39 ⇑P **P 01 04 16.1 -0.4**
baz=91
EFI East Falkland 90.82 148 *e*P **P 01 04 17.6 +0.9**
comp=Z,264nm,1.3s,mb6.0
EFI East Falkland 90.82 148 *e*P **P 01 04 17.6 +0.9**
EFI pmax pmax
comp=Z,264nm,1.3s,mb6.0
B15A Bradely Ranch, 90.89 38 ⇑P **P 01 04 15.9 -1.0**
baz=91
RWWY Rawlins 90.92 45 *e*P **P 01 04 17.7 +0.5**
comp=Z,470nm,1.0s,mb6.4
E17A Martinsdale 90.94 40 ⇓P **P 01 04 16.8 -0.3**
baz=91
L21A Rawlins 90.95 45 ⇑P **P 01 04 17.0 -0.3**
baz=91
CLNS Chul'man 90.97 333 *e*P **P 01 04 17.5 +0.5**
CLNS *e*S S 01 14 29.8 +3.2
CLNS pmax pmax
comp=Z,151nm,1.3s,mb5.8
CLNS pmax pmax
comp=N,79nm,1.4s
CLNS pmax pmax
comp=E,32nm,1.4s
CLNS smax
comp=E,1μm,12.5s
CLNS smax
comp=N,438nm,12.5s
C16A Fuhringer Ranc 91.10 38 ⇑P **P 01 04 17.5 -0.4**
baz=91
ISCO Idaho Springs 91.14 47 *e*P **P 01 04 18.8 +0.6**
comp=N,116nm,1.0s,mb5.8
ISCO Idaho Springs 91.14 47 *e*P **P 01 04 18.8 +0.6**
ISCO pmax pmax
comp=Z,116nm,1.0s,mb5.8
A15A Johnson Ranch, 91.14 37 ⇓P **P 01 04 17.8 -0.3**
baz=91
G18A Lazy EL Ranch, 91.15 41 ⇓P **P 01 04 18.4 +0.2**
baz=91
RLMT Red Lodge 91.24 42 *e*P **P 01 04 19.5 +0.9**
comp=Z,176nm,1.1s,mb5.9
RLMT Red Lodge 91.24 42 ⇓P **P 01 04 19.1 +0.5**
baz=91
GCMT Greycliff 91.32 41 *e*P **P 01 04 19.6 +0.7**
GCMT *e*pP pP 01 06 21.5 +0.1
F18A Big Timber 91.35 41 ⇑P **P 01 04 19.1 +0.1**
baz=92
D17A Six Diamond Ra 91.39 39 ⇑P **P 01 04 19.4 +0.2**
baz=92
D17A ⇓S S 01 14 33.4 +2.7
baz=92
B16A M & M Farms, S 91.43 38 ⇑P **P 01 04 19.5 +0.1**
baz=92
B16A ⇑S S 01 14 33.1 +2.1
baz=92
JCT Junction City 91.49 58 *e*P **P 01 04 20.0 -0.1**
comp=Z,186nm,0.9s,mb6.0
JCT *e*pP pP 01 06 23.8 +1.2
JCT Junction City 91.49 58 *e*P **P 01 04 20.0 -0.1**
JCT *e**PP pP 01 06 23.8 +1.2
JCT pmax pmax
comp=Z,186nm,0.9s,mb6.0
E18A Harlowton 91.56 40 ⇓P **P 01 04 20.6 +0.6**
baz=92
C17A Wharram Farm, 91.58 39 ⇓P **P 01 04 19.8 -0.3**
baz=92
C17A ⇓S S 01 14 36.4 +4.0
baz=92
A16A West Butte Ran 91.77 37 ⇑P **P 01 04 20.6 -0.3**
baz=92
A16A ⇓S S 01 14 38.4 +4.4
baz=92
AMTX Amarillo 91.84 53 *e*P **P 01 04 21.6 0.0**
comp=Z,198nm,1.1s,mb6.1
AMTX *e*pP pP 01 06 24.8 +0.7
PHWY Pilot Hill 91.92 46 *e*P **P 01 04 22.9 +1.1**
comp=Z,154nm,1.0s,mb6.0
D18A Linhart Farms, 91.93 40 ⇓P **P 01 04 21.9 +0.2**
baz=92
D18A ⇓S S 01 14 39.8 +4.3
baz=92
EGMT Eagleton 92.37 39 *e*P **P 01 04 23.6 -0.1**
comp=Z,204nm,1.2s,mb6.0
EGMT Eagleton 92.37 39 ⇓P **P 01 04 23.8 +0.1**
baz=92
EGMT ⇓S S 01 14 43.0 +3.7
baz=92
YAK Yakutsk 92.54 338 *e*P **P 01 04 23.6 -0.6**
comp=Z,480nm,0.9s,mb6.5
YAK Yakutsk 92.54 338 *e*P **P 01 04 22.8 -1.3**
YAK *e**PP pP 01 06 25.8 -0.9
YAK *e*S SKSac 01 14 00.9 -2.8
YAK pmax pmax
comp=N,48nm,1.0s
YAK pmax pmax
comp=Z,395nm,1.0s,mb6.4
YAK pmax pmax
comp=E,79nm,1.1s
YAK smax
comp=N,436nm,1.7s
YAK smax
comp=E,400nm,1.9s
LZH Lanzhou 92.70 308 *e*P **P 01 04 25.5 0.0**
LZH AP pP 01 06 28.0 -0.1
LZH XP sP 01 07 19.3 -4.7
LZH SKS 01 14 08.0
LZH S S 01 14 43.0 +0.2
LZH XS sS 01 18 19.0 -3.8
LZH SS SS 01 21 16.0 +2.6
LZH AMB AMB
comp=Z,792nm,1.5s,mb6.5
LZH AMB AMB
comp=Z,2μm,4.0s
EDM Edmonton 93.05 33 *e*P **P 01 04 26.1 -0.5**
LAO LASA Array 93.85 41 *e*P **P 01 04 30.8 +0.3**
comp=Z,250nm,0.9s,mb6.3
LAO *e*pP pP 01 06 35.3 +2.2
WMOK Wichita Mounta 93.97 54 *e*P **P 01 04 32.1 +0.7**
comp=Z,40nm,1.2s,mb5.4
WMOK Wichita Mounta 93.97 54 *e*P **P 01 04 32.1 +0.8**
WMOK pmax pmax
comp=Z,40nm,1.2s,mb5.4
OGNE Ogallala 94.10 48 *e*P **P 01 04 32.3 +0.5**
comp=Z,221nm,1.2s,mb6.2
RSSD Black Hills 94.10 44 *e*P **P 01 04 31.0 -0.7**
comp=Z,126nm,0.9s,mb6.0
RSSD *e*pP pP 01 06 34.5 +0.2
RSSD Black Hills 94.10 44 *e*P **P 01 04 31.0 -0.7**
RSSD *e**PP pP 01 06 34.5 +0.1
RSSD pmax pmax
comp=Z,126nm,0.9s,mb6.0
HKT Hockley 94.46 60 *e*P **P 01 04 35.6 +1.9**
comp=Z,245nm,1.6s,mb6.1
HKT LR LR
comp=Z,647nm,19.0s
HKT Hockley 94.46 60 *e*P **P 01 04 35.6 +1.9**
HKT pmax pmax
comp=Z,245nm,1.6s,mb6.1
HKT MLR MLR
comp=Z,647nm,19.0s
CBKS Cedar Bluff 94.86 50 *e*P **P 01 04 36.0 +0.8**
comp=Z,355nm,1.3s,mb6.3
CBKS *e*pP pP 01 06 39.7 +1.7
CBKS Cedar Bluff 94.86 50 *e*P **P 01 04 36.0 +0.7**
CBKS *e**PP pP 01 06 39.7 +1.7
CBKS pmax pmax
comp=Z,355nm,1.3s,mb6.3
INK Inuvik 95.12 15 *e*P **P 01 04 35.0 -0.8**
comp=Z,6.5nm,0.7s,mb4.9
INK Inuvik 95.12 15 *e*P **P 01 04 35.0 -0.8**
INK pmax pmax
comp=Z,7.0nm,0.7s
CFAA Coronel Fontan 95.19 127 P **P 01 04 37.1 +0.1**
comp=Z,7.3nm,0.9s,mb4.8,baz=235,slow=4.2,SNR=24
CFAA pP pP 01 06 39.0 -0.7
comp=Z,1.0nm,1.1s,baz=291,slow=3.6,SNR=2.9
CFAA S SKSac 01 14 20.9 +1.4
comp=Z,0.7nm,0.9s,baz=19,slow=21,SNR=4.3
CFAA PKKPbc PKKPbc 01 21 29.1 +0.8
comp=Z,1.9nm,0.8s,baz=27,slow=2.8,SNR=15
DGMT Dagmar 95.87 40 *e*P **P 01 04 39.7 +0.1**
comp=Z,271nm,0.9s,mb6.5
DGMT *e*PP PP 01 08 41.2 -0.5
DGMT LR LR
comp=Z,798nm,19.0s
DGMT Dagmar 95.87 40 ⇓P **P 01 04 39.1 -0.5**
baz=96
DGMT ⇑S S 01 15 14.5 +5.0
baz=96
SONM Songino Array 95.88 319 P **P 01 04 39.6 0.0**
comp=Z,17nm,1.0s,mb5.2,baz=130,slow=2.1,SNR=67
SONM pP pP 01 06 46.6 +4.1
comp=Z,8.8nm,1.0s,baz=90,slow=4.3,SNR=4.6
SONM PP PP 01 08 38.1 -3.6
comp=Z,12nm,1.0s,baz=115,slow=7.3,SNR=5.0
SONM PKiKP PKiKP 01 09 15.9 +0.9
comp=Z,7.1nm,0.8s,baz=95,slow=1.4,SNR=9.9
SONM S SKSac 01 14 22.0 0.0
comp=Z,5.9nm,1.1s,baz=0.0,slow=1.4,SNR=3.8
SONM PKKPbc PKKPbc 01 21 27.7 +0.7
comp=Z,12nm,0.8s,baz=270,slow=3.0,SNR=16
SONM PKKPab 01 22 04.1
comp=Z,6.1nm,0.9s,baz=282,slow=4.7,SNR=5.3
SONM PKPPKP 01 29 45.1
comp=Z,2.3nm,1.1s,baz=190,slow=7.5,SNR=4.0
SONM Songino Array 95.88 319 P **P 01 04 39.6 0.0**
SONM 01 08 38.1
SONM S SKSac 01 14 22.0 0.0
SONM 01 22 04.1
SONM pmax pmax
comp=Z,17nm,1.0s
SONM smax
comp=N,6.0nm,1.1s
TGUH Tegucigalpa,Un 96.25 77 *e*P **P 01 04 43.6 +1.5**
comp=N,47nm,1.1s,mb5.6
BOD Bodaibo 96.39 330 *e*P **P 01 04 39.3 -2.4**
BOD *e* 01 14 21.0
BOD pmax pmax
comp=Z,54nm,1.9s,mb5.5
IMP Imphal 96.39 294 *e*P **P 01 04 42.0 -0.6**
IMP *ex* x 01 08 49.0
GTA Gaotai 96.94 309 ⇑P **P 01 04 45.3 +0.7**
GTA AP pP 01 06 46.9 -0.7
GTA XP sP 01 07 38.1 -5.3
GTA PP PP 01 08 52.5 +2.5
GTA SKS 01 14 29.9
GTA S S 01 15 17.9 -1.0
GTA XS sS 01 18 57.3 -3.2
GTA AMB AMB
comp=Z,120nm,1.7s,mb5.8
GTA AMB AMB
comp=Z,792nm,5.1s
ATAH Atahualpa 96.99 100 S SKSac 01 14 34.8 +5.4
comp=Z,2.4nm,0.6s,baz=261,slow=24,SNR=1.3
ATAH PKKPbc PKKPbc 01 21 26.0 +3.1
comp=Z,17nm,0.8s,baz=62,slow=3.9,SNR=8.2
ATAH PKPPKP 01 29 37.8
comp=Z,3.5nm,0.8s,baz=94,slow=5.9,SNR=4.0
KSU1 Kansas State U 97.22 51 *e*PcP PcP 01 04 46.3 +0.4
comp=Z,75nm,0.8s
KSU1 *e*pP pP 01 06 48.9 0.0
YKA Yellowknife Ar 97.42 25 P **P 01 04 44.6 -1.5**
comp=Z,40nm,0.8s,mb5.7,baz=244,slow=4.4,SNR=44
YKA PKiKP PKiKP 01 09 16.7 -0.6
comp=Z,9.4nm,0.8s,baz=251,slow=1.3,SNR=12
YKA PKKPbc PKKPbc 01 21 18.8 -4.6
comp=Z,3.4nm,0.6s,baz=39,slow=2.6,SNR=8.8
YKA PKKP PKKPbc 01 21 22.8 -0.5
comp=Z,3.0nm,0.7s,baz=40,slow=2.1,SNR=4.1
YKA PKKPab 01 21 54.9
comp=Z,9.8nm,1.0s,baz=52,slow=5.1,SNR=5.7
YKA PKPPKP 01 29 37.6
comp=Z,3.8nm,0.9s,baz=43,slow=2.0,SNR=5.0
YKA Yellowknife Ar 97.42 25 P **P 01 04 44.6 -1.6**
YKA pmax pmax
comp=Z,40nm,0.8s
SHL Shillong 98.41 294 *e*P Pdif 01 04 52.5 +1.4
SHL *e*S SKSac 01 14 34.1 -1.8
ZAK Zakamensk 98.78 321 *e*P Pdif 01 04 51.9 -0.8
ZAK *e* 01 06 51.2
ZAK *e* 01 14 35.4
ZAK pmax pmax
comp=Z,29nm,1.4s,mb5.4
LVC Limon Verde 98.86 118 Pdiff Pdif 01 04 54.0 +0.9
comp=Z,13nm,1.0s,baz=259,slow=4.5,SNR=6.3
LVC pP pP 01 06 57.6 +0.9
comp=Z,2.1nm,0.5s,baz=225,slow=4.3,SNR=2.3
LVC PKKPbc PKKPbc 01 21 20.3 +2.1
comp=Z,26nm,0.6s,baz=56,slow=2.5,SNR=14
LVC PKKPab 01 21 49.8
comp=Z,21nm,1.1s,baz=86,slow=4.6,SNR=7.6
LVC PKPPKP 01 29 36.1
comp=Z,13nm,1.1s,baz=110,slow=2.0,SNR=5.4
LVC Limon Verde 98.86 118 Pdif Pdif 01 04 54.0 +0.9
LVC pP pP 01 06 57.6 +0.8
LVC PKKPbc PKKPbc 01 21 20.3 +2.1
LVC PKKPab 01 21 49.8
LVC P'P' 01 29 36.1
IRK Irkutsk 98.92 323 *e*P Pdif 01 04 52.6 -0.8
IRK *e* 01 18 15.5
IRK pmax pmax
comp=Z,64nm,1.9s,mb5.6
TLY Talaya 99.06 322 *e*P Pdif 01 04 53.5 -0.5
TLY Talaya 99.06 322 *e*P Pdif 01 04 52.8 -1.2
TLY *e* 01 09 08.8
TLY *e*S Sdif 01 15 41.0 +4.4
TLY *e* 01 17 10.5
TLY *e*SS SS 01 22 39.2 -2.3
TLY pmax pmax
comp=Z,46nm,1.6s,mb5.6
TIXI Tiksi 99.27 345 *i* P Pdif 01 04 52.9 -2.0
TIXI LR LR
comp=Z,455nm,21.0s
TIXI Tiksi 99.27 345 *e*P Pdif 01 04 53.2 -1.7
TIXI *e* 01 17 06.3
TIXI *e* 01 17 55.0
TIXI pmax pmax
comp=Z,62nm,1.4s,mb5.8
TIXI pmax pmax
comp=N,12nm,1.1s
TIXI pmax pmax
comp=E,22nm,1.1s
TIXI pmax pmax
comp=Z,241nm,10.3s
ARE Arequipa 99.39 112 *e*P Pdif 01 05 01.0 +5.5
LSA Lhasa 100.36 298 P Pdif 01 05 01.8 +2.0
ULM Lac du Bonnet 101.58 41 Pdiff Pdif 01 05 03.7 -1.5
comp=Z,10.0nm,1.0s,baz=276,slow=6.7,SNR=3.4
ULM PKiKP PKiKP 01 09 23.0 -2.1
comp=Z,16nm,0.7s,baz=276,slow=2.7,SNR=5.8
ULM PKKPbc PKKPbc 01 21 12.1 +0.8
comp=Z,12nm,0.7s,baz=91,slow=5.5,SNR=5.5
ULM Lac du Bonnet 101.58 41 Pdif Pdif 01 05 03.7 -1.5
LPAZ La Paz 102.37 113 Pdiff Pdif 01 05 12.4 +3.7
comp=Z,15nm,0.9s,baz=238,slow=4.0,SNR=45
LPAZ pP 01 07 16.6
comp=Z,2.2nm,0.9s,baz=221,slow=4.9,SNR=3.7
LPAZ PKiKP PKiKP 01 09 29.9 +2.3
comp=Z,6.1nm,0.9s,baz=174,slow=2.9,SNR=7.7
LPAZ PKKPbc PKKPbc 01 21 08.9 +0.8
comp=Z,12nm,0.7s,baz=49,slow=2.8,SNR=20
LPAZ La Paz 102.37 113 P Pdif 01 05 12.4 +3.7
LPAZ *i* 01 09 29.9
LPAZ pmax pmax
comp=Z,15nm,0.9s
TAPN Taplejung 102.52 295 *e*P Pdif 01 05 10.4 +1.0
TAPN Taplejung 102.52 295 *e*P PKiKP 01 09 27.5 0.0
ODAN Odare 102.64 294 *e*P Pdif 01 05 11.4 +1.5
comp=Z,79nm,1.0s
ODAN Odare 102.64 294 *e*P PKiKP 01 09 28.3 +0.5
comp=Z,347nm,0.8s
BOK Bokaro 103.02 291 *e*P PKiKP 01 09 28.4 -0.2
RAMN Ramite 103.34 294 *e*P Pdif 01 05 14.3 +1.3
RAMN Ramite 103.34 294 *e*P PKiKP 01 09 28.5 -0.6
comp=Z,260nm,0.7s
VIS Vishakhapatnam 103.45 284 *ex* PKiKP 01 09 29.1 -0.4
JIRN Jiri 103.90 294 *e*P Pdif 01 05 17.1 +1.6
JIRN Jiri 103.90 294 *e*P PKiKP 01 09 29.3 -0.8
comp=Z,179nm,0.6s
GUN Gumba 104.23 295 *e*P Pdif 01 05 18.3 +1.3
GUN Gumba 104.23 295 *e*P PKiKP 01 09 30.2 -0.5
PKI Pulchoki 104.54 294 *e*P Pdif 01 05 19.9 +1.5
PKI Pulchoki 104.54 294 *e*P PKiKP 01 09 30.0 -1.2
comp=Z,206nm,0.7s
PKI Pulchoki 104.54 294 *e*P Pdif 01 05 20.1 +1.7
PKIN Phulchoki 104.55 294 *e*P Pdif 01 05 20.1 +1.7
PKIN Phulchoki 104.55 294 *e*P PKiKP 01 09 29.8 -1.5
comp=Z,151nm,0.7s
KKN Kakani 104.71 294 *e*P Pdif 01 05 20.6 +1.5
KKN Kakani 104.71 294 *e*P PKiKP 01 09 30.3 -1.2
comp=Z,220nm,0.8s
DMN Daman 104.81 294 *e*P Pdif 01 05 21.2 +1.6
comp=Z,118nm,1.2s
DMN Daman 104.81 294 *e*P PKiKP 01 09 31.4 -0.3
comp=Z,108nm,0.7s
ROSC El Rosal 105.10 91 PKKPbc PKKPbc 01 21 03.2 +3.3
comp=Z,16nm,0.6s,baz=278,slow=23,SNR=11
ROSC PKKPab 01 21 22.7
comp=Z,3.3nm,0.4s,baz=86,slow=23,SNR=6.3
GKN Gorkha 105.31 294 *e*P Pdif 01 05 22.7 +0.9
comp=Z,56nm,1.0s
GKN Gorkha 105.31 294 *e*P PKiKP 01 09 31.9 -0.8
GKN Gorkha 105.31 294 *e*P Pdif 01 05 22.7 +0.9
GKN *e*P 01 09 31.9
TKL Tuckaleechee C 105.88 58 *e*PKPdf PKiKP 01 09 34.6 +1.2
KOLN Koldanda 106.13 294 *e*P Pdif 01 05 26.4 +0.9
comp=Z,34nm,0.8s
KOLN Koldanda 106.13 294 *e*P PKiKP 01 09 32.9 -1.3
comp=Z,150nm,0.8s
KOLN Koldanda 106.13 294 *e*P Pdif 01 05 26.4 +0.9
KOLN *e*P 01 09 32.9
DANN Dangsing 106.15 295 *e*P Pdif 01 05 26.4 +0.9
comp=Z,58nm,1.1s
DANN Dangsing 106.15 295 *e*P PKiKP 01 09 33.0 -1.2
comp=Z,337nm,0.7s
DANN Dangsing 106.15 295 *e*P Pdif 01 05 26.4 +0.9
DANN *e*P 01 09 33.0
TRD Trivandrum 106.37 273 *ex* PKiKP 01 09 35.6 +0.6
KOD Kodaikanal 106.47 275 *ex* PKiKP 01 09 34.5 -0.7
PYUN Piuthan 106.74 294 *e*P PKiKP 01 09 33.4 -1.9
comp=Z,139nm,0.8s
PYUN Piuthan 106.74 294 *e*P Pdif 01 05 29.0 +0.8
PYUN *e*P 01 09 33.4
AAM Ann Arbor 107.56 51 *e*PKPdf PKiKP 01 09 37.4 +1.0
ACSO Alum Creek Sta 107.59 53 *e*PKPdf PKiKP 01 09 36.6 +0.1
HYB Hyderabad 107.70 282 *i* Pdif Pdif 01 05 34.0 +1.6
HYB *e*PP PP 01 10 08.0 -1.7
HYB *e*Sdif Sdif 01 16 54.0 +5.4
HYB *e*SP SP 01 18 40.0 +1.3
HYB *e*PS PS 01 19 44.0 -0.2
HYB *e*PKKPbc PKKPbc 01 20 54.0 +1.9
HYB *e*PKKPab PKKPab 01 21 11.0 +2.7
NGP Nagpur 108.31 286 *ex* x 01 09 31.8
SIV San Ignacio 108.50 116 Pdiff Pdif 01 05 40.5 +4.5
comp=Z,1.0nm,0.8s,baz=315,slow=12,SNR=3.5
SIV PKiKP PKiKP 01 09 37.7 -1.2
comp=Z,8.8nm,0.8s,baz=250,slow=1.9,SNR=22
SIV PKKPbc PKKPbc 01 20 50.0 +0.1
comp=Z,20nm,0.8s,baz=91,slow=6.2,SNR=28
SIV PKKPab PKKPab 01 21 06.8 +0.5
comp=Z,19nm,1.1s,baz=95,slow=6.2,SNR=14
SIV PKPPKP 01 29 16.1
comp=Z,3.3nm,1.1s,baz=69,slow=4.5,SNR=4.3
ELN Prospectdale 108.62 57 *e*PKPdf PKiKP 01 09 39.3 +0.8
BLA Blacksburg 108.88 57 *e*PKPdf PKiKP 01 09 39.8 +0.7
LGTI Lohaghat 109.41 295 *ex* PKiKP 01 09 39.7 -0.6
LGTI *ex* x 01 13 24.5
PTH Pithoragarh 109.46 295 *ex* PKiKP 01 09 40.0 -0.4
PTH *ex* x 01 12 27.0
LATR Latur 109.80 283 *ex* PKiKP 01 09 41.5 +0.2
SDV Santo Domingo 109.92 88 PKKPbc PKKPbc 01 20 48.0 +3.0
comp=Z,4.6nm,0.4s,baz=171,slow=3.5,SNR=7.3
AKL Akola 110.02 285 *ex* PKiKP 01 09 41.4 -0.3
BHPL Bhopal 110.33 288 *e*P PKiKP 01 09 41.3 -0.9
CNNC Cliffs of the 110.46 59 *e*PKPdf PKiKP 01 09 43.1 +1.0
ZAA0 Zalesovo Array 110.65 321 *e*PKPdf PKiKP 01 09 42.2 +0.3
ZALV Zalesovo Beam 110.65 321 Pdiff Pdif 01 05 45.0 -0.5
comp=Z,2.7nm,0.9s,baz=107,slow=5.1,SNR=14
ZALV PKiKP PKiKP 01 09 39.7 -2.1
comp=Z,93nm,0.6s,baz=73,slow=0.9,SNR=114
ZALV PKS 01 13 16.1
comp=Z,8.4nm,0.9s,baz=92,slow=4.3,SNR=3.4
ZALV PKKPbc PKKPbc 01 20 43.2 -0.5
comp=Z,5.9nm,0.8s,baz=260,slow=3.5,SNR=6.4

ZALV Zalesovo Beam 110.65 321 P Pdif 01 05 45.0 -0.5
ZALV *i* 01 09 39.7
ZALV pmax pmax
comp=Z,3.0nm,0.9s
ZALV pmax pmax
comp=Z,93nm,0.6s
URVA University of 111.20 57 *e*PKPdf PKiKP 01 09 43.9 +0.5
MK31 Makanchi Array 111.23 313 *e*PKPdf PKiKP 01 09 42.8 -0.4
MKAR Makanchi Array 111.23 313 Pdiff Pdif 01 05 48.6 +0.5
comp=Z,6.8nm,0.8s,baz=97,slow=6.0,SNR=20
MKAR PKiKP PKiKP 01 09 41.1 -2.0
comp=Z,85nm,0.8s,baz=68,slow=2.9,SNR=41
MKAR PKKPbc PKKPbc 01 20 42.6 +0.9
comp=Z,26nm,0.8s,baz=276,slow=3.9,SNR=30
MKAR PKKPab PKKPab 01 20 54.2 +2.6
comp=Z,7.8nm,1.0s,baz=256,slow=3.4,SNR=3.5
MKAR SKKPbc 01 23 33.1
comp=Z,5.2nm,0.9s,baz=269,slow=2.9,SNR=4.1
MKAR Makanchi Array 111.23 313 P Pdif 01 05 48.6 +0.5
MKAR *i* 01 09 41.2
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR pmax pmax
comp=Z,85nm,0.8s
CBN Corbin 111.44 56 *e*PKPdf PKiKP 01 09 44.6 +0.7
DDI Dehra Dun 111.46 295 *e*P PKiKP 01 09 41.6 -2.5
GOA Goa 111.47 279 *e*P PKiKP 01 09 44.2 -0.3
SSPA Standing Stone 111.48 53 *e*PKPdf PKiKP 01 09 44.2 +0.3
SSPA *e*PP PP 01 10 35.3 -0.9
KAD Karad 111.66 281 *i* P PKiKP 01 09 43.8 -1.1
KAD *ex* x 01 10 23.1
NVS Novosibirsk 111.68 322 *i* P Pdif 01 05 48.7 -1.4
NVS pmax pmax
comp=Z,44nm,2.1s
NVS pmax pmax
comp=N,15nm,1.8s
NVS pmax pmax
comp=E,22nm,1.8s
NDI New Delhi 111.82 293 *e*P PKiKP 01 09 42.0 -2.9
SDMD Soldier's Deli 112.06 55 *e*PKPdf PKiKP 01 09 45.7 +0.7
RER Riviere de l'E 112.19 235 *e*PKPdf PKiKP 01 09 48.8 +3.0
POO Poona 112.30 282 *e*P PKiKP 01 09 45.6 -0.4
POO AMb AMB 01 09 48.4
comp=Z,145nm,1.2s
SMLA Simla 112.38 296 *i* P PKiKP 01 09 44.7 -1.2
SMLA *i* S SKSac 01 15 38.6 +1.0
MVL Millersville 112.53 54 *e*PKPdf PKiKP 01 09 46.8 +1.0
MVL *e*PP PP 01 10 42.6 -1.0
SDNR Sundarnagar 112.62 296 *e*P PKiKP 01 09 46.6 +0.3
SDNR *ex* x 01 10 52.0
BINY Binghamton 113.14 52 *e*PKPdf PKiKP 01 09 47.5 +0.5
BINY *e*PP PP 01 10 45.1 -2.7
LUPA Lehigh Univers 113.37 54 *e*PKPdf PKiKP 01 09 48.4 +1.0
AJM Ajmer 113.55 291 *e*P PKiKP 01 09 46.6 -1.7
THN Thein Dam 113.85 297 *e*P PKiKP 01 09 45.8 -2.8
BRNJ Basking Ridge 113.99 54 PKPdf PKiKP 01 09 50.3 +1.6
KURK Kurchatov 114.09 317 *e*PKPdf PKiKP 01 09 47.3 -1.2
KURK Kurchatov 114.09 317⇑ *i* PKIKP PKiKP 01 09 47.3 -1.2
CPNY Central Park 114.46 54 *e*PKPdf PKiKP 01 09 50.4 +0.8
LONY Lake Ozonia 114.46 50 *e*PKPdf PKiKP 01 09 49.1 -0.3
NCB Newcomb 114.64 50 *e*PKPdf PKiKP 01 09 50.2 +0.4
KSH Kashi 114.78 305 PKP PKPdf 01 09 52.0 +1.8
KSH *ex* XPKP 01 12 50.0
KSH *e* PKS 01 13 27.4
KSH *e* SKS SKSdf 01 16 13.4 +3.9
ULHL Ulahol 114.91 308 P PKPdf 01 09 52.0 +1.6
SNR=9.6
ACCN Adirondack Com 114.98 51 *e*PKPdf PKPdf 01 09 50.8 +0.4
FRNY Flat Rock 115.18 49 *e*PKPdf PKPdf 01 09 51.1 +0.3
MDV Middlebury 115.39 50 *e*PKPdf PKPdf 01 09 51.9 +0.6
TKM2 Tokmak 2 115.46 308 *e*PKPdf PKPdf 01 09 51.1 -0.3
TKM2 *e*PP PP 01 11 03.6 -0.3
TKM2 Tokmak 2 115.46 308 P PKPdf 01 09 50.4 -1.0
SNR=37
KZA Kyzart 115.63 307 P PKPdf 01 09 53.7 +1.9
SNR=5.2
QUA2 Belchertown 115.83 52 *e*PKPdf PKPdf 01 09 52.1 -0.1
QUA2 *e*PP PP 01 11 05.3 -1.2
KBK Karagaybulak 115.91 308 P PKPdf 01 09 53.5 +1.2
SNR=48
PCRV Puerto La Cruz 115.93 89 PKP PKPdf 01 09 53.5 +0.4
comp=Z,29nm,1.1s,baz=12,slow=9.3,SNR=2.7
HNH Hanover 116.01 51 *e*PKPdf PKPdf 01 09 53.5 +1.0
CHMS Chumysh 116.09 308 P PKPdf 01 09 53.4 +0.8
SNR=57
FRU Bishkek 116.17 308⇓ *i* PKIKP PKPdf 01 09 53.0 +0.2
FRU pmax pmax
comp=Z,33nm,1.2s
UCH Uchtor 116.19 308 *e*PKPdf PKPdf 01 09 54.8 +2.0
UCH Uchtor 116.19 308 P PKPdf 01 09 55.1 +2.3
SNR=27
AAK Ala-Archa 116.24 308 P PKPdf 01 09 52.0 -0.9
SNR=50
USP Ospenovka 116.29 309 P PKPdf 01 09 54.0 +1.0
SNR=8.8
LBNH Lisbon 116.32 50 *e*PKPdf PKPdf 01 09 54.1 +1.1
BRYW Bryant College 116.39 53 *e*PKPdf PKPdf 01 09 54.0 +0.8
FFD Franklin Falls 116.45 51 *e*PKPdf PKPdf 01 09 54.4 +1.1
WES Weston 116.60 52 *e*PKPdf PKPdf 01 09 53.7 +0.1
EKS2 Erkin-Say 116.77 308 *e*PKPdf PKPdf 01 09 53.5 -0.4
EKS2 *e*PP PP 01 11 14.0 +1.1
EKS2 Erkin-Say 116.77 308 P PKPdf 01 09 53.3 -0.7
SNR=77
AML Almayashu 116.78 307 *e*PKPdf PKPdf 01 09 53.6 -0.4
AML Almayashu 116.78 307 P PKPdf 01 09 55.7 +1.7
SNR=8.0
SJG San Juan 116.81 80 *e*PKPdf PKPdf 01 09 55.0 +0.3
BHJ Bhuj 117.27 286 *e*P PKPdf 01 09 55.7 +0.3
MTP Monte Pirata 117.36 80 *e*PKPdf PKPdf 01 09 56.1 +0.4
PKME Peaks-Kenny Pk 118.25 49 *e*PKPdf PKPdf 01 09 56.9 +0.2
CAM4 Nova Friburgo 119.11 133 *e*P PKPdf 01 10 00.8 +1.7
CAM4 *i* 01 10 02.4
CAM4 *i* 01 10 04.2
CAM4 *i* 01 10 20.0
KK31 Karatay Array 119.19 308 *i* PKIKP PKPdf 01 09 56.8 -1.8
KK31 pmax pmax
comp=Z,112nm,0.6s
BVA0 Borovoye Array 119.22 320 PKIKP PKPdf 01 09 56.6 -1.7
BVA0 pmax pmax
comp=Z,64nm,0.6s
BVAR Borovoye Array 119.22 320 PKP PKPdf 01 09 56.6 -1.7
comp=Z,363nm,0.8s,baz=131,slow=1.2,SNR=152
BVAR PKKPbc PKKPbc 01 20 13.5 -1.1
comp=Z,6.3nm,0.8s,baz=279,slow=3.8,SNR=9.5
BVAR PKKPab PKKPab 01 20 15.8 -0.3
comp=Z,7.0nm,0.8s,baz=253,slow=3.0,SNR=8.6
BVAR SP SP 01 20 19.3 -2.3
comp=Z,7.0nm,0.8s,baz=242,slow=3.1,SNR=7.7
BVAR Borovoye Array 119.22 320 PKIKP PKPdf 01 09 56.6 -1.7
BVAR SP SP 01 20 19.3 -2.3
BVAR pmax pmax
comp=Z,363nm,0.8s
BRVK Borovoye 119.28 320 *e*PKPdf PKPdf 01 09 58.7 +0.3
BRVK PP PP 01 11 26.6 -3.0
BDFB Brasilia 119.30 123 PKP PKPdf 01 09 58.4 -1.2
comp=Z,25nm,0.8s,baz=222,slow=3.4,SNR=53
BDFB SKP 01 12 45.0
comp=Z,7.9nm,0.9s,baz=145,slow=12,SNR=4.0
BDFB PKKPab PKKPab 01 20 15.1 -3.7
comp=Z,14nm,0.8s,baz=11,slow=6.7,SNR=21
SCHQ Schefferville 119.62 38 PKP PKPdf 01 09 57.4 -1.6
comp=Z,83nm,0.9s,baz=299,slow=3.0,SNR=29
SCHQ PKiKP PKiKP 01 09 59.4 +0.3
comp=Z,83nm,0.9s,baz=295,slow=3.2,SNR=30
SCHQ PKKPbc PKKPbc 01 20 13.8 +0.7
comp=Z,15nm,0.6s,baz=182,slow=3.7,SNR=13
SCHQ Schefferville 119.62 38 *e*PKPdf PKPdf 01 09 59.2 +0.2
KBL Kabul 119.68 298 *e*PKPdf PKPdf 01 09 59.9 +0.1
ABPO Ambohimpanom 119.86 232 *e*PKPdf PKPdf 01 10 03.3 +2.7
OPO Ambohidratompo 120.17 232 SKP 01 12 47.6
comp=Z,3.3nm,0.8s,baz=104,slow=5.9,SNR=4.0
OPO PKKPab PKKPab 01 20 12.6 -2.5
comp=Z,7.2nm,0.8s,baz=311,slow=2.8,SNR=7.1
FDF Fort de France 120.54 85 *e*PKPdf PKPdf 01 10 01.7 -0.2
FDF Fort de France 120.54 85 *e*P PKPdf 01 10 01.1 -0.8
BIM Bigot 120.55 85 *e*P PKPdf 01 10 02.7 +0.8
MSEY Mahe Island 121.03 251 *e*PKPdf PKPdf 01 10 03.7 +0.7
CAM3 Guarapari 121.60 133⇓ *i* P PKPdf 01 10 05.2 +1.2
CAM3 *i* 01 10 07.6
CAM3 *i* 01 10 16.0
CAM3 *i* 01 10 42.2
CAM3 *i* 01 12 49.5
KBS Kingsbay 122.02 358 *e*PKPdf PKPdf 01 10 03.5 +0.5
KBS Kingsbay 122.02 358 *e*PKPdf PKPdf 01 10 02.0 -1.0
KBS Kingsbay 122.02 358 *i* PKIKP PKPdf 01 10 03.3 +0.2
DAG Danmarks Havn 123.50 5⇑ *i* PKIKP PKPdf 01 10 03.4 -2.5
DAG pmax pmax
comp=Z,240nm,0.8s
DAG Danmarks Havn 123.50 5⇑ *i* P PKPdf 01 10 03.4 -2.5
comp=Z,243nm,0.8s
SUR Sutherland 123.55 200 PKP PKPdf 01 10 07.7 +0.3
comp=Z,395nm,0.8s,baz=155,slow=2.5,SNR=115
SUR SKP 01 12 54.9
comp=Z,52nm,0.9s,baz=173,slow=3.1,SNR=4.5
SUR PKKPab PKKPab 01 19 57.9 -3.1
comp=Z,41nm,1.0s,baz=359,slow=0.3,SNR=12
SUR Sutherland 123.55 200 *e*PKPdf PKPdf 01 10 09.9 +2.5
HSP Hornsund 123.71 356 *e*P PKPdf 01 10 05.6 -0.7
SFJD Kangerlussuaq 123.83 22 PKKPab PKKPab 01 19 57.2 +1.5
comp=Z,12nm,0.5s,baz=58,slow=3.5,SNR=8.0
SFJD Kangerlussuaq 123.83 22 *i* PKIKP PKPdf 01 10 05.1 -1.7
SFJD pmax pmax
comp=Z,210nm,0.8s
SFJD MLR MLR
comp=Z,440nm,19.0s
SFJD Kangerlussuaq 123.83 22 *i* P PKPdf 01 10 05.1 -1.7
comp=Z,214nm,0.8s
SFJD
comp=Z,430nm,19.0s
SUMG Summit 123.99 13 *e*PKPdf PKPdf 01 10 07.8 +0.8
SVE Sverdlovsk 124.21 325 *e*PKIKP PKPdf 01 10 06.9 -0.9
SVE pmax pmax
comp=Z,700nm,0.9s
BOSA Boshof 125.34 206 PKP PKPdf 01 10 10.8 -0.1
comp=Z,199nm,0.9s,baz=148,slow=2.1,SNR=81
BOSA PKKPbc PKKPbc 01 19 51.6 -0.4
comp=Z,14nm,0.9s,baz=344,slow=4.7,SNR=13
BOSA PKPPKP 01 28 40.8
comp=Z,3.9nm,0.9s,baz=142,slow=4.5,SNR=4.3
BOSA Boshof 125.34 206 *e*PKPdf PKPdf 01 10 13.2 +2.3
ARU Arti 125.42 325 *e*PKPdf PKPdf 01 10 09.4 -0.7
ARU *e*PP PP 01 12 07.5 -2.7
ARU Arti 125.42 325 *i* PKIKP PKPdf 01 10 09.2 -0.9
ARU 01 12 06.1
BJO Bjornoya 125.82 354 *e*P PKPdf 01 10 07.9 -2.5
AB31 Akbulak array 126.17 316 PKIKP PKPdf 01 10 11.1 -0.6
AB31 pmax pmax
comp=Z,317nm,1.1s
AKTK Aktyubinsk 127.17 318 PKP PKPdf 01 10 13.0 -0.6
AKTK PKKPbc 01 19 45.6
AKTK SKKPbc 01 22 42.6
AKTO Aktyubinsk 127.17 318 PKP PKPdf 01 10 13.0 -0.6
comp=Z,252nm,0.8s,baz=72,slow=2.9,SNR=111
AKTO PKKPbc 01 19 45.6
comp=Z,2.0nm,0.6s,baz=219,slow=8.9,SNR=4.5
AKTO SKKPbc 01 22 42.6
comp=Z,7.0nm,0.7s,baz=234,slow=3.1,SNR=8.3
LBTB Lobatse 128.35 208 PKP PKPdf 01 10 17.2 +0.4
comp=Z,81nm,0.7s,baz=154,slow=3.7,SNR=7.9
LBTB SKPbc 01 12 49.1
comp=Z,47nm,1.0s,baz=149,slow=5.9,SNR=8.2
LBTB PKKPbc 01 19 40.2
comp=Z,14nm,1.0s,baz=353,slow=8.8,SNR=5.7
LBTB Lobatse 128.35 208 *e*PKPdf PKPdf 01 10 18.7 +2.0
LVZ Lovozero 128.90 345 *e*PKP PKPdf 01 10 17.6 +1.2
LVZ Lovozero 128.90 345 *i* PKIKP PKPdf 01 10 17.5 +1.1
KEV Kevo 129.04 349 *e*p PKPdf 01 10 15.4 -1.2
KEV Kevo 129.04 349 *e*PKPdf PKPdf 01 10 17.6 +1.0
APA Apatity 129.46 345⇓ *i* PKIKP PKPdf 01 10 17.0 -0.5
APA *i* 01 12 16.6
APA *i* 01 13 21.5
APA pmax pmax
comp=Z,600nm,1.4s
ARCES ARCESS Array B 129.50 349 PKP PKPdf 01 10 16.3 -1.2
comp=Z,276nm,0.7s,baz=9.5,slow=1.1,SNR=96
ARCES SKPbc SKPbc 01 12 50.9 +3.4
comp=Z,89nm,0.9s,baz=33,slow=3.5,SNR=11
ARCES PKKPbc 01 19 37.3
comp=Z,5.7nm,0.8s,baz=204,slow=2.7,SNR=5.3
ARCES SKKPbc 01 22 33.9
comp=Z,13nm,1.1s,baz=158,slow=1.3,SNR=6.0
ARCES ARCESS Array B 129.50 349 PKP PKPdf 01 10 16.3 -1.2
ARCES SKPbc SKPbc 01 12 50.9 +3.4
ARCES PKKPbc 01 19 37.3
ARCES SKKPbc 01 22 33.9
ARE0 ARCESS Array S 129.50 349 *e*PKPdf PKPdf 01 10 18.7 +1.2
JMIC Jan Mayen 129.88 4 PKP PKPdf 01 10 17.3 -0.9
comp=Z,309nm,0.8s,baz=134,slow=1.9
KTK1 Kautokeino 130.35 350 *e*P PKPdf 01 10 17.7 -1.4
KTK1 *e* 01 13 43.5
TRO Tromso 130.41 352 *e*P 01 10 09.6
TRO *e* PP 01 12 50.9 +9.0
TRO *e* 01 13 43.2
KLMR Klimovskoe 132.27 336 *e*PKIKP PKPdf 01 10 18.9 -4.1
KLMR *e* 01 12 50.9
KLMR pmax pmax
comp=Z,1.0nm,1.5s
LOF Lofoten 132.47 354 *e*P PKPdf 01 10 15.9 -7.2
LOF AMb AMB 01 10 28.1
comp=Z,329nm,2.4s
JOF Joensuu 133.61 342 *e*p PKPdf 01 10 24.2 -1.2
comp=Z,316nm,0.6s
JOF Joensuu 133.61 342 *e*PKIKP PKPdf 01 10 24.2 -1.2
JOF pmax pmax
comp=Z,316nm,0.6s
BORG Borgarnes 133.97 13 *e*PKPdf PKPdf 01 10 27.6 +1.6
RCBR Riachuelo 134.66 122 *e*PKPdf PKPdf 01 10 30.8 +1.9
LSZ Lusaka 135.17 218 P SKPbc 01 13 12.0 +3.4
SNR=24
LSZ Lusaka 135.17 218 PKhKP 01 10 15.7
comp=Z,18nm,0.7s,baz=111,slow=3.2,SNR=14
LSZ PKP PKPdf 01 10 31.8 +2.0
comp=Z,211nm,0.7s,baz=114,slow=2.6,SNR=50
LSZ SKPbc SKPbc 01 13 11.7 +3.1
comp=Z,70nm,0.9s,baz=152,slow=2.2,SNR=12
LSZ Lusaka 135.17 218 *i* PKHKP 01 10 15.7
LSZ 01 10 31.8
LSZ S SKPbc 01 13 11.7 +3.1
LSZ pmax pmax
comp=Z,18nm,0.7s
LSZ Lusaka 135.17 218 *e*PKIKP PKPdf 01 10 32.0 +2.2
KAF Kangasniemi 135.66 343 *e*p PKPdf 01 10 25.3 -4.0
comp=Z,244nm,0.6s
KAF Kangasniemi 135.66 343 *e*PKIKP PKPdf 01 10 25.3 -4.0
KAF pmax pmax
comp=Z,244nm,0.6s
MAK Makhachkala 135.93 310 *e*P Pdif 01 07 36.9 -1.0
MAK *e* 01 10 29.2
MAK *i* 01 13 16.0
MAK *e* 01 16 52.8
MAK *e*SS SS 01 30 30.4 -3.0
MAK pmax pmax
comp=Z,806nm,1.6s
NSS Namsos 136.13 353 *e* 01 10 16.0
NSS *e* SKPbc 01 13 07.1 -2.8
MOS Moscow 136.22 331 *e*PKHKP 01 10 19.5
MOS pmax pmax
comp=Z,800nm,1.1s
MOS pmax pmax
comp=Z,697nm,1.0s
PUL Pulkovo 136.32 339⇑ *e*PKIKP PKPdf 01 10 31.8 +1.2
VRHR Novokhopersk 136.71 324 *e*PKHKP 01 10 21.0
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.5s
TSUM Tsumeb 136.80 203 PKhKP 01 10 22.3
comp=E,9.2nm,0.7s,baz=199,slow=4.7,SNR=13
TSUM PKP PKPdf 01 10 34.1 +1.3
comp=E,150nm,0.9s,baz=128,slow=2.3,SNR=56
TSUM SKPbc SKPbc 01 13 16.4 +2.9
comp=E,145nm,1.1s,baz=151,slow=4.1,SNR=22
TSUM Tsumeb 136.80 203 *e*PKPdf PKPdf 01 10 35.6 +2.8
OBN Obninsk 137.07 331 *e*PKPdf PKPdf 01 10 32.6 +0.5
OBN Obninsk 137.07 331⇓ *e*PKHKP 01 10 20.8
OBN *i* 01 10 32.2
OBN *i* SS SS 01 30 48.5 +3.0
OBN pmax pmax
comp=Z,698nm,0.9s
OBN pmax pmax
comp=Z,559nm,1.0s
OBN MLR MLR
comp=Z,500nm,20.0s
QRN Al-Qurain 137.32 290 *e*P PKPdf 01 10 23.1 -10
baz=290
QRN AMb AMB 01 10 37.5
comp=Z,2μm,0.9s,baz=290
BDHA Al Bayda' 137.33 268⇑ *e*P PKPdf 01 10 24.9 -8.8
UMR Umm Al-Rimmam 137.50 291 *e*P PKPdf 01 10 23.7 -10
baz=291
UMR AMb AMB 01 10 38.3
comp=Z,1μm,1.1s,baz=291
KBD Kabd 137.52 290 *e*P PKPdf 01 10 23.9 -10
baz=291
KBD AMb AMB 01 10 37.8
comp=Z,352nm,0.9s,baz=291
LBOS 137.60 268⇑ *e*P PKPdf 01 10 25.4 -8.8
RDF Al-Radifah 137.65 290 *e*P PKPdf 01 10 23.6 -10
baz=290
RDF AMb AMB 01 10 38.2
comp=Z,844nm,0.9s,baz=290
VOR Voronezh 137.71 325 *e*PKHKP 01 10 23.0
VOR pmax pmax
comp=Z,1μm,1.8s
MIB Mutribah 137.83 291 *e*P PKPdf 01 10 23.8 -11
baz=291
MIB AMb AMB 01 10 38.9
comp=Z,841nm,1.0s,baz=291
VSR Storozhevoye 138.00 325 *e*PKHKP 01 10 24.3
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.9s
VORD Divnogorie 138.06 324 *e*PKHKP 01 10 23.6
VORD pmax pmax
comp=Z,60nm,0.9s
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.4s
MOL Molde 138.45 356 *e*P PKPdf 01 10 24.6 -10
TRBA At Turbah 138.47 266⇑ *e*P PKPdf 01 10 27.0 -8.9
VSU Vasula 138.50 340 *i* PKHKP 01 10 24.3
DHBB Dhamar BB 138.59 268⇑ *e*P PKPdf 01 10 27.3 -8.8
GNI Garni 138.64 307 PKhKP 01 10 28.7
comp=E,20nm,0.8s,baz=357,slow=6.1,SNR=16
GNI PKP PKPdf 01 10 36.5 +1.0
comp=E,158nm,0.9s,baz=14,slow=5.7,SNR=66
GNI Garni 138.64 307 PKP 01 10 28.7
GNI *e*PKPdf PKPdf 01 10 38.2 +2.8
GNI Garni 138.64 307⇑ *i* PKHKP 01 10 27.9
DOMB Dombas 138.85 354 *e*P PKPdf 01 10 26.5 -8.6
DOMB AMb AMB 01 10 38.1
comp=Z,185nm,1.5s
KIV Kislovodsk 138.99 313⇓ P PKPdf 01 10 35.9 -0.1
SNR=52
KIV Kislovodsk 138.99 313⇓ P 01 10 29.4
KIV Kislovodsk 138.99 313 *e*PKHKP 01 10 29.7
KIV *i* 01 10 35.9
KIV *e* 01 13 31.5
KIV *e*PPP 01 16 46.3
KIV *e*SS SS 01 31 08.4 -0.5
KIV pmax pmax
comp=Z,190nm,1.1s
KIV Kislovodsk 138.99 313⇓ *i* P 01 10 29.4
CLDR Calderan 139.49 306 *e*P PKPdf 01 10 29.8 -7.3
DYDN Diyadin 139.57 307 *e*P PKPdf 01 10 31.9 -5.3
NB2 NORSAR Subarra 139.61 353 PKP 01 10 27.5
comp=Z,54nm,0.7s,baz=16,slow=3.2
NB2 NORSAR Subarra 139.61 353 PKP 01 10 27.5
baz=16,slow=3.2
NOA NORSAR Array B 139.61 353 PKhKP 01 10 27.4
comp=Z,28nm,0.8s,baz=215,slow=21,SNR=103
NOA PKP PKPdf 01 10 37.6 +1.0
comp=Z,136nm,0.8s,baz=14,slow=4.1,SNR=31
NOA SKPbc SKPbc 01 13 21.5 +1.6
comp=Z,27nm,0.8s,baz=15,slow=4.4,SNR=6.2
NOA SKPab 01 13 34.7
comp=Z,42nm,1.0s,baz=14,slow=3.1,SNR=4.6
NOA SKKPbc 01 22 00.2
comp=Z,16nm,0.9s,baz=190,slow=4.2,SNR=8.8
NOA NORSAR Array B 139.61 353 PKP PKPdf 01 10 37.6 +1.0
NOA SKPbc SKPbc 01 13 21.5 +1.6
NOA SKPab 01 13 34.7
NOA SKKPbc 01 22 00.2
NOA NORSAR Array B 139.61 353 PKIKP PKPdf 01 10 37.6 +1.0
NOA 01 13 34.7
KARS Kars 139.74 308 *e*P PKPdf 01 10 32.8 -4.7
HYA Hoyanger 139.93 356 *e*P PKPdf 01 10 32.0 -5.2
HYA AMb AMB 01 10 39.6
comp=Z,206nm,1.5s
HKR Hakkari 139.97 304 *e*P PKPdf 01 10 33.3 -4.6
HAKT HAKKARI 140.00 304 *i* P PKPdf 01 10 34.3 -3.7
VANB Van 140.02 305 *e*P PKPdf 01 10 33.9 -4.2
AGRB Hanur-Agry 140.08 307 *e*P PKPdf 01 10 33.5 -4.6
SUE Sulen 140.12 357 *e*P PKPdf 01 10 30.4 -7.1
HFS Hagfors 140.14 350 PKhKP 01 10 28.6
comp=Z,153nm,0.6s,baz=67,slow=5.0,SNR=257
HFS PKP PKPdf 01 10 38.0 +0.4
comp=Z,152nm,0.7s,baz=82,slow=3.1,SNR=11
HFS SKPbc SKPbc 01 13 22.6 +1.3
comp=Z,40nm,0.8s,baz=56,slow=0.5,SNR=4.3
HFS SKKPbc 01 21 53.2
comp=Z,12nm,0.8s,baz=151,slow=3.4,SNR=5.7
TUTA Tutak 140.26 307 *i* P PKPdf 01 10 32.8 -5.7
ARTV Artvin 140.41 310 *i* P PKPdf 01 10 32.9 -5.8
DAGI Agillar 140.46 309⇓ *i* P PKPdf 01 10 33.0 -5.8
DBOC Borcka 140.55 310 *i* P PKPdf 01 10 32.8 -6.1
BCA Borcka 140.55 310 *e*P PKPdf 01 10 32.8 -6.1
DDEM Demirkent 140.63 309⇑ *i* P PKPdf 01 10 33.3 -5.7
DBAD Bademkaya 140.63 309 *i* P PKPdf 01 10 33.3 -5.8
ASK Askoy 140.67 357 *e*P PKPdf 01 10 30.8 -7.7
RUND Rundenannen 140.73 357 *e*P PKPdf 01 10 34.1 -4.5
RUND AMb AMB 01 10 45.9
comp=Z,289nm,1.1s
OSL Oslo 140.74 353 *e*P PKPdf 01 10 31.4 -7.3
BER Bergen 140.76 357 *e*P PKPdf 01 10 31.2 -7.5
BER *e*P 01 10 31.8
BER AMb AMB 01 10 42.8
comp=Z,19nm,1.2s
HOMI Horasan 140.76 308 *i* P PKPdf 01 10 35.2 -4.2
EGD Espegrend 140.88 357 *e*P PKPdf 01 10 31.8 -7.1
TATV Tatvan 140.90 305 *e*P PKPdf 01 10 37.3 -2.3
SOC Sochi 141.13 314 *e*PKHKP PKPdf 01 10 36.1 -3.8
SOC *i* 01 10 39.5
SOC *e* 01 13 44.2
SOC *e*PPP 01 16 51.6
SOC *e* 01 17 11.1
SOC pmax pmax
comp=Z,86nm,0.9s
SOC pmax pmax
comp=Z,236nm,0.9s
KONO Kongsberg 141.15 353 *e*P PKPdf 01 10 33.2 -6.2
KONO Kongsberg 141.15 353 *i* PKHKP PKPdf 01 10 34.4 -5.0
ODD1 Odda 141.15 356 *e*P PKPdf 01 10 33.2 -6.2
PZAR Pazar-Rize 141.16 310 *e*P PKPdf 01 10 32.4 -7.6
MNK Minsk 141.19 335 *e*PKHKP 01 10 33.0
MNK *e* 01 10 40.0
MNK *e* 01 13 40.0
MNK pmax pmax
comp=E,270nm,1.0s
MNK pmax pmax
comp=Z,954nm,1.0s
MNK pmax pmax
comp=N,440nm,1.0s
ERZM Erzurum 141.20 308 *i* P PKPdf 01 10 36.1 -4.0
EZM Erzurum 141.20 308 *e*P PKPdf 01 10 35.3 -4.9
BNGL BINGOL 141.63 306 *i* P PKPdf 01 10 37.2 -3.7
BLS5 Blasjo 141.65 356 *e*P PKPdf 01 10 35.5 -4.8
BLS5 AMb AMB 01 10 44.0
comp=Z,133nm,0.8s
KOPT Kop Dagi 141.81 308⇓ *i* P PKPdf 01 10 38.9 -2.3
KTUT Trabzon 142.03 310 *e*P PKPdf 01 10 39.0 -2.6
MACK Trabzon 142.04 310 *i* P PKPdf 01 10 38.5 -3.1
ANN Anapa 142.12 317 *d* *i* PKHKP 01 10 38.3
ANN *e* 01 16 56.8
ANN pmax pmax
comp=Z,973nm,1.7s
STAV Stavanger 142.19 356 *e*P PKPdf 01 10 37.3 -3.9
STAV AMb AMB 01 10 40.0
comp=Z,382nm,1.1s
MARD Mardin 142.33 304 *i* P PKPdf 01 10 38.1 -4.1
EZC Erzincan 142.39 308 *e*P PKPdf 01 10 38.1 -4.1
GUMT Gumushane 142.41 309 *e*P PKPdf 01 10 39.5 -2.7
SHEL Horse Pasture 142.41 169 *e*PKPdf PKPdf 01 10 43.5 +0.5
RSC Scourie 142.61 6 *e*P PKPdf 01 10 37.7 -4.3
DIYA Diyarbakir 142.68 305⇑ *i* P PKPdf 01 10 40.0 -2.8
ESPY Espiye-Giresun 142.79 310 *e*P PKPdf 01 10 38.1 -4.8
MLA1 Latheron 142.79 4 *e*P PKPdf 01 10 37.6 -4.7

RRH Rhenigidale 142.87 7 eP PKPdf 01 10 38.7 -3.8
PTK Pertek 142.96 307 eP PKPdf 01 10 41.3 -2.0
RRR Rubha Reidh 143.03 6 eP PKPdf 01 10 39.0 -3.8
MVH1 Achvaich 143.11 5 eP PKPdf 01 10 39.2 -3.7
GRSN GIRESUNGRSN 143.11 311 i P PKPdf 01 10 40.3 -3.2
SVRC Sivrice-ELAZID 143.17 306 eP PKPdf 01 10 41.9 -1.7
SUW Suwalki 143.27 338 ePKP PKPdf 01 10 39.9 -3.4
SUW e 01 10 42.5
KSK Scoval 143.31 7 eP PKPdf 01 10 40.6 -2.7
AKASG Malin Array Be 143.32 330 PKhKP 01 10 39.5
comp=Z,2µm,0.8s,baz=43,slow=4.1,SNR=514
AKASG PKP PKPdf 01 10 42.4 -1.1
comp=Z,2µm,0.8s,baz=42,slow=4.3,SNR=244
AKASG PKiKP PKiKP 01 10 47.6 +0.6
comp=Z,502nm,0.8s,baz=43,slow=3.2,SNR=22
AKASG SKP 01 13 26.6
comp=Z,2.5nm,0.5s,baz=37,slow=3.6,SNR=1.7
AKASG SKPbc SKPbc 01 13 31.7 +2.2
comp=Z,18nm,0.7s,baz=39,slow=2.1,SNR=6.9
AKASG SKKPbc 01 21 42.6
comp=Z,6.3nm,0.6s,baz=238,slow=4.0,SNR=13
AKASG Malin Array Be 143.32 330 PKP PKPdf 01 10 39.5 -4.0
AKASG PKP PKPdf 01 10 42.4 -1.1
AKASG PKPdf PKPdf 01 10 47.6 +4.1
AKASG SKP 01 13 26.6
AKASG SKPbc SKPbc 01 13 31.7 +2.2
AKASG SKKPbc 01 21 42.6
AKASG Malin Array Be 143.32 330 i PKHKP PKPdf 01 10 39.5 -4.0
AKASG 02 10 42.4
ELZG Elazig 143.38 307 ⇑iP PKPdf 01 10 43.4 -0.6
KAC Achnashellach 143.43 6 eP PKPdf 01 10 40.6 -2.9
KEMA Kemaliye 143.51 308 i P PKPdf 01 10 43.2 -1.0
MCD Coleburn Disti 143.52 4 eP PKPdf 01 10 40.3 -3.3
KPL Plockton 143.56 6 eP PKPdf 01 10 41.0 -2.7
MDO Dochfour 143.58 5 eP PKPdf 01 10 40.7 -3.0
URFA Urfa 143.80 305 eP PKPdf 01 10 43.9 -0.9
MME1 Meikle Cairn 143.81 4 eP PKPdf 01 10 41.1 -3.0
KAR1 Arisaig 143.95 7 eP PKPdf 01 10 41.0 -3.4
DARE Darende-Malaty 144.12 308 eP PKPdf 01 10 43.9 -1.4
AKCD Akcadag 144.24 307 ⇑iP PKPdf 01 10 45.5 0.0
MUD Monsted U'grnd 144.33 353 ⇑iP PKPdf 01 10 44.7 -0.4
MUD i 01 12 52.3
MUD Monsted U'grnd 144.33 353 ⇑i PKIKP PKPdf 01 10 44.7 -0.4
MUD i 01 12 52.3
MUD pmax pmax
comp=Z,2µm,1.0s
MUD MLR MLR
comp=Z,450nm,20.0s
MUD Monsted U'grnd 144.33 353 ⇑iP PKPdf 01 10 44.7 -0.4
comp=Z,2µm,1.0s
MUD i 01 12 52.3
MUD
comp=Z,440nm,20.0s
SVSK Karacayir 144.38 310 eP PKPdf 01 10 45.9 +0.2
TOKT Tokat 144.56 311 eP PKPdf 01 10 46.0 +0.1
COP Copenhagen 144.59 349 ⇑i PKIKP PKPdf 01 10 45.4 -0.1
COP pmax pmax
comp=Z,660nm,1.0s
COP MLR MLR
comp=Z,210nm,18.0s
COP Copenhagen 144.59 349 ⇑iP PKPdf 01 10 45.4 -0.1
comp=Z,658nm,1.0s
COP
comp=Z,200nm,18.0s
KVT Kavak 144.61 312 eP PKPdf 01 10 48.7 +2.7
BSD Bornholm Skovb 144.64 347 i P PKPdf 01 10 44.7 -0.9
BSD e 01 12 54.1
BSD i 01 16 55.4
BSD Bornholm Skovb 144.64 347 i PKIKP PKPdf 01 10 44.7 -0.9
BSD i 01 16 55.4
BSD pmax pmax
comp=Z,1µm,1.0s
BSD MLR MLR
comp=Z,390nm,20.0s
BSD Bornholm Skovb 144.64 347 i P PKPdf 01 10 44.7 -0.9
comp=Z,1µm,1.0s
BSD e 01 12 54.1
BSD i 01 16 55.4
BSD
comp=Z,390nm,20.0s
EAB Aberfoyle 144.82 5 eP PKPdf 01 10 44.9 -1.0
EBH Black Hill 144.83 5 eP PKPdf 01 10 45.0 -0.9
DIKM Dikmen 144.92 313 eP PKPdf 01 10 45.3 -1.2
SARI SarD1z-Kayseri 145.03 308 eP PKPdf 01 10 48.7 +1.9
GAZ Gaziantep 145.11 305 eP PKPdf 01 10 48.1 +1.0
EDI Edinburgh 145.17 4 eP PKPdf 01 10 46.3 -0.2
PGBU Glenifferbraes 145.18 6 eP PKPdf 01 10 46.3 -0.6
ESY Stoneypath 145.22 4 eP PKPdf 01 10 45.4 -1.2
EAU Auchinoon 145.23 5 eP PKPdf 01 10 46.3 -0.3
PINB Pinarbasi 145.24 308 i P PKPdf 01 10 47.7 +0.5
KMRS Kahramanmaras 145.25 306 eP PKPdf 01 10 48.1 +0.9
BOYT Boyabat 145.26 313 i P PKPdf 01 10 48.5 +1.3
BYBT Boyabat 145.33 313 eP PKPdf 01 10 48.5 +1.2
EBL Broad Law 145.33 4 eP PKPdf 01 10 46.1 -0.7
WAR Warsaw 145.47 339 ePKP PKPdf 01 10 48.6 +1.5
WAR e 01 10 50.0
WAR Warsaw 145.47 339 ePKP PKPdf 01 10 48.6 +1.4
WAR e 01 10 50.0
RGN Rugen 145.50 348 ePKPbc PKPbc 01 10 49.6 +1.1
RGN Rugen 145.50 348 ePKPdf PKPbc 01 10 49.7 +1.2
RGN ePP PP 01 14 08.6 -5.4
BNN Bunyan 145.59 308 eP PKPdf 01 10 48.6 +0.8
BZK Bozkurt 145.63 314 eP PKPdf 01 10 48.9 +1.1
ANDN Andirin 145.64 306 i P PKPdf 01 10 48.9 +1.0
XSO Sourhope Farm 145.66 4 eP PKPdf 01 10 46.0 -1.4
CTKT Corum 145.67 312 i P PKPdf 01 10 49.8 +1.9
YOZ Yozgat 145.68 310 eP PKPdf 01 10 48.6 +0.7
GKP Gorka Klasztor 145.75 343 ePKP PKPdf 01 10 48.4 +0.8
GKP e 01 10 50.5
EKA Eskdalemuir Ar 145.76 5 PKP PKPdf 01 10 47.1 -0.4
comp=Z,561nm,0.8s,baz=326,slow=2.4,SNR=218
EKA PKPbc PKPbc 01 10 48.5 -0.7
comp=Z,560nm,0.8s,baz=339,slow=2.2,SNR=216
EKA SKKPbc 01 21 34.4
comp=Z,28nm,0.8s,baz=160,slow=4.4,SNR=20
ESK Eskdalemuir 145.78 5 eP PKPdf 01 10 47.0 -0.5
ESK e 01 12 51.2
ESK Eskdalemuir 145.78 5 ePKP2 PKPab 01 10 50.4 -0.6
ECK Cauldkaine Hil 145.92 5 eP PKPdf 01 10 46.1 -1.7
CORM Corum 145.96 311 eP PKPdf 01 10 50.1 +1.7
KIS Kishinev 145.97 326 P PKPdf 01 10 49.1 +0.9
KIS Kishinev 145.97 326 k i PKIKP PKPdf 01 10 48.0 -0.2
KIS e 01 12 54.0
KIS e 01 13 49.0
KIS eSS SS 01 33 08.0 +40
KIS pmax pmax
comp=Z,5µm,1.4s
KIS pmax pmax
comp=N,2µm,1.5s
KIS pmax pmax
comp=E,900nm,1.4s
KIS pmax pmax
comp=Z,9µm,7.0s
KIS pmax pmax
comp=Z,6µm,12.0s
KIS MLR MLR
comp=Z,500nm,19.0s
KIS MLR MLR
comp=Z,500nm,19.0s
KIS Kishinev 145.97 326 i PKP PKPdf 01 10 48.0 -0.2
comp=Z,5µm,1.4s
KIS epPKP pPKPdf 01 12 54.0 -4.9
KIS Kishinev 145.97 326 ePP 01 13 49.0
KIS Kishinev 145.97 326 ⇓iP PKPdf 01 10 47.8 -0.4
TOS Tosya 146.02 313 eP PKPbc 01 10 50.6 +0.1
GAL1 Galloway 146.09 6 eP PKPdf 01 10 47.4 -0.7
GAL1 e 01 12 54.1
GCD Castle Douglas 146.16 5 eP PKPdf 01 10 48.5 +0.3
ILGA Ilgaz 146.22 313 i P PKPbc 01 10 51.1 +0.1
BALT Daday 146.23 314 i P PKPdf 01 10 50.1 +1.3
HTY Hatay 146.24 304 eP PKPdf 01 10 50.5 +1.6
LVV L'vov 146.26 333 ePKIKP PKPdf 01 10 49.5 +0.9
CEYT Ceyhan 146.28 305 eP PKPdf 01 10 49.7 +0.7
XAL Aliendale 146.30 4 eP PKPdf 01 10 49.0 +0.5
CDAG Cicekdag 146.36 311 i P PKPbc 01 10 51.5 0.0
CANT Cankiri 146.48 313 eP PKPdf 01 10 50.7 +1.4
IAS Iasi 146.50 327 P PKPdf 01 10 50.0 +0.9
IAS Iasi 146.50 327 ⇓iP PKPdf 01 10 49.0 -0.1
FKH Fakeheh 146.52 300 eP PKPdf 01 10 50.7 +1.2
ASF Jabal al Asfar 146.54 297 PKP PKPdf 01 10 49.1 -0.5
comp=Z,486nm,0.8s,baz=331,slow=0.8,SNR=72
ASF PKPbc PKPbc 01 10 51.7 -0.5
comp=Z,486nm,0.8s,baz=319,slow=1.5,SNR=171
ASF pPKPbc pPKPbc 01 13 03.9 +3.5
comp=Z,28nm,0.8s,baz=328,slow=1.4,SNR=1.9
ASF SKKPbc 01 21 31.4
comp=Z,11nm,1.1s,baz=112,slow=1.7,SNR=6.9
ASF Jabal al Asfar 146.54 297 PKIKP PKPdf 01 10 49.1 -0.5
ASF 01 10 51.7
ASF pmax pmax
comp=Z,486nm,0.8s
GMM Mts of Mourne 146.56 8 eP PKPdf 01 10 48.7 -0.2
BSEG Bad Segeberg 146.62 350 ePKPdf PKPdf 01 10 49.3 +0.3
BSEG ePKPbc PKPbc 01 10 52.7 +1.0
HLG Helgoland 146.70 353 ePKPdf PKPdf 01 10 50.8 +1.6
HLG epPKPbc pPKPbc 01 13 01.0 +0.7
KARA Karaisali 146.72 306 eP PKPdf 01 10 50.9 +1.2
NIG Nigde 146.76 308 eP PKPdf 01 10 51.0 +1.2
SAFT Safranbolu 146.84 314 eP PKPdf 01 10 51.1 +1.3
HWQ Hawqa 146.88 301 eP PKPdf 01 10 50.2 +0.1
KAMT Kaman 146.93 310 eP PKPdf 01 10 48.9 -1.1
KWP Kalwaria 146.95 334 ePKP PKPdf 01 10 50.9 +1.1
KWP e 01 10 54.3
KWP e 01 10 58.0
KWP Kalwaria 146.95 334 ePKP PKPdf 01 10 50.8 +1.1
KWP e 01 10 54.3
KWP e 01 10 58.0
KWP Kalwaria 146.95 334 ⇑iP PKPdf 01 10 49.8 +0.1
TLCR 147.11 323 P PKPdf 01 10 51.5 +1.3
TLCR 147.11 323 ⇑iP PKPdf 01 10 50.4 +0.3
RCY Rachaya 147.17 299 eP PKPdf 01 10 51.7 +1.1
BSTP Nigde 147.19 308 i P PKPbc 01 10 53.5 -0.2
ASCN Ascension 147.19 150 ePKPdf PKPdf 01 10 52.6 +1.3
ASCN ePKPbc PKPbc 01 10 55.3 +0.9
BHL Bhannes 147.20 300 eP PKPdf 01 10 50.9 +0.2
HPK Haverah Park 147.23 3 eP PKPdf 01 10 49.4 -0.6
HPK e 01 12 57.0
MERS Mersin 147.25 306 eP PKPdf 01 10 51.5 +0.9
RUE Ruedersdorf 147.33 346 ePKPdf PKPdf 01 10 51.1 +0.8
RUE epPKPbc pPKPab 01 13 02.2 -0.5
BUR08 Bucovina Ar. S 147.35 330 ePKPbc PKPbc 01 10 55.6 +1.8
BURAR Bucovina Array 147.36 329 P PKPdf 01 10 51.1 +0.7
BURAR Bucovina Array 147.36 329 ⇓iP PKPdf 01 10 50.6 +0.1
ANTO Ankara 147.37 312 ePKPdf PKPdf 01 10 52.0 +1.3
ANTO ePKPbc PKPbc 01 10 55.2 +1.1
ANTO Ankara 147.37 312 PKIKP PKPdf 01 10 52.2 +1.5
LOD Lodumlu 147.38 312 eP PKPdf 01 10 48.5 -2.2
LDU Leeds Universi 147.39 3 eP PKPdf 01 10 51.1 +0.8
DLF Lyons Farm 147.41 9 eP PKPdf 01 10 49.0 -1.4
DSB Dublin 147.48 9 ePKPbc PKPbc 01 10 54.9 +0.9
SGKT Sivrigoynuk 147.56 313 i P PKPdf 01 10 52.4 +1.3
OJC Ojcow 147.59 338 ePKPdf PKPdf 01 10 50.8 +0.1
OJC ePKPbc PKPbc 01 10 55.2 +0.9
MMAI Mount Meron Ar 147.61 299 PKP PKPdf 01 10 50.2 -1.1
comp=Z,2µm,0.8s,baz=52,slow=2.4,SNR=310
MMAI PKPbc PKPbc 01 10 55.2 +0.3
comp=Z,2µm,0.8s,baz=67,slow=6.4,SNR=196
MMAI pPKPbc pPKPbc 01 13 07.1 +3.4
comp=Z,170nm,1.1s,baz=108,slow=1.8,SNR=4.8
MMAI SKKPbc 01 21 25.4
comp=Z,7.7nm,0.8s,baz=305,slow=2.9,SNR=7.3
KDZE Karadeniz Ereo 147.63 315 eP PKPdf 01 10 50.4 -0.8
LHO Holmfirth 147.63 4 eP PKPdf 01 10 51.0 +0.3
KOLS Kolonicke sedl 147.68 334 ePKIKP PKPdf 01 10 50.6 -0.3
KOLS e 01 10 52.8
KOLS e 01 10 56.6
KOLS Kolonicke sedl 147.68 334 ePKP PKPdf 01 10 50.6 -0.3
KOLS e 01 10 52.8
KOLS e 01 10 56.6
KOLS e 01 11 04.4
ODB Odobesti 147.69 325 ⇓iP PKPdf 01 10 52.0 +0.9
ODB Odobesti 147.69 325 ⇓iP PKPdf 01 10 52.0 +0.9
STHS Stebnicka Huta 147.71 335 ePKP PKPdf 01 10 50.5 -0.5
STHS e 01 10 52.7
STHS e 01 10 56.8
TIRR Tirgusor 147.78 322 ePKPbc PKPbc 01 10 54.8 -0.2
TIRR Tirgusor 147.78 322 ⇑iP PKPdf 01 10 51.9 +0.6
VRI Vrincioaia 147.81 326 P PKPdf 01 10 52.2 +1.0
VRI Vrincioaia 147.81 326 ⇓iP PKPdf 01 10 51.6 +0.3
PLOR Plostina 147.86 326 ⇑iP PKPdf 01 10 51.5 +0.2
HARR Harsova 147.91 323 P PKPdf 01 10 53.6 +2.2
HARR Harsova 147.91 323 ⇑iP PKPdf 01 10 51.7 +0.2
KBI1 Birley Grange 147.94 3 eP PKPdf 01 10 50.8 -0.4
EREN Erenkoy 147.94 304 eP PKPdf 01 10 53.0 +1.2
CRVS Cervenica-Dubn 148.03 335 ePKP PKPdf 01 10 50.0 -1.5
CRVS e 01 10 52.9
CRVS e 01 10 57.3
NIE Niedzica 148.06 336 ePKPdf PKPdf 01 10 51.4 -0.2
NIE ePKPbc PKPbc 01 10 56.6 +1.1
STNC Stoke 148.06 4 eP PKPdf 01 10 52.1 +0.7
STNC e 01 12 59.8
CVD Cernavoda 148.08 322 P PKPbc 01 10 54.0 -1.8
CVD Cernavoda 148.08 322 ⇓iP PKPdf 01 10 52.6 +0.8
IKL Isikli 148.09 305 eP PKPdf 01 10 52.7 +0.6
BMR Baia Mare 148.11 331 P PKPdf 01 10 52.0 +0.3
BMR Baia Mare 148.11 331 ⇑iP PKPdf 01 10 51.3 -0.4
KWE Weaver Farm 148.16 4 eP PKPdf 01 10 51.1 -0.5
SBD1 Bryn Du 148.16 5 eP PKPdf 01 10 52.0 +0.4
KSP Ksiaz 148.18 342 ePKP PKPdf 01 10 53.2 +1.5
KSP e 01 10 57.6
KSP e 01 11 02.1
KSP Ksiaz 148.18 342 ePKPdf PKPdf 01 10 51.9 +0.2
KSP i PKPdf PKPbc 01 10 57.5 +1.7
KSP e 01 11 01.6
KSP epPKP pPKPdf 01 13 01.0 -1.6
KSP eSKS SKSdf 01 17 10.0 +2.8
KSP e 01 27 33.0
KSP Ksiaz 148.18 342 i PKP2 PKPbc 01 10 57.5 +1.7
KSP e 01 17 10.0
KSP e 01 27 33.0
MDU Mudurnu 148.18 314 eP PKPdf 01 10 53.1 +1.1
TRPA Tarpa 148.19 333 ⇓iP PKPdf 01 10 52.5 +0.7
PHNC Paralimni 148.21 303 P PKPdf 01 10 53.4 +1.1
HENT Hendek 148.22 315 i P PKPdf 01 10 52.6 +0.5
RAC Raciborz 148.25 339 ePKPdf PKPdf 01 10 52.4 +0.6
LADK Ladik-KONYA 148.37 309 eP PKPdf 01 10 52.9 +0.5
PSN Preselentsi 148.37 321 i P PKPdf 01 10 54.0 +1.7
ABA1 Baconsthorpe 148.38 0 eP PKPdf 01 10 51.9 0.0
KDHN Kadinhani 148.41 310 i P PKPdf 01 10 53.0 +0.6
KIZT Kizilcal 148.43 311 eP PKPdf 01 10 52.8 +0.3
AWI1 Witton 148.44 360 eP PKPdf 01 10 53.3 +1.2
CWF Charnwood Fore 148.46 3 eP PKPdf 01 10 51.8 -0.3
MLR Muntele Rosu 148.47 326 PKP PKPdf 01 10 51.1 -1.3
comp=Z,48nm,0.5s,baz=3.4,slow=3.2,SNR=39
MLR PKPbc PKPbc 01 10 55.9 -0.8
comp=Z,1µm,0.9s,baz=118,slow=3.4,SNR=158
MLR Muntele Rosu 148.47 326 PKHKP PKPdf 01 10 53.3 +1.0
MLR Muntele Rosu 148.47 326 ⇓iP PKPdf 01 10 52.6 +0.3
KONT Konya--Tatoy 148.47 309 eP PKPdf 01 10 53.0 +0.4
OKC Ostrava-Krasne 148.48 339 ePKP PKPdf 01 10 51.4 -0.8
OKC e 01 10 57.3
OKC e 01 11 03.3
OKC e 01 13 05.0
OKC e 01 14 00.7
OKC e 01 17 29.2
OKC Ostrava-Krasne 148.48 339 ePKIKP PKPdf 01 10 51.4 -0.8
OKC e 01 11 03.3
OKC Ostrava-Krasne 148.48 339 ePKPDF PKPdf 01 10 51.4 -0.8
OKC ⇑ePKP PKPbc 01 10 57.3 +0.7
OKC ePKPAB PKPab 01 11 03.3 +1.2
OKC epPKP pPKPdf 01 13 05.0 +1.9
OKC esPKP 01 14 00.7
OKC ex x 01 17 29.2
LFK Lefkose 148.51 303 eP PKPdf 01 10 53.8 +1.0
UPC Upice 148.56 342 ePKHKP PKPdf 01 10 52.9 +0.6
UPC e 01 10 58.5
UPC Upice 148.56 342 ePKPDF PKPdf 01 10 52.9 +0.6
UPC ⇑ePKP PKPbc 01 10 58.5 +1.8
UPC ePKPAB PKPab 01 11 03.9 +1.5
UPC epPKP pPKPdf 01 13 09.1 +5.9
IBBN Ibbenburen 148.56 352 ePKPdf PKPdf 01 10 52.6 +0.3
IBBN ePKPbc PKPbc 01 10 57.6 +0.9
IBBN ePKPab PKPab 01 11 02.7 +0.3
EIL Elat 148.58 292 PKP PKPdf 01 10 52.1 -1.0
comp=Z,84nm,0.8s,baz=358,slow=1.7,SNR=91
EIL PKPbc PKPbc 01 10 57.3 -0.2
comp=Z,604nm,0.8s,baz=352,slow=2.7,SNR=110
EIL PKPab PKPab 01 11 05.3 +2.0
comp=Z,318nm,0.9s,baz=80,slow=7.2,SNR=9.1
EIL pPKP pPKPdf 01 13 04.2 +0.3
comp=Z,29nm,0.8s,baz=316,slow=7.7,SNR=1.0
EIL SKKPbc 01 21 20.4
comp=Z,7.7nm,1.0s,baz=330,slow=8.8,SNR=3.7
HLM1 Long Mynd 148.58 5 eP PKPdf 01 10 51.9 -0.4

CLL Collm 148.60 346 ePKP PKPdf 01 10 53.0 +0.6
CLL i PKP PKPbc 01 10 57.3 +0.5
CLL epPKP pPKPdf 01 13 11.0 +7.8
CLL Collm 148.60 346 ePKHKP PKPdf 01 10 53.0 +0.6
CLL pmax pmax
comp=Z,388nm,1.3s
CLL Collm 148.60 346 ePKPdf PKPdf 01 10 51.8 -0.6
CLL ePKPbc PKPbc 01 10 57.2 +0.4
CLL ePKPab PKPab 01 11 02.8 +0.2
CLL ePP PP 01 14 28.2 -3.8
CLL Collm 148.60 346 ePKPdf PKPdf 01 10 53.0 +0.6
comp=Z,388nm,1.3s
CLL i PKPbc PKPbc 01 10 57.3 +0.5
comp=Z,2µm,1.0s
CLL i PKPab PKPab 01 11 03.6 +1.0
comp=Z,734nm,1.0s
CLL epPKPdf pPKPdf 01 13 00.0 -3.2
CLL epPKPbc pPKPbc 01 13 11.0 +5.0
CLL esPKPdf 01 13 58.0
CLL ePP PP 01 14 30.0 -2.0
comp=Z,193nm,1.6s
CLL esPP 01 17 22.0
CLL ePPS 01 27 37.0
CLL epPPS 01 29 01.0
CLL eSS SS 01 32 51.0 -4.9
CLL esPSS 01 37 24.0
CLL eSSS 01 38 42.0
CLL eSSSS 01 42 54.0
CLL ePSSrev 01 45 54.0
DPC Dobruska-Polom 148.61 341 ePKHKP PKPdf 01 10 52.1 -0.3
DPC e 01 10 58.9
DPC Dobruska-Polom 148.61 341 ePKPDF PKPdf 01 10 52.1 -0.3
DPC ⇑ePKP PKPbc 01 10 58.9 +2.0
DPC ePKPAB PKPab 01 11 03.7 +1.1
DPC epPKP pPKPdf 01 13 02.1 -1.2
DPC esPKP 01 14 01.1
DPC ex x 01 17 24.5
AEU East Anglia Un 148.65 0 eP PKPdf 01 10 53.4 +1.0
GULT Gulveren 148.67 314 eP PKPdf 01 10 53.7 +0.9
MORC Moravsky Berou 148.73 340 P PKPdf 01 10 52.6 0.0
MORC ePKPbc PKPbc 01 10 57.8 +0.6
MORC Moravsky Berou 148.73 340 ⇑iP PKPdf 01 10 53.3 +0.7
HDMB Hadim 148.75 307 eP PKPbc 01 10 59.0 +1.3
BRG Berggiesshubel 148.78 345 i PKIKP PKPdf 01 10 52.0 -0.7
BRG i 01 10 54.4
BRG i 01 10 59.0
BRG 01 13 02.0
BRG i 01 17 08.0
BRG pmax pmax
comp=Z,3.0nm,1.4s
BRG Berggiesshubel 148.78 345 ePKPdf PKPdf 01 10 52.2 -0.5
BRG ePKPbc PKPbc 01 10 57.8 +0.5
BRG Berggiesshubel 148.78 345 i PKP PKPdf 01 10 52.0 -0.7
comp=Z,5.2nm,1.4s
BRG i 01 10 54.4
comp=Z,553nm,1.5s
BRG i 01 10 59.0
comp=Z,3µm,1.6s
BRG pPKP pPKPdf 01 13 02.0 -1.6
BRG e 01 13 45.7
comp=Z,130nm,1.6s
BRG i 01 14 01.0
BRG i 01 17 08.0
BRG e 01 20 31.0
BRG SS SS 01 32 40.0 -18
MAMC Mammari 148.79 303 P PKPdf 01 10 54.4 +1.2
MDB Medias 148.81 328 P PKPdf 01 10 54.4 +1.5
MDB Medias 148.81 328 ⇓iP PKPdf 01 10 54.0 +1.1
EYL Eskiyayla 148.84 315 eP PKPbc 01 10 55.4 -2.4
ESKT Eskisehir 148.87 312 i P PKPdf 01 10 53.1 -0.1
GPA Golpazari 148.88 314 eP PKPdf 01 10 53.8 +0.6
SILT Sile 148.88 316 eP PKPdf 01 10 51.1 -2.1
PCED Cedros 148.91 49 ePKP PKPbc 01 10 56.0 -2.0
CALA Caldeira 148.93 49 ePKP PKPbc 01 10 56.5 -1.6
PVCC Panska Ves 148.94 344 ePKIKP PKPdf 01 10 52.3 -0.6
PVCC e 01 13 01.3
PVCC Panska Ves 148.94 344 ePKPDF PKPdf 01 10 52.3 -0.6
PVCC ⇑ePKP PKPbc 01 10 59.5 +1.8
PVCC epPKP pPKPbc 01 13 01.3 -5.6
PVCC esPKP 01 14 01.0
BORA Eskisehir 148.97 313 ⇑iP PKPdf 01 10 54.2 +0.8
HTR Trewern Hill 148.98 6 eP PKPdf 01 10 52.9 0.0
HOR Horta 149.00 50 ePKP PKPbc 01 10 56.7 -1.5
WTSB Winterswijk 149.01 353 ePKiKP PKPdf 01 10 53.1 +0.1
comp=Z,662nm,0.9s
WTSB Winterswijk 149.01 353 ePKPpre PKPbc 01 10 57.6 -0.2
comp=Z,3µm,0.9s
WTSB Winterswijk 149.01 353 ePKPab PKPab 01 11 04.5 +0.2
comp=Z,695nm,0.8s
HRT Hereke 149.03 316 eP PKPdf 01 10 53.4 0.0
LEF Lefka 149.06 303 eP PKPdf 01 10 53.4 -0.3
MCH1 Michaelchurch 149.09 5 eP PKPdf 01 10 45.6 -7.5
MCH1 e 01 12 59.8
PRD Provadia 149.12 321 i P PKPdf 01 10 55.1 +1.6
DRGR 149.13 331 P PKPdf 01 10 53.6 +0.2
DRGR 149.13 331 ⇑iP PKPdf 01 10 53.0 +0.5
BOLV Bolvadin 149.16 311 ⇑iP PKPdf 01 10 54.7 +1.0
PICO Pico 149.16 49 ePKP PKPbc 01 10 58.5 -0.1
BUC1 Bucharest 149.18 324 ⇓iP PKPdf 01 10 53.9 +0.3
BUC1 Bucharest 149.18 324 ⇓iP PKPdf 01 10 53.8 +0.3
SZAC Souni-Zanaja 149.18 303 P PKPdf 01 10 54.7 +0.9
ADVT Abdulvahap 149.18 315 ePKP PKPdf 01 10 54.2 +0.5
SSW Stow on the Wo 149.20 4 eP PKPdf 01 10 54.5 +1.2
KLYT Kilyos 149.22 317 eP PKPdf 01 10 55.4 +1.7
CAVI Cavuskoy 149.23 314 eP PKPdf 01 10 52.5 -1.2
ALFC Alevga 149.28 304 P PKPdf 01 10 54.5 +0.5
comp=Z,32nm,0.8s
ISK Istanbul-Kandi 149.30 316 eP PKPdf 01 10 50.4 -3.5
YLV Yalova 149.36 315 eP PKPdf 01 10 51.2 -2.7
VYHS Vyhne 149.37 337 ePKP PKPdf 01 10 53.5 -0.2
VYHS e 01 10 59.2
BGKT Bogazkoy 149.43 317 eP PKPdf 01 10 53.7 -0.3
PRU Pruhonice 149.44 343 ePKIKP PKPdf 01 10 53.0 -0.7
PRU e 01 11 07.5
PRU Pruhonice 149.44 343 ePKPDF PKPdf 01 10 53.0 -0.7
PRU ⇑ePKP PKPbc 01 10 58.6 -0.3
PRU ePKPAB PKPab 01 11 07.5 +1.4
PRU epPKP pPKPbc 01 13 03.7 -4.6
PRU esPKP 01 14 03.4
PRU ex x 01 17 28.3
VRAC Vranov 149.44 340 PKP PKPdf 01 10 52.9 -0.9
comp=Z,32nm,1.0s,baz=7.9,slow=0.6,SNR=41
VRAC PKPbc PKPbc 01 10 58.7 -0.2
comp=Z,615nm,1.1s,baz=39,slow=1.7,SNR=130
VRAC PKPab PKPab 01 11 07.3 +1.1
comp=Z,422nm,0.9s,baz=2.4,slow=1.7,SNR=21
VRAC Vranov 149.44 340 P PKPdf 01 10 53.6 -0.2
VRAC Vranov 149.44 340 ⇑iP PKPdf 01 10 53.8 0.0
PSZ Piszkesteto 149.44 335 P PKPdf 01 10 54.1 +0.3
PSZ ePKPbc PKPbc 01 11 00.7 +1.7
PSZ Piszkesteto 149.44 335 ⇓ePKP PKPdf 01 10 54.3 +0.5
PSZ ePKP PKPbc 01 11 00.4 +1.4
PSZ Piszkesteto 149.44 335 ⇓iP PKPdf 01 10 53.9 +0.1
KOLL Kolacno 149.46 337 ePKP PKPdf 01 10 54.0 +0.2
KOLL e 01 11 00.6
KOLL e 01 13 08.6
HGH Gray Hill 149.46 5 eP PKPdf 01 10 52.6 -1.1
BUG Bochum--Univer 149.47 353 ePKPdf PKPdf 01 10 53.9 +0.2
BUG ePKPbc PKPbc 01 11 00.1 +1.2
BUG ePKPab PKPab 01 11 06.6 +0.4
SKP1 Kophill 149.50 3 eP PKPdf 01 10 53.6 -0.2
SHUT Suhut-Afyon 149.51 311 eP PKPdf 01 10 55.5 +1.3
AKMC Akamas 149.53 304 ⇑P PKPdf 01 10 54.6 +0.2
MOX Moxa 149.53 347 ePKP PKPdf 01 10 53.8 -0.1
comp=Z,2µm,1.5s
MOX e 01 11 00.8
MOX Moxa 149.53 347 ePKIKP PKPdf 01 10 53.8 -0.1
MOX pmax pmax
comp=Z,2µm,1.5s
MOX Moxa 149.53 347 ePKPdf PKPdf 01 10 53.6 -0.3
MOX ePKPbc PKPbc 01 11 00.2 +1.1
GEMT Gemlik 149.54 315 eP PKPdf 01 10 54.8 +0.5
TANN Tannenbergstha 149.56 346 ePKPdf PKPdf 01 10 53.7 -0.2
TANN ePKPbc PKPbc 01 11 00.1 +0.9
TANN ePKPab PKPab 01 11 06.1 +0.5
PPCY Paphos 149.56 303 P PKPdf 01 10 54.6 +0.2
WERD Werda 149.56 346 ePKPdf PKPdf 01 10 53.3 -0.6
WERD ePKPab PKPab 01 11 07.1 +0.5
CTYL Yal??k??y-??at 149.57 318 eP PKPdf 01 10 46.0 -8.2
GUNZ Gunzen 149.64 346 ePKPdf PKPdf 01 10 53.5 -0.5
GUNZ ePKPab PKPab 01 11 07.5 +0.6

GUNZ epPKPbc pPKPab 01 13 12.4 +0.8
GUNZ ePP PP 01 14 35.1 -2.8
SWN1 Swindon 149.66 4 P PKPdf 01 10 53.2 -0.9
SWN1 Swindon 149.66 4 eP PKPdf 01 10 53.2 -0.9
ELBA Catalca 149.66 317 ⇑iP PKPbc 01 10 58.9 -0.8
CTT Catalca 149.66 317 eP PKPbc 01 10 58.5 -1.2
WERN Wernitzgruen 149.70 346 ePKPdf PKPdf 01 10 53.6 -0.5
WERN ePKPbc PKPbc 01 11 00.0 +0.5
WERN ePKPab PKPab 01 11 07.5 +0.3
WERN ePP PP 01 14 35.1 -3.1
ULDT Uludag 149.73 315 *i* P PKPdf 01 10 54.8 +0.2
NKC Novy Kostel 149.73 346 ePKPDF PKPdf 01 10 54.2 0.0
NKC ⇑ePKP PKPbc 01 11 00.2 +0.6
NKC ePKPAB PKPab 01 11 08.8 +1.5
NKC epPKP pPKPdf 01 13 01.0 -4.1
NKC esPKP 01 13 59.7
SLVT Silivri 149.76 317 eP PKPdf 01 10 51.8 -2.7
TREC Trest 149.79 341 ePKIKP PKPdf 01 10 53.5 -0.8
TREC e 01 13 01.8
TREC Trest 149.79 341 ePKPDF PKPdf 01 10 53.5 -0.8
TREC ⇑ePKP PKPbc 01 11 00.9 +1.1
TREC epPKP pPKPdf 01 13 01.8 -3.5
TREC esPKP 01 14 04.7
PSBA Serra de Santa 149.82 48 ePKP PKPbc 01 10 57.5 -2.7
ISP Isparta 149.85 310 P PKPdf 01 10 53.6 -1.2
ISP Isparta 149.85 310 ⇑*i*P PKPdf 01 10 55.5 +0.7
SMOL Smolenice 149.85 338 ePKP PKPdf 01 10 54.8 +0.4
SMOL e 01 11 01.1
SMOL e 01 11 10.1
SMOL e 01 13 05.5
WOL Wolverton 149.89 3 eP PKPdf 01 10 55.0 +0.6
SZH Strazhica 149.92 323 *i* P PKPdf 01 10 56.6 +1.9
HTL Hartland 149.93 7 P PKPdf 01 10 51.5 -3.0
HTL Hartland 149.93 7 eP PKPdf 01 10 51.5 -3.0
BCK Bucak 149.95 309 eP PKPdf 01 10 54.3 -0.6
PSCM Serra do Cume 149.99 48 ePKP PKPbc 01 10 57.6 -3.0
GDZ Gediz 150.01 313 *i* P PKPdf 01 10 55.5 +0.5
MODS Modra-Piesok 150.03 338 ePKP PKPdf 01 10 55.2 +0.5
MODS e 01 11 01.4
MODS e 01 13 02.4
MODS ePP PP 01 14 38.6 -1.6
JMB Yambol 150.04 321 P PKPdf 01 10 54.5 -0.4
MANZ Manzenberg 150.04 346 ePKPdf PKPdf 01 10 54.1 -0.6
MANZ ePKPbc PKPbc 01 11 01.4 +1.1
CRLT Corlu 150.11 318 eP PKPdf 01 10 54.3 -0.8
GZR Gura Zlata 150.13 329 P PKPdf 01 10 55.4 +0.4
GZR Gura Zlata 150.13 329 ⇓*i*P PKPdf 01 10 55.1 +0.1
BUD Budapest 150.14 336 ⇓ePKP PKPdf 01 10 55.5 +0.6
BUD ePKP PKPbc 01 11 01.9 +1.3
KCT Karacabey 150.18 316 eP PKPbc 01 10 59.6 -1.4
ROTZ Rotzenmuhle 150.23 346 ePKPdf PKPdf 01 10 54.9 -0.1
ROTZ ePKPbc PKPbc 01 11 01.7 +0.9
ROTZ ePP PP 01 14 37.8 -3.4
ZST Bratislava 150.24 339 ePKIKP PKPdf 01 10 56.4 +1.4
ZST e 01 11 07.8
ZST e 01 13 06.2
ZST Bratislava 150.24 339 ePKP PKPdf 01 10 56.3 +1.3
ZST e 01 11 02.6
ZST e 01 11 07.8
ZST e 01 13 06.2
HGN Heimansgroeve 150.28 354 ePKiKP PKPdf 01 10 55.0 0.0
comp=Z,240nm,0.9s
HGN Heimansgroeve 150.28 354 ePKPpre PKPbc 01 11 00.9 +0.1
comp=Z,1μm,1.1s
HGN Heimansgroeve 150.28 354 ePKPab PKPab 01 11 10.4 +0.8
comp=Z,708nm,1.2s
PVL Pavlikeni 150.29 323 *i* P PKPdf 01 10 56.5 +1.2
EDRB Edirne 150.31 320 eP PKPdf 01 10 54.7 -0.7
TKR Tekirdag 150.31 318 eP PKPdf 01 10 54.0 -1.5
DST Dursunbey 150.34 314 eP PKPdf 01 10 56.3 +0.8
KHL Karahalli 150.34 311 eP PKPdf 01 10 56.1 +0.6
UCC Uccle 150.38 356 PKP PKPdf 01 10 55.0 -0.2
UCC PKPbc PKPbc 01 11 00.9 -0.2
UCC PKPab PKPab 01 11 08.5 -1.5
CRAR CRAIOVA 150.38 326 PKIKP PKPdf 01 10 55.4 0.0
CRAR CRAIOVA 150.38 326 ⇑*i*P PKPdf 01 10 55.5 +0.1
BNT Bandirma 150.41 316 eP PKPdf 01 10 56.7 +1.2
MEM Membach 150.43 354 PKP PKPdf 01 10 54.9 -0.4
MEM PKPbc PKPbc 01 11 01.3 +0.1
MEM E 01 11 06.9
MEM E 01 11 13.2
KHC Kasperske Hory 150.48 344 ePKIKP PKPdf 01 10 54.7 -0.7
KHC e 01 11 11.9
KHC e 01 13 02.5
KHC Kasperske Hory 150.48 344 ePKPDF PKPdf 01 10 54.7 -0.7
KHC ⇑ePKP PKPbc 01 11 01.0 -0.4
KHC ePKPAB PKPab 01 11 11.9 +1.4
KHC epPKP pPKPdf 01 13 02.5 -3.9
KHC esPKP 01 14 07.6
KHC ex x 01 17 30.4
MRMT Marmara Adasi 150.49 317 eP PKPdf 01 10 55.6 0.0
TNS Taunus Mts 150.51 351 ePKPdf PKPdf 01 10 55.7 +0.3
TNS ePKPbc PKPbc 01 11 02.4 +1.0
TNS ePKPab PKPab 01 11 10.7 +0.2
TNS epPKPbc pPKPbc 01 13 11.7 +0.7
TNS ePP PP 01 14 40.8 -1.9
BZS Buzias 150.51 330 P PKPdf 01 10 56.8 +0.9
BZS Buzias 150.51 330 ⇑*i*P PKPdf 01 10 55.3 -0.3
GRF Grafenberg Arr 150.51 347 ePKP PKPdf 01 10 55.2 -0.2
GRF ePKP PKPbc 01 11 02.5 +1.1
GRF ePKP PKPab 01 11 10.3 -0.3
GRF pPKPbc pPKPab 01 13 12.8 -2.3
GRF ePP PP 01 14 42.3 -0.5
GRF SKKPbc 01 21 08.0
GRF eSS SS 01 33 20.0 +3.1
GRF Grafenberg Arr 150.51 347 ePKIKP PKPdf 01 10 55.2 -0.2
GRF e 01 11 10.3
GRF e 01 14 42.3
GRF eSS SS 01 33 20.0 +3.1
GRF Grafenberg Arr 150.51 347 ePKPdf PKPdf 01 10 55.2 -0.2
GRF ePKPbc PKPbc 01 11 02.5 +1.1
GRF ePKPab PKPab 01 11 10.3 -0.3
GRF epPKPbc pPKPbc 01 13 12.8 +1.8
GRF ePP PP 01 14 42.3 -0.5
GRF eSKKPbc 01 21 07.9
GRF eSS SS 01 33 20.0 +3.1
DYA Yadsworthy 150.54 7 eP PKPdf 01 10 55.5 +0.1
DYA e 01 12 50.9
DEMI Demirci 150.56 313 ⇑*i*P PKPdf 01 10 56.2 +0.3
MFT Murefte 150.59 317 eP PKPdf 01 10 53.4 -2.4
TIM Timisoara 150.60 331 P PKPdf 01 10 56.9 +1.2
TIM Timisoara 150.60 331 ⇑*i*P PKPdf 01 10 55.8 +0.1
WET Wettzell 150.64 344 ePKPdf PKPdf 01 10 55.2 -0.4
WET ePKPbc PKPbc 01 11 02.5 +0.8
WET ePKPab PKPab 01 11 11.9 +0.7
WET epPKPbc pPKPbc 01 13 13.2 +1.9
WET ePP PP 01 14 40.6 -3.0
SNF Seneffe 150.67 356 PKP PKPdf 01 10 55.9 +0.3
SNF PKPbc PKPbc 01 11 02.9 +1.2
SNF PKPab PKPab 01 11 10.0 -1.2
BCLA Clavier 150.68 355 PKP PKPdf 01 10 55.4 -0.2
BCLA PKPbc PKPbc 01 11 02.9 +1.1
BCLA PKPab PKPab 01 11 11.7 +0.4
GEC2 GERESS Array S 150.71 343 ePKPbc PKPbc 01 11 02.7 +0.8
GEC2 GERESS Array S 150.71 343 ePKPdf PKPdf 01 10 55.7 0.0
GEC2 ePKPbc PKPbc 01 11 03.0 +1.1
GEC2 ePKPab PKPab 01 11 12.4 +1.0
GEC2 epPKPbc pPKPab 01 13 13.8 -2.2
GERES GERESS Array B 150.71 343 PKP PKPdf 01 10 54.3 -1.4
comp=Z,41nm,0.9s,baz=90,slow=1.3,SNR=148
GERES PKPbc PKPbc 01 11 01.1 -0.8
comp=Z,489nm,0.8s,baz=36,slow=1.8,SNR=151
GERES PKPab PKPab 01 11 12.5 +1.0
comp=Z,70nm,0.8s,baz=24,slow=3.6,SNR=3.2
GERES GERESS Array B 150.71 343 PKIKP PKPdf 01 10 54.3 -1.4
GERES 01 11 01.1
GERES 01 11 12.5
GERES pmax pmax
comp=Z,41nm,0.9s
MENF Mencas 150.71 359 PKP PKPdf 01 10 55.8 +0.1
RKY Sarkoy-Tekirda 150.71 317 eP PKPdf 01 10 55.7 -0.3
GOLH Golhisar 150.79 309 ⇓*i*P PKPdf 01 10 56.7 +0.4
BALB Balikesir 150.82 315 eP PKPdf 01 10 54.2 -2.0
KULA Kula-Manisa 150.85 312 eP PKPdf 01 10 57.3 +1.0
SOP Sopron 150.87 339 ⇓ePKP PKPdf 01 10 56.8 +0.8
SOP ePKP PKPbc 01 11 03.8 +1.5
CONA Conrad Observa 150.88 340 ⇑*i*PKPdf PKPdf 01 10 56.3 +0.2
comp=Z,172nm,1.4s,SNR=38
CONA ⇓*i*PKiKP PKiKP 01 11 03.0 +0.3
comp=Z,1μm,1.3s
CONA ⇑*i*PKPab PKPab 01 11 13.1 +0.9
comp=Z,633nm,1.4s
CSNA Conrad Observa 150.89 340 ⇑*i*PKPdf PKPdf 01 10 56.0 0.0
comp=Z,164nm,1.4s
CSNA ⇑*i*PKiKP PKiKP 01 11 02.9 +0.2
comp=Z,1μm,1.3s
CSNA ⇓*i*PKPab PKPab 01 11 13.7 +1.5
comp=Z,569nm,1.5s
DENT Denizli 150.94 311 eP PKPdf 01 10 58.1 +1.6
ABH Alteburg 150.97 352 PKP PKPdf 01 10 56.2 +0.1
GIVF Givet 151.04 355 ePKIKP PKPdf 01 10 55.5 -0.7
comp=Z,920nm,1.5s
TOD Tromm 151.05 350 PKP PKPdf 01 10 56.0 -0.2
DOU Dourbes 151.06 356 PKP PKPdf 01 10 56.4 +0.1
DOU PKPbc PKPbc 01 11 02.8 +0.1
DOU E 01 11 05.8
DOU E 01 11 10.2
BAIF Baives 151.12 356 ePKIKP PKPdf 01 10 55.6 -0.7
comp=Z,628nm,1.5s
LPK Lapseki 151.15 317 eP PKPdf 01 10 57.7 +1.0
RUP Ruppelstein 151.21 352 PKP PKPdf 01 10 56.6 +0.1
KSL Kastellorizon 151.22 307 eP PKPdf 01 10 57.0 +0.1
AKHS Akhisar 151.25 314 *i* P PKPdf 01 10 57.9 +1.0
AKS Akhisar 151.25 314 eP PKPdf 01 10 57.4 +0.5
ALN Alexandroupoli 151.29 319 P PKPdf 01 10 55.1 -1.8
ENEZ Enez 151.32 318 eP PKPdf 01 10 55.4 -1.6
PKSM Moragy 151.33 334 P PKPdf 01 10 56.8 0.0
PKSM Moragy 151.33 334 ⇑*i*P PKPdf 01 10 57.2 +0.4
WLF Walferdange 151.35 353 PKP PKPdf 01 10 57.0 +0.3
WLF PKPbc PKPbc 01 11 04.4 +1.0
WLF PKPab PKPab 01 11 13.1 -1.0
WLF Walferdange 151.35 353 ePKPdf PKPdf 01 10 58.6 +1.9
WLF ePKPbc PKPbc 01 11 04.7 +1.3
WLF ePKPab PKPab 01 11 14.2 +0.1
WLF LR LR
comp=Z,811nm,20.0s
WLF Walferdange 151.35 353 ePKPdf PKPdf 01 10 56.9 +0.2
WLF ePKPbc PKPbc 01 11 05.0 +1.7
WLF ePKPab PKPab 01 11 14.2 +0.1
WLF epPKPbc pPKPab 01 13 14.1 -4.4
WLF ePP PP 01 14 47.4 0.0
PLD Plovdiv 151.36 322 P PKPdf 01 10 55.7 -1.3
KTD Kalmit 151.44 351 PKP PKPdf 01 10 56.8 0.0
PDA Ponta Delgada 151.45 49 eP PKiKP 01 11 05.2 +1.0
MOA Molln 151.45 342 ⇑*i*PKPdf PKPdf 01 10 56.5 -0.3
comp=Z,82nm,1.1s,SNR=26
MOA ⇓*i*PKiKP PKiKP 01 11 04.6 +0.7
comp=Z,359nm,0.8s
MOA ⇓*i*PKPab PKPab 01 11 15.8 +1.2
comp=Z,534nm,1.5s
ARSA Arzberg 151.59 339 ⇑*i*PKPdf PKPdf 01 10 56.5 -0.6
comp=Z,118nm,1.6s,SNR=16
ARSA ⇑*i*PKiKP PKiKP 01 11 04.8 +0.6
comp=Z,354nm,1.2s
ARSA ⇑*i*PKPab PKPab 01 11 15.7 +0.5
comp=Z,359nm,1.0s
TURN Turunc 151.63 309 *i* P PKPdf 01 10 58.9 +1.4
EZN Ezine 151.73 317 eP PKPdf 01 10 57.8 +0.2
YER Yerkesik 151.75 310 eP PKPdf 01 10 54.0 -3.7
AYVA Ayvalik 151.77 315 *i* P PKPdf 01 10 57.7 0.0
STU Stuttgart 151.79 349 ePKPdf PKPdf 01 11 59.0 +1.7
STU ePKPbc PKPbc 01 11 05.7 +1.3
STU Stuttgart 151.79 349 ePKPdf PKPdf 01 10 57.5 +0.1
STU ePKPbc PKPbc 01 11 05.1 +0.8
STU ePKPab PKPab 01 11 15.8 -0.2
AYDN Tasoluk 151.79 311 *i* P PKPdf 01 10 59.0 +1.3
GADA Gvkgeada 151.79 318 eP PKPdf 01 10 59.0 +1.3
LANF Langenberg 151.81 351 PKP PKPdf 01 10 57.7 +0.3
KDAG Bornova 151.86 313 *i* P PKPbc 01 11 04.0 -0.9
VTS Vitosha 151.88 324 *i* P PKPdf 01 10 58.5 +0.8
BOZC Bozcaada 151.89 317 *i* P PKPbc 01 11 04.7 -0.2
FUR Furstenfeldbru 151.94 346 ePKPdf PKPdf 01 10 57.6 0.0
FUR ePKPbc PKPbc 01 11 05.3 +0.6
FUR ePKPab PKPab 01 11 16.7 0.0
FUR ePP PP 01 14 47.8 -3.1
JSA Saint Aubin 151.95 5 eP PKPdf 01 10 57.3 -0.3
RJOB Jochberg 151.96 343 ePKPdf PKPdf 01 10 56.9 -0.8
RJOB ePKPbc PKPbc 01 11 05.4 +0.6
RJOB ePKPab PKPab 01 11 18.4 +1.6
MLSB Milas 152.04 311 eP PKPdf 01 10 58.8 +0.7
KOGS Kog 152.04 338 ePKPdf PKPdf 01 10 56.6 -1.2
KOGS *i* PKPbc PKPbc 01 11 05.7 +0.7
KOGS ePKPab PKPab 01 11 17.7 +0.5
KOGS epPKPbc pPKPbc 01 13 06.5 -8.3
KOGS ePPP PP 01 14 53.2 +1.6
PRK Paraskevi 152.08 316 P PKPdf 01 10 56.3 -1.8
PRK Paraskevi 152.08 316 eP PKPdf 01 10 59.0 +0.9
STR Strasbourg 152.21 351 PKP PKPdf 01 10 58.1 +0.1
PSMN Pico do Norte, 152.21 50 ePKP PKPdf 01 10 57.7 -0.7
GCAM G?zelcaml? 152.22 312 *i* P PKPdf 01 10 59.4 +1.0
MMB Musomiste 152.25 322 *i* P PKPdf 01 10 58.0 -0.3
SOKA Soboth 152.25 339 ⇓*i*PKPdf PKPdf 01 10 56.9 -1.3
comp=Z,188nm,1.4s
SOKA ⇓*i*PKiKP PKiKP 01 11 06.3 +0.7
comp=Z,536nm,0.9s
SOKA ⇑*i*PKPab PKPab 01 11 18.2 +0.1
comp=Z,391nm,1.3s
ARG Arkhangelos 152.26 308 eP PKPbc 01 11 06.5 +0.7
GROS Grobnik 152.29 339 *i* PKPdf PKPdf 01 10 57.2 -0.9
URLA Izmir 152.33 314 *i* P PKPdf 01 10 59.0 +0.5
BFO Black Forest 152.36 350 ePKPdf PKPdf 01 10 59.3 +1.1
BFO ePKPbc PKPbc 01 11 06.1 +0.5
BFO Black Forest 152.36 350 ePKPdf PKPdf 01 10 57.9 -0.3
BFO ePKPbc PKPbc 01 11 06.7 +1.1
BDRM Kayabasi 152.38 311 *i* P PKPdf 01 10 58.0 -0.6
LIA Limnos Island 152.41 318 P PKPdf 01 10 57.4 -1.2
KBA Koelnbreinsper 152.41 342 ⇓*i*PKPdf PKPdf 01 10 56.7 -1.7
comp=Z,161nm,1.3s,SNR=35
KBA ⇓*i*PKiKP PKiKP 01 11 06.4 +0.5
comp=Z,486nm,0.9s
KBA ⇓*i*PKPab PKPab 01 11 19.2 +0.5
comp=Z,284nm,0.9s
DAT Datca 152.44 310 eP PKPdf 01 10 58.8 +0.1
CDF Champ du Feu 152.44 351 ePKIKP PKPdf 01 10 57.3 -1.0
comp=Z,626nm,1.6s
FLN La Foliniere 152.47 3 ePKIKP PKPdf 01 10 57.3 -1.1
comp=Z,918nm,1.1s
FLN eMLR MLR
comp=Z,479nm,20.0s
FLN La Foliniere 152.47 3 ePKIKP PKPdf 01 10 57.3 -1.1
FLN MLR MLR
comp=Z,480nm,20.0s
SMG Samos 152.50 312 eP PKPbc 01 11 05.0 -1.3
SPAK Spaichingen-Ko 152.51 349 PKP PKPdf 01 10 57.7 -0.7
OBKA Obir 152.56 340 ⇑*i*PKPdf PKPdf 01 10 57.9 -0.7
comp=Z,79nm,1.4s,SNR=15
OBKA ⇓*i*PKiKP PKiKP 01 11 06.8 +0.6
comp=Z,178nm,0.7s
OBKA ⇓*i*PKPab PKPab 01 11 20.0 +0.6
comp=Z,148nm,0.9s
MEZF Maizieres J'vi 152.61 355 ePKIKP PKPdf 01 10 58.2 -0.4
comp=Z,450nm,0.9s
WATA Walderalm 152.65 345 ⇓*i*PKPdf PKPdf 01 10 57.8 -0.9
comp=Z,102nm,1.0s,SNR=35
WATA ⇓*i*PKiKP PKiKP 01 11 07.4 +1.0
comp=Z,617nm,1.1s
WATA ⇑*i*PKPab PKPab 01 11 21.1 +1.4
comp=Z,227nm,0.8s
ECH Echery 152.65 351 PKP PKPdf 01 10 59.4 +0.8
ECH ePKPbc PKPbc 01 11 07.6 +1.4
ECH ePKPab PKPab 01 11 20.9 +1.2
LIBD Limburg 152.65 351 PKP PKPdf 01 10 58.8 +0.1
LDF La Druitiere 152.66 2 ePKIKP PKPdf 01 10 57.6 -1.0
comp=Z,630nm,1.2s
CHOS Chios island 152.68 314 P PKPdf 01 10 59.3 +0.3
ROSF Rostrenen 152.69 7 ePKIKP PKPdf 01 10 58.1 -0.6
comp=Z,96nm,0.9s
RETA Reutte 152.70 346 ⇓*i*PKPdf PKPdf 01 10 58.3 -0.4
comp=Z,99nm,1.1s,SNR=28
RETA ⇓*i*PKiKP PKiKP 01 11 07.5 +1.0
comp=Z,208nm,0.7s
RETA ⇓*i*PKPab PKPab 01 11 20.3 +0.4
comp=Z,387nm,1.0s
WTTA Wattenberg 152.70 345 ⇓*i*PKPdf PKPdf 01 10 57.8 -0.9
comp=Z,233nm,1.0s,SNR=56
WTTA ⇓*i*PKiKP PKiKP 01 11 07.7 +1.2
comp=Z,990nm,1.1s
WTTA ⇓*i*PKPab PKPab 01 11 20.6 +0.7
comp=Z,884nm,1.1s
MYKA Terra Mystica 152.73 341 ⇑*i*PKPdf PKPdf 01 10 58.1 -0.7
comp=Z,182nm,1.7s
MYKA ⇓*i*PKiKP PKiKP 01 11 06.8 +0.2
comp=Z,318nm,0.7s
MYKA ⇑*i*PKPab PKPab 01 11 19.1 -0.9
comp=Z,412nm,1.4s
MOTA Moosalm 152.75 345 ⇑*i*PKPdf PKPdf 01 10 57.7 -1.1
comp=Z,152nm,0.9s,SNR=89
MOTA ⇑*i*PKiKP PKiKP 01 11 07.4 +0.8
comp=Z,718nm,0.9s
MOTA ⇓*i*PKPab PKPab 01 11 21.1 +0.9
comp=Z,512nm,0.9s
THEF They Montfort 152.79 353 PKP PKPdf 01 10 58.6 -0.2
PDKS Podkum 152.81 339 *i* PKPdf PKPdf 01 10 58.5 -0.5
GRR Gorron 152.83 3 ePKIKP PKPdf 01 10 57.8 -1.1
comp=Z,1μm,1.7s
SISC Sisak 152.83 336 P PKPdf 01 10 59.3 +0.3
SGMF Saint Gilles 152.84 6 ePKIKP PKPdf 01 10 57.8 -1.1
comp=Z,274nm,1.1s
FELD Feldberg im Sc 152.86 350 PKP PKPdf 01 10 58.3 -0.7
SLE Schleitheim 152.88 349 ⇑*i*PKPdf PKPdf 01 10 56.6 -2.4
comp=Z,344nm,1.3s
OUR Ouranopolis 152.89 320 P PKPbc 01 11 07.8 +0.8
GORS Gorjuse 152.91 341 *i* PKPdf PKPdf 01 10 58.0 -1.0
STEIN Stein am Rhein 152.91 349 ⇑*i*PKPdf PKPdf 01 10 56.5 -2.5
comp=Z,334nm,1.6s
SOH Sokhos 152.96 321 P PKPdf 01 10 56.8 -2.5
HAU Haudompre 152.96 353 ePKIKP PKPdf 01 10 58.2 -0.9
comp=Z,536nm,1.4s
HAU eMLR MLR
comp=Z,472nm,18.0s
HAU Haudompre 152.96 353 ePKIKP PKPdf 01 10 58.2 -0.9
HAU MLR MLR
comp=Z,470nm,18.0s
LJU Ljubljana 152.98 340 ePKIKP PKPdf 01 10 59.3 +0.1
LJU e 01 11 21.7
LJU e 01 13 09.2
LJU e 01 14 57.7
LJU Ljubljana 152.98 340 ePKPdf PKPdf 01 10 59.3 +0.1
LJU ePKPbc PKPbc 01 11 08.1 +1.1
LJU ePKPab PKPab 01 11 21.7 +0.6
LJU epPKPbc pPKPbc 01 13 09.2 -7.7
LJU esPKPbc 01 14 11.3
LJU ePP PP 01 14 57.6 +0.8
LJU e 01 17 50.2
KNT Kendrikon 153.00 322 P PKPdf 01 10 58.6 -0.8
MOF Molkenrain 153.01 351 PKP PKPdf 01 10 59.2 0.0
PTCC Patocco-Chiusa 153.02 341 PKP PKPdf 01 10 57.4 -1.8
STIP Stip 153.04 324 P PKPdf 01 10 58.1 -1.3
STIP Stip 153.04 324 ePKP PKPdf 01 10 57.1 -2.3
CADS Cadrg 153.06 341 ePKPdf PKPdf 01 10 58.8 -0.5
CADS ePKPbc PKPbc 01 11 07.0 +0.4
CADS epPKPbc pPKPbc 01 13 07.9 -9.3
CADS e 01 17 51.5
DAVA Damuels 153.08 347 *i* PKPdf PKPdf 01 10 59.1 -0.2
comp=Z,139nm,1.0s,SNR=43
DAVA ⇓*i*PKiKP PKiKP 01 11 08.3 +1.0
comp=Z,620nm,1.1s
DAVA ⇑*i*PKPab PKPab 01 11 20.9 -0.6
comp=Z,450nm,1.4s
VAY Valandovo 153.08 323 P PKPdf 01 10 57.3 -2.2
VAY Valandovo 153.08 323 ePKP PKPdf 01 10 57.5 -2.0
HINF Hinteralfeld 153.09 352 ePKIKP PKPdf 01 10 58.5 -0.8
comp=Z,1μm,1.8s
VISS Visnje 153.09 339 ePKPdf PKPdf 01 10 59.3 0.0
VISS ePKPbc PKPbc 01 11 08.3 +1.0
VISS ePKPab PKPab 01 11 22.2 +0.6
VISS epPKPbc pPKPbc 01 13 09.9 -7.3
VISS esPKPbc 01 14 12.3
VISS e 01 17 54.6
QUIF Quistinic 153.11 7 ePKIKP PKPdf 01 10 58.1 -1.2
comp=Z,294nm,1.3s
FETA Feichten 153.15 346 *i* PKPdf PKPdf 01 10 58.5 -0.9
comp=Z,334nm,1.0s,SNR=118
FETA ⇑*i*PKiKP PKiKP 01 11 07.5 +0.1
comp=Z,529nm,1.0s
FETA ⇑*i*PKPab PKPab 01 11 18.8 -3.0
comp=Z,296nm,1.3s
WILA Wila 153.15 349 ⇑*i*PKPdf PKPdf 01 10 57.0 -2.4
comp=Z,440nm,1.2s
GMNA Gemona 153.17 342 PKP PKPdf 01 10 58.2 -1.3
SULZ Cheisacher 153.18 350 ⇑*i*PKPdf PKPdf 01 10 57.0 -2.4
comp=Z,336nm,1.3s
PLG Polygyros 153.19 320 P PKPdf 01 10 55.4 -4.3
PLG Polygyros 153.19 320 eP PKPdf 01 10 57.5 -2.2
VOY Vojsko 153.19 340 ePKPdf PKPdf 01 10 58.5 -1.0
VOY ePKPbc PKPbc 01 11 04.0 -3.5
VOY e 01 11 56.7
VOY e 01 12 03.5
VOY e 01 12 20.9
VOY e 01 13 17.0
BOJS Bojanci 153.21 338 *i* PKPdf PKPdf 01 10 59.4 -0.2
HORT Hortiatis 153.25 321 P PKPdf 01 10 55.9 -3.9
ZUR Degenried 153.25 349 ⇑*i*PKPdf PKPdf 01 10 57.1 -2.4
comp=Z,419nm,1.2s
SKO Skopje 153.26 325 ePKP PKPdf 01 10 59.0 -0.7
KARP Karpathos 153.26 308 eP PKPdf 01 11 00.0 +0.1
PLE Pljevlja 153.28 330 ⇑*i*PKP PKPdf 01 11 00.0 +0.3
THE Thessaloniki 153.31 321 P PKPdf 01 10 57.7 -2.1
PAIG Paliouri 153.32 319 P PKPdf 01 10 58.3 -1.6
BBS Basel-Blauen 153.34 351 PKP PKPdf 01 10 59.2 -0.5
IVA Berane 153.39 328 ⇑*i*PKP PKPdf 01 11 00.2 +0.3
PLONS Plons/SG 153.41 348 ⇑*i*PKPdf PKPdf 01 10 57.5 -2.3
comp=Z,424nm,1.5s
GRG Griva 153.42 323 P PKPdf 01 10 58.3 -1.7
BALST Balsthal 153.43 350 ⇑*i*PKPdf PKPdf 01 10 58.1 -1.7
comp=Z,498nm,1.6s
DAVOS Davos 153.52 347 PKIKP PKPdf 01 10 58.7 -1.2
DAVOS 01 11 07.8
DAVOS 01 11 24.7
APPI Appiano 153.53 345 PKP PKPdf 01 10 59.6 -0.4
LOMF Lomont 153.54 352 PKP PKPdf 01 11 00.1 +0.1
PVY Plav 153.56 328 ⇑*i*PKP PKPdf 01 10 59.4 -0.7
DAVOX Davos/Dischmat 153.56 347 PKP PKPdf 01 10 58.7 -1.3
comp=Z,113nm,0.8s,baz=47,slow=1.9,SNR=120
DAVOX PKPbc PKPbc 01 11 07.8 -0.5
comp=Z,505nm,0.8s,baz=22,slow=5.7,SNR=57
DAVOX PKPab PKPab 01 11 24.7 +1.1
comp=Z,233nm,0.9s,baz=5.5,slow=13,SNR=7.6
DAVOX pPKPbc pPKPbc 01 13 11.5 -6.8
comp=Z,29nm,1.1s,baz=23,slow=18,SNR=1.2
DAVOX Davos/Dischmat 153.56 347 ⇑*i*PKPdf PKPdf 01 10 57.7 -2.3
comp=Z,590nm,1.6s
DAVOX Davos/Dischmat 153.56 347 PKP PKPdf 01 10 58.7 -1.3
DAVOX PKPbc PKPbc 01 11 07.8 -0.5
DAVOX PKPab PKPab 01 11 24.7 +1.1
DAVOX pPKPbc pPKPbc 01 13 11.5 -6.8
SKDS Skadanscina 153.59 340 ePKPdf PKPdf 01 10 59.7 -0.4
SKDS ePKPbc PKPbc 01 11 09.1 +0.7
SKDS ePKPab PKPab 01 11 23.6 -0.1
UPM Unac-Piva 153.61 330 ⇑*i*PKP PKPdf 01 10 58.9 -1.3
FUORN Ofenpass-Fuorn 153.63 346 ⇑*i*PKPdf PKPdf 01 10 58.0 -2.1
comp=Z,349nm,1.1s
MUO Muotathal 153.63 349 ⇑*i*PKPdf PKPdf 01 10 58.2 -1.9
comp=Z,674nm,1.6s
LLS Linth-Limmern 153.68 348 ⇑*i*PKPdf PKPdf 01 10 58.1 -2.1
comp=Z,226nm,1.6s
APE Apeiranthos 153.72 312 eP PKPdf 01 11 00.0 -0.5
APE Apeiranthos 153.72 312 ⇑*i*P PKPdf 01 11 00.2 -0.3
BRMO Bormio 153.74 346 PKP PKPdf 01 11 00.2 -0.1
KRUS Krusevo 153.78 325 ePKP PKPdf 01 10 59.4 -1.1
CTI Castel Tesino 153.83 344 PKP PKPdf 01 10 59.1 -1.3
NKY Niksic 153.87 330 ⇑*i*PKP PKPdf 01 10 59.2 -1.4
BERNI Berninapass 153.88 346 ⇑*i*PKPdf PKPdf 01 10 58.2 -2.3
comp=Z,330nm,1.2s
HASLI Hasliberg/Brie 153.92 349 ⇑*i*PKPdf PKPdf 01 10 58.5 -2.0
comp=Z,376nm,1.7s
LIT Litokhoron 153.93 321 P PKPdf 01 10 58.9 -1.8
LOR Lormes 153.93 356 ePKIKP PKPdf 01 10 59.8 -0.7
comp=Z,396nm,1.1s
LOR eMLR MLR
comp=Z,521nm,19.5s
LOR Lormes 153.93 356 ePKIKP PKPdf 01 10 59.8 -0.7
LOR MLR MLR
comp=Z,520nm,19.5s
VDL Val di Lei 153.94 347 ⇑*i*PKPdf PKPdf 01 10 58.5 -2.0
comp=Z,406nm,1.7s
XOR Xorichti 153.96 319 P PKPdf 01 10 58.9 -1.9
BIA Bitola 153.98 324 P PKPdf 01 10 58.2 -2.6
BIA Bitola 153.98 324 ePKP PKPdf 01 10 58.4 -2.4
NEO Neokhori 153.98 319 eP PKPdf 01 11 00.0 -1.8
HYF Humbligny 153.98 358 ⇑*i*PKIKP PKPdf 01 11 00.2 -0.4
BRANT Les Verrieres 154.00 352 ⇑*i*PKPdf PKPdf 01 10 58.9 -1.7
comp=Z,352nm,2.0s
BRY Bratogost 154.01 330 ⇑*i*PKP PKPdf 01 10 59.3 -1.5
TTG Podgorica 154.03 329 ⇑*i*PKP PKPdf 01 10 59.4 -1.4
TORNY Torny/Romont 154.09 351 ⇑*i*PKPdf PKPdf 01 10 59.0 -1.7
comp=Z,551nm,1.6s
WIMIS Wimmis 154.10 350 ⇑*i*PKPdf PKPdf 01 10 58.7 -2.0

comp=Z,307nm,2.0s
MABI Malga Bissina 154.10 345 PKP PKPdf 01 10 59.0 -1.8
FNA Florina 154.11 323 P PKPdf 01 10 58.4 -2.6
FUSIO Fusio 154.12 348⇑*i*PKPdf PKPdf 01 10 58.6 -2.2
comp=Z,542nm,1.6s
SSF Saint Saulge 154.15 357 *e*PKIKP PKPdf 01 11 00.1 -0.7
comp=Z,356nm,1.1s
NVLJ Novalja 154.16 337 P PKPdf 01 11 00.1 -0.8
OHR Ohrid 154.20 325 P PKPdf 01 10 56.9 -4.2
OHR Ohrid 154.20 325 *e*PKP PKPdf 01 10 59.3 -1.8
KZN Kozani 154.21 322 *e*P PKPdf 01 11 01.0 -0.1
BUM Brajici-Budva 154.31 329⇑*i*PKP PKPdf 01 11 00.4 -0.8
LKBD Leukerbad 154.37 350⇑*i*PKPdf PKPdf 01 10 59.1 -2.0
comp=Z,264nm,1.4s
CABF La Chapelle 154.37 352 *e*PKIKP PKPdf 01 11 01.0 -0.1
comp=Z,606nm,1.0s
HCY Herceg Novi 154.38 330⇑*i*PKP PKPdf 01 11 00.3 -1.0
ULC Ulcinj 154.39 328⇑*i*PKP PKPdf 01 11 00.5 -0.8
STON Ston 154.42 331 P PKPdf 01 11 00.1 -1.2
GIMEL St. Georges / 154.42 352⇑*i*PKPdf PKPdf 01 10 59.9 -1.3
comp=Z,389nm,1.2s
AVF Avril sur Loir 154.43 357 *e*PKIKP PKPdf 01 11 00.1 -1.1
comp=Z,628nm,1.7s
SENIN Lac Senin/Sane 154.44 350⇑*i*PKPdf PKPdf 01 10 59.5 -1.7
comp=Z,323nm,1.6s
ATH Athens Observa 154.45 316 *e*P PKPdf 01 11 02.0 +0.5
AIGLE Aigle 154.51 351⇑*i*PKPdf PKPdf 01 10 59.7 -1.6
comp=Z,440nm,1.3s
LKR Lokris 154.51 318 P PKPdf 01 11 00.3 -1.3
NPS Neapolis 154.52 309 *e*P PKPdf 01 11 03.5 +1.8
TIR Tirane 154.53 326 P PKPdf 01 11 00.7 -0.8
SMF Signal de Mont 154.55 356 *e*PKIKP PKPdf 01 11 00.4 -1.0
comp=Z,317nm,1.2s
THL Klokotos Trika 154.55 321 P PKPdf 01 10 59.1 -2.5
MUGIO Muggio 154.56 347⇑*i*PKPdf PKPdf 01 10 59.1 -2.3
comp=Z,430nm,1.3s
GRYON Gryon 154.58 351⇑*i*PKPdf PKPdf 01 11 00.1 -1.3
comp=Z,324nm,1.4s
MMK Mattmark 154.64 349⇑*i*PKPdf PKPdf 01 10 59.6 -1.9
comp=Z,362nm,1.7s
MFF Saint Martin d 154.64 2 *e*PKIKP PKPdf 01 11 00.6 -0.9
comp=Z,990nm,1.5s
LAST Lasithi 154.66 308 P PKPdf 01 10 57.7 -4.2
BGF Bois d'Agland 154.69 358 *e*PKIKP PKPdf 01 11 00.8 -0.8
comp=Z,998nm,1.6s
DIX Grande Dixence 154.70 350⇑*i*PKPdf PKPdf 01 11 00.1 -1.5
comp=Z,322nm,1.4s
AGG Agios Georgios 154.70 319 P PKPdf 01 11 00.1 -1.7
EMV Vieux Emosson 154.80 351⇑*i*PKPdf PKPdf 01 11 00.2 -1.5
comp=Z,240nm,1.3s
LTK Loutraki 154.91 317 P PKPdf 01 11 01.1 -1.0
TCF Toulx Ste Croi 154.98 359 *e*PKIKP PKPdf 01 11 01.2 -0.8
comp=Z,716nm,1.2s
DID Didima 155.03 315 P PKPdf 01 10 59.0 -3.3
IDI Anoyia 155.03 309 PKP PKPdf 01 11 01.0 -1.4
comp=Z,210nm,0.9s,baz=0.0,slow=4.5,SNR=27
IDI PKPbc PKPdf 01 11 11.8 +9.4
comp=Z,131nm,0.7s,baz=133,slow=6.1,SNR=25
JAN Janina 155.17 322 *e*P PKPdf 01 11 02.0 -0.4
AGO Saint Agoulin 155.18 357 PKP PKPdf 01 11 02.3 +0.1
SIVA Sivas 155.22 309 P PKPdf 01 11 02.0 -0.7
PLDF La Plantade 155.23 356 PKP PKPdf 01 11 02.7 +0.4
LPL La Plagne 155.35 351 *e*PKIKP PKPdf 01 11 02.4 -0.1
comp=Z,396nm,1.3s
LPG La Plagne 155.37 351 *e*PKIKP PKPdf 01 11 02.5 0.0
comp=Z,444nm,1.3s
VAM Vamos 155.47 310 *e*P PKPdf 01 11 05.0 +2.0
PYM Petit Puy Mans 155.49 357 PKP PKPdf 01 11 03.2 +0.5
IGT Igoumenitsa 155.55 323 P PKPdf 01 11 01.4 -1.5
BOB Bobbio (Coli) 155.57 346 PKP PKPdf 01 11 03.1 +0.3
VLI Veliai 155.67 314 *e*P PKPdf 01 11 04.0 +0.8
FNVD Fontana Vidola 155.71 343 PKP PKPdf 01 11 04.1 +1.1
KEK Kerkira 155.72 324 *e*P PKPdf 01 11 03.0 -0.2
GDM Grand'Maison 155.75 352 PKP PKPdf 01 11 03.2 +0.2
GRN Grenoble 155.76 352 PKP PKPdf 01 11 03.2 +0.2
CING Cingoli 155.78 339 PKP PKPdf 01 11 01.8 -1.3
BNI Bardonecchia 155.82 351 *e*PKPdf PKPdf 01 11 04.2 +1.1
BNI *e*PKPab PKPab 01 11 35.2 +1.9
KYTH Kithira 155.84 313 *e*P PKPdf 01 11 04.0 +0.6
SSB Saint Sauveur 155.85 354 *e*PKPdf PKPdf 01 11 04.1 +0.9
SSB *e*PKPab PKPab 01 11 33.3 -0.1
VLC Villacollemand 155.91 344 *e*PKPdf PKPdf 01 11 03.4 +0.1
VLC *e*PKPab PKPab 01 11 34.5 +0.7
VLC LR LR
comp=Z,790nm,22.0s
RJF Les Rejaudoux 155.97 360 *e*PKIKP PKPdf 01 11 02.6 -0.7
comp=Z,668nm,1.2s
RJF *e*MLR MLR
comp=Z,1μm,21.8s
RJF Les Rejaudoux 155.97 360 *e*PKIKP PKPdf 01 11 02.6 -0.7
RJF MLR MLR
comp=Z,1μm,21.8s
LBL Lubilhac 155.99 357 PKP PKPdf 01 11 04.1 +0.8
ORIF Oris-en-Rattie 156.06 352 *e*PKIKP PKPdf 01 11 02.9 -0.5
comp=Z,702nm,1.6s
ORIF *e*MLR MLR
comp=Z,702nm,20.0s
MURB Monte Urbino 156.10 340 PKP PKPdf 01 11 02.2 -1.3
MBDF Montbardon 156.12 350 *e*PKIKP PKPdf 01 11 03.0 -0.5
comp=Z,730nm,1.3s
FGMS Monte Sant'Ang 156.12 332 PKP PKPdf 01 11 03.5 -0.1
QLNO Quiliano 156.23 347 PKP PKPdf 01 11 02.2 -1.5
VIVF Saint-Julien-l 156.26 354 *e*PKIKP PKPdf 01 11 03.2 -0.5
comp=Z,391nm,1.2s
DOI San Damiano 156.26 349 PKP PKPdf 01 11 02.9 -0.8
CSNT Castellina Chi 156.30 342 PKP PKPdf 01 11 02.7 -1.1
LFF La Frestale 156.33 1 *e*PKIKP PKPdf 01 11 03.0 -0.8
comp=Z,677nm,1.5s
CAF Calviac 156.34 359 *e*PKIKP PKPdf 01 11 03.3 -0.5
comp=Z,647nm,1.5s
SURF Saint Ours 156.35 350 PKP PKPdf 01 11 04.0 +0.2
AQU L'Aquila 156.60 337 *e*PKPdf PKPdf 01 11 05.2 +1.0
AQU L'Aquila 156.60 337⇓*i*P PKPdf 01 11 04.8 +0.6
EMAZ Mazaricos 156.67 19 PKP PKPdf 01 11 04.2 0.0
EMAZ PKPab PKPab 01 11 34.1 -3.0
SAOF Saorge 156.71 349 PKP PKPdf 01 11 03.9 -0.4
AUTN L'Aution 156.72 349 PKP PKPdf 01 11 04.0 -0.3
TOUF Mont Tournerai 156.74 349 PKP PKPdf 01 11 04.2 -0.1
LUCF Luceram 156.84 349 PKP PKPdf 01 11 04.2 -0.3
EPON Pontenova 156.84 16 PKP PKPdf 01 11 03.4 -1.1
EPON PKPab PKPab 01 11 35.3 -2.5
SBF Sospel 156.85 349 *e*PKIKP PKPdf 01 11 03.3 -1.2
comp=Z,923nm,1.3s
STS Santiago 156.86 19 PKP PKPdf 01 11 04.0 -0.5
STS PKPab PKPab 01 11 37.1 -0.8
MVIF Mont Vial 156.87 349 PKP PKPdf 01 11 04.4 -0.1
MIDA Miranda 156.89 335 PKP PKPdf 01 11 04.0 -0.6
STOF St-Etienne Org 156.96 352 PKP PKPdf 01 11 05.1 +0.5
REVF Revere 156.98 349 PKP PKPdf 01 11 04.2 -0.4
SMRF Simiane la Rot 157.03 352 *e*PKIKP PKPdf 01 11 04.4 -0.3
comp=Z,476nm,1.1s
CALN Calern 157.05 350 PKP PKPdf 01 11 04.5 -0.2
LASF Ste Croix 157.10 355 *e*PKIKP PKPdf 01 11 04.4 -0.4
comp=Z,463nm,1.1s
CERT Cerreto 157.11 337 PKP PKPdf 01 11 03.8 -1.1
VILF Villemus 157.13 352 PKP PKPdf 01 11 05.1 +0.3
PRAF Pradon 157.25 353 PKP PKPdf 01 11 05.5 +0.5
FRF La Foret Royal 157.28 350 *e*PKIKP PKPdf 01 11 03.9 -1.1
comp=Z,919nm,1.8s
EARI Arriondas 157.31 12 PKP PKPdf 01 11 05.3 +0.2
EARI PKPab PKPab 01 11 38.2 -1.6
TAVF Tavernes 157.31 351 PKP PKPdf 01 11 05.1 0.0
TOLF Tolfa 157.35 339 PKP PKPdf 01 11 03.3 -1.9
TREF Trevaresse 157.40 352 PKP PKPdf 01 11 05.3 +0.1
PUYF Puyloubier 157.44 352 PKP PKPdf 01 11 05.1 -0.1
EZAM Zamans 157.48 20 PKP PKPdf 01 11 06.3 +0.9
EZAM PKPab PKPab 01 11 38.3 -2.4
LMR La Mourre 157.52 350 *e*PKIKP PKPdf 01 11 04.2 -1.1
comp=Z,882nm,1.7s
CUC Castrocucco 157.56 330 *e*PKPdf PKPdf 01 11 05.0 -0.4
CUC *e*PKPab PKPab 01 11 41.1 0.0
GELF Grande-Etoile 157.63 352 PKP PKPdf 01 11 05.5 0.0
BERF Bertagne 157.66 352 PKP PKPdf 01 11 05.5 0.0
ELAN Lanestosa 157.69 9 PKP PKPdf 01 11 05.1 -0.4
ELAN PKPab PKPab 01 11 39.6 -1.8
ERUA La Rua 157.71 17 PKP PKPdf 01 11 05.8 +0.2
ERUA PKPab PKPab 01 11 40.8 -0.9
TIP Timpagrande 157.73 327 *e*PKPab PKPab 01 11 43.5 +1.7
PGF Pioggiola 157.77 345 *e*PKIKP PKPdf 01 11 04.5 -1.2
comp=Z,1μm,1.7s
OSSF Osses 157.91 5 PKP PKPdf 01 11 05.1 -0.7
MTLF Montolieu 157.92 358 *e*PKIKP PKPdf 01 11 05.2 -0.6
comp=Z,533nm,1.3s
EALK Alkurruntz 157.93 6 PKP PKPdf 01 11 05.7 -0.2
EALK PKPab PKPab 01 11 39.6 -2.9
ELOB Lobios 157.94 19 PKP PKPdf 01 11 06.3 +0.4
ELOB PKPab PKPab 01 11 42.1 -0.5
ELIZ Elizondo 157.98 6 PKP PKPdf 01 11 05.3 -0.6
ELIZ PKPab PKPab 01 11 41.4 -1.3
SJPF Ste Jean 158.06 5 *e*PKIKP PKPdf 01 11 05.7 -0.3
comp=Z,631nm,1.8s
LARF Larrau 158.15 5 PKP PKPdf 01 11 06.7 +0.6
REYF Montagne du Re 158.16 3 PKP PKPdf 01 11 06.1 0.0
LABF Labassere 158.20 2 PKP PKPdf 01 11 06.6 +0.4
EPF Esparros 158.23 2 *e*PKIKP PKPdf 01 11 05.7 -0.5
comp=Z,605nm,1.3s
ECAL Calabor 158.24 16 PKP PKPdf 01 11 05.9 -0.3
ECAL PKPab PKPab 01 11 44.5 +0.6
LRDF Laroque-de-Fa 158.31 358 PKP PKPdf 01 11 05.9 -0.4
MLS Moulis 158.32 0 PKP PKPdf 01 11 06.1 -0.2
ETSF Etsaut 158.32 4 *e*PKIKP PKPdf 01 11 06.1 -0.2
comp=Z,349nm,1.4s
MELF Melles 158.40 1 PKP PKPdf 01 11 06.4 0.0
ECRI Cripan 158.42 8 PKP PKPdf 01 11 06.5 0.0
ECRI PKPab PKPab 01 11 44.4 -0.3
RESF Ens 158.45 2 PKP PKPdf 01 11 07.1 +0.6
SALF Salau 158.51 0 PKP PKPdf 01 11 04.3 -2.2
CARF Carcanieres 158.55 358 PKP PKPdf 01 11 06.7 +0.1
EBIE Bielsa 158.56 2 PKP PKPdf 01 11 07.6 +1.0
EBIE PKPab PKPab 01 11 44.5 -0.8
FILF Fillols 158.69 357 PKP PKPdf 01 11 06.4 -0.4
SJAF Saint Jean de 158.75 357 PKP PKPdf 01 11 06.4 -0.4
EJON La Jonquera 158.78 357 PKP PKPdf 01 11 06.1 -0.8
EJON PKPab PKPab 01 11 44.9 -1.4
SOI Samo 158.93 326 PKP PKPdf 01 11 06.5 -0.7
EMIR Miracle 159.36 360 PKP PKPdf 01 11 07.3 -0.3
EMIR PKPab PKPab 01 11 46.7 -2.1
MTE Manteigas 159.43 20 *e*PKPdf PKPdf 01 11 09.6 +1.9
MTE *e*PKPab PKPab 01 11 49.9 +0.7
ESAC San Caprasio 159.50 4 PKP PKPdf 01 11 07.8 +0.1
ESAC PKPab PKPab 01 11 48.3 -1.1
EPOB Poblet 159.92 1 PKP PKPdf 01 11 08.0 -0.2
EPOB PKPab PKPab 01 11 49.7 -1.5
GUD Guadarrama 160.08 12 PKP PKPdf 01 11 08.0 -0.4
GUD PKPab PKPab 01 11 50.4 -1.6
EPLA Plasencia 160.17 17 PKP PKPdf 01 11 08.8 +0.3
EPLA PKPab PKPab 01 11 51.2 -1.2
ALMR Almeirim 160.20 23 *e*P PKPdf 01 11 07.8 -0.8
VAE Valguarnera 160.22 328 PKP PKPdf 01 11 10.4 +1.8
comp=Z,48nm,1.2s,baz=186,slow=6.4,SNR=3.4
ETOR Torete 160.24 8 PKP PKPdf 01 11 08.8 +0.2
ETOR PKPab PKPab 01 11 51.6 -1.1
HVZN Vizzini 160.29 327 PKP PKPdf 01 11 09.5 +0.8
ERTA Horta de San J 160.30 2 PKP PKPdf 01 11 08.8 +0.2
ERTA PKPab PKPab 01 11 51.3 -1.6
LIS Lisbon 160.36 25 *e*P PKPdf 01 11 07.6 -1.1
VSL Villasalto 160.51 341 *e*PKPdf PKPdf 01 11 10.4 +1.5
VSL *e*PKPab PKPab 01 11 54.8 +0.9
EMOS Mosqueruela 160.85 4 PKP PKPdf 01 11 09.8 +0.6
EMOS PKPab PKPab 01 11 54.1 -1.2
EVO Evora 160.95 23⇓*i*PKIKP PKPdf 01 11 08.9 -0.5
comp=Z,883nm,1.3s
EVO *e*MLR MLR
comp=Z,971nm,21.5s
ESDC Sonseca Array 161.05 13 PKP PKPdf 01 11 08.7 -0.8
comp=Z,39nm,1.0s,baz=353,slow=2.4,SNR=105
ESDC PKPab PKPab 01 11 57.1 +0.8
comp=Z,186nm,1.0s,baz=343,slow=4.0,SNR=38
ESDC PP PP 01 15 41.1 +0.7
comp=Z,42nm,1.2s,baz=346,slow=4.9,SNR=10.0
ESDC PKKP 01 19 25.1
comp=Z,1.3nm,0.7s,baz=152,slow=7.5,SNR=4.6
ESDC Sonseca Array 161.05 13 PKP PKPdf 01 11 08.8 -0.7
ESDC PKPab PKPab 01 11 55.0 -1.2
ESLA Sonseca Array 161.05 13 *e*PKPdf PKPdf 01 11 11.1 +1.6
ESLA *e*PKPab PKPab 01 11 57.4 +1.1
ESLA *e*PP PP 01 15 41.3 +0.9
PAB San Pablo 161.09 14 *e*PKPdf PKPdf 01 11 11.8 +2.2
PAB *e*PKPab PKPab 01 11 57.6 +1.2
EBAD Badajoz 161.10 20 PKP PKPdf 01 11 08.7 -0.8
EBAD PKPab PKPab 01 11 54.3 -2.3
EHIG Higuera 161.18 63 PKP PKPdf 01 11 10.8 +0.8
CHIE El Hierro 161.29 66 PKP PKPdf 01 11 11.6 +1.5
CHIE PKPab PKPab 01 11 58.3 +0.4
ETOS Mallorca 161.46 356 PKP PKPdf 01 11 09.5 -0.4
ETOS PKPab PKPab 01 11 57.2 -0.8
ECHE Chera 161.58 6 PKP PKPdf 01 11 10.5 +0.5
ECHE PKPab PKPab 01 11 57.8 -0.7
EGOM La Gomera 161.80 64 PKP PKPdf 01 11 11.8 +1.2
EGOM PKPab PKPab 01 11 59.2 -1.0
BBTS Babate 161.81 108 PKP PKPdf 01 11 10.5 -0.4
baz=178,slow=0.7
BBTS PKPab PKPab 01 12 02.0 +1.5
comp=Z,221nm,1.0s,baz=276,slow=2.4,SNR=8.5
BBTS pPKP pPKPdf 01 13 20.6 -1.8
comp=Z,11nm,0.9s,baz=336,slow=4.5,SNR=1.0
EGRO El Granado 162.03 23 PKP PKPdf 01 11 09.3 -1.2
EGRO PKPab PKPab 01 11 57.0 -3.7
EMIN Mina Concepcio 162.11 21 PKP PKPdf 01 11 10.1 +0.4
EMIN PKPab PKPab 01 11 60.0 -1.0
EIBI Ibiza 162.24 360 PKP PKPdf 01 11 09.8 -0.9
EIBI PKPab PKPab 01 11 57.1 -4.4
CCAN Las Canadas 162.29 63 PKP PKPdf 01 11 12.0 +0.9
EVIA Vianos 162.32 10 PKP PKPdf 01 11 10.8 0.0
EVIA PKPab PKPab 01 12 02.4 +0.6
EADA Adamuz 162.35 16 PKP PKPdf 01 11 10.8 -0.1
EADA PKPab PKPab 01 12 00.7 -1.3
EBAJ Bajamar 162.40 62 PKP PKPdf 01 11 11.4 +0.3
ETOB Tobarra 162.45 7 PKP PKPdf 01 11 11.0 +0.1
ETOB PKPab PKPab 01 12 01.6 -0.8
EBEN Beniarda 162.51 4 PKP PKPdf 01 11 10.8 -0.2
EBEN PKPab PKPab 01 12 00.6 -2.1
EBAN Banos Encina 162.54 14 PKP PKPdf 01 11 10.7 -0.4
EBAN PKPab PKPab 01 12 02.5 -0.4
ELUQ Luque 163.00 15 PKP PKPdf 01 11 10.8 -0.7
ELUQ PKPab PKPab 01 12 04.5 -0.4
EQES Quesada 163.03 12 PKP PKPdf 01 11 11.4 -0.1
EQES PKPab PKPab 01 12 01.5 -3.5
EHUE Huescar 163.11 11 PKP PKPdf 01 11 11.0 -0.5
EHUE PKPab PKPab 01 12 05.4 0.0
ESPR Espera 163.19 20 PKP PKPdf 01 11 12.8 +1.2
ESPR PKPab PKPab 01 12 06.1 +0.3
EOSO Osorio 163.21 63 PKP PKPdf 01 11 11.3 -0.7
EMUR La Murta 163.28 7 PKP PKPdf 01 11 10.3 -1.4
EMUR PKPab PKPab 01 12 04.1 -2.0
ELOJ Sierra Loja 163.42 16 PKP PKPdf 01 11 11.6 -0.2
ELOJ PKPab PKPab 01 12 06.1 -0.6
ECOG Cogollos-Vega 163.44 14 PKP PKPdf 01 11 10.0 -1.9
ECOG PKPab PKPab 01 12 06.9 +0.1
SFS San Fernando 163.44 22 *e*PKPab PKPab 01 12 08.6 +1.7
ERON Agron 163.63 15 PKP PKPdf 01 11 11.5 -0.5
ERON PKPab PKPab 01 12 07.0 -0.7
EJIF Jimena Fronter 163.70 20 PKP PKPdf 01 11 12.1 0.0
EJIF PKPab PKPab 01 12 07.3 -0.7
CMAH Djebel Manchou 163.75 342 P PKPdf 01 11 12.0 -0.2
CAEH 'Ain El Ouahch 163.76 344 P PKPdf 01 11 13.0 +0.8
EMIJ Mijas 163.80 18 PKP PKPdf 01 11 10.4 -1.9
EMIJ PKPab PKPab 01 12 07.7 -0.8
EGUA Guajares 163.86 14 PKP PKPdf 01 11 10.9 -1.4
EGUA PKPab PKPab 01 12 07.1 -1.6
LIC Lamto 163.88 157 *e*PKIKP PKPdf 01 11 12.0 -1.0
comp=Z,2μm,1.1s
LIC Lamto 163.88 157⇓*i*PKIKP PKPdf 01 11 11.8 -1.2
comp=Z,1μm,1.1s
LIC *e*MLR MLR
comp=Z,476nm,21.4s
LIC Lamto 163.88 157⇓*i*PKPdf PKPdf 01 11 11.8 -1.2
LIC LR LR
comp=Z,240nm,21.4s
KEST Kesra 163.92 336 PKP PKPdf 01 11 12.5 +0.1
comp=Z,25nm,1.0s,baz=263,slow=2.2,SNR=26
KEST PKPab PKPab 01 12 10.4 +1.4
comp=Z,68nm,0.9s,baz=318,slow=1.5,SNR=14
KEST PP PP 01 15 58.2 +2.6
comp=Z,12nm,1.1s,baz=304,slow=5.5,SNR=4.2
EBER Berja 163.94 12 PKP PKPdf 01 11 09.6 -2.8
EBER PKPab PKPab 01 12 08.3 -0.8
ENIJ Nijar 164.00 10 PKP PKPdf 01 11 11.9 -0.5
ENIJ PKPab PKPab 01 12 08.5 -0.8
KIC Kosan Boka 164.11 157 *e*PKIKP PKPdf 01 11 12.3 -0.9
comp=Z,2μm,1.0s
DFRA Djebel Bou Aff 164.22 346 P PKPdf 01 11 13.5 +0.9
TIC Toumodi 164.27 156 *e*PKIKP PKPdf 01 11 12.4 -0.9
comp=Z,2μm,1.0s
CFTV Fuerteventura 164.29 60 PKP PKPdf 01 11 12.2 -0.7
CFTV PKPab PKPab 01 12 11.0 0.0
CASM Ain Smara 164.34 344 P PKPdf 01 11 14.0 +1.3
DBIC Dimbokro 164.35 157 PKP PKPdf 01 11 11.9 -1.5
comp=Z,249nm,0.9s,baz=141,slow=1.3,SNR=33
DBIC PKPab PKPab 01 12 13.6 +2.2
comp=Z,86nm,0.9s,baz=177,slow=5.8,SNR=6.7
DBIC pPKP pPKPdf 01 13 24.3 -0.7
comp=Z,13nm,1.0s,baz=111,slow=8.6,SNR=1.1
DBIC sPKP 01 14 12.4
comp=Z,9.9nm,1.0s,baz=199,slow=8.9,SNR=1.5
DBIC Dimbokro 164.35 157 *e*PKIKP PKPdf 01 11 14.9 +1.5
DBIC *e* 01 12 12.7
AKF Akfadou 164.38 350 P PKPdf 01 11 16.1 +3.3
ABA Alger-Bouzarea 164.39 355 P PKPdf 01 11 15.8 +3.0
EFAM Famara 164.42 57 PKP PKPdf 01 11 13.3 +0.2
CTEI Djebel Teioual 164.55 344 P PKPdf 01 11 14.0 +1.1
SET Setif 164.65 347 P PKPdf 01 11 15.0 +2.0
CKHR Kef el Ahmar 164.80 347 P PKPdf 01 11 15.0 +1.9
EALB Alboran 164.84 14 PKP PKPdf 01 11 12.7 -0.4
EBNR Beni Rached 164.97 359 P PKPdf 01 11 14.5 +1.2
ADJB Djebel Djouab 164.99 353 P PKPdf 01 11 17.6 +4.3
EMHD Djebel Mahouad 165.00 355 P PKPdf 01 11 13.7 +0.4
AKET Djebel Ketaf 165.05 352 P PKPdf 01 11 17.7 +4.4
ECHA Ech Chlef 165.12 360 P PKPdf 01 11 15.0 +1.6
ATAF Djebel Tarf 165.16 351 P PKPdf 01 11 16.5 +3.1
EANR 'Ain N'Sour 165.31 1 P PKPdf 01 11 13.9 +0.3
ETRT Tiaret 165.87 0 P PKPdf 01 11 14.7 +0.7
MDT Midelt 167.29 23 PKP PKPdf 01 11 15.5 +0.3
comp=Z,175nm,1.0s,baz=19,slow=0.3,SNR=190
MDT PKPab PKPab 01 12 25.2 +1.2
comp=Z,52nm,0.8s,baz=352,slow=5.1,SNR=12
MDT pPKP pPKPdf 01 13 27.1 +0.1
comp=Z,18nm,1.1s,baz=194,slow=14,SNR=1.5
MDT PP PP 01 16 12.1 -0.7
comp=Z,58nm,1.4s,baz=330,slow=5.7,SNR=8.0
TOA0 Torodi Ar. Sit 171.97 183 *e*PKPdf PKPdf 01 11 19.4 +1.0
TORD Torodi Ar. Bea 171.97 183 PKP PKPdf 01 11 16.4 -2.0
comp=Z,200nm,0.9s,baz=329,slow=0.6,SNR=182
TORD PKPab PKPab 01 12 46.6 +1.6
comp=Z,61nm,0.9s,baz=172,slow=2.9,SNR=6.3
TORD pPKP pPKPdf 01 13 29.3 -1.0
comp=Z,11nm,1.0s,baz=165,slow=2.8,SNR=1.0
TORD pPKPab pPKPab 01 14 48.7 +0.5
comp=Z,9.1nm,0.9s,baz=140,slow=3.3,SNR=3.6
TAM Tamanrasset 175.80 293 *e*PKPdf PKPdf 01 11 22.4 +2.9
TAM *e*PPab PKPab 01 13 03.8 +1.5
TAM *e*PP PP 01 16 58.2 +2.4

IDC 19 01:15:11.9±5.3, **2114S**×**17881W**, **h570**km±61km, **mb3.2**/7, **mb1 3.5**/8, **mb1mx3.3**/19, **mbtmp3.2**/8, **Error ellipse: s-maj=32.0km s-min=24.7km az=8.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.43**	**191**	P	P	01 18 41.7	-1.7
	1.5nm,0.3s,baz=28,slow=3.9,SNR=6.9						
RPZ	**Rata Peaks**	**24.05**	**198**	P	P	01 19 43.0	+0.1
	2.9nm,0.4s,baz=211,slow=4.1,SNR=3.6						
ASAR	**Alice Springs**	**43.64**	**257**	P	P	01 22 27.7	+0.7
	0.7nm,0.6s,baz=99,slow=7.7,SNR=4.7						
WRA	**Warramunga Arr**	**43.77**	**263**	P	P	01 22 27.9	-0.1
	1.2nm,0.7s,baz=97,slow=7.7,SNR=4.6						
QSPA	**South Pole Qui**	**68.94**	**180**	P	P	01 25 21.6	+1.7
	5.0nm,0.9s,baz=37,slow=2.9,SNR=4.1						
NVAR	**Mina Array Bea**	**82.00**	**44**	P	P	01 26 33.5	+0.6
	1.1nm,0.6s,baz=221,slow=7.6,SNR=5.9						
TXAR	**Lajitas Array**	**88.03**	**58**	P	P	01 27 03.2	+0.9
	0.4nm,0.9s,baz=197,slow=3.8,SNR=4.0						
PDAR	**Pinedale Array**	**89.94**	**44**	P	P	01 27 10.8	-0.1
	1.0nm,0.6s,baz=213,slow=4.3,SNR=5.2						
MKAR	**Makanchi Array**	**111.08**	**313**	PKiKP	PKiKP	01 32 41.1	+0.1
	1.7nm,1.1s,baz=265,slow=1.9,SNR=4.1						
BVAR	**Borovoye Array**	**119.08**	**320**	PKP	PKPdf	01 32 55.7	-0.5
	0.8nm,0.3s,baz=127,slow=2.9,SNR=10						
AKASG	**Malin Array Be**	**143.19**	**330**	PKP	PKPdf	01 33 38.7	-2.7
	2.1nm,0.4s,baz=42,slow=4.2,SNR=12						
GERES	**GERESS Array B**	**150.60**	**343**	PKPbc	PKPbc	01 33 59.8	+0.1
	0.7nm,0.6s,baz=37,slow=3.3,SNR=8.2						
DAVOX	**Davos/Dischmat**	**153.46**	**347**	PKPbc	PKPbc	01 34 06.3	+0.1
	1.1nm,0.5s,baz=190,slow=3.1,SNR=5.1						

IDC ***19*** *01:22:17.8±1.3, 5362N×8804E, h0km, mb3.8/5, mb1 4.0/8, mb1mx3.8/26, mbtmp3.9/8, ML4.0/3, MS4.2/1, Ms1 4.2/1, ms1mx3.4/34, Error ellipse: s-maj=16.8km s-min=13.6km az=64.0*

ISCJB ***19*** *01:22:18.4±1.4, 5363N±006×8769E±009, h10km±9km, mb3.9/5, Error ellipse: s-maj=9.8km s-min=8.8km az=5.6*

MOS ***19*** *01:22:18.4±1.2, 5344N×8782E, h10km, mb4.2/1, Error ellipse: s-maj=27.4km s-min=17.0km az=32.9*

NNC ***19*** *01:22:21.8±4.2, 5328N×8762E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=32.8km s-min=21.7km az=62.0*

ISC 19 01:22:19.6±1.6, **5367N**±006×**8771E**±009, **h1**km±11km, **n21, o0**%**89**/28, **mb3.9**/5, **3C-10D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**			Pg	**Pg**	**01 22 51.6**	**-1.2**
	21nm,0.3s,baz=98,slow=16,SNR=263						
ZALV				Lg		01 23 18.2	
	35nm,0.3s,baz=113,slow=11,SNR=14						
NVS	**Novosibirsk**	**2.87**	**296**	*e*PN	**Pn**	**01 23 10.7**	**+4.2**
NVS				*i*		01 23 48.8	
KURK	**Kurchatov**	**6.32**	**246**	⇑Pn	**Pn**	**01 23 54.5**	**+0.7**
	15nm,0.6s						
KURK				⇓Sn	**Sn**	**01 25 07.8**	**+1.1**
	19nm,0.9s						
KURK				⇓Lg		01 25 39.3	
	65nm,0.8s						
KURBB	**Kurchatov Arra**	**6.42**	**245**	⇓Pn	**Pn**	**01 23 56.3**	**+1.1**
	5.9nm,0.5s						
KURBB				⇓Sn	**Sn**	**01 25 10.1**	**+1.0**
	6.2nm,0.6s						
KURBB				⇓Lg		01 25 38.6	
	11nm,0.7s						
MK31	**Makanchi Array**	**7.71**	**209**	⇓Pn	**Pn**	**01 24 13.5**	**+0.6**
	6.7nm,0.7s,baz=28,slow=13,SNR=88						
MK31				⇓Sn	**Sn**	**01 25 39.5**	**-1.3**
	9.3nm,0.8s						
MK31				⇓Lg		01 26 12.1	
	23nm,0.9s,baz=32,slow=29,SNR=6.6						
MKAR	**Makanchi Array**	**7.71**	**209**	Pn	**Pn**	**01 24 13.5**	**+0.6**
	2.0nm,0.3s,baz=29,slow=13,SNR=71						
MKAR				Sn	**Sn**	**01 25 40.2**	**-0.7**
	0.5nm,0.3s,baz=40,slow=28,SNR=3.5						
MKAR				Lg		01 26 21.9	
	1.0nm,0.3s,baz=28,slow=28,SNR=8.2						
MKAR	**Makanchi Array**	**7.71**	**209**	P	**Pn**	**01 24 13.5**	**+0.6**
MKAR						01 25 40.2	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR				smax			
	comp=N,1.0nm,0.3s						
VOSK	**Vostochnaya**	**10.09**	**271**	⇑Pn	**Pn**	**01 24 45.0**	**-0.4**
	comp=N,5.0nm,0.7s						
VOSK				⇓Sn	**Sn**	**01 26 37.8**	**-1.3**
	comp=N,8.1nm,0.7s						
ZAK	**Zakamensk**	**10.15**	**103**	*e*P	**Pn**	**01 25 00.1**	**+14**
BVA0	**Borovoye Array**	**10.38**	**273**	⇑Pn	**Pn**	**01 24 49.8**	**+0.4**
BVA0				⇓Sn	**Sn**	**01 26 45.2**	**-1.0**
	comp=N,0.9nm,0.7s,baz=78,slow=24,SNR=6.8						
BVAR	**Borovoye Array**	**10.38**	**273**	Pn	**Pn**	**01 24 49.9**	**+0.5**
	comp=N,2.0nm,0.3s,baz=74,slow=14,SNR=29						
BVAR				Sn	**Sn**	**01 26

comp=Z,1.0nm,0.5s
GERES GERESS Array B 44.63 295 P **P** **01 30 34.0 +0.7**
comp=Z,0.3nm,0.6s,mb3.4,baz=39,slow=6.3,SNR=2.9
DAVOX Davos/Dischmat 47.93 295 P **P** **01 30 60.0 +0.8**
comp=Z,2.5nm,0.6s,mb4.5,baz=69,slow=9.5,SNR=6.7
DAVOS Davos 47.94 295 P **P** **01 31 00.0 +0.7**
ESDC Sonseca Array 60.15 297 P **P** **01 32 28.1 -0.4**
comp=Z,1.2nm,0.5s,mb4.2,baz=37,slow=7.0,SNR=11
WRA Warramunga Arr 83.58 137 P **P** **01 34 45.7 -3.5**
comp=Z,0.3nm,0.8s,mb3.6,baz=343,slow=5.4,SNR=4.9

*ISCJB **19** 01:35:22.9±1.0, 589N±007×12593E±010, h78km±11km, mb3.8/7, Error ellipse: s-maj=17.2km s-min=10.0km az=20.4*
*IDC **19** 01:35:23.9±1.5, 597N×12604E, h73km±13km, mb3.6/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=160.1km s-min=15.6km az=69.0*
*NEIC **19** 01:35:23.9±1.2, 596N×12600E, h75km±13km, Error ellipse: s-maj=122.0km s-min=10.8km az=69.0*
*MAN **19** 01:35:27, 647N×12581E, h1km, mb4.7, ML3.6, MS3.6*
ISC 19 01:35:24.0±1.0, 591N±007×12593E±010, h71km±11km, n16, σ0°75/21, mb3.8/7, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.99**	**281**	*e*P		**Pn**		**01 35 41.7**	**-0.7**
GSPH				*i* S		**Sn**		**01 35 55.8**	**-0.4**
DAV	**Davao City (W)**	**1.21**	**343**	P		**Pn**		**01 35 44.9**	**-0.3**
	98nm,0.3s,baz=14,slow=16,SNR=7.9								
DAV				S		**Sn**		**01 36 00.8**	**-0.3**
	242nm,0.3s,baz=99,slow=18,SNR=7.5								
DAV	**Davao City (W)**	**1.21**	**343**	*e*Pn		**Pn**		**01 35 44.9**	**-0.4**
DAV				S		**Sn**		**01 36 00.8**	**-0.3**
KCP	**Kidapawan**	**1.38**	**323**	*e*P		**Pn**		**01 35 47.5**	**+0.1**
KCP				*i* S		**Sn**		**01 36 05.3**	**+0.4**
KCP	**Kidapawan**	**1.38**	**323**	*e*P		**Pn**		**01 35 47.5**	**+0.1**
KCP				*i* S		**Sn**		**01 36 05.3**	**+0.4**
CTBH	**Cotabato--PC H**	**2.12**	**308**	*e*P		**Pn**		**01 35 58.1**	**+0.8**
CTBH				*i* S				01 36 03.5	
BIPH	**Bislig**	**2.31**	**11**	*e*P		**Pn**		**01 36 00.5**	**+0.7**
BIPH				*e*S		**Sn**		**01 36 26.0**	**-1.2**
SCPH	**Surigao**	**3.88**	**354**	*e*P		**Pn**		**01 36 23.2**	**+2.0**
WRAB	**Tennant Creek**	**26.98**	**162**	*e*P		**P**		**01 40 59.3**	**+0.1**
	13nm,1.8s,mb4.2								
WRA	**Warramunga Arr**	**26.98**	**162**	P		**P**		**01 40 58.2**	**-1.0**
	0.4nm,0.3s,mb3.4,baz=342,slow=9.9,SNR=5.4								
ASAR	**Alice Springs**	**30.41**	**165**	P		**P**		**01 41 30.0**	**+0.4**
	0.5nm,0.6s,mb3.4,baz=349,slow=8.3,SNR=6.5								
STKA	**Stephens Creek**	**40.43**	**159**	P		**P**		**01 42 56.0**	**+0.6**
	1.7nm,0.5s,mb4.2,baz=334,slow=7.5,SNR=4.6								
SONM	**Songino Array**	**44.99**	**341**	P		**P**		**01 43 32.1**	**-0.1**
	0.5nm,0.7s,mb3.4,baz=152,slow=6.4,SNR=2.9								
MKAR	**Makanchi Array**	**55.33**	**325**	P		**P**		**01 44 50.6**	**+0.2**
	0.6nm,0.7s,mb3.8,baz=117,slow=8.3,SNR=5.4								
ARCES	**ARCESS Array B**	**88.14**	**340**	P		**P**		**01 48 05.6**	**-1.0**
	4.5nm,0.9s,mb4.5,baz=88,slow=6.4,SNR=3.9								
TORD	**Torodi Ar. Bea**	**121.47**	**289**	PKP		PKPdf		01 54 09.6	-0.7
	0.2nm,0.3s,baz=73,slow=1.7,SNR=9.3								

DHMR 19 02:38:53.1±0.9, 1313N×4139E, h2km±8km, ML3.8, 1C, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAMRY	**Kamaran Island**	**2.49**	**28**	*i* P			Pn	02 39 37.0	+2.3
KAMRY				*i* S			Sn	02 40 10.3	+4.6
UDYN	**Al 'Udayn**	**2.64**	**71**	*e*P			Pn	02 39 39.6	+2.9
UDYN				*i* S			Sn	02 40 16.1	+6.8
UDYN				AML		AML	AML	02 40 32.5	
	comp=N,594nm,0.8s								
TRBA	**At Turbah**	**2.65**	**87**	*i* P			Pn	02 39 39.2	+2.3
TRBA				*i* S			Sn	02 40 15.5	+5.8
	comp=N,356nm,0.6s								
TRBA	**At Turbah**	**2.65**	**87**	*i* P			Pn	02 39 39.2	+2.3
TRBA				*i* S			Sn	02 40 15.5	+5.8
TRBA				AML		AML	AML	02 40 29.9	
	comp=N,711nm,0.6s								
DHBB	**Dhamar BB**	**3.25**	**63**	*i* P			Pn	02 39 48.3	+3.2
DHBB				*i* S			Sn	02 40 31.1	+6.8
LBOS		**3.82**	**78**	*i* P			Pn	02 39 55.5	+2.5
LBOS				*i* S			Sn	02 40 44.2	+5.7
BDHA	**Al Bayda'**	**4.15**	**78**	*i* S			Sn	02 40 52.6	+6.0
KAMR	**Kamenskoye**	**93.37**	**22**	*i* P				02 39 37.0	
KAMR				*i* S				02 40 10.3	

*TEH **19** 02:48:53.2, 3743N×5425E, h7km, ML3.7*
*CSEM **19** 02:48:53.2, 3743N×5425E, h7km, ML3.5, After TEH*
*ISCJB **19** 02:49:36.8±1.0, 3732N±008×5432E±007, h10km, Error ellipse: s-maj=12.8km s-min=4.8km az=150.7*
ISC 19 02:49:37.6±1.6, 3732N±010×5436E±007, h6km±9km, n28, σ0°76/31, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.92**	**208**	*e*Pg			**Pg**	**02 49 55.0**	**-0.3**
IGLO				*e*Sg			**Sg**	**02 50 07.6**	**+0.3**
IGLO				*e*				02 50 14.2	
IKIA	**Kiasar**	**1.24**	**206**	*e*Pg			**Pg**	**02 50 00.5**	**-0.9**
IKIA				*e*Sg			**Sg**	**02 50 18.5**	**+1.0**
IKIA	**Kiasar**	**1.24**	**206**	*e*Pg			**Pg**	**02 50 00.5**	**-0.9**
IKIA				*e*Sg			**Sg**	**02 50 18.5**	**+1.0**
IKIA				*e*				02 50 22.9	
ISHM	**Shahmirzad**	**1.74**	**210**	*e*Pn			**Pn**	**02 50 08.2**	**-0.2**
ISHM				*e*				02 50 36.5	
IALA	**Alasht**	**1.76**	**226**	*e*Sg			**Sg**	**02 50 32.3**	**-1.8**
IALA	**Alasht**	**1.76**	**226**	*e*Sg			**Sg**	**02 50 32.3**	**-1.8**
IALA				*e*				02 50 34.9	
IANJ	**Anjilo**	**1.89**	**191**	*e*Pn			**Pn**	**02 50 11.0**	**+0.6**
IANJ	**Anjilo**	**1.89**	**191**	*e*Pn			**Pn**	**02 50 11.0**	**+0.6**
IANJ				*e*				02 50 45.0	
IPRN	**Peran**	**1.95**	**237**	*e*			**Sg**	**02 50 40.4**	**+0.1**
IFIR	**Firoozkooh**	**2.12**	**218**	*e*Pn			**Pn**	**02 50 13.6**	**0.0**
IFIR	**Firoozkooh**	**2.12**	**218**	*e*Pn			**Pn**	**02 50 13.6**	**0.0**
IFIR				*e*				02 50 47.7	
IDMV	**Damavand**	**2.56**	**228**	*e*Pn			**Pn**	**02 50 19.2**	**-0.5**
IDMV	**Damavand**	**2.56**	**228**	*e*Pn			**Pn**	**02 50 19.2**	**-0.5**
IDMV				*e*				02 51 05.4	
ISHV	**Shirvan**	**2.67**	**84**	*e*Pn			**Pn**	**02 50 21.3**	**+0.1**
ISHV	**Shirvan**	**2.67**	**84**	*e*Pn			**Pn**	**02 50 21.3**	**+0.1**
ISHV				*e*				02 51 41.4	
ISFR	**Sfrayin**	**2.92**	**94**	*e*Pn			**Pn**	**02 50 25.2**	**+0.6**
ISFR	**Sfrayin**	**2.92**	**94**	*e*Pn			**Pn**	**02 50 25.2**	**+0.6**
IVRN	**Varamin**	**3.15**	**223**	*e*Pn			**Pn**	**02 50 27.5**	**-0.3**
IKRD	**Kardeh**	**3.37**	**98**	*e*Pn			**Pg**	**02 50 42.0**	**-0.1**
IMHD	**Mahdasht**	**3.40**	**242**	*e*			**Sg**	**02 51 29.1**	**+2.3**
ISFB	**Sefidab**	**3.43**	**211**	*e*Pn			**Pn**	**02 50 30.9**	**-0.7**
ISFB	**Sefidab**	**3.43**	**211**	*e*Pn			**Pn**	**02 50 30.9**	**-0.7**
ISFB				*e*				02 51 30.1	
IKLH	**Kolahrood**	**4.60**	**210**	*e*Pn			**Pn**	**02 50 47.9**	**+0.2**
IKLH	**Kolahrood**	**4.60**	**210**	*e*Pn			**Pn**	**02 50 47.9**	**+0.2**
ICHK	**Chekchek**	**5.07**	**180**	*e*Pn			**Pn**	**02 50 54.4**	**+0.2**
ICHK	**Chekchek**	**5.07**	**180**	*e*Pn			**Pn**	**02 50 54.4**	**+0.2**
ISAD	**Sadrabad**	**5.42**	**186**	*e*Pn			**Pn**	**02 50 59.1**	**0.0**
ISAD	**Sadrabad**	**5.42**	**186**	*e*Pn			**Pn**	**02 50 59.1**	**0.0**

JMA 19 02:51:35.0±0.3, 4364N×14751E, h12km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.31**	**259**	P			Pn	02 51 59.2	+0.1
NEM2				*e*S			Sb	02 52 16.4	0.0
JRA	**Rausu**	**1.75**	**281**	P			Pn	02 52 05.6	+0.4
JRA				*e*S			Sn	02 52 29.1	+1.6
JNK	**Nakash**	**2.03**	**269**	P			Pn	02 52 09.8	+0.9
JNK				*e*S			Sn	02 52 35.0	+0.8
JAK	**Akkeshi**	**2.15**	**254**	P			Pn	02 52 11.5	+0.8
JTKR	**Abashiri--Toko**	**2.63**	**278**	P			Pn	02 52 18.5	+1.3
JAR	**Ashorobuto**	**2.75**	**264**	P			Pn	02 52 20.5	+1.7
JCH	**Churui**	**3.21**	**253**	P			Pn	02 52 26.8	+1.7
JCH				*e*S			Sn	02 53 04.1	+0.9

*SKHL **19** 02:53:55.1±3.8, 43.12N×148.14E, h40km±1km, mb5.7/2, Ms4.5/1*
*IDC **19** 02:53:56.3±0.6, 4329N×14774E, h0km, mb4.7/28, mb1 4.8/31, mb1mx4.8/35, mbtmp4.7/31, ML4.1/3, MS3.9/14, Ms1 3.9/14, ms1mx3.7/35, Error ellipse: s-maj=16.2km s-min=14.1km az=146.0*
*NIED **19** 02:54:00, 4320N×14760E, h14km, Mw4.7 Best double couple: Mo1.31000×10^16 NP1:φs138.00000°, δ81.00000°, λ22.00000°. NP2:φs44.00000°, δ69.00000°, λ170.00000°.*
*JMA **19** 02:54:00.4±0.3, 4320N×14756E, h20km, M4.6*
*ISCJB **19** 02:54:01.2±0.2, 4332N±004×14767E±002, h42km, mb4.9/138, MS4.1/23, Error ellipse: s-maj=6.1km s-min=1.9km az=172.7*
*BJI **19** 02:54:01.9, 4330N×14748E, h41km, mB5.1, mb4.8, Ms4.4, Msz4.1*
*NEIC **19** 02:54:02.7±0.2, 4323N×14766E, mb5.0/60, Error ellipse: s-maj=6.2km s-min=3.7km az=158.0*
*SZGRF **19** 02:54:04.9, 4373N×14776E, h33km, mb5.1, Kuril Islands, Russia*
*MOS **19** 02:54:05.3±0.9, 4383N×14749E, h54km, mb5.1/76, MS4.0/8, Error ellipse: s-maj=10.2km s-min=4.7km az=112.0*
ISC 19 02:54:03.2±0.2, 4332N±004×14762E±002, h44km, h44km±1.2km: pP-P, n669, σ0°66/676, mb4.9/138, MS4.1/23, 148C-167D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.37**	**272**	P			**Pn**	**02 54 24.2**	**-1.7**
NEM2				*e*S			**Sn**	**02 54 42.1**	**-0.7**
JRA	**Rausu**	**1.92**	**290**	P			**Pn**	**02 54 32.6**	**-0.7**
KUR	**Kuril'sk**	**1.92**	**5**	*e*PN			**Pn**	**02 54 28.0**	**-5.4**
KUR				*e*S			**Sn**	**02 54 52.0**	**-4.3**
KUR				pmax		pmax			
	comp=N,2μm,0.8s								
KUR				pmax		pmax			
	comp=E,2μm,0.8s								
KUR				pmax		pmax			
	comp=Z,4μm,0.8s								
KUR				smax					
	comp=N,2μm,0.7s								
KUR				smax					
	comp=E,3μm,0.7s								
KUR	**Kuril'sk**	**1.92**	**5**	*e*P			**Pn**	**02 54 28.0**	**-5.4**
KUR				AMB		AMB	AMB	02 54 40.0	
	comp=E,2μm,0.8s								
KUR				AMB		AMB	AMB	02 54 40.0	
	comp=E,2μm,0.8s								
KUR				AMB		AMB	AMB	02 54 40.0	
	comp=E,4μm,0.8s								
KUR				*e*S			**Sn**	**02 54 52.0**	**-4.3**
KUR				A				02 54 53.0	
	comp=E,2μm,0.7s								
KUR				A				02 54 53.0	
	comp=E,3μm,0.7s								
JNK	**Nakash**	**2.13**	**278**	P			**Pn**	**02 54 35.0**	**-1.3**
JNK				*e*S			**Sn**	**02 55 01.1**	**-0.4**
JAK	**Akkeshi**	**2.16**	**262**	P			**Pn**	**02 54 35.6**	**-1.1**
JTKR	**Abashiri--Toko**	**2.77**	**285**	P			**Pn**	**02 54 45.2**	**+0.1**
JOB	**Onbets**	**2.80**	**263**	P			**Pn**	**02 54 44.6**	**-0.9**
JAR	**Ashorobuto**	**2.81**	**271**	P			**Pn**	**02 54 44.8**	**-0.8**
JAR				*e*S			**Sn**	**02 55 17.7**	**-0.6**
JMP	**Maruseppu**	**3.17**	**284**	P			**Pn**	**02 54 50.8**	**+0.3**
JCH	**Churui**	**3.21**	**259**	P			**Pn**	**02 54 50.5**	**-0.5**
JCH				*e*S			**Sn**	**02 55 26.7**	**-1.2**
JEM	**Erimo**	**3.54**	**250**	P			**Pn**	**02 54 56.0**	**+0.4**
ERM	**Erimo**	**3.54**	**250**	Pn			**Pn**	**02 54 56.9**	**+1.2**
	comp=E,10μm,0.4s								
ERM	**Erimo**	**3.54**	**250**	*e*Pn			**Pn**	**02 54 56.2**	**+0.5**
ERM				Sn			**Sn**	**02 55 33.1**	**-3.2**
ERM	**Erimo**	**3.54**	**250**	*c i*PN			**Pn**	**02 54 56.0**	**+0.3**
ERM	**Erimo**	**3.54**	**250**	*e*P			**Pn**	**02 54 52.4**	**-3.3**
JKK2	**Kamakawa 2**	**3.58**	**280**	P			**Pn**	**02 54 57.0**	**+0.8**
JFR	**Furan**	**3.68**	**269**	P			**Pn**	**02 54 57.4**	**-0.1**
ASAJ	**Asahikawa**	**3.73**	**284**	Pn			**Pn**	**02 54 59.0**	**+0.8**
	comp=E,20nm,0.3s,baz=122,slow=7.3,SNR=31								
ASAJ				LR		LR	LR	02 56 38.1	
	comp=E,592nm,19.4s,baz=34,slow=42								
JNBK	**Urakawa-nobuka**	**3.73**	**255**	P			**Pn**	**02 54 57.2**	**-1.1**
JNBK				*e*S			**Sn**	**02 55 40.9**	**0.0**
JHR	**Hokuryu**	**4.31**	**278**	P			**Pn**	**02 55 07.7**	**+1.5**
JEW	**Eniwo**	**4.55**	**266**	P			**Pn**	**02 55 09.8**	**+0.4**
JWK2	**Keihoku**	**4.56**	**298**	P			**Pn**	**02 55 11.8**	**+2.1**
YSS	**Yuzh-Sakhalins**	**5.00**	**318**	*e*Pn			**Pn**	**02 55 17.3**	**+1.6**
YSS				Sn			**Sn**	**02 56 09.2**	**-2.9**
YSS	**Yuzh-Sakhalins**	**5.00**	**318**	*e*P			**Pn**	**02 55 17.0**	**+1.3**
YSS				*e*pP				02 55 29.1	
YSS				*i* sP				02 55 36.5	
YSS				*e*LQ				02 56 32.0	
YSS				AMS		AMS	AMS	02 57 16.0	
	comp=E,1μm,18.0s								
YSS				AMS		AMS	AMS	02 57 16.0	
	comp=E,4μm,17.0s								
YSS				AMS		AMS	AMS	02 57 16.0	
	comp=E,2μm,17.0s								
TEY	**Ternei**	**8.10**	**286**	*e*P			**Pn**	**02 56 01.5**	**+3.3**
SKR	**Severo-Kuril's**	**9.37**	**35**	*e*PN			**Pn**	**02 56 10.9**	**-4.6**
SKR				pmax		pmax			
	comp=N,220nm,1.0s								
SKR				pmax		pmax			
	comp=E,220nm,1.0s								
SKR				pmax		pmax			
	comp=Z,270nm,1.0s								
MAJO	**Matsushiro**	**9.90**	**230**	*e*Pn			**Pn**	**02 56 20.5**	**-2.3**
MAT	**Matsushiro**	**9.90**	**230**	P			**Pn**	**02 56 19.9**	**-3.0**
MAT				S			**Sn**	**02 58 05.6**	**-7.0**
MJAR	**Matsushiro Arr**	**9.90**	**230**	Pn			**Pn**	**02 56 20.4**	**-2.5**
	comp=Z,2.4nm,0.3s,baz=30,slow=14,SNR=32								
MJAR				Sn			**Sn**	**02 58 08.8**	**-3.8**
	comp=Z,1.1nm,0.3s,baz=131,slow=24,SNR=3.2								
MJAR				LR		LR	LR	03 00 20.5	
	comp=Z,484nm,21.4s,baz=65,slow=39								
PETK	**Petropavlovsk-**	**11.86**	**31**	Pn			**Pn**	**02 56 45.9**	**-3.7**
	comp=Z,2.1nm,0.3s,baz=200,slow=10.0,SNR=29								
PETK				LR		LR	LR	03 01 52.8	
	comp=Z,319nm,18.4s,baz=27,slow=40								
PET	**Petropavlovsk**	**12.17**	**33**	*e*PN			**Pn**	**02 56 51.5**	**-2.3**
CN2	**Changchun**	**16.08**	**279**	*e*P			**Pn**	**02 57 43.1**	**-2.9**
CN2				*e*XP			sP	02 57 57.0	-7.7
CN2				*e*S			**S**	**03 00 39.9**	**-15**
CN2				AMB		AMB	AMB		
	comp=Z,10.0nm,0.7s								
CN2				AMB		AMB	AMB		
	comp=Z,200nm,3.0s								
CN2				LR		LR	LR		
	comp=N,900nm,13.0s								
CN2				LR		LR	LR		
	comp=E,400nm,13.0s								
CN2				LR		LR	LR		
	comp=Z,600nm,14.0s								
KSRS	**Korea Array**	**16.10**	**255**	Pn			**Pn**	**02 57 44.3**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=62,slow=12,SNR=8.2								
KSRS				LR		LR	LR	03 04 29.3	
	comp=Z,499nm,19.2s,baz=60,slow=39								
CBIJ	**Chichi jima**	**16.78**	**197**	LR			LR	03 02 51.7	
	comp=Z,237nm,20.6s,baz=122,slow=32								
SNY	**Shenyang**	**17.76**	**273**	P			**Pn**	**02 58 07.8**	**+0.7**
SNY				AMB		AMB	AMB		
	comp=Z,32nm,0.6s								
SEY	**Seymchan**	**19.84**	**6**	*e*P			**Pn**	**02 58 28.0**	**-3.9**
HIA	**Hailar**	**20.09**	**297**	*e*P			**P**	**02 58 31.4**	**-1.5**
	comp=Z,10nm,0.6s								
HIA	**Hailar**	**20.09**	**297**	*e*P			**P**	**02 58 32.0**	**-0.9**
YAK	**Yakutsk**	**21.53**	**337**	*e*P			**P**	**02 58 43.6**	**-4.6**
YAK				*e*S			**S**	**03 02 39.3**	**-4.8**
YAK				*e*SS				03 03 02.6	
YAK				*e*				03 10 02.9	
YAK				pmax		pmax			
	comp=Z,56nm,0.8s,mb5.0								
YAK				pmax		pmax			
	comp=N,13nm,1.1s								
YAK				pmax		pmax			
	comp=E,15nm,1.2s								
YAK				smax					
	comp=N,173nm,1.9s								
YAK				smax					
	comp=E,168nm,2.1s								
YAK				MLR		MLR			
	comp=Z,344nm,17.0s,MS3.8								
YAK				MLR		MLR			
	comp=E,313nm,17.0s,MS3.9								
YAK				MLR		MLR			
	comp=N,163nm,15.0s,MS3.9								
JOW	**Kunigami**	**22.75**	**230**	LR		LR	LR	03 08 42.8	
	comp=N,206nm,19.6s,MS3.6,baz=76,slow=39								
BJI	**Beijing**	**23.64**	**273**	P			**P**	**02 59 09.1**	**-1.3**
BJI				S			**S**	**03 03 23.1**	**+1.3**
BJI				AMB		AMB			
	comp=Z,36nm,0.8s,mb4.8								
BJI				AMB		AMB			
	comp=Z,244nm,3.5s								
BJI				LR		LR			
	comp=N,315nm,15.9s,MS4.1								
BJI				LR		LR			
	comp=E,443nm,16.5s,MS4.1								
BJI				LR		LR			
	comp=Z,230nm,18.5s,MS3.7								
BJT	**Baijiatuau**	**23.65**	**273**	*e*P			**P**	**02 59 09.4**	**-1.1**
	comp=Z,31nm,0.7s,mb4.8								
BJT	**Baijiatuau**	**23.65**	**273**	*e*P			**P**	**02 59 09.5**	**-1.0**
BJT				pmax		pmax			
	comp=Z,31nm,0.7s								
TIA	**Tai'an**	**24.40**	**263**	*e*P			**P**	**02 59 18.0**	**+0.6**
TIA				AMB		AMB			
	comp=Z,23nm,1.0s,mb4.6								
NJ2	**Nanjing**	**25.27**	**253**	*e*P			**P**	**02 59 27.4**	**+2.1**
NJ2				AP		pP		02 59 38.6	+1.7
NJ2				XP		sP		02 59 44.8	+2.7
NJ2				PP				03 00 07.6	
NJ2				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb4.3								
NJ2				AMB		AMB			
	comp=Z,220nm,8.0s								
NJ2				LR		LR			
	comp=N,400nm,23.8s,MS4.1								
NJ2				LR		LR			
	comp=E,470nm,19.6s,MS4.1								
NJ2				LR		LR			
	comp=Z,470nm,19.6s,MS4.0								
BOD	**Bodaibo**	**25.48**	**316**	*e*P			**P**	**02 59 23.4**	**-3.5**
BOD				pmax		pmax			
	comp=Z,12nm,0.8s,mb4.5								
HHC	**Hu-ho-hao-te**	**26.75**	**277**	*e*P			**P**	**02 59 39.3**	**+0.7**
HHC				AP		pP		02 59 49.9	-0.3
HHC				XP		sP		02 59 55.9	+0.5
HHC				PP				03 00 25.6	
HHC				PCP		PcP		03 03 02.6	+1.8
HHC				S		**S**		**03 04 10.4**	**-0.8**
HHC				XS		sS		03 04 29.4	-1.3
HHC				SS				03 05 24.1	
HHC				AMB		AMB			
	comp=Z,40nm,1.1s,mb4.9								
HHC				AMB		AMB			
	comp=Z,115nm,5.6s								
HHC				LR		LR			
	comp=N,337nm,17.2s,MS4.2								
HHC				LR		LR			
	comp=E,471nm,15.5s,MS4.2								
HHC				LR		LR			
	comp=Z,309nm,16.7s,MS3.9								
BTO	**Baotou**	**27.94**	**277**	*e*P			**P**	**02 59 48.0**	**-1.3**
SONM	**Songino Array**	**28.95**	**293**	P			**P**	**02 59 58.9**	**+0.6**
	comp=Z,10nm,0.8s,mb4.6,baz=94,slow=8.7,SNR=58								
SONM				LR		LR		03 11 50.3	
	comp=Z,274nm,18.0s,MS3.9,baz=65,slow=37								
SONM	**Songino Array**	**28.95**	**293**	P			**P**	**02 59 58.9**	**+0.7**
SONM				pmax		pmax			
	comp=Z,10.0nm,0.8s								
SONM				MLR		MLR			
	comp=Z,274nm,18.0s								
GUMO	**Guam**	**29.72**	**185**	LR		LR	LR	03 08 49.1	
	comp=Z,182nm,20.7s,MS3.7,baz=0.5,slow=30								
TIXI	**Tiksi**	**29.85**	**348**	*e*P			**P**	**03 00 01.7**	**-4.2**
	comp=Z,9.0nm,0.7s,mb4.6								
TIXI	**Tiksi**	**29.85**	**348**	*e*P			**P**	**03 00 01.3**	**-4.6**
TIXI				pmax		pmax			
	comp=Z,8.0nm,0.7s,mb4.6								
ZAK	**Zakamensk**	**30.76**	**299**	*e*P			**P**	**03 00 14.7**	**+0.6**
ZAK				*e*				03 03 11.1	
ZAK				pmax		pmax			
	comp=Z,5.0nm,1.0s,mb4.3								
XAN	**Xi'an**	**31.36**	**266**	P			**P**	**03 00 19.1**	**-0.6**
XAN				AP		pP		03 00 30.6	-0.8
XAN				S		**S**		**03 05 24.8**	**+0.9**
XAN				AMB		AMB			
	comp=Z,8.0nm,0.9s,mb4.5								
XAN				LR		LR			
	comp=N,94nm,27.5s,MS3.5								
XAN				LR		LR			
	comp=E,114nm,28.8s,MS3.5								
XAN				LR		LR			
	comp=Z,158nm,25.0s,MS3.6								
LZH	**Lanzhou**	**34.13**	**273**	*e*P			**P**	**03 00 44.5**	**+0.7**
LZH				AP		pP		03 00 55.0	-0.6
LZH				XP		sP		03 01 02.0	+1.2
LZH				PP		PP		03 01 58.0	-3.6
LZH				AMB		AMB			
	comp=Z,45nm,1.0s,mb5.3								
LZH				AMB		AMB			
	comp=Z,250nm,4.8s								
LZH				LR		LR			
	comp=N,356nm,14.7s								
LZH				LR		LR			
	comp=Z,472nm,16.4s,MS4.3								
GTA	**Gaotai**	**35.71**	**280**	P			**P**	**03 00 58.3**	**+0.9**
GTA				AP		pP		03 01 09.8	+0.6
GTA				XP		sP		03 01 14.4	0.0
GTA				PP		PP		03 02 19.3	+0.4
GTA				S		**S**		**03 06 30.6**	**-0.4**
GTA				XS		sS		03 06 50.1	-0.6
GTA				AMB		AMB			
	comp=Z,13nm,0.9s,mb4.9								
GTA				AMB		AMB			
	comp=Z,134nm,4.5s								
GTA				LR		LR			
	comp=N,169nm,16.2s,MS4.3								
GTA				LR		LR			
	comp=E,346nm,13.8s,MS4.3								
GTA				LR		LR			
	comp=Z,280nm,16.8s,MS4.1								
CD2	**Chengdu**	**36.71**	**265**	*e*P			**P**	**03 01 05.8**	**-0.2**
CD2				AP		pP		03 01

KMI PP PP 03 03 17.5 +3.0
KMI S **S** **03 07 47.0 -0.7**
KMI XS sS 03 08 07.8 +0.2
KMI SS SS 03 10 41.9 -7.6
KMI AMB AMB
comp=Z,13nm,1.4s,mb4.4
KMI AMB AMB
comp=Z,147nm,5.6s
KMI LR LR
comp=N,297nm,23.0s,MS4.2
KMI LR LR
comp=E,265nm,20.9s,MS4.2
KMI LR LR
comp=Z,241nm,17.4s,MS4.1
MCK McKinley 40.76 38 *e*P **P 03 01 39.3 -0.3**
comp=Z,17nm,0.8s,mb4.7
MCK McKinley 40.76 38 *e*P **P 03 01 39.3 -0.3**
MCK pmax pmax
comp=Z,17nm,0.8s,mb4.7
COLA College 41.22 36 *e*P **P 03 01 43.7 +0.4**
comp=Z,21nm,0.8s,mb4.8
COLA College 41.22 36 *e*P **P 03 01 42.9 -0.4**
ZAA0 Zalesovo Array 41.53 308 *e*P **P 03 01 45.8 -0.2**
ZALV Zalesovo Beam 41.53 308 P **P 03 01 45.4 -0.6**
comp=Z,4.7nm,0.6s,mb4.3,baz=74,slow=6.5,SNR=15
ZALV Zalesovo Beam 41.53 308 P **P 03 01 45.4 -0.6**
ZALV Zalesovo Beam 41.53 308 P **P 03 01 45.4 -0.6**
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
NVS Novosibirsk 42.25 309 *i*P **P 03 01 49.9 -2.0**
WMQ Urumqi 42.57 292 P **P 03 01 55.5 +0.9**
WMQ AP pP 03 02 07.5 +0.9
WMQ XP sP 03 02 13.5 +1.7
WMQ PP PP 03 03 37.5 +3.8
WMQ S **S** **03 08 15.5 +1.4**
WMQ SS SS 03 11 21.5 -3.2
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,68nm,4.0s
WMQ LR LR
comp=N,798nm,18.0s,MS4.7
WMQ LR LR
comp=E,325nm,16.0s,MS4.7
WMQ LR LR
comp=Z,235nm,16.0s,MS4.2
EGAK Eagle 44.08 36 *e*P **P 03 02 05.8 -0.7**
comp=Z,18nm,0.8s,mb4.9
EGAK pP pP 03 02 19.6 +1.1
DAWY Dawson 44.94 37 *e*P **P 03 02 13.5 +0.2**
MK31 Makanchi Array 45.09 298 *e*P **P 03 02 15.7 +0.9**
MK31 Makanchi Array 45.09 298 *i*P **P 03 02 15.3 +0.5**
MK31 pmax pmax
comp=Z,15nm,0.6s,mb5.0
MKAR Makanchi Array 45.09 298 P **P 03 02 15.6 +0.8**
comp=Z,7.2nm,0.6s,mb4.7,baz=80,slow=10,SNR=84
MKAR LR LR 03 23 49.5
comp=Z,157nm,18.2s,MS4.0,baz=109,slow=40
MKAR Makanchi Array 45.09 298 P **P 03 02 15.6 +0.8**
MKAR LR LR 03 23 49.5
MKAR Makanchi Array 45.09 298 P **P 03 02 15.6 +0.8**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR MLR MLR
comp=Z,157nm,18.2s
KURK Kurchatov 46.05 304 P **P 03 02 22.9 +0.5**
comp=Z,114nm,0.9s,mb5.8,SNR=10
KURK Kurchatov 46.05 304 *e*P **P 03 02 22.4 0.0**
comp=Z,14nm,0.8s,mb4.9
KURK Kurchatov 46.05 304 *e*P **P 03 02 22.4 0.0**
KURK pmax pmax
comp=Z,14nm,0.8s,mb4.9
LSA Lhasa 46.55 272 *e*P **P 03 02 28.1 +1.6**
comp=Z,12nm,0.8s,mb4.9
LSA Lhasa 46.55 272 *e*P **P 03 02 28.1 +1.6**
LSA pmax pmax
comp=Z,12nm,0.8s,mb4.9
INK Inuvik 46.60 30 *e*P **P 03 02 26.6 +0.2**
comp=Z,1μm,1.3s
CHTO Chiang Mai 47.50 255 *e*P **P 03 02 35.0 +1.0**
comp=Z,13nm,1.1s,mb4.8
CHTO Chiang Mai 47.50 255 *e*P **P 03 02 35.0 +1.0**
CHTO pmax pmax
comp=Z,13nm,1.1s,mb4.8
CMAR Chiang Mai Arr 47.74 254 P **P 03 02 36.1 +0.2**
comp=Z,1.5nm,0.3s,mb4.5,baz=46,slow=7.5,SNR=5.1
CMAR Chiang Mai Arr 47.74 254 *i*P **P 03 02 34.0 -1.9**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
SHL Shillong 48.35 267 *e*P **P 03 02 41.0 +0.4**
VOSK Vostochnaya 49.82 309 P **P 03 02 51.3 -0.1**
VOSK pmax pmax
comp=Z,16nm,0.9s,mb5.0
BVAR Borovoye Array 50.04 310 P **P 03 02 52.8 -0.3**
comp=Z,1.7nm,0.3s,mb4.5,baz=70,slow=8.5,SNR=18
BVAR Borovoye Array 50.04 310 P **P 03 02 52.8 -0.3**
BVAR Borovoye Array 50.04 310 P **P 03 02 52.8 -0.3**
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BRVK Borovoye 50.09 310 P **P 03 02 53.7 +0.2**
comp=Z,63nm,0.9s,mb5.6,SNR=6.4
BRVK Borovoye 50.09 310 *e*P **P 03 02 53.8 +0.3**
comp=Z,18nm,1.3s,mb5.0
BRVK Borovoye 50.09 310 *e*P **P 03 02 53.8 +0.3**
BRVK pmax pmax
comp=Z,18nm,1.3s,mb4.9
TKM2 Tokmak 2 51.00 296 *e*P **P 03 03 01.9 +1.4**
comp=Z,19nm,0.8s,mb5.1
TKM2 Tokmak 2 51.00 296 *e*P **P 03 03 01.9 +1.4**
TKM2 pmax pmax
comp=Z,19nm,0.8s,mb5.1
TKM2 Tokmak 2 51.00 296 P **P 03 03 02.0 +1.5**
SNR=5.7
JIRN Jiri 51.30 273 *e*P **P 03 03 04.1 +1.2**
GUN Gumba 51.38 274 *e*P **P 03 03 04.4 +0.8**
comp=Z,21nm,0.5s,mb5.4
USP Ospenovka 51.56 297 P **P 03 03 05.7 +1.0**
SNR=8.6
KZA Kyzart 51.61 295 P **P 03 03 06.8 +1.7**
SNR=8.6
AAK Ala-Archa 51.85 296 P **P 03 03 07.6 +0.7**
SNR=6.8
KKN Kakani 51.89 274 *e*P **P 03 03 08.2 +0.9**
PKI Pulchoki 51.92 274 *e*P **P 03 03 08.0 +0.4**
PKI Pulchoki 51.92 274 *e*P **P 03 03 08.1 +0.5**
PKIN Phulchoki 51.92 274 *e*P **P 03 03 08.1 +0.5**
DMN Daman 52.12 274 *e*P **P 03 03 10.1 +1.0**
GKN Gorkha 52.23 275 *e*P **P 03 03 10.9 +1.0**
comp=Z,9.7nm,0.5s,mb5.0
EKS2 Erkin-Say 52.31 296 *e*P **P 03 03 11.1 +0.8**
comp=Z,11nm,0.7s,mb4.9
EKS2 pP pP 03 03 24.8 +2.2
EKS2 Erkin-Say 52.31 296 P **P 03 03 11.3 +1.0**
SNR=6.7
AML Almayashu 52.61 296 P **P 03 03 14.3 +1.7**
SNR=5.9
DANN Dangsing 52.68 276 *e*P **P 03 03 14.4 +1.2**
comp=Z,34nm,0.7s,mb5.4
KOLN Koldanda 53.12 275 *e*P **P 03 03 17.0 +0.5**
comp=Z,12nm,0.7s,mb4.9
PYUN Piuthan 53.38 276 *e*P **P 03 03 18.7 +0.3**
ALE Alert 53.51 5 P **P 03 03 17.6 -1.0**
comp=Z,102nm,1.2s,mb5.6,SNR=6.7
SVE Sverdlovsk 53.69 317 *e*P **P 03 03 19.8 -0.4**
SVE *e*S **S** **03 10 48.2 -2.5**
SVE pmax pmax
comp=Z,27nm,0.9s,mb5.2
KK31 Karatay Array 54.22 298 *i*P **P 03 03 24.3 0.0**
KK31 pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
ARU Arti 54.89 317 P **P 03 03 28.3 -0.7**
comp=Z,98nm,0.6s,mb6.0,SNR=5.9
ARU Arti 54.89 317 *e*P **P 03 03 28.4 -0.5**
comp=Z,40nm,1.3s,mb5.3
ARU Arti 54.89 317 *c*/P **P 03 03 28.0 -1.0**
ARU *e* 03 05 28.6
ARU *e*S **S** **03 11 07.6 +0.6**
ARU *e*SS SS 03 14 43.1 -7.0
ARU pmax pmax
comp=Z,40nm,1.7s,mb5.2
SPITS Spitsbergen Ar 55.27 349 P **P 03 03 29.6 -1.8**
comp=Z,17nm,1.0s,mb5.0,baz=33,slow=7.9,SNR=17
SPITS Spitsbergen Ar 55.27 349 P **P 03 03 29.6 -1.8**
SPITS pmax pmax
comp=Z,17nm,1.0s
YKA Yellowknife Ar 55.97 34 P **P 03 03 36.1 -0.5**
comp=Z,5.9nm,0.7s,mb4.7,baz=301,slow=7.3,SNR=7.5
YKA Yellowknife Ar 55.97 34 *i*P **P 03 03 36.0 -0.6**
YKA pmax pmax
comp=Z,6.0nm,0.7s
AB31 Akbulak array 57.60 309 P **P 03 03 48.3 -0.1**
AB31 pmax pmax
comp=Z,15nm,0.6s,mb5.2
AKTK Aktyubinsk 58.08 311 P **P 03 03 51.5 -0.1**
AKTO Aktyubinsk 58.08 311 P **P 03 03 51.5 -0.1**
comp=Z,3.1nm,0.4s,mb4.7,baz=68,slow=7.3,SNR=15
AKTO Aktyubinsk 58.08 311 P **P 03 03 51.6 -0.1**
AKTO pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KEV Kevo 59.23 340 *e*p **P 03 03 58.8 -0.7**
comp=Z,11nm,0.7s,mb5.0
KEV Kevo 59.23 340 *e*P **P 03 03 58.8 -0.7**
KEV pmax pmax
comp=Z,11nm,0.7s,mb5.0
B05A Bryant 59.59 51 ⇓P **P 03 04 01.5 -0.8**
baz=59
ARCES ARCESS Array B 59.77 340 P **P 03 04 01.9 -1.3**
comp=Z,8.9nm,0.8s,mb4.8,baz=41,slow=6.4,SNR=10.0
ARCES LR LR 03 33 58.5
comp=Z,141nm,19.5s,MS4.1,baz=280,slow=40
ARCES ARCESS Array B 59.77 340 P **P 03 04 01.9 -1.2**
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARCES MLR MLR
comp=Z,141nm,19.5s
DAG Danmarks Havn 59.87 356⇑ *i*P **P 03 04 02.2 -1.6**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
DAG Danmarks Havn 59.87 356⇑ *i*P **P 03 04 02.2 -1.6**
comp=Z,10nm,0.8s,mb4.9
A07A Ashnola River, 60.12 49 ⇑P **P 03 04 05.5 -0.4**
baz=60
B07A Winthrop 60.59 50 ⇓P **P 03 04 08.7 -0.4**
baz=60
F04A Amboy 60.66 53 ⇓P **P 03 04 09.2 -0.4**
baz=60
E05A Randle 60.70 52 ⇑P **P 03 04 09.3 -0.5**
baz=60
KTK1 Kautokeino 60.71 340 *e*P **P 03 04 02.6 -7.0**
A08A Turner Farm, O 60.79 49 ⇓P **P 03 04 10.2 -0.2**
baz=61
ETW Entiat 60.94 51 *e*P **P 03 04 11.7 +0.2**
ETW pP pP 03 04 23.9 -0.1
KLMR Klimovskoe 60.98 328 *e*P **P 03 04 09.8 -1.7**
KLMR pmax pmax
comp=Z,37nm,1.0s,mb5.5
C07A Waterville 61.05 50 ⇓P **P 03 04 11.7 -0.5**
baz=61
B08A Colville Reser 61.09 50 ⇓P **P 03 04 12.1 -0.4**
baz=61
A09A Danville 61.16 49 ⇓P **P 03 04 12.6 -0.3**
baz=61,SNR=5.0
TRO Tromso 61.27 342 *e*P **P 03 04 12.4 -1.0**
H04A Detroit Lake 61.49 54 ⇑P **P 03 04 14.8 -0.4**
baz=61
C08A Higginbotham F 61.56 50 ⇓P **P 03 04 15.1 -0.6**
baz=61
B09A Rice 61.70 49 ⇑P **P 03 04 16.3 -0.4**
baz=62
F06A Goldendale 61.71 53 ⇓P **P 03 04 17.0 +0.3**
baz=62
A10A Northport 61.71 48 ⇑P **P 03 04 16.4 -0.2**
baz=62
E07A Sunnyside 61.80 51 ⇑P **P 03 04 16.8 -0.5**
baz=62
OD2 Odessa Site #2 61.97 50 *e*P **P 03 04 18.2 -0.2**
C09A Chrisman Ranch 61.99 50 ⇓P **P 03 04 17.9 -0.6**
baz=62
D08A Wollman Farm, 62.04 51 ⇑P **P 03 04 18.3 -0.6**
baz=62
G06A Carlson Farm, 62.09 53 ⇓P **P 03 04 19.1 -0.2**
baz=62
A11A Hall Mountain, 62.37 48 ⇓P **P 03 04 21.0 -0.1**
baz=62
D09A Jones Farm, Ri 62.39 50 ⇓P **P 03 04 20.7 -0.5**
baz=62
H06A Lindquist Farm 62.55 53 ⇑P **P 03 04 22.3 -0.1**
baz=62
JOF Joensuu 62.63 332 *e*p **P 03 04 21.4 -1.2**
comp=Z,19nm,0.7s,mb5.3
JOF Joensuu 62.63 332 *e*P **P 03 04 21.4 -1.2**
JOF pmax pmax
comp=Z,19nm,0.7s,mb5.3
E09A Wood Farm, Sta 62.79 51 ⇑P **P 03 04 23.9 0.0**
baz=63
F08A Pendleton 62.84 52 ⇓P **P 03 04 24.5 +0.2**
baz=63
D10A Wagner Farm, O 62.97 50 ⇓P **P 03 04 24.7 -0.4**
baz=63
I06A Prineville 63.08 54 ⇓P **P 03 04 26.1 +0.2**
baz=63
K05A Summer Lake 63.37 55 ⇓P **P 03 04 28.2 +0.3**
baz=63
E10A Myers Farm, Un 63.39 50 ⇑P **P 03 04 27.8 -0.1**
baz=63
I07A Izee 63.41 54 ⇓P **P 03 04 27.4 -0.7**
baz=63
A13A Flathead Natio 63.43 47 ⇑P **P 03 04 27.7 -0.5**
baz=63
D11A Klaveano Farm, 63.50 49 ⇑P **P 03 04 28.0 -0.6**
baz=63
J06A Christmas Vall 63.51 55 ⇓P **P 03 04 28.2 -0.6**
baz=63
C12B Naegeli Ranch, 63.58 48 ⇑P **P 03 04 28.8 -0.4**
baz=63
H08A Prairie City 63.65 53 ⇓P **P 03 04 29.7 +0.1**
baz=64
G09A Cove 63.72 52 ⇑P **P 03 04 29.9 -0.2**
baz=64
B13A Whitefish 63.73 47 ⇑P **P 03 04 30.4 +0.3**
baz=64
A14A Double T Ranch 63.94 46 ⇓P **P 03 04 31.4 -0.1**
baz=64
E11A Bogner Ranch, 63.97 50 ⇓P **P 03 04 31.1 -0.6**
baz=64
D12A Red Ives Fores 64.04 49 ⇑P **P 03 04 31.7 -0.5**
baz=64
I08A Drewsey 64.06 53 ⇑P **P 03 04 32.5 +0.1**
baz=64
G10A Bishop Farm, J 64.08 51 ⇑P **P 03 04 32.7 +0.2**
baz=64
C13A Hot Springs 64.09 48 ⇓P **P 03 04 32.4 -0.1**
baz=64
WRAB Tennant Creek 64.11 194 *e*P **P 03 04 31.6 -1.2**
comp=Z,6.9nm,0.8s,mb4.7
WRAB Tennant Creek 64.11 194 *e*P **P 03 04 31.7 -1.1**
WRAB pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
WRA Warramunga Arr 64.12 194 P **P 03 04 31.6 -1.3**
comp=Z,4.0nm,0.8s,mb4.5,baz=14,slow=6.9,SNR=30
WRA Warramunga Arr 64.12 194 P **P 03 04 31.6 -1.3**
WRA pmax pmax
comp=Z,4.0nm,0.8s
MOD Modoc 64.21 56 ⇓P **P 03 04 33.5 +0.2**
baz=64
F11A Grangeville 64.28 50 ⇑P **P 03 04 33.3 -0.5**
baz=64,SNR=6.2
A15A Johnson Ranch, 64.30 46 ⇑P **P 03 04 33.1 -0.7**
baz=64
SUMG Summit 64.33 2 *e*P **P 03 04 34.3 +0.6**
comp=Z,33nm,1.1s,mb5.3
K07A Rock Creek Ran 64.38 55 ⇑P **P 03 04 34.0 -0.4**
baz=64
B14A Marquette Ranc 64.38 47 ⇑P **P 03 04 34.1 -0.3**
baz=64,SNR=5.8
J08A Circle Bar Ran 64.44 54 ⇑P **P 03 04 35.2 +0.3**
baz=64
C14A Swan Lake 64.48 48 ⇓P **P 03 04 35.0 -0.1**
baz=64
D13A Huson 64.50 49 ⇓P **P 03 04 35.2 0.0**
baz=64
G11A Walters Elk Ra 64.51 51 ⇓P **P 03 04 34.8 -0.5**
baz=64,SNR=6.2
H10A Noah's Angus R 64.72 52 ⇑P **P 03 04 36.4 -0.3**
baz=64
L07A Adell 64.72 55 ⇑P **P 03 04 36.9 +0.2**
baz=64
B15A Bradely Ranch, 64.79 47 ⇓P **P 03 04 36.8 -0.2**
baz=65
KAF Kangasniemi 64.85 334 *e*p **P 03 04 36.0 -1.2**
comp=Z,15nm,0.7s,mb5.1,baz=42,slow=6.2
KAF Kangasniemi 64.85 334 *e*P **P 03 04 36.0 -1.2**
KAF pmax pmax
comp=Z,15nm,0.7s,mb5.1
ORV Oroville 64.85 59 ⇓P **P 03 04 37.4 -0.2**
baz=65
J09A Fry Pan Ranch, 64.87 53 ⇑P **P 03 04 37.8 +0.1**
baz=65
A16A West Butte Ran 64.91 46 ⇓P **P 03 04 37.6 -0.2**
baz=65
O05C Quincy 64.97 58 ⇓P **P 03 04 38.4 0.0**
baz=65
MOS Moscow 65.00 324 *e*P **P 03 04 36.6 -1.7**
MOS *e* pP 03 04 47.4 -3.5
MOS pmax pmax
comp=Z,99nm,1.6s,mb5.6
D14A Greenough 65.03 48 ⇑P **P 03 04 38.0 -0.6**
baz=65,SNR=6.2
E13A Victor 65.04 49 ⇓P **P 03 04 38.1 -0.6**
baz=65
MOR8 Moi Rana 65.05 341 *e*P **P 03 04 36.0 -2.4**
comp=Z,57nm,0.9s,mb5.6
MOR8 Moi Rana 65.05 341 *e*P **P 03 04 36.0 -2.4**
MOR8 AMb AMB 03 04 38.2
comp=Z,57nm,0.9s,mb5.6
H11A Donnelly 65.07 51 ⇓P **P 03 04 38.5 -0.4**
baz=65
C15A Salmond Ranch, 65.09 47 ⇓P **P 03 04 39.1 +0.1**
baz=65,SNR=8.8
N06A Buffalo Meadow 65.17 57 ⇓P **P 03 04 39.7 0.0**
baz=65
B16A M & M Farms, S 65.18 46 ⇑P **P 03 04 39.0 -0.6**
baz=65,SNR=7.0
M07A Soldier Meadow 65.19 56 ⇓P **P 03 04 40.2 +0.4**
baz=65,SNR=6.9
L08A Fields 65.21 55 ⇓P **P 03 04 39.8 -0.1**
baz=65
K09A Rome 65.27 54 ⇑P **P 03 04 40.3 -0.1**
baz=65
F13A Darby 65.36 50 ⇓P **P 03 04 40.4 -0.4**
baz=65
BEKR Beckwourth 65.38 58 ⇓P **P 03 04 40.7 -0.3**
baz=65,SNR=6.9
E14A Clinton 65.44 49 ⇓P **P 03 04 40.9 -0.4**
baz=65
O06A Flanigan 65.52 57 ⇑P **P 03 04 41.6 -0.3**
baz=65
C16A Fuhringer Ranc 65.54 47 ⇓P **P 03 04 41.6 -0.3**
baz=65,SNR=12
M08A Happy Creek Ra 65.64 55 ⇓P **P 03 04 42.7 +0.1**
baz=65
N07B Gerlach 65.68 56 ⇓P **P 03 04 43.3 +0.3**
baz=66
P06A Stead Airport, 65.77 58 ⇓P **P 03 04 43.6 0.0**
baz=66
LAVA Lava Cap Winer 65.80 59 ⇑P **P 03 04 43.8 0.0**
baz=66
H12A Diamond D Ranc 65.82 51 ⇓P **P 03 04 43.9 +0.1**
baz=66
G13A Cobalt 65.84 50 ⇓P **P 03 04 43.1 -0.8**
baz=66,SNR=5.7
OBN Obninsk 65.86 324⇑ *i*P **P 03 04 43.3 -0.6**
OBN pmax pmax
comp=Z,67nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
F14A Wisdom 65.88 49 ⇑P **P 03 04 43.9 -0.3**
baz=66
E15A Deer Lodge 65.90 48 ⇓P **P 03 04 43.9 -0.4**
baz=66
MFID Camas Ranch 65.95 52 ⇓P **P 03 04 44.5 -0.2**
baz=66
WCN Washoe City 66.09 58 ⇑P **P 03 04 45.9 +0.3**
baz=66
O07A Toulon 66.11 57 ⇑P **P 03 04 45.9 +0.1**
baz=66
D16A Dana Ranch, Ca 66.12 47 ⇑P **P 03 04 45.9 +0.3**
baz=66
H13A Challis 66.15 51 ⇓P **P 03 04 45.3 -0.6**
baz=66,SNR=5.6
C17A Wharram Farm, 66.16 46 ⇑P **P 03 04 45.2 -0.7**
baz=66,SNR=7.0
HRY Holter Researc 66.16 48 *e*P **P 03 04 46.3 +0.3**
N08A GE Springer Mi 66.19 56 ⇓P **P 03 04 45.9 -0.3**
baz=66
K11A Parker Ranch, 66.22 53 ⇓P **P 03 04 46.3 -0.2**
baz=66
F15A Butte 66.34 49 ⇑P **P 03 04 46.8 -0.4**
baz=66,SNR=5.8
L10A Juniper Basin 66.39 54 ⇓P **P 03 04 47.2 -0.3**
baz=66
EGMT Eagleton 66.44 46 *e*P **P 03 04 47.7 0.0**
comp=Z,12nm,0.9s,mb4.9
EGMT Eagleton 66.44 46 ⇑P **P 03 04 47.3 -0.4**
baz=66
CMB Columbia Colle 66.46 59 ⇓P **P 03 04 47.7 -0.3**
baz=66,SNR=5.3
O08A Rochester Mine 66.47 56 ⇑P **P 03 04 48.0 -0.1**
baz=66
J12A Stokes Ranch, 66.47 52 ⇓P **P 03 04 47.5 -0.5**
baz=66
D17A Six Diamond Ra 66.50 47 ⇑P **P 03 04 47.6 -0.5**
baz=66
I13A Wildhorse Cree 66.63 51 ⇑P **P 03 04 49.0 0.0**
baz=66
HLID Hailey 66.67 52 ⇓P **P 03 04 49.4 +0.1**
baz=66
M10A I.L. Ranch, Tu 66.69 54 ⇓P **P 03 04 49.2 -0.2**
baz=66
R06C Coleville 66.75 58 ⇓P **P 03 04 50.1 +0.3**
baz=67,SNR=5.1
L11A Cat Creek Ranc 66.76 53 ⇓P **P 03 04 50.0 +0.1**
baz=67,SNR=5.1
G15A Dillon 66.77 49 ⇑P **P 03 04 49.8 -0.1**
baz=67,SNR=5.4
E17A Martinsdale 66.84 47 ⇑P **P 03 04 50.4 +0.1**
baz=67,SNR=5.0
F16A Kennard Place, 66.85 48 ⇑P **P 03 04 50.3 -0.1**
baz=67
S05C Merced 66.91 60 ⇓P **P 03 04 50.9 0.0**
baz=67
J13A Cove Ranch, Pi 66.91 52 ⇓P **P 03 04 50.7 -0.2**
baz=67
D18A Linhart Farms, 66.94 46 ⇑P **P 03 04 50.8 -0.1**
baz=67
K12A Draper Farm, C 66.97 53 ⇑P **P 03 04 50.7 -0.4**
baz=67
I14A Mackay 67.00 51 ⇓P **P 03 04 51.4 +0.1**
baz=67,SNR=6.7
NSS Namsos 67.00 341 *e*P **P 03 04 49.1 -1.9**
G16A Moss Hill, Enn 67.10 49 ⇓P **P 03 04 51.6 -0.4**
baz=67,SNR=6.2
O09A Fish Creek Ran 67.13 56 ⇓P **P 03 04 52.3 +0.1**
baz=67
L12A House Creek Ra 67.20 53 ⇑P **P 03 04 53.0 +0.3**
baz=67
VSR Storozhevoye 67.28 320 *e*P **P 03 04 52.8 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
E18A Harlowton 67.28 47 ⇑P **P 03 04 53.4 +0.3**
baz=67
F17A Fitzpatrick Pl 67.30 48 ⇓P **P 03 04 53.2 0.0**
baz=67
J14A Carey 67.33 51 ⇓P **P 03 04 54.1 +0.6**
baz=67,SNR=6.0
VSU Vasula 67.38 331 *e*P **P 03 04 52.4 -1.1**
VORD Divnogorie 67.39 319 *e*P **P 03 04 53.4 -0.3**
VORD pmax pmax
comp=Z,20nm,0.9s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,5.0nm,0.4s
K13A Stover Farm, H 67.43 52 ⇑P **P 03 04 54.7 +0.6**
baz=67
Q08A Gabbs 67.48 57 ⇑P **P 03 04 54.6 +0.1**
baz=67,SNR=8.5
T06C Millerton Lake 67.51 60 ⇑P **P 03 04 54.9 +0.2**
baz=67
NVAR Mina Array Bea 67.52 58 P **P 03 04 54.9 +0.1**
comp=E,5.7nm,0.7s,mb4.7,baz=286,slow=6.6,SNR=43
KCC Kaiser Creek 67.56 59 ⇓P **P 03 04 55.2 +0.2**
baz=67
G17A Pierce Place, 67.63 48 ⇑P **P 03 04 55.4 +0.1**
baz=67
PKD Parkfield 67.63 61 ⇑P **P 03 04 55.3 -0.2**
baz=68
M12A Wells 67.71 54 ⇓P **P 03 04 56.5 +0.6**

baz=68
F18A Big Timber 67.81 47 ⇓P P 03 04 56.9 +0.5
baz=68
ASAR Alice Springs 67.84 194 P P 03 04 56.0 -0.8
comp=E,1.7nm,0.7s,mb4.2,baz=7.1,slow=5.1,SNR=21
L13A Double Diamond 67.86 53 ⇓P P 03 04 57.4 +0.6
baz=68
J15A Blackfoot 67.90 51 ⇓P P 03 04 57.4 +0.3
baz=68
N12A Clover Valley, 67.99 54 ⇓P P 03 04 57.9 +0.2
baz=68
K14A Jones Ranch, D 68.02 52 ⇓P P 03 04 58.0 +0.2
baz=68
O11A Cowboy Ranch, 68.07 55 ⇑P P 03 04 58.5 +0.3
baz=68
M13A Montello 68.19 53 ⇓P P 03 04 59.2 +0.3
baz=68
MAK Makhachkala 68.28 309 *e*P P 03 04 50.6 -8.8
MAK pmax pmax
comp=Z,204nm,1.6s,mb5.9
K15A Arbon 68.30 51 ⇓P P 03 05 00.2 +0.6
baz=68
L14A Malta 68.30 52 ⇓P P 03 04 59.9 +0.3
baz=68
Q10A Clear Creek Ra 68.44 57 ⇓P P 03 05 00.4 -0.1
baz=68,SNR=5.4
J16A Bone 68.45 50 ⇑P P 03 05 00.9 +0.5
baz=68
O12A Currie 68.53 55 ⇓P P 03 05 01.0 -0.1
baz=68,SNR=5.9
RRI2 Red Ridge 68.56 50 *e*P P 03 05 02.3 +1.1
comp=Z,10nm,0.8s,mb4.8
M14A Sheep Mountain 68.58 53 ⇑P P 03 05 01.4 +0.1
baz=68
S09A Goldfield 68.62 58 ⇓P P 03 05 01.5 -0.1
baz=68,SNR=6.4
K16A Soda Springs 68.74 51 ⇑P P 03 05 02.7 +0.3
baz=68
R10A Warm Springs 68.84 57 ⇓P P 03 05 03.0 +0.1
baz=69
Q11A Duckwater 68.88 56 ⇓P P 03 05 03.1 -0.2
baz=69
S10A Tonopah Range, 68.89 58 ⇓P P 03 05 03.1 -0.2
baz=69,SNR=8.2
DGMT Dagmar 68.98 43 ⇓P P 03 05 03.2 -0.5
baz=69
GRAC Grapevine Rang 68.98 59 ⇑P P 03 05 03.9 0.0
baz=69,SNR=6.8
N14A Grayback Hills 69.08 53 ⇓P P 03 05 04.4 0.0
baz=69
M15A Larsen Ranch, 69.12 52 ⇑P P 03 05 04.7 0.0
baz=69,SNR=7.0
SFJD Kangerlussuaq 69.13 8 P P 03 05 03.7 -0.6
comp=Z,18nm,0.9s,mb5.0,baz=14,slow=8.3,SNR=3.5
SFJD Kangerlussuaq 69.13 8 P P 03 05 03.7 -0.6
SFJD pmax pmax
comp=Z,18nm,0.9s,mb5.0
R11A Troy Canyon, C 69.23 57 ⇓P P 03 05 05.2 -0.3
baz=69,SNR=8.0
Q12A Willow Creek R 69.26 56 ⇑P P 03 05 05.6 0.0
baz=69
L16A Fish Haven 69.35 51 ⇑P P 03 05 06.2 0.0
baz=69
N15A Stansbury Isla 69.45 53 ⇓P P 03 05 06.8 +0.1
baz=69,SNR=5.4
MPMC Manual Prospec 69.50 60 ⇓P P 03 05 07.2 0.0
baz=69,SNR=8.0
S11A Rachel 69.58 57 ⇓P P 03 05 07.8 +0.2
baz=69
FURC Furnace Creek, 69.63 59 ⇑P P 03 05 08.3 +0.3
baz=69
M16A Huntsville 69.69 52 ⇑P P 03 05 08.3 +0.1
baz=70
TPNV Topopah Spring 69.71 58 ⇓P P 03 05 08.5 +0.1
baz=70,SNR=9.1
DUG Dugway 69.72 54 *e*P P 03 05 09.0 +0.5
comp=Z,15nm,1.4s,mb4.7
DUG Dugway 69.72 54 *e*P P 03 05 09.0 +0.6
DUG pmax pmax
comp=Z,15nm,1.4s,mb4.7
DUG Dugway 69.72 54 ⇑P P 03 05 08.5 +0.1
baz=70,SNR=6.9
Q13A Wheeler Ranch, 69.80 55 ⇑P P 03 05 09.1 +0.2
baz=70,SNR=5.6
DOMB Dombas 69.81 341 *e*P P 03 05 08.8 +0.3
comp=Z,16nm,0.9s,mb4.9
DOMB Dombas 69.81 341 *e*P P 03 05 08.8 +0.3
DOMB AMb AMB 03 05 10.5
comp=Z,16nm,0.9s,mb4.9
DOMB *epP* pP 03 05 21.0 -0.3
R12A Pony Springs, 69.84 56 ⇑P P 03 05 09.4 +0.2
baz=70
O15A The Old Anders 69.87 53 ⇑P P 03 05 09.7 +0.3
baz=70
BW06 Boulder Array 69.92 50 ⇓P P 03 05 09.5 -0.1
baz=70
EDW2 Edwards Air Fo 69.92 61 ⇑P P 03 05 09.6 -0.2
baz=70
PDAR Pinedale Array 69.92 50 P P 03 05 09.3 -0.3
comp=Z,2.9nm,0.7s,mb4.3,baz=256,slow=2.1,SNR=22
P14A Drum Mountains 69.96 54 ⇓P P 03 05 09.6 -0.3
baz=70
U10A Ash Meadows, A 70.00 59 ⇓P P 03 05 10.6 +0.4
baz=70
N16A Rees Ranch, Co 70.08 52 ⇑P P 03 05 10.8 +0.2
baz=70
NB2 NORSAR Subarra 70.12 339 P P 03 05 10.2 -0.3
comp=Z,39nm,0.8s,mb5.4,baz=32,slow=6.5
NOA NORSAR Array B 70.12 339 P P 03 05 10.1 -0.5
comp=Z,27nm,0.8s,mb5.2,baz=33,slow=6.1,SNR=92
NOA LR LR 03 40 08.3
comp=Z,134nm,18.5s,MS4.2,baz=0.0,slow=40
NOA NORSAR Array B 70.12 339 P P 03 05 10.1 -0.5
NOA LR LR 03 40 08.3
NOA NORSAR Array B 70.12 339 P P 03 05 10.1 -0.4
NOA pmax pmax
comp=Z,27nm,0.8s
NOA MLR MLR
comp=Z,134nm,18.5s
M17A Scullys Gap (B 70.14 51 ⇑P P 03 05 10.6 -0.4
baz=70
S12A Delamar Landin 70.16 57 ⇑P P 03 05 11.5 +0.3
baz=70
T11A Corn Creek, Al 70.16 57 ⇑P P 03 05 11.2 0.0
baz=70,SNR=9.4
L18A Fontenelle, Gr 70.20 51 ⇑P P 03 05 11.6 +0.2
baz=70
Q14A Sevier Lake (B 70.22 55 ⇑P P 03 05 11.6 +0.1
baz=70,SNR=5.0
KIV Kislovodsk 70.30 312 P P 03 05 13.2 +1.3
comp=Z,181nm,0.9s,mb6.0,SNR=8.1
KIV Kislovodsk 70.30 312 *e*P P 03 05 13.7 +1.7
comp=Z,20nm,0.7s,mb5.2
KIV Kislovodsk 70.30 312 *e*P P 03 05 12.4 +0.5
KIV pmax pmax
comp=Z,29nm,0.9s,mb5.2
KIV MLR MLR
comp=Z,180nm,18.0s,MS4.4
KIV Kislovodsk 70.30 312 ⇑ *i*P P 03 05 13.9 +2.0
R13A O'Grain Ranch, 70.32 56 ⇓P P 03 05 12.1 -0.1
baz=70
SHOC Shoshone 70.36 59 ⇓P P 03 05 12.2 -0.2
baz=70
NAO01 NORSAR Array S 70.38 339 *e*P P 03 05 11.8 -0.3
comp=Z,24nm,0.9s,mb5.1
N17A Moffit Pass 70.39 52 ⇑P P 03 05 12.5 0.0
baz=70,SNR=6.7
GSC Goldstone 70.41 60 ⇑P P 03 05 12.7 -0.1
baz=70
P15A Leamington 70.44 54 ⇑P P 03 05 12.9 +0.1
baz=70
L19A Farson 70.47 50 ⇓P P 03 05 12.8 -0.2
baz=70
O16A Springville 70.48 53 ⇓P P 03 05 13.2 +0.1
baz=70,SNR=5.7
BFSC Mount Baldy St 70.54 61 ⇑P P 03 05 13.2 -0.3
baz=70
S13A Holt Ranch, En 70.77 56 ⇑P P 03 05 15.3 +0.4
baz=71,SNR=6.6
T12A Moapa 70.80 57 ⇓P P 03 05 15.4 +0.3
baz=71
TUQ Turquoise Moun 70.88 59 ⇑P P 03 05 15.8 +0.2
baz=71
V11A Goodsprings 70.93 59 ⇓P P 03 05 15.8 -0.1
baz=71
O17A Robinson Place 70.93 53 ⇓P P 03 05 16.2 +0.3
baz=71
HEC Hector,Ludlow 71.01 60 ⇑P P 03 05 16.6 +0.2
baz=71
N18A Larsen Ranch, 71.03 51 ⇓P P 03 05 16.3 -0.2
baz=71
S14A Cedar City 71.08 56 ⇑P P 03 05 16.8 +0.1
baz=71
L20A Wamsutter 71.10 50 ⇓P P 03 05 16.8 0.0
baz=71
T13A Saint George 71.11 57 ⇑P P 03 05 17.5 +0.6
baz=71,SNR=7.9
MURC Murrieta 71.24 61 ⇓P P 03 05 17.5 -0.3
baz=71
HYA Hoyanger 71.26 341 *e*P P 03 05 18.4 +1.0
comp=Z,58nm,1.6s,mb5.3
HYA Hoyanger 71.26 341 *e*P P 03 05 18.4 +1.0
HYA AMb AMB 03 05 32.3
comp=Z,58nm,1.6s,mb5.3
O18A Roosevelt 71.31 52 ⇓P P 03 05 18.4 +0.3
baz=71
R15A Junction 71.32 55 ⇓P P 03 05 18.5 +0.3
baz=71
V12A Nelson 71.36 58 ⇓P P 03 05 18.6 +0.1
baz=71,SNR=5.2
P17A Butcher Ranch, 71.40 53 ⇑P P 03 05 18.9 +0.2
baz=71,SNR=6.1
GMRC Granite Mounta 71.46 60 ⇓P P 03 05 19.0 -0.2
baz=71,SNR=6.2
U13A Pakoon Wash 71.46 57 ⇑P P 03 05 19.4 +0.3
baz=71,SNR=14
Q16A Castle Valley 71.52 54 ⇑P P 03 05 19.5 +0.1
baz=71
M20A Sweetwater, Wa 71.53 50 ⇓P P 03 05 19.5 +0.1
baz=71
T14A Hurricane 71.58 56 ⇓P P 03 05 20.3 +0.4
baz=71
P18A Preston Nutter 71.59 53 ⇓P P 03 05 20.0 +0.2
baz=71
LDFC Landfair 71.62 59 *e*P P 03 05 20.1 +0.1
comp=Z,9.7nm,1.0s,mb4.7
S15A Panguitch 71.62 55 ⇓P P 03 05 20.3 +0.3
baz=71
L21A Rawlins 71.67 49 ⇑P P 03 05 20.1 -0.1
baz=72
GNI Garni 71.68 308 P P 03 05 21.5 +1.2
comp=Z,1.8nm,0.4s,mb4.4,baz=332,slow=16,SNR=4.0
GNI Garni 71.68 308 ⇓ *e*P P 03 05 19.4 -0.9
GNI pmax pmax
comp=Z,9.0nm,1.1s
PFO Pinyon Flat Ob 71.71 61 ⇑P P 03 05 20.3 -0.3
baz=72
R16A Teasdale 71.75 54 ⇑P P 03 05 21.4 +0.6
baz=72
BELC Belle Mtn. 71.75 60 ⇑P P 03 05 20.4 -0.4
baz=72
SRU San Rafael 71.77 53 *e*P P 03 05 20.9 0.0
comp=Z,7.1nm,0.9s,mb4.6
SRU San Rafael 71.77 53 *e*P P 03 05 20.9 0.0
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SRU San Rafael 71.77 53 ⇓P P 03 05 20.8 -0.1
baz=72,SNR=11
O19A Miners Draw (B 71.79 52 ⇑P P 03 05 20.6 -0.4
baz=72
V13A Grand Canyon W 71.82 58 ⇑P P 03 05 21.4 +0.2
baz=72,SNR=9.1
U14A Mt Trumbull 71.94 57 ⇓P P 03 05 22.4 +0.4
baz=72,SNR=8.3
Q18A Rafter H Ranch 72.00 53 ⇓P P 03 05 22.3 0.0
baz=72
T15A Red Dirt Ranch 72.03 56 ⇑P P 03 05 22.5 -0.1
baz=72
S16A Weppner Ranch, 72.05 55 ⇓P P 03 05 22.8 +0.3
baz=72,SNR=7.0
R17A Hanksville Air 72.11 54 ⇓P P 03 05 22.9 -0.1
baz=72,SNR=3.3
AKASG Malin Array Be 72.13 324 P P 03 05 22.3 -0.6
comp=Z,62nm,1.0s,mb5.5,baz=39,slow=6.2,SNR=79
AKASG Malin Array Be 72.13 324 P P 03 05 22.3 -0.6
AKASG Malin Array Be 72.13 324 P P 03 05 22.3 -0.5
AKASG pmax pmax
comp=Z,62nm,1.0s
AKBB Malin Array Si 72.13 324 *e*P P 03 05 22.9 0.0
KIEV Kiev 72.14 324 *e*P P 03 05 22.6 -0.3
comp=Z,53nm,1.0s,mb5.4
KIEV Kiev 72.14 324 *e*P P 03 05 22.6 -0.3
KIEV pmax pmax
comp=Z,53nm,1.0s,mb5.4
SOC Sochi 72.14 313 *e*P P 03 05 22.4 -0.7
SOC *e* 03 05 39.3
SOC *e*PPP 03 09 45.1
SOC *e*S S 03 14 43.7 +1.7
SOC *e*SS SS 03 19 16.6 -2.4
SOC MLR MLR
comp=Z,286nm,17.0s,MS4.6
IRM Iron Mountain 72.19 60 ⇓P P 03 05 23.4 -0.1
baz=72,SNR=5.8
MONP Monument Peak 72.20 62 ⇑P P 03 05 23.4 -0.2
baz=72
ODD1 Odda 72.25 341 *e*P P 03 05 23.2 -0.3
ODD1 Odda 72.25 341 *e*P P 03 05 22.2 -1.2
P19A Cripple Cowboy 72.32 52 ⇑P P 03 05 23.9 -0.3
baz=72
BC3 Big Chuckw Mtn 72.32 60 ⇓P P 03 05 24.0 -0.3
baz=72,SNR=6.1
W13A Hualapai Mount 72.37 58 ⇑P P 03 05 24.4 -0.2
baz=72
U15A North Rim 72.48 56 ⇓P P 03 05 25.7 +0.5
baz=72,SNR=10.0
V14A Boquillas Ranc 72.50 57 ⇓P P 03 05 25.7 +0.4
baz=72,SNR=15
DVTC Desert V Tower 72.55 62 ⇑P P 03 05 25.5 -0.2
baz=72
SWSC Sam W. Stewart 72.56 61 ⇓P P 03 05 25.0 -0.8
baz=72
S17A Black Ridge (B 72.58 55 ⇓P P 03 05 25.4 -0.4
baz=72,SNR=11
T16A Glen Canyon Da 72.59 56 ⇑P P 03 05 25.2 -0.7
baz=72
Q19A Hogan Spring (72.61 53 ⇑P P 03 05 25.3 -0.6
baz=72,SNR=6.5
R18A Canyonlands Na 72.62 54 ⇓P P 03 05 25.4 -0.6
baz=72,SNR=5.1
PDMCI Parker Dam,Lak 72.73 59 ⇓P P 03 05 26.5 -0.2
baz=72
X13A Yucca 72.73 59 ⇓P P 03 05 26.7 0.0
baz=72,SNR=9.9
W14A Seligman 72.79 58 ⇓P P 03 05 27.4 +0.4
baz=73,SNR=15
Y12C Blythe 72.85 60 ⇓P P 03 05 27.5 +0.1
baz=73
V15A Kaibab Nationa 72.95 57 ⇓P P 03 05 28.3 +0.3
baz=73,SNR=6.1
T17A Navajo Res., N 73.00 55 ⇓P P 03 05 27.6 -0.7
baz=73
S18A Hurst Farm, Bl 73.02 54 ⇑P P 03 05 28.2 -0.2
baz=73,SNR=7.7
R19A Curley Farm, L 73.05 53 ⇑P P 03 05 28.3 -0.2
baz=73
GLA Glamis 73.11 60 ⇓P P 03 05 29.1 +0.1
baz=73
PV10 Paradox Valley 73.12 53 *e*P P 03 05 29.7 +0.8
W15A Williams 73.31 57 ⇓P P 03 05 30.7 +0.5
baz=73
U17A Shonto 73.35 55 ⇓P P 03 05 30.8 +0.4
baz=73,SNR=14
U16A Tuba City 73.37 56 ⇓P P 03 05 30.9 +0.4
baz=73,SNR=8.2
X14A Yava 73.40 58 ⇓P P 03 05 31.1 +0.4
baz=73
T18A Mexican Hat 73.46 54 ⇓P P 03 05 30.7 -0.3
baz=73
S19A Harvey Farm, M 73.49 54 ⇑P P 03 05 30.8 -0.3
baz=73,SNR=13
PV01 Paradox Valley 73.56 53 *e*P P 03 05 31.8 +0.2
WUAZ Wupatki 73.64 57 ⇓P P 03 05 32.5 +0.4
baz=73,SNR=5.1
Y14A Wickenburg 73.67 59 ⇓P P 03 05 32.2 -0.1
baz=74,SNR=6.5
X15A Humboldt 73.79 58 ⇑P P 03 05 33.4 +0.4
baz=74,SNR=11
W16A Flagstaff 73.82 57 ⇓P P 03 05 33.6 +0.4
baz=74
U18A Rough Rock, Ch 73.94 55 ⇑P P 03 05 34.0 +0.2
baz=74,SNR=5.8
113A Mohawk Valley, 73.97 60 ⇑P P 03 05 34.0 -0.1
baz=74
Y15A Casa Rosa Ranc 74.08 58 ⇑P P 03 05 35.0 +0.3
baz=74,SNR=9.7
T19A Beclabito 74.17 54 ⇑P P 03 05 35.0 -0.2
baz=74
MVCO Mesa Verde 74.22 54 ⇑P P 03 05 35.5 +0.1
baz=74,SNR=5.4
X16A Lo Mia Camp, P 74.33 57 ⇓P P 03 05 36.7 +0.6
baz=74,SNR=14
V18A Ganado 74.38 56 ⇓P P 03 05 36.8 +0.5
baz=74,SNR=9.3
Y16A Circle Bar Ran 74.66 58 ⇑P P 03 05 38.6 +0.5
baz=74,SNR=7.4
X17A Forest Lakes 74.77 57 ⇓P P 03 05 39.4 +0.7
baz=75,SNR=5.9
GKP Gorka Klasztor 74.78 332 *e*P P 03 05 38.6 +0.2
V19A Window Rock 74.91 55 ⇑P P 03 05 40.0 +0.5
baz=75,SNR=5.2
LVV L'vov 74.97 326 *e*P P 03 05 39.5 -0.1
115A Sonoran Desert 74.98 59 ⇓P P 03 05 40.4 +0.5
baz=75
Z16A Peralta Trail, 75.05 58 ⇑P P 03 05 40.7 +0.3
baz=75
214A Organ Pipe Nat 75.11 60 ⇑P P 03 05 40.6 0.0
baz=75
X18A Snowflake 75.16 57 ⇓P P 03 05 41.5 +0.6
baz=75
Y17A Roosevelt 75.18 58 ⇑P P 03 05 41.1 0.0
baz=75,SNR=5.3
116A Eloy 75.40 59 ⇓P P 03 05 42.9 +0.6
baz=75
Y18A Canyon Day Jun 75.62 57 ⇓P P 03 05 43.9 +0.3
baz=75,SNR=7.2
X19A St. Johns 75.63 56 ⇓P P 03 05 44.0 +0.3
baz=75,SNR=8.1
KWP Kalwaria 75.65 327 *e*P P 03 05 44.2 +0.8
KWP Kalwaria 75.65 327 ⇓ *i*P P 03 05 44.8 +1.3
216A Three Points, 75.93 59 ⇓P P 03 05 45.9 +0.5
baz=76
Y19A Nutrioso 75.97 57 ⇓P P 03 05 46.4 +0.8
baz=76
117A Oracle 76.00 58 ⇑P P 03 05 46.0 +0.2
baz=76
BUR08 Bucovina Ar. S 76.17 324 *e*P P 03 05 47.2 +0.8
BURAR Bucovina Array 76.18 324 ⇓P P 03 05 47.1 +0.6
BURAR Bucovina Array 76.18 324 ⇓ *i*P P 03 05 47.2 +0.7
OJC Ojcow 76.32 329 *e*P P 03 05 47.4 +0.1
KOLS Kolonicke sedl 76.38 326 *e*P P 03 05 47.6 0.0
STHS Stebnicka Huta 76.41 327 *e*P P 03 05 48.7 +0.9
STHS pmax pmax
comp=Z,16nm,0.8s,mb5.0
Z19A T-Link Ranch, 76.42 57 ⇑P P 03 05 48.4 +0.2
baz=76
TLCR 76.43 320 ⇓P P 03 05 48.5 +0.6
TLCR 76.43 320 ⇓ *i*P P 03 05 48.5 +0.5
118A Homack Ranch, 76.43 58 ⇓P P 03 05 48.4 +0.2
baz=76,SNR=8.9
BSEG Bad Segeberg 76.46 336 *e*P P 03 05 48.3 +0.3
BSEG pmax pmax
comp=Z,33nm,1.1s,mb5.2
BSEG Bad Segeberg 76.46 336 *e*P P 03 05 48.3 +0.3
comp=Z,33nm,1.1s,mb5.2
217A Green Valley 76.49 59 ⇑P P 03 05 48.9 +0.3
baz=76
CRVS Cervenica-Dubn 76.73 327 *e*P P 03 05 49.6 0.0
119A Ashpeak Ranch, 76.75 57 ⇓P P 03 05 50.0 0.0
baz=77
NIE Niedzica 76.77 328 *e*P P 03 05 50.6 +0.8
218A Dragoon 76.83 59 ⇓P P 03 05 50.7 +0.2
baz=77
VRI Vrincioaia 76.87 322 ⇓P P 03 05 51.7 +1.3
VRI Vrincioaia 76.87 322 ⇓ *i*P P 03 05 51.7 +1.3
BMR Baia Mare 76.87 325 ⇓P P 03 05 51.7 +1.3
BMR Baia Mare 76.87 325 ⇓ *i*P P 03 05 51.7 +1.3
TRPA Tarpa 76.91 326 ⇓ *i*P P 03 05 51.6 +1.0
PLOR Plostina 76.91 322 ⇑ *i*P P 03 05 52.6 +1.9
KSP Ksiaz 77.11 331 *e*P P 03 05 52.0 +0.3
KSP Ksiaz 77.11 331 *e*P P 03 05 51.4 -0.3
KSP *e**PP pP 03 06 05.6 +1.0
318A Bisbee 77.23 59 ⇓P P 03 05 52.6 -0.2
baz=77
OKC Ostrava-Krasne 77.26 329 *e*P P 03 05 53.0 +0.5
OKC *epP* pP 03 06 05.5 +0.1
Y22D IRIS PASSCAL I 77.30 55 ⇑P P 03 05 52.9 -0.2
baz=77
219A White Tail Can 77.31 58 ⇑P P 03 05 53.5 +0.4
baz=77
UPC Upice 77.48 331 *e*P P 03 05 54.2 +0.4
UPC *epP* pP 03 06 03.9 -2.8
DPC Dobruska-Polom 77.50 330 *e*P P 03 05 54.4 +0.5
DPC *epP* pP 03 06 05.5 -1.3
MLR Muntele Rosu 77.50 322 P P 03 05 54.8 +0.8
comp=Z,6.5nm,0.7s,mb4.7,baz=154,slow=22,SNR=9.9
MLR Muntele Rosu 77.50 322 ⇑P P 03 05 55.4 +1.4
MLR Muntele Rosu 77.50 322 P P 03 05 54.8 +0.8
MLR pmax pmax
comp=Z,7.0nm,0.7s
MLR Muntele Rosu 77.50 322 ⇑ *i*P P 03 05 55.4 +1.4
MORC Moravsky Berou 77.53 329 *e*P P 03 05 54.5 +0.4
comp=Z,20nm,0.8s,mb5.1
MORC Moravsky Berou 77.53 329 *e*P P 03 05 54.5 +0.4
MORC pmax pmax
comp=Z,20nm,0.8s,mb5.1
MORC Moravsky Berou 77.53 329 ⇑ *i*P P 03 05 55.1 +1.0
319A Douglas 77.72 58 ⇓P P 03 05 55.7 +0.2
baz=78,SNR=5.2
CLL Collm 77.85 333 ⇑ *i*P P 03 05 55.3 -0.5
CLL *e**PP pP 03 06 09.0 +0.3
CLL pmax pmax
comp=Z,24nm,1.0s,mb5.1
CLL Collm 77.85 333 *e*P P 03 05 55.3 -0.5
comp=Z,30nm,0.8s,mb5.3
CLL Collm 77.85 333 ⇑ *i*P P 03 05 55.3 -0.5
comp=Z,24nm,1.0s,mb5.1
CLL *i* P(2) 03 05 57.5
comp=Z,30nm,0.8s
CLL *epP* pP 03 06 09.0 +0.3
DRGR 77.89 325 ⇓P P 03 05 56.8 +0.6
DRGR 77.89 325 ⇓ *i*P P 03 05 56.8 +0.6
BRG Berggiesshubel 77.90 332 *e*P P 03 05 56.1 0.0
BRG *e* pP 03 06 09.2 +0.2
BRG pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
BRG Berggiesshubel 77.90 332 *e*P P 03 05 56.0 -0.1
BRG Berggiesshubel 77.90 332 *e*P P 03 05 56.2 0.0
comp=Z,14nm,1.4s,mb4.7
BRG *e* pP 03 06 09.3 +0.3
comp=Z,6.7nm,0.9s
SCHQ Schefferville 77.91 20 P P 03 05 55.7 -0.4
comp=Z,7.3nm,0.9s,mb4.6,baz=43,slow=18,SNR=4.1
SCHQ LR LR 03 40 30.2
comp=Z,172nm,18.6s,MS4.4,baz=58,slow=36
SCHQ Schefferville 77.91 20 P P 03 05 55.7 -0.4
SCHQ LR LR 03 40 30.1
PVCC Panska Ves 77.98 332 *e*P P 03 05 56.8 +0.3
VYHS Vyhne 78.09 328 *e*P P 03 05 57.4 +0.2
PSZ Piszkesteto 78.14 327 *e*P P 03 05 58.6 +1.1
comp=Z,12nm,0.8s,mb4.9
PSZ Piszkesteto 78.14 327 *e*P P 03 05 58.6 +1.1
PSZ pmax pmax
comp=Z,12nm,0.8s,mb4.9
PSZ Piszkesteto 78.14 327 ⇑ *i*P P 03 05 58.7 +1.2
KOLL Kolacno 78.19 328 *e*P P 03 05 57.0 -0.8
VRAC Vranov 78.27 330 P P 03 05 58.1 -0.1
comp=Z,10nm,0.7s,mb4.9,baz=31,slow=5.0,SNR=11
VRAC Vranov 78.27 330 ⇑P P 03 05 59.5 +1.3
VRAC Vranov 78.27 330 P P 03 05 58.1 -0.1
VRAC pmax pmax
comp=Z,11nm,0.7s
VRAC Vranov 78.27 330 ⇑ *i*P P 03 05 59.5 +1.3
PRU Pruhonice 78.44 331 *e*P P 03 05 59.5 +0.4
PRU *epP* pP 03 06 10.6 -1.4
EKA Eskdalemuir Ar 78.63 343 P P 03 06 00.0 0.0
comp=Z,7.8nm,0.7s,mb4.7,baz=25,slow=4.1,SNR=16
EKA Eskdalemuir Ar 78.63 343 P P 03 06 00.0 -0.1
EKA pmax pmax
comp=Z,8.0nm,0.7s
TREC Trest 78.68 330 *e*P P 03 06 00.9 +0.4
TREC *epP* pP 03 06 14.1 +0.7
MODS Modra-Piesok 78.79 329 *e*P P 03 06 01.8 +0.7
MODS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
TANN Tannenbergstha 78.79 333 *e*P P 03 06 00.6 -0.5
comp=Z,11nm,1.1s,mb4.7
MOX Moxa 78.88 333 *e*P P 03 06 01.3 -0.2
comp=Z,29nm,1.6s,mb5.0
MOX *e* pP 03 06 11.3 -3.1
MOX Moxa 78.88 333 *e*P P 03 06 01.3 -0.2
MOX *e* pP 03 06 11.3 -3.1

MOX					pmax	pmax		
	comp=Z,29nm,1.6s,mb5.0							
MOX	**Moxa**	**78.88**	**333**	*e*P	**P**		**03 06 01.5**	**0.0**
	comp=Z,15nm,1.1s,mb4.8							
NKC	**Novy Kostel**	**78.95**	**333**	*e*P	**P**		**03 06 01.5**	**-0.4**
GZR	**Gura Zlata**	**78.97**	**324**	⇓P	**P**		**03 06 02.4**	**+0.2**
GZR	**Gura Zlata**	**78.97**	**324**	⇓*i*P	**P**		**03 06 02.4**	**+0.3**
ZST	**Bratislava**	**79.00**	**329**	*e*P	**P**		**03 06 03.3**	**+1.1**
ZST					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
MANZ	**Manzenberg**	**79.28**	**333**	*e*P	**P**		**03 06 02.6**	**-1.1**
	comp=Z,8.0nm,0.9s,mb4.7							
BZS	**Buzias**	**79.29**	**325**	⇑P	**P**		**03 06 04.3**	**+0.5**
BZS	**Buzias**	**79.29**	**325**	⇑*i*P	**P**		**03 06 04.3**	**+0.4**
ROTZ	**Rotzenmuhle**	**79.43**	**332**	*e*P	**P**		**03 06 04.6**	**0.0**
	comp=Z,16nm,1.0s,mb4.9							
KHC	**Kasperske Hory**	**79.50**	**331**	*e*P	**P**		**03 06 05.2**	**+0.3**
KHC				*e*			03 06 07.5	
KHC	**Kasperske Hory**	**79.50**	**331**	*e*P	**P**		**03 06 05.2**	**+0.3**
KHC				*ex*	x		03 06 07.5	
KHC				*ex*	x		03 06 44.0	
CONA	**Conrad Observa**	**79.69**	**329**	⇑*i*P	**P**		**03 06 06.6**	**+0.6**
	comp=Z,12nm,0.9s,mb4.8							
CSNA	**Conrad Observa**	**79.69**	**329**	⇑*i*P	**P**		**03 06 06.6**	**+0.6**
	comp=Z,12nm,0.9s,mb4.8							
GEC2	**GERESS Array S**	**79.70**	**331**	*e*P	**P**		**03 06 06.3**	**+0.2**
GEC2				*ep*P	pP		03 06 18.6	-0.4
GEC2	**GERESS Array S**	**79.70**	**331**	*e*P	**P**		**03 06 06.1**	**+0.1**
GEC2				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
GEC2	**GERESS Array S**	**79.70**	**331**	*e*P	**P**		**03 06 06.1**	**+0.1**
	comp=Z,10.0nm,1.0s,mb4.7							
GERES	**GERESS Array B**	**79.70**	**331**	P	**P**		**03 06 05.9**	**-0.2**
	comp=Z,4.2nm,0.7s,mb4.5,baz=34,slow=5.0,SNR=24							
GERES	**GERESS Array B**	**79.70**	**331**	P	**P**		**03 06 05.9**	**-0.1**
GERES				pmax	pmax			
	comp=Z,4.0nm,0.7s							
WET	**Wettzell**	**79.73**	**332**	*e*P	**P**		**03 06 06.5**	**+0.3**
WET				pmax	pmax			
	comp=Z,23nm,1.0s,mb5.1							
WET	**Wettzell**	**79.73**	**332**	*e*P	**P**		**03 06 06.5**	**+0.3**
	comp=Z,23nm,1.0s,mb5.1							
GRF	**Grafenberg Arr**	**79.83**	**333**	*e*P	**P**		**03 06 06.9**	**+0.2**
GRF				pmax	pmax			
	comp=Z,37nm,0.8s,mb5.4							
GRF	**Grafenberg Arr**	**79.83**	**333**	*e*P	**P**		**03 06 06.9**	**+0.2**
GRF				pmax	pmax			
	comp=Z,37nm,0.8s,mb5.4							
GRF	**Grafenberg Arr**	**79.83**	**333**	*e*P	**P**		**03 06 06.9**	**+0.2**
	comp=Z,37nm,0.8s,mb5.4							
PKSM	**Moragy**	**80.03**	**327**	⇑*i*P	**P**		**03 06 07.8**	**-0.1**
TNS	**Taunus Mts**	**80.26**	**335**	*e*P	**P**		**03 06 09.3**	**+0.3**
TNS				pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9							
TNS	**Taunus Mts**	**80.26**	**335**	*e*P	**P**		**03 06 09.3**	**+0.3**
	comp=Z,14nm,0.8s,mb4.9							
MOA	**Molln**	**80.34**	**330**	⇑*i*P	**P**		**03 06 10.4**	**+0.9**
MEM	**Membach**	**80.65**	**336**	P	**P**		**03 06 11.2**	**0.0**
	comp=Z,10nm,0.9s,mb4.8							
BCLA	**Clavier**	**81.03**	**337**	P	**P**		**03 06 12.6**	**-0.5**
	comp=Z,12nm,1.4s,mb4.6							
SOKA	**Soboth**	**81.04**	**329**	⇑*i*P	**P**		**03 06 13.4**	**+0.1**
	comp=Z,9.8nm,1.1s,mb4.7							
FUR	**Furstenfeldbru**	**81.12**	**332**	*e*P	**P**		**03 06 14.1**	**+0.4**
FUR				pmax	pmax			
	comp=Z,22nm,0.9s,mb5.1							
FUR	**Furstenfeldbru**	**81.12**	**332**	*e*P	**P**		**03 06 14.1**	**+0.4**
	comp=Z,22nm,0.9s,mb5.1							
STU	**Stuttgart**	**81.29**	**334**	*e*P	**P**		**03 06 14.9**	**+0.3**
	comp=Z,21nm,0.9s,mb5.1							
KBA	**Koelnbreinsper**	**81.32**	**330**	⇑*i*P	**P**		**03 06 15.1**	**+0.3**
	comp=Z,27nm,1.0s,mb5.1							
ASF	**Jabal al Asfar**	**81.76**	**307**	P	**P**		**03 06 18.0**	**+0.6**
	comp=Z,2.0nm,1.0s,mb4.0,baz=336,slow=10.0,SNR=3.4							
ASF	**Jabal al Asfar**	**81.76**	**307**	P	**P**		**03 06 18.0**	**+0.6**
ASF				pmax	pmax			
	comp=Z,2.0nm,1.0s							
RETA	**Reutte**	**81.88**	**332**	⇑*i*P	**P**		**03 06 18.6**	**+0.9**
	comp=Z,15nm,1.2s,mb4.8							
MOTA	**Moosalm**	**81.89**	**332**	⇑*i*P	**P**		**03 06 17.9**	**+0.2**
BFO	**Black Forest**	**81.95**	**334**	*e*P	**P**		**03 06 18.2**	**+0.2**
	comp=Z,12nm,1.0s,mb4.8							
BFO	**Black Forest**	**81.95**	**334**	*e*P	**P**		**03 06 18.2**	**+0.1**
BFO				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.8							
BFO	**Black Forest**	**81.95**	**334**	*e*P	**P**		**03 06 18.3**	**+0.2**
	comp=Z,13nm,1.0s,mb4.8							
SQTA	**Sankt Quirin**	**81.96**	**332**	⇑*i*P	**P**		**03 06 19.0**	**+0.9**
MMAI	**Mount Meron Ar**	**82.02**	**308**	P	**P**		**03 06 19.8**	**+1.1**
	comp=Z,4.7nm,0.7s,mb4.5,baz=46,slow=7.3,SNR=7.9							
CDF	**Champ du Feu**	**82.22**	**335**	*e*P	**P**		**03 06 18.9**	**-0.5**
	comp=Z,43nm,1.1s,mb5.0							
CDF	**Champ du Feu**	**82.22**	**335**	*e*P	**P**		**03 06 18.9**	**-0.5**
	comp=Z,22nm,1.1s,mb5.0							
CDF	**Champ du Feu**	**82.22**	**335**	*e*P	**P**		**03 06 18.9**	**-0.5**
CDF				pmax	pmax			
	comp=Z,22nm,1.1s,mb5.0							
FETA	**Feichten**	**82.30**	**332**	⇑*e*PcP	PcP		03 06 21.0	-4.1
	comp=Z,9.7nm,1.1s							
DAVA	**Damuels**	**82.36**	**332**	⇑*i*P	**P**		**03 06 20.2**	**0.0**
	comp=Z,15nm,0.9s,mb4.9							
ECH	**Echery**	**82.43**	**335**	*e*P	**P**		**03 06 20.7**	**+0.1**
TXAR	**Lajitas Array**	**82.60**	**57**	P	**P**		**03 06 21.7**	**-0.1**
	comp=Z,4.6nm,0.8s,mb4.6,baz=300,slow=3.9,SNR=62							
TXAR	**Lajitas Array**	**82.60**	**57**	P	**P**		**03 06 21.7**	**-0.1**
TXAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
DAVOS	**Davos**	**82.77**	**332**	P	**P**		**03 06 22.9**	**+0.5**
DAVOX	**Davos/Dischmat**	**82.80**	**332**	P	**P**		**03 06 22.9**	**+0.4**
	comp=Z,2.7nm,0.5s,mb4.5,baz=301,slow=4.4,SNR=9.3							
MEZF	**Maizieres J'vi**	**82.81**	**336**	*e*P	**P**		**03 06 22.5**	**-0.1**
KRUS	**Krusevo**	**82.86**	**322**	*e*P	**P**		**03 06 19.8**	**-3.1**
HAU	**Haudompre**	**82.86**	**335**	*e*P	**P**		**03 06 22.4**	**-0.4**
	comp=Z,22nm,1.0s,mb4.8							
HAU	**Haudompre**	**82.86**	**335**	*e*P	**P**		**03 06 22.4**	**-0.4**
	comp=Z,11nm,1.0s,mb4.8							
HAU	**Haudompre**	**82.86**	**335**	*e*P	**P**		**03 06 22.4**	**-0.4**
HAU				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.8							
HINF	**Hinteralfeld**	**82.88**	**335**	*e*P	**P**		**03 06 23.6**	**+0.7**
JCT	**Junction City**	**84.08**	**53**	*e*P	**P**		**03 06 28.6**	**-0.8**
	comp=Z,50nm,1.5s,mb5.4							
JCT	**Junction City**	**84.08**	**53**	*e*P	**P**		**03 06 28.6**	**-0.8**
JCT				pmax	pmax			
	comp=Z,50nm,1.5s,mb5.4							
FLN	**La Foliniere**	**84.11**	**339**	*e*P	**P**		**03 06 28.8**	**-0.4**
	comp=Z,24nm,0.7s,mb5.2							
FLN	**La Foliniere**	**84.11**	**339**	*e*P	**P**		**03 06 28.8**	**-0.4**
	comp=Z,12nm,0.7s,mb5.1							
FLN	**La Foliniere**	**84.11**	**339**	*e*P	**P**		**03 06 28.8**	**-0.4**
FLN				pmax	pmax			
	comp=Z,12nm,0.7s,mb5.1							
LDF	**La Druitiere**	**84.17**	**339**	*e*P	**P**		**03 06 29.9**	**+0.4**
CABF	**La Chapelle**	**84.19**	**334**	*e*P	**P**		**03 06 30.2**	**+0.6**
LOR	**Lormes**	**84.28**	**336**	*e*P	**P**		**03 06 29.6**	**-0.5**
	comp=Z,16nm,0.9s,mb4.8							
LOR	**Lormes**	**84.28**	**336**	*e*P	**P**		**03 06 29.6**	**-0.5**
	comp=Z,8.0nm,0.9s,mb4.8							
LOR	**Lormes**	**84.28**	**336**	*e*P	**P**		**03 06 29.6**	**-0.5**
LOR				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.8							
GRR	**Gorron**	**84.55**	**340**	*e*P	**P**		**03 06 31.4**	**-0.1**
	comp=Z,42nm,0.9s,mb5.3							
GRR	**Gorron**	**84.55**	**340**	*e*P	**P**		**03 06 31.4**	**-0.1**
	comp=Z,21nm,0.9s,mb5.3							
GRR	**Gorron**	**84.55**	**340**	*e*P	**P**		**03 06 31.4**	**-0.1**
GRR				pmax	pmax			
	comp=Z,21nm,0.9s,mb5.3							
SSF	**Saint Saulge**	**84.57**	**336**	*e*P	**P**		**03 06 31.1**	**-0.5**
	comp=Z,18nm,1.0s,mb4.9							
SSF	**Saint Saulge**	**84.57**	**336**	*e*P	**P**		**03 06 31.1**	**-0.5**
	comp=Z,9.1nm,1.0s,mb4.9							
SSF	**Saint Saulge**	**84.57**	**336**	*e*P	**P**		**03 06 31.1**	**-0.5**
SSF				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.8							
HYF	**Humbligny**	**84.63**	**337**	*e*P	**P**		**03 06 31.9**	**0.0**
SMF	**Signal de Mont**	**84.84**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
	comp=Z,72nm,1.3s,mb5.4							
SMF	**Signal de Mont**	**84.84**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
	comp=Z,36nm,1.3s,mb5.3							
SMF	**Signal de Mont**	**84.84**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
SMF				pmax	pmax			
	comp=Z,36nm,1.3s,mb5.3							
AVF	**Avril sur Loir**	**84.86**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
	comp=Z,46nm,1.2s,mb5.2							
AVF	**Avril sur Loir**	**84.86**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
	comp=Z,23nm,1.3s,mb5.2							
AVF	**Avril sur Loir**	**84.86**	**336**	*e*P	**P**		**03 06 32.9**	**-0.1**
AVF				pmax	pmax			
	comp=Z,23nm,1.3s,mb5.2							
LPL	**La Plagne**	**84.95**	**334**	*e*P	**P**		**03 06 34.1**	**+0.6**
	comp=Z,34nm,1.1s,mb5.1							
LPL	**La Plagne**	**84.95**	**334**	*e*P	**P**		**03 06 34.1**	**+0.6**
	comp=Z,17nm,1.1s,mb5.1							
LPL	**La Plagne**	**84.95**	**334**	*e*P	**P**		**03 06 34.1**	**+0.6**
LPL				pmax	pmax			
	comp=Z,17nm,1.1s,mb5.1							
LPG	**La Plagne**	**84.96**	**334**	*e*P	**P**		**03 06 34.3**	**+0.7**
	comp=Z,24nm,1.1s,mb5.0							
LPG	**La Plagne**	**84.96**	**334**	*e*P	**P**		**03 06 34.3**	**+0.7**
	comp=Z,12nm,1.1s,mb4.9							
LPG	**La Plagne**	**84.96**	**334**	*e*P	**P**		**03 06 34.3**	**+0.7**
LPG				pmax	pmax			
	comp=Z,12nm,1.1s,mb4.9							
SGMF	**Saint Gilles**	**85.10**	**341**	*e*P	**P**		**03 06 34.4**	**+0.2**
	comp=Z,19nm,0.7s,mb5.1							
SGMF	**Saint Gilles**	**85.10**	**341**	*e*P	**P**		**03 06 34.4**	**+0.2**
	comp=Z,9.7nm,0.7s,mb5.0							
SGMF	**Saint Gilles**	**85.10**	**341**	*e*P	**P**		**03 06 34.4**	**+0.2**
SGMF				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb5.0							
MBDF	**Montbardon**	**85.64**	**333**	*e*P	**P**		**03 06 36.6**	**-0.4**
	comp=Z,9.3nm,0.7s,mb4.8							
MBDF	**Montbardon**	**85.64**	**333**	*e*P	**P**		**03 06 36.6**	**-0.4**
	comp=Z,4.7nm,0.7s,mb4.8							
MBDF	**Montbardon**	**85.64**	**333**	*e*P	**P**		**03 06 36.6**	**-0.4**
MBDF				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.8							
TCF	**Toulx Ste Croi**	**85.65**	**337**	*e*P	**P**		**03 06 37.3**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0							
TCF	**Toulx Ste Croi**	**85.65**	**337**	*e*P	**P**		**03 06 37.3**	**+0.3**
	comp=Z,7.4nm,0.8s,mb5.0							
TCF	**Toulx Ste Croi**	**85.65**	**337**	*e*P	**P**		**03 06 37.3**	**+0.3**
TCF				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.9							
ORIF	**Oris-en-Rattie**	**85.76**	**334**	*e*P	**P**		**03 06 37.2**	**-0.4**
	comp=Z,10nm,0.8s,mb4.8							
ORIF	**Oris-en-Rattie**	**85.76**	**334**	*e*P	**P**		**03 06 37.2**	**-0.4**
	comp=Z,5.2nm,0.8s,mb4.8							
ORIF	**Oris-en-Rattie**	**85.76**	**334**	*e*P	**P**		**03 06 37.2**	**-0.4**
ORIF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.8							
IDI	**Anoyia**	**85.97**	**316**	P	**P**		**03 06 39.9**	**+1.2**
	comp=Z,31nm,1.1s,mb5.5,baz=56,slow=22,SNR=7.7							
MFF	**Saint Martin d**	**86.01**	**338**	*e*P	**P**		**03 06 39.1**	**+0.3**
	comp=Z,28nm,0.9s,mb5.2							
MFF	**Saint Martin d**	**86.01**	**338**	*e*P	**P**		**03 06 39.1**	**+0.3**
	comp=Z,14nm,0.9s,mb5.2							
MFF	**Saint Martin d**	**86.01**	**338**	*e*P	**P**		**03 06 39.1**	**+0.3**
MFF				pmax	pmax			
	comp=Z,14nm,0.9s,mb5.2							
VIVF	**Saint-Julien-l**	**86.20**	**335**	*e*P	**P**		**03 06 37.8**	**-1.9**
	comp=Z,22nm,1.0s,mb5.0							
VIVF	**Saint-Julien-l**	**86.20**	**335**	*e*P	**P**		**03 06 37.8**	**-1.9**
	comp=Z,11nm,1.0s,mb5.0							
VIVF	**Saint-Julien-l**	**86.20**	**335**	*e*P	**P**		**03 06 37.8**	**-1.9**
VIVF				pmax	pmax			
	comp=Z,11nm,1.0s,mb5.0							
RJF	**Les Rejaudoux**	**86.74**	**337**	*e*P	**P**		**03 06 42.6**	**+0.2**
CAF	**Calviac**	**86.93**	**336**	*e*P	**P**		**03 06 44.1**	**+0.8**
	comp=Z,20nm,1.0s,mb5.0							
CAF	**Calviac**	**86.93**	**336**	*e*P	**P**		**03 06 44.1**	**+0.8**
	comp=Z,9.9nm,1.0s,mb5.0							
CAF	**Calviac**	**86.93**	**336**	*e*P	**P**		**03 06 44.1**	**+0.8**
CAF				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.0							
LMR	**La Mourre**	**86.96**	**333**	*e*P	**P**		**03 06 43.2**	**-0.3**
LFF	**La Frestale**	**87.30**	**337**	*e*P	**P**		**03 06 45.1**	**0.0**
	comp=Z,35nm,1.0s,mb5.3							
LFF	**La Frestale**	**87.30**	**337**	*e*P	**P**		**03 06 45.1**	**0.0**
	comp=Z,17nm,1.0s,mb5.2							
LFF	**La Frestale**	**87.30**	**337**	*e*P	**P**		**03 06 45.1**	**0.0**
LFF				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.2							
TKL	**Tuckaleechee C**	**88.52**	**40**	*e*P	**P**		**03 06 51.0**	**-0.1**
RPZ	**Rata Peaks**	**89.16**	**163**	LR	LR		03 38 58.3	
	comp=Z,137nm,21.9s,MS4.3,baz=277,slow=30							
SJPF	**Ste Jean**	**89.53**	**338**	*e*P	**P**		**03 06 54.9**	**-0.8**
KEST	**Kesra**	**92.62**	**327**	LR	LR		03 52 46.3	
	comp=Z,81nm,18.8s,MS4.2,baz=205,slow=38							
ESDC	**Sonseca Array**	**93.48**	**338**	P	**P**		**03 07 13.2**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.9,baz=4.6,slow=6.3,SNR=5.6							
TORD	**Torodi Ar. Bea**	**115.74**	**323**	PKP	PKPdf		03 12 40.0	-1.2
	comp=Z,0.4nm,0.6s,baz=3.2,slow=1.7,SNR=7.6							
TORD				PP	PP		03 13 37.1	-6.4
	comp=Z,0.8nm,0.8s,baz=32,slow=9.1,SNR=4.2							
TORD	**Torodi Ar. Bea**	**115.74**	**323**	PKP	PKPdf		03 12 40.0	-1.2
TORD				PP	PP		03 13 37.1	-6.4
SNAA	**Sanae**	**148.15**	**197**	*e*PKPdf	PKPab		03 13 49.2	+3.3
SNAA				*e*			03 13 57.0	
SNAA	**Sanae**	**148.15**	**197**	*e*PKHKP			03 13 40.8	
BDFB	**Brasilia**	**149.35**	**31**	PKPbc	PKPbc		03 13 47.6	+0.1
	comp=Z,3.4nm,0.7s,baz=94,slow=27,SNR=12							
BDFB	**Brasilia**	**149.35**	**31**	*e*PKPbc	PKPbc		03 13 48.3	+0.7
BDFB	**Brasilia**	**149.35**	**31**	PKP2	PKPbc		03 13 47.6	+0.1
BDFB				pmax	pmax			
	comp=Z,3.0nm,0.7s							
VNA2	**Neumayer--Watz**	**149.67**	**196**	*e*PKPdf	PKPab		03 13 55.3	+3.2
	baz=48,slow=0.6							
VNA2				*e*			03 14 04.1	
VNA3	**Neumayer Olymp**	**149.85**	**194**	*e*PKPdf	PKPab		03 13 56.2	+3.4
VNA3				*e*			03 14 04.2	
VNA1	**Neumayer--Stat**	**150.06**	**196**	*e*PKPdf	pPKPab		03 14 05.1	-1.9

*ISCJB **19** 02:58:02.6±0.6, 3487N±003×139.19E±005, h9km±4km, Error ellipse: s-maj=7.1km s-min=4.0km az=151.1*
*JMA **19** 02:58:02.8±0.1, 3487N×139.17E, h8km±2km, M3.7*
JMA Felt III J1.

ISC 19 02:58:03.0±0.6, 3487N±003×13919E±005, h8km±6km, n10, σ0§55/19, 1C-7D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KTJJ	**Kamata 2**	**0.12**	**296**	⇓P		**Pg**	**02 58 05.3**	**-0.3**
KTJJ				*e*S		**Sg**	**02 58 07.4**	**0.0**
AJI	**Ajiro2**	**0.19**	**334**	⇓P		**Pg**	**02 58 06.7**	**-0.2**
JIM2	**Oshima 3**	**0.25**	**129**	⇓P		**Pg**	**02 58 08.0**	**+0.1**
JIM2				*e*S		**Sg**	**02 58 12.2**	**+0.9**
JIZS	**Izushimoda**	**0.30**	**239**	⇑P		**Pg**	**02 58 08.6**	**-0.3**
JIZS				*e*S		**Sg**	**02 58 13.2**	**+0.2**
JOD2	**Odawara 2**	**0.40**	**347**	⇓P		**Pg**	**02 58 10.7**	**0.0**
JOD2				*e*S		**Sg**	**02 58 16.6**	**+0.6**
JKO	**Kozu shima**	**0.69**	**184**	⇓P		**Pg**	**02 58 15.8**	**-0.4**
JKO				*e*S		**Sg**	**02 58 25.6**	**+0.4**
JYN	**Shimob**	**0.82**	**320**	⇓P		**Pg**	**02 58 18.0**	**-0.7**
JYN				*e*S		**Sg**	**02 58 29.1**	**-0.3**
SHZ3	**Shizuoka 3**	**0.83**	**284**	⇓P		**Pg**	**02 58 18.9**	**-0.1**
SHZ3				*e*S		**Sg**	**02 58 30.8**	**+1.0**
JMY	**Miyakejima3**	**0.84**	**162**	P		**Pg**	**02 58 18.4**	**-0.8**
JMY				*e*S		**Sg**	**02 58 30.1**	**0.0**
MAT	**Matsushiro**	**1.85**	**335**	P		**Pn**	**02 58 34.1**	**-0.9**
MAT				S		**Sn**	**02 58 59.5**	**+0.9**

KRSC 19 03:11:18.6±1.2, 5272N×16038E, h5km±5km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PET	**Petropavlovsk**	**1.09**	**287**	*e*P		Pg	03 11 40.1	+0.6
PET				*i* S		Sg	03 11 55.8	+2.2
AVH	**Avacha**	**1.13**	**299**	*e*P		Pg	03 11 40.9	+0.6
AVH				*i* S		Sg	03 11 57.1	+2.1
RUS	**Russkaya**	**1.18**	**257**	*e*P		Pg	03 11 41.6	+0.5
RUS				*i* S		Sg	03 11 58.4	+2.1
GRL	**Gorelyy**	**1.42**	**264**	P		Pn	03 11 45.1	+0.1
GRL				*i* S		Sb	03 12 04.5	+0.7
GNL	**Ganaly**	**1.76**	**305**	*e*P		Pn	03 11 50.8	+1.1
GNL				*i* S		Sn	03 12 14.3	+1.8
MIPR	**Malaya Ipel'ka**	**2.26**	**260**	P		Pn	03 11 58.9	+2.4

*IDC **19** 03:35:05.0±3.5, 19.36S×175.88W, h197km±31km, mb3.7/8, mb1 3.9/9, mb1mx3.7/20, mbtmp3.7/9, Error ellipse: s-maj=21.7km s-min=17.4km az=140.0*
*ISCJB **19** 03:35:09.5±7.7, 196S±02×175.9W±0.2, h251km±72km, mb3.8/10, Error ellipse: s-maj=31.3km s-min=25.1km az=141.4*

*NEIC **19** 03:35:17.7±3.4, 1982S×175.84W, h325km±33km, mb3.9/1, Error ellipse: s-maj=20.7km s-min=16.0km az=192.0*

ISC 19 03:35:13.4±6.1, 196S±02×175.9W±0.2, h275km±60km, n17, σ1§08/13, mb3.8/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DZM	**Mont Dzumac**	**16.72**	**258**	*e*P		**P**	**03 38 53.2**	**+2.6**
URZ	**Urewera**	**19.58**	**197**	P		**P**	**03 39 19.9**	**-1.3**
	2.3nm,0.3s,baz=42,slow=5.5,SNR=5.9							
RPZ	**Rata Peaks**	**26.44**	**202**	P		**P**	**03 40 24.2**	**-1.0**
	2.2nm,0.5s,mb3.9,baz=28,slow=17,SNR=2.9							
CTAO	**Charters Tower**	**35.58**	**263**	*e*P		**P**	**03 41 45.2**	**-0.1**
	16nm,0.9s,mb4.5							
STKA	**Stephens Creek**	**39.98**	**244**	P		**P**	**03 42 21.6**	**-0.2**
	0.8nm,0.4s,mb3.4,baz=128,slow=23,SNR=4.2							
ASAR	**Alice Springs**	**46.68**	**256**	P		**P**	**03 43 14.8**	**-0.3**
	6.5nm,0.6s,mb4.1,baz=86,slow=8.1,SNR=59							
ASAR				ScP		ScP	03 48 19.3	+8.2
	0.5nm,0.7s,baz=118,slow=3.8,SNR=4.5							
WRAB	**Tennant Creek**	**46.71**	**261**	*e*P		**P**	**03 43 15.1**	**-0.3**
	3.6nm,0.6s,mb3.9							
WRA	**Warramunga Arr**	**46.72**	**261**	P		**P**	**03 43 14.4**	**-1.1**
	5.1nm,0.5s,mb4.1,baz=96,slow=7.3,SNR=141							
VNDA	**Vanda**	**59.00**	**186**	P		**P**	**03 44 45.5**	**+1.5**
	0.9nm,0.7s,mb3.3,baz=4.6,slow=7.1,SNR=7.7							
QSPA	**South Pole Qui**	**70.48**	**180**	P		**P**	**03 45 59.4**	**+1.6**
	4.6nm,0.7s,mb4.3,baz=58,slow=2.4,SNR=14							
NVAR	**Mina Array Bea**	**79.00**	**42**	P		**P**	**03 46 46.7**	**-0.3**
	0.1nm,0.3s,mb3.0,baz=224,slow=8.4,SNR=7.6							
NVAR	**Mina Array Bea**	**79.00**	**42**	P		**P**	**03 46 46.7**	**-0.3**
TXAR	**Lajitas Array**	**84.88**	**57**	P		**P**	**03 47 17.6**	**-0.1**
	1.0nm,1.1s,mb3.6,baz=224,slow=3.5,SNR=5.0							
ARCES	**ARCESS Array B**	**128.37**	**351**	PKP		PKPdf	03 53 46.1	-0.5
	comp=Z,8.8nm,0.8s,baz=352,slow=2.5,SNR=4.6							
GERES	**GERESS Array B**	**149.81**	**347**	PKPbc		PKPbc	03 54 30.6	-0.2
	0.8nm,0.8s,baz=48,slow=2.0,SNR=4.9							
TORD	**Torodi Ar. Bea**	**173.18**	**160**	PKP		PKPdf	03 54 49.2	-1.3
	0.7nm,0.9s,baz=31,slow=1.3,SNR=4.0							
TORD	**Torodi Ar. Bea**	**173.18**	**160**	PKP		PKPdf	03 54 49.2	-1.3

*ISCJB **19** 03:35:24.9±2.1, 965S±007×796W±0.2, h40km±18km, mb3.9/7, Error ellipse: s-maj=26.1km s-min=9.4km az=164.0*
*IDC **19** 03:35:27.2±2.7, 9.70S×79.57W, h45km±23km, mb3.7/7, mb1 3.9/10, mb1mx3.7/23, mbtmp3.7/10, ML3.7/3, MS3.2/6, Ms1 3.2/6, ms1mx3.0/31, Error ellipse: s-maj=30.2km s-min=9.9km az=74.0*
*NEIC **19** 03:35:27.1±1.7, 961S×79.55W, h44km±15km, Error ellipse: s-maj=24.9km s-min=10.0km az=64.0*

ISC 19 03:35:27.1±1.9, 965S±007×795W±0.2, h42km±17km, n23, σ0§79/17, mb3.9/7, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ATAH	**Atahualpa**	**2.85**	**23**	P		**Pn**	**03 36 09.5**	**-0.7**
	6.5nm,0.3s,baz=209,slow=4.5,SNR=38							
ATAH			

ARE					*e*S		Sn	03 46 14.0	+0.2
LPAZ	**La Paz**	**7.05**	**23**	Pn			**Pn**	03 45 13.7	+3.0
	comp=E,3.2nm,0.3s,baz=225,slow=7.4,SNR=38								
LPAZ					Sn		**Sn**	03 46 47.0	+16
	baz=70,slow=15,SNR=1.2								
LPAZ	**La Paz**	**7.05**	**23**	*e*Pn			**Pn**	03 45 13.8	+3.0
LPAZ					Sn		**Sn**	03 46 47.0	+16
CFAA	**Coronel Fontan**	**9.07**	**165**	Pn			**Pn**	03 45 39.3	+0.8
	comp=E,0.0nm,0.3s,baz=338,slow=14,SNR=4.2								
CFAA					Sn		**Sn**	03 47 32.1	+12
	comp=E,0.1nm,0.3s,baz=133,slow=19,SNR=2.9								
SIV	**San Ignacio**	**11.56**	**56**	Pn			**Pn**	03 46 10.2	-2.5
	comp=E,1.4nm,0.3s,baz=241,slow=14,SNR=20								
SIV					Sn		**Sn**	03 48 21.7	-0.2
	comp=E,0.1nm,0.3s,baz=143,slow=20,SNR=1.7								
BDFB	**Brasilia**	**22.82**	**76**	P			**P**	03 48 29.9	-0.7
	comp=E,2.7nm,0.5s,mb3.9,baz=238,slow=16,SNR=18								
BDFB	**Brasilia**	**22.82**	**76**	*e*P			**P**	03 48 29.9	-0.8
	comp=E,26nm,2.1s,mb4.3								
PCRV	**Puerto La Cruz**	**33.39**	**11**	LR			LR	04 02 51.5	
	comp=E,76nm,21.1s,baz=9.5,slow=35								
TKL	**Tuckaleechee C**	**59.42**	**348**	P			**P**	03 53 30.0	-0.1
	comp=E,2.1nm,0.8s,mb4.2,baz=161,slow=10,SNR=4.3								
TKL	**Tuckaleechee C**	**59.42**	**348**	P			**P**	03 53 30.0	-0.1
TXAR	**Lajitas Array**	**60.66**	**327**	P			**P**	03 53 40.9	+2.1
	comp=E,0.2nm,0.5s,mb3.5,baz=149,slow=8.4,SNR=4.7								
QSPA	**South Pole Qui**	**67.36**	**180**	P			**P**	03 54 24.0	+1.7
	comp=E,2.5nm,0.6s,mb4.4,baz=129,slow=2.1,SNR=9.2								
DBIC	**Dimbokro**	**70.95**	**74**	P			**P**	03 54 44.0	-1.5
	comp=E,3.0nm,0.6s,mb4.4,baz=233,slow=9.2,SNR=6.0								
TORD	**Torodi Ar. Bea**	**79.61**	**71**	P			**P**	03 55 34.5	-0.8
	comp=E,4.9nm,0.7s,mb4.6,baz=255,slow=5.5,SNR=43								
ASAR	**Alice Springs**	**127.83**	**209**	PKP			PKPdf	04 02 34.4	+0.4
	comp=E,0.6nm,0.8s,baz=142,slow=2.7,SNR=4.5								
WRA	**Warramunga Arr**	**130.82**	**212**	PKP			PKPdf	04 02 41.0	+1.3
	comp=E,0.6nm,0.9s,baz=151,slow=1.9,SNR=3.6								
ZALV	**Zalesovo Beam**	**143.97**	**24**	PKP			PKPdf	04 03 03.4	+0.6
	comp=E,0.9nm,0.6s,baz=236,slow=1.6,SNR=6.1								
MKAR	**Makanchi Array**	**147.84**	**35**	PKPbc			PKPbc	04 03 13.0	+0.5
	comp=E,2.4nm,0.7s,baz=324,slow=3.0,SNR=12								

*ISCJB **19** 03:47:34.7±0.8,3112S±005×139.14E±006,h10km, Error ellipse: s-maj=8.1km s-min=6.7km az=30.4*
*IDC **19** 03:47:36.4±3.4,3099S×13948E,h0km,mb1 3.0/3, mb1mx3.0/14,mbtmp2.8/3,ML2.6/3, Error ellipse: s-maj=76.7km s-min=14.9km az=39.0*
*AUST **19** 03:47:36.9,31.17S×13942E,h10km,ML2.5*
*NEIC **19** 03:47:36.0,31.17S×13942E,h10km,ML2.5(AUST), After AUST.*

ISC 19 03:47:37.0±0.8,3115S±006×13922E±006,h10km,n5, σ0$70/9,South Australia

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
STKA	**Stephens Creek**	**2.15**	**110**	Pn		**Pn**	**03**	**48 12.8**	**-0.1**
	0.8nm,0.3s,baz=297,slow=15,SNR=12								
STKA				Lg			03	48 39.3	
	4.4nm,0.3s,baz=194,slow=19,SNR=12								
STKA	**Stephens Creek**	**2.15**	**110**	*e*Pn		**Pn**	**03**	**48 12.9**	**+0.1**
STKA				*e*Sn		**Sn**	**03**	**48 39.5**	**-0.1**
BBOO	**Buckleboo**	**3.16**	**238**	Pn		**Pn**	**03**	**48 31.0**	**+4.3**
BBOO				*e*Sg		**Sg**	**03**	**49 18.1**	**-0.3**
ASAR	**Alice Springs**	**8.83**	**326**	Pn		**Pn**	**03**	**49 45.7**	**+1.1**
	0.1nm,0.3s,baz=152,slow=13,SNR=4.2								
ASAR					Sn		**Sn**	**03 51 24.7**	**+0.5**
	0.1nm,0.3s,baz=148,slow=22,SNR=4.5								
WRA	**Warramunga Arr**	**12.00**	**337**	Pn		**Pn**	**03**	**50 28.1**	**0.0**
	0.1nm,0.3s,baz=151,slow=12,SNR=8.8								
WRA					Sn		**Sn**	**03 52 40.7**	**-1.3**
	0.0nm,0.3s,baz=162,slow=23,SNR=3.2								

*NIED **19** 03:55:00,2580N×12900E,h11km,Mw4.2 Best double couple: M○2.34000×10^15 NP1:ϕs33.00000°,δ51.00000°, λ-114.00000°. NP2:ϕs248.00000°,δ45.00000°, λ-64.00000°*
*IDC **19** 03:55:22.7±1.3,2584N×129.12E,h0km,mb3.9/9, mb1 4.1/9,mb1mx4.0/20,mbtmp3.9/9,MS3.3/5,Ms1 3.4/5, ms1mx3.0/29, Error ellipse: s-maj=54.1km s-min=16.7km az=68.0*
*ISCJB **19** 03:55:24.9±1.1,2582N±004×12890E±004,h29km±8km, mb3.8/9,MS3.4/2, Error ellipse: s-maj=6.9km s-min=4.9km az=135.4*
*JMA **19** 03:55:25.7±0.2,2585N×12897E,h51km,M4.5*
*NEIC **19** 03:55:28.2±0.8,2577N×12868E,h35km,MG4.5(JMA), Error ellipse: s-maj=22.3km s-min=13.0km az=78.0*

ISC 19 03:55:26.5±1.3,2586N±004×12887E±004,h30km±10km, n33,σ1$22/46,mb3.8/9,MS3.4/2,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
JJT2	**Tamagusuku 2**	**1.04**	**286**	P		**Pn**	**03**	**55 45.9**	**+0.8**
JJT2				S		**Sb**	**03**	**56 00.0**	**+0.6**
JOW	**Kunigami**	**1.10**	**331**	Pn		**Pn**	**03**	**55 46.3**	**+0.3**
	920nm,0.3s,baz=142,slow=15,SNR=550								
JOW					Sn		**Sn**	**03 55 58.9**	**-1.3**
	522nm,0.3s,baz=336,slow=20,SNR=28								
JOW	**Kunigami**	**1.10**	**331**	P		**Pn**	**03**	**55 46.2**	**+0.2**
JOW				*e*S		**Sn**	**03**	**55 59.8**	**-0.4**
NAH1	**Naha**	**1.11**	**288**	P		**Pn**	**03**	**55 46.5**	**+0.4**
NAH1				*e*S		**Sn**	**03**	**56 01.2**	**+0.8**
JIH	**Iheya**	**1.42**	**326**	P		**Pn**	**03**	**55 50.9**	**+0.6**
JIH				S		**Sn**	**03**	**56 08.7**	**+0.7**
JAGN	**Aguni-jima**	**1.63**	**297**	*e*S		**Sn**	**03**	**56 13.9**	**+0.7**
JTK	**Tokunoshima**	**1.92**	**2**	P		**Pn**	**03**	**55 57.1**	**-0.1**
JTK				S		**Sn**	**03**	**56 18.5**	**-1.8**
JKE	**Kume jima 2**	**1.93**	**284**	P		**Pn**	**03**	**55 57.5**	**+0.2**
JKE				S		**Sn**	**03**	**56 20.1**	**-0.4**
JMZ	**Minamidaito 2**	**2.12**	**91**	P		**Pn**	**03**	**55 57.4**	**-2.5**
JMZ				S		**Sn**	**03**	**56 19.6**	**-5.6**
JAM	**Amami Oshima**	**2.62**	**14**	P		**Pn**	**03**	**56 06.6**	**-0.3**
JAM				*e*S		**Sn**	**03**	**56 35.7**	**-2.0**
JZK	**Kikaishima**	**2.63**	**22**	P		**Pn**	**03**	**56 07.0**	**0.0**
JZK				*e*S		**Sn**	**03**	**56 37.4**	**-0.6**
JOGS	**Gusukube**	**3.32**	**251**	P		**Pn**	**03**	**56 16.8**	**+0.4**
JOGS				*e*S		**Sn**	**03**	**56 54.4**	**-0.5**
JMJ	**Miyako jima 2**	**3.40**	**253**	P		**Pn**	**03**	**56 17.8**	**+0.3**
JMJ				*e*S		**Sn**	**03**	**56 55.4**	**-1.4**
JTJ	**Tarama**	**3.96**	**253**	P		**Pn**	**03**	**56 24.8**	**-0.5**
JTJ				*e*S		**Sn**	**03**	**57 08.1**	**-2.6**
JIJ	**Ishigaki jima**	**4.54**	**252**	P		**Pn**	**03**	**56 32.3**	**-0.8**
JIJ				*e*S		**Sn**	**03**	**57 21.2**	**-3.7**
JKRS	**Kuro-shima**	**4.69**	**251**	P		**Pn**	**03**	**56 36.1**	**+0.8**
JKRS				*e*S		**Sn**	**03**	**57 30.2**	**+1.4**
IRIF	**Iriomote-Funau**	**4.90**	**253**	P		**Pn**	**03**	**56 38.1**	**0.0**
IRIF				*e*S		**Sn**	**03**	**57 31.4**	**-2.5**
YOJ	**Yonaguni jima**	**5.49**	**257**	*e*S		**Sn**	**03**	**57 35.1**	**-13**
NACB	**Ninganchiao**	**6.81**	**257**	*e*Pn		**Pn**	**03**	**57 02.8**	**-1.5**
NACB					Sn	**Sn**	**03**	**58 18.9**	**-2.0**
KSRS	**Korea Array**	**11.59**	**356**	LR		LR	04	03 12.2	
	comp=Z,152nm,18.7s,baz=355,slow=40								
CBIJ	**Chichi jima**	**11.99**	**81**	LR		LR	04	02 29.6	
	comp=Z,145nm,18.4s,baz=290,slow=36								
GUMO	**Guam**	**19.36**	**126**	LR		LR	04	05 43.7	
	comp=Z,68nm,20.0s,baz=353,slow=32								
SONM	**Songino Array**	**28.17**	**327**	P		**P**	**04**	**01 20.0**	**+3.9**
	0.9nm,0.7s,mb3.5,baz=145,slow=11,SNR=5.0								
CMAR	**Chiang Mai Arr**	**28.63**	**261**	P		**P**	**04**	**01 22.9**	**+2.3**
	0.7nm,0.3s,mb3.9,baz=59,slow=8.6,SNR=6.0								
CMAR					LR	LR	04	13 34.3	
	comp=Z,53nm,19.6s,MS3.1,baz=75,slow=38								
PETK	**Petropavlovsk-**	**34.72**	**31**	LR		LR	04	16 47.8	
	comp=Z,98nm,18.8s,MS3.6,baz=317,slow=37								
ZALV	**Zalesovo Beam**	**42.89**	**323**	P		**P**	**04**	**03 24.3**	**+2.3**
	1.0nm,0.6s,mb3.7,baz=101,slow=6.0,SNR=4.5								
WRA	**Warramunga Arr**	**45.84**	**173**	P		**P**	**04**	**03 46.0**	**+0.1**
	2.1nm,0.6s,mb4.2,baz=352,slow=8.3,SNR=20								
ASAR	**Alice Springs**	**49.47**	**174**	P		**P**	**04**	**04 14.8**	**+0.7**
	0.5nm,0.4s,mb3.9,baz=3.0,slow=13,SNR=13								
BVAR	**Borovoye Array**	**50.93**	**318**	P		**P**	**04**	**04 28.0**	**+3.1**
	0.8nm,0.7s,mb3.8,baz=51,slow=7.8,SNR=4.3								
AKASG	**Malin Array Be**	**76.19**	**320**	P		**P**	**04**	**07 13.1**	**+1.3**
	0.3nm,0.4s,mb3.6,baz=59,slow=6.1,SNR=2.9								
NB2	**NORSAR Subarra**	**79.90**	**334**	P		**P**	**04**	**07 32.8**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.7,baz=52,slow=5.6								
NOA	**NORSAR Array B**	**79.90**	**334**	P		**P**	**04**	**07 32.9**	**+0.7**
	comp=Z,1.3nm,0.8s,mb3.9,baz=52,slow=5.5,SNR=4.2								
GERES	**GERESS Array B**	**85.84**	**323**	P		**P**	**04**	**08 04.6**	**+1.4**
	comp=Z,0.8nm,0.8s,mb4.0,baz=35,slow=4.9,SNR=5.6								

*IDC **19** 04:07:36.3±8.3,3584N×7045E,h85km±76km, mb3.7/8, mb1 3.8/11,mb1mx3.6/25,mbtmp3.7/11,ML4.0/3,Error ellipse: s-maj=40.5km s-min=18.0km az=6.0*
*BJI **19** 04:07:37.8,3594N×7056E,h110km,mb4.4*
*ISCJB **19** 04:07:38.4±0.4,3595N±003×7063E±004,h126km±6km, mb3.8/8,Error ellipse: s-maj=6.0km s-min=4.3km az=156.9*
*NNC **19** 04:07:38.9±5.1,3665N×7034E,h0km,mb4.2,mpv4.0, Error ellipse: s-maj=48.8km s-min=34.3km az=50.0*
*NEIC **19** 04:07:40.1±0.9,3601N×7055E,h116km±9km,mb4.1/3, Error ellipse: s-maj=14.1km s-min=8.6km az=132.0*

ISC 19 04:07:39.5±0.4,3594N±003×7065E±004,h121km±6km, n65,σ1$23/82,mb3.8/8,10C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KBL	**Kabul**	**1.91**	**224**	*e*Pn		**Pn**	**04**	**08 12.6**	**+0.6**
KBL				*e*Sn		**Sn**	**04**	**08 36.3**	**-0.4**
CEP	**Cherat**	**2.35**	**153**	⇑P		**Pn**	**04**	**08 19.7**	**+2.3**
CEP				S		**Sn**	**04**	**08 50.0**	**+3.5**
CHCP	**Chirah Chowk**	**3.13**	**136**	P		**Pn**	**04**	**08 29.9**	**+2.4**
THW	**Thamme Wali**	**3.26**	**164**	P		**Pn**	**04**	**08 30.7**	**+1.4**
THN	**Thein Dam**	**5.46**	**128**	*e*P		**Pn**	**04**	**09 00.2**	**+1.5**
THN				*e*S		**Sn**	**04**	**10 01.4**	**+1.0**
KSH	**Kashi**	**5.53**	**48**	P		**Pn**	**04**	**09 04.3**	**+4.7**
KSH				S		**Sn**	**04**	**10 04.3**	**+2.3**
KSH				Smax					
	comp=N,27nm,0.6s								
KSH				Smax					
	comp=E,26nm,0.4s								
DLH	**Dalhousie**	**5.56**	**126**	*e*P		**Pn**	**04**	**09 00.0**	**0.0**
DLH				*ex*		x	04	10 05.0	
AML	**Almayashu**	**6.62**	**20**	*e*Pn		**Pn**	**04**	**09 14.4**	**+0.1**
	comp=E,93nm,0.4s								
AML				*e*Sn		**Sn**	**04**	**10 23.3**	**-5.1**
AML	**Almayashu**	**6.62**	**20**	P		**Pn**	**04**	**09 13.9**	**-0.4**
	SNR=94								
SDNR	**Sundarnagar**	**6.88**	**128**	*e*P		**Pn**	**04**	**09 18.0**	**+0.2**
SDNR				*e*S		**Sn**	**04**	**10 32.0**	**-2.6**
EKS2	**Erkin-Say**	**7.14**	**19**	*e*Pn		**Pn**	**04**	**09 21.6**	**+0.3**
	comp=E,14nm,0.5s								
EKS2	**Erkin-Say**	**7.14**	**19**	P		**Pn**	**04**	**09 21.7**	**+0.4**
	SNR=12								
KK31	**Karatay Array**	**7.16**	**359**	⇑Pn		**Pn**	**04**	**09 19.7**	**-1.8**
	comp=E,2.5nm,0.3s,baz=187,slow=13,SNR=82								
KK31				⇑Sn		**Sn**	**04**	**10 35.3**	**-6.0**
	comp=E,22nm,0.5s,baz=187,slow=23								
SMLA	**Simla**	**7.25**	**130**	*i* P		**Pn**	**04**	**09 23.5**	**+0.6**
SMLA				*i* S		**Sn**	**04**	**10 42.4**	**-1.3**
AAK	**Ala-Archa**	**7.32**	**23**	P		**Pn**	**04**	**09 23.6**	**-0.1**
	SNR=26								
KLP	**Kalpa**	**7.71**	**123**	*e*P		**Pn**	**04**	**09 29.7**	**+0.7**
KLP				*e*S		**Sn**	**04**	**10 52.0**	**-2.7**
KLP				AML		AML	04	10 58.7	
	comp=E,217nm,0.2s								
KLP				AML		AML	04	10 59.7	
	comp=N,217nm,0.4s								
USP	**Ospenovka**	**7.90**	**21**	P		**Pn**	**04**	**09 31.4**	**-0.1**
	SNR=7.0								
TKM2	**Tokmak 2**	**7.96**	**27**	⇑Pn		**Pn**	**04**	**09 32.0**	**-0.3**
	comp=N,8.3nm,0.6s								
TKM2				⇑Sn		**Sn**	**04**	**10 59.5**	**-1.1**
	comp=N,23nm,1.1s								
TKM2	**Tokmak 2**	**7.96**	**27**	*e*Pn		**Pn**	**04**	**09 32.2**	**0.0**
	comp=N,8.8nm,0.5s								
TKM2	**Tokmak 2**	**7.96**	**27**	P		**Pn**	**04**	**09 32.3**	**0.0**
	SNR=7.8								
KHET	**Khetri**	**8.98**	**149**	*e*P		**Pn**	**04**	**09 45.6**	**-0.6**
KHET				*e*S		**Sn**	**04**	**11 19.6**	**-5.9**
KHET				AML		AML	04	11 23.1	
	comp=N,56nm,0.3s								
NDI	**New Delhi**	**9.12**	**141**	*e*P		**Pn**	**04**	**09 47.0**	**-1.1**
NDI				*e*S		**Sn**	**04**	**11 23.0**	**-5.9**
JOSI	**Joshimath**	**9.19**	**123**	*e*P		**Pn**	**04**	**09 50.3**	**+1.2**
JOSI				*e*S		**Sn**	**04**	**11 24.8**	**-5.8**
JOSI				AML		AML	04	11 34.3	
	comp=N,308nm,0.7s								
JOSI				AML		AML	04	11 35.5	
	comp=E,209nm,0.6s								
KUDL	**Kundal**	**9.21**	**146**	*e*P		**Pn**	**04**	**09 48.9**	**-0.5**
KUDL				*e*S		**Sn**	**04**	**11 24.3**	**-6.9**
KUDL				AML		AML	04	11 31.8	
	comp=N,26nm,0.2s								
KALG	**Kalgarh**	**9.37**	**131**	*ex*		x	04	11 23.8	
KALG				AML		AML	04	11 30.8	
	comp=E,67nm,0.4s								
PYUN	**Piuthan**	**13.06**	**123**	*e*P		**Pn**	**04**	**10 38.7**	**-1.7**
	comp=E,34nm,0.3s								
DANN	**Dangsing**	**13.43**	**121**	*e*P		**Pn**	**04**	**10 44.1**	**-1.2**
	comp=E,86nm,0.5s								
KOLN	**Koldanda**	**13.68**	**123**	*e*P		**Pn**	**04**	**10 47.0**	**-1.5**
	comp=E,23nm,0.4s								
MK31	**Makanchi Array**	**13.92**	**35**	Pn		**Pn**	**04**	**10 51.6**	**+0.4**
	comp=E,7.4nm,0.7s,baz=208,slow=32,SNR=40								
MK31	**Makanchi Array**	**13.92**	**35**	*e*Pn		**Pn**	**04**	**10 52.3**	**+1.0**
MKAR	**Makanchi Array**	**13.92**	**35**	P		**Pn**	**04**	**10 51.4**	**+0.1**
	comp=E,0.9nm,0.3s,baz=210,slow=11,SNR=20								
GKN	**Gorkha**	**14.26**	**120**	*e*P		**Pn**	**04**	**10 54.4**	**-1.4**
	comp=E,30nm,0.3s								
DMN	**Daman**	**14.83**	**120**	*e*P		**Pn**	**04**	**11 02.3**	**-0.7**
	comp=E,29nm,0.4s								
KKN	**Kakani**	**14.84**	**119**	*e*P		**Pn**	**04**	**11 02.6**	**-0.6**
	comp=E,31nm,0.4s								
PKI	**Pulchoki**	**15.06**	**119**	*e*P		**Pn**	**04**	**11 05.8**	**-0.2**
	comp=E,29nm,0.4s								
GUN	**Gumba**	**15.20**	**117**	*e*P		**Pn**	**04**	**11 07.1**	**-0.6**
	comp=E,23nm,0.4s								
AB09	**Akbulak array**	**15.46**	**333**	⇑Pn		**Pn**	**04**	**11 08.1**	**-2.7**
	comp=E,5.5nm,0.5s								
AB09				⇓Sn		**Sn**	**04**	**13 48.5**	**-13**
	comp=E,4.3nm,0.8s								
JIRN	**Jiri**	**15.57**	**118**	*e*P		**Pn**	**04**	**11 12.3**	**0.0**
	comp=E,89nm,0.5s								
KURBB	**Kurchatov Arra**	**15.75**	**19**	⇓Pn		**Pn**	**04**	**11 16.7**	**+2.4**
	comp=E,1.8nm,0.8s								
KURK	**Kurchatov**	**15.86**	**19**	⇑Pn		**Pn**	**04**	**11 17.3**	**+1.7**
	comp=E,8.7nm,1.0s								
KURK	**Kurchatov**	**15.86**	**19**	*e*P		**Pn**	**04**	**11 18.1**	**+2.5**
	comp=E,8.9nm,0.9s								
RAMN	**Ramite**	**16.28**	**119**	*e*P		**Pn**	**04**	**11 20.9**	**-0.2**
	comp=E,25nm,0.4s								
VOSK	**Vostochnaya**	**16.79**	**1**	⇑Pn		**Pn**	**04**	**11 26.1**	**-0.9**
	comp=E,3.2nm,0.8s								
TAPN	**Taplejung**	**16.85**	**116**	*e*P		**Pn**	**04**	**11 28.4**	**+0.4**
	comp=E,50nm,0.5s								
ODAN	**Odare**	**16.90**	**118**	*e*P		**Pn**	**04**	**11 29.4**	**+0.7**
	comp=E,36nm,0.6s								
BVA0	**Borovoye Array**	**17.09**	**359**	Pn		**Pn**	**04**	**11 30.1**	**-0.6**
	comp=E,1.2nm,1.2s,baz=177,slow=8.2,SNR=13								
BVAR	**Borovoye Array**	**17.09**	**359**	P		**Pn**	**04**	**11 29.9**	**-0.8**
	comp=E,0.3nm,0.3s,baz=172,slow=12,SNR=10								
BRVK	**Borovoye**	**17.12**	**359**	*e*Pn		**Pn**	**04**	**11 29.4**	**-1.7**
	comp=E,3.0nm,0.8s								
AKTK	**Aktyubinsk**	**17.13**	**332**	P		**Pn**	**04**	**11 30.6**	**-0.7**
AKTK				S		**S**	**04**	**14 30.1**	**-12**
AKTO	**Aktyubinsk**	**17.13**	**332**	⇑Pn		**Pn**	**04**	**11 30.5**	**-0.8**
	comp=E,0.9nm,0.8s								
AKTO				⇑Sn		**Sn**	**04**	**14 29.7**	**-12**
	comp=E,1.3nm,1.1s								
AKTO	**Aktyubinsk**	**17.13**	**332**	P		**Pn**	**04**	**11 30.6**	**-0.7**
	comp=E,0.6nm,0.3s,baz=136,slow=14,SNR=18								
AKTO				S		**S**	**04**	**14 30.1**	**-12**
	comp=E,0.2nm,0.3s,baz=143,slow=20,SNR=3.9								
MIB	**Mutribah**	**20.49**	**259**	*e*P		**P**	**04**	**12 08.3**	**+0.6**
MIB				AMb		AMB	04	12 11.7	
	comp=Z,43nm,0.6s								
ZAA0	**Zalesovo Array**	**20.55**	**24**	*e*P		**P**	**04**	**12 09.0**	**+0.9**
ZALV	**Zalesovo Beam**	**20.55**	**24**	P		**P**	**04**	**12 09.1**	**+1.0**
	comp=Z,33nm,0.5s,baz=220,slow=11,SNR=55								
NAY	**Al-Naaiem**	**20.79**	**258**	*e*P		**P**	**04**	**12 09.2**	**-1.8**
NAY				AMb		AMB	04	12 17.7	
	comp=Z,13nm,1.3s								
GNI	**Garni**	**20.80**	**289**	P		**P**	**04**	**12 13.6**	**+2.6**
	comp=Z,18nm,0.7s,baz=90,slow=3.0,SNR=12								
GTA	**Gaotai**	**23.30**	**73**	*e*P		**P**	**04**	**12 40.5**	**+4.1**
GTA				AMB		AMB			
	comp=Z,5.0nm,0.7s,mb4.0								
SONM	**Songino Array**	**28.89**	**55**	P		**P**	**04**	**13 29.6**	**+2.9**
	comp=Z,1.3nm,0.9s,mb3.6,baz=258,slow=9.0,SNR=8.1								
IDI	**Anoyia**	**36.94**	**283**	P		**P**	**04**	**14 37.2**	**+0.4**
	comp=Z,11nm,0.9s,mb4.8,baz=107,slow=17,SNR=2.5								
ARCES	**ARCESS Array B**	**41.56**	**338**	P		**P**	**04**	**15 15.3**	**+0.7**
	comp=Z,6.1nm,1.1s,mb4.2,baz=100,slow=5.0,SNR=3.9								
ARCES	**ARCESS Array B**	**41.56**	**338**	P		**P**	**04**	**15 15.3**	**+0.7**
NOA	**NORSAR Array B**	**44.66**	**323**	P		**P**	**04**	**15 39.8**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.5,baz=99,slow=7.8,SNR=2.9								
TORD	**Torodi Ar. Bea**	**65.42**	**269**	P		**P**	**04**	**18 08.7**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.4,baz=50,slow=5.9,SNR=12								
WRA	**Warramunga Arr**	**81.94**	**122**	P		**P**	**04**	**19 47.3**	**+1.5**
	comp=Z,0.2nm,0.4s,mb3.3,baz=323,slow=4.9,SNR=7.7								
ASAR	**Alice Springs**	**84.17**	**125**	P		**P**	**04**	**19 58.7**	**+1.5**
	comp=Z,0.4nm,0.7s,mb3.4,baz=299,slow=6.1,SNR=5.1								

JMA 19 04:10:38.6,2576N×14307E,h78km,M3.5,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
JHHJ	**Haha-jima-NKT**	**1.18**	**317**	P		**Pn**	**04**	**11 00.1**	**+0.4**
CBIJ	**Chichi jima**	**1.55**	**329**	P		**Pn**	**04**	**11 05.0**	**+0.5**
CBIJ				*e*S		Sn	04	11 24.5	+0.5

*GUC **19** 04:59:42.7±4.8,2285S×7060W,h39km±21km,ML4.2*
*ISCJB **19** 04:59:43.0±0.8,2284S±003×7066W±007,h37km±7km, mb3.9/5,Error ellipse: s-maj=10.5km s-min=5.3km az=13.8*
*NEIC **19** 04:59:44.7±0.6,2271S×7055W,h35km,mb4.1/1,Error ellipse: s-maj=14.4km s-min=9.4km az=100.0*
*IDC **19** 04:59:47.8±2.6,2279S×7047W,h59km±20km,mb3.6/5, mb1 3.7/8,mb1mx3.5/19,mbtmp3.6/8,ML3.6/3,MS3.3/4, Ms1 3.3/4,ms1mx2.9/21,Error ellipse: s-maj=24.5km s-min=19.5km az=152.0*

ISC 19 04:59:41.7±1.2,2278S±004×7067W±006,h13km±7km,n26, σ1$28/34,mb3.9/5,1C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
MECH	**Mejillones**	**0.39**	**148**	*e*P		**Pg**	**04**	**59 50.3**	**+0.9**
MECH				*i* S		**Sg**	**04**	**59 56.1**	**+1.4**
MECH				AML		AML	04	59 56.8	
	comp=E,104μm,0.4s								
CEN1	**Los Morros**	**0.75**	**145**	*e*P		**Pg**	**04**	**59 57.3**	**+1.0**
CEN1				*i* S		**Sg**	**05**	**00 07.4**	**+1.3**
CEN1				AML		AML	05	00 10.4	
	comp=N,4μm,0.4s								
ANCH	**Antofagasta**	**0.93**	**165**	*e*P		**Pg**	**04**	**59 58.6**	**-1.1**
ANCH				*i* S		**Sg**	**05**	**00 09.9**	**-2.1**
ANCH				AML		AML	05	00 20.0	
	comp=E,80μm,0.0s								
PB06	**Plate Boundary**	**1.02**	**86**	⇓*i* P		**Pb**	**05**	**00 00.0**	**-1.1**
PB06				*i* S		**Sg**	**05**	**00 12.4**	**-2.3**
PB07	**Plate Boundary**	**1.27**	**35**	*e*P		**Pn**	**05**	**00 06.0**	**+0.9**
PB07				*i* S		**Sb**	**05**	**00 22.4**	**+0.7**
LVC	**Limon Verde**	**1.63**	**85**	P		**Pn**	**05**	**00 10.4**	**+0.3**
	comp=E,278nm,0.3s,baz=260,slow=12,SNR=459								
LVC				S		**Sn**	**05**	**00 30.3**	**-0.7**
	comp=E,600nm,0.3s,baz=90,slow=12,SNR=24								
LVC				LR		LR	05	00 58.1	
	comp=E,1μm,18.7s,baz=219,slow=49								
LVC	**Limon Verde**	**1.63**	**85**	*e*Pn		**Pn**	**05**	**00 10

JMK	**Ichinoseki**	**0.38**	**264**	⇑P		**Pn**	**06 00 32.2**	**-0.2**
JMK				S		**Sn**	**06 00 40.7**	**-0.2**
JOM	**Ohasama**	**0.58**	**327**	⇑P		**Pn**	**06 00 34.5**	**+0.2**
JOM				S		**Sn**	**06 00 44.5**	**+0.3**
JIO	**Ouri**	**0.60**	**208**	⇑P		**Pn**	**06 00 34.3**	**-0.2**
JIO				S		**Sn**	**06 00 44.0**	**-0.6**
JOU	**Okura**	**1.03**	**233**	⇑P		**Pn**	**06 00 39.3**	**-0.2**
JOU				S		**Sn**	**06 00 53.1**	**-0.4**
JYK	**Kaneyama**	**1.05**	**266**	⇓P		**Pn**	**06 00 39.7**	**-0.2**
JYK				*e*S		**Sn**	**06 00 53.9**	**-0.2**
JMM	**Marumori**	**1.33**	**213**	⇑P		**Pn**	**06 00 42.7**	**-0.8**
JMM				S		**Sn**	**06 00 59.4**	**-1.1**
JANG	**Nango**	**1.39**	**354**	P		**Pn**	**06 00 44.2**	**0.0**
JAH	**Hinai**	**1.45**	**326**	⇓P		**Pn**	**06 00 45.6**	**+0.5**
JAH				*e*S		**Sn**	**06 01 03.6**	**+0.2**
JYS	**Shirataka**	**1.50**	**240**	⇓P		**Pn**	**06 00 45.7**	**0.0**
JYS				S		**Sn**	**06 01 04.6**	**+0.2**
JYA	**Atsumi**	**1.61**	**256**	⇓P		**Pn**	**06 00 46.9**	**-0.2**
JYA				S		**Sn**	**06 01 06.9**	**-0.1**
MJAR	**Matsushiro Arr**	**3.69**	**230**	P		**Pn**	**06 01 16.8**	**+1.4**
	8.1nm,0.3s,baz=40,slow=12,SNR=69							
MAJO	**Matsushiro**	**3.69**	**230**	*e*Pn		**Pn**	**06 01 16.7**	**+1.2**
MAT	**Matsushiro**	**3.69**	**230**	P		**Pn**	**06 01 16.7**	**+1.3**
MAT				*e*S		**Sn**	**06 02 00.7**	**+2.9**
ASAJ	**Asahikawa**	**5.17**	**7**	P		**Pn**	**06 01 34.7**	**-0.8**
	4.1nm,0.3s,baz=220,slow=12,SNR=8.8							
ASAJ				S		**Sn**	**06 02 31.4**	**-2.3**
	0.5nm,0.3s,baz=107,slow=32,SNR=2.0							
KSRS	**Korea Array**	**10.95**	**266**	P		**Pn**	**06 02 58.2**	**+3.7**
	0.8nm,0.3s,baz=76,slow=15,SNR=6.1							
SONM	**Songino Array**	**26.93**	**301**	P		**P**	**06 05 54.8**	**-0.7**
	0.3nm,0.4s,mb3.2,baz=98,slow=8.8,SNR=3.2							
ZALV	**Zalesovo Beam**	**40.79**	**311**	P		**P**	**06 07 54.1**	**-1.0**
	2.7nm,0.5s,mb4.4,baz=81,slow=8.4,SNR=12							
MKAR	**Makanchi Array**	**43.30**	**300**	P		**P**	**06 08 14.8**	**-0.8**
	3.7nm,0.6s,mb4.3,baz=86,slow=9.8,SNR=22							
KURK	**Kurchatov**	**44.93**	**307**	*e*P		**P**	**06 08 27.4**	**-1.2**
	3.1nm,0.8s,mb4.1							
INK	**Inuvik**	**52.55**	**28**	*e*P		**P**	**06 09 27.1**	**+0.5**
	50nm,0.5s							
WRAB	**Tennant Creek**	**59.02**	**188**	*e*P		**P**	**06 10 11.8**	**-1.7**
	1.6nm,0.4s,mb4.4							
WRA	**Warramunga Arr**	**59.03**	**188**	P		**P**	**06 10 12.1**	**-1.4**
	2.0nm,0.4s,mb4.5,baz=5.6,slow=6.9,SNR=75							
WRA				pP		pP	06 10 29.4	-2.0
	0.4nm,0.4s,baz=5.1,slow=7.0,SNR=3.0							
WRA				sP		sP	06 10 38.2	-0.9
	0.8nm,0.6s,baz=5.4,slow=7.1,SNR=3.3							
ASAR	**Alice Springs**	**62.75**	**188**	P		**P**	**06 10 37.5**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=358,slow=5.6,SNR=9.6							
ASAR				pP		pP	06 10 56.8	+0.1
	0.4nm,0.6s,baz=11,slow=8.5,SNR=3.4							
NB2	**NORSAR Subarra**	**72.48**	**337**	P		pP	06 11 57.1	-0.9
	comp=Z,0.8nm,0.5s,baz=37,slow=6.2							
NOA	**NORSAR Array B**	**72.48**	**337**	P		**P**	**06 11 41.0**	**+1.5**
	comp=Z,0.2nm,0.5s,mb3.2,baz=23,slow=2.9,SNR=2.8							
NOA				pP		pP	06 11 57.5	-0.5
	comp=Z,1.5nm,0.7s,baz=38,slow=6.1,SNR=4.1							
AKASG	**Malin Array Be**	**72.90**	**322**	P		**P**	**06 11 42.9**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.4,baz=43,slow=6.1,SNR=4.7							
AKASG				pP		pP	06 11 59.3	-1.4
	comp=Z,0.8nm,0.4s,baz=45,slow=6.7,SNR=6.3							
NVAR	**Mina Array Bea**	**73.64**	**54**	P		**P**	**06 11 47.5**	**+0.6**
	comp=Z,1.0nm,0.6s,mb3.7,baz=289,slow=6.1,SNR=9.3							
NVAR	**Mina Array Bea**	**73.64**	**54**	P		**P**	**06 11 47.5**	**+0.6**
DUG	**Dugway**	**75.91**	**50**	*e*P		**P**	**06 12 01.4**	**+1.4**
	comp=Z,1.5nm,0.6s,mb3.9							
PDAR	**Pinedale Array**	**76.14**	**46**	P		**P**	**06 12 01.6**	**+0.4**
	comp=Z,1.1nm,0.6s,mb3.7,baz=258,slow=1.9,SNR=10							
PV10	**Paradox Valley**	**79.31**	**49**	*e*P		**P**	**06 12 20.4**	**+1.5**
TXAR	**Lajitas Array**	**88.75**	**53**	P		**P**	**06 13 07.5**	**+0.5**
	comp=Z,0.5nm,0.6s,mb3.7,baz=290,slow=3.7,SNR=8.3							
LPAZ	**La Paz**	**145.48**	**57**	PKPbc		PKPbc	06 19 52.1	+0.7
	comp=Z,1.0nm,0.4s,baz=333,slow=3.4,SNR=5.0							
LPAZ	**La Paz**	**145.48**	**57**	PKPbc		PKPbc	06 19 52.1	+0.7
LPAZ				*e*PKPdf		PKPdf	06 19 52.4	+1.1

ATH ***19*** *06:07:07.9,3540N×2606E,h24km±3km,MD3.6/7*
CSEM ***19*** *06:07:07.5±0.1,3525N×2611E,h20km,MD3.6,Error ellipse: s-maj=3.4km s-min=1.9km az=170.0*
IDC ***19*** *06:07:07.0±1.5,3494N×2629E,h0km,mb3.7/3,mb1 3.6/4, mb1mx3.4/21,mbtmp3.6/4,ML4.2/1, Error ellipse: s-maj=69.4km s-min=24.7km az=135.0*
ISCJB ***19*** *06:07:07.7±0.5,3527N±004×2612E±003,h15km±6km, mb3.5/3,Error ellipse: s-maj=6.5km s-min=4.5km az=4.6*
NEIC ***19*** *06:07:07.9,3540N×2606E,h24km,MD3.6(ATH),After ATH.*
THE ***19*** *06:07:08.0,3526N×2608E,h6km±3km,Error ellipse: s-maj=4.4km s-min=0.7km az=170.0*

ISC 19 06:07:07.3±0.6,3532N±003×2614E±003,h4km±5km,n30, σ0§87/40,mb3.5/3,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.22**	**163**	P		**Pg**	**06 07 11.5**	**0.0**
ZKR				S		**Sg**	**06 07 15.3**	**+1.0**
NPS	**Neapolis**	**0.44**	**262**	*e*PB		**Pg**	**06 07 16.3**	**+0.7**
NPS				*e*SB		**Sg**	**06 07 21.8**	**+0.5**
LAST	**Lasithi**	**0.56**	**254**	P		**Pg**	**06 07 18.1**	**0.0**
LAST				S		**Sg**	**06 07 25.4**	**0.0**
KARP	**Karpathos**	**0.86**	**75**	*e*PN		**Pn**	**06 07 25.1**	**-1.1**
KARP				*e*SN		**Sn**	**06 07 38.6**	**-0.7**
IDI	**Anoyia**	**1.02**	**268**	P		**Pg**	**06 07 27.1**	**+0.2**
SIVA	**Sivas**	**1.13**	**255**	P		**Pg**	**06 07 27.7**	**-1.3**
SIVA				S		**Sg**	**06 07 42.8**	**-0.8**
THR1	**Thera Island**	**1.18**	**332**	P		**Pg**	**06 07 29.6**	**-0.3**
THR1				S		**Sg**	**06 07 46.6**	**+1.3**
THR6	**Thira Island,**	**1.19**	**330**	P		**Pg**	**06 07 29.9**	**-0.3**
THR3	**Thira Island,**	**1.24**	**331**	P		**Pg**	**06 07 30.4**	**-0.6**
THR4	**Thira Island,**	**1.28**	**332**	P		**Pg**	**06 07 31.8**	**-0.1**
VAM	**Vamos**	**1.59**	**274**	*e*PN		**Pn**	**06 07 36.7**	**+0.5**
APE	**Apeiranthos**	**1.81**	**344**	P		**Pn**	**06 07 38.4**	**-0.8**
APE				S		**Sn**	**06 08 03.0**	**+0.3**
APE	**Apeiranthos**	**1.81**	**344**	*e*Pn		**Pn**	**06 07 38.7**	**-0.5**
APE	**Apeiranthos**	**1.81**	**344**	*e*PN		**Pn**	**06 07 38.7**	**-0.5**
APE	**Apeiranthos**	**1.81**	**344**	P		**Pn**	**06 07 38.4**	**-0.8**
APE	**Apeiranthos**	**1.81**	**344**	*e*Pn		**Pn**	**06 07 38.7**	**-0.5**
APE				S		**Sn**	**06 08 03.0**	**+0.3**
ARG	**Arkhangelos**	**1.84**	**61**	*e*PB		**Pb**	**06 07 40.3**	**-1.3**
BDRM	**Kayabasi**	**2.03**	**31**	*e*P		**Pn**	**06 07 43.9**	**+1.5**
SMG	**Samos**	**2.45**	**71**	*e*PN		**Pn**	**06 07 47.9**	**-0.1**
KYTH	**Kithira**	**2.70**	**292**	*e*PN		**Pn**	**06 07 51.0**	**-0.4**
VLI	**Veliai**	**2.95**	**299**	*e*PN		**Pn**	**06 07 53.5**	**-1.4**
URLA	**Izmir**	**3.05**	**7**	*i*P		**Pn**	**06 07 55.6**	**-0.7**
CHOS	**Chios island**	**3.06**	**359**	P		**Pn**	**06 07 56.4**	**0.0**
DID	**Didima**	**3.20**	**314**	P		**Pn**	**06 07 58.5**	**+0.2**
DID				S		**Sn**	**06 08 37.1**	**+0.2**
LTK	**Loutraki**	**3.71**	**317**	P		**Pn**	**06 08 05.6**	**+0.2**
LTK				S		**Sn**	**06 08 48.9**	**-0.6**
ITM	**Ithomi**	**3.88**	**300**	P		**Pn**	**06 08 10.0**	**+2.4**
AKASG	**Malin Array Be**	**15.53**	**7**	Pn		**Pn**	**06 10 51.0**	**+4.0**
	0.9nm,0.3s,baz=196,slow=11,SNR=3.8							
TORD	**Torodi Ar. Bea**	**31.21**	**231**	P		**P**	**06 13 26.9**	**-0.9**
	0.3nm,0.4s,mb3.5,baz=31,slow=8.3,SNR=8.3							
MKAR	**Makanchi Array**	**43.02**	**57**	P		**P**	**06 15 09.2**	**+1.5**
	0.6nm,0.5s,mb3.6,baz=267,slow=8.4,SNR=4.7							
ZALV	**Zalesovo Beam**	**44.31**	**46**	P		**P**	**06 15 19.5**	**+1.4**
	0.5nm,0.4s,mb3.6,baz=290,slow=9.8,SNR=2.8							

CSEM ***19*** *06:07:30.6±0.2,3696N×2937E,h12km,MD2.9,Error ellipse: s-maj=5.3km s-min=3.1km az=174.0*
ISK ***19*** *06:07:30.8,3695N×2932E,h10km,MD2.9*
ISCJB ***19*** *06:07:31.1±1.4,3693N±008×2931E±005,h9km±7km, Error ellipse: s-maj=13.4km s-min=6.4km az=165.3*

ISC 19 06:07:31.9±1.3,3695N±008×2933E±006,h15km±5km,n13, σ0§82/17,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**33**	*i*P		**Pg**	**06 07 38.2**	**-0.9**
GOLH	**Golhisar**	**0.34**	**33**	*i*P		**Pg**	**06 07 38.2**	**-0.9**
GOLH				*i*S		**Sg**	**06 07 44.4**	**+0.5**
TURN	**Turunc**	**0.58**	**263**	*i*P		**Pg**	**06 07 45.3**	**+1.8**
DENT	**Denizli**	**0.84**	**344**	*e*PG		**Pg**	**06 07 47.3**	**-1.0**
DENT				*e*SG		**Sg**	**06 07 59.3**	**0.0**
YER	**Yerkesik**	**0.86**	**283**	*e*PG		**Pg**	**06 07 48.5**	**-0.1**
YER				*e*SG		**Sg**	**06 07 59.3**	**-0.6**
BCK	**Bucak**	**1.13**	**63**	*e*PN		**Pn**	**06 07 52.5**	**-0.6**
MLSB	**Milas**	**1.29**	**286**	*e*PN		**Pn**	**06 07 55.0**	**-0.4**
AYDN	**Tasoluk**	**1.36**	**302**	*i*P		**Pn**	**06 07 56.9**	**+0.7**
AYDN	**Tasoluk**	**1.36**	**302**	*i*P		**Pn**	**06 07 56.9**	**+0.6**
AYDN				*i*S		**Sn**	**06 08 14.8**	**+0.8**
KHL	**Karahalli**	**1.38**	**6**	*e*PN		**Pn**	**06 07 57.2**	**+0.6**
BDRM	**Kayabasi**	**1.51**	**275**	*i*S		**Sn**	**06 08 16.2**	**-1.6**
KULA	**Kula-Manisa**	**1.65**	**342**	*e*PN		**Pn**	**06 08 00.9**	**+0.6**
AKS	**Akhisar**	**2.27**	**329**	*e*PN		**Pn**	**06 08 09.1**	**+0.2**

ISCJB ***19*** *06:33:52.8±0.4,4349N±002×1923E±003,h2km±4km, Error ellipse: s-maj=3.7km s-min=2.8km az=29.1*
PDG ***19*** *06:33:53.2±0.2,4348N×1923E,h11km±1km,MD2.7/3, ML2.7/8,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
NEIC ***19*** *06:33:53.2,4348N×1923E,h11km,ML2.7(PDG), ML2.6(BUC),After PDG.*
CSEM ***19*** *06:33:53.4±0.1,4346N×1922E,h12km,ML2.7/8,Error ellipse: s-maj=2.0km s-min=1.4km az=128.0*
BEO ***19*** *06:33:54.1±0.3,4348N×1921E,h9km±2km,ML3.0/10*

ISC 19 06:33:53.8±0.4,4348N±002×1923E±003,h3km±4km,n37, σ1§08/67,12C-13D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLE	**Pljevlja**	**0.19**	**142**	⇑*i*Pg		**Pg**	**06 33 57.6**	**0.0**
PLE				*e*Sg		**Sg**	**06 34 00.2**	**+0.1**
UPM	**Unac-Piva**	**0.36**	**220**	⇓*i*Pg		**Pg**	**06 34 00.4**	**-0.4**
UPM				*e*Sg		**Sg**	**06 34 06.3**	**+0.8**
BBLS	**Lazići**	**0.40**	**18**	⇓*i*Pg		**Pg**	**06 34 02.0**	**+0.4**
BBLS				*e*Sg		**Sg**	**06 34 08.0**	**+1.2**
SJES	**Sjenica**	**0.59**	**112**	⇓*i*Pg		**Pg**	**06 34 04.4**	**-0.6**
SJES				*e*Sg		**Sg**	**06 34 13.0**	**+0.4**
SJES	**Sjenica**	**0.59**	**112**	*e*Pg		**Pg**	**06 34 04.4**	**-0.6**
SJES				*e*Sg		**Sg**	**06 34 12.9**	**+0.3**
NKY	**Niksic**	**0.69**	**194**	⇓*i*Pg		**Pg**	**06 34 06.0**	**-1.1**
NKY				*e*Sg		**Sg**	**06 34 17.1**	**+1.1**
BRY	**Bratogost**	**0.77**	**221**	⇓*i*Pg		**Pg**	**06 34 07.0**	**-1.6**
BRY				*e*Sg		**Sg**	**06 34 19.4**	**+0.9**
BEY	**Berane**	**0.78**	**141**	⇑*i*Pg		**Pg**	**06 34 08.1**	**-0.7**
BEY				*e*Sg		**Sg**	**06 34 19.2**	**+0.2**
IVA	**Berane**	**0.78**	**141**	⇑*i*Pg		**Pg**	**06 34 08.1**	**-0.7**
IVA				*e*Sg		**Sg**	**06 34 19.2**	**+0.2**
TREB	**Trebinje**	**1.00**	**220**	*e*Pg		**Pg**	**06 34 11.5**	**-1.5**
TREB				*e*Sg		**Sg**	**06 34 25.6**	**-0.4**
PVY	**Plav**	**1.04**	**148**	⇓*i*Pg		**Pg**	**06 34 12.5**	**-1.3**
PDG	**Podgorica**	**1.05**	**179**	⇑*i*Pg		**Pg**	**06 34 12.5**	**-1.5**
TTG	**Podgorica**	**1.05**	**179**	⇑*i*Pg		**Pg**	**06 34 12.5**	**-1.5**
TTG				*e*Sg		**Sg**	**06 34 29.2**	**+1.6**
GRUS	**Gruza**	**1.15**	**69**	⇓*i*Pg		**Pg**	**06 34 15.7**	**-0.2**
GRUS				*e*Sg		**Sg**	**06 34 31.9**	**+1.1**
HCY	**Herceg Novi**	**1.17**	**208**	⇑*i*Pg		**Pg**	**06 34 14.8**	**-1.4**
HCY				*e*Sg		**Sg**	**06 34 32.9**	**+1.6**
BUM	**Brajici-Budva**	**1.21**	**192**	⇑*i*Pg		**Pg**	**06 34 15.8**	**-1.1**
BUM				*e*Sg		**Sg**	**06 34 34.5**	**+1.9**
STON	**Ston**	**1.28**	**242**	*e*Pn		**Pn**	**06 34 16.6**	**-2.0**
STON				Sn		**Sn**	**06 34 37.1**	**+0.9**
STON	**Ston**	**1.28**	**242**	*e*Pn		**Pn**	**06 34 16.5**	**-2.1**
STON				Sn		**Sn**	**06 34 37.0**	**+0.8**
ULC	**Ulcinj**	**1.52**	**179**	⇑*i*Pg		**Pg**	**06 34 21.6**	**-1.3**
ULC				*e*Sg		**Sg**	**06 34 43.7**	**+1.1**
FGSL	**Fruska Gora**	**1.72**	**14**	⇓*i*Pn		**Pn**	**06 34 24.1**	**-0.6**
FGSL				*e*Sg		**Sg**	**06 34 50.2**	**+1.0**
FGSL	**Fruska Gora**	**1.72**	**14**	*e*Pn		**Pn**	**06 34 24.2**	**-0.5**
FGSL				*e*Sn		**Sn**	**06 34 49.2**	**+1.9**
FGSL				*e*Sg		**Sg**	**06 34 50.2**	**+1.0**
BLY	**Banja Luka**	**1.94**	**311**	*e*Pn		**Pn**	**06 34 28.9**	**+1.2**
BLY				*e*Sg		**Sg**	**06 34 56.7**	**+0.5**
BARS	**Barje**	**2.01**	**109**	*e*Pn		**Pn**	**06 34 28.7**	**+0.1**
BARS				*e*Sg		**Sg**	**06 34 58.1**	**-0.1**
KRUS	**Krusevo**	**2.59**	**144**	*e*Pn		**Pn**	**06 34 37.8**	**+1.2**
KRUS				*e*Sn		**Sn**	**06 35 08.8**	**+0.2**
KRUS	**Krusevo**	**2.59**	**144**	*e*Pn		**Pn**	**06 34 37.8**	**+1.2**
KRUS				*e*Sn		**Sn**	**06 35 08.9**	**+0.3**
OHR	**Ohrid**	**2.64**	**153**	*e*Pn		**Pn**	**06 34 40.9**	**+3.6**
OHR				*e*Sn		**Sn**	**06 35 16.1**	**+6.3**
BZS	**Buzias**	**2.73**	**38**	⇓P		**Pn**	**06 34 36.3**	**-2.2**
BZS	**Buzias**	**2.73**	**38**	*e*Pn		**Pn**	**06 34 38.1**	**-0.5**
BZS				*e*Sn		**Sn**	**06 35 11.4**	**-0.7**
BZS	**Buzias**	**2.73**	**38**	⇓*i*P		**Pn**	**06 34 36.3**	**-2.3**
PKSM	**Moragy**	**2.76**	**351**	⇑P		**Pn**	**06 34 38.8**	**-0.2**
PKSM				S		**Sn**	**06 35 21.0**	**+8.2**
PKSM	**Moragy**	**2.76**	**351**	⇓*i*Pn		**Pn**	**06 34 38.4**	**-0.6**
PKSM				*e*Sn		**Sn**	**06 35 10.4**	**-2.4**
PKSM	**Moragy**	**2.76**	**351**	⇑*i*P		**Pn**	**06 34 38.8**	**-0.2**
PKSM	**Moragy**	**2.76**	**351**	S		**Sn**	**06 35 21.0**	**+8.2**
GZR	**Gura Zlata**	**3.18**	**52**	⇓P		**Pn**	**06 34 40.8**	**-3.9**
GZR				S		**Sn**	**06 35 22.7**	**-0.4**
GZR	**Gura Zlata**	**3.18**	**52**	⇓*i*P		**Pn**	**06 34 40.8**	**-3.9**
GZR				S		**Sn**	**06 35 22.7**	**-0.4**
PSZ	**Piszkesteto**	**4.46**	**6**	⇑P		**Pn**	**06 35 02.0**	**-0.3**
PSZ	**Piszkesteto**	**4.46**	**6**	⇑*i*P		**Pn**	**06 35 02.0**	**-0.3**

IDC ***19*** *06:46:00.5±5.2,3833N×7370E,h75km±46km,mb3.8/7, mb1 4.0/11,mb1mx3.8/25,mbtmp3.9/11,ML4.2/4, Error ellipse: s-maj=33.6km s-min=18.8km az=21.0*
ISCJB ***19*** *06:46:02.2±0.4,3846N±002×7396E±005,h112km±5km, mb4.0/10,Error ellipse: s-maj=6.6km s-min=3.3km az=171.5*
MOS ***19*** *06:46:02.0±1.4,3850N×7384E,h103km,mb4.2/8,Error ellipse: s-maj=12.7km s-min=6.4km az=93.6*
BJI ***19*** *06:46:03.3,3877N×7375E,h107km*
NEIC ***19*** *06:46:04.9±0.9,3859N×7377E,h112km±8km,mb4.8/5, Error ellipse: s-maj=13.0km s-min=9.4km az=123.0*
NNC ***19*** *06:46:11.7±3.6,3916N×7362E,h190km±28km,mb3.5, mpv4.8,Error ellipse: s-maj=35.7km s-min=15.4km az=1.0*

ISC 19 06:46:03.5±0.3,3846N±002×7401E±005,h111km±5km, n95,σ1§35/117,mb4.0/10,10C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.68**	**356**	*e*Pn		**Pn**	**06 46 58.7**	**+0.2**
AML				*e*Sn		**Sn**	**06 47 39.7**	**-1.4**
AML	**Almayashu**	**3.68**	**356**	P		**Pn**	**06 46 58.9**	**+0.4**
	SNR=248							
KZA	**Kyzart**	**3.74**	**14**	P		**Pn**	**06 47 00.8**	**+1.4**
	SNR=147							
UCH	**Uchtor**	**3.79**	**6**	*e*Pn		**Pn**	**06 47 00.9**	**+0.9**
UCH				*e*Sn		**Sn**	**06 47 42.4**	**-1.3**
UCH	**Uchtor**	**3.79**	**6**	P		**Pn**	**06 47 01.3**	**+1.3**
	SNR=51							
ULHL	**Ulahol**	**4.15**	**24**	P		**Pn**	**06 47 06.6**	**+1.7**
	SNR=159							
AAK	**Ala-Archa**	**4.19**	**5**	P		**Pn**	**06 47 06.8**	**+1.4**
	SNR=98							
EKS2	**Erkin-Say**	**4.21**	**358**	*e*Pn		**Pn**	**06 47 06.2**	**+0.6**
EKS2				*e*Sn		**Sn**	**06 47 52.2**	**-1.6**
EKS2	**Erkin-Say**	**4.21**	**358**	P		**Pn**	**06 47 06.4**	**+0.8**
	SNR=385							
KBK	**Karagaybulak**	**4.26**	**9**	P		**Pn**	**06 47 08.0**	**+1.7**
	SNR=37							
CHMS	**Chumysh**	**4.57**	**7**	P		**Pn**	**06 47 11.8**	**+1.3**
	SNR=61							
TKM2	**Tokmak 2**	**4.62**	**15**	⇑P		**Pn**	**06 47 13.0**	**+1.8**
	65nm,0.7s							
TKM2				⇑S		**Sn**	**06 48 03.5**	**-0.2**
	125nm,0.8s							
TKM2	**Tokmak 2**	**4.62**	**15**	*e*Pn		**Pn**	**06 47 12.4**	**+1.2**
TKM2				*e*Sn		**Sn**	**06 48 04.6**	**+0.8**
TKM2	**Tokmak 2**	**4.62**	**15**	*i* PN		**Pn**	**06 47 12.9**	**+1.7**
TKM2				pmax	pmax			
	comp=Z,86nm,0.2s							
TKM2	**Tokmak 2**	**4.62**	**15**	P		**Pn**	**06 47 12.9**	**+1.7**
	SNR=109							
USP	**Ospenovka**	**4.82**	**4**	P		**Pn**	**06 47 15.1**	**+1.2**
	SNR=24							
CHCP	**Chirah Chowk**	**4.82**	**187**	P		**Pn**	**06 47 18.5**	**+4.5**
CEP	**Cherat**	**4.92**	**201**	P		**Pn**	**06 47 18.8**	**+3.5**
CEP				S		**Sn**	**06 48 13.0**	**+1.8**
KK31	**Karatay Array**	**5.35**	**331**	⇓P		**Pn**	**06 47 19.7**	**-1.3**
	comp=Z,49nm,0.1s,baz=136,slow=12,SNR=59							
KK31				⇑S		**Sn**	**06 48 15.3**	**-6.0**
	comp=Z,100nm,0.2s,baz=146,slow=22							
KK31	**Karatay Array**	**5.35**	**331**	*i* PN		**Pn**	**06 47 19.6**	**-1.4**
KK31				pmax	pmax			
	comp=Z,49nm,0.1s							
KBL	**Kabul**	**5.59**	**227**	*e*Pn		**Pn**	**06 47 25.5**	**+1.2**
	comp=Z,54nm,0.7s							
KBL				*e*Sn		**Sn**	**06 48 27.3**	**0.0**
KBL	**Kabul**	**5.59**	**227**	*e*PN		**Pn**	**06 47 25.5**	**+1.2**
KBL				*e*			06 48 27.3	
KBL				pmax	pmax			
	comp=Z,54nm,0.7s							
DLH	**Dalhousie**	**6.11**	**164**	*e*P		**Pn**	**06 47 32.0**	**+0.6**
DLH				*e*x		x	06 48 43.0	
THN	**Thein Dam**	**6.17**	**166**	*e*P		**Pn**	**06 47 34.8**	**+2.6**
THN				*e*S		**Sn**	**06 48 39.8**	**-1.5**
SDNR	**Sundarnagar**	**7.35**	**160**	*e*P		**Pn**	**06 47 49.6**	**+1.4**
SDNR				*e*S		**Sn**	**06 49 05.0**	**-5.1**
SMLA	**Simla**	**7.76**	**160**	*i* P		**Pn**	**06 47 55.2**	**+1.5**
SMLA				*i* S		**Sn**	**06 49 15.0**	**-4.9**
SMLA				AML	AML		06 49 20.8	
	comp=E,504nm,0.5s							
SMLA				AML	AML		06 49 22.7	
	comp=N,430nm,0.4s							
DDI	**Dehra Dun**	**8.77**	**156**	*e*P		**Pn**	**06 48 07.6**	**+0.1**
DDI				*e*S		**Sn**	**06 49 40.6**	**-4.0**
NDI	**New Delhi**	**10.11**	**164**	*e*P		**Pn**	**06 48 25.0**	**-0.6**
NDI				*e*S		**Sn**	**06 50 08.0**	**-9.0**
MK31	**Makanchi Array**	**10.32**	**34**	⇑P		**Pn**	**06 48 29.4**	**+1.0**
	comp=N,9.5nm,0.9s,baz=212,slow=13,SNR=18							
MK31	**Makanchi Array**	**10.32**	**34**	*e*Pn		**Pn**	**06 48 29.4**	**+1.0**
MK31	**Makanchi Array**	**10.32**	**34**	*i* P		**Pn**	**06 48 29.8**	**+1.4**
MK31				pmax	pmax			
	comp=Z,6.0nm,0.6s							
MKAR	**Makanchi Array**	**10.32**	**34**	P		**Pn**	**06 48 30.0**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=213,slow=14,SNR=23							
MKAR	**Makanchi Array**	**10.32**	**34**	P		**Pn**	**06 48 30.0**	**+1.6**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
LGTI	**Lohaghat**	**10.37**	**148**	*e*P		**Pn**	**06 48 29.1**	**0.0**
LGTI				*e*S		**Sn**	**06 50 15.5**	**-7.8**
WMQ	**Urumqi**	**11.63**	**58**	*e*P		**Pn**	**06 48 46.8**	**+1.0**
AJM	**Ajmer**	**11.95**	**177**	*e*S		**Sn**	**06 50 52.0**	**-10**
KURBB	**Kurchatov Arra**	**12.58**	**13**	⇑P		**Pn**	**06 48 56.5**	**-1.9**
	comp=Z,2.6nm,0.8s							
KURK	**Kurchatov**	**12.69**	**13**	⇑P		**Pn**	**06 48 57.9**	**-1.9**
	comp=Z,1.1nm,0.8s							
KURK	**Kurchatov**	**12.69**	**13**	*e*Pn		**Pn**	**06 48 57.7**	**-2.0**
	comp=Z,1.3nm,0.9s							
KURK	**Kurchatov**	**12.69**	**13**	*e*P		**Pn**	**06 48 57.7**	**-2.1**
KURK				pmax	pmax			
	comp=Z,13nm,0.9s							
PYUN	**Piuthan**	**12.76**	**141**	*e*P		**Pn**	**06 48 59.3**	**-1.6**
	comp=Z,54nm,0.4s							
DANN	**Dangsing**	**12.95**	**138**	*e*P		**Pn**	**06 49 02.2**	**-1.2**
	comp=Z,41nm,0.4s							
KOLN	**Koldanda**	**13.34**	**140**	*e*P		**Pn**	**06 49 07.5**	**-0.9**
	comp=Z,14nm,0.3s							
GKN	**Gorkha**	**13.69**	**136**	*e

YKA			pmax	pmax	
	comp=Z,1.0nm,0.5s				
WRA	**Warramunga Arr**	**81.05 124**	P	**P**	**06 58 08.1 +1.8**
	comp=Z,0.9nm,0.6s,mb3.8,baz=327,slow=5.3,SNR=18				
WRA	**Warramunga Arr**	**81.05 124**	P	**P**	**06 58 08.1 +1.9**
WRA			pmax	pmax	
	comp=Z,1.0nm,0.6s				
ASAR	**Alice Springs**	**83.46 127**	P	**P**	**06 58 20.6 +1.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=322,slow=4.9,SNR=5.1				
ASAR	**Alice Springs**	**83.46 127**	P	**P**	**06 58 20.6 +1.8**
ASAR			pmax	pmax	
	comp=Z,1.0nm,0.7s				

*IDC **19** 07:02:09.2±1.5, 1793N×12095E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.7/4, Error ellipse: s-maj=41.8km s-min=27.7km az=68.0*
*ISCJB **19** 07:02:11.1±0.9, 1803N±005×12071E±003, h13km±5km, mb3.5/2, Error ellipse: s-maj=9.1km s-min=5.3km az=5.3*
*MAN **19** 07:02:11, 1797N× 12067E, h5km, mb4.0, ML2.8, MS2.5*

ISC 19 07:02:12.0±0.8, 1801N±005×12071E±003, h14km±5km, n14, σ1§17/20, mb3.5/2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.26**	**251**	⇑*eP*	**Pg**	**07 02 16.8**	**-0.7**
SIPP				*i* S	**Sg**	**07 02 21.6**	**+0.4**
ABRA	**Dolores**	**0.36**	**180**	*eP*	**Pg**	**07 02 18.7**	**-0.6**
ABRA				*eS*	**Sg**	**07 02 24.1**	**0.0**
APYP	**Conner**	**0.53**	**106**	*eP*	**Pg**	**07 02 22.4**	**0.0**
APYP				*eS*	**Sg**	**07 02 30.4**	**+1.0**
CVP	**Callao Caves**	**1.10**	**106**	*eP*	**Pb**	**07 02 31.9**	**-0.9**
SGCP	**Mt. Cagua**	**1.29**	**79**	*eP*	**Pn**	**07 02 35.8**	**+0.1**
CAUP	**Cauayan**	**1.50**	**135**	*eP*	**Pg**	**07 02 40.2**	**-0.6**
CAUP				*eS*	**Sg**	**07 03 03.1**	**+2.8**
BOLP	**Bolinao**	**1.79**	**205**	*eP*	**Pn**	**07 02 42.4**	**-0.1**
BOLP				*eS*	**Sn**	**07 03 03.6**	**-1.4**
PALP	**Palanan**	**1.89**	**120**	*eP*	**Pg**	**07 02 46.3**	**-1.9**
PALP				*eS*	**Sg**	**07 03 12.8**	**0.0**
SCZP	**Santa Cruz**	**2.35**	**199**	*eP*	**Pn**	**07 02 52.3**	**+2.1**
BALP	**Baler**	**2.40**	**160**	*eP*	**Pn**	**07 02 52.5**	**+1.5**
KSRS	**Korea Array**	**20.38**	**17**	P	**P**	**07 06 47.4**	**-1.0**
	1.2nm,0.5s,baz=200,slow=11,SNR=5.0						
CMAR	**Chiang Mai Arr**	**20.68**	**275**	P	**P**	**07 06 53.4**	**+1.6**
	0.7nm,0.3s,baz=87,slow=10.0,SNR=5.7						
MKAR	**Makanchi Array**	**42.65**	**321**	P	**P**	**07 10 09.2**	**+1.1**
	0.9nm,0.8s,mb3.6,baz=127,slow=9.6,SNR=4.5						
ASAR	**Alice Springs**	**43.38**	**162**	P	**P**	**07 10 12.3**	**-1.8**
	0.3nm,0.3s,mb3.5,baz=339,slow=7.0,SNR=6.8						

IDC 19 07:29:46.1±3.2, 218N×9496E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/22, mbtmp3.7/5, ML4.6/1, Error ellipse: s-maj=108.2km s-min=27.8km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.64**	**13**	Pn	Pn	07 33 41.6	+0.7
	0.9nm,0.3s,baz=196,slow=15,SNR=2.9						
WRA	**Warramunga Arr**	**44.45**	**122**	P	P	07 37 59.2	0.0
	0.4nm,0.9s,baz=298,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**45.79**	**348**	P	P	07 38 09.3	-0.1
	1.0nm,0.7s,baz=161,slow=7.1,SNR=4.7						
SONM	**Songino Array**	**46.54**	**11**	P	P	07 38 15.5	+0.1
	0.2nm,0.4s,baz=204,slow=10,SNR=2.5						
ZALV	**Zalesovo Beam**	**52.27**	**352**	P	P	07 38 59.0	-0.1
	1.3nm,0.6s,baz=176,slow=5.9,SNR=4.2						

IDC 19 07:31:45.4±1.0, 2897N×9684E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.6/22, mbtmp3.6/6, Error ellipse: s-maj=51.5km s-min=20.2km az=62.0, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**20.24**	**19**	P	P	07 36 21.8	-0.2
	0.4nm,0.5s,baz=206,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**21.11**	**331**	P	P	07 36 32.1	+0.6
	0.6nm,0.5s,baz=134,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**26.45**	**344**	P	P	07 37 23.9	0.0
	1.4nm,0.5s,baz=153,slow=10.0,SNR=6.1						
WRA	**Warramunga Arr**	**60.62**	**139**	P	P	07 41 58.6	+0.4
	0.6nm,0.4s,baz=322,slow=8.4,SNR=22						
ASAR	**Alice Springs**	**63.34**	**142**	P	P	07 42 16.2	-0.2
	0.5nm,0.7s,baz=326,slow=7.0,SNR=7.1						
TORD	**Torodi Ar. Bea**	**88.14**	**284**	P	P	07 44 38.4	-0.3
	0.3nm,0.8s,baz=67,slow=4.8,SNR=2.5						

*IDC **19** 07:36:01.6±1.1, 3571N×7084E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.5/24, mbtmp3.5/6, ML3.5/2, Error ellipse: s-maj=35.1km s-min=28.3km az=58.0*
*ISCJB **19** 07:36:22.7±1.1, 3652N±006×709E±0.1, h194km±13km, mb3.0/3, Error ellipse: s-maj=17.7km s-min=6.1km az=151.0*
*NNC **19** 07:36:28.6±7.1, 3695N×7071E, h182km±91km, mb2.8, mpv3.8, Error ellipse: s-maj=64.5km s-min=35.0km az=17.0*

ISC 19 07:36:23.6±1.1, 3652N±006×709E±01, h187km±13km, n26, σ0§92/30, mb3.1/3, 6C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.70**	**134**	*eP*	**Pn**	**07 37 46.8**	**0.0**
THN				*ex*	x	07 38 50.5	
KK31	**Karatay Array**	**6.58**	**358**	⇑P	**Pn**	**07 37 58.4**	**+0.3**
	1.8nm,0.3s,baz=176,slow=12,SNR=30						
KK31				⇓S	**Sn**	**07 39 08.6**	**-4.3**
	19nm,0.5s,baz=182,slow=22,SNR=5.1						
TKM2	**Tokmak 2**	**7.34**	**28**	⇑P	**Pn**	**07 38 08.6**	**+0.4**
	7.7nm,0.6s						
TKM2				⇑S	**Sn**	**07 39 29.0**	**-1.9**
	4.5nm,0.6s						
SMLA	**Simla**	**7.49**	**134**	*i* P	**Pn**	**07 38 10.2**	**0.0**
SMLA				*i* S	**Sn**	**07 39 29.9**	**-4.8**
SMLA				*ex*	x	07 39 33.9	
	comp=E,449nm,0.4s						
SMLA				*ex*	x	07 39 35.9	
	comp=N,606nm,0.4s						
KLP	**Kalpa**	**7.87**	**127**	*eP*	**Pn**	**07 38 14.9**	**-0.3**
KLP				*eS*	**Sn**	**07 39 36.6**	**-7.1**
KLP				AML	AML	07 39 44.8	
	comp=E,165nm,0.6s						
KLP				AML	AML	07 39 47.9	
	comp=N,151nm,0.6s						
JOSI	**Joshimath**	**9.36**	**127**	*eS*	**Sn**	**07 40 11.5**	**-7.7**
JOSI				AML	AML	07 40 17.6	
	comp=E,82nm,0.8s						
JOSI				AML	AML	07 40 17.7	
	comp=N,131nm,0.7s						
KHET	**Khetri**	**9.39**	**152**	*eS*	**Sn**	**07 40 12.4**	**-7.5**
KALG	**Kalgarh**	**9.61**	**134**	*ex*	x	07 40 14.7	
PYUN	**Piuthan**	**13.22**	**126**	*eP*	**Pn**	**07 39 22.6**	**-1.7**
	comp=N,18nm,0.5s						
DANN	**Dangsing**	**13.57**	**123**	*eP*	**Pn**	**07 39 28.3**	**-0.4**
	comp=N,14nm,0.4s						
KOLN	**Koldanda**	**13.84**	**125**	*eP*	**Pn**	**07 39 30.8**	**-1.3**
	comp=N,5.6nm,0.3s						
GKN	**Gorkha**	**14.38**	**122**	*eP*	**Pn**	**07 39 39.2**	**+0.4**
	comp=N,13nm,0.3s						
DMN	**Daman**	**14.95**	**122**	*eP*	**Pn**	**07 39 46.3**	**+0.5**
	comp=N,6.4nm,0.3s						
KKN	**Kakani**	**14.96**	**122**	*eP*	**Pn**	**07 39 46.5**	**+0.6**
	comp=N,10nm,0.4s						
AB09	**Akbulak array**	**15.04**	**331**	⇑P	**Pn**	**07 39 46.6**	**0.0**
	comp=N,1.2nm,0.5s						
AB09				⇑S	**S**	**07 42 28.0**	**-5.8**
	comp=N,2.4nm,1.2s						
PKI	**Pulchoki**	**15.19**	**122**	*eP*	**Pn**	**07 39 49.7**	**+1.0**
	comp=N,36nm,0.8s						
JIRN	**Jiri**	**15.67**	**120**	*eP*	**Pn**	**07 39 55.5**	**+0.9**
	comp=N,18nm,0.3s						
RAMN	**Ramite**	**16.40**	**121**	*eP*	**Pn**	**07 40 03.5**	**+0.2**
	comp=N,18nm,0.5s						
BVAR	**Borovoye Array**	**16.50**	**359**	P	**Pn**	**07 40 05.9**	**+1.5**
	comp=N,0.2nm,0.3s,baz=172,slow=12,SNR=4.2						
AKTO	**Aktyubinsk**	**16.72**	**330**	⇑P	**Pn**	**07 40 07.2**	**+0.3**
	comp=N,0.4nm,0.9s						
AKTO	**Aktyubinsk**	**16.72**	**330**	P	**Pn**	**07 40 06.5**	**-0.4**
	comp=N,0.2nm,0.3s,baz=143,slow=13,SNR=4.2						
TAPN	**Taplejung**	**16.93**	**118**	*eP*	**Pn**	**07 40 11.1**	**+1.4**
	comp=N,14nm,0.4s						

ZALV	**Zalesovo Beam**	**19.93**	**25**	P	**P**	**07 40 42.0**	**+1.2**
	comp=N,0.7nm,0.3s,baz=224,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**65.64**	**269**	P	**P**	**07 46 47.2**	**-0.8**
	comp=N,0.2nm,0.3s,mb3.4,baz=54,slow=5.8,SNR=5.8						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**07 48 22.2**	**-1.0**
	comp=N,0.2nm,0.4s,mb3.1,baz=323,slow=4.6,SNR=6.2						
ASAR	**Alice Springs**	**84.33**	**125**	P	**P**	**07 48 33.8**	**-0.9**
	comp=N,0.1nm,0.5s,mb2.9,baz=302,slow=6.2,SNR=3.3						

IDC 19 07:56:36.1±1.8, 227N×12804E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=135.7km s-min=22.6km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.92**	**165**	P	P	08 01 42.5	+0.6
	0.6nm,0.3s,baz=344,slow=10,SNR=27						
ASAR	**Alice Springs**	**26.40**	**168**	P	P	08 02 14.5	0.0
	0.2nm,0.6s,baz=347,slow=7.6,SNR=3.1						
STKA	**Stephens Creek**	**36.32**	**160**	P	P	08 03 40.7	-1.0
	1.4nm,0.9s,baz=0.0,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**59.49**	**325**	P	P	08 06 41.5	+0.4
	1.0nm,0.5s,baz=116,slow=8.4,SNR=14						

KRSC 19 07:58:49.6±1.2, 5398N×16035E, h69km±68km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.91**	**193**	*eP*	Pn	07 59 08.0	+1.2
SPN				*i* S	Sn	07 59 21.7	+2.1
NLC	**Nalytchevo**	**1.01**	**217**	*eP*	Pn	07 59 09.8	+1.7
NLC				*i* S	Sn	07 59 24.7	+2.9
AVH	**Avacha**	**1.20**	**234**	*eP*	Pn	07 59 12.7	+2.2
AVH				*i* S	Sn	07 59 29.3	+3.2
TUMR	**Tumrok**	**1.31**	**355**	P	Pn	07 59 14.0	+2.0
TUMR				*i* S	Sn	07 59 31.5	+2.7
PET	**Petropavlovsk**	**1.40**	**227**	*eP*	Pn	07 59 14.8	+1.7
PET				*i* S	Sn	07 59 33.2	+2.5
GNL	**Ganaly**	**1.46**	**260**	*eP*	Pn	07 59 15.7	+1.8
GNL				*i* S	Sn	07 59 35.0	+2.8
KMNR	**Kamenistaya**	**1.78**	**358**	P	Pn	07 59 19.2	+1.0
RUS	**Russkaya**	**1.90**	**216**	P	Pn	07 59 20.5	+0.6
RUS				*i* S	Sn	07 59 43.0	+0.1
SRDR	**Sredinnyy**	**2.37**	**351**	P	Pn	07 59 26.9	+0.8
KBTR	**Krutoberegovo**	**2.65**	**31**	P	Pn	07 59 31.8	+1.9

*ISCJB **19** 08:12:06.8±1.1, 3691N±008×339E±009, h12km±11km, Error ellipse: s-maj=14.4km s-min=10.4km az=32.8*
*CSEM **19** 08:12:06.1±0.2, 3687N×343E, h2km, mb3.9/5, Error ellipse: s-maj=10.8km s-min=5.0km az=45.0*
*CRAAG **19** 08:12:06.0, 3675N×340E, Ml3.3*
*MDD **19** 08:12:07.8±0.6, 3680N×342E, h0km, mb3.9/5, Error ellipse: s-maj=8.8km s-min=4.9km az=27.0, PRIMO*
*NEIC **19** 08:12:11.5, 37.11N×332E, h0km, MG3.9(MDD), After MDD.*

ISC 19 08:12:06.9±1.1, 369N±01×342E±009, h3km±15km, n14, σ1§52/20, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.20**	**166**	P	**Pg**	**08 12 08.5**	**-2.2**
ABMS				P		08 13 42.3	
ABA	**Alger-Bouzarea**	**0.34**	**246**	P	**Pg**	**08 12 13.7**	**+0.3**
EMHD	**Djebel Mahouad**	**0.83**	**207**	P	**Pg**	**08 12 21.0**	**-1.8**
AKF	**Akfadou**	**0.97**	**108**	P	**Pb**	**08 12 26.4**	**+0.1**
ATAF	**Djebel Tarf**	**1.27**	**147**	P	**Pn**	**08 12 21.0**	**-11**
EIBI	**Ibiza**	**2.65**	**322**	P	**Pn**	**08 12 51.6**	**+1.1**
	36nm,1.1s,SNR=7.5						
EIBI				S	**Sn**	**08 13 20.5**	**-2.6**
	3.9nm,0.4s						
EIBI	**Ibiza**	**2.65**	**322**	P	**Pn**	**08 12 51.6**	**+1.1**
	36nm,1.1s,SNR=7.5						
EIBI				S	**Sn**	**08 13 20.5**	**-2.6**
	3.9nm,0.4s						
ETOS	**Mallorca**	**2.86**	**351**	P	**Pn**	**08 12 54.4**	**+1.0**
	2.3nm,0.2s,SNR=9.5						
ETOS				S	**Sn**	**08 13 27.2**	**-1.1**
	3.6nm,0.4s						
ETOS	**Mallorca**	**2.86**	**351**	P	**Pn**	**08 12 54.4**	**+1.1**
	2.3nm,0.2s,SNR=9.5						
ETOS				S	**Sn**	**08 13 27.2**	**-1.1**
	3.6nm,0.4s						
ETOB	**Tobarra**	**4.29**	**295**	P	**Pn**	**08 13 14.9**	**+1.9**
	3.5nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.29**	**295**	P	**Pn**	**08 13 14.9**	**+1.9**
	3.5nm,0.3s,SNR=7.9						
ECHE	**Chera**	**4.35**	**309**	P	**Pn**	**08 13 15.7**	**+1.9**
	2.5nm,0.2s,SNR=13						
EMOS	**Mosqueruela**	**4.58**	**319**	P	**Pn**	**08 13 18.2**	**+1.2**
	1.3nm,0.2s,SNR=8.0						
EMOS				S	**Sn**	**08 14 08.9**	**-1.7**
	1.0nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.58**	**319**	P	**Pn**	**08 13 18.2**	**+1.2**
	1.3nm,0.2s,SNR=8.0						
EMOS				S	**Sn**	**08 14 08.9**	**-1.7**
	1.0nm,0.3s,SNR=7.9						

*ISCJB **19** 08:20:09.9±0.4, 909N±003×6345W±002, h33km, Error ellipse: s-maj=4.7km s-min=2.9km az=159.0*
*NEIC **19** 08:20:09.8, 900N×6348W, h22km, MD4.3(TRN), MD3.7(CAR), After TRN.*
NEIC Felt at Ciudad Guayana.
*TRN **19** 08:20:09.9, 904N×6346W, h25km*
*FUNV **19** 08:20:10.1, 907N×6332W, h23km, MW4.0*

ISC 19 08:20:10.2±0.5, 906N±003×6345W±002, h27km±4km, n56, σ1§29/101, 1C-5D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORIV	**Oritupano**	**0.04**	**73**	⇓*iP*	**Pb**	**08 20 13.8**	**-1.0**
ORIV				*i* S	**Sb**	**08 20 18.1**	**+0.2**
PRGV	**PARIAGUAN**	**1.22**	**256**	⇑*eP*	**Pn**	**08 20 32.4**	**+0.9**
PRGV				*eS*	**Sn**	**08 20 51.1**	**+3.9**
PRGV	**PARIAGUAN**	**1.22**	**256**	*eP*	**Pn**	**08 20 32.6**	**+1.0**
PRGV				*eS*	**Sn**	**08 20 51.1**	**+3.9**
GURV	**El Guri**	**1.34**	**164**	*eP*	**Pn**	**08 20 32.5**	**-0.7**
GURV				*eS*	**Sn**	**08 20 50.4**	**+0.3**
PCRV	**Puerto La Cruz**	**1.61**	**314**	*eP*	**Pn**	**08 20 35.9**	**-1.1**
PCRV				*eS*	**Sn**	**08 20 51.1**	**-5.8**
PCRV	**Puerto La Cruz**	**1.61**	**314**	*eP*	**Pn**	**08 20 37.7**	**+0.7**
PCRV				*eS*	**Sn**	**08 20 57.4**	**+0.5**
CRUV	**Carupano**	**1.62**	**7**	*eP*	**Pn**	**08 20 37.7**	**+0.6**
CRUV	**Carupano**	**1.62**	**7**	*eP*	**Pn**	**08 20 36.0**	**-1.1**
RIOV	**Rio Grande**	**1.89**	**121**	*eP*	**Pn**	**08 20 39.4**	**-1.4**
RIOV	**Rio Grande**	**1.89**	**121**	*eP*	**Pn**	**08 20 39.5**	**-1.2**
GUIV	**Guiria**	**1.99**	**37**	*eP*	**Pn**	**08 20 40.4**	**-1.7**
GUIV				*eS*	**Sn**	**08 21 03.2**	**-3.0**
GUIV	**Guiria**	**1.99**	**37**	*eP*	**Pn**	**08 20 40.9**	**-1.2**
GUIV				*eS*	**Sn**	**08 21 03.2**	**-3.0**
BUAY	**Buenos Aires**	**2.03**	**59**	⇓*iP*	**Pn**	**08 20 45.9**	**+3.2**
BUAY				*eS*	**Sn**	**08 21 10.2**	**+3.1**
BUAY	**Buenos Aires**	**2.03**	**59**	⇓*eP*	**Pn**	**08 20 43.1**	**+0.4**
BUAY				*eS*	**Sn**	**08 21 06.8**	**-0.4**
ALNG	**Atlantic LNG**	**2.06**	**57**	*eP*	**Pn**	**08 20 47.0**	**+3.9**
ALNG				*eS*	**Sn**	**08 21 09.2**	**+1.2**
ALNG	**Atlantic LNG**	**2.06**	**57**	*eP*	**Pn**	**08 20 44.7**	**+1.6**
ALNG				*eS*	**Sn**	**08 21 09.2**	**+1.2**
SIPA	**Siparia**	**2.20**	**60**	⇓*iP*	**Pn**	**08 20 48.9**	**+3.9**
SIPA				*eS*	**Sn**	**08 21 12.6**	**+1.2**
SIPA	**Siparia**	**2.20**	**60**	⇓*eP*	**Pn**	**08 20 46.3**	**+1.2**
SIPA				*eS*	**Sn**	**08 21 12.6**	**+1.2**
ITEV	**Isla Los Testi**	**2.30**	**8**	*eP*	**Pn**	**08 20 45.3**	**-1.2**
TCE	**Chacachacare**	**2.33**	**46**	*eP*	**Pn**	**08 20 47.8**	**+0.9**
TCE				*eS*	**Sn**	**08 21 12.6**	**-2.1**
TCE	**Chacachacare**	**2.33**	**46**	*e*	**Pn**	**08 20 46.1**	**-0.8**
TCE	**Chacachacare**	**2.33**	**46**	*eP*	**Pn**	**08 20 47.8**	**+0.9**
TCE				*eS*	**Sn**	**08 21 12.6**	**-2.1**
TPP	**Pointe-a-Pierr**	**2.33**	**57**	*eP*	**Pn**	**08 20 49.3**	**+2.4**
TPP				*eS*	**Sn**	**08 21 23.6**	**+8.9**
TPP	**Pointe-a-Pierr**	**2.33**	**57**	*eP*	**Pn**	**08 20 46.5**	**-0.3**
CUPV	**Cœpira**	**2.51**	**293**	*eP*	**Pn**	**08 20 49.8**	**+0.5**
CUPV				*eS*	**Sn**	**08 21 20.6**	**+1.5**
CUPV	**Cœpira**	**2.51**	**293**	*eP*	**Pn**	**08 20 49.7**	**+0.3**
CUPV				*eS*	**Sn**	**08 21 20.6**	**+1.5**
TRN	**Trinidad (W)**	**2.56**	**52**	*eP*	**Pn**	**08 20 53.0**	**+3.0**
TRN				*eS*	**Sn**	**08 21 30.5**	**+10**
TRN	**Trinidad (W)**	**2.56**	**52**	*eP*	**Pn**	**08 20 48.6**	**-1.4**
TRN				*eS*	**Sn**	**08 21 20.9**	**+0.6**
TBH	**Brigand Hill**	**2.74**	**59**	*eP*	**Pn**	**08 20 55.6**	**+3.1**
TBH				*eS*	**Sn**	**08 21 33.6**	**+8.8**
TBH	**Brigand Hill**	**2.74**	**59**	*eP*	**Pn**	**08 20 51.6**	**-0.9**
TBH				*eS*	**Sn**	**08 21 25.2**	**+0.5**
MERV	**Las Mercedes**	**2.82**	**274**	*eP*	**Pn**	**08 20 53.9**	**+0.3**
MERV				*eS*	**Sn**	**08 21 27.6**	**+0.9**
BIRV	**Birongo**	**3.12**	**297**	*eP*	**Pn**	**08 20 58.7**	**+1.1**
BIRV				*eS*	**Sn**	**08 21 27.6**	**-6.4**
BIRV	**Birongo**	**3.12**	**297**	*eP*	**Pn**	**08 20 58.7**	**+1.1**
BIRV				*eS*	**Sn**	**08 21 34.5**	**+0.5**
TPR	**Prospect**	**3.38**	**51**	*eP*	**Pn**	**08 21 00.6**	**-0.6**
TPR				*eS*	**Sn**	**08 21 34.9**	**-5.5**
TPR				*eS*	**Sn**	**08 21 36.6**	**-3.8**
TPR	**Prospect**	**3.38**	**51**	*e*	**Pn**	**08 20 56.6**	**-4.6**
TPR	**Prospect**	**3.38**	**51**	*eP*	**Pn**	**08 21 00.6**	**-0.6**
TPR				*eS*	**Sn**	**08 21 39.0**	**-1.4**
BOT	**Bacolet**	**3.41**	**52**	*eP*	**Pn**	**08 21 03.0**	**+1.3**
BOT				*eS*	**Sn**	**08 21 34.6**	**-6.6**
GRGR	**Grenville**	**3.53**	**30**	*e*Pn	**Pn**	**08 21 01.8**	**-1.5**
GRGR				*eS*	**Sn**	**08 21 40.5**	**-3.7**
GRW	**Mount Saint Ca**	**3.55**	**30**	*eP*	**Pn**	**08 21 03.3**	**-0.3**
GRW				*eS*	**Sn**	**08 21 39.0**	**-5.7**
GRW	**Mount Saint Ca**	**3.55**	**30**	*eP*	**Pn**	**08 21 03.3**	**-0.3**
GRW				*eS*	**Sn**	**08 21 43.4**	**-1.2**
TOSP	**Speyside**	**3.63**	**52**	*eP*	**Pn**	**08 21 07.7**	**+3.0**
TOSP				*eS*	**Sn**	**08 21 41.9**	**-4.8**
LUEV	**Luepa**	**3.75**	**148**	*eP*	**Pn**	**08 21 04.6**	**-1.8**
BAUV	**El Baul**	**4.54**	**269**	*eP*	**Pn**	**08 21 16.8**	**-0.4**
BAUV				*eS*	**Sn**	**08 22 07.6**	**-1.5**
BAUV	**El Baul**	**4.54**	**269**	*eP*	**Pn**	**08 21 16.9**	**-0.3**
BAUV				*eS*	**Sn**	**08 22 07.6**	**-1.5**
TURV	**Turiamo**	**4.54**	**288**	*eP*	**Pn**	**08 21 18.0**	**+0.7**
TURV				*eS*	**Sn**	**08 22 08.2**	**-1.1**
TURV	**Turiamo**	**4.54**	**288**	*eP*	**Pn**	**08 21 18.0**	**+0.7**
TURV				*eS*	**Sn**	**08 22 08.2**	**-1.1**
FCV	**Fort Charlotte**	**4.61**	**28**	*eP*	**Pn**	**08 21 21.6**	**+3.4**
FCV				*eS*	**Sn**	**08 22 12.5**	**+1.5**
FCV	**Fort Charlotte**	**4.61**	**28**	*eP*	**Pn**	**08 21 20.0**	**+1.8**
FCV				*eS*	**Sn**	**08 22 08.8**	**-2.2**
SVB	**Belmont**	**4.71**	**27**	*eP*	**Pn**	**08 21 21.1**	**+1.5**
SVB				*eS*	**Sn**	**08 22 13.1**	**-0.2**
SVV	**Soufriere Volc**	**4.77**	**27**	*eP*	**Pn**	**08 21 21.1**	**+0.7**
SVV				*eS*	**Sn**	**08 22 13.5**	**-1.2**
BHS	**Barnard House**	**4.79**	**28**	*eP*	**Pn**	**08 21 24.1**	**+3.5**
SLB	**Belfond**	**5.29**	**26**	*eP*	**Pn**	**08 21 27.6**	**0.0**
SLB				*eS*	**Sn**	**08 22 27.7**	**-0.1**
SLB	**Belfond**	**5.29**	**26**	*eP*	**Pn**	**08 21 29.7**	**+2.1**
SLB				*eS*	**Sn**	**08 22 26.5**	**-1.3**
TEPV	**Terepaima**	**5.74**	**279**	*eP*	**Pn**	**08 21 33.7**	**0.0**
TEPV				*eS*	**Sn**	**08 22 35.9**	**-2.8**
CURV	**Curarigua**	**6.49**	**279**	*eP*	**Pn**	**08 21 44.0**	**-0.1**

*MOS **19** 08:29:31.4±1.2, 4529N×15070E, h64km, mb4.3/1, Error ellipse: s-maj=46.1km s-min=23.7km az=144.2*
*IDC **19** 08:29:36.6±6.0, 4557N×15042E, h92km±57km, mb3.4/4, mb1 3.7/6, mb1mx3.4/23, mbtmp3.4/6, ML3.5/2, Error ellipse: s-maj=134.2km s-min=32.3km az=142.0*
*JMA **19** 08:29:39.7±0.3, 4488N×15027E, h103km, M3.9*
*ISCJB **19** 08:29:40.8±1.3, 450N±02×1499E±02, h178km±15km, mb3.4/4, Error ellipse: s-maj=36.4km s-min=9.9km az=137.0*

ISC 19 08:29:40.4±1.5, 453N±02×1500E±03, h149km±19km, n27, σ1§07/36, mb3.5/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.49**	**270**	PN	**Pn**	**08 30 03.0**	**-6.7**
KUR				*eS*	**Sn**	**08 30 25.8**	**-6.3**
KUR				pmax	pmax		
	comp=N,160nm,0.4s						
KUR				pmax	pmax		
	comp=Z,240nm,0.4s						
KUR				smax			
	comp=E,3μm,0.8s						
KUR				smax			
	comp=N,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.18**	**249**	PN	**Pn**	**08 30 26.8**	**-3.1**
YUK				*eS*	**Sn**	**08 31 09.0**	**+0.8**
YUK				smax			
	comp=E,200nm,0.5s						
YUK				smax			
	comp=N,350nm,0.4s						
NEM2	**Nemuro 2**	**3.58**	**240**	P	**Pn**	**08 30 34.4**	**-0.6**
NEM2				*eS*	**Sn**	**08 31 15.9**	**-1.4**
JNK	**Nakash**	**4.12**	**248**	P	**Pn**	**08 30 42.8**	**+0.8**
JAK	**Akkeshi**	**4.42**	**241**	P	**Pn**	**08 30 45.6**	**-0.4**
JAR	**Ashorobuto**	**4.87**	**249**	P	**Pn**	**08 30 53.1**	**+1.2**
JOB	**Onbets**	**5.01**	**244**	P	**Pn**	**08 30 54.3**	**+0.5**
ASAJ	**Asahikawa**	**5.

s-min=13.1km az=98.0
NEIC ***19*** *08:32:55.0±0.3, 10.12N×138.32E, h10km, mb4.7/16, Error ellipse: s-maj=9.6km s-min=6.7km az=107.0*
GCMT ***19*** *08:32:55.0±0.4, 10.19N×138.31E, h21km±1km, MW4.9/52, Moment Tensor Solution. s24,c24; s52,c79; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=-2.72±.20; Mθθ=0.13±.11; Mφφ=2.85±.14; Mrθ=-0.34±.27; Mrφ=0.32±.09; Mθφ=0.64±.21; Best double couple: M=2.89700×10¹⁶ NP1:φs=15.00000°,δ40.00000°,λ=-77.00000°. NP2: φs=177.00000°,δ52.00000°,λ=-101.00000°. Principal axes: T 2.9480, Plg6.0000°, Azm275.0000°; N -0.0990, Plg9.0000°, Azm184.0000°; P -2.8460, Plg80.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***19*** *08:32:56.8±0.3, 10.12N±005×13837E±006, h33km, mb4.6/41, MS3.8/19 Error ellipse: s-maj=8.4km s-min=6.8km az=26.4*
MOS ***19*** *08:32:56.6±1.1, 10.13N×138.37E, h33km, mb4.9/15, Error ellipse: s-maj=14.3km s-min=8.7km az=92.0*

ISC 19 08:32:58.8±0.3, 1011N±005×13839E±005, h35km, (h16km±6.2km: pP-P), n86, σ0°94/71, mb4.6/41, MS3.8/19, 4C, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GUMO	**Guam**	**7.22**	**61**	Pn	**Pn**		**08 34 42.5**	**+0.6**
	20nm,0.3s,baz=180,slow=21,SNR=6.8							
GUMO				Sn	**Sn**		**08 36 01.0**	**-1.8**
	17nm,0.3s,baz=180,slow=22,SNR=6.1							
GUMO				LR	LR		08 37 00.5	
	comp=Z,1μm,18.8s,baz=180,slow=34							
GUMO				T			08 42 22.7	
	15nm,0.3s,baz=0.0,slow=21,SNR=3.6							
GUMO	**Guam**	**7.22**	**61**	Pn	**Pn**		**08 34 42.5**	**+0.6**
GUMO				Sn	**Sn**		**08 36 01.0**	**-1.8**
GUMO				LR	LR		08 37 00.5	
GUMO	**Guam**	**7.22**	**61**	P	**Pn**		**08 34 42.5**	**+0.6**
GUMO							08 36 01.0	
DAV	**Davao City (W)**	**13.02**	**258**	LR	LR		08 40 19.5	
	comp=Z,205nm,21.5s,baz=173,slow=34							
CBIJ	**Chichi jima**	**17.27**	**11**	LR	LR		08 43 01.5	
	comp=Z,154nm,19.4s,baz=129,slow=35							
JOW	**Kunigami**	**19.18**	**331**	P	**Pn**		**08 37 28.0**	**+7.4**
	13nm,0.3s,baz=146,slow=15,SNR=14							
JOW				LR	LR		08 44 32.2	
	comp=Z,173nm,19.1s,baz=125,slow=36							
JOW				T			08 56 59.4	
	14nm,0.3s,baz=298,slow=27,SNR=5.9							
JOW	**Kunigami**	**19.18**	**331**	P	**Pn**		**08 37 28.0**	**+7.4**
JOW				LR	LR		08 44 32.2	
YHNB	**Yeheng**	**21.71**	**314**	*e*P	**P**		**08 37 45.5**	**-1.4**
	96nm,1.1s,mb5.1							
JHJ	**Hachijo jima 2**	**22.93**	**3**	LR	LR		08 44 43.0	
	comp=Z,356nm,18.5s,MS3.8,baz=249,slow=31							
KAPI	**Kappang**	**23.88**	**232**	P	**P**		**08 38 08.3**	**-1.1**
	7.4nm,0.5s,mb4.3,baz=65,slow=9.0,SNR=5.1							
BATI	**Baumata**	**24.94**	**216**	P	**P**		**08 38 19.0**	**0.0**
	47nm,0.7s,mb5.1,baz=296,slow=9.4,SNR=4.9							
BATI				LR	LR		08 46 40.0	
	comp=Z,308nm,21.3s,MS3.8,baz=32,slow=33							
MJAR	**Matsushiro Arr**	**26.31**	**360**	P	**P**		**08 38 28.7**	**-2.5**
	1.6nm,0.6s,mb3.7,baz=192,slow=11,SNR=5.4							
MJAR				LR	LR		08 47 17.1	
	comp=Z,130nm,18.9s,MS3.5,baz=185,slow=33							
MJAR	**Matsushiro Arr**	**26.31**	**360**	P	**P**		**08 38 28.7**	**-2.5**
MJAR				LR	LR		08 47 17.1	
KSRS	**Korea Array**	**28.81**	**343**	LR	LR		08 49 42.2	
	comp=Z,128nm,18.1s,MS3.6,baz=338,slow=35							
HNR	**Honiara**	**28.94**	**131**	LR	LR		08 47 26.5	
	comp=Z,71nm,20.1s,MS3.3,baz=87,slow=30							
QIZ	**Qiongzhong**	**28.98**	**291**	P	**P**		**08 38 54.4**	**-0.9**
QIZ				S	**S**		**08 43 41.8**	**-2.3**
QIZ				LR	LR			
	comp=E,119nm,32.3s							
QIZ				LR	LR			
	comp=Z,138nm,32.3s,MS3.4							
WRAB	**Tennant Creek**	**30.12**	**188**	*e*P	**P**		**08 39 05.7**	**+0.4**
	comp=Z,3.8nm,0.7s,mb4.2							
WRAB	**Tennant Creek**	**30.12**	**188**	*e*P	**P**		**08 39 05.7**	**+0.4**
WRAB				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.3							
WRA	**Warramunga Arr**	**30.13**	**188**	P	**P**		**08 39 04.4**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.0,baz=6.2,slow=9.5,SNR=22							
WRA				LR	LR		08 52 25.1	
	comp=Z,118nm,18.1s,MS3.6,baz=15,slow=39							
CTA	**Charters Tower**	**30.99**	**166**	LR	LR		08 52 38.3	
	comp=Z,113nm,18.2s,MS3.6,baz=224,slow=38							
ASAR	**Alice Springs**	**33.85**	**187**	P	**P**		**08 39 38.6**	**+0.6**
	comp=Z,2.7nm,0.5s,mb4.5,baz=17,slow=13,SNR=56							
ASAR				PcP	PcP		08 42 17.5	+0.9
	comp=Z,0.8nm,0.6s,baz=16,slow=2.3,SNR=6.2							
ASAJ	**Asahikawa**	**34.07**	**5**	P	**P**		**08 39 40.3**	**+0.5**
	comp=Z,7.5nm,0.8s,mb4.7,baz=16,slow=33,SNR=4.8							
XAN	**Xi'an**	**35.99**	**316**	P	**P**		**08 39 56.9**	**+0.4**
XAN				AMB	AMB			
	comp=Z,10.0nm,1.2s,mb4.6							
XAN				LR	LR			
	comp=E,73nm,21.7s							
XAN				LR	LR			
	comp=Z,141nm,28.3s							
KMI	**Kunming**	**36.97**	**299**	P	**P**		**08 40 06.9**	**+2.0**
KMI				AP	pP		08 40 11.8	-3.3
KMI				XP	sP		08 40 14.0	-5.3
KMI				AMB	AMB			
	comp=Z,11nm,1.3s,mb4.5							
KMI				AMB	AMB			
	comp=Z,202nm,4.3s							
KMI				LR	LR			
	comp=N,319nm,12.6s,MS4.3							
KMI				LR	LR			
	comp=E,206nm,14.6s,MS4.3							
KMI				LR	LR			
	comp=Z,201nm,20.5s							
HABR	**Khabarovsk**	**38.34**	**356**	*e*P	**P**		**08 40 15.4**	**-0.8**
HABR				*e**SP	sP		08 40 34.1	+3.5
HABR				*e*			08 41 43.1	
HABR				*e*			08 42 27.4	
HABR				*e*S	**S**		**08 46 07.6**	**-0.7**
HABR				*e*SSS			08 49 15.5	
HABR				*e*			08 50 21.1	
CMAR	**Chiang Mai Arr**	**39.04**	**287**	P	**P**		**08 40 23.0**	**+0.5**
	comp=Z,12nm,0.8s,mb4.7,baz=94,slow=6.7,SNR=52							
CMAR				LR	LR		08 54 24.0	
	comp=Z,52nm,20.3s,MS3.4,baz=127,slow=33							
CHTO	**Chiang Mai**	**39.09**	**287**	*e*P	**P**		**08 40 22.3**	**-0.6**
	comp=Z,25nm,1.5s,mb4.7							
CHTO	**Chiang Mai**	**39.09**	**287**	*e*P	**P**		**08 40 22.3**	**-0.6**
CHTO				pmax	pmax			
	comp=Z,25nm,1.5s,mb4.7							
FORT	**Forrest**	**41.85**	**193**	*e*P	**P**		**08 40 45.0**	**-0.5**
	comp=Z,63nm,0.8s,mb5.3							
STKA	**Stephens Creek**	**41.86**	**176**	P	**P**		**08 40 45.5**	**0.0**
	comp=Z,11nm,0.6s,mb4.6,baz=339,slow=8.6,SNR=25							
STKA				LR	LR		08 58 49.9	
	comp=Z,306nm,18.5s,MS4.2,baz=24,slow=37							
STKA	**Stephens Creek**	**41.86**	**176**	*e*P	**P**		**08 40 45.4**	**-0.2**
	comp=Z,2.1nm,0.7s,mb3.9							
STKA				LR	LR		08 58 49.9	
HIA	**Hailar**	**42.02**	**342**	*i* P	**P**		**08 40 47.3**	**+0.7**
GTA	**Gaotai**	**45.03**	**317**	*e*P	**P**		**08 41 12.6**	**+1.5**
GTA				AP	pP		08 41 17.1	-4.4
GTA				XP	sP		08 41 19.8	-5.9
GTA				AMB	AMB			
	comp=Z,7.0nm,1.4s,mb4.3							
PETK	**Petropavlovsk-**	**45.62**	**16**	P	**P**		**08 41 15.9**	**+0.3**
	comp=Z,4.2nm,0.9s,mb4.4,baz=232,slow=9.3,SNR=4.8							
SONM	**Songino Array**	**46.25**	**330**	P	**P**		**08 41 21.4**	**+0.8**
	comp=Z,4.3nm,1.1s,mb4.3,baz=140,slow=7.1,SNR=18							
SONM				PcP	PcP		08 42 55.8	0.0
	comp=Z,1.3nm,0.9s,baz=159,slow=3.7,SNR=2.7							
NWAO	**Narrogin (SRO)**	**47.31**	**204**	P	**P**		**08 41 27.2**	**-1.8**
	comp=Z,15nm,0.7s,mb5.0,baz=66,slow=5.9,SNR=5.3							
ZAK	**Zakamensk**	**49.48**	**331**	*e*P	**P**		**08 41 45.1**	**-0.5**
ZAK				pmax	pmax			
	comp=Z,8.0nm,1.3s,mb4.6							
TLY	**Talaya**	**50.19**	**332**	*e*P	**P**		**08 41 50.7**	**-0.2**
TLY				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.9							
BOD	**Bodaibo**	**51.15**	**344**	*e*P	**P**		**08 41 57.6**	**-0.5**
BOD				pmax	pmax			
	comp=Z,9.0nm,1.5s,mb4.5							
YAK	**Yakutsk**	**52.21**	**355**	*e*P	**P**		**08 42 03.9**	**-2.1**
YAK				*e*	pP		08 42 12.3	-4.2
YAK					pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9							
YAK					pmax	pmax		
	comp=N,5.0nm,1.0s							
YAK					pmax	pmax		
	comp=E,5.0nm,1.1s							
SEY	**Seymchan**	**53.69**	**8**	*i* P	**P**		**08 42 18.1**	**+1.3**
MKAR	**Makanchi Array**	**59.73**	**319**	P	**P**		**08 43 00.7**	**+0.6**
	comp=E,2.3nm,0.9s,mb4.2,baz=122,slow=9.0,SNR=6.4							
MKAR				LR	LR		09 08 01.3	
	comp=E,46nm,18.3s,MS3.6,baz=175,slow=35							
ZALV	**Zalesovo Beam**	**60.90**	**327**	LR	LR		09 08 24.4	
	comp=E,48nm,19.8s,MS3.6,baz=248,slow=35							
TIXI	**Tiksi**	**61.77**	**357**	*e*P	**P**		**08 43 12.6**	**-0.9**
	comp=E,3.1nm,0.8s,mb4.5							
TIXI	**Tiksi**	**61.77**	**357**	*e*P	**P**		**08 43 12.6**	**-0.9**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.5							
KURK	**Kurchatov**	**63.27**	**322**	*e*P	**P**		**08 43 24.2**	**+0.4**
	comp=Z,23nm,1.3s,mb5.2							
KURK	**Kurchatov**	**63.27**	**322**	*e*P	**P**		**08 43 24.2**	**+0.4**
KURK				pmax	pmax			
	comp=Z,23nm,1.3s,mb5.2							
BRVK	**Borovoye**	**68.86**	**323**	*e*P	**P**		**08 44 00.3**	**+0.6**
	comp=Z,6.7nm,0.9s,mb4.6							
BRVK	**Borovoye**	**68.86**	**323**	*e*P	**P**		**08 44 00.3**	**+0.6**
BRVK				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.6							
KDAK	**Kodiak Island**	**70.36**	**32**	LR	LR		09 10 59.0	
	comp=Z,162nm,19.9s,MS4.3,baz=122,slow=32							
BPAW	**Bear Paw Mtn.**	**72.53**	**26**	*e*P	**P**		**08 44 21.9**	**+0.1**
	comp=Z,36nm,1.5s,mb5.1							
TRF	**Thorofare Moun**	**72.69**	**26**	*e*P	**P**		**08 44 22.5**	**-0.3**
	comp=Z,4.0nm,0.6s,mb4.5							
PMR	**Palmer**	**72.85**	**29**	*e*P	**P**		**08 44 22.6**	**-1.2**
	comp=Z,4.9nm,0.6s,mb4.6							
PMR	**Palmer**	**72.85**	**29**	*e*P	**P**		**08 44 22.6**	**-1.2**
PMR				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
MCK	**McKinley**	**73.34**	**26**	*e*P	**P**		**08 44 26.4**	**-0.3**
	comp=Z,22nm,1.2s,mb5.0							
MCK	**McKinley**	**73.34**	**26**	*e*P	**P**		**08 44 26.4**	**-0.3**
MCK				pmax	pmax			
	comp=Z,22nm,1.2s,mb5.0							
COLD	**Coldfoot**	**73.57**	**23**	*e*P	**P**		**08 44 28.7**	**+0.8**
	comp=Z,3.8nm,0.5s,mb4.6							
COLA	**College**	**74.02**	**25**	*e*P	**P**		**08 44 30.1**	**-0.5**
	comp=Z,1.9nm,0.5s,mb4.3							
COLA	**College**	**74.02**	**25**	*e*P	**P**		**08 44 30.2**	**-0.4**
COLA				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.3							
ARU	**Arti**	**76.01**	**326**	*e* iP	**P**		**08 44 42.5**	**+0.2**
ARU				*e*			08 47 29.9	
ARU				*e*S	S		08 54 22.4	-0.6
ARU				*e*SS	SS		08 59 11.3	-4.6
ARU				pmax	pmax			
	comp=Z,20nm,1.7s,mb4.8							
AKTO	**Aktyubinsk**	**76.15**	**320**	LR	LR		09 19 31.7	
	comp=Z,57nm,20.1s,MS3.9,baz=207,slow=37							
PPT	**Papeete**	**76.27**	**111**	LR	LR		09 10 00.4	
	comp=Z,132nm,20.6s,MS4.2,baz=263,slow=29							
DAWY	**Dawson**	**77.57**	**26**	*e*P	**P**		**08 44 51.9**	**+1.0**
INK	**Inuvik**	**79.97**	**22**	*e*P	**P**		**08 45 03.6**	**-0.5**
	comp=Z,172nm,1.0s							
DLBC	**Dease Lake**	**82.30**	**32**	*e*P	**P**		**08 45 17.6**	**+1.0**
GNI	**Garni**	**86.33**	**310**	*e*P	**P**		**08 45 39.0**	**+1.5**
ARCES	**ARCESS Array B**	**88.36**	**341**	P	**P**		**08 45 46.0**	**-0.7**
	comp=Z,3.9nm,0.8s,mb4.7,baz=79,slow=7.5,SNR=11							
OBN	**Obninsk**	**88.46**	**326**	*e*P	**P**		**08 45 47.6**	**+0.2**
OBN				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.9							
VNDA	**Vanda**	**88.50**	**175**	P	**P**		**08 45 47.6**	**+0.6**
	comp=Z,1.4nm,0.7s,mb4.3,baz=327,slow=7.0,SNR=24							
VNDA				LR	LR		09 25 31.5	
	comp=Z,48nm,19.1s,MS3.9,baz=105,slow=36							
YKA	**Yellowknife Ar**	**88.81**	**26**	P	**P**		**08 45 49.2**	**+0.3**
	comp=Z,3.6nm,0.5s,mb5.0,baz=291,slow=4.8,SNR=20							
YKA				LR	LR		09 24 06.0	
	comp=Z,36nm,18.4s,MS3.8,baz=145,slow=35							
YKA	**Yellowknife Ar**	**88.81**	**26**	P	**P**		**08 45 49.2**	**+0.3**
YKA				LR	LR		09 24 06.0	
CMB	**Columbia Colle**	**92.54**	**51**	*e*P	**P**		**08 46 07.6**	**+0.8**
	comp=Z,1.4nm,0.7s,mb4.5							
CMB	**Columbia Colle**	**92.54**	**51**	*e*P	**P**		**08 46 07.6**	**+0.8**
CMB				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb4.3							
NVAR	**Mina Array Bea**	**94.02**	**50**	P	**P**		**08 46 15.0**	**+1.4**
	comp=Z,1.5nm,0.6s,mb4.6,baz=261,slow=5.8,SNR=18							
TPNV	**Topopah Spring**	**96.00**	**51**	*e*P	**P**		**08 46 23.8**	**+1.0**
	comp=Z,1.4nm,0.5s,mb4.7							
TPNV	**Topopah Spring**	**96.00**	**51**	*e*P	**P**		**08 46 23.8**	**+1.1**
TPNV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.5							
NOA	**NORSAR Array B**	**97.89**	**337**	LR	LR		09 30 51.0	
	comp=Z,73nm,18.1s,MS4.2,baz=115,slow=36							
PDAR	**Pinedale Array**	**98.88**	**44**	P	**P**		**08 46 35.8**	**+0.3**
	comp=Z,0.3nm,0.6s,mb4.0,baz=72,slow=0.3,SNR=2.8							
CLL	**Collm**	**102.83**	**328**	*e*PP	PP		08 51 05.0	-1.5
TORD	**Torodi Ar. Bea**	**131.19**	**297**	PKP	PKPdf		08 52 07.7	-0.4
	comp=Z,0.7nm,0.8s,baz=46,slow=2.3,SNR=4.2							
TORD	**Torodi Ar. Bea**	**131.19**	**297**	PKP	PKPdf		08 52 07.7	-0.4
PLCA	**Paso Flores**	**140.20**	**145**	PKP	PKPdf		08 52 25.9	+1.7
	comp=Z,1.0nm,0.6s,baz=233,slow=15,SNR=4.8							
NNA	**Nana**	**145.39**	**96**	*e*PKPdf	PKPdf		08 52 34.8	+0.7
LVC	**Limon Verde**	**151.07**	**119**	*e*PKPbc	PKPbc		08 52 48.6	-0.4
LVC				*e*PKPab	PKPab		08 53 00.3	+3.6
LPAZ	**La Paz**	**153.48**	**106**	PKPbc	PKPbc		08 52 56.0	+1.5
	comp=Z,1.6nm,0.6s,baz=258,slow=1.5,SNR=6.9							
LPAZ	**La Paz**	**153.48**	**106**	*e*PKPdf	PKPdf		08 52 49.8	+2.9
LPAZ				*e*PKPbc	PKPbc		08 52 55.9	+1.4
LPAZ				PKPbc	PKPbc		08 52 56.0	+1.5

ISCJB ***19*** *08:41:49.5±0.8, 2988N±003×3624E±005, h0km, Error ellipse: s-maj=6.9km s-min=3.8km az=147.6*
CSEM ***19*** *08:41:51.6, 3001N×3611E, h10km, ML2.7, After SNSN*
SGS ***19*** *08:41:51.6, 3001N×3611E, h10km*
GII ***19*** *08:41:51.5±0.6, 2993N×3606E, h0km, ML2.0/3, EXPLOSION*

ISC 19 08:41:49.8±0.8, 2988N±003×3626E±005, h0km, n18, σ0°70/26, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HRFI	**Mount Harif**	**1.08**	**279**	Pg	**Pg**		**08 42 10.4**	**-0.1**
ZFRI	**Zfri**	**1.16**	**306**	Pg	**Pg**		**08 42 11.9**	**-0.1**
ZFRI				Sg	**Sg**		**08 42 26.7**	**-0.2**
EIL	**Elat**	**1.16**	**260**	Pg	**Pg**		**08 42 12.0**	**-0.1**
EIL				Sg	**Sg**		**08 42 27.9**	**+0.8**
MBRI	**Mt Berech**	**1.18**	**266**	Pg	**Pg**		**08 42 12.4**	**0.0**
MBRI				Sg	**Sg**		**08 42 28.1**	**+0.4**
PRNI	**Paran**	**1.19**	**294**	Pg	**Pg**		**08 42 12.5**	**-0.1**
PRNI				Sg	**Sg**		**08 42 27.7**	**-0.4**
HQLS		**1.20**	**241**	P	**Pg**		**08 42 11.9**	**-0.9**
JLOS		**1.32**	**211**	P	**Pg**		**08 42 14.9**	**-0.4**
JLOS		**1.32**	**211**	P	**Pg**		**08 42 14.9**	**-0.3**
JLOS				S	**Sg**		**08 42 32.5**	**+0.1**
KRMI	**Paran Flat**	**1.36**	**280**	Pg	**Pg**		**08 42 14.9**	**-0.9**
KRMI				Sg	**Sg**		**08 42 32.9**	**-0.5**
RMNI	**Mount Ramon**	**1.48**	**299**	Pn	**Pn**		**08 42 17.6**	**-0.1**
MZDA	**Masada**	**1.62**	**332**	Pn	**Pn**		**08 42 20.0**	**+0.4**
MZDA				Sn	**Sn**		**08 42 42.9**	**+1.6**
TBKS	**Tabuk**	**1.67**	**172**	S	**Sn**		**08 42 43.0**	**+0.6**
TBKS	**Tabuk**	**1.67**	**172**	P	**Pn**		**08 42 21.1**	**+0.8**
BDAS	**Al Bad'**	**1.77**	**215**	P	**Pn**		**08 42 21.5**	**-0.1**
RSHS		**2.03**	**220**	P	**Pn**		**08 42 24.2**	**-1.1**
RSHS		**2.03**	**220**	P	**Pn**		**08 42 24.2**	**-1.1**
RSHS				S	**Sn**		**08 42 53.3**	**+1.9**
BIDS	**Bi'r al Bayda'**	**3.06**	**168**	P	**Pg**		**08 42 48.0**	**-0.6**
WJHS		**3.14**	**178**	P	**Pn**		**08 42 39.8**	**-0.8**

IDC ***19*** *09:13:58.6±0.9, 3041S×17775W, h0km, mb4.3/6, mb1 4.5/6, mb1mx4.2/16, mbtmp4.3/6, MS3.6/7, Ms1 3.6/7, ms1mx3.3/28, Error ellipse: s-maj=25.3km s-min=18.1km az=102.0*
NEIC ***19*** *09:13:58.9±0.9, 3065S×17760W, h10km, mb4.8/2, Error ellipse: s-maj=22.1km s-min=8.9km az=101.0*
ISCJB ***19*** *09:14:01.3±1.0, 3077S±006×1778W±02, h33km, mb4.3/7, MS3.6/6, Error ellipse: s-maj=22.4km s-min=7.5km az=10.9*

ISC 19 09:14:03.1±1.0, 3069S±006×1777W±02, h35km, n35, σ1°28/27, mb4.3/7, MS3.6/6, 1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RAO	**Raoul Island**	**1.44**	**353**	Pn	**Pn**		**09 14 23.7**	**-3.0**
	268nm,0.3s,baz=82,slow=19,SNR=16							
RAO				LR	LR		09 14 34.6	
	comp=Z,2μm,21.4s,baz=61,slow=31							
RAO				Sn	**Sn**		**09 14 38.5**	**-5.8**
	2μm,0.3s,baz=158,slow=23,SNR=20							
RAO	**Raoul Island**	**1.44**	**353**	Pn	**Pn**		**09 14 23.7**	**-3.0**
RAO				LR	LR		09 14 34.6	
RAO				Sn	**Sn**		**09 14 38.5**	**-5.8**
PUZ	**Puketiti**	**8.09**	**203**	P	**Pn**		**09 15 57.5**	**-0.5**
PUZ				S	**Sn**		**09 17 28.1**	**0.0**
MWZ	**Matawai**	**8.58**	**206**	P	**Pn**		**09 16 03.8**	**-0.9**
URZ	**Urewera**	**8.68**	**208**	Pn	**Pn**		**09 16 05.0**	**-1.1**
	0.9nm,0.3s,baz=312,slow=20,SNR=20							
URZ				Sn	**Sn**		**09 17 44.2**	**+1.5**
	4.2nm,0.3s,baz=138,slow=18,SNR=9.1							
URZ	**Urewera**	**8.68**	**208**	P	**Pn**		**09 16 05.0**	**-1.1**
BKZ	**Black Stump Fm**	**9.71**	**208**	P	**Pn**		**09 16 17.7**	**-2.4**
SNZO	**South Karori**	**12.25**	**208**	Pn	**Pn**		**09 16 54.3**	**-0.6**
SNZO				Sn	**Sn**		**09 19 03.9**	**-6.2**
THZ	**Tophouse**	**13.39**	**212**	P	**Pn**		**09 17 12.7**	**+2.2**
RPZ	**Rata Peaks**	**15.77**	**211**	Pn	**Pn**		**09 17 41.6**	**-0.8**
	0.6nm,0.3s,baz=45,slow=16,SNR=4.2							
RPZ				Sn	**Sn**		**09 20 22.9**	**-13**
	0.4nm,0.3s,baz=2.3,slow=19,SNR=4.6							
JCZ	**Jackson Bay**	**17.12**	**215**	P	**Pn**		**09 17 55.5**	**-4.0**
RAR	**Rarotonga**	**18.66**	**64**	LR	LR		09 23 30.2	
	comp=Z,134nm,19.8s,baz=275,slow=31							
PAE	**Paea**	**28.66**	**70**	*e*T			09 49 25.6	
	57nm,0.3s							
PPT	**Papeete**	**28.71**	**69**	*e*LR	LR		09 27 13.8	
	136nm,25.5s							
PPT	**Papeete**	**28.71**	**69**	*e*T			09 49 41.7	
	3.4nm,0.4s							
PPT	**Papeete**	**28.71**	**69**	LR	LR		09 28 46.4	
	comp=Z,183nm,18.1s,MS3.7,baz=250,slow=31							
VAH	**Vaihoa**	**31.55**	**68**	*e*T			09 53 09.8	
	10nm,0.2s							
CTA	**Charters Tower**	**34.09**	**279**	P	**P**		**09 20 44.7**	**+0.3**
	17nm,0.8s,mb5.1,baz=107,slow=10.0,SNR=13							
CTA				LR	LR		09 32 29.3	
	comp=Z,110nm,21.3s,MS3.6,baz=50,slow=33							
CTAO	**Charters Tower**	**34.09**	**279**	*e*P	**P**		**09 20 46.1**	**+1.7**
	9.7nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**34.66**	**257**	P	**P**		**09 20 51.1**	**+1.9**
	21nm,0.8s,mb5.1,baz=99,slow=10,SNR=35							
STKA				LR	LR		09 31 45.0	
	comp=Z,82nm,21.4s,MS3.4,baz=184,slow=31							
ASAR	**Alice Springs**	**43.34**	**267**	P	**P**		**09 22 02.2**	**+0.2**
	1.8nm,0.5s,mb4.1,baz=106,slow=7.3,SNR=48							
WB2	**Warramunga Arr**	**44.35**	**272**	*e*P	**P**		**09 22 09.7**	**-0.4**
WRAB	**Tennant Creek**	**44.35**	**272**	*e*P	**P**		**09 22 09.9**	**-0.3**
	8.6nm,1.0s,mb4.4							
WRA	**Warramunga Arr**	**44.36**	**272**	P	**P**		**09 22 10.1**	**-0.1**
	3.4nm,0.3s,mb4.5,baz=111,slow=8.1,SNR=104							
WRA				LR	LR		09 39 40.7	
	comp=Z,57nm,19.4s,MS3.5,baz=155,slow=35							
VNDA	**Vanda**	**47.84**	**186**	P	**P**		**09 22 40.3**	**+3.5**
	0.5nm,0.7s,mb3.7,baz=355,slow=6.5,SNR=5.1							
NWAO	**Narrogin (SRO)**	**54.53**	**249**	LR	LR		09 45 03.0	
	comp=Z,87nm,19.5s,MS3.8,baz=175,slow=34							
GUMO	**Guam**	**56.86**	**315**	LR	LR		09 42 21.0	
	comp=Z,55nm,19.9s,MS3.6,baz=178,slow=30							
SYO	**Syowa Base**	**76.89**	**193**	*e*P	**P**		**09 25 51.7**	**+0.5**
NVAR	**Mina Array Bea**	**88.28**	**43**	P	**P**		**09 26 52.4**	**+1.7**
	0.2nm,0.5s,mb3.6,baz=224,slow=7.6,SNR=3.4							
MKAR	**Makanchi Array**	**118.15**	**310**	PKP	PKPdf		09 32 45.7	-0.3
	0.5nm,0.6s,baz=241,slow=1.0,SNR=3.4							
NB2	**NORSAR Subarra**	**149.07**	**352**	PKP	PKPbc		09 33 46.5	-0.3
	comp=Z,1.1nm,0.6s,baz=12,slow=2.7							
NOA	**NORSAR Array B**	**149.07**	**352**	PKPbc	PKPbc		09 33 46.2	-0.6
	comp=Z,2.4nm,0.8s,baz=14,slow=4.4,SNR=6.5							
NOA	**NORSAR Array B**	**149.07**	**352**	PKPbc	PKPbc		09 33 46.

KYTH	Kithira	3.19	268	*e*P	Pn	09 23 03.5	-1.0
VLI	Veliai	3.26	275	*e*P	Pn	09 23 04.0	-1.4
VLI				*e*S	Sn	09 23 39.5	-4.7
ITM	Ithomi	4.11	281	P	Pn	09 23 16.4	-0.2
HMAT	Matruh	5.38	179	P	Pn	09 23 32.3	-1.2
KOT	Kottamia	7.70	147	P	Pn	09 24 05.7	+0.9
KOT				S	Sn	09 25 29.8	-0.6
MMA0B	Mount Meron ar	7.75	114	Sn	Sn	09 25 30.4	-1.2
MMA2	Mount Meron ar	7.75	114	Sn	Sn	09 25 31.6	-0.1
HHAG	Hagoal	7.80	145	P	Pn	09 24 07.0	+0.9
HHAG				S	Sn	09 25 32.5	-0.4
AMAG	Maghara	7.81	136	P	Pn	09 24 07.1	+0.9
HRSH	Kfar Ka'horesh	7.82	116	P	Pn	09 24 08.1	+1.8
KSDI	Kefar Szold	7.86	112	Sn	Sn	09 25 33.8	-0.3
RSH		7.87	133	P	Pn	09 24 08.1	+1.1
HRI	Mount Hermon	7.88	111	Sn	Sn	09 25 34.7	0.0
GLL	Jalalah	7.95	149	P	Pn	09 24 09.2	+1.1
MMLI	Mount Malkishu	8.05	118	Sn	Sn	09 25 37.9	-1.1
KSHT	Keshet	8.06	113	Sn	Sn	09 25 38.4	-0.9
HMDT	Nahal Hemdat	8.23	118	Sn	Sn	09 25 42.8	-0.4
SUZ		8.24	142	P	Pn	09 24 13.1	+1.0
KZIT	Kziot	8.31	130	Sn	Sn	09 25 43.6	-1.6
ZAF		8.57	145	P	Pn	09 24 17.7	+1.2
MZDA	Masada	8.67	124	Sn	Sn	09 25 53.4	-0.5
HNKL	Nakhl	8.78	136	P	Pn	09 24 20.4	+1.2
KRMI	Paran Flat	9.07	132	Sn	Sn	09 26 02.0	-1.6
PRNI	Paran	9.07	130	Sn	Sn	09 26 02.0	-1.7
HRFI	Mount Harif	9.32	131	Sn	Sn	09 26 07.9	-1.6
HFRF	Wahat Farafira	9.38	173	P	Pn	09 24 28.0	+0.8
MBRI	Mt Berech	9.42	133	Sn	Sn	09 26 11.2	-0.8
EIL	Elat	9.53	133	Sn	Sn	09 26 13.8	-0.9
GRB	Gharib	9.55	147	P	Pn	09 24 30.9	+1.4
HBST	Basata	9.75	136	P	Pn	09 24 33.5	+1.3
HKAT	Jabal Katrina	9.90	141	P	Pn	09 24 36.5	+2.2
TORD	Torodi Ar. Bea	32.47	231	P	P	09 28 32.9	-0.1
	2.8nm,0.4s,mb4.4,baz=33,slow=8.8,SNR=50						
MKAR	Makanchi Array	41.82	58	P	P	09 29 51.6	0.0
	0.9nm,0.4s,mb3.8,baz=266,slow=8.6,SNR=15						
ZALV	Zalesovo Beam	43.02	47	P	P	09 30 00.1	-1.1
	1.4nm,0.4s,mb3.9,baz=261,slow=8.9,SNR=5.3						

IDC ***19*** *09:45:34.6±4.5, 242S×152±61E, h46km±43km, mb3.5/6, mb1 3.9/7, mb1mx3.7/17, mbtmp3.7/7, ML4.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=28.1km s-min=26.5km az=160.0*

NEIC ***19*** *09:45:34.8±3.1, 242S×152±54E, h47km±35km, mb4.0/1, Error ellipse: s-maj=28.0km s-min=19.9km az=100.0*

ISCJB ***19*** *09:45:35.0±3.1, 25S±0.1×152±7E±0.1, h70km±30km, mb3.6/7, Error ellipse: s-maj=20.6km s-min=17.4km az=138.7*

ISC 19 09:45:36.3±3.4, 25S±02×1526E±01, h64km±34km, n12, σ0°53/13, mb3.8/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**10.02**	**134**	P		Pn	**09 47 58.7**	**+1.2**
	5.4nm,0.3s,baz=235,slow=3.6,SNR=3.5							
HNR				S		Sn	**09 49 47.7**	**-0.7**
	4.2nm,0.3s,baz=225,slow=23,SNR=3.0							
HNR	**Honiara**	**10.02**	**134**	*e*Pn		Pn	**09 47 57.9**	**+0.3**
HNR				P			09 47 58.7	
HNR				S		Sn	**09 49 47.7**	**-0.7**
CTA	**Charters Tower**	**18.57**	**199**	LR		LR	09 55 40.2	
	comp=Z,60nm,18.6s,baz=25,slow=32							
WRAB	**Tennant Creek**	**24.90**	**225**	*e*P		P	**09 50 53.3**	**-0.2**
	4.9nm,1.0s,mb4.0							
WRA	**Warramunga Arr**	**24.91**	**225**	P		P	**09 50 53.3**	**-0.3**
	1.1nm,0.5s,mb3.6,baz=46,slow=9.4,SNR=18							
WRA				PcP		PcP	09 54 29.1	+1.0
	0.4nm,0.6s,baz=48,slow=2.4,SNR=5.3							
WRA				S		S	**09 55 07.7**	**-5.0**
	0.2nm,0.7s,baz=46,slow=9.4,SNR=2.7							
ASAR	**Alice Springs**	**27.79**	**219**	P		P	**09 51 19.6**	**+0.2**
	0.5nm,0.8s,mb3.2,baz=48,slow=8.1,SNR=5.2							
CMAR	**Chiang Mai Arr**	**56.78**	**294**	P		P	**09 55 14.3**	**-0.1**
	0.8nm,0.3s,mb4.2,baz=111,slow=6.0,SNR=4.2							
SONM	**Songino Array**	**64.30**	**327**	P		P	**09 56 04.6**	**-0.5**
	0.5nm,0.7s,mb3.6,baz=131,slow=5.2,SNR=3.7							
VNDA	**Vanda**	**75.13**	**178**	P		P	**09 57 12.1**	**+0.9**
	0.8nm,0.7s,mb3.8,baz=334,slow=5.5,SNR=6.1							
VNDA	**Vanda**	**75.13**	**178**	P		P	**09 57 12.1**	**+0.9**
NVAR	**Mina Array Bea**	**90.78**	**52**	P		P	**09 58 32.9**	**+0.1**
	0.4nm,0.7s,mb3.8,baz=264,slow=5.2,SNR=3.4							
TORD	**Torodi Ar. Bea**	**149.38**	**292**	PKPbc		PKPbc	10 05 19.1	-0.1
	0.6nm,0.5s,baz=82,slow=1.7,SNR=7.2							

ISCJB ***19*** *09:50:51.9±1.2, 4289N±008×7281E±005, h6km±8km, Error ellipse: s-maj=13.1km s-min=6.1km az=3.8*

KNET ***19*** *09:50:52.6±0.7, 4295N×7287E, h21km±5km, ml2.7, Error ellipse: s-maj=4.4km s-min=3.8km az=79.0*

ISC 19 09:50:52.3±1.2, 4293N±008×7283E±005, h8km±8km, n9, σ1°06/17, 10C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**0.75**	**111**	⇓P		Pg	**09 51 07.0**	**+0.3**
	32nm,0.1s,SNR=100							
EKS2				⇓S		Sg	**09 51 18.2**	**+1.8**
	83nm,0.1s							
AML	**Almayashu**	**1.02**	**141**	⇓P		Pg	**09 51 11.6**	**-0.3**
	16nm,0.2s,SNR=33							
AML				⇓S		Sn	**09 51 25.8**	**-1.6**
	55nm,0.1s							
AAK	**Ala-Archa**	**1.26**	**103**	⇑P		Pn	**09 51 15.9**	**-0.2**
	50nm,0.1s,SNR=51							
AAK				⇑S		Sb	**09 51 33.3**	**+0.8**
	43nm,0.2s							
USP	**Ospenovka**	**1.27**	**74**	⇓P		Pn	**09 51 15.5**	**-0.7**
	28nm,0.2s,SNR=78							
USP				⇑S		Sb	**09 51 32.7**	**-0.1**
	246nm,0.3s							
CHMS	**Chumysh**	**1.41**	**87**	⇑P		Pn	**09 51 17.9**	**-0.2**
	40nm,0.2s,SNR=14							
CHMS				⇑S		Sb	**09 51 36.9**	**0.0**
	81nm,0.1s							
KBK	**Karagaybulak**	**1.58**	**99**	⇓P		Pn	**09 51 21.8**	**+1.3**
	49nm,0.1s,SNR=15							
KBK				⇑S		Sg	**09 51 43.3**	**+0.2**
	155nm,0.3s							
KK31	**Karatay Array**	**1.71**	**276**	⇑P		Pn	**09 51 22.6**	**+0.3**
	20nm,0.3s,baz=92,slow=19,SNR=290							
KK31				⇑S		Sn	**09 51 44.3**	**-0.1**
	22nm,0.2s,baz=96,slow=30,SNR=14							
TKM2	**Tokmak 2**	**2.03**	**89**	⇓Pn		Pn	**09 51 28.6**	**+1.9**
	42nm,0.5s							
TKM2				⇓Lg			09 51 55.9	
	100nm,0.6s							
TKM2	**Tokmak 2**	**2.03**	**89**	⇑P		Pg	**09 51 28.7**	**-2.4**
	62nm,0.2s,SNR=117							
TKM2				⇑S		Sg	**09 51 55.9**	**-1.5**
	74nm,0.1s							

IDC 19 10:01:33.2±8.2, 1123S×16372E, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/18, mbtmp4.2/4, MS3.3/3, Ms1 3.3/3, ms1mx3.0/25, Error ellipse: s-maj=139.3km s-min=25.5km az=48.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.12**	**295**	Pn		Pn	10 02 38.4	+0.9
	20nm,0.3s,baz=255,slow=9.3,SNR=5.1							
HNR				Pg		Pg	10 02 46.3	-5.9
	18nm,0.3s,baz=145,slow=8.0,SNR=4.9							
HNR				Lg			10 03 44.5	
	37nm,0.3s,baz=209,slow=10,SNR=6.7							
CTA	**Charters Tower**	**18.97**	**240**	LR		LR	10 11 11.1	
	comp=Z,65nm,19.6s,baz=231,slow=30							
AFI	**Afiamalu**	**24.06**	**99**	LR		LR	10 13 26.8	
	comp=Z,112nm,21.4s,baz=258,slow=30							
STKA	**Stephens Creek**	**28.97**	**221**	P		P	10 07 33.8	-0.7
	2.0nm,0.6s,baz=29,slow=10,SNR=6.4							
STKA				LR		LR	10 18 21.0	
	comp=Z,55nm,19.5s,baz=24,slow=35							
WRA	**Warramunga Arr**	**29.56**	**249**	P		P	10 07 40.6	+0.7
	2.0nm,0.7s,baz=80,slow=9.1,SNR=20							
ASAR	**Alice Springs**	**30.94**	**242**	P		P	10 07 52.2	+0.1
	1.8nm,0.6s,baz=67,slow=9.6,SNR=40							

IDC 19 10:03:24.8±1.0, 243S×15281E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/16, mbtmp4.0/8, Error ellipse: s-maj=37.5km s-min=21.2km az=101.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.94**	**135**	Sn		Sn	10 07 49.1	+7.8
	6.7nm,0.3s,baz=322,slow=19,SNR=3.2							
WRA	**Warramunga Arr**	**25.07**	**225**	P		P	10 08 50.1	-1.1
	2.7nm,0.7s,baz=49,slow=9.2,SNR=26							
WRA				PcP		PcP	10 12 26.2	+0.1
	0.4nm,0.5s,baz=52,slow=2.2,SNR=5.1							
ASAR	**Alice Springs**	**27.94**	**219**	P		P	10 09 16.2	-0.9
	0.4nm,0.5s,baz=56,slow=8.8,SNR=4.3							
STKA	**Stephens Creek**	**31.14**	**199**	P		P	10 09 46.5	+1.1
	0.7nm,0.3s,baz=342,slow=13,SNR=3.3							
PETK	**Petropavlovsk-**	**55.48**	**4**	P		P	10 13 00.5	-0.8
	5.3nm,0.9s,baz=193,slow=5.9,SNR=2.9							
CMAR	**Chiang Mai Arr**	**56.91**	**294**	P		P	10 13 13.8	+1.6
	2.6nm,1.0s,baz=99,slow=5.1,SNR=6.1							
SONM	**Songino Array**	**64.34**	**327**	P		P	10 14 02.3	0.0
	0.7nm,0.7s,baz=132,slow=6.2,SNR=4.4							
VNDA	**Vanda**	**75.19**	**178**	P		P	10 15 09.4	+0.7
	1.2nm,0.8s,baz=339,slow=6.9,SNR=8.0							
NVAR	**Mina Array Bea**	**90.61**	**52**	P		P	10 16 29.6	+0.1
	0.3nm,0.5s,baz=262,slow=6.7,SNR=4.2							
TORD	**Torodi Ar. Bea**	**149.51**	**292**	PKPbc		PKPbc	10 23 16.3	-0.9
	0.7nm,0.6s,baz=48,slow=1.6,SNR=7.9							

ISCJB ***19*** *10:08:18.6±5.6, 166S±0.1×1726W±02, h33km±41km, mb4.0/7, MS3.5/2, Error ellipse: s-maj=37.8km s-min=11.9km az=28.0*

IDC ***19*** *10:08:19.5±6.8, 1666S×1724 3W, h33km±52km, mb3.8/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, ML1.4/1, MS3.6/2, Ms1 3.6/2, ms1mx3.1/25, Error ellipse: s-maj=34.1km s-min=17.8km az=134.0*

ISC 19 10:08:17.1±6.7, 166S±01×1726W±02, h12km±42km, n12, σ0°78/9, mb3.9/7, MS3.5/2, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.79**	**16**	Pn		Pn	**10 09 01.6**	**0.0**
	3.4nm,0.3s,baz=328,slow=20,SNR=9.5							
AFI				Sn		Sn	**10 09 35.5**	**+0.2**
	16nm,0.3s,baz=119,slow=18,SNR=6.9							
PPT	**Papeete**	**21.99**	**96**	*e*LR		LR	10 17 49.0	
	121nm,26.5s							
PPT	**Papeete**	**21.99**	**96**	LR		LR	10 18 31.9	
	comp=Z,94nm,20.3s,MS3.2,baz=57,slow=28							
URZ	**Urewera**	**23.40**	**201**	P		P	**10 13 25.5**	**-0.5**
	2.8nm,0.4s,mb4.1,baz=328,slow=9.5,SNR=3.2							
CTA	**Charters Tower**	**39.17**	**258**	LR		LR	10 28 53.6	
	comp=Z,153nm,21.1s,MS3.8,baz=228,slow=31							
STKA	**Stephens Creek**	**44.15**	**241**	P		P	**10 16 26.9**	**+1.1**
	1.0nm,0.5s,mb3.9,baz=100,slow=16,SNR=3.8							
WRA	**Warramunga Arr**	**50.36**	**258**	P		P	**10 17 14.5**	**0.0**
	1.0nm,0.5s,mb4.1,baz=97,slow=7.1,SNR=34							
ASAR	**Alice Springs**	**50.51**	**253**	P		P	**10 17 15.9**	**+0.4**
	5.4nm,0.8s,mb4.5,baz=89,slow=8.5,SNR=53							
NVAR	**Mina Array Bea**	**74.69**	**41**	P		P	**10 19 56.5**	**-0.2**
	0.3nm,0.5s,mb3.5,baz=218,slow=7.8,SNR=3.9							
TXAR	**Lajitas Array**	**80.62**	**56**	P		P	**10 20 30.8**	**+0.7**
	0.9nm,1.1s,mb3.6,baz=230,slow=9.7,SNR=4.8							
SONM	**Songino Array**	**96.28**	**318**	P		P	**10 21 43.5**	**-1.9**
	0.5nm,0.8s,mb4.0,baz=87,slow=7.4,SNR=2.8							
TORD	**Torodi Ar. Bea**	**173.47**	**121**	PKPab		PKPab	10 29 52.4	-3.7
	0.6nm,0.9s,baz=259,slow=1.5,SNR=3.2							

IDC ***19*** *10:17:33.3±0.8, 243S×152±65E, h0km, mb4.2/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.3/12, ML5.4/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/26, Error ellipse: s-maj=26.8km s-min=16.5km az=85.0*

ISCJB ***19*** *10:17:34.1±6.0, 243S±009×1526 9E±008, h18km±43km, mb4.1/13, MS3.7/10, Error ellipse: s-maj=17.3km s-min=10.9km az=40.7*

NEIC ***19*** *10:17:38.9±0.6, 246S×1525 8E, h35km, mb4.5/1, Error ellipse: s-maj=16.4km s-min=11.7km az=67.0*

ISC 19 10:17:37.2±6.2, 243S±009×15261E±008, h25km±44km, n25, σ0°88/17, mb4.1/13, MS3.7/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**10.08**	**134**	Pn		Pn	**10 20 00.9**	**+0.3**
	31nm,0.3s,baz=195,slow=6.7,SNR=7.5							
HNR				Sn		Sn	**10 21 52.5**	**-0.4**
	7.7nm,0.3s,baz=133,slow=19,SNR=3.4							
WRAB	**Tennant Creek**	**24.91**	**224**	*e*P		P	**10 22 58.3**	**-0.2**
	13nm,0.8s,mb4.5							
WB2	**Warramunga Arr**	**24.92**	**224**	*e*P		P	**10 22 58.4**	**-0.2**
WRA	**Warramunga Arr**	**24.93**	**224**	P		P	**10 22 58.6**	**-0.1**
	7.4nm,0.6s,mb4.4,baz=49,slow=8.9,SNR=78							
WRA				LR		LR	10 33 43.0	
	comp=Z,196nm,19.1s,MS3.6,baz=55,slow=39							
ASAR	**Alice Springs**	**27.81**	**219**	P		P	**10 23 24.7**	**0.0**
	1.5nm,0.5s,mb3.8,baz=51,slow=8.4,SNR=31							
DAV	**Davao City (W)**	**28.58**	**289**	LR		LR	10 34 30.0	
	comp=Z,110nm,18.5s,MS3.5,baz=222,slow=36							
STKA	**Stephens Creek**	**31.07**	**198**	P		P	**10 23 51.4**	**-2.2**
	1.3nm,0.3s,mb4.2,baz=28,slow=11,SNR=5.4							
STKA				LR		LR	10 36 55.3	
	comp=Z,141nm,19.6s,MS3.6,baz=22,slow=37							
KAPI	**Kappang**	**32.88**	**265**	LR		LR	10 37 44.4	
	comp=Z,46nm,20.4s,MS3.2,baz=303,slow=37							
URZ	**Urewera**	**42.13**	**151**	LR		LR	10 41 25.0	
	comp=Z,91nm,18.3s,MS3.7,baz=119,slow=34							
KSM	**Kuching**	**42.47**	**275**	*e*P		P	**10 25 31.2**	**+0.4**
RPZ	**Rata Peaks**	**44.26**	**161**	P		P	**10 25 46.8**	**+2.1**
	3.9nm,0.8s,mb4.2,baz=20,slow=12,SNR=3.5							
NWAO	**Narrogin (SRO)**	**44.93**	**224**	LR		LR	10 45 37.6	
	comp=Z,194nm,19.9s,MS4.0,baz=102,slow=38							
KSRS	**Korea Array**	**45.82**	**332**	P		P	**10 25 56.2**	**-1.0**
	1.2nm,0.8s,mb3.9,baz=157,slow=8.5,SNR=3.8							
PETK	**Petropavlovsk-**	**55.50**	**4**	P		P	**10 27 09.8**	**-0.3**
	11nm,1.0s,mb4.8,baz=143,slow=7.1,SNR=6.6							
CMAR	**Chiang Mai Arr**	**56.73**	**294**	P		P	**10 27 20.5**	**+1.1**
	3.1nm,0.8s,mb4.4,baz=109,slow=5.5,SNR=13							
CMAR				LR		LR	10 52 36.3	
	comp=Z,20nm,18.6s,MS3.2,baz=115,slow=37							
PPT	**Papeete**	**58.65**	**109**	*e*LR		LR	10 44 56.4	
	87nm,30.8s							
PPT	**Papeete**	**58.65**	**109**	LR		LR	10 49 23.1	
	comp=Z,134nm,20.1s,MS4.1,baz=245,slow=33							
SONM	**Songino Array**	**64.23**	**327**	P		P	**10 28 11.2**	**+1.0**
	1.0nm,0.7s,mb3.9,baz=143,slow=6.1,SNR=6.9							
VNDA	**Vanda**	**75.17**	**179**	P		P	**10 29 18.0**	**+0.8**
	2.2nm,1.0s,mb4.0,baz=324,slow=6.0,SNR=10.0							
MKAR	**Makanchi Array**	**78.43**	**319**	P		P	**10 29 35.9**	**-0.1**
	0.7nm,0.8s,mb3.6,baz=63,slow=8.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**79.09**	**326**	P		P	**10 29 38.5**	**-0.9**
	0.4nm,0.3s,mb3.8,baz=84,slow=7.4,SNR=3.2							
NVAR	**Mina Array Bea**	**90.78**	**52**	P		P	**10 30 38.3**	**-0.3**
	0.5nm,0.8s,mb3.9,baz=260,slow=4.5,SNR=3.5							
YKA	**Yellowknife Ar**	**93.43**	**28**	LR		LR	11 07 54.5	
	comp=Z,126nm,21.9s,MS3.6,baz=5.0,slow=32							
PDAR	**Pinedale Array**	**97.40**	**47**	LR		LR	11 14 42.5	
	comp=Z,65nm,18.7s,MS4.1,baz=74,slow=35							
TORD	**Torodi Ar. Bea**	**149.32**	**292**	PKPbc		PKPbc	10 37 25.2	+0.1
	1.0nm,0.4s,baz=71,slow=2.0,SNR=18							

IDC ***19*** *10:27:27.5±2.8, 1047N×8675W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.6/20, mbtmp3.6/3, Error ellipse: s-maj=117.9km s-min=35.6km az=35.0*

ISCJB ***19*** *10:27:48.5±0.6, 1187N±010×864W±0.1, h121km±5km, mb3.4/3, Error ellipse: s-maj=25.2km s-min=4.5km az=141.6*

CASC ***19*** *10:27:49.3±1.9, 1182N×8643W, h110km±6km, MD4.1, ML3.8*

ISC 19 10:27:49.3±0.6, 1186N±010×864W±01, h116km±5km, n48, σ0°76/43, mb3.4/3, 19C-13D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.16**	**43**	⇓*e*P		Pn	**10 28 05.8**	**+0.5**
TICN	**Ticuantepe**	**0.25**	**47**	⇑*i*P		Pn	**10 28 05.4**	**-0.2**
MASN	**Masaya**	**0.29**	**64**	*e*P		Pn	**10 28 05.2**	**-0.4**
XAVN	**Gruta Xavier**	**0.30**	**17**	⇑*i*P		Pn	**10 28 05.5**	**-0.3**
TISN	**Laguna Tiscapa**	**0.31**	**27**	⇓*e*P		Pn	**10 28 05.5**	**-0.3**
CSAN		**0.32**	**359**	⇓*i*P		Pn	**10 28 05.7**	**-0.2**
MGAN	**Managua**	**0.33**	**30**	⇑*i*P		Pn	**10 28 05.5**	**-0.3**
MGAN				*e*S		Sn	**10 28 18.4**	**+0.1**
MGAN					AML	AML	10 28 19.3	
	comp=E,3μm,0.6s							

MGAN				AML	AML	10 28 19.3	
APON	**Apoyo**	**0.34**	**81**	*i*P	Pn	**10 28 06.1**	**+0.2**
COPN	**Copaltepe**	**0.36**	**331**	*e*P	Pn	**10 28 05.5**	**-0.5**
COPN				⇓*i*P		10 28 05.6	
COPN				*e*S	Sn	**10 28 18.2**	**-0.4**
COPN				AML	AML	10 28 23.8	
	comp=Z,2μm,0.4s						
WILN	**Americas 2**	**0.37**	**37**	⇑*e*P	Pn	**10 28 05.7**	**-0.4**
WILN				*e*S	Sn	**10 28 18.3**	**-0.4**
APYN	**Apoyeque**	**0.37**	**10**	⇓*e*P	Pn	**10 28 05.7**	**-0.4**
HUEN		**0.53**	**27**	⇑*e*P	Pn	**10 28 06.8**	**-0.2**
HUEN				*e*P		10 28 06.8	
MOMN	**Momotombo**	**0.56**	**347**	⇑*e*P	Pn	**10 28 07.2**	**0.0**
MIRN	**Miramar**	**0.64**	**333**	⇓*e*P	Pn	**10 28 07.7**	**-0.1**
CNGN	**Cerro Negro**	**0.69**	**336**	⇑*e*P	Pn	**10 28 07.8**	**-0.3**
CNGN				*e*P		10 28 07.9	
TEL3	**Telica 3**	**0.82**	**329**	⇓*e*P	Pn	**10 28 09.4**	**+0.1**
CONN	**Concepcion**	**0.83**	**111**	⇑*i*P	Pn	**10 28 09.6**	**+0.3**
CRIN	**San Cristobal**	**1.04**	**323**	⇓*i*P	Pn	**10 28 11.4**	**0.0**
CRIN				*e*S	Sn	**10 28 29.3**	**+1.2**
LIM1	**Limonal**	**1.62**	**135**	*e*P	Pn	**10 28 17.9**	**0.0**
LIM1				*e*S	Sn	**10 28 39.8**	**0.0**
CUI	**Cuipilapa**	**1.70**	**134**	⇑*e*P	Pn	**10 28 19.3**	**+0.5**
VCR	**Vista de Mar**	**1.89**	**156**	⇓*e*P	Pn	**10 28 21.5**	**+0.3**
CNCH	**Conchagua**	**1.97**	**316**	*e*P	x	10 28 22.4	
CNCH				⇑*e*P	x	10 28 22.5	
TGUH	**Tegucigalpa,Un**	**2.33**	**339**	⇓*i*P	Pn	**10 28 27.7**	**+0.9**
TGUH				*e*P		10 28 27.7	
BLLM	**Bellamira**	**2.37**	**312**	*e*P	x	10 28 27.7	
JCR	**Jicaral**	**2.38**	**147**	*e*P	Pn	**10 28 28.0**	**+0.6**
JCR				*e*S	Sn	**10 28 54.5**	**-2.0**
VSM	**San Miguel**	**2.39**	**311**	⇓*e*P	x	10 28 28.4	
VSM				*e*P	x	10 28 28.4	
CAHU	**Cacacuatique**	**2.58**	**317**	*e*P	x	10 28 30.9	
CGA2	**Cerro Gallo 2**	**2.65**	**134**	⇑*e*P	Pn	**10 28 31.3**	**+0.4**
CGA2				*e*S	Sn	**10 29 02.5**	**-0.5**
PRS1	**Puriscal**	**2.79**	**132**	⇑*e*P	Pn	**10 28 34.1**	**+1.5**
PRS1				*e*S	Sn	**10 29 07.8**	**+1.8**
SNVI	**San Vicente**	**2.94**	**307**	*e*P	x	10 28 35.9	
SNVI				*e*P	x	10 28 36.0	
SNVI				*e*S	x	10 29 09.5	
LAJ	**Bijagual**	**3.00**	**131**	⇑*e*P	Pn	**10 28 33.9**	**-1.6**
LFRS	**El Faro**	**3.12**	**304**	*e*P	x	10 28 37.6	
LFRS				*e*S	x	10 29 13.7	
QCR	**Quepos**	**3.28**	**137**	*e*P	Pn	**10 28 39.8**	**+0.6**
QCR				*e*S	Sn	**10 29 17.5**	**-0.2**
URSC	**Urasca**	**3.28**	**128**	⇓*e*P	Pn	**10 28 40.0**	**+0.8**
BOQS	**Boqueron**	**3.36**	**304**	*e*P	x	10 28 41.7	
BOQS				⇑*i*P	x	10 28 41.9	
BOQS				*e*S	x	10 29 20.3	
SBLS	**San Blas**	**3.69**	**302**	⇑*e*P	x	10 28 46.0	
SNJE	**San Jose**	**3.69**	**303**	*e*P	x	10 28 46.1	
RTR	**El Retiro**	**3.74**	**303**	*e*P	x	10 28 47.1	
RBDL	**Robledal**	**3.89**	**305**	*e*P	x	10 28 48.8	
BAR1		**4.01**	**130**	⇑*e*P	Pn	**10 28 50.4**	**+1.5**
ACR	**Cerro Adams**	**4.51**	**135**	⇑*e*P	Pn	**10 28 56.2**	**+0.5**
ACR				*e*S	Sn	**10 29 45.6**	**-1.6**
CHI2		**14.44**	**119**	⇓*e*P	Px	10 28 10.8	
LAPE	**La Pedrera**	**15.24**	**105**	⇑*e*P	Px	10 28 15.5	
LAPE				*e*S	Sx	10 28 34.2	
TXAR	**Lajitas Array**	**23.67**	**320**	P	P	**10 32 50.0**	**-0.3**
	comp=Z,1.3nm,0.4s,mb3.6,baz=138,slow=10.0,SNR=25						
PDAR	**Pinedale Array**	**36.77**	**331**	P	P	**10 34 45.0**	**-0.6**
	comp=Z,0.3nm,0.7s,mb3.4,baz=119,slow=5.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**85.55**	**78**	P	P	**10 40 11.7**	**-3.5**
	comp=Z,0.2nm,0.7s,mb3.2,baz=286,slow=2.6,SNR=2.4						
ASAR	**Alice Springs**	**139.98**	**247**	PKP	PKPdf	10 46 56.3	-8.4
	comp=Z,0.2nm,0.4s,baz=110,slow=3.9,SNR=4.6						
WRA	**Warramunga Arr**	**140.07**	**253**	PKP	PKPdf	10 46 56.5	-8.4
	comp=Z,0.3nm,0.5s,baz=93,slow=3.1,SNR=13						

IDC 19 10:32:24.4±1.0, 000N×9628E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.8/21, mbtmp3.8/8, MS3.3/1, Ms1 3.3/1, ms1mx2.6/24, Error ellipse: s-maj=46.1km s-min=20.3km az=52.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**18.53**	**8**	P		Pn	10 36 41.8	-0.9
	baz=197,slow=12,SNR=7.4							
DAV	**Davao City (W)**	**30.06**	**76

TPIG				*i* S	Sn	10 46 07.5	-1.9	RUP					Sg	**Sg**	11 07 40.2	+0.9	**LOMF**	**Lomont**	**2.02**	**179**	Pn	**Pn**	**11 08 02.7**	**+0.2**
PCIG		**3.24**	**93**	*e*P	Pn	10 45 45.4	-2.2	**WLF**	**Walferdange**	**0.51**	**306**	*e*Pg	**Pg**	**11 07 39.2**	**+2.3**	LOMF				Pg	**Pg**	**11 08 06.3**	**+0.3**
PCIG				*i* S	Sn	10 46 21.8	-3.8	SNR=20								LOMF				Sg	**Sg**	**11 08 32.4**	**+0.2**
ACX	**Acapulco**	**3.34**	**287**	*e*P	Pn	10 45 45.1	-3.9	WLF				*e*Sg	**Sg**	**11 07 45.6**	**+2.1**	**LOMF**	**Lomont**	**2.02**	**179**	Pg	**Pg**	**11 08 06.7**	**+0.7**
TGIG		**3.43**	**75**	*e*P	Pn	10 45 48.8	-1.4	**WLF**	**Walferdange**	**0.51**	**306**	P	**Pg**	**11 07 39.2**	**+2.3**	LOMF				Sg	**Sg**	**11 08 33.5**	**+1.3**
TGIG				*i* S	Sn	10 46 27.3	-2.7	**WLF**	**Walferdange**	**0.51**	**306**	*e*Pg	**Pg**	**11 07 39.3**	**+2.4**	**BUG**	**Bochum--Univer**	**2.10**	**8**	*e*Sg	**Sg**	**11 08 34.5**	**0.0**
MEIG	**Mezcala**	**3.52**	**305**	*i* P	Pn	10 45 49.5	-2.0	WLF				*e*Sg	**Sg**	**11 07 56.4**	**+13**	**SISB**	**Singen-Schiene**	**2.22**	**138**	P	**Pn**	**11 08 06.6**	**+1.3**
MEIG				*i* S	Sn	10 46 29.3	-3.2	**WLF**	**Walferdange**	**0.51**	**306**	*e*Pg	**Pg**	**11 07 39.3**	**+2.4**	**SISB**	**Singen-Schiene**	**2.22**	**138**	Px	Px	11 08 06.6	
PPM	**Popocatepetl**	**3.68**	**328**	*e*P	Pn	10 45 59.0	+5.3	WLF				Sg	**Sg**	**11 07 45.6**	**+2.1**	**HDH**	**Heidenheim-Cha**	**2.39**	**108**	Pg	**Pg**	**11 08 12.5**	**-0.5**
PPM				*i* S	Sn	10 46 40.4	+4.0	**ABH**	**Alteburg**	**0.71**	**44**⇑	*e*P²	**Pg**	**11 07 41.5**	**+0.6**	**UBBA**	**Unterbreizbach**	**2.53**	**54**	*e*Sg	**Sg**	**11 08 47.6**	**-0.8**
CAIG	**El Cayaco**	**3.71**	**288**	*i* P	Pn	10 45 52.2	-1.8	**ABH**	**Alteburg**	**0.71**	**44**⇑	*e*P²	**Pg**	**11 07 41.5**	**+0.6**	**WTSB**	**Winterswijk**	**2.60**	**0**	*e*Pg	**Pg**	**11 08 17.8**	**+0.8**
CAIG				*i* S	Sn	10 46 32.4	-4.6	**ABH**	**Alteburg**	**0.71**	**44**	Pg	**Pg**	**11 07 41.5**	**+0.6**	WTSB				*e*Sg	**Sg**	**11 08 49.9**	**-0.8**
CAIG	**El Cayaco**	**3.71**	**288**	*i* P	Pn	10 45 52.2	-1.8	ABH				Sg	**Sg**	**11 07 51.7**	**+1.6**	**UBR**	**Ueberruh**	**2.78**	**126**	P	**Pn**	**11 08 14.0**	**+1.0**
CAIG				*i* S	Sn	10 46 34.0	-3.1	**LANF**	**Langenberg**	**0.78**	**120**⇓	*i*P²	**Pb**	**11 07 42.8**	**-0.8**	**UBR**	**Ueberruh**	**2.78**	**126**	Px	Px	11 08 14.0	
PLIG	**Platanillo**	**3.72**	**312**	*i* P	Pn	10 45 53.1	-1.0	**LANF**	**Langenberg**	**0.78**	**120**	Pg	**Pg**	**11 07 42.6**	**+0.5**	**CABF**	**La Chapelle**	**2.80**	**190**	*e*Pg	**Pg**	**11 08 21.0**	**+0.1**
PLIG				*i* S	Sn	10 46 32.7	-4.6	**KTD**	**Kalmit**	**0.85**	**93**	Pg	**Pg**	**11 07 44.8**	**+1.3**		SNR=1.0						
PLIG	**Platanillo**	**3.72**	**312**	*i* P	Pn	10 45 53.1	-1.0	**KTD**	**Kalmit**	**0.85**	**93**	Pg	**Pg**	**11 07 43.9**	**+0.4**	CABF				*e*Sg	**Sg**	**11 08 58.1**	**+0.9**
PLIG				*i* S	Sn	10 46 33.9	-3.4	KTD				Sg	**Sg**	**11 07 56.3**	**+1.7**		87nm,0.5s,SNR=1.0						
LVIG	**Laguna Verde**	**3.78**	**2**	*i* P	Pn	10 46 00.0	+5.0	**BGG**	**Burgeitz**	**0.91**	**23**	*e*Pg	**Pg**	**11 07 44.7**	**0.0**	**CABF**	**La Chapelle**	**2.80**	**190**	*e*Pn	**Pn**	**11 08 13.3**	**+0.1**
LVIG				*i* S	Sn	10 46 40.1	+1.3	**HILG**	**Hillesheim**	**0.92**	**356**	*e*Pg	**Pg**	**11 07 45.4**	**+0.5**	CABF				*e*Pg	**Pg**	**11 08 21.0**	**+0.1**
MZVM		**4.11**	**322**	*e*P	Pn	10 46 02.3	+2.7	**CDF**	**Champ du Feu**	**1.01**	**161**	*e*Pn	**Pn**	**11 07 48.3**	**-0.4**	CABF				*e*Sg	**Sg**	**11 08 58.1**	**+0.9**
THIG		**4.28**	**103**	*i* P	Pn	10 46 00.1	-1.8		SNR=1.0							**CABF**	**La Chapelle**	**2.80**	**190**	*e*Pg	**Pg**	**11 08 21.0**	**+0.1**
THIG				*i* S	Sn	10 46 48.7	-2.5	CDF				*e*Sg	**Sg**	**11 08 00.9**	**+1.2**		SNR=1.0						
DEIG	**Demacu**	**4.94**	**332**	*e*P	Pn	10 46 26.0	+15		252nm,0.3s,SNR=1.0							CABF				*e*Sg	**Sg**	**11 08 58.1**	**+0.9**
DEIG				*i* S	Sn	10 47 14.2	+6.9	**CDF**	**Champ du Feu**	**1.01**	**161**	*e*Pg	**Pg**	**11 07 47.1**	**+0.5**		43nm,0.5s,SNR=1.0						
ZIIG	**Zihuatanejo**	**4.97**	**290**	*e*P	Pn	10 46 07.7	-3.7	CDF				*e*Pn	**Pn**	**11 07 48.3**	**-0.4**	**LOR**	**Lormes**	**2.87**	**224**	*e*Pn	**Pn**	**11 08 14.5**	**+0.3**
ZIIG				*i* S	Sn	10 47 08.7	+0.5	CDF				*e*Sg	**Sg**	**11 08 00.9**	**+1.2**		SNR=1.0						
								CDF	**Champ du Feu**	**1.01**	**161**	*e*Pn	**Pn**	**11 07 48.3**	**-0.4**	LOR				*e*Sn	**Sn**	**11 08 46.6**	**-2.8**
									SNR=1.0								SNR=1.0						
								CDF				*e*Sg	**Sg**	**11 08 00.9**	**+1.2**	LOR				*e*Sg	**Sg**	**11 09 00.0**	**+0.6**
									126nm,0.3s,SNR=1.0								79nm,0.4s,SNR=1.0						
								STR	**Strasbourg**	**1.02**	**140**	Pg	**Pg**	**11 07 46.8**	**+0.1**	**LOR**	**Lormes**	**2.87**	**224**	*e*Pn	**Pn**	**11 08 14.5**	**+0.3**
								RFYF	**Reffroy**	**1.14**	**230**	*e*Pg	**Pg**	**11 07 51.0**	**+2.0**		SNR=1.0						
								RFYF				*e*Sg	**Sg**	**11 08 07.0**	**+3.2**	LOR				*e*Sn	**Sn**	**11 08 46.6**	**-2.8**
								ECH	**Echery**	**1.18**	**168**	Pg	**Pg**	**11 07 50.3**	**+0.4**		SNR=1.0						
								ECH				Sg	**Sg**	**11 08 06.6**	**+1.4**	LOR				*e*Sg	**Sg**	**11 09 00.0**	**+0.6**
								ECH	**Echery**	**1.18**	**168**	*e*Pg	**Pg**	**11 07 51.3**	**+1.5**		40nm,0.4s,SNR=1.0						
								ECH				*e*Sg	**Sg**	**11 08 07.0**	**+1.8**	**GRA1**	**Grafenberg Arr**	**2.91**	**82**	Pg	**Pg**	**11 08 22.0**	**-1.0**
								ECH	**Echery**	**1.18**	**168**⇑	*i*P	**Pg**	**11 07 51.4**	**+1.5**	GRA1				Sg	**Sg**	**11 08 59.1**	**-1.5**
								ECH	**Echery**	**1.18**	**168**	*e*Pg	**Pg**	**11 07 51.3**	**+1.4**	**GRF**	**Grafenberg Arr**	**2.91**	**82**	*e*Pg	**Pg**	**11 08 22.0**	**-1.0**
								ECH				Sg	**Sg**	**11 08 06.6**	**+1.4**	GRF				*e*Sg	**Sg**	**11 08 59.1**	**-1.5**
								STB	**Steinbach**	**1.23**	**2**	*e*Pg	**Pg**	**11 07 49.5**	**-1.3**	**DAVA**	**Damuels**	**2.94**	**134**⇑	*i*Pn	**Pn**	**11 08 16.5**	**+1.4**
								STB				*e*Sg	**Sg**	**11 08 07.6**	**+1.1**		3.7nm,0.1s						
									81nm,0.4s							DAVA				⇓*e*Sg	**Sg**	**11 09 04.0**	**+2.5**
								SWS	**Schriesheim-Wi**	**1.26**	**84**	P	**Pg**	**11 07 50.8**	**-0.5**		34nm,0.6s						
								THEF	**They Montfort**	**1.26**	**205**	Pg	**Pg**	**11 07 52.2**	**+0.8**	**GTTG**	**Gvttingen**	**2.98**	**42**	*e*Sg	**Sg**	**11 09 02.1**	**-0.7**
								THEF				Sg	**Sg**	**11 08 08.6**	**+0.9**	**OBER**	**Oberstdorf**	**3.06**	**129**⇑	*i*Pn	**Pn**	**11 08 18.0**	**+1.3**
								THEF	**They Montfort**	**1.26**	**205**⇑	*i*P	**Pg**	**11 07 52.5**	**+1.1**	**SSF**	**Saint Saulge**	**3.19**	**225**	*e*Pn	**Pn**	**11 08 18.2**	**-0.3**
								THEF	**They Montfort**	**1.26**	**205**	Pg	**Pg**	**11 07 52.5**	**+1.1**		SNR=1.0						
								THEF				Sg	**Sg**	**11 08 08.6**	**+0.9**	SSF				*e*Sn	**Sn**	**11 08 56.0**	**-1.2**
								KLL	**Kalltalsperre**	**1.31**	**347**	*e*Pg	**Pg**	**11 07 52.2**	**-0.2**		SNR=1.0						
								LIBD	**Limburg**	**1.34**	**156**⇓	*e*P²	**Pb**	**11 07 54.4**	**+1.3**	SSF				*e*Sg	**Sg**	**11 09 10.6**	**+1.1**
								LIBD	**Limburg**	**1.34**	**156**⇓	*e*P	**Pb**	**11 07 54.4**	**+1.3**		75nm,0.4s						
								LIBD	**Limburg**	**1.34**	**156**	Pg	**Pg**	**11 07 53.1**	**+0.3**	**SSF**	**Saint Saulge**	**3.19**	**225**	*e*Pn	**Pn**	**11 08 18.2**	**-0.3**
								LIBD				Sg	**Sg**	**11 08 10.5**	**+0.4**		SNR=1.0						
								MEM	**Membach**	**1.34**	**338**	P	**Pg**	**11 07 53.4**	**+0.5**	SSF				*e*Sn	**Sn**	**11 08 56.0**	**-1.2**
								MEM	**Membach**	**1.34**	**338**	P	**Pg**	**11 07 53.3**	**+0.4**		SNR=1.0						
								TOD	**Tromm**	**1.34**	**79**⇓	*e*Pn	**Pn**	**11 07 52.0**	**-1.1**	SSF				*e*Sg	**Sg**	**11 09 10.6**	**+1.1**
								TOD	**Tromm**	**1.34**	**79**	Pg	**Pg**	**11 07 51.9**	**-1.0**		37nm,0.4s						
								TOD				Sg	**Sg**	**11 08 11.1**	**+0.9**	**RETA**	**Reutte**	**3.25**	**124**⇑	*i*Pn	**Pn**	**11 08 20.3**	**+0.8**
								DREG	**Dreilaegerbach**	**1.34**	**345**	*e*Pg	**Pg**	**11 07 52.8**	**-0.2**	**MOX**	**Moxa**	**3.37**	**66**	*e*Pn	**Pn**	**11 08 21.5**	**+0.5**
								TNS	**Taunus Mts**	**1.37**	**51**	P	**Pg**	**11 07 52.7**	**-0.8**		SNR=1.8						
								TNS				Sg	**Sg**	**11 08 12.2**	**+0.9**	MOX				*e*Pg	**Pg**	**11 08 30.1**	**-1.7**
								HAU	**Haudompre**	**1.40**	**192**	*e*Pn	**Pn**	**11 07 53.9**	**0.0**		SNR=3.5						
									SNR=1.0							MOX				*e*Sg	**Sg**	**11 09 13.4**	**-1.9**
								HAU				*e*Sg	**Sg**	**11 08 13.7**	**+1.6**	**MOX**	**Moxa**	**3.37**	**66**	*e*PG	**Pg**	**11 08 29.7**	**-2.0**
									329nm,0.3s,SNR=1.0							MOX				*e*SG	**Sg**	**11 09 13.5**	**-1.9**
								HAU	**Haudompre**	**1.40**	**192**	*e*Pn	**Pn**	**11 07 53.9**	**0.0**	**SMF**	**Signal de Mont**	**3.37**	**217**	*e*Pg	**Pg**	**11 08 31.9**	**+0.2**
									SNR=1.0								SNR=1.0						
								HAU				*e*Sg	**Sg**	**11 08 13.7**	**+1.6**	SMF				*e*Sn	**Sn**	**11 08 59.8**	**-1.9**
									165nm,0.3s,SNR=1.0							SMF				*e*Sg	**Sg**	**11 09 16.3**	**+0.9**
								BCLA	**Clavier**	**1.42**	**318**	P	**Pn**	**11 07 55.5**	**+1.2**		58nm,0.4s						
								BCLA	**Clavier**	**1.42**	**318**	P	**Pn**	**11 07 55.4**	**+1.1**	**SMF**	**Signal de Mont**	**3.37**	**217**	*e*Pn	**Pn**	**11 08 20.3**	**-0.7**
								MEZF	**Maizieres J'vi**	**1.44**	**233**	*e*Pg	**Pg**	**11 07 55.8**	**+1.1**	SMF				*e*Pg	**Pg**	**11 08 31.9**	**+0.2**
									SNR=1.0							SMF				*e*Sn	**Sn**	**11 08 59.8**	**-1.9**
								MEZF				*e*Sn	**Sn**	**11 08 13.5**	**-0.5**	SMF				*e*Sg	**Sg**	**11 09 16.3**	**+0.9**
									178nm,0.4s,SNR=1.0							**SMF**	**Signal de Mont**	**3.37**	**217**	*e*Pg	**Pg**	**11 08 31.9**	**+0.2**
								MEZF	**Maizieres J'vi**	**1.44**	**233**	*e*Pg	**Pg**	**11 07 55.8**	**+1.1**		SNR=1.0						
									SNR=1.0							SMF				*e*Sn	**Sn**	**11 08 59.8**	**-1.9**
								MEZF				*e*Sn	**Sn**	**11 08 13.5**	**-0.5**	SMF				*e*Sg	**Sg**	**11 09 16.3**	**+0.9**
									89nm,0.4s,SNR=1.0								29nm,0.4s						
								BFO	**Black Forest**	**1.46**	**135**	Pn	**Pn**	**11 07 54.0**	**-0.8**	**AVF**	**Avril sur Loir**	**3.46**	**223**	*e*Pn	**Pn**	**11 08 22.5**	**+0.2**
								BFO				*e*Sg	**Sg**	**11 08 13.1**	**-1.0**		SNR=1.0						
								BFO	**Black Forest**	**1.46**	**135**	*e*Pn	**Pn**	**11 07 54.3**	**-0.5**	AVF				*e*Sn	**Sn**	**11 09 02.1**	**-1.8**
								BFO				*e*Sn	**Sn**	**11 08 15.2**	**+0.6**		SNR=1.0						
								BFO	**Black Forest**	**1.46**	**135**	*e*Pn	**Pn**	**11 07 54.3**	**-0.5**	AVF				*e*Sg	**Sg**	**11 09 18.8**	**+0.5**
								BFO				Sg	**Sg**	**11 08 13.1**	**-1.0**		40nm,0.5s,SNR=1.0						
								BFO				*e*Sn	**Sn**	**11 08 15.2**	**+0.6**	**AVF**	**Avril sur Loir**	**3.46**	**223**	*e*Pn	**Pn**	**11 08 22.5**	**+0.2**
								GIVF	**Givet**	**1.47**	**301**	*e*Pn	**Pn**	**11 07 55.6**	**+0.7**		SNR=1.0						
									SNR=1.0							AVF				*e*Sn	**Sn**	**11 09 02.1**	**-1.8**
								GIVF				*e*Sg	**Sg**	**11 08 16.3**	**+1.9**		SNR=1.0						
									400nm,0.6s							AVF				*e*Sg	**Sg**	**11 09 18.8**	**+0.5**
								GIVF	**Givet**	**1.47**	**301**	*e*Pn	**Pn**	**11 07 55.6**	**+0.7**		20nm,0.5s,SNR=1.0						
									SNR=1.0							**HYF**	**Humbligny**	**3.48**	**234**	*e*Pn	**Pn**	**11 08 22.7**	**+0.2**
								GIVF				*e*Sg	**Sg**	**11 08 17.9**	**+0.7**	HYF				*e*Sn	**Sn**	**11 09 02.9**	**-1.4**
									287nm,0.3s							HYF				*e*Sg	**Sg**	**11 09 19.9**	**+1.1**
								HINF	**Hinteralfeld**	**1.56**	**178**	*e*Pn	**Pn**	**11 07 56.1**	**0.0**	**FETA**	**Feichten**	**3.54**	**130**⇑	*i*Pn	**Pn**	**11 08 25.4**	**+2.0**
								HINF				*e*Pg	**Pg**	**11 07 57.7**	**+0.7**		9.5nm,0.4s						
								HINF				*e*Sg	**Sg**	**11 08 17.9**	**+0.7**	**WERD**	**Werda**	**3.73**	**71**	*e*Pn	**Pn**	**11 08 26.2**	**+0.2**
								HINF	**Hinteralfeld**	**1.56**	**178**	*e*Pg	**Pg**	**11 07 57.7**	**+0.7**		SNR=1.8						
								HINF				*e*Sg	**Sg**	**11 08 17.9**	**+0.7**	WERD				*e*Pg	**Pg**	**11 08 37.6**	**-1.0**
									143nm,0.3s								SNR=5.0						
								DOU	**Dourbes**	**1.59**	**298**	P	**Pn**	**11 07 57.6**	**+0.9**	WERD				*e*Sg	**Sg**	**11 09 25.9**	**-1.0**
								DOU	**Dourbes**	**1.59**	**298**	P	**Pn**	**11 07 57.5**	**+0.8**	**NKC**	**Novy Kostel**	**3.77**	**75**	*e*PN	**Pn**	**11 08 27.4**	**+0.9**
								KIZ	**Kirchzarten**	**1.60**	**152**	Pg	**Pg**	**11 07 58.4**	**+0.5**	NKC				*e*SG	**Sg**	**11 09 26.3**	**-2.0**
								SFTF	**Sexfontaines**	**1.64**	**225**	*e*Pn	**Pn**	**11 07 57.7**	**+0.4**		comp=Z,25nm,0.5s						
								SFTF				*e*Sn	**Sn**	**11 08 19.0**	**-0.1**	**TANN**	**Tannenbergstha**	**3.82**	**72**	*e*Pn	**Pn**	**11 08 28.2**	**+1.0**
									106nm,0.3s								SNR=2.0						
								SFTF	**Sexfontaines**	**1.64**	**225**	*e*Pn	**Pn**	**11 07 57.7**	**+0.4**	TANN				*e*Pg	**Pg**	**11 08 38.9**	**-1.4**
								SFTF				*e*Sn	**Sn**	**11 08 19.0**	**-0.1**		SNR=2.5						
									53nm,0.3s							TANN				*e*Sg	**Sg**	**11 09 28.0**	**-1.8**
								STU	**Stuttgart**	**1.69**	**110**	*e*Pn	**Pn**	**11 07 59.9**	**+1.9**	**LPL**	**La Plagne**	**3.86**	**181**	*e*Pg	**Pg**	**11 08 40.4**	**-0.7**
								STU	**Stuttgart**	**1.69**	**110**	*e*Pn	**Pn**	**11 07 59.9**	**+1.9**		SNR=1.0						
								STU				Sg	**Sg**	**11 08 19.9**	**-1.8**	LPL				*e*Sg	**Sg**	**11 09 30.1**	**-1.0**
								FELD	**Feldberg im Sc**	**1.70**	**151**	*e*Pn	**Pn**	**11 07 57.8**	**-0.3**		comp=Z,24nm,0.8s,SNR=1.0						
									SNR=3.6							**LPL**	**La Plagne**	**3.86**	**181**	*e*Pn	**Pn**	**11 08 27.6**	**-0.2**
								FELD				Pg	**Pg**	**11 08 00.5**	**+0.6**	LPL				*e*Pg	**Pg**	**11 08 40.4**	**-0.7**
								FELD				Sg	**Sg**	**11 08 22.9**	**+1.1**	LPL				*e*Sg	**Sg**	**11 09 30.1**	**-1.0**
								FELD	**Feldberg im Sc**	**1.70**	**151**	Pn	**Pn**	**11 07 57.7**	**-0.4**	**LPL**	**La Plagne**	**3.86**	**181**	*e*Pg	**Pg**	**11 08 40.4**	**-0.7**
								FELD				Pg	**Pg**	**11 08 00.5**	**+0.7**		SNR=1.0						
								FELD				Sg	**Sg**	**11 08 22.0**	**+0.2**	LPL				*e*Sg	**Sg**	**11 09 30.1**	**-1.0**
								BAIF	**Baives**	**1.81**	**293**	*e*Pg	**Pg**	**11 08 03.1**	**+1.2**		comp=Z,12nm,0.8s,SNR=1.0						
								BAIF				*e*Sn	**Sn**	**11 08 22.5**	**-0.7**	**BGF**	**Bois d'Agland**	**3.86**	**225**	*e*Pn	**Pn**	**11 08 27.5**	**-0.3**
									SNR=1.0								SNR=1.0						
								BAIF				*e*Sg	**Sg**	**11 08 27.3**	**+2.0**	BGF				*e*Sn	**Sn**	**11 09 12.0**	**-1.9**
									218nm,0.6s								SNR=1.0						
								BAIF	**Baives**	**1.81**	**293**	*e*Pn	**Pn**	**11 08 00.4**	**+0.8**	BGF				*e*Sg	**Sg**	**11 09 31.7**	**+0.4**
								BAIF				*e*Pg	**Pg**	**11 08 03.1**	**+1.2**		comp=Z,184nm,0.4s,SNR=1.0						
								BAIF				*e*Sn	**Sn**	**11 08 22.5**	**-0.7**	**BGF**	**Bois d'Agland**	**3.86**	**225**	*e*Pn	**Pn**	**11 08 27.5**	**-0.3**
								BAIF				*e*Sg	**Sg**	**11 08 27.3**	**+2.0**		SNR=1.0						
								BAIF	**Baives**	**1.81**	**293**	*e*Pg	**Pg**	**11 08 03.1**	**+1.2**	BGF				*e*Sn	**Sn**	**11 09 12.0**	**-1.9**
								BAIF				*e*Sn	**Sn**	**11 08 22.5**	**-0.7**		SNR=1.0						
									SNR=1.0							BGF				*e*Sg	**Sg**	**11 09 31.7**	**+0.4**
								BAIF				*e*Sg	**Sg**	**11 08 27.3**	**+2.0**		comp=Z,92nm,0.4s,SNR=1.0						
									109nm,0.6s							**WTTA**	**Wattenberg**	**3.86**	**121**⇓	*i*Pn	**Pn**	**11 08 29.8**	**+2.0**
								SPAK	**Spaichingen-Ko**	**1.84**	**133**⇑	*i*Pg	**Pg**	**11 08 03.0**	**+0.6**		comp=Z,2.6nm,0.2s						
								SPAK	**Spaichingen-Ko**	**1.84**	**133**	Pg	**Pg**	**11 08 01.6**	**-0.8**	**LPG**	**La Plagne**	**3.88**	**180**	*e*Pg	**Pg**	**11 08 41.3**	**-0.2**
								SPAK	**Spaichingen-Ko**	**1.84**	**133**⇑	*i*P	**Pg**	**11 08 03.0**	**+0.6**	LPG				*e*Sg	**Sg**	**11 09 30.8**	**-0.9**
								SIND	**Sindeldorf**	**1.84**	**90**⇓	*i*P	**Pn**	**11 07 59.1**	**-1.0**		comp=Z,33nm,0.8s						
								BUCH	**Bad Urach**	**1.93**	**118**	P	**Pn**	**11 08 02.0**	**+0.8**	**LPG**	**La Plagne**	**3.88**	**180**	*e*Pn	**Pn**	**11 08 28.5**	**+0.5**
								BBS	**Basel-Blauen**	**1.97**	**166**	Pg	**Pg**	**11 08 06.1**	**+1.2**	LPG				*e*Pg	**Pg**	**11 08 41.3**	**-0.2**
								SNF	**Seneffe**	**1.98**	**306**	P	**Pn**	**11 08 04.1**	**+2.2**	LPG				*e*Sg	**Sg**	**11 09 30.8**	**-0.9**
								GUT	**Gutenstein**	**2.02**	**129**⇑	*i*Pg	**Pg**	**11 08 06.3**	**+0.4**	**LPG**	**La Plagne**	**3.88**	**180**	*e*Pg	**Pg**	**11 08 41.3**	**-0.2**
								GUT	**Gutenstein**	**2.02**	**129**⇑	*i*P	**Pg**	**11 08 06.3**	**+0.4**	LPG				*e*Sg	**Sg**	**11 09 30.8**	**-0.9**
								LOMF	**Lomont**	**2.02**	**179**	Pg	**Pg**	**11 08 06.3**	**+0.3**		comp=Z,17nm,0.8s						
								LOMF				Sg	**Sg**	**11 08 32.4**	**+0.2**	**WET**	**Wettzell**	**4.00**	**91**	*e*Pn	**Pn**	**11 08 30.6**	**+0.9**
								LOMF	**Lomont**	**2.02**	**179**	Pg	**Pg**	**11 08 06.7**	**+0.7**		SNR=7.7						
								LOMF				Sg	**Sg**	**11 08 33.5**	**+1.4**	WET				*e*Sg	**Sg**	**11 09 36.7**	**+1.1**
																WET	**Wettzell**	**4.00**	**91**	Pn	**Pn**	**11 08 30.3**	**+0.6**
																PLDF	**La Plantade**	**4.02**	**213**	Pn	**Pn**	**11 08 30.7**	**+0.7**
																PLDF				Pg	**Pg**	**11 08 45.9**	**+1.7**
																AGO	**Saint Agoulin**	**4.14**	**218**	Pn	**Pn**	**11 08 32.3**	**+0.7**
																AGO				Pg	**Pg**	**11 08 48.5**	**+2.0**
																BNI	**Bardonecchia**	**4.32**	**181**	*e*Pn	**Pn**	**11 08 36.2**	**+2.0**
																BNI				*e*Sg	**Sg**	**11 09 46.9**	**+0.9**
																BNI	**Bardonecchia**	**4.32**	**181**	*e*Pn	**Pn**	**11 08 36.2**	**+2.1**
																BNI				*e*Sg	**Sg**	**11 09 46.9**	**+0.9**
																TCF	**Toulx Ste Croi**	**4.36**	**227**	*e*Pn	**Pn**	**11 08 34.6**	**-0.1**
																TCF				*e*Sg	**Sg**	**11 09 47.0**	**-0.2**
																	comp=Z,63nm,0.7s						
																TCF	**Toulx Ste Croi**	**4.36**	**227**	*e*Pn	**Pn**	**11 08 34.6**	**-0.1**
																TCF				*e*Sg	**Sg**	**11 09 47.0**	**-0.2**
																	comp=Z,32nm,0.7s						
																CLL	**Collm**	**4.43**	**62**	*e*Pg	**Pg**	**11 08 51.0**	**-1.1**
																CLL				*e*Sg	**Sg**	**11 09 48.0**	**-1.5**

DDA **19** *10:56:30.5,36.18N×3702E,h7km±3km, Md3.0*
ISCJB **19** *10:56:31.9±1.6,3622N±008×3691E±008,h5km±10km, Error ellipse: s-maj=14.8km s-min=9.5km az=151.4*
ISK **19** *10:56:32.7,3631N×3675E,h10km,MD2.8*
CSEM **19** *10:56:32.7±0.1,3631N×3675E,h12km,MD2.8, Error ellipse: s-maj=3.3km s-min=1.4km az=143.0*

ISC 19 10:56:32.6±1.7,3622N±009×3687E±009,h10km±9km,n6, σ1§21/10**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	**Iskenderun**	**0.58**	**302**	*i* P	**Pg**	**10 56 44.2**	**+0.3**
COBT				*i* S	**Sg**	**10 56 53.8**	**+2.3**
HTY	**Hatay**	**0.60**	**261**	*e*PG	**Pg**	**10 56 43.4**	**-0.8**
GAZ	**Gaziantep**	**0.99**	**16**	*e*PG	**Pg**	**10 56 51.3**	**-0.5**
GAZ				*e*SG	**Sg**	**10 57 04.4**	**-0.3**
GZT	**Gaziantep**	**1.27**	**26**	*i* P	**Pn**	**10 56 54.2**	**-2.1**
KMRS	**Kahramanmaras**	**1.29**	**1**	*e*PN	**Pn**	**10 56 56.0**	**-0.6**
KMRS				*e*SN	**Sn**	**10 57 13.2**	**-0.7**
URFA	**Urfa**	**1.99**	**51**	*e*PN	**Pn**	**10 57 07.6**	**+1.4**
URFA				*e*SN	**Sn**	**10 57 32.8**	**+1.7**

BNS **19** *11:07:21.3±2.1,5041N×921E,h1km,ML2.7, probably mislocated (after BGR)*
ISCJB **19** *11:07:26.0±0.2,4935N±001×676E±002,h0km, Error ellipse: s-maj=1.6km s-min=1.4km az=38.6*
*

CLL	**Collm**	**4.43**	**62**	*i* Pn		**Pn**	**11 08 28.7**	**-6.9**
CLL				*e*Pg		**Pg**	**11 08 51.0**	**-1.1**
CLL				*e*Sg		**Sg**	**11 09 50.0**	**+0.5**
	comp=Z,14nm,1.0s							
PYM	**Petit Puy Mans**	**4.43**	**217**	Pn		**Pn**	**11 08 35.5**	**-0.2**
PYM				Pg		**Pg**	**11 08 53.3**	**+1.1**
KHC	**Kasperske Hory**	**4.46**	**91**	*e*Pn		**Pn**	**11 08 36.2**	**+0.2**
KHC				*e*PG		**Pg**	**11 08 53.5**	**+0.9**
KHC				*e*SN		**Sn**	**11 09 26.3**	**-2.2**
KHC				*e*SG		**Sg**	**11 09 49.6**	**-0.7**
ORIF	**Oris-en-Rattie**	**4.50**	**188**	*e*Pg		**Pg**	**11 08 52.2**	**-1.2**
ORIF				*e*Sn		**Sn**	**11 09 26.3**	**-3.2**
ORIF				*e*Sg		**Sg**	**11 09 50.8**	**-0.8**
	comp=Z,36nm,0.7s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**4.50**	**188**	*e*Pn		**Pn**	**11 08 36.5**	**-0.1**
ORIF				*e*Pg		**Pg**	**11 08 52.2**	**-1.2**
ORIF				*e*Sn		**Sn**	**11 09 26.3**	**-3.2**
ORIF				*e*Sg		**Sg**	**11 09 50.8**	**-0.8**
ORIF	**Oris-en-Rattie**	**4.50**	**188**	*e*Pg		**Pg**	**11 08 52.2**	**-1.2**
ORIF				*e*Sn		**Sn**	**11 09 26.3**	**-3.2**
ORIF				*e*Sg		**Sg**	**11 09 50.8**	**-0.8**
	comp=Z,18nm,0.7s,SNR=1.0							
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn		**Pn**	**11 08 38.2**	**+0.6**
	SNR=45							
GEC2				*e*Sn		**Sn**	**11 09 28.8**	**-2.6**
GEC2				*e*Sg		**Sg**	**11 09 54.0**	**-0.1**
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn		**Pn**	**11 08 38.3**	**+0.7**
LDF	**La Druitiere**	**4.61**	**263**	*e*Pg		**Pg**	**11 08 55.1**	**-0.5**
	SNR=1.0							
LDF				*e*Sn		**Sn**	**11 09 29.9**	**-2.5**
	SNR=1.0							
LDF				*e*Sg		**Sg**	**11 09 55.4**	**0.0**
	comp=Z,25nm,0.4s							
LDF	**La Druitiere**	**4.61**	**263**	*e*Pn		**Pn**	**11 08 38.1**	**0.0**
LDF				*e*Pg		**Pg**	**11 08 55.1**	**-0.5**
LDF				*e*Sn		**Sn**	**11 09 29.9**	**-2.5**
LDF				*e*Sg		**Sg**	**11 09 55.4**	**0.0**
LDF	**La Druitiere**	**4.61**	**263**	*e*Pg		**Pg**	**11 08 55.1**	**-0.5**
	SNR=1.0							
LDF				*e*Sn		**Sn**	**11 09 29.9**	**-2.5**
	SNR=1.0							
LDF				*e*Sg		**Sg**	**11 09 55.4**	**0.0**
	comp=Z,12nm,0.4s							
MBDF	**Montbardon**	**4.65**	**180**	*e*Pg		**Pg**	**11 08 55.0**	**-1.2**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**11 09 30.1**	**-3.1**
MBDF				*e*Sg		**Sg**	**11 09 55.5**	**-0.9**
	comp=Z,8.5nm,0.6s							
MBDF	**Montbardon**	**4.65**	**180**	*e*Pn		**Pn**	**11 08 38.3**	**-0.3**
MBDF				*e*Pg		**Pg**	**11 08 55.0**	**-1.2**
MBDF				*e*Sn		**Sn**	**11 09 30.1**	**-3.1**
MBDF				*e*Sg		**Sg**	**11 09 55.5**	**-0.9**
MBDF	**Montbardon**	**4.65**	**180**	*e*Pg		**Pg**	**11 08 55.0**	**-1.2**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**11 09 30.1**	**-3.1**
MBDF				*e*Sg		**Sg**	**11 09 55.5**	**-0.9**
	comp=Z,4.2nm,0.6s							
VIVF	**Saint-Julien-l**	**4.74**	**198**	*e*Pg		**Pg**	**11 08 56.9**	**-1.2**
VIVF				*e*Sn		**Sn**	**11 09 32.6**	**-2.9**
	SNR=1.0							
VIVF				*e*Sg		**Sg**	**11 09 58.5**	**-1.0**
	comp=Z,26nm,0.6s							
VIVF	**Saint-Julien-l**	**4.74**	**198**	*e*Pn		**Pn**	**11 08 39.3**	**-0.6**
VIVF				*e*Pg		**Pg**	**11 08 56.9**	**-1.2**
VIVF				*e*Sn		**Sn**	**11 09 32.6**	**-2.9**
VIVF				*e*Sg		**Sg**	**11 09 58.5**	**-1.0**
VIVF	**Saint-Julien-l**	**4.74**	**198**	*e*Pg		**Pg**	**11 08 56.9**	**-1.2**
VIVF				*e*Sn		**Sn**	**11 09 32.6**	**-2.9**
	SNR=1.0							
VIVF				*e*Sg		**Sg**	**11 09 58.5**	**-1.0**
	comp=Z,13nm,0.6s							
LBL	**Lubilhac**	**4.79**	**211**	Pn		**Pn**	**11 08 41.1**	**+0.5**
LBL				Pg		**Pg**	**11 08 58.5**	**-0.5**
FLN	**La Foliniere**	**4.81**	**265**	*e*Pn		**Pn**	**11 08 40.9**	**0.0**
	SNR=1.0							
FLN				*e*Sn		**Sn**	**11 09 34.7**	**-2.6**
	SNR=1.0							
FLN				*e*Sg		**Sg**	**11 10 01.8**	**0.0**
	comp=Z,14nm,0.3s							
FLN	**La Foliniere**	**4.81**	**265**	*e*Pn		**Pn**	**11 08 40.9**	**0.0**
	SNR=1.0							
FLN				*e*Sn		**Sn**	**11 09 34.7**	**-2.6**
	SNR=1.0							
FLN				*e*Sg		**Sg**	**11 10 01.8**	**0.0**
	comp=Z,6.9nm,0.3s							
KBA	**Koelnbreinsper**	**4.95**	**115**	⇑*i*Pn		**Pn**	**11 08 45.1**	**+2.4**
	comp=Z,3.6nm,0.2s							
KBA				⇓*i*Sn		**Sn**	**11 09 42.0**	**+1.4**
	comp=Z,5.9nm,0.3s							
PRU	**Pruhonice**	**5.08**	**80**	*e*SG		**Sg**	**11 10 09.2**	**-1.0**
	comp=Z,11nm,0.8s							
GRR	**Gorron**	**5.14**	**262**	*e*Pn		**Pn**	**11 08 45.3**	**0.0**
	SNR=1.0							
GRR				*e*Sn		**Sn**	**11 09 41.8**	**-3.5**
	comp=Z,13nm,0.2s,SNR=1.0							
GRR	**Gorron**	**5.14**	**262**	*e*Pn		**Pn**	**11 08 45.3**	**0.0**
	SNR=1.0							
GRR				*e*Sn		**Sn**	**11 09 41.8**	**-3.5**
	comp=Z,6.6nm,0.2s,SNR=1.0							
PVCC	**Panska Ves**	**5.16**	**74**	*e*SG		**Sg**	**11 10 10.5**	**-2.3**
	comp=Z,36nm,1.2s							
MOA	**Molln**	**5.19**	**104**	⇑*i*Pn		**Pn**	**11 08 47.4**	**+1.3**
	comp=Z,4.7nm,0.2s							
MOA				⇑*i*Sn		**Sn**	**11 09 46.2**	**-0.4**
	comp=Z,0.9nm,0.2s							
MFF	**Saint Martin d**	**5.41**	**242**	*e*Pn		**Pn**	**11 08 49.1**	**0.0**
	SNR=1.0							
MFF				*e*Sg		**Sg**	**11 10 20.7**	**-0.4**
	comp=Z,12nm,0.5s							
MFF	**Saint Martin d**	**5.41**	**242**	*e*Pn		**Pn**	**11 08 49.1**	**0.0**
	SNR=1.0							
MFF				*e*Sg		**Sg**	**11 10 20.7**	**-0.4**
	comp=Z,6.1nm,0.5s							
RJF	**Les Rejaudoux**	**5.42**	**223**	*e*Pn		**Pn**	**11 08 49.1**	**-0.1**
RJF				*e*Sg		**Sg**	**11 10 20.4**	**-0.8**
	comp=Z,19nm,0.5s							
RJF	**Les Rejaudoux**	**5.42**	**223**	*e*Pn		**Pn**	**11 08 49.1**	**-0.1**
RJF				*e*Sg		**Sg**	**11 10 20.4**	**-0.8**
	comp=Z,9.7nm,0.5s							
SMRF	**Simiane la Rot**	**5.46**	**189**	*e*Pn		**Pn**	**11 08 49.2**	**-0.6**
SMRF				*e*Sn		**Sn**	**11 09 49.6**	**-3.7**
	comp=Z,0.5nm,0.2s							
SMRF	**Simiane la Rot**	**5.46**	**189**	*e*Pn		**Pn**	**11 08 49.2**	**-0.6**
SMRF				*e*Sn		**Sn**	**11 09 49.6**	**-3.7**
	comp=Z,0.2nm,0.2s							
CAF	**Calviac**	**5.49**	**218**	*e*Pn		**Pn**	**11 08 49.5**	**-0.7**
	SNR=1.0							
CAF				*e*Sn		**Sn**	**11 09 50.9**	**-3.1**
	SNR=1.0							
CAF				*e*Sg		**Sg**	**11 10 22.7**	**-0.8**
	comp=Z,17nm,0.6s							
CAF	**Calviac**	**5.49**	**218**	*e*Pn		**Pn**	**11 08 49.5**	**-0.7**
	SNR=1.0							
CAF				*e*Sn		**Sn**	**11 09 50.9**	**-3.1**
	SNR=1.0							
CAF				*e*Sg		**Sg**	**11 10 22.7**	**-0.8**
	comp=Z,8.4nm,0.6s							
SBF	**Sospel**	**5.53**	**175**	*e*Pn		**Pn**	**11 08 49.9**	**-0.8**
SBF				*e*Sn		**Sn**	**11 09 50.6**	**-4.3**
	comp=Z,2.8nm,0.4s							
SBF	**Sospel**	**5.53**	**175**	*e*Pn		**Pn**	**11 08 49.9**	**-0.8**
SBF				*e*Sn		**Sn**	**11 09 50.6**	**-4.3**
	comp=Z,1.4nm,0.4s							
LASF	**Ste Croix**	**5.67**	**202**	*e*Pn		**Pn**	**11 08 52.1**	**-0.5**
LASF				*e*Sn		**Sn**	**11 09 54.5**	**-3.8**
LASF				*e*Sg		**Sg**	**11 10 27.5**	**-1.6**
	comp=Z,26nm,0.7s							
LASF	**Ste Croix**	**5.67**	**202**	*e*Pn		**Pn**	**11 08 52.1**	**-0.5**
LASF				*e*Sn		**Sn**	**11 09 54.5**	**-3.8**
LASF				*e*Sg		**Sg**	**11 10 27.5**	**-1.6**
	comp=Z,13nm,0.7s							
FRF	**La Foret Royal**	**5.81**	**181**	*e*Pn		**Pn**	**11 08 53.9**	**-0.7**
FRF				*e*Sn		**Sn**	**11 09 57.7**	**-4.2**
	comp=Z,4.1nm,0.4s							
FRF	**La Foret Royal**	**5.81**	**181**	*e*Pn		**Pn**	**11 08 53.9**	**-0.7**
FRF				*e*Sn		**Sn**	**11 09 57.7**	**-4.2**
	comp=Z,2.0nm,0.4s							
LMR	**La Mourre**	**6.04**	**182**	*e*Pn		**Pn**	**11 08 56.9**	**-0.9**
LMR				*e*Sn		**Sn**	**11 10 03.1**	**-4.5**
	comp=Z,2.8nm,0.3s							
LMR	**La Mourre**	**6.04**	**182**	*e*Pn		**Pn**	**11 08 56.9**	**-0.9**
LMR				*e*Sn		**Sn**	**11 10 03.1**	**-4.5**
	comp=Z,1.4nm,0.3s							
LFF	**La Frestale**	**6.05**	**225**	*e*Pn		**Pn**	**11 08 57.6**	**-0.3**
LFF				*e*Sg		**Sg**	**11 10 39.9**	**-1.6**
	comp=Z,22nm,0.5s							
LFF	**La Frestale**	**6.05**	**225**	*e*Pn		**Pn**	**11 08 57.6**	**-0.3**
LFF				*e*Sg		**Sg**	**11 10 39.9**	**-1.6**
	comp=Z,11nm,0.5s							
ARSA	**Arzberg**	**6.20**	**107**	⇑*e*Pn		**Pn**	**11 09 01.9**	**+1.9**
ARSA				⇓*i*Sn		**Sn**	**11 10 10.6**	**-1.0**
	comp=Z,4.6nm,0.6s							
DPC	**Dobruska-Polom**	**6.25**	**77**	*e*SG		**Sg**	**11 10 45.4**	**-2.3**
SGMF	**Saint Gilles**	**6.27**	**263**	*e*Pn		**Pn**	**11 09 00.7**	**-0.2**
	SNR=1.0							
SGMF				*e*Sn		**Sn**	**11 10 09.5**	**-3.7**
SGMF				*e*Sg		**Sg**	**11 10 47.2**	**-1.3**
	comp=Z,37nm,0.7s							
SGMF	**Saint Gilles**	**6.27**	**263**	*e*Pn		**Pn**	**11 09 00.7**	**-0.2**
	SNR=1.0							
SGMF				*e*Sn		**Sn**	**11 10 09.5**	**-3.7**
SGMF				*e*Sg		**Sg**	**11 10 47.2**	**-1.3**
	comp=Z,19nm,0.7s							
ROSF	**Rostrenen**	**6.72**	**265**	*e*Pn		**Pn**	**11 09 06.6**	**-0.4**
ROSF				*e*Sn		**Sn**	**11 10 20.1**	**-4.1**
ROSF				*e*Sg		**Sg**	**11 11 00.9**	**-2.0**
	comp=Z,5.9nm,0.4s							
ROSF	**Rostrenen**	**6.72**	**265**	*e*Pn		**Pn**	**11 09 06.6**	**-0.4**
ROSF				*e*Sn		**Sn**	**11 10 20.1**	**-4.1**
ROSF				*e*Sg		**Sg**	**11 11 00.9**	**-2.0**
	comp=Z,3.0nm,0.4s							
QUIF	**Quistinic**	**6.75**	**261**	*e*Pn		**Pn**	**11 09 07.3**	**-0.2**
QUIF				*e*Sg		**Sg**	**11 11 02.4**	**-1.6**
	comp=Z,4.4nm,0.3s							
QUIF	**Quistinic**	**6.75**	**261**	*e*Pn		**Pn**	**11 09 07.3**	**-0.2**
QUIF				*e*Sg		**Sg**	**11 11 02.4**	**-1.6**
	comp=Z,2.2nm,0.3s							
MTLF	**Montolieu**	**6.81**	**209**	*e*Pn		**Pn**	**11 09 07.9**	**-0.4**
MTLF				*e*Sg		**Sg**	**11 11 03.3**	**-2.5**
	comp=Z,3.1nm,0.4s							
MTLF	**Montolieu**	**6.81**	**209**	*e*Pn		**Pn**	**11 09 07.9**	**-0.4**
MTLF				*e*Sg		**Sg**	**11 11 03.3**	**-2.5**
	comp=Z,1.5nm,0.4s							

IDC 19 11:10:15.9±7.9, 184N×12490E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=176.1km s-min=123.8km az=67.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.54**	**157**	P	P	11 15 28.7	+0.5
	1.2nm,0.4s,baz=335,slow=10,SNR=19						
ASAR	**Alice Springs**	**26.82**	**161**	P	P	11 15 58.6	+0.5
	0.1nm,0.3s,baz=341,slow=7.7,SNR=7.4						
STKA	**Stephens Creek**	**37.08**	**156**	P	P	11 17 27.0	-1.0
	0.7nm,0.4s,baz=336,slow=11,SNR=5.6						

*ISCJB **19** 11:50:49.2±0.3, 6355N×003×14666W±0.05, h10km, mb3.4/5, Error ellipse: s-maj=4.4km s-min=3.3km az=19.6*
*NEIC **19** 11:50:49.4, 6354N×14667W, h4km, ML4.2(PMR), ML3.8(AEIC), After AEIC.*
*IDC **19** 11:50:52.0±1.4, 6353N×146.14W, h0km, mb3.4/5, mb1 3.8/7, mb1mx3.7/25, mbtmp3.5/7, ML3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/23, Error ellipse: s-maj=38.9km s-min=17.0km az=36.0*

ISC 19 11:50:50.2±0.3, 6358N±003×14665W±006, h10km, n38, σ1§06/44, mb3.4/5, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAX	**Paxson**	**0.81**	**138**	P	**Pg**	**11 51 03.3**	**-2.6**
PAX				S	**Sg**	**11 51 14.1**	**-2.3**
MCK	**McKinley**	**1.03**	**280**	P	**Pg**	**11 51 08.8**	**-1.2**
MCK				S	**Sg**	**11 51 22.9**	**-0.5**
DOT	**Dot Lake**	**1.16**	**85**	P	**Pb**	**11 51 10.9**	**-1.4**
DOT				S	**Sb**	**11 51 27.7**	**+0.4**
IL1	**Eielson Array**	**1.20**	**355**	P	**Pb**	**11 51 12.5**	**-0.6**
COLA	**College**	**1.40**	**339**	P	**Pn**	**11 51 15.6**	**-0.3**
COLA				S	**Sn**	**11 51 34.6**	**+0.3**
MENT	**Mentasta**	**1.47**	**115**	P	**Pn**	**11 51 15.5**	**-1.3**
TRF	**Thorofare Moun**	**1.64**	**267**	P	**Pn**	**11 51 18.7**	**-0.3**
KTH	**Kantishna Hill**	**1.91**	**271**	P	**Pn**	**11 51 22.5**	**-0.3**
SML	**Sawmill**	**1.94**	**204**	P	**Pn**	**11 51 22.0**	**-1.2**
BPAW	**Bear Paw Mtn.**	**1.99**	**287**	P	**Pn**	**11 51 23.2**	**-0.6**
BCA3	**Beaver Creek A**	**2.25**	**101**	P	**Pn**	**11 51 26.8**	**-0.7**
PMR	**Palmer**	**2.30**	**211**	P	**Pn**	**11 51 27.4**	**-0.7**
CHUM	**Lake Minchumin**	**2.54**	**279**	*e*Pn	**Pn**	**11 51 30.7**	**-0.7**
CHUM				*e*Sg	**Sn**	**11 52 08.7**	**+6.4**
PPLA	**Purkeypile**	**2.60**	**257**	P	**Pn**	**11 51 32.7**	**+0.5**
EGAK	**Eagle**	**2.69**	**61**	P	**Pn**	**11 51 34.4**	**+0.9**
SKT	**Skwentna**	**2.76**	**237**	P	**Pn**	**11 51 33.4**	**-1.0**
RC01	**Rabbit Creek A**	**2.88**	**211**	P	**Pn**	**11 51 37.1**	**+1.0**
FIB	**Fire Island**	**2.93**	**216**	P	**Pn**	**11 51 37.6**	**+0.9**
EYAK	**Cordova Ski Ar**	**3.07**	**172**	P	**Pn**	**11 51 39.0**	**+0.3**
DAWY	**Dawson**	**3.25**	**78**	P	**Pn**	**11 51 40.7**	**-0.5**
RAGM	**Ragged Mountai**	**3.34**	**163**	P	**Pn**	**11 51 43.8**	**+1.5**
SLKM	**Skilak Lake**	**3.51**	**210**	P	**Pn**	**11 51 45.9**	**+1.2**
SEW	**Seward**	**3.73**	**202**	P	**Pn**	**11 51 49.0**	**+1.2**
IM3	**Indian Mountai**	**3.88**	**312**	P	**Pn**	**11 51 49.6**	**-0.2**
IMA2	**Indian Mountai**	**3.91**	**313**	*e*P	**Pn**	**11 51 50.1**	**-0.1**
COLD	**Coldfoot**	**3.95**	**340**	P	**Pn**	**11 51 51.6**	**+0.8**
TT01	**Tatalina**	**4.29**	**265**	P	**Pn**	**11 51 55.1**	**-0.3**
SVW2	**Sparrevohn**	**4.85**	**243**	P	**Pn**	**11 52 03.6**	**+0.5**
KDAK	**Kodiak Island**	**6.50**	**209**	Pn	**Pb**	**11 52 39.1**	**-4.2**
	0.7nm,0.3s,baz=69,slow=9.7,SNR=12						
KDAK				Sn	**Sn**	**11 53 49.0**	**+9.1**
	2.1nm,0.3s,baz=131,slow=20,SNR=2.4						
KDAK				Lg		11 54 25.7	
	1.3nm,0.3s,baz=144,slow=19,SNR=3.6						
KDAK	**Kodiak Island**	**6.50**	**209**	*e*Pn	**Pn**	**11 52 25.8**	**0.0**
	33nm,0.7s						
INK	**Inuvik**	**7.15**	**43**	*e*Pn	**Pn**	**11 52 35.1**	**+0.4**
	642nm,0.5s						
DLBC	**Dease Lake**	**9.56**	**115**	Pn	**Pn**	**11 53 09.2**	**+1.5**
	0.2nm,0.3s,baz=345,slow=12,SNR=5.6						
DLBC				Lg		11 55 44.8	
	1.2nm,0.3s,baz=256,slow=15,SNR=4.5						
YKA	**Yellowknife Ar**	**14.49**	**80**	Pn	**Pn**	**11 54 13.5**	**-1.5**
	0.3nm,0.3s,baz=286,slow=13,SNR=8.1						
PDAR	**Pinedale Array**	**29.79**	**117**	P	**P**	**11 56 58.1**	**+1.3**
	0.6nm,1.0s,mb3.3,baz=352,slow=3.7,SNR=2.9						
NVAR	**Mina Array Bea**	**30.36**	**132**	P	**P**	**11 57 03.5**	**+1.6**
	0.2nm,0.5s,mb3.1,baz=331,slow=7.2,SNR=3.1						
TXAR	**Lajitas Array**	**43.81**	**121**	P	**P**	**11 58 57.8**	**+1.9**
	0.4nm,0.7s,mb3.2,baz=337,slow=7.6,SNR=5.4						
TXAR				LR	LR	12 20 29.7	
	comp=Z,38nm,18.7s,baz=185,slow=41						
SONM	**Songino Array**	**55.04**	**308**	P	**P**	**12 00 26.6**	**+5.2**
	0.3nm,0.7s,mb3.4,baz=20,slow=4.6,SNR=2.7						
AKASG	**Malin Array Be**	**66.02**	**3**	P	**P**	**12 01 39.6**	**+3.2**
	0.4nm,0.4s,mb3.8,baz=358,slow=7.1,SNR=4.0						

CASC 19 11:53:45.6±1.8, 1408N×8992W, h219km±9km, MD4.1, ML2.8, 8C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RBDL	**Robledal**	**0.23**	**81**	*e*P	x	11 54 14.6	
RBDL				*e*S	x	11 54 39.1	
RTR	**El Retiro**	**0.32**	**124**	*e*P	x	11 54 15.1	
SNJE	**San Jose**	**0.37**	**124**	*e*P	x	11 54 15.0	
SBLS	**San Blas**	**0.37**	**130**	*e*P	x	11 54 15.2	
NBG	**Las Nubes**	**0.66**	**321**	⇑*e*P	Pn	11 54 16.2	+0.8
BOQS	**Boqueron**	**0.71**	**119**	⇓*e*P	x	11 54 16.7	
PCG	**Pacaya**	**0.74**	**295**	⇑*e*P	Pn	11 54 16.2	+0.4
LBRS	**Las Brisas**	**0.92**	**112**	*e*P	x	11 54 17.6	
LFRS	**El Faro**	**0.95**	**118**	*e*P	x	11 54 17.8	
MRL	**Marmol**	**1.01**	**13**	⇑*e*P	Pn	11 54 17.3	-0.1
FG6		**1.05**	**297**	⇑*e*P	Pn	11 54 18.2	+0.6
SNVI	**San Vicente**	**1.15**	**114**	⇑*e*P	x	11 54 19.2	
CAHU	**Cacacuatique**	**1.69**	**100**	⇓*e*P	x	11 54 23.0	
CNCH	**Conchagua**	**2.18**	**111**	⇓*e*P	x	11 54 27.8	
CRIN	**San Cristobal**	**3.11**	**116**	⇑*e*P	Pn	11 54 38.9	+1.4
TEL3	**Telica 3**	**3.35**	**116**	*e*P	Pn	11 54 41.4	+1.1
CNGN	**Cerro Negro**	**3.51**	**116**	*e*P	Pn	11 54 42.6	+0.4
CNGN				*e*P		11 54 42.9	
MIRN	**Miramar**	**3.52**	**117**	⇑*e*P	Pn	11 54 43.6	+1.2
MOMN	**Momotombo**	**3.69**	**116**	⇓*e*P	Pn	11 54 46.7	+2.4
COPN	**Copaltepe**	**3.75**	**120**	*e*P	Pn	11 54 45.8	+0.7
COPN				*e*P		11 54 45.9	
COPN				*e*S	S	11 55 33.0	+1.1
CSAN		**3.89**	**119**	*e*P	Pn	11 54 48.2	+1.4
APYN	**Apoyeque**	**3.93**	**117**	*e*P	Pn	11 54 49.3	+2.1
XAVN	**Gruta Xavier**	**3.99**	**118**	*e*P	Pn	11 54 49.8	+1.8
HUEN		**4.04**	**115**	*e*P	Pn	11 54 50.0	+1.4
TISN	**Laguna Tiscapa**	**4.04**	**118**	*e*P	Pn	11 54 51.0	+2.3
MGAN	**Managua**	**4.06**	**118**	*e*P	Pn	11 54 50.2	+1.4
MGAN				*e*S	S	11 55 39.5	+0.7
MGAN				AML	AML	11 55 44.8	
	comp=N,20nm,0.3s						
TICN	**Ticuantepe**	**4.13**	**119**	⇑*e*P	Pn	11 54 51.4	+1.7
CONN	**Concepcion**	**4.88**	**120**	*e*P	Pn	11 54 60.0	+1.0

*GII **19** 12:07:39.6±1.7, 3375N×3670E, h0km, ML2.6/2, EXPLOSION*
*GRAL **19** 12:07:39.2±0.3, 3360N×3703E, h23km±4km, MD3.3*

ISC 19 12:07:38.8±1.5, 3369N±005×3696E±009, h0km, n11, σ0§83/19, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.97**	**258**	*e*P	**Pg**	**12 07 56.6**	**-0.8**
RCY				*e*S	**Sg**	**12 08 09.7**	**-0.3**
HWQ	**Hawqa**	**1.02**	**305**	*e*P	**Pg**	**12 07 58.8**	**+0.4**
HWQ				*e*S	**Sg**	**12 08 13.1**	**+1.4**
BHL	**Bhannes**	**1.11**	**281**	*e*P	**Pg**	**12 07 59.6**	**-0.4**
HRI	**Mount Hermon**	**1.11**	**248**	Sg	**Sg**	**12 08 13.6**	**-0.8**
KSHT	**Keshet**	**1.19**	**234**	Pg	**Pg**	**12 08 00.9**	**-0.8**
KSHT				Sg	**Sg**	**12 08 18.0**	**+0.9**
MMA0B	**Mount Meron ar**	**1.47**	**243**	Pn	**Pn**	**12 08 05.2**	**-1.3**
MMA0B				Sn	**Sn**	**12 08 25.8**	**-0.5**
HNTI	**Hanita**	**1.61**	**248**	Pn	**Pn**	**12 08 07.7**	**-0.8**
HNTI				Sn	**Sn**	**12 08 29.0**	**-0.9**
MMLI	**Mount Malkishu**	**1.80**	**226**	Pn	**Pn**	**12 08 11.7**	**+0.6**
MMLI				Sn	**Sn**	**12 08 35.6**	**+1.1**
HMDT	**Nahal Hemdat**	**1.87**	**220**	Pn	**Pn**	**12 08 12.2**	**+0.1**
HMDT				Sn	**Sn**	**12 08 37.0**	**+0.6**
OFRI	**'Ofer**	**1.97**	**238**	Pn	**Pn**	**12 08 13.7**	**+0.3**
OFRI				Sn	**Sn**	**12 08 38.7**	**-0.1**
SLTI	**Sal'it**	**2.17**	**229**	Sn	**Sn**	**12 08 45.4**	**+1.7**

BER 19 12:11:30.7±0.3, 7116N×673W, h12km, MD3.3, ML3.6, MW3.2, 2C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.54**	**252**	⇑*i*P	Pg	12 11 40.3	-0.9
JNE				*e*S	Sg	12 11 47.3	-1.0
JNE				AML	AML	12 11 50.8	
	comp=Z,5μm,0.1s						
JNW	**Jan Mayen West**	**0.57**	**257**	⇑*i*P	Pg	12 11 40.9	-0.8
JNW				*e*S	Sg	12 11 48.1	-1.1
JNW				AML	AML	12 11 49.1	
	comp=Z,8μm,0.2s						
JMI	**Jan Mayen**	**0.69**	**251**	*e*P	Pg	12 11 42.6	-1.5
JMI				*e*S	Sg	12 11 51.5	-1.7
JMI				AML	AML	12 11 55.7	
	comp=Z,1μm,0.5s						

GUC 19 12:19:35.3±0.8, 2287S×7060W, h36km±6km, ML3.5, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.27**	**149**	⇓*i*P	Pn	12 19 42.2	-0.8
MECH				*i*S	Sn	12 19 48.1	-0.2
MECH				AML	AML	12 19 48.6	
	comp=N,29μm,0.3s						
CEN1	**Los Morros**	**0.64**	**145**	⇑*i*P	Pn	12 19 49.1	+1.3
CEN1				*i*S	Sn	12 19 59.3	+2.6
CEN1				AML	AML	12 20 02.2	
	comp=E,3μm,0.9s						
ANCH	**Antofagasta**	**0.83**	**168**	⇑*e*P	Pn	12 19 50.6	+0.2
ANCH				*i*S	Sn	12 20 02.0	+0.5
ANCH				AML	AML	12 20 04.2	
	comp=N,2μm,0.2s						
LVC	**Limon Verde**	**1.58**	**81**	*i*P	Pn	12 20 02.9	+2.1
LVC				*i*S	Sn	12 20 24.2	+4.2
LVC				AML	AML	12 20 28.2	
	comp=N,629n

IMHD	**Mahdasht**	**2.06**	**296**	*e*Pn	**Pn**	**12 24 39.8**	**+1.3**
IMHD				*e*Sn	**Sn**	**12 25 04.8**	**+0.5**
IMHD	**Mahdasht**	**2.06**	**296**	*e*Pn	**Pn**	**12 24 39.8**	**+1.3**
IMHD				*e*Sn	**Sn**	**12 25 04.8**	**+0.5**
IMHD				*e*		12 25 15.8	
ASAO	**Ashtian**	**2.42**	**265**	*e*Pn	**Pn**	**12 24 43.8**	**+0.4**
ASAO				AML	AML	12 25 25.7	
	comp=E,162nm,0.7s						
IGAR	**Gharneh**	**2.51**	**198**	*e*Pn	**Pn**	**12 24 45.7**	**+1.1**
IGAR	**Gharneh**	**2.51**	**198**	*e*Pn	**Pn**	**12 24 45.7**	**+1.1**
IGAR				*e*		12 25 21.9	
IRAZ	**Razeghan**	**2.55**	**285**	*e*Pn	**Pn**	**12 24 45.4**	**+0.2**
IRAZ	**Razeghan**	**2.55**	**285**	*e*Pn	**Pn**	**12 24 45.4**	**+0.2**
IRAZ				*e*		12 25 24.3	
IPIR	**Pirpir**	**2.72**	**220**	*e*Pn	**Pn**	**12 24 48.9**	**+1.4**
IPIR	**Pirpir**	**2.72**	**220**	*e*Pn	**Pn**	**12 24 48.9**	**+1.4**
IPIR				*e*		12 25 32.0	
ICHK	**Chekchek**	**2.83**	**154**	*e*Pn	**Pn**	**12 24 49.3**	**+0.3**
ICHK	**Chekchek**	**2.83**	**154**	*e*Pn	**Pn**	**12 24 50.2**	**+1.2**
ICHK				*e*		12 25 48.6	
ISAD	**Sadrabad**	**2.94**	**168**	*e*Pn	**Pn**	**12 24 51.3**	**+0.6**
ISAD				*e*Sn	**Sn**	**12 25 27.1**	**+1.0**
ISAD	**Sadrabad**	**2.94**	**168**	*e*Pn	**Pn**	**12 24 51.3**	**+0.6**
ISAD				*e*Sn	**Sn**	**12 25 27.1**	**+1.0**
ISAD				*e*		12 25 36.9	
IMEH	**Mehriz**	**3.68**	**157**	*e*Pn	**Pn**	**12 25 00.7**	**0.0**
IMEH	**Mehriz**	**3.68**	**157**	*e*Pn	**Pn**	**12 25 00.7**	**0.0**
IMEH				*e*		12 26 06.4	
ISFR	**Sfrayin**	**4.68**	**60**	*e*Pn	**Pn**	**12 25 14.5**	**+0.1**
ISFR	**Sfrayin**	**4.68**	**60**	*e*Pn	**Pn**	**12 25 14.5**	**+0.1**
ISFR				*e*		12 26 58.5	
ISHV	**Shirvan**	**4.72**	**53**	*e*Pn	**Pn**	**12 25 16.0**	**+1.0**
ISHV	**Shirvan**	**4.72**	**53**	*e*Pn	**Pn**	**12 25 16.0**	**+1.0**
ISHV				*e*		12 26 57.0	
IKOO	**Kooshah**	**5.58**	**113**	*e*Pn	**Pn**	**12 25 26.2**	**-0.7**
IKOO	**Kooshah**	**5.58**	**113**	*e*Pn	**Pn**	**12 25 26.2**	**-0.7**
IKOO				*e*		12 25 27.6	

IDC 19 12:25:51.3±6.0, 3068S×13914E, h21km±30km, mb1 2.9/3, mb1mx2.9/14, mbtmp2.7/3, ML2.5/2, Error ellipse: s-maj=144.8km s-min=18.7km az=43.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.42**	**120**	Pn	Pn	12 26 29.1	-0.5
	0.5nm,0.3s,baz=296,slow=14,SNR=16						
STKA				Pg	Pn	12 26 35.3	+5.8
	1.5nm,0.3s,baz=289,slow=16,SNR=26						
STKA				Sn	Sn	12 27 00.3	+1.8
	2.0nm,0.3s,baz=319,slow=11,SNR=4.4						
STKA				Lg		12 27 08.4	
	3.2nm,0.3s,baz=184,slow=19,SNR=7.7						
ASAR	**Alice Springs**	**8.40**	**325**	Pn	Pn	12 27 52.1	+0.3
	0.1nm,0.3s,baz=174,slow=8.3,SNR=8.5						
ASAR				Sn	Sn	12 29 26.1	+0.2
	0.2nm,0.3s,baz=150,slow=22,SNR=8.1						
WRA	**Warramunga Arr**	**11.54**	**337**	Pn	Pn	12 28 35.7	+0.9
	0.1nm,0.3s,baz=149,slow=12,SNR=13						
WRA				Sn	Sn	12 30 42.6	-0.5
	0.1nm,0.3s,baz=165,slow=24,SNR=4.0						

IDC 19 12:35:29.5±10.0, 3070N×6864E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/26, mbtmp3.6/5, Error ellipse: s-maj=168.6km s-min=49.8km az=25.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.23**	**30**	P	Pn	12 39 55.5	-0.4
	0.1nm,0.3s,baz=210,slow=11,SNR=7.9						
AKTO	**Aktyubinsk**	**21.26**	**341**	P	P	12 40 17.3	+0.2
	1.6nm,0.4s,baz=152,slow=13,SNR=4.9						
BVAR	**Borovoye Array**	**22.34**	**3**	P	P	12 40 28.5	-0.3
	1.1nm,0.5s,baz=168,slow=8.5,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.01**	**22**	P	P	12 41 04.0	0.0
	0.5nm,0.4s,baz=245,slow=9.4,SNR=3.1						
SONM	**Songino Array**	**33.47**	**48**	P	P	12 42 10.3	+0.2
	0.6nm,0.6s,baz=238,slow=8.3,SNR=3.5						

IDC 19 12:38:43.8±9.6, 2043S×17797W, h580km±123km, mb3.0/4, mb1 3.2/5, mb1mx3.0/17, mbtmp3.1/5, Error ellipse: s-maj=54.6km s-min=30.6km az=15.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.27**	**192**	P	P	12 42 21.3	-1.2
	1.0nm,0.3s,baz=349,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**44.56**	**257**	P	P	12 46 06.0	+0.6
	1.2nm,0.8s,baz=90,slow=8.3,SNR=16						
WRA	**Warramunga Arr**	**44.64**	**262**	P	P	12 46 06.0	+0.1
	0.5nm,0.3s,baz=97,slow=7.8,SNR=9.8						
PETK	**Petropavlovsk-**	**76.21**	**345**	P	P	12 49 32.2	-0.7
	5.8nm,0.9s,baz=152,slow=5.9,SNR=5.6						
TXAR	**Lajitas Array**	**86.99**	**57**	P	P	12 50 30.4	+1.9
	0.1nm,0.5s,baz=217,slow=6.1,SNR=6.0						
AKASG	**Malin Array Be**	**142.97**	**331**	PKP	PKPdf	12 57 09.1	-2.8
	0.4nm,0.3s,baz=46,slow=4.5,SNR=7.6						

IDC 19 13:26:21.8±3.2, 1720S×17792W, h650km±287km, mb3.2/4, mb1 3.4/5, mb1mx3.0/19, mbtmp3.3/5, Error ellipse: s-maj=237.5km s-min=35.4km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.77**	**62**	P	P	13 28 12.1	+0.1
	1.8nm,0.3s,baz=197,slow=19,SNR=4.1						
URZ	**Urewera**	**21.43**	**191**	P	P	13 30 26.1	+0.1
	2.5nm,0.3s,baz=190,slow=2.9,SNR=5.9						
STKA	**Stephens Creek**	**39.38**	**241**	P	P	13 32 58.8	+0.5
	1.4nm,0.5s,baz=112,slow=7.9,SNR=13						
WRA	**Warramunga Arr**	**45.22**	**259**	P	P	13 33 43.4	-0.5
	0.9nm,0.5s,baz=95,slow=7.3,SNR=7.6						
ASAR	**Alice Springs**	**45.43**	**254**	P	P	13 33 45.6	+0.3
	6.4nm,0.4s,baz=89,slow=7.9,SNR=163						

*ISK **19** 13:34:44.1, 3440N×3429E, h33km, ML3.3*
*HLW **19** 13:34:45.1, 3491N×3405E, h33km, Mb3.4*
*CSEM **19** 13:34:45.9±0.1, 3456N×3402E, h10km, ML3.4, Error ellipse: s-maj=4.4km s-min=3.4km az=95.0*
*ISCJB **19** 13:34:46.2±0.4, 3457N±003×3401E±005, h10km, Error ellipse: s-maj=6.0km s-min=3.4km az=162.4*
*GII **19** 13:34:50.2±2.4, 3472N×3411E, h32km±5km, ML2.9/5*

ISC 19 13:34:47.0±0.4, 3461N±003×3407E±005, h10km, n38, σ0°88/50, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFK	**Lefkose**	**0.80**	**327**	*e*Pn	**Pn**	**13 35 03.2**	**-1.2**
LFK				*e*Sn	**Sn**	**13 35 17.5**	**+1.2**
EREN	**Erenkoy**	**0.92**	**5**	*e*Pn	**Pn**	**13 35 04.3**	**-1.7**
LEF	**Lefka**	**1.09**	**298**	*e*Pn	**Pn**	**13 35 07.9**	**-0.5**
HWQ	**Hawqa**	**1.59**	**102**	*e*P	**Pn**	**13 35 14.9**	**-0.3**
IKL	**Isikli**	**1.65**	**349**	*e*Pn	**Pn**	**13 35 14.5**	**-1.6**
HNTI	**Hanita**	**1.78**	**149**	Sn	**Sn**	**13 35 39.2**	**-1.4**
RCY	**Rachaya**	**1.84**	**127**	*e*P	**Pn**	**13 35 18.2**	**-0.4**
HRI	**Mount Hermon**	**1.93**	**134**	Pn	**Pn**	**13 35 20.1**	**+0.2**
HRI				Sn	**Sn**	**13 35 43.0**	**-1.2**
MMB3	**Mount Meron ar**	**1.94**	**145**	Pn	**Pn**	**13 35 19.6**	**-0.3**
KSDI	**Kefar Szold**	**1.94**	**137**	Pn	**Pn**	**13 35 19.7**	**-0.3**
KSDI				Sn	**Sn**	**13 35 43.3**	**-1.1**
MMA0B	**Mount Meron ar**	**1.94**	**145**	Pn	**Pn**	**13 35 19.7**	**-0.3**
MMA0B				Sn	**Sn**	**13 35 43.1**	**-1.4**
OFRI	**'Ofer**	**2.13**	**159**	Pn	**Pn**	**13 35 22.6**	**0.0**
KSHT	**Keshet**	**2.18**	**138**	Pn	**Pn**	**13 35 24.3**	**+1.0**
MERS	**Mersin**	**2.28**	**9**	*e*PN	**Pn**	**13 35 23.6**	**-1.1**
MMLI	**Mount Malkishu**	**2.45**	**152**	Pn	**Pn**	**13 35 27.7**	**+0.7**
MMLI				Sn	**Sn**	**13 35 57.1**	**+0.1**
SLTI	**Sal'it**	**2.50**	**161**	Pn	**Pn**	**13 35 28.3**	**+0.6**
SLTI				Sn	**Sn**	**13 35 58.6**	**+0.2**
COBT	**Iskenderun**	**2.61**	**43**	*i* P	**Pn**	**13 35 30.1**	**+0.8**
COBT	**Iskenderun**	**2.61**	**43**	*i* P	**Pn**	**13 35 30.1**	**+0.9**
COBT				*i* S	**Sn**	**13 35 54.5**	**-6.4**
HMDT	**Nahal Hemdat**	**2.65**	**152**	Pn	**Pn**	**13 35 30.9**	**+1.1**
HMDT				Sn	**Sn**	**13 36 02.1**	**+0.1**
DSI	**Dead Sea**	**3.23**	**160**	Pn	**Pn**	**13 35 39.1**	**+1.4**
DSI				Sn	**Sn**	**13 36 16.2**	**0.0**
MZDA	**Masada**	**3.47**	**161**	Pn	**Pn**	**13 35 42.3**	**+1.2**
MZDA				Sn	**Sn**	**13 36 22.2**	**0.0**
RSH		**3.65**	**185**	P	**Pn**	**13 35 43.4**	**-0.2**
RSH				S	**Sn**	**13 36 26.0**	**-0.8**
AMAG	**Maghara**	**4.03**	**191**	P	**Pn**	**13 35 48.9**	**+0.2**
PRNI	**Paran**	**4.32**	**169**	Pn	**Pn**	**13 35 53.6**	**+0.8**
KRMI	**Paran Flat**	**4.52**	**173**	Pn	**Pn**	**13 35 56.6**	**+1.1**
HRFI	**Mount Harif**	**4.64**	**170**	Pn	**Pn**	**13 35 58.0**	**+0.9**
HNKL	**Nakhl**	**4.67**	**181**	P	**Pn**	**13 35 57.9**	**+0.3**
HNKL	**Nakhl**	**4.67**	**181**	P	**Pn**	**13 35 57.8**	**+0.2**
MBRI	**Mt Berech**	**4.86**	**171**	Pn	**Pn**	**13 36 01.2**	**+1.0**
SUZ		**4.87**	**193**	P	**Pn**	**13 36 00.6**	**+0.2**
HHAG	**Hagoal**	**4.94**	**200**	P	**Pn**	**13 36 00.9**	**-0.3**
HHAG				S	**Sn**	**13 36 56.5**	**-1.9**
EIL	**Elat**	**4.99**	**171**	Pn	**Pn**	**13 36 02.7**	**+0.8**
KOT	**Kottamia**	**5.04**	**203**	P	**Pn**	**13 36 02.6**	**-0.1**
GLL	**Jalalah**	**5.41**	**202**	P	**Pn**	**13 36 06.9**	**-0.8**
KEMA	**Kemaliye**	**5.84**	**36**	*i* P	**Pn**	**13 36 15.8**	**+2.1**
HKAT	**Jabal Katrina**	**6.07**	**181**	P	**Pn**	**13 36 17.0**	**+0.2**
TR2		**6.22**	**183**	P	**Pn**	**13 36 19.0**	**+0.1**
HHRG	**Al Ghardaqah**	**7.38**	**183**	P	**Pn**	**13 36 35.1**	**+0.3**

KRSC 19 14:22:11.6±1.0, 5426N×16196E, h41km±40km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**1.47**	**315**	P	Pn	14 22 36.8	+1.3
TUMR				*i* S	Sn	14 22 55.4	+1.9
SPN	**Mys Shipunski**	**1.64**	**225**	P	Pn	14 22 38.4	+0.5
SPN				*i* S	Sn	14 22 57.7	0.0
KMNR	**Kamenistaya**	**1.80**	**327**	P	Pn	14 22 41.5	+1.5
KMNR				*i* S	Sn	14 23 03.2	+1.6
ZLN	**Zelenaya**	**1.88**	**340**	*e*P	Pn	14 22 42.8	+1.6
ZLN				*i* S	Sn	14 23 05.4	+1.7
NLC	**Nalytchevo**	**1.90**	**236**	P	Pn	14 22 43.2	+1.8
NLC				*i* S	Sn	14 23 06.3	+2.2
KBTR	**Krutoberegovo**	**2.01**	**14**	P	Pn	14 22 42.8	-0.2
KBTR				*i* S	Sn	14 23 05.8	-1.1
KRSR	**Krestovskiy**	**2.12**	**338**	P	Pn	14 22 46.0	+1.6
AVH	**Avacha**	**2.16**	**244**	*e*P	Pn	14 22 47.5	+2.5
AVH				*e*S	Sn	14 23 13.5	+3.1
KOZ	**Kozyrevsk**	**2.16**	**327**	P	Pn	14 22 47.4	+2.3
KLY	**Klyuchi**	**2.19**	**341**	P	Pn	14 22 46.4	+1.0
KLY				*i* S	Sn	14 23 11.6	+0.4
SRDR	**Sredinnyy**	**2.43**	**329**	P	Pn	14 22 50.8	+2.1
GNL	**Ganaly**	**2.44**	**258**	*e*P	Pn	14 22 51.7	+2.8
GNL				*e*S	Sn	14 23 21.1	+3.7
RUS	**Russkaya**	**2.76**	**230**	P	Pn	14 22 55.3	+2.0
RUS				*i* S	Sn	14 23 26.6	+1.3

JMA 19 14:36:48.0±0.2, 4334N×14702E, h49km±4km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.93**	**272**	P	Pn	14 37 05.0	+0.3
NEM2				*e*S	Sn	14 37 17.8	+0.8
JRA	**Rausu**	**1.50**	**294**	P	Pn	14 37 13.2	+0.7
JRA				*e*S	Sn	14 37 31.6	+0.7
JNK	**Nakash**	**1.69**	**279**	P	Pn	14 37 15.6	+0.5
JNK				*e*S	Sn	14 37 36.1	+0.5
JAK	**Akkeshi**	**1.73**	**259**	P	Pn	14 37 16.1	+0.5
JAK				*e*S	Sn	14 37 37.0	+0.4
JTKR	**Abashiri--Toko**	**2.34**	**287**	P	Pn	14 37 25.7	+1.7
JTKR				*e*S	Sn	14 37 53.7	+2.1
JAR	**Ashorobuto**	**2.37**	**270**	P	Pn	14 37 25.8	+1.4
JAR				*e*S	Sn	14 37 53.3	+1.1
JOB	**Onbets**	**2.37**	**260**	P	Pn	14 37 25.5	+1.1
JOB				*e*S	Sn	14 37 52.9	+0.7
JCH	**Churui**	**2.78**	**256**	P	Pn	14 37 31.0	+1.0
JCH				*e*S	Sn	14 38 02.4	+0.1
JFR	**Furan**	**3.24**	**268**	P	Pn	14 37 38.4	+2.1
JFR				*e*S	Sn	14 38 15.3	+1.8
JNBK	**Urakawa-nobuka**	**3.31**	**253**	P	Pn	14 37 38.6	+1.3
JBT2	**Biratori 2**	**3.46**	**262**	P	Pn	14 37 40.8	+1.5

*ISCJB **19** 14:45:28.7±0.9, 4210N±006×7551E±005, h7km±7km, Error ellipse: s-maj=10.5km s-min=5.6km az=173.9*
*KNET **19** 14:45:28.3±0.5, 4213N×7549E, h12km±3km, ml1.9, Error ellipse: s-maj=3.2km s-min=2.2km az=161.0*

ISC 19 14:45:28.8±0.9, 4208N±005×7548E±004, h7km±7km, n11, σ0°79/20, 9C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**0.17**	**268**	⇑P	**Pg**	**14 45 32.8**	**+0.5**
	189nm,0.2s,SNR=188						
KZA				⇑S	**Sg**	**14 45 35.6**	**+0.9**
	225nm,0.2s						
ULHL	**Ulahol**	**0.59**	**74**	⇑P	**Pg**	**14 45 39.9**	**-0.2**
	12nm,0.1s,SNR=6.6						
ULHL				⇑S	**Sg**	**14 45 47.8**	**0.0**
	40nm,0.1s						
KBK	**Karagaybulak**	**0.70**	**326**	⇓P	**Pg**	**14 45 42.6**	**+0.4**
	46nm,0.1s,SNR=18						
KBK				⇓S	**Sg**	**14 45 52.0**	**+0.8**
	206nm,0.2s						
TKM2	**Tokmak 2**	**0.84**	**6**	⇓P	**Pg**	**14 45 44.8**	**-0.2**
	7.7nm,0.2s						
TKM2				⇑S	**Sg**	**14 45 55.7**	**-0.2**
	7.3nm,0.2s						
TKM2	**Tokmak 2**	**0.84**	**6**	⇓P	**Pg**	**14 45 44.8**	**-0.1**
	42nm,0.3s,SNR=30						
TKM2				⇓S	**Sg**	**14 45 56.1**	**+0.2**
	56nm,0.1s						
AAK	**Ala-Archa**	**0.92**	**307**	⇓P	**Pg**	**14 45 46.2**	**-0.1**
	10nm,0.2s,SNR=30						
AAK				⇑S	**Sg**	**14 45 58.5**	**+0.3**
	24nm,0.2s						
CHMS	**Chumysh**	**1.06**	**330**	⇑P	**Pg**	**14 45 48.8**	**-0.4**
	4.9nm,0.1s,SNR=9.9						
CHMS				⇓S	**Sg**	**14 46 02.8**	**-0.1**
	32nm,0.2s						
AML	**Almayashu**	**1.33**	**273**	⇓P	**Pn**	**14 45 54.0**	**+0.3**
	3.6nm,0.1s,SNR=9.5						
USP	**Ospenovka**	**1.39**	**329**	⇓P	**Pn**	**14 45 54.6**	**+0.1**
	2.7nm,0.1s,SNR=21						
USP				⇓S	**Sb**	**14 46 13.0**	**+0.1**
	23nm,0.2s						
EKS2	**Erkin-Say**	**1.39**	**295**	⇑P	**Pn**	**14 45 55.3**	**+0.8**
	3.7nm,0.2s,SNR=9.4						
KK31	**Karatay Array**	**3.81**	**287**	⇑Pn	**Pg**	**14 46 39.5**	**-2.2**
	0.4nm,0.5s,baz=99,slow=16,SNR=10						
KK31				⇓Sn	**Sg**	**14 47 28.2**	**-2.8**
	0.3nm,0.3s,baz=104,slow=28,SNR=4.9						

IDC 19 14:52:32.1±3.3, 613S×15182E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.6/3, MS3.6/1, Ms1 3.6/1, ms1mx2.8/17, Error ellipse: s-maj=95.3km s-min=52.0km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.84**	**229**	P	P	14 57 26.3	-0.1
	1.0nm,0.9s,baz=56,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**24.52**	**223**	P	P	14 57 53.5	+0.1
	1.2nm,0.5s,baz=58,slow=9.1,SNR=44						
STKA	**Stephens Creek**	**27.34**	**199**	P	P	14 58 19.4	+0.5
	0.5nm,0.5s,baz=2.0,slow=13,SNR=3.9						
JHJ	**Hachijo jima 2**	**40.67**	**344**	LR	LR	15 15 44.6	
	comp=Z,71nm,18.6s,baz=101,slow=34						
TORD	**Torodi Ar. Bea**	**149.76**	**286**	PKPbc	PKPbc	15 12 24.4	-0.7
	0.2nm,0.5s,baz=59,slow=2.6,SNR=2.9						

*IDC **19** 15:20:01.0±0.4, 2207S×17357E, h0km, mb4.9/20, mb1 5.1/23, mb1mx5.0/24, mbtmp5.0/23, ML4.3/1, MS5.5/24, Ms1 5.5/24, ms1mx5.4/27, Error ellipse: s-maj=8.9km s-min=7.6km az=46.0*
*BJI **19** 15:20:00.3, 2154S×174.17E, h5km, mB6.0, mb5.2, Ms5.7, Msz5.5*
*ISCJB **19** 15:20:02.3±0.1, 2202S±003×17351E±003, h10km, mb5.4/106, MS5.7/218, Error ellipse: s-maj=4.8km s-min=3.3km az=154.3*
*NEIC **19** 15:20:03.7±0.2, 2197S×17349E, h10km, mb5.5/59, MS5.7/180, MW5.9, Error ellipse: s-maj=7.7km s-min=5.8km az=141.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^17 Nm; Mrr 2.12; Mθθ -1.09; Mφφ -1.03; Mrθ -0.46; Mθφ 7.62; Mφr 1.07; Best double couple: Mw 7.9 0000×10^17 NP1:φ=90.00000°, δ=82.00000°, λ=0.00000°. NP2:φ=180.00000°, δ=90.00000°, λ=-172.00000°. Principal axes: T 6.6000, Plg 5.0000°, Azm 314.0000°; N 2.1800, Plg 82.0000°, Azm 179.0000°; P -8.7900, Plg 5.0000°, Azm 45.0000°;*
*GCMT **19** 15:20:03.7±0.1, 2193S×17365E, h16km, MW6.0/114, Moment Tensor Solution. s106, c239; s114, c387; Duration: 2s3 Moment tensor: Scale 10^18 Nm; Mrr 0.02±.01; Mθθ -0.32±.01; Mφφ 0.30±.01; Mrθ -0.02±.02; Mθφ 1.00±.01; Mφφ 0.19±.02; Best double couple: Mo 1.06200×10^18 NP1:φ=81.00000°, δ=80.00000°, λ=1.00000°. NP2:φ=351.00000°, δ=89.00000°, λ=170.00000°. Principal axes: T 1.0560, Plg 8.0000°, Azm 306.0000°; N 0.0120, Plg 80.0000°, Azm 167.0000°; P -1.0680, Plg 7.0000°, Azm 37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*LDG **19** 15:20:04.9±0.3, 2094S×17355E, h10km, Mb5.3/3, Ms5.6/9 Error ellipse: s-maj=29.6km s-min=6.0km az=159.0*
*MOS **19** 15:20:06.0±1.9, 2209S×17349E, h33km, mb5.6/38, MS5.7/45, Error ellipse: s-maj=9.4km s-min=7.8km az=147.9*
*DJA **19** 15:20:37, 2264S×17179E, h199km, Mw5.6/14*

ISC 19 15:20:02.3±1.5, 2202S±003×17357E±003, h1km±8km, n872, σ0°97/538, mb5.4/106, MS5.7/218, 170C-162D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.61**	**268**	*e*P	**Pn**	**15 21 40.1**	**-0.6**
NOUC	**Port Laguerre**	**6.74**	**268**	*e*P	**Pn**	**15 21 43.3**	**+0.9**
RAO	**Raoul Island**	**10.52**	**135**	Pn	**Pn**	**15 22 31.1**	**-3.3**
	38nm,0.3s,baz=81,slow=23,SNR=2.5						
RAO				Sn	**Sn**	**15 24 29.6**	**-3.3**
	baz=302,slow=24,SNR=2.2						
RAO				LR	LR	15 25 49.4	
	comp=Z,66μm,18.5s,baz=32,slow=33						
RAO	**Raoul Island**	**10.52**	**135**	P	**Pn**	**15 22 31.1**	**-3.2**
RAO						15 24 29.6	
OUZ	**Omahuta**	**13.15**	**180**	P	**Pn**	**15 23 13.0**	**+2.7**
FUNA	**Funafuti**	**14.47**	**23**	*e*P	**Pn**	**15 23 25.4**	**-3.0**
	688nm,1.8s						
AFI	**Afiamalu**	**16.10**	**62**	Pn	**Pn**	**15 23 47.3**	**-2.7**
	0.5nm,0.3s,baz=227,slow=21,SNR=2.6						
AFI				Sn	**Sn**	**15 26 50.5**	**+1.2**
	0.5nm,0.3s,baz=113,slow=18,SNR=2.0						
AFI				LR	LR	15 28 39.1	
	comp=Z,14μm,18.1s,baz=238,slow=32						
AFI	**Afiamalu**	**16.10**	**62**	*e*Pn	**Pn**	**15 23 51.9**	**+1.9**
	61nm,1.5s						
AFI				Sn	**Sn**	**15 26 50.5**	**+1.2**
AFI				LR	LR	15 28 39.1	
AFI	**Afiamalu**	**16.10**	**62**	*e*P	**Pn**	**15 23 51.9**	**+1.9**
AFI						15 26 50.5	
AFI				pmax	pmax		
	comp=Z,61nm,1.5s						
URZ	**Urewera**	**16.47**	**170**	Pn	**Pn**	**15 23 57.1**	**+2.5**
	comp=Z,1.3nm,0.3s,baz=46,slow=6.0,SNR=21						
URZ				Sn	**Sn**	**15 26 59.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=196,slow=18,SNR=2.5						
URZ				LR	LR	15 28 23.2	
	comp=Z,14μm,19.7s,baz=11,slow=31						
BKZ	**Black Stump Fm**	**17.27**	**172**	*e*P	**Pn**	**15 24 07.1**	**+2.3**
HNR	**Honiara**	**18.11**	**312**	P	**Pn**	**15 24 15.2**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=228,slow=3.3,SNR=20						
HNR				S	**Sn**	**15 27 39.3**	**+1.3**
	comp=Z,9.3nm,0.3s,baz=212,slow=10,SNR=3.7						
HNR				LR	LR	15 30 09.9	
	comp=Z,14μm,21.0s,baz=137,slow=34						
HNR	**Honiara**	**18.11**	**312**	*e*P	**Pn**	**15 24 14.6**	**-0.7**
	comp=Z,1μm,1.1s						
HNR	**Honiara**	**18.11**	**312**	*e*P	**Pn**	**15 24 14.6**	**-0.7**
HNR				pmax	pmax		
	comp=Z,1μm,1.1s						
QRZ	**Quartz Range**	**18.77**	**182**	*e*P	**Pn**	**15 24 25.4**	**+2.2**
SNZO	**South Karori**	**19.25**	**177**	*e*P	**Pn**	**15 24 29.6**	**+0.5**
	comp=Z,302nm,1.3s						
THZ	**Tophouse**	**19.69**	**181**	*e*P	**Pn**	**15 24 34.2**	**-0.1**
EIDS	**Eidsvold**	**20.85**	**256**	*e*P	**P**	**15 24 45.3**	**-0.4**
	comp=Z,122nm,1.1s						
ARMA	**Armidale**	**21.36**	**242**	*e*P	**P**	**15 24 52.3**	**+1.1**
	comp=Z,9.3nm,1.1s						
RPZ	**Rata Peaks**	**21.73**	**185**	P	**P**	**15 24 54.8**	**-0.2**
	comp=Z,12nm,0.7s,mb4.4,baz=16,slow=2.4,SNR=11						
RPZ				S	**S**	**15 28 57.9**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=203,slow=9.8,SNR=2.1						
RPZ				LR	LR	15 31 43.1	
	comp=Z,11μm,21.8s,MS5.2,baz=168,slow=32						
TARA	**Tarawa**	**23.24**	**358**	PFAKE		15 25 20.0	+8.7
TARA				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
WHZ	**Wether Hill Ro**	**24.25**	**190**	P	**P**	**15 25 21.1**	**+0.3**
RAR	**Rarotonga**	**24.79**	**93**	P	**P**	**15 25 25.2**	**-0.7**
	comp=Z,76nm,1.2s,mb5.3,baz=242,slow=8.4,SNR=3.8						
RAR				S	**S**	**15 29 49.5**	**+0.1**
	comp=Z,7.3nm,0.5s,baz=239,slow=18,SNR=2.1						
RAR				LR	LR	15 33 13.2	
	comp=Z,8μm,20.5s,MS5.2,baz=263,slow=32						
RAR	**Rarotonga**	**24.79**	**93**	P	**P**	**15 25 25.2**	**-0.7**
RAR				S	**S

comp=Z,224nm,0.8s,mb6.2
ASAR Alice Springs 36.51 260 P **P** **15 27 07.9 -1.6**
comp=Z,35nm,0.9s,mb5.1,baz=88,slow=8.7,SNR=142
ASAR PcP PcP 15 29 31.9 -1.5
comp=Z,1.9nm,0.8s,baz=96,slow=3.7,SNR=3.2
ASAR S **S** **15 32 53.0 +0.3**
comp=Z,1.2nm,1.1s,baz=54,slow=22,SNR=4.3
WRAB Tennant Creek 36.61 266 P **P** **15 27 08.9 -1.5**
comp=Z,236nm,0.9s,mb5.9,SNR=13
WRAB Tennant Creek 36.61 266 *e*P **P** **15 27 08.1 -2.3**
comp=Z,382nm,2.2s,mb5.7
WRAB LR LR
comp=Z,14µm,22.0s,MS5.7
WRAB Tennant Creek 36.61 266 *e*P **P** **15 27 08.1 -2.3**
WRAB pmax pmax
comp=Z,382nm,2.2s,mb5.7
WRAB MLR MLR
comp=Z,14µm,22.0s,MS5.7
WRAB Tennant Creek 36.61 266 P **P** **15 27 08.1 -2.3**
comp=Z,58nm,2.3s,comp=Z,2µm,mb4.9
WRA Warramunga Arr 36.62 266 P **P** **15 27 08.3 -2.2**
comp=Z,22nm,0.8s,mb5.0,baz=104,slow=8.7,SNR=25
WRA S **S** **15 32 54.9 +0.4**
comp=Z,1.7nm,1.1s,baz=96,slow=14,SNR=2.5
WRA ScP ScP 15 33 21.4 -0.3
comp=Z,2.3nm,1.1s,baz=96,slow=3.5,SNR=4.6
WRA LR LR 15 42 07.9
comp=Z,10µm,18.1s,MS5.7,baz=90,slow=36
WRA Warramunga Arr 36.62 266 P **P** **15 27 08.3 -2.2**
WRA S **S** **15 32 54.9 +0.4**
PMOR Pomariorio Ree 37.13 86 *e*P **P** **15 27 13.5 -1.3**
comp=Z,176nm,1.3s,mb5.6
VAH Vaihoa 37.31 86 *e*P **P** **15 27 14.6 -1.8**
comp=Z,54nm,1.0s,mb5.2
FORT Forrest 41.45 248 *e*P **P** **15 27 49.2 -1.6**
comp=Z,123nm,0.7s,mb5.8
GUMO Guam 45.22 319 PFAKE 15 28 30.0 +8.7
GUMO LR LR
comp=Z,9µm,22.0s,MS5.7
TAOE Nuku Hiva Isla 46.31 81 *e*P **P** **15 28 28.9 -1.2**
comp=Z,681nm,1.1s,mb6.6
TAOE *e*S **S** **15 35 14.3 -4.1**
comp=Z,14µm,24.7s
TAOE *e*LQ 15 39 13.4
comp=Z,70µm,27.9s
TAOE *e*LR LR 15 41 26.7
comp=Z,48µm,26.4s,baz=246
TAOE Nuku Hiva Isla 46.31 81 *e*P **P** **15 28 28.9 -1.2**
comp=Z,681nm,1.1s,mb6.6
TAOE *e*S **S** **15 35 14.3 -4.1**
TAOE *e*LQ 15 39 13.4
RKT Rikitea 47.33 102 *e*S **S** **15 35 27.6 -5.2**
comp=Z,4µm,27.2s
RKT *e*LQ 15 39 30.0
comp=Z,12µm,31.0s
RKT *e*LR LR 15 41 55.8
comp=Z,19µm,29.0s,baz=258
AAI Ambon 47.60 286 P **P** **15 28 42.7 +2.5**
comp=Z,113nm,1.2s,comp=Z,2µm,mb5.9
BATI Baumata 49.16 276 P **P** **15 28 55.1 +2.8**
comp=Z,60nm,1.1s,comp=Z,1µm,mb5.5
DRV Dumont d'Urvil 49.46 197 P **P** **15 29 00.0 +6.2**
DRV Dumont d'Urvil 49.46 197 PP PP 15 30 59.0 +11
DRV S **S** **15 36 14.0 +12**
DRV SS SS 15 39 46.0 +13
DRV R 15 43 00.0
LBMI Labuha 49.62 289 P **P** **15 28 57.7 +2.0**
comp=Z,72nm,1.7s,comp=Z,3µm,mb5.3
MBWA Marble Bar 49.84 260 *e*P **P** **15 28 56.1 -1.3**
comp=Z,152nm,0.9s,mb5.9
MBWA LR LR
comp=Z,11µm,19.0s,MS5.9
MBWA Marble Bar 49.84 260 P **P** **15 28 56.3 -1.1**
comp=Z,250nm,1.1s,comp=Z,4µm,mb6.1
NWAO Narrogin (SRO) 50.63 245 *e*P **P** **15 29 01.8 -1.5**
comp=Z,102nm,1.2s,mb5.6
NWAO LR LR
comp=Z,15µm,19.0s,MS6.0
NWAO Narrogin (SRO) 50.63 245 *e*P **P** **15 29 01.8 -1.4**
NWAO pmax pmax
comp=Z,102nm,1.2s
NWAO MLR MLR
comp=Z,15µm,19.0s
MIDW Midway 50.70 10 PFAKE 15 29 20.0 +16
MIDW LR LR
comp=Z,4µm,21.0s,MS5.4
KIP Kipapa 51.32 35 PFAKE 15 29 20.0 +12
KIP LR LR
comp=Z,7µm,22.0s,MS5.6
POHA Pohakuloa 51.34 38 PFAKE 15 29 20.0 +11
POHA LR LR
comp=Z,11µm,22.0s,MS5.8
PTCN Pitcairn Islan 51.42 105 PFAKE 15 29 20.0 +11
PTCN LR LR
comp=Z,8µm,22.0s,MS5.7
KDI Kendari 52.50 282 P **P** **15 29 19.3 +1.9**
comp=Z,44nm,1.1s,comp=Z,2µm,mb5.3
KAPI Kappang 54.68 280 P **P** **15 29 38.5 +5.0**
comp=Z,174nm,1.1s,mb6.0,SNR=5.2
KAPI Kappang 54.68 280 P **P** **15 29 32.2 -1.2**
KAPI LR LR
comp=Z,4µm,20.0s,MS5.5
DAV Davao City (W) 55.20 296 PFAKE 15 29 50.0 +13
DAV LR LR
comp=Z,4µm,19.0s,MS5.5
VNDA Vanda 55.84 183 P **P** **15 29 39.0 -1.9**
comp=Z,2.7nm,0.7s,mb4.4,baz=6.3,slow=8.1,SNR=6.5
VNDA S **S** **15 37 26.7 -1.9**
comp=Z,0.4nm,0.8s,baz=114,slow=12,SNR=1.7
VNDA LR LR 15 51 28.8
comp=Z,4µm,18.0s,MS5.6,baz=11,slow=34
VNDA Vanda 55.84 183 P **P** **15 29 39.0 -1.9**
VNDA S **S** **15 37 26.7 -2.0**
SBA Scott Base 55.98 182 *e*P **P** **15 29 41.0 -0.9**
comp=Z,35nm,1.0s,mb5.3
SBA LR LR
comp=Z,4µm,19.0s,MS5.5
SBA Scott Base 55.98 182 *e*P **P** **15 29 41.0 -0.9**
SBA pmax pmax
comp=Z,35nm,1.0s,mb5.3
SBA MLR MLR
comp=Z,4µm,19.0s,MS5.5
CBIJ Chichi jima 57.50 327 LR LR 15 50 16.1
comp=Z,2µm,18.7s,MS5.2,baz=144,slow=32
CASY Casey 59.26 205 PFAKE 15 30 20.0 +15
CASY LR LR
comp=Z,8µm,22.0s,MS5.8
BBKI Banjar Baru 59.79 279 P **P** **15 30 13.5 +3.9**
comp=Z,93nm,1.4s,comp=Z,3µm,mb5.6
SJI Sawahan 61.03 273 P **P** **15 30 19.7 +1.6**
KKM Kota Kinabalu 62.69 290 *e*P **P** **15 30 28.3 -1.0**
KKM LR LR
comp=Z,3µm,22.0s,MS5.5
JHJ Hachijo jima 2 63.61 329 LR LR 15 57 09.9
comp=Z,2µm,18.8s,MS5.3,baz=146,slow=35
STKI Sintang 64.28 281 P **P** **15 30 41.7 +1.8**
comp=Z,64nm,1.3s,comp=Z,2µm,mb5.7
SBUM Sibu 64.61 284 P **P** **15 30 43.4 +1.4**
LEM Lembang 65.19 273 P **P** **15 30 46.9 +1.1**
comp=Z,188nm,1.0s,comp=Z,3µm,mb6.3
KSM Kuching 65.93 282 *e*P **P** **15 30 50.6 0.0**
CBJI Citeko 66.05 273 P **P** **15 30 52.0 +0.6**
comp=Z,259nm,0.9s,comp=Z,7µm,mb6.5
DBJI Dramaga 66.10 273 P **P** **15 30 51.9 +0.3**
comp=Z,208nm,1.1s,comp=Z,3µm,mb6.3
MIR Mirnyy 66.26 206 ⇑*i*P **P** **15 30 50.0 -1.8**
MIR *i* 15 31 03.0
MIR *i* 15 31 17.0
MIR *e*S S 15 39 46.0 +4.3
MIR *e*PS 15 40 10.0
MIR pmax pmax
comp=Z,200nm,1.4s,mb6.2
MJAR Matsushiro Arr 67.14 330 P **P** **15 30 56.0 -1.8**
comp=Z,18nm,1.1s,mb5.2,baz=165,slow=6.7,SNR=22
MJAR S S 15 39 54.6 +1.6
comp=Z,0.8nm,0.7s,baz=313,slow=40,SNR=2.7
MJAR LR LR 15 54 57.5
comp=Z,2µm,20.4s,MS5.3,baz=160,slow=31
MJAR Matsushiro Arr 67.14 330 P **P** **15 30 56.0 -1.8**
MJAR S S 15 39 54.6 +1.5
MAJO Matsushiro 67.14 330 *e*P **P** **15 30 56.0 -1.8**
comp=Z,106nm,1.3s,mb5.9
MAJO LR LR
comp=Z,4µm,22.0s,MS5.6
MAT Matsushiro 67.14 330 P **P** **15 30 56.0 -1.8**
MAT S S 15 39 47.0 -6.1

QSPA South Pole Qui 68.05 180 P **P** **15 31 00.8 -2.2**
comp=Z,6.6nm,0.5s,mb5.1,baz=42,slow=1.3,SNR=16
QSPA S S 15 40 01.9 -1.0
comp=Z,0.8nm,0.5s,baz=280,slow=0.7,SNR=2.3
QSPA LR LR 15 58 10.7
comp=Z,3µm,18.8s,MS5.5,baz=36,slow=34
QSPA South Pole Qui 68.05 180 *e*P **P** **15 31 00.7 -2.2**
comp=Z,39nm,1.1s,mb5.5
QSPA LR LR
comp=Z,3µm,20.0s,MS5.5
YHNB Yeheng 68.73 310 *e*P **P** **15 31 07.0 -1.0**
comp=Z,124nm,1.4s,mb6.0
YHNB LR LR
comp=Z,5µm,22.0s,MS5.7
TATO Taipei 68.84 310 PFAKE 15 31 20.0 +11
TATO LR LR
comp=Z,4µm,22.0s,MS5.6
RPN Rapa Nui 69.28 112 P **P** **15 31 11.8 +0.2**
comp=Z,21nm,0.7s,mb5.5,baz=182,slow=6.1,SNR=1.8
RPN S S 15 40 18.8 -0.5
comp=Z,16nm,0.8s,baz=19,slow=20,SNR=1.9
RPN Rapa Nui 69.28 112 P **P** **15 31 11.8 +0.2**
RPN S S 15 40 18.8 -0.5
RPN LR LR
comp=Z,5µm,22.0s,MS5.7
ERM Erimo 69.65 336 PFAKE 15 31 20.0 +6.7
ERM LR LR
comp=Z,6µm,20.0s,MS5.8
QZH Quanzhou 70.91 308 P **P** **15 31 23.1 +1.7**
QZH S S 15 40 35.8 -2.3
QZH AMB AMB
comp=Z,3µm,6.6s
QZH LR LR
comp=N,1µm,12.8s,MS5.6
QZH LR LR
comp=E,2µm,13.8s,MS5.6
QZH LR LR
comp=Z,4µm,20.2s
ASAJ Asahikawa 71.67 337 P **P** **15 31 26.5 +0.9**
comp=Z,13nm,1.0s,mb5.0,baz=337,slow=18,SNR=2.7
ASAJ S S 15 40 46.1 -0.1
comp=Z,11nm,1.0s,baz=35,slow=28,SNR=1.8
ASAJ LR LR 15 59 19.6
comp=Z,2µm,19.7s,MS5.5,baz=157,slow=33
SSE Sheshan 72.89 315 *e*P **P** **15 31 32.8 -0.4**
SSE XP sP 15 31 37.6 +3.9
SSE PCP PcP 15 31 49.0 -1.3
SSE S S 15 41 00.8 +0.1
SSE XS sS 15 41 05.8 +4.5
SSE SCS ScS 15 41 40.8 -1.4
SSE AMB AMB
comp=Z,64nm,0.7s,mb5.9
SSE AMB AMB
comp=Z,168nm,7.1s
SSE LR LR
comp=N,1µm,22.3s,MS5.3
SSE LR LR
comp=E,2µm,22.3s,MS5.3
SSE LR LR
comp=Z,2µm,37.5s
KSRS Korea Array 73.11 324 P **P** **15 31 33.3 -1.1**
comp=Z,22nm,1.1s,mb5.2,baz=144,slow=6.1,SNR=21
KSRS S S 15 41 02.9 -0.1
comp=Z,1.9nm,0.9s,baz=233,slow=37,SNR=2.7
COCO West Island 73.36 263 PFAKE 15 31 50.0 +14
COCO LR LR
comp=Z,8µm,19.0s,MS6.0
GZH Guangzhou 73.80 304 P **P** **15 31 41.8 +3.0**
GZH LR LR
comp=N,864nm,24.0s,MS5.6
GZH LR LR
comp=E,3µm,21.5s,MS5.6
GZH LR LR
comp=Z,4µm,22.2s,MS5.7
YSS Yuzh-Sakhalins 74.08 339 *e*P **P** **15 31 39.4 -0.4**
comp=Z,60nm,1.1s,mb5.5
YSS LR LR
comp=Z,2µm,21.0s,MS5.4
YSS Yuzh-Sakhalins 74.08 339 *e*P **P** **15 31 39.8 0.0**
YSS *e**SP sP 15 31 44.8 +4.5
YSS *e* 15 31 55.0
YSS *e*S S 15 41 09.0 -4.5
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.4
YSS smax
comp=N,2µm,9.0s
YSS smax
comp=E,3µm,9.0s
YSS MLR MLR
comp=Z,2µm,19.0s,MS5.5
YSS MLR MLR
comp=N,2µm,17.0s,MS5.7
YSS MLR MLR
comp=E,2µm,18.0s,MS5.7
ADK Adak 74.08 6 PFAKE 15 31 50.0 +10
ADK LR LR
comp=Z,3µm,19.0s,MS5.7
QIZ Qiongzhong 74.47 298 P **P** **15 31 42.3 -0.5**
QIZ XP sP 15 31 46.8 +3.5
QIZ S S 15 41 17.6 -1.4
QIZ AMB AMB
comp=Z,779nm,7.4s
QIZ LR LR
comp=E,2µm,21.3s
QIZ LR LR
comp=Z,3µm,18.9s,MS5.6
QIZ Qiongzhong 74.47 298 PFAKE 15 31 50.0 +7.2
QIZ LR LR
comp=Z,3µm,20.0s,MS5.6
NJ2 Nanjing 75.03 314 *e*P **P** **15 31 45.8 0.0**
NJ2 AP 15 31 50.6
NJ2 XP sP 15 31 52.8 +6.5
NJ2 PP PP 15 34 35.8 +1.9
NJ2 S S 15 41 21.0 -3.8
NJ2 XS sS 15 41 28.0 +2.6
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.3
NJ2 AMB AMB
comp=Z,180nm,9.0s
NJ2 LR LR
comp=N,610nm,21.1s
NJ2 LR LR
comp=E,2µm,26.5s
NJ2 LR LR
comp=Z,2µm,26.5s
PET Petropavlovsk 75.85 351 PFAKE 15 32 00.0 +10
PET LR LR
comp=Z,4µm,20.0s,MS5.7
PET Petropavlovsk 75.85 351 ⇑*i*P **P** **15 31 47.5 -2.4**
PET pmax pmax
comp=Z,178nm,1.7s,mb5.9
PETK Petropavlovsk- 76.07 350 P **P** **15 31 50.6 -0.6**
comp=Z,22nm,0.9s,mb5.3,baz=138,slow=4.6,SNR=8.9
PETK S S 15 41 35.7 +0.2
comp=Z,4.7nm,0.8s,baz=236,slow=10,SNR=1.1
PETK LR LR 15 59 26.9
comp=Z,2µm,20.9s,MS5.5,baz=157,slow=31
NIKO Nikolski 76.23 11 *e*P **P** **15 31 49.5 -2.6**
comp=Z,157nm,0.9s,mb6.1
SNG Songkhla 77.07 283 P **P** **15 31 58.0 +0.2**
comp=Z,140nm,0.7s,mb6.2
WHN Wuhan 77.22 311 ⇓P **P** **15 31 57.0 -1.3**
WHN S S 15 41 41.5 -7.5
WHN LR LR
comp=N,4µm,19.6s
WHN LR LR
comp=E,10µm,29.4s
WHN LR LR
comp=Z,9µm,23.4s,MS6.0
MAW Mawson 77.37 202 P **P** **15 31 57.7 -0.8**
comp=Z,22nm,1.1s,mb5.2,baz=84,slow=9.4,SNR=9.5
MAW S S 15 41 49.7 +0.2
comp=Z,2.4nm,0.9s,baz=258,slow=16,SNR=2.0
MAW LR LR 16 03 57.7
comp=Z,5µm,18.1s,MS5.9,baz=90,slow=34
MAW Mawson 77.37 202 P **P** **15 31 57.7 -0.8**
MAW S S 15 41 49.8 +0.2
UNV Unalaska Valle 77.49 12 *e*P **P** **15 31 58.9 -0.3**
comp=Z,71nm,1.0s,mb5.8
MDJ Mudanjiang 77.53 329 P **P** **15 31 59.1 -0.5**
MDJ AP 15 32 02.0
MDJ PP PP 15 34 53.5 -1.2
MDJ S S 15 41 56.1 +4.4
MDJ AMB AMB
comp=Z,27nm,1.1s,mb5.3
MDJ AMB AMB
comp=Z,979nm,6.5s
MDJ LR LR
comp=N,3µm,41.9s,MS5.4
MDJ LR LR
comp=E,2µm,44.5s,MS5.4
MDJ LR LR
comp=Z,3µm,39.3s
MDJ Mudanjiang 77.53 329 *e*P **P** **15 31 58.5 -1.1**
comp=Z,14nm,0.9s,mb5.1
MDJ LR LR
comp=Z,2µm,22.0s,MS5.3
HABR Khabarovsk 78.18 335 *e*P **P** **15 31 59.2 -4.0**
HABR *e* 15 32 08.6
HABR *e**PP 15 32 09.6
HABR *e**SS sS 15 42 07.1 +7.9
HABR *e* 15 42 14.8
HABR *e*SSS 15 50 14.8
SNY Shenyang 78.57 324 ⇓P **P** **15 32 06.6 +1.1**
SNY SKS 15 42 11.9
SNY SS SS 15 47 02.3 -4.9
SNY AMB AMB
comp=Z,21nm,2.4s,mb4.7
SNY AMB AMB
comp=Z,1µm,5.7s
SNY LR LR
comp=N,2µm,22.8s,MS5.4
SNY LR LR
comp=E,1µm,20.4s,MS5.4
SNY LR LR
comp=Z,3µm,27.6s
CN2 Changchun 78.97 327 *e*P **P** **15 32 06.4 -1.2**
CN2 *e*XP sP 15 32 13.0 +4.9
CN2 *e*S S 15 42 04.0 -3.2
CN2 AMB AMB
comp=Z,30nm,1.1s,mb5.2
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2µm,19.0s,MS5.6
CN2 LR LR
comp=E,1µm,19.0s,MS5.6
CN2 LR LR
comp=Z,2µm,21.0s,MS5.5
KKTK Khon Kaen 79.07 293 P **P** **15 32 06.0 -2.8**
GYA Guiyang 80.73 303 ⇓*i*P **P** **15 32 16.9 -0.7**
GYA S S 15 42 18.5 -8.1
GYA SKS 15 42 29.9
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,390nm,5.1s
GYA LR LR
comp=N,1µm,20.9s,MS5.4
GYA LR LR
comp=E,1µm,19.4s,MS5.4
GYA LR LR
comp=Z,1µm,18.3s,MS5.3
NST Nakhon Sawan 81.10 291 P **P** **15 32 20.0 +0.2**
BJT Baijiatuau 81.65 319 PFAKE 15 32 30.0 +7.8
BJT LR LR
comp=Z,3µm,22.0s,MS5.7
BDT Bhumibol Dam 82.75 292 P **P** **15 32 29.5 +1.0**
PMSA Palmer Station 82.89 159 P **P** **15 32 24.6 -3.8**
comp=Z,13nm,0.8s,mb5.2,baz=196,slow=5.1,SNR=3.9
PMSA Palmer Station 82.89 159 P **P** **15 32 24.6 -3.8**
PMSA LR LR
comp=Z,2µm,19.0s,MS5.5
XAN Xi'an 82.98 311 P **P** **15 32 28.5 -0.8**
XAN AP 15 32 32.9
XAN XP sP 15 32 34.0 +4.2
XAN PP PP 15 35 39.0 -1.2
XAN S S 15 42 48.1 -1.4
XAN SS SS 15 48 13.0 -0.4
XAN AMB AMB
comp=Z,17nm,1.2s,mb5.2
XAN LR LR
comp=N,375nm,28.2s,MS5.2
XAN LR LR
comp=E,2µm,29.6s,MS5.2
XAN LR LR
comp=Z,5µm,28.5s,MS5.7
KMI Kunming 83.17 300 P **P** **15 32 30.8 +0.3**
KMI AP 15 32 35.8
KMI XP sP 15 32 37.8 +6.8
KMI PP PP 15 35 40.6 -1.4
KMI S S 15 42 43.8 -8.1
KMI AMB AMB
comp=Z,10.0nm,1.1s,mb5.0
KMI AMB AMB
comp=Z,706nm,5.4s
KMI LR LR
comp=N,1µm,19.8s,MS5.6
KMI LR LR
comp=E,2µm,17.0s,MS5.6
KMI LR LR
comp=Z,3µm,26.4s
CMAR Chiang Mai Arr 83.33 293 P **P** **15 32 31.3 -0.1**
comp=Z,12nm,1.1s,mb5.0,baz=130,slow=3.8,SNR=36
CMAR S S 15 42 50.9 -2.8
comp=Z,0.3nm,0.5s,baz=144,slow=49,SNR=2.7
CMAR LR LR 16 08 19.4
comp=Z,1µm,21.9s,MS5.2,baz=120,slow=35
CMAR Chiang Mai Arr 83.33 293 P **P** **15 32 31.3 -0.1**
CMAR S S 15 42 50.9 -2.8
SYO Syowa Base 83.36 195 ⇓*e*X **15 32 27.0**
CHG Chiang Mai 83.48 293 ⇓P **P** **15 32 32.0 -0.2**
comp=Z,42nm,0.9s,mb5.7
CHTO Chiang Mai 83.48 293 *e*P **P** **15 32 32.0 -0.2**
comp=Z,145nm,1.8s,mb5.9
CHTO LR LR
comp=Z,2µm,21.0s,MS5.5
OHAK Old Harbor 83.70 17 *e*P **P** **15 32 30.6 -1.8**
SNCC San Nicolas Is 84.17 51 PFAKE 15 32 50.0 +15
SNCC LR LR
comp=Z,3µm,20.0s,MS5.7
KDAK Kodiak Island 84.37 17 *e*P **P** **15 32 36.6 +0.8**
KDAK LR LR
comp=Z,4µm,20.0s,MS5.8
MCCM Marconi Confer 84.46 45 PFAKE 15 32 50.0 +13
MCCM LR LR
comp=Z,7µm,20.0s,MS6.0
JRSC Jasper Ridge 84.48 46 ⇑P **P** **15 32 36.3 -0.6**
baz=85
SAO San Andreas Ge 84.67 47 *e*P **P** **15 32 35.1 -2.8**
SAO LR LR
comp=Z,5µm,20.0s,MS5.9
HOPS Hopland 84.80 44 P **P** **15 32 37.9 -0.6**
comp=Z,69nm,1.3s,mb5.7
HOPS LR LR
comp=Z,8µm,19.0s,MS6.1
NSHM Saint Helena R 84.84 45 *e*P **P** **15 32 37.8 -0.9**
CVS Carmenet Viney 84.85 45 ⇓P **P** **15 32 38.8 0.0**
baz=85
U04C Hernandez Rese 84.91 48 ⇑P **P** **15 32 39.3 +0.2**
baz=85
PTRM Twissleman Ran 84.93 48 P **P** **15 32 40.9 +1.6**
HHC Hu-ho-hao-te 84.98 318 *e*P **P** **15 32 40.1 +0.8**
HHC XP sP 15 32 45.3 +5.4
HHC PP PP 15 35 59.0 +2.6
HHC SKS 15 43 01.3
HHC S S 15 43 08.3 -1.0
HHC XS sS 15 43 15.5 +5.5
HHC SS SS 15 48 44.9 +2.1
HHC AMB AMB
comp=Z,21nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,1µm,5.9s
HHC LR LR
comp=N,2µm,25.0s,MS5.7
HHC LR LR
comp=E,3µm,26.2s,MS5.7
HHC LR LR
comp=Z,5µm,30.9s,MS5.7
KIPM Iron Peak 84.99 44 *e*P **P** **15 32 38.9 -0.5**
CIS Catalina Islan 85.06 51 ⇓P **P** **15 32 39.9 0.0**
baz=85
CD2 Chengdu 85.14 306 *e*P **P** **15 32 41.8 +1.4**
CD2 AP 15 32 46.8
CD2 XP sP 15 32 49.3 +8.4
CD2 PP PP 15 36 00.3 +2.3
CD2 SKS 15 43 02.3
CD2 S S 15 43 08.9 -2.5
CD2 XS sS 15 43 16.9 +4.9
CD2 SS SS 15 48 44.9 -0.6
CD2 AMB AMB

comp=Z,20nm,1.1s,mb5.3
CD2 AMB AMB
comp=Z,2µm,8.6s
CD2 LR LR
comp=N,3µm,20.2s,MS5.8
CD2 LR LR
comp=E,2µm,18.2s,MS5.8
CD2 LR LR
comp=Z,4µm,19.2s,MS5.8
MNRC McLaughlin Nat 85.15 45 ⇓P **P 15 32 40.3 0.0**
baz=85
GASB Alder Springs 85.40 44 ⇑P **P 15 32 41.3 -0.2**
baz=86
OSI Osito Adit 85.44 50 P **P 15 32 44.4 +2.6**
comp=Z,40nm,1.2s,mb5.5
HIA Hailar 85.58 328 *e*P **P 15 32 40.4 -1.8**
comp=Z,9.1nm,1.1s,mb4.8
HIA LR LR
comp=Z,3µm,22.0s,MS5.7
HIA Hailar 85.58 328 *e*P **P 15 32 40.4 -1.7**
HIA pmax pmax
comp=Z,9.0nm,1.1s
HIA MLR MLR
comp=Z,3µm,22.0s
MWC Mount Wilson 85.72 51 *e*P **P 15 32 44.7 +1.5**
comp=Z,24nm,1.1s,mb5.2
MWC LR LR
comp=Z,3µm,21.0s,MS5.6
MWC Mount Wilson 85.72 51 *e*P **P 15 32 44.7 +1.5**
MWC pmax pmax
comp=Z,24nm,1.1s,mb5.2
MWC MLR MLR
comp=Z,3µm,21.0s,MS5.6
S05C Merced 85.73 47 ⇓P **P 15 32 42.6 -0.6**
baz=86
BTO Baotou 85.81 317 *e*P **P 15 32 46.1 +2.6**
T06C Millerton Lake 85.98 47 ⇑P **P 15 32 44.0 -0.4**
baz=86,SNR=10
BFSC Mount Baldy St 86.01 51 ⇑P **P 15 32 43.7 -1.0**
baz=86
WDC Whiskeytown Da 86.02 43 *e*P **P 15 32 44.0 -0.5**
comp=Z,46nm,1.3s,mb5.5
WDC LR LR
comp=Z,8µm,21.0s,MS6.1
WDC Whiskeytown Da 86.02 43 *e*P **P 15 32 44.1 -0.4**
WDC pmax pmax
comp=Z,46nm,1.3s,mb5.5
WDC MLR MLR
comp=Z,8µm,21.0s,MS6.1
WDC Whiskeytown Da 86.02 43 ⇑P **P 15 32 43.5 -1.1**
baz=86
OHCM Honcut 86.02 45 *e*P **P 15 32 42.9 -1.7**
MURC Murrieta 86.03 51 ⇑P **P 15 32 44.0 -0.7**
baz=86
CMB Columbia Colle 86.06 46 *e*P **P 15 32 43.0 -1.8**
comp=Z,38nm,1.1s,mb5.4
CMB LR LR
comp=Z,7µm,21.0s,MS6.1
CMB Columbia Colle 86.06 46 *e*P **P 15 32 43.0 -1.8**
CMB pmax pmax
comp=Z,38nm,1.1s,mb5.4
CMB MLR MLR
comp=Z,7µm,21.0s,MS6.1
CMB Columbia Colle 86.06 46 ⇓P **P 15 32 43.4 -1.4**
baz=86
EDW2 Edwards Air Fo 86.10 50 ⇑P **P 15 32 43.7 -1.3**
baz=86
ORV Oroville 86.13 45 ⇑P **P 15 32 44.0 -1.1**
baz=86
ISA Isabella 86.15 49 *e*P **P 15 32 44.0 -1.3**
comp=Z,59nm,1.1s,mb5.6
ISA LR LR
comp=Z,3µm,22.0s,MS5.7
ISA Isabella 86.15 49 ⇑P **P 15 32 43.9 -1.4**
baz=86
LAVA Lava Cap Winer 86.20 46 ⇑P **P 15 32 44.6 -0.9**
baz=86
L02A Cave Junction 86.23 42 ⇓P **P 15 32 44.9 -0.6**
baz=86
MONP Monument Peak 86.25 52 ⇑P **P 15 32 45.4 -0.5**
baz=86,SNR=12
SEY Seymchan 86.31 350 ⇑*i*P **P 15 32 42.3 -3.1**
KCC Kaiser Creek 86.41 47 ⇓P **P 15 32 45.1 -1.4**
baz=87,SNR=19
YBH Yreka Blue Hor 86.55 42 PFAKE 15 33 00.0 +13
YBH LR LR
comp=Z,5µm,22.0s,MS5.8
YBH Yreka Blue Hor 86.55 42 *e*P **P 15 32 46.5 -0.6**
YBH pmax pmax
comp=Z,31nm,1.1s
YBH Yreka Blue Hor 86.55 42 ⇓P **P 15 32 46.1 -1.0**
baz=87
PFO Pinyon Flat Ob 86.58 52 *e*P **P 15 32 49.0 +1.5**
comp=Z,10nm,0.9s,mb5.1
PFO LR LR
comp=Z,3µm,20.0s,MS5.7
PFO Pinyon Flat Ob 86.58 52 *e*P **P 15 32 49.0 +1.5**
PFO pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
PFO MLR MLR
comp=Z,3µm,20.0s,MS5.7
PFO Pinyon Flat Ob 86.58 52 ⇓P **P 15 32 46.4 -1.0**
baz=87
MAIT Maitri 86.58 186 *e*P **P 15 32 41.2 -5.7**
LRMC Laurel Mountai 86.61 50 ⇓P **P 15 32 46.8 -0.8**
baz=87
K02A Glendale 86.64 41 ⇓P **P 15 32 46.9 -0.6**
baz=87
SWSC Sam W. Stewart 86.73 53 ⇓P **P 15 32 47.6 -0.7**
baz=87
CWC Cottonwood Cre 86.81 49 ⇑P **P 15 32 46.9 -1.6**
baz=87,SNR=7.2
HUMO Hull Mountain 86.88 41 *e*P **P 15 32 48.2 -0.5**
comp=Z,49nm,1.0s,mb5.7
HUMO LR LR
comp=Z,3µm,21.0s,MS5.7
HUMO Hull Mountain 86.88 41 ⇑P **P 15 32 48.2 -0.5**
baz=87,SNR=17
LBCM Butte Creek Ri 86.92 44 P **P 15 32 47.0 -1.9**
J02A Umpqua 86.92 41 ⇓P **P 15 32 47.9 -1.0**
baz=87
R06C Coleville 86.94 46 ⇓P **P 15 32 48.8 -0.3**
baz=87,SNR=15
WAKR Walker 86.94 46 *e*P **P 15 32 49.6 +0.5**
MTUM Tungsten Hills 86.94 48 *e*P **P 15 32 47.6 -1.6**
USHA Ushuaia 87.02 149 LR LR 16 04 10.7
comp=Z,2µm,19.5s,MS5.4,baz=216,slow=30
MPMC Manual Prospec 87.04 49 ⇑P **P 15 32 49.1 -0.5**
baz=87,SNR=9.9
BEKR Beckwourth 87.04 45 ⇓P **P 15 32 49.2 -0.4**
baz=87,SNR=5.6
DAC Darwin (Calif) 87.07 49 PFAKE 15 33 00.0 +10
DAC LR LR
comp=Z,4µm,21.0s,MS5.8
BELC Belle Mtn. 87.10 52 ⇓P **P 15 32 50.1 +0.1**
baz=87,SNR=14
BUOR Burton Butte 87.14 42 P **P 15 32 50.3 +0.3**
WCN Washoe City 87.14 46 ⇑P **P 15 32 50.0 -0.1**
baz=87
GSC Goldstone 87.15 50 *e*P **P 15 32 50.1 -0.2**
comp=Z,27nm,1.4s,mb5.3
GSC LR LR
comp=Z,2µm,21.0s,MS5.6
GSC Goldstone 87.15 50 *e*P **P 15 32 50.1 -0.1**
GSC pmax pmax
comp=Z,27nm,1.4s,mb5.3
GSC MLR MLR
comp=Z,2µm,21.0s,MS5.6
GSC Goldstone 87.15 50 ⇓P **P 15 32 50.4 +0.2**
baz=87,SNR=9.1
HEC Hector,Ludlow 87.26 51 ⇑P **P 15 32 51.1 +0.4**
baz=88,SNR=9.8
BC3 Big Chuckw Mtn 87.33 52 ⇓P **P 15 32 50.1 -1.1**
baz=88
SLKM Skilak Lake 87.33 17 *e*P **P 15 32 49.3 -1.2**
GLA Glamis 87.50 53 *e*P **P 15 32 54.8 +2.8**
comp=Z,32nm,1.1s,mb5.6
GLA LR LR
comp=Z,2µm,22.0s,MS5.5
GLA Glamis 87.50 53 *e*P **P 15 32 54.8 +2.8**
GLA pmax pmax
comp=Z,32nm,1.1s,mb5.6
GLA MLR MLR
comp=Z,2µm,22.0s,MS5.5
O06A Flanigan 87.55 45 ⇓P **P 15 32 51.5 -0.6**
baz=88
PAHR Pah Rah Range 87.60 45 *e*P **P 15 32 50.7 -1.6**
comp=Z,30nm,1.0s,mb5.6
LZH Lanzhou 87.60 310 *e*P **P 15 32 52.0 -0.4**
LZH AP 15 32 57.0
LZH XP sP 15 32 59.1 +6.2
LZH PP PP 15 36 14.3 -3.5
LZH SKS 15 43 18.1
LZH S S 15 43 33.0 -2.2
LZH XS sS 15 43 39.3 +3.5
LZH AMB AMB
comp=Z,20nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,84nm,4.0s
LZH LR LR
comp=E,1µm,17.0s
LZH LR LR
comp=Z,2µm,19.0s,MS5.5
NVAR Mina Array Bea 87.67 47 P **P 15 32 51.3 -1.4**
comp=Z,13nm,1.1s,mb5.2,baz=226,slow=7.2,SNR=25
GMRC Granite Mounta 87.72 51 ⇑P **P 15 32 53.8 +0.9**
baz=88,SNR=8.8
R08A Mina 87.76 47 ⇑P **P 15 32 53.9 +0.8**
baz=88
COR Corvallis 87.77 40 PFAKE 15 33 00.0 +7.0
COR LR LR
comp=Z,4µm,22.0s,MS5.8
IRM Iron Mountain 87.79 52 ⇓P **P 15 32 53.1 -0.3**
baz=88,SNR=9.2
H03A Soap Creek Ran 87.83 40 ⇓P **P 15 32 53.5 +0.2**
baz=88
TUQ Turquoise Moun 87.84 50 ⇑P **P 15 32 53.6 0.0**
baz=88,SNR=6.9
N06A Buffalo Meadow 87.84 44 ⇑P **P 15 32 53.5 +0.1**
baz=88
RC01 Rabbit Creek A 87.95 17 P **P 15 32 53.8 +0.3**
comp=Z,13nm,0.9s,mb5.2
U10A Ash Meadows, A 88.03 49 ⇑P **P 15 32 54.8 +0.4**
baz=88
S09A Goldfield 88.05 48 ⇓P **P 15 32 54.4 -0.1**
baz=88
Y12C Blythe 88.06 52 ⇑P **P 15 32 54.8 +0.1**
baz=88
Q08A Gabbs 88.14 47 ⇓P **P 15 32 54.8 0.0**
baz=88
MOD Modoc 88.15 43 *e*P **P 15 32 56.2 +1.4**
comp=Z,28nm,1.0s,mb5.5
MOD LR LR
comp=Z,4µm,20.0s,MS5.9
MOD Modoc 88.15 43 ⇓P **P 15 32 55.1 +0.2**
baz=88
113A Mohawk Valley, 88.16 54 ⇑P **P 15 32 55.1 0.0**
baz=88
O07A Toulon 88.17 45 ⇓P **P 15 32 54.1 -0.8**
baz=88
K05A Summer Lake 88.22 42 ⇓P **P 15 32 55.3 +0.2**
baz=88,SNR=12
TPH Tonopah 88.22 48 *e*P **P 15 32 56.5 +1.2**
comp=Z,23nm,1.0s,mb5.5
TPH LR LR
comp=Z,5µm,22.0s,MS5.8
TPH Tonopah 88.22 48 *e*P **P 15 32 56.5 +1.2**
TPH pmax pmax
comp=Z,23nm,1.0s,mb5.5
TPH MLR MLR
comp=Z,5µm,22.0s,MS5.8
LDFC Landfair 88.26 51 *e*P **P 15 32 55.7 +0.2**
TPNV Topopah Spring 88.34 49 *e*P **P 15 32 54.9 -1.0**
comp=Z,23nm,0.9s,mb5.5
TPNV LR LR
comp=Z,4µm,22.0s,MS5.8
TPNV Topopah Spring 88.34 49 ⇑P **P 15 32 55.3 -0.6**
baz=89,SNR=16
H04A Detroit Lake 88.49 40 ⇑P **P 15 32 57.4 +1.0**
baz=89
214A Organ Pipe Nat 88.51 55 ⇓P **P 15 32 56.6 -0.2**
baz=89
PMR Palmer 88.53 17 P **P 15 32 58.3 +2.1**
comp=Z,16nm,1.0s,mb5.2
PMR LR LR
comp=Z,2µm,22.0s,MS5.5
PMR Palmer 88.53 17 P **P 15 32 58.3 +2.1**
PMR pmax pmax
comp=Z,16nm,1.0s,mb5.2
PMR MLR MLR
comp=Z,2µm,22.0s,MS5.5
CLNS Chul'man 88.55 336 *e*P **P 15 32 55.4 -1.0**
CLNS *e* 15 33 00.8
CLNS *e**PP 15 33 13.6
CLNS *e*S SKSac 15 43 20.8 -5.5
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
S10A Tonopah Range, 88.58 48 ⇑P **P 15 32 56.3 -0.7**
baz=89,SNR=16
PDMCI Parker Dam,Lak 88.59 52 ⇓P **P 15 32 57.2 +0.1**
baz=89,SNR=7.6
Y13A Salome 88.60 53 ⇓P **P 15 32 57.0 -0.2**
baz=89,SNR=8.6
M07A Soldier Meadow 88.61 44 ⇓P **P 15 32 56.6 -0.4**
baz=89
E03A Lebam 88.72 38 ⇓P **P 15 32 59.1 +1.7**
baz=89
V12A Nelson 88.75 51 ⇑P **P 15 32 58.7 +0.8**
baz=89
BMW Boistfort Moun 88.87 38 *e*P **P 15 32 59.5 +1.4**
SHPR Sheep Range 88.90 50 *e*P **P 15 33 00.8 +2.3**
J06A Christmas Vall 88.96 42 ⇑P **P 15 32 59.2 +0.6**
baz=89,SNR=21
X13A Yucca 88.96 52 ⇓P **P 15 32 58.8 -0.1**
baz=89,SNR=9.0
R10A Warm Springs 88.96 48 ⇓P **P 15 32 58.6 -0.2**
baz=89,SNR=24
N08A GE Springer Mi 88.97 45 ⇓P **P 15 32 59.2 +0.4**
baz=89
S11A Rachel 89.03 49 ⇓P **P 15 32 59.5 +0.4**
baz=89
F04A Amboy 89.04 39 ⇓P **P 15 32 59.3 +0.4**
baz=89
H05A Madras 89.04 40 ⇑P **P 15 32 59.4 +0.4**
baz=89
Z14A Wintersburg 89.04 53 ⇑P **P 15 32 59.6 +0.3**
baz=89
M08A Happy Creek Ra 89.15 44 ⇓P **P 15 32 59.5 -0.1**
baz=89
W13A Hualapai Mount 89.15 51 ⇓P **P 15 32 59.8 +0.1**
baz=89,SNR=10
Q10A Clear Creek Ra 89.16 47 ⇓P **P 15 33 00.2 +0.5**
baz=89,SNR=9.1
T11A Corn Creek, Al 89.21 49 ⇑P **P 15 33 00.9 +0.9**
baz=89,SNR=16
K07A Rock Creek Ran 89.23 43 ⇑P **P 15 32 59.5 -0.4**
baz=90
Y14A Winkenburg 89.26 53 ⇓P **P 15 33 00.2 -0.2**
baz=90
115A Sonoran Desert 89.28 54 ⇑P **P 15 32 59.5 -0.9**
baz=90
I06A Prineville 89.29 41 ⇓P **P 15 33 01.0 +0.8**
baz=90,SNR=24
O09A Fish Creek Ran 89.29 46 ⇑P **P 15 33 00.5 +0.3**
baz=90,SNR=13
U12A Valley of Fire 89.31 50 ⇓P **P 15 33 00.4 0.0**
baz=90,SNR=8.8
BMN Battle Mountai 89.39 46 *e*P **P 15 33 01.1 +0.3**
comp=Z,65nm,1.1s,mb5.8
BMN LR LR
comp=Z,6µm,20.0s,MS6.0
N09A Rock Creek Ran 89.40 45 ⇓P **P 15 33 01.1 +0.3**
baz=90
V13A Grand Canyon W 89.43 51 ⇑P **P 15 33 01.3 +0.2**
baz=90,SNR=9.0
R11A Troy Canyon, C 89.48 48 ⇑P **P 15 33 01.3 +0.1**
baz=90,SNR=13
WVOR Wild Horse Val 89.48 43 *e*P **P 15 33 00.9 -0.2**
comp=Z,37nm,1.3s,mb5.5
WVOR LR LR
comp=Z,6µm,20.0s,MS6.0
WVOR Wild Horse Val 89.48 43 *e*P **P 15 33 00.9 -0.2**
WVOR pmax pmax
comp=Z,37nm,1.3s,mb5.5
WVOR MLR MLR
comp=Z,6µm,20.0s,MS6.0
P10A Eureka 89.50 47 ⇓P **P 15 33 02.0 +0.7**
baz=90
J07A Hines 89.55 42 ⇑P **P 15 33 01.9 +0.5**
baz=90,SNR=6.7
L08A Fields 89.55 44 ⇓P **P 15 33 01.9 +0.4**
baz=90
X14A Yava 89.59 52 ⇑P **P 15 33 01.5 -0.3**
baz=90,SNR=9.6
B04A Port Angeles 89.61 37 ⇑P **P 15 33 01.6 +0.1**
baz=90
H06A Lindquist Farm 89.63 41 ⇓P **P 15 33 01.6 -0.2**
baz=90,SNR=27
S12A Delamar Landin 89.64 49 ⇑P **P 15 33 02.2 +0.2**
baz=90,SNR=7.3
SIT Sitka 89.65 25 PFAKE 15 33 10.0 +8.5
SIT LR LR
comp=Z,3µm,20.0s,MS5.7
Q11A Duckwater 89.67 48 ⇓P **P 15 33 02.6 +0.5**
baz=90,SNR=21
U13A Pakoon Wash 89.70 50 ⇑P **P 15 33 02.7 +0.4**
baz=90,SNR=16
C04A Brinnon 89.71 37 ⇑P **P 15 33 02.7 +0.7**
baz=90
G06A Carlson Farm, 89.72 40 ⇑P **P 15 33 03.0 +0.9**
baz=90,SNR=7.8
KTH Kantishna Hill 89.72 15 *e*P **P 15 33 00.4 -1.3**
comp=Z,7.3nm,0.9s,mb4.9
VTHM Trough 89.73 40 P **P 15 33 03.9 +1.6**
K08A Mann Creek Ran 89.73 43 ⇑P **P 15 33 02.1 -0.2**
baz=90
M09A Marrel Ranch, 89.74 45 ⇑P **P 15 33 02.4 0.0**
baz=90
E05A Randle 89.77 39 ⇑P **P 15 33 01.3 -1.1**
baz=90,SNR=7.6
Y15A Casa Rosa Ranc 89.77 53 ⇓P **P 15 33 02.7 0.0**
baz=90,SNR=9.8
W14A Seligman 89.79 52 ⇓P **P 15 33 02.5 -0.2**
baz=90,SNR=12
TRF Thorofare Moun 89.79 15 *e*P **P 15 32 59.8 -2.2**
comp=Z,10nm,0.8s,mb5.1
I07A Izee 89.79 42 ⇓P **P 15 33 02.2 -0.3**
baz=90,SNR=20
O10A Cortez Mining, 89.81 46 ⇓P **P 15 33 02.6 -0.1**
baz=90,SNR=11
L09A Wilkinson Ranc 89.90 44 ⇓P **P 15 33 02.4 -0.7**
baz=90,SNR=12
F06A Goldendale 89.91 40 ⇓P **P 15 33 02.5 -0.5**
baz=90,SNR=12
217A Green Valley 89.94 56 ⇑P **P 15 33 02.4 -1.2**
baz=90,SNR=9.5
P11A Circle Ranch, 89.95 47 ⇓P **P 15 33 03.2 -0.2**
baz=90
V14A Boquillas Ranc 89.96 51 ⇓P **P 15 33 03.0 -0.6**
baz=90,SNR=16
WPW White Pass 89.96 39 P **P 15 33 05.2 +1.9**
PGC Sidney 89.97 36 *e*P **P 15 33 03.5 +0.3**
comp=Z,138nm,1.3s,mb6.0
U14A Enumclaw 89.98 38 ⇓P **P 15 33 03.1 -0.2**
baz=90
FMW Mount Fremont 90.02 38 P **P 15 33 06.6 +3.1**
T13A Saint George 90.03 50 ⇑P **P 15 33 03.8 0.0**
baz=90
J08A Circle Bar Ran 90.06 43 ⇓P **P 15 33 03.4 -0.4**
baz=90,SNR=16
X15A Humboldt 90.08 53 ⇑P **P 15 33 03.3 -0.9**
baz=90,SNR=11
GSM Grass Mountain 90.10 38 P **P 15 33 05.7 +1.8**
R12A Pony Springs, 90.15 48 ⇑P **P 15 33 03.9 -0.4**
baz=90,SNR=16
Z16A Peralta Trail, 90.17 54 ⇓P **P 15 33 04.3 -0.3**
baz=90
K09A Rome 90.20 43 ⇑P **P 15 33 04.2 -0.3**
baz=90,SNR=22
TUC Tucson 90.20 55 *e*P **P 15 33 06.0 +1.2**
comp=Z,19nm,1.2s,mb5.2
TUC LR LR
comp=Z,2µm,22.0s,MS5.5
U14A Mt Trumbull 90.27 51 ⇓P **P 15 33 04.7 -0.3**
baz=90,SNR=34
I08A Drewsey 90.28 42 ⇑P **P 15 33 04.7 -0.1**
baz=90,SNR=16
O11A Cowboy Ranch, 90.29 46 ⇑P **P 15 33 04.3 -0.6**
baz=90,SNR=22
G07A Ruggs Ranch, H 90.31 40 ⇑P **P 15 33 05.1 +0.2**
baz=90,SNR=18
S13A Holt Ranch, En 90.32 49 ⇑P **P 15 33 05.1 -0.1**
baz=90,SNR=11
Q12A Willow Creek R 90.33 48 ⇓P **P 15 33 05.3 +0.1**
baz=91,SNR=12
117A Oracle 90.35 55 ⇓P **P 15 33 05.7 +0.3**
baz=91,SNR=11
MCK McKinley 90.36 16 *e*P **P 15 33 09.4 +4.7**
MCK pmax pmax
comp=Z,45nm,1.6s,mb5.5
W15A Williams 90.37 52 ⇓P **P 15 33 05.8 +0.4**
baz=91
Y16A Circle Bar Ran 90.37 53 ⇑P **P 15 33 05.9 +0.4**
baz=91,SNR=13
M10A I.L. Ranch, Tu 90.38 45 ⇑P **P 15 33 05.3 -0.1**
baz=91,SNR=26
A04A Legoe Bay, Lum 90.42 36 ⇑P **P 15 33 05.5 +0.2**
baz=91
C05A Tolt Reservoir 90.42 38 ⇑P **P 15 33 06.0 +0.6**
baz=91
WRAK Wrangell Islan 90.43 27 *e*P **P 15 33 06.0 +0.9**
comp=Z,15nm,0.8s,mb5.3
WRAK LR LR
comp=Z,3µm,19.0s,MS5.8
318A Bisbee 90.43 56 ⇑P **P 15 33 05.1 -0.7**
baz=91,SNR=11
F07A Phinny Hill Vi 90.48 40 ⇑P **P 15 33 06.2 +0.4**
baz=91
B05A Bryant 90.51 37 ⇓P **P 15 33 06.0 +0.3**
baz=91
J09A Fry Pan Ranch, 90.51 43 ⇑P **P 15 33 05.6 -0.2**
baz=91,SNR=30
R13A O'Grain Ranch, 90.52 49 ⇑P **P 15 33 06.0 -0.1**
baz=91,SNR=12
H08A Prairie City 90.53 41 ⇓P **P 15 33 06.1 +0.1**
baz=91
JCW Jim Creek 90.56 37 *e*P **P 15 33 06.1 +0.1**
CMW Cultus Mountai 90.58 37 P **P 15 33 08.0 +1.9**
218A Dragoon 90.62 56 ⇓P **P 15 33 06.1 -0.6**
baz=91,SNR=16
T14A Hurricane 90.63 50 ⇑P **P 15 33 07.3 +0.7**
baz=91
X16A Lo Mia Camp, P 90.64 53 ⇑P **P 15 33 06.5 -0.3**
baz=91,SNR=11
D06A Cle Elum 90.64 38 ⇓P **P 15 33 07.1 +0.7**
baz=91
CCUT Cedar City 90.66 49 *e*P **P 15 33 06.1 -0.6**
L10A Juniper Basin 90.70 44 ⇓P **P 15 33 06.9 +0.1**
baz=91,SNR=26
ARUT Antelope Range 90.71 49 *e*P **P 15 33 08.2 +1.2**
V15A Kaibab Nationa 90.72 51 ⇓P **P 15 33 06.8 -0.3**
baz=91,SNR=13
G08A Pilot Rock 90.75 41 ⇓P **P 15 33 06.9 0.0**
baz=91,SNR=23
Y17A Roosevelt 90.76 54 ⇓P **P 15 33 06.9 -0.4**
baz=91,SNR=6.2
YAK Yakutsk 90.77 341 PFAKE 15 33 20.0 +13
YAK LR LR
comp=Z,3µm,22.0s,MS5.8
YAK Yakutsk 90.77 341 *e*P **P 15 33 03.3 -3.4**
YAK *e* 15 43 40.9
YAK pmax pmax
comp=Z,13nm,1.2s,mb5.1
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.5s
K10A MacKenzie Ranc 90.78 44 ⇓P **P 15 33 07.7 +0.5**
baz=91
M11A Holland Ranch, 90.83 45 ⇓P **P 15 33 08.4 +1.0**
baz=91
I09A Lost Marbles R 90.83 42 ⇑P **P 15 33 07.7 +0.3**
baz=91
Q13A Wheeler Ranch, 90.85 48 ⇓P **P 15 33 07.7 +0.1**
baz=91,SNR=9.7
ELK Elko 90.86 46 *e*P **P 15 33 07.1 -0.6**
ELK LR LR
comp=Z,6µm,21.0s,MS6.0
W16A Flagstaff 90.87 52 ⇑P **P 15 33 08.6 +0.8**
baz=91
E07A Sunnyside 90.88 39 ⇑P **P 15 33 08.3 +0.8**
baz=91
S14A Cedar City 90.89 49 ⇓P **P 15 33 08.4 +0.6**
baz=91
U15A North Rim 90.91 51 ⇑P **P 15 33 07.8 -0.2**
baz=91,SNR=39
A05A Maple Falls 90.92 36 ⇓P **P 15 33 08.2 +0.6**
baz=91

RPW Rockport 90.93 37 eP P 15 33 07.4 -0.3
RSW Rattlesnake Hi 90.95 40 P P 15 33 10.4 +2.5
319A Douglas 90.95 57 ⇑P P 15 33 07.7 -0.6
baz=91,SNR=6.7
O12A Currie 90.97 47 ⇑P P 15 33 08.0 -0.1
baz=91,SNR=13
HAWA Hanford 90.98 40 eP P 15 33 09.7 +1.6
comp=Z,66nm,1.3s,mb5.8
HAWA LR LR
comp=Z,4μm,22.0s,MS5.8
B06A Marblemount 90.99 37 ⇓P P 15 33 08.4 +0.4
baz=91
C06A Tall Timber Ra 91.00 38 ⇑P P 15 33 08.9 +0.9
baz=91
N12A Clover Valley, 91.05 46 ⇓P P 15 33 08.5 0.0
baz=91,SNR=21
X17A Forest Lakes 91.07 53 ⇑P P 15 33 08.2 -0.5
baz=91,SNR=10.0
P13A Bates Ranch, G 91.08 48 ⇑P P 15 33 08.3 -0.4
baz=91,SNR=32
T15A Red Dirt Ranch 91.11 50 ⇑P P 15 33 08.6 -0.3
baz=91,SNR=17
D07A Quincy 91.14 39 ⇓P P 15 33 09.2 +0.5
baz=91
ETW Entiat 91.15 38 eP P 15 33 08.2 -0.6
WUAZ Wupatki 91.17 52 eP P 15 33 08.6 -0.6
comp=Z,34nm,1.2s,mb5.6
WUAZ LR LR
comp=Z,2μm,20.0s,MS5.5
WUAZ Wupatki 91.17 52 ⇑P P 15 33 09.2 0.0
baz=91,SNR=11
L11A Cat Creek Ranc 91.21 45 ⇓P P 15 33 08.6 -0.6
baz=91,SNR=18
H09A Durkee 91.22 42 ⇑P P 15 33 09.6 +0.4
baz=92
219A White Tail Can 91.24 56 ⇑P P 15 33 09.0 -0.6
baz=91,SNR=13
E08A Dider Farm, El 91.31 40 ⇓P P 15 33 08.9 -0.6
baz=92,SNR=12
K11A Parker Ranch, 91.32 44 ⇓P P 15 33 09.5 -0.2
baz=92,SNR=16
C07A Waterville 91.35 38 ⇓P P 15 33 09.9 +0.2
baz=92
Q14A Sevier Lake (B 91.38 48 ⇓P P 15 33 10.0 -0.1
baz=92,SNR=36
M12A Wells 91.40 46 ⇑P P 15 33 10.4 +0.3
baz=92,SNR=17
Y18A Canyon Day Jun 91.41 54 ⇓P P 15 33 10.6 +0.3
baz=92
S15A Panguitch 91.42 50 ⇓P P 15 33 10.9 +0.6
baz=92,SNR=9.0
O13A Hicks Ranch, I 91.42 47 ⇑P P 15 33 10.9 +0.7
baz=92
G09A Cove 91.46 41 ⇓P P 15 33 10.3 0.0
baz=92,SNR=16
119A Ashpeak Ranch, 91.53 55 ⇓P P 15 33 10.8 -0.1
baz=92
COLA College 91.57 15 PFAKE 15 33 20.0 +10
COLA LR LR
comp=Z,3μm,22.0s,MS5.7
COLA College 91.57 15 ⇑iP P 15 33 09.3 -1.0
F09A S2 Ranch, Elgi 91.60 41 ⇑P P 15 33 11.8 +0.9
baz=92
U16A Tuba City 91.62 52 ⇓P P 15 33 11.7 +0.4
baz=92,SNR=19
L12A House Creek Ra 91.68 45 ⇓P P 15 33 11.7 +0.3
baz=92,SNR=13
D08A Wollman Farm, 91.68 39 ⇓P P 15 33 11.0 -0.3
baz=92
R15A Junction 91.72 49 ⇓P P 15 33 11.9 +0.2
baz=92
B07A Winthrop 91.72 38 ⇑P P 15 33 11.4 0.0
baz=92
T16A Glen Canyon Da 91.72 51 ⇓P P 15 33 11.8 +0.1
baz=92,SNR=9.0
H10A Noah's Angus R 91.75 42 ⇓P P 15 33 11.7 0.0
baz=92,SNR=16
MFID Camas Ranch 91.76 43 ⇑P P 15 33 11.7 0.0
baz=92,SNR=9.8
Z19A T-Link Ranch, 91.78 55 ⇓P P 15 33 11.6 -0.5
baz=92
X18A Snowflake 91.79 53 ⇑P P 15 33 11.6 -0.5
baz=92
P14A Drum Mountains 91.80 48 ⇓P P 15 33 11.7 -0.2
baz=92
E09A Wood Farm, Sta 91.86 40 ⇓P P 15 33 12.4 +0.3
baz=92,SNR=7.8
M13A Montello 91.87 46 ⇓P P 15 33 12.4 +0.1
baz=92,SNR=10
G10A Bishop Farm, J 91.87 41 ⇓P P 15 33 12.0 -0.2
baz=92,SNR=22
A07A Ashnola River, 91.89 37 ⇑P P 15 33 11.8 -0.4
baz=92
SONM Songino Array 91.89 322 P P 15 33 10.7 -1.4
comp=Z,3.2nm,1.0s,mb4.6,baz=126,slow=3.6,SNR=10
SONM LR LR 16 12 17.2
comp=Z,2μm,21.0s,MS5.4,baz=119,slow=34
MVU Marysvale 91.90 49 PFAKE 15 33 20.0 +7.5
MVU LR LR
comp=Z,4μm,21.0s,MS5.8
I11A Placerville 91.92 43 ⇑P P 15 33 12.0 -0.4
baz=92,SNR=13
MSU Marysvale 91.93 49 eP P 15 33 15.0 +2.3
OD2 Odessa Site #2 91.98 39 P P 15 33 13.6 +1.0
GTA Gaotai 91.98 312 eP P 15 33 12.8 -0.1
GTA AP 15 33 17.0
GTA XP sP 15 33 19.0 +5.6
GTA PP PP 15 36 53.8 +1.1
GTA SKS 15 43 43.0
GTA S S 15 44 10.5 -5.3
GTA XS sS 15 44 17.8 +1.4
GTA PS PS 15 45 26.9 +1.1
GTA SS SS 15 50 19.8 -5.1
GTA AMB AMB
comp=Z,15nm,1.0s,mb5.3
GTA AMB AMB
comp=Z,576nm,6.3s
GTA LR LR
comp=N,518nm,14.7s,MS5.2
GTA LR LR
comp=E,473nm,17.7s,MS5.2
GTA LR LR
comp=Z,464nm,21.3s,MS4.9
C08A Higginbotham F 91.99 39 ⇑P P 15 33 12.7 +0.1
baz=92
K12A Draper Farm, C 91.99 44 ⇑P P 15 33 12.6 -0.2
baz=92,SNR=6.9
S16A Weppner Ranch, 91.99 50 ⇓P P 15 33 12.6 -0.3
baz=92,SNR=13
D09A Jones Farm, Ri 92.05 39 ⇑P P 15 33 12.6 -0.3
baz=92
Y19A Nutrioso 92.07 54 ⇑P P 15 33 13.1 -0.3
baz=92,SNR=12
B08A Colville Reser 92.12 38 ⇑P P 15 33 13.0 -0.3
baz=92
F10A Beach Ranch, E 92.14 41 ⇓P P 15 33 13.2 -0.2
baz=92,SNR=8.9
J12A Stokes Ranch, 92.15 44 ⇑P P 15 33 13.3 -0.2
baz=92,SNR=17
U17A Shonto 92.16 51 ⇑P P 15 33 13.9 +0.2
baz=92,SNR=14
SHL Shillong 92.22 297 eP P 15 33 15.0 +0.7
SHL eS SKSac 15 43 48.0 -1.0
SHL ex x 15 45 30.0
T17A Navajo Res., N 92.23 51 ⇑P P 15 33 13.8 -0.3
baz=92,SNR=13
DUG Dugway 92.25 47 eP P 15 33 14.3 +0.2
comp=Z,17nm,1.1s,mb5.3
DUG LR LR
comp=Z,6μm,22.0s,MS6.0
DUG Dugway 92.25 47 eP P 15 33 14.3 +0.2
DUG pmax pmax
comp=Z,17nm,1.1s,mb5.3
DUG MLR MLR
comp=Z,6μm,22.0s,MS6.0
DUG Dugway 92.25 47 ⇓P P 15 33 14.3 +0.3
baz=92
H11A Donnelly 92.27 42 ⇑P P 15 33 14.0 0.0
baz=92,SNR=12
V18A Ganado 92.31 52 ⇑P P 15 33 14.2 -0.3
baz=92,SNR=6.4
R16A Teasdale 92.31 50 ⇓P P 15 33 14.5 +0.1
baz=92,SNR=12
P15A Leamington 92.33 48 ⇑P P 15 33 14.6 +0.1
baz=93
L13A Double Diamond 92.36 45 ⇓P P 15 33 14.8 +0.3
baz=93
C09A Chrisman Ranch 92.44 39 ⇑P P 15 33 14.7 -0.1
baz=93
G11A Walters Elk Ra 92.45 42 ⇑P P 15 33 13.9 -1.0
baz=93,SNR=17
W19A Sanders 92.46 53 ⇓P P 15 33 13.8 -1.4
baz=93,SNR=5.8
A08A Turner Farm, O 92.46 37 ⇑P P 15 33 15.0 +0.2
baz=93
M14A Sheep Mountain 92.48 46 ⇓P P 15 33 14.6 -0.5
baz=93,SNR=8.4
S17A Black Ridge (B 92.51 50 ⇑P P 15 33 14.7 -0.7
baz=93,SNR=16
O15A The Old Anders 92.52 47 ⇑P P 15 33 15.7 +0.4
baz=93
K13A Stover Farm, H 92.53 45 ⇑P P 15 33 15.3 0.0
baz=93
D10A Wagner Farm, O 92.65 40 ⇓P P 15 33 16.1 +0.4
baz=93
U18A Rough Rock, Ch 92.66 52 ⇑P P 15 33 15.7 -0.4
baz=93,SNR=11
HLID Hailey 92.74 44 PFAKE 15 33 30.0 +14
HLID LR LR
comp=Z,6μm,20.0s,MS6.0
HLID Hailey 92.74 44 ⇓P P 15 33 16.2 -0.1
baz=93,SNR=10
F11A Grangeville 92.76 41 ⇓P P 15 33 16.7 +0.5
baz=93
N15A Stansbury Isla 92.76 47 ⇑P P 15 33 15.8 -0.6
baz=93
L14A Malta 92.80 46 ⇓P P 15 33 16.3 -0.3
baz=93,SNR=14
Q16A Castle Valley 92.81 49 ⇑P P 15 33 16.7 0.0
baz=93,SNR=10
J13A Cove Ranch, Pi 92.82 44 ⇑P P 15 33 16.3 -0.3
baz=93,SNR=12
B09A Rice 92.83 38 ⇓P P 15 33 17.0 +0.5
baz=93
A09A Danville 92.86 38 ⇑P P 15 33 17.0 +0.3
baz=93
R17A Hanksville Air 92.92 50 ⇑P P 15 33 16.5 -0.7
baz=93,SNR=19
H12A Diamond D Ranc 92.92 43 ⇓P P 15 33 16.5 -0.5
baz=93,SNR=13
TMUT Trail Mountain 92.95 49 eP P 15 33 19.6 +2.3
T18A Mexican Hat 92.97 51 ⇑P P 15 33 16.6 -0.8
baz=93,SNR=45
V19A Window Rock 92.97 53 ⇑P P 15 33 17.2 -0.3
baz=93
MPU Maple Canyon 92.97 48 PFAKE 15 33 30.0 +13
MPU LR LR
comp=Z,6μm,21.0s,MS6.0
HVU Hansel Valley 92.99 46 eP P 15 33 18.4 +1.0
comp=Z,23nm,1.2s,mb5.5
HVU Hansel Valley 92.99 46 eP P 15 33 18.4 +1.0
HVU pmax pmax
comp=Z,23nm,1.2s,mb5.5
SPUT South Promonto 93.00 46 eP P 15 33 19.4 +1.9
M15A Larsen Ranch, 93.07 46 ⇓P P 15 33 16.6 -1.2
baz=93,SNR=7.9
K14A Jones Ranch, D 93.07 45 ⇑P P 15 33 17.8 -0.1
baz=93
I13A Wildhorse Cree 93.09 44 ⇓P P 15 33 18.0 +0.1
baz=93
S18A Hurst Farm, Bl 93.11 51 ⇑P P 15 33 18.2 0.0
baz=93,SNR=11
O16A Springville 93.15 48 ⇑P P 15 33 18.4 +0.2
baz=93
J14A Carey 93.21 44 ⇑P P 15 33 18.4 0.0
baz=93,SNR=9.0
DAWY Dawson 93.25 19 eP P 15 33 17.2 -0.9
EGAK Eagle 93.27 18 eP P 15 33 17.2 -0.9
comp=Z,37nm,1.0s,mb5.8
EGAK LR LR
comp=Z,2μm,22.0s,MS5.6
H13A Challis 93.31 43 ⇓P P 15 33 19.1 +0.3
baz=94
NEW Newport 93.34 39 PFAKE 15 33 30.0 +11
NEW LR LR
comp=Z,4μm,19.0s,MS5.8
L15A Malad City 93.35 46 ⇓P P 15 33 19.3 +0.2
baz=94
SRU San Rafael 93.35 49 eP P 15 33 18.1 -1.1
comp=Z,23nm,1.1s,mb5.5
SRU San Rafael 93.35 49 eP P 15 33 18.1 -1.1
SRU pmax pmax
comp=Z,23nm,1.1s,mb5.5
SRU San Rafael 93.35 49 ⇑P P 15 33 18.4 -0.8
baz=94,SNR=12
A10A Northport 93.45 38 ⇑P P 15 33 19.4 +0.1
baz=94
T19A Beclabito 93.45 52 ⇓P P 15 33 19.5 -0.2
baz=94
R18A Canyonlands Na 93.48 50 ⇑P P 15 33 19.3 -0.6
baz=94,SNR=15
N16A Rex Ranch, Co 93.49 47 ⇑P P 15 33 20.2 +0.4
baz=94
I14A Mackay 93.53 44 ⇑P P 15 33 19.6 -0.2
baz=94,SNR=13
K15A Arbon 93.56 45 ⇓P P 15 33 20.4 +0.3
baz=94
G13A Cobalt 93.57 43 ⇑P P 15 33 20.0 0.0
baz=94
Q18A Rafter H Ranch 93.62 49 ⇑P P 15 33 19.6 -0.8
baz=94,SNR=15
BOD Bodaibo 93.63 332 eP P 15 33 17.5 -2.5
O17A Robinson Place 93.67 48 ⇑P P 15 33 20.0 -0.6
baz=94,SNR=19
HWUT Hardware Ranch 93.72 47 eP P 15 33 22.6 +1.8
comp=Z,12nm,1.4s,mb5.0
HWUT LR LR
comp=Z,5μm,21.0s,MS5.9
PLCA Paso Flores 93.75 137 P P 15 33 18.8 -2.3
comp=Z,1.3nm,0.9s,mb4.3,baz=244,slow=7.4,SNR=3.5
PLCA LR LR 16 06 01.6
comp=Z,3μm,21.7s,MS5.7,baz=234,slow=30
S19A Harvey Farm, M 93.75 51 ⇓P P 15 33 20.1 -1.0
baz=94,SNR=8.6
P18A Preston Nutter 93.77 49 ⇓P P 15 33 21.5 +0.4
baz=94
F13A Darby 93.83 42 ⇑P P 15 33 21.0 -0.2
baz=94
EFI East Falkland 93.84 151 PFAKE 15 33 30.0 +8.7
EFI LR LR
comp=Z,2μm,20.0s,MS5.6
H14A Leadore 93.89 43 ⇑P P 15 33 21.8 +0.2
baz=94
R19A Curley Farm, L 93.89 50 ⇓P P 15 33 21.3 -0.4
baz=94
J15A Blackfoot 93.94 45 ⇑P P 15 33 20.8 -1.0
baz=94,SNR=13
MVCO Mesa Verde 93.99 52 PFAKE 15 33 30.0 +7.8
MVCO LR LR
comp=Z,2μm,22.0s,MS5.6
G14A Jackson 94.12 43 ⇓P P 15 33 22.8 +0.3
baz=94
A11A Hall Mountain, 94.12 38 ⇑P P 15 33 22.5 0.0
baz=94
BNM Barren Site 94.14 55 eP P 15 33 22.3 -0.6
Q19A Hogan Spring (94.17 50 ⇓P P 15 33 22.4 -0.6
baz=94,SNR=9.4
LPM Los Pinos Moun 94.20 55 eP P 15 33 24.2 +1.0
K16A Soda Springs 94.25 45 ⇑P P 15 33 24.0 +0.8
baz=94
M17A Scullys Gap (B 94.27 47 ⇓P P 15 33 23.8 +0.5
baz=94
MCMT McKenzie Canyo 94.32 43 eP P 15 33 24.9 +1.4
PV01 Paradox Valley 94.32 51 eP P 15 33 23.1 -0.6
H15A Lima 94.36 43 ⇓P P 15 33 23.2 -0.5
baz=95,SNR=11
J16A Bone 94.43 45 ⇓P P 15 33 23.7 -0.3
baz=95,SNR=13
LSA Lhasa 94.43 300 eP P 15 33 25.0 +0.6
comp=Z,9.6nm,0.9s,mb5.1
LSA LR LR
comp=Z,2μm,21.0s,MS5.5
LSA Lhasa 94.43 300 eP P 15 33 25.0 +0.6
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
LSA MLR MLR
comp=Z,2μm,21.0s,MS5.5
F14A Wisdom 94.44 42 ⇑P P 15 33 24.6 +0.6
baz=95
AHID Auburn Hatcher 94.54 46 PFAKE 15 33 40.0 +15
AHID LR LR
comp=Z,3μm,20.0s,MS5.8
C13A Hot Springs 94.56 40 ⇓P P 15 33 25.2 +0.7
baz=95
TXAR Lajitas Array 94.57 60 P P 15 33 24.6 -0.5
comp=Z,5.2nm,1.0s,mb4.9,baz=234,slow=4.2,SNR=18
TXAR LR LR 16 07 20.7
comp=Z,3μm,21.0s,MS5.8,baz=200,slow=30
ANMO Albuquerque 94.58 54 eP P 15 33 24.3 -0.6
comp=Z,12nm,1.1s,mb5.2
ANMO LR LR
comp=Z,2μm,22.0s,MS5.6
ANMO Albuquerque 94.58 54 eP P 15 33 24.3 -0.6
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO MLR MLR
comp=Z,2μm,22.0s
E14A Clinton 94.64 42 ⇓P P 15 33 25.7 +0.8
baz=95
RRI2 Red Ridge 94.65 45 eP P 15 33 27.7 +2.7
comp=Z,15nm,1.0s,mb5.4
M18A Lyman 94.66 47 ⇑P P 15 33 25.8 +0.7
baz=95
N18A Larsen Ranch, 94.74 48 ⇓P P 15 33 26.4 +0.9
baz=95
O19A Miners Draw (B 94.83 48 ⇓P P 15 33 26.2 +0.3
baz=95
ZAK Zakamensk 94.93 323 eP P 15 33 18.7 -7.5
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.9
REDW Red Top Meadow 94.96 45 eP P 15 33 28.0 +1.5
comp=Z,24nm,1.3s,mb5.5
F15A Butte 95.00 42 ⇑P P 15 33 27.6 +1.0
baz=95
LRM Limekiln Ridge 95.02 42 ePP PP 15 37 16.7 +0.4
GDL2 Guadalupe Moun 95.11 57 eP P 15 33 29.2 +1.8
IMW Indian Meadow 95.14 45 eP P 15 33 29.9 +2.6
comp=Z,7.7nm,0.9s,mb5.1
G16A Moss Hill, Enn 95.16 43 ⇓P P 15 33 28.8 +1.4
baz=95
E15A Deer Lodge 95.17 42 ⇑P P 15 33 27.1 -0.2
baz=95
A13A Flathead Natio 95.24 39 ⇑P P 15 33 27.2 -0.4
baz=96
H16A Russell Place, 95.29 44 ⇑P P 15 33 29.0 +1.0
baz=96
IRK Irkutsk 95.30 325 eP P 15 33 34.4 +6.6
IRK pmax pmax
comp=Z,39nm,0.7s,mb6.0
TLY Talaya 95.36 324 PFAKE 15 33 40.0 +12
TLY LR LR
comp=Z,3μm,22.0s,MS5.7
TLY Talaya 95.36 324 eP P 15 33 30.1 +2.0
TLY ePPP 15 39 21.3
TLY eS S 15 44 41.5 -3.4
TLY ePS PS 15 46 11.4 +8.8
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
TLY MLR MLR
comp=Z,2μm,22.0s,MS5.5
L19A Farson 95.43 47 ⇑P P 15 33 28.8 +0.2
baz=96
YMR Madison River 95.45 44 PFAKE 15 33 40.0 +11
YMR LR LR
comp=Z,7μm,21.0s,MS6.1
D15A Lincoln 95.52 41 ⇓P P 15 33 29.3 +0.4
baz=96
F16A Kennard Place, 95.52 43 ⇑P P 15 33 29.3 +0.3
baz=96
BW06 Boulder Array 95.57 46 PFAKE 15 33 40.0 +11
BW06 LR LR
comp=Z,4μm,19.0s,MS5.9
BW06 Boulder Array 95.57 46 ⇑P P 15 33 29.6 +0.3
baz=96
PDAR Pinedale Array 95.57 46 P P 15 33 29.1 -0.2
comp=Z,1.5nm,0.9s,mb4.5,baz=222,slow=2.0,SNR=7.2
PDAR PP PP 15 37 23.3 +2.6
comp=Z,1.8nm,1.1s,baz=247,slow=7.2,SNR=5.4
PDAR LR LR 16 10 44.2
comp=Z,3μm,19.2s,MS5.8,baz=247,slow=32
B14A Marquette Ranc 95.65 40 ⇓P P 15 33 30.4 +0.9
baz=96
LKWY Lake 95.77 44 PFAKE 15 33 40.0 +10
LKWY LR LR
comp=Z,7μm,22.0s,MS6.1
C15A Salmond Ranch, 95.79 41 ⇓P P 15 33 30.9 +0.8
baz=96
I18A Diamond G Ranc 95.79 45 ⇑P P 15 33 31.2 +1.0
baz=96
HRY Holter Researc 95.79 42 P P 15 33 29.6 -0.6
E16A East Helena 95.81 42 ⇑P P 15 33 31.1 +0.8
baz=96
A14A Double T Ranch 95.84 39 ⇑P P 15 33 31.6 +1.3
baz=96
B15A Bradely Ranch, 96.06 40 ⇑P P 15 33 32.6 +1.3
baz=96
L20A Wamsutter 96.08 47 ⇑P P 15 33 32.9 +1.3
baz=96
D16A Dana Ranch, Ca 96.11 42 ⇓P P 15 33 33.9 +2.3
baz=96
F17A Fitzpatrick Pl 96.18 43 ⇓P P 15 33 33.9 +1.9
baz=96
A15A Johnson Ranch, 96.25 40 ⇓P P 15 33 34.3 +2.2
baz=96
SDCO Great Sand Dun 96.39 52 PFAKE 15 33 40.0 +6.9
SDCO LR LR
comp=Z,2μm,19.0s,MS5.6
G18A Lazy EL Ranch, 96.63 44 ⇓P P 15 33 35.9 +1.9
baz=97
D17A Six Diamond Ra 96.69 42 ⇑P P 15 33 35.6 +1.3
baz=97
RLMT Red Lodge 96.74 44 PFAKE 15 33 50.0 +15
RLMT LR LR
comp=Z,7μm,21.0s,MS6.1
RLMT Red Lodge 96.74 44 ⇓P P 15 33 34.9 +0.4
baz=97
ISCO Idaho Springs 97.10 50 PFAKE 15 33 50.0 +14
ISCO LR LR
comp=Z,2μm,19.0s,MS5.6
EGMT Eagleton 97.63 41 PFAKE 15 33 50.0 +12
EGMT LR LR
comp=Z,2μm,20.0s,MS5.6
INK Inuvik 97.94 17 eP P 15 33 40.0 +0.6
comp=Z,4μm,3.0s
JCT Junction City 98.11 61 PFAKE 15 33 50.0 +8.9
JCT LR LR
comp=Z,3μm,22.0s,MS5.8
AMTX Amarillo 98.19 56 PFAKE 15 33 50.0 +8.7
AMTX LR LR
comp=Z,2μm,22.0s,MS5.6
TIXI Tiksi 98.32 347 PFAKE 15 33 50.0 +9.0
TIXI LR LR
comp=Z,2μm,21.0s,MS5.5
TIXI Tiksi 98.32 347 eP P 15 33 38.8 -2.2
TIXI pmax pmax
comp=Z,4.0nm,1.2s,mb5.0
TIXI MLR MLR
comp=Z,2μm,19.0s,MS5.5
KVTX Kingsville 98.66 64 PFAKE 15 33 50.0 +6.4
KVTX LR LR
comp=Z,1μm,20.0s,MS5.4
LAO LASA Array 99.31 43 PFAKE 15 34 00.0 +14
LAO LR LR
comp=Z,7μm,20.0s,MS6.2
RSSD Black Hills 99.80 46 PFAKE 15 34 00.0 +12
RSSD LR LR
comp=Z,3μm,20.0s,MS5.8
LCO Las Campanas 99.96 127 PFAKE 15 34 00.0 +11
LCO LR LR
comp=Z,2μm,20.0s,MS5.7
OGNE Ogallala 100.06 50 PFAKE 15 34 00.0 +11
OGNE LR LR
comp=Z,2μm,19.0s,MS5.5
WMOK Wichita Mounta 100.38 57 PFAKE 15 34 00.0 +9.1
WMOK LR LR
comp=Z,2μm,19.0s,MS5.6
HYB Hyderabad 100.86 284 eP Pdif 15 33 51.0 -2.0
HYB Hyderabad 100.86 284 i P Pdif 15 33 57.5 +4.5
HYB ePP PP 15 38 04.0 +2.3
HYB eSKS 15 44 40.0
HYB eS Sdif 15 45 32.0 0.0
HYB ePS PS 15 47 08.0 +4.6
HYB eSS SS 15 52 28.0 -3.3
CBKS Cedar Bluff 101.01 53 PFAKE 15 34 10.0 +16
CBKS LR LR
comp=Z,1μm,19.0s,MS5.4
HKT Hockley 101.16 62 PFAKE 15 34 10.0 +16
HKT LR LR
comp=Z,2μm,20.0s,MS5.6
DGMT Dagmar 101.23 42 PFAKE 15 34 10.0 +15

DGMT LR LR
comp=Z,2µm,19.0s,MS5.7
WMQ Urumqi 102.06 312 *e*P Pdif 15 33 59.0 +0.7
WMQ PP PP 15 38 12.0 +1.8
WMQ SKS 15 44 36.0
WMQ S Sdif 15 45 37.0 -5.0
WMQ PS PS 15 47 16.0 +0.6
WMQ SS SS 15 52 45.0 -2.0
WMQ LR LR
comp=N,2µm,22.0s,MS5.8
WMQ LR LR
comp=E,2µm,22.0s,MS5.8
WMQ LR LR
comp=Z,2µm,22.0s,MS5.7
NATX Nacogdoches 102.69 61 PFAKE 15 34 10.0 +8.8
NATX LR LR
comp=Z,3µm,21.0s,MS5.8
NNA Nana 103.15 109 PFAKE 15 34 20.0 +17
NNA LR LR
comp=Z,2µm,20.0s,MS5.7
KSU1 Kansas State U 103.41 53 PFAKE 15 34 20.0 +16
KSU1 LR LR
comp=Z,3µm,22.0s,MS5.8
TGUH Tegucigalpa,Un 103.49 80 PFAKE 15 34 20.0 +15
TGUH LR LR
comp=Z,1µm,21.0s,MS5.5
MIAR Mount Ida 104.40 58 PFAKE 15 34 20.0 +11
MIAR LR LR
comp=Z,2µm,21.0s,MS5.7
FFC Flin Flon 104.58 37 PFAKE 15 34 20.0 +10
FFC LR LR
comp=Z,4µm,21.0s,MS5.9
LVC Limon Verde 104.69 122 PFAKE 15 34 20.0 +10
LVC LR LR
comp=Z,4µm,20.0s,MS6.0
ECSD EROS,Sioux Fal 104.75 49 PFAKE 15 34 20.0 +10
ECSD LR LR
comp=Z,5µm,22.0s,MS6.0
VBMS Vicksburg 106.19 61 PFAKE 15 38 40.0 +11
VBMS LR LR
comp=Z,2µm,19.0s,MS5.7
AGMN Agassiz Refuge 106.48 44 PFAKE 15 38 40.0 +11
AGMN LR LR
comp=Z,7µm,22.0s,MS6.2
MKAR Makanchi Array 106.56 314 Pdiff Pdif 15 34 20.1 +1.8
comp=Z,1.6nm,0.8s,baz=108,slow=4.0,SNR=6.5
SCIA State Center 106.67 51 PFAKE 15 38 40.0 +11
SCIA LR LR
comp=Z,3µm,22.0s,MS5.8
OTAV Otavalo 106.74 97 PFAKE 15 38 40.0 +10
OTAV LR LR
comp=Z,1µm,22.0s,MS5.5
OXF Oxford 107.69 59 PFAKE 15 38 40.0 +8.4
OXF LR LR
comp=Z,3µm,20.0s,MS5.8
BRAL Brewton 108.72 63 PFAKE 15 38 50.0 +16
BRAL LR LR
comp=Z,1µm,21.0s,MS5.5
JFWS Jewell Farm 109.05 51 PFAKE 15 38 50.0 +16
JFWS LR LR
comp=Z,4µm,21.0s,MS5.9
HDIL Hopedale 109.23 53 PFAKE 15 38 50.0 +16
HDIL LR LR
comp=Z,3µm,22.0s,MS5.8
EYMN Ely 109.25 45 PFAKE 15 38 50.0 +16
EYMN LR LR
comp=Z,3µm,21.0s,MS5.8
LRAL Lakeview Retre 109.27 61 PFAKE 15 38 50.0 +15
LRAL LR LR
comp=Z,2µm,22.0s,MS5.6
WVT Waverly 109.34 58 PFAKE 15 38 50.0 +15
WVT LR LR
comp=Z,2µm,21.0s,MS5.7
KURK Kurchatov 109.80 318 PFAKE 15 38 50.0 +15
KURK LR LR
comp=Z,2µm,19.0s,MS5.7
TKM2 Tokmak 2 110.33 309 PFAKE 15 38 50.0 +14
TKM2 LR LR
comp=Z,1µm,20.0s,MS5.5
UCH Uchtor 110.98 308 PFAKE 15 38 50.0 +12
UCH LR LR
comp=Z,881nm,21.0s,MS5.3
WCI Wyandotte Cave 111.00 56 PFAKE 15 38 50.0 +12
WCI LR LR
comp=Z,342nm,19.0s,MS5.0
EKS2 Erkin-Say 111.60 309 PFAKE 15 38 50.0 +11
EKS2 LR LR
comp=Z,1µm,20.0s,MS5.5
GOGA Godfrey 112.24 62 PFAKE 15 38 50.0 +10
GOGA LR LR
comp=Z,3µm,22.0s,MS5.8
DWPF Disney 112.76 68 PFAKE 15 38 50.0 +8.7
DWPF LR LR
comp=Z,258nm,22.0s,MS4.8
TZTN Tazewell 112.81 58 PFAKE 15 38 50.0 +8.8
TZTN LR LR
comp=Z,2µm,20.0s,MS5.8
GLMI Grayling 113.40 49 PFAKE 15 38 50.0 +8.0
GLMI LR LR
comp=Z,4µm,22.0s,MS5.9
ABPO Ambohimpanom 113.55 236 PFAKE 15 38 50.0 +6.9
ABPO LR LR
comp=Z,6µm,21.0s,MS6.2
AAM Ann Arbor 113.72 52 PFAKE 15 38 50.0 +7.3
AAM LR LR
comp=Z,2µm,19.0s,MS5.8
ACSO Alum Creek Sta 113.90 55 PFAKE 15 38 50.0 +6.9
ACSO LR LR
comp=Z,4µm,21.0s,MS6.0
MSEY Mahe Island 113.91 254 PFAKE 15 39 00.0 +16
MSEY LR LR
comp=Z,4µm,20.0s,MS6.0
NHSC New Hope 114.88 63 PFAKE 15 39 00.0 +15
NHSC LR LR
comp=Z,1µm,20.0s,MS5.6
BVAR Borovoye Array 115.14 319 PKP PKiKP 15 38 43.0 -2.1
comp=Z,0.8nm,0.6s,baz=354,slow=4.5,SNR=5.5
BRVK Borovoye 115.21 320 PKiKP PKiKP 15 38 45.9 +0.7
BRVK LR LR
comp=Z,3µm,22.0s,MS5.9
BLA Blacksburg 115.39 58 PFAKE 15 39 00.0 +14
BLA LR LR
comp=Z,3µm,21.0s,MS5.8
MCWV Mont Chateau 116.20 56 PFAKE 15 39 00.0 +12
MCWV LR LR
comp=Z,3µm,21.0s,MS5.9
ERPA Erie 116.39 53 PFAKE 15 39 00.0 +12
ERPA LR LR
comp=Z,2µm,22.0s,MS5.7
CNNC Cliffs of the 117.11 61 PFAKE 15 39 00.0 +11
CNNC LR LR
comp=Z,2µm,21.0s,MS5.8
SSPA Standing Stone 117.80 55 PFAKE 15 39 00.0 +9.4
SSPA LR LR
comp=Z,504nm,20.0s,MS5.1
CBN Corbin 117.93 57 PFAKE 15 39 00.0 +9.1
CBN LR LR
comp=Z,4µm,21.0s,MS6.0
BINY Binghamton 119.36 53 PFAKE 15 39 10.0 +16
BINY LR LR
comp=Z,1µm,22.0s,MS5.5
SDDR Presa de Saban 119.58 80 PFAKE 15 39 10.0 +15
SDDR LR LR
comp=Z,2µm,22.0s,MS5.7
SUR Sutherland 119.96 207 PFAKE 15 39 10.0 +15
SUR LR LR
comp=Z,2µm,20.0s,MS5.8
LONY Lake Ozonia 120.50 50 PFAKE 15 39 10.0 +14
LONY LR LR
comp=Z,4µm,22.0s,MS6.0
SVE Sverdlovsk 120.67 324 *e*PKIKP PKPdf 15 38 56.7 +1.1
SVE pmax pmax
comp=Z,19nm,1.4s
NCB Newcomb 120.74 51 PFAKE 15 39 10.0 +14
NCB LR LR
comp=Z,2µm,20.0s,MS5.7
ARU Arti 121.86 324 *e*PKPdf PKPdf 15 38 55.6 -2.3
ARU LR LR
comp=Z,2µm,20.0s,MS5.7
ARU Arti 121.86 324 *i* PKIKP PKPdf 15 38 55.9 -2.0
ARU 15 45 51.6
ARU SS SS 15 57 00.3 -9.4
ARU MLR MLR
comp=Z,3µm,23.0s,MS5.8
SOKR Solikamsk 122.25 327⇑*i*PKIKP PKPdf 15 38 55.5 -3.1
SOKR SS SS 15 57 05.5 -9.0
SOKR SSS 16 01 41.4
SOKR pmax pmax
comp=Z,70nm,3.5s
LBNH Lisbon 122.40 51 PFAKE 15 39 10.0 +11
LBNH LR LR
comp=Z,4µm,22.0s,MS6.0
SPITS Spitsbergen Ar 122.76 355 PKP PKPdf 15 38 57.3 -1.8
comp=Z,14nm,0.9s,baz=16,slow=9.5,SNR=4.1
WES Weston 122.83 53 PFAKE 15 39 10.0 +10
WES LR LR
comp=Z,2µm,21.0s,MS5.8
AKTK Aktyubinsk 122.86 317 PKP PKPdf 15 38 58.4 -1.7
AKTO Aktyubinsk 122.86 317 PKP PKPdf 15 38 58.4 -1.7
comp=Z,4.0nm,0.8s,baz=83,slow=3.8,SNR=9.5
SJG San Juan 124.07 83 PFAKE 15 39 10.0 +6.7
SJG LR LR
comp=Z,1µm,22.0s,MS5.6
PKME Peaks-Kenny Pk 124.25 49 PFAKE 15 39 10.0 +7.1
PKME LR LR
comp=Z,2µm,20.0s,MS5.7
GRGR Grenville 126.55 91 PFAKE 15 39 20.0 +12
GRGR LR LR
comp=Z,1µm,21.0s,MS5.5
SFJD Kangerlussuaq 127.18 20 PFAKE 15 39 20.0 +12
SFJD LR LR
comp=Z,3µm,21.0s,MS5.9
LVZ Lovozero 127.57 342 PFAKE 15 39 20.0 +11
LVZ LR LR
comp=Z,3µm,22.0s,MS6.0
BBSR BB Station 127.71 65 PFAKE 15 39 20.0 +10
BBSR LR LR
comp=Z,820nm,20.0s,MS5.4
KEV Kevo 128.25 346 PFAKE 15 39 20.0 +10
KEV LR LR
comp=Z,3µm,21.0s,MS6.0
ARCES ARCESS Array B 128.75 346 PKP PKPdf 15 39 09.0 -1.7
comp=Z,3.4nm,0.6s,baz=75,slow=1.4,SNR=9.7
BBGH Gun Hill 128.80 91 PFAKE 15 39 20.0 +7.5
BBGH LR LR
comp=Z,2µm,20.0s,MS5.9
LSZ Lusaka 129.74 225 PFAKE 15 39 30.0 +16
LSZ LR LR
comp=Z,3µm,20.0s,MS6.0
KLMR Klimovskoe 129.86 333 PKIKP PKPdf 15 39 09.7 -3.4
MAK Makhachkala 130.85 308 *i* PKIKP PKiKP 15 39 19.4 +3.0
MAK *e* 15 41 40.3
MAK *e*PPP 15 44 25.2
MAK *e* 15 46 19.2
MAK *e*PS PS 15 51 41.3 -3.4
MAK pmax pmax
comp=Z,156nm,1.4s
TSUM Tsumeb 132.78 212 PFAKE 15 39 30.0 +10
TSUM LR LR
comp=Z,2µm,22.0s,MS5.8
GNI Garni 133.26 305 PFAKE 15 39 30.0 +10
GNI LR LR
comp=Z,1µm,22.0s,MS5.6
OBN Obninsk 134.03 327 PFAKE 15 39 30.0 +8.9
OBN LR LR
comp=Z,2µm,22.0s,MS5.9
OBN Obninsk 134.03 327 *i* PKIKP PKPdf 15 39 19.7 -1.4
OBN pmax pmax
comp=Z,28nm,1.7s
OBN MLR MLR
comp=Z,2µm,22.0s,MS5.8
KIV Kislovodsk 134.14 310 PFAKE 15 39 30.0 +8.3
KIV LR LR
comp=Z,1µm,21.0s,MS5.5
KIV Kislovodsk 134.14 310 *i* PKIKP PKPdf 15 39 16.3 -5.4
KIV pmax pmax
comp=Z,6.0nm,0.8s
KIV MLR MLR
comp=Z,963nm,21.0s,MS5.5
ARTV Artvin 135.23 307 *i* P PKPdf 15 39 24.3 +0.4
DAGI Agillar 135.26 307 *i* P PKiKP 15 39 30.8 +5.4
DBAD Bademkaya 135.43 307 *i* P PKiKP 15 39 30.8 +5.1
BORG Borgarnes 136.17 9 PFAKE 15 39 40.0 +15
BORG LR LR
comp=Z,2µm,19.0s,MS5.8
SOC Sochi 136.32 311 *i* PKIKP PKPdf 15 39 22.9 -2.9
SOC *e*PS PS 15 52 23.2 -8.3
SOC *e*SSS 16 05 10.7
SOC MLR MLR
comp=Z,1µm,23.0s,MS5.5
MARD Mardin 136.68 301 *i* P PKiKP 15 39 34.1 +5.7
ELZG Elazig 137.92 303 *i* P PKiKP 15 39 37.4 +6.5
KEMA Kemaliye 138.16 305 *i* P PKiKP 15 39 37.4 +6.0
AKCD Akcadag 138.78 303 *i* P PKiKP 15 39 41.8 +9.1
NB2 NORSAR Subarra 139.12 347 PKPdf PKPdf 15 39 23.1 -7.3
comp=Z,6.2nm,1.1s,baz=31,slow=1.9
NOA NORSAR Array B 139.12 347 PKP PKPdf 15 39 30.1 -0.3
comp=Z,1.9nm,0.9s,baz=37,slow=2.1,SNR=5.3
HFS Hagfors 139.36 345 PKhKP 15 39 24.9
comp=Z,1.3nm,0.7s,baz=180,slow=40,SNR=3.1
PINB Pinarbasi 139.87 304 *i* P PKiKP 15 39 40.7 +5.8
RCBR Riachuelo 140.01 130 PFAKE 15 39 50.0 +16
RCBR LR LR
comp=Z,2µm,20.0s,MS5.9
AKASG Malin Array Be 140.10 325 PKP PKPdf 15 39 28.5 -4.0
comp=Z,1.3nm,0.7s,baz=61,slow=2.7,SNR=5.2
AKASG PP PP 15 42 36.8 +7.3
comp=Z,0.2nm,0.3s,baz=47,slow=7.6,SNR=4.2
AKASG SKPbc SKPbc 15 43 07.0 -2.7
comp=Z,0.2nm,0.3s,baz=65,slow=1.5,SNR=4.0
AKASG Malin Array Be 140.10 325 PKIKP PKPdf 15 39 28.5 -4.0
AKASG 15 42 36.8
KIEV Kiev 140.11 325 PFAKE 15 39 40.0 +7.5
KIEV LR LR
comp=Z,2µm,22.0s,MS5.8
ANDN Andirin 140.13 303 *i* P PKiKP 15 39 39.6 +4.1
KONO Kongsberg 140.72 347 PFAKE 15 39 40.0 +6.7
KONO LR LR
comp=Z,2µm,20.0s,MS5.8
CDAG Cicekdag 141.20 306 *i* P PKiKP 15 39 37.4 -0.2
KIS Kishinev 142.23 320 *e*PKIKP PKiKP 15 39 41.0 +1.6
KIS MLR MLR
comp=N,1µm,20.0s,MS5.8
KIS MLR MLR
comp=E,1µm,20.0s,MS5.8
KIS MLR MLR
comp=Z,2µm,20.0s,MS5.8
KIS MLR MLR
comp=Z,2µm,20.0s
KIS Kishinev 142.23 320 *e*PP PP 15 43 02.0 +19
SHEL Horse Pasture 142.25 181 PFAKE 15 39 50.0 +13
SHEL LR LR
comp=Z,2µm,21.0s,MS5.7
ANTO Ankara 142.30 307 PFAKE 15 39 50.0 +13
ANTO LR LR
comp=Z,1µm,22.0s,MS5.5
KDHN Kadinhani 143.18 305 *i* P PKiKP 15 39 42.9 +1.2
LVV L'vov 143.33 327 *e*PKIKP PKiKP 15 39 40.7 -0.9
LVV MLR MLR
comp=N,600nm,22.0s,MS5.6
LVV MLR MLR
comp=Z,2µm,22.0s,MS5.8
LVV MLR MLR
comp=E,1µm,23.0s,MS5.6
BURAR Bucovina Array 144.00 323⇓*i*P PKPdf 15 39 36.0 -3.6
BOLV Bolvadin 144.00 306 *i* P PKPdf 15 39 40.7 +0.8
BORA Eskisehir 144.02 308 *i* P PKiKP 15 39 42.9 -0.5
VRI Vrincioaia 144.04 319⇓P PKPdf 15 39 37.7 -2.0
VRI Vrincioaia 144.04 319⇓*i*P PKPdf 15 39 37.7 -2.0
PLOR Plostina 144.10 319⇓*i*P PKPdf 15 39 37.0 -2.8
KWP Kalwaria 144.12 327 *e*PKP PKPdf 15 39 40.3 +0.6
KWP Kalwaria 144.12 327 *e*PKP PKPdf 15 39 40.3 +0.6
KWP Kalwaria 144.12 327⇑*i*P PKPdf 15 39 38.1 -1.6
PSN Preselentsi 144.16 315 *i* P PKiKP 15 39 45.6 +2.1
ISP Isparta 144.58 305 *e*PKPdf PKPdf 15 39 39.2 -1.7
ISP LR LR
comp=Z,1µm,22.0s,MS5.7
ISP Isparta 144.58 305⇓*i*P PKPdf 15 39 38.5 -2.4
MLR Muntele Rosu 144.71 319 PKP PKPdf 15 39 39.7 -1.1
comp=Z,17nm,0.9s,baz=241,slow=1.9,SNR=8.6
MLR Muntele Rosu 144.71 319⇑*i*P PKPdf 15 39 40.0 -0.9
KOLS Kolonicke sedl 144.78 327 *e*PKP PKPdf 15 39 40.1 -0.8
BMR Baia Mare 144.91 324 PKIKP PKPdf 15 39 40.2 -0.9
NEF NEVSHA 144.93 315 *i* P PKPdf 15 39 40.3 -1.0
GDZ Gediz 144.98 307 *i* P PKiKP 15 39 45.0 -0.3
STHS Stebnicka Huta 144.98 328 *e*PKP PKPdf 15 39 40.7 -0.5
STHS *e* 15 39 45.9
ELBA Catalca 145.02 311 *i* P PKiKP 15 39 44.0 -1.4
OJC Ojcow 145.13 330 *e*PKP PKPdf 15 39 41.3 -0.1
TRPA Tarpa 145.15 325⇓*i*P PKPbc 15 39 39.7 -1.4
CRVS Cervenica-Dubn 145.21 327 *e*PKP PKPdf 15 39 41.7 +0.1
CRVS *e* 15 39 45.9
VOIR 145.28 320⇓P PKPbc 15 39 41.8 +0.3
VOIR 145.28 320⇓*i*P PKPbc 15 39 41.8 +0.2
GOLH Golhisar 145.47 304 *i* P PKPdf 15 39 45.0 +2.6
DURS Dursunbey 145.55 309 *i* P PKPdf 15 39 41.8 -0.7
DEMI Demirci 145.56 308 *i* P PKiKP 15 39 45.0 -1.5
BSEG Bad Segeberg 145.69 342 *e*PKP PKPdf 15 39 41.7 -0.6
SZH Strazhica 145.80 316 *i* P PKiKP 15 39 49.1 +2.2
MANT Manisa 145.86 307 *i* P PKPdf 15 39 45.0 +2.0
DRGR 145.87 323⇓P PKPdf 15 39 40.5 -2.3
DRGR 145.87 323⇓*i*P PKPdf 15 39 40.5 -2.3
OKC Ostrava-Krasne 146.15 331 *e*PKP PKiKP 15 39 46.6 -0.8
OKC AMS AMS 16 41 40.0
comp=Z,2µm,28.3s
KSP Ksiaz 146.19 334 *e*PKP PKPdf 15 39 44.2 +1.0
KSP Ksiaz 146.19 334 *e*PKP2 PKPab 15 39 43.6 -1.3
KSP MLR MLR
comp=Z,7µm,23.5s,MS6.3
PVL Pavlikeni 146.21 316 *i* P PKiKP 15 39 48.6 +0.8
AKHS Akhisar 146.28 308 *i* P PKPdf 15 39 45.0 +1.3
TURN Turunc 146.31 304 *i* P PKiKP 15 39 46.1 -2.0
MORC Moravsky Berou 146.46 332 *e*PKPdf PKPdf 15 39 42.7 -1.0
MORC Moravsky Berou 146.46 332⇓*i*P PKPdf 15 39 45.4 +1.7
DPC Dobruska-Polom 146.56 333 *e*PKP PKPdf 15 39 45.2 +1.3
DPC *e*pPKP pPKPdf 15 39 49.7 +5.4
DPC AMS AMS 16 43 30.0
comp=Z,3µm,23.5s
UPC Upice 146.57 334 *e*PKP PKPdf 15 39 45.2 +1.3
GZR Gura Zlata 146.64 321⇑P PKPdf 15 39 45.2 +1.0
GZR Gura Zlata 146.64 321⇑*i*P PKPdf 15 39 45.2 +1.0
EKA Eskdalemuir Ar 146.65 357 PKPbc PKPbc 15 39 44.2 -1.3
comp=Z,12nm,1.0s,baz=332,slow=2.8,SNR=6.7
PSZ Piszkesteto 146.65 327 *e*PKPdf PKPdf 15 39 43.9 -0.3
PSZ LR LR
comp=Z,2µm,22.0s,MS5.8
PSZ Piszkesteto 146.65 327⇓*e*PKP PKPdf 15 39 45.5 +1.4
PSZ Piszkesteto 146.65 327⇑*i*P PKPdf 15 39 45.1 +1.0
ESK Eskdalemuir 146.66 357 PFAKE 15 40 00.0 +16
ESK LR LR
comp=Z,931nm,21.0s,MS5.5
VYHS Vyhne 146.78 329 *e*PKP PKPdf 15 39 45.0 +0.7
ARG Arkhangelos 146.85 303 *e*P PKiKP 15 39 49.0 -0.3
KOLL Kolacno 146.93 329 *e*PKP PKPdf 15 39 45.2 +0.6
KOLL *e* 15 39 51.2
CLL Collm 147.09 337 *i* PKP PKPdf 15 39 44.4 -0.3
CLL *i* 15 39 57.6
CLL LR LR
comp=Z,2µm,23.6s,MS5.8
CLL Collm 147.09 337 *i* PKIKP PKPdf 15 39 44.4 -0.3
CLL *i* 15 39 57.6
CLL pmax pmax
comp=Z,15nm,1.1s
CLL MLR MLR
comp=Z,2µm,23.6s,MS5.8
CLL Collm 147.09 337 *e*PKP PKPdf 15 39 44.4 -0.3
CLL Collm 147.09 337 *i* PKPdf PKPdf 15 39 44.4 -0.3
comp=Z,15nm,1.1s
CLL *e*PKPab PKPab 15 39 48.0 -0.3
CLL *i* (pPKPab) 15 39 50.9
comp=Z,50nm,0.9s
CLL *e*(pPKiKP) 15 39 53.0
CLL *i* x x 15 39 57.6
comp=Z,93nm,1.1s
CLL *e*SS SS 16 02 19.0 +6.5
CLL *e*SSS 16 07 42.0
BRG Berggiesshubel 147.09 336 *i* PKP2 PKPab 15 39 46.1 -2.3
BRG SS SS 16 02 16.0 +3.3
BRG pmax pmax
comp=Z,14nm,1.3s
BRG Berggiesshubel 147.09 336 *e*PKP PKPdf 15 39 45.6 +0.8
BRG Berggiesshubel 147.09 336 *i* PKP PKPdf 15 39 46.2 +1.4
comp=Z,23nm,1.4s
BRG *i* 15 39 53.6
comp=Z,58nm,1.1s
BRG *i* 15 39 58.1
comp=Z,136nm,1.3s
BRG SS SS 16 02 16.0 +3.3
GCAM G?zelcaml? 147.10 306 *i* P PKiKP 15 39 49.4 -0.3
PVCC Panska Ves 147.13 335 *e*PKP PKPdf 15 39 46.6 +1.8
PVCC *e*pPKP 15 39 51.7
PVCC AMS AMS 16 43 50.0
comp=Z,3µm,24.6s
BDRM Kayabasi 147.14 305 *i* P PKiKP 15 39 49.4 -0.4
BZS Buzias 147.18 322⇓P PKiKP 15 39 48.0 -1.6
BZS Buzias 147.18 322⇓*i*P PKiKP 15 39 48.0 -1.7
BOZC Bozcaada 147.20 310 *i* P PKiKP 15 39 49.4 -0.5
VRAC Vranov 147.22 332 PKPbc PKPbc 15 39 46.7 -0.6
comp=Z,30nm,1.0s,baz=77,slow=0.9,SNR=8.9
VRAC Vranov 147.22 332⇑P PKPbc 15 39 47.5 +0.2
VRAC Vranov 147.22 332 PKP2 PKPbc 15 39 46.4 -0.9
VRAC Vranov 147.22 332⇑*i*P PKPbc 15 39 47.5 +0.2
URLA Izmir 147.35 307 *i* P PKPab 15 39 52.7 +2.8
BUD Budapest 147.38 327⇓*e*PKP PKPab 15 39 49.5 -0.1
SMOL Smolenice 147.43 330 *e*PKP PKPab 15 39 48.3 -1.5
SMOL *e* 15 39 55.4
PRU Pruhonice 147.57 334 *e*PKP PKPdf 15 39 46.4 +0.8
PRU AMS AMS 16 44 10.0
comp=Z,3µm,27.2s
MODS Modra-Piesok 147.60 330 *e*PKP PKPdf 15 39 47.0 +1.3
TREC Trest 147.71 333 *e*PKP PKPbc 15 39 48.6 0.0
TREC AMS AMS 16 44 40.0
comp=Z,3µm,21.3s
KARP Karpathos 147.79 302 *e*P PKPbc 15 39 50.5 +1.2
ZST Bratislava 147.81 330 *e*PKP2 PKPab 15 39 49.8 -1.5
ZST MLR MLR
comp=Z,600nm,21.6s,MS5.3
VTS Vitosha 147.88 317 *i* P PKPbc 15 39 50.5 +1.2
TANN Tannenbergstha 148.02 337 *e*PKP PKPdf 15 39 47.2 +0.9
MMB Musomiste 148.03 315 *i* P PKPbc 15 39 48.6 -1.1
MOX Moxa 148.12 338 *e*PKP PKPdf 15 39 48.0 +1.5
comp=Z,148nm,2.0s
MOX
comp=Z,1µm,22.0s
MOX Moxa 148.12 338 *e*PKP2 PKPbc 15 39 48.0 -1.7
MOX pmax pmax
comp=Z,148nm,2.0s
MOX MLR MLR
comp=Z,1µm,22.0s,MS5.6
MOX Moxa 148.12 338 *e*PKP PKPdf 15 39 47.7 +1.2
NKC Novy Kostel 148.17 337 *e*PKP PKPbc 15 39 49.2 -0.6
NKC AMS AMS 16 46 00.0
comp=Z,2µm,19.6s
KKB Krupnik 148.32 316 *i* P PKPdf 15 39 48.6 +1.5
WTSB Winterswijk 148.40 344 *e*PKP PKPab 15 39 53.8 +0.3
PKSM Moragy 148.42 326⇓P PKPbc 15 39 49.4 -1.2
PKSM Moragy 148.42 326 PKP2 PKPbc 15 39 49.1 -1.5
PKSM Moragy 148.42 326⇓*i*P PKPbc 15 39 49.4 -1.2
SOP Sopron 148.43 330⇓*e*pPKP PKPab 15 39 52.8 -1.0
MANZ Manzenberg 148.50 337 *e*PKP PKPbc 15 39 49.3 -1.4
UBBA Unterbreizbach 148.51 340 *e*PKP PKPbc 15 39 49.6 -1.1
CONA Conrad Observa 148.57 331⇑*i*pPKPdf pPKPdf 15 39 49.1 +1.4
comp=Z,138nm,1.7s,SNR=11
CSNA Conrad Observa 148.57 331⇓*i*pPKPdf pPKPdf 15 39 49.0 +1.4
comp=Z,119nm,1.6s
KHC Kasperske Hory 148.63 334 *e*PKP PKPbc 15 39 50.6 -0.4
KHC *e*pPKP PKPab 15 39 55.2 +0.7
KHC AMS AMS 16 44 30.0
comp=Z,4µm,25.1s
ROTZ Rotzenmuhle 148.64 337 *e*PKP PKPbc 15 39 50.0 -1.1
GEC2 GERESS Array S 148.81 334 *e*PKP PKPdf 15 39 48.5 +0.9
GERES GERESS Array B 148.81 334 PKPbc PKPbc 15 39 49.8 -1.7
comp=Z,13nm,0.9s,baz=34,slow=3.2,SNR=22
WET Wettzell 148.90 335 *e*PKP PKPbc 15 39 51.0 -0.7
VAY Valandovo 148.93 315 *e*PKP PKPdf 15 39 49.0 +0.9
GRF Grafenberg Arr 149.06 337 *e*PKP PKPdf 15 39 49.6 +1.6
GRF *e*SS SS 16 02 41.9 +7.2
GRF *e*L 16 43 26.8
comp=Z,1µm,21.7s
NPS Neapolis 149.08 302 *e*P PKPdf 15 39 50.5 +2.0
ARSA Arzberg 149.23 330⇑*i*PKPbc PKPbc 15 39 52.4 -0.2
comp=Z,43nm,1.2s
ASCN Ascension 149.23 165 PFAKE 15 40 00.0 +11
ASCN LR LR
comp=Z,2µm,20.0s,MS5.9
MOA Molln 149.34 332⇑*i*PKPbc PKPbc 15 39 51.7 -1.2
comp=Z,65nm,1.6s
KOGS Kog 149.46 328 *e*PKPdf PKPbc 15 39 51.4 -1.9
TNS Taunus Mts 149.52 341 *e*PKP PKPbc 15 39 52.7 -0.5
HGN Heimansgroeve 149.72 344 *e*PKP PKPab 15 39 57.0 -1.9
HGN Heimansgroeve 149.72 344 *e*PP 15 43 35.9
KRUS Krusevo 149.76 316 *e*PKP PKPbc 15 39 52.3 -1.8

GROS	**Grobnik**	**149.81**	**329**	*i* PKPdf	PKPdf	15 39 50.8	+1.5
MEM	**Membach**	**149.85**	**344**	PKPbc	PKPbc	15 39 53.7	-0.3
SOKA	**Soboth** comp=Z,76nm,1.3s	**149.88**	**330**⇑	*i*PKPdf	PKPdf	15 39 52.2	-2.0
BIA	**Bitola**	**149.89**	**315**	*e*PKP	PKPbc	15 39 52.0	-2.5
TOD	**Tromm**	**149.95**	**340**	PKP	PKPbc	15 39 54.7	+0.4
UCC	**Uccle**	**150.06**	**346**	PKPbc	PKPbc	15 39 54.8	+0.3
ABH	**Alteburg**	**150.09**	**342**	PKP	PKPbc	15 39 54.7	+0.1
VAM	**Vamos**	**150.14**	**303**	*e*P	PKPdf	15 39 52.0	+1.8
OHR	**Ohrid**	**150.19**	**316**	*e*PKP	PKPbc	15 39 52.1	-3.1
BCLA	**Clavier**	**150.20**	**345**	PKPab	PKPab	15 39 59.3	-1.6
OBKA	**Obir** comp=Z,34nm,1.2s	**150.23**	**330**⇑	*i*PKPdf	PKPbc	15 39 53.1	-2.0
KBA	**Koelnbreinsper** comp=Z,63nm,1.2s,SNR=7.1	**150.33**	**332**⇑	*i*PKPdf	PKPbc	15 39 53.4	-1.9
PDKS	**Podkum**	**150.34**	**329**	*i* PKPdf	PKPdf	15 39 51.6	+1.4
SNF	**Seneffe**	**150.35**	**346**	PKPab	PKPab	15 39 59.5	-2.0
RUP	**Ruppelstein**	**150.39**	**342**	PKP	PKPbc	15 39 54.7	-0.7
STU	**Stuttgart**	**150.55**	**339**	*e*PKPbc	PKPbc	15 39 54.2	-1.6
MYKA	**Terra Mystica** comp=Z,72nm,1.8s	**150.55**	**331**⇑	*i*PKPdf	PKPbc	15 39 53.6	-2.3
EVR	**Evrytania**	**150.57**	**311**	*e*P	PKPbc	15 39 54.5	-1.7
LJU	**Ljubljana**	**150.58**	**330**	*e*PKPdf	PKPbc	15 39 56.0	0.0
GIVF	**Givet** comp=Z,272nm,1.3s	**150.61**	**345**	*e*PKP1	PKPbc	15 39 54.6	-1.3
BOJS	**Bojanci**	**150.62**	**328**	*e*PKPdf	PKPbc	15 39 53.9	-2.2
GORS	**Gorjuse**	**150.62**	**330**	*i* PKPdf	PKPdf	15 39 51.4	+0.8
TIR	**Tirane**	**150.66**	**317**	PFAKE		15 40 00.0	+9.2
TIR	comp=Z,2µm,22.0s,MS5.9			LR	LR		
VLI	**Veliai**	**150.66**	**306**	*e*P	PKPbc	15 39 57.5	+1.0
DOU	**Dourbes**	**150.67**	**345**	PKPbc	PKPbc	15 39 54.7	-1.3
WLF	**Walferdange**	**150.67**	**343**	PKPbc	PKPbc	15 39 54.4	-1.7
WLF	**Walferdange**	**150.67**	**343**	*e*PKIKP	PKPdf	15 39 54.2	+3.6
WLF	comp=Z,2µm,21.0s,MS5.9			MLR	MLR		
BAIF	**Baives** comp=Z,184nm,1.3s	**150.79**	**346**	*e*PKP1	PKPbc	15 39 55.2	-1.1
CADS	**Cadrg**	**150.81**	**331**	*e*PKPdf	PKPbc	15 39 56.0	-0.5
LANF	**Langenberg**	**150.81**	**341**	PKP	PKPbc	15 39 54.2	-2.2
WATA	**Walderalm** comp=Z,37nm,0.7s	**150.87**	**334**⇑	*i*PKPbc	PKPbc	15 39 55.8	-0.8
JAN	**Janina**	**150.88**	**313**	*e*P	PKPbc	15 39 55.0	-1.9
VOY	**Vojsko**	**150.89**	**330**	*e*PKPdf	PKPbc	15 39 53.9	-2.8
VOY				*e*		15 39 56.5	
VOY				*e*		15 40 14.5	
WTTA	**Wattenberg** comp=Z,137nm,1.6s	**150.90**	**334**⇑	*i*PKPdf	pPKPdf	15 39 52.8	+1.4
MOTA	**Moosalm** comp=Z,73nm,1.2s	**151.05**	**335**⇑	*i*PKPbc	PKPbc	15 39 55.3	-1.7
RETA	**Reutte** comp=Z,36nm,1.0s	**151.06**	**336**⇑	*i*PKPbc	PKPbc	15 39 55.5	-1.6
SQTA	**Sankt Quirin** comp=Z,25nm,0.7s	**151.11**	**335**⇑	*i*PKPbc	PKPbc	15 39 55.4	-1.8
BFO	**Black Forest**	**151.22**	**339**	*e*PKPbc	PKPbc	15 39 57.8	+0.4
BFO	comp=Z,1µm,21.0s,MS5.7			LR	LR		
BFO	**Black Forest**	**151.22**	**339**	*e*PKP	PKPdf	15 39 49.5	-2.0
ITM	**Ithomi**	**151.22**	**308**	*e*P	PKPbc	15 39 56.0	-1.8
SPAK	**Spaichingen-Ko**	**151.26**	**339**	PKP	PKPbc	15 39 54.4	-3.1
FETA	**Feichten** comp=Z,48nm,0.9s	**151.46**	**335**⇑	*i*PKPbc	PKPbc	15 39 56.7	-1.3
CDF	**Champ du Feu** comp=Z,192nm,1.3s	**151.48**	**341**	*e*PKP1	PKPbc	15 39 56.5	-1.5
DAVA	**Damuels** comp=Z,59nm,1.2s	**151.56**	**336**⇑	*i*PKPbc	PKPbc	15 39 56.8	-1.4
LIBD	**Limburg**	**151.61**	**340**	PKP	PKPbc	15 39 54.7	-3.6
ECH	**Echery**	**151.69**	**341**	PKP	PKPdf	15 39 53.6	+1.4
ECH	**Echery**	**151.69**	**341**	PKIKP	PKPdf	15 39 54.4	+2.2
ECH				*e*		15 39 59.0	
FELD	**Feldberg im Sc**	**151.72**	**339**	PKP	PKPdf	15 39 54.2	+2.0
DAVOS	**Davos**	**151.97**	**336**	PKIKP	PKPbc	15 40 00.4	+1.2
DAVOX	**Davos/Dischmat** comp=Z,19nm,0.6s,baz=340,slow=2.6,SNR=18	**151.99**	**336**	PKPbc	PKPbc	15 40 00.4	+1.2
MOF	**Molkenrain**	**152.02**	**340**	PKP	PKPdf	15 39 54.4	+1.7
THEF	**They Montfort**	**152.03**	**342**	PKP	PKPdf	15 39 54.4	+1.7
MEZF	**Maizieres J'vi** comp=Z,198nm,1.3s	**152.03**	**344**	*e*PKP1	PKPbc	15 39 58.3	-0.9
HAU	**Haudompre** comp=Z,68nm,1.0s	**152.12**	**341**	*e*PKP1	PKPbc	15 39 57.9	-1.6
HAU	comp=Z,2µm,20.8s,MS5.6			*e*MLR	MLR		
HAU	**Haudompre**	**152.12**	**341**	*e*PKIKP	PKPbc	15 39 57.9	-1.6
HAU	comp=Z,2µm,20.8s,MS5.9			MLR	MLR		
HINF	**Hinteralfeld** comp=Z,67nm,1.0s	**152.14**	**341**	*e*PKP1	PKPbc	15 39 57.8	-1.7
BBS	**Basel-Blauen**	**152.24**	**339**	PKP	PKPdf	15 39 54.4	+1.4
TUE	**Stuetta**	**152.45**	**336**	PKPdf	PKPdf	15 39 53.5	+0.1
TUE	comp=Z,3µm,22.0s,MS6.0			LR	LR		
LOMF	**Lomont**	**152.56**	**340**	PKP	PKPdf	15 39 56.0	+2.5
LOMF	**Lomont**	**152.56**	**340**	PKIKP	PKPdf	15 39 54.4	+0.9
CABF	**La Chapelle** comp=Z,146nm,1.5s	**153.45**	**340**	*e*PKP1	PKPbc	15 40 01.4	-1.1
LOR	**Lormes**	**153.48**	**344**	*e*PKP1	PKPbc	15 40 01.1	-1.4
LOR	comp=Z,2µm,21.5s,MS5.5			*e*MLR	MLR		
LOR	**Lormes**	**153.48**	**344**	*e*PKIKP	PKPbc	15 40 01.1	-1.4
LOR	comp=Z,2µm,21.5s,MS5.8			MLR	MLR		
SSF	**Saint Saulge** comp=Z,28nm,0.9s	**153.76**	**345**	*e*PKP1	PKPbc	15 40 01.5	-1.6
AQU	**L'Aquila**	**153.80**	**325**	PFAKE		15 40 10.0	+15
AQU	comp=Z,2µm,22.0s,MS6.0			LR	LR		
TIP	**Timpagrande**	**153.83**	**316**	*e*PKPdf	PKPdf	15 39 56.7	+1.1
TIP	comp=Z,2µm,22.0s,MS5.8			LR	LR		
VLC	**Villacollemand**	**153.91**	**332**	PFAKE		15 40 10.0	+14
VLC	comp=Z,2µm,22.0s,MS5.9			LR	LR		
CUC	**Castrocucco**	**153.96**	**319**	PFAKE		15 40 10.0	+14
CUC	comp=Z,2µm,22.0s,MS5.9			LR	LR		
LPL	**La Plagne**	**154.21**	**338**	*e*PKP1	PKPbc	15 40 03.1	-1.0
LPG	**La Plagne** comp=Z,88nm,1.3s	**154.22**	**338**	*e*PKP1	PKPbc	15 40 03.2	-0.9
BNI	**Bardonecchia**	**154.63**	**338**	PFAKE		15 40 10.0	+13
BNI	comp=Z,3µm,21.0s,MS6.0			LR	LR		
BNI	**Bardonecchia**	**154.63**	**338**	*e*PKIKP	PKPbc	15 40 06.5	+1.5
MBDF	**Montbardon** comp=Z,26nm,1.0s	**154.88**	**337**	*e*PKP1	PKPbc	15 40 04.0	-1.6
ORIF	**Oris-en-Rattie** comp=Z,33nm,1.0s	**155.02**	**339**	*e*PKP1	PKPdf	15 40 04.3	+7.2
ORIF	comp=Z,2µm,22.0s,MS5.6			*e*MLR	MLR		
FRF	**La Foret Royal**	**155.93**	**336**	*e*PKP1	PKPdf	15 40 07.0	+8.6
WDD	**Wield Dalam**	**157.12**	**312**	PFAKE		15 40 10.0	+10
WDD	comp=Z,3µm,21.0s,MS6.0			LR	LR		
VSL	**Villasalto**	**157.97**	**326**	PFAKE		15 40 10.0	+8.9
VSL	comp=Z,2µm,20.0s,MS5.9			LR	LR		
KEST	**Kesra** comp=Z,2.3nm,0.9s,baz=347,slow=2.3,SNR=4.8	**160.61**	**318**	PKPab	PKPab	15 40 48.4	+2.6
MTE	**Manteigas**	**161.66**	**3**	PFAKE		15 40 20.0	+15
MTE	comp=Z,3µm,22.0s			LR	LR		
ESDC	**Sonseca Array** comp=Z,1.9nm,0.7s,baz=350,slow=5.2,SNR=3.8	**162.28**	**354**	PKPab	PKPab	15 40 51.0	-1.8
PAB	**San Pablo**	**162.44**	**355**	PFAKE		15 40 20.0	+14
PAB	comp=Z,2µm,21.0s			LR	LR		
LIC	**Lamto** comp=Z,71nm,1.5s	**164.24**	**185**	*e*PKIKP	PKPdf	15 40 09.3	+0.7
LIC	comp=Z,3µm,22.8s			*e*MLR	MLR		
LIC	**Lamto**	**164.24**	**185**	*e*PKPdf	PKPdf	15 40 09.3	+0.7
LIC	comp=Z,2µm,22.8s			LR	LR		
SFS	**San Fernando**	**165.61**	**359**	PFAKE		15 40 20.0	+11
SFS	comp=Z,6µm,22.0s			LR	LR		
TORD	**Torodi Ar. Bea** comp=Z,3.0nm,0.9s,baz=298,slow=0.3,SNR=8.7	**168.26**	**223**	PKP	PKPdf	15 40 09.4	-2.3
TORD				PKPab	PKPab	15 41 17.1	-2.8
TORD	comp=Z,4.2nm,0.8s,baz=118,slow=4.3,SNR=10.0			PP	PP	15 45 05.3	-2.8
TORD	**Torodi Ar. Bea** comp=Z,2.4nm,1.2s,baz=162,slow=1.4,SNR=4.0	**168.26**	**223**	PKP	PKPdf	15 40 09.4	-2.3
TORD				PKPab	PKPab	15 41 17.1	-2.8
TORD				PP	PP	15 45 05.3	-2.8

IDC 19 15:35:53.4±5.9, **2136S×17301E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.7/15, mbtmp3.7/2, Error ellipse: s-maj=259.8km s-min=58.2km az=152.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**36.13**	**259**	P	P	15 42 57.3	-0.2
	0.7nm,0.9s,baz=82,slow=9.3,SNR=6.3						
WRA	**Warramunga Arr**	**36.16**	**265**	P	P	15 42 57.8	0.0
	1.0nm,0.8s,baz=100,slow=7.8,SNR=7.1						
GERES	**GERESS Array B**	**147.99**	**334**	PKPbc	PKPbc	15 55 40.3	-0.4
	0.4nm,0.6s,baz=26,slow=4.7,SNR=2.7						

MOS ***19*** *15:38:25.3±2.0, 5101N×15769E, h13km, mb4.2/5, Error ellipse: s-maj=15.8km s-min=8.1km az=73.3*
ISCJB ***19*** *15:38:30.4±0.8, 5101N±006×1577E±01, h57km±7km, mb3.8/14, Error ellipse: s-maj=14.1km s-min=5.3km az=42.0*
KRSC ***19*** *15:38:30.5±0.4, 5113N×158.19E, h10km±10km, ML4.6*
IDC ***19*** *15:38:31.4±0.7, 5107N×15770E, h48km±6km, mb3.4/12, mb1 3.7/13, mb1mx3.6/26, mbtmp3.5/13, Error ellipse: s-maj=19.7km s-min=14.9km az=141.0*
NEIC ***19*** *15:38:31.8±0.5, 5104N×15772E, mb4.2/2, Error ellipse: s-maj=12.4km s-min=7.8km az=131.0*

ISC 19 15:38:31.8±0.8, **5104N**±006×**1577E**±01, **h50**km±7km, **h52**km±1.5km**:pP-P, n43, σ1s10/52, mb3.8**/14, **4C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.05**	**250**	⇓*i*PN	Pn	15 38 48.4	-1.7
SKR				*i* S	Sn	15 39 03.1	-0.6
SKR				pmax	pmax		
	comp=Z,270nm,0.3s						
SKR				pmax	pmax		
	comp=N,120nm,0.2s						
SKR				pmax	pmax		
	comp=E,110nm,0.3s						
SKR				smax			
	comp=N,6µm,0.3s						
SKR				smax			
	comp=E,9µm,0.3s						
RUS	**Russkaya**	**1.49**	**20**	*e*P	Pn	15 38 54.7	-1.4
RUS				*i* S	Sn	15 39 12.2	-2.1
GRL	**Gorelyy**	**1.53**	**9**	*i* P	Pn	15 38 56.9	+0.2
GRL				*i* S	Sn	15 39 15.4	0.0
PEA0B	**Petropavlovsk-**	**2.07**	**0**	*e*P	Pn	15 39 05.2	+1.2
PETK	**Petropavlovsk-**	**2.07**	**0**	P	Pn	15 39 04.5	+0.5
	comp=E,17nm,0.3s,baz=248,slow=33,SNR=260						
PETK				S	Sn	15 39 33.4	+4.8
	comp=E,13nm,0.3s,baz=160,slow=22,SNR=5.4						
PET	**Petropavlovsk**	**2.08**	**17**	*e*P	Pn	15 39 03.9	-0.2
PET				*e*S	Sn	15 39 28.0	-0.7
PET	**Petropavlovsk**	**2.08**	**17**	*e*PN	Pn	15 39 03.7	-0.4
PET				*e*S	Sn	15 39 28.6	-0.1
PET				pmax	pmax		
	comp=Z,136nm,0.3s						
PET				smax			
	comp=N,1µm,0.4s						
PET				smax			
	comp=E,617nm,0.5s						
AVH	**Avacha**	**2.32**	**16**	*i* P	Pn	15 39 08.3	+0.8
AVH				*i* S	Sn	15 39 36.4	+1.6
SPN	**Mys Shipunski**	**2.52**	**34**	*i* P	Pn	15 39 09.7	-0.5
SPN				*i* S	Sn	15 39 39.3	-0.3
GNL	**Ganaly**	**2.66**	**3**	*i* P	Pn	15 39 13.6	+1.5
GNL				*i* S	Sn	15 39 45.4	+2.3
KBTR	**Krutoberegovo**	**6.01**	**29**	P	Pn	15 39 58.1	+0.1
KBTR				*i* S	Sn	15 41 01.4	-4.0
YSS	**Yuzh-Sakhalins**	**10.62**	**253**	P	Pn	15 41 00.7	-0.4
YSS	**Yuzh-Sakhalins**	**10.62**	**253**⇑	*e*PN	Pn	15 40 54.6	-6.5
YSS				pmax	pmax		
	comp=Z,310nm,1.0s						
ASAJ	**Asahikawa**	**12.30**	**242**	P	Pn	15 41 30.3	+6.2
	comp=Z,0.7nm,0.3s,baz=63,slow=30,SNR=5.9						
ASAJ	**Asahikawa**	**12.30**	**242**	PN	Pn	15 41 30.3	+6.2
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**13.45**	**233**⇑	*i*PN	Pn	15 41 40.8	+1.1
YAK	**Yakutsk**	**18.78**	**317**⇑	*i*P	Pn	15 42 45.2	-2.2
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MJAR	**Matsushiro Arr**	**20.10**	**231**	P	P	15 43 03.0	+1.9
	comp=Z,0.5nm,0.4s,baz=109,slow=42,SNR=2.9						
MJAR	**Matsushiro Arr**	**20.10**	**231**	P	P	15 43 03.0	+1.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TIXI	**Tiksi**	**24.38**	**338**	⇓*i*P	P	15 43 42.2	-2.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb3.7						
COLA	**College**	**30.92**	**43**⇑	*i*P	P	15 44 42.3	-1.0
SONM	**Songino Array**	**32.95**	**285**	P	P	15 45 01.5	+0.3
	comp=Z,0.2nm,0.5s,mb3.3,baz=40,slow=5.6,SNR=1.6						
SONM				PcP	PcP	15 47 44.4	+0.1
	comp=Z,0.6nm,0.8s,baz=58,slow=3.6,SNR=3.3						
SONM	**Songino Array**	**32.95**	**285**	P	P	15 45 01.5	+0.3
SONM						15 47 44.4	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**47.56**	**302**	*e*P	P	15 47 03.1	+1.2
	comp=Z,3.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**47.56**	**302**	*e*P	P	15 47 03.1	+1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
MKAR	**Makanchi Array**	**47.70**	**296**	P	P	15 47 03.6	+0.6
	comp=Z,0.3nm,0.4s,mb3.6,baz=52,slow=8.2,SNR=2.9						
BVAR	**Borovoye Array**	**50.50**	**309**	P	P	15 47 23.4	-1.0
	comp=Z,0.4nm,0.4s,mb3.8,baz=65,slow=6.8,SNR=2.7						
CMAR	**Chiang Mai Arr**	**56.28**	**257**	P	P	15 48 08.4	+1.2
	comp=Z,1.1nm,0.7s,mb4.0,baz=32,slow=6.6,SNR=7.4						
CMAR				sP	sP	15 48 25.4	-1.3
	comp=Z,0.3nm,0.6s,baz=34,slow=6.6,SNR=2.0						
NVAR	**Mina Array Bea**	**57.88**	**67**	P	P	15 48 19.1	+0.8
	comp=Z,0.7nm,0.6s,mb3.9,baz=293,slow=8.3,SNR=4.0						
BW06	**Boulder Array**	**59.85**	**58**	*e*P	P	15 48 31.9	0.0
	comp=Z,1.8nm,0.9s,mb4.1						
PDAR	**Pinedale Array**	**59.85**	**58**	P	P	15 48 32.4	+0.5
	comp=Z,1.0nm,0.9s,mb3.9,baz=316,slow=4.1,SNR=6.8						
EKA	**Eskdalemuir Ar**	**72.80**	**349**	P	P	15 49 53.4	-1.1
	comp=Z,0.7nm,0.3s,mb4.0,baz=18,slow=5.6,SNR=5.4						
EKA	**Eskdalemuir Ar**	**72.80**	**349**	P	P	15 49 53.4	-1.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**72.84**	**65**	P	P	15 49 54.9	-0.2
	comp=Z,1.2nm,0.6s,mb4.0,baz=297,slow=5.3,SNR=19						
TXAR				pP	pP	15 50 08.8	-0.7
	comp=Z,0.2nm,0.5s,baz=300,slow=4.7,SNR=2.9						
TXAR	**Lajitas Array**	**72.84**	**65**	P	P	15 49 54.9	-0.2
TXAR				pP	pP	15 50 08.8	-0.7
TXAR	**Lajitas Array**	**72.84**	**65**	P	P	15 49 54.9	-0.3
TXAR				*PP	pP	15 50 08.8	-0.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**73.60**	**203**	P	P	15 49 59.0	-0.5
	comp=Z,0.6nm,0.9s,mb3.5,baz=17,slow=6.2,SNR=6.0						
WRA				pP	pP	15 50 13.0	-0.8
	comp=Z,0.6nm,0.6s,baz=19,slow=6.2,SNR=4.3						
WRA	**Warramunga Arr**	**73.60**	**203**	*e*P	P	15 49 59.5	0.0
MLR	**Muntele Rosu**	**75.19**	**327**	pP	pP	15 50 24.5	+1.6
	comp=Z,4.1nm,0.9s,baz=181,slow=7.4,SNR=2.6						
GERES	**GERESS Array B**	**75.82**	**336**	P	P	15 50 11.4	-0.7
	comp=Z,0.3nm,0.3s,mb3.7,baz=19,slow=6.2,SNR=3.7						
ASAR	**Alice Springs**	**77.28**	**202**	P	P	15 50 20.3	-0.2
	comp=Z,0.2nm,0.6s,mb3.3,baz=14,slow=5.3,SNR=7.3						
ASAR				pP	pP	15 50 35.1	+0.2
	comp=Z,0.4nm,0.6s,baz=13,slow=5.1,SNR=4.9						
ASAR	**Alice Springs**	**77.28**	**202**	P	P	15 50 20.3	-0.2
ASAR				pP	pP	15 50 35.1	+0.2
ASAR	**Alice Springs**	**77.28**	**202**	*e*P	P	15 50 21.0	+0.5

ISCJB ***19*** *16:27:08.2±0.5, 2877N±007×1400E±02, h436km±9km, mb3.1/5, Error ellipse: s-maj=26.6km s-min=8.8km az=163.3*
IDC ***19*** *16:27:08.2±2.1, 2840N×13889E, h369km±57km, mb2.9/4, mb1 3.1/6, mb1mx2.9/22, mbtmp2.9/6, Error ellipse: s-maj=118.2km s-min=13.7km az=68.0*
NEIC ***19*** *16:27:09.4±1.1, 2897N×14040E, h450km, mb3.3/1, Error ellipse: s-maj=41.6km s-min=11.4km az=80.0*

JMA ***19*** *16:27:09.6±0.1, 2884N×14002E, h421km*

ISC 19 16:27:09.2±0.5, **2880N**±007×**1401E**±02, **h429**km±10km, **n17, σ0s76/20, mb3.1**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.54**	**131**	P	P	16 28 11.8	+0.5
	24nm,0.3s,baz=274,slow=19,SNR=9.1						
CBIJ				S	S	16 29 01.3	-0.3
	57nm,0.3s,baz=294,slow=23,SNR=21						
CBIJ	**Chichi jima**	**2.54**	**131**	P	P	16 28 11.5	+0.1
CBIJ				*e*S	S	16 29 00.2	-1.4
JHHJ	**Haha-jima-NKT**	**2.87**	**138**	P	P	16 28 14.1	+0.4
JHHJ				*e*S	S	16 29 06.0	0.0
BSO1	**Boso 1**	**5.89**	**7**	*e*S	S	16 29 56.3	-0.7
JWZ	**Kozaga**	**6.00**	**323**	P	P	16 28 42.9	+0.1
JIE	**Ise**	**6.26**	**334**	P	P	16 28 46.8	+1.3
JRY	**Ryogami san**	**7.26**	**353**	P	P	16 28 56.4	+0.2
JTO	**Tosashimizu**	**7.43**	**305**	P	P	16 28 57.9	-0.2
MJAR	**Matsushiro Arr**	**7.88**	**349**	P	P	16 29 02.3	-0.6
	0.7nm,0.3s,baz=166,slow=11,SNR=6.9						
MAJO	**Matsushiro**	**7.88**	**349**	P	P	16 29 02.3	-0.6
JMK	**Ichinoseki**	**10.18**	**5**	P	P	16 29 30.8	+2.7
SONM	**Songino Array**	**32.18**	**315**	P	P	16 33 00.1	+0.5
	0.1nm,0.3s,mb2.6,baz=140,slow=7.8,SNR=3.9						
MK31	**Makanchi Array**	**47.94**	**308**	*e*P	P	16 35 06.2	-0.6
MKAR	**Makanchi Array**	**47.94**	**308**	P	P	16 35 06.5	-0.4
	0.4nm,0.5s,mb3.0,baz=88,slow=7.1,SNR=4.1						
WRA	**Warramunga Arr**	**48.77**	**187**	P	P	16 35 13.5	+0.2
	0.8nm,0.3s,mb3.5,baz=2.1,slow=7.7,SNR=33						
KURK	**Kurchatov**	**50.45**	**314**	*e*P	P	16 35 24.6	-0.9
	0.8nm,0.5s,mb3.3						
ASAR	**Alice Springs**	**52.49**	**187**	P	P	16 35 40.9	+0.2
	0.4nm,0.4s,mb3.0,baz=1.3,slow=6.4,SNR=34						

CSEM ***19*** *16:29:45.1, 3565N×0.11E, h0km, ML3.5, After ALG*

CRAAG 19 16:29:45.1, **3565N×011E, Ml3.5, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODJA	**Bouhanifia**	**0.39**	**214**	P	Pg	16 29 54.0	+1.5
USTO	**Oran**	**0.55**	**279**	P	Pg	16 29 57.0	+1.4
ODZI	**Dziouia**	**1.15**	**252**	P	Pg	16 30 09.0	+1.8

IDC ***19*** *16:31:48.7±1.1, 6230S×16478E, h0km, mb4.1/5, mb1 4.3/7, mb1mx4.2/13, mbtmp4.2/7, ML4.8/1, MS4.3/7, Ms1 4.3/7, ms1mx4.0/25, Error ellipse: s-maj=41.6km s-min=20.9km az=82.0*
NEIC ***19*** *16:31:49.9±0.6, 6233S×16463E, h10km, mb4.9/2, Error ellipse: s-maj=25.9km s-min=9.6km az=86.0*
ISCJB ***19*** *16:31:50.7±5.5, 6232S±008×1645E±04, h28km±43km, mb4.2/5, MS4.2/5, Error ellipse: s-maj=32.0km s-min=12.6km az=178.4*

ISC 19 16:31:53.3±5.4, **6233S**±008×**1647E**±04, **h34**km±42km, **n15, σ0s76/12, mb4.2/5, MS4.2**/5, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.30**	**182**	Pn	Pn	16 35 25.5	-0.6
	3.4nm,0.3s,baz=8.1,slow=16,SNR=232						
VNDA				LR	LR	16 40 25.1	
	comp=Z,1µm,18.0s,baz=0.9,slow=34						
VNDA	**Vanda**	**15.30**	**182**	Pn	Pn	16 35 25.5	-0.6
VNDA				LR	LR	16 40 25.1	
SBA	**Scott Base**	**15.62**	**178**	*e*P	Pn	16 35 31.0	+0.7
	220nm,1.5s						
RPZ	**Rata Peaks**	**19.02**	**14**	P	Pn	16 36 12.8	0.0
	0.3nm,0.3s,baz=196,slow=12,SNR=3.3						
RPZ				LR	LR	16 42 00.6	
	comp=Z,912nm,18.1s,baz=198,slow=32						
URZ	**Urewera**	**25.28**	**23**	P	P	16 37 15.8	-0.3
	6.5nm,1.0s,mb4.1,baz=228,slow=14,SNR=3.4						
URZ				LR	LR	16 45 28.0	
	comp=Z,580nm,19.9s,MS4.1,baz=348,slow=32						
QSPA	**South Pole Qui**	**27.77**	**180**	P	P	16 37 39.9	+1.7
	7.8nm,1.0s,mb4.3,baz=9.9,slow=4.5,SNR=14						
QSPA				LR	LR	16 48 34.0	
	comp=Z,193nm,19.9s,MS3.7,baz=200,slow=36						
QSPA	**South Pole Qui**	**27.77**	**180**	*e*P	P	16 37 38.8	+0.7
QSPA				LR	LR	16 48 34.0	
STKA	**Stephens Creek**	**33.88**	**323**	*e*P	P	16 38 31.9	-0.6
MAW	**Mawson**	**38.72**	**217**	LR	LR	16 55 00.4	
	comp=Z,437nm,18.1s,MS4.3,baz=105,slow=36						
NWAO	**Narrogin (SRO)**	**41.92**	**292**	LR	LR	16 52 20.5	
	comp=Z,443nm,21.0s,MS4.3,baz=349,slow=29						
ASAR	**Alice Springs**	**43.88**	**317**	P	P	16 39 56.5	+0.3
	8.5nm,1.0s,mb3.8,baz=164,slow=8.3,SNR=9.5						
CTA	**Charters Tower**	**44.08**	**335**	LR	LR	16 54 56.6	
	comp=Z,417nm,18.2s,MS4.4,baz=52,slow=32						
SNAA	**Sanae**	**46.00**	**185**	*e*P	P	16 40 10.9	-1.6
	8.3nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**47.23**	**320**	P	P	16 40 23.3	+0.6
	0.6nm,1.0s,baz=147,slow=5.0,SNR=3.9						
LPAZ	**La Paz**	**91.42**	**130**	P	P

KKN	**Kakani**	**34.41**	**335**	*e*P		**P**		**16 52 37.7**	**+0.7**
	47nm,0.8s,mb5.5								
GKN	**Gorkha**	**34.88**	**334**	*e*P		**P**		**16 52 41.7**	**+0.7**
	70nm,1.1s,mb5.5								
KOLN	**Koldanda**	**35.14**	**332**	*e*P		**P**		**16 52 44.1**	**+0.8**
	23nm,0.6s,mb5.3								
DANN	**Dangsing**	**35.56**	**333**	*e*P		**P**		**16 52 47.7**	**+0.8**
	69nm,0.5s								
PYUN	**Piuthan**	**35.71**	**332**	*e*P		**P**		**16 52 49.2**	**+1.0**
	14nm,0.5s,mb5.1								
WRA	**Warramunga Arr**	**36.39**	**120**	P		**P**		**16 52 53.5**	**-0.7**
	4.7nm,0.6s,mb4.6,baz=303,slow=8.9,SNR=78								
WRA				PcP		PcP		16 55 18.0	+0.4
	0.6nm,1.0s,baz=307,slow=2.2,SNR=3.8								
WRAB	**Tennant Creek**	**36.40**	**120**	*e*P		**P**		**16 52 53.3**	**-0.9**
	5.4nm,0.6s,mb4.7								
WRAB	**Tennant Creek**	**36.40**	**120**	*e*P		**P**		**16 52 53.3**	**-0.9**
WRAB				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
ASAR	**Alice Springs**	**37.61**	**126**	P		**P**		**16 53 04.5**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.2,baz=300,slow=8.4,SNR=72								
ASAR				PcP		PcP		16 55 21.6	+0.3
	comp=Z,0.7nm,0.8s,baz=291,slow=4.2,SNR=4.1								
CTA	**Charters Tower**	**47.05**	**115**	P		**P**		**16 54 21.1**	**-0.2**
	comp=Z,6.2nm,0.7s,mb4.6,baz=270,slow=13,SNR=4.4								
STKA	**Stephens Creek**	**47.49**	**132**	P		**P**		**16 54 25.1**	**+0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=321,slow=11,SNR=6.9								
KSRS	**Korea Array**	**47.50**	**29**	P		**P**		**16 54 24.1**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=243,slow=8.5,SNR=3.9								
SONM	**Songino Array**	**51.05**	**5**	P		**P**		**16 54 51.5**	**+0.2**
	comp=Z,3.1nm,0.6s,mb4.4,baz=187,slow=9.3,SNR=42								
SONM				PcP		PcP		16 56 06.1	-0.5
	comp=Z,0.8nm,0.5s,baz=183,slow=4.4,SNR=6.4								
TKM2	**Tokmak 2**	**51.40**	**336**	*e*P		**P**		**16 54 54.6**	**+0.5**
	comp=Z,9.5nm,0.8s,mb4.8								
TKM2	**Tokmak 2**	**51.40**	**336**	*e*P		**P**		**16 54 54.6**	**+0.5**
TKM2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
AML	**Almayashu**	**51.55**	**334**	*e*P		**P**		**16 54 56.0**	**+0.8**
	comp=Z,5.4nm,0.6s,mb4.7								
EKS2	**Erkin-Say**	**51.95**	**334**	*e*P		**P**		**16 54 58.7**	**+0.5**
	comp=Z,13nm,0.7s,mb5.0								
MK31	**Makanchi Array**	**52.51**	**344**	*i* P		**P**		**16 55 01.4**	**-0.8**
MK31				pmax		pmax			
	comp=Z,6.0nm,0.5s,mb4.8								
MKAR	**Makanchi Array**	**52.51**	**344**	P		**P**		**16 55 01.9**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.9,baz=157,slow=8.4,SNR=78								
KK31	**Karatay Array**	**53.76**	**332**	*i* P		**P**		**16 55 11.2**	**-0.3**
KK31				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb4.0								
KURK	**Kurchatov**	**57.09**	**343**	*e*P		**P**		**16 55 34.7**	**-0.6**
	comp=Z,4.2nm,0.5s,mb4.7								
KURK	**Kurchatov**	**57.09**	**343**⇑	*e*P		**P**		**16 55 34.3**	**-1.0**
KURK				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.7								
ZAA0	**Zalesovo Array**	**58.57**	**349**	*e*P		**P**		**16 55 44.6**	**-1.1**
ZALV	**Zalesovo Beam**	**58.57**	**349**	P		**P**		**16 55 44.7**	**-0.9**
	comp=Z,22nm,0.6s,mb5.3,baz=163,slow=5.7,SNR=100								
NVS	**Novosibirsk**	**59.73**	**348**	*e*P		**P**		**16 55 51.0**	**-2.6**
NVS				pmax		pmax			
	comp=N,5.0nm,1.1s								
NVS				pmax		pmax			
	comp=E,4.0nm,1.1s								
NVS				pmax		pmax			
	comp=Z,9.0nm,1.1s,mb4.7								
VOSK	**Vostochnaya**	**61.26**	**340**	P		**P**		**16 56 02.3**	**-1.8**
VOSK				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
BOD	**Bodaibo**	**61.72**	**8**	*e*P		**P**		**16 56 06.3**	**-0.8**
BOD				pmax		pmax			
	comp=Z,7.0nm,1.7s,mb4.5								
BRVK	**Borovoye**	**61.78**	**339**	*e*P		**P**		**16 56 06.6**	**-1.0**
AB31	**Akbulak array**	**63.25**	**331**	P		**P**		**16 56 16.4**	**-1.1**
AB31				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.8								
SVE	**Sverdlovsk**	**68.24**	**337**	*e*P		**P**		**16 56 49.8**	**+0.3**
YAK	**Yakutsk**	**68.63**	**14**	*e*P		**P**		**16 56 49.5**	**-2.3**
	comp=Z,17nm,0.8s,mb5.0								
YAK	**Yakutsk**	**68.63**	**14**	*e*P		**P**		**16 56 46.9**	**-4.9**
YAK				pmax		pmax			
	comp=Z,17nm,0.9s,mb5.0								
YAK				pmax		pmax			
	comp=N,3.0nm,1.0s								
ARU	**Arti**	**68.78**	**336**⇑	*i* P		**P**		**16 56 51.1**	**-1.7**
ARU				pmax		pmax			
	comp=Z,18nm,2.5s,mb4.6								
KIV	**Kislovodsk**	**70.21**	**319**	*e*P		**P**		**16 57 06.7**	**+4.8**
KIV				pmax		pmax			
	comp=Z,7.0nm,1.2s,mb4.5								
BRTR	**Keskin Array B**	**74.99**	**312**	P		**P**		**16 57 30.3**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.0								
TIXI	**Tiksi**	**76.88**	**9**	*e*P		**P**		**16 57 38.2**	**-2.3**
	comp=Z,4.6nm,1.0s,mb4.4								
TIXI	**Tiksi**	**76.88**	**9**	*e*P		**P**		**16 57 37.3**	**-3.2**
TIXI				pmax		pmax			
	comp=Z,7.0nm,1.4s,mb4.4								
OBN	**Obninsk**	**78.43**	**328**	*e*P		**P**		**16 57 49.1**	**-0.4**
OBN				pmax		pmax			
	comp=Z,22nm,1.6s,mb4.8								
AKASG	**Malin Array Be**	**81.14**	**322**	P		**P**		**16 58 03.9**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=87,slow=5.2,SNR=4.3								
ARCES	**ARCESS Array B**	**88.00**	**340**	P		**P**		**16 58 39.5**	**+1.0**
	comp=Z,7.7nm,1.2s,mb4.8,baz=115,slow=4.1,SNR=3.5								
DPC	**Dobruska-Polom**	**89.15**	**320**	*e*P		**P**		**16 58 45.9**	**+1.6**
GERES	**GERESS Array B**	**90.72**	**319**	P		**P**		**16 58 52.8**	**+1.2**
	comp=Z,1.2nm,0.7s,mb4.3,baz=88,slow=4.1,SNR=9.8								
TXAR	**Lajitas Array**	**144.94**	**40**	PKPbc		PKPdf		17 05 25.9	-0.5
	comp=Z,2.9nm,0.6s,baz=294,slow=1.0,SNR=41								
MIAR	**Mount Ida**	**145.95**	**22**	*e*PKP		PKPdf		17 05 28.4	+0.4
JCT	**Junction City**	**146.42**	**34**	*e*PKPdf		PKPdf		17 05 29.3	+0.4

IDC 19 16:50:53.3±0.9, 1156N×13959E, h0km, mb3.9/10, mb1 4.1/10, mb1mx4.0/20, mbtmp3.9/10, Error ellipse: s-maj=36.6km s-min=17.4km az=80.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.72**	**189**	P		P	16 57 17.6	-1.4
	0.2nm,0.6s,baz=8.3,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**35.44**	**189**	P		P	16 57 51.1	-0.3
	0.5nm,0.4s,baz=18,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**39.78**	**285**	P		P	16 58 29.1	+0.7
	0.5nm,0.3s,baz=97,slow=7.0,SNR=5.3						
STKA	**Stephens Creek**	**43.23**	**178**	P		P	16 58 58.0	+1.6
	1.3nm,0.8s,baz=21,slow=8.6,SNR=2.4						
SONM	**Songino Array**	**45.60**	**329**	P		P	16 59 17.1	+1.9
	0.6nm,0.8s,baz=134,slow=9.3,SNR=3.9						
MKAR	**Makanchi Array**	**59.44**	**318**	P		P	17 00 57.7	-0.2
	1.3nm,0.8s,baz=96,slow=9.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**60.35**	**326**	P		P	17 01 02.7	-1.3
	0.6nm,0.6s,baz=112,slow=6.7,SNR=2.8						
YKA	**Yellowknife Ar**	**87.00**	**27**	P		P	17 03 40.4	+0.1
	2.5nm,0.6s,baz=290,slow=4.6,SNR=6.2						
ARCES	**ARCESS Array B**	**87.38**	**341**	P		P	17 03 40.9	-1.2
	8.4nm,1.1s,baz=46,slow=11,SNR=4.0						
NVAR	**Mina Array Bea**	**92.19**	**50**	P		P	17 04 06.0	+0.7
	0.4nm,0.5s,baz=268,slow=4.6,SNR=3.7						

*CSEM **19** 16:59:45.0, 3655N×6.16E, h0km, ML3.6, After ALG*

CRAAG 19 16:59:45.0, 3655N×616E, Ml3.6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFRA	**Djebel Bou Aff**	**0.23**	**268**	P		Pg	16 59 51.5	+2.1
CASM	**Ain Smara**	**0.40**	**138**	P		Pg	16 59 55.0	+2.4
CKFL	**Kef-Lekhel**	**0.48**	**109**	P		Pg	17 00 01.0	+6.9
CAEH	**`Ain El Ouahch**	**0.60**	**68**	P		Pg	16 59 59.0	+2.5
SET	**Setif**	**0.71**	**240**	P		Pg	17 00 03.0	+4.4
CKHR	**Kef el Ahmar**	**0.75**	**225**	P		Pg	17 00 07.0	+7.6
CMAH	**Djebel Manchou**	**1.02**	**86**	P		Pg	17 00 07.0	+2.5

*ISCJB **19** 17:02:16.0±0.4, 4006N×002×2884E×003, h2km±4km, Error ellipse: s-maj=3.6km s-min=3.1km az=43.3*
*ISK **19** 17:02:15.5, 4005N×2883E, h3km, MD3.0*
*CSEM **19** 17:02:15.3±0.0, 4004N×2884E, h2km, MD3.2, Error ellipse: s-maj=1.1km s-min=0.9km az=151.0*
*DDA **19** 17:02:15.7, 4005N×2882E, h8km±5km, Md3.2*

ISC 19 17:02:16.5±0.3, 4006N±002×2884E±003, h5km±3km, n38, σ0s76/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULDT	**Uludag**	**0.24**	**70**	*i* P		**Pg**		**17 02 21.2**	**+0.1**
ULDT				*i* S		**Sg**		**17 02 25.1**	**+0.8**
KCT	**Karacabey**	**0.43**	**299**	*e*PG		**Pg**		**17 02 24.9**	**+0.3**
GEMT	**Gemlik**	**0.46**	**35**	*e*PG		**Pg**		**17 02 25.8**	**+0.5**
DST	**Dursunbey**	**0.48**	**200**	*e*PG		**Pg**		**17 02 25.3**	**-0.4**
DST				*e*SG		**Sg**		**17 02 32.7**	**+0.6**
DURS	**Dursunbey**	**0.54**	**212**	*i* P		**Pg**		**17 02 26.3**	**-0.5**
DURS				*i* S		**Sg**		**17 02 32.7**	**-1.1**
YLV	**Yalova**	**0.65**	**38**	*e*PG		**Pg**		**17 02 29.0**	**+0.1**
BNT	**Bandirma**	**0.77**	**293**	*e*PG		**Pg**		**17 02 31.0**	**-0.2**
BNT				*e*SG		**Sg**		**17 02 42.9**	**+1.8**
CAVI	**Cavuskoy**	**0.78**	**79**	*e*PG		**Pg**		**17 02 31.4**	**-0.1**
ADVT	**Abdulvahap**	**0.78**	**61**	*e*PG		**Pg**		**17 02 31.5**	**+0.1**
EDC	**Edincik**	**0.80**	**291**	*e*PG		**Pg**		**17 02 31.7**	**-0.2**
BALB	**Balikesir**	**0.85**	**241**	*e*PG		**Pg**		**17 02 32.7**	**-0.1**
HRT	**Hereke**	**0.99**	**39**	*e*PG		**Pg**		**17 02 35.7**	**+0.3**
ISK	**Istanbul-Kandi**	**1.02**	**9**	*e*PG		**Pg**		**17 02 35.9**	**-0.1**
DEMI	**Demirci**	**1.02**	**186**	*i* P		**Pg**		**17 02 35.4**	**-0.6**
DEMI				*i* S		**Sg**		**17 02 49.5**	**+0.2**
GDZ	**Gediz**	**1.09**	**153**	*i* P		**Pg**		**17 02 37.1**	**-0.2**
GDZ				*i* S		**Sg**		**17 02 51.5**	**+0.1**
MRMT	**Marmara Adasi**	**1.10**	**300**	*e*PN		**Pn**		**17 02 37.3**	**-1.2**
BGKT	**Bogazkoy**	**1.12**	**357**	*e*PN		**Pn**		**17 02 37.4**	**-1.4**
ELBA	**Catalca**	**1.13**	**344**	*i* P		**Pg**		**17 02 37.5**	**-0.6**
ELBA				*i* S		**Sg**		**17 02 53.1**	**+0.3**
CTT	**Catalca**	**1.13**	**344**	*e*PN		**Pn**		**17 02 38.0**	**-1.0**
GPA	**Golpazari**	**1.15**	**78**	*e*PN		**Pn**		**17 02 38.7**	**-0.5**
KLYT	**Kilyos**	**1.20**	**7**	*e*PN		**Pn**		**17 02 39.1**	**-0.8**
BORA	**Eskisehir**	**1.25**	**98**	*i* P		**Pg**		**17 02 39.6**	**-0.9**
BORA				*i* S		**Sg**		**17 02 57.4**	**+0.7**
SLVT	**Silivri**	**1.26**	**338**	*e*PN		**Pn**		**17 02 40.5**	**-0.3**
GULT	**Gulveren**	**1.33**	**73**	*e*PN		**Pn**		**17 02 41.9**	**+0.2**
ALT	**Altintas**	**1.40**	**135**	*e*PN		**Pn**		**17 02 42.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.42**	**297**	*e*PN		**Pn**		**17 02 42.9**	**0.0**
AKHS	**Akhisar**	**1.42**	**214**	*i* P		**Pn**		**17 02 40.2**	**-2.8**
AKHS				*i* S		**Sb**		**17 03 01.5**	**-0.4**
AKS	**Akhisar**	**1.43**	**214**	*e*PN		**Pn**		**17 02 42.6**	**-0.3**
KULA	**Kula-Manisa**	**1.55**	**185**	*e*PN		**Pn**		**17 02 45.0**	**+0.3**
MANT	**Manisa**	**1.58**	**188**	*i* P		**Pn**		**17 02 46.0**	**+0.8**
MANT				*i* S		**Sn**		**17 03 06.0**	**+0.1**
LPK	**Lapseki**	**1.63**	**282**	*e*PN		**Pn**		**17 02 46.0**	**+0.2**
ESKT	**Eskisehir**	**1.64**	**109**	*i* P		**Pn**		**17 02 46.5**	**+0.6**
ESKT				*i* S		**Sn**		**17 03 07.2**	**-0.1**
SEYT	**Eskypehyr**	**1.64**	**109**	*i* P		**Pn**		**17 02 46.5**	**+0.6**
SEYT				*i* S		**Sn**		**17 03 07.2**	**-0.1**
KHL	**Karahalli**	**1.81**	**163**	*e*PN		**Pn**		**17 02 48.7**	**+0.4**
AYVA	**Ayvalik**	**1.82**	**246**	*i* P		**Pn**		**17 02 51.3**	**+2.8**
AYVA				*i* S		**Sn**		**17 03 14.1**	**+2.2**
MDU	**Mudurnu**	**1.86**	**77**	*e*PN		**Pn**		**17 02 49.5**	**+0.6**
EZN	**Ezine**	**1.95**	**264**	*e*PN		**Pn**		**17 02 50.5**	**+0.3**
BLCB	**Balcova**	**2.18**	**220**	*e*PN		**Pn**		**17 02 53.8**	**+0.4**

IDC 19 17:05:41.0±9.5, 2245N×14512E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=374.2km s-min=31.1km az=78.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**39.93**	**319**	P		P	17 13 16.5	-0.3
	0.4nm,0.6s,baz=127,slow=6.8,SNR=4.2						
WRA	**Warramunga Arr**	**43.43**	**195**	P		P	17 13 45.6	-0.1
	0.4nm,0.7s,baz=17,slow=8.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**54.75**	**321**	P		P	17 15 12.4	+0.3
	0.6nm,0.5s,baz=111,slow=8.1,SNR=4.0						

IDC 19 17:06:47.0±2.0, 2150S×17364E, h0km, mb3.8/3, mb1 4.2/4, mb1mx3.9/15, mbtmp4.0/4, ML3.7/1, MS4.0/5, Ms1 4.0/5, ms1mx3.7/26, Error ellipse: s-maj=50.7km s-min=44.1km az=52.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**15.80**	**64**	LR		LR	17 15 25.0	
	comp=Z,366nm,20.7s,baz=66,slow=33						
URZ	**Urewera**	**16.97**	**171**	Pn		Pn	17 10 46.3	+0.5
	0.3nm,0.3s,baz=341,slow=4.2,SNR=6.0						
URZ				LR		LR	17 15 05.3	
	comp=Z,508nm,20.1s,baz=174,slow=29						
STKA	**Stephens Creek**	**30.34**	**243**	LR		LR	17 23 09.5	
	comp=Z,460nm,21.6s,baz=34,slow=32						
PPT	**Papeete**	**34.83**	**90**	*e*LQ			17 21 12.0	
	677nm,29.5s						
PPT				*e*LR		LR	17 23 09.0	
	399nm,26.5s						
PPT	**Papeete**	**34.83**	**90**	LR		LR	17 24 01.5	
	comp=Z,208nm,21.3s,baz=83,slow=30						
ASAR	**Alice Springs**	**36.68**	**259**	P		P	17 13 55.5	-0.3
	1.8nm,1.0s,baz=82,slow=9.3,SNR=8.1						
WRA	**Warramunga Arr**	**36.73**	**265**	P		P	17 13 55.9	-0.4
	0.5nm,0.7s,baz=96,slow=8.4,SNR=6.8						
WRA				LR		LR	17 27 01.7	
	comp=Z,221nm,20.4s,baz=130,slow=33						
RKT	**Rikitea**	**47.36**	**102**	*e*LR		LR	17 28 41.7	
	215nm,26.0s						
CMAR	**Chiang Mai Arr**	**83.19**	**293**	P		P	17 19 17.4	+1.8
	1.5nm,1.1s,baz=124,slow=5.2,SNR=6.0						
KHC	**Kasperske Hory**	**148.19**	**335**	*e*P		PKPdf	17 26 33.0	+1.5
GERES	**GERESS Array B**	**148.37**	**334**	PKPbc		PKPdf	17 26 34.0	+2.2
	0.8nm,0.7s,baz=9.1,slow=3.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**168.69**	**224**	PKPab		PKPab	17 28 05.8	-0.8
	0.5nm,0.8s,baz=138,slow=5.2,SNR=2.8						

IDC 19 17:24:15.1±6.8, 2192N×14331E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, Error ellipse: s-maj=281.7km s-min=20.2km az=77.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**39.24**	**320**	P		P	17 31 45.8	+0.6
	0.7nm,0.5s,baz=128,slow=7.3,SNR=7.8						
WRA	**Warramunga Arr**	**42.52**	**193**	P		P	17 32 12.2	-0.3
	0.4nm,0.5s,baz=15,slow=8.8,SNR=8.8						
ASAR	**Alice Springs**	**46.23**	**192**	P		P	17 32 42.3	+0.2
	0.7nm,0.6s,baz=13,slow=9.4,SNR=17						
ZALV	**Zalesovo Beam**	**54.11**	**322**	P		P	17 33 40.7	-0.9
	0.6nm,0.4s,baz=92,slow=7.7,SNR=6.2						
MKAR	**Makanchi Array**	**54.63**	**313**	P		P	17 33 45.4	-0.2
	0.5nm,0.7s,baz=98,slow=7.4,SNR=3.6						
BVAR	**Borovoye Array**	**62.58**	**319**	P		P	17 34 41.3	+0.4
	2.0nm,0.8s,baz=94,slow=7.1,SNR=15						

*TEH **19** 17:33:25.7, 3473N×5300E, h2km, ML4.9*
*ISCJB **19** 17:34:27.9±0.5, 3473N×002×5297E±002, h4km±3km, mb4.6/59, MS3.8/4, Error ellipse: s-maj=3.0km s-min=2.6km az=6.4*
*IDC **19** 17:34:27.3±0.7, 3456N×5287E, h0km, mb4.3/14, mb1 4.4/17, mb1mx4.3/25, mbtmp4.3/17, ML4.6/3, MS3.7/8, Ms1 3.7/8, ms1mx3.5/27, Error ellipse: s-maj=23.5km s-min=13.1km az=173.0*
*BJI **19** 17:34:27.5, 3474N×5263E, h18km, mB5.0, mb4.7, Ms4.5, Ms4.1*
*THR **19** 17:34:28.4±1.8, 3471N×5304E, h14km±14km, ML5.1*
*CSEM **19** 17:34:28.5±0.0, 3474N×5300E, h10km, mb4.8/35, Error ellipse: s-maj=1.3km s-min=0.9km az=8.0*
*MOS **19** 17:34:30.9±1.3, 3453N×5301E, h33km, mb4.7/27, Error ellipse: s-maj=7.2km s-min=6.0km az=119.2*
*NEIC **19** 17:34:30.0, 3470N×5300E, h2km, mb4.9/23, ML5.1(THR), MN4.9(TEH), After TEH.*

ISC 19 17:34:29.0±0.5, 3473N±002×5297E±002, h0km±3km, n280, σ1s08/316, mb4.6/59, MS3.8/4, 38C-25D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAS	**Lasjerd**	**0.65**	**360**	Pg		**Pg**		**17 34 41.4**	**-0.2**
ILAS				Sg		**Sg**		**17 34 50.5**	**+0.5**
ILAS	**Lasjerd**	**0.65**	**360**⇑	*e*Pg		**Pg**		**17 34 41.5**	**-0.1**
ILAS				*e*Sg		**Sg**		**17 34 50.5**	**+0.5**
ILAS	**Lasjerd**	**0.65**	**360**⇑	*e*Pg		**Pg**		**17 34 41.5**	**-0.1**
ILAS				*e*Sg		**Sg**		**17 34 50.5**	**+0.5**
ILAS				*e*				17 35 03.6	
ISFB	**Sefidab**	**0.71**	**238**⇓	*e*Pg		**Pg**		**17 34 43.0**	**+0.4**
ISFB				*e*				17 34 43.9	
IFIR	**Firoozkooh**	**0.93**	**349**	Pg		**Pg**		**17 34 46.7**	**-0.1**
IFIR				Sg		**Sg**		**17 34 58.4**	**-0.5**
IFIR	**Firoozkooh**	**0.93**	**349**⇑	*e*Pg		**Pg**		**17 34 46.8**	**0.0**
IFIR				*e*Sg		**Sg**		**17 34 58.4**	**-0.5**
IFIR				*e*				17 35 05.2	
IVRN	**Varamin**	**1.05**	**285**⇓	*e*Pg		**Pg**		**17 34 49.1**	**-0.1**
IVRN				*e*				17 35 35.6	
IANJ	**Anjilo**	**1.07**	**46**⇑	*e*Pg		**Pg**		**17 34 47.9**	**-1.7**
IANJ				*e*				17 35 08.3	
ISHM	**Shahmirzad**	**1.11**	**14**⇑	*e*Pg		**Pg**		**17 34 49.7**	**-0.6**
ISHM				*e*				17 34 53.9	
ISHM				*e*Sg		**Sg**		**17 35 05.2**	**+0.5**
IDMV	**Damavand**	**1.14**	**318**	Pg		**Pg**		**17 34 51.1**	**+0.2**
IDMV				Sg		**Sg**		**17 35 06.1**	**+0.4**
IDMV	**Damavand**	**1.14**	**318**⇑	*e*Pg		**Pg**		**17 34 51.1**	**+0.2**
IDMV				*e*Sg		**Sg**		**17 35 06.5**	**+0.8**
IDMV	**Damavand**	**1.14**	**318**⇑	*e*Pg		**Pg**		**17 34 51.1**	**+0.2**
IDMV				*e*Sg		**Sg**		**17 35 06.1**	**+0.4**
IDMV				*e*				17 35 20.9	
DAMV	**Damavand**	**1.21**	**318**	*e*Pg		**Pg**		**17 34 51.0**	**-1.3**
DAMV	**Damavand**	**1.21**	**318**	*e*Pg		**Pg**		**17 34 52.1**	**-0.2**
DAMV	**Damavand**	**1.21**	**318**	*e*Pg		**Pg**		**17 34 52.0**	**-0.3**
	SNR=90								
GHVR	**GHOM**	**1.40**	**260**	*e*Pg		**Pg**		**17 34 56.0**	**+0.1**
GHVR	**GHOM**	**1.40**	**260**	*e*Pg		**Pg**		**17 34 56.3**	**+0.4**
GHVR				AML		AML		17 35 21.2	
	comp=E,14μm,0.4s								
GHVR	**GHOM**	**1.40**	**260**	*e*Pg		**Pg**		**17 34 56.2**	**+0.3**
	SNR=90								
IAFJ	**Afjeh**	**1.52**	**318**	Pn		**Pn**		**17 34 58.0**	**+0.5**
IAFJ	**Afjeh**	**1.52**	**318**	*e*Pn		**Pn**		**17 34 58.1**	**+0.6**
IAFJ				*e*				17 35 22.8	
IKLH	**Kolahrood**	**1.82**	**220**	Pn		**Pn**		**17 35 01.9**	**+0.3**
IKLH	**Kolahrood**	**1.82**	**220**⇑	*e*Pn		**Pn**		**17 35 02.0**	**+0.5**
IKLH				*e*				17 35 29.4	
IZEF	**Zefreh**	**1.90**	**196**	Pn		**Pn**		**17 35 03.7**	**+1.0**
IZEF				Sn		**Sn**		**17 35 27.9**	**+0.5**
IZEF	**Zefreh**	**1.90**	**196**⇑	*e*Pn		**Pn**		**17 35 03.8**	**+1.1**
IZEF				*e*				17 35 05.2	
IZEF				*e*Sn		**Sn**		**17 35 27.9**	**+0.5**
CHTH	**Charan**	**1.91**	**309**	*e*Pg		**Pg**		**17 35 03.5**	**-2.2**
CHTH				*e*Sg		**Sg**		**17 35 30.7**	**+0.2**
CHTH				AML		AML		17 35 32.1	
	comp=E,19μm,0.4s								
CHTH	**Charan**	**1.91**	**309**	*e*Pg		**Pg**		**17 35 04.0**	**-1.7**
	SNR=90								
CHTH				*e*Sg		**Sg**		**17 35 30.7**	**+0.3**
	SNR=90								
NASN	**Na'in**	**1.93**	**184**	*e*Pg		**Pg**		**17 35 03.7**	**-2.4**
NASN	**Na'in**	**1.93**	**184**	*e*Pg		**Pg**		**17 35 03.8**	**-2.2**
	SNR=90								
THKV	**Tehran--Karaj**	**2.08**	**305**	*e*Pg		**Pg**		**17 35 06.5**	**-2.4**
THKV				*e*Sg		**Sg**		**17 35 36.6**	**+0.8**
THKV				AML		AML		17 35 38.0	
	comp=N,23μm,0.7s								
THKV				AML		AML		17 35 47.5	
	comp=E,17μm,0.4s								
THKV	**Tehran--Karaj**	**2.08**	**305**	*e*Sg		**Sg**		**17 35 35.4**	**-0.4**
	SNR=90								
IMHD	**Mahdasht**	**2.11**	**298**	Pn		**Pn**		**17 35 06.2**	**+0.6**
IMHD				Sn		**Sn**		**17 35 34.0**	**+1.5**
IMHD	**Mahdasht**	**2.11**	**298**⇓	*e*Pn		**Pn**		**17 35 06.2**	**+0.6**
IMHD				*e*Sn		**Sn**		**17 35 34.1**	**+1.6**
IMHD	**Mahdasht**	**2.11**	**298**⇓	*e*Pn		**Pn**		**17 35 06.2

IMON	**Monand**	**5.78**	**103**	⇓*e*Pn		**Pn**	**17 35 56.2**	**+0.2**
IMON				*e*			17 35 59.6	
IHRS	**Heris**	**5.96**	**309**	Pn		**Pn**	**17 35 58.4**	**-0.2**
IHRS				Sn		**Sn**	**17 37 04.5**	**-3.1**
IHRS	**Heris**	**5.96**	**309**	*e*Pn		**Pn**	**17 35 58.5**	**-0.1**
IHRS				*e*Sn		**Sn**	**17 37 04.6**	**-3.0**
IHRS				*e*			17 37 53.1	
IMYA	**Miami**	**6.04**	**72**	⇓*e*Pn		**Pn**	**17 35 59.5**	**-0.1**
IMYA				*e*			17 38 16.7	
IDAH	**Dahanechah**	**6.08**	**107**	⇓*e*Pn		**Pn**	**17 36 00.6**	**+0.4**
IDAH	**Dahanechah**	**6.08**	**107**	⇓*e*Pn		**Pn**	**17 36 00.6**	**+0.4**
IDAH				*e*			17 38 17.5	
IAZR	**Azarshahr**	**6.37**	**300**	Pn		**Pn**	**17 36 05.2**	**+1.1**
IAZR	**Azarshahr**	**6.37**	**300**	*e*Pn		**Pn**	**17 36 05.3**	**+1.2**
IAZR				*e*			17 36 49.3	
UMR	**Umm Al-Rimmam**	**6.81**	**222**	*e*P		**Pn**	**17 36 09.6**	**-0.7**
MIB	**Mutribah**	**6.84**	**226**	*e*P		**Pn**	**17 36 10.0**	**-0.6**
ISHB	**Shabestar**	**6.90**	**303**	Pn		**Pn**	**17 36 12.7**	**+1.3**
ISHB	**Shabestar**	**6.90**	**303**	*e*Pn		**Pn**	**17 36 12.7**	**+1.3**
IMRD	**Marand**	**7.06**	**306**	Pn		**Pn**	**17 36 13.9**	**+0.3**
IMRD	**Marand**	**7.06**	**306**	*e*Pn		**Pn**	**17 36 14.0**	**+0.4**
KBD	**Kabd**	**7.12**	**220**	*e*P		**Pn**	**17 36 13.9**	**-0.6**
BHD	**Baghdad**	**7.28**	**261**	*ex*		x	17 36 15.0	
BHD				*ex*		x	17 37 39.0	
BHD				*ex*		x	17 38 26.0	
NAY	**Al-Naaiem**	**7.31**	**223**	*e*P		**Pn**	**17 36 16.2**	**-0.9**
RDF	**Al-Radifah**	**7.39**	**220**	*e*P		**Pn**	**17 36 18.3**	**+0.1**
MSL	**Mosul**	**8.20**	**285**	*ex*		x	17 36 31.0	
MSL				*ex*		x	17 37 07.0	
MSL				*ex*		x	17 38 07.0	
MSL				*ex*		x	17 38 39.0	
MSL				*ex*		x	17 38 55.0	
MSL				*ex*		x	17 39 03.0	
GNI	**Garni**	**8.49**	**312**	Pn		**Pn**	**17 36 38.6**	**+5.4**
	comp=N,0.3nm,0.3s,baz=122,slow=4.0,SNR=4.8							
GNI				Lg			17 39 03.1	
	comp=N,0.5nm,0.3s,baz=23,slow=15,SNR=1.8							
GNI				LR		LR	17 40 29.2	
	comp=N,585nm,20.7s,baz=259,slow=42							
GNI	**Garni**	**8.49**	**312**	Pn		**Pn**	**17 36 38.6**	**+5.4**
GNI				Lg			17 39 03.1	
GNI				LR		LR	17 40 29.2	
KIV	**Kislovodsk**	**12.16**	**322**	*e*P		**Pn**	**17 37 20.3**	**-3.2**
KIV	**Kislovodsk**	**12.16**	**322**	*e*P		**Pn**	**17 37 28.6**	**+5.1**
KIV				*e*S		**Sn**	**17 39 43.4**	**+3.6**
KIV					pmax	pmax		
	comp=Z,10.0nm,1.0s							
ASF	**Jabal al Asfar**	**13.66**	**264**	Pn		**Pn**	**17 37 40.8**	**-3.2**
	comp=Z,1.5nm,0.3s,baz=294,slow=8.8,SNR=9.8							
ASF				LR		LR	17 44 00.6	
	comp=Z,397nm,21.8s,baz=115,slow=42							
ASF	**Jabal al Asfar**	**13.66**	**264**	P		**Pn**	**17 37 40.8**	**-3.2**
ASF					pmax	pmax		
	comp=Z,2.0nm,0.3s							
ASF				MLR		MLR		
	comp=Z,397nm,21.8s							
MMAI	**Mount Meron Ar**	**14.69**	**268**	Pn		**Pn**	**17 37 54.7**	**-3.4**
	comp=Z,2.8nm,0.3s,baz=67,slow=15,SNR=11							
MMAI				LR		LR	17 44 32.8	
	comp=Z,374nm,18.8s,baz=70,slow=41							
AB31	**Akbulak array**	**15.40**	**17**	P		**Pn**	**17 38 03.2**	**-4.4**
AB31					pmax	pmax		
	comp=Z,23nm,0.9s							
CEP	**Cherat**	**15.69**	**88**	P		**Pn**	**17 38 11.9**	**+0.5**
THW	**Thamme Wali**	**15.74**	**92**	P		**Pn**	**17 38 14.3**	**+2.3**
KK31	**Karatay Array**	**15.99**	**53**	*i* P		**Pn**	**17 38 15.0**	**-0.3**
KK31					pmax	pmax		
	comp=Z,32nm,1.1s							
KK31	**Karatay Array**	**15.99**	**53**	*i* P		**Pn**	**17 38 15.0**	**-0.3**
	comp=Z,32nm,1.1s							
EIL	**Elat**	**16.06**	**257**	Pn		**Pn**	**17 38 13.1**	**-3.1**
	comp=Z,3.4nm,0.3s,baz=16,slow=6.1,SNR=18							
EIL				LR		LR	17 45 37.4	
	comp=Z,391nm,20.6s,baz=241,slow=42							
AKTK	**Aktyubinsk**	**16.12**	**12**	Pn		**Pn**	**17 38 19.0**	**+2.1**
AKTK				LR		LR	17 45 44.1	
AKTK	**Aktyubinsk**	**16.12**	**12**	P		**Pn**	**17 38 18.0**	**+1.1**
	comp=Z,8.0nm,1.1s							
AKTO	**Aktyubinsk**	**16.12**	**12**	Pn		**Pn**	**17 38 19.0**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=180,slow=15,SNR=34							
AKTO				LR		LR	17 45 44.1	
	comp=Z,126nm,19.2s,baz=189,slow=42							
AKTO	**Aktyubinsk**	**16.12**	**12**	P		**Pn**	**17 38 18.0**	**+1.1**
AKTO					pmax	pmax		
	comp=Z,8.0nm,1.1s							
CSS	**Prodhromos**	**16.12**	**276**	P		**Pn**	**17 38 18.6**	**+1.6**
	comp=Z,41nm,1.3s							
CSS	**Prodhromos**	**16.12**	**276**	P		**Pn**	**17 38 18.6**	**+1.6**
	comp=Z,41nm,1.3s							
BRTR	**Keskin Array B**	**16.17**	**294**	Pn		**Pn**	**17 38 19.9**	**+2.3**
CHCP	**Chirah Chowk**	**16.83**	**88**	P		**Pn**	**17 38 25.7**	**-0.4**
ANTO	**Ankara**	**16.84**	**294**	⇓*i*P		**Pn**	**17 38 29.9**	**+3.8**
EKS2	**Erkin-Say**	**18.05**	**58**	*e*P		**Pn**	**17 38 41.2**	**0.0**
	comp=Z,44nm,1.3s							
EKS2	**Erkin-Say**	**18.05**	**58**	P		**Pn**	**17 38 43.0**	**+1.9**
	SNR=20							
EKS2	**Erkin-Say**	**18.05**	**58**	*e*P		**Pn**	**17 38 41.2**	**+0.1**
	comp=Z,44nm,1.3s							
UCH	**Uchtor**	**18.43**	**60**	P		**Pn**	**17 38 45.9**	**+0.1**
UCH	**Uchtor**	**18.43**	**60**	P		**Pn**	**17 38 45.9**	**+0.1**
AAK	**Ala-Archa**	**18.54**	**58**	P		**Pn**	**17 38 48.2**	**+1.0**
	SNR=19							
FRU	**Bishkek**	**18.68**	**58**	*e*P		**Pn**	**17 38 49.2**	**+0.2**
USP	**Ospenovka**	**18.75**	**57**	P		**Pn**	**17 38 50.2**	**+0.5**
	SNR=60							
KBK	**Karagaybulak**	**18.86**	**59**	P		**Pn**	**17 38 51.4**	**+0.3**
	SNR=9.7							
KZA	**Kyzart**	**18.91**	**61**	P		**Pn**	**17 38 51.6**	**-0.1**
	SNR=12							
THN	**Thein Dam**	**19.09**	**90**	*ex*		x	17 38 50.3	
TKM2	**Tokmak 2**	**19.40**	**58**	*e*P		**Pn**	**17 38 56.4**	**-1.2**
TKM2	**Tokmak 2**	**19.40**	**58**	P		**Pn**	**17 38 57.3**	**-0.3**
	SNR=10							
TKM2	**Tokmak 2**	**19.40**	**58**	*e*P		**Pn**	**17 38 56.4**	**-1.2**
ULHL	**Ulahol**	**19.67**	**61**	P		**Pn**	**17 39 05.9**	**+5.1**
	SNR=17							
SMLA	**Simla**	**20.62**	**93**	*i* P		**P**	**17 39 13.6**	**+3.7**
TLCR		**21.18**	**307**	⇑P		**P**	**17 39 21.2**	**+5.4**
TLCR		**21.18**	**307**	⇑*i*P		**P**	**17 39 21.3**	**+5.4**
ARU	**Arti**	**22.04**	**8**	*e*P		**P**	**17 39 24.9**	**-0.1**
	comp=Z,135nm,1.2s,mb5.2							
ARU	**Arti**	**22.04**	**8**	*e*P		**P**	**17 39 24.4**	**-0.6**
ARU				*e*			17 39 42.3	
ARU				*e*S		**S**	**17 43 20.3**	**-8.5**
BRVK	**Borovoye**	**22.07**	**29**	*e*P		**P**	**17 39 25.1**	**-0.2**
	comp=Z,105nm,1.4s,mb5.1							
BRVK	**Borovoye**	**22.07**	**29**	*e*P		**P**	**17 39 25.1**	**-0.2**
BRVK					pmax	pmax		
	comp=Z,105nm,1.4s,mb5.1							
BRVK	**Borovoye**	**22.07**	**29**	*e*P		**P**	**17 39 25.1**	**-0.2**
	comp=Z,105nm,1.4s,mb5.1							
BVA0	**Borovoye Array**	**22.08**	**29**	*i* P		**P**	**17 39 25.1**	**-0.4**
BVA0					pmax	pmax		
	comp=Z,18nm,1.3s,mb4.3							
BVA0	**Borovoye Array**	**22.08**	**29**	*i* P		**P**	**17 39 25.1**	**-0.4**
	comp=Z,18nm,1.3s,mb4.3							
BVAR	**Borovoye Array**	**22.08**	**29**	P		**P**	**17 39 25.9**	**+0.4**
	comp=Z,14nm,0.7s,mb4.5,baz=212,slow=10,SNR=29							
BVAR				LR		LR	17 49 13.1	
	comp=Z,325nm,20.1s,MS3.7,baz=116,slow=40							
BVAR	**Borovoye Array**	**22.08**	**29**	P		**P**	**17 39 25.9**	**+0.4**
BVAR					pmax	pmax		
	comp=Z,14nm,0.7s							
BVAR				MLR		MLR		
	comp=Z,325nm,20.1s							
APE	**Apeiranthos**	**22.32**	**284**	⇓*i*P		**P**	**17 39 37.5**	**+9.3**
SVE	**Sverdlovsk**	**22.71**	**11**	⇓*e*P		**P**	**17 39 33.6**	**+1.5**
SVE				*e*S		**S**	**17 43 36.4**	**-5.4**
SVE					pmax	pmax		
	comp=Z,23nm,1.3s,mb4.5							
SVE	**Sverdlovsk**	**22.71**	**11**	*e*P		**P**	**17 39 33.6**	**+1.5**
	comp=Z,23nm,1.3s,mb4.5							
SVE				*e*S		**S**	**17 43 36.4**	**-5.4**
PLOR	**Plostina**	**22.84**	**307**	⇓*i*P		**P**	**17 39 35.4**	**+1.8**
IDI	**Anoyia**	**22.98**	**279**	P		**P**	**17 39 33.1**	**-2.1**
	comp=Z,30nm,1.2s,mb4.7,baz=1.8,slow=9.3,SNR=3.2							
IDI				LR		LR	17 49 39.7	
	comp=Z,161nm,21.2s,MS3.4,baz=99,slow=40							
MLR	**Muntele Rosu**	**23.19**	**306**	P		**P**	**17 39 39.2**	**+1.9**
	comp=Z,3.5nm,0.5s,mb4.1,baz=144,slow=8.7,SNR=6.7							
MLR	**Muntele Rosu**	**23.19**	**306**	P		**P**	**17 39 39.2**	**+1.9**
MLR					pmax	pmax		
	comp=Z,4.0nm,0.5s							
MLR	**Muntele Rosu**	**23.19**	**306**	⇑P		**P**	**17 39 39.6**	**+2.3**
MLR	**Muntele Rosu**	**23.19**	**306**	⇑*i*P		**P**	**17 39 39.6**	**+2.3**
OBN	**Obninsk**	**23.35**	**336**	⇑*i*P		**P**	**17 39 38.5**	**-0.3**
OBN				*i*			17 39 52.1	
OBN				*e*			17 40 09.6	
OBN					pmax	pmax		
	comp=Z,28nm,1.2s,mb4.7							
OBN	**Obninsk**	**23.35**	**336**	*i* P		**P**	**17 39 38.5**	**-0.3**
	comp=Z,28nm,1.2s,mb4.7							
AKASG	**Malin Array Be**	**23.49**	**320**	P		**P**	**17 39 39.4**	**-1.1**
	comp=Z,0.9nm,0.4s,mb3.6,baz=129,slow=8.8,SNR=8.3							
MOS	**Moscow**	**23.52**	**338**	*e*P		**P**	**17 39 53.3**	**+13**
MOS				*e*			17 39 58.9	
MOS				*e*			17 40 23.0	
MOS					pmax	pmax		
	comp=Z,55nm,1.0s,mb5.0							
BURAR	**Bucovina Array**	**24.39**	**310**	⇑P		**P**	**17 39 49.7**	**+0.9**
BURAR	**Bucovina Array**	**24.39**	**310**	⇑*i*P		**P**	**17 39 49.7**	**+0.9**
BUR08	**Bucovina Ar. S**	**24.41**	**310**	*e*P		**P**	**17 39 49.0**	**0.0**
BUR08	**Bucovina Ar. S**	**24.41**	**310**	*e*P		**P**	**17 39 49.0**	**0.0**
KURK	**Kurchatov**	**24.53**	**42**	*e*P		**P**	**17 39 50.5**	**+0.4**
	comp=Z,18nm,0.9s,mb4.8							
KURK	**Kurchatov**	**24.53**	**42**	P		**P**	**17 39 49.9**	**-0.2**
KURK					pmax	pmax		
	comp=Z,33nm,1.2s,mb4.9							
KURK	**Kurchatov**	**24.53**	**42**	P		**P**	**17 39 49.9**	**-0.2**
	comp=Z,33nm,1.2s,mb4.9							
SOKR	**Solikamsk**	**24.98**	**5**	⇑*i*P		**P**	**17 39 55.5**	**+1.5**
SOKR					pmax	pmax		
	comp=Z,60nm,1.4s,mb5.1							
SOKR	**Solikamsk**	**24.98**	**5**	*i* P		**P**	**17 39 55.5**	**+1.5**
	comp=Z,60nm,1.4s,mb5.1							
MK31	**Makanchi Array**	**25.12**	**52**	*i* P		**P**	**17 39 55.6**	**+0.1**
MK31					pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8							
MK31	**Makanchi Array**	**25.12**	**52**	*i* P		**P**	**17 39 55.6**	**+0.1**
	comp=Z,15nm,0.8s,mb4.8							
MKAR	**Makanchi Array**	**25.12**	**52**	P		**P**	**17 39 55.9**	**+0.4**
	comp=Z,11nm,0.8s,mb4.6,baz=243,slow=5.3,SNR=25							
MKAR	**Makanchi Array**	**25.12**	**52**	P		**P**	**17 39 55.9**	**+0.4**
MKAR					pmax	pmax		
	comp=Z,11nm,0.8s							
DRGR		**25.73**	**307**	⇑*i*P		**P**	**17 40 01.7**	**+0.7**
BZS	**Buzias**	**26.15**	**304**	⇑P		**P**	**17 40 05.0**	**+0.1**
BZS	**Buzias**	**26.15**	**304**	⇑*i*P		**P**	**17 40 04.9**	**+0.1**
TRPA	**Tarpa**	**26.26**	**310**	⇑*i*P		**P**	**17 40 07.8**	**+2.0**
PYUN	**Piuthan**	**26.40**	**96**	*e*P		**P**	**17 40 06.8**	**-0.5**
	comp=Z,9.5nm,0.6s,mb4.6							
DANN	**Dangsing**	**26.94**	**95**	*e*P		**P**	**17 40 12.4**	**+0.3**
	comp=Z,63nm,1.3s,mb5.2							
KOLN	**Koldanda**	**27.02**	**96**	*e*P		**P**	**17 40 12.0**	**-0.9**
	comp=Z,34nm,1.3s,mb4.9							
KLMR	**Klimovskoe**	**27.54**	**346**	P		**P**	**17 40 14.6**	**-2.6**
KLMR					pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8							
GKN	**Gorkha**	**27.79**	**95**	*e*P		**P**	**17 40 19.5**	**-0.2**
	comp=Z,50nm,1.0s,mb5.3							
WMQ	**Urumqi**	**28.21**	**61**	*e*P		**P**	**17 40 23.5**	**+0.2**
WMQ					AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9							
PKSM	**Moragy**	**28.31**	**304**	⇓P		**P**	**17 40 24.7**	**+0.5**
PKSM	**Moragy**	**28.31**	**304**	⇓*i*P		**P**	**17 40 24.7**	**+0.5**
KKN	**Kakani**	**28.39**	**95**	*e*P		**P**	**17 40 25.0**	**-0.2**
	comp=Z,24nm,0.7s,mb5.1							
KKN	**Kakani**	**28.39**	**95**	*e*P		**P**	**17 40 25.0**	**-0.2**
KKN					pmax	pmax		
	comp=Z,24nm,0.7s,mb5.1							
PKIN	**Phulchoki**	**28.57**	**95**	*e*P		**P**	**17 40 26.6**	**-0.1**
PKI	**Pulchoki**	**28.58**	**95**	*e*P		**P**	**17 40 26.6**	**-0.2**
GUN	**Gumba**	**28.84**	**94**	*e*P		**P**	**17 40 29.6**	**+0.5**
	comp=Z,43nm,1.0s,mb5.2							
NVS	**Novosibirsk**	**29.06**	**37**	*e*P		**P**	**17 40 29.6**	**-1.2**
NVS					pmax	pmax		
	comp=N,14nm,1.4s							
NVS					pmax	pmax		
	comp=Z,14nm,1.4s,mb4.6							
JIRN	**Jiri**	**29.19**	**95**	*e*P		**P**	**17 40 32.4**	**+0.2**
	comp=Z,20nm,1.0s,mb4.9							
ZAA0	**Zalesovo Array**	**29.43**	**39**	*e*P		**P**	**17 40 33.6**	**-0.5**
ZAA0	**Zalesovo Array**	**29.43**	**39**	*e*P		**P**	**17 40 33.6**	**-0.5**
ZALV	**Zalesovo Beam**	**29.43**	**39**	P		**P**	**17 40 34.2**	**+0.1**
	comp=Z,3.9nm,0.5s,mb4.5,baz=252,slow=9.2,SNR=17							
ZALV	**Zalesovo Beam**	**29.43**	**39**	P		**P**	**17 40 34.2**	**+0.1**
ZALV	**Zalesovo Beam**	**29.43**	**39**	P		**P**	**17 40 34.2**	**+0.1**
ZALV					pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5							
RAMN	**Ramite**	**29.80**	**96**	*e*P		**P**	**17 40 37.3**	**-0.4**
	comp=Z,11nm,0.7s,mb4.8							
ODAN	**Odare**	**30.48**	**95**	*e*P		**P**	**17 40 43.6**	**-0.1**
	comp=Z,20nm,0.7s,mb5.0							
TAPN	**Taplejung**	**30.55**	**94**	*e*P		**P**	**17 40 44.6**	**+0.3**
	comp=Z,35nm,1.3s,mb5.1							
GERES	**GERESS Array B**	**32.11**	**308**	P		**P**	**17 40 56.7**	**-1.1**
	comp=Z,3.6nm,0.8s,mb4.3,baz=99,slow=8.6,SNR=20							
GERES					PcP	PcP	17 43 46.8	-0.2
	comp=Z,1.0nm,0.7s,baz=177,slow=1.9,SNR=5.1							
GERES	**GERESS Array B**	**32.11**	**308**	P		**P**	**17 40 56.7**	**-1.1**
GERES							17 43 46.8	
GERES					pmax	pmax		
	comp=Z,4.0nm,0.9s							
GERES	**GERESS Array B**	**32.11**	**308**	PcP		PcP	17 43 46.8	-0.2
KHC	**Kasperske Hory**	**32.25**	**309**	*e*P		**P**	**17 41 00.0**	**+1.0**
KHC				*e*pP			17 41 04.0	
CLL	**Collm**	**33.10**	**312**	*i* P		**P**	**17 41 05.6**	**-0.8**
	comp=Z,4.0nm,0.9s,mb4.3							
CLL				*e*S		**S**	**17 46 28.0**	**+1.7**
CLL	**Collm**	**33.10**	**312**	*i* P		**P**	**17 41 05.6**	**-0.8**
CLL				*e*S		**S**	**17 46 28.0**	**+1.7**
CLL					pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
CLL	**Collm**	**33.10**	**312**	*e*P		**P**	**17 41 06.0**	**-0.4**
	comp=Z,4.0nm,0.8s,mb4.4							
WTTA	**Wattenberg**	**33.23**	**305**	⇑*i*P		**P**	**17 41 07.2**	**-0.4**
	comp=Z,14nm,0.9s,mb4.9							
SQTA	**Sankt Quirin**	**33.51**	**305**	⇑*i*P		**P**	**17 41 09.4**	**-0.7**
	comp=Z,8.1nm,0.5s,mb5.0							
MOTA	**Moosalm**	**33.60**	**305**	⇑*i*P		**P**	**17 41 09.7**	**-1.2**
	comp=Z,3.5nm,0.5s,mb4.5							
FETA	**Feichten**	**33.82**	**304**	⇑*i*P		**P**	**17 41 12.3**	**-0.5**
	comp=Z,11nm,0.9s,mb4.8							
DAVA	**Damuels**	**34.42**	**305**	⇑*i*P		**P**	**17 41 17.2**	**-0.8**
	comp=Z,10nm,0.5s,mb5.0							
KRAR	**Krasnoyarsk**	**34.51**	**39**	⇑*i*P		**P**	**17 41 19.9**	**+1.3**
KRAR					pmax	pmax		
	comp=Z,46nm,1.7s,mb5.1							
KRAR	**Krasnoyarsk**	**34.51**	**39**	*i* P		**P**	**17 41 19.9**	**+1.3**
	comp=Z,46nm,1.7s,mb5.1							
MBDF	**Montbardon**	**36.47**	**300**	*e*P		**P**	**17 41 33.2**	**-2.5**
	comp=Z,32nm,0.8s,mb4.9							
MBDF	**Montbardon**	**36.47**	**300**	*e*P		**P**	**17 41 33.2**	**-2.5**
	comp=Z,16nm,0.8s,mb4.9							
MBDF	**Montbardon**	**36.47**	**300**	*e*P		**P**	**17 41 33.2**	**-2.5**
MBDF					pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9							
LPG	**La Plagne**	**36.49**	**301**	*e*P		**P**	**17 41 36.0**	**+0.2**
LPL	**La Plagne**	**36.50**	**301**	*e*P		**P**	**17 41 36.5**	**+0.6**
	comp=Z,10.0nm,0.7s,mb4.3							
LPL	**La Plagne**	**36.50**	**301**	*e*P		**P**	**17 41 36.5**	**+0.6**
LPL					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3							
LPL	**La Plagne**	**36.50**	**301**	*e*P		**P**	**17 41 36.5**	**+0.6**
	comp=Z,10.0nm,0.7s,mb4.6							
BNI	**Bardonecchia**	**36.54**	**301**	*e*P		**P**	**17 41 35.4**	**-0.9**
	comp=Z,11nm,0.8s,mb4.7							
BNI	**Bardonecchia**	**36.54**	**301**	*e*P		**P**	**17 41 35.4**	**-0.8**
BNI					pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6							
BNI	**Bardonecchia**	**36.54**	**301**	*e*P		**P**	**17 41 35.4**	**-0.8**
	comp=Z,11nm,0.8s,mb4.7							
CABF	**La Chapelle**	**36.97**	**303**	*e*P		**P**	**17 41 39.9**	**0.0**
ORIF	**Oris-en-Rattie**	**37.10**	**300**	*e*P		**P**	**17 41 40.8**	**-0.3**
GTA	**Gaotai**	**37.35**	**69**	*e*P		**P**	**17 41 44.1**	**+0.9**
GTA					AP		17 41 48.0	
GTA					XP	sP	17 41 50.9	+7.7
GTA					AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.3							
GTA					LR	LR		
	comp=N,393nm,15.9s,MS4.4							
GTA					LR	LR		
	comp=E,213nm,15.0s,MS4.4							
GTA					LR	LR		
	comp=Z,249nm,15.3s,MS4.1							
NB2	**NORSAR Subarra**	**37.40**	**328**	P		**P**	**17 41 42.4**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.6,baz=118,slow=8.6							
NOA	**NORSAR Array B**	**37.40**	**328**	P		**P**	**17 41 41.9**	**-1.5**
	comp=Z,2.0nm,0.9s,mb3.9,baz=117,slow=8.1,SNR=6.9							
NOA	**NORSAR Array B**	**37.40**	**328**	P		**P**	**17 41 41.9**	**-1.4**
NOA					pmax	pmax		
	comp=Z,2.0nm,0.9s							
SMF	**Signal de Mont**	**38.52**	**303**	*e*P		**P**	**17 41 52.0**	**-1.0**
SSF	**Saint Saulge**	**38.75**	**304**	*e*P		**P**	**17 41 54.1**	**-0.8**
AVF	**Avril sur Loir**	**38.86**	**303**	*e*P		**P**	**17 41 54.2**	**-1.6**
	comp=Z,26nm,1.0s,mb4.5							
AVF	**Avril sur Loir**	**38.86**	**303**	*e*P		**P**	**17 41 54.2**	**-1.6**
AVF					pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5							
AVF	**Avril sur Loir**	**38.86**	**303**	*e*P		**P**	**17 41 54.2**	**-1.6**
	comp=Z,26nm,1.0s,mb4.8							
ZAK	**Zakamensk**	**39.43**	**51**	*e*P		**P**	**17 41 57.7**	**-2.9**
ZAK				*e*			17 44 10.7	
ZAK					pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.9							
TCF	**Toulx Ste Croi**	**39.65**	**303**	*e*P		**P**	**17 42 01.4**	**-1.1**
LFF	**La Frestale**	**40.75**	**301**	*e*P		**P**	**17 42 11.7**	**+0.1**
LZH	**Lanzhou**	**41.10**	**73**	*e*P		**P**	**17 42 17.5**	**+2.8**
LZH					AP		17 42 21.3	
LZH					XP	sP	17 42 23.5	+8.8
LZH					AMB	AMB		
	comp=Z,20nm,1.4s,mb4.7							
LZH					AMB	AMB		
	comp=Z,105nm,5.0s							
LDF	**La Druitiere**	**41.19**	**306**	*e*P		**P**	**17 42 13.7**	**-1.5**
SONM	**Songino Array**	**41.44**	**55**	P		**P**	**17 42 16.8**	**-0.4**
	comp=Z,3.4nm,1.1s,mb4.0,baz=273,slow=7.9,SNR=13							
SONM	**Songino Array**	**41.44**	**55**	P		**P**	**17 42 16.8**	**-0.4**
SONM					pmax	pmax		
	comp=Z,3.0nm,1.1s							
SGMF	**Saint Gilles**	**42.82**	**306**	*e*P		**P**	**17 42 27.5**	**-1.0**
CHTO	**Chiang Mai**	**43.62**	**99**	*e*P		**P**	**17 42 34.0**	**-1.3**
	comp=Z,5.6nm,0.6s,mb4.5							
CHTO	**Chiang Mai**	**43.62**	**99**	*e*P		**P**	**17 42 34.0**	**-1.3**
CHTO					pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5							
CHTO	**Chiang Mai**	**43.62**	**99**	*e*P		**P**	**17 42 34.0**	**-1.3**
	comp=Z,5.6nm,0.6s,mb4.5							
CMAR	**Chiang Mai Arr**	**43.80**	**100**	P		**P**	**17 42 35.7**	**-1.1**
	comp=Z,3.9nm,0.7s,mb4.2,baz=298,slow=8.7,SNR=30							
CMAR	**Chiang Mai Arr**	**43.80**	**100**	P		**P**	**17 42 35.7**	**-1.1**
CMAR					pmax	pmax		
	comp=Z,4.0nm,0.7s							
KMI	**Kunming**	**43.81**	**89**	P		**P**	**17 42 38.0**	**+1.2**
KMI					AMB	AMB		
	comp=Z,12nm,1.4s,mb4.4							
BOD	**Bodaibo**	**46.17**	**40**	*e*P		**P**	**17 42 54.0**	**-1.2**
BOD					pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8							
BOD	**Bodaibo**	**46.17**	**40**	*e*P		**P**	**17 42 54.0**	**-1.2**
	comp=Z,13nm,1.2s,mb4.8							
HIA	**Hailar**	**50.12**	**52**	*e*P		**P**	**17 43 26.6**	**+0.8**
	comp=Z,13nm,1.1s,mb4.8							
HIA	**Hailar**	**50.12**	**52**	*e*P		**P**	**17 43 26.6**	**+0.8**
HIA					pmax	pmax		
	comp=Z,13nm,1.1s							
HIA	**Hailar**	**50.12**	**52**	*e*P		**P**	**17 43 26.6**	**+0.8**
	comp=Z,13nm,1.1s,mb4.8							
TOA0	**Torodi Ar. Sit**	**50.94**	**258**	*e*P		**P**	**17 43 30.5**	**-1

LAST	**Lasithi**	**1.11**	**193**	P	**Pn**	**17 47 33.8**	**-2.3**
LAST				S	**Sn**	**17 47 50.4**	**+0.2**
ZKR	**Zakros**	**1.18**	**163**	P	**Pn**	**17 47 36.5**	**-0.5**
ZKR				S	**Sn**	**17 47 52.7**	**+0.8**
KARP	**Karpathos**	**1.32**	**122**	*e*PN	**Pn**	**17 47 39.5**	**+0.6**
SIVA	**Sivas**	**1.46**	**213**	P	**Pn**	**17 47 37.7**	**-3.2**
VAM	**Vamos**	**1.54**	**237**	*e*PN	**Pn**	**17 47 47.7**	**+5.8**
VAM				*e*SN	**Sn**	**17 48 11.0**	**+10**
ARG	**Arkhangelos**	**1.89**	**90**	*e*PN	**Pn**	**17 47 47.0**	**+0.2**

IDC 19 17:47:53.8±3.7, 2114S×17349E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=141.3km s-min=46.0km az=144.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.37**	**243**	P	P	17 54 07.1	-0.5
	0.9nm,0.8s,baz=69,slow=8.6,SNR=2.5						
ASAR	**Alice Springs**	**36.60**	**258**	P	P	17 55 02.1	+0.1
	0.8nm,0.8s,baz=84,slow=9.9,SNR=13						
WRA	**Warramunga Arr**	**36.62**	**265**	P	P	17 55 02.3	+0.2
	1.0nm,0.8s,baz=97,slow=8.1,SNR=11						
GERES	**GERESS Array B**	**147.98**	**334**	PKPbc	PKPbc	18 07 40.5	-0.5
	0.5nm,0.6s,baz=28,slow=4.4,SNR=3.4						

*IDC **19** 17:48:23.1±2.4,2317S×7094W, h0km, mb4.1/1, mb1 4.0/3, mb1mx3.6/17, mbtmp3.9/3, ML3.9/2, Error ellipse: s-maj=52.1km s-min=36.1km az=163.0*
*ISCJB **19** 17:48:26.9±1.4, 2294S±006×7104W±009, h33km, Error ellipse: s-maj=12.4km s-min=9.0km az=164.4*
*GUC **19** 17:48:26.6±0.9, 2283S×7093W, h33km±4km, ML3.4*
ISC 19 17:48:28.5±1.5, 2298S±007×710W±01, h35km, n9, σ1§40/13, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.49**	**105**	*e*P	**Pn**	**17 48 36.9**	**-2.2**
MECH				*i* S	**Sn**	**17 48 44.3**	**-2.1**
MECH				AML	AML	17 48 47.2	
	comp=N,7μm,0.3s						
CEN1	**Los Morros**	**0.81**	**121**	*i* P	**Pn**	**17 48 43.5**	**0.0**
CEN1				*i* S	**Sn**	**17 48 56.2**	**+1.8**
CEN1				AML	AML	17 48 57.5	
	comp=E,2μm,0.5s						
ANCH	**Antofagasta**	**0.87**	**144**	⇓*i* P	**Pn**	**17 48 43.9**	**-0.3**
ANCH				*i* S	**Sn**	**17 48 56.4**	**+0.7**
ANCH				AML	AML	17 49 02.3	
	comp=E,2μm,0.5s						
LVC	**Limon Verde**	**1.93**	**80**	Pn	**Pn**	**17 48 58.7**	**-0.1**
	comp=E,70nm,0.3s,baz=252,slow=13,SNR=140						
LVC				Sn	**Sn**	**17 49 23.2**	**+1.4**
	comp=E,73nm,0.3s,baz=59,slow=5.8,SNR=26						
LVC	**Limon Verde**	**1.93**	**80**	*e*P	**Pn**	**17 48 58.6**	**-0.2**
LVC				*i* S	**Sn**	**17 49 23.4**	**+1.6**
LVC				AML	AML	17 49 28.6	
	comp=E,422nm,0.5s						
LPAZ	**La Paz**	**7.17**	**22**	Pn	**Pn**	**17 50 12.7**	**+1.8**
	comp=E,0.9nm,0.3s,baz=224,slow=7.3,SNR=14						
SIV	**San Ignacio**	**11.63**	**55**	Pn	**Pn**	**17 51 09.9**	**-2.1**
	comp=E,0.3nm,0.3s,baz=252,slow=15,SNR=13						
TORD	**Torodi Ar. Bea**	**79.64**	**71**	P	**P**	**18 00 33.2**	**+0.4**
	comp=E,1.5nm,0.9s,baz=259,slow=4.8,SNR=6.6						
MKAR	**Makanchi Array**	**147.94**	**36**	PKPbc	PKPbc	18 08 09.8	-0.2
	comp=E,0.6nm,0.7s,baz=309,slow=2.9,SNR=4.1						

*BJI **19** 17:49:00.6, 2721N×14237E, h80km, mB5.1, mb4.9, Ms4.3, Msz4.0*
*MOS **19** 17:49:02.6±0.9, 2755N×14155E, h37km, mb5.4/52, MS4.9/4, Error ellipse: s-maj=10.6km s-min=4.7km az=111.1*
*IDC **19** 17:49:04.4±0.7, 2752N×14163E, h42km±7km, mb4.7/20, mb1 4.8/23, mb1mx4.8/26, mbtmp4.7/23, ML4.4/3, MS3.6/9, Ms1 3.7/9, ms1mx3.5/39, Error ellipse: s-maj=15.4km s-min=6.8km az=65.0*
*ISCJB **19** 17:49:05.7±0.6, 2767N±003×14151E±002, h56km±4km, mb5.1/114, MS4.0/14, Error ellipse: s-maj=4.3km s-min=3.5km az=174.1*
*JMA **19** 17:49:05.0, 2766N×14198E, h59km±2km, M5.1*
JMA Felt II J1.
*DJA **19** 17:49:05, 2741N×142.14E, h32km, mb5.4/16*
*SZGRF **19** 17:49:08.0, 2817N×14092E, h33km, mb5.4, Bonin Islands, Japan, region*
*NEIC **19** 17:49:08.7±1.0, 2758N×14153E, h76km±8km, mb5.1/44, Error ellipse: s-maj=6.8km s-min=5.6km az=129.0*
NEIC Recorded [2 JMA] in the Chichijima-retto.
ISC 19 17:49:08.5±0.6, 2767N±003×14152E±002, h68km±4km, h84km±1.5km: pP-P, n553, σ0§83/562, mb5.0/114, 139C-125D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.82**	**134**	P	**Pn**	**17 49 18.1**	**-6.5**
	2μm,0.3s,baz=332,slow=4.6,SNR=377						
CBIJ				S	**Sn**	**17 49 27.6**	**-8.9**
	11μm,0.3s,baz=252,slow=20,SNR=40						
CBIJ	**Chichi jima**	**0.82**	**134**	P	**Pn**	**17 49 18.0**	**-6.6**
CBIJ				*e*S	**Sn**	**17 49 27.3**	**-9.3**
JHHJ	**Haha-jima-NKT**	**1.19**	**150**	P	**Pn**	**17 49 23.7**	**-5.6**
JHHJ				*e*S	**Sn**	**17 49 37.8**	**-6.2**
JHJ2	**Mitsune**	**5.62**	**345**	P	**Pn**	**17 50 29.1**	**-0.3**
JHJ2				*e*S	**Sn**	**17 51 33.7**	**+1.1**
JHJ	**Hachijo jima 2**	**5.64**	**345**	P	**Pn**	**17 50 29.2**	**-0.4**
	21nm,0.3s,baz=83,slow=19,SNR=12						
JHJ				S	**Sn**	**17 51 31.4**	**-1.5**
	46nm,0.3s,baz=73,slow=19,SNR=3.4						
JHJ				LR	LR	17 51 53.5	
	comp=Z,121nm,19.7s,baz=77,slow=29						
JKO	**Kozu shima**	**6.81**	**343**	P	**Pn**	**17 50 47.3**	**+1.6**
BSO1	**Boso 1**	**6.98**	**356**	P	**Pn**	**17 50 46.7**	**-1.3**
BSO1				*e*S	**Sn**	**17 52 02.8**	**-3.1**
JIM2	**Oshima 3**	**7.25**	**346**	P	**Pn**	**17 50 51.5**	**-0.2**
BSO4	**Boso 4**	**7.37**	**352**	P	**Pn**	**17 50 54.3**	**+1.0**
BSO4				*e*S	**Sn**	**17 52 19.8**	**+4.4**
JIZS	**Izushimoda**	**7.38**	**343**	P	**Pn**	**17 50 56.5**	**+3.0**
TATJ	**Tateyama 2**	**7.47**	**350**	P	**Pn**	**17 50 54.7**	**0.0**
TATJ				*e*S	**Sn**	**17 52 20.2**	**+2.2**
JWZ	**Kozaga**	**7.69**	**321**	P	**Pn**	**17 51 01.4**	**+3.6**
JYO	**Yokosk**	**7.70**	**349**	P	**Pn**	**17 50 58.6**	**+0.8**
JYO				*e*S	**Sn**	**17 52 25.0**	**+1.5**
JOD2	**Odawara 2**	**7.85**	**345**	P	**Pn**	**17 51 01.3**	**+1.4**
JOD2				*e*S	**Sn**	**17 52 30.2**	**+2.9**
HMMJ	**Hamamatsu 2**	**7.87**	**337**	P	**Pn**	**17 51 01.1**	**+0.9**
JIE	**Ise**	**7.87**	**330**	P	**Pn**	**17 51 02.4**	**+2.2**
JKN2	**Miekihoku**	**7.95**	**327**	P	**Pn**	**17 51 03.2**	**+1.9**
CHOJ	**Chosi**	**8.03**	**356**	P	**Pn**	**17 51 01.4**	**-1.0**
JWM	**Minabe**	**8.13**	**321**	P	**Pn**	**17 51 09.1**	**+5.4**
JYN	**Shimob**	**8.21**	**343**	P	**Pn**	**17 51 06.8**	**+2.0**
JYN				*e*S	**Sn**	**17 52 41.6**	**+5.6**
JWY	**Kouya**	**8.28**	**324**	P	**Pn**	**17 51 09.8**	**+4.0**
JHU	**Hanno**	**8.38**	**347**	P	**Pn**	**17 51 06.6**	**-0.5**
JHU				*e*S	**Sn**	**17 52 38.9**	**-1.3**
JYT	**Yasato**	**8.61**	**353**	P	**Pn**	**17 51 09.6**	**-0.7**
JYT				*e*S	**Sn**	**17 52 43.9**	**-1.9**
JRY	**Ryogami san**	**8.62**	**346**	P	**Pn**	**17 51 10.3**	**-0.1**
JRY				*e*S	**Sn**	**17 52 46.8**	**+0.8**
JAG	**Ashikaga**	**8.90**	**349**	P	**Pn**	**17 51 12.4**	**-1.9**
JAG				*e*S	**Sn**	**17 52 51.3**	**-1.7**
JHO	**Hitachi**	**8.95**	**355**	P	**Pn**	**17 51 13.2**	**-1.8**
JHO				*e*S	**Sn**	**17 52 48.4**	**-5.8**
JGK	**Kuni**	**9.20**	**345**	P	**Pn**	**17 51 18.6**	**+0.3**
MJAR	**Matsushiro Arr**	**9.28**	**343**	P	**Pn**	**17 51 19.0**	**-0.5**
	5.4nm,0.3s,baz=157,slow=12,SNR=36						
MJAR				S	**Sn**	**17 53 03.0**	**+0.7**
	1.4nm,0.3s,baz=158,slow=13,SNR=3.5						
MJAR				LR	LR	17 55 05.6	
	comp=Z,152nm,18.1s,baz=180,slow=38						
MJAR	**Matsushiro Arr**	**9.28**	**343**	P	**Pn**	**17 51 19.0**	**-0.5**
MJAR				S	**Sn**	**17 53 03.0**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**9.28**	**343**	*e*P	**Pn**	**17 51 19.6**	**+0.2**
	comp=N,31nm,0.8s						
MAJO	**Matsushiro**	**9.28**	**343**	*e*P	**Pn**	**17 51 19.6**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s						
MAT	**Matsushiro**	**9.28**	**343**	P	**Pn**	**17 51 19.7**	**+0.2**
MAT				S	**Sn**	**17 53 00.9**	**-1.4**
MAT	**Matsushiro**	**9.28**	**343**	P	**Pn**	**17 51 20.3**	**+0.8**
JFK	**Kawauchi**	**9.69**	**357**	P	**Pn**	**17 51 22.5**	**-2.5**
JFK				*e*S	**Sn**	**17 53 04.7**	**-7.4**
JFT	**Otama**	**9.87**	**354**	P	**Pn**	**17 51 26.2**	**-1.3**
JFT				*e*S	**Sn**	**17 53 11.7**	**-5.0**
JMM	**Marumori**	**10.19**	**357**	P	**Pn**	**17 51 29.1**	**-2.7**
JMM				*e*S	**Sn**	**17 53 18.1**	**-6.3**
JIO	**Ouri**	**10.76**	**359**	P	**Pn**	**17 51 37.0**	**-2.6**
JIO				*e*S	**Sn**	**17 53 30.3**	**-8.0**
JMK	**Ichinoseki**	**11.26**	**359**	P	**Pn**	**17 51 43.8**	**-2.6**
JMK				*e*S	**Sn**	**17 53 43.5**	**-7.0**
JOW	**Kunigami**	**11.82**	**269**	P	**Pn**	**17 51 55.4**	**+1.2**
	comp=Z,4.5nm,0.3s,baz=108,slow=19,SNR=13						
JOW				LR	LR	17 56 21.6	
	comp=Z,358nm,18.3s,baz=300,slow=37						
ERM	**Erimo**	**14.38**	**5**	⇑*i* P	**Pn**	**17 52 26.6**	**-1.8**
KSRS	**Korea Array**	**15.04**	**314**	P	**Pn**	**17 52 39.6**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=124,slow=11,SNR=12						
KSRS				PcP	PcP	17 57 41.6	+0.5
	comp=Z,0.2nm,0.3s,baz=180,slow=0.8,SNR=7.0						
KSRS				LR	LR	17 58 06.8	
	comp=Z,457nm,20.9s,baz=97,slow=36						
ASAJ	**Asahikawa**	**16.44**	**3**	P	**Pn**	**17 52 53.5**	**-1.1**
	comp=Z,2.5nm,0.3s,baz=226,slow=15,SNR=12						
ASAJ	**Asahikawa**	**16.44**	**3**	P	**Pn**	**17 52 53.6**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NACB	**Ninganchiao**	**18.26**	**264**	*e*P	**Pn**	**17 53 18.8**	**+1.6**
YHNB	**Yeheng**	**18.33**	**265**	*e*P	**Pn**	**17 53 20.5**	**+2.4**
	comp=Z,59nm,0.6s						
YSS	**Yuzh-Sakhalins**	**19.28**	**3**	*e*P	**Pn**	**17 53 30.6**	**+1.4**
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**19.28**	**3**	*e*P	**Pn**	**17 53 30.0**	**+0.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
MDJ	**Mudanjiang**	**19.43**	**334**	P	**Pn**	**17 53 31.1**	**+0.1**
MDJ				S	**S**	**17 57 07.8**	**+2.7**
MDJ				XS	sS	17 57 34.9	+6.7
MDJ				AMB	AMB		
	comp=Z,16nm,2.1s						
MDJ				AMB	AMB		
	comp=Z,304nm,3.9s						
MDJ				LR	LR		
	comp=E,150nm,21.1s						
MDJ				LR	LR		
	comp=Z,201nm,25.1s						
NJ2	**Nanjing**	**20.13**	**288**	*e*P	**P**	**17 53 41.6**	**+4.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
SNY	**Shenyang**	**20.36**	**319**	⇑P	**P**	**17 53 45.1**	**+5.7**
SNY				AMB	AMB		
	comp=Z,33nm,0.5s						
SNY				AMB	AMB		
	comp=Z,461nm,3.5s						
SNY				LR	LR		
	comp=E,355nm,17.7s						
SNY				LR	LR		
	comp=Z,313nm,21.8s						
CN2	**Changchun**	**20.66**	**325**	*e*P	**P**	**17 53 45.3**	**+2.7**
HABR	**Khabarovsk**	**21.37**	**348**	*e*P	**P**	**17 53 49.4**	**-0.7**
HABR				*e*		17 54 08.9	
HABR				*e*S	**S**	**17 57 46.5**	**+3.1**
HABR				*e*		17 57 48.0	
HABR				*e**SS	sS	17 58 01.3	-5.8
HABR				*e*SS		17 58 12.0	
HABR				*e*SSS		17 58 25.5	
HABR				pmax	pmax		
	comp=Z,55nm,1.0s,mb4.8						
WHN	**Wuhan**	**23.89**	**283**	P	**P**	**17 54 16.9**	**+1.0**
BJI	**Beijing**	**24.31**	**307**	P	**P**	**17 54 19.8**	**+0.2**
BJI				AMB	AMB		
	comp=Z,23nm,0.4s,mb4.9						
HIA	**Hailar**	**27.31**	**328**	*e*P	**P**	**17 54 46.7**	**+0.1**
	comp=Z,7.5nm,0.6s,mb4.4						
HIA	**Hailar**	**27.31**	**328**	*e*P	**P**	**17 54 46.7**	**+0.1**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**27.89**	**306**	*e*P	**P**	**17 54 53.8**	**+1.9**
HHC				AP	pP	17 55 13.3	+5.2
HHC				XP	sP	17 55 22.8	+6.7
HHC				PP	PP	17 55 46.6	-9.2
HHC				S	**S**	**17 59 31.4**	**+0.9**
HHC				XS	sS	18 00 03.5	+5.1
HHC				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,189nm,5.1s						
HHC				LR	LR		
	comp=N,389nm,15.5s						
HHC				LR	LR		
	comp=E,350nm,16.7s						
HHC				LR	LR		
	comp=Z,452nm,17.2s						
PETK	**Petropavlovsk-**	**28.11**	**21**	P	**P**	**17 54 51.7**	**-2.0**
	comp=Z,8.9nm,1.0s,mb4.2,baz=246,slow=11,SNR=2.8						
PETK				LR	LR	18 03 59.1	
	comp=Z,159nm,20.9s,baz=356,slow=32						
XAN	**Xi'an**	**28.62**	**291**	P	**P**	**17 54 58.3**	**-0.2**
XAN				AP	pP	17 55 17.6	+2.8
XAN				XP	sP	17 55 27.3	+4.6
XAN				S	**S**	**17 59 42.8**	**+0.6**
XAN				AMB	AMB		
	comp=Z,48nm,0.7s,mb5.2						
XAN				LR	LR		
	comp=E,93nm,20.1s						
XAN				LR	LR		
	comp=Z,238nm,27.9s						
GYA	**Guiyang**	**31.01**	**276**	⇑*i* P	**P**	**17 55 20.3**	**+0.6**
GYA				AP	pP	17 55 39.0	+3.0
GYA				XP	sP	17 55 48.3	+4.3
GYA				PP	PP	17 56 26.0	-4.7
GYA				S	**S**	**18 00 18.0**	**-1.8**
GYA				SCP	ScP	18 01 48.1	-3.1
GYA				PCS	PcS	18 01 56.3	-2.2
GYA				SCS	ScS	18 05 44.1	-4.3
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,560nm,10.2s						
GYA				LR	LR		
	comp=E,320nm,11.3s						
GYA				LR	LR		
	comp=Z,650nm,10.8s						
LBMI	**Labuha**	**31.20**	**208**	P	**P**	**17 55 21.8**	**+0.4**
	comp=Z,44nm,1.4s,mb5.0						
CLNS	**Chul'man**	**31.46**	**342**	*e*P	**P**	**17 55 20.9**	**-2.4**
CLNS				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=N,17nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
LZH	**Lanzhou**	**32.92**	**294**	*e*P	**P**	**17 55 36.0**	**-0.3**
LZH				XP	sP	17 56 04.0	+3.3
LZH				PP	PP	17 56 52.4	+0.6
LZH				AMB	AMB		
	comp=Z,39nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,130nm,4.2s						
LZH				LR	LR		
	comp=N,1μm,14.3s						
LZH				LR	LR		
	comp=Z,1μm,15.4s						
CD2	**Chengdu**	**32.99**	**285**	*e*P	**P**	**17 55 37.3**	**+0.2**
CD2				AP	pP	17 55 56.5	+3.0
CD2				XP	sP	17 56 07.5	+6.1
CD2				PP	PP	17 56 50.5	-2.2
CD2				PCP	PcP	17 58 19.9	+0.3
CD2				S	**S**	**18 00 49.4**	**-1.2**
CD2				PCS	PcS	18 02 04.1	-1.1
CD2				AMB	AMB		
	comp=Z,240nm,4.2s						
CD2				LR	LR		
	comp=N,240nm,15.2s						
CD2				LR	LR		
	comp=E,310nm,16.2s						
CD2				LR	LR		
	comp=Z,210nm,14.8s						
SONM	**Songino Array**	**33.89**	**316**	P	**P**	**17 55 43.7**	**-1.0**
	comp=Z,1.8nm,0.5s,mb4.2,baz=131,slow=11,SNR=19						
SONM				PcP	PcP	17 58 21.5	-0.4
	comp=Z,4.9nm,0.8s,baz=143,slow=3.3,SNR=16						
SONM				ScP	ScP	18 02 00.4	-0.4
	comp=Z,4.4nm,0.7s,baz=142,slow=3.1,SNR=24						
SONM				LR	LR	18 09 25.2	
	comp=Z,174nm,19.1s,baz=100,slow=36						
KMI	**Kunming**	**34.74**	**275**	P	**P**	**17 55 54.3**	**+2.0**
KMI				AP	pP	17 56 13.6	+4.8
KMI				XP	sP	17 56 23.6	+6.9
KMI				PP	PP	17 57 13.6	+1.5
KMI				S	**S**	**18 01 17.1**	**-0.6**
KMI				XS	sS	18 01 51.6	+5.7
KMI				AMB	AMB		
	comp=Z,32nm,0.9s,mb5.2						
KMI				AMB	AMB		
	comp=Z,108nm,5.6s						
KMI				LR	LR		
	comp=N,167nm,13.0s						
KMI				LR	LR		
	comp=E,138nm,16.8s						
KMI				LR	LR		
	comp=Z,101nm,19.1s						
PCI	**Palu**	**35.23**	**220**	P	**P**	**17 55 56.8**	**+0.2**
	comp=Z,86nm,1.0s,mb5.5						
YAK	**Yakutsk**	**35.25**	**350**	*e*P	**P**	**17 55 56.2**	**0.0**
	comp=Z,26nm,0.8s,mb5.1						
YAK	**Yakutsk**	**35.25**	**350**	*e*P	**P**	**17 55 55.9**	**-0.3**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
BOD	**Bodaibo**	**35.79**	**335**	*e*P	**P**	**17 56 00.5**	**-0.4**
BOD				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
SEY	**Seymchan**	**35.98**	**8**	⇑*e*P	**P**	**17 56 03.0**	**+0.6**
KDI	**Kendari**	**36.34**	**213**	P	**P**	**17 56 06.5**	**+0.4**
	comp=Z,76nm,1.1s,comp=Z,3μm,mb5.5						
GTA	**Gaotai**	**36.39**	**300**	*e*P	**P**	**17 56 06.0**	**-0.2**
GTA				AP	pP	17 56 27.0	+4.2
GTA				XP	sP	17 56 38.8	+8.1
GTA				PCP	PcP	17 58 29.9	+0.6
GTA				S	**S**	**18 01 41.8**	**-0.9**
GTA				XS	sS	18 02 24.3	+13
GTA				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.7						
GTA				AMB	AMB		
	comp=Z,120nm,3.9s						
GTA				LR	LR		
	comp=N,180nm,14.3s						
GTA				LR	LR		
	comp=E,160nm,12.8s						
GTA				LR	LR		
	comp=Z,221nm,17.2s						
ZAK	**Zakamensk**	**36.79**	**319**	*e*P	**P**	**17 56 08.7**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TLY	**Talaya**	**37.12**	**321**	*e*P	**P**	**17 56 11.9**	**-0.4**
	comp=Z,7.4nm,0.5s,mb4.9						
TLY	**Talaya**	**37.12**	**321**	*e*P	**P**	**17 56 13.4**	**+1.1**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
SBUM	**Sibu**	**37.59**	**233**	P	**P**	**17 56 18.6**	**+1.9**
STKI	**Sintang**	**39.80**	**231**	P	**P**	**17 56 36.4**	**+1.2**
	comp=Z,49nm,1.0s,mb5.3						
CHG	**Chiang Mai**	**39.94**	**267**	⇑P	**P**	**17 56 36.7**	**+0.4**
	comp=Z,20nm,0.7s,mb5.0						
CHTO	**Chiang Mai**	**39.94**	**267**	*e*P	**P**	**17 56 36.9**	**+0.5**
	comp=Z,28nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**39.94**	**267**	*e*P	**P**	**17 56 36.9**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
CMAR	**Chiang Mai Arr**	**40.07**	**266**	P	**P**	**17 56 38.2**	**+0.8**
	comp=Z,7.3nm,0.5s,mb4.7,baz=70,slow=5.6,SNR=43						
CMAR				PcP	PcP	17 58 40.9	-0.2
	comp=Z,3.3nm,0.8s,baz=70,slow=0.5,SNR=13						
CMAR				LR	LR	18 12 10.4	
	comp=Z,87nm,20.4s,baz=75,slow=34						
CMAR	**Chiang Mai Arr**	**40.07**	**266**	*i* P	**P**	**17 56 38.5**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BDT	**Bhumibol Dam**	**40.47**	**264**	P	**P**	**17 56 42.0**	**+1.3**
	comp=Z,22nm,0.6s,mb5.2						
PBKI	**Pangkalan Bun**	**41.69**	**228**	P	**P**	**17 56 55.9**	**+5.2**
	comp=Z,165nm,0.7s,mb5.9						
KHKI	**Kahang-Kahang**	**43.73**	**219**	P	**P**	**17 57 07.0**	**-0.2**
LSA	**Lhasa**	**43.96**	**285**	P	**P**	**17 57 10.4**	**+1.4**
LSA	**Lhasa**	**43.96**	**285**	*e*P	**P**	**17 57 10.3**	**+1.4**
	comp=Z,9.9nm,0.6s,mb4.7						
LSA	**Lhasa**	**43.96**	**285**	*e*P	**P**	**17 57 10.3**	**+1.3**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
SHL	**Shillong**	**44.19**	**279**	*e*P	**P**	**17 57 13.0**	**+2.1**
MYKOM	**Kota Tinggi**	**44.27**	**241**	P	**P**	**17 57 13.0**	**+1.4**
TIXI	**Tiksi**	**44.58**	**354**	*e*P	**P**	**17 57 12.7**	**-0.6**
	comp=Z,5.9nm,0.4s,mb4.7						
TIXI	**Tiksi**	**44.58**	**354**	*e*P	**P**	**17 57 13.2**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
KRAR	**Krasnoyarsk**	**44.66**	**323**	⇓*i* P	**P**	**17 57 14.1**	**-0.1**
KRAR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
SJI	**Sawahan**	**45.47**	**224**	P	**P**	**17 57 22.2**	**+1.1**
WMQ	**Urumqi**	**45.76**	**305**	*e*P	**P**	**17 57 25.0**	**+1.9**
WMQ				AP	pP	17 57 44.0	+3.8
WMQ				XP	sP	17 57 53.0	+5.0
WMQ				PP	PP	17 59 14.0	+2.7
WMQ				S	**S**	**18 04 02.0**	**+0.4**
WMQ				SS	SS	18 07 20.0	-6.6
WMQ				AMB	AMB		
	comp=Z,29nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,58nm,4.0s						
WMQ				LR	LR		
	comp=N,75nm,16.0s						
WMQ				LR	LR		
	comp=E,104nm,16.0s						
WMQ				LR	LR		
	comp=Z,103nm,16.0s						
TAPN	**Taplejung**	**47.40**	**283**	*e*P	**P**	**17 57 36.8**	**+0.6**
	comp=Z,16nm,0.4s,mb5.2						
LEM	**Lembang**	**47.43**	**229**	P	**P**	**17 57 36.6**	**+0.1**
	comp=Z,83nm,0.8s,mb5.5						
CTA	**Charters Tower**	**47.69**	**174**	P	**P**	**17 57 36.5**	**-1.8**
	comp=Z,15nm,0.6s,mb5.0,baz=2.1,slow=7.6,SNR=21						
CTA	**Charters Tower**	**47.69**	**174**	P	**P**	**17 57 36.6**	**-1.7**
CTA				pmax	pmax		
	comp=Z,15nm,0.6s						
ODAN	**Odare**	**47.79**	**282**	*e*P	**P**	**17 57 39.7**	**+0.5**
	comp=Z,149nm,0.8s,mb5.9						
WRAB	**Tennant Creek**	**47.83**	**189**	*e*P	**P**	**17 57 37.3**	**-2.0**
	comp=Z,34nm,0.5s,mb5.4						
WRAB	**Tennant Creek

PKIN **Phulchoki** 49.34 284 *e*P P 17 57 51.1 0.0
KKN **Kakani** 49.39 284 *e*P P 17 57 51.6 +0.1
comp=N,44nm,0.8s,mb5.4
MK31 **Makanchi Array** 49.66 309 *i* P P 17 57 51.9 -1.3
MK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
MKAR **Makanchi Array** 49.66 309 P P 17 57 52.1 -1.1
comp=Z,3.3nm,0.5s,mb4.5,baz=86,slow=9.9,SNR=47
MKAR PcP PcP 17 59 13.5 -0.1
comp=Z,1.8nm,0.4s,baz=75,slow=8.5,SNR=9.1
MKAR ScP ScP 18 03 03.1 -0.1
comp=Z,1.8nm,0.7s,baz=76,slow=5.0,SNR=7.5
MKAR LR LR 18 19 26.2
comp=Z,134nm,20.1s,baz=0.4,slow=37
NVS **Novosibirsk** 49.72 320 *e*P P 17 57 51.9 -1.7
NVS pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=E,7.0nm,0.6s
GKN **Gorkha** 49.90 284 *e*P P 17 57 55.5 +0.2
comp=E,18nm,0.4s,mb5.4
BOK **Bokaro** 49.92 279 *e*P P 17 57 55.8 +0.2
BOK AMb AMB 17 57 57.1
comp=Z,44nm,0.4s,mb5.7
DANN **Dangsing** 50.56 285 *e*P P 17 58 01.1 +0.7
comp=Z,40nm,0.5s,mb5.7
KOLN **Koldanda** 50.84 284 *e*P P 17 58 02.7 +0.2
comp=Z,24nm,0.6s,mb5.4
PYUN **Piuthan** 51.28 285 *e*P P 17 58 06.2 +0.4
comp=Z,74nm,0.6s,mb5.9
ASAR **Alice Springs** 51.56 189 P P 17 58 05.4 -2.3
comp=Z,2.9nm,0.5s,mb4.6,baz=9.5,slow=6.8,SNR=150
ASAR PcP PcP 17 59 20.1 -0.8
comp=Z,4.5nm,0.8s,baz=14,slow=4.4,SNR=10
ASAR ScP ScP 18 03 10.4 -1.1
comp=Z,0.7nm,0.8s,baz=8.1,slow=4.2,SNR=4.6
ASAR S S 18 05 22.1 -1.3
comp=Z,0.7nm,0.8s,baz=18,slow=20,SNR=4.5
ASAR **Alice Springs** 51.56 189 P P 17 58 05.4 -2.3
ASAR 17 59 20.1
ASAR S S 18 05 22.1 -1.3
ASAR pmax pmax
comp=Z,3.0nm,0.5s
ASAR smax
comp=N,1.0nm,0.8s
KURK **Kurchatov** 52.16 314 *e*P P 17 58 10.5 -1.5
comp=N,14nm,0.6s,mb5.2
KURK **Kurchatov** 52.16 314⇑ *e*P P 17 58 10.5 -1.5
KURK pmax pmax
comp=Z,23nm,1.1s,mb5.1
MBWA **Marble Bar** 52.92 206 *e*P P 17 58 16.2 -1.6
comp=Z,11nm,0.8s,mb4.9
SVW2 **Sparrevohn** 53.13 33 *e*P P 17 58 19.9 +1.0
TKM2 **Tokmak 2** 54.61 305 *e*P P 17 58 29.4 -0.6
comp=Z,2.4nm,0.7s,mb4.3
TKM2 **Tokmak 2** 54.61 305 *e*P P 17 58 29.4 -0.6
TKM2 pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
BPAW **Bear Paw Mtn.** 55.66 29 *e*P P 17 58 38.3 +1.0
comp=Z,3.1nm,0.7s,mb4.5
TRF **Thorofare Moun** 55.90 30 *e*P P 17 58 38.8 -0.1
comp=Z,7.8nm,0.9s,mb4.7
SEW **Seward** 56.03 34 *e*P P 17 58 37.6 -2.3
AML **Almayashu** 56.10 304 *e*P P 17 58 40.6 -0.2
comp=Z,4.6nm,0.4s,mb4.9
THN **Thein Dam** 56.36 292 *e*P P 17 58 40.7 -2.1
COLD **Coldfoot** 56.41 26 *e*P P 17 58 43.6 +1.1
comp=Z,9.6nm,1.0s,mb4.8
MCK **McKinley** 56.52 30 *e*P P 17 58 42.8 -0.6
comp=Z,5.5nm,0.9s,mb4.6
MCK **McKinley** 56.52 30 *e*P P 17 58 42.8 -0.6
MCK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
COLA **College** 57.09 29⇑ *i*P P 17 58 48.4 +1.0
BVA0 **Borovoye Array** 57.22 317 *i* P P 17 58 47.6 -0.9
BVA0 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
BVAR **Borovoye Array** 57.22 317 P P 17 58 47.8 -0.8
comp=Z,16nm,0.4s,mb5.4,baz=94,slow=7.5,SNR=144
BVAR PcP PcP 17 59 42.3 +0.1
comp=Z,7.0nm,0.6s,baz=95,slow=5.0,SNR=7.8
BVAR **Borovoye Array** 57.22 317 P P 17 58 47.8 -0.7
BVAR 17 59 42.3
BVAR pmax pmax
comp=Z,16nm,0.4s
BRVK **Borovoye** 57.29 317 *e*P P 17 58 48.1 -0.8
comp=Z,14nm,0.8s,mb5.0
BRVK *e*PcP PcP 17 59 42.2 -0.3
BRVK **Borovoye** 57.29 317 *e*P P 17 58 48.1 -0.9
BRVK *e* 17 59 42.2
BRVK pmax pmax
comp=Z,14nm,0.8s,mb5.0
BHPL **Bhopal** 57.48 281 *e*P P 17 58 49.6 -1.2
KK31 **Karatay Array** 58.27 305 *i* P P 17 58 55.1 -1.0
KK31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
HYB **Hyderabad** 58.52 274 *e*P P 17 58 58.0 -0.1
HYB *e* 17 59 47.0
HYB **Hyderabad** 58.52 274 *i* P P 17 58 58.0 -0.1
HYB *e*PcP PcP 17 59 47.0 -1.0
AJM **Ajmer** 58.87 286 *e*P P 17 58 59.2 -1.3
AJM AMb AMB 17 59 00.3
comp=Z,13nm,0.4s,mb5.3
STKA **Stephens Creek** 59.21 180 P P 17 59 00.5 -2.0
comp=Z,7.1nm,0.7s,mb4.8,baz=343,slow=6.2,SNR=17
FORT **Forrest** 59.52 193 *e*P P 17 59 02.4 -2.3
comp=Z,36nm,0.6s,mb5.6
POO **Poona** 62.25 277 *e*P P 17 59 22.9 -0.7
POO AMb AMB 17 59 24.1
comp=Z,33nm,0.9s,mb5.4
SVE **Sverdlovsk** 62.41 322⇑ *e*P P 17 59 24.0 -0.1
SVE *e* 18 01 44.5
SVE pmax pmax
comp=Z,20nm,0.7s,mb5.3
KAD **Karad** 62.42 276 *e*P P 17 59 23.4 -1.4
KAD AMb AMB 17 59 25.2
comp=Z,29nm,1.0s,mb5.3
INK **Inuvik** 62.76 25 *e*P P 17 59 25.7 -0.4
comp=Z,186nm,0.6s,mb6.2
ARU **Arti** 63.61 322 *e*P P 17 59 31.1 -0.9
comp=Z,29nm,0.5s,mb5.4
ARU **Arti** 63.61 322⇑ *e*P P 17 59 31.2 -0.8
ARU pmax pmax
comp=Z,34nm,0.9s,mb5.2
AB31 **Akbulak array** 64.28 314 P P 17 59 35.1 -1.4
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
SPB4 **Spitsbergen Ar** 69.72 350 *e*P P 18 00 11.8 +1.2
APA **Apatity** 71.30 337⇑ *i*P P 18 00 22.2 +1.9
APA pmax pmax
comp=Z,88nm,1.0s,mb5.5
YKA **Yellowknife Ar** 71.92 28 P P 18 00 23.7 -0.4
comp=Z,9.5nm,0.5s,mb4.9,baz=296,slow=6.4,SNR=32
KEV **Kevo** 72.25 341 *e*p P 18 00 26.6 +0.6
comp=Z,2.1nm,0.4s,mb4.3
KEV **Kevo** 72.25 341 *e*P P 18 00 26.9 +0.9
ARCES **ARCESS Array B** 72.81 341 P P 18 00 30.3 +1.0
comp=Z,40nm,0.7s,mb5.4,baz=70,slow=7.7,SNR=76
ARCES **ARCESS Array B** 72.81 341 P P 18 00 30.3 +1.0
ARCES **ARCESS Array B** 72.81 341 P P 18 00 30.3 +1.0
ARCES pmax pmax
comp=Z,40nm,0.7s
B04A **Port Angeles** 73.09 44 ⇑P P 18 00 31.7 +0.3
baz=73
HDW **Hoodsport** 73.52 45 P P 18 00 35.0 +1.1
E03A **Lebam** 73.63 46 ⇑P P 18 00 35.0 +0.4
baz=74
B05A **Bryant** 73.87 44 ⇓P P 18 00 36.1 +0.2
baz=74
JCW **Jim Creek** 74.00 44 P P 18 00 37.5 +0.7
JOF **Joensuu** 74.31 334 *e*p P 18 00 37.5 -0.7
comp=Z,12nm,0.3s,mb5.1
JOF **Joensuu** 74.31 334 *e*P P 18 00 37.5 -0.7
JOF pmax pmax
comp=Z,12nm,0.3s,mb5.1
A07A **Ashnola River,** 74.59 43 ⇓P P 18 00 40.6 +0.4
baz=74
F04A **Amboy** 74.61 46 ⇑P P 18 00 40.7 +0.4
baz=74
E05A **Randle** 74.77 45 ⇑P P 18 00 41.2 0.0
baz=75
B07A **Winthrop** 75.00 43 ⇑P P 18 00 42.9 +0.4
baz=75
TBM **Table Mountain** 75.24 44 P P 18 00 44.3 +0.4

H04A **Detroit Lake** 75.26 47 ⇓P P 18 00 44.1 0.0
baz=75
A08A **Turner Farm, O** 75.30 42 ⇓P P 18 00 44.2 +0.1
baz=75
C07A **Waterville** 75.36 44 ⇓P P 18 00 44.2 -0.3
baz=75
EBG **Ellensburg** 75.37 45 P P 18 00 45.2 +0.6
B08A **Colville Reser** 75.51 43 ⇓P P 18 00 45.2 -0.2
baz=75,SNR=6.9
G05A **Wamic** 75.59 46 ⇓P P 18 00 46.5 +0.5
baz=75
D07A **Quincy** 75.62 44 ⇑P P 18 00 46.3 +0.3
baz=75
MXC **Moxie City** 75.68 45 P P 18 00 47.0 +0.5
A09A **Danville** 75.70 42 ⇑P P 18 00 46.9 +0.4
baz=76
OBN **Obninsk** 75.73 325⇓ *i*P P 18 00 46.3 -0.2
OBN pmax pmax
comp=Z,26nm,0.7s,mb5.1
H05A **Madras** 75.90 47 ⇓P P 18 00 47.5 -0.3
baz=76
CROR **Criterion Ridg** 75.92 47 P P 18 00 48.1 +0.3
C08A **Higginbotham F** 75.94 43 ⇓P P 18 00 47.5 -0.4
baz=76,SNR=5.8
E07A **Sunnyside** 75.96 45 ⇑P P 18 00 48.3 +0.3
baz=76
RPZ **Rata Peaks** 76.03 158 P P 18 00 45.4 -2.7
comp=Z,5.1nm,0.5s,mb4.5,baz=48,slow=8.3,SNR=7.0
G06A **Carson Farm,** 76.03 46 ⇓P P 18 00 48.6 +0.1
baz=76
YBH **Yreka Blue Hor** 76.14 50 ⇓P P 18 00 49.5 +0.3
baz=76
B09A **Rice** 76.20 42 ⇓P P 18 00 49.9 +0.5
baz=76
A10A **Northport** 76.30 42 ⇑P P 18 00 49.9 0.0
baz=76,SNR=5.5
D08A **Wollman Farm,** 76.33 44 ⇑P P 18 00 50.4 +0.3
baz=76
VIPM **Ingram Point** 76.35 47 P P 18 00 50.7 +0.4
C09A **Chrisman Ranch** 76.40 43 ⇑P P 18 00 50.9 +0.4
baz=76
H06A **Lindquist Farm** 76.44 47 ⇑P P 18 00 50.9 +0.1
baz=76
E08A **Dider Farm, El** 76.49 45 ⇓P P 18 00 51.3 +0.3
baz=76
G07A **Ruggs Ranch, H** 76.64 46 ⇑P P 18 00 52.1 +0.2
baz=76
D09A **Jones Farm, Ri** 76.70 44 ⇓P P 18 00 52.5 +0.3
baz=76
KAF **Kangasniemi** 76.70 334 *e*p P 18 00 51.5 -0.4
comp=Z,14nm,0.4s,mb5.0,baz=53,slow=5.2
KAF **Kangasniemi** 76.70 334 *e*P P 18 00 51.5 -0.4
KAF pmax pmax
comp=Z,14nm,0.4s,mb5.0
EDM **Edmonton** 76.71 37 *e*P P 18 00 52.1 0.0
WDC **Whiskeytown Da** 76.74 51 ⇓P P 18 00 52.9 +0.3
baz=77
I06A **Prineville** 76.86 47 ⇑P P 18 00 53.7 +0.5
baz=77
K05A **Summer Lake** 76.94 49 ⇑P P 18 00 54.1 +0.5
baz=77
A11A **Hall Mountain,** 77.02 41 ⇓P P 18 00 54.7 +0.8
baz=77
E09A **Wood Farm, Sta** 77.04 44 ⇑P P 18 00 54.2 +0.1
baz=77,SNR=5.9
G08A **Pilot Rock** 77.08 46 ⇓P P 18 00 54.7 +0.4
baz=77
J06A **Christmas Vall** 77.20 48 ⇑P P 18 00 55.2 +0.1
baz=77
LTIM **Timbered Crate** 77.20 50 P P 18 00 55.5 +0.4
KIV **Kislovodsk** 77.23 313 ⇑P P 18 00 56.7 +1.5
KIV **Kislovodsk** 77.23 313 *e*P P 18 00 56.4 +1.2
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.7
KIV **Kislovodsk** 77.23 313⇑ *i*P P 18 00 56.7 +1.5
B11A **Sandpoint** 77.25 42 ⇓P P 18 00 56.0 +0.8
baz=77
I07A **Izee** 77.26 47 ⇑P P 18 00 55.9 +0.5
baz=77
A12A **Yaak River Ran** 77.44 41 ⇓P P 18 00 57.1 +0.8
baz=77
LBCM **Butte Creek Ri** 77.44 50 P P 18 00 56.3 -0.2
GNI **Garni** 77.50 309 *d i*P P 18 00 57.5 +0.6
GNI pmax pmax
comp=Z,18nm,1.7s
F09A **S2 Ranch, Elgi** 77.55 45 ⇓P P 18 00 57.5 +0.5
baz=77
H08A **Prairie City** 77.60 46 ⇑P P 18 00 57.9 +0.6
baz=77
MOD **Modoc** 77.69 49 ⇑P P 18 00 57.9 +0.1
baz=78
E10A **Myers Farm, Un** 77.70 44 ⇑P P 18 00 57.8 0.0
baz=78
J07A **Hines** 77.70 47 ⇑P P 18 00 58.3 +0.5
baz=78
G09A **Cove** 77.83 45 ⇓P P 18 00 58.9 +0.3
baz=78,SNR=6.5
O04C **Chester** 77.85 51 ⇓P P 18 00 59.2 +0.4
baz=78
ORV **Oroville** 77.90 52 ⇓P P 18 00 59.0 -0.1
baz=78
I08A **Drewsey** 77.94 47 ⇑P P 18 00 59.7 +0.5
baz=78
K07A **Rock Creek Ran** 78.05 48 ⇑P P 18 01 00.2 +0.4
baz=78,SNR=6.0
O05C **Quincy** 78.12 51 ⇑P P 18 01 00.3 0.0
baz=78
H09A **Durkee** 78.18 46 ⇑P P 18 01 00.6 +0.1
baz=78
G10A **Bishop Farm, J** 78.24 45 ⇓P P 18 01 01.0 +0.2
baz=78,SNR=7.9
J08A **Circle Bar Ran** 78.25 47 ⇑P P 18 01 01.1 +0.2
baz=78,SNR=5.3
L07A **Adell** 78.28 49 ⇑P P 18 01 01.7 +0.5
baz=78,SNR=10
WALA **Waterton Lakes** 78.39 41 *e*P P 18 01 02.0 +0.4
B13A **Whitefish** 78.40 41 ⇓P P 18 01 02.2 +0.6
baz=78,SNR=6.6
I09A **Lost Marbles R** 78.45 46 ⇑P P 18 01 02.2 +0.2
baz=78
N06A **Buffalo Meadow** 78.52 50 ⇑P P 18 01 02.6 +0.2
baz=78
F11A **Grangeville** 78.56 44 ⇓P P 18 01 02.6 0.0
baz=78
C13A **Hot Springs** 78.67 42 ⇑P P 18 01 03.5 +0.3
baz=78,SNR=11
M07A **Soldier Meadow** 78.68 49 ⇓P P 18 01 03.5 +0.2
baz=78
A14A **Double T Ranch** 78.72 40 ⇑P P 18 01 03.6 +0.2
baz=78,SNR=7.7
G11A **Walters Elk Ra** 78.72 45 ⇑P P 18 01 03.3 -0.2
baz=78,SNR=9.8
J09A **Fry Pan Ranch,** 78.72 47 ⇑P P 18 01 03.7 +0.2
baz=78
H10A **Noah's Angus R** 78.80 45 ⇓P P 18 01 03.6 -0.3
baz=79,SNR=9.0
L08A **Fields** 78.87 48 ⇓P P 18 01 04.6 +0.3
baz=79,SNR=6.8
K09A **Rome** 79.04 48 ⇓P P 18 01 05.3 +0.1
baz=79
N07B **Gerlach** 79.09 50 ⇓P P 18 01 05.6 0.0
baz=79
B14A **Marquette Ranc** 79.10 41 ⇓P P 18 01 06.1 +0.6
baz=79,SNR=8.9
A15A **Johnson Ranch,** 79.11 40 ⇑P P 18 01 05.5 0.0
baz=79,SNR=9.8
H11A **Donnelly** 79.20 45 ⇓P P 18 01 05.8 -0.3
baz=79,SNR=6.1
SOC **Sochi** 79.31 314 *e*P P 18 01 05.2 -1.6
SOC *i* S S 18 11 00.9 -1.0
SOC *e*SS SS 18 16 07.7 -1.6
SOC pmax pmax
comp=Z,15nm,0.6s,mb5.0
CMB **Columbia Colle** 79.35 53 ⇑P P 18 01 07.1 0.0
baz=79
O07A **Toulon** 79.43 50 ⇑P P 18 01 07.3 -0.2
baz=79
E13A **Victor** 79.50 43 ⇓P P 18 01 07.7 0.0
baz=79
B15A **Bradely Ranch,** 79.54 41 ⇓P P 18 01 08.0 +0.1
baz=79,SNR=9.7
K10A **MacKenzie Ranc** 79.56 47 ⇑P P 18 01 08.3 +0.2
baz=79
D14A **Greenough** 79.59 42 ⇑P P 18 01 07.9 -0.3
baz=79
N08A **GE Springer Mi** 79.65 49 ⇑P P 18 01 08.8 +0.1
baz=80

S05C **Merced** 79.70 53 ⇑P P 18 01 08.7 -0.3
baz=80
A16A **West Butte Ran** 79.78 40 ⇓P P 18 01 09.1 -0.1
baz=80,SNR=8.6
C15A **Salmond Ranch,** 79.78 41 ⇓P P 18 01 09.5 +0.3
baz=80,SNR=6.6
R06C **Coleville** 79.78 52 ⇓P P 18 01 09.4 0.0
baz=80
MFID **Camas Ranch** 79.93 46 ⇑P P 18 01 10.0 -0.1
baz=80,SNR=6.0
B16A **M & M Farms, S** 79.98 40 ⇑P P 18 01 10.3 0.0
baz=80
H12A **Diamond D Ranc** 80.00 45 ⇓P P 18 01 10.3 -0.2
baz=80
SUMG **Summit** 80.02 360 *e*P P 18 01 10.3 +0.3
comp=Z,7.7nm,0.9s,mb4.5
K11A **Parker Ranch,** 80.11 47 ⇑P P 18 01 11.3 +0.2
baz=80
G13A **Cobalt** 80.13 44 ⇑P P 18 01 10.9 -0.2
baz=80,SNR=8.0
PKD **Parkfield** 80.18 55 ⇑P P 18 01 11.7 +0.1
baz=80
C16A **Fuhringer Ranc** 80.27 41 ⇑P P 18 01 11.9 0.0
baz=80,SNR=14
T06C **Millerton Lake** 80.29 53 ⇓P P 18 01 11.8 -0.4
baz=80
M10A **I.L. Ranch, Tu** 80.37 48 ⇑P P 18 01 12.7 +0.1
baz=80
H13A **Challis** 80.37 45 ⇑P P 18 01 12.6 +0.1
baz=80,SNR=9.4
KCC **Kaiser Creek** 80.43 53 ⇓P P 18 01 12.8 -0.1
baz=80
E15A **Deer Lodge** 80.44 42 ⇑P P 18 01 12.7 -0.1
baz=80
J12A **Stokes Ranch,** 80.48 46 ⇓P P 18 01 13.1 0.0
baz=80
O09A **Fish Creek Ran** 80.58 50 ⇑P P 18 01 13.8 +0.1
baz=80
L11A **Cat Creek Ranc** 80.58 47 ⇓P P 18 01 13.8 +0.1
baz=80
NVAR **Mina Array Bea** 80.63 52 P P 18 01 14.3 +0.4
comp=Z,3.1nm,0.6s,mb4.3,baz=289,slow=5.7,SNR=11
HLID **Hailey** 80.76 46 ⇑P P 18 01 14.9 +0.3
baz=81
HRY **Holter Researc** 80.78 42 *e*P P 18 01 14.3 -0.3
I13A **Wildhorse Cree** 80.78 45 ⇓P P 18 01 15.1 +0.4
baz=81
F15A **Butte** 80.82 43 ⇑P P 18 01 15.0 +0.1
baz=81,SNR=14
H14A **Leadore** 80.90 44 ⇓P P 18 01 15.4 +0.2
baz=81
K12A **Draper Farm, C** 80.90 47 ⇓P P 18 01 15.7 +0.4
baz=81
C17A **Wharram Farm,** 80.93 41 ⇑P P 18 01 14.9 -0.5
baz=81,SNR=6.1
L12A **House Creek Ra** 81.07 47 ⇓P P 18 01 16.4 +0.1
baz=81
G15A **Dillon** 81.16 43 ⇑P P 18 01 17.0 +0.3
baz=81
I14A **Mackay** 81.19 45 ⇓P P 18 01 17.6 +0.7
baz=81,SNR=8.0
D17A **Six Diamond Ra** 81.22 41 ⇑P P 18 01 17.1 +0.1
baz=81,SNR=9.6
P10A **Eureka** 81.33 50 ⇑P P 18 01 17.4 -0.3
baz=81
H15A **Lima** 81.34 44 ⇓P P 18 01 17.8 +0.2
baz=81
F16A **Kennard Place,** 81.37 43 ⇑P P 18 01 17.8 0.0
baz=81
K13A **Stover Farm, H** 81.42 46 ⇑P P 18 01 18.5 +0.4
baz=81
J14A **Carey** 81.45 45 ⇑P P 18 01 19.0 +0.7
baz=81,SNR=10
E17A **Martinsdale** 81.48 42 ⇑P P 18 01 19.0 +0.7
baz=81
M12A **Wells** 81.49 48 ⇑P P 18 01 18.8 +0.3
baz=81,SNR=6.8
G16A **Moss Hill, Enn** 81.55 43 ⇓P P 18 01 18.6 -0.1
baz=81,SNR=5.1
N12A **Clover Valley,** 81.69 48 ⇓P P 18 01 19.9 +0.4
baz=82
S09A **Goldfield** 81.71 52 ⇑P P 18 01 19.9 +0.2
baz=82
D18A **Linhart Farms,** 81.71 41 ⇓P P 18 01 19.8 +0.3
baz=82
Q10A **Clear Creek Ra** 81.75 51 ⇑P P 18 01 19.8 -0.1
baz=82
L13A **Double Diamond** 81.79 47 ⇑P P 18 01 20.6 +0.5
baz=82
AKASG **Malin Array Be** 81.81 324 P P 18 01 19.4 -0.6
comp=Z,8.2nm,0.4s,mb5.0,baz=52,slow=5.3,SNR=66
AKASG **Malin Array Be** 81.81 324 P P 18 01 19.4 -0.6
AKASG pmax pmax
comp=Z,8.0nm,0.4s
KIEV **Kiev** 81.82 324 *e*P P 18 01 19.0 -1.1
comp=Z,16nm,0.4s,mb5.2
KIEV **Kiev** 81.82 324 *e*P P 18 01 19.0 -1.0
KIEV pmax pmax
comp=Z,16nm,0.4s,mb5.2
F17A **Fitzpatrick Pl** 81.89 42 ⇑P P 18 01 20.9 +0.4
baz=82
E18A **Harlowton** 81.98 41 ⇑P P 18 01 21.2 +0.2
baz=82,SNR=5.3
M13A **Montello** 82.01 47 ⇑P P 18 01 21.7 +0.5
baz=82
S10A **Tonopah Range,** 82.05 51 ⇑P P 18 01 21.6 0.0
baz=82,SNR=5.2
K14A **Jones Ranch, D** 82.06 46 ⇑P P 18 01 22.2 +0.7
baz=82
J15A **Blackfoot** 82.09 45 ⇑P P 18 01 22.0 +0.4
baz=82
O12A **Currie** 82.17 49 ⇑P P 18 01 22.3 +0.2
baz=82
Q11A **Duckwater** 82.25 50 ⇑P P 18 01 22.1 -0.4
baz=82
L14A **Malta** 82.27 47 ⇓P P 18 01 22.7 +0.1
baz=82
MPMC **Manual Prospec** 82.32 53 ⇑P P 18 01 22.6 -0.3
baz=82
F18A **Big Timber** 82.45 42 ⇓P P 18 01 23.5 +0.1
baz=82,SNR=5.2
LRMC **Laurel Mountai** 82.45 54 ⇑P P 18 01 23.5 -0.2
baz=82
M14A **Sheep Mountain** 82.47 47 ⇓P P 18 01 23.9 +0.3
baz=82,SNR=7.7
EDW2 **Edwards Air Fo** 82.52 55 ⇓P P 18 01 23.9 -0.1
baz=82
R11A **Troy Canyon, C** 82.54 51 ⇓P P 18 01 24.1 0.0
baz=82,SNR=5.6
TPNV **Topopah Spring** 82.76 52 ⇓P P 18 01 25.2 -0.1
baz=83
SUW **Suwalki** 82.86 328 *e*P P 18 01 25.2 -0.1
NOA **NORSAR Array B** 82.86 338 P P 18 01 24.9 -0.3
comp=Z,28nm,0.8s,mb5.2,baz=45,slow=5.0,SNR=96
NOA PP PP 18 04 35.7 +0.1
comp=Z,2.8nm,0.8s,baz=41,slow=7.9,SNR=4.8
NOA **NORSAR Array B** 82.86 338 P P 18 01 24.9 -0.3
NOA PP PP 18 04 35.7 0.0
NOA **NORSAR Array B** 82.86 338 P P 18 01 25.0 -0.3
NOA 18 04 35.7
NOA pmax pmax
comp=Z,28nm,0.8s
NOA pmax pmax
comp=Z,3.0nm,0.8s
K16A **Soda Springs** 82.92 45 ⇑P P 18 01 26.5 +0.6
baz=83
P13A **Bates Ranch, G** 83.06 49 ⇑P P 18 01 27.3 +0.6
baz=83
M15A **Larsen Ranch,** 83.07 47 ⇑P P 18 01 27.3 +0.6
baz=83
RLMT **Red Lodge** 83.13 42 *e*P P 18 01 27.5 +0.5
comp=Z,2.8nm,0.5s,mb4.3
RLMT **Red Lodge** 83.13 42 ⇑P P 18 01 27.7 +0.8
baz=83
GSC **Goldstone** 83.17 54 ⇓P P 18 01 27.3 -0.1
baz=83
N15A **Stansbury Isla** 83.32 47 ⇑P P 18 01 28.4 +0.3
baz=83
T11A **Corn Creek, Al** 83.34 51 ⇑P P 18 01 28.4 +0.2
baz=83
DUG **Dugway** 83.48 48 ⇑P P 18 01 28.8 0.0
baz=83
HWUT **Hardware Ranch** 83.57 46 *e*P P 18 01 29.5 +0.2
comp=Z,4.3nm,0.9s,mb4.3
P14A **Drum Mountains** 83.62 49 ⇑P P 18 01 29.6 -0.1
baz=83
TUQ **Turquoise Moun** 83.73 53 ⇑P P 18 01 30.1 -0.2
baz=84

Q14A	Sevier Lake (B	83.79	49	⇓P		P	18 01 30.4	-0.1	
	baz=84,SNR=8.1								
LAO	LASA Array	84.04	40	eP		P	18 01 31.5	-0.1	
	comp=Z,7.7nm,0.8s,mb4.6								
P15A	Leamington	84.16	48	⇓P		P	18 01 32.4	+0.1	
	baz=84								
M17A	Scullys Gap (B	84.21	46	⇓P		P	18 01 32.7	+0.1	
	baz=84								
BW06	Boulder Array	84.22	44	⇑P		P	18 01 32.5	-0.1	
	baz=84,SNR=5.7								
PDAR	Pinedale Array	84.22	44	P		P	18 01 32.3	-0.3	
	comp=Z,4.8nm,0.9s,mb4.3,baz=275,slow=3.0,SNR=24								
GMRC	Granite Mounta	84.24	54	⇓P		P	18 01 32.7	-0.2	
	baz=84								
PFO	Pinyon Flat Ob	84.24	55	⇑P		P	18 01 32.5	-0.4	
	baz=84								
V12A	Nelson	84.35	53	⇑P		P	18 01 33.4	0.0	
	baz=84								
T13A	Saint George	84.36	51	⇓P		P	18 01 33.7	+0.3	
	baz=84								
BELC	Belle Mtn.	84.38	55	⇑P		P	18 01 33.0	-0.6	
	baz=84								
M18A	Lyman	84.62	46	⇑P		P	18 01 34.8	+0.2	
	baz=84								
MONP	Monument Peak	84.62	56	⇓P		P	18 01 34.3	-0.5	
	baz=84								
U13A	Pakoon Wash	84.62	52	⇓P		P	18 01 34.9	+0.1	
	baz=84,SNR=7.2								
L19A	Farson	84.70	45	⇓P		P	18 01 35.2	+0.2	
	baz=84,SNR=5.1								
MSU	Marysvale	84.77	49	eP		P	18 01 36.5	+1.0	
O17A	Robinson Place	84.84	47	⇓P		P	18 01 36.0	+0.3	
	baz=85,SNR=6.8								
R15A	Junction	84.86	49	⇑P		P	18 01 36.5	+0.5	
	baz=85								
IRM	Iron Mountain	84.92	54	⇓P		P	18 01 36.2	-0.1	
	baz=85								
BC3	Big Chuckw Mtn	84.95	55	⇑P		P	18 01 36.2	-0.3	
	baz=85,SNR=5.3								
N18A	Larsen Ranch,	85.11	46	⇑P		P	18 01 37.0	-0.1	
	baz=85								
M19A	Rock Springs	85.15	45	⇑P		P	18 01 38.0	+0.7	
	baz=85								
TLCR		85.16	319	⇓P		P	18 01 37.2	0.0	
TLCR		85.16	319	⇓iP		P	18 01 37.2	-0.1	
U14A	Mt Trumbull	85.17	51	⇑P		P	18 01 37.4	-0.1	
	baz=85								
BRTR	Keskin Array B	85.18	313	P		P	18 01 37.3	-0.2	
	comp=Z,7.6nm,0.7s,mb4.8								
BRTR	Keskin Array B	85.18	313	P		P	18 01 37.3	-0.2	
BRTR				pmax	pmax				
	comp=Z,8.0nm,0.7s								
P17A	Butcher Ranch,	85.22	48	⇓P		P	18 01 37.7	0.0	
	baz=85,SNR=5.3								
Q16A	Castle Valley	85.23	48	⇓P		P	18 01 38.2	+0.4	
	baz=85								
O18A	Roosevelt	85.28	47	⇑P		P	18 01 38.3	+0.3	
	baz=85								
W13A	Hualapai Mount	85.34	53	⇑P		P	18 01 38.8	+0.4	
	baz=85								
R16A	Teasdale	85.36	49	⇑P		P	18 01 39.1	+0.7	
	baz=85								
L20A	Wamsutter	85.39	45	⇓P		P	18 01 38.5	+0.1	
	baz=85								
T15A	Red Dirt Ranch	85.41	50	⇑P		P	18 01 38.5	-0.1	
	baz=85,SNR=5.5								
P18A	Preston Nutter	85.46	47	⇑P		P	18 01 39.4	+0.5	
	baz=85								
SRU	San Rafael	85.56	48	eP		P	18 01 38.9	-0.5	
	comp=Z,9.8nm,0.8s,mb4.8								
SRU	San Rafael	85.56	48	eP		P	18 01 38.9	-0.5	
SRU				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.8								
SRU	San Rafael	85.56	48	⇑P		P	18 01 39.0	-0.4	
	baz=85,SNR=7.7								
PDMC	Parker Dam,Lak	85.57	54	⇑P		P	18 01 39.4	-0.1	
	baz=85								
Y12C	Blythe	85.57	54	⇑P		P	18 01 39.4	-0.1	
	baz=85								
S16A	Weppner Ranch,	85.57	50	⇑P		P	18 01 39.6	+0.2	
	baz=85								
V14A	Boquillas Ranc	85.62	52	⇓P		P	18 01 40.1	+0.3	
	baz=85,SNR=7.6								
X13A	Yucca	85.64	53	⇑P		P	18 01 39.8	-0.1	
	baz=86								
GLA	Glamis	85.70	55	⇑P		P	18 01 40.2	0.0	
	baz=86								
BURAR	Bucovina Array	85.75	323	⇓P		P	18 01 40.5	+0.4	
BURAR	Bucovina Array	85.75	323	⇓iP		P	18 01 40.5	+0.4	
BSD	Bornholm Skovb	85.75	332	iP		P	18 01 39.1	-0.9	
BSD				pmax	pmax				
	comp=Z,27nm,0.7s,mb5.3								
BSD				MLR	MLR				
	comp=Z,580nm,18.0s								
BSD	Bornholm Skovb	85.75	332	iP		P	18 01 39.1	-0.9	
	comp=Z,27nm,0.7s,mb5.3								
BSD									
	comp=Z,580nm,18.0s								
M20A	Sweetwater, Wa	85.77	45	⇑P		P	18 01 40.6	+0.3	
	baz=86,SNR=5.6								
U15A	North Rim	85.78	51	⇓P		P	18 01 40.7	+0.2	
	baz=86,SNR=9.0								
R17A	Hanksville Air	85.80	49	⇑P		P	18 01 40.3	-0.3	
	baz=86,SNR=8.1								
KWP	Kalwaria	85.82	325	eP		P	18 01 40.8	+0.4	
KWP	Kalwaria	85.82	325	⇓iP		P	18 01 40.4	0.0	
Q18A	Rafter H Ranch	85.82	48	⇑P		P	18 01 40.0	-0.7	
	baz=86								
O19A	Miners Draw (B	85.83	46	⇑P		P	18 01 40.4	-0.3	
	baz=86								
W14A	Seligman	85.85	52	⇓P		P	18 01 40.9	0.0	
	baz=86								
PLOR	Plostina	86.01	321	⇓iP		P	18 01 42.5	+1.0	
L21A	Rawlins	86.02	44	⇓P		P	18 01 41.6	+0.1	
	baz=86								
T16A	Glen Canyon Da	86.02	50	⇑P		P	18 01 41.4	-0.4	
	baz=86								
GKP	Gorka Klasztor	86.03	330	eP		P	18 01 41.1	-0.3	
GKP	Gorka Klasztor	86.03	330	eP		P	18 01 41.1	-0.3	
Y13A	Salome	86.04	54	⇓P		P	18 01 41.7	-0.1	
	baz=86								
S17A	Black Ridge (B	86.16	49	⇓P		P	18 01 41.6	-0.8	
	baz=86,SNR=6.2								
V15A	Kaibab Nationa	86.17	51	⇑P		P	18 01 42.6	+0.1	
	baz=86								
P19A	Cripple Cowboy	86.28	47	⇓P		P	18 01 43.0	0.0	
	baz=86								
R18A	Canyonlands Na	86.36	48	⇓P		P	18 01 42.8	-0.6	
	baz=86								
X14A	Yava	86.37	53	⇓P		P	18 01 43.6	+0.1	
	baz=86								
W15A	Williams	86.44	52	⇓P		P	18 01 44.1	+0.3	
	baz=86								
KOLS	Kolonicke sedl	86.48	325	eP		P	18 01 41.9	-1.8	
113A	Mohawk Valley,	86.61	55	⇑P		P	18 01 44.3	-0.4	
	baz=86								
S18A	Hurst Farm, Bl	86.67	49	⇓P		P	18 01 44.2	-0.7	
	baz=86,SNR=5.2								
STHS	Stebnicka Huta	86.69	326	eP		P	18 01 45.3	+0.6	
STHS				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3								
U16A	Tuba City	86.72	51	⇑P		P	18 01 45.3	+0.1	
	baz=86								
U17A	Shonto	86.80	50	⇑P		P	18 01 45.4	-0.1	
	baz=87								
X15A	Humboldt	86.82	53	⇑P		P	18 01 46.1	+0.4	
	baz=87								
TRPA	Tarpa	86.85	324	⇓iP		P	18 01 45.5	0.0	
WUAZ	Wupatki	86.89	51	⇑P		P	18 01 46.0	0.0	
	baz=87								
CRVS	Cervenica-Dubn	86.91	325	eP		P	18 01 45.4	-0.4	
MUD	Monsted U'grnd	86.99	336	iP		P	18 01 45.1	-1.0	
MUD				pmax	pmax				
	comp=Z,23nm,0.9s,mb5.1								
MUD	Monsted U'grnd	86.99	336	iP		P	18 01 45.1	-1.0	
	comp=Z,23nm,0.9s,mb5.1								
Y15A	Casa Rosa Ranc	87.03	53	⇑P		P	18 01 46.8	+0.1	
	baz=87								
T18A	Mexican Hat	87.05	49	⇓P		P	18 01 45.8	-0.9	
	baz=87,SNR=5.4								
X16A	Lo Mia Camp, P	87.42	52	⇓P		P	18 01 48.6	0.0	
	baz=87								
U18A	Rough Rock, Ch	87.44	50	⇑P		P	18 01 48.6	0.0	
	baz=87								
DRGR		87.60	323	⇓P		P	18 01 49.2	0.0	
DRGR		87.60	323	⇓iP		P	18 01 49.2	0.0	
Y16A	Circle Bar Ran	87.67	53	⇓P		P	18 01 49.8	0.0	
	baz=88								
214A	Organ Pipe Nat	87.72	55	⇑P		P	18 01 50.2	+0.1	
	baz=88								
115A	Sonoran Desert	87.76	54	⇓P		P	18 01 50.4	+0.1	
	baz=88								
V18A	Ganado	87.77	51	⇑P		P	18 01 50.7	+0.5	
	baz=88								
T19A	Beclabito	87.78	49	⇑P		P	18 01 50.6	+0.4	
	baz=88								
OKC	Ostrava-Krasne	87.93	327	eP		P	18 01 50.6	-0.1	
OKC				AMS	AMS		18 46 30.0		
KSP	Ksiaz	88.12	329	eP		P	18 01 51.6	0.0	
KSP	Ksiaz	88.12	329	eP		P	18 01 51.3	-0.3	
Y17A	Roosevelt	88.22	53	⇑P		P	18 01 52.4	0.0	
	baz=88								
MORC	Moravsky Berou	88.26	327	⇓P		P	18 01 52.2	0.0	
MORC	Moravsky Berou	88.26	327	⇓iP		P	18 01 52.2	-0.1	
DPC	Dobruska-Polom	88.44	328	eP		P	18 01 53.3	+0.2	
DPC				AMS	AMS		18 47 00.0		
	comp=Z,500nm,17.0s								
UPC	Upice	88.48	329	eP		P	18 01 53.4	+0.1	
VYHS	Vyhne	88.50	326	eP		P	18 01 53.4	0.0	
KOLL	Kolacno	88.65	326	eP		P	18 01 54.3	+0.2	
X19A	St. Johns	88.91	51	⇑P		P	18 01 56.5	+0.8	
	baz=89								
BZS	Buzias	88.93	323	⇓P		P	18 01 54.9	-0.6	
BZS	Buzias	88.93	323	⇓iP		P	18 01 54.9	-0.6	
VRAC	Vranov	89.03	328	⇓P		P	18 01 55.2	-0.8	
VRAC	Vranov	89.03	328	⇓iP		P	18 01 55.2	-0.7	
PVCC	Panska Ves	89.12	329	eP		P	18 01 56.5	+0.2	
PVCC				AMS	AMS		18 47 30.0		
	comp=Z,400nm,21.2s								
BRG	Berggiesshubel	89.16	330	iP		P	18 01 56.0	-0.5	
BRG				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.7								
BRG	Berggiesshubel	89.16	330	iPKP		P	18 01 56.0	-0.5	
	comp=Z,11nm,1.0s,mb4.8								
SMOL	Smolenice	89.17	327	eP		P	18 01 56.8	+0.2	
217A	Green Valley	89.26	54	⇓P		P	18 01 57.8	+0.4	
	baz=89								
CLL	Collm	89.26	331	iP		P	18 01 56.1	-0.9	
CLL				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.9								
CLL	Collm	89.26	331	iP		P	18 01 56.1	-0.9	
	comp=Z,12nm,0.9s,mb4.9								
CLL				i (PcP)	PcP		18 01 58.4	+0.1	
MODS	Modra-Piesok	89.34	327	eP		P	18 01 56.2	-1.2	
118A	Homack Ranch,	89.41	53	⇑P		P	18 01 58.6	+0.6	
	baz=89								
PRU	Pruhonice	89.52	329	eP		P	18 01 58.0	-0.2	
PRU				AMS	AMS		18 47 10.0		
	comp=Z,300nm,8.4s								
TREC	Trest	89.57	328	AMS	AMS		18 46 40.0		
	comp=Z,500nm,16.3s								
218A	Dragoon	89.71	54	⇑P		P	18 02 00.0	+0.6	
	baz=90								
119A	Ashpeak Ranch,	89.81	53	⇓P		P	18 02 00.5	+0.6	
	baz=90								
318A	Bisbee	90.04	54	⇓P		P	18 02 01.3	+0.3	
	baz=90								
PKSM	Moragy	90.11	324	⇓iP		P	18 02 00.8	-0.2	
219A	White Tail Can	90.26	53	⇓P		P	18 02 02.2	+0.2	
	baz=90								
NKC	Novy Kostel	90.28	330	eP		P	18 02 01.5	-0.2	
NKC				AMS	AMS		18 46 40.0		
	comp=Z,700nm,31.1s								
CONA	Conrad Observa	90.34	327	⇓iPcP	PcP		18 02 02.5	-0.7	
	comp=Z,9.6nm,0.7s								
CSNA	Conrad Observa	90.34	327	⇓iPcP	PcP		18 02 02.5	-0.7	
	comp=Z,8.9nm,0.7s								
ANMO	Albuquerque	90.56	50	⇑iP		P	18 02 00.9	-2.4	
KHC	Kasperske Hory	90.57	329	eP		P	18 02 02.7	-0.4	
KHC				e			18 02 09.5		
KHC				e			18 03 03.0		
KHC	Kasperske Hory	90.57	329	eP		P	18 02 02.7	-0.4	
KHC				e			18 02 09.5		
KHC				MLR	MLR				
	comp=Z,400nm,5.4s								
KHC	Kasperske Hory	90.57	329	eP		P	18 02 02.7	-0.4	
KHC				ex	x		18 02 09.5		
KHC				ex	x		18 03 03.0		
KHC				AMS	AMS		18 45 50.0		
	comp=Z,400nm,5.4s								
319A	Douglas	90.58	54	⇓P		P	18 02 03.8	+0.3	
	baz=90								
GEC2	GERESS Array S	90.72	329	eP		P	18 02 03.0	-0.8	
GERES	GERESS Array B	90.72	329	P		P	18 02 03.4	-0.4	
	comp=Z,9.2nm,0.7s,mb5.0,baz=40,slow=4.8,SNR=79								
GERES	GERESS Array B	90.72	329	P		P	18 02 03.4	-0.4	
GERES				pmax	pmax				
	comp=Z,9.0nm,0.7s								
ARSA	Arzberg	90.97	327	⇓iPcP	PcP		18 02 05.0	-1.0	
	comp=Z,4.0nm,0.7s								
MOA	Molln	91.16	328	⇓iPcP	PcP		18 02 05.9	-0.9	
	comp=Z,11nm,1.0s								
GRF	Grafenberg Arr	91.22	330	eP		P	18 02 05.6	-0.5	
GRF				pmax	pmax				
	comp=Z,18nm,0.9s,mb5.2								
GRF	Grafenberg Arr	91.22	330	eP		P	18 02 05.6	-0.5	
GRF				pmax	pmax				
	comp=Z,18nm,0.9s,mb5.2								
GRF	Grafenberg Arr	91.22	330	eP		P	18 02 05.6	-0.5	
	comp=Z,18nm,0.9s,mb5.2								
SOKA	Soboth	91.62	326	⇓iPcP	PcP		18 02 07.7	-1.1	
	comp=Z,13nm,0.8s								
OBKA	Obir	91.97	326	⇓iPcP	PcP		18 02 09.1	-1.4	
KBA	Koelnbreinsper	92.15	327	⇓iPcP	PcP		18 02 10.0	-1.3	
	comp=Z,10nm,0.9s								
LJU	Ljubljana	92.31	326	iP		P	18 02 10.6	-0.7	
VISS	Visnje	92.33	326	iP		P	18 02 10.5	-0.8	
MYKA	Terra Mystica	92.33	327	⇓iPcP	PcP		18 02 10.4	-1.6	
	comp=Z,8.3nm,0.6s								
VOY	Vojsko	92.63	326	eP		P	18 02 10.1	-2.6	
VOY				e			18 02 11.2		
JAVS	Javornik	92.64	326	iP		P	18 02 11.8	-1.0	
WTTA	Wattenberg	92.82	328	⇓iPcP	PcP		18 02 13.2	-1.0	
MOTA	Moosalm	93.00	329	⇓iPcP	PcP		18 02 13.7	-1.3	
SQTA	Sankt Quirin	93.05	329	⇓iPcP	PcP		18 02 14.1	-1.1	
	comp=Z,12nm,0.9s								
FETA	Feichten	93.42	329	⇓iPcP	PcP		18 02 16.0	-0.8	
	comp=Z,13nm,0.9s								
DAVA	Damuels	93.61	329	⇓iPcP	PcP		18 02 17.0	-0.7	
	comp=Z,26nm,0.9s								
CDF	Champ du Feu	93.89	331	eP		P	18 02 17.9	-0.6	
	comp=Z,42nm,0.9s,mb5.5								
CDF	Champ du Feu	93.89	331	eP		P	18 02 17.9	-0.6	
	comp=Z,21nm,0.9s,mb5.5								
CDF	Champ du Feu	93.89	331	eP		P	18 02 17.9	-0.6	
CDF				pmax	pmax				
	comp=Z,21nm,0.9s,mb5.5								
ECH	Echery	94.09	331	eP		P	18 02 18.4	-1.0	
HINF	Hinteralfeld	94.53	331	eP		P	18 02 20.4	-1.0	
	comp=Z,17nm,0.8s,mb5.2								
HINF	Hinteralfeld	94.53	331	eP		P	18 02 20.4	-1.0	
	comp=Z,8.4nm,0.8s,mb5.2								
HINF	Hinteralfeld	94.53	331	eP		P	18 02 20.4	-1.0	
HINF				pmax	pmax				
	comp=Z,8.0nm,0.8s,mb5.2								
HAU	Haudompre	94.60	332	eP		P	18 02 20.8	-0.9	
	comp=Z,12nm,0.7s,mb5.1								
HAU	Haudompre	94.60	332	eP		P	18 02 20.8	-0.9	
	comp=Z,5.8nm,0.7s,mb5.1								
HAU	Haudompre	94.60	332	eP		P	18 02 20.8	-0.9	
HAU				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb5.1								
MEZF	Maizieres J'vi	94.75	333	eP		P	18 02 22.1	-0.3	
TXAR	Lajitas Array	95.73	53	P		P	18 02 27.9	+0.6	
	comp=Z,2.8nm,0.8s,mb4.8,baz=307,slow=2.8,SNR=24								
TXAR	Lajitas Array	95.73	53	P		P	18 02 27.9	+0.6	
TXAR				pmax	pmax				
	comp=Z,3.0nm,0.8s								
CABF	La Chapelle	95.80	331	eP		P	18 02 25.2	-2.0	
	comp=Z,26nm,0.9s,mb5.3								
CABF	La Chapelle	95.80	331	eP		P	18 02 25.2	-2.0	
	comp=Z,13nm,0.9s,mb5.3								
CABF	La Chapelle	95.80	331	eP		P	18 02 25.2	-2.0	
CABF				pmax	pmax				
	comp=Z,13nm,0.9s,mb5.4								
LOR	Lormes	96.22	333	eP		P	18 02 28.4	-0.7	
	comp=Z,24nm,1.1s,mb5.2								
LOR	Lormes	96.22	333	eP		P	18 02 28.4	-0.7	
	comp=Z,12nm,1.1s,mb5.2								
LOR	Lormes	96.22	333	eP		P	18 02 28.4	-0.7	
LOR				pmax	pmax				
	comp=Z,12nm,1.1s,mb5.2								
LPL	La Plagne	96.37	330	eP		P	18 02 29.3	-0.5	
	comp=Z,11nm,0.6s,mb5.2								
LPL	La Plagne	96.37	330	eP		P	18 02 29.3	-0.5	
	comp=Z,5.5nm,0.6s,mb5.2								
LPL	La Plagne	96.37	330	eP		P	18 02 29.3	-0.5	
LPL				pmax	pmax				
	comp=Z,6.0nm,0.6s,mb5.2								
LPG	La Plagne	96.37	330	eP		P	18 02 29.4	-0.5	
	comp=Z,17nm,0.7s,mb5.3								
LPG	La Plagne	96.37	330	eP		P	18 02 29.4	-0.5	
	comp=Z,8.4nm,0.7s,mb5.3								
LPG	La Plagne	96.37	330	eP		P	18 02 29.4	-0.5	
LPG				pmax	pmax				
	comp=Z,8.0nm,0.7s,mb5.3								
SSF	Saint Saulge	96.53	333	eP		P	18 02 29.8	-0.7	
	comp=Z,26nm,1.0s,mb5.3								
SSF	Saint Saulge	96.53	333	eP		P	18 02 29.8	-0.7	
	comp=Z,13nm,1.0s,mb5.3								
SSF	Saint Saulge	96.53	333	eP		P	18 02 29.8	-0.7	
SSF				pmax	pmax				
	comp=Z,13nm,1.0s,mb5.3								
SMF	Signal de Mont	96.72	332	eP		P	18 02 30.6	-0.8	
	comp=Z,21nm,1.0s,mb5.2								
SMF	Signal de Mont	96.72	332	eP		P	18 02 30.6	-0.8	
	comp=Z,11nm,1.0s,mb5.2								
SMF	Signal de Mont	96.72	332	eP		P	18 02 30.6	-0.8	
SMF				pmax	pmax				
	comp=Z,11nm,1.0s,mb5.2								
AVF	Avril sur Loir	96.81	333	eP		P	18 02 31.2	-0.6	
	comp=Z,20nm,0.8s,mb5.3								
AVF	Avril sur Loir	96.81	333	eP		P	18 02 31.2	-0.6	
	comp=Z,10nm,0.8s,mb5.3								
AVF	Avril sur Loir	96.81	333	eP		P	18 02 31.2	-0.6	
AVF				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb5.3								
MBDF	Montbardon	96.96	329	eP		P	18 02 31.1	-1.4	
	comp=Z,30nm,1.1s,mb5.3								
MBDF	Montbardon	96.96	329	eP		P	18 02 31.1	-1.4	
	comp=Z,15nm,1.1s,mb5.3								
MBDF	Montbardon	96.96	329	eP		P	18 02 31.1	-1.4	
MBDF				pmax	pmax				
	comp=Z,15nm,1.1s,mb5.3								
ORIF	Oris-en-Rattie	97.21	330	eP		P	18 02 33.4	-0.3	
	comp=Z,10nm,0.8s,mb5.0								
ORIF	Oris-en-Rattie	97.21	330	eP		P	18 02 33.4	-0.3	
	comp=Z,5.3nm,0.8s,mb5.0								
ORIF	Oris-en-Rattie	97.21	330	eP		P	18 02 33.4	-0.3	
ORIF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb5.0								
SBF	Sospel	97.32	328	eP		P	18 02 33.1	-1.1	
VIVF	Saint-Julien-l	97.79	331	eP		P	18 02 35.4	-0.9	
	comp=Z,13nm,0.7s,mb5.2								
VIVF	Saint-Julien-l	97.79	331	eP		P	18 02 35.4	-0.9	
	comp=Z,6.3nm,0.7s,mb5.2								
VIVF	Saint-Julien-l	97.79	331	eP		P	18 02 35.4	-0.9	
VIVF				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb5.2								
EVO	Evora	108.24	335	eP		Pdif	18 03 20.8	-1.9	
	comp=Z,8.2nm,0.7s								
QSPA	South Pole Qui	117.44	180	eP		PKPdf	18 07 43.8	-1.4	
SYO	Syowa Base	119.80	204	⇓eP		PKPdf	18 07 48.1	-1.9	
TORD	Torodi Ar. Bea	123.76	311	PKP		PKPdf	18 07 58.6	-0.7	
	comp=Z,4.9nm,0.7s,baz=16,slow=2.7,SNR=30								
DBIC	Dimbokro	132.87	311	PKP		PKPdf	18 08 16.1	-0.6	
	comp=Z,4.7nm,0.8s,baz=220,slow=1.7,SNR=7.0								
DBIC	Dimbokro	132.87	311	PKIKP		PKPdf	18 08 16.1	-0.6	
DBIC				pmax	pmax				
	comp=Z,5.0nm,0.8s								
TIC	Tounodi	133.00	312	ePKIKP		PKPdf	18 08 17.0	+0.1	
	comp=Z,21nm,0.5s								
KIC	Kosan Boka	133.02	311	ePKIKP		PKPdf	18 08 16.8	-0.2	
	comp=Z,24nm,0.7s								
LIC	Lamto	133.31	311	ePKIKP		PKPdf	18 08 17.1	-0.4	
	comp=Z,36nm,1.1s								
LIC	Lamto	133.31	311	ePKIKP		PKPdf	18 08 17.7	+0.2	
	comp=Z,21nm,0.9s								
LPAZ	La Paz	150.34	74	PKP		PKPdf	18 08 48.9	+1.5	
	comp=Z,9.4nm,0.7s,baz=205,slow=1.3,SNR=5.6								
LPAZ				PKPbc	PKPbc		18 08 53.4	+0.7	
	comp=Z,7.6nm,0.6s,baz=319,slow=2.6,SNR=36								
LPAZ	La Paz	150.34	74	PKP		PKPdf	18 08 48.9	+1.5	
LPAZ				PKPbc	PKPbc		18 08 53.4	+0.7	
PLCA	Paso Flores	150.62	125	PKPbc	PKPbc		18 08 52.5	-0.2	
	comp=Z,4.9nm,0.8s,baz=218,slow=5.5,SNR=14								
PLCA	Paso Flores	150.62	125	PKIKP	PKPbc		18 08 52.5	-0.2	
PLCA				pmax	pmax				
	comp=Z,5.0nm,0.8s								

ATH ***19*** *17:56:38.6, 38.06N×2725E, h55km±2km, MD3.1/3*
CSEM ***19*** *17:56:40.6±0.2, 38.14N×2673E, h2km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.6km az=126.0*
ISCJB ***19*** *17:56:42.1±0.6, 3815N±003×2673E±004, h5km±4km, Error ellipse: s-maj=5.7km s-min=4.2km az=161.5*
ISK ***19*** *17:

PB04 Plate Boundary 1.14 55 ⇓*i*P **Pn** **18 19 33.9 -8.8**
PB04 *i* S **Sn** **18 19 44.3 -13**
PB04 AML AML 18 19 46.5
comp=N,46µm,0.4s
PB07 Plate Boundary 1.32 26 *e*P **Pn** **18 19 44.0 -1.1**
PB07 *i* S **Sn** **18 20 02.6 +1.0**
LVC Limon Verde 1.50 79 Pg **Pn** **18 19 49.1 +1.5**
comp=N,1µm,0.3s,baz=256,slow=12,SNR=2855
LVC Lg 18 20 11.4
comp=N,898nm,0.3s,baz=76,slow=3,SNR=16
LVC Limon Verde 1.50 79 *e*P **Pn** **18 19 49.5 +1.8**
LVC Limon Verde 1.50 79 *e*P **Pn** **18 19 49.1 +1.4**
LVC *i* S **Sn** **18 20 11.9 +5.8**
LVC AML AML 18 20 15.8
comp=N,5µm,0.4s
CPN1 Cerro Paranal 1.70 177 *e*P **Pn** **18 19 49.4 -1.0**
CPN1 *i* S **Sn** **18 20 11.6 +0.6**
CPN1 AML AML 18 20 19.5
comp=N,18µm,0.5s
PB01 Plate Boundary 2.09 27 *e*P **Pn** **18 19 55.4 -0.4**
PB01 *i* S **Sn** **18 20 25.0 +4.2**
PB01 AML AML 18 20 29.4
comp=E,5µm,0.3s
LCO Las Campanas 6.07 182 *e*P **Pn** **18 20 48.4 -2.0**
comp=E,130nm,0.8s
ARE Arequipa 6.49 352 *e*P **Pn** **18 20 51.0 -5.3**
ARE *e*S **Sn** **18 22 01.0 -8.3**
LPAZ La Paz 6.97 19 Pn **Pn** **18 21 04.2 +1.4**
comp=E,1.9nm,0.3s,baz=224,slow=7.6,SNR=38
LPAZ LR LR 18 23 59.8
comp=E,3µm,18.2s,baz=202,slow=40
CFAA Coronel Fontan 8.88 167 Pn **Pn** **18 21 31.2 +2.2**
comp=E,0.2nm,0.3s,baz=347,slow=14,SNR=9.0
CFAA LR LR 18 25 02.9
comp=E,245nm,20.6s,baz=332,slow=38
SIV San Ignacio 11.25 54 Pn **Pn** **18 22 00.7 -0.9**
comp=E,1.5nm,0.3s,baz=239,slow=13,SNR=83
SIV LR LR 18 27 10.6
comp=E,3µm,18.6s,baz=247,slow=42
NNA Nana 12.44 330 Pn **Pn** **18 22 15.8 -2.1**
comp=E,0.9nm,0.3s,baz=190,slow=15,SNR=3.0
NNA Sn **Sn** **18 24 24.9 -10**
comp=E,3.5nm,0.3s,baz=200,slow=18,SNR=3.6
NNA LR LR 18 26 33.0
comp=E,703nm,19.1s,baz=150,slow=35
ATAH Atahualpa 17.56 333 P **Pn** **18 23 19.4 -5.9**
comp=E,0.4nm,0.3s,baz=116,slow=15,SNR=3.1
PLCA Paso Flores 17.76 180 P **Pn** **18 23 27.6 -0.1**
comp=E,0.2nm,0.3s,baz=1.7,slow=13,SNR=11
PLCA LR LR 18 30 00.8
comp=E,790nm,19.8s,baz=359,slow=36
BDFB Brasilia 22.41 75 P **P** **18 24 18.4 -0.5**
comp=E,4.4nm,0.5s,mb4.1,baz=245,slow=18,SNR=8.8
OTAV Otavalo 24.28 340 *e*P **P** **18 24 38.3 +0.8**
comp=E,7.7nm,0.8s,mb4.2
USHA Ushuaia 31.91 178 LR LR 18 39 44.6
comp=E,962nm,19.0s,MS4.5,baz=352,slow=38
RPN Rapa Nui 35.34 255 LR LR 18 36 47.8
comp=E,428nm,18.9s,MS4.2,baz=87,slow=30
CMIG Matias Romero 46.37 327 P **P** **18 27 43.7 -2.6**
comp=E,3.9nm,0.8s,mb4.4,baz=80,slow=6.7,SNR=3.9
CMIG LR LR 18 43 38.6
comp=E,109nm,21.8s,MS3.8,baz=24,slow=32
CMIG Matias Romero 46.37 327 P **P** **18 27 43.7 -2.6**
CMIG LR LR 18 43 38.6
CPCT Cooper Cave 59.55 347 *e*P **P** **18 29 21.1 -2.2**
TKL Tuckaleechee C 59.60 347 *e*P **P** **18 29 21.4 -2.2**
SWET Sewanee 59.64 345 *e*P **P** **18 29 21.7 -2.2**
JCT Junction City 60.09 331 *e*P **P** **18 29 26.4 -0.7**
comp=E,14nm,0.7s,mb5.1
JCT Junction City 60.09 331 *e*P **P** **18 29 26.4 -0.7**
JCT pmax pmax
comp=Z,13nm,0.7s,mb5.1
WVT Waverly 60.97 344 *e*P **P** **18 29 29.9 -3.1**
comp=Z,25nm,1.1s,mb5.2
WVT Waverly 60.97 344 *e*P **P** **18 29 29.9 -3.1**
WVT pmax pmax
comp=Z,25nm,1.1s,mb5.3
TXAR Lajitas Array 60.97 327 P **P** **18 29 32.0 -1.2**
comp=Z,0.4nm,0.5s,mb3.8,baz=157,slow=7.5,SNR=15
TXAR pP pP 18 29 41.5 -1.6
comp=Z,2.2nm,0.6s,baz=157,slow=8.1,SNR=12
MIAR Mount Ida 61.21 338 *e*P **P** **18 29 32.9 -1.7**
comp=Z,7.0nm,0.6s,mb5.0
MIAR Mount Ida 61.21 338 *e*P **P** **18 29 32.9 -1.7**
MIAR pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
SNAA Sanae 61.43 161 *e*P **P** **18 29 33.4 -2.3**
comp=Z,44nm,1.4s,mb5.4
SNAA Sanae 61.43 161 *e*P **P** **18 29 33.4 -2.3**
SNAA pmax pmax
comp=Z,44nm,1.4s
FVM French Village 63.41 342 *e*P **P** **18 29 47.2 -2.1**
comp=Z,11nm,0.7s,mb5.1
FVM French Village 63.41 342 *e*P **P** **18 29 47.2 -2.1**
FVM pmax pmax
comp=Z,11nm,0.7s,mb5.1
319A Douglas 65.53 324 ⇑P **P** **18 30 03.3 -0.1**
baz=66
318A Bisbee 65.97 323 ⇓P **P** **18 30 06.1 -0.1**
baz=66,SNR=5.9
219A White Tail Can 66.00 324 ⇓P **P** **18 30 06.7 +0.3**
baz=66
NVL N'lazarevskaya 66.04 159 P **P** **18 30 06.4 +0.3**
NVL pmax pmax
comp=Z,30nm,1.3s,mb5.2
BNM Barren Site 66.34 328 *e*P **P** **18 30 08.7 +0.2**
218A Dragoon 66.41 324 ⇑P **P** **18 30 09.1 +0.2**
baz=67
LPM Los Pinos Moun 66.47 328 *e*P **P** **18 30 09.4 +0.1**
119A Ashpeak Ranch, 66.62 325 ⇑P **P** **18 30 10.7 +0.4**
baz=67
217A Green Valley 66.68 323 ⇓P **P** **18 30 10.6 -0.1**
baz=67
LAZ Ladron 66.80 328 *e*P **P** **18 30 11.6 +0.2**
118A Homack Ranch, 66.88 324 ⇓P **P** **18 30 12.0 +0.1**
baz=67
ANMO Albuquerque 66.91 328 *e*P **P** **18 30 12.1 0.0**
comp=Z,4.7nm,0.7s,mb4.6
ANMO Albuquerque 66.91 328 *e*P **P** **18 30 12.1 0.0**
ANMO pmax pmax
comp=Z,5.0nm,0.7s
Z19A T-Link Ranch, 67.01 325 ⇓P **P** **18 30 12.8 0.0**
baz=67
TUC Tucson 67.07 324 *e*P **P** **18 30 11.6 -1.6**
comp=Z,11nm,1.3s,mb4.7
TUC Tucson 67.07 324 *e*P **P** **18 30 11.6 -1.6**
TUC pmax pmax
comp=Z,11nm,1.3s,mb4.7
216A Three Points, 67.21 323 ⇑P **P** **18 30 13.9 -0.1**
baz=67
117A Oracle 67.24 324 ⇓P **P** **18 30 14.1 -0.2**
baz=67
QSPA South Pole Qui 67.28 180 *e*P **P** **18 30 14.9 +1.0**
comp=Z,13nm,0.9s,mb5.0
Y19A Nutrioso 67.52 326 ⇑P **P** **18 30 16.2 +0.2**
baz=68,SNR=6.0
214A Organ Pipe Nat 67.93 322 ⇓P **P** **18 30 18.6 0.0**
baz=68
Y17A Roosevelt 68.16 324 ⇑P **P** **18 30 20.0 0.0**
baz=68,SNR=6.4
Y16A Circle Bar Ran 68.64 324 ⇑P **P** **18 30 23.1 +0.1**
baz=69
SDCO Great Sand Dun 68.73 331 *e*P **P** **18 30 23.5 0.0**
comp=Z,13nm,0.9s,mb4.9
V19A Window Rock 68.79 327 ⇓P **P** **18 30 24.2 +0.2**
baz=69
X16A Lo Mia Camp, P 69.03 325 ⇑P **P** **18 30 25.7 +0.2**
baz=69
Y15A Casa Rosa Ranc 69.16 324 ⇓P **P** **18 30 26.3 +0.1**
baz=69
X15A Humboldt 69.51 324 ⇑P **P** **18 30 28.5 +0.1**
baz=70
Y14A Wickenburg 69.52 323 ⇓P **P** **18 30 28.3 -0.2**
baz=70
W16A Flagstaff 69.59 325 ⇓P **P** **18 30 29.5 +0.6**
baz=70
T19A Beclabito 69.66 328 ⇓P **P** **18 30 29.2 -0.1**
baz=70
MVCO Mesa Verde 69.70 328 *e*P **P** **18 30 29.1 -0.5**
comp=Z,12nm,0.9s,mb4.8
MVCO Mesa Verde 69.70 328 ⇓P **P** **18 30 29.9 +0.3**
baz=70
U18A Rough Rock, Ch 69.75 327 ⇑P **P** **18 30 30.4 +0.5**
baz=70
WUAZ Wupatki 69.83 325 *e*P **P** **18 30 30.2 -0.2**
comp=Z,14nm,1.0s,mb4.8
WUAZ Wupatki 69.83 325 ⇓P **P** **18 30 31.0 +0.7**
baz=70
Y13A Salome 69.88 323 ⇑P **P** **18 30 30.6 -0.1**
baz=70
U16A Tuba City 70.18 326 ⇓P **P** **18 30 32.7 +0.2**
baz=70
LIC Lamto 70.20 74 *e*P **P** **18 30 32.2 -1.0**
comp=Z,40nm,1.5s,mb5.1
U17A Shonto 70.29 327 ⇓P **P** **18 30 33.5 +0.4**
baz=70
T18A Mexican Hat 70.32 327 ⇓P **P** **18 30 33.7 +0.4**
baz=70,SNR=6.8
DVTC Desert V Tower 70.35 320 ⇓P **P** **18 30 33.4 -0.2**
baz=70
TIC Toumodi 70.40 74 *e*P **P** **18 30 33.4 -1.0**
comp=Z,71nm,1.1s,mb5.5
TIC Toumodi 70.40 74 *e*P **P** **18 30 33.4 -1.0**
TIC pmax pmax
comp=Z,71nm,1.1s,mb5.5
S19A Harvey Farm, M 70.43 328 ⇑P **P** **18 30 34.3 +0.3**
baz=71
X13A Yucca 70.46 323 ⇑P **P** **18 30 34.4 +0.2**
baz=71
V15A Kaibab Nationa 70.48 325 ⇓P **P** **18 30 34.6 +0.3**
baz=71
W14A Seligman 70.51 324 ⇓P **P** **18 30 34.8 +0.2**
baz=71
KIC Kosan Boka 70.52 74 *e*P **P** **18 30 34.0 -1.1**
comp=Z,59nm,0.9s,mb5.5
DBIC Dimbokro 70.55 74 P **P** **18 30 34.8 -0.5**
comp=Z,13nm,0.9s,mb4.9,baz=233,slow=5.9,SNR=12
T17A Navajo Res., N 70.67 327 ⇓P **P** **18 30 35.5 0.0**
baz=71
BC3 Big Chuckw Mtn 70.69 321 ⇓P **P** **18 30 35.5 -0.2**
baz=71
MONP Monument Peak 70.70 320 ⇑P **P** **18 30 35.6 -0.2**
baz=71
S18A Hurst Farm, Bl 70.81 328 ⇑P **P** **18 30 37.1 +0.8**
baz=71,SNR=13
V14A Boquillas Ranc 70.84 324 ⇓P **P** **18 30 37.1 +0.6**
baz=71,SNR=6.2
W13A Hualapai Mount 70.86 323 ⇑P **P** **18 30 37.3 +0.6**
baz=71
IRM Iron Mountain 70.88 322 ⇓P **P** **18 30 37.1 +0.2**
baz=71
R19A Curley Farm, L 70.92 329 ⇓P **P** **18 30 37.1 +0.1**
baz=71
U15A North Rim 71.00 325 ⇓P **P** **18 30 38.2 +0.7**
baz=71
T16A Glen Canyon Da 71.02 326 ⇑P **P** **18 30 38.1 +0.5**
baz=71
S17A Black Ridge (B 71.17 327 ⇑P **P** **18 30 38.9 +0.4**
baz=71
BELC Belle Mtn. 71.25 321 ⇓P **P** **18 30 39.3 +0.2**
baz=71
R18A Canyonlands Na 71.31 328 ⇓P **P** **18 30 39.6 +0.3**
baz=72
Q19A Hogan Spring (71.45 329 ⇑P **P** **18 30 41.3 +1.1**
baz=72
U14A Mt Trumbull 71.47 325 ⇑P **P** **18 30 41.0 +0.6**
baz=72
V13A Grand Canyon W 71.47 324 ⇓P **P** **18 30 41.0 +0.6**
baz=72
T15A Red Dirt Ranch 71.50 326 ⇓P **P** **18 30 41.7 +1.2**
baz=72
GMRC Granite Mounta 71.62 322 ⇓P **P** **18 30 41.6 +0.3**
baz=72
S16A Weppner Ranch, 71.63 327 ⇑P **P** **18 30 41.7 +0.4**
baz=72
R17A Hanksville Air 71.73 328 ⇑P **P** **18 30 42.3 +0.4**
baz=72,SNR=6.8
V12A Nelson 71.86 323 ⇓P **P** **18 30 43.0 +0.3**
baz=72
U13A Pakoon Wash 71.88 324 ⇑P **P** **18 30 42.8 0.0**
baz=72
Q18A Rafter H Ranch 71.98 329 ⇑P **P** **18 30 43.7 +0.3**
baz=72
SRU San Rafael 72.18 328 *e*P **P** **18 30 44.5 -0.1**
comp=Z,14nm,0.7s,mb5.0
SRU San Rafael 72.18 328 *e*P **P** **18 30 44.5 0.0**
SRU pmax pmax
comp=Z,14nm,0.7s,mb5.0
SRU San Rafael 72.18 328 ⇑P **P** **18 30 45.1 +0.6**
baz=72,SNR=7.7
U12A Valley of Fire 72.20 324 ⇑P **P** **18 30 45.1 +0.4**
baz=72
CCUT Cedar City 72.41 325 *e*P **P** **18 30 47.1 +1.1**
P18A Preston Nutter 72.45 329 ⇑P **P** **18 30 46.6 +0.5**
baz=73
O19A Miners Draw (B 72.45 330 ⇑P **P** **18 30 46.2 0.0**
baz=73
MSU Marysvale 72.53 327 *e*P **P** **18 30 46.6 0.0**
P17A Butcher Ranch, 72.56 328 ⇓P **P** **18 30 47.3 +0.5**
baz=73
O17A Robinson Place 73.13 329 ⇑P **P** **18 30 50.6 +0.5**
baz=73,SNR=7.2
T11A Corn Creek, Al 73.17 324 ⇓P **P** **18 30 50.6 +0.1**
baz=73
U10A Ash Meadows, A 73.18 323 ⇑P **P** **18 30 50.6 +0.1**
baz=73
Q14A Sevier Lake (B 73.45 326 ⇓P **P** **18 30 52.6 +0.5**
baz=74
L20A Wamsutter 73.47 332 ⇑P **P** **18 30 52.2 +0.1**
baz=74
TPNV Topopah Spring 73.52 323 *e*P **P** **18 30 53.3 +0.7**
comp=Z,7.0nm,0.9s,mb4.6
TPNV Topopah Spring 73.52 323 *e*P **P** **18 30 53.3 +0.8**
TPNV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TPNV Topopah Spring 73.52 323 ⇑P **P** **18 30 52.9 +0.3**
baz=74
MPMC Manual Prospec 73.58 322 ⇓P **P** **18 30 53.0 +0.1**
baz=74
R12A Pony Springs, 73.65 325 ⇓P **P** **18 30 53.7 +0.4**
baz=74
N17A Moffit Pass 73.76 329 ⇑P **P** **18 30 54.4 +0.5**
baz=74
P14A Drum Mountains 73.80 327 ⇑P **P** **18 30 54.8 +0.6**
baz=74
ISA Isabella 73.86 321 ⇓P **P** **18 30 54.9 +0.3**
baz=74
L19A Farson 74.00 331 ⇓P **P** **18 30 55.3 +0.1**
baz=74
DUG Dugway 74.14 328 *e*P **P** **18 30 56.5 +0.4**
comp=Z,5.7nm,0.8s,mb4.5
DUG Dugway 74.14 328 *e*P **P** **18 30 56.5 +0.4**
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
DUG Dugway 74.14 328 ⇓P **P** **18 30 56.5 +0.4**
baz=74
R11A Troy Canyon, C 74.18 325 ⇓P **P** **18 30 56.5 +0.1**
baz=74,SNR=5.9
P13A Bates Ranch, G 74.18 326 ⇑P **P** **18 30 57.0 +0.6**
baz=74
Q12A Willow Creek R 74.29 326 ⇓P **P** **18 30 57.0 -0.1**
baz=74
S10A Tonopah Range, 74.41 324 ⇑P **P** **18 30 58.2 +0.5**
baz=75
AGMN Agassiz Refuge 74.45 343 *e*P **P** **18 30 56.1 -1.6**
comp=Z,13nm,1.1s,mb4.8
R10A Warm Springs 74.52 324 ⇓P **P** **18 30 59.1 +0.7**
baz=75
Q11A Duckwater 74.58 325 ⇓P **P** **18 30 59.2 +0.5**
baz=75
S09A Goldfield 74.62 323 ⇓P **P** **18 30 59.1 +0.2**
baz=75
BW06 Boulder Array 74.62 331 ⇑P **P** **18 30 59.0 +0.2**
baz=75
PDAR Pinedale Array 74.62 331 P **P** **18 30 58.1 -0.7**
comp=Z,1.4nm,1.1s,mb3.8,baz=130,slow=8.0,SNR=6.1
PDAR pP pP 18 31 08.4 -0.5
comp=Z,1.3nm,0.8s,baz=152,slow=6.7,SNR=5.5
PDAR LR LR 19 03 58.1
comp=Z,78nm,19.2s,MS4.0,baz=329,slow=36
HWUT Hardware Ranch 74.62 329 *e*P **P** **18 30 58.3 -0.5**
comp=Z,7.4nm,0.7s,mb4.7
M15A Larsen Ranch, 74.93 329 ⇑P **P** **18 31 00.5 -0.2**
baz=75,SNR=6.4
Q10A Clear Creek Ra 74.96 324 ⇑P **P** **18 31 01.1 +0.1**
baz=75
O12A Currie 75.16 326 ⇓P **P** **18 31 02.3 +0.2**
baz=75
VNDA Vanda 75.20 190 P **P** **18 31 03.1 +1.3**
comp=Z,2.5nm,0.8s,mb4.2,baz=346,slow=3.2,SNR=10
VNDA LR LR 19 05 10.0
comp=Z,181nm,18.1s,MS4.4,baz=192,slow=36
PKD Parkfield 75.27 320 ⇑P **P** **18 31 02.4 -0.3**
baz=75
L15A Malad City 75.32 329 ⇓P **P** **18 31 03.1 +0.2**
baz=76
M14A Sheep Mountain 75.39 328 ⇑P **P** **18 31 03.5 +0.2**
baz=76
I18A Diamond G Ranc 75.48 332 ⇑P **P** **18 31 04.2 +0.5**
baz=76
K16A Soda Springs 75.59 330 ⇓P **P** **18 31 04.6 +0.2**
baz=76
SYO Syowa Base 75.70 160⇑*e*P **P** **18 31 03.6 -1.2**
SYO Syowa Base 75.70 160⇓*e*SZP 18 31 10.0
NVAR Mina Array Bea 75.72 323 P **P** **18 31 05.4 +0.1**
comp=Z,1.0nm,0.7s,mb3.8,baz=153,slow=5.7,SNR=6.2
NVAR pP pP 18 31 15.5 +0.1
comp=Z,2.8nm,0.8s,baz=156,slow=5.2,SNR=9.7
J14A Carey 76.86 329 ⇑P **P** **18 31 12.1 +0.5**
baz=77
K12A Draper Farm, C 77.01 328 ⇑P **P** **18 31 12.5 +0.1**
baz=77
GCMT Greycliff 77.08 333 *e*P **P** **18 31 12.6 -0.2**
F18A Big Timber 77.19 333 ⇑P **P** **18 31 13.1 -0.3**
baz=77,SNR=7.6
DGMT Dagmar 77.20 338 ⇑P **P** **18 31 13.5 +0.1**
baz=77
HLID Hailey 77.47 329 *e*P **P** **18 31 15.2 +0.1**
comp=Z,5.6nm,0.9s,mb4.5
HLID Hailey 77.47 329 ⇓P **P** **18 31 15.5 +0.5**
baz=78,SNR=6.6
SCHQ Schefferville 77.50 2 LR LR 19 04 27.4
comp=Z,136nm,19.4s,MS4.3,baz=29,slow=35
J12A Stokes Ranch, 77.56 328 ⇑P **P** **18 31 15.9 +0.3**
baz=78
F17A Fitzpatrick Pl 77.59 333 ⇑P **P** **18 31 16.3 +0.6**
baz=78
I13A Wildhorse Cree 77.60 329 ⇑P **P** **18 31 16.1 +0.4**
baz=78
H14A Leadore 77.78 330 ⇓P **P** **18 31 17.5 +0.8**
baz=78
E18A Harlowton 77.81 333 ⇓P **P** **18 31 17.0 +0.2**
baz=78
G15A Dillon 77.81 331 ⇑P **P** **18 31 17.5 +0.6**
baz=78
MFID Camas Ranch 78.04 328 ⇑P **P** **18 31 18.5 +0.3**
baz=78
K10A MacKenzie Ranc 78.09 327 ⇑P **P** **18 31 18.5 0.0**
baz=78
E17A Martinsdale 78.12 333 ⇑P **P** **18 31 18.9 +0.3**
baz=78
H13A Challis 78.15 330 ⇓P **P** **18 31 19.2 +0.4**
baz=78,SNR=8.5
N06A Buffalo Meadow 78.19 324 ⇓P **P** **18 31 19.2 +0.1**
baz=78
M07A Soldier Meadow 78.28 325 ⇑P **P** **18 31 19.4 -0.2**
baz=78
F15A Butte 78.33 331 ⇓P **P** **18 31 20.3 +0.5**
baz=78
L08A Fields 78.42 326 ⇓P **P** **18 31 20.5 +0.2**
baz=79
H12A Diamond D Ranc 78.42 329 ⇓P **P** **18 31 20.6 +0.2**
baz=79
K09A Rome 78.46 326 ⇑P **P** **18 31 20.7 +0.1**
baz=79
G13A Cobalt 78.54 330 ⇑P **P** **18 31 21.9 +0.9**
baz=79,SNR=17
D17A Six Diamond Ra 78.59 333 ⇑P **P** **18 31 20.9 -0.3**
baz=79,SNR=6.0
L07A Adell 78.81 325 ⇓P **P** **18 31 23.1 +0.5**
baz=79
E15A Deer Lodge 78.85 332 ⇓P **P** **18 31 22.7 +0.1**
baz=79
C17A Wharram Farm, 79.01 334 ⇑P **P** **18 31 23.0 -0.5**
baz=79,SNR=5.6
H11A Donnelly 79.09 329 ⇑P **P** **18 31 23.8 -0.2**
baz=79
TOA0 Torodi Ar. Sit 79.22 71 *e*P **P** **18 31 24.2 -1.1**
TORD Torodi Ar. Bea 79.22 71 P **P** **18 31 24.4 -1.0**
comp=Z,16nm,0.8s,mb5.0,baz=255,slow=5.2,SNR=94
TORD pP pP 18 31 33.2 -2.3
comp=Z,7.0nm,0.7s,baz=258,slow=4.9,SNR=10
TORD LR LR 19 06 26.2
comp=Z,207nm,18.8s,MS4.5,baz=235,slow=36
TORD Torodi Ar. Bea 79.22 71 P **P** **18 31 24.4 -1.0**
TORD pP pP 18 31 33.2 -2.3
TORD LR LR 19 06 26.2
MOD Modoc 79.24 325 *e*P **P** **18 31 24.9 0.0**
comp=Z,6.3nm,1.0s,mb4.5
MOD Modoc 79.24 325 ⇓P **P** **18 31 24.9 0.0**
baz=79
D15A Lincoln 79.28 332 ⇓P **P** **18 31 25.2 +0.2**
baz=80
H10A Noah's Angus R 79.36 328 ⇓P **P** **18 31 25.9 +0.4**
baz=80
C16A Fuhringer Ranc 79.55 333 ⇑P **P** **18 31 26.0 -0.4**
baz=80
E13A Victor 79.55 331 ⇓P **P** **18 31 26.5 0.0**
baz=80
G11A Walters Elk Ra 79.72 329 ⇑P **P** **18 31 27.5 +0.1**
baz=80,SNR=8.3
D14A Greenough 79.74 332 ⇓P **P** **18 31 27.4 0.0**
baz=80
J07A Hines 79.76 326 ⇑P **P** **18 31 27.9 +0.2**
baz=80
C15A Salmond Ranch, 79.89 333 ⇓P **P** **18 31 28.6 +0.4**
baz=80,SNR=11
B16A M & M Farms, S 80.01 334 ⇓P **P** **18 31 29.2 +0.3**
baz=80
F11A Grangeville 80.03 330 ⇑P **P** **18 31 29.3 +0.2**
baz=80
G10A Bishop Farm, J 80.05 329 ⇓P **P** **18 31 29.3 +0.1**
baz=80,SNR=6.0
J06A Christmas Vall 80.11 326 ⇑P **P** **18 31 29.6 0.0**
baz=80
K05A Summer Lake 80.13 325 ⇓P **P** **18 31 29.8 +0.1**
baz=80
N02C Big Bar 80.16 322 ⇑P **P** **18 31 30.0 +0.1**
baz=80
H08A Prairie City 80.25 327 ⇑P **P** **18 31 30.4 +0.1**
baz=80
B15A Bradely Ranch, 80.29 333 ⇑P **P** **18 31 29.8 -0.6**
baz=80,SNR=8.3
I07A Izee 80.36 327 ⇑P **P** **18 31 30.2 -0.7**
baz=80
G09A Cove 80.36 328 ⇑P **P** **18 31 31.0 +0.2**
baz=81
A16A West Butte Ran 80.39 334 ⇓P **P** **18 31 30.8 -0.1**
baz=81,SNR=8.5
F10A Beach Ranch, E 80.60 329 ⇓P **P** **18 31 32.1 -0.1**
baz=81
B14A Marquette Ranc 80.63 333 ⇑P **P** **18 31 32.1 -0.1**
baz=81
C13A Hot Springs 80.66 332 ⇑P **P** **18 31 32.5 +0.1**
baz=81,SNR=5.2
F09A S2 Ranch, Elgi 80.73 328 ⇑P **P** **18 31 32.9 0.0**
baz=81
A15A Johnson Ranch, 80.88 333 ⇑P **P** **18 31 32.7 -0.9**
baz=81
E10A Myers Farm, Un 80.92 329 ⇑P **P** **18 31 33.3 -0.5**
baz=81
G08A Pilot Rock 80.95 328 ⇓P **P** **18 31 33.5 -0.5**
baz=81
TSUM Tsumeb 81.05 107 *e*P **P** **18 31 35.6 +0.4**
comp=Z,15nm,1.0s,mb4.9
B13A Whitefish 81.15 332 ⇑P **P** **18 31 34.9 -0.1**
baz=81
A14A Double T Ranch 81.16 333 ⇓P **P** **18 31 34.7 -0.4**
baz=81
L02A Cave Junction 81.22 323 ⇓P **P** **18 31 35.4 -0.1**
baz=81
H06A Lindquist Farm 81.24 327 ⇓P **P** **18 31 35.9 +0.3**
baz=81
G07A Ruggs Ranch, H 81.28 327 ⇓P **P** **18 31 36.3 +0.5**
baz=82
D10A Wagner Farm, O 81.42 330 ⇓P **P** **18 31 36.1 -0.4**
baz=82
E09A Wood Farm, Sta 81.43 329 ⇓P **P** **18 31 36.4 -0.2**
baz=82
A13A Flathead Natio 81.55 332 ⇓P **P** **18 31 37.6 +0.4**
baz=82
B12A Libby 81.71 332 ⇓P **P** **18 31 38.5 +0.5**
baz=82
G06A Carlson Farm, 81.74 327 ⇓P **P** **18 31 38.3 +0.1**
baz=82
D09A Jones Farm, Ri 81.91 329 ⇓P **P** **18 31 38.6 -0.4**
baz=82
RSW Rattlesnake Hi 82.04 328 *e*P **P** **18 31 38.7 -1.1**
A12A Yaak River Ran 82.08 332 ⇑P **P** **18 31 40.1 +0.2**
baz=82
F06A Goldendale 82.19 327 ⇑P **P** **18 31 40.1 -0.4**
baz=82

OD2	Odessa Site #2	82.33	329	*e*P		P		18 31 41.1	-0.2
A11A	Hall Mountain, baz=83,SNR=6.6	82.41	331	⇓P		P		18 31 41.3	-0.4
C09A	Chrisman Ranch baz=83	82.43	330	⇓P		P		18 31 41.4	-0.3
B09A	Rice baz=83	82.82	330	⇑P		P		18 31 43.6	-0.2
F04A	Amboy baz=83	83.13	326	⇓P		P		18 31 44.9	-0.6
C07A	Waterville baz=83	83.19	329	⇑P		P		18 31 45.6	-0.1
E05A	Randle baz=83	83.23	327	⇓P		P		18 31 45.4	-0.6
ETW	Entiat	83.26	329	*e*P		P		18 31 46.2	+0.2
MAW	Mawson comp=Z,9.6nm,0.9s,mb4.8,baz=238,slow=9.7,SNR=9.9	83.40	164	P		P		18 31 46.3	-0.4
A09A	Danville baz=84	83.42	330	⇑P		P		18 31 46.6	-0.3
A08A	Turner Farm, O baz=84	83.72	330	⇑P		P		18 31 48.1	-0.3
B07A	Winthrop baz=84	83.76	329	⇓P		P		18 31 48.0	-0.6
D05A	Enumclaw baz=84	83.78	328	⇑P		P		18 31 47.9	-0.8
C04A	Brinnon baz=85	84.62	327	⇓P		P		18 31 52.6	-0.5
A05A	Maple Falls baz=85	85.07	329	⇑P		P		18 31 55.0	-0.3
TAM	Tamanrasset	86.77	64	*e*P		P		18 32 05.0	+0.6
ESDC	Sonseca Array comp=Z,92nm,18.8s,MS4.2,baz=245,slow=33	87.88	45	LR	LR	LR		19 07 06.0	
YKA	Yellowknife Ar comp=Z,2.9nm,0.7s,mb4.7,baz=146,slow=4.5,SNR=4.5	92.04	341	P		P		18 32 26.9	-1.2
YKA	comp=Z,49nm,18.4s,MS4.0,baz=330,slow=38			LR	LR	LR		19 17 32.6	
YKA	Yellowknife Ar comp=Z,18nm,1.8s	92.04	341	P		P		18 32 26.9	-1.2
YKA				LR	LR	LR		19 17 32.6	
KEST	Kesra comp=Z,95nm,18.5s,MS4.3,baz=253,slow=38	95.33	54	LR	LR	LR		19 19 30.9	
APA	Apatity comp=Z,3μm,14.0s	116.27	25	*e*PKIKP	PKPdf	PKPdf		18 38 06.3	+4.0
APA				MLR	MLR				
ASAR	Alice Springs comp=Z,2.0nm,0.7s,baz=135,slow=2.0,SNR=25	127.97	209	PKP	PKPdf	PKPdf		18 38 25.5	-0.7
TIXI	Tiksi	130.00	352	⇑ *i* PKIKP	PKPdf	PKPdf		18 38 26.7	-1.9
WRA	Warramunga Arr comp=Z,0.3nm,0.4s,baz=154,slow=1.7,SNR=16	130.98	212	PKP	PKPdf	PKPdf		18 38 31.4	-0.7
WRA	Warramunga Arr	130.98	212	PKP	PKPdf	PKPdf		18 38 31.4	-0.7
WRAB	Tennant Creek	130.98	212	⇑ *i* PKIKP	PKPdf	PKPdf		18 38 31.9	-0.1
BVAR	Borovoye Array comp=Z,1.2nm,0.8s,baz=250,slow=2.6,SNR=4.4	137.80	35	PKP	PKPdf	PKPdf		18 38 44.2	+0.5
YAK	Yakutsk	138.54	346	⇑ *i* PKIKP	PKPdf	PKPdf		18 38 44.6	-0.2
NVS	Novosibirsk	142.57	25	*e*PKIKP	PKPdf	PKPdf		18 38 51.7	-0.6
NVS	comp=Z,18nm,1.8s			pmax	pmax				
NVS	comp=N,19nm,2.3s			pmax	pmax				
NVS	comp=E,8.0nm,1.8s			pmax	pmax				
KURK	Kurchatov	143.32	33	⇑ *i* PKIKP	PKPdf	PKPdf		18 38 54.5	+0.8
ZAA0	Zalesovo Array	143.86	25	*e*PKPpre		PKPdf		18 38 52.2	
ZALV	Zalesovo Beam	143.86	25	PKP	PKPdf	PKPdf		18 38 52.3	-2.3
EKS2	Erkin-Say comp=E,2.9nm,0.8s,baz=298,slow=3.2,SNR=9.1	144.45	48	*e*PKPdf	PKPdf	PKPdf		18 38 55.2	-0.8
EKS2	Erkin-Say SNR=7.0	144.45	48	P	PKPdf	PKPdf		18 38 55.5	-0.5
AML	Almayashu	144.59	49	*e*PKPdf	PKPdf	PKPdf		18 38 55.7	-0.6
AML	Almayashu SNR=13	144.59	49	P	PKPdf	PKPdf		18 38 56.0	-0.2
USP	Ospenovka SNR=5.9	144.70	46	P	PKPdf	PKPdf		18 38 55.8	-0.6
AAK	Ala-Archa SNR=23	144.95	47	P	PKPdf	PKPdf		18 38 57.0	+0.2
FRU	Bishkek comp=Z,97nm,2.2s	144.96	47	⇓ *i* PKIKP	PKPdf	PKPdf		18 38 57.4	+0.5
FRU				pmax	pmax				
CHMS	Chumysh SNR=7.6	144.98	47	P	PKPdf	PKPdf		18 38 57.3	+0.4
UCH	Uchtor	145.12	48	*e*PKPdf	PKPdf	PKPdf		18 38 59.0	+1.8
KBK	Karagaybulak SNR=18	145.25	47	P	PKPbc	PKPdf		18 38 57.8	+0.7
TKM2	Tokmak 2	145.58	46	*e*PKPdf	PKPdf	PKPdf		18 38 58.6	+0.6
TKM2	Tokmak 2 SNR=11	145.58	46	P	PKPdf	PKPdf		18 38 58.8	+0.9
KZA	Kyzart SNR=9.9	145.68	48	P	PKPdf	PKPdf		18 38 59.7	+1.6
HABR	Khabarovsk	147.41	328	*e*PKIKP	PKPdf	PKPdf		18 38 59.3	-1.5
HABR				*i*				18 39 04.4	
HABR				*e*				18 42 34.6	
HABR				*e*PPP				18 45 42.8	
HABR				*e*				18 46 07.5	
HABR				*e*SS	SS			19 01 27.9	-1.4
HABR				*e*SSS				19 06 59.5	
MKAR	Makanchi Array comp=Z,6.8nm,0.7s,baz=357,slow=2.4,SNR=30	147.65	36	PKP	PKPdf	PKPdf		18 39 01.6	+0.3
MKAR	comp=Z,6.9nm,0.7s,baz=322,slow=2.7,SNR=32			PKPbc	PKPbc			18 39 03.5	-0.5
MKAR	Makanchi Array comp=Z,7.0nm,0.7s	147.65	36	*i* PKP2	PKPdf	PKPdf		18 39 01.6	+0.3
MKAR				pmax	pmax				
HYB	Hyderabad	150.48	95	*e*P	PKPbc	PKPbc		18 39 12.0	-0.1
HYB	Hyderabad	150.48	95	*i* PKP	PKPbc	PKPbc		18 39 12.0	-0.1
MJAR	Matsushiro Arr comp=Z,5.3nm,0.9s,baz=128,slow=1.4,SNR=12	151.73	305	PKPbc	PKPbc	PKPbc		18 39 13.6	-0.8
ZAK	Zakamensk comp=Z,5.0nm,1.1s	152.16	9	*e*PKIKP	PKPdf	PKPdf		18 39 08.2	-0.1
ZAK				pmax	pmax				
WMQ	Urumqi	152.47	36	*e*PKP	PKPdf	PKPdf		18 39 08.0	-1.0
HIA	Hailar	152.49	345	⇑ *i* PKIKP	PKPbc	PKPbc		18 39 13.9	-1.8
SONM	Songino Array comp=Z,1.5nm,1.0s,baz=123,slow=0.5,SNR=6.4	155.02	5	PKP	PKPdf	PKPdf		18 39 12.2	-0.2
CN2	Changchun	155.36	331	*e*PKP	PKPdf	PKPdf		18 39 08.4	-4.7
KSRS	Korea Array comp=Z,6.1nm,1.2s,baz=276,slow=30,SNR=4.1	158.53	317	PKP	PKPdf	PKPdf		18 39 17.4	+0.1
BJI	Beijing	162.02	343	PKP	PKPdf	PKPdf		18 39 20.8	-0.3
HHC	Hu-ho-hao-te	162.04	355	*e*PKP	PKPdf	PKPdf		18 39 17.4	-3.7
HHC				XPKP				18 39 27.3	
HHC				PKS				18 42 49.4	
HHC				PP	PP			18 43 51.3	+1.0
HHC				SKS	SKSdf			18 46 17.6	-6.0
HHC				SKKS	SKKSac			18 50 33.3	-3.8
HHC				SS	SS			19 04 04.9	-2.0
HHC	comp=Z,102nm,10.7s			PP	PP				
HHC	comp=N,204nm,21.4s			LR	LR				
HHC	comp=E,196nm,23.8s			LR	LR				
HHC	comp=Z,119nm,22.6s			LR	LR				
LZH	Lanzhou	165.99	19	*e*PKP	PKPdf	PKPdf		18 39 20.5	-4.4
LZH				APKP				18 39 30.0	
LZH				XPKP				18 39 31.5	
NJ2	Nanjing	167.69	320	*e*PKP	PKPdf	PKPdf		18 39 22.3	-4.0
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.8s,baz=282,slow=1.8,SNR=5.8	169.17	112	PKP	PKPdf	PKPdf		18 39 27.4	-0.3
CMAR				PKPab	PKPab			18 40 39.6	0.0
CD2	Chengdu comp=Z,1.3nm,0.8s,baz=255,slow=4.8,SNR=7.5	170.54	32	*e*PKP	PKPdf	PKPdf		18 39 25.8	-2.3
CD2				APKP				18 39 29.8	
CD2				XPKP				18 39 32.8	
CD2				PKP2	PKPab			18 40 44.5	-0.7
CD2				PP	PP			18 44 36.3	+1.5
CD2				SKS	SKSdf			18 46 26.3	-3.1
CD2				SKKS	SKKSac			18 51 19.9	-0.2
CD2				SS	SS			19 05 33.6	-0.7
CD2	comp=Z,120nm,10.2s			PP	PP				
CD2	comp=N,180nm,21.2s			LR	LR				
CD2	comp=E,210nm,18.6s			LR	LR				
CD2	comp=Z,160nm,17.8s			LR	LR				
KMI	Kunming comp=Z,152nm,21.0s	173.45	69	PKP	PKPdf	PKPdf		18 39 25.6	-4.0
KMI				APKP				18 39 31.4	
KMI				XPKP				18 39 34.8	
KMI				PP	PP			18 44 52.4	+1.8
KMI				SS	SS			19 06 05.3	+0.1
KMI	comp=Z,128nm,6.6s			PP	PP				
KMI	comp=N,156nm,16.8s			LR	LR				
KMI	comp=E,82nm,18.9s			LR	LR				
GYA	Guiyang comp=Z,90nm,8.7s	175.64	36	*e*PKP	PKPdf			18 39 29.8	-0.5
GYA				PKP2	PKPab			18 41 08.6	+0.7
GYA				PKS				18 43 01.5	
GYA				SKS	SKSdf			18 46 28.8	-2.3
GYA				SKKS	SKKSac			18 51 45.3	+0.6
GYA				SS	SS			19 06 23.0	-1.1
GYA	comp=Z,90nm,8.7s			PP	PP				
GYA	comp=N,160nm,21.2s			LR	LR				
GYA	comp=E,120nm,22.3s			LR	LR				
GYA	comp=Z,150nm,21.8s			LR	LR				

IDC 19 18:24:55.5±4.9, 694N×7315W, h157km±55km, mb1 3.4/2, mb1mx3.0/21, mbtmp3.6/2, Error ellipse: s-maj=324.5km s-min=7.6km az=132.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC		h m s		ISC
ROSC	El Rosal 7.8nm,0.3s,baz=93,slow=20,SNR=4.8	2.38	210	P	Pn		18 25 37.0		+1.5
ROSC	24nm,0.3s,baz=87,slow=20,SNR=20			S	Sn		18 26 07.6		+1.1
SDV	Santo Domingo 12nm,0.3s,baz=260,slow=5.4,SNR=116	3.15	52	P	Pn		18 25 46.2		+1.1
SDV	16nm,0.3s,baz=294,slow=19,SNR=18			S	Sn		18 26 23.9		+0.4
ASAR	Alice Springs 0.3nm,0.8s,baz=118,slow=4.0,SNR=5.3	149.16	234	PKPbc	PKPbc		18 44 25.8		-0.5
WRA	Warramunga Arr 0.2nm,0.4s,baz=106,slow=3.0,SNR=6.4	150.37	241	PKPbc	PKPbc		18 44 28.9		-0.4

*TEH **19** 18:24:39.0, 3045N×5176E, h2km, ML4.7*
*SZGRF **19** 18:25:06.7, 2903N×5287E, h33km, mb5.2, Southern Iran*
*BJI **19** 18:25:15.4, 3050N×5180E, h5km, mB5.1, mb4.6, Ms4.6, Msz4.4*
*ISCJB **19** 18:25:17.1±0.6, 3043N±002×5181E±002, h14km±4km, mb4.7/102, MS3.8/16, Error ellipse: s-maj=2.6km s-min=2.5km az=33.5*
*THR **19** 18:25:18.1±0.9, 3050N×5180E, h15km, ML4.7*
*NEIC **19** 18:25:18.4, 3053N×5181E, h15km, mb4.7/36, MS4.0/2, ML4.8(THR), ML4.7(TEH), After THR.*
*CSEM **19** 18:25:18.4±0.1, 3041N×5180E, h30km, mb4.7/38, Ms3.8, Error ellipse: s-maj=2.0km s-min=1.5km az=46.0*
*IDC **19** 18:25:18.2±3.9, 3047N×5176E, h12km±24km, mb4.4/20, mb1 4.5/24, mb1mx4.5/28, mbtmp4.4/24, ML4.4/3, MS3.8/13, Ms1 3.9/13, ms1mx3.7/35, Error ellipse: s-maj=17.3km s-min=12.0km az=173.0*
*MOS **19** 18:25:19.7±1.4, 3049N×5183E, h33km, mb4.8/39, Error ellipse: s-maj=7.2km s-min=4.2km az=121.2*

ISC 19 18:25:18.9±0.6, 3043N±002×5179E±002, h14km±4km, h15km±5.0km: pP-P, n427, σ1§23/440, mb4.7/102, MS3.8/16, 25C-26D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC		h m s		ISC
SHI	Shiraz	1.00	141	Pg	Pg		18 25 38.4		+0.1
SHI				Sg	Sg		18 25 50.2		-1.2
SHI	Shiraz	1.00	141	*e*Pg	Pg		18 25 38.5		+0.2
SHI				*e*Sg	Sg		18 25 50.3		-1.1
SHI				*e*			18 26 03.8		
IPAR	Pars	1.24	118	Pg	Pg		18 25 40.8		-1.9
IPAR				Sg	Sg		18 25 57.6		-1.2
IPAR	Pars	1.24	118	*e*Pg	Pg		18 25 40.8		-1.9
IPAR				*e*Sg	Sg		18 25 57.7		-1.1
IPAR				*e*			18 26 06.8		
ISRV	Sarvestan	1.55	132	Pn	Pn		18 25 46.7		+0.6
ISRV				Sn	Sn		18 26 09.0		+2.9
ISRV	Sarvestan	1.55	132	*e*Pn	Pn		18 25 46.7		+0.6
ISRV				*e*Sn	Sn		18 26 09.1		+3.0
ISRV				*e*			18 26 21.4		
IGAR	Gharneh	1.98	6	*e*Pn	Pn		18 25 51.4		-0.6
ISAD	Sadrabad	2.20	47	*e*Pn	Pn		18 25 55.4		+0.4
ISAD				*e*			18 26 34.6		
IPIR	Pirpir	2.38	341	Pn	Pn		18 25 58.3		+0.9
IPIR	Pirpir	2.38	341	*e*Pn	Pn		18 25 58.4		+1.0
IPIR				*e*			18 26 44.7		
GHIR	Ghir-Karzin	2.38	154	*e*Pn	Pn		18 25 59.3		+1.9
GHIR	comp=N,4μm,0.6s			AML	AML		18 26 50.5		
GHIR	comp=E,4μm,0.7s			AML	AML		18 27 01.1		
GHIR	Ghir-Karzin SNR=52	2.38	154	*e*Pn	Pn		18 26 00.1		+2.6
IZEF	Zefreh	2.50	10	*e*Pn	Pn		18 25 59.4		+0.2
IZEF				*e*			18 26 06.4		
NASN	Na'in	2.52	20	*e*Pn	Pn		18 25 59.8		+0.4
IMEH	Mehriz	2.61	68	Pn	Pn		18 26 02.0		+1.3
IMEH				Sn	Sn		18 26 32.5		+0.3
IMEH	Mehriz	2.61	68	*e*Pn	Pn		18 26 02.0		+1.3
IMEH				*e*Sn	Sn		18 26 32.5		+0.3
IMEH				*e*			18 26 42.2		
ICHK	Chekchek	2.88	50	*e*Pn	Pn		18 26 05.5		+1.1
ICHK				*e*			18 26 51.0		
IKLH	Kolahrood	2.89	357	Pn	Pn		18 26 04.4		-0.1
IKLH	Kolahrood	2.89	357	*e*Pn	Pn		18 26 04.5		0.0
IKLH				*e*			18 27 03.7		
SHGR	Shooshtar-Gavs	3.06	304	*e*Pn	Pn		18 26 07.6		+0.8
SHGR	comp=N,2μm,0.8s			AML	AML		18 27 17.0		
SHGR	comp=E,2μm,0.8s			AML	AML		18 27 30.1		
IBAF	Bafgh	3.44	69	Pn	Pn		18 26 13.1		+1.0
IBAF				Sn	Sn		18 26 53.1		+0.3
IBAF	Bafgh	3.44	69	*e*Pn	Pn		18 26 13.1		+1.0
IBAF				*e*			18 26 21.3		
IBAF				*e*Sn	Sn		18 26 53.2		+0.4
UMR	Umm Al-Rimmam	3.64	257	*e*P	Pn		18 26 16.3		+1.5
UMR	comp=E,2μm,0.5s			*e*S	Sn		18 27 00.1		+2.5
UMR	Umm Al-Rimmam baz=255	3.64	257	*e*P	Pn		18 26 16.3		+1.5
UMR	baz=255			*e*S	Sn		18 27 00.1		+2.6
UMR	comp=Z,2μm,0.5s,baz=255			AML	AML		18 27 03.5		
QRN	Al-Qurain baz=243	3.77	245	*e*P	Pn		18 26 18.7		+2.1
QRN	baz=243			*e*S	Sn		18 27 03.9		+3.2
QRN	comp=Z,1μm,0.4s,baz=243			AML	AML		18 27 11.2		
KBD	Kabd	3.77	252	*e*P	Pn		18 26 18.7		+2.1
KBD				*e*S	Sn		18 27 03.9		+3.1
KBD	Kabd baz=250	3.77	252	*e*P	Pn		18 26 18.7		+2.0
KBD	baz=250			*e*S	Sn		18 27 03.9		+3.1
KBD	comp=Z,745nm,0.4s,baz=250			AML	AML		18 27 11.3		
MIB	Mutribah	3.91	262	*e*P	Pn		18 26 20.3		+1.8
MIB	comp=Z,808nm,0.6s			*e*S	Sn		18 27 06.9		+2.8
MIB	Mutribah baz=260	3.91	262	*e*P	Pn		18 26 20.3		+1.8
MIB	baz=260			*e*S	Sn		18 27 06.9		+2.8
MIB	comp=Z,808nm,0.6s,baz=260			AML	AML		18 27 16.6		
ISFB	Sefidab	3.93	5	Pn	Pn		18 26 18.9		+0.1
ISFB	Sefidab	3.93	5	*e*Pn	Pn		18 26 19.0		+0.2
ISFB				*e*			18 26 32.3		
RDF	Al-Radifah baz=247	3.98	249	*e*P	Pn		18 26 21.6		+2.1
RDF	comp=Z,892nm,0.5s,baz=247			AML	AML		18 27 17.2		
KFJS		4.03	237	P	Pn		18 26 22.1		+1.9
GHVR	GHOM	4.06	354	*e*Pn	Pn		18 26 21.5		+0.9
GHVR	GHOM SNR=52	4.06	354	*e*Pn	Pn		18 26 21.7		+1.1
NAY	Al-Naaiem baz=253	4.12	255	*e*P	Pn		18 26 23.9		+2.4
NAY	comp=Z,376nm,0.5s,baz=253			AML	AML		18 27 16.5		
KRBR	Kerman	4.33	95	*e*Pn	Pn		18 26 25.9		+1.6
ASAO	Ashtian	4.37	341	*e*Pn	Pn		18 26 25.5		+0.6
IVRN	Varamin	4.55	359	*e*Pn	Pn		18 26 26.7		-0.7
IVRN				*e*			18 26 48.5		
BOQSS		5.02	206	P	Pn		18 26 36.3		+2.6
ILAS	Lasjerd	5.04	11	Pn	Pn		18 26 33.4		-0.6
ILAS	Lasjerd	5.04	11	*e*Pn	Pn		18 26 33.5		-0.5
ILAS				*e*			18 28 10.1		
IDMV	Damavand	5.14	2	*e*Pn	Pn		18 26 34.7		-0.7
IDMV				*e*			18 28 40.3		
DAMV	Damavand	5.19	2	*e*Pn	Pn		18 26 35.6		-0.5
DAMV	Damavand SNR=52	5.19	2	*e*Pn	Pn		18 26 35.8		-0.3
IKOM	Komasi	5.20	317	Pn	Pn		18 26 35.9		-0.4
IKOM	Komasi	5.20	317	*e*Pn	Pn		18 26 36.0		-0.3
IKOM				*e*			18 27 46.8		
IRAZ	Razeghan	5.20	343	Pn	Pn		18 26 35.8		-0.5
IRAZ	Razeghan	5.20	343	*e*Pn	Pn		18 26 35.9		-0.4
IRAZ				*e*			18 28 22.1		
IFIR	Firoozkooh	5.26	9	Pn	Pn		18 26 37.2		+0.1
IFIR	Firoozkooh	5.26	9	*e*Pn	Pn		18 26 37.3		+0.2
IFIR				*e*			18 27 11.7		
IMHD	Mahdasht	5.33	350	Pn	Pn		18 26 37.2		-0.8
IMHD	Mahdasht	5.33	350	*e*Pn	Pn		18 26 37.3		-0.7
IMHD				*e*			18 27 07.4		
IANJ	Anjilo	5.33	19	Pn	Pn		18 26 37.9		-0.2
IANJ	Anjilo	5.33	19	*e*Pn	Pn		18 26 38.0		-0.1
IANJ				*e*			18 28 22.3		
IAFJ	Afjeh	5.41	359	Pn	Pn		18 26 38.8		-0.4
IAFJ	Afjeh	5.41	359	*e*Pn	Pn		18 26 38.9		-0.3
IAFJ				*e*			18 27 01.0		
CHTH	Charan	5.49	354	*e*Pn	Pn		18 26 40.7		+0.4
ISHM	Shahmirzad	5.51	13	Pn	Pn		18 26 40.0		-0.5
ISHM	Shahmirzad	5.51	13	*e*Pn	Pn		18 26 40.0		-0.5
ISHM				*e*			18 27 11.9		
THKV	Tehran--Karaj	5.53	352	*e*Pn	Pn		18 26 41.7		+1.0
SLWS		5.70	191	P	Pn		18 26 44.2		+1.0
IVIS	Veis	5.84	316	Pn	Pn		18 26 41.5		-3.6
IVIS	Veis	5.84	316	*e*Pn	Pn		18 26 41.6		-3.5
IVIS				*e*			18 28 16.3		
IGHG	Ghaleghazi	5.88	313	Pn	Pn		18 26 45.3		-0.4
IGHG	Ghaleghazi	5.88	313	*e*Pn	Pn		18 26 45.4		-0.3
IGHG				*e*			18 29 07.7		
SNGE	Sanandaj	5.97	322	*e*Pn	Pn		18 26 47.4		+0.6
BANOM	Banah SNR=186	6.00	137	⇓P	Pn		18 26 48.7		+1.4
ILIN	Lien	6.05	319	Pn	Pn		18 26 47.8		-0.1
ILIN	Lien	6.05	319	*e*Pn	Pn		18 26 47.9		0.0
ILIN				*e*			18 28 05.9		
IDHR	Dehrash	6.24	314	Pn	Pn		18 26 49.7		-0.8
IDHR	Dehrash	6.24	314	*e*Pn	Pn		18 26 49.8		-0.7
IDHR				*e*			18 28 07.5		
BTHS		6.41	188	P	Pn		18 26 53.7		+0.8
NAZ	Nazwa, Dubai SNR=15	6.41	147	Pn	Pn		18 26 54.2		+1.2
ITEG	Tejag	6.42	66	*e*Pn	Pn		18 26 53.8		+0.7
ITEG				*e*			18 28 53.3		
IKOO	Kooshah	6.48	70	*e*Pn	Pn		18 26 55.0		+1.1
IKOO				*e*			18 29 04.0		
ASUD	Al Ashush, Dub SNR=11	6.58	151	Pn	Pn		18 26 56.1		+0.9
ASUD				Sn	Sn		18 27 49.6		-20
FAQ	Al Faqa, Dubai SNR=14	6.59	148	Pn	Pn		18 26 56.7		+1.3
HATD	Hatta, Dubai SNR=44	6.78	144	Pn	Pn		18 26 58.2		+0.2
BHD	Baghdad	6.91	296	*ex*	x		18 26 57.0		
BHD				*ex*	x		18 28 19.0		
BHD				*ex*	x		18 28 42.0		
BHD				*ex*	x		18 29 04.0		
IMON	Monand	7.25	66	*e*Pn	Pn		18 27 06.3		+1.9
IMON				*e*			18 27 39.8		
IDAH	Dahanechah	7.27	69	*e*Pn	Pn		18 27 04.5		-0.2
IDAH				*e*			18 29 27.1		
HRDDS		7.75	196	P	Pn		18 27 12.1		+0.7
ARQ	Araqi SNR=14	8.23	148	P	Pn		18 27 18.1		+0.2
ARQ	Araqi SNR=14	8.23	148	P	Pn		18 27 18.0		+0.1
IBST	Bostanabad	8.31	332	Pn	Pn		18 27 18.8		-0.2
IBST	Bostanabad	8.31	332	*e*Pn	Pn		18 27 18.8		-0.2
IBST				*e*			18 29 23.0		
ISFR	Sfrayin	8.39	36	Pn	Pn		18 27 19.7		-0.3
ISFR	Sfrayin	8.39	36	*e*Pn	Pn		18 27 19.8		-0.2
ISFR				*e*			18 28 27.3		
IKRD	Kardeh	8.46	40	Pn	Pn		18 27 30.3		+9.3
IKRD	Kardeh	8.46	40	*e*Pn	Pn		18 27 30.3		+9.3
IKRD				*e*			18 30 26.5		
IAKL	Akhelmad	8.47	42	Pn	Pn		18 27 21.7		+0.6
IAKL	Akhelmad	8.47	42	*e*Pn	Pn		18 27 21.7		+0.6
IAKL				*e*			18 27 28.8		
IMOG	Moghan	8.49	46	Pn	Pn		18 27 20.8		-0.6
IMOG	Moghan	8.49	46	*e*Pn	Pn		18 27 20.8		-0.6
IMOG				*e*			18 30 48.5		
IPAY	Payeh	8.50	43	Pn	Pn		18 27 21.2		-0.4
IPAY	Payeh	8.50	43	*e*Pn	Pn		18 27 21.3		-0.3
IPAY				*e*			18 27 27.3		
ISHV	Shirvan	8.62	33	Pn	Pn		18 27 24.1		+0.9
ISHV	Shirvan	8.62	33	*e*Pn	Pn		18 27 24.2		+1.0
ISHV				*e*			18 27 49.0		
IHRS	Heris	8.79	335	Pn	Pn		18 27 23.6		-2.0
IHRS	Heris	8.79	335	*e*Pn	Pn		18 27 23.6		-2.0
IHRS				*e*			18 28 14.5		
BIDO	Bidbid SNR=5.7	8.90	139	P	Pn		18 27 28.1		+1.0
IEMG	Emamgholi	9.00	37	Pn	Pn		18 27 28.3		-0.2
IEMG	Emamgholi	9.00	37	*e*Pn	Pn		18 27 28.3		-0.2
IEMG				*e*			18 30 34.0		
BSY	Bisya SNR=26	9.05	146	P	Pn		18 27 28.9		-0.3
BSYO	Bisya SNR=26	9.09	146	P	Pn		18 27 28.9		-0.7
IMYA	Miami	9.11	47	Pn	Pn		18 27 30.3		+0.3
IMYA	Miami	9.11	47	*e*Pn	Pn		18 27 30.4		+0.4
IMYA				*e*			18 30 28.0		
SMDO	Samad SNR=37	9.23	141	⇓P	Pn		18 27 31.8		+0.2
LYLS		9.29	207	P	Pn		18 27 32.8		+0.3
ISHB	Shabestar	9.35	329	Pn	Pn		18 27 32.3		-0.9
ISHB	Shabestar	9.35	329	*e*Pn	Pn		18 27 32.4		-0.8
ISHB				*e*			18 28 37.1		
MSL	Mosul	9.38	312	*ex*	x		18 27 33.0		
MSL				*ex*	x		18 28 18.0		
MSL				*ex*	x		18 29 16.0		
IMRD	Marand	9.67	330	Pn	Pn		18 27 38.5		+1.0
IMRD	Marand	9.67

comp=Z,123nm,0.9s
KIV Kislovodsk 15.31 334 *e*P **Pn 18 28 55.8 +1.3**
KIV *e*S **Sn 18 31 48.9 +5.0**
KIV pmax pmax
comp=Z,42nm,0.9s
KIV MLR MLR
comp=Z,100nm,11.0s
KIV Kislovodsk 15.31 334 *e*P **Pn 18 28 55.8 +1.3**
comp=Z,42nm,0.9s
MUKL Al Mukalla 16.08 190 *e*P **Pn 18 29 02.0 -2.6**
CSS Prodhromos 16.18 291 *e*P **Pn 18 29 05.1 -0.8**
comp=Z,61nm,0.9s
SOC Sochi 16.27 327 *e*P **Pn 18 29 12.8 +5.9**
SOC pmax pmax
comp=Z,66nm,0.7s
SOC MLR MLR
comp=Z,327nm,13.0s
HAJJ Hajjah 16.47 209 *e*P **Pn 18 29 08.2 -1.5**
HAJJ *i*S **Sn 18 32 10.4 -2.0**
THW Thamme Wali 17.16 77 P **Pn 18 29 18.2 -0.1**
DHBB Dhamar BB 17.19 205 *e*P **Pn 18 29 16.8 -1.9**
DHBB *i*S **Sn 18 32 28.0 -1.8**
DHBB Dhamar BB 17.19 205 *e*P **Pn 18 29 16.8 -1.9**
DHBB *i*S **Sn 18 32 28.1 -1.7**
BDHA Al Bayda' 17.35 201 *e*P **Pn 18 29 18.5 -2.2**
comp=Z,54nm,1.9s
BDHA Al Bayda' 17.35 201 *e*P **Pn 18 29 18.5 -2.3**
BDHA AMb AMB 18 29 19.7
comp=Z,108nm,1.9s
CEP Cherat 17.38 74 ⇓P **Pn 18 29 21.0 0.0**
BHJ Bhuj 17.46 110 *e*P **Pn 18 29 21.9 -0.2**
BRTR Keskin Array B 17.49 307 P **Pn 18 29 22.1 -0.2**
LBOS 17.55 202⇑*e*P **Pn 18 29 21.4 -1.8**
LBOS AMb AMB 18 29 22.4
comp=Z,201nm,2.4s
LBOS *i*S **Sn 18 32 36.3 -2.2**
ANTO Ankara 18.14 306 *e*P **Pn 18 29 32.0 +1.7**
comp=Z,13nm,0.6s
ANTO Ankara 18.14 306 *e*P **Pn 18 29 32.0 +1.7**
ANTO pmax pmax
comp=Z,13nm,0.6s
ANTO Ankara 18.14 306 ⇓*i*P **Pn 18 29 32.6 +2.3**
CHCP Chirah Chowk 18.49 74 P **Pn 18 29 34.5 -0.1**
TRBA At Turbah 18.52 204 *e*P **Pn 18 29 33.4 -1.8**
ISP Isparta 19.08 298 *e*P **Pn 18 29 39.1 -2.7**
KK31 Karatay Array 19.57 45 *i*P **Pn 18 29 46.4 -1.2**
KK31 pmax pmax
comp=Z,12nm,0.5s
KK31 Karatay Array 19.57 45 *i*P **Pn 18 29 46.4 -1.2**
comp=Z,12nm,0.5s
AB31 Akbulak array 19.80 16 P **Pn 18 29 46.7 -3.6**
AB31 pmax pmax
comp=Z,7.0nm,0.6s
AB31 Akbulak array 19.80 16 P **Pn 18 29 46.7 -3.6**
comp=Z,7.0nm,0.6s
AJM Ajmer 20.47 95 *e*P **P 18 29 56.4 +0.1**
AJM AMb AMB 18 30 02.2
comp=Z,21nm,0.8s
THN Thein Dam 20.51 78 *ex* x 18 30 05.0
AKTK Aktyubinsk 20.52 11 P **P 18 29 55.4 -1.2**
AKTK LR LR 18 39 18.3
AKTO Aktyubinsk 20.52 11 P **P 18 29 55.4 -1.3**
comp=Z,8.4nm,0.7s,baz=189,slow=10,SNR=30
AKTO LR LR 18 39 18.3
comp=Z,187nm,19.6s,MS3.5,baz=190,slow=41
ARG Arkhangelos 20.58 293 *e*P **P 18 29 59.0 +1.7**
AML Almayashu 21.11 50 *e*P **P 18 30 02.9 -0.1**
AML Almayashu 21.11 50 P **P 18 30 07.9 +4.8**
SNR=10
KARP Karpathos 21.26 290 *e*P **P 18 30 05.0 +0.3**
EKS2 Erkin-Say 21.40 49 *e*P **P 18 30 09.1 +2.9**
comp=Z,20nm,0.9s,mb4.4
EKS2 Erkin-Say 21.40 49 P **P 18 30 09.5 +3.3**
SNR=14
SMLA Simla 21.81 82 *i*P **P 18 30 09.8 -0.8**
SMLA AMb AMB 18 30 16.8
comp=Z,70nm,0.0s
AAK Ala-Archa 21.86 50 P **P 18 30 14.3 +3.2**
SNR=17
SMG Samos 21.87 296 *e*P **P 18 30 12.0 +0.7**
VRHR Novokhopersk 21.99 343 *e*P **P 18 30 10.4 -2.0**
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,190nm,0.8s
VRHR pmax pmax
comp=E,60nm,0.8s
VRHR Novokhopersk 21.99 343 *e*P **P 18 30 10.4 -2.0**
comp=E,90nm,0.7s,mb5.3
KZA Kyzart 22.13 52 P **P 18 30 13.2 -0.8**
SNR=14
USP Ospenovka 22.16 48 P **P 18 30 13.9 -0.4**
SNR=8.8
KBK Karagaybulak 22.17 50 P **P 18 30 17.6 +3.2**
SNR=13
NDI New Delhi 22.18 88 *ex* **P 18 30 18.0 +3.4**
CHMS Chumysh 22.20 49 P **P 18 30 16.6 +2.0**
SNR=9.3
NPS Neapolis 22.49 289 *e*P **P 18 30 11.0 -6.9**
VORD Divnogorie 22.54 339 *e*P **P 18 30 16.4 -1.8**
VORD pmax pmax
comp=Z,70nm,0.9s,mb5.1
VORD pmax pmax
comp=N,110nm,0.8s
VORD pmax pmax
comp=E,90nm,0.6s
VORD Divnogorie 22.54 339 *e*P **P 18 30 16.4 -1.8**
comp=E,110nm,0.8s,mb5.3
DDI Dehra Dun 22.65 84 *e*P **P 18 30 20.0 +0.4**
PRK Paraskevi 22.66 300 *e*P **P 18 30 23.5 +3.8**
TKM2 Tokmak 2 22.72 50 *e*P **P 18 30 20.8 +0.5**
comp=E,10nm,0.9s,mb4.3
TKM2 Tokmak 2 22.72 50 *e*P **P 18 30 20.8 +0.6**
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.3
TKM2 Tokmak 2 22.72 50 P **P 18 30 21.0 +0.8**
SNR=6.8
APE Apeiranthos 22.77 294 *e*P **P 18 30 20.0 -0.9**
APE Apeiranthos 22.77 294 ⇓*i*P **P 18 30 17.7 -3.2**
VSR Storozhevoye 22.80 339 *e*P **P 18 30 19.5 -1.5**
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
VSR pmax pmax
comp=N,30nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
IDI Anoyia 23.08 289 P **P 18 30 22.4 -1.7**
comp=E,13nm,0.4s,mb4.8,baz=68,slow=9.5,SNR=27
POO Poona 23.26 116 *e*P **P 18 30 26.8 +0.6**
POO AMb AMB 18 30 32.2
comp=Z,35nm,0.8s,mb4.8
TLCR 23.27 316 ⇓P **P 18 30 27.4 +1.4**
TLCR 23.27 316 ⇓*i*P **P 18 30 27.4 +1.4**
NEF NEVSHA 23.33 310 *i*P **P 18 30 28.5 +1.8**
VAM Vamos 23.65 289 *e*P **P 18 30 30.5 +0.5**
BHPL Bhopal 23.94 101 *e*P **P 18 30 32.2 -0.5**
BHPL AMb AMB 18 30 35.5
comp=Z,18nm,0.8s,mb4.5
KAD Karad 24.23 118 *e*P **P 18 30 35.3 -0.1**
KAD AMb AMB 18 30 56.8
comp=Z,117nm,1.4s,mb5.1
KAD AMP 18 30 57.6
RZN Rozhen 24.50 305 *i*P **P 18 30 39.4 +1.7**
LGTI Lohaghat 24.66 85 *e*P **P 18 30 37.3 -1.9**
LGTI *ex* x 18 31 40.8
AKL Akola 24.68 107 *ex* **P 18 30 34.7 -4.8**
AKL AMb AMB 18 30 43.9
comp=Z,21nm,1.2s,mb4.6
VRI Vrincioaia 24.88 315 ⇓*i*P **P 18 30 31.4 -10**
PLOR Plostina 24.92 315⇑*i*P **P 18 30 41.4 0.0**
PGB Panagyurishte 25.17 306 *i*P **P 18 30 43.4 -0.4**
MMB Musomiste 25.18 304 *i*P **P 18 30 46.7 +2.9**
MLR Muntele Rosu 25.18 314 P **P 18 30 45.0 +1.2**
comp=Z,29nm,0.8s,mb4.9,baz=87,slow=12,SNR=17
MLR Muntele Rosu 25.18 314 ⇓P **P 18 30 45.1 +1.3**
MLR Muntele Rosu 25.18 314 P **P 18 30 45.0 +1.2**
MLR pmax pmax
comp=Z,29nm,0.8s
MLR Muntele Rosu 25.18 314 ⇓*i*P **P 18 30 45.1 +1.3**
ITM Ithomi 25.64 293 *e*P **P 18 30 48.0 -0.1**
KKB Krupnik 25.72 304 *e*P **P 18 30 50.1 +1.3**
VTS Vitosha 25.85 306 *e*P **P 18 30 51.5 +1.5**
VAY Valandovo 25.94 303 *e*P **P 18 30 49.4 -1.3**
EVR Evrytania 25.98 297 *e*P **P 18 30 51.5 +0.3**
NGP Nagpur 26.17 104 *e*P **P 18 30 53.4 +0.3**
NGP AMb AMB 18 31 02.1
comp=Z,14nm,0.4s,mb4.9
BRVK Borovoye 26.34 26 *e*P **P 18 30 53.5 -0.7**
comp=Z,10nm,0.8s,mb4.4
BRVK Borovoye 26.34 26 *e*P **P 18 30 53.5 -0.7**
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.4
AKASG Malin Array Be 26.35 327 P **P 18 30 52.3 -2.0**
comp=Z,3.8nm,0.4s,mb4.2,baz=136,slow=9.6,SNR=21
AKASG Malin Array Be 26.35 327 *i*P **P 18 30 53.7 -0.6**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 26.35 327 *i*P **P 18 30 53.7 -0.6**
comp=Z,4.0nm,0.4s,mb4.3
AKBB Malin Array Si 26.35 327 *e*P **P 18 30 55.2 +0.9**
KIEV Kiev 26.35 327 *e*P **P 18 30 52.4 -1.9**
comp=Z,17nm,0.7s,mb4.7
KIEV Kiev 26.35 327 *e*P **P 18 30 52.4 -1.9**
KIEV pmax pmax
comp=Z,17nm,0.7s,mb4.7
BVA0 Borovoye Array 26.35 26 *i*P **P 18 30 53.8 -0.5**
BVA0 pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
BVA0 Borovoye Array 26.35 26 *i*P **P 18 30 53.8 -0.5**
comp=Z,7.0nm,1.0s,mb4.2
BVAR Borovoye Array 26.35 26 P **P 18 30 54.1 -0.3**
comp=Z,8.1nm,0.7s,mb4.4,baz=221,slow=7.4,SNR=44
BVAR PcP PcP 18 34 21.5 +1.6
comp=Z,0.6nm,0.3s,baz=182,slow=1.9,SNR=5.0
BVAR ScP ScP 18 37 57.4 -2.0
comp=Z,0.6nm,0.7s,baz=180,slow=2.5,SNR=3.6
BVAR LR LR 18 43 53.6
comp=Z,91nm,19.7s,MS3.3,baz=219,slow=42
BVAR Borovoye Array 26.35 26 P **P 18 30 54.1 -0.2**
BVAR 18 34 21.5
ARU Arti 26.43 8 *e*P **P 18 30 56.9 +1.9**
comp=Z,11nm,0.8s,mb4.4
ARU Arti 26.43 8 *c i*P **P 18 30 55.5 +0.5**
ARU *e* 18 31 30.3
ARU *e*S **S 18 35 28.9 +0.9**
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
ARU Arti 26.43 8 *i*P **P 18 30 55.5 +0.5**
comp=Z,6.0nm,1.0s,mb4.1
BURAR Bucovina Array 26.65 318 ⇓*i*P **P 18 30 59.9 +2.8**
BUR08 Bucovina Ar. S 26.68 318 *e*P **P 18 30 56.7 -0.6**
JAN Janina 26.84 298 *e*P **P 18 31 02.0 +3.1**
KRUS Krusevo 26.91 302 *e*P **P 18 30 59.0 -0.5**
KRUS Krusevo 26.91 302 *e*P **P 18 30 59.1 -0.4**
OBN Obninsk 26.96 341 *e*P **P 18 30 59.8 0.0**
OBN Obninsk 26.96 341 ⇓*i*P **P 18 31 02.0 +2.2**
OBN *e* 18 31 40.0
OBN pmax pmax
comp=Z,13nm,1.1s,mb4.4
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.5
OBN Obninsk 26.96 341 *i*P **P 18 31 02.0 +2.2**
comp=Z,13nm,1.1s,mb4.4
SVE Sverdlovsk 27.11 11 *e*P **P 18 31 04.8 +3.7**
GZR Gura Zlata 27.15 312 ⇑P **P 18 30 59.7 -1.9**
GZR Gura Zlata 27.15 312⇑*i*P **P 18 30 59.7 -1.9**
OHR Ohrid 27.18 302 *e*P **P 18 30 58.1 -3.9**
MOS Moscow 27.22 342 *e*P **P 18 31 06.9 +4.8**
MOS *e* 18 31 44.4
MOS *i* 18 32 00.6
PYUN Piuthan 27.28 87 *e*P **P 18 31 04.0 +1.0**
comp=Z,66nm,0.7s,mb5.3
HYB Hyderabad 27.60 112 *e*P **P 18 31 07.5 +1.6**
HYB Hyderabad 27.60 112 *i*P **P 18 31 07.5 +1.6**
DRGR 27.77 314 ⇑P **P 18 31 08.5 +1.3**
DRGR 27.77 314⇑*i*P **P 18 31 08.5 +1.3**
KOLN Koldanda 27.88 87 *e*P **P 18 31 08.4 +0.1**
comp=Z,22nm,0.8s,mb4.9
DANN Dangsing 27.89 86 *e*P **P 18 31 09.3 +0.9**
comp=Z,200nm,1.2s,mb5.6
BZS Buzias 27.99 311 ⇑P **P 18 31 06.8 -2.3**
BZS Buzias 27.99 311⇑*i*P **P 18 31 06.8 -2.3**
TRPA Tarpa 28.48 317 ⇓*i*P **P 18 31 16.7 +3.2**
KURK Kurchatov 28.48 37 *e*P **P 18 31 13.0 -0.5**
comp=Z,5.1nm,0.7s,mb4.3
KURK Kurchatov 28.48 37 *e*P **P 18 31 13.0 -0.5**
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
MK31 Makanchi Array 28.66 47 *i*P **P 18 31 15.2 +0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
MK31 Makanchi Array 28.66 47 *i*P **P 18 31 15.2 +0.1**
comp=Z,3.0nm,0.5s,mb4.3
MKAR Makanchi Array 28.66 47 P **P 18 31 14.9 -0.2**
comp=Z,2.0nm,0.5s,mb4.1,baz=242,slow=8.2,SNR=14
MKAR LR LR 18 43 11.7
comp=Z,396nm,18.5s,MS4.0,baz=66,slow=38
MKAR Makanchi Array 28.66 47 *e*P **P 18 31 14.8 -0.3**
GKN Gorkha 28.72 87 *e*P **P 18 31 15.4 -0.4**
comp=Z,18nm,0.5s,mb5.1
KOLS Kolonicke sedl 29.01 318 *e*P **P 18 31 20.6 +2.4**
DMN Daman 29.21 87 *e*P **P 18 31 20.7 +0.5**
comp=Z,39nm,0.9s,mb5.1
KKN Kakani 29.32 87 *e*P **P 18 31 21.4 +0.2**
comp=Z,51nm,0.9s,mb5.3
PKIN Phulchoki 29.47 87 *e*P **P 18 31 22.2 -0.3**
CRVS Cervenica-Dubn 29.47 317 *e*P **P 18 31 22.8 +0.5**
PKI Pulchoki 29.48 87 *e*P **P 18 31 22.4 -0.2**
comp=Z,78nm,1.1s,mb5.4
GUN Gumba 29.81 86 *e*P **P 18 31 25.9 +0.4**
comp=Z,85nm,1.1s,mb5.4
PSZ Piszkesteto 29.98 315 ⇓*e*P **P 18 31 27.0 +0.2**
JIRN Jiri 30.14 87 *e*P **P 18 31 28.5 +0.1**
comp=Z,33nm,0.7s,mb5.2
PKSM Moragy 30.14 311 ⇑P **P 18 31 26.8 -1.4**
PKSM Moragy 30.14 311⇑*i*P **P 18 31 26.8 -1.4**
RAMN Ramite 30.66 88 *e*P **P 18 31 32.4 -0.7**
comp=Z,26nm,0.8s,mb5.1
VYHS Vyhne 30.86 315 *e*P **P 18 31 37.1 +2.5**
KOLL Kolacno 31.16 315 *e*P **P 18 31 40.2 +3.0**
ODAN Odare 31.37 88 *e*P **P 18 31 38.8 -0.5**
comp=Z,25nm,1.0s,mb5.0
KLMR Klimovskoe 31.51 349 *e*P **P 18 31 37.0 -3.1**
KLMR pmax pmax
comp=Z,33nm,1.1s,mb5.1
TAPN Taplejung 31.52 87 *e*P **P 18 31 41.0 +0.4**
comp=Z,35nm,1.2s,mb5.1
MODS Modra-Piesok 31.77 314 *e*P **P 18 31 44.7 +2.1**
ZST Bratislava 31.82 314 *e*P **P 18 31 45.1 +2.1**
ZST pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ZST Bratislava 31.82 314 *e*P **P 18 31 45.0 +2.0**
ZST Bratislava 31.82 314 *e*P **P 18 31 45.1 +2.1**
comp=Z,7.0nm,0.9s,mb4.5
OKC Ostrava-Krasne 31.83 317 *e*P pP 18 31 54.0 +6.7
SOP Sopron 31.98 313 ⇓*e*P **P 18 31 47.3 +2.8**
MORC Moravsky Berou 32.16 317 ⇓P **P 18 31 48.2 +2.2**
MORC Moravsky Berou 32.16 317 ⇓*i*P **P 18 31 48.2 +2.2**
ARSA Arzberg 32.51 311⇑*e*P **P 18 31 49.1 +0.1**
comp=Z,9.9nm,1.4s,mb4.6
ARSA Arzberg 32.51 311 P **P 18 31 49.1 0.0**
comp=Z,9.9nm,1.4s,mb4.6
CONA Conrad Observa 32.51 313 ⇓*i*pP pP 18 31 50.7 -2.6
comp=Z,16nm,1.7s
CSNA Conrad Observa 32.51 313⇑*i*pP pP 18 31 50.6 -2.7
comp=Z,15nm,1.7s
VRAC Vranov 32.54 315 ⇓P **P 18 31 51.8 +2.5**
VRAC Vranov 32.54 315 ⇓*i*P **P 18 31 51.8 +2.4**
OBKA Obir 32.93 310 ⇓*e*pP pP 18 31 55.0 -1.9
comp=Z,14nm,1.3s
DPC Dobruska-Polom 33.11 317 *e*P **P 18 31 57.7 +3.4**
NVS Novosibirsk 33.14 34 *e*P **P 18 31 52.9 -1.6**
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,2.0nm,0.6s
NVS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
VOY Vojsko 33.24 309 *e*(P) **P 18 31 55.8 +0.3**
VOY *e* 18 32 02.4
ZAA0 Zalesovo Array 33.44 36 *e*P **P 18 31 56.2 -0.9**
ZALV Zalesovo Beam 33.44 36 P **P 18 31 56.3 -0.8**
comp=Z,5.1nm,0.4s,mb4.8,baz=252,slow=9.2,SNR=32
ZALV LR LR 18 46 58.9
comp=Z,120nm,18.7s,MS3.6,baz=59,slow=39
MOA Molln 33.50 312⇑*e*P **P 18 31 56.4 -1.3**
comp=Z,13nm,0.8s,mb4.9
KBA Koelnbreinsper 33.88 310⇑*i*pP pP 18 32 01.8 -3.4
comp=Z,21nm,0.8s
LSA Lhasa 33.96 81 P **P 18 32 03.4 +1.4**
LSA Lhasa 33.96 81 *e*P **P 18 32 02.6 +0.6**
comp=Z,5.2nm,0.8s,mb4.5
LSA Lhasa 33.96 81 *e*P **P 18 32 02.6 +0.6**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PRU Pruhonice 34.03 316 *e*P **P 18 31 59.1 -3.3**
GERES GERESS Array B 34.17 313 P **P 18 32 01.8 -1.7**
comp=Z,1.1nm,0.5s,mb4.0,baz=117,slow=8.0,SNR=8.9
GERES LR LR 18 48 55.4
comp=Z,137nm,18.1s,MS3.7,baz=91,slow=42
KHC Kasperske Hory 34.33 314 *e*P **P 18 32 04.1 -0.9**
KHC Kasperske Hory 34.33 314 *e*P **P 18 32 04.6 -0.4**
KHC *e*pP pP 18 32 07.0 -2.2
KHC *ex* x 18 32 53.0
BRG Berggiesshubel 34.71 317 *e*P **P 18 32 11.3 +3.1**
BRG *i* 18 32 19.9
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BRG Berggiesshubel 34.71 317 *e*P **P 18 32 11.3 +3.1**
comp=Z,4.5nm,1.1s,mb4.3
BRG *i* 18 32 19.9
comp=Z,4.0nm,0.8s
WTTA Wattenberg 35.05 310⇑*i*P **P 18 32 09.2 -2.0**
comp=Z,26nm,1.0s,mb5.1
JOF Joensuu 35.08 344 *e*p **P 18 32 12.0 +0.8**
comp=Z,2.0nm,0.3s,mb4.5
JOF Joensuu 35.08 344 *e*P **P 18 32 12.0 +0.8**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
SQTA Sankt Quirin 35.33 310⇑*i*P **P 18 32 13.4 -0.1**
comp=Z,18nm,0.5s,mb5.3
NKC Novy Kostel 35.39 315 *e*P **P 18 32 15.7 +1.7**
CLL Collm 35.42 317 *i*P **P 18 32 16.6 +2.3**
comp=Z,5.0nm,0.8s,mb4.5
CLL Collm 35.42 317 *i*P **P 18 32 16.6 +2.3**
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CLL Collm 35.42 317 *i*pP pP 18 32 16.6 -1.9
comp=Z,5.0nm,0.8s
CLL *ex* x 18 32 25.0
MOTA Moosalm 35.42 310⇑*i*P **P 18 32 13.8 -0.6**
comp=Z,9.4nm,0.5s,mb5.0
FETA Feichten 35.60 309⇑*i*P **P 18 32 16.1 +0.2**
comp=Z,31nm,0.9s,mb5.2
RETA Reutte 35.68 310⇑*i*P **P 18 32 16.1 -0.5**
comp=Z,15nm,0.9s,mb4.9
KEST Kesra 35.75 290 P **P 18 32 17.9 +0.5**
comp=Z,4.4nm,0.8s,mb4.4,baz=131,slow=1.6,SNR=8.8
KAF Kangasniemi 35.77 340 *e*p **P 18 32 17.0 -0.2**
comp=Z,1.2nm,0.3s,mb4.3
KAF Kangasniemi 35.77 340 *e*P **P 18 32 17.0 -0.2**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
GRF Grafenberg Arr 35.97 314 *e*P **P 18 32 18.2 -0.9**
GRF pmax pmax
comp=Z,88nm,2.0s,mb5.3
GRF Grafenberg Arr 35.97 314 *e*P **P 18 32 18.2 -0.9**
GRF pmax pmax
comp=Z,88nm,2.0s,mb5.3
GRF Grafenberg Arr 35.97 314 *e*P **P 18 32 18.2 -0.9**
comp=Z,88nm,2.0s,mb5.3
DAVA Damuels 36.22 310⇑*i*P **P 18 32 19.5 -1.8**
comp=Z,42nm,0.8s,mb5.4
TUE Stuetta 36.41 308 *e*P **P 18 32 24.1 +1.2**
comp=Z,4.8nm,0.6s,mb4.6
MBDF Montbardon 37.94 305 *e*P **P 18 32 35.3 -0.6**
comp=Z,32nm,0.8s,mb4.8
MBDF Montbardon 37.94 305 *e*P **P 18 32 35.3 -0.6**
MBDF pmax pmax
comp=Z,16nm,0.8s,mb4.8
MBDF Montbardon 37.94 305 *e*P **P 18 32 35.3 -0.6**
comp=Z,16nm,0.8s,mb4.8
BNI Bardonecchia 38.04 305 *e*P **P 18 32 35.5 -1.2**
comp=Z,15nm,0.9s,mb4.7
BNI Bardonecchia 38.04 305 *e*P **P 18 32 35.6 -1.1**
BNI pmax pmax
comp=Z,15nm,0.9s,mb4.7
LPG La Plagne 38.05 306 *e*P **P 18 32 37.2 +0.4**
comp=Z,17nm,0.6s,mb4.7
LPG La Plagne 38.05 306 *e*P **P 18 32 37.2 +0.4**
LPG pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
LPG La Plagne 38.05 306 *e*P **P 18 32 37.2 +0.4**
comp=Z,8.6nm,0.6s,mb4.7
LPL La Plagne 38.06 306 *e*P **P 18 32 36.1 -0.8**
comp=Z,66nm,1.2s,mb4.9
LPL La Plagne 38.06 306 *e*P **P 18 32 36.1 -0.8**
LPL pmax pmax
comp=Z,33nm,1.2s,mb4.9
LPL La Plagne 38.06 306 *e*P **P 18 32 36.1 -0.8**
comp=Z,33nm,1.2s,mb4.9
HINF Hinteralfeld 38.34 310 *e*P **P 18 32 38.7 -0.5**
KRAR Krasnoyarsk 38.50 36 ⇓*i*P **P 18 32 39.8 -0.7**
KRAR pmax pmax
comp=Z,16nm,1.3s,mb4.6
CABF La Chapelle 38.66 308 *e*P **P 18 32 40.0 -1.9**
comp=Z,26nm,0.7s,mb4.8
CABF La Chapelle 38.66 308 *e*P **P 18 32 40.0 -1.9**
CABF pmax pmax
comp=Z,13nm,0.7s,mb4.8
CABF La Chapelle 38.66 308 *e*P **P 18 32 40.0 -1.9**
comp=Z,13nm,0.7s,mb4.8
SMRF Simiane la Rot 38.72 304 *e*P **P 18 32 40.0 -2.5**
comp=Z,47nm,1.2s,mb4.8
SMRF Simiane la Rot 38.72 304 *e*P **P 18 32 40.0 -2.5**
comp=Z,23nm,1.2s,mb4.8
VIVF Saint-Julien-l 39.44 305 *e*P **P 18 32 45.9 -2.6**
comp=Z,11nm,0.7s,mb4.4
VIVF Saint-Julien-l 39.44 305 *e*P **P 18 32 45.9 -2.6**
comp=Z,5.3nm,0.7s,mb4.4
VIVF Saint-Julien-l 39.44 305 *e*P **P 18 32 45.9 -2.6**
comp=Z,5.3nm,0.7s,mb4.4
GTA Gaotai 39.99 64 *e*P **P 18 32 53.8 +0.7**
GTA AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
GTA AMB AMB
comp=Z,156nm,3.9s
GTA LR LR
comp=N,323nm,16.3s,MS4.4
GTA LR LR
comp=E,267nm,14.9s,MS4.4
GTA LR LR
comp=Z,231nm,14.6s,MS4.2
SMF Signal de Mont 40.20 308 *e*P **P 18 32 53.0 -1.7**
comp=Z,18nm,0.7s,mb4.6
SMF Signal de Mont 40.20 308 *e*P **P 18 32 53.0 -1.7**
comp=Z,9.3nm,0.7s,mb4.6
SMF Signal de Mont 40.20 308 *e*P **P 18 32 53.0 -1.7**
comp=Z,9.2nm,0.7s,mb4.6
LOR Lormes 40.26 309 *e*P **P 18 32 54.4 -0.8**
comp=Z,8.3nm,0.8s,mb4.2
LOR *e*MLR MLR
comp=Z,195nm,21.0s,MS3.6
LOR Lormes 40.26 309 *e*P **P 18 32 54.4 -0.8**
comp=Z,4.2nm,0.8s,mb4.2
LOR LR LR
comp=Z,190nm,21.0s,MS3.9
LOR Lormes 40.26 309 *e*P **P 18 32 54.4 -0.8**
comp=Z,4.2nm,0.8s,mb4.2
BAIF Baives 40.46 313 *e*P **P 18 32 57.4 +0.5**
comp=Z,14nm,0.8s,mb4.5
BAIF Baives 40.46 313 *e*P **P 18 32 57.4 +0.5**
comp=Z,7.0nm,0.8s,mb4.4
BAIF Baives 40.46 313 *e*P **P 18 32 57.4 +0.5**
comp=Z,7.0nm,0.8s,mb4.5
SSF Saint Saulge 40.47 308 *e*P **P 18 32 57.3 +0.3**
comp=Z,36nm,1.3s,mb4.7
SSF Saint Saulge 40.47 308 *e*P **P 18 32 57.3 +0.3**
comp=Z,18nm,1.3s,mb4.6
SSF Saint Saulge 40.47 308 *e*P **P 18 32 57.3 +0.3**
comp=Z,18nm,1.3s,mb4.7
AVF Avril sur Loir 40.55 308 *e*P **P 18 32 57.9 +0.3**
comp=Z,40nm,1.3s,mb4.6
AVF Avril sur Loir 40.55 308 *e*P **P 18 32 57.9 +0.3**
comp=Z,20nm,1.3s,mb4.6
AVF Avril sur Loir 40.55 308 *e*P **P 18 32 57.9 +0.3**
comp=Z,20nm,1.3s,mb4.6
NB2 NORSAR Subarra 40.58 331 P **P 18 32 55.4 -2.3**
comp=Z,2.6nm,0.7s,mb4.0,baz=122,slow=8.6
NOA NORSAR Array B 40.58 331 P **P 18 32 56.2 -1.5**
comp=Z,2.0nm,0.6s,mb3.9,baz=121,slow=8.2,SNR=8.5
NOA PP PP 18 34 28.8 -2.3
comp=Z,1.7nm,0.8s,baz=130,slow=11,SNR=4.6
NOA LR LR 18 50 40.1
comp=Z,178nm,21.6s,MS3.9,baz=130,slow=38
NOA NORSAR Array B 40.58 331 P **P 18 32 56.2 -1.5**
NOA 18 34 28.8

KEV	**Kevo**	**41.81**	**347**	*ep*		**P**	**18 33 11.3**	**+3.6**
	comp=Z,1.2nm,0.4s,mb3.9								
KEV	**Kevo**	**41.81**	**347**	*eP*		**P**	**18 33 11.3**	**+3.6**
KEV					pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.8								
ARCES	**ARCESS Array B**	**41.92**	**347**	P		**P**	**18 33 07.9**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.2,baz=143,slow=7.7,SNR=12								
ARCES					LR	LR	18 52 43.2		
	comp=Z,172nm,19.5s,MS3.9,baz=151,slow=39								
LFF	**La Frestale**	**42.23**	**305**	*eP*		**P**	**18 33 10.3**	**-1.2**
	comp=Z,13nm,0.8s,mb4.3								
LFF	**La Frestale**	**42.23**	**305**	*eP*		**P**	**18 33 10.3**	**-1.2**
LFF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.3								
LFF	**La Frestale**	**42.23**	**305**	*eP*		**P**	**18 33 10.3**	**-1.2**
	comp=Z,6.3nm,0.8s,mb4.3								
MFF	**Saint Martin d**	**42.93**	**307**	*eP*		**P**	**18 33 17.3**	**+0.1**
ZAK	**Zakamensk**	**43.00**	**47**	*eP*		**P**	**18 33 09.9**	**-7.7**
LDF	**La Druitiere**	**43.06**	**310**	*eP*		**P**	**18 33 17.3**	**-0.9**
	comp=Z,19nm,0.8s,mb4.6								
LDF	**La Druitiere**	**43.06**	**310**	*eP*		**P**	**18 33 17.3**	**-0.9**
LDF					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.5								
LDF	**La Druitiere**	**43.06**	**310**	*eP*		**P**	**18 33 17.3**	**-0.9**
	comp=Z,9.4nm,0.8s,mb4.6								
ETSF	**Etsaut**	**43.16**	**302**	*eP*		**P**	**18 33 19.0**	**0.0**
	comp=Z,33nm,1.2s,mb4.6								
ETSF	**Etsaut**	**43.16**	**302**	*eP*		**P**	**18 33 19.0**	**0.0**
ETSF					pmax	pmax			
	comp=Z,17nm,1.2s,mb4.7								
ETSF	**Etsaut**	**43.16**	**302**	*eP*		**P**	**18 33 19.0**	**0.0**
	comp=Z,16nm,1.2s,mb4.6								
FLN	**La Foliniere**	**43.32**	**310**	*eP*		**P**	**18 33 18.8**	**-1.5**
FLN					eMLR	MLR			
	comp=Z,176nm,22.5s,MS3.6								
FLN	**La Foliniere**	**43.32**	**310**	*eP*		**P**	**18 33 18.8**	**-1.5**
FLN					MLR	MLR			
	comp=Z,180nm,22.5s,MS3.9								
LZH	**Lanzhou**	**43.47**	**68**	*eP*		**P**	**18 33 22.0**	**+0.3**
LZH					AP	pP	18 33 25.0	-1.0	
LZH					XP	sP	18 33 27.5	-0.2	
LZH					AMB	AMB			
	comp=Z,18nm,1.0s,mb4.8								
LZH					AMB	AMB			
	comp=Z,71nm,4.3s								
GRR	**Gorron**	**43.53**	**310**	*eP*		**P**	**18 33 21.0**	**-1.0**
SJPF	**Ste Jean**	**43.64**	**302**	*eP*		**P**	**18 33 22.4**	**-0.5**
	comp=Z,24nm,0.8s,mb4.7								
SJPF	**Ste Jean**	**43.64**	**302**	*eP*		**P**	**18 33 22.4**	**-0.5**
SJPF					pmax	pmax			
	comp=Z,12nm,0.8s,mb4.7								
SJPF	**Ste Jean**	**43.64**	**302**	*eP*		**P**	**18 33 22.4**	**-0.5**
	comp=Z,12nm,0.8s,mb4.7								
CHG	**Chiang Mai**	**44.12**	**94**	⇑*P*		**P**	**18 33 27.8**	**+0.7**
	comp=Z,50nm,1.1s,mb5.2								
CHTO	**Chiang Mai**	**44.12**	**94**	*eP*		**P**	**18 33 26.9**	**-0.2**
	comp=Z,52nm,1.0s,mb5.2								
CHTO	**Chiang Mai**	**44.12**	**94**	*eP*		**P**	**18 33 26.9**	**-0.2**
CHTO					pmax	pmax			
	comp=Z,52nm,1.0s,mb5.2								
CMAR	**Chiang Mai Arr**	**44.27**	**94**	P		**P**	**18 33 27.5**	**-0.8**
	comp=Z,16nm,0.9s,mb4.7,baz=289,slow=8.2,SNR=58								
CMAR					PcP	PcP	18 35 14.6	+1.9	
	comp=Z,1.0nm,0.5s,baz=292,slow=4.9,SNR=4.5								
CMAR					LR	LR	18 54 58.2		
	comp=Z,106nm,20.6s,MS3.7,baz=292,slow=40								
CMAR	**Chiang Mai Arr**	**44.27**	**94**	P		**P**	**18 33 27.5**	**-0.8**
CMAR							18 35 14.6		
SONM	**Songino Array**	**44.81**	**51**	P		**P**	**18 33 31.7**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.5,baz=260,slow=7.2,SNR=4.8								
SONM					LR	LR	18 53 30.0		
	comp=Z,294nm,19.9s,MS4.2,baz=216,slow=38								
BDT	**Bhumibol Dam**	**44.84**	**96**	P		**P**	**18 33 33.5**	**+0.7**
KMI	**Kunming**	**45.09**	**84**	P		**P**	**18 33 35.3**	**+0.5**
KMI					AMB	AMB			
	comp=Z,13nm,1.0s,mb4.7								
ESDC	**Sonseca Array**	**45.92**	**297**	P		**P**	**18 33 43.2**	**+2.0**
	comp=Z,0.2nm,0.3s,mb3.6,baz=72,slow=9.0,SNR=3.7								
ESDC					PcP	PcP	18 35 20.8	+2.7	
	comp=Z,0.9nm,0.5s,baz=43,slow=3.6,SNR=3.4								
XAN	**Xi'an**	**47.93**	**70**	P		**P**	**18 33 56.0**	**-1.0**
XAN					AP	pP	18 34 03.6	+2.3	
XAN					AMB	AMB			
	comp=Z,12nm,1.3s,mb4.8								
XAN					LR	LR			
	comp=N,114nm,27.1s,MS3.8								
XAN					LR	LR			
	comp=E,60nm,23.5s,MS3.8								
XAN					LR	LR			
	comp=Z,198nm,27.1s,MS4.0								
OPO	**Ambohidratompo**	**48.91**	**186**	P		**P**	**18 34 03.7**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=312,slow=23,SNR=2.2								
TOA0	**Torodi Ar. Sit**	**49.18**	**261**	*eP*		**P**	**18 34 05.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**49.18**	**261**	P		**P**	**18 34 06.2**	**-0.6**
	comp=Z,8.5nm,0.6s,mb5.0,baz=54,slow=8.7,SNR=54								
BOD	**Bodaibo**	**50.12**	**38**	*eP*		**P**	**18 34 09.9**	**-3.5**
BOD					pmax	pmax			
	comp=Z,10.0nm,1.5s,mb4.6								
LSZ	**Lusaka**	**50.80**	**210**	*eP*		**P**	**18 34 20.6**	**+1.6**
	comp=Z,9.2nm,0.9s,mb4.7								
LSZ	**Lusaka**	**50.80**	**210**	*eP*		**P**	**18 34 20.6**	**+1.6**
LSZ					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.7								
TIXI	**Tiksi**	**57.37**	**22**	*eP*		**P**	**18 35 04.8**	**-1.5**
	comp=Z,2.2nm,0.6s,mb4.4								
TIXI	**Tiksi**	**57.37**	**22**	*eP*		**P**	**18 35 07.7**	**+1.4**
TIXI					pmax	pmax			
	comp=Z,24nm,3.8s								
DBIC	**Dimbokro**	**58.00**	**258**	P		**P**	**18 35 11.0**	**-0.6**
	comp=Z,5.7nm,0.4s,mb4.9,baz=26,slow=6.7,SNR=22								
YAK	**Yakutsk**	**58.01**	**33**	⇓*eP*		**P**	**18 35 10.3**	**-0.6**
YAK					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
KIC	**Kosan Boka**	**58.07**	**258**	*eP*		**P**	**18 35 11.5**	**-0.5**
	comp=Z,60nm,0.8s,mb5.7								
TIC	**Toumodi**	**58.15**	**258**	*eP*		**P**	**18 35 11.9**	**-0.7**
	comp=Z,19nm,0.4s,mb5.5								
LIC	**Lamto**	**58.38**	**258**	*eP*		**P**	**18 35 13.6**	**-0.6**
	comp=Z,24nm,0.7s,mb5.0								
LIC					eMLR	MLR			
	comp=Z,339nm,20.2s,MS4.2								
LIC	**Lamto**	**58.38**	**258**	*eP*		**P**	**18 35 13.6**	**-0.6**
	comp=Z,12nm,0.7s,mb5.0								
LIC					LR	LR			
	comp=Z,170nm,20.3s,MS4.2								
LBTB	**Lobatse**	**60.57**	**207**	*eP*		**P**	**18 35 30.0**	**+1.0**
	comp=Z,8.4nm,0.6s,mb5.0								
LBTB	**Lobatse**	**60.57**	**207**	*eP*		**P**	**18 35 30.0**	**+1.0**
LBTB					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb5.0								
SUMG	**Summit**	**61.35**	**340**	*eP*		**P**	**18 35 34.3**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.7								
KSRS	**Korea Array**	**61.97**	**61**	P		**P**	**18 35 37.6**	**-0.9**
	comp=Z,2.9nm,0.6s,mb4.6,baz=285,slow=6.2,SNR=7.4								
KSRS					LR	LR	19 04 57.9		
	comp=Z,106nm,19.1s,MS4.0,baz=113,slow=38								
KSRS	**Korea Array**	**61.97**	**61**	P		**P**	**18 35 37.7**	**-0.9**
KSRS					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.6								
KSRS					MLR	MLR			
	comp=Z,106nm,19.1s,MS4.0								
SEY	**Seymchan**	**67.95**	**29**	⇑*iP*		**P**	**18 36 16.7**	**-0.3**
PETK	**Petropavlovsk-**	**74.97**	**37**	P		**P**	**18 36 58.5**	**-1.1**
	comp=Z,4.2nm,0.9s,mb4.4,baz=323,slow=3.2,SNR=4.8								
PET	**Petropavlovsk**	**75.51**	**37**	*i* P		**P**	**18 37 02.7**	**+0.1**
SCHQ	**Schefferville**	**80.12**	**329**	P		**P**	**18 37 27.4**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.4,baz=61,slow=10,SNR=4.6								
SCHQ	**Schefferville**	**80.12**	**329**	P		**P**	**18 37 27.4**	**-0.8**
COLD	**Coldfoot**	**81.24**	**8**	*eP*		**P**	**18 37 35.0**	**+1.0**
	comp=Z,95nm,1.2s,mb5.6								
INK	**Inuvik**	**81.49**	**2**	*eP*		**P**	**18 37 34.1**	**-1.2**
IMA2	**Indian Mountai**	**81.84**	**10**	*eP*		**P**	**18 37 36.4**	**-0.8**
COLA	**College**	**83.78**	**8**	⇓*iP*		**P**	**18 37 46.5**	**-0.8**
EGAK	**Eagle**	**84.57**	**6**	*eP*		**P**	**18 37 50.7**	**-0.7**
	comp=Z,16nm,1.3s,mb5.0								
YKA	**Yellowknife Ar**	**86.76**	**354**	P		**P**	**18 38 01.4**	**-0.9**
	comp=Z,2.4nm,0.7s,mb4.5,baz=7.6,slow=5.5,SNR=5.1								
RC01	**Rabbit Creek A**	**87.14**	**10**	*eP*		**P**	**18 38 04.0**	**-0.1**
WRAB	**Tennant Creek**	**93.76**	**111**	⇓*iP*		**P**	**18 38 32.6**	**-3.1**
ASAR	**Alice Springs**	**95.31**	**114**	P		**P**	**18 38 42.2**	**-0.5**
	comp=Z,0.5nm,0.5s,mb4.2,baz=302,slow=4.3,SNR=17								
QSPA	**South Pole Qui**	**120.26**	**180**	PKP		PKPdf	18 44 07.5	-0.9	
	comp=Z,1.3nm,0.4s,baz=188,slow=0.6,SNR=18								

NEIC 19 18:27:03.5,6317N×15047W,h114km,MG3.6(AEIC),

After AEIC.,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.29**	**16**	P		P	Pn	18 27 20.0	+0.4
TRF				S		Sn		18 27 32.4	+0.7
KTH	**Kantishna Hill**	**0.44**	**332**	P		P	Pn	18 27 20.5	+0.2
KTH				S		Sn		18 27 32.8	-0.1
PPLA	**Purkeypile**	**0.83**	**252**	P		P	Pn	18 27 23.6	+0.4
PPLA				S		Sn		18 27 38.3	+0.1
MCK	**McKinley**	**0.89**	**50**	P		P	Pn	18 27 24.1	+0.3
MCK				S		Sn		18 27 39.3	+0.1
BPAW	**Bear Paw Mtn.**	**0.96**	**346**	P		P	Pn	18 27 24.3	-0.2
BPAW				S		Sn		18 27 39.6	-0.8
CHUM	**Lake Minchumin**	**1.09**	**312**	P		P	Pn	18 27 25.9	+0.1
CHUM				S		Sn		18 27 42.3	-0.5
GHO	**Glory Hole Cre**	**1.58**	**152**	P		P	Pn	18 27 31.6	+0.4
SML	**Sawmill**	**1.69**	**143**	P		P	Pn	18 27 32.4	-0.2
PMR	**Palmer**	**1.70**	**158**	P		P	Pn	18 27 32.3	-0.5
FIB	**Fire Island**	**2.02**	**176**	P		P	Pn	18 27 37.4	+0.7
COLA	**College**	**2.06**	**33**	P		P	Pn	18 27 37.4	+0.1
RC01	**Rabbit Creek A**	**2.12**	**170**	P		P	Pn	18 27 37.8	-0.2
IL1	**Eielson Array**	**2.26**	**43**	P		P	Pn	18 27 39.5	-0.3
PAX	**Paxson**	**2.29**	**93**	P		P	Pn	18 27 40.4	+0.3
TT01	**Tatalina**	**2.54**	**267**	P		P	Pn	18 27 42.9	-0.5
SLKM	**Skilak Lake**	**2.67**	**177**	P		P	Pn	18 27 45.4	+0.2
DOT	**Dot Lake**	**2.92**	**78**	P		P	Pn	18 27 48.0	-0.4
MENT	**Mentasta**	**3.08**	**91**	*eP*		P	Pn	18 27 50.3	-0.2
SEW	**Seward**	**3.12**	**171**	P		P	Pn	18 27 50.3	-0.6
IM3	**Indian Mountai**	**3.16**	**335**	P		P	Pn	18 27 51.2	-0.3
SVW2	**Sparrevohn**	**3.17**	**231**	P		P	Pn	18 27 51.6	-0.1
IMA2	**Indian Mountai**	**3.22**	**336**	*eP*		P	Pn	18 27 52.0	-0.4
EYAK	**Cordova Ski Ar**	**3.45**	**137**	P		P	Pn	18 27 54.8	-0.6
BCA3	**Beaver Creek A**	**3.95**	**88**	P		P	Pn	18 28 01.2	-0.8
COLD	**Coldfoot**	**4.08**	**1**	P		P	Pn	18 28 04.0	+0.3
MID	**Middleton Isla**	**4.25**	**150**	*eP*		P	Pn	18 28 06.8	+0.7
EGAK	**Eagle**	**4.41**	**64**	*eP*		P	Pn	18 28 08.1	-0.1
DAWY	**Dawson**	**5.03**	**75**	P		P	Pn	18 28 15.9	-0.6
KDAK	**Kodiak Island**	**5.50**	**192**	P		P	Pn	18 28 21.8	-1.2
OHAK	**Old Harbor**	**6.13**	**194**	*eP*		P	Pn	18 28 29.7	-1.7
PNL	**Peninsula**	**6.37**	**118**	P		P	Pn	18 28 34.4	-0.3

*ISCJB **19** 18:32:27.5±1.0,522S±02×1182W±03,h10km, mb3.9/7, MS4.1/5, Error ellipse: s-maj=39.2km s-min=17.3km az=146.1*
*IDC **19** 18:32:27.1±0.9,5209S×11835W,h0km, mb3.9/7, mb1 4.1/7, mb1mx4.0/15, mbtmp3.9/7, MS4.1/5, Ms1 4.0/5, ms1mx3.7/16, Error ellipse: s-maj=42.2km s-min=21.3km az=149.0*
*NEIC **19** 18:32:28.7±0.8,5210S×11834W,h10km, Error ellipse: s-maj=31.9km s-min=16.0km az=147.0*

ISC 19 18:32:29.1±1.0,**521S**±02×**1184W**±03,**h10**km,**n17**,σ0°**85**/**7**, **mb3.9/7,MS4.1/5,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**31.64**	**330**	*e*LR		LR		18 46 58.6	
	768nm,26.2s,baz=140								
PLCA	**Paso Flores**	**34.27**	**90**	P		**P**		**18 39 15.0**	**-0.1**
	2.4nm,1.1s,mb4.0,baz=239,slow=5.6,SNR=2.8								
PLCA						LR	LR	18 50 15.4	
	comp=Z,171nm,18.5s,MS3.8,baz=84,slow=31								
VNDA	**Vanda**	**37.60**	**201**	P		**P**		**18 39 44.4**	**+1.2**
	1.0nm,1.0s,mb3.5,baz=68,slow=4.7,SNR=3.9								
QSPA	**South Pole Qui**	**38.07**	**180**	P		**P**		**18 39 46.5**	**-0.7**
	4.2nm,0.9s,mb4.2,baz=107,slow=2.2,SNR=5.6								
MEH	**Mehetia**	**41.39**	**314**	*eT*				19 25 20.0	
	502nm,0.3s								
PPT	**Papeete**	**42.33**	**313**	*e*LQ				18 50 21.8	
	603nm,26.5s								
PPT					*e*LR	LR		18 52 07.4	
	498nm,26.2s,baz=156								
VAH	**Vaihoa**	**43.54**	**317**	*eT*				19 28 00.5	
	3.0nm,0.2s								
LPAZ	**La Paz**	**53.26**	**67**	P		**P**		**18 41 49.2**	**+1.3**
	0.5nm,0.4s,mb3.8,baz=168,slow=4.6,SNR=3.5								
LPAZ						LR	LR	18 58 54.7	
	comp=Z,167nm,20.5s,MS4.1,baz=263,slow=30								
SIV	**San Ignacio**	**57.59**	**73**	P		**P**		**18 42 18.1**	**-1.0**
	1.9nm,0.9s,mb4.1,baz=234,slow=7.4,SNR=6.2								
BDFB	**Brasilia**	**65.76**	**84**	LR		LR		19 08 22.0	
	comp=Z,105nm,20.4s,MS4.0,baz=192,slow=33								
STKA	**Stephens Creek**	**71.19**	**242**	LR		LR		19 07 44.9	
	comp=Z,134nm,21.5s,MS4.2,baz=39,slow=30								
ASAR	**Alice Springs**	**81.83**	**242**	P		**P**		**18 44 48.6**	**+0.2**
	0.7nm,0.9s,mb3.6,baz=152,slow=4.2,SNR=4.3								
WRA	**Warramunga Arr**	**84.57**	**244**	P		**P**		**18 45 01.8**	**-0.8**
	0.9nm,0.8s,mb4.0,baz=145,slow=4.1,SNR=3.0								
BATI	**Baumata**	**98.39**	**242**	LR		LR		19 23 30.2	
	comp=Z,154nm,19.9s,MS4.5,baz=262,slow=31								
GERES	**GERESS Array B**	**149.77**	**77**	PKPbc		PKPbc		18 52 16.5	-1.7
	0.2nm,0.5s,baz=321,slow=1.4,SNR=3.3								
CLL	**Collm**	**150.31**	**72**	*e*PKPab		PKPab		18 52 27.0	+1.2
SONM	**Songino Array**	**151.25**	**279**	PKPbc		PKPbc		18 52 22.0	+0.2
	0.7nm,0.7s,baz=139,slow=2.6,SNR=5.4								

GUC 19 18:46:13.4±1.0,**2216S**×**7034W,h38**km±6km,**MD4.2, ML3.6,1C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.94**	**186**	*eP*		P	Pn	18 46 33.0	+2.8
MECH				*i* S		Sn		18 46 46.3	+3.9
MECH				AML		AML		18 46 57.8	
	comp=E,2μm,0.7s								
CEN1	**Los Morros**	**1.23**	**174**	⇑*iP*		Pn		18 46 37.7	+3.5
CEN1				*i* S		Sn		18 46 56.7	+7.1
LVC	**Limon Verde**	**1.40**	**109**	⇓*iP*		Pn		18 46 38.5	+2.1
LVC				*i* S		Sn		18 46 57.0	+3.3
LVC				AML		AML		18 46 58.1	
	comp=E,1μm,0.5s								
ANCH	**Antofagasta**	**1.52**	**182**	*eP*		Pn		18 46 39.9	+1.9
ANCH				*i* S		Sn		18 46 59.1	+2.6
CPN1	**Cerro Paranal**	**2.46**	**181**	*eP*		Pn		18 46 53.0	+2.1
CPN1				AML		AML		18 47 36.8	
	comp=E,460nm,0.5s								

*TAP **19** 18:47:02.1,2529N×12265E,h186km±1km, ML3.5, C*
*ISCJB **19** 18:47:04.2±1.4,252N±0.1×12268E±004,h175km±11km, Error ellipse: s-maj=23.8km s-min=6.2km az=176.1*
*JMA **19** 18:47:04.0±0.6,2528N×12254E,h157km*

ISC 19 18:47:04.2±1.3,**252N**±01×**12267E**±004,**h176**km±11km, **n16**,σ0°**59**/**25**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.95**	**232**	*eP*		**Pn**		**18 47 30.6**	**-0.5**
	baz=228								
TWE	**Neicheng**	**1.02**	**243**	*eP*		**Pn**		**18 47 31.7**	**0.0**
	baz=231								
TWE				*e*S		**Sn**		**18 47 53.1**	**+0.3**
	baz=231								
ENA	**Nanau**	**1.14**	**228**	P		**Pn**		**18 47 32.4**	**-0.2**
	baz=218								
ENA				S		**Sn**		**18 47 54.3**	**-0.1**
	baz=218								
ENTT	**Nioudou**	**1.14**	**241**	P		**Pn**		**18 47 32.2**	**-0.4**
	baz=233								
ENTT				*e*S		**Sn**		**18 47 55.2**	**+0.8**
	baz=233								
IRIF	**Iriomote-Funau**	**1.29**	**131**	P		**Pn**		**18 47 33.5**	**-0.4**
IRIF				S		**Sn**		**18 47 56.9**	**+0.2**
NSK	**Sanguang**	**1.30**	**247**	*eP*		**Pn**		**18 47 33.0**	**-0.9**
	baz=243								
NNS	**Nan Shan**	**1.40**	**238**	*eP*		**Pn**		**18 47 34.7**	**-0.2**
	baz=234								
JKRS	**Kuro-shima**	**1.55**	**128**	P		**Pn**		**18 47 36.5**	**+0.2**
JKRS				S		**Sn**		**18 48 01.1**	**+0.1**
JIJ	**Ishigaki jima**	**1.57**	**121**	P		**Pn**		**18 47 36.3**	**-0.3**
JIJ				*e*S		**Sn**		**18 48 00.7**	**-0.7**
WHF	**Hehuan Shan**	**1.65**	**231**	*eP*		**Pn**		**18 47 37.4**	**+0.1**
	baz=232								
ESL	**Shilin**	**1.78**	**220**	*eP*		**Pn**		**18 47 37.2**	**-1.4**
	baz=223								
JTJ	**Tarama**	**1.93**	**106**	P		**Pn**		**18 47 40.9**	**+0.7**
JTJ				*e*S		**Sn**		**18 48 08.3**	**+0.4**
SMLT	**Sun Moon Lake**	**2.07**	**231**	*eP*		**Pn**		**18 47 42.6**	**+0.8**
	baz=236								
YUS	**Yu-Shan**	**2.31**	**223**	*eP*		**Pn**		**18 47 45.3**	**+0.9**
	baz=222								
ALS	**Alishan**	**2.39**	**226**	*eP*		**Pn**		**18 47 45.1**	**-0.2**
	baz=231								
ALS				*e*S		**Sn**		**18 48 17.4**	**+0.2**
	baz=231								
CHN5	**Tsauling**	**2.41**	**229**	*eP*		**Pn**		**18 47 46.8**	**+1.2**
	baz=234								
CHN5				*e*S		**Sn**		**18 48 17.2**	**-0.6**
	baz=234								

IDC 19 19:17:21.9±6.4,**1172N**×**8702W,h48**km±72km,**mb3.3**/2, **mb1 3.6**/3,**mb1mx3.3**/21,**mbtmp3.4**/3,**ML3.5**/1,**Error ellipse: s-maj=258.2km s-min=27.6km az=50.0,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**9.30**	**306**	P		P	Pn	19 19 32.5	-1.0
	0.4nm,0.3s,baz=127,slow=10,SNR=5.0								
TXAR	**Lajitas Array**	**23.40**	**321**	P		P		19 22 27.4	+0.7
	0.4nm,0.5s,baz=130,slow=9.8,SNR=7.5								
SIV	**San Ignacio**	**37.65**	**136**	P		P		19 24 32.6	+0.1
	1.0nm,0.6s,baz=315,slow=11,SNR=5.3								
WRA	**Warramunga Arr**	**139.47**	**253**	PKP		PKPdf		19 36 44.8	-0.1
	0.3nm,0.7s,baz=84,slow=2.0,SNR=5.5								
CMAR	**Chiang Mai Arr**	**149.44**	**349**	PKPbc		PKPbc		19 37 05.9	-0.8
	0.3nm,0.3s,baz=354,slow=2.7,SNR=2.8								

*ISCJB **19** 19:20:46.6±0.6,687N±006×7303W±007,h175km±6km, mb3.6/6, Error ellipse: s-maj=13.7km s-min=6.8km az=36.2*
*IDC **19** 19:20:47.6±0.7,676N×7294W,h164km±6km, mb3.4/6, mb1 3.5/8, mb1mx3.4/22, mbtmp3.5/8, Error ellipse: s-maj=17.8km s-min=7.4km az=133.0*
*NEIC **19** 19:20:47.9±0.8,677N×7298W,h168km±7km, Error ellipse: s-maj=14.0km s-min=11.4km az=115.0*
*FUNV **19** 19:20:47.1,676N×7321W,h156km, MW3.7*

ISC 19 19:20:47.6±0.6,**688N**±006×**7304W**±007,**h169**km±6km,**n26**, σ0°**73**/**26**,**mb3.6/6,1C-3D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.39**	**213**	P		**Pn**		**19 21 28.2**	**-0.1**
	149nm,0.3s,baz=4.1,slow=2.6,SNR=126								
ROSC				S		**Sn**		**19 21 59.7**	**-0.1**
	198nm,0.3s,baz=96,slow=21,SNR=10.0								
VIGV	**El Vigia**	**2.56**	**40**	⇑*eP*		**Pn**		**19 21 31.0**	**+0.6**
VIGV				*e*S		**Sn**		**19 22 03.0**	**-0.4**
SOCV	**Socops**	**2.57**	**57**	*eP*		**Pn**		**19 21 31.2**	**+0.7**
SOCV				*e*S		**Sn**		**19 22 03.3**	**-0.5**
SDV	**Santo Domingo**	**3.11**	**50**	P		**Pn**		**19 21 38.2**	**+1.2**
	12nm,0.3s,baz=255,slow=5.8,SNR=42								
SDV				S		**Sn**		**19 22 15.9**	**+0.4**
	46nm,0.3s,baz=286,slow=21,SNR=31								
ELOV	**Elorza**	**3.53**	**88**	*eP*		**Pn**		**19 21 42.6**	**+0.3**
VIRV	**Villa del Rosa**	**3.65**	**10**	⇓*iP*		**Pn**		**19 21 43.4**	**-0.5**
VIRV				*e*S		**Sn**		**19 22 25.4**	**-2.5**
SANV	**Sanarito**	**4.34**	**53**	*eP*		**Pn**		**19 21 53.0**	**+0.3**
CURV	**Curarigua**	**4.35**	**44**	⇓*iP*		**Pn**		**19 21 53.1**	**+0.2**
DABV	**Dabajuro**	**4.67**	**30**	*eP*		**Pn**		**19 21 57.5**	**+0.5**
TEPV	**Terepaima**	**4.88**	**51**	*eP*		**Pn**		**19 22 00.0**	**+0.2**
SIQV	**Siquisique**	**4.92**	**40**	⇓*iP*		**Pn**		**19 22 00.4**	**+0.1**
BAUV	**El Baul**	**5.36**	**67**	*eP*		**Pn**		**19 22 05.4**	**-0.6**
TURV	**Turiamo**	**6.24**	**55**	*eP*		**Pn**		**19 22 18.4**	**+0.7**
CAOV	**Caicara del Or**	**6.68**	**86**	*eP*		**Pn**		**19 22 22.5**	**-1.0**
CUPV	**Cœpira**	**7.83**	**66**	*eP*		**Pn**		**19 22 39.1**	**+0.3**
LPAZ	**La Paz**	**23.53**	**168**	P		**P**		**19 25 43.1**	**+0.5**
	0.7nm,0.4s,mb3.5,baz=335,slow=13,SNR=4.2								
SIV	**San Ignacio**	**25.63**	**153**	P		**P**		**19 26 00.2**	**-1.5**
	0.8nm,0.5s,mb3.6,baz=339,slow=12,SNR=5.4								
BDFB	**Brasilia**	**33.39**	**132**	P		**P**		**19 27 10.4**	**+0.1**
	1.5nm,0.5s,mb4.0,baz=339,slow=25,SNR=3.6								
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**		**19 27 37.7**	**+1.0**
	0.1nm,0.3s,mb2.9,baz=125,slow=9.6,SNR=4.2								
TX

7.1nm,0.5s
HNR Honiara 16.33 80 LR LR 20 09 49.7
comp=Z,120nm,21.4s,baz=239,slow=33
STKA Stephens Creek 19.19 185 P **Pn** **20 05 29.8 -0.8**
0.8nm,0.3s,baz=3.8,slow=13,SNR=13
STKA LR LR 20 12 05.0
comp=Z,303nm,21.5s,baz=196,slow=34
BATI Baumata 19.73 275 P **Pn** **20 05 38.6 +1.5**
0.9nm,0.3s,baz=53,slow=10,SNR=2.7
BATI LR LR 20 12 57.1
comp=Z,383nm,20.8s,baz=116,slow=36
CAN Canberra 23.05 169 *e*P **P** **20 06 11.9 +0.7**
26nm,1.3s,mb4.5
FORT Forrest 23.05 216 *e*P **P** **20 06 14.5 +3.3**
142nm,0.6s,mb5.6
MBWA Marble Bar 24.35 247 *e*P **P** **20 06 27.9 +4.0**
8.6nm,0.8s,mb4.2
KAPI Kappang 24.79 286 LR LR 20 16 06.6
comp=Z,126nm,21.5s,MS3.4,baz=22,slow=36
NWAO Narrogin (SRO) 31.44 226 LR LR 20 20 34.1
comp=Z,439nm,18.7s,MS4.2,baz=79,slow=37
RPZ Rata Peaks 38.88 148 LR LR 20 24 33.8
comp=Z,110nm,18.3s,MS3.7,baz=35,slow=36
URZ Urewera 39.16 137 LR LR 20 23 23.1
comp=Z,135nm,20.0s,MS3.8,baz=310,slow=34
KSRS Korea Array 52.02 344 P **P** **20 10 15.6 +0.2**
3.6nm,0.9s,mb4.3,baz=162,slow=8.5,SNR=6.0
KSRS LR LR 20 30 58.4
comp=Z,41nm,19.9s,MS3.5,baz=180,slow=34
CMAR Chiang Mai Arr 53.86 304 P **P** **20 10 29.8 +0.5**
0.5nm,0.4s,mb3.8,baz=132,slow=3.9,SNR=4.4
VNDA Vanda 65.50 176 P **P** **20 11 48.7 0.0**
0.9nm,0.7s,mb3.9,baz=312,slow=9.4,SNR=7.7
VNDA Vanda 65.50 176 P **P** **20 11 48.7 0.0**
PETK Petropavlovsk- 66.63 9 P **P** **20 11 55.0 -1.2**
6.3nm,0.9s,mb4.6,baz=165,slow=6.2,SNR=4.3
SONM Songino Array 68.77 334 P **P** **20 12 09.6 -0.1**
1.2nm,0.9s,mb3.8,baz=158,slow=5.0,SNR=6.2
MKAR Makanchi Array 80.62 322 P **P** **20 13 18.7 +0.1**
0.9nm,0.5s,mb4.0,baz=104,slow=6.6,SNR=30
MKAR Makanchi Array 80.62 322 P **P** **20 13 18.7 +0.1**
ZALV Zalesovo Beam 82.96 329 P **P** **20 13 29.6 -1.1**
0.8nm,0.5s,mb4.0,baz=132,slow=6.2,SNR=6.2
GERES GERESS Array B 125.29 322 PKP PKPdf 20 20 06.6 -0.1
0.2nm,0.5s,baz=42,slow=2.2,SNR=4.3
TORD Torodi Ar. Bea 142.93 275 PKhKP 20 20 36.6
0.7nm,0.4s,baz=81,slow=3.6,SNR=25
DBIC Dimbokro 148.40 262 PKPbc PKPbc 20 20 52.3 -1.2
5.0nm,1.1s,baz=231,slow=11,SNR=7.3
BDFB Brasilia 149.58 157 PKPbc PKPbc 20 20 55.8 -0.6
0.9nm,0.5s,baz=216,slow=27,SNR=3.6

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*CSEM **19** 20:14:44.9±0.1, 3788N×2762E, h10km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.2km az=93.0*
*ISCJB **19** 20:14:45.6±0.6, 3787N±003×2765E±007, h4km±9km, Error ellipse: s-maj=8.7km s-min=4.2km az=179.1*
*DDA **19** 20:14:46.0, 3787N×2763E, h7km±3km, Md3.0*
*ISK **19** 20:14:45.4, 3787N×2764E, h12km, MD2.9*
ISC 19 20:14:46.2±0.5, 3787N±003×2764E±006, h9km±7km, n12, σ0§52/17, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.37**	**242**	*i* P		**Pg**	**20 14 53.1**	**-0.3**
MLSB	**Milas**	**0.58**	**169**	*e*PG		**Pg**	**20 14 57.5**	**0.0**
MLSB				*e*SG		**Sg**	**20 15 05.8**	**+0.6**
KDAG	**Bornova**	**0.61**	**331**	*i* P		**Pg**	**20 14 57.6**	**-0.4**
BLCB	**Balcova**	**0.70**	**317**	*e*PG		**Pg**	**20 14 60.0**	**+0.3**
BLCB				*e*SG		**Sg**	**20 15 08.8**	**-0.1**
BDRM	**Kayabasi**	**0.82**	**191**	*i* P		**Pg**	**20 15 01.6**	**-0.4**
BDRM				*i* S		**Sg**	**20 15 13.4**	**+0.7**
YER	**Yerkesik**	**0.90**	**145**	*e*PG		**Pg**	**20 15 02.8**	**-0.7**
MANT	**Manisa**	**0.95**	**49**	*i* P		**Pg**	**20 15 04.4**	**-0.1**
AKS	**Akhisar**	**1.01**	**8**	*e*PG		**Pg**	**20 15 05.9**	**+0.2**
AKS				*e*SG		**Sg**	**20 15 19.4**	**+0.4**
KULA	**Kula-Manisa**	**1.03**	**51**	*e*PG		**Pg**	**20 15 05.5**	**-0.5**
DAT	**Datca**	**1.14**	**183**	*e*PN		**Pn**	**20 15 07.8**	**-0.5**
DEMI	**Demirci**	**1.44**	**35**	*i* P		**Pn**	**20 15 13.8**	**+1.4**
DEMI				*i* S		**Sn**	**20 15 31.3**	**-0.1**
DST	**Dursunbey**	**1.90**	**24**	*e*PN		**Pn**	**20 15 18.2**	**-0.5**

THE 19 20:15:02.1, 3627N×2540E, h13km±2km, Error ellipse: s-maj=3.1km s-min=1.2km az=12.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THR6	**Thira Island,**	**0.09**	**357**	P		Pg	20 15 05.0	+0.1
THR6				S		Sg	20 15 07.1	+0.2
THR1	**Thera Island**	**0.11**	**23**	P		Pg	20 15 05.1	-0.1
THR1				S		Sg	20 15 07.8	+0.4
THR3	**Thira Island,**	**0.14**	**359**	P		Pg	20 15 05.8	+0.2
THR3				S		Sg	20 15 08.4	+0.3

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*GCMT **19** 20:21:07.8±0.3, 2286S×7091W, h24km, MW5.3/51, Moment Tensor Solution. s29,c37; s51,c71; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.67±.03; Mθθ-0.04±.03; Mφφ-0.63±.02; Mrθ0.15±.04; Mrφ0.07±.02; Mθφ-0.72±.03; Best double couple: M=0.98700×10^17 NP1:φs357.00000°, δ21.00000°, λ97.00000°. NP2: φs170.00000°, δ69.00000°, λ87.00000°. Principal axes: T 1.0050, Plg66.0000°, Azm75.0000°; N -0.0350, Plg2.0000°, Azm171.0000°; P -0.9690, Plg24.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **19** 20:21:07.8±2.5, 2290S×7060W, h13km±15km, mb4.9/29 Error ellipse: s-maj=8.0km s-min=6.2km az=71.0*
*MOS **19** 20:21:09.9±1.3, 2275S×7062W, h33km, mb5.1/8, Error ellipse: s-maj=18.0km s-min=10.0km az=90.0*
*GUC **19** 20:21:09.1±1.3, 2284S×7070W, h33km±10km, ML5.0*
*ISCJB **19** 20:21:10.2±0.6, 2290S±004×7063W±005, h41km±5km, mb4.8/40, MS4.6/11, Error ellipse: s-maj=8.0km s-min=6.6km az=13.9*
*IDC **19** 20:21:10.8±2.9, 2285S×7050W, h32km±20km, mb4.2/14, mb1 4.4/17, mb1mx4.3/21, mbtmp4.2/17, ML4.3/1, MS4.6/15, Ms1 4.6/15, ms1mx4.4/29, Error ellipse: s-maj=19.1km s-min=14.9km az=88.0*
*BJI **19** 20:21:10.7, 2290S×7060W, h25km, mB4.9, Ms5.5, Msz5.1*
ISC 19 20:21:10.8±0.7, 2292S±004×7063W±004, h32km±5km, n143, σ1§13/107, mb4.8/40, MS4.6/11, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.25**	**137**	*e*P		**Pb**	**20 21 17.1**	**-0.8**
MECH				*i* S		**Sb**	**20 21 22.9**	**+0.2**
MECH				AML		AML	20 21 24.3	
	comp=N,278μm,0.4s							
CEN1	**Los Morros**	**0.62**	**140**	*e*P		**Pb**	**20 21 23.9**	**+0.6**
CEN1				*i* S		**Sb**	**20 21 35.1**	**+3.4**
CEN1				AML		AML	20 21 36.8	
	comp=E,27μm,0.8s							
PB06	**Plate Boundary**	**1.00**	**78**	⇓*i*P		**Pn**	**20 21 27.8**	**-0.8**
PB06				*i* S		**Sn**	**20 21 41.6**	**0.0**
PB04	**Plate Boundary**	**1.24**	**59**	*i* P		**Pn**	**20 21 22.6**	**-9.3**
PB04				*i* S		**Sn**	**20 21 32.8**	**-15**
PB04				AML		AML	20 21 34.3	
	comp=E,181μm,0.5s							
PB07	**Plate Boundary**	**1.37**	**30**	⇑*i*P		**Pn**	**20 21 32.2**	**-1.5**
PB07				*i* S		**Sn**	**20 21 50.4**	**-0.3**
LVC	**Limon Verde**	**1.62**	**80**	Pg		**Pn**	**20 21 38.1**	**+1.1**
	comp=E,2μm,0.3s,baz=257,slow=13,SNR=1494							
LVC				Lg			20 21 59.7	
	comp=E,5μm,0.3s,baz=30,slow=8.1,SNR=70							
LVC	**Limon Verde**	**1.62**	**80**	*e*P		**Pn**	**20 21 37.7**	**+0.6**
LVC	**Limon Verde**	**1.62**	**80**	⇓*i*P		**Pn**	**20 21 38.2**	**+1.1**
LVC				*i* S		**Sn**	**20 22 00.1**	**+3.3**
LVC				AML		AML	20 22 02.5	
	comp=N,31μm,0.5s							
PB01	**Plate Boundary**	**2.15**	**30**	*e*P		**Pn**	**20 21 45.4**	**+1.1**
PB01				*i* S		**Sn**	**20 22 13.4**	**+3.5**
PB01				AML		AML	20 22 17.9	
	comp=E,29μm,0.4s							
LCO	**Las Campanas**	**6.07**	**181**	*e*P		**Pn**	**20 22 35.7**	**-2.6**
	comp=E,143nm,0.7s							
ARE	**Arequipa**	**6.47**	**353**	*e*P		**Pn**	**20 22 41.0**	**-2.9**
ARE				*e*S		**Sn**	**20 23 52.0**	**-4.7**
LPAZ	**La Paz**	**7.00**	**20**	Pn		**Pn**	**20 22 51.4**	**+0.3**
	comp=E,2.8nm,0.3s,baz=214,slow=7.4,SNR=24							
LPAZ				Sn		**Sn**	**20 24 27.7**	**+18**
	comp=E,2.5nm,0.3s,baz=48,slow=11,SNR=2.6							
LPAZ				LR		LR	20 25 48.4	
	comp=E,8μm,18.3s,baz=201,slow=40							
LPAZ	**La Paz**	**7.00**	**20**	Pn		**Pn**	**20 22 51.4**	**+0.3**
LPAZ				Sn		**Sn**	**20 24 27.7**	**+18**
LPAZ				LR		LR	20 25 48.4	
CFAA	**Coronel Fontan**	**8.91**	**167**	Pn		**Pn**	**20 23 16.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=343,slow=12,SNR=9.0							
CFAA				Sn		**Sn**	**20 25 08.6**	**+12**
	comp=E,0.3nm,0.3s,baz=329,slow=16,SNR=2.7							
CFAA				LR		LR	20 26 52.5	
	comp=E,592nm,20.4s,baz=332,slow=38							
CFAA	**Coronel Fontan**	**8.91**	**167**	Pn		**Pn**	**20 23 16.5**	**-0.8**
CFAA				Sn		**Sn**	**20 25 08.6**	**+12**
CFAA				LR		LR	20 26 52.5	
SIV	**San Ignacio**	**11.35**	**54**	Pn		**Pn**	**20 23 48.1**	**-2.6**
	comp=E,2.3nm,0.3s,baz=246,slow=13,SNR=98							
SIV				Sn		**Sn**	**20 25 58.2**	**+1.8**
	comp=E,1.1nm,0.3s,baz=279,slow=18,SNR=3.6							
NNA	**Nana**	**12.38**	**330**	LR		LR	20 28 22.6	
	comp=E,2μm,19.4s,baz=159,slow=35							
PLCA	**Paso Flores**	**17.76**	**180**	P		**Pn**	**20 25 16.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=352,slow=14,SNR=9.5							
PLCA				LR		LR	20 31 50.5	
	comp=E,2μm,20.1s,baz=360,slow=36							
PLCA	**Paso Flores**	**17.76**	**180**	P		**Pn**	**20 25 16.0**	**+0.5**
PLCA				LR		LR	20 31 50.5	
SPB	**Sao Paulo**	**21.33**	**96**	*e*P		**P**	**20 25 56.3**	**+1.1**
BDFB	**Brasilia**	**22.53**	**75**	P		**P**	**20 26 05.8**	**-2.2**
	comp=E,6.8nm,0.5s,mb4.3,baz=242,slow=15,SNR=15							
BDFB				LR		LR	20 36 10.7	
	comp=E,2μm,18.0s,MS4.7,baz=70,slow=40							
OTAV	**Otavalo**	**24.24**	**341**	*e*P		**P**	**20 26 26.2**	**+1.3**
	comp=E,7.8nm,0.8s,mb4.2							
CAM4	**Nova Friburgo**	**25.90**	**94**	⇑*i*P		**P**	**20 26 39.3**	**-0.7**
CAM4				*i*		pP	20 26 47.0	-2.3
CAM4				*i*		pP	20 26 47.2	-2.1
CAM4				*i*			20 26 51.4	
ROSC	**El Rosal**	**27.84**	**352**	LR		LR	20 37 56.2	
	comp=E,568nm,21.6s,MS4.1,baz=191,slow=36							
SDV	**Santo Domingo**	**31.61**	**360**	LR		LR	20 41 52.7	
	comp=E,1μm,19.0s,MS4.6,baz=9.3,slow=39							
USHA	**Ushuaia**	**31.91**	**178**	LR		LR	20 39 55.0	
	comp=E,562nm,18.9s,MS4.3,baz=348,slow=35							
PCRV	**Puerto La Cruz**	**33.41**	**11**	LR		LR	20 43 27.4	
	comp=E,2μm,19.1s,MS5.0,baz=12,slow=40							
RPN	**Rapa Nui**	**35.23**	**255**	LR		LR	20 38 38.6	
	comp=E,950nm,19.6s,MS4.5,baz=190,slow=30							
RCBR	**Riachuelo**	**37.54**	**68**	*e*P		**P**	**20 28 21.4**	**-0.8**
	comp=E,59nm,0.8s,mb5.4							
RKT	**Rikitea**	**58.75**	**256**	*e*S		**S**	**20 39 07.7**	**-1.5**
	comp=E,984nm,26.8s							
RKT				*e*LR		LR	20 48 23.9	
	comp=E,2μm,26.5s,baz=110							
JCT	**Junction City**	**60.03**	**331**	*e*P		**P**	**20 31 14.1**	**-0.4**
	comp=E,13nm,0.9s,mb5.0							
JCT	**Junction City**	**60.03**	**331**	*e*P		**P**	**20 31 14.1**	**-0.4**
JCT				pmax		pmax		
	comp=E,13nm,0.9s,mb5.0							
TXAR	**Lajitas Array**	**60.91**	**327**	P		**P**	**20 31 20.5**	**0.0**
	comp=Z,0.7nm,0.6s,mb4.0,baz=151,slow=9.5,SNR=10.0							
WVT	**Waverly**	**60.94**	**344**	*e*P		**P**	**20 31 18.4**	**-2.2**
	comp=Z,14nm,1.0s,mb5.1							
WVT	**Waverly**	**60.94**	**344**	*e*P		**P**	**20 31 18.4**	**-2.2**
WVT				pmax		pmax		
	comp=Z,14nm,1.0s,mb5.0							
MIAR	**Mount Ida**	**61.16**	**338**	*e*P		**P**	**20 31 21.4**	**-0.8**
	comp=Z,6.6nm,0.9s,mb4.8							
MIAR	**Mount Ida**	**61.16**	**338**	*e*P		**P**	**20 31 21.4**	**-0.8**
MIAR				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.8							
BNM	**Barren Site**	**66.28**	**328**	*e*P		**P**	**20 31 55.6**	**-0.3**
LAZ	**Ladron**	**66.73**	**328**	*e*P		**P**	**20 31 59.4**	**+0.5**
ANMO	**Albuquerque**	**66.84**	**328**	P		**P**	**20 32 01.1**	**+1.6**
	comp=Z,1.3nm,0.8s,mb4.0,baz=114,slow=12,SNR=2.8							
QSPA	**South Pole Qui**	**67.28**	**180**	P		**P**	**20 32 03.2**	**+1.5**
	comp=Z,4.1nm,0.5s,mb4.7,baz=155,slow=1.7,SNR=13							
QSPA	**South Pole Qui**	**67.28**	**180**	*e*P		**P**	**20 32 02.5**	**+0.8**
	comp=Z,8.2nm,0.8s,mb4.8							
TAOE	**Nuku Hiva Isla**	**67.79**	**270**	*e*LR		LR	20 52 36.5	
	comp=Z,3μm,25.2s							
SDCO	**Great Sand Dun**	**68.67**	**331**	*e*P		**P**	**20 32 11.9**	**+0.9**
	comp=Z,10nm,1.0s,mb4.7							
MVCO	**Mesa Verde**	**69.64**	**328**	*e*P		**P**	**20 32 18.0**	**+1.0**
	comp=Z,13nm,1.1s,mb4.8							
LIC	**Lamto**	**70.31**	**74**	*e*P		**P**	**20 32 20.5**	**-1.2**
	comp=Z,31nm,0.9s,mb5.2							
TIC	**Torodi**	**70.51**	**74**	*e*P		**P**	**20 32 21.7**	**-1.2**
	comp=Z,155nm,1.4s,mb5.7							
SMCO	**Snowmass**	**70.51**	**331**	*e*P		**P**	**20 32 23.7**	**+1.4**
	comp=Z,8.9nm,0.8s,mb4.8							
KIC	**Kosan Boka**	**70.63**	**74**	*e*P		**P**	**20 32 22.7**	**-0.9**
	comp=Z,63nm,0.8s,mb5.6							
DBIC	**Dimbokro**	**70.67**	**74**	P		**P**	**20 32 23.1**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0,baz=208,slow=7.6,SNR=19							
DBIC				LR		LR	21 04 17.9	
	comp=Z,511nm,18.5s,MS4.8,baz=68,slow=37							
SRU	**San Rafael**	**72.11**	**328**	*e*P		**P**	**20 32 32.7**	**+0.7**
	comp=Z,7.8nm,0.8s,mb4.7							
SRU	**San Rafael**	**72.11**	**328**	*e*P		**P**	**20 32 32.7**	**+0.7**
SRU				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.7							
CCUT	**Cedar City**	**72.34**	**326**	*e*P		**P**	**20 32 34.7**	**+1.3**
MSU	**Marysvale**	**72.47**	**327**	P		**P**	**20 32 35.7**	**+1.6**
RSSD	**Black Hills**	**73.40**	**336**	*e*P		**P**	**20 32 40.1**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.5							
RSSD	**Black Hills**	**73.40**	**336**	*e*P		**P**	**20 32 40.1**	**+0.6**
RSSD				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
PPT	**Papeete**	**73.45**	**258**	*e*S		S	20 42 05.6	-2.6
	comp=Z,377nm,25.5s							
PPT				*e*LQ			20 52 02.6	
	comp=Z,1μm,25.8s							
PPT				*e*LR		LR	20 55 11.3	
	comp=Z,846nm,24.8s,baz=95							
AGMN	**Agassiz Refuge**	**74.41**	**343**	*e*P		**P**	**20 32 44.7**	**-0.6**
	comp=Z,15nm,1.3s,mb4.8							
PDAR	**Pinedale Array**	**74.56**	**331**	P		**P**	**20 32 46.3**	**0.0**
	comp=Z,0.4nm,0.5s,baz=138,slow=11,SNR=3.7							
HWUT	**Hardware Ranch**	**74.56**	**329**	*e*P		**P**	**20 32 46.8**	**+0.5**
	comp=Z,5.0nm,0.8s,mb4.5							
SPUT	**South Promonto**	**74.75**	**329**	*e*P		**P**	**20 32 47.9**	**+0.4**
VNDA	**Vanda**	**75.18**	**190**	P		**P**	**20 32 50.4**	**+0.8**
	comp=Z,1.5nm,1.0s,mb3.9,baz=67,slow=1.5,SNR=6.7							
VNDA				LR		LR	21 04 03.8	
	comp=Z,304nm,18.4s,MS4.6,baz=241,slow=34							
NVAR	**Mina Array Bea**	**75.64**	**323**	P		**P**	**20 32 53.7**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=145,slow=8.2,SNR=2.2							
SYO	**Syowa Base**	**75.74**	**160**	⇓*i*P		**P**	**20 32 52.0**	**-0.8**
RLMT	**Red Lodge**	**76.32**	**333**	P		**P**	**20 32 57.5**	**+1.2**
	comp=Z,4.3nm,0.7s,mb4.5							
LAO	**LASA Array**	**76.39**	**336**	P		**P**	**20 32 53.3**	**-3.4**
	comp=Z,8.4nm,1.2s,mb4.5							
DGMT	**Dagmar**	**77.16**	**338**	*e*P		**P**	**20 33 01.5**	**+0.5**
	comp=Z,9.1nm,0.7s,mb4.8							
HLID	**Hailey**	**77.41**	**329**	*e*P		**P**	**20 33 02.2**	**-0.3**
	comp=Z,6.4nm,1.0s,mb4.5							
MCMT	**McKenzie Canyo**	**77.65**	**331**	*e*P		**P**	**20 33 05.1**	**+1.3**
DLMT	**Dillon**	**77.95**	**331**	*e*P		**P**	**20 33 05.0**	**-0.5**
	comp=Z,6.3nm,1.0s,mb4.5							
TORD	**Torodi Ar. Bea**	**79.33**	**71**	P		**P**	**20 33 13.1**	**-0.7**
	comp=Z,21nm,0.7s,mb5.2,baz=253,slow=5.3,SNR=190							
TSUM	**Tsumeb**	**81.16**	**107**	*e*P		**P**	**20 33 24.2**	**+0.6**
	comp=Z,15nm,1.0s,mb4.9							
HAWA	**Hanford**	**81.95**	**328**	*e*P		**P**	**20 33 25.9**	**-1.2**
	comp=Z,5.1nm,0.8s,mb4.5							
RSW	**Rattlesnake Hi**	**81.98**	**328**	*e*P		**P**	**20 33 27.5**	**+0.2**
KEBM	**Edson Butte**	**82.02**	**323**	P		**P**	**20 33 24.5**	**-3.1**
OD2	**Odessa Site #2**	**82.27**	**329**	*e*P		**P**	**20 33 29.0**	**+0.2**
RNO	**Roman Nose**	**82.39**	**324**	P		**P**	**20 33 30.5**	**+1.0**
TAKO	**Tahkenitch**	**82.46**	**324**	P		**P**	**20 33 27.3**	**-2.6**
MPOR	**Mary's Peak**	**82.69**	**325**	P		**P**	**20 33 34.5**	**+3.5**
ETW	**Entiat**	**83.19**	**329**	*e*P		**P**	**20 33 34.0**	**+0.4**
MAW	**Mawson**	**83.43**	**164**	P		**P**	**20 33 35.6**	**+0.9**
	comp=Z,5.8nm,0.7s,mb4.7,baz=223,slow=6.5,SNR=7.6							
MAW				LR		LR	21 10 55.8	
	comp=Z,417nm,19.4s,MS4.8,baz=43,slow=36							
MAW	**Mawson**	**83.43**	**164**	P		**P**	**20 33 35.6**	**+0.9**
MAW				LR		LR	21 10 55.8	
EDM	**Edmonton**	**84.38**	**336**	*e*P		**P**	**20 33 38.1**	**-1.3**
EMIN	**Mina Concepcio**	**85.14**	**46**	P		**P**	**20 33 42.2**	**-1.5**
	comp=Z,447nm,4.0s							
ESPR	**Espera**	**85.19**	**47**	P		**P**	**20 33 44.7**	**+0.7**
	comp=Z,97nm,2.0s,mb5.6							
EJIF	**Jimena Fronter**	**85.23**	**47**	P		**P**	**20 33 45.4**	**+1.2**
	comp=Z,27nm,1.1s,mb5.3							
EJIF	**Jimena Fronter**	**85.23**	**47**	P		**P**	**20 33 45.4**	**+1.2**
EJIF				pmax		pmax		
	comp=Z,27nm,1.1s,mb5.3							
EMIJ	**Mijas**	**85.76**	**47**	P		**P**	**20 33 46.7**	**-0.2**
	comp=Z,90nm,3.2s							
ELOJ	**Sierra Loja**	**86.49**	**47**	P		**P**	**20 33 51.6**	**+1.2**
	comp=Z,24nm,1.5s,mb5.2							
ELOJ	**Sierra Loja**	**86.49**	**47**	P		**P**	**20 33 51.6**	**+1.2**
ELOJ				pmax		pmax		
	comp=Z,24nm,1.5s,mb5.2							
ELUQ	**Luque**	**86.63**	**47**	P		**P**	**20 33 51.5**	**+0.4**
	comp=Z,88nm,1.6s,mb5.7							
ELUQ	**Luque**	**86.63**	**47**	P		**P**	**20 33 51.5**	**+0.4**
ELUQ				pmax		pmax		
	comp=Z,88nm,1.6s,mb5.7							
EADA	**Adamuz**	**86.75**	**46**	P		**P**	**20 33 50.7**	**-1.0**
	comp=Z,194nm,3.6s							
TAM	**Tamanrasset**	**86.88**	**64**	*e*P		**P**	**20 33 52.8**	**+0.1**
EBAN	**Banos Encina**	**87.28**	**47**	P		**P**	**20 33 54.4**	**+0.2**
	comp=Z,116nm,2.0s,mb5.8							
EBAN	**Banos Encina**	**87.28**	**47**	P		**P**	**20 33 54.4**	**+0.1**
EBAN				pmax		pmax		
	comp=Z,116nm,2.0s,mb5.8							
ESDC	**Sonseca Array**	**87.96**	**45**	P		**P**	**20 33 58.1**	**+0.6**
	comp=Z,1.2nm,0.8s,mb4.2,baz=258,slow=9.1,SNR=3.2							
ESDC	**Sonseca Array**	**87.96**	**45**	P		**P**	**20 33 58.5**	**+1.0**
	comp=Z,2.1nm,1.2s,mb4.2							
BBB	**Bella Bella**	**90.00**	**329**	LR		LR	21 17 45.6	
	comp=Z,306nm,19.3s,MS4.8,baz=180,slow=38							
YKA	**Yellowknife Ar**	**92.00**	**341**	P		**P**	**20 34 15.1**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.4,baz=142,slow=4.4,SNR=4.3							
EPOB	**Poblet**	**92.12**	**46**	P		**P**	**20 34 22.2**	**+5.3**
	comp=Z,161nm,2.5s,mb5.9							
DLBC	**Dease Lake**	**94.73**	**333**	P		**P**	**20 34 27.2**	**-1.2**
	comp=Z,0.8nm,0.5s,mb4.4,baz=125,slow=10.0,SNR=4.3							
DLBC				LR		LR	21 22 16.5	
	comp=Z,263nm,18.3s,MS4.7,baz=312,slow=39							
KEST	**Kesra**	**95.43**	**54**	P		**P**	**20 34 31.2**	**-1.0**
	comp=Z,1.1nm,0.8s,mb4.3,baz=264,slow=8.1,SNR=4.0							
ASAR	**Alice Springs**	**127.92**	**209**	PKP		PKPdf	20 40 14.1	+0.1
	comp=Z,1.7nm,0.8s,baz=149,slow=2.1,SNR=18							
WRA	**Warramunga Arr**	**130.92**	**212**	PKP		PKPdf	20 40 19.4	-0.3
	comp=Z,1.4nm,0.9s,baz=154,slow=1.8,SNR=16							
NVS	**Novosibirsk**	**142.62**	**25**	*e*PKIKP		PKPdf	20 40 39.9	-0.3
ZALV	**Zalesovo Beam**	**143.91**	**25**	PKP		PKPdf	20 40 40.8	-1.7
	comp=Z,3.0nm,0.5s,baz=309,slow=4.3,SNR=17							
EKS2	**Erkin-Say**	**144.54**	**48**	*e*PKPdf		PKPdf	20 40 43.5	-0.4
EKS2	**Erkin-Say**	**144.54**	**48**	P		PKPdf	20 40 43.8	-0.2
	SNR=11							
AML	**Almayashu**	**144.68**	**49**	*e*PKPdf		PKPdf	20 40 44.4	+0.1
AML	**Almayashu**	**144.68**	**49**	P		PKPdf	20 40 44.7	+0.4
	SNR=19							
USP	**Ospenovka**	**144.79**	**46**	P		PKPdf	20 40 44.5	+0.1
	SNR=5.7							
BOD	**Bodaibo**	**144.97**	**356**	*e*PKIKP		PKPdf	20 40 42.3	-1.9
BOD				pmax		pmax		
	comp=Z,24nm,0.8s							
AAK	**Ala-Archa**	**145.04**	**47**	P		PKPbc	20 40 45.8	+1.5
	SNR=27							
FRU	**Bishkek**	**145.04**	**47**	*e*PKIKP		PKPdf	20 40 45.0	+0.2
FRU				pmax		pmax		
	comp=Z,57nm,1.8s							
CHMS	**Chumysh**	**145.06**	**47**	P		PKPbc	20 40 45.1	+0.8
	SNR=8.6							
UCH	**Uchtor**	**145.21**	**48**	*e*PKPdf		PKPdf	20 40 47.0	+1.8
KBK	**Karagaybulak**	**145.33**	**47**	P		PKPbc	20 40 46.7	+1.5
	SNR=24							
TKM2	**Tokmak 2**	**145.66**	**46**	*e*PKPdf		PKPdf	20 40 46.2	+0.3
TKM2	**Tokmak 2**	**145.66**	**46**	P		PKPdf	20 40 47.0	+1.1
	SNR=11							
KZA	**Kyzart**	**145.77**	**48**	P		PKPab	20 40 48.6	+1.6
	SNR=12							
POO	**Poona**	**146.55**	**91**	*e*P		PKPab	20 40 54.0	+3.3
KSH	**Kashi**	**147.23**	**52**	*e*PKP		PKPab	20 40 52.4	-0.3
KSH				*e*APKP			20 40 56.9	
KSH				*e*XPKP			20 40 59.1	
KSH	

Moment Tensor Solution. s96,c171; s113,c307; Duration: 1s9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.43±.05; $M_{\theta\theta}$-4.06±.06; $M_{\phi\phi}$4.49±.06; $M_{r\theta}$-0.65±.12; $M_{\theta\phi}$-3.36±.05; $M_{r\phi}$0.46±.12; Best double couple: $M_0$5.49400×10^{17} NP1:ϕ_s26.00000°,δ82.00000°, λ0.00000°. NP2:ϕ_s296.00000°,δ90.00000°,λ172.00000°. Principal axes: T 5.7200, Plg6.0000°, Azm251.0000°; N -0.4550, Plg82.0000°, Azm114.0000°; P -5.2680, Plg6.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

NEIC ***19*** *20:32:48.8±0.2, 4354N×127.41W, h10km, mb5.4/88, MS5.2/88, MW5.7 Error ellipse: s-maj=4.0km s-min=2.8km az=214.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}0.40; $M_{\theta\theta}$-2.95; $M_{\phi\phi}$2.55; $M_{r\theta}$-0.46; $M_{\theta\phi}$-2.66; $M_{r\phi}$-0.53; Best double couple: $M_0$3.90000×10^{17} NP1:ϕ_s113.00000°,δ80.00000°,λ-178.00000°. NP2: ϕ_s23.00000°,δ88.00000°,λ-10.00000°. Principal axes: T 3.6600, Plg5.0000°, Azm68.0000°; N 0.4500, Plg80.0000°, Azm194.0000°; P -4.1100, Plg7.0000°, Azm337.0000°;*

MOS ***19*** *20:32:48.3±0.9, 4363N×127.37W, h10km, mb5.5/53, MS5.2/28 Error ellipse: s-maj=5.1km s-min=4.6km az=123.7*

SZGRF ***19*** *20:32:51.1, 4309N×128.13W, h29km, mb5.2, MS5.1, Off coast of Oregon, United States*

ISC 19 20:32:49.2±0.2, 4360N±002×12747W±002, h10km, (h16km±1.8km:pP-P), n566, σ1927/502, mb5.1/121, MS5.2/132, 40C-37D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K01A	**Sixes**	**2.33**	**109**	⇑P	**Pn**	**20 33 23.8**	**-3.8**
	baz=2.3						
K01A				⇓S	**Sn**	**20 33 51.9**	**-4.4**
	baz=2.3						
I02A	**Mapleton**	**2.67**	**80**	⇓P	**Pn**	**20 33 29.6**	**-2.6**
	baz=2.7						
H02A	**Toledo**	**2.72**	**65**	⇓P	**Pn**	**20 33 30.9**	**-2.1**
	baz=2.8						
KBO	**Bosley Butte**	**2.76**	**119**	*eP*	**Pn**	**20 33 29.7**	**-3.8**
J02A	**Umpqua**	**2.85**	**93**	⇓P	**Pn**	**20 33 31.8**	**-2.8**
	baz=2.9						
J02A				⇑S	**Sn**	**20 34 06.6**	**-2.4**
	baz=2.9						
I03A	**Eugene**	**3.06**	**81**	⇑P	**Pn**	**20 33 35.4**	**-2.2**
	baz=3.1						
I03A				⇑S	**Sn**	**20 34 12.9**	**-1.3**
	baz=3.1						
HEBO	**Mount Hebo**	**3.12**	**57**	P	**Pn**	**20 33 36.7**	**-1.7**
DBO	**Dodson Butte**	**3.12**	**97**	P	**Pn**	**20 33 35.7**	**-2.7**
COR	**Corvallis**	**3.16**	**70**	*eP*	**Pn**	**20 33 37.6**	**-1.4**
HSO	**Harness Mounta**	**3.19**	**90**	P	**Pn**	**20 33 37.4**	**-1.9**
L02A	**Cave Junction**	**3.19**	**116**	⇓P	**Pn**	**20 33 36.4**	**-2.9**
	baz=3.2						
L02A				⇑S	**Sn**	**20 34 13.8**	**-3.6**
	baz=3.2						
H03A	**Soap Creek Ran**	**3.20**	**69**	P	**Pn**	**20 33 37.6**	**-1.9**
	baz=3.2,SNR=1000						
EUO	**Eugene**	**3.22**	**81**	P	**Pn**	**20 33 38.2**	**-1.6**
ALVY	**Alvey**	**3.25**	**81**	P	**Pn**	**20 33 39.1**	**-1.1**
KRMB	**Red Mountain**	**3.35**	**127**	*eP*	**Pn**	**20 33 38.3**	**-3.3**
HUMO	**Hull Mountain**	**3.45**	**105**	*eP*	**Pn**	**20 33 40.2**	**-2.8**
HUMO	**Hull Mountain**	**3.45**	**105**	⇓P	**Pn**	**20 33 40.4**	**-2.6**
	baz=3.5						
HUMO				⇑S	**Sn**	**20 34 20.8**	**-3.1**
	baz=3.5						
G03A	**Yamhill**	**3.46**	**59**	⇓P	**Pn**	**20 33 41.6**	**-1.5**
	baz=3.5						
G03A				⇑S	**Sn**	**20 34 25.2**	**+1.1**
	baz=3.5						
F03A	**Seaside**	**3.63**	**49**	⇑P	**Pn**	**20 33 44.1**	**-1.5**
	baz=3.7						
F03A				⇓S	**Sn**	**20 34 29.9**	**+1.4**
	baz=3.7						
BROR	**Big Rock Looko**	**3.69**	**78**	P	**Pn**	**20 33 45.0**	**-1.3**
HBO	**Huckleberry Mo**	**3.74**	**84**	P	**Pn**	**20 33 46.4**	**-0.6**
JCC	**Jacoby Creek**	**3.77**	**136**	⇓P	**Pn**	**20 33 43.8**	**-3.6**
	baz=3.7						
NLO	**Nicolai Mounta**	**3.79**	**48**	P	**Pn**	**20 33 46.7**	**-1.0**
IRO	**Indian Ridge**	**3.80**	**82**	P	**Pn**	**20 33 46.6**	**-1.2**
SSOR	**Sweet Springs**	**3.82**	**69**	P	**Pn**	**20 33 47.2**	**-0.8**
G04A	**Mulino**	**3.92**	**64**	⇑P	**Pn**	**20 33 48.5**	**-1.0**
	baz=4.0,SNR=314						
H04A	**Detroit Lake**	**3.96**	**72**	⇓P	**Pn**	**20 33 48.4**	**-1.5**
	baz=4.0						
YBH	**Yreka Blue Hor**	**3.97**	**116**	Pn	**Pn**	**20 33 49.4**	**-0.7**
	42nm,0.3s,baz=300,slow=12,SNR=556						
YBH				Sn	**Sn**	**20 34 35.7**	**-1.1**
	26nm,0.3s,baz=198,slow=19,SNR=13						
YBH				LR	LR	20 35 11.2	
	comp=Z,17μm,21.8s,baz=298,slow=36						
YBH	**Yreka Blue Hor**	**3.97**	**116**	*eP*	**Pn**	**20 33 48.2**	**-2.0**
YBH	**Yreka Blue Hor**	**3.97**	**116**	⇑P	**Pn**	**20 33 47.6**	**-2.6**
	baz=4.0						
GT2	**Goat Mountain**	**4.04**	**66**	P	**Pn**	**20 33 50.7**	**-0.4**
E03A	**Lebam**	**4.04**	**42**	⇑P	**Pn**	**20 33 49.5**	**-1.7**
	baz=4.1,SNR=334						
E03A				⇓S	**Sn**	**20 34 38.5**	**0.0**
	baz=4.1						
LAMM	**Antelope Mount**	**4.09**	**117**	P	**Pn**	**20 33 50.5**	**-1.3**
N02C	**Big Bar**	**4.15**	**130**	⇑P	**Pn**	**20 33 50.1**	**-2.6**
	baz=4.1						
BMW	**Boistfort Moun**	**4.16**	**45**	P	**Pn**	**20 33 51.3**	**-1.5**
RVW	**Rose Valley**	**4.22**	**51**	P	**Pn**	**20 33 52.6**	**-1.0**
BKCOR	**Black Crater**	**4.23**	**78**	P	**Pn**	**20 33 52.9**	**-0.8**
F04A	**Amboy**	**4.29**	**55**	⇑P	**Pn**	**20 33 53.9**	**-0.6**
	baz=4.3						
F04A				⇓S	**Sn**	**20 34 46.4**	**+1.8**
	baz=4.3						
BPO	**Bald Peter**	**4.29**	**74**	P	**Pn**	**20 33 54.5**	**-0.1**
VLMM	**Larch Mountain**	**4.34**	**62**	P	**Pn**	**20 33 55.0**	**-0.2**
LVP	**Lakeview Peak**	**4.37**	**54**	P	**Pn**	**20 33 55.2**	**-0.4**
D03A	**Wishkah Elem.**	**4.38**	**35**	⇑P	**Pn**	**20 33 54.8**	**-1.0**
	baz=4.4,SNR=48						
D03A				⇑S	**Sn**	**20 34 48.8**	**+1.9**
	baz=4.4						
TDH	**Tom, Dick, Har**	**4.41**	**65**	P	**Pn**	**20 33 55.8**	**-0.3**
MTMW	**Mount Mitchell**	**4.46**	**55**	P	**Pn**	**20 33 56.5**	**-0.3**
VBEM	**Beaver Butte**	**4.47**	**69**	P	**Pn**	**20 33 56.8**	**-0.1**
FL2	**Flat Top 2**	**4.47**	**53**	P	**Pn**	**20 33 56.6**	**-0.4**
E04A	**Onalaska**	**4.50**	**47**	⇓P	**Pn**	**20 33 57.1**	**-0.4**
	baz=4.6,SNR=18						
HOOD	**Mount Hood Mea**	**4.51**	**65**	P	**Pn**	**20 33 57.5**	**0.0**
I05A	**Bend**	**4.52**	**81**	⇓P	**Pn**	**20 33 56.2**	**-1.5**
	baz=4.5,SNR=25						
ERK	**Elk Rock**	**4.54**	**52**	P	**Pn**	**20 33 57.3**	**-0.6**
VLL	**Laurance Lake**	**4.54**	**64**	P	**Pn**	**20 33 58.1**	**+0.1**
HSR	**South Ridge**	**4.56**	**54**	P	**Pn**	**20 33 58.3**	**+0.1**
NLWA	**Neilton Lookou**	**4.56**	**32**	*eP*	**Pn**	**20 33 56.9**	**-1.4**
NLWA	**Neilton Lookou**	**4.56**	**32**	⇑P	**Pn**	**20 33 57.6**	**-0.7**
	baz=4.6						
LCW	**Lucas Creek**	**4.57**	**46**	P	**Pn**	**20 33 57.6**	**-0.7**
STD	**Studebaker Rid**	**4.57**	**53**	P	**Pn**	**20 33 58.1**	**-0.2**
ESD	**East Dome**	**4.59**	**54**	P	**Pn**	**20 33 58.6**	**0.0**
NCOR	**Newberry Crate**	**4.60**	**86**	P	**Pn**	**20 33 58.2**	**-0.5**
CDFW	**Cedar Flats**	**4.61**	**55**	P	**Pn**	**20 33 58.7**	**-0.2**
H05A	**Madras**	**4.62**	**75**	⇑P	**Pn**	**20 33 57.8**	**-1.2**
	baz=4.6,SNR=283						
VFP	**Flag Point**	**4.63**	**66**	P	**Pn**	**20 33 58.7**	**-0.5**
TDL	**Tradedollar La**	**4.64**	**52**	P	**Pn**	**20 33 58.8**	**-0.5**
G05A	**Wamic**	**4.71**	**67**	⇓P	**Pn**	**20 33 59.7**	**-0.6**
	baz=4.7,SNR=285						
KOSW	**Kosmos**	**4.71**	**51**	P	**Pn**	**20 34 00.2**	**-0.2**
WDC	**Whiskeytown Da**	**4.75**	**128**	*eP*	**Pn**	**20 33 59.2**	**-1.6**
WDC	**Whiskeytown Da**	**4.75**	**128**	⇓P	**Pn**	**20 33 58.7**	**-2.1**
	baz=4.7						
C03A	**Quillayute Air**	**4.80**	**24**	⇑P	**Pn**	**20 34 01.7**	**+0.2**
	baz=4.9						
D04A	**Dobbs Creek Ra**	**4.81**	**41**	⇓P	**Pn**	**20 34 01.6**	**-0.1**
	baz=4.9						
KIPM	**Iron Peak**	**4.82**	**140**	*eP*	**Pn**	**20 33 59.1**	**-2.7**
F05A	**White Salmon**	**4.86**	**60**	⇓P	**Pn**	**20 34 01.8**	**-0.5**
	baz=4.9,SNR=56						
KCPM	**Cahto Peak**	**4.87**	**142**	*eP*	**Pn**	**20 34 00.3**	**-2.2**
K05A	**Summer Lake**	**4.89**	**98**	⇑P	**Pn**	**20 34 01.1**	**-1.6**
	baz=4.9						
ASR	**Mount Adams--S**	**4.90**	**57**	P	**Pn**	**20 34 02.7**	**-0.1**
E05A	**Randle**	**5.01**	**52**	⇓P	**Pn**	**20 34 04.3**	**-0.2**
	baz=5.1						
E05A				⇓S	**Sn**	**20 35 04.1**	**+1.7**
	baz=5.1						
VIPM	**Ingram Point**	**5.02**	**77**	P	**Pn**	**20 34 03.5**	**-1.1**
VGB	**Gordon Butte**	**5.15**	**66**	P	**Pn**	**20 34 05.8**	**-0.5**
G06A	**Carlson Farm,**	**5.16**	**69**	P	**Pn**	**20 34 05.8**	**-0.8**
	baz=5.2,SNR=337						
C04A	**Brinnon**	**5.19**	**36**	⇓P	**Pn**	**20 34 06.4**	**-0.5**
	baz=5.2,SNR=41						
C04A				⇑S	**Sn**	**20 35 08.9**	**+2.1**
	baz=5.2						
RCM	**Mount Rainier-**	**5.19**	**49**	P	**Pn**	**20 34 06.9**	**0.0**
RCS	**Mount Rainier-**	**5.21**	**49**	P	**Pn**	**20 34 07.1**	**0.0**
WPW	**White Pass**	**5.21**	**51**	P	**Pn**	**20 34 07.2**	**0.0**
F06A	**Goldendale**	**5.24**	**63**	P	**Pn**	**20 34 07.3**	**-0.2**
	baz=5.3,SNR=172						
B04A	**Port Angeles**	**5.25**	**30**	⇑P	**Pn**	**20 34 07.7**	**0.0**
	baz=5.3						
H06A	**Lindquist Farm**	**5.26**	**75**	⇑P	**Pn**	**20 34 07.1**	**-0.8**
	baz=5.3,SNR=1000						
I06A	**Prineville**	**5.27**	**84**	⇑P	**Pn**	**20 34 06.7**	**-1.2**
	baz=5.3,SNR=46						
D05A	**Enumclaw**	**5.27**	**45**	⇑P	**Pn**	**20 34 07.9**	**-0.1**
	baz=5.3,SNR=131						
D05A				⇓S	**Sn**	**20 35 11.6**	**+2.8**
	baz=5.3						
GASB	**Alder Springs**	**5.31**	**136**	⇓P	**Pn**	**20 34 06.1**	**-2.4**
	baz=5.3						
J06A	**Christmas Vall**	**5.34**	**91**	⇓P	**Pn**	**20 34 07.4**	**-1.6**
	baz=5.3						
E06A	**Yakima**	**5.46**	**55**	⇓P	**Pn**	**20 34 10.8**	**+0.2**
	baz=5.5						
MOD	**Modoc**	**5.54**	**105**	*eP*	**Pn**	**20 34 10.3**	**-1.5**
	221nm,1.0s						
MOD	**Modoc**	**5.54**	**105**	⇓P	**Pn**	**20 34 09.8**	**-1.9**
	baz=5.5						
HOPS	**Hopland**	**5.67**	**143**	*eP*	**Pn**	**20 34 11.8**	**-1.6**
	1μm,1.2s						
HOPS	**Hopland**	**5.67**	**143**	⇓P	**Pn**	**20 34 11.1**	**-2.3**
	baz=5.6						
C05A	**Tolt Reservoir**	**5.76**	**43**	⇓P	**Pn**	**20 34 14.4**	**-0.4**
	baz=5.8,SNR=223						
C05A				⇓S	**Sn**	**20 35 23.5**	**+2.6**
	baz=5.8						
PGC	**Sidney**	**5.78**	**28**	*eP*	**Pn**	**20 34 13.4**	**-1.5**
	530nm,0.3s						
O04C	**Chester**	**5.78**	**122**	⇓P	**Pn**	**20 34 13.0**	**-1.9**
	baz=5.8						
I07A	**Izee**	**5.78**	**82**	⇓P	**Pn**	**20 34 14.3**	**-0.7**
	baz=5.8,SNR=405						
G07A	**Ruggs Ranch, H**	**5.83**	**71**	⇑P	**Pn**	**20 34 14.7**	**-1.0**
	baz=5.9,SNR=500						
JCW	**Jim Creek**	**6.01**	**38**	*eP*	**Pn**	**20 34 17.1**	**-1.0**
OHCM	**Honcut**	**6.19**	**131**	*eP*	**Pn**	**20 34 21.5**	**+0.8**
RSW	**Rattlesnake Hi**	**6.25**	**61**	*eP*	**Pn**	**20 34 21.1**	**-0.3**
NSHM	**Saint Helena R**	**6.26**	**142**	*eP*	**Pn**	**20 34 20.1**	**-1.5**
HAWA	**Hanford**	**6.29**	**61**	*eP*	**Pn**	**20 34 21.3**	**-0.6**
	637nm,0.8s						
RPW	**Rockport**	**6.38**	**38**	*eP*	**Pn**	**20 34 22.7**	**-0.6**
ETW	**Entiat**	**6.42**	**49**	*eP*	**Pn**	**20 34 23.5**	**-0.2**
MCCM	**Marconi Confer**	**6.46**	**146**	*eP*	**Pn**	**20 34 21.9**	**-2.4**
	356nm,0.9s						
WVOR	**Wild Horse Val**	**6.58**	**97**	*eP*	**Pn**	**20 34 24.1**	**-1.8**
	513nm,1.4s						
WVOR	**Wild Horse Val**	**6.58**	**97**	P	**Pn**	**20 34 24.6**	**-1.4**
LNOR	**Lincton Mounta**	**6.93**	**68**	*eP*	**Pn**	**20 34 29.0**	**-1.7**
LNOR	**Lincton Mounta**	**6.93**	**68**	P	**Pn**	**20 34 29.6**	**-1.1**
PAHR	**Pah Rah Range**	**7.20**	**120**	*eP*	**Pn**	**20 34 37.7**	**+3.3**
	858nm,1.6s						
OD2	**Odessa Site #2**	**7.23**	**55**	*eP*	**Pn**	**20 34 34.3**	**-0.6**
CMB	**Columbia Colle**	**7.73**	**134**	*eP*	**Pn**	**20 34 42.9**	**+1.2**
	2μm,1.6s						
CMB	**Columbia Colle**	**7.73**	**134**	*eP*	**Pn**	**20 34 42.9**	**+1.2**
CMB				pmax	pmax		
	comp=Z,2μm,1.6s						
SAO	**San Andreas Ge**	**8.23**	**144**	*eP*	**Pn**	**20 34 46.8**	**-1.9**
	comp=Z,981nm,1.8s						
SAO	**San Andreas Ge**	**8.23**	**144**	P	**Pn**	**20 34 47.0**	**-1.7**
BMN	**Battle Mountai**	**8.26**	**109**	*eP*	**Pn**	**20 34 50.7**	**+1.7**
	comp=Z,102nm,1.4s						
BMN	**Battle Mountai**	**8.26**	**109**	*eP*	**Pn**	**20 34 50.7**	**+1.7**
BMN				pmax	pmax		
	comp=Z,101nm,1.4s						
NEW	**Newport**	**8.59**	**53**	*eP*	**Pn**	**20 34 53.0**	**-0.5**
	comp=Z,139nm,0.8s						
NEW	**Newport**	**8.59**	**53**	P	**Pn**	**20 34 53.4**	**-0.1**
BBB	**Bella Bella**	**8.61**	**357**	Pn	**Pn**	**20 34 54.9**	**+1.2**
	comp=Z,3.9nm,0.3s,baz=182,slow=12,SNR=43						
BBB				LR	LR	20 37 39.4	
	comp=Z,14μm,19.3s,baz=182,slow=34						
NVAR	**Mina Array Bea**	**8.64**	**124**	Pn	**Pn**	**20 34 55.8**	**+1.6**
	comp=Z,2.3nm,0.3s,baz=294,slow=13,SNR=45						
MTUM	**Tungsten Hills**	**9.21**	**130**	*eP*	**Pn**	**20 35 04.8**	**+2.6**
HLID	**Hailey**	**9.48**	**86**	*eP*	**Pn**	**20 35 06.3**	**+0.6**
ELK	**Elko**	**9.52**	**103**	Pn	**Pn**	**20 35 08.6**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=292,slow=13,SNR=55						
ELK	**Elko**	**9.52**	**103**	*eP*	**Pn**	**20 35 08.2**	**+2.0**
	comp=Z,174nm,1.4s						
ELK	**Elko**	**9.52**	**103**	P	**Pn**	**20 35 08.3**	**+2.0**
TPH	**Tonopah**	**9.52**	**122**	*eP*	**Pn**	**20 35 09.0**	**+2.6**
	comp=Z,68nm,1.0s						
TPH	**Tonopah**	**9.52**	**122**	*eP*	**Pn**	**20 35 09.0**	**+2.7**
TPH				pmax	pmax		
	comp=Z,68nm,1.0s						
DIB	**Dawson Inlet,**	**10.17**	**343**	Pn	**Pn**	**20 35 19.4**	**+4.2**
	SNR=10						
VIB	**Van Inlet**	**10.23**	**343**	Pn	**Pn**	**20 35 20.1**	**+4.1**
	SNR=5.3						
ISA	**Isabella**	**10.53**	**136**	*eP*	**Pn**	**20 35 22.1**	**+2.0**
	comp=Z,629nm,1.2s						
ISA	**Isabella**	**10.53**	**136**	*eP*	**Pn**	**20 35 22.1**	**+2.0**
ISA				pmax	pmax		
	comp=Z,629nm,1.2s						
CHMT	**Chamberlain Mo**	**10.56**	**67**	*eP*	**Pn**	**20 35 19.6**	**-0.9**
MCMT	**McKenzie Canyo**	**10.57**	**78**	*eP*	**Pn**	**20 35 21.2**	**+0.5**
DLMT	**Dillon**	**10.78**	**75**	*eP*	**Pn**	**20 35 23.4**	**-0.1**
TPNV	**Topopah Spring**	**10.84**	**124**	*eP*	**Pn**	**20 35 27.5**	**+3.1**
	comp=Z,93nm,1.0s						
TPNV	**Topopah Spring**	**10.84**	**124**	*eP*	**Pn**	**20 35 27.5**	**+3.1**
TPNV				pmax	pmax		
	comp=Z,93nm,1.0s						
WALA	**Waterton Lakes**	**10.85**	**55**	*eP*	**Pn**	**20 35 25.4**	**+1.0**
	comp=Z,1μm,1.6s						
HVU	**Hansel Valley**	**10.97**	**94**	*eP*	**Pn**	**20 35 27.1**	**+0.9**
	comp=Z,576nm,1.8s						
HVU	**Hansel Valley**	**10.97**	**94**	*eP*	**Pn**	**20 35 27.1**	**+0.9**
HVU				pmax	pmax		
	comp=Z,576nm,1.8s						
BGU	**Big Grassy Mou**	**11.03**	**99**	*eP*	**Pn**	**20 35 27.7**	**+0.7**
OSI	**Osito Adit**	**11.24**	**140**	*eP*	**Pn**	**20 35 32.1**	**+2.1**
	comp=Z,656nm,1.4s						
SPUT	**South Promonto**	**11.33**	**96**	*eP*	**Pn**	**20 35 32.4**	**+1.3**
DUG	**Dugway**	**11.44**	**102**	*eP*	**Pn**	**20 35 33.6**	**+1.0**
	comp=Z,175nm,1.1s						
DUG	**Dugway**	**11.44**	**102**	*eP*	**Pn**	**20 35 33.6**	**+1.0**
DUG				pmax	pmax		
	comp=Z,175nm,1.1s						
HRY	**Holter Researc**	**11.48**	**69**	*eP*	**Pn**	**20 35 32.9**	**-0.2**
QLMT	**Earthquake Lak**	**11.58**	**78**	*eP*	**Pn**	**20 35 36.5**	**+1.9**
GSC	**Goldstone**	**11.68**	**132**	*eP*	**Pn**	**20 35 38.2**	**+2.4**
	comp=Z,931nm,1.8s						
GSC	**Goldstone**	**11.68**	**132**	*eP*	**Pn**	**20 35 38.2**	**+2.3**
GSC				pmax	pmax		
	comp=Z,931nm,1.8s						
RRI2	**Red Ridge**	**11.74**	**86**	*eP*	**Pn**	**20 35 38.4**	**+1.7**
	comp=Z,342nm,1.2s						
NOQ	**North Oquirrh**	**11.77**	**99**	*eP*	**Pn**	**20 35 38.3**	**+1.1**
	comp=Z,158nm,1.3s						
DCID1	**Drake Creek**	**11.81**	**84**	*eP*	**Pn**	**20 35 39.3**	**+1.6**
	comp=Z,253nm,1.0s						
MWC	**Mount Wilson**	**11.88**	**139**	*eP*	**Pn**	**20 35 38.9**	**+0.3**
	comp=Z,657nm,1.6s						
MWC	**Mount Wilson**	**11.88**	**139**	P	**Pn**	**20 35 39.2**	**+0.6**
MWC				pmax	pmax		
	comp=Z,660nm,1.5s						
HWUT	**Hardware Ranch**	**11.89**	**94**	*eP*	**Pn**	**20 35 40.2**	**+1.4**
	comp=Z,230nm,1.3s						
IMW	**Indian Meadow**	**11.97**	**83**	*eP*	**Pn**	**20 35 41.9**	**+2.2**
	comp=Z,134nm,1.0s						
AHID	**Auburn Hatcher**	**11.98**	**88**	*eP*	**Pn**	**20 35 42.3**	**+2.3**
	comp=Z,350nm,1.1s						
TPAW	**Teton Pass**	**11.99**	**85**	*eP*	**Pn**	**20 35 42.7**	**+2.6**
	comp=Z,387nm,1.0s						
YFT	**Old Faithful**	**12.01**	**80**	*eP*	**Pn**	**20 35 43.5**	**+3.1**
NLU	**North Lily Min**	**12.06**	**102**	*eP*	**Pn**	**20 35 38.8**	**-2.2**
REDW	**Red Top Meadow**	**12.08**	**85**	*eP*	**Pn**	**20 35 44.0**	**+2.6**
	comp=Z,519nm,1.4s						
YNR	**Norris Junctio**	**12.12**	**79**	*eP*	**Pn**	**20 35 44.1**	**+2.3**
MOOW	**Moose Ponds**	**12.12**	**84**	*eP*	**Pn**	**20 35 43.7**	**+1.8**
	comp=Z,300nm,1.5s						
ARUT	**Antelope Range**	**12.12**	**114**	*eP*	**Pn**	**20 35 44.0**	**+2.0**
SNOW	**Snow King Moun**	**12.14**	**85**	*eP*	**Pn**	**20 35 45.0**	**+2.9**
	comp=Z,208nm,1.0s						
LOHW	**Long Hollow**	**12.23**	**84**	*eP*	**Pn**	**20 35 45.2**	**+1.8**
	comp=Z,484nm,1.6s						
JLU	**Jordanelle**	**12.27**	**99**	*eP*	**Pn**	**20 35 45.0**	**+1.0**
CCUT	**Cedar City**	**12.30**	**115**	*eP*	**Pn**	**20 35 46.5**	**+2.0**
LKWY	**Lake**	**12.32**	**80**	P	**Pn**	**20 35 48.5**	**+3.9**
LKWY				pmax	pmax		
	comp=Z,720nm,1.6s						
MPU	**Maple Canyon**	**12.35**	**101**	*eP*	**Pn**	**20 35 45.7**	**+0.7**
	comp=Z,43nm,0.9s						
CRAG	**Craig**	**12.43**	**345**	*eP*	**Pn**	**20 35 49.4**	**+3.3**
	comp=Z,476nm,1.5s						
DAU	**Daniels Canyon**	**12.47**	**99**	*eP*	**Pn**	**20 35 47.8**	**+1.1**
MSU	**Marysvale**	**12.61**	**109**	*eP*	**Pn**	**20 35 50.1**	**+1.6**
LDFC	**Landfair**	**12.79**	**128**	*eP*	**Pn**	**20 35 53.8**	**+2.7**
	comp=Z,2μm,1.5s						
GCMT	**Greycliff**	**12.86**	**74**	*eP*	**Pn**	**20 35 53.4**	**+1.5**
TMUT	**Trail Mountain**	**12.93**	**104**	*eP*	**Pn**	**20 35 54.3**	**+1.3**
BW06	**Boulder Array**	**13.10**	**87**	*eP*	**Pn**	**20 35 56.9**	**+1.6**
	comp=Z,155nm,1.1s						
PDAR	**Pinedale Array**	**13.11**	**87**	Pn	**Pn**	**20 35 57.1**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=277,slow=12,SNR=165						
PDAR				LR	LR	20 41 18.3	
	comp=Z,15μm,20.9s,baz=280,slow=39						
RLMT	**Red Lodge**	**13.12**	**77**	*eP*	**Pn**	**20 35 56.6**	**+1.1**
	comp=Z,536nm,1.8s						
EGMT	**Eagleton**	**13.12**	**64**	*eP*	**Pn**	**20 35 55.4**	**-0.1**
	comp=Z,50nm,0.8s						
PFO	**Pinyon Flat Ob**	**13.16**	**136**	Pn	**Pn**	**20 35 57.2**	**+1.0**
	comp=Z,501nm,1.6s,SNR=16						
PFO	**Pinyon Flat Ob**	**13.16**	**136**	Pn	**Pn**	**20 35 57.3**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=322,slow=12,SNR=32						
PFO				LR	LR	20 40 49.0	
	comp=Z,13μm,19.9s,baz=312,slow=36						
PFO	**Pinyon Flat Ob**	**13.16**	**136**	*eP*	**Pn**	**20 35 57.3**	**+1.1**
	comp=Z,373nm,1.7s						
PFO	**Pinyon Flat Ob**	**13.16**	**136**	*eP*	**Pn**	**20 35 57.3**	**+1.1**
PFO				pmax	pmax		
	comp=Z,373nm,1.7s						
WRAK	**Wrangell Islan**	**13.21**	**348**	*eP*	**Pn**	**20 35 57.9**	**+1.2**
	comp=Z,308nm,1.6s						
EDM	**Edmonton**	**13.42**	**39**	*eP*	**Pn**	**20 35 58.9**	**-0.7**
SRU	**San Rafael**	**13.49**	**104**	*eP*	**Pn**	**20 36 02.1**	**+1.5**
	comp=Z,219nm,1.1s						
SRU	**San Rafael**	**13.49**	**104**	*eP*	**Pn**	**20 36 02.1**	**+1.5**
SRU				pmax	pmax		
	comp=Z,219nm,1.1s						
GLA	**Glamis**	**14.45**	**133**	*eP*	**Pn**	**20 36 14.1**	**+0.4**
	comp=Z,399nm,1.6s						
GLA	**Glamis**	**14.45**	**133**	*eP*	**Pn**	**20 36 14.1**	**+0.4**
GLA				pmax	pmax		
	comp=Z,399nm,1.6s						
WUAZ	**Wupatki**	**14.79**	**118**	*eP*	**Pn**	**20 36 20.4**	**+2.0**
	comp=Z,205nm,1.4s						
PV10	**Paradox Valley**	**14.86**	**104**	*eP*	**Pn**	**20 36 20.9**	**+1.6**
DLBC	**Dease Lake**	**14.95**	**355**	Pn	**Pn**	**20 36 23.8**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=183,slow=13,SNR=15						
DLBC				LR	LR	20 41 21.6	
	comp=Z,9μm,19.3s,baz=169,slow=35						
DLBC	**Dease Lake**	**14.95**	**355**	*eP*	**Pn**	**20 36 22.8**	**+2.5**
RWWY	**Rawlins**	**15.03**	**90**	*eP*	**Pn**	**20 36 18.3**	**-3.3**
	comp=Z,363nm,1.3s						
PV01	**Paradox Valley**	**15.30**	**104**	*eP*	**Pn**	**20 36 25.7**	**+0.6**
LAO	**LASA Array**	**15.30**	**71**	*eP*	**Pn**	**20 36 24.4**	**-0.7**
	comp=Z,463nm,1.0s				

EGAK LR LR
comp=Z,7μm,21.0s,MS5.1
KSU1 Kansas State U 23.53 90 *eP* **P 20 37 59.8 +0.2**
comp=Z,270nm,1.1s,mb5.6
KSU1 LR LR
comp=Z,10μm,20.0s,MS5.3
MCK McKinley 23.62 336 *eP* **P 20 37 58.3 -1.9**
comp=Z,170nm,1.7s,mb5.2
MCK McKinley 23.62 336 P **P 20 37 59.1 -1.1**
MCK pmax pmax
comp=Z,170nm,1.7s,mb5.2
TXAR Lajitas Array 23.75 119 P **P 20 38 02.3 +0.6**
comp=Z,30nm,1.0s,mb4.7,baz=306,slow=6.6,SNR=67
TXAR PcP PcP 20 41 44.7 -0.6
comp=Z,0.8nm,0.8s,baz=179,slow=2.9,SNR=4.0
TXAR LR LR 20 48 15.5
comp=Z,1μm,21.1s,MS4.4,baz=355,slow=39
TXAR Lajitas Array 23.75 119 P **P 20 38 02.3 +0.6**
TXAR PcP PcP 20 41 44.7 -0.6
TXAR LR LR 20 48 15.4
TXAR Lajitas Array 23.75 119 P **P 20 38 02.3 +0.6**
TXAR 20 41 44.7
TRF Thorofare Moun 23.82 334 *eP* **P 20 38 04.4 +2.3**
comp=Z,525nm,2.2s,mb5.6
WMOK Wichita Mounta 23.84 102 *eP* **P 20 38 02.4 -0.2**
comp=Z,289nm,1.1s,mb5.6
WMOK Wichita Mounta 23.84 102 *eP* **P 20 38 02.4 -0.2**
WMOK pmax pmax
comp=Z,289nm,1.1s,mb5.6
LPIG La Paz 24.02 139 P **P 20 38 04.0 -0.2**
comp=Z,12nm,0.3s,mb4.8,baz=33,slow=2.1,SNR=7.9
LPIG LR LR 20 46 29.8
comp=Z,5μm,19.5s,MS5.0,baz=327,slow=34
PPLA Purkeypile 24.06 332 *eP* **P 20 38 03.8 -0.5**
comp=Z,135nm,1.3s,mb5.2
KTH Kantishna Hill 24.10 334 *eP* **P 20 38 04.0 -0.6**
comp=Z,32nm,1.2s,mb4.6
COLA College 24.20 339 *eP* **P 20 38 05.3 -0.2**
comp=Z,19nm,1.0s,mb4.5
COLA LR LR
comp=Z,5μm,21.0s,MS5.0
COLA College 24.20 339 P **P 20 38 05.7 +0.2**
COLA pmax pmax
comp=Z,19nm,1.0s,mb4.5
SVW2 Sparrevohn 24.23 326 *eP* **P 20 38 06.4 +0.6**
BPAW Bear Paw Mtn. 24.51 335 *eP* **P 20 38 06.2 -2.1**
comp=Z,18nm,0.8s,mb4.7
CHUM Lake Minchumin 24.77 334 *eP* **P 20 38 10.1 -0.6**
comp=Z,24nm,1.0s,mb4.7
INK Inuvik 24.98 355 *eP* **P 20 38 11.7 -0.9**
comp=Z,2μm,1.3s
INK Inuvik 24.98 355 P **P 20 38 13.1 +0.6**
SCIA State Center 25.11 82 *eP* **P 20 38 15.2 +1.1**
comp=Z,575nm,1.5s,mb5.9
EYMN Ely 25.32 67 *eP* **P 20 38 16.0 +0.1**
comp=Z,167nm,1.0s,mb5.5
EYMN LR LR
comp=Z,14μm,19.0s,MS5.5
FCC Fort Churchill 25.50 42 *eP* **P 20 38 19.4 +2.0**
comp=Z,155nm,1.0s,mb5.5
FCC Fort Churchill 25.50 42 *eP* **P 20 38 19.4 +2.0**
FCC pmax pmax
comp=Z,155nm,1.0s,mb5.5
JCT Junction City 25.54 112 *eP* **P 20 38 17.6 -0.5**
comp=Z,190nm,1.4s,mb5.4
JCT LR LR
comp=Z,3μm,20.0s,MS4.9
COLD Coldfoot 26.65 340 *eP* **P 20 38 26.7 -1.0**
comp=Z,36nm,1.2s,mb4.8
IMA2 Indian Mountai 26.72 336 *eP* **P 20 38 28.2 -0.1**
JFWS Jewell Farm 26.98 78 *eP* **P 20 38 31.3 +0.4**
comp=Z,236nm,1.2s,mb5.6
JFWS LR LR
comp=Z,3μm,19.0s,MS4.9
MIAR Mount Ida 27.67 98 *eP* **P 20 38 37.5 +0.3**
comp=Z,665nm,2.1s,mb5.9
MIAR LR LR
comp=Z,7μm,21.0s,MS5.2
MIAR Mount Ida 27.67 98 P **P 20 38 37.8 +0.6**
MIAR pmax pmax
comp=Z,670nm,2.0s,mb5.9
CCM Cathedral Cave 27.82 89 PFAKE 20 38 50.0 +12
CCM LR LR
comp=Z,5μm,20.0s,MS5.1
SLM Saint Louis 28.32 87 *eP* **P 20 38 48.6 +5.6**
comp=Z,126nm,1.0s,mb5.5
SLM Saint Louis 28.32 87 *eP* **P 20 38 48.6 +5.6**
SLM pmax pmax
comp=Z,126nm,1.0s,mb5.5
HDIL Hopedale 28.34 83 *eP* **P 20 38 43.4 +0.3**
comp=Z,197nm,1.1s,mb5.7
HDIL LR LR
comp=Z,13μm,19.0s,MS5.6
NATX Nacogdoches 28.35 104 *eP* **P 20 38 44.9 +1.6**
comp=Z,449nm,1.5s,mb5.9
NATX LR LR
comp=Z,5μm,19.0s,MS5.1
FVM French Village 28.44 89 *eP* **P 20 38 43.1 -0.9**
comp=Z,86nm,1.1s,mb5.3
FVM French Village 28.44 89 P **P 20 38 43.6 -0.4**
FVM pmax pmax
comp=Z,66nm,1.1s,mb5.2
HKT Hockley 28.58 108 *eP* **P 20 38 46.4 +1.0**
comp=Z,215nm,1.6s,mb5.6
HKT LR LR
comp=Z,10μm,20.0s,MS5.4
KVTX Kingsville 28.70 114 PFAKE 20 39 00.0 +14
KVTX LR LR
comp=Z,4μm,20.0s,MS5.0
SIUC Southern Illin 29.42 88 *eP* **P 20 38 51.6 -1.2**
comp=Z,66nm,1.4s,mb5.2
OLIL Olney 29.84 86 *eP* **P 20 38 55.9 -0.6**
comp=Z,104nm,1.3s,mb5.4
USIN University of 30.45 87 *eP* **P 20 39 02.4 +0.5**
comp=Z,87nm,1.0s,mb5.4
GLMI Grayling 30.48 73 PFAKE 20 39 10.0 +7.9
GLMI LR LR
comp=Z,5μm,20.0s,MS5.2
OXF Oxford 30.69 94 *eP* **P 20 39 04.1 0.0**
comp=Z,293nm,1.2s,mb6.0
OXF LR LR
comp=Z,7μm,20.0s,MS5.3
OXF Oxford 30.69 94 P **P 20 39 04.9 +0.8**
OXF pmax pmax
comp=Z,290nm,1.1s,mb6.0
BLO Bloomington 30.82 84 *eP* **P 20 39 04.9 -0.2**
comp=Z,76nm,0.9s,mb5.5
BLO Bloomington 30.82 84 *eP* **P 20 39 05.5 +0.4**
BLO pmax pmax
comp=Z,76nm,1.0s,mb5.5
VBMS Vicksburg 31.05 99 *eP* **P 20 39 08.5 +1.3**
comp=Z,28nm,0.5s,mb5.3
WVT Waverly 31.10 90 *eP* **P 20 39 07.6 0.0**
comp=Z,10nm,0.4s,mb5.0
WVT Waverly 31.10 90 *eP* **P 20 39 07.6 0.0**
WVT pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
WCI Wyandotte Cave 31.34 86 *eP* **P 20 39 09.8 +0.1**
comp=Z,112nm,1.5s,mb5.5
WCI Wyandotte Cave 31.34 86 *eP* **P 20 39 10.6 +0.9**
WCI pmax pmax
comp=Z,110nm,1.5s,mb5.5
AAM Ann Arbor 31.82 77 PFAKE 20 39 30.0 +16
AAM LR LR
comp=Z,2μm,22.0s,MS4.6
SWET Sewanee 32.89 90 *eP* **P 20 39 23.1 -0.2**
ACSO Alum Creek Sta 32.98 80 *eP* **P 20 39 24.1 0.0**
comp=Z,27nm,0.8s,mb5.2
ACSO LR LR
comp=Z,962nm,21.0s,MS4.5
LRAL Lakeview Retre 33.17 95 *eP* **P 20 39 25.1 -0.7**
LRAL LR LR
comp=Z,7μm,20.0s,MS5.3
CPCT Cooper Cave 33.81 89 *eP* **P 20 39 30.4 -0.9**
BRAL Brewton 34.19 98 PFAKE 20 39 50.0 +15
BRAL LR LR
comp=Z,6μm,19.0s,MS5.3
RES Resolute Bay 34.40 15 *eP* **P 20 39 33.8 -2.2**
comp=Z,875nm,1.2s
RES Resolute Bay 34.40 15 P **P 20 39 36.5 +0.4**
ERPA Erie 34.47 76 PFAKE 20 39 50.0 +13
ERPA LR LR
comp=Z,5μm,20.0s,MS5.2
MCWV Mont Chateau 35.43 80 *eP* **P 20 39 45.0 -0.4**
comp=Z,66nm,1.2s,mb5.4
MCWV LR LR
comp=Z,3μm,19.0s,MS5.1

GOGA Godfrey 35.54 92 *eP* **P 20 39 45.6 -0.8**
comp=Z,81nm,1.0s,mb5.6
GOGA LR LR
comp=Z,5μm,20.0s,MS5.3
GOGA Godfrey 35.54 92 P **P 20 39 45.8 -0.6**
GOGA pmax pmax
comp=Z,81nm,1.0s,mb5.6
ELN Prospectdale 35.76 84 *eP* **P 20 39 48.1 0.0**
BLA Blacksburg 36.00 84 *eP* **P 20 39 51.0 +0.7**
comp=Z,196nm,1.7s,mb5.8
BLA LR LR
comp=Z,10μm,19.0s,MS5.6
BLA Blacksburg 36.00 84 P **P 20 39 51.4 +1.1**
BLA pmax pmax
comp=Z,200nm,1.6s,mb5.8
JSC Jenkinsville 36.72 89 *eP* **P 20 39 55.4 -1.0**
JSC Jenkinsville 36.72 89 P **P 20 39 55.8 -0.7**
BINY Binghamton 37.25 74 PFAKE 20 40 10.0 +9.1
BINY LR LR
comp=Z,4μm,21.0s,MS5.2
LONY Lake Ozonia 37.44 70 PFAKE 20 40 10.0 +7.6
LONY LR LR
comp=Z,12μm,19.0s,MS5.7
CBN Corbin 37.78 81 PFAKE 20 40 20.0 +15
CBN LR LR
comp=Z,4μm,21.0s,MS5.2
MVL Millersville 37.79 77 *eP* **P 20 40 04.6 -0.9**
comp=Z,30nm,1.0s,mb5.0
NCB Newcomb 37.88 70 PFAKE 20 40 20.0 +14
NCB LR LR
comp=Z,1μm,22.0s,MS4.6
URVA University of 37.93 82 *eP* **P 20 40 07.0 +0.3**
FRNY Flat Rock 38.05 69 *eP* **P 20 40 05.7 -1.8**
comp=Z,26nm,1.1s,mb4.9
NHSC New Hope 38.08 90 *eP* **P 20 40 07.9 -0.1**
comp=Z,185nm,1.1s,mb5.7
NHSC LR LR
comp=Z,5μm,21.0s,MS5.3
CMIG Matias Romero 38.17 124 P **P 20 40 08.5 -0.4**
comp=Z,11nm,0.9s,mb4.6,baz=310,slow=9.0,SNR=9.7
CNNC Cliffs of the 38.71 85 PFAKE 20 40 20.0 +6.7
CNNC LR LR
comp=Z,15μm,19.0s,MS5.8
LBNH Lisbon 39.36 69 *eP* **P 20 40 18.1 -0.5**
comp=Z,29nm,1.1s,mb4.9
LBNH LR LR
comp=Z,14μm,19.0s,MS5.8
LBNH Lisbon 39.36 69 P **P 20 40 19.2 +0.6**
LBNH pmax pmax
comp=Z,29nm,1.0s,mb5.0
DWPF Disney 39.86 97 PFAKE 20 40 30.0 +7.0
DWPF LR LR
comp=Z,4μm,20.0s,MS5.3
SCHQ Schefferville 39.95 52 P **P 20 40 23.0 -0.4**
comp=Z,16nm,0.8s,mb4.8,baz=288,slow=8.3,SNR=7.1
SCHQ LR LR 20 57 03.6
comp=Z,9μm,18.4s,MS5.6,baz=283,slow=36
SCHQ Schefferville 39.95 52 P **P 20 40 23.0 -0.4**
SCHQ LR LR 20 57 03.6
BILL Bilibino 41.70 329 PFAKE 20 40 50.0 +12
BILL LR LR
comp=Z,2μm,21.0s,MS5.0
BILL Bilibino 41.70 329⇑ *iP* **P 20 40 38.0 +0.4**
BILL *e* 20 42 20.4
BILL *i* S **S 20 46 53.3 -0.7**
BILL pmax pmax
comp=Z,15nm,1.6s,mb4.4
BILL MLR MLR
comp=Z,3μm,16.0s,MS5.2
MIDW Midway 42.59 266 PFAKE 20 41 00.0 +15
MIDW LR LR
comp=Z,4μm,20.0s,MS5.3
PET Petropavlovsk 47.97 309 *eP* **P 20 41 21.1 -6.7**
PET MLR MLR
comp=Z,400nm,21.0s,MS4.4
PETK Petropavlovsk- 48.48 309 P **P 20 41 32.3 +0.6**
comp=Z,7.6nm,0.9s,mb4.7,baz=80,slow=12,SNR=9.2
PETK LR LR 21 00 55.0
comp=Z,408nm,18.7s,MS4.4,baz=278,slow=35
SUMG Summit 48.78 24 *eP* **P 20 41 33.9 +0.1**
comp=Z,8.5nm,0.8s,mb4.8
BBSR BB Station 49.66 81 PFAKE 20 41 50.0 +9.0
BBSR LR LR
comp=Z,2μm,20.0s,MS5.0
DAG Danmarks Havn 52.07 16⇑ *eP* **P 20 41 58.0 -0.6**
comp=Z,6.0nm,0.8s,mb4.6
DAG LR LR
comp=Z,4μm,17.0s,MS5.5
DAG Danmarks Havn 52.07 16⇑ *eP* **P 20 41 58.0 -0.6**
DAG pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
DAG MLR MLR
comp=Z,4μm,17.0s,MS5.5
DAG Danmarks Havn 52.07 16⇑ *iP* **P 20 41 58.0 -0.6**
comp=Z,6.0nm,0.8s,mb4.6
DAG
comp=Z,4μm,17.0s
SDDR Presa de Saban 52.79 99 *eP* **P 20 42 06.0 +1.4**
comp=Z,61nm,1.2s,mb5.4
TIXI Tiksi 53.32 337 *eP* **P 20 42 05.6 -2.2**
comp=Z,8.2nm,1.0s,mb4.6
TIXI Tiksi 53.32 337 *eP* **P 20 42 06.2 -1.7**
TIXI *eS* **S 20 49 39.9 +0.9**
TIXI *eSS* SS 20 53 20.8 +2.8
TIXI pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TIXI MLR MLR
comp=Z,1μm,16.0s,MS5.0
BCIP Isla Barro Col 53.69 115 PFAKE 20 42 20.0 +8.7
BCIP LR LR
comp=Z,1μm,19.0s,MS5.0
MTP Monte Pirata 57.49 96 *eP* **P 20 42 39.4 +0.7**
YAK Yakutsk 58.01 327 *eP* **P 20 42 40.1 -1.6**
YAK *e*PP pP 20 42 48.1 +3.2
YAK *e* 20 43 29.5
YAK *e* 20 44 54.8
YAK *e*PPP 20 46 17.1
YAK *eS* **S 20 50 42.8 +1.0**
YAK *eSS* SS 20 54 31.0 -1.1
YAK pmax pmax
comp=Z,11nm,1.0s,mb4.8
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=Z,137nm,2.8s,mb5.5
YAK smax
comp=E,483nm,4.2s
YAK smax
comp=N,361nm,3.5s
YAK MLR MLR
comp=Z,2μm,17.0s,MS5.3
YAK MLR MLR
comp=E,2μm,21.0s,MS5.2
YAK MLR MLR
comp=N,928nm,19.0s,MS5.2
YSS Yuzh-Sakhalins 59.83 308 P **P 20 42 57.8 +3.2**
SDV Santo Domingo 60.12 107 P **P 20 42 57.6 +0.7**
comp=N,4.4nm,0.5s,mb4.8,baz=38,slow=5.8,SNR=6.2
ROSC El Rosal 60.52 114 P **P 20 43 01.1 +1.4**
comp=N,4.6nm,0.4s,mb5.0,baz=88,slow=18,SNR=6.2
ROSC LR LR 21 08 53.5
comp=N,928nm,20.8s,MS4.9,baz=353,slow=36
OTAV Otavalo 61.36 121 *eP* **P 20 43 05.7 +0.3**
comp=N,65nm,1.5s,mb5.5
ASAJ Asahikawa 61.49 305 LR LR 21 03 36.7
comp=N,487nm,21.9s,MS4.6,baz=5.5,slow=30
ERM Erimo 62.35 303 PFAKE 20 43 20.0 +8.3
ERM LR LR
comp=Z,620nm,20.0s,MS4.8
PPT Papeete 64.15 204 *eS* **S 20 51 54.4 -6.4**
comp=Z,1μm,25.8s
PPT *e*LQ 20 59 28.3
comp=Z,4μm,29.8s
PPT *e*LR LR 21 02 13.1
comp=Z,1μm,27.5s,baz=30
PPT Papeete 64.15 204 LR LR 21 05 27.2
comp=Z,362nm,18.2s,MS4.6,baz=17,slow=30
GRGR Grenville 64.24 98 PFAKE 20 43 40.0 +15
GRGR LR LR
comp=Z,1μm,21.0s,MS5.2
BBGH Gun Hill 65.08 96 PFAKE 20 43 40.0 +10
BBGH LR LR
comp=Z,4μm,22.0s,MS5.5
KEV Kevo 65.42 9 *ep* **P 20 43 34.7 +3.2**
comp=Z,0.5nm,0.4s
KEV Kevo 65.42 9 PFAKE 20 43 40.0 +8.5

KEV LR LR
comp=Z,2μm,20.0s,MS5.3
KEV Kevo 65.42 9 *eP* **P 20 43 34.7 +3.2**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARCES ARCESS Array B 65.44 10 P **P 20 43 31.3 -0.4**
comp=Z,5.4nm,0.9s,mb4.6,baz=14,slow=2.5,SNR=6.2
ARCES LR LR 21 11 27.6
comp=Z,952nm,18.6s,MS5.0,baz=339,slow=36
RKT Rikitea 66.74 188 *eS* S 20 52 31.0 -1.4
comp=Z,2μm,29.8s
RKT *e*LQ 21 00 37.4
comp=Z,5μm,31.0s
RKT *e*LR LR 21 03 46.1
comp=Z,2μm,28.2s,baz=9.4
BOD Bodaibo 66.75 329 *eP* **P 20 43 37.1 -3.1**
BOD pmax pmax
comp=Z,11nm,2.0s,mb4.5
MDJ Mudanjiang 68.61 312 P **P 20 43 49.8 -2.4**
MDJ S S 20 52 55.1 +0.5
MDJ SS SS 20 57 16.6 -1.4
MDJ AMB AMB
comp=Z,15nm,1.8s,mb4.6
MDJ AMB AMB
comp=Z,247nm,6.2s
MDJ LR LR
comp=N,1μm,40.2s,MS4.8
MDJ LR LR
comp=E,567nm,42.0s,MS4.8
MDJ LR LR
comp=Z,655nm,40.2s,MS4.6
MDJ Mudanjiang 68.61 312 PFAKE 20 44 00.0 +7.8
MDJ LR LR
comp=Z,629nm,20.0s,MS4.8
MJAR Matsushiro Arr 68.70 300 P **P 20 43 52.7 -0.2**
comp=Z,2.3nm,0.8s,mb4.2,baz=56,slow=5.0,SNR=4.4
MAJO Matsushiro 68.70 300 PFAKE 20 44 00.0 +7.1
MAJO LR LR
comp=Z,826nm,20.0s,MS5.0
MAT Matsushiro 68.70 300 P **P 20 43 50.6 -2.3**
MAT S S 20 52 57.0 +1.1
HIA Hailar 70.44 320 PFAKE 20 44 20.0 +17
HIA LR LR
comp=Z,1μm,19.0s,MS5.1
NB2 NORSAR Subarra 70.45 20 P **P 20 44 03.2 -0.1**
comp=Z,41nm,1.4s,mb5.2,baz=330,slow=6.2
NOA NORSAR Array B 70.45 20 P **P 20 44 03.2 0.0**
comp=Z,4.1nm,0.8s,mb4.4,baz=332,slow=6.0,SNR=13
NOA LR LR 21 13 33.8
comp=Z,652nm,21.3s,MS4.8,baz=330,slow=35
ESK Eskdalemuir 70.73 30 PFAKE 20 44 20.0 +15
ESK LR LR
comp=Z,2μm,19.0s,MS5.4
FUNA Funafuti 70.86 237 PFAKE 20 44 20.0 +14
FUNA LR LR
comp=Z,5μm,19.0s,MS5.8
KONO Kongsberg 71.23 21 PFAKE 20 44 20.0 +12
KONO LR LR
comp=Z,1μm,19.0s,MS5.2
CN2 Changchun 71.37 313 *eP* **P 20 44 08.9 -0.3**
CN2 *eXP* sP 20 44 15.0 +1.3
CN2 *eS* S 20 53 24.3 -2.7
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,19.0s,MS5.2
CN2 LR LR
comp=E,1μm,19.0s,MS5.2
CN2 LR LR
comp=Z,2μm,21.0s,MS5.4
NNA Nana 71.99 127 PFAKE 20 44 20.0 +6.8
NNA LR LR
comp=Z,565nm,22.0s,MS4.8
CBIJ Chichi jima 72.10 290 LR LR 21 13 03.3
comp=Z,314nm,19.3s,MS4.6,baz=228,slow=34
KAF Kangasniemi 72.55 13 *ep* **P 20 44 17.1 +1.2**
comp=Z,1.1nm,0.4s,mb4.1
KAF Kangasniemi 72.55 13 *eP* **P 20 44 17.1 +1.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KSRS Korea Array 74.32 307 P **P 20 44 26.0 -0.8**
comp=Z,0.5nm,0.6s,baz=18,slow=11,SNR=3.0
KRAR Krasnoyarsk 75.08 338⇓ *iP* **P 20 44 30.0 -0.8**
KRAR pmax pmax
comp=Z,21nm,1.7s,mb4.8
TLY Talaya 75.30 330 *eP* **P 20 44 32.5 +0.3**
comp=Z,12nm,1.1s,mb4.7
TLY Talaya 75.30 330 *eP* **P 20 44 32.5 +0.3**
TLY *e* 20 47 29.2
TLY *eS* S 20 54 11.4 +0.1
TLY *e* 20 55 04.1
TLY *eSS* SS 20 59 08.6 +8.7
TLY pmax pmax
comp=Z,20nm,1.4s,mb4.8
TLY MLR MLR
comp=Z,1μm,18.0s,MS5.3
KLMR Klimovskoe 75.37 7 *eP* **P 20 44 31.7 -0.7**
KLMR pmax pmax
comp=Z,79nm,1.5s,mb5.4
ROSF Rostrenen 76.15 35 *eP* **P 20 44 37.4 +0.3**
ZAK Zakamensk 76.49 329 *eP* **P 20 44 38.9 -0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
FLN La Foliniere 76.94 33 *eP* **P 20 44 42.1 +0.5**
FLN *e*MLR MLR
comp=Z,3μm,20.5s,MS5.2
FLN La Foliniere 76.94 33 *eP* **P 20 44 42.1 +0.5**
FLN MLR MLR
comp=Z,3μm,20.5s,MS5.5
GRR Gorron 77.09 33 *eP* **P 20 44 43.5 +1.0**
SONM Songino Array 77.34 326 P **P 20 44 43.3 -0.6**
comp=Z,3.1nm,0.8s,mb4.3,baz=61,slow=1.0,SNR=11
SONM LR LR 21 19 15.7
comp=Z,1μm,18.3s,MS5.3,baz=38,slow=36
BAIF Baives 77.64 30 *eP* **P 20 44 46.4 +0.9**
comp=Z,166nm,1.9s,mb5.3
BAIF Baives 77.64 30 *eP* **P 20 44 46.4 +0.9**
comp=Z,83nm,1.9s,mb5.3
BAIF Baives 77.64 30 *eP* **P 20 44 46.4 +0.9**
BAIF pmax pmax
comp=Z,83nm,1.9s,mb5.3
BCLA Clavier 77.73 29 P **P 20 44 46.0 0.0**
comp=Z,32nm,2.1s,mb4.9
DOU Dourbes 77.75 29 E 20 44 55.5
GIVF Givet 77.83 29 *eP* **P 20 44 47.4 +0.9**
comp=Z,160nm,1.7s,mb5.4
GIVF Givet 77.83 29 *eP* **P 20 44 47.4 +0.9**
comp=Z,80nm,1.7s,mb5.4
GIVF Givet 77.83 29 *eP* **P 20 44 47.4 +0.9**
GIVF pmax pmax
comp=Z,80nm,1.7s,mb5.4
NVS Novosibirsk 78.51 342⇑ *iP* **P 20 44 46.4 -3.8**
NVS pmax pmax
comp=Z,38nm,1.6s,mb5.1
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=E,22nm,1.6s
MFF Saint Martin d 78.82 34 *eP* **P 20 44 52.5 +0.4**
BJI Beijing 78.89 315 P **P 20 44 50.1 -2.5**
BJI S S 20 54 47.4 -3.4
BJI AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
BJI AMB AMB
comp=Z,228nm,4.6s
BJI LR LR
comp=N,659nm,21.4s,MS5.1
BJI LR LR
comp=E,694nm,18.1s,MS5.1
BJI LR LR
comp=Z,687nm,40.1s
BJT Baijiatuau 78.91 315 PFAKE 20 45 00.0 +7.3
BJT LR LR
comp=Z,943nm,20.0s,MS5.1
ZALV Zalesovo Beam 78.98 341 P **P 20 44 51.9 -0.9**
comp=Z,2.1nm,0.8s,mb4.1,baz=25,slow=7.4,SNR=4.4
ZALV LR LR 21 22 55.7
comp=Z,421nm,19.2s,MS4.8,baz=32,slow=38
GUMO Guam 79.09 278 LR LR 21 11 50.7
comp=Z,883nm,20.2s,MS5.1,baz=317,slow=30
MEZF Maizieres J'vi 79.25 30 *eP* **P 20 44 53.6 -0.8**
CLL Collm 79.45 24 *iP* **P 20 44 55.4 0.0**
comp=Z,12nm,1.2s,mb4.7
CLL *e*S S 20 54 58.0 +1.7

CLL LR LR
comp=Z,1μm,20.5s,MS5.1
CLL Collm 79.45 24 *i* P **P** **20 44 55.4 0.0**
CLL *e*S S 20 54 58.0 +1.7
CLL pmax pmax
comp=Z,12nm,1.2s,mb4.7
CLL MLR MLR
comp=Z,1μm,20.5s,MS5.1
CLL Collm 79.45 24 *i* P **P** **20 44 55.4 0.0**
comp=Z,12nm,1.2s,mb4.7
CLL *es*P sP 20 45 00.0 +0.1
CLL *e*S S 20 54 58.0 +1.7
CLL *e*SS SS 21 00 07.0 +4.7
CLL LmV 21 20 00.0
comp=Z,1μm,20.5s
MOX Moxa 79.61 25 *e*P **P** **20 44 56.7 +0.4**
comp=Z,46nm,2.1s,mb5.0
MOX
comp=Z,1μm,19.0s
MOX Moxa 79.61 25 *e*P **P** **20 44 56.7 +0.4**
MOX pmax pmax
comp=Z,46nm,2.1s,mb5.0
MOX MLR MLR
comp=Z,1μm,19.0s,MS5.2
SVE Sverdlovsk 79.72 355 *e*P **P** **20 44 55.7 -1.1**
SVE pmax pmax
comp=Z,27nm,1.4s,mb5.0
LOR Lormes 79.84 31 *e*P **P** **20 44 58.4 +0.8**
comp=Z,74nm,1.4s,mb5.1
LOR *e*MLR MLR
comp=Z,3μm,19.2s,MS5.3
LOR Lormes 79.84 31 *e*P **P** **20 44 58.4 +0.8**
comp=Z,37nm,1.4s,mb5.1
LOR LR LR
comp=Z,3μm,19.3s,MS5.6
LOR Lormes 79.84 31 *e*P **P** **20 44 58.4 +0.8**
LOR pmax pmax
comp=Z,37nm,1.4s,mb5.1
LOR MLR MLR
comp=Z,3μm,19.3s,MS5.6
SSF Saint Saulge 79.88 32 *e*P **P** **20 44 58.5 +0.6**
comp=Z,92nm,1.7s,mb5.1
SSF Saint Saulge 79.88 32 *e*P **P** **20 44 58.5 +0.6**
comp=Z,46nm,1.7s,mb5.1
SSF Saint Saulge 79.88 32 *e*P **P** **20 44 58.5 +0.6**
SSF pmax pmax
comp=Z,46nm,1.7s,mb5.1
TCF Toulx Ste Croi 80.02 33 *e*P **P** **20 44 59.0 +0.4**
comp=Z,42nm,1.3s,mb4.9
TCF Toulx Ste Croi 80.02 33 *e*P **P** **20 44 59.0 +0.4**
comp=Z,21nm,1.3s,mb4.9
TCF Toulx Ste Croi 80.02 33 *e*P **P** **20 44 59.0 +0.4**
TCF pmax pmax
comp=Z,21nm,1.3s,mb4.9
MNK Minsk 80.03 14 *e*P **P** **20 44 55.0 -3.5**
BGF Bois d'Agland 80.04 32 *e*P **P** **20 44 57.9 -0.9**
AVF Avril sur Loir 80.05 32 *e*P **P** **20 44 59.1 +0.3**
comp=Z,81nm,1.7s,mb5.1
AVF Avril sur Loir 80.05 32 *e*P **P** **20 44 59.1 +0.3**
comp=Z,41nm,1.7s,mb5.1
AVF Avril sur Loir 80.05 32 *e*P **P** **20 44 59.1 +0.3**
AVF pmax pmax
comp=Z,41nm,1.7s,mb5.1
BRG Berggiesshubel 80.11 24 *e*P **P** **20 45 00.6 +1.6**
comp=Z,5.1nm,1.1s,mb4.4
BRG *i* pP 20 45 04.9 +2.6
BRG S S 20 55 09.0 +5.7
BRG SS SS 21 00 21.0 +8.8
BRG LR LR
comp=Z,600nm,22.5s,MS4.9
BRG Berggiesshubel 80.11 24 *e*P **P** **20 45 00.6 +1.6**
BRG *i* pP 20 45 04.9 +2.6
BRG S S 20 55 09.0 +5.7
BRG SS SS 21 00 21.0 +8.8
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BRG MLR MLR
comp=N,601nm,22.0s
BRG MLR MLR
comp=E,445nm,14.2s
BRG MLR MLR
comp=Z,601nm,22.5s,MS4.9
BRG Berggiesshubel 80.11 24 *e*P **P** **20 45 00.6 +1.6**
comp=Z,8.5nm,1.1s,mb4.6
BRG *i* pP 20 45 04.9 +2.6
comp=Z,13nm,1.0s
BRG S S 20 55 09.0 +5.7
BRG SS SS 21 00 21.0 +8.8
BRG
comp=N,1μm,22.5s
BRG
comp=E,743nm,14.2s
BRG
comp=Z,1μm,22.5s
CDF Champ du Feu 80.12 29 *e*P **P** **20 45 00.0 +0.9**
comp=Z,90nm,1.6s,mb5.2
CDF Champ du Feu 80.12 29 *e*P **P** **20 45 00.0 +0.9**
comp=Z,45nm,1.6s,mb5.2
CDF Champ du Feu 80.12 29 *e*P **P** **20 45 00.0 +0.9**
CDF pmax pmax
comp=Z,45nm,1.6s,mb5.2
HAU Haudompre 80.14 29 *e*P **P** **20 44 59.9 +0.7**
comp=Z,100nm,1.7s,mb5.2
HAU *e*MLR MLR
comp=Z,2μm,20.2s,MS5.2
HAU Haudompre 80.14 29 *e*P **P** **20 44 59.9 +0.7**
comp=Z,50nm,1.7s,mb5.2
HAU LR LR
comp=Z,2μm,20.3s,MS5.5
HAU Haudompre 80.14 29 *e*P **P** **20 44 59.9 +0.7**
HAU pmax pmax
comp=Z,50nm,1.7s,mb5.2
HAU MLR MLR
comp=Z,2μm,20.3s,MS5.5
ARU Arti 80.22 357 PFAKE 20 45 10.0 +11
ARU LR LR
comp=Z,801nm,19.0s,MS5.1
ARU Arti 80.22 357 *c* *i*P **P** **20 44 59.2 -0.3**
ARU *e*S S 20 55 05.3 +1.1
ARU pmax pmax
comp=Z,17nm,1.7s,mb4.7
NKC Novy Kostel 80.23 25 *e*P **P** **20 45 00.8 +1.1**
NKC *e*S S 20 55 09.0 +4.4
NKC Novy Kostel 80.23 25 *e*P **P** **20 45 00.8 +1.1**
NKC *e*S S 20 55 09.0 +4.4
NKC AMS AMS 21 21 20.0
comp=Z,900nm,17.9s
MOS Moscow 80.24 8 *e*P **P** **20 45 04.8 +5.2**
GRF Grafenberg Arr 80.33 26 *e*P **P** **20 45 01.1 +0.9**
GRF *e**PP pP 20 45 08.4 +4.9
GRF *e*S S 20 55 09.4 +3.8
GRF *e*SS SS 21 00 15.6 +0.1
GRF pmax pmax
comp=Z,37nm,1.6s,mb5.1
GRF MLR MLR
comp=Z,800nm,20.0s,MS5.1
GRF Grafenberg Arr 80.33 26 *e*P **P** **20 45 01.1 +0.9**
GRF *e**PP pP 20 45 08.4 +4.9
GRF *e*S S 20 55 09.4 +3.8
GRF *e*SS SS 21 00 15.6 +0.1
GRF pmax pmax
comp=Z,37nm,1.6s,mb5.1
GRF MLR MLR
comp=Z,800nm,20.0s,MS5.1
GRF Grafenberg Arr 80.33 26 *e*P **P** **20 45 01.1 +0.9**
comp=Z,37nm,1.6s,mb5.1
GRF *ep*P pP 20 45 08.4 +4.9
GRF *es*P sP 20 45 14.4 +10
GRF *e*S S 20 55 09.4 +3.8
GRF *e*SS SS 21 00 15.6 +0.1
GRF *e*L 21 21 37.6
comp=Z,827nm,20.0s
SMF Signal de Mont 80.35 32 *e*P **P** **20 45 00.7 +0.3**
comp=Z,42nm,1.3s,mb4.9
SMF Signal de Mont 80.35 32 *e*P **P** **20 45 00.7 +0.3**
comp=Z,21nm,1.3s,mb4.9
SMF Signal de Mont 80.35 32 *e*P **P** **20 45 00.7 +0.3**
SMF pmax pmax
comp=Z,21nm,1.3s,mb4.9
MTE Manteigas 80.40 42 PFAKE 20 45 10.0 +9.2
MTE LR LR
comp=Z,2μm,20.0s,MS5.5
HINF Hinteralfeld 80.48 29 *e*P **P** **20 45 01.6 +0.5**
comp=Z,104nm,1.7s,mb5.2
HINF Hinteralfeld 80.48 29 *e*P **P** **20 45 01.6 +0.5**
comp=Z,52nm,1.7s,mb5.2
HINF Hinteralfeld 80.48 29 *e*P **P** **20 45 01.6 +0.5**
HINF pmax pmax
comp=Z,52nm,1.7s,mb5.2
LFF La Frestale 80.53 34 *e*P **P** **20 45 02.4 +1.0**
comp=Z,239nm,1.9s,mb5.5
LFF La Frestale 80.53 34 *e*P **P** **20 45 02.4 +1.0**
comp=Z,120nm,1.9s,mb5.5
LFF La Frestale 80.53 34 *e*P **P** **20 45 02.4 +1.0**
LFF pmax pmax
comp=Z,120nm,1.9s,mb5.5
LPAZ La Paz 80.54 123 P **P** **20 45 01.4 -0.4**
comp=Z,2.1nm,0.8s,mb4.1,baz=2.8,slow=6.3,SNR=6.2
RJF Les Rejaudoux 80.55 34 *e*P **P** **20 45 02.9 +1.4**
RJF *e*MLR MLR
comp=Z,2μm,22.8s,MS5.2
RJF Les Rejaudoux 80.55 34 *e*P **P** **20 45 02.9 +1.4**
RJF MLR MLR
comp=Z,2μm,22.8s,MS5.5
BFO Black Forest 80.55 28 PFAKE 20 45 10.0 +8.5
BFO LR LR
comp=Z,1μm,20.0s,MS5.2
HHC Hu-ho-hao-te 80.55 319 *e*P **P** **20 44 59.5 -2.1**
HHC XP sP 20 45 05.4 -0.7
HHC PP PP 20 48 05.0 +0.6
HHC S S 20 55 03.6 -4.7
HHC SKS 20 55 11.9
HHC SS SS 21 00 18.8 -0.6
HHC AMB AMB
comp=Z,13nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,146nm,4.7s
HHC LR LR
comp=N,885nm,19.0s,MS5.2
HHC LR LR
comp=E,789nm,20.2s,MS5.2
HHC LR LR
comp=Z,1μm,20.2s,MS5.2
PVCC Panska Ves 80.60 23 *e*P **P** **20 45 03.6 +1.9**
PVCC AMS AMS 21 23 20.0
comp=Z,900nm,16.7s
OBN Obninsk 80.73 9 PFAKE 20 45 10.0 +7.7
OBN LR LR
comp=Z,975nm,20.0s,MS5.2
OBN Obninsk 80.73 9⇑ *i*P **P** **20 45 02.0 -0.3**
OBN *i* 20 45 07.3
OBN *e* 20 48 06.6
OBN *i* S S 20 55 16.3 +6.6
OBN *i* SS SS 21 00 27.1 +5.9
OBN pmax pmax
comp=Z,27nm,1.6s,mb4.9
KSP Ksiaz 80.80 22 *e*P **P** **20 45 08.1 +5.3**
KSP MLR MLR
comp=Z,2μm,22.7s,MS5.5
UPC Upice 81.03 23 *e*P **P** **20 45 05.2 +1.2**
PRU Pruhonice 81.07 24 *e*P **P** **20 45 09.7 +5.5**
PRU *e*S S 20 55 15.8 +2.4
PRU AMS AMS 21 20 20.0
comp=Z,900nm,22.3s
CAF Calviac 81.08 34 *e*P **P** **20 45 04.7 +0.3**
CABF La Chapelle 81.22 30 *e*P **P** **20 45 05.1 0.0**
comp=Z,96nm,1.5s,mb5.2
CABF La Chapelle 81.22 30 *e*P **P** **20 45 05.1 0.0**
comp=Z,48nm,1.5s,mb5.2
CABF La Chapelle 81.22 30 *e*P **P** **20 45 05.1 0.0**
CABF pmax pmax
comp=Z,48nm,1.5s,mb5.2
DPC Dobruska-Polom 81.26 23 *e*P **P** **20 45 06.0 +0.8**
DPC *e*S S 20 55 17.6 +2.3
DPC AMS AMS 21 17 10.0
comp=Z,1μm,28.2s
KHC Kasperske Hory 81.55 25 *e*P **P** **20 45 07.8 +1.0**
KHC *ep*P pP 20 45 12.0 +1.9
KHC *e*S S 20 55 22.0 +3.6
KHC AMS AMS 21 23 30.0
comp=Z,1μm,19.1s
ETSF Etsaut 81.64 36 *e*P **P** **20 45 07.1 -0.3**
comp=Z,68nm,1.7s,mb5.0
ETSF Etsaut 81.64 36 *e*P **P** **20 45 07.1 -0.3**
comp=Z,34nm,1.7s,mb5.0
ETSF Etsaut 81.64 36 *e*P **P** **20 45 07.1 -0.3**
ETSF pmax pmax
comp=Z,34nm,1.7s,mb5.0
GERES GERESS Array B 81.84 25 P **P** **20 45 08.2 -0.1**
comp=Z,1.7nm,0.9s,mb4.0,baz=336,slow=4.8,SNR=8.4
GERES LR LR 21 21 56.3
comp=Z,770nm,19.7s,MS5.1,baz=336,slow=36
GERES GERESS Array B 81.84 25 P **P** **20 45 08.2 -0.1**
GERES LR LR 21 21 56.3
TREC Trest 81.97 23 AMS AMS 21 24 20.0
comp=Z,900nm,14.4s
RETA Reutte 82.10 27⇑ *i*PcP PcP 20 45 13.3 -1.8
comp=Z,9.9nm,1.3s
OKC Ostrava-Krasne 82.22 22 *e*P **P** **20 45 14.7 +4.4**
OKC *e*S S 20 55 27.7 +2.4
OKC Ostrava-Krasne 82.22 22 *e*P **P** **20 45 14.7 +4.4**
OKC *e*S S 20 55 27.7 +2.4
OKC AMS AMS 21 20 30.0
comp=Z,900nm,16.4s
OJC Ojcow 82.30 21 *e*P **P** **20 45 11.9 +1.2**
LPL La Plagne 82.39 31 *e*P **P** **20 45 12.6 +1.4**
LPG La Plagne 82.41 31 *e*P **P** **20 45 13.0 +1.6**
comp=Z,57nm,1.7s,mb4.9
LPG La Plagne 82.41 31 *e*P **P** **20 45 13.0 +1.6**
comp=Z,28nm,1.7s,mb4.9
LPG La Plagne 82.41 31 *e*P **P** **20 45 13.0 +1.6**
LPG pmax pmax
comp=Z,28nm,1.7s,mb4.9
MTLF Montolieu 82.45 34 *e*P **P** **20 45 11.8 +0.2**
FETA Feichten 82.50 27⇑ *i*PcP PcP 20 45 15.9 -1.0
comp=Z,16nm,1.9s
LASF Ste Croix 82.50 33 *e*P **P** **20 45 11.1 -0.8**
comp=Z,107nm,1.4s,mb5.4
BRVK Borovoye 82.52 349 *e*P **P** **20 45 09.3 -2.5**
comp=Z,20nm,1.0s,mb5.1
BRVK LR LR
comp=Z,2μm,22.0s,MS5.3
BRVK Borovoye 82.52 349 *e*P **P** **20 45 09.3 -2.5**
BRVK pmax pmax
comp=Z,20nm,1.0s,mb5.1
BRVK MLR MLR
comp=Z,2μm,22.0s,MS5.3
ORIF Oris-en-Rattie 82.58 31 *e*P **P** **20 45 13.1 +0.9**
comp=Z,37nm,1.3s,mb5.0
ORIF *e*MLR MLR
comp=Z,2μm,18.5s,MS5.2
ORIF Oris-en-Rattie 82.58 31 *e*P **P** **20 45 13.1 +0.9**
comp=Z,19nm,1.3s,mb5.0
ORIF Oris-en-Rattie 82.58 31 *e*P **P** **20 45 13.1 +0.9**
ORIF pmax pmax
comp=Z,19nm,1.3s,mb5.0
ESDC Sonseca Array 82.68 40 P **P** **20 45 12.4 -0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=309,slow=5.0,SNR=5.6
ESDC LR LR 21 18 44.7
comp=Z,692nm,19.1s,MS5.0,baz=315,slow=33
SSE Sheshan 82.74 306 *e*P **P** **20 45 12.6 -0.8**
SSE AP pP 20 45 16.3 -0.4
SSE S S 20 55 25.8 -5.5
SSE AMB AMB
comp=Z,36nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,116nm,5.7s
SSE LR LR
comp=N,210nm,21.5s,MS4.9
SSE LR LR
comp=E,493nm,21.6s,MS4.9
SSE LR LR
comp=Z,443nm,18.7s,MS4.9
BNI Bardonecchia 82.76 31 PFAKE 20 45 20.0 +6.8
BNI LR LR
comp=Z,2μm,22.0s,MS5.5
MBDF Montbardon 83.08 31 *e*P **P** **20 45 15.9 +1.1**
SMRF Simiane la Rot 83.26 32 *e*P **P** **20 45 16.8 +1.0**
KBA Koelnbreinsper 83.30 26⇑ *ep*P pP 20 45 17.9 -1.4
comp=Z,24nm,1.4s
CSNA Conrad Observa 83.31 24⇑ *i*pP pP 20 45 16.8 -2.5
comp=Z,15nm,1.4s
CONA Conrad Observa 83.31 24⇑ *i*pP pP 20 45 16.7 -2.5
comp=Z,17nm,1.5s
MODS Modra-Piesok 83.31 23 *e*P **P** **20 45 16.0 0.0**
MODS *ep*P pP 20 45 21.6 +2.3
KURK Kurchatov 83.36 344 *e*P **P** **20 45 14.3 -1.9**
comp=Z,12nm,1.0s,mb4.9
KURK LR LR
comp=Z,994nm,22.0s,MS5.1
KURK Kurchatov 83.36 344⇑ *i*P **P** **20 45 16.0 -0.2**
KURK pmax pmax
comp=Z,15nm,1.7s,mb4.8
NJ2 Nanjing 83.39 308 *e*P **P** **20 45 17.3 +0.6**
NJ2 AP pP 20 45 21.6 +1.6
NJ2 XP sP 20 45 24.3 +3.1
NJ2 PP PP 20 48 32.4 +4.4
NJ2 S S 20 55 38.0 +0.2
NJ2 XS sS 20 55 47.0 +3.7
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
NJ2 AMB AMB
comp=Z,90nm,6.5s
NJ2 LR LR
comp=N,340nm,29.6s,MS4.8
NJ2 LR LR
comp=E,450nm,32.7s,MS4.8
NJ2 LR LR
comp=Z,340nm,24.7s
STHS Stebnicka Huta 83.41 20 *e*P **P** **20 45 17.7 +1.3**
STHS pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ZST Bratislava 83.42 23 *e*P **P** **20 45 17.9 +1.3**
ZST pmax pmax
comp=Z,154nm,2.8s,mb5.5
KOLL Kolacno 83.44 22 *e*P **P** **20 45 18.2 +1.6**
KWP Kalwaria 83.56 19 PFAKE 20 45 30.0 +13
KWP LR LR
comp=Z,1μm,22.0s,MS5.2
VYHS Vyhne 83.63 22 *e*P **P** **20 45 18.2 +0.6**
LVV L'vov 83.69 18 *e*P **P** **20 45 23.7 +5.8**
SOP Sopron 83.73 24‖ *es*P sP 20 45 28.7 +6.0
ARSA Arzberg 83.81 24‖ *i*pP pP 20 45 20.0 -2.0
comp=Z,13nm,1.1s
AKASG Malin Array Be 83.92 15 P **P** **20 45 18.0 -1.1**
comp=Z,3.6nm,0.7s,mb4.6,baz=339,slow=4.5,SNR=6.0
AKASG LR LR 21 22 06.8
comp=Z,970nm,20.3s,MS5.2,baz=330,slow=35
AKASG Malin Array Be 83.92 15 *i* P **P** **20 45 18.8 -0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
KIEV Kiev 83.92 15 P **P** **20 45 18.9 -0.1**
comp=Z,28nm,1.4s,mb5.2
KIEV LR LR
comp=Z,1μm,22.0s,MS5.2
KIEV Kiev 83.92 15 P **P** **20 45 18.9 -0.2**
KIEV pmax pmax
comp=Z,28nm,1.4s,mb5.2
KIEV MLR MLR
comp=Z,1μm,22.0s,MS5.2
CRVS Cervenica-Dubn 83.94 20 *e*P **P** **20 45 20.8 +1.6**
FRF La Foret Royal 84.02 32 *e*P **P** **20 45 20.2 +0.5**
comp=Z,211nm,1.7s,mb5.7
FRF La Foret Royal 84.02 32 *e*P **P** **20 45 20.2 +0.5**
comp=Z,105nm,1.7s,mb5.7
FRF La Foret Royal 84.02 32 *e*P **P** **20 45 20.2 +0.5**
FRF pmax pmax
comp=Z,105nm,1.7s,mb5.7
SBF Sospel 84.06 31 *e*P **P** **20 45 21.7 +1.8**
comp=Z,131nm,1.2s,mb5.6
SBF Sospel 84.06 31 *e*P **P** **20 45 21.7 +1.8**
comp=Z,66nm,1.2s,mb5.6
SBF Sospel 84.06 31 *e*P **P** **20 45 21.7 +1.8**
SBF pmax pmax
comp=Z,66nm,1.2s,mb5.6
HNR Honiara 84.10 251 PFAKE 20 45 30.0 +10
HNR LR LR
comp=Z,2μm,22.0s,MS5.4
KOLS Kolonicke sedl 84.11 20 *e*P **P** **20 45 24.1 +4.1**
LMR La Mourre 84.16 32 *e*P **P** **20 45 20.5 +0.1**
comp=Z,256nm,1.8s,mb5.8
LMR La Mourre 84.16 32 *e*P **P** **20 45 20.5 +0.1**
comp=Z,128nm,1.8s,mb5.8
LMR La Mourre 84.16 32 *e*P **P** **20 45 20.5 +0.1**
LMR pmax pmax
comp=Z,128nm,1.8s,mb5.8
SOKA Soboth 84.18 25⇑ *i*pP pP 20 45 21.7 -2.1
comp=Z,24nm,1.4s
PSZ Piszkesteto 84.44 21 *e*P **P** **20 45 22.8 +1.0**
comp=Z,30nm,1.3s,mb5.3
PSZ LR LR
comp=Z,689nm,19.0s,MS5.1
PSZ Piszkesteto 84.44 21 *e*P **P** **20 45 22.8 +1.0**
PSZ pmax pmax
comp=Z,29nm,1.3s,mb5.2
PSZ MLR MLR
comp=Z,689nm,19.0s,MS5.1
PSZ Piszkesteto 84.44 21‖ *e*PcP PcP 20 45 23.4 -2.0
BUD Budapest 84.61 22‖ *es*P sP 20 45 33.2 +6.1
LVC Limon Verde 84.98 128 PFAKE 20 45 40.0 +15
LVC LR LR
comp=Z,466nm,20.0s,MS4.9
MKAR Makanchi Array 86.22 340 P **P** **20 45 29.3 -1.4**
comp=Z,0.4nm,0.5s,baz=24,slow=4.2,SNR=4.1
MKAR LR LR 21 25 53.7
comp=Z,700nm,21.0s,MS5.0,baz=22,slow=37
MKAR Makanchi Array 86.22 340 P **P** **20 45 29.3 -1.4**
MKAR LR LR 21 25 53.7
MKAR Makanchi Array 86.22 340 *i* P **P** **20 45 31.0 +0.3**
GTA Gaotai 86.98 325 *e*P **P** **20 45 33.6 -0.9**
GTA AP pP 20 45 37.8 -0.1
GTA XP sP 20 45 40.4 +1.3
GTA S S 20 56 08.4 -4.7
GTA PS 20 57 11.8
GTA SS SS 21 01 55.3 +1.0
GTA AMB AMB
comp=Z,4.0nm,0.8s,mb4.7
GTA LR LR
comp=N,1μm,26.2s,MS5.4
GTA LR LR
comp=E,2μm,25.6s,MS5.4
GTA LR LR
comp=Z,2μm,24.4s,MS5.4
WHN Wuhan 87.05 310 P **P** **20 45 37.3 +2.2**
WHN S S 20 56 15.9 +1.8
WHN LR LR
comp=Z,1μm,21.2s,MS5.3
XAN Xi'an 87.20 316 P **P** **20 45 33.1 -2.6**
XAN AP pP 20 45 36.5 -2.5
XAN S S 20 56 12.0 -3.4
XAN SS SS 21 01 55.5 -2.4
XAN AMB AMB
comp=Z,4.0nm,0.7s,mb4.8
XAN LR LR
comp=N,174nm,19.6s,MS4.8
XAN LR LR
comp=E,364nm,19.6s,MS4.8
XAN LR LR
comp=Z,592nm,23.0s,MS4.9
WMQ Urumqi 87.47 335 *e*P **P** **20 45 38.0 +1.2**
WMQ XP sP 20 45 45.0 +3.7
WMQ PP PP 20 49 06.0 +5.5
WMQ SKS 20 56 03.0
WMQ S S 20 56 18.0 +0.4
WMQ AMB AMB
comp=Z,31nm,1.2s,mb5.4
WMQ AMB AMB
comp=Z,84nm,5.0s
WMQ LR LR
comp=N,1μm,20.0s,MS5.5
WMQ LR LR
comp=E,1μm,20.0s,MS5.5
WMQ LR LR
comp=Z,1μm,20.0s,MS5.3
AQU L'Aquila 87.51 28 PFAKE 20 45 50.0 +13
AQU LR LR
comp=Z,928nm,20.0s,MS5.2
LZH Lanzhou 87.99 321 *e*P **P** **20 45 37.0 -2.5**
LZH AP pP 20 45 40.0 -2.8
LZH XP sP 20 45 43.0 -1.0
LZH PP PP 20 49 08.0 +3.0
LZH SKS 20 56 02.0
LZH *e*S S 20 56 13.0 -10
LZH AMB AMB
comp=Z,24nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,110nm,4.1s
LZH LR LR
comp=E,1μm,18.6s
LZH LR LR
comp=Z,2μm,19.7s,MS5.5
LCO Las Campanas 89.01 133 PFAKE 20 46 00.0 +16
LCO LR LR
comp=Z,550nm,19.0s,MS5.0
CUC Castrocucco 90.44 27 PFAKE 20 46 00.0 +9.1
CUC LR LR

comp=Z,2μm,19.0s,MS5.5
TKM2 Tokmak 2 91.42 343 *e*P **P 20 45 52.8 -2.6**
KEST Kesra 91.81 34 LR LR 21 24 54.1
comp=Z,403nm,18.2s,MS4.9,baz=301,slow=34
CEL Celeste 92.02 28 PFAKE 20 46 10.0 +12
CEL LR LR
comp=Z,15μm,19.0s
EKS2 Erkin-Say 92.04 344 PFAKE 20 46 10.0 +12
EKS2 LR LR
comp=Z,910nm,21.0s,MS5.2
CD2 Chengdu 92.28 318 *e*P **P 20 45 59.5 -0.1**
CD2 AP pP 20 46 04.8 +1.8
CD2 XP sP 20 46 08.0 +3.9
CD2 PP PP 20 49 41.8 +2.5
CD2 SKS 20 56 30.3
CD2 S S 20 56 58.3 -4.5
CD2 XS sS 20 57 06.3 -2.0
CD2 SS SS 21 03 10.3 -1.3
CD2 AMB AMB
comp=Z,350nm,8.2s
CD2 LR LR
comp=N,1μm,15.2s,MS5.7
CD2 LR LR
comp=E,2μm,16.2s,MS5.7
CD2 LR LR
comp=Z,1μm,14.8s,MS5.5
KIV Kislovodsk 92.39 7 PFAKE 20 46 10.0 +10
KIV LR LR
comp=Z,578nm,20.0s,MS5.0
KIV Kislovodsk 92.39 7 *e*P **P 20 45 55.3 -4.6**
KIV *e* 20 56 29.1
KIV *e*SS SS 21 03 14.3 +2.2
KIV pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,501nm,19.0s,MS5.0
SOC Sochi 92.45 9 *e*P **P 20 45 58.7 -1.5**
SOC *e* 20 49 44.5
SOC *e*S SKSac 20 56 31.3 -2.3
SOC *e* 20 57 05.5
SOC MLR MLR
comp=Z,655nm,16.0s,MS5.2
BDFB Brasilia 93.21 108 LR LR 21 31 24.1
comp=Z,641nm,19.3s,MS5.1,baz=306,slow=38
ANTO Ankara 95.03 15 PFAKE 20 46 20.0 +7.9
ANTO LR LR
comp=Z,951nm,20.0s,MS5.3
GNI Garni 96.34 6 PFAKE 20 46 30.0 +12
GNI LR LR
comp=Z,587nm,19.0s,MS5.1
GNI Garni 96.34 6⇑ *i*P **P 20 46 16.5 -1.5**
GNI pmax pmax
comp=Z,7.0nm,1.4s
DAV Davao City (W) 97.25 287 LR LR 21 23 55.8
comp=Z,860nm,20.4s,MS5.2,baz=30,slow=32
DAV Davao City (W) 97.25 287 PFAKE 20 46 30.0 +7.4
DAV LR LR
comp=Z,2μm,19.0s,MS5.5
KMI Kunming 97.55 315 P **P 20 46 22.5 -1.3**
KMI AP pP 20 46 28.3 +1.2
KMI PP PP 20 50 19.6 -0.8
KMI S S 20 57 44.8 -4.1
KMI XS sS 20 57 54.8 +0.4
KMI PS PS 20 59 07.8 -3.7
KMI SS SS 21 04 24.3 -2.4
KMI AMB AMB
comp=Z,3.0nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,103nm,4.8s
KMI LR LR
comp=N,456nm,17.5s,MS5.2
KMI LR LR
comp=E,511nm,17.5s,MS5.2
KMI LR LR
comp=Z,496nm,21.4s,MS5.0
PLCA Paso Flores 98.35 140 LR LR 21 26 30.7
comp=Z,442nm,18.7s,MS5.0,baz=95,slow=33
QIZ Qiongzhong 98.54 306 P **P 20 46 25.5 -2.8**
QIZ PP PP 20 50 26.3 -1.9
QIZ S S 20 57 53.8 -3.6
QIZ SS SS 21 04 38.8 -2.3
QIZ AMB AMB
comp=Z,325nm,3.4s
QIZ LR LR
comp=N,521nm,23.6s,MS5.1
QIZ LR LR
comp=E,609nm,23.1s,MS5.1
QIZ LR LR
comp=Z,667nm,21.2s,MS5.1
LSA Lhasa 98.93 327 PFAKE 20 46 40.0 +10
LSA LR LR
comp=Z,2μm,19.0s,MS5.6
CTAO Charters Tower 100.97 253 PFAKE 20 46 50.0 +11
CTAO LR LR
comp=Z,2μm,21.0s,MS5.5
KKM Kota Kinabalu 104.39 293 PFAKE 20 47 10.0 +16
KKM LR LR
comp=Z,473nm,22.0s,MS5.0
TORD Torodi Ar. Bea 106.96 52 PP PP 20 51 19.3 -12
comp=Z,1.1nm,1.0s,baz=326,slow=7.6,SNR=3.7
KAPI Kappang 109.87 282 PFAKE 20 51 30.0 +9.0
KAPI LR LR
comp=Z,269nm,21.0s,MS4.8
ASCN Ascension 112.13 80 PFAKE 20 51 40.0 +15
ASCN LR LR
comp=Z,1μm,20.0s,MS5.4
MBWA Marble Bar 120.62 269 PFAKE 20 51 50.0 +8.7
MBWA LR LR
comp=Z,1μm,22.0s,MS5.5
VNDA Vanda 128.20 195 PKP PKPdf 20 51 54.7 +0.5
comp=Z,1.1nm,0.9s,baz=291,slow=1.1,SNR=6.0
MSEY Mahe Island 141.15 355 PFAKE 20 52 30.0 +10
MSEY LR LR
comp=Z,495nm,20.0s,MS5.3
CASY Casey 141.64 214 PFAKE 20 52 30.0 +11
CASY LR LR
comp=Z,864nm,21.0s,MS5.5
LSZ Lusaka 144.96 44 *e*P PKPdf 20 52 25.1 -1.8
LSZ LR LR
comp=Z,1μm,20.0s,MS5.7
MAIT Maitri 146.15 157 *e*PKPdif PKPdf 20 52 23.7 -3.6
SYO Syowa Base 153.65 170‖ *e*PKPab PKPab 20 52 56.0 -3.7
ABPO Ambohimpanom 155.09 12 PFAKE 20 52 50.0 +7.3
ABPO LR LR
comp=Z,1μm,20.0s,MS5.7

PRE 19 20:34:52.8±0.4, 26°45'S×27°32'E, h2km, ML3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.48**	**176**	*e*P		Pg		20 35 02.4	+0.5
PRYS				*e*S		Sg		20 35 08.6	+0.5
PRYS				AML		AML		20 35 15.7	
	comp=Z,2μm,0.4s								
KSR	**Koster**	**0.71**	**327**	*e*P		Pg		20 35 06.5	+0.1
KSR				*e*S		Sg		20 35 16.3	+0.7
KSR				AML		AML		20 35 24.7	
	comp=Z,828nm,0.2s								
ERPM	**east rand prop**	**0.85**	**76**	*e*P		Pg		20 35 09.2	+0.1
ERPM				*e*S		Sg		20 35 20.6	+0.4
ERPM				AML		AML		20 35 27.4	
	comp=Z,384nm,0.2s								
SLR	**Silverton**	**1.12**	**51**	*e*P		Pg		20 35 14.3	+0.1
SLR				*e*S		Sg		20 35 30.1	+1.3
SLR				AML		AML		20 35 33.8	
	comp=Z,708nm,0.3s								
SEK	**Senekal**	**1.89**	**172**	*e*P		Pn		20 35 26.6	+0.5
SEK				*e*S		Sn		20 35 51.5	+1.1
SEK				AML		AML		20 35 56.4	
	comp=Z,457nm,0.6s								
POGA	**Pongola**	**3.94**	**104**	*e*P		Pn		20 35 56.2	+1.9
POGA				*e*S		Sn		20 36 42.4	+1.3
POGA				AML		AML		20 36 59.3	
	comp=Z,126nm,0.5s								
HVD	**Gariep Dam**	**4.44**	**201**	*e*P		Pn		20 36 01.8	+0.6
HVD				*e*S		Sn		20 36 52.5	-0.9
HVD				AML		AML		20 37 27.4	
	comp=Z,45nm,0.4s								
MOPA	**Mopani**	**4.71**	**53**	*e*P		Pn		20 36 05.7	+0.8
MOPA				*e*S		Sn		20 36 58.5	-1.7
MOPA				AML		AML		20 37 28.3	
	comp=Z,270nm,0.3s								
MSNA	**Messina**	**4.77**	**32**	*e*P		Pn		20 36 05.4	-0.3
MSNA				*e*S		Sn		20 36 57.9	-3.7
MSNA				AML		AML		20 37 26.8	
	comp=Z,45nm,0.4s								
SUR	**Sutherland**	**8.19**	**222**	*e*P		Pn		20 36 53.9	+1.2
SUR				*e*S		Sn		20 38 22.4	-3.5
CVNA	**Calvinia**	**8.30**	**231**	*e*P		Pn		20 36 55.3	+1.1
CVNA				*e*S		Sn		20 38 24.8	-3.9
CVNA				AML		AML		20 39 20.0	
	comp=Z,61nm,0.8s								
KOMG	**Komaggas**	**9.30**	**247**	*e*P		Pn		20 37 09.2	+1.2
KOMG				*e*S		Sn		20 38 48.5	-4.7
KOMG				AML		AML		20 39 24.1	
	comp=Z,9.6nm,0.6s								
CER	**Ceres**	**9.79**	**223**	*e*S		Sn		20 39 00.5	-4.7
CER				AML		AML		20 40 11.2	
	comp=Z,11nm,0.8s								
ELIM	**Elim**	**10.42**	**217**	*e*P		Pn		20 37 24.5	+1.3
ELIM				*e*S		Sn		20 39 15.3	-5.2
ELIM				AML		AML		20 39 20.6	
	comp=Z,4.5nm,0.6s								

*ISCJB **19** 21:02:22.1±0.2, 24°85'N±0.02 × 121°77'E±0.02, h83km±2km, mb3.5/8, Error ellipse: s-maj=3.9km s-min=2.8km az=148.9*
*NEIC **19** 21:02:22.4, 24°89'N × 121°75'E, h76km, mb3.9/4, After TAP.*
NEIC Recorded [3 TAP] in I-lan and [1 TAP] in T'ao-yuan Counties.
*TAP **19** 21:02:23.2, 24°79'N × 121°77'E, h72km, ML4.3, B*
*JMA **19** 21:02:23.5±0.2, 24°70'N × 121°79'E, h75km, M3.5*
*IDC **19** 21:02:24.1±4.4, 24°75'N × 121°86'E, h82km±50km, mb3.0/5, mb1 3.2/7, mb1mx3.2/22, mbtmp3.1/7, ML3.3/2, Error ellipse: s-maj=36.4km s-min=18.8km az=57.0*
ISC 19 21:02:23.0±0.2, 24°83'N±0.02 × 121°78'E±0.02, h78km±2km, n86, σ0°81/129, mb3.5/8, 2C-27D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.07**	**200**	‖ *i*P		**Pn**		**21 02 34.5**	**+0.3**
ILA	baz=219			*i* S		**Sn**		**21 02 42.6**	**+0.3**
TWE	**Neicheng**	**0.15**	**221**	‖ *i*P		**Pn**		**21 02 34.5**	**+0.1**
TWE	baz=235			S		**Sn**		**21 02 42.4**	**-0.3**
TWA	**Mucha**	**0.23**	**310**	‖ *i*P		**Pn**		**21 02 34.8**	**+0.2**
TWA	baz=314			S		**Sn**		**21 02 42.9**	**-0.3**
TWC	**Suao**	**0.23**	**163**⇑ *i*P			**Pn**		**21 02 35.0**	**+0.3**
TWC	baz=146			S		**Sn**		**21 02 43.0**	**-0.2**
NWF	**Wu-fen Shan**	**0.24**	**1**	‖ *i*P		**Pn**		**21 02 35.0**	**+0.4**
NWF	baz=3.0			S		**Sn**		**21 02 43.1**	**-0.1**
TWB1	**Santiao Chiao**	**0.26**	**48**⇑ *i*P			**Pn**		**21 02 35.1**	**+0.3**
TWB1	baz=38			S		**Sn**		**21 02 43.2**	**-0.3**
ENTT	**Nioudou**	**0.27**	**225**	‖ *i*P		**Pn**		**21 02 35.0**	**+0.2**
ENTT	baz=243			*e*S		**Sn**		**21 02 43.0**	**-0.5**
TATO	**Taipei**	**0.30**	**298**	*e*P		**Pn**		**21 02 34.7**	**-0.3**
TATO				*e*S		**Sn**		**21 02 43.8**	**-0.1**
TAP1	**Taipei**	**0.31**	**312**	‖ *i*P		**Pn**		**21 02 35.1**	**+0.1**
TAP1	baz=314			S		**Sn**		**21 02 43.5**	**-0.4**
YHNB	**Yeheng**	**0.40**	**246**	*e*P		**Pn**		**21 02 35.1**	**-0.6**
YHNB				*e*S		**Sn**		**21 02 44.2**	**-0.8**
ENA	**Nanau**	**0.41**	**184**	‖ *i*P		**Pn**		**21 02 35.7**	**-0.1**
ENA	baz=191			*e*S		**Sn**		**21 02 45.3**	**+0.2**
NSK	**Sanguang**	**0.41**	**248**	‖ *i*P		**Pn**		**21 02 35.6**	**-0.1**
NSK	baz=254			S		**Sn**		**21 02 44.1**	**-1.1**
TWS1	**Kuangyinshan**	**0.42**	**309**	‖ *i*P		**Pn**		**21 02 36.4**	**+0.5**
TWS1	baz=314			S		**Sn**		**21 02 45.8**	**+0.5**
TWY	**Chenhua**	**0.47**	**340**	‖ *i*P		**Pn**		**21 02 36.8**	**+0.5**
TWY	baz=335			*e*S		**Sn**		**21 02 46.5**	**+0.5**
EHP	**Heping Village**	**0.52**	**183**	*e*P		**Pn**		**21 02 36.9**	**+0.2**
NNS	**Nan Shan**	**0.54**	**223**	‖ *i*P		**Pn**		**21 02 37.0**	**+0.2**
NNS	baz=232			S		**Sn**		**21 02 46.9**	**-0.2**
NCU	**National Centr**	**0.55**	**284**	‖ *i*P		**Pn**		**21 02 37.4**	**+0.4**
NCU	baz=280			S		**Sn**		**21 02 47.7**	**+0.3**
NACB	**Ninganchiao**	**0.68**	**194**	*e*Pn		**Pn**		**21 02 37.5**	**-0.8**
NACB				*e*Sn		**Sn**		**21 02 48.9**	**-0.6**
HSN	**Hsinchu**	**0.73**	**268**	‖ *i*P		**Pn**		**21 02 38.8**	**0.0**
HSN	baz=273			*e*S		**Sn**		**21 02 49.3**	**-1.3**
NSTT	**Nanjuang**	**0.73**	**254**	‖ *i*P		**Pn**		**21 02 38.9**	**+0.1**
NSTT	baz=258			S		**Sn**		**21 02 49.7**	**-0.8**
TWD	**Chiawan**	**0.77**	**192**	‖ *i*P		**Pn**		**21 02 38.2**	**-1.1**
TWT	**Tachien**	**0.80**	**224**	‖ *i*P		**Pn**		**21 02 40.4**	**+0.9**
TWT	baz=227			*e*S		**Sn**		**21 02 52.6**	**+0.8**
WHF	**Hehuan Shan**	**0.83**	**214**	‖ *i*P		**Pn**		**21 02 40.4**	**+0.5**
WHF	baz=210			S		**Sn**		**21 02 52.5**	**0.0**
PCYT	**Pengchaiyu**	**0.84**	**19**	*e*P		**Pn**		**21 02 41.0**	**+1.0**
HWA	**Hwalien**	**0.87**	**190**	*e*P		**Pn**		**21 02 39.5**	**-0.9**
ESF	**Shoufeng Towns**	**0.99**	**194**	*e*P		**Pn**		**21 02 41.4**	**-0.4**
NSY	**Sanyi**	**1.01**	**246**	‖ *i*P		**Pn**		**21 02 42.6**	**+0.6**
NSY	baz=249			*e*S		**Sn**		**21 02 55.9**	**-0.4**
TWQ1	**Liyutan**	**1.03**	**242**	‖ *i*P		**Pn**		**21 02 42.6**	**+0.3**
TWQ1	baz=253			*e*S		**Sn**		**21 02 56.2**	**-0.5**
ESL	**Shilin**	**1.06**	**197**	*e*P		**Pn**		**21 02 41.0**	**-1.7**
YOJ	**Yonaguni jima**	**1.18**	**108**	P		**Pn**		**21 02 44.1**	**-0.1**
YOJ				*e*S		**Sn**		**21 02 59.5**	**-0.5**
YOJ	**Yonaguni jima**	**1.18**	**108**	*e*P		**Pn**		**21 02 44.1**	**-0.1**
YOJ	baz=99			*e*S		**Sn**		**21 02 58.6**	**-1.4**
TCU	**Taichung**	**1.21**	**236**	*e*P		**Pn**		**21 02 45.0**	**+0.4**
SMLT	**Sun Moon Lake**	**1.24**	**220**	‖ *i*P		**Pn**		**21 02 45.6**	**+0.7**
SMLT	baz=223			*e*S		**Sn**		**21 03 01.4**	**+0.1**
TYC	**Yuchr**	**1.25**	**222**	‖ *i*P		**Pn**		**21 02 45.4**	**+0.4**
TYC	baz=235			*e*S		**Sn**		**21 03 02.0**	**+0.5**
WNT	**Mingjian**	**1.38**	**227**	‖ *i*P		**Pn**		**21 02 47.1**	**+0.5**
WNT	baz=238			*e*S		**Sn**		**21 03 04.7**	**+0.2**
EHY	**Hungye**	**1.39**	**198**	*e*P		**Pn**		**21 02 44.8**	**-1.9**
EHY	baz=200			*e*S		**Sn**		**21 03 01.8**	**-2.8**
YUS	**Yu-Shan**	**1.54**	**210**	‖ P		**Pn**		**21 02 49.7**	**+1.0**
YUS	baz=205			*e*S		**Sn**		**21 03 09.5**	**+1.4**
TWF1	**Yuli**	**1.54**	**197**	*e*P		**Pn**		**21 02 46.2**	**-2.5**
	baz=199								
ALS	**Alishan**	**1.59**	**214**	P		**Pn**		**21 02 50.1**	**+0.8**
	baz=227								
ALS				*e*S		**Sn**		**21 03 10.0**	**+0.7**
	baz=227								
CHN5	**Tsauling**	**1.59**	**219**	‖ P		**Pn**		**21 02 49.9**	**+0.5**
	baz=223								
CHN5				*e*S		**Sn**		**21 03 09.6**	**+0.3**
	baz=223								
WGK	**Gukeng**	**1.59**	**224**	*e*P		**Pn**		**21 02 50.0**	**+0.6**
	baz=228								
WGK				*e*S		**Sn**		**21 03 10.0**	**+0.6**
	baz=228								
WTCT	**Ta-ch'eng**	**1.67**	**235**	*e*P		**Pn**		**21 02 50.3**	**-0.2**
	baz=237								
WTCT				*e*S		**Sn**		**21 03 10.5**	**-0.8**
	baz=237								
CHN2	**Minshiung**	**1.76**	**223**	*e*P		**Pn**		**21 02 52.0**	**+0.4**
	baz=234								
CHN2				*e*S		**Sn**		**21 03 14.1**	**+0.7**
	baz=234								
CHKT	**Chengkung**	**1.77**	**192**	*e*P		**Pn**		**21 02 50.8**	**-0.9**
	baz=196								
ELDTW	**Lidau**	**1.78**	**203**	*e*P		**Pn**		**21 02 51.6**	**-0.3**
	baz=199								
CHY	**Chiayi**	**1.81**	**223**	‖ *i*P		**Pn**		**21 02 53.0**	**+0.6**
	baz=234								
CHY				*e*S		**Sn**		**21 03 14.2**	**-0.4**
	baz=234								
CHN4	**Tsaushan**	**1.83**	**216**	*e*P		**Pn**		**21 02 53.0**	**+0.4**
	baz=221								
CHN4				*e*S		**Sn**		**21 03 16.4**	**+1.3**
	baz=221								
IRIF	**Iriomote-Funau**	**1.85**	**105**	P		**Pn**		**21 02 52.9**	**+0.1**
IRIF				*e*S		**Sn**		**21 03 15.0**	**-0.4**
WSF	**Szhu**	**1.85**	**230**	*e*P		**Pn**		**21 02 52.7**	**-0.2**
	baz=233								
WSF				*e*S		**Sn**		**21 03 15.4**	**-0.1**
	baz=233								
WTP	**Ta-pu**	**1.91**	**214**	‖ P		**Pn**		**21 02 53.9**	**+0.3**
	baz=218								
STYT	**Tauyuan**	**1.91**	**209**	‖ P		**Pn**		**21 02 54.3**	**+0.7**
	baz=223								
TWK	**Hsinying**	**1.96**	**217**	*e*P		**Pn**		**21 02 54.8**	**+0.6**
	baz=221								
CHN1	**Nanshi**	**2.00**	**215**	*e*P		**Pn**		**21 02 55.0**	**+0.1**
	baz=219								
HATJ	**Hateruma jima**	**2.00**	**112**	*e*S		**Sn**		**21 03 19.0**	**-0.2**
SGST	**Jiashian**	**2.06**	**212**	*e*P		**Pn**		**21 02 55.8**	**+0.2**
	baz=226								
CHN8	**Yiju**	**2.06**	**224**	*e*P		**Pn**		**21 02 55.6**	**0.0**
	baz=228								
CHN8				*e*S		**Sn**		**21 03 20.9**	**+0.4**
	baz=228								
TWG	**Pinlang**	**2.10**	**198**	*e*P		**Pn**		**21 02 56.0**	**-0.2**
	baz=192								
JKRS	**Kuro-shima**	**2.12**	**106**	P		**Pn**		**21 02 57.0**	**+0.6**
JKRS				*e*S		**Sn**		**21 03 22.1**	**+0.2**
JIJ	**Ishigaki jima**	**2.21**	**102**	P		**Pn**		**21 02 58.1**	**+0.5**
JIJ				*e*S		**Sn**		**21 03 23.4**	**-0.6**
SSD	**Sandimen**	**2.33**	**207**	*e*P		**Pn**		**21 02 59.9**	**+0.7**
	baz=220								
ECL	**Taimali**	**2.35**	**199**	*e*P		**Pn**		**21 02 59.0**	**-0.6**
	baz=194								
TWM1	**Shoushan**	**2.35**	**212**	*e*P		**Pn**		**21 02 59.1**	**-0.5**
	baz=225								
PNG	**Penghu**	**2.39**	**239**	*e*P		**Pn**		**21 02 59.0**	**-1.0**
	baz=240								
JTJ	**Tarama**	**2.67**	**94**	P		**Pn**		**21 03 05.4**	**+1.6**
JTJ				*e*S		**Sn**		**21 03 36.6**	**+1.4**
SCZT	**Fangliau**	**2.67**	**204**	*e*P		**Pn**		**21 03 03.3**	**-0.6**
	baz=209								
KNM	**Kinmen**	**3.07**	**263**	*e*P		**Pn**		**21 03 10.3**	**+1.0**
	baz=262								
JKE	**Kume jima 2**	**4.76**	**71**	P		**Pn**		**21 03 34.9**	**+2.6**
JOW	**Kunigami**	**6.18**	**70**	P		**Pn**		**21 03 51.9**	**+0.2**
	2.5nm,0.3s,baz=292,slow=26,SNR=11								
ENH	**Enshi**	**12.17**	**299**	Pn		**Pn**		**21 05 11.8**	**-1.6**
KSRS	**Korea Ray**	**13.63**	**21**	P		**Pn**		**21 05 35.4**	**+2.5**
	0.1nm,0.3s,baz=201,slow=10,SNR=3.6								
MAJO	**Matsushiro**	**18.30**	**47**	*e*P		**Pn**		**21 06 29.8**	**-1.7**
	6.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**22.14**	**258**	P		**P**		**21 07 13.9**	**+1.5**
	0.3nm,0.3s,mb3.0,baz=69,slow=8.0,SNR=4.4								
HIA	**Hailar**	**24.44**	**357**	P		**P**		**21 07 33.2**	**-1.0**
SONM	**Songino Array**	**25.99**	**336**	P		**P**		**21 07 50.3**	**+1.9**
	0.4nm,0.6s,mb3.1,baz=143,slow=8.9,SNR=4.5								
LSA	**Lhasa**	**27.61**	**287**	P		**P**		**21 08 03.7**	**+0.6**
YSS	**Yuzh-Sakhalins**	**27.69**	**32**	*e*P		**P**		**21 08 02.5**	**-1.2**
	6.8nm,0.6s,mb4.3								
YAK	**Yakutsk**	**37.57**	**6**	P		**P**		**21 09 27.9**	**-1.6**
MKAR	**Makanchi Array**	**38.25**	**315**	P		**P**		**21 09 36.8**	**+1.3**
	0.2nm,0.5s,mb3.2,baz=105,slow=10,SNR=3.6								
PET	**Petropavlovsk**	**39.48**	**35**	*e*P		**P**		**21 09 44.5**	**-1.1**
TKM2	**Tokmak 2**	**41.80**	**307**	*e*P		**P**		**21 10 03.9**	**-0.9**
	1.3nm,0.7s,mb3.8								
KURK	**Kurchatov**	**41.95**	**319**	*e*P		**P**		**21 10 05.5**	**-0.5**
	0.8nm,0.6s,mb3.6								
EKS2	**Erkin-Say**	**43.07**	**307**	P		**P**		**21 10 14.1**	**-1.1**
WRAB	**Tennant Creek**	**46.15**	**164**	P		**P**		**21 10 39.6**	**-0.3**
WRA	**Warramunga Arr**	**46.16**	**164**	P		**P**		**21 10 39.4**	**-0.5**
	0.6nm,0.7s,mb3.4,baz=347,slow=8.7,SNR=8.0								
BRVK	**Borovoye**	**47.59**	**320**	*e*P		**P**		**21 10 49.9**	**-0.9**
ASAR	**Alice Springs**	**49.62**	**165**	P		**P**		**21 11 06.9**	**+0.2**
	0.3nm,0.7s,mb3.3,baz=354,slow=7.5,SNR=3.6								

*ISCJB **19** 21:07:41.1±0.3, 43°73'N±0.02 × 105°44'W±0.02, h0km, mb4.0/3, Error ellipse: s-maj=2.8km s-min=2.4km az=5.6*
*NEIC **19** 21:07:43.8±0.5, 43°73'N × 105°32'W, h0km, ML3.3, Error ellipse: s-maj=7.7km s-min=6.2km az=153.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **19** 21:07:44.5±4.8, 43°61'N × 105°44'W, h15km±25km, mb3.8/3, mb1 3.9/7, mb1mx3.6/25, mbtmp3.8/7, ML3.6/4, MS3.0/2, Ms1 3.0/2, ms1mx2.9/35, Error ellipse: s-maj=70.0km s-min=11.4km az=148.0*
ISC 19 21:07:43.3±0.3, 43°72'N±0.02 × 105°37'W±0.02, h0km, n79, σ1°43/231, mb4.0/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.05**	**67**	*e*P		**Pg**		**21 08 02.9**	**-0.4**
RSSD				*e*S		**Sg**		**21 08 21.4**	**+4.5**
PHWY	**Pilot Hill**	**2.42**	**181**	*e*Pn		**Pn**		**21 08 24.9**	**+0.9**
PHWY				*e*Sn		**Sn**		**21 08 56.8**	**+2.5**
RWWY	**Rawlins**	**2.44**	**214**	*e*Pn		**Pn**		**21 08 22.7**	**-1.6**
RWWY				Pg		**Pg**		**21 08 27.9**	**-2.2**
RWWY				*e*Sn		**Sn**		**21 08 56.5**	**+1.6**
RWWY				*e*Sg		**Sg**		**21 09 01.2**	**-0.5**
LAO	**LASA Array**	**3.03**	**349**	*e*Pn		**Pn**		**21 08 33.2**	**+0.8**
LAO				*e*Pg		**Pg**		**21 08 41.2**	**-0.1**
LAO				*e*Sn		**Sn**		**21 09 09.3**	**0.0**
LAO				*e*Sg		**Sg**		**21 09 19.0**	**-1.5**
RLMT	**Red Lodge**	**3.12**	**298**	*e*Pn		**Pn**		**21 08 35.8**	**+2.1**
RLMT				Pg		**Pg**		**21 08 41.6**	**-1.5**
RLMT				*e*Sn		**Sn**		**21 09 10.6**	**-1.0**
RLMT				*e*Sg		**Sg**		**21 09 19.4**	**-4.2**
PDAR	**Pinedale Array**	**3.20**	**254**	Pn		**Pn**		**21 08 36.9**	**+2.1**
	4.9nm,0.3s,baz=70,slow=16,SNR=109								
PDAR				Lg				21 09 21.3	
	12nm,0.3s,baz=72,slow=32,SNR=5.3								
PDAR				LR		LR		21 10 01.7	
	comp=Z,160nm,19.5s,baz=169,slow=44								
PDAR	**Pinedale Array**	**3.20**	**254**	Pn		**Pn**		**21 08 36.9**	**+2.1**
PDAR				Lg				21 09 21.3	
PDAR				LR		LR		21 10 01.7	
BW06	**Boulder Array**	**3.20**	**254**	*e*Pn		**Pn**		**21 08 36.6**	**+1.8**
BW06				*e*Pg		**Pg**		**21 08 47.0**	**+2.4**
BW06				*e*Sn		**Sn**		**21 09 17.1**	**+3.4**
BW06				*e*Sg		**Sg**		**21 09 22.3**	**-3.8**
GCMT	**Greycliff**	**3.69**	**306**	*e*Pn		**Pn**		**21 08 44.1**	**+2.6**
GCMT				*e*Pg		**Pg**		**21 08 52.7**	**-1.3**
GCMT				*e*Sn		**Sn**		**21 09 26.1**	**+0.3**
GCMT				*e*Sg		**Sg**		**21 09 41.6**	**-0.2**
OGNE	**Ogallala**	**3.72**	**137**	*e*Pn		**Pn**		**21 08 42.5**	**+0.6**
OGNE				*e*Pg		**Pg**		**21 08 53.7**	**-0.9**
OGNE				*e*Sn		**Sn**		**21 09 27.5**	**+1.1**
OGNE				*e*Sg		**Sg**		**21 09 39.8**	**-3.0**
LOHW	**Long Hollow**	**3.80**	**270**	*e*P		**Pn**		**21 08 42.6**	**-0.3**
LOHW				*e*Pg		**Pg**		**21 08 51.4**	**-4.6**
LOHW				Sn		**Sn**		**21 09 28.6**	**+0.3**
LOHW				*e*Sg		**Sg**		**21 09 43.8**	**-1.4**
MOOW	**Moose Ponds**	**3.89**	**272**	*e*Pn		**Pn**		**21 08 48.0**	**+3.7**
MOOW				*e*Pg		**Pg**		**21 09 00.4**	**+2.5**

SNOW	**Snow King Moun**	**3.92**	**268**	*e*Pn	**Pn**	**21 08 43.9 -0.7**
SNOW				*e*Pg	**Pg**	**21 08 55.3 -3.1**
SNOW				*e*Sn	**Sn**	**21 09 31.6 +0.3**
SNOW				*e*Sg	**Sg**	**21 09 49.5 +0.4**
ISCO	**Idaho Springs**	**3.92**	**183**	*e*Pn	**Pn**	**21 08 46.4 +1.7**
ISCO				Pg	**Pg**	**21 08 58.5 0.0**
ISCO				Sn	**Sn**	**21 09 29.5 -1.9**
ISCO				*e*Sg	**Sg**	**21 09 46.2 -3.0**
YNR	**Norris Junctio**	**3.94**	**286**	*e*Pn	**Pn**	**21 08 42.9 -2.1**
YNR				*e*Pg	**Pg**	**21 08 57.1 -1.7**
YNR				*e*Sn	**Sn**	**21 09 32.0 +0.2**
YNR				Sg	**Sg**	**21 09 49.9 +0.1**
YFT	**Old Faithful**	**4.00**	**282**	*e*Pn	**Pn**	**21 08 43.0 -2.8**
YFT				*e*Pg	**Pg**	**21 08 59.2 -0.8**
YFT				*e*Sn	**Sn**	**21 09 33.3 0.0**
YFT				*e*Sg	**Sg**	**21 09 53.4 +1.6**
IMW	**Indian Meadow**	**4.03**	**274**	*e*Pn	**Pn**	**21 08 47.3 +1.1**
IMW				*e*Pg	**Pg**	**21 08 59.2 -1.3**
IMW				Sn	**Sn**	**21 09 33.3 -0.8**
TPAW	**Teton Pass**	**4.06**	**269**	*e*Pn	**Pn**	**21 08 49.0 +2.5**
TPAW				*e*Pg	**Pg**	**21 09 01.1 +0.1**
TPAW				*e*Sn	**Sn**	**21 09 33.5 -1.2**
TPAW				*e*Sg	**Sg**	**21 09 53.5 0.0**
AHID	**Auburn Hatcher**	**4.29**	**259**	Pn	**Pn**	**21 08 51.0 +1.3**
AHID				*e*Pg	**Pg**	**21 09 05.6 +0.1**
AHID				*e*Sn	**Sn**	**21 09 39.7 -0.8**
AHID				*e*Sg	**Sg**	**21 09 59.8 -1.3**
RRI2	**Red Ridge**	**4.34**	**267**	*e*Pn	**Pn**	**21 08 52.9 +2.4**
RRI2				*e*Pg	**Pg**	**21 09 04.5 -1.9**
RRI2				*e*Sn	**Sn**	**21 09 39.1 -2.6**
RRI2				*e*Sg	**Sg**	**21 10 02.4 -0.2**
SMCO	**Snowmass**	**4.70**	**195**	Pn	**Pn**	**21 08 57.7 +2.4**
SMCO				*e*Pg	**Pg**	**21 09 10.2 -3.1**
DGMT	**Dagmar**	**4.82**	**9**	*e*Pn	**Pn**	**21 08 58.9 +1.9**
DGMT				*e*Pg	**Pg**	**21 09 12.9 -2.7**
DGMT				Sn	**Sn**	**21 09 50.4 -3.1**
DGMT				*e*Sg	**Sg**	**21 10 18.3 +0.3**
HWUT	**Hardware Ranch** 12nm,0.4s	**5.03**	**247**	*e*Pn	**Pn**	**21 09 01.5 +1.6**
HWUT				*e*Pg	**Pg**	**21 09 22.0 +2.4**
HWUT				*e*Sn	**Sn**	**21 10 00.2 +1.5**
HWUT				*e*Sg	**Sg**	**21 10 23.4 -1.5**
EGMT	**Eagleton** 18nm,0.5s	**5.28**	**326**	*e*Pn	**Pn**	**21 09 03.9 +0.6**
EGMT				*e*Pg	**Pg**	**21 09 19.6 -4.8**
EGMT				*e*Sn	**Sn**	**21 10 06.4 +1.6**
HRY	**Holter Researc**	**5.45**	**305**	*e*Pn	**Pn**	**21 09 07.6 +1.9**
HRY				Pg	**Pg**	**21 09 24.1 -3.6**
MCMT	**McKenzie Canyo**	**5.48**	**284**	*e*Pn	**Pn**	**21 09 07.6 +1.5**
MCMT				*e*Pg	**Pg**	**21 09 20.6 -7.6**
MCMT				Sn	**Sn**	**21 10 09.4 -0.4**
MCMT				Sg	**Sg**	**21 10 40.4 +1.1**
SPUT	**South Promonto**	**5.76**	**248**	*e*Pn	**Pn**	**21 09 12.5 +2.5**
SPUT				*e*Pg	**Pg**	**21 09 32.3 -1.3**
SPUT				Sn	**Sn**	**21 10 14.5 -2.2**
SPUT				*e*Sg	**Sg**	**21 10 47.4 -0.7**
HVU	**Hansel Valley** 6.2nm,0.6s	**5.78**	**253**	*e*Pn	**Pn**	**21 09 12.8 +2.5**
HVU				*e*Pg	**Pg**	**21 09 35.4 +1.3**
HVU				Sn	**Sn**	**21 10 17.8 +0.5**
HVU				*e*Sg	**Sg**	**21 10 45.5 -3.5**
SRU	**San Rafael** 14nm,0.4s	**6.02**	**222**	*e*Pn	**Pn**	**21 09 14.7 +1.2**
SRU				*e*Pg	**Pg**	**21 09 32.1 -6.4**
SRU				*e*Sn	**Sn**	**21 10 23.2 +0.2**
SRU				*e*Sg	**Sg**	**21 10 51.8 -4.7**
ECSD	**EROS,Sioux Fal** 6.2nm,0.4s	**6.35**	**87**	*e*Pn	**Pn**	**21 09 18.0 0.0**
ECSD				*e*Pg	**Pg**	**21 09 41.5 -3.4**
ECSD				Sn	**Sn**	**21 10 31.1 0.0**
ECSD				*e*Sg	**Sg**	**21 11 02.3 -4.8**
CHMT	**Chamberlain Mo**	**6.41**	**303**	*e*Pn	**Pn**	**21 09 19.0 +0.2**
CHMT				Pg	**Pg**	**21 09 46.0 +0.1**
DUG	**Dugway** 5.5nm,0.4s	**6.57**	**240**	*e*Pn	**Pn**	**21 09 20.8 -0.3**
DUG				*e*Sn	**Sn**	**21 10 36.3 -0.3**
DUG				*e*Sg	**Sg**	**21 11 13.2 -1.0**
MSU	**Marysvale**	**7.31**	**227**	*e*Pn	**Pn**	**21 09 31.6 +0.4**
MSU				*e*Pg	**Pg**	**21 09 57.4 -5.9**
ELK	**Elko** 0.3nm,0.3s,baz=83,slow=15,SNR=3.7	**7.90**	**251**	Pn	**Pn**	**21 09 41.2 +1.9**
ELK				Lg		21 11 49.7
	0.1nm,0.3s,baz=297,slow=9.0,SNR=2.1					
ELK				LR	LR	21 12 24.4
	comp=Z,199nm,21.1s,baz=225,slow=36					
ELK	**Elko**	**7.90**	**251**	Pn	**Pn**	**21 09 41.2 +1.9**
ELK				Lg		21 11 49.7
ELK				LR	LR	21 12 24.4
AGMN	**Agassiz Refuge** 9.6nm,0.4s	**8.05**	**52**	*e*Pn	**Pn**	**21 09 40.2 -1.1**
ULM	**Lac du Bonnet** 5.2nm,0.3s,baz=231,slow=11,SNR=18	**9.20**	**41**	Pn	**Pn**	**21 09 55.9 -1.3**
ULM				Lg		21 12 28.9
	0.7nm,0.3s,baz=142,slow=19,SNR=2.1					
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**21 09 55.9 -1.3**
ULM				Lg		21 12 28.9
YKA	**Yellowknife Ar** 0.2nm,0.3s,baz=156,slow=11,SNR=3.6	**19.57**	**347**	P	**Pn**	**21 12 14.1 +0.6**
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**Pn**	**21 12 14.2 +0.6**
ARCES	**ARCESS Array B** 1.8nm,0.7s,mb4.3,baz=332,slow=4.7,SNR=5.9	**61.46**	**18**	P	**P**	**21 18 00.4 -0.6**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,mb4.0,baz=0.0,slow=5.8,SNR=3.0	**82.32**	**354**	P	**P**	**21 20 04.1 -2.3**
MKAR	**Makanchi Array** 0.3nm,0.7s,mb3.6,baz=350,slow=3.1,SNR=2.8	**89.61**	**355**	P	**P**	**21 20 42.9 +0.3**

MAN 19 21:09:16,1711N×12020E,h29km,mb4.0,ML2.7,MS2.4, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.85**	**17**	⇓*e*P	Pn	21 09 34.4	+2.4
SIPP				*i* S	Sb	21 09 49.8	+6.6

*ISCJB **19** 21:17:51.6±5.6,062N±007×1275E±0.1,h12km±36km, mb4.1/9,Error ellipse: s-maj=22.9km s-min=10.3km az=160.1*
*IDC **19** 21:17:52.1±2.0,058N×12734E,h0km,mb3.9/3,mb1 4.1/3, mb1mx3.7/16,mbtmp3.9/3,Error ellipse: s-maj=164.4km s-min=24.1km az=66.0*
*NEIC **19** 21:17:54.6±4.2,060N×12744E,h19km±27km,mb4.2/5, Error ellipse: s-maj=14.1km s-min=6.3km az=69.0*

ISC 19 21:17:54.1±5.8,059N±008×1274E±01,h16km±37km,n19, σ0§65/19,mb4.1/9,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**6.70**	**344**	Pn	**Pn**	**21 19 32.1**	**+0.2**
KSM	**Kuching**	**17.16**	**273**	*e*Pn	**Pn**	**21 21 53.4**	**0.0**
FITZ	**Fitzroy Crossi**	**18.66**	**185**	*e*P	**Pn**	**21 22 11.4**	**-0.6**
WRAB	**Tennant Creek** 3.9nm,0.8s,mb3.8	**21.49**	**162**	*e*P	**P**	**21 22 42.8**	**+0.4**
WRA	**Warramunga Arr** 2.7nm,0.9s,mb3.6,baz=340,slow=11,SNR=14	**21.50**	**162**	P	**P**	**21 22 42.5**	**0.0**
ASAR	**Alice Springs** 3.9nm,0.8s,mb4.0,baz=347,slow=11,SNR=33	**24.92**	**166**	P	**P**	**21 23 17.5**	**+0.8**
CHTO	**Chiang Mai**	**33.31**	**305**	P	**P**	**21 24 30.6**	**-0.9**
STKA	**Stephens Creek** 0.5nm,0.8s,mb3.5	**34.96**	**159**	*e*P	**P**	**21 24 45.0**	**-0.6**
TLY	**Talaya**	**54.71**	**342**	P	**P**	**21 27 22.6**	**0.0**
MIDW	**Midway** 47nm,0.6s	**59.43**	**57**	*e*P	**P**	**21 27 56.3**	**-0.2**
MKAR	**Makanchi Array** 1.1nm,0.7s,mb4.1,baz=116,slow=8.2,SNR=11	**60.53**	**326**	P	**P**	**21 28 03.9**	**+0.2**
TKM2	**Tokmak 2**	**62.56**	**319**	P	**P**	**21 28 17.1**	**-0.4**
EKS2	**Erkin-Say** 1.2nm,0.6s,mb4.1	**63.64**	**318**	*e*P	**P**	**21 28 26.6**	**+1.9**
KURK	**Kurchatov** 3.2nm,0.8s,mb4.4	**64.76**	**328**	*e*P	**P**	**21 28 31.8**	**0.0**
CASY	**Casey**	**67.81**	**187**	P	**P**	**21 28 51.6**	**+0.5**
BRVK	**Borovoye**	**70.40**	**327**	*e*P	**P**	**21 29 06.5**	**-0.9**
ARU	**Arti** 1.3nm,0.6s,mb4.0	**77.95**	**328**	*e*P	**P**	**21 29 52.2**	**+0.7**
MAW	**Mawson**	**81.08**	**201**	*e*P	**P**	**21 30 07.8**	**-0.5**
PMR	**Palmer** 41nm,1.6s,mb5.4	**86.34**	**28**	P	**P**	**21 30 34.7**	**-0.6**

IDC 19 21:24:32.4±1.3,4193S×8820E,h0km,mb3.7/6,mb1 3.9/6, mb1mx3.8/16,mbtmp3.7/6,Error ellipse: s-maj=44.5km s-min=23.8km az=99.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.5nm,0.8s,baz=223,slow=6.9,SNR=4.0	**41.97**	**79**	P	P	21 32 25.2	+0.1
ASAR				PcP	PcP	21 34 18.5	-2.0
	0.3nm,0.6s,baz=235,slow=3.3,SNR=2.9						
WRA	**Warramunga Arr** 1.4nm,1.0s,baz=232,slow=8.5,SNR=5.4	**44.59**	**75**	P	P	21 32 46.6	+0.2
VNDA	**Vanda** 0.5nm,0.7s,baz=300,slow=8.6,SNR=5.3	**45.94**	**163**	P	P	21 32 56.6	+0.2
QSPA	**South Pole Qui** 0.7nm,0.3s,baz=287,slow=5.3,SNR=3.3	**48.23**	**180**	P	P	21 33 14.7	+0.5
CMAR	**Chiang Mai Arr** 1.3nm,1.0s,baz=209,slow=6.8,SNR=6.9	**60.89**	**12**	P	P	21 34 47.3	+0.6
SONM	**Songino Array** 0.4nm,0.9s,baz=193,slow=5.8,SNR=2.6	**90.82**	**12**	P	P	21 37 37.1	+0.2

*NEIC **19** 21:33:30.1,1791N×9904W,h62km,MD3.7(MEX),After MEX.*

MEX 19 21:33:30.1±0.3,1791N×9904W,h62km±5km,MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.55**	**272**	*i* P	Pn	21 33 41.5	-1.4
MEIG				*i* S	Sn	21 33 50.7	-1.4
PLIG	**Platanillo**	**0.65**	**318**	*i* P	Pn	21 33 42.6	-1.4
PLIG				*i* S	Sn	21 33 52.6	-1.4
UTMO	**Huajuapan**	**1.18**	**94**	*i* P	Pn	21 33 49.5	-1.0
UTMO				*i* S	Sn	21 34 04.3	-1.5
PPM	**Popocatepetl**	**1.22**	**19**	*e*P	Pn	21 33 49.9	-1.2
PPM				*i* S	Sn	21 34 05.9	-0.8
MZVM		**1.28**	**352**	*i* P	Pn	21 33 50.9	-1.1
MZVM				*i* S	Sn	21 34 07.1	-1.2
ACX	**Acapulco**	**1.33**	**219**	*i* P	Pn	21 33 51.2	-1.4
CAIG	**El Cayaco**	**1.45**	**234**	*i* P	Pn	21 33 52.9	-1.4
CAIG				*i* S	Sn	21 34 11.3	-1.1
PNIG	**Pinotepa**	**1.74**	**150**	*i* P	Pn	21 33 57.2	-0.9
PNIG				*i* S	Sn	21 34 17.8	-1.6
ZIIG	**Zihuatanejo**	**2.33**	**263**	*i* P	Pn	21 34 04.5	-1.6
ZIIG				*i* S	Sn	21 34 31.7	-2.0

NEIC 19 21:45:18.0,4062S×17603E,h25km,ML3.8(WEL),After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.18**	**111**	P	Pb	21 45 24.4	+1.0
BFZ				S	Sb	21 45 29.7	+2.7
MRZ	**Mangatainoka R**	**0.35**	**263**	P	Pb	21 45 25.0	-0.7
MRZ				S	Sb	21 45 30.7	-0.2
TSZ	**Takapari Road**	**0.56**	**355**	P	Pb	21 45 27.4	-1.8
MTW	**Mount Morrison**	**0.67**	**216**	P	Pb	21 45 31.7	+0.6
KIW	**Kapiti Island**	**0.89**	**254**	P	Pb	21 45 34.4	-0.3
PAWZ	**Paruwai Farm**	**0.89**	**211**	P	Pb	21 45 34.8	+0.1
MSWZ	**Moikau Station**	**0.99**	**216**	P	Pn	21 45 35.7	-0.6
WEL	**Wellington**	**1.17**	**235**	P	Pn	21 45 38.2	-0.5
WAZ	**Wanganui**	**1.18**	**317**	P	Pn	21 45 38.9	+0.1
BHW	**Baring Head**	**1.18**	**228**	P	Pn	21 45 37.7	-1.2
SNZO	**South Karori**	**1.22**	**235**	P	Pn	21 45 38.7	-0.7
MOVZ	**Moawhango**	**1.23**	**350**	P	Pn	21 45 38.7	-0.9
WNVZ	**Wahianoa**	**1.33**	**345**	P	Pn	21 45 40.6	-0.4
TUVZ	**Tukino**	**1.38**	**348**	P	Pn	21 45 41.5	-0.1
FWVZ	**Far West T-bar**	**1.41**	**345**	P	Pn	21 45 41.9	-0.2
TCW	**Tory Channel**	**1.46**	**245**	P	Pn	21 45 41.8	-0.9
NGZ	**Ngauruhoe**	**1.48**	**347**	P	Pn	21 45 42.8	-0.2
BKZ	**Black Stump Fm**	**1.49**	**14**	P	Pn	21 45 42.0	-1.2
WTVZ	**West Tongariro**	**1.54**	**347**	P	Pn	21 45 43.8	0.0
TWVZ	**Taurewa**	**1.61**	**343**	P	Pn	21 45 44.5	-0.3
KATZ	**Kakaramea**	**1.66**	**351**	P	Pn	21 45 46.3	+0.8
RATZ	**Rangitukua**	**1.76**	**353**	P	Pn	21 45 48.5	+1.6
CMWZ	**Cape Campbell**	**1.77**	**230**	P	Pn	21 45 46.4	-0.7
VRZ	**Vera Road**	**1.78**	**326**	P	Pn	21 45 46.8	-0.4
RAEZ	**Rainy Point**	**1.83**	**316**	P	Pn	21 45 49.5	+1.7
BSWZ	**Blackbirch Sta**	**1.96**	**235**	P	Pn	21 45 48.5	-1.1
KNZ	**Kokohu**	**2.04**	**39**	P	Pn	21 45 48.9	-1.8
NNZ	**Nelson**	**2.10**	**253**	P	Pn	21 45 50.8	-0.7
PKE	**Pukeiti**	**2.12**	**312**	P	Pn	21 45 52.7	+0.9
NWEZ	**Newall Road**	**2.14**	**308**	P	Pn	21 45 53.0	+0.9
MWZ	**Matawai**	**2.56**	**27**	P	Pn	21 45 55.4	-2.4
KHZ	**Kahutara**	**2.59**	**225**	P	Pn	21 45 56.3	-2.0
THZ	**Tophouse**	**2.62**	**243**	P	Pn	21 45 57.3	-1.4
QRZ	**Quartz Range**	**2.67**	**264**	P	Pn	21 45 58.0	-1.4
LTZ	**Lake Taylor**	**3.55**	**231**	P	Pn	21 46 09.3	-2.2

*CSEM **19** 21:54:43.6,3234N×339W,h30km,MD3.5,After CNRM*

CNRM 19 21:54:43.6,3234N×339W,h30km,MD3.5,Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFT	**Errachidia**	**0.87**	**250**	*i* P	Pn	21 54 58.0	-1.8
ZFT				*i* S	Sn	21 55 10.0	-1.5
CZD	**Col de Zad**	**1.56**	**297**	*i* P	Pn	21 55 07.0	-2.2
CZD				*i* S	Sn	21 55 25.0	-3.4
TZK	**Tazeka**	**1.87**	**339**	*i* P	Pn	21 55 13.0	-0.5
TZK				*i* S	Sn	21 55 34.0	-2.1
MIF	**Mishlifen**	**1.88**	**305**	*i* P	Pn	21 55 12.0	-1.7
MIF				*i* S	Sn	21 55 33.0	-3.4
KIB	**El Ksiba**	**2.25**	**277**	*i* P	Pn	21 55 19.0	+0.2
KIB				*i* S	Sn	21 55 45.0	-0.5
TZC	**Tazercounte**	**2.63**	**267**	*i* P	Pn	21 55 22.0	-2.0
TZC				*i* S	Sn	21 55 51.0	-4.0

*MOS **19** 22:04:51.4±1.1,5334N×15854E,h126km,mb4.3/6,Error ellipse: s-maj=30.8km s-min=16.3km az=98.3*
*ISCJB **19** 22:04:52.1±0.4,5319N±006×1587E±0.1,h131km±2km, mb3.7/11,Error ellipse: s-maj=11.7km s-min=7.7km az=41.4*
*NEIC **19** 22:04:53.6±0.5,5340N×15852E,h124km±4km,mb4.2/1, Error ellipse: s-maj=13.3km s-min=10.4km az=124.0*
*IDC **19** 22:04:53.5±0.7,5329N×15835E,h127km±7km,mb3.4/9, mb1 3.6/9,mb1mx3.3/27,mbtmp3.4/9,Error ellipse: s-maj=28.7km s-min=21.5km az=13.0*
*KRSC **19** 22:04:53.3±1.3,5313N×15889E,h121km±21km,ML4.1*

ISC 19 22:04:53.3±0.4,5319N±006×15873E±010,h126km±2km, n34,σ1§01/44,mb3.8/11,1D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVH	**Avacha**	**0.08**	**2**	*i* P	**Pn**	**22 05 10.6**	**+0.3**
AVH				*i* S	**Sn**	**22 05 23.8**	**+0.6**
PET	**Petropavlovsk**	**0.17**	**197**	*e*P	**Pn**	**22 05 10.4**	**-0.1**
PET				*e*S	**Sn**	**22 05 23.3**	**-0.1**
PET	**Petropavlovsk**	**0.17**	**197**	⇓*i*PN	**Pn**	**22 05 10.2**	**-0.3**
PET				*i* S	**Sn**	**22 05 22.8**	**-0.6**
PET	comp=Z,317nm,0.2s			pmax	pmax		
PET	comp=E,2μm,0.9s			smax			
PET	comp=E,2μm,0.4s			smax			
NLC	**Nalytchevo**	**0.37**	**92**	*e*P	**Pn**	**22 05 10.7**	**-0.4**
NLC				*i* S	**Sn**	**22 05 24.0**	**-0.6**
PEA0B	**Petropavlovsk-**	**0.63**	**263**	*e*P	**Pn**	**22 05 12.8**	**+0.2**
PEA0B				*e*S	**Sn**	**22 05 27.2**	**0.0**
PETK	**Petropavlovsk-** comp=E,112nm,0.3s,baz=89,slow=12,SNR=1261	**0.63**	**263**	P	**Pn**	**22 05 13.0**	**+0.4**
PETK				S	**Sn**	**22 05 27.0**	**-0.2**
	comp=E,21nm,0.3s,baz=85,slow=16,SNR=6.3						
GNL	**Ganaly**	**0.70**	**318**	*i* P	**Pn**	**22 05 13.5**	**+0.4**
GRL	**Gorelyy**	**0.75**	**213**	*i* P	**Pn**	**22 05 14.5**	**+1.0**
GRL				*i* S	**Sn**	**22 05 29.6**	**+0.8**
RUS	**Russkaya**	**0.77**	**190**	*i* P	**Pn**	**22 05 13.0**	**-0.7**
RUS				*i* S	**Sn**	**22 05 28.0**	**-1.1**
SPN	**Mys Shipunski**	**0.78**	**96**	*i* P	**Pn**	**22 05 12.8**	**-1.0**
SPN				*i* S	**Sn**	**22 05 27.6**	**-1.7**
KII	**Karymskiy**	**0.95**	**26**	*e*P	**Pn**	**22 05 15.7**	**+0.4**
KII				*i* S	**Sn**	**22 05 32.7**	**+0.7**
TUMR	**Tumrok**	**2.26**	**21**	P	**Pn**	**22 05 31.4**	**+1.2**
KMNR	**Kamenistaya**	**2.72**	**18**	P	**Pn**	**22 05 37.8**	**+1.8**
NACB	**Ninganchiao** comp=E,17nm,0.6s,mb5.0	**40.23**	**239**	*e*P	**P**	**22 12 17.8**	**+0.3**
GUMO	**Guam**	**41.01**	**201**	*e*P	**P**	**22 12 25.4**	**+1.5**
ENH	**Enshi**	**42.23**	**257**	P	**P**	**22 12 34.2**	**+0.5**
SPITS	**Spitsbergen Ar** comp=E,0.6nm,0.3s,mb3.8,baz=46,slow=11,SNR=8.4	**46.91**	**350**	P	**P**	**22 13 08.9**	**-1.4**
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov** comp=Z,1.4nm,0.3s,mb4.2	**46.99**	**301**	*e*P	**P**	**22 13 09.6**	**-1.6**
KURK	**Kurchatov**	**46.99**	**301**	*e*P	**P**	**22 13 09.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
MKAR	**Makanchi Array** comp=Z,0.3nm,0.4s,mb3.4,baz=59,slow=6.2,SNR=8.9	**47.38**	**295**	P	**P**	**22 13 12.5**	**-1.8**
BVAR	**Borovoye Array** comp=Z,0.6nm,0.4s,mb3.9,baz=52,slow=7.6,SNR=8.4	**49.69**	**308**	P	**P**	**22 13 30.2**	**-1.7**
BVAR	**Borovoye Array**	**49.69**	**308**	P	**P**	**22 13 30.2**	**-1.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DAV	**Davao City (W)** comp=Z,91nm,0.6s	**53.29**	**223**	*e*P	**P**	**22 14 01.2**	**+2.1**
LSA	**Lhasa**	**53.60**	**272**	P	**P**	**22 14 02.1**	**+0.8**
PDAR	**Pinedale Array** comp=Z,0.3nm,0.5s,mb3.5,baz=285,slow=7.1,SNR=3.0	**58.19**	**60**	P	**P**	**22 14 35.2**	**+1.4**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.6s,mb3.7,baz=23,slow=6.8,SNR=3.4	**63.22**	**343**	P	**P**	**22 15 06.5**	**-1.1**
NOA	**NORSAR Array B**	**63.22**	**343**	P	**P**	**22 15 06.5**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors** comp=Z,3.4nm,0.8s,mb4.2,baz=64,slow=3.0,SNR=7.5	**63.61**	**341**	P	**P**	**22 15 08.9**	**-1.2**
HFS	**Hagfors**	**63.61**	**341**	P	**P**	**22 15 08.9**	**-1.2**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EKA	**Eskdalemuir Ar** comp=Z,1.0nm,0.7s,mb3.7,baz=16,slow=5.4,SNR=3.0	**70.82**	**349**	P	**P**	**22 15 55.0**	**-0.7**
EKA	**Eskdalemuir Ar**	**70.82**	**349**	P	**P**	**22 15 55.0**	**-0.6**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array** comp=Z,0.4nm,0.5s,mb3.5,baz=295,slow=5.1,SNR=10	**71.35**	**66**	P	**P**	**22 16 00.5**	**+1.2**
WRA	**Warramunga Arr** comp=Z,0.6nm,1.1s,mb3.2,baz=24,slow=6.2,SNR=2.8	**75.83**	**204**	P	**P**	**22 16 25.2**	**-0.1**

IDC 19 22:09:00.7±29.0,2212S×17393W,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.8/19,mbtmp4.0/4,Error ellipse: s-maj=533.4km s-min=152.1km az=79.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 2.7nm,0.5s,baz=102,slow=9.3,SNR=2.9	**37.13**	**266**	P	P	22 16 14.4	+1.1
STKA	**Stephens Creek** 1.0nm,0.4s,baz=96,slow=9.2,SNR=4.6	**40.56**	**246**	P	P	22 16 40.6	-1.4
ASAR	**Alice Springs** 0.4nm,0.5s,baz=96,slow=7.6,SNR=6.7	**47.86**	**258**	P	P	22 17 40.2	-0.4
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=98,slow=8.3,SNR=31	**48.14**	**263**	P	P	22 17 43.3	+0.5

CASC 19 22:14:07.4±2.6,843N×8291W,h6km±11km,MD4.2,5C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.34**	**311**	⇑*e*P	Pg	22 14 14.2	+0.3
ACR				*e*S	Sg	22 14 20.6	+2.3
BRU2	**Volcan**	**0.42**	**31**	⇓*e*P	Pg	22 14 15.7	+0.1
BRU2				*e*S	Sg	22 14 24.1	+3.0
TBS2		**0.44**	**35**	⇑*e*P	Pg	22 14 23.8	+7.9
TBS2				*e*S	Sg	22 14 31.6	+10
BAR1		**0.90**	**334**	‖*e*P	Pg	22 14 23.9	-0.8
CNI	**Changuinola**	**1.06**	**22**	‖*e*P	Pg	22 14 28.3	+0.6
BUS	**Buena Vista**	**1.40**	**323**	‖*e*P	Pn	22 14 31.9	-1.6
QCR	**Quepos**	**1.58**	**309**	*e*P	Pn	22 14 34.9	-1.2
QCR				*e*S	Sn	22 14 56.8	-0.1
URSC	**Urasca**	**1.64**	**329**	‖*e*P	Pn	22 14 35.7	-1.1
URSC				*e*S	Sn	22 14 57.3	-1.0
LAJ	**Bijagual**	**1.86**	**320**	*e*P	Pn	22 14 41.1	+1.3
LAJ				*e*S	Sn	22 15 09.3	+5.6
SJS	**Escuela Geolog**	**1.88**	**323**	*e*S	Sn	22 15 05.0	+0.9
PRS1	**Puriscal**	**2.07**	**318**	⇑*e*P	Pn	22 14 41.5	-1.3
PRS1				*e*S	Sn	22 15 09.4	+0.5
CGA2	**Cerro Gallo 2**	**2.20**	**316**	*e*P	Pn	22 14 45.1	+0.6
CGA2				*e*S	Sn	22 15 14.0	+1.9
JCR	**Jicaral**	**2.59**	**303**	*e*P	Pn	22 14 49.3	-0.6
2RIO	**Dos Rios de Up**	**3.10**	**313**	*e*P	Pn	22 15 03.0	+6.1
CUI	**Cuipilapa**	**3.15**	**315**	*e*P	Pn	22 14 58.8	+1.2
VCR	**Vista de Mar**	**3.17**	**302**	*e*P	Pn	22 14 56.8	-1.1
LIM1	**Limonal**	**3.23**	**315**	*e*P	Pn	22 14 59.4	+0.7
LAPE	**La Pedrera**	**11.26**	**94**	*e*P		22 15 01.4	
PTP	**Ponta Puerca**	**19.43**	**58**	⇑*i*P		22 14 12.4	

*NIED **19** 22:15:00,3670N×14100E,h26km,Mw3.5 Best double couple: M0 2.27000×10^14 NP1:φs§37.00000°,δ90.00000°, λ108.00000°. NP2:φs§128.00000°,δ18.00000°,λ1.00000°.*
*ISCJB **19** 22:15:17.3±1.2,3665N±006×1412E±0.1,h45km±8km, mb3.6/6,Error ellipse: s-maj=15.8km s-min=8.4km az=29.0*
*IDC **19** 22:15:18.9±7.7,3668N×14125E,h43km±62km,mb3.4/6, mb1 3.5/7,mb1mx3.4/24,mbtmp3.4/7,ML3.3/1,MS3.0/1, Ms1 3.0/1,ms1mx2.5/43,Error ellipse: s-maj=56.3km s-min=20.4km az=68.0*
*

0.3nm,0.5s,baz=329,slow=8.6,SNR=7.2
MKAR Makanchi Array 78.21 321 P P 22 35 24.2 +0.5
0.3nm,0.7s,baz=101,slow=7.0,SNR=3.6
SIV San Ignacio 144.00 129 PKP PKPdf 22 43 00.9 +0.1
0.5nm,0.4s,baz=234,slow=4.9,SNR=5.3
TORD Torodi Ar. Bea 145.50 283 PKPbc PKPbc 22 43 01.9 -1.5
3.5nm,0.9s,baz=80,slow=2.5,SNR=18

IDC ***19*** *22:42:59.2±1.6, 4346N×12764W, h0km, mb3.7/5, mb1 3.9/11, mb1mx3.8/26, mbtmp3.7/11, ML3.5/5, MS4.1/16, Ms1 4.1/16, ms1mx3.9/37, Error ellipse: s-maj=34.3km s-min=12.5km az=44.0*
ISCJB ***19*** *22:43:02.5±1.4, 4365N±003×12745W±005, h20km±12km, mb3.7/8, MS4.0/11, Error ellipse: s-maj=6.6km s-min=4.8km az=148.7*
NEIC ***19*** *22:43:03.0±0.5, 4364N×12747W, h10km, mb4.2/4, Error ellipse: s-maj=7.3km s-min=4.8km az=48.0*
GCMT ***19*** *22:43:03.0±0.3, 4342N×12793W, h19km±1km, MW5.0/81, Moment Tensor Solution. s30,c38; s81,c124; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.24±.16; Mθθ-2.29±.13; Mϕϕ2.53±.13; Mrθ-1.57±.30; Mθϕ-3.12±.11; Mϕr0.23±.25; Best double couple: M₀4.25500×10¹⁶ NP1:ϕs18.00000°, δ68.00000°, λ-5.00000°. NP2: ϕs110.00000°, δ86.00000°, λ-158.00000°. Principal axes: T 4.2510, Plg12.0000°, Azm242.0000°; N 0.0120, Plg68.0000°, Azm121.0000°; P -4.2590, Plg18.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 22:43:04.0±1.4, 4362N±003×12749W±005, h18km±10km, n85, σ1ϕ01/79, mb3.7/8, MS4.0/11, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEBO	**Mount Hebo**	**3.11**	**58**	P	**Pn**	**22 43 50.9**	**-1.2**
COR	**Corvallis**	**3.17**	**71**	*e*Pn	**Pn**	**22 43 51.7**	**-1.1**
COR				*e*Sn	**Sn**	**22 44 31.4**	**+1.3**
HSO	**Harness Mounta**	**3.20**	**90**	P	**Pn**	**22 43 51.5**	**-1.8**
EUO	**Eugene**	**3.22**	**81**	P	**Pn**	**22 43 52.2**	**-1.4**
HUMO	**Hull Mountain**	**3.47**	**105**	*e*Pn	**Pn**	**22 43 55.5**	**-1.5**
HUMO				*e*Sn	**Sn**	**22 44 36.8**	**-0.8**
KMOR	**Kings Mountain**	**3.49**	**53**	P	**Pn**	**22 43 56.0**	**-1.3**
BROR	**Big Rock Looko**	**3.69**	**78**	P	**Pn**	**22 43 59.3**	**-0.7**
NLO	**Nicolai Mounta**	**3.79**	**48**	P	**Pn**	**22 44 01.0**	**-0.3**
SSOR	**Sweet Springs**	**3.82**	**69**	P	**Pn**	**22 44 01.4**	**-0.4**
FRIS	**Frissel Point**	**3.94**	**80**	P	**Pn**	**22 44 02.8**	**-0.6**
YBH	**Yreka Blue Hor**	**4.00**	**117**	Pn	**Pn**	**22 44 03.1**	**-1.2**
	1.1nm,0.3s,baz=300,slow=12,SNR=16						
YBH				Sn	**Sn**	**22 44 51.1**	**+0.5**
	0.5nm,0.3s,baz=292,slow=16,SNR=4.3						
YBH				LR	LR	22 45 35.8	
	comp=Z,2μm,19.1s,baz=297,slow=39						
GT2	**Goat Mountain**	**4.04**	**66**	P	**Pn**	**22 44 04.8**	**0.0**
HUOR	**Husband**	**4.11**	**81**	P	**Pn**	**22 44 05.5**	**-0.3**
BMW	**Boistfort Moun**	**4.15**	**45**	P	**Pn**	**22 44 05.5**	**-0.9**
RVW	**Rose Valley**	**4.21**	**52**	P	**Pn**	**22 44 07.1**	**-0.1**
VLMM	**Larch Mountain**	**4.34**	**62**	P	**Pn**	**22 44 09.2**	**+0.2**
MTMW	**Mount Mitchell**	**4.46**	**56**	P	**Pn**	**22 44 10.6**	**+0.1**
FL2	**Flat Top 2**	**4.47**	**53**	P	**Pn**	**22 44 10.8**	**+0.2**
HOOD	**Mount Hood Mea**	**4.51**	**66**	P	**Pn**	**22 44 11.5**	**+0.2**
SHW	**Mount Saint He**	**4.53**	**54**	P	**Pn**	**22 44 12.1**	**+0.5**
VLL	**Laurance Lake**	**4.54**	**64**	P	**Pn**	**22 44 12.1**	**+0.4**
NLWA	**Neilton Lookou**	**4.55**	**33**	*e*Pn	**Pn**	**22 44 11.6**	**-0.2**
NLWA				*e*Sn	**Sn**	**22 45 05.0**	**+0.9**
VFP	**Flag Point**	**4.63**	**66**	P	**Pn**	**22 44 12.8**	**-0.2**
PGC	**Sidney**	**5.76**	**28**	*e*Pn	**Pn**	**22 44 28.3**	**-0.1**
	50nm,0.3s						
PGC				*e*Sn	**Sn**	**22 45 31.7**	**-2.3**
JCW	**Jim Creek**	**6.00**	**38**	*e*Pn	**Pn**	**22 44 31.6**	**-0.1**
JCW				*e*Sn	**Sn**	**22 45 40.1**	**+0.3**
OHCM	**Honcut**	**6.22**	**131**	*e*Pn	**Pn**	**22 44 35.5**	**+0.7**
RSW	**Rattlesnake Hi**	**6.25**	**61**	*e*Pn	**Pn**	**22 44 35.4**	**+0.3**
HAWA	**Hanford**	**6.28**	**61**	*e*Pn	**Pn**	**22 44 35.6**	**0.0**
	25nm,0.8s						
RPW	**Rockport**	**6.37**	**39**	*e*Pn	**Pn**	**22 44 37.0**	**+0.2**
RPW				*e*Sn	**Sn**	**22 45 50.1**	**+1.1**
ETW	**Entiat**	**6.41**	**49**	*e*Pn	**Pn**	**22 44 37.8**	**+0.5**
ETW				*e*Sn	**Sn**	**22 45 50.7**	**+0.8**
LNOR	**Lincton Mounta**	**6.93**	**68**	*e*Pn	**Pn**	**22 44 43.3**	**-1.2**
OD2	**Odessa Site #2**	**7.23**	**56**	*e*Pn	**Pn**	**22 44 48.3**	**-0.2**
CMB	**Columbia Colle**	**7.75**	**134**	*e*Pn	**Pn**	**22 44 55.8**	**0.0**
	90nm,1.8s						
BBB	**Bella Bella**	**8.58**	**357**	Pn	**Pn**	**22 45 07.9**	**+0.8**
	0.9nm,0.3s,baz=193,slow=15,SNR=10						
BBB				Sn	**Sn**	**22 46 43.0**	**-0.2**
	0.3nm,0.3s,baz=195,slow=12,SNR=4.7						
NEW	**Newport**	**8.58**	**54**	*e*Pn	**Pn**	**22 45 05.4**	**-1.7**
	20nm,1.1s						
NVAR	**Mina Array Bea**	**8.66**	**124**	Pn	**Pn**	**22 45 08.0**	**-0.3**
	0.2nm,0.3s,baz=295,slow=14,SNR=2.0						
ELK	**Elko**	**9.54**	**103**	Pn	**Pn**	**22 45 22.1**	**+1.8**
	0.1nm,0.3s,baz=291,slow=17,SNR=3.9						
DIB	**Dawson Inlet,**	**10.14**	**343**	Pn	**Pn**	**22 45 32.0**	**+3.5**
	SNR=3.9						
VIB	**Van Inlet**	**10.20**	**343**	Pn	**Pn**	**22 45 33.2**	**+3.9**
CHMT	**Chamberlain Mo**	**10.56**	**67**	*e*Pn	**Pn**	**22 45 33.7**	**-0.5**
MCMT	**McKenzie Canyo**	**10.58**	**78**	*e*Pn	**Pn**	**22 45 34.9**	**+0.3**
DLMT	**Dillon**	**10.78**	**76**	*e*Pn	**Pn**	**22 45 37.7**	**+0.4**
	39nm,1.7s						
WALA	**Waterton Lakes**	**10.84**	**55**	*e*Pn	**Pn**	**22 45 38.9**	**+0.8**
	48nm,1.4s						
GSC	**Goldstone**	**11.70**	**132**	*e*Pn	**Pn**	**22 45 51.9**	**+1.9**
	28nm,1.7s						
CRAG	**Craig**	**12.40**	**345**	*e*Pn	**Pn**	**22 45 59.9**	**+0.5**
GCMT	**Greycliff**	**12.86**	**74**	Pn	**Pn**	**22 46 06.8**	**+1.1**
PDAR	**Pinedale Array**	**13.12**	**88**	Pn	**Pn**	**22 46 11.2**	**+2.0**
	0.0nm,0.3s,baz=287,slow=15,SNR=8.1						
PDAR				LR	LR	22 51 34.6	
	comp=Z,929nm,20.3s,baz=281,slow=39						
PDAR	**Pinedale Array**	**13.12**	**88**	Pn	**Pn**	**22 46 11.2**	**+2.0**
PDAR				LR	LR	22 51 34.6	
PFO	**Pinyon Flat Ob**	**13.19**	**136**	Pn	**Pn**	**22 46 12.8**	**+2.5**
	0.2nm,0.3s,baz=119,slow=22,SNR=4.0						
PFO				LR	LR	22 51 04.5	
	comp=Z,699nm,20.3s,baz=326,slow=37						
DLBC	**Dease Lake**	**14.92**	**355**	Pn	**Pn**	**22 46 35.6**	**+2.0**
	0.1nm,0.3s,baz=201,slow=13,SNR=7.6						
DLBC				LR	LR	22 51 34.0	
	comp=Z,563nm,19.5s,baz=307,slow=34						
RSSD	**Black Hills**	**16.91**	**80**	Pn	**Pn**	**22 47 00.3**	**+0.8**
	2.9nm,0.8s						
ANMO	**Albuquerque**	**18.40**	**111**	P	**Pn**	**22 47 19.3**	**+1.3**
	0.1nm,0.3s,baz=274,slow=9.8,SNR=4.6						
ANMO				LR	LR	22 54 05.2	
	comp=Z,285nm,18.6s,baz=300,slow=36						
ANMO	**Albuquerque**	**18.40**	**111**	P	**Pn**	**22 47 19.3**	**+1.3**
ANMO				LR	LR	22 54 05.2	
BNM	**Barren Site**	**18.75**	**113**	P	**Pn**	**22 47 12.5**	**-10**
FFC	**Flin Flon**	**19.92**	**47**	*e*P	**Pn**	**22 47 35.7**	**-0.4**
	34nm,1.4s						
YKA	**Yellowknife Ar**	**20.35**	**17**	P	**P**	**22 47 39.3**	**+0.3**
	2.6nm,0.8s,baz=204,slow=11,SNR=4.6						
YKA				LR	LR	22 55 50.1	
	comp=Z,115nm,21.2s,MS3.2,baz=175,slow=38						
KDAK	**Kodiak Island**	**21.12**	**321**	LR	LR	22 54 04.0	
	comp=Z,654nm,22.0s,MS4.0,baz=131,slow=31						
SEW	**Seward**	**21.19**	**329**	*e*P	**P**	**22 47 48.7**	**+0.6**
DAWY	**Dawson**	**21.58**	**346**	*e*P	**P**	**22 47 52.4**	**+0.2**
ULM	**Lac du Bonnet**	**22.46**	**62**	LR	LR	22 57 04.5	
	comp=Z,688nm,19.5s,MS4.1,baz=31,slow=37						
EGAK	**Eagle**	**22.55**	**345**	*e*P	**P**	**22 48 02.4**	**-0.3**
	7.1nm,1.1s,mb4.0						
TXAR	**Lajitas Array**	**23.77**	**119**	P	**P**	**22 48 15.2**	**-0.2**
	0.9nm,0.9s,mb3.2,baz=303,slow=7.3,SNR=7.9						
TXAR				LR	LR	22 56 50.5	
	comp=Z,291nm,21.0s,MS3.7,baz=5.0,slow=35						
WMOK	**Wichita Mounta**	**23.86**	**102**	*e*P	**P**	**22 48 14.8**	**-1.4**
	7.9nm,0.9s,mb4.1						
LPIG	**La Paz**	**24.05**	**139**	LR	LR	22 56 54.2	
	comp=Z,338nm,18.5s,MS3.9,baz=191,slow=35						
SVW2	**Sparrevohn**	**24.20**	**326**	P	**P**	**22 48 18.4**	**-0.7**
IMA2	**Indian Mountai**	**26.69**	**336**	*e*P	**P**	**22 48 42.1**	**+0.5**
TKL	**Tuckaleechee C**	**34.27**	**88**	LR	LR	23 04 33.6	
	comp=Z,538nm,20.4s,MS4.3,baz=292,slow=38						
SADO	**Sadowa**	**34.28**	**71**	LR	LR	23 04 04.7	
	comp=Z,530nm,18.4s,MS4.3,baz=151,slow=37						
SCHQ	**Schefferville**	**39.95**	**52**	LR	LR	23 07 17.9	
	comp=Z,460nm,18.3s,MS4.4,baz=130,slow=36						
PMOR	**Pomariorio Ree**	**61.25**	**203**	*e*T		23 59 25.8	
	18nm,0.4s						
VAH	**Vaihoa**	**61.40**	**202**	*e*T		23 59 31.9	
	11nm,0.4s						

MEH Mehetia 64.04 202 *e*T 00 02 56.3
442nm,0.2s
TIAR Tiarei 64.09 203 *e*T 00 02 55.4
385nm,0.3s
PPT Papeete 64.17 203 *e*LR LR 23 12 16.2
94nm,23.2s
TVO Taravao 64.28 203 *e*T 00 03 07.5
54nm,0.3s
ARCES ARCESS Array B 65.42 10 LR LR 23 20 58.2
comp=Z,144nm,18.3s,MS4.2,baz=339,slow=35
RKT Rikitea 66.77 187 *e*T 00 06 18.2
5.6nm,0.3s
AFI Afiamalu 70.09 226 LR LR 23 15 30.4
comp=Z,154nm,21.4s,MS4.2,baz=21,slow=28
NB2 NORSAR Subarra 70.43 20 P **P** **22 54 20.8 +4.3**
comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=6.2
NOA NORSAR Array B 70.43 20 P **P** **22 54 19.4 +2.9**
comp=Z,1.3nm,1.0s,mb3.8,baz=332,slow=5.6,SNR=2.9
NOA NORSAR Array B 70.43 20 P **P** **22 54 19.4 +2.9**
SONM Songino Array 77.31 326 P **P** **22 54 55.6 -1.5**
comp=Z,0.8nm,0.9s,mb3.7,baz=345,slow=3.3,SNR=4.8
SONM LR LR 23 26 52.9
comp=Z,148nm,21.5s,MS4.3,baz=18,slow=34
ZALV Zalesovo Beam 78.95 341 P **P** **22 55 04.0 -2.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=299,slow=9.2,SNR=2.9
GERES GERESS Array B 81.82 25 P **P** **22 55 25.1 +3.5**
comp=Z,0.1nm,0.3s,mb3.3,baz=341,slow=5.6,SNR=2.1
AKASG Malin Array Be 83.90 15 P **P** **22 55 30.8 -1.5**
comp=Z,0.3nm,0.3s,mb3.9,baz=346,slow=5.0,SNR=2.9

ISK ***19*** *22:48:29.8, 3910N×2568E, h9km, MD3.2*
CSEM ***19*** *22:48:30.8±0.1, 3905N×2595E, h2km, ML3.6/2, Error ellipse: s-maj=2.0km s-min=1.8km az=177.0*
ISCJB ***19*** *22:48:31.5±0.6, 3905N±002×2592E±003, h1km±5km, Error ellipse: s-maj=4.2km s-min=3.4km az=139.5*
DDA ***19*** *22:48:32.5, 3906N×2602E, h5km±2km, Md3.1*
THE ***19*** *22:48:32.3, 3905N×2599E, h3km±2km, ML3.6/2, Error ellipse: s-maj=2.2km s-min=0.6km az=109.0*

ISC 19 22:48:32.3±0.5, 3906N±002×2596E±003, h4km±4km, n27, σ0s86/41, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.31**	**52**	P	**Pg**	**22 48 37.8**	**-0.4**
PRK				S	**Sg**	**22 48 42.5**	**+0.3**
AYVA	**Ayvalik**	**0.62**	**66**	*i* P	**Pg**	**22 48 44.0**	**-0.2**
AYVA				*i* S	**Sg**	**22 48 52.3**	**0.0**
CHOS	**Chios island**	**0.68**	**174**	P	**Pg**	**22 48 44.8**	**-0.4**
CHOS				S	**Sg**	**22 48 55.0**	**+1.0**
BOZC	**Bozcaada**	**0.79**	**5**	*i* P	**Pg**	**22 48 47.3**	**0.0**
BOZC				*i* S	**Sg**	**22 48 59.1**	**+1.6**
EZN	**Ezine**	**0.82**	**20**	*e*PG	**Pg**	**22 48 47.5**	**-0.5**
EZN				*e*SG	**Sg**	**22 48 59.8**	**+1.3**
URLA	**Izmir**	**0.86**	**144**	*i* P	**Pg**	**22 48 48.1**	**-0.6**
URLA				*i* S	**Sg**	**22 49 00.6**	**+0.7**
LIA	**Limnos Island**	**1.03**	**325**	P	**Pg**	**22 48 52.4**	**+0.3**
LIA				S	**Sg**	**22 49 06.7**	**+1.3**
BLCB	**Balcova**	**1.08**	**128**	P	**Pg**	**22 48 52.5**	**-0.5**
BLCB				S	**Sg**	**22 49 07.4**	**+0.4**
GADA	**Gvkgeada**	**1.13**	**358**	*e*PN	**Pg**	**22 48 51.1**	**-2.8**
KDAG	**Bornova**	**1.22**	**122**	*i* P	**Pg**	**22 48 55.1**	**-0.5**
KDAG				*i* S	**Sg**	**22 49 11.7**	**+0.4**
AKHS	**Akhisar**	**1.46**	**97**	*i* P	**Pn**	**22 48 59.7**	**+0.4**
AKHS				*i* S	**Sb**	**22 49 18.9**	**+0.1**
AKS	**Akhisar**	**1.46**	**96**	*e*PN	**Pn**	**22 48 59.9**	**+0.6**
BALB	**Balikesir**	**1.60**	**68**	*e*PN	**Pn**	**22 49 01.7**	**+0.4**
ALN	**Alexandroupoli**	**1.84**	**2**	P	**Pn**	**22 49 03.8**	**-0.8**
ALN				S	**Sn**	**22 49 28.1**	**-0.2**
MANT	**Manisa**	**2.11**	**105**	*i* P	**Pb**	**22 49 11.1**	**0.0**
MANT				*i* S	**Sb**	**22 49 39.0**	**+1.4**
MANT	**Manisa**	**2.11**	**105**	*i* S	**Sb**	**22 49 39.0**	**+1.4**
DST	**Dursunbey**	**2.14**	**74**	*e*PN	**Pn**	**22 49 09.9**	**+1.2**
DEMI	**Demirci**	**2.15**	**90**	*e*P	**Pb**	**22 49 11.8**	**+0.2**
DEMI				*i* S	**Sb**	**22 49 36.9**	**-1.7**
KULA	**Kula-Manisa**	**2.18**	**104**	*e*PN	**Pn**	**22 49 10.4**	**+1.1**
LKR	**Lokris**	**2.35**	**261**	P	**Pn**	**22 49 10.5**	**-1.1**
LTK	**Loutraki**	**2.56**	**247**	P	**Pn**	**22 49 14.3**	**-0.3**
DID	**Didima**	**2.64**	**235**	P	**Pn**	**22 49 14.7**	**-1.0**
ULDT	**Uludag**	**2.68**	**65**	*e*P	**Pg**	**22 49 22.1**	**-1.6**
ULDT				*i* S	**Sg**	**22 49 56.6**	**-1.8**
HORT	**Hortiatis**	**2.69**	**306**	P	**Pn**	**22 49 16.5**	**+0.3**
AGG	**Agios Georgios**	**2.83**	**270**	P	**Pn**	**22 49 18.1**	**-0.1**
THL	**Klokotos Trika**	**3.10**	**281**	P	**Pn**	**22 49 22.0**	**+0.1**
GRG	**Griva**	**3.33**	**306**	P	**Pn**	**22 49 24.9**	**-0.1**

CSEM ***19*** *22:59:22.8±0.1, 3807N×2374E, h20km, MD3.1, Error ellipse: s-maj=2.3km s-min=2.0km az=141.0*
ISCJB ***19*** *22:59:23.0±0.5, 3809N±003×2379E±004, h10km, Error ellipse: s-maj=4.8km s-min=4.4km az=169.1*
THE ***19*** *22:59:23.2, 3809N×2381E, h5km±5km, Error ellipse: s-maj=5.6km s-min=0.9km az=273.0*
NEIC ***19*** *22:59:23.0, 3807N×2374E, h18km, MD3.1(ATH), After ATH.*
ATH ***19*** *22:59:23.0, 3807N×2374E, h18km±1km, MD3.1/5*

ISC 19 22:59:23.5±0.5, 3809N±004×2379E±004, h13km±4km, n25, σ0s74/40, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTL	**Penteli**	**0.07**	**126**	*e*PB	**Pg**	**22 59 26.6**	**+0.4**
PTL				*e*SB	**Sg**	**22 59 28.4**	**+0.2**
ATH	**Athens Observa**	**0.13**	**205**	*e*PB	**Pg**	**22 59 26.8**	**-0.1**
ATH				*e*SB	**Sg**	**22 59 29.0**	**-0.3**
NAIG	**Nisos Aigina**	**0.41**	**215**	*e*PB	**Pg**	**22 59 31.0**	**-0.7**
LTK	**Loutraki**	**0.65**	**264**	P	**Pg**	**22 59 36.0**	**-0.2**
LTK				S	**Sg**	**22 59 46.0**	**+1.2**
DID	**Didima**	**0.73**	**217**	P	**Pg**	**22 59 37.0**	**-0.7**
DID				S	**Sg**	**22 59 47.5**	**+0.2**
LKR	**Lokris**	**0.83**	**312**	P	**Pg**	**22 59 38.8**	**-0.8**
LKR				S	**Sg**	**22 59 51.4**	**+0.8**
LKR	**Lokris**	**0.83**	**312**	*e*Pn	**Pn**	**22 59 38.7**	**-2.2**
LKR				S	**Sg**	**22 59 51.4**	**+0.8**
AOS	**Alonnisos**	**1.08**	**4**	P	**Pb**	**22 59 43.2**	**-0.8**
NEO	**Neokhori**	**1.29**	**340**	*e*PN	**Pn**	**22 59 48.0**	**+0.8**
VLI	**Veliai**	**1.53**	**207**	*e*PN	**Pn**	**22 59 51.0**	**+0.5**
EVR	**Evrytania**	**1.76**	**299**	*e*PN	**Pn**	**22 59 54.0**	**+0.4**
CHOS	**Chios island**	**1.81**	**80**	P	**Pn**	**22 59 55.1**	**+0.8**
CHOS				S	**Sn**	**23 00 17.3**	**+0.2**
LIA	**Limnos Island**	**2.10**	**31**	P	**Pn**	**22 59 58.3**	**-0.1**

ISCJB ***19*** *22:59:55.7±3.1, 4085N±008×13674E±009, h184km±31km, mb4.3/28, Error ellipse: s-maj=15.9km s-min=12.4km az=144.6*
IDC ***19*** *22:59:58.8±4.2, 4085N×13670E, h198km±40km, mb3.5/8, mb1 3.7/10, mb1mx3.6/13, mbtmp3.6/10, Error ellipse: s-maj=34.4km s-min=10.2km az=84.0*
NEIC ***19*** *22:59:58.3±2.0, 4095N×13676E, h195km±19km, mb4.6/19, Error ellipse: s-maj=9.0km s-min=5.6km az=48.0*

ISC 19 22:59:58.1±2.1, 4085N±006×13681E±009, h192km±20km, n48, σ0s62/46, mb4.2/28, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**14.39**	**244**	P	**Pn**	**23 03 15.6**	**+2.3**
	22nm,0.3s,baz=71,slow=4.8,SNR=13						
WRAB	**Tennant Creek**	**15.94**	**188**	*e*P	**Pn**	**23 03 31.4**	**-0.9**
	9.2nm,0.6s						
WRAB				*e*S	**S**	**23 06 18.2**	**-11**
WRA	**Warramunga Arr**	**15.95**	**188**	P	**Pn**	**23 03 31.6**	**-0.7**
	1.7nm,0.3s,baz=6.1,slow=12,SNR=113						
WRA				S	**S**	**23 06 19.4**	**-10**
	0.2nm,0.3s,baz=6.0,slow=23,SNR=3.7						
ASAR	**Alice Springs**	**19.68**	**188**	P	**P**	**23 04 13.1**	**+0.3**
	1.6nm,0.3s,baz=11,slow=12,SNR=116						
ASAR				S	**S**	**23 07 44.2**	**0.0**
	0.3nm,0.3s,baz=13,slow=24,SNR=8.3						
HNR	**Honiara**	**23.58**	**104**	*e*P	**P**	**23 04 52.3**	**+0.6**
	26nm,0.6s,mb5.0						
MBWA	**Marble Bar**	**23.75**	**223**	*e*P	**P**	**23 04 52.6**	**-0.5**
	8.7nm,0.5s,mb4.6						
KSM	**Kuching**	**27.05**	**281**	P	**P**	**23 05 22.5**	**-0.5**
STKA	**Stephens Creek**	**28.02**	**171**	P	**P**	**23 05 31.6**	**+0.2**
	1.3nm,0.5s,mb3.8,baz=5.0,slow=7.1,SNR=2.9						
TAU	**Tasmania Unive**	**39.78**	**168**	*e*P	**P**	**23 07 12.4**	**0.0**
	30nm,1.3s,mb4.6						
COCO	**West Island**	**40.34**	**256**	P	**P**	**23 07 17.1**	**-0.3**
COCO				*e*pP	pP	23 07 56.2	-2.1
KSRS	**Korea Array**	**42.14**	**349**	P	**P**	**23 07 30.7**	**-0.9**

2.0nm,0.7s,mb3.6,baz=163,slow=9.8,SNR=4.7
CMAR Chiang Mai Arr 43.51 302 P **P** **23 07 42.6 -0.3**
1.7nm,0.8s,mb3.4,baz=128,slow=6.5,SNR=7.4
CHTO Chiang Mai 43.67 303 *e*P **P** **23 07 43.3 -1.0**
1.6nm,0.6s,mb3.5
BJT Baijiatuau 47.80 339 P **P** **23 08 16.0 -0.2**
LSA Lhasa 55.12 311 P **P** **23 09 10.7 -0.1**
HIA Hailar 55.16 346 *e*P **P** **23 09 09.6 -1.0**
TAPN Taplejung 56.72 306 *e*P **P** **23 09 22.6 +0.4**
7.8nm,0.5s,mb4.6
ODAN Odare 56.77 306 *e*P **P** **23 09 23.1 +0.6**
13nm,0.7s,mb4.7
RAMN Ramite 57.45 306 *e*P **P** **23 09 28.1 +0.8**
13nm,0.7s,mb4.7
JIRN Jiri 58.08 306 *e*P **P** **23 09 32.1 +0.5**
6.3nm,0.4s,mb4.6
SONM Songino Array 58.17 336 P **P** **23 09 31.3 -0.5**
0.7nm,0.8s,mb3.4,baz=152,slow=7.6,SNR=3.6
GUN Gumba 58.43 306 *e*P **P** **23 09 33.9 -0.2**
10nm,0.6s,mb4.6
KKN Kakani 58.87 306 *e*P **P** **23 09 37.5 +0.4**
3.8nm,0.3s,mb4.5
DMN Daman 58.93 306 *e*P **P** **23 09 37.7 +0.1**
8.0nm,0.7s,mb4.5
GKN Gorkha 59.47 306 *e*P **P** **23 09 41.6 +0.4**
10.0nm,0.7s,mb4.6
PETK Petropavlovsk- 59.63 14 P **P** **23 09 42.7 +0.9**
2.6nm,0.7s,mb4.0,baz=162,slow=7.1,SNR=2.3
KOLN Koldanda 60.22 305 *e*P **P** **23 09 47.0 +0.6**
8.5nm,0.8s,mb4.5
DANN Dangsing 60.32 306 *e*P **P** **23 09 47.3 +0.3**
6.8nm,0.5s,mb4.5
PYUN Piuthan 60.85 305 *e*P **P** **23 09 51.1 +0.5**
14nm,0.6s,mb4.8
MK31 Makanchi Array 69.73 323 *e*P **P** **23 10 47.5 +0.3**
MKAR Makanchi Array 69.73 323 P **P** **23 10 47.4 +0.2**
0.6nm,0.5s,mb4.2,baz=110,slow=8.1,SNR=58
MKAR Makanchi Array 69.73 323 P **P** **23 10 47.4 +0.2**
ZALV Zalesovo Beam 72.17 331 P **P** **23 11 00.9 -0.9**
0.6nm,0.4s,mb3.6,baz=106,slow=5.3,SNR=4.6
TKM2 Tokmak 2 72.24 317 *e*P **P** **23 11 02.9 +0.5**
1.3nm,0.4s,mb3.9
EKS2 Erkin-Say 73.38 317 *e*P **P** **23 11 08.8 -0.4**
0.8nm,0.5s,mb3.6
KURK Kurchatov 73.75 326 *e*P **P** **23 11 10.3 -0.9**
1.6nm,0.8s,mb3.7
VNDA Vanda 74.60 175 P **P** **23 11 15.8 +0.1**
0.7nm,0.8s,mb3.3,baz=312,slow=2.3,SNR=7.4
VNDA Vanda 74.60 175 P **P** **23 11 15.8 +0.1**
BRVK Borovoye 79.42 326 *e*P **P** **23 11 42.8 -0.1**
3.7nm,0.5s,mb4.3
IMA2 Indian Mountai 85.53 23 *e*P **P** **23 12 14.9 +0.8**
MCK McKinley 86.72 25 *e*P **P** **23 12 20.1 0.0**
4.9nm,0.6s,mb4.4
ARU Arti 86.89 327 P **P** **23 12 20.4 -0.7**
COLA College 87.48 24 *e*P **P** **23 12 23.8 +0.1**
HOOD Mount Hood Mea 101.00 45 Pdif Pdif 23 13 26.5 +0.7
ARCES ARCESS Array B 101.16 340 P Pdif 23 13 24.9 -1.6
5.8nm,1.0s,baz=46,slow=5.2,SNR=5.2
RRI2 Red Ridge 108.62 46 PKiKP PKiKP 23 18 03.6 -0.8
TXAR Lajitas Array 117.62 59 PKP PKPdf 23 18 22.5 +0.5
0.1nm,0.5s,baz=260,slow=4.5,SNR=2.7
TORD Torodi Ar. Bea 134.78 284 PKP PKPdf 23 18 54.8 -0.3
0.5nm,0.8s,baz=61,slow=1.7,SNR=3.9

GCMT ***19*** *23:30:28.9±0.1, 2287S×7094W, h18km, MW5.9/102, Moment Tensor Solution. s90,c183; s102,c301; Duration: 2s2 Moment tensor: Scale 1018Nm; Mrr0.46±.01; Mθθ0.03±.00; Mϕϕ-0.49±.01; Mrθ0.10±.01; Mθϕ0.05±.00; Mθr-0.79±.02; Best double couple: M₀0.92500×1018 NP1:ϕs357.00000°, δ16.00000°, λ94.00000°. NP2:ϕs173.00000°, δ74.00000°, λ89.00000°. Principal axes: T 0.9080, Plg61.0000°, Azm81.0000°; N 0.0330, Plg1.0000°, Azm173.0000°; P -0.9410, Plg29.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
GUC ***19*** *23:30:28.9±0.4, 2279S×7077W, h30km±3km, ML5.7, MS5.2*
NEIC ***19*** *23:30:28.9, 2279S×7077W, h30km, mb5.7/119, MS5.4/172, MW5.8, ML5.7(GUC), Moment Tensor Solution. s60 Moment tensor: Scale 1017Nm; Mrr3.42; Mθθ0.55; Mϕϕ-3.97; Mrθ0.41; Mθϕ-0.43; Mθr-4.43; Best double couple: M₀5.80000×10¹⁷ NP1:ϕs16.00000°, δ21.00000°, λ109.00000°. NP2:ϕs177.00000°, δ70.00000°, λ83.00000°. Principal axes: T 5.5500, Plg64.0000°, Azm75.0000°; N 0.5000, Plg6.0000°, Azm179.0000°; P -6.0500, Plg24.0000°, Azm272.0000°; After GUC.*
NEIC Felt at Antofagasta.
LDG ***19*** *23:30:29.7±0.3, 2194S×7061W, h10km, Mb5.6/23, Ms5.5/9 Error ellipse: s-maj=22.9km s-min=8.6km az=175.0*
ISCJB ***19*** *23:30:31.1±0.1, 2274S±002×7043W±003, h34km, mb5.6/140, MS5.5/199, Error ellipse: s-maj=4.2km s-min=2.7km az=149.0*
BJI ***19*** *23:30:31.1, 2323S×7020W, h29km, mB5.7, Ms5.8, Msz5.8*
IDC ***19*** *23:30:31.1±2.0, 2278S×7054W, h27km

FCH	**Farellones**	**10.50**	**180**		AMS	AMS	23 37 30.0			
	comp=Z,32µm,17.8s									
CLCH	**Cerro Calan**	**10.57**	**181**		AMS	AMS	23 37 22.3			
	comp=E,18µm,17.8s									
LMEL	**Las Melosas**	**11.02**	**179**		AMS	AMS	23 37 36.6			
	comp=E,36µm,20.0s									
SIV	**San Ignacio**	**11.09**	**54**		Pn	**Pn**	**23 33 07.7**	**-1.2**		
	comp=E,4.0nm,0.3s,baz=245,slow=13,SNR=202									
SIV					Sn	**Sn**	**23 35 09.5**	**-2.2**		
	baz=300,slow=18,SNR=1.7									
NNA	**Nana**	**12.38**	**329**		Pn	**Pn**	**23 33 22.6**	**-4.0**		
	comp=E,1.9nm,0.3s,baz=187,slow=11,SNR=4.0									
NNA					Sn	**Sn**	**23 35 32.7**	**-11**		
	comp=E,8.5nm,0.3s,baz=233,slow=22,SNR=5.8									
NNA					LR	LR	23 37 42.7			
	comp=E,14µm,19.7s,baz=160,slow=35									
NNA	**Nana**	**12.38**	**329**		*e*Pn	**Pn**	**23 33 24.4**	**-2.3**		
NNA					*e*Sn	**Sn**	**23 35 33.8**	**-10**		
LPA	**La Plata**	**16.25**	**141**		*ce*P	**Pn**	**23 34 21.0**	**+2.5**		
LPA					*e*S	**S**	**23 37 33.0**	**+3.5**		
ATAH	**Atahualpa**	**17.49**	**333**		P	**Pn**	**23 34 31.3**	**-2.8**		
	comp=E,0.5nm,0.3s,baz=156,slow=10,SNR=22									
ATAH					S	**S**	**23 37 42.0**	**-13**		
	comp=E,0.1nm,0.3s,baz=81,slow=19,SNR=1.5									
PLCA	**Paso Flores**	**17.89**	**180**		P	**Pn**	**23 34 37.3**	**-1.5**		
	comp=E,0.6nm,0.3s,baz=1.8,slow=13,SNR=36									
PLCA					S	**S**	**23 37 57.5**	**-5.2**		
	comp=E,0.3nm,0.3s,baz=291,slow=13,SNR=1.7									
PLCA					LR	LR	23 41 10.6			
	comp=E,18µm,19.6s,baz=360,slow=36									
PLCA	**Paso Flores**	**17.89**	**180**		P	**Pn**	**23 34 37.3**	**-1.5**		
PLCA					S	**S**	**23 37 57.5**	**-5.2**		
SPB	**Sao Paulo**	**21.11**	**97**	⇑	*e*P	**P**	**23 35 15.2**	**+0.6**		
SPB					*e*S	**S**	**23 39 08.9**	**+1.3**		
BDFB	**Brasilia**	**22.27**	**75**		P	**P**	**23 35 26.2**	**-0.7**		
	comp=E,40nm,0.8s,mb4.9,baz=237,slow=16,SNR=36									
BDFB					S	**S**	**23 39 28.9**	**-1.4**		
	comp=E,15nm,1.0s,baz=38,slow=19,SNR=2.1									
OTAV	**Otavalo**	**24.20**	**340**	⇑	*i*P	**P**	**23 35 46.3**	**+0.2**		
OTAV					PcP	PcP	23 39 26.4	+0.1		
OTAV					S	**S**	**23 40 03.0**	**+0.8**		
OTAV					LR	LR				
	comp=Z,5µm,21.0s,MS5.0									
CAM4	**Nova Friburgo**	**25.68**	**94**	⇓	*i*P	**P**	**23 36 00.2**	**+0.6**		
CAM4					*i*		23 36 03.5			
CAM4					*i*		23 36 14.3			
CAM4					*i*		23 36 36.1			
ROSC	**El Rosal**	**27.75**	**352**		P	**P**	**23 36 18.9**	**+0.7**		
	comp=Z,15nm,0.7s,mb4.7,baz=98,slow=18,SNR=14									
ROSC					S	**S**	**23 41 00.2**	**+1.8**		
	comp=Z,5.3nm,0.6s,baz=279,slow=19,SNR=1.6									
ROSC					LR	LR	23 48 06.3			
	comp=Z,5µm,21.4s,MS5.0,baz=186,slow=38									
CAM3	**Guarapari**	**27.79**	**91**	⇓	*i*P	**P**	**23 36 19.5**	**+0.9**		
CAM3					*i*		23 36 20.7			
CAM3					*i*		23 36 21.8			
CAM3					*i*		23 36 24.2			
CAM3					*i*	pP	23 36 26.6	-2.3		
CAM3					*i*		23 36 46.3			
CAM3					*i*		23 36 52.7			
EFI	**East Falkland**	**30.37**	**165**		PFAKE		23 36 50.0	+8.8		
EFI					LR	LR				
	comp=Z,15µm,19.0s,MS5.7									
EFI	**East Falkland**	**30.37**	**165**	⇑	*i*P	**P**	**23 36 40.7**	**-0.5**		
USHA	**Ushuaia**	**32.03**	**178**		P	**P**	**23 36 55.3**	**-0.4**		
	comp=Z,64nm,1.0s,mb5.4,baz=335,slow=5.3,SNR=7.3									
BCIP	**Isla Barro Col**	**33.08**	**343**		PFAKE		23 37 10.0	+4.7		
BCIP					LR	LR				
	comp=Z,3µm,19.0s,MS5.1									
RPN	**Rapa Nui**	**35.48**	**255**		PFAKE		23 37 30.0	+3.9		
RPN					LR	LR				
	comp=Z,10µm,20.0s,MS5.6									
GRGR	**Grenville**	**35.74**	**15**		PFAKE		23 37 40.0	+12		
GRGR					LR	LR				
	comp=Z,6µm,19.0s,MS5.4									
BBGH	**Gun Hill**	**37.25**	**18**		PFAKE		23 37 50.0	+8.8		
BBGH					LR	LR				
	comp=Z,21µm,21.0s,MS5.9									
RCBR	**Riachuelo**	**37.28**	**68**	⇑	*i*P	**P**	**23 37 42.7**	**+1.1**		
	comp=Z,508nm,1.0s,mb6.3									
RCBR					*e*PP	PP	23 39 05.0	-2.1		
RCBR					*e*S	**S**	**23 43 30.7**	**+3.8**		
RCBR					LR	LR				
	comp=Z,4µm,20.0s,MS5.2									
FDF	**Fort de France**	**38.37**	**14**	⇑	*e*P	**P**	**23 37 47.8**	**-2.9**		
FDF					*e*PP	PP	23 39 19.7	+0.7		
TGUH	**Tegucigalpa,Un**	**40.18**	**334**	⇓	*e*P	**P**	**23 38 06.1**	**+0.3**		
	comp=Z,62nm,0.9s,mb5.3									
TGUH					*e*PcP	PcP	23 39 57.4	-12		
TGUH					*e*S	**S**	**23 44 13.9**	**+3.6**		
TGUH					LR	LR				
	comp=Z,3µm,20.0s,MS5.2									
CPD	**Cerro la Pandu**	**40.81**	**7**		*e*P	**P**	**23 38 08.9**	**-2.1**		
	comp=Z,76nm,0.9s,mb5.3									
CPD	**Cerro la Pandu**	**40.81**	**7**		*e*P	**P**	**23 38 08.9**	**-2.1**		
CPD					pmax	pmax				
	comp=Z,76nm,1.0s,mb5.3									
SJG	**San Juan**	**40.86**	**6**	⇑	*e*P	**P**	**23 38 08.6**	**-2.8**		
SJG					*e*PP	PP	23 39 47.0	+0.9		
SJG					S	**S**	**23 44 36.1**	**+16**		
SJG					LR	LR				
	comp=Z,5µm,20.0s,MS5.4									
SJG	**San Juan**	**40.86**	**6**		*e*P	**P**	**23 38 09.9**	**-1.5**		
MTP	**Monte Pirata**	**40.91**	**7**	⇑	*e*P	**P**	**23 38 08.7**	**-3.1**		
MTP					*e*pP	pP	23 38 21.2	-1.1		
MTP					*e*PP	PP	23 39 46.4	-0.3		
HUMP	**Col San Antoni**	**40.92**	**7**		*e*P	**P**	**23 38 09.9**	**-2.0**		
	comp=Z,219nm,1.8s,mb5.5									
CBYP	**Canovanas**	**41.05**	**7**		*e*P	**P**	**23 38 11.2**	**-1.7**		
	comp=Z,131nm,1.0s,mb5.5									
SDDR	**Presa de Saban**	**41.52**	**359**		PFAKE		23 38 30.0	+13		
SDDR					LR	LR				
	comp=Z,7µm,19.0s,MS5.5									
PMSA	**Palmer Station**	**42.18**	**176**		P	**P**	**23 38 22.0**	**+0.3**		
	comp=Z,59nm,0.9s,mb5.2,baz=342,slow=11,SNR=6.0									
PMSA	**Palmer Station**	**42.18**	**176**		P	**P**	**23 38 22.0**	**+0.3**		
CMIG	**Matias Romero**	**46.32**	**327**		P	**P**	**23 38 54.5**	**-0.8**		
	comp=Z,28nm,1.1s,mb5.1,baz=138,slow=4.5,SNR=9.7									
VHO	**Vista Hermosa**	**47.26**	**325**		*i* P	**P**	**23 39 03.0**	**+0.3**		
PNIG	**Pinotepa**	**47.47**	**323**		*i* P	**P**	**23 38 57.3**	**-7.1**		
CAIG	**El Cayaco**	**49.21**	**321**		*i* P	**P**	**23 39 14.0**	**-3.8**		
LVIG	**Laguna Verde**	**49.31**	**327**		*i* P	**P**	**23 39 16.9**	**-1.6**		
PLIG	**Platanillo**	**49.85**	**323**		*i* P	**P**	**23 39 23.2**	**+0.5**		
PPM	**Popocatepetl**	**49.92**	**324**		*e*P	**P**	**23 39 24.9**	**+1.8**		
ZIIG	**Zihuatanejo**	**50.35**	**320**		*i* P	**P**	**23 39 26.2**	**-0.3**		
PTVM	**Pico Tres Padr**	**50.61**	**324**		*e*P	**P**	**23 39 29.8**	**+1.4**		
TRIS	**Tristan da Cun**	**51.57**	**120**		*e*P	**P**	**23 39 36.9**	**+1.4**		
	comp=Z,344nm,1.0s,mb6.2									
TRIS					*e*PcP	PcP	23 40 52.4	+3.2		
TRIS					*e*PP	PP	23 41 44.0	+11		
TRIS					*e*S	**S**	**23 46 56.4**	**+2.5**		
TRIS					LR	LR				
	comp=Z,4µm,19.0s,MS5.4									
DWPF	**Disney**	**51.71**	**348**		PFAKE		23 39 40.0	+3.5		
DWPF					LR	LR				
	comp=Z,662nm,19.0s,MS4.7									
ZAIG	**Zacatecas**	**55.06**	**323**		*i* P	**P**	**23 40 02.0**	**+0.8**		
BBSR	**BB Station**	**55.12**	**6**	⇑	*e*P	**P**	**23 40 00.9**	**-0.6**		
	comp=Z,83nm,1.0s,mb5.7									
BBSR					*e*PP	PP	23 42 10.0	+4.7		
BBSR					*e*S	**S**	**23 47 38.7**	**-3.1**		
BBSR					LR	LR				
	comp=Z,2µm,22.0s,MS5.0									
ASCN	**Ascension**	**55.69**	**84**		PFAKE		23 40 20.0	+14		
ASCN					LR	LR				
	comp=Z,9µm,19.0s,MS5.9									
BRAL	**Brewton**	**55.83**	**343**	⇑	*e*P	**P**	**23 40 06.6**	**0.0**		
	comp=Z,198nm,1.1s,mb6.1									
BRAL					PcP	PcP	23 41 05.0	-0.2		
BRAL					*e*PP	PP	23 42 21.7	+10		
BRAL					*e*S	**S**	**23 47 56.1**	**+4.7**		
BRAL					LR	LR				
	comp=Z,2µm,20.0s,MS5.2									
NHSC	**New Hope**	**56.36**	**350**	⇑	*e*P	**P**	**23 40 09.9**	**-0.4**		
	comp=Z,228nm,1.4s,mb6.0									
NHSC					*e*PP	PP	23 42 25.9	+10		
NHSC					*e*S	**S**	**23 48 07.5**	**+9.2**		
NHSC					LR	LR				
	comp=Z,3µm,21.0s,MS5.3									
GOGA	**Godfrey**	**57.26**	**347**	⇑	*e*P	**P**	**23 40 14.6**	**-2.1**		
	comp=Z,137nm,2.0s,mb5.6									
GOGA					*e*pP	pP	23 40 27.5	-0.2		
GOGA					*e*PcP	PcP	23 41 22.3	+12		
GOGA					*e*PP	PP	23 42 33.2	+8.8		
GOGA					*e*S	**S**	**23 47 53.0**	**-17**		
GOGA					LR	LR				
	comp=Z,2µm,19.0s,MS5.2									
GOGA	**Godfrey**	**57.26**	**347**		*e*P	**P**	**23 40 15.4**	**-1.3**		
GOGA					pmax	pmax				
	comp=Z,140nm,2.0s,mb5.7									
JSC	**Jenkinsville**	**57.69**	**349**		*e*P	**P**	**23 40 18.8**	**-0.9**		
LRAL	**Lakeview Retre**	**57.73**	**344**		*e*P	**P**	**23 40 18.7**	**-1.3**		
LRAL					*e*PcP	PcP	23 41 14.4	+1.8		
LRAL					*e*PP	PP	23 42 43.8	+15		
LRAL					*e*S	**S**	**23 48 19.3**	**+2.9**		
LRAL					LR	LR				
	comp=Z,3µm,19.0s,MS5.3									
HKT	**Hockley**	**57.86**	**334**		*e*P	**P**	**23 40 19.8**	**-1.2**		
	comp=Z,167nm,1.8s,mb5.8									
HKT					*e*PcP	PcP	23 41 17.5	+4.3		
HKT					*e*S	**S**	**23 48 10.1**	**-8.1**		
HKT					LR	LR				
	comp=Z,268nm,21.0s,MS4.3									
HKT	**Hockley**	**57.86**	**334**		*e*P	**P**	**23 40 19.8**	**-1.2**		
HKT					*e*		23 41 17.5			
HKT					*e*S	**S**	**23 48 10.1**	**-8.2**		
HKT					pmax	pmax				
	comp=Z,167nm,1.8s,mb5.8									
HKT					MLR	MLR				
	comp=Z,268nm,21.0s,MS4.3									
VBMS	**Vicksburg**	**57.99**	**340**		*e*P	**P**	**23 40 21.2**	**-0.7**		
VBMS					LR	LR				
	comp=Z,2µm,21.0s,MS5.1									
CNNC	**Cliffs of the**	**58.15**	**353**	⇑	*e*P	**P**	**23 40 22.2**	**-0.7**		
CNNC					PP	PP	23 42 42.3	+10		
CNNC					*e*S	**S**	**23 48 24.2**	**+2.4**		
CNNC					LR	LR				
	comp=Z,3µm,19.0s,MS5.3									
RKT	**Rikitea**	**59.01**	**256**		*e*S	**S**	**23 48 33.8**	**+0.1**		
	comp=Z,9µm,26.8s									
RKT					*e*LQ		23 55 13.0			
	comp=Z,988nm,32.0s									
RKT					*e*LR	LR	23 57 56.1			
	comp=Z,15µm,26.5s,baz=110									
NATX	**Nacogdoches**	**59.01**	**336**		*e*P	**P**	**23 40 29.3**	**+0.3**		
	comp=Z,383nm,1.9s,mb6.1									
NATX					*e*PcP	PcP	23 41 14.4	-3.3		
NATX					*e*S	**S**	**23 48 37.8**	**+4.7**		
NATX					LR	LR				
	comp=Z,996nm,20.0s,MS4.9									
VNA3	**Neumayer Olymp**	**59.31**	**161**		*e*P	**P**	**23 40 30.4**	**-0.2**		
VNA3					*e*		23 40 34.1			
VNA3					*e*		23 40 36.8			
VNA3					*e*		23 40 45.0			
CPCT	**Cooper Cave**	**59.45**	**347**		*e*P	**P**	**23 40 30.3**	**-1.7**		
TKL	**Tuckaleechee C**	**59.49**	**347**		*e*P	**P**	**23 40 30.6**	**-1.7**		
TKL					*e*PcP	PcP	23 41 18.1	-1.5		
VNA1	**Neumayer--Stat**	**59.54**	**160**		*e*P	**P**	**23 40 33.1**	**+0.9**		
VNA1					*e*		23 40 36.8			
VNA1					*e*		23 40 38.7			
VNA1					*e*		23 40 47.5			
SWET	**Sewanee**	**59.54**	**345**		*e*P	**P**	**23 40 30.9**	**-1.7**		
OXF	**Oxford**	**59.78**	**342**		*e*P	**P**	**23 40 32.3**	**-2.0**		
	comp=Z,122nm,1.1s,mb5.8									
OXF					*e*PcP	PcP	23 41 21.0	+0.2		
OXF					*e*S	**S**	**23 48 34.3**	**-8.8**		
OXF					LR	LR				
	comp=Z,2µm,19.0s,MS5.3									
OXF	**Oxford**	**59.78**	**342**		*e*P	**P**	**23 40 32.3**	**-2.0**		
OXF					*e*		23 41 21.0			
OXF					*e*S	**S**	**23 48 34.3**	**-8.7**		
OXF					pmax	pmax				
	comp=Z,122nm,1.1s,mb5.8									
OXF					MLR	MLR				
	comp=Z,2µm,19.0s,MS5.3									
VNA2	**Neumayer--Watz**	**59.90**	**160**		*e*P	**P**	**23 40 34.4**	**-0.3**		
	baz=290,slow=7.8									
VNA2					*e*		23 40 38.4			
VNA2					*e*		23 40 41.1			
VNA2					*e*		23 40 48.0			
JCT	**Junction City**	**60.02**	**331**	⇑	*e*P	**P**	**23 40 35.0**	**-1.1**		
	comp=Z,77nm,1.0s,mb5.7									
JCT					*e*PcP	PcP	23 41 21.4	-0.4		
JCT					*e*S	**S**	**23 48 48.8**	**+2.5**		
JCT					LR	LR				
	comp=Z,951nm,20.0s,MS4.9									
JCT	**Junction City**	**60.02**	**331**		*e*P	**P**	**23 40 35.5**	**-0.5**		
JCT					pmax	pmax				
	comp=Z,77nm,1.0s,mb5.7									
TZTN	**Tazewell**	**60.31**	**348**	⇑	*e*P	**P**	**23 40 35.3**	**-2.6**		
	comp=Z,78nm,1.4s,mb5.5									
TZTN					*e*S	**S**	**23 48 50.5**	**+0.9**		
TZTN					LR	LR				
	comp=Z,3µm,19.0s,MS5.4									
URVA	**University of**	**60.41**	**353**		*e*P	**P**	**23 40 38.0**	**-0.5**		
BLA	**Blacksburg**	**60.42**	**351**		*e*P	**P**	**23 40 37.6**	**-1.0**		
	comp=Z,76nm,1.3s,mb5.6									
BLA					*ep*P	pP	23 40 49.1	-0.5		
BLA					*e*S	**S**	**23 48 55.1**	**+4.0**		
BLA					LR	LR				
	comp=Z,2µm,20.0s,MS5.2									
BLA	**Blacksburg**	**60.42**	**351**		*e*P	**P**	**23 40 37.6**	**-1.0**		
BLA					*e**PP	pP	23 40 49.1	-0.5		
BLA					*e*S	**S**	**23 48 55.2**	**+4.1**		
BLA					pmax	pmax				
	comp=Z,76nm,1.3s,mb5.6									
BLA					MLR	MLR				
	comp=Z,2µm,20.0s,MS5.2									
ELN	**Prospectdale**	**60.49**	**351**		*e*P	**P**	**23 40 38.5**	**-0.5**		
ELN					*ep*P	pP	23 40 49.2	-0.9		
ELN					*e*PcP	PcP	23 41 24.1	+0.6		
MET	**Memphis--Engin**	**60.51**	**342**		*e*P	**P**	**23 40 37.6**	**-1.6**		
WVT	**Waverly**	**60.88**	**344**		*e*P	**P**	**23 40 39.4**	**-2.4**		
	comp=Z,84nm,1.1s,mb5.8									
WVT					pP	pP	23 40 50.3	-2.4		
WVT					*e*PcP	PcP	23 41 24.3	-0.8		
WVT					*e*S	**S**	**23 48 58.1**	**+1.2**		
WVT					LR	LR				
	comp=Z,2µm,21.0s,MS5.3									
WVT	**Waverly**	**60.88**	**344**		*e*P	**P**	**23 40 39.4**	**-2.3**		
WVT					*e*PP	pP	23 40 50.3	-2.4		
WVT					*e*		23 41 24.3			
WVT					*e*S	**S**	**23 48 58.2**	**+1.2**		
WVT					pmax	pmax				
	comp=Z,84nm,1.1s,mb5.8									
WVT					MLR	MLR				
	comp=Z,2µm,21.0s,MS5.3									
TXAR	**Lajitas Array**	**60.92**	**327**		P	**P**	**23 40 41.5**	**-0.8**		
	comp=Z,7.8nm,0.9s,mb4.8,baz=147,slow=7.1,SNR=42									
TXAR					LR	LR	00 03 39.6			
	comp=Z,2µm,20.2s,MS5.3,baz=300,slow=33									
TXAR					P(PP(P		00 10 02.2			
	comp=Z,0.4nm,0.8s,baz=48,slow=1.9,SNR=3.8									
TXAR	**Lajitas Array**	**60.92**	**327**		P	**P**	**23 40 41.5**	**-0.8**		
TXAR					LR	LR	00 03 39.6			
TXAR					P'P'		00 10 02.2			
UALR	**University of**	**60.93**	**339**		*e*P	**P**	**23 40 40.8**	**-1.4**		
	comp=Z,201nm,1.8s,mb6.0									
UALR					*e*PcP	PcP	23 41 25.1	-0.2		
SHEL	**Horse Pasture**	**60.96**	**96**		*e*P	**P**	**23 40 46.5**	**+3.7**		
	comp=Z,114nm,0.9s,mb6.0									
SHEL					*e*S	**S**	**23 49 02.9**	**+4.0**		
SHEL					LR	LR				
	comp=Z,6µm,21.0s,MS5.7									
CBN	**Corbin**	**61.02**	**354**	⇑	*e*P	**P**	**23 40 41.9**	**-0.8**		
	comp=Z,93nm,1.1s,mb5.8									
CBN					*e*S	**S**	**23 48 55.6**	**-3.1**		
CBN					LR	LR				
	comp=Z,3µm,21.0s,MS5.4									
HALT	**Halls**	**61.07**	**342**		P	**P**	**23 40 41.8**	**-1.2**		
MIAR	**Mount Ida**	**61.13**	**338**		*e*P	**P**	**23 40 42.4**	**-1.0**		
	comp=Z,77nm,1.1s,mb5.8									
MIAR					*e*PP	PP	23 42 54.7	-4.0		
MIAR	**Mount Ida**	**61.13**	**338**		*e*P	**P**	**23 40 42.4**	**-1.1**		
MIAR					pmax	pmax				
	comp=Z,77nm,1.1s,mb5.8									
GNAR	**Gosnell**	**61.32**	**342**		*e*P	**P**	**23 40 43.6**	**-1.2**		
	comp=Z,4µm,1.7s									
GNAR					*e*PcP	PcP	23 41 26.9	+0.1		
GNAR					*e*ScP	ScP	23 45 24.1	-1.6		
GLAT	**Glass**	**61.40**	**343**		*e*P	**P**	**23 40 43.9**	**-1.4**		
SNAA	**Sanae**	**61.52**	**161**		*e*P	**P**	**23 40 42.8**	**-2.9**		
	comp=Z,223nm,1.2s,mb6.2									
SNAA	**Sanae**	**61.52**	**161**		*e*P	**P**	**23 40 42.8**	**-2.9**		
SNAA					pmax	pmax				
	comp=Z,223nm,1.2s									
SDMD	**Soldier's Deli**	**62.17**	**354**		*e*P	**P**	**23 40 50.6**	**+0.3**		
	comp=Z,61nm,1.4s,mb5.5									
SDMD					*e*PcP	PcP	23 41 29.4	-0.8		
WCI	**Wyandotte Cave**	**62.51**	**346**		*e*P	**P**	**23 40 50.4**	**-2.2**		
	comp=Z,41nm,0.7s,mb5.7									
WCI					*e*PcP	PcP	23 41 30.6	-1.0		
WCI					*e*S	S	23 48 56.6	-21		
WCI					LR	LR				
	comp=Z,630nm,20.0s,MS4.8									
USIN	**University of**	**62.58**	**345**		*e*P	**P**	**23 40 51.6**	**-1.5**		
	comp=Z,139nm,1.3s,mb5.9									
USIN					*ep*P	pP	23 41 02.0	-2.2		
USIN					PcP	PcP	23 41 28.9	-3.0		
MVL	**Millersville**	**62.71**	**355**		*e*P	**P**	**23 40 54.4**	**+0.4**		
	comp=Z,172nm,1.8s,mb5.9									
SIUC	**Southern Illin**	**62.73**	**343**		*e*P	**P**	**23 40 53.2**	**-1.0**		
	comp=Z,130nm,1.2s,mb5.9									
MCWV	**Mont Chateau**	**62.75**	**352**		*e*P	**P**	**23 40 54.3**	**0.0**		
MCWV					PcP	PcP	23 41 34.6	+2.0		
MCWV					LR	LR				
	comp=Z,4µm,22.0s,MS5.6									
WMOK	**Wichita Mounta**	**63.25**	**334**		*e*P	**P**	**23 40 55.9**	**-1.8**		
	comp=Z,61nm,1.6s,mb5.5									
WMOK					*e*PcP	PcP	23 41 34.8	+0.1		
WMOK					*e*PP	PP	23 43 20.7	+3.4		
WMOK					*e*ScP	ScP	23 45 40.5	+6.1		
WMOK					*e*S	**S**	**23 49 26.3**	**-0.7**		
WMOK					LR	LR				
	comp=Z,1µm,19.0s,MS5.0									
WMOK	**Wichita Mounta**	**63.25**	**334**		*e*P	**P**	**23 40 55.9**	**-1.8**		
WMOK					*e*		23 41 34.8			
WMOK					*e*		23 43 20.7			
WMOK					*e*S	**S**	**23 49 26.3**	**-0.7**		
WMOK					pmax	pmax				
	comp=Z,61nm,1.6s,mb5.5									
WMOK					MLR	MLR				
	comp=Z,1µm,19.0s,MS5.0									
BRNJ	**Basking Ridge**	**63.26**	**356**		*e*P	**P**	**23 40 58.1**	**+0.5**		
FVM	**French Village**	**63.32**	**342**		*e*P	**P**	**23 40 56.2**	**-1.9**		
	comp=Z,356nm,1.7s,mb6.2									
FVM					*e*PcP	PcP	23 41 30.7	-4.3		
FVM					*e*PP	PP	23 43 17.1	-0.8		
FVM	**French Village**	**63.32**	**342**		*e*P	**P**	**23 40 56.2**	**-1.9**		
FVM					pmax	pmax				
	comp=Z,270nm,1.7s,mb6.1									
OLIL	**Olney**	**63.41**	**345**		*e*P	**P**	**23 40 56.6**	**-2.1**		
	comp=Z,101nm,1.3s,mb5.8									
OLIL					*e*PcP	PcP	23 41 34.4	-0.9		
BLO	**Bloomington**	**63.46**	**346**		*e*P	**P**	**23 40 56.6**	**-2.4**		
	comp=Z,165nm,1.6s,mb5.9									
BLO	**Bloomington**	**63.46**	**346**		*e*P	**P**	**23 40 56.6**	**-2.4**		
BLO					pmax	pmax				
	comp=Z,160nm,1.6s,mb5.9									
SSPA	**Standing Stone**	**63.48**	**354**		*e*P	**P**	**23 40 59.4**	**+0.3**		
SSPA					PcP	PcP	23 41 34.6	-1.0		
SSPA					LR	LR				
	comp=Z,798nm,20.0s,MS4.9									
GDL2	**Guadalupe Moun**	**63.60**	**328**		*e*P	**P**	**23 41 00.4**	**+0.3**		
CCM	**Cathedral Cave**	**63.62**	**342**		P	**P**	**23 40 58.5**	**-1.6**		
	comp=Z,9.0nm,1.1s,mb4.7									
CCM					*e*PP	PP	23 43 29.1	+8.5		
CCM					*e*S	S	23 49 04.5	-27		
CCM					LR	LR				
	comp=Z,466nm,20.0s,MS4.7									
CCM	**Cathedral Cave**	**63.62**	**342**		P	**P**	**23 40 58.5**	**-1.6**		
CCM					pmax	pmax				
	comp=Z,9.0nm,1.1s,mb4.7									
CCM					MLR	MLR				
	comp=Z,466nm,20.0s,MS4.7									
ACSO	**Alum Creek Sta**	**63.78**	**349**		*e*P	**P**	**23 40 59.5**	**-1.6**		
	comp=Z,103nm,1.1s,mb5.8									
ACSO					PcP	PcP	23 41 36.6	-0.1		
ACSO					*e*PP	PP	23 43 22.2	+0.2		
ACSO					S	**S**	**23 49 24.7**	**-8.7**		
ACSO					LR	LR				
	comp=Z,2µm,22.0s,MS5.3									
BRYW	**Bryant College**	**64.39**	**359**		*

LBNH Lisbon 66.71 359 *e*P P **23 41 21.0 +1.0**
LBNH *e*PcP PcP 23 41 47.7 -1.1
LBNH *e*S S 23 50 13.2 +4.1
LBNH LR LR
comp=Z,2µm,20.0s,MS5.3
LAZ Ladron 66.75 327 *e*P P **23 41 21.6 +1.2**
LAZ *e*PcP PcP 23 41 47.6 -1.6
118A Homack Ranch, 66.84 324 ⇓P P **23 41 21.1 0.0**
baz=67,SNR=20
118A ⇓S S 23 50 14.1 +3.0
baz=67
ANMO Albuquerque 66.85 328 *e*P P **23 41 21.4 +0.3**
ANMO *e*S S 23 50 03.9 -7.3
ANMO LR LR
comp=Z,2µm,19.0s,MS5.4
ANMO Albuquerque 66.85 328⇑ *e*P P **23 41 21.1 0.0**
Z19A T-Link Ranch, 66.96 325 ⇑P P **23 41 22.0 +0.2**
baz=67,SNR=8.7
TUC Tucson 67.03 323 *e*P P **23 41 22.4 +0.1**
TUC PP PP 23 43 58.6 +8.0
TUC *e*S S 23 50 09.5 -4.0
TUC LR LR
comp=Z,2µm,19.0s,MS5.2
CBKS Cedar Bluff 67.17 335 *e*P P **23 41 26.1 +3.1**
CBKS *e*S S 23 49 59.1 -16
CBKS LR LR
comp=Z,1µm,20.0s,MS5.1
CBKS Cedar Bluff 67.17 335 *e*P P **23 41 22.9 -0.1**
216A Three Points, 67.17 323 ⇓P P **23 41 23.4 +0.2**
baz=67,SNR=9.1
LONY Lake Ozonia 67.19 357 *e*P P **23 41 23.2 +0.2**
LONY *e*PcP PcP 23 41 49.7 -1.1
LONY *e*S S 23 50 04.7 -10
LONY LR LR
comp=Z,3µm,19.0s,MS5.5
117A Oracle 67.20 324 ⇑P P **23 41 23.4 0.0**
baz=67,SNR=38
117A ⇑S S 23 50 17.7 +2.2
baz=67
Z18A Geronimo 67.21 324 ⇓P P **23 41 23.5 +0.1**
baz=67
FRNY Flat Rock 67.36 358 *e*P P **23 41 24.5 +0.4**
FRNY *e*PcP PcP 23 41 51.2 -0.3
Y19A Nutrioso 67.47 326 ⇑P P **23 41 25.5 +0.4**
baz=68,SNR=37
Y19A ⇑S S 23 50 21.1 +2.3
baz=68
116A Eloy 67.73 323 ⇓P P **23 41 27.0 +0.3**
baz=68
116A ⇑S S 23 50 24.7 +2.8
baz=68
PKME Peaks-Kenny Pk 67.73 1 *e*pP pP 23 41 36.8 -0.8
PKME PcP PcP 23 41 54.1 +1.1
PKME *e*S S 23 50 25.1 +3.8
PKME LR LR
comp=Z,2µm,20.0s,MS5.4
Y18A Canyon Day Jun 67.74 325 ⇓P P **23 41 26.9 +0.1**
baz=68,SNR=14
Y18A ⇑S S 23 50 24.5 +2.5
baz=68
SCIA State Center 67.75 342 *e*P P **23 41 25.9 -0.7**
SCIA *e*PcP PcP 23 41 49.6 -3.6
SCIA *e*S S 23 50 07.5 -14
SCIA LR LR
comp=Z,2µm,22.0s,MS5.3
X19A St. Johns 67.86 326 ⇑P P **23 41 27.7 +0.2**
baz=68,SNR=8.1
X19A ⇑S S 23 50 26.8 +3.4
baz=68
JFWS Jewell Farm 67.89 344 *e*P P **23 41 26.5 -1.0**
JFWS *e*PP PP 23 44 10.7 +13
JFWS *e*PP S 23 50 13.1 -10
JFWS LR LR
comp=Z,2µm,22.0s,MS5.4
214A Organ Pipe Nat 67.90 322 ⇓P P **23 41 27.8 0.0**
baz=68,SNR=32
214A ⇑S S 23 50 26.3 +2.3
baz=68
TAOE Nuku Hiva Isla 68.02 269 *e*S S 23 50 28.2 +2.1
comp=Z,24µm,27.5s
TAOE Nuku Hiva Isla 68.02 269 *e*LR LR 00 01 56.4
comp=Z,23µm,25.3s,baz=117
Y17A Roosevelt 68.11 324 ⇓P P **23 41 29.2 +0.1**
baz=68,SNR=42
115A Sonoran Desert 68.12 323 ⇑P P **23 41 29.6 +0.4**
baz=68,SNR=14
115A ⇑S S 23 50 29.8 +3.2
baz=68
Z16A Peralta Trail, 68.16 324 ⇑P P **23 41 29.5 +0.1**
baz=68,SNR=11
X18A Snowflake 68.28 326 ⇑P P **23 41 30.3 +0.2**
baz=68,SNR=9.5
W19A Sanders 68.44 326 ⇓P P **23 41 31.4 +0.2**
baz=69,SNR=12
Z15A Gila River Ind 68.52 323 ⇑P P **23 41 32.0 +0.3**
baz=69
GLMI Grayling 68.53 349 PFAKE 23 41 40.0 +8.6
GLMI LR LR
comp=Z,2µm,20.0s,MS5.4
X17A Forest Lakes 68.58 325 ⇓P P **23 41 32.7 +0.7**
baz=69,SNR=17
Y16A Circle Bar Ran 68.60 324 ⇑P P **23 41 32.5 +0.3**
baz=69,SNR=27
W18A Petrified Fore 68.62 326 ⇑P P **23 41 32.7 +0.5**
baz=69,SNR=14
SDCO Great Sand Dun 68.67 331 *e*P P **23 41 33.3 +0.7**
SDCO PP PP 23 44 11.0 +6.2
SDCO *e*S S 23 50 42.6 +10
SDCO LR LR
comp=Z,1µm,19.0s,MS5.1
V19A Window Rock 68.74 327 ⇑P P **23 41 33.4 +0.4**
baz=69
X16A Lo Mia Camp, P 68.98 324 ⇑P P **23 41 35.0 +0.4**
baz=69,SNR=22
Z14A Wintersburg 69.02 323 ⇓P P **23 41 34.7 0.0**
baz=69
113A Mohawk Valley, 69.04 322 ⇓P P **23 41 35.0 0.0**
baz=69
W17A Winslow 69.10 325 ⇓P P **23 41 35.6 +0.3**
baz=69,SNR=5.6
Y15A Casa Rosa Ranc 69.12 324 ⇓P P **23 41 35.6 +0.2**
baz=69,SNR=18
V18A Ganado 69.19 326 ⇑P P **23 41 36.0 +0.3**
baz=69
112A Yuma 69.34 321 ⇑P P **23 41 36.9 +0.1**
baz=70
X15A Humboldt 69.47 324 ⇑P P **23 41 37.9 +0.4**
baz=70,SNR=22
Y14A Wickenburg 69.48 323 ⇑P P **23 41 37.7 +0.1**
baz=70,SNR=10
W16A Flagstaff 69.55 325 ⇓P P **23 41 38.9 +0.9**
baz=70,SNR=23
T19A Beclabito 69.60 328 ⇓P P **23 41 38.4 +0.1**
baz=70,SNR=13
MVCO Mesa Verde 69.65 328 *e*P P **23 41 39.4 +0.8**
MVCO *e*S S 23 50 12.3 -32
MVCO LR LR
comp=Z,2µm,19.0s,MS5.4
MVCO Mesa Verde 69.65 328 ⇑P P **23 41 38.8 +0.2**
baz=70
U18A Rough Rock, Ch 69.70 327 ⇓P P **23 41 39.6 +0.7**
baz=70,SNR=16
WUAZ Wupatki 69.78 325 *e*P P **23 41 40.6 +1.2**
WUAZ *e*PP PP 23 44 32.5 +18
WUAZ *e*S S 23 50 45.7 -0.4
WUAZ LR LR
comp=Z,3µm,20.0s,MS5.5
WUAZ Wupatki 69.78 325 ⇓P P **23 41 39.8 +0.3**
baz=70
X14A Yava 69.81 324 ⇑P P **23 41 40.3 +0.6**
baz=70,SNR=15
Y13A Salome 69.85 322 ⇓P P **23 41 40.2 +0.3**
baz=70,SNR=6.2
GLA Glamis 69.86 321 *e*P P **23 41 40.9 +0.9**
GLA *e*S S 23 50 51.7 +4.5
GLA LR LR
comp=Z,1µm,21.0s,MS5.0
GLA Glamis 69.86 321 ⇑P P **23 41 40.1 +0.1**
baz=70,SNR=8.5
OGNE Ogallala 69.90 335 *e*P P **23 41 40.1 +0.1**
comp=Z,109nm,1.3s,mb5.6
OGNE *e*S S 23 50 47.5 +0.3
OGNE LR LR
comp=Z,2µm,19.0s,MS5.3
W15A Williams 70.00 324 ⇑P P **23 41 41.3 +0.4**
baz=70,SNR=17

LIC Lamto 70.06 74 *e*P P **23 41 41.8 +0.1**
comp=Z,184nm,1.3s,mb5.9
LIC Lamto 70.06 74⇑ *i*P P **23 41 41.8 +0.1**
comp=Z,181nm,1.3s,mb5.5
LIC *e*MLR MLR
comp=Z,5µm,19.8s,MS5.5
LIC Lamto 70.06 74⇑ *i*P P **23 41 41.8 +0.1**
comp=Z,91nm,1.3s,mb5.5
LIC LR LR
comp=Z,2µm,19.8s,MS5.5
U16A Tuba City 70.14 326 ⇓P P **23 41 42.0 +0.4**
baz=70,SNR=24
Y12C Blythe 70.19 322 ⇑P P **23 41 42.0 0.0**
baz=70,SNR=13
U17A Shonto 70.25 326 ⇓P P **23 41 42.8 +0.5**
baz=70,SNR=19
TIC Toumodi 70.25 74 *e*P P **23 41 43.2 +0.3**
comp=Z,426nm,1.2s,mb6.3
TIC Toumodi 70.25 74 *e*P P **23 41 43.2 +0.3**
TIC pmax pmax
comp=Z,426nm,1.2s,mb6.2
T18A Mexican Hat 70.27 327 ⇑P P **23 41 42.3 -0.1**
baz=70,SNR=42
DVTC Desert V Tower 70.32 320 ⇑P P **23 41 43.5 +0.7**
baz=70
SWSC Sam W. Stewart 70.34 321 ⇓P P **23 41 43.0 +0.1**
baz=70,SNR=7.6
KIC Kosan Boka 70.37 74 *e*P P **23 41 44.0 +0.4**
comp=Z,487nm,1.0s,mb6.4
PDMCI Parker Dam,Lak 70.38 323 ⇓P P **23 41 43.2 +0.1**
baz=71,SNR=7.3
S19A Harvey Farm, M 70.38 328 ⇓P P **23 41 43.1 +0.1**
baz=71,SNR=27
DBIC Dimbokro 70.41 74 P P **23 41 44.2 +0.4**
comp=Z,104nm,1.0s,mb5.7,baz=212,slow=6.1,SNR=47
DBIC LR LR 00 13 31.1
comp=Z,4µm,18.4s,MS5.7,baz=213,slow=37
DBIC Dimbokro 70.41 74 P P **23 41 44.2 +0.4**
DBIC LR LR 00 13 31.1
ISCO Idaho Springs 70.41 332 *e*P P **23 41 43.5 +0.3**
ISCO *e*PcP PcP 23 42 02.1 -2.4
ISCO *e*S S 23 50 55.7 +2.4
ISCO LR LR
comp=Z,1µm,19.0s,MS5.1
PV01 Paradox Valley 70.42 329 *e*P P **23 41 44.3 +1.0**
X13A Yucca 70.42 323 ⇓P P **23 41 43.5 +0.1**
baz=71,SNR=23
V15A Kaibab Nationa 70.44 325 ⇓P P **23 41 43.9 +0.5**
baz=71,SNR=27
ECSD EROS,Sioux Fal 70.44 340 *e*P P **23 41 41.7 -1.6**
ECSD *e*S S 23 50 53.4 -0.1
ECSD LR LR
comp=Z,2µm,19.0s,MS5.3
W14A Seligman 70.47 324 ⇓P P **23 41 43.9 +0.2**
baz=71,SNR=19
T17A Navajo Res., N 70.62 327 ⇓P P **23 41 44.5 0.0**
baz=71,SNR=28
BC3 Big Chuckw Mtn 70.66 321 ⇓P P **23 41 44.7 -0.2**
baz=71,SNR=29
MONP Monument Peak 70.68 320 ⇓P P **23 41 45.2 +0.2**
baz=71,SNR=13
S18A Hurst Farm, Bl 70.76 328 ⇑P P **23 41 45.9 +0.5**
baz=71,SNR=69
V14A Boquillas Ranc 70.80 324 ⇑P P **23 41 46.2 +0.5**
baz=71,SNR=41
W13A Hualapai Mount 70.82 323 ⇑P P **23 41 46.2 +0.4**
baz=71,SNR=14
PV10 Paradox Valley 70.83 329 *e*P P **23 41 45.5 -0.3**
IRM Iron Mountain 70.85 322 ⇑P P **23 41 46.1 +0.1**
baz=71,SNR=27
R19A Curley Farm, L 70.87 328 ⇑P P **23 41 46.0 0.0**
baz=71,SNR=8.8
U15A North Rim 70.96 325 ⇑P P **23 41 47.4 +0.7**
baz=71
T16A Glen Canyon Da 70.97 326 ⇓P P **23 41 47.3 +0.6**
baz=71,SNR=13
NEE2 Needles Airpor 70.99 323 ⇓P P **23 41 46.7 -0.1**
baz=71
S17A Black Ridge (B 71.12 327 ⇑P P **23 41 48.0 +0.5**
baz=71,SNR=23
PFO Pinyon Flat Ob 71.21 321 P P **23 41 49.0 +0.8**
comp=Z,149nm,1.8s,mb5.6,SNR=8.6
PFO Pinyon Flat Ob 71.21 321 LR LR 00 06 47.7
comp=Z,2µm,21.9s,MS5.4,baz=252,slow=31
PFO Pinyon Flat Ob 71.21 321 *e*P P **23 41 49.0 +0.8**
PFO *e*S S 23 50 55.2 -7.7
PFO LR LR
comp=Z,2µm,21.0s,MS5.4
PFO Pinyon Flat Ob 71.21 321 ⇓P P **23 41 48.4 +0.2**
baz=71,SNR=13
BELC Belle Mtn. 71.22 321 ⇑P P **23 41 48.4 +0.1**
baz=71,SNR=10.0
R18A Canyonlands Na 71.25 328 ⇑P P **23 41 48.6 +0.2**
baz=72,SNR=9.2
CHIE El Hierro 71.30 48 P P **23 41 50.6 +1.7**
comp=Z,54nm,1.1s,mb5.4
Q19A Navajo Spring (71.40 329 ⇑P P **23 41 49.5 +0.3**
baz=72,SNR=21
U14A Mt Trumbull 71.42 325 ⇑P P **23 41 49.7 +0.2**
baz=72,SNR=30
V13A Grand Canyon W 71.44 324 ⇓P P **23 41 49.7 +0.2**
baz=72,SNR=18
T15A Red Dirt Ranch 71.45 326 ⇓P P **23 41 50.3 +0.7**
baz=72,SNR=20
LDFC Landfair 71.49 323 *e*P P **23 41 51.5 +1.6**
W12A Cal Nev Ari 71.52 323 ⇓P P **23 41 49.9 -0.1**
baz=72
GMRC Granite Mounta 71.58 322 ⇓P P **23 41 50.9 +0.5**
baz=72,SNR=29
S16A Weppner Ranch, 71.58 327 ⇓P P **23 41 50.6 +0.2**
baz=72,SNR=12
PHWY Pilot Hill 71.59 333 *e*P P **23 41 50.6 +0.3**
comp=Z,130nm,1.8s,mb5.6
MURC Murrieta 71.64 320 ⇑P P **23 41 50.7 -0.1**
baz=72,SNR=7.4
R17A Hanksville Air 71.68 328 ⇓P P **23 41 51.0 +0.1**
baz=72,SNR=31
P19A Cripple Cowboy 71.80 330 ⇑P P **23 41 52.0 +0.4**
baz=72,SNR=21
V12A Nelson 71.82 323 ⇑P P **23 41 52.0 +0.2**
baz=72,SNR=16
U13A Pakoon Wash 71.84 324 ⇑P P **23 41 52.3 +0.4**
baz=72,SNR=18
T14A Hurricane 71.85 325 ⇑P P **23 41 52.6 +0.6**
baz=72,SNR=8.6
Q18A Rafter H Ranch 71.93 328 ⇑P P **23 41 52.7 +0.2**
baz=72,SNR=18
BBRC Big Bear Sol-O 71.94 321 ⇓P P **23 41 53.2 +0.6**
baz=72
S15A Panguitch 71.94 326 ⇑P P **23 41 52.6 +0.1**
baz=72
R16A Teasdale 71.96 327 ⇑P P **23 41 53.3 +0.7**
baz=72,SNR=9.5
HEC Hector,Ludlow 72.00 322 ⇑P P **23 41 53.1 +0.1**
baz=72,SNR=15
SCI San Clemente I 72.02 319 ⇓P P **23 41 53.1 +0.1**
baz=72
EGOM La Gomera 72.09 48 P P **23 41 54.2 +0.6**
comp=Z,206nm,1.0s,mb6.0
SRU San Rafael 72.12 328 *e*P P **23 41 54.3 +0.7**
SRU San Rafael 72.12 328 ⇓P P **23 41 53.6 0.0**
baz=72
U12A Valley of Fire 72.17 324 ⇓P P **23 41 54.0 +0.1**
baz=72,SNR=7.4
TUQ Turquoise Moun 72.21 322 ⇑P P **23 41 54.4 +0.2**
baz=72,SNR=26
CIS Catalina Islan 72.22 319 ⇑P P **23 41 54.3 -0.1**
baz=72
V11A Goodsprings 72.22 323 ⇑P P **23 41 54.4 +0.2**
baz=72,SNR=11
T13A Saint George 72.26 325 ⇑P P **23 41 55.1 +0.6**
baz=72,SNR=12
Q16A Castle Valley 72.29 328 ⇓P P **23 41 54.9 +0.4**
baz=72,SNR=15
R15A Junction 72.30 326 ⇑P P **23 41 54.9 +0.2**
baz=72,SNR=8.8
BFSC Mount Baldy St 72.36 320 ⇑P P **23 41 54.9 -0.2**
baz=72,SNR=14
CCUT Cedar City 72.37 325 *e*P P **23 41 56.5 +1.4**
FMP Fort Macarthur 72.37 320 ⇑P P **23 41 55.4 +0.3**
baz=72
O19A Miners Draw (B 72.39 330 ⇓P P **23 41 55.3 +0.1**
baz=73,SNR=20
P18A Preston Nutter 72.39 329 ⇑P P **23 41 55.7 +0.5**
baz=73,SNR=30
S14A Cedar City 72.42 326 ⇑P P **23 41 56.0 +0.6**
baz=73
RRX Edison Barstow 72.43 321 ⇓P P **23 41 55.6 +0.1**
baz=73
T12A Moapa 72.48 324 ⇓P P **23 41 55.8 +0.1**
baz=73
MSU Marysvale 72.48 327 *e*P P **23 41 56.5 +0.8**
MVU Marysvale 72.50 327 PFAKE 23 42 00.0 +4.2
MVU LR LR
comp=Z,2µm,19.0s,MS5.4
P17A Butcher Ranch, 72.51 328 ⇑P P **23 41 56.0 +0.2**
baz=73,SNR=16
CCAN Las Canadas 72.54 48 P P **23 41 56.5 +0.1**
comp=Z,53nm,0.9s,mb5.5
SHPR Sheep Range 72.56 324 *e*P P **23 41 57.0 +0.8**
MWC Mount Wilson 72.58 320 *e*P P **23 41 57.4 +0.9**
MWC *e*S S 23 51 12.9 -5.7
MWC LR LR
comp=Z,1µm,20.0s,MS5.2
ARUT Antelope Range 72.59 325 *e*P P **23 41 57.3 +1.0**
TMUT Trail Mountain 72.60 328 *e*P P **23 41 57.3 +0.9**
TMUT *e*PP PP 23 44 35.1 -3.4
GSC Goldstone 72.61 322 *e*P P **23 41 57.5 +0.9**
GSC *e*S S 23 51 16.0 -2.9
GSC LR LR
comp=Z,2µm,20.0s,MS5.3
GSC Goldstone 72.61 322 ⇓P P **23 41 56.9 +0.3**
baz=73,SNR=19
U11A Corn Creek 72.62 323 ⇑P P **23 41 57.3 +0.7**
baz=73
S13A Holt Ranch, En 72.65 325 ⇓P P **23 41 57.4 +0.7**
baz=73,SNR=26
RWWY Rawlins 72.66 332 *e*P P **23 41 57.1 +0.4**
RWWY *e*PP PP 23 44 40.4 +1.4
SHOC Shoshone 72.74 322 ⇑P P **23 41 57.6 +0.2**
baz=73
R14A James Farms, M 72.75 326 ⇑P P **23 41 57.6 +0.2**
baz=73
DECC Green Verdugo 72.76 320 ⇑P P **23 41 57.2 -0.3**
baz=73
O18A Roosevelt 72.78 329 ⇑P P **23 41 57.8 +0.3**
baz=73
SNCC San Nicolas Is 72.79 318 PFAKE 23 42 10.0 +12
SNCC LR LR
comp=Z,1µm,20.0s,MS5.1
SNCC San Nicolas Is 72.79 318 ⇑P P **23 41 57.4 -0.3**
baz=73
N19A John Jarvie Ra 72.89 330 ⇓P P **23 41 57.9 -0.2**
baz=73,SNR=8.4
EYMN Ely 72.92 345 *e*P P **23 41 57.2 -0.9**
EYMN S S 23 51 11.8 -10
EYMN LR LR
comp=Z,2µm,20.0s,MS5.4
M20A Sweetwater, Wa 72.92 331 ⇓P P **23 41 58.4 +0.1**
baz=73,SNR=8.7
L21A Rawlins 72.95 332 ⇓P P **23 41 58.4 0.0**
baz=73,SNR=30
Q15A Fillmore 72.96 327 ⇑P P **23 41 59.1 +0.5**
baz=73
EDW2 Edwards Air Fo 73.00 321 ⇓P P **23 41 58.7 -0.2**
baz=73,SNR=9.3
P16A Fountain Green 73.07 328 ⇑P P **23 41 59.5 +0.3**
baz=73
O17A Robinson Place 73.07 329 ⇑P P **23 41 59.8 +0.6**
baz=73,SNR=25
BLG Laguna Peak 73.11 319 ⇓P P **23 41 59.2 -0.4**
baz=73
T11A Corn Creek, Al 73.13 324 ⇑P P **23 42 00.1 +0.5**
baz=73,SNR=28
U10A Ash Meadows, A 73.14 323 ⇑P P **23 42 00.3 +0.6**
baz=73,SNR=23
R13A O'Grain Ranch, 73.16 325 ⇑P P **23 42 00.4 +0.7**
baz=73,SNR=12
EOSO Osorio 73.18 49 P P **23 41 59.9 -0.2**
comp=Z,828nm,2.2s,mb6.3
N18A Larsen Ranch, 73.19 330 ⇑P P **23 41 60.0 +0.1**
baz=73,SNR=6.7
S12A Delamar Landin 73.20 324 ⇓P P **23 42 00.6 +0.6**
baz=73
LRMC Laurel Mountai 73.25 321 ⇓P P **23 42 00.5 +0.1**
baz=73
OSI Osito Adit 73.25 320 ⇑P P **23 42 00.1 -0.3**
baz=73
P15A Leamington 73.34 327 ⇑P P **23 42 01.3 +0.5**
baz=74,SNR=8.9
MPU Maple Canyon 73.37 328 *e*P P **23 42 01.8 +0.9**
comp=Z,46nm,1.1s,mb5.3
MPU *e*PP PP 23 44 47.1 +2.1
MPU S S 23 51 43.7 +16
MPU LR LR
comp=Z,3µm,19.0s,MS5.5
BSC Santa Cruz Isl 73.37 319 ⇓P P **23 42 00.7 -0.4**
baz=74
M19A Rock Springs 73.37 331 ⇑P P **23 42 00.8 -0.1**
baz=74,SNR=6.4
RSSD Black Hills 73.38 335 *e*P P **23 42 01.6 +0.7**
comp=Z,25nm,0.9s,mb5.1
RSSD *e*PP PP 23 44 50.3 +5.3
RSSD *e*S S 23 51 23.5 -3.7
RSSD LR LR
comp=Z,485nm,20.0s,MS4.8
RSSD Black Hills 73.38 335 *e*P P **23 42 01.6 +0.7**
RSSD *e* 23 44 50.3
RSSD *e*S S 23 51 23.5 -3.7
RSSD pmax pmax
comp=Z,25nm,0.9s,mb5.1
RSSD MLR MLR
comp=Z,485nm,20.0s,MS4.8
Q14A Sevier Lake (B 73.40 326 ⇑P P **23 42 01.8 +0.7**
baz=74,SNR=27
L20A Wamsutter 73.41 331 ⇑P P **23 42 01.4 +0.3**
baz=74,SNR=13
O16A Springville 73.45 328 ⇓P P **23 42 01.9 +0.5**
baz=74,SNR=8.5
FURC Furnace Creek, 73.48 322 ⇓P P **23 42 02.1 +0.4**
baz=74,SNR=10
TPNV Topopah Spring 73.48 323 *e*P P **23 42 03.0 +1.3**
comp=Z,310nm,1.9s,mb5.9
TPNV *e*S S 23 51 38.3 +10
TPNV LR LR
comp=Z,1µm,20.0s,MS5.1
TPNV Topopah Spring 73.48 323 *e*P P **23 42 03.0 +1.3**
TPNV pmax pmax
comp=Z,310nm,1.9s,mb5.9
TPNV MLR MLR
comp=Z,1µm,20.0s,MS5.1
TPNV Topopah Spring 73.48 323 ⇑P P **23 42 02.2 +0.5**
baz=74
DAU Daniels Canyon 73.49 329 *e*P P **23 42 02.6 +1.0**
NLU North Lily Min 73.54 328 *e*P P **23 41 59.8 -2.1**
MPMC Manual Prospec 73.54 322 ⇓P P **23 42 01.9 -0.1**
baz=74,SNR=21
R12A Pony Springs, 73.60 325 ⇑P P **23 42 02.9 +0.6**
baz=74,SNR=21
ARVC Arvin 73.67 320 ⇑P P **23 42 03.0 +0.2**
baz=74
PPT Papeete 73.70 257 *e*S S 23 51 30.7 -1.4
comp=Z,10µm,27.0s
PPT Papeete 73.70 257 *e*LR LR 00 04 42.2
comp=Z,9µm,25.8s,baz=106
PPT Papeete 73.70 257 LR LR 00 06 06.8
comp=Z,2µm,19.6s,MS5.5,baz=49,slow=29
N17A Moffit Pass 73.70 329 ⇓P P **23 42 03.5 +0.6**
baz=74,SNR=23
S11A Rachel 73.71 324 ⇓P P **23 42 04.1 +1.1**
baz=74,SNR=12
SBC Santa Barbara 73.72 319 ⇓P P **23 42 03.2 0.0**
baz=74
M18A Lyman 73.72 330 ⇑P P **23 42 02.8 -0.2**
baz=74,SNR=9.7
JLU Jordanelle 73.73 329 *e*P P **23 42 03.8 +0.7**
P14A Drum Mountains 73.75 327 ⇓P P **23 42 04.0 +0.8**
baz=74,SNR=30
DAC Darwin (Calif) 73.76 322 PFAKE 23 42 10.0 +6.7
DAC LR LR
comp=Z,2µm,20.0s,MS5.3
Q13A Wheeler Ranch, 73.76 326 ⇑P P **23 42 03.6 +0.3**
baz=74,SNR=10
ISA Isabella 73.83 321 *e*P P **23 42 08.8 +5.0**
ISA PP PP 23 44 59.3 +10
ISA *e*S S 23 51 23.3 -9.5
ISA LR LR
comp=Z,1µm,19.0s,MS5.1
ISA Isabella 73.83 321 *e*P P **23 42 04.7 +0.9**
ISA Isabella 73.83 321 ⇑P P **23 42 03.8 +0.1**
baz=74,SNR=13
L19A Farson 73.94 331 ⇑P P **23 42 04.2 0.0**
baz=74,SNR=21
N16A Rees Ranch, Co 73.95 329 ⇓P P **23 42 04.6 +0.3**
baz=74,SNR=6.6

O15A **The Old Anders** 73.98 328 ⇓P P 23 42 05.1 +0.5
baz=74,SNR=7.2
M17A **Scullys Gap (B** 74.04 330 ⇓P P 23 42 04.7 -0.2
baz=74,SNR=8.3
DUG **Dugway** 74.08 327 eP P 23 42 05.8 +0.6
DUG eS S 23 51 19.6 -16
DUG LR LR
comp=Z,1μm,21.0s,MS5.1
DUG **Dugway** 74.08 327 ⇓P P 23 42 05.4 +0.3
baz=74
PKM **Peak Mountain** 74.10 320 ⇓P P 23 42 05.3 -0.1
baz=74,SNR=11
L18A **Fontenelle, Gr** 74.10 330 ⇑P P 23 42 05.0 -0.2
baz=74,SNR=18
P13A **Bates Ranch, G** 74.13 326 ⇑P P 23 42 06.0 +0.6
baz=74,SNR=12
R11A **Troy Canyon, C** 74.14 325 ⇓P P 23 42 06.0 +0.5
baz=74,SNR=30
GRAC **Grapevine Rang** 74.14 323 ⇑P P 23 42 06.1 +0.6
baz=74
CWC **Cottonwood Cre** 74.15 322 ⇓P P 23 42 05.9 +0.3
baz=74,SNR=10.0
Q12A **Willow Creek R** 74.25 325 ⇑P P 23 42 06.2 +0.1
baz=74,SNR=7.8
VES **Vestal, Richgr** 74.31 321 ⇓P P 23 42 06.7 +0.1
baz=74,SNR=10
SBA **Scott Base** 74.32 191 eP P 23 42 06.8 +0.8
comp=Z,95nm,1.4s,mb5.5
SBA ePP PP 23 44 54.0 +2.1
SBA eS S 23 51 34.7 -2.5
SBA LR LR
comp=Z,1μm,20.0s,MS5.2
SBA **Scott Base** 74.32 191 eP P 23 42 06.8 +0.7
SBA e 23 44 54.0
SBA eS S 23 51 34.7 -2.5
SBA pmax pmax
comp=Z,95nm,1.4s,mb5.5
SBA MLR MLR
comp=Z,1μm,20.0s,MS5.2
AGMN **Agassiz Refuge** 74.36 343 eP P 23 42 05.9 -0.6
AGMN ePP PP 23 45 06.4 +13
AGMN eS S 23 51 16.6 -22
AGMN LR LR
comp=Z,1μm,20.0s,MS5.3
M16A **Huntsville** 74.37 329 ⇑P P 23 42 06.7 -0.1
baz=75,SNR=5.9
S10A **Tonopah Range,** 74.37 324 ⇑P P 23 42 07.1 +0.2
baz=75,SNR=11
CFTV **Fuerteventura** 74.41 50 P P 23 42 05.7 -1.6
comp=Z,50nm,1.0s,mb5.4
N15A **Stansbury Isla** 74.47 328 ⇓P P 23 42 07.3 -0.1
baz=75,SNR=5.6
R10A **Warm Springs** 74.48 324 ⇑P P 23 42 08.2 +0.7
baz=75,SNR=8.5
SMMC **Simmler** 74.49 320 ⇓P P 23 42 07.8 +0.2
baz=75,SNR=6.8
Q11A **Duckwater** 74.54 325 ⇑P P 23 42 08.3 +0.5
baz=75,SNR=16
BW06 **Boulder Array** 74.56 331 eP P 23 42 02.7 -5.1
BW06 eS S 23 51 18.7 -22
BW06 LR LR
comp=Z,1μm,22.0s,MS5.2
BW06 **Boulder Array** 74.56 331 ⇓P P 23 42 07.7 -0.1
baz=75
PDAR **Pinedale Array** 74.56 331 P P 23 42 07.3 -0.5
comp=Z,11nm,1.2s,mb4.7,baz=142,slow=5.1,SNR=25
PDAR LR LR 00 17 20.3
comp=Z,1μm,18.8s,MS5.2,baz=48,slow=38
HWUT **Hardware Ranch** 74.56 329 eP P 23 42 07.8 -0.1
HWUT ePcP PcP 23 42 22.0 -0.2
HWUT eS S 23 51 39.9 -0.8
HWUT LR LR
comp=Z,3μm,21.0s,MS5.6
S09A **Goldfield** 74.58 323 ⇑P P 23 42 08.4 +0.3
baz=75,SNR=15
P12A **McGill** 74.61 326 ⇓P P 23 42 08.7 +0.5
baz=75,SNR=13
O13A **Hicks Ranch, I** 74.62 327 ⇑P P 23 42 08.5 +0.2
baz=75
TIN **Tinemaha** 74.67 322 ⇓P P 23 42 08.7 +0.1
baz=75
RCTC **Rector, Farmer** 74.73 321 ⇓P P 23 42 08.4 -0.6
baz=75
BGU **Big Grassy Mou** 74.75 328 eP P 23 42 08.2 -0.8
SPUT **South Promonto** 74.76 328 eP P 23 42 08.4 -0.6
N14A **Grayback Hills** 74.77 328 ⇓P P 23 42 09.0 -0.1
baz=75,SNR=17
V05C **Boulder Hill,** 74.81 320 ⇑P P 23 42 09.7 +0.2
baz=75
L16A **Fish Haven** 74.82 330 ⇑P P 23 42 09.4 0.0
baz=75,SNR=7.3
TPH **Tonopah** 74.83 323 eP P 23 42 09.8 +0.3
comp=Z,65nm,1.3s,mb5.4
TPH eS S 23 51 50.3 +6.5
TPH LR LR
comp=Z,1μm,19.0s,MS5.2
TPH **Tonopah** 74.83 323 eP P 23 42 09.9 +0.4
TPH eS S 23 51 50.3 +6.5
TPH pmax pmax
comp=Z,65nm,1.3s,mb5.4
TPH MLR MLR
comp=Z,1μm,19.0s,MS5.2
M15A **Larsen Ranch,** 74.88 329 ⇓P P 23 42 09.6 -0.1
baz=75,SNR=19
Q10A **Clear Creek Ra** 74.92 324 ⇓P P 23 42 10.6 +0.5
baz=75,SNR=8.4
MTUM **Tungsten Hills** 75.07 322 eP P 23 42 09.9 -1.0
P11A **Circle Ranch,** 75.11 325 ⇑P P 23 42 11.4 +0.3
baz=75
O12A **Currie** 75.11 326 ⇓P P 23 42 11.2 +0.1
baz=75,SNR=25
EFAM **Famara** 75.23 49 P P 23 42 12.9 +0.9
comp=Z,606nm,1.8s,mb6.2
PKD **Parkfield** 75.24 320 ⇑P P 23 42 12.2 +0.2
baz=75
AHID **Auburn Hatcher** 75.25 330 eP P 23 42 12.4 +0.5
AHID ePP PP 23 44 53.0 -8.0
AHID eS S 23 51 50.8 +2.5
AHID LR LR
comp=Z,2μm,22.0s,MS5.4
U05C **Westside ANR,** 75.26 320 ⇓P P 23 42 11.8 -0.3
baz=75
L15A **Malad City** 75.26 329 ⇑P P 23 42 11.6 -0.3
baz=76,SNR=20
HVU **Hansel Valley** 75.28 329 eP P 23 42 12.4 +0.4
M14A **Sheep Mountain** 75.34 328 ⇓P P 23 42 12.1 -0.3
baz=76,SNR=20
VNDA **Vanda** 75.35 190 P P 23 42 12.5 +0.5
comp=Z,18nm,0.9s,mb5.0,baz=135,slow=5.2,SNR=31
VNDA LR LR 00 14 29.4
comp=Z,3μm,18.5s,MS5.6,baz=143,slow=35
Q09A **Carvers** 75.35 324 ⇑P P 23 42 12.7 +0.2
baz=76
I18A **Diamond G Ranc** 75.41 332 ⇓P P 23 42 13.0 +0.2
baz=76,SNR=14
MLAC **Mammoth Lakes** 75.41 322 ⇓P P 23 42 13.1 +0.2
baz=76
KCC **Kaiser Creek** 75.47 322 ⇓P P 23 42 12.8 -0.4
baz=76,SNR=14
O11A **Cowboy Ranch,** 75.48 326 ⇓P P 23 42 13.4 +0.1
baz=76,SNR=9.4
T06C **Millerton Lake** 75.48 321 ⇓P P 23 42 12.7 -0.6
baz=76
R08A **Mina** 75.51 323 ⇑P P 23 42 13.3 -0.1
baz=76
K16A **Soda Springs** 75.53 330 ⇑P P 23 42 13.8 +0.3
baz=76,SNR=7.3
P10A **Eureka** 75.53 325 ⇓P P 23 42 13.9 +0.3
baz=76,SNR=6.7
J17A **Brown Place, J** 75.54 331 ⇑P P 23 42 13.7 +0.2
baz=76,SNR=6.2
REDW **Red Top Meadow** 75.61 331 eP P 23 42 14.7 +0.8
M13A **Montello** 75.64 327 ⇑P P 23 42 14.2 +0.1
baz=76
SNOW **Snow King Moun** 75.64 331 eP P 23 42 14.1 0.0
U04C **Hernandez Rese** 75.67 320 ⇑P P 23 42 14.8 +0.4
baz=76,SNR=7.3
NVAR **Mina Array Bea** 75.68 323 P P 23 42 14.6 +0.2
comp=Z,4.2nm,0.8s,mb4.4,baz=143,slow=5.5,SNR=15
LOHW **Long Hollow** 75.69 331 eP P 23 42 14.8 +0.4
L14A **Malta** 75.69 328 ⇓P P 23 42 14.5 +0.1
baz=76
N12A **Clover Valley,** 75.70 327 ⇓P P 23 42 14.6 +0.1
baz=76
V03C **Hunter Liggett** 75.71 320 ⇓P P 23 42 14.9 +0.3
baz=76
ELK **Elko** 75.72 326 eP P 23 42 14.7 +0.1
comp=Z,26nm,1.2s,mb5.0
ELK eS S 23 51 34.4 -19
ELK LR LR
comp=Z,2μm,20.0s,MS5.5
ELK **Elko** 75.72 326 eP P 23 42 14.7 +0.1
ELK pmax pmax
comp=Z,26nm,1.2s
ELK MLR MLR
comp=Z,2μm,20.0s
TPAW **Teton Pass** 75.75 331 eP P 23 42 15.5 +0.8
Q08A **Gabbs** 75.78 324 ⇑P P 23 42 15.1 +0.2
baz=76
SYO **Syowa Base** 75.78 160 ⇓iP P 23 42 12.6 -2.0
RRI2 **Red Ridge** 75.81 330 eP P 23 42 15.9 +0.9
RRI2 ePP PP 23 45 06.7 +1.0
P09A **Austin** 75.84 324 ⇑P P 23 42 15.4 +0.1
baz=76
K15A **Arbon** 75.85 329 ⇓P P 23 42 15.2 -0.1
baz=76
MOOW **Moose Ponds** 75.86 331 eP P 23 42 15.8 +0.5
J16A **Bone** 75.88 330 ⇑P P 23 42 15.9 +0.5
baz=76
I17A **Pilgram Creek** 75.92 331 ⇑P P 23 42 16.5 +0.8
baz=76
DCID1 **Drake Creek** 75.94 331 eP P 23 42 13.9 -1.9
N11A **Elko Archery C** 76.03 326 ⇓P P 23 42 16.6 +0.2
baz=76
O10A **Cortez Mining,** 76.04 325 ⇑P P 23 42 16.7 +0.3
baz=76
M12A **Wells** 76.05 327 ⇑P P 23 42 16.3 -0.2
baz=76,SNR=6.3
K14A **Jones Ranch, D** 76.05 329 ⇓P P 23 42 16.2 -0.2
baz=76,SNR=5.7
IMW **Indian Meadow** 76.06 331 eP P 23 42 16.9 +0.4
S05C **Merced** 76.07 321 ⇑P P 23 42 16.8 +0.1
baz=76,SNR=8.7
L13A **Double Diamond** 76.08 328 ⇑P P 23 42 16.6 +0.1
baz=76,SNR=12
ULM **Lac du Bonnet** 76.14 343 P P 23 42 15.0 -1.8
comp=Z,14nm,0.9s,mb4.9,baz=163,slow=5.7,SNR=11
I16A **Newdale** 76.30 331 ⇓P P 23 42 18.1 +0.3
baz=77,SNR=6.9
H17A **Grant Village** 76.30 332 ⇓P P 23 42 19.0 +1.2
baz=77
RLMT **Red Lodge** 76.31 333 eP P 23 42 18.6 +0.8
RLMT ePP PP 23 45 08.9 -1.1
RLMT eS S 23 51 56.9 -3.0
RLMT LR LR
comp=Z,2μm,19.0s,MS5.4
RLMT **Red Lodge** 76.31 333 ⇓P P 23 42 18.1 +0.3
baz=77
O09A **Fish Creek Ran** 76.31 325 ⇑P P 23 42 18.1 +0.1
baz=76
Q07A **Schurz** 76.31 323 ⇓P P 23 42 18.3 +0.3
baz=76
SAO **San Andreas Ge** 76.33 320 PFAKE 23 42 30.0 +12
SAO LR LR
comp=Z,2μm,22.0s,MS5.3
N10A **Dunphy** 76.35 326 ⇓P P 23 42 18.3 +0.1
baz=77
LKWY **Lake** 76.36 332 PFAKE 23 42 30.0 +12
LKWY LR LR
comp=Z,2μm,20.0s,MS5.4
J15A **Blackfoot** 76.36 330 ⇓P P 23 42 18.6 +0.5
baz=77
LAO **LASA Array** 76.37 335 eP P 23 42 18.5 +0.4
LAO eS S 23 51 38.6 -22
LAO LR LR
comp=Z,1μm,19.0s,MS5.3
R06C **Coleville** 76.38 322 ⇑P P 23 42 19.3 +0.9
baz=77,SNR=8.3
P08A **Dixie Valley** 76.45 324 ⇑P P 23 42 19.2 +0.4
baz=77
YFT **Old Faithful** 76.46 331 eP P 23 42 21.5 +2.8
YFT ePP PP 23 45 06.2 -5.0
M11A **Holland Ranch,** 76.51 327 ⇓P P 23 42 19.2 +0.2
baz=77,SNR=17
BMN **Battle Mountai** 76.52 325 PFAKE 23 42 30.0 +11
BMN LR LR
comp=Z,2μm,22.0s,MS5.3
K13A **Stover Farm, H** 76.57 328 ⇑P P 23 42 19.7 +0.4
baz=77
CMB **Columbia Colle** 76.58 322 eP P 23 42 19.2 -0.3
comp=Z,35nm,1.3s,mb5.1
CMB ePP PP 23 45 16.2 +3.9
CMB eS S 23 51 57.5 -5.7
CMB LR LR
comp=Z,1μm,19.0s,MS5.2
CMB **Columbia Colle** 76.58 322 eP P 23 42 19.2 -0.3
CMB e 23 45 16.2
CMB eS S 23 51 57.5 -5.7
CMB pmax pmax
comp=Z,35nm,1.3s,mb5.1
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.2
CMB **Columbia Colle** 76.58 322 ⇑P P 23 42 19.2 -0.3
baz=77
G18A **Lazy EL Ranch,** 76.59 333 ⇑P P 23 42 19.4 -0.1
baz=77,SNR=10
YNR **Norris Junctio** 76.59 332 eP P 23 42 20.1 +0.6
P07A **Fallon** 76.78 323 ⇓P P 23 42 21.2 +0.6
baz=77
J14A **Carey** 76.81 329 ⇓P P 23 42 21.5 +0.8
baz=77
H16A **Russell Place,** 76.84 331 ⇑P P 23 42 21.3 +0.5
baz=77,SNR=7.6
I15A **Monteview** 76.84 330 ⇑P P 23 42 21.9 +1.0
baz=77
O08A **Rochester Mine** 76.92 324 ⇑P P 23 42 21.5 +0.1
baz=77
M10A **I.L. Ranch, Tu** 76.95 326 ⇑P P 23 42 21.9 +0.4
baz=77
K12A **Draper Farm, C** 76.96 328 ⇓P P 23 42 22.2 +0.6
baz=77,SNR=26
N09A **Rock Creek Ran** 76.98 325 ⇓P P 23 42 21.7 -0.1
baz=77
QLMT **Earthquake Lak** 77.02 331 eP P 23 42 22.9 +1.0
GCMT **Greycliff** 77.02 333 eP P 23 42 21.7 -0.1
R04C **Big Horse Ranc** 77.05 321 ⇑P P 23 42 22.6 +0.4
baz=77
WENL **Wente Vineyard** 77.09 320 ⇓P P 23 42 22.9 +0.5
baz=77
WCN **Washoe City** 77.10 323 ⇑P P 23 42 22.9 +0.5
baz=77
DGMT **Dagmar** 77.12 338 eP P 23 42 22.4 +0.1
comp=Z,116nm,1.2s,mb5.7
DGMT ePcP PcP 23 42 32.6 -0.5
DGMT ePP PP 23 45 22.9 +6.2
DGMT eS S 23 52 06.8 -1.8
DGMT LR LR
comp=Z,2μm,19.0s,MS5.3
DGMT **Dagmar** 77.12 338 ⇑P P 23 42 22.5 +0.1
baz=77,SNR=13
F18A **Big Timber** 77.13 333 ⇑P P 23 42 22.5 0.0
baz=77,SNR=29
PAHR **Pah Rah Range** 77.17 323 eP P 23 42 23.5 +0.7
comp=Z,117nm,1.3s,mb5.7
PAHR ePcP PcP 23 42 33.1 -0.4
J13A **Cove Ranch, Pi** 77.18 329 ⇑P P 23 42 22.9 +0.2
baz=77,SNR=9.9
O07A **Toulon** 77.21 324 ⇓P P 23 42 22.7 -0.4
baz=77,SNR=7.8
I14A **Mackay** 77.24 330 ⇑P P 23 42 23.9 +0.8
baz=78,SNR=8.7
N08A **GE Springer Mi** 77.25 325 ⇑P P 23 42 22.7 -0.6
baz=78,SNR=10
LAVA **Lava Cap Winer** 77.27 322 ⇑P P 23 42 22.8 -0.6
baz=78,SNR=7.1
L10A **Juniper Basin** 77.33 327 ⇓P P 23 42 23.8 +0.2
baz=78,SNR=24
M09A **Marrel Ranch,** 77.35 326 ⇓P P 23 42 23.9 +0.1
baz=78,SNR=7.6
SCHQ **Schefferville** 77.36 2 P P 23 42 22.9 -0.6
comp=Z,10nm,0.8s,mb4.8,baz=179,slow=5.0,SNR=6.3
SCHQ LR LR 00 15 37.8
comp=Z,1μm,21.6s,MS5.3,baz=62,slow=35
BDM **Black Diamond** 77.38 321 ⇑P P 23 42 23.9 -0.1
baz=78
H15A **Lima** 77.39 331 ⇓P P 23 42 24.5 +0.5
baz=78,SNR=9.4
HLID **Hailey** 77.42 329 eP P 23 42 24.8 +0.7
comp=Z,28nm,1.0s,mb5.2
HLID ePcP PcP 23 42 34.4 0.0
HLID ePP PP 23 45 11.0 -8.2
HLID eS S 23 52 05.7 -6.3
HLID LR LR
comp=Z,884nm,19.0s,MS5.1
HLID **Hailey** 77.42 329 ⇑P P 23 42 24.6 +0.5
baz=78,SNR=29
P06A **Stead Airport,** 77.44 323 ⇓P P 23 42 24.2 -0.1
baz=78
G16A **Moss Hill, Enn** 77.49 331 ⇓P P 23 42 24.7 +0.3
baz=78,SNR=9.2
J12A **Stokes Ranch,** 77.51 328 ⇑P P 23 42 25.1 +0.5
baz=78,SNR=22
F17A **Fitzpatrick Pl** 77.53 332 ⇓P P 23 42 25.1 +0.4
baz=78,SNR=22
I13A **Wildhorse Cree** 77.54 329 ⇓P P 23 42 25.5 +0.7
baz=78,SNR=11
K11A **Parker Ranch,** 77.61 327 ⇓P P 23 42 25.2 0.0
baz=78,SNR=15
MCMT **McKenzie Canyo** 77.65 331 eP P 23 42 26.2 +0.8
MCMT ePcP PcP 23 42 35.7 +0.3
N07B **Gerlach** 77.70 324 ⇑P P 23 42 25.6 -0.2
baz=78,SNR=32
O06A **Flanigan** 77.73 323 ⇑P P 23 42 26.1 +0.1
baz=78
E18A **Harlowton** 77.74 333 ⇑P P 23 42 26.0 +0.2
baz=78,SNR=13
G15A **Dillon** 77.75 331 ⇓P P 23 42 26.2 +0.3
baz=78,SNR=15
BEKR **Beckwourth** 77.82 323 ⇑P P 23 42 26.7 +0.3
baz=78,SNR=8.6
F16A **Kennard Place,** 77.85 332 ⇑P P 23 42 26.5 +0.1
baz=78
M08A **Happy Creek Ra** 77.86 325 ⇑P P 23 42 26.6 -0.1
baz=78,SNR=11
L09A **Wilkinson Ranc** 77.90 326 ⇓P P 23 42 26.9 +0.1
baz=78,SNR=8.2
Q03C **Winters** 77.92 321 ⇓P P 23 42 26.6 -0.5
baz=78
DLMT **Dillon** 77.95 331 eP P 23 42 27.9 +0.8
DLMT ePcP PcP 23 42 35.9 -0.8
CVS **Carmenet Viney** 77.99 321 ⇑P P 23 42 27.2 -0.3
baz=78
MFID **Camas Ranch** 77.99 328 ⇓P P 23 42 27.5 +0.2
baz=78,SNR=16
LCCM **Lewis and Clar** 78.00 332 P P 23 42 27.9 +0.6
K10A **MacKenzie Ranc** 78.04 327 ⇓P P 23 42 27.6 0.0
baz=78,SNR=15
E17A **Martinsdale** 78.05 333 ⇑P P 23 42 27.7 +0.2
baz=78,SNR=15
OHCM **Honcut** 78.09 322 eP P 23 42 27.9 -0.1
H13A **Challis** 78.10 330 ⇑P P 23 42 28.2 +0.4
baz=78,SNR=37
MCCM **Marconi Confer** 78.10 320 PFAKE 23 42 40.0 +12
MCCM LR LR
comp=Z,795nm,20.0s,MS5.0
MCCM **Marconi Confer** 78.10 320 ⇓P P 23 42 28.0 0.0
baz=78
N06A **Buffalo Meadow** 78.15 324 ⇓P P 23 42 28.2 -0.1
baz=78,SNR=27
NSHM **Saint Helena R** 78.19 321 eP P 23 42 28.3 -0.2
D18A **Linhart Farms,** 78.20 334 ⇑P P 23 42 28.5 +0.1
baz=78,SNR=11
O05C **Quincy** 78.20 323 ⇓P P 23 42 28.9 +0.4
baz=78
M07A **Soldier Meadow** 78.24 325 ⇓P P 23 42 28.4 -0.3
baz=78,SNR=14
LRM **Limekiln Ridge** 78.24 331 eP P 23 42 29.4 +0.8
G14A **Jackson** 78.25 330 ⇑P P 23 42 28.9 +0.2
baz=78
ORV **Oroville** 78.25 322 ⇑P P 23 42 28.6 -0.3
baz=78,SNR=22
F15A **Butte** 78.27 331 ⇑P P 23 42 29.3 +0.5
baz=78,SNR=22
MNRC **McLaughlin Nat** 78.34 321 ⇓P P 23 42 29.6 +0.3
baz=78
H12A **Diamond D Ranc** 78.37 329 ⇓P P 23 42 29.6 +0.2
baz=79,SNR=12
L08A **Fields** 78.37 326 ⇓P P 23 42 29.3 -0.2
baz=79,SNR=8.9
K09A **Rome** 78.42 326 ⇓P P 23 42 29.5 -0.2
baz=79,SNR=11
I11A **Placerville** 78.42 328 ⇑P P 23 42 29.3 -0.4
baz=79
E16A **East Helena** 78.46 332 ⇑P P 23 42 30.4 +0.6
baz=79
J10A **Berg Farm, Mel** 78.46 327 ⇓P P 23 42 29.7 -0.2
baz=79
D17A **Six Diamond Ra** 78.53 333 ⇑P P 23 42 30.0 -0.2
baz=79,SNR=38
O04C **Chester** 78.54 323 ⇑P P 23 42 30.1 -0.3
baz=79,SNR=8.8
F14A **Wisdom** 78.64 331 ⇑P P 23 42 31.2 +0.4
baz=79,SNR=8.8
HRY **Holter Researc** 78.66 332 eP P 23 42 31.8 +0.8
HRY ePcP PcP 23 42 38.9 -0.9
WVOR **Wild Horse Val** 78.69 326 eP P 23 42 31.4 +0.2
comp=Z,24nm,1.1s,mb5.0
WVOR eS S 23 52 10.6 -15
WVOR LR LR
comp=Z,2μm,19.0s,MS5.4
WVOR **Wild Horse Val** 78.69 326 eP P 23 42 31.4 +0.2
WVOR pmax pmax
comp=Z,24nm,1.1s,mb5.0
WVOR MLR MLR
comp=Z,2μm,19.0s,MS5.4
L07A **Adell** 78.77 325 ⇓P P 23 42 31.6 -0.1
baz=79,SNR=12
HOPS **Hopland** 78.78 321 PFAKE 23 42 40.0 +8.2
HOPS LR LR
comp=Z,1μm,19.0s,MS5.3
HOPS **Hopland** 78.78 321 ⇓P P 23 42 31.6 -0.1
baz=79
E15A **Deer Lodge** 78.79 332 ⇓P P 23 42 31.9 +0.2
baz=79,SNR=12
K08A **Mann Creek Ran** 78.83 326 ⇑P P 23 42 31.9 0.0
baz=79
EGMT **Eagleton** 78.84 334 eP P 23 42 31.8 -0.1
comp=Z,36nm,1.1s,mb5.2
EGMT ePP PP 23 45 32.7 +1.6
EGMT eS S 23 52 42.2 +15
EGMT LR LR
comp=Z,1μm,20.0s,MS5.3
EGMT **Eagleton** 78.84 334 ⇑P P 23 42 31.8 -0.2
baz=79
J09A **Fry Pan Ranch,** 78.90 327 ⇑P P 23 42 32.5 +0.1
baz=79
C17A **Wharram Farm,** 78.94 333 ⇓P P 23 42 32.1 -0.4
baz=79,SNR=19
I10A **Payette** 78.96 328 ⇑P P 23 42 32.3 -0.3
baz=79
GASB **Alder Springs** 79.01 322 ⇑P P 23 42 33.1 +0.1
baz=79,SNR=7.1
H11A **Donnelly** 79.03 329 ⇓P P 23 42 32.7 -0.3
baz=79,SNR=11
TOA0 **Torodi Ar. Sit** 79.07 71 eP P 23 42 33.7 -0.3
TORD **Torodi Ar. Bea** 79.07 71 P P 23 42 33.6 -0.3
comp=Z,148nm,0.9s,mb5.9,baz=252,slow=4.1,SNR=340
TORD LR LR 00 17 37.1
comp=Z,4μm,18.9s,MS5.8,baz=220,slow=36
SUR **Sutherland** 79.11 121 eP P 23 42 35.6 +1.6
comp=Z,204nm,1.6s,mb5.8
SUR ePP PP 23 45 43.1 +10
SUR eS S 23 52 28.6 -2.4
SUR LR LR
comp=Z,4μm,20.0s,MS5.8
K07A **Rock Creek Ran** 79.19 326 ⇑P P 23 42 34.1 +0.1
baz=79,SNR=15
MOD **Modoc** 79.20 324 eP P 23 42 33.9 -0.1
comp=Z,41nm,1.2s,mb5.2
MOD ePcP PcP 23 42 40.5 -1.7
MOD eS S 23 52 17.8 -14
MOD LR LR
comp=Z,1μm,19.0s,MS5.2
MOD **Modoc** 79.20 324 ⇓P P 23 42 34.1 0.0
baz=79,SNR=9.1
D15A **Lincoln** 79.22 332 ⇓P P 23 42 34.3 +0.3
baz=80,SNR=17
J08A **Circle Bar Ran** 79.27 326 ⇓P P 23 42 34.3 -0.1
baz=80,SNR=8.0
H10A **Noah's Angus R** 79.30 328 ⇑P P 23 42 34.2 -0.3
baz=80,SNR=12
I09A **Lost Marbles R** 79.34 327 ⇓P P 23 42 34.9 +0.1
baz=80
LTIM **Timbered Crate** 79.35 323 P P 23 42 35.1 +0.2
C16A **Fuhringer Ranc** 79.48 333 ⇑P P 23 42 35.4 0.0
baz=80,SNR=20
E13A **Victor** 79.49 331 ⇑P P 23 42 36.0 +0.5
baz=80,SNR=23
WDC **Whiskeytown Da** 79.53 322 eP P 23 42 35.4 -0.5
comp=Z,28nm,1.2s,mb5.1
WDC PcP PcP 23 42 44.5 +0.7

WDC eS S 23 52 21.1 -14
WDC LR LR
comp=Z,864nm,20.0s,MS5.1
WDC Whiskeytown Da 79.53 322 eP **P 23 42 35.4 -0.5**
WDC pP 23 42 44.5 -2.7
WDC pmax pmax
comp=Z,28nm,1.2s,mb5.1
WDC MLR MLR
comp=Z,864nm,20.0s,MS5.1
WDC Whiskeytown Da 79.53 322 ⇑P **P 23 42 34.6 -1.3**
baz=80,SNR=7.7
KIPM Iron Peak 79.56 321 eP **P 23 42 36.5 +0.5**
KIPM PcP PcP 23 42 43.1 -0.7
G11A Walters Elk Ra 79.67 329 ⇑P **P 23 42 36.3 -0.2**
baz=80,SNR=54
D14A Greenough 79.68 332 ⇓P **P 23 42 36.6 +0.2**
baz=80,SNR=16
J07A Hines 79.71 326 ⇓P **P 23 42 36.8 +0.1**
baz=80
I08A Drewsey 79.71 327 ⇑P **P 23 42 37.2 +0.4**
baz=80,SNR=18
H09A Durkee 79.81 328 ⇓P **P 23 42 37.4 +0.2**
baz=80
C15A Salmond Ranch, 79.82 333 ⇓P **P 23 42 37.6 +0.4**
baz=80,SNR=42
B16A M & M Farms, S 79.95 333 ⇑P **P 23 42 37.5 -0.4**
baz=80
F11A Grangeville 79.98 329 ⇑P **P 23 42 37.8 -0.3**
baz=80,SNR=26
G10A Bishop Farm, J 80.00 329 ⇑P **P 23 42 38.6 +0.4**
baz=80,SNR=20
J06A Christmas Vall 80.06 326 ⇓P **P 23 42 38.4 -0.2**
baz=80,SNR=21
K05A Summer Lake 80.09 325 ⇑P **P 23 42 39.0 +0.2**
baz=80,SNR=14
D13A Huson 80.11 331 ⇑P **P 23 42 39.1 +0.3**
baz=80,SNR=29
H08A Prairie City 80.20 327 ⇑P **P 23 42 39.3 0.0**
baz=80,SNR=14
B15A Bradely Ranch, 80.22 333 ⇑P **P 23 42 38.8 -0.7**
baz=80,SNR=24
LAMM Antelope Mount 80.27 323 P **P 23 42 39.1 -0.7**
G09A Cove 80.31 328 ⇑P **P 23 42 40.0 +0.1**
baz=80,SNR=43
I07A Izee 80.31 326 ⇓P **P 23 42 40.2 +0.2**
baz=80,SNR=22
A16A West Butte Ran 80.32 334 ⇑P **P 23 42 39.7 -0.2**
baz=81,SNR=20
E11A Bogner Ranch, 80.35 330 ⇓P **P 23 42 39.6 -0.5**
baz=81,SNR=20
YBH Yreka Blue Hor 80.40 323 LR LR 00 19 34.6
comp=Z,896nm,18.1s,MS5.2,baz=141,slow=37
YBH Yreka Blue Hor 80.40 323 PFAKE 23 42 50.0 +9.5
YBH LR LR
comp=Z,898nm,20.0s,MS5.1
YBH Yreka Blue Hor 80.40 323 ⇑P **P 23 42 39.4 -1.1**
baz=81,SNR=6.4
KHMM Horse Mountain 80.40 322 eP **P 23 42 41.9 +1.3**
F10A Beach Ranch, E 80.55 329 ⇓P **P 23 42 41.3 +0.1**
baz=81,SNR=22
B14A Marquette Ranc 80.56 333 ⇓P **P 23 42 41.3 +0.1**
baz=81
I06A Prineville 80.58 326 ⇑P **P 23 42 41.5 +0.1**
baz=81,SNR=18
C13A Hot Springs 80.60 331 ⇓P **P 23 42 41.7 +0.3**
baz=81,SNR=27
F09A S2 Ranch, Elgi 80.68 328 ⇑P **P 23 42 41.5 -0.5**
baz=81,SNR=7.7
A15A Johnson Ranch, 80.81 333 ⇑P **P 23 42 41.7 -0.9**
baz=81,SNR=16
BSMT Bassoo Peak 80.83 331 eP **P 23 42 43.5 +0.8**
E10A Myers Farm, Un 80.87 329 ⇓P **P 23 42 42.8 -0.1**
baz=81,SNR=22
G08A Pilot Rock 80.89 328 ⇓P **P 23 42 42.9 -0.2**
baz=81,SNR=21
D11A Klaveano Farm, 80.92 330 ⇑P **P 23 42 42.6 -0.6**
baz=81,SNR=6.9
TSUM Tsumeb 80.98 107 eP **P 23 42 45.1 +0.8**
comp=Z,115nm,1.0s,mb5.8
TSUM eS S 23 52 53.5 +2.4
TSUM LR LR
comp=Z,5μm,20.0s,MS5.9
LNOR Lincton Mounta 80.98 328 eP **P 23 42 42.6 -0.9**
C12B Naegeli Ranch, 81.02 331 ⇓P **P 23 42 43.9 +0.2**
baz=81
B13A Whitefish 81.08 332 ⇓P **P 23 42 43.8 -0.3**
baz=81,SNR=17
A14A Double T Ranch 81.09 333 ⇓P **P 23 42 43.5 -0.6**
baz=81,SNR=17
HUMO Hull Mountain 81.12 324 eP **P 23 42 43.5 -0.9**
comp=Z,40nm,1.4s,mb5.2
HUMO ePcP PcP 23 42 51.1 +0.5
HUMO eS S 23 52 51.0 -0.5
HUMO LR LR
comp=Z,1μm,19.0s,MS5.2
HUMO Hull Mountain 81.12 324 ⇑P **P 23 42 44.0 -0.4**
baz=81
F08A Pendleton 81.17 328 ⇑P **P 23 42 44.2 -0.3**
baz=81
L02A Cave Junction 81.18 323 ⇑P **P 23 42 44.4 -0.2**
baz=81,SNR=7.5
H06A Lindquist Farm 81.19 326 ⇓P **P 23 42 44.8 +0.1**
baz=81,SNR=17
G07A Ruggs Ranch, H 81.23 327 ⇓P **P 23 42 45.1 +0.3**
baz=82,SNR=24
I05A Bend 81.28 326 ⇓P **P 23 42 45.2 0.0**
baz=82
D10A Wagner Farm, O 81.36 330 ⇑P **P 23 42 44.8 -0.7**
baz=82,SNR=19
WALA Waterton Lakes 81.37 333 eP **P 23 42 45.0 -0.6**
WALA epP pP 23 42 56.0 -0.9
E09A Wood Farm, Sta 81.38 329 ⇓P **P 23 42 44.9 -0.8**
baz=82,SNR=9.3
C11A Tepee Creek (N 81.47 331 ⇓P **P 23 42 45.8 -0.3**
baz=82,SNR=26
RAR Rarotonga 81.50 251 LR LR 00 10 31.1
comp=Z,2μm,19.1s,MS5.4,baz=289,slow=30
KBO Bosley Butte 81.56 323 eP **P 23 42 47.3 +0.6**
H05A Madras 81.59 326 ⇑P **P 23 42 46.5 -0.3**
baz=82
B12A Libby 81.64 331 ⇓P **P 23 42 46.7 -0.3**
baz=82
IRO Indian Ridge 81.69 325 P **P 23 42 47.5 +0.1**
G06A Carlson Farm, 81.69 327 ⇓P **P 23 42 47.4 +0.1**
baz=82,SNR=9.6
E08A Dider Farm, El 81.80 328 ⇓P **P 23 42 47.0 -0.8**
baz=82
FFC Flin Flon 81.82 342 eP **P 23 42 46.8 -0.9**
comp=Z,131nm,1.8s,mb5.6
FFC ePcP PcP 23 42 53.5 +0.1
FFC eS S 23 52 43.9 -14
FFC LR LR
comp=Z,2μm,21.0s,MS5.5
FFC Flin Flon 81.82 342 eP **P 23 42 46.8 -0.9**
FFC e 23 42 53.5
FFC pmax pmax
comp=Z,131nm,1.8s,mb5.6
FFC MLR MLR
comp=Z,2μm,21.0s,MS5.5
D09A Jones Farm, Ri 81.85 329 ⇑P **P 23 42 47.8 -0.4**
baz=82,SNR=12
C10A Spilker Farm, 81.94 330 ⇓P **P 23 42 48.4 -0.1**
baz=82
HAWA Hanford 81.96 328 eP **P 23 42 48.4 -0.3**
comp=Z,97nm,1.4s,mb5.5
J02A Umpqua 81.97 324 ⇓P **P 23 42 48.6 -0.2**
baz=82
B11A Sandpoint 81.97 331 ⇓P **P 23 42 48.1 -0.6**
baz=82,SNR=8.1
RSW Rattlesnake Hi 81.99 328 eP **P 23 42 49.1 +0.3**
A12A Yaak River Ran 82.02 332 ⇓P **P 23 42 48.8 -0.1**
baz=82,SNR=8.7
G05A Wamic 82.05 326 ⇓P **P 23 42 49.4 +0.2**
baz=82,SNR=13
SNIWA Snively Ranch 82.07 328 P **P 23 42 50.0 +0.7**
K01A Sixes 82.09 323 ⇓P **P 23 42 49.2 -0.3**
baz=82
H04A Detroit Lake 82.11 326 ⇓P **P 23 42 49.4 -0.1**
baz=82
D08A Wollman Farm, 82.14 329 ⇑P **P 23 42 49.4 -0.2**
baz=82,SNR=5.7
F06A Goldendale 82.14 327 ⇑P **P 23 42 49.7 +0.1**
baz=82,SNR=7.6
NEW Newport 82.18 331 eP **P 23 42 49.2 -0.6**
comp=Z,35nm,1.3s,mb5.1
NEW eS S 23 52 46.7 -15
NEW LR LR
comp=Z,1μm,19.0s,MS5.3
NEW Newport 82.18 331 eP **P 23 42 49.2 -0.6**
NEW pmax pmax
comp=Z,35nm,1.3s
NEW MLR MLR
comp=Z,1μm,19.0s
I03A Eugene 82.21 324 ⇑P **P 23 42 50.1 +0.1**
baz=82
E07A Sunnyside 82.23 328 ⇑P **P 23 42 49.9 -0.3**
baz=82,SNR=6.1
B10A Chitwood Farm, 82.25 331 ⇓P **P 23 42 49.8 -0.3**
baz=82
HOOD Mount Hood Mea 82.27 326 eP **P 23 42 49.5 -0.9**
comp=Z,113nm,1.2s,mb5.7
OD2 Odessa Site #2 82.28 329 P **P 23 42 50.7 +0.3**
A11A Hall Mountain, 82.35 331 ⇓P **P 23 42 50.5 -0.1**
baz=83,SNR=26
C09A Chrisman Ranch 82.37 330 ⇓P **P 23 42 50.7 -0.1**
baz=83,SNR=10
I02A Mapleton 82.53 324 ⇑P **P 23 42 51.6 -0.1**
baz=83
F05A White Salmon 82.56 327 ⇓P **P 23 42 52.4 +0.6**
baz=83
G04A Mulino 82.62 326 ⇑P **P 23 42 52.3 +0.1**
baz=83
COR Corvallis 82.63 325 PFAKE 23 43 00.0 +7.7
COR LR LR
comp=Z,401nm,22.0s,MS4.7
H03A Soap Creek Ran 82.69 325 ⇓P **P 23 42 52.4 -0.2**
baz=83
C08A Higginbotham F 82.72 329 ⇓P **P 23 42 52.4 -0.3**
baz=83,SNR=9.7
D07A Quincy 82.74 328 ⇓P **P 23 42 53.1 +0.3**
baz=83,SNR=6.1
B09A Rice 82.76 330 ⇑P **P 23 42 52.2 -0.6**
baz=83,SNR=16
E06A Yakima 82.78 327 ⇓P **P 23 42 52.7 -0.3**
baz=83,SNR=6.7
A10A Northport 82.90 331 ⇓P **P 23 42 52.6 -0.9**
baz=83,SNR=8.2
TBM Table Mountain 83.03 328 P **P 23 42 54.8 +0.6**
F04A Amboy 83.08 326 ⇑P **P 23 42 54.3 -0.2**
baz=83
G03A Yamhill 83.11 325 ⇑P **P 23 42 54.2 -0.5**
baz=83
C07A Waterville 83.13 329 ⇑P **P 23 42 54.2 -0.6**
baz=83,SNR=16
D06A Cle Elum 83.16 328 ⇓P **P 23 42 54.5 -0.5**
baz=83
E05A Randle 83.18 327 ⇓P **P 23 42 54.6 -0.4**
baz=83
ETW Entiat 83.20 329 eP **P 23 42 55.0 -0.2**
B08A Colville Reser 83.26 330 ⇓P **P 23 42 54.5 -0.9**
baz=84,SNR=11
A09A Danville 83.36 330 ⇓P **P 23 42 55.1 -0.8**
baz=84,SNR=11
MAW Mawson 83.49 164 P **P 23 42 56.1 -0.4**
comp=Z,45nm,0.9s,mb5.5,baz=223,slow=6.4,SNR=46
MAW LR LR 00 20 25.2
comp=Z,4μm,18.2s,MS5.8,baz=236,slow=36
FCC Fort Churchill 83.59 348 eP **P 23 42 55.2 -1.6**
comp=Z,244nm,1.8s,mb6.0
FCC Fort Churchill 83.59 348 eP **P 23 42 55.2 -1.6**
FCC pmax pmax
comp=Z,244nm,1.8s,mb6.0
A08A Turner Farm, O 83.66 330 ⇓P **P 23 42 56.9 -0.6**
baz=84,SNR=16
E04A Onalaska 83.69 327 ⇓P **P 23 42 57.3 -0.3**
baz=84
C06A Tall Timber Ra 83.70 329 ⇑P **P 23 42 57.1 -0.6**
baz=84
B07A Winthrop 83.71 329 ⇓P **P 23 42 56.8 -0.9**
baz=84,SNR=13
D05A Enumclaw 83.72 327 ⇓P **P 23 42 56.9 -0.9**
baz=84
BMW Boistfort Moun 83.86 326 eP **P 23 42 59.0 +0.5**
D04A Dobbs Creek Ra 84.08 327 ⇑P **P 23 42 58.7 -0.9**
baz=84
E03A Lebam 84.08 326 ⇓P **P 23 42 59.3 -0.4**
baz=84
EGRO El Granado 84.23 45 P **P 23 43 01.9 +1.2**
comp=Z,426nm,1.6s,mb6.3
A07A Ashnola River, 84.24 330 ⇑P **P 23 42 60.0 -0.5**
baz=84,SNR=25
EDM Edmton 84.36 336 eP **P 23 42 59.4 -1.5**
RPW Rockport 84.36 329 eP **P 23 42 59.7 -1.4**
JCW Jim Creek 84.39 328 eP **P 23 42 59.9 -1.3**
B06A Marblemount 84.39 329 ⇑P **P 23 43 00.1 -1.1**
baz=85
EVO Evora 84.45 44 ⇓*i*P **P 23 43 03.3 +1.5**
comp=Z,221nm,1.3s,mb5.8
EVO eMLR MLR
comp=Z,3μm,20.2s,MS5.4
SFS San Fernando 84.48 47 eP **P 23 42 58.1 -3.9**
SFS ePP PP 23 46 16.2 -1.7
SFS eS S 23 53 37.0 +11
SFS LR LR
comp=Z,3μm,19.0s,MS5.7
SFS San Fernando 84.48 47 eP **P 23 42 58.1 -3.9**
SFS *e* 23 46 16.2
SFS MLR MLR
comp=Z,3μm,19.0s,MS5.7
B05A Bryant 84.52 328 ⇓P **P 23 43 00.9 -0.9**
baz=85
C04A Brinnon 84.57 327 ⇑P **P 23 43 01.7 -0.4**
baz=85
NLWA Neilton Lookou 84.81 327 PFAKE 23 43 10.0 +6.7
NLWA LR LR
comp=Z,2μm,21.0s,MS5.4
NLWA Neilton Lookou 84.81 327 ⇑P **P 23 43 02.8 -0.5**
baz=85
EMIN Mina Concepcio 84.89 46 P **P 23 43 04.2 +0.2**
comp=Z,980nm,2.7s,mb6.5
ESPR Espera 84.94 47 P **P 23 43 04.0 -0.3**
comp=Z,447nm,1.4s,mb6.4
EJIF Jimena Fronter 84.97 47 P **P 23 43 05.8 +1.4**
comp=Z,170nm,1.1s,mb6.1
EJIF Jimena Fronter 84.97 47 P **P 23 43 05.8 +1.4**
EJIF pmax pmax
comp=Z,170nm,1.1s,mb6.1
A05A Maple Falls 85.02 329 ⇑P **P 23 43 03.6 -0.7**
baz=85
B04A Port Angeles 85.07 327 ⇑P **P 23 43 04.2 -0.5**
baz=85
A04A Legoe Bay, Lum 85.12 328 ⇓P **P 23 43 04.5 -0.4**
baz=85
EBAD Badajoz 85.22 45 P **P 23 43 04.9 -0.8**
comp=Z,1μm,2.9s,mb6.5
PGC Sidney 85.44 328 eP **P 23 43 05.3 -1.2**
comp=Z,91nm,1.3s,mb5.8
EMIJ Mijas 85.51 47 P **P 23 43 06.1 -1.0**
comp=Z,217nm,1.2s,mb6.3
MTE Manteigas 85.81 43 eP **P 23 43 09.3 +0.8**
comp=Z,45nm,0.9s,mb5.7
MTE ePP PP 23 46 17.1 -12
MTE eS S 23 53 16.4 -23
MTE LR LR
comp=Z,3μm,20.0s,MS5.7
ELOJ Sierra Loja 86.24 47 P **P 23 43 12.5 +1.8**
comp=Z,166nm,1.3s,mb6.1
ELOJ Sierra Loja 86.24 47 P **P 23 43 12.5 +1.8**
ELOJ pmax pmax
comp=Z,167nm,1.3s,mb6.1
EALB Alboran 86.37 49 P **P 23 43 09.9 -1.5**
comp=Z,543nm,2.5s,mb6.3
ELUQ Luque 86.38 47 P **P 23 43 12.4 +1.0**
comp=Z,183nm,1.2s,mb6.2
ELUQ Luque 86.38 47 P **P 23 43 12.4 +1.0**
ELUQ pmax pmax
comp=Z,183nm,1.2s,mb6.2
ERON Agron 86.40 47 P **P 23 43 11.6 0.0**
comp=Z,45nm,1.2s,mb5.6
EGUA Guajares 86.47 48 P **P 23 43 12.0 +0.1**
comp=Z,72nm,1.1s,mb5.8
EGUA Guajares 86.47 48 P **P 23 43 12.0 +0.1**
EGUA pmax pmax
comp=Z,72nm,1.1s,mb5.8
EADA Adamuz 86.50 46 P **P 23 43 11.2 -0.8**
comp=Z,660nm,3.0s
STS Santiago 86.62 40 P **P 23 43 11.7 -0.8**
comp=Z,68nm,1.4s,mb5.7
STS Santiago 86.62 40 P **P 23 43 11.7 -0.7**
STS pmax pmax
comp=Z,68nm,1.4s,mb5.7
TAM Tamanrasset 86.62 64 eP **P 23 43 14.7 +1.8**
ECOG Cogollos-Vega 86.70 47 P **P 23 43 13.9 +0.9**
comp=Z,22nm,1.0s,mb5.3
ECOG Cogollos-Vega 86.70 47 P **P 23 43 13.9 +0.9**
ECOG pmax pmax
comp=Z,22nm,1.0s,mb5.3
EBER Berja 86.97 48 P **P 23 43 13.4 -0.9**
comp=Z,409nm,2.9s,mb6.2
EBAN Banos Encina 87.02 46 P **P 23 43 14.3 -0.2**
comp=Z,93nm,1.2s,mb5.9
EBAN Banos Encina 87.02 46 P **P 23 43 14.3 -0.2**
EBAN pmax pmax
comp=Z,93nm,1.2s,mb5.9
ECAL Calabor 87.18 42 P **P 23 43 14.8 -0.4**
comp=Z,434nm,3.3s
ERUA La Rua 87.19 41 P **P 23 43 16.0 +0.8**
comp=Z,17nm,0.9s,mb5.3
ERUA La Rua 87.19 41 P **P 23 43 16.0 +0.8**
ERUA pmax pmax
comp=Z,17nm,0.9s,mb5.3
EQES Quesada 87.31 47 P **P 23 43 14.8 -1.2**
comp=Z,272nm,2.4s,mb6.1
PAB San Pablo 87.39 45 eP **P 23 43 16.1 -0.2**
comp=Z,27nm,1.1s,mb5.4
PAB ePP PP 23 46 34.0 -7.3
PAB eS S 23 53 42.6 -12
PAB LR LR
comp=Z,2μm,20.0s,MS5.5
PAB San Pablo 87.39 45 eP **P 23 43 16.1 -0.2**
PAB eS S 23 53 42.6 -12
PAB pmax pmax
comp=Z,27nm,1.1s,mb5.4
PAB MLR MLR
comp=Z,2μm,20.0s,MS5.5
ENIJ Nijar 87.47 48 P **P 23 43 16.3 -0.5**
comp=Z,122nm,1.8s,mb5.8
ENIJ Nijar 87.47 48 P **P 23 43 16.3 -0.4**
ENIJ pmax pmax
comp=Z,123nm,1.8s,mb5.8
EHUE Huescar 87.64 47 P **P 23 43 17.1 -0.4**
comp=Z,147nm,2.5s,mb5.8
EHUE Huescar 87.64 47 P **P 23 43 17.1 -0.4**
EHUE pmax pmax
comp=Z,147nm,2.5s,mb5.8
ESDC Sonseca Array 87.71 45 P **P 23 43 18.2 +0.4**
comp=Z,6.7nm,1.0s,mb4.8,baz=238,slow=4.1,SNR=14
ESDC LR LR 00 21 23.7
comp=Z,1μm,19.1s,MS5.3,baz=240,slow=35
ESDC Sonseca Array 87.71 45 P **P 23 43 17.5 -0.3**
comp=Z,67nm,1.9s,mb5.5
DRV Dumont d'Urvil 87.93 192 P **P 23 43 21.0 +2.5**
DRV Dumont d'Urvil 87.93 192 PP PP 23 46 50.0 +5.8
DRV S S 23 53 48.0 -11
DRV SS SS 00 00 02.0 +17
DRV L 00 07 00.0
DRV R 00 13 00.0
GUD Guadarrama 88.10 44 P **P 23 43 20.1 +0.5**
comp=Z,17nm,1.2s,mb5.2
GUD Guadarrama 88.10 44 P **P 23 43 20.1 +0.5**
GUD pmax pmax
comp=Z,17nm,1.2s,mb5.2
EVIA Vianos 88.13 47 P **P 23 43 19.7 -0.2**
comp=Z,18nm,1.0s,mb5.3
EVIA Vianos 88.13 47 P **P 23 43 19.7 -0.1**
EVIA pmax pmax
comp=Z,18nm,1.0s,mb5.3
CART Cartagena 88.61 48 P **P 23 43 21.7 -0.4**
ETOB Tobarra 88.78 47 P **P 23 43 19.5 -3.4**
comp=Z,340nm,2.8s,mb6.2
ETRT Tiaret 89.15 51 P **P 23 43 29.0 +4.3**
EANR 'Ain N'Sour 89.27 50 P **P 23 43 25.5 +0.2**
ETOR Torete 89.55 45 P **P 23 43 27.3 +0.8**
comp=Z,26nm,1.0s,mb5.5
ETOR Torete 89.55 45 P **P 23 43 27.3 +0.8**
ETOR pmax pmax
comp=Z,26nm,1.0s,mb5.5
ECHE Chera 89.64 46 P **P 23 43 24.4 -2.6**
comp=Z,17nm,0.9s,mb5.4
ECHE Chera 89.64 46 P **P 23 43 24.4 -2.5**
ECHE pmax pmax
comp=Z,17nm,0.9s,mb5.4
EBNR Beni Rached 89.74 50 P **P 23 43 30.5 +3.0**
ELAN Lanestosa 89.93 42 P **P 23 43 24.1 -4.1**
comp=Z,485nm,3.7s
EMHD Djebel Mahouad 90.71 51 P **P 23 43 34.5 +2.5**
SFJD Kangerlussuaq 90.73 8 PFAKE 23 43 40.0 +8.7
SFJD LR LR
comp=Z,1μm,20.0s,MS5.4
ERTA Horta de San J 91.19 46 P **P 23 43 32.5 -1.6**
comp=Z,465nm,3.4s
CASY Casey 91.21 180 PFAKE 23 43 40.0 +6.1
CASY LR LR
comp=Z,2μm,19.0s,MS5.6
SJPF Ste Jean 91.25 43 eP **P 23 43 35.3 +1.0**
comp=Z,43nm,1.1s,mb5.4
SJPF Ste Jean 91.25 43 eP **P 23 43 35.3 +1.0**
comp=Z,21nm,1.1s,mb5.4
SJPF Ste Jean 91.25 43 eP **P 23 43 35.3 +1.0**
SJPF pmax pmax
comp=Z,21nm,1.1s,mb5.4
LSZ Lusaka 91.83 107 ⇑P **P 23 43 39.8 +2.1**
SNR=6.2
LSZ Lusaka 91.83 107 eP **P 23 43 40.2 +2.5**
comp=Z,50nm,1.5s,mb5.6
LSZ ePP PP 23 47 14.7 -2.3
LSZ eS S 23 54 23.2 -14
LSZ LR LR
comp=Z,6μm,19.0s,MS6.1
LSZ Lusaka 91.83 107 eP **P 23 43 40.2 +2.5**
LSZ *e* 23 47 14.7
LSZ pmax pmax
comp=Z,50nm,1.5s,mb5.6
LSZ MLR MLR
comp=Z,6μm,19.0s,MS6.1
EPOB Poblet 91.87 46 P **P 23 43 40.2 +3.0**
comp=Z,78nm,2.1s,mb5.7
YKA Yellowknife Ar 91.95 341 P **P 23 43 36.0 -1.0**
comp=Z,6.7nm,0.8s,mb5.0,baz=136,slow=4.3,SNR=13
YKA LR LR 00 28 25.5
comp=Z,715nm,18.6s,MS5.1,baz=135,slow=38
YKA Yellowknife Ar 91.95 341 P **P 23 43 36.0 -1.0**
YKA LR LR 00 28 25.5
SNZO South Karori 92.27 223 PFAKE 23 43 50.0 +11
SNZO LR LR
comp=Z,4μm,20.0s,MS5.8
URZ Urewera 92.33 227 LR LR 00 16 41.8
comp=Z,4μm,19.6s,MS5.9,baz=121,slow=30
RPZ Rata Peaks 93.14 220 LR LR 00 18 22.4
comp=Z,2μm,18.4s,MS5.5,baz=107,slow=31
RAO Raoul Island 93.19 237 PFAKE 23 43 50.0 +6.2
RAO LR LR
comp=Z,4μm,22.0s,MS5.8
LFF La Frestale 93.39 42 eP **P 23 43 44.6 +0.4**
comp=Z,56nm,1.0s,mb5.6
LFF La Frestale 93.39 42 eP **P 23 43 44.6 +0.4**
comp=Z,28nm,1.0s,mb5.7
LFF La Frestale 93.39 42 eP **P 23 43 44.6 +0.4**
LFF pmax pmax
comp=Z,28nm,1.0s,mb5.7
MFF Saint Martin d 93.66 41 eP **P 23 43 45.6 +0.2**
comp=Z,83nm,1.3s,mb5.7
MFF Saint Martin d 93.66 41 eP **P 23 43 45.6 +0.2**
comp=Z,41nm,1.3s,mb5.7
MFF Saint Martin d 93.66 41 eP **P 23 43 45.6 +0.2**
MFF pmax pmax
comp=Z,41nm,1.3s,mb5.7
RJF Les Rejaudoux 94.05 42 eP **P 23 43 47.3 +0.1**
RJF eMLR MLR
comp=Z,4μm,17.5s,MS5.7
RJF Les Rejaudoux 94.05 42 eP **P 23 43 47.3 +0.1**
RJF MLR MLR
comp=Z,4μm,17.5s,MS6.0
GRR Gorron 94.12 39 eP **P 23 43 46.0 -1.5**
comp=Z,84nm,1.4s,mb5.7
GRR Gorron 94.12 39 eP **P 23 43 46.0 -1.5**
comp=Z,42nm,1.4s,mb5.7
GRR Gorron 94.12 39 eP **P 23 43 46.0 -1.5**
GRR pmax pmax
comp=Z,42nm,1.4s,mb5.7
CAF Calviac 94.21 43 eP **P 23 43 48.2 +0.3**
FLN La Foliniere 94.53 39 eP **P 23 43 49.2 -0.1**
comp=Z,78nm,1.3s,mb5.7
FLN eMLR MLR
comp=Z,2μm,18.2s,MS5.3
FLN La Foliniere 94.53 39 eP **P 23 43 49.2 -0.1**
comp=Z,39nm,1.3s,mb5.7
FLN LR LR
comp=Z,2μm,18.3s,MS5.6
FLN La Foliniere 94.53 39 eP **P 23 43 49.2 -0.1**

FLN pmax pmax
comp=Z,39nm,1.3s,mb5.7
FLN MLR MLR
comp=Z,2µm,18.3s,MS5.6
WRAK Wrangell Islan 94.54 331 PFAKE 23 44 00.0 +11
WRAK LR LR
comp=Z,1µm,19.0s,MS5.4
LDF La Druitiere 94.65 39 *e*P **P 23 43 49.4 -0.5**
comp=Z,46nm,1.3s,mb5.4
LDF La Druitiere 94.65 39 *e*P **P 23 43 49.4 -0.5**
comp=Z,23nm,1.3s,mb5.5
LDF La Druitiere 94.65 39 *e*P **P 23 43 49.4 -0.5**
LDF pmax pmax
comp=Z,23nm,1.3s,mb5.5
DLBC Dease Lake 94.72 333 *e*P **P 23 43 49.4 -0.6**
DLBC *e*pP pP 23 44 00.5 -0.9
AFI Afiamalu 94.88 253 LR LR 00 17 41.7
comp=Z,2µm,18.7s,MS5.6,baz=224,slow=30
AFI Afiamalu 94.88 253 PFAKE 23 44 00.0 +8.2
AFI LR LR
comp=Z,2µm,19.0s,MS5.7
TCF Toulx Ste Croi 94.94 42 *e*P **P 23 43 51.2 -0.1**
LASF Ste Croix 94.95 44 *e*P **P 23 43 49.3 -2.1**
comp=Z,113nm,1.5s,mb5.8
BORG Borgarnes 95.08 19 LR LR 00 23 16.8
comp=Z,2µm,19.8s,MS5.5,baz=228,slow=33
KEST Kesra 95.17 54 P **P 23 43 53.5 +0.9**
comp=Z,3.6nm,0.9s,mb4.8,baz=280,slow=3.6,SNR=9.9
KEST LR LR 00 31 10.9
comp=Z,2µm,19.0s,MS5.6,baz=0.0,slow=38
BGF Bois d'Agland 95.45 42 *e*P **P 23 43 53.6 0.0**
comp=Z,59nm,1.2s,mb5.6
BGF Bois d'Agland 95.45 42 *e*P **P 23 43 53.6 0.0**
comp=Z,29nm,1.2s,mb5.6
BGF Bois d'Agland 95.45 42 *e*P **P 23 43 53.6 0.0**
BGF pmax pmax
comp=Z,29nm,1.2s,mb5.6
HYF Humbligny 95.65 41 *e*P **P 23 43 54.5 0.0**
AVF Avril sur Loir 95.87 42 *e*P **P 23 43 55.3 -0.2**
comp=Z,33nm,1.2s,mb5.3
AVF Avril sur Loir 95.87 42 *e*P **P 23 43 55.3 -0.2**
comp=Z,16nm,1.2s,mb5.3
AVF Avril sur Loir 95.87 42 *e*P **P 23 43 55.3 -0.2**
AVF pmax pmax
comp=Z,16nm,1.2s,mb5.3
SSF Saint Saulge 96.08 41 *e*P **P 23 43 56.0 -0.5**
comp=Z,19nm,1.0s,mb5.2
SSF Saint Saulge 96.08 41 *e*P **P 23 43 56.0 -0.5**
comp=Z,9.4nm,1.0s,mb5.2
SSF Saint Saulge 96.08 41 *e*P **P 23 43 56.0 -0.5**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
SMF Signal de Mont 96.10 42 *e*P **P 23 43 56.7 +0.1**
comp=Z,63nm,1.2s,mb5.6
SMF Signal de Mont 96.10 42 *e*P **P 23 43 56.7 +0.1**
comp=Z,32nm,1.2s,mb5.6
SMF Signal de Mont 96.10 42 *e*P **P 23 43 56.7 +0.1**
SMF pmax pmax
comp=Z,32nm,1.2s,mb5.6
SIT Sitka 96.26 330 P **P 23 43 54.2 -2.8**
SIT S S 23 55 22.5 +8.8
SIT LR LR
comp=Z,2µm,20.0s,MS5.6
LOR Lormes 96.39 41 *e*P **P 23 43 57.4 -0.5**
comp=Z,18nm,1.0s,mb5.2
LOR *e*MLR MLR
comp=Z,3µm,23.0s,MS5.3
LOR Lormes 96.39 41 *e*P **P 23 43 57.4 -0.5**
comp=Z,9.3nm,1.0s,mb5.2
LOR LR LR
comp=Z,3µm,23.0s,MS5.7
LOR Lormes 96.39 41 *e*P **P 23 43 57.4 -0.5**
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
LOR MLR MLR
comp=Z,3µm,23.0s,MS5.7
ESK Eskdalemuir 96.40 32 *e*P pP 23 44 11.7 +2.5
ESK *e*PP PP 23 47 48.2 -3.9
ESK S S 23 55 08.3 -6.7
ESK LR LR
comp=Z,2µm,20.0s,MS5.6
ORIF Oris-en-Rattie 96.62 44 *e*P **P 23 44 00.1 +1.1**
comp=Z,47nm,1.2s,mb5.5
ORIF *e*MLR MLR
comp=Z,5µm,18.5s,MS5.7
ORIF Oris-en-Rattie 96.62 44 *e*P **P 23 44 00.1 +1.1**
comp=Z,23nm,1.2s,mb5.5
ORIF Oris-en-Rattie 96.62 44 *e*P **P 23 44 00.1 +1.1**
ORIF pmax pmax
comp=Z,23nm,1.2s,mb5.5
VSL Villasalto 96.72 50 P **P 23 44 00.3 +0.7**
VSL *e*PP PP 23 47 49.1 -5.9
VSL *e*S S 23 55 16.9 -1.6
VSL LR LR
comp=Z,2µm,19.0s,MS5.6
BNI Bardonecchia 97.19 44 *e*P **P 23 44 02.1 +0.6**
BNI *e*PP PP 23 48 06.4 +7.9
BNI *e*S S 23 55 49.0 +27
BNI LR LR
comp=Z,5µm,19.0s,MS6.0
BNI Bardonecchia 97.19 44 *e*P **P 23 44 02.1 +0.5**
BNI *e* 23 48 06.4
BNI MLR MLR
comp=Z,5µm,19.0s,MS6.0
LPL La Plagne 97.42 44 *e*P **P 23 44 03.9 +1.3**
comp=Z,28nm,1.2s,mb5.2
LPL La Plagne 97.42 44 *e*P **P 23 44 03.9 +1.3**
comp=Z,14nm,1.2s,mb5.3
LPL La Plagne 97.42 44 *e*P **P 23 44 03.9 +1.3**
LPL pmax pmax
comp=Z,14nm,1.2s,mb5.3
LPG La Plagne 97.43 44 *e*P **P 23 44 03.9 +1.3**
comp=Z,50nm,1.3s,mb5.5
LPG La Plagne 97.43 44 *e*P **P 23 44 03.9 +1.3**
comp=Z,25nm,1.3s,mb5.5
LPG La Plagne 97.43 44 *e*P **P 23 44 03.9 +1.3**
LPG pmax pmax
comp=Z,25nm,1.3s,mb5.5
SUMG Summit 97.54 9 *e*P **P 23 44 02.6 +0.1**
MEZF Maizieres J'vi 97.66 41 *e*P **P 23 44 03.5 -0.1**
BAIF Baives 97.84 39 *e*P **P 23 44 04.0 -0.3**
comp=Z,14nm,1.0s,mb5.2
BAIF Baives 97.84 39 *e*P **P 23 44 04.0 -0.3**
comp=Z,6.9nm,1.0s,mb5.1
BAIF Baives 97.84 39 *e*P **P 23 44 04.0 -0.3**
BAIF pmax pmax
comp=Z,7.0nm,1.0s,mb5.2
DOU Dourbes 98.08 39 P **P 23 44 05.3 -0.1**
comp=Z,8.6nm,1.2s,mb5.2
GIVF Givet 98.22 39 *e*P **P 23 44 06.0 0.0**
comp=Z,54nm,1.2s,mb5.7
GIVF Givet 98.22 39 *e*P **P 23 44 06.0 0.0**
comp=Z,27nm,1.2s,mb5.7
GIVF Givet 98.22 39 *e*P **P 23 44 06.0 0.0**
GIVF pmax pmax
comp=Z,27nm,1.2s,mb5.7
HINF Hinteralfeld 98.46 42 *e*P **P 23 44 06.8 -0.4**
comp=Z,23nm,1.1s,mb5.3
HINF Hinteralfeld 98.46 42 *e*P **P 23 44 06.8 -0.4**
comp=Z,12nm,1.1s,mb5.3
HINF Hinteralfeld 98.46 42 *e*P **P 23 44 06.8 -0.4**
HINF pmax pmax
comp=Z,12nm,1.1s,mb5.3
WLF Walferdange 98.81 40 P **P 23 44 09.3 +0.6**
comp=Z,26nm,1.9s,mb5.4
WLF Walferdange 98.81 40 *e*P **P 23 44 09.0 +0.3**
WLF *e*PP PP 23 48 12.6 +1.8
WLF *e*S SKSac 23 54 51.9 +8.1
WLF LR LR
comp=Z,2µm,22.0s,MS5.6
WLF Walferdange 98.81 40 *e*P **P 23 44 09.0 +0.3**
WLF *e* 23 48 12.6
WLF MLR MLR
comp=Z,2µm,22.0s,MS5.6
CDF Champ du Feu 98.96 41 *e*P **P 23 44 09.4 0.0**
comp=Z,21nm,1.1s,mb5.3
CDF Champ du Feu 98.96 41 *e*P **P 23 44 09.4 0.0**
comp=Z,10nm,1.1s,mb5.3
CDF Champ du Feu 98.96 41 *e*P **P 23 44 09.4 0.0**
CDF pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
WDD Wield Dalam 99.10 55 PFAKE 23 44 20.0 +10
WDD LR LR
comp=Z,2µm,19.0s,MS5.6
MEM Membach 99.12 39 P **P 23 44 11.0 +0.9**
VLC Villacollemand 99.26 46 P **P 23 44 11.1 +0.3**
VLC *e*PP PP 23 48 09.5 -4.9
VLC LR LR
comp=Z,1µm,20.0s,MS5.4
TUE Stuetta 99.48 44 PFAKE 23 44 20.0 +8.2
TUE LR LR
comp=Z,2µm,19.0s,MS5.7
BFO Black Forest 99.57 42 PFAKE 23 44 20.0 +7.7
BFO LR LR
comp=Z,1µm,20.0s,MS5.4
AQU L'Aquila 100.63 49 *e*Pdif Pdif 23 44 17.1 +0.1
AQU LR LR
comp=Z,2µm,19.0s,MS5.7
CEL Celeste 100.97 53 PFAKE 23 44 30.0 +11
CEL LR LR
comp=Z,28µm,21.0s,MS6.8
CUC Castrocucco 101.51 51 PFAKE 23 44 30.0 +9.1
CUC LR LR
comp=Z,2µm,22.0s,MS5.5
INK Inuvik 101.68 340 *e*Pdif Pdif 23 44 19.8 -1.8
TIP Timpagrande 101.92 53 *e*Pdif Pdif 23 44 23.4 +0.7
TIP LR LR
comp=Z,3µm,19.0s,MS5.8
EGAK Eagle 102.58 336 PFAKE 23 44 30.0 +4.4
EGAK LR LR
comp=Z,2µm,20.0s,MS5.6
NKC Novy Kostel 102.78 41 AMS AMS 00 31 20.0
comp=Z,2µm,17.8s
GERES GERESS Array B 103.08 42 Pdiff Pdif 23 44 28.2 +0.3
comp=Z,1.1nm,0.9s,baz=250,slow=4.0,SNR=7.5
GERES PP PP 23 48 42.2 -0.8
comp=Z,0.8nm,0.9s,baz=216,slow=6.6,SNR=3.6
KHC Kasperske Hory 103.10 42 *e*PDIF Pdif 23 44 27.5 -0.5
KHC AMS AMS 00 29 00.0
comp=Z,1µm,16.5s
CLL Collm 103.48 40 *e*Pdif Pdif 23 44 31.0 +1.3
CLL *e*SKS 23 55 08.0
CLL LR LR
comp=Z,2µm,21.9s,MS5.6
CLL Collm 103.48 40 *e*Pdif Pdif 23 44 31.0 +1.3
comp=Z,300nm,11.3s
CLL *e*PP PP 23 48 44.0 -2.0
CLL *e*SKSac SKSac 23 55 08.0 +1.7
CLL *e*Sdif Sdif 23 56 19.0 +3.8
CLL *e*PS PS 23 57 58.0 +1.9
comp=N,400nm,17.7s
CLL *e*PS PS 23 57 58.0 +1.9
comp=E,1µm,17.1s
CLL *e*PPS 23 58 54.0
CLL *e*SS SS 00 03 24.0 -4.2
CLL L 00 27 00.0
comp=Z,2µm,21.9s
BRG Berggiesshubel 103.90 41 P Pdif 23 44 34.0 +2.5
BRG 23 48 49.0
BRG PS PS 23 58 05.0 +4.5
BRG 00 03 36.0
BRG Berggiesshubel 103.90 41 PDIF Pdif 23 44 34.0 +2.5
BRG PP PP 23 48 49.0 -0.1
BRG SKS 23 55 19.0
BRG SDIF Sdif 23 56 27.0 +8.4
BRG PS PS 23 58 05.0 +4.5
BRG SKKP 00 03 36.0
BRG *e* 00 07 51.0
PRU Pruhonice 103.97 41 AMS AMS 00 33 00.0
comp=Z,2µm,16.7s
PVCC Panska Ves 104.16 41 AMS AMS 00 31 30.0
comp=Z,2µm,19.0s
TREC Trest 104.34 42 AMS AMS 00 35 10.0
comp=Z,2µm,17.7s
KONO Kongsberg 104.49 31 PFAKE 23 44 40.0 +5.8
KONO LR LR
comp=Z,3µm,20.0s,MS5.8
PMR Palmer 104.60 331 PFAKE 23 44 40.0 +5.4
PMR LR LR
comp=Z,1µm,22.0s,MS5.4
RGN Rugen 104.72 37 *e*Pdif Pdif 23 44 34.9 -0.3
TIR Tirane 104.86 51 PFAKE 23 49 00.0 +9.1
TIR LR LR
comp=Z,2µm,20.0s,MS5.7
KDAK Kodiak Island 104.96 327 PFAKE 23 44 40.0 +3.8
KDAK LR LR
comp=Z,1µm,20.0s,MS5.4
FUNA Funafuti 105.17 254 PFAKE 23 44 40.0 +2.8
FUNA LR LR
comp=Z,2µm,19.0s,MS5.8
DPC Dobruska-Polom 105.17 42 AMS AMS 00 32 10.0
comp=Z,2µm,19.2s
COLA College 105.23 334 PFAKE 23 49 00.0 +9.1
COLA LR LR
comp=Z,1µm,21.0s,MS5.4
TAU Tasmania Unive 105.97 208 PKiKP PKiKP 23 48 52.9 -0.2
TAU LR LR
comp=Z,1µm,20.0s,MS5.5
OKC Ostrava-Krasne 106.15 42 AMS AMS 00 35 40.0
comp=Z,1µm,16.7s
ABPO Ambohimpanom 106.26 119 PFAKE 23 49 00.0 +5.8
ABPO LR LR
comp=Z,3µm,20.0s,MS5.8
PSZ Piszkesteto 106.74 45 *e*PKiKP PKiKP 23 48 54.0 -0.2
PSZ *e*PP PP 23 49 08.6 -1.6
PSZ LR LR
comp=Z,2µm,20.0s,MS5.7
KWP Kalwaria 108.96 43 PFAKE 23 49 10.0 +12
KWP LR LR
comp=Z,1µm,20.0s,MS5.5
KBS Kingsbay 110.73 12 PFAKE 23 49 10.0 +9.1
KBS LR LR
comp=Z,850nm,19.0s,MS5.3
KIS Kishinev 112.44 47 *e*PP PP 23 50 00.0 +8.4
KIS Kishinev 112.44 47 *e*PS PS 23 59 30.0 +4.2
KIEV Kiev 113.27 43 PFAKE 23 49 20.0 +14
KIEV LR LR
comp=Z,2µm,19.0s,MS5.6
AKASG Malin Array Be 113.28 43 PKiKP PKiKP 23 49 04.6 -1.8
comp=Z,3.5nm,1.0s,baz=274,slow=2.4,SNR=5.6
AKASG Malin Array Be 113.28 43 PKPdf PKiKP 23 49 04.6 -1.8
AKASG Malin Array Be 113.28 43 *i* PKIKP PKiKP 23 49 04.5 -1.9
AKASG pmax pmax
comp=Z,4.0nm,1.0s
KEV Kevo 113.73 22 PFAKE 23 49 20.0 +13
KEV LR LR
comp=Z,2µm,19.0s,MS5.8
ANTO Ankara 114.07 55 *e*PKiKP PKiKP 23 49 08.8 +0.5
ANTO LR LR
comp=Z,1µm,22.0s,MS5.5
BRTR Keskin Array B 114.69 55 PKP PKiKP 23 49 09.7 +0.2
comp=Z,3.5nm,0.9s
MIDW Midway 114.77 292 PFAKE 23 49 20.0 +10
MIDW LR LR
comp=Z,3µm,21.0s,MS5.9
TARA Tarawa 115.05 260 PFAKE 23 49 20.0 +9.0
TARA LR LR
comp=Z,3µm,21.0s,MS5.9
LVZ Lovozero 116.56 24 PFAKE 23 49 20.0 +7.8
LVZ LR LR
comp=Z,3µm,19.0s,MS5.9
ADK Adak 117.56 318 PFAKE 23 49 20.0 +5.4
ADK LR LR
comp=Z,638nm,20.0s,MS5.2
OBN Obninsk 118.02 39 *e*PKPdf PKPdf 23 49 15.2 -0.2
OBN LR LR
comp=Z,1µm,20.0s,MS5.6
OBN Obninsk 118.02 39⇑ *i* PKIKP PKPdf 23 49 13.0 -2.4
OBN *e* 23 50 28.7
OBN *i* 00 01 35.0
OBN *e*SS SS 00 06 39.8 -2.5
OBN pmax pmax
comp=Z,26nm,1.2s
OBN MLR MLR
comp=Z,1µm,19.0s,MS5.6
KLMR Klimovskoe 119.32 32 *e*PKIKP PKPdf 23 49 17.0 -0.7
KLMR pmax pmax
comp=Z,31nm,1.3s
SOC Sochi 119.67 52 *i* PKIKP PKPdf 23 49 15.6 -3.3
SOC *e* 23 56 17.6
SOC *e*PS PS 00 00 20.0 -12
SOC pmax pmax
comp=Z,15nm,0.8s
MSEY Mahe Island 120.51 110 PFAKE 23 49 30.0 +8.5
MSEY LR LR
comp=Z,3µm,20.0s,MS5.9
HNR Honiara 121.23 243 PFAKE 23 49 30.0 +7.1
HNR LR LR
comp=Z,1µm,21.0s,MS5.6
KIV Kislovodsk 121.84 51 *e*PKPdf PKPdf 23 49 23.2 +0.1
KIV LR LR
comp=Z,1µm,19.0s,MS5.5
KIV Kislovodsk 121.84 51 *i* PKIKP PKPdf 23 49 21.9 -1.2
KIV *e* 23 50 54.8
KIV *e* 23 56 17.0
KIV *e*PS PS 00 00 49.7 -1.4
KIV pmax pmax
comp=Z,14nm,1.1s
BILL Bilibino 123.21 338 PFAKE 23 49 30.0 +5.0
BILL LR LR
comp=Z,1µm,20.0s,MS5.6
BILL Bilibino 123.21 338 *i* PKIKP PKPdf 23 49 24.5 -0.5
BILL *e* 23 51 03.5
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,900nm,19.0s,MS5.5
GNI Garni 123.21 56 *e*PKPdf PKPdf 23 49 26.5 +0.6
GNI LR LR
comp=Z,688nm,20.0s,MS5.3
GNI Garni 123.21 56⇑ *i* PKIKP PKPdf 23 49 25.0 -0.8
NWAO Narrogin (SRO) 124.12 188 PFAKE 23 49 40.0 +12
NWAO LR LR
comp=Z,2µm,22.0s,MS5.6
NAY Al-Naaiem 124.14 69 *e*P PKPdf 23 49 27.4 -0.6
baz=69
NAY AMb AMB 23 49 29.5
comp=Z,14nm,1.3s,baz=69
MIB Mutribah 124.31 69 *e*P PKPdf 23 49 27.9 -0.4
baz=68
MIB AMb AMB 23 49 30.0
comp=Z,30nm,1.2s,baz=68
RDF Al-Radifah 124.36 70 *e*P PKPdf 23 49 28.0 -0.4
baz=69
RDF AMb AMB 23 49 30.0
comp=Z,33nm,1.2s,baz=69
CTAO Charters Tower 124.37 223 PFAKE 23 49 40.0 +11
CTAO LR LR
comp=Z,2µm,21.0s,MS5.6
UMR Umm Al-Rimmam 124.59 69 *e*P PKPdf 23 49 28.6 -0.2
baz=69
UMR AMb AMB 23 49 30.6
comp=Z,47nm,1.2s,baz=69
SOKR Solikamsk 127.98 31⇑ *i* PKIKP PKPdf 23 49 36.3 +2.0
SOKR 23 51 34.3
SOKR SS SS 00 08 53.5 +5.5
SOKR pmax pmax
comp=Z,100nm,4.5s
SOKR MLR MLR
comp=Z,2µm,18.0s,MS5.7
ASAR Alice Springs 128.14 209 PKP PKPdf 23 49 34.8 -1.1
comp=Z,12nm,0.9s,baz=142,slow=2.2,SNR=45
TIXI Tiksi 129.89 352 *e*PKPdf PKPdf 23 49 36.7 -1.0
TIXI LR LR
comp=Z,1µm,20.0s,MS5.6
TIXI Tiksi 129.89 352 *i* PKIKP PKPdf 23 49 36.0 -1.7
TIXI pmax pmax
comp=Z,13nm,1.0s
ARU Arti 129.98 34 *e*PKPdf PKPdf 23 49 37.4 -0.9
ARU LR LR
comp=Z,2µm,22.0s,MS5.8
ARU Arti 129.98 34⇑ *i* PKIKP PKPdf 23 49 36.5 -1.8
SEY Seymchan 130.72 336⇑ *i* PKIKP PKPdf 23 49 39.7 +0.2
SVE Sverdlovsk 130.90 33 *i* PKIKP PKPdf 23 49 41.0 +1.0
SVE pmax pmax
comp=Z,26nm,1.5s
WRA Warramunga Arr 131.15 212 PKhKP 23 49 29.5
comp=Z,1.0nm,0.9s,baz=138,slow=2.7,SNR=5.5
WRA PKP PKPdf 23 49 40.3 -1.4
comp=Z,23nm,1.1s,baz=152,slow=1.9,SNR=16
WRA SKPbc SKPbc 23 53 03.8 +0.2
comp=Z,4.8nm,1.1s,baz=152,slow=3.8,SNR=6.1
WRA Warramunga Arr 131.15 212 PKHKP 23 49 29.5
WRA 23 49 40.3
WRAB Tennant Creek 131.15 212 *e*PKPdf PKPdf 23 49 41.0 -0.7
WRAB LR LR
comp=Z,2µm,20.0s,MS5.9
WRAB Tennant Creek 131.15 212 P PKPdf 23 49 41.9 +0.2
comp=Z,46nm,1.3s
PMG Port Moresby 131.26 233 PFAKE 23 49 50.0 +8.0
PMG LR LR
comp=Z,1µm,19.0s,MS5.7
BSY Bisya 131.89 79 P PKPdf 23 49 43.3 +0.4
SNR=8.9
SMDO Samad 132.72 79 P PKPdf 23 49 45.1 +0.6
SNR=7.8
WBK Wadi Bani Khal 133.47 80 P PKPdf 23 49 47.3 +1.4
SNR=7.4
MBWA Marble Bar 135.22 193 *e*PKPdf PKPdf 23 49 48.9 -0.5
MBWA LR LR
comp=Z,2µm,20.0s,MS5.8
BRVK Borovoye 137.55 35 *e*PKPdf PKPdf 23 49 52.8 +0.2
BRVK LR LR
comp=Z,3µm,20.0s,MS6.0
KAKA Kakadu 138.23 215 *e*PKPdf Px 23 49 41.4
YAK Yakutsk 138.44 346 PFAKE 23 50 00.0 +6.1
YAK LR LR
comp=Z,795nm,21.0s,MS5.4
YAK Yakutsk 138.44 346 *e*PKIKP PKPdf 23 49 53.2 -0.7
YAK pmax pmax
comp=Z,29nm,1.0s
NVS Novosibirsk 142.41 25 *e*PKHKP 23 49 56.0
NVS *e* 23 53 10.2
NVS pmax pmax
comp=N,23nm,1.8s
NVS pmax pmax
comp=Z,77nm,1.8s
COCO West Island 143.05 159 PFAKE 23 50 10.0 +6.3
COCO LR LR
comp=Z,894nm,20.0s,MS5.5
KURK Kurchatov 143.15 33⇑ P PKPdf 23 50 03.4 +0.6
SNR=6.5
KURK Kurchatov 143.15 33 *e*PKIKP PKPdf 23 49 59.9 -2.9
KURK MLR MLR
comp=Z,1µm,20.0s,MS5.6
ZALV Zalesovo Beam 143.69 25 PKP PKPdf 23 50 01.4 -2.3
comp=Z,11nm,0.7s,baz=320,slow=3.9,SNR=21
YSS Yuzh-Sakhalins 144.09 320 PKPdf PKPdf 23 50 04.1 -0.4
YSS LR LR
comp=Z,386nm,20.0s,MS5.2
YSS Yuzh-Sakhalins 144.09 320‖ *e*PKIKP PKPdf 23 50 04.9 +0.3
YSS *e* 23 50 16.3
CLNS Chul'man 144.20 346 *e*PKHKP 23 49 59.2
CLNS pmax pmax
comp=Z,45nm,1.2s
CLNS pmax pmax
comp=N,25nm,2.2s
CLNS pmax pmax
comp=E,8.0nm,1.5s
EKS2 Erkin-Say 144.28 48 *e*PKPdf PKPdf 23 50 04.3 -0.7
EKS2 LR LR
comp=Z,1µm,20.0s,MS5.7
EKS2 Erkin-Say 144.28 48 P PKPdf 23 50 05.4 +0.4
SNR=42
AML Almayashu 144.42 49 *e*PKPdf PKPdf 23 50 05.6 +0.3
AML Almayashu 144.42 49 P PKPdf 23 50 05.4 +0.1
SNR=29
USP Ospenovka 144.53 46 P PKPdf 23 50 05.6 +0.2
SNR=51
KRAR Krasnoyarsk 144.59 16 *i* PKIKP PKPdf 23 50 04.2 -0.9
AAK Ala-Archa 144.78 47 P PKPdf 23 50 06.1 +0.2
SNR=179
FRU Bishkek 144.79 47⇑ *i* PKIKP PKPdf 23 50 05.0 -0.9
FRU pmax pmax
comp=Z,520nm,2.0s
CHMS Chumysh 144.81 47 P PKPdf 23 50 05.9 -0.1
SNR=50
BOD Bodaibo 144.86 356 *e*PKIKP PKPdf 23 50 02.5 -3.0
BOD pmax pmax
comp=Z,124nm,1.0s
UCH Uchtor 144.95 48 *e*PKPdf PKPdf 23 50 07.9 +1.7
UCH LR LR
comp=Z,874nm,22.0s,MS5.5
UCH Uchtor 144.95 48 P PKPdf 23 50 08.5 +2.3
SNR=14
KBK Karagaybulak 145.08 47 P PKPbc 23 50 06.9 +1.0
SNR=130
GUMO Guam 145.36 261 *e*PKP PKPdf 23 50 07.2 -0.4
GUMO LR LR
comp=Z,800nm,20.0s,MS5.5
TKM2 Tokmak 2 145.41 46 *e*PKP PKPdf 23 50 07.8 +0.8
TKM2 LR LR
comp=Z,1µm,20.0s,MS5.7
TKM2 Tokmak 2 145.41 46 P PKPdf 23 50 08.7 +1.7
SNR=70
GOA Goa 145.48 96 *e*P PKPdf 23 50 03.6 -4.2
KZA Kyzart 145.51 48 P PKPdf 23 50 09.9 +2.7

SNR=53
MNGI Mangalore 145.55 100 *ex* PKPdf 23 50 08.8 +0.8
TRD Trivandrum 145.60 109 *eP* PKPdf 23 50 06.5 -1.7
ERM Erimo 146.10 312 PFAKE 23 50 20.0 +12
ERM LR LR
comp=Z,1μm,21.0s,MS5.7
ERM Erimo 146.10 312 ⇑*i*PKP2 PKPab 23 50 11.2 +1.4
ULHL Ulahol 146.12 47 P PKPab 23 50 10.3 +0.4
SNR=21
POO Poona 146.32 91 *eP* PKPdf 23 50 05.5 -3.7
KAD Karad 146.33 93 *eP* PKPdf 23 50 07.9 -1.4
KOD Kodaikanal 146.83 107 *eP* PKPdf 23 50 09.2 -1.0
KSH Kashi 146.97 52 PKP PKPdf 23 50 11.4 +1.7
KSH *e*APKP 23 50 21.6
KSH *e*XPKP 23 50 25.4
KSH *e*PKS 23 53 46.4
KSH *e*SKS SKSdf 23 57 15.8 +0.1
KSH PP PP
comp=Z,1μm,7.0s
KSH LR LR
comp=N,985nm,4.8s
KSH LR LR
comp=E,896nm,5.7s
KSH LR LR
comp=Z,1μm,4.9s
HABR Khabarovsk 147.36 328 *e*PKHKP PKPdf 23 50 08.0 -2.1
HABR *i* 23 50 13.4
HABR *e* 23 53 43.2
HABR *e* 00 06 15.5
HABR *e*SSS 00 18 10.9
MKAR Makanchi Array 147.47 36 PKPbc PKPdf 23 50 09.7 -0.7
comp=Z,42nm,0.8s,baz=316,slow=1.5,SNR=58
MKAR Makanchi Array 147.47 36 ⇑*i*PKIKP PKPdf 23 50 10.8 +0.5
MKAR pmax pmax
comp=Z,42nm,0.8s
AJM Ajmer 148.06 76 *eP* PKPdf 23 50 08.5 -3.4
KLR Kul'dur 148.34 332 *e*PKHKP 23 50 04.0
KLR pmax pmax
comp=Z,2μm,13.0s
KHKI Kahang-Kahang 148.49 191 P PKPab 23 50 25.6 +5.7
THN Thein Dam 148.58 65 *ex* PKPdf 23 50 12.5 -0.1
SJI Sawahan 149.59 184 P PKPbc 23 50 19.6 +0.2
AKL Akola 149.68 88 *ex* PKPbc 23 50 19.4 0.0
SMLA Simla 149.99 67 *i* P PKPdf 23 50 12.9 -2.0
SMLA *i* x x 23 53 55.7
KMMI Kalianget 150.04 189 P PKPab 23 50 23.7 -2.5
comp=Z,265nm,2.3s
BJII Banjamegara 150.06 180 P PKPab 23 50 22.5 -3.7
NDI New Delhi 150.29 72 *ex* PKPdf 23 50 16.0 +0.5
NDI *ex* x 23 51 21.0
IRK Irkutsk 150.31 7 *e*PKHKP PKPdf 23 50 15.5 +0.8
HYB Hyderabad 150.38 95 *eP* PKPdf 23 50 16.5 +0.6
HYB Hyderabad 150.38 95 *i* PKP PKPdf 23 50 16.5 +0.6
HYB *e* 23 50 22.0
HYB *e* 23 50 27.0
HYB *e* 23 50 35.5
BHPL Bhopal 150.40 83 *eP* PKPdf 23 50 13.8 -2.0
MOY Mondy 150.41 11 *e*PKIKP PKPdf 23 50 17.0 +2.1
MOY pmax pmax
comp=Z,25nm,2.5s
LEM Lembang 150.50 176 P PKPbc 23 50 22.4 +0.8
comp=Z,370nm,1.1s,comp=Z,3μm
KAPI Kappang 150.64 201 P PKPbc 23 50 21.7 -0.3
SNR=15
KAPI Kappang 150.64 201 *e*PKPdf PKPdf 23 50 15.7 -0.8
KAPI *e*PKPbc PKPbc 23 50 21.1 -0.9
KAPI LR LR
comp=Z,2μm,20.0s,MS5.8
DBJI Dramaga 150.70 174 P PKPbc 23 50 22.4 +0.3
comp=Z,289nm,1.1s
TLY Talaya 150.79 8 ⇓P PKPdf 23 50 17.6 +2.1
SNR=16
TLY Talaya 150.79 8 *e*PKPdf PKPdf 23 50 15.9 +0.4
TLY LR LR
comp=Z,1μm,21.0s,MS5.7
TLY Talaya 150.79 8 *e*PKIKP PKPdf 23 50 16.4 +0.9
TLY *i* 23 50 21.2
TLY *e* 23 50 26.7
TLY *e* 23 53 52.9
TLY *e*SS SS 00 13 16.5 +1.5
TLY pmax pmax
comp=Z,21nm,1.4s
CBJI Citeko 150.85 174 P PKPbc 23 50 22.3 -0.1
comp=Z,982nm,1.1s
DDI Dehra Dun 150.86 68 *ex* PKPdf 23 50 16.7 +0.4
DDI *ex* x 23 53 58.3
JCJI Jatiwangi 150.87 177 P PKPab 23 50 27.9 -1.7
comp=Z,412nm,0.9s
NGP Nagpur 151.63 87 *eP* PKPdf 23 50 12.4 -5.3
MJAR Matsushiro Arr 151.75 305 PKPbc PKPbc 23 50 22.2 -1.6
comp=Z,22nm,0.9s,baz=114,slow=1.2,SNR=23
MAJO Matsushiro 151.75 305 *e*PKPdf PKPdf 23 50 17.5 0.0
MAJO *e*PKPbc PKPbc 23 50 22.9 -0.9
MAJO LR LR
comp=Z,2μm,22.0s,MS5.8
MAT Matsushiro 151.75 305 PKP PKPbc 23 50 23.0 -0.8
ZAK Zakamensk 152.02 9 ⇑*i*PKIKP PKPdf 23 50 18.2 +0.8
ZAK *e* 23 54 02.6
ZAK pmax pmax
comp=Z,26nm,1.1s
WMQ Urumqi 152.31 36 *e*PKP PKPdf 23 50 20.0 +1.9
WMQ PP PP 23 54 11.0 +4.2
WMQ SKS SKSdf 23 57 22.0 -0.5
WMQ PP PP
comp=Z,368nm,10.0s
WMQ LR LR
comp=N,1μm,24.0s,MS5.9
WMQ LR LR
comp=E,2μm,24.0s,MS5.9
WMQ LR LR
comp=Z,2μm,24.0s,MS5.7
HIA Hailar 152.39 346 *e*PKPdf PKPdf 23 50 17.8 -0.2
HIA *e*PKPbc PKPbc 23 50 24.5 -0.3
HIA LR LR
comp=Z,1μm,20.0s,MS5.8
MDJ Mudanjiang 152.75 328 PKP PKPdf 23 50 15.8 -2.9
MDJ PP PP
comp=Z,536nm,10.9s
MDJ LR LR
comp=E,599nm,30.2s
MDJ LR LR
comp=Z,779nm,30.2s,MS5.3
MDJ Mudanjiang 152.75 328 PFAKE 23 50 30.0 +11
MDJ LR LR
comp=Z,1μm,20.0s,MS5.7
PTH Pithoragarh 152.82 69 *ex* PKPbc 23 50 28.0 +1.5
PTH *ex* x 23 52 16.0
KSI Kapahiang 152.84 164 P PKPbc 23 50 29.2 +2.2
comp=Z,142nm,1.5s
LGTI Lohaghat 152.86 70 *ex* PKPbc 23 50 26.3 -0.2
VIS Vishakhapatnam 154.85 97 *eP* PKPdf 23 50 19.2 -3.2
SONM Songino Array 154.88 5 PKP PKPdf 23 50 21.4 -0.2
comp=Z,6.7nm,1.0s,baz=320,slow=0.7,SNR=34
SONM PKPab PKPab 23 50 46.5 +1.0
comp=Z,3.7nm,0.9s,baz=334,slow=3.1,SNR=4.2
CN2 Changchun 155.30 332 *e*PKP PKPdf 23 50 20.5 -1.8
CN2 *e*APKP 23 50 31.5
CN2 PP PP 23 54 25.3 +1.9
CN2 PP PP
comp=Z,500nm,11.0s
CN2 LR LR
comp=N,2μm,21.0s,MS6.1
CN2 LR LR
comp=E,2μm,21.0s,MS6.1
CN2 LR LR
comp=Z,2μm,22.0s,MS6.0
KOLN Koldanda 155.98 73 *eP* PKPdf 23 50 23.5 -0.2
comp=Z,23nm,1.1s
DANN Dangsing 156.05 71 *eP* PKPdf 23 50 24.4 +0.6
comp=Z,88nm,1.0s
GKN Gorkha 156.87 72 *eP* PKPdf 23 50 24.7 -0.2
comp=Z,30nm,1.0s
DMN Daman 157.32 73 *eP* PKPdf 23 50 25.5 0.0
KKN Kakani 157.46 72 *eP* PKPdf 23 50 25.6 0.0
PKIN Phulchoki 157.59 73 *eP* PKPdf 23 50 25.2 -0.6
comp=Z,24nm,1.1s
PKI Pulchoki 157.60 73 *eP* PKPdf 23 50 25.5 -0.3
SNY Shenyang 157.70 332 ⇑PKP PKPdf 23 50 24.1 -1.4
SNY PP PP 23 54 37.3 +0.6
SNY PP PP
comp=Z,71nm,12.0s
SNY LR LR
comp=N,1μm,20.6s
SNY LR LR
comp=Z,1μm,20.6s,MS5.7
GUN Gumba 157.97 72 *eP* PKPdf 23 50 26.4 +0.1
DAV Davao City (W) 158.08 227 PFAKE 23 50 30.0 +3.2
DAV LR LR
comp=Z,1μm,20.0s,MS5.7
BOK Bokaro 158.18 83 *eP* PKPdf 23 50 24.2 -2.4
JIRN Jiri 158.27 72 *eP* PKPdf 23 50 26.6 -0.1
KSRS Korea Array 158.51 317 PKP PKPdf 23 50 26.6 0.0
comp=Z,11nm,1.0s,baz=90,slow=1.0,SNR=12
RAMN Ramite 158.72 74 *eP* PKPdf 23 50 27.4 +0.2
KSM Kuching 158.80 182 *e*PKPdf PKPdf 23 50 27.4 -0.3
ODAN Odare 159.43 74 *eP* PKPdf 23 50 28.1 +0.1
comp=Z,40nm,1.0s
TAPN Taplejung 159.65 73 *eP* PKPdf 23 50 28.2 -0.1
GTA Gaotai 161.45 24 *e*PKP PKPdf 23 50 31.1 +1.2
GTA APKP 23 50 42.6
GTA XPKP 23 50 45.4
GTA PKP2 PKPab 23 51 14.0 -0.2
GTA SKS SKSdf 23 57 31.5 -0.6
GTA PP PP
comp=Z,672nm,8.6s
GTA LR LR
comp=N,476nm,21.1s
GTA LR LR
comp=E,430nm,22.9s
HHC Hu-ho-hao-te 161.92 355 *e*PKP PKPdf 23 50 30.0 -0.3
HHC APKP 23 50 40.8
HHC XPKP 23 50 44.3
HHC PKS 23 54 01.8
HHC SKS SKSdf 23 57 31.1 -1.3
HHC PP PP
comp=Z,659nm,14.3s
HHC LR LR
comp=N,1μm,20.2s
HHC LR LR
comp=E,972nm,20.2s
HHC LR LR
comp=Z,1μm,19.0s
BJI Beijing 161.92 344 PKP PKPdf 23 50 32.8 +2.5
BJT Baijiatuan 161.95 344 *e*PKPdf PKPdf 23 50 29.4 -1.0
BJT LR LR
comp=Z,2μm,20.0s
LSA Lhasa 162.07 64 *e*PKPdf PKPdf 23 50 32.1 +1.3
LSA LR LR
comp=Z,2μm,21.0s
KKM Kota Kinabalu 162.18 202 PFAKE 23 50 40.0 +8.6
KKM LR LR
comp=Z,1μm,22.0s
SHL Shillong 163.59 77 *ex* PKPdf 23 50 35.0 +2.6
LZH Lanzhou 165.83 19 PKP PKPdf 23 50 34.0 -0.1
LZH APKP 23 50 42.0
LZH XPKP 23 50 46.0
LZH PKP2 PKPab 23 51 34.1 +0.6
LZH PP PP
comp=Z,480nm,5.6s
LZH LR LR
comp=E,2μm,18.1s
LZH LR LR
comp=Z,2μm,19.1s
SSE Sheshan 166.78 311 *e*PKP PKPdf 23 50 36.3 +1.3
SSE PP PP 23 55 28.4 +2.6
SSE PP PP
comp=Z,150nm,5.3s
SSE LR LR
comp=N,298nm,22.8s
SSE LR LR
comp=E,1μm,22.9s
SSE LR LR
comp=Z,1μm,24.4s
NJ2 Nanjing 167.66 320 *e*PKP PKPdf 23 50 37.1 +1.5
NJ2 APKP 23 50 49.3
NJ2 XPKP 23 50 52.6
NJ2 PKP2 PKPab 23 51 42.5 +0.7
NJ2 PP PP 23 55 32.5 +2.6
NJ2 PP PP
comp=Z,140nm,9.2s
NJ2 LR LR
comp=N,470nm,39.0s
NJ2 LR LR
comp=E,410nm,27.5s
NJ2 LR LR
comp=Z,350nm,25.4s
NST Nakhon Sawan 168.59 127 P PKPab 23 51 47.0 +0.7
BDT Bhumibol Dam 168.60 117 P PKPdf 23 50 36.5 -0.1
XAN Xi'an 168.78 3 PKP PKPdf 23 50 36.3 0.0
XAN APKP 23 50 40.8
XAN XPKP 23 50 50.6
XAN PKS 23 54 07.4
XAN SKS SKSdf 23 57 34.8 -2.5
XAN PP PP
comp=Z,714nm,14.3s
XAN LR LR
comp=N,364nm,18.5s
XAN LR LR
comp=E,588nm,19.9s
XAN LR LR
comp=Z,2μm,19.9s
TATO Taipei 168.92 284 PFAKE 23 50 40.0 +3.4
TATO LR LR
comp=Z,2μm,20.0s
YHNB Yeheng 169.06 282 *e*PKPdf PKPdf 23 50 35.7 -1.0
YHNB LR LR
comp=Z,2μm,22.0s
CMAR Chiang Mai Arr 169.12 111 PKP PKPdf 23 50 36.9 0.0
comp=Z,3.8nm,0.9s,baz=285,slow=1.8,SNR=22
CMAR PKPab PKPab 23 51 48.8 0.0
comp=Z,13nm,0.9s,baz=250,slow=4.7,SNR=15
CMAR PP PP 23 55 37.9 -0.5
comp=Z,1.3nm,0.4s,baz=243,slow=4.0,SNR=7.2
CHG Chiang Mai 169.27 110 ⇓P PKPdf 23 50 37.0 0.0
CHTO Chiang Mai 169.27 110 *e*PKPdf PKPdf 23 50 36.2 -0.8
CHTO LR LR
comp=Z,2μm,21.0s
CD2 Chengdu 170.37 32 *e*PKP PKPdf 23 50 38.0 +0.7
CD2 APKP 23 50 48.3
CD2 XPKP 23 50 53.4
CD2 PKP2 PKPab 23 51 54.0 +0.2
CD2 PKS 23 54 08.6
CD2 PP PP 23 55 46.3 +3.0
CD2 SKS SKSdf 23 57 37.0 -1.2
CD2 PP PP
comp=Z,320nm,10.8s
CD2 LR LR
comp=N,710nm,25.2s
CD2 LR LR
comp=E,1μm,21.6s
CD2 LR LR
comp=Z,1μm,26.8s
WHN Wuhan 171.19 332 ⇑PKP PKPdf 23 50 36.8 -1.0
WHN APKP 23 50 50.0
WHN PKP2 PKPab 23 51 56.4 -1.0
WHN LR LR
comp=Z,4μm,20.5s
QZH Quanzhou 171.51 286 PKP PKPdf 23 50 40.5 +2.4
QZH PP PP 23 55 52.9 +2.4
QZH PP PP
comp=Z,2μm,4.2s
QZH LR LR
comp=Z,3μm,21.2s
KMI Kunming 173.30 68 PKP PKPdf 23 50 39.0 +0.1
KMI PKP2 PKPab 23 52 09.4 +2.2
KMI PP PP 23 56 00.8 +1.6
KMI PP PP
comp=Z,885nm,8.5s
KMI LR LR
comp=N,1μm,18.8s
KMI LR LR
comp=E,878nm,18.8s
KMI LR LR
comp=Z,2μm,20.7s
GYA Guiyang 175.47 36 PKP PKPdf 23 50 39.4 -0.1
GYA XPKP 23 50 53.6
GYA PKP2 PKPab 23 52 17.4 +0.9
GYA PKS 23 54 10.1
GYA PP PP 23 56 15.6 +7.1
GYA LR LR
comp=N,670nm,17.0s
GYA LR LR
comp=E,380nm,18.0s
GYA LR LR
comp=Z,490nm,17.6s
QIZ Qiongzhong 176.25 183 PKP PKPdf 23 50 39.3 -0.6
QIZ PP PP 23 56 14.5 +3.1
QIZ LR LR
comp=N,907nm,20.5s
QIZ LR LR
comp=E,944nm,20.5s
QIZ LR LR
comp=Z,2μm,19.6s
QIZ Qiongzhong 176.25 183 PFAKE 23 50 50.0 +10
QIZ LR LR
comp=Z,2μm,20.0s

CASC 19 23:33:34.5±2.5, 1152N×8685W, h0km±9km, MD4.1, ML3.5, 14C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.70**	**21**	⇑*eP*		Pg		23 33 49.9	+1.8
CRUN	**El Crucero**	**0.71**	**49**	⇑*eP*		Pg		23 33 50.4	+2.3
CSAN		**0.78**	**32**	⇑*eP*		Pg		23 33 50.6	+1.1
TICN	**Ticuantepe**	**0.79**	**49**	⇑*eP*		Pg		23 33 51.1	+1.4
XAVN	**Gruta Xavier**	**0.81**	**39**	⇑*eP*		Pg		23 33 51.1	+1.1
MASN	**Masaya**	**0.82**	**55**	⇑*eP*		Pg		23 33 50.9	+0.5
MGAN	**Managua**	**0.86**	**43**	⇑*eP*		Pg		23 33 51.7	+0.8
APON	**Apoyo**	**0.86**	**62**	⇓*iP*		Pg		23 33 51.9	+0.8
APYN	**Apoyeque**	**0.86**	**34**	⇑*eP*		Pg		23 33 51.9	+0.8
APYN					AML	AML		23 34 10.7	
	comp=Z,1μm,0.3s								
WILN	**Americas 2**	**0.91**	**45**	⇓*eP*		Pg		23 33 52.5	+0.5
MIRN	**Miramar**	**0.93**	**8**	⇓*eP*		Pg		23 33 53.1	+0.8
MOMN	**Momotombo**	**0.94**	**19**	⇓*eP*		Pg		23 33 53.4	+0.9
CNGN	**Cerro Negro**	**0.99**	**8**	⇓*eP*		Pg		23 33 53.4	-0.1
CNGN					*e*S	Sg		23 34 08.8	+2.5
HUEN		**1.05**	**39**	⇑*eP*		Pg		23 33 54.7	0.0
TEL3	**Telica 3**	**1.05**	**0**	⇓*eP*		Pg		23 33 54.8	+0.1
CRIN	**San Cristobal**	**1.19**	**350**	⇑*eP*		Pg		23 33 56.7	-0.7
CONN	**Concepcion**	**1.20**	**88**	⇑*eP*		Pg		23 33 55.8	-1.7
VCR	**Vista de Mar**	**1.83**	**139**	*eP*		Pn		23 34 08.4	+1.2
VCR					*e*S	Sn		23 34 33.5	+2.5
JCR	**Jicaral**	**2.38**	**134**	*eP*		Pn		23 34 17.0	+2.2
FORC	**Fortuna**	**2.38**	**116**	*eP*		Pn		23 34 13.0	-1.8
TGUH	**Tegucigalpa,Un**	**2.56**	**351**	⇑*eP*		Pn		23 34 16.2	-1.0
CGA2	**Cerro Gallo 2**	**2.77**	**122**	*eP*		Pn		23 34 19.9	-0.3
PRS1	**Puriscal**	**2.92**	**121**	*eP*		Pn		23 34 22.4	+0.2
LAJ	**Bijagual**	**3.14**	**121**	*eP*		Pn		23 34 22.3	-2.9
URSC	**Urasca**	**3.45**	**119**	*eP*		Pn		23 34 29.0	-0.5

*IDC **20** 00:08:27.9±4.1, 2321S×7037W, h0km, mb4.2/1, mb1 3.9/2, mb1mx3.5/16, mbtmp3.8/2, ML3.4/1, Error ellipse: s-maj=128.3km s-min=61.4km az=89.0*
*ISCJB **20** 00:08:30.1±0.9, 2288S±005×7090W±0.10, h47km±10km, mb3.9/3, Error ellipse: s-maj=14.9km s-min=7.4km az=171.9*
*NEIC **20** 00:08:31.9, 2288S×7067W, h41km, mb3.7/2, After GUC.*
*GUC **20** 00:08:31.9±1.2, 2288S×7067W, h41km±5km, ML3.6*

ISC 20 00:08:31.3±0.8, 2289S±004×7085W±009, h39km±10km, n19, σ1§31/26, mb3.9/3, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.43**	**120**	⇓*iP*		**Pn**		**00 08 39.4**	**-1.7**
MECH				*i*	S	**Sn**		**00 08 46.0**	**-1.8**
MECH					AML	AML		00 08 46.8	
	comp=N,26μm,0.3s								
CEN1	**Los Morros**	**0.78**	**130**	⇑*iP*		**Pn**		**00 08 46.3**	**+0.4**
CEN1				*i*	S	**Sn**		**00 08 57.3**	**+1.0**
CEN1					AML	AML		00 09 00.6	
	comp=E,2μm,0.8s								
ANCH	**Antofagasta**	**0.88**	**153**	*eP*		**Pn**		**00 08 47.5**	**+0.2**
ANCH				*i*	S	**Sn**		**00 08 59.1**	**+0.2**
ANCH	**Antofagasta**	**0.88**	**153**	*eP*		**Pn**		**00 08 47.5**	**+0.2**
ANCH				*i*	S	**Sn**		**00 08 59.1**	**+0.2**
ANCH					AML	AML		00 09 01.6	
	comp=N,2μm,0.7s								
CPN1	**Cerro Paranal**	**1.77**	**167**	*eP*		**Pn**		**00 09 00.5**	**+1.0**
CPN1				*i*	S	**Sn**		**00 09 22.5**	**+1.7**
CPN1					AML	AML		00 09 32.5	
	comp=E,1μm,0.4s								
LVC	**Limon Verde**	**1.81**	**82**	*e*Pn		**Pn**		**00 09 00.2**	**+0.2**
LVC				*e*Sn		**Sn**		**00 09 16.3**	**-5.5**
LVC	**Limon Verde**	**1.81**	**82**	⇑*iP*		**Pn**		**00 09 00.4**	**+0.3**
LVC				*i*	S	**Sn**		**00 09 22.0**	**+0.2**
LVC					AML	AML		00 09 24.4	
	comp=N,956nm,0.6s								
ARE	**Arequipa**	**6.43**	**354**	*eP*		**Pn**		**00 10 03.0**	**-0.5**
ARE				*e*S		**Sn**		**00 11 13.0**	**-2.6**
LPAZ	**La Paz**	**7.05**	**22**	Pn		**Pn**		**00 10 15.0**	**+2.9**
	comp=N,0.3nm,0.3s,baz=204,slow=9.4,SNR=8.5								
LPAZ						Sn	Sn	00 11 53.2	+22
	comp=N,0.2nm,0.3s,baz=50,slow=14,SNR=3.5								
LPAZ	**La Paz**	**7.05**	**22**	Pn		**Pn**		**00 10 15.0**	**+2.9**
LPAZ						Sn	Sn	00 11 53.2	+22
NNA	**Nana**	**12.26**	**331**	Pn		**Pn**		**00 11 24.1**	**+0.7**
PLCA	**Paso Flores**	**17.79**	**179**	Pn		**Pn**		**00 12 35.0**	**-0.8**
OTAV	**Otavalo**	**24.15**	**341**	*eP*		**P**		**00 13 50.2**	**+6.3**
	comp=N,1.0nm,0.5s,mb3.5								
ROSC	**El Rosal**	**27.79**	**353**	Pn		**P**		**00 14 18.5**	**+1.7**
EFI	**East Falkland**	**30.39**	**164**	P		**P**		**00 14 38.0**	**-1.5**
PMSA	**Palmer Station**	**42.11**	**176**	*eP*		**P**		**00 16 16.8**	**-2.5**
	comp=N,71nm,1.2s								
SNAA	**Sanae**	**61.56**	**161**	*eP*		**P**		**00 18 43.3**	**-0.8**
	comp=N,0.9nm,0.8s,mb4.0								
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P		**P**		**00 20 35.3**	**+0.9**
	comp=N,1.1nm,0.5s,mb4.1,baz=258,slow=5.0,SNR=26								
MKAR	**Makanchi Array**	**147.81**	**36**	PKPbc		PKPbc		00 28 14.1	+2.2
	comp=N,0.7nm,0.7s,baz=303,slow=2.5,SNR=4.8								

*IDC **20** 00:24:08.0±4.1, 2316S×7054W, h0km, mb4.2/1, mb1 4.0/2, mb1mx3.6/16, mbtmp3.9/2, ML3.7/1, Error ellipse: s-maj=134.7km s-min=61.5km az=92.0*
*NEIC **20** 00:24:10.3, 2277S×7087W, h32km, ML3.5(GUC), After GUC.*
*GUC **20** 00:24:10.3±0.5, 2277S×7087W, h32km±4km, ML3.5*
*ISCJB **20** 00:24:12.1±1.1, 2290S±006×7091W±008, h33km, mb3.7/2, Error ellipse: s-maj=10.5km s-min=7.6km az=158.0*

ISC 20 00:24:13.6±1.1, 2295S±006×7086W±009, h35km, n12, σ1§41/20, mb3.7/2, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.41**	**113**	⇓*iP*		**Pn**		**00 24 20.2**	**-2.7**
MECH				*i*	S	**Sn**		**00 24 27.9**	**-1.5**
MECH					AML	AML		00 24 34.8	
	comp=E,9μm,0.6s								
CEN1	**Los Morros**	**0.75**	**126**	⇑*iP*		**Pn**		**00 24 27.0**	**-0.7**
CEN1				*i*	S	**Sn**		**00 24 39.8**	**+2.0**
CEN1					AML	AML		00 24 41.8	
	comp=E,2μm,0.7s								
ANCH	**Antofagasta**	**0.84**	**151**	⇑*iP*		**Pn**		**00 24 28.2**	**-0.7**
ANCH				*i*	S	**Sn**		**00 24 41.2**	**+1.2**
ANCH	**Antofagasta**	**0.84**	**151**	⇑*iP*		**Pn**		**00 24 28.2**	**-0.7**
ANCH				*i*	S	**Sn**		**00 24 41.2**	**+1.2**
ANCH					AML	AML		00 24 46.8	
	comp=E,2μm,0.5s								
LVC	**Limon Verde**	**1.83**	**80**	*e*Pn		**Pn**		**00 24 41.4**	**-1.0**
LVC				*e*Sn		**Sn**		**00 25 05.8**	**+1.4**
LVC	**Limon Verde**	**1.83**	**80**	⇑*iP*		**Pn**		**00 24 41.6**	**-0.9**
LVC				*i*	S	**Sn**		**00 25 05.8**	**+1.5**
LVC					AML	AML		00 25 11.2	
	comp=E,696nm,0.4s								
LCO	**Las Campanas**	**6.04**	**179**	*e*Pn		**Pn**		**00 25 55.1**	**+15**
LCO					S	**Sn**		**00 27 05.3**	**+17**
LPAZ	**La Paz**	**7.10**	**22**	Pn		**Pn**		**00 25 55.1**	**0.0**
	comp=E,0.6nm,0.3s,baz=219,slow=7.1,SNR=19								
LPAZ						Sn	**Sn**	**00 27 34.5**	**+20**
	comp=E,0.0nm,0.3s,baz=325,slow=20,SNR=4.1								
LPAZ	**La Paz**	**7.10**	**22**	Pn		**Pn**		**00 25 55.1**	**0.0**
LPAZ						Sn	**Sn**	**00 27 34.5**	**+20**
OTAV	**Otavalo**	**24.20**	**341**	*eP*		**P**		**00 29 20.0**	**+2.0**
	comp=E,1.0nm,0.7s,mb3.4								
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P		**P**		**00 36 16.1**	**-1.2**
	comp=E,1.5nm,0.7s,mb4.0,baz=253,slow=5.3,SNR=8.5								
MKAR	**Makanchi Array**	**147.86**	**36**	PKPbc		PKPbc		00 43 54.2	-0.6
	comp=E,0.7nm,0.8s,baz=320,slow=3.2,SNR=4.6								

*IDC **20** 00:29:16.5±4.0, 2373S×7046W, h0km, mb3.9/1, mb1 3.7/2, mb1mx3.4/16, mbtmp3.6/2, ML3.5/1, Error ellipse: s-maj=132.4km s-min=44.5km az=94.0*
*NEIC **20** 00:29:21.5, 2285S×7070W, h39km, MG3.4(GUC), After GUC.*

GUC ***20*** *00:29:21.5±0.4, 22.85S×70.70W, h39km±3km, ML3.4*
ISCJB ***20*** *00:29:23.7±1.8, 22.90S×109.07W±0.01, h26km±13km, Error ellipse: s-maj=18.6km s-min=15.7km az=179.2*

ISC 20 00:29:19.5±2.2, 2279S×007×709W±.01, h17km±8km, n10, σ0.9:39/16, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.51**	**129**	↓	*iP*	**Pg**	**00 29 29.7**	**0.0**
MECH					*i* S	**Sg**	**00 29 36.2**	**-0.3**
MECH					AML	AML	00 29 37.0	
	comp=N,19μm,0.3s							
CEN1	**Los Morros**	**0.87**	**134**	↑	*iP*	**Pb**	**00 29 36.5**	**+0.3**
CEN1					*i* S	**Sb**	**00 29 47.9**	**+0.4**
CEN1					AML	AML	00 29 50.9	
	comp=E,1μm,0.8s							
ANCH	**Antofagasta**	**0.99**	**154**	↓	*iP*	**Pb**	**00 29 38.6**	**+0.4**
ANCH					*i* S	**Sb**	**00 29 50.5**	**-0.5**
LVC	**Limon Verde**	**1.82**	**85**		*e*Pn	**Pn**	**00 29 50.3**	**+0.2**
LVC					*e*Sn	**Sn**	**00 30 13.3**	**+0.5**
LVC	**Limon Verde**	**1.82**	**85**	↑	*iP*	**Pn**	**00 29 50.3**	**+0.2**
LVC					*i* S	**Sn**	**00 30 12.2**	**-0.6**
LVC					AML	AML	00 30 14.6	
	comp=N,499nm,0.7s							
LPAZ	**La Paz**	**6.96**	**22**		Pn	**Pn**	**00 31 10.0**	**+9.2**
	comp=N,0.3nm,0.3s,baz=195,slow=6.4,SNR=6.7							
LPAZ					Sn	**Sn**	**00 32 42.0**	**+22**
	comp=N,0.6nm,0.3s,baz=17,slow=19,SNR=6.8							
LPAZ	**La Paz**	**6.96**	**22**		Pn	**Pn**	**00 31 10.0**	**+9.2**
LPAZ					Sn	**Sn**	**00 32 42.0**	**+22**
TORD	**Torodi Ar. Bea**	**79.50**	**71**		P	**P**	**00 41 25.3**	**-0.5**
	comp=N,0.4nm,0.4s,baz=254,slow=5.2,SNR=16							
TORD	**Torodi Ar. Bea**	**79.50**	**71**		P	**P**	**00 41 25.3**	**-0.5**
MKAR	**Makanchi Array**	**147.74**	**36**		PKPbc	PKPbc	00 49 04.1	+0.9
	comp=N,0.6nm,1.0s,baz=308,slow=1.9,SNR=2.8							

ISCJB ***20*** *00:42:05.6±0.1, 6326N×002×14474E±004, h10km, mb4.6/102, MS4.5/13, Error ellipse: s-maj=3.1km s-min=2.6km az=21.8*
MOS ***20*** *00:42:05.7±0.8, 6327N×14454E, h10km, mb4.7/50, MS4.1/4, Error ellipse: s-maj=11.5km s-min=4.7km az=98.5*
BJI ***20*** *00:42:06.6, 6320N×14450E, h10km, mB5.1, mb4.7, Ms5.0, Msz4.7*
IDC ***20*** *00:42:06.3±0.5, 6323N×14450E, h0km, mb4.2/23, mb1 4.4/25, mb1mx4.4/30, mbtmp4.2/25, ML4.1/2, MS4.3/6, Ms1 4.3/6, ms1mx3.8/43, Error ellipse: s-maj=14.2km s-min=12.9km az=154.0*
NEIC ***20*** *00:42:07.6±0.1, 6324N×14453E, h10km, mb4.7/41, Error ellipse: s-maj=3.8km s-min=3.3km az=174.0*
NERS ***20*** *00:42:09.9, 6324N×14493E, h27km*
SZGRF ***20*** *00:42:17.5, 6479N×14546E, h15km, mb4.8, Eastern Siberia, Russia*

ISC 20 00:42:07.7±0.1, 6325N±002×14470E±004, h10km, (h14km±1.7km:pP-P), n290, σ0.9:98/303, mb4.6/102, MS4.5/13, 20C-24D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
OCHR	**Omchak**	**2.16**	**136**	↑	*e*	**Pn**	**00 42 44.3**	**+0.6**
OCHR					Pmax		00 42 44.7	
	40nm,0.1s							
OCHR					Pmax		00 42 44.7	
	20nm,0.1s							
OCHR					Pmax		00 42 44.7	
	170nm,0.1s							
OCHR				↓	Pmax		00 42 47.1	
OCHR					Pgmax		00 42 48.1	
	370nm,0.1s							
OCHR					Pgmax		00 42 48.1	
	250nm,0.1s							
OCHR					Pgmax		00 42 48.1	
	830nm,0.1s							
OCHR					*e*		00 43 12.5	
OCHR					*e*Sg	**Sg**	**00 43 15.9**	**-1.2**
OCHR					Sgmax		00 43 18.4	
	5μm,0.2s							
OCHR					Sgmax		00 43 18.4	
	8μm,0.2s							
SNGR	**Sinegor'e**	**2.89**	**112**		Pgmax		00 42 01.5	
	1μm,0.4s							
SNGR					Pgmax		00 42 01.5	
	150nm,0.2s							
SNGR					Pgmax		00 42 01.5	
	280nm,0.2s							
SNGR				↑	Sgmax		00 42 54.7	
SNGR					Pmax		00 42 55.8	
	310nm,0.3s							
SNGR					Pmax		00 42 55.8	
	120nm,0.2s							
SNGR					*e*Pg	**Pg**	**00 43 01.8**	**-1.2**
SNGR					*e*S	**Sn**	**00 43 24.7**	**-3.7**
SNGR					*e*Sg	**Sg**	**00 43 39.8**	**-0.5**
SNGR					Sgmax		00 43 43.3	
	9μm,0.3s							
SNGR					Sgmax		00 43 43.3	
	510nm,0.2s							
SEY	**Seymchan**	**3.51**	**92**	↑	Sgmax		00 43 02.9	
SEY					Pmax		00 43 08.9	
	100nm,0.3s							
SEY					*e*Pg	**Pg**	**00 43 12.9**	**-1.9**
SEY					Pgmax		00 43 16.4	
	400nm,0.5s							
SEY					*e*Sg	**Sg**	**00 43 57.7**	**-2.6**
SEY					Sgmax		00 44 02.2	
	6μm,0.5s							
SEY					Sgmax		00 44 02.2	
	900nm,0.3s							
SEY	**Seymchan**	**3.51**	**92**	↑	*e*P	**Pn**	**00 43 02.9**	**+0.7**
OHTR	**Okhotsk**	**3.96**	**190**		*e*P	**Pn**	**00 43 14.0**	**+5.7**
OHTR					*e*Pg	**Pg**	**00 43 22.5**	**-0.9**
OHTR					Pgmax		00 43 26.9	
	330nm,0.5s							
OHTR					*e*Sg	**Sg**	**00 44 18.3**	**+3.7**
OHTR					Sgmax		00 44 20.1	
	4μm,0.5s							
TLAR	**Talaya**	**4.19**	**117**		*e*P	**Pn**	**00 43 12.0**	**+0.5**
TLAR					Pmax		00 43 13.7	
	60nm,0.3s							
TLAR					*e*Pg	**Pg**	**00 43 24.4**	**-3.4**
TLAR					Pgmax		00 43 27.3	
	930nm,0.7s							
TLAR					Pgmax		00 43 27.3	
	950nm,0.7s							
TLAR					Pgmax		00 43 27.3	
	740nm,0.6s							
TLAR					*e*S	**Sn**	**00 44 03.8**	**+3.4**
TLAR					*e*Sg	**Sg**	**00 44 20.3**	**-1.7**
TLAR					Sgmax		00 44 25.4	
	6μm,0.8s							
TLAR					Sgmax		00 44 25.4	
	5μm,0.8s							
MGD	**Magadan 1**	**4.31**	**135**	↓	Sgmax		00 43 13.3	
MGD					Pmax		00 43 14.5	
	10.0nm,0.2s							
MGD					Pmax		00 43 14.5	
	20nm,0.2s							
MGD					Pmax		00 43 14.5	
	50nm,0.2s							
MGD					*e*Pg	**Pg**	**00 43 26.4**	**-3.8**
MGD					Pgmax		00 43 31.9	
	430nm,0.6s							
MGD					Pgmax		00 43 31.9	
	90nm,0.3s							
MGD					Pgmax		00 43 31.9	
	160nm,0.3s							
MGD					*e*S	**Sn**	**00 44 03.0**	**-0.4**
MGD					*e*Sg	**Sg**	**00 44 21.9**	**-4.0**
MGD					Sgmax		00 44 30.6	
	3μm,0.6s							
MGD					Sgmax		00 44 30.6	
	240nm,0.3s							
OMS	**Omsukchan**	**5.12**	**93**		*e*	**Pb**	**00 43 39.9**	**+2.6**
OMS					*e*		00 43 48.3	
OMS					*e*		00 44 43.7	
OMS					*e*Sg	**Sg**	**00 44 52.8**	**+0.8**
OMS					Sgmax		00 44 55.5	
	2μm,0.8s							
OMS					Sgmax		00 44 55.5	
	1μm,0.8s							
YAK	**Yakutsk**	**7.03**	**267**		*e*Pn	**Pn**	**00 43 50.0**	**-0.5**
YAK					*e*Sn	**Sn**	**00 45 14.1**	**+3.8**
YAK	**Yakutsk**	**7.03**	**267**		*e*P	**Pn**	**00 43 49.9**	**-0.6**
YAK					*e*		00 45 08.0	
YAK					Pmax	Pmax		
	comp=Z,97nm,0.4s							
YAK					Pmax	Pmax		
	comp=N,11nm,0.3s							
YAK					Pmax	Pmax		
	comp=E,44nm,0.3s							
YAK					Smax			
	comp=E,346nm,0.7s							
YAK					Smax			
	comp=N,219nm,0.5s							
BILL	**Bilibino**	**10.09**	**52**		*e*P	**Pn**	**00 44 32.7**	**+0.4**
BILL					Pgmax		00 44 33.8	
	comp=N,10.0nm,0.7s							
BILL					*e*S	**Sn**	**00 46 36.5**	**+11**
BILL					Smax		00 46 38.3	
	comp=N,130nm,0.9s							
BILL					Smax		00 46 38.3	
	comp=N,80nm,0.8s							
BILL					*e*Sg	Sn	00 47 31.1	+66
BILL					Sgmax		00 47 43.8	
	comp=N,630nm,1.2s							
BILL					Sgmax		00 47 43.8	
	comp=N,400nm,1.4s							
BILL	**Bilibino**	**10.09**	**52**		*e*Pn	**Pn**	**00 44 29.9**	**-2.4**
	comp=N,32nm,0.8s							
BILL	**Bilibino**	**10.09**	**52**	↑	*e*P	**Pn**	**00 44 33.0**	**+0.7**
BILL					S	**Sn**	**00 46 26.0**	**+0.7**
BILL					pmax	pmax		
	comp=Z,12nm,0.8s							
BILL					smax			
	comp=E,57nm,1.4s							
TIXI	**Tiksi**	**10.35**	**331**		*e*Pn	**Pn**	**00 44 34.8**	**-1.2**
TIXI	**Tiksi**	**10.35**	**331**		*e*P	**Pn**	**00 44 34.7**	**-1.3**
TIXI					pmax	pmax		
	comp=Z,198nm,0.6s							
PETK	**Petropavlovsk-**	**12.23**	**140**		Pn	**Pn**	**00 45 02.7**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=336,slow=13,SNR=5.7							
PETK					LR	LR	00 50 21.2	
	comp=Z,575nm,20.9s,baz=10,slow=40							
PETK	**Petropavlovsk-**	**12.23**	**140**		Pn	**Pn**	**00 45 02.7**	**+1.0**
PETK					LR	LR	00 50 21.2	
PET	**Petropavlovsk**	**12.59**	**138**		Pn	**Pn**	**00 45 05.9**	**-0.7**
PET	**Petropavlovsk**	**12.59**	**138**	↑	*iP*	**Pn**	**00 45 05.3**	**-1.3**
KLR	**Kul'dur**	**15.73**	**213**		*e*P	**Pn**	**00 45 46.9**	**-2.2**
KLR					pmax	pmax		
	comp=Z,110nm,1.8s							
HABR	**Khabarovsk**	**15.73**	**204**		*e*P	**Pn**	**00 45 46.0**	**-3.1**
HABR					*e*		00 48 40.8	
YSS	**Yuzh-Sakhalins**	**16.36**	**185**		Pn	**Pn**	**00 45 58.1**	**+0.8**
ASAJ	**Asahikawa**	**19.20**	**185**		P	**Pn**	**00 46 32.7**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=331,slow=13,SNR=11							
ASAJ					LR	LR	00 53 36.6	
	comp=Z,1μm,20.2s,baz=108,slow=36							
ASAJ	**Asahikawa**	**19.20**	**185**		P	**Pn**	**00 46 32.7**	**+0.4**
ASAJ					pmax	pmax		
	comp=Z,1.0nm,0.3s							
ASAJ					MLR	MLR		
	comp=Z,1μm,20.2s							
HIA	**Hailar**	**19.51**	**236**		*e*P	**Pn**	**00 46 34.0**	**-2.0**
	comp=Z,74nm,1.3s							
HIA	**Hailar**	**19.51**	**236**		*e*P	**Pn**	**00 46 34.0**	**-2.0**
HIA					pmax	pmax		
	comp=Z,74nm,1.3s							
MDJ	**Mudanjiang**	**20.57**	**212**		P	**P**	**00 46 47.5**	**+1.2**
MDJ					AP		00 46 50.4	
MDJ					XP	sP	00 46 51.8	+1.4
MDJ					S	**S**	**00 50 37.8**	**+1.7**
MDJ					AMB	AMB		
	comp=Z,23nm,1.0s							
MDJ					AMB	AMB		
	comp=Z,256nm,3.4s							
MDJ					LR	LR		
	comp=N,2μm,9.7s							
MDJ					LR	LR		
	comp=E,4μm,9.9s							
MDJ					LR	LR		
	comp=Z,2μm,6.3s							
MDJ	**Mudanjiang**	**20.57**	**212**		*e*P	**P**	**00 46 45.9**	**-0.4**
	comp=Z,19nm,0.9s							
CN2	**Changchun**	**22.42**	**219**		*e*P	**P**	**00 47 06.3**	**+0.2**
CN2					*e*XP	sP	00 47 12.6	+2.3
CN2					*e*PP		00 47 33.8	
CN2					*e*S	**S**	**00 51 06.8**	**-5.4**
CN2					*e*SS		00 51 47.6	
CN2					AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5							
CN2					AMB	AMB		
	comp=Z,200nm,6.0s							
CN2					LR	LR		
	comp=N,2μm,10.0s,MS5.0							
CN2					LR	LR		
	comp=E,2μm,10.0s,MS5.0							
CN2					LR	LR		
	comp=Z,1μm,10.0s,MS4.6							
ADK	**Adak**	**23.23**	**101**		*e*P	**P**	**00 47 14.5**	**-0.1**
	comp=Z,124nm,1.3s,mb5.2							
ADK	**Adak**	**23.23**	**101**		*e*P	**P**	**00 47 14.5**	**-0.1**
ADK					pmax	pmax		
	comp=Z,124nm,1.3s,mb5.2							
TLY	**Talaya**	**24.45**	**261**		P	**P**	**00 47 27.4**	**+1.1**
	comp=Z,5.2nm,0.6s,mb4.1							
TLY	**Talaya**	**24.45**	**261**	↓	*iP*	**P**	**00 47 25.5**	**-0.8**
TLY					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1							
SNY	**Shenyang**	**24.77**	**220**		*e*P	**P**	**00 47 34.0**	**+4.8**
SNY					S	**S**	**00 51 52.1**	**+0.9**
SNY					LR	LR		
	comp=N,1μm,13.2s							
SNY					LR	LR		
	comp=E,986nm,9.0s							
SNY					LR	LR		
	comp=Z,1μm,13.5s,MS4.5							
ZAK	**Zakamensk**	**25.54**	**259**		*e*P	**P**	**00 47 37.0**	**+0.9**
ZAK					*e*		00 53 13.2	
ZAK					pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0							
IMA2	**Indian Mountai**	**25.59**	**56**		*e*P	**P**	**00 47 36.9**	**+0.5**
MOY	**Mondy**	**25.65**	**264**		*e*P	**P**	**00 47 41.1**	**+4.0**
NIKO	**Nikolski**	**26.01**	**91**		*e*P	**P**	**00 47 40.8**	**+0.5**
	comp=Z,73nm,0.8s,mb5.3							
SONM	**Songino Array**	**26.07**	**252**		P	**P**	**00 47 41.5**	**+0.5**
	comp=Z,5.6nm,1.1s,mb4.0,baz=44,slow=7.1,SNR=13							
SONM					Lg		00 55 44.4	
	comp=Z,7.9nm,1.2s,baz=39,slow=30,SNR=6.8							
COLD	**Coldfoot**	**26.42**	**53**		*e*P	**P**	**00 47 45.0**	**+1.1**
	comp=Z,16nm,0.8s,mb4.6							
KRAR	**Krasnoyarsk**	**26.50**	**278**	↓	*iP*	**P**	**00 47 44.4**	**-0.4**
KRAR					pmax	pmax		
	comp=Z,20nm,0.4s,mb5.0							
MAJO	**Matsushiro**	**27.03**	**192**		*e*P	**P**	**00 47 50.1**	**+0.5**
	comp=Z,7.1nm,0.7s,mb4.3							
MAJO	**Matsushiro**	**27.03**	**192**		*e*P	**P**	**00 47 50.2**	**+0.5**
MAJO					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3							
MAT	**Matsushiro**	**27.03**	**192**		P	**P**	**00 47 50.4**	**+0.7**
MJAR	**Matsushiro Arr**	**27.03**	**192**		P	**P**	**00 47 49.5**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.1,baz=359,slow=11,SNR=9.0							
MJAR	**Matsushiro Arr**	**27.03**	**192**		P	**P**	**00 47 49.5**	**-0.2**
MJAR					pmax	pmax		
	comp=Z,5.0nm,0.8s							
CHUM	**Lake Minchumin**	**27.05**	**60**		*e*P	**P**	**00 47 50.6**	**+0.9**
	comp=Z,12nm,0.9s,mb4.4							
KTH	**Kantishna Hill**	**27.75**	**60**		*e*P	**P**	**00 47 57.0**	**+1.0**
	comp=Z,25nm,1.6s,mb4.6							
KSRS	**Korea Array**	**27.77**	**210**		P	**P**	**00 47 57.0**	**+0.7**
	comp=Z,2.9nm,0.9s,mb3.9,baz=17,slow=9.4,SNR=4.0							
KSRS	**Korea Array**	**27.77**	**210**		P	**P**	**00 47 57.1**	**+0.8**
KSRS					pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9							
COLA	**College**	**28.30**	**56**		*e*P	**P**	**00 48 01.2**	**+0.3**
	comp=Z,8.9nm,0.8s,mb4.5							
COLA	**College**	**28.30**	**56**	↑	*iP*	**P**	**00 48 02.0**	**+1.1**
MCK	**McKinley**	**28.44**	**59**		*e*P	**P**	**00 48 03.2**	**+1.1**
	comp=Z,26nm,1.3s,mb4.7							
MCK	**McKinley**	**28.44**	**59**		*e*P	**P**	**00 48 03.2**	**+1.1**
MCK					pmax	pmax		
	comp=Z,26nm,1.3s,mb4.7							
BJT	**Baijiatuan**	**28.78**	**230**		P	**P**	**00 48 04.4**	**-0.9**
HHC	**Hu-ho-hao-te**	**29.71**	**237**		*e*P	**P**	**00 48 15.5**	**+1.9**
HHC					XP	sP	00 48 21.4	+3.5
HHC					PP	PP	00 49 12.5	-8.0
HHC					PCP	PcP	00 51 18.6	+1.4
HHC					S	**S**	**00 53 10.4**	**+1.2**
HHC					SS	SS	00 54 46.8	-28
HHC					PCS	PcS	00 55 01.0	+0.7
HHC					SCS	ScS	00 58 52.9	-0.8
HHC					AMB	AMB		
	comp=Z,14nm,0.5s,mb5.0							
HHC					AMB	AMB		
	comp=Z,154nm,3.7s							
HHC					LR	LR		
	comp=N,687nm,20.2s,MS4.5							
HHC					LR	LR		
	comp=E,934nm,21.4s,MS4.5							
HHC					LR	LR		
	comp=Z,1μm,22.6s,MS4.5							
KDAK	**Kodiak Island**	**30.22**	**71**		LR	LR	01 01 20.5	
	comp=Z,1μm,19.8s,MS4.5,baz=298,slow=38							
EGAK	**Eagle**	**30.83**	**54**		*e*P	**P**	**00 48 23.8**	**+0.6**
	comp=Z,15nm,1.0s,mb4.8							
ZALV	**Zalesovo Beam**	**31.40**	**281**		P	**P**	**00 48 29.8**	**+1.4**
	comp=Z,0.4nm,0.4s,mb3.6,baz=74,slow=5.3,SNR=4.1							
NVS	**Novosibirsk**	**31.52**	**284**		*e*P	**P**	**00 48 31.7**	**+2.3**
NVS					*e*		00 49 30.5	
NVS					*e*		00 55 20.1	
NVS							00 58 56.7	
NVS					pmax	pmax		
	comp=N,3.0nm,1.4s							
NVS					pmax	pmax		
	comp=E,9.0nm,1.4s							
NVS					pmax	pmax		
	comp=Z,11nm,1.4s,mb4.5							
INK	**Inuvik**	**31.59**	**45**		*e*P	**P**	**00 48 31.9**	**+2.1**
	comp=Z,3μm,2.3s							
DAWY	**Dawson**	**31.86**	**54**		*e*P	**P**	**00 48 32.8**	**+0.5**
NJ2	**Nanjing**	**35.23**	**220**		*e*P	**P**	**00 49 02.4**	**+0.5**
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8							
GTA	**Gaotai**	**35.68**	**250**		*e*P	**P**	**00 49 05.3**	**-0.4**
GTA					AP	pP	00 49 09.4	+0.6
GTA					XP	sP	00 49 12.3	+2.3
GTA					PP	PP	00 50 25.4	-1.2
GTA					S	**S**	**00 54 42.3**	**+0.4**
GTA					XS	sS	00 54 48.3	+1.3
GTA					SS	SS	00 57 01.8	-15
GTA					AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.2							
GTA					AMB	AMB		
	comp=Z,350nm,4.5s							
GTA					LR	LR		
	comp=N,1μm,15.5s,MS5.0							
GTA					LR	LR		
	comp=E,1μm,12.5s,MS5.0							
GTA					LR	LR		
	comp=Z,2μm,19.6s							
KURK	**Kurchatov**	**36.39**	**282**		P	**P**	**00 49 11.9**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=47,slow=8.1,SNR=20							
KURK	**Kurchatov**	**36.39**	**282**		*e*P	**P**	**00 49 11.7**	**0.0**
KURK	**Kurchatov**	**36.39**	**282**		P	**P**	**00 49 12.0**	**+0.3**
KURK					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
LZH	**Lanzhou**	**36.85**	**242**		*e*P	**P**	**00 49 18.5**	**+2.8**
LZH					AP	pP	00 49 23.0	+4.2
LZH					PP	PP	00 50 44.1	+4.6
LZH					*e*S	**S**	**00 55 07.3**	**+7.4**
LZH					XS	sS	00 55 11.0	+6.0
LZH					SS	SS	00 57 31.1	-10
LZH					AMB	AMB		
	comp=Z,32nm,1.0s,mb5.1							
LZH					AMB	AMB		
	comp=Z,160nm,4.0s							
LZH					LR	LR		
	comp=E,2μm,14.8s							
LZH					LR	LR		
	comp=Z,2μm,15.9s,MS5.0							
RES	**Resolute Bay**	**36.99**	**22**		*e*P	**P**	**00 49 16.5**	**-0.1**
WMQ	**Urumqi**	**37.47**	**266**		*e*P	**P**	**00 49 21.0**	**+0.1**
WMQ					XP	sP	00 49 28.0	+2.7
WMQ					PP	PP	00 50 49.0	+2.8
WMQ					S	**S**	**00 55 08.0**	**-1.2**
WMQ					SS	SS	00 57 40.0	-13
WMQ					AMB	AMB		
	comp=Z,26nm,1.0s,mb5.0							
WMQ					AMB	AMB		
	comp=Z,54nm,3.0s							
WMQ					LR	LR		
	comp=N,835nm,14.0s,MS4.9							
WMQ					LR	LR		
	comp=E,958nm,14.0s,MS4.9							
WMQ					LR	LR		
	comp=Z,1μm,14.0s,MS4.8							
MKAR	**Makanchi Array**	**37.63**	**274**		P	**P**	**00 49 21.9**	**-0.4**
	comp=Z,1.8nm,0.9s,mb3.8,baz=53,slow=4.7,SNR=7.8							
MKAR					PP	PP	00 50 35.0	-13
	comp=Z,1.3nm,0.7s,baz=45,slow=8.2,SNR=5.1							
MKAR	**Makanchi Array**	**37.63**	**274**		P	**P**	**00 49 21.9**	**-0.4**
MKAR					PP	PP	00 50 35.0	-13
MKAR	**Makanchi Array**	**37.63**	**274**		P	**P**	**00 49 21.9**	**-0.4**
MKAR					pmax	pmax		
	comp=Z,2.0nm,0.9s							
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.7s							
BVAR	**Borovoye Array**	**38.32**	**290**		P	**P**	**00 49 27.7**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.0,baz=65,slow=8.4,SNR=9.0							
BVAR					PP	PP	00 50 56.9	+1.5
	comp=Z,8.6nm,0.9s,baz=51,slow=12,SNR=8.4							
BVAR	**Borovoye Array**	**38.32**	**290**		P	**P**	**00 49 27.7**	**-0.3**
BVAR							00 50 56.9	
BVAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
BVAR					pmax	pmax		
	comp=Z,9.0nm,0.9s							
BRVK	**Borovoye**	**38.34**	**290**		*e*P	**P**	**00 49 27.7**	**-0.5**
	comp=Z,7.7nm,1.1s,mb4.3							
BRVK	**Borovoye**	**38.34**	**290**		*e*P	**P**	**00 49 27.7**	**-0.5**
BRVK					pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4							
DLBC	**Dease Lake**	**38.92**	**57**		P	**P**	**00 49 35.7**	**+2.7**
	comp=Z,6.6nm,0.9s,mb4.3,baz=325,slow=9.2,SNR=8.9							
DLBC	**Dease Lake**	**38.92**	**57**		*e*P	**P**	**00 49 34.2**	**+1.2**
KEV	**Kevo**	**40.29**	**332**		*e*p	**P**	**00 49 44.2**	**-0.1**
	comp=Z,1.0nm,0.4s,mb3.9							
KEV	**Kevo**	**40.29**	**332**		*e*P	**P**	**00 49 44.2**	**-0.1**
KEV					pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9							
ARU	**Arti**	**40.68**	**302**		P	**P**	**00 49 44.8**	**-2.8**
ARU	**Arti**	**40.68**	**302**	*d*	*iP*	**P**	**00 49 45.4**	**-2.2**
ARU					*e*S	**S**	**00 55 54.7**	**-2.5**
ARU					SS	SS	00 58 51.3	-5.6
ARU					pmax	pmax		
	comp=Z,18nm,2.5s,mb4.3							
ARCES	**ARCESS Array B**	**40.79**	**332**		P	**P**	**00 49 48.2**	**-0.2**
	comp=Z,3.8nm,0.6s,mb4.2,baz=36,slow=9.0,SNR=10							
ARCES					LR	LR	01 09 49.5	
	comp=Z,414nm,18.9s,MS4.3,baz=289,slow=41							
ARCES	**ARCESS Array B**	**40.79**	**332**		P	**P**	**00 49 48.2**	**-0.2**
ARCES					LR	LR	01 09 49.5	
ARCES	**ARCESS Array B**	**40.79**	**332**		P	**P**	**00 49 48.2**	**-0.2**
ARCES					pmax	pmax		
	comp=Z,4.0nm,0.6s							
ARCES					MLR	MLR		
	comp=Z,414nm,18.9s							
TATO	**Taipei**	**41.24**	**213**		*e*P	**P**	**00 49 51.0**	**-1.5**
	comp=Z,195nm,1.2s,mb5.6							
YKA	**Yellowknife Ar**	**41.34**	**44**		P	**P**	**00 49 53.4**	**+0.4**
	comp=Z,2.8nm,0.7s,mb4.0,baz=314,slow=7.5,SNR=8.6		

GYA				AMB	AMB					
	comp=Z,10.0nm,0.8s,mb4.6									
GYA				AMB	AMB					
	comp=Z,90nm,5.8s									
GYA				LR	LR					
	comp=N,430nm,19.8s,MS4.5									
GYA				LR	LR					
	comp=E,370nm,18.1s,MS4.5									
GYA				LR	LR					
	comp=Z,520nm,17.7s,MS4.5									
SUMG	**Summit**	**44.43**	**1**	*e*P	**P**		**00 50 18.2**	**+0.3**		
	comp=Z,11nm,1.1s,mb4.5									
EKS2	**Erkin-Say**	**44.67**	**277**	*e*P	**P**		**00 50 19.0**	**-1.1**		
	comp=Z,5.6nm,1.0s,mb4.3									
UCH	**Uchtor**	**44.68**	**276**	P	**P**		**00 50 19.4**	**-0.9**		
JOF	**Joensuu**	**44.72**	**323**	*e*p	**P**		**00 50 18.8**	**-1.5**		
	comp=Z,1.9nm,0.4s,mb4.3									
JOF	**Joensuu**	**44.72**	**323**	*e*P	**P**		**00 50 18.8**	**-1.5**		
JOF				pmax	pmax					
	comp=Z,2.0nm,0.4s,mb4.3									
AML	**Almayashu**	**45.12**	**277**	P	**P**		**00 50 22.9**	**-1.0**		
AKTK	**Aktyubinsk**	**45.39**	**296**	P	**P**		**00 50 24.6**	**-1.2**		
AKTO	**Aktyubinsk**	**45.39**	**296**	P	**P**		**00 50 24.6**	**-1.2**		
	comp=Z,1.0nm,0.5s,mb3.9,baz=58,slow=8.0,SNR=4.5									
AKTO	**Aktyubinsk**	**45.39**	**296**	P	**P**		**00 50 24.6**	**-1.2**		
AKTO				pmax	pmax					
	comp=Z,1.0nm,0.5s,mb3.9									
KAF	**Kangasniemi**	**46.70**	**325**	*e*p	**P**		**00 50 34.8**	**-1.2**		
	comp=Z,1.3nm,0.4s,mb4.2									
KAF	**Kangasniemi**	**46.70**	**325**	*e*P	**P**		**00 50 34.8**	**-1.2**		
KAF				pmax	pmax					
	comp=Z,1.0nm,0.4s,mb4.1									
KMI	**Kunming**	**47.03**	**236**	P	**P**		**00 50 40.6**	**+1.6**		
KMI				AP	pP		00 50 43.8	+1.7		
KMI				AMB	AMB					
	comp=Z,9.0nm,0.6s,mb4.9									
OBN	**Obninsk**	**49.54**	**314**	*e*P	**P**		**00 50 57.4**	**-0.6**		
OBN	**Obninsk**	**49.54**	**314**	*ce*P	**P**		**00 50 57.3**	**-0.7**		
OBN				*e*			00 52 18.3			
OBN				pmax	pmax					
	comp=Z,34nm,1.7s,mb5.1									
OBN				MLR	MLR					
	comp=Z,200nm,14.0s,MS4.3									
VSU	**Vasula**	**49.68**	**322**	⇓*i*P	**P**		**00 50 58.5**	**-0.5**		
VSU				pmax	pmax					
	comp=Z,14nm,1.2s,mb4.9									
NOA	**NORSAR Array B**	**51.14**	**333**	P	**P**		**00 51 09.1**	**-0.9**		
	comp=Z,7.1nm,0.7s,mb4.7,baz=25,slow=7.4,SNR=25									
NOA				LR	LR		01 18 22.2			
	comp=Z,107nm,18.7s,MS3.9,baz=5.0,slow=43									
NOA	**NORSAR Array B**	**51.14**	**333**	P	**P**		**00 51 09.1**	**-0.9**		
NOA				pmax	pmax					
	comp=Z,7.0nm,0.7s									
NOA				MLR	MLR					
	comp=Z,107nm,18.7s									
TAPN	**Taplejung**	**51.18**	**253**	*e*P	**P**		**00 51 11.1**	**+0.3**		
	comp=Z,7.7nm,0.6s,mb4.8									
GUN	**Gumba**	**51.49**	**255**	*e*P	**P**		**00 51 14.0**	**+0.9**		
	comp=Z,17nm,0.6s,mb5.1									
FFC	**Flin Flon**	**51.51**	**43**	*e*P	**P**		**00 51 13.0**	**+0.1**		
NEW	**Newport**	**51.66**	**57**	P	**P**		**00 51 15.7**	**+1.6**		
KKN	**Kakani**	**51.86**	**256**	*e*P	**P**		**00 51 17.1**	**+1.3**		
	comp=Z,26nm,0.6s,mb5.3									
BORG	**Borgarnes**	**51.90**	**352**	*e*P	**P**		**00 51 16.6**	**+0.9**		
GKN	**Gorkha**	**51.96**	**257**	*e*P	**P**		**00 51 17.6**	**+1.0**		
	comp=Z,21nm,0.5s,mb5.3									
PKI	**Pulchoki**	**51.99**	**256**	*e*P	**P**		**00 51 18.5**	**+1.7**		
PKIN	**Phulchoki**	**51.99**	**256**	*e*P	**P**		**00 51 18.4**	**+1.6**		
	comp=Z,6.9nm,0.6s,mb4.8									
RAMN	**Ramite**	**52.01**	**254**	*e*P	**P**		**00 51 17.3**	**+0.3**		
	comp=Z,29nm,1.0s,mb5.2									
DANN	**Dangsing**	**52.05**	**258**	*e*P	**P**		**00 51 18.3**	**+1.1**		
	comp=Z,32nm,0.6s,mb5.5									
WALA	**Waterton Lakes**	**52.21**	**55**	*e*P	**P**		**00 51 18.5**	**+0.3**		
	comp=Z,3.9nm,1.1s,mb4.2									
PYUN	**Piuthan**	**52.60**	**258**	*e*P	**P**		**00 51 21.9**	**+0.5**		
	comp=Z,24nm,0.7s,mb5.2									
KOLN	**Koldanda**	**52.62**	**257**	*e*P	**P**		**00 51 22.5**	**+1.0**		
	comp=Z,25nm,0.7s,mb5.3									
KBL	**Kabul**	**53.43**	**275**	*e*P	**P**		**00 51 26.3**	**-1.1**		
	comp=Z,5.3nm,0.7s,mb4.6									
KBL	**Kabul**	**53.43**	**275**	*e*P	**P**		**00 51 26.3**	**-1.1**		
KBL				pmax	pmax					
	comp=Z,5.0nm,0.7s,mb4.5									
CHTO	**Chiang Mai**	**54.20**	**237**	*e*P	**P**		**00 51 32.2**	**-0.9**		
	comp=Z,1.7nm,0.5s,mb4.2									
CHTO	**Chiang Mai**	**54.20**	**237**	*e*P	**P**		**00 51 32.2**	**-0.9**		
CHTO				pmax	pmax					
	comp=Z,2.0nm,0.5s,mb4.3									
CHMT	**Chamberlain Mo**	**54.24**	**56**	*e*P	**P**		**00 51 34.0**	**+0.9**		
CMAR	**Chiang Mai Arr**	**54.52**	**237**	P	**P**		**00 51 34.8**	**-0.7**		
	comp=Z,1.5nm,0.4s,mb4.4,baz=8.4,slow=8.0,SNR=4.6									
CMAR	**Chiang Mai Arr**	**54.52**	**237**	*i* P	**P**		**00 51 34.7**	**-0.8**		
CMAR				pmax	pmax					
	comp=Z,2.0nm,0.4s									
SUW	**Suwalki**	**54.53**	**322**	*e*P	**P**		**00 51 34.5**	**-0.7**		
AKSG	**Malin Array Be**	**55.64**	**316**	P	**P**		**00 51 42.1**	**-1.1**		
	comp=Z,8.2nm,0.6s,mb5.0,baz=30,slow=7.8,SNR=14									
AKSG	**Malin Array Be**	**55.64**	**316**	*i* P	**P**		**00 51 42.2**	**-1.0**		
AKASG				pmax	pmax					
	comp=Z,8.0nm,0.6s									
KIEV	**Kiev**	**55.65**	**316**	*e*P	**P**		**00 51 42.1**	**-1.2**		
	comp=Z,31nm,1.5s,mb5.1									
KIEV	**Kiev**	**55.65**	**316**	*e*P	**P**		**00 51 42.1**	**-1.2**		
KIEV				pmax	pmax					
	comp=Z,31nm,1.5s,mb5.1									
MCMT	**McKenzie Canyo**	**56.15**	**57**	*e*P	**P**		**00 51 46.7**	**-0.2**		
HLID	**Hailey**	**56.62**	**59**	*e*P	**P**		**00 51 50.4**	**0.0**		
KIV	**Kislovodsk**	**56.72**	**302**	P	**P**		**00 51 49.5**	**-1.5**		
KIV	**Kislovodsk**	**56.72**	**302**	⇓*i*P	**P**		**00 51 46.0**	**-5.0**		
KIV				pmax	pmax					
	comp=Z,12nm,1.8s,mb4.6									
RLMT	**Red Lodge**	**52.23**	**54**	*e*P	**P**		**00 51 56.3**	**+1.6**		
	comp=Z,12nm,1.2s,mb4.8									
BSEG	**Bad Segeberg**	**57.86**	**330**	*e*P	**P**		**00 51 58.6**	**-0.3**		
REDW	**Red Top Meadow**	**58.15**	**56**	*e*P	**P**		**00 52 04.1**	**+3.0**		
KWP	**Kalwaria**	**58.56**	**320**	*e*P	**P**		**00 52 04.2**	**+0.3**		
KWP	**Kalwaria**	**58.56**	**320**	*e*P	**P**		**00 52 03.6**	**-0.3**		
	comp=Z,26nm,0.8s,mb5.3									
KWP	**Kalwaria**	**58.56**	**320**	⇑*i*P	**P**		**00 52 04.1**	**+0.2**		
OJC	**Ojcow**	**58.87**	**322**	*e*P	**P**		**00 52 06.0**	**0.0**		
PDAR	**Pinedale Array**	**59.15**	**56**	P	**P**		**00 52 08.8**	**+0.8**		
	comp=Z,1.2nm,1.0s,mb3.9,baz=307,slow=4.7,SNR=5.1									
GNI	**Garni**	**59.16**	**298**	⇓*i*P	**P**		**00 52 09.6**	**+1.4**		
GNI				pmax	pmax					
	comp=Z,4.0nm,0.8s									
STHS	**Stebnicka Huta**	**59.18**	**321**	*e*P	**P**		**00 52 08.2**	**0.0**		
STHS				pmax	pmax					
	comp=Z,13nm,1.0s,mb4.9									
KSP	**Ksiaz**	**59.25**	**325**	*e*P	**P**		**00 52 08.3**	**-0.3**		
KOLS	**Kolonicke sedl**	**59.32**	**320**	*e*P	**P**		**00 52 08.7**	**-0.4**		
HWUT	**Hardware Ranch**	**59.38**	**58**	*e*P	**P**		**00 52 10.4**	**+0.6**		
	comp=Z,5.6nm,0.9s,mb4.6									
NVAR	**Mina Array Bea**	**59.43**	**65**	P	**P**		**00 52 11.5**	**+1.5**		
	comp=Z,1.6nm,0.8s,mb4.1,baz=315,slow=6.4,SNR=8.3									
NVAR	**Mina Array Bea**	**59.43**	**65**	P	**P**		**00 52 11.5**	**+1.4**		
NIE	**Niedzica**	**59.44**	**321**	*e*P	**P**		**00 52 10.4**	**+0.4**		
CRVS	**Cervenica-Dubn**	**59.58**	**320**	*e*P	**P**		**00 52 10.9**	**-0.1**		
BUR08	**Bucovina Ar. S**	**59.59**	**317**	*e*P	**P**		**00 52 10.9**	**-0.1**		
BURAR	**Bucovina Array**	**59.61**	**317**	⇑*i*P	**P**		**00 52 11.2**	**0.0**		
UPC	**Upice**	**59.63**	**325**	*e*P	**P**		**00 52 11.2**	**-0.1**		
CLL	**Collm**	**59.66**	**327**	⇑*i*P	**P**		**00 52 10.6**	**-0.9**		
CLL				pmax	pmax					
	comp=Z,14nm,0.8s,mb5.0									
CLL	**Collm**	**59.66**	**327**	*e*P	**P**		**00 52 10.6**	**-0.9**		
	comp=Z,14nm,0.8s,mb5.0									
CLL	**Collm**	**59.66**	**327**	⇑*i*P	**P**		**00 52 10.6**	**-0.9**		
	comp=Z,14nm,0.8s,mb5.0									
CLL				LmV			00 15 00.0			
	comp=Z,200nm,20.3s									
CLL				*e*(pP)	pP		00 52 13.0	-1.7		
OKC	**Ostrava-Krasne**	**59.67**	**323**	*e*P	**P**		**00 52 11.9**	**+0.4**		
DPC	**Dobruska-Polom**	**59.69**	**324**	*e*P	**P**		**00 52 11.8**	**+0.1**		
BRG	**Berggiesshubel**	**59.82**	**326**	*e*P	**P**		**00 52 11.9**	**-0.7**		
BRG				pmax	pmax					
	comp=Z,3.0nm,0.8s,mb4.4									
BRG	**Berggiesshubel**	**59.82**	**326**	*e*P	**P**		**00 52 11.9**	**-0.7**		
	comp=Z,12nm,1.5s,mb4.7									
MORC	**Moravsky Berou**	**59.89**	**323**	⇓P	**P**		**00 52 13.4**	**+0.4**		
MORC	**Moravsky Berou**	**59.89**	**323**	⇓*i*P	**P**		**00 52 13.4**	**+0.3**		
RSSD	**Black Hills**	**59.97**	**51**	*e*P	**P**		**00 52 14.6**	**+0.9**		
PVCC	**Panska Ves**	**59.98**	**326**	*e*P	**P**		**00 52 13.8**	**+0.1**		
PRU	**Pruhonice**	**60.48**	**325**	*e*P	**P**		**00 52 17.0**	**-0.1**		
	comp=Z,17nm,1.2s,mb5.0									
PRU	**Pruhonice**	**60.48**	**325**	*e*P	**P**		**00 52 16.8**	**-0.3**		

VRAC	**Vranov**	**60.57**	**324**	LR	LR		01 23 28.9			
	comp=Z,259nm,18.0s,MS4.4,baz=193,slow=41									
VRAC	**Vranov**	**60.57**	**324**	⇓*i*P	**P**		**00 52 15.2**	**-2.5**		
MOX	**Moxa**	**60.61**	**328**	*e*P	**P**		**00 52 17.9**	**-0.1**		
	comp=Z,16nm,1.4s,mb5.0									
MOX	**Moxa**	**60.61**	**328**	*e*P	**P**		**00 52 17.9**	**-0.1**		
MOX				pmax	pmax					
	comp=Z,16nm,1.4s,mb5.0									
MOX	**Moxa**	**60.61**	**328**	*e*P	**P**		**00 52 17.5**	**-0.5**		
	comp=Z,16nm,1.3s,mb5.0									
TANN	**Tannenbergstha**	**60.61**	**327**	*e*P	**P**		**00 52 17.7**	**-0.3**		
	comp=Z,12nm,1.4s,mb4.8									
WERD	**Werda**	**60.62**	**327**	*e*P	**P**		**00 52 18.0**	**-0.1**		
	comp=Z,22nm,1.3s,mb5.1									
VRI	**Vrincioaia**	**60.69**	**315**	⇓P	**P**		**00 52 20.2**	**+1.6**		
VRI	**Vrincioaia**	**60.69**	**315**	⇓*i*P	**P**		**00 52 20.2**	**+1.6**		
GUNZ	**Gunzen**	**60.69**	**327**	*e*P	**P**		**00 52 18.2**	**-0.4**		
	comp=Z,16nm,1.2s,mb5.0									
VYHS	**Vyhne**	**60.70**	**322**	*e*P	**P**		**00 52 18.6**	**0.0**		
KOLL	**Kolano**	**60.74**	**322**	*e*P	**P**		**00 52 18.9**	**0.0**		
WERN	**Wernitzgruen**	**60.75**	**327**	*e*P	**P**		**00 52 18.1**	**-0.9**		
	comp=Z,8.0nm,0.8s,mb4.9									
NKC	**Novy Kostel**	**60.78**	**327**	*e*P	**P**		**00 52 19.1**	**-0.1**		
	comp=Z,12nm,1.5s,mb4.8									
NKC	**Novy Kostel**	**60.78**	**327**	*e*P	**P**		**00 52 18.4**	**-0.8**		
TREC	**Trest**	**60.88**	**324**	*e*P	**P**		**00 52 20.2**	**+0.4**		
PSZ	**Piszkesteto**	**60.92**	**321**	⇑*i*P	**P**		**00 52 20.9**	**+0.8**		
DRGR		**61.11**	**318**	⇓P	**P**		**00 52 21.8**	**+0.3**		
DRGR		**61.11**	**318**	⇓*i*P	**P**		**00 52 21.8**	**+0.4**		
MODS	**Modra-Piesok**	**61.24**	**323**	*e*P	**P**		**00 52 22.1**	**-0.2**		
MODS				pmax	pmax					
	comp=Z,10.0nm,1.5s,mb4.7									
MLR	**Muntele Rosu**	**61.27**	**315**	⇑P	**P**		**00 52 23.9**	**+1.3**		
MLR	**Muntele Rosu**	**61.27**	**315**	⇑*i*P	**P**		**00 52 23.9**	**+1.3**		
ROTZ	**Rotzenmuhle**	**61.28**	**327**	*e*P	**P**		**00 52 22.3**	**-0.2**		
	comp=Z,5.0nm,0.9s,mb4.6									
ZST	**Bratislava**	**61.45**	**323**	*e*P	**P**		**00 52 23.5**	**-0.2**		
ZST				pmax	pmax					
	comp=Z,5.0nm,0.6s,mb4.8									
KHC	**Kasperske Hory**	**61.52**	**326**	*e*P	**P**		**00 52 24.1**	**-0.1**		
KHC				*e*pP	pP		00 52 30.0	+2.6		
GRF	**Grafenberg Arr**	**61.59**	**328**	*e*P	**P**		**00 52 24.7**	**+0.1**		
GRF				pmax	pmax					
	comp=Z,17nm,1.4s,mb5.0									
GRF	**Grafenberg Arr**	**61.59**	**328**	*e*P	**P**		**00 52 24.7**	**+0.1**		
GRF				pmax	pmax					
	comp=Z,17nm,1.4s,mb5.0									
GRF	**Grafenberg Arr**	**61.59**	**328**	*e*P	**P**		**00 52 24.7**	**+0.1**		
	comp=Z,17nm,1.4s,mb5.0									
VOIR		**61.60**	**316**	⇓P	**P**		**00 52 25.1**	**+0.3**		
VOIR		**61.60**	**316**	⇓*i*P	**P**		**00 52 25.1**	**+0.3**		
WET	**Wettzell**	**61.69**	**326**	*e*P	**P**		**00 52 25.4**	**+0.1**		
WET				pmax	pmax					
	comp=Z,11nm,1.4s,mb4.8									
WET	**Wettzell**	**61.69**	**326**	*e*P	**P**		**00 52 25.4**	**+0.1**		
	comp=Z,11nm,1.4s,mb4.8									
GEC2	**GERESS Array S**	**61.75**	**326**	*e*P	**P**		**00 52 25.6**	**-0.2**		
GEC2				pmax	pmax					
	comp=Z,10.0nm,1.3s,mb4.8									
GEC2	**GERESS Array S**	**61.75**	**326**	*e*P	**P**		**00 52 25.6**	**-0.2**		
	comp=Z,10.0nm,1.3s,mb4.8									
GERES	**GERESS Array B**	**61.75**	**326**	P	**P**		**00 52 25.9**	**+0.2**		
	comp=Z,4.3nm,0.9s,mb4.6,baz=38,slow=6.8,SNR=21									
GERES	**GERESS Array B**	**61.75**	**326**	P	**P**		**00 52 25.9**	**+0.1**		
GERES				pmax	pmax					
	comp=Z,4.0nm,0.9s									
MEM	**Membach**	**61.92**	**332**	P	**P**		**00 52 26.6**	**-0.3**		
CONA	**Conrad Observa**	**62.03**	**324**	⇓*i*pP	pP		00 52 28.6	-2.3		
	comp=Z,9.4nm,1.5s									
CSNA	**Conrad Observa**	**62.03**	**324**	⇓*i*pP	pP		00 52 28.5	-2.4		
	comp=Z,10nm,1.6s									
GZR	**Gura Zlata**	**62.35**	**318**	⇓*i*P	**P**		**00 52 30.2**	**+0.4**		
BZS	**Buzias**	**62.50**	**318**	⇑P	**P**		**00 52 30.9**	**+0.1**		
BZS	**Buzias**	**62.50**	**318**	⇑*i*P	**P**		**00 52 30.9**	**+0.1**		
MOA	**Molln**	**62.52**	**325**	⇓*i*pP	pP		00 52 31.3	-2.9		
	comp=Z,8.6nm,1.4s									
GIVF	**Givet**	**62.66**	**332**	*e*P	**P**		**00 52 31.5**	**-0.3**		
BAIF	**Baives**	**62.83**	**333**	*e*P	**P**		**00 52 32.5**	**-0.4**		
PKSM	**Moragy**	**62.83**	**321**	⇑P	**P**		**00 52 31.2**	**-1.8**		
PKSM	**Moragy**	**62.83**	**321**	⇑*i*P	**P**		**00 52 31.2**	**-1.8**		
FUR	**Furstenfeldbru**	**62.99**	**327**	*e*P	**P**		**00 52 33.8**	**-0.3**		
FUR				pmax	pmax					
	comp=Z,12nm,1.0s,mb5.0									
FUR	**Furstenfeldbru**	**62.99**	**327**	*e*P	**P**		**00 52 33.8**	**-0.3**		
	comp=Z,12nm,1.0s,mb5.0									
RJOB	**Jochberg**	**63.01**	**326**	*e*P	**P**		**00 52 34.5**	**+0.3**		
	comp=Z,12nm,0.9s,mb5.0									
GROS	**Grobnik**	**63.47**	**323**	*e*P	**P**		**00 52 37.5**	**+0.2**		
KBA	**Koelnbreinsper**	**63.48**	**325**	⇓*i*pP	pP		00 52 38.6	-1.9		
	comp=Z,20nm,1.5s									
BFO	**Black Forest**	**63.55**	**329**	*e*P	**P**		**00 52 37.0**	**-0.7**		
ZAVS	**Zavodnje**	**63.63**	**324**	*e*P	**P**		**00 52 38.4**	**+0.1**		
OBKA	**Obir**	**63.69**	**324**	⇓*i*pP	pP		00 52 39.7	-2.2		
	comp=Z,15nm,0.7s									
WATA	**Walderalm**	**63.69**	**326**	⇓*i*pP	pP		00 52 39.2	-2.7		
	comp=Z,1.9nm,0.4s									
CDF	**Champ du Feu**	**63.71**	**330**	*e*P	**P**		**00 52 38.6**	**-0.2**		
	comp=Z,13nm,1.0s,mb4.6									
CDF	**Champ du Feu**	**63.71**	**330**	*e*P	**P**		**00 52 38.6**	**-0.2**		
	comp=Z,6.4nm,1.0s,mb4.6									
CDF	**Champ du Feu**	**63.71**	**330**	*e*P	**P**		**00 52 38.6**	**-0.2**		
CDF				pmax	pmax					
	comp=Z,6.0nm,1.0s,mb4.6									
WTTA	**Wattenberg**	**63.74**	**326**	⇓*i*pP	pP		00 52 40.0	-2.3		
	comp=Z,19nm,1.4s									
BRTR	**Keskin Array B**	**63.76**	**307**	P	**P**		**00 52 40.0**	**+0.8**		
	comp=Z,2.9nm,0.8s,mb4.4									
BRTR	**Keskin Array B**	**63.76**	**307**	P	**P**		**00 52 40.0**	**+0.7**		
BRTR				pmax	pmax					
	comp=Z,3.0nm,0.8s									
HYB	**Hyderabad**	**63.89**	**256**	*e*P	**P**		**00 52 39.0**	**-1.4**		
HYB	**Hyderabad**	**63.89**	**256**	*i* P	**P**		**00 52 39.0**	**-1.4**		
MEZF	**Maizieres J'vi**	**64.12**	**331**	*e*P	**P**		**00 52 41.4**	**-0.1**		
CADS	**Cadrg**	**64.16**	**324**	*e*P	**P**		**00 52 41.1**	**-0.7**		
HAU	**Haudompre**	**64.30**	**330**	*e*P	**P**		**00 52 42.1**	**-0.6**		
HINF	**Hinteralfeld**	**64.37**	**330**	*e*P	**P**		**00 52 42.7**	**-0.4**		
LDF	**La Druitiere**	**65.09**	**335**	*e*P	**P**		**00 52 46.9**	**-0.9**		
GRR	**Gorron**	**65.42**	**336**	*e*P	**P**		**00 52 49.2**	**-0.8**		
	comp=Z,5.4nm,0.7s,mb4.4									
GRR	**Gorron**	**65.42**	**336**	*e*P	**P**		**00 52 49.2**	**-0.8**		
	comp=Z,2.7nm,0.7s,mb4.4									
GRR	**Gorron**	**65.42**	**336**	*e*P	**P**		**00 52 49.2**	**-0.8**		
GRR				pmax	pmax					
	comp=Z,3.0nm,0.7s,mb4.4									
LOR	**Lormes**	**65.55**	**332**	*e*P	**P**		**00 52 50.0**	**-0.8**		
CABF	**La Chapelle**	**65.68**	**330**	*e*P	**P**		**00 52 52.3**	**+0.6**		
	comp=Z,8.4nm,0.8s,mb4.5									
CABF	**La Chapelle**	**65.68**	**330**	*e*P	**P**		**00 52 52.3**	**+0.6**		
	comp=Z,4.2nm,0.8s,mb4.5									
CABF	**La Chapelle**	**65.68**	**330**	*e*P	**P**		**00 52 52.3**	**+0.6**		
CABF				pmax	pmax					
	comp=Z,4.0nm,0.8s,mb4.5									
SSF	**Saint Saulge**	**65.82**	**332**	*e*P	**P**		**00 52 51.8**	**-0.8**		
SMF	**Signal de Mont**	**66.14**	**332**	*e*P	**P**		**00 52 53.9**	**-0.8**		
LPL	**La Plagne**	**66.56**	**329**	*e*P	**P**		**00 52 57.9**	**+0.5**		
	comp=Z,5.9nm,0.6s,mb4.5									
LPL	**La Plagne**	**66.56**	**329**	*e*P	**P**		**00 52 57.9**	**+0.5**		
	comp=Z,3.0nm,0.6s,mb4.5									
LPL	**La Plagne**	**66.56**	**329**	*e*P	**P**		**00 52 57.9**	**+0.5**		
LPL				pmax	pmax					
	comp=Z,3.0nm,0.6s,mb4.5									
LPG	**La Plagne**	**66.58**	**329**	*e*P	**P**		**00 52 58.1**	**+0.6**		
	comp=Z,4.3nm,0.6s,mb4.4									
LPG	**La Plagne**	**66.58**	**329**	*e*P	**P**		**00 52 58.1**	**+0.6**		
	comp=Z,2.2nm,0.6s,mb4.4									
LPG	**La Plagne**	**66.58**	**329**	*e*P	**P**		**00 52 58.1**	**+0.6**		
LPG				pmax	pmax					
	comp=Z,2.0nm,0.6s,mb4.3									
TCF	**Toulx Ste Croi**	**66.83**	**333**	*e*P	**P**		**00 52 58.5**	**-0.6**		
	comp=Z,12nm,0.9s,mb4.6									
TCF	**Toulx Ste Croi**	**66.83**	**333**	*e*P	**P**		**00 52 58.5**	**-0.6**		
	comp=Z,5.8nm,0.9s,mb4.6									
TCF	**Toulx Ste Croi**	**66.83**	**333**	*e*P	**P**		**00 52 58.5**	**-0.6**		
TCF				pmax	pmax					
	comp=Z,6.0nm,0.9s,mb4.6									
MFF	**Saint Martin d**	**67.00**	**334**	*e*P	**P**		**00 53 00.4**	**+0.2**		
MBDF	**Montbardon**	**67.30**	**329**	*e*P	**P**		**00 53 03.3**	**+1.2**		
	comp=Z,11nm,0.9s,mb4.6									
MBDF	**Montbardon**	**67.30**	**329**	*e*P	**P**		**00 53 03.3**	**+1.2**		
	comp=Z,5.3nm,0.9s,mb4.6									
MBDF	**Montbardon**	**67.30**	**329**	*e*P	**P**		**00 53 03.3**	**+1.2**		
MBDF				pmax	pmax					
	comp=Z,5.0nm,0.9s,mb4.5									
RJF	**Les Rejaudoux**	**67.91**	**333**	*e*P	**P**		**00 53 05.7**	**-0.2**		
CAF	**Calviac**	**68.16**	**332**	*e*P	**P**		**00 53 07.0**	**-0.5**		

LFF	**La Frestale**	**68.42**	**333**	*e*P	**P**		**00 53 09.0**	**-0.1**		
	comp=Z,17nm,0.9s,mb4.8									
LFF	**La Frestale**	**68.42**	**333**	*e*P	**P**		**00 53 09.0**	**-0.1**		
	comp=Z,8.4nm,0.9s,mb4.8									
LFF	**La Frestale**	**68.42**	**333**	*e*P	**P**		**00 53 09.0**	**-0.1**		
LFF				pmax	pmax					
	comp=Z,8.0nm,0.9s,mb4.8									
WMOK	**Wichita Mounta**	**70.16**	**52**	*e*P	**P**		**00 53 19.5**	**-0.5**		
	comp=Z,3.1nm,0.7s,mb4.3									
WMOK	**Wichita Mounta**	**70.16**	**52**	*e*P	**P**		**00 53 19.5**	**-0.6**		
WMOK				pmax	pmax					
	comp=Z,3.0nm,0.7s,mb4.3									
EPF	**Esparros**	**70.33**	**333**	*e*P	**P**		**00 53 20.6**	**-0.4**		
WVT	**Waverly**	**72.51**	**42**	*e*P	**P**		**00 53 33.3**	**-1.0**		
	comp=Z,4.6nm,0.8s,mb4.5									
WVT	**Waverly**	**72.51**	**42**	*e*P	**P**		**00 53 33.3**	**-1.0**		
WVT				pmax	pmax					
	comp=Z,5.0nm,0.8s,mb4.5									
TXAR	**Lajitas Array**	**73.21**	**58**	P	**P**		**00 53 39.3**	**+0.8**		
	comp=Z,0.4nm,0.8s,mb3.4,baz=308,slow=4.5,SNR=5.0									
JCT	**Junction City**	**73.63**	**54**	*e*P	**P**		**00 53 41.2**	**+0.3**		
	comp=Z,9.2nm,0.9s,mb4.7									
JCT	**Junction City**	**73.63**	**54**	*e*P	**P**		**00 53 41.2**	**+0.2**		
JCT				pmax	pmax					
	comp=Z,9.0nm,0.9s,mb4.7									
**SWET

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.31**	**220**⇑	*e*P	**Pn**	**00 51 19.8**	**-0.1**
CEN1				*i* S	**Sn**	**00 51 27.7**	**+1.5**
CEN1				AML	AML	00 51 29.0	
	comp=N,147μm,0.4s						
MECH	**Mejillones**	**0.43**	**277**	*e*P	**Pn**	**00 51 17.4**	**-3.8**
MECH				*e*S	**Sn**	**00 51 23.6**	**-4.9**
MECH				AML	AML	00 51 24.9	
	comp=N,401μm,0.3s						
PB06	**Plate Boundary**	**0.59**	**41**⇓	*i*P	**Pn**	**00 51 23.6**	**+0.4**
PB06				*i* S	**Sn**	**00 51 33.6**	**+1.7**
ANCH	**Antofagasta**	**0.65**	**216**⇑	*e*P	**Pn**	**00 51 21.9**	**-2.2**
ANCH				*i* S	**Sn**	**00 51 30.4**	**-3.0**
ANCH	**Antofagasta**	**0.65**	**216**⇑	*e*P	**Pn**	**00 51 21.9**	**-2.2**
ANCH				*i* S	**Sn**	**00 51 30.4**	**-3.0**
ANCH				AML	AML	00 51 31.7	
	comp=N,82μm,0.7s						
PB04	**Plate Boundary**	**1.00**	**28**⇓	*i*P	**Pn**	**00 51 24.3**	**-4.4**
PB04				*i* S	**Sn**	**00 51 34.6**	**-7.0**
LVC	**Limon Verde**	**1.13**	**62**	Pg	**Pn**	**00 51 32.9**	**+2.4**
	comp=N,4μm,0.3s,baz=247,slow=11						
LVC				Lg		00 51 49.5	
	comp=N,5μm,0.3s,baz=29,slow=11,SNR=28						
LVC				LR	LR	00 52 07.9	
	comp=N,10μm,19.2s,baz=286,slow=49						
LVC	**Limon Verde**	**1.13**	**62**	*e*Pn	**Pn**	**00 51 33.1**	**+2.6**
LVC				*e*Sn	**Sn**	**00 51 48.6**	**+3.8**
LVC	**Limon Verde**	**1.13**	**62**⇓	*e*P	**Pn**	**00 51 32.4**	**+1.9**
LVC				*i* S	**Sn**	**00 51 49.3**	**+4.5**
LVC				AML	AML	00 51 51.9	
	comp=N,204μm,0.4s						
PB07	**Plate Boundary**	**1.42**	**4**⇓	*i*P	**Pn**	**00 51 33.6**	**-1.0**
PB07				*i* S	**Sn**	**00 51 52.7**	**+0.6**
CPN1	**Cerro Paranal**	**1.52**	**195**	*e*P	**Pn**	**00 51 35.1**	**-0.7**
CPN1				*i* S	**Sn**	**00 51 54.5**	**+0.1**
CPN1				AML	AML	00 52 00.8	
	comp=E,19μm,0.5s						
SPCH	**San Pedro de A**	**1.66**	**82**	*e*P	**Pn**	**00 51 43.4**	**+5.5**
SPCH				*i* S	**Sn**	**00 52 08.3**	**+10**
PB01	**Plate Boundary**	**2.15**	**13**	*e*P	**Pn**	**00 51 44.7**	**+0.2**
PB01				*i* S	**Sn**	**00 52 11.3**	**+1.3**
PB01				AML	AML	00 52 15.5	
	comp=E,21μm,0.3s						
LCO	**Las Campanas**	**5.87**	**186**	*e*Pn	**Pn**	**00 52 34.9**	**-0.7**
	comp=E,235nm,0.6s						
LCO				*e*Sn	**Sn**	**00 54 00.9**	**+19**
ARE	**Arequipa**	**6.81**	**348**	*e*P	**Pn**	**00 52 46.0**	**-2.5**
ARE				*e*S	**Sn**	**00 53 58.0**	**-6.7**
LPAZ	**La Paz**	**7.05**	**15**	Pn	**Pn**	**00 52 53.8**	**+1.9**
	comp=E,37nm,0.3s,baz=218,slow=7.0,SNR=807						
LPAZ				pP		00 53 01.1	
	comp=E,45nm,0.3s,baz=197,slow=8.3,SNR=41						
LPAZ				Sn	**Sn**	**00 54 19.1**	**+8.5**
	comp=E,0.8nm,0.3s,baz=26,slow=24,SNR=1.1						
CFAA	**Coronel Fontan**	**8.56**	**170**	Pn	**Pn**	**00 53 12.2**	**-0.2**
	comp=E,0.2nm,0.3s,baz=348,slow=13,SNR=16						
CFAA				Sn	**Sn**	**00 54 57.6**	**+10**
	comp=E,0.9nm,0.3s,baz=195,slow=16,SNR=3.9						
CFAA				LR	LR	00 56 57.4	
	comp=E,163nm,18.8s,baz=338,slow=40						
PEL	**Peldehue**	**9.97**	**183**	AMS	AMS	00 56 59.8	
	comp=E,1μm,19.3s						
FCH	**Farellones**	**10.14**	**181**	AMS	AMS	00 57 23.3	
	comp=E,723nm,19.1s						
SIV	**San Ignacio**	**11.01**	**51**	Pn	**Pn**	**00 53 46.5**	**+0.4**
	comp=E,13nm,0.3s,baz=246,slow=12,SNR=98						
SIV				Sn	**Sn**	**00 55 46.7**	**-1.2**
	comp=E,1.1nm,0.3s,baz=274,slow=18,SNR=3.0						
NNA	**Nana**	**12.88**	**328**	Pn	**Pn**	**00 54 08.8**	**-2.8**
	comp=E,0.9nm,0.3s,baz=231,slow=17,SNR=2.2						
NNA				Sn	**Sn**	**00 56 25.6**	**-8.0**
	comp=E,3.5nm,0.3s,baz=221,slow=17,SNR=4.2						
NNA				LR	LR	00 59 27.3	
	comp=E,167nm,19.6s,baz=145,slow=39						
NNA	**Nana**	**12.88**	**328**	Pn	**Pn**	**00 54 08.5**	**-3.2**
NNA				*e*Sn	**Sn**	**00 56 18.3**	**-15**
PLCA	**Paso Flores**	**17.53**	**181**	P	**Pn**	**00 55 13.8**	**+1.6**
	comp=E,0.2nm,0.3s,baz=353,slow=12,SNR=5.8						
PLCA				LR	LR	01 02 20.7	
	comp=E,763nm,19.5s,baz=359,slow=38						
PLCA	**Paso Flores**	**17.53**	**181**	P	**Pn**	**00 55 13.8**	**+1.6**
PLCA				LR	LR	01 02 20.7	
ATAH	**Atahualpa**	**17.98**	**332**	P	**Pn**	**00 55 14.3**	**-3.6**
	comp=E,0.2nm,0.3s,baz=86,slow=19,SNR=2.1						
SPB	**Sao Paulo**	**20.71**	**96**	*e*P	**P**	**00 55 47.7**	**0.0**
BDFB	**Brasilia**	**22.01**	**74**	P	**P**	**00 56 01.5**	**-0.3**
	comp=E,9.3nm,0.6s,mb4.4,baz=231,slow=15,SNR=19						
BDFB				LR	LR	01 05 10.9	
	comp=E,374nm,18.8s,MS3.8,baz=56,slow=38						
OTAV	**Otavalo**	**24.66**	**339**	*e*P	**P**	**00 56 27.3**	**-0.5**
	comp=E,12nm,1.0s,mb4.4						
CAM4	**Nova Friburgo**	**25.29**	**94**⇓	*i*P	**P**	**00 56 33.7**	**+0.2**
CAM4				*i*		00 56 36.5	
CAM4				*i*		00 56 39.1	
CAM4				*i*	pP	00 56 48.7	+3.3
CAM4				*i*		00 56 57.9	
CAM4				*i*		00 57 35.3	
ROSC	**El Rosal**	**28.16**	**351**	P	**P**	**00 56 59.3**	**0.0**
	comp=E,9.5nm,0.8s,mb4.5,baz=225,slow=5.7,SNR=4.8						
ROSC				LR	LR	01 08 51.5	
	comp=E,306nm,18.3s,MS3.9,baz=0.0,slow=38						
EFI	**East Falkland**	**29.93**	**165**⇑	*i*P	**P**	**00 57 16.0**	**+1.4**
SDV	**Santo Domingo**	**31.85**	**359**	LR	LR	01 11 36.6	
	comp=E,394nm,20.4s,MS4.1,baz=176,slow=39						
RPN	**Rapa Nui**	**35.74**	**255**	P	**P**	**00 58 05.3**	**-0.4**
	comp=E,24nm,0.6s,mb5.3,baz=194,slow=4.2,SNR=4.0						
RPN	**Rapa Nui**	**35.74**	**255**	P	**P**	**00 58 05.3**	**-0.4**
RCBR	**Riachuelo**	**37.08**	**68**	*e*P	**P**	**00 58 18.5**	**+1.3**
	comp=E,85nm,1.0s,mb5.5						
TGUH	**Tegucigalpa,Un**	**40.67**	**334**	*e*P	**P**	**00 58 46.3**	**-0.9**
	comp=E,16nm,0.8s,mb4.7						
MPR	**Mayaguez**	**41.20**	**4**	*e*P	**P**	**00 58 48.9**	**-2.6**
MTP	**Monte Pirata**	**41.23**	**6**	*e*P	**P**	**00 58 48.3**	**-3.5**
CBYP	**Canovanas**	**41.37**	**6**	*e*P	**P**	**00 58 48.8**	**-4.1**
	comp=E,36nm,0.8s,mb5.1						
PMSA	**Palmer Station**	**41.79**	**176**	*e*P	**P**	**00 58 56.2**	**+0.3**
	comp=E,23nm,0.7s,mb4.9						
BBSR	**BB Station**	**55.44**	**5**	*e*P	**P**	**01 00 40.5**	**-0.6**
BRAL	**Brewton**	**56.29**	**342**	*e*P	**P**	**01 00 47.1**	**-0.1**
LRAL	**Lakeview Retre**	**58.18**	**343**	*e*P	**P**	**01 00 58.2**	**-2.3**
VNA3	**Neumayer Olymp**	**58.84**	**161**	*e*PKPdf	**P**	**01 01 05.3**	**+0.6**
VNA3				*e*	pP	01 01 16.4	-1.2
VNA2	**Neumayer--Watz**	**59.44**	**160**	*e*PKPdf	**P**	**01 01 09.7**	**+0.9**
VNA2				*e*	pP	01 01 21.2	-0.5
CPCT	**Cooper Cave**	**59.89**	**346**	*e*P	**P**	**01 01 10.2**	**-2.1**
TKL	**Tuckaleechee C**	**59.93**	**347**	*e*P	**P**	**01 01 10.7**	**-1.9**
SWET	**Sewanee**	**59.99**	**345**	*e*P	**P**	**01 01 11.3**	**-1.6**
OXF	**Oxford**	**60.24**	**342**	*e*P	**P**	**01 01 11.6**	**-3.1**
	comp=E,36nm,1.0s,mb5.4						
OXF	**Oxford**	**60.24**	**342**	*e*P	**P**	**01 01 11.6**	**-3.1**
OXF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
JCT	**Junction City**	**60.52**	**330**	*e*P	**P**	**01 01 15.8**	**-0.9**
URVA	**University of**	**60.81**	**353**	*e*P	**P**	**01 01 17.7**	**-0.8**
ELN	**Prospectdale**	**60.91**	**350**	*e*P	**P**	**01 01 18.2**	**-1.0**
SNAA	**Sanae**	**61.06**	**161**	*e*P	**P**	**01 01 18.2**	**-1.6**
	comp=Z,15nm,0.7s,mb5.2						
SNAA				*e*	pP	01 01 29.1	-3.7
SNAA	**Sanae**	**61.06**	**161**	*e*P	**P**	**01 01 18.2**	**-1.6**
SNAA				*e*	pP	01 01 29.1	-3.7
SNAA				pmax	pmax		
	comp=Z,15nm,0.7s						
WVT	**Waverly**	**61.33**	**344**	*e*P	**P**	**01 01 19.3**	**-2.8**
	comp=Z,22nm,0.9s,mb5.3						
WVT	**Waverly**	**61.33**	**344**	*e*P	**P**	**01 01 19.3**	**-2.8**
WVT				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
TXAR	**Lajitas Array**	**61.43**	**327**	P	**P**	**01 01 21.9**	**-1.0**
	comp=Z,2.9nm,0.9s,mb4.4,baz=148,slow=7.8,SNR=26						
TXAR				pP	pP	01 01 32.5	-3.3
	comp=Z,2.3nm,0.9s,baz=153,slow=12,SNR=6.3						
MIAR	**Mount Ida**	**61.60**	**338**	*e*P	**P**	**01 01 22.8**	**-1.2**
WCI	**Wyandotte Cave**	**62.95**	**346**	*e*P	**P**	**01 01 30.1**	**-2.8**
	comp=Z,18nm,0.8s,mb5.2						
WCI	**Wyandotte Cave**	**62.95**	**346**	*e*P	**P**	**01 01 30.1**	**-2.8**
WCI				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
MVL	**Millersville**	**63.10**	**355**	*e*P	**P**	**01 01 33.6**	**-0.3**
SIUC	**Southern Illin**	**63.19**	**343**	*e*P	**P**	**01 01 32.9**	**-1.6**
WMOK	**Wichita Mounta**	**63.73**	**334**	*e*P	**P**	**01 01 35.6**	**-2.6**
WMOK				*e*PcP	PcP	01 02 12.7	-1.2
FVM	**French Village**	**63.77**	**342**	*e*P	**P**	**01 01 36.9**	**-1.5**
	comp=Z,18nm,0.6s,mb5.3						
FVM				*e*	pP	01 01 48.4	-3.0
FVM	**French Village**	**63.77**	**342**	*e*P	**P**	**01 01 36.9**	**-1.5**
FVM				*e*	pP	01 01 48.4	-3.0
FVM				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.3						
BLO	**Bloomington**	**63.90**	**346**	*e*P	**P**	**01 01 35.8**	**-3.3**
CCM	**Cathedral Cave**	**64.08**	**341**	*e*P	**P**	**01 01 37.9**	**-2.5**
	comp=Z,14nm,0.8s,mb5.0						
CCM	**Cathedral Cave**	**64.08**	**341**	*e*P	**P**	**01 01 37.9**	**-2.4**
CCM				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
GDL2	**Guadalupe Moun**	**64.11**	**328**	*e*P	**P**	**01 01 40.6**	**-0.1**
ACSO	**Alum Creek Sta**	**64.21**	**349**	*e*P	**P**	**01 01 39.5**	**-1.7**
	comp=Z,16nm,0.7s,mb5.2						
MAIT	**Maitri**	**65.62**	**159**	*e*P	**P**	**01 01 48.8**	**-1.2**
MAIT				*e*E	pP	01 02 00.3	-2.8
319A	**Douglas**	**66.00**	**324**⇓	P	**P**	**01 01 52.9**	**-0.1**
	baz=66						
318A	**Bisbee**	**66.44**	**323**⇓	P	**P**	**01 01 55.8**	**-0.1**
	baz=66,SNR=9.7						
219A	**White Tail Can**	**66.47**	**324**⇓	P	**P**	**01 01 56.0**	**0.0**
	baz=67,SNR=7.1						
BNM	**Barren Site**	**66.80**	**327**	*e*P	**P**	**01 01 57.6**	**-0.4**
218A	**Dragoon**	**66.88**	**324**⇑	P	**P**	**01 01 58.7**	**+0.1**
	baz=67						
LPM	**Los Pinos Moun**	**66.93**	**328**	*e*P	**P**	**01 01 59.4**	**+0.5**
119A	**Ashpeak Ranch,**	**67.08**	**325**⇑	P	**P**	**01 01 59.9**	**0.0**
	baz=67						
217A	**Green Valley**	**67.15**	**323**⇓	P	**P**	**01 02 00.7**	**+0.4**
	baz=67						
LAZ	**Ladron**	**67.25**	**327**	*e*P	**P**	**01 02 01.1**	**+0.2**
118A	**Honck Ranch,**	**67.34**	**324**⇑	P	**P**	**01 02 01.5**	**-0.1**
	baz=68,SNR=6.0						
ANMO	**Albuquerque**	**67.35**	**328**	*e*P	**P**	**01 02 01.6**	**+0.1**
TUC	**Tucson**	**67.54**	**323**	*e*P	**P**	**01 02 03.1**	**+0.3**
	comp=Z,3.5nm,0.9s,mb4.4						
TUC	**Tucson**	**67.54**	**323**	*e*P	**P**	**01 02 03.1**	**+0.3**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
CBKS	**Cedar Bluff**	**67.65**	**335**	*e*P	**P**	**01 02 02.9**	**-0.5**
	comp=Z,20nm,0.8s,mb5.2						
CBKS	**Cedar Bluff**	**67.65**	**335**	*e*P	**P**	**01 02 02.9**	**-0.4**
CBKS				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
216A	**Three Points,**	**67.68**	**323**⇓	P	**P**	**01 02 04.1**	**+0.4**
	baz=68						
117A	**Oracle**	**67.71**	**323**⇑	P	**P**	**01 02 04.1**	**+0.2**
	baz=68,SNR=7.8						
FRNY	**Flat Rock**	**67.74**	**357**	*e*P	**P**	**01 02 03.6**	**-0.1**
Y19A	**Nutrioso**	**67.98**	**325**⇑	P	**P**	**01 02 06.1**	**+0.5**
	baz=68,SNR=15						
PKME	**Peaks-Kenny Pk**	**68.09**	**1**	*e*P	**P**	**01 02 06.1**	**+0.1**
SCIA	**State Center**	**68.21**	**342**	*e*P	**P**	**01 02 05.5**	**-1.3**
116A	**Eloy**	**68.24**	**323**⇓	P	**P**	**01 02 07.4**	**+0.2**
	baz=68						
Y18A	**Canyon Day Jun**	**68.25**	**325**⇑	P	**P**	**01 02 07.5**	**+0.2**
	baz=68,SNR=5.1						
JFWS	**Jewell Farm**	**68.34**	**344**	*e*P	**P**	**01 02 05.7**	**-1.8**
214A	**Organ Pipe Nat**	**68.41**	**322**⇑	P	**P**	**01 02 08.5**	**+0.2**
	baz=68						
Y17A	**Roosevelt**	**68.62**	**324**⇓	P	**P**	**01 02 09.9**	**+0.4**
	baz=69,SNR=9.7						
Z16A	**Peralta Trail,**	**68.67**	**324**⇓	P	**P**	**01 02 10.2**	**+0.4**
	baz=69						
X18A	**Snowflake**	**68.79**	**325**⇑	P	**P**	**01 02 10.8**	**+0.3**
	baz=69						
X17A	**Forest Lakes**	**69.09**	**325**⇑	P	**P**	**01 02 12.9**	**+0.4**
	baz=69,SNR=5.1						
Y16A	**Circle Bar Ran**	**69.11**	**324**⇓	P	**P**	**01 02 12.9**	**+0.4**
	baz=69,SNR=5.2						
SDCO	**Great Sand Dun**	**69.17**	**330**	*e*P	**P**	**01 02 12.7**	**-0.2**
SDCO				*e*	pP	01 02 23.5	-2.5
V19A	**Window Rock**	**69.24**	**327**⇓	P	**P**	**01 02 13.7**	**+0.3**
	baz=69						
X16A	**Lo Mia Camp, P**	**69.49**	**324**⇑	P	**P**	**01 02 15.3**	**+0.3**
	baz=70,SNR=8.9						
W17A	**Winslow**	**69.61**	**325**⇓	P	**P**	**01 02 15.8**	**+0.2**
	baz=70						
Y15A	**Casa Rosa Ranc**	**69.63**	**323**⇑	P	**P**	**01 02 16.1**	**+0.3**
	baz=70,SNR=5.9						
V18A	**Ganado**	**69.69**	**326**⇓	P	**P**	**01 02 16.4**	**+0.3**
	baz=70						
LIC	**Lamto**	**69.81**	**74**	*e*P	**P**	**01 02 16.9**	**-0.4**
	comp=Z,37nm,0.8s,mb5.4						
X15A	**Humboldt**	**69.97**	**324**⇑	P	**P**	**01 02 18.1**	**+0.2**
	baz=70,SNR=8.2						
Y14A	**Wickenburg**	**69.99**	**323**⇓	P	**P**	**01 02 18.2**	**+0.2**
	baz=70						
TIC	**Toumodi**	**70.00**	**73**	*e*P	**P**	**01 02 18.2**	**-0.4**
	comp=Z,96nm,1.1s,mb5.6						
W16A	**Flagstaff**	**70.06**	**325**⇑	P	**P**	**01 02 18.9**	**+0.5**
	baz=70,SNR=11						
T19A	**Beclabito**	**70.11**	**327**⇓	P	**P**	**01 02 18.2**	**-0.5**
	baz=70						
KIC	**Kosan Boka**	**70.12**	**74**	*e*P	**P**	**01 02 19.1**	**-0.2**
	comp=Z,156nm,1.0s,mb5.9						
MVCO	**Mesa Verde**	**70.15**	**328**	*e*P	**P**	**01 02 17.9**	**-1.0**
MVCO	**Mesa Verde**	**70.15**	**328**⇓	P	**P**	**01 02 18.7**	**-0.2**
	baz=70						
DBIC	**Dimbokro**	**70.16**	**73**	P	**P**	**01 02 19.5**	**0.0**
	comp=Z,20nm,0.6s,mb5.2,baz=219,slow=6.2,SNR=50						
DBIC				LR	LR	01 31 07.4	
	comp=Z,176nm,18.1s,MS4.3,baz=148,slow=34						
U18A	**Rough Rock, Ch**	**70.21**	**327**⇑	P	**P**	**01 02 19.9**	**+0.6**
	baz=70						
WUAZ	**Wupatki**	**70.29**	**325**	*e*P	**P**	**01 02 20.7**	**+0.9**
	comp=Z,9.4nm,0.7s,mb4.8						
WUAZ	**Wupatki**	**70.29**	**325**⇑	P	**P**	**01 02 20.2**	**+0.4**
	baz=70						
X14A	**Yava**	**70.32**	**323**⇓	P	**P**	**01 02 20.4**	**+0.4**
	baz=70,SNR=5.0						
Y13A	**Salome**	**70.36**	**322**⇓	P	**P**	**01 02 20.6**	**+0.4**
	baz=70						
W15A	**Williams**	**70.51**	**324**⇑	P	**P**	**01 02 21.7**	**+0.5**
	baz=71						
U16A	**Tuba City**	**70.64**	**326**⇓	P	**P**	**01 02 22.1**	**+0.2**
	baz=71,SNR=5.9						
Y12C	**Blythe**	**70.70**	**322**⇑	P	**P**	**01 02 22.7**	**+0.4**
	baz=71						
U17A	**Shonto**	**70.75**	**326**⇓	P	**P**	**01 02 23.1**	**+0.5**
	baz=71						
T18A	**Mexican Hat**	**70.77**	**327**⇓	P	**P**	**01 02 22.9**	**+0.2**
	baz=71,SNR=15						
S19A	**Harvey Farm, M**	**70.88**	**328**⇓	P	**P**	**01 02 23.6**	**+0.3**
	baz=71,SNR=13						
ECSD	**EROS,Sioux Fal**	**70.91**	**340**	*e*P	**P**	**01 02 21.4**	**-2.0**
	comp=Z,12nm,0.9s,mb4.8						
ISCO	**Idaho Springs**	**70.91**	**332**	*e*P	**P**	**01 02 23.5**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.2						
ISCO	**Idaho Springs**	**70.91**	**332**	*e*P	**P**	**01 02 23.5**	**0.0**
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
PV01	**Paradox Valley**	**70.92**	**329**	*e*P	**P**	**01 02 22.7**	**-0.9**
X13A	**Yucca**	**70.93**	**323**⇓	P	**P**	**01 02 24.1**	**+0.4**
	baz=71						
V15A	**Kaibab Nationa**	**70.94**	**325**⇓	P	**P**	**01 02 24.5**	**+0.7**
	baz=71,SNR=6.9						
W14A	**Seligman**	**70.98**	**324**⇑	P	**P**	**01 02 24.6**	**+0.6**
	baz=71,SNR=5.4						
SMCO	**Snowmass**	**71.01**	**330**	*e*P	**P**	**01 02 25.0**	**+0.9**
T17A	**Navajo Res., N**	**71.13**	**326**⇓	P	**P**	**01 02 25.5**	**+0.6**
	baz=71,SNR=6.6						
BC3	**Big Chuckw Mtn**	**71.17**	**321**⇑	P	**P**	**01 02 25.7**	**+0.4**
	baz=71						
MONP	**Monument Peak**	**71.19**	**320**⇓	P	**P**	**01 02 26.2**	**+0.8**
	baz=71						
S18A	**Hurst Farm, Bl**	**71.26**	**327**⇓	P	**P**	**01 02 25.9**	**+0.3**
	baz=71,SNR=18						
V14A	**Boquillas Ranc**	**71.31**	**324**⇓	P	**P**	**01 02 26.6**	**+0.7**
	baz=71,SNR=7.4						
PV10	**Paradox Valley**	**71.33**	**328**	*e*P	**P**	**01 02 26.0**	**0.0**
W13A	**Hualapai Mount**	**71.33**	**323**⇓	P	**P**	**01 02 27.2**	**+1.0**
	baz=71						
R19A	**Curley Farm, L**	**71.37**	**328**⇑	P	**P**	**01 02 26.2**	**-0.1**
	baz=72						
U15A	**North Rim**	**71.47**	**325**⇑	P	**P**	**01 02 27.9**	**+0.9**
	baz=72,SNR=8.1						
T16A	**Glen Canyon Da**	**71.48**	**326**⇑	P	**P**	**01 02 27.8**	**+0.8**
	baz=72						
S17A	**Black Ridge (B**	**71.62**	**327**⇑	P	**P**	**01 02 28.0**	**+0.2**
	baz=72						
R18A	**Canyonlands Na**	**71.75**	**328**⇑	P	**P**	**01 02 28.7**	**+0.1**
	baz=72						
Q19A	**Hogan Spring (**	**71.90**	**329**⇑	P	**P**	**01 02 29.9**	**+0.4**
	baz=72,SNR=5.3						
U14A	**Mt Trumbull**	**71.93**	**324**⇑	P	**P**	**01 02 30.6**	**+0.8**
	baz=72,SNR=13						
V13A	**Grand Canyon W**	**71.94**	**324**⇓	P	**P**	**01 02 30.1**	**+0.3**
	baz=72,SNR=8.2						
T15A	**Red Dirt Ranch**	**71.96**	**325**⇓	P	**P**	**01 02 30.3**	**+0.4**
	baz=72,SNR=5.4						
EGOM	**La Gomera**	**72.06**	**48**	P	**P**	**01 02 28.6**	**-2.0**
	comp=Z,159nm,1.9s,mb5.6						
PHWY	**Pilot Hill**	**72.08**	**333**	*e*P	**P**	**01 02 33.1**	**+2.7**
S16A	**Weeppner Ranch,**	**72.09**	**326**⇓	P	**P**	**01 02 30.9**	**+0.3**
	baz=72						
GMRC	**Granite Mounta**	**72.10**	**322**⇑	P	**P**	**01 02 31.8**	**+1.0**
	baz=72						
R17A	**Hanksville Air**	**72.18**	**327**⇑	P	**P**	**01 02 31.6**	**+0.4**
	baz=72,SNR=11						
P19A	**Cripple Cowboy**	**72.30**	**329**⇓	P	**P**	**01 02 32.1**	**+0.3**
	baz=72,SNR=12						
V12A	**Nelson**	**72.33**	**323**⇓	P	**P**	**01 02 32.3**	**+0.2**
	baz=72,SNR=5.6						
T14A	**Hurricane**	**72.36**	**325**⇑	P	**P**	**01 02 33.0**	**+0.7**
	baz=72						
Q18A	**Rafter H Ranch**	**72.43**	**328**⇓	P	**P**	**01 02 32.9**	**+0.2**
	baz=73						
R16A	**Teasdale**	**72.46**	**327**⇑	P	**P**	**01 02 33.3**	**+0.4**
	baz=73						
HEC	**Hector,Ludlow**	**72.52**	**321**⇑	P	**P**	**01 02 34.0**	**+0.8**
	baz=73						
SRU	**San Rafael**	**72.63**	**328**	*e*P	**P**	**01 02 34.2**	**+0.4**
SRU	**San Rafael**	**72.63**	**328**⇓	P	**P**	**01 02 33.8**	**0.0**
	baz=73						
U12A	**Valley of Fire**	**72.67**	**324**⇓	P	**P**	**01 02 35.0**	**+0.8**
	baz=73						
TUQ	**Turquoise Moun**	**72.72**	**322**⇑	P	**P**	**01 02 35.2**	**+0.7**
	baz=73						
T13A	**Saint George**	**72.77**	**324**⇓	P	**P**	**01 02 35.2**	**+0.5**
	baz=73						
Q16A	**Castle Valley**	**72.80**	**327**⇑	P	**P**	**01 02 35.8**	**+1.0**
	baz=73						
R15A	**Junction**	**72.81**	**326**⇑	P	**P**	**01 02 35.6**	**+0.7**
	baz=73						
CCUT	**Cedar City**	**72.88**	**325**	*e*P	**P**	**01 02 36.0**	**+0.6**
O19A	**Miners Draw (B**	**72.89**	**330**⇑	P	**P**	**01 02 35.3**	**0.0**
	baz=73,SNR=6.2						
P18A	**Preston Nutter**	**72.90**	**329**⇑	P	**P**	**01 02 36.1**	**+0.7**
	baz=73,SNR=11						
MSU	**Marysvale**	**72.99**	**327**	*e*P	**P**	**01 02 36.9**	**+0.9**
P17A	**Butcher Ranch,**	**73.01**	**328**⇓	P	**P**	**01 02 36.4**	**+0.3**
	baz=73,SNR=7.2						
SHPR	**Sheep Range**	**73.07**	**323**	*e*P	**P**	**01 02 37.3**	**+0.8**
ARUT	**Antelope Range**	**73.09**	**325**	*e*P	**P**	**01 02 37.4**	**+0.7**
RWWY	**Rawlins**	**73.15**	**332**	*e*P	**P**	**01 02 37.2**	**+0.4**
S13A	**Holt Ranch, En**	**73.16**	**325**⇑	P	**P**	**01 02 37.8**	**+0.7**
	baz=73						
N19A	**John Jarvie Ra**	**73.39**	**330**⇓	P	**P**	**01 02 38.2**	**-0.1**
	baz=74,SNR=11						
M20A	**Sweetwater, Wa**	**73.42**	**331**⇑	P	**P**	**01 02 38.2**	**-0.2**
	baz=74						
L21A	**Rawlins**	**73.44**	**332**⇑	P	**P**	**01 02 38.0**	**-0.5**
	baz=74,SNR=6.8						
Q15A	**Fillmore**	**73.46**	**327**⇓	P	**P**	**01 02 39.1**	**+0.4**
	baz=74						
O17A	**Robinson Place**	**73.57**	**329**⇓	P	**P**	**01 02 39.8**	**+0.4**
	baz=74,SNR=13						
T11A	**Corn Creek, Al**	**73.64**	**324**⇑	P	**P**	**01 02 40.3**	**+0.5**
	baz=74,SNR=7.8						
U10A	**Ash Meadows, A**	**73.66**	**323**⇓	P	**P**	**01 02 41.2**	**+1.3**
	baz=74						
R13A	**O'Grain Ranch,**	**73.66**	**325**⇓	P	**P**	**01 02 41.2**	**+1.2**
	baz=74						
N18A	**Larsen Ranch,**	**73.69**	**330**⇓	P	**P**	**01 02 41.1**	**+1.1**
	baz=74						
RSSD	**Black Hills**	**73.

Q08A **Gabbs** 76.29 323 ⇓P P 01 02 55.2 +0.1
baz=76,SNR=5.7
K15A **Arbon** 76.35 329 ⇓P P 01 02 55.4 +0.1
baz=76
J16A **Bone** 76.38 330 ⇓P P 01 02 55.5 0.0
baz=76
I17A **Pilgram Creek** 76.42 331 ⇓P P 01 02 56.2 +0.5
baz=77,SNR=7.5
M12A **Wells** 76.56 327 ⇑P P 01 02 56.8 +0.2
baz=77
L13A **Double Diamond** 76.58 328 ⇑P P 01 02 57.2 +0.5
baz=77
S05C **Merced** 76.59 321 ⇑P P 01 02 58.8 +2.0
baz=77
ULM **Lac du Bonnet** 76.59 343 P P 01 02 55.1 -1.5
comp=Z,8.3nm,0.5s,mb4.9,baz=160,slow=5.7,SNR=9.0
RLMT **Red Lodge** 76.80 333 *e*P P 01 02 57.5 -0.3
comp=Z,4.7nm,0.8s,mb4.5
RLMT **Red Lodge** 76.80 333 ⇑P P 01 02 58.1 +0.3
baz=77
O09A **Fish Creek Ran** 76.82 325 ⇑P P 01 02 58.8 +0.7
baz=77
LAO **LASA Array** 76.85 335 *e*P P 01 02 57.1 -1.0
comp=Z,9.4nm,0.8s,mb4.8
J15A **Blackfoot** 76.86 330 ⇑P P 01 02 58.6 +0.4
baz=77,SNR=6.7
R06C **Coleville** 76.89 322 ⇑P P 01 02 59.1 +0.5
baz=77
M11A **Holland Ranch,** 77.01 326 ⇓P P 01 02 59.8 +0.7
baz=77
K13A **Stover Farm, H** 77.07 328 ⇓P P 01 02 59.9 +0.5
baz=77
G18A **Lazy EL Ranch,** 77.08 333 ⇑P P 01 02 59.1 -0.3
baz=77,SNR=8.0
CMB **Columbia Colle** 77.09 321 *e*P P 01 02 58.9 -0.8
L12A **House Creek Ra** 77.15 327 ⇓P P 01 03 00.2 +0.3
baz=77,SNR=5.1
J14A **Carey** 77.31 329 ⇑P P 01 03 01.0 +0.3
baz=77,SNR=8.7
H16A **Russell Place,** 77.33 331 ⇑P P 01 03 01.0 +0.2
baz=78
I15A **Monteview** 77.34 330 ⇓P P 01 03 01.6 +0.7
baz=78
O08A **Rochester Mine** 77.42 324 ⇑P P 01 03 02.6 +1.1
baz=78
K12A **Draper Farm, C** 77.46 328 ⇑P P 01 03 02.3 +0.8
baz=78,SNR=13
GCMT **Greycliff** 77.51 333 *e*P P 01 03 01.4 -0.4
L11A **Cat Creek Ranc** 77.53 327 ⇓P P 01 03 02.5 +0.4
baz=78,SNR=8.2
R04C **Big Horse Ranc** 77.56 321 ⇑P P 01 03 04.6 +2.3
baz=78
F18A **Big Timber** 77.62 333 ⇓P P 01 03 02.3 -0.1
baz=78,SNR=12
J13A **Cove Ranch, Pi** 77.68 329 ⇑P P 01 03 02.9 +0.1
baz=78,SNR=8.6
PAHR **Pah Rah Range** 77.68 323 *e*P P 01 03 03.0 +0.1
comp=Z,17nm,0.8s,mb5.0
SCHQ **Schefferville** 77.71 2 P P 01 03 01.8 -0.9
comp=Z,8.6nm,0.8s,mb4.7,baz=234,slow=5.3,SNR=5.1
O07A **Toulon** 77.72 324 ⇓P P 01 03 03.4 +0.3
baz=78,SNR=6.3
I14A **Mackay** 77.74 329 ⇑P P 01 03 03.4 +0.3
baz=78,SNR=12
N08A **GE Springer Mi** 77.76 325 ⇓P P 01 03 03.7 +0.4
baz=78
LAVA **Lava Cap Winer** 77.79 322 ⇑P P 01 03 04.0 +0.5
baz=78
L10A **Juniper Basin** 77.83 326 ⇓P P 01 03 03.9 +0.2
baz=78,SNR=16
M09A **Marrel Ranch,** 77.86 325 ⇑P P 01 03 04.3 +0.5
baz=78
H15A **Lima** 77.89 330 ⇑P P 01 03 04.4 +0.5
baz=78
HLID **Hailey** 77.92 329 *e*P P 01 03 04.4 +0.3
comp=Z,11nm,0.8s,mb4.8
HLID **Hailey** 77.92 329 ⇓P P 01 03 04.4 +0.3
baz=78
G16A **Moss Hill, Enn** 77.99 331 ⇑P P 01 03 04.3 -0.1
baz=78
J12A **Stokes Ranch,** 78.01 328 ⇓P P 01 03 04.8 +0.1
baz=78,SNR=10
F17A **Fitzpatrick Pl** 78.02 332 ⇓P P 01 03 04.9 +0.3
baz=78
I13A **Wildhorse Cree** 78.04 329 ⇑P P 01 03 05.1 +0.3
baz=78,SNR=8.9
K11A **Parker Ranch,** 78.12 327 ⇓P P 01 03 05.4 +0.2
baz=78,SNR=7.8
MCMT **McKenzie Canyo** 78.15 330 *e*P P 01 03 05.8 +0.4
N07B **Gerlach** 78.21 324 ⇑P P 01 03 06.3 +0.5
baz=78
H14A **Leadore** 78.22 330 ⇑P P 01 03 05.9 +0.1
baz=78,SNR=5.1
E18A **Harlowton** 78.23 333 ⇑P P 01 03 05.1 -0.7
baz=78
G15A **Dillon** 78.25 331 ⇑P P 01 03 06.0 +0.1
baz=78,SNR=9.3
BEKR **Beckwourth** 78.33 323 ⇓P P 01 03 06.7 +0.2
baz=78,SNR=6.8
MFID **Camas Ranch** 78.49 328 ⇓P P 01 03 07.2 -0.1
baz=79,SNR=6.3
E17A **Martinsdale** 78.54 333 ⇓P P 01 03 07.4 -0.1
baz=79,SNR=6.9
K10A **MacKenzie Ranc** 78.54 327 ⇑P P 01 03 07.5 -0.1
baz=79,SNR=8.4
H13A **Challis** 78.59 329 ⇑P P 01 03 08.0 +0.1
baz=79,SNR=21
N06A **Buffalo Meadow** 78.66 324 ⇑P P 01 03 08.2 -0.1
baz=79,SNR=7.9
D18A **Linhart Farms,** 78.69 334 ⇑P P 01 03 07.9 -0.4
baz=79
O05C **Quincy** 78.71 323 ⇓P P 01 03 08.9 +0.3
baz=79
G14A **Jackson** 78.74 330 ⇑P P 01 03 08.8 +0.2
baz=79
M07A **Soldier Meadow** 78.75 325 ⇓P P 01 03 08.7 -0.1
baz=79,SNR=7.1
F15A **Butte** 78.77 331 ⇓P P 01 03 08.6 -0.2
baz=79,SNR=5.8
TOA0 **Torodi Ar. Sit** 78.85 70 *e*P P 01 03 09.8 -0.2
TORD **Torodi Ar. Bea** 78.85 70 P P 01 03 09.7 -0.3
comp=Z,45nm,0.8s,mb5.5,baz=256,slow=5.3,SNR=370
TORD pP pP 01 03 21.6 -1.7
comp=Z,15nm,0.7s,baz=263,slow=5.4,SNR=6.6
H12A **Diamond D Ranc** 78.87 329 ⇑P P 01 03 09.3 -0.1
baz=79,SNR=10
L08A **Fields** 78.88 326 ⇓P P 01 03 09.1 -0.4
baz=79,SNR=10
I11A **Placerville** 78.92 328 ⇑P P 01 03 09.6 -0.1
baz=79
K09A **Rome** 78.92 326 ⇓P P 01 03 09.3 -0.4
baz=79,SNR=5.3
E16A **East Helena** 78.95 332 ⇓P P 01 03 09.2 -0.6
baz=79
D17A **Six Diamond Ra** 79.02 333 ⇓P P 01 03 09.7 -0.4
baz=79,SNR=13
O04C **Chester** 79.05 323 ⇑P P 01 03 10.6 +0.1
baz=79
F14A **Wisdom** 79.14 331 ⇑P P 01 03 10.9 +0.1
baz=79
HRY **Holter Researc** 79.16 332 *e*P P 01 03 11.0 +0.2
L07A **Adell** 79.28 325 ⇓P P 01 03 11.8 +0.2
baz=79,SNR=5.7
E15A **Deer Lodge** 79.28 332 ⇓P P 01 03 11.4 -0.2
baz=79,SNR=7.3
EGMT **Eagleton** 79.33 334 *e*P P 01 03 11.6 -0.2
comp=Z,8.3nm,1.1s,mb4.6
EGMT **Eagleton** 79.33 334 ⇓P P 01 03 11.2 -0.6
baz=80
J09A **Fry Pan Ranch,** 79.40 327 ⇑P P 01 03 13.4 +1.1
baz=80
C17A **Wharram Farm,** 79.43 333 ⇓P P 01 03 11.8 -0.5
baz=80,SNR=6.7
I10A **Payette** 79.46 328 ⇑P P 01 03 13.4 +0.8
baz=80
H11A **Donnelly** 79.53 329 ⇓P P 01 03 13.1 +0.1
baz=80
K07A **Rock Creek Ran** 79.70 325 ⇑P P 01 03 14.8 +0.8
baz=80
D15A **Lincoln** 79.71 332 ⇓P P 01 03 14.1 +0.2
baz=80
MOD **Modoc** 79.71 324 *e*P P 01 03 13.4 -0.6
comp=Z,12nm,1.0s,mb4.8
J08A **Circle Bar Ran** 79.78 326 ⇓P P 01 03 14.5 +0.1
baz=80
H10A **Noah's Angus R** 79.81 328 ⇑P P 01 03 14.0 -0.4
baz=80,SNR=7.0
I09A **Lost Marbles R** 79.85 327 ⇓P P 01 03 14.9 +0.2
baz=80
C16A **Fuhringer Ranc** 79.97 333 ⇑P P 01 03 14.5 -0.8
baz=80,SNR=8.2
E13A **Victor** 79.99 331 ⇓P P 01 03 15.3 -0.1
baz=80,SNR=10
D14A **Greenough** 80.17 331 ⇑P P 01 03 16.2 -0.2
baz=80
G11A **Walters Elk Ra** 80.17 329 ⇓P P 01 03 16.4 0.0
baz=80,SNR=17
J07A **Hines** 80.22 326 ⇓P P 01 03 17.7 +1.0
baz=80
I08A **Drewsey** 80.22 327 ⇓P P 01 03 17.5 +0.8
baz=80
BMO **Blue Mountains** 80.27 328 *e*P P 01 03 16.8 -0.2
comp=Z,8.0nm,0.8s,mb4.7
H09A **Durkee** 80.31 328 ⇓P P 01 03 17.7 +0.5
baz=80
C15A **Salmond Ranch,** 80.31 332 ⇓P P 01 03 17.0 -0.1
baz=80
F11A **Grangeville** 80.48 329 ⇓P P 01 03 18.1 0.0
baz=81,SNR=13
G10A **Bishop Farm, J** 80.50 328 ⇑P P 01 03 18.1 -0.1
baz=81,SNR=12
TSUM **Tsumeb** 80.52 107 *e*P P 01 03 20.2 +1.2
comp=Z,18nm,0.9s,mb5.0
J06A **Christmas Vall** 80.57 325 ⇑P P 01 03 18.8 +0.2
baz=81
K05A **Summer Lake** 80.60 325 ⇓P P 01 03 19.2 +0.4
baz=81
D13A **Huson** 80.60 331 ⇓P P 01 03 18.6 -0.1
baz=81
H08A **Prairie City** 80.70 327 ⇓P P 01 03 19.6 +0.3
baz=81
B15A **Bradely Ranch,** 80.71 333 ⇑P P 01 03 18.7 -0.5
baz=81,SNR=9.8
C14A **Swan Lake** 80.80 332 ⇑P P 01 03 19.5 -0.2
baz=81,SNR=8.2
G09A **Cove** 80.81 328 ⇓P P 01 03 19.9 +0.1
baz=81,SNR=30
A16A **West Butte Ran** 80.81 334 ⇓P P 01 03 19.6 -0.2
baz=81,SNR=25
I07A **Izee** 80.82 326 ⇓P P 01 03 20.2 +0.3
baz=81
E11A **Bogner Ranch,** 80.85 330 ⇓P P 01 03 19.5 -0.5
baz=81
YBH **Yreka Blue Hor** 80.91 323 P P 01 03 18.8 -1.7
comp=Z,3.5nm,0.8s,mb4.3,baz=67,slow=7.1,SNR=10
F10A **Beach Ranch, E** 81.05 329 ⇓P P 01 03 21.1 0.0
baz=81,SNR=15
B14A **Marquette Ranc** 81.05 332 ⇑P P 01 03 20.2 -0.9
baz=81
I06A **Prineville** 81.08 326 ⇓P P 01 03 21.7 +0.3
baz=81
C13A **Hot Springs** 81.10 331 ⇑P P 01 03 21.2 -0.1
baz=81
F09A **S2 Ranch, Elgi** 81.18 328 ⇑P P 01 03 21.6 -0.2
baz=81,SNR=5.4
H07A **Lands Inn, Kim** 81.21 327 ⇑P P 01 03 21.9 -0.1
baz=81,SNR=5.4
A15A **Johnson Ranch,** 81.30 333 ⇓P P 01 03 21.6 -0.8
baz=81
E10A **Myers Farm, Un** 81.37 329 ⇑P P 01 03 22.6 -0.1
baz=82,SNR=12
G08A **Pilot Rock** 81.40 327 ⇓P P 01 03 22.6 -0.4
baz=82,SNR=8.5
D11A **Klaveano Farm,** 81.42 330 ⇑P P 01 03 22.4 -0.6
baz=82
LNOR **Lincton Mounta** 81.48 328 *e*P P 01 03 21.9 -1.5
B13A **Whitefish** 81.58 332 ⇓P P 01 03 23.2 -0.6
baz=82,SNR=5.7
A14A **Double T Ranch** 81.59 333 ⇑P P 01 03 22.9 -1.0
baz=82,SNR=6.5
L02A **Cave Junction** 81.69 323 ⇑P P 01 03 24.7 +0.1
baz=82
H06A **Lindquist Farm** 81.70 326 ⇑P P 01 03 24.7 +0.2
baz=82
G07A **Ruggs Ranch, H** 81.73 327 ⇑P P 01 03 25.0 +0.2
baz=82
WALA **Waterton Lakes** 81.86 333 *e*P P 01 03 24.6 -0.7
comp=Z,12nm,0.8s,mb4.9
D10A **Wagner Farm, O** 81.86 330 ⇓P P 01 03 24.2 -1.1
baz=82,SNR=11
E09A **Wood Farm, Sta** 81.88 329 ⇑P P 01 03 24.6 -0.9
baz=82
C11A **Tepee Creek (N** 81.97 331 ⇓P P 01 03 25.6 -0.3
baz=82
H05A **Madras** 82.10 326 ⇓P P 01 03 27.0 +0.4
baz=82
B12A **Libby** 82.14 331 ⇓P P 01 03 26.7 -0.1
baz=82
G06A **Carson Farm,** 82.20 327 ⇓P P 01 03 27.7 +0.5
baz=82
D09A **Jones Farm, Ri** 82.35 329 ⇓P P 01 03 27.9 0.0
baz=82
C10A **Spilker Farm,** 82.43 330 ⇓P P 01 03 28.4 +0.1
baz=83
B11A **Sandpoint** 82.46 331 ⇑P P 01 03 28.3 -0.2
baz=83
HAWA **Hanford** 82.46 328 *e*P P 01 03 28.5 -0.1
comp=Z,12nm,0.8s,mb4.9
RSW **Rattlesnake Hi** 82.49 328 *e*P P 01 03 28.4 -0.3
A12A **Yaak River Ran** 82.52 332 ⇓P P 01 03 28.8 0.0
baz=83
G05A **Wamic** 82.55 326 ⇑P P 01 03 29.5 +0.4
baz=83
D08A **Wollman Farm,** 82.64 329 ⇓P P 01 03 29.6 +0.1
baz=83
F06A **Goldendale** 82.64 327 ⇓P P 01 03 29.7 +0.2
baz=83
NEW **Newport** 82.67 330 *e*P P 01 03 26.9 -2.7
OD2 **Odessa Site #2** 82.78 329 *e*P P 01 03 29.4 -0.7
A11A **Hall Mountain,** 82.85 331 ⇑P P 01 03 30.2 -0.2
baz=83
C09A **Chrisman Ranch** 82.87 330 ⇑P P 01 03 30.3 -0.3
baz=83
MAW **Mawson** 83.04 164 P P 01 03 31.6 +0.2
comp=Z,13nm,0.8s,mb5.0,baz=220,slow=6.3,SNR=17
MAW pP pP 01 03 43.2 -1.6
comp=Z,11nm,0.7s,baz=194,slow=7.3,SNR=7.4
H03A **Soap Creek Ran** 83.20 325 ⇓P P 01 03 33.0 +0.6
baz=83
D07A **Quincy** 83.24 328 ⇑P P 01 03 32.6 0.0
baz=83
B09A **Rice** 83.26 330 ⇑P P 01 03 31.8 -0.8
baz=83
A10A **Northport** 83.40 331 ⇑P P 01 03 32.9 -0.5
baz=84
MDT **Midelt** 83.56 50 LR LR 01 39 41.6
comp=Z,176nm,18.4s,MS4.5,baz=269,slow=35
G03A **Yamhill** 83.62 325 ⇓P P 01 03 34.9 +0.3
baz=84
C07A **Waterville** 83.64 329 ⇑P P 01 03 34.2 -0.4
baz=84
ETW **Entiat** 83.70 328 *e*P P 01 03 34.1 -0.8
B08A **Colville Reser** 83.76 329 ⇓P P 01 03 34.6 -0.6
baz=84
A09A **Danville** 83.86 330 ⇑P P 01 03 35.1 -0.6
baz=84
A08A **Turner Farm, O** 84.16 330 ⇓P P 01 03 36.8 -0.4
baz=84
B07A **Winthrop** 84.21 329 ⇓P P 01 03 36.8 -0.6
baz=84
A07A **Ashnola River,** 84.74 329 ⇓P P 01 03 39.8 -0.4
baz=85
EDM **Edmonton** 84.84 336 *e*P P 01 03 38.6 -1.9
EMIN **Mina Concepcio** 84.89 45 P P 01 03 40.7 -0.5
comp=Z,61nm,1.1s,mb5.6
ESPR **Espera** 84.92 46 P P 01 03 40.5 -0.9
comp=Z,63nm,1.0s,mb5.7
EJIF **Jimena Fronter** 84.95 47 P P 01 03 42.2 +0.6
comp=Z,23nm,0.8s,mb5.4
EJIF **Jimena Fronter** 84.95 47 P P 01 03 42.2 +0.7
EJIF pmax pmax
comp=Z,23nm,0.8s,mb5.4
EBAD **Badajoz** 85.22 44 P P 01 03 37.7 -5.2
EMIJ **Mijas** 85.48 47 P P 01 03 43.6 -0.6
comp=Z,36nm,0.9s,mb5.5
ELOJ **Sierra Loja** 86.22 47 P P 01 03 48.4 +0.6
comp=Z,28nm,1.0s,mb5.4
ELOJ **Sierra Loja** 86.22 47 P P 01 03 48.4 +0.6
ELOJ pmax pmax
comp=Z,28nm,1.0s,mb5.5
ELUQ **Luque** 86.36 47 P P 01 03 49.3 +0.8
comp=Z,39nm,0.8s,mb5.7
ELUQ **Luque** 86.36 47 P P 01 03 49.3 +0.8
ELUQ pmax pmax
comp=Z,39nm,0.8s,mb5.7
EGUA **Guajares** 86.44 47 P P 01 03 53.0 +4.1
comp=Z,26nm,0.8s,mb5.5
EGUA **Guajares** 86.44 47 P P 01 03 53.0 +4.1
EGUA pmax pmax
comp=Z,26nm,0.8s,mb5.5
TAM **Tamanrasset** 86.45 64 *e*P P 01 03 49.9 +0.6
EADA **Adamuz** 86.48 46 P P 01 03 49.4 +0.3
comp=Z,32nm,1.1s,mb5.5
ECOG **Cogollos-Vega** 86.68 47 P P 01 03 50.3 +0.2
comp=Z,6.6nm,0.8s,mb4.9
ECOG **Cogollos-Vega** 86.68 47 P P 01 03 50.3 +0.2
ECOG pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
EBAN **Banos Encina** 87.01 46 P P 01 03 51.1 -0.6
comp=Z,29nm,1.2s,mb5.4
EBAN **Banos Encina** 87.01 46 P P 01 03 51.1 -0.6
EBAN pmax pmax
comp=Z,29nm,1.2s,mb5.4
EQES **Quesada** 87.29 47 P P 01 03 52.5 -0.5
comp=Z,15nm,0.7s,mb5.3
EHUE **Huescar** 87.62 47 P P 01 03 54.0 -0.6
comp=Z,3.9nm,1.0s,mb4.6
EHUE **Huescar** 87.62 47 P P 01 03 54.0 -0.6
EHUE pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
ESDC **Sonseca Array** 87.70 45 P P 01 03 55.3 +0.3
comp=Z,1.9nm,0.8s,mb4.4,baz=250,slow=4.3,SNR=6.5
ESDC **Sonseca Array** 87.70 45 P P 01 03 54.5 -0.5
comp=Z,1.7nm,0.6s,mb4.5
ETOB **Tobarra** 88.75 47 P P 01 03 59.4 -0.5
comp=Z,8.2nm,0.8s,mb5.1
ETOR **Torete** 89.55 45 P P 01 04 00.3 -3.4
comp=Z,16nm,1.3s,mb5.2
ETOR **Torete** 89.55 45 P P 01 04 00.3 -3.4
ETOR pmax pmax
comp=Z,16nm,1.3s,mb5.2
ECHE **Chera** 89.63 46 P P 01 04 03.2 -0.9
comp=Z,13nm,1.0s,mb5.2
ECHE **Chera** 89.63 46 P P 01 04 03.2 -0.9
ECHE pmax pmax
comp=Z,13nm,1.0s,mb5.2
LSZ **Lusaka** 91.37 107 *e*P P 01 04 13.7 +0.9
YKA **Yellowknife Ar** 92.41 341 P P 01 04 15.2 -1.2
comp=Z,5.3nm,0.7s,mb5.0,baz=135,slow=4.4,SNR=13
YKA pP pP 01 04 26.6 -3.4
comp=Z,4.4nm,0.7s,baz=140,slow=4.2,SNR=8.1
KEST **Kesra** 95.09 53 P P 01 04 30.5 +1.1
comp=Z,2.4nm,0.9s,mb4.6,baz=137,slow=2.7,SNR=6.7
DLBC **Dease Lake** 95.21 333 *e*P P 01 04 28.8 -0.5
AKASG **Malin Array Be** 113.29 43 *i* PKIKP PKiKP 01 09 43.0 -0.6
OBN **Obninsk** 118.08 39 PKIKP PKPdf 01 09 50.0 -2.6
KIV **Kislovodsk** 121.78 52 ⇑*i* PKIKP PKPdf 01 09 59.4 -0.7
BILL **Bilibino** 123.68 338 PKIKP PKPdf 01 10 01.0 -2.0
BILL *e* 01 10 09.0
ASAR **Alice Springs** 127.99 208 PKP PKPdf 01 10 11.9 -0.8
comp=Z,2.8nm,0.7s,baz=148,slow=2.0,SNR=28
ARU **Arti** 130.07 35 ⇑*i* PKIKP PKPdf 01 10 15.4 -0.2
TIXI **Tiksi** 130.29 352 ⇓*i* PKIKP PKPdf 01 10 14.5 -1.1
WRA **Warramunga Arr** 131.03 211 PKP PKPdf 01 10 18.3 -0.3
comp=Z,2.5nm,0.7s,baz=154,slow=1.6,SNR=27
WRA pPKP pPKPdf 01 10 30.0 -2.6
comp=Z,1.1nm,0.5s,baz=153,slow=1.6,SNR=5.7
WRAB **Tennant Creek** 131.03 211 *e*PKPdf PKPdf 01 10 18.1 -0.5
NVS **Novosibirsk** 142.58 25 *e*PKHKP 01 10 33.3
KURK **Kurchatov** 143.25 34 ⇑*i* PKIKP PKPdf 01 10 37.7 -2.4
ZAA0 **Zalesovo Array** 143.87 25 *e*PKPdf PKPdf 01 10 38.3 -2.8
ZALV **Zalesovo Beam** 143.87 25 PKP PKPdf 01 10 38.5 -2.6
comp=Z,9.0nm,0.8s,baz=322,slow=4.5,SNR=27
EKS2 **Erkin-Say** 144.25 48 *e*PKPdf PKPdf 01 10 41.2 -0.9
EKS2 **Erkin-Say** 144.25 48 P PKPdf 01 10 41.9 -0.2
SNR=20
AML **Almayashu** 144.38 49 P PKPdf 01 10 42.8 +0.4
SNR=12
USP **Ospenovka** 144.51 47 P PKPdf 01 10 42.1 -0.4
SNR=9.3
CLNS **Chul'man** 144.64 346 *e*PKHKP 01 10 37.5
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS pmax pmax
comp=Z,18nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,0.5s
AAK **Ala-Archa** 144.75 48 P PKPdf 01 10 43.6 +0.6
SNR=47
FRU **Bishkek** 144.76 48 *e*PKIKP PKPdf 01 10 43.0 0.0
FRU pmax pmax
comp=Z,67nm,1.2s
CHMS **Chumysh** 144.79 47 P PKPdf 01 10 43.2 +0.1
SNR=17
UCH **Uchtor** 144.92 49 *e*PKPdf PKPdf 01 10 43.4 +0.1
KBK **Karagaybulak** 145.05 48 P PKPbc 01 10 44.5 +1.5
SNR=53
GOA **Goa** 145.08 96 *e*P PKPbc 01 10 44.1 +0.3
GOA AMS AMS 01 48 07.5
comp=Z,394nm,20.2s,MS5.2
MNGI **Mangalore** 145.12 101 AMS AMS 01 46 59.7
comp=Z,181nm,14.8s,MS5.0
TRD **Trivandrum** 145.14 109 *e*P PKPdf 01 10 42.0 -2.5
TKM2 **Tokmak 2** 145.39 47 *e*PKPdf PKPdf 01 10 44.5 +0.5
TKM2 **Tokmak 2** 145.39 47 P PKPbc 01 10 45.0 +1.0
SNR=23
KZA **Kyzart** 145.48 49 P PKPdf 01 10 46.4 +2.1
SNR=13
KAD **Karad** 145.94 93 *e*P PKPdf 01 10 43.5 -2.2
ULHL **Ulahol** 146.10 48 P PKPdf 01 10 46.9 +1.6
SNR=5.7
KOD **Kodaikanal** 146.38 107 *e*P PKPdf 01 10 45.7 -0.9
KOD AMS AMS 01 48 02.9
comp=Z,200nm,12.7s,MS5.1
KSH **Kashi** 146.90 52 *e*PKP PKPbc 01 10 49.0 +0.3
KSH *e*PKP2 PKPab 01 10 51.4 +1.3
KSH *e*APKP 01 10 59.8
KSH *e*XPKP 01 11 03.3
KSH *e*PKS 01 14 23.1
KSH *e*SKS SKSdf 01 17 53.1 +1.2
KSH PP PP
comp=Z,556nm,6.2s
MKAR **Makanchi Array** 147.55 37 PKPbc PKPdf 01 10 47.8 +0.2
comp=Z,14nm,0.7s,baz=303,slow=1.9,SNR=46
MKAR pPKPbc pPKPbc 01 11 00.9 -3.3
comp=Z,7.4nm,0.7s,baz=336,slow=2.7,SNR=9.0
MKAR **Makanchi Array** 147.55 37 *i* PKP2 PKPdf 01 10 47.7 +0.1
MKAR pmax pmax
comp=Z,14nm,0.7s
AJM **Ajmer** 147.79 77 *e*P PKPdf 01 10 46.1 -2.5
THN **Thein Dam** 148.40 65 *ex* PKPbc 01 10 51.8 -1.2
AKL **Akola** 149.33 88 *e*P PKPdf 01 10 49.2 -2.0
AKL AMS AMS 01 47 07.7
comp=Z,302nm,16.5s,MS5.2
SMLA **Simla** 149.79 68 *e*P PKPdf 01 10 51.8 +0.1
SMLA AMS AMS 01 46 27.2
comp=Z,534nm,18.1s,MS5.4
HYB **Hyderabad** 149.98 95 *e*P PKPbc 01 10 57.0 -0.3
HYB **Hyderabad** 149.98 95 *i* PKP PKPbc 01 10 57.0 -0.3
BHPL **Bhopal** 150.08 83 *e*P PKPdf 01 10 49.8 -2.6
DDI **Dehra Dun** 150.65 69 *ex* PKPbc 01 10 58.0 -0.6
DDI *ex* x 01 10 58.0
MOY **Mondy** 150.69 12 *e*PKIKP PKPbc 01 10 58.8 +0.8
NGP **Nagpur** 151.28 88 *e*P PKPdf 01 10 54.7 +0.4
NGP AMS AMS 01 46 29.4
comp=Z,272nm,21.0s,MS5.0
MJAR **Matsushiro Arr** 152.26 305 PKPbc PKPbc 01 11 01.8 -0.3
comp=Z,3.6nm,0.6s,baz=121,slow=1.7,SNR=13
MJAR PKPab PKPab 01 11 12.3 +0.2
comp=Z,2.3nm,0.7s,baz=260,slow=18,SNR=4.4
MAJO **Matsushiro** 152.26 305 PKPdf PKPdf 01 10 55.9 +0.6
MAJO *e*PKPbc PKPbc 01 11 01.3 -0.8
MAT **Matsushiro** 152.26 305 PKP PKPbc 01 11 01.3 -0.8
ZAK **Zakamensk** 152.32 9 *e*PKIKP PKPbc 01 11 01.1 -0.7
ZAK pmax pmax
comp=Z,5.0nm,1.3s
WMQ **Urumqi** 152.38 36 *e*PKP PKPdf 01 10 56.0 +0.7
VIS **Vishakhapatnam** 154.44 97 *e*P PKPdf 01 10 55.3 -3.7
SONM **Songino Array** 155.20 6 PKP PKPdf 01 10 59.8 +0.6
comp=Z,2.0nm,0.8s,baz=354,slow=0.5,SNR=14
SONM PKPab PKPab 01 11 24.0 -0.1
comp=Z,2.6nm,0.8s,baz=325,slow=3.0,SNR=7.7
BOK **Bokaro** 157.86 84 *e*P PKPdf 01 11 01.0 -2.4
GTA **Gaotai** 161.62 26 *e*PKP PKPdf 01 11 08.1 +0.9
GTA APKP 01 11 19.1
GTA XPKP 01 11 22.9
HHC **Hu-ho-hao-te** 162.31 356 *e*PKP PKPdf 01 11 07.5 -0.3
HHC APKP 01 11 18.3
HHC XPKP 01 11 21.9
HHC PKS 01 14 39.3
HHC PP PP 01 15 42.4 +4.1

HHC				SKS	SKSdf	01 18 07.5	-1.5	
HHC				SKKS	SKKSac	01 22 24.4	+0.8	
HHC				PP	PP			
	comp=Z,1μm,9.5s							
HHC				LR	LR			
	comp=N,224nm,20.2s							
HHC				LR	LR			
	comp=E,258nm,20.2s							
HHC				LR	LR			
	comp=Z,141nm,19.0s							
LZH	**Lanzhou**	**166.04**	**21**	*e*PKP	PKPdf	01 11 09.3	-2.1	
LZH				PKP2	PKPab	01 12 12.5	+0.9	
NJ2	**Nanjing**	**168.17**	**320**	*e*PKP	PKPdf	01 11 12.6	-0.5	
CMAR	**Chiang Mai Arr**	**168.64**	**112**	PKPab	PKPab	01 12 23.7	-0.1	
	comp=Z,0.6nm,0.3s,baz=250,slow=5.0,SNR=5.3							
CD2	**Chengdu**	**170.47**	**34**	*e*PKP	PKPdf	01 11 13.8	-0.7	
CD2				APKP		01 11 23.0		
CD2				XPKP		01 11 28.9		
CD2				PKP2	PKPab	01 12 32.5	+1.1	
CD2				PP	PP	01 16 23.8	+2.6	
CD2				SKS	SKSdf	01 18 12.1	-2.3	
CD2				SKKS	SKKSac	01 23 05.6	+0.6	
CD2				PP	PP			
	comp=Z,150nm,10.8s							
CD2				LR	LR			
	comp=N,160nm,18.2s							
CD2				LR	LR			
	comp=Z,180nm,18.7s							
KMI	**Kunming**	**173.07**	**72**	PKP	PKPdf	01 11 14.3	-1.6	
GYA	**Guiyang**	**175.52**	**42**	*e*PKP	PKPdf	01 11 14.5	-2.2	
GYA				APKP		01 11 26.8		
GYA				XPKP		01 11 30.6		
GYA				PKP2	PKPab	01 12 54.3	+0.3	
GYA				PKS		01 14 45.5		
GYA				SKKS	SKKSac	01 23 28.6	-0.8	
GYA				PP	PP			
	comp=Z,80nm,8.8s							
GYA				LR	LR			
	comp=N,130nm,22.8s							
GYA				LR	LR			
	comp=E,170nm,21.1s							
GYA				LR	LR			
	comp=Z,120nm,20.7s							

*NEIC **20** 01:05:05.3, 1523N×9679W, h15km, MD3.6(MEX), After MEX.*

MEX 20 01:05:05.3±0.5, 1523N×9679W, h15km±31km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.73**	**312**	*i* P			Pn	01 05 31.5	-3.4
PNIG				*i* S			Sn	01 05 52.0	-4.7
VHO	**Vista Hermosa**	**1.84**	**2**	*i* P			Pn	01 05 34.8	-1.5
VHO				*i* S			Sn	01 05 54.5	-4.8
OXX	**Oaxaca**	**1.85**	**2**	*e*P			Pn	01 05 36.5	+0.1
OXX				*i* S			Sn	01 05 55.7	-3.8
CMIG	**Matias Romero**	**2.61**	**44**	*e*P			Pn	01 05 43.7	-3.2
CMIG				*i* S			Sn	01 06 14.6	-3.7
UTMO	**Huajuapan**	**2.77**	**340**	*i* P			Pn	01 05 46.9	-2.1
UTMO				*i* S			Sn	01 06 17.4	-4.8
TPIG	**Tehuac#an**	**3.22**	**350**	*i* P			Pn	01 05 52.9	-2.4
PCIG		**3.48**	**82**	*i* P			Pn	01 05 57.3	-1.6

*NEIC **20** 01:06:30.3, 15.11N×9680W, h30km, mb4.5/29, MD4.5(MEX), After MEX.*
*MEX **20** 01:06:30.3±0.8, 15.11N×9680W, h30km±13km, MD4.5*
*ISCJB **20** 01:06:35.2±0.6, 1557N±007×9645W±003, h33km, mb4.5/23, MS4.5/2, Error ellipse: s-maj=10.2km s-min=4.7km az=7.8*
*BJI **20** 01:06:41.3, 15.10N×9680W, h50km, mB5.4, Ms5.3, Msz4.7*

ISC 20 01:06:37.6±0.6, 1564N±007×9639W±004, h35km, n166, σ0§80/171, mb4.5/23, MS4.5/2, 49C-46D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.46**	**347**	*i* P			**Pn**	**01 06 59.2**	**-2.3**
VHO				*i* S			**Sn**	**01 07 22.9**	**+3.4**
OXX	**Oaxaca**	**1.47**	**348**	*i* P			**Pn**	**01 07 00.3**	**-1.3**
OXX				*i* S			**Sn**	**01 07 23.3**	**+3.6**
PNIG	**Pinotepa**	**1.83**	**294**	*e*P			**Pn**	**01 06 57.5**	**-9.1**
PNIG				*i* S			**Sn**	**01 07 18.9**	**-10**
CMIG	**Matias Romero**	**2.05**	**45**	*i* P			**Pn**	**01 07 09.6**	**0.0**
CMIG				*i* S			**Sn**	**01 07 40.8**	**+6.9**
TPIG	**Tehuac#an**	**2.92**	**342**	*i* P			**Pn**	**01 07 20.5**	**-1.0**
TPIG				*i* S			**Sn**	**01 07 55.7**	**+0.3**
PCIG		**3.06**	**88**	*i* P			**Pn**	**01 07 22.4**	**-1.1**
PCIG				*i* S			**Sn**	**01 08 00.7**	**+1.8**
TGIG		**3.34**	**70**	*i* P			**Pn**	**01 07 26.8**	**-0.6**
TGIG				*i* S			**Sn**	**01 08 11.3**	**+5.4**
ACX	**Acapulco**	**3.60**	**290**	*e*P			**Pn**	**01 07 26.0**	**-4.9**
MEIG	**Mezcala**	**3.84**	**307**	*i* P			**Pn**	**01 07 31.2**	**-3.0**
MEIG				*i* S			**Sn**	**01 08 11.0**	**-7.1**
CAIG	**El Cayaco**	**3.97**	**291**	*i* P			**Pn**	**01 07 27.6**	**-8.5**
CAIG				*i* S			**Sn**	**01 08 11.5**	**-10**
PPM	**Popocatepetl**	**4.02**	**328**	*i* P			**Sn**	**01 07 40.0**	**+3.3**
PLIG	**Platanillo**	**4.04**	**313**	*i* S			**Sn**	**01 08 20.1**	**-3.0**
YAIG	**Yautepec**	**4.10**	**322**	*i* S			**Sn**	**01 08 19.0**	**-5.5**
ZIIG	**Zihuatanejo**	**5.24**	**293**	*i* P			**Pn**	**01 07 49.0**	**-4.5**
ZIIG				*i* S			**Sn**	**01 08 41.1**	**-12**
MOIG	**Morelia**	**6.08**	**312**	*i* S			**Sn**	**01 09 31.1**	**+18**
MMIG	**Aquila**	**7.16**	**293**	*i* P			**Pn**	**01 08 15.8**	**-4.1**
MMIG				*i* S			**Sn**	**01 09 39.2**	**-0.7**
JCT	**Junction City**	**15.10**	**349**	*e*Pn			**Pn**	**01 10 08.8**	**+0.4**
DWPF	**Disney** 98nm,1.4s	**18.60**	**46**	*e*P			**Pn**	**01 10 52.9**	**+0.4**
MIAR	**Mount Ida** 21nm,0.9s	**19.00**	**7**	*e*P			**Pn**	**01 10 55.9**	**-1.3**
WMOK	**Wichita Mounta** 8.3nm,1.0s	**19.14**	**354**	*e*P			**Pn**	**01 10 56.7**	**-2.1**
UALR	**University of** 15nm,0.8s	**19.40**	**10**	*e*Pn			**Pn**	**01 11 01.3**	**-0.7**
319A	**Douglas** baz=19	**19.59**	**325**	⇑P			**Pn**	**01 11 03.9**	**-0.4**
AMTX	**Amarillo** 13nm,0.9s	**19.75**	**347**	*e*P			**Pn**	**01 11 03.9**	**-2.2**
OXF	**Oxford** 6.2nm,0.6s	**19.82**	**17**	*e*P			**Pn**	**01 11 04.9**	**-2.1**
318A	**Bisbee** baz=20	**20.04**	**324**	⇓P			**P**	**01 11 08.7**	**+1.1**
219A	**White Tail Can** baz=20,SNR=7.8	**20.06**	**327**	⇓P			**P**	**01 11 08.3**	**+0.4**
218A	**Dragoon** baz=20	**20.47**	**325**	⇓P			**P**	**01 11 13.5**	**+1.1**
BNM	**Barren Site**	**20.61**	**335**	*e*P			**P**	**01 11 14.6**	**+0.7**
LPM	**Los Pinos Moun**	**20.75**	**335**	*e*P			**P**	**01 11 15.2**	**-0.1**
217A	**Green Valley** baz=20	**20.76**	**323**	⇓P			**P**	**01 11 17.1**	**+1.6**
LENM	**Lemitar**	**20.77**	**335**	*e*P			**P**	**01 11 16.4**	**+0.9**
118A	**Homack Ranch,** baz=21,SNR=11	**20.94**	**326**	⇑P			**P**	**01 11 18.6**	**+1.2**
TUC	**Tucson** 6.6nm,1.1s,mb3.9	**21.14**	**324**	*e*P			**P**	**01 11 19.8**	**+0.3**
ANMO	**Albuquerque** 6.5nm,1.0s,mb3.9	**21.25**	**337**	*e*P			**P**	**01 11 21.2**	**+0.5**
216A	**Three Points,** baz=21	**21.30**	**323**	⇓P			**P**	**01 11 21.1**	**-0.2**
117A	**Oracle** baz=21,SNR=8.5	**21.30**	**325**	⇑P			**P**	**01 11 21.6**	**+0.2**
Y19A	**Nutrioso** baz=21,SNR=9.4	**21.62**	**330**	⇑P			**P**	**01 11 24.5**	**-0.2**
SWET	**Sewanee**	**21.64**	**24**	*e*P			**P**	**01 11 25.0**	**+0.1**
Z17A	**San Carlos Hig** baz=21	**21.71**	**327**	⇑P			**P**	**01 11 26.6**	**+0.9**
WVT	**Waverly** 8.6nm,0.8s,mb4.2	**21.79**	**19**	*e*P			**P**	**01 11 27.2**	**+0.7**
116A	**Eloy** baz=22	**21.84**	**323**	⇑P			**P**	**01 11 27.3**	**+0.2**
Y18A	**Canyon Day Jun** baz=22	**21.86**	**328**	⇑P			**P**	**01 11 27.5**	**+0.2**
X19A	**St. Johns** baz=22,SNR=5.3	**22.02**	**331**	⇓P			**P**	**01 11 28.6**	**-0.4**
214A	**Organ Pipe Nat** baz=22	**22.08**	**320**	⇑P			**P**	**01 11 30.0**	**+0.4**
Y17A	**Roosevelt** baz=22	**22.22**	**327**	⇓P			**P**	**01 11 30.6**	**-0.5**
115A	**Sonoran Desert** baz=22	**22.25**	**323**	⇓P			**P**	**01 11 31.7**	**+0.3**
CPCT	**Cooper Cave**	**22.41**	**26**	*e*P			**P**	**01 11 33.2**	**+0.1**
Y16A	**Circle Bar Ran** baz=22	**22.70**	**326**	⇓P			**P**	**01 11 36.1**	**-0.1**
CCM	**Cathedral Cave** 12nm,0.8s,mb4.4	**22.79**	**11**	*e*P			**P**	**01 11 36.3**	**-0.8**
SIUC	**Southern Illin**	**22.89**	**15**	*e*P			**P**	**01 11 36.6**	**-1.6**
X16A	**Lo Mia Camp, P** baz=23,SNR=7.5	**23.09**	**327**	⇑P			**P**	**01 11 40.6**	**+0.2**
Y15A	**Casa Rosa Ranc** baz=23,SNR=8.6	**23.22**	**325**	⇑P			**P**	**01 11 41.7**	**0.0**
CBKS	**Cedar Bluff** 29nm,0.9s,mb4.7	**23.27**	**353**	*e*P			**P**	**01 11 41.0**	**-1.2**
V18A	**Ganado** baz=23	**23.37**	**331**	⇓P			**P**	**01 11 42.1**	**-1.1**
KSU1	**Kansas State U** 15nm,0.8s,mb4.5	**23.38**	**360**	*e*P			**P**	**01 11 43.0**	**-0.3**
SDCO	**Great Sand Dun** 8.7nm,1.0s,mb4.1	**23.45**	**342**	*e*P			**P**	**01 11 43.6**	**-0.4**
X15A	**Humboldt** baz=23	**23.57**	**326**	⇑P			**P**	**01 11 44.9**	**-0.2**
Y14A	**Wickenburg** baz=23	**23.59**	**324**	⇓P			**P**	**01 11 45.3**	**0.0**
W16A	**Flagstaff** baz=23	**23.66**	**328**	⇓P			**P**	**01 11 45.0**	**-0.9**
T19A	**Beclabito** baz=24	**23.91**	**334**	⇑P			**P**	**01 11 47.1**	**-1.1**
WUAZ	**Wupatki** 19nm,0.9s,mb4.5	**23.91**	**329**	*e*P			**P**	**01 11 46.8**	**-1.4**
WUAZ	**Wupatki** baz=24,SNR=14	**23.91**	**329**	⇓P			**P**	**01 11 48.7**	**+0.5**
X14A	**Yava** baz=24	**23.91**	**325**	⇑P			**P**	**01 11 48.1**	**-0.2**
MVCO	**Mesa Verde** 71nm,2.3s,mb4.7	**24.02**	**336**	*e*P			**P**	**01 11 48.5**	**-0.7**
MVCO	**Mesa Verde** baz=24	**24.02**	**336**	⇑P			**P**	**01 11 48.2**	**-1.1**
GLA	**Glamis** 11nm,1.2s,mb4.2	**24.07**	**319**	*e*P			**P**	**01 11 49.4**	**-0.4**
GLA	**Glamis** baz=24	**24.07**	**319**	⇓P			**P**	**01 11 50.6**	**+0.9**
W15A	**Williams** baz=24	**24.11**	**327**	⇓P			**P**	**01 11 50.9**	**+0.9**
WCI	**Wyandotte Cave** 26nm,0.9s,mb4.7	**24.20**	**20**	*e*P			**P**	**01 11 51.2**	**+0.3**
U16A	**Tuba City** baz=24,SNR=5.2	**24.29**	**330**	⇑P			**P**	**01 11 52.0**	**+0.4**
U17A	**Shonto** baz=24	**24.43**	**331**	⇓P			**P**	**01 11 52.5**	**-0.5**
PDMCI	**Parker Dam,Lak** baz=24	**24.51**	**323**	⇓P			**P**	**01 11 54.2**	**+0.5**
T18A	**Mexican Hat** baz=24,SNR=5.3	**24.53**	**333**	⇑P			**P**	**01 11 53.5**	**-0.4**
X13A	**Yucca** baz=24	**24.54**	**323**	⇓P			**P**	**01 11 54.0**	**+0.1**
V15A	**Kaibab Nationa** baz=24	**24.55**	**328**	⇑P			**P**	**01 11 53.7**	**-0.4**
W14A	**Seligman** baz=24	**24.57**	**326**	⇑P			**P**	**01 11 54.2**	**0.0**
S19A	**Harvey Farm, M** baz=24,SNR=8.5	**24.74**	**335**	⇑P			**P**	**01 11 55.3**	**-0.5**
T17A	**Navajo Res., N** baz=24	**24.82**	**332**	⇓P			**P**	**01 11 55.9**	**-0.7**
PV01	**Paradox Valley**	**24.85**	**337**	*e*P			**P**	**01 11 57.1**	**+0.3**
BC3	**Big Chuckw Mtn** baz=25	**24.86**	**320**	⇓P			**P**	**01 11 56.9**	**0.0**
V14A	**Boquillas Ranc** baz=25	**24.90**	**326**	⇓P			**P**	**01 11 57.0**	**-0.2**
W13A	**Hualapai Mount** baz=25,SNR=6.5	**24.93**	**324**	⇓P			**P**	**01 11 58.7**	**+1.1**
BLO	**Bloomington** 56nm,1.4s,mb4.9	**24.99**	**18**	*e*P			**P**	**01 11 58.0**	**0.0**
IRM	**Iron Mountain** baz=25,SNR=6.8	**25.01**	**321**	⇓P			**P**	**01 11 58.6**	**+0.3**
U15A	**North Rim** baz=25,SNR=5.9	**25.08**	**329**	⇑P			**P**	**01 11 59.8**	**+0.9**
SMCO	**Snowmass** 12nm,1.0s,mb4.4	**25.22**	**340**	*e*P			**P**	**01 12 02.4**	**+2.3**
PV10	**Paradox Valley**	**25.24**	**336**	P			**P**	**01 11 58.4**	**-2.0**
S17A	**Black Ridge (B** baz=25	**25.35**	**333**	⇑P			**P**	**01 12 00.6**	**-0.7**
ISCO	**Idaho Springs** 8.5nm,1.2s,mb4.2	**25.39**	**343**	*e*P			**P**	**01 12 01.7**	**+0.1**
BELC	**Belle Mtn.** baz=25	**25.43**	**320**	⇑P			**P**	**01 12 03.1**	**+1.0**
U14A	**Mt Trumbull** baz=25	**25.53**	**327**	⇑P			**P**	**01 12 03.1**	**+0.1**
V13A	**Grand Canyon W** baz=25	**25.54**	**325**	⇓P			**P**	**01 12 03.1**	**+0.1**
LDFC	**Landfair**	**25.62**	**323**	*e*P			**P**	**01 12 04.2**	**+0.3**
Q19A	**Hogan Spring (** baz=26	**25.83**	**337**	⇑P			**P**	**01 12 05.5**	**-0.2**
SCIA	**State Center** 32nm,1.5s,mb4.6	**26.32**	**5**	*e*P			**P**	**01 12 09.3**	**-0.8**
ACSO	**Alum Creek Sta** 12nm,0.9s,mb4.4	**27.15**	**23**	*e*P			**P**	**01 12 17.3**	**-0.2**
REDW	**Red Top Meadow** 8.6nm,1.1s,mb4.4	**30.27**	**339**	*e*P			**P**	**01 12 45.9**	**+0.7**
K15A	**Arbon** baz=30	**30.30**	**336**	⇑P			**P**	**01 12 46.0**	**+0.4**
L13A	**Double Diamond** baz=30	**30.39**	**334**	⇑P			**P**	**01 12 46.6**	**+0.3**
LOHW	**Long Hollow** 8.6nm,0.9s,mb4.4	**30.40**	**339**	*e*P			**P**	**01 12 46.4**	**0.0**
J16A	**Bone** baz=30	**30.46**	**338**	⇓P			**P**	**01 12 47.0**	**+0.1**
MOOW	**Moose Ponds** 32nm,2.5s,mb4.7	**30.57**	**339**	*e*P			**P**	**01 12 48.3**	**+0.4**
I17A	**Pilgram Creek** baz=30	**30.66**	**340**	⇑P			**P**	**01 12 49.2**	**+0.5**
CMB	**Columbia Colle**	**30.75**	**321**	*e*P			**P**	**01 12 49.4**	**-0.2**
IMW	**Indian Meadow** 14nm,1.1s,mb4.7	**30.77**	**339**	*e*P			**P**	**01 12 45.6**	**-4.0**
J15A	**Blackfoot** baz=30	**30.87**	**337**	⇑P			**P**	**01 12 51.0**	**+0.4**
K12A	**Draper Farm, C** baz=31	**31.24**	**333**	⇑P			**P**	**01 12 54.2**	**+0.3**
L11A	**Cat Creek Ranc** baz=31	**31.25**	**332**	⇑P			**P**	**01 12 54.2**	**+0.2**
O07A	**Toulon** baz=31	**31.32**	**326**	⇑P			**P**	**01 12 55.2**	**+0.6**
RLMT	**Red Lodge** 10.0nm,1.0s,mb4.6	**31.34**	**342**	*e*P			**P**	**01 12 55.2**	**+0.5**
L10A	**Juniper Basin** baz=31	**31.51**	**331**	⇑P			**P**	**01 12 56.6**	**+0.3**
J13A	**Cove Ranch, Pi** baz=31	**31.56**	**335**	⇑P			**P**	**01 12 56.4**	**-0.2**
I14A	**Mackay** baz=31	**31.71**	**336**	⇓P			**P**	**01 12 58.6**	**+0.6**
HLID	**Hailey** 41nm,2.9s,mb4.8	**31.79**	**335**	*e*P			**P**	**01 12 59.0**	**+0.3**
HLID	**Hailey** baz=32	**31.79**	**335**	⇑P			**P**	**01 12 58.7**	**0.0**
J12A	**Stokes Ranch,** baz=32	**31.82**	**334**	⇓P			**P**	**01 12 58.6**	**-0.4**
K11A	**Parker Ranch,** baz=32	**31.85**	**332**	⇓P			**P**	**01 12 59.3**	**+0.1**
I13A	**Wildhorse Cree** baz=32	**31.96**	**335**	⇑P			**P**	**01 13 01.2**	**+1.0**
H15A	**Lima** baz=32	**32.00**	**338**	⇓P			**P**	**01 13 01.1**	**+0.7**
N06A	**Buffalo Meadow** baz=32	**32.25**	**325**	⇑P			**P**	**01 13 04.0**	**+1.2**
L08A	**Fields** baz=32	**32.51**	**329**	⇓P			**P**	**01 13 05.1**	**+0.1**
H13A	**Challis** baz=32	**32.56**	**336**	⇓P			**P**	**01 13 05.9**	**+0.5**
K09A	**Rome** baz=32	**32.59**	**330**	⇓P			**P**	**01 13 05.9**	**+0.2**
DLMT	**Dillon** 13nm,1.0s,mb4.8	**32.62**	**339**	*e*P			**P**	**01 13 07.1**	**+1.2**
G14A	**Jackson** baz=32	**32.83**	**338**	⇓P			**P**	**01 13 07.8**	**0.0**
E18A	**Harlowton** baz=32	**32.84**	**343**	⇑P			**P**	**01 13 07.4**	**-0.4**
LRM	**Limekiln Ridge**	**32.97**	**339**	*e*P			**P**	**01 13 09.8**	**+0.8**
F15A	**Butte** baz=33	**33.00**	**339**	⇓P			**P**	**01 13 09.3**	**0.0**
E17A	**Martinsdale** baz=33	**33.02**	**342**	⇓P			**P**	**01 13 09.0**	**-0.4**
F14A	**Wisdom** baz=33	**33.28**	**338**	⇓P			**P**	**01 13 11.8**	**+0.1**
K07A	**Rock Creek Ran** baz=33	**33.33**	**329**	⇑P			**P**	**01 13 12.5**	**+0.4**
D18A	**Linhart Farms,** baz=33	**33.38**	**343**	⇓P			**P**	**01 13 12.5**	**0.0**
J08A	**Circle Bar Ran** baz=33	**33.44**	**330**	⇑P			**P**	**01 13 13.5**	**+0.3**
HRY	**Holter Researc**	**33.55**	**341**	*e*P			**P**	**01 13 14.6**	**+0.6**
E15A	**Deer Lodge** baz=33	**33.56**	**340**	⇑P			**P**	**01 13 14.3**	**+0.2**
I09A	**Lost Marbles R** baz=33	**33.57**	**332**	⇑P			**P**	**01 13 14.3**	**0.0**
NNA	**Nana**	**33.58**	**144**	P			**P**	**01 13 05.8**	**-8.8**
E13A	**Victor** baz=34	**34.12**	**338**	⇓P			**P**	**01 13 18.8**	**-0.2**
G10A	**Bishop Farm, J** baz=34	**34.33**	**334**	⇓P			**P**	**01 13 20.1**	**-0.7**
F11A	**Grangeville** baz=34	**34.41**	**335**	⇓P			**P**	**01 13 21.1**	**-0.4**
H08A	**Prairie City** baz=34	**34.41**	**331**	⇓P			**P**	**01 13 21.1**	**-0.5**
D14A	**Greenough** baz=34	**34.43**	**339**	⇑P			**P**	**01 13 21.2**	**-0.4**
G09A	**Cove** baz=34	**34.60**	**333**	⇑P			**P**	**01 13 22.7**	**-0.5**
D13A	**Huson** baz=34	**34.77**	**338**	⇓P			**P**	**01 13 23.9**	**-0.7**
E11A	**Bogner Ranch,** baz=34	**34.81**	**336**	⇑P			**P**	**01 13 23.3**	**-1.7**
F09A	**S2 Ranch, Elgi** baz=35	**35.00**	**333**	⇓P			**P**	**01 13 26.5**	**-0.1**
G08A	**Pilot Rock** baz=35	**35.14**	**332**	⇓P			**P**	**01 13 28.0**	**+0.2**
A14A	**Double T Ranch** baz=36	**36.05**	**341**	⇓P			**P**	**01 13 35.3**	**-0.3**
WALA	**Waterton Lakes**	**36.28**	**340**	*e*P			**P**	**01 13 38.0**	**+0.4**
NEW	**Newport**	**36.74**	**337**	*e*P			**P**	**01 13 41.0**	**-0.4**
A12A	**Yaak River Ran** baz=36	**36.76**	**339**	⇑P			**P**	**01 13 41.8**	**+0.2**
E06A	**Yakima** baz=37	**37.01**	**332**	⇓P			**P**	**01 13 44.1**	**+0.3**
A11A	**Hall Mountain,** baz=37	**37.03**	**338**	⇑P			**P**	**01 13 43.6**	**-0.4**
C08A	**Higginbotham F** baz=37	**37.12**	**335**	⇑P			**P**	**01 13 44.7**	**0.0**
H02A	**Toledo** baz=37	**37.17**	**327**	⇑P			**P**	**01 13 46.3**	**+1.0**
B09A	**Rice** baz=37	**37.26**	**336**	⇑P			**P**	**01 13 45.8**	**-0.1**
EDM	**Edmonton**	**39.81**	**344**	*e*P			**P**	**01 14 07.1**	**-0.1**
DLBC	**Dease Lake**	**49.48**	**337**	*e*P			**P**	**01 15 25.6**	**+1.4**
INK	**Inuvik**	**57.71**	**345**	*e*P			**P**	**01 16 23.2**	**-1.2**
RES	**Resolute Bay**	**59.06**	**0**	P			**P**	**01 16 34.2**	**+0.5**
HHC	**Hu-ho-hao-te**	**118.10**	**336**	*e*PKP		PKPdf		01 25 21.4	+0.2
HHC				XPKP				01 25 46.6	
HHC				PKS				01 28 56.9	
HHC				SKS		SKSdf		01 32 28.5	-2.3
HHC				SKKS		SKKSac		01 33 26.8	-7.5
HHC				LR		LR			
	comp=N,196nm,20.2s,MS5.0								
HHC				LR		LR			
	comp=E,278nm,17.8s,MS5.0								
HHC				LR		LR			
	comp=Z,166nm,19.0s,MS4.7								
WMQ	**Urumqi**	**120.72**	**357**	*e*PKP		PKPdf		01 25 31.0	+4.9
NJ2	**Nanjing**	**121.78**	**325**	*e*PKP		PKPdf		01 25 34.1	+5.6
LZH	**Lanzhou**	**125.11**	**340**	*e*PKP		PKPdf		01 25 40.0	+5.2
LZH				XPKP				01 25 54.3	
CD2	**Chengdu**	**129.83**	**337**	*e*PKP		PKPdf		01 25 44.3	+0.3
KMI	**Kunming**	**135.40**	**335**	PKP		PKPdf		01 25 55.5	+0.9
KMI				XPKP				01 26 13.1	
KMI				LR		LR			
	comp=Z,54nm,22.8s,MS4.2								

MAN 20 01:22:00, 1363N×12274E, h5km, mb4.5, ML3.4, MS3.3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.40**	**315**	*i* P			Pg	01 22 08.3	+0.6
GQP				*i* S			Sg	01 22 15.5	+2.7
POLP	**Polilio Island**	**1.34**	**325**	*e*P			Pn	01 22 24.9	-0.5
POLP				*e*S			Sb	01 22 45.1	+2.0
PVCP	**Virac**	**1.38**	**91**	⇓*e*P			Pn	01 22 25.4	-0.5
PVCP	**Virac**	**1.38**	**91**	*e*P			Pn	01 22 25.5	-0.5
OTRP	**Odiongan**	**1.44**	**209**	*e*P			Pn	01 22 24.7	-2.0
OTRP				*e*S			Sb	01 22 39.0	-6.8
SJMP	**San Jose**	**1.95**	**234**	*e*P			Pn	01 22 35.8	+2.0
SJMP				*e*S			Sn	01 23 02.2	+3.4
LUBP	**Lubang**	**2.42**	**273**	*e*P			Pn	01 22 40.7	+0.4

*GUC **20** 01:24:50.5±1.2, 2278S×7088W, h35km±4km, ML4.2*
*NEIC **20** 01:24:50.4, 2277S×7087W, h33km, mb4.9/28, ML4.1(GUC), After GUC.*
*MOS **20** 01:24:51.7±2.0, 2271S×7074W, h33km, mb5.0/14, Error ellipse: s-maj=19.0km s-min=8.8km az=98.3*
*ISCJB **20** 01:24:52.5±0.8, 2280S±004×7077W±006, h37km±7km, mb4.7/34, Error ellipse: s-maj=9.9km s-min=6.1km az=5.1*
*IDC **20** 01:24:53.4±2.9, 2289S×7057W, h34km±21km, mb4.0/7, mb1 4.1/11, mb1mx4.0/18, mbtmp4.0/11, ML4.2/4, MS3.8/5, Ms1 3.8/5, ms1mx3.5/29, Error ellipse: s-maj=20.4km s-min=18.2km az=74.0*

ISC 20 01:24:51.2±1.0, 2276S±004×7080W±004, h13km±6km, n94, σ1§51/98, mb4.7/34, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.47**	**136**	⇓*i*P			**Pg**	**01 25 00.5**	**+0.1**
MECH				*i* S			**Sg**	**01 25 08.1**	**+1.4**
MECH				AML		AML	AML	01 25 15.7	
	comp=N,30μm,0.5s								
CEN1	**Los Morros**	**0.83**	**139**	⇑*i*P			**Pg**	**01 25 07.2**	**-0.1**
CEN1				*i* S			**Sg**	**01 25 20.3**	**+2.1**
CEN1				AML		AML	AML	01 25 21.4	
	comp=E,12μm,0.6s								
ANCH	**Antofagasta**	**0.98**	**159**	*e*P			**Pb**	**01 25 08.1**	**-2.0**
ANCH				*i* S			**Sb**	**01 25 23.0**	**+0.1**
PB06	**Plate Boundary**	**1.14**	**87**	⇓*i*P			**Pb**	**01 25 11.6**	**-1.0**
PB06				*i* S			**Sb**	**01 25 28.6**	**+1.3**
PB04	**Plate Boundary**	**1.31**	**68**	⇓*i*P			**Pn**	**01 25 05.6**	**-10**
PB04				*i* S			**Sb**	**01 25 16.9**	**-15**
PB04				AML		AML	AML	01 25 18.7	
	comp=E,20μm,0.5s								
PB07	**Plate Boundary**	**1.33**	**40**	⇑*i*P			**Pn**	**01 25 14.7**	**-0.8**
PB07				*i* S			**Sb**	**01 25 32.6**	**-0.5**
LVC	**Limon Verde**	**1.75**	**85**	Pg			**Pg**	**01 25 21.8**	**-2.9**
	comp=E,264nm,0.3s,baz=261,slow=12,SNR=260								
LVC				Lg				01 25 44.2	
	comp=E,453nm,0.3s,baz=136,slow=13,SNR=20								
LVC	**Limon Verde**	**1.75**	**85**	*e*Pn			**Pn**	**01 25 22.0**	**+0.8**
LVC				*e*Sn			**Sn**	**01 25 46.3**	**+3.0**
LVC	**Limon Verde**	**1.75**	**85**	⇑*i*P			**Pn**	**01 25 21.9**	**+0.6**
LVC				*i* S			**Sn**	**01 25 45.5**	**+

OTAV	**Otavalo**	**24.05**	**341**	*eP*	**P**		**01 30 10.3**	**+4.2**
	comp=Z,6.0nm,1.1s,mb3.9								
RCBR	**Riachuelo**	**37.63**	**69**	*eP*	**P**		**01 32 02.5**	**-3.5**
	comp=Z,37nm,1.0s,mb5.1								
DWPF	**Disney**	**51.61**	**348**	*eP*	**P**		**01 33 54.5**	**-2.8**
	comp=Z,133nm,1.5s,mb5.7								
BBSR	**BB Station**	**55.13**	**6**	*eP*	**P**		**01 34 17.4**	**-5.8**
	comp=Z,40nm,1.0s,mb5.4								
LHS	**Liberty Hill**	**57.71**	**350**	*eP*	**P**		**01 34 35.3**	**-6.2**
VBMS	**Vicksburg**	**57.83**	**340**	*eP*	**P**		**01 34 41.6**	**-0.9**
	comp=Z,8.2nm,0.8s,mb4.8								
CPCT	**Cooper Cave**	**59.34**	**347**	*eP*	**P**		**01 34 50.8**	**-2.1**
TKL	**Tuckaleechee C**	**59.39**	**348**	*eP*	**P**		**01 34 50.8**	**-2.4**
SWET	**Sewanee**	**59.42**	**346**	*eP*	**P**		**01 34 52.1**	**-1.3**
OXF	**Oxford**	**59.64**	**342**	*eP*	**P**		**01 34 53.4**	**-1.6**
	comp=Z,24nm,1.1s,mb5.1								
OXF	**Oxford**	**59.64**	**342**	*eP*	**P**		**01 34 53.4**	**-1.6**
OXF				pmax	pmax				
	comp=Z,24nm,1.1s,mb5.1								
TXAR	**Lajitas Array**	**60.70**	**327**	P	**P**		**01 35 02.5**	**+0.2**
	comp=Z,1.6nm,0.3s,mb4.6,baz=149,slow=8.9,SNR=7.1								
WVT	**Waverly**	**60.75**	**344**	*eP*	**P**		**01 35 00.2**	**-2.3**
	comp=Z,9.3nm,1.0s,mb4.9								
WVT	**Waverly**	**60.75**	**344**	*eP*	**P**		**01 35 00.3**	**-2.2**
WVT				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.8								
MIAR	**Mount Ida**	**60.96**	**339**	*eP*	**P**		**01 35 03.4**	**-0.7**
	comp=Z,4.5nm,0.9s,mb4.6								
MIAR	**Mount Ida**	**60.96**	**339**	*eP*	**P**		**01 35 03.4**	**-0.6**
MIAR				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5								
SNAA	**Sanae**	**61.67**	**161**	*eP*	**P**		**01 35 04.9**	**-3.5**
	comp=Z,15nm,1.4s,mb4.9								
SNAA	**Sanae**	**61.67**	**161**	*eP*	**P**		**01 35 04.9**	**-3.5**
SNAA				pmax	pmax				
	comp=Z,15nm,1.4s								
SIUC	**Southern Illin**	**62.60**	**344**	*eP*	**P**		**01 35 14.5**	**-0.5**
	comp=Z,16nm,0.9s,mb5.2								
WMOK	**Wichita Mounta**	**63.06**	**334**	P	**P**		**01 35 14.4**	**-3.7**
FVM	**French Village**	**63.18**	**343**	*eP*	**P**		**01 35 18.0**	**-0.8**
	comp=Z,12nm,1.1s,mb5.0								
FVM	**French Village**	**63.18**	**343**	*eP*	**P**		**01 35 18.0**	**-0.8**
FVM				pmax	pmax				
	comp=Z,12nm,1.1s,mb4.9								
BRNJ	**Basking Ridge**	**63.22**	**357**	*eP*	**P**		**01 35 14.1**	**-5.0**
CCM	**Cathedral Cave**	**63.47**	**342**	*eP*	**P**		**01 35 19.7**	**-1.1**
	comp=Z,13nm,1.2s,mb4.9								
CCM	**Cathedral Cave**	**63.47**	**342**	*eP*	**P**		**01 35 19.7**	**-1.1**
CCM				pmax	pmax				
	comp=Z,13nm,1.2s,mb4.9								
ACSO	**Alum Creek Sta**	**63.69**	**350**	*eP*	**P**		**01 35 20.8**	**-1.3**
	comp=Z,5.8nm,0.6s,mb4.8								
BNM	**Barren Site**	**66.07**	**328**	*eP*	**P**		**01 35 39.1**	**+1.3**
KSU1	**Kansas State U**	**66.11**	**338**	*eP*	**P**		**01 35 34.2**	**-3.8**
LAZ	**Ladron**	**66.52**	**328**	*eP*	**P**		**01 35 42.7**	**+2.0**
ANMO	**Albuquerque**	**66.63**	**329**	*eP*	**P**		**01 35 42.5**	**+1.1**
	comp=Z,13nm,1.6s,mb4.7								
ANMO	**Albuquerque**	**66.63**	**329**	*eP*	**P**		**01 35 42.5**	**+1.1**
ANMO				pmax	pmax				
	comp=Z,13nm,1.6s								
CBKS	**Cedar Bluff**	**66.99**	**336**	*eP*	**P**		**01 35 44.2**	**+0.6**
	comp=Z,19nm,1.2s,mb5.0								
CBKS	**Cedar Bluff**	**66.99**	**336**	*eP*	**P**		**01 35 44.2**	**+0.6**
CBKS				pmax	pmax				
	comp=Z,19nm,1.2s,mb5.0								
SDCO	**Great Sand Dun**	**68.47**	**331**	*eP*	**P**		**01 35 54.1**	**+1.2**
	comp=Z,5.7nm,1.1s,mb4.5								
WUAZ	**Wupatki**	**69.55**	**326**	*eP*	**P**		**01 36 01.8**	**+2.1**
	comp=Z,5.6nm,1.0s,mb4.5								
PV01	**Paradox Valley**	**70.20**	**329**	*eP*	**P**		**01 36 04.6**	**+1.0**
DBIC	**Dimbokro**	**70.77**	**74**	P	**P**		**01 36 06.2**	**-1.6**
	comp=Z,9.4nm,1.0s,mb4.7,baz=175,slow=9.0,SNR=7.3								
DBIC				LR	LR		02 07 07.4		
	comp=Z,148nm,18.9s,baz=160,slow=36								
SRU	**San Rafael**	**71.90**	**328**	*eP*	**P**		**01 36 15.2**	**+1.2**
	comp=Z,4.0nm,0.8s,mb4.4								
SRU	**San Rafael**	**71.90**	**328**	*eP*	**P**		**01 36 15.2**	**+1.2**
SRU				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4								
MSU	**Marysvale**	**72.25**	**327**	*eP*	**P**		**01 36 17.6**	**+1.5**
ARUT	**Antelope Range**	**72.35**	**326**	*eP*	**P**		**01 36 18.7**	**+2.0**
RSSD	**Black Hills**	**73.19**	**336**	*eP*	**P**		**01 36 21.9**	**+0.4**
	comp=Z,1.8nm,0.8s,mb4.0								
RSSD	**Black Hills**	**73.19**	**336**	*eP*	**P**		**01 36 21.9**	**+0.3**
RSSD				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.1								
ISA	**Isabella**	**73.57**	**321**	*eP*	**P**		**01 36 27.2**	**+3.2**
	comp=Z,8.6nm,1.5s,mb4.5								
ISA	**Isabella**	**73.57**	**321**	*eP*	**P**		**01 36 27.2**	**+3.2**
ISA				pmax	pmax				
	comp=Z,9.0nm,1.5s,mb4.5								
HWUT	**Hardware Ranch**	**74.35**	**329**	*eP*	**P**		**01 36 30.0**	**+1.6**
	comp=Z,30nm,2.1s,mb4.9								
PDAR	**Pinedale Array**	**74.35**	**331**	P	**P**		**01 36 29.7**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=159,slow=7.7,SNR=3.4								
VNDA	**Vanda**	**75.31**	**190**	P	**P**		**01 36 32.1**	**-1.5**
	comp=Z,1.1nm,1.0s,mb3.7,baz=262,slow=1.8,SNR=4.1								
NVAR	**Mina Array Bea**	**75.43**	**323**	P	**P**		**01 36 35.8**	**+1.0**
	comp=Z,0.9nm,0.9s,mb3.7,baz=141,slow=7.3,SNR=3.7								
TPAW	**Teton Pass**	**75.54**	**331**	*eP*	**P**		**01 36 37.3**	**+2.1**
	comp=Z,34nm,2.3s,mb4.9								
CMB	**Columbia Colle**	**76.32**	**322**	*eP*	**P**		**01 36 43.9**	**+4.0**
	comp=Z,70nm,3.0s								
CMB	**Columbia Colle**	**76.32**	**322**	*eP*	**P**		**01 36 43.9**	**+4.1**
CMB				pmax	pmax				
	comp=Z,70nm,3.0s								
HLID	**Hailey**	**77.20**	**329**	*eP*	**P**		**01 36 46.5**	**+1.8**
	comp=Z,51nm,2.6s,mb5.0								
TORD	**Torodi Ar. Bea**	**79.42**	**71**	P	**P**		**01 36 56.0**	**-1.6**
	comp=Z,9.5nm,0.9s,mb4.7,baz=256,slow=5.3,SNR=67								
WALA	**Waterton Lakes**	**81.17**	**333**	*eP*	**P**		**01 37 07.3**	**+1.0**
	comp=Z,55nm,0.9s,mb5.5								
TSUM	**Tsumeb**	**81.35**	**107**	*eP*	**P**		**01 37 07.8**	**-0.2**
	comp=Z,15nm,1.4s,mb4.7								
NEW	**Newport**	**81.97**	**331**	*eP*	**P**		**01 37 07.2**	**-3.2**
	comp=Z,1.5nm,0.5s,mb4.2								
NEW	**Newport**	**81.97**	**331**	*eP*	**P**		**01 37 07.3**	**-3.2**
NEW				pmax	pmax				
	comp=Z,1.0nm,0.5s								
OD2	**Odessa Site #2**	**82.06**	**329**	*eP*	**P**		**01 37 11.6**	**+0.6**
MAW	**Mawson**	**83.62**	**164**	P	**P**		**01 37 17.8**	**-1.1**
	comp=Z,2.8nm,0.8s,mb4.5,baz=224,slow=6.0,SNR=4.3								
TAM	**Tamanrasset**	**86.95**	**64**	*eP*	**P**		**01 37 36.4**	**0.0**
LSZ	**Lusaka**	**92.20**	**107**	*eP*	**P**		**01 38 02.8**	**+1.5**
	comp=Z,4.9nm,1.5s,mb4.6								
LSZ	**Lusaka**	**92.20**	**107**	*eP*	**P**		**01 38 02.8**	**+1.5**
LSZ				pmax	pmax				
	comp=Z,5.0nm,1.5s,mb4.6								
BORG	**Borgarnes**	**95.18**	**19**	*eP*	**P**		**01 38 08.8**	**-5.0**
	comp=Z,185nm,1.8s								
ESK	**Eskdalemuir**	**96.58**	**32**	*eP*	**P**		**01 38 16.2**	**-4.1**
	comp=Z,115nm,1.7s								
ASAR	**Alice Springs**	**127.97**	**209**	PKP	PKPdf		01 43 54.4	-3.1	
	comp=Z,1.4nm,1.0s,baz=168,slow=4.8,SNR=6.4								
WRA	**Warramunga Arr**	**130.97**	**212**	PKP	PKPdf		01 44 02.0	-1.3	
	comp=Z,1.3nm,0.9s,baz=148,slow=1.6,SNR=6.6								
NVS	**Novosibirsk**	**142.55**	**25**	*e*PKIKP	PKPdf		01 44 21.5	-2.0	
NVS				pmax	pmax				
	comp=Z,13nm,1.8s								
NVS				pmax	pmax				
	comp=N,8.0nm,1.6s								
NVS				pmax	pmax				
	comp=E,4.0nm,1.6s								
ZAA0	**Zalesovo Array**	**143.83**	**24**	*e*PKPdf	PKPdf		01 44 25.7	-0.1	
ZALV	**Zalesovo Beam**	**143.83**	**24**	PKP	PKPdf		01 44 25.6	-0.2	
	comp=E,2.8nm,0.9s,baz=257,slow=2.6,SNR=8.0								
MKAR	**Makanchi Array**	**147.68**	**36**	PKPbc	PKPdf		01 44 32.7	+0.1	
	comp=E,2.0nm,0.5s,baz=325,slow=2.7,SNR=20								
MJAR	**Matsushiro Arr**	**151.42**	**305**	PKPbc	PKPbc		01 44 44.4	-0.6	
	comp=E,1.5nm,0.5s,baz=11,slow=1.3,SNR=4.5								
ZAK	**Zakamensk**	**152.05**	**8**	*e*PKIKP	PKPbc		01 44 44.8	-1.2	
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.1s								
SONM	**Songino Array**	**154.88**	**4**	PKP	PKPdf		01 44 43.1	-0.4	
	comp=Z,0.9nm,0.8s,baz=342,slow=0.5,SNR=4.9								
SONM				PKPab	PKPab		01 45 05.5	-1.9	
	comp=Z,0.7nm,0.9s,baz=350,slow=1.2,SNR=2.4								

*NEIC **20** 01:33:23.2, 1523N×9662W, h15km, MD4.0(MEX), After MEX.*

MEX 20 01:33:23.2±0.6, 1523N×9662W, h15km±25km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.83**	**357**	*i* P	Pn	01 33 51.8	-2.4
VHO				*i* S	Sn	01 34 11.6	-5.5
OXX	**Oaxaca**	**1.84**	**357**	*i* P	Pn	01 33 51.5	-2.7
OXX				*i* S	Sn	01 34 11.7	-5.6
PNIG	**Pinotepa**	**1.85**	**309**	*e*P	Pn	01 33 50.6	-3.8
PNIG				*i* S	Sn	01 34 12.5	-5.0
CMIG	**Matias Romero**	**2.49**	**42**	*i* P	Pn	01 33 59.9	-3.3
CMIG				*i* S	Sn	01 34 29.4	-4.0
UTMO	**Huajuapan**	**2.82**	**336**	*i* P	Pn	01 34 05.9	-1.8
UTMO				*i* S	Sn	01 34 38.8	-2.6
TPIG	**Tehuac#an**	**3.25**	**348**	*i* P	Pn	01 34 12.7	-1.0
TPIG				*i* S	Sn	01 34 46.0	-6.0
PPM	**Popocatepetl**	**4.26**	**334**	*e*P	Pn	01 34 25.7	-2.0
PPM				*i* S	Sn	01 35 14.0	-3.2

KRSC 20 01:34:16.8±0.9, 5559N×16193E, h67km±66km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.77**	**304**	*i* P	Pn	01 34 34.0	+1.8
ZLN				*e*S	Sn	01 34 46.2	+2.6
KBTR	**Krutoberegovo**	**0.80**	**39**	*i* P	Pn	01 34 33.0	+0.4
KBTR				*e*S	Sn	01 34 44.7	+0.5
BZMR	**Bezymyannaya**	**0.88**	**294**	*e*P	Pn	01 34 35.2	+1.6
BZMR				*e*S	Sn	01 34 49.1	+3.0
KMNR	**Kamenistaya**	**0.97**	**281**	*i* P	Pn	01 34 36.6	+1.9
KMNR				*e*S	Sn	01 34 51.1	+3.0
KRSR	**Krestovskiy**	**0.99**	**310**	*i* P	Pn	01 34 36.1	+1.1
KRSR				*e*S	Sn	01 34 49.9	+1.4
KLY	**Klyuchi**	**1.02**	**316**	*i* P	Pn	01 34 35.3	0.0
KLY				*e*S	Sn	01 34 48.7	-0.4
KPT	**Kopyto**	**1.04**	**292**	*i* P	Pn	01 34 37.2	+1.7
KPT				*e*S	Sn	01 34 51.5	+2.0
TUMR	**Tumrok**	**1.06**	**254**	*i* P	Pn	01 34 37.9	+2.0
TUMR				*e*S	Sn	01 34 52.9	+2.8
SRKR	**Sorokina**	**1.15**	**339**	*e*P	Pn	01 34 38.5	+1.5
SRKR				*e*S	Sn	01 34 54.4	+2.3
KOZ	**Kozyrevsk**	**1.25**	**293**	*i* P	Pn	01 34 40.1	+1.8
KOZ				*e*S	Sn	01 34 57.4	+2.9
SRDR	**Sredinnyy**	**1.44**	**301**	*e*P	Pn	01 34 42.3	+1.5
SRDR				*e*S	Sn	01 35 01.0	+2.1
SPN	**Mys Shipunski**	**2.73**	**205**	P	Pn	01 34 59.3	+1.0
SPN				*e*S	Sn	01 35 30.1	-0.1
NLC	**Nalytchevo**	**2.86**	**213**	P	Pn	01 35 01.8	+1.9
NLC				*e*S	Sn	01 35 34.4	+1.3
AVH	**Avacha**	**2.98**	**220**	P	Pn	01 35 04.5	+2.8
AVH				*e*S	Sn	01 35 39.2	+3.0
GNL	**Ganaly**	**3.00**	**232**	P	Pn	01 35 03.5	+1.7
PET	**Petropavlovsk**	**3.21**	**218**	S	Sn	01 35 43.2	+1.5
RUS	**Russkaya**	**3.75**	**214**	P	Pn	01 35 13.8	+1.7
RUS				*e*S	Sn	01 35 56.5	+1.5

*ISK **20** 01:37:46.7, 3905N×2693E, h14km, MD3.0*
*CSEM **20** 01:37:46.6±0.1, 3906N×2694E, h10km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.1km az=53.0*
*ISCJB **20** 01:37:47.5±0.6, 3908N±004×2696E±004, h9km±8km, Error ellipse: s-maj=6.8km s-min=5.1km az=12.2*
*DDA **20** 01:37:47.4, 39.10N×2701E, h7km±4km, Md3.0*

ISC 20 01:37:48.0±0.5, 3908N±003×2695E±004, h14km±5km, n12, σ0≦87/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.31**	**319**	*i* P	**Pg**	**01 37 54.1**	**-0.3**
AYVA				*i* S	**Sg**	**01 37 59.3**	**+0.6**
BLCB	**Balcova**	**0.69**	**174**	*e*PG	**Pg**	**01 38 00.3**	**-1.2**
AKS	**Akhisar**	**0.70**	**106**	*e*PG	**Pg**	**01 38 01.6**	**0.0**
AKS				*e*SG	**Sg**	**01 38 10.7**	**-0.1**
AKHS	**Akhisar**	**0.70**	**106**	*e*P	**Pg**	**01 38 00.8**	**-0.8**
AKHS				*i* S	**Sg**	**01 38 10.8**	**0.0**
URLA	**Izmir**	**0.77**	**201**	*i* P	**Pg**	**01 38 02.3**	**-0.6**
URLA				*i* S	**Sg**	**01 38 15.1**	**+2.1**
EZN	**Ezine**	**0.89**	**327**	*e*PG	**Pg**	**01 38 04.3**	**-1.0**
EZN				*e*SG	**Sg**	**01 38 17.3**	**+0.3**
BALB	**Balikesir**	**0.91**	**52**	*e*PG	**Pg**	**01 38 05.9**	**+0.3**
BALB				*e*SG	**Sg**	**01 38 19.1**	**+1.5**
MANT	**Manisa**	**1.38**	**114**	*e*P	**Pn**	**01 38 11.8**	**-1.0**
MANT				*i* S	**Sn**	**01 38 31.6**	**+0.8**
MANT	**Manisa**	**1.38**	**114**	*e*P	**Pn**	**01 38 11.8**	**-1.0**
MANT				*i* S	**Sn**	**01 38 31.6**	**+0.7**
GCAM	**G?zelcaml?**	**1.39**	**171**	*i* P	**Pn**	**01 38 12.2**	**-0.7**
GCAM				*i* S	**Sn**	**01 38 32.5**	**+1.5**
DST	**Dursunbey**	**1.40**	**67**	*e*PN	**Pn**	**01 38 12.8**	**-0.3**
KULA	**Kula-Manisa**	**1.45**	**112**	*e*PN	**Pn**	**01 38 13.3**	**-0.4**

*ISCJB **20** 01:43:27.3±0.8, 2254S±004×7053W±007, h39km±11km, mb4.2/3, Error ellipse: s-maj=10.6km s-min=6.5km az=9.8*
*NEIC **20** 01:43:28.7, 2266S×7036W, h44km, MG3.9(GUC), After GUC.*
*IDC **20** 01:43:28.3±5.1, 2295S×7027W, h30km±29km, mb4.0/3, mb1 4.1/5, mb1mx3.8/17, mbtmpa4.1/5, ML4.0/1, MS3.2/3, Ms1 3.1/3, ms1mx3.0/23, Error ellipse: s-maj=51.1km s-min=30.7km az=15.0*
*GUC **20** 01:43:28.7±0.8, 2266S×7036W, h44km±8km, ML3.9*

ISC 20 01:43:28.7±1.0, 2260S±004×7052W±007, h33km±8km, n19, σ1≦07/23, mb4.2/3, 4C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.50**	**172**	*i*P	**Pb**	**01 43 38.7**	**-0.6**
MECH				*i* S	**Sb**	**01 43 46.3**	**-0.4**
MECH				AML	AML	01 43 53.6	
	comp=N,16μm,0.3s						
CEN1	**Los Morros**	**0.84**	**159**	*i*P	**Pn**	**01 43 45.7**	**+1.5**
CEN1				*i* S	**Sb**	**01 43 58.3**	**+2.5**
CEN1				AML	AML	01 44 03.9	
	comp=E,5μm,0.3s						
ANCH	**Antofagasta**	**1.08**	**175**	*i*P	**Pn**	**01 43 47.1**	**-0.4**
ANCH				*i* S	**Sn**	**01 44 01.3**	**0.0**
ANCH	**Antofagasta**	**1.08**	**175**	*i*P	**Pn**	**01 43 47.1**	**-0.4**
ANCH				*i* S	**Sn**	**01 44 01.3**	**0.0**
ANCH				AML	AML	01 44 05.3	
	comp=E,5μm,0.4s						
LVC	**Limon Verde**	**1.49**	**91**	Pg	**Pn**	**01 43 52.9**	**-0.2**
	comp=E,1μm,0.3s,baz=261,slow=12,SNR=352						
LVC				Lg		01 44 10.3	
	comp=E,662nm,0.3s,baz=59,slow=11,SNR=51						
LVC	**Limon Verde**	**1.49**	**91**	Pg	**Pn**	**01 43 52.9**	**-0.2**
LVC				Lg		01 44 10.3	
LVC	**Limon Verde**	**1.49**	**91**	*e*P	**Pn**	**01 43 52.5**	**-0.6**
LVC				*i* S	**Sn**	**01 44 10.3**	**-1.1**
LVC				AML	AML	01 44 14.0	
	comp=N,4μm,0.5s						
CPN1	**Cerro Paranal**	**2.02**	**177**	*e*P	**Pn**	**01 44 00.1**	**-0.4**
CPN1				*i* S	**Sn**	**01 44 24.4**	**-0.1**
CPN1				AML	AML	01 44 36.5	
	comp=E,2μm,0.8s						
ARE	**Arequipa**	**6.18**	**351**	*e*P	**Pn**	**01 44 57.0**	**-0.6**
ARE				*e*S	**Sn**	**01 46 07.0**	**-0.1**
LPAZ	**La Paz**	**6.67**	**20**	Pn	**Pn**	**01 45 08.9**	**+4.5**
	comp=E,1.5nm,0.3s,baz=168,slow=3.8,SNR=60						
LPAZ				Sn	**Sn**	**01 46 36.1**	**+17**
	baz=219,slow=16,SNR=1.4						
CFAA	**Coronel Fontan**	**9.20**	**168**	LR	LR	01 49 21.1	
	comp=E,34nm,20.9s,baz=338,slow=40						
SIV	**San Ignacio**	**11.08**	**55**	Pn	**Pn**	**01 46 04.5**	**-0.4**
	comp=E,1.9nm,0.3s,baz=244,slow=13,SNR=33						
SIV				Sn	**Sn**	**01 48 09.7**	**+2.0**
	comp=E,0.3nm,0.3s,baz=123,slow=22,SNR=7.6						
ATAH	**Atahualpa**	**17.27**	**333**	LR	LR	01 54 32.2	
	comp=E,160nm,18.7s,baz=29,slow=38						
BDFB	**Brasilia**	**22.35**	**76**	LR	LR	01 58 10.1	
	comp=E,109nm,21.2s,baz=171,slow=40						
TXAR	**Lajitas Array**	**60.70**	**327**	P	**P**	**01 53 39.2**	**+2.2**
	comp=E,0.2nm,0.6s,mb3.4,baz=155,slow=9.5,SNR=4.5						
TXAR				pP	pP	01 53 51.4	+4.3
	comp=E,0.1nm,0.5s,baz=131,slow=7.5,SNR=3.0						
DBIC	**Dimbokro**	**70.48**	**74**	P	**P**	**01 54 39.6**	**-0.9**
	comp=E,8.6nm,1.1s,mb4.6,baz=230,slow=7.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**79.13**	**71**	P	**P**	**01 55 29.5**	**-1.0**
	comp=E,4.3nm,0.8s,mb4.5,baz=256,slow=5.3,SNR=38						
ZALV	**Zalesovo Beam**	**143.58**	**25**	PKP	PKPdf	02 02 59.8	+0.1
	comp=E,0.6nm,0.4s,baz=318,slow=1.9,SNR=3.3						
MKAR	**Makanchi Array**	**147.40**	**36**	PKPbc	PKPbc	02 03 09.9	+0.9
	comp=E,2.5nm,0.9s,baz=318,slow=1.6,SNR=11						

MAN 20 01:48:57, 827N×12230E, h33km, mb3.7, ML2.4, MS1.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.55**	**151**	*e*P	Pb	01 49 10.5	+2.1
IPIL				*e*S	Sb	01 49 17.8	+1.6
PAGZ	**Pagadian**	**1.15**	**111**	*e*P	Pn	01 49 17.7	+0.9
PAGZ				*e*S	Sn	01 49 30.1	-1.4
GUIM	**Jordan**	**2.36**	**7**	*e*P	Sn	01 50 06.5	+5.2
CUYO	**Cuyo Island**	**2.86**	**334**	*e*P	Pn	01 49 41.1	+0.8
OTRP	**Odiongan**	**4.07**	**356**	*e*P	Pn	01 50 01.7	+4.6

*MOS **20** 01:50:45.7±0.6, 5558N×162.11E, h51km, mb4.2/1, Error ellipse: s-maj=37.1km s-min=15.6km az=76.7*

KRSC 20 01:50:46.0±1.0, 5560N×16192E, h64km±66km, ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.76**	**304**	*i* P	Pn	01 51 02.4	+1.3
ZLN				*i* S	Sn	01 51 15.5	+3.3
KBTR	**Krutoberegovo**	**0.79**	**39**	*i* P	Pn	01 51 01.6	+0.1
KBTR				*i* S	Sn	01 51 13.6	+0.6
BZMR	**Bezymyannaya**	**0.88**	**293**	*i* P	Pn	01 51 03.6	+1.0
BZMR				*i* S	Sn	01 51 16.5	+1.7
KMNR	**Kamenistaya**	**0.97**	**280**	*i* P	Pn	01 51 05.3	+1.6
KMNR				*i* S	Sn	01 51 19.5	+2.7
KRSR	**Krestovskiy**	**0.98**	**310**	*i* P	Pn	01 51 04.7	+0.8
KRSR				*i* S	Sn	01 51 18.9	+1.7
KLY	**Klyuchi**	**1.01**	**316**	*e*P	Pn	01 51 04.0	-0.3
KLY				*i* S	Sn	01 51 17.7	-0.1
KPT	**Kopyto**	**1.03**	**292**	*i* P	Pn	01 51 06.0	+1.5
KPT				*i* S	Sn	01 51 20.9	+2.7
TUMR	**Tumrok**	**1.06**	**253**	*i* P	Pn	01 51 06.6	+1.7
TUMR				*i* S	Sn	01 51 21.4	+2.4
SRKR	**Sorokina**	**1.14**	**339**	*i* P	Pn	01 51 07.2	+1.3
SRKR				*i* S	Sn	01 51 23.6	+2.8
KOZR	**Kozyr**	**1.23**	**293**	PN	Pn	01 51 09.1	+1.9
KOZR				S	Sn	01 51 26.4	+3.4
KOZ	**Kozyrevsk**	**1.24**	**293**	*i* P	Pn	01 51 09.1	+1.8
KOZ				*i* S	Sn	01 51 26.4	+3.2
SRDR	**Sredinnyy**	**1.43**	**301**	*e*P	Pn	01 51 11.1	+1.3
SRDR				*i* S	Sn	01 51 29.7	+2.0
SPN	**Mys Shipunski**	**2.74**	**205**	*e*P	Pn	01 51 28.1	+0.6
SPN				*i* S	Sn	01 51 58.4	-1.1
NLC	**Nalytchevo**	**2.86**	**213**	P	Pn	01 51 30.4	+1.2
NLC				*i* S	Sn	01 52 03.1	+0.7
AVH	**Avacha**	**2.99**	**220**	*e*P	Sn	01 51 33.1	+2.2
AVH				*e*S	Sn	01 52 07.7	+2.2
GNL	**Ganaly**	**3.00**	**232**	*e*P	Pn	01 51 33.5	+2.5
GNL				*e*S	Sn	01 52 08.1	+2.4
PET	**Petropavlovsk**	**3.21**	**218**	*e*PN	Pn	01 51 36.2	+2.2
PET				*e*S	Sn	01 52 13.8	+2.8
PET				smax			
	comp=N,246nm,0.6s						
PET	**Petropavlovsk**	**3.21**	**218**	P	Pn	01 51 35.7	+1.7
PET				*i* S	Sn	01 52 12.7	+1.7
RUS	**Russkaya**	**3.76**	**214**	P	Pn	01 51 43.8	+2.4
RUS				*i* S	Sn	01 52 26.0	+1.7

*IDC **20** 01:53:47.8±0.7, 532S×152.17E, h0km, mb4.3/11, mb1 4.6/11, mb1mx4.5/16, mbtmp4.3/11, MS3.5/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=27.7km s-min=18.7km az=96.0*
*ISCJB **20** 01:53:50.8±0.5, 533S±006×15222E±009, h33km, mb4.3/16, Error ellipse: s-maj=13.2km s-min=9.2km az=4.1*
*NEIC **20** 01:53:52.6±0.3, 532S×15221E, h35km, mb4.6/6, Error ellipse: s-maj=9.9km s-min=7.6km az=93.0*

ISC 20 01:53:52.7±0.5, 533S±006×15223E±009, h35km, n36, σ0≦82/28, mb4.4/15, 2C, New Britain region

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

*GII **20** 02:14:13.4±0.8, 3389N×2673E, h6^{km}±73^{km}, mb4.2/8, ML4.0/8*
*ATH **20** 02:14:22.9, 3532N×2611E, h24^{km}±2^{km}, MD3.8/6*
ISC 20 02:14:08.3±0.2,**3408N**±002×**2584E**±003,**h37**^{km}±4^{km}, **n206**,σ1§**18**/249,**mb4.1**/25,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**1.08**	**16**	P	**Pn**	**02 14 29.1**	**+2.2**
ZKR				S	**Sn**	**02 14 44.3**	**+3.6**
LAST	**Lasithi**	**1.12**	**345**	P	**Pn**	**02 14 28.8**	**+1.3**
LAST				S	**Sn**	**02 14 43.6**	**+1.9**
NPS	**Neapolis**	**1.20**	**351**	*e*PB	**Pn**	**02 14 30.7**	**+2.1**
NPS				*e*SB	**Sn**	**02 14 37.8**	**-5.8**
IDI	**Anoyia**	**1.44**	**327**	Pn	**Pn**	**02 14 32.8**	**+0.9**
	18nm,0.3s,baz=145,slow=13,SNR=70						
IDI				Sn	**Sn**	**02 14 52.8**	**+3.2**
	34nm,0.3s,baz=64,slow=23,SNR=6.9						
KARP	**Karpathos**	**1.82**	**36**	*e*PN	**Pn**	**02 14 39.9**	**+2.7**
KARP				*e*SN	**Sn**	**02 14 53.2**	**-5.8**
VAM	**Vamos**	**1.90**	**315**	*e*PN	**Pn**	**02 14 52.0**	**+14**
VAM				*e*SN	**Sn**	**02 15 12.8**	**+12**
THR6	**Thira Island,**	**2.30**	**351**	P	**Pn**	**02 14 44.3**	**+0.6**
THR1	**Thera Island**	**2.31**	**352**	P	**Pn**	**02 14 44.4**	**+0.6**
THR3	**Thira Island,**	**2.35**	**351**	P	**Pn**	**02 14 45.0**	**+0.5**
THR4	**Thira Island,**	**2.40**	**351**	P	**Pn**	**02 14 45.8**	**+0.6**
LTBQ	**Tobruq**	**2.58**	**219**	*i* P	**Pn**	**02 14 50.1**	**+2.5**
	SNR=76						
LTBQ				*e*S	**Sn**	**02 15 20.2**	**+2.4**
	138nm,0.6s,SNR=76						
SLUM		**2.63**	**192**	P	**Pn**	**02 14 49.8**	**+1.5**
SLUM				S	**Sn**	**02 15 19.7**	**+0.7**
ARG	**Arkhangelos**	**2.84**	**41**	*e*PB	**Pn**	**02 14 54.7**	**+3.6**
ARG				*e*SN	**Sn**	**02 15 19.4**	**-4.6**
HMAT	**Matruh**	**3.16**	**160**	P	**Pn**	**02 14 55.6**	**+0.1**
HMAT				S	**Sn**	**02 15 30.3**	**-1.6**
KYTH	**Kithira**	**3.18**	**314**	*e*PN	**Pn**	**02 15 06.5**	**+11**
SMG	**Samos**	**3.71**	**12**	*e*PN	**Pn**	**02 15 03.6**	**+0.5**
DID	**Didima**	**4.02**	**329**	P	**Pn**	**02 15 07.2**	**-0.2**
DID				S	**Sn**	**02 15 52.4**	**-0.9**
CHOS	**Chios island**	**4.30**	**2**	P	**Pn**	**02 15 11.9**	**+0.7**
CHOS				S	**Sn**	**02 16 01.3**	**+1.1**
PYL	**PYLOS**	**4.37**	**311**	P	**Pn**	**02 15 11.2**	**-1.0**
PYL				S	**Sn**	**02 16 00.0**	**-1.8**
BLCB	**Balcova**	**4.41**	**12**	P	**Pn**	**02 15 13.5**	**+0.8**
LTK	**Loutraki**	**4.57**	**330**	P	**Pn**	**02 15 15.5**	**+0.5**
SWA2		**4.83**	**184**	P	**Pn**	**02 15 19.8**	**+1.3**
LKR	**Lokris**	**5.11**	**334**	P	**Pn**	**02 15 22.4**	**+0.1**
LKR	**Lokris**	**5.11**	**334**	*e*PN	**Pn**	**02 15 27.7**	**+5.4**
LKR	**Lokris**	**5.11**	**334**	P	**Pn**	**02 15 22.4**	**+0.1**
PRK	**Paraskevi**	**5.17**	**4**	P	**Pn**	**02 15 23.7**	**+0.6**
AGG	**Agios Georgios**	**5.69**	**331**	P	**Pn**	**02 15 30.9**	**+0.7**
AGG				S	**Sn**	**02 16 30.0**	**-1.2**
AGG	**Agios Georgios**	**5.69**	**331**	P	**Pn**	**02 15 30.9**	**+0.7**
AGG				S	**Sn**	**02 16 32.6**	**-1.6**
LJBD	**Adjabya**	**5.72**	**238**	*i* P	**Pn**	**02 15 32.8**	**+2.1**
	SNR=70						
AYT	**Al 'Ayyat**	**6.28**	**133**	P	**Pn**	**02 15 37.9**	**-0.5**
THL	**Klokotos Trika**	**6.28**	**332**	P	**Pn**	**02 15 38.7**	**+0.3**
THL				S	**Sn**	**02 16 47.7**	**-1.1**
LUJL	**Ujela**	**6.28**	**219**	*i* P	**Pn**	**02 15 38.5**	**+0.1**
	SNR=70						
AWBH		**6.31**	**155**	P	**Pn**	**02 15 39.7**	**+0.9**
KOT	**Kottamia**	**6.55**	**128**	P	**Pn**	**02 15 41.5**	**-0.7**
LIT	**Litokhoron**	**6.58**	**337**	P	**Pn**	**02 15 42.9**	**+0.4**
LIT				S	**Sn**	**02 16 55.2**	**-1.1**
HSAF	**As Saff**	**6.58**	**131**	P	**Pn**	**02 15 42.1**	**-0.6**
GLL	**Jalalah**	**6.71**	**130**	P	**Pn**	**02 15 43.4**	**-0.9**
HHAG	**Hagoal**	**6.72**	**126**	P	**Pn**	**02 15 44.0**	**-0.4**
HHAG				S	**Sn**	**02 16 53.0**	**-6.7**
IGT	**Igoumenitsa**	**7.01**	**323**	P	**Pn**	**02 15 47.6**	**-0.8**
IGT	**Igoumenitsa**	**7.01**	**323**	P	**Pn**	**02 15 47.6**	**-0.8**
IGT				S	**Sn**	**02 17 03.5**	**-3.4**
AMAG	**Maghara**	**7.11**	**117**	P	**Pn**	**02 15 48.4**	**-1.5**
AMAG	**Maghara**	**7.11**	**117**	P	**Pn**	**02 15 48.3**	**-1.5**
HFRF	**Wahat Farafira**	**7.23**	**162**	P	**Pn**	**02 15 52.0**	**+0.5**
SUZ		**7.29**	**124**	P	**Pn**	**02 15 51.5**	**-0.8**
RSH		**7.34**	**113**	P	**Pn**	**02 15 51.7**	**-1.3**
OFRI	**'Ofer**	**7.79**	**98**	Pn	**Pn**	**02 15 57.9**	**-1.2**
BIA	**Bitola**	**7.80**	**334**	P	**Pn**	**02 16 00.1**	**+0.8**
BIA				S	**Sn**	**02 17 23.9**	**-2.4**
BIA	**Bitola**	**7.80**	**334**	*e*Pn	**Pn**	**02 16 00.6**	**+1.3**
BIA	**Bitola**	**7.80**	**334**	*e*Pn	**Pn**	**02 16 00.6**	**+1.4**
BIA				*e*Sn	**Sn**	**02 17 17.4**	**-8.9**
KZIT	**Kziot**	**7.89**	**111**	Pn	**Pn**	**02 15 59.4**	**-1.1**
KZIT				Sn	**Sn**	**02 17 22.2**	**-6.2**
SLTI	**Sal'it**	**7.93**	**101**	Pn	**Pn**	**02 16 00.1**	**-0.9**
SLTI				Sn	**Sn**	**02 17 23.9**	**-5.5**
HRSH	**Kfar Ka'horesh**	**8.01**	**97**	P	**Pn**	**02 15 51.7**	**-10**
MMA0B	**Mount Meron ar**	**8.05**	**95**	Pn	**Pn**	**02 16 02.6**	**-0.1**
MMA0B				Sn	**Sn**	**02 17 27.9**	**-4.6**
MMAI	**Mount Meron Ar**	**8.05**	**95**	Pn	**Pn**	**02 16 02.3**	**-0.4**
	2.8nm,0.3s,baz=272,slow=11,SNR=16						
MMAI				Sn	**Sn**	**02 17 31.2**	**-1.3**
	14nm,0.3s,baz=268,slow=22,SNR=12						
HNKL	**Nakhl**	**8.05**	**119**	P	**Pn**	**02 16 02.2**	**-0.6**
RTMI	**Retamim**	**8.05**	**110**	Pn	**Pn**	**02 16 02.3**	**-0.4**
RTMI				Sn	**Sn**	**02 17 26.5**	**-6.0**
OHR	**Ohrid**	**8.08**	**332**	*e*Pn	**Pn**	**02 16 03.6**	**+0.5**
OHR				*e*Sn	**Sn**	**02 17 28.7**	**-4.4**
OHR	**Ohrid**	**8.08**	**332**	*e*Pn	**Pn**	**02 16 03.6**	**+0.6**
OHR				*e*Sn	**Sn**	**02 17 28.7**	**-4.4**
KRUS	**Krusevo**	**8.14**	**335**	*e*Pn	**Pn**	**02 16 04.8**	**+1.0**
KRUS				*e*Sn	**Sn**	**02 17 31.4**	**-3.1**
KRUS	**Krusevo**	**8.14**	**335**	*e*Pn	**Pn**	**02 16 04.9**	**+1.0**
KRUS				*e*Sn	**Sn**	**02 17 31.5**	**-3.0**
MMLI	**Mount Malkishu**	**8.19**	**99**	Pn	**Pn**	**02 16 03.5**	**-1.1**
MMLI				Sn	**Sn**	**02 17 30.0**	**-5.8**
KSDI	**Kefar Szold**	**8.23**	**93**	Pn	**Pn**	**02 16 04.0**	**-1.2**
KSDI				Sn	**Sn**	**02 17 32.1**	**-4.9**
YTIR	**Yattir**	**8.27**	**107**	Pn	**Pn**	**02 16 05.7**	**0.0**
RMNI	**Mount Ramon**	**8.30**	**112**	Pn	**Pn**	**02 16 06.4**	**+0.2**
HRDS	**Abu Rudays**	**8.32**	**128**	P	**Pn**	**02 16 06.2**	**-0.2**
HMDT	**Nahal Hemdat**	**8.32**	**100**	Pn	**Pn**	**02 16 06.0**	**-0.4**
HMDT				Sn	**Sn**	**02 17 34.4**	**-4.7**
KSHT	**Keshet**	**8.39**	**95**	Pn	**Pn**	**02 16 07.4**	**0.0**
DSI	**Dead Sea**	**8.41**	**105**	Pn	**Pn**	**02 16 07.1**	**-0.5**
DSI				Sn	**Sn**	**02 17 36.3**	**-5.0**
BRTR	**Keskin Array B**	**8.41**	**46**	Pn	**Pn**	**02 16 09.1**	**+1.5**
MZDA	**Masada**	**8.48**	**106**	Pn	**Pn**	**02 16 07.5**	**-1.1**
MZDA				Sn	**Sn**	**02 17 37.4**	**-5.7**
KRMI	**Paran Flat**	**8.51**	**115**	Pn	**Pn**	**02 16 09.2**	**+0.3**
PRNI	**Paran**	**8.60**	**113**	Pn	**Pn**	**02 16 10.4**	**+0.1**
ZFRI	**Zfri**	**8.64**	**111**	Pn	**Pn**	**02 16 10.0**	**-0.8**
HRFI	**Mount Harif**	**8.78**	**115**	Pn	**Pn**	**02 16 13.2**	**+0.4**
HRFI				Sn	**Sn**	**02 17 44.8**	**-5.6**
MBRI	**Mt Berech**	**8.81**	**117**	Pn	**Pn**	**02 16 13.2**	**+0.1**
TR2		**8.81**	**128**	P	**Pn**	**02 16 12.8**	**-0.4**
TIP	**Timpagrande**	**8.90**	**307**	*e*Pn	**Pn**	**02 16 13.7**	**-0.6**
	5.8nm,0.4s						
TIP				*e*Sn	**Sn**	**02 17 43.9**	**-9.4**
HKAT	**Jabal Katrina**	**8.90**	**126**	P	**Pn**	**02 16 14.2**	**-0.2**
EIL	**Elat**	**8.90**	**117**	Pn	**Pn**	**02 16 14.6**	**+0.1**
	3.7nm,0.3s,baz=277,slow=7.8,SNR=47						
EIL				Sn	**Sn**	**02 17 47.4**	**-6.0**
	4.6nm,0.3s,baz=39,slow=10.0,SNR=10						
EIL	**Elat**	**8.90**	**117**	Pn	**Pn**	**02 16 14.6**	**+0.1**
EIL				Sn	**Sn**	**02 17 47.4**	**-6.0**
EIL	**Elat**	**8.90**	**117**	Pn	**Pn**	**02 16 14.2**	**-0.2**
GRI	**Girifalco**	**8.95**	**305**	Pn	**Pn**	**02 16 14.5**	**-0.5**
AQBJ	**Aqaba**	**8.95**	**116**	Pn	**Pn**	**02 16 15.3**	**+0.3**
HBST	**Basata**	**8.99**	**120**	P	**Pn**	**02 16 15.1**	**-0.6**
HDK1	**Dakhla**	**9.05**	**159**	P	**Pn**	**02 16 17.4**	**+1.0**
MTTG	**Motta San Giov**	**9.10**	**298**	Pn	**Pn**	**02 16 16.8**	**-0.3**
	66nm,0.5s						
HQLS		**9.18**	**119**	P	**Pn**	**02 16 17.8**	**-0.5**
AGST	**Augusta-Monte**	**9.20**	**293**	Pn	**Pn**	**02 16 16.5**	**-2.0**
SSY	**Sortino**	**9.29**	**292**	Pn	**Pn**	**02 16 18.4**	**-1.3**
	78nm,0.5s						
AKRG	**Al Kharijah**	**9.45**	**153**	P	**Pn**	**02 16 22.7**	**+0.7**
ASF	**Jabal al Asfar**	**9.46**	**99**	Pn	**Pn**	**02 16 21.7**	**-0.4**
	0.6nm,0.3s,baz=154,slow=4.7,SNR=8.1						
ASF				Sn	**Sn**	**02 18 02.2**	**-5.0**
	1.7nm,0.3s,baz=287,slow=5.8,SNR=6.3						
HMDC	**Modica**	**9.46**	**291**	Pn	**Pn**	**02 16 21.5**	**-0.6**
	92nm,0.4s						
PE1	**Pezze di Greco**	**9.48**	**318**	*e*Pn	**Pn**	**02 16 20.2**	**-2.0**
HHRG	**Al Ghardaqah**	**9.54**	**134**	P	**Pn**	**02 16 22.8**	**-0.3**
HVZN	**Vizzini**	**9.57**	**292**	Pn	**Pn**	**02 16 22.7**	**-0.9**
	198nm,0.4s						
BDAS	**Al Bad'**	**9.72**	**123**	P	**Pn**	**02 16 24.9**	**-0.7**
JLOS		**9.81**	**120**	S	**Sn**	**02 18 04.1**	**-12**
JLOS		**9.81**	**120**	P	**Pn**	**02 16 26.3**	**-0.5**
VAE	**Valguarnera**	**9.89**	**293**	Pn	**Pn**	**02 16 28.9**	**+1.0**
	2.9nm,0.3s,baz=93,slow=22,SNR=7.9						
VAE				Sn	**Sn**	**02 18 10.0**	**-7.5**
	1.3nm,0.3s,baz=279,slow=6.8,SNR=2.6						
SG1	**Sgolgore (BA)**	**9.93**	**315**	*e*Pn	**Pn**	**02 16 26.4**	**-2.0**
CUC	**Castrocucco**	**9.95**	**309**	*e*Pn	**Pn**	**02 16 28.3**	**-0.4**
	17nm,0.4s						
CUC				*e*Sn	**Sn**	**02 18 05.0**	**-14**
CUC	**Castrocucco**	**9.95**	**309**	*e*Pn	**Pn**	**02 16 28.3**	**-0.4**
	17nm,0.4s						
HSFG		**10.23**	**135**	P	**Pn**	**02 16 32.8**	**+0.1**
HQSR		**11.12**	**136**	P	**Pn**	**02 16 45.1**	**+0.3**
ASHG	**Umm Shaghir**	**11.92**	**153**	P	**Pn**	**02 16 56.6**	**+0.9**
EMRS	**Mersa Alam**	**11.95**	**137**	P	**Pn**	**02 16 56.6**	**+0.5**
BUR08	**Bucovina Ar. S**	**13.56**	**358**	*e*Pn	**Pn**	**02 17 17.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**13.56**	**358**	*e*Pn	**Pn**	**02 17 17.5**	**-0.5**
KEST	**Kesra**	**13.64**	**282**	Pn	**Pn**	**02 17 28.7**	**+9.5**
	0.1nm,0.3s,baz=32,slow=22,SNR=7.3						
PGF	**Pioggiola**	**15.68**	**308**	*e*P	**Pn**	**02 17 36.6**	**-10**
GNI	**Garni**	**16.24**	**63**	Pn	**Pn**	**02 17 59.4**	**+5.8**
	0.7nm,0.3s,baz=246,slow=7.9,SNR=5.2						
GNI	**Garni**	**16.24**	**63**	P	**Pn**	**02 17 59.4**	**+5.9**
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIV	**Kislovodsk**	**16.36**	**48**	*e*Pn	**Pn**	**02 17 56.9**	**+1.8**
	comp=Z,7.5nm,0.7s						
KIV				*e*Sn	**Sn**	**02 20 59.2**	**+3.8**
KIV	**Kislovodsk**	**16.36**	**48**	*e*P	**Pn**	**02 17 56.9**	**+1.8**
KIV				*e*		02 20 59.2	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VRAC	**Vranov**	**16.69**	**339**	Pn	**Pn**	**02 18 00.9**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=150,slow=8.9,SNR=3.6						
AKASG	**Malin Array Be**	**16.80**	**7**	Pn	**Pn**	**02 18 01.9**	**+1.4**
	comp=Z,5.4nm,0.3s,baz=198,slow=12,SNR=11						
AKASG	**Malin Array Be**	**16.80**	**7**	Pn	**Pn**	**02 18 01.9**	**+1.4**
AKASG	**Malin Array Be**	**16.80**	**7**	P	**Pn**	**02 18 01.9**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SBF	**Sospel**	**17.30**	**310**	*e*P	**Pn**	**02 18 01.4**	**-5.4**
	comp=Z,28nm,0.8s						
SBF	**Sospel**	**17.30**	**310**	*e*P	**Pn**	**02 18 01.4**	**-5.4**
	comp=Z,14nm,0.8s						
SBF	**Sospel**	**17.30**	**310**	*e*P	**Pn**	**02 18 01.4**	**-5.4**
SBF				pmax	pmax		
	comp=Z,14nm,0.8s						
GERES	**GERESS Array B**	**17.30**	**332**	P	**Pn**	**02 18 08.6**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=149,slow=12,SNR=16						
KHC	**Kasperske Hory**	**17.58**	**332**	*e*P	**Pn**	**02 18 11.0**	**+0.7**
MBDF	**Montbardon**	**18.13**	**312**	*e*P	**Pn**	**02 18 11.1**	**-6.0**
	comp=Z,26nm,0.9s						
MBDF	**Montbardon**	**18.13**	**312**	*e*P	**Pn**	**02 18 11.1**	**-6.0**
	comp=Z,13nm,0.9s						
MBDF	**Montbardon**	**18.13**	**312**	*e*P	**Pn**	**02 18 11.1**	**-6.0**
MBDF				pmax	pmax		
	comp=Z,13nm,0.9s						
LPG	**La Plagne**	**18.53**	**314**	*e*P	**Pn**	**02 18 17.5**	**-4.5**
LPL	**La Plagne**	**18.55**	**314**	*e*P	**Pn**	**02 18 17.9**	**-4.3**
MIB	**Mutribah**	**18.73**	**97**	*e*P	**Pn**	**02 18 25.9**	**+1.4**
MIB				AMb	AMB	02 18 28.3	
	comp=Z,17nm,0.4s						
ORIF	**Oris-en-Rattie**	**18.78**	**311**	*e*P	**Pn**	**02 18 20.1**	**-4.9**
NAY	**Al-Naaiem**	**18.83**	**99**	*e*P	**Pn**	**02 18 26.7**	**+1.0**
NAY				AMb	AMB	02 18 28.1	
	comp=Z,8.0nm,0.4s						
CABF	**La Chapelle**	**19.52**	**316**	*e*P	**Pn**	**02 18 29.0**	**-4.8**
CLL	**Collm**	**19.59**	**335**	*e*P	**Pn**	**02 18 33.0**	**-1.5**
HINF	**Hinteralfeld**	**19.78**	**320**	*e*P	**Pn**	**02 18 31.7**	**-5.2**
	comp=Z,3.6nm,0.5s						
HINF	**Hinteralfeld**	**19.78**	**320**	*e*P	**Pn**	**02 18 31.7**	**-5.2**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HINF	**Hinteralfeld**	**19.78**	**320**	*e*P	**Pn**	**02 18 31.7**	**-5.2**
	comp=Z,1.8nm,0.5s						
CDF	**Champ du Feu**	**19.93**	**321**	*e*P	**Pn**	**02 18 31.8**	**-6.8**
	comp=Z,4.9nm,0.5s						
CDF	**Champ du Feu**	**19.93**	**321**	*e*P	**Pn**	**02 18 31.8**	**-6.8**
	comp=Z,2.5nm,0.5s						
CDF	**Champ du Feu**	**19.93**	**321**	*e*P	**Pn**	**02 18 31.8**	**-6.8**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HAU	**Haudompre**	**20.17**	**319**	*e*P	**P**	**02 18 36.2**	**-3.2**
	comp=Z,6.0nm,0.4s						
HAU	**Haudompre**	**20.17**	**319**	*e*P	**P**	**02 18 36.2**	**-3.2**
HAU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HAU	**Haudompre**	**20.17**	**319**	*e*P	**P**	**02 18 36.2**	**-3.2**
	comp=Z,3.0nm,0.4s						
TAM	**Tamanrasset**	**21.07**	**243**	P	**P**	**02 18 47.1**	**-2.3**
TAM	**Tamanrasset**	**21.07**	**243**	P	**P**	**02 18 47.1**	**-2.3**
MEZF	**Maizieres J'vi**	**21.16**	**319**	*e*P	**P**	**02 18 46.6**	**-3.5**
LOR	**Lormes**	**21.16**	**315**	*e*P	**P**	**02 18 47.7**	**-2.4**
	comp=Z,3.5nm,0.5s,mb3.7						
LOR	**Lormes**	**21.16**	**315**	*e*P	**P**	**02 18 47.7**	**-2.4**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
LOR	**Lormes**	**21.16**	**315**	*e*P	**P**	**02 18 47.7**	**-2.4**
	comp=Z,1.8nm,0.5s,mb3.7						
AVF	**Avril sur Loir**	**21.23**	**313**	*e*P	**P**	**02 18 47.3**	**-3.5**
	comp=Z,8.3nm,0.9s,mb3.8						
AVF	**Avril sur Loir**	**21.23**	**313**	*e*P	**P**	**02 18 47.3**	**-3.5**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.8						
AVF	**Avril sur Loir**	**21.23**	**313**	*e*P	**P**	**02 18 47.3**	**-3.5**
	comp=Z,4.2nm,0.9s,mb3.8						
SSF	**Saint Saulge**	**21.27**	**314**	*e*P	**P**	**02 18 48.6**	**-2.7**
BGF	**Bois d'Agland**	**21.42**	**312**	*e*P	**P**	**02 18 49.6**	**-3.4**
	comp=Z,11nm,0.5s,mb4.2						
BGF	**Bois d'Agland**	**21.42**	**312**	*e*P	**P**	**02 18 49.6**	**-3.4**
BGF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
BGF	**Bois d'Agland**	**21.42**	**312**	*e*P	**P**	**02 18 49.6**	**-3.4**
	comp=Z,5.6nm,0.5s,mb4.2						
RJF	**Les Rejaudoux**	**21.74**	**308**	*e*P	**P**	**02 18 52.2**	**-4.1**
OBN	**Obninsk**	**22.32**	**16**	P	**P**	**02 19 03.0**	**+0.5**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
BAIF	**Baives**	**22.52**	**322**	*e*P	**P**	**02 18 59.9**	**-4.8**
	comp=Z,12nm,0.6s,mb4.2						
BAIF	**Baives**	**22.52**	**322**	*e*P	**P**	**02 18 59.9**	**-4.8**
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
BAIF	**Baives**	**22.52**	**322**	*e*P	**P**	**02 18 59.9**	**-4.8**
	comp=Z,5.9nm,0.6s,mb4.2						
MFF	**Saint Martin d**	**23.31**	**310**	*e*P	**P**	**02 19 07.6**	**-5.4**
	comp=Z,6.1nm,0.6s,mb3.9						
MFF	**Saint Martin d**	**23.31**	**310**	*e*P	**P**	**02 19 07.6**	**-5.4**
MFF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
MFF	**Saint Martin d**	**23.31**	**310**	*e*P	**P**	**02 19 07.6**	**-5.4**
	comp=Z,3.0nm,0.6s,mb3.9						
LDF	**La Druitiere**	**24.14**	**315**	*e*P	**P**	**02 19 16.8**	**-3.9**
	comp=Z,12nm,0.7s,mb4.2						
LDF	**La Druitiere**	**24.14**	**315**	*e*P	**P**	**02 19 16.8**	**-3.9**
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
LDF	**La Druitiere**	**24.14**	**315**	*e*P	**P**	**02 19 16.8**	**-3.9**
	comp=Z,6.2nm,0.7s,mb4.2						
ESDC	**Sonseca Array**	**24.43**	**292**	P	**P**	**02 19 24.7**	**+1.3**
	comp=Z,0.8nm,0.6s,mb3.3,baz=78,slow=8.2,SNR=4.0						
FLN	**La Foliniere**	**24.43**	**315**	*e*P	**P**	**02 19 22.5**	**-0.8**
	comp=Z,10.0nm,0.4s,mb4.3						
FLN	**La Foliniere**	**24.43**	**315**	*e*P	**P**	**02 19 22.5**	**-0.8**
	comp=Z,5.0nm,0.4s,mb4.3						
FLN	**La Foliniere**	**24.43**	**315**	*e*P	**P**	**02 19 22.5**	**-0.8**
FLN				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.3						
SGMF	**Saint Gilles**	**25.47**	**312**	*e*P	**P**	**02 19 33.8**	**+1.1**
QUIF	**Quistinic**	**25.71**	**311**	*e*P	**P**	**02 19 36.3**	**+1.3**
HFS	**Hagfors**	**27.25**	**347**	P	**P**	**02 19 47.9**	**-0.8**
	comp=Z,2.1nm,0.4s,mb4.1,baz=127,slow=9.8,SNR=26						
HFS	**Hagfors**	**27.25**	**347**	P	**P**	**02 19 47.9**	**-0.8**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KAF	**Kangasniemi**	**28.05**	**0**	*e*p	**P**	**02 19 54.6**	**-1.2**
	comp=Z,1.6nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**28.05**	**0**	*e*P	**P**	**02 19 54.6**	**-1.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.2						
NB2	**NORSAR Subarra**	**28.59**	**345**	P	**P**	**02 19 58.8**	**-1.8**
	comp=Z,3.4nm,1.0s,mb4.0,baz=160,slow=10						
NOA	**NORSAR Array B**	**28.59**	**345**	P	**P**	**02 19 59.6**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.6,baz=145,slow=9.7,SNR=9.0						
NOA	**NORSAR Array B**	**28.59**	**345**	P	**P**	**02 19 59.7**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTK	**Aktyubinsk**	**28.59**	**45**	P	**P**	**02 20 01.5**	**+0.8**
AKTO	**Aktyubinsk**	**28.59**	**45**	P	**P**	**02 20 01.5**	**+0.8**
	comp=Z,1.0nm,0.3s,mb4.0,baz=229,slow=4.5,SNR=10						
AKTO	**Aktyubinsk**	**28.59**	**45**	P	**P**	**02 20 01.5**	**+0.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
JOF	**Joensuu**	**29.07**	**5**	*e*p	**P**	**02 20 03.6**	**-1.2**
	comp=Z,1.5nm,0.3s,mb4.2						
JOF	**Joensuu**	**29.07**	**5**	*e*P	**P**	**02 20 03.6**	**-1.2**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
EKA	**Eskdalemuir Ar**	**29.25**	**325**	P	**P**	**02 20 07.3**	**+0.8**
	comp=Z,0.8nm,0.4s,mb3.8,baz=129,slow=9.1,SNR=4.0						
EKA	**Eskdalemuir Ar**	**29.25**	**325**	P	**P**	**02 20 07.3**	**+0.8**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**30.25**	**232**	P	**P**	**02 20 17.6**	**+1.9**
	comp=Z,1.0nm,0.5s,mb3.8,baz=24,slow=8.0,SNR=30						
ARCES	**ARCESS Array B**	**35.51**	**360**	P	**P**	**02 21 00.1**	**-1.0**
	comp=Z,2.7nm,0.4s,mb4.5,baz=176,slow=9.1,SNR=36						
ARCES	**ARCESS Array B**	**35.51**	**360**	P	**P**	**02 21 00.2**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KEV	**Kevo**	**35.74**	**1**	*e*p	**P**	**02 21 02.5**	**-0.6**
	comp=Z,0.9nm,0.3s,mb4.2						
KEV	**Kevo**	**35.74**	**1**	*e*P	**P**	**02 21 02.5**	**-0.6**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
BVAR	**Borovoye Array**	**36.70**	**45**	P	**P**	**02 21 12.8**	**+1.3**
	comp=Z,1.2nm,0.7s,mb3.9,baz=252,slow=4.2,SNR=6.2						
BVAR	**Borovoye Array**	**36.70**	**45**	P	**P**	**02 21 12.8**	**+1.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**41.43**	**50**	*e*P	**P**	**02 21 52.7**	**+1.6**
	comp=Z,2.6nm,0.4s,mb4.2						
KURK	**Kurchatov**	**41.43**	**50**	*e*P	**P**	**02 21 52.7**	**+1.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
MK31	**Makanchi Array**	**43.91**	**56**	*e*P	**P**	**02 22 12.7**	**+1.5**
MKAR	**Makanchi Array**	**43.91**	**56**	P	**P**	**02 22 12.9**	**+1.7**
	comp=Z,2.3nm,0.7s,mb4.0,baz=276,slow=6.8,SNR=12						
MKAR	**Makanchi Array**	**43.91**	**56**	P	**P**	**02 22 13.0**	**+1

mb1 3.7/9,mb1mx3.6/18,mbtmp3.4/9,MS3.2/1,Ms1 3.3/1, ms1mx2.7/18,Error ellipse: s-maj=28.6km s-min=20.2km az=66.0

ISC 20 02:29:28.5±0.4,**2992S**×0.003×**7012W**×0.007,**h119**km±4km, **n37**,σ0°**77**/48,**mb3.8**/11,**4C-3D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.65**	**247**	*i*P	**Pn**	**02 29 47.9**	**+0.6**
TLL				*i* S	**Sn**	**02 30 02.4**	**+0.9**
TLL	**Tololo Astrono**	**0.65**	**247**	*i*P	**Pn**	**02 29 47.9**	**+0.6**
TLL				*i* S	**Sn**	**02 30 02.4**	**+0.9**
TLL				AML	AML	02 30 03.9	
	comp=E,13μm,0.4s						
LSCH	**La Serena**	**0.98**	**270**	*i*P	Px	02 32 57.1	
LSCH				*i* S	Sx	02 33 13.4	
LCO	**Las Campanas**	**1.03**	**330**	*i*P	**Pn**	**02 29 50.4**	**-0.4**
LCO				*i* S	**Sn**	**02 30 07.4**	**-0.2**
OVCH	**Ovalle**	**1.16**	**233**	*e*P	**Pn**	**02 29 51.4**	**-0.7**
OVCH				*i* S	**Sn**	**02 30 09.2**	**-0.8**
OVCH	**Ovalle**	**1.16**	**233**	*e*P	**Pn**	**02 29 51.4**	**-0.7**
OVCH				*i* S	**Sn**	**02 30 09.2**	**-0.8**
OVCH				AML	AML	02 30 10.4	
	comp=N,7μm,0.3s						
CHNG	**Los Chungos**	**2.29**	**211**	*i*P	**Pn**	**02 30 04.8**	**-0.8**
CHNG				*i* S	**Sn**	**02 30 33.3**	**-0.7**
CHNG				AML	AML	02 30 34.8	
	comp=E,770nm,0.5s						
CFAA	**Coronel Fontan**	**2.34**	**137**	P	**Pn**	**02 30 06.2**	**+0.1**
	comp=E,2.6nm,0.3s,baz=316,slow=12,SNR=9.1						
CFAA				S	**Sn**	**02 30 34.6**	**-0.4**
	comp=E,9.9nm,0.3s,baz=311,slow=14,SNR=39						
CPCH	**Copiapo**	**2.56**	**355**	*e*P	**Pn**	**02 30 08.4**	**-0.6**
CPCH				AML	AML	02 30 40.0	
	comp=E,2μm,0.1s						
PEL	**Peldehue**	**3.25**	**188**	*i*P	**Pn**	**02 30 17.9**	**-0.2**
PEL				*i* S	**Sn**	**02 30 56.6**	**+0.2**
PEL				AML	AML	02 30 58.9	
	comp=N,377nm,1.6s						
FCH	**Farellones**	**3.41**	**182**	*e*P	**Pn**	**02 30 21.0**	**+0.9**
FCH				*i* S	**Sn**	**02 31 01.7**	**+1.8**
FCH				AML	AML	02 31 04.2	
	comp=E,230nm,0.4s						
CLCH	**Cerro Calan**	**3.49**	**186**	*e*P	**Pn**	**02 30 21.1**	**-0.1**
CLCH				*i* S	**Sn**	**02 31 02.4**	**+0.5**
CLCH				AML	AML	02 31 10.4	
	comp=E,222nm,0.5s						
RCDM	**Rinconada Maip**	**3.61**	**189**	*e*P	**Pn**	**02 30 21.8**	**-1.0**
RCDM				*i* S	**Sn**	**02 31 03.9**	**-0.9**
RCDM	**Rinconada Maip**	**3.61**	**189**	*e*P	**Pn**	**02 30 21.8**	**-1.0**
RCDM				*i* S	**Sn**	**02 31 03.9**	**-0.9**
RCDM				AML	AML	02 31 05.0	
	comp=E,295nm,0.1s						
ANTU	**Antumapu**	**3.67**	**187**	*i* S	**Sn**	**02 31 06.1**	**-0.1**
ANTU				AML	AML	02 31 09.4	
	comp=E,271nm,0.4s						
PCH	**Pirque**	**3.71**	**185**	*i*P	**Pn**	**02 30 24.2**	**+0.1**
LMEL	**Las Melosas**	**3.92**	**181**	*e*P	**Pn**	**02 30 27.5**	**+0.6**
LMEL				*i* S	**Sn**	**02 31 13.2**	**+1.0**
LMEL	**Las Melosas**	**3.92**	**181**	*e*P	**Pn**	**02 30 27.5**	**+0.6**
LMEL				*i* S	**Sn**	**02 31 13.2**	**+1.0**
LMEL				AML	AML	02 31 16.3	
	comp=N,211nm,0.3s						
LPAZ	**La Paz**	**13.69**	**8**	P	**Pn**	**02 32 38.7**	**+1.0**
	comp=N,0.2nm,0.3s,baz=179,slow=11,SNR=5.8						
LPAZ				LR	LR	02 38 21.8	
	comp=N,110nm,21.5s,baz=76,slow=39						
LPAZ	**La Paz**	**13.69**	**8**	P	**Pn**	**02 32 38.7**	**+1.0**
LPAZ				LR	LR	02 38 21.8	
SIV	**San Ignacio**	**16.16**	**33**	P	**Pn**	**02 33 09.3**	**+0.6**
	comp=N,0.4nm,0.3s,baz=227,slow=12,SNR=6.2						
NNA	**Nana**	**18.90**	**339**	*e*Pn	**Pn**	**02 33 41.6**	**-0.2**
	comp=N,12nm,1.2s						
OTAV	**Otavalo**	**31.02**	**344**	*e*P	**P**	**02 35 35.6**	**+0.6**
	comp=N,0.8nm,0.4s,mb3.8						
PMSA	**Palmer Station**	**35.09**	**175**	*e*P	**P**	**02 36 09.1**	**-0.7**
	comp=N,62nm,1.2s,mb5.3						
SNAA	**Sanae**	**54.77**	**159**	*e*P	**P**	**02 38 43.0**	**-2.3**
	comp=N,1.1nm,0.6s,mb4.1						
BBSR	**BB Station**	**62.16**	**5**	P	**P**	**02 39 36.7**	**-0.3**
TXAR	**Lajitas Array**	**67.05**	**328**	P	**P**	**02 40 09.6**	**+0.8**
	comp=N,0.3nm,0.6s,mb3.3,baz=149,slow=8.8,SNR=4.6						
VNDA	**Vanda**	**68.41**	**191**	P	**P**	**02 40 17.6**	**+0.8**
	comp=N,0.7nm,0.8s,mb3.6,baz=84,slow=3.1,SNR=3.7						
VNDA	**Vanda**	**68.41**	**191**	*e*P	**P**	**02 40 17.8**	**+1.0**
	comp=N,0.9nm,0.9s,mb3.6						
DBIC	**Dimbokro**	**72.32**	**71**	P	**P**	**02 40 41.1**	**-0.5**
	comp=N,4.3nm,1.0s,mb4.2,baz=221,slow=9.3,SNR=4.0						
MAW	**Mawson**	**76.62**	**163**	*e*P	**P**	**02 41 05.9**	**+0.3**
	comp=N,0.6nm,0.8s,mb3.4						
TSUM	**Tsumeb**	**78.75**	**106**	*e*P	**P**	**02 41 17.4**	**-0.8**
	comp=N,1.9nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**80.91**	**332**	P	**P**	**02 41 29.1**	**-0.1**
	comp=N,0.4nm,0.6s,mb3.5,baz=128,slow=9.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**81.27**	**69**	P	**P**	**02 41 31.1**	**-0.6**
	comp=N,0.8nm,0.5s,mb3.8,baz=279,slow=6.3,SNR=14						
TORD				pP	pP	02 42 03.9	+1.8
	comp=N,1.9nm,0.9s,baz=258,slow=4.9,SNR=7.3						
NVAR	**Mina Array Bea**	**81.52**	**324**	P	**P**	**02 41 33.8**	**+1.3**
	comp=N,0.3nm,0.5s,mb3.4,baz=170,slow=6.0,SNR=3.0						
ZALV	**Zalesovo Beam**	**149.90**	**30**	PKPbc	PKPbc	02 49 04.3	+0.1
	comp=N,4.1nm,0.4s,baz=301,slow=3.4,SNR=19						
MKAR	**Makanchi Array**	**152.77**	**44**	PKPbc	PKPbc	02 49 10.7	-0.4
	comp=N,0.6nm,0.7s,baz=323,slow=2.3,SNR=5.4						

*ISCJB **20** 02:35:31.4±0.6,5150N±003×1603E±004,h0km,Error ellipse: s-maj=4.6km s-min=2.9km az=20.1*
*IPEC **20** 02:35:32.0±0.3,5159N×1612E,h0km,ML1.9/3,Error ellipse: s-maj=1.9km s-min=1.5km az=41.0*
*PRU **20** 02:35:33.6,5152N×1604E,h0km*
*CSEM **20** 02:35:33.7±0.1,5151N×1607E,h1km,ML2.9/10,Error ellipse: s-maj=1.9km s-min=1.3km az=4.0*
*WAR **20** 02:35:33.8,5154N×1601E,ML2.4,Mining Induced*
*VIE **20** 02:35:35.8±0.9,5134N×1599E,h0km,mb2.2/2,ML2.4/5, Error ellipse: s-maj=6.8km s-min=5.4km az=100.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 20 02:35:32.3±0.6,**5155N**±003×**1605E**±004,**h0**km,**n22**, σ0°**71**/47,**5C,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**168**	*e*Pg	**Pg**	**02 35 46.9**	**+0.8**
KSP				*e*Sg	**Sg**	**02 35 56.6**	**+1.1**
KSP	**Ksiaz**	**0.72**	**168**	*e*Pg	**Pg**	**02 35 46.7**	**+0.6**
KSP				*e*Sg	**Sg**	**02 35 55.7**	**+0.2**
UPC	**Upice**	**1.04**	**181**	*e*PG	**Pg**	**02 35 52.7**	**+0.4**
DPC	**Dobruska-Polom**	**1.21**	**172**	Pg	**Pg**	**02 35 55.7**	**+0.2**
DPC				*e*Sg	**Sg**	**02 36 10.7**	**-0.5**
DPC	**Dobruska-Polom**	**1.21**	**172**	*e*PG	**Pg**	**02 35 55.7**	**+0.2**
DPC				*e*SG	**Sg**	**02 36 11.9**	**+0.7**
	comp=Z,14nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**223**	Pg	**Pg**	**02 35 59.2**	**+0.4**
PVCC				*e*Sg	**Sg**	**02 36 17.5**	**+0.7**
PVCC	**Panska Ves**	**1.39**	**223**	*e*PG	**Pg**	**02 35 59.2**	**+0.4**
BRG	**Berggiesshubel**	**1.49**	**244**	PG	**Pg**	**02 36 00.7**	**-0.1**
BRG				SG	**Sg**	**02 36 20.7**	**+0.6**
	comp=Z,34nm,0.5s						
PRU	**Pruhonice**	**1.83**	**212**	*e*PN	**Pn**	**02 36 05.3**	**+0.3**
PRU				*e*PG	**Pg**	**02 36 06.4**	**-1.0**
PRU				*ex*	x	02 36 23.5	
PRU				*e*SG	**Sg**	**02 36 30.6**	**-0.6**
	comp=Z,15nm,0.5s						
CLL	**Collm**	**1.92**	**264**	*i* Pn	**Pn**	**02 36 05.7**	**-0.5**
CLL				*i* Pg	**Pg**	**02 36 07.9**	**-1.2**
CLL				*e*Sn	**Sn**	**02 36 24.0**	**-7.1**
CLL				*e*Sg	**Sg**	**02 36 34.0**	**0.0**
	comp=Z,11nm,0.7s						
MORC	**Moravsky Berou**	**2.01**	**151**	*e*Pn	**Pn**	**02 36 07.5**	**+0.1**
MORC				*e*Sg	**Sg**	**02 36 35.6**	**-1.3**
	comp=Z,9.7nm,0.3s						
OKC	**Ostrava-Krasne**	**2.17**	**141**	*e*PG	**Pg**	**02 36 13.5**	**-0.4**
OKC				*e*SG	**Sg**	**02 36 42.3**	**+0.3**
	comp=Z,12nm,0.7s						
VRAC	**Vranov**	**2.27**	**171**	*e*Pn	**Pn**	**02 36 11.3**	**+0.3**
VRAC				*e*Sg	**Sg**	**02 36 44.1**	**-1.1**
	comp=Z,4.5nm,0.2s						
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn	**Pn**	**02 36 14.6**	**+0.5**
KRUC				*e*Sg	**Sg**	**02 36 51.5**	**-1.1**
	comp=Z,6.2nm,0.4s						
NKC	**Novy Kostel**	**2.64**	**241**	*e*PN	**Pn**	**02 36 16.2**	**+0.2**
NKC				*e*PG	**Pg**	**02 36 22.2**	**-0.5**
NKC				*e*SG	**Sg**	**02 36 57.7**	**+0.8**
	comp=Z,16nm,0.4s						
OJC	**Ojcow**	**2.72**	**118**	*e*Pg	**Pg**	**02 36 24.5**	**+0.1**
OJC				*e*Sg	**Sg**	**02 37 00.9**	**+1.3**
KHC	**Kasperske Hory**	**2.90**	**214**	*e*PN	**Pn**	**02 36 19.8**	**+0.3**
KHC				*e*PG	**Pg**	**02 36 25.9**	**-1.8**
KHC				*e*SN	**Sn**	**02 36 55.0**	**0.0**
KHC				*e*SG	**Sg**	**02 37 05.4**	**+0.2**
	comp=Z,4.9nm,0.4s						
MOX	**Moxa**	**2.94**	**254**	*e*PG	**Pg**	**02 36 28.4**	**-0.2**
MOX				*e*SG	**Sg**	**02 37 07.6**	**+0.9**
CONA	**Conrad Observa**	**3.63**	**182**	*i*Pn	**Pn**	**02 36 31.0**	**+1.4**
CONA				*i*Sg	**Sg**	**02 37 28.7**	**-0.1**
	comp=Z,4.0nm,0.4s						
BSD	**Bornholm Skovb**	**3.63**	**350**	*i* P	**Pn**	**02 36 28.8**	**-0.9**
BSD				*e*S	**Sn**	**02 37 07.9**	**-5.3**
MOA	**Molln**	**3.88**	**198**	*i*Pn	**Pn**	**02 36 33.5**	**+0.4**
MOA				*i*Sg	**Sg**	**02 37 37.1**	**+0.2**
	comp=Z,2.4nm,0.2s						
ARSA	**Arzberg**	**4.32**	**185**	*i*Sg	**Sg**	**02 37 50.5**	**-0.5**
	comp=Z,1.7nm,0.3s						

*MOS **20** 02:36:36.8±0.9, 1106N×8680W, h33km, mb5.0/12, Error ellipse: s-maj=24.4km s-min=8.7km az=103.4*
*CASC **20** 02:36:37.8±1.9, 1099N×8693W, h36km±999km, MD4.5, ML3.9, mb4.7(NEIC)*
*ISCJB **20** 02:36:38.5±0.7, 1105N±004×8684W±006, h52km±5km, mb4.6/49, MS4.3/24, Error ellipse: s-maj=11.3km s-min=4.2km az=147.4*
*NEIC **20** 02:36:40.0±0.6, 1106N×8682W, h52km±6km, mb4.7/34, MD4.6(CASC), Error ellipse: s-maj=9.2km s-min=4.3km az=51.0*
*BJI **20** 02:36:40.9, 1110N×8680W, h51km, mB5.1, Ms5.1, Msz4.8*
*IDC **20** 02:36:41.9±2.6, 1123N×8672W, h68km±24km, mb4.0/17, mb1 4.2/20,mb1mx4.1/27, mbtmp4.0/20, MS4.2/24, Ms1 4.2/24, ms1mx4.0/33, Error ellipse: s-maj=22.6km s-min=10.4km az=53.0*

ISC 20 02:36:40.0±0.6,**1110N**±004×**8679W**±006,**h46**km±5km, **n164**,σ0°**89**/127,**mb4.6**/49,**MS4.3**/24,**27C-10D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TICN	**Ticuantepe**	**1.08**	**311**	*e*P	**Pn**	**02 36 59.0**	**+0.3**
APON	**Apoyo**	**1.08**	**41**	*e*P	**Pn**	**02 36 59.2**	**+0.5**
MASN	**Masaya**	**1.08**	**36**	*e*P	**Pn**	**02 36 59.2**	**+0.4**
COPN	**Copaltepe**	**1.09**	**10**	*i*P	**Pn**	**02 36 59.0**	**+0.1**
CSAN		**1.14**	**19**	*e*P	**Pn**	**02 36 59.4**	**-0.1**
XAVN	**Gruta Xavier**	**1.14**	**24**	*e*P	**Pn**	**02 36 59.9**	**+0.4**
TISN	**Laguna Tiscapa**	**1.16**	**26**	*e*P	**Pn**	**02 37 00.2**	**+0.4**
MGAN	**Managua**	**1.17**	**27**	*e*P	**Pn**	**02 37 00.3**	**+0.3**
MGAN				*e*P		02 37 00.3	
APYN	**Apoyeque**	**1.21**	**21**	*e*P	**Pn**	**02 37 00.7**	**+0.2**
APYN				AML	AML	02 37 32.5	
	comp=Z,2μm,0.5s						
WILN	**Americas 2**	**1.21**	**29**	*e*P	**Pn**	**02 37 00.5**	**0.0**
CONN	**Concepcion**	**1.23**	**68**	*e*P	**Pn**	**02 37 00.9**	**+0.1**
MOMN	**Momotombo**	**1.32**	**11**	*e*P	**Pn**	**02 37 02.4**	**+0.3**
MIRN	**Miramar**	**1.33**	**3**	*e*P	**Pn**	**02 37 02.0**	**-0.2**
HUEN		**1.37**	**26**	*e*P	**Pn**	**02 37 02.9**	**+0.2**
CNGN	**Cerro Negro**	**1.39**	**4**	*e*P	**Pn**	**02 37 02.6**	**-0.4**
CNGN				*e*P		02 37 03.3	
TEL3	**Telica 3**	**1.46**	**358**	*e*P	**Pn**	**02 37 03.6**	**-0.4**
VCR	**Vista de Mar**	**1.50**	**130**	*e*P	**Pn**	**02 37 00.7**	**-3.8**
LIM1	**Limonal**	**1.56**	**105**	*e*P	**Pn**	**02 37 04.0**	**-1.4**
CRIN	**San Cristobal**	**1.61**	**351**	*e*P	**Pn**	**02 37 05.5**	**-0.5**
2RIO	**Dos Rios de Up**	**1.64**	**110**	*e*P	**Pn**	**02 37 03.9**	**-2.4**
CUI	**Cuipilapa**	**1.65**	**105**	*e*P	**Pn**	**02 37 05.3**	**-1.2**
JCR	**Jicaral**	**2.07**	**127**	*e*P	**Pn**	**02 37 11.9**	**-0.4**
FORC	**Fortuna**	**2.18**	**106**	*e*P	**Pn**	**02 37 12.7**	**-1.1**
FORC				*e*P		02 37 13.0	
CNCH	**Conchagua**	**2.39**	**335**	*e*P	x	02 37 15.4	
CNCH				AML	x	02 37 51.8	
	comp=Z,958nm,0.4s						
CGA2	**Cerro Gallo 2**	**2.53**	**115**	*e*P	**Pn**	**02 37 17.9**	**-0.8**
PRS1	**Puriscal**	**2.68**	**114**	*e*P	**Pn**	**02 37 19.6**	**-1.1**
BLLM	**Bellamira**	**2.72**	**329**	*e*P	x	02 37 19.5	
VSM	**San Miguel**	**2.73**	**328**	*e*P	x	02 37 20.3	
VSM				*e*S	x	02 37 51.2	
LAJ	**Bijagual**	**2.90**	**115**	*e*P	**Pn**	**02 37 18.8**	**-5.0**
LAJ	**Bijagual**	**2.90**	**115**	*e*P	**Pn**	**02 37 18.8**	**-4.9**
SJS	**Escuela Geolog**	**2.93**	**113**	*e*P	**Pn**	**02 37 24.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.98**	**351**	*e*Pn	**Pn**	**02 37 25.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.98**	**351**	*e*P	**Pn**	**02 37 24.8**	**+0.1**
TGUH				*e*P		02 37 24.8	
CAHU	**Cacacuatique**	**2.99**	**333**	*e*P	x	02 37 24.9	
CAHU				*e*S	x	02 37 58.3	
LCR2	**La Lucha 2**	**3.06**	**116**	*e*P	**Pn**	**02 37 26.8**	**+0.9**
LCR2	**La Lucha 2**	**3.06**	**116**	*e*P	**Pn**	**02 37 26.8**	**+0.9**
TRTC	**Tortuguero**	**3.07**	**100**	*e*P	**Pn**	**02 37 26.3**	**+0.3**
QCR	**Quepos**	**3.08**	**123**	*e*P	**Pn**	**02 37 24.8**	**-1.3**
SNVI	**San Vicente**	**3.20**	**322**	*e*P	x	02 37 25.9	
URSC	**Ursaca**	**3.22**	**113**	*e*P	**Pn**	**02 37 28.8**	**+0.6**
URSC	**Ursaca**	**3.22**	**113**	*e*P	**Pn**	**02 37 28.8**	**+0.6**
LFRS	**El Faro**	**3.34**	**319**	*e*P	x	02 37 27.6	
LFRS				*e*S	x	02 38 06.5	
BOQS	**Boqueron**	**3.57**	**317**	*e*P	x	02 37 31.4	
BOQS				*e*S	x	02 38 13.4	
SBLS	**San Blas**	**3.88**	**315**	*e*P	x	02 37 36.2	
SNJE	**San Jose**	**3.89**	**315**	*e*P	x	02 37 35.7	
BAR1		**3.89**	**118**	*e*P	**Pn**	**02 37 38.1**	**+0.7**
RTR	**El Retiro**	**3.93**	**315**	*e*P	x	02 37 36.6	
ACR	**Cerro Adams**	**4.32**	**124**	*e*P	**Pn**	**02 37 43.2**	**0.0**
ACR	**Cerro Adams**	**4.32**	**124**	*e*P	**Pn**	**02 37 43.2**	**0.0**
BCIP	**Isla Barro Col**	**7.11**	**105**	*e*Pn	**Pn**	**02 38 22.9**	**+1.3**
CMIG	**Matias Romero**	**9.85**	**308**	P	**Pn**	**02 38 58.6**	**-0.4**
	comp=Z,2.5nm,0.3s,baz=126,slow=9.5,SNR=29						
OTAV	**Otavalo**	**13.61**	**142**	*e*Pn	**Pn**	**02 39 54.8**	**+4.3**
ROSC	**El Rosal**	**13.81**	**116**	P	**Pn**	**02 39 55.2**	**+1.9**
	comp=Z,1.1nm,0.3s,baz=84,slow=22,SNR=2.1						
ROSC				LR	LR	02 45 08.7	
	comp=Z,404nm,20.9s,baz=162,slow=37						
CHI2		**14.43**	**115**	*e*P	Px	02 37 04.5	
LAPE	**La Pedrera**	**15.42**	**102**	*e*P	Px	02 37 00.9	
SDV	**Santo Domingo**	**16.07**	**96**	P	**Pn**	**02 40 24.5**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=283,slow=6.0,SNR=32						
SDV				LR	LR	02 47 18.6	
	comp=Z,431nm,20.0s,baz=307,slow=40						
ATAH	**Atahualpa**	**19.83**	**155**	P	**Pn**	**02 41 10.8**	**+1.9**
	comp=Z,6.0nm,0.8s,baz=273,slow=2.5,SNR=4.7						
ATAH				LR	LR	02 47 52.0	
	comp=Z,962nm,19.0s,baz=173,slow=33						
HKT	**Hockley**	**20.56**	**337**	*e*P	**P**	**02 41 14.4**	**-0.4**
	comp=Z,16nm,1.1s						
HKT	**Hockley**	**20.56**	**337**	*e*P	**P**	**02 41 14.5**	**-0.3**
HKT				pmax	pmax		
	comp=Z,16nm,1.1s						
VBMS	**Vicksburg**	**21.30**	**351**	*e*P	**P**	**02 41 23.8**	**+1.1**
	comp=Z,30nm,0.9s,mb4.6						
PCRV	**Puerto La Cruz**	**21.80**	**90**	P	**P**	**02 41 28.7**	**+0.4**
	comp=Z,16nm,0.7s,mb4.6,baz=274,slow=3.6,SNR=6.4						
NATX	**Nacogdoches**	**21.81**	**342**	*e*P	**P**	**02 41 29.0**	**+0.7**
	comp=Z,42nm,1.2s,mb4.7						
LRAL	**Lakeview Retre**	**21.83**	**360**	*e*P	**P**	**02 41 29.5**	**+1.1**
GOGA	**Godfrey**	**22.41**	**7**	*e*P	**P**	**02 41 34.7**	**0.0**
	comp=Z,44nm,0.8s,mb4.9						
GOGA	**Godfrey**	**22.41**	**7**	*e*P	**P**	**02 41 34.7**	**0.0**
GOGA				pmax	pmax		
	comp=Z,44nm,0.8s,mb4.9						
NHSC	**New Hope**	**22.73**	**14**	*e*P	**P**	**02 41 39.0**	**+1.0**
	comp=Z,37nm,0.9s,mb4.8						
JCT	**Junction City**	**22.76**	**330**	*e*P	**P**	**02 41 37.3**	**-1.1**
	comp=Z,13nm,1.0s,mb4.3						
JCT	**Junction City**	**22.76**	**330**	*e*P	**P**	**02 41 37.3**	**-1.1**
JCT				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
OXF	**Oxford**	**23.43**	**355**	*e*P	**P**	**02 41 44.9**	**-0.3**
	comp=Z,21nm,0.8s,mb4.6						
OXF	**Oxford**	**23.43**	**355**	*e*P	**P**	**02 41 44.9**	**-0.3**
OXF				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.6						
JSC	**Jenkinsville**	**23.62**	**11**	*e*P	**P**	**02 41 47.5**	**+0.6**
SWET	**Sewanee**	**24.02**	**2**	*e*P	**P**	**02 41 50.7**	**+0.1**
TXAR	**Lajitas Array**	**24.02**	**321**	P	**P**	**02 41 50.9**	**+0.3**
	comp=Z,5.3nm,0.8s,mb4.0,baz=138,slow=9.2,SNR=48						
TXAR				PcP	PcP	02 45 32.1	+0.4
	comp=Z,3.1nm,0.9s,baz=144,slow=4.5,SNR=11						
MIAR	**Mount Ida**	**24.14**	**346**	*e*P	**P**	**02 41 50.9**	**-0.9**
	comp=Z,11nm,0.9s,mb4.3						
MIAR	**Mount Ida**	**24.14**	**346**	*e*P	**P**	**02 41 50.9**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
CPCT	**Cooper Cave**	**24.33**	**5**	*e*P	**P**	**02 41 53.4**	**+0.1**
TKL	**Tuckaleechee C**	**24.60**	**6**	P	**P**	**02 41 55.0**	**-0.9**
	comp=Z,18nm,0.6s,mb4.8,baz=178,slow=12,SNR=20						
TKL				LR	LR	02 52 31.3	
	comp=Z,352nm,18.4s,MS3.9,baz=342,slow=39						
TKL	**Tuckaleechee C**	**24.60**	**6**	*e*P	**P**	**02 41 56.0**	**+0.1**
NNA	**Nana**	**24.98**	**156**	*e*P	**P**	**02 42 00.3**	**+0.8**
TZTN	**Tazewell**	**25.50**	**6**	*e*P	**P**	**02 42 04.2**	**+0.2**
	comp=Z,17nm,0.8s,mb4.6						
LPIG	**La Paz**	**25.82**	**303**	LR	LR	02 53 29.3	
	comp=Z,365nm,18.3s,MS3.9,baz=259,slow=39						
WMOK	**Wichita Mounta**	**25.94**	**337**	*e*P	**P**	**02 42 08.1**	**0.0**
	comp=Z,27nm,1.3s,mb4.6						
WMOK	**Wichita Mounta**	**25.94**	**337**	*e*P	**P**	**02 42 08.1**	**0.0**
WMOK				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.6						
ELN	**Prospectdale**	**26.58**	**11**	*e*P	**P**	**02 42 14.4**	**+0.6**
SIUC	**Southern Illin**	**26.59**	**356**	*e*P	**P**	**02 42 13.5**	**-0.4**
	comp=Z,17nm,1.0s,mb4.5						
BLA	**Blacksburg**	**26.62**	**11**	*e*P	**P**	**02 42 15.0**	**+0.8**
	comp=Z,26nm,0.9s,mb4.8						
BLA	**Blacksburg**	**26.62**	**11**	*e*P	**P**	**02 42 15.0**	**+0.8**
BLA				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.7						
WCI	**Wyandotte Cave**	**27.02**	**1**	*e*P	**P**	**02 42 17.6**	**-0.1**
	comp=Z,8.0nm,0.8s,mb4.3						
WCI	**Wyandotte Cave**	**27.02**	**1**	*e*P	**P**	**02 42 17.6**	**-0.1**
WCI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
CCM	**Cathedral Cave**	**27.14**	**352**	*e*P	**P**	**02 42 18.1**	**-0.7**
	comp=Z,15nm,1.1s,mb4.4						
CCM	**Cathedral Cave**	**27.14**	**352**	*e*P	**P**	**02 42 18.1**	**-0.7**
CCM				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
AMTX	**Amarillo**	**27.28**	**333**	*e*P	**P**	**02 42 21.4**	**+1.2**
	comp=Z,13nm,0.6s,mb4.6						
MCWV	**Mont Chateau**	**29.10**	**11**	*e*P	**P**	**02 42 36.3**	**0.0**
	comp=Z,19nm,0.8s,mb4.4						
ACSO	**Alum Creek Sta**	**29.21**	**6**	*e*P	**P**	**02 42 36.9**	**-0.4**
	comp=Z,23nm,0.9s,mb4.9						
BNM	**Barren Site**	**29.24**	**325**	*e*P	**P**	**02 42 38.6**	**+1.0**
SDMD	**Soldier's Deli**	**29.55**	**16**	*e*P	**P**	**02 42 40.7**	**+0.4**
	comp=Z,44nm,0.9s,mb5.2						
ANMO	**Albuquerque**	**29.73**	**326**	P	**P**	**02 42 42.8**	**+0.8**
	comp=Z,1.2nm,0.7s,mb3.8,baz=164,slow=8.5,SNR=5.8						
MVL	**Millersville**	**30.23**	**16**	*e*P	**P**	**02 42 45.8**	**-0.5**
	comp=Z,25nm,0.8s,mb5.0						
SSPA	**Standing Stone**	**30.45**	**13**	*e*P	**P**	**02 42 48.5**	**+0.3**
	comp=Z,21nm,0.8s,mb4.9						
TUC	**Tucson**	**30.56**	**317**	P	**P**	**02 42 46.9**	**-2.5**
	comp=Z,3.4nm,1.2s,mb4.0						
TUC	**Tucson**	**30.56**	**317**	P	**P**	**02 42 46.9**	**-2.4**
TUC				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
LUPA	**Lehigh Univers**	**31.06**	**17**	*e*P	**P**	**02 42 53.1**	**-0.6**
SDCO	**Great Sand Dun**	**31.39**	**331**	*e*P	**P**	**02 42 56.2**	**-0.4**
	comp=Z,3.5nm,0.8s,mb4.2						
ERPA	**Erie**	**31.47**	**10**	*e*P	**P**	**02 42 56.5**	**-0.7**
	comp=Z,71nm,0.8s,mb5.5						
BINY	**Binghamton**	**32.39**	**15**	*e*P	**P**	**02 43 05.4**	**+0.1**
	comp=Z,54nm,0.9s,mb5.4						
MVCO	**Mesa Verde**	**32.51**	**327**	*e*P	**P**	**02 43 07.1**	**+0.7**
	comp=Z,4.6nm,0.9s,mb4.4						
LPAZ	**La Paz**	**32.89**	**146**	P

comp=Z,80nm,18.1s,MS4.2,baz=250,slow=36
TORD Torodi Ar. Bea 86.08 77 P **P** 02 49 16.8 +0.2
TORD LR LR 03 27 30.1
ARCES ARCESS Array B 87.24 19 LR LR 03 31 40.0
comp=Z,94nm,18.9s,MS4.2,baz=294,slow=38
KEST Kesra 88.52 54 LR LR 03 24 13.2
comp=Z,66nm,20.5s,MS4.0,baz=219,slow=32
GERES GERESS Array B 88.54 41 LR LR 03 26 09.1
comp=Z,251nm,18.3s,MS4.7,baz=118,slow=34
AKASG Malin Array Be 97.25 35 LR LR 03 31 29.0
comp=Z,259nm,19.8s,MS4.7,baz=270,slow=34
MKAR Makanchi Array 121.55 9 PKP PKPdf 02 55 28.2 -0.5
comp=Z,0.7nm,0.9s,baz=323,slow=4.3,SNR=2.8
WMQ Urumqi 125.11 5 *e*PKP PKPdf 02 55 39.0 +3.4
HHC Hu-ho-hao-te 125.60 343 *e*PKP PKPdf 02 55 34.3 -2.3
HHC XPKP 02 55 58.6
HHC PP PP 02 57 29.0 +1.8
HHC PKS 02 59 08.9
HHC SKS SKSdf 03 02 41.8 -3.1
HHC SKKS SKKSac 03 04 16.9 -5.9
HHC SS SS 03 14 19.8 -2.6
HHC PP PP
comp=Z,101nm,8.3s
HHC LR LR
comp=N,195nm,19.0s,MS4.9
HHC LR LR
comp=E,202nm,22.6s,MS4.9
HHC LR LR
comp=Z,109nm,23.8s,MS4.5
GTA Gaotai 129.38 353 *e*PKP PKPdf 02 55 46.1 +2.2
NJ2 Nanjing 130.57 331 *e*PKP PKPdf 02 55 49.6 +3.2
LZH Lanzhou 132.01 348 *e*PKP PKPdf 02 55 52.0 +3.0
LZH XPKP 02 56 08.5
CD2 Chengdu 137.02 347 *e*PKP PKPdf 02 55 58.3 -0.2
CD2 XPKP 02 56 18.0
CD2 PP PP 02 58 44.8 +3.9
CD2 PKS 02 59 33.9
CD2 SKS SKSdf 03 03 03.5 -2.4
CD2 SKKS SKKSac 03 05 32.4 -1.0
CD2 SS SS 03 16 45.8 +3.9
CD2 PP PP
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,130nm,18.2s
CD2 LR LR
comp=Z,160nm,16.8s,MS4.8
ASAR Alice Springs 139.35 247 PKP PKPdf 02 56 01.1 -1.8
comp=Z,0.8nm,0.8s,baz=99,slow=2.9,SNR=4.0
WRA Warramunga Arr 139.50 252 PKP PKPdf 02 56 03.6 +0.3
comp=Z,1.2nm,0.9s,baz=90,slow=2.0,SNR=5.4
GYA Guiyang 140.44 341 *e*PKP PKPdf 02 56 03.3 -1.6
GYA XPKP 02 56 25.8
GYA PP PP 02 59 05.3 +3.1
GYA PP PP
comp=Z,50nm,7.4s
KMI Kunming 142.81 346 PKP PKPdf 02 56 07.8 -1.4
KMI APKP 02 56 24.3
KMI XPKP 02 56 31.1
KMI LR LR
comp=Z,59nm,26.3s,MS4.2
CMAR Chiang Mai Arr 150.09 349 PKPbc PKPbc 02 56 23.1 -3.5
comp=Z,4.1nm,0.8s,baz=127,slow=1.3,SNR=9.8
CMAR PKPab PKPab 02 56 28.4 -3.9
comp=Z,7.0nm,0.9s,baz=340,slow=3.2,SNR=23

*DDA **20** 02:38:57.4, 3876N×2570E, h10km±5km, Md3.2*
*CSEM **20** 02:38:57.1±0.1, 3878N×2568E, h10km, ML4.0/3, Error ellipse: s-maj=1.7km s-min=1.0km az=19.0*
*ISK **20** 02:38:57.0, 3882N×2569E, h5km, ML3.5*
*NEIC **20** 02:38:57.0, 3882N×2570E, h4km, MD3.5(ATH), ML3.5(ISK), After ISK.*
*ISCJB **20** 02:38:57.2±0.6, 3879N±002×2567E±002, h7km±4km, Error ellipse: s-maj=3.4km s-min=2.5km az=32.2*
*ATH **20** 02:38:58.6, 3889N×2583E, h59km±7km, MD3.5/4*
*THE **20** 02:38:58.7, 3876N×2573E, h14km±1km, ML4.0/3, Error ellipse: s-maj=1.7km s-min=0.6km az=104.0*
*SOF **20** 02:39:02.7, 3923N×2554E, h12km, MD2.7*
ISC 20 02:38:58.0±0.5, 3878N±002×2567E±002, h8km±4km, n127, σ0s87/182, 2C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.49**	**142**	P	**Pg**	**02 39 07.8**	**+0.3**
CHOS				S	**Sg**	**02 39 14.4**	**+0.5**
PRK	**Paraskevi**	**0.66**	**45**	P	**Pg**	**02 39 10.7**	**0.0**
PRK				S	**Sg**	**02 39 21.0**	**+1.7**
PRK	**Paraskevi**	**0.66**	**45**	*e*P	**Pg**	**02 39 10.5**	**-0.2**
PRK				*e*S	**Sg**	**02 39 20.4**	**+1.1**
URLA	**Izmir**	**0.83**	**120**	*i* P	**Pg**	**02 39 14.0**	**0.0**
URLA				*i* S	**Sg**	**02 39 25.6**	**+0.8**
AYVA	**Ayvalik**	**0.95**	**56**	*i* P	**Pg**	**02 39 16.1**	**-0.1**
AYVA				*i* S	**Sg**	**02 39 28.8**	**+0.2**
BLCB	**Balcova**	**1.14**	**110**	*e*PN	**Pn**	**02 39 19.3**	**-1.0**
BLCB				*e*SN	**Sn**	**02 39 35.7**	**-0.4**
BLCB	**Balcova**	**1.14**	**110**	P	**Pg**	**02 39 18.9**	**-1.0**
BLCB				S	**Sg**	**02 39 34.2**	**-0.5**
BLCB	**Balcova**	**1.14**	**110**	Pn	**Pn**	**02 39 19.3**	**-1.0**
BLCB				Sg	**Sg**	**02 39 35.3**	**+0.6**
BLCB	**Balcova**	**1.14**	**110**	P	**Pg**	**02 39 18.9**	**-1.0**
BLCB				S	**Sg**	**02 39 34.2**	**-0.5**
BLCB				Sg	**Sg**	**02 39 35.3**	**+0.6**
BLCB				*e*Sn	**Sn**	**02 39 35.7**	**-0.4**
EZN	**Ezine**	**1.16**	**26**	*e*PN	**Pn**	**02 39 18.8**	**-1.7**
EZN				*e*SN	**Sn**	**02 39 34.8**	**-1.8**
EZN	**Ezine**	**1.16**	**26**	Pn	**Pn**	**02 39 18.8**	**-1.7**
EZN				Sg	**Sg**	**02 39 34.8**	**-0.5**
LIA	**Limnos Island**	**1.18**	**341**	P	**Pb**	**02 39 19.6**	**-1.0**
LIA				S	**Sg**	**02 39 36.1**	**+0.2**
LIA	**Limnos Island**	**1.18**	**341**	*e*P	**Pb**	**02 39 19.6**	**-1.0**
LIA				S	**Sg**	**02 39 36.1**	**+0.2**
KDAG	**Bornova**	**1.30**	**106**	*i* P	**Pn**	**02 39 21.5**	**-0.9**
KDAG				*i* S	**Sb**	**02 39 40.0**	**+0.4**
SMG	**Samos**	**1.41**	**139**	*e*P	**Pn**	**02 39 23.0**	**-0.9**
SMG				*e*S	**Sb**	**02 39 41.5**	**-1.1**
GADA	**Gvkgeada**	**1.42**	**7**	*e*PN	**Pn**	**02 39 23.1**	**-1.0**
AOS	**Alonnisos**	**1.45**	**286**	P	**Pn**	**02 39 25.1**	**+0.6**
AOS				S	**Sn**	**02 39 44.1**	**+0.4**
GCAM	**G?zelcaml?**	**1.63**	**131**	*i* P	**Pn**	**02 39 26.7**	**-0.3**
GCAM				*i* S	**Sn**	**02 39 49.0**	**+0.9**
GCAM	**G?zelcaml?**	**1.63**	**131**	*i* P	**Pn**	**02 39 26.7**	**-0.3**
GCAM				*i* S	**Sn**	**02 39 49.0**	**+0.8**
AKS	**Akhisar**	**1.67**	**86**	*e*PN	**Pn**	**02 39 27.5**	**0.0**
ATH	**Athens Observa**	**1.74**	**243**	*e*P	**Pn**	**02 39 30.3**	**+1.9**
LPK	**Lapseki**	**1.80**	**27**	*e*PN	**Pn**	**02 39 28.9**	**-0.4**
BALB	**Balikesir**	**1.92**	**63**	*e*PN	**Pn**	**02 39 31.2**	**+0.3**
PAIG	**Palíouri**	**1.93**	**307**	P	**Pn**	**02 39 31.2**	**+0.2**
PAIG				S	**Sn**	**02 39 55.6**	**+0.2**
ENEZ	**Enez**	**1.99**	**11**	*e*PN	**Pn**	**02 39 31.8**	**-0.1**
XOR	**Xorichti**	**2.02**	**288**	P	**Pn**	**02 39 32.2**	**-0.1**
XOR				S	**Sn**	**02 39 58.5**	**+0.8**
OUR	**Ouranopolis**	**2.03**	**320**	P	**Pn**	**02 39 31.8**	**-0.7**
LKR	**Lokris**	**2.10**	**267**	*e*P	**Pn**	**02 39 34.1**	**+0.8**
LKR	**Lokris**	**2.10**	**267**	P	**Pn**	**02 39 32.7**	**-0.6**
ALN	**Alexandroupoli**	**2.13**	**8**	P	**Pn**	**02 39 32.7**	**-1.2**
ALN				S	**Sn**	**02 40 00.1**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.23**	**31**	*e*PN	**Pn**	**02 39 35.5**	**+0.3**
LTK	**Loutraki**	**2.26**	**251**	P	**Pn**	**02 39 36.3**	**+0.7**
LTK				S	**Sn**	**02 40 04.5**	**+0.9**
MANT	**Manisa**	**2.28**	**96**	*i* P	**Pn**	**02 39 34.8**	**-1.1**
DID	**Didima**	**2.30**	**237**	P	**Pn**	**02 39 35.2**	**-1.0**
THR4	**Thira Island,**	**2.33**	**185**	P	**Pn**	**02 39 35.1**	**-1.4**
BNT	**Bandirma**	**2.34**	**47**	*e*PN	**Pn**	**02 39 36.1**	**-0.7**
PLG	**Polygyros**	**2.35**	**313**	P	**Pn**	**02 39 36.7**	**-0.1**
KULA	**Kula-Manisa**	**2.35**	**96**	*e*PN	**Pn**	**02 39 36.6**	**-0.3**
RDO	**Rodhopi**	**2.37**	**358**	*e*P	**Pn**	**02 39 35.0**	**-2.1**
THR3	**Thira Island,**	**2.38**	**185**	P	**Pn**	**02 39 36.2**	**-1.0**
DEMI	**Demirci**	**2.39**	**83**	*i* P	**Pn**	**02 39 36.0**	**-1.4**
DST	**Dursunbey**	**2.44**	**69**	*e*PN	**Pn**	**02 39 37.7**	**-0.4**
KCT	**Karacabey**	**2.55**	**54**	*e*PN	**Pn**	**02 39 40.5**	**+0.9**
KCT	**Karacabey**	**2.55**	**54**	Pn	**Pn**	**02 39 40.5**	**+0.9**
AGG	**Agios Georgios**	**2.62**	**276**	P	**Pn**	**02 39 40.8**	**+0.2**
AGG				S	**Sn**	**02 40 12.3**	**-0.2**
TKR	**Tekirdag**	**2.63**	**32**	*e*PN	**Pn**	**02 39 41.1**	**+0.4**
HORT	**Hortiatis**	**2.69**	**313**	P	**Pn**	**02 39 41.5**	**0.0**
SOH	**Sokhos**	**2.71**	**320**	P	**Pn**	**02 39 41.4**	**-0.4**
SOH				S	**Sn**	**02 40 15.5**	**+0.7**
CRLT	**Corlu**	**2.83**	**33**	*e*PN	**Pn**	**02 39 44.1**	**+0.6**
NVR	**Nevrokopi**	**2.92**	**332**	P	**Pn**	**02 39 44.6**	**-0.1**
THL	**Klokotos Trika**	**2.95**	**287**	P	**Pn**	**02 39 45.1**	**0.0**
THL				S	**Sn**	**02 40 21.9**	**+1.2**
RZN	**Rozhen**	**3.00**	**346**	*i* P	**Pn**	**02 39 45.3**	**-0.4**
ULDT	**Uludag**	**3.01**	**62**	*i* P	**Pn**	**02 39 46.8**	**+0.9**
KHL	**Karahalli**	**3.05**	**97**	*e*PN	**Pn**	**02 39 47.6**	**+1.1**
SLVT	**Silivri**	**3.13**	**38**	*e*PN	**Pn**	**02 39 48.2**	**+0.7**
EDRB	**Edirne**	**3.17**	**15**	*e*PN	**Pn**	**02 39 48.8**	**+0.6**
MMB	**Musomiste**	**3.18**	**333**	*i* P	**Pn**	**02 39 47.6**	**-0.6**
MMB				*e*Pg	**Pg**	**02 39 56.3**	**-2.5**
MMB				*e*S	**Sn**	**02 40 20.9**	**-5.4**
KNT	**Kendrikon**	**3.20**	**319**	P	**Pn**	**02 39 48.5**	**0.0**
ARG	**Arkhangelos**	**3.22**	**142**	P	**Pn**	**02 39 49.2**	**+0.4**
GRG	**Griva**	**3.33**	**312**	P	**Pn**	**02 39 50.6**	**+0.3**
YLV	**Yalova**	**3.37**	**57**	*e*PN	**Pn**	**02 39 51.7**	**+0.9**
BGKT	**Bogazkoy**	**3.38**	**44**	*e*PN	**Pn**	**02 39 51.9**	**+0.9**
ISK	**Istanbul-Kandi**	**3.46**	**48**	*e*PN	**Pn**	**02 39 53.1**	**+0.9**
ALT	**Altintas**	**3.47**	**84**	*e*PN	**Pn**	**02 39 52.3**	**0.0**
ALT	**Altintas**	**3.47**	**84**	Pn	**Pn**	**02 39 52.6**	**+0.4**
ALT	**Altintas**	**3.47**	**84**	Pn	**Pn**	**02 39 52.7**	**+0.4**
ADVT	**Abdulvahap**	**3.55**	**61**	*e*PN	**Pn**	**02 39 54.4**	**+1.0**
ADVT	**Abdulvahap**	**3.55**	**61**	Pn	**Pn**	**02 39 54.3**	**+1.0**
KKB	**Krupnik**	**3.67**	**328**	*i* P	**Pn**	**02 39 54.3**	**-0.6**
KKB				*e*S	**Sn**	**02 40 34.4**	**-3.9**
ZKR	**Zakros**	**3.68**	**173**	P	**Pn**	**02 39 53.9**	**-1.3**
ZKR	**Zakros**	**3.68**	**173**	P	**Pn**	**02 39 54.9**	**-0.3**
FNA	**Florina**	**3.87**	**303**	P	**Pn**	**02 39 57.9**	**+0.2**
GPA	**Golpazari**	**3.89**	**66**	*e*PN	**Pn**	**02 39 59.2**	**+1.2**
EYL	**Eskiyayla**	**3.89**	**61**	*e*PN	**Pn**	**02 39 58.8**	**+0.8**
GULT	**Gulveren**	**4.09**	**65**	*e*PN	**Pn**	**02 40 02.1**	**+1.4**
VTS	**Vitosha**	**4.25**	**335**	P	**Pn**	**02 40 03.5**	**+0.6**
VTS				S	**Sn**	**02 40 51.3**	**-1.3**
PVL	**Pavlikeni**	**4.44**	**357**	*e*P	**Pn**	**02 40 05.9**	**+0.3**
SZH	**Strazhica**	**4.49**	**2**	*e*P	**Pn**	**02 40 08.5**	**+2.3**
VOIR		**6.67**	**356**	*i* P	**Pn**	**02 40 37.9**	**+1.7**
GZR	**Gura Zlata**	**6.95**	**343**	*i* P	**Pn**	**02 40 39.7**	**-0.3**
DRGR		**8.30**	**346**	*i* P	**Pn**	**02 41 06.7**	**+8.2**

*CSEM **20** 02:49:44.8, 35.11N×27.11E, h17km, MD3.5/6, After ATH*
*NEIC **20** 02:49:44.8, 35.11N×27.11E, h17km, MD3.5(ATH), After ATH.*
ATH 20 02:49:44.8, 3511N×2711E, h17km±2km, MD3.5/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.44**	**5**	*e*PB	Pb	02 49 53.0	-1.1
KARP				*e*SB	Sb	02 50 00.1	-0.3
ZKR	**Zakros**	**0.73**	**271**	P	Pb	02 49 58.3	-0.8
NPS	**Neapolis**	**1.24**	**278**	*e*PN	Pn	02 50 07.6	+0.3
NPS				*e*SN	Sn	02 50 25.3	+1.7
LAST	**Lasithi**	**1.34**	**273**	P	Pn	02 50 10.4	+1.7
ARG	**Arkhangelos**	**1.38**	**37**	*e*PN	Pn	02 50 11.4	+2.1
ARG				*e*SN	Sn	02 50 30.3	+3.2
IDI	**Anoyia**	**1.83**	**276**	P	Pn	02 50 19.3	+3.9
VAM	**Vamos**	**2.40**	**278**	*e*PN	Pn	02 50 26.0	+2.7
VAM				*e*SN	Sn	02 50 55.6	+3.3
SMG	**Samos**	**2.60**	**355**	*e*PB	Pb	02 50 28.9	-2.1
VLI	**Veliai**	**3.75**	**297**	*e*PN	Pn	02 50 44.0	+2.2

*SZGRF **20** 02:50:47.6, 1767S×17585W, h33km, Tonga Islands*
*ISCJB **20** 02:51:11.8±1.1, 1816S±007×17651W±009, h262km±11km, mb3.8/12, Error ellipse: s-maj=15.9km s-min=9.8km az=33.2*
*NEIC **20** 02:51:12.5±1.2, 1822S×17650W, h251km±11km, mb4.2/4, Error ellipse: s-maj=14.1km s-min=9.8km az=129.0*
*IDC **20** 02:51:13.5±1.6, 1828S×17640W, h266km±16km, mb3.5/10, mb1 3.8/11, mb1mx3.7/19, mbtmp3.6/11, Error ellipse: s-maj=18.0km s-min=10.1km az=122.0*
ISC 20 02:51:12.6±1.0, 1822S±007×17644W±009, h258km±11km, n68, σ0s92/25, mb3.8/12, 2C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.20**	**47**	P	**Pn**	**02 52 44.1**	**+0.7**
	12nm,0.3s,baz=60,slow=22,SNR=8.7						
AFI				S	**S**	02 53 54.0	-2.2
	6.0nm,0.3s,baz=18,slow=14,SNR=2.2						
AFI	**Afiamalu**	**6.20**	**47**	*e*P	**Pn**	**02 52 44.4**	**+1.0**
AFI				*e*S	**S**	**02 53 55.3**	**-0.9**
RAO	**Raoul Island**	**11.06**	**187**	Pn	**Pn**	**02 53 44.4**	**+0.1**
URZ	**Urewera**	**20.75**	**194**	P	**P**	**02 55 33.5**	**-0.3**
	6.2nm,0.3s,baz=259,slow=0.8,SNR=14						
URZ				S	**S**	**02 59 07.2**	**-1.9**
	2.6nm,0.4s,baz=272,slow=14,SNR=9.8						
HNR	**Honiara**	**24.52**	**288**	P	**P**	**02 56 08.8**	**-0.1**
CTAO	**Charters Tower**	**35.25**	**261**	*e*P	**P**	**02 57 43.1**	**0.0**
PMG	**Port Moresby**	**36.36**	**279**	*e*P	**P**	**02 57 50.6**	**-2.0**
	17nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**40.13**	**242**	P	**P**	**02 58 24.9**	**+1.1**
	1.9nm,0.5s,mb3.7,baz=86,slow=7.1,SNR=6.7						
WRA	**Warramunga Arr**	**46.42**	**260**	P	**P**	**02 59 14.8**	**+0.8**
	0.9nm,0.6s,mb3.3,baz=95,slow=7.2,SNR=7.5						
ASAR	**Alice Springs**	**46.51**	**254**	P	**P**	**02 59 15.4**	**+0.8**
	5.7nm,0.8s,mb4.0,baz=90,slow=8.1,SNR=36						
ASAR				S	**S**	**03 05 40.3**	**-2.9**
	0.5nm,0.9s,baz=84,slow=19,SNR=4.3						
VNDA	**Vanda**	**60.30**	**185**	P	**P**	**03 00 54.6**	**+0.9**
	0.5nm,0.7s,mb3.1,baz=358,slow=7.6,SNR=4.0						
VNDA	**Vanda**	**60.30**	**185**	*e*P	**P**	**03 00 54.4**	**+0.7**
	0.4nm,0.7s,mb3.1						
MJAR	**Matsushiro Arr**	**69.29**	**322**	P	**P**	**03 01 51.4**	**-0.7**
	1.3nm,0.4s,mb4.0,baz=143,slow=5.8,SNR=4.4						
MAJO	**Matsushiro**	**69.29**	**322**	*e*P	**P**	**03 01 52.8**	**+0.7**
PETK	**Petropavlovsk-**	**74.47**	**344**	P	**P**	**03 02 22.6**	**+0.2**
	5.7nm,0.8s,mb4.2,baz=140,slow=5.6,SNR=3.3						
NVAR	**Mina Array Bea**	**78.36**	**43**	P	**P**	**03 02 45.4**	**+0.9**
	1.7nm,0.8s,mb3.8,baz=223,slow=9.5,SNR=8.6						
MAW	**Mawson**	**84.20**	**199**	*e*P	**P**	**03 03 14.0**	**-0.6**
	0.2nm,0.4s,mb3.3						
TXAR	**Lajitas Array**	**84.58**	**57**	P	**P**	**03 03 18.4**	**+1.1**
	1.1nm,0.9s,mb3.7,baz=214,slow=5.8,SNR=8.8						
COLA	**College**	**85.68**	**12**	*e*P	**P**	**03 03 21.4**	**-0.4**
	4.4nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**86.30**	**43**	P	**P**	**03 03 25.2**	**-0.2**
	0.4nm,0.7s,mb3.4,baz=221,slow=1.4,SNR=4.1						
PLCA	**Paso Flores**	**89.75**	**133**	P	**P**	**03 03 41.4**	**-0.5**
ARCES	**ARCESS Array B**	**126.94**	**351**	PKP	PKPdf	03 09 44.6	-0.4
	3.7nm,0.8s,baz=29,slow=2.1,SNR=8.9						
KWP	**Kalwaria**	**145.08**	**338**	*i* P	PKPdf	03 10 19.6	+0.6
OJC	**Ojcow**	**145.53**	**342**	*e*PX	PKPdf	03 10 19.9	+0.1
BURAR	**Bucovina Array**	**145.75**	**334**	*i* P	PKPdf	03 10 20.4	+0.2
STHS	**Stebnicka Huta**	**145.77**	**339**	*e*PKP	PKPdf	03 10 17.6	-2.6
KSP	**Ksiaz**	**145.91**	**346**	*e*P	PKPdf	03 10 21.0	+1.6
NIE	**Niedzica**	**146.07**	**340**	*e*PX	PKPab	03 10 22.8	-0.3
CRVS	**Cervenica-Dubn**	**146.13**	**339**	*e*PKP	PKPbc	03 10 23.3	+1.0
CLL	**Collm**	**146.15**	**349**	*e*PKPbc	PKPbc	03 10 22.0	-0.2
CLL	**Collm**	**146.15**	**349**	*i* PKPbc	PKPbc	03 10 22.1	-0.1
	comp=Z,9.0nm,0.6s						
BRTR	**Keskin Array B**	**146.32**	**316**	PKPbc	PKPbc	03 10 23.6	+0.5
DPC	**Dobruska-Polom**	**146.36**	**345**	*e*PKP	PKPbc	03 10 23.6	+0.7
BRG	**Berggiesshubel**	**146.39**	**348**	*e*PKPbc	PKPbc	03 10 23.4	+0.5
BRG	**Berggiesshubel**	**146.39**	**348**	*i* P	PKPbc	03 10 23.2	+0.3
	comp=Z,4.8nm,0.7s						
PVCC	**Panska Ves**	**146.59**	**347**	*e*PKP	PKPbc	03 10 24.3	+0.8
MOX	**Moxa**	**147.02**	**351**	*e*PKPbc	PKPbc	03 10 24.2	-0.5
TANN	**Tannenbergstha**	**147.10**	**350**	*e*PKPbc	PKPbc	03 10 25.4	+0.5
PRU	**Pruhonice**	**147.10**	**347**	*e*PKP	PKPbc	03 10 25.1	+0.1
NKC	**Nowy Kostel**	**147.28**	**349**	*e*PKP	PKPbc	03 10 27.3	+1.9
VYHS	**Vyhne**	**147.35**	**341**	*e*PKP	PKPbc	03 10 25.8	+0.1
KOLL	**Kolacno**	**147.41**	**342**	*e*PKP	PKPbc	03 10 25.5	-0.3
DRGR		**147.43**	**335**	*i* P	PKPbc	03 10 25.5	-0.5
PSZ	**Piszkesteto**	**147.51**	**339**	*i* P	PKPbc	03 10 25.6	-0.5
ROTZ	**Rotzenmuhle**	**147.77**	**349**	*e*PKPbc	PKPbc	03 10 27.4	+0.6
TNS	**Taunus Mts**	**147.83**	**354**	*e*PKPbc	PKPbc	03 10 26.8	-0.1
GRF	**Grafenberg Arr**	**148.00**	**351**	*e*PKPbc	PKPbc	03 10 27.7	+0.3
KHC	**Kasperske Hory**	**148.12**	**348**	*e*PKP	PKPbc	03 10 28.1	+0.4
GIVF	**Givet**	**148.18**	**358**	*e*PKP1	PKPbc	03 10 27.6	-0.2
BAIF	**Baives**	**148.23**	**359**	*e*PKP1	PKPbc	03 10 27.9	0.0
	comp=Z,4.0nm,0.6s						
GEC2	**GERESS Array S**	**148.36**	**347**	*e*PKPbc	PKPbc	03 10 28.4	+0.1
GERES	**GERESS Array B**	**148.36**	**347**	PKPbc	PKPbc	03 10 28.7	+0.3
	comp=Z,2.3nm,0.6s,baz=24,slow=2.9,SNR=26						
WLF	**Walferdange**	**148.56**	**357**	*e*PKPbc	PKPbc	03 10 29.2	+0.4
BZS	**Buzias**	**148.83**	**335**	*i* P	PKPbc	03 10 29.7	+0.1
STU	**Stuttgart**	**149.18**	**353**	*e*PKPbc	PKPbc	03 10 31.4	+1.0
FLN	**La Foliniere**	**149.36**	**5**	*e*PKP1	PKPbc	03 10 30.3	-0.5
PKSM	**Moragy**	**149.42**	**339**	*i* P	PKPbc	03 10 31.0	-0.1
LDF	**La Druitiere**	**149.56**	**5**	*e*PKP1	PKPbc	03 10 30.6	-0.7
RJOB	**Jochberg**	**149.61**	**348**	*e*PKPbc	PKPbc	03 10 32.0	+0.6
GRR	**Gorron**	**149.69**	**6**	*e*PKP1	PKPbc	03 10 31.2	-0.4
	comp=Z,14nm,0.8s						
CDF	**Champ du Feu**	**149.73**	**355**	*e*PKP1	PKPbc	03 10 31.6	-0.1
	comp=Z,3.4nm,0.6s						
HAU	**Haudompre**	**150.31**	**356**	*e*PKP1	PKPbc	03 10 32.6	-0.3
	comp=Z,9.5nm,0.7s						
HINF	**Hinteralfeld**	**150.36**	**356**	*e*PKP1	PKPbc	03 10 32.8	-0.4
	comp=Z,2.7nm,0.5s						
LOR	**Lormes**	**151.03**	**360**	*e*PKP1	PKPbc	03 10 34.6	-0.2
	comp=Z,8.7nm,0.7s						
DAVOX	**Davos/Dischmat**	**151.04**	**351**	PKPbc	PKPbc	03 10 35.2	+0.3
	comp=Z,6.0nm,0.5s,baz=253,slow=3.4,SNR=17						
SSF	**Saint Saulge**	**151.24**	**0**	*e*PKP1	PKPbc	03 10 35.1	-0.2
	comp=Z,9.1nm,0.8s						
MFF	**Saint Martin d**	**151.53**	**5**	*e*PKP1	PKPbc	03 10 35.4	-0.6
TCF	**Toulx Ste Croi**	**151.99**	**2**	*e*PKP1	PKPbc	03 10 36.5	-0.5
	comp=Z,4.3nm,0.7s						

*NEIC **20** 02:52:12.9, 1028N×8538W, h16km, MD4.2(CASC), After CASC.*
CASC 20 02:51:50.2±2.2, 1098N×8694W, h33km±24km, MD4.2, ML3.0, 16C-7D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRUN	**El Crucero**	**1.18**	**32**	*e*P	Pn	02 52 11.2	+0.9
COPN	**Copaltepe**	**1.24**	**16**	*e*P	Pn	02 52 11.2	0.0
TICN	**Ticuantepe**	**1.25**	**33**	*e*P	Pn	02 52 11.5	+0.1
APON	**Apoyo**	**1.26**	**42**	*e*P	Pn	02 52 11.7	+0.2
APON				AML	AML	02 52 24.0	
	comp=Z,208nm,0.3s						
CSAN		**1.30**	**23**	*e*P	Pn	02 52 11.8	-0.2
XAVN	**Gruta Xavier**	**1.31**	**27**	*e*P	Pn	02 52 12.2	+0.1
TISN	**Laguna Tiscapa**	**1.33**	**29**	*e*P	Pn	02 52 12.5	+0.1
MGAN	**Managua**	**1.34**	**30**	*e*P	Pn	02 52 12.7	0.0
MGAN				*e*S	Sn	02 52 30.5	+1.2
APYN	**Apoyeque**	**1.37**	**25**	*e*P	Pn	02 52 13.2	+0.2
APYN				AML	AML	02 52 39.9	
	comp=Z,890nm,0.6s						
WILN	**Americas 2**	**1.38**	**32**	*e*P	Pn	02 52 13.1	-0.1
CONN	**Concepcion**	**1.41**	**66**	*e*P	Pn	02 52 13.2	-0.3
MIRN	**Miramar**	**1.47**	**9**	*e*P	Pn	02 52 14.5	+0.1
MOMN	**Momotombo**	**1.47**	**15**	*e*P	Pn	02 52 14.7	+0.3
MOMN				AML	AML	02 52 33.9	
	comp=Z,23nm,0.5s						
CNGN	**Cerro Negro**	**1.53**	**9**	*e*P	Pn	02 52 14.9	-0.3
CNGN				*e*P		02 52 15.0	
CNGN				*e*P		02 52 15.1	
VCR	**Vista de Mar**	**1.54**	**123**	*e*P	Pn	02 52 19.7	+4.4
HUEN		**1.54**	**29**	*e*P	Pn	02 52 15.3	-0.1
TEL3	**Telica 3**	**1.59**	**3**	*e*P	Pn	02 52 16.2	+0.3
LIM1	**Limonal**	**1.68**	**99**	*e*P	Pn	02 52 16.3	-0.9
CRIN	**San Cristobal**	**1.71**	**356**	*e*P	Pn	02 52 18.0	+0.3
CUI	**Cuipilapa**	**1.75**	**100**	*e*P	Pn	02 52 17.7	-0.6
JCR	**Jicaral**	**2.12**	**122**	*e*P	Pn	02 52 21.6	-1.7
FORC	**Fortuna**	**2.28**	**103**	*e*P	Pn	02 52 25.2	-0.3
FORC				*e*P		02 52 29.5	
CNCH	**Conchagua**	**2.45**	**339**	*e*P	x	02 52 28.3	
CNCH				AML	x	02 53 01.6	
	comp=Z,257nm,0.6s						
CGA2	**Cerro Gallo 2**	**2.61**	**111**	*e*P	Pn	02 52 31.2	+1.1
BLLM	**Bellamira**	**2.76**	**333**	*e*P	x	02 52 33.0	
BLLM				*e*S	x	02 53 05.5	
PRS1	**Puriscal**	**2.76**	**111**	*e*P	Pn	02 52 32.9	+0.7
VSM	**San Miguel**	**2.76**	**332**	*e*P	x	02 52 32.6	
LAJ	**Bijagual**	**2.98**	**112**	*e*P	Pn	02 52 30.8	-4.4
CAHU	**Cacacuatique**	**3.04**	**336**	*e*P	x	02 52 36.6	
TGUH	**Tegucigalpa,

ATAB				*i* S		**Sg**	**03 25 10.3**	**-0.4**
EZC	**Erzincan**	**1.39**	**20**	*e*PN		**Pn**	**03 24 57.3**	**-1.2**
BNGL	**BINGOL**	**1.61**	**71**	*i* P		**Pn**	**03 25 01.8**	**+0.2**
MARD	**Mardin**	**1.69**	**132**	*i* P		**Pn**	**03 25 01.6**	**-1.0**
MARD				*i* S		**Sn**	**03 25 23.7**	**-1.1**
GZT	**Gaziantep**	**1.69**	**230**	*i* P		**Pn**	**03 25 01.0**	**-1.6**
GZT				*i* S		**Sn**	**03 25 26.1**	**+1.3**
SARI	**SarD1z-Kayseri**	**1.97**	**278**	*e*PN		**Pg**	**03 25 09.9**	**+0.1**
GAZ	**Gaziantep**	**2.02**	**232**	*e*PN		**Pn**	**03 25 07.9**	**+0.7**
GUMT	**Gumushane**	**2.03**	**6**	*e*PN		**Pn**	**03 25 07.5**	**+0.3**
KMRS	**Kahramanmaras**	**2.04**	**243**	*e*PN		**Pn**	**03 25 08.2**	**+0.7**
EZM	**Erzurum**	**2.23**	**48**	*e*PN		**Pn**	**03 25 09.8**	**-0.2**
SVSK	**Karacayir**	**2.25**	**311**	*e*PN		**Pn**	**03 25 10.8**	**+0.4**
ESPY	**Espiye-Giresun**	**2.50**	**352**	*e*PN		**Pn**	**03 25 14.1**	**+0.4**
BNN	**Bunyan**	**2.65**	**280**	*e*PN		**Pn**	**03 25 16.8**	**+0.9**

IDC 20 04:04:25.4±1.3, 288N×12411E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/18, mbtmp4.0/6, Error ellipse: s-maj=246.7km s-min=16.8km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**17.56**	**152**	*e*P	Px	04 08 30.3	
	12nm,0.5s						
WRA	**Warramunga Arr**	**24.81**	**157**	P	P	04 09 49.8	+0.4
	1.9nm,0.4s,baz=337,slow=9.8,SNR=15						
WB2	**Warramunga Arr**	**24.81**	**157**	*e*P	P	04 09 49.8	+0.4
ASAR	**Alice Springs**	**28.06**	**161**	P	P	04 10 18.4	-0.3
	0.4nm,0.3s,baz=331,slow=9.0,SNR=9.5						
STKA	**Stephens Creek**	**38.35**	**156**	*e*P	P	04 11 48.2	-0.1
	1.9nm,0.4s						
STKA	**Stephens Creek**	**38.35**	**156**	P	P	04 11 48.3	0.0
	2.5nm,0.3s,baz=331,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**56.79**	**327**	P	P	04 14 11.8	+0.4
	0.6nm,0.5s,baz=120,slow=7.5,SNR=9.7						
ZALV	**Zalesovo Beam**	**60.18**	**334**	P	P	04 14 35.1	+0.1
	0.6nm,0.5s,baz=123,slow=10,SNR=2.6						
KURK	**Kurchatov**	**61.07**	**329**	P	P	04 14 40.7	-0.5
	0.5nm,0.5s,baz=140,slow=5.4,SNR=3.6						

IDC 20 04:16:38.9±2.8, 799S×11323E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.4/4, Error ellipse: s-maj=137.7km s-min=23.5km az=53.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.65**	**122**	P	P	04 21 52.4	+0.1
	0.5nm,0.5s,baz=298,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**25.22**	**131**	P	P	04 22 06.3	-0.3
	0.8nm,1.0s,baz=315,slow=8.5,SNR=4.5						
SONM	**Songino Array**	**55.90**	**354**	P	P	04 26 19.1	+0.7
	0.2nm,0.3s,baz=165,slow=6.0,SNR=3.7						
MKAR	**Makanchi Array**	**61.09**	**336**	P	P	04 26 54.3	-0.4
	0.3nm,0.4s,baz=153,slow=7.6,SNR=4.9						

KRSC 20 04:19:08.4±0.5, 5257N×15958E, h11km±10km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.59**	**27**	*i* P	Pg	04 19 21.0	+1.1
SPN				*i* S	Sg	04 19 29.6	+1.9
NLC	**Nalytchevo**	**0.62**	**347**	*e*P	Pg	04 19 21.0	+0.6
NLC				*i* S	Sg	04 19 29.5	+1.0
RUS	**Russkaya**	**0.67**	**259**	*i* P	Pg	04 19 22.0	+0.7
RUS				*i* S	Sg	04 19 31.3	+1.3
PET	**Petropavlovsk**	**0.72**	**309**	*e*P	Pg	04 19 23.1	+0.7
PET				*i* S	Sg	04 19 33.1	+1.3
AVH	**Avacha**	**0.86**	**324**	*i* P	Pg	04 19 25.7	+0.7
AVH				*i* S	Sg	04 19 37.6	+1.3
GRL	**Gorelyy**	**0.92**	**269**	*e*P	Pg	04 19 26.9	+0.8
GRL				*i* S	Sg	04 19 39.7	+1.6
KII	**Karymskiy**	**1.47**	**357**	*e*P	Pn	04 19 35.5	+0.7
KII				*i* S	Sn	04 19 54.7	+0.7
GNL	**Ganaly**	**1.50**	**319**	*i* P	Pn	04 19 35.6	+0.4
GNL				*i* S	Sn	04 19 55.8	+1.1
TUMR	**Tumrok**	**2.74**	**7**	*e*P	Pn	04 19 54.4	+2.2
KMNR	**Kamenistaya**	**3.22**	**7**	*e*P	Pn	04 20 01.1	+2.3
KBTR	**Krutoberegovo**	**4.11**	**26**	P	Pn	04 20 12.3	+1.3

*IDC **20** 04:25:59.5±2.8, 2324S×7047W, h0km, mb4.1/3, mb1 4.0/4, mb1mx3.7/16, mbtmp4.0/4, ML3.7/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/23, Error ellipse: s-maj=64.1km s-min=59.0km az=74.0*

*ISCJB **20** 04:26:01.6±1.2, 2282S±006×7089W±010, h36km±12km, mb4.0/3, Error ellipse: s-maj=15.4km s-min=9.0km az=159.5*

*GUC **20** 04:26:03.9±0.6, 2284S×7064W, h35km±4km, ML3.9*

*NEIC **20** 04:26:03.9, 2284S×7064W, h35km, ML3.9(GUC), After GUC.*

ISC 20 04:26:01.6±1.3, 2281S±008×7086W±009, h23km±12km, n15, σ0§79/20, mb4.0/3, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.48**	**128**	*e*P	**Pb**	**04 26 11.4**	**0.0**
MECH				*i* S	**Sb**	**04 26 17.2**	**-0.9**
MECH				AML	AML	04 26 18.5	
	comp=N,49μm,0.3s						
CEN1	**Los Morros**	**0.84**	**134**	*i* P	**Pb**	**04 26 18.4**	**+0.8**
CEN1				*i* S	**Sb**	**04 26 29.4**	**+1.0**
CEN1				AML	AML	04 26 31.0	
	comp=E,4μm,0.4s						
ANCH	**Antofagasta**	**0.96**	**155**	*i* P	**Pb**	**04 26 19.5**	**-0.1**
ANCH				*i* S	**Sb**	**04 26 30.8**	**-1.1**
ANCH	**Antofagasta**	**0.96**	**155**	*i* P	**Pb**	**04 26 19.5**	**-0.1**
ANCH				*i* S	**Sb**	**04 26 30.8**	**-1.1**
ANCH				AML	AML	04 26 33.3	
	comp=N,4μm,0.6s						
LVC	**Limon Verde**	**1.81**	**84**	*e*P	**Pn**	**04 26 32.0**	**+0.6**
LVC				*i* S	**Sn**	**04 26 53.6**	**0.0**
LVC	**Limon Verde**	**1.81**	**84**	*e*P	**Pn**	**04 26 32.0**	**+0.6**
LVC				*i* S	**Sn**	**04 26 53.6**	**0.0**
LVC				AML	AML	04 26 55.6	
	comp=N,2μm,0.5s						
CPN1	**Cerro Paranal**	**1.86**	**167**	AML	AML	04 27 02.9	
	comp=E,2μm,0.2s						
ARE	**Arequipa**	**6.34**	**354**	*e*P	**Pn**	**04 27 35.0**	**+1.2**
ARE				*e*S	**Sn**	**04 28 44.0**	**-1.5**
LPAZ	**La Paz**	**6.98**	**22**	Pn	**Pn**	**04 27 47.1**	**+4.6**
	comp=E,0.7nm,0.3s,baz=200,slow=6.2,SNR=23						
LPAZ				LR	LR	04 30 41.5	
	comp=E,119nm,18.9s,baz=196,slow=39						
BDFB	**Brasilia**	**22.70**	**76**	P	**P**	**04 31 01.2**	**-0.7**
	comp=E,0.9nm,0.5s,mb3.5,baz=237,slow=18,SNR=5.4						
BDFB				LR	LR	04 39 57.0	
	comp=E,38nm,18.0s,baz=90,slow=37						
LRAL	**Lakeview Retre**	**57.63**	**344**	P	**P**	**04 35 50.4**	**+0.4**
DBIC	**Dimbokro**	**70.83**	**74**	P	**P**	**04 37 17.0**	**-0.1**
	comp=E,3.0nm,1.0s,mb4.2,baz=214,slow=3.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**04 38 07.1**	**+0.2**
	comp=E,3.0nm,0.8s,mb4.3,baz=255,slow=5.1,SNR=34						
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**04 38 07.1**	**+0.2**
MKAR	**Makanchi Array**	**147.75**	**36**	PKPbc	PKPbc	04 45 46.4	+1.9
	comp=E,1.0nm,0.6s,baz=312,slow=2.9,SNR=7.7						

*ISCJB **20** 04:56:16.2±0.7, 2267S±003×7060W±004, h25km±5km, mb4.8/39, MS4.2/5, Error ellipse: s-maj=6.9km s-min=5.4km az=7.1*

*GUC **20** 04:56:16.3±6.4, 2284S×7069W, h32km±41km, MD4.6, ML4.7, mb5.1(NEIC)*

*NEIC **20** 04:56:16.5, 2281S×7068W, h31km, mb5.0/31, ML4.7(GUC), After GUC.*

*MOS **20** 04:56:17.7±1.2, 2250S×7042W, h33km, mb5.0/12, Error ellipse: s-maj=19.1km s-min=9.3km az=106.7*

*IDC **20** 04:56:17.0±0.8, 2288S×7052W, h24km±5km, mb4.1/10, mb1 4.2/13, mb1mx4.1/19, mbtmp4.1/13, ML3.7/3, MS4.0/9, Ms1 4.0/9, ms1mx3.7/22, Error ellipse: s-maj=17.5km s-min=11.5km az=174.0*

*BJI **20** 04:56:24.1, 2192S×7073W, h51km, mB5.2, Ms5.5, Msz5.1*

ISC 20 04:56:17.6±0.7, 2275S±003×7056W±004, h24km±5km, h42km±3.0km: pP-P, n152, σ1§28/129, mb4.8/39, MS4.2/5, 6C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.37**	**163**	*i* P	**Pb**	**04 56 24.5**	**-1.2**
MECH				*i* S	**Sb**	**04 56 30.3**	**-0.8**
MECH				AML	AML	04 56 31.7	
	comp=N,202μm,0.4s						
CEN1	**Los Morros**	**0.72**	**152**	*i* P	**Pb**	**04 56 31.3**	**-0.3**
CEN1				*i* S	**Sb**	**04 56 42.4**	**+1.5**
CEN1				AML	AML	04 56 44.2	
	comp=E,25μm,0.6s						
PB06	**Plate Boundary**	**0.92**	**87**	*i* P	**Pb**	**04 56 34.9**	**0.0**
PB06				*i* S	**Sb**	**04 56 48.6**	**+1.9**
ANCH	**Antofagasta**	**0.94**	**171**	*e*P	**Pn**	**04 56 35.6**	**+0.3**
ANCH				*i* S	**Sb**	**04 56 47.9**	**+0.6**
PB04	**Plate Boundary**	**1.11**	**64**	*e*P	**Pn**	**04 56 29.5**	**-8.1**
PB04				*i* S	**Sn**	**04 56 39.5**	**-13**
PB04				AML	AML	04 56 41.3	
	comp=N,55μm,0.3s						
PB07	**Plate Boundary**	**1.20**	**32**	*e*P	**Pn**	**04 56 39.5**	**+0.7**
PB07				*i* S	**Sn**	**04 56 57.1**	**+2.8**
LVC	**Limon Verde**	**1.53**	**85**	Pg	**Pn**	**04 56 45.2**	**+1.7**
	comp=N,677nm,0.3s,baz=257,slow=13,SNR=3060						
LVC				Lg		04 57 06.4	
	comp=N,1μm,0.3s,baz=13,slow=14,SNR=36						
LVC	**Limon Verde**	**1.53**	**85**	*e*Pn	**Pn**	**04 56 45.3**	**+1.9**
LVC				*e*Sn	**Sn**	**04 57 04.2**	**+1.6**
LVC	**Limon Verde**	**1.53**	**85**	*i* P	**Pn**	**04 56 45.2**	**+1.8**
LVC				*i* S	**Sn**	**04 57 06.8**	**+4.2**
LVC				AML	AML	04 57 11.8	
	comp=N,9μm,0.9s						
CPN1	**Cerro Paranal**	**1.87**	**176**	AML	AML	04 57 19.1	
	comp=E,12μm,0.6s						
PB01	**Plate Boundary**	**1.97**	**31**	*i* P	**Pn**	**04 56 50.2**	**+0.7**
PB01				*i* S	**Sn**	**04 57 12.3**	**-1.1**
PB01				AML	AML	04 57 27.4	
	comp=E,5μm,0.6s						
SPCH	**San Pedro de A**	**2.19**	**95**	*e*P	**Pn**	**04 56 57.0**	**+4.6**
SPCH				*e*S	**Sn**	**04 57 26.3**	**+7.6**
SPCH	**San Pedro de A**	**2.19**	**95**	*e*P	**Pn**	**04 56 57.0**	**+4.6**
SPCH				*e*S	**Sn**	**04 57 26.3**	**+7.6**
SPCH				AML	AML	04 57 37.0	
	comp=E,38μm,0.8s						
LCO	**Las Campanas**	**6.24**	**181**	*e*Pn	**Pn**	**04 57 45.7**	**-2.4**
	comp=E,117nm,0.8s						
LCO				*e*Sn	**Sn**	**04 58 57.9**	**-0.8**
ARE	**Arequipa**	**6.32**	**352**	*i* P	**Pn**	**04 57 48.0**	**-1.3**
ARE				*e*S	**Sn**	**04 58 58.0**	**-2.7**
LPAZ	**La Paz**	**6.83**	**20**	Pn	**Pn**	**04 57 59.8**	**+3.6**
	comp=E,1.6nm,0.3s,baz=197,slow=9.0,SNR=29						
LPAZ				LR	LR	05 00 55.3	
	comp=E,2μm,18.5s,baz=202,slow=40						
LPAZ	**La Paz**	**6.83**	**20**	*e*Pn	**Pn**	**04 57 59.9**	**+3.6**
	comp=E,67nm,1.0s						
LPAZ				*e*Sn	**Sn**	**04 59 12.9**	**-0.3**
LPAZ	**La Paz**	**6.83**	**20**	*e*P	**Pn**	**04 57 59.9**	**+3.6**
LPAZ				*e*		04 59 12.9	
LPAZ				pmax	pmax		
	comp=Z,67nm,1.0s						
CFAA	**Coronel Fontan**	**9.06**	**167**	Pn	**Pn**	**04 58 24.5**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=355,slow=12,SNR=12						
CFAA				Sn	**Sn**	**05 00 16.8**	**+8.7**
	comp=Z,0.4nm,0.3s,baz=171,slow=19,SNR=4.1						
CFAA				LR	LR	05 01 59.1	
	comp=Z,129nm,20.1s,baz=332,slow=38						
SIV	**San Ignacio**	**11.20**	**55**	Pn	**Pn**	**04 58 55.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=242,slow=12,SNR=94						
SIV				LR	LR	05 04 06.3	
	comp=Z,2μm,19.8s,baz=190,slow=42						
NNA	**Nana**	**12.26**	**330**	*e*Pn	**Pn**	**04 59 11.6**	**+0.8**
NNA				*e*Sn	**Sn**	**05 01 24.6**	**-2.2**
PLCA	**Paso Flores**	**17.93**	**180**	P	**Pn**	**05 00 22.8**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=9.5,slow=6.1,SNR=2.9						
PLCA				LR	LR	05 06 57.7	
	comp=Z,436nm,20.3s,baz=1.4,slow=36						
PLCA	**Paso Flores**	**17.93**	**180**	*e*P	**Pn**	**05 00 29.4**	**+4.2**
	comp=Z,21nm,1.3s						
PLCA				LR	LR	05 06 57.7	
PLCA	**Paso Flores**	**17.93**	**180**	*e*P	**Pn**	**05 00 29.4**	**+4.2**
PLCA				pmax	pmax		
	comp=Z,21nm,1.3s						
SPB	**Sao Paulo**	**21.28**	**97**	*e*P	**P**	**05 01 03.2**	**+0.8**
BDFB	**Brasilia**	**22.42**	**76**	P	**P**	**05 01 13.8**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.0,baz=242,slow=16,SNR=3.4						
BDFB				LR	LR	05 11 17.6	
	comp=Z,523nm,18.2s,MS4.0,baz=71,slow=40						
BDFB	**Brasilia**	**22.42**	**76**	*e*P	**P**	**05 01 13.3**	**-1.4**
	comp=Z,5.3nm,0.7s,mb4.1						
OTAV	**Otavalo**	**24.11**	**340**	*e*P	**P**	**05 01 31.3**	**-0.2**
	comp=Z,4.3nm,1.1s,mb3.8						
OTAV				*e*pP		05 01 42.9	
OTAV				*e*sP		05 01 49.1	+7.4
CAM4	**Nova Friburgo**	**25.85**	**95**	*e*P	**P**	**05 01 45.0**	**-2.3**
CAM4				*i*		05 01 55.7	
CAM4				*i*		05 02 05.7	
CAM4				*i*		05 02 12.9	
ROSC	**El Rosal**	**27.68**	**352**	*e*P	**P**	**05 02 01.9**	**-2.1**
BBGH	**Gun Hill**	**37.27**	**18**	*e*P	**P**	**05 03 23.2**	**-4.5**
	comp=Z,256nm,1.1s						
BBGH				*e*pP	pP	05 03 36.8	+1.7
RCBR	**Riachuelo**	**37.42**	**69**	*e*P	**P**	**05 03 28.5**	**-0.6**
	comp=Z,50nm,0.8s,mb5.4						
TGUH	**Tegucigalpa,Un**	**40.08**	**334**	*e*P	**P**	**05 03 51.2**	**0.0**
	comp=Z,36nm,1.4s,mb4.9						
DWPF	**Disney**	**51.64**	**348**	*e*P	**P**	**05 05 21.2**	**-1.1**
	comp=Z,122nm,1.3s,mb5.7						
BBSR	**BB Station**	**55.10**	**6**	*e*P	**P**	**05 05 45.1**	**-2.6**
	comp=Z,49nm,1.0s,mb5.5						
NHSC	**New Hope**	**56.30**	**350**	*e*P	**P**	**05 05 54.9**	**-1.4**
	comp=Z,65nm,1.5s,mb5.4						
RKT	**Rikitea**	**58.85**	**256**	*e*S	**S**	**05 14 30.7**	**+12**
	comp=Z,206nm,26.8s						
RKT				*e*LR	LR	05 23 55.1	
	comp=Z,375nm,27.2s						
CPCT	**Cooper Cave**	**59.37**	**347**	*e*P	**P**	**05 06 17.4**	**-0.5**
SWET	**Sewanee**	**59.46**	**345**	*e*P	**P**	**05 06 17.5**	**-1.0**
OXF	**Oxford**	**59.70**	**342**	*e*P	**P**	**05 06 19.3**	**-0.8**
	comp=Z,22nm,0.8s,mb5.2						
OXF	**Oxford**	**59.70**	**342**	*e*P	**P**	**05 06 19.3**	**-0.8**
OXF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
JCT	**Junction City**	**59.91**	**331**	*e*P	**P**	**05 06 22.2**	**+0.6**
	comp=Z,6.4nm,0.9s,mb4.7						
JCT	**Junction City**	**59.91**	**331**	*e*P	**P**	**05 06 22.2**	**+0.5**
JCT				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
ELN	**Prospectdale**	**60.42**	**351**	*e*P	**P**	**05 06 25.0**	**0.0**
WVT	**Waverly**	**60.80**	**344**	*e*P	**P**	**05 06 26.3**	**-1.3**
TXAR	**Lajitas Array**	**60.80**	**327**	P	**P**	**05 06 28.0**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.8,baz=148,slow=8.3,SNR=9.2						
TXAR				pP	pP	05 06 36.7	+1.2
	comp=Z,1.5nm,1.0s,baz=146,slow=9.1,SNR=6.5						
MIAR	**Mount Ida**	**61.03**	**338**	*e*P	**P**	**05 06 28.9**	**-0.3**
	comp=Z,53nm,2.1s,mb5.3						
MIAR	**Mount Ida**	**61.03**	**338**	*e*P	**P**	**05 06 28.9**	**-0.3**
MIAR				pmax	pmax		
	comp=Z,53nm,2.1s,mb5.3						
SNAA	**Sanae**	**61.61**	**161**	*e*P	**P**	**05 06 29.5**	**-3.2**
	comp=Z,25nm,1.4s,mb5.2						
SNAA	**Sanae**	**61.61**	**161**	*e*P	**P**	**05 06 29.5**	**-3.2**
SNAA				pmax	pmax		
	comp=Z,25nm,1.4s						
WCI	**Wyandotte Cave**	**62.43**	**346**	*e*P	**P**	**05 06 37.3**	**-1.3**
	comp=Z,9.8nm,0.8s,mb5.0						
WCI	**Wyandotte Cave**	**62.43**	**346**	*e*P	**P**	**05 06 37.3**	**-1.3**
WCI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
SIUC	**Southern Illin**	**62.65**	**343**	*e*P	**P**	**05 06 39.4**	**-0.6**
MCWV	**Mont Chateau**	**62.69**	**352**	*e*P	**P**	**05 06 39.7**	**-0.5**
	comp=Z,45nm,1.9s,mb5.3						
WMOK	**Wichita Mounta**	**63.14**	**334**	P	**P**	**05 06 43.7**	**+0.3**
BRNJ	**Basking Ridge**	**63.22**	**357**	*e*P	**P**	**05 06 42.2**	**-1.5**
BRNJ				*e*pP	pP	05 06 54.4	+2.9
FVM	**French Village**	**63.23**	**343**	*e*P	**P**	**05 06 43.1**	**-0.8**
	comp=Z,14nm,0.9s,mb5.1						
FVM	**French Village**	**63.23**	**343**	*e*P	**P**	**05 06 43.1**	**-0.8**
FVM				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
CCM	**Cathedral Cave**	**63.53**	**342**	*e*P	**P**	**05 06 44.8**	**-1.1**
	comp=Z,6.1nm,0.8s,mb4.7						
CCM	**Cathedral Cave**	**63.53**	**342**	*e*P	**P**	**05 06 44.8**	**-1.1**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ACSO	**Alum Creek Sta**	**63.72**	**349**	*e*P	**P**	**05 06 45.3**	**-1.7**
	comp=Z,26nm,0.3s,mb5.8						
ACSO				*e*pP	pP	05 06 58.4	+3.6

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSU1	**Kansas State U**	**66.18**	**338**	*e*P	**P**	**05 07 04.2**	**+1.1**
ANMO	**Albuquerque**	**66.73**	**328**	*e*P	**P**	**05 07 08.0**	**+1.2**
	comp=Z,54nm,2.8s,mb5.1						
ANMO	**Albuquerque**	**66.73**	**328**	*i* P	**P**	**05 07 07.2**	**+0.4**
SDCO	**Great Sand Dun**	**68.56**	**331**	*e*P	**P**	**05 07 19.6**	**+1.4**
WUAZ	**Wupatki**	**69.66**	**325**	*e*P	**P**	**05 07 27.0**	**+1.9**
LIC	**Lamto**	**70.21**	**74**	*e*PKP2	**P**	**05 07 27.8**	**-1.2**
	comp=Z,54nm,1.5s,mb5.3						
PV01	**Paradox Valley**	**70.30**	**329**	P	**P**	**05 07 29.6**	**+0.7**
ECSD	**EROS,Sioux Fal**	**70.35**	**340**	*e*P	**P**	**05 07 28.8**	**-0.4**
SMCO	**Snowmass**	**70.39**	**331**	*e*P	**P**	**05 07 31.9**	**+2.3**
	comp=Z,17nm,0.8s,mb5.0						
TIC	**Toumodi**	**70.40**	**74**	*e*PKP2	**P**	**05 07 29.0**	**-1.2**
	comp=Z,47nm,1.1s,mb5.3						
KIC	**Kosan Boka**	**70.52**	**74**	*e*PKP2	**P**	**05 07 28.9**	**-2.0**
	comp=Z,28nm,0.7s,mb5.3						
DBIC	**Dimbokro**	**70.56**	**74**	P	**P**	**05 07 30.3**	**-0.9**
	comp=Z,11nm,0.9s,mb4.8,baz=224,slow=6.6,SNR=11						
DBIC	**Dimbokro**	**70.56**	**74**	*e*P	**P**	**05 07 30.4**	**-0.7**
	comp=Z,9.2nm,0.8s,mb4.8						
DBIC	**Dimbokro**	**70.56**	**74**	*e*P	**P**	**05 07 30.4**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SRU	**San Rafael**	**72.01**	**328**	*e*P	**P**	**05 07 36.7**	**-2.6**
	comp=Z,33nm,0.6s,mb5.4						
CCUT	**Cedar City**	**72.24**	**325**	*e*P	**P**	**05 07 42.9**	**+2.2**
MSU	**Marysvale**	**72.36**	**327**	*e*P	**P**	**05 07 43.2**	**+1.7**
ARUT	**Antelope Range**	**72.46**	**326**	*e*P	**P**	**05 07 44.0**	**+2.0**
RSSD	**Black Hills**	**73.27**	**335**	*e*P	**P**	**05 07 47.4**	**+0.7**
PPT	**Papeete**	**73.55**	**258**	*e*S	S	05 17 30.3	+12
	comp=Z,86nm,25.8s						
PPT	**Papeete**	**73.55**	**258**	*e*LR	LR	05 30 50.8	
	comp=Z,228nm,25.5s						
PPT	**Papeete**	**73.55**	**258**	LR	LR	05 31 19.5	
	comp=Z,173nm,18.4s,MS4.4,baz=97,slow=29						
JLU	**Jordanelle**	**73.61**	**329**	*e*P	**P**	**05 07 50.1**	**+1.3**
ISA	**Isabella**	**73.70**	**321**	*e*P	**P**	**05 07 50.9**	**+1.5**
	comp=Z,1.1nm,0.3s,mb4.3						
ISA	**Isabella**	**73.70**	**321**	*e*P	**P**	**05 07 50.9**	**+1.5**
ISA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
SBA	**Scott Base**	**74.32**	**191**	*e*P	pP	05 08 02.5	+2.1
PDAR	**Pinedale Array**	**74.44**	**331**	P	**P**	**05 07 54.2**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=141,slow=3.5,SNR=3.2						
HWUT	**Hardware Ranch**	**74.45**	**329**	*e*P	**P**	**05 07 54.5**	**+0.8**
VNDA	**Vanda**	**75.36**	**190**	P	**P**	**05 07 59.2**	**+0.7**
	comp=Z,0.9nm,1.0s,mb3.7,baz=358,slow=3.2,SNR=4.1						
VNDA				LR	LR	05 39 20.9	
	comp=Z,74nm,18.8s,MS4.0,baz=179,slow=34						
VNDA	**Vanda**	**75.36**	**190**	P	**P**	**05 07 59.2**	**+0.7**
VNDA				LR	LR	05 39 20.9	
NVAR	**Mina Array Bea**	**75.55**	**323**	P	**P**	**05 08 01.6**	**+1.6**
	comp=Z,1.1nm,1.0s,mb3.8,baz=134,slow=8.9,SNR=3.5						
LOHW	**Long Hollow**	**75.58**	**331**	*e*P	**P**	**05 08 01.7**	**+1.5**
	comp=Z,2.9nm,0.8s,mb4.3						
RRI2	**Red Ridge**	**75.69**	**331**	*e*P	**P**	**05 08 02.6**	**+1.8**
SYO	**Syowa Base**	**75.87**	**160**	*i* P	**P**	**05 07 59.0**	**-2.6**
SYO	**Syowa Base**	**75.87**	**160**	*e*P	**P**	**05 08 06.4**	**+4.8**
SYO	**Syowa Base**	**75.87**	**160**	*e*P	PP	05 10 45.0	-6.4
CMB	**Columbia Colle**	**76.45**	**322**	*e*P	**P**	**05 08 07.5**	**+2.3**
CMB				*e*pP	pP	05 08 20.9	+7.8
YMR	**Madison River**	**76.57**	**332**	*e*P	**P**	**05 08 05.4**	**-0.3**
	comp=Z,8.9nm,1.0s,mb4.7						
YMR				*e*PcP	PcP	05 08 16.8	-0.5
PAHR	**Pah Rah Range**	**77.04**	**323**	*e*P	**P**	**05 08 10.6**	**+2.0**
DLMT	**Dillon**	**77.84**	**331**	*e*P	**P**	**05 08 14.7**	**+1.8**
TOA0	**Torodi Ar. Sit**	**79.22**	**71**	*e*P	**P**	**05 08 20.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**79.22**	**71**	P	**P**	**05 08 20.2**	**-0.9**
	comp=Z,17nm,0.8s,mb5.0,baz=252,slow=5.2,SNR=88						
SUR	**Sutherland**	**79.27**	**121**	*e*P	**P**	**05 08 26.2**	**+4.9**
	comp=Z,16nm,1.1s,mb4.8						
BMO	**Blue Mountains**	**79.65**	**328**	*e*P	**P**	**05 08 23.7**	**+0.8**
TSUM	**Tsumeb**	**81.15**	**107**	*e*P	**P**	**05 08 31.9**	**+0.3**
	comp=Z,12nm,1.2s,mb4.7						
WALA	**Waterton Lakes**	**81.26**	**333**	*e*P	**P**	**05 08 32.1**	**+0.8**
	comp=Z,4.8nm,0.8s,mb4.5						
**HAW

LZH	**Lanzhou**	**165.85**	**19**	*e*PKP	PKPdf	05 16 24.0	+3.4
LZH				APKP		05 16 35.3	
NJ2	**Nanjing**	**167.53**	**320**	*e*PKP	PKPdf	05 16 27.1	+5.1
KMI	**Kunming**	**173.44**	**68**	PKP	PKPdf	05 16 29.3	+3.8
KMI				APKP		05 16 44.4	
KMI				XPKP		05 16 50.8	
KMI				LR	LR		
	comp=Z,37nm,19.3s						
GYA	**Guiyang**	**175.53**	**34**	PKP	PKPdf	05 16 28.3	+2.2
GYA				APKP		05 16 43.6	
GYA				XPKP		05 16 48.5	
GYA				PKP2	PKPab	05 13 02.4	-0.9
GYA				SKKS	SKSdf	05 23 22.8	-5.0
GYA				SKKS	SKKSac	05 28 35.4	-5.4
GYA				PP	PP		
	comp=Z,140nm,6.0s						
GYA				LR	LR		
	comp=N,180nm,25.8s						
GYA				LR	LR		
	comp=E,210nm,24.1s						
GYA				LR	LR		
	comp=Z,190nm,22.7s						
QIZ	**Qiongzhong**	**176.28**	**186**	PKP	PKPdf	05 16 31.8	+5.3
QIZ				LR	LR		
	comp=Z,124nm,19.9s						

IDC 20 04:58:26.9±4.6, 903S×10801E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=183.7km s-min=30.2km az=48.0, South of Java

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.66**	**116**	P	P	05 04 16.8	0.0
	0.3nm,0.7s,baz=290,slow=11,SNR=3.0						
SONM	**Songino Array**	**56.62**	**359**	P	P	05 08 12.3	+0.6
	0.2nm,0.4s,baz=170,slow=8.1,SNR=3.9						
MKAR	**Makanchi Array**	**60.12**	**340**	P	P	05 08 35.8	-0.3
	0.7nm,0.6s,baz=154,slow=8.2,SNR=6.3						

*IDC **20** 05:09:57.8±0.9, 685S×10529E, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/21, mbtmp4.0/12, Error ellipse: s-maj=54.8km s-min=14.4km az=56.0*
*DJA **20** 05:09:58, 733S×10624E, h223km, MLv4.1/7*
*ISCJB **20** 05:10:01.4±1.0, 724S±005×10501E±0.10, h53km±9km, mb4.0/13, Error ellipse: s-maj=16.2km s-min=7.9km az=166.7*
*NEIC **20** 05:10:02.3±0.6, 706S×10508E, h35km, mb4.3/3, Error ellipse: s-maj=27.4km s-min=8.9km az=62.0*

ISC 20 05:10:02.6±1.0, 723S±005×10503E±009, h44km±10km, n29, σ1s10/29, mb4.0/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.53**	**82**	P	**Pn**	**05 10 29.3**	**+1.8**
SBJI	**Serang**	**1.55**	**45**	P	**Pn**	**05 10 26.3**	**-1.5**
DBJI	**Dramaga**	**1.83**	**69**	P	**Pn**	**05 10 29.9**	**-1.8**
CBJI	**Citeko**	**1.98**	**66**	P	**Pn**	**05 10 31.8**	**-1.8**
KLI	**Kotabumi**	**2.35**	**356**	P	**Pn**	**05 10 40.6**	**+1.8**
LEM	**Lembang**	**2.60**	**81**	P	**Pn**	**05 10 42.7**	**+0.5**
XMIS	**Christmas Isla**	**3.29**	**169**	*e*Pn	**Pn**	**05 10 51.8**	**+0.1**
XMIS				*e*Sn	**Sn**	**05 11 28.2**	**-1.4**
XMIS	**Christmas Isla**	**3.29**	**169**	P	**Pn**	**05 10 52.0**	**+0.3**
KSI	**Kapahiang**	**4.30**	**326**	P	**Pn**	**05 11 13.8**	**+8.2**
	289nm,0.8s,1.4nm						
PPBI	**Pangkal Pinang**	**5.15**	**12**	P	**Pn**	**05 11 19.8**	**+2.5**
	32nm,0.7s,4μm0.4nm						
MBWA	**Marble Bar**	**19.85**	**136**	*e*P	**Pn**	**05 14 32.8**	**+0.9**
	21nm,1.3s						
CMAR	**Chiang Mai Arr**	**26.22**	**347**	P	**P**	**05 15 33.5**	**-0.1**
	1.1nm,0.6s,mb3.6,baz=181,slow=8.3,SNR=5.2						
WRA	**Warramunga Arr**	**31.10**	**117**	P	**P**	**05 16 17.0**	**-0.1**
	1.8nm,0.6s,mb4.1,baz=288,slow=10,SNR=24						
WRA				PcP	PcP	05 19 13.4	+1.5
	0.3nm,0.5s,baz=318,slow=2.2,SNR=4.7						
WRAB	**Tennant Creek**	**31.11**	**117**	*e*P	**P**	**05 16 17.2**	**+0.1**
	2.2nm,0.5s,mb4.2						
WB2	**Warramunga Arr**	**31.11**	**117**	*e*P	**P**	**05 16 16.9**	**-0.3**
ASAR	**Alice Springs**	**32.17**	**124**	P	**P**	**05 16 27.3**	**+0.9**
	0.7nm,0.4s,mb3.9,baz=304,slow=8.2,SNR=11						
STKA	**Stephens Creek**	**41.96**	**131**	*e*P	**P**	**05 17 51.3**	**+1.9**
	4.5nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**41.96**	**131**	P	**P**	**05 17 51.4**	**+2.0**
	2.7nm,0.4s,mb4.2,baz=331,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**41.96**	**131**	*e*P	**P**	**05 17 51.0**	**+1.6**
	0.5nm,0.4s,mb3.5						
SONM	**Songino Array**	**54.83**	**1**	P	**P**	**05 19 27.3**	**-0.9**
	0.3nm,0.5s,mb3.6,baz=160,slow=4.6,SNR=3.0						
SONM				PcP	PcP	05 20 30.6	+0.5
	0.3nm,0.5s,baz=202,slow=6.1,SNR=2.8						
MKAR	**Makanchi Array**	**57.46**	**342**	P	**P**	**05 19 46.3**	**-0.7**
	0.5nm,0.4s,mb3.9,baz=157,slow=9.0,SNR=10						
KURK	**Kurchatov**	**62.06**	**341**	P	**P**	**05 20 17.7**	**-0.9**
	0.4nm,0.5s,mb3.8,baz=156,slow=5.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**63.28**	**347**	P	**P**	**05 20 26.2**	**-0.4**
	1.1nm,0.3s,mb4.4,baz=188,slow=4.5,SNR=3.6						
BVAR	**Borovoye Array**	**66.83**	**338**	P	**P**	**05 20 49.7**	**0.0**
	0.7nm,0.5s,mb4.0,baz=157,slow=8.0,SNR=4.8						
AKTK	**Aktyubinsk**	**70.33**	**330**	P	**P**	**05 21 11.4**	**-0.2**
AKTO	**Aktyubinsk**	**70.33**	**330**	P	**P**	**05 21 11.4**	**-0.2**
	0.6nm,0.3s,mb4.0,baz=135,slow=2.9,SNR=3.4						
VNDA	**Vanda**	**76.11**	**169**	P	**P**	**05 21 49.3**	**+4.0**
	0.6nm,0.7s,mb3.7,baz=289,slow=6.0,SNR=5.7						
ARCES	**ARCESS Array B**	**93.07**	**340**	P	**P**	**05 23 11.5**	**+0.3**
	4.0nm,1.0s,mb4.8,baz=106,slow=4.8,SNR=2.9						
TXAR	**Lajitas Array**	**145.17**	**47**	PKP	PKPdf	05 29 36.8	+0.7
	0.3nm,0.7s,baz=311,slow=0.5,SNR=8.5						

*TEH **20** 05:19:39.3, 3168N×4993E, h7km, ML5.1*
*BJI **20** 05:19:59.3, 3163N×4934E, h33km, mB5.2, mb5.1, Ms4.8, Msz4.6*
*ISCJB **20** 05:20:00.0±0.1, 3161N±002×4996E±002, h10km, mb4.8/154, MS4.2/35, Error ellipse: s-maj=2.7km s-min=1.9km az=27.3*
*THR **20** 05:20:02.8±1.5, 3165N×5010E, h17km, 11km, ML4.9*
*CSEM **20** 05:20:02.4±0.0, 3162N×5000E, h30km, mb4.9/95, Ms4.4, Error ellipse: s-maj=1.4km s-min=1.1km az=14.0*
*IDC **20** 05:20:03.8±2.6, 3168N×4999E, h26km, 16km, mb4.4/22, mb1 4.5/28, mb1mx4.5/31, mbtmp4.4/28, ML4.6/3, MS4.1/20, Ms1 4.1/20, ms1mx3.9/31, Error ellipse: s-maj=14.9km s-min=11.1km az=177.0*
*MOS **20** 05:20:03.3±1.2, 3172N×4996E, h33km, mb5.0/52, MS4.1/12, Error ellipse: s-maj=5.7km s-min=3.4km az=123.0*
*NEIC **20** 05:20:03.4, 3168N×4993E, h7km, mb4.8/72, ML4.9(THR), MN5.1(TEH), After TEH.*
NEIC Thirty people slightly injured at Qal' eh-ye Tol and some houses slighty damaged in Khuzestan. Felt at Ahvaz. Also felt at Ash Shuwaykh, Kuwait.

ISC 20 05:20:02.1±0.1, 3166N±002×4997E±002, h10km, (h33km±1.9km: pP-P), n596, σ1s23/627, mb4.8/154, MS4.2/35, 49C-25D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.09**	**294**	*e*Pg	**Pg**	**05 20 25.1**	**+2.0**
SHGR				AML	AML	05 20 46.5	
	comp=N,39μm,0.3s						
SHGR				AML	AML	05 20 46.5	
	comp=E,30μm,0.3s						
SHGR	**Shooshtar-Gavs**	**1.09**	**294**	Pg	**Pg**	**05 20 25.0**	**+1.9**
IPIR	**Pirpir**	**1.28**	**37**	Pg	**Pn**	**05 20 26.3**	**+0.2**
IPIR	**Pirpir**	**1.28**	**37**	*e*Pg	**Pn**	**05 20 26.4**	**+0.3**
IPIR				*e*		05 20 48.5	
IGAR	**Gharneh**	**1.91**	**67**	*e*Pn	**Pn**	**05 20 37.1**	**+2.4**
IGAR				*e*Sg	**Sn**	**05 21 03.1**	**+4.4**
IGAR	**Gharneh**	**1.91**	**67**	*e*Pn	**Pn**	**05 20 37.1**	**+2.4**
IGAR				*e*Sg	**Sn**	**05 21 03.9**	**+5.2**
IGAR				*e*		05 21 10.3	
IKLH	**Kolahrood**	**2.14**	**39**	Pn	**Pn**	**05 20 40.7**	**+2.8**
IKLH				Sg	**Sn**	**05 21 10.1**	**+5.6**
IKLH	**Kolahrood**	**2.14**	**39**	Pn	**Pn**	**05 20 40.7**	**+2.8**
IKLH				*e*Sg	**Sn**	**05 21 10.2**	**+5.7**
IKLH	**Kolahrood**	**2.14**	**39**	*e*Pn	**Pn**	**05 20 40.7**	**+2.8**
IKLH				*e*Sg	**Sn**	**05 21 10.2**	**+5.7**
IKLH				*e*		05 21 21.9	
IZEF	**Zefreh**	**2.34**	**58**	*e*Pn	**Pn**	**05 20 42.0**	**+1.3**
NASN	**Na'in**	**2.66**	**64**	Pn	**Pn**	**05 20 46.0**	**+1.0**
NASN				Sn	**Sn**	**05 21 23.0**	**+5.7**
NASN	**Na'in**	**2.66**	**64**	*e*Pn	**Pn**	**05 20 46.4**	**+1.4**
NASN				*e*Sg	**Sn**	**05 21 23.5**	**+6.3**
NASN	**Na'in**	**2.66**	**64**	Pn	**Pn**	**05 20 46.0**	**+1.0**
NASN				*e*Sg	**Sn**	**05 21 23.5**	**+6.2**
	SNR=91						
UMR	**Umm Al-Rimmam**	**2.86**	**223**	*e*S	**Sn**	**05 21 25.0**	**+2.6**
	comp=E,5μm,0.4s						
UMR	**Umm Al-Rimmam**	**2.86**	**223**	*e*P	**Pn**	**05 20 50.5**	**+2.6**
	baz=228						
UMR				*e*S	**Sn**	**05 21 25.0**	**+2.7**
	baz=228						
UMR				AML	AML	05 21 31.5	
	comp=Z,5μm,0.4s,baz=228						
ASAO	**Ashtian**	**2.88**	**1**	*e*Pn	**Pn**	**05 20 50.1**	**+2.1**
ASAO				AML	AML	05 21 40.9	
	comp=E,5μm,0.7s						
ASAO				AML	AML	05 21 42.9	
	comp=N,5μm,0.6s						
ASAO	**Ashtian**	**2.88**	**1**	Pn	**Pn**	**05 20 50.0**	**+1.9**
SHI	**Shiraz**	**2.97**	**132**	Pn	**Pn**	**05 20 51.3**	**+2.0**
SHI	**Shiraz**	**2.97**	**132**	*e*Pn	**Pn**	**05 20 51.4**	**+2.1**
SHI				*e*		05 22 06.5	
GHVR	**GHOM**	**3.02**	**21**	*e*Pn	**Pn**	**05 20 51.8**	**+1.8**
GHVR				*e*Sg	**Sg**	**05 21 35.5**	**-3.7**
GHVR				AML	AML	05 21 48.2	
	comp=N,4μm,0.5s						
GHVR				AML	AML	05 21 55.3	
	comp=E,3μm,0.7s						
GHVR	**GHOM**	**3.02**	**21**	Pn	**Pn**	**05 20 51.0**	**+1.0**
GHVR				Sg	**Sg**	**05 21 35.0**	**-4.2**
ISAD	**Sadrabad**	**3.17**	**84**	Pn	**Pn**	**05 20 54.3**	**+2.2**
ISAD	**Sadrabad**	**3.17**	**84**	*e*Pn	**Pn**	**05 20 54.4**	**+2.3**
ISAD				*e*		05 22 09.3	
IPAR	**Pars**	**3.21**	**124**	*e*Pn	**Pn**	**05 20 54.8**	**+2.2**
IPAR				*e*		05 22 16.0	
IKOM	**Komasi**	**3.25**	**321**	*e*Pn	**Pn**	**05 20 54.5**	**+1.3**
IKOM				*e*		05 21 56.4	
ISFB	**Sefidab**	**3.29**	**35**	*e*Pn	**Pn**	**05 20 54.1**	**+0.4**
ISFB				*e*		05 21 56.4	
NAY	**Al-Naaiem**	**3.37**	**225**	*e*S	**Sn**	**05 21 37.8**	**+3.0**
	comp=E,1μm,0.4s						
NAY	**Al-Naaiem**	**3.37**	**225**	*e*P	**Pn**	**05 20 57.7**	**+3.0**
	baz=229						
NAY				*e*S	**Sn**	**05 21 37.8**	**+3.0**
	baz=229						
NAY				AML	AML	05 21 43.4	
	comp=Z,1μm,0.4s,baz=229						
QRN	**Al-Qurain**	**3.41**	**212**	*e*P	**Pn**	**05 20 57.9**	**+2.6**
	baz=216						
QRN				AML	AML	05 21 40.1	
	comp=E,2μm,0.2s,baz=216						
RDF	**Al-Radifah**	**3.44**	**218**	*e*S	**Sn**	**05 21 38.3**	**+1.8**
RDF	**Al-Radifah**	**3.44**	**218**	*e*P	**Pn**	**05 20 58.6**	**+2.9**
	baz=222						
RDF				*e*S	**Sn**	**05 21 38.3**	**+1.8**
	baz=222						
RDF				AML	AML	05 21 44.2	
	comp=Z,3μm,0.4s,baz=222						
ISRV	**Sarvestan**	**3.54**	**129**	*e*Pn	**Pn**	**05 20 58.9**	**+1.8**
ISRV				*e*		05 22 26.8	
IVRN	**Varamin**	**3.63**	**23**	Pn	**Pn**	**05 20 59.5**	**+1.1**
IVRN	**Varamin**	**3.63**	**23**	*e*Pn	**Pn**	**05 20 59.6**	**+1.2**
IVRN				*e*		05 21 13.4	
IRAZ	**Razeghan**	**3.73**	**359**	Pn	**Pn**	**05 21 01.2**	**+1.4**
IRAZ	**Razeghan**	**3.73**	**359**	*e*Pn	**Pn**	**05 21 01.3**	**+1.5**
IRAZ				*e*		05 22 13.9	
ICHK	**Chekchek**	**3.81**	**80**	Pn	**Pn**	**05 21 02.4**	**+1.5**
ICHK	**Chekchek**	**3.81**	**80**	*e*Pn	**Pn**	**05 21 02.5**	**+1.6**
ICHK	**Chekchek**	**3.81**	**80**	*e*Pn	**Pn**	**05 21 02.5**	**+1.6**
IVIS	**Veis**	**3.88**	**318**	Pn	**Pn**	**05 21 02.1**	**+0.3**
IVIS	**Veis**	**3.88**	**318**	*e*Pn	**Pn**	**05 21 02.2**	**+0.4**
IVIS				*e*		05 22 24.4	
IGHG	**Ghaleghazi**	**3.91**	**314**	*e*Pn	**Pn**	**05 21 03.2**	**+1.0**
IGHG				*e*		05 22 28.5	
IMEH	**Mehriz**	**3.97**	**93**	*e*Pn	**Pn**	**05 21 04.8**	**+1.7**
IMEH	**Mehriz**	**3.97**	**93**	*e*Pn	**Pn**	**05 21 04.6**	**+1.5**
IMEH				*e*		05 21 54.7	
IMHD	**Mahdasht**	**4.05**	**8**	Pn	**Pn**	**05 21 05.2**	**+1.0**
IMHD	**Mahdasht**	**4.05**	**8**	*e*Pn	**Pn**	**05 21 05.3**	**+1.1**
IMHD				*e*		05 21 19.9	
ILIN	**Lien**	**4.11**	**323**	*e*Pn	**Pn**	**05 21 05.5**	**+0.5**
ILIN				*e*		05 21 58.8	
GHIR	**Ghir-Karzin**	**4.26**	**141**	*e*Pn	**Pn**	**05 21 07.7**	**+0.7**
GHIR				AML	AML	05 22 44.6	
	comp=E,1μm,0.7s						
GHIR	**Ghir-Karzin**	**4.26**	**141**	Pn	**Pn**	**05 21 07.0**	**0.0**
IDMV	**Damavand**	**4.27**	**23**	Pn	**Pn**	**05 21 07.7**	**+0.6**
IDMV	**Damavand**	**4.27**	**23**	*e*Pn	**Pn**	**05 21 07.8**	**+0.7**
IDMV				*e*		05 21 21.9	
IDHR	**Dehrash**	**4.27**	**316**	Pn	**Pn**	**05 21 07.8**	**+0.6**
IDHR	**Dehrash**	**4.27**	**316**	*e*Pn	**Pn**	**05 21 07.9**	**+0.7**
IDHR				*e*		05 22 03.8	
DAMV	**Damavand**	**4.29**	**22**	*e*Pn	**Pn**	**05 21 08.5**	**+1.0**
DAMV				AML	AML	05 22 23.6	
	comp=N,869nm,0.5s						
DAMV				AML	AML	05 22 27.5	
	comp=E,1μm,0.6s						
DAMV	**Damavand**	**4.29**	**22**	*e*Pn	**Pn**	**05 21 09.1**	**+1.6**
	SNR=52						
THKV	**Tehran--Karaj**	**4.31**	**10**	Pn	**Pn**	**05 21 09.0**	**+1.3**
THKV	**Tehran--Karaj**	**4.31**	**10**	*e*Pn	**Pn**	**05 21 09.3**	**+1.6**
THKV				AML	AML	05 22 24.3	
	comp=E,788nm,0.6s						
THKV				AML	AML	05 22 43.2	
	comp=N,711nm,0.8s						
CHTH	**Charan**	**4.34**	**12**	*e*Pn	**Pn**	**05 21 09.2**	**+1.0**
	SNR=54						
IFIR	**Firoozkooh**	**4.60**	**30**	Pn	**Pn**	**05 21 13.1**	**+1.4**
IFIR	**Firoozkooh**	**4.60**	**30**	*e*Pn	**Pn**	**05 21 13.2**	**+1.5**
IFIR	**Firoozkooh**	**4.60**	**30**	*e*Pn	**Pn**	**05 21 13.2**	**+1.5**
IBAF	**Bafgh**	**4.77**	**89**	Pn	**Pn**	**05 21 15.3**	**+1.2**
IBAF	**Bafgh**	**4.77**	**89**	*e*Pn	**Pn**	**05 21 15.4**	**+1.3**
IBAF	**Bafgh**	**4.77**	**89**	*e*Pn	**Pn**	**05 21 15.4**	**+1.3**
BHD	**Baghdad**	**4.99**	**290**	*e*x	x	05 21 19.0	
BHD				*e*x	x	05 22 15.0	
ZNJK	**Zanjan**	**5.11**	**348**	*e*Pn	**Pn**	**05 21 22.6**	**+3.9**
BOQSS		**5.79**	**185**	P	**Pn**	**05 21 29.3**	**+1.1**
KRBR	**Kerman**	**6.07**	**104**	*e*Pn	**Pn**	**05 21 33.1**	**+1.2**
KRBR	**Kerman**	**6.07**	**104**	Pn	**Pn**	**05 21 33.0**	**+1.0**
SLWS		**6.86**	**175**	P	**Pn**	**05 21 43.8**	**+1.0**
MSL	**Mosul**	**7.40**	**312**	*e*x	x	05 21 51.0	
MSL				*e*x	x	05 23 14.0	
BTHS		**7.62**	**174**	P	**Pn**	**05 21 53.7**	**+0.4**
MRVT	**Maraveh tapeh**	**7.82**	**38**	*e*Pn	**Pn**	**05 21 57.7**	**+1.8**
HAKT	**HAKKARI**	**7.83**	**320**	*i*P	**Pn**	**05 21 59.1**	**+3.1**
BANOM	**Banah**	**7.97**	**134**	P	**Pn**	**05 21 59.4**	**+1.4**
	SNR=7.5						
NAZ	**Nazwa, Dubai**	**8.32**	**142**	P	**Pn**	**05 22 03.6**	**+0.7**
	SNR=9.4						
FAQ	**Al Faqa, Dubai**	**8.49**	**143**	P	**Pn**	**05 22 05.7**	**+0.6**
	SNR=6.8						
HATD	**Hatta, Dubai**	**8.71**	**140**	P	**Pn**	**05 22 08.1**	**0.0**
	SNR=12						
HRDDS		**8.71**	**183**	P	**Pn**	**05 22 08.4**	**+0.2**
VAN	**Vannovskaya**	**9.17**	**45**	P	**Pn**	**05 22 16.5**	**+2.1**
TATV	**Tatvan**	**9.30**	**319**	*i*P	**Sn**	**05 23 51.5**	**-9.4**
MARD	**Mardin**	**9.45**	**309**	*i*P	**Pn**	**05 22 15.3**	**-3.0**
GNI	**Garni**	**9.47**	**335**	Pn	**Pn**	**05 22 23.4**	**+4.9**
	comp=N,0.5nm,0.3s,baz=351,slow=19,SNR=2.2						
GNI				Lg		05 25 06.5	
	comp=N,0.3nm,0.3s,baz=66,slow=20,SNR=1.7						
GNI	**Garni**	**9.47**	**335**	Pn	**Pn**	**05 22 22.8**	**+4.2**
	comp=N,59nm,1.4s						
GNI	**Garni**	**9.47**	**335**	*i*P	**Pn**	**05 22 19.4**	**+0.8**
TUTA	**Tutak**	**9.68**	**325**	*i*P	**Pn**	**05 22 25.7**	**+4.3**
ARQ	**Araqi**	**10.12**	**143**	P	**Pn**	**05 22 27.8**	**+0.2**
	SNR=23						
BNGL	**BINGOL**	**10.24**	**318**	*i*P	**Pn**	**05 22 25.7**	**-3.4**
HOQ	**Hoqain**	**10.35**	**139**	*i*P	**Pn**	**05 22 30.6**	**0.0**
	SNR=20						
DGRG	**David-gareji**	**10.45**	**341**	P	**Pn**	**05 22 38.2**	**+6.3**
HOMI	**Horasan**	**10.62**	**324**	*i*P	**Pn**	**05 22 39.6**	**+5.4**
MTA	**Mtatsminda**	**10.84**	**339**	P	**Pn**	**05 22 31.0**	**-6.3**
TBLG	**Delisi**	**10.89**	**339**	*e*P	**Pn**	**05 22 30.9**	**-7.1**
TBLG	**Delisi**	**10.89**	**339**	P	**Pn**	**05 22 30.9**	**-7.1**
BSY	**Bisya**	**10.96**	**142**	*i*P	**Pn**	**05 22 38.9**	**-0.1**
	SNR=54						
BSYO	**Bisya**	**10.99**	**142**	P	**Pn**	**05 22 38.9**	**-0.6**
	SNR=54						
ASF	**Jabal al Asfar**	**11.12**	**276**	Pn	**Pn**	**05 22 39.8**	**-1.4**
	comp=N,15nm,0.3s,baz=325,slow=11,SNR=75						
ASF				Sn	**Sn**	**05 24 35.7**	**-10**
	comp=N,1.9nm,0.3s,baz=144,slow=19,SNR=3.6						
ASF				Lg		05 26 12.4	
	baz=163,slow=19,SNR=2.3						
SMDO	**Samad**	**11.17**	**138**	*i*P	**Pn**	**05 22 41.5**	**-0.4**
	SNR=19						
GOR	**Gori**	**11.32**	**337**	P	**Pn**	**05 22 47.9**	**+4.1**
KOPT	**Kop Dagi**	**11.34**	**320**	*i*P	**Pn**	**05 22 44.0**	**-0.1**
DDEM	**Demirkent**	**11.35**	**327**	*i*P	**Pn**	**05 22 43.1**	**-1.1**
DAGI	**Agillar**	**11.42**	**328**	*i*P	**Pn**	**05 22 43.1**	**-2.1**
MAK	**Makhachkala**	**11.45**	**351**	*e*P	**Pn**	**05 22 44.9**	**-0.7**
MAK				*e*S	**Sn**	**05 24 55.6**	**+2.1**
MAK				MLR	MLR		
	comp=Z,595nm,10.0s						
DBAD	**Bademkaya**	**11.47**	**327**	*i*P	**Pn**	**05 22 45.7**	**-0.2**
JMDO	**Jabal Madar**	**11.75**	**140**	*i*P	**Pn**	**05 22 49.6**	**-0.2**
	SNR=36						
AKCD	**Akcadag**	**11.89**	**307**	*i*P	**Pn**	**05 22 44.0**	**-7.7**
KEMA	**Kemaliye**	**12.04**	**312**	*i*P	**Pn**	**05 22 49.2**	**-4.5**
RCY	**Rachaya**	**12.08**	**282**	*e*Pn	**Pn**	**05 22 53.1**	**-1.2**
BHL	**Bhannes**	**12.26**	**284**	*e*Pn	**Pn**	**05 22 56.0**	**-0.8**
MMAI	**Mount Meron Ar**	**12.40**	**280**	Pn	**Pn**	**05 22 58.0**	**-0.7**
	comp=Z,5.2nm,0.3s,baz=84,slow=16,SNR=13						
MMAI				Sn	**Sn**	**05 25 13.9**	**-3.0**
	comp=Z,5.6nm,0.3s,baz=92,slow=34,SNR=4.9						
MMAI				Lg		05 26 57.0	
	baz=117,slow=37,SNR=1.9						
MMAI				LR	LR	05 28 44.5	
	comp=Z,486nm,21.3s,baz=95,slow=42						
ANDN	**Andirin**	**12.68**	**301**	*i*P	**Pn**	**05 22 58.7**	**-3.7**
EIL	**Elat**	**13.08**	**265**	Pn	**Pn**	**05 23 06.0**	**-2.0**
	comp=Z,2.7nm,0.3s,baz=43,slow=6.1,SNR=21						
EIL				Lg		05 27 11.4	
	comp=Z,2.2nm,0.3s,baz=342,slow=20,SNR=2.2						
KIV	**Kislovodsk**	**13.55**	**337**	*e*Pn	**Pn**	**05 23 18.3**	**+4.0**
KIV	**Kislovodsk**	**13.55**	**337**	*e*P	**Pn**	**05 23 17.1**	**+2.8**
KIV				*e*S	**Sn**	**05 25 47.5**	**+2.6**
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,207nm,12.0s						
KIV	**Kislovodsk**	**13.55**	**337**	*e*P	**Pn**	**05 23 17.1**	**+2.8**
	comp=Z,29nm,1.0s						
KIV				*e*S	**Sn**	**05 25 47.5**	**+2.6**
	comp=Z,207nm,12.0s						
WHFO	**Wadi Hawf**	**14.11**	**165**	P	**Pn**	**05 23 20.1**	**-2.0**
	SNR=27						
AVNT	**Avonos**	**14.24**	**304**	*i*P	**Pn**	**05 23 23.7**	**-0.1**
SOC	**Sochi**	**14.40**	**329**	*e*P	**Pn**	**05 23 25.7**	**-0.2**
SOC				*e*		05 26 07.6	
SOC				pmax	pmax		
	comp=Z,26nm,0.8s						
SOC				MLR	MLR		
	comp=Z,523nm,14.0s						
SOC	**Sochi**	**14.40**	**329**	*e*P	**Pn**	**05 23 25.7**	**-0.2**
	comp=Z,523nm,14.0s						
SOC				*e*S	**Sn**	**05 26 07.6**	**+2.1**
ABTO	**Aybut**	**14.56**	**167**	P	**Pn**	**05 23 26.3**	**-2.0**
	SNR=21						
RBK	**Rabkut**	**14.61**	**164**	*i*P	**Pn**	**05 23 27.6**	**-1.3**
	SNR=8.4						
RBK	**Rabkut**	**14.61**	**164**	P	**Pn**	**05 23 27.6**	**-1.3**
	SNR=8.4						
CDAG	**Cicekdag**	**14.95**	**306**	*i*P	**Pn**	**05 23 37.8**	**+4.3**
CTKT	**Corum**	**15.16**	**310**	*i*P	**Pn**	**05 23 35.7**	**-0.6**
BRTR	**Keskin Array B**	**15.50**	**306**	Pn	**Pn**	**05 23 41.1**	**+0.3**
KDHN	**Kadinhani**	**16.13**	**300**	*i*P	**Pn**	**05 23 52.6**	**+3.7**
ANTO	**Ankara**	**16.15**	**305**	*e*P	**Pn**	**05 23 52.1**	**+2.9**
	comp=Z,79nm,1.1s						
ANTO	**Ankara**	**16.15**	**305**	*e*P	**Pn**	**05 23 52.1**	**+2.9**
ANTO				pmax	pmax		
	comp=Z,79nm,1.1s						
ANTO	**Ankara**	**16.15**	**305**	*i*P	**Pn**	**05 23 52.7**	**+3.5**
KBL	**Kabul**	**16.24**	**75**	*e*P	**Pn**	**05 23 53.8**	**+3.5**
	comp=Z,21nm,1.0s						
KBL	**Kabul**	**16.24**	**75**	*e*P	**Pn**	**05 23 53.8**	**+3.5**
KBL				pmax	pmax		
	comp=Z,21nm,1.0s						
ANN	**Anapa**	**16.38**	**327**	*e*P	**Pn**	**05 23 51.8**	**-0.2**
ANN				*e*S	**Sn**	**05 26 56.4**	**+2.7**
ANN				pmax	pmax		
	comp=Z,98nm,1.8s						
ANN	**Anapa**	**16.38**	**327**	*e*P	**Pn**	**05 23 51.8**	**-0.2**
	comp=Z,98nm,1.8s						
HAJJ	**Hajjah**	**16.92**	**202**	*e*P	**Pn**	**05 23 58.6**	**-0.5**
	comp=Z,145nm,1.5s						
HAJJ	**Hajjah**	**16.92**	**202**	*e*P	**Pn**	**05 23 58.6**

VOR Voronezh 21.56 342 P **P** **05 24 50.0 -1.6**
VOR pmax pmax
comp=Z,200nm,1.2s,mb5.4
VOR Voronezh 21.56 342 P **P** **05 24 50.0 -1.6**
comp=Z,200nm,1.2s,mb5.4
AML Almayashu 21.59 54 *e*P **P** **05 24 52.5 +0.5**
comp=Z,54nm,0.8s,mb5.0
AML Almayashu 21.59 54 P **P** **05 24 54.0 +2.0**
SNR=24
AML Almayashu 21.59 54 *e*P **P** **05 24 52.5 +0.5**
comp=Z,54nm,0.8s,mb5.0
THN Thein Dam 21.82 81 *e*P **P** **05 24 53.3 -1.3**
EKS2 Erkin-Say 21.85 53 *e*P **P** **05 24 55.0 +0.3**
EKS2 Erkin-Say 21.85 53 P **P** **05 24 56.4 +1.6**
SNR=9.8
EKS2 Erkin-Say 21.85 53 *e*P **P** **05 24 55.0 +0.3**
AJM Ajmer 22.15 97 *ex* x 05 24 49.4
AJM AMb AMB 05 24 53.0
comp=Z,10.0nm,0.3s,mb4.7
UCH Uchtor 22.20 55 *e*P **P** **05 25 01.8 +3.3**
comp=Z,8.3nm,0.9s,mb4.2
KIS Kishinev 22.31 319 *e*P **P** **05 25 00.0 +0.4**
AAK Ala-Archa 22.33 54 P **P** **05 25 00.4 +0.5**
SNR=9.6
FRU Bishkek 22.48 53 *e*P **P** **05 25 02.0 +0.5**
FRU pmax pmax
comp=Z,80nm,2.2s,mb4.8
FRU Bishkek 22.48 53 *e*P **P** **05 25 02.0 +0.5**
comp=Z,80nm,2.2s,mb4.8
KSH Kashi 22.50 62 *e*P **P** **05 25 01.6 -0.1**
KSH *e*AP 05 25 10.6
KSH *e*XP sP 05 25 14.6 +8.7
KSH *e*PP 05 25 28.5
KSH S **S** **05 28 59.3 -9.5**
KSH *e*SCP ScP 05 32 30.1 -3.2
KSH *e*PCS PcS 05 32 34.1 -0.2
KSH AMB AMB
comp=Z,100nm,0.4s,mb5.6
KSH LR LR
comp=N,2µm,4.4s
KSH LR LR
comp=E,6µm,10.5s
KSH LR LR
comp=Z,5µm,9.3s
USP Ospenovka 22.57 52 P **P** **05 25 02.9 +0.5**
SNR=16
CHMS Chumysh 22.64 53 P **P** **05 25 04.7 +1.5**
SNR=9.3
KBK Karagaybulak 22.65 54 P **P** **05 25 06.7 +3.4**
SNR=7.9
KZA Kyzart 22.66 56 P **P** **05 25 01.0 -2.4**
SNR=17
KHET Khetri 22.67 92 *e*P **P** **05 25 04.3 +0.7**
KHET AMb AMB 05 25 11.5
comp=Z,13nm,1.4s,mb4.2
VRI Vrincioaia 22.91 315 ⇓P **P** **05 25 09.3 +3.3**
VRI Vrincioaia 22.91 315 ⇓*i*P **P** **05 25 09.3 +3.3**
PLOR Plostina 22.95 315 ⇓*i*P **P** **05 25 09.6 +3.2**
TKM2 Tokmak 2 23.19 54 *e*P **P** **05 25 09.4 +0.4**
TKM2 pmax pmax
comp=Z,13nm,0.8s,mb4.4
TKM2 Tokmak 2 23.19 54 P **P** **05 25 09.7 +0.7**
SNR=15
TKM2 Tokmak 2 23.19 54 *e*P **P** **05 25 09.4 +0.4**
comp=Z,13nm,0.8s,mb4.4
SMLA Simla 23.20 84 *e*P **P** **05 25 08.3 -0.9**
MLR Muntele Rosu 23.20 313 P **P** **05 25 11.9 +2.8**
comp=Z,46nm,1.1s,mb4.8,baz=116,slow=2.3,SNR=10
MLR LR LR 05 36 27.0
comp=Z,334nm,18.2s,MS3.8,baz=131,slow=42
MLR Muntele Rosu 23.20 313 ⇓*i*P **P** **05 25 11.9 +2.8**
KUDL Kundal 23.23 92 *e*P **P** **05 25 09.5 -0.1**
KUDL AMb AMB 05 25 20.5
comp=Z,41nm,1.1s,mb4.8
ULHL Ulahol 23.41 56 P **P** **05 25 14.6 +3.2**
SNR=14
AYAN Aya Nagar 23.69 91 *e*P **P** **05 25 13.7 -0.5**
AYAN AMb AMB 05 25 17.2
comp=Z,34nm,0.6s,mb5.0
NDI New Delhi 23.72 90 *e*P **P** **05 25 13.5 -0.9**
VOIR 23.74 313 ⇓*i*P **P** **05 25 15.9 +1.4**
VAY Valandovo 23.96 301 *e*P **P** **05 25 15.6 -1.0**
VAY Valandovo 23.96 301 *e*P **P** **05 25 15.7 -0.9**
KLP Kalpa 24.06 83 *e*P **P** **05 25 17.4 -0.2**
KLP AMb AMB 05 25 24.9
comp=Z,49nm,0.7s,mb5.1
DDI Dehra Dun 24.09 86 *e*P **P** **05 25 17.0 -0.8**
STIP Stip 24.34 302 *e*P **P** **05 25 20.1 +0.1**
STIP Stip 24.34 302 *e*P **P** **05 25 20.2 +0.2**
AKASG Malin Array Be 24.46 327 P **P** **05 25 19.0 -2.1**
comp=Z,3.7nm,0.3s,mb4.2,baz=137,slow=9.1,SNR=28
AKASG Malin Array Be 24.46 327 *i* P **P** **05 25 20.2 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKBB Malin Array Si 24.46 327 *e*P **P** **05 25 20.4 -0.6**
AKBB *e*S **S** **05 29 40.0 -1.1**
AKBB Malin Array Si 24.46 327 *e*P **P** **05 25 20.4 -0.6**
KIEV Kiev 24.47 327 *e*P **P** **05 25 19.9 -1.2**
comp=Z,28nm,0.8s,mb4.8
KIEV Kiev 24.47 327 *e*P **P** **05 25 19.9 -1.2**
KIEV pmax pmax
comp=Z,28nm,0.8s,mb4.7
KIEV Kiev 24.47 327 *e*P **P** **05 25 19.9 -1.2**
comp=Z,28nm,0.8s,mb4.8
BURAR Bucovina Array 24.69 317 ⇑P **P** **05 25 24.0 +0.8**
BURAR Bucovina Array 24.69 317 ⇑*i*P **P** **05 25 24.0 +0.8**
BUR08 Bucovina Ar. S 24.72 317 *e*P **P** **05 25 23.7 +0.3**
AGRA Agra 24.72 93 *e*P **P** **05 25 23.2 -0.4**
BIA Bitola 24.80 300 *e*P **P** **05 25 24.5 +0.3**
KALG Kalgarh 24.84 87 *ex* x 05 25 16.9
KALG AMb AMB 05 25 19.8
comp=Z,68nm,1.3s,mb5.0
KRUS Krusevo 24.94 301 *e*P **P** **05 25 26.5 +1.0**
SKO Skopje 24.95 302 *e*P **P** **05 25 26.6 +1.0**
SKO Skopje 24.95 302 *e*P **P** **05 25 26.7 +1.1**
BOLS Boljevac 25.14 307 *e*P **P** **05 25 27.5 +0.2**
GZR Gura Zlata 25.17 311 ⇓P **P** **05 25 27.9 +0.4**
GZR Gura Zlata 25.17 311 ⇓*i*P **P** **05 25 27.9 +0.4**
POO Poona 25.20 116 *e*P **P** **05 25 27.5 -0.5**
OHR Ohrid 25.21 300 *e*P **P** **05 25 27.9 -0.1**
OHR Ohrid 25.21 300 *e*P **P** **05 25 28.0 0.0**
OBN Obninsk 25.30 342 *e*P **P** **05 25 28.5 0.0**
comp=Z,183nm,1.4s,mb5.4
OBN Obninsk 25.30 342 *be*P **P** **05 25 27.9 -0.7**
OBN *e* 05 25 32.7
OBN *e**PP pP 05 25 39.0 +7.4
OBN *e* 05 26 10.3
OBN *e*SS 05 30 43.1
OBN pmax pmax
comp=Z,107nm,1.2s,mb5.2
OBN Obninsk 25.30 342 *e*P **P** **05 25 27.9 -0.7**
comp=Z,107nm,1.2s,mb5.2
JOSI Joshimath 25.32 85 *i* P **P** **05 25 29.4 +0.3**
ARU Arti 25.48 11 *e*P **P** **05 25 30.6 +0.4**
comp=Z,33nm,0.8s,mb4.9
ARU Arti 25.48 11⇑*e*P **P** **05 25 30.0 -0.2**
ARU pmax pmax
comp=Z,52nm,1.6s,mb4.8
ARU Arti 25.48 11 *e*P **P** **05 25 30.0 -0.2**
comp=Z,52nm,1.6s,mb4.8
MOS Moscow 25.59 344 *e*P **P** **05 25 30.3 -0.9**
MOS *e* 05 26 07.2
MOS *e*PPP 05 26 17.0
MOS pmax pmax
comp=Z,400nm,1.8s,mb5.7
MOS pmax pmax
comp=Z,246nm,1.6s,mb5.5
MOS Moscow 25.59 344 *e*P **P** **05 25 30.3 -0.9**
comp=Z,246nm,1.6s,mb5.5
BHPL Bhopal 25.71 102 *e*P **P** **05 25 32.8 +0.2**
BHPL AMb AMB 05 25 35.2
comp=Z,28nm,0.6s,mb4.9
DRGR 25.80 314 ⇓P **P** **05 25 35.0 +1.8**
DRGR 25.80 314 ⇓*i*P **P** **05 25 35.0 +1.8**
TIR Tirane 25.95 300 *e*P **P** **05 25 35.6 +1.0**
comp=Z,65nm,0.7s,mb5.3
TIR Tirane 25.95 300 *e*P **P** **05 25 35.6 +0.9**
TIR pmax pmax
comp=Z,65nm,0.7s,mb5.3
TIR Tirane 25.95 300 *e*P **P** **05 25 35.6 +0.9**
comp=Z,65nm,0.7s,mb5.3
BRVK Borovoye 25.95 29 P **P** **05 25 34.3 -0.2**
SNR=13
BRVK Borovoye 25.95 29 *e*P **P** **05 25 34.2 -0.3**
BRVK pmax pmax
comp=Z,24nm,0.9s,mb4.7
BRVK Borovoye 25.95 29 *e*P **P** **05 25 34.2 -0.3**
comp=Z,24nm,0.9s,mb4.7
BVAR Borovoye Array 25.97 29 P **P** **05 25 33.3 -1.4**
comp=Z,26nm,0.8s,mb4.8,baz=227,slow=7.2,SNR=85
BVAR ScP ScP 05 32 38.4 -4.1
comp=Z,1.8nm,0.7s,baz=228,slow=1.8,SNR=5.6
BVAR LR LR 05 37 25.1
comp=Z,649nm,21.1s,MS4.1,baz=221,slow=40
VOSK Vostochnaya 26.00 30 P **P** **05 25 34.2 -0.7**
VOSK pmax pmax
comp=Z,25nm,1.0s,mb4.7
VOSK Vostochnaya 26.00 30 P **P** **05 25 34.2 -0.7**
comp=Z,25nm,1.0s,mb4.7
BZS Buzias 26.00 311 ⇑P **P** **05 25 36.1 +1.0**
BZS Buzias 26.00 311 ⇑*i*P **P** **05 25 36.1 +1.0**
GRUS Gruza 26.01 306 *e*P **P** **05 25 36.0 +0.9**
SVE Sverdlovsk 26.23 13 *e*P **P** **05 25 37.3 +0.3**
SVE pmax pmax
comp=Z,31nm,1.1s,mb4.8
SVE Sverdlovsk 26.23 13 *e*P **P** **05 25 37.3 +0.3**
comp=Z,31nm,1.1s,mb4.8
SJES Sjenica 26.34 305 *e*P **P** **05 25 38.4 +0.3**
LVV L'vov 26.54 321 *e*P **P** **05 25 38.1 -1.8**
BBLS Lazići 26.91 306 *e*P **P** **05 25 45.0 +1.8**
FGSL Fruska Gora 27.03 309 *e*P **P** **05 25 45.4 +1.1**
KOLS Kolonicke sedl 27.06 318 *e*P **P** **05 25 46.0 +1.5**
KWP Kalwaria 27.16 319 *e*P **P** **05 25 46.5 +1.0**
KWP Kalwaria 27.16 319 ⇑*i*P **P** **05 25 48.8 +3.3**
CRVS Cervenica-Dubn 27.51 317 *e*P **P** **05 25 50.0 +1.4**
MNK Minsk 27.75 332 *e*P **P** **05 25 46.0 -4.7**
STHS Stebnicka Huta 27.88 318 *e*P **P** **05 25 58.0 +6.1**
STHS pmax pmax
comp=Z,13nm,1.4s,mb4.4
TIP Timpagrande 27.97 295 *e*P **P** **05 25 52.6 -0.3**
comp=Z,23nm,1.0s,mb4.8
TIP Timpagrande 27.97 295 *e*P **P** **05 25 52.6 -0.3**
comp=Z,23nm,1.0s,mb4.8
PSZ Piszkesteto 28.01 314 *e*P **P** **05 25 54.8 +1.6**
comp=Z,11nm,0.8s,mb4.5
PSZ Piszkesteto 28.01 314 *e*P **P** **05 25 54.8 +1.7**
PSZ pmax pmax
comp=Z,11nm,0.8s,mb4.5
PSZ Piszkesteto 28.01 314⇑*e*P **P** **05 25 55.1 +2.0**
PSZ Piszkesteto 28.01 314 *e*P **P** **05 25 54.8 +1.7**
comp=Z,11nm,0.8s,mb4.5
PKSM Moragy 28.16 310 ⇑P **P** **05 25 55.4 +0.9**
PKSM Moragy 28.16 310⇑*e*P **P** **05 25 55.4 +1.0**
PKSM Moragy 28.16 310 ⇑*i*P **P** **05 25 55.4 +1.0**
GRI Girifalco 28.21 294 P **P** **05 25 56.1 +1.1**
SOKR Solikamsk 28.29 7 ⇑*i*P **P** **05 25 57.5 +2.1**
SOKR pmax pmax
comp=Z,40nm,1.5s,mb4.8
SOKR Solikamsk 28.29 7 *i* P **P** **05 25 57.5 +2.1**
comp=Z,40nm,1.5s,mb4.8
KURK Kurchatov 28.48 40 P **P** **05 25 56.2 -1.0**
comp=Z,12nm,0.9s,mb4.5,baz=242,slow=9.5,SNR=46
KURK LR LR 05 39 08.3
comp=Z,359nm,21.3s,MS3.9,baz=240,slow=40
KURK Kurchatov 28.48 40 *e*P **P** **05 25 57.8 +0.5**
comp=Z,21nm,0.9s,mb4.8
KURK Kurchatov 28.48 40 *e*P **P** **05 25 57.8 +0.5**
KURK pmax pmax
comp=Z,21nm,0.9s,mb4.8
KURK Kurchatov 28.48 40 P **P** **05 25 57.5 +0.2**
SNR=8.8
PYUN Piuthan 28.79 88 *e*P **P** **05 25 59.1 -1.1**
comp=Z,19nm,0.7s,mb5.0
VYHS Vyhne 28.89 315 *e*P **P** **05 26 05.5 +4.5**
MK31 Makanchi Array 29.00 49 *e*P **P** **05 26 01.7 -0.2**
MKAR Makanchi Array 29.00 49 P **P** **05 26 01.2 -0.7**
comp=Z,11nm,0.6s,mb4.8,baz=243,slow=7.9,SNR=84
MKAR LR LR 05 39 02.7
comp=Z,501nm,20.8s,MS4.1,baz=253,slow=39
OJC Ojcow 29.09 318 *e*P **P** **05 26 03.7 +1.0**
DANN Dangsing 29.38 88 *e*P **P** **05 26 04.8 -0.7**
comp=Z,51nm,0.8s,mb5.3
KOLN Koldanda 29.39 89 *e*P **P** **05 26 04.8 -0.8**
SUW Suwalki 29.43 327 *e*P **P** **05 26 07.0 +1.3**
HYB Hyderabad 29.50 112 *e*P **P** **05 26 06.5 -0.2**
MODS Modra-Piesok 29.80 314 *e*P **P** **05 26 10.3 +1.3**
MODS pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
MODS Modra-Piesok 29.80 314 *e*P **P** **05 26 10.3 +1.3**
comp=Z,4.0nm,1.1s,mb4.1
ZST Bratislava 29.84 313 *e*P **P** **05 26 09.5 +0.1**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
ZST Bratislava 29.84 313 *e*P **P** **05 26 09.5 +0.1**
comp=Z,8.0nm,0.8s,mb4.5
OKC Ostrava-Krasne 29.87 317 *e*P **P** **05 26 10.7 +1.1**
OKC AMS AMS 05 42 00.0
comp=Z,400nm,6.1s
SOP Sopron 30.00 312⇑*e*P **P** **05 26 10.0 -0.8**
KLMR Klimovskoe 30.00 350 *e*P **P** **05 26 08.7 -2.0**
KLMR pmax pmax
comp=Z,99nm,1.2s,mb5.4
KLMR Klimovskoe 30.00 350 *e*P **P** **05 26 08.7 -2.0**
comp=Z,99nm,1.2s,mb5.4
MORC Moravsky Berou 30.20 316 ⇑*i*P **P** **05 26 13.1 +0.6**
comp=Z,5.8nm,0.8s,mb4.4
MORC Moravsky Berou 30.20 316 ⇑*i*P **P** **05 26 12.4 -0.1**
GKN Gorkha 30.22 88 *e*P **P** **05 26 12.2 -0.7**
comp=Z,28nm,0.7s,mb5.1
ARSA Arzberg 30.52 311 ⇑*i*P **P** **05 26 16.4 +1.0**
CONA Conrad Observa 30.53 312 ⇑*i*P **P** **05 26 16.1 +0.6**
comp=Z,14nm,1.6s,mb4.5
CSNA Conrad Observa 30.53 312 ⇑*i*P **P** **05 26 16.1 +0.7**
VRAC Vranov 30.57 315 P **P** **05 26 16.3 +0.5**
comp=Z,2.2nm,0.5s,mb4.2,baz=90,slow=8.1,SNR=3.1
SOKA Soboth 30.67 309 ⇑*i*P **P** **05 26 17.5 +0.7**
comp=Z,7.7nm,1.0s,mb4.5
DMN Daman 30.72 88 *e*P **P** **05 26 16.8 -0.6**
comp=Z,43nm,0.9s,mb5.3
KKN Kakani 30.82 88 *e*P **P** **05 26 17.8 -0.5**
PTQR Pietraquaria 30.84 300 P **P** **05 26 19.4 +1.2**
comp=Z,31nm,0.8s,mb5.2
OBKA Obir 30.94 309 ⇑*i*P **P** **05 26 20.0 +0.9**
comp=Z,8.7nm,1.0s,mb4.5
OBKA Obir 30.94 309 P **P** **05 26 20.0 +0.9**
comp=Z,8.7nm,1.0s,mb4.5
PKIN Phulchoki 30.98 88 *e*P **P** **05 26 18.8 -0.9**
PKI Pulchoki 30.99 88 *e*P **P** **05 26 19.3 -0.5**
comp=Z,41nm,0.9s,mb5.3
VSU Vasula 31.11 336 ⇑*i*P **P** **05 26 20.8 +0.4**
VSU pmax pmax
comp=Z,52nm,2.5s,mb4.9
VSU Vasula 31.11 336 *i* P **P** **05 26 20.8 +0.4**
comp=Z,52nm,2.5s,mb4.9
DPC Dobruska-Polom 31.15 317 *e*P **P** **05 26 19.6 -1.3**
DPC AMS AMS 05 40 50.0
comp=Z,300nm,15.5s
TREC Trest 31.24 314 AMS AMS 05 42 50.0
comp=Z,300nm,6.9s
VOY Vojsko 31.26 308 *e*P **P** **05 26 22.4 +0.5**
VOY *e* 05 26 34.4
VOY *e* 05 26 55.8
GUN Gumba 31.30 88 *e*P **P** **05 26 22.4 -0.1**
comp=Z,67nm,0.9s,mb5.5
UPC Upice 31.39 317 *e*P **P** **05 26 23.1 0.0**
MOA Molln 31.52 311 ⇑*i*P **P** **05 26 24.9 +0.7**
comp=Z,15nm,1.1s,mb4.7
ASS Assisi 31.53 302 P **P** **05 26 26.1 +1.8**
ASS pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
ASS Assisi 31.53 302 P **P** **05 26 26.1 +1.8**
comp=Z,5.7nm,0.8s,mb4.5
JIRN Jiri 31.63 88 *e*P **P** **05 26 24.9 -0.5**
comp=Z,37nm,0.8s,mb5.3
PTCC Patocco-Chiusa 31.71 308 P **P** **05 26 26.6 +0.7**
comp=Z,8.5nm,1.1s,mb4.5
KBA Koelnbreinsper 31.89 309 ⇓*i*P **P** **05 26 28.6 +1.1**
comp=Z,33nm,0.8s,mb5.2,SNR=26
KBA Koelnbreinsper 31.89 309 P **P** **05 26 28.6 +1.1**
comp=Z,33nm,0.8s,mb5.2,SNR=26
WMQ Urumqi 31.94 57 *e*P **P** **05 26 30.0 +2.1**
WMQ AP pP 05 26 40.0 +9.0
WMQ XP sP 05 26 44.0 +12
WMQ S **S** **05 31 37.0 -2.0**
WMQ SS SS 05 33 31.0 -25
WMQ AMB AMB
comp=Z,20nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,45nm,3.0s
WMQ LR LR
comp=N,635nm,10.0s,MS4.7
WMQ LR LR
comp=E,456nm,10.0s,MS4.7
WMQ LR LR
comp=Z,428nm,10.0s,MS4.4
PRU Pruhonice 32.07 315 *e*P **P** **05 26 21.8 -7.2**
PRU AMS AMS 05 42 40.0
comp=Z,300nm,14.4s
RAMN Ramite 32.18 89 *e*P **P** **05 26 29.1 -1.2**
comp=Z,35nm,0.8s,mb5.3
GERES GERESS Array B 32.19 313 P **P** **05 26 29.4 -0.6**
comp=Z,0.8nm,0.4s,mb3.9,baz=122,slow=7.0,SNR=9.6
GERES ScP ScP 05 32 59.0 -3.3
comp=Z,0.4nm,0.6s,baz=174,slow=2.7,SNR=4.4
GERES LR LR 05 42 41.9
comp=Z,177nm,19.2s,MS3.8,baz=107,slow=42
PVCC Panska Ves 32.25 316 AMS AMS 05 41 20.0
comp=Z,400nm,18.5s
KHC Kasperske Hory 32.36 313 *e*P **P** **05 26 31.1 -0.4**
KHC Kasperske Hory 32.36 313 *e*P **P** **05 26 31.8 +0.3**
KHC *ex* x 05 26 45.0
KHC AMS AMS 05 41 50.0
comp=Z,300nm,16.1s
SEST Monte Rota 32.56 309 P **P** **05 26 33.5 +0.2**
BOK Bokaro 32.63 95 *e*P **P** **05 26 34.8 +0.6**
BRG Berggiesshubel 32.75 316 *e*P **P** **05 26 35.2 +0.3**
BRG pmax pmax
comp=Z,30nm,1.0s,mb5.2
BRG Berggiesshubel 32.75 316 *e*P **P** **05 26 35.2 +0.3**
comp=Z,3.3nm,1.0s,mb4.2
WET Wettzell 32.80 313 *e*P **P** **05 26 35.5 +0.1**
ODAN Odare 32.88 89 *e*P **P** **05 26 36.4 0.0**
TAPN Taplejung 33.01 88 *e*P **P** **05 26 37.8 +0.2**
comp=Z,20nm,0.9s,mb5.1
NVS Novosibirsk 33.02 36 *e*P **P** **05 26 36.0 -1.2**
NVS *e*S **S** **05 31 54.8 -0.7**
NVS pmax pmax
comp=N,20nm,1.3s
NVS pmax pmax
comp=E,13nm,1.3s
NVS pmax pmax
comp=Z,31nm,1.3s,mb5.1
NVS smax
comp=N,8.0nm,1.3s
NVS smax
comp=E,6.0nm,1.1s
NVS Novosibirsk 33.02 36 *e*P **P** **05 26 36.0 -1.2**
NVS *e*S **S** **05 31 54.8 -0.7**
comp=E,8.0nm,1.3s
WTTA Wettenberg 33.07 309 ⇑*i*P **P** **05 26 38.1 +0.3**
comp=E,39nm,1.3s,mb5.2,SNR=7.0
WATA Walderalm 33.13 309 ⇑*i*P **P** **05 26 38.3 0.0**
comp=E,17nm,0.5s,mb5.2,SNR=7.6
ERBM Eremo 33.34 304 P **P** **05 26 42.3 +2.1**
SQTA Sankt Quirin 33.34 309 ⇑*i*P **P** **05 26 40.4 +0.3**
comp=E,22nm,0.5s,mb5.3
ZAA0 Zalesovo Array 33.38 38 *e*P **P** **05 26 40.1 -0.4**
ZAA0 Zalesovo Array 33.38 38 *e*P **P** **05 26 40.1 -0.4**
ZALV Zalesovo Beam 33.38 38 P **P** **05 26 39.6 -0.8**
comp=E,13nm,0.5s,mb5.1,baz=242,slow=9.5,SNR=33
ZALV LR LR 05 42 06.9
comp=E,399nm,18.0s,MS4.2,baz=272,slow=40
ROTZ Rotzenmuhle 33.41 314 *e*P **P** **05 26 41.3 +0.6**
NKC Novy Kostel 33.41 315 *e*P **P** **05 26 44.8 +4.0**
NKC AMS AMS 05 42 40.0
comp=E,400nm,8.9s
MOTA Moosalm 33.44 309 ⇑*i*P **P** **05 26 40.5 -0.5**
SNR=17
CLL Collm 33.46 317 *i* P **P** **05 26 41.6 +0.4**
comp=Z,6.0nm,1.0s,mb4.5
CLL *ex* x 05 26 50.0
comp=Z,13nm,1.0s
JOF Joensuu 33.47 345 *ep* **P** **05 26 40.6 -0.5**
comp=Z,5.5nm,0.3s,mb5.0
JOF Joensuu 33.47 345 *e*P **P** **05 26 40.6 -0.5**
JOF pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
FUR Furstenfeldbru 33.53 311 *e*P **P** **05 26 42.6 +0.8**
FETA Feichten 33.61 309 ⇑*i*P **P** **05 26 43.0 +0.5**
comp=Z,33nm,1.0s,mb5.2,SNR=14
RETA Reutte 33.70 309 ⇑*i*P **P** **05 26 43.1 -0.1**
comp=Z,9.3nm,0.5s,mb4.9
VSL Villasalto 33.70 295 *e*P **P** **05 26 45.7 +2.3**
comp=Z,33nm,1.1s,mb5.2
KEST Kesra 33.88 288 P **P** **05 26 46.8 +1.8**
comp=Z,4.9nm,0.9s,mb4.4,baz=206,slow=1.4,SNR=12
GRA1 Grafenberg Arr 34.00 313 *e*P **P** **05 26 46.2 +0.4**
comp=Z,55nm,1.7s,mb5.2
GRF Grafenberg Arr 34.00 313 *e*P **P** **05 26 46.2 +0.4**
GRF pmax pmax
comp=Z,55nm,1.7s,mb5.2
GRF Grafenberg Arr 34.00 313 *e*P **P** **05 26 46.2 +0.4**
GRF pmax pmax
comp=Z,55nm,1.7s,mb5.2
GRF Grafenberg Arr 34.00 313 *e*P **P** **05 26 46.2 +0.4**
comp=Z,55nm,1.7s,mb5.2
BSD Bornholm Skovb 34.05 324 *e*P **P** **05 26 43.9 -2.3**
BSD *i* pP 05 26 45.2 -4.1
BSD Bornholm Skovb 34.05 324 *i* P **P** **05 26 43.9 -2.3**
BSD *i* pP 05 26 45.2 -4.1
KAF Kangasniemi 34.08 340 *ep* **P** **05 26 45.4 -1.0**
comp=Z,3.1nm,0.3s,mb4.7,baz=140,slow=9.0
KAF Kangasniemi 34.08 340 *e*P **P** **05 26 45.4 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
PGF Pioggiola 34.14 300 *e*P **P** **05 26 46.6 -0.6**
comp=Z,185nm,1.5s,mb5.5
PGF Pioggiola 34.14 300 *e*P **P** **05 26 46.6 -0.6**
comp=Z,93nm,1.5s,mb5.5
DAVA Damuels 34.24 309 ⇑*i*P **P** **05 26 47.7 -0.2**
comp=Z,27nm,0.5s,mb5.4,SNR=13
TUE Stuetta 34.43 307 *e*P **P** **05 26 52.6 +3.0**
comp=Z,9.5nm,0.8s,mb4.8
VAI Varese 34.72 306 P **P** **05 26 51.9 -0.3**
LSA Lhasa 35.32 82 P **P** **05 26 56.0 -1.6**
LSA Lhasa 35.32 82 *e*P **P** **05 26 59.5 +1.9**
LSA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LSA Lhasa 35.32 82 *e*P **P** **05 26 59.5 +1.9**
comp=Z,8.4nm,0.8s,mb4.7
SBF Sospel 35.40 302 *e*P **P** **05 26 56.2 -1.8**
MBDF Montbardon 35.96 304 *e*P **P** **05 27 01.8 -1.1**
comp=Z,27nm,0.6s,mb5.0
MBDF Montbardon 35.96 304 *e*P **P** **05 27 01.8 -1.1**
MBDF pmax pmax
comp=Z,14nm,0.6s,mb5.1
MBDF Montbardon 35.96 304 *e*P **P** **05 27 01.8 -1.1**
comp=Z,14nm,0.6s,mb5.0
BNI Bardonecchia 36.06 304 *e*P **P** **05 27 03.8 +0.1**
comp=Z,38nm,1.0s,mb5.3
BNI Bardonecchia 36.06 304 *e*P **P** **05 27 03.8 +0.1**
BNI pmax pmax
comp=Z,38nm,1.0s,mb5.3
BNI Bardonecchia 36.06 304 *e*P **P** **05 27 03.8 +0.1**
comp=Z,38nm,1.0s,mb5.3
LPG La Plagne 36.06 305 *e*P **P** **05 27 02.9 -0.8**
comp=Z,26nm,0.6s,mb5.0
LPG La Plagne 36.06 305 *e*P **P** **05 27 02.9 -0.8**
LPG pmax pmax
comp=Z,13nm,0.6s,mb5.0
LPG La Plagne 36.06 305 *e*P **P** **05 27 02.9 -0.8**
comp=Z,13nm,0.6s,mb5.0
LPL La Plagne 36.08 305 *e*P **P** **05 27 02.8 -1.1**
comp=Z,31nm,0.7s,mb5.0
LPL La Plagne 36.08 305 *e*P **P** **05 27 02.8 -1.1**
LPL pmax pmax
comp=Z,15nm,0.7s,mb5.0
LPL La Plagne 36.08 305 *e*P **P** **05 27 02.8 -1.1**
comp=Z,15nm,0.7s,mb5.0
CDF Champ du Feu 36.19 310 *e*P **P** **05 27 02.8 -2.0**
ECH Echery 36.23 310 *e*P **P** **05 27 04.9 -0.2**
ECH *e* 05 27 17.8
ECH Echery 36.23 310 *e*P **P** **05 27 04.9 -0.2**
HINF Hinteralfeld 36.35 309 *e*P **P** **05 27 04.6 -1.6**
ORIF Oris-en-Rattie 36.61 304 *e*P **P** **05 27 07.0 -1.4**
ORIF *e*MLR MLR
comp=Z,155nm,23.0s,MS3.4
CABF La Chapelle 36.67 307 *e*P **P** **05 27 08.0 -0.9**
comp=Z,65nm,0.9s,mb5.2
CABF La Chapelle 36.67 307 *e*P **P** **05 27 08.0 -0.9**
CABF pmax pmax
comp=Z,33nm,0.9s,mb5.2
CABF La Chapelle 36.67 307 *e*P **P** **05 27 08.0 -0.9**
comp=Z,33nm,0.9s,mb5.2
HAU Haudompre 36.72 309 *e*P **P** **05 27 07.5 -1.8**
HAU *e*MLR MLR
comp=Z,164nm,17.0s,MS3.6

HAU Haudompre 36.72 309 *e*P **P** **05 27 07.5 -1.8**
HAU LR LR
comp=Z,160nm,17.0s,MS3.9
SHL Shillong 37.12 89 *e*P **P** **05 27 12.0 -1.0**
APA Apatity 37.25 350⇑ *i*P **P** **05 27 16.7 +3.2**
APA pmax pmax
comp=Z,14nm,0.8s,mb4.8
APA MLR MLR
comp=Z,1µm,14.0s,MS4.9
MUD Monsted U'grnd 37.55 323 *e*P **P** **05 27 14.3 -1.9**
MUD Monsted U'grnd 37.55 323 *i* P **P** **05 27 14.3 -1.9**
MEZF Maizieres J'vi 37.66 310 *e*P **P** **05 27 14.8 -2.5**
LASF Ste Croix 37.99 302 *e*P **P** **05 27 18.6 -1.5**
GIVF Givet 38.10 312 *e*P **P** **05 27 18.0 -3.0**
SMF Signal de Mont 38.21 307 *e*P **P** **05 27 20.4 -1.6**
comp=Z,30nm,0.7s,mb4.8
SMF Signal de Mont 38.21 307 *e*P **P** **05 27 20.4 -1.6**
SMF pmax pmax
comp=Z,15nm,0.7s,mb4.8
SMF Signal de Mont 38.21 307 *e*P **P** **05 27 20.4 -1.6**
comp=Z,15nm,0.7s,mb4.8
LOR Lormes 38.27 308 *e*P **P** **05 27 20.7 -1.8**
LOR comp=Z,26nm,1.1s,mb4.6
LOR *e*MLR MLR
comp=Z,286nm,20.5s,MS3.8
LOR Lormes 38.27 308 *e*P **P** **05 27 20.7 -1.8**
comp=Z,13nm,1.1s,mb4.6
LOR LR LR
comp=Z,290nm,20.5s,MS4.1
LOR Lormes 38.27 308 *e*P **P** **05 27 20.7 -1.8**
LOR pmax pmax
comp=Z,13nm,1.1s,mb4.6
LOR MLR MLR
comp=Z,290nm,20.5s,MS4.1
OSL Oslo 38.39 329 *i* P **P** **05 27 25.9 +2.6**
OSL Oslo 38.39 329 *e*P **P** **05 27 23.7 +0.4**
KRAR Krasnoyarsk 38.46 38 *i* P **P** **05 27 25.5 +1.6**
BAIF Baives 38.48 312 *e*P **P** **05 27 22.6 -1.6**
SSF Saint Saulge 38.49 307 *e*P **P** **05 27 22.6 -1.7**
comp=Z,20nm,0.8s,mb4.6
SSF Saint Saulge 38.49 307 *e*P **P** **05 27 22.6 -1.7**
SSF pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
SSF Saint Saulge 38.49 307 *e*P **P** **05 27 22.6 -1.7**
comp=Z,9.8nm,0.8s,mb4.6
AVF Avril sur Loir 38.56 307 *e*P **P** **05 27 23.4 -1.5**
comp=Z,24nm,1.0s,mb4.6
AVF Avril sur Loir 38.56 307 *e*P **P** **05 27 23.4 -1.5**
AVF pmax pmax
comp=Z,12nm,1.0s,mb4.6
AVF Avril sur Loir 38.56 307 *e*P **P** **05 27 23.4 -1.5**
comp=Z,12nm,1.0s,mb4.6
NB2 NORSAR Subarra 38.75 331 P **P** **05 27 24.0 -2.2**
comp=Z,24nm,1.2s,mb4.8,baz=124,slow=8.6
NOA NORSAR Array B 38.75 331 P **P** **05 27 24.2 -2.0**
comp=Z,5.2nm,0.8s,mb4.3,baz=122,slow=8.3,SNR=17
NOA LR LR 05 43 52.4
comp=Z,79nm,20.5s,MS3.5,baz=150,slow=37
NOA NORSAR Array B 38.75 331 P **P** **05 27 24.2 -2.0**
NAO01 NORSAR Array S 38.78 330 *e*P **P** **05 27 26.1 -0.4**
comp=Z,6.4nm,0.8s,mb4.4
BGF Bois d'Agland 38.88 306 *e*P **P** **05 27 26.0 -1.6**
EMHD Djebel Mahouad 38.98 290 P **P** **05 27 24.6 -4.0**
TCF Toulx Ste Croi 39.30 306 *e*P **P** **05 27 29.9 -1.2**
BLS5 Blasjo 40.09 327 *e*P **P** **05 27 37.8 +0.3**
comp=Z,25nm,1.9s,mb4.6
BLS5 Blasjo 40.09 327 *e*P **P** **05 27 37.8 +0.3**
BLS5 AMb AMB 05 27 44.1
comp=Z,25nm,1.9s,mb4.6
BLS5 Blasjo 40.09 327 *e*P **P** **05 27 37.8 +0.3**
comp=Z,25nm,1.9s,mb4.6
EBNR Beni Rached 40.11 290 P **P** **05 27 30.0 -8.0**
ODD1 Odda 40.21 328 *e*P **P** **05 27 38.6 +0.1**
LFF La Frestale 40.26 304 *e*P **P** **05 27 36.2 -2.9**
KEV Kevo 40.27 348 *e*p **P** **05 27 38.3 -0.6**
comp=Z,3.5nm,0.3s,mb4.6
KEV Kevo 40.27 348 *e*P **P** **05 27 38.3 -0.6**
KEV pmax pmax
comp=Z,4.0nm,0.3s,mb4.6
TAM Tamanrasset 40.27 269 *e*P **P** **05 27 40.2 +0.7**
TAM Tamanrasset 40.27 269 *e*P **P** **05 27 40.2 +0.7**
ARCES ARCESS Array B 40.36 347 P **P** **05 27 38.5 -1.2**
comp=Z,4.2nm,0.7s,mb4.3,baz=163,slow=8.6,SNR=42
ARCES LR LR 05 45 44.7
comp=Z,204nm,20.7s,MS4.0,baz=150,slow=38
KTK1 Kautokeino 40.39 346 *e*P **P** **05 27 39.8 -0.1**
NSS Namsos 40.40 336 *e*P **P** **05 27 42.5 +2.4**
EANR 'Ain N'Sour 40.50 290 P **P** **05 27 41.2 0.0**
ERTA Horta de San J 40.60 298 P **P** **05 27 42.5 +0.6**
comp=Z,36nm,1.1s,mb4.9
ERTA Horta de San J 40.60 298 P **P** **05 27 42.5 +0.6**
comp=Z,36nm,1.1s,mb4.9
MOR8 Moi Rana 40.60 339 *e*P **P** **05 27 41.6 -0.1**
comp=Z,36nm,1.8s,mb4.7
MOR8 Moi Rana 40.60 339 *e*P **P** **05 27 41.6 -0.1**
MOR8 AMb AMB 05 27 44.8
comp=Z,36nm,1.8s,mb4.7
MOR8 Moi Rana 40.60 339 *e*P **P** **05 27 41.6 -0.1**
comp=Z,36nm,1.8s,mb4.7
GTA Gaotai 40.86 65 *e*P **P** **05 27 44.6 +0.5**
GTA AP pP 05 27 55.3 +8.0
GTA XP sP 05 27 58.6 +10
GTA PP PP 05 29 22.6 +4.4
GTA S **S** **05 33 52.9 -2.5**
GTA XS sS 05 34 08.9 +8.4
GTA AMB AMB
comp=Z,26nm,0.8s,mb4.9
GTA AMB AMB
comp=Z,90nm,3.9s
GTA LR LR
comp=N,538nm,19.9s,MS4.6
GTA LR LR
comp=E,475nm,16.9s,MS4.6
GTA LR LR
comp=Z,521nm,15.8s,MS4.5
MFF Saint Martin d 40.95 306 *e*P **P** **05 27 42.8 -2.0**
FLOS Flostrand 41.05 338 *e*P **P** **05 27 44.9 -0.4**
FLOS AMb AMB 05 27 48.3
comp=Z,114nm,1.5s,mb5.3
LDF La Druitiere 41.08 309 *e*P **P** **05 27 42.8 -3.0**
STOK Stokkvaagen 41.15 338 *e*P **P** **05 27 45.1 -1.1**
comp=Z,80nm,1.4s,mb5.2
STOK Stokkvaagen 41.15 338 *e*P **P** **05 27 45.1 -1.1**
STOK AMb AMB 05 27 50.4
comp=Z,80nm,1.4s,mb5.2
STOK Stokkvaagen 41.15 338 *e*P **P** **05 27 45.1 -1.1**
comp=Z,80nm,1.4s,mb5.2
ESAC San Caprasio 41.16 299 P **P** **05 27 47.6 +1.0**
comp=Z,32nm,0.5s,mb5.2
ESAC San Caprasio 41.16 299 P **P** **05 27 47.6 +1.0**
comp=Z,32nm,0.5s,mb5.2
ETSF Etsaut 41.19 301 *e*P **P** **05 27 43.6 -3.2**
EMOS Mosqueruela 41.24 297 P **P** **05 27 46.8 -0.5**
comp=Z,100nm,1.0s,mb5.4
EMOS Mosqueruela 41.24 297 P **P** **05 27 46.8 -0.5**
comp=Z,100nm,1.0s,mb5.4
FLN La Foliniere 41.33 309 *e*P **P** **05 27 46.0 -1.9**
FLN *e*MLR MLR
comp=Z,163nm,20.5s,MS3.6
FLN La Foliniere 41.33 309 *e*P **P** **05 27 46.0 -1.9**
FLN LR LR
comp=Z,160nm,20.5s,MS3.9
GRR Gorron 41.55 309 *e*P **P** **05 27 48.0 -1.7**
comp=Z,18nm,0.6s,mb4.6
GRR Gorron 41.55 309 *e*P **P** **05 27 48.0 -1.7**
GRR pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
GRR Gorron 41.55 309 *e*P **P** **05 27 48.0 -1.7**
comp=Z,8.9nm,0.6s,mb4.6
ECHE Chera 41.69 296 P **P** **05 27 50.3 -0.7**
ECHE pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
ECHE Chera 41.69 296 P **P** **05 27 50.3 -0.7**
comp=Z,8.6nm,0.7s,mb4.5
TRO Tromso 41.84 344 *e*P **P** **05 27 51.5 -0.2**
TRO Tromso 41.84 344 *e*P **P** **05 27 50.7 -1.0**
MOY Mondy 42.03 46 *e*P **P** **05 27 55.3 +1.7**
ETOB Tobarra 42.24 294 P **P** **05 27 55.7 +0.2**
comp=Z,15nm,0.9s,mb4.6
ETOR Torete 42.41 297 P **P** **05 27 55.9 -1.0**
comp=Z,20nm,1.1s,mb4.7
ETOR Torete 42.41 297 P **P** **05 27 55.9 -0.9**
ETOR pmax pmax
comp=Z,20nm,1.1s,mb4.7
ETOR Torete 42.41 297 P **P** **05 27 55.9 -0.9**
comp=Z,20nm,1.1s,mb4.7

SGMF Saint Gilles 42.67 309 *e*P **P** **05 27 55.7 -3.1**
EVIA Vianos 42.98 294 P **P** **05 28 02.5 +1.0**
comp=Z,13nm,0.6s,mb4.8
EVIA Vianos 42.98 294 P **P** **05 28 02.5 +1.0**
EVIA pmax pmax
comp=Z,13nm,0.6s,mb4.8
EVIA Vianos 42.98 294 P **P** **05 28 02.5 +1.0**
comp=Z,13nm,0.6s,mb4.8
ENIJ Nijar 42.98 292 P **P** **05 28 01.8 +0.2**
comp=Z,7.5nm,0.7s,mb4.5
ENIJ Nijar 42.98 292 P **P** **05 28 01.8 +0.3**
ENIJ pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
ENIJ Nijar 42.98 292 P **P** **05 28 01.8 +0.3**
comp=Z,7.5nm,0.7s,mb4.5
QUIF Quistinic 43.06 308 *e*P **P** **05 27 59.4 -2.6**
ROSF Rostrenen 43.15 309 *e*P **P** **05 27 59.7 -3.1**
EHUE Huescar 43.16 293 P **P** **05 28 03.4 +0.4**
comp=Z,8.6nm,1.0s,mb4.4
EHUE Huescar 43.16 293 P **P** **05 28 03.4 +0.4**
EHUE pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
EHUE Huescar 43.16 293 P **P** **05 28 03.4 +0.4**
comp=Z,8.6nm,1.0s,mb4.4
ZAK Zakamensk 43.33 48 *e*P **P** **05 28 04.0 -0.1**
ZAK *e* 05 28 15.4
ZAK *e* 05 29 50.1
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
ZAK Zakamensk 43.33 48 *e*P **P** **05 28 04.0 -0.1**
comp=Z,4.0nm,1.0s,mb4.1
ZAK Zakamensk 43.33 48 *e*PcP PcP 05 29 50.1 -2.7
EBER Berja 43.53 292 P **P** **05 28 05.5 -0.5**
comp=Z,20nm,0.8s,mb4.9
EBER Berja 43.53 292 P **P** **05 28 05.5 -0.5**
comp=Z,20nm,0.8s,mb4.9
EQES Quesada 43.54 293 P **P** **05 28 06.0 0.0**
comp=Z,12nm,0.9s,mb4.6
EQES Quesada 43.54 293 P **P** **05 28 06.0 0.0**
comp=Z,12nm,0.9s,mb4.6
TLY Talaya 43.67 47⇑ *i*P **P** **05 28 04.6 -2.3**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TLY Talaya 43.67 47 *i* P **P** **05 28 04.6 -2.3**
comp=Z,6.0nm,0.8s,mb4.4
ESDC Sonseca Array 43.98 296 P **P** **05 28 10.0 +0.5**
comp=Z,4.4nm,0.8s,mb4.2,baz=69,slow=8.2,SNR=15
ESDC Sonseca Array 43.98 296 P **P** **05 28 08.7 -0.8**
comp=Z,13nm,1.4s,mb4.5
ESDC Sonseca Array 43.98 296 P **P** **05 28 08.7 -0.8**
comp=Z,13nm,1.4s,mb4.5
ECOG Cogollos-Vega 44.01 293 P **P** **05 28 09.8 0.0**
comp=Z,10.0nm,0.9s,mb4.5
ECOG Cogollos-Vega 44.01 293 P **P** **05 28 09.8 0.0**
ECOG pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ECOG Cogollos-Vega 44.01 293 P **P** **05 28 09.8 0.0**
comp=Z,10.0nm,0.9s,mb4.5
GUD Guadarrama 44.02 297 P **P** **05 28 09.4 -0.4**
comp=Z,12nm,0.8s,mb4.7
GUD Guadarrama 44.02 297 P **P** **05 28 09.4 -0.4**
GUD pmax pmax
comp=Z,12nm,0.8s,mb4.7
GUD Guadarrama 44.02 297 P **P** **05 28 09.4 -0.4**
comp=Z,12nm,0.8s,mb4.7
EBAN Banos Encina 44.05 294 P **P** **05 28 09.4 -0.6**
comp=Z,17nm,0.9s,mb4.8
EBAN Banos Encina 44.05 294 P **P** **05 28 09.4 -0.7**
EBAN pmax pmax
comp=Z,17nm,0.9s,mb4.8
EBAN Banos Encina 44.05 294 P **P** **05 28 09.4 -0.7**
comp=Z,17nm,0.9s,mb4.8
EGUA Guajares 44.08 292 P **P** **05 28 09.6 -0.7**
comp=Z,79nm,1.1s,mb5.4
EGUA Guajares 44.08 292 P **P** **05 28 09.6 -0.8**
comp=Z,79nm,1.1s,mb5.4
ERON Agron 44.24 292 P **P** **05 28 11.6 0.0**
ERON Agron 44.24 292 P **P** **05 28 11.6 -0.1**
LZH Lanzhou 44.48 69 *e*P **P** **05 28 14.3 +0.7**
LZH AP pP 05 28 21.1 +4.4
LZH XP sP 05 29 25.1 +7.2
LZH PP PP 05 29 58.3 +1.1
LZH *e*S **S** **05 34 49.1 +0.4**
LZH XS sS 05 35 05.0 +11
LZH AMB AMB
comp=Z,50nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,128nm,4.0s
LZH LR LR
comp=E,570nm,14.0s
LZH LR LR
comp=Z,978nm,17.1s,MS4.8
ELOJ Sierra Loja 44.49 292 P **P** **05 28 13.1 -0.6**
ELOJ Sierra Loja 44.49 292 P **P** **05 28 13.1 -0.6**
EARI Arriondas 44.57 301 P **P** **05 28 14.5 +0.3**
comp=Z,10nm,0.7s,mb4.8
EADA Adamuz 44.66 294 P **P** **05 28 16.0 +1.0**
comp=Z,7.4nm,0.9s,mb4.5
EADA Adamuz 44.66 294 P **P** **05 28 16.0 +1.0**
comp=Z,7.4nm,0.9s,mb4.5
EMIJ Mijas 45.08 292 P **P** **05 28 16.9 -1.5**
comp=Z,34nm,1.1s,mb5.1
EMIJ Mijas 45.08 292 P **P** **05 28 16.9 -1.5**
comp=Z,34nm,1.1s,mb5.1
SONM Songino Array 45.27 52 P **P** **05 28 19.9 +0.2**
comp=Z,2.2nm,0.6s,mb4.2,baz=269,slow=7.1,SNR=20
SONM LR LR 05 49 23.3
comp=Z,301nm,18.1s,MS4.3,baz=239,slow=39
CD2 Chengdu 45.57 76 *e*P **P** **05 28 21.9 -0.5**
CD2 AP pP 05 28 31.8 +6.3
CD2 XP sP 05 28 35.8 +9.1
CD2 PP PP 05 30 08.8 -0.2
CD2 S **S** **05 35 00.5 -4.2**
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,40nm,4.6s
CD2 LR LR
comp=N,180nm,15.2s
CD2 LR LR
comp=Z,210nm,14.8s,MS4.2
EJIF Jimena Fronter 45.65 292 P **P** **05 28 22.7 -0.3**
comp=Z,28nm,1.3s,mb5.0
EJIF Jimena Fronter 45.65 292 P **P** **05 28 22.7 -0.2**
EJIF pmax pmax
comp=Z,29nm,1.3s,mb5.0
EJIF Jimena Fronter 45.65 292 P **P** **05 28 22.7 -0.2**
comp=Z,28nm,1.3s,mb5.0
ULN Ulaanbaatar 45.72 52 *e*P **P** **05 28 22.8 -0.4**
comp=Z,10nm,0.7s,mb4.9
ULN Ulaanbaatar 45.72 52 *e*P **P** **05 28 22.7 -0.5**
ZFT Errachidia 45.73 286 *i* P **P** **05 28 24.0 +0.4**
CHTO Chiang Mai 45.76 94 *e*P **P** **05 28 23.3 -0.6**
comp=Z,6.8nm,0.9s,mb4.6
CHTO Chiang Mai 45.76 94 *e*P **P** **05 28 23.3 -0.7**
CHTO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CHTO Chiang Mai 45.76 94 *e*P **P** **05 28 23.3 -0.7**
comp=Z,6.8nm,0.9s,mb4.6
CMAR Chiang Mai Arr 45.92 95 P **P** **05 28 24.2 -1.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=292,slow=8.4,SNR=12
CMAR ScP ScP 05 33 54.0 -1.4
comp=Z,0.6nm,0.3s,baz=284,slow=4.4,SNR=5.2
CMAR LR LR 05 52 06.5
comp=Z,142nm,18.2s,MS4.0,baz=296,slow=42
MIF Mishlifen 46.11 288 *i* P **P** **05 28 25.0 -1.6**
KMI Kunming 46.51 84 P **P** **05 28 30.5 +0.7**
KMI AP pP 05 28 39.8 +6.8
KMI XP sP 05 28 44.6 +10
KMI PP PP 05 30 19.9 +0.9
KMI S **S** **05 35 14.5 -3.8**
KMI SS SS 05 38 33.9 -10
KMI AMB AMB
comp=Z,25nm,0.9s,mb5.1
KMI AMB AMB
comp=Z,72nm,3.5s
KMI LR LR
comp=N,238nm,14.9s,MS4.3
KMI LR LR
comp=E,196nm,17.2s,MS4.3
KMI LR LR
comp=Z,166nm,18.2s,MS4.0
MTE Manteigas 46.61 298 *e*P **P** **05 28 30.9 +0.5**
comp=Z,63nm,1.4s,mb5.3
MTE Manteigas 46.61 298 *e*P **P** **05 28 30.9 +0.5**
comp=Z,63nm,1.4s,mb5.3

ELOB Lobios 46.80 300 P **P** **05 28 32.6 +0.7**
comp=Z,15nm,1.3s,mb4.8
ELOB Lobios 46.80 300 P **P** **05 28 32.6 +0.7**
comp=Z,15nm,1.3s,mb4.8
EVO Evora 47.27 295 *e*P **P** **05 28 35.6 0.0**
comp=Z,84nm,1.4s,mb5.2
EVO *e*MLR MLR
comp=Z,157nm,20.0s,MS3.7
EVOP Sao Brissos 47.35 295 *e*P **P** **05 28 35.6 -0.6**
comp=Z,42nm,1.4s,mb5.2
TZC Tazercounte 47.45 286 *i* P **P** **05 28 38.0 +0.9**
TOA0 Torodi Ar. Sit 47.87 259 *e*P **P** **05 28 39.8 -0.6**
TOA0 Torodi Ar. Sit 47.87 259 *e*P **P** **05 28 39.8 -0.7**
TORD Torodi Ar. Bea 47.87 259 P **P** **05 28 39.4 -1.1**
comp=Z,7.4nm,0.8s,mb4.8,baz=55,slow=8.2,SNR=56
TORD LR LR 05 51 29.8
comp=Z,467nm,19.2s,MS4.5,baz=55,slow=39
XAN Xi'an 48.98 71 P **P** **05 28 48.6 -0.3**
XAN AP pP 05 28 57.6 +5.5
XAN PP PP 05 30 42.1 -0.2
XAN S **S** **05 35 50.8 -2.5**
XAN SS SS 05 39 23.1 -0.8
XAN AMB AMB
comp=Z,38nm,0.8s,mb5.5
XAN LR LR
comp=N,271nm,25.1s,MS4.2
XAN LR LR
comp=E,226nm,25.1s,MS4.2
XAN LR LR
comp=Z,332nm,26.4s,MS4.2
GYA Guiyang 49.36 81 P **P** **05 28 50.9 -1.0**
GYA AP pP 05 29 01.0 +5.9
GYA XP sP 05 29 04.9 +8.6
GYA PP PP 05 30 44.9 -1.0
GYA S **S** **05 35 54.5 -4.3**
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,120nm,5.4s
GYA LR LR
comp=N,340nm,13.7s,MS4.6
GYA LR LR
comp=E,160nm,11.6s,MS4.6
GYA LR LR
comp=Z,350nm,11.7s,MS4.6
HHC Hu-ho-hao-te 49.60 61 *e*P **P** **05 28 54.3 +0.8**
HHC AP pP 05 29 04.3 +7.6
HHC XP sP 05 29 08.9 +11
HHC PCP PcP 05 30 16.3 +1.3
HHC PP PP 05 30 48.8 +1.0
HHC S **S** **05 35 56.8 -5.0**
HHC XS sS 05 36 15.3 +8.3
HHC SCS ScS 05 38 40.4 -5.0
HHC SS SS 05 39 25.6 -8.0
HHC AMB AMB
comp=Z,26nm,0.6s,mb5.4
HHC AMB AMB
comp=Z,207nm,6.5s
HHC LR LR
comp=N,513nm,20.2s,MS4.6
HHC LR LR
comp=E,389nm,19.0s,MS4.6
HHC LR LR
comp=Z,329nm,20.2s,MS4.3
OPO Ambohidratompo 50.01 183 P **P** **05 28 57.0 +0.3**
comp=Z,2.0nm,0.9s,mb4.2,baz=69,slow=13,SNR=3.1
BOD Bodaibo 50.13 39 *e*P **P** **05 28 56.6 -0.7**
BOD pmax pmax
comp=Z,12nm,1.2s,mb4.8
BOD Bodaibo 50.13 39 *e*P **P** **05 28 56.6 -0.7**
comp=Z,12nm,1.2s,mb4.8
BJI Beijing 53.21 61 P **P** **05 29 21.1 +0.5**
BJI S **S** **05 36 44.0 -7.6**
BJI AMB AMB
comp=Z,14nm,0.9s,mb4.9
BJI LR LR
comp=N,401nm,13.6s,MS4.8
BJI LR LR
comp=E,460nm,17.4s,MS4.8
BJI LR LR
comp=Z,370nm,23.1s
WHN Wuhan 54.39 73 *e*P **P** **05 29 28.0 -1.4**
DAG Danmarks Havn 54.56 345⇑ *i*P **P** **05 29 28.1 -1.8**
DAG pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
DAG Danmarks Havn 54.56 345⇑ *i*P **P** **05 29 28.1 -1.8**
comp=Z,2.1nm,0.5s,mb4.4
DBIC Dimbokro 56.76 256 P **P** **05 29 46.6 0.0**
comp=Z,4.5nm,0.8s,mb4.6,baz=32,slow=8.2,SNR=4.4
DBIC LR LR 05 56 30.9
comp=Z,524nm,21.2s,MS4.6,baz=38,slow=38
DBIC Dimbokro 56.76 256 *e*P **P** **05 29 46.0 -0.6**
comp=Z,6.4nm,0.8s,mb4.7
DBIC Dimbokro 56.76 256 P **P** **05 29 46.6 0.0**
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC MLR MLR
comp=Z,524nm,21.2s
DBIC Dimbokro 56.76 256 *e*P **P** **05 29 46.0 -0.6**
comp=Z,6.4nm,0.8s,mb4.7
TIXI Tiksi 56.81 22 *e*P **P** **05 29 45.7 -0.4**
comp=Z,15nm,1.4s,mb4.8
TIXI Tiksi 56.81 22 *e*P **P** **05 29 44.7 -1.4**
TIXI pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
TIXI Tiksi 56.81 22 *e*P **P** **05 29 44.7 -1.4**
comp=Z,10.0nm,1.3s,mb4.7
KIC Kosan Boka 56.83 256 *e*P **P** **05 29 45.1 -2.0**
comp=Z,138nm,1.4s,mb5.8
TIC Toumodi 56.91 256 *e*P **P** **05 29 47.2 -0.5**
comp=Z,34nm,0.7s,mb5.5
LIC Lamto 57.15 256 *e*P **P** **05 29 48.4 -0.9**
comp=Z,46nm,1.0s,mb5.5
LIC Lamto 57.15 256 *e*P **P** **05 29 48.5 -0.8**
LIC *e*MLR MLR
comp=Z,940nm,17.0s,MS4.7
LIC Lamto 57.15 256 *e*P **P** **05 29 48.5 -0.8**
LIC LR LR
comp=Z,470nm,17.0s,MS4.7
NJ2 Nanjing 57.54 70 *e*P **P** **05 29 54.3 +2.4**
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
YAK Yakutsk 57.83 33⇑ *e*P **P** **05 29 52.8 -0.6**
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.1
YAK Yakutsk 57.83 33 *e*P **P** **05 29 52.8 -0.6**
comp=Z,17nm,0.9s,mb5.1
CN2 Changchun 58.99 55 *e*P **P** **05 29 58.8 -3.1**
CN2 *e*XP sP 05 30 12.6 +6.3
CN2 *e*PP PP 05 32 10.6 -1.4
CN2 *e*S **S** **05 37 59.9 -8.5**
CN2 LR LR
comp=N,500nm,16.0s,MS4.9
CN2 LR LR
comp=E,500nm,16.0s,MS4.9
CN2 LR LR
comp=Z,600nm,17.0s,MS4.8
SUMG Summit 59.66 340 *e*P **P** **05 30 07.5 +1.4**
comp=Z,4.5nm,0.8s,mb4.5
SUMG Summit 59.66 340 *e*P **P** **05 30 07.5 +1.4**
comp=Z,4.5nm,0.8s,mb4.5
LBTB Lobatse 60.98 205 *e*P **P** **05 30 16.1 +0.5**
comp=Z,9.9nm,0.6s,mb5.1
LBTB *e* 05 30 23.3
LBTB Lobatse 60.98 205 *e*P **P** **05 30 16.1 +0.5**
LBTB *e* 05 30 23.3
LBTB pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
LBTB Lobatse 60.98 205 *e*P **P** **05 30 16.1 +0.5**
KSRS Korea Array 62.74 61 P **P** **05 30 26.6 -0.9**
comp=Z,8.2nm,0.7s,mb5.0,baz=284,slow=6.9,SNR=16
KSRS LR LR 06 01 45.3
comp=Z,208nm,18.1s,MS4.3,baz=111,slow=40
KSRS Korea Array 62.74 61 P **P** **05 30 26.7 -0.8**
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
KSRS MLR MLR
comp=Z,208nm,18.1s,MS4.3
HABR Khabarovsk 63.99 48 *e*P **P** **05 30 33.4 -2.2**
HABR *e*PP pP 05 30 39.5 +0.7
HABR *e*S **S** **05 39 10.1 -1.5**
HABR *e*SS sS 05 39 20.7 +3.8
HABR *e*SS SS 05 43 20.0 +0.3
HABR Khabarovsk 63.99 48 *e*P **P** **05 30 33.4 -2.2**
HABR *e*S **S** **05 39 10.1 -1.5**
JOW Kunigami 67.11 72 LR LR 06 05 35.7

comp=Z,162nm,18.0s,MS4.3,baz=316,slow=41
SEY Seymchan 67.63 29⇑ eP P 05 30 59.5 +0.7
BILL Bilibino 70.01 21 eP P 05 31 13.8 +0.2
comp=Z,13nm,0.7s,mb5.0
BILL Bilibino 70.01 21⇓ eP P 05 31 12.8 -0.7
BILL pmax pmax
comp=Z,20nm,1.0s,mb5.0
BILL Bilibino 70.01 21 eP P 05 31 12.8 -0.7
comp=Z,20nm,1.0s,mb5.0
MJAR Matsushiro Arr 70.68 59 P P 05 31 17.0 -1.2
comp=Z,2.1nm,0.6s,mb4.2,baz=294,slow=9.3,SNR=5.1
MJAR LR LR 06 05 07.6
comp=Z,206nm,19.8s,MS4.4,baz=290,slow=38
SCHQ Schefferville 78.26 328 P P 05 32 02.1 +0.2
comp=Z,5.9nm,0.6s,mb4.7,baz=62,slow=4.6,SNR=6.5
SCHQ LR LR 06 05 23.5
comp=Z,107nm,19.7s,MS4.2,baz=318,slow=35
SCHQ Schefferville 78.26 328 eP P 05 32 01.2 -0.7
comp=Z,8.1nm,0.6s,mb4.8
SCHQ Schefferville 78.26 328 eP P 05 32 01.2 -0.7
comp=Z,8.1nm,0.6s,mb4.8
EGAK Eagle 83.49 5 eP P 05 32 28.8 -0.9
comp=Z,12nm,1.1s,mb4.8
EGAK Eagle 83.49 5 eP P 05 32 28.8 -0.9
comp=Z,12nm,1.1s,mb4.8
YKA Yellowknife Ar 85.36 353 P P 05 32 37.6 -1.6
comp=Z,2.0nm,0.7s,mb4.4,baz=11,slow=5.0,SNR=7.2
YKA LR LR 06 15 14.6
comp=Z,44nm,19.2s,MS3.9,baz=80,slow=39
NWAO Narrogin (SRO) 90.31 129 P P 05 33 01.9 -1.3
comp=Z,4.6nm,0.5s,mb5.1,baz=308,slow=5.1,SNR=4.1
WRA Warramunga Arr 95.64 110 P P 05 33 26.4 -1.8
comp=Z,0.5nm,0.8s,mb4.0,baz=318,slow=4.0,SNR=9.9
ASAR Alice Springs 97.23 113 P P 05 33 33.6 -1.7
comp=Z,0.5nm,0.8s,mb4.0,baz=315,slow=5.7,SNR=4.3
MAW Mawson 99.43 175 LR LR 06 12 56.2
comp=Z,74nm,18.9s,MS4.2,baz=168,slow=32
LPAZ La Paz 122.10 270 PKP PKPdf 05 38 57.9 +0.3
comp=Z,0.6nm,0.8s,baz=90,slow=5.5,SNR=2.7

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*ISCJB **20** 05:56:20.8±0.2, 680N±003×7295W±003, h163km±2km, mb4.4/59, Error ellipse: s-maj=5.3km s-min=3.3km az=137.0*
*NEIC **20** 05:56:21.4±0.2, 674N×7298W, mb4.5/50, Error ellipse: s-maj=6.3km s-min=4.4km az=72.0*
*IDC **20** 05:56:22.1±0.5, 680N×7296W, h164km±4km, mb3.8/14, mb1 4.0/18, mb1mx3.9/24, mbtmp3.9/18, Error ellipse: s-maj=10.0km s-min=6.4km az=121.0*
*BJI **20** 05:56:22.4, 670N×7300W, h156km, mB4.8*
*FUNV **20** 05:56:22.9, 682N×7307W, h159km, MW4.4*
ISC 20 05:56:21.8±0.2, 680N±003×7294W±003, h156km±2km, h163km±2.6km; pP-P, n285, σ0 65/289, mb4.4/59, 85C-87D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**237**	*eP*	**Pn**	**05 56 43.4**	**+0.3**
BARC				*eS*	**Sn**	**05 56 58.7**	**-0.5**
RUSC	**La Rusia**	**0.88**	**189**	*iP*	**Pn**	**05 56 46.9**	**+0.7**
RUSC				*eS*	**Sn**	**05 57 05.4**	**+0.4**
OCAC	**Ocana**	**1.48**	**345**	⇑*iP*	**Pn**	**05 56 51.0**	**-0.7**
OCAC				*eS*	**Sn**	**05 57 13.5**	**-1.2**
CHIC	**Chingaza**	**2.29**	**200**	*eP*	**Pn**	**05 57 01.2**	**+0.4**
CHIC				*eS*	**Sn**	**05 57 30.9**	**+0.1**
ROSC	**El Rosal**	**2.38**	**216**	P	**Pn**	**05 57 03.1**	**+1.3**
	60nm,0.3s,baz=89,slow=11,SNR=266						
ROSC				S	**Sn**	**05 57 34.3**	**+1.6**
	210nm,0.3s,baz=76,slow=22,SNR=17						
ROSC	**El Rosal**	**2.38**	**216**	*ePn*	**Pn**	**05 57 03.1**	**+1.3**
ROSC				Sn	**Sn**	**05 57 32.7**	**+0.1**
ROSC	**El Rosal**	**2.38**	**216**	*eP*	**Pn**	**05 57 03.1**	**+1.3**
SOCV	**Socops**	**2.54**	**54**	⇓*iP*	**Pn**	**05 57 05.4**	**+1.7**
SOCV				*eS*	**Sn**	**05 57 36.8**	**+0.8**
VIGV	**El Vigia**	**2.56**	**37**	⇓*iP*	**Pn**	**05 57 05.1**	**+1.1**
VIGV				*eS*	**Sn**	**05 57 36.6**	**+0.1**
SDV	**Santo Domingo**	**3.08**	**48**	P	**Pn**	**05 57 12.1**	**+1.6**
	231nm,0.3s,baz=235,slow=5.9,SNR=1448						
SDV				S	**Sn**	**05 57 49.8**	**+1.6**
	177nm,0.3s,baz=62,slow=23,SNR=23						
TOLC	**Tolima**	**3.25**	**228**	*eP*	**Pn**	**05 57 12.1**	**-0.6**
ELOV	**Elorza**	**3.43**	**86**	⇓*iP*	**Pn**	**05 57 17.1**	**+2.1**
VIRV	**Villa del Rosa**	**3.72**	**8**	⇑*iP*	**Pn**	**05 57 17.3**	**-1.3**
VIRV				*eS*	**Sn**	**05 57 58.8**	**-4.0**
SANV	**Sanarito**	**4.30**	**51**	⇓*iP*	**Pn**	**05 57 27.0**	**+0.7**
SANV				*eS*	**Sn**	**05 58 14.8**	**-1.7**
CURV	**Curarigua**	**4.34**	**42**	⇓*eP*	**Pn**	**05 57 27.4**	**+0.6**
CURV				*eS*	**Sn**	**05 58 15.4**	**-1.9**
SOLC	**Bahia Solano**	**4.51**	**265**	*eP*	**Pn**	**05 57 26.4**	**-2.5**
DABV	**Dabajuro**	**4.69**	**29**	⇑*eP*	**Pn**	**05 57 31.6**	**+0.4**
DABV				*eS*	**Sn**	**05 58 23.0**	**-2.4**
TEPV	**Terepaima**	**4.86**	**49**	⇓*iP*	**Pn**	**05 57 34.2**	**+0.7**
SIQV	**Siquisique**	**4.92**	**39**	⇓*iP*	**Pn**	**05 57 34.5**	**+0.1**
SIQV				*eS*	**Sn**	**05 58 29.0**	**-1.9**
MALC	**Bahia Malaga**	**5.18**	**238**	*eP*	**Pn**	**05 57 37.7**	**-0.1**
BAUV	**El Baul**	**5.29**	**66**	⇓*iP*	**Pn**	**05 57 38.8**	**-0.5**
JACV	**Jacura**	**5.88**	**43**	*eP*	**Pn**	**05 57 47.6**	**+0.5**
TURV	**Turiamo**	**6.21**	**54**	*eP*	**Pn**	**05 57 52.1**	**+0.7**
CAOV	**Caicara del Or**	**6.58**	**85**	⇓*iP*	**Pn**	**05 57 56.0**	**-0.4**
MERV	**Las Mercedes**	**7.01**	**69**	⇓*eP*	**Pn**	**05 58 01.7**	**-0.4**
FUNV	**FUNVISIS**	**7.07**	**59**	⇓*eP*	**Pn**	**05 58 02.5**	**-0.3**
BCIP	**Isla Barro Col**	**7.23**	**289**	*ePn*	**Pn**	**05 58 00.5**	**-4.5**
	50nm,0.6s						
BIRV	**Birongo**	**7.54**	**61**	*eP*	**Pn**	**05 58 08.4**	**-0.6**
CUPV	**Ceepira**	**7.78**	**65**	⇓*eP*	**Pn**	**05 58 12.0**	**-0.3**
PRGV	**PARIAGUAN**	**8.44**	**76**	⇓*eP*	**Pn**	**05 58 20.7**	**-0.4**
OTAV	**Otavalo**	**8.53**	**220**	*ePn*	**Pn**	**05 58 20.9**	**-1.4**
OTAV				*eSn*	**Sn**	**05 59 55.7**	**-1.6**
PCRV	**Puerto La Cruz**	**8.87**	**67**	P	**Pn**	**05 58 27.4**	**+0.6**
	3.3nm,0.3s,baz=217,slow=6.3,SNR=16						
PCRV				S	**Sn**	**06 00 04.5**	**-0.9**
	1.6nm,0.3s,baz=235,slow=16,SNR=2.0						
PCRV	**Puerto La Cruz**	**8.87**	**67**	*eP*	**Pn**	**05 58 27.5**	**+0.7**
PCJ	**Portland Cotta**	**11.63**	**340**	⇑*eP*	**Pn**	**05 59 03.1**	**-0.1**
PCJ				*eS*	**Sn**	**06 01 01.1**	**-11**
HOJ	**Hope**	**11.74**	**342**	⇑*eP*	**Pn**	**05 59 06.6**	**+1.9**
CMJ	**Castle Mountai**	**11.76**	**344**	⇑*eP*	**Pn**	**05 59 05.8**	**+0.9**
STH	**Stony Hill**	**11.83**	**342**	⇑*eP*	**Pn**	**05 59 06.0**	**+0.2**
STH				*eS*	**Sn**	**06 01 04.5**	**-12**
SDDR	**Presa de Saban**	**12.22**	**7**	*ePn*	**Pn**	**05 59 13.2**	**+2.5**
	16nm,0.5s						
ATAH	**Atahualpa**	**14.75**	**202**	P	**Pn**	**05 59 48.5**	**+5.5**
	1.7nm,0.3s,baz=26,slow=9.7,SNR=8.7						
TGUH	**Tegucigalpa,Un**	**15.83**	**298**	*ePn*	**Pn**	**05 59 54.5**	**-1.8**
	141nm,1.8s						
NNA	**Nana**	**19.06**	**192**	P	**P**	**06 00 32.4**	**0.0**
	0.7nm,0.3s,baz=359,slow=9.2,SNR=4.6						
NNA	**Nana**	**19.06**	**192**	*eP*	**P**	**06 00 32.1**	**-0.3**
	10nm,0.8s						
LPAZ	**La Paz**	**23.43**	**168**	P	**P**	**06 01 17.3**	**+0.3**
	4.7nm,0.7s,mb4.0,baz=354,slow=11,SNR=21						
LPAZ	**La Paz**	**23.43**	**168**	*eP*	**P**	**06 01 17.2**	**+0.2**
	5.4nm,0.8s,mb4.0						
CMIG	**Matias Romero**	**23.76**	**297**	P	**P**	**06 01 15.4**	**-4.7**
	1.4nm,0.3s,mb3.9,baz=71,slow=21,SNR=13						
SIV	**San Ignacio**	**25.51**	**153**	P	**P**	**06 01 35.6**	**-0.4**
	4.2nm,0.8s,mb4.1,baz=331,slow=10,SNR=23						
LRAL	**Lakeview Retre**	**29.19**	**335**	*eP*	**P**	**06 02 09.8**	**+1.1**
WVT	**Waverly**	**32.23**	**337**	*eP*	**P**	**06 02 35.2**	**-0.1**
	9.2nm,0.5s,mb4.8						
BDFB	**Brasilia**	**33.26**	**132**	P	**P**	**06 02 45.9**	**+1.3**
	3.4nm,0.5s,mb4.3,baz=282,slow=17,SNR=21						
BDFB	**Brasilia**	**33.26**	**132**	*eP*	**P**	**06 02 45.8**	**+1.2**
	5.9nm,0.6s,mb4.5						
MIAR	**Mount Ida**	**33.54**	**328**	*eP*	**P**	**06 02 45.5**	**-1.2**
	4.5nm,0.9s,mb4.2						
WCI	**Wyandotte Cave**	**33.55**	**341**	*eP*	**P**	**06 02 47.5**	**+0.7**
	12nm,0.8s,mb4.7						
SIUC	**Southern Illin**	**34.15**	**337**	*eP*	**P**	**06 02 51.9**	**0.0**
	20nm,0.6s,mb5.0						
BLO	**Bloomington**	**34.48**	**341**	*eP*	**P**	**06 02 55.5**	**+0.7**
	18nm,0.6s,mb5.0						
OLIL	**Olney**	**34.62**	**339**	*eP*	**P**	**06 02 56.2**	**+0.1**
	16nm,0.5s,mb4.9						
FVM	**French Village**	**34.87**	**335**	*eP*	**P**	**06 02 58.3**	**+0.1**
	11nm,0.8s,mb4.5						
CCM	**Cathedral Cave**	**35.27**	**335**	*eP*	**P**	**06 03 01.3**	**-0.3**
	22nm,0.7s,mb4.9						
CCM				*ep*	P	06 03 35.7	+0.7
WMOK	**Wichita Mounta**	**36.61**	**323**	*eP*	**P**	**06 03 11.5**	**-1.5**
	4.7nm,0.6s,mb4.3						
TXAR	**Lajitas Array**	**36.62**	**312**	P	**P**	**06 03 12.5**	**-0.7**
	4.2nm,0.6s,mb4.2,baz=124,slow=9.2,SNR=90						
TXAR				PcP	PcP	06 05 34.2	+1.1
	0.8nm,0.6s,baz=135,slow=5.7,SNR=6.8						
TXAR	**Lajitas Array**	**36.62**	**312**	P	**P**	**06 03 12.5**	**-0.7**
TXAR				PcP	PcP	06 05 34.2	+1.1
HDIL	**Hopedale**	**36.66**	**339**	*eP*	**P**	**06 03 12.2**	**-1.3**
	13nm,0.5s,mb4.8						
CFAA	**Coronel Fontan**	**38.45**	**174**	P	**P**	**06 03 26.1**	**-2.4**
	0.3nm,0.8s,baz=347,slow=10,SNR=3.9						
KSU1	**Kansas State U**	**38.60**	**330**	*eP*	**P**	**06 03 28.6**	**-1.2**
	15nm,0.6s,mb4.8						
JFWS	**Jewell Farm**	**39.08**	**340**	*eP*	**P**	**06 03 33.2**	**-0.4**
	20nm,0.6s,mb4.9						
SCIA	**State Center**	**39.32**	**336**	*eP*	**P**	**06 03 35.4**	**-0.3**
	14nm,0.6s,mb4.8						
ANMO	**Albuquerque**	**41.66**	**317**	*eP*	**P**	**06 03 55.1**	**+0.1**
	1.7nm,0.6s,mb3.9						
LAZ	**Ladron**	**41.82**	**316**	*eP*	**P**	**06 03 56.6**	**+0.3**
LAZ				*epP*	pP	06 04 31.2	+0.5
319A	**Douglas**	**41.84**	**311**	⇑P	**P**	**06 03 56.9**	**+0.4**
	baz=42						
219A	**White Tail Can**	**42.11**	**311**	⇓P	**P**	**06 03 59.0**	**+0.2**
	baz=42,SNR=6.1						
ECSD	**EROS,Sioux Fal**	**42.25**	**334**	*eP*	**P**	**06 03 57.8**	**-1.9**
	4.4nm,0.4s,mb4.4						
318A	**Bisbee**	**42.40**	**310**	⇓P	**P**	**06 04 01.3**	**+0.2**
	baz=42,SNR=11						
119A	**Ashpeak Ranch,**	**42.52**	**312**	⇑P	**P**	**06 04 02.1**	**+0.1**
	baz=42						
SDCO	**Great Sand Dun**	**42.68**	**321**	*eP*	**P**	**06 04 04.2**	**+1.0**
	5.2nm,0.7s,mb4.3						
SDCO				*epP*	pP	06 04 38.6	+0.9
218A	**Dragoon**	**42.69**	**311**	⇓P	**P**	**06 04 03.8**	**+0.4**
	baz=42,SNR=8.1						
118A	**Homack Ranch,**	**42.95**	**312**	⇓P	**P**	**06 04 05.9**	**+0.4**
	baz=43,SNR=19						
Y19A	**Nutrioso**	**43.08**	**314**	⇑P	**P**	**06 04 07.3**	**+0.8**
	baz=43,SNR=9.7						
217A	**Green Valley**	**43.18**	**310**	⇑P	**P**	**06 04 07.2**	**-0.2**
	baz=43,SNR=6.7						
TUC	**Tucson**	**43.40**	**311**	*eP*	**P**	**06 04 08.8**	**-0.3**
	3.7nm,0.7s,mb4.1						
117A	**Oracle**	**43.49**	**311**	⇓P	**P**	**06 04 09.7**	**-0.1**
	baz=43						
Y18A	**Canyon Day Jun**	**43.55**	**313**	⇓P	**P**	**06 04 10.5**	**+0.3**
	baz=43,SNR=7.6						
W19A	**Sanders**	**43.76**	**315**	⇑P	**P**	**06 04 12.3**	**+0.3**
	baz=44						
X18A	**Snowflake**	**43.86**	**314**	⇓P	**P**	**06 04 12.9**	**+0.2**
	baz=44						
EYMN	**Ely**	**43.95**	**342**	*eP*	**P**	**06 04 12.6**	**-0.6**
	15nm,0.6s,mb4.8						
ISCO	**Idaho Springs**	**44.03**	**323**	*eP*	**P**	**06 04 14.7**	**+0.7**
	5.7nm,0.9s,mb4.2						
Y17A	**Roosevelt**	**44.10**	**313**	⇓P	**P**	**06 04 14.9**	**+0.3**
	baz=44						
116A	**Eloy**	**44.21**	**311**	⇑P	**P**	**06 04 15.4**	**-0.2**
	baz=44						
MVCO	**Mesa Verde**	**44.30**	**318**	*eP*	**P**	**06 04 16.4**	**+0.3**
	4.6nm,0.6s,mb4.3						
MVCO	**Mesa Verde**	**44.30**	**318**	⇑P	**P**	**06 04 16.1**	**-0.1**
	baz=44						
Z16A	**Peralta Trail,**	**44.36**	**312**	⇑P	**P**	**06 04 16.6**	**-0.2**
	baz=44						
X17A	**Forest Lakes**	**44.38**	**313**	⇓P	**P**	**06 04 17.7**	**+0.8**
	baz=44,SNR=8.6						
T19A	**Beclabito**	**44.43**	**318**	⇓P	**P**	**06 04 17.5**	**+0.3**
	baz=44						
Y16A	**Circle Bar Ran**	**44.65**	**312**	⇑P	**P**	**06 04 19.2**	**+0.2**
	baz=44						
115A	**Sonoran Desert**	**44.66**	**311**	⇑P	**P**	**06 04 19.5**	**+0.3**
	baz=44,SNR=7.4						
214A	**Organ Pipe Nat**	**44.78**	**309**	⇓P	**P**	**06 04 20.2**	**+0.1**
	baz=45,SNR=7.0						
U18A	**Rough Rock, Ch**	**44.78**	**317**	⇓P	**P**	**06 04 20.1**	**+0.1**
	baz=45						
PV01	**Paradox Valley**	**44.87**	**319**	*eP*	**P**	**06 04 21.2**	**+0.6**
Z15A	**Gila River Ind**	**44.88**	**311**	⇑P	**P**	**06 04 20.5**	**-0.3**
	baz=45						
X16A	**Lo Mia Camp, P**	**44.88**	**313**	⇓P	**P**	**06 04 21.0**	**+0.1**
	baz=45						
S19A	**Harvey Farm, M**	**45.02**	**319**	⇓P	**P**	**06 04 21.9**	**+0.1**
	baz=45						
T18A	**Mexican Hat**	**45.17**	**317**	⇓P	**P**	**06 04 23.0**	**-0.1**
	baz=45						
W16A	**Flagstaff**	**45.27**	**314**	⇑P	**P**	**06 04 24.5**	**+0.6**
	baz=45,SNR=6.5						
Y15A	**Casa Rosa Ranc**	**45.31**	**312**	⇑P	**P**	**06 04 24.3**	**0.0**
	baz=45,SNR=12						
WUAZ	**Wupatki**	**45.37**	**315**	*eP*	**P**	**06 04 24.9**	**+0.2**
	14nm,0.9s,mb4.6						
WUAZ	**Wupatki**	**45.37**	**315**	⇓P	**P**	**06 04 25.2**	**+0.5**
	baz=45,SNR=12						
U17A	**Shonto**	**45.42**	**316**	⇓P	**P**	**06 04 25.4**	**+0.3**
	baz=45						
X15A	**Humboldt**	**45.49**	**313**	⇓P	**P**	**06 04 25.7**	**0.0**
	baz=45						
Z14A	**Wintersburg**	**45.50**	**311**	⇓P	**P**	**06 04 25.8**	**0.0**
	baz=45						
U16A	**Tuba City**	**45.51**	**315**	⇑P	**P**	**06 04 26.1**	**+0.3**
	baz=45,SNR=10.0						
S18A	**Hurst Farm, Bl**	**45.55**	**318**	⇓P	**P**	**06 04 26.1**	**0.0**
	baz=45						
AGMN	**Agassiz Refuge**	**45.71**	**339**	*eP*	**P**	**06 04 26.5**	**-0.6**
	70nm,2.1s,mb4.9						
T17A	**Navajo Res., N**	**45.73**	**317**	⇓P	**P**	**06 04 27.7**	**+0.2**
	baz=46						
Y14A	**Wickenburg**	**45.80**	**312**	⇓P	**P**	**06 04 28.1**	**0.0**
	baz=46,SNR=15						
113A	**Mohawk Valley,**	**45.86**	**310**	⇓P	**P**	**06 04 28.3**	**-0.3**
	baz=46,SNR=5.4						
R18A	**Canyonlands Na**	**45.87**	**319**	⇑P	**P**	**06 04 28.4**	**-0.2**
	baz=46						
X14A	**Yava**	**45.96**	**312**	⇑P	**P**	**06 04 29.4**	**+0.1**
	baz=46,SNR=6.5						
P19A	**Cripple Cowboy**	**45.99**	**321**	⇑P	**P**	**06 04 29.6**	**+0.1**
	baz=46						
RSSD	**Black Hills**	**46.05**	**329**	*eP*	**P**	**06 04 29.1**	**-0.8**
	1.4nm,0.4s,mb3.9						
S17A	**Black Ridge (B**	**46.06**	**317**	⇑P	**P**	**06 04 30.2**	**+0.1**
	baz=46,SNR=6.5						
V15A	**Kaibab Nationa**	**46.08**	**314**	⇓P	**P**	**06 04 30.9**	**+0.7**
	baz=46,SNR=18						
T16A	**Glen Canyon Da**	**46.20**	**316**	⇓P	**P**	**06 04 31.3**	**+0.2**
	baz=46						
Y13A	**Salome**	**46.36**	**311**	⇓P	**P**	**06 04 32.4**	**-0.1**
	baz=46,SNR=7.2						
Q18A	**Rafter H Ranch**	**46.42**	**320**	⇓P	**P**	**06 04 32.8**	**-0.1**
	baz=46						
R17A	**Hanksville Air**	**46.42**	**318**	⇑P	**P**	**06 04 32.7**	**-0.1**
	baz=46,SNR=6.3						
L21A	**Rawlins**	**46.44**	**324**	⇓P	**P**	**06 04 33.2**	**+0.3**
	baz=46						
W14A	**Seligman**	**46.44**	**313**	⇑P	**P**	**06 04 33.2**	**+0.1**
	baz=46						
U15A	**North Rim**	**46.47**	**315**	⇑P	**P**	**06 04 34.0**	**+0.7**
	baz=46,SNR=11						
O19A	**Miners Draw (B**	**46.47**	**321**	⇓P	**P**	**06 04 33.1**	**-0.1**
	baz=46						
M20A	**Sweetwater, Wa**	**46.62**	**323**	⇓P	**P**	**06 04 34.5**	**+0.2**
	baz=46						
S16A	**Weppner Ranch,**	**46.64**	**317**	⇓P	**P**	**06 04 34.7**	**+0.1**
	baz=46						
V14A	**Boquillas Ranc**	**46.66**	**314**	⇑P	**P**	**06 04 35.1**	**+0.3**
	baz=46,SNR=6.6						
SRU	**San Rafael**	**46.68**	**319**	*eP*	**P**	**06 04 34.9**	**0.0**
	6.5nm,0.8s,mb4.3						
SRU	**San Rafael**	**46.68**	**319**	⇑P	**P**	**06 04 34.9**	**0.0**
	baz=46,SNR=6.6						
X13A	**Yucca**	**46.71**	**312**	⇑P	**P**	**06 04 34.8**	**-0.4**
	baz=46						
P18A	**Preston Nutter**	**46.79**	**320**	⇓P	**P**	**06 04 35.8**	**+0.1**
	baz=47						
GLA	**Glamis**	**46.79**	**310**	*eP*	**P**	**06 04 36.2**	**+0.3**
	9.2nm,0.6s,mb4.6						
GLA	**Glamis**	**46.79**	**310**	⇓P	**P**	**06 04 35.4**	**-0.4**
	baz=47						
N19A	**John Jarvie Ra**	**46.85**	**322**	⇑P	**P**	**06 04 35.9**	**-0.2**
	baz=47,SNR=7.0						
R16A	**Teasdale**	**46.86**	**318**	⇓P	**P**	**06 04 36.6**	**+0.3**
	baz=47,SNR=5.3						
W13A	**Hualapai Mount**	**46.98**	**313**	⇑P	**P**	**06 04 37.1**	**-0.1**
	baz=47						
O18A	**Roosevelt**	**47.00**	**321**	⇓P	**P**	**06 04 37.7**	**+0.4**
	baz=47						
P17A	**Butcher Ranch,**	**47.02**	**320**	⇑P	**P**	**06 04 38.0**	**+0.5**
	baz=47						
U14A	**Mt Trumbull**	**47.09**	**315**	⇑P	**P**	**06 04 38.5**	**+0.4**
	baz=47						
M19A	**Rock Springs**	**47.20**	**323**	⇑P	**P**	**06 04 38.9**	**0.0**
	baz=47						
N18A	**Larsen Ranch,**	**47.20**	**322**	⇑P	**P**	**06 04 39.0**	**+0.1**
	baz=47						
T14A	**Hurricane**	**47.33**	**315**	⇑P	**P**	**06 04 40.2**	**+0.2**
	baz=47						
PLCA	**Paso Flores**	**47.34**	**178**	P	**P**	**06 04 38.2**	**-1.7**
	0.8nm,0.5s,mb3.6,baz=352,slow=16,SNR=5.5						
PLCA				ScP	ScP	06 09 46.2	-1.5
	1.2nm,0.8s,baz=7.1,slow=8.1,SNR=2.8						
PLCA	**Paso Flores**	**47.34**	**178**	P	**P**	**06 04 38.2**	**-1.7**
PLCA				ScP	ScP	06 09 46.2	-1.5
R15A	**Junction**	**47.36**	**317**	⇑P	**P**	**06 04 40.2**	**+0.1**
	baz=47						
ULM	**Lac du Bonnet**	**47.37**	**340**	P	**P**	**06 04 38.1**	**-1.9**
	6.4nm,0.4s,mb4.6,baz=142,slow=8.3,SNR=7.5						
V13A	**Grand Canyon W**	**47.39**	**314**	⇑P	**P**	**06 04 40.3**	**-0.1**
	baz=47,SNR=5.8						
O17A	**Robinson Place**	**47.42**	**320**	⇑P	**P**	**06 04 41.0**	**+0.4**
	baz=47,SNR=9.4						
MSU	**Marysvale**	**47.45**	**318**	*eP*	**P**	**06 04 41.2**	**+0.4**
SWSC	**Sam W. Stewart**	**47.49**	**309**	⇓P	**P**	**06 04 41.0**	**-0.2**
	baz=47						
IRM	**Iron Mountain**	**47.50**	**311**	⇓P	**P**	**06 04 41.1**	**-0.3**
	baz=47						
BC3	**Big Chuckw Mtn**	**47.52**	**310**	⇓P	**P**	**06 04 41.1**	**-0.4**
	baz=47						
U13A	**Pakoon Wash**	**47.64**	**314**	⇓P	**P**	**06 04 42.5**	**+0.1**
	baz=48,SNR=7.3						
L19A	**Farson**	**47.68**	**323**	⇑P	**P**	**06 04 42.6**	**0.0**
	baz=48,SNR=5.9						
P16A	**Fountain Green**	**47.69**	**319**	⇑P	**P**	**06 04 43.2**	**+0.5**
	baz=48						
M18A	**Lyman**	**47.71**	**322**	⇑P	**P**	**06 04 42.9**	**+0.1**
	baz=48						
Q15A	**Fillmore**	**47.84**	**318**	⇑P	**P**	**06 04 44.1**	**+0.3**
	baz=48						
DAU	**Daniels Canyon**	**47.87**	**320**	*eP*	**P**	**06 04 44.9**	**+0.9**
T13A	**Saint George**	**47.89**	**315**	⇓P	**P**	**06 04 44.6**	**+0.3**
	baz=48						
N17A	**Moffit Pass**	**47.90**	**321**	⇓P	**P**	**06 04 44.6**	**+0.3**
	baz=48						
O16A	**Springville**	**47.91**	**320**	⇓P	**P**	**06 04 44.5**	**+0.1**
	baz=48						
ARUT	**Antelope Range**	**47.94**	**316**	*eP*	**P**	**06 04 44.8**	**+0.2**
MONP	**Monument Peak**	**47.95**	**309**	⇑P	**P**	**06 04 44.5**	**-0.3**
	baz=48						
V12A	**Nelson**	**47.96**	**313**	⇓P	**P**	**06 04 44.5**	**-0.3**
	baz=48						
L18A	**Fontenelle, Gr**	**47.98**	**323**	⇑P	**P**	**06 04 45.1**	**+0.2**
	baz=48,SNR=13						
BELC	**Belle Mtn.**	**48.07**	**310**	⇑P	**P**	**06 04 45.6**	**-0.1**
	baz=48						
M17A	**Scullys Gap (B**	**48.10**	**322**	⇑P	**P**	**06 04 45.7**	**-0.2**
	baz=48						
S13A	**Holt Ranch, En**	**48.12**	**316**	⇑P	**P**	**06 04 46.6**	**+0.6**
	baz=48,SNR=14						
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**06 04 44.7**	**-1.2**
	5.2nm,0.6s,mb4.3,baz=246,slow=4.8,SNR=6.9						
BW06	**Boulder Array**	**48.20**	**324**	*eP*	**P**	**06 04 46.5**	**-0.1**
	8.6nm,1.3s,mb4.2						
BW06	**Boulder Array**	**48.20**	**324**	⇑P	**P**	**06 04 46.3**	**-0.3**
	baz=48,SNR=5.7						
PDAR	**Pinedale Array**	**48.20**	**324**	P	**P**	**06 04 46.1**	**-0.4**
	3.2nm,0.7s,mb4.1,baz=127,slow=8.9,SNR=24						
PDAR				PcP	PcP	06 06 10.9	-0.5
	0.7nm,0.7s,baz=134,slow=6.4,SNR=2.6						
Q14A	**Sevier Lake (B**	**48.43**	**318**	⇑P	**P**	**06 04 48.7**	**+0.4**
	baz=48,SNR=7.6						
V11A	**Goodsprings**	**48.43**	**313**	⇑P	**P**	**06 04 48.1**	**-0.3**
	baz=48						
R13A	**O'Grain Ranch,**	**48.49**	**316**	⇓P	**P**	**06 04 49.2**	**+0.4**
	baz=48,SNR=5.9						
M16A	**Huntsville**	**48.61**	**321**	⇑P	**P**	**06 04 49.5**	**-0.2**
	baz=48,SNR=6.7						
HWUT	**Hardware Ranch**	**48.73**	**321**	*eP*	**P**	**06 04 50.4**	**-0.3**
	4.7nm,0.7s,mb4.2						
DUG	**Dugway**	**48.75**	**319**	*eP*	**P**	**06 04 51.0

S09A	**Goldfield**	50.56	314	⇑P		P		06 05 04.3	-0.2
	baz=50								
O11A	**Cowboy Ranch,**	50.59	318	⇑P		P		06 05 04.6	-0.1
	baz=50,SNR=5.5								
M12A	**Wells**	50.75	319	⇑P		P		06 05 05.4	-0.5
	baz=51,SNR=6.2								
F17A	**Fitzpatrick Pl**	50.76	327	⇓P		P		06 05 06.4	+0.5
	baz=51								
E18A	**Harlowton**	50.77	328	⇑P		P		06 05 06.0	+0.1
	baz=51								
K13A	**Stover Farm, H**	50.87	321	⇑P		P		06 05 06.6	-0.2
	baz=51								
J14A	**Carey**	50.89	322	⇑P		P		06 05 07.3	+0.4
	baz=51,SNR=11								
G16A	**Moss Hill, Enn**	50.98	325	⇓P		P		06 05 07.7	+0.2
	baz=51,SNR=7.0								
H15A	**Lima**	51.10	324	⇑P		P		06 05 09.2	+0.7
	baz=51,SNR=9.4								
VES	**Vestal, Richgr**	51.13	311	⇓P		P		06 05 08.9	+0.1
	baz=51								
I14A	**Mackay**	51.19	323	⇑P		P		06 05 09.2	+0.1
	baz=51,SNR=5.5								
L12A	**House Creek Ra**	51.19	320	⇓P		P		06 05 09.3	+0.1
	baz=51								
E17A	**Martinsdale**	51.21	327	⇑P		P		06 05 09.3	+0.1
	baz=51,SNR=6.5								
O10A	**Cortez Mining,**	51.23	317	⇓P		P		06 05 09.7	+0.1
	baz=51								
M11A	**Holland Ranch,**	51.32	319	⇑P		P		06 05 10.3	+0.1
	baz=51								
J13A	**Cove Ranch, Pi**	51.33	322	⇑P		P		06 05 09.7	-0.5
	baz=51								
G15A	**Dillon**	51.33	325	⇓P		P		06 05 10.6	+0.4
	baz=51								
MCMT	**McKenzie Canyo**	51.34	324	*e*P		P		06 05 10.8	+0.5
MCMT				epP		pP		06 05 46.8	+1.0
MCMT				*e*sP		sP		06 05 59.7	-3.5
K12A	**Draper Farm, C**	51.38	321	⇓P		P		06 05 10.7	+0.1
	baz=51								
DLMT	**Dillon**	51.51	325	*e*P		P		06 05 11.9	+0.4
	6.2nm,1.1s,mb4.2								
H14A	**Leadore**	51.53	324	⇑P		P		06 05 12.1	+0.5
	baz=51								
D17A	**Six Diamond Ra**	51.55	328	⇑P		P		06 05 11.8	+0.1
	baz=52								
Q08A	**Gabbs**	51.56	315	⇓P		P		06 05 11.7	-0.3
	baz=51,SNR=6.5								
HLID	**Hailey**	51.57	322	*e*P		P		06 05 11.6	-0.3
	3.6nm,0.7s,mb4.1								
HLID	**Hailey**	51.57	322	⇓P		P		06 05 12.0	0.0
	baz=52,SNR=6.6								
I13A	**Wildhorse Cree**	51.58	323	⇑P		P		06 05 12.0	0.0
	baz=52,SNR=9.5								
EGMT	**Eagleton**	51.62	329	*e*P		P		06 05 12.4	+0.1
	21nm,1.4s,mb4.6								
EGMT	**Eagleton**	51.62	329	⇓P		P		06 05 12.6	+0.4
	baz=52								
NVAR	**Mina Array Bea**	51.63	315	P		P		06 05 12.4	-0.1
	2.1nm,0.6s,mb3.9,baz=123,slow=7.0,SNR=10								
O09A	**Fish Creek Ran**	51.64	317	⇑P		P		06 05 12.4	-0.1
	baz=52,SNR=8.3								
L11A	**Cat Creek Ranc**	51.67	320	⇓P		P		06 05 12.1	-0.7
	baz=52,SNR=7.3								
LRM	**Limekiln Ridge**	51.70	325	*e*P		P		06 05 13.2	+0.3
HRY	**Holter Researc**	51.89	327	*e*P		P		06 05 14.6	+0.3
PAHR	**Pah Rah Range**	52.94	316	*e*P		P		06 05 22.5	+0.4
	4.2nm,0.8s,mb4.2								
WVOR	**Wild Horse Val**	53.67	319	*e*P		P		06 05 27.2	-0.2
	4.0nm,0.5s,mb4.4								
BSMT	**Bassoo Peak**	54.19	326	*e*P		P		06 05 31.6	+0.5
YKA	**Yellowknife Ar**	63.35	340	P		P		06 06 33.3	-0.7
	6.8nm,0.6s,mb4.7,baz=132,slow=6.5,SNR=34								
YKA				pP		pP		06 07 10.7	-0.3
	2.5nm,0.7s,baz=132,slow=7.2,SNR=3.0								
YKA	**Yellowknife Ar**	63.35	340	P		P		06 06 33.3	-0.8
YKA				pP		pP		06 07 10.7	-0.3
DLBC	**Dease Lake**	67.43	331	*e*P		P		06 07 00.8	+0.4
DBIC	**Dimbokro**	67.55	86	P		P		06 07 01.1	-0.9
	2.1nm,0.8s,mb3.9,baz=225,slow=8.6,SNR=4.2								
SUMG	**Summit**	68.98	11	*e*P		P		06 07 10.1	+0.4
	1.6nm,0.6s,mb3.9								
INK	**Inuvik**	73.11	340	*e*P		P		06 07 34.3	-0.4
	96nm,0.6s								
TORD	**Torodi Ar. Bea**	73.56	78	P		P		06 07 37.3	-1.1
	0.2nm,0.3s,mb3.3,baz=283,slow=7.0,SNR=7.2								
TORD				pP		pP		06 08 19.3	+2.9
	0.4nm,0.7s,baz=290,slow=5.1,SNR=3.6								
NOA	**NORSAR Array B**	81.26	29	P		P		06 08 20.6	+0.3
	0.7nm,0.8s,mb3.4,baz=257,slow=7.2,SNR=2.3								
NOA				pP		pP		06 09 01.8	+2.7
	1.1nm,0.8s,baz=268,slow=5.5,SNR=3.6								
ARCES	**ARCESS Array B**	86.63	20	P		P		06 08 47.3	0.0
	4.9nm,1.0s,mb4.3,baz=272,slow=3.4,SNR=6.2								
MKAR	**Makanchi Array**	122.28	20	PKP		PKPdf		06 14 57.9	-0.6
	0.2nm,0.3s,baz=303,slow=2.4,SNR=5.6								
SONM	**Songimo Array**	125.60	1	PKP		PKPdf		06 15 04.1	-0.7
	0.7nm,0.6s,baz=303,slow=1.8,SNR=5.6								
WMQ	**Urumqi**	126.66	17	*e*PKP		PKPdf		06 15 08.0	+1.1
HHC	**Hu-ho-hao-te**	132.41	355	*e*PKP		PKPdf		06 15 18.3	+0.3
HHC				XPKP				06 16 18.1	
HHC				PKS				06 18 53.9	
HHC				SKS		SKSdf		06 22 11.3	-3.6
HHC				SKKS		SKKSac		06 24 21.0	-2.4
HHC				SS		SS		06 35 10.1	+3.2
HHC				PP		PP			
	comp=Z,132nm,10.7s								
HHC				LR		LR			
	comp=N,215nm,22.6s								
HHC				LR		LR			
	comp=E,561nm,22.6s								
HHC				LR		LR			
	comp=Z,152nm,23.8s								
LZH	**Lanzhou**	137.24	4	*e*PKP		PKPdf		06 15 27.0	-0.1
NJ2	**Nanjing**	139.76	344	*e*PKP		PKPdf		06 15 32.8	+0.9
CD2	**Chengdu**	142.37	5	*e*PKP		PKPdf		06 15 35.8	-0.8
GYA	**Guiyang**	146.94	1	*e*PKP		PKPdf		06 15 43.3	-1.3
GYA				PKP2		PKPab		06 15 51.3	+2.9
GYA				APKP				06 16 26.9	
GYA				XPKP				06 16 44.8	
GYA				PP		PP		06 19 16.4	+5.9
GYA				PP		PP			
	comp=Z,60nm,8.2s								
KMI	**Kunming**	147.99	7	PKP		PKPdf		06 15 46.3	-0.1
ASAR	**Alice Springs**	149.25	234	PKP		PKPdf		06 15 48.4	0.0
	comp=Z,1.1nm,0.5s,baz=114,slow=3.6,SNR=10								
ASAR				PKPbc		PKPbc		06 15 51.9	-1.0
	comp=Z,2.1nm,0.5s,baz=116,slow=3.5,SNR=13								
WB2	**Warramunga Arr**	150.48	241	*e*P		PKPbc		06 15 54.8	-1.1
WB2	**Warramunga Arr**	150.48	241	*e*PKPbc		PKPbc		06 15 54.7	-1.2
WRAB	**Tennant Creek**	150.48	241	*e*PKPbc		PKPbc		06 15 54.6	-1.3
WRA	**Warramunga Arr**	150.49	241	PKPbc		PKPbc		06 15 54.9	-1.1
	comp=Z,1.9nm,0.3s,baz=107,slow=2.8,SNR=93								

ISCJB ***20*** *06:27:11.4±0.2,3641N±002×451W±002,h86km±3km, Error ellipse: s-maj=3.1km s-min=2.6km az=27.9*

CSEM ***20*** *06:27:11.4±0.1,3642N×448W,h73km±1km,ML3.2/3, Error ellipse: s-maj=1.8km s-min=1.4km az=108.0*

LDG ***20*** *06:27:12.0±0.3,3648N×453W,h76km±2km,Ml3.3/4,Error ellipse: s-maj=6.6km s-min=2.7km az=171.0*

SFS ***20*** *06:27:13.0,3637N×447W,h69km,ML3.6*

NEIC ***20*** *06:27:13.5,3637N×451W,h70km,MG3.6(MDD),After MDD.*

MDD ***20*** *06:27:14.0±0.3,3640N×450W,h67km±3km,mb3.7/32, Error ellipse: s-maj=3.5km s-min=2.7km az=132.0,PRIMO*

CNRM ***20*** *06:27:15.5,3634N×440W,h30km,MD3.2*

ISC 20 06:27:12.8±0.3,3641N±002×449W±002,h74km±4km,n107, σ**1§20**/178**,5C-3D,Strait of Gibraltar**

INMG 20 06:27:14.2±1.5,3647N×461W,h68km±4km,MD2.9,ML2.9, Error ellipse: s-maj=3.3km s-min=2.6km az=161.0, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EMIJ	**Mijas**	**0.28**	**305**	P		**Pn**	**06 27 24.1**	**-0.1**
	181nm,0.4s,SNR=18							
EMIJ				S		**Sn**	**06 27 31.8**	**-0.8**
	114nm,0.3s,SNR=23							
EMAL	**Malaga-Limoner**	**0.36**	**8**	P		**Pn**	**06 27 30.0**	**+5.3**
EMAL				S		**Sn**	**06 27 38.1**	**+4.6**
EMAL	**Malaga-Limoner**	**0.36**	**8**	*i* P		**Pn**	**06 27 25.1**	**+0.4**
EMAL				*e*S		**Sn**	**06 27 32.9**	**-0.6**
EMAL	**Malaga-Limoner**	**0.36**	**8**	⇓P		**Pn**	**06 27 25.1**	**+0.4**
EMAL				S		**Sn**	**06 27 32.9**	**-0.6**
ELOJ	**Sierra Loja**	**0.79**	**20**	P		**Pn**	**06 27 30.4**	**+1.5**
	12nm,0.1s,SNR=18							
ELOJ				S		**Sn**	**06 27 42.9**	**+2.0**
	66nm,0.4s,SNR=19							
EJIF	**Jimena Fronter**	**0.79**	**274**	P		**Pn**	**06 27 30.1**	**+1.2**
	20nm,0.1s,SNR=7.9							
EJIF				S		**Sn**	**06 27 40.9**	**0.0**
	14nm,0.2s,SNR=7.9							
ERON	**Agron**	**0.82**	**42**	P		**Pn**	**06 27 30.2**	**+0.9**
	15nm,0.2s,SNR=18							
ERON				S		**Sn**	**06 27 42.2**	**+0.7**
	12nm,0.2s,SNR=7.9							
EGUA	**Guajares**	**0.86**	**60**	P		**Pn**	**06 27 29.2**	**-0.5**
	46nm,0.1s,SNR=7.9							
EGUA				S		**Sn**	**06 27 41.8**	**-0.5**
	22nm,0.1s,SNR=7.9							
EGUA	**Guajares**	**0.86**	**60**	P		**Pn**	**06 27 29.2**	**-0.5**
	46nm,0.1s,SNR=7.9							
EGUA				S		**Sn**	**06 27 41.8**	**-0.4**
	22nm,0.1s,SNR=7.9							
ECEU	**Ceuta**	**0.88**	**235**	P		**Pn**	**06 27 30.1**	**+0.1**
	7.9nm,0.1s,SNR=23							
ECEU				S		**Sn**	**06 27 41.8**	**-0.9**
	30nm,0.3s,SNR=8.6							
ECEU	**Ceuta**	**0.88**	**235**	P		**Pn**	**06 27 30.1**	**+0.1**
	7.9nm,0.1s,SNR=23							
ECEU				S		**Sn**	**06 27 41.8**	**-0.9**
	30nm,0.3s,SNR=8.6							
ECOG	**Cogollos-Vega**	**1.14**	**40**	P		**Pn**	**06 27 34.8**	**+1.6**
	12nm,0.3s,SNR=18							
ECOG				S		**Sn**	**06 27 50.1**	**+1.6**
	29nm,0.3s,SNR=8.3							
DKH	**Dar Kharkhour**	**1.16**	**218**	*i* P		**Pn**	**06 27 35.5**	**+2.1**
DKH				*i* S		**Sn**	**06 27 49.0**	**+0.2**
EQUE	**Quentar**	**1.16**	**46**	P		**Pn**	**06 27 35.1**	**+1.7**
	17nm,0.2s,SNR=41							
EQUE				S		**Sn**	**06 27 50.1**	**+1.2**
	18nm,0.3s,SNR=5.2							
ELUQ	**Luque**	**1.17**	**9**	P		**Pn**	**06 27 34.5**	**+1.0**
	16nm,0.2s,SNR=7.9							
ELUQ				S		**Sn**	**06 27 49.7**	**+0.7**
	213nm,0.2s,SNR=7.9							
ESPR	**Espera**	**1.19**	**293**	P		**Pn**	**06 27 34.6**	**+0.8**
	18nm,0.2s,SNR=35							
ESPR				S		**Sn**	**06 27 49.8**	**+0.2**
	22nm,0.3s,SNR=4.8							
ESPR	**Espera**	**1.19**	**293**	P		**Pn**	**06 27 34.6**	**+0.7**
	18nm,0.2s,SNR=35							
ESPR				S		**Sn**	**06 27 49.8**	**+0.1**
	22nm,0.3s,SNR=4.8							
MPAL	**Palemas**	**1.26**	**159**	*i* P		**Pn**	**06 27 36.0**	**+1.3**
MPAL				*i* S		**Sn**	**06 27 48.0**	**-3.1**
EALB	**Alboran**	**1.27**	**111**	P		**Pn**	**06 27 34.1**	**-0.7**
	1.5nm,0.1s,SNR=17							
EALB				S		**Sn**	**06 27 50.3**	**-1.0**
	30nm,0.3s,SNR=13							
EALB	**Alboran**	**1.27**	**111**	P		**Pn**	**06 27 34.1**	**-0.7**
	1.5nm,0.1s,SNR=17							
EALB				S		**Sn**	**06 27 50.3**	**-0.9**
	30nm,0.3s,SNR=13							
EBER	**Berja**	**1.38**	**69**	P		**Pn**	**06 27 36.3**	**+0.1**
	5.4nm,0.1s,SNR=18							
EBER				S		**Sn**	**06 27 53.2**	**-0.6**
	52nm,0.4s,SNR=5.0							
EBER	**Berja**	**1.38**	**69**	⇑P		**Pn**	**06 27 36.3**	**+0.1**
	5.4nm,0.1s,SNR=18							
EBER				S		**Sn**	**06 27 53.2**	**-0.7**
	52nm,0.4s,SNR=5.0							
TOU	**Touzarine**	**1.56**	**157**	*e*P		**Pn**	**06 27 38.5**	**-0.1**
TOU				*i* S		**Sn**	**06 27 56.0**	**-2.1**
TSY	**Tnine Yamani**	**1.58**	**230**	*i* P		**Pn**	**06 27 40.5**	**+1.6**
TSY				*i* S		**Sn**	**06 27 59.0**	**+0.3**
EMEL	**Melilla**	**1.66**	**131**	P		**Pn**	**06 27 39.3**	**-0.7**
	64nm,0.1s,SNR=7.9							
EMEL				S		**Sn**	**06 27 58.8**	**-1.8**
	92nm,0.2s,SNR=7.9							
EMLI	**Melilla**	**1.67**	**131**	P		**Pn**	**06 27 39.3**	**-0.7**
	64nm,0.1s,SNR=7.9							
EMLI				S		**Sn**	**06 27 58.8**	**-1.9**
	92nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**1.76**	**358**	P		**Pn**	**06 27 41.8**	**+0.5**
	10nm,0.2s,SNR=18							
EADA				S		**Sn**	**06 28 02.0**	**-0.9**
	17nm,0.3s,SNR=5.1							
EADA	**Adamuz**	**1.76**	**358**	⇑P		**Pn**	**06 27 41.8**	**+0.5**
	10nm,0.2s,SNR=18							
EADA				S		**Sn**	**06 28 02.0**	**-0.8**
	17nm,0.3s,SNR=5.1							
EQES	**Quesada**	**1.80**	**39**	P		**Pn**	**06 27 42.8**	**+1.1**
	11nm,0.2s,SNR=18							
EQES				S		**Sn**	**06 28 04.0**	**+0.3**
	24nm,0.3s,SNR=6.9							
EQES	**Quesada**	**1.80**	**39**	⇑P		**Pn**	**06 27 42.8**	**+1.1**
	11nm,0.2s,SNR=18							
EQES				S		**Sn**	**06 28 04.0**	**+0.3**
	24nm,0.3s,SNR=6.9							
EBAN	**Banos Encina**	**1.84**	**18**	P		**Pn**	**06 27 42.9**	**+0.5**
	24nm,0.1s,SNR=18							
EBAN				S		**Sn**	**06 28 03.5**	**-1.3**
	27nm,0.3s,SNR=16							
ENIJ	**Nijar**	**1.92**	**72**	P		**Pn**	**06 27 44.0**	**+0.6**
	3.6nm,0.1s,SNR=7.9							
ENIJ				S		**Sn**	**06 28 05.9**	**-0.8**
	20nm,0.4s,SNR=5.0							
ZAI	**Zaio**	**2.02**	**135**	*i* P		**Pn**	**06 27 45.0**	**+0.3**
ZAI				*i* S		**Sn**	**06 28 07.0**	**-2.0**
EHUE	**Huescar**	**2.07**	**47**	P		**Pn**	**06 27 46.6**	**+1.2**
	1.4nm,0.1s,SNR=7.9							
EHUE				S		**Sn**	**06 28 11.1**	**+0.9**
	6.4nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**2.21**	**309**	P		**Pn**	**06 27 46.8**	**-0.5**
	28nm,0.1s,SNR=18							
EMIN				S		**Sn**	**06 28 10.9**	**-2.8**
	11nm,0.4s,SNR=7.3							
EMIN	**Mina Concepcio**	**2.21**	**309**	⇓P		**Pn**	**06 27 46.8**	**-0.5**
	28nm,0.1s,SNR=18							
EMIN				S		**Sn**	**06 28 10.9**	**-2.8**
	11nm,0.4s,SNR=7.3							
TZK	**Tazeka**	**2.33**	**174**	*i* P		**Pn**	**06 27 51.0**	**+2.1**
TZK				*i* S		**Sn**	**06 28 16.5**	**0.0**
EGRO	**El Granado**	**2.65**	**296**	P		**Pn**	**06 27 52.7**	**-0.5**
	15nm,0.1s,SNR=343							
EGRO	**El Granado**	**2.65**	**296**	P		**Pn**	**06 27 52.7**	**-0.5**
	15nm,0.1s,SNR=343							
EGRO				S		**Sn**	**06 28 21.7**	**-2.6**
	33nm,0.3s,SNR=7.8							
EVIA	**Vianos**	**2.73**	**35**	P		**Pn**	**06 27 54.7**	**+0.4**
	3.8nm,0.1s,SNR=14							
EVIA				S		**Sn**	**06 28 25.1**	**-1.2**
	11nm,0.2s,SNR=7.3							
EBAD	**Badajoz**	**3.09**	**320**	P		**Pn**	**06 27 58.9**	**-0.2**
	39nm,0.1s,SNR=18							
EBAD				S		**Sn**	**06 28 32.8**	**-2.1**
	10.0nm,0.3s,SNR=11							
EBAD	**Badajoz**	**3.09**	**320**	⇓P		**Pn**	**06 27 58.9**	**-0.3**
	39nm,0.1s,SNR=18							
EBAD				S		**Sn**	**06 28 32.8**	**-2.1**
	10.0nm,0.3s,SNR=11							
ETOB	**Tobarra**	**3.23**	**45**	P		**Pn**	**06 28 01.8**	**+0.6**
	2.3nm,0.2s,SNR=18							
ETOB				S		**Sn**	**06 28 37.0**	**-1.5**
	4.3nm,0.3s,SNR=4.5							
ETOB	**Tobarra**	**3.23**	**45**	⇑P		**Pn**	**06 28 01.8**	**+0.7**
	2.3nm,0.2s,SNR=18							
ETOB				S		**Sn**	**06 28 37.0**	**-1.5**
	4.3nm,0.3s,SNR=4.5							
ESDC	**Sonseca Array**	**3.29**	**7**	P		**Pn**	**06 28 02.3**	**+0.4**
	9.1nm,0.1s,SNR=11							
ESDC	**Sonseca Array**	**3.29**	**7**	P		**Pn**	**06 28 02.3**	**+0.4**
	9.1nm,0.1s,baz=187,slow=12,SNR=11							
ESDC				S		**Sn**	**06 28 37.1**	**-2.7**
	6.7nm,0.2s,baz=182,slow=23,SNR=34							
CZD	**Col de Zad**	**3.40**	**188**	*i* P		**Pn**	**06 28 04.5**	**+1.1**
CZD				*i* S		**Sn**	**06 28 40.0**	**-2.5**
MORF	**Marmelete**	**3.46**	**286**	P		**Pn**	**06 28 03.6**	**-0.6**
MORF				S		**Sn**	**06 28 39.4**	**-4.6**
	0.1nm,0.3s							
EVO	**Evora**	**3.52**	**308**	*e*Pn		**Pn**	**06 28 05.8**	**+0.8**
EVO				*e*Sn		**Sn**	**06 28 43.6**	**-1.8**
	23nm,0.3s							
EVOP	**Sao Brissos**	**3.58**	**307**	*e*Pn		**Pn**	**06 28 05.8**	**-0.1**
EVOP				*e*Sn		**Sn**	**06 28 43.6**	**-3.5**
	11nm,0.3s							
KIB	**El Ksiba**	**4.03**	**199**	*i* P		**Pn**	**06 28 13.0**	**+1.0**
KIB				*i* S		**Sn**	**06 28 58.0**	**0.0**
EBEN	**Beniarda**	**4.09**	**55**	P		**Pn**	**06 28 14.0**	**+1.2**
	0.6nm,0.1s,SNR=7.2							
EBEN				S		**Sn**	**06 28 57.3**	**-2.1**
	0.8nm,0.1s,SNR=7.9							
ECHE	**Chera**	**4.22**	**40**	P		**Pn**	**06 28 15.0**	**+0.4**
	2.4nm,0.1s,SNR=9.5							
ECHE				S		**Sn**	**06 28 59.2**	**-3.5**
	1.4nm,0.2s,SNR=7.9							
GUD	**Guadarrama**	**4.24**	**3**	P		**Pn**	**06 28 15.4**	**+0.6**
	1.2nm,0.3s,SNR=7.9							
GUD				S		**Sn**	**06 28 58.8**	**-4.2**
	2.7nm,0.1s,SNR=7.9							
ETOR	**Torete**	**4.80**	**23**	⇑P		**Pn**	**06 28 23.1**	**+0.6**
	138nm,0.1s,SNR=18							
ETOR				S		**Sn**	**06 29 14.1**	**-2.7**
	35nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**5.06**	**37**	P		**Pn**	**06 28 27.2**	**+1.2**
	1.8nm,0.1s,SNR=17							
EMOS	**Mosqueruela**	**5.06**	**37**	P		**Pn**	**06 28 27.2**	**+1.2**
	1.8nm,0.1s,SNR=17							
EMOS				S		**Sn**	**06 29 19.3**	**-3.8**
	1.3nm,0.2s,SNR=7.9							
EIBI	**Ibiza**	**5.31**	**59**	P		**Pn**	**06 28 29.6**	**+0.1**
	4.2nm,0.5s,SNR=7.9							
EIBI	**Ibiza**	**5.31**	**59**	P		**Pn**	**06 28 29.6**	**+0.1**
	4.2nm,0.5s,SNR=7.9							
ECAL	**Calabor**	**5.80**	**343**	P		**Pn**	**06 28 36.8**	**+0.7**
	0.6nm,0.1s,SNR=14							
ECAL	**Calabor**	**5.80**	**343**	P		**Pn**	**06 28 36.8**	**+0.7**
	0.6nm,0.1s,SNR=14							
ECAL				S		**Sn**	**06 29 37.5**	**-3.6**
	10nm,0.4s,SNR=7.2							
OUK	**Oukaimeden**	**5.90**	**209**	*e*P		**Pn**	**06 28 39.0**	**+1.5**
OUK	**Oukaimeden**	**5.90**	**209**	P		**Pn**	**06 28 39.0**	**+1.5**
OUK				S		**Sn**	**06 29 43.0**	**-0.7**
ERTA	**Horta de San J**	**5.91**	**38**	P		**Pn**	**06 28 38.4**	**+0.8**
	1.1nm,0.2s,SNR=7.9							
ERTA	**Horta de San J**	**5.91**	**38**	P		**Pn**	**06 28 38.4**	**+0.8**
	1.1nm,0.2s,SNR=7.9							
ERTA				S		**Sn**	**06 29 40.2**	**-3.6**
	0.9nm,0.2s,SNR=7.9							
CIA	**Chichaoua**	**5.99**	**218**	*i* P		**Pn**	**06 28 41.0**	**+2.2**
CIA	**Chichaoua**	**5.99**	**218**	P		**Pn**	**06 28 41.0**	**+2.2**
CIA				S		**Sn**	**06 29 45.0**	**-1.0**
ELOB	**Lobios**	**6.12**	**334**	P		**Pn**	**06 28 41.0**	**+0.5**
	1.5nm,0.2s,SNR=11							
ELOB	**Lobios**	**6.12**	**334**	P		**Pn**	**06 28 41.0**	**+0.5**
	1.5nm,0.2s,SNR=11							
ELOB				S		**Sn**	**06 29 43.5**	**-5.5**
	7.4nm,0.3s,SNR=12							
EPOB	**Poblet**	**6.58**	**40**	P		**Pn**	**06 28 47.0**	**+0.3**
	0.7nm,0.1s,SNR=7.9							
EPOB	**Poblet**	**6.58**	**40**	P		**Pn**	**06 28 47.0**	**+0.3**
	0.7nm,0.1s,SNR=7.9							
IZUN	**Zunzarren**	**6.86**	**19**	P		**Pn**	**06 28 51.5**	**+0.9**
	0.7nm,0.1s,SNR=7.9							
IZUN	**Zunzarren**	**6.86**	**19**	P		**Pn**	**06 28 51.5**	**+0.9**
	0.7nm,0.1s,SNR=7.9							
ELAN	**Lanestosa**	**6.87**	**6**	P		**Pn**	**06 28 51.7**	**+1.0**
	1.8nm,0.2s,SNR=6.1							
ELAN	**Lanestosa**	**6.87**	**6**	P		**Pn**	**06 28 51.6**	**+1.0**
	1.8nm,0.2s,SNR=6.1							
ELAN				S		**Sn**	**06 30 03.2**	**-4.1**
	1.6nm,0.3s,SNR=7.9							
EARI	**Arriondas**	**6.91**	**356**	P		**Pn**	**06 28 52.3**	**+1.0**
	SNR=7.7							
EARI	**Arriondas**	**6.91**	**356**	P		**Pn**	**06 28 52.3**	**+1.0**
	0.0nm,0.0s,SNR=7.7							
EARI				S		**Sn**	**06 30 03.5**	**-4.9**
	1.0nm,0.2s,SNR=7.9							
IUSE	**Utxeti**	**6.91**	**18**	P		**Pn**	**06 28 52.0**	**+0.6**
	0.6nm,0.1s,SNR=4.0							
IUSE	**Utxeti**	**6.91**	**18**	P		**Pn**	**06 28 52.0**	**+0.7**
	0.6nm,0.1s,SNR=4.0							
SJPF	**Ste Jean**	**7.15**	**20**	*e*Pn		**Pn**	**06 28 51.9**	**-2.7**
SJPF	**Ste Jean**	**7.15**	**20**	*e*P		**Pn**	**06 28 55.3**	**+0.7**
SJPF				*e*Sn		**Sn**	**06 30 07.2**	**-7.1**
	3.5nm,0.3s							
SJPF	**Ste Jean**	**7.15**	**20**	*e*P		**Pn**	**06 28 55.3**	**+0.7**
SJPF	**Ste Jean**	**7.15**	**20**	Pn		**Pn**	**06 28 51.9**	**-2.7**
SJPF				P			06 28 55.3	
SJPF				Sn		**Sn**	**06 30 07.2**	**-7.1**
	1.8nm,0.3s							

PB06	**Plate Boundary**	**0.97**	**83**	⇓*i* P	**Pn**	**06 41 26.4**	**-0.4**
PB06				*i* S	**Sn**	**06 41 39.9**	**+0.4**
PB06				AML	AML	06 41 44.5	
	comp=E,44μm,0.6s						
PB04	**Plate Boundary**	**1.19**	**62**	*i* P	**Pn**	**06 41 20.9**	**-8.9**
PB04				*i* S	**Sn**	**06 41 30.7**	**-14**
PB04				AML	AML	06 41 32.3	
	comp=E,159μm,0.6s						
PB07	**Plate Boundary**	**1.29**	**32**	⇑*i* P	**Pn**	**06 41 30.5**	**-0.8**
PB07				*i* S	**Sn**	**06 41 48.8**	**+1.3**
LVC	**Limon Verde**	**1.59**	**82**	Pg	**Pn**	**06 41 37.2**	**+1.9**
	comp=E,1μm,0.3s,baz=254,slow=12,SNR=1046						
LVC				Lg		06 41 58.9	
	comp=E,2μm,0.3s,baz=204,slow=20,SNR=32						
LVC	**Limon Verde**	**1.59**	**82**	*e*Pn	**Pn**	**06 41 36.6**	**+1.3**
LVC				*e*Sn	**Sn**	**06 41 58.0**	**+3.2**
LVC	**Limon Verde**	**1.59**	**82**	*e*P	**Pn**	**06 41 36.2**	**+0.9**
LVC				*i* S	**Sn**	**06 41 58.1**	**+3.3**
LVC				AML	AML	06 42 02.9	
	comp=N,12μm,0.4s						
CPN1	**Cerro Paranal**	**1.79**	**174**	*e*P	**Pn**	**06 41 37.1**	**-1.1**
CPN1				AML	AML	06 42 08.0	
	comp=E,25μm,0.8s						
PB01	**Plate Boundary**	**2.07**	**31**	*e*P	**Pn**	**06 41 41.5**	**-0.5**
PB01				*e*S	**Sn**	**06 42 07.3**	**+0.6**
PB01				AML	AML	06 42 15.2	
	comp=E,17μm,0.4s						
CPCH	**Copiapo**	**4.51**	**177**	P	**Pn**	**06 42 14.6**	**-0.9**
LCO	**Las Campanas**	**6.15**	**181**	*e*Pn	**Pn**	**06 42 37.8**	**-0.3**
	comp=E,106nm,0.6s						
LCO				*e*Sn	Sn	06 44 13.1	+26
ARE	**Arequipa**	**6.39**	**352**	*e*P	**Pn**	**06 42 39.0**	**-2.5**
ARE				*e*S	**Sn**	**06 43 48.0**	**-5.4**
LPAZ	**La Paz**	**6.92**	**20**	Pn	**Pn**	**06 42 49.9**	**+1.2**
	comp=E,3.5nm,0.3s,baz=195,slow=6.8,SNR=79						
LPAZ	**La Paz**	**6.92**	**20**	*e*Pn	**Pn**	**06 42 50.9**	**+2.2**
	comp=E,36nm,0.4s						
LPAZ	**La Paz**	**6.92**	**20**	*e*P	**Pn**	**06 42 50.9**	**+2.2**
LPAZ				pmax	pmax		
	comp=Z,36nm,0.4s						
CFAA	**Coronel Fontan**	**8.99**	**167**	Pn	**Pn**	**06 43 16.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=334,slow=13,SNR=8.0						
CFAA				Sn	**Sn**	**06 45 12.1**	**+15**
	comp=Z,0.4nm,0.3s,baz=232,slow=19,SNR=3.5						
CFAA				LR	LR	06 46 50.6	
	comp=Z,101nm,21.5s,baz=333,slow=38						
CFAA	**Coronel Fontan**	**8.99**	**167**	Pn	**Pn**	**06 43 16.4**	**-0.6**
CFAA				Sn	**Sn**	**06 45 12.1**	**+15**
CFAA				LR	LR	06 46 50.6	
SIV	**San Ignacio**	**11.28**	**55**	Pn	**Pn**	**06 43 47.4**	**-1.2**
	comp=Z,3.9nm,0.3s,baz=246,slow=13,SNR=123						
NNA	**Nana**	**12.31**	**330**	Pn	**Pn**	**06 44 02.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=108,slow=18,SNR=1.9						
NNA				Sn	**Sn**	**06 46 10.9**	**-8.0**
	comp=Z,0.8nm,0.3s,baz=232,slow=18,SNR=3.4						
ATAH	**Atahualpa**	**17.43**	**333**	P	**Pn**	**06 45 10.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=152,slow=17,SNR=2.7						
PLCA	**Paso Flores**	**17.84**	**180**	P	**Pn**	**06 45 16.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=355,slow=13,SNR=7.6						
PLCA				LR	LR	06 51 37.7	
	comp=Z,375nm,20.3s,baz=359,slow=35						
PLCA	**Paso Flores**	**17.84**	**180**	*e*P	**Pn**	**06 45 17.5**	**+2.3**
	comp=Z,9.2nm,1.1s						
PLCA	**Paso Flores**	**17.84**	**180**	*e*P	**Pn**	**06 45 17.5**	**+2.3**
PLCA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SPB	**Sao Paulo**	**21.32**	**97**	*e*P	**P**	**06 45 55.0**	**+1.3**
BDFB	**Brasilia**	**22.49**	**75**	P	**P**	**06 46 04.2**	**-2.2**
	comp=Z,8.2nm,0.5s,mb4.4,baz=244,slow=14,SNR=50						
BDFB				LR	LR	06 56 09.3	
	comp=Z,473nm,18.4s,MS4.0,baz=195,slow=40						
BDFB	**Brasilia**	**22.49**	**75**	*e*P	**P**	**06 46 04.4**	**-1.9**
	comp=Z,11nm,0.4s,mb4.6						
BDFB	**Brasilia**	**22.49**	**75**	*e*P	**P**	**06 46 04.4**	**-1.9**
BDFB				pmax	pmax		
	comp=Z,11nm,0.4s						
OTAV	**Otavalo**	**24.17**	**341**	*e*P	**P**	**06 46 25.6**	**+2.6**
	comp=Z,16nm,1.2s,mb4.3						
CAM4	**Nova Friburgo**	**25.89**	**94**	⇓*i* P	**P**	**06 46 36.2**	**-2.4**
CAM4				*i*		06 46 37.9	
CAM4				*i*	pP	06 46 43.9	-3.6
CAM4				*i*		06 46 50.3	
CAM4				*i*		06 46 55.5	
CAM4				*i*		06 47 07.9	
RPN	**Rapa Nui**	**35.26**	**255**	LR	LR	06 58 13.5	
	comp=Z,260nm,19.8s,MS4.0,baz=73,slow=29						
RCBR	**Riachuelo**	**37.49**	**69**	*e*P	**P**	**06 48 20.5**	**-0.1**
	comp=Z,62nm,0.8s,mb5.5						
RCBR				*e*pP	pP	06 48 32.8	+3.1
RKT	**Rikitea**	**58.79**	**256**	*e*S	**S**	**06 59 08.2**	**-0.3**
	comp=Z,167nm,26.2s						
RKT				*e*LR	LR	07 08 22.0	
	comp=Z,412nm,28.2s						
VNA3	**Neumayer Olymp**	**59.33**	**161**	*e*	**P**	**06 51 08.4**	**+0.4**
VNA3				*e*	pP	06 51 15.5	-2.0
SWET	**Sewanee**	**59.53**	**345**	*e*P	**P**	**06 51 08.5**	**-1.2**
OXF	**Oxford**	**59.76**	**342**	*e*P	**P**	**06 51 10.1**	**-1.3**
	comp=Z,22nm,1.0s,mb5.1						
OXF	**Oxford**	**59.76**	**342**	*e*P	**P**	**06 51 10.1**	**-1.2**
OXF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
VNA2	**Neumayer--Watz**	**59.93**	**160**	*e*	**P**	**06 51 11.8**	**-0.3**
	baz=285,slow=8.9						
VNA2				*e*		06 51 18.9	
JCT	**Junction City**	**59.96**	**331**	*e*P	**P**	**06 51 13.0**	**+0.2**
	comp=Z,2.7nm,0.6s,mb4.5						
JCT	**Junction City**	**59.96**	**331**	*e*P	**P**	**06 51 13.0**	**+0.2**
JCT				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ELN	**Prospectdale**	**60.50**	**351**	*e*P	**P**	**06 51 16.2**	**-0.2**
TXAR	**Lajitas Array**	**60.85**	**327**	P	**P**	**06 51 17.7**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.9,baz=150,slow=9.4,SNR=16						
WVT	**Waverly**	**60.86**	**344**	*e*P	**P**	**06 51 16.9**	**-2.0**
	comp=Z,11nm,0.9s,mb5.0						
WVT				*e*pP	pP	06 51 28.8	+0.4
WVT	**Waverly**	**60.86**	**344**	*e*P	**P**	**06 51 16.9**	**-1.9**
WVT				*e**PP	pP	06 51 28.8	+0.4
WVT				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
MIAR	**Mount Ida**	**61.09**	**338**	*e*P	**P**	**06 51 19.9**	**-0.5**
	comp=Z,12nm,1.1s,mb4.9						
MIAR				*e*pP	pP	06 51 31.1	+1.1
MIAR	**Mount Ida**	**61.09**	**338**	*e*P	**P**	**06 51 19.9**	**-0.5**
MIAR				*e**PP	pP	06 51 31.1	+1.1
MIAR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
SNAA	**Sanae**	**61.55**	**161**	*e*P	**P**	**06 51 21.0**	**-2.1**
	comp=Z,9.8nm,0.9s,mb4.9						
SNAA	**Sanae**	**61.55**	**161**	*e*P	**P**	**06 51 21.0**	**-2.1**
SNAA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WCI	**Wyandotte Cave**	**62.50**	**346**	*e*P	**P**	**06 51 28.0**	**-1.8**
	comp=Z,6.2nm,0.6s,mb4.9						
WCI	**Wyandotte Cave**	**62.50**	**346**	*e*P	**P**	**06 51 28.0**	**-1.8**
WCI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
SIUC	**Southern Illin**	**62.72**	**343**	*e*P	**P**	**06 51 30.5**	**-0.8**
	comp=Z,4.7nm,0.4s,mb5.0						
FVM	**French Village**	**63.30**	**343**	*e*P	**P**	**06 51 34.4**	**-0.8**
	comp=Z,13nm,0.7s,mb5.2						
FVM				*e*pP	pP	06 51 43.0	-1.8
FVM	**French Village**	**63.30**	**343**	*e*P	**P**	**06 51 34.4**	**-0.7**
FVM				*e**PP	pP	06 51 43.0	-1.7
FVM				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.2						
CCM	**Cathedral Cave**	**63.59**	**342**	*e*P	**P**	**06 51 36.1**	**-1.0**
	comp=Z,4.8nm,0.8s,mb4.6						
CCM	**Cathedral Cave**	**63.59**	**342**	*e*P	**P**	**06 51 36.1**	**-1.0**
CCM				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ANMO	**Albuquerque**	**66.78**	**328**	*e*P	**P**	**06 51 58.8**	**+0.9**
	comp=Z,5.1nm,1.0s,mb4.5						
ANMO				*e*pP	pP	06 52 10.0	+2.5
ANMO	**Albuquerque**	**66.78**	**328**	*e*P	**P**	**06 51 58.8**	**+0.9**
ANMO				*e**PP	pP	06 52 10.0	+2.5
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	**Tucson**	**66.94**	**324**	*e*P	**P**	**06 51 59.2**	**+0.2**
	comp=Z,3.3nm,1.1s,mb4.3						
TUC	**Tucson**	**66.94**	**324**	*e*P	**P**	**06 51 59.2**	**+0.3**
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
SDCO	**Great Sand Dun**	**68.61**	**331**	*e*P	**P**	**06 52 10.4**	**+1.1**
	comp=Z,5.0nm,1.1s,mb4.4						
MVCO	**Mesa Verde**	**69.58**	**328**	*e*P	**P**	**06 52 18.2**	**+2.9**
	comp=Z,9.4nm,1.1s,mb4.6						
MVCO				*e*pP	pP	06 52 26.8	+1.8
LIC	**Lamto**	**70.27**	**74**	*e*P	**P**	**06 52 19.0**	**-1.2**
	comp=Z,40nm,1.1s,mb5.3						
PV01	**Paradox Valley**	**70.34**	**329**	*e*P	**P**	**06 52 22.4**	**+2.3**
TIC	**Toumodi**	**70.47**	**74**	*e*P	**P**	**06 52 20.4**	**-1.0**
	comp=Z,47nm,0.9s,mb5.4						
KIC	**Kosan Boka**	**70.59**	**74**	*e*P	**P**	**06 52 21.3**	**-0.8**
	comp=Z,48nm,0.6s,mb5.6						
DBIC	**Dimbokro**	**70.62**	**74**	P	**P**	**06 52 21.6**	**-0.7**
	comp=Z,9.1nm,0.5s,mb5.0,baz=222,slow=6.6,SNR=35						
DBIC				LR	LR	07 23 58.0	
	comp=Z,86nm,18.1s,MS4.0,baz=218,slow=36						
DBIC	**Dimbokro**	**70.62**	**74**	*e*P	**P**	**06 52 21.7**	**-0.6**
SRU	**San Rafael**	**72.05**	**328**	*e*P	**P**	**06 52 31.1**	**+0.8**
	comp=Z,8.4nm,1.0s,mb4.6						
SRU				*e*pP	pP	06 52 41.4	+1.3
SRU	**San Rafael**	**72.05**	**328**	*e*P	**P**	**06 52 31.1**	**+0.7**
SRU				*e**PP	pP	06 52 41.4	+1.3
SRU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CCUT	**Cedar City**	**72.29**	**326**	*e*P	**P**	**06 52 33.8**	**+2.0**
CCUT				*e*pP	pP	06 52 44.6	+3.1
MSU	**Marysvale**	**72.41**	**327**	*e*P	**P**	**06 52 34.0**	**+1.5**
ARUT	**Antelope Range**	**72.50**	**326**	*e*P	**P**	**06 52 34.2**	**+1.1**
ARUT				*e*pP	pP	06 52 43.3	+0.4
RSSD	**Black Hills**	**73.33**	**336**	*e*P	**P**	**06 52 37.8**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.4						
RSSD	**Black Hills**	**73.33**	**336**	*e*P	**P**	**06 52 37.8**	**0.0**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
PPT	**Papeete**	**73.49**	**258**	*e*S	S	07 02 04.9	-2.5
	comp=Z,176nm,26.0s						
PPT	**Papeete**	**73.49**	**258**	*e*LR	LR	07 15 16.7	
	comp=Z,196nm,26.2s						
PPT	**Papeete**	**73.49**	**258**	LR	LR	07 16 36.4	
	comp=Z,109nm,18.1s,MS4.2,baz=100,slow=29						
AGMN	**Agassiz Refuge**	**74.34**	**343**	*e*P	**P**	**06 52 42.5**	**-1.1**
	comp=Z,4.5nm,0.7s,mb4.5						
PDAR	**Pinedale Array**	**74.49**	**331**	P	**P**	**06 52 45.2**	**+0.6**
	comp=Z,4.4nm,0.8s,mb3.4,baz=133,slow=6.3,SNR=4.2						
HWUT	**Hardware Ranch**	**74.50**	**329**	*e*P	**P**	**06 52 45.5**	**+0.8**
	comp=Z,3.4nm,0.8s,mb4.3						
VNDA	**Vanda**	**75.27**	**190**	P	**P**	**06 52 50.0**	**+1.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=103,slow=1.3,SNR=3.8						
VNDA	**Vanda**	**75.27**	**190**	*e*P	**P**	**06 52 50.7**	**+1.9**
	comp=Z,2.7nm,1.0s,mb4.1						
VNDA	**Vanda**	**75.27**	**190**	*e*P	**P**	**06 52 50.7**	**+1.9**
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NVAR	**Mina Array Bea**	**75.59**	**323**	P	**P**	**06 52 52.6**	**+1.5**
	comp=Z,0.3nm,0.4s,mb3.6,baz=129,slow=7.1,SNR=2.8						
SYO	**Syowa Base**	**75.81**	**160**	⇓*e*P	**P**	**06 52 50.8**	**-1.2**
ULM	**Lac du Bonnet**	**76.13**	**344**	P	**P**	**06 52 53.0**	**-0.8**
	comp=Z,4.8nm,0.6s,mb4.6,baz=162,slow=6.3,SNR=4.0						
RLMT	**Red Lodge**	**76.26**	**333**	*e*P	**P**	**06 52 55.5**	**+0.8**
	comp=Z,6.4nm,1.1s,mb4.5						
GCMT	**Greycliff**	**76.96**	**333**	*e*P	**P**	**06 52 59.3**	**+0.5**
GCMT				*e*pP	pP	06 53 08.1	-0.4
HLID	**Hailey**	**77.35**	**329**	*e*P	**P**	**06 53 02.2**	**+1.2**
	comp=Z,4.9nm,1.1s,mb4.3						
TOA0	**Toordi Ar. Sit**	**79.29**	**71**	*e*P	**P**	**06 53 11.6**	**-0.8**
TORD	**Toordi Ar. Bea**	**79.29**	**71**	*e*P	**P**	**06 53 11.7**	**-0.6**
	comp=Z,25nm,0.7s,mb5.2,baz=255,slow=5.2,SNR=291						
TORD				LR	LR	07 28 03.9	
	comp=Z,106nm,18.7s,MS4.2,baz=225,slow=36						
YBH	**Yreka Blue Hor**	**80.31**	**323**	P	**P**	**06 53 16.8**	**-0.4**
	comp=Z,1.9nm,0.9s,mb4.0,baz=100,slow=8.8,SNR=2.8						
TSUM	**Tsumeb**	**81.17**	**107**	*e*P	**P**	**06 53 23.1**	**+0.6**
	comp=Z,10nm,0.8s,mb4.8						
WALA	**Worton Lakes**	**81.31**	**333**	*e*P	**P**	**06 53 22.5**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.4						
OD2	**Odessa Site #2**	**82.21**	**329**	*e*P	**P**	**06 53 27.9**	**+0.7**
OD2				*e*pP	pP	06 53 37.0	-0.1
MAW	**Mawson**	**83.50**	**164**	*e*P	**P**	**06 53 34.1**	**+0.3**
	comp=Z,6.9nm,1.1s,mb4.7						
MAW	**Mawson**	**83.50**	**164**	P	**P**	**06 53 34.3**	**+0.5**
	comp=Z,4.0nm,0.7s,mb4.6,baz=223,slow=12,SNR=9.5						
MAW				LR	LR	07 30 44.6	
	comp=Z,107nm,18.6s,MS4.2,baz=22,slow=36						
MAW	**Mawson**	**83.50**	**164**	*e*P	**P**	**06 53 34.1**	**+0.3**
MAW	**Mawson**	**83.50**	**164**	*e*P	**P**	**06 53 34.1**	**+0.3**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TAM	**Tamanrasset**	**86.83**	**64**	*e*P	**P**	**06 53 52.4**	**+1.3**
ESDC	**Sonseca Array**	**87.89**	**45**	LR	LR	07 31 59.9	
	comp=Z,66nm,19.0s,MS4.1,baz=285,slow=35						
YKA	**Yellowknife Ar**	**91.92**	**341**	P	**P**	**06 54 13.8**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.6,baz=136,slow=4.7,SNR=7.0						
DLBC	**Lease Lake**	**94.66**	**333**	P	**P**	**06 54 26.9**	**0.0**
	comp=Z,1.6nm,0.9s,mb4.4,baz=188,slow=8.1,SNR=3.3						
KEST	**Kesra**	**95.36**	**54**	LR	LR	07 41 17.6	
	comp=Z,43nm,18.3s,MS4.0,baz=333,slow=38						
ASAR	**Alice Springs**	**128.00**	**209**	PKP	PKPdf	07 00 12.8	0.0
	comp=Z,1.1nm,0.8s,baz=132,slow=2.0,SNR=7.3						
WRA	**Warramunga Arr**	**131.00**	**212**	PKP	PKPdf	07 00 18.6	-0.1
	comp=Z,0.8nm,0.7s,baz=184,slow=1.8,SNR=3.5						
NVS	**Novosibirsk**	**142.54**	**25**	*e*PKIKP	PKPdf	07 00 38.1	-0.7
ZAA0	**Zalesovo Array**	**143.82**	**25**	*e*PKPdf	PKPdf	07 00 39.4	-1.7
ZALV	**Zalesovo Beam**	**143.82**	**25**	PKP	PKPdf	07 00 39.1	-2.0
	comp=Z,1.5nm,0.5s,baz=255,slow=2.9,SNR=7.5						
EKS2	**Erkin-Say**	**144.47**	**48**	P	PKPdf	07 00 42.4	-0.2
	SNR=5.5						
AML	**Almayashu**	**144.61**	**49**	*e*PKPdf	PKPdf	07 00 43.0	+0.2
AML	**Almayashu**	**144.61**	**49**	P	PKPdf	07 00 43.4	+0.5
	SNR=6.0						
BOD	**Bodaibo**	**144.89**	**356**	*e*PKIKP	PKPdf	07 00 41.1	-1.8
BOD				pmax	pmax		
	comp=Z,17nm,0.7s						
AAK	**Ala-Archa**	**144.97**	**47**	P	PKPdf	07 00 44.3	+0.8
	SNR=16						
CHMS	**Chumysh**	**144.99**	**47**	P	PKPdf	07 00 44.0	+0.4
	SNR=5.4						
KBK	**Karagaybulak**	**145.26**	**47**	P	PKPbc	07 00 45.6	+1.8
	SNR=7.6						
TKM2	**Tokmak 2**	**145.59**	**46**	*e*PKPdf	PKPbc	07 00 45.5	+0.7
TKM2	**Tokmak 2**	**145.59**	**46**	P	PKPbc	07 00 45.8	+1.0
	SNR=11						
KZA	**Kyzart**	**145.70**	**48**	P	PKPbc	07 00 47.2	+2.0
	SNR=11						
ULHL	**Ulahol**	**146.31**	**47**	P	PKPbc	07 00 48.9	+1.9
	SNR=12						
MK31	**Makanchi Array**	**147.63**	**36**	*e*PKPbc	PKPbc	07 00 50.3	-0.3
MKAR	**Makanchi Array**	**147.63**	**36**	PKPbc	PKPbc	07 00 48.6	-2.0
	comp=Z,6.8nm,0.6s,baz=328,slow=2.8,SNR=40						
MOY	**Mondy**	**150.50**	**11**	*e*PKIKP	PKPbc	07 00 59.0	+1.3
KAPI	**Kappang**	**150.53**	**201**	PKPbc	PKPbc	07 00 58.6	-0.4
	comp=Z,5.0nm,0.2s,baz=76,slow=12,SNR=3.5						
HYB	**Hyderabad**	**150.59**	**95**	*i* PKP	PKPbc	07 00 59.5	+0.6
ZAK	**Zakamensk**	**152.09**	**8**	*e*PKIKP	PKPbc	07 00 59.0	-2.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**154.94**	**5**	PKP	PKPdf	07 00 58.2	-0.8
	comp=Z,0.4nm,0.4s,baz=142,slow=4.6,SNR=8.5						

*IDC **20** 06:45:57.3±28.0, 2058S×17430W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/19, mbtmp4.0/4, MS3.8/2, Ms1 3.8/2, ms1mx3.0/23, Error ellipse: s-maj=520.4km s-min=148.4km az=75.0*

*NOU **20** 06:47:59.9±2.3, 2074S×16990E, h10km, MD2.5, ML3.8*

ISC 20 06:48:02.3±3.8, 224S×07×1701E±02, h35km±40km, n12, σ0§40/10, mb3.7/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LASL	**Noumea**	**3.32**	**272**	AMP		06 49 33.3	
	comp=Z,450nm,0.2s						
NORM	**Noumea**	**3.37**	**272**	*e*P	**Pn**	**06 48 52.5**	**0.0**
NORM				AMP		06 49 33.5	
	comp=Z,382nm,0.5s						
ONTRN	**Noumea**	**3.40**	**271**	*e*P	**Pn**	**06 48 53.2**	**+0.4**
ONTRN				*e*S	**Sn**	**06 49 32.4**	**+0.5**
ONTRN				AMP		06 49 34.2	
	comp=Z,376nm,0.9s						
DZM	**Mont Dzumac**	**3.42**	**275**	*e*P	**Pn**	**06 48 53.0**	**-0.2**
DZM				*e*S	**Sn**	**06 49 32.7**	**+0.1**
DZM				AMP		06 49 36.6	
	comp=Z,2μm,0.5s						
NOUC	**Port Laguerre**	**3.55**	**274**	*e*P	**Pn**	**06 48 54.8**	**-0.2**
NOUC				*e*S	**Sn**	**06 49 35.1**	**-0.6**
NOUC				AMP		06 49 38.5	
	comp=Z,82nm,6.9s						
RAO	**Raoul Island**	**12.74**	**125**	LR	LR	06 51 23.4	
	comp=Z,696nm,19.5s,baz=111,slow=35						
RPZ	**Rata Peaks**	**21.27**	**178**	LR	LR	07 01 50.8	
	comp=Z,144nm,18.7s,baz=226,slow=36						
CTA	**Charters Tower**	**22.36**	**271**	P	pP	06 53 09.7	+2.9
	comp=Z,4.6nm,0.7s,baz=80,slow=8.3,SNR=4.1						
STKA	**Stephens Creek**	**27.02**	**243**	P	**P**	**06 53 40.7**	**-0.5**
	comp=Z,1.7nm,0.6s,mb3.8,baz=79,slow=9.5,SNR=2.7						
ASAR	**Alice Springs**	**33.30**	**261**	P	**P**	**06 54 37.5**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=82,slow=7.7,SNR=3.3						
WRA	**Warramunga Arr**	**33.41**	**267**	P	**P**	**06 54 37.6**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=98,slow=8.0,SNR=5.7						
BRG	**Berggiesshubel**	**146.06**	**333**	*i* P	PKPdf	07 07 37.9	+0.5
	comp=Z,9.5nm,0.9s						

*NOU **20** 07:08:02.6±1.6, 2126S×17002E, h10km, MD3.0, ML3.3*

*IDC **20** 07:08:06.6±4.1, 2182S×169.19E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/15, mbtmp3.8/3, MS3.7/8, Ms1 3.7/8, ms1mx3.5/18, Error ellipse: s-maj=137.7km s-min=51.8km az=144.0*

ISC 20 07:08:04.9±4.1, 218S±07×1700E±01, h35km±36km, n15, σ0§45/9, mb3.8/3, MS3.7/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NORM	**Noumea**	**3.32**	**262**	*e*P	**Pn**	**07 08 54.1**	**-0.4**
NORM				*e*S	**Sn**	**07 09 31.9**	**-0.8**
NORM				AMP		07 09 40.5	
	comp=Z,144nm,0.3s						
DZM	**Mont Dzumac**	**3.35**	**265**	*e*P	**Pn**	**07 08 55.0**	**+0.3**
DZM				*e*S	**Sn**	**07 09 33.4**	**+0.1**
DZM				AMP		07 09 57.7	
	comp=Z,897nm,0.0s						
NOUC	**Port Laguerre**	**3.48**	**265**	*e*P	**Pn**	**07 08 56.6**	**+0.1**
NOUC				*e*S	**Sn**	**07 09 37.3**	**+0.7**
NOUC				AMP		07 09 39.9	
	comp=Z,62nm,0.0s						
URZ	**Urewera**	**17.49**	**161**	LR	LR	07 17 53.1	
	comp=Z,226nm,19.1s,baz=344,slow=33						
CTA	**Charters Tower**	**22.27**	**270**	LR	LR	07 19 15.7	
	comp=Z,131nm,18.6s,MS3.4,baz=66,slow=31						
STKA	**Stephens Creek**	**27.21**	**242**	P	**P**	**07 13 45.8**	**+0.2**
	comp=Z,1.4nm,0.7s,mb3.6,baz=108,slow=9.6,SNR=3.8						
STKA				LR	LR	07 23 30.1	
	comp=Z,251nm,19.2s,MS3.8,baz=208,slow=35						
ASAR	**Alice Springs**	**33.32**	**260**	P	**P**	**07 14 40.0**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=85,slow=9.1,SNR=13						
WRA	**Warramunga Arr**	**33.36**	**267**	P	**P**	**07 14 39.5**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.8,baz=100,slow=8.1,SNR=7.6						
WRA				LR	LR	07 27 12.1	
	comp=Z,142nm,20.4s,MS3.7,baz=85,slow=35						
PPT	**Papeete**	**38.18**	**91**	*e*LR	LR	07 25 43.9	
	comp=Z,141nm,27.8s						
PPT	**Papeete**	**38.18**	**91**	LR	LR	07 28 52.4	
	comp=Z,65nm,18.5s,MS3.5,baz=259,slow=32						
MAW	**Mawson**	**76.34**	**202**	LR	LR	07 48 17.5	
	comp=Z,52nm,19.6s,MS3.9,baz=322,slow=32						
TXAR	**Lajitas Array**	**97.33**	**61**	LR	LR	07 56 07.5	
	comp=Z,71nm,20.0s,MS4.2,baz=0.0,slow=29						
PDAR	**Pinedale Array**	**97.81**	**47**	LR	LR	08 03 22.6	
	comp=Z,31nm,18.0s,MS3.8,baz=254,slow=34						
BRG	**Berggiesshubel**	**145.50**	**333**	*e*	PKPdf	07 27 42.0	+2.9
	comp=Z,4.7nm,1.1s						
GERES	**GERESS Array B**	**147.10**	**331**	PKPbc	PKPbc	07 27 49.8	+5.7
	comp=Z,0.3nm,0.4s,baz=52,slow=5.1,SNR=4.4						

NNC 20 07:18:48.0±3.8, 3682N×7099E, h130km±56km, mb3.0, mpv4.0, 4C-2D, Error ellipse: s-maj=32.1km s-min=25.6km az=17.0, Hindu Kush region

| Code | Station Name | Δ° | AZ° | Phase | ID | Time | Res |
|---|---|---|---

MARD	**Mardin**	**2.96**	**210**	*i* P	**Pn**	**08 16 36.5**	**+3.0**

*ISCJB **20** 08:18:25.4±0.7, 3788N×003×2768E×006, h4km±9km, Error ellipse: s-maj=7.5km s-min=5.3km az=9.6*
*DDA **20** 08:18:25.6, 3787N×2762E, h7km±5km, Md2.8*
*CSEM **20** 08:18:25.1±0.1, 3791N×2766E, h12km, MD2.8, Error ellipse: s-maj=3.4km s-min=3.0km az=123.0*
*ISK **20** 08:18:26.2, 3795N×2761E, h28km, MD2.9*
ISC 20 08:18:26.0±0.6, **3788N**±003×**2767E**±005, **h10**km±15km, **n8, s0§45/13, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAG	**Bornova**	**0.61**	**328**	*i* P	**Pg**	**08 18 37.5**	**-0.3**
BLCB	**Balcova**	**0.70**	**315**	*e*PG	**Pg**	**08 18 39.7**	**+0.1**
BLCB				*e*SG	**Sg**	**08 18 48.7**	**-0.2**
BDRM	**Kayabasi**	**0.84**	**193**	*i* P	**Pg**	**08 18 41.4**	**-0.7**
BDRM				*i* S	**Sg**	**08 18 53.1**	**+0.1**
YER	**Yerkesik**	**0.89**	**147**	*e*PG	**Pg**	**08 18 44.0**	**+0.9**
MANT	**Manisa**	**0.92**	**49**	*i* P	**Pg**	**08 18 43.8**	**0.0**
MANT				*i* S	**Sg**	**08 18 55.1**	**-0.7**
AKHS	**Akhisar**	**1.00**	**6**	*i* P	**Pg**	**08 18 46.0**	**+0.7**
AKHS				*i* S	**Sg**	**08 18 58.6**	**+0.4**
KULA	**Kula-Manisa**	**1.00**	**51**	*e*PG	**Pg**	**08 18 45.1**	**-0.1**
KULA				*e*SG	**Sg**	**08 18 58.3**	**0.0**
DAT	**Datca**	**1.16**	**184**	*e*PN	**Pn**	**08 18 48.1**	**-0.1**

*DDA **20** 08:48:45.5, 3949N×3105E, h7km±1km, Md3.0*
*CSEM **20** 08:48:45.5±0.1, 3943N×3100E, h1km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.5km az=67.0*
*ISCJB **20** 08:48:46.7±0.5, 3944N±003×3100E±004, h3km±8km, Error ellipse: s-maj=6.0km s-min=3.7km az=149.8*
*ISK **20** 08:48:46.6, 3943N×3100E, h16km, MD2.8*
ISC 20 08:48:47.4±0.5, **3943N**±003×**3100E**±004, **h4**km±8km, **n12, s1§05/22, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	**Eskisehir**	**0.14**	**308**	*i* P	**Pg**	**08 48 49.1**	**-1.1**
ESKT				*i* S	**Sg**	**08 48 51.6**	**-0.5**
SEYT	**Eskypehyr**	**0.14**	**308**	*i* P	**Pg**	**08 48 49.1**	**-1.1**
BORA	**Eskisehir**	**0.61**	**317**	*i* P	**Pg**	**08 48 57.6**	**-1.5**
BORA				*i* S	**Sg**	**08 49 08.3**	**+1.3**
BOLV	**Bolvadin**	**0.71**	**183**	*i* P	**Pg**	**08 49 00.8**	**-0.3**
BOLV				*i* S	**Sg**	**08 49 12.2**	**+1.8**
BOLV	**Bolvadin**	**0.71**	**183**	*i* P	**Pg**	**08 49 00.8**	**-0.2**
BOLV				*i* S	**Sg**	**08 49 12.1**	**+1.8**
ALT	**Altintas**	**0.79**	**242**	*e*PG	**Pg**	**08 49 01.7**	**-0.7**
ALT				*e*SG	**Sg**	**08 49 13.8**	**+1.3**
KIZT	**Kizilcal**	**0.88**	**129**	*e*PG	**Pg**	**08 49 03.8**	**-0.5**
KIZT				*e*SG	**Sg**	**08 49 16.8**	**+1.1**
SHUT	**Suhut-Afyon**	**0.94**	**202**	*e*PG	**Pg**	**08 49 05.2**	**-0.3**
MDU	**Mudurnu**	**1.04**	**9**	*e*PG	**Pg**	**08 49 06.8**	**-0.5**
MDU				*e*SG	**Sg**	**08 49 22.8**	**+1.8**
GULT	**Gulveren**	**1.06**	**340**	*e*PG	**Pg**	**08 49 07.0**	**-0.8**
GULT				*e*SG	**Sg**	**08 49 22.9**	**+1.3**
KDHN	**Kadinhani**	**1.26**	**136**	*i* P	**Pg**	**08 49 09.9**	**-1.6**
KDHN				*i* S	**Sg**	**08 49 27.9**	**0.0**
ULDT	**Uludag**	**1.60**	**297**	*i* P	**Pn**	**08 49 15.5**	**-0.8**
ULDT				*i* S	**Sn**	**08 49 37.7**	**+0.3**

*ISCJB **20** 08:55:26.6±0.5, 3907N±003×3020E±003, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.6km az=179.5*
*ISK **20** 08:55:26.9, 3901N×3018E, h10km, MD3.0*
*DDA **20** 08:55:26.2, 3909N×3026E, h11km±3km, Md3.5*
*CSEM **20** 08:55:26.2±0.1, 3903N×3018E, h5km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.3km az=24.0*
ISC 20 08:55:26.9±0.5, **3907N**±003×**3018E**±003, **h4**km±4km, **n22, s0§91/35, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.06**	**254**	PG	**Pg**	**08 55 29.1**	**+0.9**
ALT				SG	**Sg**	**08 55 30.5**	**+1.5**
SHUT	**Suhut-Afyon**	**0.59**	**151**	*e*PG	**Pg**	**08 55 37.9**	**-0.3**
SHUT				*e*SG	**Sg**	**08 55 45.9**	**-0.1**
ESKT	**Eskisehir**	**0.69**	**49**	*i* P	**Pg**	**08 55 39.3**	**-0.7**
ESKT				*i* S	**Sg**	**08 55 45.6**	**-3.3**
SEYT	**Eskypehyr**	**0.69**	**49**	*i* P	**Pg**	**08 55 39.3**	**-0.7**
BOLV	**Bolvadin**	**0.70**	**120**	*i* P	**Pg**	**08 55 39.9**	**-0.3**
BOLV				*i* S	**Sg**	**08 55 48.2**	**-1.1**
BORA	**Eskisehir**	**0.83**	**15**	*i* P	**Pg**	**08 55 42.5**	**-0.4**
BORA				*i* S	**Sg**	**08 55 54.2**	**+0.5**
KHL	**Karahalli**	**0.91**	**215**	*e*PG	**Pg**	**08 55 44.3**	**+0.1**
DEMI	**Demirci**	**1.14**	**269**	*i* P	**Pg**	**08 55 48.4**	**-0.3**
DEMI				*i* S	**Sg**	**08 56 03.2**	**-0.3**
KULA	**Kula-Manisa**	**1.31**	**245**	*e*PN	**Pn**	**08 55 51.5**	**-0.4**
KULA				*e*SN	**Sn**	**08 56 09.0**	**-0.9**
DST	**Dursunbey**	**1.32**	**294**	*e*PN	**Pn**	**08 55 52.3**	**+0.2**
KIZT	**Kizilcal**	**1.34**	**98**	*e*PN	**Pn**	**08 55 52.1**	**-0.2**
ULDT	**Uludag**	**1.34**	**323**	*i* P	**Pn**	**08 55 52.1**	**-0.3**
ULDT				*i* S	**Sg**	**08 56 08.1**	**-1.8**
MANT	**Manisa**	**1.40**	**246**	*i* P	**Pn**	**08 55 52.7**	**-0.4**
MANT				*i* S	**Sb**	**08 56 10.9**	**-0.7**
KDHN	**Kadinhani**	**1.61**	**109**	*i* P	**Pn**	**08 55 55.6**	**-0.5**
KDHN				*i* S	**Sn**	**08 56 17.2**	**-0.1**
BCK	**Bucak**	**1.64**	**169**	*e*PN	**Pn**	**08 55 55.9**	**-0.6**
HENT	**Hendek**	**1.83**	**17**	*i* P	**Pn**	**08 56 00.8**	**+1.7**
HENT				*i* S	**Sn**	**08 56 22.0**	**-0.9**
BALB	**Balikesir**	**1.87**	**288**	*e*PN	**Pn**	**08 56 00.3**	**+0.6**
GOLH	**Golhisar**	**1.90**	**195**	*i* P	**Pn**	**08 56 02.1**	**+2.1**
GOLH				*i* S	**Sn**	**08 56 32.3**	**+8.0**
LADK	**Ladik-KONYA**	**1.92**	**116**	*e*PN	**Pn**	**08 56 00.5**	**+0.1**
SGKT	**Sivrigoynuk**	**2.08**	**43**	*i* P	**Pn**	**08 56 04.1**	**+1.5**
SGKT				*i* S	**Sn**	**08 56 29.7**	**+0.7**
ANTO	**Ankara**	**2.17**	**68**	*e*PN	**Pn**	**08 56 05.5**	**+1.7**
HDMB	**Hadim**	**2.78**	**138**	*e*PN	**Pn**	**08 56 11.9**	**-0.2**

*SGS **20** 09:17:16.9, 3198N×3574E, h2km*
*ISCJB **20** 09:17:19.9±0.4, 3167N±002×3563E±004, h10km, Error ellipse: s-maj=4.9km s-min=2.5km az=6.6*
*GII **20** 09:17:21.3±0.2, 3170N×3554E, h12km, ML3.0/10, Mw2.9/4*
*GRAL **20** 09:17:32.3±1.1, 3234N×3578E, h7km±8km, MD3.4*
ISC 20 09:17:20.0±0.8, **3167N**±002×**3567E**±006, **h3**km±7km, **n37, s0§83/47, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSI	**Dead Sea**	**0.27**	**248**	Pg	**Pg**	**09 17 25.2**	**+0.1**
DSI				Sg	**Sg**	**09 17 28.8**	**+0.1**
MZDA	**Masada**	**0.45**	**216**	Pg	**Pg**	**09 17 29.7**	**+1.1**
MZDA				Sg	**Sg**	**09 17 36.0**	**+1.7**
YTIR	**Yattir**	**0.56**	**237**	Pg	**Pg**	**09 17 31.1**	**+0.2**
YTIR				Sg	**Sg**	**09 17 38.5**	**+0.3**
HMDT	**Nahal Hemdat**	**0.59**	**348**	Pg	**Pg**	**09 17 32.1**	**+0.7**
SLTI	**Sal'it**	**0.78**	**317**	Pg	**Pg**	**09 17 34.6**	**-0.4**
SLTI				Sg	**Sg**	**09 17 44.8**	**-0.4**
MMLI	**Mount Malkishu**	**0.79**	**345**	Pg	**Pg**	**09 17 35.7**	**+0.4**
MMLI				Sg	**Sg**	**09 17 46.4**	**+0.8**
RTMI	**Retamim**	**1.04**	**234**	Pg	**Pg**	**09 17 39.7**	**-0.3**
RTMI				Sg	**Sg**	**09 17 53.8**	**+0.4**
OFRI	**'Ofer**	**1.11**	**329**	Pg	**Pg**	**09 17 40.5**	**-0.9**
OFRI				Sg	**Sg**	**09 17 55.5**	**-0.3**
ZFRI	**Zfri**	**1.19**	**201**	Pg	**Pg**	**09 17 42.8**	**-0.1**
ZFRI				Sg	**Sg**	**09 17 59.7**	**+1.4**
KSHT	**Keshet**	**1.31**	**5**	Pg	**Pg**	**09 17 45.1**	**-0.1**
RMNI	**Mount Ramon**	**1.32**	**216**	Pg	**Pg**	**09 17 44.9**	**-0.5**
KZIT	**Kziot**	**1.33**	**235**	Pg	**Pg**	**09 17 44.4**	**-1.1**
KZIT				Sg	**Sg**	**09 18 01.2**	**-1.5**
MMA0B	**Mount Meron ar**	**1.36**	**350**	Pn	**Pn**	**09 17 45.1**	**-0.8**
PRNI	**Paran**	**1.43**	**204**	Pn	**Pn**	**09 17 46.6**	**-0.3**
KSDI	**Kefar Szold**	**1.52**	**360**	Pn	**Pn**	**09 17 47.5**	**-0.6**
HRI	**Mount Hermon**	**1.59**	**2**	Pn	**Pn**	**09 17 49.0**	**-0.1**
HRFI	**Mount Harif**	**1.72**	**199**	Pn	**Pn**	**09 17 50.5**	**-0.3**
KRMI	**Paran Flat**	**1.75**	**208**	Pn	**Pn**	**09 17 50.9**	**-0.4**
RCY	**Rachaya**	**1.81**	**4**	*e*P	**Pn**	**09 17 52.6**	**+0.4**
MATL	**Matirih**	**1.83**	**351**	*e*P	**Pn**	**09 17 53.1**	**+0.6**
MBRI	**Mt Berech**	**1.98**	**199**	Pn	**Pn**	**09 17 54.1**	**-0.3**
AQBJ	**Aqaba**	**2.01**	**196**	Pn	**Pn**	**09 17 55.0**	**+0.1**
EIL	**Elat**	**2.09**	**197**	Pn	**Pn**	**09 17 55.8**	**-0.2**
BEYL	**Beyrouth**	**2.20**	**356**	*e*P	**Pn**	**09 17 59.9**	**+2.4**
BHL	**Bhannes**	**2.23**	**360**	*e*P	**Pn**	**09 17 58.9**	**+1.1**
BHL				*e*S	**Sn**	**09 18 19.4**	**-6.4**
HQLS		**2.42**	**193**	S	**Sn**	**09 18 32.6**	**+1.9**
HQLS		**2.42**	**193**	P	**Pn**	**09 17 59.9**	**-0.7**
JLOS		**2.93**	**183**	S	**Sn**	**09 18 44.4**	**+1.2**
JLOS		**2.93**	**183**	P	**Pn**	**09 18 06.9**	**-0.6**
BDAS	**Al Bad'**	**3.27**	**189**	S	**Sg**	**09 19 01.5**	**-3.6**
BDAS	**Al Bad'**	**3.27**	**189**	P	**Pn**	**09 18 11.9**	**-0.3**
RSHS		**3.44**	**193**	P	**Pn**	**09 18 13.1**	**-1.5**
TBKS	**Tabuk**	**3.52**	**167**	P	**Pn**	**09 18 15.1**	**-0.5**
BIDS	**Bi'r al Bayda'**	**4.92**	**166**	P	**Pn**	**09 18 34.2**	**-0.7**
WJHS		**4.96**	**172**	P	**Pn**	**09 18 34.9**	**-0.6**
UMJS	**Umm Lajj**	**6.58**	**167**	P	**Pn**	**09 18 48.2**	**-9.4**
YOBS		**7.77**	**159**	P	**Pn**	**09 19 14.2**	**+0.1**

*CSEM **20** 09:17:48.4±0.7, 3727N×2474W, h0km, ML3.4, Error ellipse: s-maj=6.2km s-min=2.1km az=89.0, After PDA*
PDA 20 09:17:48.4±0.7, **3727N×2474W, h0**km, **MD4.0, ML3.4, Error ellipse: s-maj=6.2km s-min=2.1km az=89.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.38**	**225**	*i* P	Pg	**09 17 55.2**	**-0.4**
PSMN				*e*S	Sg	**09 18 00.8**	**+0.4**
PSMN	**Pico do Norte,**	**0.38**	**225**	*e*S	Sg	**09 18 00.8**	**+0.4**
PDA	**Ponta Delgada**	**0.88**	**303**	*e*P	Pg	**09 18 03.2**	**-2.0**
PDA				*e*S	Sg	**09 18 13.8**	**-2.8**
PSCM	**Serra do Cume**	**2.36**	**308**	*e*P	Pn	**09 18 23.5**	**-4.9**
PSCM				*e*S	Sn	**09 18 50.0**	**-8.1**
PSCM				A		**09 18 53.7**	
	46nm,0.2s						
PSCM	**Serra do Cume**	**2.36**	**308**	*e*P	Pn	**09 18 23.5**	**-4.9**
PSCM				*e*S	Sn	**09 18 50.0**	**-8.1**
PSBA	**Serra de Santa**	**2.53**	**307**	*e*P	Pn	**09 18 26.3**	**-4.4**
PSBA				*e*S	Sn	**09 18 54.6**	**-7.7**
PSBA				A		**09 18 57.9**	
	143nm,0.4s						
PSBA	**Serra de Santa**	**2.53**	**307**	*e*P	Pn	**09 18 26.3**	**-4.4**
PSBA				*e*S	Sn	**09 18 54.6**	**-7.7**
PICO	**Pico**	**3.17**	**294**	*e*P	Pn	**09 18 35.5**	**-4.0**
PICO				*e*S	Sn	**09 19 10.4**	**-7.5**
PCED	**Cedros**	**3.42**	**295**	*e*P	Sn	**09 19 13.1**	**-11**

*SGS **20** 09:18:28.0, 3302N×3547E, h2km*
*HLW **20** 09:18:42.8, 3191N×3579E, h15km, Mb4.9*
*BJI **20** 09:18:43.9, 3170N×3560E, h10km, mB5.3, mb4.8, Ms4.4, Msz4.0*
*ISCJB **20** 09:18:44.9±0.3, 3167N±001×3560E±002, h10km±2km, mb4.5/44, MS3.3/13, Error ellipse: s-maj=3.5km s-min=1.8km az=9.5*
*NEIC **20** 09:18:44.9, 3168N×3556E, h10km, mb4.6/20, ML4.3(GII), After GII.*
NEIC Felt [III] in Jerusalem. Felt at Bet Shemesh and Ra'ananna. Also felt at Amman, Jordan.
*IDC **20** 09:18:44.7±0.7, 3167N×3555E, h0km, mb4.1/16, mb1 4.2/20, mb1mx4.2/29, mbtmp4.1/20, ML4.2/2, MS3.4/11, Ms1 3.4/11, ms1mx3.2/31, Error ellipse: s-maj=11.4km s-min=9.0km az=124.0*
*CSEM **20** 09:18:44.3±0.0, 3166N×3557E, h10km, mb4.7/20, Ms3.1, Mw3.1, Error ellipse: s-maj=1.4km s-min=1.1km az=94.0*
*GII **20** 09:18:45.9±0.3, 3168N×3556E, h10km, mb4.4/5, ML4.3/8, Mw3.7/3*
*MOS **20** 09:18:46.6±2.3, 3149N×3558E, h23km, mb4.8/22, Error ellipse: s-maj=9.2km s-min=4.6km az=111.5*
*GRAL **20** 09:18:46.8±1.4, 3167N×3556E, h0km±8km, MD4.1*
*NIC **20** 09:18:47.7±0.2, 3161N×3562E, h36km, mb4.7, ML4.4, MW3.1*
ISC 20 09:18:45.7±0.4, **3165N**±001×**3559E**±002, **h6**km±2km, **n250,** σ1§**03**/277, **mb4.5**/44, **MS3.3**/13, **10C-16D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSI	**Dead Sea**	**0.20**	**246**	Pg	**Pg**	**09 18 50.1**	**+0.5**
DSI				Sg	**Sg**	**09 18 53.4**	**+1.2**
MZDA	**Masada**	**0.39**	**210**	Pg	**Pg**	**09 18 54.6**	**+1.4**
MZDA				Sg	**Sg**	**09 19 00.7**	**+2.4**
YTIR	**Yattir**	**0.50**	**235**	Pg	**Pg**	**09 18 56.0**	**+0.7**
HMDT	**Nahal Hemdat**	**0.60**	**355**	Pg	**Pg**	**09 18 57.1**	**-0.2**
HMDT				Sg	**Sg**	**09 19 05.7**	**+0.5**
SLTI	**Sal'it**	**0.75**	**322**	Pg	**Pg**	**09 18 59.6**	**-0.6**
SLTI				Sg	**Sg**	**09 19 09.7**	**-0.2**
MMLI	**Mount Malkishu**	**0.80**	**350**	Pg	**Pg**	**09 19 00.6**	**-0.4**
MMLI				Sg	**Sg**	**09 19 11.6**	**+0.2**
RTMI	**Retamim**	**0.97**	**233**	Pg	**Pg**	**09 19 04.4**	**+0.1**
RTMI				Sg	**Sg**	**09 19 17.9**	**+0.9**
HRSH	**Kfar Ka'horesh**	**1.08**	**346**	*e*P	**Pg**	**09 19 15.9**	**+10**
HRSH				S	**Sg**	**09 19 39.1**	**+19**
OFRI	**'Ofer**	**1.10**	**332**	Pg	**Pg**	**09 19 05.4**	**-1.3**
OFRI				Sg	**Sg**	**09 19 20.3**	**-0.7**
ZFRI	**Zfri**	**1.15**	**198**	Pg	**Pg**	**09 19 07.7**	**0.0**
ZFRI				Sg	**Sg**	**09 19 23.8**	**+1.2**
ASF	**Jabal al Asfar**	**1.23**	**65**	Pg	**Pg**	**09 19 08.4**	**-0.8**
	471nm,0.3s,baz=116,slow=7.8,SNR=86						
ASF				Lg		**09 19 24.7**	
	2µm,0.3s,baz=262,slow=20,SNR=29						
KZIT	**Kziot**	**1.26**	**234**	Pg	**Pg**	**09 19 09.3**	**-0.6**
KZIT				Sg	**Sg**	**09 19 26.1**	**-0.1**
RMNI	**Mount Ramon**	**1.27**	**214**	Pg	**Pg**	**09 19 09.7**	**-0.3**
KSHT	**Keshet**	**1.34**	**8**	Pn	**Pn**	**09 19 09.8**	**-1.1**
MMA0B	**Mount Meron ar**	**1.37**	**353**	Pn	**Pn**	**09 19 10.1**	**-1.3**
MMAI	**Mount Meron Ar**	**1.37**	**353**	Pg	**Pn**	**09 19 09.9**	**-1.5**
	2µm,0.3s,baz=168,slow=16,SNR=54						
MMAI				Lg		**09 19 28.3**	
	3µm,0.3s,baz=167,slow=31,SNR=24						
MMA1	**Mount Meron ar**	**1.37**	**353**	Pn	**Pn**	**09 19 10.1**	**-1.3**
PRNI	**Paran**	**1.39**	**201**	Pn	**Pn**	**09 19 11.2**	**-0.3**
PRNI				Sn	**Sn**	**09 19 31.2**	**+1.0**
HNTI	**Hanita**	**1.47**	**346**	Pn	**Pn**	**09 19 12.6**	**-0.2**
HNTI				Sn	**Sn**	**09 19 31.8**	**-0.6**
KSDI	**Kefar Szold**	**1.54**	**2**	Pn	**Pn**	**09 19 12.8**	**-0.9**
HRI	**Mount Hermon**	**1.62**	**4**	Pn	**Pn**	**09 19 14.0**	**-0.8**
HRFI	**Mount Harif**	**1.68**	**197**	Pn	**Pn**	**09 19 15.5**	**-0.1**
HRFI				Sn	**Sn**	**09 19 38.2**	**+0.8**
KRMI	**Paran Flat**	**1.70**	**206**	Pn	**Pn**	**09 19 15.7**	**-0.2**
KRMI				Sn	**Sn**	**09 19 38.6**	**+0.7**
RSH		**1.74**	**247**	P	**Pn**	**09 19 15.9**	**-0.6**
RSH				S	**Sn**	**09 19 39.1**	**+0.1**
RCY	**Rachaya**	**1.84**	**6**	*e*P	**Pn**	**09 19 17.8**	**-0.1**
MATL	**Matirih**	**1.85**	**353**	*e*P	**Pn**	**09 19 17.3**	**-0.6**
MBRI	**Mt Berech**	**1.94**	**198**	Pn	**Pn**	**09 19 19.1**	**-0.1**
MBRI				Sn	**Sn**	**09 19 44.2**	**+0.3**
AQBJ	**Aqaba**	**1.97**	**194**	Pn	**Pn**	**09 19 19.7**	**+0.1**
EIL	**Elat**	**2.05**	**196**	Pn	**Pn**	**09 19 20.8**	**+0.1**
	61nm,0.3s,baz=354,slow=8.6,SNR=15						
EIL				Lg		**09 19 50.2**	
	209nm,0.3s,baz=339,slow=9.4,SNR=9.3						
EIL	**Elat**	**2.05**	**196**	Pn	**Pn**	**09 19 20.8**	**+0.1**
EIL				Lg		**09 19 50.2**	
EIL	**Elat**	**2.05**	**196**	Pn	**Pn**	**09 19 20.7**	**0.0**
EIL				Sn	**Sn**	**09 19 46.9**	**+0.3**
GLFJ		**2.19**	**193**	*e*P	**Pn**	**09 19 21.0**	**-1.7**
	SNR=48						
HNKL	**Nakhl**	**2.21**	**219**	⇓P	**Pn**	**09 19 22.6**	**-0.3**
BEYL	**Beyrouth**	**2.22**	**358**	*e*P	**Pn**	**09 19 24.4**	**+1.4**
BHL	**Bhannes**	**2.25**	**1**	*e*P	**Pn**	**09 19 23.5**	**+0.1**
BHL				*e*S	**Sn**	**09 19 50.7**	**-0.8**
AMAG	**Maghara**	**2.28**	**244**	⇑P	**Pn**	**09 19 23.4**	**-0.4**
AMAG				S	**Sn**	**09 19 52.7**	**+0.5**
HQLS		**2.39**	**191**	P	**Pn**	**09 19 24.3**	**-1.0**
HQLS		**2.39**	**191**	P	**Pn**	**09 19 24.3**	**-1.0**
HQLS				S	**Sn**	**09 19 55.9**	**+1.0**
HBST	**Basata**	**2.54**	**197**	⇓P	**Pn**	**09 19 27.1**	**-0.2**
HWQ	**Hawqa**	**2.64**	**6**	*e*P	**Pn**	**09 19 30.0**	**+1.2**
FKH	**Fakeheh**	**2.67**	**15**	*e*P	**Pn**	**09 19 30.1**	**+0.9**
JLOS		**2.91**	**182**	P	**Pn**	**09 19 32.3**	**-0.1**
JLOS		**2.91**	**182**	P	**Pn**	**09 19 32.3**	**-0.2**
JLOS				S	**Sn**	**09 20 13.1**	**+5.4**
SUZ		**2.98**	**234**	⇓P	**Pn**	**09 19 33.1**	**-0.4**
BDAS	**Al Bad'**	**3.24**	**188**	S	**Sg**	**09 20 24.9**	**-4.8**
BDAS	**Al Bad'**	**3.24**	**188**	P	**Pn**	**09 19 36.9**	**-0.2**
ZNM		**3.26**	**227**	⇓P	**Pn**	**09 19 37.3**	**0.0**
ZNM				S	**Sn**	**09 20 17.0**	**+0.5**
RSHS		**3.41**	**192**	P	**Pn**	**09 19 38.8**	**-0.6**
RSHS		**3.41**	**192**	P	**Pn**	**09 19 38.8**	**-0.6**
RSHS				S	**Sg**	**09 20 31.9**	**-3.3**
HKAT	**Jabal Katrina**	**3.41**	**204**	⇓P	**Pn**	**09 19 39.2**	**-0.2**
TBKS	**Tabuk**	**3.52**	**166**	S	**Sg**	**09 20 35.0**	**-3.6**
TBKS	**Tabuk**	**3.52**	**166**	P	**Pn**	**09 19 40.9**	**0.0**
ZAF		**3.53**	**229**	⇓P	**Pn**	**09 19 40.4**	**-0.7**
HRDS	**Abu Rudays**	**3.54**	**215**	P	**Pg**	**09 19 57.3**	**+3.8**
PHNC	**Paralimni**	**3.59**	**339**	P	**Pn**	**09 19 42.3**	**+0.4**
	8.9nm,0.6s						
PHNC				S	**Sn**	**09 20 24.9**	**+0.3**
TR2		**3.63**	**207**	⇑P	**Pn**	**09 19 42.2**	**-0.3**
KOT	**Kottamia**	**3.66**	**243**	⇓P	**Pn**	**09 19 42.2**	**-0.7**
KOT				S	**Sn**	**09 20 25.6**	**-0.8**
SZAC	**Souni-Zanaja**	**3.84**	**324**	P	**Pn**	**09 19 45.7**	**+0.4**
	23nm,0.2s						
SZAC				S	**Sn**	**09 20 31.3**	**+0.5**
TR1		**3.90**	**202**	⇓P	**Pn**	**09 19 46.1**	**0.0**
GLL	**Jalalah**	**3.93**	**239**	⇓P	**Pn**	**09 19 46.1**	**-0.5**
LFK	**Lefkose**	**4.01**	**335**	*e*PN	**Pn**	**09 19 47.4**	**-0.3**
HSAF	**As Saff**	**4.03**	**241**	⇓P	**Pn**	**09 19 47.1**	**-0.7**
MAMC	**Mammari**	**4.03**	**331**	P	**Pn**	**09 19 48.4**	**+0.4**
EREN	**Erenkoy**	**4.05**	**343**	*e*PN	**Pn**	**09 19 46.8**	**-1.4**
LEF	**Lefka**	**4.13**	**328**	*e*PN	**Pn**	**09 19 50.5**	**+1.2**
SQR		**4.17**	**246**	⇓P	**Pn**	**09 19 49.5**	**-0.5**
PPCY	**Paphos**	**4.22**	**321**	P	**Pn**	**09 19 51.1**	**+0.6**
PPCY				S	**Sn**	**09 20 40.1**	**0.0**
AYT	**Al 'Ayyat**	**4.29**	**244**	⇓P	**Pn**	**09 19 50.6**	**-0.8**
ALFC	**Alevga**	**4.30**	**325**	⇑P	**Pn**	**09 19 51.8**	**+0.2**
	38nm,0.5s						
ALFC				S	**Sn**	**09 20 42.6**	**+0.5**
HTY	**Hatay**	**4.48**	**6**	*e*PN	**Pn**	**09 19 57.1**	**+3.0**
HHRG	**Al Ghardaqah**	**4.75**	**202**	⇓P	**Pn**	**09 19 57.3**	**-0.6**
IKL	**Isikli**	**4.84**	**341**	*e*PN	**Pn**	**09 19 58.3**	**-0.8**
BIDS	**Bi'r al Bayda'**	**4.91**	**166**	P	**Pn**	**09 19 59.5**	**-0.5**
WJHS		**4.95**	**172**	P	**Sn**	**09 20 53.9**	**-4.3**
HSFG		**5.27**	**196**	⇓P	**Pn**	**09 20 05.1**	**+0.1**
MERS	**Mersin**	**5.28**	**351**	*e*PN	**Pn**	**09 20 04.6**	**-0.5**
CEYT	**Ceyhan**	**5.35**	**1**	*e*PN	**Pn**	**09 20 08.5**	**+2.4**
ASUT		**5.50**	**221**	⇑P	**Pn**	**09 20 08.8**	**+0.7**
KARA	**Karaisali**	**5.62**	**356**	*e*PN	**Pn**	**09 20 10.2**	**+0.5**
GAZ	**Gaziantep**	**5.67**	**13**	*e*PN	**Pn**	**09 20 16.9**	**+6.4**
HDMB	**Hadim**	**5.89**	**335**	*e*PN	**Pn**	**09 20 13.1**	**-0.4**
KMRS	**Kahramanmaras**	**5.94**	**10**	*e*PN	**Pn**	**09 20 19.3**	**+5.2**
HQSR		**5.97**	**191**	P	**Pn**	**09 20 14.7**	**+0.1**
URFA	**Urfa**	**6.36**	**24**	*e*PN	**Pb**	**09 20 31.9**	**-4.9**
NIG	**Nigde**	**6.50**	**353**	*e*PN	**Pn**	**09 20 22.1**	**+0.3**
UMJS	**Umm Lajj**	**6.57**	**166**	P	**Pn**	**09 20 21.2**	**-1.7**
ANTB	**Antalya**	**6.64**	**323**	*e*PN	**Pn**	**09 20 27.0**	**+3.2**
KBRS	**Khaybar**	**6.67**	**150**	P	**Pn**	**09 20 23.3**	**-0.9**
LADK	**Ladik-KONYA**	**7.05**	**339**	*e*PN	**Pn**	**09 20 29.1**	**-0.3**
SARI	**SarD1z-Kayseri**	**7.07**	**7**	*e*PN	**Pn**	**09 20 29.5**	**-0.2**
BCK	**Bucak**	**7.11**	**326**	*e*PN	**Pn**	**09 20 31.6**	**+1.3**
BNN	**Bunyan**	**7.19**	**2**	*e*PN	**Pn**	**09 20 34.0**	**+2.7**
HMAT	**Matruh**	**7.29**	**268**	⇓P	**Pn**	**09 20 31.3**	**-1.4**
SVRC	**Sivrice-ELAZID**	**7.37**	**23**	*e*PN	x	09 20 45.6	
DARE	**Darende-Malaty**	**7.51**	**13**	*e*PN	**Pn**	**09 20 35.8**	**+0.1**
YNBS	**Yanbu' al Bahr**	**7.58**	**163**	P	**Pn**	**09 20 36.1**	**-0.7**
YNBS	**Yanbu' al Bahr**	**7.58**	**163**	P	**Pn**	**09 20 36.1**	**-0.7**
BHD	**Baghdad**	**7.60**	**75**	*ex*	x	09 20 37.0	
BHD				*ex*	x	09 21 13.0	
BHD				*ex*	x	09 22 07.0	
BHD				*ex*	x	09 22 49.0	
BHD				*i x*	x	09 22 58.0	
KIZT	**Kizilcal**	**7.83**	**338**	*e*PN	**Pn**	**09 20 39.6**	**-0.4**
MSL	**Mosul**	**7.83**	**51**	*ex*	x	09 20 40.0	

KHC				*ex*		x		09 24 14.0
MOS	**Moscow**	**24.12**	**3**	*eP*		**P**		**09 24 04.3 +2.2**
MOS				*e*				09 24 46.6
PRU	**Pruhonice**	**24.14**	**325**	*eP*		**P**		**09 24 05.9 +3.7**
PVCC	**Panska Ves**	**24.48**	**326**	*eP*		**P**		**09 24 10.2 +4.8**
DAVOX	**Davos/Dischmat**	**24.85**	**315**	P		**P**		**09 24 09.5 +0.7**
	comp=Z,7.5nm,0.7s,mb4.3,baz=120,slow=14,SNR=3.2							
DAVOS	**Davos**	**24.93**	**315**	P		**P**		**09 24 09.5 0.0**
BRG	**Berggiesshubel**	**25.01**	**326**	*eP*		**P**		**09 24 14.7 +4.5**
BRG					pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5							
BRG	**Berggiesshubel**	**25.01**	**326**	*eP*		**P**		**09 24 14.8 +4.6**
	comp=Z,22nm,0.9s,mb4.7							
BRG	**Berggiesshubel**	**25.01**	**326**	*eP*		**P**		**09 24 14.7 +4.5**
	comp=Z,22nm,0.9s,mb4.7							
AKTK	**Aktyubinsk**	**25.10**	**35**	P		**P**		**09 24 10.9 -0.1**
AKTK					LR	LR		09 36 07.4
AKTK	**Aktyubinsk**	**25.10**	**35**	P		**P**		**09 24 10.9 -0.1**
AKTO	**Aktyubinsk**	**25.10**	**35**	P		**P**		**09 24 10.9 -0.1**
	comp=Z,18nm,0.7s,mb4.7,baz=233,slow=8.8,SNR=55							
AKTO					LR	LR		09 36 07.4
	comp=Z,134nm,18.6s,MS3.5,baz=222,slow=42							
AKTO	**Aktyubinsk**	**25.10**	**35**	P		**P**		**09 24 10.9 -0.1**
AKTO					pmax	pmax		
	comp=Z,18nm,0.7s,mb4.7							
AKTO					MLR	MLR		
	comp=Z,134nm,18.6s,MS3.5							
ROTZ	**Rotzenmuhle**	**25.16**	**323**	*eP*		**P**		**09 24 15.7 +4.1**
NKC	**Novy Kostel**	**25.33**	**324**	*eP*		**P**		**09 24 17.9 +4.8**
TANN	**Tannenbergstha**	**25.43**	**324**	*eP*		**P**		**09 24 18.5 +4.5**
GRF	**Grafenberg Arr**	**25.63**	**322**	*eP*		**P**		**09 24 19.6 +3.7**
GRF					pmax	pmax		
	comp=Z,13nm,1.3s,mb4.3							
GRF	**Grafenberg Arr**	**25.63**	**322**	*eP*		**P**		**09 24 19.6 +3.7**
	comp=Z,13nm,1.3s,mb4.3							
CLL	**Collm**	**25.74**	**326**	⇑*iP*		**P**		**09 24 20.6 +3.7**
CLL					pmax	pmax		
	comp=Z,24nm,1.3s,mb4.6							
CLL	**Collm**	**25.74**	**326**	*eP*		**P**		**09 24 20.9 +4.0**
	comp=Z,24nm,1.3s,mb4.6							
CLL	**Collm**	**25.74**	**326**	⇑*i*(sP)		sP		09 24 20.6 +1.3
	comp=Z,24nm,1.3s							
CLL				*eS*		**S**		**09 28 54.0 +7.9**
MBDF	**Montbardon**	**25.99**	**308**	*eP*		**P**		**09 24 18.3 -0.9**
	comp=Z,63nm,1.0s,mb4.8							
MBDF	**Montbardon**	**25.99**	**308**	*eP*		**P**		**09 24 18.3 -0.9**
MBDF					pmax	pmax		
	comp=Z,32nm,1.0s,mb4.8							
MBDF	**Montbardon**	**25.99**	**308**	*eP*		**P**		**09 24 18.3 -0.9**
	comp=Z,32nm,1.0s,mb4.8							
MOX	**Moxa**	**26.00**	**324**	*eP*		**P**		**09 24 20.1 +0.9**
MOX				*e*		pP		09 24 23.3 +2.4
MOX	**Moxa**	**26.00**	**324**	*eP*		**P**		**09 24 23.1 +3.9**
BNI	**Bardonecchia**	**26.17**	**309**	*eP*		**P**		**09 24 21.1 +0.3**
	comp=Z,22nm,1.1s,mb4.6							
BNI	**Bardonecchia**	**26.17**	**309**	*eP*		**P**		**09 24 21.1 +0.3**
BNI					pmax	pmax		
	comp=Z,22nm,1.1s,mb4.6							
BNI	**Bardonecchia**	**26.17**	**309**	*eP*		**P**		**09 24 21.1 +0.3**
	comp=Z,22nm,1.1s,mb4.6							
LPG	**La Plagne**	**26.28**	**310**	*eP*		**P**		**09 24 22.0 +0.2**
	comp=Z,51nm,1.0s,mb4.7							
LPG	**La Plagne**	**26.28**	**310**	*eP*		**P**		**09 24 22.0 +0.2**
LPG					pmax	pmax		
	comp=Z,26nm,1.0s,mb4.7							
LPG	**La Plagne**	**26.28**	**310**	*eP*		**P**		**09 24 22.0 +0.2**
	comp=Z,26nm,1.0s,mb4.7							
LPL	**La Plagne**	**26.30**	**310**	*eP*		**P**		**09 24 22.3 +0.3**
	comp=Z,44nm,0.9s,mb4.7							
LPL	**La Plagne**	**26.30**	**310**	*eP*		**P**		**09 24 22.3 +0.3**
LPL					pmax	pmax		
	comp=Z,22nm,0.9s,mb4.7							
LPL	**La Plagne**	**26.30**	**310**	*eP*		**P**		**09 24 22.3 +0.3**
	comp=Z,22nm,0.9s,mb4.7							
BFO	**Black Forest**	**26.52**	**317**	*eP*		**P**		**09 24 23.5 -0.4**
	comp=Z,26nm,0.8s,mb4.8							
BFO	**Black Forest**	**26.52**	**317**	*eP*		**P**		**09 24 23.5 -0.4**
BFO					pmax	pmax		
	comp=Z,26nm,0.8s,mb4.8							
BFO	**Black Forest**	**26.52**	**317**	*eP*		**P**		**09 24 25.0 +1.1**
	comp=Z,30nm,0.9s,mb4.8							
BFO	**Black Forest**	**26.52**	**317**	*eP*		**P**		**09 24 23.5 -0.4**
	comp=Z,26nm,0.8s,mb4.8							
SMRF	**Simiane la Rot**	**26.56**	**306**	*eP*		**P**		**09 24 24.0 -0.4**
ORIF	**Oris-en-Rattie**	**26.66**	**308**	*eP*		**P**		**09 24 24.4 -0.8**
	comp=Z,35nm,1.0s,mb4.5							
ORIF				*e*	MLR	MLR		
	comp=Z,98nm,22.0s,MS3.0							
ORIF	**Oris-en-Rattie**	**26.66**	**308**	*eP*		**P**		**09 24 24.4 -0.8**
ORIF					pmax	pmax		
	comp=Z,18nm,1.0s,mb4.6							
ORIF	**Oris-en-Rattie**	**26.66**	**308**	*eP*		**P**		**09 24 24.4 -0.8**
	comp=Z,18nm,1.0s,mb4.5							
CABF	**La Chapelle**	**27.13**	**312**	*eP*		**P**		**09 24 29.3 -0.2**
	comp=Z,22nm,0.9s,mb4.4							
CABF	**La Chapelle**	**27.13**	**312**	*eP*		**P**		**09 24 29.3 -0.2**
CABF					pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4							
CABF	**La Chapelle**	**27.13**	**312**	*eP*		**P**		**09 24 29.3 -0.2**
	comp=Z,11nm,0.9s,mb4.4							
ECH	**Echery**	**27.15**	**316**	P		**P**		**09 24 28.2 -1.4**
ECH					pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2							
ECH	**Echery**	**27.15**	**316**	P		**P**		**09 24 28.2 -1.4**
	comp=Z,9.2nm,1.1s,mb4.2							
HINF	**Hinteralfeld**	**27.16**	**315**	*eP*		**P**		**09 24 29.4 -0.3**
CDF	**Champ du Feu**	**27.18**	**316**	*eP*		**P**		**09 24 30.6 +0.8**
	comp=Z,14nm,0.8s,mb4.2							
CDF	**Champ du Feu**	**27.18**	**316**	*eP*		**P**		**09 24 30.6 +0.8**
CDF					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2							
CDF	**Champ du Feu**	**27.18**	**316**	*eP*		**P**		**09 24 30.6 +0.8**
	comp=Z,6.8nm,0.8s,mb4.2							
VIVF	**Saint-Julien-l**	**27.45**	**308**	*eP*		**P**		**09 24 32.5 +0.2**
	comp=Z,23nm,1.1s,mb4.3							
VIVF	**Saint-Julien-l**	**27.45**	**308**	*eP*		**P**		**09 24 32.5 +0.2**
VIVF					pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3							
VIVF	**Saint-Julien-l**	**27.45**	**308**	*eP*		**P**		**09 24 32.5 +0.2**
	comp=Z,11nm,1.1s,mb4.3							
LASF	**Ste Croix**	**27.78**	**306**	*eP*		**P**		**09 24 35.1 -0.2**
	comp=Z,156nm,1.5s,mb5.1							
LASF	**Ste Croix**	**27.78**	**306**	*eP*		**P**		**09 24 35.1 -0.2**
	comp=Z,78nm,1.5s,mb5.1							
SMF	**Signal de Mont**	**28.59**	**311**	*eP*		**P**		**09 24 42.3 -0.1**
LOR	**Lormes**	**28.80**	**312**	*eP*		**P**		**09 24 44.2 -0.1**
LOR				*e*	MLR	MLR		
	comp=Z,76nm,20.6s,MS3.0							
LOR	**Lormes**	**28.80**	**312**	*eP*		**P**		**09 24 44.2 -0.1**
LOR					LR	LR		
	comp=Z,80nm,20.6s,MS3.3							
SSF	**Saint Saulge**	**28.95**	**311**	*eP*		**P**		**09 24 44.2 -1.4**
	comp=Z,8.4nm,0.8s,mb4.2							
SSF	**Saint Saulge**	**28.95**	**311**	*eP*		**P**		**09 24 44.2 -1.4**
SSF					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2							
SSF	**Saint Saulge**	**28.95**	**311**	*eP*		**P**		**09 24 44.2 -1.4**
	comp=Z,4.2nm,0.8s,mb4.2							
TCF	**Toulx Ste Croi**	**29.53**	**309**	*eP*		**P**		**09 24 49.7 -1.2**
HFS	**Hagfors**	**31.99**	**339**	P		**P**		**09 25 12.4 0.0**
	comp=Z,5.8nm,0.8s,mb4.5,baz=142,slow=7.5,SNR=8.4							
BRVK	**Borovoye**	**32.90**	**39**	P		**P**		**09 25 18.5 -1.9**
	comp=Z,6.1nm,1.1s,mb4.4							
BRVK				*e*				09 25 25.6
BRVK	**Borovoye**	**32.90**	**39**	P		**P**		**09 25 18.5 -2.0**
BRVK				*e*				09 25 25.6
BRVK					pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4							
BRVK	**Borovoye**	**32.90**	**39**	P		**P**		**09 25 18.5 -2.0**
ESDC	**Sonseca Array**	**32.91**	**295**	P		**P**		**09 25 21.0 +0.3**
	comp=Z,2.6nm,0.7s,mb4.3,baz=77,slow=8.1,SNR=4.7							
NB2	**NORSAR Subarra**	**33.47**	**339**	P		**P**		**09 25 27.7 +2.4**
	comp=Z,2.7nm,0.8s,mb4.2,baz=140,slow=9.3							
NOA	**NORSAR Array B**	**33.47**	**339**	P		**P**		**09 25 25.3 0.0**
	comp=Z,3.4nm,0.9s,mb4.3,baz=135,slow=8.5,SNR=6.9							
EKA	**Eskdalemuir Ar**	**36.04**	**323**	P		**P**		**09 25 47.0 -0.6**
	comp=Z,3.2nm,0.4s,mb4.6,baz=118,slow=9.9,SNR=11							
EVO	**Evora**	**36.07**	**293**	*eP*		**P**		**09 25 49.4 +1.3**
	comp=Z,115nm,1.5s,mb5.3							
TORD	**Torodi Ar. Bea**	**36.14**	**247**	P		**P**		**09 25 48.4 -0.5**
	comp=Z,1.6nm,0.7s,mb4.0,baz=68,slow=7.3,SNR=12							
EVOP	**Sao Brissos**	**36.16**	**293**	*eP*		**P**		**09 25 49.4 +0.6**
	comp=Z,58nm,1.5s,mb5.3							
KURK	**Kurchatov**	**36.93**	**46**	*eP*		**P**		**09 25 54.8 -0.4**
	comp=Z,5.0nm,0.8s,mb4.4							
KURK	**Kurchatov**	**36.93**	**46**	*eP*		**P**		**09 25 54.8 -0.4**
KURK					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4							
KURK	**Kurchatov**	**36.93**	**46**	*eP*		**P**		**09 25 54.8 -0.4**
	comp=Z,5.0nm,0.8s,mb4.4							
ARCES	**ARCESS Array B**	**38.36**	**354**	P		**P**		**09 26 05.5 -1.6**
	comp=Z,4.7nm,0.7s,mb4.3,baz=175,slow=7.3,SNR=11							
ARCES					LR	LR		09 44 16.0
	comp=Z,78nm,18.0s,MS3.6,baz=342,slow=40							
MKAR	**Makanchi Array**	**38.62**	**53**	P		**P**		**09 26 10.2 +0.6**
	comp=Z,4.0nm,1.1s,mb4.0,baz=244,slow=9.8,SNR=4.2							
MKAR					LR	LR		09 45 19.2
	comp=Z,60nm,18.2s,MS3.5,baz=352,slow=41							
MKAR	**Makanchi Array**	**38.62**	**53**	P		**P**		**09 26 10.2 +0.6**
ZALV	**Zalesovo Beam**	**41.38**	**43**	P		**P**		**09 26 31.8 -0.6**
	comp=Z,0.8nm,0.5s,mb3.6,baz=263,slow=7.3,SNR=3.6							
ZALV					LR	LR		09 44 54.0
	comp=Z,24nm,21.2s,MS3.0,baz=76,slow=38							
WMQ	**Urumqi**	**42.31**	**58**	*eP*		**P**		**09 26 39.0 -1.2**
WMQ					XP	sP		09 26 46.0 +3.3
WMQ					PP	PP		09 28 20.0 +1.9
WMQ					S	**S**		**09 32 59.0 -2.5**
WMQ					SS	SS		09 36 01.0 -8.7
WMQ					AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7							
WMQ					AMB	AMB		
	comp=Z,42nm,4.0s							
WMQ					LR	LR		
	comp=N,87nm,16.0s,MS3.8							
WMQ					LR	LR		
	comp=E,69nm,16.0s,MS3.8							
WMQ					LR	LR		
	comp=Z,57nm,16.0s,MS3.5							
DBIC	**Dimbokro**	**45.18**	**245**		LR	LR		09 47 42.8
	comp=Z,63nm,18.5s,MS3.6,baz=27,slow=38							
KIC	**Kosan Boka**	**45.28**	**245**	*eP*		**P**		**09 27 03.5 -0.9**
	comp=Z,67nm,1.2s,mb5.4							
TIC	**Toumodi**	**45.32**	**245**	*eP*		**P**		**09 26 58.3 -6.4**
	comp=Z,28nm,0.9s,mb5.1							
LIC	**Lamto**	**45.59**	**245**	*eP*		**P**		**09 27 02.6 -4.2**
	comp=Z,31nm,1.0s,mb5.2							
LIC	**Lamto**	**45.59**	**245**	*eP*		**P**		**09 27 04.4 -2.4**
LSZ	**Lusaka**	**47.19**	**190**	P		**P**		**09 27 19.4 +0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=26,slow=8.7,SNR=4.7							
LSZ	**Lusaka**	**47.19**	**190**	P		**P**		**09 27 19.4 +0.1**
LSZ					pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9							
LSZ	**Lusaka**	**47.19**	**190**	P		**P**		**09 27 19.4 +0.1**
	comp=Z,1.0nm,0.6s,mb3.9							
SONM	**Songino Array**	**54.91**	**51**	P		**P**		**09 28 18.0 +0.8**
	comp=Z,2.6nm,1.1s,mb4.2,baz=300,slow=6.0,SNR=5.8							
SONM					LR	LR		09 52 10.6
	comp=Z,48nm,18.7s,MS3.6,baz=347,slow=36							
ULN	**Ulaanbaatar**	**55.34**	**51**	⇑*eP*		**P**		**09 28 23.9 +3.7**
LZH	**Lanzhou**	**55.80**	**65**	*eP*		**P**		**09 28 26.0 +2.3**
LZH					AP	pP		09 28 30.3 +4.8
LZH					XP	sP		09 28 32.1 +5.9
LZH					AMB	AMB		
	comp=Z,19nm,1.4s,mb4.9							
LZH					AMB	AMB		
	comp=Z,85nm,4.3s							
CMAR	**Chiang Mai Arr**	**58.17**	**87**	*eP*		**P**		**09 28 43.5 +2.8**
TIXI	**Tiksi**	**61.33**	**21**	*eP*		**P**		**09 29 04.5 +2.8**
TIXI					pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.5							
TIXI	**Tiksi**	**61.33**	**21**	*eP*		**P**		**09 29 04.5 +2.8**
	comp=Z,6.0nm,1.6s,mb4.5							
KSRS	**Korea Array**	**73.23**	**56**		LR	LR		10 04 28.0
	comp=Z,23nm,21.6s,MS3.4,baz=175,slow=38							
BILL	**Bilibino**	**74.06**	**17**	P		**P**		**09 30 26.0 +4.0**
BILL				*e*				09 30 37.7
BILL					pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7							
BILL	**Bilibino**	**74.06**	**17**	*ePcP*		PcP		09 30 37.7 +0.5
YKA	**Yellowknife Ar**	**83.17**	**347**	P		**P**		**09 31 13.4 +1.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=30,slow=5.4,SNR=3.1							
YKA					LR	LR		10 11 23.0
	comp=Z,23nm,18.9s,MS3.6,baz=75,slow=38							
YKA	**Yellowknife Ar**	**83.17**	**347**	P		**P**		**09 31 13.4 +1.1**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
YKA					MLR	MLR		
	comp=Z,23nm,18.9s							

*ISK **20** 09:30:24.9,37.13N×29.30E,h15km,MD3.0*
*CSEM **20** 09:30:24.2±0.1,37.11N×29.34E,h12km,ML3.2, Error ellipse: s-maj=2.6km s-min=1.4km az=170.0*
*ISCJB **20** 09:30:25.7±0.8,37.16N±009×29.28E±004,h15km±5km, Error ellipse: s-maj=14.7km s-min=4.9km az=169.0*
*DDA **20** 09:30:27.0,37.21N×29.23E,h7km±1km,Md3.2,Ml3.2*
ISC 20 09:30:26.2±0.7,3717N±008×2928E±004,h18km±4km,n11, σ0s82/16,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.23**	**74**	*i*	P	**Pg**		**09 30 30.2**	**-1.5**
GOLH				*i*	S	**Sg**		**09 30 36.7**	**+1.4**
DENT	**Denizli**	**0.61**	**341**	*e*	PG	**Pg**		**09 30 38.2**	**-0.2**
TURN	**Turunc**	**0.62**	**241**	*i*	P	**Pg**		**09 30 38.9**	**+0.4**
TURN				*i*	S	**Sg**		**09 30 50.8**	**+4.0**
YER	**Yerkesik**	**0.80**	**268**	*e*	PG	**Pg**		**09 30 41.0**	**-0.8**
YER				*e*	SG	**Sg**		**09 30 52.9**	**+0.5**
BCK	**Bucak**	**1.08**	**74**	*e*	PN	**Pn**		**09 30 45.6**	**-0.8**
BCK				*e*	SN	**Sn**		**09 31 02.4**	**+1.4**
KHL	**Karahalli**	**1.17**	**9**	*e*	PN	**Pn**		**09 30 47.5**	**-0.1**
MLSB	**Milas**	**1.21**	**276**	*e*	PN	**Pn**		**09 30 47.7**	**-0.5**
KULA	**Kula-Manisa**	**1.43**	**340**	*e*	PN	**Pn**		**09 30 51.6**	**+0.3**
DAT	**Datca**	**1.43**	**253**	*e*	PN	**Pn**		**09 30 51.2**	**-0.2**
BDRM	**Kayabasi**	**1.47**	**266**	*i*	P	**Pn**		**09 30 51.3**	**-0.6**
BDRM				*i*	S	**Sn**		**09 31 11.5**	**+0.9**
HDMB	**Hadim**	**2.57**	**94**	*e*	PN	**Pn**		**09 31 06.4**	**-0.6**

*IDC **20** 09:33:29.0±2.5,2449S×17821W,h232km±22km,mb3.8/8, mb1 4.2/10,mb1mx4.0/17,mbtmp4.0/10,Error ellipse: s-maj=18.6km s-min=14.8km az=143.0*
*ISCJB **20** 09:33:34.2±1.3,2489S±009×17830W±0.10,h288km±11km, mb4.0/13,Error ellipse: s-maj=15.5km s-min=12.0km az=42.4*
*NEIC **20** 09:33:36.6±1.6,2498S×17808W,h308km±15km,mb4.5/2, Error ellipse: s-maj=14.8km s-min=12.7km az=111.0*
ISC 20 09:33:34.4±1.3,2486S±009×1782W±01,h280km±10km, n53,σ1s21/52,mb4.0/13,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.38**	**176**	P		**Pn**		**09 34 45.7**	**+1.8**
	77nm,0.3s,baz=75,slow=20,SNR=2.9								
RAO					S	**S**		**09 35 38.9**	**-0.5**
	180nm,0.3s,baz=87,slow=24,SNR=5.8								
AFI	**Afiamalu**	**12.47**	**30**	P		**Pn**		**09 36 15.4**	**-7.9**
	10nm,0.3s,baz=220,slow=2.3,SNR=27								
AFI					S			09 38 18.8	-23
	3.1nm,0.3s,baz=204,slow=20,SNR=4.0								
PUZ	**Puketiti**	**13.51**	**192**	P		**Pn**		**09 36 35.9**	**+0.4**
MWZ	**Matawai**	**13.91**	**194**	P		**Pn**		**09 36 41.1**	**+0.7**
URZ	**Urewera**	**13.93**	**195**	P		**Pn**		**09 36 39.7**	**-1.0**
	3.7nm,0.3s,baz=36,slow=6.5,SNR=39								
URZ					S	**S**		**09 39 09.2**	**-5.3**
	4.9nm,0.3s,baz=84,slow=23,SNR=14								
URZ	**Urewera**	**13.93**	**195**	P		**Pn**		**09 36 40.5**	**-0.2**
DZM	**Mont Dzumac**	**14.34**	**278**	*eP*		**Pn**		**09 36 48.9**	**+3.2**
DZM	**Mont Dzumac**	**14.34**	**278**	*eP*		**Pn**		**09 36 49.5**	**+3.8**
BKZ	**Black Stump Fm**	**14.95**	**196**	P		**Pn**		**09 36 51.6**	**-1.2**
MRZ	**Mangatainoka R**	**16.59**	**197**	P		**P**		**09 37 08.7**	**-1.1**
CAW	**Cannon Point**	**17.14**	**197**	P		**P**		**09 37 15.8**	**0.0**
TCW	**Tory Channel**	**17.46**	**199**	P		**P**		**09 37 17.4**	**-1.9**
QRZ	**Quartz Range**	**17.70**	**204**	P		**P**		**09 37 22.8**	**+1.0**
NNZ	**Nelson**	**17.75**	**201**	P		**P**		**09 37 21.3**	**-1.1**
THZ	**Tophouse**	**18.39**	**201**	P		**P**		**09 37 28.4**	**-0.9**
DSZ	**Denniston Nort**	**18.77**	**204**	P		**P**		**09 37 34.1**	**+0.8**
LTZ	**Lake Taylor**	**19.52**	**201**	*eP*		**P**		**09 37 42.2**	**+0.9**
WVZ	**Waitaha Valley**	**20.31**	**204**	*eP*		**P**		**09 37 49.0**	**-0.7**
RPZ	**Rata Peaks**	**20.75**	**202**	P		**P**		**09 37 52.0**	**-2.3**
RPZ	12nm,0.7s,baz=4.7,slow=16,SNR=15								
	1.9nm,0.4s,baz=59,slow=19,SNR=4.2				S	**S**		**09 41 30.1**	**+2.4**
FQZ	**Fox Glacier**	**21.12**	**205**	P		**P**		**09 37 56.4**	**-1.4**
JCZ	**Jackson Bay**	**21.91**	**206**	P		**P**		**09 38 04.6**	**-0.5**
WKZ	**Wanaka**	**22.45**	**204**	P		**P**		**09 38 09.2**	**-0.7**
TUZ	**Tuapeka**	**23.20**	**202**	P		**P**		**09 38 18.3**	**+1.5**
MLZ	**Mavora Lakes**	**23.21**	**205**	P		**P**		**09 38 17.6**	**+0.8**
WHZ	**Wether Hill Ro**	**23.75**	**204**	P		**P**		**09 38 22.4**	**+0.6**
ARMA	**Armidale**	**27.22**	**251**	*eP*		**P**		**09 38 56.2**	**+3.1**
ARMA	**Armidale**	**27.22**	**251**	*eP*		**P**		**09 38 55.6**	**+2.6**
	0.8nm,0.8s,mb3.2								
CTA	**Charters Tower**	**33.10**	**271**	*eP*		**P**		**09 39 45.6**	**+0.9**
	8.5nm,1.1s,mb4.2								
STKA	**Stephens Creek**	**35.88**	**249**	*eP*		**P**		**09 40 10.5**	**+2.2**
	4.1nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**35.88**	**249**	P		**P**		**09 40 09.4**	**+1.1**
	5.7nm,0.7s,mb4.2,baz=93,slow=11,SNR=18								
ASAR	**Alice Springs**	**43.48**	**261**	P		**P**		**09 41 10.5**	**-0.2**
	15nm,1.1s,mb4.1,baz=99,slow=8.4,SNR=45								
ASAR					PcP	PcP		09 42 50.7	-2.7
	1.4nm,1.0s,baz=116,slow=5.3,SNR=4.3								
ASAR					S	**S**		**09 47 16.0**	**-1.9**
	0.9nm,0.9s,baz=99,slow=17,SNR=6.8								
WB2	**Warramunga Arr**	**43.95**	**267**	*eP*		**P**		**09 41 13.6**	**-0.9**
WB2	**Warramunga Arr**	**43.95**	**267**	*eP*		**P**		**09 41 13.5**	**-0.9**
WRA	**Warramunga Arr**	**43.96**	**267**	P		**P**		**09 41 13.4**	**-1.2**
	4.3nm,0.7s,mb3.8,baz=100,slow=6.8,SNR=44								
WRA					PcP	PcP		09 42 54.8	-0.3
	1.2nm,0.8s,baz=98,slow=3.3,SNR=4.5								
WRA					ScP	ScP		09 46 26.4	+6.6
	2.0nm,0.8s,baz=100,slow=3.8,SNR=10								
WRA					S	**S**		**09 47 20.9**	**-3.9**
	1.3nm,1.0s,baz=104,slow=14,SNR=3.6								
KAKA	**Kakadu**	**48.00**	**275**	*eP*		**P**		**09 41 30.9**	**-15**
	2.3nm,0.4s,mb3.9								
VNDA	**Vanda**	**53.57**	**185**	P		**P**		**09 42 29.3**	**+2.9**
	1.9nm,0.8s,mb3.5,baz=359,slow=8.6,SNR=11								
VNDA					PcP	PcP		09 43 30.4	+1.4
	2.1nm,0.9s,baz=11,slow=3.1,SNR=4.4								
VNDA	**Vanda**	**53.57**	**185**	P		**P**		**09 42 29.3**	**+2.9**
VNDA					PcP	PcP		09 43 30.4	+1.4
MAW	**Mawson**	**77.41**	**200**	P		**P**		**09 44 59.6**	**+1.2**
	8.3nm,0.8s,mb4.5,baz=115,slow=8.0,SNR=21								
SYO	**Syowa Base**	**82.45**	**193**	⇑*eP*		**P**		**09 45 24.3**	**-1.0**
SNAA	**Sanae**	**83.68**	**179**	*eP*		**P**		**09 45 29.6**	**-1.9**
	10nm,0.9s,mb4.7								
VNA3	**Neumayer Olymp**	**83.83**	**176**	*e*		**P**		**09 45 32.9**	**+0.7**
VNA2	**Neumayer--Watz**	**84.26**	**177**	*e*		**P**		**09 45 35.7**	**+1.3**
	baz=187,slow=4.1								
NVAR	**Mina Array Bea**	**84.33**	**43**	P		**P**		**09 45 34.8**	**-0.4**
	2.0nm,0.8s,mb4.0,baz=222,slow=8.4,SNR=11								
VNA1	**Neumayer--Stat**	**84.49**	**177**	*e*		**P**		**09 45 37.1**	**+1.5**
TUC	**Tucson**	**85.83**	**52**	*eP*		**P**		**09 45 43.2**	**+0.4**
	4.0nm,0.9s,mb4.2								
TXAR	**Lajitas Array**	**89.58**	**57**	P		**P**		**09 46 00.3**	**-0.3**
	1.0nm,0.8s,mb3.7,baz=212,slow=7.5,SNR=11								
PDAR	**Pinedale Array**	**92.27**	**43**	P		**P**		**09 46 11.6**	**-1.2**
	1.0nm,0.9s,mb3.7,baz=214,slow=5.1,SNR=6.2								
AKASG	**Malin Array Be**	**146.64**	**328**	PKPbc		PKPbc		09 52 41.0	-1.9
	1.4nm,0.7s,baz=42,slow=4.2,SNR=6.9								
BRTR	**Keskin Array B**	**149.44**	**307**	PKPbc		PKPbc		09 52 50.0	-0.5
CLL	**Collm**	**152.22**	**345**	*e*PKPbc		PKPbc		09 52 56.0	-0.6
DBIC	**Dimbokro**	**160.83**	**160**	PKPab		PKPab		09 53 46.0

	baz=284							
NNS				S	Sn	10 54 15.1	+0.8	
	baz=284							
ESL	**Shilin**	**0.95**	**245**	P	Pn	10 54 01.8	+0.1	
	baz=239							
ESL				S	Sn	10 54 14.4	0.0	
	baz=239							
NWF	**Wu-fen Shan**	**1.01**	**328**	*e*P	Pn	10 54 02.7	+0.3	
	baz=328							
WHF	**Hehuan Shan**	**1.02**	**266**	P	Pn	10 54 03.1	+0.6	
	baz=257							
WHF				*e*S	Sn	10 54 16.5	+0.5	
	baz=257							
NSK	**Sanguang**	**1.03**	**296**	P	Pn	10 54 03.6	+0.9	
	baz=289							
NSK				*e*S	Sn	10 54 17.0	+0.7	
	baz=289							
TWA	**Mucha**	**1.05**	**317**	*e*P	Pn	10 54 03.3	+0.4	
	baz=328							
TWA				*e*S	Sn	10 54 19.2	+2.5	
	baz=328							
TWT	**Tachien**	**1.09**	**272**	*e*P	Pn	10 54 04.8	+1.3	
	baz=272							
TWT				S	Sn	10 54 18.9	+1.0	
	baz=272							
EHY	**Hungye**	**1.20**	**234**	P	Pn	10 54 04.9	0.0	
	baz=244							
EHY				*e*S	Sn	10 54 20.4	+0.2	
	baz=244							
TWS1	**Kuangyinshan**	**1.24**	**315**	*e*P	Pn	10 54 05.9	+0.5	
	baz=325							
TWS1				*e*S	Sn	10 54 23.4	+2.2	
	baz=325							
IRIF	**Iriomote-Funau**	**1.24**	**84**	P	Pn	10 54 05.4	-0.1	
IRIF				S	Sn	10 54 21.1	-0.2	
TWF1	**Yuli**	**1.31**	**229**	*i* P	Pn	10 54 06.5	+0.1	
	baz=240							
TWF1				*e*S	Sn	10 54 22.5	-0.5	
	baz=240							
HATJ	**Hateruma jima**	**1.32**	**97**	P	Pn	10 54 07.6	+1.1	
HATJ				*e*S	Sn	10 54 24.1	+1.0	
NSTT	**Nanjuang**	**1.32**	**288**	*e*P	Pn	10 54 07.8	+1.3	
	baz=289							
NSTT				*e*S	Sn	10 54 24.6	+1.5	
	baz=289							
SMLT	**Sun Moon Lake**	**1.39**	**256**	P	Pn	10 54 08.8	+1.3	
	baz=250							
SMLT				*e*S	Sn	10 54 25.9	+1.1	
	baz=250							
TYC	**Yuchr**	**1.42**	**258**	P	Pn	10 54 09.2	+1.3	
	baz=251							
TYC				*e*S	Sn	10 54 26.6	+0.9	
	baz=251							
CHKT	**Chengkung**	**1.45**	**220**	*e*P	Pn	10 54 07.7	-0.5	
	baz=213							
CHKT				S	Sn	10 54 24.4	-1.9	
	baz=213							
TWQ1	**Liyutan**	**1.47**	**275**	*e*P	Pn	10 54 10.1	+1.6	
	baz=276							
TWQ1				*e*S	Sn	10 54 29.3	+2.6	
	baz=276							
YUS	**Yu-Shan**	**1.49**	**241**	*e*P	Pn	10 54 10.1	+1.3	
	baz=240							
YUS				S	Sn	10 54 28.2	+0.9	
	baz=240							
JKRS	**Kuro-shima**	**1.49**	**89**	P	Pn	10 54 09.6	+0.8	
JKRS				*e*S	Sn	10 54 27.5	+0.2	
TCU	**Taichung**	**1.55**	**268**	*e*P	Pn	10 54 11.2	+1.5	
	baz=268							
TCU				*e*S	Sn	10 54 30.4	+1.6	
	baz=268							
ALS	**Alishan**	**1.60**	**244**	P	Pn	10 54 12.0	+1.7	
	baz=236							
ALS				*e*S	Sn	10 54 31.2	+1.3	
	baz=236							
ELDTW	**Lidau**	**1.61**	**231**	*e*P	Pn	10 54 10.6	+0.2	
	baz=223							
ELDTW				*e*S	Sn	10 54 29.7	-0.5	
	baz=223							
JIJ	**Ishigaki jima**	**1.62**	**85**	P	Pn	10 54 10.3	-0.2	
JIJ				S	Sn	10 54 29.5	-0.9	
CHN5	**Tsauling**	**1.67**	**249**	P	Pn	10 54 12.8	+1.5	
	baz=239							
CHN5				*e*S	Sn	10 54 33.5	+1.8	
	baz=239							
STYT	**Tauyuan**	**1.82**	**235**	*e*P	Pn	10 54 14.4	+1.2	
	baz=234							
STYT				*e*S	Sn	10 54 36.8	+1.6	
	baz=234							
TWG	**Pinlang**	**1.83**	**221**	*e*P	Pn	10 54 13.8	+0.4	
	baz=220							
TWG				*e*S	Sn	10 54 34.6	-1.0	
	baz=220							
CHN4	**Tsaushan**	**1.85**	**242**	*e*P	Pn	10 54 15.9	+2.3	
	baz=242							
CHN4				*e*S	Sn	10 54 38.4	+2.5	
	baz=242							
WTP	**Ta-pu**	**1.88**	**239**	*e*P	Pn	10 54 16.1	+2.0	
	baz=239							
WTP				*e*S	Sn	10 54 38.5	+1.8	
	baz=239							
TWK	**Hsinying**	**1.97**	**242**	*e*P	Pn	10 54 17.5	+2.2	
	baz=241							
TWK				*e*S	Sn	10 54 41.8	+2.9	
	baz=241							
CHN1	**Nanshi**	**1.98**	**239**	P	Pn	10 54 17.5	+2.0	
	baz=238							
CHN1				*e*S	Sn	10 54 41.8	+2.6	
	baz=238							
SGST	**Jiashian**	**2.00**	**236**	*e*P	Pn	10 54 17.5	+1.9	
	baz=235							
SGST				*e*S	Sn	10 54 40.4	+0.8	
	baz=235							
ECL	**Taimali**	**2.08**	**219**	*e*P	Pn	10 54 17.6	+0.9	
	baz=225							
ECL				*e*S	Sn	10 54 40.0	-1.4	
	baz=225							
JTJ	**Tarama**	**2.16**	**78**	P	Pn	10 54 18.4	+0.5	
JTJ				*e*S	Sn	10 54 42.8	-0.8	
SSD	**Sandimen**	**2.17**	**228**	*e*P	Pn	10 54 20.4	+2.4	
	baz=220							
SSD				*e*S	Sn	10 54 45.0	+1.2	
	baz=220							

DDA ***20*** *10:54:23.2, 3842N×43.44E, h23km, Md3.3*
ISCJB ***20*** *10:54:25.3±0.9, 3856N±006×4322E±008, h10km, Error ellipse: s-maj=10.7km s-min=6.3km az=40.9*
ISK ***20*** *10:54:25.3, 3860N×4322E, h7km, MD2.8*
CSEM ***20*** *10:54:25.0±0.4, 3859N×4325E, h2km, MD3.3, Error ellipse: s-maj=8.5km s-min=6.2km az=62.0*

ISC 20 10:54:25.6±1.0, 3855N±007×433E±01, h15km±12km, n9, σ0§72/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.10**	**63**	PG	**Pg**	**10 54 27.8**	**-1.0**
VANB				*e*SG	**Sg**	**10 54 31.5**	**+0.5**
TVAN	**Van**	**0.10**	**103**	*i* P	**Pg**	**10 54 27.5**	**-1.3**
TVAN				*i* S	**Sg**	**10 54 31.4**	**+0.3**
VANT	**Van**	**0.14**	**141**	PG	**Pg**	**10 54 29.7**	**+0.4**
CLDR	**Caldiran**	**0.77**	**40**	*e*PG	**Pg**	**10 54 41.1**	**+0.5**
TUTA	**Tutak**	**0.92**	**337**	*i* P	**Pg**	**10 54 44.1**	**+0.6**
TUTA				*i* S	**Sg**	**10 54 59.9**	**+4.2**
TUTA	**Tutak**	**0.92**	**337**	*i* P	**Pg**	**10 54 44.1**	**+0.6**
TUTA				*i* S	**Sg**	**10 54 59.8**	**+4.2**
AGRB	**Hanur-Agry**	**1.05**	**348**	*e*PG	**Pg**	**10 54 44.8**	**-1.0**
HAKT	**HAKKARI**	**1.05**	**161**	*i* P	**Pb**	**10 54 45.6**	**+0.1**
HAKT				*i* S	**Sb**	**10 55 04.9**	**+5.9**
HOMI	**Horasan**	**1.83**	**325**	*i* P	**Pg**	**10 55 01.2**	**+0.3**
HOMI				*i* S	**Sg**	**10 55 31.4**	**+6.8**

ISCJB ***20*** *10:55:24.1±0.5, 5116S±006×1625E±0.1, h10km, mb4.3/8, MS3.7/6, Error ellipse: s-maj=11.1km s-min=7.0km az=135.1*
IDC ***20*** *10:55:25.6±1.1, 5102S×16228E, h0km, mb4.3/6, mb1 4.4/8, mb1mx4.3/13, mbtmp4.3/8, ML3.7/2, MS3.8/8, Ms1 3.8/8, ms1mx3.6/20, Error ellipse: s-maj=34.2km s-min=19.1km az=72.0*
NEIC ***20*** *10:55:26.6±0.6, 5114S×16236E, h10km, mb4.5/2, Error ellipse: s-maj=16.4km s-min=8.1km az=128.0*

ISC 20 10:55:26.4±0.5, 5114S±006×16236E±010, h10km, n30, σ1§24/24, mb4.3/8, MS3.7/6, 1D, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.95**	**210**	*e*P	**Pn**	**10 56 24.6**	**-2.4**
WHZ	**Wether Hill Ro**	**6.42**	**37**	P	**Pn**	**10 56 59.9**	**-1.0**
MLZ	**Mavora Lakes**	**6.97**	**36**	P	**Pn**	**10 57 07.8**	**-0.6**
TUZ	**Tuapeka**	**7.08**	**46**	P	**Pn**	**10 57 09.9**	**-0.1**
EAZ	**Earnscleugh**	**7.51**	**41**	P	**Pn**	**10 57 14.6**	**-1.3**
WKZ	**Wanaka**	**7.73**	**38**	P	**Pn**	**10 57 19.6**	**+0.7**
ODZ	**Otahua Downs**	**8.24**	**45**	P	**Pn**	**10 57 25.8**	**0.0**
JCZ	**Jackson Bay**	**8.28**	**34**	P	**Pn**	**10 57 27.5**	**+1.1**
RPZ	**Rata Peaks**	**9.47**	**42**	Pn	**Pn**	**10 57 41.4**	**-1.3**
	0.6nm,0.3s,baz=222,slow=8.1,SNR=4.8						
RPZ				LR	LR	11 00 49.2	
	comp=Z,272nm,18.2s,baz=324,slow=34						
TAU	**Tasmania Unive**	**13.14**	**303**	*e*P	**Pn**	**10 58 29.2**	**-3.7**
	29nm,0.8s						
MOO	**Moorlands**	**13.53**	**304**	*e*P	**Pn**	**10 58 36.5**	**-1.8**
URZ	**Urewera**	**16.56**	**45**	Pn	**Pn**	**10 59 19.9**	**+1.3**
	0.4nm,0.3s,baz=240,slow=8.3,SNR=5.9						
URZ				LR	LR	11 06 03.1	
	comp=Z,623nm,18.1s,baz=232,slow=39						
TOO	**Toolangi**	**18.09**	**312**	*e*P	**Pn**	**10 59 39.4**	**+1.8**
CNB	**Canberra Magne**	**18.39**	**324**	*e*P	**Pn**	**10 59 41.7**	**+0.4**
STKA	**Stephens Creek**	**24.59**	**314**	*e*P	**P**	**11 00 48.1**	**+1.6**
	3.9nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**24.59**	**314**	P	**P**	**11 00 47.5**	**+1.0**
	4.6nm,0.7s,mb4.1,baz=135,slow=14,SNR=9.6						
STKA				LR	LR	11 09 29.6	
	comp=Z,265nm,18.3s,MS3.8,baz=202,slow=34						
VNDA	**Vanda**	**26.49**	**180**	P	**P**	**11 01 03.9**	**+0.6**
	1.4nm,0.9s,mb3.5,baz=338,slow=12,SNR=6.4						
VNDA				LR	LR	11 09 54.3	
	comp=Z,147nm,20.0s,MS3.5,baz=105,slow=33						
CTA	**Charters Tower**	**33.48**	**332**	LR	LR	11 14 42.8	
	comp=Z,199nm,18.6s,MS3.9,baz=230,slow=35						
ASAR	**Alice Springs**	**35.13**	**311**	P	**P**	**11 02 19.4**	**-0.6**
	6.1nm,0.9s,mb4.5,baz=144,slow=8.0,SNR=25						
NWAO	**Narrogin (SRO)**	**37.44**	**281**	LR	LR	11 14 17.4	
	comp=Z,115nm,18.6s,MS3.7,baz=287,slow=30						
WRA	**Warramunga Arr**	**38.14**	**314**	P	**P**	**11 02 44.2**	**-1.4**
	5.4nm,0.9s,mb4.3,baz=148,slow=7.9,SNR=23						
WRA				LR	LR	11 19 45.6	
	comp=Z,171nm,18.5s,MS3.9,baz=170,slow=38						
WRAB	**Tennant Creek**	**38.14**	**314**	*e*P	**P**	**11 02 46.4**	**+0.7**
	11nm,1.0s,mb4.5						
QSPA	**South Pole Qui**	**38.98**	**180**	P	**P**	**11 02 55.2**	**+3.1**
	6.6nm,1.0s,mb4.3,baz=358,slow=2.8,SNR=12						
MAW	**Mawson**	**47.35**	**211**	LR	LR	11 22 23.1	
	comp=Z,69nm,18.8s,MS3.6,baz=297,slow=34						
PPT	**Papeete**	**50.61**	**67**	*e*LR	LR	11 18 57.9	
	78nm,28.5s						
SYO	**Syowa Base**	**53.02**	**202**	‖ *e*P	**P**	**11 04 43.0**	**+0.3**
SNAA	**Sanae**	**57.05**	**186**	*e*P	**P**	**11 05 11.1**	**-0.7**
	5.6nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**88.67**	**302**	P	**P**	**11 08 21.5**	**+1.8**
	0.5nm,0.3s,mb4.4,baz=162,slow=3.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**138.99**	**209**	PKP	PKPdf	11 14 51.9	-1.3
	0.5nm,0.9s,baz=172,slow=2.2,SNR=2.6						
AKASG	**Malin Array Be**	**150.84**	**288**	PKPbc	PKPbc	11 15 18.5	+0.5
	0.6nm,0.4s,baz=124,slow=1.3,SNR=3.2						

CSEM ***20*** *11:10:00.6±0.2, 8595N×28.18E, h2km, mb4.3/2, Error ellipse: s-maj=7.1km s-min=5.8km az=146.0*
MOS ***20*** *11:10:01.4±0.9, 8597N×2560E, h10km, mb4.3/3, Error ellipse: s-maj=99.9km s-min=12.1km az=90.7*
ISCJB ***20*** *11:10:02.8±0.7, 8586N±009×27E±, h10km, mb4.0/9, Error ellipse: s-maj=14.4km s-min=13.0km az=31.6*
NEIC ***20*** *11:10:03.8±0.6, 8602N×2724E, h10km, mb4.3/2, Error ellipse: s-maj=12.0km s-min=11.6km az=132.0*
IDC ***20*** *11:10:03.8±0.9, 8592N×2987E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.9/26, mbtmp3.9/13, ML4.1/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/29, Error ellipse: s-maj=23.3km s-min=17.8km az=45.0*

ISC 20 11:10:05.1±0.8, 8586N±010×28E±, h10km, n25, σ1§02/24, mb4.0/9, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**7.24**	**206**	*e*P	**Pn**	**11 11 51.3**	**+0.6**
	22nm,0.4s						
KBS	**Kingsbay**	**7.24**	**206**	*e*P	**Pn**	**11 11 51.3**	**+0.7**
KBS				pmax	pmax		
	comp=Z,22nm,0.4s						
KBS	**Kingsbay**	**7.24**	**206**	*e*P	**Pn**	**11 11 51.3**	**+0.7**
	comp=Z,22nm,0.4s						
SPITS	**Spitsbergen Ar**	**7.87**	**198**	Pn	**Pn**	**11 11 58.5**	**-0.8**
	baz=61,slow=13,SNR=77						
ARCES	**ARCESS Array B**	**16.43**	**183**	Pn	**Pn**	**11 13 53.9**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=356,slow=9.7,SNR=17						
ARCES				LR	LR	11 20 30.3	
	comp=Z,65nm,19.7s,baz=164,slow=38						
RES	**Resolute Bay**	**18.03**	**314**	*e*P	**Pn**	**11 14 10.2**	**-4.9**
YKA	**Yellowknife Ar**	**31.09**	**327**	LR	LR	11 29 18.2	
	comp=Z,34nm,19.3s,baz=5.0,slow=37						
ZALV	**Zalesovo Beam**	**34.09**	**118**	P	**P**	**11 16 49.0**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.1,baz=1.6,slow=9.0,SNR=5.9						
BRVK	**Borovoye**	**34.13**	**134**	*e*P	**P**	**11 16 50.2**	**+0.8**
	comp=Z,4.1nm,0.7s,mb4.5						
BRVK	**Borovoye**	**34.13**	**134**	*e*P	**P**	**11 16 50.2**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BRVK	**Borovoye**	**34.13**	**134**	*e*P	**P**	**11 16 50.2**	**+0.8**
BVAR	**Borovoye Array**	**34.17**	**134**	P	**P**	**11 16 50.8**	**+1.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=350,slow=7.5,SNR=13						
AKASG	**Malin Array Be**	**35.32**	**179**	P	**P**	**11 16 59.5**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.7,baz=354,slow=8.3,SNR=4.8						
KURK	**Kurchatov**	**36.93**	**125**	P	**P**	**11 17 14.2**	**+0.7**
	comp=Z,2.4nm,0.9s,mb4.0,baz=350,slow=8.4,SNR=14						
KURK	**Kurchatov**	**36.93**	**125**	*e*P	**P**	**11 17 13.5**	**0.0**
	comp=Z,2.4nm,0.9s,mb4.0						
KURK	**Kurchatov**	**36.93**	**125**	P	**P**	**11 17 14.2**	**+0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**36.93**	**125**	*e*P	**P**	**11 17 13.5**	**0.0**
MKAR	**Makanchi Array**	**41.06**	**122**	P	**P**	**11 17 47.3**	**-0.7**
	comp=Z,1.9nm,0.9s,mb3.7,baz=352,slow=8.0,SNR=4.8						
MKAR				LR	LR	11 36 04.5	
	comp=Z,38nm,18.5s,baz=180,slow=38						
SONM	**Songino Array**	**41.66**	**97**	P	**P**	**11 17 52.7**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=343,slow=7.3,SNR=6.1						
BRTR	**Keskin Array B**	**46.31**	**174**	P	**P**	**11 18 32.3**	**+1.9**
	comp=Z,1.2nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**46.31**	**174**	P	**P**	**11 18 32.3**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**50.58**	**320**	P	**P**	**11 19 02.4**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=336,slow=6.8,SNR=4.2						
TXAR	**Lajitas Array**	**63.66**	**314**	P	**P**	**11 20 38.2**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=359,slow=5.4,SNR=2.8						
CMAR	**Chiang Mai Arr**	**70.33**	**108**	P	**P**	**11 21 17.1**	**-1.3**
	comp=Z,1.7nm,0.9s,mb4.0,baz=348,slow=6.9,SNR=9.5						
TORD	**Torodi Ar. Bea**	**73.22**	**207**	P	**P**	**11 21 35.6**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=8.7,slow=5.9,SNR=4.3						

ISCJB ***20*** *11:26:34.1±1.1, 2191N±007×1432E±02, h268km±12km, mb3.6/9, Error ellipse: s-maj=28.2km s-min=11.1km az=174.3*
IDC ***20*** *11:26:35.0±1.7, 2188N×14300E, h254km±18km, mb3.5/8, mb1 3.6/12, mb1mx3.5/26, mbtmp3.6/12, Error ellipse: s-maj=35.4km s-min=11.6km az=76.0*
NEIC ***20*** *11:26:35.0±2.2, 2190N×143.11E, h258km±21km, mb3.9/4, Error ellipse: s-maj=23.1km s-min=7.7km az=84.0*
JMA ***20*** *11:26:39.5±0.3, 2237N×14345E, h285km, M4.5*

ISC 20 11:26:34.9±1.1, 2190N±007×1432E±02, h257km±12km, n39, σ0§89/41, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.80**	**349**	P	**Pn**	**11 27 49.5**	**+1.0**
JHHJ				S	**S**	**11 28 45.4**	**-1.8**
CBIJ	**Chichi jima**	**5.25**	**350**	P	**Pn**	**11 27 55.6**	**+1.6**
	33nm,0.3s,baz=303,slow=18,SNR=44						
CBIJ				S	**S**	**11 28 55.5**	**-1.7**
	72nm,0.3s,baz=294,slow=23,SNR=19						
CBIJ	**Chichi jima**	**5.25**	**350**	P	**Pn**	**11 27 55.4**	**+1.4**
CBIJ				S	**S**	**11 28 54.9**	**-2.3**
JHJ2	**Mitsune**	**11.56**	**346**	P	**Pn**	**11 29 12.7**	**-0.2**
JHJ	**Hachijo jima 2**	**11.58**	**346**	P	**Pn**	**11 29 13.4**	**+0.4**
	8.1nm,0.3s,baz=252,slow=21,SNR=12						
BSO1	**Boso 1**	**12.86**	**352**	P	**Pn**	**11 29 29.2**	**+0.4**
BSO3	**Boso 3**	**13.07**	**350**	P	**Pn**	**11 29 30.8**	**-0.6**

JWZ	**Kozaga**	**13.34**	**332**	P	**Pn**	**11 29 36.6**	**+1.9**	
JIE	**Ise**	**13.69**	**337**	P	**Pn**	**11 29 39.5**	**+0.5**	
JKN2	**Miekihoku**	**13.72**	**335**	P	**Pn**	**11 29 41.2**	**+1.8**	
HMMJ	**Hamamatsu 2**	**13.77**	**341**	P	**Pn**	**11 29 41.3**	**+1.3**	
JOD2	**Odawara 2**	**13.79**	**346**	P	**Pn**	**11 29 40.7**	**+0.5**	
JNY	**Yasuok**	**14.20**	**342**	P	**Pn**	**11 29 45.6**	**+0.5**	
JAO	**Obara**	**14.30**	**340**	P	**Pn**	**11 29 46.2**	**-0.1**	
JHU	**Hanno**	**14.32**	**347**	P	**Pn**	**11 29 45.9**	**-0.7**	
JOW	**Kunigami**	**14.45**	**293**	P	**Pn**	**11 29 48.2**	**-0.1**	
	2.0nm,0.3s,baz=170,slow=25,SNR=4.8							
JRY	**Ryogami san**	**14.56**	**346**	P	**Pn**	**11 29 49.2**	**-0.3**	
JAG	**Ashikaga**	**14.84**	**348**	P	**Pn**	**11 29 51.9**	**-0.9**	
JHO	**Hitachi**	**14.84**	**352**	P	**Pn**	**11 29 53.1**	**+0.3**	
MJAR	**Matsushiro Arr**	**15.22**	**345**	P	**Pn**	**11 29 56.3**	**-1.1**	
	2.4nm,0.3s,baz=232,slow=12,SNR=18							
MJAR	**Matsushiro Arr**	**15.22**	**345**	P	**Pn**	**11 29 56.3**	**-1.1**	
MAJO	**Matsushiro**	**15.22**	**345**	*e*P	**Pn**	**11 29 56.2**	**-1.2**	
	19nm,0.7s							
MAT	**Matsushiro**	**15.22**	**345**	P	**Pn**	**11 29 57.4**	**0.0**	
MAT	**Matsushiro**	**15.22**	**345**	P	**Pn**	**11 29 57.2**	**-0.2**	
JMK	**Ichinoseki**	**17.08**	**355**	P	**P**	**11 30 19.5**	**+2.5**	
KSRS	**Korea Array**	**20.36**	**323**	P	**P**	**11 30 52.3**	**+0.1**	
	7.4nm,0.7s,baz=147,slow=8.8,SNR=31							
SONM	**Songino Array**	**39.19**	**320**	P	**P**	**11 33 38.0**	**-0.2**	
	1.2nm,0.4s,mb3.6,baz=129,slow=7.3,SNR=20							
WRAB	**Tennant Creek**	**42.46**	**192**	*e*P	**P**	**11 34 05.0**	**-0.1**	
	5.0nm,0.7s,mb3.9							
WB2	**Warramunga Arr**	**42.47**	**192**	*e*P	**P**	**11 34 04.7**	**-0.5**	
WB2	**Warramunga Arr**	**42.47**	**192**	*e*P	**P**	**11 34 05.0**	**-0.1**	
WRA	**Warramunga Arr**	**42.47**	**192**	P	**P**	**11 34 04.8**	**-0.4**	
	3.5nm,0.7s,mb3.7,baz=12,slow=7.9,SNR=60							
ASAR	**Alice Springs**	**46.18**	**192**	P	**P**	**11 34 34.2**	**-0.2**	
	0.7nm,0.6s,baz=14,slow=9.9,SNR=18							
MBWA	**Marble Bar**	**48.54**	**210**	*e*P	**P**	**11 34 52.1**	**-0.4**	
	2.7nm,0.6s,mb3.8							
STKA	**Stephens Creek**	**53.49**	**182**	P	**P**	**11 35 29.1**	**0.0**	
	0.8nm,0.4s,mb3.5,baz=347,slow=11,SNR=5.4							
ZALV	**Zalesovo Beam**	**54.06**	**322**	P	**P**	**11 35 32.4**	**-0.6**	
	1.5nm,0.5s,mb3.6,baz=108,slow=7.8,SNR=7.3							
MKAR	**Makanchi Array**	**54.57**	**313**	P	**P**	**11 35 36.1**	**-0.6**	
	0.4nm,0.5s,mb3.1,baz=91,slow=9.7,SNR=4.4							
KURK	**Kurchatov**	**57.33**	**317**	*e*P	**P**	**11 35 56.1**	**-0.1**	
	1.6nm,0.5s,mb3.7							
ARCES	**ARCESS Array B**	**78.73**	**341**	P	**P**	**11 38 08.3**	**-0.3**	
	3.7nm,0.9s,mb4.1,baz=87,slow=6.2,SNR=2.7							
PLCA	**Paso Flores**	**145.88**	**131**	PKPbc	PKPbc	11 45 45.8	+1.6	
	1.2nm,0.6s,baz=223,slow=18,SNR=5.0							

ISCJB ***20*** *11:31:04.5±1.6, 3828N±006×394E±0.1, h8km±12km, Error ellipse: s-maj=14.9km s-min=10.4km az=11.0*
CSEM ***20*** *11:31:04.7±0.4, 3834N×3930E, h12km, MD2.8, Error ellipse: s-maj=12.9km s-min=6.0km az=112.0*
DDA ***20*** *11:31:05.4, 3830N×3932E, h2km±3km, Md2.8*

ISC 20 11:31:05.0±1.6, 3828N±006×394E±01, h12km±12km, n5, σ1§11/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.11**	**329**	*e*PG	**Pg**	**11 31 07.2**	**-0.7**
ELZG	**Elazig**	**0.38**	**305**	*i* P	**Pg**	**11 31 12.2**	**-0.3**
ELZG				*i* S	**Sg**	**11 31 17.8**	**+0.3**
PTK	**Pertek**	**0.61**	**1**	*e*PG	**Pg**	**11 31 16.4**	**-0.4**
PTK				*e*SG	**Sg**	**11 31 25.8**	**+1.0**
URFA	**Urfa**	**0.95**	**208**	*e*PG	**Pg**	**11 31 24.3**	**+1.0**
AKCD	**Akcadag**	**1.15**	**271**	*i* P	**Pb**	**11 31 25.3**	**-1.4**
AKCD				*i* S	**Sb**	**11 31 42.1**	**+0.6**

TEH ***20*** *11:35:18.5, 3267N×49.19E, h13km, ML3.8*
ISCJB ***20*** *11:36:17.0±0.3, 3266N±003×4926E±004, h10km, Error ellipse: s-maj=5.3km s-min=3.8km az=25.5*
THR ***20*** *11:36:16.4±1.2, 3270N×4924E, h14km±9km, ML3.5*
CSEM ***20*** *11:36:16.9±0.1, 3271N×4923E, h16km, ML3.8, Error ellipse: s-maj=1.6km s-min=1.2km az=114.0*

ISC 20 11:36:18.1±0.3, 3268N±003×4924E±004, h10km, n52, σ0§73/58, 1C, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.68**	**213**	*e*Pg	**Pg**	**11 36 29.7**	**-1.7**
SHGR				AML	AML	11 36 46.9	
	comp=E,5μm,0.7s						
SHGR				AML	AML	11 36 50.7	
	comp=N,4μm,0.6s						
IPIR	**Pirpir**	**1.39**	**89**	*e*Pn	**Pn**	**11 36 41.6**	**-2.0**
IPIR	**Pirpir**	**1.39**	**89**	*e*Pn	**Pn**	**11 36 40.5**	**-3.1**
IPIR				*e*Lg		11 37 03.2	
IPIR				*e*		11 37 11.8	
ASAO	**Ashtian**	**1.97**	**19**	*e*Pg	**Pn**	**11 36 51.4**	**-0.2**
ASAO				AML	AML	11 37 21.3	
	comp=E,464nm,0.7s						
ASAO				AML	AML	11 37 24.8	
	comp=N,428nm,0.7s						
ASAO	**Ashtian**	**1.97**	**19**	*e*Pn	**Pn**	**11 36 51.5**	**-0.1**
	SNR=52						
IKLH	**Kolahrood**	**2.06**	**71**	*e*Pn	**Pn**	**11 36 52.9**	**+0.1**

RDF	**Al-Radifah**	**4.02**	**202**	*e*P	**Pn**	**11 37 19.8**	**+0.1**
RDF				*e*S	**Sn**	**11 38 08.6**	**+1.8**
RDF	**Al-Radifah**	**4.02**	**202**	*e*P	**Pn**	**11 37 19.8**	**0.0**
	baz=201						
RDF				*e*S	**Sn**	**11 38 08.6**	**+1.8**
	baz=201						
RDF				AML	AML	11 38 13.4	
	comp=Z,84nm,0.5s,baz=201						
QRN	**Al-Qurain**	**4.09**	**197**	*e*P	**Pn**	**11 37 20.8**	**+0.1**
	baz=196						
QRN				AML	AML	11 38 15.2	
	comp=Z,127nm,0.3s,baz=196						
ILAS	**Lasjerd**	**4.09**	**48**	*e*Pn	**Pn**	**11 37 20.8**	**+0.1**
ILAS	**Lasjerd**	**4.09**	**48**	*e*Pn	**Pn**	**11 37 20.8**	**+0.1**
ILAS				*e*		11 38 44.7	
BHD	**Baghdad**	**4.13**	**279**	*e*x	x	11 37 20.0	
BHD				*e*x	x	11 38 09.0	
BHD				*e*x	x	11 38 34.0	
IPAR	**Pars**	**4.32**	**130**	*e*Pn	**Pn**	**11 37 23.2**	**-0.6**
IPAR				*e*Sn	**Sn**	**11 38 12.2**	**-2.0**
IPAR	**Pars**	**4.32**	**130**	*e*Pn	**Pn**	**11 37 23.2**	**-0.6**
IPAR				*e*Sn	**Sn**	**11 38 12.2**	**-2.0**
IPAR				*e*		11 38 29.4	
ICHK	**Chekchek**	**4.39**	**94**⇑	*e*Pn	**Pn**	**11 37 25.1**	**+0.3**
ICHK	**Chekchek**	**4.39**	**94**	*e*Pn	**Pn**	**11 37 24.9**	**+0.1**
ICHK				*e*		11 38 43.1	
IMEH	**Mehriz**	**4.74**	**104**	*e*Pn	**Pn**	**11 37 29.8**	**+0.2**
IMEH	**Mehriz**	**4.74**	**104**	*e*Pn	**Pn**	**11 37 29.8**	**+0.2**
IMEH				*e*		11 39 05.8	
GHIR	**Ghir-Karzin**	**5.44**	**143**	*e*Pn	**Pn**	**11 37 39.5**	**+0.1**
IBAF	**Bafgh**	**5.47**	**100**	*e*Pn	**Pn**	**11 37 39.3**	**-0.4**
IBAF	**Bafgh**	**5.47**	**100**	*e*Pn	**Pn**	**11 37 39.3**	**-0.4**

NEIC 20 11:39:08.1±0.9, 3047S×17854W, h382km±11km, mb4.6/3, Error ellipse: s-maj=28.1km s-min=10.0km az=102.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.33**	**24**	Pn	Pn	11 39 58.5	-0.2
RAO				*e*S	S	11 40 32.6	-6.8
MXZ	**Matakaoa Point**	**7.55**	**199**	P	Pn	11 40 57.1	-0.2
PUZ	**Puketiti**	**8.04**	**198**	P	Pn	11 41 02.4	-0.6
MARZ	**Manawahe**	**8.48**	**207**	P	Pn	11 41 10.5	+2.4
MWZ	**Matawai**	**8.49**	**201**	P	Pn	11 41 06.8	-1.5
URZ	**Urewera**	**8.56**	**204**	P	Pn	11 41 07.0	-2.1
TAZ	**Tarawera**	**8.76**	**207**	P	Pn	11 41 15.4	+4.0
KNZ	**Kokohu**	**9.08**	**199**	P	Pn	11 41 13.6	-1.5
BKZ	**Black Stump Fm**	**9.59**	**204**	P	Pn	11 41 19.5	-1.5
HIZ	**Hauiti**	**9.70**	**212**	P	Pn	11 41 23.1	+0.8
KATZ	**Kakaramea**	**9.72**	**208**	P	Pn	11 41 24.3	+1.7
TWVZ	**Taurewa**	**9.91**	**208**	P	Pn	11 41 25.5	+0.7
NGZ	**Ngauruhoe**	**9.93**	**207**	P	Pn	11 41 25.3	+0.3
WPVZ	**Whakapapa**	**9.98**	**208**	P	Pn	11 41 27.7	+2.1
TUVZ	**Tukino**	**9.99**	**207**	P	Pn	11 41 25.7	0.0
FWVZ	**Far West T-bar**	**10.02**	**207**	P	Pn	11 41 27.5	+1.4
WNVZ	**Wahianoa**	**10.06**	**207**	P	Pn	11 41 27.4	+0.8
MOVZ	**Moawhango**	**10.07**	**206**	P	Pn	11 41 26.7	0.0
TSZ	**Takapari Road**	**10.57**	**204**	P	Pn	11 41 30.9	-1.6
PKE	**Pukeiti**	**10.65**	**213**	P	Pn	11 41 36.3	+2.8
NEZ	**North Egmont**	**10.66**	**213**	P	Pn	11 41 36.0	+2.4
WAZ	**Wanganui**	**10.67**	**208**	P	Pn	11 41 33.0	-0.7
NWEZ	**Newall Road**	**10.77**	**213**	*e*P	Pn	11 41 37.2	+2.3
BFZ	**Birch Farm**	**11.04**	**201**	P	Pn	11 41 38.1	+0.1
MRZ	**Mangatainoka R**	**11.24**	**204**	P	Pn	11 41 37.0	-3.3
KIW	**Kapiti Island**	**11.65**	**205**	P	Pn	11 41 43.9	-1.3
MTW	**Mount Morrison**	**11.71**	**203**	P	Pn	11 41 45.2	-0.6
CAW	**Cannon Point**	**11.81**	**204**	P	Pn	11 41 43.5	-3.5
PAWZ	**Paruwai Farm**	**11.94**	**203**	P	Pn	11 41 48.6	+0.2
MSWZ	**Moikau Station**	**12.02**	**203**	P	P	11 41 48.3	-0.1
WEL	**Wellington**	**12.08**	**205**	P	P	11 41 48.5	-0.5
SNZO	**South Karori**	**12.12**	**205**	*e*P	P	11 41 49.3	-0.2
	35nm,0.7s						
SNZO				*e*S	S	11 43 58.0	-5.0
BHW	**Baring Head**	**12.15**	**204**	P	P	11 41 49.4	-0.4
TCW	**Tory Channel**	**12.20**	**207**	P	P	11 41 49.1	-1.3
NNZ	**Nelson**	**12.56**	**209**	P	P	11 41 51.6	-2.8
QRZ	**Quartz Range**	**12.62**	**213**	P	P	11 41 52.7	-2.4
BSWZ	**Blackbirch Sta**	**12.78**	**207**	P	P	11 41 57.5	+0.7
THZ	**Tophouse**	**13.22**	**209**	P	P	11 41 59.8	-1.8
KHZ	**Kahutara**	**13.51**	**206**	P	P	11 42 03.9	-0.9
DSZ	**Denniston Nort**	**13.69**	**212**	P	P	11 42 05.8	-0.9
LTZ	**Lake Taylor**	**14.32**	**208**	P	P	11 42 12.3	-1.4
MQZ	**McQueen's Vall**	**14.96**	**205**	P	P	11 42 22.4	+1.9
RPZ	**Rata Peaks**	**15.60**	**209**	P	P	11 42 30.5	+3.0
DZM	**Mont Dzumac**	**15.84**	**298**	*e*P	P	11 42 29.9	-0.5
DZM	**Mont Dzumac**	**15.84**	**298**	*e*P	P	11 42 30.0	-0.4
	17nm,0.5s						
FOZ	**Fox Glacier**	**16.08**	**212**	P	P	11 42 33.9	+1.2
ODZ	**Otahua Downs**	**16.86**	**207**	P	P	11 42 45.5	+4.5
JCZ	**Jackson Bay**	**16.90**	**213**	P	P	11 42 43.2	+1.7
AFI	**Afiamalu**	**17.62**	**22**	*e*P	P	11 42 50.5	+1.0
	28nm,0.4s						
AFI				*e*S	S	11 45 51.5	-1.3
WB2	**Warramunga Arr**	**43.63**	**273**	*e*P	P	11 46 34.7	-1.9
WRAB	**Tennant Creek**	**43.63**	**273**	*e*P	P	11 46 35.5	-1.1
	8.1nm,1.3s						

NIED **20** *11:46:00, 32.80N×140.90E, h56km, Mw5.0 Best double couple: M0 3.50000×10^16 NP1:φs323.00000°, δ54.00000°, λ62.00000°. NP2:φs186.00000°, δ45.00000°, λ123.00000°.*
BJI **20** *11:46:21.2, 3253N×14159E, h50km, mB5.0, mb4.9, Ms4.4, Msz4.2*
ISCJB **20** *11:46:27.8±0.1, 3266N±002×14076E±002, h48km, mb5.2/203, MS4.2/39, Error ellipse: s-maj=2.8km s-min=1.9km az=20.9*
BGS **20** *11:46:27.1±2.0, 3173N×14068E, h70km±999km, mb5.3*
MOS **20** *11:46:27.7±0.8, 3267N×14070E, h50km, mb5.5/83, MS4.2/7, Error ellipse: s-maj=8.1km s-min=4.2km az=108.9*
JMA **20** *11:46:28.7±0.3, 3277N×14089E, h44km, M5.1*
JMA Felt II J1.
IDC **20** *11:46:30.4±1.0, 3267N×14076E, h60km±8km, mb4.6/19, mb1 4.8/21, mb1mx4.8/23, mbtmp4.7/21, MS4.1/23, Ms1 4.1/23, ms1mx3.9/38, Error ellipse: s-maj=13.3km s-min=9.5km az=72.0*
GCMT **20** *11:46:31.4±0.3, 3268N×141.01E, h42km±1km, MW5.0/66, Moment Tensor Solution. s33,c43; s66,c101; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.95±.17; Mθθ0.45±.11; Mθφ-3.39±.11; Mrθ-1.33±.09; Mφφ0.63±.10; Mφr-1.41±.10; Best double couple: M0 3.78700×10^16 NP1:φs328.00000°, δ40.00000°, λ51.00000°. NP2: φs194.00000°, δ60.00000°, λ117.00000°. Principal axes: T 3.8540, Plg64.0000°, Azm152.0000°; N -0.1280, Plg23.0000°, Azm360.0000°; P -3.7200, Plg11.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **20** *11:46:31.4±0.6, 3267N×14067E, h70km±5km, mb5.2/119, MW5.0(NIED) Error ellipse: s-maj=3.3km s-min=2.9km az=157.0*
NEIC Recorded [2 JMA] on Hachijo-jima and [1 JMA] on Aoga-shima, Kozu-shima, Mikura-jima, Miyake-jima and Nii-jima. Also recorded [1 JMA] in Chiba, Kanagawa, Shizuoka and Tokyo Prefectures, Honshu.
SZGRF **20** *11:46:35.3, 3403N×140.48E, h33km, mb5.3, Near east coast of eastern Honshu, Japan*
DJA **20** *11:46:37, 32.78N×141.01E, h127km, mb5.3/17*

ISC 20 11:46:29.6±0.1, 3269N±002×14073E±002, h50km, h50km±2.5km; pP-P, n920, σ0.71/929, mb5.2/203, MS4.2/39, 253C-204D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.88**	**299**	⇓P	**Pn**	**11 46 46.1**	**+0.4**
JHJ	**Hachijo jima 2**	**0.91**	**299**	P	**Pn**	**11 46 46.4**	**+0.3**
	2μm,0.3s,baz=166,slow=12,SNR=1472						
JHJ				S	**Sn**	**11 47 00.6**	**+2.4**
JMY	**Miyakejima3**	**1.72**	**324**	P	**Pn**	**11 46 57.3**	**+0.3**
JMY				*e*S	**Sn**	**11 47 18.7**	**+0.9**
BSO1	**Boso 1**	**1.97**	**6**	P	**Pn**	**11 46 58.0**	**-2.5**
BSO1				S	**Sn**	**11 47 21.7**	**-2.3**
JKO	**Kozu shima**	**2.00**	**319**	P	**Pn**	**11 47 01.9**	**+0.9**
JKO				*e*S	**Sn**	**11 47 25.4**	**+0.6**
NJJJ	**Nii jima 2**	**2.09**	**325**	P	**Pn**	**11 47 02.9**	**+0.7**
NJJJ				*e*S	**Sn**	**11 47 27.2**	**+0.1**
BSO3	**Boso 3**	**2.12**	**355**	P	**Pn**	**11 47 00.6**	**-1.9**
BSO3				S	**Sn**	**11 47 26.7**	**-0.9**
JIM2	**Oshima 3**	**2.30**	**332**	P	**Pn**	**11 47 04.9**	**-0.1**
JIM2				*e*S	**Sn**	**11 47 30.9**	**-1.1**
JIZS	**Izushimoda**	**2.55**	**323**	⇑P	**Pn**	**11 47 09.5**	**+1.1**
JIZS				*e*S	**Sn**	**11 47 38.3**	**+0.1**
AJI	**Ajiro2**	**2.72**	**330**	⇑P	**Pn**	**11 47 10.9**	**+0.1**
TK01	**Tokai 1**	**2.84**	**293**	P	**Pn**	**11 47 13.8**	**+1.3**
JOD2	**Odawara 2**	**2.91**	**332**	P	**Pn**	**11 47 13.4**	**0.0**
JOD2				*e*S	**Sn**	**11 47 45.5**	**-1.6**
TK04	**Tokai 4**	**2.92**	**306**	P	**Pn**	**11 47 15.7**	**+2.1**
TK04				*e*S	**Sn**	**11 47 50.6**	**+3.1**
SHZ3	**Shizuoka 3**	**3.17**	**319**	P	**Pn**	**11 47 19.3**	**+2.4**
JYN	**Shimob**	**3.34**	**328**	⇑P	**Pn**	**11 47 20.9**	**+1.6**
JRY	**Ryogami san**	**3.65**	**336**	⇑P	**Pn**	**11 47 23.9**	**+0.4**
JIE	**Ise**	**3.77**	**298**	P	**Pn**	**11 47 26.7**	**+1.6**
JNT	**Takato**	**3.84**	**327**	P	**Pn**	**11 47 28.7**	**+2.6**
JAG	**Ashikaga**	**3.87**	**345**	P	**Pn**	**11 47 25.3**	**-1.3**
JAG				*e*S	**Sn**	**11 48 09.5**	**-1.3**
JKN2	**Miekihoku**	**4.03**	**294**	P	**Pn**	**11 47 30.6**	**+1.8**
MJAR	**Matsushiro Arr**	**4.37**	**332**	P	**Pn**	**11 47 34.6**	**+1.1**
	62nm,0.3s,baz=151,slow=11,SNR=507						
MJAR				S	**Sn**	**11 48 25.9**	**+2.8**
	100nm,0.3s,baz=195,slow=22,SNR=7.8						
MJAR				LR	LR	11 48 45.2	
	comp=Z,589nm,19.3s,baz=160,slow=31						
MJAR	**Matsushiro Arr**	**4.37**	**332**	P	**Pn**	**11 47 34.6**	**+1.2**
MJAR				S	**Sn**	**11 48 25.9**	**+2.8**
MAJO	**Matsushiro**	**4.37**	**332**	*e*Pn	**Pn**	**11 47 35.5**	**+2.0**
MAJO				*e*Sn	**Sn**	**11 48 25.3**	**+2.2**
MAT	**Matsushiro**	**4.37**	**332**	P	**Pn**	**11 47 35.0**	**+1.5**
MAT				S	**Sn**	**11 48 23.2**	**+0.1**
JGM	**Miyama**	**4.48**	**313**	P	**Pn**	**11 47 37.7**	**+2.7**
CBIJ	**Chichi jima**	**5.71**	**167**	P	**Pn**	**11 47 49.4**	**-2.5**
	94nm,0.3s,baz=62,slow=8.2,SNR=44						
CBIJ				S	**Sn**	**11 48 51.0**	**-5.2**
	121nm,0.3s,baz=110,slow=23,SNR=8.1						
UWA2	**Uwa jima 2**	**6.83**	**277**	P	**Pn**	**11 48 10.5**	**+3.2**
JHM	**Kurahashi**	**7.01**	**284**	P	**Pn**	**11 48 13.9**	**+4.3**
JIU2	**Izumi 2**	**8.37**	**272**	P	**Pn**	**11 48 32.6**	**+4.3**
ERM	**Erimo**	**9.51**	**11**	Pn	**Pn**	**11 48 42.2**	**-1.6**
	1μm,0.5s,SNR=11						
ERM	**Erimo**	**9.51**	**11**	*e*P	**Pn**	**11 48 41.6**	**-2.2**
ASAJ	**Asahikawa**	**11.50**	**7**	P	**Pn**	**11 49 07.7**	**-3.4**
	11nm,0.3s,baz=220,slow=11,SNR=92						
ASAJ				S	**Sn**	**11 51 10.9**	**-7.1**
	3.3nm,0.3s,baz=282,slow=33,SNR=5.5						
ASAJ	**Asahikawa**	**11.50**	**7**	P	**Pn**	**11 49 07.7**	**-3.4**
ASAJ				S	**Sn**	**11 51 11.0**	**-7.0**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
KSRS	**Korea Array**	**11.52**	**298**	P	**Pn**	**11 49 15.5**	**+4.2**
	comp=N,0.6nm,0.3s,baz=113,slow=14,SNR=42						
KSRS				LR	LR	11 53 46.7	
	comp=N,953nm,19.3s,baz=108,slow=38						
JOW	**Kunigami**	**12.29**	**245**	P	**Pn**	**11 49 24.6**	**+2.7**
	comp=N,2.4nm,0.3s,baz=88,slow=13,SNR=5.8						
JOW				LR	LR	11 53 40.3	
	comp=N,561nm,19.1s,baz=116,slow=35						
YSS	**Yuzh-Sakhalins**	**14.33**	**6**	*e*Pn	**Pn**	**11 49 47.2**	**-2.4**
YSS	**Yuzh-Sakhalins**	**14.33**	**6**	*i* P	**Pn**	**11 49 47.5**	**-2.0**
YSS				pmax	pmax		
	comp=Z,235nm,2.2s						
MDJ	**Mudanjiang**	**14.73**	**327**	P	**Pn**	**11 49 54.6**	**-0.2**
MDJ				AP	pP	11 50 02.8	-8.3
MDJ				XP	sP	11 50 08.6	-8.9
MDJ				S	**Sn**	**11 52 35.1**	**-1.6**
MDJ				AMB	AMB		
	comp=Z,13nm,1.6s						
MDJ				AMB	AMB		
	comp=Z,222nm,3.5s						
MDJ				LR	LR		
	comp=N,389nm,26.1s						
MDJ				LR	LR		
	comp=E,342nm,25.4s						
MDJ				LR	LR		
	comp=Z,632nm,26.1s						
CN2	**Changchun**	**16.32**	**317**	*e*P	**Pn**	**11 50 15.0**	**-0.2**
CN2				*e*AP	pP	11 50 24.3	-4.5
CN2				*e*S	**S**	**11 53 14.4**	**-11**
CN2				*e*SS		11 53 36.4	
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,20.0s						
CN2				LR	LR		
	comp=E,800nm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,24.0s						
HABR	**Khabarovsk**	**16.34**	**346**	*e*P	**Pn**	**11 50 15.7**	**+0.3**
HABR				*e*S	**S**	**11 53 17.6**	**-8.4**
SSE	**Sheshan**	**16.68**	**270**	*e*P	**Pn**	**11 50 19.1**	**-0.8**
SSE				AP	pP	11 50 30.8	-2.1
SSE				XP	sP	11 50 35.9	-3.3
SSE				S	**S**	**11 53 24.3**	**-8.9**
SSE				XS	sS	11 53 51.3	0.0
SSE				AMB	AMB		
	comp=Z,68nm,0.6s						
SSE				AMB	AMB		
	comp=Z,109nm,6.4s						
SSE				LR	LR		
	comp=N,159nm,29.4s						
SSE				LR	LR		
	comp=E,455nm,29.5s						
SSE				LR	LR		
	comp=Z,580nm,28.8s						
KLR	**Kul'dur**	**17.84**	**340**	*e*P	**Pn**	**11 50 28.4**	**-5.7**
KLR				*e*		11 53 38.8	
NJ2	**Nanjing**	**18.49**	**274**	*e*P	**Pn**	**11 50 44.5**	**+2.3**
NJ2				AP	pP	11 50 54.0	+1.1
NJ2				XP	sP	11 51 00.3	+1.1
NJ2				S	**S**	**11 54 06.0**	**-3.1**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,120nm,7.8s						
NJ2				LR	LR		
	comp=N,160nm,13.7s						
NJ2				LR	LR		
	comp=E,540nm,24.0s						
NJ2				LR	LR		
	comp=Z,500nm,29.4s						
YHNB	**Yeheng**	**18.75**	**250**	*e*Pn	**Pn**	**11 50 46.7**	**+1.3**
	comp=Z,185nm,0.8s						
NACB	**Ninganchiao**	**18.83**	**248**	*e*Pn	**Pn**	**11 50 46.8**	**+0.5**
	comp=Z,55nm,0.7s						
GUMO	**Guam**	**19.38**	**168**	P	**Pn**	**11 50 52.3**	**-0.7**
	comp=Z,27nm,0.3s,baz=34,slow=1.2,SNR=18						
GUMO	**Guam**	**19.38**	**168**	*e*Pn	**Pn**	**11 50 52.7**	**-0.2**
	comp=Z,2μm,1.1s						
GUMO	**Guam**	**19.38**	**168**	*e*P	**Pn**	**11 50 52.7**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,2μm,1.1s						
GUMO	**Guam**	**19.38**	**168**	P	**Pn**	**11 50 52.7**	**-0.2**
	comp=Z,2μm,1.4s						
QZH	**Quanzhou**	**20.85**	**254**	P	**P**	**11 51 07.5**	**+0.2**
QZH				S	**S**	**11 55 04.0**	**+6.8**
QZH				LR	LR		
	comp=Z,910nm,17.8s,MS4.2						
BJI	**Beijing**	**21.05**	**297**	P	**P**	**11 51 08.9**	**-0.5**
BJI				XP	sP	11 51 24.3	-2.8
BJI				S	**S**	**11 55 03.0**	**+2.1**
BJI				XS	sS	11 55 19.1	-0.5
BJI				AMB	AMB		
	comp=Z,18nm,0.5s,mb4.7						
BJI				LR	LR		
	comp=N,570nm,19.0s,MS4.1						
BJI				LR	LR		
	comp=E,460nm,18.7s,MS4.1						
BJI				LR	LR		
	comp=Z,448nm,23.5s,MS3.8						
WHN	**Wuhan**	**22.55**	**272**	P	**P**	**11 51 25.9**	**+0.4**
HIA	**Hailar**	**22.80**	**323**	*e*P	**P**	**11 51 25.6**	**-2.3**
	comp=Z,44nm,0.9s,mb4.9						
HIA	**Hailar**	**22.80**	**323**	*e*P	**P**	**11 51 25.6**	**-2.3**
HIA				pmax	pmax		
	comp=Z,44nm,0.9s						
PETK	**Petropavlovsk-**	**23.78**	**26**	P	**P**	**11 51 37.2**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.0,baz=146,slow=8.6,SNR=10.0						
PETK				PcP	PcP	11 55 18.8	-0.9
	comp=Z,5.7nm,1.0s,baz=158,slow=1.0,SNR=4.2						
PETK				LR	LR	11 59 31.2	
	comp=Z,239nm,20.9s,MS3.6,baz=219,slow=33						
PETK	**Petropavlovsk-**	**23.78**	**26**	P	**P**	**11 51 37.2**	**-0.2**
PETK				PcP	PcP	11 55 18.8	-0.9
PETK				LR	LR	11 59 31.2	
HHC	**Hu-ho-hao-te**	**24.66**	**298**	*e*P	**P**	**11 51 45.9**	**+0.3**
HHC				AP		11 51 56.0	
HHC				XP	sP	11 52 01.9	-2.4
HHC				PP		11 52 23.3	
HHC				S	**S**	**11 56 01.0**	**-2.7**
HHC				AMB	AMB		
	comp=Z,27nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,229nm,5.6s						
HHC				LR	LR		
	comp=N,331nm,17.8s,MS4.3						
HHC				LR	LR		
	comp=E,680nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,590nm,17.8s,MS4.1						
BTO	**Baotou**	**25.78**	**297**	*e*P	**P**	**11 51 55.8**	**0.0**
CLNS	**Chul'man**	**26.50**	**340**	*e*P	**P**	**11 52 02.7**	**+0.6**
CLNS				*e**PP	pP	11 52 19.3	+4.5
CLNS				*e*		11 52 40.1	
CLNS				*e*		11 57 45.3	
CLNS				pmax	pmax		
	comp=Z,57nm,0.6s,mb5.3						
CLNS				pmax	pmax		
	comp=N,41nm,0.7s						
CLNS				pmax	pmax		
	comp=E,18nm,0.7s						
DAV	**Davao City (W)**	**29.12**	**212**	LR	LR	12 03 49.5	
	comp=E,324nm,18.7s,MS4.0,baz=355,slow=36						
ULN	**Ulaanbaatar**	**29.55**	**311**⇑	P	**P**	**11 52 31.3**	**+1.9**
	SNR=7.1						
ULN	**Ulaanbaatar**	**29.55**	**311**	*e*P	**P**	**11 52 30.2**	**+0.8**
	comp=E,21nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**29.55**	**311**⇑	*e*P	**P**	**11 52 30.0**	**+0.6**
ULN	**Ulaanbaatar**	**29.55**	**311**	P	**P**	**11 52 30.3**	**+0.9**
	comp=E,30nm,1.1s,mb4.9						
SONM	**Songino Array**	**29.96**	**310**	P	**P**	**11 52 33.4**	**+0.4**
	comp=E,7.7nm,0.8s,mb4.5,baz=113,slow=8.5,SNR=48						
SONM				PcP	PcP	11 55 33.7	-0.7
	comp=E,3.6nm,0.7s,baz=119,slow=1.7,SNR=4.6						
SONM				ScP	ScP	11 59 10.9	-1.6
	comp=E,3.8nm,1.0s,baz=122,slow=3.5,SNR=10						
SONM				LR	LR	12 05 16.5	
	comp=E,667nm,18.2s,MS4.3,baz=254,slow=38						
SONM	**Songino Array**	**29.96**	**310**	P	**P**	**11 52 33.4**	**+0.3**
SONM						11 55 33.7	
SONM						11 59 10.9	
GYA	**Guiyang**	**30.19**	**267**	P	**P**	**11 52 33.3**	**-2.0**
GYA				AP	pP	11 52 44.8	-3.3
GYA				XP	sP	11 52 50.3	-3.7
GYA				PCP	PcP	11 55 35.9	+0.5
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GYA				AMB	AMB		
	comp=Z,230nm,6.1s						
GYA				LR	LR		
	comp=N,90nm,10.1s						
GYA				LR	LR		
	comp=E,100nm,9.9s						
GYA				LR	LR		
	comp=Z,120nm,10.4s,MS3.8						
YAK	**Yakutsk**	**30.21**	**350**	*e*P	**P**	**11 52 34.7**	**-0.4**
	comp=Z,49nm,0.9s,mb5.2						
YAK	**Yakutsk**	**30.21**	**350**	*e*P	**P**	**11 52 33.6**	**-1.4**
YAK				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,24nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
LZH	**Lanzhou**	**30.51**	**287**	*e*P	**P**	**11 52 39.0**	**+0.9**
LZH				AP	pP	11 52 50.0	-0.9
LZH				XP	sP	11 52 57.1	+0.3
LZH				PP	PP	11 53 38.4	-9.1
LZH				*e*S	**S**	**11 57 35.3**	**-0.8**
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,73nm,4.9s						
LZH				LR	LR		
	comp=E,597nm,13.8s						
LZH				LR	LR		
	comp=Z,921nm,15.5s,MS4.5						
QIZ	**Qiongzhong**	**30.82**	**251**	P	**P**	**11 52 41.3**	**+0.4**
QIZ				LR	LR		
	comp=Z,395nm,29.2s,MS3.9						
BOD	**Bodaibo**	**31.01**	**332**	*e*P	**P**	**11 52 41.5**	**-0.6**
BOD				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.9						
SEY	**Seymchan**	**31.15**	**10**⇓	*i*P	**P**	**11 52 43.6**	**+0.2**
CD2	**Chengdu**	**31.38**	**277**	P	**P**	**11 52 45.3**	**-0.4**
CD2				AP	pP	11 52 56.6	-2.0
CD2				XP	sP	11 53 03.5	-1.0
CD2				PP	PP	11 53 50.4	-6.8
CD2				PCP	PcP	11 55 38.5	0.0
CD2				S	**S**	**11 57 48.5**	**-1.2**
CD2				SCS	ScS	12 03 13.8	-1.3
CD2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
CD2				AMB	AMB		
	comp=Z,210nm,4.6s						
CD2				LR	LR		
	comp=N,1μm,13.8s,MS4.9						
CD2				LR	LR		
	comp=E,2μm,14.2s,MS4.9						
CD2				LR	LR		
	comp=Z,1μm,15.0s,MS4.7						
ZAK	**Zakamensk**	**32.70**	**314**	*e*P	**P**	**11 52 57.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
IRK	**Irkutsk**	**32.77**	**318**	*e*P	**P**	**11 52 55.6**	**-2.0**
IRK				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.5						
TLY	**Talaya**	**32.92**	**316**	*e*P	**P**	**11 53 00.0**	**+1.0**
TLY	**Talaya**	**32.92**	**316**	*e*P	**P**	**11 52 59.0**	**0.0**
TLY				*e*		11 54 32.5	
TLY				*e*S	**S**	**11 58 10.9**	**-2.4**
TLY				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
TLY				MLR	MLR		
	comp=Z,365nm,18.0s,MS4.1						
GTA	**Gaotai**	**33.54**	**293**	P	**P**	**11 53 06.0

BILL pmax pmax
comp=Z,27nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.8
PCI Palu 38.81 215 P **P 11 53 53.3 +3.6**
comp=Z,54nm,1.1s,mb5.2
TIXI Tiksi 39.54 354 *eP* **P 11 53 54.4 -0.8**
comp=Z,20nm,0.9s,mb4.8
TIXI Tiksi 39.54 354 *eP* **P 11 53 53.7 -1.5**
TIXI pmax pmax
comp=Z,19nm,0.8s,mb4.9
CHTO Chiang Mai 39.84 260 P **P 11 53 58.3 0.0**
SNR=5.1
CHTO Chiang Mai 39.84 260 *eP* **P 11 53 57.9 -0.4**
comp=Z,15nm,0.8s,mb4.8
CHTO Chiang Mai 39.84 260 *eP* **P 11 53 57.9 -0.5**
CHTO pmax pmax
comp=Z,15nm,0.8s,mb4.8
CM31 Chiang Mai Arr 40.01 260 *eP* **P 11 53 58.1 -1.7**
CMAR Chiang Mai Arr 40.01 260 P **P 11 53 59.4 -0.4**
comp=Z,7.4nm,0.7s,mb4.5,baz=51,slow=7.0,SNR=34
CMAR PcP PcP 11 56 04.3 +0.1
comp=Z,2.5nm,0.7s,baz=3.0,slow=1.3,SNR=5.7
CMAR ScP ScP 11 59 48.8 -0.2
comp=Z,1.0nm,0.5s,baz=28,slow=3.4,SNR=6.8
CMAR LR LR 12 11 06.4
comp=Z,178nm,19.0s,MS3.9,baz=61,slow=37
CMAR Chiang Mai Arr 40.01 260 P **P 11 53 59.4 -0.4**
CMAR 11 56 04.3
NIKO Nikolski 41.15 45 *eP* **P 11 54 07.9 -0.8**
KSM Kuching 42.21 229 *eP* **P 11 54 17.4 -0.5**
KSM Kuching 42.21 229 P **P 11 54 18.8 +0.9**
comp=Z,45nm,1.0s,mb5.1
WMQ Urumqi 42.45 301 P **P 11 54 20.5 +1.0**
WMQ AP pP 11 54 30.5 -2.3
WMQ XP sP 11 54 34.5 -4.1
WMQ PP PP 11 56 02.5 +4.0
WMQ S **S 12 00 40.5 +2.7**
WMQ SS SS 12 03 43.5 -4.7
WMQ AMB AMB
comp=Z,30nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,75nm,4.0s
WMQ LR LR
comp=N,165nm,16.0s,MS4.1
WMQ LR LR
comp=E,132nm,16.0s,MS4.1
WMQ LR LR
comp=Z,168nm,16.0s,MS4.0
KAPI Kappang 42.46 212 *eP* **P 11 54 18.9 -1.0**
KAPI Kappang 42.46 212 P **P 11 54 19.8 -0.1**
comp=Z,19nm,1.4s,mb4.5
ZAA0 Zalesovo Array 44.53 316 *eP* **P 11 54 35.6 -0.5**
ZALV Zalesovo Beam 44.53 316 P **P 11 54 35.6 -0.5**
comp=Z,4.8nm,0.4s,mb4.7,baz=106,slow=7.9,SNR=26
ZALV PcP PcP 11 56 18.1 -0.5
comp=Z,20nm,0.6s,baz=98,slow=3.2,SNR=14
ZALV ScP ScP 12 00 04.5 -2.1
comp=Z,11nm,1.0s,baz=94,slow=4.5,SNR=13
ZALV LR LR 12 14 03.4
comp=Z,165nm,18.3s,MS4.0,baz=107,slow=37
ZALV Zalesovo Beam 44.53 316 P **P 11 54 35.6 -0.5**
ZALV 11 56 18.1
NVS Novosibirsk 45.53 317 ⇓*i* P **P 11 54 42.7 -1.3**
NVS *i* 11 56 20.0
NVS *i* S **S 12 01 20.2 -2.1**
NVS *i* 12 04 33.8
NVS pmax pmax
comp=Z,47nm,1.5s,mb5.2
NVS pmax pmax
comp=N,8.0nm,1.4s
NVS pmax pmax
comp=E,34nm,1.2s
NVS smax
comp=N,12nm,1.8s
NVS smax
comp=E,24nm,2.0s
BATI Baumata 45.66 204 P **P 11 54 47.9 +2.4**
comp=E,44nm,1.0s,mb5.3
HNR Honiara 45.72 153 LR LR 12 12 16.5
comp=E,255nm,20.8s,MS4.1,baz=76,slow=34
KAKA Kakadu 45.83 191 *eP* Px 11 54 32.0
comp=E,22nm,0.6s
KAKA Kakadu 45.83 191 *eP* Px 11 54 32.5
MK31 Makanchi Array 46.07 306 *eP* **P 11 54 47.8 -0.6**
MK31 Makanchi Array 46.07 306 *i* P **P 11 54 48.2 -0.2**
MK31 pmax pmax
comp=Z,12nm,0.4s,mb5.2
MKAR Makanchi Array 46.07 306 P **P 11 54 48.2 -0.3**
comp=Z,21nm,0.7s,mb5.2,baz=85,slow=8.7,SNR=87
MKAR ScP ScP 12 00 10.9 -2.2
comp=Z,7.0nm,0.7s,baz=80,slow=5.4,SNR=16
MKAR LR LR 12 15 00.1
comp=Z,247nm,19.6s,MS4.2,baz=261,slow=37
MKAR Makanchi Array 46.07 306 P **P 11 54 48.2 -0.3**
MKAR ScP ScP 12 00 10.9 -2.2
MKAR LR LR 12 15 00.1
COEN Coen 46.44 177 *eP* **P 11 54 51.7 +0.1**
comp=Z,143nm,1.1s,mb5.8
COEN Coen 46.44 177 P **P 11 54 51.9 +0.3**
comp=Z,62nm,1.6s,mb5.3
KHKI Kahang-Kahang 47.33 215 P **P 11 54 58.0 -0.6**
KURK Kurchatov 48.27 311 P **P 11 55 05.6 +0.1**
comp=Z,576nm,0.9s,mb6.6,SNR=45
KURK Kurchatov 48.27 311 ⇑P **P 11 55 06.4 +0.9**
SNR=26
KURK Kurchatov 48.27 311 LR LR 12 16 26.7
comp=Z,585nm,18.3s,MS4.6,baz=85,slow=37
KURK Kurchatov 48.27 311 *eP* **P 11 55 05.1 -0.4**
comp=Z,80nm,0.8s,mb5.8
KURK Kurchatov 48.27 311 P **P 11 55 05.5 0.0**
KURK pmax pmax
comp=Z,83nm,0.9s,mb5.8
SJI Sawahan 48.75 220 P **P 11 55 11.7 +2.1**
SVW2 Sparrevohn 49.35 35 *eP* **P 11 55 14.3 +0.7**
PPI Padang Panjang 50.32 237 P **P 11 55 25.8 +4.2**
LEM Lembang 50.37 225 P **P 11 55 21.7 -0.2**
comp=Z,64nm,1.0s,mb5.6
OHAK Old Harbor 50.38 40 *eP* **P 11 55 20.1 -1.4**
comp=Z,63nm,0.8s,mb5.7
IMA2 Indian Mountai 50.73 29 *eP* **P 11 55 24.3 +0.3**
KDAK Kodiak Island 50.75 39 P **P 11 55 23.0 -1.3**
comp=Z,1μm,0.5s,SNR=42
KDAK Kodiak Island 50.75 39 P pP 11 55 37.9 +0.1
comp=Z,142nm,0.6s,baz=273,slow=5.1,SNR=123
KDAK LR LR 12 15 46.6
comp=Z,234nm,21.2s,MS4.2,baz=277,slow=35
PPLA Purkeypile 51.08 33 *eP* **P 11 55 27.5 +0.8**
comp=Z,100nm,1.4s,mb5.6
CHUM Lake Minchumin 51.09 32 *eP* **P 11 55 27.4 +0.6**
comp=Z,47nm,1.1s,mb5.3
TKM2 Tokmak 2 51.31 301 *eP* **P 11 55 28.6 -0.1**
comp=Z,9.0nm,0.6s,mb4.9
TKM2 Tokmak 2 51.31 301 *eP* **P 11 55 28.6 -0.1**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
TKM2 Tokmak 2 51.31 301 P **P 11 55 29.4 +0.7**
SNR=15
KTH Kantishna Hill 51.69 32 *eP* **P 11 55 31.5 +0.2**
comp=Z,191nm,2.1s,mb5.7
KZA Kyzart 51.73 300 P **P 11 55 33.2 +1.4**
SNR=10.0
KBK Karagaybulak 51.83 301 P **P 11 55 33.1 +0.6**
SNR=14
USP Ospenovka 52.02 302 P **P 11 55 34.1 +0.1**
SNR=7.5
COLD Coldfoot 52.24 27 *eP* **P 11 55 35.5 +0.3**
comp=Z,14nm,1.2s,mb4.8
SEW Seward 52.34 36 *eP* **P 11 55 35.1 -1.1**
PMR Palmer 52.48 35 *eP* **P 11 55 35.7 -1.4**
comp=Z,121nm,1.2s,mb5.7
PMR Palmer 52.48 35 *eP* **P 11 55 35.7 -1.4**
PMR pmax pmax
comp=Z,121nm,1.2s,mb5.7
MCK McKinley 52.58 32 *eP* **P 11 55 37.5 -0.4**
comp=Z,89nm,1.4s,mb5.5
MCK McKinley 52.58 32 *eP* **P 11 55 37.5 -0.3**
MCK pmax pmax
comp=Z,89nm,1.4s,mb5.5
EKS2 Erkin-Say 52.67 301 *eP* **P 11 55 38.7 -0.2**
comp=Z,6.2nm,0.7s,mb4.7
EKS2 Erkin-Say 52.67 301 P **P 11 55 39.0 +0.1**
SNR=6.0
WRAB Tennant Creek 52.68 188 P **P 11 55 38.0 -1.0**
comp=Z,787nm,0.5s,SNR=74
WRAB Tennant Creek 52.68 188 *eP* **P 11 55 37.6 -1.4**
comp=Z,73nm,0.6s,mb5.8
WRAB Tennant Creek 52.68 188 *c i* P **P 11 55 37.9 -1.1**
WRAB Tennant Creek 52.68 188 P **P 11 55 37.7 -1.3**
comp=Z,144nm,0.9s,mb5.9
WB2 Warramunga Arr 52.69 188 *eP* **P 11 55 37.3 -1.8**
WB2 *eP* PcP PcP 11 56 49.1 +0.7
WB2 *eS* **S 12 02 54.3 -9.0**
WB2 Warramunga Arr 52.69 188 *eP* **P 11 55 37.7 -1.4**
WRA Warramunga Arr 52.69 188 P **P 11 55 37.9 -1.1**
comp=Z,98nm,0.6s,mb5.9,baz=5.4,slow=7.7,SNR=725
WRA PcP PcP 11 56 48.7 +0.4
comp=Z,23nm,0.7s,baz=360,slow=4.0,SNR=9.1
WRA ScP ScP 12 00 40.2 -1.3
comp=Z,1.7nm,0.7s,baz=2.0,slow=4.5,SNR=5.4
WRA Warramunga Arr 52.69 188 P **P 11 55 37.9 -1.2**
WRA 11 56 48.7
CTA Charters Tower 52.74 173 *eP* **P 11 55 38.7 -0.8**
comp=Z,15nm,0.6s,mb5.1
CTAO Charters Tower 52.74 173 *eP* **P 11 55 38.5 -0.9**
comp=Z,21nm,0.8s,mb5.1
CTAO Charters Tower 52.74 173 *eP* **P 11 55 38.6 -0.9**
CTAO pmax pmax
comp=Z,21nm,0.8s,mb5.1
CTAO Charters Tower 52.74 173 P **P 11 55 40.9 +1.4**
comp=Z,43nm,0.9s,mb5.4
DDI Dehra Dun 52.79 285 *ex* x 11 55 31.0
VOSK Vostochnaya 52.83 314 P **P 11 55 39.7 -0.2**
VOSK pmax pmax
comp=Z,49nm,0.9s,mb5.4
AML Almayashu 52.85 301 *eP* **P 11 55 41.0 +0.9**
comp=Z,31nm,0.7s,mb5.3
AML Almayashu 52.85 301 P **P 11 55 41.3 +1.2**
SNR=9.7
COLA College 53.07 30 *eP* **P 11 55 41.2 -0.2**
comp=Z,22nm,0.7s,mb5.2
COLA College 53.07 30 ⇓*i* P **P 11 55 42.0 +0.5**
BVA0 Borovoye Array 53.15 315 *i* P **P 11 55 42.7 +0.5**
BVA0 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BRVK Borovoye 53.21 315 P **P 11 55 43.2 +0.6**
comp=Z,213nm,0.9s,mb6.1,SNR=12
BRVK Borovoye 53.21 315 P **P 11 55 43.7 +1.1**
SNR=10
BRVK Borovoye 53.21 315 *eP* **P 11 55 41.9 -0.7**
comp=Z,38nm,0.9s,mb5.3
BRVK Borovoye 53.21 315 *eP* **P 11 55 41.9 -0.7**
BRVK pmax pmax
comp=Z,38nm,0.9s,mb5.3
NDI New Delhi 54.05 284 *eP* **P 11 55 48.0 -1.2**
KK31 Karatay Array 54.90 303 *i* P **P 11 55 55.1 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
MENT Mentasta 54.95 33 *eP* **P 11 55 55.8 +0.6**
EGAK Eagle 55.94 30 *eP* **P 11 56 01.6 -0.6**
comp=Z,15nm,0.8s,mb5.1
ASAR Alice Springs 56.42 188 P **P 11 56 04.8 -1.3**
comp=Z,24nm,0.5s,mb5.5,baz=3.2,slow=7.1,SNR=252
ASAR PcP PcP 11 57 02.6 +0.1
comp=Z,13nm,0.7s,baz=12,slow=4.6,SNR=7.3
DAWY Dawson 56.78 31 *eP* **P 11 56 08.3 +0.1**
MBWA Marble Bar 57.18 203 *eP* **P 11 56 10.3 -1.3**
comp=Z,24nm,0.6s,mb5.4
MBWA Marble Bar 57.18 203 P **P 11 56 11.1 -0.5**
comp=Z,59nm,0.8s,mb5.7
PNL Peninsula 57.43 36 *eP* **P 11 56 13.2 +0.4**
HYB Hyderabad 57.61 271 *eP* **P 11 56 14.0 -0.8**
HYB Hyderabad 57.61 271 *i* P **P 11 56 14.0 -0.8**
SVE Sverdlovsk 58.08 320 ⇓*e* P **P 11 56 18.3 +0.8**
SVE pmax pmax
comp=Z,31nm,1.0s,mb5.3
INK Inuvik 58.52 26 *eP* **P 11 56 20.1 -0.3**
comp=Z,1μm,0.7s
KBL Kabul 58.53 293 *eP* **P 11 56 20.4 -0.6**
comp=Z,11nm,0.7s,mb5.0
KBL Kabul 58.53 293 *eP* **P 11 56 20.4 -0.6**
KBL pmax pmax
comp=Z,11nm,0.7s,mb5.0
EIDS Eidsvold 58.57 169 *eP* **P 11 56 21.2 0.0**
comp=Z,35nm,0.9s,mb5.4
LATR Latur 58.83 273 *ex* **P 11 56 21.8 -1.5**
ARU Arti 59.29 320 P **P 11 56 25.8 -0.1**
comp=Z,222nm,1.1s,mb6.1,SNR=6.2
ARU Arti 59.29 320 *eP* **P 11 56 25.6 -0.3**
comp=Z,34nm,0.9s,mb5.4
ARU Arti 59.29 320 ⇓*i* P **P 11 56 25.7 -0.2**
ARU pmax pmax
comp=Z,28nm,1.1s,mb5.2
SKAG Skagway 59.50 36 *eP* **P 11 56 28.5 +1.2**
comp=Z,82nm,1.2s,mb5.6
DZM Mont Dzumac 59.74 152 *eP* **P 11 56 29.8 +0.5**
DZM Mont Dzumac 59.74 152 *eP* **P 11 56 30.4 +1.1**
AB31 Akbulak array 60.36 312 P **P 11 56 32.9 -0.5**
AB31 pmax pmax
comp=Z,19nm,0.5s,mb5.4
POO Poona 61.06 274 *ex* x 11 56 31.5
AKTO Aktyubinsk 61.21 314 *i* P **P 11 56 39.5 +0.4**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
DLBC Dease Lake 62.42 36 *eP* **P 11 56 48.1 +1.0**
ARMA Armidale 63.61 169 *eP* **P 11 56 55.8 +0.6**
ARMA Armidale 63.61 169 *eP* **P 11 56 55.8 +0.5**
comp=Z,1.2nm,0.6s,mb4.1
STKA Stephens Creek 64.22 179 *eP* **P 11 56 58.7 -0.5**
comp=Z,22nm,0.8s,mb5.2
STKA Stephens Creek 64.22 179 P **P 11 56 58.8 -0.4**
comp=Z,24nm,0.7s,mb5.3,baz=344,slow=7.0,SNR=36
STKA LR LR 12 25 40.1
comp=Z,156nm,21.1s,MS4.2,baz=24,slow=37
STKA Stephens Creek 64.22 179 *eP* **P 11 56 58.6 -0.6**
FORT Forrest 64.25 192 *eP* **P 11 56 58.9 -0.6**
comp=Z,103nm,0.5s,mb6.1
FORT Forrest 64.25 192 *eP* **P 11 56 59.1 -0.4**
comp=Z,123nm,0.6s,mb6.1
ALE Alert 64.47 3 P **P 11 57 00.0 -0.4**
comp=Z,146nm,0.9s,mb6.0,SNR=8.4
AFI Afiamalu 64.85 128 P **P 11 57 04.3 +0.6**
comp=Z,34nm,0.8s,mb5.4,baz=247,slow=4.3,SNR=4.6
APA Apatity 66.42 336 ⇑*i* P **P 11 57 12.6 -0.6**
APA *i* pP 11 57 27.2 0.0
APA *i* 11 57 40.2
APA pmax pmax
comp=Z,14nm,0.8s,mb5.0
APA MLR MLR
comp=Z,900nm,13.0s,MS5.2
RES Resolute Bay 66.94 14 *eP* **P 11 57 15.6 -0.7**
comp=Z,798nm,0.7s
KLMR Klimovskoe 67.14 329 *eP* **P 11 57 16.9 -0.9**
KLMR pmax pmax
comp=Z,22nm,0.7s,mb5.3
KEV Kevo 67.31 340 *ep* **P 11 57 18.0 -0.7**
comp=Z,1.7nm,0.3s,mb4.5
KEV Kevo 67.31 340 *eP* **P 11 57 18.0 -0.7**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KLBR Kellerberrin 67.52 201 *eP* **P 11 57 19.8 -0.7**
comp=Z,32nm,1.1s,mb5.3
YKA Yellowknife Ar 67.86 29 P **P 11 57 21.4 -0.9**
comp=Z,15nm,0.7s,mb5.1,baz=296,slow=6.5,SNR=32
YKA Yellowknife Ar 67.86 29 P **P 11 57 21.4 -0.9**
ARCES ARCESS Array B 67.87 340 P **P 11 57 22.0 -0.2**
comp=Z,4.1nm,0.4s,mb4.8,baz=61,slow=7.5,SNR=73
ARCES LR LR 12 29 55.3
comp=Z,181nm,18.2s,MS4.3,baz=240,slow=38
ARCES ARCESS Array B 67.87 340 P **P 11 57 22.0 -0.2**
ARCES LR LR 12 29 55.3
CNB Canberra Magne 68.13 172 *eP* **P 11 57 24.8 +0.6**
JOF Joensuu 69.54 333 *ep* **P 11 57 31.7 -1.1**
comp=Z,7.5nm,0.4s,mb5.0
JOF Joensuu 69.54 333 *eP* **P 11 57 31.7 -1.1**
JOF pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
PGC Sidney 69.78 45 *eP* **P 11 57 34.9 +0.4**
comp=Z,75nm,0.8s,mb5.7
B04A Port Angeles 70.02 45 ⇑P **P 11 57 36.1 +0.1**
baz=70,SNR=8.9
TOO Toolangi 70.04 176 *eP* **P 11 57 36.3 +0.3**
DAG Danmarks Havn 70.05 355 ⇓*i* P **P 11 57 35.2 -0.5**
DAG pmax pmax
comp=Z,15nm,0.6s,mb5.1
DAG Danmarks Havn 70.05 355 ⇓*i* P **P 11 57 35.2 -0.5**
comp=Z,15nm,0.6s,mb5.1
NLWA Neilton Lookou 70.09 46 ⇑P **P 11 57 37.1 +0.6**
baz=70,SNR=5.7
A04A Legoe Bay, Lum 70.19 44 ⇓P **P 11 57 37.6 +0.6**
baz=70,SNR=9.2
D03A Wishkah Elem. 70.28 46 ⇑P **P 11 57 38.3 +0.7**
baz=70
VDB Vedder Mountai 70.40 44 P **P 11 57 38.3 -0.1**
A05A Maple Falls 70.43 44 ⇑P **P 11 57 38.2 -0.3**
baz=70,SNR=13
HDW Hoodsport 70.47 45 P **P 11 57 39.9 +1.2**
C04A Brinnon 70.49 45 ⇑P **P 11 57 39.2 +0.4**
baz=70,SNR=8.8
MBW Mount Baker 70.63 44 P **P 11 57 40.5 +0.8**
E03A Lebam 70.67 47 ⇑P **P 11 57 40.4 +0.5**
baz=70
B05A Bryant 70.76 45 ⇓P **P 11 57 41.1 +0.6**
baz=70,SNR=27
D04A Dobbs Creek Ra 70.87 46 ⇑P **P 11 57 42.0 +0.8**
baz=71
JCW Jim Creek 70.89 45 *eP* **P 11 57 41.7 +0.4**
B06A Marblemount 71.00 44 ⇓P **P 11 57 42.1 +0.1**
baz=71,SNR=15
RPW Rockport 71.02 44 *eP* **P 11 57 42.2 +0.2**
E04A Onalaska 71.16 46 ⇓P **P 11 57 43.4 +0.5**
baz=71
OBN Obninsk 71.25 324 ⇑*eP* **P 11 57 42.7 -0.7**
OBN *e**PP pP 11 57 56.8 -0.7
OBN *e* pP 11 58 00.6 +3.1
OBN pmax pmax
comp=Z,13nm,0.7s,mb5.0
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.4
C05A Tolt Reservoir 71.27 45 ⇑P **P 11 57 44.1 +0.5**
baz=71,SNR=10
D05A Enumclaw 71.33 46 ⇑P **P 11 57 44.6 +0.6**
baz=71
A07A Ashnola River, 71.39 43 ⇓P **P 11 57 44.4 +0.1**
baz=71,SNR=41
WBK Wadi Bani Khal 71.51 285 P **P 11 57 46.3 +0.8**
SNR=10
C06A Tall Timber Ra 71.63 45 ⇑P **P 11 57 46.0 +0.2**
baz=71,SNR=5.3
F04A Amboy 71.65 47 ⇓P **P 11 57 46.4 +0.5**
baz=71,SNR=7.5
PNT Penticton 71.70 43 P **P 11 57 46.4 +0.1**
E05A Randle 71.76 46 ⇓P **P 11 57 46.3 -0.3**
baz=72,SNR=5.8
BIDO Bidbid 71.77 287 ⇑P **P 11 57 47.6 +0.6**
SNR=8.8
B07A Winthrop 71.83 44 ⇓P **P 11 57 47.2 +0.2**
baz=72,SNR=38
KAF Kangasniemi 71.92 333 *ep* **P 11 57 46.0 -1.2**
comp=Z,8.0nm,0.3s,mb5.1,baz=51,slow=5.7
KAF Kangasniemi 71.92 333 *eP* **P 11 57 46.0 -1.2**
KAF pmax pmax
comp=Z,8.0nm,0.3s,mb5.1
G04A Mulino 71.96 48 ⇑P **P 11 57 47.8 0.0**
baz=72
D06A Cle Elum 72.01 45 ⇓P **P 11 57 48.4 +0.3**
baz=72,SNR=9.1
I03A Eugene 72.04 49 ⇑P **P 11 57 48.8 +0.5**
baz=72
A08A Turner Farm, O 72.08 43 ⇑P **P 11 57 48.6 +0.1**
baz=72,SNR=28
BANOM Banah 72.10 290 ⇓P **P 11 57 49.9 +0.9**
SNR=5.8
J02A Umpqua 72.14 50 ⇑P **P 11 57 49.4 +0.5**
baz=72
C07A Waterville 72.23 44 ⇓P **P 11 57 49.3 -0.2**
baz=72,SNR=18
E06A Yakima 72.24 46 ⇓P **P 11 57 49.6 +0.1**
baz=72,SNR=8.1
F05A White Salmon 72.27 47 ⇑P **P 11 57 50.0 +0.3**
baz=72
EBG Ellensburg 72.31 45 P **P 11 57 50.6 +0.8**
JMDO Jabal Madar 72.33 286 ⇑P **P 11 57 50.3 -0.1**
SNR=8.3
B08A Colville Reser 72.34 44 ⇓P **P 11 57 50.3 +0.3**
baz=72,SNR=48
H04A Detroit Lake 72.39 48 ⇑P **P 11 57 50.5 +0.1**
baz=72
HOQ Hoqain 72.39 287 P **P 11 57 51.4 +0.7**
SNR=9.4
A09A Danville 72.46 43 ⇓P **P 11 57 50.8 +0.1**
baz=72,SNR=44
K02A Glendale 72.47 50 ⇓P **P 11 57 51.0 +0.1**
baz=72
D07A Quincy 72.53 45 ⇓P **P 11 57 50.8 -0.4**
baz=72,SNR=11
G05A Wamic 72.66 47 ⇓P **P 11 57 52.2 +0.2**
baz=72
L02A Cave Junction 72.69 51 ⇓P **P 11 57 52.6 +0.3**
baz=72
F06A Goldendale 72.74 46 ⇓P **P 11 57 52.8 +0.3**
baz=72
HATD Hatta, Dubai 72.75 289 P **P 11 57 53.8 +1.0**
SNR=10.0
C08A Higginbotham F 72.79 44 ⇑P **P 11 57 52.7 0.0**
baz=73,SNR=8.5
BSY Bisya 72.88 286 P **P 11 57 54.1 +0.4**
SNR=24
E07A Sunnyside 72.91 45 ⇓P **P 11 57 53.7 +0.2**
baz=73,SNR=13
B09A Rice 72.99 43 ⇑P **P 11 57 54.2 +0.3**
baz=73,SNR=24
H05A Madras 73.01 48 ⇓P **P 11 57 54.5 +0.5**
baz=73,SNR=5.7
A10A Northport 73.05 42 ⇓P **P 11 57 54.6 +0.3**
baz=73,SNR=39
G06A Carlson Farm, 73.09 47 ⇑P **P 11 57 54.6 +0.1**
baz=73,SNR=6.4
EDM Edmonton 73.12 37 *eP* **P 11 57 53.8 -0.7**
ARQ Araqi 73.15 287 P **P 11 57 55.8 +0.6**
SNR=17
RSW Rattlesnake Hi 73.15 45 *eP* **P 11 57 55.3 +0.5**
OD2 Odessa Site #2 73.18 44 *eP* **P 11 57 54.9 -0.1**
F07A Phinny Hill Vi 73.19 46 ⇑P **P 11 57 55.1 0.0**
baz=73
I05A Bend 73.22 48 ⇑P **P 11 57 55.4 +0.1**
baz=73
D08A Wollman Farm, 73.22 45 ⇓P **P 11 57 55.5 +0.2**
baz=73,SNR=19
C09A Chrisman Ranch 73.23 44 ⇑P **P 11 57 55.4 +0.1**
baz=73,SNR=15
KIV Kislovodsk 73.35 312 ⇑P **P 11 57 57.7 +1.6**
SNR=9.3
KIV Kislovodsk 73.35 312 *eP* **P 11 57 57.3 +1.2**
comp=Z,26nm,0.7s,mb5.3
KIV Kislovodsk 73.35 312 *c i* P **P 11 57 57.7 +1.6**
KIV pmax pmax
comp=Z,39nm,1.5s,mb5.1
E08A Dider Farm, El 73.42 45 ⇓P **P 11 57 56.6 +0.1**
baz=73
VIPM Ingram Point 73.46 48 P **P 11 57 57.3 +0.6**
YBH Yreka Blue Hor 73.48 51 *eP* **P 11 57 57.5 +0.6**
comp=Z,12nm,0.8s,mb4.9
YBH Yreka Blue Hor 73.48 51 *eP* **P 11 57 57.6 +0.7**
YBH pmax pmax
comp=Z,12nm,0.8s
H06A Lindquist Farm 73.52 47 ⇑P **P 11 57 57.0 0.0**
baz=73,SNR=7.3
D09A Jones Farm, Ri 73.58 44 ⇓P **P 11 57 57.5 +0.1**
baz=73,SNR=5.4
B10A Chitwood Farm, 73.58 43 ⇑P **P 11 57 57.8 +0.5**
baz=73,SNR=5.3
NEW Newport 73.66 43 *eP* **P 11 57 57.9 0.0**
comp=Z,39nm,0.9s,mb5.3
NEW Newport 73.66 43 *eP* **P 11 57 57.9 +0.1**
NEW pmax pmax
comp=Z,39nm,0.9s
G07A Ruggs Ranch, H 73.67 47 ⇓P **P 11 57 58.1 +0.2**
baz=73,SNR=5.8
A11A Hall Mountain, 73.73 42 ⇑P **P 11 57 59.0 +0.7**
baz=74,SNR=39
C10A Spilker Farm, 73.78 43 ⇓P **P 11 57 59.1 +0.6**
baz=74,SNR=10
GNI Garni 73.88 307 LR LR 12 33 28.1
comp=Z,200nm,18.5s,MS4.4,baz=231,slow=38
GNI Garni 73.88 307 ⇑*eP* **P 11 57 59.9 +0.7**
GNI pmax pmax
comp=Z,35nm,1.9s
F08A Pendleton 73.94 46 ⇑P **P 11 57 60.0 +0.5**
baz=74,SNR=15
E09A Wood Farm, Sta 73.96 45 ⇓P **P 11 57 59.8 +0.2**
baz=74,SNR=30
I06A Prineville 73.99 48 ⇑P **P 11 58 00.4 +0.6**
baz=74,SNR=7.3
B11A Sandpoint 74.00 42 ⇑P **P 11 58 00.6 +0.7**
baz=74,SNR=23
G08A Pilot Rock 74.09 46 ⇓P **P 11 58 00.7 +0.3**
baz=74,SNR=8.2
A12A Yaak River Ran 74.15 42 ⇓P **P 11 58 01.4 +0.7**

baz=74,SNR=22
WDC Whiskeytown Da 74.15 52 *e*P **P 11 58 00.9 0.0**
comp=Z,26nm,1.2s,mb5.0
WDC Whiskeytown Da 74.15 52 *e*P **P**
WDC pmax pmax
comp=Z,26nm,1.2s,mb5.0
K05A Summer Lake 74.17 49 ⇑P **P 11 58 01.7 +0.8**
baz=74,SNR=27
D10A Wagner Farm, O 74.19 44 ⇓P **P 11 58 00.7 -0.3**
baz=74,SNR=10
LNOR Lincton Mounta 74.20 45 *e*P **P 11 58 01.3 +0.3**
I07A Izee 74.36 48 ⇑P **P 11 58 02.0 0.0**
baz=74,SNR=6.6
J06A Christmas Vall 74.37 49 ⇓P **P 11 58 02.3 +0.2**
baz=74,SNR=12
B12A Libby 74.43 42 ⇑P **P 11 58 02.9 +0.6**
baz=74,SNR=7.0
F09A S2 Ranch, Elgi 74.51 45 ⇑P **P 11 58 03.0 +0.2**
baz=74,SNR=10.0
E10A Myers Farm, Un 74.58 44 ⇑P **P 11 58 03.1 -0.2**
baz=74,SNR=14
H08A Prairie City 74.66 47 ⇓P **P 11 58 03.9 +0.2**
baz=74,SNR=17
D11A Klaveano Farm, 74.75 44 ⇓P **P 11 58 04.0 -0.2**
baz=74,SNR=26
F10A Beach Ranch, E 74.78 45 ⇑P **P 11 58 05.2 +0.8**
baz=75,SNR=13
G09A Cove 74.81 46 ⇑P **P 11 58 04.9 +0.3**
baz=75,SNR=16
A13A Flathead Natio 74.84 41 ⇓P **P 11 58 05.7 +1.0**
baz=75,SNR=14
J07A Hines 74.84 48 ⇓P **P 11 58 05.8 +0.9**
baz=75,SNR=38
C12B Naegeli Ranch, 74.89 43 ⇓P **P 11 58 06.0 +1.0**
baz=75,SNR=11
MOD Modoc 74.96 50 *e*P **P 11 58 05.6 +0.1**
comp=Z,20nm,1.0s,mb5.0
SUMG Summit 75.02 360 *e*P **P 11 58 05.9 +0.6**
comp=Z,20nm,1.1s,mb5.0
I08A Drewsey 75.03 47 ⇓P **P 11 58 06.5 +0.6**
baz=75,SNR=15
WALA Waterton Lakes 75.05 41 *e*P **P 11 58 06.0 +0.1**
comp=Z,31nm,0.8s,mb5.3
B13A Whitefish 75.11 42 ⇑P **P 11 58 07.0 +0.7**
baz=75,SNR=38
E11A Bogner Ranch, 75.18 44 ⇓P **P 11 58 06.6 -0.2**
baz=75,SNR=14
H09A Durkee 75.20 46 ⇑P **P 11 58 07.0 +0.2**
baz=75,SNR=9.4
G10A Bishop Farm, J 75.20 46 ⇓P **P 11 58 07.3 +0.5**
baz=75,SNR=44
K07A Rock Creek Ran 75.23 49 ⇓P **P 11 58 07.8 +0.7**
baz=75,SNR=32
O04C Chester 75.25 52 ⇑P **P 11 58 07.5 +0.3**
baz=75,SNR=6.3
D12A Red Ives Fores 75.31 43 ⇑P **P 11 58 07.3 -0.2**
baz=75
BMO Blue Mountains 75.32 46 *e*P **P 11 58 07.7 +0.2**
comp=Z,18nm,0.6s,mb5.2
A14A Double T Ranch 75.37 41 ⇓P **P 11 58 08.7 +1.0**
baz=75,SNR=19
J08A Circle Bar Ran 75.37 48 ⇓P **P 11 58 08.2 +0.3**
baz=75,SNR=34
C13A Hot Springs 75.42 42 ⇓P **P 11 58 08.7 +0.6**
baz=75,SNR=16
F11A Grangeville 75.46 45 ⇑P **P 11 58 08.2 -0.2**
baz=75,SNR=18
Q03C Winters 75.47 53 ⇓P **P 11 58 09.1 +0.6**
baz=75
OHCM Honcut 75.48 53 *e*P **P 11 58 08.2 -0.3**
I09A Lost Marbles R 75.51 47 ⇓P **P 11 58 09.0 +0.3**
baz=75,SNR=32
L07A Adell 75.52 49 ⇓P **P 11 58 09.5 +0.8**
baz=75,SNR=46
O05C Quincy 75.54 52 ⇓P **P 11 58 08.6 -0.3**
baz=75,SNR=6.8
G11A Walters Elk Ra 75.65 45 ⇑P **P 11 58 09.3 -0.2**
baz=75,SNR=50
K08A Mann Creek Ran 75.69 48 ⇑P **P 11 58 10.0 +0.3**
baz=76,SNR=26
A15A Johnson Ranch, 75.75 41 ⇑P **P 11 58 10.0 +0.1**
baz=76,SNR=30
WVOR Wild Horse Val 75.75 49 *e*P **P 11 58 10.3 +0.3**
comp=Z,20nm,0.9s,mb5.0
WVOR Wild Horse Val 75.75 49 *e*P **P 11 58 10.4 +0.4**
WVOR pmax pmax
comp=Z,20nm,0.9s,mb5.0
B14A Marquette Ranc 75.79 41 ⇑P **P 11 58 10.5 +0.3**
baz=76,SNR=26
H10A Noah's Angus R 75.79 46 ⇓P **P 11 58 10.5 +0.2**
baz=76,SNR=46
D13A Huson 75.81 43 ⇓P **P 11 58 10.7 +0.5**
baz=76,SNR=9.1
J09A Fry Pan Ranch, 75.83 48 ⇑P **P 11 58 10.7 +0.2**
baz=76,SNR=23
C14A Swan Lake 75.85 42 ⇑P **P 11 58 10.8 +0.3**
baz=76
N06A Buffalo Meadow 75.85 51 ⇑P **P 11 58 11.0 +0.3**
baz=76,SNR=9.2
M07A Soldier Meadow 75.95 50 ⇓P **P 11 58 11.6 +0.4**
baz=76,SNR=20
BEKR Beckwourth 75.96 52 ⇓P **P 11 58 11.2 -0.1**
baz=76,SNR=26
I10A Payette 76.03 46 ⇑P **P 11 58 12.2 +0.6**
baz=76,SNR=13
L08A Fields 76.06 49 ⇓P **P 11 58 12.3 +0.4**
baz=76,SNR=32
O06A Flanigan 76.15 51 ⇓P **P 11 58 12.3 -0.1**
baz=76,SNR=13
H11A Donnelly 76.18 46 ⇑P **P 11 58 11.9 -0.5**
baz=76,SNR=27
K09A Rome 76.19 48 ⇑P **P 11 58 12.8 +0.3**
baz=76,SNR=15
B15A Bradely Ranch, 76.21 41 ⇓P **P 11 58 12.4 -0.2**
baz=76,SNR=43
LAVA Lava Cap Winer 76.27 53 ⇓P **P 11 58 12.5 -0.6**
baz=76,SNR=16
E13A Victor 76.32 43 ⇓P **P 11 58 13.0 -0.2**
baz=76
P06A Stead Airport, 76.36 52 ⇓P **P 11 58 13.9 +0.3**
baz=76
D14A Greenough 76.36 43 ⇑P **P 11 58 13.2 -0.2**
baz=76,SNR=10
A16A West Butte Ran 76.39 40 ⇑P **P 11 58 13.1 -0.4**
baz=76,SNR=13
N07B Gerlach 76.39 50 ⇑P **P 11 58 13.9 +0.2**
baz=76,SNR=15
R04C Big Horse Ranc 76.39 53 ⇓P **P 11 58 12.9 -0.9**
baz=76,SNR=6.7
J10A Berg Farm, Mel 76.40 47 ⇑P **P 11 58 13.4 -0.3**
baz=76,SNR=6.5
M08A Happy Creek Ra 76.43 49 ⇑P **P 11 58 14.2 +0.3**
baz=76,SNR=6.8
C15A Salmond Ranch, 76.48 42 ⇑P **P 11 58 14.8 +0.7**
baz=76,SNR=30
L09A Wilkinson Ranc 76.58 49 ⇓P **P 11 58 15.3 +0.6**
baz=76,SNR=16
CHMT Chamberlain Mo 76.60 43 *e*P **P 11 58 14.1 -0.7**
B16A M & M Farms, S 76.63 41 ⇓P **P 11 58 14.7 -0.2**
baz=76,SNR=9.1
I11A Placerville 76.64 46 ⇑P **P 11 58 14.7 -0.3**
baz=76,SNR=6.0
WCN Washoe City 76.65 52 ⇓P **P 11 58 15.3 +0.1**
baz=76,SNR=7.1
K10A MacKenzie Ranc 76.68 48 ⇓P **P 11 58 15.4 +0.1**
baz=76,SNR=22
PAHR Pah Rah Range 76.68 51 *e*P **P 11 58 15.6 +0.2**
comp=Z,32nm,1.3s,mb5.1
CMB Columbia Colle 76.88 53 *e*P **P 11 58 16.6 0.0**
comp=Z,37nm,1.2s,mb5.2
CMB Columbia Colle 76.88 53 *e*P **P 11 58 16.6 +0.1**
CMB pmax pmax
comp=Z,37nm,1.2s,mb5.2
N08A GE Springer Mi 76.94 50 ⇑P **P 11 58 17.2 +0.4**
baz=77
D15A Lincoln 76.94 42 ⇓P **P 11 58 16.8 +0.1**
baz=77
C16A Fuhringer Ranc 76.95 41 ⇑P **P 11 58 16.6 -0.2**
baz=77,SNR=19
H12A Diamond D Ranc 76.96 45 ⇓P **P 11 58 16.5 -0.3**
baz=77,SNR=24
MFID Camas Ranch 76.98 47 ⇑P **P 11 58 17.2 +0.2**
baz=77,SNR=23
UMR Umm Al-Rimmam 76.99 297 *e*P **P 11 58 16.1 -1.2**
baz=297
UMR AMb AMB 11 58 21.1
comp=Z,77nm,0.9s,mb5.6,baz=297
G13A Cobalt 77.03 45 ⇓P **P 11 58 16.7 -0.5**
baz=77,SNR=14
M09A Marrel Ranch, 77.03 49 ⇓P **P 11 58 17.7 +0.3**
baz=77,SNR=6.5
P07A Fallon 77.10 51 ⇑P **P 11 58 17.5 -0.2**
baz=77
F14A Wisdom 77.14 44 ⇑P **P 11 58 17.8 0.0**
baz=77
MIB Mutribah 77.15 297 *e*P **P 11 58 17.5 -0.7**
baz=297
MIB AMb AMB 11 58 22.4
comp=Z,120nm,0.7s,mb5.9,baz=297
O08A Rochester Mine 77.18 50 ⇓P **P 11 58 18.7 +0.6**
baz=77,SNR=22
I12A Atlanta 77.20 46 ⇓P **P 11 58 18.4 +0.2**
baz=77,SNR=18
K11A Parker Ranch, 77.20 47 ⇓P **P 11 58 18.6 +0.3**
baz=77,SNR=19
E15A Deer Lodge 77.22 43 ⇑P **P 11 58 18.0 -0.3**
baz=77,SNR=18
QRN Al-Qurain 77.25 296 *e*P **P 11 58 18.1 -0.7**
baz=296
QRN AMb AMB 11 58 22.7
comp=Z,130nm,0.7s,mb6.0,baz=296
R06C Coleville 77.26 52 ⇑P **P 11 58 19.0 +0.3**
baz=77,SNR=11
S05C Merced 77.28 54 ⇑P **P 11 58 18.6 -0.2**
baz=77,SNR=19
N09A Rock Creek Ran 77.29 50 ⇑P **P 11 58 19.3 +0.6**
baz=77,SNR=11
L10A Juniper Basin 77.30 48 ⇑P **P 11 58 19.0 +0.2**
baz=77,SNR=16
H13A Challis 77.31 45 ⇑P **P 11 58 18.9 +0.1**
baz=77,SNR=30
V03C Hunter Liggett 77.34 55 ⇑P **P 11 58 19.5 +0.3**
baz=77
AKASG Malin Array Be 77.40 323 P **P 11 58 18.5 -0.7**
comp=Z,2.7nm,0.3s,mb4.6,baz=46,slow=6.0,SNR=36
AKASG LR LR 12 35 01.4
comp=Z,202nm,18.8s,MS4.5,baz=50,slow=38
AKBB Malin Array Si 77.40 323 *e*P **P 11 58 18.5 -0.7**
G14A Jackson 77.40 44 ⇓P **P 11 58 18.9 -0.4**
baz=77
KIEV Kiev 77.41 323 *e*P **P 11 58 18.2 -1.0**
comp=Z,28nm,0.8s,mb5.2
KIEV Kiev 77.41 323 *e*P **P 11 58 18.2 -1.0**
KIEV pmax pmax
comp=Z,28nm,0.8s,mb5.2
RDF Al-Radifah 77.43 296 *e*P **P 11 58 19.3 -0.5**
baz=296
RDF AMb AMB 11 58 23.9
comp=Z,174nm,0.7s,mb6.1,baz=296
U04C Hernandez Rese 77.48 55 ⇓P **P 11 58 20.2 +0.3**
baz=77
NAY Al-Naaiem 77.50 297 *e*P **P 11 58 19.4 -0.8**
baz=297
NAY AMb AMB 11 58 24.1
comp=Z,83nm,0.8s,mb5.7,baz=297
J12A Stokes Ranch, 77.52 47 ⇓P **P 11 58 20.1 +0.1**
baz=77,SNR=6.1
HRY Holter Researc 77.52 42 *e*P **P 11 58 20.1 +0.1**
M10A I.L. Ranch, Tu 77.56 49 ⇑P **P 11 58 20.5 +0.2**
baz=77,SNR=26
C17A Wharram Farm, 77.59 41 ⇑P **P 11 58 19.5 -0.8**
baz=77,SNR=9.5
F15A Butte 77.63 43 ⇑P **P 11 58 20.7 +0.1**
baz=77,SNR=48
FFC Flin Flon 77.67 32 P **P 11 58 19.5 -1.1**
comp=Z,166nm,0.9s,mb6.0,SNR=5.9
FFC Flin Flon 77.67 32 *e*P **P 11 58 19.8 -0.8**
comp=Z,23nm,0.8s,mb5.2
FFC Flin Flon 77.67 32 *e*P **P 11 58 19.8 -0.8**
FFC pmax pmax
comp=Z,23nm,0.8s,mb5.2
L11A Cat Creek Ranc 77.70 48 ⇑P **P 11 58 21.6 +0.6**
baz=78,SNR=28
E16A East Helena 77.71 42 ⇓P **P 11 58 20.6 -0.4**
baz=78,SNR=5.7
BMN Battle Mountai 77.71 50 *e*P **P 11 58 21.5 +0.4**
comp=Z,32nm,1.2s,mb5.1
BMN Battle Mountai 77.71 50 *e*P **P 11 58 21.5 +0.4**
BMN pmax pmax
comp=Z,32nm,1.2s,mb5.1
I13A Wildhorse Cree 77.75 46 ⇑P **P 11 58 21.6 +0.3**
baz=78,SNR=22
HLID Hailey 77.76 46 *e*P **P 11 58 21.8 +0.4**
comp=Z,10nm,0.9s,mb4.8
HLID Hailey 77.76 46 ⇓P **P 11 58 21.3 -0.1**
baz=78,SNR=23
H14A Leadore 77.81 45 ⇑P **P 11 58 21.5 -0.1**
baz=78
DLMT Dillon 77.84 44 *e*P **P 11 58 21.5 -0.2**
comp=Z,33nm,1.1s,mb5.2
O09A Fish Creek Ran 77.87 50 ⇑P **P 11 58 22.3 +0.3**
baz=78,SNR=22
T06C Millerton Lake 77.88 54 ⇑P **P 11 58 21.6 -0.6**
baz=78,SNR=19
D17A Six Diamond Ra 77.91 41 ⇓P **P 11 58 22.1 0.0**
baz=78,SNR=6.1
EGMT Eagleton 77.92 40 *e*P **P 11 58 22.0 -0.2**
comp=Z,64nm,1.5s,mb5.3
EGMT Eagleton 77.92 40 ⇓P **P 11 58 21.7 -0.4**
baz=78,SNR=7.6
NOA NORSAR Array B 77.97 337 P **P 11 58 21.6 -0.6**
comp=Z,20nm,0.9s,mb5.1,baz=41,slow=5.4,SNR=54
NOA LR LR 12 35 34.9
comp=Z,104nm,19.1s,MS4.2,baz=20,slow=38
K12A Draper Farm, C 77.97 47 ⇓P **P 11 58 22.6 +0.1**
baz=78,SNR=9.7
MCMT McKenzie Canyo 77.99 44 *e*P **P 11 58 22.4 -0.2**
J13A Cove Ranch, Pi 78.00 46 ⇑P **P 11 58 22.8 +0.1**
baz=78,SNR=17
N10A Dunphy 78.01 49 ⇓P **P 11 58 23.5 +0.7**
baz=78,SNR=6.1
G15A Dillon 78.02 44 ⇑P **P 11 58 22.6 -0.2**
baz=78,SNR=13
NVAR Mina Array Bea 78.07 52 P **P 11 58 23.4 +0.2**
comp=Z,12nm,0.7s,mb5.0,baz=289,slow=5.5,SNR=91
M11A Holland Ranch, 78.08 48 ⇑P **P 11 58 24.0 +0.8**
baz=78,SNR=28
Q08A Gabbs 78.09 51 ⇑P **P 11 58 23.2 -0.1**
baz=78,SNR=13
MLAC Mammoth Lakes 78.14 53 ⇑P **P 11 58 24.3 +0.7**
baz=78,SNR=6.9
I14A Mackay 78.14 45 ⇓P **P 11 58 24.0 +0.6**
baz=78,SNR=44
F16A Kennard Place, 78.16 43 ⇓P **P 11 58 23.7 +0.2**
baz=78,SNR=14
L12A House Creek Ra 78.17 47 ⇓P **P 11 58 24.2 +0.6**
baz=78,SNR=17
E17A Martindale 78.21 42 ⇓P **P 11 58 23.9 +0.1**
baz=78,SNR=9.2
H15A Lima 78.23 44 ⇓P **P 11 58 24.0 +0.1**
baz=78
P09A Austin 78.23 51 ⇓P **P 11 58 24.0 -0.1**
baz=78,SNR=7.5
O10A Cortez Mining, 78.25 50 ⇓P **P 11 58 24.7 +0.6**
baz=78,SNR=9.4
D18A Linhart Farms, 78.38 41 ⇑P **P 11 58 24.5 -0.2**
baz=78,SNR=7.6
G16A Moss Hill, Enn 78.38 43 ⇑P **P 11 58 24.9 +0.2**
baz=78,SNR=13
J14A Carey 78.44 46 ⇓P **P 11 58 25.9 +0.8**
baz=78,SNR=26
N11A Elko Archery C 78.45 49 ⇓P **P 11 58 25.7 +0.4**
baz=78,SNR=9.4
MTUM Tungsten Hills 78.47 53 *e*P **P 11 58 25.7 +0.3**
K13A Stover Farm, H 78.47 47 ⇓P **P 11 58 25.7 +0.4**
baz=78,SNR=16
SMMC Simmler 78.57 55 ⇓P **P 11 58 26.1 +0.1**
baz=78
Q09A Carvers 78.59 51 ⇑P **P 11 58 26.3 +0.2**
baz=78,SNR=6.8
P10A Eureka 78.64 50 ⇑P **P 11 58 26.6 +0.3**
baz=78,SNR=8.1
M12A Wells 78.64 48 ⇓P **P 11 58 27.1 +0.8**
baz=78,SNR=34
F17A Fitzpatrick Pl 78.65 42 ⇑P **P 11 58 26.3 +0.1**
baz=78,SNR=10
I15A Monteview 78.68 45 ⇓P **P 11 58 27.0 +0.6**
baz=78,SNR=6.8
E18A Harlowton 78.68 42 ⇓P **P 11 58 26.6 +0.2**
baz=78
ELK Elko 78.81 49 *e*P **P 11 58 27.5 +0.3**
comp=Z,18nm,0.9s,mb5.0
ELK Elko 78.81 49 *e*P **P 11 58 27.5 +0.3**
ELK pmax pmax
comp=Z,18nm,0.9s
TIN Tinemaha 78.85 53 ⇑P **P 11 58 28.0 +0.4**
baz=79
L13A Double Diamond 78.87 47 ⇓P **P 11 58 28.4 +0.9**
baz=79,SNR=24
N12A Clover Valley, 78.87 49 ⇓P **P 11 58 27.9 +0.3**
baz=79,SNR=24
O11A Cowboy Ranch, 78.88 49 ⇑P **P 11 58 27.9 +0.3**
baz=79,SNR=14
PKM Peak Mountain 78.91 56 ⇑P **P 11 58 28.3 +0.4**
baz=79
VES Vestal, Richgr 78.92 55 ⇑P **P 11 58 27.2 -0.7**
baz=79,SNR=17
G17A Pierce Place, 78.94 43 ⇑P **P 11 58 28.0 +0.2**
baz=79,SNR=9.6
H16A Russell Place, 79.00 44 ⇓P **P 11 58 28.6 +0.4**
baz=79,SNR=5.5
J15A Blackfoot 79.05 45 ⇑P **P 11 58 28.9 +0.4**
baz=79,SNR=10
K14A Jones Ranch, D 79.08 46 ⇓P **P 11 58 29.1 +0.4**
baz=79,SNR=5.9
Q10A Clear Creek Ra 79.11 51 ⇑P **P 11 58 28.7 -0.2**
baz=79,SNR=14
P11A Circle Ranch, 79.13 50 ⇑P **P 11 58 29.2 +0.2**
baz=79
M13A Montello 79.14 48 ⇓P **P 11 58 29.4 +0.4**
baz=79,SNR=21
S09A Goldfield 79.17 52 ⇑P **P 11 58 29.0 -0.2**
baz=79,SNR=15
F18A Big Timber 79.18 42 ⇑P **P 11 58 29.0 -0.2**
baz=79,SNR=8.8
YMR Madison River 79.19 44 *e*P **P 11 58 29.9 +0.7**
comp=Z,8.1nm,0.6s,mb4.8
GCMT Greycliff 79.28 42 *e*P **P 11 58 29.7 0.0**
CWC Cottonwood Cre 79.28 54 ⇓P **P 11 58 29.6 -0.3**
baz=79
L14A Malta 79.33 47 ⇓P **P 11 58 30.6 +0.6**
baz=79,SNR=22
I16A Newdale 79.34 44 ⇑P **P 11 58 31.1 +1.0**
baz=79,SNR=24
O12A Currie 79.38 49 ⇑P **P 11 58 30.5 +0.2**
baz=79,SNR=41
YFT Old Faithful 79.39 44 *e*P **P 11 58 32.7 +2.4**
K15A Arbon 79.40 46 ⇑P **P 11 58 31.1 +0.7**
baz=79,SNR=7.7
ISA Isabella 79.43 54 *e*P **P 11 58 29.8 -1.0**
comp=Z,19nm,1.3s,mb4.9
ISA Isabella 79.43 54 *e*P **P 11 58 29.8 -0.9**
ISA pmax pmax
comp=Z,19nm,1.3s,mb4.9
ISA Isabella 79.43 54 ⇓P **P 11 58 30.2 -0.6**
baz=79,SNR=5.5
GRAC Grapevine Rang 79.46 53 ⇓P **P 11 58 30.6 -0.3**
baz=79,SNR=6.6
R10A Warm Springs 79.47 51 ⇓P **P 11 58 30.8 -0.1**
baz=79,SNR=9.1
S10A Tonopah Range, 79.48 52 ⇓P **P 11 58 31.2 +0.3**
baz=79,SNR=6.7
ARVC Arvin 79.48 55 ⇓P **P 11 58 30.8 -0.2**
baz=79
M14A Sheep Mountain 79.57 47 ⇑P **P 11 58 31.9 +0.5**
baz=79,SNR=18
H17A Grant Village 79.57 44 ⇑P **P 11 58 33.0 +1.7**
baz=79,SNR=8.1
Q11A Duckwater 79.59 51 ⇓P **P 11 58 31.3 -0.2**
baz=79,SNR=11
J16A Bone 79.61 45 ⇑P **P 11 58 32.0 +0.4**
baz=79,SNR=11
IMW Indian Meadow 79.65 44 *e*P **P 11 58 32.7 +1.0**
comp=Z,17nm,0.9s,mb5.0
DCID1 Drake Creek 79.68 45 *e*P **P 11 58 33.3 +1.4**
comp=Z,14nm,0.7s,mb5.0
RRI2 Red Ridge 79.74 45 *e*P **P 11 58 33.2 +1.0**
comp=Z,8.1nm,0.7s,mb4.8
HVU Hansel Valley 79.76 47 *e*P **P 11 58 33.0 +0.7**
comp=Z,21nm,1.0s,mb5.0
HVU Hansel Valley 79.76 47 *e*P **P 11 58 33.1 +0.7**
HVU pmax pmax
comp=Z,21nm,1.0s,mb5.0
OSI Osito Adit 79.83 55 ⇑P **P 11 58 33.2 +0.3**
baz=80
I17A Pilgram Creek 79.85 44 ⇑P **P 11 58 34.1 +1.3**
baz=80
MOOW Moose Ponds 79.85 44 *e*P **P 11 58 33.6 +0.8**
comp=Z,6.9nm,1.0s,mb4.5
L15A Malad City 79.87 46 ⇑P **P 11 58 33.4 +0.4**
baz=80,SNR=19
TPAW Teton Pass 79.88 45 *e*P **P 11 58 33.6 +0.7**
comp=Z,11nm,0.7s,mb4.9
K16A Soda Springs 79.88 45 ⇓P **P 11 58 33.9 +0.9**
baz=80,SNR=9.4
MPMC Manual Prospec 79.89 54 ⇑P **P 11 58 33.0 -0.2**
baz=80,SNR=22
RLMT Red Lodge 79.90 43 *e*P **P 11 58 33.1 0.0**
comp=Z,9.9nm,0.8s,mb4.8
RLMT Red Lodge 79.90 43 ⇑P **P 11 58 33.2 +0.2**
baz=80,SNR=10
R11A Troy Canyon, C 79.91 51 ⇑P **P 11 58 33.3 +0.1**
baz=80,SNR=26
O13A Hicks Ranch, I 79.94 49 ⇓P **P 11 58 33.8 +0.4**
baz=80,SNR=11
SNOW Snow King Moun 80.01 45 *e*P **P 11 58 34.4 +0.7**
comp=Z,13nm,0.9s,mb4.8
REDW Red Top Meadow 80.01 45 *e*P **P 11 58 34.2 +0.5**
comp=Z,14nm,1.1s,mb4.8
LOHW Long Hollow 80.01 44 *e*P **P 11 58 33.8 0.0**
comp=Z,8.3nm,1.0s,mb4.6
Q12A Willow Creek R 80.01 50 ⇑P **P 11 58 34.1 +0.3**
baz=80,SNR=17
N14A Grayback Hills 80.04 48 ⇑P **P 11 58 34.1 +0.2**
baz=80,SNR=26
LRMC Laurel Mountai 80.07 54 ⇓P **P 11 58 33.8 -0.4**
baz=80,SNR=11
BGU Big Grassy Mou 80.09 48 *e*P **P 11 58 34.5 +0.4**
FURC Furnace Creek, 80.09 53 ⇑P **P 11 58 34.2 -0.1**
baz=80,SNR=19
J17A Brown Place, J 80.09 45 ⇑P **P 11 58 34.3 +0.2**
baz=80
M15A Larsen Ranch, 80.15 47 ⇓P **P 11 58 34.8 +0.3**
baz=80,SNR=7.6
EDW2 Edwards Air Fo 80.19 55 ⇑P **P 11 58 34.6 -0.2**
baz=80,SNR=14
S11A Rachel 80.19 52 ⇑P **P 11 58 34.8 +0.1**
baz=80,SNR=6.9
TPNV Topopah Spring 80.24 52 *e*P **P 11 58 34.9 -0.2**
comp=Z,25nm,0.9s,mb5.1
TPNV Topopah Spring 80.24 52 *e*P **P 11 58 34.9 -0.2**
TPNV pmax pmax
comp=Z,25nm,0.9s,mb5.1
TPNV Topopah Spring 80.24 52 ⇑P **P 11 58 35.0 -0.1**
baz=80,SNR=32
P13A Bates Ranch, G 80.30 49 ⇓P **P 11 58 35.3 -0.1**
baz=80,SNR=20
I18A Diamond G Ranc 80.42 44 ⇑P **P 11 58 36.1 +0.2**
baz=80
N15A Stansbury Isla 80.43 47 ⇑P **P 11 58 36.0 0.0**
baz=80
L16A Fish Haven 80.45 46 ⇑P **P 11 58 36.6 +0.5**
baz=80,SNR=5.3
U10A Ash Meadows, A 80.48 53 ⇓P **P 11 58 36.5 +0.2**
baz=80,SNR=14
Q13A Wheeler Ranch, 80.58 50 ⇓P **P 11 58 36.9 0.0**
baz=80,SNR=13
DGMT Dagmar 80.60 38 ⇓P **P 11 58 36.3 -0.4**
baz=80
HWUT Hardware Ranch 80.60 46 *e*P **P 11 58 37.4 +0.4**
comp=Z,33nm,1.0s,mb5.2
LAO LASA Array 80.64 40 *e*P **P 11 58 36.9 -0.2**
comp=Z,18nm,0.9s,mb5.0
DUG Dugway 80.64 48 *e*P **P 11 58 37.5 +0.3**
comp=Z,22nm,0.8s,mb5.1
DUG Dugway 80.64 48 *e*P **P 11 58 37.5 +0.3**
DUG pmax pmax
comp=Z,22nm,0.8s,mb5.1
DUG Dugway 80.64 48 ⇓P **P 11 58 37.5 +0.3**
baz=80,SNR=27
CIS Catalina Islan 80.70 56 ⇓P **P 11 58 37.1 -0.5**
baz=80
M16A Huntsville 80.73 47 ⇑P **P 11 58 37.7 0.0**
baz=80,SNR=20
T11A Corn Creek, Al 80.76 52 ⇓P **P 11 58 37.5 -0.3**
baz=80,SNR=17
BFSC Mount Baldy St 80.77 55 ⇑P **P 11 58 37.8 -0.2**
baz=81,SNR=5.5
GSC Goldstone 80.77 54 *e*P **P 11 58 37.5 -0.5**
comp=Z,23nm,1.2s,mb5.0
GSC Goldstone 80.77 54 *e*P **P 11 58 37.5 -0.4**
GSC pmax pmax
comp=Z,23nm,1.2s,mb5.0
GSC Goldstone 80.77 54 ⇓P **P 11 58 37.6 -0.3**

baz=81,SNR=14
SHOC Shoshone 80.80 53 ⇑P P 11 58 37.9 -0.2
baz=81,SNR=8.3
S12A Delamar Landin 80.80 51 ⇑P P 11 58 38.4 +0.3
baz=81
O15A The Old Anders 80.81 48 ⇑P P 11 58 38.2 +0.2
baz=81
NOQ North Oquirrh 80.81 47 *e*P P 11 58 38.7 +0.6
comp=Z,32nm,0.8s,mb5.3
P14A Drum Mountains 80.83 49 ⇑P P 11 58 38.5 +0.3
baz=81,SNR=30
RPZ Rata Peaks 80.93 158 P P 11 58 36.8 -1.5
comp=Z,5.5nm,0.6s,mb4.7,baz=249,slow=3.3,SNR=5.1
Q14A Sevier Lake (B 81.04 49 ⇑P P 11 58 39.5 +0.2
baz=81,SNR=39
R13A O'Grain Ranch, 81.05 50 ⇑P P 11 58 39.6 +0.2
baz=81,SNR=11
N16A Rees Ranch, Co 81.10 47 ⇑P P 11 58 39.8 +0.2
baz=81,SNR=6.6
U11A Corn Creek 81.11 52 ⇓P P 11 58 39.8 0.0
baz=81
BW06 Boulder Array 81.13 45 ⇓P P 11 58 39.1 -0.6
baz=81,SNR=7.5
PDAR Pinedale Array 81.13 45 P P 11 58 39.5 -0.3
comp=Z,4.6nm,0.7s,mb4.5,baz=273,slow=1.8,SNR=39
PDAR LR LR 12 33 54.4
comp=Z,60nm,18.7s,MS4.0,baz=142,slow=35
M17A Scullys Gap (B 81.23 46 ⇑P P 11 58 40.3 0.0
baz=81,SNR=8.5
NLU North Lily Min 81.25 48 *e*P P 11 58 37.6 -2.7
JLU Jordanelle 81.26 47 *e*P P 11 58 40.8 +0.4
BBRC Big Bear Sol-O 81.27 55 ⇑P P 11 58 40.0 -0.6
baz=81,SNR=6.3
TUQ Turquoise Moun 81.30 53 ⇑P P 11 58 40.5 -0.2
baz=81,SNR=18
BRTR Keskin Array B 81.32 312 P P 11 58 40.9 +0.1
comp=Z,12nm,0.9s,mb4.8
P15A Leamington 81.34 48 ⇑P P 11 58 40.9 0.0
baz=81,SNR=27
L18A Fontenelle, Gr 81.34 45 ⇓P P 11 58 41.0 +0.2
baz=81,SNR=12
HEC Hector,Ludlow 81.36 54 ⇑P P 11 58 40.7 -0.3
baz=81,SNR=16
BUR08 Bucovina Ar. S 81.36 322 *e*P P 11 58 40.9 +0.1
BURAR Bucovina Array 81.37 322 ⇑P P 11 58 41.0 +0.1
BURAR Bucovina Array 81.37 322 ⇑*i*P P 11 58 41.0 +0.1
T12A Moapa 81.39 52 ⇑P P 11 58 41.5 +0.3
baz=81
V11A Goodsprings 81.41 53 ⇓P P 11 58 41.0 -0.3
baz=81,SNR=14
MURC Murrieta 81.44 56 ⇑P P 11 58 41.0 -0.5
baz=81,SNR=6.5
N17A Moffit Pass 81.44 47 ⇓P P 11 58 41.5 +0.2
baz=81,SNR=14
O16A Springville 81.46 48 ⇓P P 11 58 41.8 +0.3
baz=81,SNR=16
S13A Holt Ranch, En 81.47 51 ⇓P P 11 58 42.0 +0.4
baz=81,SNR=27
MPU Maple Canyon 81.49 48 *e*P P 11 58 42.1 +0.4
comp=Z,26nm,1.0s,mb5.1
DAU Daniels Canyon 81.49 47 *e*P P 11 58 42.4 +0.7
R14A James Farms, M 81.60 50 ⇑P P 11 58 42.6 +0.3
baz=81
Q15A Fillmore 81.61 49 ⇑P P 11 58 42.5 +0.2
baz=81,SNR=19
ARUT Antelope Range 81.62 50 *e*P P 11 58 42.5 0.0
M18A Lyman 81.62 46 ⇑P P 11 58 42.4 0.0
baz=81,SNR=10
L19A Farson 81.64 45 ⇑P P 11 58 42.4 -0.1
baz=81,SNR=13
U12A Valley of Fire 81.67 52 ⇓P P 11 58 43.0 +0.3
baz=82
VRI Vrincioaia 81.67 320 ⇑P P 11 58 43.2 +0.7
VRI Vrincioaia 81.67 320 ⇑*i*P P 11 58 43.2 +0.7
P16A Fountain Green 81.71 48 ⇓P P 11 58 43.0 +0.2
baz=82
T13A Saint George 81.75 51 ⇑P P 11 58 43.4 +0.3
baz=82,SNR=14
ANTO Ankara 81.76 312 ⇑P P 11 58 43.5 +0.4
ANTO Ankara 81.76 312 ⇑*i*P P 11 58 43.5 +0.4
CCUT Cedar City 81.81 51 *e*P P 11 58 43.5 +0.1
S14A Cedar City 81.81 50 ⇓P P 11 58 43.6 +0.2
baz=82,SNR=11
GMRC Granite Mounta 81.84 54 ⇓P P 11 58 43.4 -0.2
baz=82,SNR=14
V12A Nelson 81.86 53 ⇓P P 11 58 43.6 -0.1
baz=82,SNR=12
O17A Robinson Place 81.94 47 ⇑P P 11 58 44.3 +0.3
baz=82,SNR=35
PFO Pinyon Flat Ob 81.95 55 P P 11 58 44.0 -0.2
comp=Z,141nm,1.1s,mb5.8,SNR=10
PFO Pinyon Flat Ob 81.95 55 *e*P P 11 58 43.8 -0.5
comp=Z,20nm,0.9s,mb5.0
PFO Pinyon Flat Ob 81.95 55 *e*P P 11 58 43.8 -0.4
PFO pmax pmax
comp=Z,20nm,0.9s,mb5.0
PFO Pinyon Flat Ob 81.95 55 ⇓P P 11 58 43.7 -0.5
baz=82,SNR=15
KOLS Kolonicke sedl 82.01 324 *e*P P 11 58 44.9 +0.7
MSU Marysvale 82.02 49 *e*P P 11 58 45.1 +0.6
BELC Belle Mtn. 82.05 55 ⇓P P 11 58 44.3 -0.4
baz=82,SNR=17
LDFC Landfair 82.05 53 *e*P P 11 58 44.4 -0.4
comp=Z,21nm,1.0s,mb5.0
U13A Pakoon Wash 82.06 52 ⇑P P 11 58 44.8 0.0
baz=82,SNR=18
M19A Rock Springs 82.12 45 ⇓P P 11 58 45.0 0.0
baz=82
N18A Larsen Ranch, 82.13 46 ⇓P P 11 58 44.9 -0.1
baz=82,SNR=12
R15A Junction 82.13 50 ⇓P P 11 58 45.6 +0.5
baz=82,SNR=21
TMUT Trail Mountain 82.17 48 *e*P P 11 58 45.6 +0.3
STHS Stebnicka Huta 82.19 325 *e*P P 11 58 45.9 +0.8
STHS pmax pmax
comp=Z,12nm,0.8s,mb4.9
STHS Stebnicka Huta 82.19 325 *e*P P 11 58 45.9 +0.8
STHS *e*PCP PcP 11 58 51.7 +1.3
T14A Hurricane 82.27 51 ⇑P P 11 58 45.9 0.0
baz=82
L20A Wamsutter 82.31 45 ⇓P P 11 58 45.7 -0.2
baz=82,SNR=6.7
OJC Ojcow 82.33 326 *e*P P 11 58 45.9 0.0
MLR Muntele Rosu 82.34 320 ⇓P P 11 58 46.6 +0.6
MLR Muntele Rosu 82.34 320 ⇓*i*P P 11 58 46.6 +0.6
O18A Roosevelt 82.35 47 ⇓P P 11 58 46.3 +0.2
baz=82,SNR=14
P17A Butcher Ranch, 82.36 48 ⇑P P 11 58 46.5 +0.3
baz=82,SNR=26
V13A Grand Canyon W 82.37 52 ⇑P P 11 58 46.3 -0.1
baz=82
MONP Monument Peak 82.37 56 ⇓P P 11 58 46.1 -0.3
baz=82,SNR=9.8
S15A Panguitch 82.38 50 ⇑P P 11 58 47.2 +0.8
baz=82,SNR=24
TRPA Tarpa 82.41 323 ⇑*i*P P 11 58 46.8 +0.5
Q16A Castle Valley 82.42 48 ⇑P P 11 58 47.0 +0.4
baz=82,SNR=14
CRVS Cervenica-Dubn 82.43 325 *e*P P 11 58 46.6 +0.2
CRVS *e*PCP PcP 11 58 51.1 -0.4
N19A John Jarvie Ra 82.48 46 ⇓P P 11 58 46.6 -0.2
baz=82,SNR=16
IRM Iron Mountain 82.54 54 ⇑P P 11 58 47.0 -0.3
baz=82,SNR=10
U14A Mt Trumbull 82.58 51 ⇑P P 11 58 47.3 -0.1
baz=82,SNR=7.9
P18A Preston Nutter 82.58 47 ⇓P P 11 58 47.7 +0.3
baz=82,SNR=17
R16A Teasdale 82.59 49 ⇓P P 11 58 48.1 +0.6
baz=82,SNR=27
BC3 Big Chuckw Mtn 82.62 55 ⇑P P 11 58 47.4 -0.3
baz=82,SNR=14
NIE Niedzica 82.63 325 *e*P P 11 58 48.1 +0.6
M20A Sweetwater, Wa 82.71 45 ⇓P P 11 58 48.2 +0.1
baz=82,SNR=9.9
SRU San Rafael 82.71 48 *e*P P 11 58 48.3 +0.2
comp=Z,52nm,0.7s,mb5.7
SRU San Rafael 82.71 48 *e*P P 11 58 48.3 +0.2
SRU pmax pmax
comp=Z,52nm,0.7s,mb5.7
SRU San Rafael 82.71 48 ⇑P P 11 58 48.1 0.0
baz=82,SNR=56
DVTC Desert V Tower 82.72 56 ⇑P P 11 58 48.1 -0.2
baz=82
T15A Red Dirt Ranch 82.75 51 ⇓P P 11 58 48.1 -0.2
baz=82,SNR=8.6
SWSC Sam W. Stewart 82.78 56 ⇑P P 11 58 48.4 -0.2
baz=83
S16A Weppner Ranch, 82.85 50 ⇑P P 11 58 48.9 0.0
baz=83,SNR=14
W13A Hualapai Mount 82.86 53 ⇓P P 11 58 48.7 -0.2
baz=83,SNR=5.3
O19A Miners Draw (B 82.87 46 ⇑P P 11 58 48.5 -0.4
baz=83,SNR=24
L21A Rawlins 82.91 44 ⇑P P 11 58 48.9 -0.1
baz=83,SNR=31
Q18A Rafter H Ranch 82.96 48 ⇓P P 11 58 49.0 -0.4
baz=83,SNR=8.5
R17A Hanksville Air 83.00 49 ⇑P P 11 58 49.4 -0.2
baz=83,SNR=28
V14A Boquillas Ranc 83.08 52 ⇑P P 11 58 50.0 -0.1
baz=83,SNR=22
PDMCI Parker Dam,Lak 83.15 54 ⇑P P 11 58 50.1 -0.3
baz=83
U15A North Rim 83.15 51 ⇑P P 11 58 50.6 +0.2
baz=83,SNR=18
X13A Yucca 83.19 53 ⇑P P 11 58 50.3 -0.3
baz=83,SNR=15
Y12C Blythe 83.20 54 ⇑P P 11 58 50.3 -0.5
baz=83,SNR=6.3
PPT Papeete 83.23 116 *e*LR LR 12 24 37.4
comp=Z,431nm,26.8s,baz=315
W14A Seligman 83.33 52 ⇓P P 11 58 51.4 0.0
baz=83,SNR=9.8
T16A Glen Canyon Da 83.34 50 ⇓P P 11 58 50.9 -0.5
baz=83,SNR=6.4
P19A Cripple Cowboy 83.36 47 ⇓P P 11 58 51.4 0.0
baz=83,SNR=51
OKC Ostrava-Krasne 83.36 327 *e*PKPab P 11 58 51.5 +0.3
OKC *ex* pP 11 59 06.5 +0.8
GLA Glamis 83.39 55 *e*P P 11 58 51.5 -0.2
comp=Z,16nm,0.9s,mb5.1
GLA Glamis 83.39 55 *e*P P 11 58 51.5 -0.2
GLA pmax pmax
comp=Z,16nm,0.9s,mb5.0
GLA Glamis 83.39 55 ⇑P P 11 58 51.4 -0.3
baz=83,SNR=14
S17A Black Ridge (B 83.41 49 ⇑P P 11 58 51.1 -0.6
baz=83,SNR=18
ULM Lac du Bonnet 83.45 33 P P 11 58 50.5 -1.2
comp=Z,3.3nm,0.5s,mb4.7,baz=286,slow=2.2,SNR=3.4
ULM LR LR 12 36 09.0
comp=Z,78nm,19.3s,MS4.1,baz=308,slow=36
RSSD Black Hills 83.45 41 *e*P P 11 58 51.3 -0.5
comp=Z,4.6nm,0.6s,mb4.7
RSSD Black Hills 83.45 41 *e*P P 11 58 51.3 -0.5
RSSD pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KSP Ksiaz 83.49 328 *e*P P 11 58 51.9 0.0
R18A Canyonlands Na 83.54 48 ⇓P P 11 58 51.9 -0.5
baz=83,SNR=32
V15A Kaibab Nationa 83.59 51 ⇓P P 11 58 52.8 +0.1
baz=83,SNR=15
Q19A Hogan Spring (83.59 47 ⇓P P 11 58 52.3 -0.4
baz=83,SNR=29
Y13A Salome 83.64 54 ⇓P P 11 58 52.9 -0.1
baz=83
BSEG Bad Segeberg 83.67 333 *e*P P 11 58 52.3 -0.4
BSEG pmax pmax
comp=Z,29nm,1.4s,mb5.2
BSEG Bad Segeberg 83.67 333 *e*P P 11 58 52.3 -0.4
comp=Z,29nm,1.4s,mb5.2
MORC Morasky Berou 83.69 327 ⇓*i*P P 11 58 53.2 +0.3
T17A Navajo Res., N 83.79 50 ⇑P P 11 58 53.6 -0.1
baz=84
DPC Dobruska-Polom 83.83 328 *e*PKPab P 11 58 54.2 +0.6
112A Yuma 83.85 55 ⇑P P 11 58 54.1 0.0
baz=84
UPC Upice 83.86 328 *e*PKPab P 11 58 54.1 +0.3
UPC *ex* pP 11 59 07.3 -0.9
PSZ Piszkesteto 83.86 324 ⇑P P 11 58 54.3 +0.4
PSZ Piszkesteto 83.86 324 ⇓*e*PcP P 11 58 54.4 +0.6
PSZ Piszkesteto 83.86 324 ⇑*i*P P 11 58 54.3 +0.5
S18A Hurst Farm, BI 83.89 49 ⇓P P 11 58 54.0 -0.2
baz=84,SNR=32
X14A Yava 83.89 53 ⇑P P 11 58 54.6 +0.3
baz=84,SNR=15
W15A Williams 83.90 52 ⇓P P 11 58 54.4 +0.1
baz=84,SNR=10
VYHS Vyhne 83.98 325 *i* P P 11 58 54.7 +0.3
R19A Curley Farm, L 83.99 48 ⇓P P 11 58 54.5 -0.2
baz=84,SNR=17
PV10 Paradox Valley 84.08 48 *e*P P 11 58 55.7 +0.5
U16A Tuba City 84.08 51 ⇓P P 11 58 55.2 0.0
baz=84,SNR=18
GZR Gura Zlata 84.10 321 ⇓P P 11 58 55.2 +0.1
GZR Gura Zlata 84.10 321 ⇓*i*P P 11 58 55.2 +0.1
U17A Shonto 84.11 50 ⇑P P 11 58 55.5 +0.1
baz=84,SNR=20
KOLL Kolacno 84.12 326 *e*P P 11 58 55.6 +0.4
KOLL Kolacno 84.12 326 *e*P P 11 58 55.5 +0.3
Y14A Wickenburg 84.12 53 ⇑P P 11 58 55.5 0.0
baz=84,SNR=19
113A Mohawk Valley, 84.28 55 ⇓P P 11 58 55.8 -0.5
baz=84,SNR=12
WUAZ Wupatki 84.29 51 *e*P P 11 58 56.5 +0.2
comp=Z,29nm,1.0s,mb5.4
WUAZ Wupatki 84.29 51 ⇑P P 11 58 56.0 -0.2
baz=84,SNR=16
T18A Mexican Hat 84.30 49 ⇑P P 11 58 55.5 -0.7
baz=84,SNR=41
X15A Humboldt 84.32 53 ⇓P P 11 58 56.8 +0.4
baz=84,SNR=33
S19A Harvey Farm, M 84.40 48 ⇓P P 11 58 56.7 -0.1
baz=84,SNR=16
W16A Flagstaff 84.44 52 ⇓P P 11 58 57.3 +0.3
baz=84,SNR=9.7
PHWY Pilot Hill 84.44 44 *e*P P 11 58 56.9 -0.1
comp=Z,23nm,1.2s,mb5.2
VRAC Vranov 84.45 327 ⇑P P 11 58 57.4 +0.5
VRAC Vranov 84.45 327 ⇑*i*P P 11 58 57.4 +0.6
PVCC Panska Ves 84.48 329 *e*PKPab P 11 58 57.2 +0.3
PVCC *ex* pP 11 59 05.5 -5.9
BRG Berggiesshubel 84.50 329 ⇑*i*P P 11 58 56.6 -0.4
BRG pmax pmax
comp=Z,15nm,0.9s,mb5.1
BRG Berggiesshubel 84.50 329 *e*P P 11 58 56.5 -0.5
comp=Z,25nm,0.9s,mb5.3
BRG Berggiesshubel 84.50 329 ⇑*i*P P 11 58 56.6 -0.4
comp=Z,25nm,0.9s,mb5.3
Z14A Wintersburg 84.50 54 ⇑P P 11 58 56.8 -0.6
baz=84
PV01 Paradox Valley 84.52 48 *e*P P 11 58 57.4 +0.1
BZS Buzias 84.56 322 ⇑P P 11 58 56.8 -0.6
BZS Buzias 84.56 322 ⇑*i*P P 11 58 56.8 -0.6
Y15A Casa Rosa Ranc 84.57 53 ⇓P P 11 58 57.7 0.0
baz=84,SNR=21
CLL Collm 84.58 330 *e*P P 11 58 56.6 -0.8
comp=Z,54nm,0.9s,mb5.7
CLL Collm 84.58 330 ⇑*i*P P 11 58 56.8 -0.6
comp=Z,54nm,0.9s,mb5.7
CLL *e*(pP) pP 11 59 13.0 +1.1
CLL *e*PP PP 12 02 18.0 +5.3
CLL LmV 12 41 00.0
comp=Z,100nm,18.9s
U18A Rough Rock, Ch 84.73 50 ⇑P P 11 58 58.9 +0.4
baz=84,SNR=46
MODS Modra-Piesok 84.80 326 *e*P P 11 58 58.9 +0.3
MODS pmax pmax
comp=Z,14nm,1.1s,mb5.0
PRU Pruhonice 84.89 328 *e*PKPab P 11 58 58.8 -0.2
PRU *ex* pP 11 59 14.1 +0.7
X16A Lo Mia Camp, P 84.89 52 ⇓P P 11 58 59.4 0.0
baz=85,SNR=20
TREC Trest 84.97 328 *e*PKPab P 11 58 59.5 +0.1
W17A Winslow 84.98 51 ⇑P P 11 58 59.9 +0.1
baz=85
ZST Bratislava 85.01 326 *e*P P 11 58 59.8 +0.2
ZST pmax pmax
comp=Z,11nm,0.6s,mb5.2
T19A Beclabito 85.03 49 ⇓P P 11 58 59.7 -0.2
baz=85,SNR=11
Z15A Gila River Ind 85.08 53 ⇑P P 11 58 59.9 -0.3
baz=85
V18A Ganado 85.12 50 ⇓P P 11 59 00.1 -0.4
baz=85,SNR=37
MVCO Mesa Verde 85.13 49 *e*P P 11 59 00.3 -0.1
comp=Z,18nm,0.9s,mb5.2
MVCO Mesa Verde 85.13 49 ⇓P P 11 59 00.2 -0.2
baz=85,SNR=19
Y16A Circle Bar Ran 85.19 53 ⇓P P 11 59 00.5 -0.4
baz=85,SNR=11
ISCO Idaho Springs 85.30 45 *e*P P 11 59 01.6 +0.3
comp=Z,15nm,0.7s,mb5.2
ISCO Idaho Springs 85.30 45 *e*P P 11 59 01.6 +0.4
ISCO pmax pmax
comp=Z,15nm,0.7s,mb5.2
115A Sonoran Desert 85.38 54 ⇑P P 11 59 01.4 -0.3
baz=85,SNR=8.0
214A Organ Pipe Nat 85.41 55 ⇑P P 11 59 01.5 -0.5
baz=85,SNR=8.8
TANN Tannenbergstha 85.47 330 *e*P P 11 59 01.5 -0.4
comp=Z,6.0nm,0.9s,mb4.7
Z16A Peralta Trail, 85.54 53 ⇓P P 11 59 02.4 -0.2
baz=85
W18A Petrified Fore 85.60 51 ⇓P P 11 59 02.7 -0.1
baz=85
NKC Novy Kostel 85.61 330 *e*PKPab P 11 59 02.8 +0.2
MOX Moxa 85.66 330 *e*P P 11 59 02.5 -0.3
comp=Z,28nm,1.6s,mb5.2
MOX Moxa 85.66 330 *e*P P 11 59 02.5 -0.3
MOX pmax pmax
comp=Z,28nm,1.6s,mb5.2
MOX Moxa 85.66 330 *e*P P 11 59 02.1 -0.7
comp=Z,13nm,0.9s,mb5.2
PKSM Moragy 85.66 324 ⇓P P 11 59 02.6 -0.3
PKSM Moragy 85.66 324 ⇓*i*P P 11 59 02.6 -0.3
V19A Window Rock 85.69 50 ⇑P P 11 59 03.4 +0.1
baz=86,SNR=9.0
KAC Achnashellach 85.71 342 *e*P P 11 59 02.8 -0.1
Y17A Roosevelt 85.72 52 ⇑P P 11 59 03.1 -0.4
baz=86,SNR=17
CONA Conrad Observa 85.78 326 ⇓*i*PcP P 11 59 04.2 +0.7
comp=Z,20nm,1.0s,mb5.3
CSNA Conrad Observa 85.78 326 ⇓*i*PcP P 11 59 04.1 +0.6
comp=Z,20nm,1.0s,mb5.3
116A Eloy 85.81 54 ⇑P P 11 59 03.5 -0.5
baz=86,SNR=7.2
X18A Snowflake 85.82 51 ⇓P P 11 59 03.8 -0.1
baz=86,SNR=6.2
W19A Sanders 85.83 51 ⇓P P 11 59 03.9 -0.1
baz=86
IBBN Ibbenburen 85.91 333 *e*P P 11 59 03.4 -0.6
KPL Plockton 85.94 342 *e*P P 11 59 03.7 -0.4
KPL AMb AMB 11 59 06.5
comp=Z,69nm,1.7s,mb5.6
KHC Kasperske Hory 85.94 328 *e*PKPab P 11 59 04.1 -0.2
KHC *ex* pP 11 59 19.8 +1.1
ROTZ Rotzenmuhle 86.07 329 *e*P P 11 59 04.7 -0.2
comp=Z,26nm,1.5s,mb5.2
GEC2 GERESS Array S 86.10 328 *e*P P 11 59 04.2 -0.8
GEC2 GERESS Array S 86.10 328 *e*P P 11 59 04.3 -0.7
GERES GERESS Array B 86.10 328 P P 11 59 04.6 -0.4
comp=Z,4.6nm,0.7s,mb4.8,baz=38,slow=5.0,SNR=32
GERES LR LR 12 40 18.8
comp=Z,127nm,19.3s,MS4.3,baz=196,slow=38
UBBA Unterbreizbach 86.19 331 *e*P P 11 59 04.6 -0.8
Y18A Canyon Day Jun 86.21 52 ⇑P P 11 59 05.8 -0.1
baz=86,SNR=15
WET Wettzell 86.24 329 *e*P P 11 59 05.7 0.0
216A Three Points, 86.31 54 ⇑P P 11 59 06.0 -0.5
baz=86
X19A St. Johns 86.31 51 ⇓P P 11 59 06.4 0.0
baz=86,SNR=25
ESY Stoneypath 86.37 340 *e*P P 11 59 05.6 -0.6
ARSA Arzberg 86.43 326 ⇓*i*PcP P 11 59 06.8 +0.1
comp=Z,9.2nm,0.9s,mb5.0
117A Oracle 86.46 53 ⇓P P 11 59 06.4 -0.7
baz=86,SNR=6.3
GRF Grafenberg Arr 86.54 330 *e*P P 11 59 07.6 +0.4
GRF pmax pmax
comp=Z,42nm,1.3s,mb5.5
GRF Grafenberg Arr 86.54 330 *e*P P 11 59 07.6 +0.4
GRF pmax pmax
comp=Z,42nm,1.3s,mb5.5
GRF Grafenberg Arr 86.54 330 *e*P P 11 59 07.6 +0.4
comp=Z,42nm,1.3s,mb5.5
MOA Molln 86.58 327 ⇓*i*PcP P 11 59 07.5 +0.1
comp=Z,12nm,1.1s,mb5.0
TUC Tucson 86.59 54 *e*P P 11 59 07.5 -0.3
comp=Z,2.5nm,0.8s,mb4.5
TUC Tucson 86.59 54 *e*P P 11 59 07.5 -0.3
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
EAB Aberfoyle 86.61 341 *e*P P 11 59 06.8 -0.5
EBL Broad Law 86.61 340 *e*P P 11 59 07.0 -0.5
Y19A Nutrioso 86.62 51 ⇓P P 11 59 07.9 0.0
baz=86,SNR=6.0
Z18A Geronimo 86.63 53 ⇑P P 11 59 07.8 -0.1
baz=86
XSO Sourhope Farm 86.63 340 *e*P P 11 59 07.0 -0.5
SDCO Great Sand Dun 86.66 47 *e*P P 11 59 08.2 +0.2
comp=Z,23nm,1.4s,mb5.2
EAU Auchinoon 86.67 341 *e*P P 11 59 07.2 -0.4
BUG Bochum-Univer 86.78 333 *e*P P 11 59 07.9 -0.4
217A Green Valley 86.89 54 ⇑P P 11 59 09.0 -0.2
baz=87,SNR=8.2
VAY Valandovo 86.92 318 *e*P P 11 59 14.0 +4.8
118A Homack Ranch, 86.94 53 ⇓P P 11 59 09.4 -0.1
baz=87,SNR=7.4
PGBU Glenifferbraes 86.98 341 *e*P P 11 59 08.9 -0.3
PGBU AMb AMB 11 59 12.2
comp=Z,127nm,1.7s,mb5.9
ESK Eskdalemuir 87.06 340 *e*P P 11 59 08.3 -1.3
ESK AMb AMB 11 59 08.9
comp=Z,72nm,1.8s,mb5.6
PERS Pernice 87.07 326 *e*P P 11 59 09.1 -0.7
SOKA Soboth 87.08 326 ⇓*i*PcP P 11 59 09.6 -0.3
comp=Z,12nm,1.0s,mb5.1
ECK Cauldkaine Hil 87.15 340 *e*P P 11 59 09.6 -0.5
TNS Taunus Mts 87.28 332 *e*P P 11 59 10.6 -0.2
TNS pmax pmax
comp=Z,14nm,1.4s,mb5.0
TNS Taunus Mts 87.28 332 *e*P P 11 59 10.6 -0.2
comp=Z,14nm,1.4s,mb5.0
218A Dragoon 87.29 53 ⇓P P 11 59 10.7 -0.5
baz=87
119A Ashpeak Ranch, 87.31 52 ⇑P P 11 59 11.3 0.0
baz=87
KRUS Krusevo 87.62 319 *e*P P 11 59 17.4 +4.8
318A Bisbee 87.65 54 ⇓P P 11 59 12.5 -0.5
baz=87,SNR=7.4
ECSD EROS,Sioux Fal 87.68 38 *e*P P 11 59 11.6 -1.3
comp=Z,20nm,0.9s,mb5.3
MYKA Terra Mystica 87.77 327 ⇓*i*PcP P 11 59 12.1 -1.1
comp=Z,7.6nm,0.5s,mb5.2
219A White Tail Can 87.81 53 ⇑P P 11 59 12.9 -0.7
baz=88,SNR=7.6
ANMO Albuquerque 87.82 49 *e*P P 11 59 13.5 -0.2
comp=Z,6.3nm,0.8s,mb4.9
ANMO Albuquerque 87.82 49 ⇑*e*P P 11 59 14.0 +0.3
GAL1 Galloway 87.87 341 *e*P P 11 59 12.5 -1.0
GAL1 AMb AMB 11 59 13.3
comp=Z,124nm,1.6s,mb5.9
STU Stuttgart 88.10 330 *e*P P 11 59 14.9 +0.2
JAVS Javornik 88.11 326 *e*P P 11 59 13.3 -1.5
LHO Holmfirth 88.19 339 *e*P P 11 59 14.2 -0.9
WTTA Wattenberg 88.20 328 ⇓*i*PcP P 11 59 14.8 -0.4
comp=Z,4.8nm,0.5s,mb5.0
BNM Barren Site 88.22 50 *e*P P 11 59 15.3 -0.2
KBI1 Birley Grange 88.34 338 *e*P P 11 59 15.4 -0.4
MOTA Moosalm 88.38 328 ⇓*i*PcP P 11 59 15.0 -1.1
comp=Z,2.5nm,0.4s,mb4.8
CWF Charnwood Fore 88.71 338 *e*P P 11 59 16.6 -0.9
CWF AMb AMB 11 59 20.5
comp=Z,36nm,2.2s,mb5.3
GIVF Givet 88.79 333 *e*P P 11 59 17.0 -0.9
FETA Feichten 88.79 328 ⇓*i*PcP P 11 59 17.6 -0.4
comp=Z,7.5nm,0.9s,mb5.0
BFO Black Forest 88.81 330 *e*P P 11 59 17.0 -1.1
BFO Black Forest 88.81 330 *e*P P 11 59 17.5 -0.6
DAVA Damuels 88.96 329 ⇓*i*PcP P 11 59 18.6 -0.2
comp=Z,17nm,0.9s,mb5.4
CDF Champ du Feu 89.18 331 ⇑*i*P P 11 59 18.8 -1.0
comp=Z,13nm,0.8s,mb5.0
CDF Champ du Feu 89.18 331 ⇑*i*P P 11 59 18.8 -1.0
comp=Z,6.6nm,0.8s,mb5.0
CDF Champ du Feu 89.18 331 ⇑*i*P P 11 59 18.8 -1.0
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
IDI Anoyia 89.52 313 LR LR 12 43 46.0
comp=Z,32nm,19.3s,MS3.8,baz=269,slow=38
SCHQ Schefferville 89.66 16 P P 11 59 21.7 -0.3
comp=Z,6.4nm,0.9s,mb4.9,baz=38,slow=2.6,SNR=5.7
SCHQ LR LR 12 45 58.5
comp=Z,55nm,19.0s,MS4.0,baz=354,slow=40
SCHQ Schefferville 89.66 16 P P 11 59 21.7 -0.3
SCHQ LR LR 12 45 58.5
TUE Stuetta 89.82 329 *e*P P 11 59 22.4 -0.5
comp=Z,8.5nm,0.8s,mb5.1

HAU	**Haudompre**		**89.88**	**331**	*e*P	**P**	**11**	**59**	**21.8**	**-1.3**
HAU					*e*MLR	MLR				
	comp=Z,131nm,21.5s,MS4.0									
HAU	**Haudompre**		**89.88**	**331**	*e*P	**P**	**11**	**59**	**21.8**	**-1.3**
HAU					MLR	MLR				
	comp=Z,130nm,21.5s,MS4.3									
MCH1	**Michaelchurch**		**89.88**	**339**	*e*P	**P**	**11**	**59**	**22.6**	**-0.5**
MCH1					AMb	AMB	11	59	26.6	
	comp=Z,64nm,2.0s,mb5.6									
HTR	**Trewern Hill**		**89.89**	**339**	*e*P	**P**	**11**	**59**	**22.6**	**-0.5**
HGH	**Gray Hill**		**90.13**	**338**	*e*P	**P**	**11**	**59**	**23.3**	**-0.9**
FSSB	**Fossombrone**		**90.36**	**325**	P	**P**	**11**	**59**	**25.1**	**-0.3**
	comp=Z,24nm,0.8s,mb5.6									
VAI	**Varese**		**90.54**	**329**	P	**P**	**11**	**59**	**25.2**	**-1.0**
SNTG	**Esanatoglia**		**90.60**	**325**	P	**P**	**11**	**59**	**26.4**	**-0.2**
	comp=Z,22nm,0.9s,mb5.5									
SCIA	**State Center**		**90.73**	**37**	P	**P**	**11**	**59**	**26.8**	**-0.4**
	comp=Z,14nm,0.9s,mb5.3									
VMG	**Vicchio**		**90.74**	**326**	P	**P**	**11**	**59**	**26.9**	**-0.3**
	comp=Z,20nm,0.7s,mb5.5									
NRCA	**Norcia**		**90.83**	**324**	P	**P**	**11**	**59**	**27.6**	**-0.1**
	comp=Z,7.8nm,0.7s,mb5.2									
KSU1	**Kansas State U**		**90.94**	**41**	*e*P	**P**	**11**	**59**	**27.2**	**-1.0**
	comp=Z,23nm,0.9s,mb5.5									
CABF	**La Chapelle**		**91.10**	**331**	*e*P	**P**	**11**	**59**	**28.2**	**-0.6**
	comp=Z,15nm,0.8s,mb5.1									
CABF	**La Chapelle**		**91.10**	**331**	*e*P	**P**	**11**	**59**	**28.2**	**-0.6**
	comp=Z,7.5nm,0.8s,mb5.1									
CABF	**La Chapelle**		**91.10**	**331**	*e*P	**P**	**11**	**59**	**28.2**	**-0.6**
CABF					pmax	pmax				
	comp=Z,8.0nm,0.8s,mb5.1									
LOR	**Lormes**		**91.47**	**332**	*e*P	**P**	**11**	**59**	**29.5**	**-1.0**
LOR					*e*MLR	MLR				
	comp=Z,119nm,22.5s,MS4.0									
LOR	**Lormes**		**91.47**	**332**	*e*P	**P**	**11**	**59**	**29.5**	**-1.0**
LOR					MLR	MLR				
	comp=Z,120nm,22.5s,MS4.3									
LPL	**La Plagne**		**91.70**	**330**	⇑*i*P	**P**	**11**	**59**	**31.1**	**-0.5**
LPG	**La Plagne**		**91.71**	**330**	⇑*i*P	**P**	**11**	**59**	**31.2**	**-0.4**
SSF	**Saint Saulge**		**91.77**	**332**	⇑*i*P	**P**	**11**	**59**	**31.0**	**-0.9**
	comp=Z,22nm,0.9s,mb5.2									
SSF	**Saint Saulge**		**91.77**	**332**	⇑*i*P	**P**	**11**	**59**	**31.0**	**-0.9**
	comp=Z,11nm,0.9s,mb5.2									
SSF	**Saint Saulge**		**91.77**	**332**	⇑*i*P	**P**	**11**	**59**	**31.0**	**-0.9**
SSF					pmax	pmax				
	comp=Z,11nm,0.9s,mb5.2									
FLN	**La Foliniere**		**91.83**	**335**	⇑*i*P	**P**	**11**	**59**	**31.1**	**-1.0**
	comp=Z,36nm,0.9s,mb5.4									
FLN					*e*MLR	MLR				
	comp=Z,155nm,22.5s,MS4.1									
FLN	**La Foliniere**		**91.83**	**335**	⇑*i*P	**P**	**11**	**59**	**31.1**	**-1.0**
	comp=Z,18nm,0.9s,mb5.4									
FLN					LR	LR				
	comp=Z,160nm,22.5s,MS4.4									
FLN	**La Foliniere**		**91.83**	**335**	⇑*i*P	**P**	**11**	**59**	**31.1**	**-1.0**
FLN					pmax	pmax				
	comp=Z,18nm,0.9s,mb5.4									
FLN					MLR	MLR				
	comp=Z,160nm,22.5s,MS4.4									
LDF	**La Druitiere**		**91.85**	**335**	⇑*i*P	**P**	**11**	**59**	**31.2**	**-1.0**
	comp=Z,11nm,0.7s,mb5.0									
LDF	**La Druitiere**		**91.85**	**335**	⇑*i*P	**P**	**11**	**59**	**31.2**	**-1.0**
	comp=Z,5.7nm,0.6s,mb5.1									
LDF	**La Druitiere**		**91.85**	**335**	⇑*i*P	**P**	**11**	**59**	**31.2**	**-1.0**
LDF					pmax	pmax				
	comp=Z,6.0nm,0.6s,mb5.1									
SMF	**Signal de Mont**		**91.98**	**332**	*e*P	**P**	**11**	**59**	**31.7**	**-1.2**
	comp=Z,45nm,1.2s,mb5.4									
SMF	**Signal de Mont**		**91.98**	**332**	*e*P	**P**	**11**	**59**	**31.7**	**-1.2**
	comp=Z,23nm,1.2s,mb5.4									
SMF	**Signal de Mont**		**91.98**	**332**	*e*P	**P**	**11**	**59**	**31.7**	**-1.2**
SMF					pmax	pmax				
	comp=Z,23nm,1.2s,mb5.4									
AVF	**Avril sur Loir**		**92.06**	**332**	⇑*i*P	**P**	**11**	**59**	**32.4**	**-0.8**
	comp=Z,38nm,0.8s,mb5.5									
AVF	**Avril sur Loir**		**92.06**	**332**	⇑*i*P	**P**	**11**	**59**	**32.4**	**-0.8**
	comp=Z,19nm,0.8s,mb5.5									
AVF	**Avril sur Loir**		**92.06**	**332**	⇑*i*P	**P**	**11**	**59**	**32.4**	**-0.8**
AVF					pmax	pmax				
	comp=Z,19nm,0.8s,mb5.5									
BNI	**Bardonecchia**		**92.09**	**329**	*e*P	**P**	**11**	**59**	**32.6**	**-0.8**
	comp=Z,11nm,0.9s,mb5.2									
BNI	**Bardonecchia**		**92.09**	**329**	*e*P	**P**	**11**	**59**	**32.6**	**-0.8**
BNI					pmax	pmax				
	comp=Z,11nm,0.9s,mb5.2									
GRR	**Gorron**		**92.28**	**336**	⇑*i*P	**P**	**11**	**59**	**33.5**	**-0.7**
	comp=Z,36nm,0.8s,mb5.5									
GRR	**Gorron**		**92.28**	**336**	⇑*i*P	**P**	**11**	**59**	**33.5**	**-0.7**
	comp=Z,18nm,0.8s,mb5.5									
GRR	**Gorron**		**92.28**	**336**	⇑*i*P	**P**	**11**	**59**	**33.5**	**-0.7**
GRR					pmax	pmax				
	comp=Z,18nm,0.8s,mb5.5									
MBDF	**Montbardon**		**92.31**	**329**	⇑*i*P	**P**	**11**	**59**	**33.1**	**-1.4**
	comp=Z,44nm,0.9s,mb5.5									
MBDF	**Montbardon**		**92.31**	**329**	⇑*i*P	**P**	**11**	**59**	**33.1**	**-1.4**
	comp=Z,22nm,0.9s,mb5.5									
MBDF	**Montbardon**		**92.31**	**329**	⇑*i*P	**P**	**11**	**59**	**33.1**	**-1.4**
MBDF					pmax	pmax				
	comp=Z,22nm,0.9s,mb5.5									
BGF	**Bois d'Agland**		**92.44**	**332**	*e*P	**P**	**11**	**59**	**33.4**	**-1.6**
ORIF	**Oris-en-Rattie**		**92.54**	**330**	*e*P	**P**	**11**	**59**	**34.7**	**-0.8**
	comp=Z,28nm,0.8s,mb5.4									
ORIF					*e*MLR	MLR				
	comp=Z,152nm,19.5s,MS4.2									
ORIF	**Oris-en-Rattie**		**92.54**	**330**	*e*P	**P**	**11**	**59**	**34.7**	**-0.8**
	comp=Z,14nm,0.8s,mb5.4									
ORIF	**Oris-en-Rattie**		**92.54**	**330**	*e*P	**P**	**11**	**59**	**34.7**	**-0.8**
ORIF					pmax	pmax				
	comp=Z,14nm,0.8s,mb5.4									
SBF	**Sospel**		**92.70**	**328**	*e*P	**P**	**11**	**59**	**34.6**	**-1.7**
	comp=Z,50nm,0.8s,mb5.7									
SBF	**Sospel**		**92.70**	**328**	*e*P	**P**	**11**	**59**	**34.6**	**-1.7**
	comp=Z,25nm,0.8s,mb5.7									
SBF	**Sospel**		**92.70**	**328**	*e*P	**P**	**11**	**59**	**34.6**	**-1.7**
SBF					pmax	pmax				
	comp=Z,25nm,0.8s,mb5.7									
WMOK	**Wichita Mounta**		**92.72**	**45**	*e*P	**P**	**11**	**59**	**35.7**	**-0.9**
	comp=Z,42nm,1.3s,mb5.7									
WMOK	**Wichita Mounta**		**92.72**	**45**	*e*P	**P**	**11**	**59**	**35.7**	**-0.9**
WMOK					pmax	pmax				
	comp=Z,42nm,1.3s,mb5.7									
TCF	**Toulx Ste Croi**		**92.92**	**333**	*e*P	**P**	**11**	**59**	**36.5**	**-0.7**
SGMF	**Saint Gilles**		**92.98**	**336**	*e*P	**P**	**11**	**59**	**36.8**	**-0.7**
PGF	**Pioggiola**		**93.02**	**326**	*e*P	**P**	**11**	**59**	**37.1**	**-0.7**
VIVF	**Saint-Julien-l**		**93.10**	**330**	⇑*i*P	**P**	**11**	**59**	**37.3**	**-0.8**
	comp=Z,52nm,0.9s,mb5.7									
VIVF	**Saint-Julien-l**		**93.10**	**330**	⇑*i*P	**P**	**11**	**59**	**37.3**	**-0.8**
	comp=Z,26nm,0.9s,mb5.7									
VIVF	**Saint-Julien-l**		**93.10**	**330**	⇑*i*P	**P**	**11**	**59**	**37.3**	**-0.8**
VIVF					pmax	pmax				
	comp=Z,26nm,0.9s,mb5.7									
ROSF	**Rostrenen**		**93.15**	**337**	⇑*i*P	**P**	**11**	**59**	**37.6**	**-0.6**
	comp=Z,33nm,0.9s,mb5.5									
ROSF	**Rostrenen**		**93.15**	**337**	⇑*i*P	**P**	**11**	**59**	**37.6**	**-0.6**
	comp=Z,16nm,0.9s,mb5.5									
ROSF	**Rostrenen**		**93.15**	**337**	⇑*i*P	**P**	**11**	**59**	**37.6**	**-0.6**
ROSF					pmax	pmax				
	comp=Z,16nm,0.9s,mb5.5									
TXAR	**Lajitas Array**		**93.22**	**52**	P	**P**	**11**	**59**	**39.0**	**+0.1**
	comp=Z,27nm,0.6s,mb5.8,baz=303,slow=3.1,SNR=405									
SMRF	**Simiane la Rot**		**93.43**	**329**	*e*P	**P**	**11**	**59**	**37.6**	**-2.0**
LMR	**La Mourre**		**93.53**	**328**	*e*P	**P**	**11**	**59**	**38.7**	**-1.4**
MFF	**Saint Martin d**		**93.54**	**334**	⇑*i*P	**P**	**11**	**59**	**39.4**	**-0.7**
	comp=Z,51nm,1.0s,mb5.6									
MFF	**Saint Martin d**		**93.54**	**334**	⇑*i*P	**P**	**11**	**59**	**39.4**	**-0.7**
	comp=Z,26nm,1.0s,mb5.6									
MFF	**Saint Martin d**		**93.54**	**334**	⇑*i*P	**P**	**11**	**59**	**39.4**	**-0.7**
MFF					pmax	pmax				
	comp=Z,26nm,1.0s,mb5.6									
RJF	**Les Rejaudoux**		**94.00**	**332**	*e*P	**P**	**11**	**59**	**41.7**	**-0.5**
	comp=Z,33nm,0.9s,mb5.5									
RJF					*e*MLR	MLR				
	comp=Z,103nm,22.5s,MS3.9									
RJF	**Les Rejaudoux**		**94.00**	**332**	*e*P	**P**	**11**	**59**	**41.7**	**-0.5**
	comp=Z,16nm,0.9s,mb5.5									
RJF					LR	LR				
	comp=Z,100nm,22.5s,MS4.2									
RJF	**Les Rejaudoux**		**94.00**	**332**	*e*P	**P**	**11**	**59**	**41.7**	**-0.5**
RJF					pmax	pmax				
	comp=Z,16nm,0.9s,mb5.5									
RJF					MLR	MLR				
	comp=Z,100nm,22.5s,MS4.2									
LASF	**Ste Croix**		**94.07**	**330**	*e*P	**P**	**11**	**59**	**42.0**	**-0.6**
	comp=Z,30nm,0.9s,mb5.4									
CAF	**Calviac**		**94.10**	**332**	⇑*i*P	**P**	**11**	**59**	**42.4**	**-0.3**
	comp=Z,30nm,0.9s,mb5.4									
CAF	**Calviac**		**94.10**	**332**	⇑*i*P	**P**	**11**	**59**	**42.4**	**-0.3**
	comp=Z,15nm,0.9s,mb5.4									
CAF	**Calviac**		**94.10**	**332**	⇑*i*P	**P**	**11**	**59**	**42.4**	**-0.3**
CAF					pmax	pmax				
	comp=Z,15nm,0.9s,mb5.4									
VAE	**Valguarnera**		**94.11**	**320**	LR	LR	12	44	22.2	
	comp=Z,72nm,19.7s,MS4.1,baz=112,slow=37									
CCM	**Cathedral Cave**		**94.59**	**39**	*e*P	**P**	**11**	**59**	**43.3**	**-1.8**
	comp=Z,11nm,1.1s,mb5.2									
CCM	**Cathedral Cave**		**94.59**	**39**	*e*P	**P**	**11**	**59**	**43.3**	**-1.8**
CCM					pmax	pmax				
	comp=Z,11nm,1.1s,mb5.2									
LFF	**La Frestale**		**94.61**	**333**	*e*P	**P**	**11**	**59**	**44.6**	**-0.4**
	comp=Z,25nm,0.9s,mb5.3									
LFF	**La Frestale**		**94.61**	**333**	*e*P	**P**	**11**	**59**	**44.6**	**-0.4**
	comp=Z,13nm,0.9s,mb5.3									
LFF	**La Frestale**		**94.61**	**333**	*e*P	**P**	**11**	**59**	**44.6**	**-0.4**
LFF					pmax	pmax				
	comp=Z,13nm,0.9s,mb5.4									
JCT	**Junction City**		**94.98**	**49**	*e*P	**P**	**11**	**59**	**46.2**	**-0.9**
	comp=Z,12nm,0.7s,mb5.4									
JCT	**Junction City**		**94.98**	**49**	*e*P	**P**	**11**	**59**	**46.2**	**-0.8**
JCT					pmax	pmax				
	comp=Z,12nm,0.7s,mb5.4									
MIAR	**Mount Ida**		**95.90**	**42**	*e*P	**P**	**11**	**59**	**50.1**	**-1.0**
	comp=Z,22nm,1.1s,mb5.5									
MIAR	**Mount Ida**		**95.90**	**42**	*e*P	**P**	**11**	**59**	**50.1**	**-1.0**
MIAR					pmax	pmax				
	comp=Z,22nm,1.1s,mb5.5									
ETSF	**Etsaut**		**96.83**	**332**	*e*P	**P**	**11**	**59**	**54.9**	**-0.3**
	comp=Z,5.1nm,0.6s,mb4.8									
ETSF	**Etsaut**		**96.83**	**332**	*e*P	**P**	**11**	**59**	**54.9**	**-0.3**
	comp=Z,2.5nm,0.6s,mb4.8									
ETSF	**Etsaut**		**96.83**	**332**	*e*P	**P**	**11**	**59**	**54.9**	**-0.3**
ETSF					pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.9									
SJPF	**Ste Jean**		**96.91**	**333**	*e*P	**P**	**11**	**59**	**53.8**	**-1.7**
	comp=Z,49nm,1.3s,mb5.5									
SJPF	**Ste Jean**		**96.91**	**333**	*e*P	**P**	**11**	**59**	**53.8**	**-1.7**
	comp=Z,24nm,1.3s,mb5.5									
SJPF	**Ste Jean**		**96.91**	**333**	*e*P	**P**	**11**	**59**	**53.8**	**-1.7**
SJPF					pmax	pmax				
	comp=Z,24nm,1.3s,mb5.5									
RKT	**Rikitea**		**97.62**	**112**	*e*LR	LR	12	31	01.3	
	comp=Z,413nm,35.8s,baz=310									
MAW	**Mawson**		**115.37**	**204**	PKiKP	PKiKP	12	05	04.1	-0.6
	comp=Z,2.2nm,0.8s,baz=298,slow=9.8,SNR=4.3									
TORD	**Torodi Ar. Bea**		**119.92**	**313**	PKP	PKPdf	12	05	13.8	-1.4
	comp=Z,5.5nm,0.6s,baz=27,slow=1.3,SNR=40									
SYO	**Syowa Base**		**124.06**	**205**	*e*X		12	05	19.3	
DBIC	**Dimbokro**		**128.98**	**314**	PKP	PKPdf	12	05	31.2	-1.3
	comp=Z,4.4nm,0.5s,baz=347,slow=1.2,SNR=11									
TIC	**Toumodi**		**129.10**	**314**	*e*PKP2	PKPdf	12	05	31.6	-1.2
	comp=Z,25nm,0.2s									
KIC	**Kosan Boka**		**129.15**	**313**	*e*PKP2	PKPdf	12	05	31.4	-1.5
	comp=Z,94nm,1.2s									
LIC	**Lamto**		**129.43**	**314**	*e*PKP2	PKPdf	12	05	32.7	-0.7
	comp=Z,96nm,2.1s									
LIC	**Lamto**		**129.43**	**314**	*e*PKIKP	PKPdf	12	05	30.5	-2.9
	comp=Z,13nm,0.8s									
ARE	**Arequipa**		**146.71**	**69**	*e*P	PKPdf	12	06	07.0	+2.2
LPAZ	**La Paz**		**149.21**	**65**	PKP	PKPdf	12	06	09.1	+0.2
	comp=Z,21nm,0.9s,baz=324,slow=2.6,SNR=10									
LPAZ					PKPbc	PKPbc	12	06	13.5	+0.4
	comp=Z,23nm,0.7s,baz=317,slow=2.8,SNR=47									
LVC	**Limon Verde**		**151.97**	**77**	*e*PKPbc	PKPbc	12	06	19.8	+0.2
PLCA	**Paso Flores**		**153.77**	**117**	PKPbc	PKPbc	12	06	23.3	+0.3
	comp=Z,6.7nm,0.8s,baz=229,slow=2.5,SNR=14									

*ISCJB **20** 11:46:28.6±0.7, 6.48N±006×127.18E±006, h33km, mb3.7/3, Error ellipse: s-maj=10.1km s-min=5.7km az=135.1*
*IDC **20** 11:46:29.8±1.6, 5.62N×125.85E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.8/18, mbtmp3.9/3, MS4.1/1, Ms1 4.1/1, ms1mx3.0/33, Error ellipse: s-maj=183.9km s-min=17.1km az=77.0*
*MAN **20** 11:46:33, 6.82N×126.80E, h15km, mb4.9, ML3.9, MS4.0*

ISC 20 11:46:30.4±0.7, 6.53N±006×12.716E±006, h35km, n19, σ1°16/27, mb3.7/3, 2C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MATI	**Mati**	**0.98**	**295**	*e*P	**Pn**	**11**	**46**	**45.0**	**-2.6**
MATI				*e*S	**Sn**	**11**	**46**	**55.3**	**-5.1**
DAV	**Davao City (W)**	**1.65**	**289**	Pn	**Pn**	**11**	**46**	**57.3**	**+0.4**
	185nm,0.3s,baz=254,slow=0.9,SNR=28								
DAV				Sn	**Sn**	**11**	**47**	**19.0**	**+2.0**
	483nm,0.3s,baz=88,slow=23,SNR=36								
DMPH	**Davao City--Mi**	**1.73**	**289**	⇓*e*P	**Pn**	**11**	**46**	**58.6**	**+0.7**
DMPH				*i* S	**Sn**	**11**	**47**	**20.8**	**+2.1**
BIPH	**Bislig**	**1.82**	**334**	⇓*e*P	**Pn**	**11**	**46**	**58.8**	**-0.4**
BIPH				*i* S	**Sn**	**11**	**47**	**20.3**	**-0.7**
KCP	**Kidapawan**	**2.10**	**283**	⇓*e*P	**Pn**	**11**	**47**	**02.7**	**-0.4**
KCP				*i* S	**Sn**	**11**	**47**	**28.7**	**+0.6**
GSPH	**General Santos**	**2.24**	**259**	⇓*e*P	**Pn**	**11**	**47**	**02.5**	**-2.5**
GSPH				*e*S	**Sn**	**11**	**47**	**25.5**	**-5.9**
BUKP	**Musuan**	**2.47**	**303**	*e*P	**Pn**	**11**	**47**	**08.1**	**-0.1**
BUKP				*e*S	**Sn**	**11**	**47**	**37.4**	**+0.3**
BUTP	**Butuan**	**2.86**	**328**	*e*P	**Pn**	**11**	**47**	**14.2**	**+0.7**
BUTP				*e*S	**Sn**	**11**	**47**	**51.1**	**+4.4**
CTBH	**Cotabato--PC H**	**2.97**	**283**	⇑*e*P	**Pn**	**11**	**47**	**15.3**	**+0.3**
CTBH				*i* S	**Sn**	**11**	**47**	**47.9**	**-1.5**
SCPH	**Surigao**	**3.62**	**333**	⇓*e*P	**Pn**	**11**	**47**	**26.4**	**+2.4**
PAGZ	**Pagadian**	**3.96**	**289**	*e*P	**Pn**	**11**	**47**	**28.0**	**-0.7**
PAGZ				*e*S	Px	11	47	56.4	
MSLP	**Maasin**	**4.24**	**328**	*e*P	**Pn**	**11**	**47**	**32.3**	**-0.1**
TBP	**Tagbilaran**	**4.52**	**314**	*e*P	**Pn**	**11**	**47**	**35.9**	**-0.6**
TBP				*e*S	**Sn**	**11**	**48**	**24.5**	**-3.3**
GUMO	**Guam**	**18.79**	**67**	LR	LR	11	58	01.1	
	comp=Z,507nm,20.6s,baz=3.2,slow=34								
KAKA	**Kakadu**	**19.83**	**165**	*e*P	Px	11	50	46.1	
	4.8nm,0.6s								
WRA	**Warramunga Arr**	**27.24**	**165**	P	**P**	**11**	**52**	**11.8**	**+0.5**
	0.5nm,0.3s,mb3.5,baz=340,slow=11,SNR=17								
WB2	**Warramunga Arr**	**27.25**	**165**	*e*P	**P**	**11**	**52**	**11.6**	**+0.2**
ASAR	**Alice Springs**	**30.73**	**168**	P	**P**	**11**	**52**	**43.1**	**+0.8**
	0.4nm,0.6s,mb3.5,baz=345,slow=7.2,SNR=8.3								
STKA	**Stephens Creek**	**40.60**	**161**	P	**P**	**11**	**54**	**06.3**	**-0.6**
	4.0nm,0.8s,mb4.1,baz=338,slow=8.6,SNR=6.4								

*NIED **20** 12:00:00, 3280N×140.90E, h56km, Mw4.0 Best double couple: M0 1.29000×10^15 NP1:φ0 189.00000°, δ72.00000°, λ113.00000°. NP2:φ0 315.00000°, δ29.00000°, λ40.00000°.*
*ISCJB **20** 12:00:26.3±0.8, 3268N±004×140.92E±008, h55km±8km, mb4.0/8, Error ellipse: s-maj=11.5km s-min=6.8km az=169.6*
*JMA **20** 12:00:27.3±0.2, 3276N×140.92E, h46km, M4.0*
*IDC **20** 12:00:27.8±1.7, 3255N×140.67E, h45km±13km, mb3.7/7, mb1 4.0/9, mb1mx3.7/24, mbtmp3.8/9, ML4.1/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/42, Error ellipse: s-maj=33.0km s-min=9.4km az=64.0*
*MOS **20** 12:00:27.9±0.5, 3250N×140.47E, h61km, mb4.7/1, Error ellipse: s-maj=38.5km s-min=13.7km az=112.2*
*NEIC **20** 12:00:29.9±1.4, 3259N×140.65E, h65km±12km, mb4.5/1, MW4.0(NIED), Error ellipse: s-maj=23.6km s-min=11.0km az=71.0*

ISC 20 12:00:26.9±0.7, 3266N±004×14093E±008, h42km±8km, n28, σ1°08/39, mb4.0/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JHJ2	**Mitsune**	**1.04**	**296**	P	**Pn**	**12**	**00**	**45.3**	**+0.3**
JHJ2				S	**Sn**	**12**	**00**	**58.7**	**+0.4**
JHJ	**Hachijo jima 2**	**1.06**	**296**	P	**Pn**	**12**	**00**	**45.4**	**0.0**
	134nm,0.3s,baz=146,slow=11,SNR=516								
JHJ				S	**Sn**	**12**	**00**	**56.8**	**-2.2**
	543nm,0.3s,baz=72,slow=23,SNR=30								
JMY	**Miyakejima3**	**1.84**	**320**	P	**Pn**	**12**	**00**	**56.3**	**+0.3**
BSO1	**Boso 1**	**1.99**	**1**	P	**Pn**	**12**	**00**	**57.0**	**-1.1**
BSO2	**Boso 2**	**2.09**	**356**	S	**Sn**	**12**	**01**	**23.1**	**-1.1**
JKO	**Kozu shima**	**2.13**	**316**	P	**Pn**	**12**	**01**	**00.9**	**+0.8**
JKO				S	**Sn**	**12**	**01**	**24.9**	**-0.4**
BSO3	**Boso 3**	**2.16**	**351**	P	**Pn**	**12**	**00**	**59.9**	**-0.6**
BSO3				S	**Sn**	**12**	**01**	**23.8**	**-2.2**
NJJJ	**Nii jima 2**	**2.21**	**322**	P	**Pn**	**12**	**01**	**01.8**	**+0.7**
NJJJ				S	**Sn**	**12**	**01**	**26.4**	**-0.9**
BSO4	**Boso 4**	**2.38**	**348**	S	**Sn**	**12**	**01**	**31.5**	**+0.3**
JIM2	**Oshima 3**	**2.40**	**329**	P	**Pn**	**12**	**01**	**03.8**	**+0.1**
JIM2				S	**Sn**	**12**	**01**	**31.8**	**-0.1**
JIZS	**Izushimoda**	**2.67**	**321**	P	**Pn**	**12**	**01**	**08.4**	**+1.0**
JIZS				S	**Sn**	**12**	**01**	**38.0**	**-0.5**
JOD2	**Odawara 2**	**3.01**	**330**	P	**Pn**	**12**	**01**	**12.4**	**+0.3**
JOD2				S	**Sn**	**12**	**01**	**44.4**	**-2.5**
JSG	**Sagara**	**3.04**	**312**	P	**Pn**	**12**	**01**	**14.9**	**+2.4**
MJAR	**Matsushiro Arr**	**4.47**	**331**	P	**Pn**	**12**	**01**	**34.3**	**+2.1**
	5.0nm,0.3s,baz=152,slow=11,SNR=65								
MJAR				S	**Sn**	**12**	**02**	**22.7**	**-0.2**
	2.6nm,0.3s,baz=192,slow=22,SNR=4.4								
MAJO	**Matsushiro**	**4.47**	**331**	*e*P	**Pn**	**12**	**01**	**34.7**	**+2.5**
MAT	**Matsushiro**	**4.47**	**331**	P	**Pn**	**12**	**01**	**34.4**	**+2.2**
MAT				S	**Sn**	**12**	**02**	**24.0**	**+1.0**
CBIJ	**Chichi jima**	**5.65**	**169**	P	**Pn**	**12**	**01**	**48.4**	**0.0**
	16nm,0.3s,baz=317,slow=20,SNR=11								
CBIJ				S	**Sn**	**12**	**02**	**50.1**	**-1.9**
	14nm,0.3s,baz=252,slow=20,SNR=3.4								
CBIJ				LR	LR	12	03	53.6	
	comp=Z,162nm,18.9s,baz=58,slow=37								
SONM	**Songino Array**	**30.11**	**310**	P	**P**	**12**	**06**	**32.4**	**0.0**
	0.5nm,0.6s,mb3.4,baz=112,slow=6.4,SNR=2.5								
MK31	**Makanchi Array**	**46.22**	**306**	*e*P	**P**	**12**	**08**	**47.3**	**-0.4**
MKAR	**Makanchi Array**	**46.22**	**306**	P	**P**	**12**	**08**	**47.2**	**-0.5**
	1.1nm,0.6s,mb4.0,baz=84,slow=9.2,SNR=12								
KURK	**Kurchatov**	**48.41**	**311**	P	**P**	**12**	**09**	**04.1**	**-0.6**
	1.7nm,0.7s,mb4.2,baz=93,slow=7.4,SNR=5.5								
WRAB	**Tennant Creek**	**52.67**	**188**	*e*P	**P**	**12**	**09**	**36.9**	**-0.2**
	3.8nm,0.7s,mb4.4								
WRAB	**Tennant Creek**	**52.67**	**188**	*e*P	**P**	**12**	**09**	**36.9**	**-0.2**
WRAB				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5								
WB2	**Warramunga Arr**	**52.68**	**188**	*e*P	**P**	**12**	**09**	**37.0**	**-0.1**
WRA	**Warramunga Arr**	**52.68**	**188**	P	**P**	**12**	**09**	**37.0**	**-0.1**
	comp=Z,3.0nm,0.4s,mb4.6,baz=5.4,slow=7.6,SNR=89								
ASAR	**Alice Springs**	**56.41**	**188**	P	**P**	**12**	**10**	**04.2**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=4.7,slow=7.1,SNR=31								
GERES	**GERESS Array B**	**86.21**	**328**	P	**P**	**12**	**13**	**03.8**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.9,baz=35,slow=3.6,SNR=3.1								
**T

MK31	**Makanchi Array**	**14.02**	**37**	⇑P		**Pn**	**12 29 12.0**	**+0.2**
	comp=E,8.4nm,0.6s,baz=224,slow=14,SNR=120							
MK31	**Makanchi Array**	**14.02**	**37**	*e*P		**Pn**	**12 29 11.6**	**-0.3**
MK31	**Makanchi Array**	**14.02**	**37**	*i* P		**Pn**	**12 29 12.0**	**+0.2**
MK31				pmax	pmax			
	comp=Z,3.0nm,0.3s							
MKAR	**Makanchi Array**	**14.02**	**37**	P		**Pn**	**12 29 11.8**	**0.0**
	comp=Z,2.1nm,0.3s,baz=219,slow=15,SNR=26							
DANN	**Dangsing**	**14.05**	**120**	*e*P		**Pn**	**12 29 11.2**	**-1.2**
	comp=Z,32nm,0.3s							
KOLN	**Koldanda**	**14.30**	**122**	*e*P		**Pn**	**12 29 13.8**	**-1.8**
GKN	**Gorkha**	**14.88**	**119**	*e*P		**Pn**	**12 29 22.4**	**-0.4**
	comp=Z,24nm,0.3s							
AB01	**Akbulak array**	**14.95**	**334**	⇓P		**Pn**	**12 29 20.9**	**-2.6**
	comp=Z,3.7nm,0.4s							
AB31	**Akbulak array**	**14.95**	**334**	P		**Pn**	**12 29 20.8**	**-2.7**
AB31							12 31 55.8	
AB31				pmax	pmax			
	comp=Z,6.0nm,0.3s							
AB31				smax				
	comp=N,8.0nm,0.5s							
DMN	**Daman**	**15.45**	**119**	*e*P		**Pn**	**12 29 29.5**	**-0.4**
KKN	**Kakani**	**15.46**	**119**	*e*P		**Pn**	**12 29 29.4**	**-0.7**
	comp=N,32nm,0.5s							
PKIN	**Phulchoki**	**15.67**	**119**	*e*P		**Pn**	**12 29 32.8**	**+0.1**
KURBB	**Kurchatov Arra**	**15.67**	**21**	⇓P		**Pn**	**12 29 30.5**	**-2.0**
	comp=N,2.3nm,0.6s							
PKI	**Pulchoki**	**15.68**	**119**	*e*P		**Pn**	**12 29 33.1**	**+0.3**
KURK	**Kurchatov**	**15.78**	**21**	⇑P		**Pn**	**12 29 31.6**	**-2.2**
	comp=N,7.8nm,0.8s							
KURK	**Kurchatov**	**15.78**	**21**	P		**Pn**	**12 29 31.1**	**-2.8**
	comp=N,0.2nm,0.3s,baz=213,slow=10,SNR=22							
KURK	**Kurchatov**	**15.78**	**21**	*e*P		**Pn**	**12 29 31.9**	**-1.9**
	comp=N,5.9nm,0.7s							
KURK	**Kurchatov**	**15.78**	**21**	*e*P		**Pn**	**12 29 31.9**	**-1.9**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.7s							
GUN	**Gumba**	**15.82**	**117**	*e*P		**Pn**	**12 29 34.1**	**-0.4**
JIRN	**Jiri**	**16.19**	**117**	*e*P		**Pn**	**12 29 40.1**	**+1.1**
	comp=Z,48nm,0.3s							
VOSK	**Vostochnaya**	**16.52**	**2**	⇓P		**Pn**	**12 29 42.5**	**-0.4**
	comp=Z,2.5nm,0.7s							
VOSK	**Vostochnaya**	**16.52**	**2**	P		**Pn**	**12 29 41.7**	**-1.2**
VOSK				pmax	pmax			
	comp=Z,2.0nm,0.5s							
AKTK	**Aktyubinsk**	**16.63**	**332**	P		**Pn**	**12 29 42.4**	**-1.8**
AKTK				S		**S**	**12 32 38.3**	**-11**
AKTO	**Aktyubinsk**	**16.63**	**332**	⇑P		**Pn**	**12 29 42.9**	**-1.3**
	comp=Z,1.6nm,0.8s							
AKTO	**Aktyubinsk**	**16.63**	**332**	P		**Pn**	**12 29 42.4**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=138,slow=12,SNR=24							
AKTO				S		**S**	**12 32 38.3**	**-11**
	comp=Z,0.3nm,0.3s,baz=11,slow=23,SNR=5.5							
AKTO	**Aktyubinsk**	**16.63**	**332**	P		**Pn**	**12 29 42.4**	**-1.8**
AKTO				S		**S**	**12 32 38.3**	**-11**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVA0	**Borovoye Array**	**16.81**	**1**	⇓P		**Pn**	**12 29 47.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=170,slow=9.0,SNR=14							
BVA0	**Borovoye Array**	**16.81**	**1**	*e*P		**Pn**	**12 29 47.0**	**+0.6**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BVAR	**Borovoye Array**	**16.81**	**1**	P		**Pn**	**12 29 46.4**	**0.0**
	comp=Z,1.6nm,0.3s,baz=174,slow=9.9,SNR=14							
BRVK	**Borovoye**	**16.84**	**1**	*e*P		**Pn**	**12 29 46.2**	**-0.6**
	comp=Z,4.5nm,0.6s							
BRVK	**Borovoye**	**16.84**	**1**	*e*P		**Pn**	**12 29 46.2**	**-0.5**
BRVK				pmax	pmax			
	comp=Z,5.0nm,0.6s							
RAMN	**Ramite**	**16.90**	**118**	*e*P		**Pn**	**12 29 47.9**	**+0.2**
TAPN	**Taplejung**	**17.47**	**115**	*e*P		**Pn**	**12 29 55.6**	**+1.1**
	comp=Z,40nm,0.6s							
ODAN	**Odare**	**17.52**	**117**	*e*P		**Pn**	**12 29 56.3**	**+1.1**
	comp=Z,22nm,0.5s							
RDF	**Al-Radifah**	**20.21**	**255**	*e*P		**P**	**12 30 23.4**	**-0.1**
RDF				AMb	AMB	AMB	12 30 36.7	
	comp=Z,60nm,1.6s							
NAY	**Al-Naaiem**	**20.31**	**256**	*e*P		**P**	**12 30 24.3**	**-0.3**
NAY				AMb	AMB	AMB	12 30 27.4	
	comp=Z,11nm,1.1s							
ZAA0	**Zalesovo Array**	**20.53**	**26**	*e*P		**P**	**12 30 27.9**	**+1.3**
ZALV	**Zalesovo Beam**	**20.53**	**26**	P		**P**	**12 30 27.9**	**+1.3**
	comp=Z,17nm,0.5s,baz=218,slow=11,SNR=51							
NVS	**Novosibirsk**	**20.75**	**22**	⇓*i* P		**P**	**12 30 30.4**	**+1.4**
NVS				pmax	pmax			
	comp=Z,27nm,1.2s							
NVS				pmax	pmax			
	comp=N,30nm,1.6s							
NVS				pmax	pmax			
	comp=E,12nm,1.6s							
GTA	**Gaotai**	**23.75**	**73**	*e*P		**P**	**12 31 01.8**	**+2.8**
SONM	**Songino Array**	**29.18**	**55**	P		**P**	**12 31 49.6**	**+1.9**
	comp=E,0.7nm,0.7s,mb3.5,baz=270,slow=8.8,SNR=5.1							
CMAR	**Chiang Mai Arr**	**31.06**	**117**	P		**P**	**12 32 05.7**	**+1.2**
	comp=E,1.1nm,0.7s,mb3.7,baz=294,slow=7.8,SNR=6.2							
ARCES	**ARCESS Array B**	**41.09**	**338**	P		**P**	**12 33 30.2**	**+1.1**
	comp=E,4.1nm,0.9s,mb4.1,baz=109,slow=7.8,SNR=7.1							
NOA	**NORSAR Array B**	**44.11**	**323**	P		**P**	**12 33 54.6**	**+1.1**
	comp=E,0.4nm,0.6s,mb3.2,baz=97,slow=7.9,SNR=2.5							
KSRS	**Korea Array**	**45.76**	**70**	P		**P**	**12 34 08.6**	**+1.6**
	comp=E,1.0nm,0.7s,mb3.6,baz=273,slow=6.9,SNR=3.7							
TORD	**Torodi Ar. Bea**	**64.87**	**268**	P		**P**	**12 36 22.6**	**-1.6**
	comp=E,0.3nm,0.3s,mb3.6,baz=54,slow=5.8,SNR=4.0							
WRA	**Warramunga Arr**	**82.56**	**121**	P		**P**	**12 38 06.6**	**-0.5**
	comp=E,0.5nm,0.4s,mb3.6,baz=324,slow=5.0,SNR=17							
ASAR	**Alice Springs**	**84.78**	**124**	P		**P**	**12 38 18.2**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.4,baz=313,slow=4.9,SNR=13							

MOS ***20*** *12:52:55.7± 1.1, 682S× 15575E, h33km, mb6.0/49, MS5.5/35, Error ellipse: s-maj=8.7km s-min=6.5km az=108.7*

BJI ***20*** *12:52:57.2, 689S× 15591E, h59km, mB6.0, mb5.6, Ms5.6, Msz5.5*

ISCJB ***20*** *12:52:57.9± 0.1, 693S± 002× 15571E± 002, h51km, mb5.8/158, MS5.6/142, Error ellipse: s-maj=3.1km s-min=2.5km az=17.0*

NEIC ***20*** *12:52:59.0± 0.1, 691S× 15567E, mb5.8/64, ME5.6, MW6.0, Error ellipse: s-maj=4.8km s-min=3.7km az=69.0 Broadband fault plane solution: P waves. NP1: ϕs=100.00000°, δ=45.00000°, λ=90.00000°. NP2: ϕs=280.00000°, δ=45.00000°, λ=90.00000°. Principal axes: T Plg90.0000°, Azm0.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm10.0000°; Moment Tensor Solution. s35 Moment tensor: Scale 10^18 Nm; Mrr=1.41; Mθθ=1.20; Mϕϕ=0.21; Mrθ=0.19; Mϕθ=0.42; Mrϕ=0.22; Best double couple: Mo=1.40000×10^18 NP1:ϕs=295.00000°, δ=51.00000°, λ=97.00000°. NP2:ϕs=105.00000°, δ=40.00000°, λ=82.00000°. Principal axes: T 1.4500, Plg82.0000°, Azm245.0000°; N -0.0700, Plg5.0000°, Azm111.0000°; P -1.3800, Plg5.0000°, Azm20.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

IDC ***20*** *12:52:59.0± 0.3, 692S× 15578E, h51km± 2km, mb5.4/27, mb1 5.4/29, mb1mx5.4/29, mbtmp5.4/29, MS5.3/20, Ms1 5.3/20, ms1mx5.2/25 Error ellipse: s-maj=10.2km s-min=7.7km az=57.0*

GCMT ***20*** *12:52:59.0± 0.1, 704S× 15575E, h60km, MW6.0/111, Moment Tensor Solution. s111, c243; s110, c342; Duration: 2s5 Moment tensor: Scale 10^18Nm; Mrr=1.09±.01; Mθθ=1.35±.01; Mϕϕ=0.26±.01; Mrθ=-0.08±.01; Mϕθ=0.12±.01; Mrϕ=0.35±.01; Best double couple: Mo=1.29000×10^18 NP1:ϕs=75.00000°, δ=46.00000°, λ=62.00000°. NP2:ϕs=293.00000°, δ=51.00000°, λ=116.00000°. Principal axes: T 1.2170, Plg70.0000°, Azm268.0000°; N 0.1490, Plg20.0000°, Azm96.0000°; P -1.3640, Plg3.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

DJA ***20*** *12:53:25.8± 0.0, 748S× 154 45E, h203km, mB6.5/36, Mw(mB)6.2/36, Mwp5.9/34*

ISC 20 12:52:59.7±0.1, 690S±002×15575E±002, h53km, h53km±1.0km: pP-P, n996, σ0s88/613, mb5.8/158, MS5.6/142, 137C-129D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.85**	**121**	P		**Pn**	**12 54 10.6**	**+0.4**
	203nm,0.3s,baz=232,slow=4.7,SNR=43							
HNR				S		**Sn**	**12 55 09.1**	**+3.9**
	591nm,0.3s,baz=243,slow=16,SNR=3.9							
HNR	**Honiara**	**4.85**	**121**	*e*Pn		**Pn**	**12 54 10.9**	**+0.6**
HNR	**Honiara**	**4.85**	**121**	P		**Pn**	**12 54 10.6**	**+0.3**
HNR				S		**Sn**	**12 55 09.1**	**+3.9**
HNR				pmax	pmax			
	comp=Z,203nm,0.3s							
HNR				smax				
	comp=N,591nm,0.3s							
COEN	**Coen**	**14.21**	**239**	*e*Pn		**Pn**	**12 56 23.2**	**+5.0**
	comp=N,926nm,1.3s							
COEN	**Coen**	**14.21**	**239**	P		**Pn**	**12 56 21.0**	**+2.7**
	comp=N,368nm,1.4s,comp=N,5μm							
COEN	**Coen**	**14.21**	**239**	P		**Pn**	**12 56 20.2**	**+1.9**
	comp=N,368nm,1.4s,comp=N,5μm							
COEN	**Coen**	**14.21**	**239**	P		**Pn**	**12 56 20.5**	**+2.2**
	comp=N,368nm,1.4s,comp=N,5μm							
MMPI	**Merauke**	**15.31**	**263**	P		**Pn**	**12 56 36.7**	**+4.1**
MMPI	**Merauke**	**15.31**	**263**	P		**Pn**	**12 56 36.7**	**+4.1**
	comp=N,3μm,1.8s							
MMPI	**Merauke**	**15.31**	**263**	P		**Pn**	**12 56 35.1**	**+2.5**
	comp=N,3μm,1.8s							
JAY	**Jayapura**	**15.61**	**285**	P		**Pn**	**12 56 37.8**	**+1.3**
JAY	**Jayapura**	**15.61**	**285**	P		**Pn**	**12 56 37.4**	**+0.9**
	comp=N,639nm,1.3s							
CTA	**Charters Tower**	**16.02**	**214**	*e*P		**Pn**	**12 56 43.0**	**+1.3**
	comp=N,299nm,1.0s							
CTA				*e*S		**S**	**12 59 52.2**	**+2.4**
CTA				*e*SCS		ScS	13 08 46.6	+1.3
CTA	**Charters Tower**	**16.02**	**214**	P		**Pn**	**12 56 42.4**	**+0.7**
	comp=N,3.3nm,0.3s,baz=31,slow=14,SNR=44							
CTA				S		**S**	**12 59 43.1**	**-6.7**
	baz=41,slow=10,SNR=1.6							
CTA				LR		LR	13 02 22.5	
	comp=N,23μm,18.4s,baz=38,slow=35							
CTA	**Charters Tower**	**16.02**	**214**	P		**Pn**	**12 56 42.4**	**+0.7**
CTA				S		**S**	**12 59 43.1**	**-6.7**
CTAO	**Charters Tower**	**16.02**	**214**	*e*P		**Pn**	**12 56 43.7**	**+2.0**
CTAO	**Charters Tower**	**16.02**	**214**	P		**Pn**	**12 56 44.3**	**+2.6**
	comp=N,607nm,1.1s							
CTAO	**Charters Tower**	**16.02**	**214**	P		**Pn**	**12 56 43.4**	**+1.7**
	comp=N,607nm,1.1s							
CTAO	**Charters Tower**	**16.02**	**214**	P		**Pn**	**12 56 43.0**	**+1.3**
	comp=N,607nm,1.1s							
NOUC	**Port Laguerre**	**18.22**	**147**	*e*P		**Pn**	**12 57 09.6**	**+0.7**
DZM	**Mont Dzumac**	**18.27**	**147**	*e*P		**Pn**	**12 57 09.7**	**+0.1**
DZM	**Mont Dzumac**	**18.27**	**147**	*e*P		**Pn**	**12 57 10.2**	**+0.7**
LASL	**Noumea**	**18.45**	**147**	*e*P		**Pn**	**12 57 12.9**	**+1.2**
EIDS	**Eidsvold**	**18.90**	**193**	*e*P		**Pn**	**12 57 17.0**	**0.0**
	comp=N,522nm,1.1s							
TARA	**Tarawa**	**19.00**	**65**	*e*P		**Pn**	**12 57 19.6**	**+1.3**
	comp=N,2μm,1.2s							
TLE	**Tual**	**22.91**	**272**	P		**P**	**12 58 01.0**	**+1.6**
	comp=N,4μm,1.4s,mb6.6							
GUMO	**Guam**	**23.05**	**332**	P		**P**	**12 58 01.0**	**+0.3**
	comp=N,161nm,1.0s,mb5.4,baz=204,slow=10.0,SNR=3.7							
GUMO				LR		LR	13 05 52.4	
	comp=N,8μm,20.4s,MS5.1,baz=149,slow=34							
GUMO	**Guam**	**23.05**	**332**	P		Px	12 58 14.2	
	comp=N,2μm,1.9s							
GUMO	**Guam**	**23.05**	**332**	P		Px	12 58 14.2	
	comp=N,2μm,1.9s							
FUNA	**Funafuti**	**23.29**	**96**	*e*P		**P**	**12 58 04.1**	**+0.9**
	comp=N,4μm,2.1s,mb6.5							
FUNA				LR		LR		
	comp=Z,12μm,20.0s,MS5.3							
KAKA	**Kakadu**	**23.68**	**254**	*e*P		Px	12 57 52.1	
	comp=Z,4μm,1.4s							
ARMA	**Armidale**	**23.71**	**189**	*e*P		**P**	**12 58 06.7**	**-0.2**
ARMA				*e*pP			12 58 22.6	
ARMA				*e*PCP		PcP	13 01 50.8	+0.9
ARMA				*e*S		**S**	**13 02 20.2**	**+2.0**
ARMA				*e*SCP		ScP	13 05 25.3	+1.4
ARMA				*e*PCS		PcS	13 05 31.6	+2.1
ARMA				*e*SCS		ScS	13 09 13.5	+2.8
ARMA	**Armidale**	**23.71**	**189**	*e*P		**P**	**12 58 06.9**	**-0.1**
	comp=Z,55nm,1.3s,mb4.8							
WRAB	**Tennant Creek**	**24.48**	**236**	*e*P		**P**	**12 58 13.6**	**-0.4**
	comp=Z,2μm,1.4s,mb6.3							
WRAB	**Tennant Creek**	**24.48**	**236**	*c i*P		**P**	**12 58 14.1**	**+0.1**
WRAB	**Tennant Creek**	**24.48**	**236**	P		**P**	**12 58 13.6**	**-0.4**
	comp=Z,1μm,2.1s,mb5.9							
WRAB	**Tennant Creek**	**24.48**	**236**	P		**P**	**12 58 13.6**	**-0.4**
	comp=Z,1μm,2.1s,mb5.9							
WB2	**Warramunga Arr**	**24.48**	**236**	*e*P		**P**	**12 58 13.4**	**-0.7**
WB2				*e*PCP		PcP	13 01 51.8	0.0
WB2				*e*S		**S**	**13 02 27.8**	**-3.1**
WB2				*e*PCS		PcS	13 05 28.5	-3.4
WB2				*e*SCS		ScS	13 09 13.7	-0.5
WB2	**Warramunga Arr**	**24.48**	**236**	*e*P		**P**	**12 58 13.9**	**-0.1**
WRA	**Warramunga Arr**	**24.49**	**236**	P		**P**	**12 58 13.7**	**-0.5**
	comp=Z,313nm,0.9s,mb5.7,baz=61,slow=9.6,SNR=381							
WRA				PcP		PcP	13 01 51.9	+0.1
	comp=Z,30nm,0.4s,baz=64,slow=2.7,SNR=9.0							
WRA				S		**S**	**13 02 37.8**	**+6.7**
	comp=Z,8.7nm,1.0s,baz=60,slow=14,SNR=3.1							
WRA				ScP		ScP	13 05 26.5	+0.3
	comp=Z,34nm,1.2s,baz=55,slow=2.5,SNR=7.8							
WRA				LR		LR	13 07 54.7	
	comp=Z,14μm,18.6s,MS5.5,baz=60,slow=37							
WRA				PKiKP		PKiKP	13 09 32.0	-2.1
	comp=Z,1.3nm,0.4s,baz=317,slow=0.9,SNR=7.3							
WRA				pPKiKP			13 09 47.3	
	comp=Z,1.4nm,0.6s,baz=315,slow=1.1,SNR=3.0							
WRA	**Warramunga Arr**	**24.49**	**236**	P		**P**	**12 58 13.7**	**-0.5**
WRA				PcP		PcP	13 01 51.9	+0.1
WRA				S		**S**	**13 02 37.8**	**+6.7**
WRA				ScP		ScP	13 05 26.5	+0.3
WRA				LR		LR	13 07 54.7	
WRA	**Warramunga Arr**	**24.49**	**236**	P		**P**	**12 58 13.7**	**-0.4**
WRA							13 01 51.9	
WRA				S		**S**	**13 02 37.8**	**+6.8**
ASAR	**Alice Springs**	**26.80**	**229**	P		**P**	**12 58 33.8**	**-1.3**
	comp=Z,182nm,1.0s,mb5.6,baz=62,slow=9.3,SNR=442							
ASAR				PP			12 59 18.3	
	comp=Z,55nm,0.7s,baz=53,slow=10,SNR=4.1							
ASAR				PcP		PcP	13 01 56.3	-0.7
	comp=Z,44nm,0.7s,baz=55,slow=3.3,SNR=8.5							
ASAR				ScP		ScP	13 05 33.4	+0.5
	comp=Z,8.5nm,0.7s,baz=71,slow=4.0,SNR=5.2							
ASAR	**Alice Springs**	**26.80**	**229**	P		**P**	**12 58 33.8**	**-1.2**
ASAR							12 59 18.3	
ASAR							13 01 56.3	
AAI	**Ambon**	**27.62**	**275**	P		**P**	**12 58 42.4**	**-0.1**
	comp=Z,570nm,0.8s,comp=Z,1μm,mb6.2							
AAI	**Ambon**	**27.62**	**275**	P		**P**	**12 58 42.4**	**-0.1**
	comp=Z,570nm,0.8s,comp=Z,1μm,mb6.2							
STKA	**Stephens Creek**	**28.14**	**206**	*e*P		**P**	**12 58 45.8**	**-1.2**
	comp=Z,47nm,0.6s,mb5.3							
STKA				*e*pP		pP	12 59 00.4	-0.1
STKA				*e*PCP		PcP	13 01 59.7	-0.4
STKA				*e*S		**S**	**13 03 24.1**	**-4.5**
STKA				*e*SCP		ScP	13 05 37.3	+0.5
STKA				*e*SCS		ScS	13 09 25.4	-4.1
STKA	**Stephens Creek**	**28.14**	**206**	P		**P**	**12 58 45.9**	**-1.1**
	comp=Z,50nm,0.6s,mb5.3,baz=18,slow=9.0,SNR=103							
STKA				pP		pP	12 59 00.1	-0.3
	comp=Z,38nm,0.5s,baz=21,slow=18,SNR=7.7							
STKA				PcP		PcP	13 01 59.0	-1.1
	comp=Z,73nm,1.1s,baz=315,slow=2.9,SNR=3.8							
STKA				ScP		ScP	13 05 36.6	-0.2
	comp=Z,18nm,0.8s,baz=359,slow=4.6,SNR=5.3							
STKA				LR		LR	13 09 53.4	
	comp=Z,18μm,19.4s,MS5.7,baz=20,slow=36							
STKA	**Stephens Creek**	**28.14**	**206**	*e*P		**P**	**12 58 46.0**	**-1.0**
	comp=Z,405nm,2.1s,mb5.7							
LBMI	**Labuha**	**28.86**	**281**	P		**P**	**12 58 55.3**	**+1.8**
	comp=Z,2μm,1.3s,mb6.7							
LBMI	**Labuha**	**28.86**	**281**	P		**P**	**12 58 55.3**	**+1.8**
	comp=Z,2μm,1.3s,mb6.7							
CNB	**Canberra Magne**	**28.88**	**191**	*e*P		**P**	**12 58 53.3**	**-0.2**
CNB				*e*pP		pP	12 59 06.5	-0.5
CNB				*e*S		**S**	**13 03 36.1**	**-4.0**
CAN	**Canberra**	**28.96**	**191**	*e*P		**P**	**12 58 54.5**	**+0.4**
BATI	**Baumata**	**31.89**	**262**	P		**P**	**12 59 22.0**	**+1.6**
	comp=Z,283nm,1.1s,comp=Z,4μm,mb6.0							
BATI	**Baumata**	**31.89**	**262**	P		**P**	**12 59 22.0**	**+1.6**
	comp=Z,283nm,1.1s,comp=Z,4μm,mb6.0							
TOO	**Toolangi**	**31.92**	**196**	*e*P		**P**	**12 59 19.7**	**-0.6**
TOO				*e*pP		pP	12 59 34.6	+0.7
TOO				*e*PCP		PcP	13 02 09.8	0.0
TOO				*e*S		**S**	**13 04 15.8**	**-12**
MATI	**Mati**	**32.48**	**294**	*e*P		**P**	**12 59 25.0**	**-0.5**
AFI	**Afiamalu**	**32.66**	**105**	P		**P**	**12 59 26.0**	**-1.0**
	comp=Z,96nm,0.6s,mb5.9,baz=127,slow=1.9,SNR=29							
AFI	**Afiamalu**	**32.66**	**105**	P		**P**	**12 59 26.0**	**-1.1**
AFI				MLR		MLR		
	comp=Z,8μm,20.0s,MS5.4							
KDI	**Kendari**	**33.11**	**273**	P		**P**	**12 59 31.8**	**+0.8**
	comp=Z,178nm,1.2s,comp=Z,6μm,mb5.9							
KDI	**Kendari**	**33.11**	**273**	P		**P**	**12 59 31.8**	**+0.8**
	comp=Z,178nm,1.2s,comp=Z,6μm,mb5.9							
DAV	**Davao City (W)**	**33.15**	**294**	PFAKE			12 59 40.0	+8.7
DAV				LR		LR		
	comp=Z,5μm,20.0s,MS5.2							
DAV	**Davao City (W)**	**33.15**	**294**	⇑*e*P		**P**	**12 59 29.9**	**-1.5**
RAO	**Raoul Island**	**33.32**	**135**	P		**P**	**12 59 30.8**	**-1.9**
	comp=Z,509nm,0.6s,mb6.6,baz=108,slow=20,SNR=4.7							
RAO				LR		LR	13 08 45.2	
	comp=Z,1μm,22.0s,MS4.6,baz=103,slow=28							
RAO	**Raoul Island**	**33.32**	**135**	*e*P		**P**	**12 59 32.5**	**-0.1**
	comp=Z,590nm,0.8s,mb6.6							
RAO				LR		LR		
	comp=Z,6μm,19.0s,MS5.3							
RAO	**Raoul Island**	**33.32**	**135**	*e*P		**P**	**12 59 32.5**	**-0.1**
RAO				pmax	pmax			
	comp=Z,590nm,0.8s,mb6.6							
RAO				MLR		MLR		
	comp=Z,6μm,19.0s,MS5.3							
GSPH	**General Santos**	**33.34**	**292**	⇑*e*P		**P**	**12 59 31.4**	**-1.6**
GSPH	**General Santos**	**33.34**	**292**	⇑*e*P		**P**	**12 59 31.4**	**-1.6**
BUKP	**Musuan**	**33.95**	**295**	*e*P		**P**	**12 59 38.1**	**-0.2**
SCPH	**Surigao**	**34.40**	**298**	⇑*e*P		**P**	**12 59 43.1**	**+0.9**
MKAZ	**Moumakai**	**34.89**	**152**	P		**P**	**12 59 47.0**	**+0.9**
MKAZ				S		pP	12 59 54.9	-4.9
MSLP	**Maasin**	**35.12**	**298**	*e*P		**P**	**12 59 48.9**	**+0.5**
FORT	**Forrest**	**35.17**	**224**	*e*P		**P**	**12 59 47.2**	**-1.5**
	comp=Z,613nm,0.6s,mb6.7							
FORT	**Forrest**	**35.17**	**224**	*e*P		**P**	**12 59 47.6**	**-1.1**
	comp=Z,642nm,0.6s,mb6.7							
PAGZ	**Pagadian**	**35.45**	**294**	*e*P		**P**	**12 59 52.4**	**+1.1**
TBP	**Tagbilaran**	**35.79**	**297**	*e*P		**P**	**12 59 50.2**	**-4.0**
KAPI	**Kappang**	**35.85**	**271**	P		**P**	**12 59 54.1**	**-0.7**
	SNR=44							
KAPI	**Kappang**	**35.85**	**271**	*e*P		**P**	**12 59 53.1**	**-1.6**
	comp=Z,891nm,1.1s,mb6.6							
KAPI				*e*pP		pP	13 00 07.2	-1.3
KAPI				LR		LR		
	comp=Z,2μm,20.0s,MS4.9							
KAPI	**Kappang**	**35.85**	**271**	P		**P**	**12 59 53.5**	**-1.3**
	comp=Z,452nm,1.3s,comp=Z,4μm,mb6.2							
HIZ	**Hauiti**	**35.90**	**154**	P		**P**	**12 59 55.7**	**+0.9**
MOO	**Moorlands**	**36.20**	**191**	*e*P		**P**	**12 59 57.5**	**+0.2**
CBIJ	**Chichi jima**	**36.26**	**339**	P		**P**	**12 59 56.6**	**-1.4**
	comp=Z,81nm,0.7s,mb5.8,baz=281,slow=16,SNR=5.2							
PCI	**Palu**	**36.31**	**278**	P		**P**	**13 00 00.5**	**+1.8**
	comp=Z,1μm,1.1s,mb6.8							
PCI	**Palu**	**36.31**	**278**	P		**P**	**13 00 00.5**	**+1.8**
	comp=Z,1μm,1.1s,mb6.8							
TAU	**Tasmania Unive**	**36.63**	**190**	*e*P		**P**	**13 00 01.8**	**+0.8**
	comp=Z,761nm,1.5s,mb6.3							
TAU				*e*pP		pP	13 00 15.2	+0.5
TAU	**Tasmania Unive**	**36.63**	**190**	*e*P		**P**	**13 00 01.8**	**+0.9**
TAU				pmax	pmax			
	comp=Z,760nm,1.5s,mb6.3							
URZ	**Urewera**	**36.72**	**151**	P		**P**	**13 00 00.9**	**-0.9**
	comp=Z,44nm,0.5s,mb5.5,baz=313,slow=2.0,SNR=46							
URZ				LR		LR	13 13 59.2	
	comp=Z,7μm,18.1s,MS5.5,baz=187,slow=34							
URZ	**Urewera**	**36.72**	**151**	P		**P**	**13 00 01.9**	**0.0**
QRZ	**Quartz Range**	**36.95**	**159**	P		**P**	**13 00 04.0**	**+0.2**
MWZ	**Matawai**	**36.98**	**151**	P		**P**	**13 00 05.0**	**+0.9**
PUZ	**Puketiti**	**37.13**	**150**	P		**P**	**13 00 04.4**	**-0.9**
BKZ	**Black Stump Fm**	**37.16**	**153**	P		**P**	**13 00 04.8**	**-0.8**
GUIM	**Jordan**	**37.33**	**298**	*e*P		**P**	**13 00 07.7**	**+0.4**
PVCP	**Virac**	**37.40**	**303**	*e*P		**P**	**13 00 08.0**	**+0.1**
DSZ	**Denniston Nort**	**37.52**	**160**	P		**P**	**13 00 09.0**	**+0.5**
MBWA	**

RAR MLR MLR
comp=Z,143nm,0.8s

NACB Ninganchiao 45.43 314 *e*P **P 13 01 12.9 -0.7**
comp=Z,3μm,21.0s
comp=Z,140nm,0.8s,mb5.8

BJII Banjamegara 45.67 266 P **P 13 01 16.0 +0.3**
YHNB Yeheng 45.90 314 *e*P **P 13 01 17.7 +0.4**
comp=Z,114nm,0.9s,mb5.8

TATO Taipei 46.01 315 PFAKE 13 01 30.0 +12
TATO LR LR
comp=Z,5μm,19.0s,MS5.4

KSM Kuching 46.11 279 *e*P **P 13 01 18.0 -1.2**
KSM Kuching 46.11 279 ⇓P **P 13 01 20.4 +1.2**
KSM Kuching 46.11 279 P **P 13 01 18.6 -0.6**
comp=Z,821nm,1.6s,comp=Z,8μm,mb6.4

MJAR Matsushiro Arr 46.24 340 P **P 13 01 19.8 0.0**
comp=Z,19nm,0.6s,mb5.2,baz=169,slow=7.4,SNR=53
MJAR PP PP 13 03 08.8 -0.4
comp=Z,3.1nm,0.5s,baz=352,slow=11,SNR=4.3
MJAR ScP ScP 13 06 43.7 0.0
comp=Z,9.2nm,1.2s,baz=164,slow=5.2,SNR=4.4

MJAR Matsushiro Arr 46.24 340 P **P 13 01 19.8 0.0**
MJAR PP PP 13 03 08.8 -0.4
MJAR ScP ScP 13 06 43.7 0.0

MJAR Matsushiro Arr 46.24 340 P **P 13 01 19.8 0.0**
MJAR 13 03 08.8

MAJO Matsushiro 46.24 340 *e*P **P 13 01 19.2 -0.5**
comp=Z,104nm,0.9s,mb5.8
MAJO LR LR
comp=Z,2μm,20.0s,MS5.1

MAJO Matsushiro 46.24 340 P **P 13 01 19.4 -0.4**
MAJO pmax pmax
comp=Z,100nm,0.9s,mb5.8

MAT Matsushiro 46.24 340 P **P 13 01 19.8 0.0**
MAT S **S 13 07 58.0 -4.7**

JCJI Jatiwangi 47.15 268 P **P 13 01 27.4 +0.1**
comp=Z,1μm,1.8s,mb6.6

MCQ Macquarie Isla 47.53 177 *e*P **P 13 01 29.9 +0.3**
LEM Lembang 47.77 267 P **P 13 01 32.0 -0.2**
comp=Z,626nm,1.3s,comp=Z,9μm,mb6.5

QZH Quanzhou 48.07 313 P **P 13 01 31.3 -2.9**
QZH S **S 13 08 29.0 -0.1**
QZH AMB AMB
comp=Z,300nm,1.1s,mb6.2
QZH AMB AMB
comp=Z,2μm,8.7s
QZH LR LR
comp=N,6μm,21.6s,MS5.7
QZH LR LR
comp=E,5μm,18.7s,MS5.7
QZH LR LR
comp=Z,14μm,32.0s

TPI Tanjungpandan 48.09 272 P **P 13 01 35.3 +0.7**
comp=Z,574nm,1.5s,comp=Z,7μm,mb6.4

DBJI Dramaga 48.65 267 P **P 13 01 37.8 -1.1**
comp=Z,372nm,1.6s,comp=Z,6μm,mb6.2

XMIS Christmas Isla 49.61 262 *e*P **P 13 01 44.9 -1.4**
XMIS *e*PP PP 13 03 41.3 +0.2
XMIS *e*S **S 13 08 53.6 +2.4**

XMIS Christmas Isla 49.61 262 *e*P **P 13 01 46.3 0.0**
comp=Z,398nm,1.2s,mb6.3
XMIS *e*pP pP 13 01 59.0 -1.5
XMIS *e*sP sP 13 02 04.7 -2.0

XMIS Christmas Isla 49.61 262 P **P 13 01 46.6 +0.3**
comp=Z,405nm,1.1s,comp=Z,0.0nm,mb6.4

PPBI Pangkal Pinang 49.66 273 P **P 13 01 46.9 +0.2**
comp=Z,349nm,1.3s,comp=Z,5μm,mb6.2

ERM Erimo 50.02 348 PFAKE 13 02 00.0 +11
ERM LR LR
comp=Z,6μm,20.0s,MS5.6

SSE Sheshan 50.21 321 ⇑P **P 13 01 50.5 0.0**
SSE AP pP 13 02 04.9 +0.2
SSE XP sP 13 02 10.3 -0.6
SSE PCP PcP 13 03 10.8 +1.7
SSE PP PP 13 03 47.8 +1.5
SSE S **S 13 08 56.9 -2.0**
SSE XS sS 13 09 21.0 -1.9
SSE SCS ScS 13 11 35.1 -2.2
SSE AMB AMB
comp=Z,53nm,0.7s,mb5.7
SSE AMB AMB
comp=Z,787nm,6.5s
SSE LR LR
comp=N,2μm,24.3s,MS5.2
SSE LR LR
comp=E,2μm,24.4s,MS5.2
SSE LR LR
comp=Z,3μm,23.9s,MS5.3

GZH Guangzhou 51.06 307 P **P 13 01 57.4 +0.4**
GZH S **S 13 09 12.3 +1.3**
GZH LR LR
comp=N,1μm,24.4s,MS5.3
GZH LR LR
comp=E,3μm,20.4s,MS5.3
GZH LR LR
comp=Z,4μm,22.2s,MS5.4

KSRS Korea Array 51.21 332 P **P 13 01 58.7 +0.8**
comp=Z,28nm,0.7s,mb5.3,baz=151,slow=8.1,SNR=54
KSRS ScP ScP 13 07 05.8 +1.0
comp=Z,7.5nm,1.2s,baz=127,slow=4.7,SNR=5.2
KSRS LR LR 13 23 20.6
comp=Z,2μm,19.5s,MS5.1,baz=145,slow=36

KSRS Korea Array 51.21 332 P **P 13 01 58.7 +0.8**
KSRS pmax pmax
comp=Z,28nm,0.7s,mb5.3
KSRS pmax pmax
comp=N,8.0nm,1.2s
KSRS MLR MLR
comp=Z,2μm,19.5s,MS5.1

QIZ Qiongzhong 52.06 301 P **P 13 02 02.5 -2.1**
QIZ AP pP 13 02 17.0 -1.9
QIZ PP PP 13 04 00.9 -2.4
QIZ S **S 13 09 22.6 -2.3**
QIZ XS sS 13 09 45.1 -3.9
QIZ SS SS 13 13 01.9 -0.9
QIZ AMB AMB
comp=Z,165nm,1.0s,mb5.9
QIZ AMB AMB
comp=Z,1μm,9.5s
QIZ LR LR
comp=N,2μm,25.4s,MS5.2
QIZ LR LR
comp=E,2μm,27.0s,MS5.2
QIZ LR LR
comp=Z,6μm,26.5s,MS5.5

QIZ Qiongzhong 52.06 301 *e*P **P 13 02 06.1 +1.5**
comp=Z,298nm,1.2s,mb6.1

ASAJ Asahikawa 52.15 348 P **P 13 02 05.9 +1.1**
comp=Z,105nm,0.8s,mb5.8,baz=220,slow=7.4,SNR=51
ASAJ pP pP 13 02 20.1 +0.9
comp=Z,104nm,0.7s,baz=212,slow=17,SNR=7.8

ASAJ Asahikawa 52.15 348 P **P 13 02 05.9 +1.1**
ASAJ *PP pP 13 02 20.1 +0.9
ASAJ pmax pmax
comp=Z,105nm,0.8s

NJ2 Nanjing 52.33 320 *e*P **P 13 02 07.3 +1.0**
NJ2 AP pP 13 02 19.8 -0.9
NJ2 XP sP 13 02 25.1 -1.7
NJ2 PP PP 13 04 06.9 +1.4
NJ2 S **S 13 09 25.0 -3.1**
NJ2 AMB AMB
comp=Z,50nm,1.0s,mb5.4
NJ2 AMB AMB
comp=Z,910nm,8.7s
NJ2 LR LR
comp=N,2μm,25.9s,MS5.3
NJ2 LR LR
comp=E,4μm,25.9s,MS5.3
NJ2 LR LR
comp=Z,4μm,25.9s,MS5.3

MYKOM Kota Tinggi 52.51 278 ⇓P **P 13 02 09.1 +1.0**
KGM Kluang 53.07 278 ⇑P **P 13 02 13.0 +0.8**
KIP Kipapa 53.38 57 PFAKE 13 02 30.0 +16
KIP LR LR
comp=Z,5μm,22.0s,MS5.6

KTGM Kuala Trenggan 53.90 282 ⇓P **P 13 02 19.6 +1.3**
PPT Papeete 54.30 107 *e*P **P 13 02 22.0 +0.9**
comp=Z,171nm,1.6s,mb5.7
PPT *e*S **S 13 09 56.3 +0.8**
comp=Z,3μm,27.2s
PPT *e*LQ 13 15 51.6
comp=Z,3μm,28.0s
PPT *e*LR LR 13 18 15.9
comp=Z,6μm,23.2s,baz=280

PPT Papeete 54.30 107 P **P 13 02 21.5 +0.3**
comp=Z,66nm,0.5s,mb5.9,baz=257,slow=3.4,SNR=46
PPT LR LR 13 20 37.1
comp=Z,3μm,21.8s,MS5.3,baz=274,slow=30

PAE Paea 54.31 107 *e*P **P 13 02 21.7 +0.5**
comp=Z,2μm,1.6s,mb6.9

WHN Wuhan 54.40 315 ⇑P **P 13 02 22.0 +0.4**
WHN AP pP 13 02 41.0 +5.0
WHN S **S 13 09 56.3 0.0**
WHN LR LR
comp=N,5μm,21.0s,MS5.7
WHN LR LR
comp=E,4μm,17.3s,MS5.7
WHN LR LR
comp=Z,12μm,23.6s

KHU Kahuku 54.49 61 *e*P **P 13 02 23.3 +0.9**
KHU Kahuku 54.49 61 P **P 13 02 23.9 +1.5**
TIAR Tiarei 54.52 107 *e*P **P 13 02 23.4 +0.7**
comp=Z,2μm,0.8s

TVO Taravao 54.63 107 *e*P **P 13 02 24.3 +0.8**
comp=Z,2μm,0.8s

POHA Pohakuloa 54.77 60 PFAKE 13 02 40.0 +16
POHA LR LR
comp=Z,4μm,19.0s,MS5.5

YSS Yuzh-Sakhalins 54.85 349 ⇓*i*P **P 13 02 26.1 +1.6**
YSS Yuzh-Sakhalins 54.85 349 ⇓*i*P **P 13 02 25.0 +0.5**
YSS pmax pmax
comp=Z,190nm,1.0s,mb6.1
YSS MLR MLR
comp=Z,4μm,16.0s,MS5.5
YSS MLR MLR
comp=N,3μm,18.0s

UBT Ubonrachathani 54.88 294 P **P 13 02 25.0 -0.3**
FRIM Kepong 54.96 279 ⇓P **P 13 02 26.4 +0.5**
DL2 Dalian 55.48 328 ⇑*i*P **P 13 02 29.6 +0.3**
DL2 AP pP 13 02 42.5 -1.2
DL2 S **S 13 10 10.4 -0.2**
DL2 AMB AMB
comp=Z,100nm,1.5s,mb5.6
DL2 AMB AMB
comp=Z,700nm,6.1s
DL2 LR LR
comp=N,1μm,25.5s
DL2 LR LR
comp=Z,3μm,25.5s,MS5.3

MEH Mehetia 55.76 107 *e*P **P 13 02 32.1 +0.4**
comp=Z,4μm,0.8s

IPM Ipoh 55.78 280 ⇓P **P 13 02 32.4 +0.5**
PMOR Pomariorio Ree 55.78 103 *e*P **P 13 02 32.7 +0.8**
comp=Z,429nm,1.1s,mb6.4

VAH Vaihoa 56.05 104 *e*P **P 13 02 34.4 +0.6**
comp=Z,308nm,1.4s,mb6.2

TIA Tai'an 56.15 323 ⇓P **P 13 02 34.1 0.0**
TIA AMB AMB
comp=Z,49nm,1.7s,mb5.3

MDJ Mudanjiang 56.43 338 P **P 13 02 36.8 +0.9**
MDJ AP pP 13 02 50.8 +0.4
MDJ XP sP 13 02 56.3 -0.2
MDJ PCP PcP 13 03 32.6 +0.2
MDJ S **S 13 10 21.8 -1.2**
MDJ XS sS 13 10 48.4 +1.1
MDJ SS SS 13 14 08.6 -2.5
MDJ AMB AMB
comp=Z,106nm,1.4s,mb5.7
MDJ AMB AMB
comp=Z,1μm,5.2s
MDJ LR LR
comp=N,2μm,25.8s
MDJ LR LR
comp=E,1μm,19.9s
MDJ LR LR
comp=Z,3μm,21.8s,MS5.4

MDJ Mudanjiang 56.43 338 *e*P **P 13 02 35.6 -0.3**
comp=Z,184nm,1.4s,mb5.9

SNY Shenyang 56.72 332 ⇑P **P 13 02 36.8 -1.2**
SNY S **S 13 10 24.4 -2.4**
SNY AMB AMB
comp=Z,952nm,8.7s
SNY LR LR
comp=N,1μm,26.1s,MS5.2
SNY LR LR
comp=E,2μm,24.3s,MS5.2
SNY LR LR
comp=Z,3μm,24.6s,MS5.3

SNG Songkhla 56.75 283 P **P 13 02 37.0 -1.8**
comp=Z,1μm,1.0s,mb7.0

KKTK Khon Kaen 57.23 294 P **P 13 02 42.1 0.0**
comp=Z,2μm,0.8s

SKR Severo-Kuril's 57.35 0 P pP 13 03 02.0 +5.2
SKR S **S 13 10 38.0 +3.2**
SKR *e*PS 13 10 50.0
SKR *e* 13 12 29.0
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
SKR smax
comp=E,4μm,10.0s
SKR MLR MLR
comp=E,5μm,22.0s
SKR MLR MLR
comp=Z,7μm,22.0s,MS5.7

CN2 Changchun 57.43 334 *e*P **P 13 02 43.5 +0.5**
CN2 SCP ScP 13 07 31.4 -0.5
CN2 *e*S **S 13 10 35.8 -0.3**
CN2 SCS ScS 13 12 25.3 -2.5
CN2 *e*SS SS 13 14 27.4 +0.6
CN2 AMB AMB
comp=Z,10.0nm,1.4s,mb4.7
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,2μm,25.0s,MS5.2
CN2 LR LR
comp=E,2μm,25.0s,MS5.2
CN2 LR LR
comp=Z,4μm,29.0s,MS5.3

GYA Guiyang 58.00 307 ⇑*i*P **P 13 02 46.8 -0.5**
GYA AP pP 13 02 59.8 -2.1
GYA XP sP 13 03 05.0 -2.9
GYA PP PP 13 04 58.3 +1.9
GYA S **S 13 10 43.9 -0.3**
GYA XS sS 13 11 06.8 -1.8
GYA AMB AMB
comp=Z,90nm,0.8s,mb5.8
GYA LR LR
comp=N,1μm,20.0s,MS5.5
GYA LR LR
comp=E,4μm,21.9s,MS5.5
GYA LR LR
comp=Z,5μm,20.1s,MS5.6

HABR Khabarovsk 58.06 344 ⇓*i*P **P 13 02 45.5 -1.9**
HABR *e*PP pP 13 02 53.4 -8.5
HABR *e*SP sP 13 02 57.6 -10
HABR *e* 13 03 35.1
HABR *e*S **S 13 10 44.5 +0.2**
HABR *e*SS sS 13 10 58.7 -10
HABR *e* 13 12 32.1
HABR *e*SS SS 13 14 33.6 -3.0
HABR pmax pmax
comp=Z,437nm,1.6s,mb6.2

COCO West Island 58.25 260 ⇓P **P 13 02 48.9 -0.4**
SNR=5.4

COCO West Island 58.25 260 *e*P **P 13 02 49.9 +0.6**
comp=Z,739nm,1.3s,mb6.5
COCO LR LR
comp=Z,3μm,20.0s,MS5.3

NNT Nongplab 58.94 289 P **P 13 02 54.5 +0.4**
BJT Baijiatuau 59.26 325 *e*P **P 13 02 55.4 -0.5**
comp=Z,35nm,0.4s,mb5.7

BJT Baijiatuau 59.26 325 *e*P **P 13 02 55.4 -0.4**
BJT pmax pmax
comp=Z,35nm,0.4s

BJI Beijing 59.27 325 P **P 13 02 55.4 -0.5**
BJI XP sP 13 03 14.9 -1.7
BJI S **S 13 10 59.3 -0.9**
BJI XS sS 13 11 22.8 -2.0
BJI SS SS 13 14 55.8 0.0
BJI AMB AMB
comp=Z,65nm,1.6s,mb5.4
BJI AMB AMB
comp=Z,1μm,4.7s
BJI LR LR
comp=N,2μm,22.0s,MS5.5
BJI LR LR
comp=E,3μm,20.9s,MS5.5
BJI LR LR
comp=Z,5μm,29.0s

NST Nakhon Sawan 59.47 293 P **P 13 02 58.0 +0.3**
KLR Kul'dur 59.71 342 *i*P **P 13 02 56.5 -2.2**
KLR *e*S **S 13 11 00.0 -5.5**
KLR pmax pmax
comp=Z,2μm,8.5s
KLR smax
comp=N,2μm,8.0s
KLR smax
comp=E,2μm,8.0s

PET Petropavlovsk 59.74 2 PFAKE 13 03 10.0 +11
PET LR LR
comp=Z,7μm,21.0s,MS5.8

PET Petropavlovsk 59.74 2 *e*P **P 13 02 56.3 -2.6**
PET *e*S **S 13 11 05.8 -0.1**
PET *e*PS 13 11 26.5
PET pmax pmax
comp=Z,130nm,1.9s,mb5.6
PET pmax pmax
comp=Z,2μm,6.4s

PEA0B Petropavlovsk- 59.80 1 *e*P **P 13 03 00.3 +1.0**
PETK Petropavlovsk- 59.80 1 P **P 13 02 59.9 +0.6**
comp=Z,28nm,0.6s,mb5.4,baz=148,slow=6.5,SNR=62
PETK pP pP 13 03 14.5 +0.6
comp=Z,75nm,0.9s,baz=146,slow=7.0,SNR=10.0
PETK LR LR 13 24 55.6
comp=Z,5μm,22.0s,MS5.6,baz=183,slow=32

PETK Petropavlovsk- 59.80 1 P **P 13 02 59.9 +0.6**
PETK pP pP 13 03 14.5 +0.6
PETK LR LR 13 24 55.6

XAN Xi'an 60.16 316 P **P 13 03 01.1 -1.1**
XAN AP pP 13 03 15.1 -1.7
XAN AMB AMB
comp=Z,71nm,1.0s,mb5.7
XAN AMB AMB
comp=Z,1μm,10.3s
XAN LR LR
comp=E,2μm,25.7s
XAN LR LR
comp=Z,6μm,26.1s,MS5.6

KMI Kunming 60.59 304 P **P 13 03 05.8 +0.5**
KMI AP pP 13 03 20.6 +0.7
KMI XP sP 13 03 25.8 -0.2
KMI PCP PcP 13 03 50.8 +1.5
KMI PP PP 13 05 20.0 +0.6
KMI S **S 13 11 16.0 -1.8**
KMI XS sS 13 11 41.3 -1.0
KMI SS SS 13 15 17.1 0.0
KMI AMB AMB
comp=Z,106nm,1.5s,mb5.8
KMI AMB AMB
comp=Z,1μm,6.0s
KMI LR LR
comp=N,1μm,21.8s,MS5.4
KMI LR LR
comp=E,3μm,22.4s,MS5.4
KMI LR LR
comp=Z,4μm,24.1s,MS5.5

DRV Dumont d'Urvil 60.65 187 P **P 13 03 05.0 +0.1**
DRV S **S 13 11 25.0 +7.8**
DRV SS SS 13 15 24.0 +7.7
DRV L 13 18 00.0

BDT Bhumibol Dam 60.98 294 P **P 13 03 09.0 +0.9**
comp=Z,42nm,1.0s,mb5.5

CMAR Chiang Mai Arr 61.42 295 P **P 13 03 11.2 +0.2**
comp=Z,62nm,0.9s,mb5.7,baz=113,slow=4.8,SNR=226
CMAR pP pP 13 03 25.2 -0.5
comp=Z,43nm,0.7s,baz=120,slow=4.8,SNR=9.9
CMAR LR LR 13 29 30.2
comp=Z,1μm,18.5s,MS5.0,baz=276,slow=36
CMAR PKPPKP 13 32 24.7
comp=Z,1.0nm,0.9s,baz=260,slow=4.0,SNR=4.3

CMAR Chiang Mai Arr 61.42 295 P **P 13 03 11.3 +0.3**
CMAR *PP pP 13 03 25.2 -0.5

CHTO Chiang Mai 61.54 296 ⇑P **P 13 03 11.6 -0.2**
SNR=62

CHTO Chiang Mai 61.54 296 *e*P **P 13 03 11.1 -0.7**
comp=Z,268nm,1.3s,mb6.2

CHTO Chiang Mai 61.54 296 P **P 13 03 11.3 -0.5**
CHTO pmax pmax
comp=Z,270nm,1.2s,mb6.2

CD2 Chengdu 62.33 310 P **P 13 03 16.9 0.0**
CD2 AP pP 13 03 33.8 +2.2
CD2 XP sP 13 03 42.0 +4.4
CD2 PP PP 13 05 35.8 +1.1
CD2 PCS PcS 13 07 57.5 -2.1
CD2 S **S 13 11 35.8 -3.8**
CD2 XS sS 13 12 06.5 +2.2
CD2 SCS ScS 13 12 58.8 -6.1
CD2 SS SS 13 15 42.8 -1.3
CD2 AMB AMB
comp=Z,260nm,0.6s,mb6.5
CD2 AMB AMB
comp=Z,2μm,7.2s
CD2 LR LR
comp=N,4μm,24.0s,MS5.7
CD2 LR LR
comp=E,5μm,22.8s,MS5.7
CD2 LR LR
comp=Z,3μm,23.8s,MS5.4

HHC Hu-ho-hao-te 62.47 323 *e*P **P 13 03 18.0 +0.4**
HHC AP pP 13 03 31.9 -0.4
HHC XP sP 13 03 37.8 -0.5
HHC PCP PcP 13 03 55.6 -0.9
HHC PP PP 13 05 37.9 +2.2
HHC PCS PcS 13 07 58.3 -1.5
HHC S **S 13 11 39.9 -1.1**
HHC XS sS 13 12 03.8 -1.8
HHC SCS ScS 13 13 03.1 -2.4
HHC AMB AMB
comp=Z,53nm,1.8s,mb5.4
HHC AMB AMB
comp=Z,1μm,8.4s
HHC LR LR
comp=N,2μm,20.2s,MS5.4
HHC LR LR
comp=E,2μm,21.4s,MS5.4
HHC LR LR
comp=Z,4μm,21.4s,MS5.5

BTO Baotou 63.24 322 *e*P **P 13 03 22.6 -0.2**
HIA Hailar 64.16 335 *e*P **P 13 03 28.6 0.0**
comp=Z,69nm,0.8s,mb5.7

HIA Hailar 64.16 335 *e*P **P 13 03 28.6 0.0**
HIA pmax pmax
comp=Z,69nm,0.8s

LZH Lanzhou 64.78 315 ⇓P **P 13 03 33.0 0.0**
LZH AP pP 13 03 47.1 -0.6
LZH XP sP 13 03 52.1 -1.7
LZH PP PP 13 05 55.0 -1.1
LZH S **S 13 12 10.0 +0.1**
LZH XS sS 13 12 30.0 -4.7
LZH AMB AMB
comp=Z,168nm,1.3s,mb5.9
LZH AMB AMB
comp=Z,570nm,4.8s
LZH LR LR
comp=E,3μm,16.3s
LZH LR LR
comp=Z,5μm,17.4s,MS5.8

CASY Casey 66.91 198 *e*P **P 13 03 46.0 -0.2**
comp=Z,407nm,1.6s,mb6.2
CASY LR LR
comp=Z,5μm,20.0s,MS5.7

IMP Imphal 67.89 300 *e*P **P 13 03 52.0 -1.1**
RKT Rikitea 68.28 112 *e*P **P 13 03 55.6 0.0**
comp=Z,236nm,1.3s,mb6.0
RKT *e*S S 13 12 53.5 +0.6
comp=Z,2μm,28.0s
RKT *e*LQ 13 21 48.5
comp=Z,4μm,34.8s
RKT *e*LR LR 13 24 33.8
comp=Z,12μm,30.2s,baz=277

RKT Rikitea 68.28 112 *e*P **P 13 03 55.6 0.0**
comp=Z,236nm,1.3s,mb6.1
RKT *e*S S 13 12 53.5 +0.6
RKT *e*LQ 13 21 48.5

RKT Rikitea 68.28 112 *e*P **P 13 03 55.6 0.0**
RKT *e*S S 13 12 53.5 +0.6
RKT pmax pmax
comp=Z,236nm,1.3s,mb6.1

UNV Unalaska Valle 68.34 23 *e*P **P 13 03 54.7 -0.7**
comp=Z,43nm,0.8s,mb5.5

CLNS Chul'man 68.36 342 *e*P **P 13 03 56.2 +0.8**
CLNS *e*PP pP 13 04 09.3 -1.0
CLNS *e* 13 04 20.2

CLNS eS S 13 12 43.7 -8.8
CLNS e 13 13 30.9
CLNS pmax pmax
comp=Z,172nm,1.3s,mb5.9
CLNS pmax pmax
comp=N,109nm,1.4s
CLNS pmax pmax
comp=E,41nm,1.3s
CLNS smax
comp=N,377nm,10.8s
CLNS smax
comp=E,682nm,12.0s
CLNS MLR MLR
comp=Z,932nm,17.0s,MS5.1
CLNS MLR MLR
comp=E,231nm,12.0s
CLNS MLR MLR
comp=N,766nm,18.0s
CIT Chita 68.86 334 eP P **13 04 00.3 +1.7**
CIT e pP 13 04 13.4 -0.1
CIT pmax pmax
comp=Z,443nm,1.9s,mb6.1
GTA Gaotai 69.19 317 ⇑P P **13 04 01.1 +0.2**
GTA AP pP 13 04 16.0 +0.2
GTA XP sP 13 04 23.0 +1.2
GTA S S 13 13 02.1 -0.9
GTA XS sS 13 13 28.0 0.0
GTA PS 13 13 34.6
GTA SS SS 13 17 28.1 -2.4
GTA AMB AMB
comp=Z,59nm,1.5s,mb5.3
GTA AMB AMB
comp=Z,1μm,4.2s
GTA LR LR
comp=N,1μm,21.7s,MS5.4
GTA LR LR
comp=E,2μm,25.9s,MS5.4
GTA LR LR
comp=Z,4μm,25.0s,MS5.6
ULN Ulaanbaatar 69.33 327 P P **13 04 02.6 +1.0**
SNR=88
ULN Ulaanbaatar 69.33 327⇑ iP P **13 04 03.0 +1.4**
SONM Songino Array 69.67 327 P P **13 04 03.2 -0.5**
comp=Z,93nm,0.9s,mb5.7,baz=140,slow=5.2,SNR=293
SONM pP pP 13 04 19.0 +0.4
comp=Z,66nm,0.9s,baz=143,slow=5.1,SNR=7.0
SONM PKPPKP 13 32 12.1
comp=Z,8.6nm,1.2s,baz=261,slow=3.1,SNR=19
SONM LR LR 13 34 26.9
comp=Z,2μm,21.7s,MS5.3,baz=130,slow=36
SONM Songino Array 69.67 327 P P **13 04 03.2 -0.5**
SONM *PP pP 13 04 19.0 +0.4
SEY Seymchan 69.68 358⇓ iP P **13 04 04.3 +0.9**
SEY Seymchan 69.68 358⇓ iP P **13 04 04.2 +0.8**
SHL Shillong 69.90 300 eP P **13 04 05.0 -0.6**
SHL i S S 13 13 10.0 -1.8
VNDA Vanda 70.65 179 P P **13 04 08.8 -0.5**
comp=Z,46nm,1.2s,mb5.3,baz=344,slow=7.4,SNR=73
VNDA LR LR 13 29 33.3
comp=Z,5μm,21.4s,MS5.7,baz=6.9,slow=31
VNDA Vanda 70.65 179 P P **13 04 08.9 -0.4**
VNDA pmax pmax
comp=Z,340nm,1.6s
SBA Scott Base 71.15 178 eP P **13 04 13.6 +1.3**
comp=Z,491nm,1.7s,mb6.2
SBA LR LR
comp=Z,4μm,20.0s,MS5.6
SBA Scott Base 71.15 178 P P **13 04 13.7 +1.4**
SBA pmax pmax
comp=Z,490nm,1.6s,mb6.2
YAK Yakutsk 71.63 347⇑ iP P **13 04 15.3 0.0**
YAK LR LR
comp=Z,2μm,20.0s,MS5.4
YAK Yakutsk 71.63 347*c* iP P **13 04 14.8 -0.5**
YAK e pP 13 04 34.1 +3.8
YAK e 13 06 57.8
YAK eS S 13 13 25.9 -4.6
YAK e 13 14 10.2
YAK eSSS 13 21 21.4
YAK pmax pmax
comp=Z,51nm,1.4s,mb5.3
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=E,15nm,1.5s
YAK pmax pmax
comp=Z,72nm,1.3s,mb5.4
YAK smax
comp=E,583nm,2.8s
YAK smax
comp=N,2μm,4.9s
LSA Lhasa 71.84 304 P P **13 04 18.0 +0.7**
LSA S S 13 13 23.0 -11
LSA XS sS 13 13 56.8 -2.6
LSA LR LR
comp=N,660nm,30.6s,MS5.3
LSA LR LR
comp=E,2μm,25.8s,MS5.3
LSA LR LR
comp=Z,4μm,27.4s,MS5.5
LSA Lhasa 71.84 304 eP P **13 04 18.7 +1.4**
comp=Z,83nm,0.9s,mb5.7
LSA Lhasa 71.84 304 eP P **13 04 18.7 +1.4**
LSA pmax pmax
comp=Z,83nm,0.9s,mb5.7
SDPT Sand Point 71.85 25 eP P **13 04 18.0 +1.2**
comp=Z,558nm,2.0s,mb6.2
CAL Calcutta 72.12 296 eP P **13 04 19.1 0.0**
CAL eS S 13 13 37.0 -0.8
BOD Bodaibo 72.81 338 eP P **13 04 21.3 -1.1**
BOD pmax pmax
comp=Z,86nm,1.2s,mb5.6
ZAK Zakamensk 72.81 328 eP P **13 04 22.1 -0.5**
ZAK pmax pmax
comp=Z,138nm,1.3s,mb5.7
MIR Mirnyy 73.06 202⇓ iP P **13 04 25.0 +1.1**
MIR i S S 13 13 48.0 +1.1
MIR pmax pmax
comp=Z,1μm,1.8s,mb6.5
MIR pmax pmax
comp=E,2μm,3.0s
CHGN Chignik 73.35 25 eP P **13 04 26.6 +0.9**
TLY Talaya 73.37 329 P P **13 04 27.2 +1.3**
SNR=16
TLY Talaya 73.37 329⇑ iP P **13 04 26.5 +0.6**
TLY Talaya 73.37 329*c* iP P **13 04 25.6 -0.3**
TLY eS S 13 13 50.3 -0.5
TLY e 13 14 25.3
TLY eSS SS 13 18 28.9 -5.2
TLY pmax pmax
comp=Z,137nm,1.2s,mb5.8
IRK Irkutsk 73.38 330 eP P **13 04 25.9 0.0**
IRK eS S 13 13 50.3 -0.6
IRK pmax pmax
comp=Z,293nm,1.6s,mb6.0
BWNR Bhubaneshwar 73.83 293 ex P **13 04 25.0 -4.3**
BOK Bokaro 74.62 297⇑ iP P **13 04 32.5 -1.4**
BOK AMb AMB 13 04 37.5
comp=Z,246nm,1.6s,mb5.9
MOY Mondy 74.73 328 eP P **13 04 34.7 +0.9**
MOY pmax pmax
comp=Z,34nm,3.6s
BILL Bilibino 75.13 4⇑ iP P **13 04 36.5 +0.7**
BILL Bilibino 75.13 4*α* iP P **13 04 36.4 +0.6**
BILL e pP 13 04 50.1 -0.8
BILL 13 07 26.0
BILL eS S 13 14 09.0 -1.0
BILL ePS 13 15 08.2
BILL pmax pmax
comp=Z,231nm,1.2s,mb6.0
BILL MLR MLR
comp=Z,2μm,18.0s,MS5.5
VIS Vishakhapatnam 75.54 290⇑ iP P **13 04 38.0 -1.2**
VIS AMb AMB 13 04 42.4
comp=Z,364nm,1.3s,mb6.2
OHAK Old Harbor 76.11 26 eP P **13 04 43.7 +2.1**
comp=Z,277nm,2.1s,mb5.8
KDAK Kodiak Island 76.75 26 P P **13 04 59.5 +14**
comp=Z,29nm,0.7s,mb5.3,baz=190,slow=1.8,SNR=10.0
KDAK Kodiak Island 76.75 26 PFAKE 13 05 00.0 +15
KDAK LR LR
comp=Z,3μm,20.0s,MS5.6
MDRS Chennai 77.57 285 eP P **13 04 51.9 +1.1**
MDRS AMb AMB 13 04 53.8
comp=Z,289nm,1.4s,mb6.0

SVW2 Sparrevohn 77.63 22 eP P **13 04 50.4 +0.3**
WMQ Urumqi 79.27 317 P P **13 05 00.0 +0.4**
WMQ AP pP 13 05 13.0 -1.7
WMQ XP sP 13 05 18.0 -2.6
WMQ PP PP 13 08 01.0 +1.0
WMQ S S 13 14 54.0 -1.9
WMQ SCS ScS 13 15 16.0 -2.2
WMQ SS SS 13 20 05.0 +1.3
WMQ AMB AMB
comp=Z,67nm,1.2s,mb5.5
WMQ AMB AMB
comp=Z,165nm,6.0s
WMQ LR LR
comp=N,2μm,20.0s,MS5.7
WMQ LR LR
comp=E,3μm,20.0s,MS5.7
WMQ LR LR
comp=Z,4μm,20.0s,MS5.7
SLKM Skilak Lake 79.35 24 P P **13 04 59.4 -0.2**
KOD Kodaikanal 79.78 282 eP P **13 05 02.6 -0.3**
KOD AMb AMB 13 05 06.5
comp=Z,402nm,1.4s,mb6.2
HYB Hyderabad 79.95 289 eP P **13 05 01.5 -2.3**
comp=Z,315nm,1.0s,mb6.2
HYB e 13 05 08.0
HYB eS S 13 15 00.0 -4.0
HYB Hyderabad 79.95 289 eP P **13 05 01.5 -2.3**
HYB e 13 05 08.0
HYB eS S 13 15 00.0 -4.0
HYB pmax pmax
comp=Z,315nm,1.0s,mb6.2
HYB Hyderabad 79.95 289 *i* P P **13 05 01.5 -2.3**
comp=Z,315nm,1.0s,mb6.2
HYB epP pP 13 05 17.5 -1.5
HYB eS S 13 15 00.0 -4.0
PPLA Purkeypile 80.01 22 eP P **13 05 02.8 -0.3**
comp=Z,90nm,1.3s,mb5.5
TRD Trivandrum 80.02 280 eP P **13 05 04.9 +0.6**
TRD AMb AMB 13 05 08.0
comp=Z,426nm,1.5s,mb6.2
NGP Nagpur 80.19 293 *i* P P **13 04 58.8 -6.2**
NGP eS S 13 14 57.3 -9.2
TIXI Tiksi 80.37 352⇑ iP P **13 05 04.0 -0.9**
TIXI LR LR
comp=Z,2μm,20.0s,MS5.5
TIXI Tiksi 80.37 352 eP P **13 05 03.7 -1.2**
TIXI eS S 13 15 02.9 -3.5
TIXI eSS SS 13 20 14.2 -4.9
TIXI pmax pmax
comp=Z,61nm,1.4s,mb5.3
TIXI MLR MLR
comp=Z,2μm,19.0s,MS5.5
PMR Palmer 80.40 23 eP P **13 05 05.0 -0.3**
comp=Z,99nm,1.3s,mb5.6
PMR Palmer 80.40 23 eP P **13 05 05.0 -0.3**
PMR pmax pmax
comp=Z,99nm,1.3s,mb5.6
CHUM Lake Minchumin 80.57 21 eP P **13 05 05.8 -0.3**
comp=Z,80nm,1.1s,mb5.6
KTH Kantishna Hill 80.86 21 eP P **13 05 06.1 -1.6**
comp=Z,45nm,0.9s,mb5.4
LGTI Lohaghat 80.89 301 eP P **13 05 08.1 -0.5**
LGTI ex x 13 07 24.5
PTH Pithoragarh 80.94 301 eP P **13 05 09.0 +0.1**
PTH ex x 13 07 06.0
BPAW Bear Paw Mtn. 81.17 21 eP P **13 05 08.6 -0.7**
comp=Z,19nm,0.8s,mb5.1
IMA2 Indian Mountai 81.47 19 eP P **13 05 11.3 +0.4**
MCK McKinley 81.69 22 eP P **13 05 10.2 -1.9**
comp=Z,118nm,0.9s,mb5.8
MCK McKinley 81.69 22 P P **13 05 10.8 -1.3**
MCK pmax pmax
comp=Z,120nm,0.9s,mb5.8
PAF Port-aux-Franc 81.91 221 P P **13 05 15.1 +1.5**
AKL Akola 81.98 292 eP P **13 05 13.3 -1.2**
LATR Latur 82.00 290 eP P **13 05 13.1 -1.6**
BHPL Bhopal 82.07 295 eP P **13 05 14.4 -0.6**
BHPL AMb AMB 13 05 15.9
comp=Z,232nm,0.9s,mb6.1
COLA College 82.72 21 eP P **13 05 15.6 -1.9**
comp=Z,57nm,0.8s,mb5.7
COLA LR LR
comp=Z,5μm,21.0s,MS5.9
COLA College 82.72 21*c* iP P **13 05 16.1 -1.4**
MNGI Mangalore 82.76 284 eP P **13 05 18.9 +0.1**
DDI Dehra Dun 82.94 302 eP P **13 05 17.5 -1.9**
MENT Mentasta 83.27 24 eP P **13 05 20.8 +0.5**
COLD Coldfoot 83.28 18 eP P **13 05 19.6 -0.7**
comp=Z,167nm,1.8s,mb5.8
MK31 Makanchi Array 83.83 319 *i* P P **13 05 23.2 -0.4**
MK31 pmax pmax
comp=Z,42nm,0.4s,mb5.9
MKAR Makanchi Array 83.83 319 P P **13 05 22.9 -0.6**
comp=Z,68nm,0.6s,mb6.0,baz=94,slow=5.7,SNR=164
MKAR pP pP 13 05 39.9 +1.0
comp=Z,39nm,0.7s,baz=103,slow=5.8,SNR=8.0
MKAR PKiKP PKiKP 13 10 38.4 -1.0
comp=Z,3.2nm,0.9s,baz=246,slow=2.3,SNR=4.4
MKAR LR LR 13 44 54.5
comp=Z,1μm,20.5s,MS5.2,baz=103,slow=37
MKAR Makanchi Array 83.83 319 P P **13 05 23.0 -0.6**
MKAR *PP pP 13 05 39.9 +1.0
SMLA Simla 83.85 302 *i* P P **13 05 23.8 -0.3**
GOA Goa 84.10 286⇑ iP P **13 05 24.1 -1.6**
GOA AMb AMB 13 05 28.1
comp=Z,407nm,2.5s,mb6.1
GOA eS S 13 15 42.6 -4.2
ZAA0 Zalesovo Array 84.52 326 eP P **13 05 25.1 -1.9**
ZALV Zalesovo Beam 84.52 326 P P **13 05 25.1 -1.8**
comp=Z,49nm,0.5s,mb5.9,baz=114,slow=5.2,SNR=127
ZALV pP pP 13 05 42.1 -0.1
comp=Z,38nm,0.5s,baz=119,slow=5.5,SNR=13
ZALV LR LR 13 44 59.5
comp=Z,756nm,19.2s,MS5.1,baz=340,slow=37
ZALV Zalesovo Beam 84.52 326 P P **13 05 25.1 -1.8**
ZALV *PP pP 13 05 42.2 0.0
POO Poona 84.55 289 eP P **13 05 27.1 -0.8**
MAW Mawson 84.77 203 P P **13 05 27.2 -0.7**
comp=Z,76nm,0.6s,mb6.0,baz=94,slow=6.1,SNR=113
MAW pP pP 13 05 41.5 -1.7
comp=Z,125nm,0.9s,baz=100,slow=7.1,SNR=9.1
MAW LR LR 13 41 51.9
comp=Z,2μm,19.0s,MS5.4,baz=90,slow=35
MAW Mawson 84.77 203 P P **13 05 27.2 -0.8**
MAW *PP pP 13 05 41.5 -1.8
DLH Dalhousie 85.14 303 eP P **13 05 28.0 -2.5**
EGAK Eagle 85.14 23 eP P **13 05 29.2 -0.6**
comp=Z,67nm,1.1s,mb5.7
AJM Ajmer 85.15 297 eP P **13 05 29.8 -0.9**
THN Thein Dam 85.32 303 eP P **13 05 29.5 -1.9**
SKAG Skagway 85.43 29 eP P **13 05 32.2 +0.9**
comp=Z,142nm,2.0s,mb5.8
DAWY Dawson 85.51 24 eP P **13 05 31.9 +0.2**
NVS Novosibirsk 85.69 326⇓ iP P **13 05 32.0 -0.7**
NVS e pP 13 05 46.4 -1.7
NVS eS S 13 15 47.7 -13
NVS pmax pmax
comp=N,118nm,1.6s
NVS pmax pmax
comp=E,205nm,1.6s
NVS pmax pmax
comp=Z,352nm,1.6s,mb6.3
WRAK Wrangell Islan 85.86 32 eP P **13 05 33.4 -0.2**
comp=Z,71nm,1.4s,mb5.7
WRAK epP pP 13 05 48.8 -0.1
KSH Kashi 86.52 310 P P **13 05 38.1 +0.9**
KSH eAP pP 13 05 51.3 -1.3
KSH eXP sP 13 05 56.8 -1.7
KSH ePP PP 13 09 00.3 +0.7
KSH SKS 13 15 57.3
KSH S S 13 16 07.1 -2.7
KSH PS 13 17 12.3
KSH eSS SS 13 21 49.1 -2.4
KSH LR LR
comp=N,870nm,6.0s
KSH LR LR
comp=E,4μm,19.6s
KSH LR LR
comp=Z,975nm,4.6s
ULHL Ulahol 86.89 313 P P **13 05 40.2 +1.2**
SNR=17
KURK Kurchatov 87.22 322 P P **13 05 40.4 0.0**
SNR=46
KURK Kurchatov 87.22 322 P P **13 05 38.4 -2.0**
comp=Z,17nm,0.6s,mb5.4,baz=102,slow=4.2,SNR=68

KURK Kurchatov 87.22 322 *i* P P **13 05 38.8 -1.6**
KURK pmax pmax
comp=Z,233nm,1.8s,mb6.1
HOPS Hopland 87.48 50 PFAKE 13 05 50.0 +8.1
HOPS LR LR
comp=Z,3μm,22.0s,MS5.7
TKM2 Tokmak 2 87.50 314 eP P **13 05 41.2 -0.7**
comp=Z,50nm,1.1s,mb5.7
TKM2 Tokmak 2 87.50 314 P P **13 05 41.4 -0.5**
TKM2 pmax pmax
comp=Z,51nm,1.0s,mb5.7
TKM2 Tokmak 2 87.50 314 P P **13 05 41.4 -0.5**
SNR=39
KZA Kyzart 87.58 313 P P **13 05 43.7 +1.4**
SNR=21
DLBC Dease Lake 87.68 30 eP P **13 05 42.8 +0.4**
KBK Karagaybulak 87.91 313 P P **13 05 44.1 +0.2**
SNR=26
CHMS Chumysh 88.12 314 P P **13 05 45.3 +0.4**
SNR=31
UCH Uchtor 88.14 313 eP P **13 05 46.1 +1.1**
comp=Z,24nm,1.1s,mb5.3
UCH Uchtor 88.14 313 P P **13 05 46.7 +1.7**
SNR=6.5
FRU Bishkek 88.18 313⇑ eP P **13 05 44.0 -1.1**
FRU e pP 13 05 55.0 -5.5
FRU e 13 16 06.0
FRU e 13 16 24.0
FRU pmax pmax
comp=Z,290nm,2.0s,mb6.2
FRU pmax pmax
comp=Z,2μm,5.0s
FRU MLR MLR
comp=Z,2μm,22.0s,MS5.4
AAK Ala-Archa 88.23 313 P P **13 05 44.9 -0.5**
SNR=37
HUMO Hull Mountain 88.25 47 eP P **13 05 47.3 +1.8**
comp=Z,13nm,0.9s,mb5.2
HUMO LR LR
comp=Z,4μm,22.0s,MS5.7
YBH Yreka Blue Hor 88.27 48 eP P **13 05 47.4 +1.8**
comp=Z,18nm,1.1s,mb5.2
YBH Yreka Blue Hor 88.27 48 P P **13 05 48.1 +2.5**
YBH pmax pmax
comp=Z,18nm,1.0s
USP Ospenovka 88.35 314 P P **13 05 46.2 +0.2**
SNR=52
COR Corvallis 88.39 45 PFAKE 13 06 00.0 +14
COR LR LR
comp=Z,3μm,19.0s,MS5.8
AML Almayashu 88.72 313 eP P **13 05 48.5 +0.7**
comp=Z,89nm,1.1s,mb6.0
AML LR LR
comp=Z,2μm,22.0s,MS5.5
AML Almayashu 88.72 313 P P **13 05 48.9 +1.2**
SNR=17
EKS2 Erkin-Say 88.76 313 eP P **13 05 47.8 -0.1**
comp=Z,37nm,1.0s,mb5.7
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.3
EKS2 Erkin-Say 88.76 313 P P **13 05 48.7 +0.9**
SNR=15
OHCM Honcut 88.76 50 eP P **13 05 46.8 -1.2**
U04C Hernandez Rese 88.81 53⇓ P P **13 05 48.3 +0.1**
baz=89
BHJ Bhuj 89.12 293 eP P **13 05 50.3 +0.3**
C04A Brinnon 89.22 42⇓ P P **13 05 49.9 0.0**
baz=89
LAVA Lava Cap Winer 89.23 51⇑ P P **13 05 50.8 +0.6**
baz=89
O05C Quincy 89.30 50⇓ P P **13 05 50.6 +0.2**
baz=89
PKM Peak Mountain 89.36 55⇓ P P **13 05 50.8 -0.1**
baz=90
INK Inuvik 89.37 21 eP P **13 05 48.7 -1.5**
comp=Z,2μm,1.1s
INK Inuvik 89.37 21 P P **13 05 48.9 -1.2**
CMB Columbia Colle 89.39 52 PFAKE 13 06 00.0 +9.0
CMB LR LR
comp=Z,2μm,22.0s,MS5.5
BEKR Beckwourth 89.70 50⇑ P P **13 05 51.9 -0.5**
baz=90,SNR=6.8
T06C Millerton Lake 89.77 53⇑ P P **13 05 52.7 -0.1**
baz=90
K05A Summer Lake 89.77 47⇑ P P **13 05 52.7 +0.1**
baz=90
D05A Enumclaw 89.78 43⇓ P P **13 05 52.6 +0.1**
baz=90
BLG Laguna Peak 89.85 56⇑ P P **13 05 52.8 -0.4**
baz=90
C05A Tolt Reservoir 90.06 42⇑ P P **13 05 53.8 0.0**
baz=90
MOD Modoc 90.07 48 eP P **13 05 54.1 +0.1**
comp=Z,18nm,1.0s,mb5.4
WCN Washoe City 90.08 51⇓ P P **13 05 54.5 +0.4**
baz=90
VES Vestal, Richgr 90.09 54⇑ P P **13 05 54.3 0.0**
baz=90
O06A Flanigan 90.16 50⇓ P P **13 05 55.0 +0.5**
baz=90
ARVC Arvin 90.19 55⇓ P P **13 05 55.4 +0.6**
baz=90
R06C Coleville 90.19 51⇑ P P **13 05 55.3 +0.6**
baz=90
N06A Buffalo Meadow 90.24 49⇓ P P **13 05 54.3 -0.6**
baz=90,SNR=6.2
CIS Catalina Islan 90.30 57⇑ P P **13 05 54.5 -0.8**
baz=90,SNR=5.6
E06A Yakima 90.35 43⇓ P P **13 05 55.6 +0.4**
baz=90
F06A Goldendale 90.35 44⇓ P P **13 05 55.5 +0.3**
baz=90
J06A Christmas Vall 90.39 47⇑ P P **13 05 55.7 +0.2**
baz=90
PAHR Pah Rah Range 90.42 50 eP P **13 05 55.8 +0.1**
comp=Z,28nm,1.3s,mb5.4
I06A Prineville 90.46 46⇑ P P **13 05 56.4 +0.6**
baz=91
H06A Lindquist Farm 90.50 45⇑ P P **13 05 55.7 -0.2**
baz=91
ISA Isabella 90.56 54 eP P **13 05 57.5 +1.1**
comp=Z,20nm,1.5s,mb5.2
ISA epP pP 13 06 12.2 +0.3
ISA LR LR
comp=Z,2μm,21.0s,MS5.5
ISA Isabella 90.56 54 P P **13 05 58.8 +2.4**
ISA e pP 13 06 12.2 +0.3
ISA pmax pmax
comp=Z,20nm,1.5s,mb5.2
ISA Isabella 90.56 54⇑ P P **13 05 57.0 +0.5**
baz=91
MWC Mount Wilson 90.70 56 eP P **13 05 57.3 +0.2**
comp=Z,69nm,1.1s,mb5.9
MWC Mount Wilson 90.70 56 P P **13 05 57.9 +0.8**
MWC pmax pmax
comp=Z,69nm,1.0s,mb5.9
L07A Adell 90.80 48⇓ P P **13 05 57.3 -0.1**
baz=91,SNR=6.6
M07A Soldier Meadow 90.83 49⇑ P P **13 05 57.4 -0.2**
baz=91,SNR=6.8
EDW2 Edwards Air Fo 90.84 55⇓ P P **13 05 57.8 0.0**
baz=91
N07B Gerlach 90.89 49⇑ P P **13 05 57.5 -0.3**
baz=91,SNR=10
K07A Rock Creek Ran 90.97 47⇓ P P **13 05 58.6 +0.4**
baz=91
I07A Izee 90.98 46⇑ P P **13 05 58.0 -0.3**
baz=91
BFSC Mount Baldy St 91.03 56⇓ P P **13 05 58.8 +0.1**
baz=91
G07A Ruggs Ranch, H 91.05 45⇑ P P **13 05 58.5 0.0**
baz=91
NVAR Mina Array Bea 91.07 52 P P **13 05 58.9 +0.1**
comp=Z,3.0nm,0.8s,mb4.7,baz=252,slow=5.4,SNR=16
NVAR pP pP 13 06 14.3 +0.1
comp=Z,6.7nm,0.9s,baz=254,slow=5.5,SNR=9.7
NVAR PKPPKP 13 31 30.0
comp=Z,1.6nm,1.0s,baz=108,slow=2.8,SNR=6.0
NVAR Mina Array Bea 91.07 52 P P **13 05 58.9 +0.1**
NVAR pP pP 13 06 14.3 +0.1
NVAR P'P' 13 31 30.0
E07A Sunnyside 91.11 43⇓ P P **13 05 58.9 +0.2**
baz=91
D07A Quincy 91.13 43⇑ P P **13 05 58.5 -0.3**
baz=91
C07A Waterville 91.15 42⇑ P P **13 05 58.2 -0.7**
baz=91

A07A	Ashnola River,	91.15	41	⇓P		P	13 05 59.0	+0.1		
	baz=91									
KBL	Kabul	91.17	304	*eP*		P	13 05 57.2	-2.0		
	comp=Z,82nm,1.1s,mb6.0									
KBL	Kabul	91.17	304	P		P	13 05 57.8	-1.5		
KBL				pmax		pmax				
	comp=Z,82nm,1.1s,mb6.0									
KK31	Karatay Array	91.20	313	*i* P		P	13 05 57.0	-2.3		
KK31	Karatay Array	91.20	313	*i* P		P	13 05 57.9	-1.4		
KK31				pmax		pmax				
	comp=Z,69nm,1.1s,mb5.9									
R08A	Mina	91.22	52	⇑P		P	13 05 58.9	-0.5		
	baz=91									
B07A	Winthrop	91.23	41	⇓P		P	13 05 59.2	-0.1		
	baz=91									
DAC	Darwin (Calif)	91.35	54	PFAKE			13 06 10.0	+10		
DAC				LR		LR				
	comp=Z,2µm,19.0s,MS5.7									
WVOR	Wild Horse Val	91.38	48	*eP*		P	13 05 59.9	-0.2		
	comp=Z,17nm,1.1s,mb5.3									
WVOR	Wild Horse Val	91.38	48	*eP*		P	13 05 59.9	-0.2		
WVOR				pmax		pmax				
	comp=Z,17nm,1.1s,mb5.3									
MPMC	Manual Prospec	91.40	54	⇓P		P	13 06 00.5	+0.1		
	baz=92									
Q08A	Gabbs	91.42	51	⇑P		P	13 05 60.0	-0.4		
	baz=92,SNR=7.4									
M08A	Happy Creek Ra	91.43	49	⇑P		P	13 06 00.0	-0.4		
	baz=92,SNR=5.3									
O08A	Rochester Mine	91.44	50	⇑P		P	13 06 00.6	+0.1		
	baz=92,SNR=7.4									
N08A	GE Springer Mi	91.52	49	⇓P		P	13 06 00.6	-0.2		
	baz=92,SNR=10.0									
K08A	Mann Creek Ran	91.53	47	⇓P		P	13 06 00.7	-0.1		
	baz=92									
G08A	Pilot Rock	91.55	45	⇑P		P	13 06 00.5	-0.3		
	baz=92									
L08A	Fields	91.56	48	⇑P		P	13 06 00.3	-0.6		
	baz=92,SNR=9.6									
J08A	Circle Bar Ran	91.62	47	⇑P		P	13 06 00.9	-0.3		
	baz=92,SNR=6.6									
I08A	Drewsey	91.63	46	⇑P		P	13 06 01.4	+0.2		
	baz=92									
BBRC	Big Bear Sol-O	91.64	56	⇓P		P	13 06 01.1	-0.4		
	baz=92									
H08A	Prairie City	91.64	46	⇓P		P	13 06 01.5	+0.2		
	baz=92									
E08A	Dider Farm, El	91.65	44	⇑P		P	13 06 01.8	+0.5		
	baz=92									
B08A	Colville Reser	91.73	42	⇑P		P	13 06 01.1	-0.4		
	baz=92									
F08A	Pendleton	91.74	44	⇑P		P	13 06 01.8	+0.1		
	baz=92									
D08A	Wollman Farm,	91.82	43	⇓P		P	13 06 02.2	+0.1		
	baz=92									
S09A	Goldfield	91.82	52	⇑P		P	13 06 02.0	-0.3		
	baz=92,SNR=12									
GSC	Goldstone	91.86	55	*eP*		P	13 06 02.1	-0.4		
GSC				*ep*P		pP	13 06 16.7	-1.2		
GSC				LR		LR				
	comp=Z,4µm,22.0s,MS5.8									
GSC	Goldstone	91.86	55	P		P	13 06 03.0	+0.5		
GSC				pmax		pmax				
	comp=Z,16nm,1.0s,mb5.3									
GSC	Goldstone	91.86	55	⇓P		P	13 06 03.1	+0.6		
	baz=92									
MONP	Monument Peak	91.88	57	⇓P		P	13 06 02.8	+0.1		
	baz=92									
PFO	Pinyon Flat Ob	91.94	57	*eP*		P	13 06 02.6	-0.3		
	comp=Z,19nm,1.5s,mb5.2									
PFO	Pinyon Flat Ob	91.94	57	P		P	13 06 03.3	+0.4		
PFO				pmax		pmax				
	comp=Z,13nm,0.9s,mb5.3									
PFO	Pinyon Flat Ob	91.94	57	⇓P		P	13 06 02.5	-0.4		
	baz=92									
FURC	Furnace Creek,	91.96	54	⇓P		P	13 06 03.7	+0.7		
	baz=92									
N09A	Rock Creek Ran	91.99	49	⇑P		P	13 06 02.8	-0.1		
	baz=92,SNR=5.3									
L09A	Wilkinson Ranc	92.03	48	⇓P		P	13 06 03.6	+0.5		
	baz=92									
K09A	Rome	92.08	47	⇑P		P	13 06 03.7	+0.4		
	baz=92									
M09A	Marrel Ranch,	92.12	49	⇑P		P	13 06 03.3	-0.2		
	baz=92,SNR=7.0									
P09A	Austin	92.12	51	⇓P		P	13 06 04.8	+1.2		
	baz=92									
J09A	Fry Pan Ranch,	92.14	47	⇑P		P	13 06 03.9	+0.3		
	baz=92									
O09A	Fish Creek Ran	92.16	50	⇓P		P	13 06 03.7	0.0		
	baz=92,SNR=10									
BMN	Battle Mountai	92.17	50	PFAKE			13 06 10.0	+6.2		
BMN				LR		LR				
	comp=Z,3µm,22.0s,MS5.6									
HEC	Hector,Ludlow	92.19	55	⇓P		P	13 06 03.6	-0.4		
	baz=92									
I09A	Lost Marbles R	92.23	46	⇓P		P	13 06 04.2	+0.2		
	baz=92									
D09A	Jones Farm, Ri	92.24	43	⇑P		P	13 06 04.0	0.0		
	baz=92									
E09A	Wood Farm, Sta	92.28	44	⇓P		P	13 06 04.5	+0.3		
	baz=92									
VOSK	Vostochnaya	92.28	323	P		P	13 06 01.8	-2.2		
VOSK				pmax		pmax				
	comp=Z,134nm,1.6s,mb6.0									
A09A	Danville	92.31	41	⇓P		P	13 06 04.3	0.0		
	baz=92									
S10A	Tonopah Range,	92.34	52	⇑P		P	13 06 04.6	-0.1		
	baz=92,SNR=9.1									
SHOC	Shoshone	92.36	54	⇓P		P	13 06 05.1	+0.4		
	baz=92									
BELC	Belle Mtn.	92.36	56	⇑P		P	13 06 04.6	-0.3		
	baz=92,SNR=8.4									
G09A	Cove	92.37	45	⇓P		P	13 06 04.8	+0.2		
	baz=92									
U10A	Ash Meadows, A	92.38	54	⇓P		P	13 06 05.2	+0.4		
	baz=92									
SWSC	Sam W. Stewart	92.41	57	⇓P		P	13 06 04.8	-0.3		
	baz=92									
TPNV	Topopah Spring	92.50	53	*eP*		P	13 06 05.6	+0.2		
	comp=Z,27nm,1.0s,mb5.6									
TPNV	Topopah Spring	92.50	53	P		P	13 06 05.9	+0.5		
TPNV				pmax		pmax				
	comp=Z,27nm,1.0s,mb5.6									
TPNV	Topopah Spring	92.50	53	⇑P		P	13 06 05.7	+0.2		
	baz=93									
B09A	Rice	92.52	42	⇑P		P	13 06 05.0	-0.2		
	baz=93									
TUQ	Turquoise Moun	92.59	55	⇑P		P	13 06 05.9	+0.1		
	baz=93									
Q10A	Clear Creek Ra	92.60	51	⇑P		P	13 06 06.4	+0.5		
	baz=93									
R10A	Warm Springs	92.62	52	⇑P		P	13 06 06.4	+0.5		
	baz=93									
P10A	Eureka	92.65	51	⇓P		P	13 06 06.6	+0.6		
	baz=93									
BMO	Blue Mountains	92.65	45	*eP*		P	13 06 04.8	-1.2		
	comp=Z,15nm,1.3s,mb5.3									
BMO				LR		LR				
	comp=Z,2µm,19.0s,MS5.6									
BMO	Blue Mountains	92.65	45	P		P	13 06 04.9	-1.0		
BMO				pmax		pmax				
	comp=Z,15nm,1.3s,mb5.3									
SYO	Syowa Base	92.66	199	⇓*eP*		P	13 06 02.4	-3.1		
BVA0	Borovoye Array	92.67	323	*i* P		P	13 06 03.9	-1.9		
BVA0				pmax		pmax				
	comp=Z,63nm,1.7s,mb5.8									
BVAR	Borovoye Array	92.67	323	P		P	13 06 03.5	-2.3		
	comp=Z,26nm,0.6s,mb5.8,baz=108,slow=4.8,SNR=115									
BVAR				PKiKP		PKiKP	13 10 53.2	-0.7		
	comp=Z,1.1nm,0.4s,baz=158,slow=2.0,SNR=4.0									
O10A	Cortez Mining,	92.70	50	⇓P		P	13 06 06.6	+0.3		
	baz=93									
K10A	MacKenzie Ranc	92.71	47	⇓P		P	13 06 06.0	-0.2		
	baz=93,SNR=6.4									
GMRC	Granite Mounta	92.73	55	⇓P		P	13 06 06.2	-0.4		
	baz=93,SNR=5.7									
N10A	Dunphy	92.74	49	⇓P		P	13 06 07.1	+0.7		
	baz=93									
BRVK	Borovoye	92.74	323	*i* P		P	13 06 04.8	-1.3		
BRVK				LR		LR				
	comp=Z,2µm,20.0s,MS5.5									
BC3	Big Chuckw Mtn	92.78	57	⇓P		P	13 06 06.8	0.0		
	baz=93,SNR=5.6									
G10A	Bishop Farm, J	92.83	45	⇑P		P	13 06 05.8	-1.0		
	baz=93,SNR=7.4									
F10A	Beach Ranch, E	92.84	44	⇑P		P	13 06 06.8	+0.1		
	baz=93									
L10A	Juniper Basin	92.92	48	⇑P		P	13 06 06.9	-0.4		
	baz=93,SNR=8.7									
D10A	Wagner Farm, O	92.94	43	⇑P		P	13 06 06.4	-0.8		
	baz=93,SNR=6.9									
S11A	Rachel	92.98	53	⇑P		P	13 06 07.9	+0.2		
	baz=93									
A10A	Northport	92.98	41	⇓P		P	13 06 07.6	+0.3		
	baz=93									
H10A	Noah's Angus R	93.01	46	⇑P		P	13 06 07.3	-0.3		
	baz=93									
IRM	Iron Mountain	93.08	56	⇓P		P	13 06 08.1	-0.1		
	baz=93,SNR=9.5									
NEW	Newport	93.18	42	*eP*		P	13 06 07.5	-0.8		
	comp=Z,4.7nm,1.0s,mb4.9									
NEW				*ep*P		pP	13 06 22.4	-1.3		
NEW	Newport	93.18	42	P		P	13 06 08.1	-0.2		
NEW				*e*		pP	13 06 22.5	-1.2		
NEW				pmax		pmax				
	comp=Z,14nm,1.2s									
P11A	Circle Ranch,	93.18	51	⇑P		P	13 06 08.7	+0.2		
	baz=93									
Q11A	Duckwater	93.18	51	⇓P		P	13 06 08.0	-0.6		
	baz=93,SNR=12									
R11A	Troy Canyon, C	93.18	52	⇑P		P	13 06 08.2	-0.3		
	baz=93,SNR=7.9									
LDFC	Landfair	93.21	55	*eP*		P	13 06 09.4	+0.6		
	comp=Z,59nm,1.2s,mb5.9									
GLA	Glamis	93.23	57	*eP*		P	13 06 09.7	+0.8		
	comp=Z,19nm,1.0s,mb5.5									
GLA				LR		LR				
	comp=Z,2µm,22.0s,MS5.6									
GLA	Glamis	93.23	57	P		P	13 06 10.2	+1.3		
GLA				pmax		pmax				
	comp=Z,19nm,1.0s,mb5.5									
GLA	Glamis	93.23	57	⇓P		P	13 06 08.8	-0.1		
	baz=93									
O11A	Cowboy Ranch,	93.32	50	⇑P		P	13 06 08.8	-0.3		
	baz=93,SNR=10									
K11A	Parker Ranch,	93.33	47	⇓P		P	13 06 08.4	-0.6		
	baz=93,SNR=7.4									
T11A	Corn Creek, Al	93.35	53	⇑P		P	13 06 09.3	0.0		
	baz=94									
M11A	Holland Ranch,	93.36	49	⇑P		P	13 06 09.4	+0.1		
	baz=94,SNR=6.9									
G11A	Walters Elk Ra	93.44	45	⇓P		P	13 06 09.0	-0.6		
	baz=94									
L11A	Cat Creek Ranc	93.46	48	⇑P		P	13 06 09.8	+0.1		
	baz=94,SNR=6.1									
V12A	Nelson	93.49	55	⇑P		P	13 06 10.4	+0.4		
	baz=94									
I11A	Placerville	93.50	46	⇓P		P	13 06 09.4	-0.5		
	baz=94,SNR=5.1									
MFID	Camas Ranch	93.54	47	⇓P		P	13 06 10.2	+0.1		
	baz=94									
H11A	Donnelly	93.55	46	⇓P		P	13 06 10.1	0.0		
	baz=94									
Y12C	Blythe	93.56	57	⇓P		P	13 06 10.9	+0.5		
	baz=94									
F11A	Grangeville	93.57	44	⇑P		P	13 06 09.6	-0.6		
	baz=94									
D11A	Klaveano Farm,	93.58	43	⇓P		P	13 06 09.6	-0.5		
	baz=94									
E11A	Bogner Ranch,	93.59	44	⇓P		P	13 06 09.6	-0.6		
	baz=94									
S12A	Delamar Landin	93.68	53	⇓P		P	13 06 11.1	+0.2		
	baz=94									
ELK	Elko	93.70	50	PFAKE			13 06 20.0	+9.1		
ELK				LR		LR				
	comp=Z,3µm,21.0s,MS5.8									
ELK	Elko	93.70	50	P		P	13 06 11.5	+0.6		
ELK				pmax		pmax				
	comp=Z,35nm,1.3s									
B11A	Sandpoint	93.70	42	⇓P		P	13 06 10.5	-0.1		
	baz=94									
A11A	Hall Mountain,	93.76	41	⇓P		P	13 06 10.4	-0.6		
	baz=94,SNR=6.3									
Q12A	Willow Creek R	93.84	51	⇑P		P	13 06 11.3	-0.2		
	baz=94,SNR=11									
N12A	Clover Valley,	93.86	49	⇑P		P	13 06 11.2	-0.4		
	baz=94,SNR=10.0									
R12A	Pony Springs,	93.95	52	⇑P		P	13 06 11.9	-0.1		
	baz=94,SNR=10									
L12A	House Creek Ra	94.01	48	⇑P		P	13 06 12.1	-0.2		
	baz=94,SNR=7.2									
M12A	Wells	94.01	49	⇓P		P	13 06 12.1	-0.2		
	baz=94,SNR=5.8									
O12A	Currie	94.03	50	⇓P		P	13 06 12.6	+0.2		
	baz=94,SNR=9.6									
J12A	Stokes Ranch,	94.06	47	⇓P		P	13 06 12.0	-0.4		
	baz=94,SNR=6.8									
I12A	Atlanta	94.08	47	⇓P		P	13 06 12.4	-0.1		
	baz=94									
K12A	Draper Farm, C	94.14	48	⇓P		P	13 06 13.3	+0.4		
	baz=94									
V13A	Grand Canyon W	94.20	55	⇓P		P	13 06 13.3	0.0		
	baz=94									
X13A	Yucca	94.21	56	⇓P		P	13 06 13.4	0.0		
	baz=94									
A12A	Yaak River Ran	94.22	41	⇑P		P	13 06 12.6	-0.5		
	baz=94									
U13A	Pakoon Wash	94.27	54	⇑P		P	13 06 13.5	-0.1		
	baz=94									
H12A	Diamond D Ranc	94.35	46	⇓P		P	13 06 14.5	+0.7		
	baz=94									
T13A	Saint George	94.38	53	⇓P		P	13 06 14.6	+0.5		
	baz=94									
R13A	O'Grain Ranch,	94.43	52	⇑P		P	13 06 14.2	-0.1		
	baz=94,SNR=6.3									
Q13A	Wheeler Ranch,	94.46	51	⇓P		P	13 06 14.2	-0.2		
	baz=95,SNR=7.3									
S13A	Holt Ranch, En	94.46	53	⇓P		P	13 06 14.3	-0.1		
	baz=95,SNR=5.8									
P13A	Bates Ranch, G	94.51	51	⇓P		P	13 06 14.5	-0.1		
	baz=95									
M13A	Montello	94.57	49	⇓P		P	13 06 14.6	-0.2		
	baz=95,SNR=6.8									
HLID	Hailey	94.58	47	*eP*		P	13 06 14.6	-0.2		
	comp=Z,9.0nm,1.1s,mb5.1									
HLID	Hailey	94.58	47	⇑P		P	13 06 15.0	+0.2		
	baz=95									
O13A	Hicks Ranch, I	94.60	50	⇓P		P	13 06 15.7	+0.7		
	baz=95									
J13A	Cove Ranch, Pi	94.74	47	⇑P		P	13 06 15.9	+0.3		
	baz=95									
H13A	Challis	94.78	46	⇑P		P	13 06 16.1	+0.3		
	baz=95									
L13A	Double Diamond	94.80	48	⇓P		P	13 06 16.1	+0.3		
	baz=95									
I13A	Wildhorse Cree	94.83	46	⇓P		P	13 06 16.4	+0.4		
	baz=95									
G13A	Cobalt	94.84	45	⇓P		P	13 06 16.0	0.0		
	baz=95									
CCUT	Cedar City	94.85	53	*eP*		P	13 06 16.5	+0.2		
V14A	Boquillas Ranc	94.90	55	⇑P		P	13 06 17.1	+0.6		
	baz=95									
U14A	Mt Trumbull	94.90	54	⇑P		P	13 06 17.3	+0.8		
	baz=95									
B13A	Whitefish	94.96	42	⇓P		P	13 06 16.7	+0.3		
	baz=95									
T14A	Hurricane	95.03	53	⇓P		P	13 06 17.8	+0.8		
	baz=95									
Q14A	Sevier Lake (B	95.04	51	⇑P		P	13 06 17.8	+0.7		
	baz=95									
M14A	Sheep Mountain	95.19	49	⇑P		P	13 06 17.3	-0.4		
	baz=95,SNR=6.2									
P14A	Drum Mountains	95.25	51	⇑P		P	13 06 18.3	+0.3		
	baz=95									
N14A	Grayback Hills	95.26	50	⇑P		P	13 06 18.5	+0.5		
	baz=95									
L14A	Malta	95.31	48	⇑P		P	13 06 19.0	+0.7		
	baz=95									
DUG	Dugway	95.50	50	*eP*		P	13 06 19.8	+0.7		
	comp=Z,27nm,2.1s,mb5.3									
DUG				*ep*P		pP	13 06 34.4	-0.2		
DUG	Dugway	95.50	50	P		P	13 06 20.3	+1.2		
DUG				*e*		pP	13 06 34.6	0.0		
DUG				pmax		pmax				
	comp=Z,22nm,1.5s,mb5.4									
F14A	Wisdom	95.51	45	⇑P		P	13 06 19.1	+0.1		
	baz=95									
A14A	Double T Ranch	95.69	41	⇑P		P	13 06 19.8	0.0		
	baz=96									
P15A	Leamington	95.86	51	⇑P		P	13 06 21.1	+0.3		
	baz=96,SNR=5.5									
MSU	Marysvale	95.86	52	*eP*		P	13 06 21.9	+1.0		
MSU				*ep*P		pP	13 06 37.6	+1.3		
MSU	Marysvale	95.86	52	P		P	13 06 22.1	+1.3		
YKA	Yellowknife Ar	95.90	28	P		P	13 06 19.7	-0.7		
	comp=Z,8.7nm,0.7s,mb5.3,baz=268,slow=4.6,SNR=24									
YKA				pP		pP	13 06 35.1	-0.8		
	comp=Z,9.1nm,0.8s,baz=266,slow=4.5,SNR=9.1									
YKA				PKiKP		PKiKP	13 11 00.2	+1.0		
	comp=Z,0.4nm,0.4s,baz=263,slow=1.2,SNR=5.7									
YKA				PKKP		PKKPbc	13 23 05.8	-5.9		
	comp=Z,4.3nm,0.5s,baz=78,slow=2.8,SNR=36									
YKA				LR		LR	13 45 38.3			
	comp=Z,1µm,21.9s,MS5.3,baz=155,slow=33									
YKA	Yellowknife Ar	95.90	28	P		P	13 06 19.8	-0.7		
YKA				pP		pP	13 06 35.1	-0.8		
YKA	Yellowknife Ar	95.90	28	P		P	13 06 19.7	-0.7		
YKA				*PP		pP	13 06 35.1	-0.8		
YKA				pmax		pmax				
	comp=Z,9.0nm,0.7s									
H15A	Lima	95.94	46	⇑P		P	13 06 21.4	+0.4		
	baz=96									
J15A	Blackfoot	96.01	47	⇑P		P	13 06 22.0	+0.6		
	baz=96									
EDM	Edmonton	96.01	37	*eP*		P	13 06 20.6	-0.6		
EDM				*ep*P		pP	13 06 35.7	-0.9		
E15A	Deer Lodge	96.05	44	⇑P		P	13 06 21.9	+0.4		
	baz=96									
C15A	Salmond Ranch,	96.16	43	⇓P		P	13 06 20.8	-1.2		
	baz=96									
O16A	Springville	96.50	50	⇑P		P	13 06 23.1	-0.6		
	baz=97									
HWUT	Hardware Ranch	96.53	49	PFAKE			13 06 30.0	+6.2		
HWUT				LR		LR				
	comp=Z,2µm,21.0s,MS5.6									
G16A	Moss Hill, Enn	96.57	45	⇓P		P	13 06 23.5	-0.4		
	baz=97									
BOZ	Bozeman (W)	96.71	45	PFAKE			13 06 40.0	+15		
BOZ				LR		LR				
	comp=Z,2µm,19.0s,MS5.6									
AHID	Auburn Hatcher	96.94	48	PFAKE			13 06 40.0	+14		
AHID				LR		LR				
	comp=Z,3µm,21.0s,MS5.8									
R17A	Hanksville Air	97.01	52	⇓P		P	13 06 26.6	+0.6		
	baz=97									
O17A	Robinson Place	97.08	50	⇑P		P	13 06 26.9	+0.6		
	baz=97									
SRU	San Rafael	97.19	51	*eP*		P	13 06 27.0	+0.1		
	comp=Z,1.5nm,0.9s									
SRU				*ep*P		pP	13 06 42.3	0.0		
SRU	San Rafael	97.19	51	P		P	13 06 27.9	+1.1		
SRU	San Rafael	97.19	51	⇑P		P	13 06 27.2	+0.3		
	baz=97									
F17A	Fitzpatrick Pl	97.40	45	⇑P		P	13 06 27.7	+0.1		
	baz=98									
Q18A	Rafter H Ranch	97.49	52	⇑P		P	13 06 28.4	+0.2		
	baz=98									
R18A	Canyonlands Na	97.64	52	⇑P		P	13 06 29.7	+0.8		
	baz=98									
N18A	Larsen Ranch,	97.93	50	⇓P		P	13 06 30.1	0.0		
	baz=98									
BW06	Boulder Array	98.08	48	PFAKE			13 06 40.0	+9.3		
BW06				LR		LR				
	comp=Z,3µm,20.0s,MS5.8									
PDAR	Pinedale Array	98.08	48	P		P	13 06 28.9	-1.8		
	comp=Z,1.6nm,0.7s,mb4.7,baz=297,slow=0.3,SNR=16									
PDAR				pP		pP	13 06 44.6	-1.6		
	comp=Z,4.0nm,0.9s,baz=251,slow=2.4,SNR=12									
PDAR				PKKP		PKKPbc	13 23 02.5	-2.6		
	comp=Z,1.2nm,0.5s,baz=95,slow=4.8,SNR=6.4									
PDAR				LR		LR	13 48 42.7			
	comp=Z,3µm,18.3s,MS5.8,baz=274,slow=34									
PV10	Paradox Valley	98.32	52	*eP*		P	13 06 34.1	+2.2		
SVE	Sverdlovsk	98.53	326	*eP*		P	13 06 30.2	-2.2		
SVE				*e*			13 10 37.4			
SVE				*eS*		SKSac	13 17 03.0	-2.8		
SVE				*eSS*		SS	13 24 37.3	-5.4		
SVE				pmax		pmax				
	comp=Z,38nm,1.3s,mb5.8									
SVE				MLR		MLR				
	comp=Z,2µm,21.0s,MS5.5									
NVL	N'lazarevskaya	98.82	191	P		P	13 06 32.5	-1.0		
NVL				*e*PP		pP	13 06 45.3	-3.7		
NVL				pmax		pmax				
	comp=Z,30nm,1.5s,mb5.6									
NVL				MLR		MLR				
	comp=N,4µm,20.0s,MS6.0									
NVL				MLR		MLR				
	comp=E,3µm,20.0s,MS6.0									
NVL				MLR		MLR				
	comp=Z,8µm,20.0s,MS6.2									
WBK	Wadi Bani Khal	98.86	292	P		P	13 06 34.4	-0.3		
	SNR=15									
AB31	Akbulak array	98.98	319	P		P	13 06 32.2	-2.4		
AB31				pmax		pmax				
	comp=Z,10.0nm,0.8s,mb5.4									
M20A	Sweetwater, Wa	99.06	49	⇓P		P	13 06 35.6	+0.4		
	baz=99									
ARU	Arti	99.69	326	*e*Pdif		Pdif	13 06 35.8	-1.9		
	comp=Z,37nm,1.1s									
ARU				LR		LR				
	comp=Z,2µm,21.0s,MS5.7									
ARU	Arti	99.69	326	*c i*P		Pdif	13 06 35.7	-2.0		
ARU							13 10 39.7			
ARU				S		SKSac	13 17 06.7	-4.9		
ARU				SS		SS	13 24 55.3	-3.6		
ARU				pmax		pmax				
	comp=Z,48nm,1.2s,mb5.8									
ARU				MLR		MLR				
	comp=Z,

comp=Z,3µm,22.0s,MS5.8
ECSD EROS,Sioux Fal 107.47 46 PFAKE 13 11 30.0 +9.2
ECSD LR LR
comp=Z,3µm,21.0s,MS5.8
KSU1 Kansas State U 108.00 51 PFAKE 13 11 30.0 +8.1
KSU1 LR LR
comp=Z,2µm,22.0s,MS5.6
KLMR Klimovskoe 108.60 332 *e*P Pdif 13 07 14.0 -3.3
KLMR 13 11 47.0
KLMR pmax pmax
comp=Z,44nm,1.5s
KEV Kevo 109.16 343 PFAKE 13 11 30.0 +6.8
KEV LR LR
comp=Z,2µm,20.0s,MS5.8
ARCES ARCESS Array B 109.72 343 Pdiff Pdif 13 07 20.7 -1.6
comp=Z,4.5nm,1.0s,baz=58,slow=4.4,SNR=5.1
ARCES PKiKP PKiKP 13 11 23.3 -0.9
comp=Z,10nm,0.4s,baz=83,slow=1.6,SNR=146
ARCES ARCESS Array B 109.72 343 Pdif Pdif 13 07 20.7 -1.6
ARCES PKPdf PKiKP 13 11 23.3 -0.9
DGRG David-gareji 109.79 312 P PKiKP 13 11 28.1 +2.9
MTA Mtatsminda 110.19 312 P PP 13 12 02.9 +2.4
KTK1 Kautokeino 110.68 344 *e*P PKiKP 13 11 24.5 -1.5
KTK1 Kautokeino 110.68 344 *e* PKiKP 13 11 24.5 -1.5
ONI Oni 111.02 313 P PP 13 12 09.0 +2.5
JOF Joensuu 111.29 336 *e*p PKiKP 13 11 25.7 -1.7
comp=Z,8.4nm,0.6s
JOF Joensuu 111.29 336 *e*p PKKPbc 13 22 22.0 -3.6
comp=Z,2.4nm,0.4s
JOF Joensuu 111.29 336 *e*PKIKP PKiKP 13 11 25.7 -1.7
JOF pmax pmax
comp=Z,8.0nm,0.6s
KIV Kislovodsk 111.31 314 P PKiKP 13 11 26.9 -1.0
KIV LR LR
comp=Z,1µm,21.0s,MS5.4
KIV Kislovodsk 111.31 314 *e*P Pdif 13 07 32.4 +3.0
KIV *e* 13 12 09.2
KIV *e* 13 18 08.6
KIV *e*PS PS 13 21 39.1 -1.9
KIV *e*SS SS 13 27 41.8 +3.6
KIV pmax pmax
comp=Z,11nm,1.2s
KIV MLR MLR
comp=Z,2µm,23.0s,MS5.6
OBN Obninsk 112.08 327↑ *e*PKP PKiKP 13 11 29.1 0.0
OBN Obninsk 112.08 327↑ *i*PKIKP PKiKP 13 11 29.0 -0.1
OBN *e* 13 12 10.3
OBN *e*PS PS 13 21 42.6 -4.9
OBN *e*SS SS 13 27 59.0 +12
OBN pmax pmax
comp=Z,38nm,2.0s
OBN MLR MLR
comp=Z,2µm,22.0s,MS5.6
CCM Cathedral Cave 112.31 52 PFAKE 13 11 40.0 +10
CCM LR LR
comp=Z,3µm,19.0s,MS5.8
HDIL Hopedale 113.36 49 PFAKE 13 11 40.0 +8.0
HDIL LR LR
comp=Z,2µm,21.0s,MS5.7
KAF Kangasniemi 113.70 337 *e*p PKiKP 13 11 30.3 -1.7
comp=Z,9.0nm,0.5s
KAF Kangasniemi 113.70 337 *e*PKIKP PKiKP 13 11 30.3 -1.7
KAF pmax pmax
comp=Z,9.0nm,0.5s
LOF Lofoten 113.87 345 *e*P PKiKP 13 11 33.5 +1.3
LOF AMb AMB 13 11 34.5
comp=Z,101nm,1.6s
ANN Anapa 114.78 316 *i*PKIKP PKiKP 13 11 32.1 -2.5
ANN pmax pmax
comp=Z,41nm,0.9s
EFI East Falkland 114.85 158 PFAKE 13 11 50.0 +15
EFI LR LR
comp=Z,2µm,19.0s,MS5.7
MOR8 Moi Rana 115.08 344 *e*P PKiKP 13 11 32.9 -1.7
MOR8 *e* 13 12 27.3
STOK Stokkvaagen 115.35 344 *e*P PKiKP 13 11 34.1 -0.9
STOK AMb AMB 13 11 37.6
comp=Z,94nm,1.9s
GLMI Grayling 115.67 43 PFAKE 13 11 50.0 +14
GLMI LR LR
comp=Z,2µm,20.0s,MS5.8
WCI Wyandotte Cave 116.11 51 PFAKE 13 11 50.0 +13
WCI LR LR
comp=Z,2µm,19.0s,MS5.8
PLCA Paso Flores 116.34 142 PKP PKPdf 13 11 37.0 -0.7
comp=Z,1.5nm,0.4s,baz=59,slow=5.2,SNR=13
PLCA pPKP pPKPdf 13 11 51.2 -2.5
comp=Z,2.3nm,0.4s,baz=232,slow=2.3,SNR=5.4
NSS Namsos 117.00 343 *e*P PKPdf 13 11 36.4 -1.9
NSS AMb AMB 13 11 46.1
comp=Z,55nm,1.9s
NSS *ep*PKP pPKPdf 13 11 51.9 -2.3
SFJD Kangerlussuaq 117.35 11 PFAKE 13 11 50.0 +11
SFJD LR LR
comp=Z,3µm,20.0s,MS5.9
AKASG Malin Array Be 117.90 325 PKP PKPdf 13 11 39.0 -1.4
comp=Z,18nm,0.5s,baz=49,slow=2.8,SNR=51
AKASG pPKP pPKPdf 13 11 53.6 -2.8
comp=Z,6.7nm,0.5s,baz=64,slow=2.4,SNR=7.2
AKASG PP PP 13 12 56.0 +1.4
comp=Z,0.5nm,0.4s,baz=61,slow=4.8,SNR=6.4
AKASG Malin Array Be 117.90 325 PKP PKPdf 13 11 39.0 -1.4
AKASG pPKP pPKPdf 13 11 53.6 -2.8
AKASG PP PP 13 12 56.0 +1.4
AKBB Malin Array Si 117.90 325 *e*P PKPdf 13 11 38.0 -2.3
AKBB Malin Array Si 117.90 325 PKIKP PKPdf 13 11 38.4 -2.0
KIEV Kiev 117.91 325 *e*P PKPdf 13 11 37.9 -2.5
KIEV LR LR
comp=Z,2µm,22.0s,MS5.7
KIEV Kiev 117.91 325 PKIKP PKPdf 13 11 38.1 -2.3
TKL Tuckaleechee C 118.64 53 PKP PKPdf 13 11 41.0 -1.2
comp=Z,1.9nm,0.3s,baz=139,slow=9.1,SNR=6.2
TKL pPKP pPKPdf 13 11 56.6 -1.6
comp=Z,3.5nm,0.5s,baz=151,slow=4.0,SNR=4.0
BRTR Keskin Array B 118.88 312 PKP PKPdf 13 11 41.5 -1.2
comp=Z,7.0nm,0.7s
BRTR pPKP pPKPdf 13 11 56.2 -2.4
GOGA Godfrey 119.37 56 PFAKE 13 11 50.0 +6.2
GOGA LR LR
comp=Z,3µm,22.0s,MS5.9
ANTO Ankara 119.47 312 P PKPdf 13 11 43.7 0.0
ANTO Ankara 119.47 312 ⇓*i*P PKPdf 13 11 43.2 -0.6
SUW Suwalki 119.52 330 *e*PKP PKPdf 13 11 43.9 +0.5
SUW *e* 13 11 58.5
KIS Kishinev 119.69 321 *e*PKIKP PKPdf 13 11 43.0 -1.0
KIS *e* 13 13 06.0
KIS MLR MLR
comp=Z,1µm,22.0s,MS5.5
KIS MLR MLR
comp=E,800nm,20.0s
KIS MLR MLR
comp=Z,2µm,20.0s
ERPA Erie 119.71 45 PFAKE 13 12 00.0 +16
ERPA LR LR
comp=Z,3µm,20.0s,MS6.0
MOL Molde 119.78 344 *e*P PKPdf 13 11 43.5 -0.1
NB2 NORSAR Subarra 119.86 341 PKPdf PKPdf 13 11 42.2 -1.6
comp=Z,4.5nm,0.5s,baz=39,slow=1.9
NB2 NORSAR Subarra 119.86 341 PKPdf PKPdf 13 11 42.2 -1.6
baz=39,slow=1.9
NOA NORSAR Array B 119.86 341 PKP PKPdf 13 11 41.7 -2.1
comp=Z,13nm,0.6s,baz=46,slow=1.9,SNR=56
NOA pPKP pPKPdf 13 11 57.1 -2.7
comp=Z,5.8nm,0.7s,baz=46,slow=2.0,SNR=7.8
NOA PKKPab PKKPab 13 21 53.5 -1.7
comp=Z,2.5nm,0.7s,baz=224,slow=4.3,SNR=12
NOA NORSAR Array B 119.86 341 PKP PKPdf 13 11 41.7 -2.1
NOA pPKP pPKPdf 13 11 57.1 -2.7
NOA PKKPab PKKPab 13 21 53.5 -1.7
NOA NORSAR Array B 119.86 341 PKIKP PKPdf 13 11 41.7 -2.1
NOA 13 11 57.1
NAO01 NORSAR Array S 120.11 341 *e*PKPdf PKPdf 13 11 42.4 -1.9
TLCR 120.42 319 ⇓*i*P PKPdf 13 11 46.1 +0.7
TLCR 120.42 319 ⇓*i*P PKPdf 13 11 46.1 +0.7
BOSA Boshof 120.67 231 PKP PKPdf 13 11 45.6 -0.8
comp=Z,25nm,0.7s,baz=120,slow=1.7,SNR=39
BOSA pPKP pPKPdf 13 12 00.6 -1.8
comp=Z,21nm,0.6s,baz=137,slow=2.1,SNR=9.7
LVV L'vov 121.26 326 *e*PKIKP PKPdf 13 11 49.4 +2.5
LVV *e* 13 23 11.3
LVV *e* 13 29 42.9
LVV MLR MLR
comp=Z,3µm,23.0s,MS5.8
LVV MLR MLR
comp=N,1µm,22.0s,MS5.7
LVV MLR MLR
comp=E,1µm,22.0s,MS5.7
HYA Hoyanger 121.29 343 *e*P PKPdf 13 11 49.5 +2.9
HYA Hoyanger 121.29 343 *e*PKPdf PKPdf 13 11 46.9 +0.3
SCHQ Schefferville 121.35 27 PKP PKPdf 13 11 46.1 -0.8
comp=E,4.7nm,0.8s,baz=203,slow=14,SNR=6.1
SCHQ pPKP pPKPdf 13 12 01.2 -1.6
comp=E,2.5nm,0.4s,baz=47,slow=12,SNR=1.9
KONO Kongsberg 121.44 341 PFAKE 13 12 00.0 +13
KONO LR LR
comp=Z,3µm,21.0s,MS5.8
VRI Vrincioaia 121.48 320 ⇓P PKPdf 13 11 44.5 -2.9
VRI Vrincioaia 121.48 320 ⇓*i*P PKPdf 13 11 44.5 -2.9
BUR08 Bucovina Ar. S 121.63 323 *e*P PKPdf 13 11 47.4 -0.2
BURAR Bucovina Array 121.63 323 ⇑P PKPdf 13 11 48.9 +1.3
BURAR Bucovina Array 121.63 323 ⇑*i*P PKPdf 13 11 48.9 +1.2
SSPA Standing Stone 121.69 46 *e*P PKPdf 13 11 47.2 -0.8
SSPA LR LR
comp=Z,3µm,21.0s,MS5.9
ISP Isparta 121.77 310 PFAKE 13 12 00.0 +12
ISP LR LR
comp=Z,881nm,21.0s,MS5.4
LBTB Lobatse 122.05 235 *e*P PKPdf 13 11 47.8 -1.4
LBTB Lobatse 122.05 235 PKIKP PKPdf 13 11 48.3 -0.9
DWPF Disney 122.09 61 PFAKE 13 12 00.0 +11
DWPF LR LR
comp=Z,2µm,21.0s,MS5.7
KWP Kalwaria 122.10 326 *e*PKP PKPdf 13 11 47.4 -1.1
KWP *e* 13 12 02.9
KWP Kalwaria 122.10 326 *e*PKP PKPdf 13 11 47.4 -1.1
KWP *e* 13 12 02.9
KWP Kalwaria 122.10 326⇑ *i*P PKPdf 13 11 47.8 -0.7
MLR Muntele Rosu 122.14 320 ⇓P PKPdf 13 11 47.1 -1.6
MLR Muntele Rosu 122.14 320 ⇓*i*P PKPdf 13 11 47.1 -1.6
ODD1 Odda 122.17 342 *e*P PKPdf 13 11 47.1 -1.2
ODD1 AMb AMB 13 11 48.9
comp=Z,76nm,1.2s
BORG Borgarnes 122.22 359 PFAKE 13 12 00.0 +12
BORG LR LR
comp=Z,2µm,20.0s,MS5.8
BINY Binghamton 122.46 44 PFAKE 13 12 00.0 +11
BINY LR LR
comp=Z,3µm,20.0s,MS5.9
BLS5 Blasjo 122.62 342 *e*P PKPdf 13 11 50.0 +0.8
BLS5 AMb AMB 13 11 52.1
comp=Z,40nm,1.4s
BSD Bornholm Skovb 122.68 334 *i* P PKPdf 13 11 48.7 -0.7
BSD *e* 13 13 07.9
BSD Bornholm Skovb 122.68 334 *i* P PKPdf 13 11 48.7 -0.7
comp=Z,23nm,0.8s
BSD *e* 13 13 07.9
BSD
comp=Z,1µm,22.0s
KOLS Kolonicke sedl 122.70 325 *e*PKP PKPdf 13 11 48.8 -0.9
KOLS *e* 13 21 56.3
GKP Gorka Klasztor 122.83 332 *e*PKP PKPdf 13 11 49.9 +0.1
GKP *e* 13 12 04.2
CBN Corbin 122.88 49 PFAKE 13 12 00.0 +10
CBN LR LR
comp=Z,2µm,21.0s,MS5.8
TRPA Tarpa 122.96 324 ⇓*i*P PKPdf 13 11 49.1 -1.1
STHS Stebnicka Huta 123.02 326 *e*PKP PKPdf 13 11 50.3 0.0
STHS *e* 13 12 03.5
KMY Karmoy 123.16 342 *e*P PKPdf 13 11 50.0 -0.2
CRVS Cervenica-Dubn 123.17 326 *e*PKP PKPdf 13 11 50.2 -0.4
CRVS *e* 13 12 07.7
CRVS *e* 13 21 41.7
CRVS *e* 13 21 55.4
CFAA Coronel Fontan 123.18 135 PKP PKPdf 13 11 50.1 -1.1
comp=Z,1.0nm,0.6s,baz=218,slow=2.3,SNR=8.8
CFAA pPKP pPKPdf 13 12 05.3 -1.8
comp=Z,1.1nm,0.5s,baz=234,slow=1.6,SNR=6.4
COP Copenhagen 123.32 336 *i* P PKPdf 13 11 50.7 0.0
comp=Z,36nm,0.8s
COP *e* 13 13 20.9
COP *i* 13 30 02.7
COP
comp=Z,350nm,21.0s
OJC Ojcow 123.36 328 *e*PKPdf PKPdf 13 11 50.3 -0.6
OJC *ep*PKPdf pPKPdf 13 12 11.3 +4.4
OJC *e*PP PP 13 13 31.3 -0.5
OJC *e*PS PS 13 23 25.6 -3.9
OJC L 14 07 33.6
comp=Z,2.4nm,23.5s
OJC Ojcow 123.36 328 *e*PKPdf PKPdf 13 11 50.3 -0.6
OJC *ep*PKPdf pPKPdf 13 12 11.3 +4.4
OJC *e*PP PP 13 13 31.1 -0.7
OJC *e*PS PS 13 23 25.6 -3.9
OJC LR LR
comp=Z,2µm,23.5s,MS5.8
DRGR 123.53 323 P PKPdf 13 11 51.0 -0.3
DRGR 123.53 323 ⇓*i*P PKPdf 13 11 50.8 -0.5
NIE Niedzica 123.53 327 *e*PKPdf PKPdf 13 11 51.5 +0.2
LSZ Lusaka 123.57 247 *e*PKPdf PKPdf 13 11 51.8 -0.5
LSZ *ep*PKPdf pPKPdf 13 12 06.5 -1.8
LSZ Lusaka 123.57 247 PKIKP PKPdf 13 11 52.0 -0.3
GZR Gura Zlata 124.17 321 P PKPdf 13 11 52.5 -0.1
GZR Gura Zlata 124.17 321 ⇑*i*P PKPdf 13 11 51.8 -0.8
ATAH Atahualpa 124.25 103 PKP PKPdf 13 11 53.8 +0.1
comp=Z,4.0nm,0.5s,baz=343,slow=8.8,SNR=4.2
OKC Ostrava-Krasne 124.45 328 *e*PKP PKPdf 13 11 52.7 -0.3
OKC *e* 13 12 08.4
OKC *e*SP SP 13 23 38.7 +6.9
OKC *e*SS SS 13 30 35.3 +7.7
OKC Ostrava-Krasne 124.45 328 *e*PKPDF PKPdf 13 11 52.7 -0.3
OKC *ep*PKP pPKPdf 13 12 08.4 -0.6
OKC *e*PS PS 13 23 38.7 -0.4
OKC *e*SS SS 13 30 35.3 +7.7
OKC AMS AMS 14 08 00.0
comp=Z,1µm,22.4s
PSZ Piszkesteto 124.58 325 P PKPdf 13 11 53.7 +0.4
PSZ Piszkesteto 124.58 325⇑ *e*PKP PKPdf 13 11 52.2 -1.1
PSZ Piszkesteto 124.58 325⇑ *i*P PKPdf 13 11 52.2 -1.1
BZS Buzias 124.77 322 P PKPdf 13 11 53.6 -0.2
BZS Buzias 124.77 322 ⇑*i*P PKPdf 13 11 52.0 -1.8
KSP Ksiaz 124.80 330 *e*PKP PKPdf 13 11 54.1 +0.5
KSP *e* 13 12 09.1
KSP Ksiaz 124.80 330 *e*PKIKP PKPdf 13 11 53.8 +0.2
KSP *e* 13 12 08.5
KSP *e* 13 13 38.0
KSP *e*SP SP 13 23 29.0 -5.7
KSP MLR MLR
comp=Z,7µm,22.8s,MS6.2
MORC Moravsky Berou 124.81 328 P PKPdf 13 11 54.1 +0.5
MORC Moravsky Berou 124.81 328⇑ *i*P PKPdf 13 11 53.6 -0.1
VYHS Vyhne 124.85 326 *e*PKIKP PKPdf 13 11 52.9 -0.9
VYHS Vyhne 124.85 326 *e*PKP PKPdf 13 11 52.8 -1.0
VYHS *e* 13 21 34.0
VYHS *e* 13 21 48.0
BCIP Isla Barro Col 124.95 84 PFAKE 13 12 10.0 +15
BCIP LR LR
comp=Z,893nm,20.0s,MS5.4
KOLL Kolacno 125.04 327 *e*PKP PKPdf 13 11 53.8 -0.4
DPC Dobruska-Polom 125.09 329 *e*PKPDF PKPdf 13 11 54.6 +0.4
DPC *ep*PKP pPKPdf 13 12 09.2 -1.0
DPC *e*SP SP 13 23 33.6 -3.7
DPC *e*SS SS 13 30 43.4 +7.9
DPC AMS AMS 14 06 30.0
comp=Z,3µm,23.7s
UPC Upice 125.15 330 *e*PKPDF PKPdf 13 11 54.7 +0.4
UPC *ep*PKP pPKPdf 13 12 09.9 -0.4
BUD Budapest 125.31 325⇑ *e*PKP PKPdf 13 11 53.4 -1.3
BSEG Bad Segeberg 125.43 336 *e*PKPdf PKPdf 13 11 54.5 -0.3
VRAC Vranov 125.58 328 P PKPdf 13 11 55.6 +0.4
VRAC Vranov 125.58 328⇑ *i*P PKPdf 13 11 55.7 +0.5
MODS Modra-Piesok 125.77 327 *e*PKP PKPdf 13 11 55.7 +0.1
MODS *e* 13 12 09.9
PVCC Panska Ves 125.85 330 *e*PKIKP PKPdf 13 11 55.7 0.0
PVCC *e* 13 12 10.4
PVCC MLR MLR
comp=Z,3µm,22.6s,MS5.8
PVCC Panska Ves 125.85 330 *e*PKPDF PKPdf 13 11 55.7 0.0
PVCC *ep*PKP pPKPdf 13 12 10.4 -1.2
PVCC *e*SP SP 13 23 33.8 -10
PVCC AMS AMS 14 03 20.0
comp=Z,3µm,27.6s
BRG Berggiesshubel 125.93 331 *e*PKPdf PKPdf 13 11 55.5 -0.3
BRG Berggiesshubel 125.93 331 *i* PKP PKPdf 13 11 55.6 -0.2
comp=Z,63nm,0.9s
BRG *i* 13 12 11.0
comp=Z,84nm,1.4s
BRG *e* 13 13 45.9
comp=Z,43nm,1.6s
BRG *i* 13 23 36.0
BRG *i* 13 25 38.0
BRG
comp=N,3µm,24.6s
BRG
comp=E,2µm,24.7s
BRG
comp=Z,3µm,24.6s
ZST Bratislava 125.97 327 *e*PKP PKPdf 13 11 56.1 +0.1
ZST *e* 13 12 11.3
CLL Collm 126.09 332⇑ *i*PKIKP PKPdf 13 11 55.6 -0.5
CLL pmax pmax
comp=Z,42nm,0.8s
CLL MLR MLR
comp=Z,2µm,20.3s,MS5.7
CLL Collm 126.09 332 *e*PKPdf PKPdf 13 11 55.4 -0.7
CLL Collm 126.09 332⇑ *i*PKPdf PKPdf 13 11 55.6 -0.5
comp=Z,42nm,0.8s
CLL *ep*PKPdf pPKPdf 13 12 10.0 -2.1
CLL *es*PKPdf 13 12 18.0
CLL *e*PP PP 13 13 51.0 +1.1
CLL *e*PPlp 13 13 51.0
CLL L 13 14 00.0
comp=Z,2µm,20.3s
CLL *e*PKSdf 13 15 28.0
CLL *e*SP SP 13 23 38.0 -7.9
CLL *e*PPS 13 25 36.0
CLL *e*SS SS 13 30 46.0 -1.8
TREC Trest 126.16 329 *e*PKPDF PKPdf 13 11 56.5 +0.2
TREC *ep*PKP pPKPdf 13 12 11.8 -0.5
TREC *e*SP SP 13 23 43.2 -3.6
TREC AMS AMS 14 10 20.0
comp=Z,2µm,21.8s
VAY Valandovo 126.18 317 *e*PKP PKPdf 13 11 54.7 -1.9
PRU Pruhonice 126.21 330 *e*PKIKP PKPdf 13 11 56.5 +0.1
PRU *e* 13 12 10.7
PRU *e*SS SS 13 30 53.4 +4.0
PRU MLR MLR
comp=Z,2µm,20.9s,MS5.8
PRU Pruhonice 126.21 330 *e*PKPDF PKPdf 13 11 56.5 +0.1
PRU *ep*PKP pPKPdf 13 12 10.7 -1.6
PRU *ex* x 13 23 35.8
PRU *e*SS SS 13 30 53.4 +4.0
PRU AMS AMS 14 09 40.0
comp=Z,2µm,20.9s
PKSM Moragy 126.23 324 P PKPdf 13 11 56.0 -0.6
PKSM Moragy 126.23 324⇑ *i*P PKPdf 13 11 56.0 -0.5
SOP Sopron 126.57 327⇑ *e*PKP PKPdf 13 11 56.2 -0.9
SKO Skopje 126.64 318 *e*PKP PKPdf 13 11 57.6 +0.2
CONA Conrad Observa 126.80 327 ⇓*i*PKiKP PKiKP 13 11 57.7 -0.3
comp=Z,93nm,2.0s,SNR=20
CSNA Conrad Observa 126.80 327 ⇓*i*PKiKP PKiKP 13 11 57.7 -0.3
comp=Z,92nm,2.0s
TANN Tannenbergstha 126.94 331 *e*PKPdf PKPdf 13 11 57.7 -0.1
KRUS Krusevo 127.04 318 *e*PKP PKPdf 13 11 57.3 -0.9
NKC Novy Kostel 127.07 331 *e*PKP PKPdf 13 11 57.9 -0.1
NKC *e* 13 12 12.8
NKC *e*SP SP 13 23 43.7 -11
NKC *e*SS SS 13 31 04.9 +4.8
NKC Novy Kostel 127.07 331 *e*PKIKP PKPdf 13 11 57.9 -0.1
NKC *e* 13 12 12.8
NKC *e*SS SS 13 31 04.9 +4.8
NKC MLR MLR
comp=Z,2µm,20.9s,MS5.8
NKC Novy Kostel 127.07 331 *e*PKPDF PKPdf 13 11 57.9 -0.1
NKC *ep*PKP pPKPdf 13 12 12.8 -1.2
NKC *e*SP SP 13 23 43.7 -11
NKC *e*SS SS 13 31 04.9 +4.8
NKC AMS AMS 14 08 30.0
comp=Z,2µm,20.9s
MOX Moxa 127.18 332 *e*PKP PKPdf 13 11 57.6 -0.6
comp=Z,169nm,2.0s
MOX *e* 13 12 13.5
MOX
comp=Z,600nm,19.0s
MOX Moxa 127.18 332 *e*PKPdf PKPdf 13 11 57.9 -0.3
KHC Kasperske Hory 127.24 330 *e*PKIKP PKPdf 13 11 58.4 0.0
KHC *e* 13 12 13.2
KHC *e*SP SP 13 23 50.1 -6.1
KHC MLR MLR
comp=Z,3µm,23.9s,MS5.8
KHC Kasperske Hory 127.24 330 *e*PKPDF PKPdf 13 11 58.4 0.0
KHC *ep*PKP pPKPdf 13 12 13.2 -1.1
KHC *ex* x 13 12 33.5
KHC *e*SP SP 13 23 50.1 -6.1
KHC *e*SS SS 13 31 11.6 +9.3
KHC AMS AMS 14 07 50.0
comp=Z,3µm,23.9s
KHC Kasperske Hory 127.24 330 *e*P 13 25 02.5
KHC *ex* 13 25 18.5
KHC Kasperske Hory 127.24 330 *e*P SKKSdf 13 29 18.5 -3.0
GEC2 GERESS Array S 127.36 329 *e*PKPdf PKPdf 13 11 57.5 -1.1
GEC2 GERESS Array S 127.36 329 *e*PKPdf PKPdf 13 11 58.4 -0.2
GERES GERESS Array B 127.36 329 PKP PKPdf 13 11 58.3 -0.3
comp=Z,19nm,0.6s,baz=70,slow=1.6,SNR=62
GERES pPKP pPKPdf 13 12 13.2 -1.4
comp=Z,10nm,0.6s,baz=54,slow=2.3,SNR=8.5
LVC Limon Verde 127.36 125 PFAKE 13 12 10.0 +11
LVC LR LR
comp=Z,951nm,20.0s,MS5.5
ARSA Arzberg 127.39 327 ⇓*i*PKiKP PKiKP 13 11 58.5 -0.7
comp=Z,10nm,0.9s
OHR Ohrid 127.46 318 *e*PKP PKPdf 13 11 58.1 -0.9
KOGS Kog 127.47 326 *e*PKPdf PKPdf 13 11 58.0 -0.9
KOGS *e* 13 12 11.7
ROTZ Rotzenmuhle 127.50 331 *e*PKPdf PKPdf 13 11 58.9 +0.1
WET Wettzell 127.58 330 *e*PKPdf PKPdf 13 11 59.0 0.0
IBBN Ibbenburen 127.67 336 *e*PKPdf PKPdf 13 11 59.0 -0.1
MOA Molln 127.70 328 ⇓*i*PKiKP PKiKP 13 11 59.1 -0.8
comp=Z,14nm,0.7s
UBBA Unterbreizbach 127.80 333 *e*PKPdf PKPdf 13 11 59.1 -0.3
PERS Pernice 127.98 326 *e*PKPdf PKPdf 13 11 59.0 -0.9
PERS *e* 13 12 13.0
SOKA Soboth 128.00 326 ⇓*i*PKiKP PKiKP 13 11 59.7 -0.8
GRF Grafenberg Arr 128.02 331 *e*P Pdif 13 08 46.4 +2.8
GRF *e* 13 11 59.7
GRF *e* 13 12 15.0
GRF *e* 13 14 06.2
GRF *e*SS SS 13 31 17.8 +5.9
GRF Grafenberg Arr 128.02 331 *e*Pdiff Pdif 13 08 46.4 +2.8
GRF *e*PKPdf PKPdf 13 11 59.7 -0.1
GRF *ep*PKPdf pPKPdf 13 12 15.0 -0.8
GRF *e*PP PP 13 14 06.2 +3.6
GRF *e*SS SS 13 31 17.8 +5.9
GRF *e*L 14 10 58.2
comp=Z,2µm,21.7s
GOLS Golise 128.07 325 *e*PKPdf PKPdf 13 11 59.3 -0.8
WTSB Winterswijk 128.32 336 *e*PKP PKPdf 13 12 00.2 -0.1
comp=Z,69nm,1.1s
WTSB Winterswijk 128.32 336 *ex* x 13 12 14.2
OBKA Obir 128.37 326 ⇓*i*PKiKP PKiKP 13 11 59.9 -1.4
comp=Z,32nm,1.5s
PDKS Podkum 128.40 326 *e*PKPdf PKPdf 13 11 59.6 -1.1
BUG Bochum--Univer 128.52 335 *e*PKPdf PKPdf 13 12 00.6 -0.1
BOJS Bojanci 128.58 325 *e*PKPdf PKPdf 13 12 00.3 -0.7
BOJS *e* 13 12 14.6
BOJS *e* 13 14 09.3
BOJS *e* 13 15 18.5
BOJS *e* 13 26 05.7
VISS Visnje 128.64 326 *e*PKPdf PKPdf 13 12 00.1 -1.1
LJU Ljubljana 128.67 326 *e*PKIKP PKPdf 13 12 00.4 -0.8
LJU *e* 13 12 14.5
LJU *e* 13 25 48.8
LJU Ljubljana 128.67 326 *e*PKPdf PKPdf 13 12 00.4 -0.8
LJU *e* 13 12 14.5
LJU *e* 13 25 48.8
LJU *e* 13 26 08.2
KBA Koelnbreinsper 128.67 328 ⇓*i*PKiKP PKiKP 13 12 00.3 -1.5
SNR=8.6
MYKA Terra Mystica 128.79 327 ⇓*i*PKiKP PKiKP 13 12 00.5 -1.6
comp=Z,37nm,1.7s
ESK Eskdalemuir 128.88 345 PFAKE 13 12 10.0 +8.7
ESK LR LR
comp=Z,2µm,22.0s,MS5.7
CEY Cerknica 128.91 326 *e*PKPdf PKPdf 13 12 00.6 -1.0
CEY *e* 13 15 19.2
TNS Taunus Mts 128.92 334 *e*PKPdf PKPdf 13 12 01.7 +0.2
JAVS Javornik 129.01 326 *e*PKPdf PKPdf 13 12 00.6 -1.3
FUR Furstenfeldbru 129.02 330 *e*PKPdf PKPdf 13 12 01.8 0.0
VOJS Vojsko 129.03 326 *e*PKPdf PKPdf 13 12 00.4 -1.5
KNDS Knezji Dol 129.06 326 *e*PKPdf PKPdf 13 12 01.1 -0.8

PTCC	**Patocco-Chiusa**	**129.09**	**327**	PKP	PKPdf	13 12 01.5	-0.5	
TOD	**Tromm**	**129.20**	**333**	PKP	PKPdf	13 12 01.2	-0.9	
GMNA	**Gemona**	**129.23**	**327**	PKP	PKPdf	13 12 01.6	-0.7	
SKDS	**Skadanscina**	**129.25**	**326**	*e*PKPdf	PKPdf	13 12 00.6	-1.8	
WATA	**Walderalm**	**129.42**	**329**	⇓*i*PKiKP	PKiKP	13 12 02.4	-0.9	
	comp=Z,26nm,0.5s,SNR=9.6							
WTTA	**Wattenberg**	**129.44**	**329**	⇓*i*PKiKP	PKiKP	13 12 02.9	-0.5	
	comp=Z,72nm,1.0s,SNR=20							
ABH	**Alteburg**	**129.56**	**334**	PKP	PKPdf	13 12 01.7	-1.1	
HGN	**Heimansgroeve**	**129.59**	**336**	*e*PKP	PKPdf	13 12 01.5	-1.2	
	comp=Z,59nm,1.8s							
HGN	**Heimansgroeve**	**129.59**	**336**	*ex*	x	13 12 18.0		
STU	**Stuttgart**	**129.61**	**332**	*e*PKPdf	PKPdf	13 12 03.7	+0.8	
STU	**Stuttgart**	**129.61**	**332**	PKiKP	PKPdf	13 12 03.8	+0.9	
STU				*e*		13 12 19.1		
STU	**Stuttgart**	**129.61**	**332**	*e*PKPdf	PKPdf	13 12 03.0	+0.1	
MOTA	**Moosalm**	**129.66**	**329**	⇓*i*PKiKP	PKiKP	13 12 02.8	-0.9	
	comp=Z,28nm,0.5s							
MEM	**Membach**	**129.68**	**335**	PKP	PKPdf	13 12 02.1	-0.9	
MEM				APKP		13 12 17.1		
MEM				SKP		13 15 21.2		
SQTA	**Sankt Quirin**	**129.69**	**329**	⇓*i*PKiKP	PKiKP	13 12 03.1	-0.8	
	comp=Z,16nm,0.5s							
KTD	**Kalmit**	**129.73**	**333**	PKP	PKPdf	13 12 03.1	0.0	
RETA	**Reutte**	**129.74**	**330**	⇓*i*PKiKP	PKiKP	13 12 03.0	-0.9	
	comp=Z,14nm,0.5s							
RUP	**Ruppelstein**	**129.91**	**334**	PKP	PKPdf	13 12 02.6	-0.8	
FETA	**Feichten**	**130.06**	**329**	⇑*e*PKiKP	PKiKP	13 12 03.3	-1.3	
	comp=Z,66nm,1.3s,SNR=12							
LANF	**Langenberg**	**130.11**	**333**	PKP	PKPdf	13 12 03.6	-0.2	
BCLA	**Clavier**	**130.11**	**336**	PKP	PKPdf	13 12 04.0	+0.3	
BCLA				APKP		13 12 18.9		
BCLA				SKP		13 15 23.5		
UCC	**Uccle**	**130.20**	**337**	PKP	PKPdf	13 12 04.2	+0.2	
UCC				APKP		13 12 18.6		
UCC				SKP		13 15 23.3		
CTI	**Castel Tesino**	**130.23**	**328**	PKP	PKPdf	13 12 04.0	-0.2	
SPAK	**Spaichingen-Ko**	**130.28**	**331**	PKP	PKPdf	13 12 02.2	-2.0	
DAVA	**Damuels**	**130.31**	**330**	⇓*i*PKiKP	PKiKP	13 12 04.5	-0.6	
	SNR=6.3							
WLF	**Walferdange**	**130.33**	**334**	PKP	PKPdf	13 12 05.0	+0.7	
WLF				APKP		13 12 20.4		
WLF				SKP		13 15 22.6		
WLF	**Walferdange**	**130.33**	**334**	*e*PKPdf	PKPdf	13 12 04.6	+0.4	
BFO	**Black Forest**	**130.33**	**332**	*e*PKPdf	PKPdf	13 12 03.5	-0.8	
BFO				LR	LR			
	comp=Z,1μm,22.0s,MS5.5							
BFO	**Black Forest**	**130.33**	**332**	*e*PKPdf	PKPdf	13 12 04.1	-0.2	
SNF	**Seneffe**	**130.45**	**336**	PKP	PKPdf	13 12 04.7	+0.3	
SNF				APKP		13 12 20.3		
SNF				SKP		13 15 24.2		
GIVF	**Givet**	**130.55**	**336**	*e*PKiKP	PKPdf	13 12 04.0	-0.6	
	comp=Z,136nm,1.1s							
BRMO	**Bormio**	**130.61**	**329**	PKP	PKPdf	13 12 04.5	-0.4	
DOU	**Dourbes**	**130.65**	**336**	PKP	PKPdf	13 12 04.7	-0.1	
DOU				APKP		13 12 19.9		
DOU				SKP		13 15 23.8		
CDF	**Champ du Feu**	**130.76**	**333**	*e*PKiKP	PKPdf	13 12 04.0	-1.1	
	comp=Z,14nm,0.5s							
LIBD	**Limburg**	**130.80**	**332**	PKP	PKPdf	13 12 05.5	+0.3	
FELD	**Feldberg im Sc**	**130.81**	**332**	PKP	PKPdf	13 12 04.3	-0.9	
MABI	**Malga Bissina**	**130.82**	**328**	PKP	PKPdf	13 12 04.0	-1.3	
BAIF	**Baives**	**130.84**	**336**	*e*PKiKP	PKPdf	13 12 04.8	-0.4	
LPAZ	**La Paz**	**130.84**	**118**	PKP	PKPdf	13 12 06.0	-0.1	
	comp=Z,15nm,1.1s,baz=299,slow=3.6,SNR=16							
ECH	**Echery**	**130.96**	**333**	PKP	PKPdf	13 12 04.8	-0.7	
ECH	**Echery**	**130.96**	**333**	*e*PKPdf	PKPdf	13 12 04.9	-0.6	
ECH	**Echery**	**130.96**	**333**	PKiKP	PKPdf	13 12 05.3	-0.2	
ECH				*e*		13 12 21.2		
CING	**Cingoli**	**131.03**	**324**	PKP	PKPdf	13 12 05.6	-0.2	
TIP	**Timpagrande**	**131.11**	**317**	*e*PKPdf	PKPdf	13 12 06.7	+0.6	
TUE	**Stuetta**	**131.14**	**329**	*e*PKPdf	PKPdf	13 12 03.5	-2.3	
MOF	**Molkenrain**	**131.23**	**332**	PKP	PKPdf	13 12 05.2	-0.8	
TSUM	**Tsumeb**	**131.31**	**237**	*e*PKPdf	PKPdf	13 12 06.4	-0.6	
TSUM				LR	LR			
	comp=Z,4μm,21.0s,MS6.1							
CUC	**Castrocucco**	**131.31**	**319**	*e*PKPdf	PKPdf	13 12 05.5	-0.9	
CUC				LR	LR			
	comp=Z,3μm,22.0s,MS5.9							
BBS	**Basel-Blauen**	**131.34**	**332**	PKP	PKPdf	13 12 05.2	-1.0	
CSSN	**Cassano Irpino**	**131.36**	**320**	PKP	PKPdf	13 12 05.4	-1.1	
HINF	**Hinteralfeld**	**131.39**	**332**	*e*PKiKP	PKPdf	13 12 05.3	-1.0	
RNI2	**Rionero Sannit**	**131.44**	**322**	PKP	PKPdf	13 12 05.0	-1.6	
THEF	**They Montfort**	**131.48**	**333**	PKP	PKPdf	13 12 05.7	-0.8	
HAU	**Haudompre**	**131.48**	**333**	*e*PKiKP	PKPdf	13 12 05.7	-0.8	
	comp=Z,82nm,0.8s							
HAU				*e*MLR	MLR			
	comp=Z,2μm,22.0s,MS5.5							
HAU	**Haudompre**	**131.48**	**333**	*e*PKiKP	PKPdf	13 12 05.7	-0.8	
HAU				MLR	MLR			
	comp=Z,2μm,22.0s,MS5.8							
MURB	**Monte Urbino**	**131.49**	**324**	PKP	PKPdf	13 12 05.7	-0.9	
BADI	**Badiali**	**131.50**	**325**	PKP	PKPdf	13 12 05.9	-0.8	
AQU	**L'Aquila**	**131.52**	**323**	P	PKPdf	13 12 06.7	-0.1	
AQU				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
MEZF	**Maizieres J'vi**	**131.68**	**334**	*e*PKiKP	PKPdf	13 12 06.3	-0.5	
	comp=Z,80nm,0.6s							
FNVD	**Fontana Vidola**	**131.72**	**326**	PKP	PKPdf	13 12 06.8	-0.2	
LOMF	**Lomont**	**131.74**	**332**	PKP	PKPdf	13 12 05.9	-1.1	
VAI	**Varese**	**131.84**	**329**	PKP	PKPdf	13 12 06.5	-0.7	
GSCL	**Gusciola**	**131.90**	**327**	PKP	PKPdf	13 12 06.8	-0.6	
MNS	**Montasola**	**131.93**	**323**	PKP	PKPdf	13 12 05.9	-1.6	
ERBM	**Eremo**	**131.95**	**327**	PKP	PKPdf	13 12 07.9	+0.4	
SOI	**Samo**	**132.14**	**316**	PKP	PKPdf	13 12 07.3	-0.7	
CEL	**Celeste**	**132.15**	**317**	PFAKE		13 12 20.0	+12	
CEL				LR	LR			
	comp=Z,15μm,21.0s,MS6.7							
OG01	**Vacheresse**	**132.55**	**331**	PKP	PKPdf	13 12 09.4	+0.9	
CABF	**La Chapelle**	**132.63**	**332**	*e*PKiKP	PKPdf	13 12 08.6	-0.1	
	comp=Z,62nm,0.7s							
LPL	**La Plagne**	**133.11**	**330**	*e*PKiKP	PKPdf	13 12 09.7	+0.1	
	comp=Z,40nm,0.7s							
LPG	**La Plagne**	**133.11**	**330**	*e*PKiKP	PKPdf	13 12 09.7	+0.1	
	comp=Z,55nm,0.7s							
LOR	**Lormes**	**133.14**	**334**	*e*PKiKP	PKPdf	13 12 09.3	-0.3	
	comp=Z,30nm,0.6s							
LOR				*e*MLR	MLR			
	comp=Z,2μm,23.0s,MS5.5							
LOR	**Lormes**	**133.14**	**334**	*e*PKiKP	PKPdf	13 12 09.3	-0.3	
LOR				MLR	MLR			
	comp=Z,2μm,23.0s,MS5.8							
OG05	**Jujurieux**	**133.34**	**332**	PKP	PKPdf	13 12 09.8	-0.2	
SSF	**Saint Saulge**	**133.46**	**334**	*e*PKiKP	PKPdf	13 12 09.9	-0.3	
	comp=Z,35nm,0.6s							
BNI	**Bardonecchia**	**133.47**	**330**	*e*PKPdf	PKPdf	13 12 10.0	-0.3	
BNI				LR	LR			
	comp=Z,2μm,22.0s,MS5.8							
BNI	**Bardonecchia**	**133.47**	**330**	PKiKP	PKPdf	13 12 10.2	-0.1	
SMF	**Signal de Mont**	**133.63**	**333**	*e*PKiKP	PKPdf	13 12 09.9	-0.7	
	comp=Z,20nm,0.4s							
MBDF	**Montbardon**	**133.65**	**329**	*e*PKiKP	PKPdf	13 12 10.1	-0.6	
	comp=Z,18nm,0.7s							
FLN	**La Foliniere**	**133.69**	**338**	*e*PKiKP	PKPdf	13 12 10.0	-0.6	
	comp=Z,58nm,0.8s							
FLN				*e*MLR	MLR			
	comp=Z,4μm,21.8s,MS5.7							
FLN	**La Foliniere**	**133.69**	**338**	*e*PKiKP	PKPdf	13 12 10.0	-0.6	
FLN				MLR	MLR			
	comp=Z,4μm,21.8s,MS6.0							
LDF	**La Druitiere**	**133.70**	**338**	*e*PKiKP	PKPdf	13 12 10.0	-0.6	
	comp=Z,20nm,0.7s							
AVF	**Avril sur Loir**	**133.73**	**334**	*e*PKiKP	PKPdf	13 12 10.2	-0.6	
SBF	**Sospel**	**133.91**	**328**	*e*PKiKP	PKPdf	13 12 10.3	-0.9	
	comp=Z,68nm,0.8s							
PGF	**Pioggiola**	**133.95**	**326**	*e*PKiKP	PKPdf	13 12 10.7	-0.6	
	comp=Z,311nm,1.3s							
ORIF	**Oris-en-Rattie**	**133.96**	**330**	*e*PKiKP	PKPdf	13 12 10.8	-0.4	
	comp=Z,48nm,0.8s							
ORIF				*e*MLR	MLR			
	comp=Z,2μm,20.2s,MS5.6							
SDV	**Santo Domingo**	**134.03**	**84**	PKP	PKPdf	13 12 10.9	-1.3	
	comp=Z,12nm,0.7s,baz=299,slow=9.7,SNR=10							
BGF	**Bois d'Agland**	**134.13**	**334**	*e*PKiKP	PKPdf	13 12 11.2	-0.3	
	comp=Z,26nm,0.4s							
GRR	**Gorron**	**134.14**	**338**	*e*PKiKP	PKPdf	13 12 11.0	-0.5	
	comp=Z,23nm,0.5s							
PLDF	**La Plantade**	**134.24**	**333**	PKP	PKPdf	13 12 12.4	+0.7	
SSB	**Saint Sauveur**	**134.34**	**332**	*e*PKPdf	PKPdf	13 12 11.7	-0.3	
SSB	**Saint Sauveur**	**134.34**	**332**	PKiKP	PKPdf	13 12 12.3	+0.4	
SSB				*e*		13 12 27.7		
AGO	**Saint Agoulin**	**134.40**	**333**	PKP	PKPdf	13 12 11.9	-0.1	
FRF	**La Foret Royal**	**134.53**	**328**	*e*PKiKP	PKPdf	13 12 11.1	-1.3	
	comp=Z,42nm,0.8s							
VIVF	**Saint-Julien-l**	**134.59**	**331**	*e*PKiKP	PKPdf	13 12 11.5	-0.9	
TCF	**Toulx Ste Croi**	**134.62**	**334**	*e*PKiKP	PKPdf	13 12 12.1	-0.3	
	comp=Z,149nm,1.1s							
BBSR	**BB Station**	**134.66**	**51**	PFAKE		13 12 20.0	+7.0	
BBSR				LR	LR			
	comp=Z,2μm,22.0s,MS5.9							
PYM	**Petit Puy Mans**	**134.69**	**333**	PKP	PKPdf	13 12 12.6	0.0	
LMR	**La Mourre**	**134.76**	**328**	*e*PKiKP	PKPdf	13 12 11.9	-0.9	
	comp=Z,98nm,1.1s							
SMRF	**Simiane la Rot**	**134.79**	**330**	*e*PKiKP	PKPdf	13 12 11.9	-0.9	
	comp=Z,53nm,0.9s							
SGMF	**Saint Gilles**	**134.86**	**340**	*e*PKiKP	PKPdf	13 12 12.2	-0.6	
	comp=Z,29nm,0.5s							
LBL	**Lubilhac**	**134.97**	**333**	PKP	PKPdf	13 12 14.1	+1.0	
ROSF	**Rostrenen**	**135.03**	**340**	*e*PKiKP	PKPdf	13 12 12.3	-0.8	
MFF	**Saint Martin d**	**135.34**	**336**	*e*PKiKP	PKPdf	13 12 13.5	-0.3	
	comp=Z,72nm,0.9s							
QUIF	**Quistinic**	**135.36**	**340**	*e*PKiKP	PKPdf	13 12 13.5	-0.3	
LASF	**Ste Croix**	**135.56**	**331**	*e*PKiKP	PKPdf	13 12 13.9	-0.4	
	comp=Z,123nm,1.1s							
VSL	**Villasalto**	**135.67**	**322**	*e*PKPdf	PKPdf	13 12 14.9	+0.3	
RJF	**Les Rejaudoux**	**135.69**	**334**	*e*PKiKP	PKPdf	13 12 13.5	-1.0	
RJF				*e*MLR	MLR			
	comp=Z,2μm,22.8s,MS5.4							
RJF	**Les Rejaudoux**	**135.69**	**334**	*e*PKiKP	PKPdf	13 12 13.5	-1.0	
RJF				MLR	MLR			
	comp=Z,2μm,22.8s,MS5.7							
CAF	**Calviac**	**135.75**	**333**	*e*PKiKP	PKPdf	13 12 13.7	-0.9	
LFF	**La Frestale**	**136.32**	**334**	*e*PKiKP	PKPdf	13 12 14.6	-1.0	
	comp=Z,35nm,0.8s							
MTLF	**Montolieu**	**136.89**	**332**	*e*PKiKP	PKPdf	13 12 15.8	-1.0	
	comp=Z,26nm,0.8s							
KEST	**Kesra**	**137.93**	**318**	PKhKP		13 12 08.4		
	comp=Z,1.0nm,0.5s,baz=21,slow=5.7,SNR=5.3							
KEST				PKP	PKPdf	13 12 17.0	-1.9	
	comp=Z,10.0nm,1.1s,baz=114,slow=0.6,SNR=11							
EPF	**Esparros**	**138.00**	**333**	*e*PKiKP	PKPdf	13 12 17.8	-1.0	
	comp=Z,68nm,1.2s							
ETSF	**Etsaut**	**138.51**	**334**	*e*PKiKP	PKPdf	13 12 19.0	-0.8	
	comp=Z,44nm,0.6s							
SJPF	**Ste Jean**	**138.63**	**334**	*e*PKiKP	PKPdf	13 12 18.9	-1.1	
CMAH	**Djebel Manchou**	**138.65**	**320**	P	PKPdf	13 12 21.0	+0.8	
ELIZ	**Elizondo**	**138.72**	**335**	PKP	PKPdf	13 12 19.2	-0.9	
ABSA	**Djebel Ababsia**	**138.83**	**320**	P	PKPdf	13 12 23.0	+2.4	
CAEH	**'Ain El Ouahch**	**138.91**	**321**	P	PKPdf	13 12 23.0	+2.3	
EPOB	**Poblet**	**138.96**	**331**	PKP	PKPdf	13 12 15.3	-5.3	
CKFL	**Kef-Lekhel**	**139.23**	**321**	P	PKPdf	13 12 23.0	+1.7	
ESAC	**San Caprasio**	**139.40**	**332**	PKP	PKPdf	13 12 21.3	-0.1	
CASM	**Ain Smara**	**139.47**	**321**	P	PKPdf	13 12 20.0	-1.7	
ERTA	**Horta de San J**	**139.62**	**331**	PKP	PKPdf	13 12 19.4	-2.4	
DFRA	**Djebel Bou Aff**	**139.67**	**321**	P	PKPdf	13 12 18.0	-4.1	
AKF	**Akfadou**	**140.41**	**323**	P	PKPdf	13 12 18.5	-4.9	
EMOS	**Mosqueruela**	**140.47**	**331**	PKP	PKPdf	13 12 20.2	-3.2	
ETOR	**Torete**	**140.84**	**333**	PKP	PKPdf	13 12 19.1	-4.9	
ATAF	**Djebel Tarf**	**141.09**	**322**	P	PKPdf	13 12 19.7	-5.0	
AKET	**Djebel Ketaf**	**141.22**	**322**	P	PKPdf	13 12 20.1	-4.8	
ECHE	**Chera**	**141.31**	**331**	PKP	PKPdf	13 12 21.6	-3.4	
ADJB	**Djebel Djouab**	**141.41**	**323**	P	PKPdf	13 12 20.9	-4.3	
EBEN	**Beniarda**	**141.62**	**329**	PKP	PKPdf	13 12 23.0	-2.5	
EMAZ	**Mazaricos**	**141.66**	**342**	PKP	PKPdf	13 12 21.1	-4.4	
EMHD	**Djebel Mahouad**	**141.67**	**323**	P	PKPdf	13 12 20.0	-5.7	
ECAL	**Calabor**	**141.80**	**339**	PKP	PKPdf	13 12 22.4	-3.3	
GUD	**Guadarrama**	**141.90**	**335**	PKP	PKPdf	13 12 21.8	-4.1	
ESDC	**Sonseca Array**	**142.62**	**334**	PKhKP		13 12 22.4		
	comp=Z,6.9nm,0.9s,baz=30,slow=3.2,SNR=21							
ESDC	**Sonseca Array**	**142.62**	**334**	PKP	PKPdf	13 12 19.9	-7.4	
GRGR	**Grenville**	**142.77**	**79**	PFAKE		13 12 40.0	+12	
GRGR				LR	LR			
	comp=Z,919nm,21.0s,MS5.5							
EMUR	**La Murta**	**142.79**	**329**	PKP	PKPdf	13 12 24.6	-3.1	
EVIA	**Vianos**	**142.79**	**331**	PKP	PKPdf	13 12 24.7	-2.9	
PAB	**San Pablo**	**142.90**	**334**	*e*PKPpre		13 12 24.7		
PAB				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
PAB	**San Pablo**	**142.90**	**334**	PKiKP	PKPdf	13 12 24.8	-3.0	
EANR	**'Ain N'Sour**	**142.92**	**325**	P	PKPdf	13 12 24.8	-3.1	
OKGL	**Djebel Kef Gue**	**143.12**	**325**	P	PKPdf	13 12 26.0	-2.3	
ETRT	**Tiaret**	**143.20**	**324**	P	PKPdf	13 12 25.5	-3.0	
OJGS	**Djebel Guires**	**143.44**	**325**	P	PKPdf	13 12 27.0	-1.9	
MTE	**Manteigas**	**143.45**	**338**	*e*PKPpre		13 12 25.6		
EHUE	**Huescar**	**143.49**	**331**	PKP	PKPdf	13 12 25.8	-3.1	
OJBR	**Djebel Berber**	**143.61**	**325**	P	PKPdf	13 12 25.0	-4.2	
EQES	**Quesada**	**143.73**	**331**	PKP	PKPdf	13 12 24.7	-4.6	
EBAN	**Banos Encina**	**143.78**	**332**	PKP	PKPdf	13 12 26.6	-2.7	
ENIJ	**Nijar**	**143.95**	**329**	PKP	PKPdf	13 12 26.3	-3.4	
ODJA	**Bouhanifia**	**144.08**	**325**	P	PKPdf	13 12 28.0	-2.0	
EADA	**Adamuz**	**144.13**	**333**	PKP	PKPdf	13 12 26.5	-3.5	
EBER	**Berja**	**144.35**	**330**	PKP	PKPdf	13 12 28.4	-2.0	
ECOG	**Cogollos-Vega**	**144.38**	**331**	PKP	PKPdf	13 12 27.7	-2.7	
ELUQ	**Luque**	**144.49**	**332**	PKP	PKPdf	13 12 27.9	-2.8	
ERON	**Agron**	**144.70**	**331**	PKP	PKPdf	13 12 27.9	-3.1	
BBGH	**Gun Hill**	**144.71**	**77**	PFAKE		13 12 40.0	+8.4	
BBGH				LR	LR			
	comp=Z,2μm,21.0s,MS6.0							
ODZI	**Dziouia**	**144.71**	**326**	P	PKPdf	13 12 30.0	-1.1	
EGUA	**Guajares**	**144.74**	**331**	PKP	PKPdf	13 12 27.9	-3.2	
ELOJ	**Sierra Loja**	**144.77**	**332**	PKP	PKPdf	13 12 29.1	-2.0	
EALB	**Alboran**	**145.17**	**329**	PKP	PKPdf	13 12 29.4	-2.5	
EVO	**Evora**	**145.25**	**337**	⇑*i*PKiKP	PKPdf	13 12 31.6	-0.3	
	comp=Z,1μm,1.7s							
EVO				*e*MLR	MLR			
	comp=Z,2μm,23.0s,MS5.6							
EMIN	**Mina Concepcio**	**145.38**	**335**	PKP	PKPdf	13 12 30.4	-1.8	
LIS	**Lisbon**	**145.51**	**339**	*e*P	PKPdf	13 12 31.0	-1.3	
CAM4	**Nova Friburgo**	**145.83**	**149**	⇓*i*P	PKPdf	13 12 33.7	+0.2	
CAM4				*i*		13 12 38.1		
CAM4				*i*		13 12 46.9		
CAM4				*i*		13 12 53.1		
CAM4				*i*		13 12 58.6		
CAM4				*i*		13 13 03.1		
CAM4				*i*		13 14 05.2		
EJIF	**Jimena Fronter**	**145.95**	**332**	PKP	PKPdf	13 12 33.6	+0.4	
TAM	**Tamanrasset**	**147.28**	**302**	*e*PKPdf	PKPdf	13 12 36.1	+0.3	
BDFB	**Brasilia**	**147.51**	**134**	PKP	PKPdf	13 12 34.7	-1.6	
	comp=Z,16nm,0.5s,baz=209,slow=6.0,SNR=33							
BDFB				PKPbc	PKPbc	13 12 37.4	-1.6	
	comp=Z,16nm,0.5s,baz=219,slow=7.6,SNR=24							
CAM3	**Guarapari**	**148.22**	**150**	*e*P	PKPbc	13 12 39.9	-0.9	
CAM3				*i*		13 12 40.8		
CAM3				*i*		13 12 43.9		
CAM3				*i*		13 12 54.7		
CAM3				*i*		13 13 01.9		
SHEL	**Horse Pasture**	**150.82**	**219**	*e*PKPbc	PKPbc	13 12 48.0	+0.7	
TOA0	**Torodi Ar. Sit**	**153.73**	**286**	*e*PKPdf	PKPdf	13 12 44.3	-1.7	
TORD	**Torodi Ar. Bea**	**153.73**	**286**	PKP	PKPdf	13 12 44.5	-1.5	
	comp=Z,10nm,0.9s,baz=35,slow=1.5,SNR=43							
TORD				PKPbc	PKPbc	13 12 52.0	-1.9	
	comp=Z,26nm,0.5s,baz=27,slow=2.6,SNR=75							
TORD				PKPab	PKPab	13 13 06.7	-0.1	
	comp=Z,28nm,0.6s,baz=75,slow=3.1,SNR=18							
KIC	**Kosan Boka**	**160.62**	**270**	*e*PKiKP	PKPdf	13 12 53.7	-1.1	
	comp=Z,504nm,1.4s							
DBIC	**Dimbokro**	**160.74**	**270**	PKP	PKPdf	13 12 53.1	-1.8	
	comp=Z,26nm,1.1s,baz=103,slow=1.3,SNR=12							
DBIC				PKPab	PKPab	13 13 36.7	-0.5	
	comp=Z,83nm,0.5s,baz=79,slow=4.6,SNR=46							
DBIC				PP	PP	13 17 17.3	-3.0	
	comp=Z,16nm,1.1s,baz=95,slow=9.3,SNR=4.1							
DBIC	**Dimbokro**	**160.74**	**270**	PKP	PKPdf	13 12 53.1	-1.8	
DBIC				PKPab	PKPab	13 13 36.7	-0.5	
DBIC				PP	PP	13 17 17.3	-3.0	
DBIC	**Dimbokro**	**160.74**	**270**	PKiKP	PKPdf	13 12 54.4	-0.5	
LIC	**Lamto**	**160.89**	**269**	*e*PKiKP	PKPdf	13 12 53.7	-1.4	
	comp=Z,202nm,1.4s							
LIC	**Lamto**	**160.89**	**269**	⇑*i*PKiKP	PKPdf	13 12 53.8	-1.3	
	comp=Z,225nm,1.4s							
LIC				*e*MLR	MLR			
	comp=Z,2μm,21.8s							
LIC	**Lamto**	**160.89**	**269**	⇑*i*PKPdf	PKPdf	13 12 53.8	-1.3	
LIC				LR	LR			
	comp=Z,1μm,21.8s							
TIC	**Toumodi**	**160.91**	**270**	*e*PKiKP	PKPdf	13 12 53.9	-1.2	
	comp=Z,329nm,1.4s							
ASCN	**Ascension**	**162.27**	**214**	PFAKE		13 13 10.0	+13	
ASCN				LR	LR			
	comp=Z,1μm,20.0s							
RCBR	**Riachuelo**	**162.82**	**137**	PFAKE		13 13 10.0	+13	
RCBR				LR	LR			
	comp=Z,1μm,20.0s							

*NEIC **20** 13:05:42.1, 3334S×7049W, h91km, MD3.5(GUC), After GUC.*

NEIC Felt [II] at Santiago.

GUC 20 13:05:42.1±0.5, 3334S×7049W, h91km±2km, MD3.5, ML3.6,2C-6D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLCH	**Cerro Calan**	**0.07**	**214**	⇓*i*P		Pn	Pn	13 05 54.9	0.0
CLCH				*i*	S	Sn	Sn	13 06 04.7	+0.3
CLCH				AML	AML			13 06 05.3	
	comp=E,8μm,0.2s								
FCH	**Farellones**	**0.17**	**85**	⇓*i*P		Pn	Pn	13 05 55.7	+0.6
FCH				*i*	S	Sn	Sn	13 06 06.4	+1.6
FCH				AML	AML			13 06 08.7	
	comp=N,4μm,0.1s								
SAN	**Santiago**	**0.18**	**232**	⇑*i*P		Pn	Pn	13 05 55.2	0.0
SAN				*i*	S	Sn	Sn	13 06 05.0	+0.2
SAN	**Santiago**	**0.18**	**232**	⇑*i*P		Pn	Pn	13 05 55.2	0.0
SAN				*i*	S	Sn	Sn	13 06 05.0	+0.2
SAN				AML	AML			13 06 05.5	
	comp=E,4μm,0.6s								
PEL	**Peldehue**	**0.26**	**321**	⇓*i*P		Pn	Pn	13 05 55.6	+0.1
PEL				*i*	S	Sn	Sn	13 06 05.3	0.0
PEL				AML	AML			13 06 06.3	
	comp=E,4μm,0.5s								
PCH	**Pirque**	**0.28**	**183**	⇓*i*P		Pn	Pn	13 05 55.6	0.0
PCH				*i*	S	Sn	Sn	13 06 05.5	-0.1
YECH	**El Yeso**	**0.47**	**133**	⇓*i*P		Pn	Pn	13 05 58.7	+2.0
YECH				*i*	S	Sn	Sn	13 06 10.1	+2.4
TACH	**Talagante**	**0.48**	**230**	⇓*i*P		Pn	Pn	13 05 56.8	0.0
TACH				*i*	S	Sn	Sn	13 06 07.9	+0.1
CHCH	**Chadas Angostu**	**0.60**	**193**	*i*P		Pn	Pn	13 05 58.8	0.0
CHCH				*i*	S	Sn	Sn	13 06 09.9	+0.3
LNV	**Longovilo**	**0.98**	**231**	*e*P		Pn	Pn	13 06 01.4	-0.2
CHNG	**Los Chungos**	**1.69**	**329**	*e*P		Pn	Pn	13 06 10.5	+0.2
CHNG				*i*	S	Sn	Sn	13 06 31.8	+0.2

*IDC **20** 13:08:40.9±1.9, 1507N×10449W, h0km, mb3.8/4, mb1 4.3/7, mb1mx4.1/21, mbtmp4.0/7, ML3.6/2, MS4.4/7, Ms1 4.4/7, ms1mx3.9/39, Error ellipse: s-maj=84.2km s-min=29.1km az=87.0*

*

LPAZ La Paz 6.67 344 eP Pn 13 12 26.9 +1.7
LPAZ S S 13 13 41.8 +0.2
LCO Las Campanas 7.43 212 ePn Pn 13 12 33.7 -1.1
LCO eS S 13 13 44.9 -14
ARE Arequipa 7.97 321 eP Pn 13 12 40.0 -2.0
ARE eS S 13 14 05.0 -7.3
SIV San Ignacio 8.29 37 P Pn 13 12 47.8 +1.7
CFAA Coronel Fontan 9.01 191 P Pn 13 12 55.2 0.0
comp=E,0.9nm,0.3s,baz=13,slow=11,SNR=18
CFAA S S 13 14 29.3 -7.2
comp=E,4.3nm,0.3s,baz=154,slow=14,SNR=16
NNA Nana 14.72 315 P Pn 13 14 06.9 -0.5
comp=E,3.7nm,0.3s,baz=155,slow=8.9,SNR=14
NNA S S 13 16 43.5 -7.3
comp=E,0.9nm,0.3s,baz=211,slow=21,SNR=3.0
NNA Nana 14.72 315 eP Pn 13 14 07.3 -0.1
comp=E,22nm,0.6s
SPB Sao Paulo 17.31 96 eP P 13 14 36.3 0.0
PLCA Paso Flores 18.31 191 P P 13 14 47.8 +0.7
comp=E,1.0nm,0.3s,baz=7.1,slow=12,SNR=20
PLCA Paso Flores 18.31 191 eP P 13 14 47.5 +0.5
comp=E,23nm,0.9s
BDFB Brasilia 18.59 71 P P 13 14 52.5 +2.1
comp=E,6.5nm,0.3s,baz=241,slow=18,SNR=20
BDFB Brasilia 18.59 71 eP P 13 14 52.6 +2.3
comp=E,160nm,0.8s
ATAH Atahualpa 19.55 321 P P 13 15 01.0 +0.3
comp=E,1.0nm,0.3s,baz=166,slow=7.0,SNR=4.8
CAM4 Nova Friburgo 21.86 94 (P) P 13 15 20.6 -4.1
CAM4 i 13 15 26.0
CAM4 i 13 15 29.8
CAM3 Guarapari 23.95 90⇓ P 13 15 44.2 +0.3
CAM3 i 13 15 44.4
CAM3 i 13 15 45.9
CAM3 i 13 15 48.0
RCBR Riachuelo 33.74 65 eP P 13 17 10.2 -0.4
comp=E,16nm,0.6s,mb4.7
CMIG Matias Romero 48.51 322 P P 13 19 09.9 -0.6
comp=E,11nm,0.7s,mb4.3,baz=111,slow=5.6,SNR=18
VNA3 Neumayer Olymp 58.11 161 eP P 13 20 20.6 +1.0
VNA3 e 13 20 24.0
VNA1 Neumayer--Stat 58.29 161 eP P 13 20 21.5 +0.6
VNA1 e 13 20 25.7
VNA2 Neumayer--Watz 58.66 161 eP P 13 20 23.9 +0.5
VNA2 e 13 20 27.4
LRAL Lakeview Retre 58.90 340 eP P 13 20 23.4 -2.1
comp=E,6.1nm,0.4s,mb4.6
TKL Tuckaleechee C 60.41 344 P P 13 20 34.3 -1.5
comp=E,12nm,0.7s,mb4.6,baz=164,slow=8.0,SNR=15
TKL Tuckaleechee C 60.41 344 eP P 13 20 34.0 -1.7
SWET Sewanee 60.59 342 eP P 13 20 35.0 -2.0
OXF Oxford 61.05 338 eP P 13 20 37.5 -2.6
comp=E,32nm,1.0s,mb4.9
ELN Prospectdale 61.20 347 eP P 13 20 40.6 -0.4
JCT Junction City 61.96 327 eP P 13 20 44.8 -1.5
comp=E,13nm,0.7s,mb4.7
WVT Waverly 62.01 340 eP P 13 20 44.3 -2.2
comp=E,22nm,0.8s,mb4.8
MIAR Mount Ida 62.62 335 eP P 13 20 48.9 -1.6
comp=E,4.4nm,0.6s,mb4.3
TXAR Lajitas Array 63.08 323 P P 13 20 52.5 -1.3
comp=E,2.4nm,0.6s,mb4.0,baz=152,slow=8.2,SNR=28
PARMO Parma 63.12 339 eP P 13 20 52.6 -1.2
FVM French Village 64.54 339 eP P 13 21 01.2 -1.9
comp=E,9.3nm,0.5s,mb4.7
ACSO Alum Creek Sta 64.56 346 eP P 13 21 01.5 -1.6
comp=E,7.0nm,0.6s,mb4.5
CCM Cathedral Cave 64.88 338 eP P 13 21 03.2 -2.0
comp=E,19nm,0.6s,mb4.9
LIC Lamto 66.37 72 eP P 13 21 14.4 -0.9
comp=E,32nm,0.6s,mb5.1
TIC Toumodi 66.58 72 eP P 13 21 15.1 -1.5
comp=E,60nm,0.9s,mb5.2
KIC Kosan Boka 66.69 72 eP P 13 21 16.1 -1.2
comp=E,163nm,1.0s,mb5.6
DBIC Dimbokro 66.73 72 P P 13 21 16.7 -0.9
comp=E,18nm,0.7s,mb4.8,baz=212,slow=7.2,SNR=17
DBIC Dimbokro 66.73 72 P P 13 21 16.7 -0.9
QSPA South Pole Qui 67.46 180 P P 13 21 22.4 +1.3
comp=E,8.2nm,0.7s,mb4.5,baz=137,slow=1.6,SNR=16
QSPA South Pole Qui 67.46 180 P P 13 21 22.4 +1.3
319A Douglas 67.80 321 ⇑P P 13 21 23.7 -0.2
baz=68,SNR=14
219A White Tail Can 68.24 321 ⇑P P 13 21 26.6 0.0
baz=68,SNR=8.9
318A Bisbee 68.26 320 ⇓P P 13 21 26.6 -0.2
baz=68,SNR=12
LPM Los Pinos Moun 68.52 325 eP P 13 21 27.8 -0.5
218A Dragoon 68.68 321 ⇓P P 13 21 29.4 +0.1
baz=69,SNR=11
119A Ashpeak Ranch, 68.83 322 ⇓P P 13 21 30.6 +0.4
baz=69
ANMO Albuquerque 68.91 325 P P 13 21 30.1 -0.6
comp=E,6.8nm,0.8s,mb4.3,baz=144,slow=7.2,SNR=26
ANMO Albuquerque 68.91 325 eP P 13 21 30.2 -0.5
comp=E,6.7nm,0.8s,mb4.3
JFWS Jewell Farm 68.98 341 eP P 13 21 29.3 -1.6
comp=E,18nm,0.5s,mb5.0
217A Green Valley 68.99 320 ⇓P P 13 21 31.3 0.0
baz=69,SNR=12
118A Homack Ranch, 69.12 321 ⇑P P 13 21 32.0 0.0
baz=69,SNR=10
Z19A T-Link Ranch, 69.19 322 ⇓P P 13 21 32.9 +0.4
baz=69
TUC Tucson 69.35 321 eP P 13 21 33.2 -0.3
comp=E,8.1nm,1.3s,mb4.2
117A Oracle 69.52 321 ⇓P P 13 21 34.2 -0.3
baz=70,SNR=10
216A Three Points, 69.53 320 ⇓P P 13 21 34.5 -0.1
baz=70,SNR=7.6
Y19A Nutrioso 69.68 323 ⇑P P 13 21 36.1 +0.7
baz=70,SNR=11
Y18A Canyon Day Jun 69.99 322 ⇓P P 13 21 37.6 +0.3
baz=70
214A Organ Pipe Nat 70.31 319 ⇓P P 13 21 39.1 -0.3
baz=70,SNR=7.4
Y17A Roosevelt 70.39 322 ⇑P P 13 21 39.9 +0.1
baz=71,SNR=19
X18A Snowflake 70.49 323 ⇑P P 13 21 41.0 +0.7
baz=71
SDCO Great Sand Dun 70.59 328 eP P 13 21 40.9 0.0
comp=E,11nm,1.1s,mb4.4
V19A Window Rock 70.87 324 ⇑P P 13 21 43.2 +0.6
baz=71
Y16A Circle Bar Ran 70.89 321 ⇓P P 13 21 43.0 +0.2
baz=71,SNR=7.9
X16A Lo Mia Camp, P 71.25 322 ⇓P P 13 21 44.9 0.0
baz=72,SNR=11
W17A Winslow 71.32 323 ⇓P P 13 21 45.9 +0.5
baz=72
V18A Ganado 71.35 324 ⇑P P 13 21 45.3 -0.2
baz=72
Y15A Casa Rosa Ranc 71.44 321 ⇑P P 13 21 45.9 -0.2
baz=72,SNR=5.8
113A Mohawk Valley, 71.45 319 ⇓P P 13 21 45.8 -0.4
baz=72
T19A Beclabito 71.69 325 ⇓P P 13 21 47.4 -0.1
baz=72,SNR=13
MVCO Mesa Verde 71.70 326 ⇑P P 13 21 47.7 +0.2
baz=72,SNR=6.9
X15A Humboldt 71.76 321 ⇑P P 13 21 48.1 +0.1
baz=72,SNR=11
W16A Flagstaff 71.79 322 ⇑P P 13 21 48.9 +0.8
baz=72,SNR=11
Y14A Wickenburg 71.82 320 ⇑P P 13 21 48.1 -0.2
baz=72,SNR=6.7
U18A Rough Rock, Ch 71.84 324 ⇑P P 13 21 48.5 +0.1
baz=72,SNR=7.6
WUAZ Wupatki 72.01 323 ⇓P P 13 21 49.8 +0.4
baz=72
X14A Yava 72.12 321 ⇓P P 13 21 50.4 +0.2
baz=72,SNR=5.2
Y13A Salome 72.22 320 ⇓P P 13 21 50.7 0.0
baz=72
ISCO Idaho Springs 72.26 329 eP P 13 21 50.7 -0.1
comp=E,7.9nm,1.2s,mb4.2
W15A Williams 72.27 322 ⇑P P 13 21 51.5 +0.5
baz=72
GLA Glamis 72.30 319 ⇑P P 13 21 51.3 +0.1
baz=72
U16A Tuba City 72.33 323 ⇓P P 13 21 51.2 -0.1
baz=73,SNR=5.7
T18A Mexican Hat 72.37 325 ⇑P P 13 21 51.4 -0.1
baz=73,SNR=15
U17A Shonto 72.40 324 ⇓P P 13 21 52.3 +0.6
baz=73
PV01 Paradox Valley 72.44 326 eP P 13 21 52.4 +0.5
S19A Harvey Farm, M 72.44 326 ⇑P P 13 21 51.6 -0.3
baz=73,SNR=12
Y12C Blythe 72.59 319 ⇓P P 13 21 52.8 -0.1
baz=73,SNR=5.5
V15A Kaibab Nationa 72.67 322 ⇑P P 13 21 53.9 +0.5
baz=73,SNR=12
W14A Seligman 72.76 321 ⇓P P 13 21 54.4 +0.5
baz=73,SNR=6.1
X13A Yucca 72.76 320 ⇑P P 13 21 54.2 +0.3
baz=73,SNR=7.0
T17A Navajo Res., N 72.77 324 ⇑P P 13 21 54.5 +0.6
baz=73,SNR=7.6
S18A Hurst Farm, Bl 72.85 325 ⇓P P 13 21 54.5 +0.1
baz=73,SNR=12
PV10 Paradox Valley 72.86 326 eP P 13 21 53.8 -0.6
R19A Curley Farm, L 72.91 326 ⇑P P 13 21 54.2 -0.5
baz=73,SNR=5.2
V14A Boquillas Ranc 73.07 322 ⇓P P 13 21 56.3 +0.6
baz=73,SNR=10
BC3 Big Chuckw Mtn 73.09 319 ⇓P P 13 21 55.7 -0.2
baz=73,SNR=6.7
T16A Glen Canyon Da 73.14 324 ⇑P P 13 21 56.9 +0.8
baz=73
W13A Hualapai Mount 73.15 321 ⇓P P 13 21 56.9 +0.7
baz=73
MONP Monument Peak 73.17 318 ⇓P P 13 21 56.8 +0.4
baz=73
U15A North Rim 73.18 323 ⇓P P 13 21 57.1 +0.8
baz=73,SNR=14
S17A Black Ridge (B 73.24 324 ⇓P P 13 21 56.6 0.0
baz=74,SNR=5.1
IRM Iron Mountain 73.25 319 ⇓P P 13 21 56.7 0.0
baz=74,SNR=6.9
R18A Canyonlands Na 73.31 325 ⇓P P 13 21 56.9 -0.1
baz=74
Q19A Hogan Spring (73.41 326 ⇓P P 13 21 58.2 +0.5
baz=74,SNR=6.0
T15A Red Dirt Ranch 73.65 323 ⇑P P 13 21 59.7 +0.7
baz=74,SNR=8.1
BELC Belle Mtn. 73.66 319 ⇓P P 13 21 59.2 +0.1
baz=74
PFO Pinyon Flat Ob 73.67 318 P P 13 21 59.6 +0.3
comp=E,4.7nm,1.0s,mb4.1,baz=88,slow=8.0,SNR=4.2
PFO Pinyon Flat Ob 73.67 318 ⇑P P 13 21 59.7 +0.5
baz=74
U14A Mt Trumbull 73.67 322 ⇓P P 13 21 59.6 +0.4
baz=74,SNR=12
S16A Weppner Ranch, 73.73 324 ⇑P P 13 21 59.9 +0.5
baz=74
V13A Grand Canyon W 73.73 321 ⇑P P 13 21 59.9 +0.3
baz=74,SNR=6.5
R17A Hanksville Air 73.77 325 ⇓P P 13 21 59.8 +0.1
baz=74,SNR=12
P19A Cripple Cowboy 73.78 327 ⇑P P 13 22 00.1 +0.3
baz=74,SNR=18
Q18A Rafter H Ranch 73.97 326 ⇓P P 13 22 01.1 +0.3
baz=74
GMRC Granite Mounta 73.98 319 ⇑P P 13 22 01.4 +0.4
baz=74,SNR=15
T14A Hurricane 74.08 323 ⇑P P 13 22 01.8 +0.3
baz=74,SNR=8.7
S15A Panguitch 74.12 324 ⇓P P 13 22 02.0 +0.3
baz=74
U13A Paoon Wash 74.12 322 ⇓P P 13 22 02.4 +0.6
baz=74
MURC Murrieta 74.13 318 ⇓P P 13 22 01.9 0.0
baz=74
V12A Nelson 74.15 321 ⇓P P 13 22 02.0 +0.1
baz=74,SNR=8.1
SRU San Rafael 74.18 326 eP P 13 22 02.0 -0.1
comp=E,12nm,0.8s,mb4.6
SRU San Rafael 74.18 326 ⇓P P 13 22 02.0 -0.1
baz=74,SNR=13
Q16A Castle Valley 74.38 325 ⇑P P 13 22 03.8 +0.6
baz=75
BBRC Big Bear Sol-O 74.40 318 ⇓P P 13 22 03.6 +0.2
baz=75
HEC Hector,Ludlow 74.42 319 ⇑P P 13 22 03.8 +0.2
baz=75,SNR=7.7
P18A Preston Nutter 74.42 326 ⇓P P 13 22 03.7 +0.3
baz=75,SNR=9.2
R15A Junction 74.45 324 ⇑P P 13 22 04.0 +0.3
baz=75,SNR=6.0
U12A Valley of Fire 74.46 321 ⇑P P 13 22 03.8 +0.1
baz=75,SNR=5.2
SYO Syowa Base 74.46 159⇓ eP P 13 22 02.4 -0.9
T13A Saint George 74.51 322 ⇓P P 13 22 04.5 +0.5
baz=75
P17A Butcher Ranch, 74.56 326 ⇑P P 13 22 04.2 -0.1
baz=75,SNR=5.8
V11A Goodsprings 74.57 320 ⇑P P 13 22 04.8 +0.4
baz=75
CCUT Cedar City 74.58 323 eP P 13 22 05.2 +0.8
TUQ Turquoise Moun 74.58 320 ⇓P P 13 22 05.0 +0.5
baz=75
MSU Marysvale 74.62 324 eP P 13 22 04.9 +0.3
S14A Cedar City 74.62 323 ⇑P P 13 22 05.3 +0.7
baz=75
L21A Rawlins 74.78 329 ⇓P P 13 22 05.0 -0.5
baz=75,SNR=9.5
ARUT Antelope Range 74.79 323 eP P 13 22 05.9 +0.3
M20A Sweetwater, Wa 74.81 329 ⇓P P 13 22 06.0 +0.4
baz=75
N19A John Jarvie Ra 74.83 328 ⇓P P 13 22 05.4 -0.4
baz=75,SNR=5.6
BFSC Mount Baldy St 74.84 318 ⇑P P 13 22 06.1 +0.2
baz=75
S13A Holt Ranch, En 74.88 323 ⇑P P 13 22 06.9 +0.8
baz=75,SNR=11
GSC Goldstone 75.02 319 ⇓P P 13 22 07.0 0.0
baz=75,SNR=5.5
Q15A Fillmore 75.08 324 ⇑P P 13 22 07.9 +0.7
baz=75
O17A Robinson Place 75.09 326 ⇓P P 13 22 07.6 +0.3
baz=75,SNR=13
L20A Wamsutter 75.28 329 ⇑P P 13 22 08.3 0.0
baz=76,SNR=7.8
R13A O'Grain Ranch, 75.36 323 ⇓P P 13 22 09.3 +0.4
baz=76,SNR=7.0
T11A Corn Creek, Al 75.41 322 ⇓P P 13 22 09.4 +0.2
baz=76,SNR=14
P15A Leamington 75.44 325 ⇓P P 13 22 09.8 +0.5
baz=76
TOA0 Torodi Ar. Sit 75.45 69 eP P 13 22 08.2 -1.6
TORD Torodi Ar. Bea 75.45 69 P P 13 22 08.8 -1.1
comp=E,14nm,0.5s,mb4.8,baz=257,slow=5.6,SNR=131
TORD Torodi Ar. Bea 75.45 69 P P 13 22 08.8 -1.1
S12A Delamar Landin 75.46 322 ⇑P P 13 22 10.0 +0.6
baz=76
EDW2 Edwards Air Fo 75.47 318 ⇑P P 13 22 09.2 -0.3
baz=76
U10A Ash Meadows, A 75.50 320 ⇓P P 13 22 10.4 +0.8
baz=76
O16A Springville 75.50 326 ⇑P P 13 22 10.5 +0.9
baz=76
DAU Daniels Canyon 75.52 326 eP P 13 22 10.1 +0.4
Q14A Sevier Lake (B 75.56 324 ⇑P P 13 22 10.4 +0.4
baz=76,SNR=5.7
M18A Lyman 75.68 327 ⇑P P 13 22 10.4 -0.2
baz=76
LRMC Laurel Mountai 75.68 319 ⇓P P 13 22 10.9 +0.2
baz=76
N17A Moffit Pass 75.70 327 ⇑P P 13 22 11.4 +0.7
baz=76,SNR=18
JLU Jordanelle 75.76 326 eP P 13 22 11.1 0.0
TPNV Topopah Spring 75.81 321 eP P 13 22 11.8 +0.4
comp=E,11nm,1.0s,mb4.5
TPNV Topopah Spring 75.81 321 ⇓P P 13 22 11.9 +0.4
baz=76,SNR=12
R12A Pony Springs, 75.82 323 ⇓P P 13 22 11.9 +0.4
baz=76,SNR=16
L19A Farson 75.84 328 ⇑P P 13 22 11.9 +0.5
baz=76
FURC Furnace Creek, 75.84 320 ⇓P P 13 22 11.8 +0.1
baz=76,SNR=6.2
P14A Drum Mountains 75.88 324 ⇓P P 13 22 12.2 +0.5
baz=76,SNR=8.8
Q13A Wheeler Ranch, 75.94 323 ⇓P P 13 22 12.5 +0.4
baz=76,SNR=6.6
MPMC Manual Prospec 75.94 319 ⇓P P 13 22 11.9 -0.3
baz=76,SNR=5.1
N16A Rees Ranch, Co 75.97 326 ⇑P P 13 22 12.7 +0.5
baz=76
S11A Rachel 76.00 322 ⇑P P 13 22 13.3 +0.8
baz=76
M17A Scullys Gap (B 76.01 327 ⇓P P 13 22 12.0 -0.4
baz=76
L18A Fontenelle, Gr 76.03 328 ⇓P P 13 22 12.3 -0.3
baz=76,SNR=11
VNDA Vanda 76.06 190 P P 13 22 13.5 +1.2
comp=E,1.3nm,0.8s,mb3.6,baz=163,slow=0.5,SNR=6.5
DUG Dugway 76.18 325 ⇓P P 13 22 14.3 +0.8
baz=76
ISA Isabella 76.28 318 eP P 13 22 14.2 +0.1
comp=E,7.3nm,0.8s,mb4.4
ISA Isabella 76.28 318 ⇑P P 13 22 14.2 +0.1
baz=76,SNR=5.8
P13A Bates Ranch, G 76.29 324 ⇓P P 13 22 14.6 +0.5
baz=76,SNR=5.3
R11A Troy Canyon, C 76.39 322 ⇓P P 13 22 14.9 +0.2
baz=77,SNR=7.2
BW06 Boulder Array 76.44 329 ⇓P P 13 22 14.5 -0.4
baz=77
PDAR Pinedale Array 76.44 329 P P 13 22 14.2 -0.6
comp=E,1.7nm,0.6s,mb3.9,baz=129,slow=7.9,SNR=13
Q12A Willow Creek R 76.45 323 ⇓P P 13 22 15.2 +0.3
baz=77,SNR=6.5
N15A Stansbury Isla 76.53 326 ⇑P P 13 22 15.7 +0.4
baz=77
CWC Cottonwood Cre 76.55 319 ⇓P P 13 22 16.1 +0.5
baz=77
HWUT Hardware Ranch 76.56 327 eP P 13 22 15.1 -0.5
comp=E,7.0nm,0.9s,mb4.3
PKM Peak Mountain 76.61 317 ⇑P P 13 22 16.3 +0.3
baz=77
S10A Tonopah Range, 76.67 321 ⇓P P 13 22 16.6 +0.3
baz=77,SNR=13
O13A Hicks Ranch, I 76.75 324 ⇑P P 13 22 17.2 +0.6
baz=77
R10A Warm Springs 76.76 322 ⇓P P 13 22 17.5 +0.8
baz=77,SNR=16
VES Vestal, Richgr 76.77 318 ⇑P P 13 22 16.9 +0.1
baz=77,SNR=5.6
Q11A Duckwater 76.77 322 ⇑P P 13 22 17.0 +0.2
baz=77,SNR=8.5
L16A Fish Haven 76.80 327 ⇓P P 13 22 17.5 +0.7
baz=77
N14A Grayback Hills 76.85 325 ⇓P P 13 22 17.4 +0.2
baz=77
M15A Larsen Ranch, 76.91 326 ⇓P P 13 22 17.7 +0.3
baz=77
S09A Goldfield 76.91 321 ⇑P P 13 22 18.0 +0.4
baz=77
SMMC Simmler 76.99 317 ⇑P P 13 22 18.6 +0.5
baz=77
Q10A Clear Creek Ra 77.18 322 ⇓P P 13 22 19.3 +0.2
baz=77,SNR=7.5
O12A Currie 77.26 324 ⇑P P 13 22 19.7 +0.2
baz=78,SNR=12
ULM Lac du Bonnet 77.27 341 P P 13 22 17.1 -2.2
comp=E,7.8nm,0.6s,mb4.5,baz=157,slow=5.5,SNR=6.3
L15A Malad City 77.27 327 ⇓P P 13 22 19.0 -0.5
baz=78,SNR=10
I18A Diamond G Ranc 77.27 329 ⇑P P 13 22 19.7 +0.3
baz=78,SNR=10
TSUM Tsumeb 77.31 106 P P 13 22 20.3 -0.1
comp=E,9.5nm,0.5s,mb4.7,baz=242,slow=4.5,SNR=20
TSUM Tsumeb 77.31 106 eP P 13 22 19.6 -0.7
comp=E,13nm,0.8s,mb4.6
P11A Circle Ranch, 77.32 323 ⇑P P 13 22 21.1 +1.2
baz=78
M14A Sheep Mountain 77.40 326 ⇑P P 13 22 20.1 -0.1
baz=78,SNR=7.9
K16A Soda Springs 77.48 328 ⇑P P 13 22 20.8 +0.2
baz=78,SNR=8.0
LOHW Long Hollow 77.58 329 eP P 13 22 20.5 -0.7
comp=E,3.3nm,0.6s,mb4.1
Q09A Carvers 77.63 322 ⇑P P 13 22 22.4 +0.8
baz=78
O11A Cowboy Ranch, 77.67 323 ⇑P P 13 22 21.8 0.0
baz=78,SNR=5.3
RRI2 Red Ridge 77.73 328 eP P 13 22 22.0 0.0
comp=E,11nm,1.1s,mb4.4
L14A Malta 77.73 326 ⇓P P 13 22 21.8 -0.2
baz=78,SNR=11
P10A Eureka 77.76 323 ⇓P P 13 22 22.8 +0.5
baz=78,SNR=5.3
I17A Pilgram Creek 77.80 329 ⇓P P 13 22 22.8 +0.5
baz=78
J16A Bone 77.81 328 ⇓P P 13 22 23.0 +0.6
baz=78
K15A Arbon 77.84 327 ⇓P P 13 22 22.5 -0.1
baz=78,SNR=9.3
ELK Elko 77.87 324 P P 13 22 22.8 0.0
comp=E,5.4nm,0.8s,mb4.2,baz=126,slow=3.2,SNR=24
ELK Elko 77.87 324 P P 13 22 22.8 -0.1
T06C Millerton Lake 77.91 319 ⇓P P 13 22 23.4 +0.2
baz=78
IMW Indian Meadow 77.95 329 eP P 13 22 23.4 +0.1
comp=E,7.7nm,1.0s,mb4.3
NVAR Mina Array Bea 78.01 321 P P 13 22 23.6 0.0
comp=E,3.8nm,0.7s,mb4.1,baz=157,slow=5.4,SNR=22
K14A Jones Ranch, D 78.06 326 ⇑P P 13 22 24.0 +0.1
baz=78
Q08A Gabbs 78.08 321 ⇑P P 13 22 24.0 -0.1
baz=78,SNR=14
P09A Austin 78.09 322 ⇑P P 13 22 24.1 0.0
baz=78,SNR=6.1
RLMT Red Lodge 78.10 330 eP P 13 22 23.4 -0.6
comp=E,2.9nm,0.5s,mb4.2
RLMT Red Lodge 78.10 330 ⇓P P 13 22 23.9 -0.1
baz=78
L13A Double Diamond 78.13 326 ⇓P P 13 22 24.4 +0.1
baz=78,SNR=14
U04C Hernandez Rese 78.16 318 ⇑P P 13 22 24.9 +0.4
baz=78
M12A Wells 78.16 325 ⇑P P 13 22 24.6 +0.2
baz=78,SNR=8.2
O10A Cortez Mining, 78.24 323 ⇑P P 13 22 25.1 +0.2
baz=78
J15A Blackfoot 78.31 328 ⇑P P 13 22 25.3 0.0
baz=79,SNR=7.6
G18A Lazy EL Ranch, 78.38 330 ⇓P P 13 22 25.3 -0.2
baz=79
S05C Merced 78.51 319 ⇓P P 13 22 26.9 +0.4
baz=79
N10A Dunphy 78.54 323 ⇑P P 13 22 27.0 +0.5
baz=79
YMR Madison River 78.54 329 eP P 13 22 26.8 +0.4
comp=E,5.5nm,0.7s,mb4.3
O09A Fish Creek Ran 78.54 323 ⇑P P 13 22 26.8 +0.2
baz=79
K13A Stover Farm, H 78.60 326 ⇑P P 13 22 27.4 +0.6
baz=79
DGMT Dagmar 78.61 335 eP P 13 22 26.3 -0.4
comp=E,4.7nm,0.4s,mb4.5
DGMT Dagmar 78.61 335 ⇓P P 13 22 26.7 0.0
baz=79
M11A Holland Ranch, 78.64 324 ⇑P P 13 22 27.1 0.0
baz=79,SNR=7.9
H16A Russell Place, 78.70 329 ⇑P P 13 22 27.9 +0.6
baz=79
P08A Dixie Valley 78.73 322 ⇓P P 13 22 27.5 -0.1
baz=79,SNR=5.4
L12A House Creek Ra 78.73 325 ⇓P P 13 22 27.9 +0.3
baz=79,SNR=14
R06C Coleville 78.75 320 ⇓P P 13 22 28.4 +0.7
baz=79
I15A Monteview 78.78 328 ⇑P P 13 22 28.7 +0.9
baz=79
J14A Carey 78.80 327 ⇑P P 13 22 28.0 +0.1
baz=79,SNR=7.4
F18A Big Timber 78.90 331 ⇑P P 13 22 27.9 -0.5
baz=79,SNR=5.7
K12A Draper Farm, C 79.02 326 ⇓P P 13 22 29.3 +0.2
baz=79,SNR=18
M10A I.L. Ranch, Tu 79.11 324 ⇑P P 13 22 30.0 +0.4
baz=79
L11A Cat Creek Ranc 79.14 325 ⇓P P 13 22 29.9 +0.2
baz=79,SNR=10.0
O08A Rochester Mine 79.17 322 ⇓P P 13 22 30.1 +0.2
baz=79
J13A Cove Ranch, Pi 79.19 327 ⇓P P 13 22 30.6 +0.6
baz=79
I14A Mackay 79.20 327 ⇓P P 13 22 30.3 +0.3
baz=79,SNR=8.5
F17A Fitzpatrick Pl 79.33 330 ⇓P P 13 22 30.8 +0.1
baz=80,SNR=6.1
G16A Moss Hill, Enn 79.36 329 ⇓P P 13 22 31.0 +0.2
baz=80
HLID Hailey 79.43 327 eP P 13 22 31.7 +0.4
comp=E,12nm,0.8s,mb4.6
HLID Hailey 79.43 327 ⇓P P 13 22 31.9 +0.6
baz=80,SNR=20
WCN Washoe City 79.44 321 ⇑P P 13 22 31.8 +0.4
baz=80

L10A	**Juniper Basin**	79.46	324	⇓P		P	13 22 31.5	0.0
	baz=80,SNR=23							
PAHR	**Pah Rah Range**	79.48	321	*e*P		P	13 22 31.8	+0.1
	comp=E,27nm,0.9s,mb4.9							
N08A	**GE Springer Mi**	79.49	323	⇓P		P	13 22 30.7	-0.9
	baz=80							
E18A	**Harlowton**	79.49	331	⇓P		P	13 22 31.4	-0.1
	baz=80							
I13A	**Wildhorse Cree**	79.53	327	⇑P		P	13 22 32.2	+0.4
	baz=80,SNR=5.7							
M09A	**Marrel Ranch,**	79.54	323	⇑P		P	13 22 31.5	-0.4
	baz=80,SNR=6.5							
J12A	**Stokes Ranch,**	79.56	326	⇑P		P	13 22 32.2	+0.2
	baz=80,SNR=8.3							
MCMT	**McKenzie Canyo**	79.56	328	*e*P		P	13 22 32.3	+0.4
G15A	**Dillon**	79.64	329	⇑P		P	13 22 32.8	+0.4
	baz=80							
H14A	**Leadore**	79.66	328	⇑P		P	13 22 33.0	+0.5
	baz=80,SNR=5.5							
LAVA	**Lava Cap Winer**	79.66	320	⇑P		P	13 22 32.5	-0.2
	baz=80							
K11A	**Parker Ranch,**	79.71	325	⇓P		P	13 22 32.8	0.0
	baz=80,SNR=11							
DLMT	**Dillon**	79.83	329	*e*P		P	13 22 32.6	-0.8
	comp=E,17nm,1.4s,mb4.5							
E17A	**Martinsdale**	79.84	330	⇓P		P	13 22 33.1	-0.2
	baz=80,SNR=6.0							
I12A	**Atlanta**	79.96	326	⇑P		P	13 22 34.2	+0.1
	baz=80,SNR=11							
N07B	**Gerlach**	79.96	322	⇓P		P	13 22 33.9	-0.3
	baz=80,SNR=10							
O06A	**Flanigan**	80.04	321	⇑P		P	13 22 35.2	+0.5
	baz=80							
MFID	**Camas Ranch**	80.05	326	⇓P		P	13 22 35.2	+0.6
	baz=80							
H13A	**Challis**	80.06	327	⇓P		P	13 22 34.8	+0.1
	baz=80,SNR=13							
M08A	**Happy Creek Ra**	80.07	323	⇑P		P	13 22 35.4	+0.6
	baz=80							
F15A	**Butte**	80.14	329	⇑P		P	13 22 35.2	+0.2
	baz=80							
K10A	**MacKenzie Ranc**	80.16	325	⇑P		P	13 22 35.1	-0.1
	baz=80,SNR=6.3							
BEKR	**Beckwourth**	80.16	321	⇑P		P	13 22 35.4	+0.1
	baz=80,SNR=9.4							
D17A	**Six Diamond Ra**	80.28	331	⇑P		P	13 22 35.9	+0.1
	baz=80							
H12A	**Diamond D Ranc**	80.35	327	⇑P		P	13 22 36.1	-0.1
	baz=81,SNR=5.5							
N06A	**Buffalo Meadow**	80.43	322	⇑P		P	13 22 36.4	-0.4
	baz=81,SNR=7.4							
G13A	**Cobalt**	80.43	328	⇑P		P	13 22 36.7	+0.1
	baz=81,SNR=22							
I11A	**Placerville**	80.47	326	⇑P		P	13 22 36.6	-0.2
	baz=81							
HRY	**Holter Researc**	80.47	330	*e*P		P	13 22 36.7	0.0
M07A	**Soldier Meadow**	80.48	322	⇓P		P	13 22 36.6	-0.3
	baz=81,SNR=7.2							
F14A	**Wisdom**	80.53	329	⇑P		P	13 22 37.2	0.0
	baz=81,SNR=6.1							
O05C	**Quincy**	80.55	321	⇑P		P	13 22 37.1	-0.3
	baz=81,SNR=6.6							
L08A	**Fields**	80.55	324	⇓P		P	13 22 37.0	-0.3
	baz=81,SNR=7.5							
K09A	**Rome**	80.56	324	⇓P		P	13 22 37.3	0.0
	baz=81							
E15A	**Deer Lodge**	80.63	329	⇓P		P	13 22 37.6	-0.1
	baz=81							
MDT	**Midelt**	80.66	49	P		P	13 22 38.4	+0.3
	comp=E,8.7nm,0.9s,mb4.4,baz=236,slow=4.6,SNR=9.5							
BOSA	**Boshof**	80.67	117	P		P	13 22 38.0	-0.5
	comp=E,5.1nm,0.4s,mb4.5,baz=264,slow=4.0,SNR=16							
BOSA	**Boshof**	80.67	117	P		P	13 22 38.0	-0.5
L07A	**Adell**	80.99	323	⇓P		P	13 22 39.6	-0.1
	baz=81,SNR=5.6							
H11A	**Donnelly**	81.05	327	⇓P		P	13 22 39.6	-0.3
	baz=81,SNR=7.4							
C16A	**Fuhringer Ranc**	81.24	331	⇓P		P	13 22 40.3	-0.5
	baz=82							
H10A	**Noah's Angus R**	81.34	326	⇓P		P	13 22 41.1	-0.3
	baz=82,SNR=9.6							
LBCM	**Butte Creek Ri**	81.36	321	P		P	13 22 41.0	-0.6
E13A	**Victor**	81.38	329	⇓P		P	13 22 41.2	-0.3
	baz=82,SNR=8.5							
K07A	**Rock Creek Ran**	81.39	323	⇑P		P	13 22 41.8	+0.1
	baz=82,SNR=7.8							
J08A	**Circle Bar Ran**	81.41	324	⇓P		P	13 22 41.8	0.0
	baz=82,SNR=11							
I09A	**Lost Marbles R**	81.44	325	⇓P		P	13 22 41.5	-0.5
	baz=82,SNR=14							
C15A	**Salmond Ranch,**	81.61	330	⇑P		P	13 22 42.2	-0.5
	baz=82,SNR=6.9							
G11A	**Walters Elk Ra**	81.66	327	⇑P		P	13 22 42.7	-0.4
	baz=82,SNR=5.8							
I08A	**Drewsey**	81.83	325	⇑P		P	13 22 44.4	+0.4
	baz=82,SNR=11							
J07A	**Hines**	81.87	324	⇑P		P	13 22 44.6	+0.3
	baz=82							
F11A	**Grangeville**	81.95	327	⇑P		P	13 22 43.8	-0.8
	baz=82,SNR=5.9							
D13A	**Huson**	81.98	329	⇓P		P	13 22 44.3	-0.3
	baz=82							
LASM	**Arnica Sink**	81.98	321	P		P	13 22 44.5	-0.4
B15A	**Bradely Ranch,**	81.99	331	⇑P		P	13 22 43.8	-0.9
	baz=82							
G10A	**Bishop Farm, J**	82.02	326	⇓P		P	13 22 45.1	+0.2
	baz=82,SNR=16							
A16A	**West Butte Ran**	82.03	332	⇓P		P	13 22 44.2	-0.8
	baz=82,SNR=12							
LBTB	**Lobatse**	82.24	114	P		P	13 22 46.4	-0.4
	comp=E,2.9nm,0.5s,mb4.2,baz=271,slow=6.6,SNR=4.3							
J06A	**Christmas Vall**	82.25	323	⇑P		P	13 22 45.6	-0.6
	baz=82,SNR=5.9							
H08A	**Prairie City**	82.30	325	⇑P		P	13 22 46.0	-0.4
	baz=82							
E11A	**Bogner Ranch,**	82.30	328	⇑P		P	13 22 45.6	-0.8
	baz=82							
K05A	**Summer Lake**	82.32	323	⇓P		P	13 22 46.8	+0.3
	baz=82,SNR=8.3							
G09A	**Cove**	82.35	326	⇓P		P	13 22 46.4	-0.2
	baz=83,SNR=12							
I07A	**Izee**	82.45	324	⇓P		P	13 22 47.5	+0.3
	baz=83							
F10A	**Beach Ranch, E**	82.55	327	⇑P		P	13 22 47.7	+0.1
	baz=83							
I06A	**Prineville**	82.74	324	⇑P		P	13 22 49.0	+0.3
	baz=83							
E10A	**Myers Farm, Un**	82.84	327	⇑P		P	13 22 49.2	+0.1
	baz=83							
G08A	**Pilot Rock**	82.97	326	⇓P		P	13 22 49.6	-0.3
	baz=83							
TAM	**Tamanrasset**	83.18	62	*e*P		P	13 22 51.4	-0.1
F08A	**Pendleton**	83.22	326	⇑P		P	13 22 51.4	+0.2
	baz=83							
G07A	**Ruggs Ranch, H**	83.33	325	⇑P		P	13 22 51.8	+0.1
	baz=84							
H06A	**Lindquist Farm**	83.33	324	⇑P		P	13 22 52.1	+0.4
	baz=84							
I05A	**Bend**	83.46	324	⇓P		P	13 22 52.9	+0.5
	baz=84							
B12A	**Libby**	83.50	329	⇓P		P	13 22 52.3	-0.1
	baz=84							
L02A	**Cave Junction**	83.50	321	⇑P		P	13 22 52.7	0.0
	baz=84							
K02A	**Glendale**	83.82	321	⇓P		P	13 22 54.6	+0.3
	baz=84							
D08A	**Wollman Farm,**	84.14	327	⇓P		P	13 22 55.8	0.0
	baz=84							
F06A	**Goldendale**	84.24	325	⇑P		P	13 22 56.5	+0.2
	baz=84							
EBG	**Ellensburg**	84.88	326	P		P	13 22 59.5	0.0
ESDC	**Sonseca Array**	85.00	43	P		P	13 23 00.4	+0.1
	comp=E,6.4nm,0.9s,mb4.4,baz=238,slow=4.8,SNR=12							
C07A	**Waterville**	85.14	327	⇑P		P	13 22 59.8	-0.9
	baz=85,SNR=5.6							
A09A	**Danville**	85.27	328	⇓P		P	13 23 00.3	-1.1
	baz=86							
A08A	**Turner Farm, O**	85.59	328	⇓P		P	13 23 02.3	-0.6
	baz=86							
B07A	**Winthrop**	85.68	327	⇓P		P	13 23 02.1	-1.3
	baz=86,SNR=9.3							
D05A	**Enumclaw**	85.80	326	⇑P		P	13 23 03.4	-0.6
	baz=86							
A07A	**Ashnola River,**	86.20	328	⇓P		P	13 23 05.2	-0.8
	baz=86,SNR=6.8							
RPW	**Rockport**	86.37	327	*e*P		P	13 23 05.2	-1.6
B06A	**Marblemount**	86.40	327	⇑P		P	13 23 05.5	-1.4
	baz=87							
B05A	**Bryant**	86.55	326	⇑P		P	13 23 06.3	-1.3
	baz=87							
CMW	**Cultus Mountai**	86.66	326	P		P	13 23 06.8	-1.3
A05A	**Maple Falls**	87.02	327	⇓P		P	13 23 08.8	-1.1
	baz=87							
LSZ	**Lusaka**	88.17	106	P		P	13 23 17.1	+1.0
	comp=E,3.1nm,0.5s,mb4.4,baz=259,slow=0.4,SNR=4.2							
KEST	**Kesra**	92.08	52	P		P	13 23 34.3	+0.4
	comp=E,1.7nm,0.9s,mb4.0,baz=260,slow=4.7,SNR=3.8							
YKA	**Yellowknife Ar**	93.19	340	P		P	13 23 37.1	-1.2
	comp=E,1.8nm,0.5s,mb4.3,baz=133,slow=4.9,SNR=8.4							
ASAR	**Alice Springs**	129.89	204	PKP	PKPdf		13 29 32.5	-1.1
	comp=E,1.4nm,0.5s,baz=126,slow=1.7,SNR=20							
ASAR				SKPbc			13 32 32.3	
	comp=E,1.7nm,0.9s,baz=148,slow=3.2,SNR=12							
WB2	**Warramunga Arr**	133.06	207	*e*P	PKPdf		13 29 38.8	-0.9
WRA	**Warramunga Arr**	133.07	207	PKhKP			13 29 25.6	
	comp=E,0.2nm,0.8s,baz=128,slow=1.6,SNR=6.3							
WRA				PKP	PKPdf		13 29 38.9	-0.8
	comp=E,1.4nm,0.6s,baz=158,slow=1.7,SNR=23							
WRA				SKPbc	SKPbc		13 32 43.9	-3.4
	comp=E,4.1nm,1.0s,baz=162,slow=2.8,SNR=13							
PETK	**Petropavlovsk-**	135.03	324	SKPbc	SKPbc		13 32 50.2	-2.4
	comp=E,6.0nm,0.8s,baz=94,slow=4.3,SNR=4.7							
ZALV	**Zalesovo Beam**	141.95	28	PKhKP			13 29 50.5	
	comp=E,1.0nm,0.5s,baz=306,slow=4.8,SNR=2.6							
ZALV				PKP	PKPdf		13 29 54.3	-0.6
	comp=E,1.6nm,0.4s,baz=259,slow=3.0,SNR=4.0							
ZALV	**Zalesovo Beam**	141.95	28	PKP			13 29 50.5	
ZALV				PKP	PKPdf		13 29 54.3	-0.6
MK31	**Makanchi Array**	145.10	39	*e*PKP	PKPdf		13 30 00.5	-0.2
MKAR	**Makanchi Array**	145.10	39	PKPbc	PKPbc		13 30 00.6	-0.1
	comp=E,11nm,0.8s,baz=311,slow=3.5,SNR=31							
MKAR				SKPbc	SKPbc		13 33 17.1	-2.6
	comp=E,0.7nm,0.6s,baz=303,slow=3.1,SNR=4.3							
MKAR	**Makanchi Array**	145.10	39	PKPbc	PKPbc		13 30 00.6	-0.1
MKAR				SKPbc	SKPbc		13 33 17.1	-2.6
HYB	**Hyderabad**	146.55	93	*e*P	PKPdf		13 30 05.5	+1.5
HYB	**Hyderabad**	146.55	93	*i* PKP	PKPdf		13 30 05.5	+1.5
WMQ	**Urumqi**	149.93	39	*e*PKP	PKPdf		13 30 08.0	-0.7
SONM	**Songino Array**	154.27	11	PKP	PKPdf		13 30 15.4	+0.3
	comp=E,0.8nm,0.8s,baz=340,slow=1.2,SNR=4.6							
SONM				PKPbc	PKPbc		13 30 22.7	-0.8
	comp=E,0.8nm,0.7s,baz=292,slow=1.1,SNR=4.6							
SONM				PKPab	PKPab		13 30 38.6	+0.3
	comp=E,1.1nm,0.6s,baz=327,slow=3.8,SNR=5.1							
MJAR	**Matsushiro Arr**	154.79	309	PKPbc	PKPbc		13 30 25.8	+0.8
	comp=E,1.7nm,0.7s,baz=101,slow=1.6,SNR=3.5							
MJAR				PKPab	PKPab		13 30 40.0	-1.0
	comp=E,2.0nm,0.8s,baz=68,slow=2.9,SNR=3.8							
CN2	**Changchun**	156.88	338	*e*PKP	PKPdf		13 30 16.6	-2.1
HHC	**Hu-ho-hao-te**	161.85	5	*e*PKP	PKPdf		13 30 22.8	-1.7
HHC				APKP			13 31 22.5	
HHC				XPKP			13 31 46.3	
HHC				PKS			13 33 54.8	
HHC				PP	PP		13 34 56.6	+1.9
HHC				SKS	SKSdf		13 37 03.8	-5.1
HHC				SKKS	SKKSac		13 41 20.8	-1.7
HHC				SS	SS		13 54 53.9	-0.4
HHC				PP	PP			
	comp=Z,1μm,8.3s							
CMAR	**Chiang Mai Arr**	165.48	104	PKPab	PKPab		13 31 27.8	-0.3
	comp=Z,2.8nm,0.8s,baz=253,slow=5.4,SNR=5.9							
CD2	**Chengdu**	167.92	46	*e*PKP	PKPdf		13 30 27.5	-2.5
KMI	**Kunming**	169.63	75	PKP	PKPdf		13 30 31.3	0.0
GYA	**Guiyang**	172.55	59	*e*PKP	PKPdf		13 30 29.9	-2.8
GYA				APKP			13 31 29.6	
GYA				PKP2	PKPab		13 31 58.0	-1.2
GYA				PKS			13 34 01.6	
GYA				PP	PP		13 35 50.8	-0.1
GYA				PP	PP			
	comp=Z,60nm,9.0s							

*NEIC **20** 13:11:17.2±2.5, 696S×156°09E, h44km±27km, mb3.9/2, Error ellipse: s-maj=23.6km s-min=14.4km az=134.0*
*ISCJB **20** 13:11:18.3±3.6, 70S±02°×1559E±02, h62km±37km, mb3.9/9, Error ellipse: s-maj=32.8km s-min=20.4km az=40.8*
*IDC **20** 13:11:19.8±4.5, 700S×155°90E, h60km±47km, mb3.8/7, mb1 3.9/9, mb1mx3.8/19, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=37.1km s-min=24.8km az=114.0*

ISC 20 13:11:20.3±3.1, 70S±02°×1559E±02, h64km±33km, n17, σ0°56/16, mb3.9/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	4.67	122	P		Pn	13 12 27.7	-0.7
	2.2nm,0.3s,baz=188,slow=7.1,SNR=2.6							
HNR	**Honiara**	4.67	122	*e*P		Pn	13 12 22.9	-5.5
CTA	**Charters Tower**	16.05	215	P		Pn	13 15 03.3	+1.3
	0.2nm,0.3s,baz=46,slow=15,SNR=3.4							
KAKA	**Kakadu**	23.81	254	*e*P		Px	13 16 13.7	
	7.5nm,0.6s							
WRAB	**Tennant Creek**	24.56	236	*e*P		P	13 16 33.8	-0.5
	1.4nm,0.6s,mb3.7							
WB2	**Warramunga Arr**	24.57	236	*e*P		P	13 16 34.1	-0.3
WB2	**Warramunga Ar**	24.57	236	*e*P		P	13 16 34.0	-0.4
WRA	**Warramunga Ar**	24.58	236	P		P	13 16 34.2	-0.3
	1.9nm,0.6s,mb3.8,baz=60,slow=9.2,SNR=27							
ASAR	**Alice Springs**	26.87	229	P		P	13 16 54.3	-0.9
	0.9nm,0.5s,mb3.5,baz=59,slow=10.0,SNR=20							
STKA	**Stephens Creek**	28.14	206	P		P	13 17 06.5	+0.1
	2.4nm,0.7s,mb3.9,baz=32,slow=9.5,SNR=4.4							
CMAR	**Chiang Mai Arr**	61.60	295	P		P	13 21 31.6	-0.1
	0.8nm,0.7s,mb4.0,baz=115,slow=5.4,SNR=5.2							
ULN	**Ulaanbaatar**	69.48	327	*e*P		P	13 22 22.0	+0.1
	2.2nm,0.9s,mb4.1							
SONM	**Songino Array**	69.82	327	P		P	13 22 24.2	+0.2
	1.4nm,0.9s,mb3.9,baz=140,slow=5.3,SNR=8.4							
QSPA	**South Pole Qui**	82.99	180	P		P	13 23 38.5	+0.5
	2.4nm,0.5s,mb4.5,baz=327,slow=2.9,SNR=3.6							
QSPA	**South Pole Qui**	82.99	180	P		P	13 23 38.5	+0.5
MKAR	**Makanchi Array**	84.00	318	P		P	13 23 44.0	+0.3
	0.5nm,0.6s,mb3.8,baz=101,slow=8.7,SNR=3.8							
MKAR	**Makanchi Array**	84.00	318	P		P	13 23 44.0	+0.2

*ISCJB **20** 13:18:11.8±1.4, 73S±03°×120.1E±0.4, h540km±12km, mb3.5/4, Error ellipse: s-maj=79.4km s-min=16.4km az=146.7*
*IDC **20** 13:18:12.7±1.4, 726S×120.13E, h534km±15km, mb3.0/4, mb1 3.2/7, mb1mx2.9/19, mbtmp3.1/7, Error ellipse: s-maj=63.4km s-min=16.1km az=61.0*
*NEIC **20** 13:18:12.8±1.0, 726S×120.05E, h540km±11km, mb3.9/1, Error ellipse: s-maj=54.4km s-min=13.9km az=59.0*

ISC 20 13:18:12.9±1.3, 73S±03°×1202E±0.4, h534km±11km, n11, σ0°41/12, mb3.4/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	2.27	350	P		P	13 19 22.9	+0.4
	11nm,0.3s,baz=187,slow=2.9,SNR=54							
KAPI	**Kappang**	2.27	350	*e*P		P	13 19 22.9	+0.3
BATI	**Baumata**	4.54	130	P		P	13 19 38.4	+0.4
	26nm,0.3s,baz=322,slow=2.9,SNR=32							
BATI				S		S	13 20 46.6	-0.8
	8.4nm,0.3s,baz=305,slow=12,SNR=4.9							
WRA	**Warramunga Ar**	18.66	134	P		P	13 21 57.9	+0.2
	0.3nm,0.3s,baz=311,slow=10,SNR=16							
WRAB	**Tennant Creek**	18.66	134	*e*P		P	13 21 58.0	+0.3
	2.5nm,0.7s							
WB2	**Warramunga Ar**	18.67	134	*e*P		P	13 21 57.9	+0.1
ASAR	**Alice Springs**	20.99	143	P		P	13 22 18.9	+0.2
	1.0nm,0.3s,baz=320,slow=8.7,SNR=58							
STKA	**Stephens Creek**	31.62	144	P		P	13 23 52.3	+0.2
	1.3nm,0.3s,mb3.9,baz=348,slow=9.3,SNR=7.7							
SONM	**Songino Array**	56.19	349	P		P	13 27 01.5	-0.5
	0.4nm,0.4s,mb3.0,baz=176,slow=7.6,SNR=4.4							
VNDA	**Vanda**	73.52	171	P		P	13 28 50.3	-0.5
	0.4nm,0.4s,mb3.2,baz=343,slow=3.2,SNR=4.4							
VNDA	**Vanda**	73.52	171	*e*P		P	13 28 50.2	-0.6

*TRN **20** 13:32:27.6, 1766N×62°99W, h120km, MD3.8, M3.7(FDF)*
*ISCJB **20** 13:32:28.5±1.0, 176N±0.1°×6303W±0.06, h121km±9km, Error ellipse: s-maj=19.8km s-min=5.3km az=23.5*
*RSPR **20** 13:32:30.4, 1770N×6305W, h114km±1km, MD3.7/9, MD3.7/9*

ISC 20 13:32:29.0±1.1, 177N±01°×6300W±006, h119km±9km, n40, σ0°52/58, 18C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SABA	**Saba**	0.23	263	⇑*e*P		Pn	13 32 45.9	+0.3
SABA				*e*S		Sn	13 32 58.9	+0.7
SMRT	**St. Maarten**	0.41	350	⇑*e*P		Pn	13 32 46.5	+0.1
SMRT				*e*S		Sn	13 32 59.8	+0.3
BPA	**Boggy Peak**	1.25	118	*e*P		Pn	13 32 53.5	-0.1
BPA				*e*S		Sn	13 33 11.0	-1.2
ABV	**Anegada**	1.66	311	⇓*e*P		Pn	13 32 58.9	+0.5
ABV	**Anegada**	1.66	311	⇑*e*P		Pn	13 32 59.1	+0.8
ABV	**Anegada**	1.66	311	⇑*e*P		Pn	13 32 59.1	+0.8
ABV				*e*S		Sn	13 33 20.3	-0.4
ABV				*e*S		Sn	13 33 21.3	+0.6
TBVI	**Tortola**	1.72	297	⇓*e*P		Pn	13 32 58.8	-0.2
TBVI				*e*S		Sn	13 33 20.3	-1.5
TBVI				*e*S		Sn	13 33 21.0	-0.8
LZG	**Guadaloupe-1**	1.90	142	*e*P		Pn	13 33 01.6	+0.3
STVI	**Saint Thomas**	1.98	291	*e*S		Sn	13 33 26.9	-0.8
STVI	**Saint Thomas**	1.98	291	⇑*e*P		Pn	13 33 02.1	-0.2
STVI	**Saint Thomas**	1.98	291	*e*S		Sn	13 33 27.1	-0.6
STVI	**Saint Thomas**	1.98	291	⇑*e*P		Pn	13 33 02.1	-0.2
STVI	**Saint Thomas**	1.98	291	⇑*e*P		Pn	13 33 02.2	-0.1
STVI				*e*S		Sn	13 33 26.9	-0.8
STVI				*e*S		Sn	13 33 27.7	0.0
MGG	**Marie-Galante**	2.36	137	*e*P		Pn	13 33 07.3	+0.3
MTP	**Monte Pirata**	2.47	281	*e*S		Sn	13 33 38.3	-0.4
MTP	**Monte Pirata**	2.47	281	⇑*e*P		Pn	13 33 08.3	-0.1
MTP	**Monte Pirata**	2.47	281	*e*S		Sn	13 33 38.5	-0.2
MTP	**Monte Pirata**	2.47	281	⇑*e*P		Pn	13 33 08.4	0.0
MTP	**Monte Pirata**	2.47	281	⇑*e*P		Pn	13 33 08.4	0.0
MTP				*e*S		Sn	13 33 38.3	-0.4
MTP				*e*S		Sn	13 33 38.5	-0.2
HUMP	**Col San Antoni**	2.75	281	⇓*e*P		Pn	13 33 12.2	+0.1
HUMP	**Col San Antoni**	2.75	281	*e*S		Sn	13 33 46.1	+0.8
HUMP	**Col San Antoni**	2.75	281	⇑*e*P		Pn	13 33 12.0	-0.1
HUMP	**Col San Antoni**	2.75	281	*e*S		Sn	13 33 45.4	+0.1
HUMP	**Col San Antoni**	2.75	281	⇑*e*P		Pn	13 33 12.3	+0.2
HUMP				*e*S		Sn	13 33 45.4	+0.1
HUMP				*e*S		Sn	13 33 46.1	+0.8
CBYP	**Canovanas**	2.79	283	⇑*e*P		Pn	13 33 12.9	+0.4
CBYP	**Canovanas**	2.79	283	*e*S		Sn	13 33 46.1	+0.1
CBYP	**Canovanas**	2.79	283	⇑*e*P		Pn	13 33 13.0	+0.5
CBYP	**Canovanas**	2.79	283	*e*S		Sn	13 33 45.2	-0.8
CBYP	**Canovanas**	2.79	283	⇑*e*P		Pn	13 33 13.0	+0.5
CBYP				*e*S		Sn	13 33 45.2	-0.8
CBYP				*e*S		Sn	13 33 46.1	+0.1
CPD	**Cerro la Pandu**	2.80	278	⇑*e*P		Pn	13 33 12.7	0.0
CPD	**Cerro la Pandu**	2.80	278	*e*S		Sn	13 33 46.9	+0.6
CPD	**Cerro la Pandu**	2.80	278	⇑*e*P		Pn	13 33 12.7	0.0
CPD	**Cerro la Pandu**	2.80	278	*e*S		Sn	13 33 46.0	-0.4
CPD	**Cerro la Pandu**	2.80	278	⇑*e*P		Pn	13 33 12.7	0.0
CPD				*e*S		Sn	13 33 46.0	-0.4
CPD				*e*S		Sn	13 33 46.9	+0.6
SJG	**San Juan**	3.03	279	⇓*e*P		Pn	13 33 16.1	+0.4
AOPR	**Arecibo Observ**	3.64	282	*e*S		Sn	13 34 06.2	+0.2
AOPR	**Arecibo Observ**	3.64	282	*e*S		Sn	13 34 05.4	-0.6
AOPR	**Arecibo Observ**	3.64	282	*e*S		Sn	13 34 05.4	-0.6
AOPR				*e*S		Sn	13 34 06.2	+0.2
CRPR	**Cabo Rojo, PR**	3.93	276	*e*S		Sn	13 34 13.1	+0.1
CRPR	**Cabo Rojo, PR**	3.93	276	*e*S		Sn	13 34 13.1	+0.1

*ISCJB **20** 13:35:37.2±0.9, 2280S±0.04°×7080W±0.07, h40km±8km, mb3.9/5, Error ellipse: s-maj=11.6km s-min=6.1km az=5.0*
*NEIC **20** 13:35:37.4±1.8, 2284S×7071W, h25km±13km, mb4.2/1, ML3.7(GUC), Error ellipse: s-maj=16.0km s-min=9.4km az=101.0*
*GUC **20** 13:35:37.5±2.8, 2278S×7069W, h39km±8km, ML3.9*
*IDC **20** 13:35:38.9±4.1, 2286S×7050W, h30km±26km, mb3.8/4, mb1 3.9/6, mb1mx3.7/18, mbtmp3.8/6, ML3.1/2, Error ellipse: s-maj=30.5km s-min=27.6km az=135.0*

ISC 20 13:35:37.6±1.0, 2280S±0.03°×7077W±0.06, h29km±6km, n28, σ1°§07/38, mb3.9/5, 3C-1D, Near coast of northern Chile

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.75**	**312**	*i* S	**Sn**	**13 42 21.8**	**+6.0**
SPCH				AML	AML	13 42 22.2	
	comp=N,1μm,0.5s						
LVC	**Limon Verde**	**2.44**	**307**	P	**Pn**	**13 41 58.6**	**+2.0**
	comp=N,77nm,0.3s,baz=123,slow=7.0,SNR=188						
LVC				S	**Sn**	**13 42 30.8**	**+1.5**
	comp=N,126nm,0.3s,baz=262,slow=23,SNR=64						
LVC	**Limon Verde**	**2.44**	**307**	*e*Pn	**Pn**	**13 41 58.5**	**+1.9**
LVC				*e*S	**Sn**	**13 42 25.5**	**-3.8**
LVC				S	**Sn**	**13 42 30.8**	**+1.5**
LVC	**Limon Verde**	**2.44**	**307**	⇑*i*P	**Pn**	**13 41 58.6**	**+1.9**
LVC				*i* S	**Sn**	**13 42 31.0**	**+1.7**
LVC				AML	AML	13 42 32.9	
	comp=E,1μm,0.3s						
CEN1	**Los Morros**	**3.21**	**282**	⇓*i*P	**Pn**	**13 42 07.5**	**+1.9**
CEN1				*i* S	**Sn**	**13 42 45.9**	**+0.4**
CEN1				AML	AML	13 42 48.4	
	comp=N,1μm,0.4s						
ANCH	**Antofagasta**	**3.34**	**276**	⇑*i*P	**Pn**	**13 42 09.0**	**+1.6**
ANCH				*i* S	**Sn**	**13 42 47.3**	**-1.3**
ANCH	**Antofagasta**	**3.34**	**276**	⇑*i*P	**Pn**	**13 42 09.0**	**+1.6**
ANCH				*i* S	**Sn**	**13 42 47.3**	**-1.3**
ANCH				AML	AML	13 42 50.1	
	comp=N,2μm,0.2s						
MECH	**Mejillones**	**3.50**	**286**	*e*P	**Pn**	**13 42 09.9**	**+0.5**
MECH				*i* S	**Sn**	**13 42 49.8**	**-2.3**
MECH				AML	AML	13 42 53.7	
	comp=N,3μm,0.2s						
PB01	**Plate Boundary**	**3.93**	**320**	⇑*i*P	**Pn**	**13 42 14.9**	**+0.2**
PB01				*i* S	**Sn**	**13 42 59.5**	**-2.3**
LCO	**Las Campanas**	**6.03**	**215**	*e*Pn	**Pn**	**13 42 40.5**	**-1.2**
CFAA	**Coronel Fontan**	**7.60**	**189**	P	**Pn**	**13 43 01.8**	**-0.5**
	comp=N,0.4nm,0.3s,baz=20,slow=9.9,SNR=37						
CFAA				S	**Sn**	**13 44 22.3**	**-5.5**
	comp=N,1.1nm,0.3s,baz=270,slow=22,SNR=17						
CFAA	**Coronel Fontan**	**7.60**	**189**	P	**Pn**	**13 43 01.8**	**-0.6**
CFAA				S	**Sn**	**13 44 22.3**	**-5.5**
LPAZ	**La Paz**	**7.86**	**351**	P	**Pn**	**13 43 06.9**	**+0.9**
	comp=N,2.0nm,0.3s,baz=164,slow=8.7,SNR=56						
LPAZ				S	**Sn**	**13 44 33.3**	**-1.1**
	comp=N,0.3nm,0.3s,baz=107,slow=24,SNR=4.2						
LPAZ	**La Paz**	**7.86**	**351**	*e*Pn	**Pn**	**13 43 06.4**	**+0.4**
LPAZ				S	**Sn**	**13 44 33.3**	**-1.1**
SIV	**San Ignacio**	**9.68**	**35**	P	**Pn**	**13 43 29.4**	**-0.4**
	baz=224,slow=14						
PLCA	**Paso Flores**	**16.89**	**190**	P	**Pn**	**13 44 59.2**	**-1.0**
	comp=N,0.4nm,0.3s,baz=5.7,slow=13,SNR=11						
PLCA	**Paso Flores**	**16.89**	**190**	*e*P	**Pn**	**13 44 59.2**	**-1.0**
	comp=N,3.7nm,0.5s						
BDFB	**Brasilia**	**19.54**	**68**	P	**P**	**13 45 29.1**	**+0.8**
	comp=N,0.4nm,0.3s,baz=219,slow=18,SNR=8.0						
ATAH	**Atahualpa**	**20.32**	**325**	LR	LR	13 53 54.1	
	comp=N,1μm,21.8s,baz=305,slow=38						
USHA	**Ushuaia**	**30.73**	**182**	P	**P**	**13 47 13.7**	**+1.6**
	comp=N,4.0nm,0.5s,mb4.4,baz=0.0,slow=7.1,SNR=2.7						
VNA3	**Neumayer Olymp**	**57.00**	**161**	*e*	**P**	**13 50 41.2**	**+0.6**
VNA3				*e*		13 50 44.0	
VNA3				*e*		13 50 50.2	
VNA1	**Neumayer--Stat**	**57.20**	**160**	*e*	**P**	**13 50 42.9**	**+0.9**
VNA1				*e*		13 50 45.9	
VNA2	**Neumayer--Watz**	**57.57**	**160**	*e*	**P**	**13 50 45.2**	**+0.6**
	baz=289,slow=8.1						
VNA2				*e*		13 50 47.6	
VNA2				*e*		13 50 53.1	
SNAA	**Sanae**	**59.20**	**161**	*e*P	**P**	**13 50 53.5**	**-2.4**
	comp=N,1.8nm,0.6s,mb4.1						
TXAR	**Lajitas Array**	**63.86**	**324**	P	**P**	**13 51 27.5**	**-0.1**
	comp=N,0.7nm,0.7s,mb3.6,baz=153,slow=9.0,SNR=8.9						
SDCO	**Great Sand Dun**	**71.47**	**328**	*e*P	**P**	**13 52 15.8**	**+0.8**
	comp=N,0.9nm,0.6s,mb3.7						
SYO	**Syowa Base**	**73.40**	**159**	⇓*e*P	**P**	**13 52 24.9**	**-1.2**
MSU	**Marysvale**	**75.42**	**325**	*e*P	**P**	**13 52 39.0**	**+1.0**
TOA0	**Torodi Ar. Sit**	**76.42**	**69**	*e*P	**P**	**13 52 43.1**	**-1.2**
TORD	**Torodi Ar. Bea**	**76.42**	**69**	P	**P**	**13 52 43.1**	**-1.2**
	comp=N,0.7nm,0.4s,mb3.6,baz=260,slow=5.8,SNR=15						
PDAR	**Pinedale Array**	**77.32**	**329**	P	**P**	**13 52 48.6**	**-0.1**
	comp=N,0.4nm,0.5s,mb3.3,baz=130,slow=9.0,SNR=5.7						
ULM	**Lac du Bonnet**	**78.37**	**341**	P	**P**	**13 52 53.5**	**-0.8**
	comp=N,3.3nm,0.6s,mb4.2,baz=104,slow=4.2,SNR=2.8						
NVAR	**Mina Array Bea**	**78.73**	**321**	P	**P**	**13 52 57.4**	**+0.8**
	comp=N,0.4nm,0.6s,mb3.2,baz=147,slow=8.3,SNR=3.8						
HLID	**Hailey**	**80.27**	**327**	*e*P	**P**	**13 53 05.9**	**+1.2**
	comp=N,1.9nm,0.8s,mb3.8						
MAW	**Mawson**	**81.29**	**163**	P	**P**	**13 53 10.3**	**+0.3**
	comp=N,2.9nm,0.6s,mb4.1,baz=215,slow=8.1,SNR=6.6						
MAW	**Mawson**	**81.29**	**163**	*e*P	**P**	**13 53 10.2**	**+0.3**
	comp=N,0.6nm,0.6s,mb3.4						
YKA	**Yellowknife Ar**	**94.28**	**340**	P	**P**	**13 54 11.5**	**-0.9**
	comp=N,0.6nm,0.5s,mb4.0,baz=136,slow=4.5,SNR=7.6						
YKA	**Yellowknife Ar**	**94.28**	**340**	P	**P**	**13 54 11.5**	**-0.9**
WRA	**Warramunga Arr**	**131.64**	**207**	PKP	PKPdf	14 00 05.5	-0.8
	comp=N,0.1nm,0.3s,baz=154,slow=1.9,SNR=7.5						
MKAR	**Makanchi Array**	**146.47**	**40**	PKPbc	PKPbc	14 00 32.8	-1.1
	comp=N,0.5nm,0.6s,baz=20,slow=3.2,SNR=5.0						

***NEIC 20** 14:15:05.9±0.5, 1356N×12299E, h35km, mb4.6/3, Error ellipse: s-maj=20.3km s-min=9.8km az=66.0*

ISC 20 14:15:02.8±1.1, 1358N±003×12276E±004, h5km±7km, n38, σ1$08/49, mb4.1/11, 4C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.45**	**317**	⇑*i*P	**Pg**	**14 15 11.4**	**0.0**
GQP				*i* S	**Sg**	**14 15 17.9**	**+0.7**
PVCP	**Virac**	**1.36**	**89**	*e*P	**Pn**	**14 15 28.0**	**-0.4**
POLP	**Polilio Island**	**1.39**	**325**	*e*P	**Pn**	**14 15 26.9**	**-2.0**
POLP				*e*S	**Sb**	**14 15 47.0**	**-0.4**
OTRP	**Odiongan**	**1.40**	**211**	*e*P	**Pn**	**14 15 27.3**	**-1.7**
OTRP				*e*S	**Sb**	**14 15 45.8**	**-1.9**
MMPH	**Masbate**	**1.48**	**145**	*e*P	**Pn**	**14 15 30.1**	**+0.1**
MMPH	**Masbate**	**1.48**	**145**	*e*P	**Sn**	**14 15 49.5**	**-0.2**
TGY	**Tagaytay City**	**1.84**	**287**	⇓*i*P	**Pn**	**14 15 37.1**	**+2.1**
TGY				*i* S	**Sn**	**14 15 47.9**	**-11**
SJMP	**San Jose**	**1.94**	**235**	*e*P	**Pn**	**14 15 37.1**	**+0.7**
SJMP				*e*S	**Sn**	**14 16 03.0**	**+1.8**
RCP	**Roxas**	**2.00**	**180**	⇑*e*P	**Pn**	**14 15 37.1**	**-0.2**
CNP	**Catarman**	**2.14**	**119**	*e*P	**Pn**	**14 15 41.2**	**+2.1**
CNP				*e*S	**Sn**	**14 16 07.6**	**+1.6**
BALP	**Baler**	**2.44**	**332**	*e*P	**Pn**	**14 15 43.2**	**0.0**
BALP				*e*S	**Sn**	**14 16 17.8**	**+4.4**
LUBP	**Lubang**	**2.44**	**274**	*e*P	**Pn**	**14 15 43.3**	**-0.1**
PCPH	**Palayan**	**2.55**	**321**	⇑*e*P	**Pn**	**14 15 44.6**	**-0.1**
PCPH				*e*S	**Sn**	**14 16 17.8**	**+1.6**
GUIM	**Jordan**	**2.94**	**183**	*e*P	**Pn**	**14 15 51.4**	**+1.3**
BUSP	**Coron**	**2.94**	**238**	*e*P	**Pn**	**14 15 49.8**	**-0.5**
BUSP				*e*S	**Sn**	**14 16 15.3**	**-11**
CUYO	**Cuyo Island**	**3.20**	**212**	*e*P	**Pn**	**14 15 53.7**	**0.0**
LLP	**Lapu-Lapu**	**3.45**	**160**	*e*P	**Pn**	**14 15 59.6**	**+2.4**
CAUP	**Cauayan**	**3.47**	**345**	*e*P	**Pn**	**14 15 56.8**	**-0.7**
CAUP				*e*S	**Sn**	**14 16 31.2**	**-7.7**
PALP	**Palanan**	**3.48**	**355**	⇑*e*P	**Pn**	**14 15 51.3**	**-6.3**
PALP				*e*S	**Sn**	**14 16 40.0**	**+0.7**
SCZP	**Santa Cruz**	**3.52**	**309**	*e*P	**Pn**	**14 15 58.1**	**0.0**
BOLP	**Bolinao**	**3.92**	**316**	*e*P	**Pn**	**14 16 04.5**	**+0.9**
TBP	**Tagbilaran**	**4.01**	**164**	*e*P	**Pn**	**14 16 05.0**	**+0.2**
ABRA	**Dolores**	**4.50**	**334**	*e*P	**Pn**	**14 16 10.6**	**-1.0**
ABRA				*e*S	**Sn**	**14 17 09.1**	**+4.6**
DAV	**Davao City (W)**	**7.04**	**156**	LR	LR	14 19 14.8	
	comp=Z,216nm,20.2s,baz=217,slow=37						
CMAR	**Chiang Mai Arr**	**23.39**	**285**	P	**P**	**14 20 13.6**	**+0.8**
	1.2nm,0.5s,mb3.5,baz=98,slow=7.6,SNR=7.5						
WRA	**Warramunga Arr**	**35.20**	**161**	P	**P**	**14 21 55.6**	**-2.4**
	0.6nm,0.8s,mb3.6,baz=346,slow=9.0,SNR=5.2						
ULN	**Ulaanbaatar**	**36.60**	**342**	*e*P	**P**	**14 22 09.4**	**-0.4**
	5.7nm,1.1s,mb4.3						
SONM	**Songino Array**	**36.77**	**342**	P	**P**	**14 22 10.8**	**-0.5**
	1.4nm,0.7s,mb3.9,baz=159,slow=10.0,SNR=10						
ASAR	**Alice Springs**	**38.59**	**163**	P	**P**	**14 22 25.6**	**-1.3**
	0.3nm,0.6s,baz=345,slow=7.3,SNR=10						
MK31	**Makanchi Array**	**47.33**	**323**	*e*P	**P**	**14 23 37.6**	**+0.1**
MKAR	**Makanchi Array**	**47.33**	**323**	P	**P**	**14 23 37.5**	**0.0**
	0.6nm,0.6s,mb3.7,baz=112,slow=10,SNR=5.8						
PETK	**Petropavlovsk-**	**48.19**	**28**	P	**P**	**14 23 41.6**	**-2.4**
	3.7nm,0.9s,mb4.4,baz=223,slow=3.3,SNR=2.2						
ZALV	**Zalesovo Beam**	**50.10**	**332**	P	**P**	**14 23 58.6**	**0.0**
	0.7nm,0.3s,mb4.1,baz=140,slow=9.2,SNR=3.3						
KURK	**Kurchatov**	**51.41**	**326**	P	**P**	**14 24 08.3**	**-0.4**
	3.2nm,0.6s,mb4.4,baz=121,slow=8.6,SNR=18						
KURK	**Kurchatov**	**51.41**	**326**	*e*P	**P**	**14 24 08.1**	**-0.6**
	4.9nm,0.7s,mb4.5						
BVAR	**Borovoye Array**	**57.01**	**325**	P	**P**	**14 24 48.8**	**-0.6**
	0.8nm,0.5s,mb4.0,baz=124,slow=7.9,SNR=4.0						
BRVK	**Borovoye**	**57.08**	**325**	*e*P	**P**	**14 24 49.7**	**-0.2**
	5.9nm,1.1s,mb4.5						
ARCES	**ARCESS Array B**	**79.91**	**339**	P	**P**	**14 27 12.7**	**+0.3**
	4.2nm,0.9s,mb4.4,baz=67,slow=9.9,SNR=4.3						

*ISCJB **20** 14:19:37.4±3.3, 6.15S×006×14964E±009, h31km±24km, mb4.3/18, MS3.9/4, Error ellipse: s-maj=16.0km s-min=9.8km az=21.1*

*NEIC **20** 14:19:39.0±0.5, 6.12S×14973E, mb4.7/4, Error ellipse: s-maj=15.3km s-min=8.9km az=103.0*

*IDC **20** 14:19:39.5±0.7, 6.21S×14974E, h35km±5km, mb4.1/16, mb1 4.2/17, mb1mx4.2/22, mbtmp4.1/17, ML3.9/1, MS3.9/4, Ms1 3.9/4, ms1mx3.5/26, Error ellipse: s-maj=17.9km s-min=10.9km az=105.0*

ISC 20 14:19:40.3±1.7, 617S±007×14970E±010, h40km±16km, h39km±1.1km:pP-P, n42, σ0$93/36, mb4.3/18, MS3.9/4, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.06**	**219**	*e*P	**Pn**	**14 22 02.8**	**+0.6**
	7.2nm,0.3s						
CTA	**Charters Tower**	**14.24**	**193**	Pn	**Pn**	**14 22 58.7**	**-0.7**
	0.4nm,0.3s,baz=7.3,slow=17,SNR=3.7						
CTA	**Charters Tower**	**14.24**	**193**	Pn	**Pn**	**14 22 58.7**	**-0.7**
EIDS	**Eidsvold**	**19.14**	**176**	*e*P	**Pn**	**14 24 01.6**	**+0.3**
	11nm,0.6s						
GUMO	**Guam**	**20.20**	**346**	LR	LR	14 30 13.2	
	comp=Z,359nm,20.4s,MS3.7,baz=164,slow=31						
WRAB	**Tennant Creek**	**20.24**	**226**	*e*P	**P**	**14 24 12.6**	**+0.4**
	32nm,0.7s						
WRAB				*e*pP		14 24 20.9	
WB2	**Warramunga Arr**	**20.25**	**226**	⇓*i*P	**P**	**14 24 12.6**	**+0.3**
WB2				*e*pP		14 24 21.2	
WB2				*e*S	**S**	**14 24 52.3**	**-5.0**
WB2	**Warramunga Arr**	**20.25**	**226**	*e*P	**P**	**14 24 12.4**	**+0.2**
WB2				*e*pP		14 24 21.0	
WRA	**Warramunga Arr**	**20.25**	**226**	P	**P**	**14 24 12.7**	**+0.4**
	21nm,0.4s,baz=51,slow=11,SNR=178						
WRA				pP		14 24 21.5	
	34nm,0.8s,baz=51,slow=11,SNR=18						
WRA				S	**S**	**14 27 52.7**	**-4.8**
	6.4nm,1.1s,baz=48,slow=22,SNR=6.3						
WRA				PcP	PcP	14 28 25.0	-0.3
	3.3nm,0.7s,baz=32,slow=1.9,SNR=7.6						
WRA				pPcP		14 28 36.1	
	1.7nm,0.6s,baz=28,slow=1.5,SNR=4.8						
ASAR	**Alice Springs**	**23.10**	**219**	P	**P**	**14 24 42.9**	**+0.1**
	9.3nm,0.7s,mb4.3,baz=51,slow=9.5,SNR=57						
ASAR				S	**S**	**14 28 51.3**	**+0.1**
	2.1nm,0.8s,baz=38,slow=22,SNR=8.6						
ARMA	**Armidale**	**24.19**	**176**	*e*P	**P**	**14 24 54.2**	**+1.2**
BATI	**Baumata**	**26.07**	**259**	P	**P**	**14 25 10.7**	**+0.3**
	20nm,0.5s,mb4.9,baz=158,slow=3.4,SNR=6.2						
BATI				pP	pP	14 25 21.1	-0.3
	45nm,0.7s,baz=63,slow=11,SNR=4.5						
STKA	**Stephens Creek**	**26.68**	**195**	*e*P	**P**	**14 25 17.6**	**+2.0**
	8.2nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**26.68**	**195**	P	**P**	**14 25 16.7**	**+1.1**
	13nm,0.7s,mb4.5,baz=351,slow=9.4,SNR=13						
STKA	**Stephens Creek**	**26.68**	**195**	*e*P	**P**	**14 25 17.5**	**+1.9**
FORT	**Forrest**	**31.81**	**217**	*e*P	**P**	**14 26 00.9**	**-0.3**
	11nm,0.6s,mb4.9						
FORT				*e*pP	pP	14 26 11.2	-1.1
MBWA	**Marble Bar**	**32.62**	**240**	*e*P	**P**	**14 26 07.2**	**-1.2**
	8.4nm,0.6s,mb4.8						
CBIJ	**Chichi jima**	**33.85**	**348**	LR	LR	14 38 04.2	
	comp=Z,288nm,20.9s,MS4.0,baz=122,slow=33						
KLBR	**Kellerberrin**	**39.14**	**226**	*e*P	**P**	**14 27 02.8**	**-1.3**
	8.6nm,0.5s,mb4.7						
KLBR				*e*pP	pP	14 27 12.9	-2.5
NWAO	**Narrogin (SRO)**	**40.25**	**224**	P	**P**	**14 27 12.8**	**-0.6**
	3.3nm,0.5s,mb4.3,baz=21,slow=8.6,SNR=2.9						
NWAO	**Narrogin (SRO)**	**40.25**	**224**	*e*P	**P**	**14 27 13.0**	**-0.4**
URZ	**Urewera**	**40.48**	**146**	P	**P**	**14 27 15.0**	**-0.2**
	1.8nm,0.5s,mb4.0,baz=72,slow=12,SNR=5.6						
RPZ	**Rata Peaks**	**41.85**	**157**	P	**P**	**14 27 25.6**	**-0.7**
	2.1nm,0.5s,mb4.1,baz=214,slow=3.6,SNR=3.6						
MJAR	**Matsushiro Arr**	**43.83**	**347**	P	**P**	**14 27 40.6**	**-1.9**
	1.7nm,0.7s,mb3.9,baz=172,slow=8.4,SNR=5.3						
KSRS	**Korea Array**	**47.92**	**337**	P	**P**	**14 28 14.2**	**-0.5**
	1.6nm,0.7s,mb4.2,baz=151,slow=8.5,SNR=5.7						
KSRS				pP	pP	14 28 25.6	-0.5
	2.5nm,0.8s,baz=151,slow=7.2,SNR=3.7						
KSRS				LR	LR	14 45 51.3	
	comp=Z,79nm,21.5s,MS3.7,baz=330,slow=33						
PETK	**Petropavlovsk-**	**59.44**	**6**	P	**P**	**14 29 38.9**	**+0.1**
	7.3nm,0.7s,mb4.8,baz=152,slow=6.6,SNR=18						
PETK				pP	pP	14 29 49.4	-1.1
	9.4nm,0.6s,baz=158,slow=5.9,SNR=7.1						
PETK				LR	LR	14 50 09.0	
	comp=Z,166nm,20.5s,MS4.2,baz=175,slow=31						
SONM	**Songino Array**	**65.88**	**330**	P	**P**	**14 30 22.0**	**+0.2**
	0.9nm,0.8s,mb3.9,baz=147,slow=5.7,SNR=4.5						
VNDA	**Vanda**	**71.60**	**177**	P	**P**	**14 30 55.4**	**-1.6**
	3.2nm,0.7s,mb4.4,baz=350,slow=5.9,SNR=14						
VNDA	**Vanda**	**71.60**	**177**	*e*P	**P**	**14 30 55.0**	**-2.0**
MK31	**Makanchi Array**	**79.34**	**320**	P	**P**	**14 31 41.1**	**-0.8**
MKAR	**Makanchi Array**	**79.34**	**320**	P	**P**	**14 31 44.1**	**+2.2**
	0.6nm,0.7s,mb3.6,baz=99,slow=6.0,SNR=5.1						
KURK	**Kurchatov**	**82.95**	**323**	P	**P**	**14 32 02.2**	**+1.2**
	0.7nm,0.6s,mb3.8,baz=112,slow=4.3,SNR=2.8						
KURK	**Kurchatov**	**82.95**	**323**	*e*P	**P**	**14 32 00.7**	**-0.3**
	1.2nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**88.49**	**324**	P	**P**	**14 32 29.4**	**+1.0**
	0.8nm,0.7s,mb4.0,baz=108,slow=7.7,SNR=3.3						
NVAR	**Mina Array Bea**	**95.35**	**52**	P	**P**	**14 33 01.5**	**+0.9**
	0.1nm,0.4s,mb3.6,baz=260,slow=5.4,SNR=2.3						
PLCA	**Paso Flores**	**120.49**	**145**	PKP	PKPdf	14 38 27.4	-0.5
	1.0nm,0.8s,baz=244,slow=14,SNR=3.9						
GERES	**GERESS Array B**	**123.54**	**327**	PKP	PKPdf	14 38 32.5	-0.9
	0.3nm,0.4s,baz=81,slow=1.8,SNR=5.3						
LPAZ	**La Paz**	**136.43**	**121**	PKP	PKPdf	14 38 58.4	-0.4
	1.7nm,0.6s,baz=150,slow=1.7,SNR=8.0						
TOA0	**Torodi Ar. Sit**	**147.73**	**285**	*e*PKPbc	PKPbc	14 39 20.0	-1.8
TORD	**Torodi Ar. Bea**	**147.73**	**285**	PKPbc	PKPbc	14 39 20.2	-1.5
	4.3nm,0.7s,baz=55,slow=2.4,SNR=25						
TORD				pPKPbc	pPKPbc	14 39 31.5	-2.9
	2.8nm,0.8s,baz=63,slow=2.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**147.73**	**285**	PKPbc	PKPbc	14 39 20.2	-1.6
TORD				pPKPbc	pPKPbc	14 39 31.5	-2.9
BDFB	**Brasilia**	**152.12**	**141**	PKP	PKPdf	14 39 26.5	+0.7
	2.3nm,0.7s,baz=164,slow=26,SNR=7.2						
BDFB				PKPbc	PKPbc	14 39 31.7	-0.7
	3.3nm,0.5s,baz=343,slow=24,SNR=9.6						
BDFB				PKPab	PKPab	14 39 40.9	-1.1
	2.6nm,0.6s,baz=200,slow=15,SNR=5.1						

*NEIC **20** 14:22:36.8, 1681N×10025W, h12km, MD3.7(MEX), After MEX.*

MEX 20 14:22:36.8±0.9, 1681N±10025W, h12km±9km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.23**	**355**	*e*P	Pg	14 22 41.6	-0.3
CAIG				*i* S	Sg	14 22 44.9	-0.3
ACX	**Acapulco**	**0.32**	**80**	*i* P	Pg	14 22 43.6	+0.2
ACX				*i* S	Sg	14 22 47.2	-0.6
ZIIG	**Zihuatanejo**	**1.41**	**304**	*i* P	Pn	14 22 58.0	-4.2
ZIIG				*i* S	Sn	14 23 16.7	-4.0
PNIG	**Pinotepa**	**2.08**	**101**	*i* P	Pn	14 23 09.4	-2.0
PNIG				*i* S	Sn	14 23 32.9	-4.3
UTMO	**Huajuapan**	**2.54**	**66**	*i* P	Pn	14 23 14.8	-3.0
UTMO				*i* S	Sn	14 23 45.0	-3.8

*NEIC **20** 15:00:12.8±5.4, 3102S×17921W, h122km±41km, mb4.0/1, Error ellipse: s-maj=51.9km s-min=26.5km az=221.0*

*IDC **20** 15:00:12.9±7.5, 3104S×17922W, h122km±58km, mb3.8/3, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/27, Error ellipse: s-maj=56.0km s-min=28.2km az=44.0*

ISC 20 15:00:17.7±5.7, 312S±03×1796W±04, h143km±43km, n11, σ0$39/10, mb4.0/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.46**	**37**	LR	LR	15 01 18.9	
	comp=Z,551nm,20.8s,baz=172,slow=31						
URZ	**Urewera**	**7.51**	**200**	P	**Pn**	**15 02 04.9**	**+0.5**
	1.4nm,0.3s,baz=311,slow=4.2,SNR=14						
URZ				S	**Sn**	**15 03 28.5**	**+0.3**
	6.1nm,0.3s,baz=260,slow=17,SNR=9.7						
SNZO	**South Karori**	**11.04**	**203**	*e*P	**Pn**	**15 02 51.1**	**-0.5**
RPZ	**Rata Peaks**	**14.48**	**208**	P	**Pn**	**15 03 35.0**	**-0.8**
	0.6nm,0.3s,baz=112,slow=19,SNR=5.2						
RPZ				S	**Sn**	**15 06 03.5**	**-13**
	1.0nm,0.3s,baz=53,slow=18,SNR=9.9						
ASAR	**Alice Springs**	**41.70**	**269**	P	**P**	**15 07 52.8**	**+0.3**
	0.9nm,0.4s,mb3.7,baz=106,slow=7.3,SNR=45						
ASAR				PcP	PcP	15 09 43.5	-3.0
	0.4nm,0.6s,baz=110,slow=4.0,SNR=5.1						
WB2	**Warramunga Arr**	**42.75**	**274**	*e*P	**P**	**15 08 01.2**	**+0.1**
WRAB	**Tennant Creek**	**42.76**	**274**	*e*P	**P**	**15 08 01.0**	**-0.2**
	2.0nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**42.76**	**274**	P	**P**	**15 08 01.3**	**+0.1**
	1.5nm,0.4s,mb3.9,baz=111,slow=8.1,SNR=29						
QSPA	**South Pole Qui**	**58.87**	**180**	P	**P**	**15 10 01.1**	**+0.2**
	2.7nm,0.7s,mb4.2,baz=39,slow=2.5,SNR=5.7						
NB2	**NORSAR Subarra**	**149.35**	**350**	PKP	PKPdf	15 19 45.0	+0.6
	comp=Z,0.8nm,0.5s,baz=14,slow=2.6						
NOA	**NORSAR Array B**	**149.35**	**350**	PKPbc	PKPdf	15 19 45.4	+0.9
	comp=Z,1.1nm,0.6s,baz=16,slow=4.2,SNR=6.1						

*IDC **20** 15:22:22.1±4.7, 6518S×17948E, h0km, mb4.1/3, mb1 4.3/4, mb1mx4.0/11, mbtmp4.1/4, ML3.7/1, MS3.8/1, Ms1 3.8/1, ms1mx3.6/17, Error ellipse: s-maj=155.0km s-min=25.9km az=69.0*

*ISCJB **20** 15:22:25.1±3.2, 654S±02×178E±, h10km, mb4.1/4, Error ellipse: s-maj=95.0km s-min=13.1km az=166.8*

*NEIC **20** 15:22:25.2±2.4, 6530S×17851E, h10km, mb4.3/2, Error ellipse: s-maj=71.4km s-min=11.0km az=77.0*

ISC 20 15:22:25.5±3.0, 653S±02×178E±, h10km, n11, σ0$55/9, mb4.1/4, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.08**	**191**	*e*P	**Pn**	**15 25 30.8**	**-0.2**
	23nm,0.7s						
VNDA	**Vanda**	**13.26**	**196**	Pn	**Pn**	**15 25 33.5**	**+0.2**
	0.4nm,0.3s,baz=45,slow=18,SNR=59						
VNDA				LR	LR	15 29 15.3	
	comp=Z,439nm,21.8s,baz=109,slow=31						
VNDA	**Vanda**	**13.26**	**196**	*e*P	**Pn**	**15 25 33.4**	**0.0**
VNDA				LR	LR	15 29 15.3	
QSPA	**South Pole Qui**	**24.78**	**180**	P	**P**	**15 27 46.7**	**0.0**
	5.4nm,0.9s,mb4.1,baz=21,slow=8.3,SNR=9.4						
QSPA	**South Pole Qui**	**24.78**	**180**	*e*P	**P**	**15 27 47.1**	**+0.3**
	5.1nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**50.44**	**304**	P	**P**	**15 31 23.9**	**+1.0**
	1.3nm,0.7s,mb4.0,baz=156,slow=7.1,SNR=26						
WB2	**Warramunga Arr**	**53.73**	**306**	*e*P	**P**	**15 31 47.6**	**+0.2**
WRA	**Warramunga Arr**	**53.73**	**306**	P	**P**	**15 31 47.3**	**-0.2**
	2.0nm,0.9s,mb4.1,baz=158,slow=6.5,SNR=15						
WRAB	**Tennant Creek**	**53.74**	**306**	P	**P**	**15 31 46.5**	**-1.0**
	3.6nm,0.9s,mb4.3						
DIB	**Dawson Inlet,**	**124.02**

0.7300, Plg1.0000°, Azm21.0000°; P -6.8700, Plg6.0000°, Azm111.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.

ISCJB ***20*** *15:28:26.9±0.1, 2999S×003E×178.01W±0.03, h56km, mb6.0/220, MS5.5/223 Error ellipse: s-maj=4.9km s-min=2.6km az=148.3*

BJI ***20*** *15:28:26.8, 2942S×177.43W, h55km, mB6.0, mb5.7, Ms5.6, Msz5.4*

IDC ***20*** *15:28:27.4±0.4, 2970S×177.79W, h43km±3km, mb5.5/24, mb1 5.5/24, mb1mx5.5/24, mbtmp5.5/24, MS5.4/21, Ms1 5.4/21, ms1mx5.3/24, Error ellipse: s-maj=12.5km s-min=10.1km az=52.0*

MOS ***20*** *15:28:27.8±0.8, 2971S×177.93W, h56km, mb6.2/49, MS5.6/51, Error ellipse: s-maj=10.6km s-min=8.1km az=64.5*

GCMT ***20*** *15:28:28.1±0.1, 2981S×177.40W, h52km, MW5.9/105, Moment Tensor Solution. s105,c233; s103,c299; Duration: 2s2 Moment tensor: Scale 10^18 Nm; Mrr 0.76±.01; Mθθ 0.03±.01; Mϕϕ -0.78±.01; Mrθ 0.06±.01; Mθϕ -0.25±.01; Mϕr 0.37±.01; Best double couple: M0 0.89300×10^18 NP1: ϕs 200.00000°, δ 33.00000°, λ 96.00000°. NP2: ϕs 13.00000°, δ 57.00000°, λ 86.00000°. Principal axes: T 0.8450, Plg77.0000°, Azm271.0000°; N 0.0940, Plg3.0000°, Azm15.0000°; P -0.9400, Plg12.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

IGIL ***20*** *15:28:28.7, 2974S×177.93W, h59km, MS5.8*

DJA ***20*** *15:28:55, 30.14S×178.46W, h280km, Mw5.9/43*

ISC 20 15:28:28.7±0.1, 2997S±003×17794W±003, h58km, h58km±1.3km: pP-P, n1442, σ0≈75/840, mb6.0/220, MS5.5/223, 316C-243D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RAO	**Raoul Island**	**0.72**	**2**	P		**Pn**	**15 28 39.2**	**-3.8**
	12μm,0.3s,baz=229,slow=6.0,SNR=338							
RAO	**Raoul Island**	**0.72**	**2**	P		**Pn**	**15 28 39.0**	**-4.0**
MXZ	**Matakaoa Point**	**8.19**	**201**	P		**Pn**	**15 30 21.8**	**-3.0**
KUZ	**Kuaotunu**	**8.59**	**216**	P		**Pn**	**15 30 35.3**	**+5.1**
PUZ	**Puketiti**	**8.67**	**200**	P		**Pn**	**15 30 28.0**	**-3.4**
WCZ	**Waipu Caves**	**8.80**	**225**	P		**Pn**	**15 30 42.9**	**+10**
OUZ	**Omahuta**	**8.85**	**232**	P		**Pn**	**15 30 41.6**	**+7.8**
MWZ	**Matawai**	**9.15**	**203**	P		**Pn**	**15 30 34.0**	**-3.9**
URZ	**Urewera**	**9.23**	**205**	P		**Pn**	**15 30 35.5**	**-3.4**
	1.7nm,0.3s,baz=9.2,slow=6.5,SNR=94							
URZ				S		**Sn**	**15 32 21.5**	**+0.3**
	39nm,0.3s,baz=270,slow=20,SNR=12							
URZ	**Urewera**	**9.23**	**205**	P		**Pn**	**15 30 35.4**	**-3.6**
KNZ	**Kokohu**	**9.72**	**201**	P		**Pn**	**15 30 40.6**	**-5.1**
BKZ	**Black Stump Fm**	**10.25**	**205**	P		**Pn**	**15 30 48.6**	**-4.4**
HIZ	**Hauiti**	**10.39**	**213**	P		**Pn**	**15 30 55.2**	**+0.3**
MOVZ	**Moawhango**	**10.74**	**207**	P		**Pn**	**15 30 56.1**	**-3.6**
TSZ	**Takapari Road**	**11.23**	**205**	P		**Pn**	**15 31 00.5**	**-5.9**
WAZ	**Wanganui**	**11.35**	**209**	P		**Pn**	**15 31 08.0**	**0.0**
NWEZ	**Newall Road**	**11.47**	**214**	P		**Pn**	**15 31 11.2**	**+1.6**
MRZ	**Mangatainoka R**	**11.90**	**205**	P		**Pn**	**15 31 07.5**	**-8.0**
KIW	**Kapiti Island**	**12.32**	**206**	P		**Pn**	**15 31 14.2**	**-7.0**
CAW	**Cannon Point**	**12.48**	**205**	P		**Pn**	**15 31 16.1**	**-7.2**
MSWZ	**Moikau Station**	**12.68**	**204**	P		**Pn**	**15 31 19.0**	**-7.1**
SNZO	**South Karori**	**12.79**	**206**	*e*Pn		**Pn**	**15 31 23.0**	**-4.6**
	121nm,0.8s							
NNZ	**Nelson**	**13.25**	**210**	P		**Pn**	**15 31 27.2**	**-6.6**
QRZ	**Quartz Range**	**13.32**	**213**	P		**Pn**	**15 31 34.4**	**-0.4**
THZ	**Tophouse**	**13.90**	**210**	P		**Pn**	**15 31 35.1**	**-7.5**
DSZ	**Denniston Nort**	**14.38**	**212**	P		**Pn**	**15 31 44.2**	**-4.8**
DSZ				S		**Sn**	**15 34 19.6**	**-7.4**
LTZ	**Lake Taylor**	**15.01**	**209**	P		**Pn**	**15 31 49.2**	**-7.9**
LTZ				S		**Sn**	**15 34 31.1**	**-11**
PLUM	**Mont Dore**	**15.82**	**295**	*e*P		**Pn**	**15 32 15.1**	**+7.4**
LASL	**Noumea**	**15.92**	**295**	*e*P		**Pn**	**15 32 16.3**	**+7.3**
NOUC	**Port Laguerre**	**16.18**	**295**	*e*P		**Pn**	**15 32 17.6**	**+5.4**
RPZ	**Rata Peaks**	**16.28**	**210**	P		**Pn**	**15 32 12.1**	**-1.2**
	2.9nm,0.3s,baz=29,slow=3.0,SNR=14							
RPZ				S		**Sn**	**15 35 00.6**	**-12**
	10nm,0.3s,baz=31,slow=19,SNR=7.7							
RPZ	**Rata Peaks**	**16.28**	**210**	P		**Pn**	**15 32 06.4**	**-7.0**
RPZ				P			15 32 12.2	
RPZ				S		**Sn**	**15 35 00.6**	**-12**
FOZ	**Fox Glacier**	**16.77**	**213**	P		**Pn**	**15 32 13.3**	**-6.3**
AFI	**Afiamalu**	**16.97**	**21**	*e*Pn		**Pn**	**15 32 10.4**	**-12**
	207nm,0.8s							
AFI				*e*Sn		Sn	15 35 06.8	-23
LBZ	**Lake Benmore**	**17.19**	**210**	P		**Pn**	**15 32 22.9**	**-1.8**
ODZ	**Otahua Downs**	**17.53**	**208**	P		**Pn**	**15 32 25.4**	**-3.5**
JCZ	**Jackson Bay**	**17.60**	**213**	P		**Pn**	**15 32 28.5**	**-1.3**
WKZ	**Wanaka**	**18.05**	**211**	P		**Pn**	**15 32 30.4**	**-4.9**
EAZ	**Earnscleugh**	**18.24**	**210**	P		**Pn**	**15 32 35.2**	**-2.4**
MSZ	**Milford Sound**	**18.44**	**213**	P		**Pn**	**15 32 37.3**	**-2.7**
RAR	**Rarotonga**	**18.55**	**66**	P		**Pn**	**15 32 35.0**	**-6.4**
	9.5nm,0.3s,baz=231,slow=5.8,SNR=17							
RAR				S		Sn	15 35 38.9	-29
	2.7nm,0.3s,baz=270,slow=20,SNR=3.7							
RAR				T			15 51 30.0	
	55nm,0.3s,baz=187,slow=22,SNR=5.7							
RAR	**Rarotonga**	**18.55**	**66**	*e*P		**Pn**	**15 32 34.8**	**-6.6**
	781nm,1.3s							
TUZ	**Tuapeka**	**18.69**	**208**	P		**Pn**	**15 32 40.2**	**-2.7**
MLZ	**Mavora Lakes**	**18.84**	**212**	P		**Pn**	**15 32 41.9**	**-2.8**
WHZ	**Wether Hill Ro**	**19.36**	**211**	P		**Pn**	**15 32 47.1**	**-3.8**
FUNA	**Funafuti**	**21.50**	**352**	PFAKE			15 33 20.0	+7.2
FUNA				LR		LR		
	comp=Z,13μm,19.0s,MS5.3							
ARMA	**Armidale**	**26.27**	**261**	⇑*i*P		**P**	**15 34 03.7**	**+5.1**
ARMA	**Armidale**	**26.27**	**261**	*e*P		**P**	**15 34 03.5**	**+4.9**
	comp=Z,18nm,0.8s,mb4.7							
EIDS	**Eidsvold**	**27.77**	**272**	*e*P		**P**	**15 34 15.0**	**+2.9**
	comp=Z,315nm,0.8s,mb6.0							
CNB	**Canberra Magne**	**27.96**	**250**	*e*P		**P**	**15 34 17.7**	**+3.9**
CNB				*e*PCP		PcP	15 37 28.7	+0.9
CAN	**Canberra**	**28.26**	**250**	*e*P		**P**	**15 34 20.0**	**+3.6**
	comp=Z,260nm,0.9s,mb5.9							
PAE	**Paea**	**28.61**	**71**	*e*P		**P**	**15 34 16.8**	**-2.8**
	comp=Z,906nm,1.1s,mb6.4							
PAE	**Paea**	**28.61**	**71**	*e*P		**P**	**15 34 16.8**	**-2.8**
PAE				pmax		pmax		
	comp=Z,906nm,1.1s,mb6.4							
PPT	**Papeete**	**28.66**	**71**	*e*P		**P**	**15 34 17.4**	**-2.7**
	comp=Z,156nm,1.4s,mb5.6							
PPT				*e*S		**S**	**15 38 57.6**	**-7.3**
	comp=Z,6μm,28.5s							
PPT				*e*LR		LR	15 41 21.4	
	comp=Z,37μm,26.2s,baz=238							
PPT	**Papeete**	**28.66**	**71**	P		**P**	**15 34 14.5**	**-5.6**
	comp=Z,20nm,0.7s,mb5.0,baz=30,slow=8.1,SNR=2.6							
PPT				LR		LR	15 42 38.0	
	comp=Z,8μm,21.8s,MS5.3,baz=240,slow=30							
PPT				T			16 04 10.2	
	comp=Z,165nm,0.4s,baz=49,slow=12,SNR=6.8							
PPT	**Papeete**	**28.66**	**71**	P		**P**	**15 34 14.5**	**-5.6**
PPT				LR		LR	15 42 38.0	
TVO	**Taravao**	**28.82**	**72**	*e*P		**P**	**15 34 18.8**	**-2.7**
	comp=Z,779nm,1.1s,mb6.3							
TVO	**Taravao**	**28.82**	**72**	*e*P		**P**	**15 34 18.8**	**-2.7**
TVO				pmax		pmax		
	comp=Z,779nm,1.1s,mb6.3							
TIAR	**Tiarei**	**28.85**	**71**	*e*P		**P**	**15 34 19.2**	**-2.6**
	comp=Z,2μm,1.0s,mb6.8							
HNR	**Honiara**	**29.06**	**310**	P		**P**	**15 34 23.1**	**-0.6**
	comp=Z,147nm,0.8s,mb5.8,baz=186,slow=3.7,SNR=15							
HNR				LR		LR	15 44 02.3	
	comp=Z,7μm,21.6s,MS5.3,baz=142,slow=32							
HNR	**Honiara**	**29.06**	**310**	*e*P		**P**	**15 34 23.1**	**-0.6**
	comp=Z,265nm,0.9s,mb6.0							
HNR				LR		LR		
	comp=Z,7μm,21.0s,MS5.2							
MEH	**Mehetia**	**29.75**	**73**	*e*P		**P**	**15 34 26.4**	**-3.4**
	comp=Z,2μm,1.0s,mb6.7							
TAU	**Tasmania Unive**	**30.56**	**235**	P		**P**	**15 34 39.5**	**+2.8**
	comp=Z,772nm,0.9s,mb6.5,SNR=12							
TAU	**Tasmania Unive**	**30.56**	**235**	*e*P		**P**	**15 34 39.0**	**+2.3**
	comp=Z,128nm,1.0s,mb5.7							
TAU				LR		LR		
	comp=Z,12μm,20.0s,MS5.5							
TAU	**Tasmania Unive**	**30.56**	**235**	P		**P**	**15 34 39.7**	**+3.0**
TAU				pmax		pmax		
	comp=Z,130nm,1.0s,mb5.7							
TOO	**Toolangi**	**31.18**	**246**	*e*P		**P**	**15 34 45.3**	**+3.1**
TOO				*es*P		sP	15 35 03.3	-0.1
TOO				*e*PCP		PcP	15 37 38.5	+2.6
VAH	**Vaihoa**	**31.47**	**69**	*e*P		**P**	**15 34 42.2**	**-2.8**
	comp=Z,203nm,1.3s,mb5.8							
TARA	**Tarawa**	**32.35**	**343**	*e*P		**P**	**15 34 49.5**	**-3.2**
	comp=Z,87nm,0.8s,mb5.6							
TARA				LR		LR		
	comp=Z,9μm,20.0s,MS5.5							
CTA	**Charters Tower**	**33.78**	**279**	⇑*i*P		**P**	**15 35 08.0**	**+2.8**
	comp=Z,416nm,0.8s,mb6.4							
CTA	**Charters Tower**	**33.78**	**279**	P		**P**	**15 35 07.9**	**+2.7**
	comp=Z,555nm,0.9s,mb6.5,baz=102,slow=11,SNR=264							
CTA				LR		LR	15 47 48.7	
	comp=Z,17μm,18.0s,MS5.8,baz=119,slow=34							
CTAO	**Charters Tower**	**33.78**	**279**	*e*P		**P**	**15 35 07.9**	**+2.8**
	comp=Z,568nm,0.8s,mb6.5							
CTAO				LR		LR		
	comp=Z,14μm,19.0s,MS5.7							
CTAO	**Charters Tower**	**33.78**	**279**	P		**P**	**15 35 07.9**	**+2.7**
	comp=Z,862nm,0.9s,comp=Z,6μm,mb6.7							
STKA	**Stephens Creek**	**34.63**	**256**	⇑*i*P		**P**	**15 35 15.3**	**+2.9**
	comp=Z,363nm,0.7s,mb6.4							
STKA	**Stephens Creek**	**34.63**	**256**	P		**P**	**15 35 15.5**	**+3.1**
	comp=Z,518nm,0.8s,mb6.5,baz=85,slow=8.4,SNR=339							
STKA				PKiKP		PKiKP		
	comp=Z,4.1nm,0.8s,baz=282,slow=6.0,SNR=3.1							
STKA				LR		LR	15 48 47.1	
	comp=Z,13μm,18.0s,MS5.7,baz=86,slow=35							
STKA	**Stephens Creek**	**34.63**	**256**	*e*P		**P**	**15 35 15.3**	**+3.0**
	comp=Z,104nm,0.9s,mb5.8							
RKT	**Rikitea**	**38.87**	**90**	*e*P		**P**	**15 35 47.3**	**-1.2**
	comp=Z,63nm,1.2s,mb5.2							
RKT				*e*S		**S**	**15 41 39.6**	**-2.9**
	comp=Z,5μm,29.5s							
RKT				*e*LQ			15 44 37.6	
	comp=Z,4μm,24.8s							
RKT				*e*LR		LR	15 46 09.5	
	comp=Z,21μm,29.5s,baz=256							
RKT	**Rikitea**	**38.87**	**90**	*e*P		**P**	**15 35 47.3**	**-1.2**
	comp=Z,63nm,1.2s,mb5.2							
RKT				*e*S		**S**	**15 41 39.6**	**-2.9**
RKT				*e*LQ			15 44 37.6	
RKT	**Rikitea**	**38.87**	**90**	*e*P		**P**	**15 35 47.3**	**-1.2**
RKT				*e*S		**S**	**15 41 39.6**	**-2.9**
RKT				pmax		pmax		
	comp=Z,63nm,1.2s,mb5.2							
COEN	**Coen**	**39.21**	**285**	*e*P		**P**	**15 35 52.1**	**+0.7**
	comp=Z,90nm,0.9s,mb5.5							
COEN	**Coen**	**39.21**	**285**	P		**P**	**15 35 53.5**	**+2.1**
	comp=Z,67nm,1.3s,comp=Z,1μm,mb5.2							
TAOE	**Nuku Hiva Isla**	**41.09**	**67**	*e*S		**S**	**15 42 09.5**	**-6.4**
	comp=Z,12μm,27.9s							
TAOE				*e*LQ			15 45 29.4	
	comp=Z,18μm,23.9s							
TAOE				*e*LR		LR	15 47 02.6	
	comp=Z,63μm,26.2s							
ASAR	**Alice Springs**	**43.19**	**266**	P		**P**	**15 36 24.9**	**+0.9**
	comp=Z,236nm,0.7s,mb6.0,baz=104,slow=6.3,SNR=908							
ASAR				PcP		PcP	15 38 12.8	+0.2
	comp=Z,38nm,0.7s,baz=123,slow=3.5,SNR=7.4							
ASAR				ScP		ScP	15 42 02.6	+3.7
	comp=Z,5.7nm,0.9s,baz=129,slow=5.8,SNR=3.0							
ASAR				PKiKP		PKiKP	15 45 14.8	-0.9
	comp=Z,3.2nm,0.8s,baz=142,slow=0.7,SNR=6.3							
ASAR				P4KPbc			16 14 22.9	
	comp=Z,0.8nm,0.8s,baz=108,slow=3.8,SNR=6.4							
ASAR	**Alice Springs**	**43.19**	**266**	P		**P**	**15 36 24.9**	**+0.9**
ASAR				PcP		PcP	15 38 12.8	+0.2
ASAR				ScP		ScP	15 42 02.6	+3.7
ASAR	**Alice Springs**	**43.19**	**266**	P		**P**	**15 36 25.0**	**+1.0**
ASAR							15 38 12.9	
WB2	**Warramunga Arr**	**44.12**	**272**	*e*P		**P**	**15 36 32.5**	**+0.9**
WB2	**Warramunga Arr**	**44.12**	**272**	*e*P		**P**	**15 36 32.4**	**+0.8**
WRAB	**Tennant Creek**	**44.13**	**272**	P		**P**	**15 36 32.0**	**+0.4**
	comp=Z,6μm,0.8s,mb7.4							
WRAB	**Tennant Creek**	**44.13**	**272**	*e*P		**P**	**15 36 32.4**	**+0.8**
	comp=Z,745nm,0.8s,mb6.5							
WRAB				LR		LR		
	comp=Z,8μm,22.0s,MS5.6							
WRAB	**Tennant Creek**	**44.13**	**272**	P		**P**	**15 36 32.2**	**+0.6**
	comp=Z,1μm,0.9s,comp=Z,7μm,mb6.6							
WRA	**Warramunga Arr**	**44.13**	**272**	P		**P**	**15 36 31.6**	**0.0**
	comp=Z,691nm,0.8s,mb6.5,baz=110,slow=7.7,SNR=944							
WRA				pP		pP	15 36 45.9	-0.7
	comp=Z,76nm,0.8s,baz=113,slow=6.9,SNR=2.6							
WRA				PcP		PcP	15 38 16.3	+0.4
	comp=Z,57nm,0.8s,baz=113,slow=3.2,SNR=5.1							
WRA				ScP		ScP	15 42 06.1	+3.2
	comp=Z,5.7nm,0.8s,baz=111,slow=3.9,SNR=2.5							
WRA				S		**S**	**15 42 59.2**	**-1.4**
	comp=Z,3.9nm,0.7s,baz=107,slow=13,SNR=2.9							
WRA				PKiKP		PKiKP	15 45 15.9	-0.9
	comp=Z,4.6nm,0.8s,baz=91,slow=0.3,SNR=7.7							
WRA				LR		LR	15 53 23.1	
	comp=Z,6μm,21.6s,MS5.5,baz=105,slow=34							
WRA				P4KPbc			16 14 26.7	
	comp=Z,1.4nm,0.9s,baz=102,slow=4.2,SNR=10							
WRA	**Warramunga Arr**	**44.13**	**272**	P		**P**	**15 36 31.6**	**0.0**
WRA				pP		pP	15 36 45.9	-0.7
WRA				PcP		PcP	15 38 16.3	+0.4
WRA				ScP		ScP	15 42 06.1	+3.2
WRA				S		**S**	**15 42 59.2**	**-1.4**
WRA	**Warramunga Arr**	**44.13**	**272**	P		**P**	**15 36 31.6**	**-0.1**
WRA				*PP		pP	15 36 45.9	-0.7
WRA							15 38 16.3	
WRA				S		**S**	**15 42 59.2**	**-1.4**
MMPI	**Merauke**	**44.45**	**290**	P		**P**	**15 36 35.5**	**+1.2**
	comp=Z,571nm,0.8s,comp=Z,5μm,mb6.3							
DRV	**Dumont d'Urvil**	**44.55**	**202**	P		**P**	**15 36 27.0**	**-7.4**
DRV				S		**S**	**15 43 20.0**	**+14**
DRV				SS		SS	15 46 26.0	-0.5
DRV				R			15 49 00.0	
FORT	**Forrest**	**46.21**	**255**	*e*P		**P**	**15 36 48.2**	**+0.2**
	comp=Z,403nm,0.6s,mb6.5							
FORT				*e*PCP		PcP	15 38 22.7	-0.2
FORT	**Forrest**	**46.21**	**255**	*e*P		**P**	**15 36 48.0**	**0.0**
	comp=Z,470nm,0.7s,mb6.5							
FORT				*e*PcP		PcP	15 38 22.6	-0.3
SBA	**Scott Base**	**48.47**	**184**	*e*P		**P**	**15 37 09.3**	**+4.5**
	comp=Z,288nm,1.1s,mb6.2							
SBA				LR		LR		
	comp=Z,2μm,22.0s,MS5.1							
VNDA	**Vanda**	**48.52**	**186**	P		**P**	**15 37 09.0**	**+3.6**
	comp=Z,38nm,0.9s,mb5.4,baz=4.0,slow=8.2,SNR=84							
VNDA				LR		LR	15 53 54.5	
	comp=Z,2μm,21.3s,MS5.0,baz=40,slow=31							
VNDA	**Vanda**	**48.52**	**186**	*e*P		**P**	**15 37 08.7**	**+3.4**
	comp=Z,54nm,1.0s,mb5.5							
VNDA				LR		LR		
	comp=Z,2μm,21.0s,MS5.0							
KAKA	**Kakadu**	**48.91**	**280**	⇑*i*P		Px	15 36 55.6	
	comp=Z,181nm,0.7s							
STCH	**Steam Cracks**	**53.77**	**27**	*e*P		**P**	**15 37 43.8**	**-1.5**
POHA	**Pohakuloa**	**53.95**	**26**	*e*P		**P**	**15 37 45.4**	**-1.1**
	comp=Z,226nm,0.9s,mb6.1							
POHA				LR		LR		
	comp=Z,3μm,20.0s,MS5.3							
KLBR	**Kellerberrin**	**54.54**	**251**	⇑*i*P		**P**	**15 37 50.5**	**-0.4**
	comp=Z,364nm,1.1s,mb6.3							
KIP	**Kipapa**	**54.58**	**23**	*e*P		**P**	**15 37 50.5**	**-0.7**
	comp=Z,322nm,1.1s,mb6.3							
KIP	**Kipapa**	**54.58**	**23**	P		**P**	**15 37 50.7**	**-0.4**
KIP				pmax		pmax		
	comp=Z,320nm,1.1s,mb6.3							
NWAO	**Narrogin (SRO)**	**54.60**	**249**	LR		LR	16 00 55.4	
	comp=Z,5μm,18.5s,MS5.6,baz=105,slow=36							
NWAO	**Narrogin (SRO)**	**54.60**	**249**	*e*P		**P**	**15 37 51.0**	**-0.3**
	comp=Z,32nm,1.0s,mb5.3							
NWAO				LR		LR		
	comp=Z,5μm,19.0s,MS5.6							
NWAO	**Narrogin (SRO)**	**54.60**	**249**	P		**P**	**15 37 51.5**	**+0.2**
NWAO				pmax		pmax		
	comp=Z,32nm,1.0s							
CASY	**Casey**	**55.54**	**208**	*e*P		**P**	**15 37 58.5**	**+0.9**
CASY	**Casey**	**55.54**	**208**	*e*P		**P**	**15 37 58.5**	**+0.9**
	comp=Z,338nm,0.9s,mb6.4							
CASY				LR		LR		
	comp=Z,2μm,21.0s,MS5.1							
GUMO	**Guam**	**56.21**	**315**	P		**P**	**15 38 01.2**	**-1.8**
	comp=Z,158nm,0.7s,mb6.2,baz=162,slow=13,SNR=7.4							
GUMO	**Guam**	**56.21**	**315**	*e*P		**P**	**15 38 01.9**	**-1.1**
	comp=Z,105nm,0.5s,mb6.1							
GUMO				LR		LR		
	comp=Z,3μm,21.0s,MS5.4							
GUMO	**Guam**	**56.21**	**315**	*e*P		**P**	**15 38 01.9**	**-1.1**
GUMO				pmax		pmax		
	comp=Z,105nm,0.5s,mb6.1							
GUMO				MLR		MLR		
	comp=Z,3μm,21.0s,MS5.4							
MBWA	**Marble Bar**	**56.32**	**263**	P		**P**	**15 38 04.1**	**+0.2**
	SNR=9.6							
MBWA	**Marble Bar**	**56.32**	**263**	*e*P		**P**	**15 38 03.3**	**-0.6**
	comp=Z,104nm,0.8s,mb5.9							
MBWA				LR		LR		
	comp=Z,10μm,19.0s,MS5.9							
MBWA	**Marble Bar**	**56.32**	**263**	P		**P**	**15 38 03.8**	**-0.1**
	comp=Z,224nm,1.0s,comp=Z,3μm,mb6.2							
AAI	**Ambon**	**57.15**	**286**	P		**P**	**15 38 10.4**	**+0.6**
	comp=Z,181nm,1.1s,comp=Z,2μm,mb6.0							
BATI	**Baumata**	**57.65**	**277**	P		**P**	**15 38 15.6**	**+2.3**
	comp=Z,157nm,1.3s,comp=Z,2μm,mb5.9							
MIDW	**Midway**	**57.86**	**1**	PFAKE			15 38 20.0	+5.6
MIDW				LR		LR		
	comp=Z,7μm,22.0s,MS5.7							
LBMI	**Labuha**	**59.43**	**289**	P		**P**	**15 38 26.0**	**+0.3**
	comp=Z,364nm,1.3s,comp=Z,3μm,mb6.3							
RPN	**Rapa Nui**	**59.50**	**106**	*e*pP		pP	15 38 42.2	+0.6
	comp=Z,658nm,1.5s							
RPN				LR		LR		
	comp=Z,4μm,21.0s,MS5.5							
QSPA	**South Pole Qui**	**60.14**	**180**	P		**P**	**15 38 32.8**	**+3.2**
	comp=Z,123nm,0.8s,mb6.0,baz=41,slow=2.4,SNR=243							
QSPA				LR		LR	16 01 55.4	
	comp=Z,2μm,19.1s,MS5.3,baz=224,slow=33							
QSPA	**South Pole Qui**	**60.14**	**180**	*e*P		**P**	**15 38 32.5**	**+2.9**
	comp=Z,505nm,0.8s,mb6.6							
QSPA				LR		LR		
	comp=Z,3μm,22.0s,MS5.3							
KDI	**Kendari**	**61.69**	**283**	P		**P**	**15 38 40.9**	**-0.2**
	comp=Z,216nm,0.9s,mb6.3							
MIR	**Mirnyy**	**62.53**	**207**	⇑*i*P		**P**	**15 38 46.0**	**+0.1**
MIR				*i*		pP	15 39 02.0	+0.4
MIR				*i*			15 39 11.0	
MIR				pmax		pmax		
	comp=Z,600nm,1.5s,mb6.5							
MNI	**Manado**	**62.79**	**289**	P		**P**	**15 38 47.7**	**-0.8**
	comp=Z,831nm,0.9s,mb6.9							
KAPI	**Kappang**	**63.59**	**280**	P		**P**	**15 38 53.3**	**-0.5**
	comp=Z,482nm,0.7s,mb6.6,SNR=7.7							
KAPI	**Kappang**	**63.59**	**280**	P		**P**	**15 38 53.5**	**-0.3**
	SNR=10							
KAPI	**Kappang**	**63.59**	**280**	*e*P		**P**	**15 38 53.1**	**-0.7**
	comp=Z,232nm,1.4s,mb6.0							
KAPI				LR		LR		
	comp=Z,2μm,19.0s,MS5.4							
KAPI	**Kappang**	**63.59**	**280**	P		**P**	**15 38 53.2**	**-0.6**
	comp=Z,78nm,1.6s,comp=Z,1μm,mb5.5							
MATI	**Mati**	**64.89**	**295**	*e*P		**P**	**15 38 60.0**	**-2.2**
KHKI	**Kahang-Kahang**	**65.49**	**274**	P		**P**	**15 39 05.8**	**-0.4**
DAV	**Davao City (W)**	**65.49**	**295**	P		**P**	**15 39 06.2**	**0.0**
	SNR=9.3							
DAV	**Davao City (W)**	**65.49**	**295**	*e*P		**P**	**15 39 05.8**	**-0.3**
	comp=Z,334nm,0.6s,mb6.5							
DAV				LR		LR		
	comp=Z,2μm,22.0s,MS5.2							
DAV	**Davao City (W)**	**65.49**	**295**	P		**P**	**15 39 06.7**	**+0.5**
	comp=Z,736nm,1.0s,mb6.7							
PCI	**Palu**	**65.66**	**284**	P		**P**	**15 39 08.4**	**+1.1**
	comp=Z,984nm,1.1s,comp=Z,6μm,mb6.8							
DNP	**Denpasar**	**65.68**	**274**	P		**P**	**15 39 09.2**	**+1.8**
	comp=Z,814nm,1.3s,comp=Z,9μm,mb6.6							
NBBI	**Negara**	**66.34**	**274**	P		**P**	**15 39 12.1**	**+0.4**
	comp=Z,438nm,1.0s,comp=Z,4μm,mb6.4							
BUKP	**Musuan**	**66.39**	**295**	*e*P		**P**	**15 39 11.6**	**-0.3**
BUTP	**Butuan**	**66.61**	**296**	*e*P		**P**	**15 39 13.1**	**-0.3**
SCPH	**Surigao**	**67.22**	**297**	⇓*e*P		**P**	**15 39 16.1**	**-1.1**
KMMI	**Kalianget**	**67.55**	**275**	P		**P**	**15 39 20.3**	**+1.0**
	comp=Z,834nm,1.0s,comp=Z,7μm,mb6.7							
PAGZ	**Pagadian**	**67.70**	**294**	*e*P		**P**	**15 39 20.6**	**+0.4**
MSLP	**Maasin**	**67.92**	**297**	*e*P		**P**	**15 39 20.5**	**-1.1**
IPIL	**Ipil**	**68.31**	**293**	*e*P		**P**	**15 39 24.0**	**-0.1**
KRKI	**Karangkates**	**68.32**	**273**	P

VNA3 e 15 40 33.0
VNA3 e pP 15 40 36.5 -4.0
VNA3 e pP 15 40 42.6 +2.1
VNA3 e 15 44 29.4
VNA3 e 15 44 38.5
VNA3 e 15 44 47.0
VNA3 e 15 44 51.4
KSI Kapahiang 79.06 272 P **P 15 40 26.4 -0.8**
comp=Z,659nm,0.9s,comp=Z,5µm,mb6.6
NACB Ninganchiao 79.15 306 *e*P **P 15 40 26.3 -1.0**
comp=Z,58nm,0.8s,mb5.6
VNA2 Neumayer--Watz 79.16 177 *e*P **P 15 40 28.2 +1.5**
baz=166,slow=4.3
VNA2 e 15 40 34.7
VNA2 e pP 15 40 39.2 -3.7
VNA2 e pP 15 40 45.4 +2.5
VNA2 e 15 44 32.3
VNA2 e 15 44 41.2
VNA2 e 15 44 49.7
VNA2 e 15 44 54.6
NVL N'lazarevskaya 79.31 183 *c i*P **P 15 40 28.9 +1.4**
NVL *e**PP pP 15 40 44.4 +0.7
NVL *e*S S 15 50 25.4 +2.3
NVL pmax pmax
comp=Z,115nm,1.2s,mb5.7
NVL MLR MLR
comp=N,2µm,20.0s,MS5.4
NVL MLR MLR
comp=E,483nm,20.0s,MS5.4
NVL MLR MLR
comp=Z,2µm,20.0s,MS5.5
VNA1 Neumayer--Stat 79.39 177 *e*P **P 15 40 29.6 +1.6**
VNA1 e 15 40 36.0
VNA1 e 15 40 39.9
VNA1 e pP 15 40 46.7 +2.5
VNA1 e 15 44 51.1
VNA1 e 15 44 55.9
YHNB Yeheng 79.62 306 PFAKE 15 40 40.0 +10
YHNB LR LR
comp=Z,2µm,21.0s,MS5.5
TATO Taipei 79.73 307 PFAKE 15 40 40.0 +9.5
TATO LR LR
comp=Z,4µm,22.0s,MS5.7
COCO West Island 79.93 262 PFAKE 15 40 40.0 +8.1
COCO LR LR
comp=Z,4µm,19.0s,MS5.8
ERM Erimo 80.11 332 *e*P **P 15 40 33.8 +1.6**
comp=Z,127nm,0.8s,mb5.9
ERM LR LR
comp=Z,7µm,20.0s,MS6.0
ERM Erimo 80.11 332 *e*P **P 15 40 33.8 +1.7**
ERM pmax pmax
comp=Z,127nm,0.8s,mb5.9
ERM MLR MLR
comp=Z,7µm,20.0s,MS6.0
MYKOM Kota Tinggi 80.69 277 ⇑P **P 15 40 36.7 +0.7**
MYKOM Kota Tinggi 80.69 277 P **P 15 40 36.3 +0.3**
RGRI Rengat 80.92 275 P **P 15 40 38.4 +1.2**
comp=Z,675nm,1.4s,mb6.4
KGM Kluang 81.26 277 ⇑P **P 15 40 36.7 -2.4**
KGM Kluang 81.26 277 ⇑P **P 15 40 39.7 +0.7**
QZH Quanzhou 81.75 305 P **P 15 40 42.3 +1.0**
QZH AMB AMB
comp=Z,150nm,0.9s,mb5.9
QZH AMB AMB
comp=Z,2µm,6.0s
PDSI Padang 82.26 273 P **P 15 40 42.3 -2.0**
comp=Z,359nm,1.2s,comp=Z,3µm,mb6.2
PPI Padang Panjang 82.55 274 P **P 15 40 44.2 -1.6**
comp=Z,92nm,1.4s,comp=Z,1µm,mb5.6
SMY Shemya 82.64 355 PFAKE 15 40 50.0 +4.8
SMY LR LR
comp=Z,3µm,19.0s,MS5.7
PLCA Paso Flores 82.76 133 P **P 15 40 47.6 +1.2**
comp=Z,41nm,1.1s,mb5.4,baz=239,slow=4.7,SNR=39
PLCA PKKPbc PKKPbc 15 59 10.8 +1.1
comp=Z,4.0nm,0.9s,baz=351,slow=0.5,SNR=6.3
PLCA PKP2bc 16 07 08.3
comp=Z,2.9nm,0.8s,baz=223,slow=2.9,SNR=6.0
PLCA LR LR 16 08 53.9
comp=Z,3µm,21.9s,MS5.6,baz=281,slow=29
PLCA Paso Flores 82.76 133 *e*P **P 15 40 47.5 +1.0**
comp=Z,209nm,1.4s,mb6.0
PLCA *e*pP pP 15 41 03.6 +0.9
PLCA LR LR
comp=Z,3µm,22.0s,MS5.7
NIKO Nikolski 82.97 6 *e*P **P 15 40 45.7 -1.3**
comp=Z,431nm,1.0s,mb6.4
KTGM Kuala Trenggan 83.10 280 ⇑P **P 15 40 49.3 +0.7**
KTGM Kuala Trenggan 83.10 280 ⇑P **P 15 40 49.7 +1.1**
EFI East Falkland 83.12 147 *e*P **P 15 40 48.4 +0.3**
comp=Z,88nm,0.9s,mb5.8
EFI *e*pP pP 15 41 05.6 +1.2
EFI LR LR
comp=Z,3µm,21.0s,MS5.7
EFI East Falkland 83.12 147 *e*P **P 15 40 48.4 +0.3**
EFI *e**PP pP 15 41 05.6 +1.2
EFI pmax pmax
comp=Z,88nm,0.9s,mb5.8
EFI MLR MLR
comp=Z,3µm,21.0s,MS5.7
FRIM Kepong 83.33 278 ⇑P **P 15 40 49.7 -0.1**
FRIM Kepong 83.33 278 ⇑P **P 15 40 49.7 -0.1**
SKR Severo-Kuril's 83.52 344 *e*P **P 15 40 50.0 +0.2**
SNCC San Nicolas Is 83.71 46 PFAKE 15 41 00.0 +8.8
SNCC LR LR
comp=Z,4µm,22.0s,MS5.7
SNCC San Nicolas Is 83.71 46 ⇑P **P 15 40 51.2 0.0**
baz=84
SSE Sheshan 83.87 311 ⇑P **P 15 40 51.5 -0.6**
SSE AP pP 15 41 09.1 +0.7
SSE XP sP 15 41 15.8 +1.0
SSE S S 15 51 12.8 +1.6
SSE AMB AMB
comp=Z,64nm,0.8s,mb5.8
SSE AMB AMB
comp=Z,643nm,9.7s
SSE LR LR
comp=N,898nm,24.9s,MS5.2
SSE LR LR
comp=E,711nm,24.8s,MS5.2
SSE LR LR
comp=Z,1µm,24.0s,MS5.3
KSRS Korea Array 84.06 320 P **P 15 40 53.0 +0.1**
comp=Z,73nm,0.9s,mb5.8,baz=140,slow=5.7,SNR=94
KSRS LR LR 16 17 28.2
comp=Z,2µm,18.9s,MS5.4,baz=136,slow=35
KSRS Korea Array 84.06 320 P **P 15 40 53.0 +0.1**
KSRS pmax pmax
comp=Z,73nm,0.9s,mb5.8
KSRS MLR MLR
comp=Z,2µm,18.9s,MS5.4
UNV Unalaska Valle 84.06 7 *e*P **P 15 40 51.1 -1.4**
comp=Z,267nm,1.3s,mb6.2
BSC Santa Cruz Isl 84.14 45 ⇓P **P 15 40 53.8 +0.4**
baz=84
SCI San Clemente I 84.14 47 ⇓P **P 15 40 53.4 -0.1**
baz=84
LPIG La Paz 84.27 58 P **P 15 40 54.1 -0.2**
comp=Z,21nm,0.3s,mb5.7,baz=41,slow=3.1,SNR=3.8
LPIG pP pP 15 41 06.6 -4.0
comp=Z,32nm,0.4s,baz=144,slow=3.5,SNR=1.6
LPIG sP sP 15 41 11.7 -5.3
comp=Z,37nm,0.4s,baz=143,slow=2.8,SNR=2.2
LPIG LR LR 16 13 25.7
comp=Z,2µm,18.1s,MS5.5,baz=159,slow=32
YSS Yuzh-Sakhalins 84.39 334 *e*P **P 15 40 55.3 +0.9**
comp=Z,268nm,0.9s,mb6.4
YSS Yuzh-Sakhalins 84.39 334 *e*P **P 15 40 54.6 +0.3**
YSS pmax pmax
comp=Z,385nm,1.2s,mb6.4
YSS MLR MLR
comp=Z,700nm,19.0s,MS5.1
SBC Santa Barbara 84.39 45 ⇓P **P 15 40 54.9 +0.3**
baz=84
AKUT Akutan 84.42 7 *e*P **P 15 40 53.3 -1.0**
comp=Z,749nm,1.8s,mb6.5
IPM Ipoh 84.48 278 ⇓P **P 15 40 55.3 -0.4**
IPM Ipoh 84.48 278 P **P 15 40 55.9 +0.2**
comp=Z,264nm,1.2s,comp=Z,2µm,mb6.2
CIS Catalina Islan 84.51 46 ⇑P **P 15 40 55.1 -0.2**
baz=85
V03C Hunter Liggett 84.54 43 ⇓P **P 15 40 55.6 +0.2**
baz=85
BLG Laguna Peak 84.57 46 ⇓P **P 15 40 55.4 -0.1**
baz=85
PKM Peak Mountain 84.63 45 ⇑P **P 15 40 56.4 +0.5**
baz=85
FMP Fort Macarthur 84.78 46 ⇑P **P 15 40 56.8 +0.1**
baz=85
SMMC Simmler 84.80 44 ⇓P **P 15 40 57.3 +0.6**
baz=85
QIZ Qiongzhong 84.86 295 P **P 15 40 58.4 +1.0**
QIZ AP pP 15 41 12.9 -0.8
QIZ XP sP 15 41 18.8 -1.3
QIZ PP PP 15 44 15.3 +0.5
QIZ S S 15 51 23.8 +2.3
QIZ XS sS 15 51 45.5 -3.7
QIZ SS SS 15 56 56.0 +0.5
QIZ AMB AMB
comp=Z,694nm,8.1s
QIZ LR LR
comp=E,745nm,30.6s
QIZ LR LR
comp=Z,2µm,36.1s
QIZ Qiongzhong 84.86 295 *e*P **P 15 40 54.5 -2.9**
comp=Z,218nm,1.8s,mb6.0
QIZ LR LR
comp=Z,1µm,21.0s,MS5.3
SAO San Andreas Ge 84.92 42 *e*P **P 15 40 57.5 +0.2**
comp=Z,316nm,1.8s,mb6.1
SAO LR LR
comp=Z,3µm,19.0s,MS5.7
SAO San Andreas Ge 84.92 42 P **P 15 40 57.7 +0.4**
SAO pmax pmax
comp=Z,320nm,1.8s,mb6.2
U04C Hernandez Rese 85.04 43 ⇓P **P 15 40 58.4 +0.5**
baz=85
MCCM Marconi Confer 85.06 40 P **P 15 40 57.3 -0.7**
MCCM LR LR
comp=Z,3µm,19.0s,MS5.7
OSI Osito Adit 85.11 45 *e*P **P 15 40 58.5 +0.2**
comp=Z,61nm,0.7s,mb5.8
OSI Osito Adit 85.11 45 ⇑P **P 15 40 58.8 +0.5**
baz=85
DECC Green Verdugo 85.11 46 ⇑P **P 15 40 58.5 +0.1**
baz=85
PET Petropavlovsk 85.13 346 *e*P **P 15 40 57.8 -0.1**
PET LR LR
comp=Z,3µm,20.0s,MS5.7
PET Petropavlovsk 85.13 346 *e*P **P 15 40 57.7 -0.2**
PET *e*S S 15 51 22.7 0.0
PET *e*SS SS 15 57 01.4 +3.0
PET pmax pmax
comp=Z,93nm,0.7s,mb6.0
PET pmax pmax
comp=Z,1µm,19.0s
PET MLR MLR
comp=Z,1µm,20.0s,MS5.3
PET MLR MLR
comp=Z,3µm,21.0s
V05C Boulder Hill, 85.23 44 ⇑P **P 15 40 59.7 +0.8**
baz=85
MWC Mount Wilson 85.27 46 *e*P **P 15 40 59.1 0.0**
comp=Z,187nm,1.4s,mb6.0
MWC LR LR
comp=Z,2µm,19.0s,MS5.6
MWC Mount Wilson 85.27 46 P **P 15 40 59.4 +0.3**
MWC pmax pmax
comp=Z,190nm,1.3s,mb6.1
ARVC Arvin 85.39 45 ⇑P **P 15 40 59.7 0.0**
baz=86
MURC Murrieta 85.40 47 ⇓P **P 15 40 60.0 +0.2**
baz=86
PETK Petropavlovsk- 85.41 346 P **P 15 40 58.9 -0.4**
comp=Z,110nm,0.7s,mb6.1,baz=121,slow=6.6,SNR=108
PETK PKiKP PKiKP 15 46 08.8 -0.8
comp=Z,4.9nm,0.8s,baz=100,slow=3.5,SNR=5.4
PETK LR LR 16 13 20.8
comp=Z,1µm,22.0s,MS5.3,baz=170,slow=32
PETK Petropavlovsk- 85.41 346 P **P 15 40 58.9 -0.4**
U05C Westside ANR, 85.42 43 ⇑P **P 15 41 00.5 +0.7**
baz=86
MONP Monument Peak 85.44 48 ⇑P **P 15 41 00.3 +0.3**
baz=86
NSHM Saint Helena R 85.48 40 *e*P **P 15 40 59.9 -0.2**
NSHM *e*pP pP 15 41 16.8 +0.4
DVTC Desert V Tower 85.50 48 ⇑P **P 15 41 00.6 +0.3**
baz=86,SNR=12
BFSC Mount Baldy St 85.53 46 ⇑P **P 15 41 00.6 +0.2**
baz=86
HOPS Hopland 85.55 40 *e*P **P 15 41 00.4 0.0**
comp=Z,143nm,1.1s,mb6.1
HOPS LR LR
comp=Z,4µm,19.0s,MS5.8
VES Vestal, Richgr 85.70 44 ⇓P **P 15 41 00.9 -0.3**
baz=86
EDW2 Edwards Air Fo 85.74 46 ⇓P **P 15 41 01.7 +0.3**
baz=86
KCPM Cahto Peak 85.75 39 *e*P **P 15 41 01.6 +0.2**
comp=Z,50nm,1.4s,mb5.5
SWSC Sam W. Stewart 85.88 48 ⇑P **P 15 41 02.2 0.0**
baz=86,SNR=19
PFO Pinyon Flat Ob 85.88 47 P **P 15 41 02.0 -0.2**
comp=Z,399nm,0.9s,mb6.7,SNR=22
PFO Pinyon Flat Ob 85.88 47 LR LR 16 14 16.0
comp=Z,2µm,18.4s,MS5.6,baz=257,slow=32
PFO Pinyon Flat Ob 85.88 47 *e*P **P 15 41 02.3 +0.1**
comp=Z,223nm,1.5s,mb6.2
PFO LR LR
comp=Z,3µm,19.0s,MS5.6
PFO Pinyon Flat Ob 85.88 47 P **P 15 41 02.6 +0.4**
PFO pmax pmax
comp=Z,220nm,1.5s,mb6.2
PFO Pinyon Flat Ob 85.88 47 ⇑P **P 15 41 02.3 +0.2**
baz=86,SNR=13
Q03C Winters 85.89 41 ⇓P **P 15 41 02.8 +0.7**
baz=86
KIPM Iron Peak 85.90 39 *e*P **P 15 41 02.5 +0.4**
comp=Z,180nm,1.5s,mb6.1
RCTC Rector, Farmer 85.92 44 ⇑P **P 15 41 01.9 -0.4**
baz=86
ISA Isabella 85.96 45 *e*P **P 15 41 02.9 +0.4**
comp=Z,118nm,0.9s,mb6.1
ISA LR LR
comp=Z,2µm,22.0s,MS5.5
ISA Isabella 85.96 45 P **P 15 41 03.1 +0.6**
ISA pmax pmax
comp=Z,120nm,1.0s,mb6.1
ISA Isabella 85.96 45 ⇑P **P 15 41 02.8 +0.3**
baz=86
ISA ⇓S S 15 51 38.0 +6.3
baz=86
S05C Merced 85.97 42 ⇑P **P 15 41 02.4 -0.1**
baz=86
BBRC Big Bear Sol-O 86.01 47 ⇓P **P 15 41 03.2 +0.5**
baz=86
NJ2 Nanjing 86.01 311 *e*P **P 15 41 03.0 +0.2**
NJ2 AP pP 15 41 20.0 +0.8
NJ2 XP sP 15 41 26.8 +1.3
NJ2 PP PP 15 44 24.6 +0.7
NJ2 S S 15 51 29.0 -3.3
NJ2 XS sS 15 51 58.0 -2.0
NJ2 AMB AMB
comp=Z,70nm,0.8s,mb5.9
NJ2 AMB AMB
comp=Z,100nm,4.1s
NJ2 LR LR
comp=N,2µm,24.7s,MS5.8
NJ2 LR LR
comp=E,4µm,25.7s,MS5.8
NJ2 LR LR
comp=Z,1µm,24.0s,MS5.3
T06C Millerton Lake 86.11 43 ⇑P **P 15 41 03.1 -0.1**
baz=86
T06C ⇑S S 15 51 38.4 +5.3
baz=86
R04C Big Horse Ranc 86.24 41 ⇓P **P 15 41 03.4 -0.4**
baz=86
R04C ⇑S S 15 51 40.3 +5.9
baz=86
SDPT Sand Point 86.29 10 *e*P **P 15 41 02.7 -0.9**
comp=Z,225nm,0.8s,mb6.5
LRMC Laurel Mountai 86.32 45 ⇓P **P 15 41 04.7 +0.4**
baz=86
RRX Edison Barstow 86.36 46 ⇑P **P 15 41 04.6 +0.1**
baz=86
CMB Columbia Colle 86.41 42 *e*P **P 15 41 04.3 -0.4**
comp=Z,80nm,0.9s,mb6.0
CMB *e*pP pP 15 41 21.2 +0.1
CMB LR LR
comp=Z,3µm,22.0s,MS5.7
CMB Columbia Colle 86.41 42 P **P 15 41 04.5 -0.2**
CMB pmax pmax
comp=Z,80nm,0.9s,mb6.0
112A Yuma 86.41 49 ⇑P **P 15 41 05.2 +0.4**
baz=86
BELC Belle Mtn. 86.42 47 ⇑P **P 15 41 05.2 +0.3**
baz=86,SNR=70
BC3 Big Chuckw Mtn 86.55 48 ⇓P **P 15 41 06.1 +0.7**
baz=87,SNR=61
BC3 ⇑S S 15 51 43.6 +6.0
baz=87
GLA Glamis 86.57 49 *e*P **P 15 41 06.2 +0.6**
comp=Z,328nm,1.4s,mb6.4
GLA LR LR
comp=Z,2µm,22.0s,MS5.4
GLA Glamis 86.57 49 P **P 15 41 06.4 +0.8**
GLA pmax pmax
comp=Z,330nm,1.4s,mb6.4
GLA Glamis 86.57 49 ⇓P **P 15 41 06.0 +0.4**
baz=87,SNR=23
GLA ⇑S S 15 51 44.1 +6.2
baz=87
MAIG Mazatlaan 86.64 61 *e*P **P 15 41 04.2 -2.0**
OHCM Honcut 86.67 40 *e*P **P 15 41 05.4 -0.5**
OHCM *e*pP pP 15 41 22.0 -0.3
UBT Ubonrachathani 86.68 290 ⇑P **P 15 41 08.0 +1.5**
LAVA Lava Cap Winer 86.70 41 ⇑P **P 15 41 05.5 -0.5**
baz=87
CWC Cottonwood Cre 86.71 44 ⇓P **P 15 41 06.3 +0.1**
baz=87
CWC ⇓S S 15 51 45.2 +6.2
baz=87
HEC Hector,Ludlow 86.74 46 ⇓P **P 15 41 06.6 +0.2**
baz=87,SNR=67
GSC Goldstone 86.75 46 *e*P **P 15 41 06.3 -0.1**
comp=Z,217nm,1.2s,mb6.3
GSC LR LR
comp=Z,2µm,19.0s,MS5.6
GSC Goldstone 86.75 46 P **P 15 41 06.4 0.0**
GSC pmax pmax
comp=Z,220nm,1.2s,mb6.3
GSC Goldstone 86.75 46 ⇓P **P 15 41 06.5 +0.1**
baz=87,SNR=59
MPMC Manual Prospec 86.82 45 ⇑P **P 15 41 07.4 +0.7**
baz=87
MPMC ⇓S S 15 51 45.3 +5.3
baz=87
KRMB Red Mountain 86.88 37 *e*P **P 15 41 07.5 +0.6**
comp=Z,88nm,1.2s,mb5.9
DAC Darwin (Calif) 86.90 45 PFAKE 15 41 20.0 +13
DAC LR LR
comp=Z,3µm,19.0s,MS5.7
WDC Whiskeytown Da 86.95 39 *e*P **P 15 41 06.9 -0.3**
comp=Z,111nm,1.3s,mb5.9
WDC LR LR
comp=Z,2µm,20.0s,MS5.6
WDC Whiskeytown Da 86.95 39 *e*P **P 15 41 06.9 -0.3**
WDC pmax pmax
comp=Z,111nm,1.3s,mb5.9
WDC MLR MLR
comp=Z,2µm,20.0s,MS5.6
WDC Whiskeytown Da 86.95 39 P **P 15 41 07.3 +0.1**
WDC pmax pmax
comp=Z,110nm,1.2s,mb6.0
MTUM Tungsten Hills 87.02 43 *e*P **P 15 41 07.8 +0.1**
TIN Tinemaha 87.03 44 ⇓P **P 15 41 08.1 +0.4**
baz=87
MLAC Mammoth Lakes 87.05 43 ⇑P **P 15 41 08.2 +0.4**
baz=87
IRM Iron Mountain 87.06 48 ⇑P **P 15 41 08.4 +0.5**
baz=87,SNR=106
IRM ⇑S S 15 51 48.4 +5.9
baz=87
113A Mohawk Valley, 87.09 49 ⇓P **P 15 41 08.2 +0.1**
baz=87,SNR=10
113A ⇓S S 15 51 48.5 +5.7
baz=87
GMRC Granite Mounta 87.14 47 ⇓P **P 15 41 08.9 +0.6**
baz=87,SNR=38
Y12C Blythe 87.21 48 ⇑P **P 15 41 08.9 +0.2**
baz=87,SNR=16
Y12C ⇑S S 15 51 49.9 +6.0
baz=87
214A Organ Pipe Nat 87.22 51 ⇑P **P 15 41 09.1 +0.3**
baz=87,SNR=49
R06C Coleville 87.28 42 ⇑P **P 15 41 09.3 +0.4**
baz=87
TUQ Turquoise Moun 87.39 46 ⇑P **P 15 41 09.5 0.0**
baz=88,SNR=47
TUQ ⇑S S 15 51 50.4 +4.9
baz=88
O05C Quincy 87.42 40 ⇓P **P 15 41 09.8 +0.3**
baz=88
O05C ⇑S S 15 51 49.5 +3.9
baz=88
SHOC Shoshone 87.46 46 ⇓P **P 15 41 09.6 -0.2**
baz=88,SNR=16
SHOC ⇓S S 15 51 52.4 +6.1
baz=88
ZIIG Zihuatanejo 87.47 68 *i* P **P 15 41 10.0 -0.3**
FURC Furnace Creek, 87.47 45 ⇓P **P 15 41 09.7 -0.2**
baz=88,SNR=16
L02A Cave Junction 87.49 37 ⇑P **P 15 41 10.7 +0.9**
baz=88
K01A Sixes 87.50 36 ⇑P **P 15 41 10.8 +0.9**
baz=88
GRAC Grapevine Rang 87.51 44 ⇓P **P 15 41 10.0 0.0**
baz=88,SNR=10
GRAC ⇑S S 15 51 51.4 +4.8
baz=88
CHGN Chignik 87.53 11 *e*P **P 15 41 09.1 -0.5**
O04C Chester 87.57 40 ⇓P **P 15 41 10.4 +0.2**
baz=88
O04C ⇑S S 15 51 50.3 +3.2
baz=88
WCN Washoe City 87.63 41 ⇑P **P 15 41 11.0 +0.5**
baz=88
WCN ⇑S S 15 51 53.6 +6.0
baz=88
YBH Yreka Blue Hor 87.66 38 LR LR 16 11 33.9
comp=Z,2µm,21.8s,MS5.4,baz=233,slow=30
YBH Yreka Blue Hor 87.66 38 *e*P **P 15 41 10.6 0.0**
comp=Z,124nm,1.5s,mb5.9
YBH LR LR
comp=Z,2µm,22.0s,MS5.5
BEKR Beckwourth 87.67 41 ⇑P **P 15 41 10.6 -0.1**
baz=88
LDFC Landfair 87.67 47 *e*P **P 15 41 12.0 +1.1**
comp=Z,704nm,1.6s,mb6.6
Y13A Salome 87.70 49 ⇓P **P 15 41 11.3 +0.3**
baz=88,SNR=18
SFJM Santa Fe 87.77 65 *i* P **P 15 41 12.8 +1.1**
U10A Ash Meadows, A 87.77 45 ⇓P **P 15 41 12.0 +0.7**
baz=88,SNR=13
LBCM Butte Creek Ri 87.78 39 P **P 15 41 11.1 -0.1**
NEE2 Needles Airpor 87.79 47 ⇑P **P 15 41 12.0 +0.6**
baz=88,SNR=11
P06A Stead Airport, 87.80 41 ⇓P **P 15 41 11.4 0.0**
baz=88
PDMCI Parker Dam,Lak 87.80 48 ⇑P **P 15 41 11.7 +0.2**
baz=88,SNR=23
NVAR Mina Array Bea 87.89 43 P **P 15 41 11.9 +0.1**
comp=Z,52nm,0.7s,mb5.9,baz=221,slow=8.3,SNR=270
NVAR pP pP 15 41 24.4 -3.8
comp=Z,45nm,1.0s,baz=222,slow=10,SNR=4.3
NVAR sP sP 15 41 28.9 -5.7
comp=Z,56nm,0.9s,baz=220,slow=7.8,SNR=11
NVAR PKKPbc PKKPbc 15 59 00.7 +1.7
comp=Z,4.4nm,0.9s,baz=120,slow=2.3,SNR=7.9
NVAR PKPPKP 16 07 07.0
comp=Z,2.6nm,1.0s,baz=91,slow=1.7,SNR=8.1
Q07A Schurz 87.93 42 ⇑P **P 15 41 12.3 +0.3**
baz=88
R08A Mina 87.95 43 ⇓P **P 15 41 12.0 -0.1**
baz=88
V11A Goodsprings 87.95 46 ⇓P **P 15 41 12.5 +0.3**
baz=88,SNR=7.5
W12A Cal Nev Ari 87.97 47 ⇑P **P 15 41 13.0 +0.7**
baz=88,SNR=12
K02A Glendale 87.98 37 ⇑P **P 15 41 12.2 0.0**
baz=88,SNR=8.5
Z14A Wintersburg 88.00 49 ⇑P **P 15 41 13.1 +0.6**
baz=88,SNR=18
S09A Goldfield 88.07 44 ⇑P **P 15 41 12.2 -0.5**
baz=88,SNR=20
115A Sonoran Desert 88.07 50 ⇑P **P 15 41 13.4 +0.6**
baz=88,SNR=25
PAHR Pah Rah Range 88.11 41 *e*P **P 15 41 12.6 -0.3**
comp=Z,54nm,0.9s,mb5.8

WHN **Wuhan** 88.13 307 ⇑*i*P P 15 41 13.5 +0.3
WHN AP pP 15 41 28.1 -1.5
WHN LR LR
comp=Z,3µm,22.0s,MS5.7
CAIG **El Cayaco** 88.14 69 *e*P P 15 41 13.1 -0.4
HUMO **Hull Mountain** 88.15 37 *e*P P 15 41 13.2 +0.2
comp=Z,182nm,1.6s,mb6.0
HUMO LR LR
comp=Z,2µm,19.0s,MS5.4
TPNV **Topopah Spring** 88.16 45 *e*P P 15 41 13.4 +0.3
comp=Z,75nm,0.9s,mb5.9
TPNV LR LR
comp=Z,2µm,19.0s,MS5.6
TPNV **Topopah Spring** 88.16 45 P P 15 41 13.5 +0.4
TPNV pmax pmax
comp=Z,75nm,0.9s,mb5.9
TPNV **Topopah Spring** 88.16 45 ⇓P P 15 41 13.7 +0.6
baz=88
216A **Three Points,** 88.16 51 ⇑P P 15 41 14.0 +0.7
baz=88,SNR=17
O06A **Flanigan** 88.17 41 ⇓P P 15 41 12.6 -0.5
baz=88,SNR=24
X13A **Yucca** 88.19 48 ⇑P P 15 41 13.9 +0.6
baz=88,SNR=48
V12A **Nelson** 88.25 47 ⇓P P 15 41 14.0 +0.4
baz=88,SNR=28
P07A **Fallon** 88.29 42 ⇓P P 15 41 13.5 -0.2
baz=88
TPH **Tonopah** 88.30 44 *e*P P 15 41 13.7 0.0
comp=Z,105nm,1.0s,mb6.0
TPH LR LR
comp=Z,2µm,19.0s,MS5.5
TPH **Tonopah** 88.30 44 P P 15 41 13.9 +0.1
TPH pmax pmax
comp=Z,110nm,1.0s,mb6.0
MDJ **Mudanjiang** 88.30 325 P P 15 41 13.9 +0.3
MDJ AP pP 15 41 28.5 -1.6
MDJ XP sP 15 41 34.5 -1.9
MDJ PP pP 15 44 41.8 -0.4
MDJ S S 15 51 53.5 -0.4
MDJ XS sS 15 52 19.0 -2.7
MDJ AMB AMB
comp=Z,84nm,0.9s,mb6.0
MDJ AMB AMB
comp=Z,812nm,4.6s
MDJ LR LR
comp=N,757nm,23.3s,MS5.2
MDJ LR LR
comp=E,750nm,27.0s,MS5.2
MDJ LR LR
comp=Z,2µm,25.0s,MS5.3
MDJ **Mudanjiang** 88.30 325 *e*P P 15 41 13.8 +0.2
comp=Z,80nm,1.0s,mb5.9
MDJ LR LR
comp=Z,2µm,20.0s,MS5.5
Y14A **Wickenburg** 88.32 49 ⇑P P 15 41 14.5 +0.5
baz=88,SNR=62
116A **Eloy** 88.34 51 ⇓P P 15 41 14.8 +0.7
baz=88,SNR=16
U11A **Corn Creek** 88.36 46 ⇓P P 15 41 14.6 +0.5
baz=88,SNR=7.7
J02A **Umpqua** 88.36 36 ⇑P P 15 41 14.2 +0.3
baz=88
Q08A **Gabbs** 88.39 43 ⇓P P 15 41 14.0 -0.2
baz=88,SNR=35
217A **Green Valley** 88.46 52 ⇓P P 15 41 15.6 +0.9
baz=88,SNR=69
W13A **Hualapai Mount** 88.47 48 ⇑P P 15 41 15.2 +0.6
baz=88,SNR=30
Z15A **Gila River Ind** 88.47 50 ⇓P P 15 41 15.1 +0.4
baz=88
N06A **Buffalo Meadow** 88.56 40 ⇓P P 15 41 14.6 -0.3
baz=89,SNR=33
S10A **Tonopah Range,** 88.58 44 ⇑P P 15 41 15.2 +0.1
baz=89,SNR=114
I02A **Mapleton** 88.68 36 ⇓P P 15 41 15.8 +0.3
baz=89
HABR **Khabarovsk** 88.70 331 *e*P P 15 41 13.2 -2.2
HABR *e**PP pP 15 41 30.2 -1.6
HABR *e**SP sP 15 41 36.2 -1.9
HABR *e* 15 44 42.4
HABR *e*S SKSac 15 51 34.9 -4.5
HABR *e* 15 52 01.1
HABR *e*SS SS 15 57 50.0 -0.8
HABR pmax pmax
comp=Z,287nm,1.4s,mb6.4
X14A **Yava** 88.72 49 ⇓P P 15 41 16.6 +0.8
baz=89,SNR=45
Y15A **Casa Rosa Ranc** 88.77 49 ⇑P P 15 41 16.7 +0.6
baz=89,SNR=66
MOIG **Morelia** 88.80 67 *i*P P 15 41 16.1 -0.4
TUC **Tucson** 88.80 51 *e*P P 15 41 17.1 +0.8
comp=Z,253nm,1.4s,mb6.4
TUC LR LR
comp=Z,2µm,20.0s,MS5.4
TUC **Tucson** 88.80 51 *e*P P 15 41 17.1 +0.8
TUC pmax pmax
comp=Z,221nm,1.4s,mb6.3
TUC MLR MLR
comp=Z,1µm,20.0s,MS5.4
Q09A **Carvers** 88.82 43 ⇓P P 15 41 16.4 +0.2
baz=89,SNR=5.9
318A **Bisbee** 88.83 52 ⇑P P 15 41 17.3 +0.9
baz=89,SNR=70
P08A **Dixie Valley** 88.86 42 ⇓P P 15 41 16.4 +0.1
baz=89,SNR=10
V13A **Grand Canyon W** 88.87 47 ⇓P P 15 41 16.9 +0.4
baz=89,SNR=74
U12A **Valley of Fire** 88.89 46 ⇓P P 15 41 17.2 +0.7
baz=89,SNR=23
S11A **Rachel** 88.91 45 ⇓P P 15 41 16.6 0.0
baz=89,SNR=15
I03A **Eugene** 88.94 36 ⇑P P 15 41 16.4 -0.3
baz=89
T12A **Moapa** 88.96 46 ⇑P P 15 41 17.3 +0.4
baz=89
T11A **Corn Creek, Al** 88.98 45 ⇓P P 15 41 17.7 +0.7
baz=89,SNR=99
R10A **Warm Springs** 88.99 44 ⇓P P 15 41 17.3 +0.3
baz=89,SNR=41
117A **Oracle** 88.99 51 ⇑P P 15 41 18.2 +1.1
baz=89,SNR=55
Z16A **Peralta Trail,** 88.99 50 ⇑P P 15 41 17.9 +0.7
baz=89,SNR=15
KKTK **Khon Kaen** 89.05 289 ⇑P P 15 41 19.5 +1.7
comp=Z,1µm,0.8s,mb7.3
W14A **Seligman** 89.05 48 ⇑P P 15 41 18.3 +1.0
baz=89,SNR=93
N07B **Gerlach** 89.07 41 ⇑P P 15 41 17.0 -0.4
baz=89,SNR=18
MOD **Modoc** 89.08 39 *e*P P 15 41 16.9 -0.5
comp=Z,130nm,1.4s,mb6.1
MOD LR LR
comp=Z,3µm,19.0s,MS5.7
218A **Dragoon** 89.11 52 ⇑P P 15 41 18.5 +0.8
baz=89,SNR=56
X15A **Humboldt** 89.15 49 ⇓P P 15 41 18.7 +0.8
baz=89,SNR=48
LCO **Las Campanas** 89.16 123 *e*P P 15 41 18.5 +0.2
comp=Z,393nm,0.8s,mb6.8
LCO *e*pP pP 15 41 35.8 +1.1
LCO LR LR
comp=Z,3µm,21.0s,MS5.7
O08A **Rochester Mine** 89.21 41 ⇑P P 15 41 17.7 -0.3
baz=89
U13A **Pakoon Wash** 89.24 46 ⇑P P 15 41 18.7 +0.5
baz=89,SNR=55
Q10A **Clear Creek Ra** 89.28 43 ⇓P P 15 41 18.7 +0.4
baz=89,SNR=31
319A **Douglas** 89.28 53 ⇓P P 15 41 19.3 +0.8
baz=89,SNR=45
Y16A **Circle Bar Ran** 89.28 50 ⇓P P 15 41 19.4 +0.9
baz=89,SNR=104
V14A **Boquillas Ranc** 89.30 48 ⇑P P 15 41 19.7 +1.2
baz=89,SNR=82
P09A **Austin** 89.31 42 ⇓P P 15 41 18.3 -0.2
baz=89,SNR=5.3
OHAK **Old Harbor** 89.32 13 *e*P P 15 41 17.8 -0.3
comp=Z,387nm,1.7s,mb6.5
K05A **Summer Lake** 89.33 38 ⇑P P 15 41 18.6 +0.1
baz=89,SNR=24
M07A **Soldier Meadow** 89.36 40 ⇓P P 15 41 18.3 -0.3
baz=89,SNR=23
COR **Corvallis** 89.36 36 PFAKE 15 41 30.0 +11
COR LR LR
comp=Z,3µm,19.0s,MS5.7
ZAIG **Zacatecas** 89.37 63 *i*P P 15 41 19.6 +0.4

H03A **Soap Creek Ran** 89.43 36 ⇑P P 15 41 18.7 -0.3
baz=90,SNR=8.9
S12A **Delamar Landin** 89.44 45 ⇑P P 15 41 20.0 +0.8
baz=90,SNR=18
CFAA **Coronel Fontan** 89.45 127 P P 15 41 19.9 +0.4
comp=Z,3.8nm,1.0s,mb4.7,baz=237,slow=3.6,SNR=30
CFAA sP sP 15 41 37.5 -4.9
comp=Z,4.6nm,0.9s,baz=233,slow=4.7,SNR=8.8
CFAA **Coronel Fontan** 89.45 127 P P 15 41 19.9 +0.4
CFAA sP sP 15 41 37.5 -4.9
R11A **Troy Canyon, C** 89.46 44 ⇓P P 15 41 19.0 -0.2
baz=90,SNR=21
PLIG **Platanillo** 89.47 68 *i*P P 15 41 19.7 0.0
IRO **Indian Ridge** 89.49 37 P P 15 41 19.2 -0.1
N08A **GE Springer Mi** 89.54 41 ⇑P P 15 41 19.4 -0.1
baz=90,SNR=40
PNIG **Pinotepa** 89.55 71 *i*P P 15 41 20.4 +0.3
118A **Homack Ranch,** 89.55 51 ⇓P P 15 41 21.0 +1.2
baz=90,SNR=123
W15A **Williams** 89.56 48 ⇓P P 15 41 20.9 +1.2
baz=90,SNR=14
Y17A **Roosevelt** 89.59 50 ⇓P P 15 41 20.7 +0.7
baz=90,SNR=75
X16A **Lo Mia Camp, P** 89.63 49 ⇑P P 15 41 21.2 +1.0
baz=90,SNR=143
T13A **Saint George** 89.65 46 ⇑P P 15 41 20.6 +0.4
baz=90,SNR=12
219A **White Tail Can** 89.66 52 ⇑P P 15 41 21.2 +0.9
baz=90,SNR=47
O09A **Fish Creek Ran** 89.68 42 ⇓P P 15 41 20.1 -0.2
baz=90,SNR=17
NNT **Nongplab** 89.69 285 P P 15 41 23.0 +2.2
L07A **Adell** 89.69 39 ⇓P P 15 41 20.1 -0.1
baz=90,SNR=18
TIA **Tai'an** 89.72 313 ⇑P P 15 41 20.8 +0.3
TIA AMB AMB
comp=Z,68nm,1.1s,mb5.9
U14A **Mt Trumbull** 89.73 47 ⇓P P 15 41 21.4 +0.9
baz=90,SNR=104
Q11A **Duckwater** 89.73 44 ⇓P P 15 41 20.4 -0.1
baz=90,SNR=24
P10A **Eureka** 89.75 43 ⇑P P 15 41 20.4 -0.2
baz=90,SNR=16
Z18A **Geronimo** 89.77 51 ⇑P P 15 41 21.4 +0.6
baz=90,SNR=8.7
CN2 **Changchun** 89.83 323 *e*P P 15 41 20.5 -0.3
CN2 *e*PP PP 15 44 55.8 +1.4
CN2 *e*S S 15 52 05.5 -2.7
CN2 *e*SS SS 15 58 07.3 -0.2
CN2 AMB AMB
comp=Z,20nm,1.1s,mb5.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,17.0s,MS5.5
CN2 LR LR
comp=E,1µm,17.0s,MS5.5
CN2 LR LR
comp=Z,2µm,18.0s,MS5.5
BMN **Battle Mountai** 89.84 42 *e*P P 15 41 20.5 -0.4
comp=Z,77nm,1.3s,mb5.9
BMN LR LR
comp=Z,2µm,19.0s,MS5.7
BMN **Battle Mountai** 89.84 42 P P 15 41 20.8 -0.1
BMN pmax pmax
comp=Z,77nm,1.2s,mb5.9
M08A **Happy Creek Ra** 89.84 40 ⇑P P 15 41 21.2 +0.3
baz=90,SNR=24
G03A **Yamhill** 89.89 35 ⇓P P 15 41 21.3 +0.3
baz=90
BSI **Banda Aceh** 89.92 276 P P 15 41 22.4 +0.4
comp=Z,152nm,0.9s,comp=Z,1µm,mb6.3
N09A **Rock Creek Ran** 89.94 41 ⇓P P 15 41 21.5 +0.1
baz=90,SNR=14
W16A **Flagstaff** 89.98 49 ⇑P P 15 41 22.7 +0.9
baz=90,SNR=36
BKCOR **Black Crater** 89.98 37 P P 15 41 21.7 +0.2
H04A **Detroit Lake** 90.00 36 ⇑P P 15 41 21.0 -0.5
baz=90,SNR=13
V15A **Kaibab Nationa** 90.01 48 ⇓P P 15 41 22.8 +1.0
baz=90,SNR=70
S13A **Holt Ranch, En** 90.03 46 ⇑P P 15 41 22.6 +0.7
baz=90,SNR=30
R12A **Pony Springs,** 90.04 45 ⇑P P 15 41 22.3 +0.4
baz=90,SNR=40
YAIG **Yautepec** 90.07 68 *i*P P 15 41 22.9 +0.4
J06A **Christmas Vall** 90.08 38 ⇓P P 15 41 21.4 -0.6
baz=90,SNR=35
119A **Ashpeak Ranch,** 90.08 52 ⇑P P 15 41 23.2 +0.9
baz=90,SNR=68
I05A **Bend** 90.11 37 ⇓P P 15 41 22.4 +0.3
baz=90,SNR=7.4
P11A **Circle Ranch,** 90.13 43 ⇓P P 15 41 22.4 0.0
baz=90,SNR=5.0
O10A **Cortez Mining,** 90.16 42 ⇑P P 15 41 22.4 0.0
baz=90,SNR=11
Y18A **Canyon Day Jun** 90.18 51 ⇑P P 15 41 23.8 +1.1
baz=90,SNR=154
F03A **Seaside** 90.19 35 ⇓P P 15 41 22.4 0.0
baz=90
T14A **Hurricane** 90.19 46 ⇓P P 15 41 23.3 +0.7
baz=90,SNR=12
K07A **Rock Creek Ran** 90.19 39 ⇑P P 15 41 22.5 0.0
baz=90,SNR=44
G04A **Mulino** 90.22 36 ⇑P P 15 41 22.3 -0.3
baz=90,SNR=7.6
BPO **Bald Peter** 90.23 36 P P 15 41 22.8 +0.2
U15A **North Rim** 90.30 47 ⇑P P 15 41 24.0 +0.7
baz=90,SNR=126
CCUT **Cedar City** 90.32 46 *e*P P 15 41 24.0 +0.7
comp=Z,86nm,1.3s,mb5.9
R13A **O'Grain Ranch,** 90.34 45 ⇑P P 15 41 24.0 +0.7
baz=90,SNR=27
WUAZ **Wupatki** 90.34 48 *e*P P 15 41 24.0 +0.6
comp=Z,116nm,1.0s,mb6.2
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.4
WUAZ **Wupatki** 90.34 48 ⇑P P 15 41 24.1 +0.7
baz=90,SNR=37
M09A **Marrel Ranch,** 90.35 41 ⇓P P 15 41 23.6 +0.3
baz=90,SNR=20
Q12A **Willow Creek R** 90.35 44 ⇓P P 15 41 23.4 0.0
baz=90,SNR=42
L08A **Fields** 90.36 40 ⇓P P 15 41 23.1 -0.2
baz=90,SNR=34
WVOR **Wild Horse Val** 90.36 40 *e*P P 15 41 23.0 -0.3
comp=Z,91nm,1.4s,mb5.9
WVOR LR LR
comp=Z,3µm,19.0s,MS5.8
WVOR **Wild Horse Val** 90.36 40 *e*P P 15 41 23.0 -0.3
WVOR pmax pmax
comp=Z,91nm,1.4s,mb5.9
WVOR MLR MLR
comp=Z,3µm,19.0s,MS5.8
Z19A **T-Link Ranch,** 90.42 51 ⇑P P 15 41 24.8 +0.9
baz=90,SNR=30
ARUT **Antelope Range** 90.42 46 *e*P P 15 41 24.0 +0.3
comp=Z,37nm,1.0s,mb5.7
ARUT **Antelope Range** 90.42 46 P P 15 41 24.3 +0.6
N10A **Dunphy** 90.44 42 ⇑P P 15 41 24.1 +0.3
baz=90
H05A **Madras** 90.47 37 ⇓P P 15 41 23.7 -0.1
baz=90,SNR=20
W17A **Winslow** 90.51 49 ⇑P P 15 41 25.4 +1.2
baz=91,SNR=9.2
I06A **Prineville** 90.52 38 ⇓P P 15 41 24.4 +0.4
baz=91,SNR=51
O11A **Cowboy Ranch,** 90.56 43 ⇑P P 15 41 24.5 +0.2
baz=91,SNR=45
S14A **Cedar City** 90.57 46 ⇑P P 15 41 25.0 +0.6
baz=91,SNR=7.2
T15A **Red Dirt Ranch** 90.61 47 ⇓P P 15 41 24.9 +0.3
baz=91,SNR=15
J07A **Hines** 90.62 39 ⇑P P 15 41 24.6 +0.1
baz=91
E03A **Lebam** 90.62 34 ⇓P P 15 41 24.7 +0.3
baz=91,SNR=21
L09A **Wilkinson Ranc** 90.62 40 ⇓P P 15 41 24.1 -0.5
baz=91,SNR=17
K08A **Mann Creek Ran** 90.64 39 ⇑P P 15 41 24.4 -0.2
baz=91,SNR=17
X18A **Snowflake** 90.69 50 ⇑P P 15 41 25.7 +0.6
baz=91,SNR=26
VIPM **Ingram Point** 90.69 37 P P 15 41 24.8 +0.1
KLR **Kul'dur** 90.69 330 ⇓*i*P P 15 41 21.0 -3.7
KLR pmax pmax
comp=Z,230nm,1.4s,mb6.3

HOOD **Mount Hood Mea** 90.72 36 *e*P P 15 41 24.4 -0.5
comp=Z,120nm,1.1s,mb6.1
BMW **Boistfort Moun** 90.73 34 *e*P P 15 41 25.2 +0.2
BMW **Boistfort Moun** 90.73 34 P P 15 41 25.4 +0.5
F04A **Amboy** 90.75 35 ⇓P P 15 41 24.8 -0.2
baz=91,SNR=21
Q13A **Wheeler Ranch,** 90.79 44 ⇓P P 15 41 25.4 0.0
baz=91,SNR=30
VFP **Flag Point** 90.81 36 P P 15 41 25.3 0.0
Y19A **Nutrioso** 90.81 51 ⇓P P 15 41 26.7 +1.1
baz=91,SNR=130
CROR **Criterion Ridg** 90.82 37 P P 15 41 25.3 -0.1
G05A **Wamic** 90.83 36 ⇑P P 15 41 25.0 -0.4
baz=91,SNR=12
LVP **Lakeview Peak** 90.85 35 P P 15 41 25.7 +0.2
U16A **Tuba City** 90.88 48 ⇓P P 15 41 26.7 +0.8
baz=91,SNR=38
NST **Nakhon Sawan** 90.92 287 P P 15 41 28.0 +1.5
D03A **Wishkah Elem.** 90.92 34 ⇑P P 15 41 26.3 +0.4
baz=91,SNR=5.5
M10A **I.L. Ranch, Tu** 90.94 41 ⇓P P 15 41 26.0 0.0
baz=91,SNR=26
N11A **Elko Archery C** 90.95 42 ⇑P P 15 41 26.3 +0.2
baz=91
I07A **Izee** 90.99 38 ⇑P P 15 41 26.0 -0.2
baz=91,SNR=43
H06A **Lindquist Farm** 90.99 37 ⇑P P 15 41 25.9 -0.3
baz=91,SNR=77
R14A **James Farms, M** 91.00 45 ⇑P P 15 41 26.9 +0.6
baz=91
S15A **Panguitch** 91.02 46 ⇓P P 15 41 27.8 +1.3
baz=91,SNR=19
K09A **Rome** 91.04 40 ⇓P P 15 41 26.4 -0.1
baz=91,SNR=58
VHO **Vista Hermosa** 91.04 71 *i*P P 15 41 28.4 +1.4
J08A **Circle Bar Ran** 91.06 39 ⇓P P 15 41 26.4 -0.1
baz=91,SNR=43
X19A **St. Johns** 91.07 50 ⇑P P 15 41 27.4 +0.6
baz=91,SNR=19
E04A **Onalaska** 91.07 35 ⇑P P 15 41 27.0 +0.5
baz=91
NLWA **Neilton Lookou** 91.08 33 *e*P P 15 41 26.5 0.0
comp=Z,46nm,1.0s,mb5.8
NLWA LR LR
comp=Z,2µm,19.0s,MS5.6
NLWA **Neilton Lookou** 91.08 33 ⇓P P 15 41 26.8 +0.3
baz=91,SNR=10
P13A **Bates Ranch, G** 91.11 44 ⇑P P 15 41 27.1 +0.3
baz=91,SNR=53
C03A **Quillayute Air** 91.14 33 ⇓P P 15 41 27.8 +1.0
baz=91
T16A **Glen Canyon Da** 91.14 47 ⇑P P 15 41 27.5 +0.4
baz=91,SNR=24
TDL **Tradedollar La** 91.15 35 P P 15 41 27.1 +0.3
W18A **Petrified Fore** 91.18 50 ⇓P P 15 41 28.1 +0.8
baz=91,SNR=11
G06A **Carlson Farm,** 91.18 36 ⇑P P 15 41 26.9 -0.2
baz=91,SNR=38
VTHM **Trough** 91.18 37 P P 15 41 27.0 -0.1
O12A **Currie** 91.18 43 ⇓P P 15 41 27.0 -0.2
baz=91,SNR=24
ELK **Elko** 91.19 42 PKKPbc PKKPbc 15 58 51.5 +0.7
comp=Z,3.6nm,0.9s,baz=35,slow=2.6,SNR=10
ELK LR LR 16 19 28.7
comp=Z,3µm,18.1s,MS5.7,baz=252,slow=34
ELK **Elko** 91.19 42 *e*P P 15 41 26.7 -0.5
comp=Z,56nm,1.3s,mb5.7
ELK *e*pP pP 15 41 44.1 +0.4
ELK LR LR
comp=Z,3µm,19.0s,MS5.7
ELK **Elko** 91.19 42 P P 15 41 27.0 -0.2
ELK pmax pmax
comp=Z,56nm,1.2s
F05A **White Salmon** 91.20 36 ⇑P P 15 41 26.8 -0.4
baz=91,SNR=8.3
Q14A **Sevier Lake (B** 91.26 45 ⇑P P 15 41 27.6 0.0
baz=91,SNR=82
M11A **Holland Ranch,** 91.31 42 ⇓P P 15 41 28.0 +0.2
baz=91,SNR=19
L10A **Juniper Basin** 91.33 41 ⇑P P 15 41 27.8 -0.1
baz=91,SNR=57
I08A **Drewsey** 91.38 38 ⇓P P 15 41 27.7 -0.3
baz=91,SNR=23
N12A **Clover Valley,** 91.38 42 ⇑P P 15 41 27.8 -0.3
baz=91,SNR=33
GYA **Guiyang** 91.38 300 ⇑*i*P P 15 41 28.9 +0.4
GYA AP pP 15 41 46.0 +1.0
GYA XP sP 15 41 52.8 +1.5
GYA PP PP 15 45 08.9 +1.8
GYA SKS 15 51 53.0
GYA S S 15 52 19.4 -3.8
GYA XS sS 15 52 48.9 -2.3
GYA PS PS 15 53 41.3 +1.8
GYA SS SS 15 58 29.0 -1.5
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,450nm,6.8s
GYA LR LR
comp=N,800nm,18.0s,MS5.4
GYA LR LR
comp=E,900nm,18.2s,MS5.4
GYA LR LR
comp=Z,1µm,19.0s,MS5.4
D04A **Dobbs Creek Ra** 91.39 34 ⇓P P 15 41 28.9 +0.9
baz=92
V18A **Ganado** 91.40 49 ⇑P P 15 41 28.7 +0.4
baz=92,SNR=41
R15A **Junction** 91.40 46 ⇑P P 15 41 29.2 +0.9
baz=92,SNR=6.6
W19A **Sanders** 91.40 50 ⇓P P 15 41 29.2 +0.9
baz=92,SNR=5.2
J09A **Fry Pan Ranch,** 91.45 39 ⇑P P 15 41 28.3 0.0
baz=92,SNR=43
U17A **Shonto** 91.45 48 ⇓P P 15 41 29.1 +0.6
baz=92,SNR=26
F06A **Goldendale** 91.47 36 ⇓P P 15 41 28.1 -0.3
baz=92,SNR=22
E05A **Randle** 91.52 35 ⇓P P 15 41 28.0 -0.6
baz=92,SNR=21
S16A **Weppner Ranch,** 91.53 47 ⇑P P 15 41 29.0 +0.2
baz=92,SNR=19
O13A **Hicks Ranch, I** 91.55 44 ⇓P P 15 41 29.1 +0.2
baz=92,SNR=13
K10A **MacKenzie Ranc** 91.56 40 ⇓P P 15 41 28.7 -0.2
baz=92,SNR=40
T17A **Navajo Res., N** 91.60 48 ⇑P P 15 41 29.9 +0.7
baz=92,SNR=22
MVU **Marysvale** 91.62 46 PFAKE 15 41 40.0 +11
MVU LR LR
comp=Z,1µm,20.0s,MS5.4
MSU **Marysvale** 91.65 46 *e*P P 15 41 30.4 +0.9
comp=Z,53nm,1.1s,mb5.8
MSU **Marysvale** 91.65 46 P P 15 41 30.5 +1.1
G07A **Ruggs Ranch, H** 91.70 37 ⇓P P 15 41 28.9 -0.6
baz=92,SNR=43
B04A **Port Angeles** 91.72 33 ⇓P P 15 41 29.7 +0.2
baz=92,SNR=7.0
H08A **Prairie City** 91.73 38 ⇓P P 15 41 29.4 -0.2
baz=92,SNR=15
C04A **Brinnon** 91.73 34 ⇓P P 15 41 29.5 -0.1
baz=92,SNR=20
P14A **Drum Mountains** 91.76 44 ⇓P P 15 41 30.3 +0.4
baz=92,SNR=12
L11A **Cat Creek Ranc** 91.80 41 ⇑P P 15 41 29.9 -0.1
baz=92,SNR=41
M12A **Wells** 91.81 42 ⇑P P 15 41 29.8 -0.3
baz=92,SNR=30
Q15A **Fillmore** 91.82 45 ⇓P P 15 41 30.5 +0.3
baz=92
D05A **Enumclaw** 91.84 34 ⇑P P 15 41 30.5 +0.4
baz=92,SNR=9.6
U18A **Rough Rock, Ch** 91.86 48 ⇓P P 15 41 30.6 +0.2
baz=92,SNR=29
I09A **Lost Marbles R** 91.87 39 ⇓P P 15 41 29.5 -0.8
baz=92,SNR=14
E06A **Yakima** 91.90 35 ⇓P P 15 41 29.8 -0.5
baz=92,SNR=15
R16A **Teasdale** 91.94 46 ⇑P P 15 41 31.1 +0.3
baz=92,SNR=12
S17A **Black Ridge (B** 91.98 47 ⇑P P 15 41 30.5 -0.5
baz=92,SNR=28
V19A **Window Rock** 91.98 49 ⇑P P 15 41 31.2 +0.2
baz=92,SNR=7.9
F07A **Phinny Hill Vi** 91.99 36 ⇑P P 15 41 30.5 -0.3
baz=92,SNR=9.4
K11A **Parker Ranch,** 92.03 41 ⇓P P 15 41 31.0 -0.1

baz=92,SNR=46
J10A Berg Farm, Mel 92.04 40 ⇑P P **15 41 30.9 -0.2**
baz=92
G08A Pilot Rock 92.09 37 ⇑P P **15 41 30.9 -0.3**
baz=92,SNR=81
TXAR Lajitas Array 92.11 57 P P **15 41 31.9 +0.1**
comp=Z,23nm,0.9s,mb5.5,baz=212,slow=5.8,SNR=127
TXAR pP pP 15 41 43.5 -4.7
comp=Z,5.5nm,0.8s,baz=153,slow=3.6,SNR=5.2
TXAR sP sP 15 41 48.7 -5.9
comp=Z,61nm,1.2s,baz=207,slow=5.0,SNR=14
TXAR PKKPbc PKKPbc 15 58 52.0 +4.2
comp=Z,1.9nm,0.9s,baz=82,slow=3.7,SNR=7.3
TXAR PKPPKP 16 06 53.8
comp=Z,0.7nm,0.9s,baz=120,slow=4.9,SNR=4.3
TXAR LR LR 16 17 29.1
comp=Z,1μm,18.8s,MS5.4,baz=60,slow=32
TXAR Lajitas Array 92.11 57 P P **15 41 31.9 +0.1**
TXAR pP pP 15 41 43.5 -4.7
TXAR sP sP 15 41 48.7 -5.9
TXAR PKKPbc PKKPbc 15 58 52.0 +4.2
TXAR P'P' 16 06 53.8
TXAR LR LR 16 17 29.1
TXAR Lajitas Array 92.11 57 P P **15 41 31.9 +0.1**
TXAR *SP sP 15 41 48.7 -5.9
TXAR 15 58 52.0
PGC Sidney 92.17 33 *e*P P **15 41 31.3 -0.2**
comp=Z,65nm,1.0s,mb5.9
M13A Montello 92.21 43 ⇑P P **15 41 31.7 -0.2**
baz=92,SNR=84
L12A House Creek Ra 92.21 42 ⇓P P **15 41 32.0 +0.1**
baz=92,SNR=24
P15A Leamington 92.23 45 ⇓P P **15 41 32.4 +0.4**
baz=92,SNR=32
T18A Mexican Hat 92.28 48 ⇓P P **15 41 32.7 +0.3**
baz=92,SNR=72
DUG Dugway 92.29 44 *e*P P **15 41 31.9 -0.4**
comp=Z,24nm,1.1s,mb5.4
DUG LR LR
comp=Z,2μm,19.0s,MS5.7
DUG Dugway 92.29 44 P P **15 41 32.8 +0.5**
DUG pmax pmax
comp=Z,24nm,1.1s,mb5.4
DUG Dugway 92.29 44 ⇑P P **15 41 32.0 -0.4**
baz=92,SNR=6.5
C05A Tolt Reservoir 92.34 34 ⇓P P **15 41 32.1 -0.2**
baz=92
EBG Ellensburg 92.36 35 P P **15 41 32.4 -0.1**
H09A Durkee 92.36 38 ⇓P P **15 41 31.9 -0.6**
baz=92,SNR=52
D06A Cle Elum 92.41 35 ⇓P P **15 41 32.6 -0.1**
baz=92,SNR=9.5
I10A Payette 92.45 39 ⇓P P **15 41 33.6 +0.6**
baz=92
Y22D IRIS PASSCAL I 92.46 52 ⇓P P **15 41 34.1 +0.8**
baz=92
N14A Grayback Hills 92.47 43 ⇑P P **15 41 32.7 -0.5**
baz=92,SNR=11
E07A Sunnyside 92.48 36 ⇑P P **15 41 32.6 -0.4**
baz=92,SNR=20
LENM Lemitar 92.48 52 *e*P P **15 41 33.8 +0.5**
comp=Z,74nm,1.3s,mb5.8
LAZ Ladron 92.50 51 *e*P P **15 41 34.1 +0.7**
comp=Z,134nm,1.7s,mb6.0
RSW Rattlesnake Hi 92.50 36 *e*P P **15 41 33.0 -0.2**
comp=Z,124nm,1.3s,mb6.2
R17A Hanksville Air 92.51 46 ⇑P P **15 41 33.0 -0.3**
baz=93,SNR=24
Q16A Castle Valley 92.52 46 ⇓P P **15 41 33.6 +0.2**
baz=93,SNR=13
F08A Pendleton 92.52 37 ⇓P P **15 41 32.7 -0.6**
baz=93,SNR=26
HAWA Hanford 92.53 36 *e*P P **15 41 32.9 -0.3**
comp=Z,73nm,1.1s,mb6.0
HAWA LR LR
comp=Z,2μm,19.0s,MS5.6
S18A Hurst Farm, Bl 92.53 47 ⇓P P **15 41 33.2 -0.3**
baz=93,SNR=10
B05A Bryant 92.54 34 ⇓P P **15 41 32.9 -0.3**
baz=93,SNR=9.8
O15A The Old Anders 92.55 44 ⇑P P **15 41 33.7 +0.1**
baz=93
SVW2 Sparrevohn 92.56 11 *e*P P **15 41 31.7 -1.3**
MFID Camas Ranch 92.56 40 ⇑P P **15 41 33.0 -0.4**
baz=93,SNR=46
A04A Legoe Bay, Lum 92.56 33 ⇑P P **15 41 33.5 +0.1**
baz=93
JCW Jim Creek 92.57 34 *e*P P **15 41 32.8 -0.6**
CMIG Matias Romero 92.57 72 P P **15 41 34.8 +0.6**
comp=Z,19nm,0.9s,mb5.5,baz=231,slow=3.5,SNR=15
CMIG pP pP 15 41 47.5 -3.1
comp=Z,38nm,1.1s,baz=224,slow=12,SNR=11
CMIG sP sP 15 41 52.5 -4.5
comp=Z,33nm,1.0s,baz=216,slow=7.3,SNR=10.0
CMIG LR LR 16 16 26.4
comp=Z,994nm,18.8s,MS5.3,baz=242,slow=31
CMIG Matias Romero 92.57 72 P P **15 41 34.8 +0.6**
CMIG pP pP 15 41 47.5 -3.1
CMIG sP sP 15 41 52.5 -4.5
CMIG LR LR 16 16 26.4
K12A Draper Farm, C 92.59 41 ⇑P P **15 41 33.0 -0.6**
baz=93,SNR=21
NLU North Lily Min 92.59 45 *e*P P **15 41 30.6 -3.1**
comp=Z,31nm,1.0s,mb5.7
NLU *e*pP pP 15 41 47.9 -2.3
BGU Big Grassy Mou 92.61 43 *e*P P **15 41 33.4 -0.4**
comp=Z,49nm,1.2s,mb5.8
P16A Fountain Green 92.64 45 ⇓P P **15 41 34.7 +0.7**
baz=93
BJT Baijiatuao 92.65 315 *e*P P **15 41 33.7 -0.3**
comp=Z,118nm,1.0s,mb6.3
BJT LR LR
comp=Z,2μm,22.0s,MS5.5
BJT Baijiatuao 92.65 315 *e*P P **15 41 33.7 -0.3**
BJT pmax pmax
comp=Z,118nm,1.0s
BJT MLR MLR
comp=Z,2μm,22.0s
T19A Beclabito 92.65 49 ⇓P P **15 41 33.9 -0.2**
baz=93,SNR=7.1
BDT Bhumibol Dam 92.65 288 P P **15 41 35.0 +0.5**
comp=Z,13nm,1.0s,mb5.3
LVIG Laguna Verde 92.65 69 *i*P P **15 41 34.4 0.0**
BJI Beijing 92.66 315 P P **15 41 33.8 -0.2**
BJI XP sP 15 41 56.3 -0.5
BJI PP PP 15 45 16.9 +0.1
BJI S S 15 52 26.4 -7.6
BJI XS sS 15 53 02.3 +0.2
BJI SS SS 15 58 51.1 +2.8
BJI AMB AMB
comp=Z,93nm,1.0s,mb6.2
BJI AMB AMB
comp=Z,805nm,13.6s
BJI LR LR
comp=N,1μm,24.8s,MS5.5
BJI LR LR
comp=E,1μm,21.0s,MS5.5
BJI LR LR
comp=Z,3μm,32.3s
BMO Blue Mountains 92.68 38 *e*P P **15 41 33.1 -0.9**
comp=Z,58nm,1.3s,mb5.8
BMO LR LR
comp=Z,2μm,22.0s,MS5.5
BMO Blue Mountains 92.68 38 P P **15 41 33.3 -0.7**
BMO pmax pmax
comp=Z,58nm,1.3s,mb5.8
BBB Bella Bella 92.70 28 P P **15 41 34.0 +0.1**
comp=Z,57nm,1.1s,mb5.9,baz=230,slow=4.6,SNR=13
G09A Cove 92.70 38 ⇑P P **15 41 33.7 -0.4**
baz=93,SNR=46
BNM Barren Site 92.70 52 *e*P P **15 41 34.8 +0.4**
comp=Z,285nm,2.0s,mb6.3
TMUT Trail Mountain 92.72 46 *e*P P **15 41 35.1 +0.8**
comp=Z,62nm,0.9s,mb6.0
SEW Seward 92.76 14 *e*P P **15 41 33.6 -0.4**
comp=Z,65nm,0.9s,mb6.1
M14A Sheep Mountain 92.78 43 ⇓P P **15 41 34.2 -0.3**
baz=93,SNR=80
LPM Los Pinos Moun 92.79 52 *e*P P **15 41 35.1 +0.3**
comp=Z,91nm,1.4s,mb6.0
L13A Double Diamond 92.79 42 ⇓P P **15 41 34.4 -0.2**
baz=93,SNR=16
I11A Placerville 92.81 40 ⇑P P **15 41 34.2 -0.4**
baz=93,SNR=42
H10A Noah's Angus R 92.81 39 ⇑P P **15 41 33.8 -0.8**
baz=93,SNR=31
LNOR Lincton Mounta 92.83 37 *e*P P **15 41 33.9 -0.8**
comp=Z,18nm,1.3s,mb5.3
MID Middleton Isla 92.83 16 *e*P P **15 41 33.6 -0.7**
comp=Z,226nm,0.9s,mb6.6
E08A Dider Farm, El 92.84 36 ⇑P P **15 41 34.4 -0.3**
baz=93,SNR=10
D07A Quincy 92.85 35 ⇑P P **15 41 34.5 -0.3**
baz=93,SNR=7.8
J12A Stokes Ranch, 92.86 41 ⇓P P **15 41 34.8 -0.1**
baz=93,SNR=62
C06A Tall Timber Ra 92.89 34 ⇑P P **15 41 34.7 -0.2**
baz=93
N15A Stansbury Isla 92.89 44 ⇑P P **15 41 34.7 -0.3**
baz=93,SNR=12
MPU Maple Canyon 92.90 45 *e*P P **15 41 35.3 +0.2**
comp=Z,28nm,0.9s,mb5.7
MPU LR LR
comp=Z,4μm,19.0s,MS5.9
F09A S2 Ranch, Elgi 92.92 37 ⇓P P **15 41 34.5 -0.6**
baz=93,SNR=11
RPW Rockport 92.94 34 *e*P P **15 41 34.4 -0.7**
comp=Z,4.7nm,0.6s,mb5.1
SLKM Skilak Lake 92.97 13 *e*P P **15 41 34.2 -0.7**
SLKM Skilak Lake 92.97 13 P P **15 41 34.7 -0.2**
NOQ North Oquirrh 92.99 44 *e*P P **15 41 35.8 +0.2**
comp=Z,53nm,0.7s,mb6.1
NOQ *e*pP pP 15 41 52.3 +0.2
R18A Canyonlands Na 93.00 47 ⇓P P **15 41 35.3 -0.4**
baz=93,SNR=33
B06A Marblemount 93.01 34 ⇑P P **15 41 35.1 -0.3**
baz=93
SRU San Rafael 93.04 46 *e*P P **15 41 35.6 -0.2**
comp=Z,92nm,1.2s,mb6.1
SRU San Rafael 93.04 46 P P **15 41 36.0 +0.2**
SRU pmax pmax
comp=Z,62nm,1.2s,mb5.9
SRU San Rafael 93.04 46 ⇑P P **15 41 35.9 +0.1**
baz=93,SNR=34
A05A Maple Falls 93.05 33 ⇓P P **15 41 36.8 +1.2**
baz=93
G10A Bishop Farm, J 93.06 38 ⇑P P **15 41 35.1 -0.6**
baz=93,SNR=36
K13A Stover Farm, H 93.06 42 ⇓P P **15 41 35.9 +0.1**
baz=93,SNR=22
O16A Springville 93.09 45 ⇓P P **15 41 36.0 0.0**
baz=93,SNR=8.9
S19A Harvey Farm, M 93.11 48 ⇑P P **15 41 36.2 0.0**
baz=93,SNR=23
P17A Butcher Ranch, 93.12 46 ⇓P P **15 41 36.2 +0.1**
baz=93,SNR=7.9
C07A Waterville 93.14 35 ⇓P P **15 41 35.2 -0.9**
baz=93,SNR=12
L14A Malta 93.17 42 ⇓P P **15 41 36.2 -0.2**
baz=93,SNR=31
I12A Atlanta 93.19 40 ⇓P P **15 41 36.4 0.0**
baz=93,SNR=76
SPUT South Promonto 93.19 43 *e*P P **15 41 36.4 -0.1**
comp=Z,75nm,1.0s,mb6.1
SPUT *e*pP pP 15 41 53.3 +0.3
MVCO Mesa Verde 93.21 48 *e*P P **15 41 36.0 -0.7**
comp=Z,92nm,1.5s,mb6.0
MVCO LR LR
comp=Z,2μm,21.0s,MS5.4
MVCO Mesa Verde 93.21 48 ⇓P P **15 41 36.6 -0.1**
baz=93,SNR=6.2
ANMO Albuquerque 93.27 51 PKKPbc PKKPbc 15 58 46.2 +1.2
comp=Z,22nm,0.8s,baz=348,slow=3.0,SNR=3.9
ANMO Albuquerque 93.27 51 *e*P P **15 41 37.2 +0.2**
comp=Z,38nm,0.9s,mb5.8
ANMO LR LR
comp=Z,2μm,20.0s,MS5.6
Q18A Rafter H Ranch 93.28 46 ⇓P P **15 41 36.2 -0.7**
baz=93,SNR=19
H11A Donnelly 93.28 39 ⇓P P **15 41 36.4 -0.4**
baz=93,SNR=32
D08A Wollman Farm, 93.29 36 ⇑P P **15 41 36.5 -0.3**
baz=93,SNR=23
HVU Hansel Valley 93.29 43 *e*P P **15 41 36.6 -0.3**
comp=Z,78nm,0.9s,mb6.1
HVU Hansel Valley 93.29 43 *e*P P **15 41 36.8 -0.1**
HVU pmax pmax
comp=Z,78nm,0.9s,mb6.1
M15A Larsen Ranch, 93.29 43 ⇑P P **15 41 36.7 -0.2**
baz=93,SNR=35
CM31 Chiang Mai Arr 93.31 289 PFAKE
CM31 LR LR
comp=Z,1μm,19.0s,MS5.3
CMAR Chiang Mai Arr 93.31 289 P P **15 41 38.7 +1.2**
comp=Z,18nm,0.9s,mb5.5,baz=140,slow=3.7,SNR=64
CMAR PP PP 15 45 19.9 -2.4
comp=Z,3.7nm,0.9s,baz=131,slow=5.9,SNR=3.9
CMAR PKKPbc PKKPbc 15 58 45.5 +1.3
comp=Z,3.1nm,0.8s,baz=292,slow=4.5,SNR=16
CMAR PKPPKP 16 06 54.2
comp=Z,0.3nm,0.3s,baz=292,slow=3.6,SNR=4.3
CMAR LR LR 16 23 41.7
comp=Z,571nm,21.1s,MS5.0,baz=145,slow=36
CMAR Chiang Mai Arr 93.31 289 P P **15 41 38.7 +1.2**
CMAR 15 45 19.9
E09A Wood Farm, Sta 93.33 37 ⇑P P **15 41 36.2 -0.7**
baz=93,SNR=38
CRAG Craig 93.33 24 *e*P P **15 41 36.7 0.0**
comp=Z,31nm,0.9s,mb5.7
R19A Curley Farm, L 93.35 47 ⇑P P **15 41 36.9 -0.4**
baz=93,SNR=6.0
JLU Jordanelle 93.36 44 *e*P P **15 41 37.3 0.0**
comp=Z,49nm,1.3s,mb5.8
DAU Daniels Canyon 93.37 45 *e*P P **15 41 37.3 0.0**
comp=Z,37nm,1.2s,mb5.7
DAU Daniels Canyon 93.37 45 P P **15 41 38.0 +0.7**
HLID Hailey 93.45 41 *e*P P **15 41 37.5 -0.1**
comp=Z,43nm,0.9s,mb5.9
HLID LR LR
comp=Z,2μm,19.0s,MS5.5
HLID Hailey 93.45 41 ⇑P P **15 41 37.5 -0.1**
baz=94,SNR=54
F10A Beach Ranch, E 93.45 38 ⇑P P **15 41 36.6 -1.0**
baz=94,SNR=48
J13A Cove Ranch, Pi 93.48 41 ⇑P P **15 41 37.9 +0.1**
baz=94,SNR=37
CHG Chiang Mai 93.49 290 ⇑P P **15 41 39.3 +0.9**
comp=Z,27nm,1.1s,mb5.6
CHTO Chiang Mai 93.49 290 ⇑P P **15 41 38.9 +0.5**
SNR=10.0
CHTO Chiang Mai 93.49 290 *e*P P **15 41 38.8 +0.4**
comp=Z,19nm,0.9s,mb5.5
CHTO *e*PP PP 15 45 23.7 0.0
CHTO LR LR
comp=Z,1μm,20.0s,MS5.4
CHTO Chiang Mai 93.49 290 P P **15 41 39.3 +0.9**
CHTO pmax pmax
comp=Z,19nm,0.9s,mb5.5
NNA Nana 93.49 106 PFAKE 15 41 50.0 +11
NNA LR LR
comp=Z,2μm,22.0s,MS5.5
P18A Preston Nutter 93.52 46 ⇓P P **15 41 38.1 +0.1**
baz=94,SNR=16
K14A Jones Ranch, D 93.52 42 ⇓P P **15 41 37.9 0.0**
baz=94,SNR=25
N16A Rees Ranch, Co 93.54 44 ⇓P P **15 41 38.0 -0.1**
baz=94,SNR=7.2
PV10 Paradox Valley 93.54 47 *e*P P **15 41 38.0 -0.2**
comp=Z,203nm,0.7s,mb6.7
O17A Robinson Place 93.55 45 ⇓P P **15 41 38.2 +0.1**
baz=94,SNR=13
GAMB Gambell 93.56 3 *e*P P **15 41 37.6 0.0**
comp=Z,114nm,0.8s,mb6.3
G11A Walters Elk Ra 93.59 38 ⇓P P **15 41 37.4 -0.8**
baz=94,SNR=73
D09A Jones Farm, Ri 93.60 36 ⇓P P **15 41 37.5 -0.7**
baz=94,SNR=19
RC01 Rabbit Creek A 93.60 13 *e*P P **15 41 37.1 -0.7**
comp=Z,92nm,1.3s,mb6.0
OD2 Odessa Site #2 93.62 36 *e*P P **15 41 37.6 -0.7**
comp=Z,39nm,0.8s,mb5.9
B07A Winthrop 93.63 34 ⇓P P **15 41 37.2 -1.1**
baz=94,SNR=11
L15A Malad City 93.66 43 ⇓P P **15 41 38.1 -0.4**
baz=94,SNR=37
KMI Kunming 93.68 297 P P **15 41 40.5 +1.4**
KMI AP pP 15 41 57.0 +1.4
KMI XP sP 15 42 03.9 +2.0
KMI PP PP 15 45 28.8 +3.7
KMI SKS 15 52 07.0
KMI S S 15 52 39.8 -3.9
KMI XS sS 15 53 11.8 0.0
KMI SS SS 15 59 05.3 +1.9
KMI AMB AMB
comp=Z,26nm,1.0s,mb5.6
KMI AMB AMB
comp=Z,424nm,8.2s
KMI LR LR
comp=N,504nm,21.4s,MS5.2
KMI LR LR
comp=E,727nm,22.4s,MS5.2
KMI LR LR
comp=Z,1μm,21.4s,MS5.3
M16A Huntsville 93.69 44 ⇓P P **15 41 38.5 -0.2**
baz=94,SNR=16
PV01 Paradox Valley 93.70 48 *e*P P **15 41 38.6 -0.3**
comp=Z,2μm,0.7s
C08A Higginbotham F 93.71 35 ⇑P P **15 41 38.5 -0.1**
baz=94
Q19A Hogan Spring (93.74 47 ⇓P P **15 41 38.3 -0.7**
baz=94,SNR=22
J14A Carey 93.81 41 ⇑P P **15 41 39.9 +0.6**
baz=94,SNR=121
H12A Diamond D Ranc 93.82 40 ⇑P P **15 41 39.1 -0.2**
baz=94,SNR=53
I13A Wildhorse Cree 93.84 41 ⇓P P **15 41 39.4 0.0**
baz=94,SNR=23
E10A Myers Farm, Un 93.85 37 ⇑P P **15 41 38.5 -0.8**
baz=94,SNR=9.1
SIT Sitka 93.86 22 PFAKE 15 41 50.0 +11
SIT LR LR
comp=Z,2μm,20.0s,MS5.6
XAN Xi'an 93.90 307 P P **15 41 40.3 +0.4**
XAN AP pP 15 41 52.3 -4.1
XAN AMB AMB
comp=Z,20nm,1.0s,mb5.5
XAN AMB AMB
comp=Z,473nm,8.3s
XAN LR LR
comp=E,617nm,15.6s
XAN LR LR
comp=Z,1μm,17.7s,MS5.5
HWUT Hardware Ranch 93.90 44 *e*P P **15 41 38.6 -1.1**
comp=Z,41nm,1.1s,mb5.8
HWUT LR LR
comp=Z,2μm,22.0s,MS5.6
A07A Ashnola River, 93.90 34 ⇑P P **15 41 39.1 -0.5**
baz=94,SNR=14
N17A Moffit Pass 93.94 44 ⇓P P **15 41 39.9 0.0**
baz=94,SNR=13
B08A Colville Reser 93.95 35 ⇑P P **15 41 39.0 -0.7**
baz=94,SNR=10
F11A Grangeville 93.97 38 ⇑P P **15 41 38.3 -1.6**
baz=94,SNR=8.3
K15A Arbon 93.99 42 ⇓P P **15 41 39.5 -0.6**
baz=94,SNR=39
O18A Roosevelt 94.05 45 ⇑P P **15 41 40.0 -0.4**
baz=94
LVC Limon Verde 94.09 119 *e*P P **15 41 42.4 +1.2**
comp=Z,194nm,1.2s,mb6.4
LVC *e*pP pP 15 41 59.8 +2.1
LVC LR LR
comp=Z,3μm,22.0s,MS5.6
C09A Chrisman Ranch 94.11 36 ⇑P P **15 41 39.8 -0.7**
baz=94,SNR=9.0
D10A Wagner Farm, O 94.13 37 ⇑P P **15 41 39.7 -0.9**
baz=94,SNR=14
H13A Challis 94.17 40 ⇓P P **15 41 40.8 -0.1**
baz=94,SNR=40
PMR Palmer 94.18 13 *e*P P **15 41 39.7 -0.8**
comp=Z,48nm,1.0s,mb5.9
PMR Palmer 94.18 13 *e*P P **15 41 39.7 -0.8**
PMR pmax pmax
comp=Z,49nm,1.0s,mb5.9
I14A Mackay 94.22 41 ⇑P P **15 41 41.1 0.0**
baz=94,SNR=45
L16A Fish Haven 94.23 43 ⇓P P **15 41 40.9 -0.3**
baz=94,SNR=15
E11A Bogner Ranch, 94.24 38 ⇓P P **15 41 39.8 -1.4**
baz=94,SNR=8.3
P19A Cripple Cowboy 94.31 46 ⇓P P **15 41 41.7 0.0**
baz=94
WRAK Wrangell Islan 94.35 23 *e*P P **15 41 41.8 +0.4**
comp=Z,25nm,0.8s,mb5.7
WRAK *e*pP pP 15 41 56.9 -1.0
WRAK LR LR
comp=Z,1μm,19.0s,MS5.4
M17A Scullys Gap (B 94.36 44 ⇑P P **15 41 41.2 -0.6**
baz=94,SNR=30
J15A Blackfoot 94.48 42 ⇓P P **15 41 42.7 +0.3**
baz=94,SNR=80
G13A Cobalt 94.51 40 ⇑P P **15 41 42.1 -0.3**
baz=95,SNR=33
B09A Rice 94.58 35 ⇑P P **15 41 42.6 0.0**
baz=95
C10A Spilker Farm, 94.61 36 ⇓P P **15 41 42.6 -0.2**
baz=95
D11A Klaveano Farm, 94.62 37 ⇓P P **15 41 43.4 +0.5**
baz=95
K16A Soda Springs 94.63 43 ⇑P P **15 41 43.3 +0.3**
baz=95,SNR=38
H14A Leadore 94.69 40 ⇑P P **15 41 43.0 -0.2**
baz=95,SNR=31
M18A Lyman 94.69 44 ⇑P P **15 41 42.8 -0.5**
baz=95,SNR=14
PNL Peninsula 94.81 19 *e*P P **15 41 43.6 +0.2**
comp=Z,50nm,0.9s,mb5.9
I15A Monteview 94.81 41 ⇓P P **15 41 44.3 +0.5**
baz=95
AHID Auburn Hatcher 94.87 43 *e*P P **15 41 43.7 -0.4**
comp=Z,89nm,1.1s,mb6.1
AHID LR LR
comp=Z,2μm,21.0s,MS5.5
J16A Bone 94.88 42 ⇑P P **15 41 44.1 -0.1**
baz=95,SNR=34
N19A John Jarvie Ra 94.93 45 ⇓P P **15 41 43.5 -0.9**
baz=95,SNR=8.5
NEW Newport 95.00 36 *e*P P **15 41 43.3 -1.3**
comp=Z,5.8nm,0.9s,mb5.0
NEW LR LR
comp=Z,3μm,20.0s,MS5.7
NEW Newport 95.00 36 P P **15 41 44.0 -0.6**
NEW pmax pmax
comp=Z,6.0nm,0.9s
L18A Fontenelle, Gr 95.01 44 ⇓P P **15 41 45.0 +0.2**
baz=95
G14A Jackson 95.03 40 ⇓P P **15 41 44.6 -0.2**
baz=95,SNR=7.9
RRI2 Red Ridge 95.09 42 *e*P P **15 41 45.0 -0.2**
comp=Z,40nm,1.0s,mb5.8
H15A Lima 95.10 41 ⇑P P **15 41 44.9 -0.3**
baz=95,SNR=16
MCMT McKenzie Canyo 95.11 40 *e*P P **15 41 45.1 -0.1**
comp=Z,16nm,1.0s,mb5.4
A10A Northport 95.25 35 ⇓P P **15 41 45.3 -0.4**
baz=95
M19A Rock Springs 95.30 45 ⇑P P **15 41 45.6 -0.5**
baz=95
I16A Newdale 95.31 42 ⇑P P **15 41 46.5 +0.3**
baz=95,SNR=17
DCID1 Drake Creek 95.32 42 *e*P P **15 41 46.0 -0.2**
comp=Z,85nm,1.2s,mb6.0
SMCO Snowmass 95.32 48 *e*P P **15 41 45.7 -0.6**
comp=Z,33nm,1.1s,mb5.7
E13A Victor 95.38 39 ⇓P P **15 41 45.2 -1.2**
baz=95,SNR=5.5
REDW Red Top Meadow 95.38 42 *e*P P **15 41 46.1 -0.3**
comp=Z,56nm,1.0s,mb6.0
REDW *e*pP pP 15 42 03.5 +0.5
TPAW Teton Pass 95.39 42 *e*P P **15 41 46.2 -0.3**
comp=Z,32nm,0.9s,mb5.8
TPAW *e*pP pP 15 42 03.5 +0.4
F14A Wisdom 95.43 39 ⇓P P **15 41 46.0 -0.6**
baz=96,SNR=7.4
J17A Brown Place, J 95.46 42 ⇓P P **15 41 46.7 -0.1**
baz=96,SNR=12
SDCO Great Sand Dun 95.48 49 *e*P P **15 41 46.7 -0.4**
comp=Z,54nm,1.6s,mb5.7
SDCO LR LR
comp=Z,1μm,20.0s,MS5.4
KVTX Kingsville 95.48 61 PFAKE 15 42 00.0 +13
KVTX LR LR
comp=Z,1μm,20.0s,MS5.4
C12B Naegeli Ranch, 95.49 37 ⇓P P **15 41 46.0 -0.9**
baz=96
SNOW Snow King Moun 95.49 42 *e*P P **15 41 47.3 +0.3**
comp=Z,56nm,0.8s,mb6.0
SNOW *e*pP pP 15 42 03.5 +0.1
B11A Sandpoint 95.49 36 ⇓P P **15 41 46.3 -0.6**
baz=96
L19A Farson 95.52 44 ⇑P P **15 41 47.2 +0.1**
baz=96,SNR=12

G15A	**Dillon**	**95.52**	**40**	⇓	P		**P**	**15 41 47.1**	**0.0**	
	baz=96,SNR=39									
TNA	**Tin City**	**95.54**	**4**	*e*	P		**P**	**15 41 46.2**	**-0.4**	
	comp=Z,104nm,0.9s,mb6.3									
JCT	**Junction City**	**95.56**	**58**	*e*	P		**P**	**15 41 46.3**	**-1.3**	
	comp=Z,99nm,1.0s,mb6.2									
JCT					*e*	pP	pP	15 42 03.3	-0.8	
JCT						LR	LR			
	comp=Z,2μm,19.0s,MS5.5									
SEY	**Seymchan**	**95.57**	**347**	*e*	P		**P**	**15 41 46.3**	**-0.5**	
DLMT	**Dillon**	**95.58**	**40**	*e*	P		**P**	**15 41 47.2**	**-0.2**	
	comp=Z,47nm,1.2s,mb5.8									
KTH	**Kantishna Hill**	**95.64**	**12**	*e*	P		**P**	**15 41 45.2**	**-1.9**	
	comp=Z,43nm,0.9s,mb5.9									
IMW	**Indian Meadow**	**95.64**	**42**	*e*	P		**P**	**15 41 47.5**	**-0.2**	
	comp=Z,47nm,1.2s,mb5.8									
TRF	**Thorofare Moun**	**95.66**	**12**	*e*	P		**P**	**15 41 46.5**	**-0.7**	
	comp=Z,66nm,0.8s,mb6.1									
MOOW	**Moose Ponds**	**95.67**	**42**	*e*	P		**P**	**15 41 47.0**	**-0.8**	
	comp=Z,32nm,1.4s,mb5.6									
LOHW	**Long Hollow**	**95.67**	**42**	*e*	P		**P**	**15 41 47.5**	**-0.2**	
	comp=Z,48nm,1.3s,mb5.8									
CHUM	**Lake Minchumin**	**95.71**	**11**	*e*	P		**P**	**15 41 45.6**	**-1.8**	
	comp=Z,38nm,1.1s,mb5.7									
BW06	**Boulder Array**	**95.79**	**43**		PFAKE			15 42 00.0	+12	
BW06					LR		LR			
	comp=Z,3μm,22.0s,MS5.7									
BW06	**Boulder Array**	**95.79**	**43**	⇓	P		**P**	**15 41 47.9**	**-0.4**	
	baz=96									
PDAR	**Pinedale Array**	**95.79**	**43**		P		**P**	**15 41 47.5**	**-0.8**	
	comp=Z,10.0nm,0.8s,mb5.3,baz=206,slow=3.5,SNR=79									
PDAR					PKKPbc		PKKPbc	15 58 37.6	-1.0	
	comp=Z,4.5nm,0.7s,baz=84,slow=4.2,SNR=19									
PDAR					PKPPKP			16 06 50.4		
	comp=Z,0.5nm,0.7s,baz=111,slow=3.3,SNR=4.0									
PDAR					LR		LR	16 17 22.7		
	comp=Z,2μm,21.9s,MS5.5,baz=232,slow=31									
A11A	**Hall Mountain,**	**95.83**	**36**	⇑	P		**P**	**15 41 48.0**	**-0.3**	
	baz=96									
I17A	**Pilgram Creek**	**95.87**	**42**	⇓	P		**P**	**15 41 49.2**	**+0.5**	
	baz=96									
M20A	**Sweetwater, Wa**	**95.88**	**45**	⇓	P		**P**	**15 41 48.7**	**-0.1**	
	baz=96									
CD2	**Chengdu**	**95.90**	**302**		P		**P**	**15 41 50.4**	**+1.2**	
CD2					AP		pP	15 42 08.3	+2.6	
CD2					XP		sP	15 42 14.5	+2.5	
CD2					PP		PP	15 45 45.8	+3.4	
CD2					SKS			15 52 20.3		
CD2					S		S	15 53 00.9	-2.0	
CD2					XS		sS	15 53 30.3	-0.7	
CD2					PS		PS	15 54 33.4	+4.1	
CD2					SS		SS	15 59 36.8	+1.8	
CD2					AMB		AMB			
	comp=Z,50nm,0.6s,mb6.1									
CD2					AMB		AMB			
	comp=Z,610nm,6.2s									
CD2					LR		LR			
	comp=N,1μm,21.6s,MS5.5									
CD2					LR		LR			
	comp=E,1μm,18.8s,MS5.5									
CD2					LR		LR			
	comp=Z,1μm,24.0s									
B12A	**Libby**	**95.91**	**36**	⇓	P		**P**	**15 41 48.8**	**0.0**	
	baz=96									
QLMT	**Earthquake Lak**	**95.92**	**41**	*e*	P		**P**	**15 41 49.1**	**+0.3**	
	comp=Z,23nm,0.9s,mb5.6									
F15A	**Butte**	**95.93**	**40**	⇓	P		**P**	**15 41 48.9**	**0.0**	
	baz=96									
H16A	**Russell Place,**	**95.95**	**41**	⇑	P		**P**	**15 41 49.3**	**+0.3**	
	baz=96,SNR=19									
HHC	**Hu-ho-hao-te**	**95.97**	**314**	*e*	P		**P**	**15 41 50.9**	**+1.7**	
HHC					AP		pP	15 42 08.3	+2.6	
HHC					XP		sP	15 42 15.4	+3.4	
HHC					PP		PP	15 45 45.9	+3.2	
HHC					SKS			15 52 20.8		
HHC					S		S	15 53 01.3	-1.7	
HHC					XS		sS	15 53 31.0	-0.1	
HHC					SS		SS	15 59 37.8	+2.2	
HHC					AMB		AMB			
	comp=Z,23nm,1.2s,mb5.5									
HHC					AMB		AMB			
	comp=Z,182nm,5.1s									
HHC					LR		LR			
	comp=N,810nm,26.2s,MS5.3									
HHC					LR		LR			
	comp=E,1μm,28.5s,MS5.3									
HHC					LR		LR			
	comp=Z,2μm,30.9s,MS5.5									
YFT	**Old Faithful**	**96.03**	**42**	*e*	P		**P**	**15 41 50.6**	**+1.2**	
	comp=Z,24nm,0.9s,mb5.6									
L20A	**Wamsutter**	**96.08**	**45**	⇑	P		**P**	**15 41 49.9**	**+0.2**	
	baz=96									
YMR	**Madison River**	**96.09**	**41**	*e*	P		**P**	**15 41 50.3**	**+0.7**	
	comp=Z,76nm,1.3s,mb6.0									
YMR					LR		LR			
	comp=Z,3μm,22.0s,MS5.7									
D14A	**Greenough**	**96.14**	**38**	⇑	P		**P**	**15 41 48.8**	**-1.1**	
	baz=96									
H17A	**Grant Village**	**96.15**	**42**	⇓	P		**P**	**15 41 50.9**	**+0.9**	
	baz=96,SNR=6.2									
MCK	**McKinley**	**96.17**	**13**	*e*	P		**P**	**15 41 48.0**	**-1.5**	
	comp=Z,43nm,0.9s,mb5.9									
MCK	**McKinley**	**96.17**	**13**		P		**P**	**15 41 48.8**	**-0.7**	
MCK					pmax		pmax			
	comp=Z,43nm,0.9s,mb5.9									
CHMT	**Chamberlain Mo**	**96.17**	**39**	*e*	P		**P**	**15 41 48.8**	**-1.2**	
	comp=Z,15nm,1.3s,mb5.2									
A12A	**Yaak River Ran**	**96.17**	**36**	⇑	P		**P**	**15 41 49.8**	**-0.1**	
	baz=96									
I18A	**Diamond G Ranc**	**96.18**	**43**	⇓	P		**P**	**15 41 50.0**	**-0.1**	
	baz=96									
E15A	**Deer Lodge**	**96.21**	**39**	⇑	P		**P**	**15 41 50.0**	**-0.1**	
	baz=96									
YNR	**Norris Junctio**	**96.28**	**41**	*e*	P		**P**	**15 41 51.6**	**+1.1**	
	comp=Z,54nm,1.4s,mb5.8									
LKWY	**Lake**	**96.35**	**42**	*e*	P		**P**	**15 41 51.9**	**+1.1**	
	comp=Z,10.0nm,0.8s,mb5.3									
LKWY					LR		LR			
	comp=Z,4μm,19.0s,MS5.9									
LKWY	**Lake**	**96.35**	**42**		P		**P**	**15 41 52.5**	**+1.7**	
LKWY					pmax		pmax			
	comp=Z,8.0nm,0.8s,mb5.2									
F16A	**Kennard Place,**	**96.38**	**40**	⇓	P		**P**	**15 41 50.9**	**0.0**	
	baz=96									
HIA	**Hailar**	**96.40**	**324**	*e*	P		**P**	**15 41 51.0**	**0.0**	
	comp=Z,18nm,1.0s,mb5.5									
HIA					LR		LR			
	comp=Z,2μm,21.0s,MS5.6									
HIA	**Hailar**	**96.40**	**324**	*e*	P		**P**	**15 41 51.0**	**+0.1**	
HIA					pmax		pmax			
	comp=Z,19nm,1.0s									
HIA					MLR		MLR			
	comp=Z,2μm,21.0s									
AMTX	**Amarillo**	**96.52**	**53**	*e*	P		**P**	**15 41 51.4**	**-0.5**	
	comp=Z,21nm,1.1s,mb5.5									
AMTX				*e*	pP		pP	15 42 07.8	-0.6	
AMTX					LR		LR			
	comp=Z,2μm,21.0s,MS5.5									
MENT	**Mentasta**	**96.54**	**15**	*e*	P		**P**	**15 41 51.1**	**-0.1**	
ISCO	**Idaho Springs**	**96.54**	**48**	*e*	P		**P**	**15 41 50.6**	**-1.3**	
	comp=Z,32nm,1.5s,mb5.5									
ISCO					LR		LR			
	comp=Z,2μm,22.0s,MS5.5									
ISCO	**Idaho Springs**	**96.54**	**48**		P		**P**	**15 41 52.4**	**+0.6**	
ISCO					pmax		pmax			
	comp=Z,33nm,1.5s,mb5.5									
RWWY	**Rawlins**	**96.59**	**45**	*e*	P		**P**	**15 41 51.5**	**-0.5**	
	comp=Z,53nm,1.4s,mb5.8									
G17A	**Pierce Place,**	**96.61**	**41**	⇓	P		**P**	**15 41 51.8**	**-0.2**	
	baz=97									
D15A	**Lincoln**	**96.65**	**39**	⇑	P		**P**	**15 41 52.0**	**-0.1**	
	baz=97									
L21A	**Rawlins**	**96.65**	**45**	⇑	P		**P**	**15 41 51.4**	**-0.8**	
	baz=97									
DLBC	**Dease Lake**	**96.71**	**23**		P		**P**	**15 41 51.8**	**-0.3**	
	comp=Z,9.0nm,0.9s,mb5.2,baz=214,slow=7.4,SNR=12									
DLBC					PKKPbc		PKKPbc	15 58 36.9	+0.1	
	comp=Z,2.9nm,0.5s,baz=349,slow=27,SNR=7.4									
DLBC	**Dease Lake**	**96.71**	**23**	*e*	P		**P**	**15 41 51.7**	**-0.4**	
E16A	**East Helena**	**96.80**	**40**	⇓	P		**P**	**15 41 52.3**	**-0.5**	
	baz=97									
HRY	**Holter Researc**	**96.83**	**39**	*e*	P		**P**	**15 41 51.9**	**-1.0**	
	comp=Z,8.5nm,0.8s,mb5.2									
F17A	**Fitzpatrick Pl**	**97.00**	**40**	⇓	P		**P**	**15 41 54.1**	**+0.3**	
	baz=97									
C15A	**Salmond Ranch,**	**97.05**	**38**	⇓	P		**P**	**15 41 53.2**	**-0.7**	
	baz=97									
B14A	**Marquette Ranc**	**97.05**	**37**	⇑	P		**P**	**15 41 53.0**	**-0.9**	
	baz=97									
WALA	**Waterton Lakes**	**97.15**	**37**	*e*	P		**P**	**15 41 53.2**	**-1.1**	
	comp=Z,17nm,1.0s,mb5.4									
E17A	**Martinsdale**	**97.22**	**40**	⇑	P		**P**	**15 41 54.7**	**0.0**	
	baz=97									
G18A	**Lazy EL Ranch,**	**97.28**	**41**	⇓	P		**P**	**15 41 55.0**	**0.0**	
	baz=97									
RLMT	**Red Lodge**	**97.33**	**42**	*e*	P		**P**	**15 41 55.7**	**+0.4**	
	comp=Z,11nm,1.0s,mb5.2									
RLMT					LR		LR			
	comp=Z,2μm,19.0s,MS5.6									
RLMT	**Red Lodge**	**97.33**	**42**	⇓	P		**P**	**15 41 55.5**	**+0.3**	
	baz=97									
A14A	**Double T Ranch**	**97.35**	**37**	⇑	P		**P**	**15 41 54.7**	**-0.5**	
	baz=97									
COLA	**College**	**97.41**	**12**	*e*	P		**P**	**15 41 53.6**	**-1.5**	
	comp=Z,29nm,0.8s,mb5.8									
COLA					LR		LR			
	comp=Z,2μm,20.0s,MS5.6									
COLA	**College**	**97.41**	**12**		P		**P**	**15 41 53.8**	**-1.3**	
COLA					pmax		pmax			
	comp=Z,29nm,0.8s,mb5.8									
TGUH	**Tegucigalpa,Un**	**97.46**	**78**		PFAKE			15 42 10.0	+13	
TGUH					LR		LR			
	comp=Z,2μm,21.0s,MS5.6									
GCMT	**Greycliff**	**97.49**	**41**	*e*	P		**P**	**15 41 55.6**	**-0.3**	
	comp=Z,8.2nm,0.9s,mb5.2									
GCMT				*e*	pP		pP	15 42 13.2	+0.7	
C16A	**Fuhringer Ranc**	**97.53**	**38**	⇓	P		**P**	**15 41 55.5**	**-0.6**	
	baz=98									
F18A	**Big Timber**	**97.53**	**41**	⇓	P		**P**	**15 41 56.1**	**-0.1**	
	baz=98									
IMA2	**Indian Mountai**	**97.53**	**10**	*e*	P		**P**	**15 41 54.5**	**-1.2**	
D17A	**Six Diamond Ra**	**97.72**	**39**	⇑	P		**P**	**15 41 56.7**	**-0.3**	
	baz=98									
C17A	**Wharram Farm,**	**97.96**	**39**	⇓	P		**P**	**15 41 57.3**	**-0.8**	
	baz=98									
D18A	**Linhart Farms,**	**98.23**	**40**	⇑	P		**P**	**15 41 59.2**	**-0.1**	
	baz=98									
HKT	**Hockley**	**98.25**	**60**		PFAKE			15 42 10.0	+10	
HKT					LR		LR			
	comp=Z,1μm,22.0s,MS5.4									
LPAZ	**La Paz**	**98.27**	**114**		P		**P**	**15 42 01.4**	**+1.1**	
	comp=Z,2.6nm,0.8s,mb4.8,baz=198,slow=1.8,SNR=12									
LPAZ					PKKPbc		PKKPbc	15 58 30.4	-0.1	
	comp=Z,1.2nm,0.8s,baz=208,slow=2.5,SNR=4.1									
LPAZ	**La Paz**	**98.27**	**114**	*e*	P		**P**	**15 42 01.3**	**+1.0**	
	comp=Z,5.7nm,0.9s,mb5.1									
LPAZ				*e*	pP		pP	15 42 18.4	+1.6	
LPAZ					LR		LR			
	comp=Z,872nm,22.0s,MS5.2									
LPAZ	**La Paz**	**98.27**	**114**		P		**P**	**15 42 01.7**	**+1.4**	
LPAZ					pmax		pmax			
	comp=Z,6.0nm,0.9s									
A16A	**West Butte Ran**	**98.29**	**38**	⇓	P		**P**	**15 41 59.6**	**+0.1**	
	baz=98									
OTAV	**Otavalo**	**98.34**	**95**		PFAKE			15 42 10.0	+9.3	
OTAV					LR		LR			
	comp=Z,2μm,21.0s,MS5.5									
BILL	**Bilibino**	**98.42**	**354**	⇓	*i* P		**P**	**15 41 58.8**	**-0.8**	
BILL	**Bilibino**	**98.42**	**354**	⇓	*e* P		**P**	**15 41 58.5**	**-1.1**	
BILL					*e*		pP	15 42 12.8	-3.3	
BILL					*e*			15 46 04.1		
BILL								15 52 26.0		
BILL					*e*	PS		PS	15 54 52.4	-3.0
BILL					*e*	SSS			16 03 55.9	
BILL						pmax		pmax		
	comp=Z,25nm,1.6s,mb5.5									
BILL						MLR		MLR		
	comp=Z,2μm,18.0s,MS5.5									
WMOK	**Wichita Mounta**	**98.48**	**55**		PFAKE			15 42 10.0	+9.3	
WMOK					LR		LR			
	comp=Z,890nm,20.0s,MS5.3									
LZH	**Lanzhou**	**98.51**	**307**	*e*	P		**P**	**15 42 02.5**	**+1.7**	
LZH					AP		pP	15 42 15.0	-2.3	
LZH					XP		sP	15 42 20.0	-3.6	
LZH					PP		PP	15 46 02.5	+0.2	
LZH					SKS			15 52 32.0		
LZH					S		S	15 53 22.3	-2.6	
LZH					XS		sS	15 53 44.3	-8.8	
LZH					PS		PS	15 55 01.3	+3.9	
LZH					SS		SS	16 00 10.1	-1.4	
LZH					AMB		AMB			
	comp=Z,20nm,1.5s,mb5.4									
LZH					AMB		AMB			
	comp=Z,124nm,6.6s									
LZH					LR		LR			
	comp=E,990nm,14.8s									
LZH					LR		LR			
	comp=Z,1μm,16.2s,MS5.6									
DAWY	**Dawson**	**98.51**	**16**	*e*	P		**P**	**15 41 59.2**	**-0.9**	
EGAK	**Eagle**	**98.70**	**15**	*e*	P		**P**	**15 42 00.6**	**-0.4**	
	comp=Z,14nm,0.8s,mb5.5									
EGAK					LR		LR			
	comp=Z,2μm,20.0s,MS5.5									
EGMT	**Eagleton**	**98.74**	**39**		PFAKE			15 42 10.0	+8.5	
EGMT					LR		LR			
	comp=Z,2μm,19.0s,MS5.7									
CLNS	**Chul'man**	**99.02**	**332**	*e*	P		**P**	**15 41 58.1**	**-4.4**	
CLNS					pmax		pmax			
	comp=Z,18nm,1.3s,mb5.4									
CLNS					pmax		pmax			
	comp=N,4.0nm,1.3s									
COLD	**Coldfoot**	**99.14**	**11**	*e*	P		**P**	**15 42 02.7**	**-0.2**	
	comp=N,9.3nm,1.0s,mb5.3									
OGNE	**Ogallala**	**99.46**	**48**		PFAKE			15 42 10.0	+5.1	
OGNE					LR		LR			
	comp=Z,2μm,20.0s,MS5.6									
RSSD	**Black Hills**	**99.88**	**45**	*e*	Pdif		Pdif	15 42 06.0	-0.9	
	comp=Z,24nm,0.8s									
RSSD					LR		LR			
	comp=Z,3μm,19.0s,MS5.8									
RSSD	**Black Hills**	**99.88**	**45**		P		Pdif	15 42 06.3	-0.6	
RSSD					pmax		pmax			
	comp=Z,24nm,0.8s,mb5.7									
CBKS	**Cedar Bluff**	**99.89**	**51**		PFAKE			15 42 20.0	+13	
CBKS					LR		LR			
	comp=Z,2μm,20.0s,MS5.6									
LAO	**LASA Array**	**99.97**	**42**	*e*	Pdif		Pdif	15 42 07.2	-0.1	
	comp=Z,8.3nm,0.9s									
LAO					LR		LR			
	comp=Z,2μm,19.0s,MS5.5									
EDM	**Edmonton**	**99.98**	**33**	*e*	Pdif		Pdif	15 42 06.0	-1.4	
EDM	**Edmonton**	**99.98**	**33**		P		Pdif	15 42 06.2	-1.1	
NATX	**Nacogdoches**	**100.01**	**59**		PFAKE			15 42 20.0	+13	
NATX					LR		LR			
	comp=Z,1μm,20.0s,MS5.5									
YAK	**Yakutsk**	**100.87**	**338**		PFAKE			15 42 20.0	+8.7	
YAK					LR		LR			
	comp=Z,2μm,22.0s,MS5.6									
YAK	**Yakutsk**	**100.87**	**338**	*e*	P		Pdif	15 42 09.8	-1.5	
YAK					pmax		pmax			
	comp=Z,20nm,0.9s									
YAK					pmax		pmax			
	comp=N,1μm,25.1s									
BCIP	**Isla Barro Col**	**101.50**	**86**		PFAKE			15 42 20.0	+5.9	
BCIP					LR		LR			
	comp=Z,1μm,21.0s,MS5.4									
DGMT	**Dagmar**	**102.08**	**41**		PFAKE			15 42 30.0	+13	
DGMT					LR		LR			
	comp=Z,2μm,22.0s,MS5.6									
MIAR	**Mount Ida**	**102.14**	**57**		PFAKE			15 42 30.0	+13	
MIAR					LR		LR			
	comp=Z,971nm,20.0s,MS5.3									
KSU1	**Kansas State U**	**102.15**	**52**		PFAKE			15 42 30.0	+13	
KSU1					LR		LR			
	comp=Z,1μm,21.0s,MS5.4									
SHL	**Shillong**	**102.46**	**292**	*e*	P		Pdif	15 42 18.5	+0.1	
SHL				*e*	x		x	15 46 32.0		
ULN	**Ulaanbaatar**	**102.49**	**318**	*e*	Pdif		Pdif	15 42 19.2	+0.7	
ULN					LR		LR			
	comp=Z,1μm,21.0s,MS5.4									
ULN	**Ulaanbaatar**	**102.49**	**318**		P		Pdif	15 42 20.8	+2.3	
SONM	**Songino Array**	**102.86**	**318**		P		Pdif	15 42 19.5	-0.7	
	comp=Z,2.3nm,0.8s,baz=129,slow=2.9,SNR=8.8									
SONM					PP		PP	15 46 30.7	-4.3	
	comp=Z,2.6nm,0.9s,baz=140,slow=7.8,SNR=4.4									
SONM					PKiKP		PKiKP	15 46 41.4	+1.4	
	comp=Z,1.7nm,0.7s,baz=92,slow=2.6,SNR=3.7									
SONM					PKKPbc		PKKPbc	15 58 19.3	+0.6	
	comp=Z,3.6nm,1.0s,baz=286,slow=2.7,SNR=9.5									
SONM	**Songino Array**	**102.86**	**318**		P		Pdif	15 42 19.5	-0.6	
SONM								15 46 30.7		
GTA	**Gaotai**	**102.92**	**308**	*e*	P		Pdif	15 42 20.8	+0.4	
GTA					AP			15 42 37.9		
GTA					XP			15 42 45.0		
GTA					SKS			15 52 54.3		
GTA					S		Sdif	15 53 58.4	-3.4	
GTA					XS			15 54 28.0		
GTA					PS		PS	15 55 45.3	+0.8	
GTA					SS		SS	16 01 11.3	-1.5	
GTA					AMB		AMB			
	comp=Z,6.0nm,1.1s									
GTA					AMB		AMB			
	comp=Z,184nm,6.8s									
GTA					LR		LR			
	comp=N,494nm,17.8s,MS5.3									
GTA					LR		LR			
	comp=E,703nm,19.6s,MS5.3									
GTA					LR		LR			
	comp=Z,1μm,27.7s									
VBMS	**Vicksburg**	**103.33**	**60**		PFAKE			15 42 30.0	+7.7	
VBMS					LR		LR			
	comp=Z,2μm,22.0s,MS5.5									
INK	**Inuvik**	**103.36**	**16**	*e*	Pdif		Pdif	15 42 20.4	-2.0	
	comp=Z,211nm,1.0s									
INK	**Inuvik**	**103.36**	**16**		P		Pdif	15 42 21.1	-1.3	
INK					pmax		pmax			
	comp=Z,210nm,1.0s									
ECSD	**EROS,Sioux Fal**	**104.33**	**48**		PFAKE			15 42 40.0	+13	
ECSD					LR		LR			
	comp=Z,2μm,20.0s,MS5.6									
LSA	**Lhasa**	**104.89**	**296**		PKP		PKiKP	15 46 44.6	+0.3	
LSA	**Lhasa**	**104.89**	**296**		PFAKE			15 42 40.0	+11	
LSA					LR		LR			
	comp=Z,712nm,20.0s,MS5.2									
YKA	**Yellowknife Ar**	**105.04**	**25**		Pdiff		Pdif	15 42 29.6	-0.2	
	comp=Z,1.1nm,0.9s,baz=230,slow=4.6,SNR=3.7									
YKA					PKiKP		PKiKP	15 46 42.5	-1.0	
	comp=Z,1.7nm,0.6s,baz=251,slow=1.4,SNR=11									
YKA					PKKPbc		PKKPbc	15 58 11.3	-1.3	
	comp=Z,9.2nm,0.8s,baz=40,slow=3.0,SNR=21									
YKA					PKKP		PKKPab	15 58 27.9	+1.8	
	comp=Z,8.8nm,0.9s,baz=46,slow=4.8,SNR=14									
YKA					PKPPKP			16 06 38.7		
	comp=Z,1.9nm,0.8s,baz=36,slow=1.8,SNR=4.8									
YKA	**Yellowknife Ar**	**105.04**	**25**		Pdif		Pdif	15 42 29.6	-0.2	
YKA					PKPdf		PKiKP	15 46 42.5	-1.0	
YKA					PKKPbc		PKKPbc	15 58 11.3	-1.3	
YKA					PKKP		PKKPab	15 58 27.9	+1.8	
YKA					P'P'			16 06 38.7		
OXF	**Oxford**	**105.19**	**59**		PFAKE			15 46 50.0	+5.3	
OXF					LR		LR			
	comp=Z,1μm,20.0s,MS5.5									
CCM	**Cathedral Cave**	**105.41**	**55**		PFAKE			15 46 50.0	+5.0	
CCM					LR		LR			
	comp=Z,1μm,19.0s,MS5.4									
BRAL	**Brewton**	**105.44**	**63**		PFAKE			15 46 50.0	+4.7	
BRAL					LR		LR			
	comp=Z,1μm,21.0s,MS5.4									
SCIA	**State Center**	**105.74**	**51**		PFAKE			15 47 00.0	+15	
SCIA					LR		LR			
	comp=Z,1μm,22.0s,MS5.4									
ZAK	**Zakamensk**	**105.89**	**319**	*e*	P		Pdif	15 42 35.5	+1.9	
ZAK					pmax		pmax			
	comp=Z,4.0nm,1.3s									
TLY	**Talaya**	**106.29**	**321**		PFAKE			15 47 00.0	+14	
TLY					LR		LR			
	comp=Z,1μm,20.0s,MS5.4									
LRAL	**Lakeview Retre**	**106.36**	**61**		PFAKE			15 47 00.0	+13	
LRAL					LR		LR			
	comp=Z,1μm,21.0s,MS5.4									
FFC	**Flin Flon**	**106.43**	**36**		PFAKE			15 47 00.0	+14	
FFC					LR		LR			
	comp=Z,2μm,20.0s,MS5.6									
TAPN	**Taplejung**	**106.60**	**292**	*e*	P		PKiKP	15 46 47.3	-0.2	
	comp=Z,65nm,1.1s									
ODAN	**Odare**	**106.65**	**292**	*e*	P		PKiKP	15 46 47.4	-0.2	
	comp=Z,36nm,0.7s									
AGMN	**Agassiz Refuge**	**106.87**	**44**		PFAKE			15 47 00.0	+13	
AGMN					LR		LR			
	comp=Z,2μm,22.0s,MS5.5									
WVT	**Waverly**	**107.05**	**58**		PFAKE			15 47 00.0	+12	
WVT					LR		LR			
	comp=Z,935nm,20.0s,MS5.3									
TRD	**Trivandrum**	**107.26**	**270**	*ex*		x		15 46 40.2		
TRD				*ex*		x		15 53 22.0		
RAMN	**Ramite**	**107.32**	**291**	*e*	P		PKiKP	15 46 48.7	-0.2	
	comp=Z,44nm,0.7s									
KOD	**Kodaikanal**	**107.63**	**272**	*ex*		x		15 46 49.7		
ULM	**Lac du Bonnet**	**107.71**	**42**		PKKP		PKKPab	15 58 18.0	+3.1	
	comp=Z,11nm,0.9s,baz=89,slow=7.5,SNR=5.1									
ULM	**Lac du Bonnet**	**107.71**	**42**		PFAKE			15 47 00.0	+11	
ULM					LR		LR			
	comp=Z,2μm,19.0s,MS5.7

WMQ SS SS 16 03 31.0 +2.1
WMQ PP PP
comp=Z,305nm,8.0s
WMQ LR LR
comp=N,665nm,22.0s,MS5.6
WMQ LR LR
comp=E,1μm,22.0s,MS5.6
WMQ LR LR
comp=Z,2μm,22.0s,MS5.6
GOA Goa 113.19 275 *e*P PKiKP 15 47 00.2 0.0
SDDR Presa de Saban 113.33 81 PFAKE 15 47 10.0 +10
SDDR LR LR
comp=Z,1μm,22.0s,MS5.5
BHPL Bhopal 113.37 284 *e*P PKiKP 15 46 59.8 -0.6
BDFB Brasilia 113.79 126 PKiKP PKiKP 15 47 01.1 -0.4
comp=Z,1.1nm,0.5s,baz=87,slow=22,SNR=5.9
BDFB PKKPbc PKKPbc 15 57 50.4 +7.3
comp=Z,3.7nm,0.7s,baz=70,slow=12,SNR=7.0
BDFB Brasilia 113.79 126 PKPdf PKiKP 15 47 01.1 -0.4
BDFB PKKPbc PKKPbc 15 57 50.4 +7.3
BDFB LR LR
comp=Z,967nm,19.0s,MS5.4
KRAR Krasnoyarsk 113.85 322 *i* PKIKP PKiKP 15 46 59.9 -0.4
CNNC Cliffs of the 114.17 62 PFAKE 15 47 10.0 +8.4
CNNC LR LR
comp=Z,871nm,21.0s,MS5.3
MCWV Mont Chateau 114.22 57 PFAKE 15 47 10.0 +8.5
MCWV LR LR
comp=Z,2μm,21.0s,MS5.6
POO Poona 114.47 278 *e*P PKiKP 15 46 58.5 -4.2
ABPO Ambohimpanom 114.70 228 *e*PKPdf PKiKP 15 47 03.8 +0.7
ABPO LR LR
comp=Z,2μm,21.0s,MS5.7
ERPA Erie 114.92 54 PFAKE 15 47 10.0 +7.2
ERPA LR LR
comp=Z,1μm,19.0s,MS5.6
OPO Ambohidratompo 115.05 228 PKKPab PKKPab 15 57 46.3 -1.0
comp=Z,3.4nm,0.8s,baz=303,slow=6.0,SNR=6.3
SUR Sutherland 115.49 198 PKP PKPdf 15 47 05.5 +1.1
comp=Z,26nm,0.8s,baz=134,slow=1.8,SNR=13
SUR Sutherland 115.49 198 *e*PKPdf PKPdf 15 47 05.0 +0.6
SUR LR LR
comp=Z,2μm,21.0s,MS5.6
CBN Corbin 115.56 59 PFAKE 15 47 10.0 +5.9
CBN LR LR
comp=Z,1μm,19.0s,MS5.5
SSPA Standing Stone 115.96 56 PFAKE 15 47 10.0 +5.2
SSPA LR LR
comp=Z,1μm,20.0s,MS5.5
SMLA Simla 116.55 292 *i* P PKPdf 15 47 04.8 -1.4
RES Resolute Bay 116.82 17 *e*PKPdf PKPdf 15 47 04.1 -1.4
RES Resolute Bay 116.82 17 PKIKP PKPdf 15 47 04.5 -1.0
AJM Ajmer 116.95 286 *e*P PKPdf 15 47 06.3 -0.9
AJM *i* x x 15 48 03.1
SJG San Juan 117.38 84 PFAKE 15 47 20.0 +12
SJG LR LR
comp=Z,1μm,21.0s,MS5.5
MK31 Makanchi Array 117.54 310 *e*PKPdf PKPdf 15 47 06.5 -1.1
MKAR Makanchi Array 117.54 310 PKP PKPdf 15 47 06.4 -1.2
comp=Z,23nm,0.7s,baz=176,slow=0.8,SNR=96
MKAR PKKPbc PKKPbc 15 57 30.7 0.0
comp=Z,3.3nm,0.9s,baz=288,slow=4.8,SNR=6.4
BOSA Boshof 117.67 203 PKP PKPdf 15 47 09.5 +0.9
comp=Z,12nm,0.5s,baz=156,slow=2.2,SNR=16
BOSA PKKPbc PKKPbc 15 57 29.8 -0.3
comp=Z,3.4nm,0.7s,baz=7.8,slow=13,SNR=5.7
BOSA Boshof 117.67 203 *e*PKPdf PKPdf 15 47 09.3 +0.7
BOSA LR LR
comp=Z,2μm,21.0s,MS5.6
ZAA0 Zalesovo Array 117.75 319 *e*PKPdf PKPdf 15 47 06.2 -1.6
ZALV Zalesovo Beam 117.75 319 PKP PKPdf 15 47 06.3 -1.5
comp=Z,13nm,0.7s,baz=158,slow=1.4,SNR=44
BINY Binghamton 117.79 55 PFAKE 15 47 20.0 +12
BINY LR LR
comp=Z,1μm,19.0s,MS5.5
THN Thein Dam 118.15 293 *e*P PKPdf 15 47 07.9 -1.4
MSEY Mahe Island 118.37 245 PFAKE 15 47 20.0 +10
MSEY LR LR
comp=Z,2μm,19.0s,MS5.7
GRGR Grenville 118.66 92 PFAKE 15 47 20.0 +9.2
GRGR LR LR
comp=Z,1μm,22.0s,MS5.5
NVS Novosibirsk 118.85 319⇑ *i* PKIKP PKPdf 15 47 08.0 -1.9
NVS *e* 15 47 28.8
NVS *e* 15 48 36.8
NVS pmax pmax
comp=N,17nm,1.1s
NVS pmax pmax
comp=E,25nm,1.1s
NVS pmax pmax
comp=Z,58nm,1.1s
LONY Lake Ozonia 119.41 53 PFAKE 15 47 20.0 +8.7
LONY LR LR
comp=Z,1μm,21.0s,MS5.5
NCB Newcomb 119.50 54 PFAKE 15 47 20.0 +8.5
NCB LR LR
comp=Z,895nm,21.0s,MS5.4
BHJ Bhuj 119.95 281 *e*P PKPdf 15 47 11.8 -1.3
KSH Kashi 120.07 301 PKP PKPdf 15 47 13.6 +0.8
KSH *e*PKS 15 50 48.8
KSH *e*SKS SKSdf 15 54 20.6 +0.8
KSH PP PP
comp=Z,824nm,4.4s
KSH LR LR
comp=N,2μm,16.8s,MS6.0
KSH LR LR
comp=E,2μm,14.6s,MS6.0
KSH LR LR
comp=Z,1μm,5.1s
QUA2 Belchertown 120.41 56 *e*PKPdf PKPdf 15 47 12.6 -0.7
ULHL Ulahol 120.57 304 P PKPdf 15 47 14.0 +0.3
SNR=22
KURK Kurchatov 120.79 314 ⇓P PKPdf 15 47 13.2 -0.5
SNR=22
KURK Kurchatov 120.79 314 *e*PKIKP PKPdf 15 47 12.8 -1.0
KURK MLR MLR
comp=Z,918nm,20.0s,MS5.4
LBTB Lobatse 120.85 205 PKP PKPdf 15 47 15.8 +0.9
comp=Z,8.6nm,0.6s,baz=179,slow=4.4,SNR=13
LBTB PKKPbc PKKPbc 15 57 17.2 -1.3
comp=Z,6.1nm,0.9s,baz=355,slow=3.5,SNR=7.0
LBTB Lobatse 120.85 205 *e*PKPdf PKPdf 15 47 15.4 +0.5
LBTB LR LR
comp=Z,2μm,21.0s,MS5.8
BBGH Gun Hill 120.94 92 PFAKE 15 47 20.0 +4.9
BBGH LR LR
comp=Z,3μm,22.0s,MS5.8
LBNH Lisbon 121.17 54 PFAKE 15 47 20.0 +5.3
LBNH LR LR
comp=Z,958nm,21.0s,MS5.4
WES Weston 121.18 56 PFAKE 15 47 20.0 +5.2
WES LR LR
comp=Z,1μm,19.0s,MS5.5
TKM2 Tokmak 2 121.19 305 *e*PKPdf PKPdf 15 47 14.0 -0.8
TKM2 LR LR
comp=Z,843nm,21.0s,MS5.4
TKM2 Tokmak 2 121.19 305 P PKPdf 15 47 14.5 -0.3
SNR=49
KZA Kyzart 121.25 304 P PKPdf 15 47 15.7 +0.7
SNR=46
KBK Karagaybulak 121.60 304 P PKPdf 15 47 15.6 0.0
SNR=32
UCH Uchtor 121.81 304 *e*PKPdf PKPdf 15 47 16.5 +0.5
UCH LR LR
comp=Z,319nm,22.0s,MS4.9
UCH Uchtor 121.81 304 P PKPdf 15 47 16.8 +0.8
SNR=16
CHMS Chumysh 121.81 304 P PKPdf 15 47 15.7 -0.3
SNR=48
FRU Bishkek 121.87 304⇑ *i* PKIKP PKPdf 15 47 16.0 -0.1
FRU *e* 15 47 40.0
FRU pmax pmax
comp=Z,150nm,1.6s
AAK Ala-Archa 121.92 304 P PKPdf 15 47 16.2 0.0
SNR=38
USP Ospenovka 122.05 305 P PKPdf 15 47 16.1 -0.3
SNR=44
AML Almayashu 122.38 303 *e*PKPdf PKPdf 15 47 17.1 -0.1
AML Almayashu 122.38 303 P PKPdf 15 47 17.9 +0.7
SNR=5.4
EKS2 Erkin-Say 122.44 304 *e*PKPdf PKPdf 15 47 17.1 -0.1
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.5
EKS2 Erkin-Say 122.44 304 P PKPdf 15 47 17.4 +0.1
SNR=34
PKME Peaks-Kenny Pk 123.22 53 *e*PKPdf PKPdf 15 47 17.6 -1.0
PKME LR LR
comp=Z,1μm,22.0s,MS5.5
BBSR BB Station 123.69 69 PFAKE 15 47 30.0 +10
BBSR LR LR
comp=Z,2μm,22.0s,MS5.7
KBL Kabul 124.10 293 *e*PKPdf PKPdf 15 47 20.7 +0.1
KK31 Karatay Array 124.88 304 PKIKP PKPdf 15 47 21.3 -0.6
KK31 pmax pmax
comp=Z,92nm,0.7s
VOSK Vostochnaya 125.76 316 PKIKP PKPdf 15 47 22.3 -0.9
VOSK pmax pmax
comp=Z,121nm,0.8s
SCHQ Schefferville 125.89 42 PKP PKPdf 15 47 22.5 -0.9
comp=Z,20nm,0.9s,baz=16,slow=2.2,SNR=11
SCHQ Schefferville 125.89 42 *e*PKPdf PKPdf 15 47 22.1 -1.3
SCHQ LR LR
comp=Z,2μm,22.0s,MS5.8
BVA0 Borovoye Array 126.14 316 *i* PKIKP PKPdf 15 47 22.7 -1.3
BVA0 pmax pmax
comp=Z,26nm,0.9s
BRVK Borovoye 126.20 316⇑ P PKPdf 15 47 23.9 -0.2
SNR=27
BRVK Borovoye 126.20 316 *e*PKIKP PKPdf 15 47 23.3 -0.8
BRVK MLR MLR
comp=Z,1μm,22.0s,MS5.5
LSZ Lusaka 128.44 213⇑ P PKPdf 15 47 30.1 +0.5
SNR=12
LSZ Lusaka 128.44 213 PKP PKPdf 15 47 30.3 +0.7
comp=Z,41nm,1.1s,baz=100,slow=2.8,SNR=3.8
LSZ Lusaka 128.44 213 *e*PKPdf PKPdf 15 47 30.1 +0.5
LSZ LR LR
comp=Z,980nm,20.0s,MS5.5
LSZ Lusaka 128.44 213 PKIKP PKPdf 15 47 30.3 +0.7
LSZ pmax pmax
comp=Z,41nm,1.1s
TSUM Tsumeb 128.87 199 PKP PKPdf 15 47 31.6 +1.3
comp=Z,6.8nm,0.6s,baz=165,slow=1.7,SNR=7.9
TSUM PP PP 15 49 36.5 +0.4
comp=Z,8.5nm,0.8s,baz=140,slow=4.2,SNR=6.3
TSUM Tsumeb 128.87 199 PKPdf PKPdf 15 47 31.4 +1.1
TSUM LR LR
comp=Z,2μm,19.0s,MS5.7
RCBR Riachuelo 129.09 128 PFAKE 15 47 40.0 +9.1
RCBR LR LR
comp=Z,2μm,21.0s,MS5.7
JMDO Jabal Madar 129.55 275 P PKPdf 15 47 31.4 0.0
SNR=17
SMDO Samad 129.84 276 P PKPdf 15 47 32.4 +0.4
SNR=17
BIDO Bidbid 129.93 277 P PKPdf 15 47 32.6 +0.4
SNR=5.8
BSY Bisya 130.46 275 P PKPdf 15 47 32.6 -0.5
SNR=27
HOQ Hoqain 130.66 276 P PKPdf 15 47 33.4 -0.1
SNR=8.2
KBS Kingsbay 130.76 357 PFAKE 15 47 40.0 +7.9
KBS LR LR
comp=Z,2μm,22.0s,MS5.7
KBS Kingsbay 130.76 357 *e*PKPdf PKPdf 15 47 32.6 +0.4
KBS *e*PP PP 15 49 45.8 -2.8
RBK Rabkut 131.05 268⇑ P PKPdf 15 47 34.5 +0.1
SNR=5.8
ARQ Araqi 131.25 276 P PKPdf 15 47 34.4 -0.2
SNR=5.9
SPB4 Spitsbergen Ar 131.28 356 *e*PKPdf PKPdf 15 47 32.8 -0.4
SFJD Kangerlussuaq 131.59 25 PFAKE 15 47 40.0 +6.1
SFJD LR LR
comp=Z,2μm,22.0s,MS5.8
SVE Sverdlovsk 131.60 321 *i* PKIKP PKPdf 15 47 32.9 -1.3
SVE *e* 16 00 08.2
SVE pmax pmax
comp=Z,50nm,0.9s
ABTO Aybut 131.78 267 P PKPdf 15 47 36.4 +0.7
SNR=7.0
HATD Hatta, Dubai 132.08 278 P PKPdf 15 47 35.9 -0.3
SNR=23
DAG Danmarks Havn 132.12 6⇑ *i* P PKPdf 15 47 33.4 -1.3
comp=Z,25nm,0.8s
SUMG Summit 132.28 15 *e*PKPdf PKPdf 15 47 34.7 -0.4
AB31 Akbulak array 132.67 311 PKIKP PKPdf 15 47 35.5 -1.0
AB31 pmax pmax
comp=Z,27nm,0.9s
ARU Arti 132.79 321 *e*PKPdf PKPdf 15 47 35.7 -0.8
ARU LR LR
comp=Z,2μm,20.0s,MS5.7
ARU Arti 132.79 321*c* *i* PKIKP PKPdf 15 47 35.8 -0.7
SOKR Solikamsk 133.07 325*d* *i* PKIKP PKPdf 15 47 37.3 +0.4
SOKR pmax pmax
comp=Z,100nm,0.8s
SHEL Horse Pasture 133.72 170 PFAKE 15 47 50.0 +10
SHEL LR LR
comp=Z,1μm,21.0s,MS5.7
AKTO Aktyubinsk 133.85 313 PKIKP PKPdf 15 47 38.1 -0.6
AKTO pmax pmax
comp=Z,8.0nm,0.8s
LVZ Lovozero 137.46 342 *i* P PKPdf 15 47 43.8 -1.1
LVZ LR LR
comp=Z,2μm,22.0s,MS5.8
LVZ Lovozero 137.46 342 *i* PKIKP PKPdf 15 47 43.7 -1.2
KEV Kevo 137.72 347 *e*PKPpre 15 47 35.3
KEV *e*PKPdf PKPdf 15 47 45.0 -0.3
KEV LR LR
comp=Z,3μm,22.0s,MS6.0
APA Apatity 138.02 343⇈ *e*PKHKP 15 47 36.0
APA *i* 15 47 44.5
APA pmax pmax
comp=Z,76nm,1.2s
APA MLR MLR
comp=Z,2μm,17.0s,MS5.9
ARCES ARCESS Array B 138.18 348 PKhKP 15 47 35.2
comp=Z,28nm,0.7s,baz=44,slow=4.0,SNR=35
ARCES PKP PKPdf 15 47 45.4 -0.8
comp=Z,62nm,0.6s,baz=48,slow=1.3,SNR=23
ARE0 ARCESS Array S 138.19 348 *e*PKPdf PKPdf 15 47 45.4 -0.8
KTK1 Kautokeino 139.04 349 *e* PKPdf 15 47 40.4 -7.3
ASCN Ascension 139.14 155 PFAKE 15 48 00.0 +10
ASCN LR LR
comp=Z,1μm,20.0s,MS5.6
TRO Tromso 139.14 351 *e*P PKPdf 15 47 42.3 -5.7
QRN Al-Qurain 140.22 280 *e*P PKPdf 15 47 44.6 -6.6
baz=280
QRN AMb AMB 15 47 54.7
comp=Z,384nm,0.8s,baz=280
KLMR Klimovskoe 140.41 332 *i* PKHKP 15 47 42.5
KLMR *e* 15 50 45.3
KLMR SS SS 16 09 10.3 +1.2
UMR Umm Al-Rimmam 140.57 281 *e*P PKPdf 15 47 44.8 -7.0
baz=281
UMR AMb AMB 15 47 55.7
comp=Z,342nm,0.9s,baz=281
RDF Al-Radifah 140.57 280 *e*P PKPdf 15 47 45.0 -6.8
baz=280
RDF AMb AMB 15 47 55.8
comp=Z,153nm,1.0s,baz=280
NAY Al-Naaiem 140.91 281 *e*P PKPdf 15 47 45.3 -7.1
baz=281
NAY AMb AMB 15 47 56.2
comp=Z,80nm,0.9s,baz=281
MIB Mutribah 140.94 281 *e*P PKPdf 15 47 44.6 -7.8
baz=282
MIB AMb AMB 15 47 56.5
comp=Z,186nm,0.9s,baz=282
LOF Lofoten 141.21 353 *e*P PKPdf 15 47 50.3 -1.4
STEI Steigen 141.21 352 *e* PKPdf 15 47 44.5 -7.2
MAK Makhachkala 141.67 302 *e*PKIKP PKPdf 15 47 50.8 -2.5
MAK *e* 15 48 07.8
MAK *e* 15 48 16.8
MAK *e* 15 50 58.3
MAK *e*SS SS 16 09 25.9 +0.5
MAK pmax pmax
comp=Z,495nm,1.3s
JOF Joensuu 142.04 339 *e*pkp 15 47 46.8
comp=Z,79nm,0.8s
JOF Joensuu 142.04 339 *e*PKHKP 15 47 46.8
JOF pmax pmax
comp=Z,79nm,0.8s
BORG Borgarnes 142.25 16 PFAKE 15 48 00.0 +6.3
BORG LR LR
comp=Z,1μm,21.0s,MS5.7
FLOS Flostrand 142.96 352 *e*P PKPdf 15 47 50.7 -4.2
MOR8 Moi Rana 142.99 352 *e*P PKPdf 15 47 49.6 -5.4
MOR8 AMb AMB 15 47 53.3
comp=Z,47nm,0.9s
STOK Stokkvaagen 143.00 353 *e*P PKPdf 15 47 50.8 -4.1
STOK AMb AMB 15 47 54.3
comp=Z,118nm,0.8s
DGRG David-gareji 143.36 300 P PKPdf 15 47 53.7 -2.7
MTA Mtatsminda 143.78 301 P PKPdf 15 47 54.4 -2.8
TBLG Delisi 143.81 301 P PKPdf 15 47 55.2 -2.0
VRHR Novokhopersk 143.86 317 *e*PKIKP PKPdf 15 47 54.2 -2.7
VRHR pmax pmax
comp=Z,40nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.5s
GNI Garni 143.92 298 *e*P PKPdf 15 47 54.3 -3.1
GNI Garni 143.92 298 ⇓P PKPdf 15 47 56.9 -0.5
SNR=18
GNI Garni 143.92 298 *e*PKIKP PKPdf 15 47 54.7 -2.7
GNI MLR MLR
comp=Z,1μm,22.0s
MOS Moscow 144.01 326 *e*P 15 47 51.1
MOS Moscow 144.01 326 *e*PKHKP 15 47 50.9
MOS *e* 15 51 09.7
MOS pmax pmax
comp=Z,141nm,1.1s
MOS MLR MLR
comp=Z,1μm,21.0s,MS5.7
KAF Kangasniemi 144.16 341 *e*pkp PKPdf 15 47 52.5 -4.6
baz=38,slow=3.3
GOR Gori 144.26 301 P PKPdf 15 47 57.0 -0.9
CLDR Caldiran 144.60 296 *e*P PKPdf 15 47 57.8 -0.8
ONI Oni 144.68 302 P PKPdf 15 47 58.2 -0.5
DYDN Diyadin 144.76 297 *i* P PKPdf 15 47 58.5 -0.4
HKR Hakkari 144.76 294 *e*P PKPdf 15 47 57.9 -1.1
HAKT HAKKARI 144.79 294 *i* P PKPdf 15 48 01.6 +2.6
OBN Obninsk 144.85 326 *e*PKPpre PKPdf 15 47 56.8 -1.7
OBN LR LR
comp=Z,1μm,21.0s,MS5.6
OBN Obninsk 144.85 326*a* *i* PKIKP PKPdf 15 47 57.0 -1.5
OBN *e* 15 48 22.1
OBN *e* 16 03 41.3
OBN *e*SS SS 16 09 57.2 -3.6
OBN pmax pmax
comp=Z,410nm,1.0s
OBN MLR MLR
comp=Z,1μm,22.0s,MS5.5
NSS Namsos 144.87 353⇑ *i* P PKPdf 15 47 55.6 -2.7
VANB Van 145.03 295 *e*P PKPbc 15 47 59.5 +0.6
KIV Kislovodsk 145.03 305 P PKPbc 15 47 58.9 +0.2
SNR=20
KIV Kislovodsk 145.03 305 *e*PKP PKPdf 15 47 58.3 -0.9
KIV LR LR
comp=Z,1μm,20.0s,MS5.7
KIV Kislovodsk 145.03 305 *e*PKHKP 15 47 52.1
KIV *i* 15 47 56.8
KIV *e*SS SS 16 10 02.2 -1.8
KIV pmax pmax
comp=Z,104nm,0.9s
KIV MLR MLR
comp=Z,1μm,21.0s,MS5.7
KIV Kislovodsk 145.03 305⇑ *i* P PKPbc 15 47 58.6 -0.1
VOR Voronezh 145.03 319⇓ *i* PKIKP PKPdf 15 47 56.5 -2.4
VOR pmax pmax
comp=Z,350nm,0.3s
VANT Van 145.03 295 *e*P PKPbc 15 47 59.9 +1.0
KARS Kars 145.15 299 *e*P PKPbc 15 47 59.4 +0.2
VSR Storozhevoye 145.25 318*c* *i* PKIKP PKPdf 15 47 58.4 -0.9
VSR pmax pmax
comp=Z,90nm,0.7s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,20nm,0.5s
VORD Divnogorie 145.28 318*c* *i* PKIKP PKPdf 15 47 58.4 -1.0
VORD pmax pmax
comp=Z,150nm,0.7s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,90nm,1.2s
AGRB Hanur-Agry 145.29 297 *e*P PKPbc 15 48 00.2 +0.5
TUTA Tutak 145.44 297 *i* P PKPdf 15 48 00.7 +0.6
TATV Tatvan 145.91 295 *i* P PKPdf 15 48 02.3 +1.4
ARTV Artvin 145.97 300 *i* P PKPdf 15 48 00.9 0.0
DAGI Agillar 145.99 300 *i* P PKPdf 15 48 01.1 +0.2
HOMI Horasan 146.10 298 *i* P PKPdf 15 48 02.1 +0.9
DDEM Demirkent 146.13 300 *i* P PKPdf 15 48 01.0 -0.2
DBOC Borcka 146.15 300 *i* P PKPdf 15 48 01.3 +0.1
DBAD Bademkaya 146.16 300 *i* P PKPdf 15 48 00.8 -0.5
BCA Borcka 146.17 301 *e*P PKPdf 15 48 00.8 -0.4
EZM Erzurum 146.52 298 *e*P PKPdf 15 48 03.2 +1.3
BEST Besiri 146.71 294 *i* P PKPdf 15 48 03.5 +1.3
BNGL BINGOL 146.76 296 *i* P PKPdf 15 48 03.2 +0.9
MARD Mardin 147.12 293 *i* P PKPdf 15 48 02.7 -0.3
KOPT Kop Dagi 147.18 298 *i* P PKPbc 15 48 06.4 +1.1
MOL Molde 147.20 355 *e*P PKPdf 15 48 04.2 +1.9
SOC Sochi 147.21 305*c* *i* PKIKP PKPdf 15 48 01.9 -1.0
SOC *i* 15 48 07.0
SOC *e* 15 51 29.9
SOC *e*PPP 15 54 49.2
SOC pmax pmax
comp=Z,168nm,0.8s
SOC pmax pmax
comp=Z,120nm,0.8s
SOC MLR MLR
comp=Z,1μm,19.0s,MS5.7
DOMB Dombas 147.60 354⇑ *i* P PKPdf 15 48 05.0 +2.0
DOMB AMb AMB 15 48 08.1
comp=Z,262nm,0.8s
KTUT Trabzon 147.62 300 *e*P PKPdf 15 48 04.5 +0.9
MACK Trabzon 147.62 300 *i* P PKPbc 15 48 07.7 +1.2
EZC Erzincan 147.72 298 *e*P PKPdf 15 48 05.6 +1.7
GUMT Gumushane 147.90 299 *e*P PKPbc 15 48 08.4 +1.1
PTK Pertek 148.13 296 *e*P PKPdf 15 48 05.5 +0.9
SVRC Sivrice-ELAZID 148.24 295 *e*P PKPdf 15 48 06.3 +1.5
NB2 NORSAR Subarra 148.34 352 PKP PKPbc 15 48 07.3 -0.4
comp=Z,387nm,0.7s,baz=12,slow=2.9
NB2 NORSAR Subarra 148.34 352 PKP PKPbc 15 48 07.3 -0.4
baz=12,slow=2.9
NOA NORSAR Array B 148.34 352 PKP PKPdf 15 48 03.1 -1.1
comp=Z,102nm,0.7s,baz=17,slow=4.5,SNR=144
NOA PKPbc PKPbc 15 48 06.6 -1.1
comp=Z,158nm,0.7s,baz=356,slow=0.1,SNR=579
ESPY Espiye-Giresun 148.41 300 *e*P PKPdf 15 48 05.2 +0.2
ELZG Elazig 148.48 296 *i* P PKPbc 15 48 09.4 +0.5
ANN Anapa 148.52 308 *i* PKP2 PKPbc 15 48 07.8 -0.9
ANN pmax pmax
comp=Z,467nm,0.9s
ANN MLR MLR
comp=N,2μm,24.0s,MS5.8
ANN MLR MLR
comp=E,796nm,24.0s,MS5.8
ANN MLR MLR
comp=Z,1μm,24.0s,MS5.7
NAO01 NORSAR Array S 148.57 352 *e*PKPdf PKPdf 15 48 04.2 -0.5
NAO01 *e*PKPbc PKPbc 15 48 07.7 -0.6
NAO01 *e*PKPab PKPab 15 48 11.1 -0.9
URFA Urfa 148.67 294 *e*P PKPdf 15 48 06.0 +0.4
HYA Hoyanger 148.68 356⇑ *i* P PKPbc 15 48 09.1 +0.5
HYA AMb AMB 15 48 09.7
comp=Z,277nm,1.1s
KEMA Kemaliye 148.79 297 *i* P PKPbc 15 48 10.7 +1.1
SUE Sulen 148.86 357⇑ *i* P PKPbc 15 48 08.8 -0.3
SUE AMb AMB 15 48 09.3
comp=Z,430nm,0.9s
MNK Minsk 149.26 330 *e*PKIKP PKPdf 15 48 05.0 -0.9
MNK pmax pmax
comp=N,6μm,1.0s
MNK pmax pmax
comp=E,4μm,1.0s
MNK pmax pmax
comp=Z,6μm,1.0s
AKCD Akcadag 149.33 295 *i* P PKPbc 15 48 11.1 +0.1
DARE Darende-Malaty 149.36 297 *e*P PKPbc 15 48 10.9 -0.1
ASK Askoy 149.42 357 *e*P PKPbc 15 48 09.1 -1.4
RUND Rundenannen 149.48 357⇑ *i* P PKPbc 15 48 12.7 +2.0
BER Bergen 149.51 357⇑ *i* P PKPbc 15 48 09.2 -1.4
BER AMb AMB 15 48 10.1
comp=Z,278nm,0.9s
BER *e*P 15 48 10.5
WAL1 Walls 149.62 4⇑ *e*P PKPbc 15 48 09.6 -1.4
EGD Espegrend 149.63 357 *e*P PKPbc 15 48 09.9 -1.1
LRW Lerwick 149.76 3 P PKPbc 15 48 10.7 -0.6
LRW Lerwick 149.76 3 *e*P PKPbc 15 48 10.2 -1.2
LRW ⇑ *e*P 15 48 10.7
SVSK Karacayir 149.86 299 *e*P PKPdf 15 48 08.0 +0.6
KONO Kongsberg 149.89 352 *e*PKPbc PKPbc 15 48 11.0 -0.7
KONO *e*PKPab PKPab 15 48 14.7 -2.7

KONO LR LR
comp=Z,1μm,21.0s,MS5.7
KONO Kongsberg 149.89 352⇑*iP* PKPbc 15 48 11.0 -0.6
KONO AMS AMS 16 51 48.0
comp=Z,1μm,18.2s,MS5.7
GAZ Gaziantep 149.97 293 *eP* PKPdf 15 48 07.9 +0.3
ASF Jabal al Asfar 150.16 283 PKP PKPdf 15 48 08.8 +0.7
comp=Z,7.6nm,0.9s,baz=355,slow=2.7,SNR=6.6
ASF PKPbc PKPbc 15 48 14.4 +1.2
comp=Z,135nm,0.9s,baz=314,slow=1.3,SNR=81
KMRS Kahramanmaras 150.19 294 *eP* PKPbc 15 48 13.0 -0.1
SARI SarD1z-Kayseri 150.25 296 *eP* PKPbc 15 48 11.0 -2.2
KVT Kavak 150.38 301 *eP* PKPdf 15 48 09.8 +1.7
BLS5 Blasjo 150.40 355 *eP* PKPbc 15 48 13.5 +0.7
BLS5 AMb AMB 15 48 20.5
comp=Z,95nm,0.8s
KMY Karmoy 150.68 357 *eP* PKPbc 15 48 13.0 -0.6
KMY AMb AMB 15 48 14.0
comp=Z,536nm,0.9s
DIKM Dikmen 150.84 303 *eP* PKPdf 15 48 11.5 +2.7
HTY Hatay 150.88 291 *eP* PKPbc 15 48 14.0 -0.8
BNN Bunyan 150.89 297 *eP* PKPbc 15 48 14.2 -0.5
STAV Stavanger 150.94 356 *eP* PKPbc 15 48 13.8 -0.3
STAV AMb AMB 15 48 14.9
comp=Z,227nm,2.4s
AKASG Malin Array Be 150.99 323 PKP PKPdf 15 48 07.2 -1.5
comp=Z,0.9nm,0.3s,baz=23,slow=1.6,SNR=14
AKASG PKPbc PKPbc 15 48 14.1 -0.4
comp=Z,289nm,0.7s,baz=46,slow=2.9,SNR=252
AKASG Malin Array Be 150.99 323 PKP PKPdf 15 48 07.2 -1.5
AKASG PKPbc PKPbc 15 48 14.1 -0.4
AKBB Malin Array Si 150.99 323 *e*PKPdf PKPdf 15 48 07.8 -1.0
AKBB *e*PKPbc PKPbc 15 48 13.9 -0.6
KIEV Kiev 151.00 323 *e*PKPdf PKPdf 15 48 07.7 -1.1
KIEV *e*PKPbc PKPbc 15 48 14.1 -0.5
KIEV LR LR
comp=Z,1μm,22.0s,MS5.7
RCY Rachaya 151.15 286 *eP* PKPbc 15 48 16.5 +1.0
CEYT Ceyhan 151.15 293 *eP* PKPbc 15 48 13.4 -2.0
RSC Scourie 151.19 8⇑*eP* PKPbc 15 48 14.2 -0.6
BYBT Boyabat 151.24 302 *eP* PKPbc 15 48 15.5 0.0
BHL Bhannes 151.30 287 *eP* PKPbc 15 48 16.6 +0.8
RRH Rhenigidale 151.41 10⇑*eP* PKPbc 15 48 14.8 -0.5
SNART Snartemo 151.42 354⇑*iP* PKPbc 15 48 15.2 -0.1
SNART AMb AMB 15 48 15.8
comp=Z,315nm,0.8s
MLA1 Latheron 151.43 6⇑*eP* PKPbc 15 48 14.3 -1.0
EIL Elat 151.51 278 PKP PKPdf 15 48 10.6 +0.3
comp=Z,24nm,0.9s,baz=343,slow=2.7,SNR=16
EIL PKPbc PKPbc 15 48 17.1 +0.6
comp=Z,210nm,0.8s,baz=283,slow=0.3,SNR=88
EIL PP PP 15 51 57.5 +0.7
comp=Z,25nm,1.0s,baz=122,slow=4.3,SNR=4.9
EIL Elat 151.51 278 PKP PKPdf 15 48 10.6 +0.3
EIL PKPbc PKPbc 15 48 17.1 +0.6
EIL PP PP 15 51 57.5 +0.7
SUW Suwalki 151.52 334 *i* PKPc PKPbc 15 48 15.6 0.0
RRR Rubha Reidh 151.59 9⇑*eP* PKPbc 15 48 15.0 -0.7
CORM Corum 151.61 300 *eP* PKPbc 15 48 13.4 -3.0
AVNT Avonos 151.66 297 *iP* PKPbc 15 48 16.1 -0.4
BZK Bozkurt 151.68 304 *eP* PKPbc 15 48 15.4 -1.1
KARA Karaisali 151.68 294 *eP* PKPbc 15 48 13.3 -3.3
MVH1 Achvaich 151.72 7⇑*eP* PKPbc 15 48 15.3 -0.7
KSK Scoval 151.84 10⇑*eP* PKPbc 15 48 16.0 -0.3
TOS Tosya 151.88 302 *eP* PKPbc 15 48 15.0 -2.0
NIG Nigde 151.94 296 *eP* PKPbc 15 48 15.4 -1.7
KAC Achnashellach 152.01 8⇑*eP* PKPbc 15 48 16.2 -0.4
KPL Plockton 152.12 9 P PKPbc 15 48 15.9 -1.0
KPL AMS AMS 16 52 45.0
comp=Z,1μm,20.9s
KPL Plockton 152.12 9 *eP* PKPbc 15 48 15.9 -1.0
KPL AMS AMS 16 52 45.0
comp=Z,1μm,20.9s,MS5.6
MERS Mersin 152.14 293 *eP* PKPdf 15 48 11.9 +1.0
MCD Coleburn Disti 152.15 6⇑*eP* PKPbc 15 48 15.9 -1.1
MDO Dochfour 152.18 7⇑*eP* PKPbc 15 48 16.3 -0.8
CANT Cankiri 152.28 301 *eP* PKPbc 15 48 17.2 -0.7
BRTR Keskin Array B 152.44 299 PKP PKPdf 15 48 10.4 -0.9
comp=Z,8.4nm,0.9s
BRTR PKPbc PKPbc 15 48 18.2 -0.1
MME1 Meikle Cairn 152.44 6⇑*eP* PKPbc 15 48 16.1 -1.5
KAMT Kaman 152.45 298 *eP* PKPdf 15 48 11.1 -0.3
KAR1 Arisaig 152.50 9⇑*eP* PKPbc 15 48 16.9 -0.8
EREN Erenkoy 152.51 290 *eP* PKPbc 15 48 17.8 -0.7
PHNC Paralimni 152.64 289 P PKPbc 15 48 19.2 +0.4
comp=Z,5.7nm,0.7s
SAFT Safranbolu 152.81 303 *eP* PKPdf 15 48 15.0 +3.2
IKL Isikli 152.86 292 *eP* PKPbc 15 48 16.7 -2.6
LFK Lefkose 153.04 290 *eP* PKPbc 15 48 16.1 -3.6
ANTO Ankara 153.05 300 *e*PKPdf PKPdf 15 48 11.5 -0.7
ANTO *e*PKPbc PKPbc 15 48 19.7 +0.1
ANTO LR LR
comp=Z,938nm,22.0s,MS5.6
ANTO Ankara 153.05 300 *e*PKIKP PKPdf 15 48 11.5 -0.7
ANTO MLR MLR
comp=Z,938nm,22.0s,MS5.6
ANTO Ankara 153.05 300⇓*iP* PKPbc 15 48 19.3 -0.3
MUD Monsted U'grnd 153.06 351⇑*iP* PKPbc 15 48 18.8 -0.2
MUD *i* 15 52 03.2
MUD *i* 16 01 05.3
MUD Monsted U'grnd 153.06 351⇑*i*PKIKP PKPbc 15 48 18.8 -0.2
MUD *i* 15 52 03.2
MUD Monsted U'grnd 153.06 351⇑*iP* PKPbc 15 48 18.8 -0.2
MUD *i* 15 52 03.2
MUD *i* 16 01 05.3
MUD
comp=Z,710nm,23.0s
LOD Lodumlu 153.07 300 *eP* PKPdf 15 48 07.9 -4.3
CSS Prodhromos 153.21 289 P PKPbc 15 48 20.0 -0.1
KIS Kishinev 153.22 317 *i* PKIKP PKPbc 15 48 19.0 -0.7
KIS *e* 15 48 37.0
KIS *e* 15 48 45.0
KIS *e* 15 52 10.0
KIS MLR MLR
comp=Z,1μm,24.0s,MS5.7
KIS MLR MLR
comp=Z,900nm,24.0s
KIS Kishinev 153.22 317 *e*PKIKP PKPbc 15 48 19.0 -0.7
KIS LRM 16 52 48.0
comp=Z,900nm,24.0s
BSD Bornholm Skovb 153.24 344 *i* P PKPbc 15 48 19.0 -0.5
BSD *i* 15 52 01.0
BSD Bornholm Skovb 153.24 344 *i* P PKPbc 15 48 19.0 -0.5
comp=Z,160nm,0.8s
BSD *i* 15 52 01.0
BSD
comp=Z,820nm,24.0s
COP Copenhagen 153.26 347⇑*iP* PKPbc 15 48 19.5 0.0
comp=Z,134nm,0.8s
COP *i* 15 52 03.2
COP
comp=Z,600nm,22.0s
MAMC Mammari 153.30 289 P PKPbc 15 48 20.6 +0.3
EAB Aberfoyle 153.41 8⇑*eP* PKPbc 15 48 19.0 -0.8
EBH Black Hill 153.44 7⇑*eP* PKPbc 15 48 19.4 -0.5
LEF Lefka 153.57 289 *eP* PKPbc 15 48 19.3 -1.5
SZAC Souni-Zanaja 153.59 288 P PKPbc 15 48 21.0 +0.1
LADK Ladik-KONYA 153.68 296 *eP* PKPbc 15 48 17.1 -3.9
HDMB Hadim 153.75 293 *eP* PKPbc 15 48 19.9 -1.3
PGBU Glenifferbraes 153.76 8 P PKPbc 15 48 19.1 -1.5
PGBU 15 48 32.5
PGBU AMS AMS 16 56 59.2
comp=Z,954nm,19.4s
PGBU Glenifferbraes 153.76 8 *eP* PKPbc 15 48 19.1 -1.5
PGBU *e* 15 48 32.5
PGBU AMS AMS 16 56 59.2
comp=Z,954nm,19.4s,MS5.6
EDI Edinburgh 153.80 7 *eP* PKPbc 15 48 19.6 -1.0
ALFC Alevga 153.81 289 P PKPbc 15 48 20.8 -0.6
comp=Z,2.4nm,0.7s
KDHN Kadinhani 153.82 297 *i* P PKPbc 15 48 21.2 -0.1
EAU Auchinoon 153.84 7 *eP* PKPbc 15 48 20.2 -0.6
ESY Stoneypath 153.86 6 *eP* PKPbc 15 48 19.9 -0.9
KIZT Kizilcal 153.94 298 *eP* PKPbc 15 48 19.7 -1.8
EBL Broad Law 153.96 7⇑*eP* PKPbc 15 48 20.2 -0.8
TLCR 154.08 313⇓*P* PKPbc 15 48 21.7 +0.1
TLCR 154.08 313⇓*iP* PKPbc 15 48 21.7 +0.1
MDU Mudurnu 154.09 302 *eP* PKPdf 15 48 15.2 +1.5
LVV L'vov 154.15 326 *e*PKIKP PKPdf 15 48 12.9 -0.5
GKP Gorka Klasztor 154.21 339 *e*PKP PKPbc 15 48 21.8 +0.1
XSO Sourhope Farm 154.31 6 *eP* PKPbc 15 48 20.7 -1.1
ESK Eskdalemuir 154.39 7 *eP* PKPbc 15 48 20.8 -1.2
ESK *e* 15 48 35.1
ESK AMS AMS 16 55 34.6
comp=Z,889nm,20.3s,MS5.6
ESK Eskdalemuir 154.39 7 *e*PKIKP PKPbc 15 48 21.1 -0.9
ESK *e* 15 48 35.3
ESK MLR MLR
comp=Z,1μm,21.0s,MS5.6
ECK Cauldkaine Hil 154.53 7⇑*eP* PKPbc 15 48 21.2 -1.0
GAL1 Galloway 154.65 9 *eP* PKPbc 15 48 21.5 -1.0
GAL1 AMS AMS 16 51 43.9
comp=Z,928nm,22.3s,MS5.5
TIRR Tirgusor 154.66 312⇑*iP* PKPdf 15 48 15.0 +0.7
TIRR Tirgusor 154.66 312⇑*iP* PKPdf 15 48 15.0 +0.7
HARR Harsova 154.86 313 P PKPbc 15 48 21.9 -1.5
KWP Kalwaria 154.91 327 *e*PKP PKPbc 15 48 23.5 +0.2
KWP *e* 15 48 38.7
KWP Kalwaria 154.91 327⇓*i*PKIKP PKPbc 15 48 23.6 +0.4
KWP Kalwaria 154.91 327⇓*iP* PKPbc 15 48 23.6 +0.4
BUR08 Bucovina Ar. S 154.92 321 *e*PKPdf PKPdf 15 48 14.6 0.0
BUR08 *e*PKPbc PKPbc 15 48 23.6 +0.2
BURAR Bucovina Array 154.93 321⇑*iP* PKPbc 15 48 24.2 +0.9
BURAR Bucovina Array 154.93 321⇑*iP* PKPbc 15 48 24.2 +0.8
XAL Allendale 154.94 6 *eP* PKPbc 15 48 22.3 -0.8
SHUT Suhut-Afyon 155.02 298 *eP* PKPdf 15 48 15.4 +0.4
VRI Vrincioaia 155.03 316⇓*P* PKPdf 15 48 23.9 +9.1
VRI Vrincioaia 155.03 316⇓*iP* PKPdf 15 48 23.9 +9.1
PLOR Plostina 155.09 316⇑*iP* PKPdf 15 48 23.7 +8.8
ISP Isparta 155.19 296 *e*PKPbc PKPdf 15 48 23.4 +8.2
ISP LR LR
comp=Z,2μm,20.0s,MS5.8
DMUB Kingscourt 155.22 13 *eP* PKPdf 15 48 16.3 +1.5
DMUB Kingscourt 155.22 13 *eP* PKPab 15 48 37.6 -2.3
BSEG Bad Segeberg 155.31 348 *eP* PKPdf 15 48 14.7 -0.2
BSEG *e*PKPab PKPab 15 48 38.6 -1.7
LIC Lamto 155.45 163 *e*PKIKP PKPdf 15 48 16.7 +0.3
comp=Z,193nm,1.1s
LIC Lamto 155.45 163⇑*i*PKIKP PKPdf 15 48 16.7 +0.3
comp=Z,74nm,1.0s
LIC *e*MLR MLR
comp=Z,2μm,22.2s,MS5.6
LIC Lamto 155.45 163⇑*i*PKPdf PKPdf 15 48 16.7 +0.3
LIC LR LR
comp=Z,980nm,22.3s,MS5.6
KOLS Kolonicke sedl 155.59 327 *e*PKP PKPdf 15 48 14.9 -0.6
KIC Kosan Boka 155.65 163 *e*PKIKP PKPdf 15 48 17.0 +0.3
comp=Z,246nm,1.0s
MLR Muntele Rosu 155.70 316 PKP PKPdf 15 48 15.3 -0.4
comp=Z,7.2nm,0.8s,baz=148,slow=9.5,SNR=1.8
MLR PKPab PKPab 15 48 42.4 +0.1
comp=Z,20nm,0.7s,baz=183,slow=16,SNR=3.9
MLR Muntele Rosu 155.70 316⇑*i*PKIKP PKPdf 15 48 20.2 +4.5
MLR Muntele Rosu 155.70 316⇑*iP* PKPdf 15 48 20.1 +4.4
STHS Stebnicka Huta 155.73 329 *e*PKP PKPdf 15 48 14.7 -0.9
STHS *e* 15 48 42.8
OJC Ojcow 155.76 332 *e*PKPdf PKPdf 15 48 15.0 -0.6
OJC *e*PKPab PKPab 15 48 41.9 -0.5
TIC Toumodi 155.86 163 *e*PKIKP PKPdf 15 48 17.3 +0.4
comp=Z,87nm,0.7s
DLF Lyons Farm 155.86 13 *eP* PKPdf 15 48 18.8 +3.1
DLF Lyons Farm 155.86 13 *eP* PKPab 15 48 40.1 -2.6
DBIC Dimbokro 155.92 163 PKP PKPdf 15 48 17.3 +0.3
comp=Z,17nm,0.9s,baz=150,slow=1.2,SNR=15
DBIC PKPab PKPab 15 48 44.6 +0.7
comp=Z,21nm,0.8s,baz=177,slow=5.9,SNR=5.3
DBIC Dimbokro 155.92 163 *e*PKIKP PKPdf 15 48 17.3 +0.3
DBIC MLR MLR
comp=Z,1μm,19.0s
CRVS Cervenica-Dubn 156.00 327 *e*PKP PKPdf 15 48 15.1 -0.9
CRVS *e* 15 48 43.1
TRPA Tarpa 156.01 325⇑*iP* PKPdf 15 48 24.1 +8.1
VOIR 156.26 317⇓*iP* PKPdf 15 48 32.0 +16
KSP Ksiaz 156.58 337 *e*PKP PKPdf 15 48 16.4 -0.3
KSP *e* 15 48 27.2
KSP Ksiaz 156.58 337 *e*PKPdf PKPdf 15 48 16.0 -0.7
KSP *i* pPKPdf pPKPdf 15 48 27.1 -6.7
KSP *e*PKPab PKPab 15 48 44.9 -1.0
KSP *e*PP PP 15 52 19.0 -4.7
KSP *e*PPS 16 05 28.0
KSP LR LR
comp=Z,5μm,21.3s,MS6.3
OKC Ostrava-Krasne 156.73 333 *e*PKP PKPdf 15 48 16.7 -0.2
OKC *e* 15 48 27.6
OKC *e* 15 48 46.8
OKC *e*PP PP 15 52 22.4 -2.2
OKC *e* 16 02 45.9
OKC *e* 16 05 40.1
OKC *e* 16 18 53.2
OKC Ostrava-Krasne 156.73 333 *e*PKIKP PKPdf 15 48 16.7 -0.2
OKC *e* 15 52 22.4
OKC *e* 16 05 40.1
OKC MLR MLR
comp=Z,2μm,22.1s,MS5.8
OKC Ostrava-Krasne 156.73 333 *e*PKPDF PKPdf 15 48 16.7 -0.2
OKC *e*pPKP pPKPdf 15 48 27.6 -6.4
OKC *e*PKPAB PKPab 15 48 46.8 +0.3
OKC *e*PP PP 15 52 22.4 -2.2
OKC *e*SKKS 16 02 45.9
OKC *ex* x 16 05 40.1
OKC *ex* x 16 18 53.2
OKC AMS AMS 16 55 00.0
comp=Z,2μm,22.1s
DRGR 156.79 322 P PKPdf 15 48 16.8 -0.3
DRGR 156.79 322⇑*iP* PKPdf 15 48 16.7 -0.4
UPC Upice 156.96 337 *e*PKPDF PKPdf 15 48 17.2 0.0
UPC *e*pPKP pPKPdf 15 48 27.9 -6.4
UPC *e*PKPAB PKPab 15 48 47.4 +0.1
DPC Dobruska-Polom 156.99 336 *e*PKIKP PKPdf 15 48 17.4 +0.2
DPC *e* 15 52 24.1
DPC *e* 16 05 40.6
DPC MLR MLR
comp=Z,2μm,21.6s,MS6.0
DPC Dobruska-Polom 156.99 336 *e*PKPDF PKPdf 15 48 17.4 +0.2
DPC *e*pPKP pPKPdf 15 48 28.4 -6.0
DPC *e*PKPAB PKPab 15 48 47.8 +0.2
DPC *e*PP PP 15 52 24.1 -1.8
DPC *ex* x 16 02 38.4
DPC *ex* x 16 05 40.6
DPC *ex* x 16 18 45.4
DPC AMS AMS 17 00 10.0
comp=Z,2μm,21.6s
MORC Moravsky Berou 157.01 334 *e*PKPdf PKPdf 15 48 16.9 -0.4
MORC Moravsky Berou 157.01 334⇑*iP* PKPdf 15 48 17.8 +0.5
AKHS Akhisar 157.03 300 *i* P PKPdf 15 48 15.3 -2.4
CLL Collm 157.18 342⇑*i*PKIKP PKPdf 15 48 16.6 -0.8
CLL pmax pmax
comp=Z,42nm,1.8s
CLL MLR MLR
comp=Z,1μm,21.8s,MS5.7
CLL Collm 157.18 342 *e*PKP PKPdf 15 48 16.5 -0.9
CLL *e*PKPab PKPab 15 48 45.6 -2.8
CLL Collm 157.18 342⇑*iP*KPdf PKPdf 15 48 16.6 -0.8
comp=Z,42nm,1.8s
CLL *e*PKPdiff 15 48 28.0
comp=Z,49nm,0.9s
CLL *ex* x 15 48 31.0
comp=Z,61nm,0.8s
CLL *ex* x 15 48 47.0
CLL *i* PKPab PKPab 15 48 49.5 +1.1
comp=Z,153nm,0.9s
CLL *e*PP PP 15 52 24.0 -2.8
CLL *e*PPP 15 56 01.0
CLL *ex* x 15 58 57.0
CLL *e*PPPrev 16 01 31.0
CLL *e*SKSP 16 02 44.0
CLL *e*PPS 16 05 40.0
CLL *e*SS SS 16 12 31.0 +15
CLL *e*(PSS) 16 13 31.0
CLL *e*SSS 16 18 24.0
CLL *ex* x 16 21 06.0
CLL *e*SSSS 16 22 30.0
CLL L 16 55 00.0
comp=Z,1μm,21.8s
IBBN Ibbenburen 157.29 351 *e*PKP PKPdf 15 48 17.2 -0.3
IBBN *e*PKPab PKPab 15 48 46.9 -1.9
BRG Berggiesshubel 157.30 340 *i* Pdif PKPdf 15 48 17.1 -0.5
BRG PKP PKPdf 15 48 18.0 +0.4
BRG *i* 15 48 28.2
BRG *i* 15 48 50.6
BRG PP PP 15 52 28.0 +0.4
BRG *i* 16 05 45.0
BRG SS SS 16 12 20.0 +2.2
comp=Z,970nm,19.3s,MS5.7
BRG Berggiesshubel 157.30 340 *e*PKP PKPdf 15 48 17.0 -0.6
BRG *e*PKPab PKPab 15 48 46.8 -2.1
BRG Berggiesshubel 157.30 340 *i* PDIF PKPdf 15 48 17.1 -0.5
comp=Z,54nm,1.5s
BRG Berggiesshubel 157.30 340 PKP PKPdf 15 48 18.0 +0.4
BRG *i* 15 48 28.2
comp=Z,35nm,0.9s
BRG *i* 15 48 50.6
comp=Z,127nm,0.8s
BRG PP PP 15 52 28.0 +0.4
BRG *i* 16 05 45.0
BRG SS SS 16 12 20.0 +2.2
BRG
comp=N,1μm,25.9s
BRG
comp=E,1μm,25.8s
BRG
comp=Z,2μm,19.3s
PVCC Panska Ves 157.42 339 *e*PKPDF PKPdf 15 48 17.7 -0.1
PVCC *e*pPKP pPKPdf 15 48 29.2 -5.7
PVCC *e*PKPAB PKPab 15 48 49.8 +0.3
PVCC *e*PP PP 15 52 26.9 -1.3
PVCC *ex* x 16 05 45.4
PVCC AMS AMS 16 55 10.0
comp=Z,2μm,22.4s
PSZ Piszkesteto 157.43 328 *e*PKPdf PKPdf 15 48 17.4 -0.5
PSZ LR LR
comp=Z,2μm,21.0s,MS5.9
PSZ Piszkesteto 157.43 328⇑*e*PKP PKPdf 15 48 16.5 -1.4
VYHS Vyhne 157.49 330 *e*PKP PKPdf 15 48 16.8 -1.1
VYHS *e* 15 48 49.0
KOLL Kolacno 157.61 331 *e*PKIKP PKPdf 15 48 18.3 +0.2
KOLL Kolacno 157.61 331 *e*PKP PKPdf 15 48 18.2 +0.1
KOLL *e* 15 48 52.4
WTSB Winterswijk 157.75 352 *e*PKP PKPab 15 48 49.7 -1.1
comp=Z,99nm,1.1s
VRAC Vranov 157.75 334 PKP PKPdf 15 48 17.6 -0.6
comp=Z,4.4nm,0.7s,baz=72,slow=18
VRAC PKPab PKPab 15 48 51.0 0.0
comp=Z,44nm,0.9s,baz=28,slow=4.5,SNR=6.8
VRAC Vranov 157.75 334⇓*iP* PKPab 15 48 51.2 +0.2
PRU Pruhonice 157.90 338 *e*PKIKP PKPdf 15 48 17.9 -0.5
PRU *e* 15 52 29.5
PRU *e* 16 05 50.2
PRU MLR MLR
comp=Z,1μm,21.2s,MS5.8
PRU Pruhonice 157.90 338 *e*PKPDF PKPdf 15 48 17.9 -0.5
PRU *e*pPKP pPKPdf 15 48 29.6 -5.9
PRU *e*PKPAB PKPab 15 48 51.5 0.0
PRU *e*PP PP 15 52 29.5 -1.4
PRU *ex* x 16 02 55.8
PRU *ex* x 16 05 50.2
PRU *ex* x 16 18 58.3
PRU AMS AMS 16 55 00.0
comp=Z,1μm,21.2s
BZS Buzias 158.12 321 P PKPdf 15 48 17.6 -1.2
BZS Buzias 158.12 321⇑*iP* PKPdf 15 48 18.2 -0.6
TANN Tannenbergstha 158.13 342 *e*PKP PKPdf 15 48 17.7 -1.0
TANN *e*PKPab PKPab 15 48 50.3 -2.2
MOX Moxa 158.14 344 *e*PKP PKPdf 15 48 17.7 -1.0
comp=Z,53nm,2.1s
MOX *e* 15 48 51.9
MOX
comp=Z,900nm,23.0s
MOX Moxa 158.14 344 *e*PKP PKPdf 15 48 17.6 -1.1
MOX *e*PKPab PKPab 15 48 50.2 -2.4
TREC Trest 158.17 336 *e*PKPDF PKPdf 15 48 18.5 -0.2
TREC *e*pPKP pPKPdf 15 48 30.4 -5.5
TREC *e*PKPAB PKPab 15 48 52.6 -0.1
TREC *e*PP PP 15 52 30.7 -1.7
TREC *ex* x 16 05 51.3
TREC AMS AMS 17 01 30.0
comp=Z,2μm,20.7s
BUG Bochum–Univer 158.21 351 *e*PKPab PKPab 15 48 50.5 -2.3
MODS Modra-Piesok 158.24 332 *e*PKP PKPdf 15 48 18.0 -0.8
MODS *e* 15 48 51.9
NKC Novy Kostel 158.30 342 *e*PKP PKPdf 15 48 17.9 -1.0
NKC *e* 15 48 29.1
NKC *e* 15 48 53.4
NKC *e*PP PP 15 52 27.0 -6.0
NKC *e* 16 02 55.0
NKC *e* 16 05 45.3
NKC *e* 16 18 45.6
NKC Novy Kostel 158.30 342 *e*PKIKP PKPdf 15 48 17.9 -1.0
NKC *e* 15 48 53.4
NKC *e* 16 05 45.3
NKC MLR MLR
comp=Z,2μm,22.8s,MS5.8
NKC Novy Kostel 158.30 342 *e*PKPDF PKPdf 15 48 17.9 -1.0
NKC *e*pPKP pPKPdf 15 48 29.1 -6.9
NKC *e*PKPAB PKPab 15 48 53.4 +0.1
NKC *e*PP PP 15 52 27.0 -6.0
NKC *ex* x 16 02 55.0
NKC *ex* x 16 05 45.3
NKC *ex* x 16 18 45.6
NKC AMS AMS 17 01 10.0
comp=Z,2μm,25.8s
UBBA Unterbreizbach 158.34 346 *e*PKP PKPdf 15 48 17.7 -1.2
UBBA *e*PKPab PKPab 15 48 51.2 -2.2
ZST Bratislava 158.45 332 *e*PKP PKPdf 15 48 18.8 -0.3
ZST *e* 15 48 53.6
ROTZ Rotzenmuhle 158.79 342 *e*PKP PKPdf 15 48 17.8 -1.7
ROTZ *e*PKPab PKPab 15 48 54.3 -1.1
KHC Kasperske Hory 158.95 339 *e*PKIKP PKPdf 15 48 19.1 -0.6
KHC *e* 15 48 31.9
KHC *e* 15 48 56.3
KHC *e* 15 52 32.8
KHC *e* 16 05 57.9
KHC MLR MLR
comp=Z,2μm,22.4s,MS5.8
KHC Kasperske Hory 158.95 339 *e*PKPDF PKPdf 15 48 19.1 -0.6
KHC *e*pPKP pPKPdf 15 48 31.9 -4.9
KHC *e*PKPAB PKPab 15 48 56.3 +0.2
KHC *ex* x 15 49 21.0
KHC *e*PP PP 15 52 32.8 -3.8
KHC *ex* x 16 02 59.3
KHC *ex* x 16 05 57.9
KHC *ex* x 16 19 26.4
KHC AMS AMS 16 55 50.0
comp=Z,2μm,25.4s
HGN Heimansgroeve 159.03 353 *e*PKP PKPab 15 48 55.0 -1.4
comp=Z,106nm,0.8s
SOP Sopron 159.08 332⇑*eP* PKPdf 15 48 18.3 -1.6
SOP Sopron 159.08 332⇑*eP* PKPdf 15 48 18.3 -1.6
GRF Grafenberg Arr 159.12 343 *e*PKIKP PKPdf 15 48 19.0 -0.9
GRF *e* 15 48 55.3
GRF *e* 15 52 35.0
GRF *e*SS SS 16 12 32.6 -4.3
GRF MLR MLR
comp=Z,1μm,21.2s,MS5.7
GRF Grafenberg Arr 159.12 343 *e*PKP PKPdf 15 48 19.0 -0.9
GRF *e*pPKPdf pPKPdf 15 48 30.5 -6.5
GRF *e*PKPab PKPab 15 48 55.3 -1.5
GRF *e*PP PP 15 52 35.0 -2.4
GRF *e*SS SS 16 12 32.6 -4.3
GRF *e*SSS 16 18 52.1
GRF *e*L 17 04 27.2
comp=Z,1μm,21.2s
UCC Uccle 159.13 356 APKP 15 48 37.0
UCC PKPab PKPab 15 48 55.9 -0.9
WET Wettzell 159.16 340 *e*PKP PKPdf 15 48 18.9 -1.0
WET *e*PKPab PKPab 15 48 55.8 -1.2
CONA Conrad Observa 159.16 333⇓*iPKPdf* PKPdf 15 48 19.2 -0.7
comp=Z,11nm,1.0s,SNR=7.8
CONA ⇑*iPKPab* PKPab 15 48 57.0 -0.1
comp=Z,83nm,1.0s
CSNA Conrad Observa 159.16 333⇓*iPKPdf* PKPdf 15 48 19.2 -0.7
comp=Z,11nm,1.1s
CSNA ⇑*iPKPab* PKPab 15 48 57.0 -0.1
comp=Z,80nm,1.0s
GEC2 GERESS Array S 159.16 338 *e*PKPdf PKPdf 15 48 18.9 -1.1
GEC2 GERESS Array S 159.16 338 *e*PKP PKPdf 15 48 19.0 -0.9
GEC2 *e*PKPab PKPab 15 48 55.9 -1.2
GERES GERESS Array B 159.16 338 PKP PKPdf 15 48 19.1 -0.8
comp=Z,6.6nm,0.8s,baz=101,slow=1.4,SNR=26
GERES PKPab PKPab 15 48 56.2 -0.9
comp=Z,16nm,0.9s,baz=32,slow=3.8,SNR=5.7
MEM Membach 159.17 353 PKP PKPdf 15 48 19.5 -0.4
MEM APKP 15 48 35.7
MEM PKPab PKPab 15 48 55.6 -1.4
TNS Taunus Mts 159.21 348 *e*PKP PKPdf 15 48 19.2 -0.7
TNS *ep*PKPdf pPKPdf 15 48 31.5 -5.6

TNS				*e*PKPab	PKPab	15 48 55.7	-1.5	
PKSM	**Moragy**	**159.26**	**326**	⇓P	PKPdf	15 48 19.1	-1.0	
PKSM	**Moragy**	**159.26**	**326**	⇓*i*P	PKPdf	15 48 19.1	-1.0	
SNF	**Seneffe**	**159.42**	**356**	PKP	PKPdf	15 48 20.2	0.0	
SNF				PKPab	PKPab	15 48 57.4	-0.7	
BCLA	**Clavier**	**159.43**	**354**	PKP	PKPdf	15 48 19.4	-0.8	
BCLA				PKPab	PKPab	15 48 57.2	-1.0	
RHK3	**Tenkes**	**159.68**	**326**	⇓*e*P	PKPdf	15 48 19.9	-0.7	
ABH	**Alteburg**	**159.69**	**350**	PKP	PKPdf	15 48 19.5	-1.0	
TOD	**Tromm**	**159.74**	**347**	PKP	PKPdf	15 48 20.0	-0.6	
GIVF	**Givet**	**159.79**	**355**	⇑*i*PKIKP	PKPdf	15 48 19.9	-0.7	
DOU	**Dourbes**	**159.81**	**355**	PKP	PKPdf	15 48 19.0	-1.7	
DOU				PKPab	PKPab	15 48 58.8	-1.0	
MOA	**Molln**	**159.82**	**336**	⇓*i*PKPdf	PKPdf	15 48 19.7	-1.0	
	comp=Z,8.4nm,0.9s							
MOA				⇓*e*PKPdf	pPKPdf	15 48 40.0	+2.1	
	comp=Z,12nm,0.9s							
MOA				⇑*e*PKPab	PKPab	15 49 00.6	+0.6	
	comp=Z,85nm,1.2s,SNR=7.8							
ARSA	**Arzberg**	**159.84**	**333**	⇓*i*PKPdf	PKPdf	15 48 19.9	-0.8	
	comp=Z,7.1nm,0.9s							
ARSA				⇓*e*PKPab	PKPab	15 49 00.0	-0.1	
	comp=Z,17nm,1.1s							
BAIF	**Baives**	**159.87**	**356**	*e*PKIKP	PKPdf	15 48 20.1	-0.6	
	comp=Z,66nm,1.3s							
VAY	**Valandovo**	**159.90**	**310**	*e*PKP	PKPdf	15 48 18.4	-2.7	
VAY				*e*PKP	PKPab	15 48 58.6	-2.1	
RUP	**Ruppelstein**	**159.93**	**351**	PKP	PKPdf	15 48 20.2	-0.6	
IDI	**Anoyia**	**160.07**	**291**	PKP	PKPdf	15 48 22.1	+0.7	
	comp=Z,23nm,0.8s,baz=130,slow=11,SNR=5.3							
IDI				PKPab	PKPab	15 49 01.2	-0.4	
	comp=Z,35nm,0.8s,baz=49,slow=7.3,SNR=6.3							
WLF	**Walferdange**	**160.09**	**352**	PKP	PKPdf	15 48 21.5	+0.6	
WLF				APKP		15 48 34.9		
WLF				PKPab	PKPab	15 49 00.0	-1.0	
WLF	**Walferdange**	**160.09**	**352**	PFAKE		15 48 30.0	+9.0	
WLF				LR	LR			
	comp=Z,2µm,22.0s							
WLF	**Walferdange**	**160.09**	**352**	*e*PKP	PKPdf	15 48 20.9	-0.1	
WLF				*e*PKPab	PKPab	15 48 59.8	-1.2	
KOGS	**Kog**	**160.18**	**330**	*e*PKPdf	PKPdf	15 48 19.9	-1.3	
KOGS				*e*PP	PP	15 52 43.9	+0.4	
KOGS				*e*		16 06 09.1		
SKO	**Skopje**	**160.32**	**313**	*e*PKP	PKPdf	15 48 20.6	-0.9	
SKO				*e*PKP	PKPab	15 49 02.8	+0.4	
RJOB	**Jochberg**	**160.43**	**338**	*e*PKP	PKPdf	15 48 20.6	-0.8	
RJOB				*e*PKPab	PKPab	15 49 01.3	-1.3	
STU	**Stuttgart**	**160.45**	**346**	*e*PKP	PKPdf	15 48 20.5	-0.9	
STU				*e*pPKPdf	pPKPdf	15 48 33.5	-5.0	
STU				*e*PKPab	PKPab	15 49 01.2	-1.4	
FUR	**Furstenfeldbru**	**160.50**	**341**	*e*PKPab	PKPab	15 49 02.0	-0.9	
PERS	**Pernice**	**160.51**	**332**	*e*PKPdf	PKPdf	15 48 20.2	-1.3	
PERS				*e*PKPab	PKPab	15 49 02.1	-0.9	
SOKA	**Soboth**	**160.51**	**332**	⇓*i*PKPdf	PKPdf	15 48 20.5	-1.0	
	comp=Z,25nm,1.9s							
SOKA				⇑*i*PKPab	PKPab	15 49 03.1	+0.1	
	comp=Z,72nm,1.1s							
LANF	**Langenberg**	**160.52**	**349**	PKP	PKPdf	15 48 20.6	-0.9	
KRUS	**Krusevo**	**160.75**	**311**	*e*PKP	PKPdf	15 48 20.6	-1.4	
KRUS				*e*PKP	PKPab	15 49 02.4	-1.9	
KBA	**Koelnbreinsper**	**160.81**	**336**	⇓*i*PKPdf	PKPdf	15 48 20.5	-1.4	
	comp=Z,14nm,1.1s							
KBA				⇓*i*PKPab	PKPab	15 49 04.6	+0.3	
	comp=Z,59nm,0.8s							
OBKA	**Obir**	**160.84**	**333**	⇓PKPdf	PKPdf	15 48 21.0	-0.9	
	comp=Z,4.5nm,0.8s							
OBKA				⇑*i*PKPab	PKPab	15 49 04.3	-0.1	
	comp=Z,29nm,0.8s							
BIA	**Bitola**	**160.87**	**310**	*e*PKP	PKPdf	15 48 19.8	-2.3	
BIA				*e*PKP	PKPab	15 49 02.1	-2.7	
BFO	**Black Forest**	**161.05**	**347**	PFAKE		15 48 30.0	+7.9	
BFO				LR	LR			
	comp=Z,1µm,20.0s							
BFO	**Black Forest**	**161.05**	**347**	*e*PKPab	PKPab	15 49 03.6	-1.7	
MYKA	**Terra Mystica**	**161.08**	**335**	⇓*i*PKPdf	PKPdf	15 48 21.1	-1.0	
	comp=Z,7.5nm,0.9s							
MYKA				⇑*i*PKPab	PKPab	15 49 04.9	-0.6	
	comp=Z,51nm,0.7s							
FLN	**La Foliniere**	**161.13**	**5**	⇑*i*PKIKP	PKPdf	15 48 21.4	-0.7	
	comp=Z,58nm,0.8s							
FLN				*e*MLR	MLR			
	comp=Z,764nm,22.2s							
FLN	**La Foliniere**	**161.13**	**5**	⇑*i*PKIKP	PKPdf	15 48 21.4	-0.7	
FLN				MLR	MLR			
	comp=Z,760nm,22.3s							
CDF	**Champ du Feu**	**161.16**	**349**	⇑*i*PKIKP	PKPdf	15 48 21.2	-1.0	
WATA	**Walderalm**	**161.16**	**340**	⇑*i*PKPab	PKPab	15 49 06.1	+0.2	
	comp=Z,39nm,0.6s							
OHR	**Ohrid**	**161.17**	**311**	*e*PKP	PKPdf	15 48 19.1	-3.3	
OHR				*e*PKP	PKPab	15 49 02.9	-3.2	
SPAK	**Spaichingen-Ko**	**161.17**	**346**	PKP	PKPdf	15 48 20.2	-2.0	
ROSF	**Rostrenen**	**161.21**	**11**	*e*PKIKP	PKPdf	15 48 21.2	-1.0	
WTTA	**Wattenberg**	**161.21**	**339**	⇓*i*PKPdf	PKPdf	15 48 21.8	-0.5	
	comp=Z,22nm,1.4s							
WTTA				⇓*i*PKPab	PKPab	15 49 06.2	+0.2	
	comp=Z,132nm,0.7s							
LJU	**Ljubljana**	**161.23**	**332**	*e*PKPdf	PKPdf	15 48 21.5	-0.8	
LJU				*e*PKPab	PKPab	15 49 05.2	-0.9	
LJU				*e*		16 06 18.3		
RETA	**Reutte**	**161.26**	**341**	*i* PKPab	PKPab	15 49 06.2	0.0	
	comp=Z,113nm,0.8s,SNR=14							
MOTA	**Moosalm**	**161.30**	**341**	⇑*i*PKPdf	PKPdf	15 48 21.8	-0.5	
	comp=Z,14nm,0.9s							
MOTA				⇑*i*PKPab	PKPab	15 49 06.7	+0.3	
	comp=Z,114nm,0.9s,SNR=8.9							
LDF	**La Druitiere**	**161.33**	**5**	⇑*i*PKIKP	PKPdf	15 48 21.5	-0.8	
	comp=Z,42nm,0.8s							
BOJS	**Bojanci**	**161.35**	**330**	*e*PKPdf	PKPdf	15 48 21.6	-0.8	
BOJS				*e*PKPab	PKPab	15 49 07.7	+1.0	
LIBD	**Limburg**	**161.35**	**348**	PKP	PKPdf	15 48 21.2	-1.2	
MEZF	**Maizieres J'vi**	**161.35**	**354**	⇑*i*PKIKP	PKPdf	15 48 22.1	-0.3	
ECH	**Echery**	**161.37**	**349**	PKP	PKPdf	15 48 19.8	-2.6	
SQTA	**Sankt Quirin**	**161.38**	**340**	⇓*i*PKPdf	PKPdf	15 48 21.7	-0.7	
	comp=Z,13nm,0.8s							
SQTA				⇑*i*PKPab	PKPab	15 49 07.1	+0.4	
	comp=Z,118nm,1.1s							
ABTA	**Abfaltersbach**	**161.38**	**337**	⇓*i*PKPdf	PKPdf	15 48 21.2	-1.3	
	comp=Z,23nm,1.3s							
ABTA				⇓*e*PKPab	PKPab	15 49 05.8	-1.0	
	comp=Z,85nm,1.1s,SNR=6.4							
CADS	**Cadrg**	**161.38**	**334**	*e*PKPdf	PKPdf	15 48 21.0	-1.5	
CADS				*e*		15 48 38.6		
SGMF	**Saint Gilles**	**161.40**	**10**	*e*PKIKP	PKPdf	15 48 21.5	-0.9	
GRR	**Gorron**	**161.47**	**6**	*e*PKIKP	PKPdf	15 48 21.8	-0.7	
	comp=Z,63nm,1.1s							
VOY	**Vojsko**	**161.49**	**333**	*e*PKPdf	PKPdf	15 48 21.1	-1.5	
VOY				*e*PKPab	PKPab	15 49 07.8	+0.5	
THEF	**They Montfort**	**161.52**	**352**	PKP	PKPdf	15 48 19.6	-3.0	
FELD	**Feldberg im Sc**	**161.54**	**347**	PKP	PKPdf	15 48 20.3	-2.3	
QUIF	**Quistinic**	**161.63**	**11**	*e*PKIKP	PKPdf	15 48 21.9	-0.8	
TIR	**Tirane**	**161.65**	**313**	PFAKE		15 48 30.0	+7.1	
TIR				LR	LR			
	comp=Z,2µm,22.0s							
DAVA	**Damuels**	**161.68**	**343**	⇓*i*PKPdf	PKPdf	15 48 22.3	-0.5	
	comp=Z,17nm,1.4s							
DAVA				⇑*e*PKPab	PKPab	15 49 08.4	+0.3	
	comp=Z,123nm,0.8s,SNR=14							
HAU	**Haudompre**	**161.69**	**351**	⇑*i*PKIKP	PKPdf	15 48 21.9	-0.8	
	comp=Z,80nm,1.3s							
HAU				*e*MLR	MLR			
	comp=Z,1µm,20.5s							
HAU	**Haudompre**	**161.69**	**351**	⇑*i*PKIKP	PKPdf	15 48 21.9	-0.8	
HAU				MLR	MLR			
	comp=Z,1µm,20.5s							
FETA	**Feichten**	**161.70**	**341**	⇓*i*PKPdf	PKPdf	15 48 22.3	-0.5	
	comp=Z,18nm,1.2s,SNR=7.9							
FETA				⇑*i*PKPab	PKPab	15 49 08.7	+0.5	
	comp=Z,93nm,1.1s							
KNDS	**Knezji Dol**	**161.70**	**331**	*e*PKPdf	PKPdf	15 48 21.8	-1.1	
KNDS				*e*		15 48 38.8		
MOF	**Molkenrain**	**161.72**	**349**	PKP	PKPdf	15 48 21.3	-1.5	
HINF	**Hinteralfeld**	**161.80**	**350**	⇑*i*PKIKP	PKPdf	15 48 21.8	-1.1	
	comp=Z,60nm,1.3s							
BBS	**Basel-Blauen**	**162.03**	**348**	PKP	PKPdf	15 48 20.0	-3.1	
DAVOS	**Davos**	**162.12**	**342**	PKIKP	PKPdf	15 48 22.7	-0.5	
DAVOS						15 49 10.4		
DAVOX	**Davos/Dischmat**	**162.15**	**342**	PKP	PKPdf	15 48 22.7	-0.6	
	comp=Z,8.4nm,0.9s,baz=53,slow=5.1,SNR=3.6							
DAVOX				PKPab	PKPab	15 49 10.3	+0.2	
	comp=Z,129nm,0.6s,baz=2.1,slow=3.1,SNR=41							
LOMF	**Lomont**	**162.26**	**349**	PKP	PKPdf	15 48 20.1	-3.2	
TUE	**Stuetta**	**162.57**	**343**	*e*PKPdf	PKPdf	15 48 22.5	-1.2	
TUE				*e*PKPab	PKPab	15 49 11.8	-0.2	
TUE				LR	LR			
	comp=Z,2µm,22.0s							
LOR	**Lormes**	**162.67**	**356**	⇑*i*PKIKP	PKPdf	15 48 23.2	-0.6	
	comp=Z,148nm,1.6s							
LOR				*e*MLR	MLR			
	comp=Z,2µm,22.8s							
LOR	**Lormes**	**162.67**	**356**	⇑*i*PKIKP	PKPdf	15 48 23.2	-0.6	
LOR				MLR	MLR			
	comp=Z,2µm,22.8s							
SSF	**Saint Saulge**	**162.90**	**357**	⇑*i*PKIKP	PKPdf	15 48 23.4	-0.6	
	comp=Z,56nm,1.0s							
CABF	**La Chapelle**	**163.09**	**350**	⇑*i*PKIKP	PKPdf	15 48 24.0	-0.2	
	comp=Z,162nm,1.4s							
AVF	**Avril sur Loir**	**163.18**	**357**	⇑*i*PKIKP	PKPdf	15 48 23.4	-0.9	
	comp=Z,47nm,1.3s							
TOA0	**Torodi Ar. Sit**	**163.25**	**179**	*e*PKPdf	PKPdf	15 48 24.9	-0.4	
TOA0				*e*PKPab	PKPab	15 49 16.4	+0.7	
TORD	**Torodi Ar. Bea**	**163.25**	**179**	PKP	PKPdf	15 48 25.1	-0.2	
	comp=Z,25nm,0.8s,baz=3.6,slow=0.2,SNR=75							
TORD				PKPab	PKPab	15 49 16.5	+0.8	
	comp=Z,53nm,0.9s,baz=175,slow=3.9,SNR=20							
TORD				PP	PP	15 53 02.8	+3.4	
	comp=Z,8.6nm,1.1s,baz=154,slow=4.6,SNR=3.6							
SMF	**Signal de Mont**	**163.30**	**356**	⇑*i*PKIKP	PKPdf	15 48 23.6	-0.8	
	comp=Z,52nm,1.2s							
MFF	**Saint Martin d**	**163.31**	**5**	*e*PKIKP	PKPdf	15 48 24.0	-0.4	
	comp=Z,65nm,1.2s							
BGF	**Bois d'Agland**	**163.43**	**358**	⇑*i*PKIKP	PKPdf	15 48 24.1	-0.4	
TCF	**Toulx Ste Croi**	**163.71**	**360**	*e*PKIKP	PKPdf	15 48 24.1	-0.7	
AGO	**Saint Agoulin**	**163.93**	**357**	PKP	PKPdf	15 48 25.6	+0.6	
LPL	**La Plagne**	**164.05**	**348**	*e*PKIKP	PKPdf	15 48 25.0	-0.1	
	comp=Z,30nm,0.9s							
LPG	**La Plagne**	**164.07**	**348**	⇑*i*PKIKP	PKPdf	15 48 25.0	-0.1	
	comp=Z,104nm,1.7s							
PYM	**Petit Puy Mans**	**164.23**	**358**	PKP	PKPdf	15 48 25.6	+0.3	
VLC	**Villacollemand**	**164.37**	**337**	PFAKE		15 48 40.0	+15	
VLC				LR	LR			
	comp=Z,2µm,22.0s							
BNI	**Bardonecchia**	**164.51**	**348**	*e*PKPdf	PKPdf	15 48 25.5	-0.1	
BNI				LR	LR			
	comp=Z,1µm,21.0s							
AQU	**L'Aquila**	**164.64**	**327**	PFAKE		15 48 40.0	+14	
AQU				LR	LR			
	comp=Z,1µm,21.0s							
RJF	**Les Rejaudoux**	**164.69**	**1**	⇑*i*PKIKP	PKPdf	15 48 25.4	-0.3	
RJF				*e*MLR	MLR			
	comp=Z,2µm,20.5s							
RJF	**Les Rejaudoux**	**164.69**	**1**	⇑*i*PKIKP	PKPdf	15 48 25.4	-0.3	
RJF				MLR	MLR			
	comp=Z,2µm,20.5s							
LBL	**Lubilhac**	**164.74**	**357**	PKP	PKPdf	15 48 26.8	+1.1	
ORIF	**Oris-en-Rattie**	**164.78**	**350**	⇑*i*PKIKP	PKPdf	15 48 25.4	-0.4	
	comp=Z,30nm,0.9s							
ORIF				*e*MLR	MLR			
	comp=Z,2µm,21.8s							
MBDF	**Montbardon**	**164.81**	**347**	⇑*i*PKIKP	PKPdf	15 48 25.3	-0.5	
	comp=Z,45nm,1.0s							
TIP	**Timpagrande**	**164.82**	**311**	*e*PKPdf	PKPdf	15 48 26.0	0.0	
TIP				*e*PKPab	PKPab	15 49 22.8	+0.6	
TIP				LR	LR			
	comp=Z,960nm,21.0s							
CUC	**Castrocucco**	**164.95**	**315**	PFAKE		15 48 40.0	+14	
CUC				LR	LR			
	comp=Z,2µm,21.0s							
VIVF	**Saint-Julien-l**	**165.00**	**353**	⇑*i*PKIKP	PKPdf	15 48 25.6	-0.4	
	comp=Z,148nm,1.5s							
LFF	**La Frestale**	**165.02**	**4**	*e*PKIKP	PKPdf	15 48 25.8	-0.2	
CAF	**Calviac**	**165.07**	**360**	⇑*i*PKIKP	PKPdf	15 48 26.0	0.0	
	comp=Z,79nm,1.1s							
SAOF	**Saorge**	**165.35**	**344**	PKP	PKPdf	15 48 30.0	+3.7	
AUTN	**L'Aution**	**165.37**	**344**	PKP	PKPdf	15 48 25.4	-0.9	
TOUF	**Mont Tournerai**	**165.39**	**345**	PKP	PKPdf	15 48 25.4	-0.9	
LUCF	**Luceram**	**165.48**	**345**	PKP	PKPdf	15 48 26.8	+0.4	
SBF	**Sospel**	**165.49**	**344**	*e*PKIKP	PKPdf	15 48 25.3	-1.1	
MVIF	**Mont Vial**	**165.52**	**345**	PKP	PKPdf	15 48 25.4	-1.1	
CALN	**Calern**	**165.72**	**346**	PKP	PKPdf	15 48 25.1	-1.5	
SMRF	**Simiane la Rot**	**165.75**	**350**	*e*PKIKP	PKPdf	15 48 26.7	+0.1	
LASF	**Ste Croix**	**165.85**	**355**	*e*PKIKP	PKPdf	15 48 26.5	-0.2	
CEL	**Celeste**	**165.88**	**309**	PFAKE		15 48 40.0	+13	
CEL				LR	LR			
	comp=Z,132µm,22.0s							
FRF	**La Foret Royal**	**165.95**	**346**	*e*PKIKP	PKPdf	15 48 26.1	-0.7	
	comp=Z,101nm,1.2s							
LMR	**La Mourre**	**166.20**	**346**	*e*PKIKP	PKPdf	15 48 26.4	-0.6	
PGF	**Pioggiola**	**166.27**	**338**	⇑*i*PKIKP	PKPdf	15 48 27.8	+0.7	
	comp=Z,261nm,1.7s							
SJPF	**Ste Jean**	**166.62**	**10**	⇑*i*PKIKP	PKPdf	15 48 27.3	-0.1	
	comp=Z,32nm,1.0s							
MTLF	**Montolieu**	**166.66**	**360**	⇑*i*PKIKP	PKPdf	15 48 27.0	-0.4	
EPF	**Esparros**	**166.90**	**6**	⇑*i*PKIKP	PKPdf	15 48 27.6	0.0	
	comp=Z,36nm,0.9s							
ETSF	**Etsaut**	**166.93**	**9**	*e*PKIKP	PKPdf	15 48 27.0	-0.6	
	comp=Z,56nm,1.1s							
MTE	**Manteigas**	**166.97**	**34**	*e*PKPdf	PKPdf	15 48 27.9	+0.2	
MTE				*e*PKPab	PKPab	15 49 30.2	-1.4	
MTE				LR	LR			
	comp=Z,2µm,22.0s							
LIS	**Lisbon**	**167.29**	**44**	*e*P	PKPdf	15 48 26.2	-1.8	
LIS				*e*SS	SS	16 14 02.2	-0.6	
LIS				AMS	AMS	17 00 56.4		
	comp=Z,2µm,21.7s							
WDD	**Wield Dalam**	**168.00**	**303**	PFAKE		15 48 40.0	+11	
WDD				LR	LR			
	comp=Z,2µm,22.0s							
EVO	**Evora**	**168.08**	**42**	⇑*i*PKIKP	PKPdf	15 48 29.1	+0.5	
	comp=Z,85nm,1.2s							
EVO				*e*MLR	MLR			
	comp=Z,1µm,19.0s							
VSL	**Villasalto**	**168.76**	**330**	PFAKE		15 48 40.0	+11	
VSL				LR	LR			
	comp=Z,995nm,19.0s							
PAB	**San Pablo**	**169.10**	**27**	*e*PKPdf	PKPdf	15 48 29.9	+0.7	
PAB				LR	LR			
	comp=Z,3µm,21.0s							
ESDC	**Sonseca Array**	**169.13**	**25**	PKP	PKPdf	15 48 29.7	+0.5	
	comp=Z,10nm,0.8s,baz=352,slow=2.9,SNR=24							
ESDC				PKPab	PKPab	15 49 40.3	-0.8	
	comp=Z,11nm,0.9s,baz=324,slow=4.0,SNR=8.5							
ESDC				PP	PP	15 53 28.4	-1.8	
	comp=Z,0.8nm,0.5s,baz=359,slow=5.9,SNR=5.2							
ESLA	**Sonseca Array**	**169.13**	**25**	*e*PKPdf	PKPdf	15 48 28.0	-1.2	
ESLA				LR	LR			
	comp=Z,10µm,20.0s							
SFS	**San Fernando**	**170.52**	**45**	PFAKE		15 48 40.0	+10	
SFS				LR	LR			
	comp=Z,3µm,21.0s							
KEST	**Kesra**	**171.60**	**315**	PKP	PKPdf	15 48 30.8	+0.1	
	comp=Z,6.0nm,1.0s,baz=275,slow=2.5,SNR=9.5							
KEST				PKPab	PKPab	15 49 52.9	+0.6	
	comp=Z,8.5nm,0.9s,baz=323,slow=5.2,SNR=5.1							
TAM	**Tamanrasset**	**172.20**	**204**	*e*PKPdf	PKPdf	15 48 31.0	-0.4	
MDT	**Midelt**	**173.63**	**62**	PKPab	PKPab	15 50 01.3	-0.2	
	baz=323,slow=5.7							

*NEIC **20** 15:32:26.3±6.9, 2991S×17755W, h7km±41km, mb5.2/1, Error ellipse: s-maj=21.1km s-min=14.6km az=86.0*
*MOS **20** 15:32:29.9±0.9, 2989S×17788W, h31km, mb5.2/1, MS5.0/1, Error ellipse: s-maj=27.1km s-min=22.7km az=29.0*
*ISCJB **20** 15:32:30.1±0.7, 2993S±006×1778W±0.1, h33km, mb4.8/12, Error ellipse: s-maj=16.5km s-min=8.3km az=5.7*
*IDC **20** 15:32:32.2±1.4, 2970S×17776W, h43km±10km, mb4.5/11, mb1 4.7/11, mb1mx4.6/17, mbtmp4.5/11, Error ellipse: s-maj=21.4km s-min=19.6km az=100.0*

ISC 20 15:32:28.4±1.9, 3000S±007×1778W±01, h11km±11km, n41, σ1§16/28, mb4.8/12, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.76**	**352**	P		**Pg**	**15 32 43.6**	**+0.6**
	4µm,0.3s,baz=85,slow=5.0,SNR=12							
RAO				S		**Sg**	**15 32 52.4**	**-0.5**
	17µm,0.3s,baz=142,slow=18,SNR=23							
RAO	**Raoul Island**	**0.76**	**352**	*e*P		**Pg**	**15 32 43.4**	**+0.4**
RAO				S		**Sg**	**15 32 52.4**	**-0.5**
URZ	**Urewera**	**9.26**	**206**	P		**Pn**	**15 34 40.8**	**-0.9**
	baz=336,slow=20,SNR=3.3							
URZ				S		**Sn**	**15 36 24.8**	**-0.9**
	29nm,0.3s,baz=180,slow=20,SNR=9.7							
RPZ	**Rata Peaks**	**16.32**	**210**	P		**Pn**	**15 36 16.5**	**-0.9**
	baz=38,slow=19,SNR=1.5							
RPZ				S		Sx	15 39 03.1	
	2.6nm,0.3s,baz=210,slow=20,SNR=7.7							
ARMA	**Armidale**	**26.39**	**261**	*e*P		**P**	**15 38 08.5**	**+3.6**
EIDS	**Eidsvold**	**27.90**	**272**	*e*P		**P**	**15 38 20.7**	**+2.3**
CTA	**Charters Tower**	**33.91**	**278**	*e*P		**P**	**15 39 12.5**	**+1.0**
	13nm,0.4s,mb5.2							
CTA	**Charters Tower**	**33.91**	**278**	P		**P**	**15 39 12.6**	**+1.0**
	14nm,0.4s,mb5.3,baz=104,slow=9.1,SNR=11							
CTAO	**Charters Tower**	**33.91**	**278**	*e*P		**P**	**15 39 12.4**	**+0.8**
STKA	**Stephens Creek**	**34.74**	**256**	*e*P		**P**	**15 39 20.7**	**+2.1**
	16nm,0.8s,mb5.0							
STKA	**Stephens Creek**	**34.74**	**256**	P		**P**	**15 39 20.5**	**+1.9**
	37nm,1.1s,mb5.2,baz=95,slow=10,SNR=3.6							
STKA	**Stephens Creek**	**34.74**	**256**	*e*P		**P**	**15 39 20.2**	**+1.6**
ASAR	**Alice Springs**	**43.31**	**266**	P		**P**	**15 40 29.4**	**-1.0**
	8.8nm,0.6s,mb4.6,baz=102,slow=7.3,SNR=6.0							
ASAR				PKPPKP			16 12 32.2	
	0.3nm,0.9s,baz=357,slow=2.8,SNR=4.1							
WB2	**Warramunga Arr**	**44.25**	**272**	*e*P		**P**	**15 40 38.0**	**0.0**
WB2	**Warramunga Arr**	**44.25**	**272**	*e*P		**P**	**15 40 38.2**	**+0.2**
WRAB	**Tennant Creek**	**44.26**	**272**	*e*P		**P**	**15 40 38.2**	**+0.1**
	24nm,0.6s,mb5.1							
WRAB	**Tennant Creek**	**44.26**	**272**	*e*P		**P**	**15 40 38.2**	**+0.1**
WRAB				pmax	pmax			
	comp=Z,24nm,0.6s,mb5.1							
WRA	**Warramunga Arr**	**44.26**	**272**	P		**P**	**15 40 37.2**	**-0.9**
	comp=Z,31nm,0.9s,mb5.0,baz=110,slow=8.1,SNR=18							
QSPA	**South Pole Qui**	**60.11**	**180**	P		**P**	**15 42 37.4**	**+2.3**
	comp=Z,7.3nm,0.7s,mb4.8,baz=23,slow=1.5,SNR=3.6							
MAW	**Mawson**	**72.74**	**200**	P		**P**	**15 43 56.6**	**+0.5**
	comp=Z,8.5nm,0.8s,mb4.7,baz=148,slow=11,SNR=2.9							
MJAR	**Matsushiro Arr**	**78.02**	**325**	P		**P**	**15 44 25.0**	**-1.7**
	comp=Z,5.6nm,1.0s,mb4.5,baz=166,slow=5.0,SNR=5.0							
PLCA	**Paso Flores**	**82.65**	**133**	P		**P**	**15 44 53.0**	**+1.1**
	comp=Z,3.8nm,1.0s,mb4.4,baz=254,slow=7.7,SNR=4.2							
PLCA				pP	pP		15 45 08.4	+13
	comp=Z,17nm,1.1s,baz=224,slow=5.7,SNR=7.8							
KSRS	**Korea Array**	**84.16**	**319**	P		**P**	**15 44 58.8**	**-0.7**
	comp=Z,4.3nm,0.9s,mb4.6,baz=148,slow=5.5,SNR=4.9							
PETK	**Petropavlovsk-**	**85.47**	**345**	P		**P**	**15 45 05.3**	**-0.3**
	comp=Z,3.4nm,0.7s,mb4.6,baz=109,slow=8.3,SNR=7.2							
NVAR	**Mina Array Bea**	**87.83**	**43**	P		**P**	**15 45 16.2**	**-1.3**
	comp=Z,1.8nm,0.8s,mb4.4,baz=218,slow=5.4,SNR=3.8							
CFAA	**Coronel Fontan**	**89.33**	**126**	pP		pP	15 45 41.5	+13
	comp=Z,1.4nm,1.0s,baz=226,slow=4.3,SNR=6.1							
TXAR	**Lajitas Array**	**92.02**	**57**	pP		pP	15 45 53.4	+12
	comp=Z,5.6nm,1.1s,baz=211,slow=6.9,SNR=6.0							
SONM	**Songino Array**	**102.97**	**318**	PKKP		PKKPbc	16 02 34.0	+9.4
	comp=Z,1.2nm,0.9s,baz=302,slow=3.1,SNR=5.1							
YKA	**Yellowknife Ar**	**105.01**	**25**	PKKPbc		PKKPbc	16 02 22.0	+3.2
	comp=Z,0.8nm,0.7s,baz=33,slow=5.8,SNR=3.6							
MKAR	**Makanchi Array**	**117.65**	**310**	PKP		PKPd

n29,σ0°83/29,mb3.4/9,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.70**	**352**	P	**Pn**	**16 23 49.5**	**+1.3**
JHHJ				*e*S	**S**	**16 24 44.2**	**-1.3**
CBIJ	**Chichi jima**	**5.16**	**353**	P	**Pn**	**16 23 55.2**	**+1.3**
	23nm,0.3s,baz=261,slow=19,SNR=16						
CBIJ				S	**S**	**16 24 54.2**	**-1.5**
	14nm,0.3s,baz=270,slow=20,SNR=4.5						
CBIJ	**Chichi jima**	**5.16**	**353**	P	**Pn**	**16 23 55.1**	**+1.2**
CBIJ				*e*S	**S**	**16 24 55.2**	**-0.5**
JHJ	**Hachijo jima 2**	**11.46**	**347**	P	**Pn**	**16 25 12.7**	**-0.6**
	6.0nm,0.3s,baz=270,slow=20,SNR=5.1						
BSO3	**Boso 3**	**12.97**	**351**	P	**Pn**	**16 25 31.5**	**-0.6**
JIE	**Ise**	**13.54**	**338**	P	**Pn**	**16 25 40.3**	**+1.2**
JOD2	**Odawara 2**	**13.68**	**347**	P	**Pn**	**16 25 41.4**	**+0.7**
JNY	**Yasuok**	**14.07**	**343**	P	**Pn**	**16 25 46.2**	**+0.7**
JHU	**Hanno**	**14.21**	**348**	P	**Pn**	**16 25 46.3**	**-0.9**
JYT	**Yasato**	**14.42**	**351**	P	**Pn**	**16 25 49.2**	**-0.5**
JRY	**Ryogami san**	**14.44**	**347**	P	**Pn**	**16 25 50.1**	**+0.1**
JAG	**Ashikaga**	**14.73**	**349**	P	**Pn**	**16 25 53.7**	**+0.2**
JHO	**Hitachi**	**14.75**	**353**	P	**Pn**	**16 25 53.8**	**+0.1**
MJAR	**Matsushiro Arr**	**15.10**	**345**	P	**Pn**	**16 25 57.8**	**-0.1**
	0.7nm,0.3s,baz=169,slow=11,SNR=6.7						
KSRS	**Korea Array**	**20.16**	**323**	P	**P**	**16 26 53.7**	**+1.3**
	3.4nm,0.6s,baz=145,slow=8.9,SNR=13						
SONM	**Songino Array**	**38.98**	**320**	P	**P**	**16 29 39.0**	**-0.2**
	0.3nm,0.3s,mb3.2,baz=125,slow=6.6,SNR=6.6						
CMAR	**Chiang Mai Arr**	**41.31**	**273**	P	**P**	**16 29 58.0**	**-0.7**
	0.3nm,0.6s,mb2.9,baz=75,slow=7.2,SNR=4.8						
WRAB	**Tennant Creek**	**42.46**	**192**	*e*P	**P**	**16 30 07.8**	**-0.1**
	1.3nm,0.6s,mb3.5						
WRA	**Warramunga Arr**	**42.48**	**192**	P	**P**	**16 30 07.7**	**-0.2**
	0.5nm,0.4s,mb3.3,baz=16,slow=9.1,SNR=29						
ASAR	**Alice Springs**	**46.19**	**191**	P	**P**	**16 30 36.6**	**-0.6**
	0.2nm,0.3s,mb2.9,baz=14,slow=6.8,SNR=15						
ZALV	**Zalesovo Beam**	**53.85**	**322**	P	**P**	**16 31 34.7**	**+0.4**
	1.1nm,0.3s,mb3.8,baz=98,slow=8.9,SNR=3.0						
MK31	**Makanchi Array**	**54.34**	**313**	*e*P	**P**	**16 31 37.4**	**-0.6**
MKAR	**Makanchi Array**	**54.34**	**313**	P	**P**	**16 31 37.5**	**-0.5**
	0.4nm,0.3s,mb3.4,baz=98,slow=7.1,SNR=9.8						
MKAR	**Makanchi Array**	**54.34**	**313**	P	**P**	**16 31 37.5**	**-0.5**
KURK	**Kurchatov**	**57.12**	**317**	*e*P	**P**	**16 31 56.4**	**-1.2**
	1.1nm,0.6s,mb3.7						
BRVK	**Borovoye**	**62.38**	**319**	*e*P	**P**	**16 32 35.1**	**+1.8**
	2.1nm,0.4s,mb4.1						
TORD	**Torodi Ar. Bea**	**128.38**	**309**	PKP	PKPdf	16 41 13.2	-1.8
	0.1nm,0.4s,baz=0.8,slow=0.9,SNR=4.5						
PLCA	**Paso Flores**	**146.12**	**131**	PKPbc	PKPbc	16 41 48.4	+0.4
	1.1nm,0.5s,baz=237,slow=1.6,SNR=5.6						
PLCA	**Paso Flores**	**146.12**	**131**	PKPbc	PKPbc	16 41 48.4	+0.4

*ISCJB **20** 16:40:11.9±4.0,69S±02ₓ1557E±0.1,h75km±44km, mb3.7/7,Error ellipse: s-maj=33.0km s-min=17.8km az=149.9*

*IDC **20** 16:40:12.5±2.8,694Sₓ15562E,h61km±28km,mb3.6/6, mb1 3.9/8,mb1mx3.7/18,mbtmp3.8/8,ML3.8/2,MS3.4/1, Ms1 3.4/1,ms1mx3.0/22,Error ellipse: s-maj=24.2km s-min=20.8km az=9.0*

*NEIC **20** 16:40:14.8±3.1,701Sₓ15577E,h90km±38km,mb3.8/1, Error ellipse: s-maj=36.6km s-min=13.5km az=130.0*

ISC 20 16:40:13.2±3.6,69S±02ₓ1556E±01,h67km±41km,n14, σ0°61/15,mb3.7/7,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.94**	**121**	P	**Pn**	**16 41 23.5**	**-1.4**
	3.9nm,0.3s,baz=225,slow=10.0,SNR=3.5						
HNR				S	**Sn**	**16 42 21.4**	**+0.6**
	8.9nm,0.3s,baz=99,slow=1.8,SNR=5.6						
HNR				LR	LR	16 43 22.2	
	comp=Z,367nm,18.7s,baz=309,slow=38						
HNR	**Honiara**	**4.94**	**121**	*e*Pn	**Pn**	**16 41 24.4**	**-0.6**
HNR				S	**Sn**	**16 42 21.4**	**+0.6**
HNR				LR	LR	16 43 22.2	
CTA	**Charters Tower**	**15.95**	**214**	P	**Pn**	**16 43 54.6**	**+1.1**
	0.2nm,0.3s,baz=55,slow=10,SNR=5.0						
KAKA	**Kakadu**	**23.56**	**254**	*e*P	Px	16 45 05.6	
	3.6nm,0.6s						
WRAB	**Tennant Creek**	**24.37**	**236**	*e*P	**P**	**16 45 25.1**	**-0.1**
	2.7nm,0.7s,mb3.7						
WB2	**Warramunga Arr**	**24.38**	**236**	*e*P	**P**	**16 45 25.1**	**-0.1**
WB2	**Warramunga Arr**	**24.38**	**236**	*e*P	**P**	**16 45 25.0**	**-0.2**
WRA	**Warramunga Arr**	**24.39**	**236**	P	**P**	**16 45 25.2**	**-0.1**
	1.9nm,0.6s,mb3.6,baz=60,slow=9.3,SNR=20						
ASAR	**Alice Springs**	**26.70**	**229**	P	**P**	**16 45 45.2**	**-1.0**
	1.6nm,0.8s,mb3.6,baz=61,slow=8.9,SNR=21						
ASAR				ScP	ScP	16 52 43.0	+0.2
	0.5nm,0.9s,baz=88,slow=3.9,SNR=4.1						
STKA	**Stephens Creek**	**28.08**	**206**	P	**P**	**16 45 58.2**	**-0.2**
	4.3nm,0.8s,mb4.0,baz=18,slow=13,SNR=5.8						
CMAR	**Chiang Mai Arr**	**61.33**	**295**	P	**P**	**16 50 22.6**	**+0.3**
	0.4nm,0.8s,mb3.5,baz=125,slow=5.9,SNR=5.0						
SONM	**Songino Array**	**69.62**	**327**	P	**P**	**16 51 15.3**	**+0.1**
	1.5nm,0.9s,mb3.8,baz=128,slow=5.2,SNR=7.0						
MKAR	**Makanchi Array**	**83.77**	**319**	P	**P**	**16 52 35.4**	**+0.4**
	0.5nm,0.8s,mb3.4,baz=96,slow=9.8,SNR=4.6						
MKAR	**Makanchi Array**	**83.77**	**319**	P	**P**	**16 52 35.4**	**+0.4**

*GCMT **20** 16:44:28.9±0.3,2311Sₓ7095W,h32km±1km,MW5.4/66, Moment Tensor Solution. s38,c51; s66,c100; Duration: 1±2 Moment tensor: Scale 10^{17}Nm; Mr0.99±.05; Mθθ0.10±.03; Mφφ-1.09±.04; Mrθ0.02±.04; Mφr0.01±.02; Mθr-0.97±.05; Best double couple: M₀1.42100×10^{17} NP1:φs360.00000°,δ24.00000°,λ91.00000°. NP2: φs179.00000°,δ66.00000°,λ90.00000°. Principal axes: T 1.3710, Plg69.0000°, Azm89.0000°; N 0.1000, Plg0.0000°, Azm179.0000°; P -1.4700, Plg21.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 16:44:28.9±1.1,2315Sₓ7039W,h16km±7km,mb5.3/66, ML5.0(GUC) Error ellipse: s-maj=7.0km s-min=4.6km az=64.0*

*ISCJB **20** 16:44:28.9±0.8,2317S±003ₓ7040W±004,h25km±6km, mb5.1/80,MS5.0/10,Error ellipse: s-maj=6.5km s-min=4.9km az=161.8*

*GUC **20** 16:44:29.4±1.2,2322Sₓ7074W,h13km±8km,ML5.1*

*MOS **20** 16:44:30.3±1.4,2306Sₓ7045W,h33km,mb5.3/28,Error ellipse: s-maj=15.2km s-min=6.9km az=104.9*

*IDC **20** 16:44:30.5±0.7,2315Sₓ7050W,h28km±4km,mb4.6/15, mb1 4.7/19,mb1mx4.7/20,mbtmp4.6/19,ML3.9/5,MS4.7/10, Ms1 4.7/10,ms1mx4.4/24,Error ellipse: s-maj=13.6km s-min=11.0km az=154.0*

*BJI **20** 16:44:32.8,2310Sₓ7040W,h30km,mB5.4,Ms5.4,Msz5.3*

ISC 20 16:44:31.6±0.7,2325S±003ₓ7046W±004,h32km±5km, h28km±1.2km:pP-P,n507,σ0°76/432,mb5.1/80,MS5.0/10, 117C-122D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.14**	**4**	AML	AML	16 44 48.7	
	comp=E,376μm,0.7s						
CEN1	**Los Morros**	**0.28**	**121**	*e*P	**Pb**	**16 44 41.0**	**+2.0**
CEN1				*i* S	**Sb**	**16 44 47.8**	**+3.8**
ANCH	**Antofagasta**	**0.44**	**174**	*e*P	**Pb**	**16 44 39.3**	**-1.9**
ANCH				*i* S	**Sb**	**16 44 47.5**	**-0.2**
ANCH	**Antofagasta**	**0.44**	**174**	*e*P	**Pb**	**16 44 39.3**	**-1.9**
ANCH				*i* S	**Sb**	**16 44 47.1**	**-0.7**
ANCH				AML	AML	16 44 49.8	
	comp=N,65μm,0.9s						
PB06	**Plate Boundary**	**0.98**	**57**	*e*P	**Pn**	**16 44 49.5**	**+0.3**
PB06				*i* S	**Sn**	**16 45 05.4**	**+3.5**
PB04	**Plate Boundary**	**1.32**	**43**	*e*P	**Pn**	**16 44 47.9**	**-6.0**
PB04				*i* S	**Sn**	**16 45 01.7**	**-8.8**
PB04				AML	AML	16 45 03.0	
	comp=E,189μm,0.7s						
CPN1	**Cerro Paranal**	**1.38**	**178**	*e*P	**Pn**	**16 44 54.1**	**-0.5**
CPN1				*i* S	**Sn**	**16 45 13.1**	**+1.4**
CPN1				AML	AML	16 45 16.2	
	comp=E,34μm,0.6s						
LVC	**Limon Verde**	**1.56**	**66**	Pg	**Pn**	**16 44 59.9**	**+2.7**
	comp=E,626nm,0.3s,baz=251,slow=12,SNR=4.1						
LVC				Lg		16 45 22.0	
	comp=E,8μm,0.3s,baz=350,slow=16,SNR=67						
LVC	**Limon Verde**	**1.56**	**66**	↑P/Pn	**Pn**	**16 44 59.7**	**+2.6**
LVC				Pg	**Pn**	**16 44 59.9**	**+2.7**
LVC				*e*Sn	**Sn**	**16 45 21.6**	**+5.4**
LVC				Lg		16 45 22.0	
LVC	**Limon Verde**	**1.56**	**66**	*e*P	**Pn**	**16 44 59.9**	**+2.8**
LVC				*i* S	**Sn**	**16 45 22.5**	**+6.2**
LVC				AML	AML	16 45 25.1	
	comp=N,51μm,0.8s						
PB07	**Plate Boundary**	**1.60**	**19**	*e*P	**Pn**	**16 44 57.9**	**+0.2**
PB07				*i* S	**Sn**	**16 45 19.8**	**+2.4**
PB01	**Plate Boundary**	**2.37**	**22**	*e*P	**Pn**	**16 45 10.8**	**+2.5**
PB01				*i* S	**Sn**	**16 45 42.7**	**+6.5**
PB01				AML	AML	16 45 46.4	
	comp=E,50μm,0.8s						
LCO	**Las Campanas**	**5.75**	**182**	P	**Pn**	**16 45 54.9**	**+0.2**
	comp=E,185nm,0.6s						
ARE	**Arequipa**	**6.82**	**352**	↓*i*P	**Pn**	**16 46 06.0**	**-3.5**
ARE				*e*S	**Sn**	**16 47 16.0**	**-10**
LPAZ	**La Paz**	**7.26**	**18**	Pn	**Pn**	**16 46 16.8**	**+1.2**
	comp=E,3.4nm,0.3s,baz=198,slow=11,SNR=21						
LPAZ				Sn	**Sn**	**16 47 54.0**	**+17**
	comp=E,3.5nm,0.3s,baz=200,slow=18,SNR=1.5						
LPAZ				LR	LR	16 49 18.7	
	comp=E,8μm,19.4s,baz=204,slow=40						
LPAZ	**La Paz**	**7.26**	**18**	*e*Pn	**Pn**	**16 46 15.6**	**0.0**
	comp=E,151nm,0.8s						
LPAZ	**La Paz**	**7.26**	**18**	*e*P	**Pn**	**16 46 15.6**	**0.0**
LPAZ				pmax	pmax		
	comp=Z,151nm,0.8s						
CFAA	**Coronel Fontan**	**8.56**	**167**	Pn	**Pn**	**16 46 32.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=356,slow=17,SNR=8.9						
CFAA				Sn	**Sn**	**16 48 24.2**	**+15**
	comp=Z,1.0nm,0.3s,baz=248,slow=18,SNR=15						
CFAA				LR	LR	16 50 03.2	
	comp=Z,945nm,19.9s,baz=334,slow=38						
CFAA	**Coronel Fontan**	**8.56**	**167**	Pn	**Pn**	**16 46 32.8**	**-0.5**
CFAA				Sn	**Sn**	**16 48 24.2**	**+15**
CFAA				LR	LR	16 50 03.2	
SIV	**San Ignacio**	**11.41**	**52**	Pn	**Pn**	**16 47 10.4**	**-2.1**
	comp=Z,1.2nm,0.3s,baz=246,slow=12,SNR=28						
SIV				Sn	**Sn**	**16 49 21.2**	**+2.3**
	baz=301,slow=19						
NNA	**Nana**	**12.74**	**330**	Pn	**Pn**	**16 47 29.8**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=171,slow=5.0,SNR=7.4						
NNA				Sn	**Sn**	**16 49 39.8**	**-12**
	comp=Z,3.1nm,0.3s,baz=204,slow=20,SNR=4.6						
NNA	**Nana**	**12.74**	**330**	*e*P	**Pn**	**16 47 32.8**	**+2.1**
	comp=Z,20nm,0.8s						
LPA	**La Plata**	**15.95**	**140**	*de*P	**Pn**	**16 48 13.0**	**-0.7**
LPA	**La Plata**	**15.95**	**140**	*e*P	**Pn**	**16 48 13.0**	**-0.7**
PLCA	**Paso Flores**	**17.44**	**180**	Pn	**Pn**	**16 48 32.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=5.4,slow=13,SNR=12						
PLCA				LR	LR	16 55 45.6	
	comp=Z,2μm,19.0s,baz=359,slow=38						
PLCA	**Paso Flores**	**17.44**	**180**	*e*P	**Pn**	**16 48 31.9**	**-0.4**
	comp=Z,75nm,1.5s						
PLCA	**Paso Flores**	**17.44**	**180**	*e*P	**Pn**	**16 48 31.9**	**-0.5**
PLCA				pmax	pmax		
	comp=Z,75nm,1.5s						
ATAH	**Atahualpa**	**17.86**	**333**	P	**Pn**	**16 48 34.0**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=69,slow=8.6,SNR=3.3						
ATAH				LR	LR	16 54 43.5	
	comp=Z,1μm,21.3s,baz=314,slow=35						
SPB	**Sao Paulo**	**21.13**	**96**	*e*P	**P**	**16 49 16.7**	**+2.8**
BDFB	**Brasilia**	**22.46**	**74**	P	**P**	**16 49 26.9**	**-1.2**
	comp=Z,28nm,1.0s,mb4.7,baz=245,slow=16,SNR=23						
BDFB				LR	LR	17 00 07.4	
	comp=Z,1μm,18.3s,MS4.5,baz=77,slow=42						
OTAV	**Otavalo**	**24.60**	**340**	P	**P**	**16 49 49.5**	**+0.4**
	comp=Z,72nm,1.3s,mb5.0						
CAM4	**Nova Friburgo**	**25.71**	**94**	↑*i*P	**P**	**16 49 58.8**	**-0.4**
CAM4				*i*		16 50 03.3	
CAM4				*i*	pP	16 50 08.2	-0.2
CAM4				*i*		16 50 14.2	
CAM3	**Guarapari**	**27.85**	**91**	*e*P	**P**	**16 50 17.2**	**-1.2**
CAM3				*i*		16 50 29.8	
CAM3				*i*		16 50 35.1	
ROSC	**El Rosal**	**28.18**	**352**	P	**P**	**16 50 20.9**	**-0.5**
	comp=Z,5.3nm,0.3s,mb4.7,baz=87,slow=21,SNR=8.0						
ROSC	**El Rosal**	**28.18**	**352**	*e*P	**P**	**16 50 20.9**	**-0.5**
RCBR	**Riachuelo**	**37.51**	**68**	*e*P	**P**	**16 51 43.3**	**+0.4**
	comp=Z,216nm,1.1s,mb5.8						
FDF	**Fort de France**	**38.83**	**14**	*e*P	**P**	**16 51 50.5**	**-3.3**
TGUH	**Tegucigalpa,Un**	**40.56**	**334**	P	**P**	**16 52 08.0**	**-0.3**
SJG	**San Juan**	**41.32**	**6**	*e*P	**P**	**16 52 11.4**	**-3.0**
	comp=Z,117nm,0.9s,mb5.5						
SJG	**San Juan**	**41.32**	**6**	*e*P	**P**	**16 52 11.4**	**-3.0**
SJG				pmax	pmax		
	comp=Z,117nm,0.9s						
MTP	**Monte Pirata**	**41.37**	**7**	*e*P	**P**	**16 52 11.5**	**-3.4**
TRIS	**Tristan da Cun**	**51.40**	**120**	*e*P	**P**	**16 53 35.1**	**+1.6**
	comp=Z,84nm,1.0s,mb5.6						
LRAL	**Lakeview Retre**	**58.15**	**344**	*e*P	**P**	**16 54 20.1**	**-2.2**
	comp=Z,72nm,1.5s,mb5.5						
HKT	**Hockley**	**58.24**	**334**	*e*P	**P**	**16 54 21.6**	**-1.4**
	comp=Z,35nm,1.4s,mb5.2						
HKT	**Hockley**	**58.24**	**334**	*e*P	**P**	**16 54 21.6**	**-1.4**
HKT				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
CNNC	**Cliffs of the**	**58.59**	**353**	*e*P	**P**	**16 54 24.5**	**-0.9**
RKT	**Rikitea**	**58.83**	**256**	*e*S	**S**	**17 02 30.7**	**-0.4**
	comp=Z,1μm,27.5s						
RKT				*e*LR	LR	17 11 55.8	
	comp=Z,3μm,26.0s,baz=109						
VNA3	**Neumayer Olymp**	**58.90**	**161**	*e*P	**P**	**16 54 27.5**	**+0.4**
VNA3				*e*	pP	16 54 35.1	-1.8
VNA3				*e*		16 54 45.6	
VNA3				*e*		16 54 54.0	
VNA1	**Neumayer--Stat**	**59.14**	**160**	*e*P	**P**	**16 54 29.6**	**+0.8**
VNA1				*e*		16 54 36.4	
VNA2	**Neumayer--Watz**	**59.50**	**160**	*e*P	**P**	**16 54 31.7**	**+0.5**
VNA2				*e*	pP	16 54 39.3	-1.7
VNA2				*e*		16 54 47.8	
VNA2				*e*		16 54 55.8	
CPCT	**Cooper Cave**	**59.88**	**347**	*e*P	**P**	**16 54 32.0**	**-2.2**
TKL	**Tuckaleechee C**	**59.92**	**347**	*e*P	**P**	**16 54 32.5**	**-2.0**
SWET	**Sewanee**	**59.97**	**345**	*e*P	**P**	**16 54 32.9**	**-1.9**
JCT	**Junction City**	**60.39**	**331**	*e*P	**P**	**16 54 36.8**	**-1.0**
	comp=Z,34nm,1.1s,mb5.3						
JCT	**Junction City**	**60.39**	**331**	*e*P	**P**	**16 54 36.8**	**-1.1**
JCT				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.3						
ELN	**Prospectdale**	**60.93**	**351**	*e*P	**P**	**16 54 40.4**	**-1.0**
TXAR	**Lajitas Array**	**61.27**	**327**	P	**P**	**16 54 42.8**	**-1.1**
	comp=Z,2.1nm,1.0s,mb4.2,baz=141,slow=8.1,SNR=13						
WVT	**Waverly**	**61.30**	**344**	*e*P	**P**	**16 54 40.9**	**-3.0**
	comp=Z,37nm,1.1s,mb5.4						
WVT	**Waverly**	**61.30**	**344**	*e*P	**P**	**16 54 40.9**	**-3.0**
WVT				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.4						
UALR	**University of**	**61.33**	**340**	*e*P	**P**	**16 54 42.9**	**-1.3**
	comp=Z,44nm,1.3s,mb5.4						
MIAR	**Mount Ida**	**61.53**	**338**	*e*P	**P**	**16 54 44.2**	**-1.3**
	comp=Z,41nm,1.2s,mb5.4						
MIAR	**Mount Ida**	**61.53**	**338**	*e*P	**P**	**16 54 44.2**	**-1.3**
MIAR				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.4						
WCI	**Wyandotte Cave**	**62.93**	**346**	*e*P	**P**	**16 54 52.7**	**-2.1**
	comp=Z,27nm,1.0s,mb5.3						
WCI	**Wyandotte Cave**	**62.93**	**346**	*e*P	**P**	**16 54 52.7**	**-2.1**
WCI				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
USIN	**University of**	**63.00**	**345**	*e*P	**P**	**16 54 53.3**	**-2.0**
SIUC	**Southern Illin**	**63.15**	**343**	*e*P	**P**	**16 54 54.1**	**-2.3**
	comp=Z,61nm,1.1s,mb5.6						
FVM	**French Village**	**63.73**	**342**	*e*P	**P**	**16 54 58.7**	**-1.4**
	comp=Z,156nm,1.6s,mb5.8						
FVM	**French Village**	**63.73**	**342**	*e*P	**P**	**16 54 58.7**	**-1.4**
FVM				pmax	pmax		
	comp=Z,155nm,1.6s,mb5.8						
SSPA	**Standing Stone**	**63.93**	**354**	*e*P	**P**	**16 55 00.9**	**-0.5**
	comp=Z,4.7nm,1.0s,mb4.5						
CCM	**Cathedral Cave**	**64.03**	**342**	*e*P	**P**	**16 55 00.7**	**-1.4**
	comp=Z,18nm,1.1s,mb5.0						
CCM	**Cathedral Cave**	**64.03**	**342**	*e*P	**P**	**16 55 00.7**	**-1.4**
CCM				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
ACSO	**Alum Creek Sta**	**64.22**	**349**	*e*P	**P**	**16 55 01.7**	**-1.6**
	comp=Z,34nm,1.0s,mb5.3						
BRYW	**Bryant College**	**64.84**	**359**	*e*P	**P**	**16 55 05.8**	**-1.5**
	comp=Z,89nm,1.1s,mb5.7						
MAIT	**Maitri**	**65.69**	**159**	*e*P	**P**	**16 55 10.9**	**-1.7**
NVL	**N'lazarevskaya**	**65.72**	**159**	*e*P	**P**	**16 55 13.3**	**+0.5**
NVL				*e**PP	pP	16 55 21.2	-1.5
NVL				S	S	17 04 01.6	+5.1
NVL				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.4						
NVL				MLR	MLR		
	comp=N,413nm,21.0s,MS4.7						
NVL				MLR	MLR		
	comp=E,379nm,21.0s,MS4.7						
NVL				MLR	MLR		
	comp=Z,963nm,21.0s,MS5.0						
319A	**Douglas**	**65.82**	**324**	↑P	**P**	**16 55 13.8**	**-0.1**
	baz=66,SNR=6.0						
318A	**Bisbee**	**66.25**	**324**	↓P	**P**	**16 55 16.8**	**+0.1**
	baz=66,SNR=5.7						
219A	**White Tail Can**	**66.29**	**324**	↓P	**P**	**16 55 17.6**	**+0.7**
	baz=66						
BNM	**Barren Site**	**66.64**	**328**	*e*P	**P**	**16 55 19.0**	**-0.1**
218A	**Dragoon**	**66.69**	**324**	↓P	**P**	**16 55 19.9**	**+0.4**
	baz=67						
LPM	**Los Pinos Moun**	**66.77**	**328**	*e*P	**P**	**16 55 20.1**	**+0.2**
LENM	**Lemitar**	**66.82**	**328**	*e*P	**P**	**16 55 19.2**	**-1.1**
119A	**Ashpeak Ranch,**	**66.91**	**325**	↓P	**P**	**16 55 21.6**	**+0.7**
	baz=67						
QSPA	**South Pole Qui**	**66.95**	**180**	*e*P	**P**	**16 55 21.1**	**+0.6**
	comp=Z,76nm,1.6s,mb5.5						
QSPA				*e*	pP	16 55 29.3	-1.1
MDV	**Middlebury**	**66.96**	**358**	*e*P	**P**	**16 55 20.7**	**-0.2**
217A	**Green Valley**	**66.96**	**323**	↑P	**P**	**16 55 21.1**	**-0.1**
	baz=67,SNR=5.7						
LAZ	**Ladron**	**67.09**	**328**	*e*P	**P**	**16 55 22.4**	**+0.3**
118A	**Homack Ranch,**	**67.17**	**324**	↓P	**P**	**16 55 22.5**	**0.0**
	baz=67,SNR=6.8						
ANMO	**Albuquerque**	**67.20**	**328**	*e*P	**P**	**16 55 22.5**	**-0.2**
	comp=Z,35nm,1.5s,mb5.2						
ANMO	**Albuquerque**	**67.20**	**328**	*e*P	**P**	**16 55 22.5**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,35nm,1.5s						
Z19A	**T-Link Ranch,**	**67.30**	**325**	↑P	**P**	**16 55 24.1**	**+0.8**
	baz=68						
TUC	**Tucson**	**67.35**	**324**	*e*P	**P**	**16 55 24.0**	**+0.3**
	comp=Z,24nm,1.4s,mb5.0						
TUC	**Tucson**	**67.35**	**324**	*e*P	**P**	**16 55 24.0**	**+0.3**
TUC				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.0						
216A	**Three Points,**	**67.49**	**323**	↑P	**P**	**16 55 25.0**	**+0.4**
	baz=68						
117A	**Oracle**	**67.53**	**324**	↓P	**P**	**16 55 24.5**	**-0.3**
	baz=68,SNR=8.3						
CBKS	**Cedar Bluff**	**67.56**	**336**	*e*P	**P**	**16 55 24.2**	**-0.6**
	comp=Z,68nm,1.1s,mb5.6						
CBKS	**Cedar Bluff**	**67.56**	**336**	*e*P	**P**	**16 55 24.2**	**-0.6**
CBKS				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.6						
Y19A	**Nutrioso**	**67.81**	**326**	↑P	**P**	**16 55 26.0**	**-0.6**
	baz=68,SNR=16						
TAOE	**Nuku Hiva Isla**	**67.94**	**270**	*e*S	S	17 04 22.3	-2.8
	comp=Z,723nm,24.1s						
TAOE	**Nuku Hiva Isla**	**67.94**	**270**	*e*LR	LR	17 15 57.9	
	comp=Z,4μm,24.8s,baz=123						
Y18A	**Canyon Day Jun**	**68.08**	**325**	↑P	**P**	**16 55 28.4**	**+0.2**
	baz=68						
PKME	**Peaks-Kenny Pk**	**68.19**	**1**	*e*P	**P**	**16 55 28.3**	**-0.3**
	comp=Z,43nm,1.2s,mb5.3						
214A	**Organ Pipe Nat**	**68.22**	**322**	↓P	**P**	**16 55 29.0**	**-0.2**
	baz=68,SNR=6.7						
JFWS	**Jewell Farm**	**68.31**	**344**	*e*P	**P**	**16 55 27.8**	**-1.7**
	comp=Z,48nm,1.4s,mb5.3						
JFWS				*e*		16 55 34.2	
JFWS	**Jewell Farm**	**68.31**	**344**	*e*P	**P**	**16 55 27.8**	**-1.7**
JFWS				*e*		16 55 34.2	
JFWS				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.3						
Y17A	**Roosevelt**	**68.44**	**324**	↑P	**P**	**16 55 30.8**	**+0.2**
	baz=69,SNR=10						
Y16A	**Circle Bar Ran**	**68.93**	**324**	↑P	**P**	**16 55 34.5**	**+0.9**
	baz=69						
W18A	**Petrified Fore**	**68.97**	**326**	↓P	**P**	**16 55 34.1**	**+0.3**
	baz=69						
SDCO	**Great Sand Dun**	**69.04**	**331**	*e*P	**P**	**16 55 33.8**	**-0.3**
	comp=Z,47nm,1.4s,mb5.2						
V19A	**Window Rock**	**69.08**	**327**	↓P	**P**	**16 55 35.1**	**+0.6**
	baz=69						
X16A	**Lo Mia Camp, P**	**69.31**	**325**	↑P	**P**	**16 55 36.4**	**+0.5**
	baz=70,SNR=6.8						
113A	**Mohawk Valley,**	**69.36**	**322**	↑P	**P**	**16 55 37.0**	**+0.8**
	baz=70			

BELC **Belle Mtn.** 71.53 321 ⇓P P 16 55 49.7 +0.2
baz=72
R18A **Canyonlands Na** 71.60 328 ⇑P P 16 55 50.3 +0.5
baz=72
Q19A **Hogan Spring (** 71.75 329 ⇑P P 16 55 51.2 +0.5
baz=72
U14A **Mt Trumbull** 71.75 325 ⇑P P 16 55 50.8 0.0
baz=72,SNR=7.6
V13A **Grand Canyon W** 71.76 324 ⇓P P 16 55 51.0 +0.2
baz=72,SNR=7.5
T15A **Red Dirt Ranch** 71.79 326 ⇑P P 16 55 51.8 +0.8
baz=72
W12A **Cal Nev Ari** 71.84 323 ⇑P P 16 55 52.2 +0.9
baz=72
GMRC **Granite Mounta** 71.90 322 ⇑P P 16 55 52.1 +0.3
baz=72,SNR=6.1
S16A **Weppner Ranch,** 71.93 327 ⇑P P 16 55 51.8 0.0
baz=72,SNR=6.2
R17A **Hanksville Air** 72.03 328 ⇓P P 16 55 52.2 -0.2
baz=72,SNR=6.5
V12A **Nelson** 72.14 323 ⇓P P 16 55 53.1 0.0
baz=72,SNR=5.1
P19A **Cripple Cowboy** 72.16 330 ⇓P P 16 55 53.2 +0.1
baz=72,SNR=9.6
U13A **Pakoon Wash** 72.17 324 ⇑P P 16 55 53.2 -0.1
baz=72
Q18A **Rafter H Ranch** 72.28 329 ⇑P P 16 55 53.8 -0.1
baz=72,SNR=6.3
HEC **Hector,Ludlow** 72.32 322 ⇓P P 16 55 55.0 +0.8
baz=72
SRU **San Rafael** 72.48 328 *e*P P 16 55 55.1 +0.1
comp=Z,25nm,1.1s,mb5.0
SRU **San Rafael** 72.48 328 *e*P P
SRU pmax pmax
comp=Z,25nm,1.1s,mb5.1
SRU **San Rafael** 72.48 328 ⇓P P 16 55 54.8 -0.2
baz=73,SNR=6.8
TUQ **Turquoise Moun** 72.53 322 ⇓P P 16 55 55.7 +0.3
baz=73
V11A **Goodsprings** 72.55 323 ⇑P P 16 55 55.6 +0.1
baz=73
Q16A **Castle Valley** 72.64 328 ⇓P P 16 55 56.6 +0.6
baz=73
R15A **Junction** 72.65 327 ⇑P P 16 55 56.5 +0.5
baz=73
CCUT **Cedar City** 72.70 325 *e*P P 16 55 57.6 +1.2
P18A **Preston Nutter** 72.75 329 ⇑P P 16 55 56.9 +0.3
baz=73,SNR=9.1
MSU **Marysvale** 72.83 327 *e*P P 16 55 57.7 +0.6
P17A **Butcher Ranch,** 72.86 328 ⇓P P 16 55 57.7 +0.4
baz=73
ARUT **Antelope Range** 72.92 326 *e*P P 16 55 58.4 +0.7
GSC **Goldstone** 72.93 322 ⇑P P 16 55 58.3 +0.5
baz=73
S13A **Holt Ranch, En** 72.99 325 ⇓P P 16 55 58.8 +0.7
baz=73,SNR=6.1
N19A **John Jarvie Ra** 73.25 330 ⇓P P 16 55 59.7 +0.1
baz=74
M20A **Sweetwater, Wa** 73.29 331 ⇓P P 16 56 00.1 +0.3
baz=74,SNR=5.2
EDW2 **Edwards Air Fo** 73.31 321 ⇓P P 16 56 00.7 +0.7
baz=74
L21A **Rawlins** 73.32 332 ⇓P P 16 55 59.9 0.0
baz=74,SNR=12
EYMN **Ely** 73.34 345 *e*P P 16 55 57.7 -2.2
comp=Z,19nm,1.0s,mb5.0
O17A **Robinson Place** 73.43 329 ⇓P P 16 56 01.3 +0.6
baz=74,SNR=9.7
T11A **Corn Creek, Al** 73.46 324 ⇓P P 16 56 01.7 +0.8
baz=74,SNR=9.3
U10A **Ash Meadows, A** 73.47 323 ⇑P P 16 56 01.7 +0.8
baz=74
R13A **O'Grain Ranch,** 73.49 326 ⇑P P 16 56 02.1 +1.1
baz=74
S12A **Delamar Landin** 73.53 325 ⇓P P 16 56 01.7 +0.4
baz=74
PPT **Papeete** 73.54 258 *e*S S 17 05 31.1 +1.0
comp=Z,658nm,27.2s
PPT **Papeete** 73.54 258 *e*LR LR 17 18 39.8
comp=Z,2µm,25.2s,baz=109
N18A **Larsen Ranch,** 73.55 330 ⇓P P 16 56 01.8 +0.5
baz=74
LRMC **Laurel Mountai** 73.56 321 ⇓P P 16 56 01.9 +0.3
baz=74
P15A **Leamington** 73.69 328 ⇓P P 16 56 02.6 +0.3
baz=74
MPU **Maple Canyon** 73.72 328 *e*P P 16 56 02.4 +0.1
comp=Z,59nm,1.4s,mb5.3
M19A **Rock Springs** 73.73 331 ⇓P P 16 56 03.1 +0.6
baz=74
Q14A **Sevier Lake (B** 73.75 327 ⇑P P 16 56 03.2 +0.6
baz=74,SNR=10
RSSD **Black Hills** 73.76 335 *e*P P 16 56 02.5 0.0
comp=Z,10nm,1.0s,mb4.7
RSSD **Black Hills** 73.76 335 *e*P P 16 56 02.5 0.0
RSSD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
L20A **Wamsutter** 73.78 332 ⇓P P 16 56 03.2 +0.5
baz=74
O16A **Springville** 73.80 328 ⇓P P 16 56 02.5 -0.3
baz=74
TPNV **Topopah Spring** 73.81 323 *e*P P 16 56 03.8 +0.9
comp=Z,18nm,1.2s,mb4.9
TPNV **Topopah Spring** 73.81 323 *e*P P 16 56 03.8 +0.9
TPNV pmax pmax
comp=Z,18nm,1.2s,mb4.9
TPNV **Topopah Spring** 73.81 323 ⇑P P 16 56 03.4 +0.5
baz=74
DAU **Daniels Canyon** 73.84 329 *e*P P 16 56 03.7 +0.6
MPMC **Manual Prospec** 73.86 322 ⇑P P 16 56 03.4 +0.1
baz=74
R12A **Pony Springs,** 73.94 325 ⇑P P 16 56 04.3 +0.6
baz=74,SNR=14
S11A **Rachel** 74.04 324 ⇓P P 16 56 04.8 +0.5
baz=74
N17A **Moffit Pass** 74.06 329 ⇓P P 16 56 04.7 +0.4
baz=74,SNR=11
JLU **Jordanelle** 74.08 329 *e*P P 16 56 04.8 +0.3
M18A **Lyman** 74.09 330 ⇓P P 16 56 04.5 0.0
baz=74
P14A **Drum Mountains** 74.10 327 ⇓P P 16 56 05.1 +0.5
baz=74
Q13A **Wheeler Ranch,** 74.10 326 ⇓P P 16 56 05.2 +0.6
baz=74
ISA **Isabella** 74.14 321 *e*P P 16 56 05.6 +0.6
comp=Z,20nm,1.3s,mb4.9
ISA **Isabella** 74.14 321 *e*P P 16 56 05.6 +0.7
ISA pmax pmax
comp=Z,20nm,1.3s,mb4.9
ISA **Isabella** 74.14 321 ⇑P P 16 56 05.5 +0.6
baz=74
L19A **Farson** 74.30 331 ⇑P P 16 56 05.9 +0.2
baz=74,SNR=6.3
DUG **Dugway** 74.43 328 *e*P P 16 56 07.2 +0.7
comp=Z,13nm,1.2s,mb4.8
DUG **Dugway** 74.43 328 *e*P P 16 56 07.3 +0.8
DUG pmax pmax
comp=Z,13nm,1.2s,mb4.7
DUG **Dugway** 74.43 328 ⇓P P 16 56 06.6 +0.1
baz=75
L18A **Fontenelle, Gr** 74.47 330 ⇓P P 16 56 06.7 +0.1
baz=75,SNR=5.7
R11A **Troy Canyon, C** 74.47 325 ⇑P P 16 56 07.1 +0.4
baz=75,SNR=8.1
P13A **Bates Ranch, G** 74.47 326 ⇑P P 16 56 07.2 +0.4
baz=75,SNR=6.0
Q12A **Willow Creek R** 74.58 326 ⇓P P 16 56 08.0 +0.6
baz=75
VES **Vestal, Richgr** 74.62 321 ⇓P P 16 56 08.3 +0.6
baz=75
S10A **Tonopah Range,** 74.70 324 ⇑P P 16 56 08.5 +0.4
baz=75,SNR=8.1
AGMN **Agassiz Refuge** 74.77 343 *e*P P 16 56 06.7 -1.6
comp=Z,26nm,1.0s,mb5.1
R10A **Warm Springs** 74.81 324 ⇓P P 16 56 09.2 +0.5
baz=75,SNR=7.4
Q11A **Duckwater** 74.87 325 ⇓P P 16 56 09.5 +0.5
baz=75,SNR=7.5
VNDA **Vanda** 74.89 190 P P 16 56 10.0 +1.2
comp=Z,2.3nm,1.0s,mb4.1,baz=126,slow=5.7,SNR=6.9
VNDA pP pP 16 56 18.1 -0.7
comp=Z,3.8nm,0.9s,baz=135,slow=4.3,SNR=9.6
VNDA **Vanda** 74.89 190 P P 16 56 08.7 0.0
comp=Z,30nm,2.1s,mb4.8
VNDA **Vanda** 74.89 190 P P 16 56 08.7 0.0
VNDA pmax pmax
comp=Z,30nm,2.1s
S09A **Goldfield** 74.90 323 ⇑P P 16 56 09.8 +0.5
baz=75
BW06 **Boulder Array** 74.92 331 ⇑P P 16 56 09.8 +0.5
baz=75
HWUT **Hardware Ranch** 74.92 329 *e*P P 16 56 09.1 -0.2
comp=Z,21nm,1.1s,mb5.0
PDAR **Pinedale Array** 74.92 331 P P 16 56 08.6 -0.7
comp=Z,3.0nm,1.1s,mb4.1,baz=152,slow=6.6,SNR=9.7
N14A **Grayback Hills** 75.12 328 ⇓P P 16 56 10.4 0.0
baz=75
M15A **Larsen Ranch,** 75.23 329 ⇓P P 16 56 11.6 +0.5
baz=75
SYO **Syowa Base** 75.38 160 ⇓*e*P P 16 56 10.4 -1.3
SYO **Syowa Base** 75.38 160 ⇓*e*X 16 56 18.0
O12A **Currie** 75.45 326 ⇓P P 16 56 12.7 +0.3
baz=76
AHID **Auburn Hatcher** 75.61 330 *e*P P 16 56 13.1 -0.2
comp=Z,29nm,1.0s,mb5.2
L15A **Malad City** 75.62 329 ⇓P P 16 56 13.4 +0.1
baz=76
M14A **Sheep Mountain** 75.69 328 ⇑P P 16 56 13.3 -0.5
baz=76,SNR=6.8
I18A **Diamond G Ranc** 75.78 332 ⇑P P 16 56 14.2 0.0
baz=76,SNR=5.5
P10A **Eureka** 75.86 325 ⇓P P 16 56 15.3 +0.5
baz=76
K16A **Soda Springs** 75.89 330 ⇑P P 16 56 15.1 +0.3
baz=76,SNR=11
REDW **Red Top Meadow** 75.97 331 *e*P P 16 56 15.1 -0.2
comp=Z,15nm,1.4s,mb4.7
U04C **Hernandez Rese** 75.98 320 ⇑P P 16 56 16.1 +0.6
baz=76
NVAR **Mina Array Bea** 76.00 323 P P 16 56 15.8 +0.2
comp=Z,2.2nm,0.9s,mb4.1,baz=152,slow=6.3,SNR=9.5
L14A **Malta** 76.05 329 ⇓P P 16 56 15.5 -0.3
baz=76,SNR=6.3
LOHW **Long Hollow** 76.06 331 *e*P P 16 56 15.6 -0.2
comp=Z,12nm,1.1s,mb4.8
TPAW **Teton Pass** 76.12 331 *e*P P 16 56 15.9 -0.2
comp=Z,35nm,1.2s,mb5.2
RRI2 **Red Ridge** 76.17 331 *e*P P 16 56 16.1 -0.3
comp=Z,35nm,1.2s,mb5.2
J16A **Bone** 76.25 330 ⇓P P 16 56 16.9 0.0
baz=76
O10A **Cortez Mining,** 76.38 325 ⇓P P 16 56 17.7 0.0
baz=77
K14A **Jones Ranch, D** 76.41 329 ⇓P P 16 56 18.2 +0.3
baz=77
L13A **Double Diamond** 76.43 328 ⇓P P 16 56 18.1 +0.2
baz=77
IMW **Indian Meadow** 76.43 331 *e*P P 16 56 17.9 0.0
comp=Z,19nm,1.3s,mb4.9
ULM **Lac du Bonnet** 76.56 344 P P 16 56 17.0 -1.4
comp=Z,10.0nm,0.9s,mb4.7,baz=179,slow=4.0,SNR=4.1
ULM **Lac du Bonnet** 76.56 344 P P 16 56 17.0 -1.4
I16A **Newdale** 76.66 331 ⇓P P 16 56 19.7 +0.5
baz=77
RLMT **Red Lodge** 76.69 333 *e*P P 16 56 18.6 -0.8
comp=Z,17nm,1.1s,mb4.9
RLMT **Red Lodge** 76.69 333 ⇓P P 16 56 19.2 -0.1
baz=77
R06C **Coleville** 76.70 323 ⇑P P 16 56 20.4 +0.8
baz=77
J15A **Blackfoot** 76.72 330 ⇑P P 16 56 19.7 +0.2
baz=77,SNR=5.5
LAO **LASA Array** 76.75 336 *e*P P 16 56 19.1 -0.5
comp=Z,52nm,1.2s,mb5.3
M11A **Holland Ranch,** 76.85 327 ⇓P P 16 56 20.6 +0.3
baz=77
YNR **Norris Junctio** 76.96 332 P P 16 56 21.8 +0.9
G18A **Lazy EL Ranch,** 76.97 333 ⇑P P 16 56 20.8 -0.1
baz=77,SNR=9.3
L12A **House Creek Ra** 77.00 328 ⇓P P 16 56 21.5 +0.3
baz=77
YMR **Madison River** 77.05 332 *e*P P 16 56 21.8 +0.4
comp=Z,70nm,1.4s,mb5.4
J14A **Carey** 77.17 329 ⇓P P 16 56 22.3 +0.2
baz=77,SNR=5.5
H16A **Russell Place,** 77.20 331 ⇓P P 16 56 23.1 +0.9
baz=77
K12A **Draper Farm, C** 77.31 328 ⇑P P 16 56 23.2 +0.4
baz=78,SNR=6.8
L11A **Cat Creek Ranc** 77.38 327 ⇓P P 16 56 23.4 +0.2
baz=78,SNR=5.6
QLMT **Earthquake Lak** 77.38 331 *e*P P 16 56 24.0 +0.8
GCMT **Greycliff** 77.39 333 *e*P P 16 56 23.0 -0.3
PAHR **Pah Rah Range** 77.50 323 *e*P P 16 56 23.9 -0.1
comp=Z,58nm,1.5s,mb5.3
F18A **Big Timber** 77.50 333 ⇓P P 16 56 23.4 -0.5
baz=78,SNR=17
DGMT **Dagmar** 77.52 338 *e*P P 16 56 24.1 +0.2
comp=Z,70nm,1.3s,mb5.4
DGMT **Dagmar** 77.52 338 ⇑P P 16 56 23.6 -0.3
baz=78
J13A **Cove Ranch, Pi** 77.53 329 ⇓P P 16 56 24.2 +0.1
baz=78
N08A **GE Springer Mi** 77.59 325 ⇓P P 16 56 24.3 -0.2
baz=78
LAVA **Lava Cap Winer** 77.59 322 ⇑P P 16 56 24.9 +0.3
baz=78
I14A **Mackay** 77.60 330 ⇑P P 16 56 24.8 +0.3
baz=78,SNR=5.3
L10A **Juniper Basin** 77.67 327 ⇑P P 16 56 24.9 -0.1
baz=78,SNR=9.0
M09A **Marrel Ranch,** 77.69 326 ⇑P P 16 56 25.6 +0.5
baz=78
H15A **Lima** 77.76 331 ⇑P P 16 56 25.9 +0.6
baz=78
HLID **Hailey** 77.77 329 *e*P P 16 56 25.6 +0.2
comp=Z,22nm,1.2s,mb5.0
HLID **Hailey** 77.77 329 ⇑P P 16 56 25.6 +0.2
baz=78,SNR=13
SCHQ **Schefferville** 77.82 2 P P 16 56 24.1 -1.3
comp=Z,5.6nm,0.9s,mb4.5,baz=141,slow=6.5,SNR=2.6
G16A **Moss Hill, Enn** 77.86 331 ⇑P P 16 56 26.4 +0.5
baz=78
J12A **Stokes Ranch,** 77.86 328 ⇑P P 16 56 26.2 +0.2
baz=78,SNR=8.6
I13A **Wildhorse Cree** 77.90 329 ⇓P P 16 56 26.8 +0.7
baz=78,SNR=6.9
F17A **Fitzpatrick Pl** 77.90 333 ⇓P P 16 56 26.3 +0.2
baz=78,SNR=10.0
K11A **Parker Ranch,** 77.96 327 ⇓P P 16 56 26.6 +0.1
baz=78
MCMT **McKenzie Canyo** 78.01 331 *e*P P 16 56 27.0 +0.3
N07B **Gerlach** 78.03 324 ⇓P P 16 56 27.1 +0.2
baz=78,SNR=11
H14A **Leadore** 78.09 330 ⇓P P 16 56 27.3 +0.1
baz=78
G15A **Dillon** 78.11 331 ⇓P P 16 56 27.4 +0.1
baz=78,SNR=8.7
BEKR **Beckwourth** 78.15 323 ⇓P P 16 56 28.1 +0.5
baz=78
M08A **Happy Creek Ra** 78.19 325 ⇓P P 16 56 27.9 0.0
baz=78
F16A **Kennard Place,** 78.22 332 ⇓P P 16 56 28.4 +0.5
baz=78
DLMT **Dillon** 78.31 331 *e*P P 16 56 28.5 0.0
comp=Z,20nm,1.2s,mb4.9
MFID **Camas Ranch** 78.34 328 ⇓P P 16 56 28.5 -0.1
baz=78,SNR=5.5
K10A **MacKenzie Ranc** 78.38 327 ⇑P P 16 56 29.2 +0.3
baz=79
E17A **Martinsdale** 78.43 333 ⇑P P 16 56 28.9 -0.1
baz=79,SNR=6.8
H13A **Challis** 78.45 330 ⇓P P 16 56 29.7 +0.5
baz=79,SNR=17
N06A **Buffalo Meadow** 78.47 324 ⇑P P 16 56 29.7 +0.3
baz=79,SNR=7.7
M07A **Soldier Meadow** 78.57 325 ⇓P P 16 56 30.1 +0.1
baz=79
D18A **Linhart Farms,** 78.58 334 ⇑P P 16 56 29.8 0.0
baz=79,SNR=8.6
F15A **Butte** 78.64 331 ⇓P P 16 56 30.3 +0.1
baz=79,SNR=8.0
L08A **Fields** 78.71 326 ⇓P P 16 56 30.9 +0.3
baz=79
H12A **Diamond D Ranc** 78.72 329 ⇓P P 16 56 31.0 +0.3
baz=79,SNR=6.1
K09A **Rome** 78.76 326 ⇑P P 16 56 31.1 +0.2
baz=79
E16A **East Helena** 78.83 332 ⇑P P 16 56 31.5 +0.2
baz=79
G13A **Cobalt** 78.85 330 ⇓P P 16 56 31.9 +0.5
baz=79,SNR=36
O04C **Chester** 78.86 323 ⇑P P 16 56 31.5 0.0
baz=79
D17A **Six Diamond Ra** 78.90 333 ⇑P P 16 56 31.6 0.0
baz=79,SNR=24
F14A **Wisdom** 79.01 331 ⇑P P 16 56 32.9 +0.7
baz=79,SNR=12
HRY **Holter Researc** 79.03 332 *e*P P 16 56 32.0 -0.4
L07A **Adell** 79.11 325 ⇓P P 16 56 33.2 +0.4
baz=79
E15A **Deer Lodge** 79.16 332 ⇓P P 16 56 33.4 +0.3
baz=79,SNR=8.8
EGMT **Eagleton** 79.22 334 ⇑P P 16 56 32.8 -0.5
baz=79
J09A **Fry Pan Ranch,** 79.24 327 ⇑P P 16 56 34.0 +0.4
baz=79
TOA0 **Torodi Ar. Sit** 79.29 71 *e*P P 16 56 33.9 -0.5
TORD **Torodi Ar. Bea** 79.29 71 P P 16 56 33.4 -1.1
comp=Z,74nm,0.9s,mb5.6,baz=253,slow=4.8,SNR=176
C17A **Wharram Farm,** 79.32 334 ⇓P P 16 56 33.7 -0.1
baz=80,SNR=12
H11A **Donnelly** 79.39 329 ⇑P P 16 56 34.1 -0.2
baz=80
K07A **Rock Creek Ran** 79.53 326 ⇑P P 16 56 35.4 +0.2
baz=80
MOD **Modoc** 79.53 325 *e*P P 16 56 35.1 -0.1
comp=Z,11nm,1.0s,mb4.8
D15A **Lincoln** 79.59 332 ⇓P P 16 56 35.9 +0.5
baz=80,SNR=8.0
J08A **Circle Bar Ran** 79.61 327 ⇓P P 16 56 36.0 +0.4
baz=80
H10A **Noah's Angus R** 79.65 328 ⇑P P 16 56 35.9 +0.2
baz=80
I09A **Lost Marbles R** 79.69 327 ⇑P P 16 56 36.2 +0.2
baz=80
CHMT **Chamberlain Mo** 79.81 332 *e*P P 16 56 36.4 -0.2
E13A **Victor** 79.86 331 ⇓P P 16 56 37.0 +0.2
baz=80,SNR=9.0
C16A **Fuhringer Ranc** 79.86 333 ⇑P P 16 56 36.7 -0.1
baz=80,SNR=9.3
G11A **Walters Elk Ra** 80.03 329 ⇑P P 16 56 37.6 -0.2
baz=80,SNR=23
D14A **Greenough** 80.05 332 ⇑P P 16 56 38.0 +0.2
baz=80
I08A **Drewsey** 80.06 327 ⇓P P 16 56 38.0 0.0
baz=80,SNR=7.3
BMO **Blue Mountains** 80.12 328 *e*P P 16 56 37.3 -1.0
comp=Z,33nm,1.4s,mb5.1
C15A **Salmond Ranch,** 80.20 333 ⇑P P 16 56 38.7 0.0
baz=80,SNR=21
J06A **Christmas Vall** 80.40 326 ⇑P P 16 56 39.9 +0.1
baz=81,SNR=7.0
K05A **Summer Lake** 80.42 325 ⇑P P 16 56 40.2 +0.2
baz=81
D13A **Huson** 80.47 331 ⇓P P 16 56 40.1 -0.1
baz=81,SNR=8.1
H08A **Prairie City** 80.55 327 ⇓P P 16 56 40.9 +0.3
baz=81
B15A **Bradely Ranch,** 80.60 333 ⇑P P 16 56 40.3 -0.5
baz=81,SNR=13
I07A **Izee** 80.65 327 ⇑P P 16 56 41.5 +0.3
baz=81,SNR=7.4
G09A **Cove** 80.66 328 ⇑P P 16 56 41.9 +0.7
baz=81,SNR=22
A16A **West Butte Ran** 80.70 334 ⇑P P 16 56 41.2 -0.2
baz=81,SNR=18
E11A **Bogner Ranch,** 80.71 330 ⇑P P 16 56 41.1 -0.3
baz=81
F10A **Beach Ranch, E** 80.90 329 ⇓P P 16 56 42.5 0.0
baz=81
TSUM **Tsumeb** 80.91 107 *e*P P 16 56 44.0 +0.7
comp=Z,49nm,1.0s,mb5.4
I06A **Prineville** 80.92 326 ⇓P P 16 56 42.8 +0.2
baz=81
B14A **Marquette Ranc** 80.93 333 ⇑P P 16 56 42.5 -0.1
baz=81,SNR=9.6
C13A **Hot Springs** 80.97 332 ⇓P P 16 56 42.5 -0.3
baz=81,SNR=8.6
F09A **S2 Ranch, Elgi** 81.03 328 ⇓P P 16 56 42.6 -0.6
baz=81
A15A **Johnson Ranch,** 81.19 333 ⇓P P 16 56 43.7 -0.2
baz=81
BSMT **Bassoo Peak** 81.19 332 P P 16 56 44.5 +0.6
E10A **Myers Farm, Un** 81.22 329 ⇑P P 16 56 44.2 0.0
baz=81,SNR=6.8
G08A **Pilot Rock** 81.24 328 ⇓P P 16 56 44.4 +0.1
baz=81,SNR=6.1
D11A **Klaveano Farm,** 81.28 330 ⇓P P 16 56 44.4 -0.1
baz=82
LNOR **Lincton Mounta** 81.33 328 *e*P P 16 56 43.5 -1.3
C12B **Naegeli Ranch,** 81.39 331 ⇑P P 16 56 45.1 0.0
baz=82
B13A **Whitefish** 81.45 332 ⇑P P 16 56 45.1 -0.2
baz=82,SNR=7.3
A14A **Double T Ranch** 81.47 333 ⇓P P 16 56 45.2 -0.3
baz=82,SNR=9.4
F08A **Pendleton** 81.52 328 ⇑P P 16 56 45.6 -0.1
baz=82
VIPM **Ingram Point** 81.52 326 P P 16 56 46.5 +0.7
H06A **Lindquist Farm** 81.53 327 ⇑P P 16 56 46.0 +0.1
baz=82,SNR=6.7
G07A **Ruggs Ranch, H** 81.58 327 ⇓P P 16 56 46.4 +0.3
baz=82,SNR=6.7
D10A **Wagner Farm, O** 81.72 330 ⇓P P 16 56 46.1 -0.6
baz=82,SNR=7.6
E09A **Wood Farm, Sta** 81.73 329 ⇑P P 16 56 46.7 -0.1
baz=82
WALA **Waterton Lakes** 81.74 333 *e*P P 16 56 46.0 -0.8
comp=Z,37nm,1.2s,mb5.2
B12A **Libby** 82.01 332 ⇑P P 16 56 48.6 +0.3
baz=82
G06A **Carlson Farm,** 82.04 327 ⇓P P 16 56 48.6 +0.1
baz=82
CROR **Criterion Ridg** 82.04 326 P P 16 56 49.2 +0.7
D09A **Jones Farm, Ri** 82.21 329 ⇑P P 16 56 49.0 -0.4
baz=82,SNR=7.5
FFC **Flin Flon** 82.23 342 P P 16 56 48.8 -0.5
comp=Z,100nm,1.2s,mb5.6,SNR=5.2
FFC **Flin Flon** 82.23 342 *e*P P 16 56 48.6 -0.7
comp=Z,30nm,1.3s,mb5.1
FFC **Flin Flon** 82.23 342 *e*P P 16 56 48.6 -0.7
FFC pmax pmax
comp=Z,30nm,1.3s,mb5.1
HAWA **Hanford** 82.31 328 *e*P P 16 56 49.7 -0.2
comp=Z,17nm,1.1s,mb4.9
HAWA *e* pP 16 56 59.2 -0.8
RSW **Rattlesnake Hi** 82.34 328 *e*P P 16 56 50.0 0.0
A12A **Yaak River Ran** 82.39 332 ⇑P P 16 56 50.2 -0.1
baz=83,SNR=9.9
GBL **Gable Mountain** 82.42 328 P P 16 56 50.7 +0.2
F06A **Goldendale** 82.48 327 ⇑P P 16 56 50.7 -0.2
baz=83
D08A **Wollman Farm,** 82.49 329 ⇓P P 16 56 50.6 -0.3
baz=83
OD2 **Odessa Site #2** 82.64 329 P P 16 56 51.6 +0.1
A11A **Hall Mountain,** 82.72 331 ⇓P P 16 56 51.4 -0.6
baz=83,SNR=12
C09A **Chrisman Ranch** 82.73 330 ⇓P P 16 56 51.8 -0.3
baz=83,SNR=5.8
MAW **Mawson** 83.07 164 P P 16 56 53.9 +0.2
comp=Z,27nm,1.0s,mb5.2,baz=230,slow=7.0,SNR=21
MAW **Mawson** 83.07 164 *e*P P 16 56 53.8 +0.1
comp=Z,10nm,1.1s,mb4.8
MAW **Mawson** 83.07 164 *e*P P 16 56 53.8 +0.1
MAW pmax pmax
comp=Z,10.0nm,1.1s
D07A **Quincy** 83.09 328 ⇑P P 16 56 54.3 +0.3
baz=83
E06A **Yakima** 83.13 328 ⇑P P 16 56 54.8 +0.7
baz=83
EBG **Ellensburg** 83.18 328 P P 16 56 55.0 +0.5
A10A **Northport** 83.27 331 ⇓P P 16 56 55.2 +0.4
baz=84
C07A **Waterville** 83.49 329 ⇓P P 16 56 55.6 -0.4
baz=84,SNR=7.9
E05A **Randle** 83.53 327 ⇓P P 16 56 56.1 -0.1
baz=84
B08A **Colville Reser** 83.62 330 ⇑P P 16 56 56.5 -0.2
baz=84
A09A **Danville** 83.72 330 ⇑P P 16 56 56.9 -0.3
baz=84
BOSA **Boshof** 83.89 118 P P 16 56 58.8 +0.1
comp=Z,25nm,1.0s,mb5.3,baz=232,slow=5.2,SNR=19
BOSA LR LR 17 33 08.0
comp=Z,958nm,18.8s,MS5.2,baz=306,slow=35
A08A **Turner Farm, O** 84.02 330 ⇑P P 16 56 58.2 -0.4
baz=84,SNR=11
B07A **Winthrop** 84.06 329 ⇑P P 16 56 58.0 -0.9
baz=84,SNR=5.2
A07A **Ashnola River,** 84.60 330 ⇓P P 16 57 01.0 -0.7
baz=85,SNR=8.2
JCW **Jim Creek** 84.74 328 *e*P P 16 57 01.0 -1.3
EDM **Edmonton** 84.74 336 *e*P P 16 57 00.3 -1.9

C04A	**Brinnon**	**84.92**	**327**	⇓P		**P**	**16 57 03.3**	**0.0**
	baz=85							
A05A	**Maple Falls**	**85.37**	**329**	⇓P		**P**	**16 57 05.2**	**-0.2**
	baz=86							
TAM	**Tamanrasset**	**86.88**	**64**	*e*P		**P**	**16 57 14.0**	**+0.4**
ESDC	**Sonseca Array**	**88.08**	**45**	P		**P**	**16 57 16.3**	**-2.6**
	comp=Z,3.0nm,0.9s,mb4.5,baz=232,slow=4.5,SNR=5.6							
ESDC				LR		LR	17 32 23.3	
	comp=Z,472nm,19.9s,MS4.9,baz=235,slow=33							
LSZ	**Lusaka**	**91.76**	**107**	*e*P		**P**	**16 57 38.7**	**+2.0**
	comp=Z,12nm,1.3s,mb5.1							
LSZ	**Lusaka**	**91.76**	**107**	*e*P		**P**	**16 57 38.7**	**+1.9**
LSZ				pmax	pmax			
	comp=Z,12nm,1.3s,mb5.1							
URZ	**Urewera**	**91.97**	**227**	LR		LR	17 30 45.7	
	comp=Z,695nm,19.0s,MS5.1,baz=221,slow=30							
YKA	**Yellowknife Ar**	**92.36**	**341**	P		**P**	**16 57 36.3**	**-2.0**
	comp=Z,4.7nm,0.8s,mb4.9,baz=134,slow=4.5,SNR=13							
KEST	**Kesra**	**95.49**	**54**	P		**P**	**16 57 54.0**	**+0.5**
	comp=Z,2.5nm,1.0s,mb4.6,baz=213,slow=13,SNR=4.1							
KEST				LR		LR	17 45 18.6	
	comp=Z,458nm,18.0s,MS5.0,baz=0.1,slow=38							
SKAG	**Skagway**	**97.93**	**332**	*e*P		**P**	**16 58 01.7**	**-2.2**
	comp=Z,6.5nm,0.4s,mb5.5							
MEM	**Membach**	**99.52**	**39**	P		**P**	**16 58 11.8**	**+0.6**
	comp=Z,5.4nm,1.2s,mb4.8							
BRTR	**Keskin Array B**	**115.00**	**56**	PKP	PKiKP		17 03 08.6	-0.9
	comp=Z,2.0nm,1.0s							
OBN	**Obninsk**	**118.42**	**39**	*i* PKIKP	PKPdf		17 03 16.0	+0.5
OBN				pmax	pmax			
	comp=Z,18nm,1.3s							
OBN				MLR	MLR			
	comp=Z,200nm,18.0s,MS4.8							
KIV	**Kislovodsk**	**122.18**	**52**	*i* PKIKP	PKPdf		17 03 20.4	-2.7
ASAR	**Alice Springs**	**127.71**	**209**	PKP	PKPdf		17 03 33.6	-0.9
	comp=Z,2.9nm,0.9s,baz=139,slow=2.0,SNR=16							
ASAR				pPKP	pPKPdf		17 03 41.3	-3.7
	comp=Z,1.8nm,0.8s,baz=130,slow=1.9,SNR=7.1							
TIXI	**Tiksi**	**130.33**	**352**	*e*PKPdf	PKPdf		17 03 36.9	-1.0
TIXI	**Tiksi**	**130.33**	**352**	*i* PKIKP	PKPdf		17 03 35.4	-2.5
TIXI				pmax	pmax			
	comp=Z,13nm,2.2s							
ARU	**Arti**	**130.39**	**35**	*i* PKIKP	PKPdf		17 03 37.9	-0.5
WRA	**Warramunga Arr**	**130.73**	**211**	PKP	PKPdf		17 03 39.5	-0.7
	comp=Z,7.1nm,1.2s,baz=147,slow=1.7,SNR=18							
WRA				pPKP	pPKPdf		17 03 48.5	-2.3
	comp=Z,2.6nm,0.9s,baz=149,slow=1.6,SNR=6.6							
WRA				SKPbc	SKPbc		17 07 00.6	-1.3
	comp=Z,2.5nm,1.1s,baz=140,slow=5.2,SNR=6.6							
WRA	**Warramunga Arr**	**130.73**	**211**	PKIKP	PKPdf		17 03 39.5	-0.8
WRA							17 03 48.5	
WRAB	**Tennant Creek**	**130.73**	**211**	*i* PKIKP	PKPdf		17 03 38.4	-1.9
SEY	**Seymchan**	**131.11**	**336**	*i* PKIKP	PKPdf		17 03 39.9	+0.3
SVE	**Sverdlovsk**	**131.31**	**33**	*e*PKIKP	PKPdf		17 03 33.9	-6.3
SVE				pmax	pmax			
	comp=Z,14nm,1.4s							
YAK	**Yakutsk**	**138.87**	**346**	*i* PKIKP	PKPdf		17 03 53.6	-0.5
NVS	**Novosibirsk**	**142.85**	**25**	*e*PKIKP	PKPdf		17 03 58.3	-3.2
NVS				*e*			17 07 13.7	
NVS				pmax	pmax			
	comp=E,10.0nm,1.4s							
NVS				pmax	pmax			
	comp=Z,21nm,1.4s							
KURK	**Kurchatov**	**143.57**	**33**	*i* PKIKP	PKPdf		17 04 04.7	+1.8
ZAA0	**Zalesovo Array**	**144.13**	**25**	*e*PKP	PKPdf		17 04 01.4	-2.4
ZALV	**Zalesovo Beam**	**144.13**	**25**	PKP	PKPdf		17 04 01.3	-2.5
	comp=Z,20nm,0.9s,baz=299,slow=4.2,SNR=29							
CLNS	**Chul'man**	**144.62**	**345**	*e*PKIKP	PKPdf		17 04 02.2	-2.3
CLNS				pmax	pmax			
	comp=Z,28nm,1.2s							
CLNS				pmax	pmax			
	comp=E,12nm,1.3s							
CLNS				pmax	pmax			
	comp=N,9.0nm,0.9s							
EKS2	**Erkin-Say**	**144.64**	**48**	*e*PKPdf	PKPdf		17 04 04.5	-0.5
EKS2	**Erkin-Say**	**144.64**	**48**	P	PKPdf		17 04 04.9	-0.1
	SNR=31							
AML	**Almayashu**	**144.77**	**49**	*e*PKPdf	PKPdf		17 04 05.4	+0.1
AML	**Almayashu**	**144.77**	**49**	P	PKPdf		17 04 05.8	+0.5
	SNR=33							
USP	**Ospenovka**	**144.89**	**47**	P	PKPdf		17 04 05.3	-0.2
	SNR=22							
KRAR	**Krasnoyarsk**	**145.04**	**16**	*i* PKIKP	PKPdf		17 04 03.6	-1.7
AAK	**Ala-Archa**	**145.14**	**48**	P	PKPbc		17 04 06.9	+1.4
	SNR=95							
FRU	**Bishkek**	**145.14**	**47**⇑	*i* PKIKP	PKPdf		17 04 06.0	+0.1
FRU				pmax	pmax			
	comp=Z,240nm,1.6s							
CHMS	**Chumysh**	**145.17**	**47**	P	PKPbc		17 04 06.5	+0.9
	SNR=15							
UCH	**Uchtor**	**145.30**	**48**	*e*PKPdf	PKPdf		17 04 07.5	+1.2
UCH	**Uchtor**	**145.30**	**48**	P	PKPbc		17 04 07.8	+1.7
	SNR=12							
BOD	**Bodaibo**	**145.31**	**356**	*e*PKIKP	PKPdf		17 04 03.7	-2.0
BOD				pmax	pmax			
	comp=Z,64nm,1.0s							
KBK	**Karagaybulak**	**145.44**	**48**	P	PKPdf		17 04 07.6	+1.2
	SNR=53							
TRD	**Trivandrum**	**145.51**	**110**⇑	*i* P	PKPdf		17 04 07.8	+0.4
TKM2	**Tokmak 2**	**145.77**	**47**	*e*PKP	PKPdf		17 04 07.6	+0.6
TKM2	**Tokmak 2**	**145.77**	**47**	P	PKPdf		17 04 08.0	+1.0
	SNR=24							
KZA	**Kyzart**	**145.87**	**48**	P	PKPab		17 04 09.4	+1.2
	SNR=25							
POO	**Poona**	**146.38**	**91**⇑	*i* P	PKPdf		17 04 08.6	-0.1
ULHL	**Ulahol**	**146.48**	**48**	P	PKPdf		17 04 10.1	+1.9
	SNR=11							
KSH	**Kashi**	**147.30**	**52**	*e*PKP	PKPbc		17 04 11.8	-0.3
KSH				*e*PKP2	PKPab		17 04 13.1	-0.8
KSH				*e*PKS			17 07 45.8	
KSH				PP	PP			
	comp=Z,969nm,5.7s							
KSH				LR	LR			
	comp=N,400nm,4.7s							
KSH				LR	LR			
	comp=E,638nm,4.2s							
KSH				LR	LR			
	comp=Z,402nm,5.2s							
HABR	**Khabarovsk**	**147.71**	**328**	*e*PKIKP	PKPdf		17 04 07.9	-2.2
HABR				*i*			17 04 12.5	
HABR				*e*			17 04 18.9	
HABR				*e*			17 07 39.2	
HABR				*e*PPP			17 10 53.6	
HABR				*e*			17 11 13.9	
HABR				*e*SS	SS		17 26 37.9	-3.5
HABR				*e*SSS			17 32 10.6	
MK31	**Makanchi Array**	**147.88**	**36**	*e*PKPdf	PKPdf		17 04 10.4	0.0
MKAR	**Makanchi Array**	**147.88**	**36**	PKPbc	PKPbc		17 04 10.7	-2.7
	comp=Z,18nm,0.9s,baz=336,slow=2.7,SNR=27							
AJM	**Ajmer**	**148.23**	**77**	*e*P	PKPdf		17 04 10.4	-1.3
KLR	**Kul'dur**	**148.71**	**332**	*e*PKIKP	PKPdf		17 04 10.0	-1.7
THN	**Thein Dam**	**148.83**	**65**	*e*P	PKPdf		17 04 11.6	-0.8
SJI	**Sawahan**	**149.13**	**184**	P	PKPab		17 04 36.0	+14
KMMI	**Kalianget**	**149.58**	**189**	P	PKPab		17 04 34.4	+11
	comp=Z,139nm,1.5s							
LEM	**Lembang**	**150.05**	**176**	P	PKPab		17 04 21.2	-4.4
	comp=Z,92nm,1.4s,comp=Z,0.3nm							
KAPI	**Kappang**	**150.20**	**201**	PKPbc	PKPbc		17 04 19.2	-1.1
	comp=Z,20nm,1.1s,baz=225,slow=3.6,SNR=6.2							
KAPI	**Kappang**	**150.20**	**201**	*e*PKPbc	PKPbc		17 04 19.2	-1.1
KAPI	**Kappang**	**150.20**	**201**	P	PKPab		17 04 50.9	+25
	comp=Z,16nm,1.4s							
DBJI	**Dramaga**	**150.26**	**174**	P	PKPab		17 04 33.3	+6.9
	comp=Z,67nm,1.3s,comp=Z,0.3nm							
CBJI	**Citeko**	**150.40**	**175**	P	PKPbc		17 04 20.9	+0.1
	comp=Z,242nm,1.3s,comp=Z,1.5nm							
HYB	**Hyderabad**	**150.41**	**96**	*e*P	PKPbc		17 04 20.0	-0.6
HYB				*e*			17 04 27.0	
HYB	**Hyderabad**	**150.41**	**96**	*i* PKP	PKPbc		17 04 20.0	-0.6
HYB				*e*			17 04 27.0	
NDI	**New Delhi**	**150.49**	**73**	*e*P	PKPdf		17 04 16.0	+0.8
BHPL	**Bhopal**	**150.52**	**84**	*e*P	PKPdf		17 04 14.8	-0.6
IRK	**Irkutsk**	**150.77**	**7**	*e*PKIKP	PKPdf		17 04 14.3	-0.5
IRK				pmax	pmax			
	comp=Z,68nm,1.4s							
MOY	**Mondy**	**150.87**	**11**	*e*PKIKP	PKPbc		17 04 21.0	+0.3
MOY				pmax	pmax			
	comp=Z,5.0nm,1.2s							
CIT	**Chita**	**151.11**	**355**	*e*PKIKP	PKPbc		17 04 21.3	+0.1
CIT				*e*			17 04 28.5	
TLY	**Talaya**	**151.25**	**8**	*e*PKIKP	PKPbc		17 04 21.7	+0.1
TLY				*e*			17 04 25.4	
TLY				pmax	pmax			
	comp=Z,21nm,1.1s							
MJAR	**Matsushiro Arr**	**151.96**	**305**	PKPbc	PKPbc		17 04 23.2	-0.5
	comp=Z,7.6nm,1.0s,baz=100,slow=0.6,SNR=11							
MAJO	**Matsushiro**	**151.96**	**305**	*e*PKPbc	PKPbc		17 04 23.6	-0.1
MAT	**Matsushiro**	**151.96**	**305**	PKP	PKPbc		17 04 22.6	-1.1
ZAK	**Zakamensk**	**152.47**	**9**	*e*PKIKP	PKPdf		17 04 17.5	0.0
ZAK				pmax	pmax			
	comp=Z,8.0nm,1.5s							
WMQ	**Urumqi**	**152.71**	**36**	PKP	PKPdf		17 04 19.0	+0.9
WMQ				PP	PP		17 08 13.0	+4.5
WMQ				SKS	SKSdf		17 11 20.0	-2.9
WMQ				SKKS	SKKSac		17 14 57.0	+0.2
WMQ				SS	SS		17 27 38.0	+0.7
WMQ				PP	PP			
	comp=Z,215nm,10.0s							
WMQ				LR	LR			
	comp=N,226nm,20.0s,MS5.1							
WMQ				LR	LR			
	comp=E,176nm,22.0s,MS5.1							
WMQ				LR	LR			
	comp=Z,487nm,22.0s,MS5.3							
LGTI	**Lohaghat**	**153.07**	**70**	*ex*	x		17 04 26.5	
MDJ	**Mudanjiang**	**153.10**	**327**	PKP	PKPdf		17 04 17.8	-0.8
MDJ				PP	PP			
	comp=Z,108nm,16.0s							
MDJ				LR	LR			
	comp=N,109nm,23.9s							
MDJ				LR	LR			
	comp=E,128nm,17.4s							
MDJ				LR	LR			
	comp=Z,170nm,19.5s,MS4.9							
PDSI	**Padang**	**154.41**	**159**	P	PKPab		17 04 45.3	+1.5
	comp=Z,40nm,1.2s							
PPI	**Padang Panjang**	**154.82**	**158**	P	PKPab		17 04 47.0	+1.4
	comp=Z,25nm,1.4s							
SONM	**Songino Array**	**155.34**	**5**	PKP	PKPdf		17 04 20.7	-0.9
	comp=Z,2.8nm,1.0s,baz=160,slow=0.2,SNR=12							
SONM				PKPab	PKPab		17 04 47.2	+0.3
	comp=Z,2.6nm,0.9s,baz=340,slow=4.3,SNR=6.4							
SONM				PP	PP		17 08 21.0	-1.5
	comp=Z,0.6nm,0.9s,baz=351,slow=3.8,SNR=3.7							
ULN	**Ulaanbaatar**	**155.35**	**4**	*e*PKPdf	PKPdf		17 04 21.9	+0.3
CN2	**Changchun**	**155.67**	**331**	*e*PKP	PKPdf		17 04 19.8	-2.4
BOK	**Bokaro**	**158.30**	**84**	*e*P	PKPdf		17 04 25.7	-0.5
KSRS	**Korea Array**	**158.79**	**316**	PKP	PKPdf		17 04 25.9	-0.5
	comp=Z,4.1nm,1.1s,baz=130,slow=0.7,SNR=7.9							
GTA	**Gaotai**	**161.89**	**25**	*e*PKP	PKPdf		17 04 30.8	+1.1
GTA				APKP			17 04 43.9	
GTA				XPKP			17 04 48.0	
GTA				PKP2	PKPab		17 05 15.0	-0.5
GTA				PP	PP		17 08 57.8	-0.8
GTA				SKS	SKSdf		17 11 31.9	-0.4
GTA				SKKS	SKKSac		17 15 41.5	-3.8
GTA				PP	PP			
	comp=Z,213nm,4.8s							
GTA				LR	LR			
	comp=N,280nm,14.6s							
GTA				LR	LR			
	comp=E,181nm,15.5s							
GTA				LR	LR			
	comp=Z,194nm,24.7s							
LSA	**Lhasa**	**162.33**	**65**	*e*PKPdf	PKPdf		17 04 31.5	+1.0
HHC	**Hu-ho-hao-te**	**162.37**	**355**	*e*PKP	PKPdf		17 04 28.8	-1.4
HHC				APKP			17 04 38.8	
HHC				XPKP			17 04 43.5	
HHC				PKS			17 08 01.0	
HHC				PP	PP		17 09 04.0	+3.2
HHC				SKS	SKSdf		17 11 29.1	-3.5
HHC				SKKS	SKKSac		17 15 44.4	-3.1
HHC				SS	SS		17 29 15.8	-3.2
HHC				PP	PP			
	comp=Z,207nm,5.0s							
HHC				LR	LR			
	comp=N,251nm,20.2s							
HHC				LR	LR			
	comp=E,322nm,20.2s							
HHC				LR	LR			
	comp=Z,316nm,20.2s							
SHL	**Shillong**	**163.75**	**78**	*e*P	PKPdf		17 04 32.0	0.0
LZH	**Lanzhou**	**166.28**	**20**	*e*PKP	PKPdf		17 04 34.0	+0.2
LZH				APKP			17 04 47.0	
LZH				XPKP			17 04 52.0	
LZH				PKP2	PKPab		17 05 40.0	+5.1
LZH				SKKS	SKKSac		17 16 10.0	+2.4
LZH				SS	SS		17 30 06.0	+6.3
LZH				PP	PP			
	comp=Z,280nm,7.4s							
LZH				LR	LR			
	comp=N,301nm,15.2s							
LZH				LR	LR			
	comp=Z,555nm,17.1s							
NJ2	**Nanjing**	**167.96**	**319**	*e*PKP	PKPdf		17 04 34.5	-0.7
CMAR	**Chiang Mai Arr**	**169.01**	**114**	PKP	PKPdf		17 04 36.3	+0.1
	comp=Z,2.2nm,1.0s,baz=283,slow=1.8,SNR=13							
CMAR				PKPab	PKPab		17 05 47.4	-0.3
	comp=Z,4.2nm,1.0s,baz=251,slow=4.2,SNR=15							
CMAR				PP	PP		17 09 37.1	0.0
	comp=Z,2.5nm,1.1s,baz=249,slow=5.5,SNR=8.3							
XAN	**Xi'an**	**169.23**	**3**	PKP	PKPdf		17 04 36.1	+0.2
CD2	**Chengdu**	**170.79**	**33**	*e*PKP	PKPdf		17 04 35.9	-1.0
CD2				APKP			17 04 46.8	
CD2				XPKP			17 04 51.8	
CD2				PKP2	PKPab		17 05 54.9	-0.1
CD2				PP	PP		17 09 46.9	+2.0
CD2				SKS	SKSdf		17 11 34.3	-3.9
CD2				SKKS	SKKSac		17 16 29.5	-0.6
CD2				SS	SS		17 30 44.8	-0.8
CD2				PP	PP			
	comp=Z,180nm,10.2s							
CD2				LR	LR			
	comp=N,180nm,18.8s							
CD2				LR	LR			
	comp=Z,160nm,21.0s							
KMI	**Kunming**	**173.51**	**72**	PKP	PKPdf		17 04 36.5	-1.8
KMI				APKP			17 04 51.0	
KMI				XPKP			17 04 57.0	
KMI				PKP2	PKPab		17 06 07.4	-0.1
KMI				PP	PP		17 10 02.4	+2.7
KMI				SKKS	SKKSac		17 16 42.3	-1.6
KMI				SS	SS		17 31 11.9	-2.8
KMI				PP	PP			
	comp=Z,204nm,13.2s							
KMI				LR	LR			
	comp=N,375nm,17.5s							
KMI				LR	LR			
	comp=E,528nm,23.3s							
KMI				LR	LR			
	comp=Z,828nm,19.4s							
GYA	**Guiyang**	**175.87**	**39**	PKP	PKPdf		17 04 37.3	-1.7
GYA				APKP			17 04 48.1	
GYA				XPKP			17 04 51.8	
GYA				PKS			17 08 06.8	
GYA				PP	PP			
	comp=Z,160nm,6.8s							
GYA				LR	LR			
	comp=N,110nm,19.1s							
GYA				LR	LR			
	comp=E,150nm,18.9s							
GYA				LR	LR			
	comp=Z,170nm,19.0s							

IDC ***20*** *17:04:53.2±4.1,2386S×7031W,h0km,mb4.0/1,mb1 3.8/2, mb1mx3.5/17,mbtmp3.8/2,ML3.3/1,Error ellipse: s-maj=139.7km s-min=62.2km az=89.0*

GUC ***20*** *17:04:57.8±0.9,2324S×7061W,h35km±3km,ML3.5*

ISCJB ***20*** *17:04:59.0±1.6,2329S±0.005×706W±0.1,h21km±7km, Error ellipse: s-maj=16.7km s-min=8.6km az=179.8*

ISC 20 17:04:57.3±1.9,2328S±0.006×707W±0.1,h23km±8km,n7, σ0°93/10,1C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.29**	**53**	⇓	*i* P		**Pb**	**17 05 03.8**	**-0.2**
MECH					*i* S		**Sb**	**17 05 09.3**	**+0.7**
MECH					AML	AML		17 05 09.9	
	comp=E,20μm,0.6s								
CEN1	**Los Morros**	**0.47**	**103**		*i* P		**Pb**	**17 05 05.5**	**-1.5**
CEN1					*i* S		**Sb**	**17 05 12.4**	**-1.2**
CEN1					AML	AML		17 05 12.8	
	comp=E,3μm,0.4s								
ANCH	**Antofagasta**	**0.48**	**146**⇑		*i* P		**Pb**	**17 05 07.5**	**+0.5**
ANCH					*i* S		**Sb**	**17 05 14.8**	**+1.0**
ANCH					AML	AML		17 05 18.1	
	comp=N,3μm,0.3s								
LVC	**Limon Verde**	**1.78**	**68**	⇓	*i* P		**Pn**	**17 05 27.5**	**+0.9**
LVC					*i* S		**Sn**	**17 05 49.2**	**+0.7**
LVC					AML	AML		17 05 52.2	
	comp=N,2μm,0.5s								
LPAZ	**La Paz**	**7.37**	**20**		Pn		**Pn**	**17 06 48.7**	**+5.3**
	comp=N,0.2nm,0.3s,baz=203,slow=6.5,SNR=3.2								
TORD	**Torodi Ar. Bea**	**79.51**	**71**		P		**P**	**17 17 01.5**	**-1.1**
	comp=N,1.3nm,0.8s,baz=252,slow=5.1,SNR=5.0								
MKAR	**Makanchi Array**	**148.04**	**36**		PKPbc	PKPbc		17 24 40.7	-0.1
	comp=N,0.8nm,0.7s,baz=336,slow=3.2,SNR=5.2								

IDC ***20*** *17:19:47.6±1.6,665S×15553E,h0km,mb3.8/4,mb1 4.0/6, mb1mx3.8/18,mbtmp3.9/6,ML3.5/2, Error ellipse: s-maj=34.8km s-min=28.4km az=96.0*

ISCJB ***20*** *17:19:52.5±4.5,68S±0.02×1557E±0.1,h54km±48km, mb3.5/4, Error ellipse: s-maj=36.2km s-min=22.5km az=162.6*

ISC 20 17:19:53.3±3.9,68S±0.02×1556E±0.1,h40km±42km,n7, σ0°76/8,mb3.5/4,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.03**	**122**			Pn	**Pn**	**17 21 06.5**	**+0.2**
	12nm,0.3s,baz=223,slow=5.3,SNR=14								
HNR						Sn	**Sn**	**17 22 03.2**	**0.0**
	5.8nm,0.3s,baz=280,slow=15,SNR=1.9								
CTA	**Charters Tower**	**16.06**	**214**			Pn	**Pn**	**17 23 35.8**	**-0.6**
	0.0nm,0.3s,baz=24,slow=9.8,SNR=2.4								
WB2	**Warramunga Arr**	**24.45**	**236**	*e*	P		**P**	**17 25 09.6**	**+1.0**
WRA	**Warramunga Arr**	**24.46**	**236**		P		**P**	**17 25 09.3**	**+0.6**
	0.9nm,0.4s,mb3.6,baz=60,slow=9.2,SNR=22								
ASAR	**Alice Springs**	**26.79**	**229**		P		**P**	**17 25 29.5**	**-0.3**
	0.5nm,0.5s,mb3.3,baz=60,slow=9.9,SNR=22								
STKA	**Stephens Creek**	**28.21**	**206**		P		**P**	**17 25 41.8**	**-0.5**
	2.0nm,0.8s,mb3.8,baz=8.4,slow=9.8,SNR=3.2								
SONM	**Songino Array**	**69.49**	**327**		P		**P**	**17 30 57.2**	**-0.4**
	0.1nm,0.3s,mb3.2,baz=113,slow=6.7,SNR=2.4								

ISCJB ***20*** *17:24:25.6±2.7,2404S×0.010×1769W±0.2,h114km±32km, mb4.2/8, Error ellipse: s-maj=28.4km s-min=13.1km az=22.2*

NEIC ***20*** *17:24:29.1±0.9,2405S×17677W,mb4.5/4,Error ellipse: s-maj=21.5km s-min=14.7km az=113.0*

IDC ***20*** *17:24:33.6±8.4,2447S×17743W,h130km±73km,mb3.6/5, mb1 3.9/6,mb1mx3.7/18,mbtmp3.7/6, Error ellipse: s-maj=39.6km s-min=27.8km az=6.0*

ISC 20 17:24:25.1±1.9,2402S±0.010×1771W±0.1,h78km±23km,n14, σ1°15/13,mb4.2/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.23**	**27**		*e*	Pn	**Pn**	**17 27 03.8**	**+0.9**
AFI					*e*	Sn	**Sn**	**17 29 04.8**	**-1.8**
URZ	**Urewera**	**15.04**	**198**		P		**Pn**	**17 27 53.2**	**0.0**
	1.3nm,0.3s,baz=262,slow=4.5,SNR=6.8								
CTA	**Charters Tower**	**34.16**	**269**		P		**P**	**17 31 04.3**	**+1.3**
	3.5nm,0.3s,mb4.6,baz=92,slow=14,SNR=9.9								
CTAO	**Charters Tower**	**34.16**	**269**	*e*	P		**P**	**17 31 04.2**	**+1.2**
	19nm,1.1s,mb4.8								
TAU	**Tasmania Unive**	**34.84**	**229**		P		**P**	**17 31 03.7**	**-4.9**
	68nm,1.7s,mb5.2								
TAOE	**Nuku Hiva Isla**	**38.34**	**73**		P		**P**	**17 31 41.2**	**+2.5**
ASAR	**Alice Springs**	**44.66**	**260**		P		**P**	**17 32 30.4**	**+0.1**
	1.3nm,0.3s,mb4.1,baz=94,slow=7.2,SNR=94								
ASAR					pP		pP	17 33 01.3	+12
	1.0nm,0.9s,baz=113,slow=6.7,SNR=3.4								
ASAR					PcP		PcP	17 34 12.7	+0.9
	0.5nm,0.5s,baz=114,slow=4.3,SNR=5.4								
WRAB	**Tennant Creek**	**45.07**	**265**	*e*	P		**P**	**17 32 33.4**	**-0.2**
	6.9nm,1.0s,mb4.3								
WRA	**Warramunga Arr**	**45.07**	**265**		P		**P**	**17 32 33.2**	**-0.5**
	1.3nm,0.3s,mb4.1,baz=98,slow=8.1,SNR=75								
WRA					pP		pP	17 33 04.6	+12
	0.8nm,0.4s,baz=102,slow=7.7,SNR=3.8								
WRA					PcP		PcP	17 34 14.2	+0.9
	0.6nm,0.6s,baz=96,slow=3.1,SNR=4.3								
VNDA	**Vanda**	**54.50**	**186**		P		**P**	**17 33 43.6**	**-0.7**
	0.4nm,0.7s,mb3.6,baz=359,slow=7.0,SNR=2.1								
QSPA	**South Pole Qui**	**66.06**	**180**		P		**P**	**17 35 01.6**	**-1.5**
	2.5nm,1.0s,mb4.0								
NVAR	**Mina Array Bea**	**83.00**	**43**		P		**P**	**17 36 47.4**	**+5.6**
	0.3nm,0.6s,mb3.3,baz=231,slow=10.0,SNR=3.3								
ARCES	**ARCESS Array B**	**132.53**	**349**		PKP	PKPdf		17 43 32.6	+2.8
	4.4nm,1.0s,baz=5.7,slow=1.8,SNR=4.1								
AKASG	**Malin Array Be**	**146.49**	**329**		PKPbc	PKPbc		17 43 59.1	+2.0
	2.9nm,0.5s,baz=40,slow=4.7,SNR=10								

GUC ***20*** *17:55:49.8±0.7,2294S×7081W,h34km±1km,ML5.6, MS5.6*

ISCJB ***20*** *17:55:50.4±0.9,2285S±0.002×7055W±0.003,h15km±5km, mb5.6/242,MS5.7/180,Error ellipse: s-maj=4.6km s-min=3.2km az=145.6*

NEIC ***20*** *17:55:51.5±0.2,2292S×7048W,h15km,mb5.7/227, ME5.8,MS5.7/140,ML5.6(GUC),Error ellipse: s-maj=6.0km s-min=4.3km az=55.0 Broadband fault plane solution: P waves. NP1:φ=170.00000°,δ75.00000°, λ90.00000°. NP2:φ=350.00000°,δ15.00000°,λ90.00000°. Principal axes: T Plg60.0000°, Azm80.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm260.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*NEIC Felt [IV] at Mejillones; [III] at Antofagas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.23**	**165**	*e*P	**Pg**	**17 55 58.3**	**+1.4**
MECH				*i* S	**Sg**	**17 56 04.4**	**+4.1**
MECH				AML	AML	17 56 15.3	
	comp=N,1219μm,0.6s						
CEN1	**Los Morros**	**0.58**	**150**	*e*P	**Pg**	**17 56 06.1**	**+2.8**
CEN1				*i* S	**Sg**	**17 56 16.7**	**+5.6**
CEN1				AML	AML	17 56 18.9	
	comp=E,362μm,0.6s						
ANCH	**Antofagasta**	**0.80**	**173**⇓	*e*P	**Pg**	**17 56 04.7**	**-2.7**
ANCH				*e*S	**Sg**	**17 56 16.6**	**-1.4**
ANCH	**Antofagasta**	**0.80**	**173**⇓	*e*P	**Pg**	**17 56 04.7**	**-2.7**
ANCH				*e*S	**Sg**	**17 56 16.0**	**-2.0**
ANCH				AML	AML	17 56 19.4	
	comp=N,446μm,0.7s						
PB06	**Plate Boundary**	**0.89**	**79**⇓	*i*P	**Pb**	**17 56 10.3**	**+1.3**
PB06				*i* S	**Sg**	**17 56 26.5**	**+5.8**
PB06				AML	AML	17 56 29.4	
	comp=N,192μm,0.4s						
PB07	**Plate Boundary**	**1.29**	**27**	*e*P	**Pn**	**17 56 15.6**	**+0.2**
PB07				*i* S	**Sb**	**17 56 35.5**	**+3.2**
LVC	**Limon Verde**	**1.50**	**80**	Pg	**Pg**	**17 56 20.7**	**0.0**
	comp=N,6μm,0.3s,baz=254,slow=13,SNR=1992						
LVC				Lg		17 56 43.6	
	comp=N,6μm,0.3s,baz=46,slow=7.7,SNR=6.9						
LVC	**Limon Verde**	**1.50**	**80**	*e*Pn	**Pn**	**17 56 20.8**	**+2.4**
LVC				*e*Sn	**Sn**	**17 56 43.7**	**+5.9**
LVC	**Limon Verde**	**1.50**	**80**	*e*P	**Pn**	**17 56 20.5**	**+2.1**
LVC				*i* S	**Sn**	**17 56 44.0**	**+6.2**
LVC				AML	AML	17 56 49.9	
	comp=N,67μm,0.6s						
CPN1	**Cerro Paranal**	**1.74**	**177**⇑	*e*P	**Pn**	**17 56 19.9**	**-1.7**
CPN1				*i* S	**Sn**	**17 56 42.1**	**-1.6**
CPN1				AML	AML	17 56 49.4	
	comp=N,146μm,0.6s						
PB01	**Plate Boundary**	**2.06**	**28**⇑	*e*P	**Pn**	**17 56 25.9**	**-0.2**
PB01				*e*S	**Sn**	**17 56 58.0**	**+6.4**
PB01				AML	AML	17 57 03.5	
	comp=E,58μm,0.9s						
SPCH	**San Pedro de A**	**2.13**	**91**	*e*P	**Pn**	**17 56 33.3**	**+6.2**
SPCH				*i* S	**Sn**	**17 57 03.7**	**+10**
SPCH	**San Pedro de A**	**2.13**	**91**	*e*P	**Pn**	**17 56 33.3**	**+6.2**
SPCH				*i* S	**Sn**	**17 57 03.7**	**+10**
LCO	**Las Campanas**	**6.11**	**182**	*e*Pn	**Pn**	**17 57 17.8**	**-3.9**
	comp=E,1μm,0.8s						
LCO				*e*S	Sn	17 58 55.2	+24
ARE	**Arequipa**	**6.45**	**352**⇑	*i*P	**Pn**	**17 57 23.5**	**-3.0**
ARE				*e*S	**Sn**	**17 58 32.0**	**-7.9**
LPAZ	**La Paz**	**6.93**	**19**	Pn	**Pn**	**17 57 34.7**	**+1.6**
	comp=E,12nm,0.3s,baz=227,slow=9.4,SNR=92						
LPAZ				Sn	**Sn**	**17 59 03.5**	**+12**
	baz=19,slow=12,SNR=1.8						
LPAZ				LR	LR	18 00 25.3	
	comp=E,52μm,19.7s,baz=201,slow=39						
LPAZ	**La Paz**	**6.93**	**19**	*e*Pn	**Pn**	**17 57 35.6**	**+2.5**
	comp=E,5.4nm,0.5s						
CFAA	**Coronel Fontan**	**8.92**	**167**	Pn	**Pn**	**17 57 59.1**	**-1.3**
	comp=E,0.8nm,0.3s,baz=342,slow=13,SNR=36						
CFAA				Sn	**Sn**	**17 59 44.6**	**+3.9**
	comp=E,0.6nm,0.3s,baz=8.9,slow=11,SNR=2.1						
CFAA				LR	LR	18 01 33.7	
	comp=E,10μm,20.9s,baz=331,slow=38						
FCH	**Farellones**	**10.41**	**179**	AMS	AMS	18 02 31.1	
	comp=E,68μm,16.9s						
LMEL	**Las Melosas**	**10.93**	**179**	AMS	AMS	18 02 47.8	
	comp=E,65μm,17.9s						
SIV	**San Ignacio**	**11.23**	**54**	Pn	**Pn**	**17 58 30.9**	**-1.1**
	comp=E,18nm,0.3s,baz=240,slow=12,SNR=195						
SIV				Sn	**Sn**	**18 00 38.2**	**+0.7**
	baz=249,slow=10,SNR=1.2						
NNA	**Nana**	**12.40**	**330**	Pn	**Pn**	**17 58 46.1**	**-1.9**
	comp=E,2.4nm,0.3s,baz=175,slow=16,SNR=7.1						
NNA				Sn	**Sn**	**18 00 57.9**	**-8.2**
	comp=E,15nm,0.3s,baz=188,slow=18,SNR=7.0						
NNA				LR	LR	18 03 06.3	
	comp=E,25μm,19.7s,baz=160,slow=35						
NNA	**Nana**	**12.40**	**330**	*e*Pn	**Pn**	**17 58 46.2**	**-1.9**
	comp=E,103nm,0.8s						
NNA				*e*Sn	**Sn**	**18 00 57.4**	**-8.7**
LPA	**La Plata**	**16.26**	**140**	*ce*P	**Pn**	**17 59 37.0**	**-2.9**
LPA	**La Plata**	**16.26**	**140**	*e*P	**Pn**	**17 59 43.0**	**+3.1**
LPA				*ep*P	pP	17 59 44.0	-2.7
LPA				*e*S	**Sn**	**18 02 40.0**	**-0.1**
LPA				*e*S	**Sn**	**18 02 51.0**	**+11**
LPA							
	comp=Z,44μm,19.0s						
LPA	**La Plata**	**16.26**	**140**⇑	*e*P	**Pn**	**17 59 37.0**	**-2.9**
LPA				*e*P		17 59 43.0	
LPA				*ep*P	pP	17 59 44.0	-2.7
LPA				*e*S	**Sn**	**18 02 40.0**	**-0.1**
LPA				*e*S	**Sn**	**18 02 51.0**	**+11**
LPA	**La Plata**	**16.26**	**140**⇑	*e*P	**Pn**	**17 59 37.0**	**-2.9**
LPA				*e*S	**Sn**	**18 02 40.0**	**-0.1**
ATAH	**Atahualpa**	**17.52**	**333**	P	**Pn**	**17 59 54.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=155,slow=8.8,SNR=15						
ATAH				S	**Sn**	**18 03 08.0**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=342,slow=4.9,SNR=1.8						
PLCA	**Paso Flores**	**17.80**	**180**	P	**Pn**	**17 59 59.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=1.7,slow=13,SNR=11						
PLCA				S	**Sn**	**18 03 18.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=21,slow=21,SNR=1.3						
PLCA				LR	LR	18 06 31.3	
	comp=Z,32μm,20.2s,baz=360,slow=36						
PLCA	**Paso Flores**	**17.80**	**180**	*e*Pn	**Pn**	**17 59 57.2**	**-1.9**
	comp=Z,154nm,1.1s						
PLCA	**Paso Flores**	**17.80**	**180**	*e*P	**Pn**	**17 59 57.2**	**-1.9**
PLCA				pmax	pmax		
	comp=Z,150nm,1.1s						
SPB	**Sao Paulo**	**21.22**	**96**	*e*P	**P**	**18 00 37.9**	**+0.5**
	comp=Z,165nm,0.9s,mb5.4						
SPB				*e*S	**S**	**18 04 41.8**	**+8.8**
BDFB	**Brasilia**	**22.41**	**75**	P	**P**	**18 00 48.5**	**-1.6**
	comp=Z,26nm,0.5s,mb4.9,baz=240,slow=18,SNR=36						
BDFB				LR	LR	18 10 35.2	
	comp=Z,22μm,21.8s,MS5.5,baz=70,slow=39						
BDFB	**Brasilia**	**22.41**	**75**	*e*P	**P**	**18 00 49.6**	**-0.5**
	comp=Z,92nm,0.8s,mb5.3						
BDFB	**Brasilia**	**22.41**	**75**	*e*P	**P**	**18 00 49.6**	**-0.6**
BDFB				pmax	pmax		
	comp=Z,81nm,0.8s						
OTAV	**Otavalo**	**24.24**	**340**	*e*P	**P**	**18 01 09.7**	**+1.2**
	comp=Z,161nm,1.2s,mb5.3						
OTAV				LR	LR		
	comp=Z,10μm,21.0s,MS5.3						
CAM4	**Nova Friburgo**	**25.79**	**94**⇑	*i*P	**P**	**18 01 22.6**	**+0.1**
CAM4				*i*	pP	18 01 27.2	+0.5
CAM4				*i*		18 01 36.0	
CAM4				*i*		18 01 41.2	
CAM4				*i*		18 01 42.7	
CAM4				*i*		18 01 52.4	
CAM4				*i*		18 01 56.3	
CAM4				*i*		18 02 06.7	
CAM4				*i*		18 02 11.2	
CAM4				*i*		18 02 22.9	
ROSC	**El Rosal**	**27.82**	**352**	P	**P**	**18 01 40.9**	**+0.1**
	comp=Z,32nm,0.9s,mb4.9,baz=102,slow=7.7,SNR=13						
ROSC				LR	LR	18 11 58.1	
	comp=Z,11μm,18.5s,MS5.5,baz=186,slow=35						
ROSC	**El Rosal**	**27.82**	**352**⇑	*e*P	**P**	**18 01 41.7**	**+0.9**
CAM3	**Guarapari**	**27.91**	**91**⇑	*i*P	**P**	**18 01 37.0**	**-4.7**
CAM3				*i*	pP	18 01 39.0	-6.8
CAM3				*i*	pP	18 01 41.2	-4.7
CAM3				*i*		18 01 52.4	
CAM3				*i*		18 01 56.3	
CAM3				*i*		18 02 06.7	
CAM3				*i*		18 02 11.2	
EFI	**East Falkland**	**30.32**	**165**	P	**P**	**18 02 02.8**	**+0.1**
	comp=Z,733nm,1.1s,mb6.3,SNR=5.1						
EFI	**East Falkland**	**30.32**	**165**	*e*P	**P**	**18 02 01.0**	**-1.7**
	comp=Z,117nm,0.9s,mb5.6						
EFI				LR	LR		
	comp=Z,28μm,19.0s,MS5.9						
EFI	**East Falkland**	**30.32**	**165**	*e*P	**P**	**18 02 01.0**	**-1.7**
EFI				pmax	pmax		
	comp=Z,117nm,0.9s,mb5.6						
EFI				MLR	MLR		
	comp=Z,28μm,19.0s,MS5.9						
USHA	**Ushuaia**	**31.95**	**178**	P	**P**	**18 02 17.9**	**+0.9**
	comp=Z,33nm,0.9s,mb5.2,baz=303,slow=3.9,SNR=8.4						
BCIP	**Isla Barro Col**	**33.13**	**343**	P	**P**	**18 02 24.6**	**-3.2**
BCIP				LR	LR		
	comp=Z,6μm,19.0s,MS5.3						
RPN	**Rapa Nui**	**35.34**	**255**	P	**P**	**18 02 47.0**	**0.0**
	comp=Z,91nm,0.9s,mb5.7,baz=22,slow=3.1,SNR=4.7						
RPN				LR	LR	18 13 19.4	
	comp=Z,17μm,19.6s,MS5.8,baz=90,slow=30						
RPN	**Rapa Nui**	**35.34**	**255**	P	**P**	**18 02 47.0**	**0.0**
RPN				LR	LR	18 13 19.4	
GRGR	**Grenville**	**35.86**	**15**	*e*P	**P**	**18 02 50.6**	**-0.8**
	comp=Z,121nm,0.9s,mb5.8						
GRGR				LR	LR		
	comp=Z,12μm,19.0s,MS5.7						
BBGH	**Gun Hill**	**37.38**	**18**	PFAKE		18 03 10.0	+5.7
BBGH				LR	LR		
	comp=Z,36μm,20.0s,MS6.2						
RCBR	**Riachuelo**	**37.43**	**68**⇑	*i*P	**P**	**18 03 04.5**	**-0.4**
	comp=Z,464nm,0.9s,mb6.3						
BIM	**Bigot**	**38.30**	**15**	*e*P	**P**	**18 03 11.7**	**-0.4**
FDF	**Fort de France**	**38.49**	**15**	*e*P	**P**	**18 03 11.3**	**-2.4**
	comp=Z,152nm,1.0s,mb5.7						
FDF	**Fort de France**	**38.49**	**15**	P	**P**	**18 03 12.9**	**-0.8**
FDF	**Fort de France**	**38.49**	**15**	*e*P	**P**	**18 03 11.2**	**-2.5**
TGUH	**Tegucigalpa,Un**	**40.21**	**334**	*e*P	**P**	**18 03 29.9**	**+1.7**
	comp=Z,143nm,1.3s,mb5.5						
SJG	**San Juan**	**40.96**	**6**	*e*P	**P**	**18 03 31.6**	**-2.7**
	comp=Z,225nm,0.9s,mb5.8						
SJG	**San Juan**	**40.96**	**6**	P	**P**	**18 03 32.4**	**-1.9**
SJG				pmax	pmax		
	comp=Z,230nm,1.0s						
MTP	**Monte Pirata**	**41.01**	**7**	*e*P	**P**	**18 03 31.1**	**-3.5**
	comp=Z,181nm,1.1s,mb5.6						
MTP				*e*PP	PP	18 05 10.7	+1.1
ANWB	**Willy Bob**	**41.19**	**13**	*e*P	**P**	**18 03 32.6**	**-3.6**
	comp=Z,186nm,0.9s,mb5.7						
SDDR	**Presa de Saban**	**41.61**	**359**	*e*P	**P**	**18 03 37.5**	**-2.2**
SDDR				*e*		18 03 54.6	
PMSA	**Palmer Station**	**42.10**	**176**	P	**P**	**18 03 43.7**	**+0.6**
	comp=Z,64nm,0.8s,mb5.3,baz=357,slow=4.5,SNR=6.3						
PMSA				LR	LR	18 22 13.5	
	comp=Z,13μm,18.6s,MS5.8,baz=346,slow=38						
PMSA	**Palmer Station**	**42.10**	**176**	*e*P	**P**	**18 03 43.3**	**+0.2**
	comp=Z,142nm,1.0s,mb5.5						
PMSA				LR	LR		
	comp=Z,13μm,19.0s,MS5.8						
LMGC	**Las Mercedes**	**43.15**	**351**	*e*PG	**P**	**18 03 55.2**	**+3.1**
	baz=155						
LMGC				*e*SG	**S**	**18 10 16.6**	**-1.7**
	comp=N,5μm,16.7s						
LMGC				*e*			
	comp=E,6μm,19.5s						
CCCC	**Cccc**	**44.38**	**350**	*e*P	**P**	**18 03 59.8**	**-2.2**
SOR	**Soroa**	**47.00**	**344**	*e*P	**P**	**18 04 23.3**	**+0.6**
VHO	**Vista Hermosa**	**47.27**	**325**	*i* P	**P**	**18 04 27.0**	**+2.1**
CAIG	**El Cayaco**	**49.21**	**321**	*i* P	**P**	**18 04 40.9**	**+1.0**
LVIG	**Laguna Verde**	**49.32**	**327**	*i* P	**P**	**18 04 32.7**	**-8.0**
ZIIG	**Zihuatanejo**	**50.35**	**320**	*i* P	**P**	**18 04 49.6**	**+1.0**
TRIS	**Tristan da Cun**	**51.63**	**120**	*e*P	**P**	**18 04 59.4**	**+1.3**
	comp=E,396nm,1.3s,mb6.2						
DWPF	**Disney**	**51.78**	**348**	*e*P	**P**	**18 04 57.7**	**-1.4**
	comp=E,130nm,1.1s,mb5.8						
DWPF				LR	LR		
	comp=Z,5μm,19.0s,MS5.6						
ZAIG	**Zacatecas**	**55.06**	**323**	*i* P	**P**	**18 05 26.0**	**+2.6**
BBSR	**BB Station**	**55.22**	**6**	*e*P	**P**	**18 05 22.9**	**-1.5**
	comp=Z,146nm,1.1s,mb5.9						
BBSR				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
ASCN	**Ascension**	**55.82**	**84**	PFAKE		18 05 40.0	+11
ASCN				LR	LR		
	comp=Z,16μm,19.0s,MS6.1						
BRAL	**Brewton**	**55.88**	**343**	*e*P	**P**	**18 05 29.2**	**0.0**
	comp=Z,459nm,1.3s,mb6.3						
BRAL				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
NHSC	**New Hope**	**56.43**	**350**	*e*P	**P**	**18 05 32.6**	**-0.4**
	comp=Z,347nm,1.4s,mb6.2						
NHSC				LR	LR		
	comp=Z,5μm,20.0s,MS5.6						
KVTX	**Kingsville**	**56.68**	**331**	PFAKE		18 05 40.0	+5.1
KVTX				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
COW	**Cow Castle Cre**	**56.78**	**350**	P	**P**	**18 05 36.1**	**+0.6**
GOGA	**Godfrey**	**57.32**	**347**	*e*P	**P**	**18 05 38.3**	**-1.0**
GOGA				*e*PcP	PcP	18 06 33.8	+0.4
GOGA				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
GOGA	**Godfrey**	**57.32**	**347**	*e*P	**P**	**18 05 39.7**	**+0.4**
JSC	**Jenkinsville**	**57.76**	**349**	*e*P	**P**	**18 05 42.0**	**-0.4**
JSC	**Jenkinsville**	**57.76**	**349**	P	**P**	**18 05 42.7**	**+0.3**
LRAL	**Lakeview Retre**	**57.78**	**344**	*e*P	**P**	**18 05 41.3**	**-1.3**
	comp=Z,76nm,1.1s,mb5.6						
LRAL				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
HKT	**Hockley**	**57.89**	**334**	*e*P	**P**	**18 05 43.6**	**+0.2**
	comp=Z,75nm,1.5s,mb5.5						
HKT				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
HKT	**Hockley**	**57.89**	**334**	P	**P**	**18 05 44.9**	**+1.5**
HKT				pmax	pmax		
	comp=Z,75nm,1.5s,mb5.5						
VBMS	**Vicksburg**	**58.03**	**340**	*e*P	**P**	**18 05 44.3**	**-0.1**
	comp=Z,100nm,1.2s,mb5.7						
CNNC	**Cliffs of the**	**58.22**	**353**	PFAKE		18 06 00.0	+14
CNNC				LR	LR		
	comp=Z,4μm,19.0s,MS5.6						
RKT	**Rikitea**	**58.87**	**256**	*e*P	**P**	**18 05 51.6**	**+1.0**
RKT				*e*S	**S**	**18 13 58.7**	**+2.5**
	comp=Z,16μm,26.2s						
RKT				*e*LQ		18 20 35.0	
	comp=Z,2μm,31.8s						
RKT				*e*LR	LR	18 23 29.5	
	comp=Z,28μm,26.2s,baz=110						
RKT	**Rikitea**	**58.87**	**256**	*e*P	**P**	**18 05 51.6**	**+1.0**
RKT				*e*S	**S**	**18 13 58.7**	**+2.5**
RKT				*e*LQ		18 20 35.0	
RKT	**Rikitea**	**58.87**	**256**	*e*P	**P**	**18 05 51.6**	**+1.0**
RKT				*e*S	**S**	**18 13 58.7**	**+2.5**
NATX	**Nacogdoches**	**59.04**	**336**	*e*P	**P**	**18 05 51.3**	**-0.2**
	comp=Z,66nm,0.9s,mb5.7						
NATX				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
VNA3	**Neumayer Olymp**	**59.26**	**161**	*e*P	**P**	**18 05 52.8**	**+0.3**
VNA3				*e*		18 05 54.3	
VNA3				*e*		18 06 00.1	
VNA3				*e*		18 06 04.6	
VNA3				*e*		18 06 07.6	
VNA1	**Neumayer--Stat**	**59.49**	**160**	*e*P	**P**	**18 05 55.0**	**+0.9**
VNA1				*e*		18 05 56.6	
VNA1				*e*		18 06 02.0	
VNA1				*e*		18 06 05.5	
VNA1				*e*		18 06 09.2	
CPCT	**Cooper Cave**	**59.51**	**347**	*e*P	**P**	**18 05 52.3**	**-2.3**
TKL	**Tuckaleechee C**	**59.56**	**347**	*e*P	**P**	**18 05 52.6**	**-2.3**
TKL	**Tuckaleechee C**	**59.56**	**347**	*e*P	**P**	**18 05 53.2**	**-1.7**
SWET	**Sewanee**	**59.60**	**345**	*e*P	**P**	**18 05 53.0**	**-2.2**
OXF	**Oxford**	**59.86**	**342**	*e*P	**P**	**18 05 56.4**	**-0.5**
	comp=Z,222nm,1.1s,mb6.1						
OXF				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
OXF	**Oxford**	**59.83**	**342**	P	**P**	**18 05 56.9**	**+0.1**
OXF				pmax	pmax		
	comp=Z,220nm,1.0s,mb6.1						
VNA2	**Neumayer--Watz**	**59.86**	**160**	*e*P	**P**	**18 05 56.8**	**+0.2**
	baz=289,slow=8.7						
VNA2				*e*		18 05 58.4	
VNA2				*e*		18 06 04.4	
VNA2				*e*		18 06 08.2	
VNA2				*e*		18 06 11.6	
JCT	**Junction City**	**60.05**	**331**	*e*P	**P**	**18 05 57.4**	**-1.0**
	comp=Z,57nm,0.7s,mb5.7						
JCT				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
JCT	**Junction City**	**60.05**	**331**	P	**P**	**18 05 57.9**	**-0.5**
JCT				pmax	pmax		
	comp=Z,57nm,0.7s,mb5.7						
TZTN	**Tazewell**	**60.37**	**348**	*e*P	**P**	**18 05 59.1**	**-1.4**
	comp=Z,79nm,1.2s,mb5.6						
BLA	**Blacksburg**	**60.49**	**351**	*e*P	**P**	**18 06 00.5**	**-0.8**
	comp=Z,76nm,1.0s,mb5.7						
BLA				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
BLA	**Blacksburg**	**60.49**	**351**	P	**P**	**18 06 01.7**	**+0.4**
BLA				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.7						
ELN	**Prospectdale**	**60.56**	**351**	*e*P	**P**	**18 06 00.6**	**-1.1**
WVT	**Waverly**	**60.93**	**344**	*e*P	**P**	**18 06 01.3**	**-3.0**
	comp=Z,142nm,1.1s,mb6.0						
WVT	**Waverly**	**60.93**	**344**	*e*P	**P**	**18 06 01.8**	**-2.5**
TXAR	**Lajitas Array**	**60.94**	**327**	P	**P**	**18 06 03.7**	**-0.8**
	comp=Z,3.4nm,0.5s,mb4.7,baz=150,slow=9.0,SNR=36						
TXAR				LR	LR	18 28 52.9	
	comp=Z,4μm,20.6s,MS5.6,baz=325,slow=32						
TXAR				PKP2bc		18 35 25.7	
	comp=Z,0.6nm,1.0s,baz=304,slow=0.9,SNR=3.7						
TXAR	**Lajitas Array**	**60.94**	**327**	P	**P**	**18 06 03.7**	**-0.8**
TXAR				LR	LR	18 28 52.9	
TXAR				⇑*e*		18 35 25.7	
UALR	**University of**	**60.97**	**340**	*e*P	**P**	**18 06 04.8**	**+0.2**
	comp=Z,67nm,1.0s,mb5.7						
SHEL	**Horse Pasture**	**61.07**	**96**	*e*P	**P**	**18 06 06.6**	**+0.8**
	comp=Z,113nm,0.8s,mb6.0						
CBN	**Corbin**	**61.10**	**354**	PFAKE		18 06 20.0	+15
CBN				LR	LR		
	comp=Z,6μm,22.0s,MS5.7						
MIAR	**Mount Ida**	**61.17**	**338**	*e*P	**P**	**18 06 04.2**	**-1.8**
	comp=Z,87nm,1.1s,mb5.8						
MIAR				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
MIAR	**Mount Ida**	**61.17**	**338**	*e*P	**P**	**18 06 04.8**	**-1.2**
MIAR				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.8						
HBAR	**Harrisburg**	**61.17**	**341**	P	**P**	**18 06 05.5**	**-0.4**
GNAR	**Gosnell**	**61.37**	**342**	*e*P	**P**	**18 06 06.8**	**-0.5**
	comp=Z,3μm,1.2s						
UTMT	**University of**	**61.40**	**343**	*e*P	**P**	**18 06 07.6**	**+0.1**
	comp=Z,182nm,0.8s,mb6.3						
GLAT	**Glass**	**61.45**	**343**	*e*P	**P**	**18 06 07.2**	**-0.6**
PARMO	**Parma**	**61.95**	**343**	*e*P	**P**	**18 06 10.0**	**-1.1**
PARMO				*e*		18 06 20.7	
SDMD	**Soldier's Deli**	**62.24**	**354**	*e*P	**P**	**18 06 12.9**	**-0.2**
	comp=Z,94nm,1.1s,mb5.8						
WCI	**Wyandotte Cave**	**62.56**	**346**	*e*P	**P**	**18 06 12.7**	**-2.5**
	comp=Z,109nm,0.9s,mb6.0						
WCI	**Wyandotte Cave**	**62.56**	**346**	*e*P	**P**	**18 06 12.7**	**-2.6**
WCI				pmax	pmax		
	comp=Z,109nm,0.9s,mb6.0						
USIN	**University of**	**62.63**	**345**	*e*P	**P**	**18 06 14.4**	**-1.4**
	comp=Z,196nm,1.0s,mb6.2						
MVL	**Millersville**	**62.79**	**355**	*e*P	**P**	**18 06 16.4**	**-0.4**
	comp=Z,56nm,1.0s,mb5.7						
SIUC	**Southern Illin**	**62.79**	**343**	*e*P	**P**	**18 06 15.2**	**-1.6**
	comp=Z,215nm,1.1s,mb6.2						
MCWV	**Mont Chateau**	**62.82**	**352**	*e*P	**P**	**18 06 16.2**	**-0.7**
	comp=Z,83nm,1.0s,mb5.8						
MCWV				LR	LR		
	comp=Z,7μm,21.0s,MS5.8						
WMOK	**Wichita Mounta**	**63.28**	**334**	*e*P	**P**	**18 06 19.3**	**-0.8**
	comp=Z,18nm,1.0s,mb5.1						
WMOK	**Wichita Mounta**	**63.28**	**334**	*e*P	**P**	**18 06 20.5**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
LUPA	**Lehigh Univers**	**63.31**	**356**	P	**P**	**18 06 20.9**	**+0.7**
	comp=Z,12nm,1.0s,mb5.0						
FVM	**French Village**	**63.37**	**342**	*e*P	**P**	**18 06 18.6**	**-2.1**
	comp=Z,157nm,1.0s,mb6.1						
FVM	**French Village**	**63.37**	**342**	*e*P	**P**	**18 06 19.1**	**-1.5**
FVM				pmax	pmax		
	comp=Z,120nm,1.0s,mb6.0						
OLIL	**Olney**	**63.47**	**345**	*e*P	**P**	**18 06 19.6**	**-1.7**
	comp=Z,98nm,1.0s,mb5.9						
BLO	**Bloomington**	**63.52**	**346**	*e*P	**P**	**18 06 20.2**	**-1.4**
	comp=Z,30nm,0.6s,mb5.5						
BLO	**Bloomington**	**63.52**	**346**	P	**P**	**18 06 21.4**	**-0.2**
BLO				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.5						
SSPA	**Standing Stone**	**63.56**	**354**	*e*P	**P**	**18 06 21.5**	**-0.3**
	comp=Z,86nm,1.3s,mb5.6						
CCM	**Cathedral Cave**	**63.67**	**342**	*e*P	**P**	**18 06 20.6**	**-2.0**
	comp=Z,87nm,1.0s,mb5.7						
CCM				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
CCM	**Cathedral Cave**	**63.67**	**342**	*e*P	**P**	**18 06 20.6**	**-2.0**
CCM				pmax	pmax		
	comp=Z,87nm,1.0s,mb5.7						
CCM				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.5						
ACSO	**Alum Creek Sta**	**63.85**	**349**	*e*P	**P**	**18 06 21.9**	**-1.8**
	comp=Z,164nm,1.0s,mb6.0						
ACSO				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
BRYW	**Bryant College**	**64.47**	**359**	*e*P	**P**	**18 06 28.5**	**+0.7**
	comp=Z,264nm,1.0s,mb6.2						
AMTX	**Amarillo**	**64.62**	**332**	*e*P	**P**	**18 06 28.1**	**-0.8**
	comp=Z,40nm,0.9s,mb5.4						
AMTX				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
BBTS	**Babate**	**64.68**	**60**	LR	LR	18 33 09.0	
	comp=Z,14μm,21.9s,MS6.1,baz=50,slow=35						
ALLY	**Alegheny Colle**	**64.82**	**352**	*e*P	**P**	**18 06 30.4**	**+0.3**
	comp=Z,50nm,0.8s,mb5.6						
BINY	**Binghamton**	**64.95**	**356**	*e*P	**P**	**18 06 31.6**	**+0.7**
	comp=Z,65nm,1.1s,mb5.6						
BINY				LR	LR		
	comp=Z,6μm,19.0s,MS5.8

LBNH Lisbon 66.80 359 *e*P **P 18 06 43.8 +1.0**
comp=Z,66nm,1.1s,mb5.6
LBNH LR LR
comp=Z,3µm,20.0s,MS5.6
LBNH Lisbon 66.80 359 P **P 18 06 45.3 +2.5**
LBNH pmax pmax
comp=Z,66nm,1.1s,mb5.6
118A Homack Ranch, 66.84 324 ⇑P **P 18 06 43.5 +0.2**
baz=67,SNR=23
118A ⇑S S 18 15 36.6 +1.0
baz=67
ANMO Albuquerque 66.87 328 *e*P **P 18 06 43.7 +0.2**
comp=Z,93nm,1.5s,mb5.6
ANMO LR LR
comp=Z,4µm,20.0s,MS5.6
ANMO Albuquerque 66.87 328 P **P 18 06 43.8 +0.4**
ANMO pmax pmax
comp=Z,93nm,1.4s
Z19A T-Link Ranch, 66.97 325 ⇓P **P 18 06 44.5 +0.3**
baz=67,SNR=7.0
Z19A ⇓S S 18 15 37.9 +0.8
baz=67
TUC Tucson 67.03 324 *e*P **P 18 06 45.5 +0.9**
comp=Z,60nm,1.3s,mb5.5
TUC Tucson 67.03 324 P **P 18 06 45.7 +1.1**
TUC pmax pmax
comp=Z,52nm,1.3s,mb5.4
216A Three Points, 67.17 323 ⇑P **P 18 06 46.2 +0.8**
baz=67,SNR=8.5
216A ⇑S S 18 15 38.7 -1.0
baz=67
CBKS Cedar Bluff 67.20 336 *e*P **P 18 06 45.2 -0.3**
comp=Z,126nm,0.9s,mb6.0
CBKS LR LR
comp=Z,2µm,20.0s,MS5.4
CBKS Cedar Bluff 67.20 336 P **P 18 06 46.1 +0.6**
CBKS pmax pmax
comp=Z,130nm,1.0s,mb5.9
117A Oracle 67.20 324 ⇑P **P 18 06 46.1 +0.4**
baz=68,SNR=24
117A ⇓S S 18 15 40.1 +0.1
baz=68
Z18A Geronimo 67.22 325 ⇑P **P 18 06 45.6 -0.2**
baz=68
Z18A ⇓S S 18 15 39.7 -0.4
baz=68
LONY Lake Ozonia 67.27 357 *e*P **P 18 06 44.5 -1.2**
comp=Z,56nm,1.1s,mb5.5
LONY LR LR
comp=Z,5µm,19.0s,MS5.8
QSPA South Pole Qui 67.32 180 PKP2bc 18 35 07.0
comp=Z,4.2nm,1.0s,baz=296,slow=2.3,SNR=4.0
QSPA South Pole Qui 67.32 180 *e*P **P 18 06 44.8 -0.9**
comp=Z,47nm,0.8s,mb5.6
FRNY Flat Rock 67.44 358 *e*P **P 18 06 46.5 -0.4**
comp=Z,82nm,1.1s,mb5.7
Y19A Nutrioso 67.48 326 ⇑P **P 18 06 48.2 +0.8**
baz=68,SNR=31
Y19A ⇓S S 18 15 45.1 +1.8
baz=68
116A Eloy 67.73 323 ⇓P **P 18 06 49.7 +0.8**
baz=68,SNR=7.6
116A ⇑S S 18 15 47.2 +0.8
baz=68
Y18A Canyon Day Jun 67.75 325 ⇓P **P 18 06 49.7 +0.6**
baz=68,SNR=9.3
Y18A ⇓S S 18 15 47.8 +1.3
baz=68
SCIA State Center 67.80 342 *e*P **P 18 06 48.8 -0.4**
comp=Z,121nm,1.0s,mb5.9
PKME Peaks-Kenny Pk 67.82 1 *e*P **P 18 06 49.2 -0.1**
comp=Z,72nm,1.0s,mb5.7
PKME LR LR
comp=Z,4µm,20.0s,MS5.7
X19A St. Johns 67.87 326 ⇑P **P 18 06 50.5 +0.7**
baz=68,SNR=5.9
X19A ⇓S S 18 15 49.8 +1.9
baz=68
TAOE Nuku Hiva Isla 67.89 270 *e*S S 18 15 47.0 -2.1
comp=Z,32µm,26.3s
TAOE Nuku Hiva Isla 67.89 270 *e*LR LR 18 27 19.0
comp=Z,43µm,25.2s,baz=114
214A Organ Pipe Nat 67.90 322 ⇑P **P 18 06 50.3 +0.3**
baz=68,SNR=24
214A ⇑S S 18 15 50.2 +1.8
baz=68
JFWS Jewell Farm 67.95 344 *e*P **P 18 06 47.2 -2.9**
comp=Z,156nm,1.3s,mb5.9
JFWS LR LR
comp=Z,4µm,22.0s,MS5.6
JFWS Jewell Farm 67.95 344 *e*P **P 18 06 48.7 -1.4**
JFWS pmax pmax
comp=Z,160nm,1.2s,mb5.9
Y17A Roosevelt 68.12 324 ⇓P **P 18 06 52.2 +0.8**
baz=68,SNR=40
Y17A ⇓S S 18 15 54.3 +3.4
baz=68
115A Sonoran Desert 68.12 323 ⇑P **P 18 06 51.5 0.0**
baz=68,SNR=9.5
Z16A Peralta Trail, 68.16 324 ⇑P **P 18 06 52.1 +0.4**
baz=68,SNR=6.7
X18A Snowflake 68.29 326 ⇓P **P 18 06 52.9 +0.5**
baz=68
W19A Sanders 68.45 326 ⇑P **P 18 06 53.4 0.0**
baz=69,SNR=9.6
Z15A Gila River Ind 68.53 323 ⇓P **P 18 06 54.1 +0.2**
baz=69
GLMI Grayling 68.60 349 PFAKE 18 07 00.0 +5.9
GLMI LR LR
comp=Z,4µm,19.0s,MS5.6
Y16A Circle Bar Ran 68.60 324 ⇑P **P 18 06 55.0 +0.6**
baz=69,SNR=21
W18A Petrified Fore 68.63 326 ⇓P **P 18 06 54.5 -0.1**
baz=69,SNR=9.8
SDCO Great Sand Dun 68.70 331 *e*P **P 18 06 54.1 -0.8**
comp=Z,59nm,1.0s,mb5.5
V19A Window Rock 68.75 327 ⇓P **P 18 06 55.2 -0.1**
baz=69,SNR=8.7
X16A Lo Mia Camp, P 68.99 325 ⇑P **P 18 06 56.8 -0.1**
baz=69,SNR=22
Z14A Wintersburg 69.02 323 ⇓P **P 18 06 56.7 -0.3**
baz=69
113A Mohawk Valley, 69.04 322 ⇓P **P 18 06 57.8 +0.6**
baz=69,SNR=8.1
W17A Winslow 69.11 325 ⇓P **P 18 06 57.3 -0.3**
baz=69
Y15A Casa Rosa Ranc 69.12 324 ⇑P **P 18 06 57.9 +0.3**
baz=69,SNR=17
V18A Ganado 69.20 326 ⇓P **P 18 06 58.3 +0.2**
baz=70
112A Yuma 69.34 321 ⇑P **P 18 06 58.8 -0.3**
baz=70
X15A Humboldt 69.47 324 ⇑P **P 18 07 00.1 +0.3**
baz=70,SNR=22
Y14A Wickenburg 69.48 323 ⇓P **P 18 07 00.0 +0.2**
baz=70,SNR=10.0
W16A Flagstaff 69.55 325 ⇓P **P 18 07 01.0 +0.7**
baz=70,SNR=19
T19A Beclabito 69.62 328 ⇓P **P 18 07 00.7 0.0**
baz=70,SNR=17
MVCO Mesa Verde 69.66 328 *e*P **P 18 07 00.9 0.0**
comp=Z,51nm,1.0s,mb5.4
MVCO LR LR
comp=Z,3µm,19.0s,MS5.6
MVCO Mesa Verde 69.66 328 ⇓P **P 18 07 00.5 -0.5**
baz=70
U18A Rough Rock, Ch 69.72 327 ⇓P **P 18 07 01.4 +0.1**
baz=70
WUAZ Wupatki 69.79 325 *e*P **P 18 07 03.2 +1.5**
comp=Z,131nm,1.4s,mb5.7
WUAZ Wupatki 69.79 325 ⇓P **P 18 07 02.0 +0.2**
baz=70
X14A Yava 69.81 324 ⇑P **P 18 07 02.7 +0.8**
baz=70,SNR=16
Y13A Salome 69.85 323 ⇑P **P 18 07 02.8 +0.6**
baz=70,SNR=12
GLA Glamis 69.86 321 *e*P **P 18 07 03.4 +1.2**
comp=Z,72nm,1.3s,mb5.5
GLA LR LR
comp=Z,2µm,20.0s,MS5.3
GLA Glamis 69.86 321 P **P 18 07 04.6 +2.4**
GLA pmax pmax
comp=Z,72nm,1.3s,mb5.4
GLA Glamis 69.86 321 ⇑P **P 18 07 02.7 +0.5**
baz=70,SNR=16
OGNE Ogallala 69.93 335 *e*P **P 18 07 02.7 +0.2**
comp=Z,74nm,1.0s,mb5.6
OGNE LR LR
comp=Z,3µm,19.0s,MS5.6
W15A Williams 70.01 325 ⇑P **P 18 07 03.5 +0.4**
baz=70
U16A Tuba City 70.14 326 ⇑P **P 18 07 04.4 +0.5**
baz=70,SNR=9.4
Y12C Blythe 70.19 322 ⇑P **P 18 07 04.8 +0.5**
baz=70,SNR=8.6
LIC Lamto 70.20 74 *e*P **P 18 07 03.5 -1.3**
comp=Z,164nm,1.0s,mb5.9
LIC Lamto 70.20 74 ⇑*i*P **P 18 07 03.5 -1.3**
comp=Z,127nm,1.0s,mb5.5
LIC *e*MLR MLR
comp=Z,11µm,18.8s,MS5.8
LIC Lamto 70.20 74 ⇑*i*P **P 18 07 03.5 -1.3**
comp=Z,63nm,1.0s,mb5.5
LIC LR LR
comp=Z,5µm,18.8s,MS5.8
U17A Shonto 70.26 327 ⇓P **P 18 07 05.2 +0.6**
baz=70,SNR=18
T18A Mexican Hat 70.28 327 ⇑P **P 18 07 05.7 +1.0**
baz=70,SNR=39
DVTC Desert V Tower 70.32 320 ⇑P **P 18 07 06.0 +0.9**
baz=71,SNR=7.1
SWSC Sam W. Stewart 70.34 321 ⇓P **P 18 07 06.0 +0.8**
baz=71
PDMCI Parker Dam,Lak 70.38 323 ⇓P **P 18 07 05.6 +0.2**
baz=71
TIC Toumodi 70.39 74 *e*P **P 18 07 05.5 -0.5**
comp=Z,420nm,1.2s,mb6.2
S19A Harvey Farm, M 70.39 328 ⇓P **P 18 07 05.3 -0.1**
baz=71,SNR=26
X13A Yucca 70.42 323 ⇓P **P 18 07 06.1 +0.4**
baz=71,SNR=23
PV01 Paradox Valley 70.43 329 *e*P **P 18 07 07.1 +1.4**
comp=Z,5µm,1.3s
ISCO Idaho Springs 70.44 332 *e*P **P 18 07 06.7 +1.0**
comp=Z,34nm,1.0s,mb5.2
ISCO LR LR
comp=Z,2µm,20.0s,MS5.3
ISCO Idaho Springs 70.44 332 *e*P **P 18 07 08.0 +2.4**
ISCO pmax pmax
comp=Z,33nm,1.0s,mb5.2
V15A Kaibab Nationa 70.44 325 ⇑P **P 18 07 06.4 +0.7**
baz=71,SNR=22
W14A Seligman 70.47 324 ⇓P **P 18 07 06.5 +0.5**
baz=71,SNR=13
ECSD EROS,Sioux Fal 70.48 340 *e*P **P 18 07 04.2 -1.7**
comp=Z,95nm,1.2s,mb5.6
ECSD LR LR
comp=Z,3µm,20.0s,MS5.5
KIC Kosan Boka 70.51 74 *e*P **P 18 07 05.2 -1.5**
comp=Z,432nm,0.9s,mb6.4
SMCO Snowmass 70.53 331 *e*P **P 18 07 07.9 +1.7**
comp=Z,73nm,1.1s,mb5.5
DBIC Dimbokro 70.55 74 P **P 18 07 05.5 -1.4**
comp=Z,85nm,0.8s,mb5.7,baz=217,slow=5.8,SNR=63
DBIC LR LR 18 38 54.5
comp=Z,9µm,18.1s,MS6.0,baz=215,slow=37
DBIC Dimbokro 70.55 74 *e*P **P 18 07 05.3 -1.6**
comp=Z,122nm,0.9s,mb5.8
DBIC Dimbokro 70.55 74 P **P 18 07 05.9 -1.0**
DBIC pmax pmax
comp=Z,120nm,0.9s
T17A Navajo Res., N 70.64 327 ⇑P **P 18 07 07.4 +0.5**
baz=71,SNR=40
BC3 Big Chuckw Mtn 70.65 321 ⇓P **P 18 07 07.6 +0.5**
baz=71,SNR=26
MONP Monument Peak 70.67 320 ⇑P **P 18 07 07.7 +0.5**
baz=71
S18A Hurst Farm, BI 70.77 328 ⇓P **P 18 07 08.3 +0.6**
baz=71,SNR=68
V14A Boquillas Ranc 70.80 324 ⇓P **P 18 07 08.4 +0.4**
baz=71,SNR=38
W13A Hualapai Mount 70.83 323 ⇓P **P 18 07 08.5 +0.4**
baz=71,SNR=14
IRM Iron Mountain 70.84 322 ⇓P **P 18 07 08.1 -0.2**
baz=71,SNR=29
PV10 Paradox Valley 70.85 329 *e*P **P 18 07 09.5 +1.4**
comp=Z,536nm,0.9s,mb6.5
R19A Curley Farm, L 70.89 329 ⇓P **P 18 07 08.2 -0.2**
baz=71,SNR=7.0
U15A North Rim 70.97 325 ⇑P **P 18 07 09.3 +0.3**
baz=71,SNR=32
T16A Glen Canyon Da 70.98 326 ⇓P **P 18 07 09.0 0.0**
baz=71,SNR=6.7
NEE2 Needles Airpor 70.99 323 ⇑P **P 18 07 09.0 -0.1**
baz=71
S17A Black Ridge (B 71.13 327 ⇓P **P 18 07 09.6 -0.3**
baz=71,SNR=21
PFO Pinyon Flat Ob 71.20 321 PFAKE 18 07 20.0 +10
PFO LR LR
comp=Z,4µm,21.0s,MS5.7
PFO Pinyon Flat Ob 71.20 321 *e*P **P 18 07 12.3 +1.9**
PFO pmax pmax
comp=Z,13nm,0.5s,mb5.1
PFO Pinyon Flat Ob 71.20 321 ⇓P **P 18 07 09.9 -0.5**
baz=72
BELC Belle Mtn. 71.22 321 ⇑P **P 18 07 10.3 -0.2**
baz=72,SNR=7.2
R18A Canyonlands Na 71.27 328 ⇑P **P 18 07 10.2 -0.5**
baz=72,SNR=9.1
Q19A Hogan Spring (71.41 329 ⇓P **P 18 07 11.7 +0.2**
baz=72
U14A Mt Trumbull 71.43 325 ⇓P **P 18 07 11.8 +0.1**
baz=72,SNR=46
V13A Grand Canyon W 71.44 324 ⇓P **P 18 07 12.0 +0.2**
baz=72,SNR=24
CHIE El Hierro 71.45 48 P **P 18 07 11.1 -0.9**
comp=Z,71nm,1.1s,mb5.5
T15A Red Dirt Ranch 71.46 326 ⇓P **P 18 07 11.6 -0.3**
baz=72,SNR=15
LDFC Landfair 71.49 323 *e*P **P 18 07 13.9 +1.8**
comp=Z,110nm,1.2s,mb5.7
W12A Cal Nev Ari 71.52 323 ⇑P **P 18 07 12.6 +0.3**
baz=72,SNR=6.6
GMRC Granite Mounta 71.58 322 ⇑P **P 18 07 12.8 +0.1**
baz=72,SNR=25
S16A Weppner Ranch, 71.60 327 ⇑P **P 18 07 12.9 +0.2**
baz=72,SNR=20
PHWY Pilot Hill 71.61 333 *e*P **P 18 07 13.8 +1.0**
comp=Z,68nm,1.3s,mb5.4
MURC Murrieta 71.63 320 ⇓P **P 18 07 12.8 -0.2**
baz=72
R17A Hanksville Air 71.69 328 ⇓P **P 18 07 13.3 0.0**
baz=72,SNR=24
P19A Cripple Cowboy 71.82 330 ⇑P **P 18 07 14.3 +0.3**
baz=72
V12A Nelson 71.82 323 ⇓P **P 18 07 13.8 -0.4**
baz=72,SNR=19
U13A Pakoon Wash 71.85 324 ⇑P **P 18 07 14.9 +0.7**
baz=72,SNR=16
T14A Hurricane 71.86 325 ⇓P **P 18 07 14.1 -0.2**
baz=72,SNR=9.2
BBRC Big Bear Sol-O 71.94 321 ⇓P **P 18 07 14.9 +0.1**
baz=72
Q18A Rafter H Ranch 71.94 329 ⇑P **P 18 07 14.9 +0.1**
baz=72,SNR=16
S15A Panguitch 71.95 326 ⇑P **P 18 07 15.2 +0.3**
baz=72
R16A Teasdale 71.97 327 ⇓P **P 18 07 15.6 +0.6**
baz=72,SNR=7.6
HEC Hector,Ludlow 72.00 322 ⇓P **P 18 07 15.8 +0.6**
baz=72,SNR=8.9
SRU San Rafael 72.14 328 *e*P **P 18 07 14.9 -1.1**
comp=Z,50nm,0.9s,mb5.5
SRU San Rafael 72.14 328 P **P 18 07 16.3 +0.4**
SRU pmax pmax
comp=Z,34nm,0.9s,mb5.3
SRU San Rafael 72.14 328 ⇑P **P 18 07 16.0 0.0**
baz=72,SNR=18
U12A Valley of Fire 72.17 324 ⇓P **P 18 07 16.3 +0.2**
baz=72,SNR=6.5
TUQ Turquoise Moun 72.21 322 ⇓P **P 18 07 16.8 +0.4**
baz=72,SNR=25
CIS Catalina Islan 72.21 319 ⇓P **P 18 07 16.9 +0.4**
baz=72
V11A Goodsprings 72.22 323 ⇑P **P 18 07 16.3 -0.2**
baz=72
EGOM La Gomera 72.23 48 P **P 18 07 14.7 -2.1**
comp=Z,204nm,0.9s,mb6.0
T13A Saint George 72.27 325 ⇓P **P 18 07 17.3 +0.5**
baz=72,SNR=9.0
Q16A Castle Valley 72.31 328 ⇓P **P 18 07 17.4 +0.5**
baz=73,SNR=15
R15A Junction 72.31 327 ⇑P **P 18 07 17.6 +0.6**
baz=73
BFSC Mount Baldy St 72.35 320 ⇑P **P 18 07 17.8 +0.4**
baz=73,SNR=11
FMP Fort Macarthur 72.36 320 ⇑P **P 18 07 16.8 -0.6**
baz=73
CCUT Cedar City 72.38 325 *e*P **P 18 07 18.5 +1.1**
comp=Z,80nm,1.1s,mb5.6
P18A Preston Nutter 72.41 329 ⇓P **P 18 07 18.1 +0.5**
baz=73,SNR=10.0
RRX Edison Barstow 72.42 321 ⇓P **P 18 07 18.0 +0.3**
baz=73
S14A Cedar City 72.43 326 ⇓P **P 18 07 18.3 +0.6**
baz=73
T12A Moapa 72.48 324 ⇓P **P 18 07 18.2 +0.2**
baz=73
MSU Marysvale 72.50 327 *e*P **P 18 07 17.8 -0.3**
comp=Z,47nm,1.1s,mb5.3
MSU Marysvale 72.50 327 P **P 18 07 18.9 +0.8**
MVU Marysvale 72.51 327 PFAKE 18 07 30.0 +12
MVU LR LR
comp=Z,4µm,20.0s,MS5.7
P17A Butcher Ranch, 72.53 328 ⇑P **P 18 07 18.4 +0.1**
baz=73,SNR=12
MWC Mount Wilson 72.58 320 *e*P **P 18 07 19.7 +1.0**
comp=Z,26nm,1.0s,mb5.1
MWC LR LR
comp=Z,2µm,21.0s,MS5.4
MWC Mount Wilson 72.58 320 P **P 18 07 21.3 +2.6**
MWC pmax pmax
comp=Z,26nm,1.0s,mb5.1
ARUT Antelope Range 72.59 326 *e*P **P 18 07 19.7 +1.0**
comp=Z,104nm,1.1s,mb5.7
GSC Goldstone 72.61 322 *e*P **P 18 07 20.0 +1.2**
comp=Z,55nm,1.3s,mb5.3
GSC LR LR
comp=Z,3µm,20.0s,MS5.5
GSC Goldstone 72.61 322 P **P 18 07 20.5 +1.6**
GSC pmax pmax
comp=Z,55nm,1.3s,mb5.3
GSC Goldstone 72.61 322 ⇓P **P 18 07 19.1 +0.2**
baz=73,SNR=16
TMUT Trail Mountain 72.62 328 *e*P **P 18 07 20.1 +1.3**
comp=Z,31nm,0.9s,mb5.2
U11A Corn Creek 72.62 323 ⇓P **P 18 07 18.9 0.0**
baz=73
S13A Holt Ranch, En 72.66 325 ⇓P **P 18 07 19.9 +0.8**
baz=73,SNR=14
RWWY Rawlins 72.68 332 *e*P **P 18 07 20.1 +1.0**
comp=Z,43nm,0.9s,mb5.4
CCAN Las Canadas 72.69 48 P **P 18 07 19.0 -0.5**
comp=Z,48nm,0.8s,mb5.5
SHOC Shoshone 72.74 322 ⇑P **P 18 07 20.1 +0.5**
baz=73
DECC Green Verdugo 72.76 320 ⇓P **P 18 07 20.1 +0.3**
baz=73
R14A James Farms, M 72.76 326 ⇑P **P 18 07 20.0 +0.3**
baz=73
SNCC San Nicolas Is 72.78 319 ⇑P **P 18 07 19.6 -0.4**
baz=73
O18A Roosevelt 72.80 329 ⇑P **P 18 07 20.1 +0.3**
baz=73
N19A John Jarvie Ra 72.91 330 ⇓P **P 18 07 20.6 +0.1**
baz=73,SNR=6.5
M20A Sweetwater, Wa 72.95 331 ⇑P **P 18 07 21.3 +0.6**
baz=73,SNR=8.2
Q15A Fillmore 72.97 327 ⇓P **P 18 07 21.4 +0.5**
baz=73,SNR=5.3
L21A Rawlins 72.97 332 ⇑P **P 18 07 20.7 -0.2**
baz=73,SNR=24
EYMN Ely 72.98 345 *e*P **P 18 07 18.9 -1.8**
comp=Z,62nm,0.9s,mb5.5
EYMN LR LR
comp=Z,4µm,19.0s,MS5.7
EDW2 Edwards Air Fo 73.00 321 ⇓P **P 18 07 21.2 +0.1**
baz=73,SNR=8.4
P16A Fountain Green 73.08 328 ⇓P **P 18 07 21.5 0.0**
baz=73
O17A Robinson Place 73.09 329 ⇑P **P 18 07 21.7 +0.1**
baz=73,SNR=17
BLG Laguna Peak 73.10 319 ⇓P **P 18 07 21.7 -0.1**
baz=73
T11A Corn Creek, Al 73.13 324 ⇑P **P 18 07 22.4 +0.5**
baz=73,SNR=32
U10A Ash Meadows, A 73.14 323 ⇑P **P 18 07 22.1 +0.1**
baz=73,SNR=30
R13A O'Grain Ranch, 73.16 326 ⇑P **P 18 07 22.0 -0.1**
baz=73,SNR=15
S12A Delamar Landin 73.20 325 ⇓P **P 18 07 22.7 +0.4**
baz=74,SNR=6.7
N18A Larsen Ranch, 73.21 330 ⇑P **P 18 07 21.8 -0.5**
baz=74
LRMC Laurel Mountai 73.24 321 ⇓P **P 18 07 22.9 +0.3**
baz=74,SNR=10
OSI Osito Adit 73.24 320 ⇑P **P 18 07 22.0 -0.6**
baz=74
EOSO Osorio 73.33 49 P **P 18 07 22.3 -1.0**
comp=Z,579nm,1.7s,mb6.2
P15A Leamington 73.36 327 ⇑P **P 18 07 23.3 +0.1**
baz=74,SNR=11
BSC Santa Cruz Isl 73.36 319 ⇓P **P 18 07 22.7 -0.6**
baz=74
MPU Maple Canyon 73.38 328 *e*P **P 18 07 25.1 +1.8**
comp=Z,58nm,1.1s,mb5.4
MPU LR LR
comp=Z,3µm,20.0s,MS5.5
M19A Rock Springs 73.39 331 ⇑P **P 18 07 22.8 -0.6**
baz=74,SNR=6.6
RSSD Black Hills 73.41 335 *e*P **P 18 07 23.2 -0.2**
RSSD Black Hills 73.41 335 *e*P **P 18 07 24.2 +0.8**
Q14A Sevier Lake (B 73.41 326 ⇑P **P 18 07 23.6 +0.1**
baz=74,SNR=31
L20A Wamsutter 73.43 332 ⇓P **P 18 07 23.2 -0.3**
baz=74,SNR=14
O16A Springville 73.47 328 ⇑P **P 18 07 23.4 -0.4**
baz=74
FURC Furnace Creek, 73.48 323 ⇓P **P 18 07 24.1 +0.1**
baz=74,SNR=7.9
TPNV Topopah Spring 73.48 323 *e*P **P 18 07 25.7 +1.7**
comp=Z,71nm,1.2s,mb5.5
TPNV Topopah Spring 73.48 323 P **P 18 07 25.9 +1.9**
TPNV pmax pmax
comp=Z,71nm,1.2s,mb5.5
TPNV Topopah Spring 73.48 323 ⇓P **P 18 07 24.6 +0.6**
baz=74,SNR=27
DAU Daniels Canyon 73.51 329 *e*P **P 18 07 23.8 -0.3**
comp=Z,69nm,1.2s,mb5.5
DAU Daniels Canyon 73.51 329 P **P 18 07 24.6 +0.6**
MPMC Manual Prospec 73.54 322 ⇓P **P 18 07 24.2 -0.2**
baz=74,SNR=10
NLU North Lily Min 73.55 328 *e*P **P 18 07 22.7 -1.6**
comp=Z,57nm,1.3s,mb5.3
PPT Papeete 73.57 258 *e*S S 18 16 53.2 -1.9
comp=Z,16µm,27.0s
PPT Papeete 73.57 258 *e*LR LR 18 30 14.7
comp=Z,17µm,25.5s,baz=106
PPT Papeete 73.57 258 LR LR 18 31 18.6
comp=Z,5µm,21.6s,MS5.8,baz=49,slow=29
R12A Pony Springs, 73.61 325 ⇓P **P 18 07 25.4 +0.7**
baz=74,SNR=36
ARVC Arvin 73.66 320 ⇑P **P 18 07 24.8 -0.3**
baz=74
S11A Rachel 73.71 324 ⇑P **P 18 07 25.8 +0.5**
baz=74
SBC Santa Barbara 73.72 319 ⇑P **P 18 07 25.0 -0.4**
baz=74
N17A Moffit Pass 73.72 329 ⇑P **P 18 07 25.2 -0.1**
baz=74,SNR=9.8
M18A Lyman 73.75 330 ⇑P **P 18 07 25.1 -0.3**
baz=74,SNR=6.8
JLU Jordanelle 73.75 329 *e*P **P 18 07 26.6 +1.1**
comp=Z,63nm,0.9s,mb5.5
DAC Darwin (Calif) 73.75 322 PFAKE 18 07 40.0 +14
DAC LR LR
comp=Z,3µm,21.0s,MS5.6
P14A Drum Mountains 73.77 327 ⇑P **P 18 07 25.9 +0.3**
baz=74,SNR=24
Q13A Wheeler Ranch, 73.77 326 ⇓P **P 18 07 26.1 +0.4**
baz=74,SNR=14
ISA Isabella 73.83 321 *e*P **P 18 07 27.1 +1.1**
comp=Z,30nm,1.0s,mb5.2
ISA LR LR
comp=Z,2µm,20.0s,MS5.3
ISA Isabella 73.83 321 P **P 18 07 28.5 +2.5**
ISA pmax pmax
comp=Z,30nm,1.0s,mb5.2
ISA Isabella 73.83 321 ⇓P **P 18 07 26.1 +0.1**
baz=74,SNR=13
L19A Farson 73.96 331 ⇓P **P 18 07 26.9 +0.3**
baz=74,SNR=12
N16A Rees Ranch, Co 73.96 329 ⇑P **P 18 07 26.6 -0.1**
baz=74

O15A **The Old Anders** 73.99 328 ⇓P P 18 07 27.0 +0.1
baz=74,SNR=7.4
M17A **Scullys Gap (B** 74.06 330 ⇓P P 18 07 27.0 -0.2
baz=74
PKM **Peak Mountain** 74.09 320 ⇑P P 18 07 28.2 +0.6
baz=74,SNR=6.9
DUG **Dugway** 74.10 328 *eP* P 18 07 28.7 +1.2
DUG comp=Z,24nm,0.9s,mb5.1
LR LR
comp=Z,2µm,19.0s,MS5.4
DUG **Dugway** 74.10 328 P P 18 07 30.1 +2.6
DUG pmax pmax
comp=Z,24nm,0.9s,mb5.1
DUG **Dugway** 74.10 328 ⇑P P 18 07 27.7 +0.2
baz=74,SNR=18
L18A **Fontenelle, Gr** 74.12 330 ⇑P P 18 07 27.5 -0.1
baz=74,SNR=17
GRAC **Grapevine Rang** 74.14 323 ⇑P P 18 07 27.8 -0.1
baz=74
P13A **Bates Ranch, G** 74.14 326 ⇑P P 18 07 28.5 +0.7
baz=74,SNR=21
R11A **Troy Canyon, C** 74.14 325 ⇓P P 18 07 28.2 +0.4
baz=74,SNR=29
CWC **Cottonwood Cre** 74.15 322 ⇓P P 18 07 28.2 +0.3
baz=74,SNR=8.7
SBA **Scott Base** 74.20 191 *eP* P 18 07 26.8 -0.9
comp=Z,80nm,1.4s,mb5.5
SBA **Scott Base** 74.20 191 P P 18 07 30.5 +2.8
SBA pmax pmax
comp=Z,80nm,1.4s,mb5.5
Q12A **Willow Creek R** 74.25 326 ⇑P P 18 07 28.9 +0.4
baz=74,SNR=12
VES **Vestal, Richgr** 74.31 321 ⇑P P 18 07 28.9 0.0
baz=75,SNR=5.8
S10A **Tonopah Range,** 74.38 324 ⇑P P 18 07 29.4 +0.3
baz=75,SNR=17
M16A **Huntsville** 74.39 329 ⇓P P 18 07 29.0 -0.1
baz=75
AGMN **Agassiz Refuge** 74.41 343 *eP* P 18 07 27.4 -1.8
comp=Z,72nm,0.9s,mb5.6
AGMN LR LR
comp=Z,3µm,19.0s,MS5.6
SMMC **Simmler** 74.48 320 ⇓P P 18 07 29.5 -0.4
baz=75
R10A **Warm Springs** 74.48 324 ⇑P P 18 07 30.2 +0.4
baz=75,SNR=22
N15A **Stansbury Isla** 74.49 328 ⇓P P 18 07 29.4 -0.4
baz=75
Q11A **Duckwater** 74.54 325 ⇑P P 18 07 30.7 +0.5
baz=75,SNR=10
CFTV **Fuerteventura** 74.56 50 P P 18 07 30.3 -0.2
comp=Z,46nm,0.8s,mb5.5
BW06 **Boulder Array** 74.58 331 PFAKE 18 07 40.0 +10
BW06 LR LR
comp=Z,2µm,22.0s,MS5.5
BW06 **Boulder Array** 74.58 331 ⇑P P 18 07 29.7 -0.6
baz=75,SNR=7.8
PDAR **Pinedale Array** 74.58 331 P P 18 07 30.9 +0.6
comp=Z,7.1nm,1.0s,mb4.6,baz=144,slow=5.3,SNR=10
PDAR LR LR 18 42 43.8
comp=Z,2µm,18.6s,MS5.5,baz=49,slow=38
S09A **Goldfield** 74.58 323 ⇑P P 18 07 30.5 +0.1
baz=75,SNR=11
HWUT **Hardware Ranch** 74.58 329 *eP* P 18 07 31.8 +1.5
comp=Z,55nm,0.9s,mb5.5
HWUT LR LR
comp=Z,5µm,21.0s,MS5.8
O13A **Hicks Ranch, I** 74.63 327 ⇓P P 18 07 30.0 -0.7
baz=75
TIN **Tinemaha** 74.66 322 ⇓P P 18 07 30.2 -0.7
baz=75
RCTC **Rector, Farmer** 74.72 321 ⇑P P 18 07 31.0 -0.2
baz=75
BGU **Big Grassy Mou** 74.76 328 *eP* P 18 07 32.0 +0.7
comp=Z,58nm,1.4s,mb5.3
SPUT **South Promonto** 74.77 329 *eP* P 18 07 30.7 -0.7
comp=Z,41nm,0.9s,mb5.4
N14A **Grayback Hills** 74.78 328 ⇑P P 18 07 31.7 +0.2
baz=75,SNR=6.1
V05C **Boulder Hill,** 74.81 320 ⇑P P 18 07 31.1 -0.6
baz=75
TPH **Tonopah** 74.83 323 *eP* P 18 07 33.4 +1.6
comp=Z,60nm,1.4s,mb5.3
TPH LR LR
comp=Z,2µm,19.0s,MS5.5
TPH **Tonopah** 74.83 323 *eP* P 18 07 33.4 +1.6
TPH pmax pmax
comp=Z,60nm,1.4s,mb5.3
TPH MLR MLR
comp=Z,2µm,19.0s,MS5.5
L16A **Fish Haven** 74.84 330 ⇑P P 18 07 31.8 0.0
baz=75,SNR=9.7
PTRM **Twissleman Ran** 74.84 320 P P 18 07 33.6 +1.7
M15A **Larsen Ranch,** 74.89 329 ⇑P P 18 07 31.8 -0.3
baz=75,SNR=8.7
Q10A **Clear Creek Ra** 74.92 324 ⇓P P 18 07 32.5 +0.1
baz=75,SNR=16
P11A **Circle Ranch,** 75.11 325 ⇑P P 18 07 33.0 -0.5
baz=75
O12A **Currie** 75.12 326 ⇓P P 18 07 33.4 -0.1
baz=75,SNR=22
VNDA **Vanda** 75.24 190 P P 18 07 34.0 +0.4
comp=Z,11nm,0.8s,mb4.8,baz=92,slow=1.7,SNR=36
VNDA LR LR 18 39 49.8
comp=Z,4µm,18.7s,MS5.8,baz=140,slow=35
VNDA **Vanda** 75.24 190 *eP* P 18 07 33.9 +0.2
comp=Z,19nm,0.9s,mb5.0
VNDA **Vanda** 75.24 190 *eP* P 18 07 33.9 +0.2
VNDA pmax pmax
comp=Z,19nm,0.9s
U05C **Westside ANR,** 75.25 321 ⇓P P 18 07 34.2 -0.1
baz=76
AHID **Auburn Hatcher** 75.27 330 *eP* P 18 07 35.2 +0.9
comp=Z,65nm,0.9s,mb5.6
AHID LR LR
comp=Z,4µm,20.0s,MS5.7
L15A **Malad City** 75.28 329 ⇑P P 18 07 33.6 -0.7
baz=76,SNR=10
HVU **Hansel Valley** 75.29 329 *eP* P 18 07 35.0 +0.6
comp=Z,32nm,1.0s,mb5.2
HVU **Hansel Valley** 75.29 329 P P 18 07 36.4 +2.0
HVU pmax pmax
comp=Z,32nm,1.0s,mb5.2
Q09A **Carvers** 75.35 324 ⇑P P 18 07 35.1 +0.2
baz=76,SNR=7.7
M14A **Sheep Mountain** 75.36 328 ⇑P P 18 07 34.4 -0.4
baz=76,SNR=24
MLAC **Mammoth Lakes** 75.41 322 ⇓P P 18 07 34.6 -0.5
baz=76
I18A **Diamond G Ranc** 75.44 332 ⇑P P 18 07 35.2 0.0
baz=76,SNR=16
T06C **Millerton Lake** 75.48 321 ⇑P P 18 07 35.3 -0.3
baz=76
O11A **Cowboy Ranch,** 75.49 326 ⇓P P 18 07 36.1 +0.5
baz=76,SNR=12
R08A **Mina** 75.51 323 ⇑P P 18 07 35.7 0.0
baz=76
P10A **Eureka** 75.54 325 ⇓P P 18 07 36.8 +0.9
baz=76
K16A **Soda Springs** 75.55 330 ⇓P P 18 07 35.6 -0.2
baz=76,SNR=28
J17A **Brown Place, J** 75.56 331 ⇓P P 18 07 36.2 +0.3
baz=76,SNR=8.4
REDW **Red Top Meadow** 75.63 331 *eP* P 18 07 37.2 +0.9
comp=Z,55nm,1.0s,mb5.4
M13A **Montello** 75.65 328 ⇑P P 18 07 36.8 +0.3
baz=76,SNR=9.1
SNOW **Snow King Moun** 75.66 331 *eP* P 18 07 37.0 +0.5
comp=Z,47nm,1.0s,mb5.4
U04C **Hernandez Rese** 75.66 320 ⇑P P 18 07 36.9 +0.3
baz=76
NVAR **Mina Array Bea** 75.68 323 P P 18 07 36.7 0.0
comp=Z,7.6nm,0.9s,mb4.6,baz=149,slow=5.6,SNR=28
V03C **Hunter Liggett** 75.70 320 ⇑P P 18 07 37.0 +0.1
baz=76
N12A **Clover Valley,** 75.71 327 ⇓P P 18 07 37.0 +0.2
baz=76,SNR=5.6
L14A **Malta** 75.71 329 ⇑P P 18 07 37.0 +0.2
baz=76,SNR=14
LOHW **Long Hollow** 75.71 331 *eP* P 18 07 37.0 +0.2
comp=Z,22nm,0.9s,mb5.1
ELK **Elko** 75.73 327 *eP* P 18 07 37.8 +0.9
comp=Z,26nm,1.0s,mb5.1
ELK LR LR
comp=Z,4µm,20.0s,MS5.8
ELK **Elko** 75.73 327 *eP* P 18 07 37.8 +0.9
ELK pmax pmax
comp=Z,26nm,1.0s
ELK MLR MLR
comp=Z,4µm,20.0s
SYO **Syowa Base** 75.74 160 ⇓*eP* P 18 07 34.0 -2.7
SYO **Syowa Base** 75.74 160 ⇓*pP* pP 18 07 42.5 +1.3
TPAW **Teton Pass** 75.77 331 *eP* P 18 07 38.2 +1.1
comp=Z,41nm,1.0s,mb5.3
Q08A **Gabbs** 75.78 324 ⇑P P 18 07 37.9 +0.6
baz=76,SNR=9.8
RRI2 **Red Ridge** 75.83 331 *eP* P 18 07 38.5 +1.1
P09A **Austin** 75.85 325 ⇓P P 18 07 37.6 0.0
baz=76
K15A **Arbon** 75.87 329 ⇑P P 18 07 38.6 +0.9
baz=76
MOOW **Moose Ponds** 75.88 331 *eP* P 18 07 37.9 +0.2
comp=Z,16nm,1.0s,mb4.9
J16A **Bone** 75.90 330 ⇓P P 18 07 37.8 -0.1
baz=76
I17A **Pilgram Creek** 75.94 331 ⇓P P 18 07 38.7 +0.7
baz=76,SNR=5.9
DCID1 **Drake Creek** 75.96 331 P P 18 07 38.6 +0.4
comp=Z,85nm,1.2s,mb5.5
N11A **Elko Archery C** 76.03 326 ⇑P P 18 07 38.7 0.0
baz=76
O10A **Cortez Mining,** 76.05 325 ⇓P P 18 07 38.9 +0.2
baz=76
M12A **Wells** 76.06 327 ⇓P P 18 07 38.9 +0.1
baz=76,SNR=12
K14A **Jones Ranch, D** 76.07 329 ⇓P P 18 07 39.1 +0.2
baz=76,SNR=6.9
S05C **Merced** 76.07 321 ⇑P P 18 07 39.2 +0.3
baz=76,SNR=11
IMW **Indian Meadow** 76.09 331 *eP* P 18 07 39.9 +1.0
comp=Z,64nm,1.4s,mb5.4
L13A **Double Diamond** 76.09 328 ⇓P P 18 07 38.9 0.0
baz=76,SNR=17
ULM **Lac du Bonnet** 76.19 344 P P 18 07 38.5 -0.8
comp=Z,33nm,0.9s,mb5.3,baz=153,slow=6.0,SNR=16
ULM **Lac du Bonnet** 76.19 344 *eP* P 18 07 37.3 -2.1
comp=Z,85nm,1.3s,mb5.5
I16A **Newdale** 76.32 331 ⇓P P 18 07 40.5 +0.3
baz=77,SNR=5.7
Q07A **Schurz** 76.32 323 ⇑P P 18 07 40.7 +0.3
baz=77
O09A **Fish Creek Ran** 76.32 325 ⇑P P 18 07 40.5 +0.1
baz=77
H17A **Grant Village** 76.32 332 ⇑P P 18 07 40.4 +0.2
baz=77
SAO **San Andreas Ge** 76.33 320 PFAKE 18 07 50.0 +10
SAO LR LR
comp=Z,2µm,21.0s,MS5.4
RLMT **Red Lodge** 76.34 333 *eP* P 18 07 40.6 +0.3
RLMT **Red Lodge** 76.34 333 ⇓P P 18 07 40.1 -0.2
baz=77,SNR=15
N10A **Dunphy** 76.36 326 ⇑P P 18 07 40.2 -0.3
baz=77
J15A **Blackfoot** 76.38 330 ⇑P P 18 07 40.8 +0.2
baz=77,SNR=15
LKWY **Lake** 76.38 332 *eP* P 18 07 42.8 +2.2
comp=Z,57nm,1.1s,mb5.4
LKWY LR LR
comp=Z,5µm,19.0s,MS5.8
LKWY **Lake** 76.38 332 *eP* P 18 07 42.8 +2.3
LKWY pmax pmax
comp=Z,45nm,1.1s,mb5.3
LKWY MLR MLR
comp=Z,4µm,19.0s,MS5.8
R06C **Coleville** 76.38 323 ⇓P P 18 07 40.9 +0.2
baz=77
LAO **LASA Array** 76.40 336 *eP* P 18 07 39.8 -0.9
LAO LR LR
comp=Z,2µm,19.0s,MS5.5
P08A **Dixie Valley** 76.45 324 ⇓P P 18 07 40.3 -0.8
baz=77,SNR=6.4
YFT **Old Faithful** 76.48 332 *eP* P 18 07 41.8 +0.7
comp=Z,55nm,1.0s,mb5.4
M11A **Holland Ranch,** 76.52 327 ⇑P P 18 07 41.1 -0.3
baz=77,SNR=19
BMN **Battle Mountai** 76.53 325 P P 18 07 43.5 +2.1
comp=Z,9.8nm,1.0s,mb4.7
BMN LR LR
comp=Z,3µm,22.0s,MS5.5
BMN **Battle Mountai** 76.53 325 P P 18 07 43.5 +2.0
BMN pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BMN MLR MLR
comp=Z,3µm,22.0s,MS5.5
CMB **Columbia Colle** 76.58 322 *eP* P 18 07 40.8 -1.1
comp=Z,17nm,1.1s,mb4.9
CMB LR LR
comp=Z,2µm,19.0s,MS5.3
CMB **Columbia Colle** 76.58 322 P P 18 07 43.7 +1.9
CMB pmax pmax
comp=Z,17nm,1.1s,mb4.9
K13A **Stover Farm, H** 76.58 328 ⇑P P 18 07 41.6 -0.2
baz=77
YNR **Norris Junctio** 76.62 332 *eP* P 18 07 43.6 +1.7
comp=Z,26nm,1.0s,mb5.1
G18A **Lazy EL Ranch,** 76.62 333 ⇓P P 18 07 41.6 -0.3
baz=77,SNR=19
L12A **House Creek Ra** 76.66 328 ⇑P P 18 07 41.9 -0.3
baz=77,SNR=18
YMR **Madison River** 76.71 332 *eP* P 18 07 43.6 +1.2
comp=Z,119nm,1.2s,mb5.7
P07A **Fallon** 76.78 324 ⇑P P 18 07 42.1 -0.9
baz=77
J14A **Carey** 76.83 329 ⇓P P 18 07 43.0 -0.1
baz=77,SNR=14
H16A **Russell Place,** 76.86 331 ⇑P P 18 07 43.0 -0.2
baz=77,SNR=14
I15A **Monteview** 76.87 330 ⇑P P 18 07 42.9 -0.4
baz=77
O08A **Rochester Mine** 76.92 325 ⇓P P 18 07 43.1 -0.6
baz=77,SNR=9.1
M10A **I.L. Ranch, Tu** 76.97 326 ⇑P P 18 07 43.7 -0.2
baz=77,SNR=8.7
K12A **Draper Farm, C** 76.97 328 ⇓P P 18 07 43.6 -0.3
baz=77,SNR=20
N09A **Rock Creek Ran** 76.99 325 ⇑P P 18 07 43.2 -0.9
baz=77
QLMT **Earthquake Lak** 77.04 331 *eP* P 18 07 45.8 +1.5
comp=Z,20nm,1.3s,mb4.9
L11A **Cat Creek Ranc** 77.04 327 ⇑P P 18 07 44.2 -0.2
baz=77,SNR=17
R04C **Big Horse Ranc** 77.04 321 ⇑P P 18 07 43.9 -0.6
baz=77
GCMT **Greycliff** 77.04 333 *eP* P 18 07 44.3 0.0
comp=Z,60nm,1.3s,mb5.4
WCN **Washoe City** 77.10 323 ⇓P P 18 07 44.1 -0.7
baz=77
G17A **Pierce Place,** 77.12 332 ⇑P P 18 07 44.4 -0.3
baz=77
F18A **Big Timber** 77.16 333 ⇓P P 18 07 44.8 -0.1
baz=77,SNR=23
DGMT **Dagmar** 77.16 338 *eP* P 18 07 43.8 -1.1
comp=Z,128nm,0.9s,mb5.8
DGMT LR LR
comp=Z,2µm,20.0s,MS5.5
DGMT **Dagmar** 77.16 338 ⇑P P 18 07 44.7 -0.1
baz=77,SNR=15
PAHR **Pah Rah Range** 77.17 323 *eP* P 18 07 45.5 +0.4
comp=Z,62nm,1.0s,mb5.5
J13A **Cove Ranch, Pi** 77.19 329 ⇓P P 18 07 45.3 +0.1
baz=78,SNR=14
I14A **Mackay** 77.26 330 ⇓P P 18 07 46.0 +0.5
baz=78,SNR=14
N08A **GE Springer Mi** 77.26 325 ⇑P P 18 07 46.1 +0.5
baz=78,SNR=8.4
L10A **Juniper Basin** 77.34 327 ⇓P P 18 07 46.0 0.0
baz=78
M09A **Marrel Ranch,** 77.36 326 ⇓P P 18 07 45.9 -0.2
baz=78
H15A **Lima** 77.42 331 ⇓P P 18 07 46.8 +0.4
baz=78
HLID **Hailey** 77.43 329 *eP* P 18 07 47.1 +0.6
comp=Z,35nm,1.0s,mb5.2
HLID LR LR
comp=Z,2µm,19.0s,MS5.4
HLID **Hailey** 77.43 329 ⇑P P 18 07 46.8 +0.3
baz=78,SNR=49
P06A **Stead Airport,** 77.44 323 ⇑P P 18 07 47.0 +0.3
baz=78
SCHQ **Schefferville** 77.46 2 P P 18 07 45.6 -0.7
comp=Z,19nm,1.0s,mb5.0,baz=178,slow=6.0,SNR=7.8
SCHQ LR LR 18 41 23.7
comp=Z,3µm,21.3s,MS5.5,baz=194,slow=35
SCHQ **Schefferville** 77.46 2 *eP* P 18 07 43.6 -2.7
comp=Z,56nm,1.3s,mb5.3
G16A **Moss Hill, Enn** 77.52 331 ⇑P P 18 07 47.2 +0.3
baz=78,SNR=7.0
J12A **Stokes Ranch,** 77.53 328 ⇑P P 18 07 46.9 -0.2
baz=78,SNR=26
F17A **Fitzpatrick Pl** 77.55 333 ⇓P P 18 07 46.8 -0.3
baz=78,SNR=13
I13A **Wildhorse Cree** 77.56 329 ⇓P P 18 07 47.5 +0.3
baz=78,SNR=15
K11A **Parker Ranch,** 77.63 327 ⇑P P 18 07 47.7 +0.1
baz=78,SNR=11
MCMT **McKenzie Canyo** 77.67 331 *eP* P 18 07 49.3 +1.5
comp=Z,11nm,0.9s,mb4.8
N07B **Gerlach** 77.70 324 ⇑P P 18 07 47.6 -0.5
baz=78,SNR=30
O06A **Flanigan** 77.74 324 ⇓P P 18 07 48.1 -0.2
baz=78
H14A **Leadore** 77.75 330 ⇓P P 18 07 47.8 -0.4
baz=78
BOZ **Bozeman (W)** 77.77 332 PFAKE 18 08 00.0 +12
BOZ LR LR
comp=Z,3µm,20.0s,MS5.6
E18A **Harlowton** 77.77 333 ⇑P P 18 07 48.0 -0.3
baz=78,SNR=12
G15A **Dillon** 77.77 331 ⇓P P 18 07 48.2 -0.1
baz=78,SNR=14
BEKR **Beckwourth** 77.82 323 ⇓P P 18 07 48.5 -0.3
baz=78
M08A **Happy Creek Ra** 77.87 325 ⇓P P 18 07 48.8 -0.1
baz=78,SNR=9.6
F16A **Kennard Place,** 77.87 332 ⇑P P 18 07 48.9 0.0
baz=78
L09A **Wilkinson Ranc** 77.91 326 ⇓P P 18 07 48.7 -0.5
baz=78
Q03C **Winters** 77.92 321 ⇓P P 18 07 49.0 -0.4
baz=78
DLMT **Dillon** 77.97 331 *eP* P 18 07 50.6 +1.1
comp=Z,45nm,1.1s,mb5.3
MFID **Camas Ranch** 78.00 328 ⇓P P 18 07 49.5 -0.2
baz=78,SNR=21
E17A **Martinsdale** 78.08 333 ⇑P P 18 07 50.1 0.0
baz=78,SNR=7.8
OHCM **Honcut** 78.09 322 *eP* P 18 07 51.8 +1.5
MCCM **Marconi Confer** 78.10 320 PFAKE 18 08 00.0 +10
MCCM LR LR
comp=Z,2µm,19.0s,MS5.3
H13A **Challis** 78.11 330 ⇓P P 18 07 50.2 0.0
baz=78
N06A **Buffalo Meadow** 78.15 324 ⇑P P 18 07 50.3 -0.3
baz=78,SNR=16
NSHM **Saint Helena R** 78.19 321 *eP* P 18 07 51.7 +0.9
D18A **Linhart Farms,** 78.23 334 ⇓P P 18 07 50.5 -0.3
baz=78,SNR=12
M07A **Soldier Meadow** 78.24 325 ⇓P P 18 07 50.9 -0.1
baz=78,SNR=16
G14A **Jackson** 78.27 331 ⇓P P 18 07 50.7 -0.4
baz=78
F15A **Butte** 78.30 331 ⇓P P 18 07 51.8 +0.5
baz=79,SNR=19
L08A **Fields** 78.38 326 ⇑P P 18 07 51.4 -0.4
baz=79,SNR=13
H12A **Diamond D Ranc** 78.39 329 ⇓P P 18 07 51.7 0.0
baz=79,SNR=21
K09A **Rome** 78.43 326 ⇑P P 18 07 51.8 -0.2
baz=79
I11A **Placerville** 78.44 328 ⇓P P 18 07 51.5 -0.6
baz=79
J10A **Berg Farm, Mel** 78.47 328 ⇑P P 18 07 52.0 -0.3
baz=79
E16A **East Helena** 78.48 332 ⇓P P 18 07 51.4 -0.9
baz=79,SNR=8.2
G13A **Cobalt** 78.51 330 ⇓P P 18 07 52.0 -0.4
baz=79
O04C **Chester** 78.54 323 ⇓P P 18 07 51.4 -1.3
baz=79,SNR=7.0
D17A **Six Diamond Ra** 78.56 333 ⇓P P 18 07 51.9 -0.7
baz=79,SNR=24
F14A **Wisdom** 78.66 331 ⇑P P 18 07 52.8 -0.5
baz=79,SNR=11
HRY **Holter Researc** 78.69 332 *eP* P 18 07 54.3 +0.9
comp=Z,27nm,0.9s,mb5.2
WVOR **Wild Horse Val** 78.70 326 *eP* P 18 07 54.1 +0.5
comp=Z,27nm,1.3s,mb5.0
WVOR **Wild Horse Val** 78.70 326 P P 18 07 55.4 +1.8
WVOR pmax pmax
comp=Z,27nm,1.2s,mb5.0
HOPS **Hopland** 78.77 321 PFAKE 18 08 00.0 +5.9
HOPS LR LR
comp=Z,2µm,20.0s,MS5.5
L07A **Adell** 78.78 325 ⇑P P 18 07 54.1 +0.1
baz=79,SNR=15
E15A **Deer Lodge** 78.81 332 ⇓P P 18 07 54.0 -0.1
baz=79,SNR=16
K08A **Mann Creek Ran** 78.84 326 ⇓P P 18 07 53.3 -1.0
baz=79
EGMT **Eagleton** 78.87 334 *eP* P 18 07 54.5 +0.2
comp=Z,58nm,1.1s,mb5.4
EGMT LR LR
comp=Z,2µm,19.0s,MS5.5
EGMT **Eagleton** 78.87 334 ⇑P P 18 07 53.9 -0.5
baz=79,SNR=8.7
J09A **Fry Pan Ranch,** 78.91 327 ⇑P P 18 07 54.3 -0.4
baz=79,SNR=12
C17A **Wharram Farm,** 78.97 334 ⇑P P 18 07 54.3 -0.6
baz=79,SNR=19
I10A **Payette** 78.97 328 ⇑P P 18 07 53.8 -1.2
baz=79
H11A **Donnelly** 79.05 329 ⇓P P 18 07 54.1 -1.3
baz=79
SUR **Sutherland** 79.17 121 P P 18 07 58.7 +2.1
comp=Z,412nm,0.8s,mb6.4,SNR=9.5
SUR **Sutherland** 79.17 121 P P 18 07 56.8 +0.3
comp=Z,43nm,0.8s,mb5.5,baz=240,slow=5.1,SNR=20
SUR **Sutherland** 79.17 121 *eP* P 18 07 57.1 +0.6
comp=Z,209nm,1.4s,mb5.9
MOD **Modoc** 79.21 325 *eP* P 18 07 56.1 -0.3
comp=Z,45nm,1.0s,mb5.3
MOD LR LR
comp=Z,2µm,22.0s,MS5.5
TOA0 **Torodi Ar. Sit** 79.22 71 *eP* P 18 07 55.1 -2.0
TORD **Torodi Ar. Bea** 79.22 71 P P 18 07 55.5 -1.5
comp=Z,146nm,0.8s,mb6.0,baz=254,slow=4.3,SNR=184
TORD ScS ScS 18 18 14.0 -5.9
comp=Z,1.3nm,0.8s,baz=247,slow=10,SNR=5.1
TORD LR LR 18 42 50.5
comp=Z,6µm,19.6s,MS5.9,baz=230,slow=36
D15A **Lincoln** 79.24 332 ⇑P P 18 07 56.4 0.0
baz=80,SNR=6.9
J08A **Circle Bar Ran** 79.28 327 ⇓P P 18 07 56.7 0.0
baz=80,SNR=8.2
H10A **Noah's Angus R** 79.32 328 ⇓P P 18 07 56.3 -0.6
baz=80
I09A **Lost Marbles R** 79.36 327 ⇑P P 18 07 56.5 -0.6
baz=80,SNR=9.0
CHMT **Chamberlain Mo** 79.46 332 *eP* P 18 07 58.7 +1.1
comp=Z,34nm,1.5s,mb5.0
E13A **Victor** 79.51 331 ⇑P P 18 07 57.4 -0.5
baz=80,SNR=10.0
WDC **Whiskeytown Da** 79.53 322 *eP* P 18 07 57.1 -1.1
comp=Z,41nm,1.3s,mb5.2
WDC LR LR
comp=Z,2µm,20.0s,MS5.3
WDC **Whiskeytown Da** 79.53 322 P P 18 07 58.7 +0.5
WDC pmax pmax
comp=Z,41nm,1.2s,mb5.2
G11A **Walters Elk Ra** 79.69 329 ⇑P P 18 07 58.3 -0.6
baz=80
D14A **Greenough** 79.70 332 ⇑P P 18 07 58.6 -0.3
baz=80,SNR=9.8
J07A **Hines** 79.72 326 ⇑P P 18 07 58.7 -0.4
baz=80,SNR=8.7
I08A **Drewsey** 79.72 327 ⇑P P 18 07 58.6 -0.5
baz=80,SNR=9.5
BMO **Blue Mountains** 79.78 328 *eP* P 18 07 60.0 +0.5
comp=Z,66nm,1.3s,mb5.4
BMO LR LR
comp=Z,2µm,19.0s,MS5.5
H09A **Durkee** 79.82 328 ⇑P P 18 07 58.9 -0.7
baz=80
C15A **Salmond Ranch,** 79.85 333 ⇓P P 18 07 59.6 -0.1
baz=80,SNR=23
B16A **M & M Farms, S** 79.97 334 ⇑P P 18 07 59.8 -0.6
baz=80
G10A **Bishop Farm, J** 80.01 329 ⇓P P 18 08 00.3 -0.4
baz=80,SNR=52
J06A **Christmas Vall** 80.07 326 ⇓P P 18 08 01.0 0.0
baz=80,SNR=24
K05A **Summer Lake** 80.09 325 ⇑P P 18 08 01.2 +0.1
baz=80,SNR=18
D13A **Huson** 80.13 331 ⇓P P 18 08 01.1 -0.2

baz=80,SNR=35
H08A Prairie City 80.21 327 ⇓P P 18 08 01.6 -0.1
baz=80,SNR=10
B15A Bradely Ranch, 80.25 333 ⇓P P 18 08 00.7 -1.1
baz=80,SNR=16
I07A Izee 80.32 327 ⇓P P 18 08 02.0 -0.4
baz=81,SNR=22
G09A Cove 80.32 328 ⇓P P 18 08 01.7 -0.6
baz=81,SNR=68
A16A West Butte Ran 80.35 334 ⇓P P 18 08 01.4 -1.0
baz=81,SNR=21
YBH Yreka Blue Hor 80.40 323 eP P 18 08 01.4 -1.4
comp=Z,20nm,1.0s,mb5.0
YBH Yreka Blue Hor 80.40 323 P P 18 08 03.7 +0.9
YBH pmax pmax
comp=Z,20nm,1.0s
F10A Beach Ranch, E 80.56 329 ⇓P P 18 08 03.4 -0.2
baz=81,SNR=30
I06A Prineville 80.58 326 ⇓P P 18 08 04.0 +0.2
baz=81,SNR=13
B14A Marquette Ranc 80.59 333 ⇓P P 18 08 03.1 -0.5
baz=81,SNR=12
C13A Hot Springs 80.62 332 ⇓P P 18 08 04.1 +0.2
baz=81,SNR=22
F09A S2 Ranch, Elgi 80.70 328 ⇑P P 18 08 04.1 -0.2
baz=81,SNR=20
A15A Johnson Ranch, 80.84 333 ⇑P P 18 08 03.9 -1.1
baz=81,SNR=12
E10A Myers Farm, Un 80.88 329 ⇑P P 18 08 04.5 -0.9
baz=81,SNR=36
KTRM Thompson Ridge 80.89 323 P P 18 08 07.9 +2.4
G08A Pilot Rock 80.91 328 ⇓P P 18 08 04.7 -0.8
baz=81,SNR=21
D11A Klaveano Farm, 80.94 330 ⇑P P 18 08 04.6 -1.0
baz=81,SNR=9.2
LNOR Lincton Mounta 81.00 328 eP P 18 08 04.9 -1.1
comp=Z,24nm,1.2s,mb5.0
LNOR Lincton Mounta 81.00 328 P P 18 08 05.2 -0.7
C12B Naegeli Ranch, 81.05 331 ⇓P P 18 08 06.0 -0.2
baz=81,SNR=12
TSUM Tsumeb 81.06 107 P P 18 08 07.0 0.0
comp=Z,70nm,0.8s,mb5.6,baz=227,slow=4.3,SNR=61
TSUM Tsumeb 81.06 107 eP P 18 08 07.7 +0.6
comp=Z,86nm,0.9s,mb5.7
B13A Whitefish 81.11 332 ⇓P P 18 08 05.8 -0.7
baz=81,SNR=17
A14A Double T Ranch 81.12 333 ⇓P P 18 08 05.7 -0.8
baz=81,SNR=24
HUMO Hull Mountain 81.12 324 eP P 18 08 06.9 +0.2
comp=Z,52nm,1.6s,mb5.2
HUMO LR LR
comp=Z,1μm,20.0s,MS5.3
L02A Cave Junction 81.18 323 ⇑P P 18 08 06.5 -0.5
baz=81,SNR=5.2
F08A Pendleton 81.18 328 ⇓P P 18 08 06.5 -0.4
baz=81,SNR=10
H06A Lindquist Farm 81.20 327 ⇓P P 18 08 07.4 +0.3
baz=82,SNR=18
G07A Ruggs Ranch, H 81.24 327 ⇑P P 18 08 07.2 0.0
baz=82,SNR=25
I05A Bend 81.28 326 ⇓P P 18 08 07.1 -0.5
baz=82,SNR=5.7
RAR Rarotonga 81.36 251 LR LR 18 35 52.6
comp=Z,3μm,19.4s,MS5.7,baz=290,slow=30
D10A Wagner Farm, O 81.38 330 ⇓P P 18 08 07.8 -0.1
baz=82,SNR=27
E09A Wood Farm, Sta 81.39 329 ⇓P P 18 08 06.9 -1.1
baz=82
WALA Waterton Lakes 81.39 333 eP P 18 08 07.3 -0.6
comp=Z,92nm,1.1s,mb5.6
K02A Glendale 81.52 324 ⇓P P 18 08 08.4 -0.4
baz=82
H05A Madras 81.60 326 ⇑P P 18 08 08.2 -0.9
baz=82
B12A Libby 81.67 332 ⇑P P 18 08 09.0 -0.5
baz=82,SNR=13
G06A Carlson Farm, 81.71 327 ⇓P P 18 08 09.5 -0.2
baz=82,SNR=11
E08A Dider Farm, El 81.82 328 ⇓P P 18 08 09.6 -0.7
baz=82
D09A Jones Farm, Ri 81.87 329 ⇓P P 18 08 10.1 -0.4
baz=82,SNR=23
FFC Flin Flon 81.87 342 P P 18 08 10.4 +0.1
comp=Z,229nm,1.2s,mb6.0,SNR=10
FFC Flin Flon 81.87 342 eP P 18 08 09.2 -1.2
comp=Z,74nm,1.3s,mb5.5
FFC LR LR
comp=Z,4μm,20.0s,MS5.7
FFC Flin Flon 81.87 342 P P 18 08 10.3 0.0
FFC pmax pmax
comp=Z,74nm,1.3s,mb5.5
C10A Spilker Farm, 81.96 330 ⇓P P 18 08 10.2 -0.7
baz=82
J02A Umpqua 81.97 324 ⇓P P 18 08 10.0 -1.1
baz=82
HAWA Hanford 81.97 328 eP P 18 08 10.2 -0.9
comp=Z,72nm,1.1s,mb5.5
HAWA LR LR
comp=Z,2μm,21.0s,MS5.5
B11A Sandpoint 81.99 331 ⇓P P 18 08 10.0 -1.1
baz=82,SNR=7.3
RSW Rattlesnake Hi 82.00 328 P P 18 08 12.3 +1.0
A12A Yaak River Ran 82.05 332 ⇓P P 18 08 11.2 -0.2
baz=82
G05A Wamic 82.06 326 ⇓P P 18 08 11.1 -0.5
baz=82
H04A Detroit Lake 82.12 326 ⇓P P 18 08 11.3 -0.6
baz=82
F06A Goldendale 82.15 327 ⇑P P 18 08 11.5 -0.6
baz=82,SNR=9.0
D08A Wollman Farm, 82.16 329 ⇑P P 18 08 11.5 -0.5
baz=82,SNR=11
VFP Flag Point 82.19 326 P P 18 08 13.0 +0.8
NEW Newport 82.20 331 eP P 18 08 11.9 -0.3
comp=Z,28nm,1.2s,mb5.1
NEW LR LR
comp=Z,2μm,19.0s,MS5.5
NEW Newport 82.20 331 P P 18 08 13.4 +1.2
NEW pmax pmax
comp=Z,28nm,1.2s
I03A Eugene 82.22 325 ⇑P P 18 08 11.7 -0.8
baz=82
E07A Sunnyside 82.25 328 ⇑P P 18 08 12.2 -0.3
baz=82,SNR=5.3
B10A Chitwood Farm, 82.27 331 ⇓P P 18 08 12.1 -0.5
baz=82
HOOD Mount Hood Mea 82.28 326 eP P 18 08 13.9 +1.2
comp=Z,63nm,0.9s,mb5.5
OD2 Odessa Site #2 82.30 329 P P 18 08 12.2 -0.6
C09A Chrisman Ranch 82.39 330 ⇓P P 18 08 13.0 -0.3
baz=83,SNR=20
MXC Moxie City 82.48 328 P P 18 08 15.9 +2.2
I02A Mapleton 82.53 324 ⇓P P 18 08 13.3 -0.8
baz=83
G04A Mulino 82.63 326 ⇓P P 18 08 13.9 -0.6
baz=83
COR Corvallis 82.64 325 PFAKE 18 08 20.0 +5.4
COR LR LR
comp=Z,2μm,21.0s,MS5.5
C08A Higginbotham F 82.74 329 ⇓P P 18 08 14.9 -0.2
baz=83
D07A Quincy 82.76 329 ⇑P P 18 08 15.0 -0.2
baz=83,SNR=6.5
E06A Yakima 82.79 328 ⇓P P 18 08 14.9 -0.4
baz=83,SNR=6.9
A10A Northport 82.92 331 ⇑P P 18 08 15.2 -0.8
baz=83,SNR=11
F04A Amboy 83.09 326 ⇑P P 18 08 16.1 -0.9
baz=83,SNR=7.4
G03A Yamhill 83.12 326 ⇓P P 18 08 16.6 -0.5
baz=83
C07A Waterville 83.15 329 ⇓P P 18 08 16.6 -0.6
baz=83,SNR=22
D06A Cle Elum 83.18 328 ⇓P P 18 08 16.7 -0.7
baz=83,SNR=5.5
E05A Randle 83.19 327 ⇓P P 18 08 17.0 -0.5
baz=83,SNR=10
FL2 Flat Top 2 83.24 327 P P 18 08 19.6 +1.9
B08A Colville Reser 83.28 330 ⇑P P 18 08 17.2 -0.7
baz=84,SNR=14
A09A Danville 83.38 330 ⇑P P 18 08 18.0 -0.4
baz=84
MAW Mawson 83.44 164 P P 18 08 18.4 -0.2
comp=Z,54nm,0.8s,mb5.6,baz=218,slow=5.8,SNR=53
MAW LR LR 18 45 45.6
comp=Z,7μm,18.6s,MS6.0,baz=236,slow=36
MAW Mawson 83.44 164 eP P 18 08 17.8 -0.7
comp=Z,16nm,0.9s,mb5.1
MAW Mawson 83.44 164 P P 18 08 18.3 -0.2
MAW pmax pmax
comp=Z,84nm,0.9s
FCC Fort Churchill 83.65 348 eP P 18 08 19.4 -0.1
comp=Z,175nm,1.6s,mb5.9
FCC Fort Churchill 83.65 348 P P 18 08 20.6 +1.1
FCC pmax pmax
comp=Z,170nm,1.5s,mb6.0
GSM Grass Mountain 83.65 328 P P 18 08 20.9 +1.2
A08A Turner Farm, O 83.68 330 ⇓P P 18 08 20.2 +0.3
baz=84,SNR=27
B07A Winthrop 83.72 329 ⇓P P 18 08 19.8 -0.3
baz=84,SNR=14
D05A Enumclaw 83.74 328 ⇑P P 18 08 19.6 -0.6
baz=84,SNR=5.7
MDT Midelt 83.77 51 P P 18 08 22.0 +1.2
comp=Z,36nm,0.9s,mb5.5,baz=248,slow=4.6,SNR=27
BMW Boistfort Moun 83.87 326 eP P 18 08 22.0 +1.0
C05A Tolt Reservoir 83.94 328 ⇑P P 18 08 20.8 -0.5
baz=84
E03A Lebam 84.09 326 ⇑P P 18 08 21.8 -0.3
baz=84
BOSA Boshof 84.11 118 P P 18 08 22.7 -0.1
comp=Z,74nm,0.9s,mb5.8,baz=259,slow=4.2,SNR=48
BOSA LR LR 18 43 29.0
comp=Z,6μm,18.0s,MS6.0,baz=248,slow=34
BOSA Boshof 84.11 118 eP P 18 08 20.7 -2.1
comp=Z,83nm,0.9s,mb5.9
BOSA Boshof 84.11 118 eP P 18 08 20.7 -2.1
BOSA pmax pmax
comp=Z,83nm,0.9s,mb5.9
A07A Ashnola River, 84.26 330 ⇓P P 18 08 22.4 -0.5
baz=84
RPW Rockport 84.38 329 P P 18 08 23.8 +0.3
EGRO El Granado 84.38 45 P P 18 08 24.9 +1.1
comp=Z,420nm,1.5s,mb6.3
EDM Edmonton 84.39 336 eP P 18 08 19.6 -3.8
EDM Edmonton 84.39 336 P P 18 08 21.7 -1.7
JCW Jim Creek 84.40 328 eP P 18 08 23.9 +0.3
B06A Marblemount 84.41 329 ⇑P P 18 08 23.0 -0.6
baz=85
B05A Bryant 84.53 328 ⇓P P 18 08 23.8 -0.5
baz=85
C04A Brinnon 84.59 327 ⇑P P 18 08 24.4 -0.1
baz=85
EVO Evora 84.60 44 eP P 18 08 25.0 +0.2
comp=Z,196nm,1.1s,mb5.8
EVO eMLR MLR
comp=Z,6μm,20.0s,MS5.7
NLWA Neilton Lookou 84.82 327 PFAKE
NLWA LR LR 18 08 40.0 +14
comp=Z,3μm,20.0s,MS5.6
NLWA Neilton Lookou 84.82 327 ⇑P P 18 08 25.8 +0.1
baz=85
A05A Maple Falls 85.03 329 ⇓P P 18 08 26.8 0.0
baz=85
EMIN Mina Concepcio 85.04 46 P P 18 08 27.6 +0.5
comp=Z,360nm,1.2s,mb6.4
B04A Port Angeles 85.08 327 ⇓P P 18 08 27.2 +0.2
baz=85
ESPR Espera 85.09 47 P P 18 08 28.1 +0.7
comp=Z,328nm,0.9s,mb6.5
EJIF Jimena Fronter 85.12 47 P P 18 08 27.7 +0.1
comp=Z,124nm,0.9s,mb6.0
EJIF Jimena Fronter 85.12 47 P P 18 08 27.7 +0.2
EJIF pmax pmax
comp=Z,124nm,0.9s,mb6.0
A04A Legoe Bay, Lum 85.14 328 ⇑P P 18 08 28.3 +1.0
baz=85
PGC Sidney 85.45 328 eP P 18 08 29.1 +0.2
comp=Z,53nm,0.9s,mb5.7
LBTB Lobatse 85.79 115 P P 18 08 31.3 0.0
comp=Z,18nm,0.8s,mb5.3,baz=254,slow=6.2,SNR=18
MTE Manteigas 85.96 43 eP P 18 08 31.6 0.0
comp=Z,76nm,1.0s,mb5.9
MTE LR LR
comp=Z,6μm,19.0s,MS6.0
ELOJ Sierra Loja 86.39 47 P P 18 08 33.7 -0.1
comp=Z,78nm,0.9s,mb5.9
ELOJ Sierra Loja 86.39 47 P P 18 08 33.7 -0.1
ELOJ pmax pmax
comp=Z,78nm,0.9s,mb5.9
ELOB Lobios 86.47 42 P P 18 08 34.2 +0.1
comp=Z,571nm,2.4s,mb6.4
EALB Alboran 86.52 49 P P 18 08 35.3 +0.8
comp=Z,409nm,1.9s,mb6.3
ELUQ Luque 86.53 47 P P 18 08 36.2 +1.7
comp=Z,185nm,1.1s,mb6.2
ELUQ Luque 86.53 47 P P 18 08 36.2 +1.7
ELUQ pmax pmax
comp=Z,185nm,1.1s,mb6.2
ERON Agron 86.55 47 P P 18 08 36.2 +1.6
comp=Z,29nm,1.0s,mb5.5
EGUA Guajares 86.62 48 P P 18 08 36.2 +1.2
comp=Z,83nm,1.2s,mb5.8
EGUA Guajares 86.62 48 P P 18 08 36.2 +1.2
EGUA pmax pmax
comp=Z,83nm,1.2s,mb5.8
EADA Adamuz 86.65 46 P P 18 08 36.2 +1.2
comp=Z,132nm,1.1s,mb6.1
STS Santiago 86.76 41 P P 18 08 34.8 -0.7
TAM Tamanrasset 86.76 64 eP P 18 08 36.5 +0.5
comp=Z,50nm,1.3s,mb5.6
TAM Tamanrasset 86.76 64 P P 18 08 36.9 +0.9
ECOG Cogollos-Vega 86.85 47 P P 18 08 36.7 +0.6
comp=Z,32nm,1.1s,mb5.5
ECOG Cogollos-Vega 86.85 47 P P 18 08 36.7 +0.6
ECOG pmax pmax
comp=Z,32nm,1.1s,mb5.5
EBER Berja 87.11 48 P P 18 08 35.5 -1.8
comp=Z,184nm,1.8s,mb6.0
EBAN Banos Encina 87.17 46 P P 18 08 35.9 -1.7
comp=Z,206nm,1.6s,mb6.1
EBAN Banos Encina 87.17 46 P P 18 08 35.9 -1.7
EBAN pmax pmax
comp=Z,206nm,1.6s,mb6.1
ECAL Calabor 87.33 42 P P 18 08 40.1 +1.8
comp=Z,336nm,2.4s,mb6.2
ERUA La Rua 87.33 42 P P 18 08 38.1 -0.2
comp=Z,43nm,0.8s,mb5.7
ERUA La Rua 87.33 42 P P 18 08 38.1 -0.2
ERUA pmax pmax
comp=Z,43nm,0.8s,mb5.7
ODZI Dziouia 87.45 50 P P 18 08 41.0 +2.0
EQES Quesada 87.46 47 P P 18 08 37.8 -1.2
comp=Z,109nm,1.5s,mb5.9
PAB San Pablo 87.53 45 eP P 18 08 40.2 +0.8
comp=Z,62nm,1.4s,mb5.6
PAB LR LR
comp=Z,3μm,19.0s,MS5.7
PAB San Pablo 87.53 45 eP P 18 08 40.2 +0.9
PAB pmax pmax
comp=Z,62nm,1.4s,mb5.7
PAB MLR MLR
comp=Z,3μm,19.0s,MS5.7
ENIJ Nijar 87.62 48 P P 18 08 40.6 +0.8
comp=Z,20nm,0.7s,mb5.5
ENIJ Nijar 87.62 48 P P 18 08 40.6 +0.8
ENIJ pmax pmax
comp=Z,20nm,0.7s,mb5.5
EHUE Huescar 87.79 47 P P 18 08 39.5 -1.1
comp=Z,18nm,1.1s,mb5.2
EHUE Huescar 87.79 47 P P 18 08 39.5 -1.1
EHUE pmax pmax
comp=Z,18nm,1.1s,mb5.2
DRV Dumont d'Urvil 87.82 192 P P 18 08 36.0 -4.3
DRV S S 18 19 12.0 -10
DRV R 18 38 00.0
ESDC Sonseca Array 87.86 45 P P 18 08 41.3 +0.4
comp=Z,6.0nm,0.8s,mb4.8,baz=252,slow=4.5,SNR=15
ESDC LR LR 18 46 47.0
comp=Z,2μm,19.6s,MS5.5,baz=235,slow=35
ESDC Sonseca Array 87.86 45 P P 18 08 40.0 -0.9
comp=Z,4.7nm,0.8s,mb4.8
ESLA Sonseca Array 87.86 45 eP P 18 08 39.7 -1.1
comp=Z,73nm,2.0s,mb5.6
EPON Pontenova 87.86 41 P P 18 08 40.7 -0.1
comp=Z,353nm,2.4s,mb6.2
USTO Oran 88.15 50 P P 18 08 47.0 +4.6
ODJA Bouhanifia 88.23 50 P P 18 08 46.0 +3.2
GUD Guadarrama 88.25 44 P P 18 08 42.7 0.0
comp=Z,16nm,1.1s,mb5.2
GUD Guadarrama 88.25 44 P P 18 08 42.7 0.0
GUD pmax pmax
comp=Z,16nm,1.1s,mb5.2
EVIA Vianos 88.28 47 P P 18 08 42.8 -0.1
comp=Z,22nm,1.0s,mb5.3
EVIA Vianos 88.28 47 P P 18 08 42.8 -0.1
EVIA pmax pmax
comp=Z,22nm,1.0s,mb5.3
OJBR Djebel Berber 88.71 50 P P 18 08 48.0 +3.0
ETOB Tobarra 88.92 47 P P 18 08 46.3 +0.3
comp=Z,254nm,2.4s,mb6.1
OJGS Djebel Guires 88.96 51 P P 18 08 50.0 +3.8
EARI Arriondas 89.02 42 P P 18 08 47.4 +1.1
comp=Z,696nm,3.3s
OKGL Djebel Kef Gue 89.14 50 P P 18 08 49.0 +2.0
ETRT Tiaret 89.30 51 P P 18 08 49.6 +1.8
EANR 'Ain N'Sour 89.42 50 P P 18 08 51.4 +3.0
ETOR Torete 89.70 45 P P 18 08 50.2 +0.7
comp=Z,45nm,0.9s,mb5.8
ETOR Torete 89.70 45 P P 18 08 50.2 +0.7
ETOR pmax pmax
comp=Z,45nm,0.9s,mb5.8
ECHA Ech Chlef 89.71 50 P P 18 08 52.6 +2.9
ECHE Chera 89.79 46 P P 18 08 52.8 +2.8
comp=Z,20nm,0.9s,mb5.5
ECHE Chera 89.79 46 P P 18 08 52.8 +2.8
ECHE pmax pmax
comp=Z,20nm,0.9s,mb5.5
EBEN Beniarda 89.85 47 P P 18 08 52.6 +2.3
comp=Z,194nm,2.5s,mb6.0
EBNR Beni Rached 89.89 50 P P 18 08 54.1 +3.6
ECRI Cripan 90.33 43 P P 18 08 54.6 +2.2
comp=Z,6.3nm,0.6s,mb5.1
ECRI Cripan 90.33 43 P P 18 08 54.6 +2.2
ECRI pmax pmax
comp=Z,6.0nm,0.6s,mb5.1
SFJD Kangerlussuaq 90.84 8 *i* P P 18 08 57.8 +3.6
SFJD *i* 18 19 46.0
SFJD *i* 18 20 58.2
SFJD
comp=Z,2μm,19.0s
EMHD Djebel Mahouad 90.86 51 P P 18 08 58.0 +2.9
CASY Casey 91.12 180 eP P 18 08 54.9 -0.9
comp=Z,177nm,1.5s,mb6.2
CASY LR LR
comp=Z,3μm,20.0s,MS5.8
ERTA Horta de San J 91.33 46 P P 18 08 59.6 +2.5
comp=Z,306nm,2.1s,mb6.3
SJPF Ste Jean 91.40 43 eP P 18 08 57.7 +0.3
comp=Z,56nm,1.1s,mb5.5
SJPF Ste Jean 91.40 43 eP P 18 08 57.7 +0.3
comp=Z,28nm,1.1s,mb5.5
SJPF Ste Jean 91.40 43 eP P 18 08 57.7 +0.3
SJPF pmax pmax
comp=Z,28nm,1.1s,mb5.5
ETSF Etsaut 91.71 44 eP P 18 08 59.2 +0.3
comp=Z,27nm,1.0s,mb5.2
ETSF Etsaut 91.71 44 eP P 18 08 59.2 +0.3
comp=Z,13nm,1.0s,mb5.2
ETSF Etsaut 91.71 44 eP P 18 08 59.2 +0.3
ETSF pmax pmax
comp=Z,13nm,1.0s,mb5.2
LSZ Lusaka 91.92 107 P P 18 09 01.6 +1.1
comp=Z,4.2nm,0.7s,mb4.9,baz=236,slow=3.4,SNR=12
LSZ Lusaka 91.92 107 eP P 18 09 01.7 +1.2
comp=Z,17nm,1.0s,mb5.3
LSZ LR LR
comp=Z,3μm,21.0s,MS5.7
LSZ Lusaka 91.92 107 eP P 18 09 01.7 +1.2
LSZ pmax pmax
comp=Z,17nm,1.0s,mb5.3
LSZ MLR MLR
comp=Z,3μm,21.0s,MS5.7
YKA Yellowknife Ar 92.00 341 P P 18 08 58.3 -1.3
comp=Z,16nm,0.8s,mb5.4,baz=136,slow=4.4,SNR=37
YKA LR LR 18 53 49.6
comp=Z,1μm,19.2s,MS5.4,baz=130,slow=38
EBIE Bielsa 92.06 44 P P 18 09 02.6 +2.2
comp=Z,164nm,2.3s,mb6.0
URZ Urewera 92.18 227 LR LR 18 41 03.4
comp=Z,6μm,19.7s,MS6.0,baz=105,slow=29
EPF Esparros 92.35 44 eP P 18 09 02.0 +0.2
comp=Z,41nm,1.2s,mb5.3
EPF Esparros 92.35 44 eP P 18 09 02.0 +0.2
comp=Z,20nm,1.2s,mb5.3
EPF Esparros 92.35 44 eP P 18 09 02.0 +0.2
EPF pmax pmax
comp=Z,20nm,1.2s,mb5.3
QUIF Quistinic 92.70 38 eP P 18 09 02.6 -0.7
comp=Z,26nm,0.9s,mb5.3
QUIF Quistinic 92.70 38 eP P 18 09 02.6 -0.7
comp=Z,13nm,0.9s,mb5.4
QUIF Quistinic 92.70 38 eP P 18 09 02.6 -0.7
QUIF pmax pmax
comp=Z,13nm,0.9s,mb5.4
ROSF Rostrenen 92.86 38 eP P 18 09 03.4 -0.6
comp=Z,113nm,1.3s,mb5.8
ROSF Rostrenen 92.86 38 eP P 18 09 03.4 -0.6
comp=Z,56nm,1.3s,mb5.8
ROSF Rostrenen 92.86 38 eP P 18 09 03.4 -0.6
ROSF pmax pmax
comp=Z,57nm,1.3s,mb5.8
RPZ Rata Peaks 92.99 220 LR LR 18 43 34.1
comp=Z,3μm,19.3s,MS5.7,baz=109,slow=31
RAO Raoul Island 93.05 237 LR LR 18 40 56.6
comp=Z,3μm,22.0s,MS5.7,baz=130,slow=29
RAO Raoul Island 93.05 237 PFAKE 18 09 20.0 +14
RAO LR LR
comp=Z,3μm,22.0s,MS5.7
DFRA Djebel Bou Aff 93.12 52 P P 18 09 07.0 +1.5
POHA Pohakuloa 93.12 290 PFAKE 18 09 20.0 +14
POHA LR LR
comp=Z,7μm,20.0s,MS6.1
SGMF Saint Gilles 93.22 38 eP P 18 09 04.8 -0.9
CASM Ain Smara 93.44 52 P P 18 09 09.0 +2.0
LFF La Frestale 93.53 42 eP P 18 09 07.0 -0.2
comp=Z,94nm,0.9s,mb5.9
LFF La Frestale 93.53 42 eP P 18 09 07.0 -0.2
comp=Z,47nm,0.9s,mb5.9
LFF La Frestale 93.53 42 eP P 18 09 07.0 -0.2
LFF pmax pmax
comp=Z,47nm,0.9s,mb5.9
CKFL Kef-Lekhel 93.67 52 P P 18 09 09.0 +0.9
MTLF Montolieu 93.71 44 eP P 18 09 07.6 -0.4
comp=Z,118nm,1.6s,mb5.8
MTLF Montolieu 93.71 44 eP P 18 09 07.6 -0.4
comp=Z,59nm,1.6s,mb5.8
MTLF Montolieu 93.71 44 eP P 18 09 07.6 -0.4
MTLF pmax pmax
comp=Z,59nm,1.6s,mb5.8
MFF Saint Martin d 93.81 41 eP P 18 09 08.0 -0.4
comp=Z,99nm,1.2s,mb5.8
MFF Saint Martin d 93.81 41 eP P 18 09 08.0 -0.4
comp=Z,49nm,1.2s,mb5.8
MFF Saint Martin d 93.81 41 eP P 18 09 08.0 -0.4
MFF pmax pmax
comp=Z,49nm,1.2s,mb5.8
CAEH 'Ain El Ouahch 93.93 52 P P 18 09 10.0 +0.8
RJF Les Rejaudoux 94.19 42 eP P 18 09 09.7 -0.5
comp=Z,80nm,1.2s,mb5.7
RJF eMLR MLR
comp=Z,7μm,17.8s,MS5.9
RJF Les Rejaudoux 94.19 42 eP P 18 09 09.7 -0.5
comp=Z,40nm,1.2s,mb5.7
RJF LR LR
comp=Z,7μm,17.8s,MS6.2
RJF Les Rejaudoux 94.19 42 eP P 18 09 09.7 -0.5
RJF pmax pmax
comp=Z,40nm,1.2s,mb5.7
RJF MLR MLR
comp=Z,7μm,17.8s,MS6.2
GRR Gorron 94.27 39 eP P 18 09 09.5 -1.0
comp=Z,105nm,1.4s,mb5.8
GRR Gorron 94.27 39 eP P 18 09 09.5 -1.0
comp=Z,52nm,1.4s,mb5.8
GRR Gorron 94.27 39 eP P 18 09 09.5 -1.0
GRR pmax pmax
comp=Z,52nm,1.4s,mb5.8
CMAH Djebel Manchou 94.28 52 P P 18 09 10.0 -0.8
CAF Calviac 94.36 43 eP P 18 09 10.8 -0.2
comp=Z,46nm,1.2s,mb5.5
CAF Calviac 94.36 43 eP P 18 09 10.8 -0.2
comp=Z,23nm,1.2s,mb5.5
CAF Calviac 94.36 43 eP P 18 09 10.8 -0.2
CAF pmax pmax
comp=Z,23nm,1.2s,mb5.5
FLN La Foliniere 94.67 39 eP P 18 09 11.5 -0.8
comp=Z,76nm,1.3s,mb5.7
FLN eMLR MLR
comp=Z,3μm,20.8s,MS5.5
FLN La Foliniere 94.67 39 eP P 18 09 11.5 -0.8

comp=Z,38nm,1.3s,mb5.7
FLN LR LR
comp=Z,3µm,20.8s,MS5.8
FLN La Foliniere 94.67 39 *e*P **P 18 09 11.5 -0.8**
FLN pmax pmax
comp=Z,38nm,1.3s,mb5.7
FLN MLR MLR
comp=Z,3µm,20.8s,MS5.8
AFI Afiamalu 94.74 253 LR LR 18 42 54.2
comp=Z,3µm,19.3s,MS5.8,baz=292,slow=30
AFI Afiamalu 94.74 253 PFAKE 18 09 20.0 +6.5
AFI LR LR
comp=Z,4µm,19.0s,MS5.9
DLBC Dease Lake 94.74 333 *e*P **P 18 09 11.4 -1.0**
LDF La Druitiere 94.80 39 *e*P **P 18 09 12.0 -0.9**
comp=Z,104nm,1.3s,mb5.8
LDF La Druitiere 94.80 39 *e*P **P 18 09 12.0 -0.9**
comp=Z,52nm,1.3s,mb5.8
LDF La Druitiere 94.80 39 *e*P **P 18 09 12.0 -0.9**
LDF pmax pmax
comp=Z,52nm,1.3s,mb5.8
TCF Toulx Ste Croi 95.08 42 *e*P **P 18 09 13.7 -0.6**
comp=Z,15nm,0.9s,mb5.1
TCF Toulx Ste Croi 95.08 42 *e*P **P 18 09 13.7 -0.6**
comp=Z,7.5nm,0.9s,mb5.1
TCF Toulx Ste Croi 95.08 42 *e*P **P 18 09 13.7 -0.6**
TCF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
BORG Borgarnes 95.20 19 PFAKE 18 09 20.0 +5.6
BORG LR LR
comp=Z,4µm,21.0s,MS5.8
KEST Kesra 95.32 54 P **P 18 09 15.8 +0.1**
comp=Z,6.2nm,0.9s,mb5.0,baz=197,slow=2.1,SNR=13
KEST LR LR 18 56 43.2
comp=Z,4µm,18.9s,MS5.9,baz=204,slow=38
BGF Bois d'Agland 95.60 42 *e*P **P 18 09 16.2 -0.4**
comp=Z,56nm,1.0s,mb5.7
BGF Bois d'Agland 95.60 42 *e*P **P 18 09 16.2 -0.4**
comp=Z,26nm,1.0s,mb5.7
BGF Bois d'Agland 95.60 42 *e*P **P 18 09 16.2 -0.4**
BGF pmax pmax
comp=Z,28nm,1.0s,mb5.7
HYF Humbligny 95.80 41 *e*P **P 18 09 17.0 -0.5**
KIP Kipapa 95.91 291 PFAKE 18 09 30.0 +11
KIP LR LR
comp=Z,6µm,19.0s,MS6.1
VIVF Saint-Julien-l 95.97 44 *e*P **P 18 09 18.6 +0.2**
comp=Z,63nm,1.4s,mb5.5
VIVF Saint-Julien-l 95.97 44 *e*P **P 18 09 18.6 +0.2**
comp=Z,31nm,1.4s,mb5.5
VIVF Saint-Julien-l 95.97 44 *e*P **P 18 09 18.6 +0.2**
VIVF pmax pmax
comp=Z,31nm,1.4s,mb5.5
AVF Avril sur Loir 96.02 42 *e*P **P 18 09 17.8 -0.7**
comp=Z,28nm,1.1s,mb5.3
AVF Avril sur Loir 96.02 42 *e*P **P 18 09 17.8 -0.7**
comp=Z,14nm,1.1s,mb5.3
AVF Avril sur Loir 96.02 42 *e*P **P 18 09 17.8 -0.7**
AVF pmax pmax
comp=Z,14nm,1.1s,mb5.3
SSF Saint Saulge 96.23 41 *e*P **P 18 09 18.5 -1.0**
comp=Z,31nm,1.1s,mb5.4
SSF Saint Saulge 96.23 41 *e*P **P 18 09 18.5 -1.0**
comp=Z,16nm,1.1s,mb5.3
SSF Saint Saulge 96.23 41 *e*P **P 18 09 18.5 -1.0**
SSF pmax pmax
comp=Z,16nm,1.1s,mb5.4
SMF Signal de Mont 96.25 42 *e*P **P 18 09 19.2 -0.4**
comp=Z,46nm,1.0s,mb5.6
SMF Signal de Mont 96.25 42 *e*P **P 18 09 19.2 -0.4**
comp=Z,23nm,1.0s,mb5.6
SMF Signal de Mont 96.25 42 *e*P **P 18 09 19.2 -0.4**
SMF pmax pmax
comp=Z,23nm,1.0s,mb5.6
ESK Eskdalemuir 96.54 32 P **P 18 09 18.9 -1.8**
ESK LR LR
comp=Z,3µm,19.0s,MS5.8
LOR Lormes 96.54 41 *e*P **P 18 09 19.9 -1.0**
comp=Z,31nm,1.1s,mb5.4
LOR *e*MLR MLR
comp=Z,5µm,22.8s,MS5.6
LOR Lormes 96.54 41 *e*P **P 18 09 19.9 -1.0**
comp=Z,16nm,1.1s,mb5.3
LOR LR LR
comp=Z,5µm,22.8s,MS5.9
LOR Lormes 96.54 41 *e*P **P 18 09 19.9 -1.0**
LOR pmax pmax
comp=Z,16nm,1.1s,mb5.4
LOR MLR MLR
comp=Z,5µm,22.8s,MS5.9
EKA Eskdalemuir Ar 96.57 32 P **P 18 09 19.9 -0.9**
comp=Z,6.8nm,0.8s,mb5.1,baz=251,slow=6.0,SNR=9.6
ORIF Oris-en-Rattie 96.77 44 *e*P **P 18 09 22.4 +0.4**
comp=Z,34nm,0.9s,mb5.5
ORIF *e*MLR MLR
comp=Z,8µm,23.0s,MS5.8
ORIF Oris-en-Rattie 96.77 44 *e*P **P 18 09 22.4 +0.4**
comp=Z,17nm,0.9s,mb5.4
ORIF Oris-en-Rattie 96.77 44 *e*P **P 18 09 22.4 +0.4**
ORIF pmax pmax
comp=Z,17nm,0.9s,mb5.5
MBDF Montbardon 97.26 45 *e*P **P 18 09 24.5 +0.3**
comp=Z,42nm,1.1s,mb5.5
MBDF Montbardon 97.26 45 *e*P **P 18 09 24.5 +0.3**
comp=Z,21nm,1.1s,mb5.5
MBDF Montbardon 97.26 45 *e*P **P 18 09 24.5 +0.3**
MBDF pmax pmax
comp=Z,21nm,1.1s,mb5.5
BNI Bardonecchia 97.34 44 PFAKE 18 09 30.0 +5.4
BNI LR LR
comp=Z,8µm,19.0s,MS6.2
LPL La Plagne 97.57 44 *e*P **P 18 09 26.3 +0.7**
comp=Z,20nm,1.1s,mb5.3
LPL La Plagne 97.57 44 *e*P **P 18 09 26.3 +0.7**
comp=Z,10nm,1.1s,mb5.3
LPL La Plagne 97.57 44 *e*P **P 18 09 26.3 +0.7**
LPL pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
LPG La Plagne 97.58 44 *e*P **P 18 09 26.4 +0.8**
comp=Z,50nm,1.3s,mb5.6
LPG La Plagne 97.58 44 *e*P **P 18 09 26.4 +0.8**
comp=Z,25nm,1.3s,mb5.6
LPG La Plagne 97.58 44 *e*P **P 18 09 26.4 +0.8**
LPG pmax pmax
comp=Z,25nm,1.3s,mb5.6
CABF La Chapelle 97.63 43 *e*P **P 18 09 25.6 -0.2**
comp=Z,25nm,1.0s,mb5.4
CABF La Chapelle 97.63 43 *e*P **P 18 09 25.6 -0.2**
comp=Z,13nm,1.0s,mb5.4
CABF La Chapelle 97.63 43 *e*P **P 18 09 25.6 -0.2**
CABF pmax pmax
comp=Z,13nm,1.0s,mb5.4
SUMG Summit 97.65 9 *e*P **P 18 09 25.9 +0.5**
comp=Z,11nm,1.2s,mb5.3
MEZF Maizieres J'vi 97.81 41 *e*P **P 18 09 26.1 -0.5**
PGF Pioggiola 97.84 47 *e*P **P 18 09 27.0 +0.1**
comp=Z,238nm,1.9s,mb6.1
PGF Pioggiola 97.84 47 *e*P **P 18 09 27.0 +0.1**
comp=Z,119nm,1.9s,mb6.1
PGF Pioggiola 97.84 47 *e*P **P 18 09 27.0 +0.1**
PGF pmax pmax
comp=Z,119nm,1.9s,mb6.1
BAIF Baives 97.99 39 *e*P **P 18 09 26.6 -0.8**
DOU Dourbes 98.23 39 P **P 18 09 28.6 +0.2**
comp=Z,20nm,2.0s,mb5.3
GIVF Givet 98.36 39 *e*P **P 18 09 28.5 -0.6**
comp=Z,109nm,1.4s,mb5.9
GIVF Givet 98.36 39 *e*P **P 18 09 28.5 -0.6**
comp=Z,55nm,1.4s,mb5.9
GIVF Givet 98.36 39 *e*P **P 18 09 28.5 -0.6**
GIVF pmax pmax
comp=Z,55nm,1.4s,mb5.9
HAU Haudompre 98.38 41 *e*P **P 18 09 28.4 -0.8**
comp=Z,32nm,1.1s,mb5.5
HAU *e*MLR MLR
comp=Z,4µm,20.0s,MS5.6
HAU Haudompre 98.38 41 *e*P **P 18 09 28.4 -0.8**
comp=Z,16nm,1.1s,mb5.5
HAU LR LR
comp=Z,4µm,20.0s,MS5.9
HAU Haudompre 98.38 41 *e*P **P 18 09 28.4 -0.8**
HAU pmax pmax
comp=Z,16nm,1.1s,mb5.5
HAU MLR MLR
comp=Z,4µm,20.0s,MS5.9
HINF Hinteralfeld 98.61 42 *e*P **P 18 09 29.3 -0.9**
BCLA Clavier 98.78 39 P **P 18 09 30.5 -0.4**

WLF Walferdange 98.95 40 P **P 18 09 31.7 0.0**
comp=Z,26nm,1.7s,mb5.5
WLF Walferdange 98.95 40 *e*P **P 18 09 31.8 0.0**
comp=Z,32nm,1.3s,mb5.7
WLF Walferdange 98.95 40 *e*P **P 18 09 31.8 +0.1**
WLF pmax pmax
comp=Z,33nm,1.3s,mb5.7
ECH Echery 98.96 41 *e*P **P 18 09 32.4 +0.6**
comp=Z,21nm,1.4s,mb5.5
CDF Champ du Feu 99.11 41 *e*P **P 18 09 31.9 -0.5**
comp=Z,22nm,1.1s,mb5.3
CDF Champ du Feu 99.11 41 *e*P **P 18 09 31.9 -0.5**
comp=Z,11nm,1.1s,mb5.3
CDF Champ du Feu 99.11 41 *e*P **P 18 09 31.9 -0.5**
CDF pmax pmax
comp=Z,11nm,1.1s,mb5.3
TUE Stuetta 99.62 44 *e*P Pdif 18 09 35.1 +0.3
comp=Z,4.7nm,0.9s
BFO Black Forest 99.72 42 PFAKE 18 09 40.0 +4.7
BFO LR LR
comp=Z,2µm,20.0s,MS5.7
DAVOS Davos 100.05 43 P Pdif 18 09 37.4 +0.6
DAVOX Davos/Dischmat 100.08 43 P Pdif 18 09 37.4 +0.5
comp=Z,5.4nm,0.8s,baz=344,slow=4.8,SNR=5.5
MBAR Mbarara 100.13 95 PFAKE 18 09 50.0 +13
MBAR LR LR
comp=Z,668nm,21.0s,MS5.1
DAVA Damuels 100.28 43⇓ *e*Pdiff Pdif 18 09 39.6 +1.8
comp=Z,12nm,1.7s
FETA Feichten 100.71 43⇓ *i*Pdiff Pdif 18 09 41.8 +2.1
comp=Z,11nm,1.4s
AQU L'Aquila 100.78 49 PFAKE 18 09 50.0 +10
AQU LR LR
comp=Z,3µm,20.0s,MS5.8
RETA Reutte 100.91 43⇑ *i*Pdiff Pdif 18 09 42.6 +2.1
MOTA Moosalm 101.07 43⇓ *i*Pdiff Pdif 18 09 43.0 +1.7
comp=Z,11nm,1.2s
SQTA Sankt Quirin 101.09 43⇑ *i*Pdiff Pdif 18 09 43.0 +1.6
comp=Z,26nm,1.1s
CEL Celeste 101.12 53 PFAKE 18 09 50.0 +8.5
CEL LR LR
comp=Z,9µm,20.0s,MS6.3
WTTA Wattenberg 101.38 43⇓ *i*Pdiff Pdif 18 09 42.5 -0.2
comp=Z,22nm,1.0s
CUC Castrocucco 101.66 52 PFAKE 18 09 50.0 +6.1
CUC LR LR
comp=Z,2µm,19.0s,MS5.7
ABTA Abfaltersbach 101.75 44⇑ *i*Pdiff Pdif 18 09 45.1 +0.7
comp=Z,11nm,1.9s
SKDS Skadanscina 102.31 46 *e*Pdiff Pdif 18 09 47.2 +0.3
SKDS *e*PP PP 18 13 56.6 -2.9
SKDS *e*SKSac SKSac 18 20 26.2 +0.2
SKDS *e*Sdiff Sdif 18 21 39.9 +10
SKDS *e* 18 23 09.2
SKDS *e*SS SS 18 28 38.3 +1.6
MYKA Terra Mystica 102.44 45⇑ *e*Pdiff Pdif 18 09 48.3 +0.9
comp=Z,7.6nm,1.0s
MYKA ⇑ *i*PP PP 18 13 57.0 -3.5
comp=Z,11nm,1.1s
EGAK Eagle 102.61 336 PFAKE 18 10 00.0 +12
EGAK LR LR
comp=Z,3µm,19.0s,MS5.8
CEY Cerknica 102.65 46 *e*Pdiff Pdif 18 09 49.6 +1.3
CEY *e*PP PP 18 13 59.1 -3.0
CEY *e*SS SS 18 28 43.2 +1.9
LJU Ljubljana 102.82 45 *e*PP PP 18 14 00.8 -2.5
LJU *e*SKSac SKSac 18 20 30.4 +2.1
LJU *e* 18 20 39.5
LJU *e*Sdiff Sdif 18 21 46.2 +12
LJU *e* 18 23 14.8
LJU *e*SS SS 18 28 46.7 +3.1
NKC Novy Kostel 102.93 41 *e*Pdif Pdif 18 09 47.4 -2.2
NKC *e*PP PP 18 13 58.4 -5.6
NKC *e*SKS 18 20 33.2
NKC *e*Sdif Sdif 18 21 42.6 +7.3
NKC *e*PS PS 18 23 15.0 +2.9
NKC *e*SS SS 18 28 42.4 -2.5
NKC Novy Kostel 102.93 41 *e*P Pdif 18 09 47.4 -2.2
NKC *e* 18 13 58.4
NKC *e*PS PS 18 23 15.0 +2.9
NKC *e*SS SS 18 28 42.4 -2.5
NKC MLR MLR
comp=Z,4µm,17.7s,MS6.0
NKC Novy Kostel 102.93 41 *e*PDif Pdif 18 09 47.4 -2.2
NKC *e*PP PP 18 13 58.4 -5.6
NKC *e*SKS 18 20 33.2
NKC *e*x x 18 21 42.6
NKC *e*PS PS 18 23 15.0 +2.9
NKC *e*SS SS 18 28 42.4 -2.5
NKC AMS AMS 18 56 40.0
comp=Z,4µm,17.7s
OBKA Obir 102.99 45⇓ *i*Pdiff Pdif 18 09 50.3 +0.5
comp=Z,7.9nm,1.1s
GERES GERESS Array B 103.23 42 Pdiff Pdif 18 09 51.2 +0.3
comp=Z,2.0nm,0.9s,baz=242,slow=2.9,SNR=11
GERES PP PP 18 14 00.7 -5.6
comp=Z,0.4nm,0.7s,baz=246,slow=9.8,SNR=3.5
GERES PKiKP PKiKP 18 14 10.7 +0.6
comp=Z,1.1nm,0.8s,baz=222,slow=1.3,SNR=4.3
GERES GERESS Array B 103.23 42 P Pdif 18 09 51.2 +0.3
GERES 18 14 00.7
KHC Kasperske Hory 103.25 42 *e*P Pdif 18 09 52.5 +1.5
KHC *e* 18 14 00.9
KHC *e* 18 20 29.9
KHC *e*PS PS 18 23 10.5 -4.9
KHC *e*SS SS 18 28 46.3 -3.1
KHC MLR MLR
comp=Z,2µm,18.3s,MS5.7
KHC Kasperske Hory 103.25 42 *e*PDif Pdif 18 09 52.5 +1.5
KHC *e*PP PP 18 14 00.9 -5.6
KHC *e*SKS 18 20 29.9
KHC *e*x x 18 21 46.2
KHC *e*SP SP 18 23 10.5 -2.8
KHC *e*SS SS 18 28 46.3 -3.1
KHC AMS AMS 18 54 20.0
comp=Z,2µm,18.3s
MOA Molln 103.25 44⇓ *e*Pdiff Pdif 18 09 52.5 +1.5
comp=Z,3.8nm,0.8s
MUD Monsted U'grnd 103.29 34 *e*P Pdif 18 09 50.7 -0.5
MUD *i* 18 14 02.6
MUD *e* 18 21 44.0
MUD *i* 18 23 20.9
MUD *e* 18 24 06.7
MUD *i* 18 28 52.1
MUD Monsted U'grnd 103.29 34 *e*P Pdif 18 09 50.7 -0.5
MUD *i* 18 14 02.6
MUD *e* 18 24 06.7
MUD *i* 18 28 52.1
MUD Monsted U'grnd 103.29 34 *i*P Pdif 18 09 50.7 -0.5
MUD *i* 18 14 02.6
MUD *e* 18 21 44.0
MUD *i* 18 23 20.9
MUD *e* 18 24 06.7
MUD *i* 18 28 52.1
MUD
comp=Z,4µm,20.0s
SOKA Soboth 103.36 45⇓ *i*PP PP 18 14 04.3 -3.1
comp=Z,7.0nm,1.3s
CLL Collm 103.63 40 *e*Pdif Pdif 18 09 53.0 +0.3
CLL *e*PP PP 18 14 06.0 -3.2
CLL *e*SKS 18 20 31.0
CLL *e*Sdif Sdif 18 21 45.0 +3.9
CLL LR LR
comp=Z,5µm,22.7s,MS6.0
CLL Collm 103.63 40 *e*P Pdif 18 09 53.0 +0.3
CLL *e* 18 14 06.0
CLL *e* 18 20 31.0
CLL MLR MLR
comp=Z,5µm,22.7s,MS6.0
CLL Collm 103.63 40 *e*Pdif Pdif 18 09 53.0 +0.3
CLL *e*x x 18 10 06.0
CLL *e*PP PP 18 14 06.0 -3.2
comp=Z,700nm,18.7s
CLL *e*x x 18 14 27.0
CLL *e*SKSac SKSac 18 20 31.0 -0.8
CLL *e*Sdif Sdif 18 21 45.0 +3.9
CLL *e*PS PS 18 23 22.0 +2.6
CLL *e*PPS 18 24 20.0
CLL *e*SS SS 18 28 55.0 +0.5
CLL *e*SSS 18 33 00.0
ARSA Arzberg 103.86 44⇑ *e*Pdiff Pdif 18 09 54.1 +0.4
comp=Z,4.1nm,1.1s
BRG Berggiesshubel 104.04 41 Pdif Pdif 18 09 56.0 +1.5

comp=Z,7.2nm,1.4s
BRG *e* 18 09 57.4
BRG PP PP 18 14 10.0 -2.3
BRG *e* 18 14 28.7
BRG SKS 18 20 37.0
BRG Sdif Sdif 18 21 51.0 +6.4
BRG PS PS 18 23 27.0 +3.2
BRG *i* 18 29 08.0
BRG *i* 18 33 04.0
BRG LR LR
comp=Z,1µm,18.4s,MS5.5
BRG Berggiesshubel 104.04 41 P Pdif 18 09 56.0 +1.5
BRG 18 14 10.0
BRG PS PS 18 23 27.0 +3.2
BRG *i* 18 29 08.0
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG MLR MLR
comp=N,1µm,19.0s,MS5.5
BRG MLR MLR
comp=E,728nm,17.0s,MS5.5
BRG MLR MLR
comp=Z,1µm,18.4s,MS5.5
BRG Berggiesshubel 104.04 41 PDIF Pdif 18 09 56.0 +1.5
BRG *e* 18 09 57.4
comp=Z,12nm,1.4s
BRG PP PP 18 14 10.0 -2.3
BRG *e* 18 14 28.7
comp=Z,5.2nm,1.1s
BRG SKS 18 20 37.0
BRG SDIF Sdif 18 21 51.0 +6.4
BRG PS PS 18 23 27.0 +3.2
BRG *i* 18 29 08.0
BRG *i* 18 33 04.0
BRG
comp=N,2µm,19.0s
BRG
comp=E,1µm,17.0s
BRG
comp=Z,2µm,18.4s
PRU Pruhonice 104.12 42 *e*P Pdif 18 09 56.2 +1.3
PRU *e* 18 14 07.1
PRU *e* 18 20 33.6
PRU *e*PS PS 18 23 26.4 +1.8
PRU *e*SS SS 18 28 57.2 -4.1
PRU MLR MLR
comp=Z,3µm,18.0s,MS5.9
PRU Pruhonice 104.12 42 *e*PDif Pdif 18 09 56.2 +1.3
PRU *e*PP PP 18 14 07.1 -5.8
PRU *e*SKS 18 20 33.6
PRU *e*x x 18 21 50.0
PRU *e*PS PS 18 23 26.4 +1.8
PRU *e*SS SS 18 28 57.2 -4.1
PRU AMS AMS 18 58 30.0
comp=Z,3µm,18.0s
CONA Conrad Observa 104.29 44⇑ *e*Pdiff Pdif 18 09 56.6 +1.0
comp=Z,4.4nm,1.3s
PVCC Panska Ves 104.31 41 *e*P Pdif 18 09 53.9 -1.8
PVCC *e* 18 14 11.0
PVCC *e*PS PS 18 23 28.3 +1.7
PVCC *e*SS SS 18 29 04.6 +0.7
PVCC MLR MLR
comp=Z,4µm,17.9s,MS6.0
PVCC Panska Ves 104.31 41 *e*PDif Pdif 18 09 53.9 -1.8
PVCC *e*PP PP 18 14 11.0 -3.3
PVCC *e*SKS 18 20 38.3
PVCC *e*PS PS 18 23 28.3 +1.7
PVCC *e*SS SS 18 29 04.6 +0.7
PVCC AMS AMS 18 57 00.0
comp=Z,4µm,17.9s
TREC Trest 104.48 42 *e*PDIF Pdif 18 09 54.6 -1.9
TREC *e*PP PP 18 14 25.1 +9.4
TREC *e*SKS 18 20 39.0
TREC *e*PS PS 18 23 30.8 +2.4
TREC AMS AMS 19 00 40.0
comp=Z,3µm,18.0s
PMR Palmer 104.62 331 PFAKE 18 10 10.0 +13
PMR LR LR
comp=Z,2µm,19.0s,MS5.6
KONO Kongsberg 104.63 31 PFAKE 18 10 10.0 +13
KONO LR LR
comp=Z,5µm,20.0s,MS6.0
FUNA Funafuti 105.03 254 PFAKE 18 14 20.0 +5.4
FUNA LR LR
comp=Z,8µm,21.0s,MS6.2
COLA College 105.26 334 PFAKE 18 14 20.0 +6.6
COLA LR LR
comp=Z,2µm,20.0s,MS5.6
DPC Dobruska-Polom 105.32 42 *e*P Pdif 18 09 57.3 -2.9
DPC *e* 18 20 40.6
DPC *e*PS PS 18 23 37.1 0.0
DPC *e*SS SS 18 29 14.9 -2.9
DPC MLR MLR
comp=Z,3µm,19.4s,MS5.8
DPC Dobruska-Polom 105.32 42 *e*PDif Pdif 18 09 57.3 -2.9
DPC *e*x x 18 14 06.5
DPC *e*SKS SKSac 18 20 46.4 +1.0
DPC *e*SDif Sdif 18 21 58.4 +3.2
DPC *e*PS PS 18 23 37.1 0.0
DPC *e*SS SS 18 29 14.9 -2.9
DPC AMS AMS 18 55 10.0
comp=Z,3µm,19.4s
KSP Ksiaz 105.45 41 *e*PDif Pdif 18 10 03.0 +2.2
KSP *e*PKPdf PKiKP 18 14 12.0 -2.2
KSP *e*SP SP 18 23 35.0 -1.3
KSP *e*SS SS 18 29 10.0 -9.5
KSP LR LR
comp=Z,7µm,17.8s,MS6.3
NOA NORSAR Array B 105.85 30 Pdiff Pdif 18 10 03.6 +1.1
comp=Z,0.4nm,0.6s,baz=246,slow=7.7,SNR=3.3
NOA PP PP 18 14 23.0 -2.5
comp=Z,1.2nm,0.9s,baz=244,slow=6.8,SNR=3.3
BSD Bornholm Skovb 105.91 37 *e*P Pdif 18 09 57.7 -5.1
BSD *i* 18 14 04.3
BSD *e* 18 24 08.5
BSD Bornholm Skovb 105.91 37 *i*P Pdif 18 09 57.7 -5.1
BSD *i* 18 14 04.3
BSD *e* 18 24 08.5
BSD
comp=Z,6µm,19.0s
OKC Ostrava-Krasne 106.30 42 *e*Pdif Pdif 18 10 02.7 -1.9
OKC *e*PP PP 18 14 23.9 -5.2
OKC *e*SKS SKSac 18 20 46.4 +2.4
OKC *e*SDif Sdif 18 22 12.1 +8.7
OKC *e*PS PS 18 23 48.8 +1.5
OKC *e*SS SS 18 29 27.6 -3.5
OKC Ostrava-Krasne 106.30 42 *e*P Pdif 18 10 02.7 -1.9
OKC *e* 18 14 23.9
OKC *e* 18 20 46.4
OKC *e*PS PS 18 23 48.8 +1.5
OKC *e*SS SS 18 29 27.6 -3.5
OKC MLR MLR
comp=Z,2µm,16.8s,MS5.7
OKC Ostrava-Krasne 106.30 42 *e*PDIF Pdif 18 10 02.7 -1.9
OKC *e*PP PP 18 14 23.9 -5.2
OKC *e*SKS SKSac 18 20 46.4 +2.4
OKC *e*x x 18 22 12.1
OKC *e*PS PS 18 23 48.8 +1.5
OKC *e*SS SS 18 29 27.6 -3.5
OKC AMS AMS 19 04 20.0
comp=Z,2µm,16.8s
ABPO Ambohimpanom 106.32 119 PFAKE 18 14 30.0 +13
ABPO LR LR
comp=Z,6µm,20.0s,MS6.1
OJC Ojcow 107.43 42 *e*PKiKP PKiKP 18 14 21.8 +4.0
OJC *e*PP PP 18 14 36.5 -0.9
OJC *e*SKSac SKSac 18 20 49.1 +0.2
OJC *e*PS PS 18 24 01.9 +3.0
OJC L 19 00 05.6
comp=Z,3.0nm,18.0s
KWP Kalwaria 109.11 43 PFAKE 18 14 30.0 +9.0
KWP LR LR
comp=Z,3µm,22.0s,MS5.8
KBS Kingsbay 110.85 12 PFAKE 18 14 30.0 +6.5
KBS LR LR
comp=Z,2µm,21.0s,MS5.7
ISP Isparta 112.07 57 PFAKE 18 14 40.0 +13
ISP LR LR
comp=Z,4µm,22.0s,MS6.0
KIS Kishinev 112.59 47 *e*PKIKP PKiKP 18 14 25.0 -2.7
KIS *e*PS PS 18 24 50.0 +0.8
KIS MLR MLR
comp=N,2µm,20.0s,MS5.7

KIS MLR MLR
comp=E,800nm,20.0s,MS5.7
KIS MLR MLR
comp=Z,2μm,20.0s,MS5.8
KIS Kishinev 112.59 47 *e*PP PP 18 15 15.0 +0.2
KIS *e*SKKS SKSdf 18 21 44.0 +4.6
KIS *e*S SKKSac 18 22 05.0 -11
KIS Kishinev 112.59 47 *e*PS PS 18 24 50.0 +0.8
KIS LRM 19 02 45.0
comp=Z,2μm,20.0s
KIEV Kiev 113.42 43 PFAKE 18 14 40.0 +11
KIEV LR LR
comp=Z,3μm,19.0s,MS5.9
AKASG Malin Array Be 113.43 43 PKiKP PKiKP 18 14 27.7 -1.5
comp=Z,2.2nm,0.6s,baz=258,slow=2.9,SNR=6.6
AKASG PP PP 18 15 16.4 -4.3
comp=Z,1.8nm,0.7s,baz=254,slow=7.1,SNR=4.1
KEV Kevo 113.86 22 PFAKE 18 14 40.0 +11
KEV LR LR
comp=Z,3μm,21.0s,MS5.9
ANTO Ankara 114.22 55 PFAKE 18 14 40.0 +9.0
ANTO LR LR
comp=Z,3μm,22.0s,MS5.9
MIDW Midway 114.70 292 PFAKE 18 14 40.0 +7.7
MIDW LR LR
comp=Z,6μm,20.0s,MS6.2
BRTR Keskin Array B 114.83 55 PKP PKiKP 18 14 31.5 -0.7
comp=Z,3.8nm,0.8s,baz=192,slow=3.5,SNR=13
LVZ Lovozero 116.69 24 PFAKE 18 14 40.0 +5.1
LVZ LR LR
comp=Z,1μm,20.0s,MS5.4
STKA Stephens Creek 117.48 211 PKP PKPdf 18 14 37.7 0.0
comp=Z,2.9nm,1.0s,baz=317,slow=7.8,SNR=3.4
OBN Obninsk 118.17 39 *e*PKP PKPdf 18 14 37.1 -1.0
OBN LR LR
comp=Z,2μm,20.0s,MS5.8
OBN Obninsk 118.17 39 *i* PKIKP PKPdf 18 14 38.0 -0.1
OBN *e* 18 14 51.7
OBN *e* 18 15 54.9
OBN 18 21 25.0
OBN *e*PS PS 18 25 38.6 -1.1
OBN pmax pmax
comp=Z,19nm,1.1s
OBN MLR MLR
comp=Z,2μm,19.0s,MS5.8
ANN Anapa 118.28 50 *i* PKIKP PKPdf 18 14 38.7 0.0
ANN *e* 18 21 27.6
ANN pmax pmax
comp=Z,61nm,1.1s
MOS Moscow 118.76 38 *e*PKIKP PKPdf 18 14 38.7 -0.6
MOS *e* 18 21 23.2
MOS MLR MLR
comp=Z,3μm,20.0s,MS6.0
KLMR Klimovskoe 119.46 32 *e*PKIKP PKPdf 18 14 39.6 -0.8
VSR Storozhevoye 119.73 43 *e*PKIKP PKPdf 18 14 40.7 -0.6
VSR *e* 18 15 59.3
VSR *e*PS PS 18 25 51.8 -2.1
VSR pmax pmax
comp=Z,8.0nm,1.1s
VSR pmax pmax
comp=N,6.0nm,1.5s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,130nm,12.1s
VSR pmax pmax
comp=N,200nm,14.1s
VSR pmax pmax
comp=E,210nm,12.1s
VSR MLR MLR
comp=N,790nm,22.0s,MS5.6
VSR MLR MLR
comp=E,1μm,22.0s,MS5.6
VSR MLR MLR
comp=Z,980nm,22.0s,MS5.4
VORD Divnogorie 119.81 43 *e*PKIKP PKPdf 18 14 40.9 -0.5
VORD *e* 18 15 59.9
VORD *e*PS PS 18 25 55.4 +0.7
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,9.0nm,0.8s
VORD pmax pmax
comp=E,4.0nm,0.4s
VORD pmax pmax
comp=Z,640nm,14.7s
VORD pmax pmax
comp=N,90nm,9.2s
VORD pmax pmax
comp=E,370nm,15.1s
VORD MLR MLR
comp=Z,2μm,17.0s,MS5.7
VORD MLR MLR
comp=N,1μm,22.0s,MS5.6
VORD MLR MLR
comp=E,1μm,21.0s,MS5.6
SOC Sochi 119.82 52 *i* PKIKP PKPdf 18 14 43.2 +1.5
SOC *e* 18 16 10.2
SOC *e*PS PS 18 25 51.6 -3.5
SOC pmax pmax
comp=Z,24nm,1.1s
MSEY Mahe Island 120.59 110 PFAKE 18 14 50.0 +5.9
MSEY LR LR
comp=Z,5μm,20.0s,MS6.1
HNR Honiara 121.09 243 PFAKE 18 14 50.0 +4.9
HNR LR LR
comp=Z,3μm,22.0s,MS5.8
VRHR Novokhopersk 121.28 43 *e*PKIKP PKPdf 18 14 43.4 -0.8
VRHR *e*PS PS 18 26 05.0 -2.8
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,30nm,1.7s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR MLR MLR
comp=Z,2μm,18.0s,MS5.8
VRHR MLR MLR
comp=N,3μm,27.0s
VRHR MLR MLR
comp=E,2μm,20.0s
KIV Kislovodsk 121.99 52 *e*PKPdf PKPdf 18 14 44.7 -1.2
KIV LR LR
comp=Z,2μm,19.0s,MS5.7
KIV Kislovodsk 121.99 52 *e*P Pdif 18 11 12.6 -1.7
KIV *i* 18 14 45.8
KIV *e* 18 16 17.5
KIV *e* 18 21 40.5
KIV *e*PS PS 18 26 15.3 +0.8
KIV *e*SS SS 18 32 50.5 -7.9
KIV pmax pmax
comp=Z,22nm,1.0s
ONI Oni 122.50 53 P PP 18 16 20.7 -3.2
BILL Bilibino 123.25 338 *i* PKIKP PKPdf 18 14 48.0 +0.5
BILL *e* 18 14 54.7
BILL *e* 18 16 26.4
BILL *e*PPP 18 19 06.4
BILL *e*PS PS 18 26 22.9 -1.7
BILL *e*SS SS 18 33 25.2 +13
BILL pmax pmax
comp=Z,26nm,1.4s
GNI Garni 123.36 56 *e*PKPdf PKPdf 18 14 49.2 +0.6
GNI LR LR
comp=Z,1μm,20.0s,MS5.6
MTA Mtatsminda 123.47 54 P PP 18 16 27.5 -2.9
NWAO Narrogin (SRO) 124.02 188 PKP PKPdf 18 14 49.0 -1.2
comp=Z,12nm,0.9s,baz=248,slow=5.7,SNR=3.8
NWAO Narrogin (SRO) 124.02 188 PKIKP PKPdf 18 14 49.0 -1.2
NWAO MLR MLR
comp=Z,2μm,19.0s
CTAO Charters Tower 124.22 223 PFAKE 18 15 00.0 +9.1
CTAO LR LR
comp=Z,3μm,22.0s,MS5.8
MAK Makhachkala 125.49 53 *e*PKIKP PKPdf 18 14 52.1 -0.5
MAK *i* 18 16 41.9
MAK *e*PPP 18 19 20.4
MAK *e* 18 21 52.7
MAK *i* SP SP 18 26 38.2 -4.9
MAK *i* PS PS 18 26 46.0 +0.6
MAK pmax pmax
comp=Z,67nm,1.4s
MAK MLR MLR
comp=Z,2μm,22.0s,MS5.8
ASAR Alice Springs 128.00 209 PKP PKPdf 18 14 56.1 -2.0
comp=Z,15nm,0.8s,baz=134,slow=1.5,SNR=48
ASAR SKKPbc 18 28 03.8
comp=Z,1.4nm,1.0s,baz=345,slow=4.2,SNR=4.8
SOKR Solikamsk 128.12 31 ⇓*i* PKIKP PKPdf 18 14 59.5 +2.4
SOKR PS PS 18 27 01.1 -6.6
SOKR SS SS 18 34 09.9 -4.3
SOKR pmax pmax
comp=Z,30nm,1.4s
TIXI Tiksi 129.96 352 *e*PKPdf PKPdf 18 14 59.3 -1.0
TIXI Tiksi 129.96 352 *i* PKIKP PKPdf 18 14 59.8 -0.5
TIXI pmax pmax
comp=Z,20nm,1.0s
TIXI MLR MLR
comp=Z,2μm,20.0s,MS5.8
ARU Arti 130.12 34 *e*PKPdf PKPdf 18 15 01.0 0.0
ARU LR LR
comp=Z,3μm,22.0s,MS6.0
ARU Arti 130.12 34 *i* PKIKP PKPdf 18 15 01.3 +0.3
ARU 18 17 09.9
ARU MLR MLR
comp=Z,5μm,24.0s,MS6.1
SEY Seymchan 130.76 336 *e*PKIKP PKPdf 18 15 02.8 +0.8
WB2 Warramunga Arr 131.00 212 *e*P PKPdf 18 15 02.7 -1.2
WB2 *e*S SKPbc 18 18 26.5 -1.5
WB2 Warramunga Arr 131.00 212 *e*PKPdf PKPdf 18 15 03.5 -0.4
WRA Warramunga Arr 131.01 212 PKP PKPdf 18 15 03.1 -0.8
comp=Z,14nm,1.0s,baz=151,slow=1.7,SNR=9.2
WRA SKPbc SKPbc 18 18 25.1 -2.9
comp=Z,4.8nm,1.2s,baz=144,slow=3.9,SNR=5.8
WRA SKKPbc 18 27 41.2
comp=Z,1.5nm,0.9s,baz=341,slow=5.8,SNR=4.6
WRAB Tennant Creek 131.01 212 *e*PKPdf PKPdf 18 15 02.3 -1.6
WRAB *e*SKP 18 18 18.8
WRAB Tennant Creek 131.01 212 P PKPdf 18 15 04.3 +0.4
SVE Sverdlovsk 131.04 33 *i* PKIKP PKPdf 18 15 03.3 +0.6
SVE *e* 18 17 16.3
SVE *e*PPP 18 20 06.2
SVE *e*PS PS 18 27 28.1 -5.1
SVE *e*SSS 18 39 44.7
SVE pmax pmax
comp=Z,33nm,1.7s
SVE MLR MLR
comp=Z,3μm,20.0s,MS6.1
AKTO Aktyubinsk 131.65 42 PKIKP PKPdf 18 15 04.7 +0.6
PETK Petropavlovsk- 132.76 322 PKP PKPdf 18 15 06.1 0.0
comp=Z,13nm,0.9s,baz=85,slow=4.9,SNR=8.5
PETK Petropavlovsk- 132.76 322 PKP PKPdf 18 15 06.1 0.0
DGAR Diego Garcia 132.89 125 PFAKE 18 15 20.0 +12
DGAR LR LR
comp=Z,984nm,22.0s,MS5.5
AB31 Akbulak array 133.17 43 PKIKP PKPdf 18 15 07.2 +0.2
AB31 pmax pmax
comp=Z,34nm,1.1s
MBWA Marble Bar 135.10 194 PFAKE 18 15 20.0 +8.4
MBWA LR LR
comp=Z,3μm,21.0s,MS6.0
BRVK Borovoye 137.70 35 *e*PKPdf PKPdf 18 15 14.4 -0.9
BRVK LR LR
comp=Z,5μm,20.0s,MS6.2
BVA0 Borovoye Array 137.77 35 *i* PKIKP PKPdf 18 15 15.1 -0.3
BVA0 pmax pmax
comp=Z,7.0nm,1.2s
KAKA Kakadu 138.09 215 *e*P Px 18 15 00.4
comp=Z,9.1nm,0.6s
VOSK Vostochnaya 138.23 35 PKIKP PKPdf 18 15 16.3 0.0
VOSK pmax pmax
comp=Z,15nm,1.0s
YAK Yakutsk 138.50 346 *e*PKPdf PKPdf 18 15 16.3 -0.2
YAK Yakutsk 138.50 346 *i* PKIKP PKPdf 18 15 16.3 -0.2
YAK pmax pmax
comp=Z,35nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK MLR MLR
comp=Z,1μm,24.0s,MS5.6
YAK MLR MLR
comp=N,2μm,21.0s,MS5.8
YAK MLR MLR
comp=E,601nm,21.0s,MS5.8
KK31 Karatay Array 142.03 48 *i* PKIKP PKPdf 18 15 18.7 -4.8
KK31 pmax pmax
comp=Z,5.0nm,0.9s
NVS Novosibirsk 142.54 25 *e*PKIKP PKPdf 18 15 20.5 -3.5
NVS *e* 18 18 35.6
NVS pmax pmax
comp=N,12nm,1.6s
NVS pmax pmax
comp=Z,88nm,1.6s
NVS pmax pmax
comp=E,26nm,1.4s
KBL Kabul 142.90 63 *e*PKPpre 18 15 19.9
COCO West Island 143.01 159 PFAKE 18 15 40.0 +14
COCO LR LR
comp=Z,3μm,20.0s,MS6.0
KURK Kurchatov 143.29 33 *e*PKPdf PKPdf 18 15 21.6 -3.9
KURK LR LR
comp=Z,2μm,20.0s,MS5.9
KURK Kurchatov 143.29 33 *i* PKIKP PKPdf 18 15 22.7 -2.8
BHJ Bhuj 143.43 81 *ex* x 18 15 19.2
ZAA0 Zalesovo Array 143.83 25 *e*PKPdf PKPdf 18 15 22.5 -3.8
ZALV Zalesovo Beam 143.83 25 PKP PKPdf 18 15 23.2 -3.2
comp=Z,33nm,0.9s,baz=307,slow=2.9,SNR=25
CLNS Chul'man 144.25 346 *e*PKIKP PKPdf 18 15 23.1 -3.9
CLNS pmax pmax
comp=Z,47nm,1.2s
CLNS pmax pmax
comp=N,11nm,1.2s
CLNS pmax pmax
comp=E,23nm,0.9s
BATI Baumata 144.31 204 PKP PKPdf 18 15 27.4 -1.0
comp=E,38nm,0.9s,baz=265,slow=0.9,SNR=5.6
BATI Baumata 144.31 204 P PKiKP 18 15 31.5 -0.5
EKS2 Erkin-Say 144.43 48 *e*PKPdf PKPdf 18 15 26.2 -1.6
EKS2 LR LR
comp=Z,3μm,22.0s,MS6.0
EKS2 Erkin-Say 144.43 48 P PKPdf 18 15 27.1 -0.7
SNR=87
AML Almayashu 144.57 49 *e*PKPdf PKPdf 18 15 27.5 -0.5
AML Almayashu 144.57 49 P PKPdf 18 15 27.9 -0.1
SNR=57
USP Ospenovka 144.68 46 P PKPdf 18 15 27.4 -0.8
SNR=39
KRAR Krasnoyarsk 144.71 16 *i* PKIKP PKPdf 18 15 25.9 -1.9
AAK Ala-Archa 144.93 47 P PKPdf 18 15 28.1 -0.5
SNR=234
FRU Bishkek 144.94 47 *i* PKIKP PKPdf 18 15 27.0 -1.6
FRU *e* 18 18 52.0
FRU pmax pmax
comp=Z,480nm,2.0s
FRU pmax pmax
comp=Z,3μm,6.0s
FRU MLR MLR
comp=Z,2μm,20.0s,MS5.9
BOD Bodaibo 144.94 356 *e*PKIKP PKPdf 18 15 25.0 -3.2
BOD pmax pmax
comp=Z,225nm,0.9s
CHMS Chumysh 144.96 47 P PKPdf 18 15 28.6 -0.1
SNR=50
UCH Uchtor 145.10 48 *e*PKPdf PKPdf 18 15 30.2 +1.3
UCH Uchtor 145.10 48 P PKPbc 18 15 30.8 +2.4
SNR=23
GUMO Guam 145.22 261 PFAKE 18 15 40.0 +10
GUMO LR LR
comp=Z,3μm,19.0s,MS6.0
KBK Karagaybulak 145.23 47 P PKPbc 18 15 30.0 +1.1
SNR=210
ASAJ Asahikawa 145.55 316 PKPbc PKPbc 18 15 29.6 -0.2
comp=Z,81nm,0.9s,baz=300,slow=1.8,SNR=12
TKM2 Tokmak 2 145.56 46 *e*PKPdf PKPdf 18 15 29.5 -0.2
TKM2 Tokmak 2 145.56 46 P PKPdf 18 15 30.5 +0.8
SNR=79
GOA Goa 145.59 96 ⇑*i*P PKPdf 18 15 29.4 -1.1
MNGI Mangalore 145.65 101 *e*P PKPdf 18 15 29.7 -0.9
KZA Kyzart 145.66 48 P PKPdf 18 15 31.8 +1.9
SNR=30
TRD Trivandrum 145.69 109 *e*P PKPdf 18 15 30.5 -0.3
ERM Erimo 146.07 312 *e*PKPdf PKPdf 18 15 31.9 +1.3
ERM LR LR
comp=Z,3μm,22.0s,MS6.0
ULHL Ulahol 146.27 47 P PKiKP 18 15 35.2 0.0
SNR=46
AAA Alma-Ata 146.30 45 *e*PKP2 PKPdf 18 15 29.7 -1.3
AAA pmax pmax
comp=Z,5μm,10.2s
AAA MLR MLR
comp=Z,2μm,28.0s,MS5.7
POO Poona 146.44 91 *e*P PKPdf 18 15 30.4 -1.5
KAD Karad 146.44 93 *e*P PKPdf 18 15 32.6 +0.6
NIL Nilore 146.49 63 PFAKE 18 15 40.0 +8.4
NIL LR LR
comp=Z,139nm,21.0s,MS4.7
KOD Kodaikanal 146.92 107 *e*P PKPdf 18 15 33.8 +0.9
KSH Kashi 147.12 52 PKP PKPbc 18 15 34.4 -0.2
KSH *e*PKP2 PKPab 18 15 35.8 -0.4
KSH *e*APKP 18 15 45.1
KSH *e*XPKP 18 15 48.9
KSH *e*PP PP 18 18 56.4 -3.3
KSH *e*PKS 18 19 08.6
KSH *e*SKS SKSdf 18 22 38.6 -2.3
KSH *e*SKKS SKKSac 18 25 41.8 -9.4
KSH PP PP
comp=Z,5μm,5.4s
KSH LR LR
comp=N,6μm,18.0s,MS6.6
KSH LR LR
comp=E,6μm,13.3s,MS6.6
KSH LR LR
comp=Z,6μm,14.5s,MS6.5
HABR Khabarovsk 147.37 328 *e*PKIKP PKPdf 18 15 31.5 -1.1
HABR *i* 18 15 36.9
HABR *e* 18 15 42.6
HABR *e* 18 19 02.8
HABR *e* 18 22 37.6
HABR *e*SS SS 18 37 59.2 -3.1
MK31 Makanchi Array 147.62 36 *e*PKPdf PKPdf 18 15 32.3 -0.8
MK31 *e*PKPbc PKPbc 18 15 35.0 -0.7
MK31 Makanchi Array 147.62 36 *i* PKP2 PKPdf 18 15 32.9 -0.1
MK31 pmax pmax
comp=Z,175nm,1.2s
MKAR Makanchi Array 147.62 36 PKPbc PKPdf 18 15 33.2 +0.2
comp=Z,66nm,0.8s,baz=317,slow=1.4,SNR=73
AAI Ambon 147.89 217 P PKPbc 18 15 37.0 -0.5
AJM Ajmer 148.20 76 *e*P PKPdf 18 15 33.7 -0.9
AJM *i* PP PP 18 19 07.1 +0.4
KLR Kul'dur 148.37 332 *e*PKP2 PKPab 18 15 45.5 +4.7
THN Thein Dam 148.72 65 *e*P PKPdf 18 15 34.9 -0.4
LATR Latur 148.91 92 *e*P PKPdf 18 15 35.0 -1.0
DLH Dalhousie 148.91 65 *ex* PKPbc 18 15 38.0 -1.6
KRKI Karangkates 149.02 186 P PKPab 18 15 43.0 -1.4
SJI Sawahan 149.49 184 P PKPbc 18 15 41.6 0.0
AKL Akola 149.80 88 *ex* PKPbc 18 15 42.0 -0.2
KMMI Kalianget 149.93 189 P PKPab 18 15 48.9 +0.8
BJII Banjamegara 149.97 180 P PKPab 18 15 46.1 -2.2
SMLA Simla 150.14 67 *i* P PKPdf 18 15 36.1 -1.6
SMLA *i* x x 18 19 17.2
KDI Kendari 150.40 207 P PKPbc 18 15 43.9 0.0
IRK Irkutsk 150.41 6 *e*PKIKP PKPdf 18 15 37.9 +0.5
IRK pmax pmax
comp=Z,158nm,1.5s
LEM Lembang 150.42 176 P PKPbc 18 15 44.1 +0.2
NDI New Delhi 150.43 72 *e*P PKPdf 18 15 37.0 -1.2
HYB Hyderabad 150.49 95 *e*P PKPdf 18 15 38.5 0.0
HYB *e* 18 15 44.0
HYB Hyderabad 150.49 95 *i* PKP PKPdf 18 15 38.5 0.0
HYB *e* 18 15 44.0
HYB *e*PKPAB PKPab 18 15 51.5 +1.0
HYB *e* 18 15 55.0
KAPI Kappang 150.52 201 P PKPdf 18 15 44.3 +5.6
SNR=9.5
KAPI Kappang 150.52 201 PKPbc PKPbc 18 15 42.7 -1.4
comp=Z,55nm,0.8s,baz=203,slow=2.8,SNR=19
KAPI Kappang 150.52 201 PKPbc PKPbc 18 15 42.7 -1.4
KAPI LR LR
comp=Z,3μm,20.0s,MS6.0
KAPI Kappang 150.52 201 P PKiKP 18 15 44.4 -0.5
MOY Mondy 150.52 11 *e*PKIKP PKPdf 18 15 38.6 +1.0
MOY pmax pmax
comp=Z,16nm,1.6s
BHPL Bhopal 150.53 83 *e*P PKPdf 18 15 37.4 -1.1
DBJI Dramaga 150.62 174 P PKiKP 18 15 44.3 -0.8
CIT Chita 150.74 355 *e*PKIKP PKPdf 18 15 37.1 -0.8
CBJI Citeko 150.77 175 P PKiKP 18 15 44.3 -1.1
LBMI Labuha 150.78 219 P PKiKP 18 15 46.1 +0.7
JCJI Jatiwangi 150.79 178 P PKiKP 18 15 45.6 +0.2
TLY Talaya 150.90 7 ⇑P PKPdf 18 15 40.7 +2.6
SNR=5.2
TLY Talaya 150.90 7 *e*PKP PKiKP 18 15 41.0 -3.4
TLY *e*PKPbc PKPbc 18 15 45.4 +1.6
TLY Talaya 150.90 7 *e*PKIKP PKPdf 18 15 41.6 +3.5
TLY *e* 18 15 48.0
TLY *e* 18 19 15.6
TLY pmax pmax
comp=Z,53nm,1.0s
MJAR Matsushiro Arr 151.70 305 PKPbc PKPbc 18 15 45.4 -0.8
comp=Z,30nm,0.9s,baz=120,slow=0.7,SNR=34
MAJO Matsushiro 151.71 305 *e*PKPbc PKPbc 18 15 44.9 -1.3
MAJO LR LR
comp=Z,2μm,21.0s,MS6.0
MAT Matsushiro 151.71 305 PKP PKPdf 18 15 35.7 -4.2
NGP Nagpur 151.75 88 *e*P PKPdf 18 15 36.8 -3.6
NGP *ex* x 18 29 28.5
KLI Kotabumi 152.06 170 P PKiKP 18 15 48.9 +0.9
ZAK Zakamensk 152.12 9 *e*PKIKP PKPdf 18 15 41.0 +1.0
ZAK *e* 18 15 47.0
ZAK *e* 18 15 57.3
ZAK pmax pmax
comp=Z,82nm,1.1s
HIA Hailar 152.45 345 *e*PKPdf PKPdf 18 15 40.8 +0.2
HIA *e*PKPbc PKPbc 18 15 46.5 -0.9
HIA LR LR
comp=Z,2μm,21.0s,MS6.0
WMQ Urumqi 152.45 36 PKP PKPdf 18 15 41.0 +0.2
WMQ PP PP 18 19 33.0 +3.1
WMQ SKS SKSdf 18 22 43.0 -4.7
WMQ PP PP
comp=Z,564nm,10.0s
WMQ LR LR
comp=N,2μm,24.0s,MS6.1
WMQ LR LR
comp=E,3μm,24.0s,MS6.1
WMQ LR LR
comp=Z,3μm,24.0s,MS6.0
MDJ Mudanjiang 152.76 328 PKP PKPdf 18 15 40.4 -0.8
MDJ PKS 18 19 15.0
MDJ PP PP 18 19 31.9 +0.3
MDJ SKS SKSdf 18 22 46.5 -1.5
MDJ PP PP
comp=Z,411nm,15.4s
MDJ LR LR
comp=N,412nm,20.3s,MS5.5
MDJ LR LR
comp=E,666nm,16.8s,MS5.5
MDJ LR LR
comp=Z,1μm,17.5s,MS5.8
MDJ Mudanjiang 152.76 328 PFAKE 18 15 50.0 +8.8
MDJ LR LR
comp=Z,2μm,20.0s,MS5.9
KSI Kapahiang 152.78 165 P PKiKP 18 15 49.6 +0.1
PTH Pithoragarh 152.96 70 *ex* PKiKP 18 15 50.0 +0.6
PTH *ex* x 18 17 02.0
LGTI Lohaghat 153.00 70 *e*P PKPdf 18 15 41.5 -0.5
LGTI *ex* x 18 20 25.5
BBKI Banjar Baru 153.30 192 P PKPdf 18 15 54.8 +12
PDSI Padang 154.77 158 P PKPdf 18 15 53.2 +8.2
VIS Vishakhapatnam 154.95 97 *e*P PKPdf 18 15 41.5 -3.6
SONM Songino Array 154.98 5 PKP PKPdf 18 15 44.3 +0.1
comp=Z,9.5nm,0.8s,baz=316,slow=0.5,SNR=51
SONM PKPab PKPab 18 16 09.0 +0.7
comp=Z,10nm,0.9s,baz=337,slow=3.3,SNR=5.2
SONM PP PP 18 19 44.7 +1.3
comp=Z,3.1nm,1.0s,baz=352,slow=6.6,SNR=4.4
ULN Ulaanbaatar 154.99 4 *e*PKIKP PKPdf 18 15 44.3 +0.1
ULN *e* 18 16 09.0
CN2 Changchun 155.32 332 *e*PKP PKPdf 18 15 44.9 +0.1
CN2 APKP 18 15 55.6
CN2 *e*PP PP 18 19 50.3 +4.5
CN2 PP PP
comp=Z,1μm,5.0s
CN2 LR LR
comp=N,1μm,18.0s,MS6.0
CN2 LR LR
comp=E,2μm,18.0s,MS6.0
CN2 LR LR
comp=Z,2μm,20.0s,MS5.9
PYUN Piuthan 155.55 72 *e*P PKPdf 18 15 45.3 -0.3
comp=Z,29nm,0.9s
KOLN Koldanda 156.12 73 *e*P PKPdf 18 15 46.1 -0.3

	comp=Z,37nm,1.2s								
DANN	**Dangsing**	**156.19**	**71**	*e*P		PKPdf	18 15 46.5	0.0	
	comp=Z,125nm,0.8s								
GKN	**Gorkha**	**157.01**	**72**	*e*P		PKPdf	18 15 47.0	-0.6	
	comp=Z,50nm,1.0s								
DMN	**Daman**	**157.47**	**73**	*e*P		PKPdf	18 15 46.9	-1.2	
	comp=Z,26nm,1.0s								
KKN	**Kakani**	**157.60**	**72**	*e*P		PKPdf	18 15 47.8	-0.5	
	comp=Z,35nm,0.9s								
PKIN	**Phulchoki**	**157.72**	**73**	*e*P		PKPdf	18 15 47.6	-0.9	
	comp=Z,25nm,0.9s								
PKI	**Pulchoki**	**157.74**	**73**	*e*P		PKPdf	18 15 48.2	-0.3	
DAV	**Davao City (W)**	**157.93**	**227**		PFAKE		18 16 00.0	+11	
DAV					LR	LR			
	comp=Z,2μm,19.0s,MS5.9								
GUN	**Gumba**	**158.11**	**72**	*e*P		PKPdf	18 15 47.7	-1.2	
BOK	**Bokaro**	**158.31**	**83**	*e*P		PKPdf	18 15 48.1	-1.2	
JIRN	**Jiri**	**158.41**	**72**	*e*P		PKPdf	18 15 48.0	-1.3	
KSRS	**Korea Array**	**158.49**	**317**		PKP	PKPdf	18 15 49.0	-0.1	
	comp=Z,10nm,0.9s,baz=69,slow=0.9,SNR=20								
RAMN	**Ramite**	**158.86**	**74**	*e*P		PKPdf	18 15 48.7	-1.2	
	comp=Z,124nm,1.1s								
ODAN	**Odare**	**159.57**	**74**	*e*P		PKPdf	18 15 50.0	-0.7	
	comp=Z,61nm,0.9s								
TAPN	**Taplejung**	**159.79**	**73**	*e*P		PKPdf	18 15 50.5	-0.4	
	comp=Z,56nm,1.2s								
GTA	**Gaotai**	**161.58**	**24**		PKP	PKPdf	18 15 53.3	+0.8	
GTA					APKP		18 16 04.5		
GTA					XPKP		18 16 08.3		
GTA					PKP2	PKPab	18 16 37.9	+0.7	
GTA					PP	PP	18 20 18.1	-1.8	
GTA					SKS	SKSdf	18 22 54.8	-2.4	
GTA					SKKS	SKKSac	18 27 02.3	-6.4	
GTA					SS	SS	18 40 26.4	-10	
GTA					PP	PP			
	comp=Z,1μm,11.9s								
GTA					LR	LR			
	comp=N,2μm,21.7s								
GTA					LR	LR			
	comp=E,1μm,19.9s								
GTA					LR	LR			
	comp=Z,2μm,21.1s								
BJI	**Beijing**	**161.98**	**343**		PKP	PKPdf	18 15 51.1	-1.8	
BJI					PP	PP	18 20 18.9	-2.9	
BJI					PP	PP			
	comp=Z,719nm,7.8s								
BJI					LR	LR			
	comp=N,2μm,18.3s								
BJI					LR	LR			
	comp=E,2μm,22.5s								
BJI					LR	LR			
	comp=Z,2μm,23.6s								
HHC	**Hu-ho-hao-te**	**162.00**	**355**	*e*PKP		PKPdf	18 15 53.3	+0.4	
HHC					APKP		18 16 04.1		
HHC					XPKP		18 16 07.8		
HHC					PKS		18 19 28.8		
HHC					SKS	SKSdf	18 22 52.0	-5.4	
HHC					SKKS	SKKSac	18 27 08.9	-1.8	
HHC					SS	SS	18 40 37.9	-2.1	
HHC					PP	PP			
	comp=Z,1μm,8.3s								
HHC					LR	LR			
	comp=N,1μm,21.4s								
HHC					LR	LR			
	comp=E,1μm,22.6s								
HHC					LR	LR			
	comp=Z,1μm,23.8s								
BJT	**Baijiatuan**	**162.00**	**343**		PFAKE		18 16 00.0	+7.1	
BJT					LR	LR			
	comp=Z,3μm,21.0s								
KKM	**Kota Kinabalu**	**162.05**	**202**		PFAKE		18 16 00.0	+6.2	
KKM					LR	LR			
	comp=Z,2μm,22.0s								
LSA	**Lhasa**	**162.22**	**64**		PKP	PKPdf	18 15 55.4	+1.9	
LSA	**Lhasa**	**162.22**	**64**	*e*PKPdf		PKPdf	18 15 54.6	+1.2	
LSA				*e*PKPab		PKPab	18 16 42.0	+1.6	
LSA					LR	LR			
	comp=Z,3μm,20.0s								
SHL	**Shillong**	**163.72**	**77**	*e*P		PKPdf	18 15 55.0	0.0	
LZH	**Lanzhou**	**165.96**	**19**	*e*PKP		PKPdf	18 15 56.0	-0.7	
LZH					APKP		18 16 05.8		
LZH					XPKP		18 16 08.8		
LZH					PKP2	PKPab	18 16 56.0	-0.4	
LZH					PP	PP	18 20 40.1	-2.7	
LZH					SKKS	SKKSac	18 27 26.3	-4.7	
LZH					SS	SS	18 41 18.0	-3.2	
LZH					PP	PP			
	comp=Z,1μm,8.0s								
LZH					LR	LR			
	comp=E,3μm,19.7s								
LZH					LR	LR			
	comp=Z,4μm,20.4s								
SSE	**Sheshan**	**166.75**	**311**	*e*PKP		PKPdf	18 15 58.9	+1.5	
SSE					PP	PP	18 20 51.3	+3.3	
SSE					SS	SS	18 41 24.0	-7.1	
SSE					PP	PP			
	comp=Z,339nm,6.2s								
SSE					LR	LR			
	comp=N,294nm,25.2s								
SSE					LR	LR			
	comp=E,2μm,25.3s								
SSE					LR	LR			
	comp=Z,2μm,24.6s								
NJ2	**Nanjing**	**167.65**	**320**	*e*PKP		PKPdf	18 15 54.0	-4.1	
NJ2					APKP		18 16 04.8		
NJ2					PKP2	PKPab	18 17 02.5	-1.7	
NJ2					PP	PP	18 20 55.0	+2.7	
NJ2					SKS	SKSdf	18 22 53.0	-8.7	
NJ2					PP	PP			
	comp=Z,640nm,15.2s								
NJ2					LR	LR			
	comp=N,2μm,25.8s								
NJ2					LR	LR			
	comp=E,1μm,21.7s								
NJ2					LR	LR			
	comp=Z,1μm,21.7s								
XAN	**Xi'an**	**168.87**	**2**		PKP	PKPdf	18 15 58.0	-0.8	
XAN					APKP		18 16 06.4		
XAN					PP	PP	18 20 53.8	-3.7	
XAN					PP	PP			
	comp=Z,1μm,14.2s								
XAN					LR	LR			
	comp=N,558nm,20.9s								
XAN					LR	LR			
	comp=E,1μm,20.9s								
XAN					LR	LR			
	comp=Z,3μm,21.8s								
CMAR	**Chiang Mai Arr**	**169.20**	**112**		PKP	PKPdf	18 15 58.8	-0.7	
	comp=Z,5.5nm,0.9s,baz=270,slow=1.7,SNR=30								
CMAR					PKPab	PKPab	18 17 11.3	-0.2	
	comp=Z,12nm,0.9s,baz=250,slow=4.5,SNR=18								
CMAR					PP	PP	18 21 00.0	-1.1	
	comp=Z,2.5nm,0.9s,baz=256,slow=5.7,SNR=5.8								
CHTO	**Chiang Mai**	**169.35**	**110**	*e*PKPdf		PKPdf	18 15 59.2	-0.3	
CHTO				*e*PKPab		PKPab	18 17 12.1	-0.1	
CHTO				*e*PP		PP	18 21 00.3	-1.6	
CHTO					LR	LR			
	comp=Z,3μm,22.0s								
CD2	**Chengdu**	**170.51**	**31**	*e*PKP		PKPdf	18 16 03.8	+3.9	
CD2					APKP		18 16 12.3		
CD2					XPKP		18 16 16.3		
CD2					PKS		18 19 33.3		
CD2					PP	PP	18 21 11.9	+5.5	
CD2					SKS	SKSdf	18 22 59.8	-3.4	
CD2					PP	PP			
	comp=Z,850nm,10.8s								
CD2					LR	LR			
	comp=N,2μm,20.4s								
CD2					LR	LR			
	comp=E,3μm,18.8s								
CD2					LR	LR			
	comp=Z,3μm,19.2s								
WHN	**Wuhan**	**171.22**	**331**		PKPR		18 16 02.3		
WHN					PKP2	PKPab	18 17 19.8	-0.1	
WHN					PP	PP	18 21 09.3	-0.5	
WHN					LR	LR			
	comp=Z,7μm,18.9s								
ENH	**Enshi**	**172.64**	**360**		PFAKE		18 16 10.0	+9.1	
ENH					LR	LR			
	comp=Z,4.0nm,19.0s								
KMI	**Kunming**	**173.44**	**69**		PKP	PKPdf	18 16 00.0	-1.4	
KMI					APKP		18 16 12.6		
KMI					XPKP		18 16 18.4		
KMI					PKP2	PKPab	18 17 30.6	+0.4	
KMI					PP	PP	18 21 23.1	+0.8	
KMI					SKKS	SKKSac	18 28 06.3	-2.3	
KMI					PP	PP			
	comp=Z,2μm,9.0s								
KMI					LR	LR			
	comp=N,960nm,23.6s								
KMI					LR	LR			
	comp=E,2μm,19.1s								
KMI					LR	LR			
	comp=Z,3μm,22.1s								
GYA	**Guiyang**	**175.61**	**35**		PKP	PKPdf	18 16 02.0	-0.1	
GYA					APKP		18 16 12.8		
GYA					XPKP		18 16 16.4		
GYA					PKP2	PKPab	18 17 39.6	+0.1	
GYA					PKS		18 19 32.8		
GYA					PP	PP			
	comp=Z,1μm,6.7s								
GYA					LR	LR			
	comp=N,1μm,17.4s								
GYA					LR	LR			
	comp=E,2μm,20.1s								
GYA					LR	LR			
	comp=Z,1μm,19.5s								
QIZ	**Qiongzhong**	**176.15**	**185**		PKP	PKPdf	18 16 02.0	-0.4	
QIZ					PKP2	PKPab	18 17 42.4	+0.5	
QIZ					PP	PP			
	comp=Z,939nm,5.8s								
QIZ					LR	LR			
	comp=E,2μm,22.1s								
QIZ					LR	LR			
	comp=Z,3μm,20.8s								
QIZ	**Qiongzhong**	**176.15**	**185**		PFAKE		18 16 10.0	+7.6	
QIZ					LR	LR			
	comp=Z,3μm,20.0s								

*IDC **20** 18:03:51.7±1.4,3222N×139.77E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/22, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=57.8km s-min=18.1km az=86.0*
*NEIC **20** 18:03:52.0±0.8, 3234N×140.30E, h10km, mb4.8/2, Error ellipse: s-maj=25.2km s-min=13.3km az=77.0*
*ISCJB **20** 18:03:53.3±1.1, 3268N×006×14093E×009, h50km±11km, mb4.0/5, Error ellipse: s-maj=12.9km s-min=9.3km az=174.5*
*JMA **20** 18:03:54.8±0.2, 3278N×14087E, h48km, M3.7*

ISC 20 18:03:54.5±1.2, 3269N±007×14091E±009, h41km±13km, n22, σ1°29/33, mb4.0/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.01**	**295**	P	**Pn**	**18 04 12.1**	**-0.2**
JHJ2				S	**Sn**	**18 04 23.7**	**-1.6**
JHJ	**Hachijo jima 2**	**1.04**	**295**	Pn	**Pn**	**18 04 12.2**	**-0.5**
	62nm,0.3s,baz=57,slow=11,SNR=3.6						
JHJ				Sn	**Sn**	**18 04 21.2**	**-4.8**
	162nm,0.3s,baz=87,slow=23,SNR=9.1						
JMY	**Miyakejima3**	**1.81**	**320**	S	**Sn**	**18 04 44.5**	**-0.4**
BSO1	**Boso 1**	**1.96**	**2**	P	**Pn**	**18 04 24.4**	**-0.9**
BSO1				S	**Sn**	**18 04 48.1**	**-0.6**
JKO	**Kozu shima**	**2.11**	**316**	P	**Pn**	**18 04 27.7**	**+0.4**
BSO3	**Boso 3**	**2.13**	**351**	P	**Pn**	**18 04 26.9**	**-0.8**
BSO3				S	**Sn**	**18 04 51.5**	**-1.4**
NJJJ	**Nii jima 2**	**2.18**	**322**	P	**Pn**	**18 04 28.5**	**+0.2**
NJJJ				S	**Sn**	**18 04 53.7**	**-0.4**
JIM2	**Oshima 3**	**2.37**	**329**	P	**Pn**	**18 04 30.5**	**-0.4**
JIM2				S	**Sn**	**18 04 56.5**	**-2.2**
JIZS	**Izushimoda**	**2.64**	**321**	P	**Pn**	**18 04 35.0**	**+0.4**
JIZS				S	**Sn**	**18 05 04.3**	**-1.1**
JOD2	**Odawara 2**	**2.98**	**330**	P	**Pn**	**18 04 39.2**	**-0.1**
JOD2				S	**Sn**	**18 05 11.3**	**-2.5**
SHZ3	**Shizuoka 3**	**3.27**	**317**	P	**Pn**	**18 04 45.0**	**+1.8**
JYN	**Shimob**	**3.42**	**326**	P	**Pn**	**18 04 46.8**	**+1.5**
JYN				S	**Sn**	**18 05 26.6**	**+1.9**
MJAR	**Matsushiro Arr**	**4.44**	**331**	Pn	**Pn**	**18 05 00.9**	**+1.6**
	2.3nm,0.3s,baz=156,slow=12,SNR=23						
MJAR				Sn	**Sn**	**18 05 53.4**	**+3.6**
	1.0nm,0.3s,baz=159,slow=25,SNR=3.6						
MAJO	**Matsushiro**	**4.44**	**331**	*e*Pn	**Pn**	**18 05 00.3**	**+0.9**
MAT	**Matsushiro**	**4.44**	**331**	P	**Pn**	**18 05 01.2**	**+1.8**
MAT				S	**Sn**	**18 05 52.7**	**+2.9**
TLY	**Talaya**	**33.02**	**316**	*e*P	**P**	**18 10 26.9**	**+1.2**
	17nm,1.0s,mb4.9						
MKAR	**Makanchi Array**	**46.19**	**306**	P	**P**	**18 12 13.8**	**-1.4**
	0.3nm,0.7s,mb3.3,baz=92,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**52.71**	**188**	P	**P**	**18 13 03.8**	**-1.2**
	0.3nm,0.4s,mb3.6,baz=4.2,slow=7.5,SNR=9.9						
AML	**Almayashu**	**52.98**	**301**	*e*P	**P**	**18 13 08.7**	**+1.8**
	5.1nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**56.44**	**188**	P	**P**	**18 13 30.9**	**-1.1**
	0.3nm,0.9s,mb3.3,baz=4.4,slow=7.8,SNR=4.7						
INK	**Inuvik**	**58.45**	**26**	*e*P	**P**	**18 13 52.8**	**+7.0**
SIT	**Sitka**	**59.99**	**39**	P	**P**	**18 14 01.4**	**+4.8**

JMA 20 18:08:35.6±0.8, 4489N×14953E, h30km, M4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**3.12**	**242**	P	Pn	18 09 21.4	-1.3
NEM2				*e*S	Sn	18 09 56.0	-3.0
JRA	**Rausu**	**3.30**	**255**	P	Pn	18 09 26.5	+1.4
JNK	**Nakash**	**3.69**	**251**	P	Pn	18 09 31.5	+0.9
JAK	**Akkeshi**	**3.97**	**243**	P	Pn	18 09 33.6	-0.8
JAK				*e*S	Sn	18 10 15.4	-4.5
JTKR	**Abashiri--Toko**	**4.13**	**259**	P	Pn	18 09 39.2	+2.6
JAR	**Ashorobuto**	**4.45**	**251**	P	Pn	18 09 42.4	+1.5
JMP	**Maruseppu**	**4.51**	**261**	P	Pn	18 09 44.8	+3.1
JOB	**Onbets**	**4.57**	**246**	P	Pn	18 09 42.9	+0.3
JCH	**Churui**	**5.01**	**245**	P	Pn	18 09 49.2	+0.5
JFR	**Furan**	**5.29**	**253**	P	Pn	18 09 55.6	+3.1
JEM	**Erimo**	**5.46**	**240**	P	Pn	18 09 56.1	+1.3
JNBK	**Urakawa-nobuka**	**5.57**	**244**	P	Pn	18 09 55.7	-0.7
JBT2	**Biratori 2**	**5.60**	**250**	P	Pn	18 09 57.9	+1.2
JNB	**Noboribetsu**	**6.62**	**252**	P	Pn	18 10 12.2	+1.5
JKB	**Kayabe**	**6.88**	**247**	P	Pn	18 10 14.1	-0.2
JKB				*e*S	Sn	18 11 27.1	-4.4
JYM2	**Yakumo 2**	**7.21**	**251**	P	Pn	18 10 19.7	+0.8
JANG	**Nango**	**7.43**	**235**	P	Pn	18 10 19.1	-2.9
JANG				*e*S	Sn	18 11 35.4	-10
JIO	**Ouri**	**8.88**	**226**	*e*S	Sn	18 12 08.4	-12

IDC 20 18:16:17.9±2.2, 352N×12766E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, MS4.0/1, Ms1 4.0/1, ms1mx3.3/20, Error ellipse: s-maj=174.5km s-min=24.3km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.23**	**165**	P	P	18 21 36.5	0.0
	0.3nm,0.4s,baz=344,slow=10.0,SNR=7.4						
CBIJ	**Chichi jima**	**27.25**	**29**	LR	LR	18 30 31.7	
	comp=Z,306nm,20.9s,baz=343,slow=31						
ASAR	**Alice Springs**	**27.70**	**168**	P	P	18 22 08.3	+0.4
	0.3nm,0.8s,baz=355,slow=7.3,SNR=5.4						
MKAR	**Makanchi Array**	**58.26**	**325**	P	P	18 26 14.1	-0.1
	0.9nm,0.8s,baz=114,slow=5.4,SNR=3.4						

MAN 20 18:27:15, 976N×12454E, h26km, mb4.6, ML3.5, MS3.5, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.49**	**40**	*e*P	Pb	18 27 26.0	+0.9
MSLP				*e*S	Sb	18 27 35.9	+4.0
TBP	**Tagbilaran**	**0.67**	**264↓**	*e*P	Pb	18 27 28.7	+0.6
TBP				*e*S	Sb	18 27 37.7	+0.6
LLP	**Lapu-Lapu**	**0.79**	**315↑**	*i*P	Pb	18 27 30.6	+0.5
LLP				*i* S	Sb	18 27 42.2	+1.8
SCPH	**Surigao**	**0.94**	**89**	*e*P	Pn	18 27 31.0	-1.5
SCPH				*e*S	Sb	18 27 43.8	-0.8
OCLP	**Ormoc**	**1.28**	**3**	*e*P	Pn	18 27 38.0	+0.7
OCLP				*e*S	Sn	18 27 57.7	+4.0
BUTP	**Butuan**	**1.33**	**126**	*e*P	Pn	18 27 39.0	+1.2
BUTP				*e*S	Sn	18 27 53.5	-1.2
SNPH	**Sibulan**	**1.35**	**252**	*e*P	Pn	18 27 39.0	+0.8
PLP	**Palo**	**1.46**	**17↑**	*e*P	Pn	18 27 41.4	+1.7
PLP				*i* S	Sn	18 28 01.2	+3.1
PLP	**Palo**	**1.46**	**17↑**	*e*P	Sn	18 27 41.4	+1.7
PLP				*i* S	Sn	18 28 01.2	+3.1
BUKP	**Musuan**	**1.94**	**164**	*e*P	Pn	18 27 47.9	+1.6
BUKP				*e*S	Sn	18 28 16.3	+6.5
GUIM	**Jordan**	**2.10**	**294**	*e*P	Pn	18 27 49.2	+0.6
GUIM				*e*S	Sn	18 28 15.6	+1.7
PAGZ	**Pagadian**	**2.22**	**211**	*e*P	Pn	18 27 50.6	+0.5
PAGZ				*e*S	Sn	18 28 17.9	+1.2
IPIL	**Ipil**	**2.76**	**225**	*e*P	Pn	18 27 59.6	+2.0
IPIL				*e*S	Sn	18 28 32.8	+2.7
IPIL	**Ipil**	**2.76**	**225↑**	*e*P	Pn	18 28 00.0	+2.4

IDC 20 19:03:27.6±1.9, 370S×12884E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=133.5km s-min=27.3km az=66.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.01**	**162**	P	Pn	19 07 28.1	+1.0
	0.1nm,0.3s,baz=340,slow=12,SNR=8.5						
ASAR	**Alice Springs**	**20.45**	**167**	P	P	19 08 07.6	+0.8
	1.9nm,0.7s,baz=350,slow=10,SNR=37						
STKA	**Stephens Creek**	**30.49**	**158**	P	P	19 09 41.5	-0.8
	2.6nm,1.0s,baz=323,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	**64.85**	**327**	P	P	19 14 08.8	+0.3
	0.1nm,0.5s,baz=131,slow=7.9,SNR=2.6						

*ISCJB **20** 19:07:21.9±1.6, 3170N±010×5023E±008, h4km±18km, Error ellipse: s-maj=17.4km s-min=9.8km az=161.1*
*CSEM **20** 19:07:25.4±0.1, 3172N×5007E, h25km, ML3.0, Error ellipse: s-maj=5.2km s-min=3.4km az=136.0*
*THR **20** 19:07:26.3±0.5, 31.96N×5010E, h14km±4km, ML3.1*
*KISR **20** 19:07:27.3, 3147N×4989E, h24km, ML3.0*

ISC 20 19:07:26.7±2.1, 3170N±010×500E±01, h18km±16km, n10, σ0°45/14, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.06**	**293**	*e*Pg	**Pg**	**19 07 46.9**	**-0.4**
SHGR				AML	AML	19 08 06.4	
	comp=E,527nm,0.3s						
SHGR				AML	AML	19 08 06.5	
	comp=N,554nm,0.2s						
NASN	**Na'in**	**2.65**	**65**	*e*Pn	**Pn**	**19 08 08.1**	**-0.5**
NASN				*e*Sg	**Sg**	**19 08 43.0**	**-9.1**
UMR	**Umm Al-Rimmam**	**2.88**	**223**	*e*P	**Pn**	**19 08 12.0**	**+0.2**
UMR				*e*S	**Sn**	**19 08 45.2**	**-0.8**
	comp=N,78nm,0.3s						
UMR	**Umm Al-Rimmam**	**2.88**	**223**	*e*P	**Pn**	**19 08 12.0**	**+0.2**
	baz=225						
UMR				*e*S	**Sn**	**19 08 45.2**	**-0.9**
	baz=225						
UMR				AML	AML	19 08 51.3	
	comp=Z,78nm,0.3s,baz=225						
MIB	**Mutribah**	**2.94**	**231**	*e*P	**Pn**	**19 08 12.8**	**+0.2**
	baz=234						
MIB				AML	AML	19 08 54.5	
	comp=Z,38nm,0.4s,baz=234						
KBD	**Kabd**	**3.19**	**218**	*e*P	**Pn**	**19 08 16.5**	**+0.6**
	baz=220						
KBD				AML	AML	19 09 06.0	
	comp=Z,22nm,0.2s,baz=220						
NAY	**Al-Naaiem**	**3.38**	**224**	*e*P	**Pn**	**19 08 19.1**	**+0.4**
NAY				*e*S	**Sn**	**19 08 58.3**	**-0.1**
QRN	**Al-Qurain**	**3.43**	**211**	*e*P	**Pn**	**19 08 19.1**	**-0.3**
	baz=213						
QRN				AML	AML	19 09 01.2	
	comp=Z,57nm,0.3s,baz=213						
RDF	**Al-Radifah**	**3.46**	**218**	*e*P	**Pn**	**19 08 20.2**	**+0.5**
	baz=219						
RDF				AML	AML	19 09 03.9	
	comp=Z,55nm,0.3s,baz=219						
SNGE	**Sanandaj**	**4.03**	**328**	*e*Pn	**Pn**	**19 08 27.9**	**+0.4**
SNGE				AML	AML	19 09 29.3	
	comp=N,20nm,0.7s						

IDC 20 19:34:55.4±1.8, 2880S×17822W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.8/15, mbtmp4.0/3, Error ellipse: s-maj=48.5km s-min=13.5km az=44.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.52**	**150**	Pn	Pg	19 35 10.8	+5.4
	890nm,0.3s,baz=86,slow=8.3,SNR=77						
RAO				Sn	Sg	19 35 18.7	+6.5
	5μm,0.3s,baz=50,slow=17,SNR=52						
STKA	**Stephens Creek**	**34.69**	**255**	P	P	19 41 46.9	0.0
	1.2nm,0.6s,baz=99,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**43.03**	**265**	P	P	19 42 56.4	-0.5
	0.9nm,0.8s,baz=105,slow=6.8,SNR=11						
WRA	**Warramunga Arr**	**43.87**	**271**	P	P	19 43 03.9	+0.2
	2.4nm,0.6s,baz=110,slow=7.7,SNR=23						
NB2	**NORSAR Subarra**	**147.15**	**352**	PKP	PKPdf	19 54 38.3	+0.7
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**147.15**	**352**	PKPbc	PKPbc	19 54 38.7	-1.1
	comp=Z,1.0nm,0.6s,baz=36,slow=2.8,SNR=5.6						

*NEIC **20** 19:52:27.3, 1668N×9969W, h6km, MD3.7(MEX), After MEX.*

MEX 20 19:52:27.2±0.5, 1666N×9970W, h6km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.29**	**314**	*i* P	Pg	19 52 32.7	-0.3
ACX				*i* S	Sg	19 52 36.5	-0.4
CAIG	**El Cayaco**	**0.67**	**305**	*i* P	Pg	19 52 39.1	-0.9
CAIG				*i* S	Sg	19 52 48.1	-0.7
PNIG	**Pinotepa**	**1.53**	**100**	*i* P	Pn	19 52 50.9	-4.1
PNIG				*i* S	Sn	19 53 11.4	-3.7
PNIG	**Pinotepa**	**1.53**	**100**	*i* P	Pn	19 52 50.9	-4.1
PNIG				*i* S	Sn	19 53 11.1	-4.1
PLIG	**Platanillo**	**1.73**	**6**	*i* P	Pn	19 52 54.9	-2.9
PLIG				*i* S	Sn	19 53 15.3	-4.8
ZIIG	**Zihuatanejo**	**1.94**	**299**	*i* P	Pn	19 52 58.1	-2.5
ZIIG				*i* S	Sn	19 53 21.3	-3.9
UTMO	**Huajuapan**	**2.15**	**57**	*i* P	Pn	19 53 00.9	-2.6
UTMO				*i* S	Sn	19 53 26.5	-4.0

*TAP **20** 19:52:38.1, 2489N×12248E, h6km, ML3.3, D*
*ISCJB **20** 19:52:39.6±1.0, 2495N±006×12246E±006, h10km, mb3.5/4, Error ellipse: s-maj=9.9km s-min=6.1km az=139.0*
*IDC **20** 19:52:42.2±1.3, 2493N×12125E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/20, mbtmp3.5/4, Error ellipse: s-maj=47.2km s-min=25.9km az=80.0*

ISC 20 19:52:39.5±0.9, 2497N±005×12248E±006, h10km, n38, σ1°07/39, mb3.5/4, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.45**	**275**	P	**Pg**	**19 52 48.0**	**-0.1**
	baz=284						
TWB1				*e*S	**Sg**	**19 52 55.3**	**+1.2**
	baz=284						
NWF	**Wu-fen Shan**	**0.64**	**279↑**	*i*P	**Pg**	**19 52 52.3**	**+0.4**
	baz=285						
**T

NSTT	**Nanjuang** baz=259	**1.38**	**256**	*e*P	**Pn**	**19 53 03.9**	**-0.9**
TWT	**Tachien** baz=242	**1.38**	**239**	*e*P	**Pn**	**19 53 03.9**	**-1.0**
ESL	**Shilin** baz=221	**1.49**	**220**	*e*P	**Pn**	**19 53 05.2**	**-1.2**
TWQ1	**Liyutan** baz=250	**1.67**	**249**	*e*P	**Pn**	**19 53 10.3**	**+1.5**
EHY	**Hungye** baz=217	**1.80**	**216**	*e*P	**Pn**	**19 53 11.5**	**+0.9**
SMLT	**Sun Moon Lake** baz=235	**1.80**	**233**	P	**Pn**	**19 53 10.9**	**+0.3**
TYC	**Yuchr** baz=236	**1.82**	**235**	*e*P	**Pn**	**19 53 10.8**	**0.0**
TWF1	**Yuli** baz=215	**1.94**	**214**	*e*P	**Pn**	**19 53 12.6**	**+0.1**
WNT	**Mingjian** baz=238	**1.96**	**237**	*e*P	**Pn**	**19 53 13.9**	**+1.1**
YUS	**Yu-Shan** baz=224	**2.03**	**224**	*e*P	**Pn**	**19 53 14.2**	**+0.5**
ALS	**Alishan** baz=228	**2.11**	**227**	*e*P	**Pn**	**19 53 16.2**	**+1.3**
CHN5	**Tsauling** baz=231	**2.14**	**231**	*e*P	**Pn**	**19 53 16.4**	**+1.1**
ELDTW	**Lidau** baz=218	**2.22**	**217**	*e*P	**Pn**	**19 53 17.2**	**+0.8**
CHN4	**Tsaushan** baz=228	**2.36**	**227**	*e*P	**Pn**	**19 53 20.3**	**+2.0**
STYT	**Tauyuan** baz=222	**2.39**	**221**	*e*P	**Pn**	**19 53 18.7**	**0.0**
WTP	**Ta-pu** baz=226	**2.42**	**225**	*e*P	**Pn**	**19 53 19.4**	**+0.3**
CHN1	**Nanshi** baz=226	**2.52**	**225**	*e*P	**Pn**	**19 53 22.2**	**+1.7**
SGST	**Jiashian** baz=223	**2.56**	**223**	*e*P	**Pn**	**19 53 22.8**	**+1.8**
SSD	**Sandimen** baz=218	**2.79**	**218**	*e*P	**Pn**	**19 53 24.9**	**+0.8**
PETK	**Petropavlovsk-** 2.4nm,0.8s,mb4.0,baz=224,slow=8.1,SNR=2.4	**38.56**	**34**	P	**P**	**20 00 12.0**	**+10**
MKAR	**Makanchi Array** 0.8nm,0.9s,mb3.5,baz=108,slow=8.2,SNR=4.0	**38.61**	**315**	P	**P**	**20 00 00.6**	**-2.2**
WRA	**Warramunga Arr** 0.3nm,0.8s,mb3.3,baz=344,slow=8.4,SNR=4.2	**46.11**	**164**	P	**P**	**20 01 09.3**	**+5.3**
ASAR	**Alice Springs** 0.4nm,0.8s,mb3.5,baz=342,slow=6.8,SNR=4.2	**49.60**	**166**	P	**P**	**20 01 38.2**	**+7.2**

*ISCJB **20** 20:51:41.6±1.7,2302S∧006∨7092W∧008,h21km±11km, mb4.2/4,Error ellipse: s-maj=13.5km s-min=9.3km az=30.4*
*GUC **20** 20:51:43.9±1.7,2308S∨7077W,h32km±13km,ML3.8*
*NEIC **20** 20:51:44.8,2304S∨7073W,h27km,mb4.1/1,ML3.8(GUC), After GUC.*
*IDC **20** 20:51:45.3±6.3,2310S∨7058W,h24km±34km,mb4.2/3, mb1 4.2/4,mb1mx3.8/17,mbtmp4.2/4,ML3.2/2,Error ellipse: s-maj=50.8km s-min=29.8km az=120.0*
ISC 20 20:51:41.7±1.4,2301S∧006∨7089W∧007,h12km±8km,n24, σ1§10/33,mb4.2/4,1C-4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MECH	**Mejillones**	**0.42**	**103**	⇓*i*P		**Pg**	**20 51 51.2**	**+1.2**
MECH				*i* S		**Sg**	**20 51 55.7**	**+0.1**
MECH				AML		AML	20 52 02.9	
	comp=N,33μm,0.5s							
CEN1	**Los Morros**	**0.74**	**121**	*e*P		**Pg**	**20 51 56.7**	**+0.6**
CEN1				*i* S		**Sg**	**20 52 05.3**	**-0.5**
CEN1				AML		AML	20 52 07.9	
	comp=E,4μm,0.3s							
ANCH	**Antofagasta**	**0.80**	**147**	⇑*i*P		**Pg**	**20 51 57.6**	**+0.4**
ANCH				S		**Sg**	**20 52 08.1**	**+0.3**
PB06	**Plate Boundary**	**1.25**	**76**	⇓*i*P		**Pn**	**20 52 04.2**	**-0.8**
PB06				*i* S		**Sb**	**20 52 19.8**	**-1.6**
PB04	**Plate Boundary**	**1.49**	**61**	*e*P		**Pn**	**20 52 00.7**	**-7.6**
PB04				*i* S		**Sn**	**20 52 14.3**	**-13**
PB04				AML		AML	20 52 16.9	
	comp=E,5μm,0.4s							
PB07	**Plate Boundary**	**1.58**	**36**	⇓*i*P		**Pn**	**20 52 11.1**	**+1.6**
PB07				*i* S		**Sn**	**20 52 32.0**	**+2.2**
LVC	**Limon Verde**	**1.87**	**78**	Pg		**Pg**	**20 52 15.0**	**-2.5**
	comp=E,189nm,0.3s,baz=256,slow=13,SNR=700							
LVC				Lg			20 52 37.8	
	comp=E,710nm,0.3s,baz=331,slow=22,SNR=30							
LVC	**Limon Verde**	**1.87**	**78**	*e*Pn		**Pn**	**20 52 14.4**	**+0.9**
LVC				Pg		**Pg**	**20 52 15.0**	**-2.6**
LVC				*e*Sn		**Sn**	**20 52 36.7**	**-0.3**
LVC				Lg			20 52 37.8	
LVC	**Limon Verde**	**1.87**	**78**	⇓*i*P		**Pn**	**20 52 14.5**	**+1.0**
LVC				*i* S		**Sn**	**20 52 37.9**	**+0.9**
LVC				AML		AML	20 52 39.3	
	comp=N,3μm,0.3s							
PB01	**Plate Boundary**	**2.35**	**34**	*e*P		**Pn**	**20 52 24.2**	**+4.1**
PB01				*i* S		**Sn**	**20 52 55.2**	**+6.3**
LCO	**Las Campanas**	**5.98**	**178**	*e*Pn		**Pn**	**20 53 04.0**	**-6.1**
LCO				*e*Sn		Sn	20 54 42.0	+23
LPAZ	**La Paz**	**7.17**	**22**	Pn		**Pn**	**20 53 32.8**	**+6.4**
	comp=N,0.6nm,0.3s,baz=214,slow=10,SNR=7.3							
LPAZ	**La Paz**	**7.17**	**22**	*e*Pn		**Pn**	**20 53 24.8**	**-1.6**
CFAA	**Coronel Fontan**	**8.88**	**165**	Pn		**Pn**	**20 53 49.2**	**-0.7**
	comp=N,0.1nm,0.3s,baz=351,slow=15,SNR=2.9							
CFAA				Sn		**Sn**	**20 55 38.9**	**+9.0**
	comp=N,0.1nm,0.3s,baz=222,slow=16,SNR=3.1							
CFAA	**Coronel Fontan**	**8.88**	**165**	Pn		**Pn**	**20 53 49.2**	**-0.7**
CFAA				Sn		**Sn**	**20 55 38.9**	**+9.0**
SIV	**San Ignacio**	**11.59**	**55**	Pn		**Pn**	**20 54 26.7**	**-0.3**
	comp=N,0.5nm,0.3s,baz=258,slow=13,SNR=28							
OTAV	**Otavalo**	**24.25**	**341**	*e*P		**P**	**20 56 57.2**	**-1.5**
	comp=N,9.2nm,1.4s,mb4.0							
DBIC	**Dimbokro**	**70.92**	**74**	P		**P**	**21 02 58.6**	**-0.8**
	comp=N,2.5nm,0.7s,mb4.2,baz=244,slow=6.2,SNR=4.5							
TORD	**Torodi Ar. Bea**	**79.58**	**71**	P		**P**	**21 03 49.6**	**+0.4**
	comp=N,1.4nm,0.5s,mb4.2,baz=253,slow=5.2,SNR=28							
BOSA	**Boshof**	**84.35**	**119**	P		**P**	**21 04 15.1**	**+0.9**
	comp=N,1.7nm,0.6s,mb4.4,baz=239,slow=6.0,SNR=7.1							
BOSA	**Boshof**	**84.35**	**119**	P		**P**	**21 04 15.1**	**+0.9**
WRA	**Warramunga Arr**	**130.72**	**212**	PKP		PKPdf	21 10 55.0	+1.5
	comp=N,0.5nm,1.0s,baz=158,slow=1.8,SNR=4.0							
MKAR	**Makanchi Array**	**147.92**	**36**	PKPbc		PKPbc	21 11 28.3	+1.5
	comp=N,0.5nm,0.6s,baz=314,slow=3.1,SNR=6.2							
MKAR	**Makanchi Array**	**147.92**	**36**	PKPbc		PKPbc	21 11 28.3	+1.5

*GUC **20** 20:55:27.7±3.8,2326S∨7075W,h35km±11km,ML4.8*
*ISCJB **20** 20:55:28.4±0.7,2324S∧003∨7075W∧006,h37km±5km, mb4.7/24,MS4.0/9,Error ellipse: s-maj=9.1km s-min=5.4km az=13.9*
*NEIC **20** 20:55:28.5±2.2,2321S∨7065W,h23km±15km,mb5.0/13, ML4.7(GUC),Error ellipse: s-maj=10.6km s-min=7.0km az=86.0*
*MOS **20** 20:55:29.2±1.6,2311S∨7065W,h33km,mb4.9/5,Error ellipse: s-maj=21.3km s-min=10.6km az=91.2*
*IDC **20** 20:55:29.7±3.3,2318S∨7052W,h28km±21km,mb4.3/12, mb1 4.4/14,mb1mx4.3/21,mbtmp4.3/14,ML4.0/3,MS3.8/11, Ms1 3.8/11,ms1mx3.6/32,Error ellipse: s-maj=20.5km s-min=16.2km az=74.0*
ISC 20 20:55:28.8±0.9,2325S∧003∨7073W∧005,h24km±6km,n86, σ1§12/73,mb4.7/24,MS4.0/9,3C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MECH	**Mejillones**	**0.30**	**60**	*e*P		**Pb**	**20 55 35.6**	**-0.1**
MECH				*i* S		**Sb**	**20 55 40.9**	**+0.4**
MECH				AML		AML	20 55 41.8	
	comp=E,207μm,0.5s							
PB06	**Plate Boundary**	**1.20**	**63**	⇓*i*P		**Pn**	**20 55 49.2**	**-0.8**
PB06				*i* S		**Sn**	**20 56 05.0**	**-0.5**
CPN1	**Cerro Paranal**	**1.40**	**168**	⇑*i*P		**Pn**	**20 55 53.1**	**+0.3**
CPN1				*i* S		**Sn**	**20 56 11.4**	**+0.9**
CPN1				AML		AML	20 56 15.0	
	comp=E,26μm,0.6s							
PB04	**Plate Boundary**	**1.51**	**50**	⇑*i*P		**Pn**	**20 55 47.1**	**-7.2**
PB04				*i* S		**Sn**	**20 56 01.1**	**-12**
PB04				AML		AML	20 56 10.1	
	comp=N,28μm,0.5s							
PB07	**Plate Boundary**	**1.71**	**27**	*e*P		**Pn**	**20 55 56.7**	**-0.3**
PB07				*i* S		**Sn**	**20 56 19.1**	**+1.1**
LVC	**Limon Verde**	**1.79**	**70**	Pg		**Pn**	**20 55 59.2**	**+1.0**
	comp=N,896nm,0.3s,baz=247,slow=10,SNR=120							
LVC				Lg			20 56 21.4	
	comp=N,4μm,0.3s,baz=13,slow=9.6,SNR=58							
LVC	**Limon Verde**	**1.79**	**70**	Pg		**Pn**	**20 55 59.2**	**+1.0**
LVC				*e*Sn		**Sn**	**20 56 21.3**	**+1.1**
LVC	**Limon Verde**	**1.79**	**70**	⇑*i*P		**Pn**	**20 55 59.2**	**+1.0**
LVC				*i* S		**Sn**	**20 56 21.9**	**+1.7**
LVC				AML		AML	20 56 25.0	
	comp=N,17μm,0.8s							
PB01	**Plate Boundary**	**2.48**	**28**	*e*P		**Pn**	**20 56 07.7**	**0.0**
PB01				*i* S		**Sn**	**20 56 42.2**	**+5.0**
PB01				AML		AML	20 56 43.3	
	comp=E,11μm,0.7s							
LCO	**Las Campanas**	**5.74**	**180**	*e*Pn		**Pn**	**20 56 53.0**	**+0.7**
	comp=E,113nm,0.8s							
ARE	**Arequipa**	**6.79**	**354**	⇓*i*P		**Pn**	**20 57 05.4**	**-1.5**
ARE				*i* S		**Sn**	**20 58 18.8**	**-4.7**
LPAZ	**La Paz**	**7.35**	**20**	Pn		**Pn**	**20 57 16.9**	**+2.4**
	comp=E,1.7nm,0.3s,baz=223,slow=7.5,SNR=16							
LPAZ				LR		LR	21 00 18.1	
	comp=E,732nm,19.5s,baz=33,slow=40							
LPAZ	**La Paz**	**7.35**	**20**	*e*Pn		**Pn**	**20 57 16.1**	**+1.5**
LPAZ				LR		LR	21 00 18.1	
CFAA	**Coronel Fontan**	**8.61**	**166**	Pn		**Pn**	**20 57 31.4**	**-0.4**
	comp=E,0.3nm,0.3s,baz=341,slow=13,SNR=9.7							
CFAA				Sn		**Sn**	**20 59 22.8**	**+15**
	comp=E,0.6nm,0.3s,baz=337,slow=13,SNR=4.3							
CFAA				LR		LR	21 01 02.7	
	comp=E,80nm,21.8s,baz=336,slow=39							
CFAA	**Coronel Fontan**	**8.61**	**166**	Pn		**Pn**	**20 57 31.4**	**-0.4**
CFAA				Sn		**Sn**	**20 59 22.8**	**+15**
CFAA				LR		LR	21 01 02.7	
SIV	**San Ignacio**	**11.62**	**53**	Pn		**Pn**	**20 58 10.6**	**-2.4**
	comp=E,2.7nm,0.3s,baz=248,slow=12,SNR=20							
SIV				Sn		**Sn**	**21 00 24.2**	**+2.2**
	baz=310,slow=23,SNR=3.8							
PLCA	**Paso Flores**	**17.43**	**180**	P		**Pn**	**20 59 29.9**	**-0.3**
	comp=E,0.1nm,0.3s,baz=355,slow=13,SNR=3.2							
SPB	**Sao Paulo**	**21.38**	**96**	*e*P		**P**	**21 00 15.3**	**+0.7**
BDFB	**Brasilia**	**22.70**	**75**	P		**P**	**21 00 27.2**	**-1.6**
	comp=E,6.3nm,0.9s,mb4.0,baz=244,slow=18,SNR=11							
BDFB				LR		LR	21 10 31.3	
	comp=E,188nm,18.4s,MS3.6,baz=65,slow=40							
ROSC	**El Rosal**	**28.16**	**352**	LR		LR	21 13 27.0	
	comp=E,202nm,19.4s,MS3.7,baz=201,slow=38							
RCBR	**Riachuelo**	**37.75**	**68**	*e*P		**P**	**21 02 42.6**	**-0.4**
	comp=E,26nm,1.0s,mb4.9							
MTP	**Monte Pirata**	**41.41**	**7**	P		**P**	**21 03 10.2**	**-3.0**
CMIG	**Matias Romero**	**46.53**	**327**	LR		LR	21 20 05.7	
	comp=E,89nm,21.0s,MS3.7,baz=72,slow=32							
VNA3	**Neumayer Olymp**	**58.98**	**161**	*e*		**P**	**21 05 25.1**	**-0.7**
VNA3				*e*		pP	21 05 33.1	-0.4
VNA3				*e*			21 05 44.8	
VNA2	**Neumayer--Watz** baz=292,slow=8.2	**59.58**	**160**	*e*		**P**	**21 05 31.0**	**+1.0**
VNA2				*e*		pP	21 05 38.5	+0.8
VNA2				*e*			21 05 50.2	
TKL	**Tuckaleechee C**	**59.88**	**348**	P		**P**	**21 05 31.5**	**-0.9**
	comp=E,6.5nm,0.8s,mb4.7,baz=165,slow=9.9,SNR=6.7							
SWET	**Sewanee**	**59.91**	**346**	*e*P		**P**	**21 05 31.5**	**-1.1**
ELN	**Prospectdale**	**60.89**	**351**	*e*P		**P**	**21 05 36.8**	**-2.5**
TXAR	**Lajitas Array**	**61.14**	**327**	*e*P		**P**	**21 05 42.2**	**+1.0**
	comp=E,0.5nm,0.6s,mb3.8,baz=145,slow=9.9,SNR=4.9							
SNAA	**Sanae**	**61.19**	**160**	*e*P		**P**	**21 05 39.0**	**-2.0**
	comp=E,13nm,1.2s,mb5.0							
SNAA	**Sanae**	**61.19**	**160**	*e*P		**P**	**21 05 39.0**	**-2.0**
SNAA				pmax		pmax		
	comp=Z,13nm,1.2s							
WVT	**Waverly**	**61.23**	**344**	*e*P		**P**	**21 05 40.5**	**-1.2**
	comp=Z,11nm,0.9s,mb5.0							
WVT	**Waverly**	**61.23**	**344**	*e*P		**P**	**21 05 40.5**	**-1.2**
WVT				pmax		pmax		
	comp=Z,11nm,0.9s,mb5.0							
MIAR	**Mount Ida**	**61.44**	**339**	*e*P		**P**	**21 05 43.2**	**+0.1**
	comp=Z,4.2nm,0.8s,mb4.6							
MIAR	**Mount Ida**	**61.44**	**339**	*e*P		**P**	**21 05 43.2**	**+0.1**
MIAR				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.6							
FVM	**French Village**	**63.66**	**343**	*e*P		**P**	**21 05 57.7**	**-0.1**
	comp=Z,7.8nm,0.4s,mb5.1							
FVM	**French Village**	**63.66**	**343**	*e*P		**P**	**21 05 57.7**	**-0.2**
FVM				pmax		pmax		
	comp=Z,8.0nm,0.4s,mb5.1							
MAIT	**Maitri**	**65.78**	**159**	*e*P		**P**	**21 06 10.2**	**-1.1**
QSPA	**South Pole Qui**	**66.95**	**180**	*e*P		**P**	**21 06 20.1**	**+1.4**
	comp=Z,3.7nm,0.5s,mb4.7							
ANMO	**Albuquerque**	**67.08**	**329**	P		**P**	**21 06 21.5**	**+1.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=198,slow=4.7,SNR=3.7							
ANMO	**Albuquerque**	**67.08**	**329**	*e*P		**P**	**21 06 21.3**	**+1.2**
SADO	**Sadowa**	**68.12**	**354**	P		**P**	**21 06 26.3**	**-0.1**
	comp=Z,9.2nm,0.9s,mb4.8,baz=165,slow=4.1,SNR=4.8							
SADO				LR		LR	21 38 29.8	
	comp=Z,70nm,18.2s,MS3.9,baz=113,slow=38							
SDCO	**Great Sand Dun**	**68.92**	**331**	*e*P		**P**	**21 06 33.4**	**+1.8**
LIC	**Lamto**	**70.49**	**74**	*e*P		**P**	**21 06 40.5**	**-1.3**
	comp=Z,24nm,0.8s,mb5.2							
TIC	**Toumodi**	**70.69**	**74**	*e*P		**P**	**21 06 42.2**	**-0.9**
	comp=Z,26nm,0.7s,mb5.3							
TIC	**Toumodi**	**70.69**	**74**	*e*P		**P**	**21 06 42.2**	**-0.9**
TIC				pmax		pmax		
	comp=Z,27nm,0.7s,mb5.3							
KIC	**Kosan Boka**	**70.81**	**74**	*e*P		**P**	**21 06 43.1**	**-0.7**
	comp=Z,93nm,0.9s,mb5.7							
DBIC	**Dimbokro**	**70.84**	**74**	P		**P**	**21 06 43.3**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0,baz=227,slow=6.2,SNR=24							
DBIC				LR		LR	21 38 04.3	
	comp=Z,131nm,18.6s,MS4.2,baz=153,slow=36							
DBIC	**Dimbokro**	**70.84**	**74**	*e*P		**P**	**21 06 43.2**	**-0.8**
DBIC				LR		LR	21 38 04.3	
PPT	**Papeete**	**73.29**	**258**	LR		LR	21 30 09.1	
	comp=Z,63nm,21.1s,MS3.9,baz=340,slow=28							
VNDA	**Vanda**	**74.84**	**190**	P		**P**	**21 07 08.1**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=297,slow=1.1,SNR=4.1							
SYO	**Syowa Base**	**75.46**	**160**	⇓*e*P		**P**	**21 07 09.6**	**-0.7**
NVAR	**Mina Array Bea**	**75.86**	**323**	P		**P**	**21 07 15.1**	**+2.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=104,slow=6.3,SNR=5.4							
HLID	**Hailey**	**77.65**	**329**	P		**P**	**21 07 24.1**	**+1.1**
	comp=Z,3.2nm,0.8s,mb4.3							
TOA0	**Torodi Ar. Sit**	**79.53**	**71**	*e*P		**P**	**21 07 33.2**	**-0.8**
TORD	**Torodi Ar. Bea**	**79.53**	**71**	P		**P**	**21 07 33.3**	**-0.6**
	comp=Z,21nm,0.8s,mb5.1,baz=256,slow=5.2,SNR=84							
TORD				LR		LR	21 42 52.8	
	comp=Z,74nm,18.1s,MS4.1,baz=135,slow=36							
TSUM	**Tsumeb**	**81.15**	**107**	*e*P		**P**	**21 07 43.0**	**+0.3**
	comp=Z,12nm,0.8s,mb4.9							
WALA	**Waterton Lakes**	**81.63**	**333**	*e*P		**P**	**21 07 45.4**	**+1.0**
	comp=Z,6.4nm,1.0s,mb4.5							
OD2	**Odessa Site #2**	**82.51**	**329**	*e*P		**P**	**21 07 50.5**	**+1.3**
MAW	**Mawson**	**83.14**	**164**	P		**P**	**21 07 53.1**	**+0.9**
	comp=Z,10nm,0.8s,mb4.9,baz=231,slow=7.5,SNR=17							
MAW				LR		LR	21 44 53.7	
	comp=Z,133nm,21.8s,MS4.3,baz=170,slow=36							
MAW	**Mawson**	**83.14**	**164**	*e*P		**P**	**21 07 52.8**	**+0.5**
	comp=Z,2.5nm,0.8s,mb4.3							
MAW				LR		LR	21 44 53.7	
MAW	**Mawson**	**83.14**	**164**	*e*P		**P**	**21 07 52.8**	**+0.6**
MAW				pmax		pmax		
	comp=Z,2.0nm,0.8s							
BOSA	**Boshof**	**84.11**	**118**	P		**P**	**21 07 57.7**	**-0.3**
	comp=Z,8.6nm,0.7s,mb5.0,baz=272,slow=4.6,SNR=17							
BOSA				LR		LR	21 43 33.9	
	comp=Z,129nm,19.2s,MS4.3,baz=25,slow=34							
YKA	**Yellowknife Ar**	**92.28**	**341**	P		**P**	**21 08 36.4**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.6,baz=140,slow=4.4,SNR=6.9							
ASAR	**Alice Springs**	**127.58**	**209**	PKP		PKPdf	21 14 33.0	+0.5
	comp=Z,1.6nm,0.8s,baz=130,slow=1.7,SNR=14							
WRA	**Warramunga Arr**	**130.59**	**212**	PKP		PKPdf	21 14 38.8	+0.6
	comp=Z,1.0nm,0.6s,baz=156,slow=1.6,SNR=30							
ZAA0	**Zalesovo Array**	**144.25**	**25**	*e*PKPdf		PKPdf	21 14 59.9	-2.4
ZALV	**Zalesovo Beam**	**144.25**	**25**	PKP		PKPdf	21 15 01.0	-1.3
	comp=Z,7.7nm,0.7s,baz=294,slow=3.4,SNR=26							
EKS2	**Erkin-Say**	**144.83**	**48**	*e*PKPdf		PKPdf	21 15 03.7	+0.1
EKS2	**Erkin-Say** SNR=12	**144.83**	**48**	P		PKPdf	21 15 04.2	+0.5
AML	**Almayashu**	**144.97**	**49**	*e*PKPdf		PKPdf	21 15 04.7	+0.8
AML	**Almayashu** SNR=9.2	**144.97**	**49**	P		PKPdf	21 15 05.0	+1.2
USP	**Ospenovka** SNR=7.4	**145.08**	**47**	P		PKPbc	21 15 04.7	+1.2
BOD	**Bodaibo**	**145.30**	**356**	*e*PKIKP		PKPdf	21 15 03.6	-0.3
BOD				pmax		pmax		
	comp=Z,16nm,1.0s							
AAK	**Ala-Archa** SNR=30	**145.33**	**48**	P		PKPbc	21 15 06.2	+1.9
CHMS	**Chumysh** SNR=7.9	**145.36**	**47**	P		PKPbc	21 15 05.8	+1.4
KBK	**Karagaybulak** SNR=14	**145.63**	**47**	P		PKPbc	21 15 06.8	+1.5
TKM2	**Tokmak 2**	**145.96**	**47**	*e*PKPdf		PKPbc	21 15 07.1	+0.8
TKM2	**Tokmak 2**	**145.96**	**47**	P		PKPbc	21 15 07.5	+1.2
	SNR=9.9							
ULHL	**Ulahol** SNR=9.8	**146.67**	**47**	P		PKPbc	21 15 08.9	+0.4
MK31	**Makanchi Array**	**148.03**	**36**	*e*PKPdf		PKPdf	21 15 09.1	+0.1
MK31				*e*PKPbc		PKPbc	21 15 12.2	+0.2
MKAR	**Makanchi Array**	**148.03**	**36**	PKPbc		PKPdf	21 15 09.8	+0.9
	comp=Z,6.7nm,0.7s,baz=333,slow=1.1,SNR=40							
MJAR	**Matsushiro Arr**	**151.75**	**305**	PKPbc		PKPbc	21 15 22.3	+0.8
	comp=Z,3.7nm,0.9s,baz=72,slow=1.1,SNR=7.0							
ZAK	**Zakamensk**	**152.52**	**8**	*e*PKIKP		PKPdf	21 15 17.2	+1.4
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.4s							
SONM	**Songino Array**	**155.36**	**5**	PKP		PKPdf	21 15 21.3	+1.4
	comp=Z,1.0nm,0.8s,baz=306,slow=1.1,SNR=6.7							
SONM				PKPab		PKPab	21 15 45.5	+0.3
	comp=Z,0.7nm,0.8s,baz=5.3,slow=4.4,SNR=3.6							
CMAR	**Chiang Mai Arr**	**169.23**	**114**	PKP		PKPdf	21 15 35.2	+0.6
	comp=Z,0.2nm,0.3s,baz=302,slow=1.1,SNR=5.0							
CMAR				PKPab		PKPab	21 16 47.0	+0.2
	comp=Z,1.2nm,0.8s,baz=245,slow=5.1,SNR=6.7							

*ISCJB **20** 21:54:39.3±0.6,5992S∧009∨264W∧02,h10km,mb3.9/9, MS3.2/2,Error ellipse: s-maj=18.7km s-min=8.9km az=140.5*
*IDC **20** 21:54:40.0±0.8,5970S∨2627W,h0km,mb4.0/8,mb1 4.2/8, mb1mx4.0/16,mbtmp4.0/8,MS3.3/3,Ms1 3.3/3, ms1mx3.0/20,Error ellipse: s-maj=29.1km s-min=20.7km az=61.0*
*NEIC **20** 21:54:45.2±0.4,5973S∨2644W,h35km,mb4.3/2,Error ellipse: s-maj=13.9km s-min=11.1km az=218.0*
ISC 20 21:54:41.2±0.6,5990S±009∨264W±02,h10km,n24, σ1§02/19,mb3.9/9,MS3.2/2,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	**Neumayer--Stat**	**13.11**	**153**	*e*P		**Pn**	**21 57 47.8**	**+0.6**
VNA1				*e*			21 57 50.3	
VNA3	**Neumayer Olymp**	**13.25**	**156**	*e*P		**Pn**	**21 57 49.4**	**+0.3**
VNA3				*e*			21 57 52.3	
VNA3				*e*S		**Sn**	**22 00 05.5**	**-11**
VNA2	**Neumayer--Watz** baz=308,slow=17	**13.51**	**153**	*e*P		**Pn**	**21 57 52.8**	**+0.1**
VNA2				*e*			21 57 55.2	
VNA2				*e*S		**Sn**	**22 00 09.6**	**-13**
SNAA	**Sanae** 8.8nm,0.4s	**15.10**	**151**	*e*Pn		**Pn**	**21 58 11.6**	**-2.7**
PMSA	**Palmer Station**	**17.92**	**238**	LR		LR	22 03 57.1	
	comp=Z,96nm,18.5s,baz=12,slow=31							
MAIT	**Maitri**	**18.88**	**141**	*e*P		**Pn**	**21 59 01.4**	**-0.4**
EFI	**East Falkland**	**19.43**	**281**	P		**Pn**	**21 59 06.9**	**-1.6**
USHA	**Ushuaia**	**22.90**	**264**	LR		LR	22 06 26.4	
	comp=Z,100nm,21.0s,MS3.2,baz=33,slow=31							
QSPA	**South Pole Qui** 2.3nm,0.6s,mb4.1,baz=263,slow=3.4,SNR=6.9	**30.34**	**180**	P		**P**	**22 00 55.6**	**+3.2**
PLCA	**Paso Flores** 1.9nm,0.8s,mb4.1,baz=83,slow=4.8,SNR=5.8	**33.24**	**285**	P		**P**	**22 01 18.4**	**+0.3**
CFAA	**Coronel Fontan** 0.3nm,0.5s,mb3.3,baz=154,slow=7.9,SNR=7.9	**39.55**	**297**	P		**P**	**22 02 12.2**	**0.0**
VNDA	**Vanda** 1.1nm,0.8s,mb3.6,baz=190,slow=7.0,SNR=7.1	**42.73**	**183**	P		**P**	**22 02 40.8**	**+2.9**
BOSA	**Boshof** comp=Z,26nm,20.1s,MS3.2,baz=2.4,slow=31	**46.67**	**72**	LR		LR	22 18 26.8	
LPAZ	**La Paz** 1.1nm,0.5s,mb4.0,baz=117,slow=6.8,SNR=3.1	**52.97**	**307**	P		**P**	**22 03 58.9**	**+1.1**
LSZ	**Lusaka** 3.1nm,1.1s,mb4.2	**59.49**	**66**	*e*P		**P**	**22 04 44.5**	**+0.2**
TOA0	**Torodi Ar. Sit**	**76.25**	**28**	*e*P		**P**	**22 06 29.5**	**-0.1**
TORD	**Torodi Ar. Bea** 1.0nm,0.4s,mb4.1,baz=197,slow=6.2,SNR=27	**76.25**	**28**	P		**P**	**22 06 29.4**	**-0.2**
ASAR	**Alice Springs** 0.4nm,0.5s,mb4.1,baz=183,slow=3.7,S

TKM2				*e*Sn		**Sn**	**22 17 11.2**	**-1.6**
SMLA	**Simla**	**7.80**	**131**	*e*P		**Pn**	**22 15 49.6**	**+0.1**
SMLA				*i* S		**Sn**	**22 17 13.1**	**-4.3**
KLP	**Kalpa**	**8.22**	**125**	*e*P		**Pn**	**22 15 57.0**	**+2.0**
KLP				*e*S		**Sn**	**22 17 22.8**	**-4.6**
KLP				AML		AML	22 17 26.0	
	comp=E,116nm,0.5s							
KLP				AML		AML	22 17 28.4	
	comp=N,100nm,0.4s							
DDI	**Dehra Dun**	**8.91**	**131**	*ex*		x	22 17 23.0	
DDI				*ex*		x	22 17 23.0	
KHET	**Khetri**	**9.57**	**150**	*e*S		**Sn**	**22 17 53.1**	**-6.6**
KHET				AML		AML	22 17 54.2	
	comp=N,24nm,0.5s							
KHET				AML		AML	22 17 54.5	
	comp=E,33nm,0.4s							
NDI	**New Delhi**	**9.70**	**141**	*ex*		x	22 17 52.0	
JOSI	**Joshimath**	**9.70**	**125**	*e*P		**Pn**	**22 16 12.7**	**-1.6**
JOSI				*e*S		**Sn**	**22 17 52.1**	**-11**
JOSI				AML		AML	22 18 04.8	
	comp=N,73nm,0.8s							
JOSI				AML		AML	22 18 07.4	
	comp=E,88nm,0.7s							
KUDL	**Kundal**	**9.80**	**146**	*e*P		**Pn**	**22 16 18.6**	**+3.0**
KUDL				*e*S		**Sn**	**22 17 56.4**	**-8.8**
PYUN	**Piuthan**	**13.57**	**124**	*e*P		**Pn**	**22 17 03.1**	**-0.5**
	comp=E,10.0nm,0.4s							
MK31	**Makanchi Array**	**13.63**	**37**	P		**Pn**	**22 17 07.9**	**+3.7**
	comp=E,1.1nm,0.7s,baz=210,slow=11,SNR=12							
MK31	**Makanchi Array**	**13.63**	**37**	*e*Pn		**Pn**	**22 17 04.0**	**-0.1**
MK31				*e*Sn		**Sn**	**22 19 38.2**	**+2.0**
MKAR	**Makanchi Array**	**13.63**	**37**	P		**Pn**	**22 17 04.5**	**+0.4**
	comp=E,0.2nm,0.3s,baz=212,slow=14,SNR=10							
DANN	**Dangsing**	**13.93**	**122**	*e*P		**Pn**	**22 17 08.0**	**0.0**
KOLN	**Koldanda**	**14.19**	**124**	*e*P		**Pn**	**22 17 11.0**	**-0.3**
GKN	**Gorkha**	**14.75**	**121**	*e*P		**Pn**	**22 17 17.9**	**-0.2**
	comp=E,15nm,0.4s							
AB01	**Akbulak array**	**14.85**	**333**	⇓P		**Pn**	**22 17 17.4**	**-1.7**
	comp=E,1.2nm,0.5s							
AB01				⇓S		**Sn**	**22 19 56.1**	**-9.0**
DMN	**Daman**	**15.32**	**121**	*e*P		**Pn**	**22 17 24.4**	**-0.7**
KKN	**Kakani**	**15.33**	**120**	*e*P		**Pn**	**22 17 24.6**	**-0.6**
	comp=E,13nm,0.3s							
KURK	**Kurchatov**	**15.44**	**20**	P		**Pn**	**22 17 24.2**	**-2.0**
	comp=E,0.1nm,0.3s,baz=212,slow=10,SNR=2.7							
KURK	**Kurchatov**	**15.44**	**20**	*e*P		**Pn**	**22 17 27.1**	**+0.9**
	comp=E,0.5nm,0.3s							
PKIN	**Phulchoki**	**15.54**	**121**	*e*P		**Pn**	**22 17 28.5**	**+0.7**
	comp=E,17nm,0.4s							
PKI	**Pulchoki**	**15.55**	**121**	*e*P		**Pn**	**22 17 28.2**	**+0.3**
GUN	**Gumba**	**15.68**	**119**	*e*P		**Pn**	**22 17 29.9**	**+0.5**
JIRN	**Jiri**	**16.05**	**119**	*e*P		**Pn**	**22 17 33.6**	**-0.3**
	comp=E,54nm,0.6s							
VOSK	**Vostochnaya**	**16.25**	**1**	⇑P		**Pn**	**22 17 35.2**	**-0.8**
	comp=E,2.2nm,0.8s							
AKTK	**Aktyubinsk**	**16.54**	**331**	P		**Pn**	**22 17 40.0**	**+0.5**
AKTO	**Aktyubinsk**	**16.54**	**331**	P		**Pn**	**22 17 40.0**	**+0.5**
	comp=E,0.5nm,0.3s,baz=145,slow=10,SNR=35							
BVA0	**Borovoye Array**	**16.55**	**0**	⇑P		**Pn**	**22 17 39.3**	**-0.3**
	comp=E,0.8nm,0.9s,baz=166,slow=13,SNR=8.1							
BVAR	**Borovoye Array**	**16.55**	**0**	P		**Pn**	**22 17 40.1**	**+0.5**
	comp=E,0.5nm,0.3s,baz=167,slow=14,SNR=10							
BRVK	**Borovoye**	**16.58**	**360**	*e*P		**Pn**	**22 17 39.9**	**-0.1**
	comp=E,3.3nm,0.6s							
RAMN	**Ramite**	**16.77**	**120**	*e*P		**Pn**	**22 17 41.9**	**-0.6**
	comp=E,27nm,0.6s							
TAPN	**Taplejung**	**17.32**	**117**	*e*P		**Pn**	**22 17 48.5**	**-0.5**
	comp=E,16nm,0.7s							
ODAN	**Odare**	**17.38**	**119**	*e*P		**Pn**	**22 17 49.8**	**+0.1**
	comp=E,22nm,0.7s							
LSA	**Lhasa**	**18.69**	**105**	*e*P		**P**	**22 18 02.6**	**+0.3**
	comp=E,3.1nm,0.6s							
ZALV	**Zalesovo Beam**	**20.17**	**25**	P		**P**	**22 18 18.3**	**+0.4**
	comp=E,1.5nm,0.4s,baz=217,slow=11,SNR=7.0							
ZALV	**Zalesovo Beam**	**20.17**	**25**	P		**P**	**22 18 18.3**	**+0.4**
GNI	**Garni**	**20.39**	**288**	P		**P**	**22 18 20.2**	**-0.2**
SONM	**Songino Array**	**28.80**	**55**	P		**P**	**22 19 39.4**	**+1.2**
	comp=E,0.2nm,0.4s,mb3.1,baz=260,slow=8.9,SNR=2.6							
SONM	**Songino Array**	**28.80**	**55**	P		**P**	**22 19 39.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**30.92**	**118**	P		**P**	**22 19 57.9**	**+0.7**
	comp=E,0.3nm,0.6s,mb3.1,baz=292,slow=8.4,SNR=4.3							
TIRR	**Tirgusor**	**32.58**	**297**	P		**P**	**22 20 11.3**	**-0.1**
KEV	**Kevo**	**40.63**	**338**	P		**P**	**22 21 19.1**	**+0.1**
ARCES	**ARCESS Array B**	**40.96**	**338**	P		**P**	**22 21 22.7**	**+0.9**
	comp=E,2.9nm,0.7s,mb3.8,baz=97,slow=6.3,SNR=8.3							
ARCES	**ARCESS Array B**	**40.96**	**338**	P		**P**	**22 21 22.7**	**+0.9**
NOA	**NORSAR Array B**	**44.08**	**323**	P		**P**	**22 21 47.0**	**+0.1**
	comp=E,0.7nm,0.8s,mb3.0,baz=99,slow=7.7,SNR=2.9							
TORD	**Torodi Ar. Bea**	**65.17**	**268**	P		**P**	**22 24 18.7**	**-0.4**
	comp=E,0.2nm,0.4s,mb3.1,baz=51,slow=5.7,SNR=5.6							
WRA	**Warramunga Arr**	**82.44**	**121**	P		**P**	**22 25 57.4**	**-1.8**
	comp=E,0.4nm,0.8s,mb3.1,baz=319,slow=4.2,SNR=4.7							

ISCJB ***20*** *22:14:59.4±0.9, 30N±02×1282E±04, h37km, mb3.9/8, Error ellipse: s-maj=61.2km s-min=9.6km az=154.4*
IDC ***20*** *22:15:01.4±1.3, 297N×12832E, h37km±6km, mb3.7/6, mb1 3.7/6, mb1mx3.5/19, mbtmp3.7/6, Error ellipse: s-maj=101.9km s-min=14.4km az=69.0*
NEIC ***20*** *22:15:01.5±0.6, 284N×12810E, mb4.4/3, Error ellipse: s-maj=46.2km s-min=7.2km az=64.0*
ISC 20 22:15:01.6±0.9, 28N±02×1281E±04, h39km, h39km±1.2km:pP-P, n16, σ0§67/16, mb3.9/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRAB	**Tennant Creek**	**23.45**	**165**	*e*P		**P**	**22 20 08.0**	**+0.3**
	2.3nm,0.8s,mb3.7							
WRA	**Warramunga Arr**	**23.45**	**165**	P		**P**	**22 20 07.7**	**-0.1**
	0.8nm,0.6s,mb3.3,baz=346,slow=10,SNR=8.8							
WRA				pP			22 20 18.8	
	1.4nm,0.6s,baz=345,slow=11,SNR=6.5							
WB2	**Warramunga Arr**	**23.45**	**165**	*e*P		**P**	**22 20 07.6**	**-0.1**
QIZ	**Qiongzhong**	**24.04**	**313**	P		**P**	**22 20 12.2**	**-1.0**
ASAR	**Alice Springs**	**26.94**	**168**	P		**P**	**22 20 40.1**	**+0.7**
	0.4nm,0.5s,mb3.2,baz=360,slow=7.8,SNR=6.8							
ASAR				pP		pP	22 20 50.9	+0.6
	0.6nm,0.6s,baz=353,slow=8.3,SNR=3.4							
CM31	**Chiang Mai Arr**	**32.50**	**301**	P		**P**	**22 21 28.7**	**-0.1**
STKA	**Stephens Creek**	**36.83**	**161**	P		**P**	**22 22 05.2**	**-0.8**
MK31	**Makanchi Array**	**59.07**	**325**	*e*P		**P**	**22 24 58.0**	**+0.2**
MK31				*e*		pP	22 25 09.2	-0.2
MKAR	**Makanchi Array**	**59.07**	**325**	P		**P**	**22 24 58.3**	**+0.5**
	1.9nm,0.4s,mb4.5,baz=112,slow=8.1,SNR=69							
MKAR				pP		pP	22 25 09.4	0.0
	1.0nm,0.4s,baz=114,slow=8.1,SNR=9.1							
UCH	**Uchtor**	**61.75**	**317**	P		**P**	**22 25 18.0**	**+1.8**
ZALV	**Zalesovo Beam**	**62.00**	**333**	P		**P**	**22 25 17.9**	**+0.2**
	0.4nm,0.3s,mb4.0,baz=128,slow=6.9,SNR=2.4							
KURK	**Kurchatov**	**63.23**	**327**	P		**P**	**22 25 26.0**	**+0.1**
	2.1nm,0.7s,mb4.4,baz=122,slow=6.3,SNR=7.1							
KURK				pP		pP	22 25 36.4	-1.2
	1.6nm,0.6s,baz=127,slow=6.2,SNR=4.0							
KURK	**Kurchatov**	**63.23**	**327**	*e*P		**P**	**22 25 25.7**	**-0.1**
	2.1nm,0.4s,mb4.6							
KURK				*e*		pP	22 25 36.8	-0.8
BVAR	**Borovoye Array**	**68.81**	**327**	P		**P**	**22 26 01.7**	**0.0**
	0.6nm,0.4s,mb3.9,baz=122,slow=6.5,SNR=5.0							
BRVK	**Borovoye**	**68.88**	**327**	*e*P		**P**	**22 26 01.7**	**-0.5**
	2.3nm,0.5s,mb4.4							
ARU	**Arti**	**76.42**	**328**	*e*P		**P**	**22 26 45.9**	**-1.0**

ISCJB ***20*** *22:30:22.1±1.3, 3169N±009×5024E±007, h13km±14km, Error ellipse: s-maj=14.9km s-min=9.4km az=167.1*
CSEM ***20*** *22:30:24.2±0.3, 3168N×5013E, h15km, ML3.4, Error ellipse: s-maj=7.9km s-min=5.5km az=133.0*
KISR ***20*** *22:30:25.3, 3165N×5007E, h33km, ML3.4*
THR ***20*** *22:30:26.5±0.3, 3203N×5008E, h14km±3km, ML3.2*
SGS ***20*** *22:30:27.6, 3152N×4981E, h13km*
ISC 20 22:30:23.2±1.5, 3167N±008×5016E±006, h2km±16km, n18, σ1§00/30, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.23**	**291**	*e*Pg		**Pg**	**22 30 46.7**	**-0.1**
SHGR				AML		AML	22 31 05.3	
	comp=N,803nm,0.6s							
SHGR				AML		AML	22 31 05.5	
	comp=E,1μm,0.2s							
NASN	**Na'in**	**2.51**	**63**	*e*Pn		**Pn**	**22 31 08.2**	**+3.2**
NASN				*e*Sg		**Sg**	**22 31 43.1**	**-0.9**
UMR	**Umm Al-Rimmam**	**2.98**	**226**	*e*P		**Pn**	**22 31 12.2**	**+0.8**
UMR				*e*S		**Sn**	**22 31 47.7**	**0.0**
	comp=E,150nm,0.3s							
UMR	**Umm Al-Rimmam**	**2.98**	**226**	*e*P		**Pn**	**22 31 12.2**	**+0.8**
	baz=225							
UMR				*e*S		**Sn**	**22 31 47.7**	**0.0**
	baz=225							
UMR				AML		AML	22 31 53.6	
	comp=E,151nm,0.3s,baz=225							
MIB	**Mutribah**	**3.06**	**233**	*e*P		**Pn**	**22 31 13.2**	**+0.7**
KBD	**Kabd**	**3.27**	**221**	*e*P		**Pn**	**22 31 16.7**	**+1.2**
KBD				*e*S		**Sn**	**22 31 54.6**	**-0.3**
	comp=E,80nm,0.4s							
KBD	**Kabd**	**3.27**	**221**	*e*P		**Pn**	**22 31 16.7**	**+1.3**
	baz=220							
KBD				*e*S		**Sn**	**22 31 54.6**	**-0.3**
	baz=220							
KBD				AML		AML	22 31 56.1	
	comp=E,80nm,0.4s,baz=220							
NAY	**Al-Naaiem**	**3.48**	**227**	*e*P		**Pn**	**22 31 19.2**	**+0.8**
NAY				*e*S		**Sn**	**22 31 59.4**	**-0.8**
	comp=E,42nm,0.4s							
NAY	**Al-Naaiem**	**3.48**	**227**	*e*P		**Pn**	**22 31 19.2**	**+0.8**
	baz=226							
NAY				*e*S		**Sn**	**22 31 59.4**	**-0.8**
	baz=226							
NAY				AML		AML	22 32 03.0	
	comp=E,42nm,0.4s,baz=226							
RDF	**Al-Radifah**	**3.54**	**220**	*e*P		**Pn**	**22 31 20.2**	**+1.0**
RDF				*e*S		**Sn**	**22 32 00.9**	**-0.7**
	comp=E,126nm,0.4s							
RDF	**Al-Radifah**	**3.54**	**220**	*e*P		**Pn**	**22 31 20.2**	**+1.0**
	baz=219							
RDF				*e*S		**Sn**	**22 32 00.8**	**-0.8**
	baz=219							
RDF				AML		AML	22 32 05.7	
	comp=E,126nm,0.4s,baz=219							
KFJS		**3.97**	**210**	P		**Pn**	**22 31 25.5**	**+0.5**
SNGE	**Sanandaj**	**4.14**	**326**	*e*Pn		**Pn**	**22 31 27.1**	**-0.4**
SNGE				AML		AML	22 31 40.7	
	comp=N,18nm,0.5s							
ASYS		**6.55**	**232**	P		**Pn**	**22 31 57.8**	**-2.7**
ASYS		**6.55**	**232**	P		**Pn**	**22 31 57.8**	**-2.7**
ASYS				S		**Sn**	**22 33 07.9**	**-7.8**
BTHS		**7.62**	**175**	P		**Pn**	**22 32 15.4**	**+0.2**
BTHS		**7.62**	**175**	P		**Pn**	**22 32 15.4**	**+0.2**
BTHS				S		**Sn**	**22 33 32.1**	**-10**
LYLS		**9.94**	**196**	P		**Pn**	**22 32 45.7**	**-1.3**
LYLS				S		**Sn**	**22 34 32.4**	**-6.7**

ISCJB ***20*** *22:38:29.8±0.8, 2289S±003×7081W±005, h31km±6km, mb4.4/18, MS3.7/3, Error ellipse: s-maj=7.2km s-min=5.3km az=179.8*
NEIC ***20*** *22:38:31.4, 2288S×7062W, h36km, mb4.8/8, ML4.3(GUC), After GUC.*
GUC ***20*** *22:38:31.0±2.1, 2289S×7067W, h33km±13km, ML4.4*
MOS ***20*** *22:38:31.1±1.9, 2281S×7068W, h33km, mb4.8/6, Error ellipse: s-maj=19.4km s-min=9.1km az=97.3*
IDC ***20*** *22:38:32.2±3.4, 2288S×7049W, h27km±22km, mb4.1/10, mb1 4.2/12, mb1mx4.1/18, mbtmp4.1/12, ML3.2/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=21.2km s-min=18.9km az=85.0*
BJI ***20*** *22:38:34.4, 2290S×7060W, h35km, mB5.0, Ms5.5, Msz5.2*
ISC 20 22:38:31.1±0.8, 2288S±003×7072W±005, h26km±5km, h23km±1.4km:pP-P, n95, σ1§37/83, mb4.4/18, MS3.7/3, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.33**	**132**	⇓*i*P		**Pb**	**22 38 38.5**	**-0.2**
MECH				*i* S		**Sb**	**22 38 44.3**	**+0.3**
MECH				AML		AML	22 38 45.2	
	comp=N,100μm,0.4s							
CEN1	**Los Morros**	**0.70**	**137**	⇑*i*P		**Pb**	**22 38 45.2**	**+0.5**
CEN1				*i* S		**Sb**	**22 38 55.5**	**+1.6**
CEN1				AML		AML	22 38 58.3	
	comp=E,19μm,0.6s							
ANCH	**Antofagasta**	**0.85**	**161**	⇓*i*P		**Pb**	**22 38 46.4**	**-0.9**
PB06	**Plate Boundary**	**1.07**	**81**	*i* P		**Pn**	**22 38 49.2**	**-1.2**
PB06				*i* S		**Sn**	**22 39 03.2**	**-1.2**
PB04	**Plate Boundary**	**1.29**	**62**	*e*P		**Pn**	**22 38 44.6**	**-8.9**
PB04				*i* S		**Sn**	**22 38 55.7**	**-14**
PB04				AML		AML	22 38 58.1	
	comp=N,30μm,0.4s							
PB07	**Plate Boundary**	**1.38**	**34**	⇑*i*P		**Pn**	**22 38 54.7**	**0.0**
PB07				*i* S		**Sn**	**22 39 12.9**	**+0.8**
LVC	**Limon Verde**	**1.69**	**81**	Pg		**Pn**	**22 39 00.1**	**+1.1**
	comp=N,577nm,0.3s,baz=254,slow=11,SNR=1471							
LVC				Lg			22 39 20.1	
	comp=N,716nm,0.3s,baz=106,slow=7.9,SNR=58							
LVC	**Limon Verde**	**1.69**	**81**	*e*Pn		**Pn**	**22 38 59.6**	**+0.6**
LVC	**Limon Verde**	**1.69**	**81**	⇓*i*P		**Pn**	**22 38 59.6**	**+0.7**
LVC				*i* S		**Sn**	**22 39 21.5**	**+1.8**
LVC				AML		AML	22 39 23.5	
	comp=N,4μm,0.8s							
PB01	**Plate Boundary**	**2.15**	**32**	*e*P		**Pn**	**22 39 06.3**	**+1.0**
PB01				*i* S		**Sn**	**22 39 35.2**	**+4.0**
PB01				AML		AML	22 39 39.1	
	comp=E,6μm,0.6s							
LCO	**Las Campanas**	**6.11**	**180**	*e*Pn		**Pn**	**22 39 57.2**	**-2.5**
	comp=E,52nm,0.6s							
LCO				*e*Sn		**Sn**	**22 41 07.6**	**-1.1**
ARE	**Arequipa**	**6.42**	**353**	⇓*i*P		**Pn**	**22 40 03.9**	**-0.2**
ARE				*e*S		**Sn**	**22 41 15.0**	**-1.6**
LPAZ	**La Paz**	**7.00**	**21**	Pn		**Pn**	**22 40 15.0**	**+3.0**
	comp=E,1.3nm,0.3s,baz=204,slow=6.0,SNR=16							
LPAZ				LR		LR	22 43 10.3	
	comp=E,666nm,18.4s,baz=203,slow=40							
CFAA	**Coronel Fontan**	**8.97**	**166**	Pn		**Pn**	**22 40 38.2**	**-0.7**
	comp=E,0.1nm,0.3s,baz=335,slow=13,SNR=5.4							
CFAA				Sn		**Sn**	**22 42 33.5**	**+14**
	comp=E,0.1nm,0.3s,baz=194,slow=20,SNR=7.4							
CFAA				LR		LR	22 44 14.1	
	comp=E,66nm,20.5s,baz=332,slow=38							
SIV	**San Ignacio**	**11.39**	**55**	Pn		**Pn**	**22 41 10.3**	**-1.8**
	comp=E,1.9nm,0.3s,baz=244,slow=14,SNR=56							
PLCA	**Paso Flores**	**17.80**	**180**	P		**Pn**	**22 42 36.3**	**-0.7**
	comp=E,0.0nm,0.3s,baz=3.3,slow=12,SNR=2.4							
PLCA				LR		LR	22 48 48.7	
	comp=E,171nm,20.8s,baz=1.0,slow=35							
PLCA	**Paso Flores**	**17.80**	**180**	*e*Pn		**Pn**	**22 42 35.8**	**-1.2**
	comp=E,2.8nm,0.6s							
PLCA				LR		LR	22 48 48.7	
PLCA	**Paso Flores**	**17.80**	**180**	*e*P		**Pn**	**22 42 35.8**	**-1.2**
PLCA				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BDFB	**Brasilia**	**22.59**	**75**	P		**P**	**22 43 28.0**	**-1.7**
	comp=Z,1.7nm,0.5s,mb3.7,baz=246,slow=17,SNR=6.6							
BDFB				LR		LR	22 54 04.9	
	comp=Z,8.0nm,21.8s,baz=73,slow=42							
BDFB	**Brasilia**	**22.59**	**75**	*e*P		**P**	**22 43 28.2**	**-1.6**
BDFB				LR		LR	22 54 04.9	
ROSC	**El Rosal**	**27.79**	**352**	LR		LR	22 54 36.3	
	comp=Z,92nm,18.3s,MS3.4,baz=189,slow=35							
SDV	**Santo Domingo**	**31.57**	**0**	LR		LR	22 59 15.4	
	comp=Z,154nm,19.1s,MS3.7,baz=277,slow=39							
RCBR	**Riachuelo**	**37.60**	**69**	*e*P		**P**	**22 45 43.8**	**-0.1**
	comp=Z,20nm,0.7s,mb5.0							
MTP	**Monte Pirata**	**41.04**	**7**	P		**P**	**22 46 10.4**	**-2.0**
PMSA	**Palmer Station**	**42.11**	**176**	P		**P**	**22 46 18.4**	**-2.3**
DWPF	**Disney**	**51.73**	**348**	*e*P		**P**	**22 47 35.0**	**-1.4**
VNA3	**Neumayer Olymp**	**59.32**	**161**	*e*P		**P**	**22 48 31.3**	**+0.9**
VNA3				*e*		pP	22 48 38.8	+0.3
CPCT	**Cooper Cave**	**59.47**	**347**	*e*P		**P**	**22 48 32.0**	**+0.3**
TKL	**Tuckaleechee C**	**59.52**	**348**	*e*P		**P**	**22 48 29.7**	**-2.4**
SWET	**Sewanee**	**59.55**	**346**	*e*P		**P**	**22 48 33.0**	**+0.7**
VNA1	**Neumayer--Stat**	**59.56**	**160**	*e*P		**P**	**22 48 33.9**	**+1.9**
VNA1				*e*		pP	22 48 41.0	+0.8
OXF	**Oxford**	**59.77**	**342**	P		**P**	**22 48 32.6**	**-1.2**
VNA2	**Neumayer--Watz**	**59.92**	**160**	*e*P		**P**	**22 48 35.6**	**+1.1**
	baz=286,slow=8.9							
VNA2				*e*		pP	22 48 43.0	+0.4
JCT	**Junction City**	**59.95**	**331**	*e*P		**P**	**22 48 37.5**	**+2.3**
	comp=Z,6.1nm,0.8s,mb4.7							
JCT	**Junction City**	**59.95**	**331**	*e*P		**P**	**22 48 37.5**	**+2.3**
JCT				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
TXAR	**Lajitas Array**	**60.83**	**327**	P		**P**	**22 48 43.3**	**+2.1**
	comp=Z,0.5nm,0.6s,mb3.9,baz=147,slow=9.0,SNR=5.9							
WVT	**Waverly**	**60.88**	**344**	*e*P		**P**	**22 48 41.6**	**+0.2**
	comp=Z,8.6nm,1.0s,mb4.8							
WVT				*e*pP		pP	22 48 47.3	-2.2
WVT	**Waverly**	**60.88**	**344**	*e*P		**P**	**22 48 41.6**	**+0.2**
WVT				*e**PP		pP	22 48 47.3	-2.3
WVT				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.8							
MIAR	**Mount Ida**	**61.10**	**339**	*e*P		**P**	**22 48 41.0**	**-1.9**
SNAA	**Sanae**	**61.54**	**161**	*e*P		**P**	**22 48 44.1**	**-1.4**
	comp=Z,5.6nm,0.7s,mb4.8							
SNAA	**Sanae**	**61.54**	**161**	*e*P		**P**	**22 48 44.1**	**-1.4**
SNAA				pmax		pmax		
	comp=Z,6.0nm,0.7s							
SIUC	**Southern Illin**	**62.73**	**344**	*e*P		**P**	**22 48 52.3**	**-1.6**
WMOK	**Wichita Mounta**	**63.19**	**334**	P		**P**	**22 48 56.1**	**-0.9**
FVM	**French Village**	**63.31**	**343**	*e*P		**P**	**22 48 58.5**	**+0.8**
	comp=Z,9.5nm,0.8s,mb5.0							
FVM				*e*pP		pP	22 49 04.8	-1.1
FVM	**French Village**	**63.31**	**343**	*e*P		**P**	**22 48 58.5**	**+0.8**
FVM				*e**PP		pP	22 49 04.8	-1.1
FVM				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb5.0							
CCM	**Cathedral Cave**	**63.61**	**342**	*e*P		**P**	**22 49 00.5**	**+0.8**
ACSO	**Alum Creek Sta**	**63.81**	**350**	*e*P		**P**	**22 49 00.2**	**-0.8**
ANMO	**Albuquerque**	**66.77**	**329**	*e*P		**P**	**22 49 21.0**	**+0.7**
QSPA	**South Pole Qui**	**67.32**	**180**	*e*P		**P**	**22 49 25.6**	**+2.4**
	comp=Z,12nm,1.2s,mb4.8							
SDCO	**Great Sand Dun**	**68.60**	**331**	*e*P		**P**	**22 49 28.6**	**-3.1**
	comp=Z,9.6nm,1.4s,mb4.5							
ECSD	**EROS,Sioux Fal**	**70.42**	**340**	*e*P		**P**	**22 49 42.3**	**-0.5**
	comp=Z,4.8nm,1.0s,mb4.4							
DBIC	**Dimbokro**	**70.73**	**74**	P		**P**	**22 49 45.5**	**0.0**
	comp=Z,9.0nm,1.0s,mb4.7,baz=248,slow=9.4,SNR=9.0							
DBIC				LR		LR	23 18 01.1	
	comp=Z,85nm,19.4s,MS4.0,baz=356,slow=34							
DBIC	**Dimbokro**	**70.73**	**74**	*e*P		**P**	**22 49 45.1**	**-0.3**
DBIC				LR		LR	23 18 01.1	
MSU	**Marysvale**	**72.39**	**327**	*e*P		**P**	**22 49 55.0**	**+0.1**
RSSD	**Black Hills**	**73.33**	**336**	*e*P		**P**	**22 50 02.5**	**+2.2**
HWUT	**Hardware Ranch**	**74.49**	**329**	*e*P		**P**	**22 50 05.7**	**-1.4**
PDAR	**Pinedale Array**	**74.49**	**331**	P		**P**	**22 50 09.4**	**+2.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=122,slow=4.8,SNR=2.4							
VNDA	**Vanda**	**75.20**	**190**	P		**P**	**22 50 12.6**	**+1.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=123,slow=2.6,SNR=3.8							
NVAR	**Mina Array Bea**	**75.56**	**323**	P		**P**	**22 50 15.9**	**+2.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=156,slow=6.7,SNR=2.9							
RRI2	**Red Ridge**	**75.73**	**331**	*e*P		**P**	**22 50 16.2**	**+1.9**
SYO	**Syowa Base**	**75.80**	**160**	⇑*e*X			22 50 08.4	
ULM	**Lac du Bonnet**	**76.14**	**344**	P		**P**	**22 50 16.9**	**+0.5**
	comp=Z,2.9nm,0.4s,mb4.6,baz=146,slow=3.6,SNR=3.2							
ULM	**Lac du Bonnet**	**76.14**	**344**	P		**P**	**22 50 16.9**	**+0.5**
HLID	**Hailey**	**77.33**	**329**	*e*P		**P**	**22 50 19.8**	**-3.6**
SCHQ	**Schefferville**	**77.46**	**2**	*e*P		**P**	**22 50 21.8**	**-2.0**
MCMT	**McKenzie Canyo**	**77.58**	**331**	P		**P**	**22 50 26.2**	**+1.5**
TOA0	**Torodi Ar. Sit**	**79.39**	**71**	*e*P		**P**	**22 50 35.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**79.39**	**71**	P		**P**	**22 50 35.1**	**-0.3**
	comp=Z,9.1nm,0.7s,mb4.8,baz=254,slow=5.1,SNR=96							
TSUM	**Tsumeb**	**81.25**	**107**	*e*P		**P**	**22 50 46.5**	**+1.1**
WALA	**Waterton Lakes**	**81.31**	**333**	*e*P		**P**	**22 50 45.8**	**+0.9**
OD2	**Odessa Site #2**	**82.20**	**329**	*e*P		**P**	**22 50 51.2**	**+1.5**
MAW	**Mawson**	**83.49**	**164**	P		**P**	**22 50 57.4**	**+1.2**
	comp=Z,2.2nm,0.9s,mb4.6,baz=197,slow=3.8,SNR=6.8							
BOSA	**Boshof**	**84.27**	**118**	P		**P**

PKI	**Pulchoki**	**6.88**	**189**	*e*P		**Pn**	**22 41 55.8**	**+0.3**
	comp=Z,138nm,0.6s							
DMN	**Daman**	**6.89**	**192**	*e*P		**Pn**	**22 41 55.8**	**+0.2**
	comp=Z,48nm,0.4s							
PYUN	**Piuthan**	**7.02**	**208**	*e*P		**Pn**	**22 41 56.7**	**-0.7**
	comp=Z,110nm,0.8s							
TAPN	**Taplejung**	**7.07**	**173**	*e*P		**Pn**	**22 41 58.4**	**+0.3**
	comp=Z,78nm,0.5s							
KOLN	**Koldanda**	**7.11**	**203**	*e*P		**Pn**	**22 41 58.8**	**+0.2**
	comp=Z,43nm,0.6s							
LGTI	**Lohaghat**	**7.36**	**230**	*ex*		**Pn**	**22 42 03.5**	**+1.5**
RAMN	**Ramite**	**7.41**	**181**	*e*P		**Pn**	**22 42 02.0**	**-0.8**
	comp=Z,55nm,0.6s							
ODAN	**Odare**	**7.53**	**175**	*e*P		**Pn**	**22 42 03.6**	**-0.7**
	comp=Z,64nm,0.5s							
SMLA	**Simla**	**8.65**	**251**	*i* P		**Pn**	**22 42 18.2**	**-1.4**
WMQ	**Urumqi**	**9.45**	**4**	*e*P		**Pn**	**22 42 31.4**	**+0.7**
SHL	**Shillong**	**9.88**	**151**	*e*P		**Pn**	**22 42 37.0**	**+0.5**
GTA	**Gaotai**	**11.64**	**61**	*e*P		**Pn**	**22 43 04.8**	**+4.2**
GTA					AP		22 43 12.1	
GTA					XP		22 43 15.0	
GTA					AMB	AMB		
	comp=Z,5.0nm,0.9s							
GTA					LR	LR		
	comp=N,1μm,10.4s							
GTA					LR	LR		
	comp=E,424nm,9.8s							
GTA					LR	LR		
	comp=Z,432nm,14.6s							
TKM2	**Tokmak 2**	**12.14**	**318**	*e*Pn		**Pn**	**22 43 06.7**	**-0.8**
UCH	**Uchtor**	**12.35**	**313**	*e*Pn		**Pn**	**22 43 11.2**	**+1.0**
AML	**Almayashu**	**12.79**	**311**	*e*Pn		**Pn**	**22 43 15.4**	**-1.0**
MK31	**Makanchi Array**	**12.83**	**346**	*e*Pn		**Pn**	**22 43 16.4**	**-0.4**
MKAR	**Makanchi Array**	**12.83**	**346**	Pn		**Pn**	**22 43 16.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=159,slow=15,SNR=31							
MKAR					LR	LR	22 48 59.1	
	comp=Z,57nm,19.5s,baz=163,slow=41							
EKS2	**Erkin-Say**	**13.04**	**313**	*e*Pn		**Pn**	**22 43 19.1**	**-0.6**
KBL	**Kabul**	**14.56**	**276**	*e*Pn		**Pn**	**22 43 37.0**	**-3.4**
	comp=Z,25nm,0.9s							
KBL	**Kabul**	**14.56**	**276**	*e*P		**Pn**	**22 43 37.0**	**-3.4**
KBL					pmax	pmax		
	comp=Z,25nm,0.9s							
KMI	**Kunming**	**16.70**	**119**	P		**Pn**	**22 44 06.5**	**-1.6**
KMI					AP	pP	22 44 12.0	-8.2
KMI					PP		22 44 17.4	
KMI					AMB	AMB		
	comp=Z,5.0nm,1.1s							
KMI					AMB	AMB		
	comp=Z,122nm,4.6s							
KMI					LR	LR		
	comp=N,287nm,12.5s							
KMI					LR	LR		
	comp=E,208nm,14.2s							
KMI					LR	LR		
	comp=Z,245nm,10.4s							
KURK	**Kurchatov**	**17.35**	**343**	P		**Pn**	**22 44 13.9**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=156,slow=11,SNR=16							
KURK					LR	LR	22 52 44.1	
	comp=Z,29nm,20.8s,baz=205,slow=43							
KURK	**Kurchatov**	**17.35**	**343**	*e*Pn		**Pn**	**22 44 14.3**	**-1.6**
KURK					LR	LR	22 52 44.1	
XAN	**Xi'an**	**18.40**	**85**	P		**Pn**	**22 44 28.0**	**-0.9**
XAN					AMB	AMB		
	comp=Z,4.0nm,1.3s							
XAN					AMB	AMB		
	comp=Z,133nm,4.8s							
HYB	**Hyderabad**	**18.40**	**205**	*i* P		**Pn**	**22 44 25.0**	**-4.0**
GYA	**Guiyang**	**18.94**	**109**	P		**Pn**	**22 44 33.9**	**-1.6**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s							
CHTO	**Chiang Mai**	**18.97**	**142**	*e*P		**Pn**	**22 44 34.3**	**-1.6**
	comp=Z,4.2nm,0.9s							
CHTO	**Chiang Mai**	**18.97**	**142**	*e*P		**Pn**	**22 44 34.3**	**-1.6**
CHTO					pmax	pmax		
	comp=Z,4.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**19.27**	**142**	P		**Pn**	**22 44 36.5**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=309,slow=6.8,SNR=5.0							
ZAA0	**Zalesovo Array**	**19.60**	**357**	*e*P		**Pn**	**22 44 42.4**	**-0.7**
ZALV	**Zalesovo Beam**	**19.60**	**357**	P		**Pn**	**22 44 42.6**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=179,slow=9.6,SNR=23							
ZALV					LR	LR	22 53 40.0	
	comp=Z,201nm,18.2s,baz=331,slow=41							
SONM	**Songino Array**	**19.95**	**42**	P		**Pn**	**22 44 46.6**	**-0.7**
	comp=Z,9.1nm,0.9s,baz=232,slow=12,SNR=50							
SONM					LR	LR	22 53 12.8	
	comp=Z,246nm,19.0s,baz=236,slow=39							
ZAK	**Zakamensk**	**20.07**	**32**	*e*P		**P**	**22 44 49.0**	**+2.3**
ZAK					pmax	pmax		
	comp=Z,9.0nm,1.2s							
MOY	**Mondy**	**20.13**	**27**	*e*P		**P**	**22 44 49.7**	**+2.4**
ULN	**Ulaanbaatar**	**20.33**	**42**	*e*P		**P**	**22 44 51.6**	**+2.1**
	comp=Z,22nm,0.9s							
ULN	**Ulaanbaatar**	**20.33**	**42**	*e*P		**P**	**22 44 51.6**	**+2.0**
ULN					pmax	pmax		
	comp=Z,22nm,0.9s							
NVS	**Novosibirsk**	**20.59**	**354**	*i* P		**P**	**22 44 51.7**	**-0.6**
NVS					pmax	pmax		
	comp=Z,32nm,1.0s							
NVS					pmax	pmax		
	comp=N,44nm,1.9s							
NVS					pmax	pmax		
	comp=E,15nm,1.9s							
BVAR	**Borovoye Array**	**21.95**	**333**	P		**P**	**22 45 08.6**	**+1.7**
	comp=E,4.5nm,1.0s,mb3.9,baz=138,slow=12,SNR=11							
BRVK	**Borovoye**	**22.01**	**333**	*e*P		**P**	**22 45 07.3**	**-0.3**
	comp=E,5.5nm,0.8s,mb4.0							
BRVK	**Borovoye**	**22.01**	**333**	*e*P		**P**	**22 45 07.3**	**-0.3**
BRVK					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1							
AKTK	**Aktyubinsk**	**26.33**	**316**	P		**P**	**22 45 51.0**	**+2.2**
AKTK					LR	LR	22 57 27.4	
AKTO	**Aktyubinsk**	**26.33**	**316**	P		**P**	**22 45 51.0**	**+2.2**
	comp=Z,3.3nm,0.8s,mb3.9,baz=107,slow=13,SNR=7.7							
AKTO					LR	LR	22 57 27.4	
	comp=Z,68nm,20.1s,MS3.2,baz=295,slow=39							
AKTO	**Aktyubinsk**	**26.33**	**316**	P		**P**	**22 45 51.0**	**+2.2**
AKTO					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9							
AKTO					MLR	MLR		
	comp=Z,68nm,20.1s,MS3.2							
CN2	**Changchun**	**31.28**	**61**	*e*P		**P**	**22 46 34.1**	**+1.2**
CN2					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6							
KSRS	**Korea Array**	**33.35**	**73**	P		**P**	**22 46 50.5**	**-0.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=291,slow=7.7,SNR=3.3							
KSRS	**Korea Array**	**33.35**	**73**	P		**P**	**22 46 50.6**	**-0.5**
KSRS					pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
KIV	**Kislovodsk**	**35.06**	**299**	*e*P		**P**	**22 47 04.7**	**-1.1**
KIV	**Kislovodsk**	**35.06**	**299**	*e*P		**P**	**22 47 04.7**	**-1.2**
JOW	**Kunigami**	**36.38**	**90**	LR		LR	23 03 40.8	
	comp=Z,66nm,19.4s,MS3.4,baz=106,slow=39							
OBN	**Obninsk**	**40.11**	**317**	P		**P**	**22 47 47.9**	**-0.4**
MJAR	**Matsushiro Arr**	**41.61**	**72**	P		**P**	**22 48 01.7**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.8,baz=297,slow=7.2,SNR=2.9							
BR131	**Keskin Array S**	**42.16**	**293**	*e*P		**P**	**22 48 04.8**	**-0.6**
BRTR	**Keskin Array B**	**42.16**	**293**	P		**P**	**22 48 09.9**	**+4.5**
	comp=Z,0.6nm,0.7s,mb3.3,baz=77,slow=8.2,SNR=2.3							
TIXI	**Tiksi**	**43.34**	**18**	*e*P		**P**	**22 48 14.9**	**+0.4**
	comp=Z,6.7nm,0.8s,mb4.4							
TIXI	**Tiksi**	**43.34**	**18**	*e*P		**P**	**22 48 13.8**	**-0.7**
TIXI					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3							
PSZ	**Piszkesteto**	**50.56**	**307**	P		**P**	**22 49 10.8**	**-0.4**
NB2	**NORSAR Subarra**	**53.69**	**324**	P		**P**	**22 49 34.1**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=84,slow=7.9							
NOA	**NORSAR Array B**	**53.69**	**324**	P		**P**	**22 49 34.2**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=84,slow=7.5,SNR=3.0							
NOA					LR	LR	23 14 58.4	
	comp=Z,30nm,19.2s,MS3.4,baz=60,slow=39							
NOA	**NORSAR Array B**	**53.69**	**324**	P		**P**	**22 49 34.2**	**-0.1**
NOA					LR	LR	23 14 58.4	
GERES	**GERESS Array B**	**54.41**	**309**	P		**P**	**22 49 40.7**	**+1.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=79,slow=6.9,SNR=7.6							
BATI	**Baumata**	**56.54**	**135**	LR		LR	23 15 39.1	
	comp=Z,774nm,21.4s,MS4.8,baz=307,slow=38							
WLF	**Walferdange**	**58.95**	**312**	*e*P		**P**	**22 50 12.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**64.02**	**138**	P		**P**	**22 50 46.1**	**-0.4**
	comp=Z,0.0nm,0.5s							
WRA	**Warramunga Arr**	**70.52**	**132**	P		**P**	**22 51 27.1**	**-0.5**
	comp=Z,2.5nm,0.6s,mb4.3,baz=326,slow=6.4,SNR=21							
WRA					LR	LR	23 26 40.6	
	comp=Z,438nm,18.3s,MS4.8,baz=295,slow=40							
ASAR	**Alice Springs**	**73.11**	**135**	P		**P**	**22 51 42.4**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.0,baz=324,slow=5.9,SNR=17							
LSZ	**Lusaka**	**74.34**	**239**	*e*P		**P**	**22 51 50.7**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.0							
TORD	**Torodi Ar. Bea**	**78.61**	**278**	P		**P**	**22 52 14.1**	**-0.7**
	comp=Z,1.6nm,0.8s,mb4.0,baz=51,slow=4.8,SNR=7.0							
BOSA	**Boshof**	**85.42**	**231**	P		**P**	**22 52 49.9**	**-0.3**
	comp=Z,2.7nm,0.7s,mb4.5,baz=8.7,slow=4.1,SNR=3.3							
DBIC	**Dimbokro**	**87.55**	**276**	P		**P**	**22 53 01.8**	**+0.8**
	comp=Z,3.6nm,0.9s,mb4.6,baz=94,slow=7.6,SNR=3.2							

ISCJB ***20*** *22:50:42.9±0.6, 5141N±003×1619E±003, h0km, Error ellipse: s-maj=4.6km s-min=2.8km az=18.5*
IPEC ***20*** *22:50:44.2±0.3, 5150N×1624E, h0km, ML2.1/3, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
WAR ***20*** *22:50:45.8, 5145N×1618E, ML2.5, Mining Induced*
CSEM ***20*** *22:50:45.6±0.2, 5142N×1616E, h0km, ML3.0/12, Error ellipse: s-maj=3.2km s-min=2.0km az=7.0*
PRU ***20*** *22:50:45.9, 5140N×1617E, h0km*

ISC 20 22:50:44.2±0.6, 5144N±003×1619E±003, h0km, n24, σ1§01/50, 7C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
KSP	**Ksiaz**	**0.60**	**174**	*e*Pg	**Pg**	**22**	**50**	**56.8**	**+1.1**
KSP				*e*Sg	**Sg**	**22**	**51**	**05.1**	**+1.6**
KSP	**Ksiaz**	**0.60**	**174**	*e*Pg	**Pg**	**22**	**50**	**56.7**	**+1.0**
KSP				*e*Sg	**Sg**	**22**	**51**	**04.9**	**+1.4**
UPC	**Upice**	**0.94**	**187**	*e*PG	**Pg**	**22**	**51**	**03.0**	**+0.8**
DPC	**Dobruska-Polom**	**1.10**	**176**	Pg	**Pg**	**22**	**51**	**05.8**	**+0.6**
DPC				*e*Sg	**Sg**	**22**	**51**	**19.9**	**+0.6**
DPC	**Dobruska-Polom**	**1.10**	**176**	*e*PG	**Pg**	**22**	**51**	**05.8**	**+0.6**
DPC				*e*SG	**Sg**	**22**	**51**	**20.0**	**+0.7**
	comp=Z,21nm,0.3s								
PVCC	**Panska Ves**	**1.37**	**229**	*e*Pg	**Pg**	**22**	**51**	**11.0**	**+0.5**
PVCC				*e*Sg	**Sg**	**22**	**51**	**29.0**	**+0.8**
PVCC	**Panska Ves**	**1.37**	**229**	*e*PG	**Pg**	**22**	**51**	**11.3**	**+0.8**
PRU	**Pruhonice**	**1.79**	**216**	*e*PG	**Pg**	**22**	**51**	**17.9**	**-0.6**
PRU				*e*SG	**Sg**	**22**	**51**	**41.6**	**-0.1**
	comp=Z,24nm,0.3s								
MORC	**Moravsky Berou**	**1.88**	**152**	*e*Pn	**Pn**	**22**	**51**	**17.6**	**+0.1**
MORC				*e*Sg	**Sg**	**22**	**51**	**44.3**	**-0.1**
	comp=Z,9.6nm,0.2s								
CLL	**Collm**	**2.00**	**267**	*i* Pn	**Pn**	**22**	**51**	**19.0**	**-0.2**
CLL				*i* Pg	**Pg**	**22**	**51**	**21.7**	**-0.8**
CLL				*ex*	x	22	51	23.0	
CLL				*e*Sg	**Sg**	**22**	**51**	**50.0**	**+1.6**
	comp=Z,11nm,0.6s								
OKC	**Ostrava-Krasne**	**2.03**	**141**	*e*PN	**Pn**	**22**	**51**	**19.1**	**-0.5**
OKC				*e*PG	**Pg**	**22**	**51**	**23.1**	**0.0**
OKC				*e*SG	**Sg**	**22**	**51**	**50.0**	**+0.6**
	comp=Z,15nm,0.9s								
VRAC	**Vranov**	**2.15**	**173**	*e*Pn	**Pn**	**22**	**51**	**22.3**	**+1.1**
VRAC				*e*Sg	**Sg**	**22**	**51**	**53.4**	**+0.2**
	comp=Z,13nm,0.5s								
KRUC	**Moravsky**	**2.39**	**177**	*e*Pn	**Pn**	**22**	**51**	**25.5**	**+1.0**
KRUC				*e*Sg	**Sg**	**22**	**52**	**01.0**	**+0.2**
	comp=Z,6.7nm,0.4s								
OJC	**Ojcow**	**2.60**	**117**	*e*Pg	**Pg**	**22**	**51**	**33.6**	**-0.3**
OJC				*e*Sg	**Sg**	**22**	**52**	**08.6**	**+1.1**
NKC	**Novy Kostel**	**2.66**	**244**	*e*PN	**Pn**	**22**	**51**	**29.1**	**+0.8**
NKC				*e*PG	**Pg**	**22**	**51**	**35.0**	**-0.2**
NKC				*e*SG	**Sg**	**22**	**52**	**09.4**	**-0.2**
	comp=Z,22nm,0.4s								
KHC	**Kasperske Hory**	**2.85**	**217**	*e*PN	**Pn**	**22**	**51**	**31.9**	**+1.0**
KHC				*e*PG	**Pg**	**22**	**51**	**36.8**	**-2.1**
KHC				*e*SN	**Sn**	**22**	**52**	**06.1**	**+0.1**
KHC				*e*SG	**Sg**	**22**	**52**	**14.5**	**-1.3**
	comp=Z,8.9nm,0.8s								
MOX	**Moxa**	**2.99**	**256**	*e*PG	**Pg**	**22**	**51**	**42.0**	**+0.5**
MOX				*e*SG	**Sg**	**22**	**52**	**22.4**	**+2.1**
NIE	**Niedzica**	**3.33**	**126**	*e*P	**Pg**	**22**	**51**	**47.2**	**-0.7**
NIE				*e*S	**Sg**	**22**	**52**	**30.6**	**-0.3**
CONA	**Conrad Observa**	**3.52**	**184**	⇓*i*Pn	**Pg**	**22**	**51**	**50.7**	**-0.9**
	comp=Z,1.2nm,0.3s								
CONA				⇑*e*Sg	**Sg**	**22**	**52**	**37.3**	**0.0**
	comp=Z,8.8nm,0.4s								
CSNA	**Conrad Observa**	**3.52**	**184**	⇓*i*Pn	**Pn**	**22**	**51**	**41.5**	**+1.4**
	comp=Z,0.3nm,0.1s								
CSNA				⇑*i*Sg	**Sg**	**22**	**52**	**37.3**	**0.0**
	comp=Z,3.9nm,0.2s								
BSD	**Bornholm Skovb**	**3.76**	**349**	*i* P	**Pn**	**22**	**51**	**42.2**	**-1.1**
BSD				*i* S	**Sn**	**22**	**52**	**24.7**	**-3.5**
MOA	**Molln**	**3.81**	**200**	⇑*i*Pn	**Pn**	**22**	**51**	**41.8**	**-2.2**
	comp=Z,0.5nm,0.1s								
MOA				⇑*i*Sg	**Sg**	**22**	**52**	**44.6**	**-1.8**
	comp=Z,4.3nm,0.3s								
ARSA	**Arzberg**	**4.22**	**186**	⇑*i*Pn	**Pg**	**22**	**52**	**03.7**	**-1.2**
ARSA				⇑*e*Sg	**Sg**	**22**	**52**	**57.5**	**-2.1**
	comp=Z,4.5nm,0.6s								
KBA	**Koelnbreinsper**	**4.75**	**204**	⇑*i*Sg	**Sg**	**22**	**53**	**15.6**	**-1.0**
	comp=Z,2.5nm,0.5s								

BJI ***20*** *22:59:22.4, 489S×10128E, h36km, mB5.4, mb5.5, Ms5.1, Msz4.9*
ISCJB ***20*** *22:59:25.7±0.2, 437S±002×10120E±002, h28km, mb5.4/132, MS4.8/58, Error ellipse: s-maj=3.8km s-min=3.0km az=34.1*
DJA ***20*** *22:59:26.3±0.0, 453S×10096E, h28km, mB5.8/19, Mjma4.9/12, MLv5.6/13, Mw(mB)5.4/19, Mwp4.7/23*
IDC ***20*** *22:59:27.2±0.3, 433S×10128E, h25km±1km, mb5.0/29, mb1 5.0/30, mb1mx5.0/31, mbtmp5.0/30, ML4.7/1, MS4.6/9, Ms1 4.6/9, ms1mx4.3/20, Error ellipse: s-maj=11.7km s-min=6.9km az=50.0*
MOS ***20*** *22:59:27.1±1.1, 422S×10132E, h33km, mb5.6/35, MS4.7/14, Error ellipse: s-maj=9.8km s-min=4.8km az=113.8*
NEIC ***20*** *22:59:28.6±0.1, 433S×10126E, h35km, mb5.4/29, Error ellipse: s-maj=5.1km s-min=4.0km az=52.0*

ISC 20 22:59:27.8±0.2, 439S±002×10119E±002, h29km, h29km±.5km: pP-P, n463, σ0§95/393, mb5.4/132, MS4.8/58, 52C-24D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
KSI	**Kapahiang**	**1.58**	**62**	P	**Pn**	**22**	**59**	**53.7**	**-0.1**
PDSI	**Padang**	**3.53**	**348**	P	**Pn**	**23**	**00**	**19.6**	**-1.1**
KLI	**Kotabumi**	**3.68**	**98**	P	**Pn**	**23**	**00**	**24.8**	**+2.0**
PMBI	**Palembang**	**3.86**	**68**	P	**Pn**	**23**	**00**	**26.3**	**+1.1**
PPI	**Padang Panjang**	**3.98**	**348**	P	**Pn**	**23**	**00**	**27.1**	**+0.1**
RGRI	**Rengat**	**4.17**	**16**	P	**Pn**	**23**	**00**	**30.2**	**+0.7**
TNG	**Tangerang**	**5.71**	**108**	P	**Pn**	**23**	**00**	**54.4**	**+3.6**
	2μm,0.8s,5.9nm								
DBJI	**Dramaga**	**5.94**	**111**	P	**Pn**	**23**	**00**	**53.7**	**-0.1**
	1μm,1.3s,10μm3.0nm								
TPI	**Tanjungpandan**	**6.65**	**76**	P	**Pn**	**23**	**01**	**05.5**	**+1.9**
	126nm,1.2s,1μm0.6nm								
MYKOM	**Kota Tinggi**	**6.69**	**23**	⇓P	**Pn**	**23**	**01**	**05.8**	**+1.6**
GSI	**Gunungsitoli**	**6.71**	**327**	P	**Pn**	**23**	**01**	**04.3**	**-0.1**
	268nm,0.8s,3μm1.1nm								
LEM	**Lembang**	**6.84**	**111**	P	**Pn**	**23**	**01**	**07.3**	**+1.1**
	786nm,1.2s,9μm2.4nm								
JCJI	**Jatiwangi**	**7.35**	**107**	P	**Pn**	**23**	**01**	**15.1**	**+1.9**
	472nm,1.0s,8μm2.2nm								
FRIM	**Kepong**	**7.59**	**3**	⇑P	**Pn**	**23**	**01**	**16.8**	**+0.3**
IPM	**Ipoh**	**8.81**	**359**	⇑P	**Pn**	**23**	**01**	**34.2**	**+0.9**
COCO	**West Island**	**8.87**	**209**	Pn	**Pn**	**23**	**01**	**29.9**	**-4.2**
	5μm,0.6s,SNR=8.8								
COCO	**West Island**	**8.87**	**209**	P	**Pn**	**23**	**01**	**30.1**	**-4.0**
	SNR=5.8								
COCO	**West Island**	**8.87**	**209**	*e*Pn	**Pn**	**23**	**01**	**29.6**	**-4.5**
COCO				Sn	**Sn**	**23**	**03**	**12.9**	**-0.2**
COCO	**West Island**	**8.87**	**209**	P	**Pn**	**23**	**01**	**29.4**	**-4.7**
	610nm,0.9s,1.5nm								
BJII	**Banjamegara**	**8.96**	**109**	P	**Pn**	**23**	**01**	**35.2**	**-0.2**
KTGM	**Kuala Trenggan**	**9.84**	**11**	⇑P	**Pn**	**23**	**01**	**49.0**	**+1.5**
UGM	**Wanagama**	**9.92**	**111**	P	**Pn**	**23**	**01**	**45.9**	**-2.6**
	350nm,1.1s								
PBKI	**Pangkalan Bun**	**10.59**	**81**	P	**Pn**	**23**	**02**	**01.0**	**+3.3**
	459nm,1.0s,3μm								
KSM	**Kuching**	**10.81**	**58**	*e*Pn	**Pn**	**23**	**02**	**01.9**	**+1.2**
KSM	**Kuching**	**10.81**	**58**	⇑P	**Pn**	**23**	**02**	**02.6**	**+1.8**
KSM	**Kuching**	**10.81**	**58**	P	**Pn**	**23**	**02**	**03.7**	**+3.0**
	69nm,0.9s,747nm								
SJI	**Sawahan**	**11.03**	**108**	P	**Pn**	**23**	**02**	**03.2**	**-0.5**
BSI	**Banda Aceh**	**11.45**	**329**	P	**Pn**	**23**	**02**	**07.7**	**-1.8**
	419nm,1.0s,2μm								
SNG	**Songkhla**	**11.50**	**357**	P	**Pn**	**23**	**02**	**09.0**	**-1.2**
	620nm,1.0s								
SBUM	**Sibu**	**12.95**	**59**	⇑P	**Pn**	**23**	**02**	**31.7**	**+1.8**
SBUM	**Sibu**	**12.95**	**59**	P	**Pn**	**23**	**02**	**34.4**	**+4.4**

KMMI	**Kalianget**	**12.98**	**102**	P		**Pn**	**23 02 32.0**	**+1.5**
	214nm,1.2s							
BBKI	**Banjar Baru**	**13.65**	**87**	P		**Pn**	**23 02 43.6**	**+4.0**
	204nm,1.4s,3μm							
BTM	**Bintulu**	**14.07**	**58**	⇓P		**Pn**	**23 02 47.2**	**+1.8**
KHKI	**Kahang-Kahang**	**14.86**	**106**	P		**Pn**	**23 03 03.3**	**+7.2**
KKM	**Kota Kinabalu**	**18.23**	**55**	*e*Pn		**Pn**	**23 03 38.7**	**-0.2**
KKM				Sn		**Sn**	**23 06 54.3**	**-7.5**
KKM	**Kota Kinabalu**	**18.23**	**55**	⇓P		**Pn**	**23 03 40.1**	**+1.2**
KAPI	**Kappang**	**18.51**	**93**	P		**Pn**	**23 03 39.2**	**-3.1**
	2.4nm,0.3s,baz=294,slow=9.9,SNR=9.8							
KAPI				LR		LR	23 11 31.7	
	comp=Z,1μm,20.9s,baz=278,slow=39							
KAPI	**Kappang**	**18.51**	**93**	P		**Pn**	**23 03 41.2**	**-1.1**
	35nm,0.9s,399nm							
TSM	**Tawau**	**18.77**	**63**	⇓P		**Pn**	**23 03 45.8**	**+0.5**
SDKM	**Sandakan**	**18.83**	**58**	⇓P		**Pn**	**23 03 46.9**	**+0.7**
PCI	**Palu**	**18.94**	**80**	P		**Pn**	**23 03 47.2**	**-0.3**
	655nm,1.4s,6μm							
KDM	**Kudat**	**19.23**	**54**	⇓P		**Pn**	**23 03 51.1**	**+0.1**
MYLDM	**Lahad Datu**	**19.73**	**61**	⇓P		**Pn**	**23 03 56.4**	**-0.6**
MYLDM	**Lahad Datu**	**19.73**	**61**	P		**Pn**	**23 03 57.2**	**+0.3**
NST	**Nakhon Sawan**	**19.96**	**357**	P		**Pn**	**23 03 58.0**	**-1.6**
KKTK	**Khon Kaen**	**20.66**	**4**	⇓P		**P**	**23 04 05.0**	**-0.3**
	1μm,0.6s							
KDI	**Kendari**	**21.38**	**90**	P		**P**	**23 04 12.6**	**-0.6**
BDT	**Bhumibol Dam**	**21.60**	**354**	P		**P**	**23 04 14.0**	**-1.5**
	38nm,0.9s,mb4.8							
CM31	**Chiang Mai Arr**	**22.81**	**354**	*e*P		**P**	**23 04 27.1**	**-1.3**
CM31				LR		LR		
	comp=Z,2μm,19.0s,MS4.6							
CMAR	**Chiang Mai Arr**	**22.81**	**354**	P		**P**	**23 04 26.2**	**-2.2**
	comp=Z,108nm,0.9s,mb5.3,baz=183,slow=8.4,SNR=67							
CMAR				PcP		PcP	23 08 20.9	+1.4
	comp=Z,5.7nm,0.8s,baz=209,slow=3.5,SNR=6.4							
CMAR				pPcP			23 08 29.4	
	comp=Z,8.3nm,0.8s,baz=206,slow=3.1,SNR=9.3							
CMAR				ScP		ScP	23 11 56.4	+1.1
	comp=Z,0.9nm,0.7s,baz=230,slow=2.2,SNR=5.5							
CMAR				LR		LR	23 15 08.2	
	comp=Z,2μm,18.7s,MS4.5,baz=179,slow=41							
CMAR	**Chiang Mai Arr**	**22.81**	**354**	P		**P**	**23 04 26.2**	**-2.2**
CMAR				PcP		PcP	23 08 20.9	+1.4
CMAR				pPcP			23 08 29.4	
CMAR				ScP		ScP	23 11 56.4	+1.1
CMAR				LR		LR	23 15 08.2	
CMAR	**Chiang Mai Arr**	**22.81**	**354**	P		**P**	**23 04 26.2**	**-2.2**
CMAR							23 08 20.9	
CMAR							23 08 29.5	
BATI	**Baumata**	**23.02**	**106**	P		**P**	**23 04 29.1**	**-1.7**
	comp=Z,102nm,0.7s,mb5.3,baz=330,slow=1.7,SNR=11							
BATI	**Baumata**	**23.02**	**106**	P		**P**	**23 04 29.7**	**-1.0**
	comp=Z,131nm,0.8s,mb5.4							
CHG	**Chiang Mai**	**23.16**	**355**	⇓P		**P**	**23 04 30.1**	**-2.0**
	comp=Z,104nm,1.0s,mb5.2							
CHTO	**Chiang Mai**	**23.16**	**355**	P		**P**	**23 04 31.5**	**-0.6**
	SNR=32							
CHTO	**Chiang Mai**	**23.16**	**355**	*e*P		**P**	**23 04 29.5**	**-2.6**
	comp=Z,120nm,1.1s,mb5.2							
CH

CD2 **Chengdu** 35.18 4 *e*P **P** **23 06 18.5 -0.8**
CD2 AP pP 23 06 28.5 +0.5
CD2 XP sP 23 06 32.6 +1.0
CD2 PP PP 23 07 38.9 -0.7
CD2 PCP PcP 23 08 48.3 -1.9
CD2 AMB AMB
comp=Z,130nm,1.0s,mb5.8
CD2 AMB AMB
comp=Z,130nm,4.2s
CD2 LR LR
comp=N,2μm,18.0s,MS5.2
CD2 LR LR
comp=E,3μm,16.8s,MS5.2
CD2 LR LR
comp=Z,2μm,18.2s,MS4.9
LSA Lhasa 35.23 345 P **P** **23 06 19.4 -0.4**
LSA Lhasa 35.23 345 *e*P **P** **23 06 20.9 +1.1**
comp=Z,53nm,0.9s,mb5.5
LSA *e*PcP PcP 23 08 52.1 +1.7
LSA *e*S **S** **23 11 52.4 +0.8**
LSA LR LR
comp=Z,472nm,20.0s,MS4.2
LSA Lhasa 35.23 345 *e*P **P** **23 06 20.9 +1.1**
LSA *e* 23 08 52.1
LSA *e*S **S** **23 11 52.4 +0.7**
LSA pmax pmax
comp=Z,53nm,0.9s,mb5.5
LSA MLR MLR
comp=Z,472nm,20.0s,MS4.2
PKI Pulchoki 35.23 335 *e*P **P** **23 06 20.8 +1.0**
comp=Z,97nm,1.1s,mb5.7
PKIN Phulchoki 35.25 335 *e*P **P** **23 06 20.6 +0.7**
comp=Z,68nm,1.1s,mb5.5
POO Poona 35.28 311 *e*P **P** **23 06 19.0 -1.3**
GUN Gumba 35.34 336 *e*P **P** **23 06 22.3 +1.5**
comp=Z,469nm,1.1s,mb6.3
DMN Daman 35.40 335 *e*P **P** **23 06 22.2 +1.0**
comp=Z,117nm,1.0s,mb5.8
KKN Kakani 35.48 335 *e*P **P** **23 06 22.9 +0.9**
comp=Z,204nm,1.0s,mb6.0
WRA Warramunga Arr 35.79 118 P **P** **23 06 23.7 -1.1**
comp=Z,24nm,0.8s,mb5.2,baz=292,slow=9.7,SNR=114
WRA pP pP 23 06 31.7 -1.8
comp=Z,22nm,0.7s,baz=303,slow=9.0,SNR=21
WRA PcP PcP 23 08 52.0 -0.2
comp=Z,2.7nm,0.8s,baz=288,slow=2.6,SNR=3.1
WRA pPcP 23 09 00.3
comp=Z,3.4nm,0.9s,baz=301,slow=2.4,SNR=4.7
WRA S **S** **23 12 01.4 +0.8**
comp=Z,3.7nm,1.1s,baz=295,slow=16,SNR=4.7
WRA Warramunga Arr 35.79 118 P **P** **23 06 23.7 -1.1**
WRA *PP pP 23 06 31.7 -1.7
WRA 23 08 52.0
WRA S **S** **23 12 01.4 +0.9**
WRAB Tennant Creek 35.80 118 P **P** **23 06 24.0 -0.8**
comp=Z,280nm,0.8s,mb6.2,SNR=18
WRAB Tennant Creek 35.80 118 *e*P **P** **23 06 23.8 -1.0**
comp=Z,36nm,0.7s,mb5.4
WRAB LR LR
comp=Z,1μm,22.0s,MS4.6
WRAB Tennant Creek 35.80 118 *e*P **P** **23 06 23.8 -1.0**
WRAB pmax pmax
comp=Z,36nm,0.7s,mb5.4
WRAB MLR MLR
comp=Z,1μm,22.0s,MS4.6
WRAB Tennant Creek 35.80 118 P **P** **23 06 23.7 -1.1**
WB2 Warramunga Arr 35.80 118⇑*i*P **P** **23 06 23.7 -1.2**
WB2 Warramunga Arr 35.80 118 *e*P **P** **23 06 23.8 -1.1**
GKN Gorkha 35.94 335 *e*P **P** **23 06 26.9 +1.0**
comp=Z,249nm,1.0s,mb6.1
BHPL Bhopal 35.95 321 *e*P **P** **23 06 26.8 +0.8**
BHPL AMb AMB 23 06 37.4
comp=Z,35nm,0.5s,mb5.6
KOLN Koldanda 36.20 333 *e*P **P** **23 06 29.3 +1.2**
comp=Z,133nm,0.9s,mb5.9
DANN Dangsing 36.62 334 *e*P **P** **23 06 32.8 +1.1**
comp=Z,202nm,1.1s,mb5.9
PYUN Piuthan 36.76 333 *e*P **P** **23 06 33.8 +1.0**
comp=Z,73nm,0.8s,mb5.6
ASAR Alice Springs 36.91 124 P **P** **23 06 33.8 -0.5**
comp=Z,6.6nm,0.8s,mb4.5,baz=296,slow=8.1,SNR=55
ASAR pP pP 23 06 41.4 -1.6
comp=Z,18nm,0.7s,baz=303,slow=8.3,SNR=29
ASAR PcP PcP 23 08 55.9 +0.3
comp=Z,5.5nm,0.8s,baz=304,slow=2.9,SNR=6.4
ASAR pPcP 23 09 03.8
comp=Z,13nm,0.9s,baz=317,slow=3.3,SNR=12
ASAR S **S** **23 12 16.2 -1.3**
comp=Z,3.2nm,1.1s,baz=297,slow=14,SNR=5.2
ASAR Alice Springs 36.91 124 P **P** **23 06 33.8 -0.5**
ASAR *PP pP 23 06 41.4 -1.6
ASAR 23 08 55.9
ASAR S **S** **23 12 16.3 -1.3**
WHN Wuhan 36.94 19 ⇑P **P** **23 06 34.4 0.0**
WHN AP pP 23 06 47.8 +4.7
WHN S **S** **23 12 13.9 -3.9**
WHN LR LR
comp=N,3μm,20.2s,MS5.3
WHN LR LR
comp=E,4μm,20.4s,MS5.3
WHN LR LR
comp=Z,2μm,15.3s
XAN Xi'an 38.91 10 P **P** **23 06 50.1 -0.9**
XAN AP pP 23 06 56.8 -2.9
XAN PP PP 23 08 28.3 +7.8
XAN AMB AMB
comp=Z,106nm,1.0s,mb5.5
XAN AMB AMB
comp=Z,206nm,9.3s
XAN LR LR
comp=N,585nm,20.9s,MS4.7
XAN LR LR
comp=E,1μm,20.9s,MS4.7
XAN LR LR
comp=Z,3μm,21.8s,MS5.0
LGTI Lohaghat 39.19 330 *e*P **P** **23 06 53.8 +0.4**
PTH Pithoragarh 39.29 330 *e*P **P** **23 06 54.0 -0.2**
PTH *ex* x 23 08 12.0
NJ2 Nanjing 39.95 24 *e*P **P** **23 07 00.1 +0.5**
NJ2 AP pP 23 07 09.9 +1.5
NJ2 XP sP 23 07 13.9 +2.0
NJ2 PP PP 23 08 36.4 +4.5
NJ2 S **S** **23 13 00.0 -3.1**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb4.8
NJ2 AMB AMB
comp=Z,220nm,5.3s
NJ2 LR LR
comp=N,2μm,21.7s,MS5.0
NJ2 LR LR
comp=E,890nm,19.4s,MS5.0
NJ2 LR LR
comp=Z,1μm,27.1s
AJM Ajmer 40.02 321 *e*P **P** **23 07 00.5 +0.1**
AYAN Aya Nagar 40.06 326 *e*P **P** **23 06 59.5 -1.1**
AYAN AMb AMB 23 07 08.6
comp=Z,57nm,1.1s,mb5.2
SSE Sheshan 40.12 27 ⇑P **P** **23 07 01.4 +0.3**
SSE AP pP 23 07 12.0 +2.2
SSE XP sP 23 07 17.6 +4.2
SSE S **S** **23 13 06.6 +0.9**
SSE XS sS 23 13 24.9 +4.8
SSE SCS ScS 23 17 02.9 -3.2
SSE AMB AMB
comp=Z,103nm,0.8s,mb5.6
SSE AMB AMB
comp=Z,133nm,3.5s
SSE LR LR
comp=N,831nm,15.6s,MS4.8
SSE LR LR
comp=E,620nm,15.6s,MS4.8
SSE LR LR
comp=Z,490nm,13.8s,MS4.5
NDI New Delhi 40.16 326 *e*P **P** **23 07 01.0 -0.5**
LZH Lanzhou 40.34 3 *e*P **P** **23 07 03.3 +0.5**
LZH AP pP 23 07 15.0 +3.4
LZH XP sP 23 07 18.5 +3.4
LZH PP PP 23 08 39.0 +2.9
LZH *e*S **S** **23 13 09.3 +0.4**
LZH XS sS 23 13 27.0 +3.7
LZH *e*SS SS 23 16 08.0 -0.4
LZH AMB AMB
comp=Z,180nm,1.4s,mb5.6
LZH AMB AMB
comp=Z,370nm,4.0s
LZH LR LR
comp=E,2μm,15.5s
LZH LR LR
comp=Z,3μm,16.9s,MS5.2
JOSI Joshimath 40.44 331 *e*P **P** **23 07 04.3 +0.5**
JOSI AMb AMB 23 07 07.7
comp=Z,425nm,0.6s,mb6.4
KHET Khetri 40.50 324 *e*P **P** **23 07 03.9 -0.4**
KHET AMb AMB 23 07 06.2
comp=Z,18nm,0.8s,mb4.8
DDI Dehra Dun 41.00 329 *e*P **P** **23 07 07.0 -1.4**
DDI *ex* x 23 07 07.0
KLP Kalpa 41.88 330 *e*P **P** **23 07 16.1 +0.5**
KLP AMb AMB 23 07 28.0
comp=Z,67nm,1.0s,mb5.2
SMLA Simla 42.11 329 *e*P **P** **23 07 17.8 +0.3**
SMLA *ex* x 23 07 19.5
comp=Z,166nm,0.6s
SMLA *i* x x 23 13 01.8
COEN Coen 42.46 106 P **P** **23 07 18.2 -2.4**
comp=Z,16nm,1.2s,mb4.5
TIA Tai'an 43.05 19 ⇑P **P** **23 07 23.8 -1.3**
GTA Gaotai 43.60 358⇑*i*P **P** **23 07 29.9 +0.5**
GTA AP pP 23 07 40.6 +2.4
GTA XP sP 23 07 44.4 +2.6
GTA PCP PcP 23 09 15.0 -1.6
GTA SCP ScP 23 13 04.6 -1.7
GTA PCS PcS 23 13 08.5 -0.8
GTA S **S** **23 13 59.8 +2.8**
GTA XS sS 23 14 16.8 +5.3
GTA AMB AMB
comp=Z,46nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,184nm,6.8s
GTA LR LR
comp=N,589nm,13.4s,MS5.0
GTA LR LR
comp=E,1μm,15.5s,MS5.0
GTA LR LR
comp=Z,869nm,14.3s,MS4.8
THN Thein Dam 43.89 328 *e*P **P** **23 07 30.6 -1.3**
BTO Baotou 45.50 9 *e*P **P** **23 07 43.6 -1.0**
PMG Port Moresby 45.88 99 PFAKE 23 08 00.0 +12
PMG LR LR
comp=Z,619nm,22.0s,MS4.5
HHC Hu-ho-hao-te 46.01 11 *e*P **P** **23 07 49.3 +0.7**
HHC AP pP 23 07 59.0 +1.5
HHC XP sP 23 08 03.8 +2.8
HHC PCP PcP 23 09 25.8 +0.9
HHC PP PP 23 09 37.8 +0.9
HHC PCS PcS 23 13 20.1 +0.9
HHC S **S** **23 14 32.6 +0.7**
HHC XS sS 23 14 49.3 +2.8
HHC SCS ScS 23 17 39.3 -3.0
HHC AMB AMB
comp=Z,77nm,1.1s,mb5.5
HHC AMB AMB
comp=Z,233nm,5.4s
HHC LR LR
comp=N,1μm,15.5s,MS5.0
HHC LR LR
comp=E,725nm,14.3s,MS5.0
HHC LR LR
comp=Z,912nm,14.3s,MS4.9
BJT Baijiatuau 46.29 16 *e*P **P** **23 07 50.7 -0.1**
comp=Z,209nm,1.1s,mb6.0
BJT *e*PcP PcP 23 09 26.6 +0.8
BJT LR LR
comp=Z,1μm,20.0s,MS4.8
BJI Beijing 46.31 16 P **P** **23 07 51.0 0.0**
BJI S **S** **23 14 38.8 +2.6**
BJI XS sS 23 14 54.8 +4.0
BJI AMB AMB
comp=Z,135nm,1.1s,mb5.8
BJI LR LR
comp=N,1μm,15.3s,MS5.0
BJI LR LR
comp=E,389nm,14.0s,MS5.0
BJI LR LR
comp=Z,676nm,19.5s
CTA Charters Tower 46.53 114 *e*P **P** **23 07 53.2 +0.1**
comp=Z,31nm,0.9s,mb5.2
CTA Charters Tower 46.53 114 P **P** **23 07 52.5 -0.7**
comp=Z,28nm,0.9s,mb5.2,baz=281,slow=8.7,SNR=14
CTAO Charters Tower 46.53 114 *e*P **P** **23 07 53.3 +0.2**
comp=Z,68nm,1.1s,mb5.5
CTAO LR LR
comp=Z,549nm,20.0s,MS4.5
CTAO Charters Tower 46.53 114 *e*P **P** **23 07 53.3 +0.2**
CTAO pmax pmax
comp=Z,68nm,1.1s,mb5.5
CTAO MLR MLR
comp=Z,549nm,20.0s,MS4.5
CTAO Charters Tower 46.53 114 P **P** **23 07 53.0 -0.1**
STKA Stephens Creek 46.69 131 *e*P **P** **23 07 53.9 -0.3**
comp=Z,24nm,0.8s,mb5.2
STKA Stephens Creek 46.69 131 P **P** **23 07 54.5 +0.3**
comp=Z,9.5nm,0.7s,mb4.8,baz=289,slow=6.6,SNR=14
STKA pP pP 23 08 02.5 -0.5
comp=Z,25nm,0.7s,baz=307,slow=8.6,SNR=16
STKA LR LR 23 28 56.1
comp=Z,1μm,21.3s,MS4.7,baz=104,slow=38
STKA Stephens Creek 46.69 131 *e*P **P** **23 07 54.1 -0.1**
comp=Z,6.5nm,0.8s,mb4.6
GUMO Guam 46.88 67 *e*P **P** **23 07 55.8 -0.1**
KS15 Wonju Array Si 48.47 29 *e*P **P** **23 08 07.8 0.0**
KSRS Korea Array 48.49 29 P **P** **23 08 07.6 -0.4**
comp=Z,77nm,0.9s,mb5.7,baz=216,slow=8.0,SNR=135
KSRS PcP PcP 23 09 34.2 +0.4
comp=Z,4.7nm,0.9s,baz=230,slow=2.7,SNR=4.1
KBL Kabul 49.16 325 *e*P **P** **23 08 12.6 -0.5**
comp=Z,26nm,1.1s,mb5.2
KBL *e*PcP PcP 23 09 35.6 -0.7
KBL *e*PP PP 23 10 07.8 +0.7
KBL Kabul 49.16 325 *e*P **P** **23 08 12.6 -0.6**
KBL *e* 23 09 35.6
KBL *e* 23 10 07.8
KBL pmax pmax
comp=Z,26nm,1.1s,mb5.2
KSH Kashi 49.49 334 P **P** **23 08 16.8 +1.2**
KSH AP pP 23 08 26.9 +2.4
KSH XP sP 23 08 30.9 +2.9
KSH *e*PCP PcP 23 09 40.1 +2.7
KSH *e*PP PP 23 10 11.0 +0.9
KSH *e*SCP ScP 23 13 31.3 +0.4
KSH *e*PCS PcS 23 13 35.3 +1.4
KSH *e*S **S** **23 15 19.8 -1.5**
KSH *e*SCS ScS 23 18 03.6 -1.8
KSH *e*SS SS 23 18 46.8 -6.9
KSH AMB AMB
comp=Z,161nm,1.1s,mb6.0
KSH AMB AMB
comp=Z,507nm,3.4s
KSH LR LR
comp=N,1μm,6.0s
KSH LR LR
comp=E,1μm,5.4s
KSH LR LR
comp=Z,3μm,19.1s,MS5.3
WMQ Urumqi 49.51 347⇑*i*P **P** **23 08 16.5 +0.8**
WMQ AP pP 23 08 28.5 +3.9
WMQ XP sP 23 08 34.5 +6.4
WMQ PP PP 23 10 11.5 +1.3
WMQ S **S** **23 15 19.5 -1.9**
WMQ XS sS 23 15 39.5 +3.4
WMQ SCS ScS 23 18 00.5 -4.9
WMQ SS SS 23 18 47.5 -6.4
WMQ AMB AMB
comp=Z,168nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,524nm,5.0s
WMQ LR LR
comp=N,448nm,16.0s,MS4.7
WMQ LR LR
comp=E,487nm,16.0s,MS4.7
WMQ LR LR
comp=Z,475nm,16.0s,MS4.6
SNY Shenyang 50.31 22 ⇑P **P** **23 08 20.3 -1.6**
SNY AMB AMB
comp=Z,34nm,1.1s,mb5.3
SNY LR LR
comp=N,838nm,17.1s
SNY LR LR
comp=E,773nm,12.0s
SNY LR LR
comp=Z,749nm,15.9s,MS4.8
ULHL Ulahol 51.66 336 P **P** **23 08 32.6 +0.6**
SNR=13
EIDS Eidsvold 52.15 119 *e*P **P** **23 08 35.5 -0.5**
comp=Z,64nm,1.3s,mb5.4
SONM Songino Array 52.20 4 P **P** **23 08 36.8 +0.9**
comp=Z,129nm,0.9s,mb5.8,baz=189,slow=8.5,SNR=655
SONM PcP PcP 23 09 47.5 +0.2
comp=Z,15nm,0.6s,baz=184,slow=4.3,SNR=9.7
SONM pPcP 23 09 55.6
comp=Z,10nm,0.6s,baz=183,slow=3.6,SNR=4.9
SONM ScP ScP 23 13 43.5 +1.1
comp=Z,1.2nm,1.0s,baz=207,slow=4.8,SNR=2.9
SONM LR LR 23 32 55.2
comp=Z,512nm,18.4s,MS4.6,baz=0.2,slow=38
SONM Songino Array 52.20 4 P **P** **23 08 36.8 +0.9**
SONM 23 09 47.5
ULN Ulaanbaatar 52.29 5⇑P **P** **23 08 37.7 +1.2**
SNR=24
ULN Ulaanbaatar 52.29 5 *e*P **P** **23 08 35.6 -0.9**
comp=Z,88nm,1.0s,mb5.6
ULN LR LR
comp=Z,762nm,19.0s,MS4.8
ULN Ulaanbaatar 52.29 5*c i*P **P** **23 08 35.5 -1.0**
UCH Uchtor 52.35 335 *e*P **P** **23 08 38.0 +0.9**
comp=Z,18nm,1.1s,mb4.9
UCH LR LR
comp=Z,148nm,21.0s,MS4.0
TKM2 Tokmak 2 52.48 336 *e*P **P** **23 08 38.6 +0.6**
comp=Z,56nm,0.8s,mb5.5
TKM2 LR LR
comp=Z,487nm,21.0s,MS4.5
TKM2 Tokmak 2 52.48 336 *e*P **P** **23 08 38.6 +0.5**
TKM2 pmax pmax
comp=Z,56nm,0.8s,mb5.5
TKM2 MLR MLR
comp=Z,487nm,21.0s,MS4.5
TKM2 Tokmak 2 52.48 336 P **P** **23 08 38.6 +0.6**
SNR=82
KBK Karagaybulak 52.52 336 P **P** **23 08 39.3 +1.0**
SNR=22
AML Almayashu 52.62 334 P **P** **23 08 40.0 +0.9**
SNR=20
AAK Ala-Archa 52.69 335 P **P** **23 08 40.5 +0.9**
comp=Z,111nm,0.8s,mb5.8,SNR=15
AAK Ala-Archa 52.69 335 P **P** **23 08 40.4 +0.7**
SNR=24
CN2 Changchun 52.71 22 *e*P **P** **23 08 38.8 -1.0**
CN2 *e*AP pP 23 08 48.8 +0.1
CN2 PCP PcP 23 09 48.0 -1.2
CN2 *e*S **S** **23 16 03.5 -2.3**
CN2 SCS ScS 23 18 22.5 -5.0
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,1μm,20.0s,MS5.1
CN2 LR LR
comp=E,900nm,20.0s,MS5.1
CN2 LR LR
comp=Z,2μm,21.0s,MS5.1
FRU Bishkek 52.81 336 *e*P **P** **23 08 40.0 -0.5**
FRU pmax pmax
comp=Z,60nm,1.4s,mb5.3
CHMS Chumysh 52.89 336 P **P** **23 08 41.2 +0.2**
SNR=15
EKS2 Erkin-Say 53.02 335 *e*P **P** **23 08 42.8 +0.8**
comp=Z,87nm,0.8s,mb5.7
EKS2 *e*PP PP 23 10 45.1 +3.0
EKS2 LR LR
comp=Z,479nm,22.0s,MS4.5
EKS2 Erkin-Say 53.02 335 P **P** **23 08 42.9 +0.8**
SNR=101
USP Ospenovka 53.21 336 P **P** **23 08 43.6 +0.2**
SNR=34
MAJO Matsushigo 53.41 37 *e*P **P** **23 08 42.9 -2.2**
comp=Z,47nm,0.9s,mb5.4
MAJO Matsushiro 53.41 37 *e*P **P** **23 08 42.9 -2.1**
MAJO pmax pmax
comp=Z,47nm,0.9s,mb5.4
MAT Matsushiro 53.41 37 P **P** **23 08 43.2 -1.8**
MJAR Matsushiro Arr 53.41 37 P **P** **23 08 43.5 -1.6**
comp=Z,60nm,0.9s,mb5.5,baz=218,slow=7.5,SNR=82
MJAR PcP PcP 23 09 52.8 +0.7
comp=Z,4.3nm,0.9s,baz=212,slow=3.5,SNR=4.0
MK31 Makanchi Array 53.63 344 *e*P **P** **23 08 46.5 +0.1**
MKAR Makanchi Array 53.63 344 P **P** **23 08 46.5 0.0**
comp=Z,69nm,0.8s,mb5.6,baz=147,slow=8.0,SNR=425
MKAR pP pP 23 08 54.2 -1.3
comp=Z,48nm,0.7s,baz=142,slow=8.1,SNR=19
MKAR LR LR 23 35 35.2
comp=Z,294nm,20.4s,MS4.3,baz=160,slow=40
MKAR Makanchi Array 53.63 344 P **P** **23 08 46.5 0.0**
MKAR pP pP 23 08 54.2 -1.3
MKAR LR LR 23 35 35.2
MKAR Makanchi Array 53.63 344 P **P** **23 08 46.5 0.0**
MKAR *PP pP 23 08 54.2 -1.3
ARMA Armidale 54.06 125 *e*P **P** **23 08 51.0 +1.0**
ARMA Armidale 54.06 125 *e*P **P** **23 08 51.1 +1.1**
OPO Ambohidratompo 54.55 250 P **P** **23 08 54.9 +1.2**
comp=Z,13nm,0.9s,mb4.9,baz=69,slow=5.9,SNR=16
OPO pP pP 23 09 03.2 +0.4
comp=Z,6.8nm,0.9s,baz=84,slow=8.4,SNR=5.8
ABPO Ambohimpanom 54.58 250 *e*P **P** **23 08 54.7 +0.8**
comp=Z,20nm,1.0s,mb5.1
ABPO *e*PcP PcP 23 09 55.1 -1.9
ZAK Zakamensk 54.58 2⇑*i*P **P** **23 08 53.6 +0.3**
ZAK *e* 23 09 56.6
ZAK pmax pmax
comp=Z,29nm,0.9s,mb5.3
KK31 Karatay Array 54.81 333 *i*P **P** **23 08 53.8 -1.3**
MDJ Mudanjiang 55.02 24 P **P** **23 08 56.3 -0.4**
MDJ AP pP 23 09 05.0 -0.7
MDJ XP sP 23 09 09.3 +0.1
MDJ SCP ScP 23 13 54.8 0.0
MDJ PCS PcS 23 13 58.8 +1.0
MDJ S **S** **23 16 42.6 +5.5**
MDJ SS SS 23 20 21.3 0.0
MDJ AMB AMB
comp=Z,51nm,0.9s,mb5.5
MDJ AMB AMB
comp=Z,497nm,4.6s
MDJ LR LR
comp=E,320nm,19.4s
MDJ LR LR
comp=Z,324nm,20.0s,MS4.4
MDJ Mudanjiang 55.02 24 *e*P **P** **23 08 56.0 -0.6**
comp=Z,45nm,0.9s,mb5.5
MDJ LR LR
comp=Z,443nm,20.0s,MS4.5
HIA Hailar 55.82 15⇑*i*P **P** **23 09 01.5 -0.8**
HIA LR LR
comp=Z,891nm,19.0s,MS4.9
HIA Hailar 55.82 15*c i*P **P** **23 09 01.4 -0.9**
MOY Mondy 55.84 360 *e*P **P** **23 09 02.5 +0.1**
TLY Talaya 55.89 2 P **P** **23 09 04.4 +1.7**
comp=Z,352nm,1.0s,mb6.3,SNR=5.5
TLY Talaya 55.89 2 P **P** **23 09 04.4 +1.7**
SNR=5.9
TLY Talaya 55.89 2 *e*P **P** **23 09 04.1 +1.4**
comp=Z,64nm,1.0s,mb5.6
TLY LR LR
comp=Z,675nm,19.0s,MS4.8
TLY Talaya 55.89 2 *e*P **P** **23 09 03.2 +0.5**
TLY *e* pP 23 09 11.4 -0.4
TLY *e*S **S** **23 17 01.0 +13**
TLY pmax pmax
comp=Z,70nm,1.0s,mb5.7
TLY MLR MLR
comp=Z,683nm,17.0s,MS4.8
TAU Tasmania Unive 55.99 140 *e*P **P** **23 09 04.5 +0.7**
comp=Z,28nm,0.9s,mb5.3
TAU Tasmania Unive 55.99 140 *e*P **P** **23 09 04.5 +0.8**
TAU pmax pmax
comp=Z,28nm,0.9s,mb5.3
IRK Irkutsk 56.48 2⇑*i*P **P** **23 09 06.6 -0.3**
IRK *e* 23 17 07.5
IRK pmax pmax
comp=Z,61nm,1.1s,mb5.5
ABKT Ailbek 58.03 320 P **P** **23 09 18.6 +0.4**
comp=Z,193nm,0.9s,mb6.1,SNR=14
KURK Kurchatov 58.22 343 P **P** **23 09 19.4 +0.2**
comp=Z,588nm,1.0s,mb6.6,SNR=83
KURK Kurchatov 58.22 343 ⇑P **P** **23 09 18.8 -0.4**
SNR=30

KURK **Kurchatov** 58.22 343 P **P** 23 09 18.5 -0.8
comp=Z,60nm,0.9s,mb5.6,baz=162,slow=6.8,SNR=184
KURK ScP ScP 23 14 09.4 +0.6
comp=Z,0.2nm,0.3s,baz=140,slow=5.8,SNR=3.1
KURK Kurchatov 58.22 343 *eP* **P** 23 09 19.0 -0.2
KURK MLR MLR
comp=Z,605nm,19.0s,MS4.7
HNR Honiara 58.49 98 *eP* **P** 23 09 20.5 -1.4
comp=Z,252nm,1.0s,mb6.2
HNR *e*PcP PcP 23 10 13.3 +1.0
HNR LR LR
comp=Z,367nm,19.0s,MS4.5
KLR Kul'dur 59.64 23⇓*iP* **P** 23 09 24.6 -4.5
KLR pmax pmax
comp=Z,150nm,1.2s,mb5.9
ZAA0 Zalesovo Array 59.72 349 *eP* **P** 23 09 29.3 -0.3
ZALV Zalesovo Beam 59.72 349 P **P** 23 09 29.2 -0.4
comp=Z,91nm,0.9s,mb5.8,baz=174,slow=6.0,SNR=211
ZALV pP pP 23 09 37.0 -1.7
comp=Z,57nm,0.8s,baz=171,slow=4.7,SNR=14
ZALV S **S** 23 17 38.0 -0.4
comp=Z,0.3nm,0.3s,baz=98,slow=11,SNR=4.2
ZALV LR LR 23 39 14.5
comp=Z,334nm,18.4s,MS4.5,baz=158,slow=40
ZALV Zalesovo Beam 59.72 349 P **P** 23 09 29.2 -0.4
ZALV *PP pP 23 09 37.0 -1.7
ZALV S **S** 23 17 38.0 -0.5
HABR Khabarovsk 60.38 25 *eP* **P** 23 09 30.8 -3.4
HABR *e*PP pP 23 09 40.6 -2.7
HABR *e*SP sP 23 09 44.7 -2.1
HABR *e* 23 10 15.8
HABR *e* 23 11 43.3
HABR *e*S **S** 23 17 42.7 -4.4
HABR *e*SS SS 23 21 41.3 -4.0
KRAR Krasnoyarsk 60.58 355 *eP* **P** 23 09 34.6 -0.8
NVS Novosibirsk 60.88 348⇑*iP* **P** 23 09 36.0 -1.5
NVS *e* 23 11 51.7
NVS *e*S **S** 23 17 42.3 -11
NVS *e*SS SS 23 21 45.0 -7.9
NVS pmax pmax
comp=Z,37nm,1.1s,mb5.4
NVS pmax pmax
comp=N,27nm,1.4s
NVS pmax pmax
comp=E,18nm,1.1s
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.9
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=E,10.0nm,1.6s
NVS smax
comp=N,23nm,1.8s
NVS smax
comp=E,11nm,1.4s
RDF Al-Radifah 61.21 306 *eP* **P** 23 09 39.5 -0.8
baz=306
UMR Umm Al-Rimmam 61.33 307 *eP* **P** 23 09 40.2 -0.9
baz=307
UMR AMb AMB 23 09 42.6
comp=Z,73nm,0.9s,mb5.8,baz=307
NAY Al-Naaiem 61.58 307 *eP* **P** 23 09 42.3 -0.5
baz=306
NAY AMb AMB 23 09 52.3
comp=Z,31nm,0.8s,mb5.5,baz=306
MIB Mutribah 61.73 307 *eP* **P** 23 09 43.5 -0.3
baz=307
MIB AMb AMB 23 09 53.1
comp=Z,78nm,0.9s,mb5.8,baz=307
CASY Casey 62.12 176 P **P** 23 09 45.8 0.0
CASY LR LR
comp=Z,592nm,19.0s,MS4.8
VOSK Vostochnaya 62.37 340 P **P** 23 09 46.6 -1.0
VOSK pmax pmax
comp=Z,34nm,0.7s,mb5.6
BVA0 Borovoye Array 62.82 340 *i* P **P** 23 09 49.4 -1.2
BVA0 pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
BVAR Borovoye Array 62.82 340 P **P** 23 09 49.9 -0.7
comp=Z,43nm,0.8s,mb5.6,baz=145,slow=8.1,SNR=153
BVAR pP pP 23 09 57.8 -2.0
comp=Z,25nm,0.8s,baz=126,slow=6.3,SNR=14
BOD Bodaibo 62.86 8⇓*iP* **P** 23 09 50.0 -0.8
BOD pmax pmax
comp=Z,51nm,1.0s,mb5.6
BRVK Borovoye 62.88 340 P **P** 23 09 50.6 -0.4
comp=Z,248nm,0.6s,mb6.5,SNR=30
BRVK Borovoye 62.88 340 ⇑P **P** 23 09 50.3 -0.7
SNR=12
BRVK Borovoye 62.88 340 *eP* **P** 23 09 50.4 -0.6
BRVK MLR MLR
comp=Z,422nm,19.0s,MS4.6
YSS Yuzh-Sakhalins 62.89 31 *eP* **P** 23 09 50.3 -0.9
comp=Z,153nm,1.0s,mb6.1
YSS Yuzh-Sakhalins 62.89 31 *eP* **P** 23 09 49.7 -1.5
YSS pmax pmax
comp=Z,162nm,1.0s,mb6.1
CLNS Chul'man 64.00 14 *eP* **P** 23 09 58.3 -0.1
CLNS pmax pmax
comp=Z,47nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,19nm,0.9s
CLNS pmax pmax
comp=N,27nm,1.0s
CLNS MLR MLR
comp=E,212nm,13.0s,MS4.9
CLNS MLR MLR
comp=Z,511nm,14.0s,MS4.9
CLNS MLR MLR
comp=N,453nm,13.0s,MS4.9
AB31 Akbulak array 64.29 331 P **P** 23 09 59.4 -1.0
AB31 pmax pmax
comp=Z,57nm,0.7s,mb5.7
AKTK Aktyubinsk 66.01 331 P **P** 23 10 10.8 -0.7
AKTO Aktyubinsk 66.01 331 P **P** 23 10 10.8 -0.7
comp=Z,14nm,0.9s,mb5.0,baz=131,slow=7.4,SNR=23
AKTO Aktyubinsk 66.01 331 *iP* **P** 23 10 10.3 -1.2
GNI Garni 68.06 316 P **P** 23 10 25.5 +0.7
comp=Z,9.2nm,0.9s,mb4.8,baz=353,slow=12,SNR=7.3
GNI Garni 68.06 316 *eP* **P** 23 10 26.0 +1.2
GNI MLR MLR
comp=Z,172nm,22.0s
DGRG David-gareji 68.22 318 P **P** 23 10 25.7 -0.1
MAW Mawson 68.29 195 P **P** 23 10 26.2 +0.5
comp=Z,12nm,0.9s,mb4.9,baz=53,slow=6.3,SNR=13
MAW pP pP 23 10 34.7 -0.2
comp=Z,11nm,0.8s,baz=22,slow=6.5,SNR=8.3
MAW LR LR 23 34 29.1
comp=Z,571nm,20.2s,MS4.8,baz=26,slow=31
MAW Mawson 68.29 195 P **P** 23 10 26.2 +0.5
MAW *PP pP 23 10 34.7 -0.2
MTA Mtatsminda 68.72 318 P **P** 23 10 28.3 -0.6
TBLG Delisi 68.77 318 P **P** 23 10 29.4 +0.2
GOR Gori 69.31 318 P **P** 23 10 33.8 +1.2
SVE Sverdlovsk 69.33 338⇓*eP* **P** 23 10 32.2 -0.1
SVE *e* pP 23 10 41.2 -0.4
SVE *e* 23 13 09.0
SVE *e*PPP 23 14 50.4
SVE *e*S S 23 19 32.1 -4.9
SVE pmax pmax
comp=Z,112nm,1.0s,mb5.8
SVE MLR MLR
comp=Z,751nm,22.0s,MS4.9
YAK Yakutsk 69.75 14 *eP* **P** 23 10 32.9 -2.0
YAK LR LR
comp=Z,428nm,20.0s,MS4.7
YAK Yakutsk 69.75 14 *eP* **P** 23 10 32.8 -2.0
YAK pmax pmax
comp=Z,167nm,1.0s,mb5.9
YAK pmax pmax
comp=E,30nm,1.0s
YAK pmax pmax
comp=N,49nm,1.1s
ARU Arti 69.86 336 P **P** 23 10 35.2 -0.4
comp=N,295nm,0.8s,mb6.3,SNR=16
ARU Arti 69.86 336 *eP* **P** 23 10 35.2 -0.4
ARU LR LR
comp=Z,412nm,21.0s,MS4.7
ARU Arti 69.86 336*c iP* **P** 23 10 35.1 -0.5
ARU pmax pmax
comp=Z,75nm,1.2s,mb5.5
ONI Oni 70.01 318 P **P** 23 10 35.7 -1.2
ASF Jabal al Asfar 70.94 306 P **P** 23 10 43.3 +0.5
comp=Z,11nm,0.9s,mb4.8,baz=35,slow=2.8,SNR=10
ASF pP pP 23 10 52.6 +0.6
comp=Z,16nm,0.9s,baz=360,slow=2.2,SNR=9.0

KIV Kislovodsk 71.12 319 *eP* **P** 23 10 44.0 +0.4
KIV LR LR
comp=Z,193nm,20.0s,MS4.4
KIV Kislovodsk 71.12 319 *eP* **P** 23 10 43.7 +0.1
KIV *e* 23 11 02.1
KIV *e*S S 23 19 58.5 +0.1
KIV pmax pmax
comp=Z,28nm,1.2s,mb5.1
KIV Kislovodsk 71.12 319⇓*iP* **P** 23 10 43.9 +0.3
MMAI Mount Meron Ar 72.40 306 P **P** 23 10 52.5 +0.9
comp=Z,13nm,0.8s,mb4.9,baz=72,slow=5.4,SNR=6.2
MMAI pP pP 23 11 00.6 -0.2
comp=Z,10nm,0.7s,baz=97,slow=6.8,SNR=5.3
LSZ Lusaka 72.47 255 *eP* **P** 23 10 52.7 +0.4
SOKR Solikamsk 72.71 338*c iP* **P** 23 10 53.5 +0.7
SOKR pmax pmax
comp=Z,100nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,570nm,23.0s,MS4.8
SOC Sochi 72.91 318 *i* P **P** 23 10 54.1 -0.3
SOC Sochi 72.91 318 *eP* **P** 23 10 53.4 -1.0
SOC *e*S S 23 20 15.4 -3.7
SOC pmax pmax
comp=Z,41nm,0.9s,mb5.4
PETK Petropavlovsk- 74.27 31 P **P** 23 11 01.4 -0.7
comp=Z,18nm,0.8s,mb5.0,baz=209,slow=3.5,SNR=14
PETK pP pP 23 11 09.3 -2.1
comp=Z,8.3nm,0.6s,baz=289,slow=3.0,SNR=5.4
PETK Petropavlovsk- 74.27 31 P **P** 23 11 01.4 -0.7
PETK pP pP 23 11 09.3 -2.2
PET Petropavlovsk 74.73 32 *eP* **P** 23 11 03.8 -1.0
PET Petropavlovsk 74.73 32⇓*eP* **P** 23 11 04.1 -0.7
PET *e*S S 23 20 36.7 -2.4
PET pmax pmax
comp=Z,102nm,0.8s,mb5.8
PET MLR MLR
comp=Z,200nm,19.0s,MS4.4
ANN Anapa 74.90 319 *eP* **P** 23 11 04.1 -1.9
ANN pmax pmax
comp=Z,65nm,1.3s,mb5.4
VRHR Novokhopersk 74.96 326 *eP* **P** 23 11 05.3 -0.9
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.5
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.8s
LBTB Lobatse 75.11 245 *eP* **P** 23 11 07.7 0.0
comp=E,6.1nm,0.8s,mb4.6
LBTB LR LR
comp=Z,642nm,22.0s,MS4.9
LBTB Lobatse 75.11 245 *eP* **P** 23 11 07.7 +0.1
LBTB pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LBTB MLR MLR
comp=Z,642nm,22.0s,MS4.9
BOSA Boshof 75.57 242 P **P** 23 11 10.2 0.0
comp=Z,7.7nm,0.9s,mb4.6,baz=122,slow=5.3,SNR=5.4
BOSA pP pP 23 11 18.2 -1.3
comp=Z,3.4nm,0.9s,baz=96,slow=2.9,SNR=3.8
BOSA LR LR 23 38 09.2
comp=Z,415nm,19.7s,MS4.7,baz=93,slow=31
BOSA Boshof 75.57 242 *eP* **P** 23 11 10.3 +0.1
BOSA *PP pP 23 11 18.3 -1.2
BRTR Keskin Array B 75.80 313 P **P** 23 11 10.7 -0.6
comp=Z,7.5nm,0.8s,mb4.7,baz=128,slow=7.3,SNR=33
BRTR pP pP 23 11 18.6 -2.0
comp=Z,9.2nm,0.6s,baz=139,slow=7.2,SNR=20
SYO Syowa Base 76.01 199⇑*eX*
SYO Syowa Base 76.01 199⇓*eX* 23 11 19.2
VSR Storozhevoye 76.40 325 *eP* **P** 23 11 13.3 -1.1
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,0.7s
SEY Seymchan 77.39 21⇑*iP* **P** 23 11 19.8 +0.1
SEY Seymchan 77.39 21⇑*iP* **P** 23 11 19.7 0.0
TIXI Tiksi 78.02 9 *eP* **P** 23 11 21.5 -1.6
TIXI Tiksi 78.02 9*c iP* **P** 23 11 21.6 -1.5
TIXI pmax pmax
comp=Z,36nm,0.7s,mb5.4
TIXI MLR MLR
comp=Z,761nm,17.0s,MS5.1
MOS Moscow 79.14 329 *eP* **P** 23 11 35.0 +5.4
MOS *e* 23 14 32.4
MOS pmax pmax
comp=Z,74nm,1.1s,mb5.5
OBN Obninsk 79.44 328 *eP* **P** 23 11 30.6 -0.6
OBN Obninsk 79.44 328*αe*P **P** 23 11 31.2 0.0
OBN *i* pP 23 11 39.5 -1.1
OBN *e* 23 11 46.3
OBN 23 14 30.0
OBN 23 21 20.0
OBN SS SS 23 26 42.0 +3.8
OBN pmax pmax
comp=Z,57nm,1.2s,mb5.4
SUR Sutherland 79.54 238 P **P** 23 11 32.9 +0.5
VNDA Vanda 79.60 169 P **P** 23 11 31.8 0.0
comp=Z,5.4nm,0.9s,mb4.5,baz=295,slow=5.5,SNR=23
VNDA pP pP 23 11 39.8 -1.4
comp=Z,9.9nm,1.0s,baz=302,slow=7.0,SNR=12
KLMR Klimovskoe 80.48 334 *eP* **P** 23 11 36.5 -0.2
KLMR pmax pmax
comp=Z,69nm,1.3s,mb5.4
SBA Scott Base 80.70 169 *eP* **P** 23 11 39.1 +1.4
SBA PcP PcP 23 11 45.6 +1.2
SBA LR LR
comp=Z,310nm,21.0s,MS4.6
IDI Anoyia 81.40 307 P **P** 23 11 42.5 +0.3
comp=Z,17nm,1.0s,mb4.9,baz=63,slow=4.5,SNR=3.0
IDI pP pP 23 11 51.0 -0.7
comp=Z,14nm,0.8s,baz=38,slow=12,SNR=2.3
AKASG Malin Array Be 82.09 322 P **P** 23 11 44.5 -0.9
comp=Z,7.1nm,0.8s,mb4.7,baz=86,slow=5.1,SNR=21
AKASG pP pP 23 11 52.4 -2.5
comp=Z,6.1nm,0.8s,baz=87,slow=4.8,SNR=7.6
AKBB Malin Array Si 82.09 322 *eP* **P** 23 11 44.6 -0.9
KIEV Kiev 82.10 322 *eP* **P** 23 11 44.6 -0.9
comp=Z,6.5nm,0.8s,mb4.6
KIEV *e* pP 23 11 52.2 -2.7
KIEV Kiev 82.10 322 *eP* **P** 23 11 44.6 -0.9
KIEV *e* pP 23 11 52.2 -2.7
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VRI Vrincioaia 82.40 317⇑*iP* **P** 23 11 47.8 +0.6
TSUM Tsumeb 82.54 251 *eP* **P** 23 11 48.9 +0.3
comp=Z,8.2nm,1.0s,mb4.7
MLR Muntele Rosu 82.84 317⇑*iP* **P** 23 11 50.0 +0.4
BURAR Bucovina Array 83.83 319⇑*iP* **P** 23 11 55.5 +1.0
BURAR Bucovina Array 83.83 319⇑*iP* **P** 23 11 55.5 +0.9
BUR08 Bucovina Ar. S 83.84 319 *eP* **P** 23 11 55.7 +1.1
JOF Joensuu 84.87 334 *ep* **P** 23 11 59.1 -0.4
comp=Z,9.9nm,0.8s,mb5.0
JOF Joensuu 84.87 334 *eP* **P** 23 11 59.1 -0.4
JOF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
BILL Bilibino 84.97 20 P **P** 23 12 00.0 +0.1
LVV L'vov 85.09 321 *eP* **P** 23 12 00.2 -0.7
DRGR 85.32 318⇓P **P** 23 12 02.7 +0.6
DRGR 85.32 318⇓*iP* **P** 23 12 02.7 +0.6
LVZ Lovozero 85.42 340 *eP* **P** 23 12 01.7 -0.5
QSPA South Pole Qui 85.59 180 *eP* **P** 23 12 03.1 +0.2
VSU Vasula 85.65 329 *eP* **P** 23 12 03.7 +0.2
TRPA Tarpa 85.70 319⇓*iP* **P** 23 12 04.0 0.0
MAIT Maitri 85.71 199⇑*iP* **P** 23 12 02.6 -1.0
APA Apatity 85.73 339⇓*iP* **P** 23 12 03.0 -0.7
APA pmax pmax
comp=Z,23nm,1.0s,mb5.4
APA MLR MLR
comp=Z,1μm,15.0s,MS5.3
BZS Buzias 85.84 316⇑*iP* **P** 23 12 04.9 +0.1
BZS Buzias 85.84 316⇑*iP* **P** 23 12 04.9 +0.1
KWP Kalwaria 85.89 320 *eP* **P** 23 12 05.2 +0.3
KOLS Kolonicke sedl 86.03 320 *eP* **P** 23 12 06.4 +0.8
KOLS *e*pP pP 23 12 14.6 -0.5
SUW Suwalki 86.51 325 *eP* **P** 23 12 07.8 -0.1
SUW *e* pP 23 12 15.9 -1.4
SUW Suwalki 86.51 325 *eP* **P** 23 12 07.8 -0.1
SUW *e* pP 23 12 15.9 -1.4
CRVS Cervenica-Dubn 86.55 319 *eP* **P** 23 12 08.6 +0.4
CRVS *e*pP pP 23 12 18.4 +0.8
STHS Stebnicka Huta 86.78 320 *eP* **P** 23 12 09.6 +0.3
STHS pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
KAF Kangasniemi 86.84 333 *ep* **P** 23 12 08.4 -0.9
comp=Z,13nm,0.8s,mb5.2,baz=100,slow=4.5
KAF Kangasniemi 86.84 333 *eP* **P** 23 12 08.4 -0.9
KAF pmax pmax
comp=Z,13nm,0.8s,mb5.2
NIE Niedzica 87.38 320 *eP* **P** 23 12 13.2 +1.0
PSZ Piszkesteto 87.41 318⇓*eP* **P** 23 12 12.7 +0.3
OJC Ojcow 87.84 321 *eP* **P** 23 12 14.9 +0.5
PKSM Moragy 87.99 316⇑*iP* **P** 23 12 15.3 +0.1
PKSM Moragy 87.99 316⇑*iP* **P** 23 12 15.4 +0.2
VYHS Vyhne 88.19 319 *eP* **P** 23 12 16.1 0.0
VYHS *ep*P pP 23 12 24.7 -0.9
KOLL Kolacno 88.49 319 *eP* **P** 23 12 18.1 +0.6
KOLL *ep*P pP 23 12 26.6 -0.4
OKC Ostrava-Krasne 88.84 320 *eP* **P** 23 12 19.8 +0.7
OKC *ep*P pP 23 12 27.9 -0.7
OKC Ostrava-Krasne 88.84 320 *eP* **P** 23 12 19.8 +0.7
OKC *ep*P pP 23 12 27.9 -0.7
OKC AMS AMS 23 57 40.0
ARCES ARCESS Array B 89.11 340 P **P** 23 12 20.5 +0.5
comp=Z,22nm,0.8s,mb5.5,baz=112,slow=5.4,SNR=24
ARCES pP pP 23 12 27.9 -1.5
comp=Z,18nm,0.8s,baz=90,slow=2.4,SNR=6.6
ARCES LR LR 23 56 16.9
comp=Z,413nm,21.3s,MS4.8,baz=104,slow=38
ARCES ARCESS Array B 89.11 340 P **P** 23 12 20.5 +0.5
ARCES pP pP 23 12 27.9 -1.5
ARCES LR LR 23 56 16.9
ARCES ARCESS Array B 89.11 340 P **P** 23 12 20.5 +0.5
ARCES *PP pP 23 12 28.0 -1.5
MODS Modra-Piesok 89.21 318 *eP* **P** 23 12 20.1 -0.8
MODS *e* pP 23 12 30.0 -0.4
MODS pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
MODS Modra-Piesok 89.21 318 *eP* **P** 23 12 20.1 -0.8
MODS *ep*P pP 23 12 29.9 -0.5
MORC Moravsky Berou 89.22 320 ⇑P **P** 23 12 21.7 +0.8
MORC Moravsky Berou 89.22 320⇑*iP* **P** 23 12 21.7 +0.8
ZST Bratislava 89.30 318 *eP* **P** 23 12 21.8 +0.5
ZST *e* pP 23 12 30.0 -0.8
ZST pmax pmax
comp=Z,11nm,0.9s,mb5.2
ZST Bratislava 89.30 318 *eP* **P** 23 12 21.8 +0.5
ZST *ep*P pP 23 12 30.0 -0.8
SOP Sopron 89.60 318⇑*eP* **P** 23 12 22.2 -0.6
KOGS Kog 89.66 316 *eP* **P** 23 12 23.4 +0.3
KOGS *ep*P pP 23 12 31.9 -0.7
VRAC Vranov 89.77 319 ⇑P **P** 23 12 24.1 +0.6
VRAC Vranov 89.77 319⇑*iP* **P** 23 12 24.1 +0.6
GCIS Gornji Cirnik 90.03 316 *eP* **P** 23 12 25.2 +0.4
GOLS Golise 90.05 316 *eP* **P** 23 12 25.5 +0.6
GOLS *ep*P pP 23 12 33.8 -0.5
DPC Dobruska-Polom 90.07 320 *eP* **P** 23 12 25.8 +0.9
DPC *ep*P pP 23 12 34.4 0.0
DPC Dobruska-Polom 90.07 320 *eP* **P** 23 12 25.8 +0.9
DPC *e*PP pP 23 12 34.4 0.0
DPC Dobruska-Polom 90.07 320 *eP* **P** 23 12 25.8 +0.9
DPC *ep*P pP 23 12 34.4 0.0
DPC AMS AMS 23 56 40.0
CONA Conrad Observa 90.09 318⇓*iP* **P** 23 12 25.5 +0.4
comp=Z,5.4nm,1.3s,mb4.7
CSNA Conrad Observa 90.10 318⇓*iP* **P** 23 12 25.5 +0.4
comp=Z,3.2nm,1.0s,mb4.6
KSP Ksiaz 90.15 321 *eP* **P** 23 12 25.1 -0.1
KSP *ep*P pP 23 12 34.3 -0.4
ARSA Arzberg 90.25 317⇑*iP* **P** 23 12 26.3 +0.5
comp=Z,9.7nm,1.0s,mb5.1
ARSA ⇓*ip*P pP 23 12 35.1 -0.2
BOJS Bojanci 90.25 315 *eP* **P** 23 12 26.2 +0.3
BOJS *ep*P pP 23 12 34.4 -0.9
SNAA Sanae 90.25 198 *eP* **P** 23 12 24.0 -1.4
comp=Z,18nm,1.0s,mb5.3
SNAA *e* pP 23 12 32.8 -2.1
SNAA Sanae 90.25 198 *eP* **P** 23 12 24.0 -1.4
SNAA *e* pP 23 12 32.8 -2.0
SNAA pmax pmax
comp=Z,18nm,1.0s
UPC Upice 90.28 320 *eP* **P** 23 12 26.6 +0.7
UPC *ep*P pP 23 12 35.1 -0.3
TREC Trest 90.49 319 *eP* **P** 23 12 27.3 +0.4
TREC *e*PP pP 23 12 35.8 -0.6
TREC Trest 90.49 319 *eP* **P** 23 12 27.3 +0.4
TREC *ep*P pP 23 12 35.8 -0.6
TREC AMS AMS 23 58 50.0
SOKA Soboth 90.52 317⇑*i*PcP PcP 23 12 27.7 -0.5
comp=Z,9.1nm,0.9s
SOKA ⇑*ip*P pP 23 12 36.8 +0.2
comp=Z,18nm,1.0s
LJU Ljubljana 90.81 316 *eP* **P** 23 12 28.8 +0.4
LJU *ep*P pP 23 12 37.2 -0.8
OBKA Obir 90.84 316⇓*i*PcP PcP 23 12 29.5 -0.1
comp=Z,4.4nm,0.8s
PRU Pruhonice 91.17 320 *eP* **P** 23 12 30.3 +0.3
PRU *ep*P pP 23 12 39.0 -0.5
PRU Pruhonice 91.17 320 *eP* **P** 23 12 30.3 +0.3
PRU *ep*P pP 23 12 39.0 -0.5
PRU AMS AMS 23 56 10.0
PVCC Panska Ves 91.20 320 *eP* **P** 23 12 31.2 +1.0
PVCC *ep*P pP 23 12 37.9 -1.8
PVCC AMS AMS 23 57 30.0
comp=Z,300nm,27.0s
MYKA Terra Mystica 91.47 316⇑*ip*P pP 23 12 40.6 -0.4
comp=Z,12nm,1.5s
GEC2 GERESS Array S 91.62 319 *eP* **P** 23 12 32.2 +0.1
GEC2 *e*PP pP 23 12 41.0 -0.6
GERES GERESS Array B 91.62 319 P **P** 23 12 32.7 +0.6
comp=Z,3.2nm,0.8s,mb4.7,baz=96,slow=4.2,SNR=27
GERES pP pP 23 12 40.7 -0.9
comp=Z,3.8nm,0.7s,baz=96,slow=3.7,SNR=16
BRG Berggiesshubel 91.63 321 *eP* **P** 23 12 32.3 +0.2
BRG *e* pP 23 12 41.1 -0.5
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
BRG Berggiesshubel 91.63 321 *eP* **P** 23 12 32.3 +0.2
comp=Z,5.5nm,1.0s,mb4.8
BRG *e* pP 23 12 41.1 -0.5
comp=Z,8.7nm,1.1s
KHC Kasperske Hory 91.72 319 *eP* **P** 23 12 33.0 +0.4
KHC *ep*P pP 23 12 41.2 -0.9
KHC Kasperske Hory 91.72 319 *eP* **P** 23 12 33.0 +0.4
KHC *ep*P pP 23 12 41.2 -0.9
KHC AMS AMS 23 59 10.0
VNA2 Neumayer--Watz 91.87 198 *eP* **P** 23 12 33.7 +0.8
baz=88,slow=4.0
VNA2 *e* pP 23 12 43.8 +1.4
VNA1 Neumayer--Stat 92.24 198 *eP* **P** 23 12 35.0 +0.4
VNA1 *e* pP 23 12 45.5 +1.4
CLL Collm 92.26 321 *eP* **P** 23 12 35.0 0.0
CLL *e*S S 23 23 32.0 -4.1
CLL Collm 92.26 321 *eP* **P** 23 12 35.0 0.0
CLL *ep*P pP 23 12 44.0 -0.5
CLL *e*S S 23 23 32.0 -4.1
CLL *e*SS SS 23 29 49.0 +2.4
VNA3 Neumayer Olymp 92.46 198 *eP* **P** 23 12 34.0 -1.6
VNA3 *e* pP 23 12 44.3 -0.8
NKC Novy Kostel 92.53 320 *ep*P pP 23 12 45.4 -0.4
NKC AMS AMS 23 58 00.0
WTTA Wattenberg 92.89 317⇑*i*PcP PcP 23 12 38.3 -0.4
comp=Z,11nm,1.3s
GRF Grafenberg Arr 93.29 319 *eP* **P** 23 12 40.2 +0.4
GRF *e* pP 23 12 48.4 -0.9
NB2 P **P** 23 12 41.6 -0.3
NORSAR Subarra 93.80 331
comp=Z,1.4nm,0.9s,mb4.4,baz=94,slow=5.3
NOA NORSAR Array B 93.80 331 P **P** 23 12 41.6 -0.3
comp=Z,3.4nm,0.9s,mb4.8,baz=96,slow=4.4,SNR=5.4
NOA pP pP 23 12 50.3 -1.1
comp=Z,2.4nm,0.9s,baz=94,slow=4.6,SNR=5.2
TOA0 Torodi Ar. Sit 100.22 283 Pdif Pdif 23 13 11.9 +0.8
TORD Torodi Ar. Bea 100.22 283 P Pdif 23 13 12.7 +1.6
comp=Z,0.5nm,1.0s,baz=90,slow=4.5,SNR=2.7
PPT Papeete 106.89 110 *e*LR LR 23 12 57.4
comp=Z,113nm,25.5s
YKA Yellowknife Ar 116.28 18 PKP PKPdf 23 18 05.4 -2.7
comp=Z,1.8nm,1.0s,baz=312,slow=3.2,SNR=3.0
YKA pPKP pPKPdf 23 18 14.7 -3.2
comp=Z,0.6nm,0.7s,baz=113,slow=20,SNR=1.4
JCW Jim Creek 122.92 33 *e*PKPdf PKPdf 23 18 21.3 0.0
JCW *e* 23 18 29.9
EDM Edmonton 123.68 24 *e*PKPdf PKPdf 23 18 22.7 +0.1
EDM *e*PP PP 23 20 03.6 -0.9
RSW Rattlesnake Hi 125.27 34 *e*PKPdf PKPdf 23 18 26.8 +0.9

RSW				e		23 18 35.0	
HAWA	**Hanford**	**125.30**	**34**	*e*PKPdf	PKPdf	23 18 26.2	+0.3
HAWA				e		23 18 34.8	
HUMO	**Hull Mountain**	**125.41**	**39**	*e*PKPdf	PKPdf	23 18 27.1	+0.8
HUMO				e		23 18 35.9	
LNOR	**Lincton Mounta**	**126.31**	**33**	*e*PKPdf	PKPdf	23 18 28.2	+0.3
LNOR				e		23 18 36.6	
WVOR	**Wild Horse Val**	**128.17**	**37**	*e*PKPdf	PKPdf	23 18 32.2	+0.7
WVOR				e		23 18 41.2	
CHMT	**Chamberlain Mo**	**128.25**	**30**	*e*PKPdf	PKPdf	23 18 31.2	-0.4
CHMT				e		23 18 40.2	
EGMT	**Eagleton**	**129.08**	**26**	*e*PKPdf	PKPdf	23 18 33.9	+0.7
EGMT				e		23 18 42.2	
HRY	**Holter Researc**	**129.08**	**29**	*e*PKPdf	PKPdf	23 18 34.5	+1.4
HRY				e		23 18 42.0	
DLMT	**Dillon**	**129.65**	**31**	*e*PKPdf	PKPdf	23 18 34.9	+0.6
DLMT				e		23 18 43.6	
MCMT	**McKenzie Canyo**	**129.89**	**31**	*e*PKPdf	PKPdf	23 18 35.7	+1.0
MCMT				e		23 18 44.5	
BOZ	**Bozeman (W)**	**129.94**	**30**	*e*PKPdf	PKPdf	23 18 35.1	+0.3
BOZ				e		23 18 44.5	
NVAR	**Mina Array Bea**	**130.65**	**41**	PKP	PKPdf	23 18 36.6	+0.2
	comp=Z,3.4nm,0.8s,baz=262,slow=2.4,SNR=12						
NVAR				pPKP	pPKPdf	23 18 46.4	+0.2
	comp=Z,2.7nm,0.6s,baz=285,slow=1.8,SNR=7.6						
NVAR				SKPbc	SKPbc	23 21 60.0	+1.7
	comp=Z,3.5nm,0.9s,baz=258,slow=4.0,SNR=8.9						
GCMT	**Greycliff**	**130.78**	**28**	*e*PKPdf	PKPdf	23 18 37.2	+0.7
GCMT				e		23 18 46.3	
DGMT	**Dagmar**	**131.01**	**22**	*e*PKPdf	PKPdf	23 18 36.7	-0.1
ELK	**Elko**	**131.22**	**37**	PFAKE		23 18 50.0	+13
ELK				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
LAO	**LASA Array**	**131.64**	**25**	*e*PKPdf	PKPdf	23 18 38.8	+0.8
LAO				e		23 18 47.3	
REDW	**Red Top Meadow**	**131.95**	**31**	*e*PKPdf	PKPdf	23 18 39.6	+0.9
REDW				e		23 18 48.1	
HVU	**Hansel Valley**	**131.99**	**34**	*e*PKPdf	PKPdf	23 18 39.9	+1.0
HVU				e		23 18 48.6	
ULM	**Lac du Bonnet**	**132.08**	**15**	PKP	PKPdf	23 18 38.6	-0.2
	comp=Z,9.2nm,0.8s,baz=5.2,slow=3.2,SNR=5.8						
ULM				pPKP	pPKPdf	23 18 47.5	-1.0
	comp=Z,12nm,0.8s,baz=77,slow=1.4,SNR=4.9						
HWUT	**Hardware Ranch**	**132.78**	**34**	*e*PKPdf	PKPdf	23 18 40.3	-0.1
HWUT				e		23 18 50.0	
DUG	**Dugway**	**133.00**	**36**	*e*PKPdf	PKPdf	23 18 40.7	-0.2
BW06	**Boulder Array**	**133.04**	**31**	PFAKE		23 18 50.0	+9.2
BW06				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
PDAR	**Pinedale Array**	**133.04**	**31**	PKhKP		23 18 29.7	
	comp=Z,0.5nm,0.8s,baz=336,slow=3.3,SNR=3.8						
PDAR				PKP	PKPdf	23 18 41.0	+0.2
	comp=Z,1.5nm,0.7s,baz=112,slow=1.6,SNR=7.1						
PDAR				pPKP	pPKPdf	23 18 49.1	-1.4
	comp=Z,1.2nm,0.6s,baz=187,slow=2.6,SNR=4.6						
GSC	**Goldstone**	**133.35**	**44**	*e*PKPdf	PKPdf	23 18 42.1	+0.5
GSC				e		23 18 51.6	
MSU	**Marysvale**	**134.46**	**37**	*e*PKPdf	PKPdf	23 18 44.9	+1.3
MSU				e		23 18 54.9	
RSSD	**Black Hills**	**134.62**	**26**	*e*PKPpre		23 18 35.0	
RSSD				*e*PKPdf	PKPdf	23 18 43.4	-0.4
RSSD				e		23 18 52.3	
LDFC	**Landfair**	**134.63**	**43**	*e*PKPdf	PKPdf	23 18 45.4	+1.4
RWWY	**Rawlins**	**135.01**	**30**	*e*PKPdf	PKPdf	23 18 45.0	+0.4
RWWY				e		23 18 53.1	
SRU	**San Rafael**	**135.04**	**35**	*e*PKPdf	PKPdf	23 18 45.5	+0.9
SRU				e		23 18 56.0	
PHWY	**Pilot Hill**	**136.17**	**29**	*e*PKPdf	PKPdf	23 18 46.3	-0.4
PHWY				e		23 18 55.0	
PV10	**Paradox Valley**	**136.40**	**35**	*e*PKPdf	PKPdf	23 18 48.5	+1.3
PV10				e		23 18 57.3	
WUAZ	**Wupatki**	**136.84**	**40**	*e*PKPdf	PKPdf	23 18 49.3	+1.2
ISCO	**Idaho Springs**	**137.23**	**31**	PFAKE		23 19 00.0	+11
ISCO				LR	LR		
	comp=Z,770nm,21.0s,MS5.4						
ECSD	**EROS,Sioux Fal**	**137.78**	**19**	*e*PKPdf	PKPdf	23 18 49.7	+0.1
ECSD				e		23 18 58.4	
SDCO	**Great Sand Dun**	**138.81**	**33**	*e*PKPpre		23 18 36.7	
SDCO				*e*PKPdf	PKPdf	23 18 51.0	-0.7
SDCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
TUC	**Tucson**	**139.17**	**43**	*e*PKPdf	PKPdf	23 18 52.8	+0.3
AMTX	**Amarillo**	**142.99**	**32**	*e*PKPdf	PKPdf	23 18 57.0	-2.4
ACSO	**Alum Creek Sta**	**144.12**	**5**	*e*PKPdf	PKPdf	23 18 58.2	-2.9
SLM	**Saint Louis**	**144.36**	**15**	*e*PKPdf	PKPdf	23 18 58.9	-2.7
SLM				e		23 19 07.4	
WMOK	**Wichita Mounta**	**144.58**	**29**	*e*PKPdf	PKPdf	23 19 00.5	-1.7
WMOK				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
CCM	**Cathedral Cave**	**144.62**	**17**	*e*PKPdf	PKPdf	23 19 00.0	-2.0
CCM				e		23 19 08.4	
BLO	**Bloomington**	**144.68**	**10**	*e*PKPdf	PKPdf	23 19 00.2	-2.0
BLO				e		23 19 08.8	
OLIL	**Olney**	**144.78**	**13**	*e*PKPdf	PKPdf	23 19 00.4	-1.9
OLIL				e		23 19 09.4	
MCWV	**Mont Chateau**	**144.88**	**1**	*e*PKPdf	PKPdf	23 19 01.3	-1.2
FVM	**French Village**	**144.92**	**16**	*e*PKPdf	PKPdf	23 19 00.7	-1.9
FVM				e		23 19 09.3	
SIUC	**Southern Illin**	**145.49**	**15**	*e*PKP	PKPdf	23 19 02.9	-0.7
SIUC				e		23 19 11.4	
USIN	**University of**	**145.62**	**12**	*e*PKPdf	PKPdf	23 19 03.6	-0.2
USIN				e		23 19 11.8	
WCI	**Wyandotte Cave**	**145.63**	**10**	*e*PKPdf	PKPdf	23 19 03.4	-0.5
WCI				e		23 19 11.9	
TXAR	**Lajitas Array**	**145.80**	**41**	PKPbc	PKPbc	23 19 05.2	+0.3
	comp=Z,77nm,1.0s,baz=280,slow=1.6,SNR=252						
TXAR				pPKPbc	pPKPbc	23 19 13.6	-0.9
	comp=Z,25nm,0.7s,baz=352,slow=0.5,SNR=15						
TXAR	**Lajitas Array**	**145.80**	**41**	PKPbc	PKPbc	23 19 05.2	+0.3
TXAR				pPKPbc	pPKPbc	23 19 13.6	-0.9
CBN	**Corbin**	**146.32**	**358**	*e*PKPdf	PKPdf	23 19 05.1	+0.1
PARMO	**Parma**	**146.34**	**16**	*e*PKPdf	PKPdf	23 19 05.6	+0.5
GLAT	**Glass**	**146.84**	**16**	*e*PKPab	PKPab	23 19 07.9	-1.0
UTMT	**University of**	**146.88**	**15**	*e*PKPdf	PKPdf	23 19 06.0	0.0
GNAR	**Gosnell**	**146.92**	**17**	*e*PKPbc	PKPbc	23 19 08.0	0.0
MIAR	**Mount Ida**	**147.01**	**23**	*e*PKPdf	PKPdf	23 19 07.0	+0.7
MIAR				e		23 19 16.3	
HBAR	**Harrisburg**	**147.11**	**18**	*e*PKPdf	PKPdf	23 19 05.9	-0.5
HALT	**Halls**	**147.16**	**16**	*e*PKPdf	PKPdf	23 19 07.0	+0.5
HALT				e		23 19 16.4	
UALR	**University of**	**147.26**	**21**	*e*PKPdf	PKPdf	23 19 06.8	+0.1
UALR				e		23 19 16.7	
ELN	**Prospectdale**	**147.27**	**3**	*e*PKPdf	PKPdf	23 19 06.2	-0.4
ELN				e		23 19 17.0	
BLA	**Blacksburg**	**147.30**	**2**	*e*PKPdf	PKPdf	23 19 07.5	+0.9
BLA				e		23 19 16.4	
WVT	**Waverly**	**147.34**	**14**	*e*PKP	PKPbc	23 19 08.7	-0.4
WVT				e		23 19 17.2	
JCT	**Junction City**	**147.35**	**35**	*e*PKPdf	PKPdf	23 19 07.8	+0.8
JCT				e		23 19 18.2	
TZTN	**Tazewell**	**147.70**	**7**	*e*PKPdf	PKPdf	23 19 07.4	0.0
TZTN				e		23 19 17.8	
OXF	**Oxford**	**148.45**	**17**	*e*PKPdf	PKPdf	23 19 08.3	-0.3
OXF				*e*PKPbc	PKPbc	23 19 11.4	-0.8
OXF				e		23 19 19.7	
TKL	**Tuckaleechee C**	**148.55**	**8**	*e*PKPdf	PKPdf	23 19 09.1	+0.3
TKL				*e*PKPbc	PKPbc	23 19 12.0	-0.4
TKL				e		23 19 20.2	
SWET	**Sewanee**	**148.62**	**11**	*e*PKPdf	PKPdf	23 19 09.2	+0.3
SWET				*e*PKPbc	PKPbc	23 19 11.7	-0.9
SWET				e		23 19 19.9	
CPCT	**Cooper Cave**	**148.64**	**9**	*e*PKPdf	PKPdf	23 19 09.0	+0.1
CPCT				*e*PKPbc	PKPbc	23 19 11.9	-0.7
CPCT				e		23 19 20.4	
NATX	**Nacogdoches**	**148.97**	**27**	*e*PKPbc	PKPbc	23 19 13.7	+0.1
NATX				e		23 19 21.5	
CNNC	**Cliffs of the**	**149.29**	**359**	*e*PKPdf	PKPdf	23 19 10.1	+0.1
CNNC				*e*PKPbc	PKPbc	23 19 14.3	0.0
CNNC				*e*PKPab	PKPab	23 19 18.6	-0.1
HKT	**Hockley**	**149.91**	**30**	*e*PKPdf	PKPdf	23 19 11.8	+0.7
HKT				*e*PKPbc	PKPbc	23 19 16.6	+0.6
HKT				e		23 19 25.1	
HKT	**Hockley**	**149.91**	**30**	*e*PKHKP	PKPdf	23 19 11.8	+0.7
HKT				e		23 19 16.6	
JSC	**Jenkinsville**	**150.17**	**4**	*e*PKPbc	PKPbc	23 19 16.5	0.0
JSC				*e*PKPab	PKPab	23 19 22.1	-0.3
VBMS	**Vicksburg**	**150.22**	**20**	*e*PKPdf	PKPdf	23 19 11.9	+0.4
VBMS				*e*PKPbc	PKPbc	23 19 16.6	-0.1
LRAL	**Lakeview Retre**	**150.49**	**14**	*e*PKPdf	PKPdf	23 19 11.8	-0.1
LRAL				*e*PKPbc	PKPbc	23 19 16.7	-0.6
LRAL				e		23 19 23.5	
GOGA	**Godfrey**	**150.80**	**8**	*e*PKPdf	PKPdf	23 19 12.7	+0.3
GOGA				*e*PKPbc	PKPbc	23 19 17.9	-0.1
GOGA				e		23 19 24.3	
COW	**Cow Castle Cre**	**151.10**	**3**	*e*PKPbc	PKPbc	23 19 18.1	-0.6
NHSC	**New Hope**	**151.40**	**2**	*e*PKPdf	PKPdf	23 19 13.7	+0.4
NHSC				*e*PKPbc	PKPbc	23 19 19.6	+0.2
NHSC				e		23 19 27.7	
LVC	**Limon Verde**	**151.47**	**199**	*e*PKPab	PKPab	23 19 29.0	+1.0
LVC				LR	LR		
	comp=Z,3µm,22.0s						
LPAZ	**La Paz**	**156.90**	**207**	PKP	PKPdf	23 19 21.8	+0.3
	comp=Z,0.5nm,0.5s,baz=210,slow=8.1,SNR=2.0						
LPAZ	**La Paz**	**156.90**	**207**	PKIKP	PKPdf	23 19 21.8	+0.3
LPAZ				MLR	MLR		
	comp=Z,2µm,21.0s						
NNA	**Nana**	**163.62**	**187**	PFAKE		23 19 40.0	+11
NNA				LR	LR		
	comp=Z,860nm,20.0s						
OTAV	**Otavalo**	**175.86**	**185**	PKPdf	PKPdf	23 19 37.2	+0.9

NEIC ***20*** *23:17:39.8, 1672N×9971W, h6km, MD3.5(MEX), After MEX.*

MEX 20 23:17:39.8±0.5, 1672N×9971W, h6km±3km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.24**	**306**	*i*	P		Pg	23 17 44.3	-0.3
ACX				*i*	S		Sg	23 17 47.8	0.0
CAIG	**El Cayaco**	**0.62**	**301**	*i*	P		Pg	23 17 50.7	-1.1
CAIG				*i*	S		Sg	23 17 59.8	-0.1
PNIG	**Pinotepa**	**1.56**	**102**	*i*	P		Pn	23 18 04.8	-3.3
PNIG				*i*	S		Sn	23 18 24.2	-4.4
ZIIG	**Zihuatanejo**	**1.89**	**298**	*i*	P		Pn	23 18 10.0	-2.7
ZIIG				*i*	S		Sn	23 18 33.0	-3.9
UTMO	**Huajuapan**	**2.13**	**59**	*i*	P		Pn	23 18 13.4	-2.6
UTMO				*i*	S		Sn	23 18 38.3	-4.5

SGS ***20*** *23:20:45.6, 3287N×3518E, h5km*
HLW ***20*** *23:21:00.2, 3182N×3575E, h12km, Mb3.8*
ISCJB ***20*** *23:21:01.2±0.5, 3166N±002×3563E±004, h9km±3km, Error ellipse: s-maj=6.2km s-min=2.5km az=13.9*
CSEM ***20*** *23:21:01.3±0.1, 3166N×3555E, h8km, ML3.4, Error ellipse: s-maj=2.5km s-min=1.7km az=130.0*
GII ***20*** *23:21:02.4±0.4, 3169N×3557E, h9km±1km, ML3.3/6, Mw2.6/5*
NEIC ***20*** *23:21:02.0, 3168N×3559E, h5km, ML3.2(GII), After GII.*
NEIC Felt in the Dead Sea area.
GRAL ***20*** *23:21:10.3±0.6, 3208N×3560E, h13km±7km, MD3.5*

ISC 20 23:21:02.1±0.6, 3166N±002×3562E±004, h9km±3km, n52, σ0§66/77, 7C, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DSI	**Dead Sea**	**0.23**	**246**		Pg		**Pg**	**23 21 06.6**	**-0.1**
DSI	**Dead Sea**	**0.23**	**246**		Pg		**Pg**	**23 21 06.7**	**0.0**
DSI					Sg		**Sg**	**23 21 10.1**	**+0.3**
MZDA	**Masada**	**0.41**	**212**		Pg		**Pg**	**23 21 11.1**	**+0.9**
MZDA					Sg		**Sg**	**23 21 17.2**	**+1.5**
MZDA	**Masada**	**0.41**	**212**		Pg		**Pg**	**23 21 10.8**	**+0.6**
MZDA					Sg		**Sg**	**23 21 17.2**	**+1.5**
YTIR	**Yattir**	**0.52**	**235**		Pg		**Pg**	**23 21 12.5**	**+0.2**
YTIR	**Yattir**	**0.52**	**235**		Pg		**Pg**	**23 21 12.6**	**+0.3**
YTIR					Sg		**Sg**	**23 21 20.2**	**+1.1**
HMDT	**Nahal Hemdat**	**0.59**	**352**		Pg		**Pg**	**23 21 13.6**	**-0.1**
HMDT					Sg		**Sg**	**23 21 22.0**	**+0.6**
SLTI	**Sal'it**	**0.76**	**320**		Pg		**Pg**	**23 21 15.9**	**-0.9**
SLTI					Sg		**Sg**	**23 21 26.5**	**-0.2**
SLTI	**Sal'it**	**0.76**	**320**		Pg		**Pg**	**23 21 15.9**	**-0.8**
SLTI					Sg		**Sg**	**23 21 26.4**	**-0.2**
MMLI	**Mount Malkishu**	**0.79**	**348**		Pg		**Pg**	**23 21 17.0**	**-0.4**
MMLI					Sg		**Sg**	**23 21 27.9**	**+0.2**
RTMI	**Retamim**	**1.00**	**233**		Pg		**Pg**	**23 21 21.1**	**-0.2**
RTMI					Sg		**Sg**	**23 21 34.9**	**+0.6**
HRSH	**Kfar Ka'horesh**	**1.07**	**345**	↑	P		**Pg**	**23 21 32.6**	**+10**
HRSH					S		**Sg**	**23 21 55.8**	**+19**
OFRI	**'Ofer**	**1.10**	**331**		Pg		**Pg**	**23 21 21.8**	**-1.4**
ZFRI	**Zfri**	**1.17**	**199**		Pg		**Pg**	**23 21 24.2**	**-0.4**
ZFRI					Sg		**Sg**	**23 21 40.4**	**+0.7**
KZIT	**Kziot**	**1.29**	**235**		Pg		**Pg**	**23 21 25.6**	**-1.3**
KZIT					Sg		**Sg**	**23 21 43.1**	**-0.5**
RMNI	**Mount Ramon**	**1.29**	**215**		Pg		**Pg**	**23 21 26.1**	**-0.8**
KSHT	**Keshet**	**1.33**	**7**		Pn		**Pn**	**23 21 26.6**	**-0.2**
MMA0B	**Mount Meron ar**	**1.36**	**352**		Pn		**Pn**	**23 21 26.7**	**-0.6**
MMA0B					Sn		**Sn**	**23 21 44.8**	**-0.6**
PRNI	**Paran**	**1.41**	**202**		Pn		**Pn**	**23 21 27.9**	**0.0**
PRNI					Sn		**Sn**	**23 21 47.3**	**+0.8**
HNTI	**Hanita**	**1.47**	**345**		Pn		**Pn**	**23 21 28.6**	**-0.1**
HNTI					Sn		**Sn**	**23 21 49.5**	**+1.5**
HNTI	**Hanita**	**1.47**	**345**		Pn		**Pn**	**23 21 28.6**	**-0.1**
HNTI					Sn		**Sn**	**23 21 48.6**	**+0.6**
KSDI	**Kefar Szold**	**1.53**	**1**		Pn		**Pn**	**23 21 29.1**	**-0.5**
KSDI					Sn		**Sn**	**23 21 49.9**	**+0.4**
HRI	**Mount Hermon**	**1.60**	**3**		Pn		**Pn**	**23 21 30.6**	**0.0**
HRFI	**Mount Harif**	**1.70**	**197**		Pn		**Pn**	**23 21 32.0**	**+0.1**
HRFI					Sn		**Sn**	**23 21 54.4**	**+0.7**
KRMI	**Paran Flat**	**1.72**	**207**		Pn		**Pn**	**23 21 32.2**	**0.0**
KRMI					Sn		**Sn**	**23 21 54.6**	**+0.3**
RSH		**1.77**	**247**		P		**Pn**	**23 21 32.7**	**-0.2**
RSH					S		**Sn**	**23 21 55.8**	**+0.3**
RCY	**Rachaya**	**1.82**	**5**	*e*	P		**Pn**	**23 21 34.5**	**+0.9**
RCY				*e*	S		**Sn**	**23 21 52.8**	**-4.1**
MATL	**Matirih**	**1.84**	**352**	*e*	P		**Pn**	**23 21 34.5**	**+0.7**
MBRI	**Mt Berech**	**1.96**	**198**		Pn		**Pn**	**23 21 35.5**	**+0.1**
EIL	**Elat**	**2.07**	**196**		Pn		**Pn**	**23 21 37.1**	**+0.1**
HNKL	**Nakhl**	**2.23**	**220**	↑	P		**Pn**	**23 21 39.2**	**0.0**
BHL	**Bhannes**	**2.24**	**1**	*e*	P		**Pn**	**23 21 40.6**	**+1.3**
BHL				*e*	S		**Sn**	**23 22 02.2**	**-4.8**
AMAG	**Maghara**	**2.30**	**244**		P		**Pn**	**23 21 40.0**	**-0.2**
AMAG					S		**Sn**	**23 22 08.8**	**+0.2**
AMAG	**Maghara**	**2.30**	**244**		P		**Pn**	**23 21 40.0**	**-0.2**
AMAG					S		**Sn**	**23 22 08.8**	**+0.1**
HQLS		**2.40**	**192**		P		**Pn**	**23 21 40.4**	**-1.1**
HBST	**Basata**	**2.56**	**198**		P		**Pn**	**23 21 43.7**	**0.0**
HWQ	**Hawqa**	**2.62**	**6**	*e*	P		**Pn**	**23 21 45.5**	**+0.9**
JLOS		**2.92**	**182**		P		**Pn**	**23 21 47.6**	**-1.1**
SUZ		**3.01**	**234**	↑	P		**Pn**	**23 21 49.5**	**-0.4**
SUZ		**3.01**	**234**		P		**Pn**	**23 21 49.5**	**-0.4**
BDAS	**Al Bad'**	**3.25**	**188**		P		**Pn**	**23 21 51.6**	**-1.6**
HKAT	**Jabal Katrina**	**3.43**	**205**	↑	P		**Pn**	**23 21 55.6**	**-0.1**
HHAG	**Hagoal**	**3.48**	**242**	↑	P		**Pn**	**23 21 56.1**	**-0.3**
TBKS	**Tabuk**	**3.52**	**167**		S		**Sg**	**23 22 49.7**	**-5.5**
TBKS	**Tabuk**	**3.52**	**167**		P		**Pn**	**23 21 56.5**	**-0.4**
TR2		**3.66**	**207**	↑	P		**Pn**	**23 21 58.7**	**-0.1**
KOT	**Kottamia**	**3.69**	**243**		P		**Pn**	**23 21 59.1**	**-0.2**
KOT					S		**Sn**	**23 22 42.1**	**-0.9**
HSAF	**As Saff**	**4.05**	**241**	↑	P		**Pn**	**23 22 03.8**	**-0.5**
GRB	**Gharib**	**4.18**	**217**		P		**Pn**	**23 22 05.8**	**-0.2**
HHRG	**Al Ghardaqah**	**4.77**	**203**		P		**Pn**	**23 22 14.8**	**+0.6**
ANTO	**Ankara**	**8.51**	**345**	*e*	Pn		**Pn**	**23 23 05.9**	**+0.5**
GNI	**Garni**	**11.24**	**39**	*e*	Pn		**Pn**	**23 23 43.7**	**+0.9**

NEIC ***20*** *23:26:29.7, 1634N×9989W, h4km, MD3.8(MEX), After MEX.*

MEX 20 23:26:29.8±0.8, 1634N×9989W, h5km±6km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.53**	**358**	*i*	P		Pg	23 26 39.1	-0.9
ACX				*i*	P			23 26 39.2	
ACX				*i*	S		Sg	23 26 47.2	+0.3
ACX				*i*	S		Sg	23 26 47.5	+0.6
CAIG	**El Cayaco**	**0.79**	**333**	*i*	P		Pg	23 26 44.0	-1.0
CAIG				*i*	S		Sg	23 26 54.0	-0.4
PNIG	**Pinotepa**	**1.70**	**88**	*i*	P		Pn	23 26 56.2	-3.9
PNIG				*i*	S		Sn	23 27 17.9	-4.3
ZIIG	**Zihuatanejo**	**1.96**	**310**	*i*	P		Pn	23 27 01.2	-2.6
ZIIG				*i*	S		Sn	23 27 24.4	-4.4
PLIG	**Platanillo**	**2.08**	**10**	*i*	P		Pn	23 27 01.3	-4.1
PLIG				*i*	S		Sn	23 27 25.6	-6.0
UTMO	**Huajuapan**	**2.49**	**53**	*i*	P		Pn	23 27 09.6	-1.5
UTMO				*e*	S		Sn	23 27 38.6	-3.2
VHO	**Vista Hermosa**	**3.12**	**76**	*i*	P		Pn	23 27 18.8	-0.8
VHO				*i*	S		Sn	23 27 53.9	-3.3
TPIG	**Tehuac#an**	**3.18**	**49**	*i*	S		Sn	23 28 01.7	+2.8
CMIG	**Matias Romero**	**4.86**	**80**	*e*	P		Pn	23 27 50.9	+7.2

IDC ***20*** *23:52:50.1±0.4, 1778S×17334W, h0km, mb5.3/20, mb1 5.4/21, mb1mx5.4/22, mbtmp5.3/21, ML6.2/1, MS5.3/25, Ms1 5.3/25, ms1mx5.1/34, Error ellipse: s-maj=16.0km s-min=11.5km az=119.0*
SZGRF ***20*** *23:52:52.9, 1898S×17324W, h33km, mb5.7, Tonga Islands*
ISCJB ***20*** *23:52:54.0±0.1, 1783S±003×173.18W±003, h34km, mb5.6/115, MS5.5/242, Error ellipse: s-maj=5.1km s-min=2.7km az=140.2*
BJI ***20*** *23:52:55.4, 17.18S×173.07W, h29km, mB6.0, mb5.6, Ms5.6, Msz5.4*
GCMT ***20*** *23:52:55.5±0.1, 1786S×172.79W, h35km, MW5.7/107, Moment Tensor Solution. s104,c206; s107,c259; Duration: 1§7 Moment tensor: Scale 1017Nm; Mrr3.17±.04; Mθθ-0.98±.03; Mφφ-2.19±.03; Mrθ 1.26±.04; Mθφ0.10±.03; Mφr3.30±.05; Best double couple: Mo4.40600×1017 NP1:φs176.00000°, δ19.00000°, λ72.00000°. NP2:φs16.00000°, δ72.00000°, λ96.00000°. Principal axes: T 4.9760, Plg63.0000°, Azm295.0000°; N -1.1410, Plg6.0000°, Azm194.0000°; P -3.8360, Plg26.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***20*** *23:52:55.5±0.1, 1782S×173.23W, h35km, mb5.6/58, MS5.5/198 Error ellipse: s-maj=5.2km s-min=3.0km az=127.0*
NEIC Felt at Neiafu.
MOS ***20*** *23:52:56.0±0.8, 1729S×173.17W, h33km, mb5.6/35, MS5.5/52, Error ellipse: s-maj=11.1km s-min=8.1km az=71.8*
DJA ***20*** *23:53:02, 1809S×17369W, h60km, Mw6.2/26*

ISC 20 23:52:55.9±0.1, 1783S±003×17319W±003, h36km, h36km±1.1km: pP-P, n1094, σ0§71/655, mb5.6/115, MS5.5/242, 212C-176D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.13**	**19**		Pn		**Pn**	**23 53 49.6**	**-6.9**
	61nm,0.3s,baz=85,slow=1.5,SNR=36								
AFI					Sn		**Sn**	**23 54 32.8**	**-11**
	609nm,0.3s,baz=226,slow=23,SNR=12								
AFI					T			23 58 00.6	
	148nm,0.3s,baz=108,slow=12,SNR=5.5								
AFI	**Afiamalu**	**4.13**	**19**	*e*	Pn		**Pn**	**23 53 49.1**	**-7.4**
AFI					Sn		**Sn**	**23 54 32.5**	**-11**
AFI	**Afiamalu**	**4.13**	**19**		P		**Pn**	**23 53 49.6**	**-6.9**
AFI								23 54 32.8	
AFI					pmax	pmax			
	comp=Z,61nm,0.3s								
AFI					smax				
	comp=N,609nm,0.3s								
AFI					pmax	pmax			
	comp=N,148nm,0.3s								
FUNA	**Funafuti**	**11.85**	**320**		Pn		**Pn**	**23 55 41.0**	**-1.4**
RAO	**Raoul Island**	**12.17**	**200**		Pn		**Pn**	**23 55 44.7**	**-2.1**
	comp=N,136nm,0.3s,baz=248,slow=21,SNR=8.4								
RAO					Sn		**Sn**	**23 57 56.3**	**-4.9**
	comp=N,275nm,0.3s,baz=41,slow=23,SNR=6.8								
RAO					T			00 08 07.9	
	comp=N,161nm,0.3s,baz=99,slow=22,SNR=6.4								
RAO	**Raoul Island**	**12.17**	**200**	*e*	Pn		**Pn**	**23 55 46.1**	**-0.6**
RAO				*e*	Sn		**Sn**	**23 57 50.5**	**-11**
RAR	**Rarotonga**	**13.09**	**107**		Pn		**Pn**	**23 55 52.4**	**-7.1**
	comp=N,26nm,0.3s,baz=263,slow=7.3,SNR=29								
RAR					Sn		**Sn**	**23 58 04.2**	**-20**
	comp=N,11nm,0.3s,baz=139,slow=19,SNR=3.6								
RAR					LR	LR		23 59 46.8	
	comp=N,15µm,21.3s,baz=200,slow=32								
RAR					T			00 09 32.4	
	comp=N,43nm,0.3s,baz=193,slow=11,SNR=6.0								
RAR	**Rarotonga**	**13.09**	**107**	*e*

RKT **Rikitea** 36.12 105 *e*P P **23 59 52.7 -2.0**
comp=Z,30nm,1.0s,mb5.2
RKT *e*S S **00 05 27.3 -4.8**
RKT *e*LQ 00 08 13.2
RKT Rikitea 36.12 105 *e*P P **23 59 52.7 -2.0**
RKT *e*S S **00 05 27.3 -4.8**
RKT pmax pmax
comp=Z,30nm,1.0s,mb5.2
CTA Charters Tower 38.36 260 PcP PcP 00 02 28.5 +1.4
comp=Z,25nm,1.0s,baz=74,slow=6.2,SNR=4.5
CTA LR LR 00 14 01.3
comp=Z,13µm,21.6s,MS5.7,baz=88,slow=33
CTAO Charters Tower 38.36 260 *e*P P **00 00 11.1 -2.7**
comp=Z,82nm,0.7s,mb5.6
CTAO *e*PcP PcP 00 02 28.3 +1.2
CTAO *e*S S **00 06 13.8 +7.7**
CTAO LR LR
comp=Z,12µm,21.0s,MS5.7
CTAO Charters Tower 38.36 260 P P **00 00 12.4 -1.4**
comp=Z,131nm,0.8s,mb5.7
PMG Port Moresby 39.36 277 PFAKE 00 00 30.0 +7.7
PMG LR LR
comp=Z,5µm,20.0s,MS5.3
POHA Pohakuloa 41.18 26 *e*P P **00 00 37.6 +0.5**
POHA *e*P 00 00 41.0
POHA *e*S S **00 06 47.3 -1.0**
TAU Tasmania Unive 41.71 225 *e*P P **00 00 39.8 -1.5**
comp=Z,510nm,1.9s,mb5.8
TAU *e*PP PP 00 02 17.7 -0.3
TAU *e*S S **00 07 00.2 +4.5**
TAU LR LR
comp=Z,7µm,19.0s,MS5.5
COEN Coen 42.07 269 P P **00 00 43.2 -1.4**
comp=Z,52nm,1.1s,mb5.1
STKA Stephens Creek 43.04 242 P P **00 00 50.3 -2.0**
comp=Z,21nm,0.7s,mb5.0,baz=90,slow=8.9,SNR=22
STKA LR LR 00 16 48.7
comp=Z,6µm,18.9s,MS5.5,baz=68,slow=34
MIDW Midway 45.95 355 *e*P P **00 01 16.3 +0.9**
MIDW LR LR
comp=Z,4µm,19.0s,MS5.4
WB2 Warramunga Arr 49.52 259 *i*P P **00 01 39.9 -3.5**
WB2 *e*PcP PcP 00 03 07.1 +2.1
WB2 *e*S S **00 09 04.2 +15**
WRAB Tennant Creek 49.52 259 *e*P P **00 01 39.8 -3.5**
comp=Z,125nm,0.9s,mb5.9
WRAB S S **00 08 58.3 +9.4**
WRAB LR LR
comp=Z,11µm,20.0s,MS5.8
WRAB Tennant Creek 49.52 259 *c i*P P **00 01 40.3 -3.1**
WRAB Tennant Creek 49.52 259 P P **00 01 40.1 -3.3**
comp=Z,161nm,1.0s,comp=Z,2µm,mb6.0
WRA Warramunga Arr 49.53 259 P P **00 01 40.4 -3.1**
comp=Z,81nm,0.8s,mb5.8,baz=97,slow=6.6,SNR=366
WRA PcP PcP 00 03 04.9 -0.1
comp=Z,26nm,0.8s,baz=91,slow=3.7,SNR=8.1
WRA S S **00 08 44.9 -4.1**
comp=Z,11nm,1.1s,baz=97,slow=12,SNR=11
WRA LR LR 00 21 27.8
comp=Z,10µm,20.5s,MS5.8,baz=80,slow=35
WRA Warramunga Arr 49.53 259 P P **00 01 40.4 -3.0**
WRA 00 03 04.9
WRA S S **00 08 44.9 -4.1**
ASAR Alice Springs 49.59 254 P P **00 01 41.2 -2.6**
comp=Z,188nm,0.8s,mb6.2,baz=88,slow=8.3,SNR=626
ASAR PcP PcP 00 03 06.1 +0.9
comp=Z,48nm,0.9s,baz=104,slow=3.9,SNR=11
ASAR ScP ScP 00 07 01.4 +3.3
comp=Z,1.2nm,0.7s,baz=91,slow=5.7,SNR=3.0
ASAR S S **00 08 41.9 -8.0**
comp=Z,7.7nm,0.9s,baz=88,slow=15,SNR=15
ASAR Alice Springs 49.59 254 P P **00 01 41.3 -2.6**
ASAR 00 03 06.1
GUMO Guam 51.83 304 LR LR 00 20 55.2
comp=Z,3µm,20.0s,MS5.3,baz=84,slow=33
GUMO Guam 51.83 304 PFAKE 00 02 10.0 +9.2
GUMO LR LR
comp=Z,3µm,19.0s,MS5.3
FORT Forrest 54.53 245 *e*P P **00 02 18.0 -2.5**
FORT PcP PcP 00 03 23.8 +0.2
SWI Sorong 57.09 281 P P **00 02 38.3 -0.8**
comp=Z,225nm,0.6s,comp=Z,2µm,mb6.4
DRV Dumont d'Urvil 57.39 200 P P **00 02 41.0 +0.6**
DRV S S **00 10 39.0 +4.6**
DRV R 00 20 00.0
FITZ Fitzroy Crossi 57.94 259 P P **00 02 44.2 -0.9**
AAI Ambon 59.03 277 P P **00 02 52.6 -0.2**
comp=Z,107nm,1.3s,comp=Z,2µm,mb5.7
RPN Rapa Nui 59.20 111 PFAKE 00 03 10.0 +16
RPN LR LR
comp=Z,4µm,21.0s,MS5.6
LBMI Labuha 60.69 280 P P **00 03 05.1 +1.0**
comp=Z,83nm,1.3s,comp=Z,2µm,mb5.7
SBA Scott Base 60.86 185 *e*P P **00 03 03.4 -0.8**
SBA *e*S S **00 11 30.3 +11**
SBA LR LR
comp=Z,1µm,20.0s,MS5.1
SBA Scott Base 60.86 185 *e*P P **00 03 06.1 +1.8**
VNDA Vanda 61.00 186 P P **00 03 06.6 +1.4**
comp=Z,24nm,1.0s,mb5.3,baz=9.0,slow=6.7,SNR=79
VNDA LR LR 00 23 10.7
comp=Z,854nm,20.7s,MS4.9,baz=11,slow=30
VNDA Vanda 61.00 186 *e*P P **00 03 05.9 +0.7**
comp=Z,38nm,1.1s,mb5.4
VNDA *e*PcP PcP 00 03 47.9 -0.3
VNDA LR LR 00 23 10.7
BATI Baumata 61.50 268 LR LR 00 28 47.1
comp=Z,3µm,20.4s,MS5.4,baz=119,slow=35
BATI Baumata 61.50 268 P P **00 03 10.7 +1.1**
comp=Z,44nm,0.7s,comp=Z,1µm,mb5.7
MBWA Marble Bar 62.90 255 P P **00 03 18.0 -0.9**
SNR=7.3
MBWA Marble Bar 62.90 255 *e*P P **00 03 14.1 -4.8**
MBWA *e*PP PP 00 05 40.0 +2.5
MBWA *e*S S **00 11 59.4 +13**
MBWA LR LR
comp=Z,5µm,19.0s,MS5.7
MBWA Marble Bar 62.90 255 P P **00 03 18.5 -0.4**
comp=Z,177nm,1.1s,mb6.1
NWAO Narrogin (SRO) 63.63 242 LR LR 00 29 16.9
comp=Z,2µm,19.1s,MS5.4,baz=102,slow=34
NWAO Narrogin (SRO) 63.63 242 *e*P P **00 03 22.1 -1.4**
NWAO *e*S S **00 12 01.0 +5.7**
NWAO LR LR
comp=Z,2µm,19.0s,MS5.3
NWAO Narrogin (SRO) 63.63 242 *e*P P **00 03 23.4 -0.2**
KDI Kendari 64.24 274 P P **00 03 28.4 +0.5**
comp=Z,53nm,1.3s,comp=Z,5µm,mb5.4
DAV Davao City (W) 65.30 287 LR LR 00 30 17.1
comp=Z,2µm,19.6s,MS5.3,baz=136,slow=34
DAV Davao City (W) 65.30 287 *e*P P **00 03 33.6 -1.1**
DAV *e*PP PP 00 06 11.3 +12
DAV *e*S S 00 12 24.9 +8.4
DAV LR LR
comp=Z,3µm,21.0s,MS5.4
KAPI Kappang 66.65 272 P P **00 03 42.4 -1.1**
SNR=6.0
KAPI Kappang 66.65 272 *e*P P **00 03 42.6 -0.8**
KAPI PP PP 00 06 15.0 +4.4
KAPI *e*S S 00 12 48.2 +15
KAPI LR LR
comp=Z,1µm,21.0s,MS5.1
KAPI Kappang 66.65 272 P P **00 03 42.8 -0.7**
comp=Z,28nm,1.9s,comp=Z,625nm,mb5.0
PCI Palu 67.83 276 P P **00 03 52.6 +1.6**
comp=Z,302nm,1.4s,comp=Z,4µm,mb6.1
CASY Casey 68.30 205 *e*P P **00 03 52.4 -0.6**
CASY *e*S S 00 12 44.9 -6.2
CASY LR LR
comp=Z,1µm,19.0s,MS5.2
KHKI Kahang-Kahang 69.65 268 P P **00 04 01.7 -0.6**
MJAR Matsushiro Arr 70.92 320 P P **00 04 08.9 -0.6**
comp=Z,23nm,0.9s,mb5.1,baz=161,slow=5.9,SNR=23
MJAR LR LR 00 29 38.4
comp=Z,3µm,21.9s,MS5.5,baz=140,slow=31
MAJO Matsushiro 70.92 320 *e*P P **00 04 09.1 -0.4**
comp=Z,27nm,0.8s,mb5.2
MAJO *e*PP PP 00 06 48.5 +1.2
MAJO *e*S S 00 13 18.6 -4.0
MAJO LR LR
comp=Z,4µm,22.0s,MS5.6
MAJO Matsushiro 70.92 320 *e*P P **00 04 09.1 -0.4**
MAJO *e* 00 06 48.5
MAJO *e*S S 00 13 18.6 -4.0
MAJO pmax pmax
comp=Z,27nm,0.8s,mb5.2
MAJO MLR MLR
comp=Z,4µm,22.0s,MS5.6
MAT Matsushiro 70.92 320 P P **00 04 08.8 -0.7**
MAT S S 00 13 22.0 -0.6
SMY Shemya 71.12 352 PFAKE 00 04 20.0 +10
SMY LR LR
comp=Z,4µm,19.0s,MS5.7
MYLDM Lahad Datu 71.13 282 ⇑P P **00 04 12.4 +1.1**
MYLDM Lahad Datu 71.13 282 P P **00 04 13.0 +1.6**
TSM Tawau 71.41 281 ⇑P P **00 04 14.0 +1.0**
KMMI Kalianget 71.58 268 P P **00 04 14.8 +0.7**
comp=Z,238nm,1.2s,mb6.0
BBKI Banjar Baru 71.78 272 P P **00 04 15.8 +0.5**
comp=Z,393nm,1.1s,comp=Z,5µm,mb6.2
ERM Erimo 71.90 327 PFAKE 00 04 30.0 +15
ERM LR LR
comp=Z,5µm,21.0s,MS5.7
SNCC San Nicolas Is 72.13 45 PFAKE 00 04 30.0 +13
SNCC LR LR
comp=Z,3µm,19.0s,MS5.5
SDKM Sandakan 72.51 282 ⇓P P **00 04 20.1 +0.4**
V03C Hunter Liggett 72.68 42 ⇓P P **00 04 20.5 +0.3**
baz=73
KRKI Karangkates 72.71 267 P P **00 04 21.5 +0.7**
MCCM Marconi Confer 72.99 39 PFAKE 00 04 30.0 +8.1
MCCM LR LR
comp=Z,2µm,22.0s,MS5.4
SAO San Andreas Ge 73.00 41 *e*P P **00 04 16.3 -5.7**
SAO *e*S S 00 13 46.1 -0.5
SAO LR LR
comp=Z,2µm,19.0s,MS5.5
SAO San Andreas Ge 73.00 41 *e*P P **00 04 22.6 +0.6**
SMMC Simmler 73.04 43 ⇓P P **00 04 22.9 +0.6**
baz=73
U04C Hernandez Rese 73.18 42 ⇑P P **00 04 23.9 +0.8**
baz=74,SNR=7.6
NSHM Saint Helena R 73.40 39 *e*P P **00 04 24.0 -0.4**
HOPS Hopland 73.42 39 *e*P P **00 04 19.9 -4.6**
HOPS *e*S S 00 13 30.4 -21
HOPS LR LR
comp=Z,3µm,20.0s,MS5.5
OSI Osito Adit 73.47 44 *e*P P **00 04 25.2 +0.3**
SJI Sawahan 73.48 267 P P **00 04 25.7 +0.3**
KKM Kota Kinabalu 73.56 282 *e*P P **00 04 27.4 +1.5**
MWC Mount Wilson 73.69 45 *e*P P **00 04 26.4 +0.2**
MWC *e*PP PP 00 07 10.6 -0.4
MWC *e*S S 00 14 05.3 +11
MWC LR LR
comp=Z,2µm,20.0s,MS5.4
ASAJ Asahikawa 73.70 328 LR LR 00 31 51.5
comp=Z,3µm,21.3s,MS5.5,baz=12,slow=32
ARVC Arvin 73.70 44 ⇓P P **00 04 25.9 -0.3**
baz=74
MURC Murrieta 73.91 46 ⇑P P **00 04 27.1 -0.3**
baz=74
VES Vestal, Richgr 73.95 43 ⇑P P **00 04 27.1 -0.6**
baz=74,SNR=8.4
BFSC Mount Baldy St 73.97 45 ⇓P P **00 04 27.0 -0.8**
baz=74
MONP Monument Peak 74.05 47 ⇑P P **00 04 27.7 -0.6**
baz=74,SNR=9.4
S05C Merced 74.07 41 ⇑P P **00 04 27.9 -0.4**
baz=74,SNR=8.0
EDW2 Edwards Air Fo 74.11 45 ⇓P P **00 04 27.9 -0.7**
baz=74,SNR=12
RCTC Rector, Farmer 74.13 43 ⇓P P **00 04 28.0 -0.7**
baz=74
DVTC Desert V Tower 74.15 47 ⇑P P **00 04 28.4 -0.5**
baz=74
ISA Isabella 74.25 44 *e*P P **00 04 29.4 0.0**
ISA *e*S S 00 14 05.9 +5.2
ISA LR LR
comp=Z,2µm,21.0s,MS5.4
ISA Isabella 74.25 44 ⇑P P **00 04 29.2 -0.2**
baz=75,SNR=16
R04C Big Horse Ranc 74.25 40 ⇑P P **00 04 28.7 -0.6**
baz=75
T06C Millerton Lake 74.25 42 ⇓P P **00 04 29.1 -0.2**
baz=75,SNR=15
PFO Pinyon Flat Ob 74.43 46 *e*P P **00 04 30.6 +0.1**
PFO *e*S S 00 14 04.3 +1.4
PFO LR LR
comp=Z,2µm,20.0s,MS5.4
PFO Pinyon Flat Ob 74.43 46 ⇓P P **00 04 30.1 -0.4**
baz=75,SNR=5.0
CMB Columbia Colle 74.45 41 *e*P P **00 04 40.0 +9.4**
CMB *e*S S 00 14 03.1 +0.2
CMB LR LR
comp=Z,2µm,21.0s,MS5.4
BBRC Big Bear Sol-O 74.48 46 ⇑P P **00 04 30.3 -0.4**
baz=75
SWSC Sam W. Stewart 74.52 47 ⇑P P **00 04 30.5 -0.5**
baz=75
OHCM Honcut 74.59 39 *e*P P **00 04 31.4 +0.1**
PET Petropavlovsk 74.64 343 PFAKE 00 04 40.0 +8.8
PET LR LR
comp=Z,1µm,21.0s,MS5.2
PET Petropavlovsk 74.64 343 *e*P P **00 04 34.1 +2.9**
PET *e*S S 00 14 08.1 +3.8
PET *e*PS 00 14 44.5
PET *e*SS SS 00 18 50.8 -1.8
PET pmax pmax
comp=Z,400nm,13.2s
LRMC Laurel Mountai 74.66 44 ⇑P P **00 04 31.5 -0.3**
baz=75,SNR=11
LAVA Lava Cap Winer 74.68 40 ⇑P P **00 04 31.2 -0.7**
baz=75,SNR=6.5
WDC Whiskeytown Da 74.76 38 PFAKE 00 04 40.0 +7.8
WDC LR LR
comp=Z,3µm,20.0s,MS5.6
RRX Edison Barstow 74.78 45 ⇑P P **00 04 31.7 -0.8**
baz=75
BELC Belle Mtn. 74.97 46 ⇓P P **00 04 32.9 -0.7**
baz=75,SNR=13
CWC Cottonwood Cre 74.97 43 ⇓P P **00 04 32.9 -0.7**
baz=75,SNR=9.0
PETK Petropavlovsk- 74.99 342 P P **00 04 33.0 -0.2**
comp=Z,13nm,0.6s,mb5.0,baz=107,slow=8.3,SNR=31
PBKI Pangkalan Bun 75.03 272 P P **00 04 35.6 +1.2**
comp=Z,552nm,1.3s,comp=Z,6µm,mb6.3
MPMC Manual Prospec 75.13 44 ⇑P P **00 04 34.1 -0.4**
baz=76,SNR=24
K01A Sixes 75.14 35 ⇓P P **00 04 34.5 +0.1**
baz=76
GSC Goldstone 75.15 45 *e*P P **00 04 34.3 -0.3**
GSC *e*S S 00 14 14.9 +4.2
GSC LR LR
comp=Z,2µm,20.0s,MS5.4
GSC Goldstone 75.15 45 ⇓P P **00 04 34.1 -0.5**
baz=76,SNR=11
BC3 Big Chuckw Mtn 75.15 47 ⇑P P **00 04 34.0 -0.7**
baz=76,SNR=14
MLAC Mammoth Lakes 75.18 42 ⇓P P **00 04 34.9 +0.1**
baz=76
L02A Cave Junction 75.19 36 P P **00 04 34.7 +0.1**
baz=76
DAC Darwin (Calif) 75.19 44 PFAKE 00 04 50.0 +15
DAC LR LR
comp=Z,2µm,20.0s,MS5.5
MTUM Tungsten Hills 75.19 42 *e*P P **00 04 35.1 +0.3**
HEC Hector,Ludlow 75.20 45 ⇑P P **00 04 34.6 -0.3**
baz=76
TIN Tinemaha 75.23 43 ⇑P P **00 04 35.2 +0.2**
baz=76
GLA Glamis 75.26 48 *e*P P **00 04 36.0 +0.7**
GLA *e*PP PP 00 07 24.9 +0.5
GLA *e*S S 00 14 12.4 +0.3
GLA LR LR
comp=Z,1µm,22.0s,MS5.2
GLA Glamis 75.26 48 ⇓P P **00 04 35.1 -0.2**
baz=76,SNR=5.4
WAKR Walker 75.33 41 *e*P P **00 04 35.8 +0.2**
R06C Coleville 75.33 41 ⇓P P **00 04 35.5 -0.1**
baz=76,SNR=14
YBH Yreka Blue Hor 75.41 37 *e*P P **00 04 36.5 +0.5**
YBH *e*S S 00 14 14.2 +0.8
YBH LR LR
comp=Z,2µm,22.0s,MS5.5
O04C Chester 75.45 39 ⇑P P **00 04 35.8 -0.5**
baz=76,SNR=9.5
BTM Bintulu 75.54 278 ⇓P P **00 04 38.2 +0.8**
BJII Banjamegara 75.55 267 P P **00 04 38.2 +0.8**
BEKR Beckwourth 75.60 39 ⇓P P **00 04 36.9 -0.2**
baz=76,SNR=29
LBCM Butte Creek Ri 75.62 38 P P **00 04 37.1 -0.1**
WCN Washoe City 75.62 40 ⇑P P **00 04 37.1 -0.1**
baz=76,SNR=8.0
GMRC Granite Mounta 75.63 46 ⇓P P **00 04 37.2 -0.2**
baz=76,SNR=13
IRM Iron Mountain 75.64 47 ⇓P P **00 04 36.9 -0.5**
baz=76,SNR=17
YSS Yuzh-Sakhalins 75.68 331 *e*P P **00 04 36.6 -0.8**
comp=Z,150nm,1.5s,mb5.7
YSS *e* pP 00 04 45.9 -2.7
YSS Yuzh-Sakhalins 75.68 331 *e*P P **00 04 37.0 -0.4**
YSS *e* pP 00 04 45.2 -3.4
YSS pmax pmax
comp=Z,80nm,1.1s,mb5.6
GRAC Grapevine Rang 75.75 43 ⇓P P **00 04 38.0 0.0**
baz=76,SNR=13
P06A Stead Airport, 75.76 40 ⇓P P **00 04 38.5 +0.4**
baz=76
FURC Furnace Creek, 75.78 44 ⇑P P **00 04 38.0 -0.2**
baz=76
TUQ Turquoise Moun 75.82 45 ⇑P P **00 04 38.1 -0.3**
baz=76,SNR=16
HUMO Hull Mountain 75.84 36 PFAKE 00 04 50.0 +12
HUMO LR LR
comp=Z,3µm,21.0s,MS5.5
SHOC Shoshone 75.84 45 ⇑P P **00 04 38.6 0.0**
baz=76
Y12C Blythe 75.85 47 ⇑P P **00 04 38.3 -0.4**
baz=76,SNR=7.0
113A Mohawk Valley, 75.86 48 ⇓P P **00 04 38.3 -0.5**
baz=76,SNR=11
Q07A Schurz 75.98 41 ⇑P P **00 04 39.3 0.0**
baz=76
NVAR Mina Array Bea 76.00 41 P P **00 04 39.6 +0.2**
comp=Z,16nm,0.8s,mb5.0,baz=226,slow=9.7,SNR=67
J02A Umpqua 76.00 35 ⇓P P **00 04 39.5 +0.2**
baz=76
BUOR Burton Butte 76.03 36 P P **00 04 40.1 +0.7**
STKI Sintang 76.06 275 P P **00 04 41.0 +0.6**
comp=Z,209nm,1.6s,comp=Z,6µm,mb5.8
R08A Mina 76.07 42 ⇓P P **00 04 39.9 +0.1**
baz=76
PAHR Pah Rah Range 76.09 40 *e*P P **00 04 40.4 +0.5**
U10A Ash Meadows, A 76.10 44 ⇓P P **00 04 39.6 -0.5**
baz=76
O06A Flanigan 76.11 39 ⇑P P **00 04 39.9 0.0**
baz=76
SBUM Sibu 76.11 277 ⇓P P **00 04 38.2 -2.5**
SBUM Sibu 76.11 277 P P **00 04 41.3 +0.7**
214A Organ Pipe Nat 76.12 50 ⇑P P **00 04 39.7 -0.6**
baz=76
LDFC Landfair 76.17 46 *e*P P **00 04 40.7 +0.2**
LDFC *e* pP 00 04 53.4 +1.7
LDFC *e*S S 00 14 16.9 -5.2
S09A Goldfield 76.27 43 ⇓P P **00 04 40.6 -0.4**
baz=77
I02A Mapleton 76.29 34 ⇑P P **00 04 40.9 0.0**
baz=77
P07A Fallon 76.30 40 ⇓P P **00 04 41.4 +0.3**
baz=77
NEE2 Needles Airpor 76.34 46 ⇓P P **00 04 40.6 -0.8**
baz=77
Y13A Salome 76.37 47 ⇑P P **00 04 41.7 0.0**
baz=77
V11A Goodsprings 76.38 45 ⇓P P **00 04 41.4 -0.3**
baz=77
PDMCI Parker Dam,Lak 76.42 47 ⇑P P **00 04 41.5 -0.4**
baz=77,SNR=7.1
TPNV Topopah Spring 76.46 44 PFAKE 00 04 50.0 +7.9
TPNV LR LR
comp=Z,3µm,22.0s,MS5.5
TPNV Topopah Spring 76.46 44 ⇓P P **00 04 42.0 0.0**
baz=77
W12A Cal Nev Ari 76.46 46 ⇑P P **00 04 42.2 +0.1**
baz=77
N06A Buffalo Meadow 76.46 39 ⇑P P **00 04 42.0 0.0**
baz=77
YHNB Yeheng 76.47 302 PFAKE 00 04 50.0 +7.6
YHNB LR LR
comp=Z,479nm,19.0s,MS4.8
TPH Tonopah 76.47 42 *e*P P **00 04 42.8 +0.7**
TPH *e*S S 00 14 25.4 +0.1
TPH LR LR
comp=Z,2µm,22.0s,MS5.4
Q08A Gabbs 76.49 41 ⇑P P **00 04 42.2 0.0**
baz=77
TATO Taipei 76.51 302 PFAKE 00 04 50.0 +7.4
TATO LR LR
comp=Z,3µm,19.0s,MS5.6
I03A Eugene 76.56 35 P P **00 04 42.4 -0.1**
baz=77
H02A Toledo 76.65 34 P P **00 04 43.6 +0.7**
baz=77
V12A Nelson 76.71 45 ⇓P P **00 04 43.2 -0.3**
baz=77
U11A Corn Creek 76.74 45 ⇑P P **00 04 43.9 +0.3**
baz=77
Z14A Wintersburg 76.76 48 ⇑P P **00 04 43.6 -0.2**
baz=77,SNR=5.7
X13A Yucca 76.79 47 ⇓P P **00 04 43.8 -0.1**
baz=77,SNR=19
S10A Tonopah Range, 76.79 43 ⇑P P **00 04 44.0 +0.1**
baz=77,SNR=26
P08A Dixie Valley 76.89 41 ⇑P P **00 04 44.7 +0.3**
baz=77
MOD Modoc 76.90 38 ⇓*e*P P **00 04 44.6 +0.2**
MOD *e* pP 00 04 55.0 -0.7
MOD *e*S S 00 14 33.3 +3.5
MOD LR LR
comp=Z,2µm,20.0s,MS5.5
115A Sonoran Desert 76.92 49 ⇓P P **00 04 44.6 -0.2**
baz=77
SHPR Sheep Range 76.93 45 *e*P P **00 04 44.9 +0.2**
Q09A Carvers 76.94 42 ⇑P P **00 04 44.7 -0.1**
baz=77,SNR=6.7
COR Corvallis 76.96 34 PFAKE 00 05 00.0 +15
COR LR LR
comp=Z,4µm,22.0s,MS5.6
N07B Gerlach 77.00 39 ⇑P P **00 04 45.0 0.0**
baz=77
Y14A Wickenburg 77.02 48 ⇑P P **00 04 45.0 -0.3**
baz=77
H03A Soap Creek Ran 77.02 34 ⇑P P **00 04 45.2 +0.1**
baz=77
W13A Hualapai Mount 77.02 46 ⇓P P **00 04 45.2 -0.1**
baz=77
K05A Summer Lake 77.08 37 ⇓P P **00 04 46.0 +0.6**
baz=77,SNR=31
216A Three Points, 77.13 50 ⇑P P **00 04 46.3 +0.4**
baz=77
JCJI Jatiwangi 77.16 267 P P **00 04 46.6 0.0**
comp=Z,736nm,1.2s,comp=Z,10µm,mb6.5
S11A Rachel 77.18 43 ⇑P P **00 04 46.6 +0.4**
baz=78
R10A Warm Springs 77.19 43 ⇓P P **00 04 46.4 +0.2**
baz=78
O08A Rochester Mine 77.20 40 ⇓P P **00 04 46.3 +0.2**
baz=78
116A Eloy 77.23 50 ⇑P P **00 04 46.5 0.0**
baz=78
KDAK Kodiak Island 77.25 11 PFAKE 00 05 00.0 +14
KDAK LR LR
comp=Z,4µm,19.0s,MS5.8
M07A Soldier Meadow 77.25 39 ⇑P P **00 04 46.5 +0.1**
baz=78,SNR=23
Z15A Gila River Ind 77.28 49 ⇓P P **00 04 46.3 -0.5**
baz=78,SNR=5.9
T11A Corn Creek, Al 77.30 44 ⇑P P **00 04 46.9 +0.1**
baz=78,SNR=36
U12A Valley of Fire 77.31 45 ⇑P P **00 04 47.0 +0.2**
baz=78,SNR=12
T12A Moapa 77.35 45 ⇓P P **00 04 47.3 +0.2**
baz=78
V13A Grand Canyon W 77.36 46 ⇓P P **00 04 47.7 +0.5**
baz=78,SNR=14
X14A Yava 77.38 47 ⇓P P **00 04 47.6 +0.3**
baz=78,SNR=12
P09A Austin 77.39 41 ⇓P P **00 04 47.5 +0.3**
baz=78
Q10A Clear Creek Ra 77.44 42 ⇓P P **00 04 47.7 +0.2**
baz=78
217A Green Valley 77.48 51 ⇓P P **00 04 47.8 -0.1**
baz=78,SNR=13
Y15A Casa Rosa Ranc 77.50 48 ⇑P P **00 04 48.4 +0.4**
baz=78,SNR=22
N08A GE Springer Mi 77.51 40 ⇑P P **00 04 47.7 -0.1**
baz=78,SNR=28
L07A Adell 77.54 38 ⇑P P **00 04 48.6 +0.6**

baz=78
KSM Kuching 77.61 276 *e*P P **00 04 48.8 -0.3**
KSM *e*PP PP 00 07 49.7 +5.1
KSM *e*S S 00 14 15.2 -24
KSM Kuching 77.61 276 ⇑P P **00 04 49.7 +0.6**
KSM Kuching 77.61 276 P P **00 04 49.5 +0.4**
comp=Z,405nm,1.3s,comp=Z,5µm,mb6.2
H04A Detroit Lake 77.62 35 ⇑P P **00 04 48.0 -0.4**
baz=78
W14A Seligman 77.64 47 ⇓P P **00 04 49.2 +0.5**
baz=78,SNR=24
BKCOR Black Crater 77.64 35 P P **00 04 48.5 0.0**
LEM Lembang 77.68 267 P P **00 04 49.7 +0.2**
comp=Z,718nm,1.1s,comp=Z,8µm,mb6.5
U13A Pakoon Wash 77.68 45 ⇑P P **00 04 49.4 +0.4**
baz=78,SNR=37
R11A Troy Canyon, C 77.69 43 ⇓P P **00 04 49.1 +0.1**
baz=78,SNR=25
O09A Fish Creek Ran 77.72 41 ⇑P P **00 04 49.1 0.0**
baz=78
S12A Delamar Landin 77.75 44 ⇓P P **00 04 49.5 +0.2**
baz=78,SNR=16
M08A Happy Creek Ra 77.76 39 ⇓P P **00 04 49.4 +0.2**
baz=78,SNR=24
TUC Tucson 77.77 50 PFAKE **00 05 00.0 +10**
TUC LR LR
comp=Z,1µm,20.0s,MS5.3
I05A Bend 77.79 35 P P **00 04 50.0 +0.6**
baz=78
G04A Mulino 77.81 34 ⇓P P **00 04 49.3 -0.1**
baz=78
Z16A Peralta Trail, 77.83 49 ⇓P P **00 04 49.5 -0.3**
baz=78
J06A Christmas Vall 77.83 37 ⇑P P **00 04 49.5 -0.1**
baz=78,SNR=18
X15A Humboldt 77.85 48 ⇑P P **00 04 50.1 +0.2**
baz=78,SNR=18
V14A Boquillas Ranc 77.85 46 ⇑P P **00 04 50.2 +0.3**
baz=78,SNR=25
P10A Eureka 77.86 41 ⇓P P **00 04 50.0 +0.1**
baz=78
BMN Battle Mountai 77.86 40 *e*P P **00 04 49.8 0.0**
BMN *e*PcP PcP 00 05 00.1 +0.5
BMN *e*S S 00 14 42.8 +2.6
BMN LR LR
comp=Z,2µm,22.0s,MS5.4
N09A Rock Creek Ran 77.92 40 ⇓P P **00 04 50.4 +0.2**
baz=78
Q11A Duckwater 77.92 42 ⇑P P **00 04 50.5 +0.2**
baz=78
318A Bisbee 77.93 51 ⇑P P **00 04 50.4 0.0**
baz=78,SNR=9.2
117A Oracle 77.94 50 ⇑P P **00 04 50.5 0.0**
baz=78,SNR=13
K07A Rock Creek Ran 78.01 38 ⇑P P **00 04 51.0 +0.4**
baz=78
KSRS Korea Array 78.03 316 P P **00 04 50.6 -0.2**
comp=Z,31nm,1.1s,mb5.2,baz=132,slow=6.0,SNR=40
KSRS LR LR 00 36 49.4
comp=Z,2µm,19.8s,MS5.4,baz=121,slow=34
T13A Saint George 78.05 45 ⇓P P **00 04 51.2 +0.2**
baz=78,SNR=23
Y16A Circle Bar Ran 78.07 48 ⇓P P **00 04 51.1 -0.1**
baz=78,SNR=13
H05A Madras 78.12 35 P P **00 04 51.5 +0.3**
baz=78,SNR=5.9
E03A Lebam 78.13 33 ⇑P P **00 04 51.3 +0.2**
baz=78
218A Dragoon 78.15 51 ⇓P P **00 04 52.1 +0.4**
baz=78
W15A Williams 78.19 47 ⇓P P **00 04 52.5 +0.7**
baz=78
WVOR Wild Horse Val 78.20 38 *e*P P **00 04 52.0 +0.3**
WVOR *e*S S 00 14 42.9 -1.0
WVOR LR LR
comp=Z,3µm,20.0s,MS5.6
U14A Mt Trumbull 78.22 46 ⇓P P **00 04 52.4 +0.5**
baz=78
O10A Cortez Mining, 78.22 41 ⇓P P **00 04 52.1 +0.3**
baz=79
L08A Fields 78.23 38 ⇑P P **00 04 52.4 +0.5**
baz=79
I06A Prineville 78.24 36 ⇓P P **00 04 52.4 +0.5**
baz=79,SNR=28
BMW Boistfort Moun 78.25 33 *e*P P **00 04 52.2 +0.3**
BMW *e*PcP PcP 00 05 02.2 +1.0
BMW *e*PP PP 00 07 48.2 -1.1
P11A Circle Ranch, 78.27 42 ⇑P P **00 04 52.5 +0.4**
baz=79
M09A Marrel Ranch, 78.30 39 ⇓P P **00 04 52.4 +0.1**
baz=79
R12A Pony Springs, 78.31 43 ⇓P P **00 04 52.7 +0.3**
baz=79,SNR=36
F04A Amboy 78.32 34 P P **00 04 52.0 -0.2**
baz=79
HOOD Mount Hood Mea 78.33 34 *e*P P **00 04 52.5 +0.2**
VIPM Ingram Point 78.37 35 P P **00 04 52.2 -0.3**
X16A Lo Mia Camp, P 78.37 48 ⇓P P **00 04 53.2 +0.3**
baz=79,SNR=22
J07A Hines 78.39 37 ⇓P P **00 04 53.1 +0.4**
baz=79
S13A Holt Ranch, En 78.39 44 ⇑P P **00 04 53.1 +0.2**
baz=79,SNR=9.5
319A Douglas 78.42 52 ⇓P P **00 04 53.3 +0.1**
baz=79,SNR=8.6
Y17A Roosevelt 78.43 49 ⇑P P **00 04 53.6 +0.4**
baz=79,SNR=8.3
G05A Wamic 78.45 35 ⇑P P **00 04 52.8 -0.2**
baz=79
N10A Dunphy 78.47 40 P P **00 04 53.4 +0.2**
baz=79
K08A Mann Creek Ran 78.47 38 ⇑P P **00 04 53.4 +0.2**
baz=79
XMIS Christmas Isla 78.52 263 *e*P P **00 04 53.7 -0.4**
XMIS Christmas Isla 78.52 263 P P **00 04 54.4 +0.3**
comp=Z,0.0nm,1.4s
CBJI Citeko 78.53 267 P P **00 04 53.4 -0.8**
comp=Z,745nm,1.1s,mb6.5
L09A Wilkinson Ranc 78.53 39 ⇓P P **00 04 53.3 -0.2**
baz=79
118A Homack Ranch, 78.53 50 ⇓P P **00 04 54.3 +0.5**
baz=79,SNR=15
NLWA Neilton Lookou 78.54 32 *e*P P **00 04 54.2 +0.7**
NLWA *e*PcP PcP 00 05 02.2 -0.2
NLWA *e*S S 00 14 45.0 -2.3
NLWA LR LR
comp=Z,2µm,20.0s,MS5.4
NLWA Neilton Lookou 78.54 32 ⇓P P **00 04 53.6 +0.1**
baz=79
Q12A Willow Creek R 78.56 43 ⇓P P **00 04 54.1 +0.3**
baz=79,SNR=19
DBJI Dramaga 78.59 267 P P **00 04 54.3 -0.2**
comp=Z,497nm,1.1s,comp=Z,6µm,mb6.4
V15A Kaibab Nationa 78.59 46 ⇓P P **00 04 54.4 +0.4**
baz=79,SNR=19
E04A Onalaska 78.59 33 ⇑P P **00 04 54.0 +0.3**
baz=79
T14A Hurricane 78.63 45 ⇑P P **00 04 54.4 +0.3**
baz=79
R13A O'Grain Ranch, 78.65 44 ⇑P P **00 04 54.7 +0.5**
baz=79,SNR=18
O11A Cowboy Ranch, 78.66 41 ⇓P P **00 04 54.5 +0.2**
baz=79
W16A Flagstaff 78.66 47 ⇑P P **00 04 54.7 +0.3**
baz=79
H06A Lindquist Farm 78.67 35 ⇑P P **00 04 54.1 -0.1**
baz=79
TDL Tradedollar La 78.70 33 P P **00 04 54.5 +0.2**
CCUT Cedar City 78.71 44 *e*P P **00 04 55.1 +0.5**
CCUT *e*PcP PcP 00 05 04.0 +0.7
Z18A Geronimo 78.71 50 ⇓P P **00 04 55.4 +0.7**
baz=79
I07A Izee 78.72 36 ⇓P P **00 04 54.4 -0.1**
baz=79,SNR=25
219A White Tail Can 78.74 51 ⇓P P **00 04 55.2 +0.3**
baz=79
ARUT Antelope Range 78.78 44 *e*P P **00 04 55.5 +0.5**
ARUT *e*PP PP 00 07 50.9 -3.0
F05A White Salmon 78.79 34 ⇑P P **00 04 54.6 -0.3**
baz=79
G06A Carlson Farm, 78.82 35 ⇑P P **00 04 54.5 -0.5**
baz=79
U15A North Rim 78.83 46 ⇓P P **00 04 55.8 +0.5**
baz=79
TPI Tanjungpandan 78.84 271 P P **00 04 56.8 +0.9**
comp=Z,166nm,1.1s,comp=Z,2µm,mb5.9
QZH Quanzhou 78.85 301 ⇑↑P P **00 04 56.4 +0.7**
QZH S S 00 14 57.3 +5.7
QZH AMB AMB
comp=Z,2µm,5.8s
QZH LR LR
comp=Z,5µm,31.6s,MS5.7
J08A Circle Bar Ran 78.86 37 ⇓P P **00 04 55.5 +0.2**
baz=79
K09A Rome 78.90 38 ⇓P P **00 04 55.7 +0.1**
baz=79
M10A I.L. Ranch, Tu 78.92 40 ⇓P P **00 04 55.7 +0.1**
baz=79
S14A Cedar City 78.95 44 ⇓P P **00 04 56.5 +0.6**
baz=79,SNR=6.3
WUAZ Wupatki 78.99 47 PFAKE **00 05 10.0 +14**
WUAZ LR LR
comp=Z,1µm,22.0s,MS5.3
WUAZ Wupatki 78.99 47 ⇑P P **00 04 56.4 +0.2**
baz=79
N11A Elko Archery C 79.00 41 P P **00 04 55.9 -0.2**
baz=79
H07A Lands Inn, Kim 79.00 36 ⇓P P **00 04 55.9 -0.2**
baz=79
Q13A Wheeler Ranch, 79.04 43 ⇓P P **00 04 56.8 +0.4**
baz=79,SNR=9.3
Y18A Canyon Day Jun 79.05 49 ⇑P P **00 04 56.8 +0.2**
baz=79
E05A Randle 79.07 33 ⇑P P **00 04 56.3 -0.1**
baz=79
F06A Goldendale 79.08 34 P P **00 04 56.4 0.0**
baz=79
T15A Red Dirt Ranch 79.08 45 ⇑P P **00 04 57.1 +0.4**
baz=79,SNR=15
119A Ashpeak Ranch, 79.09 50 ⇓P P **00 04 57.2 +0.4**
baz=79,SNR=14
I08A Drewsey 79.15 37 ⇑P P **00 04 56.9 +0.1**
baz=80
B04A Port Angeles 79.18 31 ⇑P P **00 04 57.1 +0.2**
baz=80
ELK Elko 79.27 41 *e*P P **00 04 57.5 -0.1**
comp=Z,102nm,1.6s,mb5.5
ELK *e*PP PP 00 07 58.7 +0.7
ELK *e*S S 00 14 53.9 -1.4
ELK LR LR
comp=Z,3µm,22.0s,MS5.5
ELK Elko 79.27 41 *e*P P **00 04 57.5 -0.1**
ELK *e* 00 07 58.7
ELK *e*S S 00 14 53.9 -1.4
ELK pmax pmax
ELK comp=Z,103nm,1.6s MLR MLR
comp=Z,3µm,22.0s
J09A Fry Pan Ranch, 79.27 38 ⇓P P **00 04 57.6 0.0**
baz=80
L10A Juniper Basin 79.28 39 ⇑P P **00 04 57.9 +0.2**
baz=80
M11A Holland Ranch, 79.32 40 ⇑P P **00 04 58.1 +0.2**
baz=80
P13A Bates Ranch, G 79.32 43 ⇑P P **00 04 58.1 +0.2**
baz=80
R14A James Farms, M 79.34 44 ⇑P P **00 04 58.5 +0.4**
baz=80
G07A Ruggs Ranch, H 79.37 35 ⇓P P **00 04 58.1 +0.1**
baz=80
Z19A T-Link Ranch, 79.37 50 ⇑P P **00 04 58.5 +0.1**
baz=80
S15A Panguitch 79.44 45 ⇑P P **00 04 59.8 +1.2**
baz=80,SNR=7.1
K10A MacKenzie Ranc 79.45 39 ⇑P P **00 04 58.7 +0.1**
baz=80
N12A Clover Valley, 79.45 41 P P **00 04 58.7 +0.1**
baz=80,SNR=20
H08A Prairie City 79.46 36 ⇓P P **00 04 58.3 -0.2**
baz=80,SNR=17
E06A Yakima 79.47 34 ⇑P P **00 04 58.6 0.0**
baz=80
U16A Tuba City 79.48 47 ⇓P P **00 04 59.2 +0.3**
baz=80
X18A Snowflake 79.49 49 ⇓P P **00 04 59.5 +0.6**
baz=80,SNR=5.6
Q14A Sevier Lake (B 79.54 43 ⇓P P **00 04 59.8 +0.6**
baz=80,SNR=36
SSE Sheshan 79.58 307 P P **00 04 59.3 -0.2**
SSE XP sP 00 05 16.1 +1.2
SSE S S 00 14 59.4 +0.4
SSE SS SS 00 20 10.5 +2.4
SSE AMB AMB
comp=Z,44nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,491nm,9.2s
SSE LR LR
comp=N,715nm,26.7s,MS5.3
SSE LR LR
comp=E,2µm,26.6s,MS5.3
SSE LR LR
comp=Z,2µm,25.4s,MS5.3
PGC Sidney 79.60 31 *e*P P **00 04 59.0 -0.2**
PGC *e*PcP PcP 00 05 08.1 +1.1
F07A Phinny Hill Vi 79.62 35 ⇑P P **00 04 59.2 -0.1**
baz=80
T16A Glen Canyon Da 79.66 46 ⇑P P **00 05 00.4 +0.5**
baz=80,SNR=9.5
I09A Lost Marbles R 79.66 37 ⇓P P **00 04 59.6 -0.1**
baz=80
Y19A Nutrioso 79.71 49 ⇓P P **00 05 00.8 +0.6**
baz=80
O13A Hicks Ranch, I 79.72 42 ⇑P P **00 05 00.6 +0.5**
baz=80
L11A Cat Creek Ranc 79.77 40 ⇓P P **00 05 00.7 +0.5**
baz=80
R15A Junction 79.78 44 ⇓P P **00 05 01.1 +0.7**
baz=80
M12A Wells 79.85 41 ⇓P P **00 05 00.9 +0.2**
baz=80
J10A Berg Farm, Mel 79.90 38 P P **00 05 01.1 +0.2**
baz=80
X19A St. Johns 79.91 49 ⇓P P **00 05 01.9 +0.6**
baz=80
W18A Petrified Fore 79.94 48 ⇑P P **00 05 01.5 +0.2**
baz=80
K11A Parker Ranch, 79.95 39 ⇑P P **00 05 01.5 +0.2**
baz=80
S16A Weppner Ranch, 79.98 45 ⇓P P **00 05 01.6 +0.1**
baz=80
MVU Marysvale 79.98 44 PFAKE **00 05 10.0 +8.5**
MVU LR LR
comp=Z,2µm,21.0s,MS5.4
P14A Drum Mountains 80.01 43 ⇓P P **00 05 01.9 +0.3**
baz=80,SNR=21
MSU Marysvale 80.01 44 *e*P P **00 05 02.6 +0.9**
MSU *e* pP 00 05 12.9 0.0
B05A Bryant 80.02 32 ⇑P P **00 05 01.7 +0.2**
baz=80
U17A Shonto 80.04 46 ⇓P P **00 05 02.5 +0.6**
baz=80,SNR=10
JCW Jim Creek 80.05 32 *e*P P **00 05 01.8 +0.1**
V18A Ganado 80.10 48 ⇑P P **00 05 02.9 +0.7**
baz=80
RSW Rattlesnake Hi 80.12 34 *e*P P **00 05 02.4 +0.4**
RSW *e*PcP PcP 00 05 09.4 +0.1
H09A Durkee 80.12 37 P P **00 05 01.9 -0.2**
baz=80,SNR=9.2
Q15A Fillmore 80.14 44 ⇑P P **00 05 02.4 0.0**
baz=80,SNR=5.0
T17A Navajo Res., N 80.14 46 ⇓P P **00 05 03.2 +0.8**
baz=80,SNR=19
HAWA Hanford 80.15 34 *e*P P **00 05 02.0 -0.2**
comp=Z,121nm,1.5s,mb5.6
HAWA *e*S S 00 14 59.9 -4.5
HAWA LR LR
comp=Z,3µm,21.0s,MS5.6
W19A Sanders 80.18 48 ⇑P P **00 05 03.1 +0.4**
baz=80
L12A House Creek Ra 80.20 40 ⇑P P **00 05 02.9 +0.3**
baz=80
I10A Payette 80.27 38 ⇓P P **00 05 03.2 +0.3**
baz=81
M13A Montello 80.29 41 ⇓P P **00 05 02.8 -0.3**
baz=81
R16A Teasdale 80.35 45 ⇓P P **00 05 04.4 +0.8**
baz=81,SNR=7.6
D07A Quincy 80.42 34 P P **00 05 03.5 -0.1**
baz=81
RPW Rockport 80.43 32 *e*P P **00 05 01.9 -1.8**
RPW *e*PcP PcP 00 05 12.0 +1.4
BMO Blue Mountains 80.44 37 PFAKE **00 05 20.0 +16**
BMO LR LR
comp=Z,2µm,21.0s,MS5.5
MFID Camas Ranch 80.45 38 P P **00 05 03.7 -0.2**
baz=81,SNR=22
PPBI Pangkal Pinang 80.46 271 P P **00 05 05.5 +0.8**
comp=Z,167nm,1.2s,comp=Z,3µm,mb5.8
S17A Black Ridge (B 80.48 46 ⇓P P **00 05 03.9 -0.3**
baz=81,SNR=10
HABR Khabarovsk 80.49 328 *e*P P **00 05 02.2 -1.8**
HABR *e* 00 05 08.7
HABR *e**SP sP 00 05 16.3 -3.1
HABR *e* 00 08 03.7
HABR *e*S S 00 15 04.9 -2.9
HABR *e*SS SS 00 20 16.6 -4.4
HABR *e*SSS 00 23 42.6
U18A Rough Rock, Ch 80.50 47 ⇓P P **00 05 04.7 +0.3**
baz=81
DUG Dugway 80.50 42 *e*P P **00 05 04.1 -0.2**
comp=Z,20nm,1.1s,mb5.0
DUG *e*PcP PcP 00 05 09.3 -1.8
DUG *e* pP 00 05 15.2 -0.3
DUG *e*S S 00 15 06.4 -1.9
DUG LR LR
comp=Z,1µm,21.0s,MS5.3
DUG Dugway 80.50 42 *e*P P **00 05 04.1 -0.2**
DUG *e* pP 00 05 15.2 -0.4
DUG *e*S S 00 15 06.4 -1.9
DUG pmax pmax
comp=Z,20nm,1.1s,mb5.0
DUG MLR MLR
comp=Z,1µm,21.0s,MS5.3
DUG Dugway 80.50 42 ⇓P P **00 05 04.3 +0.1**
baz=81
A05A Maple Falls 80.51 31 ⇑P P **00 05 03.6 -0.5**
baz=81
LNOR Lincton Mounta 80.51 35 *e*P P **00 05 04.0 -0.2**
LNOR *e*PcP PcP 00 05 10.5 -0.5
LNOR *e* pP 00 05 15.5 +0.1
P15A Leamington 80.51 43 ⇑P P **00 05 04.9 +0.6**
baz=81
K12A Draper Farm, C 80.55 40 P P **00 05 04.3 -0.2**
baz=81,SNR=11
H10A Noah's Angus R 80.60 37 ⇑P P **00 05 04.2 -0.5**
baz=81,SNR=46
N14A Grayback Hills 80.62 42 P P **00 05 04.7 -0.2**
baz=81,SNR=7.4
I11A Placerville 80.66 38 ⇓P P **00 05 05.2 +0.2**
baz=81
EPH Ephrata 80.72 34 P P **00 05 05.3 0.0**
V19A Window Rock 80.72 48 ⇑P P **00 05 05.7 +0.1**
baz=81
BGU Big Grassy Mou 80.76 42 *e*P P **00 05 05.4 -0.3**
O15A The Old Anders 80.77 43 ⇑P P **00 05 05.8 +0.1**
baz=81
J12A Stokes Ranch, 80.79 39 ⇑P P **00 05 06.0 +0.3**
baz=81
L13A Double Diamond 80.83 40 ⇓P P **00 05 05.9 -0.1**
baz=81
T18A Mexican Hat 80.86 46 ⇓P P **00 05 06.8 +0.5**
baz=81,SNR=74
M14A Sheep Mountain 80.88 41 P P **00 05 06.2 0.0**
baz=81,SNR=21
Q16A Castle Valley 80.89 44 ⇑P P **00 05 07.3 +0.9**
baz=81
P16A Fountain Green 80.94 43 ⇑P P **00 05 07.3 +0.7**
baz=81
R17A Hanksville Air 80.94 45 ⇑P P **00 05 06.8 +0.1**
baz=81,SNR=15
SIT Sitka 81.02 20 PFAKE **00 05 20.0 +13**
SIT LR LR
comp=Z,2µm,19.0s,MS5.4
S18A Hurst Farm, Bl 81.05 46 ⇓P P **00 05 07.5 +0.2**
baz=81,SNR=5.7
K13A Stover Farm, H 81.06 40 ⇑P P **00 05 07.1 -0.1**
baz=81
MDJ Mudanjiang 81.06 323 P P **00 05 07.8 +0.6**
MDJ AP pP 00 05 16.6 -1.8
MDJ XP sP 00 05 20.9 -1.7
MDJ PP PP 00 08 14.3 +1.6
MDJ S S 00 15 16.3 +2.3
MDJ XS sS 00 15 33.4 +0.7
MDJ AMB AMB
comp=Z,55nm,1.4s,mb5.3
MDJ AMB AMB
comp=Z,654nm,4.5s
MDJ LR LR
comp=N,1µm,10.1s
MDJ LR LR
comp=E,2µm,15.2s
MDJ LR LR
comp=Z,3µm,12.9s,MS5.8
MDJ Mudanjiang 81.06 323 *e*P P **00 05 06.0 -1.1**
comp=Z,78nm,1.3s,mb5.5
MDJ *e* pP 00 05 15.7 -2.8
MDJ *e*PP PP 00 08 19.7 +7.0
MDJ *e*S S 00 15 25.4 +11
MDJ LR LR
comp=Z,4µm,21.0s,MS5.7
N15A Stansbury Isla 81.06 42 ⇑P P **00 05 07.3 0.0**
baz=81
TMUT Trail Mountain 81.07 44 *e*P P **00 05 08.3 +0.9**
TMUT *e*PcP PcP 00 05 13.8 +0.2
H11A Donnelly 81.09 37 P P **00 05 07.1 -0.3**
baz=81,SNR=19
F10A Beach Ranch, E 81.16 36 ⇑P P **00 05 06.9 -0.7**
baz=82
MPU Maple Canyon 81.17 43 *e*P P **00 05 08.2 +0.4**
comp=Z,9.6nm,0.9s,mb4.7
MPU S S 00 15 52.5 +37
MPU LR LR
comp=Z,4µm,20.0s,MS5.8
NOQ North Oquirrh 81.19 42 *e*P P **00 05 08.0 0.0**
NOQ *e*PP PP 00 08 14.7 +0.7
OD2 Odessa Site #2 81.21 34 *e*P P **00 05 07.9 0.0**
OD2 *e*PcP PcP 00 05 14.4 +0.4
L14A Malta 81.24 41 ⇑P P **00 05 08.0 -0.1**
baz=82,SNR=8.4
T19A Beclabito 81.29 47 ⇓P P **00 05 08.6 0.0**
baz=82,SNR=18
O16A Springville 81.35 43 ⇓P P **00 05 09.4 +0.6**
baz=82
HLID Hailey 81.37 39 *e*P P **00 05 08.7 -0.2**
comp=Z,27nm,1.0s,mb5.1
HLID *e* pP 00 05 20.0 -0.2
HLID *e*PP PP 00 08 17.6 +2.3
HLID *e*S S 00 15 21.5 +4.2
HLID LR LR
comp=Z,1µm,21.0s,MS5.3
HLID Hailey 81.37 39 ⇑P P **00 05 09.0 +0.2**
baz=82,SNR=35
HVU Hansel Valley 81.39 41 ⇑*e*P P **00 05 08.8 -0.2**
HVU Hansel Valley 81.39 41 *e*P P **00 05 09.4 +0.4**
A07A Ashnola River, 81.39 32 ⇑P P **00 05 08.6 -0.2**
baz=82
M15A Larsen Ranch, 81.42 42 ⇑P P **00 05 08.9 -0.2**
baz=82
J13A Cove Ranch, Pi 81.42 39 P P **00 05 09.3 +0.2**
baz=82,SNR=31
SRU San Rafael 81.42 44 *e*P P **00 05 09.6 +0.4**
SRU *e*PcP PcP 00 05 14.9 -0.3
SRU San Rafael 81.42 44 ⇓P P **00 05 09.2 0.0**
baz=82,SNR=18
PMR Palmer 81.45 11 *e*P P **00 05 08.1 -0.7**
PMR LR LR
comp=Z,2µm,21.0s,MS5.4
LAZ Ladron 81.46 50 *e*P P **00 05 10.2 +0.7**
LAZ *e*PcP PcP 00 05 16.1 +0.6
LAZ *e* pP 00 05 21.2 +0.4
Y22D IRIS PASSCAL I 81.46 50 ⇓P P **00 05 10.2 +0.6**
baz=82
LENM Lemitar 81.46 50 *e*P P **00 05 09.8 +0.3**
LENM *e*PcP PcP 00 05 16.7 +1.2
LENM *e* pP 00 05 21.0 +0.2
LENM *e*PP PP 00 08 16.9 +0.5
P17A Butcher Ranch, 81.47 44 ⇑P P **00 05 09.8 +0.4**
baz=82,SNR=10
R18A Canyonlands Na 81.48 45 ⇓P P **00 05 10.0 +0.5**
baz=82,SNR=36
B08A Colville Reser 81.49 33 ⇓P P **00 05 08.5 -0.8**
baz=82
WRAK Wrangell Islan 81.52 22 PFAKE **00 05 20.0 +11**
WRAK LR LR
comp=Z,2µm,22.0s,MS5.3
E10A Myers Farm, Un 81.53 35 ⇓P P **00 05 09.0 -0.5**
baz=82
K14A Jones Ranch, D 81.56 40 P P **00 05 10.1 +0.3**
baz=82,SNR=11

JLU	**Jordanelle**	**81.60**	**43**	*e*P		**P**	**00 05 10.7**	**+0.5**
JLU				*e*PcP		PcP	00 05 16.3	+0.4
DAU	**Daniels Canyon**	**81.62**	**43**	*e*P		**P**	**00 05 10.7**	**+0.5**
S19A	**Harvey Farm, M**	**81.67**	**46**	⇓P		**P**	**00 05 10.9**	**+0.3**
	baz=82,SNR=12							
H12A	**Diamond D Ranc**	**81.67**	**38**	⇑P		**P**	**00 05 10.3**	**-0.1**
	baz=82							
Q18A	**Rafter H Ranch**	**81.68**	**45**	⇑P		**P**	**00 05 10.7**	**+0.1**
	baz=82							
C09A	**Chrisman Ranch**	**81.70**	**34**	⇓P		**P**	**00 05 09.8**	**-0.6**
	baz=82							
BNM	**Barren Site**	**81.71**	**50**	*e*P		**P**	**00 05 11.2**	**+0.4**
I13A	**Wildhorse Cree**	**81.75**	**39**	⇑P		**P**	**00 05 11.4**	**+0.6**
	baz=82							
L15A	**Malad City**	**81.75**	**41**	P		**P**	**00 05 10.4**	**-0.5**
	baz=82,SNR=11							
N16A	**Rees Ranch, Co**	**81.76**	**42**	P		**P**	**00 05 11.1**	**+0.1**
	baz=82							
J14A	**Carey**	**81.78**	**40**	P		**P**	**00 05 12.0**	**+1.0**
	baz=82,SNR=41							
D10A	**Wagner Farm, O**	**81.78**	**35**	⇓P		**P**	**00 05 10.0**	**-0.9**
	baz=82							
LPM	**Los Pinos Moun**	**81.78**	**50**	*e*P		**P**	**00 05 11.7**	**+0.5**
LPM				*e*PcP		PcP	00 05 17.5	+0.6
LPM				*e*		pP	00 05 22.4	-0.2
NJ2	**Nanjing**	**81.78**	**307**	*e*P		**P**	**00 05 10.4**	**-0.9**
NJ2				AP		pP	00 05 20.8	-1.8
NJ2				XP		sP	00 05 24.8	-1.9
NJ2				S		S	00 15 19.5	-2.5
NJ2				SS		SS	00 20 41.0	0.0
NJ2				AMB		AMB		
	comp=Z,30nm,1.2s,mb5.1							
NJ2				AMB		AMB		
	comp=Z,490nm,7.5s							
NJ2				LR		LR		
	comp=N,450nm,24.4s,MS5.4							
NJ2				LR		LR		
	comp=E,2µm,23.3s,MS5.4							
NJ2				LR		LR		
	comp=Z,2µm,28.8s							
TXAR	**Lajitas Array**	**81.80**	**56**	P		**P**	**00 05 11.9**	**+0.5**
	comp=Z,5.3nm,1.0s,mb4.4,baz=217,slow=6.0,SNR=13							
TXAR				LR		LR	00 33 36.0	
	comp=Z,1µm,21.6s,MS5.2,baz=140,slow=30							
TXAR	**Lajitas Array**	**81.80**	**56**	P		**P**	**00 05 11.9**	**+0.5**
TXAR				LR		LR	00 33 36.0	
MVCO	**Mesa Verde**	**81.84**	**47**	*e*P		**P**	**00 05 11.8**	**+0.3**
	comp=Z,20nm,1.1s,mb5.0							
MVCO				*e*PcP		PcP	00 05 16.7	-0.4
MVCO				*e*		pP	00 05 22.9	+0.1
MVCO				*e*PP		PP	00 08 15.5	-3.9
MVCO				*e*S		S	00 15 10.4	-12
MVCO				LR		LR		
	comp=Z,2µm,20.0s,MS5.3							
MVCO	**Mesa Verde**	**81.84**	**47**	⇑P		**P**	**00 05 12.0**	**+0.5**
	baz=82							
O17A	**Robinson Place**	**81.85**	**43**	⇑P		**P**	**00 05 12.0**	**+0.5**
	baz=82,SNR=24							
R19A	**Curley Farm, L**	**81.86**	**46**	⇑P		**P**	**00 05 12.0**	**+0.4**
	baz=82,SNR=8.3							
M16A	**Huntsville**	**81.86**	**42**	P		**P**	**00 05 11.4**	**0.0**
	baz=82,SNR=14							
P18A	**Preston Nutter**	**81.88**	**44**	⇓P		**P**	**00 05 12.2**	**+0.6**
	baz=82,SNR=13							
PMSA	**Palmer Station**	**81.89**	**156**	*e*P		**P**	**00 05 12.0**	**+0.7**
PMSA				*e*S		S	00 15 18.4	-3.8
PMSA				LR		LR		
	comp=Z,3µm,21.0s,MS5.6							
E11A	**Bogner Ranch,**	**81.95**	**36**	⇓P		**P**	**00 05 10.9**	**-0.9**
	baz=82							
K15A	**Arbon**	**82.03**	**40**	⇓P		**P**	**00 05 11.8**	**-0.6**
	baz=82							
H13A	**Challis**	**82.04**	**38**	⇑P		**P**	**00 05 12.3**	**0.0**
	baz=82,SNR=22							
PV10	**Paradox Valley**	**82.05**	**46**	*e*P		**P**	**00 05 12.2**	**-0.4**
HWUT	**Hardware Ranch**	**82.06**	**42**	*e*P		**P**	**00 05 12.2**	**-0.3**
	comp=Z,58nm,1.6s,mb5.3							
HWUT				PcP		PcP	00 05 17.4	-0.5
HWUT				*e*S		S	00 15 28.6	+4.2
HWUT				LR		LR		
	comp=Z,2µm,21.0s,MS5.4							
I14A	**Mackay**	**82.16**	**39**	⇑P		**P**	**00 05 13.3**	**+0.4**
	baz=82,SNR=14							
N17A	**Moffit Pass**	**82.17**	**43**	P		**P**	**00 05 13.4**	**+0.3**
	baz=82,SNR=7.5							
Q19A	**Hogan Spring (**	**82.19**	**45**	⇑P		**P**	**00 05 13.6**	**+0.3**
	baz=82,SNR=30							
ANMO	**Albuquerque**	**82.21**	**50**	*e*P		**P**	**00 05 13.8**	**+0.4**
	comp=Z,27nm,1.3s,mb5.0							
ANMO				*e*PcP		PcP	00 05 19.2	+0.5
ANMO				*e*			00 05 28.9	
ANMO				*e*S		S	00 15 29.4	+3.1
ANMO				LR		LR		
	comp=Z,2µm,20.0s,MS5.4							
ANMO	**Albuquerque**	**82.21**	**50**	*e*P		**P**	**00 05 13.8**	**+0.3**
ANMO				*e*			00 05 19.2	
ANMO				*e*			00 05 28.9	
ANMO				*e*S		S	00 15 29.4	+3.1
ANMO				pmax		pmax		
	comp=Z,27nm,1.3s							
ANMO				MLR		MLR		
	comp=Z,2µm,20.0s							
C10A	**Spilker Farm,**	**82.22**	**34**	⇑P		**P**	**00 05 12.6**	**-0.6**
	baz=83							
PV01	**Paradox Valley**	**82.25**	**46**	*e*P		**P**	**00 05 14.3**	**+0.7**
D11A	**Klaveano Farm,**	**82.29**	**35**	⇓P		**P**	**00 05 12.6**	**-1.0**
	baz=83							
G13A	**Cobalt**	**82.35**	**38**	⇑P		**P**	**00 05 13.7**	**-0.3**
	baz=83							
L16A	**Fish Haven**	**82.36**	**41**	⇑P		**P**	**00 05 14.0**	**-0.1**
	baz=83							
O18A	**Roosevelt**	**82.36**	**44**	⇓P		**P**	**00 05 14.5**	**+0.3**
	baz=83							
GZH	**Guangzhou**	**82.47**	**297**	P		**P**	**00 05 16.3**	**+1.2**
GZH				S		S	00 15 34.5	+5.0
GZH				LR		LR		
	comp=N,524nm,27.4s,MS5.1							
GZH				LR		LR		
	comp=E,851nm,24.7s,MS5.1							
GZH				LR		LR		
	comp=Z,2µm,30.8s							
J15A	**Blackfoot**	**82.48**	**40**	⇓P		**P**	**00 05 15.5**	**+0.8**
	baz=83							
M17A	**Scullys Gap (B**	**82.56**	**42**	P		**P**	**00 05 14.9**	**-0.2**
	baz=83							
B10A	**Chitwood Farm,**	**82.56**	**34**	P		**P**	**00 05 13.8**	**-1.1**
	baz=83							
H14A	**Leadore**	**82.59**	**39**	P		**P**	**00 05 15.8**	**+0.6**
	baz=83,SNR=21							
NEW	**Newport**	**82.59**	**34**	*e*P		**P**	**00 05 13.7**	**-1.4**
	comp=Z,35nm,1.6s,mb5.1							
NEW				*e*PcP		PcP	00 05 20.4	+0.3
NEW				*e*PP		PP	00 08 25.8	+0.6
NEW				*e*S		S	00 15 29.8	+0.1
NEW				LR		LR		
	comp=Z,3µm,21.0s,MS5.6							
NEW	**Newport**	**82.59**	**34**	*e*P		**P**	**00 05 13.7**	**-1.4**
NEW				*e*			00 05 20.4	
NEW				*e*			00 08 25.8	
NEW				*e*S		S	00 15 29.8	+0.2
NEW				pmax		pmax		
	comp=Z,35nm,1.6s							
NEW				MLR		MLR		
	comp=Z,3µm,21.0s							
KLR	**Kul'dur**	**82.65**	**327**	*e*P		**P**	**00 05 10.6**	**-4.8**
KLR				pmax		pmax		
	comp=Z,240nm,2.0s,mb5.9							
K16A	**Soda Springs**	**82.70**	**41**	P		**P**	**00 05 15.8**	**0.0**
	baz=83,SNR=16							
P19A	**Cripple Cowboy**	**82.72**	**45**	⇓P		**P**	**00 05 16.4**	**+0.4**
	baz=83,SNR=7.4							
I15A	**Monteview**	**82.78**	**39**	⇑P		**P**	**00 05 16.0**	**-0.2**
	baz=83							
A10A	**Northport**	**82.80**	**33**	⇓P		**P**	**00 05 15.4**	**-0.8**
	baz=83							
G14A	**Jackson**	**82.88**	**38**	⇑P		**P**	**00 05 16.5**	**-0.3**
	baz=83							
J16A	**Bone**	**82.92**	**40**	⇑P		**P**	**00 05 17.0**	**0.0**
	baz=83							
M18A	**Lyman**	**82.92**	**43**	P		**P**	**00 05 17.3**	**+0.3**
	baz=83,SNR=12							
N18A	**Larsen Ranch,**	**82.94**	**43**	P		**P**	**00 05 16.9**	**-0.2**
	baz=83,SNR=10							
KTH	**Kantishna Hill**	**82.95**	**10**	*e*P		**P**	**00 05 15.0**	**-1.6**
	comp=Z,27nm,1.0s,mb5.2							
KTH				*e*PcP		PcP	00 05 21.3	0.0

AHID	**Auburn Hatcher**	**82.96**	**41**	*e*P		**P**	**00 05 16.9**	**-0.3**
	comp=Z,95nm,1.7s,mb5.5							
AHID				*e*PP		PP	00 08 28.6	+0.1
AHID				*e*S		S	00 15 30.7	-3.0
AHID				LR		LR		
	comp=Z,2µm,22.0s,MS5.4							
H15A	**Lima**	**83.02**	**39**	⇑P		**P**	**00 05 17.6**	**+0.1**
	baz=83							
CHUM	**Lake Minchumin**	**83.05**	**9**	*e*P		**P**	**00 05 15.8**	**-1.3**
	comp=Z,26nm,0.9s,mb5.3							
CHUM				PP		PP	00 08 27.8	-0.8
CN2	**Changchun**	**83.07**	**320**	*e*P		**P**	**00 05 18.1**	**+0.4**
CN2				*e*XP		sP	00 05 32.3	-0.9
CN2				*e*PP		PP	00 08 31.5	+2.2
CN2				*e*S		S	00 15 34.5	-0.2
CN2				AMB		AMB		
	comp=Z,70nm,1.5s,mb5.5							
CN2				AMB		AMB		
	comp=Z,2µm,6.0s							
CN2				LR		LR		
	comp=N,1µm,21.0s,MS5.4							
CN2				LR		LR		
	comp=E,1µm,21.0s,MS5.4							
CN2				LR		LR		
	comp=Z,2µm,22.0s,MS5.4							
E13A	**Victor**	**83.14**	**37**	P		**P**	**00 05 17.1**	**-1.0**
	baz=84							
C12B	**Naegeli Ranch,**	**83.15**	**35**	⇑P		**P**	**00 05 17.4**	**-0.7**
	baz=84							
SNY	**Shenyang**	**83.19**	**318**	⇑P		**P**	**00 05 17.8**	**-0.6**
SNY				LR		LR		
	comp=N,838nm,17.4s,MS5.3							
SNY				LR		LR		
	comp=E,861nm,18.0s,MS5.3							
SNY				LR		LR		
	comp=Z,1µm,20.4s,MS5.2							
L18A	**Fontenelle, Gr**	**83.20**	**42**	P		**P**	**00 05 18.0**	**-0.5**
	baz=84							
N19A	**John Jarvie Ra**	**83.22**	**43**	⇓P		**P**	**00 05 17.9**	**-0.7**
	baz=84,SNR=15							
TNA	**Tin City**	**83.23**	**2**	*e*P		**P**	**00 05 18.2**	**+0.1**
	comp=Z,74nm,1.1s,mb5.6							
F14A	**Wisdom**	**83.25**	**38**	⇑P		**P**	**00 05 18.3**	**-0.4**
	baz=84							
I16A	**Newdale**	**83.32**	**40**	⇑P		**P**	**00 05 19.4**	**+0.4**
	baz=84,SNR=25							
DCID1	**Drake Creek**	**83.35**	**40**	*e*P		**P**	**00 05 19.4**	**+0.2**
	comp=Z,61nm,1.1s,mb5.5							
DCID1				*e*PcP		PcP	00 05 24.5	+1.0
DCID1				*e*		pP	00 05 30.9	+0.3
D13A	**Huson**	**83.36**	**36**	⇓P		**P**	**00 05 18.3**	**-0.8**
	baz=84							
KSI	**Kapahiang**	**83.39**	**268**	P		**P**	**00 05 19.7**	**-0.4**
	comp=Z,355nm,0.9s,mb6.4							
A11A	**Hall Mountain,**	**83.41**	**34**	⇑P		**P**	**00 05 19.0**	**-0.4**
	baz=84							
REDW	**Red Top Meadow**	**83.43**	**41**	*e*P		**P**	**00 05 19.2**	**-0.4**
	comp=Z,118nm,1.6s,mb5.7							
REDW				*e*S		S	00 15 37.9	-0.5
TPAW	**Teton Pass**	**83.44**	**40**	*e*P		**P**	**00 05 19.7**	**0.0**
	comp=Z,123nm,1.6s,mb5.7							
TPAW				*e*PcP		PcP	00 05 25.1	+1.2
TPAW				*e*		pP	00 05 33.1	+2.1
TPAW				*e*S		S	00 15 49.9	+11
MCK	**McKinley**	**83.46**	**11**	*e*P		**P**	**00 05 18.5**	**-0.7**
	comp=Z,60nm,0.9s,mb5.6							
MCK	**McKinley**	**83.46**	**11**	*e*P		**P**	**00 05 18.5**	**-0.7**
MCK				pmax		pmax		
	comp=Z,60nm,0.9s,mb5.6							
DLMT	**Dillon**	**83.46**	**38**	*e*P		**P**	**00 05 19.6**	**-0.1**
	comp=Z,83nm,1.5s,mb5.5							
DLMT				*e*PP		PP	00 09 18.7	+46
DLMT				*e*S		S	00 15 04.2	-34
J17A	**Brown Place, J**	**83.52**	**41**	P		**P**	**00 05 20.6**	**+0.5**
	baz=84,SNR=6.9							
M19A	**Rock Springs**	**83.55**	**43**	P		**P**	**00 05 20.4**	**+0.2**
	baz=84,SNR=14							
SNOW	**Snow King Moun**	**83.55**	**41**	*e*P		**P**	**00 05 20.6**	**+0.4**
	comp=Z,88nm,1.4s,mb5.7							
SNOW				*e*PcP		PcP	00 05 25.1	+0.7
SNOW				*e*		pP	00 05 34.1	+2.5
BSMT	**Bassoo Peak**	**83.61**	**35**	*e*P		**P**	**00 05 19.8**	**-0.7**
C13A	**Hot Springs**	**83.63**	**35**	⇓P		**P**	**00 05 19.2**	**-1.3**
	baz=84							
MOOW	**Moose Ponds**	**83.70**	**40**	*e*P		**P**	**00 05 20.8**	**-0.2**
	comp=Z,71nm,1.8s,mb5.5							
MOOW				*e*PcP		PcP	00 05 25.4	+0.4
LOHW	**Long Hollow**	**83.72**	**40**	*e*P		**P**	**00 05 20.9**	**-0.1**
	comp=Z,63nm,1.5s,mb5.5							
LOHW				*e*		pP	00 05 33.6	+1.2
L19A	**Farson**	**83.72**	**42**	⇓P		**P**	**00 05 20.9**	**-0.2**
	baz=84,SNR=23							
A12A	**Yaak River Ran**	**83.78**	**34**	⇓P		**P**	**00 05 21.0**	**-0.2**
	baz=84							
MYKOM	**Kota Tinggi**	**83.84**	**274**	⇑P		**P**	**00 05 23.4**	**+1.0**
MYKOM	**Kota Tinggi**	**83.84**	**274**	P		**P**	**00 05 23.5**	**+1.1**
G16A	**Moss Hill, Enn**	**83.85**	**39**	P		**P**	**00 05 21.7**	**-0.1**
	baz=84							
QLMT	**Earthquake Lak**	**83.86**	**39**	*e*P		**P**	**00 05 22.3**	**+0.5**
QLMT				*e*		pP	00 05 34.6	+1.5
DLBC	**Dease Lake**	**83.88**	**21**	*e*P		**P**	**00 05 21.6**	**0.0**
D14A	**Greenough**	**83.89**	**36**	⇓P		**P**	**00 05 20.9**	**-1.0**
	baz=84							
I17A	**Pilgram Creek**	**83.90**	**40**	P		**P**	**00 05 22.4**	**+0.4**
	baz=84,SNR=10							
H16A	**Russell Place,**	**83.91**	**39**	P		**P**	**00 05 22.8**	**+0.8**
	baz=84,SNR=34							
BW06	**Boulder Array**	**83.93**	**42**	PFAKE			00 05 30.0	+7.8
BW06				LR		LR		
	comp=Z,2µm,21.0s,MS5.4							
BW06	**Boulder Array**	**83.93**	**42**	⇓P		**P**	**00 05 21.9**	**-0.3**
	baz=84							
PDAR	**Pinedale Array**	**83.93**	**42**	P		**P**	**00 05 21.6**	**-0.6**
	comp=Z,14nm,0.7s,mb5.2,baz=212,slow=3.4,SNR=118							
PDAR				LR		LR	00 35 39.0	
	comp=Z,1µm,21.2s,MS5.3,baz=251,slow=31							
CHMT	**Chamberlain Mo**	**83.94**	**37**	P		**P**	**00 05 21.4**	**-0.7**
QIZ	**Qiongzhong**	**83.99**	**292**	P		**P**	**00 05 22.1**	**-0.9**
QIZ				XP		sP	00 05 35.3	-3.2
QIZ				S		S	00 15 43.9	-1.1
QIZ				SS		SS	00 21 13.3	-0.9
QIZ				AMB		AMB		
	comp=Z,845nm,6.5s							
QIZ				LR		LR		
	comp=N,633nm,24.9s,MS5.3							
QIZ				LR		LR		
	comp=E,1µm,24.9s,MS5.3							
QIZ				LR		LR		
	comp=Z,2µm,26.5s,MS5.4							
QIZ	**Qiongzhong**	**83.99**	**292**	PFAKE			00 05 30.0	+7.0
QIZ				LR		LR		
	comp=Z,2µm,21.0s,MS5.5							
YMR	**Madison River**	**84.06**	**39**	PFAKE			00 05 30.0	+7.2
YMR				LR		LR		
	comp=Z,1µm,20.0s,MS5.3							
B13A	**Whitefish**	**84.09**	**35**	⇓P		**P**	**00 05 21.7**	**-1.2**
	baz=84							
H17A	**Grant Village**	**84.15**	**40**	⇓P		**P**	**00 05 24.6**	**+1.4**
	baz=84,SNR=6.5							
M20A	**Sweetwater, Wa**	**84.17**	**43**	P		**P**	**00 05 24.0**	**+0.5**
	baz=84,SNR=19							
BOZ	**Bozeman (W)**	**84.18**	**38**	PFAKE			00 05 30.0	+6.6
BOZ				LR		LR		
	comp=Z,2µm,20.0s,MS5.4							
SDCO	**Great Sand Dun**	**84.19**	**47**	*e*P		**P**	**00 05 23.6**	**0.0**
	comp=Z,32nm,1.4s,mb5.2							
SDCO				*e*		pP	00 05 35.4	+0.5
SDCO				LR		LR		
	comp=Z,1µm,21.0s,MS5.2							
I18A	**Diamond G Ranc**	**84.25**	**41**	⇑P		**P**	**00 05 24.0**	**+0.2**
	baz=85,SNR=12							
YNR	**Norris Junctio**	**84.25**	**39**	*e*P		**P**	**00 05 24.2**	**+0.4**
YNR				*e*		pP	00 05 35.3	+0.2
F16A	**Kennard Place,**	**84.26**	**38**	P		**P**	**00 05 23.5**	**-0.3**
	baz=85							
L20A	**Wamsutter**	**84.33**	**43**	P		**P**	**00 05 24.6**	**+0.4**
	baz=85,SNR=43							
LKWY	**Lake**	**84.34**	**40**	*e*P		**P**	**00 05 24.2**	**0.0**
	comp=Z,28nm,1.1s,mb5.3							
LKWY				LR		LR		
	comp=Z,1µm,22.0s,MS5.3							
LKWY	**Lake**	**84.34**	**40**	*e*P		**P**	**00 05 24.2**	**0.0**
LKWY				pmax		pmax		
	comp=Z,28nm,1.1s,mb5.3							
LKWY				MLR		MLR		
	comp=Z,1µm,22.0s,MS5.3							

KGM	**Kluang**	**84.42**	**274**	⇑P		**P**	**00 05 26.0**	**+0.6**
D15A	**Lincoln**	**84.43**	**37**	P		**P**	**00 05 24.2**	**-0.4**
	baz=85							
WHN	**Wuhan**	**84.61**	**304**	⇑P		**P**	**00 05 27.3**	**+1.3**
WHN				AMB		AMB		
	comp=Z,256nm,1.6s,mb6.1							
WHN				AMB		AMB		
	comp=Z,1µm,11.0s							
WHN				LR		LR		
	comp=N,2µm,16.7s,MS5.7							
WHN				LR		LR		
	comp=E,2µm,20.2s,MS5.7							
WHN				LR		LR		
	comp=Z,2µm,19.8s,MS5.6							
RGRI	**Rengat**	**84.63**	**271**	P		**P**	**00 05 28.1**	**+1.6**
	comp=Z,377nm,1.9s,mb6.2							
E16A	**East Helena**	**84.64**	**38**	P		**P**	**00 05 24.8**	**-0.9**
	baz=85							
HRY	**Holter Researc**	**84.64**	**37**	*e*P		**P**	**00 05 25.3**	**-0.4**
COLA	**College**	**84.70**	**11**	PFAKE			00 05 40.0	+14
COLA				LR		LR		
	comp=Z,3µm,22.0s,MS5.7							
COLA	**College**	**84.70**	**11**	*c i*P		**P**	**00 05 24.6**	**-0.9**
C15A	**Salmond Ranch,**	**84.78**	**36**	⇑P		**P**	**00 05 25.4**	**-1.0**
	baz=85							
WALA	**Waterton Lakes**	**84.78**	**35**	*e*P		**P**	**00 05 25.8**	**-0.5**
	comp=Z,83nm,1.6s,mb5.6							
F17A	**Fitzpatrick Pl**	**84.89**	**38**	P		**P**	**00 05 27.1**	**+0.1**
	baz=85							
SEY	**Seymchan**	**84.90**	**345**	⇑*i*P		**P**	**00 05 26.3**	**-0.3**
RWWY	**Rawlins**	**84.91**	**43**	*e*P		**P**	**00 05 26.9**	**-0.2**
	comp=Z,130nm,1.5s,mb5.8							
IMA2	**Indian Mountai**	**84.92**	**8**	*e*P		**P**	**00 05 26.5**	**-0.2**
L21A	**Rawlins**	**84.94**	**43**	⇓P		**P**	**00 05 26.6**	**-0.7**
	baz=85,SNR=11							
A14A	**Double T Ranch**	**85.00**	**35**	⇑P		**P**	**00 05 26.8**	**-0.7**
	baz=85							
ISCO	**Idaho Springs**	**85.07**	**46**	PFAKE			00 05 40.0	+12
ISCO				LR		LR		
	comp=Z,770nm,21.0s,MS5.1							
RLMT	**Red Lodge**	**85.32**	**40**	PFAKE			00 05 40.0	+11
RLMT				LR		LR		
	comp=Z,1µm,22.0s,MS5.2							
RLMT	**Red Lodge**	**85.32**	**40**	⇓P		**P**	**00 05 29.6**	**+0.4**
	baz=86							
JCT	**Junction City**	**85.32**	**56**	*e*P		**P**	**00 05 28.6**	**-0.9**
	comp=Z,112nm,1.9s,mb5.7							
JCT				LR		LR		
	comp=Z,728nm,21.0s,MS5.0							
JCT	**Junction City**	**85.32**	**56**	*e*P		**P**	**00 05 28.6**	**-0.9**
JCT				pmax		pmax		
	comp=Z,112nm,1.9s,mb5.7							
JCT				MLR		MLR		
	comp=Z,728nm,21.0s,MS5.0							
GCMT	**Greycliff**	**85.43**	**39**	*e*P		**P**	**00 05 29.5**	**-0.2**
F18A	**Big Timber**	**85.46**	**39**	P		**P**	**00 05 29.7**	**-0.1**
	baz=86							
D17A	**Six Diamond Ra**	**85.54**	**37**	⇓P		**P**	**00 05 30.3**	**+0.1**
	baz=86							
MAW	**Mawson**	**85.57**	**199**	P		**P**	**00 05 30.0**	**-0.1**
	comp=Z,24nm,0.7s,mb5.5,baz=128,slow=6.4,SNR=39							
MAW				LR		LR	00 40 42.4	
	comp=Z,2µm,20.5s,MS5.5,baz=110,slow=34							
MAW	**Mawson**	**85.57**	**199**	*e*P		**P**	**00 05 30.7**	**+0.6**
	comp=Z,18nm,1.2s,mb5.2							
MAW				LR		LR	00 40 42.4	
MAW	**Mawson**	**85.57**	**199**	*e*P		**P**	**00 05 30.7**	**+0.6**
MAW				pmax		pmax		
	comp=Z,17nm,1.2s							
KTGM	**Kuala Trenggan**	**85.62**	**277**	⇑P		**P**	**00 05 32.3**	**+0.9**
AMTX	**Amarillo**	**85.69**	**51**	*e*P		**P**	**00 05 31.2**	**-0.1**
	comp=Z,42nm,0.9s,mb5.7							
AMTX				LR		LR		
	comp=Z,2µm,21.0s,MS5.5							
KVTX	**Kingsville**	**85.72**	**59**	PFAKE			00 05 40.0	+8.5
KVTX				LR		LR		
	comp=Z,1µm,20.0s,MS5.2							
C17A	**Wharram Farm,**	**85.75**	**37**	⇑P		**P**	**00 05 30.6**	**-0.6**
	baz=86							
PHWY	**Pilot Hill**	**85.88**	**44**	*e*P		**P**	**00 05 31.5**	**-0.5**
	comp=Z,5.8nm,0.9s,mb4.8							
EGAK	**Eagle**	**85.92**	**13**	*e*P		**P**	**00 05 31.5**	**-0.2**
	comp=Z,110nm,1.6s,mb5.8							
EGAK				LR		LR		
	comp=Z,3µm,20.0s,MS5.6							
A16A	**West Butte Ran**	**85.99**	**36**	⇑P		**P**	**00 05 31.8**	**-0.6**
	baz=86							
D18A	**Linhart Farms,**	**86.08**	**38**	⇓P		**P**	**00 05 32.6**	**-0.3**
	baz=86							
PDSI	**Padang**	**86.24**	**270**	P		**P**	**00 05 33.1**	**-1.4**
	comp=Z,131nm,1.2s,mb6.0							
COCO	**West Island**	**86.31**	**258**	PFAKE			00 05 50.0	+15
COCO				LR		LR		
	comp=Z,4µm,22.0s,MS5.8							
FRIM	**Kepong**	**86.40**	**275**	⇑P		**P**	**00 05 36.0**	**+0.7**
PPI	**Padang Panjang**	**86.44**	**271**	P		**P**	**00 05 35.1**	**-0.4**
	comp=Z,58nm,1.4s,comp=Z,2µm,mb5.6							
COLD	**Coldfoot**	**86.50**	**9**	*e*P		**P**	**00 05 34.5**	**0.0**
	comp=Z,30nm,1.1s,mb5.4							
EGMT	**Eagleton**	**86.53**	**37**	*e*P		**P**	**00 05 34.8**	**-0.3**
	comp=Z,56nm,1.7s,mb5.5							
EGMT				LR		LR		
	comp=Z,2µm,21.0s,MS5.6							
EGMT	**Eagleton**	**86.53**	**37**	⇓P		**P**	**00 05 34.6**	**-0.4**
	baz=87							
UBT	**Ubonrachathani**	**87.03**	**287**	⇓P		**P**	**00 05 40.0**	**+1.8**
BJT	**Baijiatuau**	**87.27**	**314**	*e*P		**P**	**00 05 38.3**	**-0.5**
	comp=Z,84nm,1.2s,mb5.8							
BJT				LR		LR		
	comp=

HIA MLR MLR
comp=Z,168nm,1.6s
comp=Z,3µm,20.0s
GYA Guiyang 89.35 298 ⇑*i*P **P 00 05 50.3 +1.2**
GYA AP pP 00 06 00.8 +0.3
GYA XP sP 00 06 04.8 +0.2
GYA PP PP 00 09 23.8 +3.3
GYA SKS 00 16 13.6
GYA S S 00 16 37.3 +0.6
GYA XS sS 00 16 53.4 -2.3
GYA SS SS 00 22 34.8 +2.3
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,340nm,6.2s
GYA LR LR
comp=N,780nm,17.0s,MS5.3
GYA LR LR
comp=E,660nm,17.2s,MS5.3
GYA LR LR
comp=Z,1µm,17.5s,MS5.4
NATX Nacogdoches 89.89 57 PFAKE 00 06 00.0 +8.6
NATX LR LR
comp=Z,1µm,21.0s,MS5.3
DGMT Dagmar 89.99 38 *e*P **P 00 05 51.3 -0.2**
comp=Z,34nm,1.1s,mb5.6
DGMT LR LR
comp=Z,2µm,22.0s,MS5.5
DGMT Dagmar 89.99 38 ⇑P **P 00 05 51.1 -0.4**
baz=90
XAN Xi'an 90.20 306 P **P 00 05 53.4 +0.5**
XAN AP pP 00 06 04.3 0.0
XAN XP sP 00 06 08.4 0.0
XAN PP PP 00 09 31.6 +4.4
XAN SKS 00 16 22.6
XAN S S 00 16 42.9 -1.4
XAN XS sS 00 17 00.3 -3.0
XAN PS PS 00 17 56.1 +0.7
XAN SS SS 00 22 46.6 +2.0
XAN AMB AMB
comp=Z,65nm,1.5s,mb5.7
XAN AMB AMB
comp=Z,587nm,7.2s
XAN LR LR
comp=N,362nm,20.2s,MS5.3
XAN LR LR
comp=E,1µm,22.2s,MS5.3
XAN LR LR
comp=Z,2µm,22.2s,MS5.5
SYO Syowa Base 90.27 191 ⇑*i*P **P 00 05 51.0 -1.6**
SYO Syowa Base 90.27 191 ⇑*e*P **P 00 05 53.8 +1.2**
SYO Syowa Base 90.27 191 ⇓*i*P **P 00 05 57.2 +4.6**
VNA3 Neumayer Olymp 90.44 175 *e* **P 00 05 52.7 -0.6**
VNA3 *e* pP 00 06 02.8 -1.9
TGUH Tegucigalpa,Un 90.44 75 PFAKE 00 06 10.0 +16
TGUH LR LR
comp=Z,1µm,22.0s,MS5.3
CLNS Chul'man 90.44 331 *e*P **P 00 05 54.2 +0.8**
CLNS *e**PP pP 00 06 04.7 -0.1
CLNS *e*PPP 00 11 20.9
CLNS *e*S SKSac 00 16 22.6 +0.9
CLNS *e* 00 17 44.2
CLNS *e*SSS 00 26 11.3
CLNS pmax pmax
comp=Z,94nm,1.4s,mb5.9
CLNS pmax pmax
comp=E,25nm,1.3s
CLNS pmax pmax
comp=N,54nm,1.4s
CLNS MLR MLR
comp=E,378nm,17.0s,MS5.2
CLNS MLR MLR
comp=N,573nm,17.0s,MS5.2
CLNS MLR MLR
comp=Z,653nm,16.0s,MS5.2
SNAA Sanae 90.49 177 *e* **P 00 05 49.4 -4.2**
SNAA *e* pP 00 05 58.5 -6.5
SNAA Sanae 90.49 177 *e*P **P 00 05 50.2 -3.4**
comp=Z,22nm,1.0s,mb5.4
SNAA Sanae 90.49 177 *e*P **P 00 05 50.2 -3.4**
SNAA pmax pmax
comp=Z,22nm,1.0s
INK Inuvik 90.56 14 *e*P **P 00 05 53.2 -0.5**
comp=Z,2µm,1.8s
EFI East Falkland 90.79 146 PFAKE 00 06 10.0 +15
EFI LR LR
comp=Z,3µm,21.0s,MS5.7
HHC Hu-ho-hao-te 90.81 313 *e*P **P 00 05 56.5 +1.0**
HHC AP pP 00 06 07.5 +0.6
HHC XP sP 00 06 11.1 0.0
HHC PP PP 00 09 35.8 +4.0
HHC SKS 00 16 24.3
HHC S S 00 16 47.4 -2.2
HHC XS sS 00 17 05.8 -2.8
HHC AMB AMB
comp=Z,64nm,2.2s,mb5.6
HHC AMB AMB
comp=Z,706nm,6.8s
HHC LR LR
comp=N,952nm,21.4s,MS5.4
HHC LR LR
comp=E,871nm,19.0s,MS5.4
HHC LR LR
comp=Z,1µm,22.6s,MS5.2
VNA2 Neumayer--Watz 90.93 175 *e* **P 00 05 56.0 +0.4**
baz=204,slow=3.2
VNA2 *e* pP 00 06 04.7 -2.3
KSU1 Kansas State U 91.10 49 PFAKE 00 06 10.0 +13
KSU1 LR LR
comp=Z,2µm,21.0s,MS5.5
VNA1 Neumayer--Stat 91.13 175 *e* **P 00 05 57.4 +0.8**
VNA1 *e* pP 00 06 05.5 -2.5
YAK Yakutsk 91.41 337 PFAKE 00 06 10.0 +12
YAK LR LR
comp=Z,1µm,22.0s,MS5.3
YAK Yakutsk 91.41 337 *e*P **P 00 05 55.8 -2.0**
YAK pmax pmax
comp=Z,17nm,1.2s,mb5.2
MAIT Maitri 91.56 182 *e*P **P 00 05 55.8 -2.8**
NVL N'lazarevskaya 91.57 182 P **P 00 05 58.7 +0.1**
NVL pmax pmax
comp=Z,24nm,1.2s,mb5.4
NVL MLR MLR
comp=N,1µm,21.0s
NVL MLR MLR
comp=Z,2µm,21.0s,MS5.4
NVL MLR MLR
comp=E,41nm,7.0s
NST Nakhon Sawan 91.63 286 P **P 00 06 01.4 +1.5**
comp=E,85nm,1.4s,mb5.9
MIAR Mount Ida 91.72 54 *e*P **P 00 05 59.2 -0.7**
comp=E,26nm,1.3s,mb5.4
MIAR LR LR
comp=Z,764nm,20.0s,MS5.1
MIAR Mount Ida 91.72 54 *e*P **P 00 05 59.2 -0.7**
MIAR pmax pmax
comp=Z,26nm,1.3s,mb5.4
MIAR MLR MLR
comp=Z,764nm,20.0s,MS5.1
BTO Baotou 91.81 312 *e*P **P 00 06 00.3 +0.2**
LCO Las Campanas 91.93 121 PFAKE 00 06 10.0 +8.9
LCO LR LR
comp=Z,2µm,21.0s,MS5.6
YKA Yellowknife Ar 92.23 23 P **P 00 06 01.0 -0.6**
comp=Z,0.8nm,0.7s,baz=34,slow=29,SNR=4.0
YKA LR LR 00 40 20.8
comp=Z,408nm,21.7s,MS4.8,baz=195,slow=31
KMI Kunming 92.25 296 ⇑P **P 00 06 04.6 +2.0**
KMI AP pP 00 06 15.3 +1.3
KMI XP sP 00 06 19.4 +1.3
KMI PP PP 00 09 45.1 +1.6
KMI SKS 00 16 29.5
KMI S S 00 17 02.8 -0.5
KMI XS sS 00 17 20.3 -2.0
KMI PS PS 00 18 18.3 -0.1
KMI SS SS 00 23 11.9 -2.6
KMI AMB AMB
comp=Z,81nm,1.3s,mb5.9
KMI AMB AMB
comp=Z,774nm,3.6s
KMI LR LR
comp=N,623nm,18.8s,MS5.4
KMI LR LR
comp=E,1µm,21.0s,MS5.4
KMI LR LR
comp=Z,2µm,25.3s,MS5.4
NNA Nana 92.31 103 PFAKE 00 06 10.0 +6.9
NNA LR LR
comp=Z,860nm,20.0s,MS5.2
ECSD EROS,Sioux Fal 92.83 45 *e*P **P 00 06 05.0 +0.2**
comp=Z,69nm,1.9s,mb5.8
ECSD LR LR
comp=Z,813nm,21.0s,MS5.2
BSI Banda Aceh 93.09 275 P **P 00 06 07.5 +0.7**
CD2 Chengdu 93.24 301 P **P 00 06 07.9 +0.9**
CD2 AP pP 00 06 18.5 +0.1
CD2 XP sP 00 06 22.6 +0.1
CD2 PP PP 00 09 54.5 +3.3
CD2 SKS 00 16 37.8
CD2 S S 00 17 09.8 -2.1
CD2 XS sS 00 17 27.8 -3.1
CD2 PS PS 00 18 32.0 +2.8
CD2 SS SS 00 23 30.0 +1.6
CD2 AMB AMB
comp=Z,40nm,1.6s,mb5.6
CD2 AMB AMB
comp=Z,480nm,5.6s
CD2 LR LR
comp=N,1µm,18.0s,MS5.4
CD2 LR LR
comp=E,170nm,18.0s,MS5.4
CD2 LR LR
comp=Z,1µm,19.8s,MS5.4
VBMS Vicksburg 93.35 57 PFAKE 00 06 20.0 +12
VBMS LR LR
comp=Z,844nm,21.0s,MS5.2
CM31 Chiang Mai Arr 93.56 288 *e*P **P 00 06 09.9 +1.1**
comp=Z,12nm,0.6s,mb5.5
CM31 LR LR
comp=Z,1µm,20.0s,MS5.3
CMAR Chiang Mai Arr 93.56 288 P **P 00 06 09.4 +0.7**
comp=Z,1.9nm,0.3s,mb5.0,baz=51,slow=30,SNR=8.0
CMAR LR LR 00 43 37.8
comp=Z,1µm,21.8s,MS5.4,baz=95,slow=33
CMAR Chiang Mai Arr 93.56 288 P **P 00 06 09.4 +0.7**
CMAR LR LR 00 43 37.8
CHG Chiang Mai 93.66 288 ⇑P **P 00 06 10.3 +1.1**
comp=Z,68nm,1.3s,mb5.9
CHTO Chiang Mai 93.66 288 PFAKE 00 06 20.0 +11
CHTO LR LR
comp=Z,1µm,20.0s,MS5.4
FFC Flin Flon 94.01 33 PFAKE 00 06 20.0 +10
FFC LR LR
comp=Z,2µm,20.0s,MS5.5
SCIA State Center 94.52 48 PFAKE 00 06 20.0 +7.4
SCIA LR LR
comp=Z,2µm,22.0s,MS5.5
OTAV Otavalo 94.59 91 PFAKE 00 06 30.0 +16
OTAV LR LR
comp=Z,882nm,21.0s,MS5.2
CCM Cathedral Cave 94.67 52 PFAKE 00 06 20.0 +6.6
CCM LR LR
comp=Z,1µm,20.0s,MS5.4
LZH Lanzhou 94.81 306 ⇓P **P 00 06 15.0 +0.9**
LZH AP pP 00 06 25.3 -0.3
LZH XP sP 00 06 29.0 -0.7
LZH PP PP 00 09 59.5 -3.9
LZH SKS 00 16 47.0
LZH S S 00 17 14.1 -11
LZH AMB AMB
comp=Z,70nm,1.2s,mb6.0
LZH AMB AMB
comp=Z,410nm,6.4s
LZH LR LR
comp=E,1µm,17.1s
LZH LR LR
comp=Z,2µm,19.0s,MS5.5
OXF Oxford 94.96 55 PFAKE 00 06 30.0 +15
OXF LR LR
comp=Z,2µm,22.0s,MS5.4
AGMN Agassiz Refuge 94.99 41 PFAKE 00 06 30.0 +15
AGMN LR LR
comp=Z,807nm,19.0s,MS5.2
ULM Lac du Bonnet 95.68 39 LR LR 00 43 05.3
comp=Z,3µm,21.1s,MS5.7,baz=237,slow=32
ULM Lac du Bonnet 95.68 39 PFAKE 00 06 30.0 +12
ULM LR LR
comp=Z,3µm,20.0s,MS5.8
LVC Limon Verde 95.78 116 PFAKE 00 06 30.0 +11
LVC LR LR
comp=Z,3µm,22.0s,MS5.7
BRAL Brewton 95.79 59 PFAKE 00 06 30.0 +11
BRAL LR LR
comp=Z,1µm,22.0s,MS5.3
BCIP Isla Barro Col 95.92 82 PFAKE 00 06 30.0 +10
BCIP LR LR
comp=Z,823nm,20.0s,MS5.2
BOD Bodaibo 96.10 329 *e*P **P 00 06 18.1 -1.4**
ULN Ulaanbaatar 96.37 318 PFAKE 00 06 30.0 +9.1
ULN LR LR
comp=Z,988nm,20.0s,MS5.3
ULN Ulaanbaatar 96.37 318 *e*P **P 00 06 20.3 -0.6**
ULN Ulaanbaatar 96.37 318 P **P 00 06 22.1 +1.2**
LRAL Lakeview Retre 96.43 58 PFAKE 00 06 30.0 +8.4
LRAL LR LR
comp=Z,1µm,21.0s,MS5.3
WVT Waverly 96.68 54 PFAKE 00 06 30.0 +7.4
WVT LR LR
comp=Z,2µm,21.0s,MS5.5
SONM Songino Array 96.77 318 P **P 00 06 23.0 +0.3**
comp=Z,1.7nm,1.0s,mb4.4,baz=107,slow=3.3,SNR=6.1
SONM PP PP 00 10 15.5 -2.7
comp=Z,3.5nm,1.2s,baz=106,slow=5.5,SNR=6.9
SONM LR LR 00 45 06.7
comp=Z,1µm,21.9s,MS5.4,baz=146,slow=32
SONM Songino Array 96.77 318 P **P 00 06 23.0 +0.2**
SONM 00 10 15.5
HDIL Hopedale 96.89 50 PFAKE 00 06 30.0 +6.5
HDIL LR LR
comp=Z,2µm,21.0s,MS5.6
JFWS Jewell Farm 96.92 47 PFAKE 00 06 30.0 +6.5
JFWS LR LR
comp=Z,2µm,20.0s,MS5.5
TIXI Tiksi 97.38 344 *e*P **P 00 06 24.0 -0.9**
comp=Z,18nm,1.4s,mb5.3
TIXI LR LR
comp=Z,1µm,21.0s,MS5.4
TIXI Tiksi 97.38 344 *e*P **P 00 06 23.4 -1.6**
TIXI pmax pmax
comp=Z,19nm,1.4s,mb5.3
TIXI MLR MLR
comp=Z,647nm,19.0s,MS5.1
EYMN Ely 97.63 42 PFAKE 00 06 40.0 +13
EYMN LR LR
comp=Z,1µm,20.0s,MS5.4
WCI Wyandotte Cave 98.45 53 PFAKE 00 06 40.0 +9.4
WCI LR LR
comp=Z,1µm,20.0s,MS5.3
LPAZ La Paz 98.80 110 P **P 00 06 34.2 +1.6**
comp=Z,0.3nm,0.3s,baz=236,slow=16,SNR=2.3
LPAZ LR LR 00 41 11.8
comp=Z,2µm,21.4s,MS5.6,baz=304,slow=29
LPAZ La Paz 98.80 110 P **P 00 06 34.2 +1.6**
LPAZ LR LR 00 41 11.8
GOGA Godfrey 99.38 58 PFAKE 00 06 50.0 +15
GOGA LR LR
comp=Z,989nm,22.0s,MS5.3
ZAK Zakamensk 99.50 320 *e*P **P 00 06 30.5 -4.4**
ZAK pmax pmax
comp=Z,6.0nm,1.5s,mb4.9
TLY Talaya 99.64 321 PFAKE 00 06 50.0 +14
TLY LR LR
comp=Z,2µm,20.0s,MS5.5
DWPF Disney 99.70 64 PFAKE 00 06 50.0 +14
DWPF LR LR
comp=Z,876nm,20.0s,MS5.3
TKL Tuckaleechee C 99.71 56 LR LR 00 45 09.4
comp=Z,976nm,21.8s,MS5.3,baz=275,slow=32
TZTN Tazewell 100.11 55 PFAKE 00 06 50.0 +12
TZTN LR LR
comp=Z,2µm,22.0s,MS5.5
GLMI Grayling 101.36 47 PFAKE 00 06 50.0 +6.7
GLMI LR LR
comp=Z,2µm,20.0s,MS5.6
AAM Ann Arbor 101.44 49 PFAKE 00 07 00.0 +16
AAM LR LR
comp=Z,1µm,22.0s,MS5.4
ACSO Alum Creek Sta 101.44 51 PFAKE 00 07 00.0 +16
ACSO LR LR
comp=Z,1µm,21.0s,MS5.4
NHSC New Hope 101.97 59 PFAKE 00 07 00.0 +14
NHSC LR LR
comp=Z,919nm,19.0s,MS5.3
BLA Blacksburg 102.71 55 PFAKE 00 07 00.0 +11
BLA LR LR
comp=Z,1µm,21.0s,MS5.5
LSA Lhasa 103.40 297 *e*Pdif Pdif 00 06 53.2 +0.8
LSA *e*PP PP 00 11 01.9 -7.1
LSA LR LR
comp=Z,1µm,22.0s,MS5.4
MCWV Mont Chateau 103.67 52 PFAKE 00 07 10.0 +16
MCWV LR LR
comp=Z,1µm,20.0s,MS5.4
ERPA Erie 104.06 50 PFAKE 00 07 10.0 +15
ERPA LR LR
comp=Z,2µm,21.0s,MS5.6
CNNC Cliffs of the 104.29 57 PFAKE 00 07 10.0 +14
CNNC LR LR
comp=Z,2µm,22.0s,MS5.5
CBN Corbin 105.28 54 PFAKE 00 11 30.0 +15
CBN LR LR
comp=Z,1µm,21.0s,MS5.5
SSPA Standing Stone 105.33 52 PFAKE 00 11 30.0 +15
SSPA LR LR
comp=Z,869nm,20.0s,MS5.3
SDDR Presa de Saban 106.52 75 PFAKE 00 11 30.0 +12
SDDR LR LR
comp=Z,2µm,22.0s,MS5.6
BINY Binghamton 107.00 50 PFAKE 00 11 30.0 +12
BINY LR LR
comp=Z,2µm,21.0s,MS5.6
LONY Lake Ozonia 108.35 48 PFAKE 00 11 30.0 +10
LONY LR LR
comp=Z,1µm,21.0s,MS5.4
NCB Newcomb 108.53 49 PFAKE 00 11 30.0 +9.2
NCB LR LR
comp=Z,1µm,21.0s,MS5.4
WMQ Urumqi 108.61 311 *e*PDIF Pdif 00 07 15.0 -0.5
WMQ PP PP 00 11 49.0 +1.9
WMQ PS PS 00 21 09.0 -3.6
WMQ SS SS 00 27 00.0 -1.6
WMQ PP PP
WMQ comp=Z,138nm,8.0s LR LR
comp=N,528nm,20.0s,MS5.3
WMQ LR LR
comp=E,577nm,20.0s,MS5.3
WMQ LR LR
comp=Z,648nm,20.0s,MS5.2
LBNH Lisbon 110.20 49 PFAKE 00 11 40.0 +16
LBNH LR LR
comp=Z,1µm,22.0s,MS5.5
WES Weston 110.46 51 PFAKE 00 11 40.0 +15
WES LR LR
comp=Z,1µm,19.0s,MS5.5
DGAR Diego Garcia 110.53 255 PFAKE 00 11 40.0 +14
DGAR LR LR
comp=Z,4µm,21.0s,MS5.9
SJG San Juan 111.07 77 PFAKE 00 11 40.0 +14
SJG LR LR
comp=Z,1µm,22.0s,MS5.5
ZAA0 Zalesovo Array 111.25 322 *e*PKiKP PKiKP 00 11 24.9 -0.8
ZAA0 *e*PP PP 00 12 00.9 -4.9
ZALV Zalesovo Beam 111.25 322 PKiKP PKiKP 00 11 25.1 -0.5
comp=Z,5.2nm,0.9s,baz=132,slow=2,SNR=15
PKME Peaks-Kenny Pk 112.15 48 PFAKE 00 11 40.0 +12
PKME LR LR
comp=Z,2µm,22.0s,MS5.7
MK31 Makanchi Array 112.65 314 *e*PKiKP PKiKP 00 11 27.9 -0.7
MKAR Makanchi Array 112.65 314 Pdiff Pdif 00 07 38.0 +4.5
comp=Z,0.5nm,0.9s,baz=90,slow=4.8,SNR=2.8
MKAR PKiKP PKiKP 00 11 27.7 -0.9
comp=Z,3.4nm,0.6s,baz=79,slow=0.2,SNR=31
MKAR PKKPab PKKPab 00 22 26.9 +2.6
comp=Z,0.8nm,1.0s,baz=287,slow=3.2,SNR=3.8
MKAR Makanchi Array 112.65 314 Pdif Pdif 00 07 38.0 +4.5
MKAR PKPdf PKiKP 00 11 27.7 -0.9
MKAR PKKPab PKKPab 00 22 26.9 +2.6
MKAR Makanchi Array 112.65 314 ⇑*i*PKiKP PKiKP 00 11 27.7 -0.8
SCHQ Schefferville 113.79 37 PFAKE 00 11 40.0 +10
SCHQ LR LR
comp=Z,2µm,22.0s,MS5.7
GRGR Grenville 113.92 84 PFAKE 00 11 40.0 +8.1
GRGR LR LR
comp=Z,607nm,19.0s,MS5.2
BBSR BB Station 114.70 62 PFAKE 00 11 40.0 +7.1
BBSR LR LR
comp=Z,887nm,19.0s,MS5.4
KURK Kurchatov 115.08 318 PFAKE 00 11 40.0 +6.9
KURK LR LR
comp=Z,1µm,22.0s,MS5.5
KURK Kurchatov 115.08 318 ⇑*i*PKiKP PKiKP 00 11 32.4 -0.7
BBGH Gun Hill 116.15 84 PFAKE 00 11 50.0 +14
BBGH LR LR
comp=Z,1µm,20.0s,MS5.5
BDFB Brasilia 116.56 118 PFAKE 00 11 50.0 +13
BDFB LR LR
comp=Z,947nm,20.0s,MS5.4
KSH Kashi 117.06 306 *e*PKP PKPdf 00 11 39.5 +2.3
KSH *e*XPKP 00 11 53.8
KSH *e*PP PP 00 12 50.0 +2.5
KSH *e*PKS 00 15 15.1
KSH *e*SKS SKSdf 00 18 46.8 +0.2
KSH *e*SKKS SKKSac 00 19 39.1 -6.3
KSH *e*SS SS 00 28 47.0 -6.8
KSH PP PP
KSH comp=Z,1µm,3.6s LR LR
comp=N,1µm,11.0s
KSH LR LR
comp=E,2µm,16.1s
KSH LR LR
comp=Z,2µm,15.5s,MS5.8
TKM2 Tokmak 2 117.36 310 PFAKE 00 11 50.0 +12
TKM2 LR LR
comp=Z,1µm,21.0s,MS5.5
UCH Uchtor 118.17 309 PFAKE 00 11 50.0 +11
UCH LR LR
comp=Z,994nm,22.0s,MS5.4
EKS2 Erkin-Say 118.71 309 *e*PKPdf PKPdf 00 11 40.2 -0.1
EKS2 LR LR
comp=Z,980nm,20.0s,MS5.4
SFJD Kangerlussuaq 118.77 22 PFAKE 00 11 50.0 +10
SFJD LR LR
comp=Z,1µm,19.0s,MS5.5
AML Almayashu 118.78 309 *e*PKPdf PKPdf 00 11 40.8 +0.4
NIL Nilore 119.04 299 PFAKE 00 11 50.0 +8.8
NIL LR LR
comp=Z,182nm,19.0s,MS4.7
VOSK Vostochnaya 119.60 321 PKiKP PKPdf 00 11 40.6 -1.1
VOSK pmax pmax
comp=Z,27nm,0.9s
BVA0 Borovoye Array 119.90 321 *i* PKiKP PKPdf 00 11 41.3 -1.0
BRVK Borovoye 119.96 321 *e*PKiKP PKPdf 00 11 41.9 -0.5
BRVK MLR MLR
comp=Z,2µm,20.0s,MS5.6
KK31 Karatay Array 121.08 310 *i* PKiKP PKPdf 00 11 43.9 -1.0
KK31 pmax pmax
comp=Z,18nm,1.4s
KBL Kabul 122.55 300 *e*PKPdf PKPdf 00 11 47.9 0.0
SVE Sverdlovsk 124.28 328 *i* PKiKP PKPdf 00 11 50.3 -0.3
SVE *e* 00 13 44.6
SVE *e*SS SS 00 30 24.8 -0.2
SVE pmax pmax
comp=Z,39nm,1.4s
SVE MLR MLR
comp=Z,1µm,21.0s,MS5.6
SOKR Solikamsk 125.01 332*c* *i*PKiKP PKPdf 00 11 51.4 -0.5
SOKR pmax pmax
comp=Z,60nm,1.2s
SOKR MLR MLR
comp=Z,1µm,20.0s,MS5.6
ARU Arti 125.49 328 *e*PKPdf PKPdf 00 11 52.3 -0.6
ARU LR LR
comp=Z,1µm,20.0s,MS5.6
ARU Arti 125.49 328 *e*PKiKP PKPdf 00 11 52.3 -0.6
ARU MLR MLR
comp=Z,1µm,20.0s,MS5.6
ABPO Ambohimpanom 125.98 229 PFAKE 00 12 10.0 +15
ABPO LR LR
comp=Z,2µm,19.0s,MS5.7
KEV Kevo 126.62 351 PFAKE 00 12 10.0 +15
KEV LR LR
comp=Z,1µm,19.0s,MS5.6
LVZ Lovozero 126.90 347 PFAKE 00 12 10.0 +15

LVZ LR LR
comp=Z,1µm,19.0s,MS5.6
ARCES ARCESS Array B 127.03 352 PKP PKPdf 00 11 55.2 -0.2
comp=Z,7.8nm,0.7s,baz=27,slow=0.7,SNR=19
MSEY Mahe Island 127.04 250 PFAKE 00 12 10.0 +13
MSEY LR LR
comp=Z,1µm,21.0s,MS5.6
AB31 Akbulak array 127.18 319 PKIKP PKPdf 00 11 56.0 -0.3
AB31 pmax pmax
comp=Z,56nm,1.6s
AKTO Aktyubinsk 127.99 321 PKIKP PKPdf 00 11 57.4 -0.5
SUR Sutherland 128.31 195 PFAKE 00 12 10.0 +11
SUR LR LR
comp=Z,2µm,21.0s,MS5.7
BORG Borgarnes 129.44 15 PFAKE 00 12 10.0 +10
BORG LR LR
comp=Z,1µm,19.0s,MS5.6
BOSA Boshof 130.51 201 PKP PKPdf 00 12 05.0 +1.5
comp=Z,7.4nm,0.8s,baz=227,slow=3.9,SNR=8.3
BOSA Boshof 130.51 201 PKIKP PKPdf 00 12 05.0 +1.6
BOSA MLR MLR
comp=Z,1µm,21.0s,MS5.6
KLMR Klimovskoe 131.12 339 *e*PKIKP PKPdf 00 12 02.3 -1.2
RCBR Riachuelo 131.74 115 PFAKE 00 12 20.0 +14
RCBR LR LR
comp=Z,2µm,21.0s,MS5.8
JOF Joensuu 131.86 345 *ep* PKPdf 00 12 04.6 -0.2
comp=Z,5.4nm,0.7s
JOF Joensuu 131.86 345 *e*PKIKP PKPdf 00 12 04.6 -0.2
JOF pmax pmax
comp=Z,5.0nm,0.7s
LBTB Lobatse 133.65 204 PFAKE 00 12 20.0 +11
LBTB LR LR
comp=Z,1µm,20.0s,MS5.7
KAF Kangasniemi 133.69 347 *ep* PKPdf 00 12 08.2 -0.1
comp=Z,3.3nm,0.6s
KAF Kangasniemi 133.69 347 *e*PKIKP PKPdf 00 12 08.2 -0.1
KAF pmax pmax
comp=Z,3.0nm,0.6s
MOS Moscow 135.53 336 *e*PKIKP PKPdf 00 12 12.0 +0.1
MOS pmax pmax
comp=Z,65nm,1.6s
OBN Obninsk 136.40 336 *e*PKPdf PKPdf 00 12 12.7 -0.9
OBN LR LR
comp=Z,810nm,19.0s,MS5.5
NB2 NORSAR Subarra136.72 357 PKP 00 12 04.3
comp=Z,24nm,1.7s,baz=17,slow=2.6
NOA NORSAR Array B136.72 357 PKhKP 00 12 04.5
comp=Z,1.0nm,0.8s,baz=16,slow=5.0,SNR=4.0
NOA PKP PKPdf 00 12 13.1 -0.9
comp=Z,2.2nm,0.8s,baz=14,slow=4.1,SNR=4.8
NOA PP PP 00 14 55.3 -0.8
comp=Z,1.6nm,1.1s,baz=9.3,slow=6.2,SNR=3.4
VRHR Novokhopersk 136.83 328 *e*PKIKP PKPdf 00 12 14.6 +0.1
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=N,20nm,1.3s
VRHR pmax pmax
comp=E,20nm,0.8s
MAK Makhachkala 137.46 315 *e*PKIKP PKPdf 00 12 14.4 -1.5
MAK *e*PPP 00 18 09.2
MAK *e* 00 27 12.7
VSR Storozhevoye 137.96 330 *e*PKIKP PKPdf 00 12 16.7 +0.1
VSR pmax pmax
comp=Z,7.0nm,0.8s
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.4s
VORD Divnogorie 138.06 329 *e*PKIKP PKPdf 00 12 16.0 -0.8
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=E,30nm,0.8s
KONO Kongsberg 138.19 358 PFAKE 00 12 30.0 +13
KONO LR LR
comp=Z,1µm,21.0s,MS5.6
GOF Gofitskoye 139.40 320 *e*PKHKP 00 11 53.2
DGRG David-gareji 139.51 314 P PKPdf 00 12 20.8 +1.1
MTA Mtatsminda 139.81 314 P PKPdf 00 12 19.7 -0.6
TBLG Delisi 139.83 314 P PKPdf 00 12 20.3 0.0
GOR Gori 140.15 315 P PKPdf 00 12 23.3 +2.5
KIV Kislovodsk 140.17 319 *e*PKPdf PKPdf 00 12 20.4 -0.5
KIV LR LR
comp=Z,2µm,20.0s,MS5.8
KIV Kislovodsk 140.17 319 *e*PKHKP 00 12 15.8
KIV *i* 00 12 21.8
KIV *e* 00 15 15.5
KIV *e*PPP 00 18 22.4
KIV *e*SS SS 00 33 34.6 -4.1
KIV pmax pmax
comp=Z,18nm,1.1s
ONI Oni 140.32 316 P PKPdf 00 12 21.6 +0.5
GNI Garni 140.47 312 *e*P PKPdf 00 12 14.8 -6.7
GNI Garni 140.47 312 PFAKE 00 12 30.0 +8.5
GNI LR LR
comp=Z,785nm,21.0s,MS5.4
GNI Garni 140.47 312 *i* PKIKP PKPdf 00 12 22.8 +1.3
LSZ Lusaka 140.93 214 *e*PKPdf PKPdf 00 12 16.9 -6.2
LSZ LR LR
comp=Z,1µm,19.0s,MS5.7
MUD Monsted U'grnd 141.40 358 *i* P Pdif 00 09 49.1 +7.8
MUD Monsted U'grnd 141.40 358 *i* P PKPdf 00 12 29.4 +6.7
MUD
comp=Z,630nm,20.0s
KARS Kars 141.43 314 *e*P PKPdf 00 12 19.4 -3.8
CLDR Caldiran 141.45 311 *e*P PKPdf 00 12 17.1 -6.2
TSUM Tsumeb 141.71 197 PFAKE 00 12 40.0 +16
TSUM LR LR
comp=Z,1µm,19.0s,MS5.7
ESK Eskdalemuir 141.80 9 PFAKE 00 12 40.0 +17
ESK LR LR
comp=Z,1µm,21.0s,MS5.7
AGRB Hanur-Agry 141.94 312 *e*P PKPdf 00 12 20.0 -4.2
COP Copenhagen 141.97 355 *i* P PKPdf 00 12 20.8 -2.9
COP *i* 00 15 21.6
COP
comp=Z,280nm,20.0s
ARTV Artvin 141.97 315 *i* P PKPdf 00 12 21.8 -2.4
BCA Borcka 142.06 316 *e*P PKPdf 00 12 19.0 -5.3
SOC Sochi 142.20 320 *e*PKIKP PKPdf 00 12 23.6 -0.9
SOC *e* 00 15 27.6
SOC *e*PPP 00 18 38.0
SOC *e*SS SS 00 34 05.3 +2.9
SOC *e*SSS 00 39 22.7
SOC pmax pmax
comp=Z,19nm,0.8s
SOC MLR MLR
comp=Z,1µm,21.0s,MS5.7
DBAD Bademkaya 142.20 315 *i* P PKPdf 00 12 23.5 -1.1
BSD Bornholm Skovb 142.27 352 *e*P PKPdf 00 12 22.2 -2.1
BSD *e* 00 15 34.3
BSD *i* 00 21 53.0
BSD Bornholm Skovb 142.27 352 *e*PKIKP PKPdf 00 12 22.2 -2.1
BSD *e* 00 15 34.3
BSD MLR MLR
comp=Z,740nm,20.0s,MS5.4
BSD Bornholm Skovb 142.27 352 *i* P PKPdf 00 12 22.2 -2.1
BSD *e* 00 15 34.3
BSD *i* 00 21 53.0
BSD
comp=Z,740nm,20.0s
HOMI Horasan 142.50 314 *e*P PKPdf 00 12 23.3 -1.9
AKASG Malin Array Be 142.64 336 PKhKP 00 12 21.2
comp=Z,4.6nm,0.6s,baz=40,slow=3.8,SNR=17
AKBB Malin Array Si 142.64 336 *e*PKP 00 12 21.0
KIEV Kiev 142.65 336 *e*PKPdf PKPdf 00 12 21.1 -4.0
KIEV LR LR
comp=Z,1µm,21.0s,MS5.6
PZAR Pazar-Rize 142.66 316 *e*P PKPdf 00 12 20.4 -5.0
EZM Erzurum 142.93 314 *e*P PKPdf 00 12 23.8 -2.2
MSL Mosul 143.05 307 *ex* x 00 12 23.0
MSL *ex* x 00 16 02.0
KTUT Trabzon 143.50 316 *e*P PKPdf 00 12 22.8 -4.1
BEST Besiri 143.85 311 *i* P PKPdf 00 12 26.6 -1.0
BSEG Bad Segeberg 143.86 356 *e*PKIKP PKPdf 00 12 24.9 -2.2
BSEG Bad Segeberg 143.86 356 *e*PKPbc PKPdf 00 12 24.9 -2.2
GUMT Gumushane 143.95 316 *e*P PKPdf 00 12 26.2 -1.6
EZC Erzincan 144.06 314 *e*P PKPdf 00 12 28.0 +0.1
ESPY Espiye-Giresun 144.22 317 *e*P PKPdf 00 12 24.7 -3.4
SHEL Horse Pasture 144.22 159 PFAKE 00 12 40.0 +11
SHEL LR LR
comp=Z,783nm,19.0s,MS5.5
MARD Mardin 144.44 310 *i* P PKPdf 00 12 27.8 -0.9
DIYA Diyarbakir 144.66 311 *i* P PKPdf 00 12 29.4 +0.3
PTK Pertek 144.75 313 *e*P PKPdf 00 12 29.0 -0.1
RUE Ruedersdorf 144.99 353 *e*PKPab PKPdf 00 12 28.3 -0.8
RUE Ruedersdorf 144.99 353 *e*PKPbc PKPdf 00 12 28.1 -1.0
SVRC Sivrice-ELAZID 145.04 313 *e*P PKPbc 00 12 29.6 +0.5
WIT Witteveen 145.09 0 *e*PKP PKPdf 00 12 29.5 +0.2
KEMA Kemaliye 145.19 314 *i* P PKPbc 00 12 31.0 +1.5
LVV L'vov 145.20 340 *i* PKIKP PKPdf 00 12 29.4 -0.2
ELZG Elazig 145.21 313 *i* P PKPbc 00 12 32.0 +2.4
IBBN Ibbenburen 145.59 359 *e*PKPbc PKPbc 00 12 30.3 -0.1
KIS Kishinev 145.72 333⇑*i*PKIKP PKPdf 00 12 31.0 +0.4
KIS pmax pmax
comp=Z,600nm,2.0s
KIS pmax pmax
comp=Z,2µm,6.0s
KIS MLR MLR
comp=Z,1µm,20.0s,MS5.6
KIS MLR MLR
comp=Z,1µm,20.0s
KWP Kalwaria 145.78 342⇑P PKPdf 00 12 31.1 +0.5
KWP LR LR
comp=Z,2µm,21.0s,MS5.8
KWP Kalwaria 145.78 342⇑*i*P PKPdf 00 12 31.1 +0.5
DARE Darende-Malaty 145.81 314 *e*P PKPab 00 12 33.3 +1.3
KVT Kavak 145.85 319 *e*P PKPdf 00 12 30.9 -0.1
SVSK Karacayir 145.87 316 *e*P PKPdf 00 12 31.7 +0.7
WTSB Winterswijk 145.94 0 *e*PKP PKPdf 00 12 30.2 -0.6
comp=Z,283nm,2.0s
OJC Ojcow 146.04 345 *e*PKPdf PKPdf 00 12 30.9 -0.1
OJC *ep*PKPdf pPKPdf 00 12 41.6 -1.2
OJC *e*SS SS 00 34 48.9 +3.9
OJC L 01 14 57.6
comp=Z,1.4nm,22.4s
AKCD Akcadag 146.05 313⇑*i*P PKPab 00 12 34.7 +1.8
IAS Iasi 146.10 334⇑P PKPdf 00 12 32.0 +0.8
IAS Iasi 146.10 334⇑*i*P PKPdf 00 12 31.9 +0.7
KSP Ksiaz 146.20 349 *e*PKP PKPdf 00 12 31.6 +0.3
KSP *e* 00 12 32.9
KSP *ep*PKP pPKPdf 00 12 41.9 -1.1
KSP *e*PP PP 00 15 53.0 -0.8
KSP LR LR
comp=Z,2µm,22.2s,MS5.9
CLL Collm 146.23 353⇑*i*PKP PKPdf 00 12 32.3 +1.0
CLL *i* 00 12 37.9
CLL *e*PP PP 00 15 53.0 -0.9
CLL *e*SKKS SKKSac 00 22 51.0 +7.2
CLL LR LR
comp=Z,1µm,21.2s,MS5.6
CLL Collm 146.23 353⇑*i*PKP2 PKPab 00 12 32.3 -0.8
CLL *e* 00 15 53.0
CLL pmax pmax
comp=Z,403nm,1.5s
CLL MLR MLR
comp=Z,1µm,21.2s,MS5.6
CLL Collm 146.23 353 *e*PKPbc PKPbc 00 12 32.1 -0.3
CLL Collm 146.23 353⇑*i*PKPbc PKPbc 00 12 31.9 -0.5
comp=Z,403nm,1.5s
CLL *e*PKPlp 00 12 34.0
comp=Z,600nm,21.9s
CLL *i* x x 00 12 37.9
CLL *ep*PKPbc pPKPbc 00 12 43.0 -1.0
CLL *ex* x 00 13 18.0
CLL *e*PP PP 00 15 53.0 -0.9
comp=Z,300nm,21.9s
CLL *e*PPP 00 19 15.0
CLL *e*SKKSac SKKSac 00 22 51.0 +7.2
CLL *e*SKSP 00 26 04.0
CLL *e*PPS 00 28 34.0
CLL *ex* x 00 29 40.0
CLL *e*SS SS 00 34 50.0 +3.0
CLL *e*ScSScS 00 36 13.0
CLL *e*SSS 00 40 20.0
CLL *e*SSSS 00 44 42.0
CLL LmH 01 20 00.0
comp=N,800nm,21.7s
CLL LmH 01 20 00.0
comp=E,600nm,21.7s
CLL LmV 01 21 00.0
comp=Z,1µm,21.2s
BOYT Boyabat 146.36 320 *i* P PKPab 00 12 35.0 +1.1
BYBT Boyabat 146.42 320 *e*P PKPdf 00 12 33.3 +1.3
BUG Bochum--Univer 146.46 359 *e*PKPbc PKPbc 00 12 32.9 -0.1
BRG Berggiesshubel 146.54 352⇑*i*PKP PKPdf 00 12 32.6 +0.8
BRG *i* 00 12 39.1
BRG *i* 00 12 46.2
BRG *e* 00 19 34.2
BRG LR LR
comp=Z,520nm,16.7s,MS5.4
BRG Berggiesshubel 146.54 352 *e*PKPbc PKPbc 00 12 33.5 +0.2
BRG Berggiesshubel 146.54 352⇑*i*PKP PKPdf 00 12 32.6 +0.8
comp=Z,279nm,1.5s
BRG *i* 00 12 39.1
comp=Z,167nm,1.5s
BRG *i* 00 12 46.2
comp=Z,97nm,1.3s
BRG *e* 00 19 34.2
comp=Z,14nm,1.9s
BRG
comp=N,748nm,19.1s
BRG
comp=E,523nm,22.9s
BRG
comp=Z,872nm,16.7s
RAC Raciborz 146.54 347 *e*PKP2 PKPab 00 12 32.9 -1.5
FBE Freiberg 146.57 352 *e*PKPbc PKPbc 00 12 33.7 +0.3
UPC Upice 146.57 349 *e*PKP PKPdf 00 12 33.4 +1.5
BZK Bozkurt 146.58 322 *e*P PKPab 00 12 34.2 -0.6
NIE Niedzica 146.65 344 *e*PKP PKPdf 00 12 32.7 +0.6
BUR08 Bucovina Ar. S 146.66 337 *e*PKP PKPdf 00 12 33.6 +1.5
DPC Dobruska-Polom 146.67 349 *e*PKP PKPdf 00 12 33.0 +0.9
DPC AMS AMS 01 17 20.0
comp=Z,1µm,24.6s
BURAR Bucovina Array 146.68 337⇑P PKPdf 00 12 33.4 +1.2
SARI SarD1z-Kayseri 146.70 315 *e*P PKPdf 00 12 32.4 -0.1
GZT Gaziantep 146.74 312 *i* P PKPab 00 12 34.9 -0.6
OKC Ostrava-Krasne 146.79 347 *e*PKP PKPdf 00 12 33.1 +0.8
OKC AMS AMS 01 17 50.0
comp=Z,1µm,22.5s
PVCC Panska Ves 146.79 351 *e*PKP PKPdf 00 12 33.2 +0.9
PVCC AMS AMS 01 16 30.0
comp=Z,2µm,20.2s
PINB Pinarbasi 146.90 315 *i* P PKPab 00 12 36.6 +0.5
ASCN Ascension 146.95 139 PFAKE 00 12 40.0 +6.3
ASCN LR LR
comp=Z,1µm,19.0s,MS5.6
MORC Moravsky Berou 146.97 347⇑P PKPdf 00 12 33.2 +0.6
MORC Moravsky Berou 146.97 347⇑*i*P PKPdf 00 12 33.2 +0.6
UBBA Unterbreizbach 146.99 356 *e*PKPbc PKPbc 00 12 34.9 +0.3
UBBA *e*PP PP 00 16 02.6 +4.2
MOX Moxa 147.03 354 *e*PKP PKPdf 00 12 33.2 +0.5
comp=Z,383nm,2.0s
MOX
comp=Z,900nm,22.0s
MOX Moxa 147.03 354 *e*PKIKP PKPdf 00 12 33.2 +0.5
MOX pmax pmax
comp=Z,383nm,2.0s
MOX MLR MLR
comp=Z,900nm,22.0s,MS5.5
MOX Moxa 147.03 354 *e*PKPbc PKPbc 00 12 35.0 +0.3
MOX *e*PP PP 00 16 03.1 +4.5
UCC Uccle 147.05 3 PKP PKPbc 00 12 34.8 0.0
GAZ Gaziantep 147.07 312 *e*P PKPdf 00 12 32.4 -0.8
TLCR 147.11 331⇓P PKPab 00 12 35.6 -1.2
TLCR 147.11 331⇓*i*P PKPab 00 12 35.6 -1.1
TOS Tosya 147.12 320 *e*P PKPdf 00 12 33.8 +0.7
HGN Heimansgroeve 147.13 1 *e*PKP PKPbc 00 12 34.9 -0.1
comp=Z,149nm,1.9s
KMRS Kahramanmaras 147.13 313 *e*P PKPdf 00 12 34.3 +1.0
WERD Werda 147.16 354 *e*PKPbc PKPbc 00 12 35.5 +0.4
TANN Tannenbergstha 147.18 353 *e*PKPbc PKPbc 00 12 35.8 +0.7
BNN Bunyan 147.18 316 *e*P PKPdf 00 12 33.4 +0.1
BALT Daday 147.20 322 *i* P PKPbc 00 12 35.5 0.0
GUNZ Gunzen 147.24 353 *e*PKPdf PKPdf 00 12 33.1 +0.1
GUNZ *e*PKPbc PKPbc 00 12 35.9 +0.6
CORM Corum 147.25 319 *e*P PKPdf 00 12 34.7 +1.4
MEM Membach 147.29 1 PKPbc PKPbc 00 12 34.1 -1.3
WERN Wernitzgruen 147.31 353 *e*PKPdf PKPdf 00 12 33.4 +0.3
WERN *e*PKPbc PKPbc 00 12 36.2 +0.7
PRU Pruhonice 147.32 351 *e*PKP PKPdf 00 12 33.2 0.0
PRU AMS AMS 01 17 20.0
comp=Z,2µm,22.4s
SNF Seneffe 147.33 3 PKP PKPbc 00 12 35.7 +0.2
NKC Novy Kostel 147.36 353 *e*PKP PKPdf 00 12 33.4 +0.2
NKC AMS AMS 01 19 20.0
comp=Z,1µm,20.1s
CFR Carcaliu 147.43 331⇑P PKPab 00 12 37.5 -0.5
BCLA Clavier 147.46 2 PKP PKPbc 00 12 35.9 0.0
ANDN Andirin 147.48 313 *i* P PKPdf 00 12 34.5 +0.6
VRI Vrincioaia 147.51 334⇑P PKPbc 00 12 36.5 +0.3
VRI Vrincioaia 147.51 334⇑*i*P PKPbc 00 12 36.5 +0.3
PLOR Plostina 147.55 334⇓*i*P PKPbc 00 12 36.2 -0.1
VRAC Vranov 147.61 348⇑P PKPdf 00 12 34.5 +0.9
VRAC Vranov 147.61 348⇑*i*P PKPdf 00 12 34.5 +0.8
CANT Cankiri 147.62 320 *e*P PKPdf 00 12 35.2 +1.2
MANZ Manzenberg 147.64 354 *e*PKPdf PKPdf 00 12 33.6 -0.1
MANZ *e*PKPbc PKPbc 00 12 36.8 +0.4
TNS Taunus Mts 147.66 358 *e*PKP2 PKPbc 00 12 36.8 +0.3
TNS Taunus Mts 147.66 358 *e*PKPbc PKPbc 00 12 36.8 +0.3
DOU Dourbes 147.76 3 PKPbc PKPbc 00 12 35.4 -1.4
GIVF Givet 147.76 2 *e*PKIKP PKPdf 00 12 33.9 0.0
comp=Z,334nm,1.5s
BAIF Baives 147.78 3 *e*PKIKP PKPdf 00 12 33.9 0.0
comp=Z,403nm,1.5s
SAFT Safranbolu 147.80 322 *e*P PKPdf 00 12 35.3 +1.1
TREC Trest 147.83 349 *e*PKP PKPdf 00 12 34.1 +0.1
TREC AMS AMS 01 18 40.0
comp=Z,1µm,20.4s
ROTZ Rotzenmuhle 147.84 353 *e*PKPdf PKPdf 00 12 34.0 0.0
ROTZ *e*PKPbc PKPbc 00 12 37.6 +0.6
ROTZ *e*PP PP 00 16 08.3 +4.9
TIRR Tirgusor 147.85 330⇓P PKPbc 00 12 37.4 +0.2
TIRR Tirgusor 147.85 330⇓*i*P PKPbc 00 12 36.5 -0.7
AVNT Avonos 147.88 316 *i* P PKPdf 00 12 35.8 +1.3
HARR Harsova 147.90 331⇓P PKPbc 00 12 38.0 +0.7
HARR Harsova 147.90 331⇑*i*P PKPbc 00 12 37.5 +0.2
GRF Grafenberg Arr 148.01 355 *e*PKP PKPbc 00 12 38.2 +0.8
GRF *e*PP PP 00 16 09.4 +5.0
GRF *e*SS SS 00 35 15.2 +8.1
GRF *e*SSS 00 40 57.9
GRF LR LR
comp=Z,1µm,21.2s,MS5.7
GRF Grafenberg Arr 148.01 355 *e*PKP2 PKPab 00 12 38.2 -1.9
GRF *e* 00 16 09.4
GRF Grafenberg Arr 148.01 355 *e*PKP2 PKPab 00 12 38.2 -1.9
GRF *e* 00 16 09.4
GRF MLR MLR
comp=Z,1µm,21.2s,MS5.7
GRF Grafenberg Arr 148.01 355 *e*PKPbc PKPbc 00 12 38.2 +0.8
GRF *e*PP PP 00 16 09.4 +5.0
GRF *e*SS SS 00 35 15.2 +8.1
GRF *e*SSS 00 40 57.9
GRF *e*L 01 21 44.7
comp=Z,1µm,21.2s
BRTR Keskin Array B 148.13 319 PKPbc PKPdf 00 12 35.4 +0.5
comp=Z,30nm,0.8s,baz=67,slow=2.5,SNR=44
PSZ Piszkesteto 148.13 343 *e*PKPdf PKPdf 00 12 35.0 +0.4
PSZ *e*PKPbc PKPbc 00 12 37.9 +0.1
PSZ LR LR
comp=Z,1µm,21.0s,MS5.7
PSZ Piszkesteto 148.13 343⇑*e*PKP PKPdf 00 12 34.6 0.0
MLR Muntele Rosu 148.14 334⇑P PKPdf 00 12 34.4 -0.2
MLR Muntele Rosu 148.14 334⇑*i*P PKPbc 00 12 37.8 -0.1
CEYT Ceyhan 148.18 313 *e*P PKPdf 00 12 35.7 +0.7
WLF Walferdange 148.24 1 PKPbc PKPbc 00 12 36.7 -1.3
WLF Walferdange 148.24 1 *e*PKIKP PKPdf 00 12 35.7 +1.0
WLF *e* 00 12 38.3
WLF MLR MLR
comp=Z,998nm,19.0s,MS5.6
WLF Walferdange 148.24 1 *e*PKPdf PKPdf 00 12 35.1 +0.4
WLF *e*PKPbc PKPbc 00 12 38.8 +0.8
DRGR 148.27 339⇑P PKPbc 00 12 38.4 +0.2
DRGR 148.27 339⇓*i*P PKPdf 00 12 35.4 +0.6
KAMT Kaman 148.29 318 *e*P PKPdf 00 12 34.9 -0.2
KHC Kasperske Hory 148.30 352 *e*PKP PKPdf 00 12 34.7 -0.1
KHC *ex* x 00 12 38.0
KHC *ex* x 00 12 50.5
KHC AMS AMS 01 17 20.0
comp=Z,2µm,23.8s
HTY Hatay 148.32 311 *e*P PKPbc 00 12 38.5 -0.2
WET Wettzell 148.38 352 *e*PKIKP PKPdf 00 12 34.7 -0.2
WET *e* 00 12 39.0
WET Wettzell 148.38 352 *e*PKPdf PKPdf 00 12 34.7 -0.2
WET *e*PKPbc PKPbc 00 12 39.0 +0.6
ROSF Rostrenen 148.48 13 *e*PKIKP PKPdf 00 12 34.5 -0.6
comp=Z,82nm,1.1s
KARA Karaisali 148.53 314 *e*P PKPdf 00 12 35.9 +0.3
VOIR 148.55 335⇑P PKPbc 00 12 40.0 +1.0
VOIR 148.55 335⇓*i*P PKPdf 00 12 36.2 +0.9
GEC2 GERESS Array S 148.56 351 *e*PKPdf PKPdf 00 12 35.7 +0.4
GEC2 *e*PKPbc PKPbc 00 12 38.9 0.0
GEC2 *e*PKPab PKPab 00 12 42.0 -0.3
GEC2 GERESS Array S 148.56 351 *e*PKPdf PKPdf 00 12 35.0 -0.2
GEC2 *e*PKPbc PKPbc 00 12 39.2 +0.3
GERES GERESS Array B 148.56 351 PKP PKPdf 00 12 35.5 +0.2
comp=Z,9.3nm,0.7s,baz=17,slow=1.0,SNR=19
GERES PKPbc PKPbc 00 12 38.9 0.0
comp=Z,9.1nm,0.7s,baz=29,slow=2.2,SNR=20
ANTO Ankara 148.57 320 *e*P PKPdf 00 12 33.9 -1.7
ANTO Ankara 148.57 320⇑P PKPdf 00 12 35.7 +0.1
SNR=17
ANTO Ankara 148.57 320⇑P PKPdf 00 12 40.0 +4.4
ANTO LR LR
comp=Z,672nm,20.0s,MS5.4
ANTO Ankara 148.57 320⇑*i*P PKPdf 00 12 35.9 +0.3
LOD Lodumlu 148.58 320 *e*P PKPdf 00 12 33.6 -1.9
FLN La Foliniere 148.58 9 *e*PKIKP PKPdf 00 12 35.0 -0.3
comp=Z,186nm,0.8s
FLN *e*MLR MLR
comp=Z,1µm,22.5s,MS5.3
FLN La Foliniere 148.58 9 *e*PKIKP PKPdf 00 12 35.0 -0.3
FLN MLR MLR
comp=Z,1µm,22.5s,MS5.6
SGMF Saint Gilles 148.70 12 *e*PKIKP PKPdf 00 12 35.8 +0.3
comp=Z,141nm,1.1s
BUD Budapest 148.77 344⇑*e*PKP PKPbc 00 12 39.7 +0.2
LDF La Druitiere 148.80 9⇑*i*PKIKP PKPdf 00 12 35.3 -0.3
comp=Z,123nm,1.0s
GRR Gorron 148.88 10 *e*PKIKP PKPdf 00 12 37.0 +1.2
comp=Z,152nm,0.8s
QUIF Quistinic 148.90 13 *e*PKIKP PKPdf 00 12 35.8 0.0
comp=Z,88nm,1.1s
STU Stuttgart 149.07 357 *e*PKPdf PKPdf 00 12 36.3 +0.2
STU *e*PKPbc PKPbc 00 12 40.7 +0.5
STU Stuttgart 149.07 357 *e*PKPbc PKPbc 00 12 40.6 +0.4
CONA Conrad Observa 149.08 348⇓*e*PKPdf PKPdf 00 12 36.7 +0.6
comp=Z,26nm,1.5s,SNR=38
CONA ⇓*i*PKiKP PKiKP 00 12 41.6 +0.1
comp=Z,127nm,1.5s
CSNA Conrad Observa 149.08 348⇓*i*PKPdf PKPdf 00 12 36.8 +0.7
comp=Z,25nm,1.5s
CSNA ⇓*i*PKiKP PKiKP 00 12 41.5 0.0
comp=Z,123nm,1.5s
MERS Mersin 149.10 313 *e*P PKPdf 00 12 36.6 +0.1
SOP Sopron 149.17 347⇑*e*PKP PKPbc 00 12 41.0 +0.5
MEZF Maizieres J'vi 149.37 2 *e*PKIKP PKPdf 00 12 37.1 +0.5
comp=Z,192nm,1.3s
MOA Molln 149.44 350⇓*i*PKPdf PKPdf 00 12 36.7 0.0
comp=Z,11nm,1.7s
GZR Gura Zlata 149.46 338⇑P PKPbc 00 12 42.6 +1.3
GZR Gura Zlata 149.46 338⇑*i*P PKPdf 00 12 38.4 +1.6
CDF Champ du Feu 149.49 359 *e*PKIKP PKPdf 00 12 36.9 +0.1
comp=Z,78nm,0.9s
FUR Furstenfeldbru 149.52 354 *e*PKIKP PKPdf 00 12 36.7 -0.1
FUR *e* 00 12 41.6
FUR Furstenfeldbru 149.52 354 *e*PKPdf PKPdf 00 12 36.7 -0.1
FUR *e*PKPbc PKPbc 00 12 41.6 +0.3
BFO Black Forest 149.55 358 *e*PKPdf PKPdf 00 12 37.5 +0.6
BFO *e*PKPbc PKPbc 00 12 41.4 0.0
BFO LR LR
comp=Z,686nm,20.0s,MS5.5
BFO Black Forest 149.55 358 *e*PKPbc PKPbc 00 12 41.5 +0.1
BHL Bhannes 149.65 307 *e*P PKPbc 00 12 42.0 -0.1
BZS Buzias 149.67 339⇑P PKPdf 00 12 36.7 -0.5
BZS Buzias 149.67 339⇑*i*P PKPdf 00 12 38.2 +1.1
ECH Echery 149.69 360 *e*PKPdf PKPdf 00 12 37.8 +0.7
ECH *e*PKPbc PKPbc 00 12 41.8 0.0
ECH *e*PKPab PKPab 00 12 46.7 -0.3
RJOB Jochberg 149.77 352 *e*PKPdf PKPdf 00 12 36.7 -0.5
RJOB *e*PKPbc PKPbc 00 12 42.0 0.0
ARSA Arzberg 149.79 348 *i* PKPdf PKPdf 00 12 37.5 +0.3
comp=Z,14nm,1.3s,SNR=18
ARSA ⇓PKiKP PKiKP 00 12 42.6 -0.4
comp=Z,51nm,1.6s

ARSA ⇓*i*PKPab pPKPab 00 13 00.7 +1.8
comp=Z,54nm,1.4s
KDHN Kadinhani 149.79 318 *i* P PKPbc 00 12 42.6 +0.3
HAU Haudompre 149.90 1 *e*PKIKP PKPdf 00 12 37.5 +0.1
comp=Z,127nm,0.9s
HAU *e*MLR MLR
comp=Z,643nm,22.8s,MS5.1
HAU Haudompre 149.90 1 *e*PKHKP 00 12 37.5
HAU MLR MLR
comp=Z,640nm,22.8s,MS5.4
ESKT Eskisehir 149.97 321 *i* P PKPbc 00 12 43.6 +0.9
IKL Isikli 150.00 313 *e*P PKPdf 00 12 39.2 +1.2
EREN Erenkoy 150.01 311 *e*P PKPbc 00 12 40.5 -2.5
PKSM Moragy 150.04 343 ⇑P PKPdf 00 12 37.3 -0.4
PKSM Moragy 150.04 343 ⇓*i*P PKPdf 00 12 37.8 +0.1
HINF Hinteralfeld 150.09 360 *e*PKIKP PKPdf 00 12 37.7 0.0
comp=Z,36nm,0.9s
MBAR Mbarara 150.17 235 PFAKE 00 12 50.0 +11
MBAR LR LR
comp=Z,705nm,19.0s,MS5.5
RETA Reutte 150.24 355 *i* PKiKP PKiKP 00 12 43.2 -0.7
comp=Z,61nm,1.2s,SNR=16
WATA Walderalm 150.31 353 *i* PKiKP PKiKP 00 12 43.8 -0.3
comp=Z,45nm,1.0s,SNR=8.7
KBA Koelnbreinsper 150.34 351 ⇓*i*PKPdf PKPdf 00 12 38.3 +0.2
comp=Z,14nm,1.4s,SNR=16
KBA ⇑*i*PKiKP PKiKP 00 12 44.2 0.0
comp=Z,30nm,0.9s
MOTA Moosalm 150.35 354 ⇑*i*PKPdf PKPdf 00 12 38.6 +0.5
comp=Z,4.8nm,0.8s
MOTA ⇑*i*PKiKP PKiKP 00 12 43.4 -0.8
comp=Z,64nm,1.1s,SNR=18
WTTA Wattenberg 150.38 353 ⇓*i*PKPdf PKPdf 00 12 38.7 +0.5
comp=Z,14nm,1.2s
WTTA ⇓*i*PKiKP PKiKP 00 12 44.2 0.0
comp=Z,87nm,1.0s,SNR=16
KOGS Kog 150.41 347 *e*PKPdf PKPdf 00 12 38.0 -0.3
KOGS *i* PKPbc PKPbc 00 12 43.2 -0.3
KOGS *e*PKPab PKPab 00 12 48.9 -1.1
SOKA Soboth 150.44 348 ⇓*i*PKPdf PKPdf 00 12 38.4 +0.1
comp=Z,18nm,1.4s
SOKA ⇓*i*PKiKP PKiKP 00 12 43.7 -0.6
comp=Z,75nm,1.4s
HYF Humbligny 150.44 6 *e*PKIKP PKPdf 00 12 38.5 +0.2
PERS Pernice 150.46 348 *i* PKPdf PKPdf 00 12 37.4 -1.0
PERS *e*PKPbc PKPbc 00 12 43.0 -0.7
SQTA Sankt Quirin 150.46 354 ⇑*i*PKPdf PKPdf 00 12 39.0 +0.6
SQTA ⇓*i*PKiKP PKiKP 00 12 44.3 -0.1
DAVA Damuels 150.51 356 ⇓*i*PKiKP PKiKP 00 12 44.6 +0.1
comp=Z,126nm,1.9s
LOR Lormes 150.54 4 ⇑*i*PKIKP PKPdf 00 12 38.6 +0.1
comp=Z,274nm,1.5s
LOR *e*MLR MLR
comp=Z,1μm,21.2s,MS5.5
LOR Lormes 150.54 4 ⇑*i*PKIKP PKPdf 00 12 38.6 +0.1
LOR MLR MLR
comp=Z,1μm,21.3s,MS5.8
ULDT Uludag 150.56 324 *i* P PKPbc 00 12 45.0 +0.9
LFK Lefkose 150.58 311 *e*P PKPdf 00 12 40.5 +1.5
LFK Lefkose 150.58 311 *e*P PKPdf 00 12 40.5 +1.5
OBKA Obir 150.69 349 ⇓*i*PKPdf PKPdf 00 12 36.6 -2.1
comp=Z,4.9nm,1.4s
OBKA ⇓*i*PKiKP PKiKP 00 12 44.2 -0.7
comp=Z,25nm,1.1s
FETA Feichten 150.71 355 ⇓*e*PKPdf PKPdf 00 12 38.0 -0.8
comp=Z,13nm,1.5s
FETA *i* PKiKP PKiKP 00 12 44.7 -0.2
comp=Z,56nm,1.0s,SNR=10
SSF Saint Saulge 150.72 5 ⇑*i*PKIKP PKPdf 00 12 38.9 +0.2
comp=Z,130nm,0.9s
MYKA Terra Mystica 150.73 350 ⇓*i*PKPdf PKPdf 00 12 38.7 0.0
comp=Z,19nm,1.5s
MYKA ⇓*i*PKiKP PKiKP 00 12 44.1 -0.8
comp=Z,52nm,1.3s
MFF Saint Martin d 150.73 10 *e*PKIKP PKPdf 00 12 38.7 -0.1
comp=Z,275nm,1.5s
ABTA Abfaltersbach 150.78 352 *i* PKPdf PKPdf 00 12 38.8 0.0
comp=Z,15nm,1.1s,SNR=25
ABTA ⇓*i*PKiKP PKiKP 00 12 44.5 -0.5
comp=Z,93nm,1.1s
SEST Monte Rota 150.81 352 PKP PKPbc 00 12 44.3 -0.2
AVF Avril sur Loir 150.98 5 *e*PKIKP PKPdf 00 12 38.9 -0.2
comp=Z,68nm,0.9s
PTCC Patocco-Chiusa 150.99 351 PKP PKPdf 00 12 38.5 -0.7
GDZ Gediz 151.06 322 *i* P PKPbc 00 12 45.5 +0.1
CADS Cadrg 151.10 350 *e*PKPdf PKPdf 00 12 38.5 -0.8
CADS *i* PKPbc PKPbc 00 12 44.3 -0.9
CADS *e*PKPab PKPab 00 12 50.1 -2.7
LEF Lefka 151.12 312 *e*P PKPdf 00 12 40.9 +1.2
LEF Lefka 151.12 312 *e*P PKPdf 00 12 40.9 +1.2
GMNA Gemona 151.14 351 PKP PKPdf 00 12 39.7 +0.3
LJU Ljubljana 151.14 349 *i* PKPdf PKPdf 00 12 39.2 -0.2
LJU *e*PKPbc PKPbc 00 12 44.7 -0.6
SMF Signal de Mont 151.16 4 *e*PKIKP PKPdf 00 12 39.4 0.0
BGF Bois d'Agland 151.16 6 *e*PKIKP PKPdf 00 12 39.3 -0.1
comp=Z,107nm,0.9s
APPI Appiano 151.20 354 PKP PKPbc 00 12 44.7 -0.7
ISP Isparta 151.22 319 ⇑P PKPdf 00 12 44.4 +4.6
ISP *e*PKPbc PKPbc 00 12 45.1 -0.6
ISP LR LR
comp=Z,958nm,22.0s,MS5.6
ISP Isparta 151.22 319 ⇓*i*P PKPbc 00 12 45.8 +0.1
VOY Vojsko 151.27 350 *e*PKPdf PKPdf 00 12 39.2 -0.4
VOY *e*PKPbc PKPbc 00 12 44.8 -0.8
VOY *e* 00 13 00.3
VOY *e* 00 13 24.9
BRMO Bormio 151.28 355 PKP PKPdf 00 12 39.7 +0.1
CABF La Chapelle 151.29 1 ⇑*i*PKIKP PKPdf 00 12 40.4 +0.8
comp=Z,339nm,1.5s
SISC Sisak 151.31 346 P PKPbc 00 12 46.0 +0.3
TUE Stuetta 151.36 356 *e*PKPdf PKPdf 00 12 40.3 +0.6
TUE PKP PKPdf 00 12 45.9 +6.2
TUE *e*PKPbc PKPbc 00 12 46.7 +0.9
TCF Toulx Ste Croi 151.37 7 ⇑*i*PKIKP PKPdf 00 12 39.7 -0.1
comp=Z,102nm,1.0s
BOJS Bojanci 151.52 347 *e*PKPdf PKPdf 00 12 40.0 0.0
BOJS *e*PKPbc PKPbc 00 12 45.7 -0.5
DEMI Demirci 151.54 322 *i* P PKPbc 00 12 46.3 -0.1
CTI Castel Tesino 151.57 353 PKP PKPbc 00 12 46.0 -0.3
VTS Vitosha 151.64 334 ⇑P PKPdf 00 12 38.4 -1.9
VTS Vitosha 151.64 334 ⇓*i*P PKPbc 00 12 47.3 +0.7
MABI Malga Bissina 151.69 355 PKP PKPbc 00 12 45.8 -0.8
VAI Varese 151.99 357 PKP PKPdf 00 12 40.8 +0.1
MANT Manisa 152.00 322 *i* P PKPbc 00 12 48.3 +0.7
AKHS Akhisar 152.17 323 *i* P PKPbc 00 12 47.9 0.0
RJF Les Rejaudoux 152.25 8 *e*PKIKP PKPdf 00 12 41.2 +0.1
RJF *e*MLR MLR
comp=Z,2μm,21.5s,MS5.5
RJF Les Rejaudoux 152.25 8 *e*PKIKP PKPdf 00 12 41.2 +0.1
RJF MLR MLR
comp=Z,2μm,21.5s,MS5.8
LPL La Plagne 152.39 0 *e*PKIKP PKPdf 00 12 42.1 +0.8
comp=Z,41nm,1.0s
LPG La Plagne 152.41 0 *e*PKIKP PKPdf 00 12 42.3 +0.9
comp=Z,71nm,1.1s
LFF La Frestale 152.50 9 *e*PKIKP PKPdf 00 12 41.5 0.0
AYVA Ayvalik 152.50 325 *i* P PKPbc 00 12 48.8 +0.2
NVLJ Novalja 152.50 347 P PKPdf 00 12 40.3 -1.2
SSB Saint Sauveur 152.56 3 *e*PKPbc PKPbc 00 12 48.7 +0.2
CAF Calviac 152.69 7 *e*PKIKP PKPdf 00 12 42.5 +0.7
comp=Z,24nm,1.1s
KDAG Bornova 152.81 323 *e*P PKPbc 00 12 48.1 -1.3
BNI Bardonecchia 152.86 0 *e*PKPdf PKPdf 00 12 42.6 +0.6
BNI *e*PKPbc PKPbc 00 12 48.6 -0.6
BNI LR LR
comp=Z,2μm,20.0s,MS5.8
SKO Skopje 152.88 336 *e*PKP PKPdf 00 12 34.1 -8.1
VAY Valandovo 152.96 333 *e*PKP PKPdf 00 12 36.8 -5.5
TURN Turunc 153.01 319 *i* P PKPbc 00 12 50.8 +0.9
MBDF Montbardon 153.18 0 *e*PKIKP PKPdf 00 12 43.0 +0.5
STON Ston 153.38 342 P PKPdf 00 12 41.4 -1.4
KRUS Krusevo 153.47 335 *e*PKP PKPdf 00 12 34.1 -8.9
VLC Villacollemand 153.58 354 PFAKE 00 12 50.0 +6.9
VLC LR LR
comp=Z,1μm,22.0s,MS5.7
SFI Santa Sofia 153.66 352 PKP PKPdf 00 12 43.2 0.0
LASF Ste Croix 153.71 5 *e*PKIKP PKPdf 00 12 43.8 +0.5
FSSB Fossombrone 153.73 350 PKP PKPdf 00 12 44.0 +0.7
BIA Bitola 153.73 335 *e*PKP PKPdf 00 12 34.4 -9.1
OHR Ohrid 153.86 335 *e*PKP PKPdf 00 12 34.4 -9.3
SMRF Simiane la Rot 153.91 2 ⇑*i*PKIKP PKPdf 00 12 44.4 +0.8
comp=Z,127nm,1.5s
CING Cingoli 153.96 349 PKP PKPdf 00 12 43.6 -0.1
TIR Tirane 154.02 337 PFAKE 00 12 50.0 +6.2
TIR LR LR
comp=Z,1μm,20.0s,MS5.7
ETSF Etsaut 154.24 13 *e*PKIKP PKPdf 00 12 44.9 +0.8
MTLF Montolieu 154.27 8 *e*PKIKP PKPdf 00 12 44.3 +0.2
EPF Esparros 154.28 11 *e*PKIKP PKPdf 00 12 44.7 +0.6
MTE Manteigas 154.32 26 PFAKE 00 13 00.0 +16
MTE LR LR
comp=Z,1μm,21.0s,MS5.8
FRF La Foret Royal 154.35 0 *e*PKIKP PKPdf 00 12 44.2 0.0
NRCA Norcia 154.50 349 PKP PKPdf 00 12 44.6 +0.1
LMR La Mourre 154.57 1 *e*PKIKP PKPdf 00 12 44.6 +0.1
AQU L'Aquila 154.91 348 *e*PKPdf PKPdf 00 12 45.8 +0.8
AQU *e*PKPbc PKPbc 00 12 53.1 -0.6
AQU *e*PKPab PKPab 00 13 08.5 -0.5
AQU LR LR
comp=Z,1μm,20.0s,MS5.8
INTR Introdacqua 155.14 347 PKP PKPdf 00 12 44.9 -0.5
PTQR Pietraquaria 155.24 348 PKP PKPdf 00 12 45.0 -0.5
PGF Pioggiola 155.29 356 *e*PKIKP PKPdf 00 12 46.7 +1.2
LTRZ Laterza 155.72 341 PKP PKPdf 00 12 46.0 -0.2
CSSN Cassano Irpino 155.98 345 PKP PKPdf 00 12 46.1 -0.4
PAB San Pablo 156.29 22 PFAKE 00 13 00.0 +13
PAB LR LR
comp=Z,1μm,21.0s,MS5.6
ESDC Sonseca Array 156.31 21 PKP PKPdf 00 12 47.1 +0.1
comp=Z,0.4nm,0.6s,baz=270,slow=5.2,SNR=4.3
ESDC PKPab PKPab 00 13 14.7 -0.4
comp=Z,2.8nm,0.8s,baz=324,slow=4.0,SNR=10
ESLA Sonseca Array 156.31 21 PFAKE 00 13 00.0 +13
ESLA LR LR
comp=Z,5μm,20.0s,MS6.3
CUC Castrocucco 156.57 342 PFAKE 00 13 00.0 +13
CUC LR LR
comp=Z,2μm,22.0s,MS5.8
TIP Timpagrande 157.03 340 *e*PKPdf PKPdf 00 12 47.9 -0.1
TIP LR LR
comp=Z,1μm,20.0s,MS5.8
SFS San Fernando 158.16 29 PFAKE 00 13 00.0 +11
SFS LR LR
comp=Z,2μm,20.0s,MS6.0
VSL Villasalto 158.29 355 PFAKE 00 13 00.0 +10
VSL LR LR
comp=Z,1μm,20.0s,MS5.8
WDD Wield Dalam 160.77 341 PFAKE 00 13 00.0 +7.5
WDD LR LR
comp=Z,1μm,21.0s
LIC Lamto 163.67 133 *e*PKIKP PKPdf 00 12 52.9 -3.1
comp=Z,38nm,1.1s
LIC *e*MLR MLR
comp=Z,1μm,21.0s
LIC Lamto 163.67 133 *e*PKPdf PKPdf 00 12 52.9 -3.1
LIC LR LR
comp=Z,730nm,21.0s
DBIC Dimbokro 164.11 133 PKP PKPdf 00 12 55.0 -1.4
comp=Z,6.2nm,1.1s,baz=224,slow=4.5,SNR=3.7
DBIC Dimbokro 164.11 133 PKIKP PKPdf 00 12 55.0 -1.4
DBIC MLR MLR
comp=Z,1μm,20.0s
TOA0 Torodi Ar. Sit 173.22 133 *e*PKPdf PKPdf 00 13 00.7 -1.5
TOA0 *e*PKPab PKPab 00 14 30.5 +0.5
TORD Torodi Ar. Bea 173.22 133 PKP PKPdf 00 13 00.7 -1.6
comp=Z,7.7nm,0.9s,baz=318,slow=1.1,SNR=32
TORD PKPab PKPab 00 14 30.8 +0.7
comp=Z,5.2nm,0.9s,baz=257,slow=4.6,SNR=7.5
TORD Torodi Ar. Bea 173.22 133 PKP PKPdf 00 13 00.7 -1.6
TORD PKPab PKPab 00 14 30.8 +0.7
TAM Tamanrasset 174.92 14 *e*PKPdf PKPdf 00 13 03.1 +0.5

*ISK **20** 23:56:44.8, 3845N×3923E, h5km, MD3.0*
*ISCJB **20** 23:56:45.9±0.5, 3843N±003×3929E±003, h6km±4km, Error ellipse: s-maj=5.5km s-min=4.0km az=37.9*
*DDA **20** 23:56:45.8, 3841N×3923E, h13km±2km, Md2.6*
*CSEM **20** 23:56:45.1±0.2, 3844N×3927E, h8km, MD3.0, Error ellipse: s-maj=5.3km s-min=3.6km az=83.0*

ISC 20 23:56:46.5±0.4, 3844N±003×3926E±003, h5km±6km, n13, σ0s94/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**152**		**Pg**	**23 56 47.3**	**-0.8**
SVRC				*e*SG	**Sg**	**23 56 48.5**	**-0.6**
ELZG	**Elazig**	**0.23**	**284**	*i* P	**Pg**	**23 56 50.8**	**-0.1**
ELZG				*i* S	**Sg**	**23 56 54.9**	**+1.1**
PTK	**Pertek**	**0.46**	**13**	*e*PG	**Pg**	**23 56 54.6**	**-0.7**
PTK				*e*SG	**Sg**	**23 57 03.0**	**+1.7**
DIYA	**Diyarbakir**	**0.85**	**127**	*i* P	**Pg**	**23 57 03.0**	**+0.2**
DIYA				*i* S	**Sg**	**23 57 15.2**	**+1.3**
KEMA	**Kemaliye**	**1.02**	**324**	*i* P	**Pg**	**23 57 05.2**	**-0.9**
KEMA				*i* S	**Sg**	**23 57 20.0**	**+0.7**
URFA	**Urfa**	**1.06**	**199**	*e*PG	**Pg**	**23 57 06.7**	**-0.1**
URFA				*e*SG	**Sg**	**23 57 21.8**	**+1.3**
AKCD	**Akcadag**	**1.06**	**262**	*i* P	**Pg**	**23 57 05.5**	**-1.4**
AKCD				*i* S	**Sg**	**23 57 20.4**	**-0.3**
DARE	**Darende-Malaty**	**1.25**	**294**	*e*PN	**Pn**	**23 57 12.1**	**+1.5**
EZC	**Erzincan**	**1.37**	**18**	*e*PN	**Pn**	**23 57 10.7**	**-1.6**
MARD	**Mardin**	**1.65**	**133**	*i* P	**Pg**	**23 57 18.4**	**+0.4**
MARD				*i* S	**Sg**	**23 57 39.4**	**0.0**
BEST	**Besiri**	**1.68**	**109**	*i* P	**Pg**	**23 57 17.1**	**-1.5**
BEST				*i* S	**Sg**	**23 57 40.9**	**+0.6**
KMRS	**Kahramanmaras**	**2.09**	**244**	*e*PN	**Pn**	**23 57 21.8**	**-0.3**
SVSK	**Karacayir**	**2.29**	**311**	*e*PN	**Pn**	**23 57 24.9**	**-0.1**

JMA 21 00:01:08.5±0.4, 4016N×14515E, h46km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**2.39**	**322**	*e*S	Sn	00 02 15.2	+2.1
MIYJ	**Miyakonagasawa**	**2.63**	**258**	P	Pn	00 01 49.8	+1.4
MIYJ				*e*S	Sn	00 02 20.6	+1.6
JNBK	**Urakawa-nobuka**	**2.79**	**320**	P	Pn	00 01 52.6	+2.1
JNBK				*e*S	Sn	00 02 26.2	+3.3
JANG	**Nango**	**2.79**	**276**	P	Pn	00 01 51.9	+1.3
JANG				*e*S	Sn	00 02 24.2	+1.2
JCH	**Churui**	**2.80**	**332**	P	Pn	00 01 51.4	+0.7
JCH				*e*S	Sn	00 02 24.0	+0.8
JOM	**Ohasama**	**3.05**	**258**	P	Pn	00 01 56.3	+2.1
JOM				*e*S	Sn	00 02 31.9	+2.5
NEM2	**Nemuro 2**	**3.23**	**8**	*e*S	Sn	00 02 28.2	-5.7
JMK	**Ichinoseki**	**3.27**	**250**	P	Pn	00 01 58.7	+1.5
JMK				*e*S	Sn	00 02 35.9	+1.1
JOT	**Ohata**	**3.35**	**293**	P	Pn	00 02 00.2	+2.0
JTKR	**Abashiri--Toko**	**3.92**	**347**	P	Pn	00 02 06.5	+0.4
JTKR				*e*S	Sn	00 02 49.8	-1.0

*IDC **21** 00:02:03.9±1.2, 3041S×17764W, h0km, mb4.3/6, mb1 4.4/7, mb1mx4.1/19, mbtmp4.3/7, ML3.1/1, Error ellipse: s-maj=30.1km s-min=21.7km az=80.0*
*ISCJB **21** 00:02:06.8±0.6, 3046S±005×1777W±0.1, h33km, mb4.3/10, Error ellipse: s-maj=14.0km s-min=7.6km az=178.9*
*NEIC **21** 00:02:08.6±1.9, 3044S×17759W, h35km±18km, mb4.5/6, Error ellipse: s-maj=12.6km s-min=11.8km az=178.0*

ISC 21 00:02:04.4±5.3, 3050S±007×1776W±01, h5km±34km, n28, σ0s98/27, mb4.3/10, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.27**	**348**	Pn	**Pn**	**00 02 28.4**	**-0.3**
RAO	129nm,0.3s,baz=80,slow=23,SNR=5.4			Sn	**Sn**	**00 02 42.3**	**-3.9**
URZ	504nm,0.3s,baz=70,slow=20,SNR=12 **Urewera**	**8.88**	**208**	Pn	**Pn**	**00 04 12.3**	**-1.0**
URZ	0.2nm,0.3s,baz=100,slow=17,SNR=5.2			Sn	**Sn**	**00 05 49.7**	**-4.1**
AFI	2.1nm,0.3s,baz=91,slow=21,SNR=8.4 **Afiamalu**	**17.37**	**19**	Pn	**Pn**	**00 06 08.3**	**+0.8**
TAU	**Tasmania Unive**	**30.50**	**236**	*e*P	**P**	**00 08 18.3**	**0.0**
CTA	11nm,0.9s,mb4.6 **Charters Tower**	**34.14**	**279**	P	**P**	**00 08 52.0**	**+1.6**
CTAO	3.5nm,0.4s,mb4.6,baz=128,slow=5.2,SNR=4.0 **Charters Tower**	**34.14**	**279**	*e*P	**P**	**00 08 52.2**	**+1.8**
STKA	3.2nm,0.4s,mb4.6 **Stephens Creek**	**34.77**	**257**	P	**P**	**00 08 57.6**	**+1.8**
STKA	2.7nm,0.4s,mb4.6,baz=86,slow=8.7,SNR=5.7 **Stephens Creek**	**34.77**	**257**	*e*P	**P**	**00 08 56.8**	**+1.0**
ASAR	1.4nm,0.9s,mb3.9 **Alice Springs**	**43.43**	**267**	P	**P**	**00 10 08.3**	**0.0**
WB2	0.8nm,0.4s,mb3.8,baz=105,slow=7.2,SNR=8.3 **Warramunga Arr**	**44.42**	**272**	*e*P	**P**	**00 10 16.2**	**-0.1**
WRAB	**Tennant Creek**	**44.42**	**272**	*e*P	**P**	**00 10 16.4**	**+0.1**
	1.5nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**44.43**	**272**	P	**P**	**00 10 15.3**	**-1.1**
	1.8nm,0.3s,mb4.3,baz=111,slow=8.1,SNR=70						
SBA	**Scott Base**	**47.96**	**184**	P	**P**	**00 10 43.9**	**+0.4**
VNDA	**Vanda**	**48.03**	**186**	*e*P	**P**	**00 10 42.4**	**-1.6**
	0.9nm,0.7s,mb3.9						
FITZ	**Fitzroy Crossi**	**52.69**	**270**	*e*P	**P**	**00 11 19.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**54.67**	**249**	P	**P**	**00 11 34.5**	**+0.1**
	4.0nm,0.7s,mb4.5,baz=95,slow=12,SNR=2.2						
NWAO	**Narrogin (SRO)**	**54.67**	**249**	P	**P**	**00 11 37.4**	**+3.0**
CASY	**Casey**	**55.21**	**208**	*e*P	**P**	**00 11 37.2**	**-0.6**
	12nm,0.8s,mb5.0						
MBWA	**Marble Bar**	**56.54**	**264**	*e*P	**P**	**00 11 48.1**	**+0.1**
QSPA	**South Pole Qui**	**59.61**	**180**	P	**P**	**00 12 11.3**	**+2.6**
	0.8nm,0.3s,mb4.3,baz=37,slow=5.1,SNR=3.3						
PMSA	**Palmer Station**	**72.04**	**156**	P	**P**	**00 13 28.6**	**-0.4**
MAW	**Mawson**	**72.33**	**200**	*e*P	**P**	**00 13 31.0**	**+0.4**
SNAA	**Sanae**	**78.05**	**178**	P	**P**	**00 14 03.7**	**+0.2**
PLCA	**Paso Flores**	**82.20**	**133**	*e*P	**P**	**00 14 26.9**	**+0.3**
NIKO	**Nikolski**	**83.47**	**5**	P	**P**	**00 14 31.2**	**-1.3**
MKAR	**Makanchi Array**	**118.09**	**310**	PKP	PKPdf	00 20 50.6	-1.5
	0.2nm,0.5s,baz=112,slow=1.7,SNR=3.6						
AKASG	**Malin Array Be**	**151.58**	**323**	PKPbc	PKPbc	00 21 58.7	-0.6
	1.3nm,0.4s,baz=46,slow=3.2,SNR=8.2						
TORD	**Torodi Ar. Bea**	**162.72**	**178**	PKP	PKPdf	00 22 07.7	-0.5
	1.7nm,1.0s,baz=180,slow=1.4,SNR=4.1						
TORD				PKPab	PKPab	00 22 56.9	+0.5
	1.3nm,1.2s,baz=132,slow=2.1,SNR=1.8						

*ISCJB **21** 00:37:52.1±7.5, 1337N±007×4486W±005, h1km±47km, mb4.3/33, MS4.2/6, Error ellipse: s-maj=11.7km s-min=8.6km az=20.2*
*IDC **21** 00:37:53.9±0.6, 1337N×4486W, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.2/25, mbtmp4.1/20, MS4.2/6, Ms1 4.2/6, ms1mx3.9/22, Error ellipse: s-maj=16.7km s-min=13.2km az=141.0*
*NEIC **21** 00:37:55.1±0.2, 1336N×4483W, h10km, mb4.9/14, Error ellipse: s-maj=6.0km s-min=4.8km az=188.0*
*GCMT **21** 00:37:55.1±0.5, 1325N×4488W, h12km, MW5.0/57, Moment Tensor Solution. s24,c27; s57,c69; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.44±.17; Mθθ 1.04±.15; Mϕϕ 3.39±.14; Mrθ -0.93±.62; Mrϕ -0.66±.14; Mθϕ -0.74±.45; Best double couple: M=4.13900×10^16 NP1:ϕs 155.00000°, δ42.00000°, λ -106.00000°. NP2: ϕs 357.00000°, δ50.00000°, λ -75.00000°. Principal axes: T 3.5950, Plg4.0000°, Azm77.0000°; N 1.0780, Plg11.0000°, Azm167.0000°; P -4.6830, Plg78.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 00:37:54.9±6.8, 1336N±007×4486W±005, h6km±42km, n75, σ0s84/72, mb4.3/33, MS4.2/6, 2C-2D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBGH	**Gun Hill**	**14.31**	**271**	*e*P	**Pn**	**00 41 18.8**	**+0.5**
MTP	**Monte Pirata**	**20.46**	**286**	*e*P	**P**	**00 42 33.5**	**+0.1**
SJG	**San Juan**	**21.02**	**286**	*e*P	**P**	**00 42 39.8**	**+0.3**
RCBR	**Riachuelo**	**21.04**	**154**	*e*P	**P**	**00 42 39.0**	**-0.7**
SDV	**Santo Domingo**	**25.67**	**263**	P	**P**	**00 43 24.6**	**-1.3**
	2.6nm,0.6s,mb4.0,baz=35,slow=11,SNR=3.4						
SDDR	**Presa de Saban**	**25.97**	**286**	*e*P	**P**	**00 43 28.0**	**-0.6**
BBTS	**Babate**	**27.51**	**84**	LR	LR	00 51 33.8	
	comp=Z,516nm,20.8s,MS4.1,baz=103,slow=30						
BDFB	**Brasilia**	**28.99**	**186**	P	**P**	**00 43 57.1**	**+1.6**
	2.6nm,0.7s,mb4.1,baz=350,slow=19,SNR=3.0						
ROSC	**El Rosal**	**30.27**	**257**	LR	LR	00 54 16.9	
	comp=Z,320nm,18.8s,MS4.0,baz=13,slow=32						
ROSC	**El Rosal**	**30.27**	**257**	*e*P	**P**	**00 44 07.2**	**+0.1**
SIV	**San Ignacio**	**33.28**	**209**	P	**P**	**00 44 33.8**	**+0.4**
	1.0nm,0.8s,mb3.8,baz=60,slow=9.5,SNR=5.6						
OTAV	**Otavalo**	**35.74**	**251**	*e*P	**P**	**00 44 59.2**	**+4.3**
LPAZ	**La Paz**	**37.38**	**219**	P	**P**	**00 45 09.1**	**+0.4**
	2.6nm,0.9s,mb4.1,baz=344,slow=7.2,SNR=5.8						
LPAZ				LR	LR	00 59 35.6	
	comp=Z,214nm,20.1s,MS3.9,baz=218,slow=35						
LPAZ	**La Paz**	**37.38**	**219**	*e*P	**P**	**00 45 08.5**	**-0.2**
	4.7nm,1.1s,mb4.2						
LPAZ				*e*PP	PP	00 46 34.9	+0.9
LPAZ				LR	LR	00 59 35.6	
ATAH	**Atahualpa**	**38.97**	**241**	P	**P**	**00 45 23.2**	**+0.9**
	5.7nm,0.8s,mb4.3,baz=64,slow=11,SNR=3.6						
DBIC	**Dimbokro**	**39.91**	**96**	P	**P**	**00 45 29.3**	**-0.8**
	3.6nm,0.8s,mb4.1,baz=280,slow=8.5,SNR=3.3						
DBIC	**Dimbokro**	**39.91**	**96**	*e*P	**P**	**00 45 29.3**	**-0.8**
TKL	**Tuckaleechee C**	**41.41**	**309**	P	**P**	**00 45 42.9**	**+0.7**
	2.5nm,0.7s,mb4.0,baz=110,slow=7.9,SNR=4.0						
SWET	**Sewanee**	**42.89**	**308**	*e*P	**P**	**00 45 59.3**	**+4.9**
WVT	**Waverly**	**44.66**	**308**	*e*P	**P**	**00 46 08.5**	**0.0**
	14nm,1.2s,mb4.7						
SCHQ	**Schefferville**	**44.80**	**342**	P	**P**	**00 46 09.7**	**+0.3**
	6.8nm,0.9s,mb4.5,baz=139,slow=9.5,SNR=3.8						
SCHQ	**Schefferville**	**44.80**	**342**	*e*P	**P**	**00 46 09.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**45.26**	**85**	P	**P**	**00 46 11.8**	**-1.9**
	4.1nm,1.2s,mb4.1,baz=303,slow=6.9,SNR=8.1						
VBMS	**Vicksburg**	**45.70**	**302**	*e*P	**P**	**00 46 16.7**	**-0.2**
SIUC	**Southern Illin**	**46.23**	**310**	*e*P	**P**	**00 46 21.3**	**+0.3**
	16nm,0.8s,mb5.0						
FVM	**French Village**	**47.22**	**310**	*e*P	**P**	**00 46 27.7**	**-1.1**
	11nm,0.8s,mb4.8						
MIAR	**Mount Ida**	**48.72**	**304**	*e*P	**P**	**00 46 40.2**	**-0.3**
CFAA	**Coronel Fontan**	**50.02**	**206**	P	**P**	**00 46 50.4**	**+0.1**
	0.1nm,0.3s,mb3.3,baz=40,slow=6.9,SNR=4.6						
KSU1	**Kansas State U**	**52.19**	**309**	*e*P	**P**	**00 47 06.2**	**-0.4**
	35nm,1.2s,mb5.2						
WMOK	**Wichita Mounta**	**52.97**	**304**	*e*P	**P**	**00 47 10.7**	**-1.7**
	6.0nm,1.3s,mb4.4						
KEST	**Kesra**	**53.37**	**55**	P	**P**	**00 47 16.6**	**+1.2**
	1.3nm,0.8s,mb3.9,baz=243,slow=14,SNR=3.2						
BORG	**Borgarnes**	**53.83**	**12**	*e*P	**P**	**00 47 17.1**	**-1.1**
ULM	**Lac du Bonnet**	**55.31**	**323**	P	**P**	**00 47 28.3**	**-0.9**
	6.7nm,0.8s,mb4.7,baz=159,slow=8.7,SNR=3.4						
ULM				LR	LR	01 06 56.7	
	comp=Z,505nm,18.5s,MS4.6,baz=322,slow=32						
TXAR	**Lajitas Array**	**56.49**	**296**	P	**P**	**00 47 38.9**	**+0.7**
	0.9nm,0.9s,mb3.8,baz=111,slow=6.9,SNR=8.5						
TXAR				LR	LR	01 14 35.9	
	comp=Z,245nm,18.1s,MS4.3,baz=300,slow=39						
SDCO	**Great Sand Dun**	**58.78**	**306**	*e*P	**P**	**00 47 54.7**	**+0.5**
PLCA	**Paso Flores**	**58.85**	**203**	P	**P**	**00 47 53.9**	**-0.6**
	2.1nm,0.8s,mb4.2,baz=339,slow=8.8

LNOR	**Lincton Mounta**	**69.01**	**314**	P		**P**	**00 49 00.6**	**-0.7**
ISA	**Isabella**	**69.09**	**303**	*e*P		**P**	**00 49 01.8**	**-0.3**
OD2	**Odessa Site #2**	**69.36**	**316**	*e*P		**P**	**00 49 03.0**	**-0.5**
TSUM	**Tsumeb**	**69.48**	**117**	P		**P**	**00 49 04.3**	**-0.4**
AKASG	**Malin Array Be**	**69.70**	**41**	P		**P**	**00 49 05.3**	**-0.2**
	1.2nm,0.6s,mb4.0,baz=269,slow=4.6,SNR=5.5							
ARCES	**ARCESS Array B**	**70.73**	**21**	P		**P**	**00 49 11.1**	**-0.4**
	10nm,1.2s,mb4.6,baz=312,slow=7.6,SNR=6.5							
ARE0	**ARCESS Array S**	**70.73**	**21**	P		**P**	**00 49 12.2**	**+0.7**
BRTR	**Keskin Array B**	**72.79**	**52**	P		**P**	**00 49 25.5**	**+1.0**
	0.8nm,0.6s,mb3.8,baz=239,slow=6.5,SNR=2.9							
MBAR	**Mbarara**	**76.13**	**94**	*e*P		**P**	**00 49 43.0**	**-1.5**
INK	**Inuvik**	**77.19**	**338**	*e*P		**P**	**00 49 50.2**	**+0.8**
KIV	**Kislovodsk**	**79.11**	**47**	*e*P		**P**	**00 50 01.1**	**+0.6**

*IDC **21** 00:56:33.9±1.6,1422S×16797E,h0km,mb4.1/5, mb1 4.3/5,mb1mx3.9/17,mbtmp4.0/5,Error ellipse: s-maj=75.3km s-min=29.4km az=147.0*
*ISCJB **21** 00:56:36.8±0.7,143S±02×168E±0.1,h33km,mb3.9/6, Error ellipse: s-maj=26.0km s-min=12.3km az=147.4*
*NEIC **21** 00:56:39.1±0.5,1422S×16797E,h35km,mb4.2/2,Error ellipse: s-maj=19.6km s-min=9.1km az=147.0*

ISC 21 00:56:39.2±0.6,142S±02×1680E±01,h35km,n13, σ0§67/13,mb3.9/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUNA	**Funafuti**	**12.37**	**64**	*e*Pn	**Pn**	**00 59 31.8**	**-1.0**
CTAO	**Charters Tower**	**21.55**	**251**	P	**P**	**01 01 25.6**	**0.0**
STKA	**Stephens Creek**	**29.85**	**229**	P	**P**	**01 02 43.5**	**+0.2**
	4.5nm,0.6s,mb4.4,baz=41,slow=8.7,SNR=10						
STKA	**Stephens Creek**	**29.85**	**229**	*e*P	**P**	**01 02 42.6**	**-0.7**
	0.8nm,0.6s,mb3.6						
WRAB	**Tennant Creek**	**32.60**	**255**	*e*P	**P**	**01 03 07.2**	**-0.5**
	1.4nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**32.61**	**255**	P	**P**	**01 03 07.4**	**-0.4**
	0.7nm,0.5s,mb3.8,baz=85,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**33.49**	**249**	P	**P**	**01 03 14.7**	**-0.8**
	1.8nm,0.5s,mb4.3,baz=76,slow=8.9,SNR=27						
TAU	**Tasmania Unive**	**33.68**	**208**	*e*P	**P**	**01 03 16.8**	**0.0**
VNDA	**Vanda**	**63.40**	**181**	P	**P**	**01 07 05.5**	**+0.8**
CASY	**Casey**	**64.27**	**202**	*e*P	**P**	**01 07 11.0**	**+0.4**
NIKO	**Nikolski**	**69.82**	**15**	*e*P	**P**	**01 07 46.6**	**+0.7**
TXAR	**Lajitas Array**	**95.43**	**61**	P	**P**	**01 10 00.4**	**-0.1**
	0.2nm,0.8s,mb3.6,baz=224,slow=6.2,SNR=2.5						
MKAR	**Makanchi Array**	**97.30**	**316**	P	**P**	**01 10 09.8**	**+1.3**
	0.3nm,0.6s,mb3.9,baz=104,slow=5.6,SNR=3.4						

IDC 21 01:02:50.0±51.0,1645S×17582W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.8/17,mbtmp3.9/3,Error ellipse: s-maj=952.7km s-min=179.8km az=78.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.50**	**240**	P	P	01 10 39.6	+0.5
	2.2nm,0.8s,baz=59,slow=5.9,SNR=3.4						
WRA	**Warramunga Arr**	**47.34**	**258**	P	P	01 11 25.6	-0.4
	0.3nm,0.5s,baz=94,slow=8.2,SNR=6.9						
ASAR	**Alice Springs**	**47.58**	**253**	P	P	01 11 27.6	-0.2
	2.4nm,0.6s,baz=89,slow=8.3,SNR=38						

*ISCJB **21** 01:04:24.9±0.7,3930N±003×2026E±005,h10km,Error ellipse: s-maj=5.8km s-min=4.1km az=147.1*
*THE **21** 01:04:25.5,3931N×2034E,h1km±5km,ML3.1/5,Error ellipse: s-maj=7.5km s-min=1.3km az=250.0*
*NEIC **21** 01:04:25.0,3942N×2029E,h32km,MD3.3(ATH),After ATH.*
*ATH **21** 01:04:25.0,3942N×2029E,h32km±1km,MD3.3/3*
*CSEM **21** 01:04:25.2±0.2,3933N×2028E,h12km,ML3.1/5,Error ellipse: s-maj=4.7km s-min=3.6km az=59.0*

ISC 21 01:04:25.2±0.7,3929N±003×2025E±005,h10km,n23, σ1§16/39,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.25**	**14**	P	**Pg**	**01 04 28.9**	**-1.4**
IGT				S	**Sg**	**01 04 32.9**	**-0.9**
KEK	**Kerkira**	**0.55**	**321**	*e*PB	**Pg**	**01 04 35.2**	**-0.7**
KEK				*e*SB	**Sg**	**01 04 43.3**	**+0.1**
JAN	**Janina**	**0.59**	**51**	*e*PB	**Pg**	**01 04 34.9**	**-1.8**
JAN				*e*SB	**Sg**	**01 04 43.5**	**-0.9**
KFL	**Anninata**	**1.25**	**160**	P	**Pn**	**01 04 48.5**	**-0.1**
EVR	**Evrytania**	**1.27**	**107**	*e*PN	**Pn**	**01 04 48.3**	**-0.6**
THL	**Klokotos Trika**	**1.39**	**78**	P	**Pn**	**01 04 49.1**	**-1.5**
THL				S	**Sn**	**01 05 09.3**	**+0.2**
THL	**Klokotos Trika**	**1.39**	**78**	*e*Pn	**Pn**	**01 04 50.1**	**-0.5**
THL				S	**Sn**	**01 05 09.3**	**+0.2**
KZN	**Kozani**	**1.55**	**48**	*e*PB	**Pn**	**01 04 50.5**	**-2.3**
KZN				*e*SN	**Sn**	**01 05 10.2**	**-2.8**
RLS	**Riolos of Patr**	**1.55**	**142**	*e*PN	**Pn**	**01 04 53.7**	**+0.9**
AGG	**Agios Georgios**	**1.64**	**99**	P	**Pn**	**01 04 53.5**	**-0.5**
AGG				S	**Sn**	**01 05 14.8**	**-0.3**
FNA	**Florina**	**1.73**	**30**	P	**Pn**	**01 04 55.7**	**+0.5**
FNA				S	**Sn**	**01 05 17.5**	**+0.2**
OHR	**Ohrid**	**1.87**	**13**	P	**Pn**	**01 04 57.5**	**+0.3**
OHR	**Ohrid**	**1.87**	**13**	*e*Pn	**Pn**	**01 04 54.5**	**-2.7**
OHR	**Ohrid**	**1.87**	**13**	P	**Pn**	**01 04 57.5**	**+0.3**
OHR				*e*Sn	**Sn**	**01 05 22.7**	**+1.8**
OHR	**Ohrid**	**1.87**	**13**	*e*Pn	**Pn**	**01 04 54.6**	**-2.6**
OHR				*e*Sn	**Sn**	**01 05 22.7**	**+1.9**
LIT	**Litokhoron**	**1.91**	**64**	P	**Pn**	**01 04 57.7**	**0.0**
LIT				S	**Sn**	**01 05 22.8**	**+1.0**
BIA	**Bitola**	**1.92**	**25**	P	**Pn**	**01 04 58.7**	**+0.9**
BIA	**Bitola**	**1.92**	**25**	*e*Pn	**Pn**	**01 05 00.3**	**+2.5**
BIA				*e*Sn	**Sn**	**01 05 22.7**	**+0.7**
KRUS	**Krusevo**	**2.21**	**20**	*e*Pn	**Pn**	**01 05 05.1**	**+3.2**
KRUS				*e*Sn	**Sn**	**01 05 31.4**	**+2.0**
KRUS	**Krusevo**	**2.21**	**20**	*e*Pn	**Pn**	**01 05 05.2**	**+3.2**
KRUS				*e*Sn	**Sn**	**01 05 31.5**	**+2.1**
LKR	**Lokris**	**2.23**	**106**	P	**Pn**	**01 05 03.0**	**+0.8**
LKR				S	**Sn**	**01 05 31.1**	**+1.3**
GRG	**Griva**	**2.34**	**44**	P	**Pn**	**01 05 03.7**	**0.0**
GRG				S	**Sn**	**01 05 33.5**	**+1.0**
KNT	**Kendrikon**	**2.76**	**46**	P	**Pn**	**01 05 09.0**	**-0.4**

*IDC **21** 01:12:53.2±12.0,688S×10906E,h227km±114km,mb3.3/6, mb1 3.4/6,mb1mx3.2/19,mbtmp3.3/6,Error ellipse: s-maj=119.1km s-min=16.8km az=59.0*
*ISCJB **21** 01:12:56.0±0.6,66S±02×109E±0.1,h260km±8km, mb3.4/6,Error ellipse: s-maj=37.0km s-min=13.5km az=33.3*
*DJA **21** 01:12:56.6±0.0,908S×10881E,h21km,Mjma3.6/7, MLv4.0/7*

ISC 21 01:12:57.1±0.6,66S±02×1096E±01,h252km±8km,n13, σ0§92/13,mb3.5/6,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**0.76**	**171**	P	**Pn**	**01 13 30.5**	**-0.6**
SMRI	**Semarang**	**0.97**	**119**	P	**Pn**	**01 13 33.6**	**+1.5**
JCJI	**Jatiwangi**	**1.31**	**274**	P	**Pn**	**01 13 34.5**	**+0.3**
UGM	**Wanagama**	**1.62**	**145**	P	**Pn**	**01 13 34.8**	**-1.7**
LEM	**Lembang**	**1.97**	**263**	P	**Pn**	**01 13 39.7**	**+0.3**
SJI	**Sawahan**	**2.45**	**118**	P	**Pn**	**01 13 43.7**	**-0.3**
CBJI	**Citeko**	**2.72**	**273**	P	**Pn**	**01 13 47.0**	**+0.3**
WRA	**Warramunga Arr**	**27.46**	**121**	P	**P**	**01 18 20.7**	**+0.4**
	0.2nm,0.4s,mb3.1,baz=302,slow=8.0,SNR=6.6						
WRA				PcP	PcP	01 21 31.5	-0.5
	0.4nm,0.5s,baz=293,slow=1.8,SNR=6.7						
ASAR	**Alice Springs**	**28.89**	**129**	P	**P**	**01 18 33.0**	**+0.1**
	1.2nm,0.7s,mb3.6,baz=303,slow=8.4,SNR=15						
STKA	**Stephens Creek**	**39.06**	**134**	P	**P**	**01 20 00.5**	**+0.5**
	1.1nm,0.2s,mb4.0,baz=313,slow=14,SNR=6.0						
SONM	**Songino Array**	**54.25**	**357**	P	**P**	**01 21 58.3**	**+1.3**
	1.1nm,0.6s,mb3.6,baz=176,slow=8.0,SNR=9.1						
MKAR	**Makanchi Array**	**58.40**	**338**	P	**P**	**01 22 25.8**	**-0.5**
	0.4nm,0.4s,mb3.4,baz=150,slow=7.1,SNR=7.7						
ZALV	**Zalesovo Beam**	**63.80**	**344**	P	**P**	**01 23 00.5**	**-1.8**
	0.5nm,0.3s,mb3.6,baz=151,slow=6.3,SNR=2.8						

*ISCJB **21** 01:15:18.5±0.6,1334N±009×448W±0.1,h10km,mb4.3/25, MS4.0/5,Error ellipse: s-maj=15.8km s-min=12.0km az=151.1*
*IDC **21** 01:15:18.8±1.1,1333N×4477W,h0km,mb4.0/8,mb1 4.2/8, mb1mx3.9/22,mbtmp4.0/8,MS4.0/6,Ms1 4.0/6, ms1mx3.7/28,Error ellipse: s-maj=26.4km s-min=24.5km az=76.0*
*NEIC **21** 01:15:20.2±0.4,1332N×4478W,h10km,mb4.6/19,Error ellipse: s-maj=10.5km s-min=8.0km az=61.0*

ISC 21 01:15:20.5±0.6,1333N±009×448W±01,h10km,n31, σ0§60/28,mb4.3/25,MS4.0/5,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**19.69**	**263**	LR	LR	01 26 54.0	
	comp=Z,234nm,18.8s,baz=82,slow=35						
SDV	**Santo Domingo**	**25.74**	**263**	P	**P**	**01 20 52.5**	**+1.0**
	2.5nm,0.8s,mb3.8,baz=83,slow=5.8,SNR=4.3						
SDV				LR	LR	01 31 10.6	
	comp=Z,144nm,18.4s,MS3.5,baz=153,slow=37						
BDFB	**Brasilia**	**28.96**	**186**	P	**P**	**01 21 20.0**	**-0.3**
	2.4nm,0.9s,mb3.9,baz=357,slow=22,SNR=5.6						
SIV	**San Ignacio**	**33.29**	**209**	P	**P**	**01 21 58.6**	**+0.1**
	2.5nm,0.9s,mb4.1,baz=62,slow=7.3,SNR=7.8						
LPAZ	**La Paz**	**37.40**	**219**	P	**P**	**01 22 34.3**	**+0.4**
	3.2nm,1.0s,mb4.1,baz=13,slow=11,SNR=6.3						
LPAZ				LR	LR	01 37 25.5	
	comp=Z,141nm,20.4s,MS3.8,baz=113,slow=36						
LPAZ	**La Paz**	**37.40**	**219**	*e*P	**P**	**01 22 34.0**	**+0.1**
	4.2nm,1.0s,mb4.2						
LPAZ				LR	LR	01 37 25.5	
WVT	**Waverly**	**44.73**	**308**	*e*P	**P**	**01 23 33.7**	**-0.5**
	8.1nm,1.0s,mb4.5						
TOA0	**Torodi Ar. Sit**	**45.19**	**85**	*e*P	**P**	**01 23 38.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**45.19**	**85**	P	**P**	**01 23 38.0**	**-0.1**
	2.1nm,1.1s,mb3.9,baz=282,slow=7.4,SNR=6.4						
WMOK	**Wichita Mounta**	**53.05**	**304**	*e*P	**P**	**01 24 37.3**	**-0.7**
	4.5nm,1.3s,mb4.2						
ULM	**Lac du Bonnet**	**55.38**	**323**	*e*P	**P**	**01 24 54.4**	**-0.4**
	4.3nm,0.8s,mb4.5						
AMTX	**Amarillo**	**55.43**	**303**	*e*P	**P**	**01 24 53.4**	**-2.0**
	3.9nm,0.5s,mb4.7						
TXAR	**Lajitas Array**	**56.57**	**296**	P	**P**	**01 25 03.8**	**+0.1**
	0.5nm,0.9s,mb3.6,baz=112,slow=8.5,SNR=5.9						
TXAR				LR	LR	01 47 42.3	
	comp=Z,106nm,19.9s,MS3.9,baz=100,slow=34						
PLCA	**Paso Flores**	**58.85**	**203**	*e*P	**P**	**01 25 19.1**	**-0.3**
	4.4nm,1.1s,mb4.4,baz=32,slow=11,SNR=3.1						
PLCA	**Paso Flores**	**58.85**	**203**	*e*P	**P**	**01 25 18.3**	**-1.1**
	9.5nm,1.4s,mb4.6						
SDCO	**Great Sand Dun**	**58.86**	**306**	*e*P	**P**	**01 25 19.9**	**+0.2**
	8.3nm,1.2s,mb4.6						
ISCO	**Idaho Springs**	**59.23**	**308**	*e*P	**P**	**01 25 23.2**	**+1.0**
	9.6nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	**62.58**	**311**	P	**P**	**01 25 44.7**	**-0.2**
	1.8nm,1.1s,mb4.1,baz=114,slow=6.3,SNR=8.4						
BW06	**Boulder Array**	**62.58**	**311**	*e*P	**P**	**01 25 45.0**	**+0.1**
	3.7nm,1.1s,mb4.4						
TUC	**Tucson**	**62.80**	**300**	*e*P	**P**	**01 25 47.1**	**+0.5**
	3.8nm,1.2s,mb4.4						
LOHW	**Long Hollow**	**63.45**	**312**	*e*P	**P**	**01 25 49.9**	**-0.8**
	5.3nm,1.1s,mb4.6						
MOOW	**Moose Ponds**	**63.56**	**312**	*e*P	**P**	**01 25 51.2**	**-0.2**
	1.6nm,0.9s,mb4.0						
TPAW	**Teton Pass**	**63.68**	**312**	*e*P	**P**	**01 25 52.6**	**+0.4**
	0.9nm,0.7s,mb3.9						
HWUT	**Hardware Ranch**	**63.94**	**310**	*e*P	**P**	**01 25 54.0**	**0.0**
	6.4nm,1.0s,mb4.6						
BOZ	**Bozeman (W)**	**64.42**	**314**	*e*P	**P**	**01 25 57.4**	**+0.4**
	1.3nm,0.9s,mb4.0						
DLMT	**Dillon**	**65.06**	**314**	*e*P	**P**	**01 26 01.1**	**-0.2**
	5.8nm,0.7s,mb4.7						
HLID	**Hailey**	**66.19**	**312**	*e*P	**P**	**01 26 08.9**	**+0.3**
	3.3nm,1.1s,mb4.3						
ELK	**Elko**	**66.65**	**309**	*e*P	**P**	**01 26 12.4**	**+0.8**
	4.4nm,1.1s,mb4.4						
NEW	**Newport**	**68.42**	**317**	*e*P	**P**	**01 26 22.9**	**+0.2**
	7.5nm,1.2s,mb4.6						
YBH	**Yreka Blue Hor**	**72.28**	**310**	LR	LR	01 55 35.9	
	comp=Z,143nm,20.8s,MS4.2,baz=23,slow=33						
BOSA	**Bochof**	**79.45**	**123**	LR	LR	01 56 26.3	
	comp=Z,344nm,20.5s,MS4.7,baz=342,slow=31						

*CSEM **21** 01:15:27.9±0.1,4084N×3370E,h8km,MD3.0,Error ellipse: s-maj=1.7km s-min=1.5km az=150.0*
*ISCJB **21** 01:15:28.6±0.5,4086N±003×3370E±004,h6km±7km, Error ellipse: s-maj=5.6km s-min=4.7km az=18.1*
*ISK **21** 01:15:28.0,4085N×3369E,h9km,MD3.0*
*DDA **21** 01:15:29.2,4085N×3369E,h7km±1km,Md2.9*

ISC 21 01:15:29.2±0.5,4085N±003×3369E±004,h11km±6km,n13, σ0§59/19,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CANT	**Cankiri**	**0.25**	**193**	PG	**Pg**	**01 15 33.3**	**-0.9**
CANT				*e*SG	**Sg**	**01 15 37.8**	**+0.1**
TOS	**Tosya**	**0.32**	**53**	PG	**Pg**	**01 15 35.1**	**-0.3**
ELDT	**Eldivan**	**0.41**	**209**	*i* P	**Pg**	**01 15 36.9**	**-0.3**
ELDT				*i* S	**Sg**	**01 15 43.7**	**+1.0**
BALT	**Daday**	**0.72**	**342**	*i* P	**Pg**	**01 15 43.2**	**0.0**
BALT				*e*S	**Sg**	**01 15 53.6**	**+0.9**
SAFT	**Safranbolu**	**0.85**	**298**	*e*PG	**Pg**	**01 15 45.1**	**-0.6**
SAFT				*e*SG	**Sg**	**01 15 56.9**	**+0.1**
CTKT	**Corum**	**0.86**	**105**	*e*P	**Pg**	**01 15 46.0**	**+0.1**
CTKT				*e*S	**Sg**	**01 15 58.5**	**+1.4**
CORM	**Corum**	**0.98**	**133**	*e*PG	**Pg**	**01 15 47.1**	**-0.9**
BYBT	**Boyabat**	**1.02**	**52**	*e*PG	**Pg**	**01 15 48.2**	**-0.7**
BYBT				*e*SG	**Sg**	**01 16 02.0**	**-0.2**
KAMT	**Kaman**	**1.48**	**179**	*e*PN	**Pn**	**01 15 55.4**	**-0.3**
YOZ	**Yozgat**	**1.73**	**133**	*e*PN	**Pn**	**01 15 59.1**	**-0.1**
KVT	**Kavak**	**1.80**	**82**	*e*PN	**Pn**	**01 16 00.2**	**+0.1**
MDU	**Mudurnu**	**1.92**	**259**	*e*PN	**Pn**	**01 16 02.0**	**+0.2**
SVSK	**Karacayir**	**2.69**	**109**	*e*PN	**Pn**	**01 16 12.7**	**+0.3**

*DDA **21** 01:21:00.4,3706N×2840E,h7km±2km,Md2.8*
*CSEM **21** 01:21:00.9±0.1,3714N×2830E,h4km,MD2.7,Error ellipse: s-maj=3.6km s-min=2.1km az=167.0*
*ISCJB **21** 01:21:01.2±0.5,3706N±004×2835E±004,h10km,Error ellipse: s-maj=5.5km s-min=4.0km az=15.7*
*ISK **21** 01:21:01.0,3717N×2830E,h4km,MD2.7*

ISC 21 01:21:01.4±0.6,3709N±004×2837E±004,h1km±10km,n11, σ1§05/19,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.08**	**307**	PG	**Pg**	**01 21 01.9**	**-1.2**
YER				*e*SG	**Sg**	**01 21 03.8**	**-0.3**
TURN	**Turunc**	**0.28**	**138**	*i* P	**Pg**	**01 21 05.2**	**-1.7**
TURN				*i* S	**Sg**	**01 21 10.1**	**-0.4**
MLSB	**Milas**	**0.52**	**294**	*e*PG	**Pg**	**01 21 09.9**	**-1.4**
MLSB				*e*SG	**Sg**	**01 21 16.9**	**-1.1**
DAT	**Datca**	**0.72**	**241**	*e*PG	**Pg**	**01 21 15.6**	**+0.2**
DAT				*e*SG	**Sg**	**01 21 26.1**	**+1.5**
BDRM	**Kayabasi**	**0.74**	**269**	*i* P	**Pg**	**01 21 15.2**	**-0.3**
BDRM				*i* S	**Sg**	**01 21 26.3**	**+1.2**
DENT	**Denizli**	**0.85**	**38**	*e*PG	**Pg**	**01 21 17.7**	**-0.1**
GOLH	**Golhisar**	**0.97**	**81**	*e*P	**Pg**	**01 21 21.9**	**+1.9**
GOLH				*i* S	**Sg**	**01 21 36.7**	**+4.2**
GCAM	**G?zelcaml?**	**1.09**	**305**	*e*P	**Pg**	**01 21 22.3**	**0.0**
GCAM				*i* S	**Sg**	**01 21 37.6**	**+1.1**
ELL	**Elmali**	**1.28**	**105**	*e*PN	**Pn**	**01 21 27.4**	**+0.9**
MANT	**Manisa**	**1.41**	**6**	*e*P	**Pn**	**01 21 27.5**	**-0.7**
MANT				*i* S	**Sg**	**01 21 48.1**	**+1.2**
KULA	**Kula-Manisa**	**1.45**	**9**	*e*PN	**Pn**	**01 21 27.8**	**-0.9**

*ISCJB **21** 01:43:33.8±1.1,1866N±004×1454E±0.1,h228km±10km, mb4.0/24,Error ellipse: s-maj=20.1km s-min=7.0km az=173.4*
*IDC **21** 01:43:33.9±0.9,1866N×14551E,h212km±8km,mb3.7/17, mb1 3.9/19,mb1mx3.8/26,mbtmp3.7/19,Error ellipse: s-maj=17.1km s-min=9.6km az=81.0*
*NEIC **21** 01:43:40.0±2.4,1865N×14548E,h277km±24km,mb4.2/8, Error ellipse: s-maj=13.4km s-min=6.1km az=83.0*

ISC 21 01:43:34.9±1.2,1864N±005×1455E±01,h222km±11km, h213km±1.6km:pP-P,n38,σ0§58/33,mb4.0/24,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.05**	**187**	S	**S**	**01 45 49.7**	**-0.9**
	31nm,0.3s,baz=183,slow=23,SNR=3.8						
CBIJ	**Chichi jima**	**8.95**	**341**	P	**Pn**	**01 45 41.2**	**+0.9**
	7.9nm,0.3s,baz=203,slow=15,SNR=3.3						
CBIJ				S	**S**	**01 47 15.5**	**-5.7**
	14nm,0.3s,baz=286,slow=22,SNR=5.6						
MJAR	**Matsushiro Arr**	**18.95**	**342**	P	**P**	**01 47 40.0**	**+0.6**
	0.3nm,0.3s,baz=174,slow=10,SNR=3.6						
KSRS	**Korea Array**	**24.24**	**324**	P	**P**	**01 48 31.4**	**-0.2**
	1.5nm,0.9s,mb3.6,baz=246,slow=29,SNR=4.1						
COEN	**Coen**	**32.47**	**184**	*e*P	**P**	**01 49 44.2**	**-0.4**
	12nm,0.9s,mb4.4						
KAPI	**Kappang**	**34.57**	**230**	P	**P**	**01 50 03.4**	**+0.5**
	5.3nm,0.9s,mb4.4,baz=76,slow=5.2,SNR=4.4						
PETK	**Petropavlovsk-**	**35.70**	**13**	P	**P**	**01 50 12.6**	**+0.6**
	3.9nm,0.8s,mb4.0,baz=239,slow=8.4,SNR=3.4						
CTA	**Charters Tower**	**38.49**	**179**	P	**P**	**01 50 36.2**	**+0.4**
	3.8nm,0.7s,mb4.0,baz=2.1,slow=7.2,SNR=3.5						
CTA	**Charters Tower**	**38.49**	**179**	P	**P**	**01 50 36.1**	**+0.4**
CTAO	**Charters Tower**	**38.49**	**179**	*e*P	**P**	**01 50 36.2**	**+0.4**
	4.7nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**39.85**	**196**	*e*P	**P**	**01 50 47.5**	**+0.5**
	9.3nm,0.4s,mb4.6						
WB2	**Warramunga Arr**	**39.86**	**196**	*e*P	**P**	**01 50 47.5**	**+0.4**
WRA	**Warramunga Arr**	**39.86**	**196**	P	**P**	**01 50 47.5**	**+0.3**
	12nm,0.6s,mb4.5,baz=20,slow=8.5,SNR=132						
WRA				PcP	PcP	01 52 47.8	-0.6
	1.0nm,0.5s,baz=15,slow=3.6,SNR=5.2						
SONM	**Songino Array**	**43.06**	**322**	P	**P**	**01 51 12.6**	**-0.1**
	1.0nm,0.5s,mb3.5,baz=134,slow=8.9,SNR=8.3						
ASAR	**Alice Springs**	**43.53**	**195**	P	**P**	**01 51 17.2**	**+0.4**
	2.5nm,0.6s,mb3.7,baz=9.7,slow=7.6,SNR=33						
ASAR				PcP	PcP	01 53 00.0	-0.5
	0.7nm,0.5s,baz=42,slow=2.1,SNR=4.5						
CMAR	**Chiang Mai Ar**	**44.02**	**278**	P	**P**	**01 51 21.9**	**+1.1**
	1.1nm,0.4s,mb3.5,baz=66,slow=7.0,SNR=6.0						
MBWA	**Marble Bar**	**46.90**	**214**	*e*P	**P**	**01 51 43.6**	**+0.3**
	23nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**50.36**	**184**	P	**P**	**01 52 09.1**	**-0.3**
	3.3nm,0.8s,mb3.7,baz=360,slow=12,SNR=3.6						
FORT	**Forrest**	**51.91**	**199**	*e*P	**P**	**01 52 21.4**	**+0.5**
	10nm,0.5s,mb4.5						
ZALV	**Zalesovo Beam**	**57.94**	**323**	P	**P**	**01 53 03.0**	**-0.8**
	1.2nm,0.5s,mb3.8,baz=112,slow=7.5,SNR=7.3						
ZALV				pP	pP	01 53 51.5	-2.2
	0.7nm,0.4s,baz=99,slow=7.2,SNR=2.1						
ZALV	**Zalesovo Beam**	**57.94**	**323**	P	**P**	**01 53 03.0**	**-0.8**
ZALV				pP	pP	01 53 51.5	-2.2
MK31	**Makanchi Array**	**58.35**	**314**	*e*P	**P**	**01 53 06.4**	**-0.4**
MKAR	**Makanchi Array**	**58.35**	**314**	P	**P**	**01 53 06.7**	**-0.1**
	1.7nm,0.6s,mb3.9,baz=89,slow=8.7,SNR=24						
MKAR				pP	pP	01 53 54.3	-2.5
	0.4nm,0.5s,baz=71,slow=7.5,SNR=2.3						
KURK	**Kurchatov**	**61.18**	**318**	*e*P	**P**	**01 53 24.8**	**-1.1**
	3.0nm,0.9s,mb3.9						
URZ	**Urewera**	**63.92**	**153**	P	**P**	**01 53 43.9**	**-0.2**
	3.2nm,0.6s,mb4.2,baz=90,slow=10,SNR=4.1						
RPZ	**Rata Peaks**	**66.33**	**160**	P	**P**	**01 53 59.7**	**+0.2**
	3.2nm,0.5s,mb4.2,baz=259,slow=5.2,SNR=3.1						
BRVK	**Borovoye**	**66.45**	**320**	*e*P	**P**	**01 53 59.5**	**-0.8**
	4.6nm,0.7s,mb4.2						
ARU	**Arti**	**73.00**	**325**	*e*P	**P**	**01 54 39.1**	**-1.0**
	3.3nm,0.6s,mb4.1						
YKA	**Yellowknife Ar**	**78.14**	**28**	P	**P**	**01 55 09.7**	**+0.5**
	1.1nm,0.6s,mb3.7,baz=285,slow=4.7,SNR=3.7						
ARCES	**ARCESS Array B**	**82.49**	**342**	P	**P**	**01 55 31.7**	**-0.4**
	3.9nm,0.9s,mb4.0,baz=60,slow=7.2,SNR=4.1						
NVAR	**Mina Array Bea**	**83.34**	**52**	P	**P**	**01 55 37.2**	**0.0**
	1.3nm,0.7s,mb3.8,baz=272,slow=5.4,SNR=5.3						
NVAR				pP	pP	01 56 28.6	-2.3
	1.0nm,0.7s,baz=268,slow=5.9,SNR=2.8						
PDAR	**Pinedale Array**	**88.02**	**45**	P	**P**	**01 55 59.6**	**-0.4**
	0.4nm,0.8s,mb3.3,baz=336,slow=2.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**132.33**	**309**	PKP	PKPdf	02 02 23.1	-0.4
	1.4nm,1.2s,baz=18,slow=1.1,SNR=4.9						
PLCA	**Paso Flores**	**142.11**	**133**	PKhKP		02 02 37.0	
	0.9nm,0.6s,baz=355,slow=20,SNR=3.6						
PLCA				PKP	PKPd

9.3nm,0.3s,baz=291,slow=23,SNR=9.7
URZ LR LR 02 10 28.1
comp=Z,97nm,18.7s,baz=196,slow=34
RPZ Rata Peaks 14.40 211 P **Pn** **02 09 30.2 +4.1**
1.3nm,0.3s,baz=24,slow=7.4,SNR=3.9
RPZ S **Sn** **02 11 50.6 -14**
2.2nm,0.3s,baz=9.9,slow=18,SNR=6.9
DZM Mont Dzumac 16.44 302 *eP* **Pn** **02 09 53.0 +0.1**
RAR Rarotonga 19.88 63 LR LR 02 16 16.3
comp=Z,94nm,19.4s,baz=290,slow=31
CTA Charters Tower 33.51 282 P **P** **02 12 42.1 +0.9**
11nm,0.7s,mb4.9,baz=105,slow=12,SNR=8.0
STKA Stephens Creek 33.65 259 P **P** **02 12 44.2 +1.9**
3.0nm,0.7s,mb4.4,baz=80,slow=12,SNR=5.2
COEN Coen 39.16 288 *eP* **P** **02 13 30.2 +0.8**
14nm,0.8s,mb4.7
ASAR Alice Springs 42.51 269 P **P** **02 13 56.8 -0.3**
6.5nm,0.6s,mb4.6,baz=104,slow=7.5,SNR=100
WB2 Warramunga Arr 43.61 274 *eP* **P** **02 14 05.4 -0.6**
WRAB Tennant Creek 43.62 274 *eP* **P** **02 14 05.3 -0.8**
19nm,0.5s,mb5.1
WRA Warramunga Arr 43.62 274 P **P** **02 14 05.2 -0.9**
22nm,0.5s,mb5.2,baz=114,slow=7.9,SNR=598
FORT Forrest 45.17 257 *eP* **P** **02 14 18.2 -0.2**
16nm,0.8s,mb4.9
VNDA Vanda 46.65 186 P **P** **02 14 30.8 +1.4**
1.1nm,0.6s,mb4.0,baz=28,slow=6.2,SNR=3.7
VNDA Vanda 46.65 186 *eP* **P** **02 14 28.9 -0.4**
0.9nm,0.6s,mb3.9
CASY Casey 53.65 208 *eP* **P** **02 15 21.1 -1.4**
13nm,0.6s,mb5.0
BATI Baumata 57.30 279 LR LR 02 38 17.4
comp=Z,105nm,18.4s,baz=306,slow=34
QSPA South Pole Qui 58.31 180 P **P** **02 15 57.2 +1.6**
20nm,0.7s,mb5.3,baz=27,slow=0.9,SNR=27
SNAA Sanae 76.77 179 *e* **P** **02 17 47.9 -4.4**
SNAA *e* 02 17 52.8
SNAA *e* pP 02 18 01.2 -2.0
SNAA Sanae 76.77 179 *eP* **P** **02 17 52.2 -0.1**
8.6nm,0.8s,mb4.7
VNA3 Neumayer Olymp 76.94 176 *e* **P** **02 17 52.4 -0.8**
VNA3 *e* 02 17 57.8
VNA3 *e* 02 18 06.1
VNA2 Neumayer--Watz 77.37 177 *e* **P** **02 17 55.6 0.0**
baz=172,slow=4.4
VNA2 *e* 02 18 00.4
VNA2 *e* pP 02 18 08.7 +2.1
VNA1 Neumayer--Stat 77.61 177 *e* **P** **02 17 57.4 +0.5**
VNA1 *e* 02 18 02.0
VNA1 *e* pP 02 18 09.3 +1.4
ARCES ARCESS Array B 139.84 347 PKhKP 02 25 20.1
2.8nm,0.8s,baz=68,slow=2.8,SNR=7.3
ARCES PKP PKPdf 02 25 25.8 -2.4
3.1nm,0.8s,baz=85,slow=2.2,SNR=6.9
JOF Joensuu 143.51 337 *ep* PKPdf 02 25 30.1 -4.8
0.6nm,0.3s
KAF Kangasniemi 145.68 339 *ep* PKPdf 02 25 36.0 -2.7
2.4nm,0.3s
NB2 NORSAR Subarra150.05 350 PKP PKPdf 02 25 48.7 +2.8
comp=Z,1.1nm,0.5s,baz=15,slow=2.5
NOA NORSAR Array B 150.05 350 PKPbc PKPbc 02 25 49.0 -1.9
comp=Z,1.8nm,0.6s,baz=14,slow=4.1,SNR=7.6
AKASG Malin Array Be 152.06 321 PKPbc PKPbc 02 25 53.7 -2.2
comp=Z,1.2nm,0.6s,baz=58,slow=2.6,SNR=4.1
AKASG PKPab PKPab 02 26 03.3 -2.2
comp=Z,0.3nm,0.3s,baz=47,slow=3.7,SNR=3.4
AKASG Malin Array Be 152.06 321 PKPbc PKPbc 02 25 53.7 -2.3
AKASG PKPab PKPab 02 26 03.3 -2.2
BR131 Keskin Array S 152.75 296 *e*PKPbc PKPbc 02 25 56.4 -1.5
BRTR Keskin Array B 152.75 296 PKPbc PKPbc 02 25 56.2 -1.7
BRTR PKPab PKPab 02 26 07.2 -1.7
BRTR Keskin Array B 152.75 296 PKPbc PKPbc 02 25 56.2 -1.7
BRTR PKPab PKPab 02 26 07.2 -1.7
TOA0 Tordoi Ar. Sit 161.43 181 *e*PKPab PKPab 02 26 44.8 -1.7
TORD Tordoi Ar. Bea 161.43 181 PKPab PKPab 02 26 45.6 -1.0
comp=Z,3.8nm,0.7s,baz=178,slow=3.5,SNR=28

NIED ***21*** *02:07:00,36.00N×13.960E,h32km,Mw3.5 Best double couple: M₀2.24000×10¹⁴ NP1:φs224.00000°,δ64.00000°, λ75.00000°. NP2:φs75.00000°,δ29.00000°,λ118.00000°.*
ISCJB ***21*** *02:07:38.0±1.3,3594N±004×13954E±008,h70km±9km, Error ellipse: s-maj=11.0km s-min=6.7km az=172.7*
JMA ***21*** *02:07:39.0±0.1,3598N×13956E,h61km±1km,M3.5 Broadband fault plane solution: P waves. NP1: φs86.00000°,δ44.00000°,λ114.00000°. NP2: φs234.00000°,δ50.00000°,λ68.00000°. Principal axes: T Plg73.0000°, Azm80.0000°; N Plg17.0000°, Azm248.0000°; P Plg3.0000°, Azm339.0000°;*
JMA Felt II J1.

ISC 21 02:07:38.3±1.3,3595N±004×13954E±008,h70km±9km, n10,σ0s58/20,3C-4D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHU	**Hanno**	**0.23**	**247**	↑P		**Pn**	**02 07 49.1**	**+0.1**
JHU				S		**Sn**	**02 07 56.4**	**-0.4**
TOK	**Tokyo**	**0.31**	**146**	↓P		**Pn**	**02 07 50.2**	**+0.7**
TOK				*e*S		**Sn**	**02 07 59.0**	**+1.3**
JAG	**Ashikaga**	**0.48**	**351**	↓P		**Pn**	**02 07 50.7**	**-0.2**
JAG				S		**Sn**	**02 07 59.2**	**-1.0**
JRY	**Ryogami san**	**0.53**	**278**	↑P		**Pn**	**02 07 51.6**	**+0.3**
JRY				S		**Sn**	**02 08 01.0**	**+0.2**
JOD2	**Odawara 2**	**0.77**	**209**	↓P		**Pn**	**02 07 53.9**	**-0.1**
JOD2				S		**Sn**	**02 08 04.8**	**-0.8**
JKT	**Katashina**	**0.85**	**344**	↓P		**Pn**	**02 07 55.0**	**0.0**
JKT				S		**Sn**	**02 08 06.8**	**-0.5**
JYN	**Shimob**	**0.93**	**242**	↑P		**Pn**	**02 07 56.3**	**+0.5**
JYN				*e*S		**Sn**	**02 08 09.1**	**+0.2**
JIM2	**Oshima 3**	**1.23**	**184**	P		**Pn**	**02 07 59.1**	**-0.6**
JIM2				S		**Sn**	**02 08 14.9**	**-0.7**
MAT	**Matsushiro**	**1.23**	**299**	P		**Pn**	**02 08 00.1**	**+0.4**
MAT				S		**Sn**	**02 08 16.2**	**+0.4**
MAT	**Matsushiro**	**1.23**	**299**	P		**Pn**	**02 08 00.3**	**+0.6**
MAT				*e*S		**Sn**	**02 08 16.3**	**+0.5**

DJA 21 02:09:36.4±0.0,082S×12955E,h30km,Mjma3.8/2, MLv4.3/2,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SWI	**Sorong**	**1.71**	**91**	P		Pn	02 10 06.1	+1.9
SWI	**Sorong**	**1.71**	**91**	S		Sn	02 10 24.1	-0.9
TLE	**Tual**	**5.75**	**146**	P		Pn	02 11 04.2	+4.5
48nm,0.8s,0.3nm								
TLE	**Tual**	**5.75**	**146**	S		Sn	02 12 08.8	+4.1
48nm,0.8s,0.3nm								

ISCJB ***21*** *02:12:12.7±8.3,70S±02×1557E±03,h68km±69km, mb3.8/8,Error ellipse: s-maj=56.5km s-min=32.9km az=174.6*
IDC ***21*** *02:12:14.4±11.0,701S×15577E,h75km±90km,mb3.7/7, mb1 3.8/8,mb1mx3.7/18,mbtmp3.7/8,ML4.0/1,Error ellipse: s-maj=67.5km s-min=27.6km az=82.0*
NEIC ***21*** *02:12:15.4±6.5, 704S×15575E,h86km±52km,mb3.9/1, Error ellipse: s-maj=42.9km s-min=24.4km az=78.0*

ISC 21 02:12:14.3±7.6,70S±02×1557E±04,h70km±62km,n17,σ0s50/11,mb3.8/8,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**15.92**	**214**	P		**Pn**	**02 15 54.1**	**0.0**
0.4nm,0.3s,baz=51,slow=16,SNR=2.4								
WRAB	**Tennant Creek**	**24.38**	**236**	*eP*		**P**	**02 17 25.8**	**-0.3**
5.1nm,1.0s,mb3.8								
WRA	**Warramunga Arr**	**24.39**	**236**	P		**P**	**02 17 26.8**	**+0.6**
0.8nm,0.5s,mb3.3,baz=59,slow=9.9,SNR=4.9								
WRA				PcP		PcP	02 21 04.2	+0.1
0.3nm,0.5s,baz=56,slow=2.3,SNR=5.2								
ASAR	**Alice Springs**	**26.70**	**229**	P		**P**	**02 17 46.5**	**-0.6**
0.4nm,0.5s,mb3.2,baz=60,slow=9.5,SNR=4.7								
ASAR				PcP		PcP	02 21 08.9	-0.4
0.4nm,0.4s,baz=66,slow=2.6,SNR=4.0								
CMAR	**Chiang Mai Arr**	**61.40**	**295**	P		**P**	**02 22 24.4**	**+0.7**
0.8nm,0.4s,mb4.1,baz=132,slow=4.9,SNR=3.3								
SONM	**Songino Array**	**69.70**	**327**	P		**P**	**02 23 17.1**	**+0.5**
1.9nm,0.9s,mb3.9,baz=141,slow=8.1,SNR=7.6								
QSPA	**South Pole Qui**	**82.99**	**180**	P		**P**	**02 24 31.7**	**+0.4**
1.0nm,0.2s,mb4.2,baz=280,slow=6.1,SNR=3.3								

MK31	**Makanchi Array**	**83.85**	**319**	*eP*		**P**	**02 24 35.7**	**-0.7**
MKAR	**Makanchi Array**	**83.85**	**319**	P		**P**	**02 24 36.3**	**0.0**
0.4nm,0.4s,mb3.6,baz=91,slow=9.2,SNR=11								
ZALV	**Zalesovo Beam**	**84.56**	**326**	P		**P**	**02 24 39.2**	**-0.5**
1.4nm,0.5s,mb4.1,baz=105,slow=6.0,SNR=5.6								
ZALV	**Zalesovo Beam**	**84.56**	**326**	P		**P**	**02 24 39.2**	**-0.5**
GERES	**GERESS Array B**	**127.40**	**329**	PKP	PKPdf		02 31 10.7	-0.5
0.5nm,0.5s,baz=54,slow=2.3,SNR=6.8								
TORD	**Tordoi Ar. Bea**	**153.69**	**286**	PKPbc	PKPbc		02 32 04.6	-1.7
0.4nm,0.4s,baz=34,slow=2.2,SNR=19								
TORD				PKPab	PKPab		02 32 18.1	-1.1
0.7nm,0.5s,baz=69,slow=2.7,SNR=4.8								
KIC	**Kosan Boka**	**160.55**	**269**	*eP*	PKPab		02 32 47.9	-1.0
63nm,1.3s								
DBIC	**Dimbokro**	**160.68**	**270**	PKPab	PKPab		02 32 49.1	-0.4
2.0nm,0.5s,baz=86,slow=6.4,SNR=9.1								
LIC	**Lamto**	**160.83**	**269**	*eP*	PKPab		02 32 49.7	-0.5
48nm,1.6s								
TIC	**Toumodi**	**160.84**	**270**	*eP*	PKPab		02 32 49.7	-0.5
120nm,1.6s								

IDC 21 02:22:46.4±4.9,058S×13168E,h0km,mb3.4/2,mb1 3.6/3, mb1mx3.5/16,mbtmp3.4/3,ML3.6/1,MS3.2/1,Ms1 3.2/1, ms1mx2.7/21,Error ellipse: s-maj=326.0km s-min=27.5km az=73.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**19.21**	**42**	LR		LR	02 32 45.1	
comp=Z,80nm,21.7s,baz=58,slow=31								
WRA	**Warramunga Arr**	**19.42**	**172**	P		Pn	02 27 14.5	-1.0
0.2nm,0.3s,baz=354,slow=12,SNR=13								
ASAR	**Alice Springs**	**23.05**	**175**	P		P	02 27 53.6	+0.1
1.6nm,0.7s,baz=354,slow=11,SNR=16								
MKAR	**Makanchi Array**	**63.90**	**324**	P		P	02 33 21.1	0.0
0.1nm,0.3s,baz=134,slow=6.2,SNR=4.1								

NEIC ***21*** *02:45:11.7, 1627N×9955W, h26km, MD3.6(MEX), After MEX.*

MEX 21 02:45:11.7±0.5,1627N×9955W,h26km±19km,MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ACX	**Acapulco**	**0.69**	**329**	*i* P		Pb	02 45 23.2	-1.9
ACX				*i* S		Sb	02 45 31.5	-2.8
CAIG	**El Cayaco**	**1.04**	**318**	*i* P		Pn	02 45 27.5	-3.1
CAIG				*i* S		Sb	02 45 40.7	-3.5
PNIG	**Pinotepa**	**1.37**	**85**	*i* P		Pn	02 45 33.0	-2.2
PNIG				*i* S		Sn	02 45 48.9	-3.6
ZIIG	**Zihuatanejo**	**2.27**	**306**	*i* P		Pn	02 45 45.0	-2.6
ZIIG				*i* S		Sn	02 46 12.1	-2.6
UTMO	**Huajuapan**	**2.28**	**47**	*i* P		Pn	02 45 45.1	-2.6
UTMO				*i* S		Sn	02 46 12.7	-2.3

IDC ***21*** *02:53:12.7±1.1,1493N×9159W,h0km, mb4.0/10, mb1 4.2/12,mb1mx4.0/24,mbtmp3.9/12,ML4.1/1,MS3.3/5, Ms1 3.3/5,ms1mx2.8/34,Error ellipse: s-maj=35.8km s-min=14.4km az=40.0*
ISCJB ***21*** *02:53:18.0±0.4, 1437N±004×9254W±003,h77km±4km, mb4.0/25,Error ellipse: s-maj=8.1km s-min=3.4km az=32.7*
BJI ***21*** *02:53:17.3, 1430N×9260W, h53km, mB5.2, Ms5.5, Msz5.1*
NEIC ***21*** *02:53:19.3, 1426N×9262W, h54km, mb4.3/15, MD4.4(MEX), After MEX.*
CASC ***21*** *02:53:19.9±1.4, 1420N×9229W, h8km±30km, MD4.3, ML3.7, mb4.3(NEIC)*
MEX ***21*** *02:53:19.3±0.6, 1426N×9261W, h55km±29km, MD4.4*

ISC 21 02:53:19.9±0.4,1445N±004×9248W±003,h74km±4km,n85, σ1s26/81,mb4.0/24,3C-6D,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**0.50**	**24**	*i* P		**Pn**	**02 53 31.8**	**-1.2**
THIG				*i* S		**Sn**	**02 53 42.6**	**-0.2**
PCIG		**1.44**	**330**	*eP*		**Pn**	**02 53 42.9**	**-1.3**
PCIG				*i* S		**Sn**	**02 54 01.1**	**-1.5**
FG6		**1.55**	**86**	↓*eP*		**Pn**	**02 53 45.9**	**+0.3**
PCG	**Pacaya**	**1.81**	**91**	↑*eP*		**Pn**	**02 53 49.1**	**0.0**
PCG				*e*S		**Sn**	**02 54 11.9**	**+0.6**
NBG	**Las Nubes**	**2.07**	**86**	↑*eP*		**Pn**	**02 53 53.6**	**+1.1**
SCX	**San Cristobal**	**2.28**	**356**	*i* P		**Pn**	**02 53 56.5**	**+1.1**
SCX				*i* S		**Sn**	**02 54 24.2**	**+1.6**
SCX	**San Cristobal**	**2.28**	**356**	*i* P		**Pn**	**02 53 56.5**	**+1.1**
SCX				*i* S		**Sn**	**02 54 25.6**	**+3.0**
TGIG		**2.40**	**345**	*i* P		**Pn**	**02 53 57.0**	**-0.1**
TGIG				*i* S		**Sn**	**02 54 26.5**	**+1.0**
RBDL	**Robledal**	**2.73**	**97**	*eP*		x	02 54 00.8	
RBDL				*e*S		x	02 54 33.5	
MRL	**Marmol**	**2.77**	**77**	*eP*		**Pn**	**02 54 02.9**	**+1.0**
RTR	**El Retiro**	**2.80**	**101**	*eP*		x	02 54 02.0	
RTR				*e*S		x	02 54 35.7	
SBLS	**San Blas**	**2.83**	**102**	↓*eP*		x	02 54 02.3	
SBLS				*e*S		x	02 54 36.0	
SNJE	**San Jose**	**2.84**	**101**	*eP*		x	02 54 02.3	
SNJE				*e*S		x	02 54 36.5	
BOQS	**Boqueron**	**3.18**	**102**	*eP*		x	02 54 06.8	
BOQS				*eP*		x	02 54 06.8	
BOQS				*e*S		x	02 54 44.2	
BOQS				AML		x	02 54 45.9	
comp=Z,563nm,0.5s								
LBRS	**Las Brisas**	**3.41**	**101**	*eP*		x	02 54 09.8	
LFRS	**El Faro**	**3.42**	**103**	*eP*		x	02 54 10.0	
LFRS				*e*S		x	02 54 48.5	
CMIG	**Matias Romero**	**3.50**	**319**	Pn		**Pn**	**02 54 11.8**	**-0.2**
comp=Z,13nm,0.3s,baz=152,slow=9.4,SNR=128								
CMIG				Pg		**Pn**	**02 54 20.6**	**+8.6**
comp=Z,20nm,0.3s,baz=132,slow=11,SNR=20								
CMIG				Sn		**Sn**	**02 54 50.0**	**-2.4**
comp=Z,43nm,0.3s,baz=118,slow=15,SNR=9.1								
CMIG				Lg			02 55 12.3	
comp=Z,62nm,0.3s,baz=269,slow=16,SNR=6.1								
CMIG				LR		LR	02 55 49.5	
comp=Z,116nm,19.1s,baz=145,slow=41								
CMIG	**Matias Romero**	**3.50**	**319**	*i* P		**Pn**	**02 54 11.6**	**-0.4**
CMIG				*i* S		**Sn**	**02 54 51.4**	**-1.0**
SNVI	**San Vicente**	**3.63**	**103**	*eP*		x	02 54 12.8	
SNVI				*e*S		x	02 54 55.0	
VSM	**San Miguel**	**4.21**	**103**	↓*eP*		x	02 54 22.0	
CNCH	**Conchagua**	**4.66**	**104**	↓*eP*		x	02 54 26.8	
SCIG	**Sabancuy**	**4.66**	**15**	*i* P		**Pn**	**02 54 12.9**	**+1.1**
SCIG				*i* S		**Sn**	**02 55 19.8**	**-0.8**
VHO	**Vista Hermosa**	**4.86**	**303**	*i* P		**Pn**	**02 54 30.0**	**-0.5**
VHO				*i* S		**Sn**	**02 55 25.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**5.06**	**94**	*e*Pn		**Pn**	**02 54 32.7**	**-0.6**
PNIG	**Pinotepa**	**5.78**	**290**	*i* P		**Pn**	**02 54 41.8**	**-1.3**
PNIG				*i* S		**Sn**	**02 55 42.3**	**-5.7**
TEL3	**Telica 3**	**5.79**	**108**	↓*eP*		**Pn**	**02 54 42.0**	**-1.1**
MIRN	**Miramar**	**5.95**	**109**	↑*eP*		**Pn**	**02 54 44.5**	**-0.9**
MOMN	**Momotombo**	**6.12**	**109**	*eP*		**Pn**	**02 54 47.4**	**-0.4**
UTMO	**Huajuapan**	**6.12**	**304**	*i* P		**Pn**	**02 54 48.6**	**+0.8**
UTMO				*i* S		**Sn**	**02 55 54.6**	**-1.8**
TPIG	**Tehuac#an**	**6.13**	**311**	*i* P		**Pn**	**02 54 47.7**	**-0.2**
TPIG				*i* S		**Sn**	**02 55 57.9**	**+1.3**
COPN	**Copaltepe**	**6.16**	**111**	*eP*		**Pn**	**02 54 46.9**	**-1.3**
COPN				AML		AML	02 56 01.0	
comp=Z,67nm,0.6s								
PPM	**Popocatepetl**	**7.47**	**309**	*i* S		**Sn**	**02 56 30.8**	**+1.4**
CAIG	**El Cayaco**	**7.93**	**290**	*i* P		**Pn**	**02 55 11.5**	**-1.0**
CAIG				*i* S		**Sn**	**02 56 40.9**	**+0.1**
VCR	**Vista de Mar**	**7.95**	**122**	*eP*		**Pn**	**02 55 12.6**	**-0.1**
JCR	**Jicaral**	**8.53**	**122**	*eP*		**Pn**	**02 55 21.2**	**+0.6**
CGA2	**Cerro Gallo 2**	**8.98**	**118**	*eP*		**Pn**	**02 55 28.3**	**+1.4**
PRS1	**Puriscal**	**9.13**	**118**	*eP*		**Pn**	**02 55 29.8**	**+0.9**
ZIIG	**Zihuatanejo**	**9.19**	**291**	*eP*		**Pn**	**02 55 29.4**	**-0.3**
URSC	**Urasca**	**9.66**	**117**	*eP*		**Pn**	**02 55 38.2**	**+2.1**
ACR	**Cerro Adams**	**10.78**	**121**	*eP*		**Pn**	**02 55 53.0**	**+1.5**
TXAR	**Lajitas Array**	**18.07**	**327**	Pn		**Pn**	**02 57 29.4**	**+3.5**
comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=6.3								
LRAL	**Lakeview Retre**	**19.17**	**14**	*e*Pn		**Pn**	**02 57 38.2**	**-0.9**
ROSC	**El Rosal**	**20.25**	**116**	P		**P**	**02 57 50.9**	**+1.5**
comp=Z,0.7nm,0.3s,baz=284,slow=21,SNR=8.3								
ROSC	**El Rosal**	**20.25**	**116**	*eP*		**P**	**02 57 52.3**	**+2.9**
GOGA	**Godfrey**	**20.58**	**22**	*eP*		**P**	**02 57 53.0**	**+0.2**
comp=Z,80nm,2.3s								
CHI2			**20.87**	**116**	↓*eP*		Px	02 54 39.6
CHI2					AML		AML	02 55 48.5
comp=Z,133nm,0.4s								
WMOK	**Wichita Mounta**	**20.99**	**345**	*eP*		**P**	**02 57 57.7**	**+0.5**

comp=Z,2.6nm,0.8s								
SWET	**Sewanee**	**21.51**	**15**	*eP*		**P**	**02 58 02.5**	**-0.1**
AMTX	**Amarillo**	**21.98**	**339**	*eP*		**P**	**02 58 08.8**	**+1.1**
comp=Z,12nm,0.6s,mb4.4								
WVT	**Waverly**	**21.99**	**10**	*eP*		**P**	**02 58 07.2**	**-0.6**
comp=Z,3.6nm,0.6s,mb3.9								
SDV	**Santo Domingo**	**22.09**	**102**	P		**P**	**02 58 06.5**	**-2.6**
comp=Z,9.9nm,0.7s,mb4.2,baz=332,slow=7.0,SNR=15								
CPCT	**Cooper Cave**	**22.11**	**17**	*eP*		**P**	**02 58 08.5**	**-0.5**
TKL	**Tuckaleechee C**	**22.52**	**19**	P		**P**	**02 58 11.9**	**-1.6**
comp=Z,4.4nm,0.6s,mb4.0,baz=193,slow=11,SNR=7.0								
TKL				LR		LR	03 06 48.1	
comp=Z,58nm,19.5s,baz=155,slow=37								
SIUC	**Southern Illin**	**23.36**	**7**	*eP*		**P**	**02 58 21.1**	**-0.6**
comp=Z,25nm,0.8s,mb4.6								
TZTN	**Tazewell**	**23.41**	**18**	*eP*		**P**	**02 58 21.2**	**-1.1**
comp=Z,13nm,1.0s,mb4.2								
CCM	**Cathedral Cave**	**23.54**	**2**	*eP*		**P**	**02 58 23.5**	**0.0**
comp=Z,4.9nm,0.8s,mb3.9								
ANMO	**Albuquerque**	**23.99**	**331**	P		**P**	**02 58 30.8**	**+3.2**
comp=Z,0.6nm,0.6s,mb3.1,baz=138,slow=14,SNR=4.4								
ANMO	**Albuquerque**	**23.99**	**331**	*eP*		**P**	**02 58 30.1**	**+2.5**
comp=Z,0.9nm,0.6s,mb3.3								
WCI	**Wyandotte Cave**	**24.32**	**12**	*eP*		**P**	**02 58 29.2**	**-1.3**
comp=Z,26nm,0.8s,mb4.6								
ATAH	**Atahualpa**	**25.48**	**146**	P		**P**	**02 58 45.7**	**+4.3**
comp=Z,4.3nm,0.7s,mb4.0,baz=336,slow=12,SNR=3.6								
PDAR	**Pinedale Array**	**31.83**	**336**	P		**P**	**02 59 40.5**	**+3.0**
comp=Z,0.2nm,0.6s,mb3.0,baz=72,slow=17,SNR=4.1								
REDW	**Red Top Meadow**	**32.84**	**335**	*eP*		**P**	**02 59 48.5**	**+2.1**
comp=Z,7.9nm,1.0s,mb4.5								
ELK	**Elko**	**32.87**	**327**	*eP*		**P**	**02 59 48.5**	**+1.8**
comp=Z,0.9nm,0.6s,mb3.8								
SNOW	**Snow King Moun**	**32.89**	**335**	*eP*		**P**	**02 59 48.4**	**+1.5**
comp=Z,7.3nm,0.8s,mb4.6								
LOHW	**Long Hollow**	**32.95**	**335**	*eP*		**P**	**02 59 48.6**	**+1.3**
comp=Z,1.6nm,0.8s,mb3.9								
RRI2	**Red Ridge**	**33.03**	**334**	*eP*		**P**	**02 59 50.8**	**+2.7**
comp=Z,8.9nm,1.4s,mb4.4								
NVAR	**Mina Array Bea**	**33.03**	**321**	P		**P**	**02 59 52.2**	**+4.0**
comp=Z,0.8nm,0.7s,mb3.7,baz=150,slow=7.3,SNR=5.5								
EDM	**Edmonton**	**42.07**	**341**	*eP*		**P**	**03 01 04.2**	**+0.1**
EDM				*ep*P		pP	03 01 27.2	+5.0
SIV	**San Ignacio**	**43.33**	**133**	P		**P**	**03 01 13.6**	**-1.3**
comp=Z,0.7nm,0.6s,mb3.6,baz=269,slow=9.3,SNR=4.0								
SCHQ	**Schefferville**	**44.97**	**21**	P		**P**	**03 01 24.6**	**-2.8**
comp=Z,5.6nm,0.8s,mb4.3,baz=183,slow=7.7,SNR=3.8								
SCHQ				LR		LR	03 20 33.6	
comp=Z,63nm,19.2s,baz=336,slow=37								
YKA	**Yellowknife Ar**	**50.49**	**347**	P		**P**	**03 02 09.9**	**-0.1**
comp=Z,4.0nm,0.5s,mb4.6,baz=152,slow=7.3,SNR=22								
YKA	**Yellowknife Ar**	**50.49**	**347**	P		**P**	**03 02 09.9**	**-0.1**
BDFB	**Brasilia**	**53.15**	**123**	LR		LR	03 25 45.8	
comp=Z,31nm,18.2s,baz=34,slow=37								
RCBR	**Riachuelo**	**59.61**	**106**	*eP*		**P**	**03 03 15.4**	**-1.2**
comp=Z,7.9nm,0.7s,mb4.8								
EKA	**Eskdalemuir Ar**	**77.88**	**36**	P		**P**	**03 05 06.9**	**-2.5**
comp=Z,2.5nm,0.6s,mb4.1,baz=272,slow=6.6,SNR=9.6								
ESDC	**Sonseca Array**	**79.81**	**52**	P		**P**	**03 05 16.7**	**-3.7**
comp=Z,0.1nm,0.3s,mb3.1,baz=276,slow=5.3,SNR=4.7								
ESDC	**Sonseca Array**	**79.81**	**52**	P		**P**	**03 05 16.7**	**-3.7**
NOA	**NORSAR Array B**	**83.98**	**28**	LR		LR	03 45 52.3	
comp=Z,22nm,18.1s,baz=180,slow=38								
TORD	**Tordoi Ar. Bea**	**90.72**	**76**	P		**P**	**03 06 13.1**	**-2.2**
comp=Z,3.0nm,0.9s,mb3.4,baz=306,slow=5.3,SNR=2.9								
CN2	**Changchun**	**112.48**	**331**	*e*PKP	PKiKP		03 11 48.1	+0.3
HHC	**Hu-ho-hao-te**	**120.64**	**339**	*e*PKP	PKPdf		03 12 03.5	0.0
HHC				PP	PP		03 13 34.6	+3.9
HHC				PKS			03 15 38.3	
HHC				SKS	SKSdf		03 19 02.8	-6.4
HHC				SKKS	SKKSac		03 20 16.6	-8.2
HHC				PP	PP			
comp=Z,197nm,11.9s								
HHC				LR	LR			
comp=N,413nm,16.7s								
HHC				LR	LR			
comp=E,604nm,16.6s								
HHC				LR	LR			
comp=Z,375nm,19.0s								
WMQ	**Urumqi**	**122.02**	**360**	*e*PKP	PKPdf		03 12 06.0	-0.1
CD2	**Chengdu**	**132.28**	**341**	*e*PKP	PKPdf		03 12 24.9	-1.2
GYA	**Guiyang**	**135.28**	**335**	PDIF	Pdif		03 09 32.8	-0.8
GYA				PKP	PKPdf		03 12 31.6	-0.2
GYA				PP	PP		03 15 12.4	+5.4
GYA				PP	PP			
comp=Z,60nm,7.8s								
CMAR	**Chiang Mai Arr**	**145.42**	**341**	PKPbc	PKPbc		03 12 51.5	+1.2
comp=Z,1.4nm,0.4s,baz=343,slow=4.3,SNR=12								

NIED

BVAR	**Borovoye Array**	**46.16**	**307**	P	**P**		**03 25 34.9**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=69,slow=7.9,SNR=3.2							
BVAR	**Borovoye Array**	**46.16**	**307**	P	**P**		**03 25 34.9**	**-0.3**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
WRA	**Warramunga Arr**	**64.66**	**188**	P	**P**		**03 27 48.8**	**+0.3**
	comp=Z,0.7nm,1.0s,mb3.6,baz=2.9,slow=6.1,SNR=4.9							
WRA	**Warramunga Arr**	**64.66**	**188**	P	**P**		**03 27 48.8**	**+0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
ASAR	**Alice Springs**	**68.39**	**188**	P	**P**		**03 28 12.9**	**+0.6**
	comp=Z,1.1nm,1.1s,mb3.8,baz=12,slow=2.8,SNR=5.3							
ASAR	**Alice Springs**	**68.39**	**188**	P	**P**		**03 28 12.9**	**+0.6**
ASAR				pmax	pmax			
	comp=Z,1.0nm,1.1s							
TXAR	**Lajitas Array**	**85.04**	**53**	P	**P**		**03 29 46.7**	**+0.2**
	comp=Z,0.5nm,0.9s,mb3.7,baz=274,slow=3.4,SNR=4.5							
TXAR	**Lajitas Array**	**85.04**	**53**	P	**P**		**03 29 46.7**	**+0.2**
TXAR	**Lajitas Array**	**85.04**	**53**	P	**P**		**03 29 46.7**	**+0.2**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							

*ATH **21** 03:17:43.7, 37.71N×1959.E, h5km±4km, MD3.7/4*
*NEIC **21** 03:17:43.8, 37.70N×1960.E, h5km, MD3.7(ATH), After ATH.*
*CSEM **21** 03:17:46.7±0.2, 37.83N×1978.E, h5km, ML3.9/4, Error ellipse: s-maj=4.3km s-min=3.9km az=8.0*
*ISCJB **21** 03:17:47.0±0.5, 37.79N±003×1974.E±003, h10km, Error ellipse: s-maj=4.7km s-min=3.6km az=12.2*
*THE **21** 03:17:47.3, 37.79N×1981.E, h1km±2km, ML3.9/4, Error ellipse: s-maj=4.8km s-min=1.4km az=243.0*

ISC 21 03:17:48.0±0.5, 3777N±003×1975E±003, h10km, n43, σ0§94/63, 2C, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KFL	**Anninata**	**0.89**	**67**	P		**Pg**	**03 18 02.2**	**-3.0**
RLS	**Riolos of Patr**	**1.39**	**78**	*e*PB		**Pn**	**03 18 12.6**	**-0.9**
RLS				*e*SB		**Sn**	**03 18 33.9**	**+2.0**
PYL	**PYLOS**	**1.81**	**118**	P		**Pn**	**03 18 19.0**	**-0.3**
PYL				S		**Sn**	**03 18 42.1**	**-0.2**
IGT	**Igoumenitsa**	**1.82**	**14**	P		**Pn**	**03 18 18.4**	**-0.9**
IGT				S		**Sn**	**03 18 42.8**	**+0.4**
ITM	**Ithomi**	**1.83**	**108**	*e*PN		**Pn**	**03 18 20.3**	**+0.8**
KEK	**Kerkira**	**1.94**	**1**	*e*PN		**Pn**	**03 18 21.1**	**+0.1**
EVR	**Evrytania**	**1.98**	**54**	*e*PN		**Pn**	**03 18 22.5**	**+0.9**
EVR				*e*SN		**Sg**	**03 18 51.3**	**-0.5**
JAN	**Janina**	**2.07**	**24**	*e*PN		**Pn**	**03 18 23.6**	**+0.8**
JAN	**Janina**	**2.07**	**24**	*e*Pg		**Pn**	**03 18 24.6**	**+1.8**
AGG	**Agios Georgios**	**2.38**	**58**	P		**Pn**	**03 18 26.9**	**-0.2**
AGG				S		**Sn**	**03 18 56.1**	**-0.3**
THL	**Klokotos Trika**	**2.52**	**44**	P		**Pn**	**03 18 29.2**	**+0.2**
THL				S		**Sn**	**03 18 59.7**	**-0.1**
THL	**Klokotos Trika**	**2.52**	**44**	*e*Pn		**Pn**	**03 18 29.5**	**+0.5**
THL				S		**Sn**	**03 18 59.7**	**-0.1**
LTK	**Loutraki**	**2.56**	**83**	P		**Pn**	**03 18 28.3**	**-1.2**
LTK				S		**Sn**	**03 19 01.4**	**+0.7**
LKR	**Lokris**	**2.71**	**70**	P		**Pn**	**03 18 30.4**	**-1.2**
LKR				S		**Sn**	**03 19 05.7**	**+1.3**
LKR	**Lokris**	**2.71**	**70**	P		**Pn**	**03 18 31.8**	**+0.2**
TIP	**Timpagrande**	**2.73**	**302**	Pn		**Pn**	**03 18 32.7**	**+0.8**
DID	**Didima**	**2.78**	**94**	P		**Pn**	**03 18 32.0**	**-0.6**
DID				S		**Sn**	**03 19 06.1**	**-0.1**
GRI	**Girifalco**	**2.82**	**293**	Pn		**Pn**	**03 18 34.1**	**+1.0**
XOR	**Xorichti**	**3.13**	**58**	P		**Pn**	**03 18 37.1**	**-0.3**
LIT	**Litokhoron**	**3.16**	**42**	P		**Pn**	**03 18 37.8**	**0.0**
FNA	**Florina**	**3.26**	**22**	P		**Pn**	**03 18 39.3**	**+0.1**
FNA				S		**Sn**	**03 19 18.6**	**+0.5**
OHR	**Ohrid**	**3.43**	**13**	*e*Pn		**Pn**	**03 18 41.2**	**-0.4**
OHR				*e*Sn		**Sn**	**03 19 22.5**	**+0.2**
OHR	**Ohrid**	**3.43**	**13**	*e*Pn		**Pn**	**03 18 41.3**	**-0.3**
OHR				*e*Sn		**Sn**	**03 19 22.5**	**+0.2**
BIA	**Bitola**	**3.47**	**20**	P		**Pn**	**03 18 41.3**	**-0.7**
BIA	**Bitola**	**3.47**	**20**	*e*Pn		**Pn**	**03 18 41.5**	**-0.5**
BIA				*e*Sn		**Sn**	**03 19 23.5**	**+0.4**
BIA	**Bitola**	**3.47**	**20**	*e*Pn		**Pn**	**03 18 41.6**	**-0.4**
BIA				*e*Sn		**Sn**	**03 19 23.5**	**+0.4**
PE1	**Pezze di Greco**	**3.53**	**330**	*e*Pn		**Pn**	**03 18 39.8**	**-3.0**
PE1				*e*Sn		**Sn**	**03 19 23.9**	**-0.7**
LTRZ	**Laterza**	**3.63**	**322**	Pn		**Pn**	**03 18 43.7**	**-0.6**
KRUS	**Krusevo**	**3.78**	**17**	*e*Pn		**Pn**	**03 18 45.7**	**-0.6**
KRUS				*e*Sn		**Sn**	**03 19 30.9**	**+0.2**
KRUS	**Krusevo**	**3.78**	**17**	*e*Pn		**Pn**	**03 18 45.7**	**-0.6**
KRUS				*e*Sn		**Sn**	**03 19 31.0**	**+0.3**
GRG	**Griva**	**3.79**	**32**	P		**Pn**	**03 18 45.6**	**-0.8**
GRG				S		**Sn**	**03 19 33.0**	**+2.0**
HORT	**Hortiatis**	**3.84**	**42**	P		**Pn**	**03 18 46.5**	**-0.7**
SG1	**Sgolgore (BA)**	**3.88**	**323**	*e*Pn		**Pn**	**03 18 47.7**	**0.0**
HVZN	**Vizzini**	**4.05**	**263**	Pn		**Pn**	**03 18 49.6**	**-0.4**
SOH	**Sokhos**	**4.14**	**41**	P		**Pn**	**03 18 51.1**	**-0.1**
VAY	**Valandovo**	**4.16**	**31**	*e*Pn		**Pn**	**03 18 50.2**	**-1.4**
VAY				*e*Sn		**Sn**	**03 19 44.1**	**+3.8**
KNT	**Kendrikon**	**4.17**	**35**	P		**Pn**	**03 18 50.9**	**-0.8**
SGO	**Sicignano**	**4.43**	**315**	Pn		**Pn**	**03 18 57.3**	**+2.0**
WDD	**Wield Dalam**	**4.60**	**247**	P		**Pn**	**03 18 59.7**	**+2.1**
NVR	**Nevrokopi**	**4.78**	**40**	P		**Pn**	**03 19 01.3**	**+1.2**
IDI	**Anoyia**	**4.83**	**119**	P		**Pn**	**03 18 56.0**	**-4.7**
SOKA	**Soboth**	**9.56**	**340**	⇑*i*Pn		**Pn**	**03 20 04.5**	**-1.1**
	2.1nm,0.5s							
MOA	**Molln**	**10.84**	**340**	⇑*i*Pn		**Pn**	**03 20 22.7**	**-0.5**
	0.9nm,0.2s							

*IDC **21** 03:22:11.2±6.2, 2169N×1419.4E, h356km±61km, mb3.2/9, mb1 3.4/10, mb1mx3.2/25, mbtmp3.3/10, Error ellipse: s-maj=53.5km s-min=17.5km az=80.0*
*ISCJB **21** 03:22:14.6±7.4, 2160N±02×1418E±05, h406km±74km, mb3.4/9, Error ellipse: s-maj=70.3km s-min=24.5km az=171.0*

ISC 21 03:22:10.7±6.5, 2170N±02×1420E±05, h353km±61km, n10, σ1§04/10, mb3.4/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSRS	**Korea Array**	**19.86**	**325**	P		**P**	**03 26 16.4**	**-0.5**
	0.7nm,0.3s,baz=146,slow=8.7,SNR=19							
SONM	**Songino Array**	**38.62**	**321**	P		**P**	**03 29 01.5**	**+0.4**
	0.7nm,0.4s,mb3.2,baz=130,slow=7.7,SNR=8.8							
CMAR	**Chiang Mai Arr**	**40.44**	**273**	P		**P**	**03 29 14.8**	**-1.5**
	0.6nm,0.3s,mb3.3,baz=74,slow=4.0,SNR=5.2							
WRA	**Warramunga Arr**	**42.04**	**191**	P		**P**	**03 29 29.6**	**+0.5**
	0.1nm,0.3s,mb2.5,baz=13,slow=9.2,SNR=8.3							
ZALV	**Zalesovo Beam**	**53.51**	**322**	P		**P**	**03 30 55.9**	**0.0**
	0.6nm,0.3s,mb3.4,baz=121,slow=7.1,SNR=4.7							
MKAR	**Makanchi Array**	**53.87**	**313**	P		**P**	**03 31 00.2**	**+1.6**
	0.3nm,0.5s,mb2.9,baz=85,slow=9.7,SNR=6.2							
KURK	**Kurchatov**	**56.71**	**317**	P		**P**	**03 31 19.4**	**+0.9**
	0.7nm,0.4s,mb3.3,baz=93,slow=7.6,SNR=3.5							
BVAR	**Borovoye Array**	**61.94**	**320**	P		**P**	**03 31 54.9**	**+1.0**
	0.5nm,0.3s,mb3.5,baz=98,slow=9.1,SNR=3.6							
ARCES	**ARCESS Array B**	**78.57**	**341**	P		**P**	**03 33 33.0**	**-0.5**
	7.6nm,1.1s,mb4.4,baz=52,slow=10,SNR=3.3							
HFS	**Hagfors**	**88.29**	**337**	P		**P**	**03 34 20.7**	**-1.9**
	1.6nm,0.8s,mb3.9,baz=89,slow=9.2,SNR=4.9							

*ISCJB **21** 03:24:26.0±0.4, 5902S±007×255W±02, h10km, mb4.5/17, MS3.6/5, Error ellipse: s-maj=12.8km s-min=8.0km az=149.2*
*IDC **21** 03:24:26.1±0.6, 5895S×2557W, h0km, mb4.4/13, mb1 4.4/13, mb1mx4.4/19, mbtmp4.4/13, MS3.7/6, Ms1 3.7/6, ms1mx3.4/19, Error ellipse: s-maj=19.8km s-min=16.3km az=58.0*
*NEIC **21** 03:24:34.3±2.7, 5898S×2566W, h62km±23km, mb4.5/9, Error ellipse: s-maj=9.6km s-min=8.2km az=218.0*

ISC 21 03:24:26.9±6.1, 5902S±009×255W±02, h4km±39km, n48, σ0§93/31, mb4.5/17, MS3.6/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	**Neumayer--Stat**	**13.70**	**155**	*e*P		**Pn**	**03 27 42.6**	**+1.0**
VNA1				*e*			03 27 45.4	
VNA3	**Neumayer Olymp**	**13.88**	**158**	*e*P		**Pn**	**03 27 44.4**	**+0.3**
VNA3				*e*			03 27 47.1	
VNA2	**Neumayer--Watz**	**14.10**	**155**	*e*P		**Pn**	**03 27 47.0**	**0.0**
	baz=310,slow=13							
VNA2				*e*			03 27 50.3	
VNA2				*e*S		**Sn**	**03 30 10.6**	**-13**
SNAA	**Sanae**	**15.66**	**153**	*e*P		**Pn**	**03 28 05.3**	**-2.7**
SNAA				*e*			03 28 07.6	
SNAA				*e*S		Sn	03 30 44.4	-17
SNAA	**Sanae**	**15.66**	**153**	*e*Pn		**Pn**	**03 28 05.2**	**-2.8**
	22nm,0.6s							
PMSA	**Palmer Station**	**18.79**	**236**	LR		LR	03 34 30.2	
	comp=Z,242nm,19.8s,baz=181,slow=32							
MAIT	**Maitri**	**19.29**	**143**	*e*P		**Pn**	**03 28 51.5**	**-1.6**
USHA	**Ushuaia**	**23.47**	**261**	P		**P**	**03 29 38.2**	**+1.0**
	7.2nm,0.6s,mb4.3,baz=112,slow=11,SNR=6.8							
USHA				LR		LR	03 35 49.7	
	comp=Z,77nm,19.6s,MS3.2,baz=48,slow=29							
QSPA	**South Pole Qui**	**31.22**	**180**	P		**P**	**03 30 48.5**	**+1.9**
	9.9nm,0.5s,mb4.9,baz=212,slow=2.4,SNR=37							
PLCA	**Paso Flores**	**33.47**	**283**	P		**P**	**03 31 05.8**	**-0.9**
	1.7nm,0.7s,mb4.1,baz=148,slow=13,SNR=5.3							
PLCA				LR		LR	03 42 29.2	
	comp=Z,70nm,18.9s,MS3.4,baz=176,slow=32							
PLCA	**Paso Flores**	**33.47**	**283**	*e*P		**P**	**03 31 06.0**	**-0.8**
	5.1nm,1.1s,mb4.4							
PLCA				LR		LR	03 42 29.1	
MAW	**Mawson**	**37.25**	**141**	P		**P**	**03 31 38.9**	**0.0**
	1.4nm,0.5s,mb4.1,baz=228,slow=14,SNR=4.4							
CFAA	**Coronel Fontan**	**39.59**	**295**	P		**P**	**03 31 58.4**	**-0.6**
	0.7nm,0.5s,mb3.6,baz=157,slow=7.7,SNR=13							
CFAA	**Coronel Fontan**	**39.59**	**295**	P		**P**	**03 31 58.4**	**-0.6**
SUR	**Sutherland**	**40.69**	**70**	LR		LR	03 43 38.4	
	comp=Z,321nm,20.9s,MS4.2,baz=324,slow=28							
LCO	**Las Campanas**	**42.92**	**294**	*e*P		**P**	**03 32 26.3**	**-0.1**
	14nm,1.1s,mb4.6							
VNDA	**Vanda**	**43.63**	**182**	P		**P**	**03 32 33.4**	**+1.8**
	6.3nm,0.6s,mb4.5,baz=184,slow=6.9,SNR=80							
VNDA				LR		LR	03 48 51.7	
	comp=Z,71nm,21.1s,MS3.5,baz=77,slow=34							
VNDA	**Vanda**	**43.63**	**182**	*e*P		**P**	**03 32 33.1**	**+1.4**
	6.0nm,0.6s,mb4.5							
VNDA				LR		LR	03 48 51.7	
BDFB	**Brasilia**	**46.39**	**329**	P		**P**	**03 32 54.5**	**+0.3**
	0.7nm,0.3s,mb4.0,baz=180,slow=13,SNR=3.8							
LBTB	**Lobatse**	**49.13**	**69**	P		**P**	**03 33 16.0**	**+0.6**
	3.8nm,0.8s,mb4.5,baz=190,slow=5.7,SNR=3.5							
TSUM	**Tsumeb**	**50.46**	**57**	*e*P		**P**	**03 33 26.2**	**+0.6**
	2.7nm,0.6s,mb4.5							
LPAZ	**La Paz**	**52.83**	**305**	P		**P**	**03 33 42.7**	**-0.6**
	0.9nm,0.4s,mb4.1,baz=127,slow=5.1,SNR=5.9							
LPAZ	**La Paz**	**52.83**	**305**	*e*P		**P**	**03 33 42.6**	**-0.7**
	1.1nm,0.6s,mb4.0							
LSZ	**Lusaka**	**58.70**	**66**	*e*P		**P**	**03 34 25.6**	**+0.2**
	2.9nm,0.8s,mb4.4							
DBIC	**Dimbokro**	**67.55**	**22**	P		**P**	**03 35 24.0**	**-0.1**
	3.4nm,0.7s,mb4.5,baz=191,slow=5.3,SNR=5.0							
DBIC	**Dimbokro**	**67.55**	**22**	*e*P		**P**	**03 35 23.8**	**-0.3**
	39nm,1.7s,mb5.2							
ROSC	**El Rosal**	**74.48**	**309**	LR		LR	04 11 34.5	
	comp=Z,53nm,18.4s,MS3.9,baz=3.2,slow=38							
TOA0	**Torodi Ar. Sit**	**75.25**	**27**	*e*P		**P**	**03 36 10.6**	**0.0**
TORD	**Torodi Ar. Bea**	**75.25**	**27**	P		**P**	**03 36 11.2**	**+0.6**
	7.8nm,0.6s,mb4.8,baz=198,slow=6.4,SNR=146							
FORT	**Forest**	**87.88**	**157**	*e*P		**P**	**03 37 17.1**	**-0.3**
	9.1nm,0.6s,mb5.2							
STKA	**Stephens Creek**	**88.81**	**169**	P		**P**	**03 37 20.5**	**-1.2**
	2.7nm,0.7s,mb4.7,baz=170,slow=12,SNR=5.5							
STKA	**Stephens Creek**	**88.81**	**169**	P		**P**	**03 37 20.5**	**-1.2**
ASAR	**Alice Springs**	**95.88**	**161**	P		**P**	**03 37 53.7**	**-0.8**
	2.2nm,0.7s,mb4.7,baz=186,slow=4.1,SNR=22							
PDAR	**Pinedale Array**	**122.64**	**300**	PKP		PKPdf	03 43 20.7	-2.0
	0.3nm,0.4s,baz=132,slow=5.3,SNR=4.9							
NOA	**NORSAR Array B**	**123.09**	**20**	PKP		PKPdf	03 43 21.2	-1.8
	2.7nm,1.0s,baz=185,slow=1.7,SNR=3.8							
NOA	**NORSAR Array B**	**123.09**	**20**	PKP		PKPdf	03 43 21.2	-1.8
NVAR	**Mina Array Bea**	**123.33**	**290**	PKP		PKPdf	03 43 24.9	+0.7
	0.4nm,0.6s,baz=68,slow=7.9,SNR=3.6							
BRVK	**Borovoye**	**135.56**	**59**	*e*PKPdf		PKPdf	03 43 46.4	-0.5
BVAR	**Borovoye Array**	**135.58**	**59**	PKP		PKPdf	03 43 46.1	-0.8
	1.5nm,0.6s,baz=168,slow=3.6,SNR=4.7							
MKAR	**Makanchi Array**	**136.94**	**73**	PKP		PKPdf	03 43 49.5	-0.1
	0.4nm,0.6s,baz=48,slow=2.1,SNR=2.7							
KURK	**Kurchatov**	**137.82**	**67**	PKP		PKPdf	03 43 51.0	-0.1
	0.5nm,0.3s,baz=223,slow=2.2,SNR=2.9							
YKA	**Yellowknife Ar**	**138.95**	**315**	PKP		PKPdf	03 43 52.0	-0.8
	5.6nm,0.6s,baz=130,slow=2.1,SNR=30							
YKA	**Yellowknife Ar**	**138.95**	**315**	PKP		PKPdf	03 43 52.0	-0.8
YKW3	**Yellowknife Ar**	**138.99**	**315**	*e*PKPdf		PKPdf	03 43 51.6	-1.3
RES	**Resolute Bay**	**140.95**	**337**	*e*PKPdf		PKPdf	03 43 55.9	-0.3
ZALV	**Zalesovo Beam**	**142.81**	**66**	PKhKP			03 43 55.2	
	0.7nm,0.4s,baz=243,slow=6.3,SNR=2.4							
INK	**Inuvik**	**148.64**	**317**	*e*PKPbc		PKPbc	03 44 12.2	-1.1
SONM	**Songino Array**	**149.91**	**90**	PKPbc		PKPbc	03 44 16.5	-0.6
	1.4nm,0.3s,baz=220,slow=3.6,SNR=11							

*ISCJB **21** 03:25:55.7±2.0, 4719N±02×1529E±02, h69km±17km, mb3.7/9, Error ellipse: s-maj=34.1km s-min=14.2km az=150.1*
*IDC **21** 03:25:58.0±2.9, 4714N×1528.6E, h77km±26km, mb3.5/10, mb1 3.7/12, mb1mx3.5/26, mbtmp3.5/12, Error ellipse: s-maj=35.0km s-min=17.3km az=166.0*
*MOS **21** 03:25:59.3±1.8, 4724N×1525.2E, h95km, mb4.1/3, Error ellipse: s-maj=26.7km s-min=16.0km az=68.8*

ISC 21 03:25:58.2±1.7, 472N±02×1528E±02, h75km±14km, n19, σ0§52/19, mb3.7/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**4.13**	**30**	*e*PN		**Pn**	**03 27 05.0**	**+6.3**
SKR				*e*			03 27 45.0	
PETK	**Petropavlovsk-**	**6.72**	**26**	P		**Pn**	**03 27 34.2**	**+0.2**
	0.3nm,0.3s,baz=175,slow=12,SNR=7.2							
ASAJ	**Asahikawa**	**7.79**	**251**	P		**Pn**	**03 27 48.2**	**-0.5**
	0.7nm,0.3s,baz=68,slow=19,SNR=3.5							
ASAJ	**Asahikawa**	**7.79**	**251**	PN		**Pn**	**03 27 48.3**	**-0.5**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
KSRS	**Korea Array**	**20.74**	**251**	P		**P**	**03 30 33.7**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=55,slow=9.3,SNR=3.0							
MKAR	**Makanchi Array**	**46.58**	**297**	P		**P**	**03 34 17.9**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.2,baz=62,slow=6.8,SNR=3.4							
MKAR				PcP		PcP	03 35 50.9	-0.3
	comp=Z,0.2nm,0.6s,baz=35,slow=3.5,SNR=2.8							
KURK	**Kurchatov**	**46.97**	**303**	P		**P**	**03 34 20.6**	**-0.6**
	comp=Z,0.5nm,0.2s,mb3.8,baz=70,slow=8.2,SNR=3.4							
KURK	**Kurchatov**	**46.97**	**303**	P		**P**	**03 34 20.6**	**-0.7**
KURK				pmax		pmax		
	comp=Z,1.0nm,0.2s,mb4.2							
NVAR	**Mina Array Bea**	**62.41**	**62**	P		**P**	**03 36 13.3**	**+0.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=270,slow=6.9,SNR=2.8							
PDAR	**Pinedale Array**	**64.66**	**54**	P		**P**	**03 36 27.6**	**-0.2**
	comp=Z,0.4nm,0.9s,mb3.2,baz=302,slow=10,SNR=3.5							
NB2	**NORSAR Subarra**	**67.77**	**341**	P		**P**	**03 36 47.7**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**67.77**	**341**	P		**P**	**03 36 47.5**	**+0.2**
	comp=Z,1.0nm,0.5s,mb3.9,baz=28,slow=6.3,SNR=8.2							
NOA	**NORSAR Array B**	**67.77**	**341**	*e*P		**P**	**03 36 48.1**	**+0.7**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.5s							
HFS	**Hagfors**	**68.00**	**339**	P		**P**	**03 36 49.2**	**+0.4**
	comp=Z,3.0nm,0.4s,mb4.4,baz=55,slow=6.0,SNR=26							
AKASG	**Malin Array Be**	**71.09**	**326**	P		**P**	**03 37 07.5**	**-0.5**
	comp=Z,1.6nm,0.3s,mb4.3,baz=31,slow=6.0,SNR=5.5							
AKASG	**Malin Array Be**	**71.09**	**326**	*e*P		**P**	**03 37 08.1**	**+0.1**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.4s							
TXAR	**Lajitas Array**	**77.45**	**60**	P		**P**	**03 37 44.2**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.2,baz=302,slow=3.8,SNR=5.3							
TXAR	**Lajitas Array**	**77.45**	**60**	*e*P		**P**	**03 37 45.5**	**+0.1**
GERES	**GERESS Array B**	**77.99**	**334**	P		**P**	**03 37 48.1**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.3,baz=29,slow=8.4,SNR=3.3							

*IDC **21** 03:30:07.1±0.4, 3109N×9637.E, h0km, mb4.7/31, mb1 4.7/31, mb1mx4.7/32, mbtmp4.7/31, MS4.2/21, Ms1 4.2/21, ms1mx4.1/34, Error ellipse: s-maj=15.0km s-min=10.6km az=56.0*
*BJI **21** 03:30:08.7, 2263N×9639.E, h45km, mB5.1, mb5.1, Ms4.7, Msz4.5*
*ISCJB **21** 03:30:11.9±0.2, 3106N±003×9632E±003, h42km, mb5.1/153, MS4.3/36, Error ellipse: s-maj=4.4km s-min=3.1km az=36.2*
*DJA **21** 03:30:12, 2295N×9610.E, h25km, Mw5.5/4*
*GCMT **21** 03:30:13.2±0.4, 2281N×9619.E, h41km±1km, MW4.9/55, Moment Tensor Solution. s24,c34; s55,c72; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.04±.17; Mθθ -1.46±.10; Mϕϕ -0.57±.14; Mrθ 1.57±.09; Mθϕ 1.22±.10; Mϕr~0.50±.11; Best double couple: M0 2.73700×10^16 NP1: ϕs 318.00000°, δ28.00000°, λ111.00000°. NP2: ϕs 114.00000°, δ64.00000°, λ79.00000°. Principal axes: T 2.6410, Plg69.0000°, Azm2.0000°; N 0.1930, Plg10.0000°, Azm119.0000°; P -2.8320, Plg18.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 03:30:13.2±0.2, 3106N×9636.E, mb5.1/47 Error ellipse: s-maj=5.5km s-min=3.5km az=46.0*
*MOS **21** 03:30:13.7±1.1, 3.18N×9643.E, h57km, mb5.4/60, Error ellipse: s-maj=10.1km s-min=4.3km az=115.2*
*SZGRF **21** 03:30:19.2, 387N×9523.E, h44km, mb5.1, Off west coast of northern Sumatera, Indonesia*

ISC 21 03:30:13.9±0.2, 306N±003×9632E±002, h44km, h44km±.9km: pP-P, n426, σ0§97/411, mb5.1/153, MS4.3/36, 40C-22D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSI	**Gunungsitoli**	**2.15**	**144**	P		**Pn**	**03 30 45.3**	**-2.0**
BSI	**Banda Aceh**	**2.63**	**337**	P		**Pn**	**03 30 54.0**	**+0.1**
TRSI	**Tarutung**	**2.83**	**111**	P		**Pn**	**03 30 57.1**	**+0.4**
IPM	**Ipoh**	**4.91**	**73**	⇓P		**Pn**	**03 31 26.6**	**+1.4**
IPM	**Ipoh**	**4.91**	**73**	P		**Pn**	**03 31 26.1**	**+0.9**
	271nm,0.7s,5μm1.4nm							
FRIM	**Kepong**	**5.30**	**88**	⇑P		**Pn**	**03 31 32.0**	**+1.3**
PPI	**Padang Panjang**	**5.37**	**130**	P		**Pn**	**03 31 32.2**	**+0.6**
	111nm,1.0s,2μm0.8nm							
PDSI	**Padang**	**5.72**	**134**	P		**Pn**	**03 31 38.1**	**+1.7**
	114nm,0.6s,5μm1.2nm							
SNG	**Songkhla**	**5.92**	**46**	P		**Pn**	**03 31 40.0**	**+0.8**
	500nm,1.0s							
KGM	**Kluang**	**7.07**	**98**	⇓P		**Pn**	**03 31 56.4**	**+1.5**
KTGM	**Kuala Trenggan**	**7.16**	**71**	⇓P		**Pn**	**03 31 57.5**	**+1.3**
MYKOM	**Kota Tinggi**	**7.63**	**99**	⇓P		**Pn**	**03 32 04.3**	**+1.7**
MYKOM	**Kota Tinggi**	**7.63**	**99**	P		**Pn**	**03 32 03.3**	**+0.6**
KSI	**Kapahiang**	**9.15**	**137**	P		**Pn**	**03 32 22.8**	**-0.7**
	204nm,1.1s							
KLI	**Kotabumi**	**11.61**	**133**	P		**Pn**	**03 33 01.7**	**+4.6**
TPI	**Tanjungpandan**	**12.72**	**117**	P		**Pn**	**03 33 14.2**	**+1.9**
NST	**Nakhon Sawan**	**13.09**	**16**	P		**Pn**	**03 33 19.0**	**+1.7**
KSM	**Kuching**	**14.07**	**96**	*e*Pn		**Pn**	**03 33 30.8**	**0.0**
BDT	**Bhumibol Dam**	**14.34**	**10**	P		**Pn**	**03 33 36.0**	**+1.6**
KKTK	**Khon Kaen**	**14.66**	**25**	⇑P		**Pn**	**03 33 44.5**	**+5.8**
	3μm,0.4s							
STKI	**Sintang**	**15.44**	**101**	P		**Pn**	**03 33 52.0**	**+3.1**
	61nm,0.9s							
CM31	**Chiang Mai Arr**	**15.52**	**9**	*e*P		**Pn**	**03 33 48.4**	**-1.4**
	44nm,1.0s							
CMAR	**Chiang Mai Arr**	**15.52**	**9**	Pn		**Pn**	**03 33 50.2**	**+0.4**
	3.5nm,0.3s,baz=199,slow=11,SNR=62							
CMAR				LR		LR	03 39 56.4	
	comp=Z,1μm,20.6s,baz=187,slow=38							
CHG	**Chiang Mai**	**15.87**	**9**	⇓P		**Pn**	**03 33 54.8**	**+0.5**
	23nm,0.8s							
CHTO	**Chiang Mai**	**15.87**	**9**	*e*P		**Pn**	**03 33 54.4**	**+0.1**
	19nm,0.9s							
CHTO	**Chiang Mai**	**15.87**	**9**	*e*P		**Pn**	**03

KAD Karad 25.93 305 ex P 03 35 41.4 -0.9
JIRN Jiri 26.31 339 eP P 03 35 45.7 +0.1
comp=Z,105nm,0.7s,mb5.5
PKI Pulchoki 26.51 338 eP P 03 35 48.4 +1.0
comp=Z,37nm,0.6s,mb5.1
PKIN Phulchoki 26.52 338 eP P 03 35 48.0 +0.5
GUN Gumba 26.65 339 eP P 03 35 48.7 +0.1
comp=Z,75nm,0.6s,mb5.4
DMN Daman 26.66 337 eP P 03 35 50.0 +1.2
comp=Z,59nm,0.8s,mb5.2
KKN Kakani 26.76 338 eP P 03 35 49.3 -0.3
comp=Z,102nm,0.9s,mb5.4
POO Poona 26.84 307 ex x 03 36 04.0
LSA Lhasa 26.95 350 P P 03 35 50.6 -0.7
LSA XP sP 03 36 10.0 +1.7
LSA S S 03 40 18.1 -7.4
LSA AMB AMB
comp=Z,40nm,0.9s,mb5.0
LSA AMB AMB
comp=Z,280nm,5.0s
LSA LR LR
comp=N,270nm,22.0s,MS3.9
LSA LR LR
comp=E,240nm,22.0s,MS3.9
LSA LR LR
comp=Z,530nm,22.0s,MS4.1
LSA Lhasa 26.95 350 eP P 03 35 51.0 -0.3
comp=Z,63nm,0.8s,mb5.2
LSA Lhasa 26.95 350 eP P 03 35 51.0 -0.3
LSA pmax pmax
comp=Z,63nm,0.8s,mb5.2
BHPL Bhopal 27.15 319 eP P 03 35 54.4 +1.2
BHPL AMb AMB 03 35 55.6
comp=Z,26nm,1.0s,mb4.7
GKN Gorkha 27.19 337 eP P 03 35 53.4 -0.2
comp=Z,85nm,0.7s,mb5.4
KOLN Koldanda 27.41 335 eP P 03 35 55.8 +0.3
comp=Z,146nm,0.8s,mb5.6
DANN Dangsing 27.85 336 eP P 03 35 59.4 -0.1
comp=Z,55nm,0.4s,mb5.5
PYUN Piuthan 27.96 334 eP P 03 36 00.7 +0.3
comp=Z,47nm,0.5s,mb5.3
CD2 Chengdu 28.58 13 eP P 03 36 05.8 -0.1
CD2 AP pP 03 36 17.5 -0.2
CD2 XP sP 03 36 23.0 0.0
CD2 PP PP 03 36 59.8 -11
CD2 PCP PcP 03 39 14.6 -1.9
CD2 S S 03 40 50.6 -0.6
CD2 XS sS 03 41 10.9 -0.1
CD2 SS SS 03 42 20.3 -33
CD2 AMB AMB
comp=Z,30nm,0.7s,mb5.1
CD2 AMB AMB
comp=Z,180nm,4.6s
CD2 LR LR
comp=N,820nm,15.6s,MS4.7
CD2 LR LR
comp=E,1μm,12.0s,MS4.7
CD2 LR LR
comp=Z,280nm,16.8s,MS3.9
BATI Baumata 30.25 116 P P 03 36 17.3 -3.7
comp=Z,15nm,0.3s,mb5.2,baz=358,slow=1.5,SNR=3.7
LGTI Lohaghat 30.36 331 eP P 03 36 21.7 0.0
PTH Pithoragarh 30.46 332 eP P 03 36 23.9 +1.3
AJM Ajmer 31.21 320 eP P 03 36 30.8 +1.5
AJM AMb AMB 03 36 31.8
comp=Z,38nm,0.8s,mb5.3
NDI New Delhi 31.30 326 eP P 03 36 28.0 -2.1
DDI Dehra Dun 32.16 329 eP P 03 36 35.2 -2.3
WHN Wuhan 32.22 30 ⇑P P 03 36 38.5 +0.4
XAN Xi'an 32.99 19 P P 03 36 43.3 -1.5
XAN AP pP 03 36 54.5 -2.1
XAN XP sP 03 37 00.1 -1.8
XAN PP PP 03 37 53.1 -6.9
XAN S S 03 41 56.6 -3.6
XAN AMB AMB
comp=Z,21nm,1.0s,mb5.0
XAN AMB AMB
comp=Z,93nm,4.3s
XAN LR LR
comp=N,302nm,18.3s,MS4.3
XAN LR LR
comp=E,465nm,14.4s,MS4.3
XAN LR LR
comp=Z,1μm,18.7s,MS4.6
MBWA Marble Bar 33.25 137 eP P 03 36 45.9 -1.3
comp=Z,45nm,1.3s,mb5.2
SMLA Simla 33.26 329 eP P 03 36 47.4 +0.3
SMLA AMb AMB 03 36 48.7
comp=Z,73nm,0.9s,mb5.6
LZH Lanzhou 33.59 11 eP P 03 36 54.5 +4.5
LZH AP pP 03 37 06.8 +4.9
LZH XP sP 03 37 11.9 +4.8
LZH PP PP 03 38 08.3 +1.6
LZH eS S 03 42 15.3 +5.8
LZH XS sS 03 42 35.4 +6.0
LZH SS SS 03 44 18.5 -18
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,135nm,4.9s
LZH LR LR
comp=E,849nm,16.0s
LZH LR LR
comp=Z,1μm,17.8s,MS4.7
DLH Dalhousie 35.00 329 eP P 03 37 02.0 -0.2
THN Thein Dam 35.04 329 eP P 03 37 02.0 -0.6
NJ2 Nanjing 35.79 34 eP P 03 37 10.1 +1.1
NJ2 AP pP 03 37 21.3 +0.3
NJ2 XP sP 03 37 27.8 +1.6
NJ2 PP PP 03 38 32.1 +1.1
NJ2 S S 03 42 45.5 +2.1
NJ2 XS sS 03 43 06.0 +2.6
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
NJ2 AMB AMB
comp=Z,90nm,6.0s
NJ2 LR LR
comp=N,230nm,24.2s,MS4.1
NJ2 LR LR
comp=E,360nm,26.2s,MS4.1
NJ2 LR LR
comp=Z,350nm,26.4s,MS4.0
GTA Gaotai 36.32 5 P P 03 37 12.8 -0.7
GTA AP pP 03 37 25.3 -0.1
GTA XP sP 03 37 30.4 -0.3
GTA PCP PcP 03 39 38.6 +1.0
GTA S S 03 42 51.4 0.0
GTA XS sS 03 43 11.3 -0.1
GTA SS SS 03 45 18.8 -13
GTA AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
GTA AMB AMB
comp=Z,179nm,7.5s
GTA LR LR
comp=N,372nm,15.0s,MS4.3
GTA LR LR
comp=E,259nm,16.5s,MS4.3
GTA LR LR
comp=Z,413nm,16.5s,MS4.3
SSE Sheshan 36.45 37 P P 03 37 14.5 -0.2
SSE XP sP 03 37 30.8 -1.1
SSE PP PP 03 38 38.4 +0.1
SSE S S 03 42 54.9 +1.3
SSE XS sS 03 43 13.9 +0.4
SSE AMB AMB
comp=Z,30nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,196nm,6.5s
SSE LR LR
comp=N,302nm,22.5s,MS4.3
SSE LR LR
comp=E,443nm,22.5s,MS4.3
SSE LR LR
comp=Z,607nm,19.4s,MS4.4
JOW Kunigami 38.66 49 LR LR 03 53 16.0
comp=Z,250nm,19.2s,MS4.0,baz=98,slow=36
KAKA Kakadu 39.15 114 P Px 03 37 22.5
HHC Hu-ho-hao-te 40.06 18 eP P 03 37 46.1 +1.2
HHC AP pP 03 37 58.9 +1.9
HHC XP sP 03 38 03.8 +1.6
HHC PP PP 03 39 23.4 +5.7
HHC PCP PcP 03 39 51.9 +2.7
HHC S S 03 43 48.6 +0.7
HHC XS sS 03 44 08.8 +0.8
HHC SS SS 03 46 41.0 -5.6
HHC SCS ScS 03 47 46.4 -1.7
HHC AMB AMB
comp=Z,30nm,1.2s,mb4.9
HHC AMB AMB
comp=Z,171nm,8.3s
HHC LR LR
comp=N,413nm,20.2s,MS4.5
HHC LR LR
comp=E,604nm,19.0s,MS4.5
HHC LR LR
comp=Z,375nm,17.8s,MS4.3
KBL Kabul 40.30 324 eP P 03 37 47.0 -0.1
comp=Z,6.4nm,0.6s,mb4.5
KBL Kabul 40.30 324 eP P 03 37 47.0 -0.1
KBL pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
KSH Kashi 40.72 336 eP P 03 37 51.3 +0.8
KSH eAP pP 03 38 03.5 +1.0
KSH eXP sP 03 38 08.8 +1.1
KSH ePP PP 03 39 28.5 +3.5
KSH ePCP PcP 03 39 53.3 +2.0
KSH eSCP ScP 03 43 37.5 0.0
KSH ePCS PcS 03 43 42.6 +0.5
KSH eS S 03 43 57.5 -0.4
KSH eXS sS 03 44 17.8 -0.2
KSH eSCS ScS 03 47 50.8 -1.4
KSH AMB AMB
comp=Z,419nm,3.0s
NWAO Narrogin (SRO) 40.90 153 P P 03 37 51.2 -0.8
comp=Z,9.7nm,0.8s,mb4.5,baz=334,slow=6.5,SNR=4.8
NWAO Narrogin (SRO) 40.90 153 eP P 03 37 51.9 -0.1
comp=Z,52nm,1.3s,mb5.0
NWAO Narrogin (SRO) 40.90 153 eP P 03 37 51.9 -0.1
NWAO pmax pmax
comp=Z,52nm,1.3s
BJT Baijiatuan 40.95 23 eP P 03 37 52.6 +0.3
comp=Z,67nm,0.6s,mb5.5
BJT Baijiatuan 40.95 23 eP P 03 37 52.6 +0.3
BJT pmax pmax
comp=Z,67nm,0.6s
BJI Beijing 40.97 23 P P 03 37 53.1 +0.6
BJI PP PP 03 39 27.9 +0.2
BJI S S 03 44 04.3 +2.7
BJI XS sS 03 44 23.0 +1.3
BJI AMB AMB
comp=Z,100nm,0.7s,mb5.5
BJI LR LR
comp=Z,200nm,18.2s,MS4.0
WMQ Urumqi 41.30 351 P P 03 37 55.0 -0.1
WMQ AP pP 03 38 07.0 -0.2
WMQ XP sP 03 38 13.0 +0.6
WMQ PP PP 03 39 34.0 +2.8
WMQ S S 03 44 06.0 -0.3
WMQ SS SS 03 47 05.0 -6.3
WMQ AMB AMB
comp=Z,31nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,68nm,3.0s
WMQ LR LR
comp=N,156nm,14.0s,MS4.2
WMQ LR LR
comp=E,198nm,15.0s,MS4.2
WMQ LR LR
comp=Z,169nm,14.0s,MS4.1
ULHL Ulahol 42.95 338 P P 03 38 09.3 +0.7
SNR=22
KZA Kyzart 43.19 337 P P 03 38 11.8 +1.3
SNR=22
UCH Uchtor 43.60 336 P P 03 38 15.3 +1.4
SNR=13
WRA Warramunga Arr 43.77 123 P P 03 38 14.2 -1.4
comp=Z,9.8nm,0.6s,mb4.7,baz=302,slow=9.2,SNR=64
WRA LR LR 03 57 26.5
comp=Z,187nm,21.5s,MS4.0,baz=275,slow=38
TKM2 Tokmak 2 43.77 338 eP P 03 38 15.6 +0.3
comp=Z,38nm,0.9s,mb5.1
TKM2 epP pP 03 38 30.2 +2.8
TKM2 Tokmak 2 43.77 338 eP P 03 38 15.6 +0.4
TKM2 e*PP pP 03 38 30.2 +2.8
TKM2 pmax pmax
comp=Z,37nm,0.9s,mb5.1
TKM2 Tokmak 2 43.77 338 P P 03 38 16.2 +0.9
SNR=23
WRAB Tennant Creek 43.78 123 P P 03 38 14.0 -1.6
comp=Z,318nm,1.1s,mb6.0,SNR=7.8
WRAB Tennant Creek 43.78 123 eP P 03 38 14.4 -1.2
comp=Z,52nm,1.0s,mb5.2
WRAB epP pP 03 38 25.7 -2.1
WRAB Tennant Creek 43.78 123 eP P 03 38 14.4 -1.2
WRAB e*PP pP 03 38 25.7 -2.1
WRAB pmax pmax
comp=Z,52nm,1.0s,mb5.2
WRAB Tennant Creek 43.78 123 P P 03 38 15.3 -0.3
comp=Z,54nm,0.9s,mb5.3
WB2 Warramunga Arr 43.78 123 eP P 03 38 14.2 -1.4
WB2 epP pP 03 38 25.5 -2.4
KBK Karagaybulak 43.80 337 P P 03 38 16.9 +1.5
SNR=52
AML Almayashu 43.86 336 eP P 03 38 17.0 +1.1
comp=Z,95nm,1.0s,mb5.5
AML Almayashu 43.86 336 P P 03 38 17.4 +1.5
SNR=67
AAK Ala-Archa 43.95 337 P P 03 38 18.0 +1.3
comp=Z,263nm,0.7s,mb6.1,SNR=13
AAK Ala-Archa 43.95 337 P P 03 38 18.0 +1.3
SNR=27
FRU Bishkek 44.08 337 eP P 03 38 18.0 +0.3
FRU e pP 03 38 30.0 +0.2
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.3
CHMS Chumysh 44.16 337 P P 03 38 18.7 +0.4
SNR=14
EKS2 Erkin-Say 44.26 336 eP P 03 38 20.0 +0.8
comp=Z,35nm,0.8s,mb5.1
EKS2 Erkin-Say 44.26 336 P P 03 38 20.5 +1.4
SNR=35
USP Ospenovka 44.49 337 P P 03 38 21.7 +0.8
SNR=101
KSRS Korea Array 44.85 36 P P 03 38 22.9 -1.1
comp=Z,7.3nm,0.9s,mb4.5,baz=229,slow=9.5,SNR=15
KSRS LR LR 03 59 12.4
comp=Z,444nm,18.4s,MS4.4,baz=209,slow=39
ASAR Alice Springs 45.22 128 P P 03 38 25.9 -1.3
comp=Z,2.8nm,0.6s,mb4.3,baz=304,slow=7.9,SNR=26
MK31 Makanchi Array 45.24 346 eP P 03 38 26.7 -0.2
MK31 Makanchi Array 45.24 346 i P P 03 38 26.8 -0.1
MK31 pmax pmax
comp=Z,21nm,0.3s,mb5.5
MKAR Makanchi Array 45.24 346 P P 03 38 26.5 -0.4
comp=Z,42nm,0.4s,mb5.6,baz=159,slow=8.5,SNR=513
MKAR LR LR 04 00 42.9
comp=Z,178nm,19.3s,MS4.0,baz=164,slow=41
FORT Forrest 45.26 140 eP P 03 38 27.2 -0.1
comp=Z,86nm,0.7s,mb5.7
FORT epP pP 03 38 38.7 -0.8
SONM Songino Array 45.45 10 P P 03 38 28.0 -0.5
comp=Z,33nm,0.8s,mb5.2,baz=188,slow=9.3,SNR=178
SONM PcP PcP 03 40 07.0 0.0
comp=Z,9.6nm,0.6s,baz=187,slow=3.3,SNR=11
SONM LR LR 03 59 50.4
comp=Z,777nm,18.6s,MS4.7,baz=355,slow=39
SONM Songino Array 45.45 10 P P 03 38 28.0 -0.5
SONM 03 40 07.0
ULN Ulaanbaatar 45.59 10 eP P 03 38 29.6 0.0
comp=Z,29nm,1.1s,mb5.1
ULN ePcP PcP 03 40 07.6 +0.1
ULN Ulaanbaatar 45.59 10 eP P 03 38 29.6 0.0
ULN e 03 40 07.6
ULN pmax pmax
comp=Z,29nm,1.1s,mb5.1
ULN Ulaanbaatar 45.59 10 P P 03 38 29.6 0.0
KK31 Karatay Array 46.01 334 i P P 03 38 33.1 +0.1
KK31 Karatay Array 46.01 334 i P P 03 38 33.0 0.0
KK31 pmax pmax
comp=Z,38nm,1.0s,mb5.3
ZAK Zakamensk 47.52 6 eP P 03 38 44.1 -0.6
ZAK e 03 40 14.5
ZAK pmax pmax
comp=Z,18nm,0.8s,mb5.2
CN2 Changchun 48.08 28 eP P 03 38 47.9 -1.2
CN2 eAP pP 03 39 00.3 -1.1
CN2 PCP PcP 03 40 16.0 -0.4
CN2 eS S 03 45 42.4 -2.2
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
CN2 AMB AMB
comp=Z,170nm,3.0s
MOY Mondy 48.60 4 eP P 03 38 53.9 +0.9
TLY Talaya 48.84 6 eP P 03 38 54.8 -0.1
TLY Talaya 48.84 6 i/ P P 03 38 55.6 +0.7
TLY eS S 03 45 55.5 +0.4
TLY pmax pmax
comp=Z,31nm,0.7s,mb5.5
TLY MLR MLR
comp=Z,634nm,24.0s,MS4.5
ABKT Ailbek 49.23 320 P P 03 38 59.5 +1.4
comp=Z,750nm,0.6s,SNR=20
COEN Coen 49.44 111 eP P 03 38 58.8 -1.3
comp=Z,17nm,0.7s,mb5.2
COEN Coen 49.44 111 P P 03 39 00.4 +0.3
KURK Kurchatov 49.78 345 P P 03 39 02.2 +0.1
comp=Z,398nm,1.0s,mb6.4,SNR=31
KURK Kurchatov 49.78 345 P P 03 39 00.2 -1.9
comp=Z,54nm,0.8s,mb5.7,baz=167,slow=7.0,SNR=133
KURK Kurchatov 49.78 345 eP P 03 39 01.5 -0.6
comp=Z,63nm,0.9s,mb5.6
KURK Kurchatov 49.78 345 eP P 03 39 01.5 -0.6
KURK pmax pmax
comp=Z,63nm,0.9s,mb5.7
CBIJ Chichi jima 49.92 57 LR LR 03 58 23.3
comp=Z,181nm,19.4s,MS4.1,baz=115,slow=34
HIA Hailar 50.19 20 eP P 03 39 05.0 -0.2
comp=Z,47nm,0.9s,mb5.5
HIA Hailar 50.19 20 eP P 03 39 05.0 -0.2
HIA pmax pmax
comp=Z,47nm,0.9s
MDJ Mudanjiang 50.70 30 P P 03 39 08.4 -0.8
MDJ AMB AMB
comp=Z,16nm,1.4s,mb4.8
MDJ AMB AMB
comp=Z,765nm,4.7s
MJAR Matsushiro Arr 50.95 44 P P 03 39 10.2 -1.0
comp=Z,0.9nm,0.5s,mb4.0,baz=248,slow=8.5,SNR=3.7
MJAR PcP PcP 03 40 27.8 +0.7
comp=Z,3.8nm,0.8s,baz=248,slow=4.7,SNR=7.7
MJAR LR LR 04 02 32.7
comp=Z,195nm,19.4s,MS4.1,baz=240,slow=38
MJAR Matsushiro Arr 50.95 44 P P 03 39 10.2 -1.0
MJAR 03 40 27.8
ZAA0 Zalesovo Array 51.60 351 eP P 03 39 15.0 -0.7
ZALV Zalesovo Beam 51.60 351 P P 03 39 14.8 -0.9
comp=Z,44nm,0.7s,mb5.5,baz=176,slow=7.1,SNR=136
ZALV LR LR 04 05 01.7
comp=Z,131nm,19.8s,MS4.0,baz=132,slow=41
ZALV Zalesovo Beam 51.60 351 P P 03 39 14.8 -0.9
ZALV LR LR 04 05 01.6
NVS Novosibirsk 52.71 351 ⇑i P P 03 39 22.4 -1.5
NVS e*PP pP 03 39 32.6 -3.8
NVS e 03 40 32.9
NVS eS S 03 46 40.6 -7.9
NVS pmax pmax
comp=Z,47nm,1.1s,mb5.3
NVS pmax pmax
comp=N,32nm,1.2s
NVS pmax pmax
comp=E,20nm,1.2s
NVS smax
comp=N,46nm,3.2s
NVS smax
comp=E,40nm,3.2s
OPO Ambohidratompo 52.91 244 P P 03 39 26.5 +0.4
comp=E,1.8nm,0.6s,mb4.2,baz=54,slow=6.3,SNR=8.3
RDF Al-Radifah 52.95 304 eP P 03 39 26.5 +0.3
baz=304
RDF AMb AMB 03 39 39.9
comp=Z,100nm,1.0s,mb5.7,baz=304
UMR Umm Al-Rimmam 53.03 305 eP P 03 39 26.9 +0.1
baz=305
UMR AMb AMB 03 39 27.9
comp=Z,100nm,0.8s,mb5.8,baz=305
NAY Al-Naaiem 53.31 305 eP P 03 39 29.2 +0.3
baz=305
NAY AMb AMB 03 39 30.4
comp=Z,55nm,0.7s,mb5.6,baz=305
MIB Mutribah 53.42 305 eP P 03 39 29.7 0.0
baz=305
MIB AMb AMB 03 39 31.4
comp=Z,194nm,0.8s,mb6.1,baz=305
VOSK Vostochnaya 53.77 341 P P 03 39 31.2 -0.6
VOSK pmax pmax
comp=Z,18nm,0.5s,mb5.3
CTA Charters Tower 54.13 117 P P 03 39 33.5 -1.5
comp=Z,12nm,0.8s,mb4.9,baz=300,slow=8.9,SNR=9.3
CTAO Charters Tower 54.13 117 eP P 03 39 34.3 -0.7
comp=Z,40nm,1.1s,mb5.3
CTAO epP pP 03 39 46.1 -1.3
CTAO Charters Tower 54.13 117 eP P 03 39 34.3 -0.7
CTAO e*PP pP 03 39 46.1 -1.4
CTAO pmax pmax
comp=Z,40nm,1.1s,mb5.3
BVA0 Borovoye Array 54.22 341 i P P 03 39 34.3 -0.7
BVA0 pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BVAR Borovoye Array 54.22 341 P P 03 39 34.0 -1.0
comp=Z,26nm,0.7s,mb5.3,baz=141,slow=8.5,SNR=108
BRVK Borovoye 54.28 341 P P 03 39 35.3 -0.2
comp=Z,182nm,0.5s,mb6.3,SNR=14
BRVK Borovoye 54.28 341 eP P 03 39 35.0 -0.5
comp=Z,21nm,0.8s,mb5.1
BRVK Borovoye 54.28 341 eP P 03 39 35.0 -0.5
BRVK pmax pmax
comp=Z,21nm,0.8s,mb5.1
STKA Stephens Creek 55.25 133 P P 03 39 42.0 -1.0
comp=Z,8.5nm,0.7s,mb4.9,baz=305,slow=8.0,SNR=14
STKA LR LR 04 03 04.1
comp=Z,198nm,19.6s,MS4.2,baz=25,slow=36
STKA Stephens Creek 55.25 133 eP P 03 39 42.4 -0.5
comp=Z,5.8nm,0.8s,mb4.7
AB31 Akbulak array 55.47 332 P P 03 39 43.9 -0.3
AB31 pmax pmax
comp=Z,32nm,1.1s,mb5.3
HABR Khabarovsk 56.09 30 eP P 03 39 46.3 -2.3
HABR e pP 03 39 59.4 -1.8
HABR e 03 40 43.7
HABR eS S 03 47 33.2 -1.1
HABR eSS sS 03 47 50.4 -4.8
HABR e 03 49 33.6
HABR eSS SS 03 51 21.5 +0.3
BOD Bodaibo 56.36 11 eP P 03 39 49.3 -1.1
BOD pmax pmax
comp=Z,19nm,1.3s,mb5.0
AKTK Aktyubinsk 57.19 332 i P P 03 39 55.7 -0.7
AKTO Aktyubinsk 57.19 332 i P P 03 39 55.7 -0.7
AKTO pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ASAJ Asahikawa 57.73 38 P P 03 39 59.6 -0.8
comp=Z,12nm,0.8s,mb5.0,baz=322,slow=3.8,SNR=3.0
ASAJ LR LR 04 05 26.5
comp=Z,190nm,18.4s,MS4.2,baz=180,slow=37
CLNS Chul'man 58.25 18 eP P 03 40 04.5 +0.8
CLNS e*PP pP 03 40 17.6 +1.3
CLNS e 03 40 50.1
CLNS e 03 42 14.4
CLNS eS S 03 47 57.2 -5.2
CLNS e*SS sS 03 48 25.2 +1.8
CLNS eSS SS 03 51 59.0 +4.2
CLNS pmax pmax
comp=Z,30nm,0.8s,mb5.4
CLNS pmax pmax
comp=E,16nm,0.9s
CLNS pmax pmax
comp=N,11nm,0.7s
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS smax
comp=N,7.0nm,1.1s
CLNS smax
comp=E,7.0nm,1.4s
HAKT HAKKARI 59.06 313 i P P 03 40 12.8 +3.0
GNI Garni 59.35 316 P P 03 40 11.6 -0.1
comp=E,9.7nm,0.7s,mb4.9,baz=27,slow=16,SNR=5.8
GNI Garni 59.35 316 eP P 03 40 11.6 -0.2
comp=E,23nm,0.9s,mb5.2
GNI Garni 59.35 316 eP P 03 40 11.6 -0.1
GNI pmax pmax
comp=Z,12nm,1.1s

TUTA Tutak 60.41 314⇓ *iP* **P 03 40 19.9 +0.8**
SVE Sverdlovsk 60.65 338⇓ *eP* **P 03 40 19.8 -0.5**
SVE *eS* **S 03 48 32.5 -0.9**
SVE pmax pmax
comp=Z,43nm,0.9s,mb5.6
BEST Besiri 60.98 312 *i* P **P 03 40 23.7 +0.7**
ARU Arti 61.14 337 *eP* **P 03 40 22.7 -0.9**
ARU Arti 61.14 337 *d iP* **P 03 40 22.6 -1.0**
ARU *e* 03 42 37.4
ARU *eS* **S 03 48 41.0 +1.3**
ARU pmax pmax
comp=Z,20nm,1.2s,mb5.1
MARD Mardin 61.15 311 *i* P **P 03 40 24.9 +0.8**
BNGL BINGOL 61.45 313 *eP* **P 03 40 27.0 +0.9**
ERZM Erzurum 61.64 314 *eP* **P 03 40 28.8 +1.4**
DAGI Agillar 61.70 316 *i* P **P 03 40 28.5 +0.8**
ARTV Artvin 61.73 316 *i* P **P 03 40 30.5 +2.6**
DDEM Demirkent 61.74 315 *i* P **P 03 40 28.7 +0.7**
DBAD Bademkaya 61.83 316 *i* P **P 03 40 29.3 +0.7**
DBOC Borcka 61.97 316 *i* P **P 03 40 29.7 +0.1**
KOPT Kop Dagi 62.30 314 *i* P **P 03 40 33.1 +1.3**
KIV Kislovodsk 62.33 319 P **P 03 40 32.4 +0.5**
comp=Z,215nm,0.8s,mb6.3,SNR=7.3
KIV Kislovodsk 62.33 319 *eP* **P 03 40 32.1 +0.1**
KIV Kislovodsk 62.33 319 *eP* **P 03 40 32.1 +0.2**
KIV *e* 03 42 47.6
KIV *eS* **S 03 48 51.0 -4.3**
KIV pmax pmax
comp=Z,41nm,1.1s,mb5.5
KIV pmax pmax
comp=Z,82nm,7.7s
KIV Kislovodsk 62.33 319⇓ *iP* **P 03 40 31.7 -0.2**
ELZG Elazig 62.88 312⇓ *iP* **P 03 40 36.8 +1.1**
KEMA Kemaliye 63.50 313 *i* P **P 03 40 41.4 +1.6**
GZT Gaziantep 63.59 310 *i* P **P 03 40 41.7 +1.3**
AKCD Akcadag 63.61 312 *eP* **P 03 40 41.6 +1.1**
YAK Yakutsk 63.90 17 *eP* **P 03 40 40.9 -1.1**
YAK *epP* pP 03 40 55.1 +0.4
YAK Yakutsk 63.90 17 *eP* **P 03 40 40.8 -1.2**
YAK *e* pP 03 40 55.6 +0.9
YAK pmax pmax
comp=Z,88nm,0.9s,mb5.8
YAK pmax pmax
comp=N,26nm,1.2s
YAK pmax pmax
comp=E,31nm,1.3s
SOKR Solikamsk 64.04 339 *eP* **P 03 40 43.0 +0.1**
SOKR pmax pmax
comp=Z,40nm,1.2s,mb5.3
SOC Sochi 64.16 318 *i* P **P 03 40 44.0 0.0**
COBT Iskenderun 64.35 309 *eP* **P 03 40 46.0 +0.6**
ANDN Andirin 64.58 310 *i* P **P 03 40 48.2 +1.2**
PINB Pinarbasi 64.86 312 *i* P **P 03 40 49.5 +0.8**
GULE Gulek 65.70 310 *i* P Px 03 40 33.4
AVNT Avonos 66.05 311 *i* P **P 03 40 56.8 +0.4**
VRHR Novokhopersk 66.10 326 *eP* **P 03 40 55.5 -1.0**
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.7
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,20nm,1.0s
ANN Anapa 66.13 318 *eP* **P 03 40 48.1 -8.7**
ANN *e* 03 41 22.4
ANN pmax pmax
comp=Z,87nm,1.6s,mb5.5
BRTR Keskin Array B 67.22 312 P **P 03 41 02.9 -0.9**
comp=Z,6.6nm,0.8s,mb4.7
VORD Divnogorie 67.37 325 *eP* **P 03 41 03.1 -1.5**
VORD pmax pmax
comp=Z,40nm,0.8s,mb5.5
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,90nm,0.7s
VSR Storozhevoye 67.55 325 *eP* **P 03 41 04.2 -1.5**
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ANTO Ankara 67.88 312 *eP* **P 03 41 07.5 -0.5**
comp=Z,11nm,1.1s,mb4.8
ANTO *epP* pP 03 41 19.9 -0.9
ANTO Ankara 67.88 312 *eP* **P 03 41 07.5 -0.5**
ANTO *e*PP* pP 03 41 19.9 -1.0
ANTO pmax pmax
comp=Z,11nm,1.1s,mb4.8
GOLH Golhisar 69.73 309 *i* P **P 03 41 19.3 -0.3**
MOS Moscow 70.29 329 *eP* **P 03 41 20.3 -2.4**
MOS *e* pP 03 41 34.7 -0.8
MOS pmax pmax
comp=Z,81nm,0.7s,mb5.8
OBN Obninsk 70.58 328 *eP* **P 03 41 23.4 -1.0**
comp=Z,34nm,0.9s,mb5.3
OBN Obninsk 70.58 328 *c iP* **P 03 41 23.8 -0.6**
OBN *e* 03 44 02.2
OBN *eSS* SS 03 55 10.8 +3.9
OBN pmax pmax
comp=Z,36nm,0.8s,mb5.3
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.1
PETK Petropavlovsk- 70.69 34 LR LR 04 15 56.7
comp=Z,170nm,18.6s,MS4.3,baz=228,slow=39
TIXI Tiksi 71.53 10 *eP* **P 03 41 28.0 -1.8**
comp=Z,16nm,0.9s,mb5.0
TIXI Tiksi 71.53 10⇑ *iP* **P 03 41 28.1 -1.7**
TIXI pmax pmax
comp=Z,15nm,1.4s,mb4.7
KLMR Klimovskoe 71.70 334 *eP* **P 03 41 29.8 -1.3**
KLMR pmax pmax
comp=Z,43nm,1.5s,mb5.2
TLCR 72.08 317⇓ P **P 03 41 33.7 0.0**
TLCR 72.08 317⇓ *iP* **P 03 41 33.7 0.0**
TIRR Tirgusor 72.18 316⇑ P **P 03 41 33.9 -0.4**
TIRR Tirgusor 72.18 316⇑ *iP* **P 03 41 33.9 -0.4**
SEY Seymchan 72.41 23 *eP* **P 03 41 34.2 -1.1**
KIS Kishinev 72.53 318 *eP* **P 03 41 37.0 +0.7**
HARR Harsova 72.57 316⇓ P **P 03 41 36.8 +0.1**
HARR Harsova 72.57 316⇓ *iP* **P 03 41 36.8 +0.2**
AKASG Malin Array Be 73.26 322 P **P 03 41 39.2 -1.4**
comp=Z,14nm,0.8s,mb5.0,baz=90,slow=4.8,SNR=44
AKASG Malin Array Be 73.26 322 P **P 03 41 39.2 -1.4**
AKBB Malin Array Si 73.26 322 *eP* **P 03 41 39.3 -1.2**
KIEV Kiev 73.26 322 *eP* **P 03 41 39.1 -1.5**
comp=Z,9.7nm,0.6s,mb4.9
KIEV Kiev 73.26 322 *eP* **P 03 41 39.1 -1.5**
KIEV pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRI Vrincioaia 73.66 317⇑ P **P 03 41 43.6 +0.6**
VRI Vrincioaia 73.66 317⇑ *iP* **P 03 41 43.6 +0.5**
PLOR Plostina 73.71 317⇓ *iP* **P 03 41 44.2 +0.8**
LBTB Lobatse 73.92 243 P **P 03 41 45.5 +0.4**
comp=Z,2.2nm,0.6s,mb4.3,baz=88,slow=10.0,SNR=2.7
LBTB Lobatse 73.92 243 *eP* **P 03 41 46.4 +1.4**
comp=Z,12nm,0.9s,mb4.8
LBTB Lobatse 73.92 243 *eP* **P 03 41 46.4 +1.4**
LBTB pmax pmax
comp=Z,12nm,0.9s,mb4.8
MLR Muntele Rosu 74.12 316⇑ P **P 03 41 46.0 +0.3**
MLR Muntele Rosu 74.12 316⇑ *iP* **P 03 41 46.0 +0.3**
MAW Mawson 74.31 193 P **P 03 41 46.9 +0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=271,slow=13,SNR=2.8
MAW LR LR 04 11 28.7
comp=Z,140nm,18.2s,MS4.3,baz=211,slow=33
VOIR 74.72 316⇓ P **P 03 41 48.9 -0.4**
VOIR 74.72 316⇓ *iP* **P 03 41 48.9 -0.4**
BOSA Boshof 74.95 239 P **P 03 41 51.0 +0.2**
comp=Z,1.3nm,0.4s,mb4.2,baz=106,slow=7.4,SNR=3.3
BOSA LR LR 04 12 12.3
comp=Z,216nm,18.1s,MS4.5,baz=265,slow=34
BOSA Boshof 74.95 239 *eP* **P 03 41 50.7 -0.2**
comp=Z,9.3nm,0.9s,mb4.7
BOSA Boshof 74.95 239 *eP* **P 03 41 50.7 -0.2**
BOSA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BURAR Bucovina Array 75.06 319⇑ P **P 03 41 51.8 +0.7**
BURAR Bucovina Array 75.06 319⇑ *iP* **P 03 41 51.8 +0.7**
BUR08 Bucovina Ar. S 75.07 319 *eP* **P 03 41 51.7 +0.5**
BUR08 *epP* pP 03 42 04.0 -0.2
MNK Minsk 75.13 326 *eP* **P 03 41 50.0 -1.4**
VTS Vitosha 75.52 313⇑ P **P 03 41 52.9 -1.1**
VTS Vitosha 75.52 313⇑ *iP* **P 03 41 52.8 -1.1**

JOF Joensuu 76.10 335 *ep* **P 03 41 54.9 -1.9**
comp=Z,13nm,0.8s,mb4.9
JOF Joensuu 76.10 335 *eP* **P 03 41 54.9 -1.9**
JOF pmax pmax
comp=Z,13nm,0.8s,mb4.9
LVV L'vov 76.28 321 *eP* **P 03 41 58.0 -0.1**
DRGR 76.57 317⇓ P **P 03 42 00.2 +0.4**
DRGR 76.57 317⇓ *iP* **P 03 42 00.2 +0.4**
LVZ Lovozero 76.80 340 P **P 03 42 00.5 -0.1**
comp=Z,204nm,0.7s,mb6.2,SNR=5.4
VSU Vasula 76.81 330 *c iP* **P 03 42 00.7 -0.2**
VSU pmax pmax
comp=Z,51nm,0.9s,mb5.5
KWP Kalwaria 77.08 320 *eP* **P 03 42 03.1 +0.5**
KWP Kalwaria 77.08 320⇑ *iP* **P 03 42 03.0 +0.4**
APA Apatity 77.09 339 *eP* **P 03 42 00.0 -2.3**
APA pmax pmax
comp=Z,22nm,0.9s,mb5.1
BZS Buzias 77.13 316⇑ P **P 03 42 02.7 -0.3**
BZS Buzias 77.13 316⇑ *iP* **P 03 42 02.7 -0.3**
KOLS Kolonicke sedl 77.24 319 *eP* **P 03 42 04.3 +0.8**
KOLS *epP* pP 03 42 14.9 -1.6
SUW Suwalki 77.66 325 *eP* **P 03 42 05.2 -0.5**
CRVS Cervenica-Dubn 77.76 319 *eP* **P 03 42 06.8 +0.4**
STHS Stebnicka Huta 77.99 320 *eP* **P 03 42 09.2 +1.5**
STHS *e* pP 03 42 21.3 +0.6
STHS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
STHS Stebnicka Huta 77.99 320 *eP* **P 03 42 09.2 +1.5**
STHS *epP* pP 03 42 21.3 +0.6
KAF Kangasniemi 78.04 333 *ep* **P 03 42 05.9 -1.8**
comp=Z,17nm,0.7s,mb5.1,baz=104,slow=5.2
KAF Kangasniemi 78.04 333 *eP* **P 03 42 05.9 -1.8**
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.1
NIE Niedzica 78.59 320 *eP* **P 03 42 13.7 +2.7**
PSZ Piszkesteto 78.64 318 *eP* **P 03 42 11.3 0.0**
comp=Z,19nm,1.0s,mb5.0
PSZ Piszkesteto 78.64 318 *eP* **P 03 42 11.3 0.0**
PSZ pmax pmax
comp=Z,19nm,1.0s,mb5.0
PSZ Piszkesteto 78.64 318⇑ *eP* **P 03 42 11.5 +0.2**
PSZ Piszkesteto 78.64 318⇑ *iP* **P 03 42 11.6 +0.3**
OJC Ojcow 79.04 320 *eP* **P 03 42 13.7 +0.3**
VYHS Vyhne 79.42 319 *eP* **P 03 42 15.5 -0.1**
TIP Timpagrande 79.98 309 *eP* **P 03 42 18.5 -0.3**
comp=Z,12nm,1.1s,mb4.7
OKC Ostrava-Krasne 80.04 320 *eP* **P 03 42 19.1 +0.2**
OKC *ex* x 03 42 30.8
KEV Kevo 80.07 341 *ep* **P 03 42 18.3 -0.3**
comp=Z,13nm,0.8s,mb4.9
KEV Kevo 80.07 341 *eP* **P 03 42 18.3 -0.3**
KEV pmax pmax
comp=Z,13nm,0.8s,mb4.9
MORC Moravsky Berou 80.42 320 *eP* **P 03 42 20.9 0.0**
comp=Z,13nm,1.2s,mb4.7
MORC *epP* pP 03 42 32.6 -1.4
MORC Moravsky Berou 80.42 320 *eP* **P 03 42 20.9 -0.1**
MORC *e*PP* pP 03 42 32.6 -1.5
MORC pmax pmax
comp=Z,13nm,1.2s,mb4.7
MODS Modra-Piesok 80.44 318 *eP* **P 03 42 22.0 +0.9**
MODS *e* pP 03 42 33.2 -1.0
MODS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
MODS Modra-Piesok 80.44 318 *eP* **P 03 42 22.0 +0.9**
MODS *epP* pP 03 42 33.2 -1.0
ARCES ARCESS Array B 80.50 340 P **P 03 42 21.0 0.0**
comp=Z,7.9nm,0.5s,mb4.9,baz=95,slow=5.0,SNR=60
ARCES LR LR 04 20 41.7
comp=Z,145nm,18.9s,MS4.3,baz=106,slow=38
ZST Bratislava 80.53 318 *eP* **P 03 42 22.0 +0.4**
ZST *e* pP 03 42 34.2 -0.5
ZST pmax pmax
comp=Z,14nm,0.9s,mb4.9
ZST Bratislava 80.53 318 *eP* **P 03 42 21.9 +0.3**
ZST *epP* pP 03 42 34.2 -0.5
RPZ Rata Peaks 81.14 135 P **P 03 42 24.5 -0.4**
comp=Z,2.5nm,0.6s,mb4.3,baz=276,slow=9.2,SNR=2.5
DPC Dobruska-Polom 81.27 320 *eP* **P 03 42 26.1 +0.6**
DPC *ex* x 03 42 38.0
CONA Conrad Observa 81.34 318⇑ *eP* **P 03 42 25.9 0.0**
comp=Z,4.0nm,0.8s,mb4.4
UPC Upice 81.48 320 *eP* **P 03 42 26.2 -0.4**
SYO Syowa Base 81.49 198⇑ *eP* **P 03 42 27.6 +1.4**
BOJS Bojanci 81.56 315 *eP* **P 03 42 27.1 0.0**
BOJS *epP* pP 03 42 39.5 -0.7
PERS Pernice 81.74 317 *eP* **P 03 42 28.2 +0.2**
PERS *epP* pP 03 42 40.8 -0.4
SOKA Soboth 81.80 317⇑ *iP* **P 03 42 28.8 +0.4**
comp=Z,15nm,1.1s,mb4.8
LJU Ljubljana 82.10 316 *eP* **P 03 42 30.4 +0.4**
LJU *epP* pP 03 42 42.8 -0.3
OBKA Obir 82.12 316⇑ *iP* **P 03 42 31.3 +1.3**
comp=Z,9.0nm,0.9s,mb4.7
PRU Pruhonice 82.37 320 *eP* **P 03 42 31.8 +0.5**
PRU *ex* x 03 42 43.3
PVCC Panska Ves 82.40 320 *eP* **P 03 42 32.0 +0.6**
PVCC *ex* x 03 42 43.9
MOA Molln 82.40 318⇑ *iP* **P 03 42 32.1 +0.6**
comp=Z,9.5nm,1.3s,mb4.6
VOY Vojsko 82.54 316 *eP* **P 03 42 32.7 +0.4**
VOY *epP* pP 03 42 44.2 -1.2
AQU L'Aquila 82.71 312 *eP* **P 03 42 33.6 +0.4**
comp=Z,42nm,1.1s,mb5.4
AQU *epP* pP 03 42 44.8 -1.6
AQU L'Aquila 82.71 312 *eP* **P 03 42 33.6 +0.4**
AQU *e*PP* pP 03 42 44.8 -1.6
AQU pmax pmax
comp=Z,41nm,1.1s,mb5.4
AQU L'Aquila 82.71 312⇓ *iP* **P 03 42 33.2 0.0**
MYKA Terra Mystica 82.75 316⇑ *iP* **P 03 42 34.7 +1.3**
comp=Z,12nm,0.9s,mb4.9
BRG Berggiesshubel 82.82 321 *eP* **P 03 42 34.2 +0.6**
BRG *e* pP 03 42 46.5 -0.2
BRG pmax pmax
comp=Z,17nm,1.9s,mb4.8
BRG Berggiesshubel 82.82 321 *eP* **P 03 42 33.9 +0.3**
comp=Z,21nm,1.7s,mb4.9
BRG *epP* pP 03 42 45.5 -1.2
BRG Berggiesshubel 82.82 321 *eP* **P 03 42 34.2 +0.6**
comp=Z,28nm,1.9s,mb5.0
BRG *e* pP 03 42 46.5 -0.2
comp=Z,7.3nm,1.0s
GEC2 GERESS Array S 82.84 319 *eP* **P 03 42 34.3 +0.5**
GEC2 *epP* pP 03 42 46.4 -0.5
GEC2 GERESS Array S 82.84 319 *eP* **P 03 42 34.4 +0.6**
GEC2 *e*PP* pP 03 42 46.3 -0.6
GEC2 pmax pmax
comp=Z,26nm,1.4s,mb5.1
GEC2 GERESS Array S 82.84 319 *eP* **P 03 42 34.4 +0.6**
comp=Z,26nm,1.4s,mb5.1
GEC2 *epP* pP 03 42 46.3 -0.6
GERES GERESS Array B 82.84 319 P **P 03 42 34.4 +0.6**
comp=Z,3.8nm,0.8s,mb4.5,baz=97,slow=5.6,SNR=29
KHC Kasperske Hory 82.94 319 *eP* **P 03 42 33.8 -0.5**
KHC *ex* x 03 42 46.0
KBA Koelnbreinsper 82.98 317⇓ *iP* **P 03 42 34.3 -0.2**
comp=Z,6.3nm,0.7s,mb4.7
WET Wettzell 83.40 319 *eP* **P 03 42 36.8 +0.2**
WET *e*PP* pP 03 42 49.3 -0.5
WET pmax pmax
comp=Z,11nm,1.2s,mb4.8
WET Wettzell 83.40 319 *eP* **P 03 42 36.8 +0.2**
comp=Z,11nm,1.2s,mb4.8
WET *epP* pP 03 42 49.3 -0.5
CLL Collm 83.44 321 *iP* **P 03 42 36.8 0.0**
comp=Z,19nm,1.5s,mb4.9
CLL LR LR
comp=Z,100nm,17.9s,MS4.2
CLL Collm 83.44 321 *iP* **P 03 42 36.8 0.0**
CLL pmax pmax
comp=Z,19nm,1.5s,mb4.9
CLL MLR MLR
comp=Z,100nm,17.9s,MS4.2
CLL Collm 83.44 321 *eP* **P 03 42 36.7 -0.1**
comp=Z,20nm,1.5s,mb4.9
ABTA Abfaltersbach 83.53 317⇑ *iP* **P 03 42 36.7 -0.7**
comp=Z,7.0nm,1.0s,mb4.8
HFS Hagfors 83.68 330 P **P 03 42 37.9 +0.1**
comp=Z,9.9nm,0.8s,mb5.0,baz=106,slow=5.3,SNR=22
ROTZ Rotzenmuhle 83.87 320 *eP* **P 03 42 39.5 +0.5**
comp=Z,11nm,1.3s,mb4.8
MANZ Manzenberg 83.94 320 *eP* **P 03 42 39.8 +0.4**
comp=Z,10.0nm,1.0s,mb4.9
MANZ *epP* pP 03 42 52.7 +0.1
WTTA Wattenberg 84.15 317⇑ *iP* **P 03 42 40.2 -0.4**
comp=Z,12nm,0.9s,mb5.0
WATA Walderalm 84.20 317⇑ *iP* **P 03 42 39.6 -1.2**
comp=Z,6.4nm,0.7s,mb4.8
SQTA Sankt Quirin 84.44 317⇑ *iP* **P 03 42 42.1 +0.1**
comp=Z,5.2nm,0.7s,mb4.8
GRF Grafenberg Arr 84.50 319 *eP* **P 03 42 42.4 +0.1**
GRF *e*PP* pP 03 42 55.2 -0.2
GRF pmax pmax
comp=Z,16nm,1.0s,mb5.1
GRF Grafenberg Arr 84.50 319 *eP* **P 03 42 42.4 +0.1**
GRF *e*PP* pP 03 42 55.2 -0.2
GRF pmax pmax
comp=Z,16nm,1.0s,mb5.1
GRF Grafenberg Arr 84.50 319 *eP* **P 03 42 42.4 +0.1**
comp=Z,16nm,1.0s,mb5.1
GRF *epP* pP 03 42 55.2 -0.2
MOTA Moosalm 84.52 317⇑ *iP* **P 03 42 41.8 -0.6**
comp=Z,7.5nm,0.8s,mb4.9
RETA Reutte 84.75 317⇑ *iP* **P 03 42 43.3 -0.3**
comp=Z,12nm,0.8s,mb5.1
NB2 NORSAR Subarra 84.96 331 P **P 03 42 43.7 -0.6**
comp=Z,12nm,1.0s,mb5.0,baz=94,slow=5.3
NOA NORSAR Array B 84.96 331 P **P 03 42 43.8 -0.6**
comp=Z,5.8nm,0.9s,mb4.7,baz=98,slow=5.4,SNR=13
NOA LR LR 04 24 14.1
comp=Z,81nm,19.7s,MS4.1,baz=270,slow=38
NAO01 NORSAR Array S 85.11 331 *eP* **P 03 42 43.4 -1.6**
comp=Z,11nm,1.0s,mb4.9
BSEG Bad Segeberg 85.18 324 *eP* **P 03 42 46.2 +0.6**
BSEG pmax pmax
comp=Z,86nm,2.1s,mb5.5
BSEG Bad Segeberg 85.18 324 *eP* **P 03 42 46.2 +0.6**
comp=Z,86nm,2.1s,mb5.5
DAVA Damuels 85.35 317⇑ *iP* **P 03 42 44.4 -2.1**
comp=Z,20nm,1.3s,mb5.1
KONO Kongsberg 85.72 329 *eP* **P 03 42 48.5 +0.4**
KEST Kesra 85.77 305 P **P 03 42 49.5 +0.6**
comp=Z,4.1nm,0.8s,mb4.7,baz=179,slow=1.7,SNR=9.2
KEST LR LR 04 22 35.1
comp=Z,36nm,19.3s,MS3.8,baz=216,slow=37
BFO Black Forest 86.39 318 *eP* **P 03 42 50.5 -1.2**
comp=Z,10nm,1.3s,mb4.9
BFO *epP* pP 03 43 03.4 -1.5
BFO Black Forest 86.39 318 *eP* **P 03 42 50.5 -1.2**
BFO *e*PP* pP 03 43 03.4 -1.5
BFO pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
BFO Black Forest 86.39 318 *eP* **P 03 42 50.8 -0.9**
comp=Z,14nm,1.4s,mb5.0
SBF Sospel 87.09 314 *eP* **P 03 42 53.7 -1.5**
comp=Z,179nm,1.3s,mb5.8
SBF Sospel 87.09 314 *eP* **P 03 42 53.7 -1.5**
comp=Z,90nm,1.3s,mb5.8
SBF Sospel 87.09 314 *eP* **P 03 42 53.7 -1.5**
SBF pmax pmax
comp=Z,90nm,1.3s,mb5.8
LPG La Plagne 87.53 315 *eP* **P 03 42 56.9 -0.4**
comp=Z,21nm,1.0s,mb5.0
LPG La Plagne 87.53 315 *eP* **P 03 42 56.9 -0.4**
comp=Z,11nm,1.0s,mb5.0
LPG La Plagne 87.53 315 *eP* **P 03 42 56.9 -0.4**
LPG pmax pmax
comp=Z,11nm,1.0s,mb5.0
LPL La Plagne 87.55 315 *eP* **P 03 42 57.0 -0.4**
comp=Z,21nm,0.7s,mb5.2
LPL La Plagne 87.55 315 *eP* **P 03 42 57.0 -0.4**
comp=Z,11nm,0.7s,mb5.2
LPL La Plagne 87.55 315 *eP* **P 03 42 57.0 -0.4**
LPL pmax pmax
comp=Z,11nm,0.7s,mb5.2
HAU Haudompre 87.73 318 *eP* **P 03 42 57.1 -1.1**
comp=Z,14nm,0.8s,mb5.0
HAU Haudompre 87.73 318 *eP* **P 03 42 57.1 -1.1**
comp=Z,6.8nm,0.8s,mb4.9
HAU Haudompre 87.73 318 *eP* **P 03 42 57.1 -1.1**
HAU pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
VNDA Vanda 87.81 169 P **P 03 42 57.7 -0.3**
comp=Z,0.4nm,0.7s,mb3.8,baz=356,slow=6.3,SNR=2.4
VNDA LR LR 04 20 47.3
comp=Z,123nm,19.0s,MS4.3,baz=304,slow=35
VNDA Vanda 87.81 169 P **P 03 42 57.7 -0.3**
VNDA LR LR 04 20 47.3
CABF La Chapelle 87.96 316 *eP* **P 03 42 58.7 -0.6**
LOR Lormes 89.45 317 *eP* **P 03 43 04.9 -1.4**
comp=Z,11nm,0.9s,mb4.9
LOR Lormes 89.45 317 *eP* **P 03 43 04.9 -1.4**
comp=Z,5.6nm,0.9s,mb4.9
LOR Lormes 89.45 317 *eP* **P 03 43 04.9 -1.4**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
SMF Signal de Mont 89.50 317 *eP* **P 03 43 05.8 -0.8**
comp=Z,12nm,0.8s,mb5.0
SMF Signal de Mont 89.50 317 *eP* **P 03 43 05.8 -0.8**
comp=Z,6.2nm,0.8s,mb5.0
SMF Signal de Mont 89.50 317 *eP* **P 03 43 05.8 -0.8**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
TAM Tamanrasset 89.56 293 *eP* **P 03 43 08.5 +1.1**
SSF Saint Saulge 89.70 317 *eP* **P 03 43 06.9 -0.6**
AVF Avril sur Loir 89.83 317 *eP* **P 03 43 07.4 -0.7**
comp=Z,24nm,1.2s,mb5.1
AVF Avril sur Loir 89.83 317 *eP* **P 03 43 07.4 -0.7**
comp=Z,12nm,1.2s,mb5.1
AVF Avril sur Loir 89.83 317 *eP* **P 03 43 07.4 -0.7**
AVF pmax pmax
comp=Z,12nm,1.2s,mb5.1
MAIT Maitri 91.08 199 *eP* **P 03 43 13.1 -0.3**
LDF La Druitiere 91.99 319 *eP* **P 03 43 17.6 -0.5**
MFF Saint Martin d 92.24 317 *eP* **P 03 43 18.9 -0.4**
comp=Z,21nm,1.0s,mb5.1
MFF Saint Martin d 92.24 317 *eP* **P 03 43 18.9 -0.4**
comp=Z,10nm,1.0s,mb5.1
MFF Saint Martin d 92.24 317 *eP* **P 03 43 18.9 -0.4**
MFF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
EKA Eskdalemuir Ar 92.89 326 P **P 03 43 21.4 -0.7**
comp=Z,2.2nm,0.8s,mb4.7,baz=81,slow=5.3,SNR=5.6
TOA0 Torodi Ar. Sit 93.81 283 *eP* **P 03 43 26.6 -0.6**
TORD Torodi Ar. Bea 93.81 283 P **P 03 43 26.8 -0.4**
comp=Z,1.7nm,0.9s,mb4.5,baz=87,slow=4.7,SNR=8.5
TORD LR LR 04 26 08.5
comp=Z,81nm,18.4s,MS4.2,baz=140,slow=36
ESDC Sonseca Array 95.96 310 P **P 03 43 36.2 -0.3**
comp=Z,0.2nm,0.6s,mb3.8,baz=62,slow=4.8,SNR=4.7
KDAK Kodiak Island 98.50 30 LR LR 04 34 15.2
comp=Z,332nm,19.1s,MS4.8,baz=293,slow=39
NEW Newport 121.16 25 *e*PKPdf PKPdf 03 49 01.2 -1.0
WVOR Wild Horse Val 124.77 31 *e*PKPdf PKPdf 03 49 09.3 0.0
BOZ Bozeman (W) 125.52 24 *e*PKPdf PKPdf 03 49 10.7 +0.1
ULM Lac du Bonnet 125.87 10 PKP PKPdf 03 49 09.9 -1.2
comp=Z,9.0nm,0.8s,baz=331,slow=3.9,SNR=5.2
ULM Lac du Bonnet 125.87 10 *e*PKPdf PKPdf 03 49 10.1 -1.0
HLID Hailey 125.99 27 *e*PKPdf PKPdf 03 49 11.8 +0.3
YMR Madison River 126.60 24 *e*PKPdf PKPdf 03 49 11.8 -0.9
LAO LASA Array 126.62 19 *e*PKPdf PKPdf 03 49 13.6 +0.9
TPAW Teton Pass 127.57 25 *e*PKPdf PKPdf 03 49 14.9 +0.3
LOHW Long Hollow 127.61 25 *e*PKPdf PKPdf 03 49 15.1 +0.4
SNOW Snow King Moun 127.67 25 *e*PKPdf PKPdf 03 49 15.9 +1.2
REDW Red Top Meadow 127.71 25 *e*PKPdf PKPdf 03 49 15.4 +0.6
ELK Elko 127.74 30 *e*PKPdf PKPdf 03 49 15.3 +0.3
NVAR Mina Array Bea 127.78 34 PKP PKPdf 03 49 15.7 +0.5
comp=Z,2.0nm,0.7s,baz=266,slow=1.9,SNR=8.6
BW06 Boulder Array 128.74 24 *e*PKPdf PKPdf 03 49 16.2 -0.6
PDAR Pinedale Array 128.74 24 PKP PKPdf 03 49 17.1 +0.2
comp=Z,1.3nm,0.7s,baz=165,slow=1.0,SNR=11
HWUT Hardware Ranch 128.82 27 *e*PKPdf PKPdf 03 49 16.9 -0.1
DUG Dugway 129.35 29 *e*PKPdf PKPdf 03 49 18.9 +0.8
RSSD Black Hills 129.61 19 *e*PKPdf PKPdf 03 49 18.8 +0.4
MSU Marysvale 130.97 30 *e*PKPdf PKPdf 03 49 22.7 +1.5
MSU *eSKP* SKPbc 03 52 43.5 +1.3
TUC Tucson 136.43 34 *e*PKPdf PKPdf 03 49 31.8 +0.2
ANMO Albuquerque 136.56 28 *e*PKPdf PKPdf 03 49 32.4 +0.6
ANMO *ep*PKPdf pPKPdf 03 49 43.9 -1.6
WVT Waverly 140.82 5 *e*PKPpre 03 49 32.0
WVT *e*PKPdf PKPdf 03 49 38.4 -1.2
MIAR Mount Ida 141.46 13 *e*PKPpre 03 49 34.8
MIAR *e*PKPdf PKPdf 03 49 40.2 -0.5
TXAR Lajitas Array 142.53 29 PKhKP 03 49 38.1
comp=Z,1.6nm,0.6s,baz=186,slow=0.4,SNR=16
BDFB Brasilia 142.73 248 PKP PKPdf 03 49 44.0 +0.6
comp=Z,0.8nm,0.5s,baz=156,slow=20,SNR=2.8

JCT	**Junction City**	**143.27**	**24**	*e*PKPdf	PKPdf	03 49 40.4	-3.7
VBMS	**Vicksburg**	**144.32**	**10**	*e*PKPdf	PKPdf	03 49 44.0	-1.9
HKT	**Hockley**	**145.18**	**19**	*e*PKPbc	PKPbc	03 49 46.1	-0.9
BRAL	**Brewton**	**145.97**	**5**	*e*PKPbc	PKPbc	03 49 49.3	-0.2
MTP	**Monte Pirata**	**152.41**	**320**	*e*PKPbc	PKPbc	03 50 04.4	-1.8
LPAZ	**La Paz**	**159.83**	**228**	PKP	PKPdf	03 50 09.6	+0.4
	comp=Z,1.4nm,0.9s,baz=45,slow=6.5,SNR=5.8						
OTAV	**Otavalo**	**173.83**	**302**	*e*PKPdf	PKPdf	03 50 20.2	+0.4
OTAV				*e*PKPab	PKPab	03 51 50.9	+0.7

IDC ***21*** *04:01:59.6±4.1,2342S×7051W,h0km,mb3.9/1,mb1 3.9/2, mb1mx3.5/18,mbtmp3.9/2,ML3.8/1,MS2.8/1,Ms1 2.9/1, ms1mx2.5/27,Error ellipse: s-maj=134.6km s-min=61.3km az=91.0*

ISCJB ***21*** *04:02:01.0±1.2,2310S±004×7096W±007,h25km±7km, Error ellipse: s-maj=10.3km s-min=5.6km az=12.6*

GUC ***21*** *04:02:01.4±2.6,2311S×7088W,h33km±9km,MD4.2, ML4.0*

NEIC ***21*** *04:02:02.2,2314S×7083W,h33km,ML4.0(GUC),After GUC.*

ISC 21 04:02:02.1±1.3,2310S±004×7090W±007,h21km±8km,n18, σ0§97/27,5C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.42**	**91**	⇓*i*P	**Pb**	**04 02 10.0**	**-0.8**
MECH				*i* S	**Sb**	**04 02 15.9**	**-0.8**
MECH				AML	AML	04 02 22.3	
	comp=N,30μm,0.4s						
CEN1	**Los Morros**	**0.71**	**114**	⇑*i*P	**Pb**	**04 02 15.1**	**-0.7**
CEN1				*i* S	**Sb**	**04 02 25.2**	**+0.1**
ANCH	**Antofagasta**	**0.74**	**142**	⇑*i*P	**Pb**	**04 02 17.8**	**+1.5**
ANCH				*i* S	**Sb**	**04 02 27.1**	**+1.2**
PB06	**Plate Boundary**	**1.29**	**73**	⇑*i*P	**Pn**	**04 02 23.7**	**-1.1**
PB06				*i* S	**Sn**	**04 02 40.5**	**-0.9**
MACH	**Maria Elena**	**1.39**	**50**	⇓*e*P	**Pn**	**04 02 25.8**	**-0.4**
MACH				*i* S	**Sn**	**04 02 42.9**	**-1.0**
PB04	**Plate Boundary**	**1.55**	**58**	*e*P	**Pn**	**04 02 19.7**	**-8.7**
PB04				*i* S	**Sn**	**04 02 33.1**	**-15**
PB04				AML	AML	04 02 35.0	
	comp=E,5μm,0.6s						
CPN1	**Cerro Paranal**	**1.59**	**163**	⇑*i*P	**Pn**	**04 02 29.4**	**+0.4**
CPN1				*i* S	**Sn**	**04 02 49.6**	**+0.7**
CPN1				AML	AML	04 02 53.8	
	comp=E,1μm,0.3s						
PB07	**Plate Boundary**	**1.66**	**35**	*e*P	**Pn**	**04 02 30.0**	**+0.1**
PB07				*i* S	**Sn**	**04 02 51.3**	**+0.8**
LVC	**Limon Verde**	**1.90**	**76**	⇓*i*P	**Pn**	**04 02 33.6**	**+0.4**
LVC				*i* S	**Sn**	**04 02 58.1**	**+1.6**
LVC	**Limon Verde**	**1.90**	**76**	⇓*i*P	**Pn**	**04 02 33.6**	**+0.4**
LVC				*i* S	**Sn**	**04 02 58.1**	**+1.6**
LVC				AML	AML	04 03 00.7	
	comp=N,1μm,0.8s						
PB01	**Plate Boundary**	**2.43**	**33**	⇓*e*P	**Pn**	**04 02 40.7**	**+0.2**
PB01				*i* S	**Sn**	**04 03 13.2**	**+3.5**
SPCH	**San Pedro de A**	**2.50**	**86**	AML	AML	04 03 23.0	
	comp=E,3μm,0.6s						
CPCH	**Copiapo**	**4.27**	**173**	⇑*i*P	**Pn**	**04 03 04.8**	**-1.0**
CPCH				*i* S	**Sn**	**04 03 53.9**	**-1.2**
ARE	**Arequipa**	**6.62**	**355**	*e*P	**Pn**	**04 03 38.0**	**-0.2**
LPAZ	**La Paz**	**7.26**	**22**	Pn	**Pn**	**04 03 50.1**	**+3.1**
	comp=E,0.7nm,0.3s,baz=201,slow=9.5,SNR=19						
LPAZ				LR	LR	04 06 49.3	
	comp=E,80nm,21.6s,baz=297,slow=39						
TORD	**Torodi Ar. Bea**	**79.62**	**71**	P	**P**	**04 14 08.1**	**-0.2**
	comp=E,1.0nm,0.8s,baz=254,slow=5.0,SNR=8.1						
MKAR	**Makanchi Array**	**148.00**	**36**	PKPbc	PKPbc	04 21 46.5	+0.7
	comp=E,0.5nm,0.7s,baz=318,slow=3.3,SNR=4.6						
MKAR	**Makanchi Array**	**148.00**	**36**	PKPbc	PKPbc	04 21 46.5	+0.7

IDC 21 04:12:24.9±3.6,714S×12725E,h436km±55km,mb3.7/1, mb1 3.7/4,mb1mx3.1/16,mbtmp3.5/4,Error ellipse: s-maj=67.4km s-min=47.3km az=94.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.68**	**229**	P	P	04 13 45.5	0.0
	25nm,0.3s,baz=146,slow=1.8,SNR=11						
BATI				S	S	04 14 51.7	+0.7
	42nm,0.3s,baz=278,slow=21,SNR=23						
WRA	**Warramunga Arr**	**14.47**	**152**	P	P	04 15 29.6	-1.0
	1.6nm,0.3s,baz=331,slow=11,SNR=94						
WRA				S	S	04 18 03.0	-1.2
	0.3nm,0.3s,baz=322,slow=20,SNR=7.1						
ASAR	**Alice Springs**	**17.64**	**159**	P	P	04 16 04.4	+0.1
	1.3nm,0.3s,baz=347,slow=12,SNR=72						
ASAR				S	S	04 19 06.8	+1.3
	0.1nm,0.3s,baz=333,slow=18,SNR=5.5						
STKA	**Stephens Creek**	**28.02**	**153**	P	P	04 17 38.8	-0.1
	2.9nm,0.3s,baz=331,slow=9.1,SNR=13						

ISCJB ***21*** *04:24:14.0±0.8,4485S±006×7708W±009,h148km±9km, mb3.7/13,Error ellipse: s-maj=14.2km s-min=9.0km az=171.5*

IDC ***21*** *04:24:14.8±1.4,4595S×7715W,h143km±16km,mb3.3/5, mb1 3.7/12,mb1mx3.6/25,mbtmp3.5/12,Error ellipse: s-maj=18.2km s-min=16.2km az=87.0*

NEIC ***21*** *04:24:14.2±0.9,4575S×7711W,h137km±9km,mb4.0/9, Error ellipse: s-maj=14.1km s-min=7.6km az=70.0*

ISC 21 04:24:15.4±0.7,450S±005×7707W±008,h143km±8km,n32, σ1§07/29,mb3.7/13,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.81**	**208**	P	**Pn**	**04 25 01.1**	**+1.1**
	62nm,0.3s,baz=23,slow=9.8,SNR=374						
ATAH				S	**Sn**	**04 25 34.5**	**0.0**
	41nm,0.3s,baz=147,slow=11,SNR=5.9						
OTAV	**Otavalo**	**4.91**	**344**	*e*Pn	**Pn**	**04 25 25.4**	**-2.0**
NNA	**Nana**	**7.44**	**178**	P	**Pn**	**04 26 00.7**	**-0.6**
	5.7nm,0.3s,baz=333,slow=12,SNR=15						
NNA				S	**Sn**	**04 27 18.1**	**-6.3**
	22nm,0.3s,baz=292,slow=22,SNR=16						
ROSC	**El Rosal**	**9.69**	**16**	P	**Pn**	**04 26 33.8**	**+2.4**
	1.1nm,0.3s,baz=87,slow=18,SNR=4.0						
LPAZ	**La Paz**	**14.63**	**144**	P	**Pn**	**04 27 34.5**	**-1.2**
	0.2nm,0.3s,baz=30,slow=21,SNR=6.6						
LPAZ	**La Paz**	**14.63**	**144**	*e*P	**Pn**	**04 27 33.2**	**-2.4**
	1.1nm,0.6s						
SDV	**Santo Domingo**	**14.77**	**26**	P	**Pn**	**04 27 36.6**	**-0.7**
	1.4nm,0.3s,baz=189,slow=9.1,SNR=12						
PCRV	**Puerto La Cruz**	**19.13**	**40**	P	**P**	**04 28 28.3**	**+0.7**
	4.6nm,0.3s,baz=206,slow=6.5,SNR=20						
SIV	**San Ignacio**	**19.42**	**127**	P	**P**	**04 28 31.4**	**+0.6**
	0.2nm,0.3s,baz=322,slow=12,SNR=7.8						
TXAR	**Lajitas Array**	**42.24**	**324**	P	**P**	**04 31 54.2**	**-0.3**
	0.6nm,0.7s,mb3.3,baz=146,slow=9.3,SNR=7.6						
WMOK	**Wichita Mounta**	**44.06**	**334**	*e*P	**P**	**04 32 09.7**	**+0.5**
	2.0nm,0.7s,mb3.9						
ANMO	**Albuquerque**	**48.01**	**327**	*e*P	**P**	**04 32 40.7**	**+0.7**
	4.3nm,0.9s,mb4.1						
TUC	**Tucson**	**48.64**	**321**	*e*P	**P**	**04 32 44.1**	**-0.8**
	0.9nm,0.7s,mb3.5						
SDCO	**Great Sand Dun**	**49.65**	**330**	*e*P	**P**	**04 32 53.2**	**+0.7**
	3.2nm,1.1s,mb3.9						
DUG	**Dugway**	**55.27**	**327**	*e*P	**P**	**04 33 34.4**	**+0.5**
	1.4nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**55.49**	**331**	P	**P**	**04 33 35.5**	**+0.1**
	0.4nm,0.5s,mb3.4,baz=140,slow=11,SNR=3.9						
HWUT	**Hardware Ranch**	**55.63**	**329**	*e*P	**P**	**04 33 36.3**	**-0.1**
	1.3nm,0.5s,mb4.0						
NVAR	**Mina Array Bea**	**57.28**	**322**	P	**P**	**04 33 48.4**	**+0.2**
	0.9nm,0.6s,mb3.8,baz=110,slow=7.4,SNR=6.9						
BOZ	**Bozeman (W)**	**58.65**	**332**	*e*P	**P**	**04 33 56.5**	**-1.0**
	1.2nm,0.9s,mb3.7						
YKA	**Yellowknife Ar**	**72.66**	**343**	P	**P**	**04 35 26.0**	**-1.1**
	0.6nm,0.4s,mb3.7,baz=140,slow=6.2,SNR=6.9						
VNA3	**Neumayer Olymp**	**78.59**	**162**	*e*	**P**	**04 36 02.8**	**+2.0**
VNA2	**Neumayer--Watz**	**79.19**	**162**	*e*	**P**	**04 36 05.8**	**+1.7**
	baz=296,slow=5.9						
TOA0	**Torodi Ar. Sit**	**80.12**	**76**	*e*P	**P**	**04 36 10.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**80.12**	**76**	P	**P**	**04 36 09.3**	**-0.8**
	0.4nm,0.6s,mb3.2,baz=271,slow=5.4,SNR=10.0						
TORD	**Torodi Ar. Bea**	**80.12**	**76**	P	**P**	**04 36 09.3**	**-0.9**
SNAA	**Sanae**	**80.81**	**162**	*e*	**P**	**04 36 11.0**	**-1.7**
SNAA	**Sanae**	**80.81**	**162**	*e*P	**P**	**04 36 11.0**	**-1.7**
	2.3nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**128.54**	**14**	PKP	PKPdf	04 43 05.2	-0.1
	0.9nm,0.4s,baz=247,slow=3.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**128.54**	**14**	PKP	PKPdf	04 43 05.2	-0.1
MKAR	**Makanchi Array**	**134.24**	**20**	PKP	PKPdf	04 43 16.8	+0.4
	0.2nm,0.5s,baz=44,slow=1.5,SNR=3.6						
ASAR	**Alice Springs**	**138.82**	**226**	PKP	PKPdf	04 43 25.1	-0.4
	0.2nm,0.6s,baz=169,slow=1.3,SNR=4.1						
WRA	**Warramunga Arr**	**140.72**	**231**	PKP	PKPdf	04 43 28.5	-0.5
	0.9nm,0.8s,baz=120,slow=2.2,SNR=5.5						

MAN 21 04:35:00,1364N×12032E,h51km,mb4.1,ML2.9,MS2.6, 1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.12**	**322**	*e*P	Pn	04 35 10.4	+2.3
LUBP				*e*S	Sn	04 35 16.1	+2.4
TGY	**Tagaytay City**	**0.75**	**52**	⇑*e*P	Pn	04 35 17.0	+2.5
TGY				*i* S	Sn	04 35 27.9	+2.8
SJMP	**San Jose**	**1.40**	**146**	*e*P	Pn	04 35 24.3	+1.1
SJMP				*e*S	Sn	04 35 43.5	+2.8
BUSP	**Coron**	**1.63**	**184**	*e*P	Pn	04 35 27.4	+1.1
BUSP				*e*S	Sn	04 35 48.5	+2.3
ENPP	**El Nido**	**2.57**	**200**	*e*P	Pn	04 35 40.9	+1.7

IDC ***21*** *04:54:22.0±0.9,3296S×17814W,h0km,mb4.3/5, mb1 4.6/6,mb1mx4.2/18,mbtmp4.3/6,ML3.8/1,Error ellipse: s-maj=32.4km s-min=27.2km az=165.0*

ISCJB ***21*** *04:54:26.6±0.8,3318S±009×17814W±0.1,h33km,mb4.4/7, Error ellipse: s-maj=16.4km s-min=11.3km az=23.7*

NEIC ***21*** *04:54:26.0±9.5,3306S×17822W,h26km±63km,mb4.3/2, Error ellipse: s-maj=34.9km s-min=18.9km az=212.0*

ISC 21 04:54:28.4±0.8,3312S±009×17834W±01,h35km,n31, σ0§61/15,mb4.4/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.33**	**215**	Pn	**Pn**	**04 55 58.3**	**-0.8**
	1.9nm,0.3s,baz=35,slow=8.6,SNR=22						
URZ				Sn	**Sn**	**04 57 10.2**	**+0.1**
	2.0nm,0.3s,baz=335,slow=13,SNR=4.2						
RPZ	**Rata Peaks**	**13.44**	**215**	Sn	**Sn**	**04 59 52.8**	**-12**
	2.7nm,0.3s,baz=30,slow=23,SNR=5.0						
CTA	**Charters Tower**	**34.05**	**283**	P	**P**	**05 01 10.4**	**+1.1**
	6.9nm,0.6s,mb4.8,baz=121,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**42.75**	**270**	P	**P**	**05 02 22.4**	**-0.1**
	5.2nm,0.9s,mb4.3,baz=112,slow=7.6,SNR=34						
WB2	**Warramunga Arr**	**43.98**	**275**	*e*P	**P**	**05 02 32.2**	**-0.2**
WRAB	**Tennant Creek**	**43.98**	**275**	*e*P	**P**	**05 02 32.0**	**-0.4**
	12nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**43.99**	**275**	P	**P**	**05 02 32.4**	**0.0**
	7.1nm,0.7s,mb4.5,baz=116,slow=7.4,SNR=62						
FORT	**Forrest**	**45.13**	**258**	*e*P	**P**	**05 02 41.5**	**-0.1**
	8.9nm,0.7s,mb4.7						
QSPA	**South Pole Qui**	**57.00**	**180**	P	**P**	**05 04 11.3**	**+1.4**
	0.7nm,0.7s,mb3.8,baz=6.0,slow=2.8,SNR=5.4						
QSPA	**South Pole Qui**	**57.00**	**180**	P	**P**	**05 04 11.3**	**+1.4**
SNAA	**Sanae**	**75.45**	**179**	*e*	Px	05 06 17.4	
SNAA				*e*		05 06 29.8	
SNAA				*e*		05 06 40.9	
VNA3	**Neumayer Olymp**	**75.62**	**176**	*e*	**P**	**05 06 08.4**	**-0.8**
VNA3				*e*		05 06 22.2	
VNA3				*e*		05 06 34.2	
VNA2	**Neumayer--Watz**	**76.05**	**177**	*e*	**P**	**05 06 11.5**	**-0.1**
	baz=177,slow=5.7						
VNA2				*e*		05 06 25.4	
VNA2				*e*		05 06 37.2	
VNA1	**Neumayer--Stat**	**76.28**	**177**	*e*	**P**	**05 06 13.3**	**+0.3**
VNA1				*e*		05 06 27.1	
VNA1				*e*		05 06 39.0	
NVAR	**Mina Array Bea**	**90.42**	**43**	P	**P**	**05 07 25.6**	**-0.4**
	0.6nm,0.8s,mb4.0,baz=218,slow=6.0,SNR=4.1						
MK31	**Makanchi Array**	**119.28**	**309**	*e*PKPdf	PKPdf	05 13 12.1	-1.3
MKAR	**Makanchi Array**	**119.28**	**309**	PKP	PKPdf	05 13 11.2	-2.2
	0.9nm,0.8s,baz=95,slow=1.3,SNR=4.8						
KURK	**Kurchatov**	**122.70**	**313**	PKP	PKPdf	05 13 18.7	-1.2
	2.0nm,0.7s,baz=107,slow=2.3,SNR=8.9						
KURK	**Kurchatov**	**122.70**	**313**	PKP	PKPdf	05 13 18.7	-1.2
KURK				*e*PKPdf	PKPdf	05 13 18.7	-1.1
EKS2	**Erkin-Say**	**123.87**	**302**	*e*PKPdf	PKPdf	05 13 22.1	-0.3
KBL	**Kabul**	**124.99**	**292**	*e*PKPdf	PKPdf	05 13 24.2	-0.6
BVAR	**Borovoye Array**	**128.12**	**314**	PKP	PKPdf	05 13 29.8	-0.4
	1.8nm,0.8s,baz=82,slow=3.3,SNR=5.2						
JOF	**Joensuu**	**144.82**	**337**	*e*p	PKPdf	05 13 58.3	-2.4
	3.8nm,0.7s						
KAF	**Kangasniemi**	**147.00**	**339**	*e*p	PKPdf	05 14 05.4	+1.0
	3.8nm,0.7s						
NB2	**NORSAR Subarra**	**151.39**	**350**	PKP	PKPbc	05 14 16.7	-0.9
	comp=Z,1.2nm,0.8s,baz=24,slow=2.8						
NOA	**NORSAR Array B**	**151.39**	**350**	PKPbc	PKPbc	05 14 16.2	-1.4
	comp=Z,1.2nm,0.8s,baz=15,slow=4.1,SNR=4.7						
NOA	**NORSAR Array B**	**151.39**	**350**	PKPbc	PKPbc	05 14 16.2	-1.4
AKASG	**Malin Array Be**	**153.23**	**319**	PKPbc	PKPbc	05 14 20.3	-1.8
	comp=Z,0.4nm,0.3s,baz=96,slow=1.8,SNR=4.1						
AKASG	**Malin Array Be**	**153.23**	**319**	PKPbc	PKPbc	05 14 20.3	-1.8
BRTR	**Keskin Array B**	**153.54**	**294**	PKPbc	PKPbc	05 14 22.7	-0.4
	comp=Z,0.7nm,0.7s,baz=42,slow=6.7,SNR=3.1						
CLL	**Collm**	**160.03**	**339**	*e*PKPab	PKPab	05 15 02.0	-1.1

ISCJB ***21*** *04:59:18.5±0.7,686N±007×7304W±007,h163km±7km, mb3.4/2,Error ellipse: s-maj=14.2km s-min=7.7km az=38.6*

FUNV ***21*** *04:59:19.8,680N×7310W,h164km,MW3.6*

IDC ***21*** *04:59:21.5±4.5,668N×7332W,h170km±33km,mb3.1/2, mb1 3.5/3,mb1mx3.1/20,mbtmp3.2/3,Error ellipse: s-maj=83.4km s-min=37.0km az=81.0*

ISC 21 04:59:19.5±0.7,685N±007×7303W±007,h157km±7km,n17, σ0§90/21,mb3.4/2,6D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.23**	**35**	⇓*i*P	**Pn**	**04 59 48.4**	**+1.4**
CAPV				*e*S	**Sn**	**05 00 08.9**	**+0.8**
ROSC	**El Rosal**	**2.36**	**213**	P	**Pn**	**05 00 00.3**	**+1.0**
	15nm,0.3s,baz=90,slow=16,SNR=55						
ROSC				S	**Sn**	**05 00 28.4**	**-1.7**
	23nm,0.3s,baz=80,slow=21,SNR=9.5						
VIGV	**El Vigia**	**2.58**	**40**	⇓*i*P	**Pn**	**05 00 02.9**	**+1.0**
VIGV				*e*S	**Sn**	**05 00 34.6**	**-0.1**
SOCV	**Socops**	**2.58**	**56**	*e*P	**Pn**	**05 00 03.0**	**+1.0**
SOCV				*e*S	**Sn**	**05 00 34.4**	**-0.5**
ELOV	**Elorza**	**3.52**	**87**	*e*P	**Pn**	**05 00 14.3**	**+0.6**
VIRV	**Villa del Rosa**	**3.69**	**10**	⇓*i*P	**Pn**	**05 00 15.3**	**-0.6**
VIRV				*e*S	**Sn**	**05 00 57.4**	**-2.4**
SANV	**Sanarito**	**4.35**	**52**	*e*P	**Pn**	**05 00 24.6**	**+0.2**
CURV	**Curarigua**	**4.37**	**44**	⇓*e*P	**Pn**	**05 00 25.2**	**+0.5**
DABV	**Dabajuro**	**4.69**	**30**	*e*P	**Pn**	**05 00 29.2**	**+0.2**
TEPV	**Terepaima**	**4.90**	**50**	⇓*e*P	**Pn**	**05 00 32.0**	**+0.3**
SIQV	**Siquisique**	**4.94**	**40**	*e*P	**Pn**	**05 00 32.2**	**-0.1**
BAUV	**El Baul**	**5.36**	**67**	⇓*e*P	**Pn**	**05 00 36.7**	**-1.1**
CAOV	**Caicara del Or**	**6.67**	**85**	*e*P	**Pn**	**05 00 54.5**	**-0.8**
CUPV	**Cepira**	**7.84**	**65**	*e*P	**Pn**	**05 01 09.6**	**-1.2**
TXAR	**Lajitas Array**	**36.52**	**312**	P	**P**	**05 06 10.5**	**+0.6**
	0.4nm,0.7s,mb3.2,baz=126,slow=7.6,SNR=5.9						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**05 09 31.2**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=135,slow=6.5,SNR=4.4						
WRA	**Warramunga Arr**	**150.43**	**241**	PKPbc	PKPbc	05 18 52.9	-0.4
	0.1nm,0.3s,baz=105,slow=3.8,SNR=6.0						

IDC 21 05:15:17.1±3.1,2999S×13884E,h0km,mb1 2.9/3, mb1mx2.9/14,mbtmp2.7/3,ML2.7/3,Error ellipse: s-maj=107.8km s-min=14.0km az=48.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.03**	**129**	Pn	Pn	05 16 06.2	0.0
	0.5nm,0.3s,baz=304,slow=9.7,SNR=6.2						
STKA				Pg	Pg	05 16 12.1	-3.1
	1.4nm,0.3s,baz=300,slow=13,SNR=14						
STKA				Sn	Sn	05 16 42.3	-0.9
	1.3nm,0.3s,baz=281,slow=14,SNR=5.4						
STKA				Lg		05 16 54.3	
	2.8nm,0.3s,baz=201,slow=21,SNR=7.0						
ASAR	**Alice Springs**	**7.68**	**324**	Pn	Pn	05 17 09.6	-0.7
	0.1nm,0.3s,baz=147,slow=12,SNR=5.0						
ASAR				Sn	Sn	05 18 35.7	-2.3
	baz=150,slow=22,SNR=2.8						
ASAR				Lg		05 19 22.6	
	baz=144,slow=27,SNR=3.4						
WRA	**Warramunga Arr**	**10.80**	**337**	Pn	Pn	05 17 54.2	+1.2
	0.1nm,0.3s,baz=149,slow=12,SNR=5.3						
WRA				Sn	Sn	05 19 53.5	-1.1
	0.1nm,0.3s,baz=164,slow=24,SNR=3.6						

ISCJB ***21*** *05:26:06.3±0.5,7088N±010×6676W±01,h10km,Error ellipse: s-maj=14.9km s-min=3.5km az=15.5*

NAO ***21*** *05:26:07.8±5.2,7084N×6676W,h6km±62km,ML3.1*

BER ***21*** *05:26:08.9,7107N×6677W,h10km,MD5.0,ML3.4, ML3.1(NAO)*

CSEM ***21*** *05:26:09.3±0.5,7116N×6699W,h25km,ML3.1,Error ellipse: s-maj=24.7km s-min=16.0km az=21.0*

ISC 21 05:26:09.4±0.8,7080N±009×71W±04,h32km±20km,n16, σ0§96/26,4C,Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.45**	**295**	*i* P	**Pb**	**05 26 18.6**	**-0.4**
JNE				*e*S	**Sb**	**05 26 25.5**	**-0.2**
JNE				AML	AML	05 26 27.2	
	comp=Z,10μm,0.3s						
JNW	**Jan Mayen West**	**0.50**	**297**	⇑*i*P	**Pb**	**05 26 19.3**	**-0.7**
JNW				*e*S	**Sb**	**05 26 26.7**	**-0.4**
JNW				AML	AML	05 26 27.2	
	comp=Z,8μm,0.2s						
JMIC	**Jan Mayen**	**0.51**	**292**	Pg	**Pb**	**05 26 19.5**	**-0.6**
JMIC				Lg		05 26 27.1	
JMIC	**Jan Mayen**	**0.51**	**292**	⇑*i*P	**Pb**	**05 26 19.4**	**-0.6**
JMIC				*e*S	**Sb**	**05 26 27.2**	**-0.2**
JMIC				AML	AML	05 26 31.9	
	comp=Z,6μm,0.5s						
JMI	**Jan Mayen**	**0.56**	**284**	⇑*i*P	**Pb**	**05 26 20.9**	**+0.1**
JMI				*e*S	**Sb**	**05 26 30.2**	**+1.5**
JMI				AML	AML	05 26 32.1	
	comp=Z,4μm,0.4s						
DAG	**Danmarks Havn**	**6.80**	**337**	⇑*i*P	**Pn**	**05 27 45.8**	**-0.9**
	comp=Z,21nm,0.3s						
LOF	**Lofoten**	**7.71**	**100**	*e*Pn	**Pn**	**05 27 59.9**	**+0.8**
LOF				*e*Sn	**Sn**	**05 29 21.5**	**-3.7**
LOF				AML	AML	05 29 29.9	
	comp=Z,9.2nm,0.4s						
STOK	**Stokkvaagen**	**8.58**	**112**	*e*Pn	**Pn**	**05 28 11.4**	**+0.2**
STOK				*e*Sn	**Sn**	**05 29 39.6**	**-7.1**
STOK				AML	AML	05 29 47.0	
	comp=N,18nm,0.5s						
FLOS	**Flostrand**	**8.69**	**111**	*e*Pn	**Pn**	**05 28 12.9**	**+0.4**
FLOS				*e*Sn	**Sn**	**05 29 42.2**	**-7.0**
FLOS				AML	AML	05 29 48.2	
	comp=Z,20nm,0.3s						
MOR8	**Moi Rana**	**9.13**	**110**	*e*Pn	**Pn**	**05 28 19.5**	**+0.9**
MOR8				*e*Sn	**Sn**	**05 29 55.8**	**-4.2**
MOR8				AML	AML	05 30 02.3	
	comp=Z,9.1nm,0.3s						
NSS	**Namsos**	**9.55**	**122**	*e*Pn	**Pn**	**05 28 24.3**	**-0.2**
NSS				*e*Sn	**Sn**	**05 30 03.9**	**-6.6**
NSS				AML	AML	05 30 11.2	
	comp=Z,14nm,0.5s						
SPA0	**Spitsbergen Ar**	**9.60**	**29**	Pn	**Pn**	**05 28 26.2**	**+1.2**
	baz=226,slow=12						
KTK1	**Kautokeino**	**10.51**	**85**	*e*Pn	**Pn**	**05 28 37.5**	**-0.1**
ARA0	**ARCESS Array S**	**11.05**	**81**	Pn	**Pn**	**05 28 44.0**	**-0.9**
	baz=292,slow=12						
HFS	**Hagfors**	**13.64**	**131**	Pn	**Pn**	**05 29 22.3**	**+2.1**
	baz=342,slow=14						
HFS				Sn	**Sn**	**05 31 47.9**	**-2.4**
	baz=345,slow=28						
FIA0	**FINESS Array S**	**16.12**	**109**	P	**Pn**	**05 29 54.0**	**+0.8**
	baz=319,slow=14						

GUC 21 05:35:03.4±0.8,2294S×7032W,h36km±5km,MD3.9, ML3.1,3C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.20**	**217**	*e*P	Pn	05 35 09.5	-0.9
MECH				*i* S	Sn	05 35 14.9	-0.2
MECH				AML	AML	05 35 15.6	
	comp=E,8μm,0.4s						
CEN1	**Los Morros**	**0.46**	**166**	⇑*i*P	Pn	05 35 15.7	+2.1
CEN1				*i* S	Sn	05 35 24.7	+4.2
MACH	**Maria Elena**	**0.91**	**35**	⇑*i*P	Pn	05 35 20.4	+0.8
MACH				*i* S	Sn	05 35 32.7	+1.3
LVC	**Limon Verde**	**1.34**	**76**	⇓*i*P	Pn	05 35 28.3	+2.7
LVC				*i* S	Sn	05 35 46.6	+4.5
LVC				AML	AML	05 35 47.4	

JIZS eS **Sn** **06 33 31.4 +0.2**
JOD2 Odawara 2 2.31 316 P **Pn** **06 33 08.7 -0.2**
JOD2 eS **Sn** **06 33 34.6 -1.5**
MJAR Matsushiro Arr 3.74 322 P **Pn** **06 33 29.0 +0.6**
2.8nm,0.3s,baz=146,slow=11,SNR=12
MJAR S **Sn** **06 34 14.2 +3.0**
3.1nm,0.3s,baz=143,slow=27,SNR=6.8
MAJO Matsushiro 3.74 322 *e*Pn **Pn** **06 33 29.1 +0.6**
MAJO eSn **Sn** **06 34 11.9 +0.7**
MAT Matsushiro 3.74 322 P **Pn** **06 33 29.7 +1.2**
MAT S **Sn** **06 34 12.1 +0.8**
SONM Songino Array 29.58 309 P **P** **06 38 33.6 +0.5**
0.4nm,0.5s,mb3.4,baz=123,slow=8.3,SNR=3.3
MKAR Makanchi Array 45.75 305 P **P** **06 40 49.5 +0.1**
0.2nm,0.5s,mb3.3,baz=95,slow=6.5,SNR=3.0
WRA Warramunga Arr 53.63 188 P **P** **06 41 48.6 -0.8**
1.6nm,0.4s,mb4.3,baz=4.9,slow=7.6,SNR=23
ASAR Alice Springs 57.35 188 P **P** **06 42 15.7 -0.4**
0.7nm,1.0s,mb3.6,baz=16,slow=13,SNR=6.1

SZGRF ***21*** *06:47:20.4,2283S×178.16W,h33km,South of Fiji Islands*
MOS ***21*** *06:48:27.2±2.8,2104S×17929W,h563km,mb5.1/14,*
Error ellipse: s-maj=11.6km s-min=10.0km az=21.7
BJI ***21*** *06:48:27.0,2103S×17875W,h603km,mB5.3,mb4.9*
GCMT ***21*** *06:48:29.7±0.8,2108S×17929W,h634km±7km,MW5.1/35,*
Moment Tensor Solution. s35,c40; Duration: 0 Moment
tensor: Scale 10^{16}Nm; M_{rr}-2.98±.36; $M_{\theta\theta}$0.05±.72;
$M_{\phi\phi}$2.93±.58; $M_{r\theta}$-2.09±.67; $M_{r\phi}$1.04±.56; $M_{\theta r}$-3.88±.52;
Best double couple: $M_0$5.40400×10^{16} NP1:ϕ_s188.00000°,
δ18.00000°,λ-108.00000°. NP2:ϕ_s27.00000°,δ73.00000°,
λ-84.00000°. Principal axes: T 5.5090, Plg27.0000°,
Azm112.0000°; N -0.2100, Plg6.0000°, Azm205.0000°; P
-5.3000, Plg62.0000°, Azm305.0000°; nsta1 refers to
body waves, cutoff=40s.
NEIC ***21*** *06:48:29.7±0.7,2111S×17922W,h608km±8km,mb4.9/27*
Error ellipse: s-maj=9.6km s-min=5.7km az=161.0
IDC ***21*** *06:48:29.6±1.0,2110S×179.19W,h608km±11km,mb3.9/17,*
mb1 4.1/20,mb1mx4.0/21,mbtmp3.9/20,Error ellipse:
s-maj=12.1km s-min=10.1km az=134.0
ISCJB ***21*** *06:48:29.1±0.2,2120S±005×17927W±004,h610km,*
mb4.8/55,Error ellipse: s-maj=6.4km s-min=4.4km
az=157.8
DJA ***21*** *06:48:36.0±0.0,2119S×17974W,h650km,mB5.7/1,*
mb4.9/7

ISC 21 06:48:30.4±0.2,2124S±005×17925W±004,h612km,
h612km±4.5km:pP-P,n464,σ0s65/283,mb4.8/55,
103C-119D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.07**	**172**	P		**P**	**06 50 31.6**	**+1.0**
	160nm,0.3s,baz=49,slow=20,SNR=4.0							
RAO				S		**S**	**06 52 08.5**	**-0.8**
	85nm,0.3s,baz=53,slow=20,SNR=4.7							
RAO	**Raoul Island**	**8.07**	**172**	*e*P		**P**	**06 50 30.7**	**0.0**
RAO	**Raoul Island**	**8.07**	**172**	P		**P**	**06 50 31.6**	**+1.0**
RAO				S		**S**	**06 52 08.5**	**-0.7**
RAO				pmax	pmax			
	comp=Z,161nm,0.3s							
RAO				smax				
	comp=N,85nm,0.3s							
AFI	**Afiamalu**	**10.19**	**46**	P		**P**	**06 50 48.5**	**-2.9**
	comp=N,9.6nm,0.3s,baz=252,slow=9.6,SNR=18							
AFI				S		**S**	**06 52 38.5**	**-8.4**
	comp=N,14nm,0.3s,baz=307,slow=20,SNR=11							
AFI	**Afiamalu**	**10.19**	**46**	*e*P		**P**	**06 50 48.4**	**-3.0**
	comp=N,165nm,0.9s							
AFI				*e*S		**S**	**06 52 39.0**	**-8.0**
AFI	**Afiamalu**	**10.19**	**46**	P		**P**	**06 50 48.5**	**-2.9**
AFI				S		**S**	**06 52 38.5**	**-8.5**
AFI				pmax	pmax			
	comp=Z,10.0nm,0.3s							
AFI				smax				
	comp=N,14nm,0.3s							
URZ	**Urewera**	**17.25**	**190**	P		**P**	**06 51 58.0**	**-0.5**
	comp=N,2.3nm,0.3s,baz=113,slow=15,SNR=14							
URZ				S		**S**	**06 54 42.9**	**-4.7**
	comp=N,1.2nm,0.3s,baz=49,slow=20,SNR=6.2							
RAR	**Rarotonga**	**18.16**	**93**	P		**P**	**06 52 05.3**	**-1.7**
	comp=N,1.8nm,0.3s,baz=225,slow=6.2,SNR=6.1							
RAR	**Rarotonga**	**18.16**	**93**	P		**P**	**06 52 05.3**	**-1.7**
RAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
PAE	**Paea**	**28.18**	**88**	⇑*i*P		**P**	**06 53 35.2**	**-0.8**
	comp=Z,316nm,1.1s,mb5.9							
PAE	**Paea**	**28.18**	**88**	⇑*i*P		**P**	**06 53 35.2**	**-0.8**
PAE				pmax	pmax			
	comp=Z,316nm,1.1s,mb5.9							
PPT	**Papeete**	**28.20**	**88**	⇑*i*P		**P**	**06 53 35.7**	**-0.5**
	comp=Z,51nm,1.0s,mb5.1							
PPT	**Papeete**	**28.20**	**88**	P		**P**	**06 53 35.6**	**-0.6**
	comp=Z,30nm,0.6s,mb5.1,baz=218,slow=3.8,SNR=6.6							
PPT	**Papeete**	**28.20**	**88**	P		**P**	**06 53 35.6**	**-0.6**
PPT				pmax	pmax			
	comp=Z,30nm,0.6s							
TIAR	**Tiarei**	**28.42**	**88**	⇑*i*P		**P**	**06 53 37.6**	**-0.5**
	comp=Z,599nm,0.8s							
TVO	**Taravao**	**28.46**	**88**	⇑*i*P		**P**	**06 53 37.7**	**-0.7**
	comp=Z,427nm,0.7s							
MEH	**Mehetia**	**29.55**	**89**	*e*P		**P**	**06 53 47.2**	**-0.6**
	comp=Z,2μm,0.9s							
PMOR	**Pomariorio Ree**	**30.40**	**84**	⇑*i*P		**P**	**06 53 54.4**	**-0.7**
	comp=Z,162nm,1.2s,mb5.5							
VAH	**Vaihoa**	**30.58**	**84**	⇑*i*P		**P**	**06 53 55.6**	**-1.1**
	comp=Z,151nm,1.0s,mb5.6							
CTAO	**Charters Tower**	**32.27**	**266**	*e*P		**P**	**06 54 11.6**	**+0.7**
	comp=Z,24nm,1.0s,mb4.8							
CTAO	**Charters Tower**	**32.27**	**266**	*e*P		**P**	**06 54 11.6**	**+0.7**
CTAO				pmax	pmax			
	comp=Z,24nm,1.0s,mb4.8							
CTAO	**Charters Tower**	**32.27**	**266**	P		**P**	**06 54 11.5**	**+0.6**
	comp=Z,32nm,0.9s,mb5.0							
PMG	**Port Moresby**	**34.39**	**285**	*e*P		**P**	**06 54 29.3**	**+0.6**
PMG	**Port Moresby**	**34.39**	**285**	*e*P		**P**	**06 54 29.5**	**+0.7**
PMG				pmax	pmax			
	comp=Z,53nm,0.8s							
PMG	**Port Moresby**	**34.39**	**285**	P		**P**	**06 54 29.0**	**+0.2**
	comp=Z,85nm,1.5s,mb5.2							
STKA	**Stephens Creek**	**36.42**	**245**	P		**P**	**06 54 46.4**	**+1.1**
	comp=Z,10nm,0.5s,mb4.6,baz=93,slow=9.9,SNR=29							
STKA				PcP		PcP	06 56 50.9	-1.2
	comp=Z,7.9nm,0.8s,baz=76,slow=4.9,SNR=5.0							
STKA				ScP		ScP	06 59 42.3	+0.8
	comp=Z,2.2nm,0.6s,baz=60,slow=2.5,SNR=2.7							
STKA	**Stephens Creek**	**36.42**	**245**	*e*P		**P**	**06 54 46.2**	**+0.9**
	comp=Z,2.7nm,0.6s,mb4.0							
RKT	**Rikitea**	**40.92**	**101**	⇑*i*P		**P**	**06 55 21.3**	**-0.3**
	comp=Z,44nm,1.0s,mb5.0							
RKT	**Rikitea**	**40.92**	**101**	⇑*i*P		**P**	**06 55 21.3**	**-0.3**
RKT				pmax	pmax			
	comp=Z,44nm,1.0s,mb4.9							
ASAR	**Alice Springs**	**43.22**	**258**	P		**P**	**06 55 40.1**	**+0.6**
	comp=Z,43nm,0.5s,mb5.2,baz=95,slow=7.4,SNR=622							
ASAR				PcP		PcP	06 57 13.9	-0.7
	comp=Z,12nm,0.8s,baz=108,slow=4.0,SNR=12							
ASAR				ScP		ScP	07 00 09.3	+0.9
	comp=Z,4.0nm,0.8s,baz=104,slow=3.9,SNR=9.6							
ASAR				S		**S**	**07 01 21.7**	**-1.9**
	comp=Z,17nm,0.9s,baz=93,slow=15,SNR=38							
ASAR				ScS		ScS	07 04 30.4	-1.3
	comp=Z,1.2nm,0.9s,baz=88,slow=6.9,SNR=4.0							
ASAR	**Alice Springs**	**43.22**	**258**	P		**P**	**06 55 40.2**	**+0.7**
ASAR							06 57 13.9	
ASAR				S		**S**	**07 01 21.7**	**-1.9**
ASAR							07 04 30.4	
ASAR				pmax	pmax			
	comp=Z,43nm,0.5s							
ASAR				pmax	pmax			
	comp=Z,12nm,0.8s							
ASAR				pmax	pmax			
	comp=N,4.0nm,0.8s							
ASAR				smax				
	comp=N,17nm,0.9s							
ASAR				pmax	pmax			
	comp=N,1.0nm,0.9s							
WB2	**Warramunga Arr**	**43.34**	**263**	*e*P		**P**	**06 55 40.4**	**-0.1**
WB2				*e*PcP		PcP	06 57 14.8	-0.3
WB2				*e*S		**S**	**07 01 23.2**	**-2.2**
WRAB	**Tennant Creek**	**43.34**	**263**	*e*P		**P**	**06 55 40.3**	**-0.2**
	comp=N,61nm,1.0s,mb5.1							
WRAB				*e*PcP		PcP	06 57 14.4	-0.6
WRAB				*e*pP		pP	06 57 24.2	-2.4
WRAB				*e*S		**S**	**07 01 21.9**	**-3.5**
WRAB				pmax	pmax			
	comp=Z,61nm,1.0s,mb5.1							
WRAB	**Tennant Creek**	**43.34**	**263**	P		**P**	**06 55 39.6**	**-0.9**
	comp=Z,76nm,1.1s,mb5.1							
WRA	**Warramunga Arr**	**43.35**	**263**	P		**P**	**06 55 40.3**	**-0.3**
	comp=Z,24nm,0.3s,mb5.2,baz=97,slow=7.8,SNR=888							
WRA				PcP		PcP	06 57 14.7	-0.4
	comp=Z,5.6nm,0.7s,baz=97,slow=4.3,SNR=9.6							
WRA				ScP		ScP	07 00 09.7	+0.6
	comp=Z,1.7nm,0.8s,baz=94,slow=2.8,SNR=4.5							
WRA				S		**S**	**07 01 21.7**	**-3.8**
	comp=Z,7.7nm,0.9s,baz=101,slow=18,SNR=6.2							
WRA	**Warramunga Arr**	**43.35**	**263**	P		**P**	**06 55 40.3**	**-0.3**
WRA							06 57 14.7	
WRA				S		**S**	**07 01 21.7**	**-3.8**
WRA				pmax	pmax			
	comp=Z,24nm,0.3s							
WRA				pmax	pmax			
	comp=Z,6.0nm,0.7s							
WRA				pmax	pmax			
	comp=N,2.0nm,0.8s							
WRA				smax				
	comp=N,8.0nm,0.9s							
FORT	**Forrest**	**47.93**	**247**	*e*P		**P**	**06 56 15.0**	**-0.1**
	comp=N,64nm,0.6s,mb5.3							
FORT				*e*pP		pP	06 58 03.9	-0.8
TLE	**Tual**	**48.99**	**281**	P		**P**	**06 56 24.0**	**+0.8**
	comp=N,146nm,0.9s,mb5.4							
MBWA	**Marble Bar**	**56.56**	**258**	*e*P		**P**	**06 57 16.6**	**-0.1**
	comp=N,78nm,0.8s,mb5.0							
MBWA	**Marble Bar**	**56.56**	**258**	P		**P**	**06 57 16.5**	**-0.2**
	comp=N,150nm,0.8s,mb5.2							
NWAO	**Narrogin (SRO)**	**57.00**	**244**	*e*P		**P**	**06 57 19.9**	**+0.4**
	comp=N,36nm,1.3s,mb4.5							
NWAO	**Narrogin (SRO)**	**57.00**	**244**	*e*P		**P**	**06 57 19.9**	**+0.4**
NWAO				pmax	pmax			
	comp=Z,37nm,1.3s							
SBA	**Scott Base**	**57.06**	**184**	*e*P		**P**	**06 57 21.3**	**+2.1**
	comp=Z,8.1nm,0.9s,mb4.0							
SBA	**Scott Base**	**57.06**	**184**	*e*P		**P**	**06 57 21.3**	**+2.1**
SBA				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.0							
VNDA	**Vanda**	**57.08**	**185**	P		**P**	**06 57 21.1**	**+1.8**
	comp=Z,2.1nm,0.5s,baz=354,slow=6.7,SNR=44							
VNDA				PcP		PcP	06 58 04.8	-0.5
	comp=Z,1.7nm,0.7s,baz=318,slow=4.4,SNR=4.3							
VNDA				ScP		ScP	07 01 06.0	-0.9
	comp=Z,1.3nm,1.0s,baz=352,slow=5.5,SNR=3.6							
VNDA	**Vanda**	**57.08**	**185**	*e*P		**P**	**06 57 20.3**	**+1.0**
	comp=Z,2.5nm,0.6s							
VNDA	**Vanda**	**57.08**	**185**	P		**P**	**06 57 21.1**	**+1.8**
VNDA							06 58 04.8	
MJAR	**Matsushiro Arr**	**70.12**	**325**	P		**P**	**06 58 41.7**	**-1.0**
	comp=Z,15nm,0.6s,mb4.6,baz=160,slow=5.7,SNR=24							
MJAR	**Matsushiro Arr**	**70.12**	**325**	P		**P**	**06 58 41.7**	**-1.0**
MJAR				pmax	pmax			
	comp=Z,15nm,0.6s							
MAJO	**Matsushiro**	**70.12**	**325**	*e*P		**P**	**06 58 42.1**	**-0.6**
	comp=Z,379nm,2.4s,mb5.4							
MAJO	**Matsushiro**	**70.12**	**325**	*e*P		**P**	**06 58 42.1**	**-0.6**
MAJO				pmax	pmax			
	comp=Z,379nm,2.4s,mb5.4							
MAT	**Matsushiro**	**70.12**	**325**	P		**P**	**06 58 41.9**	**-0.8**
KSM	**Kuching**	**72.37**	**279**	*e*P		**P**	**06 58 56.4**	**+0.1**
NACB	**Ninganchiao**	**73.13**	**305**	*e*P		**P**	**06 58 58.7**	**-1.7**
	comp=Z,93nm,1.1s,mb5.2							
QZH	**Quanzhou**	**75.85**	**304**	P		**P**	**06 59 15.6**	**0.0**
YSS	**Yuzh-Sakhalins**	**76.04**	**334**	*e*P		**P**	**06 59 16.2**	**+0.1**
YSS				pmax	pmax			
	comp=Z,29nm,1.3s,mb4.5							
KSRS	**Korea Array**	**76.68**	**319**	P		**P**	**06 59 19.9**	**0.0**
	comp=Z,4.4nm,0.7s,mb4.0,baz=151,slow=6.4,SNR=12							
KSRS	**Korea Array**	**76.68**	**319**	P		**P**	**06 59 19.9**	**+0.1**
KSRS				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.0							
PEA0B	**Petropavlovsk-**	**76.69**	**346**	*e*P		**P**	**06 59 18.8**	**-0.7**
PETK	**Petropavlovsk-**	**76.69**	**346**	P		**P**	**06 59 18.7**	**-0.8**
	comp=Z,15nm,0.7s,mb4.5,baz=124,slow=6.2,SNR=27							
PETK	**Petropavlovsk-**	**76.69**	**346**	P		**P**	**06 59 18.7**	**-0.8**
PETK				pmax	pmax			
	comp=Z,15nm,0.7s,mb4.5							
NJ2	**Nanjing**	**79.46**	**310**	*e*P		**P**	**06 59 36.0**	**+1.2**
NJ2				AMB		AMB		
	comp=Z,30nm,1.0s,mb4.6							
MDJ	**Mudanjiang**	**80.46**	**326**	P		**P**	**06 59 40.0**	**+0.3**
MDJ				AMB		AMB		
	comp=Z,23nm,1.1s,mb4.4							
MDJ				AMB		AMB		
	comp=Z,642nm,4.9s							
MAW	**Mawson**	**80.48**	**200**	P		**P**	**06 59 39.7**	**+0.2**
	comp=Z,5.8nm,0.8s,mb4.0,baz=120,slow=5.2,SNR=8.6							
MAW	**Mawson**	**80.48**	**200**	P		**P**	**06 59 39.7**	**+0.2**
MAW				pmax	pmax			
	comp=Z,6.0nm,0.8s							
HABR	**Khabarovsk**	**80.52**	**331**	*e*P		**P**	**06 59 38.6**	**-1.3**
HABR				*e*PP		pP	07 01 44.3	-3.7
HABR				*e*			07 02 53.7	
HABR				*e*PPP			07 04 49.0	
HABR				*e*S		S	07 08 59.0	+1.8
HABR				*e*SS		SS	07 14 30.9	+2.1
HABR				*e*SSS			07 18 05.1	
EDW2	**Edwards Air Fo**	**80.57**	**47**	⇑P		**P**	**06 59 40.8**	**+0.2**
	baz=81							
MONP	**Monument Peak**	**80.57**	**49**	⇑P		**P**	**06 59 40.8**	**+0.2**
	baz=81							
T06C	**Millerton Lake**	**80.63**	**44**	⇑P		**P**	**06 59 40.8**	**0.0**
	baz=81							
ISA	**Isabella**	**80.68**	**46**	⇑P		**P**	**06 59 41.6**	**+0.5**
	baz=81							
L02A	**Cave Junction**	**81.34**	**38**	⇑P		**P**	**06 59 44.7**	**+0.5**
	baz=81							
BELC	**Belle Mtn.**	**81.47**	**49**	⇑P		**P**	**06 59 45.2**	**0.0**
	baz=82							
MPMC	**Manual Prospec**	**81.57**	**46**	⇓P		**P**	**06 59 45.8**	**+0.2**
	baz=82							
YBH	**Yreka Blue Hor**	**81.59**	**39**	P		**P**	**06 59 46.2**	**+0.6**
	comp=Z,4.3nm,0.9s,mb4.0,baz=284,slow=8.3,SNR=6.3							
YBH	**Yreka Blue Hor**	**81.59**	**39**	P		**P**	**06 59 46.2**	**+0.6**
YBH				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BC3	**Big Chuckw Mtn**	**81.66**	**49**	⇓P		**P**	**06 59 46.3**	**+0.2**
	baz=82							
R06C	**Coleville**	**81.68**	**43**	⇓P		**P**	**06 59 46.4**	**+0.3**
	baz=82							
WHN	**Wuhan**	**81.95**	**307**	⇑P		**P**	**06 59 48.0**	**+0.3**
HUMO	**Hull Mountain**	**81.99**	**38**	*e*P		**P**	**06 59 48.3**	**+0.7**
	comp=Z,20nm,1.4s,mb4.4							
IRM	**Iron Mountain**	**82.14**	**49**	⇑P		**P**	**06 59 48.8**	**+0.2**
	baz=82							
CN2	**Changchun**	**82.18**	**323**	*e*P		**P**	**06 59 48.8**	**+0.3**
CN2				AMB		AMB		
	comp=Z,40nm,0.9s,mb5.0							
CN2				AMB		AMB		
	comp=Z,200nm,4.0s							
NVAR	**Mina Array Bea**	**82.36**	**44**	P		**P**	**06 59 49.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=218,slow=8.2,SNR=7.3							
NVAR				pP		pP	07 02 01.7	+3.2
	comp=Z,0.3nm,0.5s,baz=249,slow=7.6,SNR=2.4							
NVAR				PKKPbc		PKKPbc	07 18 12.6	+0.1
	comp=Z,0.6nm,0.7s,baz=104,slow=3.8,SNR=4.4							
NVAR	**Mina Array Bea**	**82.36**	**44**	P		**P**	**06 59 49.8**	**+0.3**
NVAR				pP		pP	07 02 01.7	+3.2
NVAR				PKKPbc		PKKPbc	07 18 12.6	+0.1
N06A	**Buffalo Meadow**	**82.73**	**41**	⇓P		**P**	**06 59 52.0**	**+0.6**
	baz=83							
Y13A	**Salome**	**82.90**	**50**	⇑P		**P**	**06 59 52.9**	**+0.5**
	baz=83							
PDMCI	**Parker Dam,Lak**	**82.93**	**49**	⇑P		**P**	**06 59 52.8**	**+0.2**
	baz=83							
O07A	**Toulon**	**82.99**	**42**	⇑P		**P**	**06 59 52.7**	**+0.1**
	baz=83							
S10A	**Tonopah Range,**	**83.19**	**45**	⇑P		**P**	**06 59 54.0**	**+0.2**
	baz=83							
K05A	**Summer Lake**	**83.27**	**39**	⇓P		**P**	**06 59 54.5**	**+0.6**
	baz=83							
Z14A	**Wintersburg**	**83.30**	**50**	⇑P		**P**	**06 59 54.1**	**-0.3**
	baz=83							
Y14A	**Wickenburg**	**83.55**	**50**	⇓P		**P**	**06 59 55.9**	**+0.3**
	baz=84							
I05A	**Bend**	**83.92**	**38**	⇓P		**P**	**06 59 57.5**	**+0.4**
	baz=84							
J06A	**Christmas Vall**	**84.02**	**39**	⇑P		**P**	**06 59 57.7**	**0.0**
	baz=84							
Y15A	**Casa Rosa Ranc**	**84.04**	**50**	⇑P		**P**	**06 59 57.7**	**-0.3**
	baz=84							
217A	**Green Valley**	**84.07**	**53**	⇑P		**P**	**06 59 58.8**	**+0.6**
	baz=84							
E03A	**Lebam**	**84.12**	**35**	⇑P		**P**	**06 59 58.7**	**+0.6**
	baz=84							
W14A	**Seligman**	**84.15**	**49**	⇑P		**P**	**06 59 58.8**	**+0.3**
	baz=84							
K07A	**Rock Creek Ran**	**84.23**	**40**	⇑P		**P**	**06 59 59.0**	**+0.3**
	baz=84							
V14A	**Boquillas Ranc**	**84.35**	**48**	⇓P		**P**	**06 59 59.6**	**+0.2**
	baz=84							
F04A	**Amboy**	**84.36**	**36**	⇑P		**P**	**06 59 59.7**	**+0.5**
	baz=84							
D03A	**Wishkah Elem.**	**84.37**	**34**	⇓P		**P**	**07 00 00.2**	**+0.9**
	baz=84							
I06A	**Prineville**	**84.39**	**38**	⇓P		**P**	**07 00 00.1**	**+0.6**
	baz=84							
L08A	**Fields**	**84.48**	**41**	⇓P		**P**	**07 00 00.5**	**+0.5**
	baz=84							
NLWA	**Neilton Lookou**	**84.50**	**34**	⇑P		**P**	**07 00 00.6**	**+0.7**
	baz=85							
117A	**Oracle**	**84.51**	**52**	⇑P		**P**	**07 00 00.7**	**+0.3**
	baz=85							
318A	**Bisbee**	**84.52**	**53**	⇑P		**P**	**07 00 00.4**	**0.0**
	baz=85							
K08A	**Mann Creek Ran**	**84.70**	**40**	⇓P		**P**	**07 00 01.3**	**+0.3**
	baz=85							
218A	**Dragoon**	**84.73**	**53**	⇑P		**P**	**07 00 01.9**	**+0.4**
	baz=85							
H06A	**Lindquist Farm**	**84.80**	**38**	⇑P		**P**	**07 00 01.5**	**+0.1**
	baz=85							
L09A	**Wilkinson Ranc**	**84.80**	**41**	⇓P		**P**	**07 00 02.0**	**+0.5**
	baz=85							
I07A	**Izee**	**84.89**	**39**	⇑P		**P**	**07 00 01.9**	**0.0**
	baz=85							
X16A	**Lo Mia Camp, P**	**84.91**	**50**	⇑P		**P**	**07 00 01.8**	**-0.4**
	baz=85							
G06A	**Carlson Farm,**	**84.92**	**37**	⇓P		**P**	**07 00 02.3**	**+0.3**
	baz=85							
O11A	**Cowboy Ranch,**	**85.01**	**44**	⇓P		**P**	**07 00 02.5**	**-0.1**
	baz=85							
319A	**Douglas**	**85.02**	**54**	⇑P		**P**	**07 00 03.3**	**+0.4**
	baz=85							
J08A	**Circle Bar Ran**	**85.07**	**40**	⇓P		**P**	**07 00 02.8**	**0.0**
	baz=85							
V15A	**Kaibab Nationa**	**85.09**	**49**	⇓P		**P**	**07 00 03.5**	**+0.4**
	baz=85							
E05A	**Randle**	**85.10**	**36**	⇑P		**P**	**07 00 03.0**	**+0.1**
	baz=85							
118A	**Homack Ranch,**	**85.11**	**52**	⇓P		**P**	**07 00 02.8**	**-0.5**
	baz=85							
K09A	**Rome**	**85.15**	**41**	⇑P		**P**	**07 00 03.7**	**+0.5**
	baz=85							
C04A	**Brinnon**	**85.17**	**34**	⇓P		**P**	**07 00 03.3**	**+0.1**
	baz=85							
M10A	**I.L. Ranch, Tu**	**85.22**	**42**	⇑P		**P**	**07 00 04.5**	**+1.0**
	baz=85							
U15A	**North Rim**	**85.32**	**48**	⇑P		**P**	**07 00 04.9**	**+0.8**
	baz=85							
I08A	**Drewsey**	**85.34**	**39**	⇑P		**P**	**07 00 04.4**	**+0.3**
	baz=85							
D05A	**Enumclaw**	**85.37**	**35**	⇓P		**P**	**07 00 04.6**	**+0.5**
	baz=85							
Q13A	**Wheeler Ranch,**	**85.45**	**45**	⇓P		**P**	**07 00 04.6**	**-0.1**
	baz=86							
G07A	**Ruggs Ranch, H**	**85.49**	**38**	⇓P		**P**	**07 00 05.2**	**+0.4**
	baz=86							
J09A	**Fry Pan Ranch,**	**85.50**	**40**	⇑P		**P**	**07 00 05.1**	**+0.2**
	baz=86							
E06A	**Yakima**	**85.52**	**36**	⇑P		**P**	**07 00 05.4**	**+0.6**
	baz=86							
T15A	**Red Dirt Ranch**	**85.56**	**48**	⇑P		**P**	**07 00 05.1**	**-0.2**
	baz=86							
L10A	**Juniper Basin**	**85.57**	**42**	⇑P		**P**	**07 00 05.8**	**+0.6**
	baz=86							
BJI	**Beijing**	**85.60**	**316**	P		**P**	**07 00 05.3**	**-0.1**
BJI					AMB	AMB		
	comp=Z,35nm,0.6s,mb5.2							
Y18A	**Canyon Day Jun**	**85.61**	**51**	⇓P		**P**	**07 00 05.8**	**+0.2**
	baz=86							
SYO	**Syowa Base**	**85.75**	**193**	⇑*i*P		**P**	**07 00 03.4**	**-2.3**
SYO	**Syowa Base**	**85.75**	**193**	‖*e*PcP		PcP	07 00 06.4	-1.0
C05A	**Tolt Reservoir**	**85.84**	**35**	⇓P		**P**	**07 00 06.7**	**+0.4**
	baz=86							
I09A	**Lost Marbles R**	**85.86**	**40**	⇑P		**P**	**07 00 06.8**	**+0.3**
	baz=86							
G08A	**Pilot Rock**	**85.91**	**38**	⇓P		**P**	**07 00 06.6**	**-0.2**
	baz=86,SNR=9.7							
Q14A	**Sevier Lake (B**	**85.96**	**46**	⇑P		**P**	**07 00 06.7**	**-0.4**
	baz=86							
B05A	**Bryant**	**85.97**	**34**	⇓P		**P**	**07 00 07.2**	**+0.3**
	baz=86							
D06A	**Cle Elum**	**85.99**	**36**	⇓P		**P**	**07 00 07.1**	**+0.1**
	baz=86							
GYA	**Guiyang**	**86.01**	**300**	⇓*i*P		**P**	**07 00 08.1**	**+0.5**
GYA					AP	pP	07 02 18.9	+0.8
GYA					XP	sP	07 03 20.6	+1.4
GYA					PP	PP	07 03 41.5	+1.6
GYA					SKS		07 09 36.0	
GYA					S	S	07 09 52.4	+0.5
GYA					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4							
G

KTH **Kantishna Hill** 87.38 12 *e*P P 07 00 11.0 -2.2
comp=Z,23nm,0.9s,mb4.9
TRF **Thorofare Moun** 87.42 13 *e*P P 07 00 11.4 -1.9
comp=Z,37nm,0.7s,mb5.2
VNA3 **Neumayer Olymp** 87.48 177 *e*P P 07 00 12.9 -0.9
VNA3 *e* 07 00 14.3
VNA3 *e* pP 07 02 27.6 +2.9
B08A **Colville Reser** 87.50 35 ⇑P P 07 00 13.5 -0.6
baz=88,SNR=7.5
TMUT **Trail Mountain** 87.50 46 *e*P P 07 00 15.1 +0.7
G11A **Walters Elk Ra** 87.53 39 ⇓P P 07 00 14.0 -0.3
baz=88
S18A **Hurst Farm, Bl** 87.54 48 ⇑P P 07 00 14.4 -0.2
baz=88
L14A **Malta** 87.57 43 ⇑P P 07 00 14.9 +0.3
baz=88
HLID **Hailey** 87.64 41 *e*P P 07 00 15.7 +0.7
comp=Z,4.7nm,1.1s,mb4.1
HLID **Hailey** 87.64 41 ⇓P P 07 00 15.4 +0.5
baz=88
E10A **Myers Farm, Un** 87.65 38 ⇑P P 07 00 15.0 +0.2
baz=88
XAN **Xi'an** 87.66 308 P P 07 00 15.6 +0.4
XAN AMB AMB
comp=Z,27nm,1.0s,mb4.9
XAN AMB AMB
comp=Z,40nm,4.5s
J13A **Cove Ranch, Pi** 87.70 41 ⇓P P 07 00 15.4 +0.2
baz=88,SNR=7.0
C09A **Chrisman Ranch** 87.75 36 ⇑P P 07 00 15.3 -0.1
baz=88
NANT **Nan** 87.86 291 P P 07 00 13.0 -3.5
K14A **Jones Ranch, D** 87.88 43 ⇓P P 07 00 16.3 +0.3
baz=88
D10A **Wagner Farm, O** 87.88 37 ⇑P P 07 00 15.4 -0.6
baz=88,SNR=6.9
A08A **Turner Farm, O** 87.89 35 ⇓P P 07 00 15.9 0.0
baz=88,SNR=7.7
H12A **Diamond D Ranc** 87.91 40 ⇑P P 07 00 15.7 -0.4
baz=88,SNR=6.9
VNA2 **Neumayer--Watz** 87.91 177 *e*P P 07 00 15.7 -0.1
VNA2 *e* 07 00 17.1
VNA2 *e* 07 00 25.5
VNA2 *e* pP 07 02 30.1 +3.3
MCK **McKinley** 87.95 13 *e*P P 07 00 14.6 -1.3
comp=Z,22nm,0.9s,mb4.9
MCK **McKinley** 87.95 13 *e*P P 07 00 14.6 -1.2
MCK pmax pmax
comp=Z,22nm,0.9s,mb4.9
J14A **Carey** 88.07 42 ⇓P P 07 00 17.5 +0.6
baz=88
E11A **Bogner Ranch,** 88.10 38 ⇑P P 07 00 16.7 -0.2
baz=88
L15A **Malad City** 88.10 43 ⇑P P 07 00 17.5 +0.4
baz=88
VNA1 **Neumayer--Stat** 88.14 177 *e*P P 07 00 16.0 -0.9
VNA1 *e* 07 00 17.9
N16A **Rees Ranch, Co** 88.15 45 ⇑P P 07 00 17.7 +0.4
baz=88
B09A **Rice** 88.18 36 ⇓P P 07 00 16.8 -0.5
baz=88
M16A **Huntsville** 88.24 44 ⇑P P 07 00 17.6 -0.1
baz=88
A09A **Danville** 88.27 35 ⇑P P 07 00 17.8 +0.1
baz=88
O17A **Robinson Place** 88.27 45 ⇓P P 07 00 18.2 +0.3
baz=88
H13A **Challis** 88.28 40 ⇑P P 07 00 18.6 +0.7
baz=88
D11A **Klaveano Farm,** 88.41 38 ⇑P P 07 00 18.0 -0.3
baz=88
I14A **Mackay** 88.43 41 ⇓P P 07 00 18.9 +0.3
baz=88,SNR=5.2
TXAR **Lajitas Array** 88.43 58 P P 07 00 19.1 +0.2
comp=Z,1.7nm,0.8s,mb3.8,baz=216,slow=6.4,SNR=22
TXAR pP pP 07 02 32.0 +1.7
comp=Z,1.8nm,1.2s,baz=230,slow=7.9,SNR=4.7
TXAR PKKPbc PKKPbc 07 17 57.8 0.0
comp=Z,0.6nm,0.5s,baz=89,slow=4.0,SNR=17
G13A **Cobalt** 88.57 40 ⇑P P 07 00 19.6 +0.4
baz=89
KMI **Kunming** 88.65 298 P P 07 00 21.8 +1.7
KMI AP pP 07 02 30.3 -1.2
KMI S S 07 10 16.6 +0.2
KMI XS sS 07 14 07.6 -3.1
KMI AMB AMB
comp=Z,23nm,0.8s,mb5.1
KMI AMB AMB
comp=Z,105nm,4.8s
ANMO **Albuquerque** 88.77 52 *e*P P 07 00 16.1 -4.3
ANMO pmax pmax
comp=Z,1.0nm,1.1s
O18A **Roosevelt** 88.79 46 ⇓P P 07 00 20.3 0.0
baz=89
J15A **Blackfoot** 88.79 42 ⇓P P 07 00 20.8 +0.6
baz=89
F13A **Darby** 88.89 39 ⇓P P 07 00 20.6 0.0
baz=89
C11A **Tepee Creek (N** 88.90 37 ⇓P P 07 00 20.8 +0.2
baz=89
M17A **Scullys Gap (B** 88.94 44 ⇓P P 07 00 20.9 -0.1
baz=89
D12A **Red Ives Fores** 88.97 38 ⇑P P 07 00 20.9 -0.1
baz=89
HHC **Hu-ho-hao-te** 89.04 315 *e*P P 07 00 21.9 +0.4
HHC AP pP 07 02 32.3 -0.7
HHC XP sP 07 03 30.5 -3.4
HHC PP PP 07 04 06.3 +2.8
HHC SKS 07 09 54.6
HHC S S 07 10 19.6 +0.3
HHC XS sS 07 14 10.8 -3.1
HHC SS SS 07 16 37.3 +4.7
HHC AMB AMB
comp=Z,17nm,1.2s,mb4.8
HHC AMB AMB
comp=Z,324nm,5.8s
G14A **Jackson** 89.11 40 ⇑P P 07 00 22.1 +0.3
baz=89
B11A **Sandpoint** 89.17 36 ⇑P P 07 00 21.7 -0.2
baz=89
P19A **Cripple Cowboy** 89.17 47 ⇑P P 07 00 22.4 +0.3
baz=89
COLA **College** 89.18 13 *e*P P 07 00 19.5 -2.1
comp=Z,24nm,1.0s,mb5.0
COLA **College** 89.18 13 *e*P P 07 00 19.5 -2.0
COLA pmax pmax
comp=Z,24nm,1.0s,mb5.0
DLBC **Dease Lake** 89.19 23 P P 07 00 21.3 -0.4
comp=Z,2.6nm,0.7s,mb4.2,baz=149,slow=5.9,SNR=3.5
DLBC **Dease Lake** 89.19 23 P P 07 00 21.3 -0.4
J16A **Bone** 89.24 42 ⇓P P 07 00 22.9 +0.5
baz=89
C12B **Naegeli Ranch,** 89.26 37 ⇑P P 07 00 22.2 -0.1
baz=89
CM31 **Chiang Mai Arr** 89.27 290 *e*P P 07 00 24.3 +1.2
CMAR **Chiang Mai Arr** 89.27 290 P P 07 00 24.2 +1.2
comp=Z,20nm,0.9s,mb5.0,baz=129,slow=3.1,SNR=82
CMAR **Chiang Mai Arr** 89.27 290 *i* P P 07 00 24.2 +1.2
CMAR pmax pmax
comp=Z,20nm,0.9s
MCMT **McKenzie Canyo** 89.27 41 *e*P P 07 00 22.1 -0.4
MCMT *e*pP pP 07 02 35.0 +1.0
H15A **Lima** 89.28 41 ⇓P P 07 00 23.1 +0.6
baz=89
M18A **Lyman** 89.31 45 ⇓P P 07 00 22.7 0.0
baz=89
N18A **Larsen Ranch,** 89.35 45 ⇓P P 07 00 22.9 0.0
baz=89
CHG **Chiang Mai** 89.40 290 ⇓P P 07 00 24.5 +0.8
comp=Z,27nm,0.8s,mb5.1
CHTO **Chiang Mai** 89.40 290 *e*P P 07 00 23.5 -0.2
comp=Z,18nm,0.7s,mb5.0
CHTO **Chiang Mai** 89.40 290 *e*P P 07 00 23.5 -0.2
CHTO pmax pmax
comp=Z,19nm,0.7s,mb5.0
A11A **Hall Mountain,** 89.46 36 ⇓P P 07 00 23.1 -0.1
baz=90
RRI2 **Red Ridge** 89.46 43 *e*P P 07 00 23.7 +0.3
comp=Z,4.4nm,0.9s,mb4.3
PLCA **Paso Flores** 89.61 134 P P 07 00 24.6 +0.3
comp=Z,1.0nm,0.7s,mb3.8,baz=243,slow=4.5,SNR=3.6
PLCA **Paso Flores** 89.61 134 P P 07 00 24.6 +0.3
PLCA pmax pmax
comp=Z,1.0nm,0.7s
I16A **Newdale** 89.62 42 ⇓P P 07 00 25.0 +0.9
baz=90

N19A **John Jarvie Ra** 89.64 45 ⇓P P 07 00 24.0 -0.3
baz=90
G15A **Dillon** 89.66 41 ⇓P P 07 00 24.2 -0.1
baz=90
REDW **Red Top Meadow** 89.76 43 *e*P P 07 00 25.1 +0.4
comp=Z,7.9nm,1.3s,mb4.4
D14A **Greenough** 90.06 39 ⇓P P 07 00 25.5 -0.5
baz=90
CD2 **Chengdu** 90.21 303 *e*P P 07 00 26.8 -0.4
CD2 AP pP 07 02 37.5 -1.5
CD2 XP sP 07 03 36.3 -3.4
CD2 PP PP 07 04 14.3 +1.5
CD2 SKS 07 10 00.6
CD2 S S 07 10 28.3 -1.9
CD2 XS sS 07 14 20.1 -5.6
CD2 SS SS 07 16 51.4 +1.7
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,30nm,6.2s
PDAR **Pinedale Array** 90.30 44 P P 07 00 26.9 -0.4
comp=Z,0.8nm,0.8s,baz=207,slow=3.7,SNR=5.8
PDAR pP pP 07 02 29.3 -10
comp=Z,0.6nm,0.9s,baz=232,slow=3.0,SNR=2.5
DAWY **Dawson** 90.49 16 *e*P P 07 00 26.8 -0.8
A13A **Flathead Natio** 90.52 37 ⇑P P 07 00 27.8 -0.4
baz=91
EGAK **Eagle** 90.62 15 *e*P P 07 00 27.4 -0.8
comp=Z,10nm,0.9s,mb4.8
L20A **Wamsutter** 90.73 45 ⇓P P 07 00 29.7 +0.5
baz=91
COLD **Coldfoot** 90.81 11 *e*P P 07 00 28.0 -1.0
comp=Z,53nm,2.2s,mb5.1
B14A **Marquette Ranc** 90.86 38 ⇑P P 07 00 29.3 -0.4
baz=91
A14A **Double T Ranch** 91.10 37 ⇓P P 07 00 30.3 -0.5
baz=91
F17A **Fitzpatrick Pl** 91.14 41 ⇑P P 07 00 31.0 -0.1
baz=91
B15A **Bradely Ranch,** 91.24 38 ⇑P P 07 00 31.1 -0.4
baz=91
C16A **Fuhringer Ranc** 91.45 39 ⇓P P 07 00 32.1 -0.3
baz=92
GCMT **Greycliff** 91.69 41 *e*P P 07 00 32.8 -0.8
D17A **Six Diamond Ra** 91.75 39 ⇓P P 07 00 33.8 -0.1
baz=92
C17A **Wharram Farm,** 91.94 39 ⇓P P 07 00 34.3 -0.4
baz=92
A16A **West Butte Ran** 92.12 38 ⇓P P 07 00 35.4 0.0
baz=92
LZH **Lanzhou** 92.30 308 *e*P P 07 00 37.4 +0.8
LZH AP pP 07 02 48.3 -0.4
LZH XP sP 07 03 47.3 -2.0
LZH PP PP 07 04 31.9 +3.1
LZH SKS 07 10 13.5
LZH S S 07 10 48.1 -0.2
LZH SS SS 07 17 22.0 +2.9
LZH AMB AMB
comp=Z,26nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,65nm,4.8s
YAK **Yakutsk** 92.36 338 *e*P P 07 00 34.7 -1.6
YAK pmax pmax
comp=Z,32nm,0.8s,mb5.4
ULN **Ulaanbaatar** 95.16 320 *e*P P 07 00 48.5 -0.9
comp=Z,70nm,2.9s,mb5.3
ULN **Ulaanbaatar** 95.16 320 *e*P P 07 00 48.5 -0.9
ULN pmax pmax
comp=Z,70nm,2.9s,mb5.3
SONM **Songino Array** 95.55 319 P P 07 00 49.3 -1.8
comp=Z,0.8nm,0.5s,mb4.2,baz=123,slow=4.3,SNR=6.7
SONM PP PP 07 04 51.6 -1.9
comp=Z,0.8nm,1.0s,baz=104,slow=6.1,SNR=3.8
SONM **Songino Array** 95.55 319 P P 07 00 49.3 -1.8
SONM 07 04 51.6
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM pmax pmax
comp=Z,1.0nm,1.0s
GTA **Gaotai** 96.54 310 *e*P P 07 00 56.3 +0.5
GTA AMB AMB
comp=Z,7.0nm,1.6s,mb4.6
ZALV **Zalesovo Baam** 110.33 321 PKiKP PKiKP 07 05 51.2 -2.5
comp=Z,2.7nm,0.6s,baz=146,slow=1.2,SNR=9.3
MK31 **Makanchi Array** 110.86 313 *e*PKPdf PKiKP 07 05 52.8 -2.1
MKAR **Makanchi Array** 110.86 313 Pdiff Pdif 07 01 59.0 -0.3
comp=Z,0.6nm,0.8s,baz=111,slow=4.7,SNR=4.3
MKAR PKiKP PKiKP 07 05 52.7 -2.2
comp=Z,1.3nm,0.4s,baz=78,slow=2.1,SNR=24
MKAR **Makanchi Array** 110.86 313 *i* PKiKP PKiKP 07 05 52.7 -2.2
MKAR pmax pmax
comp=Z,1.0nm,0.4s
KURK **Kurchatov** 113.75 317 *e*PKPdf PKiKP 07 05 57.9 -2.4
BRVK **Borovoye** 118.95 320 *e*PKPdf PKPdf 07 06 08.3 -1.9
KBL **Kabul** 119.22 299 *e*PKPdf PKPdf 07 06 10.4 -1.0
SPB4 **Spitsbergen Ar** 122.53 356 *e*PKPdf PKPdf 07 06 15.2 -1.3
BOSA **Boshof** 125.08 206 PKP PKPdf 07 06 22.2 -0.8
comp=Z,3.2nm,0.8s,baz=157,slow=11,SNR=3.1
BOSA **Boshof** 125.08 206 PKP PKPdf 07 06 22.2 -0.8
BOSA **Boshof** 125.08 206 PKIKP PKPdf 07 06 22.2 -0.7
BOSA pmax pmax
comp=Z,3.0nm,0.8s
ARU **Arti** 125.14 325 *e*PKPdf PKPdf 07 06 20.9 -1.1
ARU **Arti** 125.14 325 PKIKP PKPdf 07 06 20.0 -2.0
ARU PP PP 07 08 21.6 -0.5
AKTK **Aktyubinsk** 126.83 318 PKP PKPdf 07 06 23.8 -1.6
AKTO **Aktyubinsk** 126.83 318 PKP PKPdf 07 06 23.8 -1.6
comp=Z,5.6nm,0.8s,baz=74,slow=3.4,SNR=12
AKTO **Aktyubinsk** 126.83 318 PKIKP PKPdf 07 06 23.8 -1.7
AKTO pmax pmax
comp=Z,6.0nm,0.8s
LBTB **Lobatse** 128.07 209 PKP PKPdf 07 06 27.7 -1.1
comp=Z,2.3nm,0.6s,baz=189,slow=5.2,SNR=4.4
LBTB **Lobatse** 128.07 209 PKP PKPdf 07 06 27.7 -1.1
LBTB **Lobatse** 128.07 209 PKIKP PKPdf 07 06 27.7 -1.0
LBTB pmax pmax
comp=Z,2.0nm,0.6s
KEV **Kevo** 128.97 349 *e*p PKPdf 07 06 27.3 -1.7
comp=Z,1.2nm,0.3s
KEV **Kevo** 128.97 349 *e*PKIKP PKPdf 07 06 27.3 -1.7
KEV pmax pmax
comp=Z,1.0nm,0.3s
ARCES **ARCESS Array B** 129.43 349 PKP PKPdf 07 06 28.2 -1.7
comp=Z,12nm,0.7s,baz=55,slow=0.9,SNR=30
ARCES PP PP 07 08 51.8 +2.6
comp=Z,12nm,1.0s,baz=36,slow=6.3,SNR=4.5
ARCES **ARCESS Array B** 129.43 349 PKIKP PKPdf 07 06 28.2 -1.7
ARCES 07 08 51.8
ARCES pmax pmax
comp=Z,12nm,0.7s
ARCES pmax pmax
comp=Z,12nm,1.0s
JOF **Joensuu** 133.46 341 *e*p PKPdf 07 06 35.6 -2.0
comp=Z,3.2nm,0.4s
LSZ **Lusaka** 134.81 219 PKP PKPdf 07 06 41.2 -0.4
comp=Z,4.0nm,0.5s,baz=122,slow=3.1,SNR=4.2
KAF **Kangasniemi** 135.53 343 *e*p PKPdf 07 06 40.6 -0.9
comp=Z,2.1nm,0.4s
KAF **Kangasniemi** 135.53 343 *e*PKIKP PKPdf 07 06 40.6 -0.9
KAF pmax pmax
comp=Z,2.0nm,0.4s
TSUM **Tsumeb** 136.56 203 PKP PKPdf 07 06 45.9 +1.1
comp=Z,3.7nm,0.8s,baz=146,slow=3.6,SNR=4.2
OBN **Obninsk** 136.84 331 *i* PKIKP PKPdf 07 06 42.5 -1.6
OBN *e*SS SS 07 26 57.5 +4.6
OBN pmax pmax
comp=Z,8.0nm,0.9s
NB2 **NORSAR Subarra** 139.56 352 PKP 07 06 40.0
comp=Z,1.8nm,0.6s,baz=10,slow=3.2
NOA **NORSAR Array B** 139.56 352 PKhKP 07 06 39.6
comp=Z,1.6nm,0.4s,baz=8.1,slow=3.8,SNR=12
NOA PKP PKPdf 07 06 49.5 +0.5
comp=Z,0.9nm,0.4s,baz=22,slow=3.6,SNR=7.6
NOA **NORSAR Array B** 139.56 352 PKP PKPdf 07 06 49.5 +0.5
BNGL **BINGOL** 141.21 306 ⇓*i*P PKPdf 07 06 48.2 -4.5
ANN **Anapa** 141.77 317 *i* PKHKP 07 06 44.5
ANN pmax pmax
comp=Z,135nm,2.0s
AKASG **Malin Array Be** 143.08 330 PKhKP 07 06 46.1
comp=Z,33nm,0.4s,baz=42,slow=4.5,SNR=12
AKASG PKP PKPdf 07 06 52.1 -3.5
comp=Z,34nm,0.4s,baz=43,slow=4.3,SNR=159
AKASG **Malin Array Be** 143.08 330 PKHKP 07 06 46.1
AKASG pmax pmax
comp=Z,33nm,0.4s
AKASG pmax pmax
comp=Z,34nm,0.4s
SUW **Suwalki** 143.10 338 *e*PKP PKPdf 07 06 52.6 -2.9
KEMA **Kemaliye** 143.10 308 ⇓*i*P PKPdf 07 06 54.2 -1.8
AKCD **Akcadag** 143.82 306 ⇓*i*P PKPdf 07 06 56.6 -0.6
MUD **Monsted U'grnd** 144.28 352 ⇑*i*PKHKP PKPdf 07 06 56.4 -1.0
MUD pmax pmax
comp=Z,30nm,0.8s
MUD **Monsted U'grnd** 144.28 352 ⇑*i*P PKPdf 07 06 56.4 -1.0
comp=Z,30nm,0.8s
GZT **Gaziantep** 144.37 305 ⇓*i*P PKPdf 07 06 58.0 -0.3
BSD **Bornholm Skovb** 144.53 346 ⇓*i*PKHKP PKPdf 07 06 56.7 -1.2
BSD pmax pmax
comp=Z,36nm,0.7s
BSD **Bornholm Skovb** 144.53 346 ⇓*i*P PKPdf 07 06 56.7 -1.2
comp=Z,36nm,0.7s
ANDN **Andirin** 145.23 306 ⇓*i*P PKPdf 07 07 00.5 +0.8
COBT **Iskenderun** 145.61 304 ⇓*i*P PKPbc 07 07 01.4 -0.6
GKP **Gorka Klasztor** 145.61 342 *e*PKP PKPdf 07 06 57.5 -2.3
GKP *e* 07 07 00.7
GKP **Gorka Klasztor** 145.61 342 *e*PKHKP PKPdf 07 06 57.5 -2.3
GKP *e* 07 07 00.7
AVNT **Avonos** 145.94 309 ⇓*i*P PKPbc 07 07 02.0 -0.8
LVV **L'vov** 146.04 333 *e*PKIKP PKPdf 07 07 01.0 +0.3
BRTR **Keskin Array B** 146.45 311 PKPbc PKPdf 07 07 02.4 +0.7
comp=Z,15nm,0.7s,baz=133,slow=3.8,SNR=48
BRTR SKP 07 09 39.6
comp=Z,1.6nm,0.8s,baz=20,slow=4.6,SNR=3.8
BRTR **Keskin Array B** 146.45 311 PKIKP PKPdf 07 07 02.4 +0.7
BRTR pmax pmax
comp=Z,15nm,0.7s
BRTR pmax pmax
comp=N,2.0nm,0.9s
BSEG **Bad Segeberg** 146.55 350 *e*PKPbc PKPbc 07 07 03.1 -1.0
BSEG *e*PKPab PKPab 07 07 05.7 -1.3
KWP **Kalwaria** 146.74 334 *e*PKP PKPbc 07 07 04.0 -0.7
KWP *e* 07 07 07.7
KWP **Kalwaria** 146.74 334 ⇓*i*P PKPbc 07 07 03.9 -0.8
TLCR 146.81 323 ⇓*i*P PKPbc 07 07 04.2 -0.8
ANTO **Ankara** 146.99 311 PKIKP PKPbc 07 07 05.2 -0.5
ANTO **Ankara** 146.99 311 ⇓*i*P PKPbc 07 07 05.0 -0.7
BUR08 **Bucovina Ar. S** 147.10 329 *e*PKPbc PKPbc 07 07 05.2 -0.5
BURAR **Bucovina Array** 147.11 329 ⇓*i*P PKPbc 07 07 05.3 -0.4
OJC **Ojcow** 147.40 337 *e*PKP PKPdf 07 07 04.8 +1.9
KOLS **Kolonicke sedl** 147.46 333 *e*PKIKP PKPbc 07 07 06.6 0.0
KOLS **Kolonicke sedl** 147.46 333 *e*PKP PKPbc 07 07 06.5 -0.1
TIRR **Tirgusor** 147.47 322 ⇑*i*P PKPbc 07 07 06.0 -0.8
STHS **Stebnicka Huta** 147.51 335 *e*PKP PKPbc 07 07 06.4 -0.3
STHS *e* 07 07 11.2
VRI **Vrincioaia** 147.53 325 PKIKP PKPbc 07 07 06.2 -0.7
VRI **Vrincioaia** 147.53 325 ⇑*i*P PKPbc 07 07 06.0 -0.9
PLOR **Plostina** 147.58 325 PKIKP PKPbc 07 07 06.0 -1.0
PLOR **Plostina** 147.58 325 ⇑*i*P PKPbc 07 07 05.9 -1.1
CRVS **Cervenica-Dubn** 147.82 334 *e*PKP PKPbc 07 07 07.1 -0.4
KSP **Ksiaz** 148.03 341 *e*PKP PKPbc 07 07 07.7 -0.3
KSP *e* 07 07 13.1
KSP **Ksiaz** 148.03 341 ⇓*i*PKHKP PKPbc 07 07 07.4 -0.6
KSP *e* 07 07 12.4
WIT **Witteveen** 148.15 353 *e*PKP PKPbc 07 07 08.3 +0.1
MLR **Muntele Rosu** 148.19 325 ⇑*i*P PKPbc 07 07 07.7 -0.9
OKC **Ostrava-Krasne** 148.31 338 *e*PKHKP PKPbc 07 07 07.9 -0.8
OKC *e* 07 07 13.8
OKC **Ostrava-Krasne** 148.31 338 ⇑*e*PKP PKPbc 07 07 07.9 -0.8
OKC *e*PKPAB PKPab 07 07 13.8 -0.5
UPC **Upice** 148.41 341 *e*PKHKP PKPbc 07 07 08.5 -0.4
UPC *e* 07 07 14.6
UPC **Upice** 148.41 341 ⇑*e*PKP PKPbc 07 07 08.5 -0.4
UPC *e*PKPAB PKPab 07 07 14.6 -0.1
DPC **Dobruska-Polom** 148.46 341 *e*PKHKP PKPbc 07 07 08.7 -0.4
DPC *e* 07 07 14.9
DPC **Dobruska-Polom** 148.46 341 ⇑*e*PKP PKPbc 07 07 08.7 -0.4
DPC *e*PKPAB PKPab 07 07 14.9 0.0
ESKT **Eskisehir** 148.49 312 ⇓*i*P PKPbc 07 07 08.5 -1.0
CLL **Collm** 148.50 345 ⇓*e*PKIKP PKPdf 07 07 04.0 -0.6
CLL *i* 07 07 08.3
CLL *i* 07 07 14.0
CLL pmax pmax
comp=Z,61nm,1.1s
CLL pmax pmax
comp=Z,21nm,1.0s
CLL **Collm** 148.50 345 *e*PKPbc PKPbc 07 07 08.1 -1.0
CLL *e*PKPab PKPab 07 07 14.0 -1.0
CLL **Collm** 148.50 345 *e*PKPdf PKPdf 07 07 04.0 -0.6
CLL ⇓*i*PKPbc PKPbc 07 07 08.3 -0.8
comp=Z,61nm,1.1s
CLL ⇑*i*PKPab PKPab 07 07 14.0 -1.0
comp=Z,21nm,1.0s
IBBN **Ibbenburen** 148.52 352 *e*PKPbc PKPbc 07 07 08.3 -0.8
MORC **Moravsky Berou** 148.56 339 PKHKP PKPbc 07 07 09.2 -0.1
MORC **Moravsky Berou** 148.56 339 ⇓*i*P PKPbc 07 07 08.7 -0.6
BRG **Berggiesshubel** 148.66 344 *e*PKPbc PKPbc 07 07 08.3 -1.2
BRG *e*PKPab PKPab 07 07 14.9 -0.8
BRG **Berggiesshubel** 148.66 344 *e*PKP PKPdf 07 07 03.5 -1.4
comp=Z,3.5nm,1.0s
BRG *i* 07 07 08.3
comp=Z,54nm,1.4s
BRG *i* 07 07 14.9
comp=Z,24nm,1.1s
BRG *e* 07 11 03.9
comp=Z,3.0nm,0.9s
VOIR 148.69 326 ⇓*i*P PKPbc 07 07 09.3 -0.5
PVCC **Panska Ves** 148.81 343 *e*PKHKP PKPbc 07 07 09.5 -0.4
PVCC **Panska Ves** 148.81 343 ⇑*e*PKP PKPbc 07 07 09.5 -0.4
DRGR 148.89 330 PKHKP PKPbc 07 07 09.5 -0.7
DRGR 148.89 330 ⇑*i*P PKPbc 07 07 09.3 -0.9
WTSB **Winterswijk** 148.97 353 *e*PKP PKPbc 07 07 09.0 -1.2
comp=Z,53nm,0.8s
VYHS **Vyhne** 149.19 336 *e*PKP PKPbc 07 07 10.3 -0.6
VYHS *e* 07 07 17.6
PSZ **Piszkesteto** 149.24 334 ⇓*e*PKP PKPbc 07 07 10.2 -0.8
PSZ **Piszkesteto** 149.24 334 ⇓*i*P PKPbc 07 07 10.3 -0.7
KOLL **Kolacno** 149.28 337 *e*PKP PKPbc 07 07 10.7 -0.4
KOLL *e* 07 07 18.4
VRAC **Vranov** 149.28 340 PKHKP PKPbc 07 07 10.7 -0.4
VRAC **Vranov** 149.28 340 ⇑*i*P PKPbc 07 07 10.6 -0.5
PRU **Pruhonice** 149.30 342 *e*PKHKP PKPbc 07 07 10.4 -0.7
PRU *e* 07 07 18.0
PRU **Pruhonice** 149.30 342 ⇑*e*PKP PKPbc 07 07 10.4 -0.7
PRU *e*PKPAB PKPab 07 07 18.0 -0.4
BUG **Bochum--Univer** 149.43 352 *e*PKPbc PKPbc 07 07 10.3 -1.1
MOX **Moxa** 149.43 346 *e*P PKPbc 07 07 10.7 -0.7
comp=Z,40nm,1.3s
MOX *e* 07 07 17.9
MOX **Moxa** 149.43 346 *e*PKHKP PKPbc 07 07 10.7 -0.7
MOX *e* 07 07 17.9
MOX pmax pmax
comp=Z,40nm,1.3s
MOX **Moxa** 149.43 346 *e*PKPbc PKPbc 07 07 10.4 -1.0
MOX *e*PKPab PKPab 07 07 17.9 -1.0
ISP **Isparta** 149.45 309 ⇑*i*P PKPbc 07 07 10.0 -1.9
TANN **Tannenbergstha** 149.45 345 *e*PKPbc PKPbc 07 07 10.6 -0.9
UBBA **Unterbreizbach** 149.60 348 *e*PKPbc PKPbc 07 07 10.5 -1.3
UBBA *e*PKPab PKPab 07 07 18.4 -1.2
NKC **Novy Kostel** 149.63 345 *e*PKHKP PKPbc 07 07 11.3 -0.6
NKC *e* 07 07 19.1
NKC **Novy Kostel** 149.63 345 ⇑*e*PKP PKPbc 07 07 11.3 -0.6
NKC *e*PKPAB PKPab 07 07 19.1 -0.6
TREC **Trest** 149.65 341 *e*PKHKP PKPbc 07 07 11.1 -0.8
TREC **Trest** 149.65 341 ⇑*e*PKP PKPbc 07 07 11.1 -0.8
MODS **Modra-Piesok** 149.85 338 *i* PKP PKPbc 07 07 12.1 -0.4
MODS *e* 07 07 20.9
GZR **Gura Zlata** 149.88 328 ⇑*i*P PKPbc 07 07 11.4 -1.2
MANZ **Manzenberg** 149.94 345 *e*PKPbc PKPbc 07 07 12.0 -0.6
BUD **Budapest** 149.94 335 ⇓*e*PKP PKPbc 07 07 11.7 -1.0
ZST **Bratislava** 150.07 338 *e*PKP PKPbc 07 07 12.1 -0.9
ZST *e* 07 07 21.6
ROTZ **Rotzenmuhle** 150.12 345 *e*PKPbc PKPbc 07 07 12.3 -0.7
ROTZ *e*PKPab PKPab 07 07 21.5 -0.3
HGN **Heimansgroeve** 150.25 353 *e*PKP PKPbc 07 07 12.1 -1.2
comp=Z,12nm,0.9s
BZS **Buzias** 150.27 330 PKIKP PKPbc 07 07 12.4 -1.1
BZS **Buzias** 150.27 330 ⇑*i*P PKPbc 07 07 12.3 -1.2
KHC **Kasperske Hory** 150.35 343 *e*PKPDF PKPdf 07 07 05.2 -2.4
KHC ⇑*e*PKP PKPbc 07 07 13.0 -0.6
KHC *e*PKPAB PKPab 07 07 22.6 -0.2
UCC **Uccle** 150.36 355 PKPbc PKPbc 07 07 12.7 -0.9
MEM **Membach** 150.40 353 PKPbc PKPbc 07 07 12.7 -0.9
GRF **Grafenberg Arr** 150.42 346 *e*PKPbc PKPbc 07 07 13.0 -0.7
GRF *e*PKPab PKPab 07 07 22.4 -0.6
TNS **Taunus Mts** 150.44 350 *e*PKPbc PKPbc 07 07 13.0 -0.8
TNS *e*PKPab PKPab 07 07 21.9 -1.2
WET **Wettzell** 150.52 344 *e*PKPbc PKPbc 07 07 13.0 -1.0

WET				*e*PKPab	PKPab	07 07 23.1	-0.4
MANT	**Manisa**	**150.55 312**	⇓	*i*P	PKPbc	07 07 13.6	-0.8
GEC2	**GERESS Array S**	**150.57 342**		*e*PKPbc	PKPbc	07 07 13.2	-0.9
GEC2				*e*PKPab	PKPab	07 07 23.2	-0.5
GERES	**GERESS Array B**	**150.57 342**		PKP	PKPdf	07 07 06.8	-1.2
	comp=Z,0.4nm,0.3s,baz=29,slow=3.0,SNR=4.5						
GERES				PKPbc	PKPbc	07 07 12.6	-1.5
	comp=Z,13nm,0.7s,baz=45,slow=2.1,SNR=65						
GERES				pPKPbc	pPKPbc	07 09 38.7	+4.6
	comp=Z,0.6nm,0.6s,baz=22,slow=3.7,SNR=2.7						
GERES	**GERESS Array B**	**150.57 342**		PKIKP	PKPdf	07 07 06.8	-1.2
GERES						07 07 12.6	
GERES				pmax	pmax		
	comp=Z,13nm,0.7s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SNF	**Seneffe**	**150.66 355**		PKPbc	PKPbc	07 07 13.3	-0.9
SNF				PKPab	PKPab	07 07 23.0	-1.0
BCLA	**Clavier**	**150.66 354**		PKPbc	PKPbc	07 07 13.2	-1.0
BCLA				PKPab	PKPab	07 07 22.9	-1.1
SOP	**Sopron**	**150.69 338**	⇓	*e*PKP	PKPbc	07 07 13.7	-0.7
CONA	**Conrad Observa**	**150.72 339**	⇓	*i*PKPbc	PKPbc	07 07 13.8	-0.7
	comp=Z,29nm,0.7s						
CSNA	**Conrad Observa**	**150.72 339**	⇓	*i*PKPbc	PKPbc	07 07 13.9	-0.6
	comp=Z,29nm,0.7s						
GIVF	**Givet**	**151.02 355**		*e*PKP1	PKPbc	07 07 14.0	-1.1
	comp=Z,85nm,0.8s						
DOU	**Dourbes**	**151.04 355**		PKPbc	PKPbc	07 07 14.4	-0.8
BAIF	**Baives**	**151.11 355**		*e*PKP1	PKPbc	07 07 14.2	-1.1
	comp=Z,64nm,1.0s						
PKSM	**Moragy**	**151.12 334**	⇓	*i*P	PKPbc	07 07 14.3	-1.2
MOA	**Molln**	**151.30 341**	⇓	*i*PKPbc	PKPbc	07 07 14.6	-1.2
	comp=Z,10nm,0.7s						
WLF	**Walferdange**	**151.31 353**		*e*PKPbc	PKPbc	07 07 15.4	-0.4
ARSA	**Arzberg**	**151.42 339**	⇓	*i*PKPbc	PKPbc	07 07 14.6	-1.5
	comp=Z,7.4nm,1.0s						
VTS	**Vitosha**	**151.59 324**	⇓	*i*P	PKPbc	07 07 15.6	-1.0
STU	**Stuttgart**	**151.71 348**		*e*PKPbc	PKPbc	07 07 15.8	-0.9
FUR	**Furstenfeldbru**	**151.83 345**		*e*PKPbc	PKPbc	07 07 16.3	-0.7
FUR				*e*PKPab	PKPab	07 07 28.7	-0.4
RJOB	**Jochberg**	**151.83 343**		*e*PKPbc	PKPbc	07 07 15.8	-1.2
RJOB				*e*PKPab	PKPab	07 07 29.0	-0.1
SOKA	**Soboth**	**152.09 339**	⇓	*i*PKPbc	PKPbc	07 07 16.0	-1.6
	comp=Z,15nm,1.0s						
PERS	**Pernice**	**152.10 339**		*i* PKPbc	PKPbc	07 07 16.0	-1.6
PERS				*i* PKPab	PKPab	07 07 29.3	-0.9
KBA	**Koelnbreinsper**	**152.27 341**	⇓	*i*PKPbc	PKPbc	07 07 16.2	-1.8
	comp=Z,17nm,0.9s						
BFO	**Black Forest**	**152.29 349**		*e*PKPbc	PKPbc	07 07 16.9	-1.1
BFO				*e*PKPab	PKPab	07 07 29.8	-1.2
CDF	**Champ du Feu**	**152.39 351**		*e*PKP1	PKPbc	07 07 16.9	-1.3
	comp=Z,34nm,0.9s						
OBKA	**Obir**	**152.40 339**	⇓	*i*PKPbc	PKPbc	07 07 16.4	-1.9
	comp=Z,6.8nm,0.6s						
FLN	**La Foliniere**	**152.52 2**		*e*PKP1	PKPbc	07 07 16.8	-1.7
	comp=Z,39nm,0.9s						
WATA	**Walderalm**	**152.53 344**	⇓	*i*PKPbc	PKPbc	07 07 17.0	-1.5
	comp=Z,15nm,0.8s						
WTTA	**Wattenberg**	**152.58 344**	⇓	*i*PKPbc	PKPbc	07 07 17.6	-1.1
	comp=Z,21nm,0.8s						
MEZF	**Maizieres J'vi**	**152.58 354**		*e*PKP1	PKPbc	07 07 17.7	-0.9
MYKA	**Terra Mystica**	**152.58 340**	⇓	*i*PKPbc	PKPbc	07 07 16.8	-1.8
	comp=Z,13nm,0.8s						
MOTA	**Moosalm**	**152.64 345**	⇓	*i*PKPbc	PKPbc	07 07 17.4	-1.4
	comp=Z,3.2nm,0.3s						
LDF	**La Druitiere**	**152.70 1**		*e*PKP1	PKPbc	07 07 17.0	-1.8
	comp=Z,22nm,0.8s						
SQTA	**Sankt Quirin**	**152.73 344**	⇓	*i*PKPbc	PKPbc	07 07 17.9	-1.1
	comp=Z,23nm,1.0s						
ROSF	**Rostrenen**	**152.77 6**		*e*PKP1	PKPbc	07 07 17.1	-1.9
	comp=Z,10nm,0.6s						
VAY	**Valandovo**	**152.78 322**		*e*PKP	PKPbc	07 07 16.2	-3.1
LJU	**Ljubljana**	**152.81 339**		*i* PKPbc	PKPbc	07 07 18.0	-1.2
LJU				*i* PKPab	PKPab	07 07 32.2	-1.1
ABTA	**Abfaltersbach**	**152.81 342**	⇓	*i*PKPbc	PKPbc	07 07 17.4	-1.7
	comp=Z,16nm,0.7s						
GRR	**Gorron**	**152.88 2**		*e*PKP1	PKPbc	07 07 17.7	-1.5
	comp=Z,21nm,0.7s						
SGMF	**Saint Gilles**	**152.92 5**		*e*PKP1	PKPbc	07 07 17.5	-1.8
	comp=Z,33nm,0.8s						
HAU	**Haudompre**	**152.92 352**		*e*PKP1	PKPbc	07 07 17.8	-1.5
	comp=Z,15nm,0.7s						
SKO	**Skopje**	**152.97 325**		*e*PKP	PKPbc	07 07 18.0	-1.7
DAVA	**Damuels**	**152.98 346**	⇓	*i*PKiKP	PKiKP	07 07 19.3	-0.3
	comp=Z,14nm,1.0s						
BOJS	**Bojanci**	**153.03 337**		*i* PKPbc	PKPbc	07 07 18.7	-0.9
BOJS				*i* PKPab	PKPab	07 07 33.2	-1.0
HINF	**Hinteralfeld**	**153.03 351**		*e*PKP1	PKPbc	07 07 18.1	-1.5
FETA	**Feichten**	**153.03 345**	⇓	*i*PKPbc	PKPbc	07 07 18.6	-1.0
	comp=Z,13nm,1.0s						
CEY	**Cerknica**	**153.11 339**		*i* PKPbc	PKPbc	07 07 18.5	-1.3
CEY				*i* PKPab	PKPab	07 07 33.5	-1.1
KRUS	**Krusevo**	**153.49 324**		*e*PKP	PKPbc	07 07 19.4	-1.4
OHR	**Ohrid**	**153.91 324**		*e*PKP	PKPbc	07 07 19.2	-2.5
LOR	**Lormes**	**153.91 355**		*e*PKP1	PKPbc	07 07 20.2	-1.3
	comp=Z,12nm,0.8s						
SSF	**Saint Saulge**	**154.14 356**		*e*PKP1	PKPbc	07 07 20.7	-1.3
	comp=Z,17nm,0.9s						
CABF	**La Chapelle**	**154.32 351**		*e*PKP1	PKPbc	07 07 21.6	-0.8
	comp=Z,30nm,1.0s						
BGF	**Bois d'Agland**	**154.69 357**		*e*PKP1	PKPdf	07 07 21.8	+7.8
MFF	**Saint Martin d**	**154.69 1**		*e*PKP1	PKPdf	07 07 21.5	+7.5
MBDF	**Montbardon**	**156.05 349**		*e*PKP1	PKPdf	07 07 25.0	+9.1
	comp=Z,26nm,1.0s						
ESDC	**Sonseca Array**	**161.19 11**		PKPab	PKPab	07 08 07.7	-2.0
	comp=Z,3.2nm,0.9s,baz=0.3,slow=4.5,SNR=8.5						
KEST	**Kesra**	**163.72 334**		PKPab	PKPab	07 08 20.6	-0.4
	comp=Z,5.0nm,0.9s,baz=342,slow=3.2,SNR=8.9						
LIC	**Lamto**	**164.06 159**		*e*PKP1	PKPdf	07 07 23.2	-2.4
	comp=Z,46nm,1.2s						
LIC	**Lamto**	**164.06 159**	⇑	*i*PKIKP	PKPdf	07 07 24.0	-1.6
	comp=Z,44nm,1.2s						
KIC	**Kosan Boka**	**164.28 159**		*e*PKP1	PKPdf	07 07 24.2	-1.6
	comp=Z,25nm,0.9s						
TIC	**Toumodi**	**164.45 158**		*e*PKP1	PKPdf	07 07 24.4	-1.5
	comp=Z,13nm,0.2s						
DBIC	**Dimbokro**	**164.53 159**		PKP	PKPdf	07 07 24.1	-1.8
	comp=Z,2.1nm,0.6s,baz=180,slow=4.0,SNR=5.1						
DBIC	**Dimbokro**	**164.53 159**		PKIKP	PKPdf	07 07 24.2	-1.8
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**171.90 187**		PKP	PKPdf	07 07 28.6	-2.1
	comp=Z,3.3nm,0.8s,baz=247,slow=1.2,SNR=18						
TORD				PKPab	PKPab	07 08 56.9	-0.7
	comp=Z,1.7nm,0.8s,baz=167,slow=3.7,SNR=6.5						

GUC 21 06:48:44.7±0.4, 2305S×7049W, h41km±1km, MD3.7, ML3.9, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**					Pn		06 48 50.9	-0.4
MECH						*i* S		06 48 55.9	-0.1
MECH					AML	AML		06 48 56.2	
	comp=N,9μm,0.5s								
CEN1	**Los Morros**	**0.43**	**142**	⇑		*i*P		06 48 56.2	+1.6
CEN1						*i* S		06 49 04.6	+3.0
MACH	**Maria Elena**	**1.09**	**39**			*e*P		06 49 04.7	+1.3
MACH						*i* S		06 49 19.7	+2.4
LVC	**Limon Verde**	**1.52**	**74**	⇑		*i*P		06 49 13.1	+3.6
LVC						*i* S		06 49 33.2	+5.2
LVC					AML	AML		06 49 34.8	
	comp=Z,8μm,0.4s								
CPN1	**Cerro Paranal**	**1.57**	**177**	⇓		*i*P		06 49 12.1	+2.0
CPN1						*i* S		06 49 32.9	+3.7
SPCH	**San Pedro de A**	**2.12**	**87**		AML	AML		06 49 58.5	
	comp=E,1μm,0.6s								

IDC 21 07:46:55.0±1.8, 688S×15673E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/16, mbtmp4.0/5, MS3.1/2, Ms1 3.1/2, ms1mx2.7/25, Error ellipse: s-maj=67.8km s-min=26.8km az=118.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.07**	**129**			Sn		07 48 44.2	-2.8
	13nm,0.3s,baz=305,slow=16,SNR=4.0								
CTA	**Charters Tower**	**16.60**	**217**			LR	LR	07 56 13.4	
	comp=Z,79nm,18.7s,baz=52,slow=34								
WRA	**Warramunga Arr**	**25.31**	**237**			P	P	07 52 23.7	+0.1
	2.4nm,0.7s,baz=62,slow=9.5,SNR=7.7								
WRA						LR	LR	08 01 59.5	
	comp=Z,38nm,21.1s,baz=150,slow=36								
ASAR	**Alice Springs**	**27.55**	**230**			P	P	07 52 42.2	-1.5
	0.4nm,0.6s,baz=61,slow=9.6,SNR=4.6								
STKA	**Stephens Creek**	**28.60**	**208**			P	P	07 52 54.8	+1.7
	1.6nm,0.8s,baz=21,slow=13,SNR=3.0								
SONM	**Songino Array**	**70.18**	**327**			P	P	07 58 10.7	+1.2
	0.4nm,0.3s,baz=138,slow=6.1,SNR=5.2								
YKA	**Yellowknife Ar**	**95.43**	**28**			P	P	08 00 20.3	-1.0
	1.5nm,0.8s,baz=268,slow=5.1,SNR=5.4								

MAN 21 07:48:50.1342N×12044E, h31km, mb3.7, ML2.5, MS2.0, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**328**			*e*P	Pb	07 49 00.8	+2.4
LUBP						*e*S	Sb	07 49 07.7	+3.5
TGY	**Tagaytay City**	**0.83**	**35**	⇑		*e*P	Pn	07 49 14.1	+8.5
SJMP	**San Jose**	**1.16**	**145**			*e*P	Pn	07 49 10.3	+0.1
SJMP						*e*S	Sn	07 49 26.4	+1.5
BUSP	**Coron**	**1.43**	**190**			*e*P	Sn	07 49 34.0	+2.4
ENPP	**El Nido**	**2.42**	**204**			*e*P	Pn	07 49 28.9	+1.4

*ISCJB **21** 07:53:00.3±0.5, 2285S×7077W×004, h33km, mb4.3/12, Error ellipse: s-maj=5.8km s-min=4.3km az=4.4*
*NEIC **21** 07:53:01.1, 2282S×7065W, h34km, mb4.7/2, ML4.5(GUC), After GUC.*
*GUC **21** 07:53:01.3±1.1, 2282S×7066W, h32km±6km, ML4.5*
*IDC **21** 07:53:02.8±3.1, 2282S×7047W, h34km±22km, mb4.0/10, mb1 4.1/12, mb1mx4.0/20, mbtmp4.0/12, ML3.6/3, Error ellipse: s-maj=22.2km s-min=18.4km az=106.0*

ISC 21 07:53:01.0±0.9, 2283S×004×7071W×005, h27km±6km, n46, σ1°24/47, mb4.3/12, 2C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.37**	**139**	⇓		*i*P	Pb	07 53 09.1	-0.1
MECH						*i* S	Sb	07 53 14.9	+0.2
MECH					AML	AML		07 53 16.8	
	comp=E,65μm,0.4s								
CEN1	**Los Morros**	**0.73**	**140**	⇑		*i*P	Pb	07 53 16.0	+0.8
CEN1						*i* S	Sb	07 53 26.9	+2.1
CEN1					AML	AML		07 53 28.7	
	comp=E,13μm,0.4s								
ANCH	**Antofagasta**	**0.90**	**162**	⇑		*i*P	Pn	07 53 15.3	-2.5
ANCH						*i* S	Sb	07 53 27.5	-2.0
PB06	**Plate Boundary**	**1.06**	**84**	⇓		*i*P	Pn	07 53 19.3	-0.7
PB06						*i* S	Sn	07 53 33.0	-0.9
MACH	**Maria Elena**	**1.08**	**55**	⇓		*i*P	Pn	07 53 19.8	-0.5
MACH						*i* S	Sn	07 53 34.0	-0.4
PB04	**Plate Boundary**	**1.26**	**64**	⇓		*i*P	Pn	07 53 13.8	-9.0
PB04						*i* S	Sn	07 53 23.9	-15
PB04					AML	AML		07 53 24.8	
	comp=E,31μm,0.5s								
PB07	**Plate Boundary**	**1.33**	**35**			*i* P	Pn	07 53 23.6	-0.2
PB07						*i* S	Sn	07 53 40.4	-0.3
LVC	**Limon Verde**	**1.67**	**83**			Pg	Pn	07 53 29.8	+1.3
	comp=E,335nm,0.3s,baz=255,slow=13,SNR=685								
LVC						Lg		07 53 50.7	
	comp=E,466nm,0.3s,baz=262,slow=11,SNR=18								
LVC	**Limon Verde**	**1.67**	**83**			Pg	Pn	07 53 29.8	+1.3
LVC						Lg		07 53 50.7	
LVC	**Limon Verde**	**1.67**	**83**	⇓		*i*P	Pn	07 53 29.6	+1.1
LVC						*i* S	Sn	07 53 51.1	+2.0
LVC					AML	AML		07 53 53.9	
	comp=N,5μm,0.9s								
CPN1	**Cerro Paranal**	**1.81**	**171**		AML	AML		07 54 03.1	
	comp=E,7μm,0.8s								
PB01	**Plate Boundary**	**2.10**	**33**			*e*P	Pn	07 53 34.5	0.0
PB01						*i* S	Sn	07 54 01.0	+1.2
PB01					AML	AML		07 54 14.1	
	comp=E,4μm,0.5s								
SPCH	**San Pedro de A**	**2.32**	**93**		AML	AML		07 54 21.2	
	comp=N,16μm,0.5s								
LCO	**Las Campanas**	**6.16**	**180**			*e*Pn	Pn	07 54 30.6	+0.3
	comp=N,42nm,0.6s								
LCO						*e*Sn	Sn	07 56 04.7	+25
ARE	**Arequipa**	**6.37**	**353**			*e*P	Pn	07 54 33.0	-0.2
ARE						*e*S	Sn	07 55 43.0	-2.1
LPAZ	**La Paz**	**6.94**	**21**			Pn	Pn	07 54 44.5	+3.5
	comp=N,1.0nm,0.3s,baz=192,slow=6.8,SNR=17								
LPAZ	**La Paz**	**6.94**	**21**			Pn	Pn	07 54 44.5	+3.5
CFAA	**Coronel Fontan**	**9.02**	**166**			Pn	Pn	07 55 08.1	-1.3
	comp=N,0.1nm,0.3s,baz=338,slow=11,SNR=5.0								
SIV	**San Ignacio**	**11.35**	**55**			Pn	Pn	07 55 39.5	-1.9
	comp=N,1.2nm,0.3s,baz=244,slow=13,SNR=66								
ATAH	**Atahualpa**	**17.39**	**334**			P	Pn	07 57 07.1	+5.3
	comp=N,0.2nm,0.3s,baz=130,slow=9.1,SNR=3.6								
PLCA	**Paso Flores**	**17.86**	**180**			P	Pn	07 57 10.3	+2.9
	comp=N,0.1nm,0.3s,baz=357,slow=16,SNR=3.0								
PLCA	**Paso Flores**	**17.86**	**180**			*e*Pn	Pn	07 57 07.2	-0.2
BDFB	**Brasilia**	**22.57**	**76**			P	P	07 57 59.5	+0.1
	comp=N,2.6nm,0.5s,mb3.9,baz=238,slow=15,SNR=11								
TXAR	**Lajitas Array**	**60.79**	**327**			P	P	08 03 11.7	+0.9
	comp=N,0.5nm,0.8s,mb3.7,baz=146,slow=8.2,SNR=7.6								
SNAA	**Sanae**	**61.59**	**161**			*e*P	P	08 03 13.2	-2.4
	comp=N,11nm,1.3s,mb4.8								
FVM	**French Village**	**63.26**	**343**			*e*P	P	08 03 27.0	-0.1
	comp=N,5.3nm,0.8s,mb4.7								
QSPA	**South Pole Qui**	**67.37**	**180**			P	P	08 03 55.0	+1.7
	comp=N,2.1nm,0.7s,mb4.3,baz=156,slow=1.4,SNR=7.4								
DBIC	**Dimbokro**	**70.71**	**74**			P	P	08 04 13.5	-1.5
	comp=N,5.8nm,0.7s,mb4.7,baz=198,slow=4.9,SNR=8.0								
DBIC	**Dimbokro**	**70.71**	**74**			P	P	08 04 13.5	-1.5
CCUT	**Cedar City**	**72.23**	**326**			*e*P	P	08 04 24.3	+0.6
MSU	**Marysvale**	**72.35**	**327**			*e*P	P	08 04 24.1	-0.3
PDAR	**Pinedale Array**	**74.44**	**331**			P	P	08 04 39.5	+2.9
	comp=N,0.5nm,0.9s,mb3.4,baz=123,slow=7.8,SNR=3.6								
NVAR	**Mina Array Bea**	**75.53**	**323**			P	P	08 04 46.0	+3.0
	comp=N,0.4nm,0.8s,mb3.4,baz=132,slow=3.8,SNR=2.6								
TOA0	**Torodi Ar. Sit**	**79.37**	**71**			*e*P	P	08 05 04.4	-0.6
TORD	**Torodi Ar. Bea**	**79.37**	**71**			P	P	08 05 04.8	-0.2
	comp=N,10.0nm,0.8s,mb4.8,baz=255,slow=5.2,SNR=68								
MAW	**Mawson**	**83.52**	**164**			P	P	08 05 26.5	+0.3
	comp=N,3.3nm,0.9s,mb4.5,baz=303,slow=15,SNR=5.2								
MDT	**Midelt**	**83.87**	**51**			P	P	08 05 29.3	+0.9
	comp=N,4.0nm,0.9s,mb4.5,baz=182,slow=0.5,SNR=4.5								
BOSA	**Boshof**	**84.29**	**118**			P	P	08 05 30.8	-0.1
	comp=N,4.9nm,0.8s,mb4.7,baz=265,slow=6.7,SNR=4.8								
BOSA	**Boshof**	**84.29**	**118**			P	P	08 05 30.8	-0.1
ASAR	**Alice Springs**	**127.96**	**209**			PKP	PKPdf	08 12 05.0	0.0
	comp=N,0.8nm,0.8s,baz=160,slow=1.5,SNR=7.5								
WRA	**Warramunga Arr**	**130.96**	**212**			PKP	PKPdf	08 12 11.6	+0.8
	comp=N,1.0nm,0.7s,baz=152,slow=1.2,SNR=5.8								
KURK	**Kurchatov**	**143.34**	**33**			PKP	PKPdf	08 12 31.0	-1.7
	comp=N,0.3nm,0.3s,baz=308,slow=3.1,SNR=4.0								
ZALV	**Zalesovo Beam**	**143.85**	**25**			PKP	PKPdf	08 12 31.6	-1.9
	comp=N,1.1nm,0.4s,baz=291,slow=4.1,SNR=4.1								
BOD	**Bodaibo**	**144.88**	**356**			*e*P	PKPdf	08 12 33.3	-1.8
MKAR	**Makanchi Array**	**147.68**	**36**			PKPbc	PKPbc	08 12 41.0	-1.9
	comp=N,3.1nm,0.7s,baz=300,slow=2.4,SNR=26								
SONM	**Songino Array**	**154.94**	**5**			PKP	PKPdf	08 12 52.5	+1.3
	comp=N,0.4nm,0.8s,baz=343,slow=1.5,SNR=2.8								
SONM						PKPbc	PKPbc	08 13 01.1	+1.2
	comp=N,0.4nm,0.7s,baz=35,slow=3.5,SNR=2.9								
SONM						PKPab	PKPab	08 13 15.5	+0.2
	comp=N,0.6nm,0.8s,baz=350,slow=3.9,SNR=3.9								

IDC 21 07:54:38.6±4.4, 2291S×7054W, h29km±28km, mb3.8/4, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, ML3.6/3, MS3.8/1, Ms1 3.8/1, ms1mx3.0/24, Error ellipse: s-maj=30.9km s-min=29.2km az=147.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.53**	**79**			Pg	Pn	07 55 06.5	+2.6
	132nm,0.3s,baz=259,slow=10,SNR=4.8								
LVC						LR	LR	07 55 24.5	
	comp=Z,1μm,18.8s,baz=345,slow=30								
LVC						Lg		07 55 28.4	
	406nm,0.3s,baz=30,slow=15,SNR=4.1								
LPAZ	**La Paz**	**6.97**	**19**			Pn	Pn	07 56 20.1	+1.4
	0.9nm,0.3s,baz=231,slow=6.8,SNR=2.2								
CFAA	**Coronel Fontan**	**8.90**	**167**			Pn	Pn	07 56 46.1	+1.0
	0.1nm,0.3s,baz=5.8,slow=11,SNR=3.4								
SIV	**San Ignacio**	**11.27**	**54**			Pn	Pn	07 57 17.4	-0.3
	0.9nm,0.3s,baz=246,slow=13,SNR=4.4								
BDFB	**Brasilia**	**22.44**	**75**			P	P	07 59 35.8	+0.6
	1.3nm,0.4s,baz=257,slow=15,SNR=4.0								
SDV	**Santo Domingo**	**31.60**	**360**			LR	LR	08 13 19.7	
	comp=Z,144nm,18.1s,baz=186,slow=36								
TXAR	**Lajitas Array**	**60.95**	**327**			P	P	08 04 49.0	0.0
	0.2nm,0.5s,baz=141,slow=10,SNR=3.9								
DBIC	**Dimbokro**	**70.58**	**74**			P	P	08 05 51.3	-0.2
	1.5nm,0.4s,baz=226,slow=8.2,SNR=4.8								
TORD	**Torodi Ar. Bea**	**79.25**	**71**			P	P	08 06 41.4	-0.2
	3.1nm,0.5s,baz=253,slow=5.2,SNR=8.8								
ASAR	**Alice Springs**	**127.96**	**209**			PKP	PKPdf	08 13 41.4	-0.9
	0.2nm,0.5s,baz=150,slow=2.0,SNR=2.7								
WRA	**Warramunga Arr**	**130.97**	**212**			PKP	PKPdf	08 13 48.0	-0.1
	0.4nm,0.8s,baz=165,slow=1.7,SNR=3.3								
MKAR	**Makanchi Array**	**147.66**	**36**			PKPbc	PKPbc	08 14 20.0	-0.1
	1.1nm,0.6s,baz=323,slow=2.9,SNR=5.9								

*ISCJB **21** 07:55:20.2±0.7, 2285S±003×7072W±006, h44km±6km, mb4.3/14, Error ellipse: s-maj=9.7km s-min=5.1km az=16.5*
*IDC **21** 07:55:20.2±0.6, 2281S×7058W, h24km±3km, mb4.0/10, mb1 4.2/13, mb1mx4.1/19, mbtmp4.1/13, ML3.9/3, MS3.6/4, Ms1 3.7/4, ms1mx3.3/23, Error ellipse: s-maj=18.9km s-min=11.3km az=6.0*
*MOS **21** 07:55:20.1±1.4, 2274S×7067W, h33km, mb4.5/4, Error ellipse: s-maj=23.6km s-min=14.1km az=83.7*
*GUC **21** 07:55:20.5±1.2, 2282S×7069W, h25km±10km, ML4.1*
*NEIC **21** 07:55:22.5±1.1, 2282S×7060W, h47km±10km, mb5.0/5, Error ellipse: s-maj=12.6km s-min=9.0km az=96.0*

ISC 21 07:55:20.8±0.8, 2284S±003×7070W±005, h31km±5km, h28km±1.4km: pP-P, n50, σ1°06/49, mb4.3/14, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.34**	**139**			*e*P	**Pb**	**07 55 28.2**	**-0.8**
MECH						*i* S	**Sb**	**07 55 34.9**	**+0.3**
MECH					AML	AML		07 55 35.5	
	comp=N,102μm,0.4s								
CEN1	**Los Morros**	**0.71**	**140**			*e*P	**Pn**	**07 55 35.5**	**+0.8**
CEN1						*i* S	**Sn**	**07 55 46.4**	**+1.8**
CEN1					AML	AML		07 55 48.1	
	comp=E,16μm,0.9s								
ANCH	**Antofagasta**	**0.87**	**163**			*e*P	**Pn**	**07 55 35.8**	**-1.2**
ANCH						*i* S	**Sn**	**07 55 47.6**	**-1.1**
ANCH					AML	AML		07 55 52.0	
	comp=E,37μm,0.0s								
PB06	**Plate Boundary**	**1.05**	**83**			*e*P	**Pn**	**07 55 38.5**	**-0.9**
PB06						*i* S	**Sn**	**07 55 52.3**	**-0.7**
MACH	**Maria Elena**	**1.08**	**54**			*e*P	**Pn**	**07 55 38.9**	**-1.0**
MACH						*i* S	**Sn**	**07 55 53.2**	**-0.5**
MACH					AML	AML		07 55 54.6	
	comp=N,159nm,0.2s								
PB04	**Plate Boundary**	**1.26**	**63**			*e*P	**Pn**	**07 55 33.3**	**-9.0**
PB04						*i* S	**Sn**	**07 55 43.0**	**-15**
PB04					AML	AML		07 55 44.6	
	comp=E,35μm,0.5s								
PB07	**Plate Boundary**	**1.34**	**34**			*e*P	**Pn**	**07 55 43.6**	**+0.2**
PB07						*i* S	**Sn**	**07 56 00.7**	**+0.4**
LVC	**Limon Verde**	**1.66**	**82**			Pg	**Pn**	**07 55 49.0**	**+1.1**
	comp=E,449nm,0.3s,baz=256,slow=15,SNR=3.3								
LVC						Lg		07 56 11.2	
	comp=E,653nm,0.3s,baz=184,slow=4.7,SNR=12								
LVC

MKAR				pPKPbc	pPKPbc	08 15 09.9	-2.5
	comp=Z,3.2nm,0.7s,baz=318,slow=2.5,SNR=5.4							
MJAR	**Matsushiro Arr**	**151.55**	**305**	PKP	PKPdf	08 15 07.5	+1.6
	comp=Z,0.8nm,0.5s,baz=40,slow=3.0,SNR=2.8							
MJAR				PKPbc	PKPbc	08 15 12.5	+0.4
	comp=Z,1.7nm,0.7s,baz=68,slow=2.6,SNR=4.1							
ZAK	**Zakamensk**	**152.11**	**8**	*e*PKIKP	PKPbc	08 15 13.4	+0.5
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.2s							
SONM	**Songino Array**	**154.96**	**5**	PKP	PKPdf	08 15 10.4	0.0
	comp=Z,0.4nm,0.8s,baz=17,slow=1.5,SNR=2.3							
SONM				PKPbc	PKPbc	08 15 18.8	-0.4
	comp=Z,1.0nm,1.0s,baz=354,slow=1.4,SNR=4.3							

TEH ***21*** *08:03:30.4, 3158N×4986E, h7km, ML3.9*
CSEM ***21*** *08:04:25.7±0.1, 3158N×4988E, h30km, ML3.8, Error ellipse: s-maj=2.8km s-min=2.0km az=29.0*
NEIC ***21*** *08:04:25.5, 3160N×4990E, h7km, ML3.9(TEH), After TEH.*
THR ***21*** *08:04:26.1±1.0, 3167N×4997E, h18km±7km, ML3.8*
ISCJB ***21*** *08:04:27.3±0.6, 3162N±005×4989E±005, h53km±8km, mb4.0/7, Error ellipse: s-maj=8.1km s-min=6.3km az=21.5*
IDC ***21*** *08:04:28.4±4.9, 3169N×4994E, h39km±39km, mb3.9/6, mb1 4.0/11, mb1mx3.7/28, mbtmp3.9/11, ML3.8/5, Error ellipse: s-maj=48.7km s-min=22.1km az=150.0*
ISC 21 08:04:28.9±0.5, 3163N±005×4990E±004, h47km±8km, n60, σ0§90/64, mb4.0/7, 2C-5D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.05**	**297**	*e*Pg	**Pn**	**08 04 46.7**	**-0.5**
SHGR				AML	AML	08 05 08.0	
	comp=N,3μm,0.5s						
SHGR				AML	AML	08 05 10.9	
	comp=E,2μm,0.4s						
IPIR	**Pirpir**	**1.35**	**38**	*e*Pg	**Pn**	**08 04 49.2**	**-2.1**
IPIR	**Pirpir**	**1.35**	**38**	*e*Pg	**Pn**	**08 04 49.2**	**-2.1**
IPIR				*e*		08 05 08.8	
IGAR	**Gharneh**	**1.98**	**66**	*e*Pn	**Pn**	**08 05 00.2**	**+0.3**
IGAR	**Gharneh**	**1.98**	**66**	*e*Pn	**Pn**	**08 05 00.2**	**+0.3**
IGAR				*e*		08 05 27.6	
IKLH	**Kolahrood**	**2.20**	**40§**	*e*Pn	**Pn**	**08 05 03.4**	**+0.4**
IKLH	**Kolahrood**	**2.20**	**40§**	*e*Pn	**Pn**	**08 05 03.4**	**+0.4**
IKLH				*e*		08 05 38.5	
IZEF	**Zefreh**	**2.42**	**58**	*e*Pn	**Pn**	**08 04 07.1**	**+1.2**
IZEF	**Zefreh**	**2.42**	**58**	*e*Pn	**Pn**	**08 05 06.8**	**+0.9**
IZEF				*e*		08 05 44.7	
NASN	**Na'in**	**2.73**	**64**	*e*Pn	**Pn**	**08 05 10.5**	**+0.3**
NASN				*e*Sg	**Sn**	**08 05 50.2**	**+8.2**
GHVR	**GHOM**	**3.08**	**22**	*e*Pn	**Pn**	**08 05 15.3**	**+0.3**
GHVR				*e*Sg	**Sn**	**08 05 59.4**	**+8.9**
GHVR				AML	AML	08 06 02.7	
	comp=E,330nm,0.5s						
GHVR				AML	AML	08 06 03.4	
	comp=N,277nm,0.5s						
GHVR	**GHOM**	**3.08**	**22**	*e*Pn	**Pn**	**08 05 15.3**	**+0.3**
	SNR=52						
GHVR				*e*Sg	**Sn**	**08 05 59.4**	**+8.9**
	SNR=91						
ISAD	**Sadrabad**	**3.24**	**84**	*e*Pn	**Pn**	**08 05 17.3**	**+0.1**
ISAD	**Sadrabad**	**3.24**	**84**	*e*Pn	**Pn**	**08 05 17.3**	**+0.1**
ISAD				*e*		08 06 14.6	
IKOM	**Komasi**	**3.24**	**322**	*e*Pn	**Pn**	**08 05 16.8**	**-0.4**
IKOM	**Komasi**	**3.24**	**322**	*e*Pn	**Pn**	**08 05 16.8**	**-0.4**
IKOM				*e*		08 06 28.9	
ISRV	**Sarvestan**	**3.56**	**128**	*e*Pn	**Pn**	**08 05 21.1**	**-0.6**
ISRV	**Sarvestan**	**3.56**	**128**	*e*Pn	**Pn**	**08 05 21.1**	**-0.6**
ISRV				*e*		08 06 45.4	
IVRN	**Varamin**	**3.69**	**24§**	*e*Pn	**Pn**	**08 05 23.5**	**+0.1**
IVRN	**Varamin**	**3.69**	**24§**	*e*Pn	**Pn**	**08 05 23.3**	**-0.1**
IVRN				*e*		08 05 44.3	
IRAZ	**Razeghan**	**3.77**	**0**	*e*Pn	**Pn**	**08 05 24.7**	**+0.3**
IRAZ				*e*Sn	**Sn**	**08 06 08.3**	**+0.8**
IRAZ	**Razeghan**	**3.77**	**0**	*e*Pn	**Pn**	**08 05 24.7**	**+0.3**
IRAZ				*e*		08 05 31.9	
IRAZ				*e*Sn	**Sn**	**08 06 08.3**	**+0.8**
IVIS	**Veis**	**3.86**	**319**	*e*Pn	**Pn**	**08 05 25.1**	**-0.6**
IVIS	**Veis**	**3.86**	**319**	*e*Pn	**Pn**	**08 05 25.2**	**-0.5**
IVIS				*e*		08 06 14.9	
ICHK	**Chekchek**	**3.88**	**80§**	*e*Pn	**Pn**	**08 05 25.9**	**-0.1**
ICHK	**Chekchek**	**3.88**	**80**	*e*Pn	**Pn**	**08 05 25.4**	**-0.6**
ICHK				*e*		08 06 33.2	
IMEH	**Mehriz**	**4.03**	**92**	*e*Pn	**Pn**	**08 05 27.7**	**-0.4**
IMEH	**Mehriz**	**4.03**	**92**	*e*Pn	**Pn**	**08 05 27.7**	**-0.4**
IMEH				*e*		08 06 02.8	
SNGE	**Sanandaj**	**4.06**	**329**	*e*Pn	**Pn**	**08 05 29.6**	**+1.1**
SNGE				AML	AML	08 06 43.8	
	comp=E,150nm,0.6s						
GHIR	**Ghir-Karzin**	**4.27**	**140**	*e*Pn	**Pn**	**08 05 32.3**	**+0.9**
GHIR				AML	AML	08 06 52.6	
	comp=E,90nm,0.3s						
DAMV	**Damavand**	**4.35**	**23**	*e*Pn	**Pn**	**08 05 32.8**	**+0.4**
DAMV				AML	AML	08 06 49.0	
	comp=E,82nm,1.0s						
THKV	**Tehran--Karaj**	**4.35**	**11**	*e*Pn	**Pn**	**08 05 32.7**	**+0.3**
THKV				AML	AML	08 06 55.1	
	comp=E,88nm,0.5s						
CHTH	**Charan**	**4.39**	**13**	*e*Pn	**Pn**	**08 05 33.4**	**+0.4**
ILAS	**Lasjerd**	**4.53**	**33§**	*e*Pn	**Pn**	**08 05 34.8**	**-0.1**
ILAS	**Lasjerd**	**4.53**	**33§**	*e*Pn	**Pn**	**08 05 34.8**	**-0.1**
ILAS				*e*		08 06 59.2	
BHD	**Baghdad**	**4.95**	**291**	*ex*	x	08 05 40.0	
BHD				*ex*	x	08 06 39.0	
IPRN	**Peran**	**5.03**	**23**	*e*Pn	**Pn**	**08 05 41.9**	**+0.2**
IPRN				*e*		08 05 56.8	
ISHM	**Shahmirzad**	**5.04**	**33**	*e*Pn	**Pn**	**08 05 41.5**	**-0.3**
ISHM	**Shahmirzad**	**5.04**	**33**	*e*Pn	**Pn**	**08 05 41.5**	**-0.3**
ISHM				*e*		08 06 03.6	
KRBR	**Kerman**	**6.13**	**104**	*e*Pn	**Pn**	**08 05 57.3**	**+0.5**
MSL	**Mosul**	**7.38**	**312**	*ex*	x	08 06 13.0	
MSL				*ex*	x	08 07 37.0	
ASF	**Jabal al Asfar**	**11.07**	**276**	Pn	**Pn**	**08 07 03.1**	**-1.4**
	comp=E,1.8nm,0.3s,baz=322,slow=8.6,SNR=14						
ASF				Sn	**Sn**	**08 09 00.3**	**-6.5**
	comp=E,0.4nm,0.3s,baz=271,slow=15,SNR=2.0						
MMAI	**Mount Meron Ar**	**12.34**	**280**	Pn	**Pn**	**08 07 21.3**	**-0.7**
	comp=E,0.9nm,0.3s,baz=67,slow=15,SNR=2.8						
EIL	**Elat**	**13.02**	**265**	Pn	**Pn**	**08 07 30.7**	**-0.4**
	comp=E,0.9nm,0.3s,baz=9.5,slow=12,SNR=2.8						
BRTR	**Keskin Array B**	**15.47**	**306**	Pn	**Pn**	**08 08 05.3**	**+1.4**
	comp=E,0.1nm,0.3s,baz=144,slow=14,SNR=4.2						
AKTK	**Aktyubinsk**	**19.74**	**16**	P	**Pn**	**08 08 54.1**	**-2.2**
AKTK	**Aktyubinsk**	**19.74**	**16**	P	**Pn**	**08 08 54.1**	**-2.2**
AKTO	**Aktyubinsk**	**19.74**	**16**	P	**Pn**	**08 08 54.1**	**-2.2**
	comp=E,0.2nm,0.3s,baz=194,slow=11,SNR=3.5						
IDI	**Anoyia**	**21.17**	**287**	P	**P**	**08 09 11.8**	**+1.7**
	comp=E,14nm,0.5s,mb4.5,baz=84,slow=12,SNR=8.3						
MLR	**Muntele Rosu**	**23.18**	**313**	P	**P**	**08 09 33.9**	**+2.5**
	comp=E,2.0nm,0.6s,mb3.7,baz=284,slow=20,SNR=3.0						
AKASG	**Malin Array Be**	**24.46**	**327**	P	**P**	**08 09 42.9**	**-0.3**
	comp=E,0.5nm,0.3s,mb3.4,baz=127,slow=7.1,SNR=4.2						
AKASG	**Malin Array Be**	**24.46**	**327**	P	**P**	**08 09 42.8**	**-0.3**
BUR08	**Bucovina Ar. S**	**24.70**	**317**	P	**P**	**08 09 44.5**	**-0.9**
MKAR	**Makanchi Array**	**29.06**	**49**	P	**P**	**08 10 24.6**	**0.0**
	comp=E,0.7nm,0.6s,mb3.6,baz=248,slow=7.7,SNR=6.4						
ARCES	**ARCESS Array B**	**40.38**	**347**	P	**P**	**08 12 01.5**	**-0.2**
	comp=E,12nm,1.1s,mb4.5,baz=155,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**40.38**	**347**	P	**P**	**08 12 01.5**	**-0.2**
ARCES	**ARCESS Array B**	**40.38**	**347**	P	**P**	**08 12 01.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**47.80**	**259**	P	**P**	**08 13 02.5**	**+0.7**
	comp=E,1.1nm,0.6s,mb4.0,baz=54,slow=8.3,SNR=9.4						
SCHQ	**Schefferville**	**78.25**	**328**	P	**P**	**08 16 23.2**	**-0.2**
	comp=E,4.0nm,0.8s,mb4.4,baz=16,slow=7.4,SNR=3.2						
SCHQ	**Schefferville**	**78.25**	**328**	P	**P**	**08 16 23.2**	**-0.2**

MOS ***21*** *08:09:10.5±1.0, 3298S×17929W, h33km, mb5.4/17, MS4.6/5, Error ellipse: s-maj=14.4km s-min=11.2km az=63.3*
IDC ***21*** *08:09:11.6±2.2, 3285S×17923W, h38km±18km, mb4.6/16, mb1 4.7/18, mb1mx4.6/21, mbtmp4.6/18, ML4.7/2, MS4.5/10, Ms1 4.5/10, ms1mx4.3/14, Error ellipse: s-maj=14.8km s-min=12.9km az=160.0*
NEIC ***21*** *08:09:12.5±0.8, 3309S×179.19W, h43km±7km, mb5.2/18, Error ellipse: s-maj=9.7km s-min=7.3km az=118.0*
ISCJB ***21*** *08:09:12.9±0.1, 3319S±004×17929W±005, h56km, mb5.0/44, MS4.7/23, Error ellipse: s-maj=7.2km s-min=3.2km az=39.3*
BJI ***21*** *08:09:12.4, 3298S×17884W, h58km, mB5.7, mb5.2, Ms5.3, Msz4.9*
GCMT ***21*** *08:09:12.5±0.2, 3304S×17895W, h55km, MW5.3/85, Moment Tensor Solution. s80,c127; s85,c135; Duration: 1§0 Moment tensor: Scale 10¹⁷Nm; Mrr0.84±.02; Mθθ-0.00±.02; Mϕϕ-0.83±.01; Mrθ 0.02±.01; Mθϕ-0.30±.01; Mϕr 0.33±.01; Best double couple: M≤0.94900×10¹⁷ NP1≤204.00000°, ≤35.00000°, ≤100.00000°. NP2≤ 12.00000°, ≤55.00000°, ≤83.00000°. Principal axes: T 0.9050, Plg79.0000°, Azm256.0000°; N 0.0880, Plg6.0000°, Azm16.0000°; P -0.9920, Plg10.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***21*** *08:09:29.4±0.0, 3361S×17960E, h129km*
ISC 21 08:09:14.7±0.1, 3318S±004×17926W±005, h59km, h59km±2.2km; pP-P, n381, σ0§77/313, mb5.0/44, MS4.7/23, 87C-92D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.08**	**17**	Pn	**Pn**	**08 10 06.5**	**-8.1**
	79nm,0.3s,baz=252,slow=20,SNR=3.0						
RAO				Sn	**Sn**	**08 10 53.0**	**-8.0**
	456nm,0.3s,baz=279,slow=22,SNR=6.4						
RAO	**Raoul Island**	**4.08**	**17**	*e*Pn	**Pn**	**08 10 09.0**	**-5.6**
RAO				*e*Sn	**Sn**	**08 10 53.1**	**-8.0**
MXZ	**Matakaoa Point**	**4.81**	**204**	*e*P	**Pn**	**08 10 24.6**	**+0.1**
WIZ	**White Island**	**5.22**	**213**	P	**Pn**	**08 10 34.1**	**+3.9**
PUZ	**Puketiti**	**5.29**	**202**	*e*P	**Pn**	**08 10 30.2**	**-0.9**
KUZ	**Kuaotunu**	**5.45**	**228**	P	**Pn**	**08 10 38.1**	**+4.8**
MWZ	**Matawai**	**5.77**	**206**	P	**Pn**	**08 10 38.0**	**+0.3**
MARZ	**Manawahe**	**5.83**	**213**	P	**Pn**	**08 10 40.9**	**+2.4**
URZ	**Urewera**	**5.87**	**209**	Pn	**Pn**	**08 10 38.3**	**-0.7**
	11nm,0.3s,baz=24,slow=1.9,SNR=81						
URZ				Sn	**Sn**	**08 11 47.2**	**+2.3**
	48nm,0.3s,baz=140,slow=20,SNR=6.6						
URZ	**Urewera**	**5.87**	**209**	P	**Pn**	**08 10 38.0**	**-1.0**
WCZ	**Waipu Caves**	**5.95**	**241**	P	**Pn**	**08 10 44.5**	**+4.3**
MKAZ	**Moumakai**	**6.02**	**228**	P	**Pn**	**08 10 46.3**	**+5.2**
TAZ	**Tarawera**	**6.11**	**213**	P	**Pn**	**08 10 45.3**	**+3.0**
OUZ	**Omahuta**	**6.26**	**249**	P	**Pn**	**08 10 48.1**	**+3.7**
KNZ	**Kokohu**	**6.34**	**202**	P	**Pn**	**08 10 44.3**	**-1.2**
BKZ	**Black Stump Fm**	**6.89**	**209**	P	**Pn**	**08 10 51.7**	**-1.4**
HIZ	**Hauiti**	**7.15**	**220**	P	**Pn**	**08 10 59.9**	**+3.3**
NGZ	**Ngauruhoe**	**7.29**	**213**	P	**Pn**	**08 11 00.2**	**+1.8**
TUVZ	**Tukino**	**7.34**	**213**	P	**Pn**	**08 11 00.6**	**+1.5**
MOVZ	**Moawhango**	**7.41**	**212**	P	**Pn**	**08 10 59.9**	**-0.2**
WNVZ	**Wahianoa**	**7.41**	**213**	P	**Pn**	**08 11 01.2**	**+1.1**
TSZ	**Takapari Road**	**7.87**	**208**	P	**Pn**	**08 11 04.8**	**-1.6**
WAZ	**Wanganui**	**8.04**	**214**	P	**Pn**	**08 11 08.5**	**-0.2**
BFZ	**Birch Farm**	**8.31**	**204**	P	**Pn**	**08 11 09.9**	**-2.5**
MRZ	**Mangatainoka R**	**8.54**	**207**	P	**Pn**	**08 11 12.0**	**-3.5**
MTW	**Mount Morrison**	**8.99**	**206**	P	**Pn**	**08 11 18.8**	**-3.0**
CAW	**Cannon Point**	**9.12**	**208**	P	**Pn**	**08 11 19.9**	**-3.6**
MSWZ	**Moikau Station**	**9.31**	**206**	P	**Pn**	**08 11 23.5**	**-2.6**
SNZO	**South Karori**	**9.43**	**209**	P	**Pn**	**08 11 24.0**	**-3.8**
TCW	**Tory Channel**	**9.53**	**211**	P	**Pn**	**08 11 24.9**	**-4.2**
NNZ	**Nelson**	**9.94**	**214**	P	**Pn**	**08 11 30.3**	**-4.4**
QRZ	**Quartz Range**	**10.06**	**218**	P	**Pn**	**08 11 32.6**	**-3.9**
BSWZ	**Blackbirch Sta**	**10.12**	**211**	P	**Pn**	**08 11 33.8**	**-3.3**
THZ	**Tophouse**	**10.59**	**214**	P	**Pn**	**08 11 40.3**	**-3.3**
LTZ	**Lake Taylor**	**11.68**	**212**	P	**Pn**	**08 11 53.3**	**-5.2**
MQZ	**McQueen's Vall**	**12.27**	**209**	P	**Pn**	**08 11 59.6**	**-6.9**
WVZ	**Waitaha Valley**	**12.63**	**216**	P	**Pn**	**08 12 07.3**	**-4.1**
RPZ	**Rata Peaks**	**12.96**	**213**	Pn	**Pn**	**08 12 10.5**	**-5.4**
	2.2nm,0.3s,baz=219,slow=0.6,SNR=8.7						
RPZ				Sn	**Sn**	**08 14 29.6**	**-8.9**
	5.2nm,0.3s,baz=121,slow=18,SNR=8.5						
RPZ	**Rata Peaks**	**12.96**	**213**	P	**Pn**	**08 12 10.7**	**-5.3**
ODZ	**Otahua Downs**	**14.19**	**210**	P	**Pn**	**08 12 27.3**	**-5.2**
JCZ	**Jacksoy Bay**	**14.34**	**217**	P	**Pn**	**08 12 29.3**	**-5.1**
DZM	**Mont Dzumac**	**16.80**	**308**	P	**Pn**	**08 13 03.7**	**-2.3**
AFI	**Afiamalu**	**20.36**	**21**	P	**P**	**08 13 41.9**	**-4.4**
	18nm,0.8s,baz=312,slow=14,SNR=3.1						
AFI				S	**S**	**08 17 15.2**	**-16**
	14nm,0.6s,baz=171,slow=19,SNR=2.0						
AFI	**Afiamalu**	**20.36**	**21**	*e*P	**P**	**08 13 43.6**	**-2.8**
EIDS	**Eidsvold**	**26.95**	**279**	*e*P	**P**	**08 14 52.6**	**+2.0**
	20nm,1.0s,mb4.6						
PPT	**Papeete**	**30.86**	**67**	*e*S	**S**	**08 20 31.6**	**+6.4**
	466nm,27.2s						
PPT				*e*LR	LR	08 23 24.3	
	2μm,26.5s,baz=231						
PPT	**Papeete**	**30.86**	**67**	LR	LR	08 24 27.8	
	comp=Z,677nm,19.4s,MS4.3,baz=258,slow=30						
STKA	**Stephens Creek**	**32.90**	**261**	P	**P**	**08 15 44.0**	**+0.7**
	4.7nm,0.8s,mb4.5,baz=86,slow=13,SNR=7.7						
STKA				LR	LR	08 27 19.6	
	comp=Z,2μm,21.3s,MS4.8,baz=65,slow=33						
CTA	**Charters Tower**	**33.31**	**284**	P	**P**	**08 15 48.1**	**+1.1**
	21nm,0.6s,mb5.3,baz=107,slow=10,SNR=23						
CTAO	**Charters Tower**	**33.31**	**284**	*e*P	**P**	**08 15 48.5**	**+1.5**
	24nm,0.7s,mb5.2						
CTAO	**Charters Tower**	**33.31**	**284**	*e*P	**P**	**08 15 48.5**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
CTAO	**Charters Tower**	**33.31**	**284**	P	**P**	**08 15 48.4**	**+1.4**
	comp=Z,40nm,0.7s,mb5.4						
PMG	**Port Moresby**	**38.94**	**300**	*e*P	**P**	**08 16 35.0**	**-0.1**
	comp=Z,73nm,1.2s,mb5.3						
PMG	**Port Moresby**	**38.94**	**300**	*e*P	**P**	**08 16 35.0**	**0.0**
PMG				pmax	pmax		
	comp=Z,73nm,1.2s						
PMG	**Port Moresby**	**38.94**	**300**	P	**P**	**08 16 36.5**	**+1.5**
	comp=Z,76nm,1.7s,mb5.1						
COEN	**Coen**	**39.11**	**290**	*e*P	**P**	**08 16 36.8**	**+0.3**
	comp=Z,31nm,0.9s,mb5.0						
COEN	**Coen**	**39.11**	**290**	P	**P**	**08 16 38.5**	**+2.0**
	comp=Z,23nm,1.0s,mb4.8						
RKT	**Rikitea**	**40.06**	**87**	*e*S	**S**	**08 22 54.5**	**+8.3**
	comp=Z,575nm,27.0s						
RKT				*e*LR	LR	08 27 47.7	
	comp=Z,3μm,27.2s,baz=234						
ASAR	**Alice Springs**	**41.98**	**271**	P	**P**	**08 16 59.8**	**-0.3**
	comp=Z,23nm,0.7s,mb4.9,baz=110,slow=7.0,SNR=130						
ASAR				S	**S**	**08 23 14.3**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=114,slow=15,SNR=3.2						
ASAR				PKIKP	PKiKP	08 25 58.8	-1.7
	comp=Z,0.5nm,0.8s,baz=66,slow=1.2,SNR=4.4						
ASAR	**Alice Springs**	**41.98**	**271**	P	**P**	**08 16 59.8**	**-0.3**
ASAR				S	**S**	**08 23 14.3**	**-0.3**
WRAB	**Tennant Creek**	**43.22**	**276**	P	**P**	**08 17 09.6**	**-0.5**
	comp=Z,203nm,0.5s,mb6.1,SNR=13						
WRAB	**Tennant Creek**	**43.22**	**276**	*e*P	**P**	**08 17 10.3**	**+0.1**
	comp=Z,39nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**43.22**	**276**	*e*P	**P**	**08 17 10.3**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**43.22**	**276**	P	**P**	**08 17 10.1**	**0.0**
	comp=Z,39nm,0.9s,mb5.2						
WRA	**Warramunga Arr**	**43.22**	**276**	P	**P**	**08 17 09.1**	**-1.1**
	comp=Z,20nm,0.5s,mb5.1,baz=116,slow=7.6,SNR=83						
WRA				S	**S**	**08 23 36.6**	**+3.6**
	comp=Z,2.8nm,1.0s,baz=118,slow=13,SNR=4.5						
WRA				LR	LR	08 33 51.1	
	comp=Z,655nm,21.1s,MS4.5,baz=125,slow=34						
WRA	**Warramunga Arr**	**43.22**	**276**	P	**P**	**08 17 09.1**	**-1.1**
WRA				S	**S**	**08 23 36.6**	**+3.6**
WRA				LR	LR	08 33 51.1	
WRA	**Warramunga Arr**	**43.22**	**276**	P	**P**	**08 17 09.1**	**-1.1**
WRA				S	**S**	**08 23 36.6**	**+3.6**
FORT	**Forrest**	**44.37**	**258**	*e*P	**P**	**08 17 20.2**	**+0.9**
	comp=Z,71nm,1.0s,mb5.3						
SBA	**Scott Base**	**45.20**	**184**	*e*P	**P**	**08 17 30.5**	**+5.3**
	comp=Z,216nm,2.8s,mb5.5						
SBA	**Scott Base**	**45.20**	**184**	*e*P	**P**	**08 17 30.5**	**+5.3**
SBA				pmax	pmax		
	comp=Z,216nm,2.8s,mb5.5						
VNDA	**Vanda**	**45.23**	**186**	P	**P**	**08 17 28.9**	**+3.4**
	comp=Z,2.2nm,0.7s,mb4.1,baz=331,slow=5.6,SNR=9.5						
CASY	**Casey**	**52.19**	**209**	*e*P	**P**	**08 18 18.8**	**-0.3**
	comp=Z,56nm,0.8s,mb5.5						
NWAO	**Narrogin (SRO)**	**52.46**	**252**	P	**P**	**08 18 20.5**	**-1.0**
	comp=Z,6.6nm,0.7s,mb4.7,baz=114,slow=9.7,SNR=4.1						
MBWA	**Marble Bar**	**54.91**	**266**	P	**P**	**08 18 39.3**	**-0.3**
	comp=Z,45nm,2.0s,mb5.2						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**08 18 55.5**	**+2.3**
	comp=Z,49nm,1.0s,mb5.5,baz=33,slow=3.8,SNR=35						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**08 18 55.5**	**+2.3**
BATI	**Baumata**	**57.01**	**280**	P	**P**	**08 18 53.4**	**-1.3**
	comp=Z,20nm,0.3s,mb5.6,baz=245,slow=4.4,SNR=4.0						
KDI	**Kendari**	**61.37**	**285**	P	**P**	**08 19 24.9**	**+0.1**
MAW	**Mawson**	**69.34**	**201**	P	**P**	**08 20 15.6**	**+0.1**
	comp=Z,12nm,0.9s,mb4.8,baz=125,slow=6.3,SNR=15						
MAW				LR	LR	08 49 16.6	
	comp=Z,491nm,20.6s,MS4.7,baz=122,slow=34						
MAW	**Mawson**	**69.34**	**201**	*e*P	**P**	**08 20 16.7**	**+1.2**
	comp=Z,14nm,1.6s,mb4.7						
MAW	**Mawson**	**69.34**	**201**	*e*P	**P**	**08 20 16.7**	**+1.2**
MAW				pmax	pmax		
	comp=Z,14nm,1.6s						
SYO	**Syowa Base**	**74.17**	**194**	i*X*		08 20 42.6	
SNAA	**Sanae**	**75.41**	**179**	*e*P	**P**	**08 20 49.9**	**-1.7**
SNAA				*e*		08 20 57.3	
SNAA				*e*	pP	08 21 09.6	+1.6
SNAA				*e*		08 21 14.9	
SNAA	**Sanae**	**75.41**	**179**	*e*P	**P**	**08 20 49.1**	**-2.5**
	comp=Z,11nm,0.8s,mb4.8						
SNAA	**Sanae**	**75.41**	**179**	*e*P	**P**	**08 20 49.1**	**-2.5**
SNAA				pmax	pmax		
	comp=Z,11nm,0.8s						
VNA3	**Neumayer Olymp**	**75.61**	**177**	*e*P	**P**	**08 20 53.5**	**+0.8**
VNA3				*e*		08 20 59.5	
VNA3				*e*	pP	08 21 11.1	+2.0
VNA2	**Neumayer--Watz**	**76.03**	**177**	*e*P	**P**	**08 20 56.7**	**+1.6**
	baz=182,slow=5.3						
VNA2				*e*		08 21 02.1	
VNA2				*e*	pP	08 21 13.5	+2.0
VNA2				*e*		08 21 18.7	
MAIT	**Maitri**	**76.04**	**184**	*e*P	**P**	**08 20 53.7**	**-1.5**
NVL	**N'lazarevskaya**	**76.05**	**184**	P	**P**	**08 20 55.7**	**+0.5**
NVL				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
VNA1	**Neumayer--Stat**	**76.27**	**177**	*e*P	**P**	**08 20 57.4**	**+0.9**
VNA1				*e*		08 21 03.8	
VNA1				*e*	pP	08 21 12.9	0.0
MJAR	**Matsushiro Arr**	**79.93**	**326**	LR	LR	08 53 23.2	
	comp=Z,174nm,21.4s,MS4.4,baz=135,slow=33						
PLCA	**Paso Flores**	**81.39**	**133**	P	**P**	**08 21 25.1**	**-0.1**
	comp=Z,3.9nm,0.9s,mb4.3,baz=194,slow=5.1,SNR=7.8						
PLCA				LR	LR	08 52 11.3	
	comp=Z,151nm,19.2s,MS4.4,baz=216,slow=32						
QIZ	**Qiongzhong**	**85.23**	**296**	*e*P	**P**	**08 21 46.4**	**+1.3**
QIZ				*e*S	S	08 32 13.3	+2.4
QIZ				LR	LR		
	comp=N,87nm,31.6s,MS4.3						
QIZ				LR	LR		
	comp=E,174nm,36.5s,MS4.3						
QIZ				LR	LR		
	comp=Z,215nm,37.5s,MS4.3						
KSRS	**Korea Array**	**85.78**	**321**	P	**P**	**08 21 45.6**	**-1.8**
	comp=Z,2.4nm,0.7s,mb4.5,baz=134,slow=5.7,SNR=7.5						
NJ2	**Nanjing**	**87.25**	**311**	*e*P	**P**	**08 21 54.8**	**+0.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.3						
PET	**Petropavlovsk**	**87.97**	**347**	*e*P	**P**	**08 22 01.7**	**+4.1**
PET				*e*S	S	08 32 42.4	+6.5
PET				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.4						
PET				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.5						
U04C	**Hernandez Rese**	**88.14**	**44**	⇑P	**P**	**08 21 59.2**	**+0.4**
	baz=88						
PETK	**Petropavlovsk-**	**88.24**	**346**	P	**P**	**08 21 57.6**	**-1.3**
	comp=Z,6.6nm,0.8s,mb4.9,baz=112,slow=4.7,SNR=3.9						
PETK				LR	LR	08 54 08.6	
	comp=Z,208nm,21.7s,MS4.5,baz=192,slow=31						
MURC	**Murrieta**	**88

HABR *e*PP pP 08 22 27.6 -0.9
HABR *e* 08 25 46.9
HABR *e*SSS 08 42 48.4
115A Sonoran Desert 90.97 51 ⇑P P 08 22 12.9 +0.7
baz=91,SNR=5.7
V11A Goodsprings 90.97 47 ⇓P P 08 22 12.1 0.0
baz=91
NVAR Mina Array Bea 90.99 43 P P 08 22 11.8 -0.4
comp=Z,8.1nm,0.9s,mb5.0,baz=217,slow=7.9,SNR=35
216A Three Points, 91.03 52 ⇓P P 08 22 13.1 +0.6
baz=91
S09A Goldfield 91.15 44 ⇑P P 08 22 12.6 -0.3
baz=91
X13A Yucca 91.15 49 ⇓P P 08 22 13.3 +0.3
baz=91,SNR=14
TPNV Topopah Spring 91.21 46 *e*P P 08 22 13.4 +0.1
comp=Z,4.1nm,0.8s,mb4.8
TPNV Topopah Spring 91.21 46 ⇓P P 08 22 13.3 +0.1
baz=91
TPNV Topopah Spring 91.21 46 *e*P P 08 22 13.4 +0.2
TPNV pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
K02A Glendale 91.21 38 ⇓P P 08 22 13.1 0.0
baz=91
PAHR Pah Rah Range 91.25 42 *e*P P 08 22 13.3 -0.1
comp=Z,11nm,1.1s,mb5.1
V12A Nelson 91.25 47 ⇓P P 08 22 13.5 +0.1
baz=91
Y14A Wickenburg 91.25 50 ⇑P P 08 22 13.9 +0.4
baz=91,SNR=11
217A Green Valley 91.31 52 ⇑P P 08 22 14.3 +0.4
baz=91,SNR=11
HUMO Hull Mountain 91.37 38 *e*P P 08 22 14.3 +0.6
comp=Z,42nm,1.8s,mb5.5
TPH Tonopah 91.38 44 *e*P P 08 22 14.5 +0.5
W13A Hualapai Mount 91.44 48 ⇑P P 08 22 14.8 +0.5
baz=92,SNR=8.1
Q08A Gabbs 91.50 43 ⇑P P 08 22 14.2 -0.3
baz=92,SNR=6.5
J02A Umpqua 91.60 37 ⇓P P 08 22 14.6 -0.3
baz=92
S10A Tonopah Range, 91.65 45 ⇑P P 08 22 15.2 0.0
baz=92,SNR=10
318A Bisbee 91.66 53 ⇑P P 08 22 15.6 +0.2
baz=92,SNR=10
X14A Yava 91.67 49 ⇑P P 08 22 15.8 +0.4
baz=92,SNR=12
TUC Tucson 91.67 52 *e*P P 08 22 16.2 +0.8
Y15A Casa Rosa Ranc 91.69 50 ⇓P P 08 22 15.5 -0.1
baz=92,SNR=7.9
CN2 Changchun 91.72 323 *e*P P 08 22 14.3 -1.1
CN2 *e*XP sP 08 22 38.1 -0.5
CN2 *e*S S 08 33 07.6 -3.4
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
N06A Buffalo Meadow 91.72 41 ⇓P P 08 22 15.2 -0.3
baz=92
O07A Toulon 91.85 42 ⇓P P 08 22 15.8 -0.2
baz=92
117A Oracle 91.86 52 ⇑P P 08 22 16.7 +0.3
baz=92
V13A Grand Canyon W 91.87 48 ⇑P P 08 22 16.5 +0.2
baz=92
Z16A Peralta Trail, 91.89 51 ⇑P P 08 22 16.9 +0.4
baz=92,SNR=6.6
U12A Valley of Fire 91.90 47 ⇓P P 08 22 16.8 +0.4
baz=92
218A Dragoon 91.95 53 ⇓P P 08 22 17.3 +0.5
baz=92,SNR=10
S11A Rachel 91.97 45 ⇓P P 08 22 17.0 +0.3
baz=92
GYA Guiyang 92.01 300 P P 08 22 17.3 +0.1
GYA AP pP 08 22 34.0 0.0
GYA XP sP 08 22 40.4 -0.1
GYA PP PP 08 26 01.5 +3.6
GYA SKS 08 32 43.1
GYA S S 08 33 12.9 -1.6
GYA XS sS 08 33 43.8 +0.7
GYA SS SS 08 39 26.3 +1.1
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,120nm,6.0s
GYA LR LR
comp=N,350nm,19.3s,MS4.9
GYA LR LR
comp=E,210nm,21.6s,MS4.9
GYA LR LR
comp=Z,410nm,20.8s,MS4.8
T11A Corn Creek, Al 92.02 46 ⇑P P 08 22 17.2 +0.2
baz=92,SNR=8.7
W14A Seligman 92.02 49 ⇓P P 08 22 17.6 +0.5
baz=92,SNR=6.2
R10A Warm Springs 92.06 45 ⇑P P 08 22 17.1 -0.1
baz=92
X15A Humboldt 92.09 50 ⇓P P 08 22 17.9 +0.5
baz=92,SNR=7.0
319A Douglas 92.10 54 ⇓P P 08 22 18.3 +0.8
baz=92
Y16A Circle Bar Ran 92.20 50 ⇓P P 08 22 18.5 +0.6
baz=92,SNR=14
N07B Gerlach 92.22 41 ⇑P P 08 22 18.2 +0.4
baz=92
U13A Pakoon Wash 92.24 47 ⇓P P 08 22 18.5 +0.4
baz=92
V14A Boquillas Ranc 92.28 48 ⇓P P 08 22 18.5 +0.3
baz=92,SNR=5.9
O08A Rochester Mine 92.34 42 ⇓P P 08 22 18.2 -0.2
baz=92,SNR=7.7
Q10A Clear Creek Ra 92.36 44 ⇑P P 08 22 19.2 +0.7
baz=92,SNR=5.5
118A Homack Ranch, 92.41 52 ⇓P P 08 22 19.4 +0.5
baz=92,SNR=7.0
S12A Delamar Landin 92.48 46 ⇓P P 08 22 19.8 +0.7
baz=92
Y17A Roosevelt 92.49 51 ⇓P P 08 22 19.7 +0.4
baz=92,SNR=8.7
K05A Summer Lake 92.53 39 ⇓P P 08 22 18.9 -0.2
baz=93,SNR=8.8
M07A Soldier Meadow 92.53 41 ⇑P P 08 22 19.0 -0.2
baz=93
R11A Troy Canyon, C 92.53 45 ⇑P P 08 22 18.7 -0.5
baz=93
X16A Lo Mia Camp, P 92.56 50 ⇓P P 08 22 20.2 +0.6
baz=93,SNR=9.5
H03A Soap Creek Ran 92.68 36 ⇑P P 08 22 19.9 0.0
baz=93
U14A Mt Trumbull 92.73 48 ⇓P P 08 22 20.5 +0.3
baz=93,SNR=6.7
O09A Fish Creek Ran 92.81 43 ⇑P P 08 22 20.3 -0.2
baz=93
Q11A Duckwater 92.81 44 ⇓P P 08 22 20.1 -0.5
baz=93
P10A Eureka 92.85 43 ⇑P P 08 22 20.4 -0.4
baz=93
L07A Adell 92.86 40 ⇑P P 08 22 20.6 -0.1
baz=93,SNR=7.2
W16A Flagstaff 92.93 49 ⇓P P 08 22 22.0 +0.7
baz=93
119A Ashpeak Ranch, 92.93 52 ⇑P P 08 22 21.6 +0.3
baz=93
V15A Kaibab Nationa 92.98 49 ⇓P P 08 22 21.7 +0.3
baz=93
M08A Happy Creek Ra 93.00 41 ⇓P P 08 22 21.7 +0.3
baz=93
S13A Holt Ranch, En 93.06 46 ⇑P P 08 22 22.3 +0.5
baz=93
Y18A Canyon Day Jun 93.07 51 ⇑P P 08 22 22.5 +0.6
baz=93,SNR=5.7
R12A Pony Springs, 93.09 45 ⇑P P 08 22 21.9 0.0
baz=93,SNR=5.1
J06A Christmas Vall 93.28 39 ⇑P P 08 22 22.1 -0.5
baz=93,SNR=9.8
U15A North Rim 93.29 48 ⇓P P 08 22 23.5 +0.7
baz=93,SNR=6.6
WUAZ Wupatki 93.29 49 ⇑P P 08 22 23.1 +0.2
baz=93
CMAR Chiang Mai Arr 93.32 290 P P 08 22 23.7 +0.3
comp=Z,1.1nm,0.3s,mb4.7,baz=152,slow=3.8,SNR=5.4
CMAR PP PP 08 26 07.9 -0.3
comp=Z,1.4nm,0.4s,baz=134,slow=6.4,SNR=6.4
I05A Bend 93.34 38 ⇓P P 08 22 23.0 +0.1
baz=93,SNR=5.9
K07A Rock Creek Ran 93.38 40 ⇓P P 08 22 22.7 -0.4
baz=93,SNR=7.5
R13A O'Grain Ranch, 93.38 46 ⇑P P 08 22 22.7 -0.6
baz=93
Q12A Willow Creek R 93.43 45 ⇓P P 08 22 23.0 -0.4
baz=94
M09A Marrel Ranch, 93.50 42 ⇑P P 08 22 23.7 0.0
baz=94,SNR=7.2
L08A Fields 93.52 41 ⇓P P 08 22 23.5 -0.3
baz=94,SNR=12
WVOR Wild Horse Val 93.53 40 *e*P P 08 22 23.3 -0.5
comp=Z,6.3nm,1.0s,mb5.0
WVOR Wild Horse Val 93.53 40 *e*P P 08 22 23.3 -0.5
WVOR pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
X18A Snowflake 93.59 51 ⇑P P 08 22 24.6 +0.3
baz=94
O11A Cowboy Ranch, 93.66 43 ⇓P P 08 22 24.4 0.0
baz=94,SNR=8.7
Y19A Nutrioso 93.70 52 ⇑P P 08 22 25.2 +0.4
baz=94
H05A Madras 93.70 37 ⇑P P 08 22 25.0 +0.4
baz=94
I06A Prineville 93.73 38 ⇓P P 08 22 24.7 0.0
baz=94,SNR=10
L09A Wilkinson Ranc 93.78 41 ⇑P P 08 22 24.9 -0.1
baz=94
J07A Hines 93.81 39 ⇓P P 08 22 24.9 -0.2
baz=94
K08A Mann Creek Ran 93.81 40 ⇑P P 08 22 24.4 -0.7
baz=94,SNR=13
Q13A Wheeler Ranch, 93.85 45 ⇓P P 08 22 25.0 -0.3
baz=94
G05A Wamic 94.07 37 ⇑P P 08 22 25.6 -0.6
baz=94
M10A I.L. Ranch, Tu 94.07 42 ⇑P P 08 22 26.3 0.0
baz=94,SNR=6.3
KMI Kunming 94.12 297 P P 08 22 29.4 +2.4
KMI AP pP 08 22 44.8 +1.0
KMI PP PP 08 26 18.9 +4.4
KMI S S 08 33 32.1 -1.2
KMI SS SS 08 39 58.6 +3.1
KMI AMB AMB
comp=Z,6.0nm,0.8s,mb5.1
KMI AMB AMB
comp=Z,138nm,4.7s
KMI LR LR
comp=N,216nm,13.6s,MS4.9
KMI LR LR
comp=E,229nm,17.7s,MS4.9
KMI LR LR
comp=Z,320nm,22.3s,MS4.7
BJI Beijing 94.16 316 P P 08 22 30.4 +3.6
BJI XP sP 08 22 48.9 -1.1
BJI S S 08 33 36.8 +3.9
BJI XS sS 08 34 01.1 -0.4
BJI SS SS 08 39 57.6 +2.1
BJI AMB AMB
comp=Z,20nm,0.7s,mb5.7
BJI LR LR
comp=Z,322nm,28.2s,MS4.6
P13A Bates Ranch, G 94.18 45 ⇓P P 08 22 26.4 -0.5
baz=94
I07A Izee 94.19 39 ⇑P P 08 22 26.6 -0.3
baz=94,SNR=8.8
K09A Rome 94.20 41 ⇓P P 08 22 26.4 -0.5
baz=94,SNR=11
H06A Lindquist Farm 94.22 38 ⇑P P 08 22 26.4 -0.5
baz=94,SNR=9.7
J08A Circle Bar Ran 94.25 40 ⇓P P 08 22 26.4 -0.7
baz=94,SNR=7.2
O12A Currie 94.27 44 ⇓P P 08 22 26.7 -0.5
baz=94
ELK Elko 94.30 43 *e*P P 08 22 27.3 -0.1
Q14A Sevier Lake (B 94.32 46 ⇓P P 08 22 27.5 0.0
baz=94
V18A Ganado 94.33 50 ⇑P P 08 22 27.6 0.0
baz=94
G06A Carlson Farm, 94.41 37 ⇑P P 08 22 27.2 -0.6
baz=94
L10A Juniper Basin 94.48 42 ⇑P P 08 22 27.6 -0.6
baz=94,SNR=11
N12A Clover Valley, 94.48 43 ⇓P P 08 22 27.7 -0.5
baz=94
J09A Fry Pan Ranch, 94.62 40 ⇓P P 08 22 28.2 -0.6
baz=95,SNR=7.3
K10A MacKenzie Ranc 94.72 41 ⇑P P 08 22 28.8 -0.5
baz=95,SNR=10.0
TXAR Lajitas Array 94.78 58 P P 08 22 29.2 -0.6
comp=Z,1.1nm,1.0s,mb4.2,baz=202,slow=5.4,SNR=6.7
TXAR LR LR 08 59 59.8
comp=Z,194nm,18.2s,MS4.6,baz=190,slow=32
M12A Wells 94.92 43 ⇑P P 08 22 29.8 -0.5
baz=95
G07A Ruggs Ranch, H 94.92 38 ⇑P P 08 22 29.9 -0.2
baz=95
L11A Cat Creek Ranc 94.94 42 ⇑P P 08 22 30.0 -0.3
baz=95,SNR=5.4
C04A Brinnon 95.01 34 ⇓P P 08 22 30.1 -0.3
baz=95
K11A Parker Ranch, 95.18 41 ⇓P P 08 22 31.3 0.0
baz=95,SNR=5.7
T18A Mexican Hat 95.25 49 ⇑P P 08 22 31.7 -0.1
baz=95
P15A Leamington 95.28 46 ⇓P P 08 22 31.9 0.0
baz=95
G08A Pilot Rock 95.31 38 ⇑P P 08 22 31.5 -0.3
baz=95,SNR=6.6
M13A Montello 95.32 43 ⇓P P 08 22 31.8 -0.2
baz=95
L12A House Creek Ra 95.34 42 ⇓P P 08 22 32.0 -0.1
baz=95
DUG Dugway 95.36 45 ⇑P P 08 22 32.0 -0.2
baz=95
MFID Camas Ranch 95.72 41 ⇓P P 08 22 33.2 -0.6
baz=96,SNR=8.1
K12A Dyer Farm, C 95.72 42 ⇑P P 08 22 33.3 -0.5
baz=96
F08A Pendleton 95.74 38 ⇓P P 08 22 33.3 -0.6
baz=96
B05A Bryant 95.82 34 ⇓P P 08 22 33.9 -0.3
baz=96
M14A Sheep Mountain 95.88 44 ⇓P P 08 22 34.2 -0.4
baz=96,SNR=6.9
G09A Cove 95.91 39 ⇓P P 08 22 34.2 -0.4
baz=96
I11A Placerville 95.97 40 ⇓P P 08 22 34.3 -0.7
baz=96,SNR=6.8
H10A Noah's Angus R 96.00 40 ⇓P P 08 22 34.1 -1.0
baz=96
J12A Stokes Ranch, 96.01 41 ⇑P P 08 22 34.7 -0.4
baz=96,SNR=7.8
G10A Bishop Farm, J 96.27 39 ⇓P P 08 22 35.5 -0.8
baz=96
L14A Malta 96.28 43 ⇑P P 08 22 35.8 -0.6
baz=96
I12A Atlanta 96.35 41 ⇓P P 08 22 36.1 -0.6
baz=96
H11A Donnelly 96.47 40 ⇓P P 08 22 36.6 -0.6
baz=96
P18A Preston Nutter 96.55 47 ⇓P P 08 22 36.8 -0.9
baz=97
E09A Wood Farm, Sta 96.55 37 ⇓P P 08 22 36.9 -0.6
baz=97
HLID Hailey 96.60 41 *e*P P 08 22 37.5 -0.3
HLID Hailey 96.60 41 ⇓P P 08 22 37.4 -0.4
baz=97
O17A Robinson Place 96.60 46 ⇑P P 08 22 37.6 -0.3
baz=97
J13A Cove Ranch, Pi 96.62 42 ⇑P P 08 22 37.8 -0.2
baz=97
K14A Jones Ranch, D 96.64 43 ⇓P P 08 22 37.9 -0.1
baz=97
F10A Beach Ranch, E 96.66 38 ⇑P P 08 22 38.1 +0.1
baz=97
CD2 Chengdu 96.67 303 *e*P P 08 22 39.6 +1.2
CD2 AP pP 08 22 55.3 0.0
CD2 XP sP 08 23 00.8 -0.9
CD2 PP PP 08 26 37.6 +3.5
CD2 S S 08 33 54.0 -1.1
CD2 XS sS 08 34 18.6 -5.2
CD2 SS SS 08 40 33.6 +2.1
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.6
CD2 AMB AMB
comp=Z,60nm,6.8s
CD2 LR LR
comp=N,260nm,15.2s,MS5.0
CD2 LR LR
comp=E,310nm,16.2s,MS5.0
CD2 LR LR
comp=Z,180nm,14.8s,MS4.7
L15A Malad City 96.75 44 ⇓P P 08 22 38.0 -0.5
baz=97
G11A Walters Elk Ra 96.79 39 ⇓P P 08 22 38.0 -0.6
baz=97
B07A Winthrop 96.90 35 ⇑P P 08 22 38.3 -0.7
baz=97
J14A Carey 96.94 42 ⇑P P 08 22 39.0 -0.4
baz=97
I13A Wildhorse Cree 96.99 41 ⇓P P 08 22 39.2 -0.3
baz=97
H12A Diamond D Ranc 96.99 41 ⇑P P 08 22 39.2 -0.4
baz=97
N17A Moffit Pass 97.00 45 ⇓P P 08 22 39.4 -0.3
baz=97
H13A Challis 97.33 41 ⇑P P 08 22 41.2 +0.1
baz=97
HHC Hu-ho-hao-te 97.40 314 *e*P P 08 22 42.6 +1.1
HHC AP pP 08 22 57.3 -1.0
HHC XP sP 08 23 03.3 -1.5
HHC PP PP 08 26 42.1 +2.6
HHC SKS 08 33 13.6
HHC S S 08 33 59.8 -1.0
HHC XS sS 08 34 27.4 -2.2
HHC SS SS 08 40 39.6 -1.8
HHC AMB AMB
comp=Z,13nm,0.7s,mb5.5
HHC AMB AMB
comp=Z,322nm,5.6s
HHC LR LR
comp=N,506nm,17.8s,MS5.2
HHC LR LR
comp=E,482nm,17.8s,MS5.2
HHC LR LR
comp=Z,413nm,22.6s,MS4.9
J15A Blackfoot 97.60 43 ⇓P P 08 22 42.5 +0.1
baz=98
G13A Cobalt 97.68 40 ⇑P P 08 22 42.4 -0.2
baz=98
D11A Klaveano Farm, 97.84 38 ⇑P P 08 22 43.2 -0.1
baz=98
H14A Leadore 97.85 41 ⇓P P 08 22 43.2 -0.3
baz=98
LPAZ La Paz 97.96 115 LR LR 08 59 29.3
comp=Z,90nm,19.8s,MS4.3,baz=282,slow=31
J16A Bone 97.99 43 ⇑P P 08 22 44.2 0.0
baz=98
F13A Darby 98.07 40 ⇓P P 08 22 44.5 +0.1
baz=98
SNOW Snow King Moun 98.60 43 *e*P P 08 22 47.2 +0.4
PDAR Pinedale Array 98.87 44 P P 08 22 47.4 -0.7
comp=Z,1.0nm,0.9s,mb4.3,baz=149,slow=3.1,SNR=7.3
PDAR LR LR 08 57 18.0
comp=Z,273nm,21.8s,MS4.7,baz=245,slow=29
LZH Lanzhou 99.52 307 *e*P Pdif 08 22 52.0 +0.8
LZH AP pP 08 23 06.0 -2.0
LZH XP sP 08 23 08.9 -5.5
LZH PP PP 08 26 59.0 +3.1
LZH SKS 08 33 25.0
LZH *e*S S 08 34 16.0 -3.1
LZH XS sS 08 34 46.0 -1.9
LZH SS SS 08 41 11.0 -0.4
LZH AMB AMB
comp=Z,18nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,120nm,4.7s
LZH LR LR
comp=N,780nm,16.0s
LZH LR LR
comp=Z,920nm,17.3s,MS5.3
TIXI Tiksi 110.65 345 ⇑*i*PKIKP PKiKP 08 27 38.0 -1.5
TIXI MLR MLR
comp=Z,200nm,18.0s,MS4.7
WMQ Urumqi 114.08 308 *e*PKP PKiKP 08 27 47.0 +0.1
WMQ PP PP 08 28 47.0 +4.3
WMQ SKS SKSdf 08 34 54.0 +0.3
WMQ SKKS SKKSac 08 35 35.0 -3.4
WMQ SS SS 08 44 30.0 +1.1
WMQ PP PP
comp=Z,65nm,8.0s
WMQ LR LR
comp=N,62nm,20.0s,MS4.6
WMQ LR LR
comp=E,135nm,22.0s,MS4.6
WMQ LR LR
comp=Z,175nm,22.0s,MS4.6
BOSA Boshof 114.29 204 PKP PKiKP 08 27 47.2 -0.7
comp=Z,4.1nm,0.9s,baz=114,slow=2.7,SNR=4.0
MK31 Makanchi Array 118.71 309 *e*PKPdf PKPdf 08 27 53.7 -2.0
MK31 Makanchi Array 118.71 309 *i*PKIKP PKPdf 08 27 53.7 -2.0
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 118.71 309 PKP PKPdf 08 27 53.5 -2.2
comp=Z,4.9nm,0.9s,baz=74,slow=1.4,SNR=24
MKAR PKKPbc PKKPbc 08 38 11.6 -0.5
comp=Z,0.5nm,0.7s,baz=276,slow=3.5,SNR=4.3
ZALV Zalesovo Beam 119.37 318 PKP PKPdf 08 27 54.5 -2.2
comp=Z,1.9nm,0.4s,baz=170,slow=2.7,SNR=9.0
KURK Kurchatov 122.17 313 PKP PKPdf 08 28 00.2 -2.0
comp=Z,8.7nm,0.7s,baz=110,slow=1.9,SNR=23
KURK Kurchatov 122.17 313 *e*PKPdf PKPdf 08 28 00.6 -1.6
KURK Kurchatov 122.17 313 ⇓*i*PKIKP PKPdf 08 27 59.8 -2.4
KURK pmax pmax
comp=Z,15nm,1.0s
LSZ Lusaka 125.15 213 *e*PKPdf PKPdf 08 28 09.8 +0.7
VOSK Vostochnaya 127.22 314 PKIKP PKPdf 08 28 10.2 -1.6
VOSK pmax pmax
comp=Z,8.0nm,0.7s
BVA0 Borovoye Array 127.61 314 PKIKP PKPdf 08 28 11.0 -1.6
BVA0 pmax pmax
comp=Z,2.0nm,1.1s
BVAR Borovoye Array 127.61 314 PKP PKPdf 08 28 10.2 -2.4
comp=Z,4.9nm,0.5s,baz=130,slow=2.3,SNR=28
BRVK Borovoye 127.68 314 *e*PKPdf PKPdf 08 28 10.9 -1.7
AB31 Akbulak array 133.85 309 PKIKP PKPdf 08 28 23.8 -0.7
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 134.51 319 *e*PKPdf PKPdf 08 28 25.1 -0.4
ARU Arti 134.51 319 *i*PKIKP PKPdf 08 28 25.0 -0.5
ARU 08 30 57.3
LVZ Lovozero 140.13 341 ⇑*i*PKIKP PKPdf 08 28 34.7 -0.9
ARCES ARCESS Array B 141.05 346 PKhKP 08 28 30.8
comp=Z,4.8nm,0.8s,baz=356,slow=0.9,SNR=5.5
JOF Joensuu 144.56 336 *e*p PKPdf 08 28 42.0 -1.6
comp=Z,6.3nm,0.8s
JOF Joensuu 144.56 336 *e*PKIKP PKPdf 08 28 42.0 -1.6
JOF pmax pmax
comp=Z,6.0nm,0.8s
VRHR Novokhopersk 145.34 313 *e*PKIKP PKPdf 08 28 44.1 -1.2
VRHR pmax pmax
comp=Z,30nm,0.6s
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,40nm,1.2s
KIV Kislovodsk 145.82 301 *i*PKIKP PKPdf 08 28 44.8 -1.5
KIV pmax pmax
comp=Z,9.0nm,0.8s
KIV MLR MLR
comp=Z,119nm,21.0s,MS4.7
MOS Moscow 145.95 323 *e*PKHKP PKPdf 08 28 42.8 -3.4
KAF Kangasniemi 146.76 338 *e*p PKPdf 08 28 45.9 -1.5
comp=Z,11nm,0.7s
KAF Kangasniemi 146.76 338 *e*PKIKP PKPdf 08 28 45.9 -1.5
KAF pmax pmax
comp=Z,11nm,0.7s
OBN Obninsk 146.77 322 ⇓*i*PKP2 PKPdf 08 28 48.7 +1.1
OBN pmax pmax
comp=Z,17nm,0.8s
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.6
VORD Divnogorie 146.79 314 *e*PKP2 PKPdf 08 28 48.3 +0.5
VORD pmax pmax
comp=Z,20nm,1.0s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,1.0s
VSR Storozhevoye 146.79 314 *e*PKP2 PKPdf 08 28 48.4 +0.7
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax

comp=E,8.0nm,0.6s
VSU Vasula 149.27 333 *i* PKIKP PKPdf 08 28 53.7 +2.1
ANN Anapa 149.46 303 *i* PKIKP PKPdf 08 28 46.9 -5.4
ANN pmax pmax
comp=Z,57nm,1.6s
NB2 NORSAR Subarra 151.30 349 PKP PKPbc 08 28 58.1 -2.6
comp=Z,31nm,0.9s,baz=17,slow=2.6
NB2 NORSAR Subarra 151.30 349 PKP PKPbc 08 28 58.1 -2.6
baz=17,slow=2.6
NOA NORSAR Array B 151.30 349 PKP PKPdf 08 28 53.9 -0.8
comp=Z,2.7nm,0.9s,baz=29,slow=1.9,SNR=8.4
NOA PKPbc PKPbc 08 28 58.3 -2.5
comp=Z,16nm,0.8s,baz=13,slow=4.1,SNR=43
NAO01 NORSAR Array S 151.54 350 *e*PKPbc PKPbc 08 28 59.9 -1.3
LIC Lamto 152.65 167 *e*P PKPdf 08 29 00.8 +2.6
comp=Z,60nm,0.9s
LIC Lamto 152.65 167 *e*PKIKP PKPbc 08 29 05.5 +0.2
comp=Z,27nm,0.7s
AKASG Malin Array Be 152.76 319 PKPbc PKPbc 08 29 01.9 -2.5
comp=Z,3.6nm,0.5s,baz=69,slow=2.1,SNR=16
AKBB Malin Array Si 152.76 319 *e*PKPbc PKPbc 08 29 02.7 -1.7
KIEV Kiev 152.77 318 *e*PKPbc PKPbc 08 29 02.6 -1.8
KIC Kosan Boka 152.83 168 *e*P PKPdf 08 28 58.0 -0.5
comp=Z,75nm,0.8s
BRTR Keskin Array B 152.85 293 PKPbc PKPbc 08 29 03.6 -1.4
comp=Z,2.7nm,0.5s,baz=116,slow=2.8,SNR=18
TIC Toumodi 153.06 167 *e*P PKPdf 08 28 58.3 -0.5
comp=Z,68nm,0.9s
DBIC Dimbokro 153.12 168 PKP PKPdf 08 28 59.7 +0.8
comp=Z,5.3nm,1.0s,baz=147,slow=5.6,SNR=4.0
DBIC PKPbc PKPbc 08 29 06.3 0.0
comp=Z,2.6nm,0.3s,baz=120,slow=2.3,SNR=14
CLL Collm 159.79 337 *i* PKP2 PKPab 08 29 43.9 -1.6
CLL pmax pmax
comp=Z,14nm,1.1s
CLL MLR MLR
comp=Z,300nm,20.7s,MS5.1
CLL Collm 159.79 337 *e*PKPab PKPab 08 29 44.1 -1.4
CLL Collm 159.79 337 *e*PKPdf PKPdf 08 29 05.0 -1.3
CLL *i* PKPab PKPab 08 29 43.9 -1.6
comp=Z,14nm,1.1s
CLL *ep*PKPab pPKPab 08 29 57.0 -5.4
CLL *e*PP PP 08 33 36.0 +8.9
CLL LV 08 48 00.0
comp=Z,100nm,21.5s
CLL *ex* x 08 48 36.0
BRG Berggiesshubel 159.84 335 *e*PKPab PKPab 08 29 44.3 -1.5
BRG Berggiesshubel 159.84 335 *e*PKP PKPdf 08 29 04.7 -1.7
comp=Z,6.7nm,1.2s
BRG *e* 08 29 44.0
comp=Z,6.5nm,0.9s
TORD Torodi Ar. Bea 160.04 183 PKP PKPdf 08 29 07.5 -0.3
comp=Z,2.4nm,1.0s,baz=281,slow=0.5,SNR=7.9
TORD PKPab PKPab 08 29 47.8 +0.4
comp=Z,14nm,0.9s,baz=174,slow=3.0,SNR=19
IBBN Ibbenburen 160.22 347 *e*PKPab PKPab 08 29 46.7 -0.6
TANN Tannenbergstha 160.73 337 *e*PKPab PKPab 08 29 48.7 -1.0
ROTZ Rotzenmuhle 161.37 336 *e*PKPab PKPab 08 29 51.6 -0.9
KHC Kasperske Hory 161.41 333 *e*PKPDF PKPdf 08 29 02.5 -5.7
KHC *e*PKPAB PKPab 08 29 51.0 -1.7
GERES GERESS Array B 161.59 332 PKP PKPdf 08 29 07.2 -1.2
comp=Z,0.5nm,0.5s,baz=270,slow=1.3,SNR=7.4
GERES PKPab PKPab 08 29 51.3 -2.2
comp=Z,0.4nm,0.3s,baz=38,slow=2.4,SNR=5.3
GRF Grafenberg Arr 161.76 338 *e*PKPab PKPab 08 29 53.2 -1.0
BAIF Baives 162.94 352 *e*PKP2 PKPab 08 29 56.3 -3.0
CDF Champ du Feu 164.01 344 *e*PKP2 PKPab 08 30 02.3 -1.8
FLN La Foliniere 164.40 3 *e*PKP2 PKPab 08 30 01.6 -4.2
LDF La Druitiere 164.59 2 *e*PKP2 PKPab 08 30 03.0 -3.6
HAU Haudompre 164.60 346 *e*PKP2 PKPab 08 30 02.9 -3.7
SGMF Saint Gilles 164.74 8 *e*PKP2 PKPab 08 30 02.8 -4.4
comp=Z,31nm,1.0s
GRR Gorron 164.76 4 *e*PKP2 PKPab 08 30 04.1 -3.2
SSF Saint Saulge 165.97 352 *e*PKP2 PKPab 08 30 08.1 -4.6
comp=Z,16nm,0.9s
SMF Signal de Mont 166.34 351 *e*PKP2 PKPab 08 30 11.4 -3.0
comp=Z,28nm,1.1s
LPL La Plagne 166.84 341 *e*PKP2 PKPab 08 30 13.8 -2.8
LPG La Plagne 166.85 341 *e*PKP2 PKPab 08 30 14.6 -2.1
TCF Toulx Ste Croi 166.86 356 *e*PKP2 PKPab 08 30 13.9 -2.7
MBDF Montbardon 167.56 340 *e*PKP2 PKPab 08 30 17.2 -2.6
LASF Ste Croix 168.85 348 *e*PKP2 PKPab 08 30 21.5 -4.0
KEST Kesra 172.45 292 PKP PKPdf 08 29 17.2 +0.3
comp=Z,2.2nm,0.9s,baz=359,slow=2.6,SNR=3.8
ESDC Sonseca Array 172.49 29 PKPab PKPab 08 30 39.8 -2.0
comp=Z,0.2nm,0.3s,baz=310,slow=4.6,SNR=4.2

IDC 21 09:16:05.4±58.0, 1914S×17927E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, Error ellipse: s-maj=1039.0km s-min=142.1km az=80.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.11**	**242**	P	P	09 23 09.3	+0.1
	1.5nm,0.9s,baz=90,slow=6.1,SNR=2.7						
WRA	**Warramunga Arr**	**42.26**	**261**	P	P	09 24 00.7	-0.1
	0.3nm,0.3s,baz=97,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**42.35**	**256**	P	P	09 24 01.4	-0.1
	0.8nm,0.8s,baz=87,slow=8.0,SNR=13						

*ISCJB **21** 09:24:18.6±3.4, 1433S×1006×767W±0.1, h6km±22km, mb4.0/13, MS3.5/2, Error ellipse: s-maj=18.5km s-min=8.3km az=156.2*
*IDC **21** 09:24:20.2±0.9, 1423S×7649W, h0km, mb3.9/9, mb1 4.1/13, mb1mx4.0/21, mbtmp4.0/13, ML3.8/3, MS3.4/6, Ms1 3.4/6, ms1mx3.1/30, Error ellipse: s-maj=29.3km s-min=14.4km az=62.0*
*NEIC **21** 09:24:25.5±1.5, 1427S×7659W, h41km±13km, mb4.3/4, Error ellipse: s-maj=22.0km s-min=9.3km az=59.0*
NEIC Felt [III] at Pisco.

ISC 21 09:24:22.3±3.8, 1426S±006×766W±01, h15km±24km, n32, σ1§04/35, mb4.0/13, MS3.5/2, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.27**	**354**	Pn	Pn	**09 24 58.2**	**-1.1**
	43nm,0.3s,baz=175,slow=14,SNR=30						
NNA				Sn	Sn	**09 25 29.2**	**+2.1**
	377nm,0.3s,baz=207,slow=12,SNR=18						
NNA	**Nana**	**2.27**	**354**	*e*Pn	Pn	**09 24 57.9**	**-1.4**
NNA				*e*Sn	Sn	**09 25 28.2**	**+1.1**
ARE	**Arequipa**	**5.39**	**115**	P	Pn	**09 25 47.0**	**+4.8**
ARE				*e*S	Sn	**09 27 02.0**	**+18**
ATAH	**Atahualpa**	**7.43**	**346**	Pn	Pn	**09 26 09.5**	**-0.7**
	0.6nm,0.3s,baz=135,slow=2.9,SNR=4.6						
ATAH				Sn	Sn	**09 27 33.2**	**-1.1**
	baz=13,slow=19,SNR=1.9						
ATAH				LR	LR	09 29 22.8	
	comp=Z,137nm,18.8s,baz=289,slow=42						
LPAZ	**La Paz**	**8.42**	**105**	Pn	Pn	**09 26 26.2**	**+2.4**
	0.8nm,0.3s,baz=275,slow=9.5,SNR=14						
LPAZ				Sn	Sn	**09 28 13.3**	**+15**
	0.1nm,0.3s,baz=290,slow=18,SNR=2.4						
LPAZ				LR	LR	09 30 04.3	
	comp=Z,220nm,20.5s,baz=294,slow=41						
LPAZ	**La Paz**	**8.42**	**105**	*e*Pn	Pn	**09 26 26.2**	**+2.4**
LVC	**Limon Verde**	**11.05**	**140**	Pn	Pn	**09 26 59.5**	**-0.3**
	0.8nm,0.3s,baz=294,slow=14,SNR=7.5						
LVC				Sn	Sn	**09 28 57.0**	**-6.2**
	0.3nm,0.3s,baz=73,slow=20,SNR=3.9						
LVC				LR	LR	09 30 24.8	
	comp=Z,142nm,18.5s,baz=310,slow=33						
LVC	**Limon Verde**	**11.05**	**140**	*e*Pn	Pn	**09 26 59.6**	**-0.2**
LVC				Sn	Sn	**09 28 57.0**	**-6.2**
OTAV	**Otavalo**	**14.52**	**353**	*e*Pn	Pn	**09 27 51.0**	**+3.6**
SIV	**San Ignacio**	**15.09**	**99**	Pn	Pn	**09 27 54.7**	**-0.3**
	0.3nm,0.3s,baz=291,slow=16,SNR=6.2						
CFAA	**Coronel Fontan**	**18.89**	**157**	P	Pn	**09 28 42.7**	**-0.1**
	0.0nm,0.3s,baz=316,slow=8.2,SNR=3.9						
CFAA	**Coronel Fontan**	**18.89**	**157**	P	Pn	**09 28 42.7**	**-0.1**
ROSC	**El Rosal**	**19.13**	**7**	LR	LR	09 36 57.1	
	comp=Z,123nm,20.6s,baz=195,slow=40						
SDV	**Santo Domingo**	**23.75**	**15**	P	P	**09 29 34.1**	**-0.1**
	2.7nm,0.4s,mb4.0,baz=202,slow=10,SNR=9.1						
PLCA	**Paso Flores**	**26.89**	**170**	P	P	**09 30 03.1**	**+0.5**
	1.0nm,0.6s,mb3.5,baz=339,slow=6.0,SNR=3.9						
PCRV	**Puerto La Cruz**	**27.03**	**27**	LR	LR	09 41 58.5	
	comp=Z,107nm,18.5s,MS3.4,baz=52,slow=39						
BDFB	**Brasilia**	**27.64**	**97**	P	P	**09 30 09.9**	**+0.3**
	0.7nm,0.4s,mb3.6,baz=142,slow=26,SNR=3.5						
BDFB				LR	LR	09 41 57.9	
	comp=Z,113nm,19.3s,MS3.5,baz=112,slow=38						
SWET	**Sewanee**	**50.00**	**350**	*e*P	P	**09 33 14.7**	**-1.3**
TXAR	**Lajitas Array**	**50.61**	**329**	P	P	**09 33 21.9**	**+1.1**
	0.5nm,0.7s,mb3.5,baz=150,slow=9.0,SNR=8.2						
MIAR	**Mount Ida**	**51.15**	**342**	*e*P	P	**09 33 24.4**	**-0.3**
	3.4nm,0.6s,mb4.5						
MIAR				*ep*P	pP	09 33 31.3	+1.8
ANMO	**Albuquerque**	**56.56**	**331**	*e*P	P	**09 34 04.8**	**+0.5**
	1.2nm,1.0s,mb3.9						
PDAR	**Pinedale Array**	**64.31**	**334**	P	P	**09 34 57.2**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=149,slow=9.0,SNR=2.2						
NVAR	**Mina Array Bea**	**65.36**	**325**	P	P	**09 35 05.4**	**+1.4**
	0.5nm,0.7s,mb3.6,baz=133,slow=6.9,SNR=4.6						
HLID	**Hailey**	**67.13**	**331**	*e*P	P	**09 35 16.4**	**+1.1**
	1.0nm,0.6s,mb4.0						
SNAA	**Sanae**	**71.46**	**161**	*e*P	P	**09 35 38.6**	**-3.1**
	6.5nm,1.1s,mb4.5						
DBIC	**Dimbokro**	**74.13**	**79**	P	P	**09 35 57.9**	**-0.8**
	4.1nm,0.9s,mb4.3,baz=131,slow=7.9,SNR=4.5						
TOA0	**Tordoi Ar. Sit**	**82.17**	**74**	*e*P	P	**09 36 42.4**	**-0.8**
TORD	**Tordoi Ar. Bea**	**82.17**	**74**	P	P	**09 36 42.7**	**-0.5**
	4.5nm,0.7s,mb4.5,baz=260,slow=5.0,SNR=25						
TORD	**Tordoi Ar. Bea**	**82.17**	**74**	P	P	**09 36 42.7**	**-0.5**
ESDC	**Sonseca Array**	**86.12**	**48**	P	P	**09 37 02.7**	**-0.1**
	0.2nm,0.3s,mb3.9,baz=268,slow=4.9,SNR=3.0						
WRA	**Warramunga Arr**	**134.37**	**223**	PKP	PKPdf	09 43 40.4	-0.2
	0.5nm,0.7s,baz=145,slow=1.8,SNR=5.7						
SONM	**Songino Array**	**146.44**	**356**	PKPbc	PKPbc	09 44 03.0	+0.2
	0.9nm,0.6s,baz=330,slow=3.1,SNR=7.4						

*ISCJB **21** 09:46:16.4±0.3, 4963S±005×1260E±0.1, h10km, mb5.1/40, MS4.5/15, Error ellipse: s-maj=9.5km s-min=6.5km az=9.0*
*IDC **21** 09:46:17.0±0.5, 4960S×12595E, h0km, mb4.8/12, mb1 5.0/13, mb1mx5.0/15, mbtmp4.9/13, ML4.0/1, MS4.5/15, Ms1 4.5/15, ms1mx4.4/20, Error ellipse: s-maj=19.1km s-min=13.9km az=105.0*
*MOS **21** 09:46:16.9±1.9, 4951S×12595E, h10km, mb5.3/5, Error ellipse: s-maj=25.2km s-min=11.4km az=85.8*
*NEIC **21** 09:46:18.2±0.3, 4954S×12596E, h10km, mb5.0/12, Error ellipse: s-maj=11.8km s-min=8.4km az=103.0*
*GCMT **21** 09:46:18.2±0.1, 4961S×12599E, h16km, MW5.3/85, Moment Tensor Solution. s65,c101; s85,c151; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr=0.17±.02; Mθθ=0.54±.02; Mϕϕ=-0.37±.02; Mrθ=-0.03±.05; Mθϕ=0.96±.02; Mϕr=-0.22±.06; Best double couple: M=1.09100×10^17 NP1:ϕ=282.00000°, δ=77.00000°, λ=-4.00000°. NP2:ϕ=13.00000°, δ=86.00000°, λ=-167.00000°. Principal axes: T 1.1640, Plg=6.0000°, Azm=147.0000°; N -0.1470, Plg=77.0000°, Azm=30.0000°; P -1.0180, Plg=12.0000°, Azm=239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **21** 09:46:18.2, 4950S×12600E, h10km, mB5.5, mb5.1, Ms4.8, Msz4.7*
*DJA **21** 09:46:28, 4890S×126.17E, h28km, mb5.4/10*

ISC 21 09:46:18.1±0.3, 4961S±005×1260E±01, h10km, (h15km±2.3km: pP-P), n112, σ1§18/73, mb5.1/40, MS4.5/15, 1C-1D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**16.16**	**74**	*e*P	Pn	**09 50 04.5**	**-0.7**
	252nm,1.4s						
TAU	**Tasmania Unive**	**16.16**	**74**	*e*P	Pn	**09 50 04.5**	**-0.6**
TAU				pmax	pmax		
	comp=Z,252nm,1.4s						
NWAO	**Narrogin (SRO)**	**17.90**	**335**	P	Pn	**09 50 25.2**	**-1.9**
	comp=Z,22nm,0.3s,baz=155,slow=11,SNR=94						
NWAO				LR	LR	09 55 42.6	
	comp=Z,4μm,19.3s,baz=155,slow=32						
NWAO	**Narrogin (SRO)**	**17.90**	**335**	*e*P	Pn	**09 50 24.5**	**-2.6**
	comp=Z,116nm,0.6s						
NWAO				LR	LR	09 55 42.6	
NWAO	**Narrogin (SRO)**	**17.90**	**335**	*e*P	Pn	**09 50 24.5**	**-2.6**
NWAO				pmax	pmax		
	comp=Z,116nm,0.6s						
CASY	**Casey**	**18.52**	**200**	*e*P	Pn	**09 50 32.9**	**-1.6**
	comp=Z,48nm,1.1s						
FORT	**Forrest**	**18.87**	**5**	*e*P	Pn	**09 50 37.1**	**-1.9**
	comp=Z,173nm,0.6s						
STKA	**Stephens Creek**	**21.21**	**39**	P	P	**09 51 03.5**	**-0.4**
	comp=Z,66nm,0.9s,mb5.0,baz=198,slow=9.8,SNR=72						
STKA				LR	LR	09 57 49.1	
	comp=Z,1μm,18.4s,MS4.3,baz=206,slow=33						
STKA	**Stephens Creek**	**21.21**	**39**	*e*P	P	**09 51 03.4**	**-0.5**
	comp=Z,18nm,0.8s,mb4.4						
STKA				LR	LR	09 57 49.1	
CAN	**Canberra**	**22.05**	**58**	*e*P	P	**09 51 13.1**	**+0.2**
ASAR	**Alice Springs**	**26.62**	**16**	P	P	**09 51 55.3**	**-1.4**
	comp=Z,84nm,0.8s,mb5.3,baz=193,slow=9.0,SNR=204						
ARMA	**Armidale**	**27.21**	**55**	*e*P	P	**09 52 02.2**	**+0.3**
	comp=Z,1.7nm,0.9s						
MBWA	**Marble Bar**	**28.82**	**348**	*e*P	P	**09 52 14.7**	**-1.7**
	comp=Z,39nm,1.4s,mb4.9						
MBWA	**Marble Bar**	**28.82**	**348**	P	P	**09 52 19.7**	**+3.3**
	comp=Z,34nm,1.5s,mb4.8						
WRA	**Warramunga Arr**	**30.34**	**16**	P	P	**09 52 28.4**	**-1.5**
	comp=Z,12nm,0.5s,mb4.9,baz=194,slow=8.6,SNR=71						
WRA				PcP	PcP	09 55 31.4	+1.5
	comp=Z,1.6nm,0.8s,baz=201,slow=2.5,SNR=4.5						
WRA				LR	LR	10 04 02.0	
	comp=Z,423nm,18.2s,MS4.1,baz=210,slow=35						
WRA	**Warramunga Arr**	**30.34**	**16**	P	P	**09 52 28.4**	**-1.4**
WRA						09 55 31.4	
WRAB	**Tennant Creek**	**30.35**	**16**	P	P	**09 52 28.0**	**-1.9**
	comp=Z,194nm,0.6s,mb6.0,SNR=24						
WRAB	**Tennant Creek**	**30.35**	**16**	*e*P	P	**09 52 28.3**	**-1.6**
	comp=Z,31nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**30.35**	**16**	*e*P	P	**09 52 28.3**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**30.35**	**16**	P	P	**09 52 29.0**	**-0.9**
	comp=Z,46nm,1.1s,mb5.1						
RPZ	**Rata Peaks**	**31.09**	**97**	P	P	**09 52 38.0**	**+1.6**
	comp=Z,6.4nm,0.8s,mb4.5,baz=229,slow=10,SNR=4.7						
RPZ				LR	LR	10 02 30.2	
	comp=Z,1μm,20.1s,MS4.5,baz=75,slow=31						
VNDA	**Vanda**	**31.13**	**166**	P	P	**09 52 35.9**	**-0.4**
	comp=Z,13nm,0.9s,mb4.8,baz=317,slow=9.0,SNR=53						
VNDA				LR	LR	10 04 16.0	
	comp=Z,2μm,18.5s,MS4.8,baz=323,slow=35						
SBA	**Scott Base**	**32.15**	**165**	*e*P	P	**09 52 45.2**	**-0.1**
	comp=Z,15nm,1.0s,mb4.8						
SBA	**Scott Base**	**32.15**	**165**	*e*P	P	**09 52 45.2**	**-0.1**
SBA				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
MAW	**Mawson**	**35.50**	**216**	P	P	**09 53 15.3**	**+0.9**
	comp=Z,1.5nm,0.8s,mb4.0,baz=67,slow=14,SNR=3.7						
MAW				LR	LR	10 04 52.9	
	comp=Z,485nm,20.5s,MS4.2,baz=83,slow=32						
URZ	**Urewera**	**37.82**	**92**	P	P	**09 53 35.1**	**+0.6**
	comp=Z,11nm,0.7s,mb4.7,baz=190,slow=3.8,SNR=5.9						
URZ				LR	LR	10 05 31.9	
	comp=Z,753nm,20.0s,MS4.5,baz=232,slow=30						
COEN	**Coen**	**38.23**	**28**	*e*P	P	**09 53 37.0**	**-1.2**
	comp=Z,13nm,0.8s,mb4.7						
QSPA	**South Pole Qui**	**40.51**	**180**	P	P	**09 53 56.0**	**-0.6**
	comp=Z,18nm,1.0s,mb4.7,baz=332,slow=4.5,SNR=17						
QSPA				PcP	PcP	09 55 58.7	-0.1
	comp=Z,2.4nm,0.6s,baz=307,slow=5.3,SNR=3.5						
SJI	**Sawahan**	**43.41**	**339**	P	P	**09 54 21.8**	**+0.8**
SYO	**Syowa Base**	**43.69**	**211**	*ep*P	P	**09 54 20.0**	**-2.6**
SYO	**Syowa Base**	**43.69**	**211**	P	P	**09 54 29.0**	**+6.4**
KAPI	**Kappang**	**44.75**	**351**	LR	LR	10 11 23.8	
	comp=Z,447nm,19.3s,MS4.4,baz=188,slow=34						
KAPI	**Kappang**	**44.75**	**351**	*e*P	P	**09 54 31.2**	**-0.5**
	comp=Z,31nm,1.1s,mb5.0						
KAPI	**Kappang**	**44.75**	**351**	P	P	**09 54 34.2**	**+2.5**
	comp=Z,17nm,1.2s,mb4.8						
LEM	**Lembang**	**45.36**	**334**	P	P	**09 54 39.0**	**+2.5**
	comp=Z,85nm,1.1s,mb5.5						
BBKI	**Banjar Baru**	**46.95**	**345**	P	P	**09 54 53.3**	**+4.2**
	comp=Z,101nm,1.3s,mb5.6						
HNR	**Honiara**	**48.99**	**47**	LR	LR	10 13 53.3	
	comp=Z,684nm,18.6s,MS4.7,baz=214,slow=34						
KSI	**Kapahiang**	**49.92**	**329**	P	P	**09 55 12.9**	**+0.9**
	comp=Z,201nm,1.1s,mb6.1						
NVL	**N'lazarevskaya**	**51.08**	**203**	P	P	**09 55 20.2**	**+0.1**
NVL				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
MAIT	**Maitri**	**51.10**	**203**	*e*P	P	**09 55 17.8**	**-2.4**
SNAA	**Sanae**	**53.75**	**198**	*e*	P	**09 55 36.3**	**-3.6**
SNAA				*e*	pP	09 55 40.6	-2.4
SNAA				*e*		09 55 45.3	
SNAA				*e*		09 55 55.2	
SNAA				*e*		09 55 58.6	
SNAA	**Sanae**	**53.75**	**198**	*e*P	P	**09 55 36.6**	**-3.2**
	comp=Z,44nm,1.0s,mb5.3						
SNAA	**Sanae**	**53.75**	**198**	*e*P	P	**09 55 36.6**	**-3.3**
SNAA				pmax	pmax		
	comp=Z,44nm,1.0s						
VNA2	**Neumayer--Watz**	**55.23**	**197**	*e*	P	**09 55 51.1**	**+0.5**
	baz=146,slow=3.0						
VNA2				*e*	pP	09 55 54.7	+0.9
VNA2				*e*		09 55 59.4	
VNA2				*e*		09 56 09.6	
VNA2				*e*		09 56 12.8	
VNA3	**Neumayer Olymp**	**55.39**	**196**	*e*	P	**09 55 51.8**	**+0.1**
VNA3				*e*	pP	09 55 55.3	+0.4
VNA3				*e*		09 56 00.1	
VNA3				*e*		09 56 13.7	
VNA1	**Neumayer--Stat**	**55.62**	**197**	*e*	P	**09 55 54.9**	**+1.5**
VNA1				*e*	pP	09 55 57.8	+1.2
VNA1				*e*		09 56 02.6	
OPO	**Ambohidratompo**	**68.90**	**266**	P	P	**09 57 24.7**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=15,slow=20,SNR=2.5						
NST	**Nakhon Sawan**	**68.90**	**333**	P	P	**09 57 19.0**	**-4.0**
NANT	**Nan**	**71.71**	**335**	P	P	**09 57 39.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**71.89**	**333**	P	P	**09 57 41.5**	**+0.2**
	comp=Z,5.9nm,0.7s,mb4.6,baz=185,slow=5.4,SNR=21						
CMAR				LR	LR	10 27 44.9	
	comp=Z,367nm,19.8s,MS4.7,baz=161,slow=35						
CHG	**Chiang Mai**	**72.23**	**333**	P	P	**09 57 43.3**	**+0.1**
CHTO	**Chiang Mai**	**72.23**	**333**	*e*P	P	**09 57 43.3**	**+0.1**
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**72.23**	**333**	*e*P	P	**09 57 43.3**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
PPT	**Papeete**	**73.25**	**97**	*e*S	S	10 07 20.1	+2.2
	comp=Z,113nm,26.2s						
PPT	**Papeete**	**73.25**	**97**	LR	LR	10 24 26.9	
	comp=Z,232nm,18.7s,MS4.5,baz=228,slow=31						
BOSA	**Boshof**	**75.22**	**243**	P	P	**09 57 59.6**	**-1.4**
	comp=Z,3.1nm,0.5s,mb4.5,baz=146,slow=5.1,SNR=9.4						
BOSA				LR	LR	10 24 06.3	
	comp=Z,348nm,19.6s,MS4.7,baz=131,slow=30						
WHN	**Wuhan**	**80.47**	**350**	P	P	**09 58 30.6**	**+0.8**
TAPN	**Taplejung**	**83.86**	**326**	*e*P	P	**09 58 47.4**	**-0.2**
	comp=Z,31nm,0.8s,mb5.5						
RAMN	**Ramite**	**83.90**	**325**	*e*P	P	**09 58 46.8**	**-1.1**
	comp=Z,28nm,0.6s,mb5.5						
XAN	**Xi'an**	**84.65**	**346**	P	P	**09 58 51.8**	**+0.3**
XAN				AP	pP	09 59 00.3	+5.5
XAN				PP	PP	10 02 07.6	-0.3
XAN				SKS		10 09 14.0	
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.6						
XAN				AMB	AMB		
	comp=Z,75nm,4.5s						
XAN				LR	LR		
	comp=N,148nm,15.5s,MS4.6						
XAN				LR	LR		
	comp=E,143nm,19.6s,MS4.6						
XAN				LR	LR		
	comp=Z,424nm,27.1s						
JIRN	**Jiri**	**84.69**	**325**	*e*P	P	**09 58 51.8**	**-0.1**
	comp=Z,26nm,0.8s,mb5.4						
PKI	**Pulchoki**	**84.91**	**325**	*e*P	P	**09 58 52.4**	**-0.6**
	comp=Z,23nm,0.7s,mb5.4						
GUN	**Gumba**	**85.04**	**325**	*e*P	P	**09 58 53.4**	**-0.2**
	comp=Z,48nm,0.7s,mb5.7						
DMN	**Daman**	**85.06**	**324**	*e*P	P	**09 58 53.8**	**+0.1**
	comp=Z,29nm,0.9s,mb5.4						
KKN	**Kakani**	**85.15**	**325**	*e*P	P	**09 58 54.8**	**+0.6**
	comp=Z,27nm,0.6s,mb5.6						
GKN	**Gorkha**	**85.59**	**324**	*e*P	P	**09 58 55.8**	**-0.6**
	comp=Z,40nm,0.7s,mb5.8						
KOLN	**Koldanda**	**85.78**	**323**	*e*P	P	**09 58 57.1**	**-0.2**
	comp=Z,26nm,0.7s,mb5.6						
DANN	**Dangsing**	**86.24**	**324**	*e*P	P	**09 59 00.0**	**+0.4**
	comp=Z,51nm,0.6s,mb5.9						
PYUN	**Piuthan**	**86.31**	**323**	*e*P	P	**09 58 59.6**	**-0.3**
	comp=Z,44nm,0.7s,mb5.8						
MJAR	**Matsushiro Arr**	**86.45**	**10**	P	P	**09 59 02.1**	**+1.7**
	comp=Z,5.2nm,0.8s,mb4.8,baz=185,slow=6.5,SNR=11						
KSRS	**Korea Array**	**86.70**	**2**	P	P	**09 59 03.2**	**+1.7**
	comp=Z,4.1nm,0.7s,mb4.7,baz=182,slow=4.9,SNR=14						
KSRS				LR	LR	10 40 05.1	
	comp=Z,80nm,19.3s,MS4.1,baz=190,slow=37						
LZH	**Lanzhou**	**87.56**	**342**	*e*P	P	**09 59 07.8**	**+2.0**
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,90nm,4.1s						
PLCA	**Paso Flores**	**88.86**	**167**	P	P	**09 59 12.5**	**+0.2**
	comp=Z,1.4nm,0.7s,mb4.4,baz=216,slow=2.5,SNR=3.4						
PLCA				LR	LR	10 34 32.5	
	comp=Z,246nm,19.6s,MS4.6,baz=192,slow=33						
PLCA	**Paso Flores**	**88.86**	**167**	P	P	**09 59 12.5**	**+0.2**
PLCA				LR	LR	10 34 32.5	
DDI	**Dehra Dun**	**90.28**	**320**	*ex*	x	09 59 35.0	
HHC	**Hu-ho-hao-te**	**90.97**	**349**	P	P	**09 59 23.5**	**+1.8**
HHC				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.3						
HHC				AMB	AMB		
	comp=Z,439nm,6.1s						
GTA	**Gaotai**	**91.61**	**340**	*e*P	P	**09 59 32.0**	**+7.3**
GTA				AP	pP	09 59 36.9	+8.9

MOS Felt (III) at Ulyunkhan.

BYKL 21 10:08:05.7±0.2, 5474N×11104E, h21km±4km, 4C-5D, FELT I=II MSK at Ulyunkhan., Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.15**	**27**	*e*PG	Pb	10 08 10.3	0.0
YLYR				*i*		10 08 13.4	
YLYR				pmax	pmax		
	comp=Z,1μm,0.1s						
YLYR				smax			
	comp=E,4μm,0.1s						
YLYR	**Ulyunkhan**	**0.15**	**27**	⇓*i*Pg	Pb	10 08 10.3	0.0
YLYR				*e*Sg	Sb	10 08 12.9	-0.6
KMO	**Kumora**	**1.15**	**4**	*e*PG	Pn	10 08 27.0	+0.4
KMO				*e*		10 08 42.7	
KMO				pmax	pmax		
	comp=Z,165nm,0.3s						
KMO				smax			
	comp=E,1μm,0.4s						
KMO	**Kumora**	**1.15**	**4**	⇓*i*Pg	Pn	10 08 27.0	+0.4
KMO				*e*Pb	Pb	10 08 28.5	+1.6
KMO				*e*Sg	Sb	10 08 42.9	+1.5
KMO				*e*Sb	Sb	10 08 45.8	+4.4
KMO				max			
	comp=E,268nm,0.3s						
KMO				max			
	comp=E,2μm,0.5s						
SYVR	**Suvo**	**1.25**	**210**	*e*PG	Pn	10 08 29.0	+1.2
SYVR				*e*		10 08 46.3	
SYVR				pmax	pmax		
	comp=Z,189nm,0.6s						
SYVR				smax			
	comp=E,1μm,0.7s						
SYVR	**Suvo**	**1.25**	**210**	⇓*i*Pg	Pn	10 08 29.0	+1.2
SYVR				*i* Sg	Sn	10 08 46.7	+2.8
SYVR				Pmax			
	comp=E,185nm,0.5s						
SYVR				Smax			
	comp=E,1μm,0.6s						
NIZ	**Nizh Angarsk**	**1.35**	**321**	⇑*i*PG	Pn	10 08 30.8	+1.6
NIZ				*e*		10 08 49.3	
NIZ				pmax	pmax		
	comp=Z,126nm,0.4s						
NIZ				smax			
	comp=E,870nm,0.4s						
NIZ	**Nizh Angarsk**	**1.35**	**321**	⇑*i*Pg	Pn	10 08 30.8	+1.6
NIZ				*e*Sg	Sn	10 08 49.4	+3.0
NIZ				Pmax			
	comp=E,125nm,0.4s						
NIZ				Smax			
	comp=E,807nm,0.2s						
YOA	**Uoyan**	**1.45**	**15**	⇑*i*PG	Pn	10 08 32.4	+1.8
YOA				*i*		10 08 53.2	
YOA				pmax	pmax		
	comp=Z,356nm,0.2s						
YOA				smax			
	comp=E,3μm,0.3s						
YOA	**Uoyan**	**1.45**	**15**	*e*Pg	Pn	10 08 32.3	+1.7
YOA				*e*Sg	Sn	10 08 53.2	+4.2
YOA				Pmax			
	comp=E,350nm,0.2s						
YOA				Smax			
	comp=E,3μm,0.3s						
UKT	**Uakit**	**1.67**	**62**	*e*PN	Pn	10 08 35.0	+1.4
UKT				*e*		10 08 57.2	
UKT				pmax	pmax		
	comp=Z,108nm,0.4s						
UKT				smax			
	comp=N,980nm,0.2s						
UKT	**Uakit**	**1.67**	**62**	*e*Pn	Pn	10 08 34.5	+0.9
UKT				⇓*i*Pg	Pn	10 08 35.1	+1.5
UKT				*i* Sg	Sn	10 08 57.3	+3.0
UKT				Pmax			
	comp=N,148nm,0.4s						
UKT				Smax			
	comp=N,1μm,0.3s						
SVKR	**Severomuysk**	**1.99**	**45**	*e*PN	Pn	10 08 40.3	+2.2
SVKR				*e*		10 08 41.4	
SVKR				*e*		10 09 08.3	
SVKR				pmax	pmax		
	comp=Z,312nm,0.4s						
SVKR				smax			
	comp=N,4μm,1.2s						
SVKR	**Severomuysk**	**1.99**	**45**	*e*Pn	Pn	10 08 39.6	+1.5
SVKR				*e*Pg	Pn	10 08 41.7	+3.6
SVKR				*e*Sg	Sn	10 09 09.1	+6.8
SVKR				Pmax			
	comp=N,319nm,0.3s						
SVKR				Smax			
	comp=N,2μm,0.5s						
MXMB	**Maximikha**	**2.01**	**223**	*e*Pn	Pn	10 08 39.7	+1.4
MXMB				*e*Pg	Pn	10 08 42.1	+3.8
MXMB				*e*		10 09 06.4	
MXMB				*i* Sg	Sn	10 09 10.2	+7.5
MXMB				Pmax			
	comp=N,83nm,0.3s						
MXMB				Smax			
	comp=N,1μm,0.8s						
OGRR	**Ongureny**	**2.30**	**243**	⇑*i*PN	Pn	10 08 44.2	+1.8
OGRR				*e*		10 08 47.2	
OGRR				*e*		10 09 16.7	
OGRR				pmax	pmax		
	comp=Z,94nm,0.5s						
OGRR				smax			
	comp=N,419nm,0.7s						
OGRR	**Ongureny**	**2.30**	**243**	*e*Pn	Pn	10 08 44.1	+1.7
OGRR				*e*Pg	Pn	10 08 46.2	+3.8
OGRR				*e*Sg	Sn	10 09 16.7	+6.7
OGRR				Pmax			
	comp=N,93nm,0.4s						
OGRR				Smax			
	comp=N,419nm,0.6s						
CIT	**Chita**	**3.11**	**150**	*e*Sg	Sn	10 09 43.0	+13
CIT				Smax			
	comp=N,231nm,0.1s						
NLYR	**Nelyaty**	**3.17**	**55**	*e*PN	Pn	10 08 55.2	+0.9
NLYR				*e*		10 09 02.9	
NLYR	**Nelyaty**	**3.17**	**55**	⇓*i*Pn	Pn	10 08 55.5	+1.2
NLYR				*e*Pg	Pn	10 09 01.9	+7.6
NLYR				*e*Sn	Sn	10 09 31.0	-0.5
NLYR				*e*Sg	Sn	10 09 43.5	+12
NLYR				Pmax			
	comp=N,50nm,0.6s						
NLYR				Smax			
	comp=N,370nm,0.8s						
TRTB	**Turuntaevo**	**3.24**	**220**	*e*Pn	Pn	10 08 56.7	+1.5
TRTB				*e*Pg	Pn	10 09 03.6	+8.4
TRTB				*e*Sg	Sn	10 09 47.0	+14
TRTB				Pmax			
	comp=N,28nm,0.6s						
TRTB				Smax			
	comp=N,161nm,0.7s						
TRG	**Tyrgan**	**3.42**	**236**	*e*PN	Pn	10 08 59.6	+1.9
TRG				*e*		10 09 06.8	
TRG				*e*S	Sn	10 09 39.2	+1.7
TRG				*e*		10 09 50.2	
TRG				pmax	pmax		
	comp=Z,11nm,0.2s						
TRG				smax			
	comp=N,182nm,0.3s						
TRG	**Tyrgan**	**3.42**	**236**	*e*Pn	Pn	10 08 59.2	+1.5
TRG				*e*Pg	Pn	10 09 07.0	+9.3
TRG				*e*Sn	Sn	10 09 39.2	+1.7
TRG				*e*Sg	Sn	10 09 52.3	+15
TRG				Pmax			
	comp=N,22nm,0.6s						
TRG				Smax			
	comp=N,193nm,0.5s						
BOD	**Bodaibo**	**3.50**	**27**	*e*PN	Pn	10 08 58.8	0.0
BOD				*e*S	Sn	10 09 53.1	+14
BOD				smax			
	comp=E,152nm,0.3s						
BOD	**Bodaibo**	**3.50**	**27**	*e*Pg	Pn	10 09 07.2	+8.4
BOD				*e*Sn	Sn	10 09 40.4	+0.9
BOD				*e*Sg	Sn	10 09 52.3	+13
BOD				Pmax			
	comp=E,25nm,0.4s						
BOD				Smax			
	comp=E,189nm,0.4s						
FFNB	**Fofonovo**	**3.72**	**225**	*e*Sg	Sn	10 10 01.2	+16
FFNB				Smax			
	comp=E,456nm,0.7s						
KAB	**Kabansk**	**3.76**	**226**	*e*Sg	Sn	10 10 02.7	+17
KAB				Smax			
	comp=E,601nm,0.5s						
HRMR	**Khuramsha**	**3.97**	**220**	*e*Pn	Pn	10 09 07.0	+1.8
HRMR				*e*Pg	Pn	10 09 16.8	+12
HRMR				*e*Sg	Sn	10 10 09.9	+19
HRMR				Pmax			
	comp=E,83nm,0.5s						
HRMR				Smax			
	comp=E,623nm,0.5s						
CRS	**Chara**	**4.62**	**59**	*e*PN	Pn	10 09 15.4	+1.3
CRS				*e*		10 09 29.0	
CRS				*e*		10 10 28.1	
CRS				pmax	pmax		
	comp=Z,89nm,1.1s						
CRS				smax			
	comp=E,295nm,1.4s						
CRS	**Chara**	**4.62**	**59**	*e*Pn	Pn	10 09 14.8	+0.7
CRS				*e*Pg	Pn	10 09 27.1	+13
CRS				*e*Sg	Sn	10 10 27.9	+21
CRS				Pmax			
	comp=E,36nm,1.2s						
CRS				Smax			
	comp=E,297nm,1.4s						
LSTR	**Listvyanka**	**4.71**	**235**	*e*Pn	Pn	10 09 16.5	+1.2
LSTR				*e*Pg	Pn	10 09 28.4	+13
LSTR				*e*Sg	Sn	10 10 30.3	+21
LSTR				Pmax			
	comp=E,37nm,1.4s						
LSTR				Smax			
	comp=E,97nm,1.1s						
IRK	**Irkutsk**	**4.75**	**241**	*e*PN	Pn	10 09 31.7	+16
IRK				*e*		10 10 31.3	
IRK				pmax	pmax		
	comp=Z,179nm,0.2s						
IRK				smax			
	comp=N,414nm,0.4s						
IRK	**Irkutsk**	**4.75**	**241**	*e*Sg	Sn	10 10 33.3	+23
IRK				Smax			
	comp=N,411nm,0.4s						
KPC	**Khapcheranga**	**5.11**	**170**	*e*PN	Pn	10 09 22.1	+1.2
KPC				*e*		10 09 38.7	
KPC				*e*		10 10 44.8	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KPC				smax			
	comp=E,83nm,1.2s						
KPC	**Khapcheranga**	**5.11**	**170**	*e*Pn	Pn	10 09 22.3	+1.4
KPC				*e*Pg	Pn	10 09 36.9	+16
KPC				*e*Sn	Sn	10 10 19.9	+0.7
KPC				*e*Sg	Sn	10 10 43.2	+24
KPC				Pmax			
	comp=E,6.0nm,0.4s						
KPC				Smax			
	comp=E,85nm,1.1s						
TUP	**Tupik**	**5.20**	**90**	*e*PN	Pn	10 09 22.5	+0.4
TUP				*e*		10 09 38.0	
TUP				*e*		10 10 46.4	
TUP				pmax	pmax		
	comp=Z,14nm,0.4s						
TUP				smax			
	comp=N,350nm,0.7s						
TUP	**Tupik**	**5.20**	**90**	*i* Pn	Pn	10 09 22.4	+0.3
TUP				*e*Sn	Sn	10 10 18.9	-2.4
TUP				*e*Sg	Sn	10 10 46.0	+25
TUP				Smax			
	comp=N,350nm,0.7s						
TLY	**Talaya**	**5.40**	**238**	*e*PN	Pn	10 09 26.4	+1.5
TLY				*e*		10 09 41.1	
TLY	**Talaya**	**5.40**	**238**	*e*Pn	Pn	10 09 24.6	-0.3
TLY				*e*Pg	Pn	10 09 41.4	+17
TLY				*e*Sg	Sn	10 10 51.9	+26
TLY				Smax			
	comp=N,70nm,0.8s						
ARS	**Arshan**	**5.88**	**245**	*e*PN	Pn	10 09 34.5	+3.0
ARS				*e*		10 09 52.4	
ARS				*e*		10 11 05.9	
ARS				pmax	pmax		
	comp=Z,21nm,0.5s						
ARS				smax			
	comp=E,247nm,0.6s						
ARS	**Arshan**	**5.88**	**245**	*e*Pn	Pn	10 09 34.2	+2.7
ARS				*e*Pg	Pn	10 09 49.4	+18
ARS				*e*Sn	Sn	10 10 37.4	-0.9
ARS				*e*Sg	Sn	10 11 05.4	+27
ARS				Pmax			
	comp=E,24nm,0.8s						
ARS				Smax			
	comp=E,251nm,0.5s						
ZAK	**Zakamensk**	**6.43**	**230**	*e*PG	Pn	10 10 03.3	+24
ZAK				*e*		10 11 26.1	
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAK				smax			
	comp=E,37nm,1.2s						
ZAK	**Zakamensk**	**6.43**	**230**	*e*Sg	Sn	10 11 25.6	+34
ZAK				Smax			
	comp=E,36nm,1.2s						
MOY	**Mondy**	**6.78**	**247**	*e*Pn	Pn	10 09 43.5	-0.3
MOY				*e*Pg	Pn	10 10 06.0	+22
MOY				*e*Sg	Sn	10 11 33.6	+33
MOY				Pmax			
	comp=E,34nm,1.4s						
MOY				Smax			
	comp=E,100nm,1.3s						
ORL	**Orlik**	**7.03**	**256**	*e*PN	Pn	10 09 49.7	+2.4
ORL				*e*S	Sn	10 11 44.5	+38
ORL				smax			
	comp=N,56nm,0.7s						
ORL	**Orlik**	**7.03**	**256**	*e*Pn	Pn	10 09 49.3	+2.0
ORL				*e*Sn	Sn	10 11 03.8	-2.7
ORL				*e*Sg	Sn	10 11 41.8	+35
ORL				max			
	comp=N,13nm,0.5s						
ORL				Smax			
	comp=N,107nm,1.3s						
IENR	**Iengra**	**8.00**	**74**	*e*Sg	Sn	10 12 13.4	+43
TDJR	**Todzha**	**9.19**	**261**	*e*Sg	Sn	10 12 49.7	+50

ISK 21 10:16:50.1, 3753N×3551E, h20km, ML2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.45**	**233**	*e*PG	Pb	10 16 59.4	0.0
KARA				*e*SG	Sb	10 17 06.8	+1.2
CEYT	**Ceyhan**	**0.56**	**160**	*e*PG	Pb	10 17 01.6	+0.5
CEYT				*e*SG	Sb	10 17 10.3	+1.7
NIG	**Nigde**	**0.92**	**309**	*e*PG	Pb	10 17 08.5	+1.2
NIG				*e*SG	Sb	10 17 21.6	+2.5
MERS	**Mersin**	**1.03**	**230**	*e*PG	Pb	10 17 10.5	+1.3
KMRS	**Kahramanmaras**	**1.11**	**91**	*e*PN	Pn	10 17 10.7	+0.2
HTY	**Hatay**	**1.50**	**160**	*e*PN	Pn	10 17 15.8	0.0

IDC 21 10:18:07.0±2.2, 1145N×9282E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.7/1, MS4.1/7, Ms1 4.1/7, ms1mx3.6/36, Error ellipse: s-maj=69.6km s-min=25.8km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.13**	**40**	Pn	Pn	10 20 21.1	+0.9
	0.2nm,0.3s,baz=229,slow=14,SNR=13						
ZALV	**Zalesovo Beam**	**42.86**	**353**	P	P	10 26 06.3	-0.5
	0.4nm,0.3s,baz=158,slow=8.5,SNR=3.0						
ZALV				LR	LR	10 47 41.1	
	comp=Z,115nm,19.6s,baz=148,slow=41						
WRA	**Warramunga Arr**	**51.41**	**127**	P	P	10 27 14.1	0.0
	0.3nm,0.5s,baz=308,slow=8.3,SNR=12						
ASAR	**Alice Springs**	**53.22**	**131**	P	P	10 27 27.6	+0.1
	0.4nm,0.5s,baz=311,slow=7.1,SNR=11						
AKASG	**Malin Array Be**	**64.57**	**321**	LR	LR	10 58 11.1	
	comp=Z,168nm,21.8s,baz=105,slow=37						
MLR	**Muntele Rosu**	**65.73**	**315**	LR	LR	11 04 15.7	
	comp=Z,123nm,18.1s,baz=87,slow=42						
VRAC	**Vranov**	**72.43**	**318**	LR	LR	11 03 19.7	
	comp=Z,129nm,19.0s,baz=80,slow=38						
HFS	**Hagfors**	**74.73**	**329**	LR	LR	11 04 29.9	
	comp=Z,193nm,19.1s,baz=303,slow=37						
NOA	**NORSAR Array B**	**76.00**	**330**	LR	LR	11 09 23.2	
	comp=Z,118nm,19.4s,baz=105,slow=40						
DAVOX	**Davos/Dischmat**	**76.93**	**316**	LR	LR	11 06 21.6	
	comp=Z,100nm,20.8s,baz=340,slow=38						

*CSEM **21** 10:31:52.7±0.1, 4015N×4205E, h8km, MD3.0, Error ellipse: s-maj=2.0km s-min=1.9km az=50.0*

*ISCJB **21** 10:31:53.9±0.6, 4017N±0.003×4207E±0.004, h3km±8km, Error ellipse: s-maj=5.4km s-min=4.4km az=147.4*

*ISK **21** 10:31:53.4, 4020N×4206E, h9km, MD2.9*

*DDA **21** 10:31:54.0, 4016N×4205E, h7km±5km, Md3.0*

ISC 21 10:31:54.4±0.5, 4015N±0.03×4206E±0.04, h11km±5km, n12, σ1§08/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.16**	**228**	*i* P	**Pg**	**10 31 56.9**	**-1.0**
HOMI				*i* S	**Sg**	**10 32 00.0**	**-0.3**
ERZM	**Erzurum**	**0.59**	**245**	*i* P	**Pg**	**10 32 05.3**	**-0.5**
ERZM				*i* S	**Sg**	**10 32 13.6**	**+0.1**
EZM	**Erzurum**	**0.59**	**246**	PG	**Pg**	**10 32 05.9**	**+0.1**
KARS	**Kars**	**0.91**	**59**	*e*PG	**Pg**	**10 32 11.1**	**-0.9**
KARS				*e*SG	**Sg**	**10 32 23.9**	**0.0**
AGRB	**Hanur-Agry**	**0.92**	**128**	*e*PG	**Pg**	**10 32 11.1**	**-1.0**
AGRB				*e*SG	**Sg**	**10 32 25.9**	**+1.8**
DAGI	**Agillar**	**0.93**	**353**	*i* P	**Pg**	**10 32 11.4**	**-0.9**
DAGI				*i* S	**Sg**	**10 32 26.2**	**+1.8**
TUTA	**Tutak**	**0.95**	**142**	*i* P	**Pg**	**10 32 11.4**	**-1.2**
TUTA				*i* S	**Sg**	**10 32 27.4**	**+2.4**
ARTV	**Artvin**	**1.04**	**355**	*i* P	**Pg**	**10 32 14.0**	**-0.3**
ARTV				*i* S	**Sg**	**10 32 29.0**	**+1.2**
KOPT	**Kop Dagi**	**1.21**	**264**	*i* P	**Pn**	**10 32 17.1**	**-0.1**
KOPT				*i* S	**Sb**	**10 32 35.1**	**+2.3**
DBOC	**Borcka**	**1.23**	**346**	*i* P	**Pn**	**10 32 16.3**	**-1.3**
DBOC				*i* S	**Sb**	**10 32 34.0**	**+0.5**
BCA	**Borcka**	**1.33**	**346**	*e*PN	**Pn**	**10 32 18.3**	**-0.7**
BCA				*e*SN	**Sn**	**10 32 36.2**	**-0.5**
EZC	**Erzincan**	**1.77**	**258**	*e*PN	**Pn**	**10 32 29.3**	**+4.4**

KRSC 21 10:34:57.8±1.0, 5482N×16394E, h43km±42km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.53**	**336**	*e*P	Pn	10 35 22.1	-0.5
KBTR				*e*S	Sn	10 35 39.5	-1.7
ZLN	**Zelenaya**	**2.15**	**305**	*e*P	Pn	10 35 33.9	+2.8
ZLN				*e*S	Sn	10 36 00.5	+3.9
KMNR	**Kamenistaya**	**2.32**	**295**	*e*P	Pn	10 35 36.4	+3.0
KMNR				*e*S	Sn	10 36 04.9	+4.3
KRSR	**Krestovskiy**	**2.38**	**307**	P	Pn	10 35 36.4	+2.2
KRSR				S	Sn	10 36 04.8	+2.8
KLY	**Klyuchi**	**2.39**	**310**	*e*P	Pn	10 35 35.3	+0.9
KLY				*e*S	Sn	10 36 02.8	+0.3
KPT	**Kopyto**	**2.41**	**300**	P	Pn	10 35 38.5	+3.8
SRKR	**Sorokina**	**2.42**	**321**	P	Pn	10 35 36.9	+2.2
SRKR				*e*S	Sn	10 36 05.2	+2.2
KOZ	**Kozyrevsk**	**2.63**	**300**	*e*P	Pn	10 35 40.8	+3.2
KOZ				*e*S	Sn	10 36 12.6	+4.4
SRDR	**Sredinnyy**	**2.83**	**304**	P	Pn	10 35 43.4	+3.0
SRDR				S	Sn	10 36 17.1	+3.9
SPN	**Mys Shipunski**	**2.89**	**235**	*e*P	Pn	10 35 42.7	+1.5
SPN				*e*S	Sn	10 36 14.7	+0.1
NLC	**Nalytchevo**	**3.18**	**241**	*e*P	Pn	10 35 46.9	+1.7
NLC				*e*S	Sn	10 36 23.0	+1.3
AVH	**Avacha**	**3.44**	**245**	*e*P	Pn	10 35 52.3	+3.5
PET	**Petropavlovsk**	**3.61**	**242**	P	Pn	10 35 53.9	+2.8
PET				S	Sn	10 36 34.4	+2.1
GNL	**Ganaly**	**3.69**	**255**	*e*P	Pn	10 35 56.1	+3.8
RUS	**Russkaya**	**4.02**	**236**	S	Sn	10 36 43.9	+1.4

IDC 21 10:37:25.8±9.7, 1599S×16761E, h272km±63km, mb3.8/6, mb1 3.9/7, mb1mx3.4/21, mbtmp3.9/7, Error ellipse: s-maj=108.7km s-min=48.3km az=89.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.91**	**310**	P	Pn	10 39 43.0	-0.1
	11nm,0.3s,baz=207,slow=9.0,SNR=3.9						
CTA	**Charters Tower**	**20.71**	**255**	P	P	10 41 46.4	+0.4
	7.5nm,0.6s,baz=87,slow=12,SNR=12						
STKA	**Stephens Creek**	**28.45**	**232**	P	P	10 42 55.9	0.0
	1.4nm,0.5s,baz=40,slow=7.7,SNR=6.4						
WRA	**Warramunga Arr**	**31.86**	**258**	P	P	10 43 25.4	-0.6
	1.2nm,0.3s,baz=81,slow=6.0,SNR=71						
ASAR	**Alice Springs**	**32.55**	**251**	P	P	10 43 32.0	0.0
	9.6nm,0.4s,baz=78,slow=8.9,SNR=209						
KAPI	**Kappang**	**48.19**	**278**	P	P	10 45 39.8	+0.2
	1.3nm,0.3s,baz=79,slow=16,SNR=3.6						
NWAO	**Narrogin (SRO)**	**48.40**	**240**	P	P	10 45 40.9	0.0
	5.6nm,0.7s,baz=82,slow=11,SNR=4.0						

NEIC 21 10:46:31.4, 3743S×17707E, h29km, ML3.7(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.71**	**245**	P	Pb	10 46 43.9	-1.3
TGRZ				S	Sb	10 46 53.6	-1.1
EDRZ	**Edgecumbe**	**0.73**	**201**	P	Pb	10 46 43.7	-1.8
LIRZ	**Lichensteins R**	**0.79**	**223**	P	Pn	10 46 45.3	-1.3
MKRZ	**Makatiti**	**0.85**	**214**	P	Pn	10 46 46.7	-0.8
KARZ	**Kaharoa**	**0.88**	**228**	P	Pn	10 46 46.7	-1.1
TAZ	**Tarawera**	**0.92**	**209**	P	Pn	10 46 47.7	-0.6
MXZ	**Matakaoa Point**	**0.99**	**98**	P	Pn	10 46 48.4	-0.9
PUZ	**Puketiti**	**1.14**	**125**	P	Pn	10 46 51.6	+0.2
KUZ	**Kuaotunu**	**1.28**	**302**	P	Pn	10 46 52.3	-1.0
TOZ	**Tahuroa Road**	**1.28**	**256**	P	Pn	10 46 52.4	-0.9
MKAZ	**Moumakai**	**1.55**	**281**	P	Pn	10 46 56.6	-0.4
HIZ	**Hauiti**	**2.06**	**238**	P	Pn	10 47 03.8	-0.2
WCZ	**Waipu Caves**	**2.65**	**303**	P	Pn	10 47 11.9	-0.2
OUZ	**Omahuta**	**3.57**	**307**	P	Pn	10 47 25.2	+0.4

*ISCJB **21** 10:53:22.0±1.6, 196S±02×1777W±02, h501km±25km, mb3.9/9, Error ellipse: s-maj=38.0km s-min=18.5km az=155.6*

*NEIC **21** 10:53:24.5±1.1, 1946S×17761W, h524km±13km, mb4.2/1, Error ellipse: s-maj=28.0km s-min=11.8km az=150.0*

*IDC **21** 10:53:25.1±1.7, 1950S×17764W, h527km±19km, mb3.5/8, mb1 3.7/9, mb1mx3.4/20, mbtmp3.5/9, Error ellipse: s-maj=26.3km s-min=13.2km az=152.0*

ISC 21 10:53:23.3±1.5, 195S±02×1777W±02, h502km±24km, n18, σ0§97/14, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.87**	**46**	P	**P**	**10 55 19.9**	**+1.4**
	9.3nm,0.3s,baz=42,slow=5.3,SNR=17						
AFI				S	**S**	**10 56 50.8**	**-2.1**
	2.5nm,0.3s,baz=17,slow=19,SNR=4.9						
CTA	**Charters Tower**	**33.94**	**263**	P	**P**	**10 59 25.3**	**+1.0**
	16nm,0.4s,mb4.8,baz=93,slow=10,SNR=24						
CTA	**Charters Tower**	**33.94**	**263**	P	**P**	**10 59 25.3**	**+1.0**
STKA	**Stephens Creek**	**38.55**	**243**	P	**P**	**11 00 02.8**	**+0.5**
	7.7nm,0.9s,mb4.1,baz=96,slow=9.5,SNR=9.9						
WB2	**Warramunga Arr**	**45.07**	**261**	*e*P	**P**	**11 00 53.9**	**-0.2**
WRAB	**Tennant Creek**	**45.08**	**261**	*e*P	**P**	**11 00 53.9**	**-0.2**
	3.5nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**45.08**	**261**	P	**P**	**11 00 53.7**	**-0.5**
	3.2nm,0.3s,mb4.2,baz=97,slow=7.5,SNR=198						
WRA				PcP	PcP	11 02 23.4	-1.0
	0.1nm,0.5s,baz=94,slow=3.3,SNR=4.5						
ASAR	**Alice Springs**	**45.09**	**256**	P	**P**	**11 00 54.2**	**0.0**
	19nm,0.8s,mb4.6,baz=94,slow=7.8,SNR=197						
ASAR				PcP	PcP	11 02 23.4	-1.0
	1.5nm,0.7s,baz=106,slow=4.4,SNR=4.6						
ASAR				S	**S**	**11 06 54.1**	**-2.2**
	0.5nm,0.6s,baz=94,slow=16,SNR=4.7						
VNDA	**Vanda**	**58.98**	**185**	P	**P**	**11 02 33.0**	**-0.4**
	0.2nm,0.5s,mb2.7,baz=8.8,slow=2.8,SNR=2.8						
NWAO	**Narrogin (SRO)**	**59.14**	**243**	P	**P**	**11 02 34.5**	**-0.8**
	2.9nm,0.6s,mb3.8,baz=83,slow=8.1,SNR=2.9						
TXAR	**Lajitas Array**	**86.21**	**57**	P	**P**	**11 05 11.9**	**+0.6**
	0.1nm,0.5s,mb2.8,baz=212,slow=9.6,SNR=2.3						
CMAR	**Chiang Mai Arr**	**90.08**	**289**	P	**P**	**11 05 30.6**	**+1.0**
	0.9nm,0.7s,mb3.7,baz=110,slow=2.7,SNR=7.3						
MKAR	**Makanchi Array**	**110.72**	**314**	PKiKP	PKiKP	11 10 56.1	-2.4
	0.2nm,0.5s,baz=18,slow=0.7,SNR=3.8				

DAVOX Davos/Dischmat 152.05 349 PKPbc PKPbc 11 12 20.5 -0.7
1.5nm,0.3s,baz=301,slow=5.9,SNR=3.6

NEIC 21 11:17:38.0,3746S×17710E,h3km,ML4.1(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.10**	**134**	P	Pg	11 17 39.8	-0.2
WIZ				S	Sg	11 17 42.0	+0.7
MARZ	**Manawahe**	**0.62**	**213**	P	Pg	11 17 50.0	0.0
MARZ				S	Sg	11 17 59.2	+1.1
EDRZ	**Edgecumbe**	**0.71**	**204**	P	Pg	11 17 51.9	+0.3
EDRZ				S	Sg	11 18 02.0	+1.2
TGRZ	**Tauranga**	**0.72**	**248**	P	Pg	11 17 52.0	+0.2
LIRZ	**Lichensteins R**	**0.79**	**226**	P	Pg	11 17 53.5	+0.4
URZ	**Urewera**	**0.80**	**179**	P	Pg	11 17 52.8	-0.5
MKRZ	**Makatiti**	**0.84**	**216**	P	Pg	11 17 54.8	+0.6
KARZ	**Kaharoa**	**0.88**	**230**	P	Pg	11 17 54.9	0.0
TAZ	**Tarawera**	**0.90**	**211**	P	Pg	11 17 55.8	+0.5
MWZ	**Matawai**	**0.94**	**159**	P	Pg	11 17 55.3	-0.7
MXZ	**Matakaoa Point**	**0.96**	**97**	P	Pg	11 17 55.9	-0.6
UTU	**Utuhina**	**1.01**	**225**	P	Pg	11 17 57.9	+0.4
PUZ	**Puketiti**	**1.10**	**124**	P	Pg	11 17 59.8	+0.7
TOZ	**Tahuroa Road**	**1.30**	**257**	P	Pg	11 18 00.6	-2.3
KUZ	**Kuaotunu**	**1.31**	**302**	*e*P	Pg	11 18 00.0	-3.2
MKAZ	**Moumakai**	**1.58**	**282**	P	Pn	11 18 04.5	-2.4
KNZ	**Kokohu**	**1.62**	**164**	P	Pn	11 18 08.0	+0.5
BKZ	**Black Stump Fm**	**1.77**	**195**	P	Pn	11 18 07.1	-2.4
OTAZ	**Otara**	**1.81**	**286**	P	Pn	11 18 08.5	-1.5
KAAZ	**Kauri Point**	**2.02**	**288**	P	Pn	11 18 11.9	-1.0
WTAZ	**Waiatarua**	**2.08**	**284**	P	Pn	11 18 12.6	-1.2
WCZ	**Waipu Caves**	**2.68**	**304**	P	Pn	11 18 20.1	-2.0
OUZ	**Omahuta**	**3.60**	**307**	P	Pn	11 18 33.4	-1.3

IDC 21 11:42:52.3±2.1,2864S×17777W,h104km±15km,mb3.6/3,mb1 3.8/3,mb1mx3.5/15,mbtmp3.6/3,Error ellipse: s-maj=55.8km s-min=32.6km az=5.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.62**	**192**	P	Pn	11 43 10.9	+1.5
	1µm,0.3s,baz=76,slow=4.0,SNR=80						
RAO				S	Sn	11 43 23.2	+1.0
	377nm,0.3s,baz=80,slow=22,SNR=5.6						
URZ	**Urewera**	**10.50**	**203**	P	Pn	11 45 13.2	-6.5
	3.1nm,0.3s,baz=331,slow=7.2,SNR=9.3						
URZ				S	Sn	11 47 07.5	-7.8
	2.7nm,0.3s,baz=125,slow=22,SNR=8.0						
STKA	**Stephens Creek**	**35.10**	**254**	P	P	11 49 36.0	+0.3
	0.8nm,0.4s,baz=91,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**43.43**	**265**	P	P	11 50 45.4	+0.3
	1.2nm,0.6s,baz=97,slow=7.2,SNR=25						
WRA	**Warramunga Arr**	**44.26**	**270**	P	P	11 50 51.4	-0.3
	1.4nm,0.5s,baz=109,slow=7.8,SNR=23						
AKASG	**Malin Array Be**	**150.01**	**325**	PKPbc	PKPbc	12 02 30.0	-0.3
	1.1nm,0.5s,baz=47,slow=3.5,SNR=5.1						
BRTR	**Keskin Array B**	**151.90**	**301**	PKPbc	PKPbc	12 02 34.1	-1.0
TORD	**Torodi Ar. Bea**	**164.57**	**178**	PKPab	PKPab	12 03 39.8	0.0
	0.6nm,0.8s,baz=186,slow=3.4,SNR=3.5						

IGQ 21 11:45:31.1,101S×8043W,h13km±7km,Mb4.2,Ms4.0,1C,Error ellipse: s-maj=4.6km s-min=2.3km az=1.2,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.30**	**263**	⇑P	Pg	11 45 36.7	-0.6
JAMA	**Jama**	**0.78**	**17**	P	Pg	11 45 46.4	+0.2
JAMA				S	Sg	11 45 57.3	+0.8
QIL2	**Quilotoa**	**1.52**	**85**	P	Pn	11 45 59.4	+1.4
IGUA	**Igualata**	**1.85**	**105**	P	Pn	11 46 06.0	+3.4
CAMI	**Rancho Maria**	**1.96**	**80**	P	Pn	11 46 07.1	+3.1
CAMI	**Rancho Maria**	**1.96**	**80**	S	Sn	11 46 35.5	+7.1
JUA2	**San Juan 2**	**1.99**	**67**	P	Pn	11 46 05.9	+1.5
JUI6	**Juive**	**2.01**	**102**	P	Pn	11 46 07.2	+2.5
TERV	**Terraza Guagua**	**2.01**	**66**	P	Pn	11 46 06.2	+1.4
PINO	**Pino**	**2.01**	**65**	P	Pn	11 46 05.2	+0.5
GGP	**Refugio Guagua**	**2.02**	**66**	P	Pn	11 46 06.2	+1.4
GGP	**Refugio Guagua**	**2.02**	**66**	S	Sn	11 46 33.9	+4.0
ARRY	**Arrayan**	**2.04**	**104**	P	Pn	11 46 07.5	+2.4
PISA	**Pisayambo**	**2.05**	**91**	P	Pn	11 46 09.0	+3.8
RUN5	**Runtun**	**2.05**	**101**	P	Pn	11 46 07.8	+2.5
PATA	**Patacocha**	**2.06**	**104**	P	Pn	11 46 09.1	+3.7
YANA	**Yana**	**2.06**	**65**	P	Pn	11 46 06.5	+1.1
VC1	**Cotopaxi 1**	**2.06**	**80**	P	Pn	11 46 09.0	+3.5
ULBA	**Ulba**	**2.07**	**102**	P	Pn	11 46 08.8	+3.3
ULBA	**Ulba**	**2.07**	**102**	S	Sn	11 46 37.5	+6.3
TAMB	**Tambo**	**2.09**	**81**	P	Pn	11 46 10.1	+4.3
ANTI	**Antisana**	**2.34**	**76**	P	Pn	11 46 12.4	+3.1
COTA	**Cotacachi**	**2.48**	**57**	P	Pn	11 46 14.0	+2.7
CAYA	**Cayambe**	**2.67**	**66**	P	Pn	11 46 17.7	+3.9
CAYA	**Cayambe**	**2.67**	**66**	S	Sn	11 46 53.7	+7.7

*NEIC **21** 11:49:47.0, 1659N×9408W, h122km, MD4.2(MEX), After MEX.*

MEX 21 11:49:46.8±0.5,1660N×9408W,h124km±5km,MD4.2,Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.92**	**303**	*i*P	Pn	11 50 07.2	-1.3
CMIG				*i*S	Sn	11 50 22.9	-1.8
TGIG		**0.93**	**79**	*i*P	Pn	11 50 07.4	-1.1
TGIG				*i*S	Sn	11 50 23.2	-1.8
PCIG		**1.21**	**137**	*e*P	Pn	11 50 09.7	-1.6
PCIG				*i*S	Sn	11 50 28.4	-1.6
SCX	**San Cristobal**	**1.39**	**84**	*i*P	Pn	11 50 12.7	-0.6
SCX				*i*S	Sn	11 50 31.6	-1.8
SCX	**San Cristobal**	**1.39**	**84**	*i*P	Pn	11 50 12.7	-0.6
SCX				*i*P		11 50 12.8	
SCX				*i*S	Sn	11 50 31.6	-1.8
SCX				*i*S	Sn	11 50 32.0	-1.4
THIG		**2.42**	**134**	*i*P	Pn	11 50 24.5	-1.3
THIG				*i*S	Sn	11 50 54.0	-1.7
VHO	**Vista Hermosa**	**2.59**	**281**	*i*P	Pn	11 50 27.5	-0.4
VHO				*i*S	Sn	11 50 58.0	-1.5
TPIG	**Tehuac#an**	**3.62**	**301**	*i*P	Pn	11 50 41.4	0.0
TPIG				*i*S	Sn	11 51 21.7	-2.0
SCIG	**Sabancuy**	**3.63**	**49**	*i*P	Pn	11 50 39.3	-2.1
SCIG				*i*S	Sn	11 51 23.0	-0.8
UTMO	**Huajuapan**	**3.77**	**290**	*i*P	Pn	11 50 43.1	-0.3
UTMO				*i*S	Sn	11 51 24.8	-2.3
LVIG	**Laguna Verde**	**3.82**	**325**	*i*P	Pn	11 50 41.7	-2.4
PNIG	**Pinotepa**	**3.89**	**268**	*i*P	Pn	11 50 42.5	-2.5
PPM	**Popocatepetl**	**4.98**	**300**	*i*P	Pn	11 50 59.9	+0.3
PPM				*i*S	Sn	11 51 55.0	-1.2

*THE **21** 11:55:41.6, 3898N×2756E, h8km±1km, ML3.5/3, Error ellipse: s-maj=2.7km s-min=0.9km az=112.0*
*DDA **21** 11:55:44.7, 3887N×2716E, h19km±2km, Md3.2*
*CSEM **21** 11:55:44.8±0.1, 3883N×2718E, h10km, MD3.2, Error ellipse: s-maj=1.4km s-min=1.4km az=102.0*
*ISCJB **21** 11:55:45.6±0.5, 3886N±002×2716E±003, h7km±4km, Error ellipse: s-maj=4.0km s-min=3.4km az=29.5*
*ISK **21** 11:55:45.6, 3886N×2719E, h14km, MD3.1*
ISC 21 11:55:46.2±0.4,3884N±002×2717E±003,h14km±4km,n31,σ0s82/50,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAG	**Bornova**	**0.45**	**170**	*i*P	**Pg**	**11 55 54.5**	**-0.5**
KDAG				*i*S	**Sg**	**11 56 01.7**	**+0.7**
BLCB	**Balcova**	**0.47**	**192**	*e*PG	**Pg**	**11 55 55.5**	**0.0**
BLCB				*e*SG	**Sg**	**11 56 03.0**	**+1.3**
BLCB	**Balcova**	**0.47**	**192**	P	**Pg**	**11 55 55.3**	**-0.1**
BLCB				S	**Sg**	**11 56 06.4**	**+4.7**
BLCB	**Balcova**	**0.47**	**192**	P	**Pg**	**11 55 55.3**	**-0.1**
BLCB	**Balcova**	**0.47**	**192**	*e*Pg	**Pg**	**11 55 55.5**	**+0.1**
BLCB				*e*Sg	**Sg**	**11 56 03.1**	**+1.4**
BLCB				S	**Sg**	**11 56 06.4**	**+4.7**
AKHS	**Akhisar**	**0.51**	**86**	*i*P	**Pg**	**11 55 55.6**	**-0.5**
AKHS				*i*S	**Sg**	**11 56 03.1**	**+0.2**
AKS	**Akhisar**	**0.51**	**86**	*e*PG	**Pg**	**11 55 56.2**	**+0.1**
AKS				*e*SG	**Sg**	**11 56 03.0**	**+0.2**
AYVA	**Ayvalik**	**0.59**	**321**	*i*P	**Pg**	**11 55 57.4**	**-0.4**
AYVA				*i*S	**Sg**	**11 56 05.9**	**+0.2**
PRK	**Paraskevi**	**0.81**	**300**	P	**Pg**	**11 56 01.1**	**-0.7**
PRK				S	**Sg**	**11 56 15.3**	**+2.9**
BALB	**Balikesir**	**0.97**	**35**	*e*PG	**Pg**	**11 56 04.2**	**-0.7**
BALB				*e*SG	**Sg**	**11 56 17.7**	**+0.2**
CHOS	**Chios island**	**0.98**	**243**	P	**Pb**	**11 56 04.7**	**-0.3**
CHOS				S	**Sb**	**11 56 22.7**	**+4.8**
GCAM	**G?zelcaml?**	**1.14**	**177**	*i*P	**Pb**	**11 56 06.5**	**-1.2**
GCAM				*i*S	**Sb**	**11 56 22.7**	**+0.3**
MANT	**Manisa**	**1.14**	**108**	*i*P	**Pb**	**11 56 07.2**	**-0.6**
MANT				*i*S	**Sb**	**11 56 22.8**	**+0.3**
EZN	**Ezine**	**1.18**	**327**	*e*PN	**Pn**	**11 56 08.2**	**0.0**
KULA	**Kula-Manisa**	**1.21**	**105**	*e*PN	**Pn**	**11 56 08.5**	**-0.2**
DEMI	**Demirci**	**1.22**	**80**	*i*P	**Pn**	**11 56 07.7**	**-1.2**
DEMI				*i*S	**Sb**	**11 56 24.8**	**+0.1**
DURS	**Dursunbey**	**1.27**	**53**	*i*P	**Pn**	**11 56 13.8**	**+4.4**
DURS				*i*S	**Sb**	**11 56 25.8**	**-0.1**
BOZC	**Bozcaada**	**1.32**	**319**	*i*P	**Pn**	**11 56 09.2**	**-1.0**
BOZC				*i*S	**Sb**	**11 56 27.6**	**+0.1**
DST	**Dursunbey**	**1.36**	**56**	*e*PN	**Pn**	**11 56 10.1**	**-0.7**
LPK	**Lapseki**	**1.56**	**348**	*e*PN	**Pn**	**11 56 13.3**	**-0.2**
BNT	**Bandirma**	**1.62**	**21**	*e*PN	**Pn**	**11 56 14.2**	**-0.1**
GADA	**Gvkgeada**	**1.67**	**324**	*e*PN	**Pn**	**11 56 15.1**	**+0.2**
KCT	**Karacabey**	**1.69**	**33**	*e*PN	**Pn**	**11 56 15.2**	**-0.1**
GDZ	**Gediz**	**1.82**	**82**	*i*P	**Pn**	**11 56 18.8**	**+1.7**
GDZ				*i*S	**Sn**	**11 56 43.5**	**+3.5**
RKY	**Sarkoy-Tekirda**	**1.84**	**0**	*e*PN	**Pn**	**11 56 17.4**	**+0.1**
LIA	**Limnos Island**	**1.86**	**305**	P	**Pn**	**11 56 14.8**	**-2.9**
LIA				S	**Sn**	**11 56 42.1**	**+1.1**
ENEZ	**Enez**	**2.04**	**338**	*e*PN	**Pn**	**11 56 21.1**	**+1.0**
ALN	**Alexandroupoli**	**2.23**	**338**	P	**Pn**	**11 56 17.5**	**-5.2**
ALN				S	**Sn**	**11 56 46.1**	**-3.8**
ALT	**Altintas**	**2.30**	**84**	*e*PN	**Pn**	**11 56 23.7**	**0.0**
YLV	**Yalova**	**2.42**	**44**	*e*PN	**Pn**	**11 56 26.1**	**+0.8**
ADVT	**Abdulvahap**	**2.54**	**51**	*e*PN	**Pn**	**11 56 27.8**	**+0.8**

*MOS **21** 12:05:46.9±1.7, 5539N×11039E, h9km, mb4.2/1, Error ellipse: s-maj=22.9km s-min=12.6km az=61.9*

BYKL 21 12:05:46.5±0.3,5541N×11039E,h13km±15km,3C-1D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.60**	**308**	*e*PG	Pg	12 05 57.5	-0.8
NIZ				*e*		12 06 07.1	
NIZ				pmax	pmax		
	comp=Z,91nm,0.2s						
NIZ				smax			
	comp=N,353nm,0.4s						
NIZ	**Nizh Angarsk**	**0.60**	**308**	⇑*i*Pg	Pg	12 05 57.6	-0.7
NIZ				*e*Sg	Sg	12 06 07.2	+0.9
NIZ				Pmax			
	comp=N,83nm,0.2s						
NIZ				Smax			
	comp=N,345nm,0.4s						
KMO	**Kumora**	**0.66**	**44**	*e*Pg	Pg	12 05 58.1	-1.3
KMO				*e*Sg	Sg	12 06 06.7	-1.4
KMO				Pmax			
	comp=N,144nm,0.3s						
KMO				Smax			
	comp=N,457nm,0.7s						
YLYR	**Ulyunkhan**	**0.69**	**140**	*e*Pg	Pg	12 05 58.7	-1.3
YLYR				*e*Sg	Sg	12 06 08.1	-1.0
YLYR				Pmax			
	comp=N,59nm,0.2s						
YLYR				Smax			
	comp=N,386nm,0.2s						
YOA	**Uoyan**	**1.05**	**46**	*e*PG	Pg	12 06 07.7	+1.1
YOA				*i*		12 06 20.0	
YOA				pmax	pmax		
	comp=Z,197nm,0.2s						
YOA				smax			
	comp=N,695nm,0.4s						
YOA	**Uoyan**	**1.05**	**46**	*e*Sg	Sg	12 06 20.0	-0.3
YOA				Smax			
	comp=N,683nm,0.5s						
SYVR	**Suvo**	**1.77**	**188**	*e*PN	Pn	12 06 18.4	+1.6
SYVR				*e*		12 06 42.7	
SYVR				pmax	pmax		
	comp=Z,80nm,0.6s						
SYVR				smax			
	comp=E,325nm,1.5s						
SYVR	**Suvo**	**1.77**	**188**	⇓*i*Pg	Pg	12 06 18.5	-1.9
SYVR				*e*Sg	Sg	12 06 42.4	-1.0
SYVR				Pmax			
	comp=E,49nm,0.3s						
SYVR				Smax			
	comp=E,264nm,0.3s						
UKT	**Uakit**	**1.85**	**86**	*e*Pg	Pg	12 06 19.5	-2.4
UKT				*e*Sg	Sg	12 06 44.0	-1.8
UKT				Pmax			
	comp=E,70nm,0.5s						
UKT				Smax			
	comp=E,290nm,0.8s						
SVKR	**Severomuysk**	**1.93**	**67**	*e*Pg	Pg	12 06 21.8	-1.6
SVKR				*e*Sg	Sg	12 06 47.3	-1.1
SVKR				Pmax			
	comp=E,82nm,0.3s						
SVKR				Smax			
	comp=E,476nm,0.4s						
MXMB	**Maximikha**	**2.36**	**205**	*e*Pg	Pg	12 06 28.8	-2.8
MXMB				*e*Sg	Sg	12 07 01.0	-1.2
MXMB				Pmax			
	comp=E,52nm,0.8s						
MXMB				Smax			
	comp=E,383nm,0.7s						
OGRR	**Ongureny**	**2.41**	**224**	*e*PN	Pn	12 06 27.5	+2.0
OGRR				*e*		12 06 30.7	
OGRR				*e*		12 07 01.0	
OGRR				pmax	pmax		
	comp=Z,34nm,0.3s						
OGRR				smax			
	comp=N,204nm,0.7s						
OGRR	**Ongureny**	**2.41**	**224**	*e*PN	Pn	12 06 26.8	+1.3
OGRR				*e*Pg	Pg	12 06 29.4	-3.2
OGRR				*e*Sn	Sn	12 06 57.4	+2.6
OGRR				*e*Sg	Sg	12 07 00.9	-2.8
OGRR				Pmax			
	comp=N,27nm,0.4s						
OGRR				Smax			
	comp=N,203nm,0.4s						
BOD	**Bodaibo**	**3.13**	**38**	*e*Pn	Pn	12 06 36.4	+0.9
BOD				*e*Pg	Pg	12 06 41.9	-4.6
BOD				*e*Sn	Sn	12 07 14.3	+1.6
BOD				*e*Sg	Sg	12 07 22.1	-4.9
BOD				Pmax			
	comp=N,8.0nm,0.5s						
BOD				Smax			
	comp=N,71nm,1.0s						
NLYR	**Nelyaty**	**3.18**	**68**	*e*PN	Pn	12 06 37.1	+1.0
NLYR				*e*		12 06 42.8	
NLYR				*e*S	Sn	12 07 13.0	-0.8
NLYR				*e*		12 07 23.2	
NLYR				pmax	pmax		
	comp=Z,62nm,1.6s						
NLYR				smax			
	comp=N,134nm,0.9s						
NLYR	**Nelyaty**	**3.18**	**68**	*e*Pn	Pn	12 06 37.1	+1.0
NLYR				*e*Pg	Pg	12 06 43.4	-3.9
NLYR				*e*Sn	Sn	12 07 13.6	-0.2
NLYR				*e*Sg	Sg	12 07 25.7	-2.8
NLYR				Pmax			
	comp=N,15nm,0.5s						
NLYR				Smax			
	comp=N,97nm,0.7s						
ZRHB	**Zarechye**	**3.44**	**215**	*e*Sg	Sg	12 07 34.6	-2.3
ZRHB				Smax			
	comp=N,169nm,1.0s						
TRG	**Tyrgan**	**3.57**	**224**	*e*Pn	Pn	12 06 40.8	-0.6
TRG				*e*Pg	Pg	12 06 49.9	-4.9
TRG				*e*Sn	Sn	12 07 23.6	+0.2
TRG				*e*Sg	Sg	12 07 36.4	-4.5
TRG				Pmax			
	comp=N,9.0nm,0.6s						
TRG				Smax			
	comp=N,63nm,0.3s						
TRTB	**Turuntaevo**	**3.58**	**208**	*e*Pn	Pn	12 06 43.5	+1.9
TRTB				*e*Pg	Pg	12 06 51.1	-4.0
TRTB				*e*Sn	Sn	12 07 25.0	+1.2
TRTB				*e*Sg	Sg	12 07 37.6	-3.8
TRTB				Pmax			
	comp=N,9.0nm,0.4s						
TRTB				Smax			
	comp=N,45nm,0.6s						
FFNB	**Fofonovo**	**4.00**	**214**	*e*Pn	Pn	12 06 48.6	+1.2
FFNB				*e*Sg	Sg	12 07 50.5	-4.3
FFNB				max			
	comp=N,18nm,0.2s						
FFNB				Smax			
	comp=N,193nm,0.7s						
KAB	**Kabansk**	**4.03**	**215**	*e*Sg	Sg	12 07 53.7	-2.1
KAB				Smax			
	comp=N,245nm,1.3s						
HRMR	**Khuramsha**	**4.31**	**210**	*e*Pn	Pn	12 06 51.5	-0.1
HRMR				*e*Pg	Pg	12 07 03.0	-5.9
HRMR				*e*Sg	Sg	12 07 59.9	-4.8
HRMR				Pmax			
	comp=N,20nm,0.5s						
HRMR				Smax			
	comp=N,168nm,0.6s						
CRS	**Chara**	**4.65**	**68**	*e*PN	Pg	12 07 11.5	-4.0
CRS				*e*		12 08 10.2	
CRS				pmax	pmax		
	comp=Z,43nm,1.4s						
CRS				smax			
	comp=E,73nm,1.4s						
CRS	**Chara**	**4.65**	**68**	*e*Pg	Pg	12 07 09.8	-5.7
CRS				*e*Sg	Sg	12 08 10.0	-5.7
CRS				Smax			
	comp=E,23nm,0.8s						
LSTR	**Listvyanka**	**4.85**	**225**	*e*Pn	Pn	12 06 59.9	+0.8
LSTR				*e*Sn	Sn	12 07 55.4	+0.4
LSTR				*e*Sg	Sg	12 08 15.5	-6.6
LSTR				Smax			
	comp=E,28nm,0.8s						
TLY	**Talaya**	**5.49**	**230**	*e*PN	Pn	12 07 07.0	-0.8
TLY				*e*		12 07 23.2	
TLY				*e*S	Sn	12 08 09.3	-1.4
TLY				*e*		12 08 35.0	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TLY				smax			
	comp=E,58nm,1.1s						
TLY	**Talaya**	**5.49**	**230**	*e*Sn	Sn	12 08 09.7	-1.0
TLY				*e*Sg	Sg	12 08 34.9	-7.6
TLY				Smax			
	comp=E,57nm,1.0s						
TUP	**Tupik**	**5.61**	**96**	⇑*i*PN	Pn	12 07 10.5	+1.1
TUP				*e*S	Sn	12 08 12.3	-1.3
TUP				*e*S	Sn	12 08 41.0	+27
TUP				smax			
	comp=N,70nm,0.8s						
TUP	**Tupik**	**5.61**	**96**	⇑*i*Pn	Pn	12 07 10.3	+0.9
TUP				*e*Sn	Sn	12 08 12.3	-1.3
TUP				*e*Sg	Sg	12 08 39.9	-6.3
TUP				Smax			
	comp=N,56nm,0.7s						
KPC	**Khapcheranga**	**5.84**	**167**	*e*Pn	Pn	12 07 13.0	+0.3
KPC				*e*Pg	Pg	12 07 31.2	-7.1
KPC				*e*Sn	Sn	12 08 20.0	+0.5
KPC				*e*Sg	Sg	12 08 46.8	-7.1
KPC				Pmax			
	comp=N,3.0nm,0.5s						
KPC				Smax			
	comp=N,25nm,1.0s						
ARS	**Arshan**	**5.88**	**237**	*e*PN	Pn	12 07 16.2	+2.9
ARS				*e*S	Sn	12 08 20.1	-0.4
ARS				*e*S	Sn	12 08 48.7	+28
ARS				smax			
	comp=N,163nm,0.7s						
ARS	**Arshan**	**5.88**	**237**	*e*Sn	Sn	12 08 20.1	-0.4
ARS				*e*Sg	Sg	12 08 48.0	-7.2
ARS				Smax			
	comp=N,162nm,0.7s						
ZAK	**Zakamensk**	**6.62**	**223**	*e*Sg	Sg	12 09 12.8	-6.0
ZAK				Smax			
	comp=N,13nm,0.5s						
MOY	**Mondy**	**6.74**	**240**	*e*Sn	Sn	12 08 42.1	+0.6
MOY				*e*Sg	Sg	12 09 13.6	-9.0
MOY				Smax			
	comp=N,20nm,0.8s						
ORL	**Orlik**	**6.87**	**250**	*e*PN	Pn	12 07 29.4	+2.6
ORL				*e*S	Sn	12 08 44.6	-0.2
ORL				*e*S	Sn	12 09 19.4	+35
ORL				smax			
	comp=N,35nm,1.0s						
ORL	**Orlik**	**6.87**	**250**	*e*Sn	Sn	12 08 44.8	0.0
ORL				*e*Sg	Sg	12 09 20.6	-6.2
ORL				Smax			
	comp=N,32nm,0.9s						

*JMA **21** 12:33:40.4±0.5, 3391N×13694E, h380km±4km, M3.1*
*ISCJB **21** 12:33:41.2±0.7, 34.1N±0.1×137.06E±0.10, h385km±9km, mb2.8/4, Error ellipse: s-maj=18.2km s-min=12.3km az=15.6*
*IDC **21** 12:33:42.0±1.6, 3390N×13680E, h363km±29km, mb2.6/4, mb1 2.7/6, mb1mx2.6/24, mbtmp2.5/6, Error ellipse: s-maj=61.8km s-min=18.3km az=57.0*
ISC 21 12:33:42.4±0.6,342N±01×13710E±010,h379km±9km,n18,σ1s09/25,mb2.7/4,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGM	**Miyama**	**1.57**	**349**	P	**Pn**	**12 34 33.7**	**0.0**
JWT	**Wachi**	**1.79**	**309**	P	**Pn**	**12 34 33.7**	**-1.3**
JKG	**Kaga**	**2.20**	**344**	P	**Pn**	**12 34 37.4**	**-0.3**
JRY	**Ryogami san**	**2.37**	**38**	P	**Pn**	**12 34 40.8**	**+2.0**
JRY				*e*S	**S**	**12 35 26.9**	**+2.4**
JHU	**Hanno**	**2.46**	**46**	*e*S	**S**	**12 35 25.9**	**+0.2**
MJAR	**Matsushiro Arr**	**2.54**	**21**	P	**Pn**	**12 34 41.3**	**+1.2**
	0.5nm,0.3s,baz=197,slow=14,SNR=6.5						
BSO4	**Boso 4**	**2.80**	**72**	*e*S	**S**	**12 35 31.0**	**+0.5**
BSO3	**Boso 3**	**2.89**	**76**	P	**Pn**	**12 34 42.7**	**-0.3**
BSO3				*e*S	**S**	**12 35 31.7**	**-0.2**
JAG	**Ashikaga**	**2.97**	**40**	P	**Pn**	**12 34 44.2**	**+0.6**
JAG				*e*S	**S**	**12 35 32.9**	**-0.2**
BSO1	**Boso 1**	**3.24**	**80**	P	**Pn**	**12 34 45.6**	**-0.4**
BSO1				*e*S	**S**	**12 35 37.8**	**+0.4**
JYT	**Yasato**	**3.27**	**50**	P	**Pn**	**12 34 46.6**	**+0.4**
JYT				*e*S	**S**	**12 35 35.7**	**-2.1**
JHO	**Hitachi**	**3.74**	**48**	P	**Pn**	**12 34 51.1**	**+0.5**
JHO				*e*S	**S**	**12 35 44.1**	**-1.6**
JFK	**Kawauchi**	**4.43**	**43**	P	**Pn**	**12 34 58.3**	**+1.0**
JFK				*e*S	**S**	**12 35 56.4**	**-1.7**
KSRS	**Korea Array**	**8.15**	**296**	P	**Pn**	**12 35 37.2**	**-1.3**
	0.2nm,0.3s,baz=128,slow=14,SNR=5.0						
SONM	**Songino Array**	**26.70**	**310**	P	**P**	**12 38 49.2**	**+0.8**
	0.7nm,0.9s,mb2.9,baz=117,slow=8.4,SNR=2.9						
MKAR	**Makanchi Array**	**42.74**	**304**	P	**P**	**12 41 04.2**	**+0.4**
	0.3nm,0.7s,mb2.5,baz=88,slow=10.0,SNR=3.4						
WRA	**Warramunga Arr**	**53.86**	**183**	P	**P**	**12 42 26.0**	**-1.9**
	0.2nm,0.3s,

ISCJB ***21*** *12:45:54.8±1.8, 66S×01×1274E±02, h384km±25km, mb3.6/7, Error ellipse: s-maj=39.0km s-min=10.0km az=159.3*

IDC ***21*** *12:45:57.5±1.8, 6.78S×127.16E, h405km±24km, mb3.4/7, mb1 3.4/11, mb1mx3.4/17, mbtmp3.4/11, Error ellipse: s-maj=32.3km s-min=10.1km az=69.0*

ISC 21 12:45:57.9±1.6, 68S±01×1271E±02, h409km±21km, n11, σ0s72/14, mb3.6/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.81**	**225**	P		**Pn**	**12 47 19.1**	**+0.6**
	22nm,0.3s,baz=71,slow=0.8,SNR=29							
BATI				S		**S**	**12 48 23.4**	**-0.5**
	18nm,0.3s,baz=158,slow=1.5,SNR=12							
KAPI	**Kappang**	**7.51**	**283**	P		**P**	**12 47 47.2**	**-0.4**
	2.2nm,0.3s,baz=159,slow=6.2,SNR=5.6							
WRA	**Warramunga Arr**	**14.86**	**152**	P		**P**	**12 49 08.8**	**+0.3**
	1.2nm,0.3s,baz=339,slow=11,SNR=124							
WRA				S		**S**	**12 51 42.3**	**-4.0**
	0.3nm,0.3s,baz=325,slow=20,SNR=11							
ASAR	**Alice Springs**	**18.03**	**159**	P		**P**	**12 49 43.0**	**+0.7**
	0.9nm,0.3s,baz=350,slow=13,SNR=48							
ASAR				S		**S**	**12 52 47.3**	**-0.5**
	0.2nm,0.3s,baz=343,slow=22,SNR=10							
STKA	**Stephens Creek**	**28.41**	**153**	P		**P**	**12 51 17.2**	**+0.2**
	1.6nm,0.3s,mb3.8,baz=337,slow=12,SNR=3.0							
KSRS	**Korea Array**	**44.00**	**1**	P		**P**	**12 53 27.0**	**0.0**
	1.7nm,0.8s,mb3.5,baz=184,slow=9.8,SNR=4.6							
MJAR	**Matsushiro Arr**	**44.33**	**13**	P		**P**	**12 53 27.6**	**-1.9**
	0.6nm,0.5s,mb3.2,baz=196,slow=8.8,SNR=5.2							
SONM	**Songino Array**	**57.36**	**344**	P		**P**	**12 55 05.9**	**+0.8**
	0.7nm,0.6s,mb3.2,baz=164,slow=7.8,SNR=6.2							
PETK	**Petropavlovsk-**	**65.05**	**20**	P		**P**	**12 55 56.1**	**+0.2**
	7.6nm,0.9s,mb4.3,baz=219,slow=6.7,SNR=3.1							
MKAR	**Makanchi Array**	**66.48**	**328**	P		**P**	**12 56 05.8**	**+0.6**
	0.8nm,0.5s,mb3.6,baz=119,slow=8.0,SNR=12							
ZALV	**Zalesovo Beam**	**70.13**	**335**	P		**P**	**12 56 27.2**	**-0.1**
	1.3nm,0.4s,mb3.9,baz=141,slow=5.7,SNR=8.6							

NIED ***21*** *12:52:00, 2580N×12560E, h8km, Mw3.8 Best double couple: M0 6.51000×10^14 NP1:φs57.00000°, δ73.00000°, λ-100.00000°. NP2:φs269.00000°, δ20.00000°, λ-60.00000°.*

ISCJB ***21*** *12:52:42.5±2.5, 258N±02×1256E±02, h21km±22km, Error ellipse: s-maj=39.7km s-min=6.6km az=40.8*

JMA ***21*** *12:52:42.4±0.2, 2581N×12557E, h17km±4km, M3.8*

ISC 21 12:52:42.7±2.9, 2577N±009×1256E±01, h18km±19km, n6, σ0s31/12, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JMJ	**Miyako jima 2**	**1.00**	**197**	P		**Pb**	**12 53 01.2**	**-0.3**
JMJ				S		**Sb**	**12 53 14.4**	**+0.1**
JOGS	**Gusukube**	**1.03**	**190**	P		**Pb**	**12 53 01.6**	**-0.4**
JOGS				S		**Sb**	**12 53 15.4**	**+0.3**
JKE	**Kume jima 2**	**1.19**	**62**	P		**Pn**	**12 53 04.4**	**-0.1**
JKE				S		**Sb**	**12 53 19.9**	**0.0**
JTJ	**Tarama**	**1.40**	**216**	P		**Pn**	**12 53 07.5**	**+0.2**
JTJ				S		**Sn**	**12 53 25.4**	**0.0**
JIJ	**Ishigaki jima**	**1.94**	**224**	P		**Pn**	**12 53 14.8**	**0.0**
JIJ				S		**Sn**	**12 53 38.0**	**-0.7**
JKRS	**Kuro-shima**	**2.11**	**224**	P		**Pn**	**12 53 17.8**	**+0.6**
JKRS				S		**Sn**	**12 53 43.1**	**+0.1**

IDC 21 12:53:12.5±1.9, 644S×14907E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/15, mbtmp4.0/4, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=80.3km s-min=25.6km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.61**	**225**	P		Pn	12 57 42.9	-1.0
	0.9nm,0.3s,baz=52,slow=11,SNR=43							
GUMO	**Guam**	**20.33**	**348**	LR		LR	13 03 45.5	
	comp=Z,43nm,19.5s,baz=113,slow=31							
ASAR	**Alice Springs**	**22.49**	**219**	P		P	12 58 13.4	-0.2
	0.9nm,0.5s,baz=52,slow=9.2,SNR=14							
STKA	**Stephens Creek**	**26.25**	**194**	P		P	12 58 49.8	+0.4
	1.4nm,0.7s,baz=25,slow=13,SNR=3.8							
PETK	**Petropavlovsk-**	**59.77**	**6**	P		P	13 03 18.9	-0.2
	2.3nm,0.8s,baz=159,slow=6.0,SNR=4.6							

DJA ***21*** *12:54:57.3±0.0, 2545S×6825W, h10km, mB6.5/7, Mw(mB)6.3/7, Mwp5.4/4*

GUC ***21*** *12:55:02.2±0.6, 2504S×6871W, h115km±10km, ML5.7, mb5.6(NEIC)*

IDC ***21*** *12:55:03.3±0.9, 2490S×6847W, h96km±6km, mb5.1/23, mb1 5.2/29, mb1mx5.2/29, mbtmp5.1/29, MS4.7/18, Ms1 4.7/18, ms1mx4.5/31, Error ellipse: s-maj=11.4km s-min=7.5km az=80.0*

ISCJB ***21*** *12:55:04.7±0.1, 2477S±003×6842W±003, h117km, mb5.5/193, Error ellipse: s-maj=5.0km s-min=3.8km az=135.1*

NEIC ***21*** *12:55:05.6±0.1, 2481S×6847W, mb5.6/174, MW5.8, Error ellipse: s-maj=5.2km s-min=3.8km az=58.0, Moment Tensor Solution. s57 Moment tensor: Scale 10^17Nm; Mrr=4.62; Mθθ=2.51; Mrθ=0.85; Mθφ=-1.88; Mφr=4.53; Best double couple: M0 6.40000×10^17 NP1:φs119.00000°, δ31.00000°, λ-133.00000°. NP2:φs346.00000°, δ68.00000°, λ-68.00000°. Principal axes: T 5.1000, Plg19.0000°, Azm59.0000°; N 2.0700, Plg20.0000°, Azm157.0000°; P -7.1700, Plg60.0000°, Azm289.0000°;*

NEIC Felt [IV] at Copiapo and Tierra Amarilla; [III] at Antofagasta, Diego de Almagro, El Salvador, Taltal and Vallenar; [II] at Chanaral, Freirina, Huasco, Mejillones and Tocopilla, Chile.

GCMT ***21*** *12:55:05.6±0.1, 2502S×6881W, h127km, MW5.8/100, Moment Tensor Solution. s100,c207; s98,c233; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr=4.30±.06; Mθθ 1.04±.07; Mφφ 3.26±.08; Mrθ-0.40±.05; Mθφ-2.26±.06; Mφr-3.57±.06; Best double couple: M0 5.74400×10^17 NP1:φs129.00000°, δ32.00000°, λ-126.00000°. NP2:φs350.00000°, δ65.00000°, λ-70.00000°. Principal axes: T 5.5490, Plg17.0000°, Azm65.0000°; N 0.3910, Plg18.0000°, Azm161.0000°; P -5.9400, Plg64.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***21*** *12:55:05.6, 2480S×6850W, h115km, mB5.7*

MOS ***21*** *12:55:07.5±1.2, 2441S×6849W, h131km, mb5.4/53, MS4.7/5, Error ellipse: s-maj=9.4km s-min=5.7km az=101.8*

IGIL ***21*** *12:55:07.2, 2464S×6837W, h120km, MS5.0*

LDG ***21*** *12:55:12.2±0.4, 2355S×6821W, h150km, Mb5.2/16, Ms4.7/10, Error ellipse: s-maj=28.4km s-min=17.1km az=16.0*

ISC 21 12:55:06.3±0.1, 2482S±003×6838W±004, h119km, h119km±1.3km; pP-P, n1076, σ0s80/816, mb5.5/193, 225C-220D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.85**	**275**	*eP*		**Pn**	**12 55 31.3**	**-6.6**
CPN1				*i* S		**Sn**	**12 55 53.5**	**-8.5**
CPN1					AML	AML	12 56 00.4	
	comp=E,108μm,0.6s							
SPCH	**San Pedro de A**	**1.91**	**5**	*eP*		**Pn**	**12 55 39.0**	**+0.4**
SPCH				*i* S		**Sn**	**12 56 06.3**	**+3.1**
ANCH	**Antofagasta**	**2.17**	**301**	*eP*		**Pn**	**12 55 36.7**	**-5.2**
ANCH				*i* S		**Sn**	**12 56 02.5**	**-6.6**
ANCH	**Antofagasta**	**2.17**	**301**	*eP*		**Pn**	**12 55 36.7**	**-5.2**
ANCH				*i* S		**Sn**	**12 56 02.5**	**-6.6**
ANCH					AML	AML	12 56 05.7	
	comp=N,67μm,0.5s							
CEN1	**Los Morros**	**2.19**	**310**	↓*eP*		**Pn**	**12 55 30.3**	**-12**
CEN1				*i* S		**Sn**	**12 55 56.8**	**-13**
CEN1					AML	AML	12 56 02.6	
	comp=E,44μm,0.8s							
LVC	**Limon Verde**	**2.25**	**347**	P		**Pn**	**12 55 40.9**	**-1.9**
	comp=E,2μm,0.3s,baz=186,slow=8.7,SNR=1034							
LVC				S		**Sn**	**12 56 09.7**	**-1.1**
	comp=E,1μm,0.3s,baz=199,slow=5.7,SNR=6.6							
LVC					LR	LR	12 56 42.9	
	comp=E,5μm,21.1s,baz=190,slow=43							
LVC	**Limon Verde**	**2.25**	**347**	*eP*		**Pn**	**12 55 41.8**	**-1.0**
LVC				*eSn*		**Sn**	**12 56 10.2**	**-0.7**
LVC	**Limon Verde**	**2.25**	**347**	↑*eP*		**Pn**	**12 55 41.5**	**-1.3**
LVC				*i* S		**Sn**	**12 56 11.6**	**+0.8**
LVC					AML	AML	12 56 18.5	
	comp=N,29μm,0.4s							
MECH	**Mejillones**	**2.55**	**312**	*eP*		**Pn**	**12 55 42.2**	**-4.5**
MECH				*i* S		**Sn**	**12 56 12.2**	**-5.5**
MECH					AML	AML	12 56 21.6	
	comp=N,69μm,0.8s							
CPCH	**Copiapo**	**3.09**	**215**	*eP*		**Pn**	**12 55 45.6**	**-8.1**
CPCH				*i* S		**Sn**	**12 56 18.6**	**-12**
PB01	**Plate Boundary**	**3.89**	**345**	↑*eP*		**Pn**	**12 56 01.5**	**-2.9**
PB01				*i* S		**Sn**	**12 56 44.6**	**-4.8**
LCO	**Las Campanas**	**4.67**	**206**	*ePn*		**Pn**	**12 56 07.2**	**-7.5**
LCO	**Las Campanas**	**4.67**	**206**	↑*iP*		**Pn**	**12 56 07.3**	**-7.4**
LCO				*i* S		**Sn**	**12 56 57.0**	**-11**
TLL	**Tololo Astrono**	**5.75**	**201**	↑*iP*		**Pn**	**12 56 21.6**	**-7.7**
TLL				*i* S		**Sn**	**12 57 23.4**	**-11**
CFAA	**Coronel Fontan**	**6.76**	**179**	P		**Pn**	**12 56 37.6**	**-5.4**
	comp=N,20nm,0.3s,baz=352,slow=13,SNR=1351							
CFAA				S		**Sn**	**12 57 46.7**	**-12**
	comp=N,23nm,0.3s,baz=305,slow=9.9,SNR=3.1							
CFAA					LR	LR	12 59 29.5	
	comp=N,1μm,18.3s,baz=14,slow=40							
CFAA	**Coronel Fontan**	**6.76**	**179**	P		**Pn**	**12 56 37.6**	**-5.4**
CFAA				S		**Sn**	**12 57 46.7**	**-12**
CFAA					LR	LR	12 59 29.5	
LPAZ	**La Paz**	**8.49**	**2**	P		**Pn**	**12 57 05.0**	**-1.4**
	comp=N,46nm,0.3s,baz=182,slow=8.5,SNR=605							
LPAZ	**La Paz**	**8.49**	**2**	*ePn*		**Pn**	**12 57 05.3**	**-1.2**
	comp=N,14nm,1.2s							
LPAZ	**La Paz**	**8.49**	**2**	*eP*		**Pn**	**12 57 05.3**	**-1.2**
LPAZ					pmax	pmax		
	comp=Z,14nm,1.2s							
ARE	**Arequipa**	**8.81**	**340**	*eP*		**Pn**	**12 57 05.0**	**-5.8**
ARE				*eS*		**Sn**	**12 58 42.0**	**-6.3**
SIV	**San Ignacio**	**11.13**	**39**	P		**Pn**	**12 57 39.8**	**-2.2**
	comp=Z,318nm,0.3s,baz=248,slow=8.8,SNR=843							
SIV				S		**Sn**	**12 59 41.7**	**-2.9**
	baz=109,slow=23,SNR=3.2							
SIV					LR	LR	13 03 03.3	
	comp=Z,7μm,21.0s,baz=197,slow=43							
LPA	**La Plata**	**13.53**	**140**	*ePn*		**Pn**	**12 58 09.0**	**-4.3**
LPA	**La Plata**	**13.53**	**140**	*eP*		**Pn**	**12 58 16.0**	**+2.7**
LPA				*eSP*			12 58 43.0	
LPA				*eS*		**Sn**	**13 00 57.0**	**+15**
LPA	**La Plata**	**13.53**	**140**	*eP*		**Pn**	**12 58 16.0**	**+2.7**
LPA				*eSP*			12 58 43.0	
LPA				*eS*		**Sn**	**13 00 57.0**	**+15**
NNA	**Nana**	**15.07**	**326**	Pn		**Pn**	**12 58 33.0**	**-0.1**
	comp=Z,995nm,0.8s,SNR=10							
NNA	**Nana**	**15.07**	**326**	P		**Pn**	**12 58 30.4**	**-2.6**
	comp=Z,4.4nm,0.3s,baz=179,slow=13,SNR=25							
NNA				S		**S**	**13 01 13.8**	**-15**
	comp=Z,3.4nm,0.3s,baz=328,slow=14,SNR=3.9							
NNA	**Nana**	**15.07**	**326**	*eP*		**Pn**	**12 58 32.7**	**-0.3**
PLCA	**Paso Flores**	**15.98**	**186**	P		**Pn**	**12 58 39.5**	**-4.7**
	comp=Z,1.0nm,0.3s,baz=1.5,slow=14,SNR=104							
PLCA				S		**S**	**13 01 29.2**	**-18**
	comp=Z,0.4nm,0.3s,baz=31,slow=10,SNR=1.5							
PLCA					PcP	PcP	13 03 34.2	+0.3
	comp=Z,0.9nm,0.3s,baz=271,slow=15,SNR=4.7							
PLCA	**Paso Flores**	**15.98**	**186**	*eP*		**Pn**	**12 58 38.7**	**-5.5**
	comp=Z,111nm,0.9s							
PLCA				*ePcP*		PcP	13 03 34.0	+0.1
ATAH	**Atahualpa**	**20.14**	**330**	P		**P**	**12 59 30.6**	**-0.5**
	comp=Z,47nm,0.9s,baz=157,slow=8.0,SNR=29							
ATAH				S		**S**	**13 03 07.9**	**-3.0**
	comp=Z,6.9nm,0.9s,baz=290,slow=20,SNR=2.2							
ATAH					PcP	PcP	13 03 41.9	+0.5
	comp=Z,17nm,1.0s,baz=159,slow=3.6,SNR=3.7							
BDFB	**Brasilia**	**21.15**	**68**	P		**P**	**12 59 41.5**	**-0.5**
	comp=Z,257nm,0.9s,mb5.6,baz=229,slow=17,SNR=206							
BDFB					LR	LR	13 08 44.2	
	comp=Z,2μm,21.8s,baz=55,slow=39							
BDFB	**Brasilia**	**21.15**	**68**	*eP*		**P**	**12 59 41.5**	**-0.5**
	comp=Z,399nm,0.9s,mb5.8							
BDFB	**Brasilia**	**21.15**	**68**	P		**P**	**12 59 41.5**	**-0.5**
BDFB					pmax	pmax		
	comp=Z,257nm,0.9s							
BDFB					MLR	MLR		
	comp=Z,2μm,21.8s							
OTAV	**Otavalo**	**26.75**	**337**	*eP*		**P**	**13 00 34.9**	**0.0**
	comp=Z,19nm,0.7s,mb4.7							
OTAV				*ePcP*		PcP	13 03 56.3	+1.0
OTAV				*eScP*		ScP	13 07 27.3	+2.8
EFI	**East Falkland**	**27.96**	**166**	P		**P**	**13 00 43.8**	**-1.5**
	comp=Z,638nm,1.0s,mb6.1,SNR=12							
EFI	**East Falkland**	**27.96**	**166**	*eP*		**P**	**13 00 43.2**	**-2.1**
	comp=Z,89nm,0.8s,mb5.3							
EFI				*ePcP*		PcP	13 03 57.7	+0.2
EFI	**East Falkland**	**27.96**	**166**	*eP*		**P**	**13 00 43.2**	**-2.1**
EFI					pmax	pmax		
	comp=Z,89nm,0.9s,mb5.3							
USHA	**Ushuaia**	**29.98**	**180**	P		**P**	**13 01 01.0**	**-2.2**
	comp=Z,15nm,0.5s,mb4.9,baz=344,slow=7.5,SNR=25							
USHA					PcP	PcP	13 04 02.0	-0.6
	comp=Z,16nm,0.8s,baz=59,slow=5.4,SNR=3.3							
ROSC	**El Rosal**	**30.06**	**348**	P		**P**	**13 01 05.6**	**+1.3**
	comp=Z,9.8nm,0.5s,mb4.7,baz=236,slow=8.9,SNR=6.2							
ROSC					LR	LR	13 13 21.6	
	comp=Z,1μm,18.1s,baz=193,slow=36							
ROSC	**El Rosal**	**30.06**	**348**	*eP*		**P**	**13 01 05.0**	**+0.7**
RCBR	**Riachuelo**	**36.41**	**64**	*eP*		**P**	**13 02 00.3**	**+0.8**
	comp=Z,472nm,0.9s,mb6.4							
GRGR	**Grenville**	**37.30**	**11**	*eP*		**P**	**13 02 06.0**	**-0.9**
	comp=Z,154nm,0.4s,mb6.3							
BIM	**Bigot**	**39.74**	**11**	*eP*		**P**	**13 02 25.8**	**-1.6**
FDF	**Fort de France**	**39.94**	**11**	*eP*		**P**	**13 02 27.8**	**-1.2**
FDF	**Fort de France**	**39.94**	**11**	*eP*		**P**	**13 02 27.8**	**-1.2**
PMSA	**Palmer Station**	**40.05**	**177**	P		**P**	**13 02 27.2**	**-2.1**
	comp=Z,31nm,0.9s,mb5.1,baz=35,slow=5.6,SNR=6.9							
PMSA	**Palmer Station**	**40.05**	**177**	*eP*		**P**	**13 02 28.5**	**-0.9**
	comp=Z,43nm,1.0s,mb5.2							
CPD	**Cerro la Pandu**	**42.66**	**3**	*eP*		**P**	**13 02 48.8**	**-2.4**
	comp=Z,62nm,1.1s,mb5.2							
CPD	**Cerro la Pandu**	**42.66**	**3**	*eP*		**P**	**13 02 48.8**	**-2.4**
CPD					pmax	pmax		
	comp=Z,62nm,1.1s,mb5.2							
ANWB	**Willy Bob**	**42.71**	**9**	*eP*		**P**	**13 02 48.9**	**-2.8**
SJG	**San Juan**	**42.72**	**3**	*eP*		**P**	**13 02 49.2**	**-2.5**
	comp=Z,254nm,1.0s,mb5.9							
MTP	**Monte Pirata**	**42.74**	**4**	*eP*		**P**	**13 02 49.4**	**-2.4**
HUMP	**Col San Antoni**	**42.77**	**4**	*eP*		**P**	**13 02 49.5**	**-2.5**
	comp=Z,46nm,0.4s,mb5.6							
MPR	**Mayaguez**	**42.78**	**2**	*eP*		**P**	**13 02 50.5**	**-1.7**
TGUH	**Tegucigalpa,Un**	**42.81**	**332**	*eP*		**P**	**13 02 52.1**	**-0.3**
	comp=Z,157nm,1.2s,mb5.6							
CBYP	**Canovanas**	**42.90**	**4**	*eP*		**P**	**13 02 50.6**	**-2.4**
	comp=Z,146nm,1.0s,mb5.7							
AOPR	**Arecibo Observ**	**42.93**	**2**	*eP*		**P**	**13 02 51.1**	**-2.2**
	comp=Z,43nm,0.7s,mb5.3							
SDDR	**Presa de Saban**	**43.62**	**356**	*eP*		**P**	**13 02 57.6**	**-1.4**
	comp=Z,66nm,1.0s,mb5.3							
SDDR				*e*			13 03 16.9	
TRIS	**Tristan da Cun**	**48.98**	**118**	*eP*		**P**	**13 03 40.8**	**0.0**
	comp=Z,298nm,0.9s,mb6.2							
DWPF	**Disney**	**54.10**	**346**	*eP*		**P**	**13 04 18.1**	**-0.7**
	comp=Z,141nm,1.1s,mb5.9							
VNA3	**Neumayer Olymp**	**56.80**	**161**	*eP*		**P**	**13 04 36.8**	**-0.8**
VNA3				*e*			13 04 37.9	
VNA3				*e*			13 04 50.7	
VNA3				*e*		pP	13 05 08.7	+2.6
VNA3				*e*			13 34 39.4	
VNA1	**Neumayer--Stat**	**57.01**	**160**	*eP*		**P**	**13 04 38.8**	**-0.3**
VNA1				*e*			13 04 39.8	
VNA1				*e*			13 04 51.8	
VNA1				*e*		pP	13 05 10.5	+2.8
VNA1				*e*			13 34 39.4	
VNA2	**Neumayer--Watz**	**57.38**	**160**	*eP*		**P**	**13 04 40.9**	**-0.8**
	baz=289,slow=8.9							
VNA2				*e*			13 04 42.1	
VNA2				*e*			13 04 54.4	
VNA2				*e*		pP	13 05 12.8	+2.5
VNA2				*e*			13 34 38.2	
BRAL	**Brewton**	**58.32**	**341**	*eP*		**P**	**13 04 48.5**	**-0.2**
	comp=Z,304nm,0.9s,mb6.3							
BRAL				*e*			13 05 28.9	
NHSC	**New Hope**	**58.69**	**348**	*eP*		**P**	**13 04 51.7**	**+0.5**
	comp=Z,366nm,1.0s,mb6.4							
NHSC				*e*			13 05 31.3	
SNAA	**Sanae**	**59.00**	**160**	*eP*		**P**	**13 04 48.5**	**-4.5**
SNAA				*e*			13 04 49.7	
SNAA				*e*			13 05 02.2	
SNAA				*e*		pP	13 05 19.9	-1.8
SNAA				*e*			13 34 31.2	
SNAA	**Sanae**	**59.00**	**160**	*eP*		**P**	**13 04 48.4**	**-4.6**
	comp=Z,92nm,0.9s,mb5.8							
SNAA	**Sanae**	**59.00**	**160**	*eP*		**P**	**13 04 48.4**	**-4.6**
SNAA					pmax	pmax		
	comp=Z,91nm,0.9s							
COW	**Cow Castle Cre**	**59.05**	**348**	*eP*		**P**	**13 04 53.5**	**-0.2**
KVTX	**Kingsville**	**59.33**	**329**	*eP*		**P**	**13 04 56.5**	**+0.8**
	comp=Z,214nm,1.0s,mb6.1							
GOGA	**Godfrey**	**59.66**	**345**	*eP*		**P**	**13 04 56.6**	**-1.3**
	comp=Z,56nm,0.9s,mb5.6							
JSC	**Jenkinsville**	**60.03**	**348**	*eP*		**P**	**13 04 59.7**	**-0.8**
LRAL	**Lakeview Retre**	**60.20**	**342**	*eP*		**P**	**13 05 00.0**	**-1.6**
	comp=Z,58nm,0.8s,mb5.7							
RKT	**Rikitea**	**60.31**	**257**	*eP*		**P**	**13 05 02.4**	**-0.4**
	comp=Z,51nm,1.2s,mb5.4							
RKT				*eS*		**S**	**13 13 03.8**	**-4.3**
	comp=Z,1μm,25.5s							
RKT				*eLQ*			13 20 24.8	
	comp=Z,1μm,32.8s							
RKT				*eLR*		LR	13 23 01.0	
	comp=Z,4μm,38.8s,baz=106							
RKT	**Rikitea**	**60.31**	**257**	*eP*		**P**	**13 05 02.4**	**-0.4**
	comp=Z,51nm,1.2s,mb5.4							
RKT				*eS*		**S**	**13 13 03.8**	**-4.3**
RKT				*eLQ*			13 20 24.8	
RKT	**Rikitea**	**60.31**	**257**	*eP*		**P**	**13 05 02.4**	**-0.4**
RKT				*eS*		**S**	**13 13 03.8**	**-4.3**
RKT					pmax	pmax		
	comp=Z,51nm,1.2s,mb5.4							
CNNC	**Cliffs of the**	**60.40**	**351**	*eP*		**P**	**13 05 03.4**	**+0.5**
	comp=Z,179nm,1.1s,mb6.0							
CNNC				*epP*		pP	13 05 32.4	+0.6
HKT	**Hockley**	**60.49**	**333**	*eP*		**P**	**13 05 01.8**	**-1.9**
	comp=Z,74nm,1.3s,mb5.6							
HKT	**Hockley**	**60.49**	**333**	*eP*		**P**	**13 05 01.8**	**-1.9**
HKT					pmax	pmax		
	comp=Z,74nm,1.3s,mb5.6							
VBMS	**Vicksburg**	**60.53**	**338**	*eP*		**P**	**13 05 03.4**	**-0.5**
	comp=Z,81nm,0.9s,mb5.8							
NATX	**Nacogdoches**	**61.61**	**335**	*eP*		**P**	**13 05 11.4**	**+0.2**
	comp=Z,91nm,0.6s,mb6.0							
NATX				*epP*		pP	13 05 40.1	-0.1
NATX				*eSP*		sP	13 05 53.2	0.0
CPCT	**Cooper Cave**	**61.85**	**345**	*eP*		**P**	**13 05 11.3**	**-1.4**
CPCT				*epP*		pP	13 05 38.6	-3.1
CPCT				*eSP*		sP	13 05 53.6	-1.2
TKL	**Tuckaleechee C**	**61.88**	**346**	LR		LR	13 35 28.0	
	comp=Z,798nm,18.9s,baz=153,slow=39							
TKL	**Tuckaleechee C**	**61.88**	**346**	*eP*		**P**	**13 05 11.5**	**-1.4**
TKL				*epP*		pP	13 05 39.7	-2.2
SWET	**Sewanee**	**61.98**	**344**	*eP*		**P**	**13 05 12.3**	**-1.2**
SWET				*epP*		pP	13 05 39.9	-2.6
OXF	**Oxford**	**62.29**	**340**	*eP*		**P**	**13 05 14.0**	**-1.7**
	comp=Z,334nm,1.1s,mb6.3							
OXF	**Oxford**	**62.29**	**340**	*eP*		**P**	**13 05 14.0**	**-1.7**
OXF					pmax	pmax		
	comp=Z,333nm,1.1s,mb6.3							
TZTN	**Tazewell**	**62.69**	**346**	*eP*		**P**	**13 05 17.3**	**-1.0**
	comp=Z,38nm,1.1s,mb5.2							
JCT	**Junction City**	**62.69**	**330**	*eP*		**P**	**13 05 17.5**	**-1.0**
	comp=Z,104nm,0.8s,mb5.8							
JCT				*epP*		pP	13 05 45.1	-2.4
JCT				*eSP*		sP	13 05 59.8	-0.7
BLA	**Blacksburg**	**62.73**	**349**	*eP*		**P**	**13 05 18.5**	**-0.1**
	comp=Z,49nm,0.8s,mb5.5							
BLA				*epP*		pP	13 05 50.2	+2.6
BLA	**Blacksburg**	**62.73**	**349**	*eP*		**P**	**13 05 18.5**	**0.0**
BLA				*e**PP		pP	13 05 50.2	+2.6
BLA					pmax	pmax		
	comp=Z,49nm,0.8s,mb5.5							
ELN	**Prospectdale**	**62.80**	**349**	*eP*		**P**	**13 05 18.8**	**-0.3**
ELN				*epP*		pP	13 05 49.6	+1.5
WVT	**Waverly**	**63.34**	**342**	*eP*		**P**	**13 05 20.6**	**-2.1**
	comp=Z,71nm,0.6s,mb5.8							
WVT				*epP*		pP	13 05 50.7	-1.0
MAIT	**Maitri**	**63.55**	**159**	↑*iP*		**P**	**13 05 20.8**	**-2.8**
NVL	**N'lazarevskaya**	**63.58**	**159**	*iP*		**P**	**13 05 23.2**	**-0.6**
NVL				*e**PP		pP	13 05 51.7	-1.2
NVL				*eS*		**S**	**13 13 49.6**	**+1.9**
NVL					pmax	pmax		
	comp=Z,160nm,1.2s,mb5.7							
TXAR	**Lajitas Array**	**63.62**	**326**	P		**P**	**13 05 23.9**	**-0.7**
	comp=Z,24nm,0.9s,mb5.0,baz=144,slow=7.2,SNR=94							
TXAR					PcP	PcP	13 06 00.9	+0.9
	comp=Z,4.2nm,0.5s,baz=157,slow=8.8,SNR=6.9							
TXAR					PKPPKP		13 34 18.3	
	comp=Z,0.8nm,1.0s,baz=340,slow=1.9,SNR=4.1							
TXAR	**Lajitas Array**	**63.62**	**326**	P		**P**	**13 05 24.0**	**-0.6**
TXAR	

318A **Bisbee** 68.65 322 ⇓P P 13 05 57.0 +0.3
baz=69,SNR=238
318A ⇓S S 13 14 52.9 +2.8
baz=69
NCB **Newcomb** 68.66 355 *e*P P 13 05 56.7 +0.2
comp=Z,63nm,1.1s,mb5.4
219A **White Tail Can** 68.67 323 ⇓P P 13 05 57.0 +0.2
baz=69,SNR=105
LBNH **Lisbon** 68.79 357 *e*P P 13 05 58.5 +1.2
comp=Z,97nm,1.4s,mb5.4
LBNH *e*pP pP 13 06 28.6 +1.8
KSU1 **Kansas State U** 68.85 337 *e*P P 13 05 56.6 -1.2
comp=Z,65nm,0.7s,mb5.6
LIC **Lamto** 68.88 72 *e*P P 13 05 58.9 +0.3
comp=Z,414nm,0.8s,mb6.3
LIC **Lamto** 68.88 72⇑*i*P P 13 05 59.0 +0.4
comp=Z,276nm,0.8s,mb5.8
LIC *e*MLR MLR
comp=Z,2µm,21.8s
LIC **Lamto** 68.88 72⇑*i*P P 13 05 59.0 +0.4
comp=Z,138nm,0.8s,mb5.8
LIC LR LR
comp=Z,1µm,21.8s
BNM **Barren Site** 68.98 327 *e*P P 13 05 59.2 +0.4
BNM *e*PcP PcP 13 06 20.6 -1.6
BNM *e*pP pP 13 06 30.4 +2.1
WVL **Waterville** 69.05 359 *e*P P 13 05 60.0 +1.1
Y22D **IRIS PASSCAL I** 69.07 326 ⇓P P 13 05 59.9 +0.6
baz=69
218A **Dragoon** 69.08 323 ⇓P P 13 05 59.8 +0.4
baz=69,SNR=127
218A ⇑S S 13 14 58.2 +3.0
baz=69
TIC **Toumodi** 69.09 72 *e*P P 13 06 01.0 +1.1
comp=Z,449nm,0.9s,mb6.3
TIC **Toumodi** 69.09 72 *e*P P 13 06 01.0 +1.1
TIC pmax pmax
comp=Z,449nm,0.9s,mb6.3
LPM **Los Pinos Moun** 69.11 327 *e*P P 13 05 59.9 +0.3
LPM *e*PcP PcP 13 06 24.0 +1.3
LPM *e*pP pP 13 06 29.0 -0.1
LENM **Lemitar** 69.17 326 *e*P P 13 06 00.3 +0.4
EMMW **East Machias** 69.19 1 *e*P P 13 06 00.5 +0.7
KIC **Kosan Boka** 69.20 72 *e*P P 13 06 01.2 +0.7
comp=Z,1µm,0.7s,mb6.8
DBIC **Dimbokro** 69.25 72 P P 13 06 01.6 +0.7
comp=Z,247nm,0.8s,mb6.1,baz=209,slow=6.7,SNR=227
DBIC LR LR 13 33 22.4
comp=Z,2µm,22.0s,baz=208,slow=33
DBIC PKP2ab 13 34 14.8
comp=Z,4.4nm,0.9s,baz=73,slow=7.7,SNR=3.4
DBIC **Dimbokro** 69.25 72 *e*P P 13 06 01.4 +0.6
comp=Z,270nm,0.8s,mb6.1
119A **Ashpeak Ranch,** 69.29 324 ⇑P P 13 06 00.9 +0.3
baz=70,SNR=49
119A ⇓S S 13 15 01.5 +4.0
baz=70
LONY **Lake Ozonia** 69.33 355 *e*P P 13 06 00.8 +0.2
comp=Z,51nm,1.1s,mb5.3
LONY *e*pP pP 13 06 31.1 +1.0
217A **Green Valley** 69.36 322 ⇑P P 13 06 01.3 +0.2
baz=70,SNR=115
217A ⇑S S 13 15 01.2 +2.7
baz=70
LAZ **Ladron** 69.44 326 *e*P P 13 06 01.8 +0.3
ANMO **Albuquerque** 69.54 327 *e*P P 13 06 02.4 +0.3
comp=Z,110nm,1.1s,mb5.6
ANMO *e*pP pP 13 06 31.6 -0.1
ANMO *es*P sP 13 06 46.2 +1.6
ANMO **Albuquerque** 69.54 327⇑*e*P P 13 06 00.8 -1.3
ANMO pmax pmax
comp=Z,98nm,1.0s
118A **Homack Ranch,** 69.55 323 ⇓P P 13 06 02.3 +0.1
baz=70,SNR=103
118A ⇓S S 13 15 03.7 +3.0
baz=70
Z19A **T-Link Ranch,** 69.67 324 ⇑P P 13 06 03.6 +0.6
baz=70,SNR=26
Z19A ⇓S S 13 15 06.2 +4.2
baz=70
PKME **Peaks-Kenny Pk** 69.75 359 *e*P P 13 06 03.5 +0.4
comp=Z,47nm,0.7s,mb5.4
TUC **Tucson** 69.75 323 *e*P P 13 06 03.4 0.0
CBKS **Cedar Bluff** 69.78 334 *e*P P 13 06 03.2 -0.3
comp=Z,396nm,1.0s,mb6.2
CBKS *e*pP pP 13 06 34.2 +1.1
CBKS *es*P sP 13 06 45.6 -0.3
CBKS **Cedar Bluff** 69.78 334 *e*P P 13 06 03.2 -0.3
CBKS *e**PP pP 13 06 34.2 +1.1
CBKS *e**SP sP 13 06 45.6 -0.3
CBKS pmax pmax
comp=Z,396nm,1.0s,mb6.2
216A **Three Points,** 69.89 322 ⇑P P 13 06 04.4 0.0
baz=70,SNR=31
216A ⇑S S 13 15 08.3 +3.7
baz=70
117A **Oracle** 69.92 323 ⇑P P 13 06 04.7 +0.2
baz=70,SNR=70
117A ⇑S S 13 15 08.5 +3.5
baz=70
Z18A **Geronimo** 69.93 324 ⇓P P 13 06 04.6 0.0
baz=70,SNR=9.5
Y19A **Nutrioso** 70.18 325 ⇓P P 13 06 06.9 +0.8
baz=70,SNR=197
SCIA **State Center** 70.25 341 *e*P P 13 06 05.4 -1.0
comp=Z,107nm,0.9s,mb5.7
JFWS **Jewell Farm** 70.34 343 *e*P P 13 06 05.8 -1.0
comp=Z,55nm,0.6s,mb5.6
116A **Eloy** 70.45 322 ⇑P P 13 06 07.8 +0.1
baz=71,SNR=26
Y18A **Canyon Day Jun** 70.45 324 ⇓P P 13 06 08.1 +0.3
baz=71,SNR=44
X19A **St. Johns** 70.56 325 ⇓P P 13 06 08.7 +0.3
baz=71,SNR=24
X19A ⇑S S 13 15 16.6 +4.2
baz=71
214A **Organ Pipe Nat** 70.62 321 ⇓P P 13 06 09.2 +0.3
baz=71,SNR=53
214A ⇓S S 13 15 17.2 +4.0
baz=71
Y17A **Roosevelt** 70.83 323 ⇑P P 13 06 10.4 +0.4
baz=71,SNR=146
115A **Sonoran Desert** 70.84 322 ⇓P P 13 06 10.5 +0.3
baz=71,SNR=13
115A ⇑S S 13 15 19.1 +3.3
baz=71
Z16A **Peralta Trail,** 70.88 323 ⇓P P 13 06 10.4 +0.1
baz=71,SNR=13
X18A **Snowflake** 70.99 325 ⇓P P 13 06 11.5 +0.6
baz=71,SNR=37
X18A ⇓S S 13 15 21.5 +4.2
baz=71
W19A **Sanders** 71.14 325 ⇓P P 13 06 12.3 +0.4
baz=71,SNR=66
W19A ⇑S S 13 15 23.3 +4.2
baz=71
Z15A **Gila River Ind** 71.24 322 ⇓P P 13 06 12.2 -0.3
baz=72,SNR=5.6
Y16A **Circle Bar Ran** 71.31 323 ⇑P P 13 06 13.4 +0.5
baz=72,SNR=85
Y16A ⇑S S 13 15 25.6 +4.5
baz=72
W18A **Petrified Fore** 71.33 325 ⇑P P 13 06 13.5 +0.5
baz=72,SNR=41
SDCO **Great Sand Dun** 71.34 330 *e*P P 13 06 13.2 +0.2
comp=Z,38nm,0.7s,mb5.3
V19A **Window Rock** 71.44 326 ⇓P P 13 06 14.3 +0.7
baz=72,SNR=73
X16A **Lo Mia Camp, P** 71.70 324 ⇑P P 13 06 15.9 +0.7
baz=72,SNR=113
Z14A **Wintersburg** 71.74 322 ⇑P P 13 06 15.6 0.0
baz=72,SNR=7.9
113A **Mohawk Valley,** 71.77 321 ⇑P P 13 06 15.8 +0.1
baz=72,SNR=28
W17A **Winslow** 71.81 324 ⇓P P 13 06 16.4 +0.5
baz=72,SNR=20
Y15A **Casa Rosa Ranc** 71.84 323 ⇓P P 13 06 16.4 +0.3
baz=72,SNR=62
V18A **Ganado** 71.89 325 ⇑P P 13 06 16.7 +0.3
baz=72,SNR=22
112A **Yuma** 72.07 320 ⇑P P 13 06 17.3 -0.2
baz=72
EGOM **La Gomera** 72.11 46 P P 13 06 21.3 +3.4
comp=Z,88nm,0.7s,mb5.7
X15A **Humboldt** 72.18 323 ⇓P P 13 06 18.8 +0.7
baz=72,SNR=75
Y14A **Wickenburg** 72.20 322 ⇓P P 13 06 18.5 +0.2
baz=72,SNR=55
W16A **Flagstaff** 72.26 324 ⇓P P 13 06 19.4 +0.8
baz=72,SNR=73
T19A **Beclabito** 72.30 327 ⇑P P 13 06 19.1 +0.3
baz=72,SNR=140
MVCO **Mesa Verde** 72.33 327 *e*P P 13 06 19.3 +0.3
comp=Z,146nm,1.1s,mb5.7
MVCO **Mesa Verde** 72.33 327 ⇓P P 13 06 19.3 +0.4
baz=73,SNR=57
U18A **Rough Rock, Ch** 72.40 326 ⇓P P 13 06 20.1 +0.7
baz=73,SNR=40
WUAZ **Wupatki** 72.49 324 *e*P P 13 06 20.6 +0.6
comp=Z,166nm,1.1s,mb5.8
WUAZ *es*P sP 13 07 02.9 +0.3
WUAZ **Wupatki** 72.49 324 ⇑P P 13 06 20.6 +0.7
baz=73,SNR=107
OGNE **Ogallala** 72.51 334 *e*P P 13 06 19.5 -0.4
comp=Z,150nm,1.0s,mb5.8
X14A **Yava** 72.53 323 ⇓P P 13 06 20.8 +0.6
baz=73,SNR=62
CCAN **Las Canadas** 72.55 47 P P 13 06 23.8 +3.4
comp=Z,16nm,0.7s,mb5.0
Y13A **Salome** 72.57 322 ⇑P P 13 06 20.8 +0.3
baz=73,SNR=34
GLA **Glamis** 72.59 320 *e*P P 13 06 21.2 +0.6
comp=Z,27nm,0.9s,mb5.1
GLA *e*PcP PcP 13 06 36.9 -0.5
GLA **Glamis** 72.59 320 ⇓P P 13 06 20.7 +0.1
baz=73,SNR=8.8
GLA **Glamis** 72.59 320 *e*P P 13 06 21.2 +0.6
GLA *e* 13 06 30.8
SBA **Scott Base** 72.67 190 *e*P P 13 06 20.0 -0.5
comp=Z,123nm,1.4s,mb5.5
SBA **Scott Base** 72.67 190 P P 13 06 20.3 -0.2
SBA pmax pmax
comp=Z,120nm,1.4s,mb5.5
W15A **Williams** 72.72 324 ⇑P P 13 06 22.3 +1.0
baz=73,SNR=33
U16A **Tuba City** 72.84 325 ⇓P P 13 06 22.7 +0.7
baz=73,SNR=57
Y12C **Blythe** 72.92 321 ⇓P P 13 06 22.9 +0.4
baz=73,SNR=57
U17A **Shonto** 72.95 326 ⇑P P 13 06 23.3 +0.7
baz=73,SNR=33
T18A **Mexican Hat** 72.96 326 ⇑P P 13 06 22.8 +0.1
baz=73,SNR=186
ECSD **EROS,Sioux Fal** 72.97 339 *e*P P 13 06 21.6 -0.9
comp=Z,62nm,0.8s,mb5.5
DVTC **Desert V Tower** 73.05 319 ⇓P P 13 06 23.8 +0.4
baz=73,SNR=21
ISCO **Idaho Springs** 73.07 331 *e*P P 13 06 23.5 +0.3
comp=Z,179nm,1.5s,mb5.7
ISCO **Idaho Springs** 73.07 331 *e*P P 13 06 23.5 +0.3
ISCO pmax pmax
comp=Z,179nm,1.5s,mb5.7
S19A **Harvey Farm, M** 73.07 327 ⇓P P 13 06 23.7 +0.4
baz=73,SNR=96
SWSC **Sam W. Stewart** 73.07 320 ⇓P P 13 06 23.6 +0.2
baz=73,SNR=14
PV01 **Paradox Valley** 73.10 328 *e*P P 13 06 24.0 +0.6
PDMCI **Parker Dam,Lak** 73.10 322 ⇓P P 13 06 23.7 +0.1
baz=73,SNR=6.4
X13A **Yucca** 73.14 322 ⇓P P 13 06 24.1 +0.3
baz=73,SNR=87
V15A **Kaibab Nationa** 73.15 324 ⇑P P 13 06 24.7 +0.9
baz=73,SNR=100
SMCO **Snowmass** 73.18 330 *e*P P 13 06 24.8 +0.9
W14A **Seligman** 73.19 323 ⇑P P 13 06 24.9 +0.8
baz=73,SNR=58
SYO **Syowa Base** 73.24 159⇑*i*P P 13 06 21.6 -2.4
SYO **Syowa Base** 73.24 159⇓*i*PcP PcP 13 06 34.9 -4.9
T17A **Navajo Res., N** 73.33 326 ⇓P P 13 06 25.9 +1.1
baz=74,SNR=58
BC3 **Big Chuckw Mtn** 73.38 320 ⇓P P 13 06 25.4 +0.2
baz=74,SNR=31
MONP **Monument Peak** 73.40 319 ⇓P P 13 06 25.9 +0.5
baz=74,SNR=21
S18A **Hurst Farm, Bl** 73.45 327 ⇓P P 13 06 26.4 +0.8
baz=74,SNR=175
V14A **Boquillas Ranc** 73.51 323 ⇓P P 13 06 27.0 +1.0
baz=74,SNR=142
PV10 **Paradox Valley** 73.52 328 *e*P P 13 06 26.0 +0.1
PV10 *e*pP pP 13 06 55.5 -0.3
W13A **Hualapai Mount** 73.54 322 ⇑P P 13 06 27.0 +0.8
baz=74,SNR=55
R19A **Curley Farm, L** 73.56 328 ⇓P P 13 06 26.3 +0.2
baz=74,SNR=66
IRM **Iron Mountain** 73.57 321 ⇓P P 13 06 26.5 +0.2
baz=74,SNR=6.3
MEH **Mehetia** 73.61 258 *e*P P 13 06 26.1 -0.9
comp=Z,3µm,1.0s,mb7.0
U15A **North Rim** 73.67 324 ⇓P P 13 06 27.8 +1.0
baz=74,SNR=98
T16A **Glen Canyon Da** 73.68 325 ⇑P P 13 06 27.5 +0.6
baz=74,SNR=16
VNDA **Vanda** 73.69 190 P P 13 06 26.1 -0.4
comp=Z,24nm,0.9s,mb4.9,baz=139,slow=5.3,SNR=85
VNDA LR LR 13 40 06.5
comp=Z,541nm,19.2s,baz=139,slow=37
VNDA **Vanda** 73.69 190 *e*P P 13 06 26.1 -0.4
comp=Z,116nm,1.8s,mb5.3
VNDA **Vanda** 73.69 190 P P 13 06 26.1 -0.3
VNDA pmax pmax
comp=Z,24nm,0.9s
VNDA MLR MLR
comp=Z,541nm,19.2s
NEE2 **Needles Airpor** 73.71 322 ⇑P P 13 06 27.0 -0.2
baz=74
S17A **Black Ridge (B** 73.81 326 ⇓P P 13 06 28.3 +0.6
baz=74,SNR=14
PFO **Pinyon Flat Ob** 73.93 320 P P 13 06 28.0 -0.5
comp=Z,272nm,0.9s,mb6.0,SNR=15
PFO **Pinyon Flat Ob** 73.93 320 *e*P P 13 06 28.6 +0.2
comp=Z,243nm,1.8s,mb5.6
PFO **Pinyon Flat Ob** 73.93 320 ⇓P P 13 06 28.9 +0.4
baz=74,SNR=21
PFO **Pinyon Flat Ob** 73.93 320 *e*P P 13 06 28.6 +0.1
PFO pmax pmax
comp=Z,243nm,1.8s,mb5.6
R18A **Canyonlands Na** 73.94 327 ⇑P P 13 06 28.4 +0.1
baz=74,SNR=68
BELC **Belle Mtn.** 73.95 320 ⇑P P 13 06 28.9 +0.4
baz=74,SNR=16
Q19A **Hogan Spring (** 74.08 328 ⇑P P 13 06 29.5 +0.3
baz=74,SNR=52
U14A **Mt Trumbull** 74.14 324 ⇓P P 13 06 30.5 +0.9
baz=74,SNR=100
V13A **Grand Canyon W** 74.15 323 ⇑P P 13 06 30.2 +0.5
baz=74,SNR=80
T15A **Red Dirt Ranch** 74.16 325 ⇑P P 13 06 30.6 +0.9
baz=74,SNR=73
VAH **Vaihoa** 74.18 260 *e*P P 13 06 29.7 -0.7
comp=Z,257nm,1.1s,mb5.9
LDFC **Landfair** 74.21 322 *e*P P 13 06 31.6 +1.5
comp=Z,86nm,0.8s,mb5.5
LDFC *e*PcP PcP 13 06 46.5 +2.1
LDFC *e*pP pP 13 06 58.3 -1.7
LDFC *es*P sP 13 07 13.3 +0.6
PHWY **Pilot Hill** 74.23 332 *e*P P 13 06 30.2 +0.3
W12A **Cal Nev Ari** 74.24 322 ⇑P P 13 06 30.3 +0.1
baz=74,SNR=20
S16A **Weppner Ranch,** 74.28 326 ⇑P P 13 06 30.6 +0.2
baz=74,SNR=64
GMRC **Granite Mounta** 74.31 321 ⇑P P 13 06 31.1 +0.5
baz=74,SNR=62
CFTV **Fuerteventura** 74.36 48 P P 13 06 34.0 +2.9
comp=Z,13nm,0.7s,mb4.8
MURC **Murrieta** 74.37 319 ⇑P P 13 06 31.2 +0.2
baz=75,SNR=16
R17A **Hanksville Air** 74.37 327 ⇓P P 13 06 31.1 +0.2
baz=75,SNR=152
P19A **Cripple Cowboy** 74.48 329 ⇑P P 13 06 32.2 +0.8
baz=75,SNR=282
PMOR **Pomariolo Ree** 74.51 260 *e*P P 13 06 31.6 -0.7
comp=Z,251nm,1.1s,mb5.8
V12A **Nelson** 74.54 322 ⇓P P 13 06 32.3 +0.4
baz=75,SNR=64
U13A **Pakoon Wash** 74.56 323 ⇓P P 13 06 32.6 +0.6
baz=75,SNR=32
T14A **Hurricane** 74.56 324 ⇑P P 13 06 33.0 +1.0
baz=75,SNR=41
Q18A **Rafter H Ranch** 74.61 327 ⇑P P 13 06 32.7 +0.4
baz=75,SNR=48
S15A **Panguitch** 74.65 325 ⇓P P 13 06 33.1 +0.6
baz=75,SNR=22
R16A **Teasdale** 74.66 326 ⇑P P 13 06 32.9 +0.4
baz=75,SNR=30
BBRC **Big Bear Sol-O** 74.67 320 ⇓P P 13 06 33.5 +0.8
baz=75,SNR=17
TVO **Taravao** 74.69 257 *e*P P 13 06 32.7 -0.6
comp=Z,1µm,1.3s,mb6.5
TVO **Taravao** 74.69 257 *e*P P 13 06 32.7 -0.6
TVO pmax pmax
comp=Z,1µm,1.3s,mb6.6
HEC **Hector,Ludlow** 74.73 321 ⇓P P 13 06 33.6 +0.5
baz=75,SNR=20
SCI **San Clemente I** 74.75 318 ⇓P P 13 06 32.2 -1.0
baz=75
SRU **San Rafael** 74.81 327 *e*P P 13 06 33.7 +0.2
comp=Z,74nm,0.6s,mb5.6
SRU **San Rafael** 74.81 327 ⇑P P 13 06 33.7 +0.3
baz=75,SNR=108
U12A **Valley of Fire** 74.88 323 ⇓P P 13 06 34.2 +0.3
baz=75,SNR=50
TUQ **Turquoise Moun** 74.93 321 ⇓P P 13 06 34.7 +0.5
baz=75,SNR=5.7
V11A **Goodsprings** 74.94 322 ⇑P P 13 06 34.6 +0.3
baz=75,SNR=37
CIS **Catalina Islan** 74.95 318 ⇑P P 13 06 34.5 +0.1
baz=75,SNR=10
T13A **Saint George** 74.97 324 ⇑P P 13 06 35.2 +0.8
baz=75,SNR=47
Q16A **Castle Valley** 74.98 327 ⇓P P 13 06 35.0 +0.6
baz=75,SNR=37
R15A **Junction** 75.01 326 ⇓P P 13 06 35.1 +0.5
baz=75,SNR=45
PAE **Paea** 75.03 257 *e*P P 13 06 34.6 -0.6
comp=Z,953nm,1.0s,mb6.5
PAE **Paea** 75.03 257 *e*P P 13 06 34.6 -0.6
PAE pmax pmax
comp=Z,953nm,1.0s,mb6.5
PPT **Papeete** 75.06 257 *e*P P 13 06 34.9 -0.5
comp=Z,94nm,1.2s,mb5.4
PPT *e*S S 13 15 59.9 -4.3
comp=Z,2µm,26.0s
PPT **Papeete** 75.06 257 *e*LR LR 13 29 43.6
comp=Z,5µm,36.8s,baz=114
PPT **Papeete** 75.06 257 P P 13 06 35.5 +0.1
comp=Z,53nm,0.8s,mb5.3,baz=114,slow=9.3,SNR=10
PPT **Papeete** 75.06 257 P P 13 06 35.5 +0.1
PPT pmax pmax
comp=Z,53nm,0.8s
CCUT **Cedar City** 75.08 324 *e*P P 13 06 35.9 +0.9
CCUT *e*pP pP 13 07 04.8 -0.1
CCUT *es*P sP 13 07 18.9 +1.2
P18A **Preston Nutter** 75.08 328 ⇓P P 13 06 35.7 +0.8
baz=75,SNR=113
BFSC **Mount Baldy St** 75.09 319 ⇑P P 13 06 35.2 +0.1
baz=75,SNR=38
FMP **Fort Macarthur** 75.10 319 ⇓P P 13 06 35.2 0.0
baz=75
S14A **Cedar City** 75.13 325 ⇑P P 13 06 36.1 +0.8
baz=75,SNR=29
RRX **Edison Barstow** 75.15 320 ⇓P P 13 06 36.0 +0.5
baz=75
MSU **Marysvale** 75.18 326 *e*P P 13 06 36.2 +0.7
T12A **Moapa** 75.19 323 ⇓P P 13 06 35.7 0.0
baz=75
P17A **Butcher Ranch,** 75.20 327 ⇑P P 13 06 35.9 +0.3
baz=76,SNR=61
SHPR **Sheep Range** 75.28 323 *e*P P 13 06 36.7 +0.6
ARUT **Antelope Range** 75.29 325 *e*P P 13 06 36.9 +0.7
RWWY **Rawlins** 75.31 331 *e*P P 13 06 36.6 +0.5
MWC **Mount Wilson** 75.31 319 *e*P P 13 06 36.6 +0.2
GSC **Goldstone** 75.34 321 ⇑P P 13 06 37.0 +0.4
baz=76,SNR=40
GSC **Goldstone** 75.34 321 *e*P P 13 06 37.0 +0.5
U11A **Corn Creek** 75.34 322 ⇑P P 13 06 37.1 +0.6
baz=76,SNR=11
EYMN **Ely** 75.35 344 *e*P P 13 06 34.9 -1.4
comp=Z,125nm,1.3s,mb5.5
S13A **Holt Ranch, En** 75.36 324 ⇑P P 13 06 37.6 +1.0
baz=76,SNR=84
R14A **James Farms, M** 75.46 325 ⇑P P 13 06 37.9 +0.8
baz=76,SNR=26
O18A **Roosevelt** 75.46 328 ⇓P P 13 06 37.7 +0.6
baz=76,SNR=25
SHOC **Shoshone** 75.47 322 ⇓P P 13 06 37.2 0.0
baz=76
DECC **Green Verdugo** 75.49 319 ⇓P P 13 06 37.7 +0.3
baz=76
N19A **John Jarvie Ra** 75.56 329 ⇑P P 13 06 37.7 0.0
baz=76,SNR=107
M20A **Sweetwater, Wa** 75.58 330 ⇓P P 13 06 38.0 +0.3
baz=76,SNR=25
L21A **Rawlins** 75.60 331 ⇓P P 13 06 38.0 +0.1
baz=76,SNR=137
Q15A **Fillmore** 75.66 326 ⇑P P 13 06 38.8 +0.5
baz=76,SNR=50
EDW2 **Edwards Air Fo** 75.73 320 ⇓P P 13 06 38.6 -0.2
baz=76,SNR=41
O17A **Robinson Place** 75.76 328 ⇓P P 13 06 39.7 +0.9
baz=76,SNR=89
P16A **Fountain Green** 75.76 327 ⇓P P 13 06 39.4 +0.6
baz=76,SNR=27
BLG **Laguna Peak** 75.83 319 ⇓P P 13 06 39.3 -0.1
baz=76,SNR=7.7
T11A **Corn Creek, Al** 75.84 323 ⇑P P 13 06 40.2 +0.8
baz=76,SNR=109
N18A **Larsen Ranch,** 75.86 329 ⇑P P 13 06 39.5 +0.2
baz=76,SNR=60
R13A **O'Grain Ranch,** 75.86 325 ⇓P P 13 06 40.4 +1.0
baz=76,SNR=44
U10A **Ash Meadows, A** 75.86 322 ⇑P P 13 06 40.1 +0.6
baz=76,SNR=42
S12A **Delamar Landin** 75.91 324 ⇑P P 13 06 40.6 +0.9
baz=76,SNR=35
LRMC **Laurel Mountai** 75.97 320 ⇓P P 13 06 40.2 0.0
baz=76,SNR=22
OSI **Osito Adit** 75.98 319 ⇑P P 13 06 39.2 -1.0
baz=76
RSSD **Black Hills** 75.98 334 *e*P P 13 06 40.0 0.0
comp=Z,57nm,1.0s,mb5.3
RSSD **Black Hills** 75.98 334 *e*P P 13 06 40.0 0.0
RSSD pmax pmax
comp=Z,57nm,1.0s,mb5.3
M19A **Rock Springs** 76.04 330 ⇓P P 13 06 40.3 -0.1
baz=76,SNR=44
P15A **Leamington** 76.04 326 ⇓P P 13 06 40.9 +0.4
baz=76,SNR=40
MPU **Maple Canyon** 76.06 327 *e*P P 13 06 41.0 +0.5
L20A **Wamsutter** 76.06 330 ⇓P P 13 06 40.8 +0.3
baz=76,SNR=76
BSC **Santa Cruz Isl** 76.10 318 ⇑P P 13 06 41.1 +0.2
baz=76,SNR=10
Q14A **Sevier Lake (B** 76.11 325 ⇑P P 13 06 41.6 +0.8
baz=76,SNR=89
O16A **Springville** 76.14 327 ⇑P P 13 06 41.4 +0.5
baz=76,SNR=57
DAU **Daniels Canyon** 76.18 328 *e*P P 13 06 41.8 +0.6
FURC **Furnace Creek,** 76.20 322 ⇓P P 13 06 41.9 +0.5
baz=76,SNR=62
TPNV **Topopah Spring** 76.20 322 *e*P P 13 06 42.0 +0.6
comp=Z,170nm,1.1s,mb5.7
TPNV **Topopah Spring** 76.20 322 ⇑P P 13 06 42.3 +0.9
baz=76,SNR=97
TPNV **Topopah Spring** 76.20 322 *e*P P 13 06 42.0 +0.6
TPNV pmax pmax
comp=Z,170nm,1.1s,mb5.7
NLU **North Lily Min** 76.23 327 *e*P P 13 06 39.0 -2.5
MPMC **Manual Prospec** 76.27 321 ⇓P P 13 06 41.9 +0.1
baz=76,SNR=44
R12A **Pony Springs,** 76.31 324 ⇓P P 13 06 43.2 +1.2
baz=77,SNR=107
N17A **Moffit Pass** 76.38 328 ⇑P P 13 06 43.0 +0.7
baz=77,SNR=189
ARVC **Arvin** 76.40 319 ⇓P P 13 06 42.6 0.0
baz=77
M18A **Lyman** 76.40 329 ⇑P P 13 06 42.2 -0.2
baz=77,SNR=42
JLU **Jordanelle** 76.42 328 *e*P P 13 06 43.0 +0.4
S11A **Rachel** 76.43 323 ⇑P P 13 06 43.7 +1.0
baz=77,SNR=25
P14A **Drum Mountains** 76.45 326 ⇑P P 13 06 43.6 +0.8
baz=77,SNR=116
Q13A **Wheeler Ranch,** 76.47 325 ⇑P P 13 06 43.4 +0.6
baz=77,SNR=101
SUR **Sutherland** 76.51 120 P P 13 06 45.9 +2.5
comp=Z,860nm,0.7s,mb6.6,SNR=24
SUR **Sutherland** 76.51 120 *e*P P 13 06 44.4 +1.0
comp=Z,96nm,0.7s,mb5.6
ISA **Isabella** 76.56 320 *e*P P 13 06 43.8 +0.3
comp=Z,126nm,1.0s,mb5.6
ISA **Isabella** 76.56 320 ⇓P P 13 06 43.9 +0.5

baz=77,SNR=70
L19A **Farson** 76.60 330 ⇓P P 13 06 44.0 +0.5
baz=77,SNR=21
N16A **Rees Ranch, Co** 76.63 328 ⇑P P 13 06 44.3 +0.5
baz=77,SNR=26
O15A **The Old Anders** 76.67 327 ⇑P P 13 06 44.5 +0.5
baz=77,SNR=17
M17A **Scullys Gap (B** 76.71 329 ⇑P P 13 06 44.0 -0.2
baz=77,SNR=34
L18A **Fontenelle, Gr** 76.77 329 ⇑P P 13 06 44.7 +0.2
baz=77,SNR=86
DUG **Dugway** 76.78 327 *eP* P 13 06 44.7 +0.2
comp=Z,132nm,1.1s,mb5.6
DUG **Dugway** 76.78 327 ⇑P P 13 06 45.1 +0.6
baz=77,SNR=100
DUG **Dugway** 76.78 327 *eP* P 13 06 44.7 +0.1
DUG pmax pmax
comp=Z,132nm,1.1s,mb5.6
NOQ **North Oquirrh** 76.78 327 *eP* P 13 06 45.0 +0.4
comp=Z,28nm,0.7s,mb5.1
PKM **Peak Mountain** 76.83 319 ⇓P P 13 06 45.6 +0.6
baz=77,SNR=33
P13A **Bates Ranch, G** 76.83 325 ⇑P P 13 06 45.7 +0.8
baz=77
AGMN **Agassiz Refuge** 76.84 342 *eP* P 13 06 43.7 -1.0
comp=Z,103nm,1.1s,mb5.5
R11A **Troy Canyon, C** 76.85 324 ⇑P P 13 06 45.8 +0.8
baz=77,SNR=130
GRAC **Grapevine Rang** 76.86 322 ⇓P P 13 06 45.6 +0.5
baz=77,SNR=8.0
CWC **Cottonwood Cre** 76.87 321 ⇓P P 13 06 45.7 +0.5
baz=77,SNR=57
Q12A **Willow Creek R** 76.95 325 ⇓P P 13 06 46.2 +0.6
baz=77,SNR=50
VES **Vestal, Richgr** 77.04 320 ⇓P P 13 06 46.3 +0.2
baz=77,SNR=49
M16A **Huntsville** 77.05 328 ⇓P P 13 06 46.3 +0.2
baz=77,SNR=52
S10A **Tonopah Range,** 77.09 323 ⇑P P 13 06 47.0 +0.6
baz=77,SNR=98
N15A **Stansbury Isla** 77.16 327 ⇑P P 13 06 46.8 +0.1
baz=77,SNR=10
R10A **Warm Springs** 77.19 323 ⇑P P 13 06 48.0 +1.0
baz=77,SNR=161
PDAR **Pinedale Array** 77.22 330 P P 13 06 46.6 -0.4
comp=Z,16nm,0.5s,mb5.0,baz=131,slow=7.8,SNR=178
BW06 **Boulder Array** 77.22 330 ⇑P P 13 06 46.7 -0.3
baz=78,SNR=61
SMMC **Simmler** 77.22 319 ⇓P P 13 06 47.8 +0.6
baz=77,SNR=33
HWUT **Hardware Ranch** 77.25 328 *eP* P 13 06 46.9 -0.2
comp=Z,67nm,0.6s,mb5.5
Q11A **Duckwater** 77.25 324 ⇑P P 13 06 47.7 +0.5
baz=78,SNR=96
S09A **Goldfield** 77.30 322 ⇑P P 13 06 47.6 +0.1
baz=78,SNR=58
O13A **Hicks Ranch, I** 77.32 326 ⇓P P 13 06 48.0 +0.4
baz=78,SNR=39
TIN **Tinemaha** 77.39 321 ⇓P P 13 06 48.5 +0.5
baz=78,SNR=5.3
BGU **Big Grassy Mou** 77.44 327 *eP* P 13 06 48.0 -0.2
SPUT **South Promonto** 77.44 328 *eP* P 13 06 48.9 +0.7
RCTC **Rector, Farmer** 77.45 320 ⇓P P 13 06 48.0 -0.5
baz=78,SNR=25
N14A **Grayback Hills** 77.46 327 ⇑P P 13 06 48.6 +0.2
baz=78,SNR=44
L16A **Fish Haven** 77.50 329 ⇓P P 13 06 48.4 -0.2
baz=78,SNR=60
V05C **Boulder Hill,** 77.54 319 ⇓P P 13 06 49.4 +0.5
baz=78,SNR=5.9
TPH **Tonopah** 77.55 323 *eP* P 13 06 49.0 +0.1
comp=Z,141nm,1.2s,mb5.6
TPH **Tonopah** 77.55 323 *eP* P 13 06 49.0 +0.1
TPH pmax pmax
comp=Z,141nm,1.2s,mb5.6
M15A **Larsen Ranch,** 77.56 328 ⇑P P 13 06 48.8 -0.1
baz=78,SNR=48
PTRM **Twissleman Ran** 77.58 319 *eP* P 13 06 49.6 +0.4
Q10A **Clear Creek Ra** 77.63 324 ⇓P P 13 06 49.6 +0.2
baz=78
MTUM **Tungsten Hills** 77.79 321 *eP* P 13 06 50.6 +0.3
O12A **Currie** 77.81 325 ⇑P P 13 06 50.7 +0.3
baz=78,SNR=86
P11A **Circle Ranch,** 77.82 324 ⇓P P 13 06 50.9 +0.6
baz=78,SNR=25
AHID **Auburn Hatcher** 77.92 329 *eP* P 13 06 50.8 -0.1
comp=Z,157nm,1.0s,mb5.7
L15A **Malad City** 77.94 328 ⇓P P 13 06 50.8 -0.2
baz=78,SNR=131
HVU **Hansel Valley** 77.96 328 *eP* P 13 06 51.1 0.0
U05C **Westside ANR,** 77.99 320 ⇓P P 13 06 50.7 -0.7
baz=78
M14A **Sheep Mountain** 78.03 327 ⇓P P 13 06 51.5 0.0
baz=78,SNR=92
TOA0 **Torodi Ar. Sit** 78.03 69 *eP* P 13 06 52.5 +0.4
TORD **Torodi Ar. Bea** 78.03 69 P P 13 06 52.7 +0.6
comp=Z,346nm,0.7s,mb6.2,baz=254,slow=5.1,SNR=422
TORD S S 13 16 37.9 +1.3
comp=Z,12nm,1.0s,baz=246,slow=8.4,SNR=24
TORD PKKPbc PKKPbc 13 25 50.7 -0.3
comp=Z,0.3nm,0.4s,baz=54,slow=2.0,SNR=4.7
TORD LR LR 13 39 30.2
comp=Z,902nm,19.9s,baz=230,slow=34
TORD **Torodi Ar. Bea** 78.03 69 P P 13 06 52.7 +0.6
TORD S S 13 16 37.9 +1.3
TORD PKKPbc PKKPbc 13 25 50.7 -0.3
TORD LR LR 13 39 30.2
Q09A **Carvers** 78.06 323 ⇑P P 13 06 52.2 +0.4
baz=78,SNR=19
I18A **Diamond G Ranc** 78.07 331 ⇑P P 13 06 52.2 +0.5
baz=78,SNR=210
MLAC **Mammoth Lakes** 78.14 321 ⇓P P 13 06 52.8 +0.6
baz=78,SNR=42
O11A **Cowboy Ranch,** 78.19 325 ⇑P P 13 06 52.8 +0.4
baz=78,SNR=41
K16A **Soda Springs** 78.20 329 ⇓P P 13 06 52.9 +0.5
baz=78,SNR=167
J17A **Brown Place, J** 78.21 330 ⇓P P 13 06 52.8 +0.4
baz=78,SNR=18
T06C **Millerton Lake** 78.21 320 ⇓P P 13 06 51.4 -1.2
baz=78,SNR=25
R08A **Mina** 78.23 322 ⇑P P 13 06 52.9 +0.2
baz=78,SNR=9.5
P10A **Eureka** 78.24 324 ⇓P P 13 06 53.4 +0.7
baz=78,SNR=69
REDW **Red Top Meadow** 78.27 330 *eP* P 13 06 52.9 +0.1
comp=Z,114nm,1.2s,mb5.5
SNOW **Snow King Moun** 78.30 330 *eP* P 13 06 53.5 +0.5
M13A **Montello** 78.33 327 ⇓P P 13 06 53.1 -0.1
baz=79,SNR=64
LOHW **Long Hollow** 78.35 330 *eP* P 13 06 53.3 0.0
comp=Z,42nm,0.6s,mb5.3
L14A **Malta** 78.38 328 ⇓P P 13 06 53.3 -0.1
baz=79,SNR=145
N12A **Clover Valley,** 78.40 326 ⇓P P 13 06 53.7 +0.1
baz=79,SNR=40
NVAR **Mina Array Bea** 78.40 322 P P 13 06 53.8 +0.2
comp=Z,19nm,0.8s,mb4.9,baz=150,slow=5.7,SNR=83
NVAR PP PP 13 09 48.1 -4.7
comp=Z,3.8nm,1.1s,baz=103,slow=6.1,SNR=3.6
NVAR PKKPbc PKKPbc 13 25 51.2 -0.6
comp=Z,0.5nm,0.5s,baz=305,slow=2.2,SNR=5.0
U04C **Hernandez Rese** 78.40 319 ⇓P P 13 06 54.0 +0.3
baz=79,SNR=36
TPAW **Teton Pass** 78.42 330 *eP* P 13 06 54.0 +0.4
comp=Z,126nm,1.2s,mb5.5
ELK **Elko** 78.42 326 *eP* P 13 06 53.6 -0.1
comp=Z,102nm,1.1s,mb5.5
ELK **Elko** 78.42 326 P P 13 06 53.9 +0.2
ELK pmax pmax
comp=Z,100nm,1.0s
V03C **Hunter Liggett** 78.44 319 ⇓P P 13 06 54.5 +0.6
baz=79,SNR=6.6
RRI2 **Red Ridge** 78.47 330 *eP* P 13 06 54.4 +0.4
comp=Z,167nm,1.1s,mb5.7
Q08A **Gabbs** 78.50 323 ⇓P P 13 06 54.2 0.0
baz=79,SNR=87
MOOW **Moose Ponds** 78.52 330 *eP* P 13 06 54.0 -0.2
comp=Z,125nm,1.6s,mb5.5
K15A **Arbon** 78.53 328 ⇓P P 13 06 54.3 +0.1
baz=79,SNR=89
J16A **Bone** 78.55 329 ⇑P P 13 06 54.6 +0.2
baz=79,SNR=35
P09A **Austin** 78.56 324 ⇓P P 13 06 54.7 +0.2
baz=79,SNR=34
I17A **Pilgram Creek** 78.58 330 ⇑P P 13 06 55.4 +0.9
baz=79,SNR=80
DCID1 **Drake Creek** 78.60 330 *eP* P 13 06 55.0 +0.4
comp=Z,38nm,0.7s,mb5.3
ULM **Lac du Bonnet** 78.61 342 P P 13 06 53.6 -0.9
comp=Z,57nm,0.8s,mb5.5,baz=155,slow=5.8,SNR=24
ULM LR LR 13 46 11.9
comp=Z,252nm,21.3s,baz=129,slow=39
ULM **Lac du Bonnet** 78.61 342 *eP* P 13 06 53.1 -1.4
comp=Z,176nm,1.4s,mb5.7
TSUM **Tsuga** 78.64 106 *eP* P 13 06 56.7 +1.2
comp=Z,149nm,0.9s,mb5.8
TSUM *epP* pP 13 07 26.1 +0.4
IMW **Indian Meadow** 78.73 330 *eP* P 13 06 55.5 +0.3
comp=Z,269nm,1.5s,mb5.8
N11A **Elko Archery C** 78.73 325 ⇑P P 13 06 55.3 0.0
baz=79
K14A **Jones Ranch, D** 78.73 328 ⇓P P 13 06 55.2 -0.1
baz=79,SNR=46
O10A **Cortez Mining,** 78.75 324 ⇑P P 13 06 55.7 +0.2
baz=79,SNR=18
M12A **Wells** 78.75 326 ⇑P P 13 06 55.6 +0.2
baz=79,SNR=98
L13A **Double Diamond** 78.77 327 ⇓P P 13 06 55.9 +0.4
baz=79,SNR=175
S05C **Merced** 78.80 320 ⇑P P 13 06 56.0 +0.2
baz=79,SNR=69
H17A **Grant Village** 78.95 331 ⇑P P 13 06 57.9 +1.4
baz=79,SNR=13
RLMT **Red Lodge** 78.95 332 *eP* P 13 06 56.8 +0.3
comp=Z,38nm,0.6s,mb5.4
RLMT **Red Lodge** 78.95 332 ⇓P P 13 06 56.7 +0.3
baz=79,SNR=96
I16A **Newdale** 78.96 330 ⇑P P 13 06 57.1 +0.5
baz=79,SNR=22
LAO **LASA Array** 78.97 335 *eP* P 13 06 56.3 -0.3
comp=Z,181nm,1.2s,mb5.8
LKWY **Lake** 79.01 331 *eP* P 13 06 58.1 +1.3
comp=Z,69nm,1.2s,mb5.4
LKWY **Lake** 79.01 331 *eP* P 13 06 58.1 +1.3
LKWY pmax pmax
comp=Z,69nm,1.2s,mb5.4
O09A **Fish Creek Ran** 79.03 324 ⇓P P 13 06 56.7 -0.3
baz=79,SNR=26
J15A **Blackfoot** 79.03 329 ⇑P P 13 06 57.5 +0.6
baz=79,SNR=111
Q07A **Schurz** 79.03 322 ⇑P P 13 06 57.1 0.0
baz=79
N10A **Dunphy** 79.06 325 ⇑P P 13 06 57.3 +0.1
baz=79,SNR=13
SAO **San Andreas Ge** 79.06 319 *eP* P 13 06 56.6 -0.7
comp=Z,46nm,1.0s,mb5.3
SAO **San Andreas Ge** 79.06 319 *eP* P 13 06 56.6 -0.7
SAO pmax pmax
comp=Z,46nm,1.0s,mb5.3
R06C **Coleville** 79.11 322 ⇓P P 13 06 58.3 +0.8
baz=79,SNR=58
YFT **Old Faithful** 79.11 331 *eP* P 13 06 59.0 +1.6
P08A **Dixie Valley** 79.17 323 ⇓P P 13 06 58.2 +0.4
baz=79,SNR=36
M11A **Holland Ranch,** 79.21 326 ⇑P P 13 06 58.4 +0.4
baz=80,SNR=167
BMN **Battle Mountai** 79.23 324 *eP* P 13 06 57.2 -0.9
comp=Z,48nm,1.0s,mb5.3
BMN **Battle Mountai** 79.23 324 *eP* P 13 06 57.2 -0.9
BMN pmax pmax
comp=Z,48nm,1.0s,mb5.3
G18A **Lazy EL Ranch,** 79.24 332 ⇓P P 13 06 58.2 +0.2
baz=80,SNR=84
YNR **Norris Junctio** 79.25 331 *eP* P 13 06 59.2 +1.1
K13A **Stover Farm, H** 79.25 327 ⇓P P 13 06 58.6 +0.4
baz=80,SNR=43
CMB **Columbia Colle** 79.30 321 *eP* P 13 06 57.8 -0.8
comp=Z,28nm,1.0s,mb5.0
CMB **Columbia Colle** 79.30 321 *eP* P 13 06 57.8 -0.8
CMB pmax pmax
comp=Z,28nm,1.0s,mb5.0
SCHQ **Schefferville** 79.33 1 P P 13 06 56.8 -1.5
comp=Z,26nm,0.8s,mb5.1,baz=182,slow=4.2,SNR=31
SCHQ **Schefferville** 79.33 1 *eP* P 13 06 58.3 0.0
comp=Z,23nm,0.7s,mb5.1
L12A **House Creek Ra** 79.34 327 ⇓P P 13 06 59.1 +0.4
baz=80,SNR=122
YMR **Madison River** 79.34 331 *eP* P 13 06 59.3 +0.7
comp=Z,254nm,1.3s,mb5.9
J14A **Carey** 79.49 328 ⇑P P 13 07 00.1 +0.6
baz=80,SNR=125
H16A **Russell Place,** 79.49 330 ⇓P P 13 07 00.2 +0.7
baz=80,SNR=78
P07A **Fallon** 79.50 323 ⇓P P 13 07 00.1 +0.5
baz=80,SNR=6.9
I15A **Monteview** 79.52 329 ⇑P P 13 07 00.4 +0.8
baz=80,SNR=55
O08A **Rochester Mine** 79.63 324 ⇓P P 13 07 00.2 -0.1
baz=80,SNR=39
K12A **Draper Farm, C** 79.65 327 ⇓P P 13 07 01.1 +0.7
baz=80,SNR=138
GCMT **Greycliff** 79.66 332 *eP* P 13 07 00.2 -0.1
M10A **I.L. Ranch, Tu** 79.66 325 ⇓P P 13 07 00.6 +0.2
baz=80,SNR=29
QLMT **Earthquake Lak** 79.67 330 *eP* P 13 07 01.4 +1.0
N09A **Rock Creek Ran** 79.69 324 ⇑P P 13 06 59.9 -0.7
baz=80,SNR=15
DGMT **Dagmar** 79.70 337 *eP* P 13 07 00.8 +0.4
comp=Z,302nm,1.1s,mb6.0
DGMT *epP* pP 13 07 29.5 -1.2
DGMT **Dagmar** 79.70 337 ⇓P P 13 07 00.7 +0.3
baz=80,SNR=59
L11A **Cat Creek Ranc** 79.73 326 ⇑P P 13 07 01.2 +0.4
baz=80,SNR=102
G17A **Pierce Place,** 79.75 331 ⇓P P 13 07 01.4 +0.6
baz=80,SNR=34
F18A **Big Timber** 79.77 332 ⇑P P 13 07 01.0 +0.1
baz=80,SNR=121
R04C **Big Horse Ranc** 79.77 321 ⇑P P 13 07 01.2 +0.1
baz=80,SNR=35
WCN **Washoe City** 79.82 322 ⇓P P 13 07 01.9 +0.5
baz=80,SNR=18
J13A **Cove Ranch, Pi** 79.86 328 ⇓P P 13 07 01.9 +0.5
baz=80,SNR=79
PAHR **Pah Rah Range** 79.89 322 *eP* P 13 07 02.1 +0.4
comp=Z,306nm,1.3s,mb6.0
PAHR *epP* pP 13 07 31.3 -0.7
PAHR *esP* sP 13 07 45.9 +1.2
I14A **Mackay** 79.91 329 ⇓P P 13 07 02.5 +0.8
baz=80,SNR=104
O07A **Toulon** 79.93 323 ⇑P P 13 07 01.9 0.0
baz=80,SNR=68
LAVA **Lava Cap Winer** 80.00 321 ⇑P P 13 07 02.1 -0.2
baz=80,SNR=44
L10A **Juniper Basin** 80.03 326 ⇓P P 13 07 02.8 +0.4
baz=80,SNR=204
M09A **Marrel Ranch,** 80.06 325 ⇑P P 13 07 02.5 -0.1
baz=80,SNR=51
H15A **Lima** 80.06 330 ⇑P P 13 07 03.4 +0.9
baz=80,SNR=35
HLID **Hailey** 80.10 328 *eP* P 13 07 03.3 +0.5
comp=Z,189nm,1.1s,mb5.8
HLID **Hailey** 80.10 328 ⇑P P 13 07 03.5 +0.8
baz=80,SNR=221
G16A **Moss Hill, Enn** 80.15 330 ⇓P P 13 07 03.2 +0.2
baz=80,SNR=38
P06A **Stead Airport,** 80.16 322 ⇑P P 13 07 03.6 +0.4
baz=80,SNR=11
F17A **Fitzpatrick Pl** 80.17 332 ⇑P P 13 07 03.7 +0.6
baz=80,SNR=85
J12A **Stokes Ranch,** 80.20 327 ⇓P P 13 07 03.7 +0.5
baz=80,SNR=180
I13A **Wildhorse Cree** 80.22 328 ⇓P P 13 07 04.1 +0.8
baz=80,SNR=172
K11A **Parker Ranch,** 80.31 326 ⇑P P 13 07 04.2 +0.3
baz=81,SNR=151
MCMT **McKenzie Canyo** 80.32 330 *eP* P 13 07 04.7 +0.8
E18A **Harlowton** 80.38 332 ⇓P P 13 07 04.3 +0.1
baz=81,SNR=43
H14A **Leadore** 80.39 329 ⇑P P 13 07 05.1 +0.8
baz=81,SNR=100
BOZ **Bozeman (W)** 80.40 331 *eP* P 13 07 03.8 -0.5
comp=Z,83nm,1.5s,mb5.3
BOZ **Bozeman (W)** 80.40 331 ⇑P P 13 07 04.0 -0.2
baz=81,SNR=46
BOZ **Bozeman (W)** 80.40 331 P P 13 07 04.0 -0.3
BOZ pmax pmax
comp=Z,83nm,1.4s,mb5.4
G15A **Dillon** 80.41 330 ⇑P P 13 07 04.7 +0.4
baz=81,SNR=70
N07B **Gerlach** 80.41 323 ⇑P P 13 07 04.6 +0.1
baz=81,SNR=112
O06A **Flanigan** 80.45 323 ⇑P P 13 07 04.9 +0.1
baz=81
F16A **Kennard Place,** 80.50 331 ⇓P P 13 07 05.0 +0.2
baz=81,SNR=21
BEKR **Beckwourth** 80.54 322 ⇑P P 13 07 05.4 +0.1
baz=81,SNR=29
M08A **Happy Creek Ra** 80.57 324 ⇑P P 13 07 05.3 0.0
baz=81,SNR=41
L09A **Wilkinson Ranc** 80.60 325 ⇑P P 13 07 05.5 0.0
baz=81,SNR=62
DLMT **Dillon** 80.61 330 *eP* P 13 07 05.7 +0.3
comp=Z,195nm,1.4s,mb5.7
I12A **Atlanta** 80.62 328 ⇓P P 13 07 06.0 +0.5
baz=81,SNR=75
Q03C **Winters** 80.65 320 ⇓P P 13 07 06.5 +0.7
baz=81,SNR=26
MFID **Camas Ranch** 80.68 327 ⇓P P 13 07 06.1 +0.3
baz=81,SNR=58
E17A **Martinsdale** 80.69 332 ⇓P P 13 07 06.0 +0.1
baz=81,SNR=42
K10A **MacKenzie Ranc** 80.74 326 ⇓P P 13 07 06.2 0.0
baz=81,SNR=65
H13A **Challis** 80.77 329 ⇑P P 13 07 07.0 +0.7
baz=81,SNR=200
OHCM **Honcut** 80.82 321 *eP* P 13 07 06.8 +0.1
D18A **Linhart Farms,** 80.83 333 ⇑P P 13 07 06.5 -0.1
baz=81,SNR=87
MCCM **Marconi Confer** 80.83 319 *eP* P 13 07 06.5 -0.2
comp=Z,116nm,1.0s,mb5.7
N06A **Buffalo Meadow** 80.86 323 ⇓P P 13 07 06.8 -0.1
baz=81,SNR=62
G14A **Jackson** 80.91 330 ⇑P P 13 07 07.5 +0.4
baz=81,SNR=36
NSHM **Saint Helena R** 80.92 320 *eP* P 13 07 07.3 +0.1
NSHM *epP* pP 13 07 36.8 -0.8
NSHM *esP* sP 13 07 50.6 +0.3
F15A **Butte** 80.93 330 ⇓P P 13 07 07.6 +0.4
baz=81,SNR=82
M07A **Soldier Meadow** 80.95 324 ⇑P P 13 07 07.3 0.0
baz=81,SNR=65
MAW **Mawson** 81.03 163 P P 13 07 06.9 -0.6
comp=Z,138nm,0.7s,mb5.9,baz=215,slow=6.2,SNR=298
MAW **Mawson** 81.03 163 *eP* P 13 07 06.8 -0.7
comp=Z,36nm,0.9s,mb5.2
MAW **Mawson** 81.03 163 P P 13 07 06.9 -0.6
MAW pmax pmax
comp=Z,138nm,0.7s
H12A **Diamond D Ranc** 81.05 328 ⇓P P 13 07 08.3 +0.5
baz=81,SNR=83
L08A **Fields** 81.08 325 ⇑P P 13 07 07.8 -0.2
baz=81,SNR=71
E16A **East Helena** 81.11 331 ⇑P P 13 07 08.2 +0.2
baz=81,SNR=22
I11A **Placerville** 81.11 327 ⇓P P 13 07 08.0 -0.2
baz=81,SNR=26
K09A **Rome** 81.12 326 ⇓P P 13 07 08.0 -0.2
baz=81,SNR=56
J10A **Berg Farm, Mel** 81.16 327 ⇓P P 13 07 07.9 -0.5
baz=81,SNR=12
G13A **Cobalt** 81.16 329 ⇓P P 13 07 09.1 +0.7
baz=81,SNR=372
D17A **Six Diamond Ra** 81.16 332 ⇑P P 13 07 08.5 +0.1
baz=81,SNR=183
O04C **Chester** 81.26 322 ⇓P P 13 07 08.7 -0.3
baz=82,SNR=33
F14A **Wisdom** 81.30 330 ⇓P P 13 07 09.9 +0.8
baz=82,SNR=88
HRY **Holter Researc** 81.31 331 *eP* P 13 07 09.2 +0.1
HRY *epP* pP 13 07 37.7 -1.7
WVOR **Wild Horse Val** 81.40 325 *eP* P 13 07 09.2 -0.5
comp=Z,78nm,1.6s,mb5.3
WVOR **Wild Horse Val** 81.40 325 P P 13 07 09.2 -0.5
WVOR pmax pmax
comp=Z,78nm,1.5s,mb5.3
D16A **Dana Ranch, Ca** 81.44 332 ⇓P P 13 07 10.3 +0.5
baz=82
E15A **Deer Lodge** 81.44 331 ⇑P P 13 07 10.0 +0.2
baz=82,SNR=77
EGMT **Eagleton** 81.47 333 *eP* P 13 07 09.1 -0.8
comp=Z,185nm,1.3s,mb5.8
EGMT **Eagleton** 81.47 333 ⇑P P 13 07 09.4 -0.5
baz=82,SNR=48
BOSA **Boshof** 81.48 117 P P 13 07 10.8 +0.2
comp=Z,96nm,0.7s,mb5.7,baz=263,slow=4.1,SNR=28
BOSA **Boshof** 81.48 117 *eP* P 13 07 10.7 +0.1
comp=Z,68nm,0.6s,mb5.7
BOSA **Boshof** 81.48 117 P P 13 07 10.9 +0.3
BOSA pmax pmax
comp=Z,96nm,0.7s,mb5.7
L07A **Adell** 81.48 324 ⇑P P 13 07 10.6 +0.4
baz=82,SNR=54
K08A **Mann Creek Ran** 81.53 325 ⇑P P 13 07 10.3 -0.1
baz=82,SNR=20
C17A **Wharram Farm,** 81.57 333 ⇑P P 13 07 10.1 -0.4
baz=82,SNR=81
J09A **Fry Pan Ranch,** 81.60 326 ⇑P P 13 07 10.7 0.0
baz=82,SNR=55
I10A **Payette** 81.65 327 ⇓P P 13 07 11.0 +0.1
baz=82,SNR=30
H11A **Donnelly** 81.72 328 ⇑P P 13 07 11.3 0.0
baz=82,SNR=76
F13A **Darby** 81.73 329 ⇑P P 13 07 11.7 +0.3
baz=82,SNR=187
LBCM **Butte Creek Ri** 81.76 322 P P 13 07 10.9 -0.7
E14A **Clinton** 81.82 330 ⇓P P 13 07 12.3 +0.5
baz=82,SNR=61
D15A **Lincoln** 81.87 331 ⇑P P 13 07 12.5 +0.4
baz=82,SNR=69
K07A **Rock Creek Ran** 81.90 325 ⇑P P 13 07 12.6 +0.3
baz=82,SNR=85
MOD **Modoc** 81.92 324 *eP* P 13 07 12.3 -0.1
comp=Z,134nm,1.3s,mb5.6
J08A **Circle Bar Ran** 81.97 326 ⇑P P 13 07 12.9 +0.2
baz=82,SNR=109
H10A **Noah's Angus R** 81.99 327 ⇑P P 13 07 12.5 -0.2
baz=82,SNR=97
I09A **Lost Marbles R** 82.04 326 ⇑P P 13 07 12.9 -0.1
baz=82,SNR=107
CHMT **Chamberlain Mo** 82.09 331 *eP* P 13 07 13.2 0.0
C16A **Fuhringer Ranc** 82.12 332 ⇑P P 13 07 13.2 -0.1
baz=82,SNR=81
E13A **Victor** 82.15 330 ⇓P P 13 07 14.0 +0.5
baz=82,SNR=134
WDC **Whiskeytown Da** 82.25 321 *eP* P 13 07 12.2 -2.1
comp=Z,24nm,0.7s,mb5.1
WDC *epP* pP 13 07 42.2 -2.5
WDC **Whiskeytown Da** 82.25 321 *eP* P 13 07 12.2 -2.0
WDC *e*PP pP 13 07 42.2 -2.4
WDC pmax pmax
comp=Z,24nm,0.7s,mb5.1
KCPM **Cahto Peak** 82.26 320 *eP* P 13 07 14.4 +0.1
KIPM **Iron Peak** 82.28 320 *eP* P 13 07 14.2 -0.2
D14A **Greenough** 82.33 331 ⇑P P 13 07 14.5 +0.1
baz=83,SNR=36
G11A **Walters Elk Ra** 82.35 328 ⇓P P 13 07 14.6 0.0
baz=83,SNR=103
I08A **Drewsey** 82.41 326 ⇓P P 13 07 15.1 +0.1
baz=83,SNR=97
J07A **Hines** 82.42 325 ⇑P P 13 07 15.1 +0.1
baz=83
BMO **Blue Mountains** 82.45 327 *eP* P 13 07 14.8 -0.4
comp=Z,95nm,1.3s,mb5.5
C15A **Salmond Ranch,** 82.47 332 ⇓P P 13 07 15.4 +0.2
baz=83,SNR=232
H09A **Durkee** 82.50 327 ⇓P P 13 07 15.3 -0.1
baz=83,SNR=28
RAR **Rarotonga** 82.56 250 LR LR 13 36 01.0
comp=Z,505nm,18.3s,baz=288,slow=30
B16A **M & M Farms, S** 82.58 333 ⇑P P 13 07 14.9 -0.8
baz=83,SNR=13
F11A **Grangeville** 82.65 329 ⇑P P 13 07 15.6 -0.5
baz=83,SNR=61
G10A **Bishop Farm, J** 82.68 328 ⇑P P 13 07 16.5 +0.2
baz=83,SNR=87
D13A **Huson** 82.77 330 ⇑P P 13 07 16.8 +0.1
baz=83,SNR=63
J06A **Christmas Vall** 82.77 325 ⇓P P 13 07 16.8 -0.1
baz=83,SNR=80
K05A **Summer Lake** 82.80 324 ⇑P P 13 07 16.4 -0.6
baz=83,SNR=47
B15A **Bradely Ranch,** 82.86 332 ⇑P P 13 07 16.4 -0.7
baz=83,SNR=73
H08A **Prairie City** 82.90 326 ⇑P P 13 07 17.2 -0.2
baz=83,SNR=33
A16A **West Butte Ran** 82.95 333 ⇑P P 13 07 17.1 -0.5
baz=83,SNR=152
C14A **Swan Lake** 82.96 331 ⇑P P 13 07 17.9 +0.3
baz=83,SNR=40
G09A **Cove** 83.00 327 ⇓P P 13 07 17.9 -0.1
baz=83,SNR=146
I07A **Izee** 83.01 326 ⇓P P 13 07 18.1 +0.1

baz=83,SNR=52
E11A Bogner Ranch, 83.02 329 ⇑P P **13 07 17.3 -0.8**
baz=83,SNR=34
YBH Yreka Blue Hor 83.12 322 P P **13 07 17.1 -1.6**
comp=Z,16nm,0.9s,mb4.8,baz=125,slow=4.0,SNR=24
YBH Yreka Blue Hor 83.12 322 *e*P P **13 07 16.9 -1.7**
comp=Z,13nm,0.8s,mb4.8
YBH Yreka Blue Hor 83.12 322 P P **13 07 17.1 -1.6**
YBH pmax pmax
comp=Z,16nm,0.9s
LBTB Lobatse 83.20 114 *e*P P **13 07 20.1 +0.4**
comp=Z,122nm,0.8s,mb5.8
LBTB *e*pP pP 13 07 49.6 -0.5
LBTB Lobatse 83.20 114 *e*P P **13 07 20.1 +0.4**
LBTB *e**PP pP 13 07 49.6 -0.5
LBTB pmax pmax
comp=Z,122nm,0.8s,mb5.8
B14A Marquette Ranc 83.20 332 ⇑P P **13 07 18.5 -0.5**
baz=84,SNR=28
F10A Beach Ranch, E 83.23 328 ⇑P P **13 07 18.7 -0.4**
baz=84,SNR=43
C13A Hot Springs 83.26 331 ⇓P P **13 07 19.1 -0.1**
baz=84,SNR=59
I06A Prineville 83.28 325 ⇓P P **13 07 20.0 +0.6**
baz=84,SNR=86
F09A S2 Ranch, Elgi 83.37 328 ⇑P P **13 07 19.1 -0.7**
baz=84
A15A Johnson Ranch, 83.45 332 ⇓P P **13 07 19.1 -1.1**
baz=84,SNR=25
MDT Midelt 83.50 49 P P **13 07 21.7 +0.9**
comp=Z,14nm,1.1s,mb4.7,baz=229,slow=3.6,SNR=14
MDT LR LR 13 45 39.5
comp=Z,385nm,18.9s,baz=235,slow=36
E10A Myers Farm, Un 83.54 328 ⇓P P **13 07 20.2 -0.5**
baz=84,SNR=20
G08A Pilot Rock 83.59 327 ⇓P P **13 07 20.7 -0.3**
baz=84,SNR=37
D11A Klaveano Farm, 83.59 329 ⇑P P **13 07 20.3 -0.7**
baz=84,SNR=16
KRMB Red Mountain 83.65 321 *e*P P **13 07 20.9 -0.5**
KRMB *e*pP pP 13 07 51.4 -0.5
LNOR Lincton Mounta 83.67 327 *e*P P **13 07 19.9 -1.5**
C12B Naegeli Ranch, 83.69 330 ⇑P P **13 07 21.2 -0.2**
baz=84,SNR=28
B13A Whitefish 83.73 331 ⇑P P **13 07 21.4 -0.3**
baz=84,SNR=40
A14A Double T Ranch 83.73 332 ⇑P P **13 07 21.1 -0.5**
baz=84,SNR=31
HUMO Hull Mountain 83.84 323 *e*P P **13 07 21.5 -0.8**
comp=Z,9.1nm,0.6s,mb4.8
F08A Pendleton 83.86 327 ⇑P P **13 07 21.4 -0.9**
baz=84,SNR=8.3
VIPM Ingram Point 83.88 325 P P **13 07 22.8 +0.3**
H06A Lindquist Farm 83.89 326 ⇑P P **13 07 22.5 -0.1**
baz=84,SNR=47
L02A Cave Junction 83.90 322 ⇓P P **13 07 22.3 -0.4**
baz=84,SNR=9.7
G07A Ruggs Ranch, H 83.93 326 ⇓P P **13 07 23.1 +0.3**
baz=84,SNR=51
I05A Bend 83.98 325 ⇑P P **13 07 22.9 -0.1**
baz=84,SNR=9.7
WALA Waterton Lakes 84.01 332 *e*P P **13 07 22.5 -0.6**
comp=Z,86nm,1.0s,mb5.5
D10A Wagner Farm, O 84.04 329 ⇑P P **13 07 22.3 -0.9**
baz=84,SNR=82
LIS Lisbon 84.05 43 *e*P P **13 07 23.1 -0.4**
LIS *e*S S 13 17 35.0 -3.0
LIS *e*S S 13 17 35.0 -3.0
LIS AMS AMS 13 44 33.3
comp=N,549nm,14.8s
E09A Wood Farm, Sta 84.06 328 ⇑P P **13 07 22.2 -1.1**
baz=84
K02A Glendale 84.24 323 ⇓P P **13 07 23.9 -0.5**
baz=84,SNR=14
H05A Madras 84.29 325 ⇑P P **13 07 24.6 0.0**
baz=84,SNR=12
B12A Libby 84.30 331 ⇑P P **13 07 24.2 -0.3**
baz=85,SNR=36
FFC Flin Flon 84.31 341 P P **13 07 24.1 -0.3**
comp=N,231nm,1.1s,mb5.9,SNR=7.5
FFC Flin Flon 84.31 341 *e*P P **13 07 23.7 -0.7**
comp=N,42nm,1.0s,mb5.2
FFC *e*pP pP 13 07 53.0 -2.0
FFC Flin Flon 84.31 341 *e*P P **13 07 23.7 -0.7**
FFC *e**PP pP 13 07 53.0 -2.0
FFC pmax pmax
comp=Z,42nm,1.0s,mb5.2
EGRO El Granado 84.36 44 P P **13 07 26.7 +1.6**
comp=Z,191nm,1.4s,mb5.7
G06A Carlson Farm, 84.39 326 ⇓P P **13 07 24.9 -0.2**
baz=85,SNR=28
E08A Dider Farm, El 84.49 328 ⇑P P **13 07 24.8 -0.7**
baz=85,SNR=11
F07A Phinny Hill Vi 84.50 327 ⇑P P **13 07 25.4 -0.2**
baz=85,SNR=17
D09A Jones Farm, Ri 84.53 328 ⇑P P **13 07 25.1 -0.6**
baz=85,SNR=41
C10A Spilker Farm, 84.61 329 ⇑P P **13 07 25.5 -0.6**
baz=85,SNR=43
B11A Sandpoint 84.63 330 ⇑P P **13 07 25.3 -0.9**
baz=85,SNR=13
EVO Evora 84.64 43 *e*P P **13 07 27.2 +0.7**
comp=Z,52nm,1.0s,mb5.1
EVO *e*MLR MLR
comp=Z,565nm,22.5s
HAWA Hanford 84.65 327 *e*P P **13 07 26.0 -0.3**
comp=Z,146nm,1.4s,mb5.7
HAWA *e*pP pP 13 07 55.1 -1.8
A12A Yaak River Ran 84.67 331 ⇓P P **13 07 26.1 -0.3**
baz=85,SNR=50
RSW Rattlesnake Hi 84.68 327 *e*P P **13 07 26.6 +0.2**
J02A Umpqua 84.68 323 ⇑P P **13 07 26.4 -0.1**
baz=85,SNR=13
G05A Wamic 84.75 326 ⇓P P **13 07 27.1 +0.3**
baz=85,SNR=34
KEBM Edson Butte 84.78 322 *e*P P **13 07 24.5 -2.5**
H04A Detroit Lake 84.82 325 ⇑P P **13 07 26.2 -1.1**
baz=85,SNR=14
D08A Wollman Farm, 84.82 328 ⇓P P **13 07 26.8 -0.4**
baz=85,SNR=48
F06A Goldendale 84.84 326 ⇓P P **13 07 27.1 -0.2**
baz=85,SNR=25
NEW Newport 84.84 330 *e*P P **13 07 26.0 -1.2**
comp=Z,87nm,1.4s,mb5.5
NEW Newport 84.84 330 *e*P P **13 07 26.0 -1.3**
NEW pmax pmax
comp=Z,87nm,1.4s
B10A Chitwood Farm, 84.92 330 ⇓P P **13 07 26.5 -1.1**
baz=85
E07A Sunnyside 84.92 327 ⇑P P **13 07 27.5 -0.2**
baz=85,SNR=27
I03A Eugene 84.92 324 ⇓P P **13 07 27.4 -0.4**
baz=85,SNR=17
OD2 Odessa Site #2 84.96 328 P P **13 07 27.5 -0.3**
HOOD Mount Hood Mea 84.97 325 *e*P P **13 07 27.7 -0.3**
comp=Z,135nm,1.0s,mb5.8
A11A Hall Mountain, 85.01 331 ⇓P P **13 07 27.5 -0.5**
baz=85,SNR=92
ESPR Espera 85.01 46 P P **13 07 30.1 +1.7**
comp=Z,46nm,0.8s,mb5.5
EMIN Mina Concepcio 85.02 44 P P **13 07 29.4 +1.0**
comp=Z,23nm,0.6s,mb5.3
EJIF Jimena Fronter 85.02 46 P P **13 07 30.5 +2.1**
comp=Z,11nm,0.6s,mb5.0
EJIF Jimena Fronter 85.02 46 P P **13 07 30.5 +2.0**
EJIF pmax pmax
comp=Z,11nm,0.6s,mb5.0
C09A Chrisman Ranch 85.04 329 ⇓P P **13 07 27.9 -0.3**
baz=85,SNR=96
I02A Mapleton 85.24 323 ⇑P P **13 07 29.1 -0.3**
baz=86
F05A White Salmon 85.26 326 ⇑P P **13 07 28.8 -0.6**
baz=86,SNR=19
G04A Mulino 85.33 325 ⇑P P **13 07 29.2 -0.5**
baz=86,SNR=23
COR Corvallis 85.34 324 *e*P P **13 07 29.7 -0.2**
comp=Z,231nm,1.3s,mb6.0
COR Corvallis 85.34 324 P P **13 07 30.4 +0.6**
COR pmax pmax
comp=Z,230nm,1.2s,mb6.0
C08A Higginbotham F 85.40 328 ⇑P P **13 07 29.3 -0.7**
baz=86,SNR=9.9
H03A Soap Creek Ran 85.40 324 ⇓P P **13 07 30.2 +0.1**
baz=86,SNR=14
D07A Quincy 85.43 328 ⇑P P **13 07 29.9 -0.3**
baz=86,SNR=44
B09A Rice 85.43 329 ⇑P P **13 07 29.4 -0.8**
baz=86,SNR=61
E06A Yakima 85.47 327 ⇓P P **13 07 29.8 -0.6**
baz=86,SNR=21
A10A Northport 85.56 330 ⇓P P **13 07 29.7 -1.1**
baz=86,SNR=48
F04A Amboy 85.78 325 ⇓P P **13 07 31.2 -0.8**
baz=86,SNR=30
C07A Waterville 85.82 328 ⇑P P **13 07 31.4 -0.8**
baz=86,SNR=90
G03A Yamhill 85.82 325 ⇑P P **13 07 31.9 -0.3**
baz=86,SNR=21
D06A Cle Elum 85.85 327 ⇓P P **13 07 31.5 -0.8**
baz=86
E05A Randle 85.88 326 ⇓P P **13 07 31.2 -1.2**
baz=86,SNR=17
ETW Entiat 85.89 328 *e*P P **13 07 31.8 -0.6**
B08A Colville Reser 85.94 329 ⇓P P **13 07 31.8 -0.8**
baz=86,SNR=51
FCC Fort Churchill 85.96 347 *e*P P **13 07 32.2 -0.3**
comp=Z,117nm,1.1s,mb5.7
FCC Fort Churchill 85.96 347 *e*P P **13 07 32.2 -0.3**
FCC pmax pmax
comp=Z,117nm,1.1s,mb5.7
HEBO Mount Hebo 86.00 324 *e*P P **13 07 33.7 +0.6**
comp=Z,123nm,1.1s,mb5.8
A09A Danville 86.03 330 ⇓P P **13 07 32.3 -0.8**
baz=86,SNR=72
DRV Dumont d'Urvil 86.31 191 P P **13 07 37.0 +2.6**
DRV S SKSac 13 17 50.0 +0.6
DRV R 13 36 00.0
A08A Turner Farm, O 86.33 329 ⇑P P **13 07 34.0 -0.6**
baz=87,SNR=86
F03A Seaside 86.38 325 ⇓P P **13 07 34.4 -0.5**
baz=87,SNR=5.2
C06A Tall Timber Ra 86.38 328 ⇑P P **13 07 33.6 -1.3**
baz=87
B07A Winthrop 86.38 328 ⇓P P **13 07 34.1 -0.8**
baz=87,SNR=102
E04A Onalaska 86.39 326 ⇓P P **13 07 34.1 -0.8**
baz=87
D05A Enumclaw 86.42 327 ⇓P P **13 07 34.3 -0.7**
baz=87,SNR=35
ELUQ Luque 86.45 46 P P **13 07 37.2 +1.7**
comp=Z,12nm,0.6s,mb5.0
ELUQ Luque 86.45 46 P P **13 07 37.2 +1.7**
ELUQ pmax pmax
comp=Z,12nm,0.6s,mb5.0
BMW Boistfort Moun 86.57 326 *e*P P **13 07 35.2 -0.6**
EADA Adamuz 86.59 45 P P **13 07 36.5 +0.3**
comp=Z,7.8nm,0.5s,mb4.9
C05A Tolt Reservoir 86.61 327 ⇑P P **13 07 34.5 -1.5**
baz=87,SNR=12
ECOG Cogollos-Vega 86.74 46 P P **13 07 39.4 +2.5**
comp=Z,2.8nm,0.5s,mb4.5
ECOG Cogollos-Vega 86.74 46 P P **13 07 39.4 +2.5**
ECOG pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
EPLA Plasencia 86.75 43 P P **13 07 37.8 +0.9**
comp=Z,19nm,0.6s,mb5.2
EPLA Plasencia 86.75 43 P P **13 07 37.8 +0.9**
EPLA pmax pmax
comp=Z,19nm,0.6s,mb5.2
D04A Dobbs Creek Ra 86.78 326 ⇓P P **13 07 36.6 -0.2**
baz=87
E03A Lebam 86.79 325 ⇑P P **13 07 36.4 -0.4**
baz=87,SNR=18
A07A Ashnola River, 86.92 329 ⇓P P **13 07 37.3 -0.1**
baz=87,SNR=79
EDM Edmonton 86.96 335 *e*P P **13 07 35.9 -1.7**
EDM *e*pP pP 13 08 06.1 -2.1
EDM *e*sP sP 13 08 20.6 -0.2
EBER Berja 86.98 47 P P **13 07 39.6 +1.5**
comp=Z,41nm,1.2s,mb5.2
RPW Rockport 87.05 328 *e*P P **13 07 36.5 -1.6**
JCW Jim Creek 87.07 327 *e*P P **13 07 36.8 -1.4**
JCW *e*sP sP 13 08 21.5 -0.1
B06A Marblemount 87.08 328 ⇓P P **13 07 36.9 -1.3**
baz=87,SNR=23
EBAN Banos Encina 87.10 45 P P **13 07 39.4 +0.8**
comp=Z,9.9nm,0.6s,mb4.9
EBAN Banos Encina 87.10 45 P P **13 07 39.4 +0.8**
EBAN pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
B05A Bryant 87.20 327 ⇓P P **13 07 37.7 -1.2**
baz=87,SNR=41
C04A Brinnon 87.27 327 ⇑P P **13 07 38.6 -0.5**
baz=88,SNR=23
D03A Wishkah Elem. 87.27 326 ⇑P P **13 07 39.2 -0.1**
baz=88,SNR=9.1
CMW Cultus Mountai 87.32 327 P P **13 07 38.5 -1.0**
EQES Quesada 87.36 46 P P **13 07 40.1 +0.2**
comp=Z,78nm,1.4s,mb5.5
ECAL Calabor 87.47 41 P P **13 07 42.6 +2.3**
comp=Z,142nm,1.6s,mb5.7
A06A Chilliwack 87.47 328 ⇑P P **13 07 39.0 -1.2**
baz=88,SNR=6.4
NLWA Neilton Lookou 87.50 326 *e*P P **13 07 39.9 -0.4**
comp=Z,105nm,1.2s,mb5.7
NLWA Neilton Lookou 87.50 326 ⇓P P **13 07 40.0 -0.3**
baz=88,SNR=25
PAB San Pablo 87.53 44 *e*P P **13 07 41.4 +0.8**
comp=Z,47nm,1.1s,mb5.4
PAB *e*pP pP 13 08 11.4 -0.1
PAB San Pablo 87.53 44 *e*P P **13 07 41.4 +0.7**
PAB *e**PP pP 13 08 11.4 0.0
PAB pmax pmax
comp=Z,47nm,1.1s,mb5.4
A05A Maple Falls 87.70 328 ⇑P P **13 07 40.2 -1.0**
baz=88,SNR=50
B04A Port Angeles 87.76 327 ⇑P P **13 07 41.3 -0.2**
baz=88,SNR=6.4
A04A Legoe Bay, Lum 87.81 327 ⇑P P **13 07 41.0 -0.7**
baz=88,SNR=8.7
ESDC Sonseca Array 87.85 44 P P **13 07 43.6 +1.4**
comp=Z,6.5nm,0.8s,mb4.7,baz=251,slow=4.4,SNR=13
ESDC LR LR 13 46 45.3
comp=Z,440nm,20.2s,baz=235,slow=35
ESDC Sonseca Array 87.85 44 P P **13 07 42.8 +0.6**
comp=Z,0.2nm,0.2s
ESLA Sonseca Array 87.85 44 *e*P P **13 07 43.7 +1.5**
comp=Z,2.8nm,0.8s,mb4.3
PGC Sidney 88.13 327 *e*P P **13 07 42.7 -0.5**
comp=Z,167nm,1.0s,mb6.0
EVIA Vianos 88.20 46 P P **13 07 44.8 +0.9**
comp=Z,24nm,1.0s,mb5.2
EVIA Vianos 88.20 46 P P **13 07 44.8 +0.9**
EVIA pmax pmax
comp=Z,24nm,1.0s,mb5.2
C03A Quillayute Air 88.22 326 ⇓P P **13 07 43.7 0.0**
baz=88
GUD Guadarrama 88.29 43 P P **13 07 44.8 +0.6**
comp=Z,4.0nm,0.6s,mb4.6
GUD Guadarrama 88.29 43 P P **13 07 44.8 +0.6**
GUD pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ETOB Tobarra 88.83 46 P P **13 07 47.7 +0.9**
comp=Z,50nm,1.1s,mb5.5
CASY Casy 89.19 180 *e*P P **13 07 47.6 -0.6**
comp=Z,153nm,0.9s,mb6.0
LSZ Lusaka 89.48 106 ⇓P P **13 07 53.6 +3.1**
SNR=14
LSZ Lusaka 89.48 106 *e*P P **13 07 53.4 +2.9**
comp=Z,91nm,1.1s,mb5.7
LSZ *e*pP pP 13 08 22.2 +0.8
LSZ Lusaka 89.48 106 *e*P P **13 07 53.4 +2.9**
LSZ pmax pmax
comp=Z,91nm,1.1s,mb5.7
ECHE Chera 89.72 46 P P **13 07 51.2 +0.3**
comp=Z,7.7nm,0.8s,mb4.9
ECHE Chera 89.72 46 P P **13 07 51.2 +0.2**
ECHE pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
XMAS Kiritimati 90.00 272 *e*P P **13 07 52.2 -0.8**
comp=Z,163nm,1.1s,mb6.1
ERTA Horta de San J 91.30 45 P P **13 07 59.8 +1.5**
comp=Z,71nm,1.2s,mb5.7
SJPF Ste Jean 91.48 42 *e*P P **13 07 58.2 -0.9**
comp=Z,25nm,0.8s,mb5.1
SJPF Ste Jean 91.48 42 *e*P P **13 07 58.2 -0.9**
comp=Z,12nm,0.8s,mb5.1
SJPF Ste Jean 91.48 42 *e*P P **13 07 58.2 -0.9**
SJPF pmax pmax
comp=Z,12nm,0.8s,mb5.1
ETSF Etsaut 91.77 43 *e*P P **13 07 59.5 -0.9**
comp=Z,16nm,0.6s,mb5.1
ETSF Etsaut 91.77 43 *e*P P **13 07 59.5 -0.9**
comp=Z,8.3nm,0.6s,mb5.1
ETSF Etsaut 91.77 43 *e*P P **13 07 59.5 -0.9**
ETSF pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
EBIE Bielsa 92.10 43 P P **13 08 03.0 +1.1**
comp=Z,34nm,0.9s,mb5.6
URZ Urewera 92.26 226 P P **13 08 03.6 +0.6**
comp=Z,11nm,0.9s,mb5.1,baz=354,slow=7.4,SNR=3.6
URZ LR LR 13 42 24.9
comp=Z,266nm,21.2s,baz=188,slow=31
RPZ Rata Peaks 92.73 219 P P **13 08 05.0 -0.1**
comp=Z,14nm,1.0s,mb5.2,baz=75,slow=2.4,SNR=5.5
RPZ LR LR 13 42 13.3
comp=Z,332nm,19.2s,baz=272,slow=31
QUIF Quistinic 93.01 38 *e*P P **13 08 04.5 -1.5**
ROSF Rostrenen 93.19 37 *e*P P **13 08 05.6 -1.2**
comp=Z,102nm,1.1s,mb5.8
ROSF Rostrenen 93.19 37 *e*P P **13 08 05.6 -1.2**
comp=Z,51nm,1.1s,mb5.8
ROSF Rostrenen 93.19 37 *e*P P **13 08 05.6 -1.2**
ROSF pmax pmax
comp=Z,51nm,1.1s,mb5.8
SGMF Saint Gilles 93.54 38 *e*P P **13 08 07.5 -0.9**
comp=Z,19nm,0.8s,mb5.2
SGMF Saint Gilles 93.54 38 *e*P P **13 08 07.5 -0.9**
comp=Z,9.4nm,0.8s,mb5.2
SGMF Saint Gilles 93.54 38 *e*P P **13 08 07.5 -0.9**
SGMF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
LFF La Frestale 93.66 42 *e*P P **13 08 07.8 -1.2**
MFF Saint Martin d 94.01 40 *e*P P **13 08 09.5 -1.1**
comp=Z,40nm,1.0s,mb5.4
MFF Saint Martin d 94.01 40 *e*P P **13 08 09.5 -1.1**
comp=Z,20nm,1.0s,mb5.4
MFF Saint Martin d 94.01 40 *e*P P **13 08 09.5 -1.1**
MFF pmax pmax
comp=Z,20nm,1.0s,mb5.4
YKA Yellowknife Ar 94.46 340 P P **13 08 11.4 -0.9**
comp=Z,34nm,0.8s,mb5.7,baz=137,slow=4.7,SNR=59
YKA LR LR 13 52 21.8
comp=Z,188nm,19.6s,baz=150,slow=36
YKA Yellowknife Ar 94.46 340 P P **13 08 11.4 -0.9**
YKA LR LR 13 52 21.8
YKA Yellowknife Ar 94.46 340 P P **13 08 11.4 -0.9**
YKA pmax pmax
comp=Z,34nm,0.8s
YKA MLR MLR
comp=Z,188nm,19.7s
GRR Gorron 94.56 38 *e*P P **13 08 11.6 -1.5**
comp=Z,52nm,1.0s,mb5.6
GRR Gorron 94.56 38 *e*P P **13 08 11.6 -1.5**
comp=Z,26nm,1.0s,mb5.6
GRR Gorron 94.56 38 *e*P P **13 08 11.6 -1.5**
GRR pmax pmax
comp=Z,26nm,1.0s,mb5.6
KEST Kesra 94.90 53 P P **13 08 14.8 -0.2**
comp=Z,4.3nm,0.9s,mb4.9,baz=253,slow=0.9,SNR=4.2
KEST LR LR 13 53 47.3
comp=Z,351nm,19.6s,baz=3.4,slow=37
LDF La Druitiere 95.08 38 *e*P P **13 08 14.1 -1.4**
comp=Z,22nm,0.8s,mb5.3
LDF La Druitiere 95.08 38 *e*P P **13 08 14.1 -1.4**
comp=Z,11nm,0.8s,mb5.3
LDF La Druitiere 95.08 38 *e*P P **13 08 14.1 -1.4**
LDF pmax pmax
comp=Z,11nm,0.8s,mb5.3
BGF Bois d'Agland 95.75 41 *e*P P **13 08 16.8 -1.8**
SMF Signal de Mont 96.39 41 *e*P P **13 08 20.2 -1.3**
comp=Z,11nm,0.7s,mb5.1
SMF Signal de Mont 96.39 41 *e*P P **13 08 20.2 -1.3**
comp=Z,5.4nm,0.7s,mb5.1
SMF Signal de Mont 96.39 41 *e*P P **13 08 20.2 -1.3**
SMF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
SSF Saint Saulge 96.40 41 *e*P P **13 08 20.6 -0.9**
comp=Z,10.0nm,0.8s,mb5.0
SSF Saint Saulge 96.40 41 *e*P P **13 08 20.6 -0.9**
comp=Z,5.0nm,0.8s,mb5.0
SSF Saint Saulge 96.40 41 *e*P P **13 08 20.6 -0.9**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LOR Lormes 96.71 41 *e*P P **13 08 21.2 -1.7**
comp=Z,19nm,1.0s,mb5.2
LOR *e*MLR MLR
comp=Z,473nm,20.5s
LOR Lormes 96.71 41 *e*P P **13 08 21.2 -1.7**
comp=Z,9.3nm,1.0s,mb5.2
LOR LR LR
comp=Z,470nm,20.5s
LOR Lormes 96.71 41 *e*P P **13 08 21.2 -1.7**
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
LOR MLR MLR
comp=Z,470nm,20.5s
ORIF Oris-en-Rattie 96.81 44 *e*P P **13 08 22.7 -0.7**
comp=Z,34nm,1.0s,mb5.4
ORIF *e*MLR MLR
comp=Z,624nm,23.0s
ORIF Oris-en-Rattie 96.81 44 *e*P P **13 08 22.7 -0.7**
comp=Z,17nm,1.0s,mb5.4
ORIF Oris-en-Rattie 96.81 44 *e*P P **13 08 22.7 -0.7**
ORIF pmax pmax
comp=Z,17nm,1.0s,mb5.4
DLBC Dease Lake 97.35 332 P P **13 08 25.4 -0.1**
comp=Z,15nm,0.9s,mb5.4,baz=151,slow=5.8,SNR=12
DLBC Dease Lake 97.35 332 *e*P P **13 08 25.0 -0.6**
LPL La Plagne 97.62 43 *e*P P **13 08 26.6 -0.5**
LPG La Plagne 97.62 43 *e*P P **13 08 26.8 -0.3**
comp=Z,17nm,0.8s,mb5.3
LPG La Plagne 97.62 43 *e*P P **13 08 26.8 -0.3**
comp=Z,8.5nm,0.8s,mb5.3
LPG La Plagne 97.62 43 *e*P P **13 08 26.8 -0.3**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb5.3
WLF Walferdange 99.19 39 *e*SP SP 13 21 26.8 +4.5
SUMG Summit 99.25 9 *e*P P **13 08 34.8 +1.1**
comp=Z,5.3nm,1.1s,mb5.0
CDF Champ du Feu 99.28 41 *e*P 13 08 33.0
comp=Z,9.4nm,0.8s
CDF Champ du Feu 99.28 41 *e*P 13 08 33.0
comp=Z,4.7nm,0.8s
CDF Champ du Feu 99.28 41 *e*P 13 08 33.0
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
BFO Black Forest 99.87 41 *e*SP SP 13 21 33.5 +3.9
STU Stuttgart 100.58 41 *e*SP SP 13 21 40.6 +3.4
BUG Bochum--Univer 100.63 38 *e*SP SP 13 21 42.6 +5.0
TNS Taunus Mts 100.77 40 *e*SP SP 13 21 44.3 +5.2
IBBN Ibbenburen 101.29 37 *e*SP SP 13 21 49.3 +4.7
FUR Furstenfeldbru 101.58 42 *e*SP SP 13 21 49.9 +2.0
UBBA Unterbreizbach 101.92 39 *e*SP SP 13 21 56.1 +4.7
GRF Grafenberg Arr 102.17 41 *e*PP PP 13 12 59.9 -1.1
*e*SP SP 13 21 57.4 +3.3
RJOB Jochberg 102.35 43 *e*SP SP 13 21 57.5 +1.5
LJU Ljubljana 102.78 45 *e*PP PP 13 13 05.4 -0.3
MOX Moxa 102.79 40 *e*SP SP 13 22 04.9 +4.4
ROTZ Rotzenmuhle 102.79 41 *e*SP SP 13 22 04.1 +3.5
MANZ Manzenberg 102.81 41 *e*SP SP 13 22 04.4 +3.5
MOZS Mozjanca 102.83 45 *e*PP PP 13 13 05.5 -0.5
WET Wettzell 102.95 42 *e*SP SP 13 22 04.5 +2.2
NKC Novy Kostel 103.11 41 *e*SP SP 13 22 07.4 +3.4
NKC AMS AMS 13 53 00.0
comp=Z,500nm,14.2s
TANN Tannenbergstha 103.19 40 *e*SP SP 13 22 08.6 +3.8
GEC2 GERESS Array S 103.33 42 *e*SP SP 13 22 07.4 +1.0
KHC Kasperske Hory 103.37 42 *e*PP PP 13 13 08.0 -2.0
KHC *e*SP SP 13 22 09.0 +2.3
KHC *e*SS SS 13 27 53.8 +8.9
KHC AMS AMS 13 55 20.0
comp=Z,300nm,19.9s
BSEG Bad Segeberg 103.37 37 *e*SP SP 13 22 09.1 +2.6
GROS Grobnik 103.57 45 *e*PP PP 13 13 10.4 -1.2
CLL Collm 103.85 40 *e*SP SP 13 22 15.5 +3.8
CLL Collm 103.85 40 *e*PP PP 13 13 13.0 -0.5
CLL *e*SKSac SKSac 13 19 26.0 +2.9
CLL *e*SKKSac SKKSac 13 20 05.0 -1.2
CLL *e*Sdif Sdif 13 20 38.0 +3.7
CLL *e*SP SP 13 22 07.0 -4.7
CLL *e*(PPS) 13 23 12.0
CLL *e*pPPS 13 23 42.0
CLL *e*SS SS 13 28 05.0 +14
CLL LmV 13 54 00.0
comp=Z,300nm,20.7s
INK Inuvik 104.21 340 *e*Pdif Pdif 13 08 54.9 -1.6
comp=Z,594nm,1.2s
INK Inuvik 104.21 340 *e*P Pdif 13 08 54.9 -1.6

INK pmax pmax
comp=Z,594nm,1.2s
BRG Berggiesshubel 104.24 40 *e*SP SP 13 22 19.3 +3.5
PRU Pruhonice 104.27 41 *e*SP SP 13 22 19.4 +3.3
PRU *e*SS SS 13 28 03.0 +5.8
PRU AMS AMS 13 53 50.0
comp=Z,300nm,17.9s
PVCC Panska Ves 104.48 41 *e*SP SP 13 22 10.5 -7.8
PVCC AMS AMS 13 54 00.0
comp=Z,400nm,14.9s
TREC Trest 104.59 42 *e*SP SP 13 22 23.4 +3.9
DPC Dobruska-Polom 105.47 41 *e*SP SP 13 22 31.4 +2.8
DPC AMS AMS 13 54 30.0
comp=Z,300nm,14.4s
OKC Ostrava-Krasne 106.40 42 *e*SP SP 13 22 45.7 +7.5
OKC AMS AMS 13 57 00.0
NOA NORSAR Array B 106.54 30 PKKP PKKPab 13 24 50.6 +0.1
comp=Z,1.6nm,0.9s,baz=66,slow=4.5,SNR=3.6
BZS Buzias 107.29 47⇓ *i*P PKiKP 13 13 19.7 +1.3
HFS Hagfors 107.37 31 PKKP PKKPab 13 24 46.8 -0.1
comp=Z,5.1nm,1.0s,baz=131,slow=6.1,SNR=4.3
COLA College 107.85 334 *e*P Pdif 13 09 11.0 -1.7
comp=Z,7.5nm,1.0s
COLA College 107.85 334 *e*P Pdif 13 09 11.0 -1.7
COLA pmax pmax
comp=Z,7.0nm,1.0s
DRGR 108.37 46⇓ *i*P PKiKP 13 13 20.7 +0.4
DRGR 108.37 46⇓ *i*P PKiKP 13 13 20.7 +0.3
TRPA Tarpa 108.64 45⇑ *i*P PKiKP 13 13 21.6 +0.8
BUR08 Bucovina Ar. S 110.23 46 *e*PKPdf PKiKP 13 13 24.4 +0.5
BURAR Bucovina Array 110.24 46⇓ *i*P PKiKP 13 13 25.0 +1.1
BURAR Bucovina Array 110.24 46⇓ *i*P PKiKP 13 13 25.0 +1.1
PLOR Plostina 110.74 48⇓ *i*P PKiKP 13 13 25.1 +0.2
VRI Vrincioaia 110.80 48⇑ P PKiKP 13 13 25.3 +0.3
VRI Vrincioaia 110.80 48⇑ *i*P PKiKP 13 13 25.3 +0.3
HARR Harsova 111.33 50⇓ *i*P PKiKP 13 13 27.1 +1.1
HARR Harsova 111.33 50⇓ *i*P PKiKP 13 13 27.1 +1.1
TIRR Tirgusor 111.61 50⇓ P PKiKP 13 13 27.1 +0.6
TIRR Tirgusor 111.61 50⇓ *i*P PKiKP 13 13 27.1 +0.5
TLCR 112.06 49⇓ P PKiKP 13 13 27.6 +0.2
TLCR 112.06 49⇓ *i*P PKiKP 13 13 27.6 +0.2
KIEV Kiev 113.48 43 *e*PKPdf PKiKP 13 13 28.9 -1.0
KIEV *e*PP PP 13 14 23.2 -0.2
KIEV *e*SKPdf SKPdf 13 16 57.8 +3.4
AKASG Malin Array Be 113.49 43 PKiKP PKiKP 13 13 29.6 -0.3
comp=Z,4.6nm,0.5s,baz=275,slow=2.7,SNR=24
AKASG PP PP 13 14 23.4 -0.1
comp=Z,5.9nm,0.8s,baz=254,slow=7.7,SNR=9.0
AKASG PKKPbc PKKPbc 13 24 13.6 -2.1
comp=Z,0.7nm,0.4s,baz=79,slow=2.5,SNR=4.3
AKASG Malin Array Be 113.49 43 *i* PKIKP PKiKP 13 13 29.6 -0.3
AKASG 13 14 23.4
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 113.49 43 *e*PKPdf PKiKP 13 13 29.3 -0.6
AKBB *e*PP PP 13 14 22.8 -0.7
AKBB *e*SKPdf SKPdf 13 16 58.5 +4.1
ARCES ARCESS Array B 114.35 23 PKKPbc PKKPbc 13 24 09.8 -3.5
comp=Z,6.1nm,0.9s,baz=73,slow=4.1,SNR=9.1
STKA Stephens Creek 116.77 208 PKP PKPdf 13 13 36.0 -1.0
comp=Z,8.0nm,1.0s,baz=340,slow=2.8,SNR=9.2
STKA PKKPbc PKKPbc 13 24 03.4 -0.6
comp=Z,2.7nm,0.7s,baz=339,slow=7.0,SNR=7.7
APA Apatity 117.17 25 *e*PKIKP PKPdf 13 13 45.8 +9.3
APA pmax pmax
comp=Z,25nm,1.2s
ANN Anapa 117.99 51 *i* PKIKP PKPdf 13 13 39.3 +0.5
ANN *e* 13 14 55.5
ANN *e*PPP 13 17 26.4
ANN pmax pmax
comp=Z,108nm,1.9s
OBN Obninsk 118.44 39 *e*PKPdf PKPdf 13 13 39.5 +0.2
OBN Obninsk 118.44 39⇑ *i*PKIKP PKPdf 13 13 39.5 +0.2
OBN *e* 13 14 11.1
OBN *e* 13 15 06.6
OBN pmax pmax
comp=Z,36nm,0.8s
OBN MLR MLR
comp=Z,200nm,18.0s
MOS Moscow 119.07 38 *e*PKIKP PKPdf 13 13 40.4 -0.1
MOS pmax pmax
comp=Z,55nm,1.1s
SOC Sochi 119.46 52 *i* PKIKP PKPdf 13 13 42.1 +0.4
SOC *e* 13 15 05.2
SOC *e*PPP 13 17 43.2
SOC *e*PS PS 13 24 35.6 -20
SOC *e*SSS 13 35 49.8
VSR Storozhevoye 119.79 44 *e*PKIKP PKPdf 13 13 42.1 +0.1
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s
VORD Divnogorie 119.85 44 *e*PKIKP PKPdf 13 13 42.0 -0.2
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.4s
KLMR Klimovskoe 120.04 33 *e*PKIKP PKPdf 13 13 42.1 -0.1
KIV Kislovodsk 121.64 52 *e*PKPdf PKPdf 13 13 46.0 +0.2
KIV Kislovodsk 121.64 52 *i* PKIKP PKPdf 13 13 46.4 +0.6
KIV *e* 13 15 18.5
KIV *e* 13 20 29.0
KIV *e*PS PS 13 25 16.7 +1.9
KIV *e*SS SS 13 31 51.6 +4.4
KIV pmax pmax
comp=Z,50nm,1.1s
KIV Kislovodsk 121.64 52⇑ *i*P PKPdf 13 13 46.7 +0.9
NWAO Narrogin (SRO) 122.33 186 PKP PKPdf 13 13 47.0 -0.7
comp=Z,12nm,0.8s,baz=201,slow=4.5,SNR=11
NWAO Narrogin (SRO) 122.33 186 PKIKP PKPdf 13 13 47.0 -0.7
NWAO pmax pmax
comp=Z,12nm,0.8s
FORT Forrest 122.52 197 *e*PKPdf PKPdf 13 13 45.7 -2.4
GNI Garni 122.79 57 PKP PKPdf 13 13 49.6 +1.4
comp=Z,19nm,0.7s,baz=214,slow=1.8,SNR=6.0
GNI Garni 122.79 57 PKIKP PKPdf 13 13 49.6 +1.4
GNI pmax pmax
comp=Z,19nm,0.7s
NAY Al-Naaiem 123.11 70 *e*P PKPdf 13 13 48.8 -0.4
baz=70
NAY AMb AMB 13 13 54.5
comp=Z,32nm,2.1s,baz=70
MIB Mutribah 123.31 70 *e*P PKPdf 13 13 49.5 0.0
baz=69
MIB AMb AMB 13 13 50.5
comp=Z,37nm,0.7s,baz=69
RDF Al-Radifah 123.31 71 *e*P PKPdf 13 13 49.5 -0.1
baz=70
RDF AMb AMB 13 13 50.7
comp=Z,65nm,1.2s,baz=70
UMR Umm Al-Rimmam 123.58 70 *e*P PKPdf 13 13 49.8 -0.2
baz=70
UMR AMb AMB 13 13 51.5
comp=Z,93nm,0.8s,baz=70
CTAO Charters Tower 124.08 220 *e*PKPdf PKPdf 13 13 50.5 -0.9
CTAO Charters Tower 124.08 220 P PKPdf 13 13 51.9 +0.6
BILL Bilibino 125.77 338 *i* PKP PKPdf 13 13 54.2 +1.2
BILL Bilibino 125.77 338 *i* PKIKP PKPdf 13 13 54.1 +1.1
BILL *e* 13 15 45.8
BILL *e* 13 20 46.5
BILL *e*PS PS 13 25 51.4 +1.1
WHFO Wadi Hawf 126.02 85⇓ P PKPdf 13 13 55.7 +0.7
SNR=5.5
ASAR Alice Springs 127.19 206 PKP PKPdf 13 13 55.6 -1.6
comp=Z,41nm,0.7s,baz=134,slow=1.8,SNR=200
ASAR PKKP 13 24 10.0
comp=Z,0.2nm,0.3s,baz=342,slow=1.8,SNR=4.3
SOKR Solikamsk 128.73 32*c* *i*PKIKP PKPdf 13 14 00.4 +1.5
SOKR pmax pmax
comp=Z,40nm,1.0s
HATD Hatta, Dubai 129.95 78 P PKPdf 13 14 03.8 +1.5
SNR=6.1
ARQ Aragi 129.96 80 P PKPdf 13 14 02.6 +0.2
SNR=5.7
WB2 Warramunga Arr 130.32 208 *e*PKPdf PKPdf 13 14 01.7 -1.5
WB2 *e*SKPbc SKPbc 13 17 16.6 +1.1
BANOM Banah 130.32 76⇓ P PKPdf 13 14 03.7 +0.7
SNR=5.2
WRA Warramunga Arr 130.32 208 PKP PKPdf 13 14 01.9 -1.3
comp=Z,61nm,1.0s,baz=159,slow=1.6,SNR=113
WRA SKPbc SKPbc 13 17 14.9 -0.6
comp=Z,5.1nm,1.0s,baz=153,slow=3.7,SNR=6.7
WRA Warramunga Arr 130.32 208 PKIKP PKPdf 13 14 01.9 -1.4
WRA pmax pmax
comp=Z,61nm,1.0s
WRA pmax pmax
comp=N,5.0nm,1.0s
WRAB Tennant Creek 130.32 208 *e*PKPdf PKPdf 13 14 01.5 -1.8
WRAB *e*SKPbc SKPbc 13 17 16.9 +1.3
BSY Bisya 130.43 81 P PKPdf 13 14 03.4 +0.1
SNR=11
ARU Arti 130.57 36 *e*PKPdf PKPdf 13 14 02.8 +0.3
ARU *e*SKPbc SKPbc 13 17 17.6 +2.4
ARU Arti 130.57 36 *i* PKIKP PKPdf 13 14 03.4 +0.9
ARU 13 16 18.8
ARU SS SS 13 33 27.2 -11
COEN Coen 130.68 222 *e*PKPdf PKPdf 13 14 03.0 -1.1
COEN Coen 130.68 222 P PKPdf 13 14 05.1 +1.1
JMDO Jabal Madar 131.15 81⇑ P PKPdf 13 14 05.4 +0.7
SNR=7.0
SMDO Samad 131.26 80 P PKPdf 13 14 05.1 +0.2
SNR=18
BIDO Bidbid 131.44 80 P PKPdf 13 14 05.8 +0.6
SNR=8.3
SVE Sverdlovsk 131.54 35 *e*PKIKP PKPdf 13 14 05.4 +1.1
SVE pmax pmax
comp=Z,38nm,1.4s
AKTK Aktyubinsk 131.74 44 PKP PKPdf 13 14 05.7 +0.7
AKTK SKPbc SKPbc 13 17 21.8 +2.1
AKTO Aktyubinsk 131.74 44 PKP PKPdf 13 14 05.7 +0.7
comp=Z,20nm,1.1s,baz=328,slow=1.0,SNR=21
AKTO SKPbc SKPbc 13 17 21.8 +2.1
comp=Z,27nm,1.0s,baz=279,slow=2.7,SNR=12
AKTO Aktyubinsk 131.74 44 PKIKP PKPdf 13 14 05.7 +0.8
AKTO pmax pmax
comp=Z,20nm,1.1s
AKTO pmax pmax
comp=N,27nm,1.0s
WBK Wadi Bani Khal 131.99 81 P PKPdf 13 14 07.1 +0.9
SNR=17
TIXI Tiksi 132.13 353 *i* PKP PKPdf 13 14 03.9 -1.2
TIXI Tiksi 132.13 353 *i* PKIKP PKPdf 13 14 03.4 -1.7
TIXI pmax pmax
comp=Z,35nm,1.0s
AB31 Akbulak array 133.20 45 PKIKP PKPdf 13 14 07.8 +0.1
AB31 pmax pmax
comp=Z,62nm,1.2s
SEY Seymchan 133.32 336⇑ *e*PKIKP PKPdf 13 14 08.3 +0.8
MBWA Marble Bar 133.63 190 *e*PKPdf PKPdf 13 14 08.1 -1.3
MBWA Marble Bar 133.63 190 P PKPdf 13 14 09.0 -0.5
PETK Petropavlovsk- 135.48 322 PKhKP 13 14 04.3
comp=Z,16nm,1.0s,baz=74,slow=3.0,SNR=7.4
PETK PKP PKPdf 13 14 12.8 +0.9
comp=Z,24nm,0.7s,baz=71,slow=2.8,SNR=29
PETK SKPbc SKPbc 13 17 33.7 +1.5
comp=Z,8.0nm,0.8s,baz=99,slow=4.9,SNR=4.1
PETK Petropavlovsk- 135.48 322 PKP PKPdf 13 14 12.8 +0.9
PETK SKPbc SKPbc 13 17 33.7 +1.5
BRVK Borovoye 138.12 37⇑ P PKPdf 13 14 16.6 -0.2
SNR=11
BRVK Borovoye 138.12 37 *e*PKPdf PKPdf 13 14 17.0 +0.3
BRVK *e*SKPbc SKPbc 13 17 42.8 +2.8
BVA0 Borovoye Array 138.20 37 *i* PKIKP PKPdf 13 14 17.7 +0.8
BVA0 pmax pmax
comp=Z,8.0nm,1.2s
BVAR Borovoye Array 138.20 37 PKP PKPdf 13 14 17.7 +0.8
comp=Z,26nm,0.8s,baz=283,slow=1.9,SNR=34
BVAR SKP 13 17 43.7
comp=Z,7.0nm,0.9s,baz=274,slow=5.8,SNR=7.3
BVAR Borovoye Array 138.20 37 PKIKP PKPdf 13 14 17.7 +0.8
BVAR pmax pmax
comp=Z,26nm,0.8s
BVAR pmax pmax
comp=N,7.0nm,0.9s
YAK Yakutsk 140.84 347 *i* PKP PKPdf 13 14 21.1 -0.3
YAK Yakutsk 140.84 347 *e*PKHKP 13 14 14.1
YAK pmax pmax
comp=Z,70nm,0.9s
KK31 Karatay Array 141.78 51 *i* PKHKP 13 14 18.4
KK31 pmax pmax
comp=Z,2.0nm,0.5s
TRD Trivandrum 143.19 110 *e*P PKPdf 13 14 26.3 -0.8
BATI Baumata 143.26 200 PKP PKPdf 13 14 24.1 -3.2
comp=Z,46nm,0.8s,baz=211,slow=3.6,SNR=5.1
BATI Baumata 143.26 200 P PKPdf 13 14 31.3 +4.0
NVS Novosibirsk 143.41 27 *e*PKIKP PKPdf 13 14 23.1 -3.1
NVS *e* 13 17 48.0
NVS pmax pmax
comp=Z,390nm,2.7s
NVS pmax pmax
comp=E,68nm,2.0s
TLE Tual 143.41 217 P PKPdf 13 14 29.6 +2.0
GOA Goa 143.43 97 AMS AMS 13 49 56.3
comp=Z,504nm,14.3s
KURK Kurchatov 143.77 36⇑ P PKPdf 13 14 26.8 -0.2
SNR=36
KURK Kurchatov 143.77 36 PKP PKPdf 13 14 25.7 -1.3
comp=Z,60nm,0.7s,baz=305,slow=3.5,SNR=181
KURK SKPbc SKPbc 13 17 57.6 +2.9
comp=Z,14nm,1.0s,baz=322,slow=3.6,SNR=7.5
KURK Kurchatov 143.77 36 *e*PKPdf PKPdf 13 14 25.4 -1.6
KURK Kurchatov 143.77 36 PKIKP PKPdf 13 14 25.7 -1.3
KURK pmax pmax
comp=Z,60nm,0.7s
KURK pmax pmax
comp=N,14nm,1.0s
EKS2 Erkin-Say 144.21 51 *e*PKPdf PKPdf 13 14 27.8 -0.2
EKS2 *e* 13 17 47.8
EKS2 Erkin-Say 144.21 51 P PKPdf 13 14 27.9 -0.1
SNR=72
AML Almayashu 144.31 52 P PKPdf 13 14 28.2 0.0
SNR=26
KAD Karad 144.36 95 *e*P PKPdf 13 14 26.6 -2.4
POO Poona 144.43 93 *e*P PKPdf 13 14 28.0 -1.1
XMIS Christmas Isla 144.44 170 *e*PKPdf PKPdf 13 14 27.4 -1.9
KOD Kodaikanal 144.47 108 *e*P PKPdf 13 14 28.4 -0.9
USP Ospenovka 144.52 49 P PKPdf 13 14 28.1 -0.4
SNR=42
ZAA0 Zalesovo Array 144.70 27 *e*PKPdf PKPdf 13 14 28.2 -0.3
ZAA0 *ep*PKPdf pPKPdf 13 14 58.8 -1.9
ZAA0 *e*SKPbc SKPbc 13 17 57.9 +1.0
ZALV Zalesovo Beam 144.70 27 PKP PKPdf 13 14 28.2 -0.3
comp=N,311nm,0.6s,baz=316,slow=4.1,SNR=823
ZALV SKPbc SKPbc 13 17 59.4 +2.6
comp=N,61nm,1.0s,baz=298,slow=3.2,SNR=10
ZALV Zalesovo Beam 144.70 27 PKP PKPdf 13 14 28.2 -0.3
ZALV SKPbc SKPbc 13 17 59.4 +2.6
ZALV Zalesovo Beam 144.70 27 PKIKP PKPdf 13 14 28.2 -0.3
ZALV pmax pmax
comp=Z,311nm,0.6s
ZALV pmax pmax
comp=N,61nm,1.0s
AAK Ala-Archa 144.72 50 P PKPdf 13 14 29.9 +0.9
SNR=174
FRU Bishkek 144.74 50⇓ *i*PKIKP PKPdf 13 14 28.0 -0.9
FRU *i* 13 14 59.0
FRU pmax pmax
comp=Z,440nm,2.0s
CHMS Chumysh 144.78 50 P PKPdf 13 14 29.6 +0.6
SNR=43
UCH Uchtor 144.86 51 P PKPdf 13 14 30.8 +1.7
SNR=20
KBK Karagaybulak 145.03 50 P PKPbc 13 14 30.8 +1.7
SNR=165
TKM2 Tokmak 2 145.39 50 *e*PKPdf PKPdf 13 14 31.0 +1.0
TKM2 *ep*PKPdf pPKPdf 13 15 01.8 -0.5
TKM2 *es*PKPdf 13 15 18.0
TKM2 Tokmak 2 145.39 50 P PKPdf 13 14 31.1 +1.0
SNR=41
KZA Kyzart 145.43 51 P PKPdf 13 14 33.0 +2.9
SNR=11
ULHL Ulahol 146.07 50 P PKPab 13 14 35.0 +1.9
SNR=5.4
IGBI Denpasar 146.40 186 P PKPab 13 14 34.7 -0.4
CLNS Chul'man 146.59 347 *e*PKP2 PKPab 13 14 32.1 -2.5
CLNS pmax pmax
comp=Z,96nm,1.0s
CLNS pmax pmax
comp=N,34nm,1.1s
CLNS pmax pmax
comp=E,44nm,1.1s
KSH Kashi 146.69 55 PKP PKPdf 13 14 34.5 +2.1
KSH *e*XPKP 13 15 12.0
KSH *e*PKS 13 18 09.1
KSH PP PP
comp=Z,3μm,5.3s
KSH LR LR
comp=N,957nm,4.4s
KSH LR LR
comp=E,580nm,6.9s
KSH LR LR
comp=Z,722nm,4.4s
AJM Ajmer 146.69 79 *e*P PKPdf 13 14 31.9 -0.9
GUMO Guam 146.77 257 PKPbc PKPbc 13 14 33.1 -2.0
comp=Z,271nm,0.6s,baz=159,slow=6.6,SNR=13
GUMO Guam 146.77 257 *e*PKPbc PKPbc 13 14 33.8 -1.3
GUMO Guam 146.77 257 PKIKP PKPdf 13 14 33.1 -0.1
GUMO pmax pmax
comp=Z,271nm,0.6s
GUMO Guam 146.77 257 P PKPdf 13 14 34.5 +1.3
KHKI Kahang-Kahang 146.79 187 P PKPdf 13 14 35.0 +1.6
YSS Yuzh-Sakhalins 146.82 320 *e*PKPdf PKPdf 13 14 32.4 +0.1
YSS *ep*PKPdf pPKPdf 13 15 04.4 -0.2
YSS Yuzh-Sakhalins 146.82 320⇑ *i*PKIKP PKPdf 13 14 32.0 -0.3
YSS pmax pmax
comp=Z,210nm,1.0s
BOD Bodaibo 146.98 358 *e*PKIKP PKPdf 13 14 31.3 -1.0
BOD pmax pmax
comp=Z,289nm,1.9s
KRKI Karangkates 147.22 182 P PKPab 13 14 37.7 -0.6
AAI Ambon 147.41 212 P PKPdf 13 14 34.2 -0.2
SJI Sawahan 147.65 180 P PKPdf 13 14 37.1 +2.3
THN Thein Dam 147.69 68 *e*P PKPdf 13 14 33.3 -1.0
AKL Akola 147.88 90 *e*P PKPdf 13 14 35.9 +1.0
AKL AMS AMS 13 50 19.6
comp=Z,623nm,20.4s
DLH Dalhousie 147.90 68 *e*P PKPdf 13 14 36.0 +1.4
MK31 Makanchi Array 147.95 39 *e*PKPdf PKPdf 13 14 34.6 +0.4
MK31 *e*PKPbc PKPbc 13 14 38.2 +0.7
MK31 *ep*PKPdf pPKPdf 13 15 08.0 +1.5
MKAR Makanchi Array 147.95 39 PKPbc PKPbc 13 14 37.8 +0.3
comp=Z,176nm,0.8s,baz=321,slow=2.0,SNR=165
MKAR Makanchi Array 147.95 39 PKP2 PKPbc 13 14 37.8 +0.4
MKAR pmax pmax
comp=Z,176nm,0.8s
BJII Banjamegara 147.99 176 P PKPab 13 14 41.4 0.0
KMMI Kalianget 148.25 184 P PKPbc 13 14 39.5 +0.3
ASAJ Asahikawa 148.29 315 PKPbc PKPbc 13 14 37.9 -0.6
comp=Z,134nm,1.0s,baz=270,slow=6.1,SNR=34
ASAJ Asahikawa 148.29 315 PKP2 PKPbc 13 14 37.9 -0.5
ASAJ pmax pmax
comp=Z,135nm,1.0s
LEM Lembang 148.31 172 P PKPdf 13 14 36.9 +1.0
SMRI Semarang 148.31 178 P PKPbc 13 14 39.2 -0.2
HYB Hyderabad 148.34 97 *e*P PKPdf 13 14 36.0 +0.3
HYB Hyderabad 148.34 97 *i* PKP PKPdf 13 14 36.0 +0.3
HYB *e*PKPAB PKPab 13 14 43.0 +0.2
HYB *e* 13 15 18.0
RTK Rohtak 148.40 74 *e*P PKPdf 13 14 36.4 +0.8
KUDL Kundal 148.44 76 *e*P PKPdf 13 14 36.0 +0.3
DBJI Dramaga 148.46 171 P PKPbc 13 14 39.3 -0.5
CBJI Citeko 148.61 171 P PKPdf 13 14 36.7 +0.3
JCJI Jatiwangi 148.71 174 P PKPbc 13 14 40.4 0.0
BHPL Bhopal 148.77 86 *e*P PKPdf 13 14 34.9 -1.5
ERM Erimo 148.82 311 *e*PKPbc PKPbc 13 14 39.9 +0.1
SONA Sohna 148.97 76 *e*P PKPdf 13 14 36.4 -0.1
SMLA Simla 149.01 70 *i* P PKPdf 13 14 37.1 +0.6
SMLA *i* x x 13 14 57.6
AYAN Aya Nagar 149.02 76 *e*P PKPdf 13 14 36.8 +0.2
NDI New Delhi 149.10 75 *e*P PKPdf 13 14 36.0 -0.7
KAPI Kappang 149.31 196 P PKPbc 13 14 41.9 0.0
SNR=19
KAPI Kappang 149.31 196 PKPbc PKPbc 13 14 39.8 -2.1
comp=Z,85nm,0.9s,baz=238,slow=3.5,SNR=7.5
KAPI Kappang 149.31 196 *e*PKPdf PKPdf 13 14 36.2 -1.3
KAPI *e*PKPbc PKPbc 13 14 40.2 -1.7
KAPI *e*PKPab PKPab 13 14 46.2 -0.5
KAPI *ep*PKPdf pPKPdf 13 15 10.1 +0.3
KAPI Kappang 149.31 196 P PKPdf 13 14 38.0 +0.5
KDI Kendari 149.47 202 P PKPdf 13 14 38.5 +0.7
AGRA Agra 149.69 78 *e*P PKPdf 13 14 37.8 +0.2
KLI Kotabumi 149.78 167 P PKPbc 13 14 42.4 -0.7
DDI Dehra Dun 149.81 72 *e*P PKPdf 13 14 35.8 -2.0
DDI *ex* x 13 18 18.3
NGP Nagpur 149.83 90 *e*P PKPdf 13 14 36.9 -1.2
HABR Khabarovsk 150.05 328 *e*PKHKP 13 14 37.8
HABR *e* 13 18 11.8
HABR *e* 13 21 33.4
HABR *e*SS SS 13 37 24.1 -0.6
HABR *e*SSS 13 43 06.0
KSI Kapahiang 150.37 162 P PKPbc 13 14 43.7 -0.8
LBMI Labuha 150.39 214 P PKPbc 13 14 44.8 +0.2
KALG Kalgarh 150.44 74 *ex* x 13 14 31.8
KLR Kul'dur 150.99 332 *e*PKIKP PKPdf 13 14 36.0 -3.0
PTH Pithoragarh 151.72 73 *ex* x 13 14 47.6
PTH *ex* x 13 16 38.6
BBKI Banjar Baru 151.72 187 P PKPbc 13 14 47.6 0.0
LGTI Lohaghat 151.75 74 *e*P PKPdf 13 14 37.2 -3.6
LGTI *ex* x 13 18 26.5
MOY Mondy 151.98 14 *e*PKIKP PKPdf 13 14 41.8 +1.4
MOY pmax pmax
comp=Z,19nm,2.1s
IRK Irkutsk 152.05 10 *e*PKIKP PKPdf 13 14 39.4 -1.1
IRK *e* 13 14 54.6
IRK pmax pmax
comp=Z,112nm,1.7s
PDSI Padang 152.23 155 P PKPdf 13 14 42.3 +0.3
TPI Tanjungpandan 152.32 171 P PKPbc 13 14 48.8 -0.2
CBIJ Chichi jima 152.46 281 PKPbc PKPbc 13 14 47.5 -1.5
comp=Z,112nm,0.7s,baz=104,slow=11,SNR=7.9
TLY Talaya 152.49 11 *e*PKPbc PKPbc 13 14 49.2 +1.0
TLY Talaya 152.49 11 *e*PKIKP PKPdf 13 14 35.3 -5.9
TLY *i* 13 14 42.6
TLY pmax pmax
comp=Z,12nm,1.0s
TLY pmax pmax
comp=Z,48nm,1.3s
PPI Padang Panjang 152.62 155 P PKPdf 13 14 42.8 +0.2
PBKI Pangkalan Bun 152.64 180 P PKPbc 13 14 50.9 +1.2
PPBI Pangkal Pinang 152.66 168 P PKPbc 13 14 48.9 -0.9
VIS Vishakhapatnam 152.74 99 *e*P PKPdf 13 14 40.7 -1.8
WMQ Urumqi 152.78 40 PKP PKPdf 13 14 42.0 +0.2
WMQ PP PP 13 18 36.0 +2.4
WMQ SKS SKSdf 13 21 40.0 +2.0
WMQ SKKS SKKSac 13 25 14.0 +1.4
WMQ SS SS 13 37 57.0 +1.7
WMQ PP PP
comp=Z,65nm,10.0s
WMQ LR LR
comp=N,354nm,24.0s
WMQ LR LR
comp=E,313nm,24.0s
WMQ LR LR
comp=Z,443nm,24.0s
PCI Palu 153.22 198 P PKPbc 13 14 50.7 -0.3
MNI Manado 153.49 211 P PKPbc 13 14 51.0 -0.6
ZAK Zakamensk 153.67 12 *e*PKIKP PKPdf 13 14 42.9 0.0
ZAK pmax pmax
comp=Z,22nm,1.1s
MJAR Matsushiro Arr 154.41 303 PKP PKPdf 13 14 45.0 +0.6
comp=Z,8.9nm,1.0s,baz=210,slow=0.3,SNR=12
MJAR PKPbc PKPbc 13 14 52.1 -0.7
comp=Z,20nm,0.8s,baz=68,slow=1.5,SNR=30
MJAR PKPab PKPab 13 15 07.0 -0.6
comp=Z,23nm,0.9s,baz=79,slow=4.7,SNR=4.3
MJAR Matsushiro Arr 154.41 303 PKIKP PKPdf 13 14 45.1 +0.7
MJAR 13 15 07.0
MJAR pmax pmax
comp=Z,9.0nm,1.0s
MJAR pmax pmax
comp=Z,20nm,0.8s
MJAR pmax pmax
comp=Z,23nm,0.9s
MAJO Matsushiro 154.41 303 *e*PKPdf PKPdf 13 14 43.5 -0.9
MAJO *e*PKPbc PKPbc 13 14 52.6 -0.2
MAJO *e*PKPab PKPab 13 15 06.8 -0.8
KOLN Koldanda 154.73 77 *e*P PKPdf 13 14 44.8 -0.3
comp=Z,52nm,1.1s
HIA Hailar 154.78 347 *e*PKPdf PKPdf 13 14 44.3 -0.2
HIA *e*PKPbc PKPbc 13 14 52.5 -0.7
HIA *e*PKPab PKPab 13 15 08.8 +0.2
DANN Dangsing 154.86 76 *e*P PKPdf 13 14 45.6 +0.3
comp=Z,149nm,0.9s
BSI Banda Aceh 155.21 138 P PKPdf 13 14 46.0 -0.2

MDJ	**Mudanjiang**	**155.44**	**328**	PKP	PKPdf	13 14 44.9	-0.7	
MDJ	**Mudanjiang**	**155.44**	**328**	*e*PKPdf	PKPdf	13 14 45.1	-0.5	
GKN	**Gorkha**	**155.64**	**77**	*e*P	PKPdf	13 14 46.1	-0.3	
	comp=Z,100nm,1.3s							
DMN	**Daman**	**156.06**	**78**	*e*P	PKPdf	13 14 46.8	-0.1	
	comp=Z,68nm,1.3s							
KKN	**Kakani**	**156.21**	**77**	*e*P	PKPdf	13 14 47.4	+0.3	
PKIN	**Phulchoki**	**156.32**	**78**	*e*P	PKPdf	13 14 46.9	-0.4	
PKI	**Pulchoki**	**156.33**	**78**	*e*P	PKPdf	13 14 47.0	-0.3	
	comp=Z,98nm,1.3s							
BOK	**Bokaro**	**156.53**	**87**	*e*P	PKPdf	13 14 46.6	-1.0	
SONM	**Songino Array**	**156.66**	**9**	PKP	PKPdf	13 14 47.5	+0.4	
	comp=Z,30nm,1.0s,baz=318,slow=0.4,SNR=89							
SONM				PKPab	PKPab	13 15 17.5	+0.8	
	comp=Z,18nm,0.9s,baz=328,slow=3.7,SNR=12							
SONM	**Songino Array**	**156.66**	**9**	PKIKP	PKPdf	13 14 47.5	+0.5	
SONM				pmax	pmax			
	comp=Z,30nm,1.0s							
SONM				pmax	pmax			
	comp=Z,18nm,0.9s							
ULN	**Ulaanbaatar**	**156.71**	**8**	⇑P	PKPdf	13 14 46.9	-0.2	
	SNR=15							
ULN	**Ulaanbaatar**	**156.71**	**8**	*e*PKPdf	PKPdf	13 14 47.4	+0.3	
ULN				*e*PKPab	PKPab	13 15 18.5	+1.5	
ULN				*e*PP	PP	13 18 53.8	-1.0	
ULN	**Ulaanbaatar**	**156.71**	**8**	P	PKPdf	13 14 47.7	+0.6	
GUN	**Gumba**	**156.74**	**77**	*e*P	PKPdf	13 14 47.7	-0.1	
KSM	**Kuching**	**156.76**	**177**	*e*PKPdf	PKPdf	13 14 48.8	+0.5	
KSM				*e*PKPab	PKPab	13 15 17.9	-0.2	
KSM	**Kuching**	**156.76**	**177**	P	PKPdf	13 14 50.5	+2.2	
JIRN	**Jiri**	**157.02**	**77**	*e*P	PKPdf	13 14 47.5	-0.7	
	comp=Z,60nm,1.3s							
IPM	**Ipoh**	**157.36**	**152**	P	PKPdf	13 14 49.4	+0.4	
RAMN	**Ramite**	**157.40**	**79**	*e*P	PKPdf	13 14 49.0	+0.3	
	comp=Z,185nm,1.1s							
CN2	**Changchun**	**157.94**	**333**	*e*PKP	PKPdf	13 14 47.5	-1.3	
CN2				PKP2	PKPab	13 15 22.1	-0.3	
CN2				PP	PP	13 18 59.8	-2.1	
CN2				PP	PP			
	comp=Z,1μm,5.0s							
ODAN	**Odare**	**158.10**	**79**	*e*P	PKPdf	13 14 49.4	-0.1	
	comp=Z,70nm,0.8s							
TAPN	**Taplejung**	**158.38**	**78**	*e*P	PKPdf	13 14 49.9	0.0	
	comp=Z,99nm,1.4s							
LSA	**Lhasa**	**161.17**	**71**	*e*PKPdf	PKPdf	13 14 54.3	+1.4	
LSA				*e*pPKPdf	pPKPdf	13 15 26.3	+0.9	
LSA				*e*PKPab	PKPab	13 15 36.5	-0.5	
LSA				*e*PP	PP	13 19 21.4	+0.6	
KSRS	**Korea Array**	**161.24**	**316**	PKP	PKPdf	13 14 52.8	0.0	
	comp=Z,18nm,0.9s,baz=84,slow=1.0,SNR=39							
KSRS				PKPab	PKPab	13 15 37.5	+0.5	
	comp=Z,27nm,1.0s,baz=57,slow=4.0,SNR=15							
KSRS	**Korea Array**	**161.24**	**316**	PKIKP	PKPdf	13 14 52.8	0.0	
KSRS						13 15 37.6		
KSRS				pmax	pmax			
	comp=Z,18nm,0.9s							
KSRS				pmax	pmax			
	comp=Z,27nm,1.0s							
SHL	**Shillong**	**162.12**	**83**	⇓*i*P	PKPdf	13 14 53.0	-1.1	
SHL				*ex*	x	13 19 37.5		
GTA	**Gaotai**	**162.37**	**32**	PKP	PKPdf	13 14 54.3	+0.4	
GTA				APKP		13 15 20.8		
GTA				XPKP		13 15 31.9		
GTA				PKS		13 18 27.3		
GTA				PP	PP	13 19 30.8	+4.9	
GTA				SKS	SKSdf	13 21 48.5	+0.8	
GTA				SKKS	SKKSac	13 26 05.3	+2.1	
GTA				SS	SS	13 39 39.0	+2.0	
GTA				PP	PP			
	comp=Z,280nm,7.5s							
GTA				LR	LR			
	comp=N,213nm,12.9s							
GTA				LR	LR			
	comp=E,248nm,13.8s							
GTA				LR	LR			
	comp=Z,315nm,17.1s							
IMP	**Imphal**	**163.93**	**86**	*e*P	PKPdf	13 14 57.0	+1.2	
IMP				*ex*	x	13 15 50.0		
HHC	**Hu-ho-hao-te**	**164.01**	**0**	*e*PKP	PKPdf	13 14 57.4	+2.0	
HHC				APKP		13 15 24.6		
HHC				XPKP		13 15 34.1		
HHC				PKS		13 18 30.1		
HHC				PP	PP	13 19 39.1	+5.1	
HHC				SKS	SKSdf	13 21 51.1	+2.2	
HHC				SKKS	SKKSac	13 26 13.9	+2.6	
HHC				SS	SS	13 39 53.3	+0.4	
HHC				PP	PP			
	comp=Z,462nm,8.3s							
HHC				LR	LR			
	comp=N,357nm,21.4s							
HHC				LR	LR			
	comp=E,269nm,22.6s							
HHC				LR	LR			
	comp=Z,463nm,19.0s							
BJI	**Beijing**	**164.34**	**347**	PKP	PKPdf	13 14 56.5	+0.8	
BJI				XPKP		13 15 40.3		
BJI				PP	PP	13 19 40.0	+4.2	
BJI				SS	SS	13 40 01.5	+5.0	
BJI				LR	LR			
	comp=Z,381nm,40.9s							
CMAR	**Chiang Mai Arr**	**166.62**	**116**	PKP	PKPdf	13 14 58.0	-0.3	
	comp=Z,14nm,0.9s,baz=268,slow=2.2,SNR=60							
CMAR				PKPab	PKPab	13 16 00.4	-0.9	
	comp=Z,2.1nm,0.8s,baz=254,slow=4.6,SNR=3.1							
CMAR				PP	PP	13 19 52.5	+3.2	
	comp=Z,5.5nm,1.1s,baz=250,slow=5.9,SNR=5.4							
CMAR	**Chiang Mai Arr**	**166.62**	**116**	PKIKP	PKPdf	13 14 58.0	-0.2	
CMAR						13 16 00.4		
CMAR						13 19 52.5		
CMAR				pmax	pmax			
	comp=Z,14nm,0.9s							
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.9s							
CMAR				pmax	pmax			
	comp=Z,6.0nm,1.1s							
CHG	**Chiang Mai**	**166.80**	**114**	P	PKPdf	13 14 57.8	-0.6	
	comp=Z,22nm,0.8s							
CHTO	**Chiang Mai**	**166.80**	**114**	⇑P	PKPdf	13 14 59.5	+1.2	
	SNR=8.2							
CHTO	**Chiang Mai**	**166.80**	**114**	*e*PKIKP	PKPdf	13 14 57.7	-0.7	
CHTO				*e*		13 16 02.5		
CHTO				*e*		13 19 50.6		
LZH	**Lanzhou**	**166.92**	**29**	⇑PKP	PKPdf	13 14 59.5	+1.5	
LZH				APKP		13 15 33.0		
LZH				PKP2	PKPab	13 16 05.1	+3.1	
LZH				PP	PP	13 19 53.6	+4.0	
LZH				SKKS	SKKSac	13 26 27.0	+0.7	
LZH				SS	SS	13 40 21.3	-2.1	
LZH				PP	PP			
	comp=Z,240nm,4.0s							
TIA	**Tai'an**	**167.70**	**339**	PKP	PKPdf	13 14 58.5	0.0	
NANT	**Nan**	**168.22**	**118**	P	PKPdf	13 14 57.0	-2.4	
SSE	**Sheshan**	**169.49**	**309**	PKP	PKPdf	13 14 57.4	-2.4	
SSE				PP	PP	13 20 01.4	-2.0	
SSE				SS	SS	13 40 45.0	-5.6	
SSE				PP	PP			
	comp=Z,335nm,8.3s							
SSE				LR	LR			
	comp=N,82nm,25.0s							
SSE				LR	LR			
	comp=E,304nm,25.0s							
SSE				LR	LR			
	comp=Z,302nm,25.0s							
NJ2	**Nanjing**	**170.39**	**320**	*e*PKP	PKPdf	13 15 02.0	+1.7	
NJ2				APKP		13 15 28.1		
NJ2				XPKP		13 15 38.8		
NJ2				PP	PP	13 20 11.0	+3.5	
NJ2				SKS	SKSdf	13 21 55.0	+2.0	
NJ2				SKKS	SKKSac	13 26 47.0	+3.4	
NJ2				SS	SS	13 41 01.0	+2.3	
NJ2				PP	PP			
	comp=Z,180nm,10.2s							
NJ2				LR	LR			
	comp=N,470nm,33.9s							
NJ2				LR	LR			
	comp=E,310nm,29.0s							
NJ2				LR	LR			
	comp=Z,380nm,26.8s							
XAN	**Xi'an**	**170.51**	**14**	PKP	PKPdf	13 15 00.0	-0.3	
XAN				APKP		13 15 29.6		
XAN				XPKP		13 15 40.6		
XAN				PKP2	PKPab	13 16 15.0	-2.8	
XAN				PKS		13 18 33.0		
XAN				SKS	SKSdf	13 21 55.0	+2.1	
XAN				PP	PP			
	comp=Z,160nm,6.9s							
XAN				LR	LR			
	comp=N,259nm,20.3s							
XAN				LR	LR			
	comp=E,174nm,25.3s							
XAN				LR	LR			
	comp=Z,404nm,22.4s							
CD2	**Chengdu**	**170.77**	**47**	*e*PKP	PKPdf	13 14 59.9	-0.7	
CD2				XPKP		13 15 47.9		
CD2				PKP2	PKPab	13 16 19.9	+0.6	
CD2				PP	PP	13 20 10.9	+1.2	
CD2				SKS	SKSdf	13 21 48.0	-5.2	
CD2				SKKS	SKKSac	13 26 42.9	-2.7	
CD2				SS	SS	13 41 00.4	-2.6	
CD2				PP	PP			
	comp=Z,200nm,8.4s							
CD2				LR	LR			
	comp=N,420nm,25.2s							
CD2				LR	LR			
	comp=E,340nm,24.0s							
CD2				LR	LR			
	comp=Z,500nm,21.6s							
KMI	**Kunming**	**171.93**	**86**	PKP	PKPdf	13 15 02.5	+1.2	
KMI				APKP		13 15 33.9		
KMI				XPKP		13 15 48.8		
KMI				PKP2	PKPab	13 16 26.8	+2.0	
KMI				PKS		13 18 32.9		
KMI				PP	PP	13 20 19.0	+2.5	
KMI				SKS	SKSdf	13 21 50.3	-3.6	
KMI				SKKS	SKKSac	13 26 54.1	+2.3	
KMI				SS	SS	13 41 13.3	-3.0	
KMI				PP	PP			
	comp=Z,79nm,3.9s							
KMI				LR	LR			
	comp=N,333nm,18.7s							
KMI				LR	LR			
	comp=E,279nm,19.2s							
KMI				LR	LR			
	comp=Z,462nm,22.2s							
QZH	**Quanzhou**	**173.67**	**273**	*e*PKP	PKPdf	13 15 03.5	+1.5	
QZH				PP	PP	13 20 23.9	-1.1	
WHN	**Wuhan**	**173.80**	**338**	⇑PKP	PKPdf	13 15 02.1	+0.2	
WHN				SS	SS	13 41 29.6	-1.4	
WHN				LR	LR			
	comp=Z,655nm,26.2s							
GYA	**Guiyang**	**175.24**	**69**	PKP	PKPdf	13 15 02.1	-0.4	
GYA				APKP		13 15 35.1		
GYA				XPKP		13 15 43.3		
GYA				PKP2	PKPab	13 16 40.5	+1.1	
GYA				PKS		13 18 32.9		
GYA				PP	PP	13 20 34.6	+2.3	
GYA				SKKS	SKKSac	13 27 07.9	+0.5	
GYA				SS	SS	13 41 43.8	-3.9	
GYA				PP	PP			
	comp=Z,450nm,6.0s							
GYA				LR	LR			
	comp=N,350nm,23.3s							
GYA				LR	LR			
	comp=E,210nm,25.6s							
GYA				LR	LR			
	comp=Z,410nm,24.8s							

*IDC **21** 13:01:56.9±1.6, 46.58N×153.12E, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/24, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=51.4km s-min=21.4km az=170.0*
*ISCJB **21** 13:02:00.4±2.4, 46.5N×02.1530E±02, h38km±19km, mb3.9/7, Error ellipse: s-maj=38.3km s-min=14.9km az=149.6*
*NEIC **21** 13:02:00.9±1.3, 46.28N×153.04E, h35km, mb4.1/1, Error ellipse: s-maj=31.8km s-min=15.3km az=165.0*
*MOS **21** 13:02:01.5±0.7, 46.58N×152.90E, h45km, mb4.2/4, Error ellipse: s-maj=24.0km s-min=20.8km az=76.4*

ISC 21 13:02:03.5±2.0, 46.5N±02×153.0E±02, h49km±15km, n18, σ0.968/18, mb3.9/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.28**	**23**	Pn		**Pn**		**13 03 47.1**	**+0.1**
	0.3nm,0.3s,baz=173,slow=12,SNR=5.8								
ASAJ	**Asahikawa**	**7.73**	**256**	Pn		**Pn**		**13 03 53.2**	**-0.1**
	0.4nm,0.3s,baz=104,slow=19,SNR=3.1								
KSRS	**Korea Array**	**20.66**	**253**	P		**P**		**13 06 39.6**	**+0.5**
	0.9nm,0.6s,baz=156,slow=41,SNR=3.3								
KSRS	**Korea Array**	**20.66**	**253**	P		**P**		**13 06 39.6**	**+0.5**
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.6s								
MK31	**Makanchi Array**	**47.01**	**298**	*e*P		**P**		**13 10 29.7**	**+0.1**
MKAR	**Makanchi Array**	**47.01**	**298**	P		**P**		**13 10 29.2**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=65,slow=7.6,SNR=3.5								
KURK	**Kurchatov**	**47.46**	**304**	P		**P**		**13 10 32.7**	**-0.3**
	comp=Z,0.3nm,0.2s,mb3.8,baz=68,slow=8.1,SNR=3.8								
KURK	**Kurchatov**	**47.46**	**304**	*e*P		**P**		**13 10 32.4**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.0								
KURK	**Kurchatov**	**47.46**	**304**	*e*P		**P**		**13 10 32.4**	**-0.6**
KURK				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.1								
BVAR	**Borovoye Array**	**50.98**	**310**	P		**P**		**13 10 58.7**	**-1.1**
	comp=Z,0.3nm,0.3s,mb3.6,baz=65,slow=7.2,SNR=2.8								
PDAR	**Pinedale Array**	**64.95**	**54**	P		**P**		**13 12 37.2**	**-0.6**
	comp=Z,1.0nm,0.9s,mb3.9,baz=93,slow=3.9,SNR=3.9								
NOA	**NORSAR Array B**	**68.45**	**341**	P		**P**		**13 13 01.5**	**+1.7**
	comp=Z,0.7nm,0.6s,mb3.9,baz=27,slow=6.3,SNR=2.9								
NOA	**NORSAR Array B**	**68.45**	**341**	P		**P**		**13 13 01.5**	**+1.7**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.6s								
AKASG	**Malin Array Be**	**71.73**	**326**	P		**P**		**13 13 20.4**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.2,baz=32,slow=5.9,SNR=4.5								
AKASG	**Malin Array Be**	**71.73**	**326**	P		**P**		**13 13 20.4**	**+0.4**
AKASG	**Malin Array Be**	**71.73**	**326**	P		**P**		**13 13 20.5**	**+0.4**
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.5s								
TXAR	**Lajitas Array**	**77.67**	**60**	P		**P**		**13 13 54.9**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.7,baz=309,slow=6.4,SNR=10.0								
TXAR	**Lajitas Array**	**77.67**	**60**	P		**P**		**13 13 54.9**	**+0.1**
TXAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								

*ISCJB **21** 13:12:55.7±0.8, 25.06S×104.004E×686W±0.1, h103km±8km, mb3.5/5, Error ellipse: s-maj=15.5km s-min=6.3km az=179.6*
*IDC **21** 13:12:55.6±1.4, 25.10S×68.90W, h90km±11km, mb3.3/4, mb1 3.6/6, mb1mx3.5/18, mbtmp3.4/6, Error ellipse: s-maj=31.8km s-min=11.1km az=85.0*
*NEIC **21** 13:12:55.7±0.7, 25.00S×68.52W, h90km±7km, mb3.7/1, Error ellipse: s-maj=16.1km s-min=8.6km az=100.0*
*GUC **21** 13:12:57.6±0.5, 24.95S×68.74W, h100km, MD3.9, ML3.8*

ISC 21 13:12:56.7±0.7, 25.05S±004×68.63W±009, h95km±8km, n24, σ0.991/30, mb3.5/5, 2C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.67**	**284**	⇑*i*P		**Pn**		**13 13 25.8**	**+1.0**
CPN1				*i* S		**Sn**		**13 13 46.8**	**+0.6**
CPN1				AML	AML	13 13 47.2			
	comp=N,2μm,0.4s								
ANCH	**Antofagasta**	**2.12**	**310**	⇓*i*P		**Pn**		**13 13 31.3**	**+0.6**
ANCH				*i* S		**Sn**		**13 13 56.5**	**-0.2**
ANCH	**Antofagasta**	**2.12**	**310**	⇓*i*P		**Pn**		**13 13 31.3**	**+0.6**
ANCH				*i* S		**Sn**		**13 13 56.5**	**-0.2**
ANCH				AML	AML	13 13 57.5			
	comp=N,1μm,0.4s								
CEN1	**Los Morros**	**2.19**	**319**	⇓*i*P		**Pn**		**13 13 31.2**	**-0.4**
CEN1				*i* S		**Sn**		**13 13 56.4**	**-1.8**
CEN1				AML	AML	13 13 59.9			
	comp=N,539nm,0.4s								
LVC	**Limon Verde**	**2.44**	**354**	P		**Pn**		**13 13 35.6**	**+0.7**
	comp=N,19nm,0.3s,baz=169,slow=8.9,SNR=26								
LVC				S		**Sn**		**13 14 04.5**	**+0.3**
	comp=N,118nm,0.3s,baz=279,slow=20,SNR=39								
LVC	**Limon Verde**	**2.44**	**354**	*e*Pn		**Pn**		**13 13 32.8**	**-2.2**
LVC				S		**Sn**		**13 14 04.5**	**+0.3**
LVC				*e*Sn		**Sn**		**13 14 04.8**	**+0.5**
LVC	**Limon Verde**	**2.44**	**354**	⇓*i*P		**Pn**		**13 13 36.0**	**+1.1**
LVC				*i* S		**Sn**		**13 14 05.0**	**+0.8**
LVC				AML	AML	13 14 08.2			
	comp=E,540nm,0.8s								
CPCH	**Copiapo**	**2.77**	**214**	⇑*i*P		**Pn**		**13 13 39.4**	**+0.1**
CPCH				*i* S		**Sn**		**13 14 12.9**	**+0.9**
LCO	**Las Campanas**	**4.35**	**205**	*e*P		**Pn**		**13 14 00.7**	**+0.1**
CFAA	**Coronel Fontan**	**6.54**	**177**	P		**Pn**		**13 14 30.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=359,slow=15,SNR=6.4								
CFAA				S		**Sn**		**13 15 41.1**	**-2.1**
	comp=E,0.5nm,0.3s,baz=247,slow=18,SNR=7.8								
LPAZ	**La Paz**	**8.73**	**3**	P		**Pn**		**13 14 60.0**	**-0.3**
	comp=E,0.4nm,0.3s,baz=188,slow=7.8,SNR=9.9								
LPAZ	**La Paz**	**8.73**	**3**	*e*P		**Pn**		**13 15 00.1**	**-0.1**
SIV	**San Ignacio**	**11.46**	**40**	P		**Pn**		**13 15 32.9**	**-4.4**
	comp=E,4.5nm,0.3s,baz=246,slow=10,SNR=69								
TXAR	**Lajitas Array**	**63.69**	**326**	P		**P**		**13 23 16.9**	**-1.2**
	comp=E,0.2nm,0.7s,mb3.1,baz=144,slow=6.6,SNR=4.1								
SDCO	**Great Sand Dun**	**71.43**	**330**	*e*P		**P**		**13 24 07.0**	**+0.3**
	comp=E,0.7nm,0.6s,mb3.7								
PDAR	**Pinedale Array**	**77.31**	**330**	P		**P**		**13 24 40.1**	**-0.5**
	comp=E,0.3nm,0.4s,mb3.3,baz=136,slow=7.8,SNR=6.0								
TOA0	**Torodi Ar. Sit**	**78.33**	**69**	*e*P		**P**		**13 24 48.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**78.33**	**69**	P		**P**		**13 24 47.9**	**+1.0**
	comp=E,2.3nm,0.6s,mb4.1,baz=254,slow=5.7,SNR=17								
TORD	**Torodi Ar. Bea**	**78.33**	**69**	P		**P**		**13 24 47.9**	**+1.0**
NVAR	**Mina Array Bea**	**78.44**	**322**	P		**P**		**13 24 46.7**	**-0.3**
	comp=E,0.2nm,0.5s,mb3.1,baz=135,slow=5.5,SNR=2.8								
ASAR	**Alice Springs**	**126.87**	**206**	PKP	PKPdf	13 31 48.6	-1.4		
	comp=E,0.4nm,0.6s,baz=118,slow=1.3,SNR=5.0								
WRA	**Warramunga Arr**	**130.01**	**209**	PKP	PKPdf	13 31 55.0	-1.0		
	comp=E,0.2nm,0.3s,baz=153,slow=1.9,SNR=12								
ZALV	**Zalesovo Beam**	**145.01**	**27**	PKPbc	PKPbc	13 32 21.7	-0.2		
	comp=E,4.3nm,0.6s,baz=310,slow=4.3,SNR=18								
MKAR	**Makanchi Array**	**148.28**	**39**	PKPbc	PKPbc	13 32 31.1	-0.6		
	comp=E,1.1nm,0.5s,baz=305,slow=3.1,SNR=10.0								

PRE 21 13:18:39.2±0.4, 26.42S×27.43E, h2km, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.18**	**67**	*e*P		Pg		13 18 42.5	-0.1
KLOF				*e*S		Sg		13 18 45.1	+0.2
KLOF				AML	AML	13 18 48.0			
	comp=Z,9μm,0.1s								
PRYS	**Parys**	**0.51**	**187**	*e*P		Pg		13 18 48.9	0.0
PRYS				*e*S		Sg		13 18 56.1	+0.6
PRYS				AML	AML	13 19 02.4			
	comp=Z,715nm,0.4s								
KSR	**Koster**	**0.74**	**320**	*e*P		Pg		13 18 53.3	-0.1
KSR				*e*S		Sg		13 19 03.6	+0.7
KSR				AML	AML	13 19 06.7			
	comp=Z,599nm,0.6s								
ERPM	**east rand prop**	**0.75**	**77**	*e*P		Pg		13 18 53.3	-0.3
ERPM				*e*S		Sg		13 19 03.9	+0.6
ERPM				AML	AML	13 19 12.1			
	comp=Z,305nm,0.3s								
SLR	**Silverton**	**1.03**	**49**	*e*P		Pg		13 18 58.9	0.0
SLR				*e*S		Sg		13 19 13.3	+1.1
SLR				AML	AML	13 19 17.9			
	comp=Z,357nm,0.2s								
SEK	**Senekal**	**1.90**	**175**	*e*P		Pn		13 19 13.3	+0.6
SEK				*e*S		Sn		13 19 38.5	+1.2
SEK				AML	AML	13 19 41.9			
	comp=Z,369nm,0.2s								
SWZ	**Schweizer**	**2.02**	**247**	*e*P		Pn		13 19 15.0	+0.7
SWZ				*e*S		Sn		13 19 41.0	+0.9
SWZ				AML	AML	13 19 46.6			
	comp=Z,589nm,0.8s								
LBTB	**Lobatse**	**2.16**	**310**	*e*P		Pn		13 19 17.1	+0.8
LBTB				*e*S		Sn		13 19 44.4	+0.7
LBTB				AML	AML	13 19 50.4			
	comp=Z,200nm,0.3s								
BOSA	**Boshof**	**2.91**	**221**	*e*P		Pn		13 19 27.1	+0.5
BOSA				*e*S		Sn		13 20 02.4	+0.2
BOSA				AML	AML	13 20 17.8			
	comp=Z,59nm,0.3s								
POGA	**Pongola**	**3.85**	**105**	*e*P		Pn		13 19 41.1	+1.6
POGA				*e*S		Sn		13 20 26.8	+1.4
POGA				AML	AML	13 20 43.8			
	comp=Z,125nm,0.6s								
MOPA	**Mopani**	**4.62**	**52**	*e*P		Pn		13 19 50.4	+0.4
MOPA				*e*S		Sn		13 20 43.0	-1.3
MOPA				AML	AML	13 21 10.6			
	comp=Z,189nm,0.5s								
MSNA	**Messina**	**4.70**	**31**	*e*P		Pn		13 19 50.4	-0.7
MSNA				*e*S		Sn		13 20 43.0	-3.2
MSNA				AML	AML	13 21 06.1			
	comp=Z,36nm,0.2s								
PKA	**Prieska**	**5.25**	**231**	*e*P		Pn		13 19 59.2	+0.5
PKA				*e*S		Sn		13 20 58.0	-1.7
PKA				AML	AML	13 21 39.0			
	comp=Z,95nm,0.6s								
UPI	**Upington**	**5.82**	**249**	*e*P		Pn		13 20 07.3	+0.8
UPI				*e*S		Sn		13 21 11.8	-2.1
UPI				AML	AML	13 21 47.9			
	comp=Z,39nm,0.6s								
SUR	**Sutherland**	**8.28**	**223**	*e*P		Pn		13 20 41.1	+0.9
SUR				*e*S		Sn		13 22 10.9	-3.5
CVNA	**Calvinia**	**8.40**	**231**	*e*P		Pn		13 20 42.9	+1.0
CVNA				*e*S		Sn		13 22 13.4	-3.9
CVNA				AML	AML	13 23 07.7			
	comp=Z,39nm,0.6s								

*ISCJB **21** 13:44:09.3±0.3, 40.00N×002.4047E±002, h10km, Error ellipse: s-maj=3.1km s-min=2.6km az=168.9*
*ISK **21** 13:44:09.3, 40.03N×40.45E, h2km, MD3.4*
*DDA **21** 13:44:09.2, 40.05N×40.49E, h3km±2km, Md3.5*
*CSEM **21** 13:44:09.3±0.1, 40.09N×40.38E, h2km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.3km az=135.0*

ISC 21 13:44:09.8±0.3, 40.01N±002×40.48E±002, h2km±3km, n26, σ0.991/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.01**	**70**	*i* P		**Pg**		**13 44 10.4**	**+0.2**
KOPT				*i* S		**Sg**		**13 44 11.3**	**+0.8**
EZC	**Erzincan**	**0.58**	**243**	*e*PG		**Pg**		**13 44 26.9**	**-1.4**
EZM	**Erzurum**	**0.69**	**99**	*e*PG		**Pg**		**13 44 23.7**	**+0.8**
ERZM	**Erzurum**	**0.69**	**99**	*i* P		**Pg**		**13 44 23.3**	**+0.3**
ERZM				*i* S		**Sg**		**13 44 33.1**	**+1.2**
GUMT	**Gumushane**	**0.89**	**301**	*e*PG

ellipse: s-maj=16.7km s-min=9.4km az=46.8
*JMA **21** 13:45:53.3±0.7, 4670N×15279E, h30km, M5.0*
*NEIC **21** 13:45:54.9±0.6, 4668N×15259E, mb4.6/1, Error ellipse: s-maj=19.9km s-min=8.3km az=136.0*
*IDC **21** 13:45:55.4±0.5, 4676N×15263E, h51km±5km, mb3.7/13, mb1 4.0/14, mb1mx3.9/23, mbtmp3.8/14, MS3.3/1, Ms1 3.3/1, ms1mx2.8/34, Error ellipse: s-maj=19.9km s-min=12.2km az=144.0*

ISC 21 13:45:54.6±0.7, 4664N±008×1528E±01, h42km±6km, h52km±.9km: pP-P, n70, σ1$32/75, mb4.4/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.71**	**249**	*e*P	**Pn**	**13 46 46.0**	**-3.3**
KUR				*e*S	**Sn**	**13 47 28.0**	**-3.7**
KUR				A		13 47 48.2	
	699nm,0.6s						
KUR				A		13 47 48.2	
	593nm,0.6s						
SKR	**Severo-Kuril's**	**4.61**	**27**	*e*PN	**Pn**	**13 47 01.5**	**-0.2**
SKR				*e*S	**Sn**	**13 47 52.4**	**-1.5**
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				smax			
	comp=N,340nm,0.9s						
SKR				smax			
	comp=E,230nm,0.9s						
SKR				smax			
	comp=Z,160nm,0.9s						
SKR	**Severo-Kuril's**	**4.61**	**27**	*e*P	**Pn**	**13 47 01.5**	**-0.2**
SKR				AMB	AMB	13 47 04.1	
	comp=Z,150nm,0.5s						
SKR				AMB	AMB	13 47 04.1	
	comp=Z,80nm,0.5s						
SKR				AMB	AMB	13 47 04.1	
	comp=Z,230nm,0.5s						
SKR				*e*S	**Sn**	**13 47 52.4**	**-1.5**
SKR				A		13 48 11.6	
	comp=Z,340nm,0.9s						
SKR				A		13 48 11.6	
	comp=Z,230nm,0.9s						
SKR				A		13 48 11.6	
	comp=Z,160nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**5.53**	**244**	*e*P	**Pn**	**13 47 15.9**	**+1.6**
YUK				AMB	AMB	13 47 17.2	
	comp=Z,470nm,0.5s						
YUK				AMB	AMB	13 47 17.2	
	comp=Z,380nm,0.5s						
YUK				AMB	AMB	13 47 17.2	
	comp=Z,170nm,0.3s						
YUK				A		13 48 33.0	
	comp=Z,8μm,3.0s						
YUK				A		13 48 33.0	
	comp=Z,5μm,2.0s						
YUK				A		13 48 40.3	
	comp=Z,840nm,0.6s						
YUK				A		13 48 40.3	
	comp=Z,700nm,0.5s						
NEM2	**Nemuro 2**	**5.97**	**239**	P	**Pn**	**13 47 19.5**	**-0.8**
NEM2				*e*S	**Sn**	**13 48 22.4**	**-4.9**
JRA	**Rausu**	**6.04**	**246**	P	**Pn**	**13 47 23.2**	**+1.9**
JNK	**Nakash**	**6.47**	**245**	P	**Pn**	**13 47 28.3**	**+1.1**
JTKR	**Abashiri--Toko**	**6.80**	**250**	P	**Pn**	**13 47 33.9**	**+2.1**
JAK	**Akkeshi**	**6.81**	**241**	P	**Pn**	**13 47 31.0**	**-0.8**
JAK				*e*S	**Sn**	**13 48 42.2**	**-5.7**
YSS	**Yuzh-Sakhalins**	**6.89**	**276**	*e*P	**Pn**	**13 47 35.9**	**+3.0**
YSS	**Yuzh-Sakhalins**	**6.89**	**276**	*e*P	**Pn**	**13 47 36.0**	**+3.0**
JMP	**Maruseppu**	**7.14**	**252**	P	**Pn**	**13 47 38.9**	**+2.5**
PEA0B	**Petropavlovsk-**	**7.21**	**24**	*e*P	**Pn**	**13 47 37.1**	**-0.2**
PETK	**Petropavlovsk-**	**7.21**	**24**	P	**Pn**	**13 47 38.5**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=172,slow=12,SNR=28						
PETK				LR	LR	13 50 25.7	
	comp=Z,257nm,21.3s,baz=137,slow=38						
PETK	**Petropavlovsk-**	**7.21**	**24**	P	**Pn**	**13 47 38.5**	**+1.2**
PETK				LR	LR	13 50 25.7	
JAR	**Ashorobuto**	**7.21**	**246**	P	**Pn**	**13 47 38.7**	**+1.3**
PET	**Petropavlovsk**	**7.43**	**29**	*e*P	**Pn**	**13 47 40.2**	**-0.1**
PET	**Petropavlovsk**	**7.43**	**29**	*e*PN	**Pn**	**13 47 42.2**	**+1.9**
PET				MLR	MLR		
	comp=Z,300nm,21.0s						
JKK2	**Kamakawa 2**	**7.60**	**252**	P	**Pn**	**13 47 45.4**	**+2.7**
ASAJ	**Asahikawa**	**7.60**	**254**	P	**Pn**	**13 47 45.3**	**+2.5**
	comp=Z,3.5nm,0.3s,baz=72,slow=13,SNR=28						
ASAJ	**Asahikawa**	**7.60**	**254**	P	**Pn**	**13 47 46.0**	**+3.3**
ASAJ	**Asahikawa**	**7.60**	**254**	PN	**Pn**	**13 47 45.3**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JCH	**Churui**	**7.83**	**242**	P	**Pn**	**13 47 44.8**	**-1.1**
ERM	**Erimo**	**8.30**	**240**	*e*P	**Pn**	**13 47 52.6**	**+0.3**
JBT2	**Biratori 2**	**8.36**	**246**	P	**Pn**	**13 47 53.5**	**+0.3**
JNBK	**Urakawa-nobuka**	**8.39**	**242**	P	**Pn**	**13 47 52.7**	**-0.8**
JYM2	**Yakumo 2**	**9.97**	**248**	P	**Pn**	**13 48 15.0**	**-0.1**
JTM	**Tenmabayashi**	**10.30**	**240**	P	**Pn**	**13 48 17.0**	**-2.6**
JANG	**Nango**	**10.30**	**237**	P	**Pn**	**13 48 16.2**	**-3.5**
OFUJ	**Ofunato**	**11.11**	**231**	P	**Pn**	**13 48 26.6**	**-4.2**
JIO	**Ouri**	**11.74**	**230**	*e*S	**Sn**	**13 50 35.9**	**-13**
MJAR	**Matsushiro Arr**	**14.83**	**232**	P	**Pn**	**13 49 18.6**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=31,slow=14,SNR=5.6						
MAJO	**Matsushiro**	**14.83**	**232**	*e*P	**Pn**	**13 49 18.0**	**-3.4**
KSRS	**Korea Array**	**20.55**	**252**	P	**P**	**13 50 30.4**	**+1.0**
	comp=Z,4.8nm,0.8s,baz=59,slow=9.3,SNR=13						
KSRS	**Korea Array**	**20.55**	**252**	P	**P**	**13 50 30.4**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**22.55**	**13**	*e*P	**P**	**13 50 55.4**	**+4.8**
SONM	**Songino Array**	**31.16**	**289**	P	**P**	**13 52 07.4**	**-1.7**
	comp=Z,1.0nm,1.2s,mb3.5,baz=72,slow=8.3,SNR=2.8						
SONM	**Songino Array**	**31.16**	**289**	P	**P**	**13 52 07.4**	**-1.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KDAK	**Kodiak Island**	**34.35**	**51**	P	**P**	**13 52 35.9**	**-1.1**
	comp=Z,16nm,1.0s,mb4.9,baz=96,slow=9.7,SNR=4.7						
INK	**Inuvik**	**41.87**	**32**	*e*P	**P**	**13 53 40.4**	**+0.4**
ZALV	**Zalesovo Beam**	**42.49**	**306**	P	**P**	**13 53 43.5**	**-1.8**
	comp=Z,0.4nm,0.3s,mb3.5,baz=67,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**13 54 18.0**	**-1.7**
	comp=Z,0.4nm,0.8s,mb3.4,baz=212,slow=7.4,SNR=3.6						
LSA	**Lhasa**	**50.05**	**273**	*e*P	**P**	**13 54 46.8**	**+1.8**
	comp=Z,3.9nm,0.6s,mb4.6						
LSA	**Lhasa**	**50.05**	**273**	*e*P	**P**	**13 54 46.8**	**+1.8**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**52.12**	**256**	P	**P**	**13 55 01.4**	**+0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=35,slow=7.3,SNR=12						
CMAR				pP	pP	13 55 14.3	+1.7
	comp=Z,0.9nm,0.7s,baz=43,slow=7.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**52.12**	**256**	P	**P**	**13 55 01.4**	**+0.8**
CMAR				*PP	pP	13 55 14.3	+1.7
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TAPN	**Taplejung**	**53.88**	**273**	*e*P	**P**	**13 55 14.1**	**+0.6**
	comp=Z,8.1nm,0.7s,mb4.8						
ODAN	**Odare**	**54.41**	**273**	*e*P	**P**	**13 55 18.1**	**+0.7**
	comp=Z,18nm,1.1s,mb4.9						
JIRN	**Jiri**	**54.73**	**274**	*e*P	**P**	**13 55 20.2**	**+0.5**
	comp=Z,14nm,0.7s,mb5.1						
RAMN	**Ramite**	**54.90**	**273**	*e*P	**P**	**13 55 21.0**	**+0.1**
	comp=Z,32nm,1.0s,mb5.3						
KKN	**Kakani**	**55.27**	**275**	*e*P	**P**	**13 55 23.5**	**-0.1**
	comp=Z,8.2nm,0.4s,mb5.1						
DMN	**Daman**	**55.50**	**275**	*e*P	**P**	**13 55 25.4**	**+0.1**
	comp=Z,16nm,0.9s,mb5.1						
GKN	**Gorkha**	**55.58**	**276**	*e*P	**P**	**13 55 26.0**	**+0.2**
	comp=Z,16nm,0.8s,mb5.1						
DANN	**Dangsing**	**55.96**	**277**	*e*P	**P**	**13 55 29.3**	**+0.8**
	comp=Z,12nm,0.6s,mb5.1						
KOLN	**Koldanda**	**56.44**	**276**	*e*P	**P**	**13 55 32.4**	**+0.5**
	comp=Z,12nm,0.9s,mb4.9						
PYUN	**Piuthan**	**56.64**	**277**	*e*P	**P**	**13 55 33.6**	**+0.2**
	comp=Z,12nm,1.0s,mb4.9						
NVAR	**Mina Array Bea**	**62.69**	**62**	P	**P**	**13 56 15.8**	**+1.0**
	comp=Z,1.1nm,0.7s,mb4.1,baz=287,slow=8.2,SNR=6.8						
NVAR				pP	pP	13 56 30.2	+3.2
	comp=Z,0.7nm,0.7s,baz=295,slow=7.7,SNR=4.0						
NVAR	**Mina Array Bea**	**62.69**	**62**	P	**P**	**13 56 15.8**	**+1.0**
NVAR				pP	pP	13 56 30.2	+3.2
PDAR	**Pinedale Array**	**65.00**	**54**	P	**P**	**13 56 30.5**	**+0.5**
	comp=Z,1.4nm,0.9s,mb4.0,baz=291,slow=2.6,SNR=8.6						
PDAR				pP	pP	13 56 44.2	+2.0
	comp=Z,1.3nm,0.8s,baz=294,slow=1.9,SNR=5.2						
NB2	**NORSAR Subarra**	**68.26**	**341**	P	**P**	**13 56 49.3**	**-1.2**
	comp=Z,2.5nm,0.7s,mb4.3,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**68.26**	**341**	P	**P**	**13 56 49.5**	**-1.0**
	comp=Z,3.2nm,0.8s,mb4.4,baz=29,slow=6.3,SNR=5.0						
NOA	**NORSAR Array B**	**68.26**	**341**	P	**P**	**13 56 49.5**	**-1.0**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**68.33**	**199**	P	**P**	**13 56 50.6**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=22,slow=7.0,SNR=9.0						
WRA				pP	pP	13 57 04.9	+1.2
	comp=Z,1.0nm,0.7s,baz=20,slow=6.9,SNR=5.3						
WRA	**Warramunga Arr**	**68.33**	**199**	P	**P**	**13 56 50.6**	**-0.7**
WRA				*PP	pP	13 57 04.9	+1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**71.51**	**326**	P	**P**	**13 57 07.8**	**-2.8**
	comp=Z,1.2nm,0.5s,mb4.1,baz=34,slow=6.3,SNR=4.7						
AKASG	**Malin Array Be**	**71.51**	**326**	P	**P**	**13 57 07.9**	**-2.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**72.03**	**198**	P	**P**	**13 57 14.6**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=13,slow=5.2,SNR=35						
ASAR				pP	pP	13 57 28.9	+2.5
	comp=Z,1.0nm,0.8s,baz=13,slow=5.6,SNR=6.1						
ASAR	**Alice Springs**	**72.03**	**198**	P	**P**	**13 57 14.6**	**+0.7**
ASAR				*PP	pP	13 57 28.9	+2.6
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**77.75**	**60**	P	**P**	**13 57 47.6**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=309,slow=3.8,SNR=7.2						
TXAR				pP	pP	13 58 01.9	+2.3
	comp=Z,1.7nm,0.6s,baz=296,slow=5.0,SNR=11						
TXAR	**Lajitas Array**	**77.75**	**60**	P	**P**	**13 57 47.6**	**+0.5**
TXAR				*PP	pP	13 58 02.0	+2.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						

*IDC **21** 13:47:52.6±3.1, 4882S×16483E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=71.6km s-min=32.2km az=157.0*
*NEIC **21** 13:47:53.4±1.6, 4912S×16461E, h10km, Error ellipse: s-maj=34.7km s-min=9.1km az=156.0*

ISC 21 13:47:55.3±1.6, 489S±02×1645E±02, h10km, n13, σ1$13/17, mb3.7/2, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**3.77**	**39**	P	**Pn**	**13 48 53.4**	**0.0**
WHZ				S	**Sn**	**13 49 35.8**	**-2.0**
MLZ	**Mavora Lakes**	**4.31**	**37**	P	**Pn**	**13 49 01.0**	**+0.2**
MLZ				S	**Sn**	**13 49 50.5**	**-0.5**
TUZ	**Tuapeka**	**4.52**	**52**	P	**Pn**	**13 49 03.6**	**-0.1**
MSZ	**Milford Sound**	**4.80**	**30**	P	**Pn**	**13 49 09.1**	**+1.6**
EAZ	**Earnscleugh**	**4.88**	**44**	P	**Pn**	**13 49 08.8**	**+0.1**
EAZ				S	**Sn**	**13 50 05.5**	**+0.3**
WKZ	**Wanaka**	**5.08**	**39**	P	**Pn**	**13 49 12.4**	**+1.1**
WKZ				S	**Sn**	**13 50 11.1**	**+1.1**
JCZ	**Jackson Bay**	**5.61**	**33**	P	**Pn**	**13 49 20.4**	**+1.7**
ODZ	**Otahua Downs**	**5.67**	**50**	P	**Pn**	**13 49 18.5**	**-0.9**
RPZ	**Rata Peaks**	**6.85**	**44**	Pn	**Pn**	**13 49 32.4**	**-3.2**
	0.7nm,0.3s,baz=212,slow=1.4,SNR=4.5						
RPZ				Sn	**Sn**	**13 50 50.0**	**-3.7**
	2.4nm,0.3s,baz=54,slow=19,SNR=7.9						
ASAR	**Alice Springs**	**34.84**	**305**	P	**P**	**13 54 47.2**	**+0.8**
	0.9nm,0.7s,mb3.8,baz=137,slow=7.8,SNR=16						
WB2	**Warramunga Arr**	**37.66**	**309**	*e*P	**P**	**13 55 09.6**	**-0.9**
WRA	**Warramunga Arr**	**37.67**	**309**	P	**P**	**13 55 09.5**	**-1.1**
	1.2nm,1.0s,mb3.6,baz=138,slow=8.2,SNR=6.5						
AKASG	**Malin Array Be**	**151.41**	**291**	PKPbc	PKPbc	14 07 47.4	-0.9
	0.9nm,0.6s,baz=104,slow=1.6,SNR=4.7						

IDC 21 13:55:04.8±1.2, 634N×12733E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.5/18, mbtmp3.6/5, Error ellipse: s-maj=79.3km s-min=20.2km az=73.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.01**	**165**	P	P	14 00 49.6	+0.8
	0.2nm,0.5s,baz=347,slow=9.8,SNR=4.9						
ASAR	**Alice Springs**	**30.50**	**168**	P	P	14 01 19.2	-0.6
	0.1nm,0.6s,baz=342,slow=7.2,SNR=6.0						
KSRS	**Korea Array**	**30.98**	**1**	P	P	14 01 23.7	-0.1
	0.4nm,0.4s,baz=181,slow=9.2,SNR=3.4						
MKAR	**Makanchi Array**	**55.79**	**324**	P	P	14 04 44.1	+0.4
	0.7nm,0.3s,baz=116,slow=7.4,SNR=20						
KURK	**Kurchatov**	**59.90**	**326**	P	P	14 05 12.1	-0.4
	1.3nm,0.5s,baz=125,slow=6.2,SNR=6.4						

IDC 21 14:19:55.0±5.3, 1990S×17751W, h520km±167km, mb3.2/4, mb1 3.3/5, mb1mx3.0/19, mbtmp3.2/5, Error ellipse: s-maj=144.8km s-min=93.7km az=113.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.10**	**44**	P	P	14 21 54.0	+1.0
	1.2nm,0.3s,baz=195,slow=19,SNR=3.4						
AFI				S	S	14 23 28.8	-0.8
	3.0nm,0.3s,baz=9.3,slow=22,SNR=6.8						
CTA	**Charters Tower**	**34.01**	**263**	P	P	14 25 56.1	+0.6
	1.4nm,0.3s,baz=76,slow=9.0,SNR=3.7						
STKA	**Stephens Creek**	**38.47**	**244**	P	P	14 26 31.4	-0.8
	0.8nm,0.5s,baz=90,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**45.11**	**256**	P	P	14 27 24.7	-0.1
	3.8nm,0.5s,baz=92,slow=7.7,SNR=138						
WRA	**Warramunga Arr**	**45.14**	**261**	P	P	14 27 24.9	-0.2
	1.9nm,0.7s,baz=97,slow=7.6,SNR=56						

*ISCJB **21** 14:21:26.1±1.5, 2645N×1453E±0.1, h10km, mb3.7/2, Error ellipse: s-maj=13.5km s-min=10.8km az=6.4*
*JMA **21** 14:21:27.1±0.1, 2619N×14526E, h76km*
*IDC **21** 14:21:30.4±1.4, 2508N×14050E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=60.0km s-min=19.4km az=106.0*

ISC 21 14:21:27.5±1.5, 2630N±008×1452E±01, h10km, n15, σ1$01/27, mb3.7/2, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.81**	**287**	Pn	**Pn**	**14 22 12.2**	**-0.3**
	11nm,0.3s,baz=294,slow=23,SNR=10						
CBIJ				Sn	**Sn**	**14 22 46.8**	**+0.2**
	56nm,0.3s,baz=271,slow=22,SNR=18						
CBIJ	**Chichi jima**	**2.81**	**287**	P	**Pn**	**14 22 12.0**	**-0.5**
CBIJ				*e*S	**Sn**	**14 22 46.1**	**-0.4**
BSO2	**Boso 2**	**9.26**	**337**	*e*S	**Sn**	**14 25 26.3**	**+1.1**
BSO3	**Boso 3**	**9.39**	**336**	P	**Pn**	**14 23 44.0**	**+1.1**
BSO3				*e*S	**Sn**	**14 25 30.0**	**+1.5**
JOD2	**Odawara 2**	**10.37**	**331**	P	**Pn**	**14 23 56.6**	**+0.4**
JOD2				*e*S	**Sn**	**14 25 53.6**	**+1.1**
JYT	**Yasato**	**10.79**	**338**	P	**Pn**	**14 24 03.6**	**+1.6**
JYT				*e*S	**Sn**	**14 26 02.5**	**-0.2**
JHU	**Hanno**	**10.79**	**333**	P	**Pn**	**14 24 02.4**	**+0.4**
JHU				*e*S	**Sn**	**14 25 59.2**	**-3.6**
JHO	**Hitachi**	**11.02**	**340**	P	**Pn**	**14 24 04.5**	**-0.6**
JHO				*e*S	**Sn**	**14 26 05.5**	**-2.9**
JRY	**Ryogami san**	**11.09**	**332**	P	**Pn**	**14 24 05.0**	**-1.1**
JRY				*e*S	**Sn**	**14 26 09.6**	**-0.5**
JAG	**Ashikaga**	**11.22**	**335**	P	**Pn**	**14 24 08.0**	**0.0**
JAG				*e*S	**Sn**	**14 26 12.7**	**-0.8**
JFK	**Kawauchi**	**11.63**	**343**	P	**Pn**	**14 24 12.0**	**-1.6**
JFK				*e*S	**Sn**	**14 26 17.7**	**-5.8**
MJAR	**Matsushiro Arr**	**11.83**	**331**	Pn	**Pn**	**14 24 16.9**	**+0.7**
	1.1nm,0.3s,baz=160,slow=12,SNR=11						
MJAR				Sn	**Sn**	**14 26 27.9**	**-0.4**
	0.5nm,0.3s,baz=163,slow=25,SNR=4.2						
JMK	**Ichinoseki**	**13.06**	**346**	P	**Pn**	**14 24 32.8**	**-0.2**
JMK				*e*S	**Sn**	**14 26 52.8**	**-5.5**
WRA	**Warramunga Arr**	**47.16**	**194**	P	**P**	**14 29 49.3**	**-11**
	0.6nm,0.4s,mb3.9,baz=8.2,slow=8.5,SNR=13						
ASAR	**Alice Springs**	**50.85**	**193**	P	**P**	**14 30 17.4**	**-11**
	0.4nm,0.7s,mb3.5,baz=12,slow=8.0,SNR=9.1						

NEIC 21 14:27:48.4, 3783S×17784E, h56km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**0.41**	**127**	P	**Pn**	**14 27 59.4**	**+0.3**
MXZ	**Matakaoa Point**	**0.46**	**54**	P	**Pn**	**14 28 01.3**	**+1.7**
MWZ	**Matawai**	**0.56**	**206**	P	**Pn**	**14 28 00.0**	**-0.8**
WIZ	**White Island**	**0.60**	**300**	P	**Pn**	**14 28 00.9**	**-0.3**
URZ	**Urewera**	**0.72**	**233**	P	**Pn**	**14 28 02.3**	**-0.3**
EDRZ	**Edgecumbe**	**0.91**	**252**	P	**Pn**	**14 28 05.2**	**+0.1**
EDRZ				S	Sn	**14 28 16.7**	**-0.8**
MARZ	**Manawahe**	**0.94**	**260**	P	**Pn**	**14 28 04.0**	**-1.4**
MARZ				S	Sn	**14 28 17.5**	**-0.5**
TAZ	**Tarawera**	**1.13**	**249**	P	**Pn**	**14 28 08.4**	**+0.5**
LIRZ	**Lichensteins R**	**1.17**	**261**	P	**Pn**	**14 28 08.6**	**+0.2**
KNZ	**Kokohu**	**1.20**	**186**	P	**Pn**	**14 28 08.3**	**-0.6**
TGRZ	**Tauranga**	**1.25**	**274**	P	**Pn**	**14 28 09.3**	**-0.4**
KARZ	**Kaharoa**	**1.28**	**261**	P	**Pn**	**14 28 09.9**	**-0.1**
BKZ	**Black Stump Fm**	**1.70**	**218**	P	**Pn**	**14 28 15.8**	**+0.1**
KUZ	**Kuaotunu**	**2.01**	**302**	P	**Pn**	**14 28 19.5**	**-0.4**
NGZ	**Ngauruhoe**	**2.21**	**232**	P	**Pn**	**14 28 23.2**	**+0.5**
TUVZ	**Tukino**	**2.24**	**229**	P	**Pn**	**14 28 23.5**	**+0.5**
MKAZ	**Moumakai**	**2.25**	**288**	P	**Pn**	**14 28 23.2**	**+0.1**
MOVZ	**Moawhango**	**2.27**	**225**	P	**Pn**	**14 28 23.3**	**-0.2**
WNVZ	**Wahianoa**	**2.31**	**229**	P	**Pn**	**14 28 24.2**	**+0.2**
HIZ	**Hauiti**	**2.45**	**253**	P	**Pn**	**14 28 26.7**	**+0.8**
TSZ	**Takapari Road**	**2.67**	**213**	P	**Pn**	**14 28 27.0**	**-1.9**
WAZ	**Wanganui**	**2.94**	**228**	P	**Pn**	**14 28 33.2**	**+0.5**
RAEZ	**Rainy Point**	**3.07**	**241**	P	**Pn**	**14 28 36.2**	**+1.8**
NEZ	**North Egmont**	**3.27**	**243**	P	**Pn**	**14 28 39.8**	**+2.7**
PKE	**Pukeiti**	**3.31**	**245**	P	**Pn**	**14 28 40.1**	**+2.4**
MRZ	**Mangatainoka R**	**3.33**	**211**	P	**Pn**	**14 28 35.0**	**-2.9**
WCZ	**Waipu Caves**	**3.38**	**303**	P	**Pn**	**14 28 39.4**	**+0.8**
NWEZ	**Newall Road**	**3.43**	**244**	P	**Pn**	**14 28 41.9**	**+2.5**
MTW	**Mount Morrison**	**3.79**	**208**	P	**Pn**	**14 28 40.1**	**-4.1**
KIW	**Kapiti Island**	**3.79**	**216**	P	**Pn**	**14 28 41.4**	**-2.8**
CAW	**Cannon Point**	**3.91**	**212**	P	**Pn**	**14 28 42.1**	**-3.8**
OUZ	**Omahuta**	**4.30**	**306**	P	**Pn**	**14 28 52.6**	**+1.4**
TCW	**Tory Channel**	**4.36**	**218**	P	**Pn**	**14 28 48.5**	**-3.5**
NNZ	**Nelson**	**4.83**	**224**	P	**Pn**	**14 28 55.1**	**-3.4**
BSWZ	**Blackbirch Sta**	**4.94**	**217**	P	**Pn**	**14 28 56.1**	**-3.9**
QRZ	**Quartz Range**	**5.09**	**232**	P	**Pn**	**14 28 59.3**	**-2.8**
THZ	**Tophouse**	**5.47**	**223**	P	**Pn**	**14 29 03.6**	**-3.6**
DSZ	**Denniston Nort**	**6.08**	**228**	P	**Pn**	**14 29 11.2**	**-4.3**
LTZ	**Lake Taylor**	**6.53**	**219**	P	**Pn**	**14 29 16.8**	**-4.9**
MQZ	**McQueen's Vall**	**7.07**	**212**	P	**Pn**	**14 29 23.2**	**-5.9**
WVZ	**Waitaha Valley**	**7.54**	**224**	P	**Pn**	**14 29 32.9**	**-2.6**
RPZ	**Rata Peaks**	**7.81**	**219**	P	**Pn**	**14 29 35.1**	**-4.2**
FOZ	**Fox Glacier**	**8.43**	**225**	P	**Pn**	**14 29 42.9**	**-4.9**
LBZ	**Lake Benmore**	**8.73**	**219**	P	**Pn**	**14 29 47.0**	**-4.9**

GUC 21 14:32:32.4±0.4, 3041S×7201W, h36km±2km, ML3.5, 2C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	**0.72**	**106**	i/*i*P	Pn	14 32 46.0	-0.1
OVCH				*i* S	Sn	14 32 56.7	+0.7
OVCH				AML	AML	14 33 02.4	
	comp=N,4μm,0.2s						
TLL	**Tololo Astrono**	**1.07**	**77**	i/*i*P	Pn	14 32 52.2	+1.4
TLL				*i* S	Sn	14 33 06.9	+2.4
TLL				AML	AML	14 33 10.8	
	comp=N,3μm,0.4s						
CHNG	**Los Chungos**	**1.54**	**164**	i/*i*P	Pn	14 32 58.5	+1.2
CHNG				*i* S	Sn	14 33 18.4	+2.4
CHNG				AML	AML	14 33 26.3	
	comp=E,708nm,0.7s						
LCO	**Las Campanas**	**1.79**	**40**	i/*i*P	Pn	14 33 02.8	+2.0
LCO				*i* S	Sn	14 33 26.0	+3.5
LCO				AML	AML	14 33 33.9	
	comp=N,942nm,0.4s						

*BJI **21** 14:39:50.9, 2.10N×12806E, h73km, mB5.2, mb5.0, Ms4.7, Ms2.7*
*MOS **21** 14:39:51.8±1.0, 260N×12796E, h54km, mb5.1/16, Error ellipse: s-maj=18.6km s-min=7.6km az=116.1*
*ISCJB **21** 14:39:54.1±0.3, 250N±003×12796E±005, h75km, mb4.9/68, Error ellipse: s-maj=7.2km s-min=4.0km az=165.5*
*NEIC **21** 14:39:56.0±0.2, 247

comp=Z,228nm,0.9s,mb5.5
WRA Warramunga Arr 23.15 165 P **P** **14 44 56.1 +0.1**
comp=Z,177nm,1.0s,mb5.4,baz=343,slow=11,SNR=82
WRA S **S** **14 49 05.1 +3.5**
comp=Z,1.2nm,0.8s,baz=350,slow=18,SNR=2.7
WB2 Warramunga Arr 23.15 164 *e*P **P** **14 44 56.0 0.0**
WB2 *e* 14 45 04.4
JOW Kunigami 24.22 1 LR LR 14 54 10.3
comp=Z,376nm,21.0s,baz=138,slow=35
MBWA Marble Bar 24.82 199 *e*P **P** **14 45 10.9 -0.3**
comp=Z,76nm,1.0s,mb5.1
XMIS Christmas Isla 25.65 240 *e*P **P** **14 45 18.2 -0.6**
ASAR Alice Springs 26.62 168 P **P** **14 45 27.8 +0.3**
comp=Z,9.3nm,0.9s,mb4.3,baz=353,slow=6.5,SNR=64
CBIJ Chichi jima 28.03 28 LR LR 14 53 58.4
comp=Z,266nm,21.5s,baz=331,slow=30
CTA Charters Tower 28.74 142 P **P** **14 45 47.3 +0.9**
comp=Z,5.6nm,0.8s,mb4.3,baz=304,slow=10.0,SNR=2.6
NJ2 Nanjing 30.64 345 *e*P **P** **14 46 04.9 +1.8**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
WHN Wuhan 30.74 337 ⇓P **P** **14 46 05.8 +1.8**
WHN AP pP 14 46 24.8 +2.6
GYA Guiyang 31.39 321 ⇓ *i*P **P** **14 46 10.5 +0.6**
GYA AP pP 14 46 28.3 +0.2
GYA XP sP 14 46 38.0 +0.9
GYA PP PP 14 47 16.1 -6.1
GYA PCP PcP 14 49 04.5 +2.5
GYA S **S** **14 51 12.1 +0.1**
GYA XS sS 14 51 41.0 -2.2
GYA SCP ScP 14 52 38.9 +0.5
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,90nm,5.4s
GYA LR LR
comp=N,510nm,17.1s
GYA LR LR
comp=E,370nm,17.9s
GYA LR LR
comp=Z,690nm,18.2s
CMAR Chiang Mai Arr 32.55 301 P **P** **14 46 19.9 -0.2**
comp=Z,1.9nm,0.7s,mb4.0,baz=115,slow=6.9,SNR=17
CMAR PcP PcP 14 49 05.8 +0.5
comp=Z,0.9nm,0.7s,baz=138,slow=1.1,SNR=4.2
CMAR ScP ScP 14 52 44.6 +2.2
comp=Z,0.5nm,0.5s,baz=128,slow=1.5,SNR=5.1
CMAR LR LR 15 00 42.5
comp=Z,78nm,20.2s,baz=155,slow=38
CMAR Chiang Mai Arr 32.55 301 P **P** **14 46 19.9 -0.2**
CMAR 14 49 05.8
CHTO Chiang Mai 32.70 302 *e*P **P** **14 46 21.3 -0.1**
comp=Z,4.1nm,0.6s,mb4.4
CHTO Chiang Mai 32.70 302 *e*P **P** **14 46 21.3 -0.1**
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
FORT Forrest 33.07 180 *e*P **P** **14 46 23.9 -0.5**
comp=Z,66nm,0.8s,mb5.5
FORT *e*pP pP 14 46 42.2 -0.4
KMI Kunming 33.11 315 P **P** **14 46 26.3 +1.3**
KMI AP pP 14 46 44.6 +1.4
KMI S **S** **14 51 39.8 +1.0**
KMI AMB AMB
comp=Z,12nm,1.0s,mb4.7
KMI AMB AMB
comp=Z,150nm,3.1s
KMI LR LR
comp=N,294nm,15.6s
KMI LR LR
comp=E,226nm,16.7s
KMI LR LR
comp=Z,270nm,16.1s
KSRS Korea Array 34.81 360 P **P** **14 46 38.8 -0.7**
comp=Z,5.1nm,0.8s,mb4.4,baz=180,slow=11,SNR=14
KSRS pP pP 14 46 58.0 +0.2
comp=Z,5.3nm,1.0s,baz=182,slow=9.5,SNR=4.5
KSRS ScP ScP 14 52 51.1 +1.1
comp=Z,1.7nm,1.0s,baz=81,slow=38,SNR=3.0
KSRS LR LR 14 58 40.8
comp=Z,185nm,21.6s,baz=180,slow=32
MJAR Matsushiro Arr 35.20 14 P **P** **14 46 41.4 -1.5**
comp=Z,1.3nm,0.7s,mb3.9,baz=187,slow=9.6,SNR=3.6
MJAR pP pP 14 46 59.6 -1.6
comp=Z,4.0nm,0.7s,baz=184,slow=9.7,SNR=5.3
MJAR LR LR 14 58 30.4
comp=Z,210nm,20.1s,baz=225,slow=32
MJAR Matsushiro Arr 35.20 14 P **P** **14 46 41.4 -1.5**
MJAR *PP pP 14 46 59.6 -1.6
MAT Matsushiro 35.20 14 P **P** **14 46 44.9 +2.0**
MAT S **S** **14 52 13.6 +2.9**
XAN Xi'an 36.07 333 P **P** **14 46 50.3 -0.1**
XAN AP pP 14 47 08.3 -0.5
XAN XP sP 14 47 17.3 -0.5
XAN AMB AMB
comp=Z,32nm,0.9s,mb5.2
XAN AMB AMB
comp=Z,137nm,5.6s
XAN LR LR
comp=N,169nm,11.3s
XAN LR LR
comp=E,128nm,10.4s
XAN LR LR
comp=Z,273nm,15.9s
CD2 Chengdu 36.36 324 *e*P **P** **14 46 53.3 +0.4**
CD2 AP pP 14 47 11.6 +0.3
CD2 XP sP 14 47 21.0 +0.7
CD2 PP PP 14 48 19.6 +2.5
CD2 PCP PcP 14 49 16.8 +0.8
CD2 S **S** **14 52 28.8 +0.2**
CD2 XS sS 14 53 00.3 +0.1
CD2 SS SS 14 54 57.8 -13
CD2 SCS ScS 14 57 00.3 -1.9
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
CD2 AMB AMB
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,350nm,10.8s
CD2 LR LR
comp=E,400nm,9.6s
CD2 LR LR
comp=Z,280nm,14.4s
STKA Stephens Creek 36.54 160 P **P** **14 46 55.1 +0.8**
comp=Z,103nm,0.7s,mb5.8,baz=333,slow=7.9,SNR=168
STKA LR LR 15 02 20.4
comp=Z,344nm,22.0s,baz=124,slow=37
STKA Stephens Creek 36.54 160 *e*P **P** **14 46 54.8 +0.4**
comp=Z,22nm,0.8s,mb5.1
NWAO Narrogin (SRO) 36.64 195 P **P** **14 46 54.6 -0.6**
comp=Z,17nm,0.5s,mb5.2,baz=12,slow=8.4,SNR=17
BJT Baijiatuan 38.87 346 *e*P **P** **14 47 14.1 +0.2**
comp=Z,29nm,0.8s,mb5.2
BJT Baijiatuan 38.87 346 *e*P **P** **14 47 14.1 +0.2**
BJT pmax pmax
comp=Z,29nm,0.8s
BJI Beijing 38.89 346 P **P** **14 47 13.9 -0.1**
BJI XP sP 14 47 41.3 -0.3
BJI S **S** **14 53 10.8 +4.2**
BJI XS sS 14 53 41.1 +2.7
BJI AMB AMB
comp=Z,75nm,1.1s,mb5.4
ARMA Armidale 39.76 147 *e*P **P** **14 47 22.3 +0.8**
comp=Z,1.1nm,0.9s
LZH Lanzhou 40.19 329 *e*P **P** **14 47 27.0 +2.0**
LZH AP pP 14 47 41.0 -2.6
LZH XP sP 14 47 48.0 -4.5
LZH PP PP 14 49 04.0 +5.1
LZH S **S** **14 53 28.0 +1.8**
LZH XS sS 14 54 00.1 +1.9
LZH SS SS 14 56 25.0 -2.1
LZH AMB AMB
comp=Z,69nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,310nm,4.0s
LZH LR LR
comp=E,610nm,13.2s
LZH LR LR
comp=Z,850nm,15.3s
HHC Hu-ho-hao-te 40.96 341 *e*P **P** **14 47 31.8 +0.5**
HHC AP pP 14 47 48.9 -1.1
HHC XP sP 14 47 55.5 -3.4
HHC PP PP 14 49 11.6 +4.4
HHC PCP PcP 14 49 31.8 +1.6
HHC S **S** **14 53 41.6 +4.0**
HHC XS sS 14 54 10.1 +0.5
HHC SCS ScS 14 57 28.8 +0.3
HHC AMB AMB
comp=Z,26nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,329nm,5.7s
HHC LR LR
comp=N,443nm,20.2s
HHC LR LR
comp=E,542nm,16.7s
HHC LR LR
comp=Z,308nm,15.5s
CN2 Changchun 41.21 357 *e*P **P** **14 47 36.4 +3.2**
CN2 *e*S **S** **14 53 45.5 +4.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
CN2 AMB AMB
comp=Z,200nm,3.0s
SHL Shillong 41.59 307 *e*P **P** **14 47 37.5 +0.9**
LSA Lhasa 44.17 312 *e*P **P** **14 47 58.8 +1.4**
comp=Z,46nm,1.5s,mb5.0
LSA Lhasa 44.17 312 *e*P **P** **14 47 58.8 +1.4**
LSA pmax pmax
comp=Z,46nm,1.5s,mb5.0
GTA Gaotai 44.79 329 *e*P **P** **14 48 02.8 +0.6**
GTA AP pP 14 48 18.1 -3.0
GTA XP sP 14 48 25.3 -4.7
GTA PCP PcP 14 49 45.8 +2.7
GTA SCP ScP 14 53 30.8 +2.1
GTA S **S** **14 54 32.3 -1.4**
GTA SCS ScS 14 57 50.6 -1.7
GTA AMB AMB
comp=Z,11nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,209nm,7.8s
GTA LR LR
comp=N,232nm,11.4s
GTA LR LR
comp=E,174nm,14.1s
GTA LR LR
comp=Z,223nm,15.9s
TAPN Taplejung 45.73 307 *e*P **P** **14 48 10.3 +0.4**
comp=Z,38nm,0.9s,mb5.1
ODAN Odare 45.78 306 *e*P **P** **14 48 10.9 +0.7**
comp=Z,45nm,0.9s,mb5.2
HABR Khabarovsk 46.23 7 *e*P **P** **14 48 11.1 -2.3**
HABR *e**PP pP 14 48 30.6 -1.9
HABR *e* 14 49 45.4
HABR *e* 14 50 00.2
HABR *e* 14 57 58.2
HABR *e*SSS 14 59 17.0
RAMN Ramite 46.45 306 *e*P **P** **14 48 16.2 +0.6**
comp=Z,66nm,1.0s,mb5.3
JIRN Jiri 47.08 306 *e*P **P** **14 48 20.9 +0.4**
comp=Z,47nm,0.9s,mb5.2
GUN Gumba 47.43 306 *e*P **P** **14 48 23.6 +0.4**
comp=Z,54nm,0.8s,mb5.3
PKI Pulchoki 47.67 306 *e*P **P** **14 48 24.9 -0.2**
comp=Z,41nm,1.2s,mb5.2
KKN Kakani 47.87 306 *e*P **P** **14 48 26.7 +0.1**
comp=Z,39nm,1.0s,mb5.2
DMN Daman 47.94 306 *e*P **P** **14 48 27.6 +0.5**
comp=Z,45nm,0.9s,mb5.3
MDRS Chennai 48.32 285 *ex* x 14 48 52.6
MDRS AMb AMB 14 49 18.3
comp=Z,110nm,0.5s,mb5.9
GKN Gorkha 48.48 306 *e*P **P** **14 48 31.2 0.0**
ULN Ulaanbaatar 48.68 341 *e*P **P** **14 48 32.6 +0.1**
comp=Z,24nm,1.1s,mb5.0
ULN *e*pP pP 14 48 51.6 -0.1
ULN Ulaanbaatar 48.68 341 *e*P **P** **14 48 32.6 +0.2**
ULN *e**PP pP 14 48 51.6 0.0
ULN pmax pmax
comp=Z,24nm,1.1s,mb5.0
SONM Songino Array 48.87 341 P **P** **14 48 33.9 0.0**
comp=Z,7.0nm,1.1s,mb4.5,baz=162,slow=7.8,SNR=26
SONM pP pP 14 48 53.6 +0.5
comp=Z,4.6nm,0.7s,baz=157,slow=8.9,SNR=7.4
SONM LR LR 15 08 58.2
comp=Z,180nm,18.6s,baz=122,slow=36
SONM Songino Array 48.87 341 P **P** **14 48 33.9 0.0**
SONM *PP pP 14 48 53.6 +0.5
KOLN Koldanda 49.23 305 *e*P **P** **14 48 37.4 +0.4**
comp=Z,70nm,0.9s,mb5.6
DANN Dangsing 49.32 306 *e*P **P** **14 48 38.4 +0.7**
comp=Z,72nm,0.8s,mb5.7
PYUN Piuthan 49.85 305 *e*P **P** **14 48 42.2 +0.5**
comp=Z,53nm,1.0s,mb5.4
HYB Hyderabad 50.68 290 *e*P **P** **14 48 48.5 +0.4**
HYB Hyderabad 50.68 290 *i*P **P** **14 48 48.5 +0.4**
HYB *e* 14 48 58.0
ZAK Zakamensk 52.10 340 *e*P **P** **14 48 58.3 +0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
BHPL Bhopal 53.04 297 *e*P **P** **14 49 05.4 -0.3**
BHPL AMb AMB 14 49 06.2
comp=Z,14nm,0.8s,mb5.0
WMQ Urumqi 54.44 325 P **P** **14 49 17.0 +1.5**
WMQ AP pP 14 49 36.0 +1.0
WMQ XP sP 14 49 45.0 +1.3
WMQ PP PP 14 51 22.0 +3.6
WMQ S **S** **14 56 48.0 -0.3**
WMQ SCS ScS 14 58 55.0 -2.6
WMQ SS SS 15 00 30.0 -1.8
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,59nm,4.0s
WMQ LR LR
comp=N,182nm,16.0s
WMQ LR LR
comp=E,174nm,16.0s
WMQ LR LR
comp=Z,181nm,16.0s
DDI Dehra Dun 54.68 306 *e*P **P** **14 49 15.8 -1.7**
KAD Karad 54.76 289 *e*P **P** **14 49 17.2 -1.1**
POO Poona 55.28 291 *e*P **P** **14 49 21.5 -0.5**
PETK Petropavlovsk- 56.14 21 P **P** **14 49 27.1 -0.5**
comp=Z,5.2nm,0.9s,mb4.6,baz=153,slow=4.4,SNR=3.0
PETK pP pP 14 49 46.7 -0.5
comp=Z,6.6nm,0.7s,baz=161,slow=1.1,SNR=3.6
PETK Petropavlovsk- 56.14 21 P **P** **14 49 27.1 -0.5**
PETK pP pP 14 49 46.7 -0.5
BOD Bodaibo 56.28 351 *e*P **P** **14 49 26.9 -1.5**
BOD pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
AJM Ajmer 56.34 300 *e*P **P** **14 49 29.5 0.0**
AJM AMb AMB 14 49 30.2
comp=Z,9.2nm,0.6s,mb5.0
HVS Khovu-Aksy 56.38 335 ⇑ *e*P **P** **14 49 29.4 +0.1**
THN Thein Dam 57.28 307 *e*P **P** **14 49 33.6 -2.5**
MK31 Makanchi Array 59.27 325 *e*P **P** **14 49 50.0 +0.4**
MK31 Makanchi Array 59.27 325 *i*P **P** **14 49 49.6 0.0**
MK31 pmax pmax
comp=Z,14nm,0.7s,mb5.1
MKAR Makanchi Array 59.27 325 P **P** **14 49 50.1 +0.5**
comp=Z,12nm,0.6s,mb5.1,baz=118,slow=7.9,SNR=72
MKAR pP pP 14 50 09.4 0.0
comp=Z,4.9nm,0.6s,baz=116,slow=8.0,SNR=4.6
MKAR LR LR 15 14 43.6
comp=Z,103nm,20.0s,baz=248,slow=35
MKAR Makanchi Array 59.27 325 *i*P **P** **14 49 50.0 +0.4**
MKAR pmax pmax
comp=Z,12nm,0.6s
YAK Yakutsk 59.43 1 *e*P **P** **14 49 50.2 -0.1**
comp=Z,34nm,1.1s,mb5.3
YAK *e* pP 14 50 09.2 -1.0
YAK Yakutsk 59.43 1 *e*P **P** **14 49 49.7 -0.7**
YAK *e* pP 14 50 08.2 -2.0
YAK pmax pmax
comp=Z,33nm,1.1s,mb5.3
YAK pmax pmax
comp=N,16nm,1.4s
BHJ Bhuj 60.01 295 *ex* x 14 48 39.5
URZ Urewera 60.81 137 LR LR 15 12 34.0
comp=N,119nm,21.9s,baz=204,slow=32
ZAA0 Zalesovo Array 62.25 333 *e*P **P** **14 50 08.5 -1.1**
ZALV Zalesovo Beam 62.25 333 P **P** **14 50 08.6 -1.1**
comp=N,2.4nm,0.6s,mb4.4,baz=125,slow=7.4,SNR=11
ZALV LR LR 15 18 00.3
comp=N,70nm,19.0s,baz=188,slow=37
ZALV Zalesovo Beam 62.25 333 P **P** **14 50 08.6 -1.1**
ZALV LR LR 15 18 00.3
AML Almayashu 62.42 317 *e*P **P** **14 50 12.6 +1.5**
comp=N,12nm,0.9s,mb4.9
AML *e* pP 14 50 32.4 +1.4
EKS2 Erkin-Say 62.58 318 *e*P **P** **14 50 13.2 +1.0**
comp=N,11nm,0.9s,mb4.8
EKS2 *e*pP pP 14 50 33.2 +1.1
KBL Kabul 63.24 308 *e*P **P** **14 50 16.7 0.0**
comp=N,6.5nm,0.7s,mb4.7
KBL Kabul 63.24 308 *e*P **P** **14 50 16.7 0.0**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KURK Kurchatov 63.44 327 P **P** **14 50 17.9 +0.2**
comp=Z,143nm,0.8s,mb6.0,SNR=16
KURK Kurchatov 63.44 327 *e*P **P** **14 50 17.5 -0.2**
comp=Z,17nm,0.8s,mb5.0
KURK Kurchatov 63.44 327 ⇑ *e*P **P** **14 50 17.5 -0.2**
KURK pmax pmax
comp=Z,16nm,0.9s,mb5.0
NVS Novosibirsk 63.53 333 *e*P **P** **14 50 16.0 -2.2**
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.6
NVS pmax pmax
comp=E,10.0nm,1.5s
KK31 Karatay Array 64.97 317 *i*P **P** **14 50 27.7 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
BVA0 Borovoye Array 69.02 327 *i*P **P** **14 50 53.0 -0.3**
BVA0 pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
TIXI Tiksi 69.08 0 *e*P **P** **14 50 52.6 -0.7**
comp=Z,8.4nm,0.8s,mb4.6
TIXI Tiksi 69.08 0 *e*P **P** **14 50 51.4 -1.9**
TIXI *e* pP 14 51 13.3 -0.3
TIXI pmax pmax
comp=Z,22nm,1.5s,mb4.8
BRVK Borovoye 69.09 327 P **P** **14 50 53.8 0.0**
comp=Z,50nm,0.6s,mb5.5,SNR=5.8
BRVK Borovoye 69.09 327 *e*P **P** **14 50 53.2 -0.6**
comp=Z,12nm,0.9s,mb4.7
BRVK Borovoye 69.09 327 *e*P **P** **14 50 53.2 -0.6**
BRVK pmax pmax
comp=Z,12nm,0.9s,mb4.7
BILL Bilibino 70.46 14 *e*P pP 14 51 18.3 -3.9
BILL *e* 14 53 38.0
AB31 Akbulak array 73.88 321 P **P** **14 51 22.0 -0.7**
AB31 pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
ARU Arti 76.63 328 *d*iP **P** **14 51 36.6 -1.7**
ARU *e*S S 15 01 16.2 -2.4
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.3
MIB Mutribah 80.62 300 *e*P **P** **14 51 59.4 -1.4**
MIB AMb AMB 14 52 04.2
comp=Z,26nm,0.9s,mb5.1
NAY Al-Naaiem 80.68 299 *e*P **P** **14 51 58.7 -2.4**
NAY AMb AMB 14 52 21.9
comp=Z,24nm,1.5s,mb4.8
VNDA Vanda 82.04 173 P **P** **14 52 07.3 -0.1**
comp=Z,8.1nm,0.9s,mb4.5,baz=314,slow=6.0,SNR=41
VNDA LR LR 15 23 59.0
comp=Z,105nm,19.8s,baz=330,slow=32
VNDA Vanda 82.04 173 *e*P **P** **14 52 07.2 -0.2**
comp=Z,8.9nm,0.9s,mb4.6
VNDA Vanda 82.04 173 *e*P **P** **14 52 07.2 -0.1**
VNDA pmax pmax
comp=Z,9.0nm,0.9s
MAW Mawson 83.00 200 P **P** **14 52 12.8 +0.3**
comp=Z,2.6nm,0.8s,mb4.1,baz=67,slow=16,SNR=3.7
PPT Papeete 83.58 108 LR LR 15 24 58.3
comp=Z,73nm,20.4s,baz=264,slow=32
OBN Obninsk 88.77 325 *i*P **P** **14 52 40.3 -0.9**
OBN *e**PP pP 14 53 01.9 -0.4
OBN *e* 14 56 09.8
OBN *e* 15 03 01.9
OBN *e*SS SS 15 09 15.7 +0.4
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
OBN MLR MLR
comp=Z,100nm,16.0s
SYO Syowa Base 91.70 201 ⇓ *e*P **P** **14 52 53.6 -1.0**
ARCES ARCESS Array B 92.03 340 P **P** **14 52 55.4 -0.8**
comp=Z,7.4nm,0.9s,mb4.9,baz=39,slow=7.8,SNR=3.9
QSPA South Pole Qui 92.39 180 *e*P **P** **14 52 58.3 +0.7**
comp=Z,6.5nm,1.1s,mb4.8
AKASG Malin Array Be 93.62 321 LR LR 15 39 48.3
comp=Z,51nm,18.1s,baz=20,slow=38
PDAR Pinedale Array 111.49 42 PKKPbc PKKPbc 15 09 23.9 +5.9
comp=Z,0.6nm,0.8s,baz=111,slow=5.0,SNR=4.9
TXAR Lajitas Array 121.39 53 PKP PKPdf 14 58 42.4 +1.2
comp=Z,0.6nm,0.7s,baz=209,slow=1.5,SNR=8.6
JCT Junction City 123.94 50 *e*PKPdf PKPdf 14 58 47.0 +1.0
TORD Torodi Ar. Bea 124.45 288 PKP PKPdf 14 58 47.0 -0.5
comp=Z,2.4nm,0.7s,baz=58,slow=1.9,SNR=12
CFAA Coronel Fontan 147.26 154 PKPbc PKPbc 14 59 30.8 -0.5
comp=Z,0.6nm,0.7s,baz=255,slow=2.0,SNR=10
ATAH Atahualpa 153.38 101 PKPbc PKPbc 14 59 49.0 +2.4
comp=Z,5.8nm,0.5s,baz=120,slow=16,SNR=7.2
SDV Santo Domingo 158.32 58 PKP PKPdf 14 59 45.4 -0.1
comp=Z,4.5nm,0.8s,baz=264,slow=4.6,SNR=5.1
LPAZ La Paz 159.06 132 PKP PKPdf 14 59 48.2 +1.9
comp=Z,1.5nm,1.0s,baz=297,slow=0.2,SNR=4.6
LPAZ PKPab PKPab 15 00 24.5 +1.4
comp=Z,2.5nm,1.0s,baz=239,slow=3.5,SNR=5.2
LPAZ La Paz 159.06 132 *e*PKPdf PKPdf 14 59 48.1 +1.7
LPAZ *e*PKPab PKPab 15 00 25.3 +2.2
LPAZ La Paz 159.06 132 *e*PKP2 PKPab 15 00 25.3 +2.2
SIV San Ignacio 163.90 147 PKP PKPdf 14 59 50.5 -0.9
comp=Z,1.5nm,1.0s,baz=198,slow=12,SNR=4.6
SIV PKPab PKPab 15 00 45.2 +1.0
comp=Z,0.6nm,0.5s,baz=196,slow=10,SNR=4.1

ISCJB ***21*** *14:54:52.9±3.4, 48S±0.1×153E±0.1, h68km±34km, mb4.0/11, Error ellipse: s-maj=22.7km s-min=17.4km az=154.1*
IDC ***21*** *14:54:54.4±0.8, 4.79S×15.329E, h64km±5km, mb3.9/11, mb1 4.1/12, mb1mx4.0/18, mbtmp4.0/12, Error ellipse: s-maj=21.9km s-min=13.2km az=66.0*
NEIC ***21*** *14:54:54.3±0.6, 4.82S×15.325E, Error ellipse: s-maj=17.3km s-min=11.4km az=52.0*

ISC 21 14:54:55.3±2.8, 48S±01×153.8E±01, h72km±30km, n17, σ0s 71/17, mb4.0/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**		**8.05**	**125**	P		**Pn**	**14 56 49.4**	**-0.2**
	9.6nm,0.3s,baz=230,slow=13,SNR=4.7								
HNR					S		**Sn**	**14 58 19.4**	**+0.3**
	baz=178,slow=17,SNR=2.5								
HNR	**Honiara**		**8.05**	**125**	P		**Pn**	**14 56 49.4**	**-0.2**
HNR					S		**Sn**	**14 58 19.4**	**+0.3**
WRA	**Warramunga Arr**		**23.80**	**229**	P		**P**	**15 00 01.3**	**-0.2**
	5.3nm,0.5s,mb4.2,baz=53,slow=9.8,SNR=62								
WRA					pP			15 00 16.9	
	5.4nm,0.5s,baz=51,slow=9.8,SNR=7.3								
WRA					PcP	PcP		15 03 43.9	+0.4
	1.7nm,0.9s,baz=44,slow=1.9,SNR=7.0								
WRA					pPcP			15 04 02.6	
	1.0nm,0.9s,baz=50,slow=2.5,SNR=4.1								
ASAR	**Alice Springs**		**26.47**	**223**	P		**P**	**15 00 26.1**	**+0.3**
	1.4nm,0.8s,mb3.5,baz=59,slow=8.7,SNR=20								
ASAR					PcP	PcP		15 03 50.0	+0.6
	1.2nm,0.9s,baz=70,slow=2.8,SNR=6.0								
STKA	**Stephens Creek**		**29.08**	**201**	P		**P**	**15 00 48.3**	**-0.6**
	2.2nm,0.7s,mb3.9,baz=35,slow=13,SNR=7.2								
RPZ	**Rata Peaks**		**41.81**	**161**	P		**P**	**15 02 38.1**	**+0.3**
	22nm,0.8s,mb4.9,baz=356,slow=2.1,SNR=16								
KSRS	**Korea Array**		**48.22**	**333**	P		**P**	**15 03 27.5**	**-1.3**
	1.8nm,0.9s,mb3.9,baz=146,slow=9.5,SNR=4.6								
CMAR	**Chiang Mai Arr**		**58.31**	**295**	P		**P**	**15 04 44.6**	**+1.4**
	0.6nm,0.7s,mb3.8,baz=115,slow=5.1,SNR=5.3								
SONM	**Songino Array**		**66.58**	**328**	P		**P**	**15 05 38.8**	**+1.0**
	0.8nm,0.8s,mb3.6,baz=149,slow=3.1,SNR=3.7								
SONM					pP	pP		15 05 55.1	-1.7
	0.5nm,0.6s,baz=123,slow=5.3,SNR=2.2								
VNDA	**Vanda**		**72.81**	**178**	P		**P**	**15 06 15.6**	**0.0**
	4.7nm,0.9s,mb4.3,baz=326,slow=6.2,SNR=27								
MKAR	**Makanchi Array**		**80.64**	**319**	P		**P**	**15 07 00.6**	**+0.4**
	2.1nm,0.5s,mb4.2,baz=96,slow=7.5,SNR=35								
MKAR					pP	pP		15 07 17.4	-2.4
	0.6nm,0.5s,baz=98,slow=6.8,SNR=2.6								
MKAR	**Makanchi Array**		**80.64**	**319**	P		**P**	**15 07 00.6**	**+0.4**
MKAR					pP	pP		15 07 17.4	-2.4
ZALV	**Zalesovo Beam**		**81.42**	**326**	P		**P**	**15 07 03.2**	**-1.0**
	1.4nm,0.4s,mb4.2,baz=118,slow=5.4,SNR=7.7								
ZALV	**Zalesovo Beam**		**81.42**	**326**	P		**P**	**15 07 03.2**	**-1.0**
MAW	**Mawson**		**85.75**	**203**	P		**P**	**15 07 25.8**	**-0.3**
	2.0nm,0.8s,mb4.1,baz=4.3,slow=1.2,SNR=4.3								

TORD	**Torodi Ar. Bea**	**150.76**	**288**	PKPbc	PKPbc	15 14 39.9	-0.5
	6.9nm,0.7s,baz=60,slow=2.1,SNR=30						
TORD				pPKPbc	pPKPbc	15 14 59.0	-2.0
	5.8nm,0.8s,baz=63,slow=1.7,SNR=9.0						
TORD	**Torodi Ar. Bea**	**150.76**	**288**	PKPbc	PKPbc	15 14 39.9	-0.5
TORD				pPKPbc	pPKPbc	15 14 59.0	-2.0

*NEIC **21** 15:00:12.4, 16.15N×97.20W, h12km, MD4.6(MEX), After MEX.*

MEX 21 15:00:12.4±1.4, 16.15N×97.20W, h12km±18km, MD4.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.93**	**285**	*i* P	Pg	15 00 27.2	-3.2
PNIG				*i* S	Sg	15 00 39.8	-2.7
VHO	**Vista Hermosa**	**1.02**	**26**	*i* P	Pb	15 00 28.2	-3.8
VHO				*i* S	Sb	15 00 41.8	-3.7
UTMO	**Huajuapan**	**1.77**	**341**	*e*P	Pn	15 00 41.1	-1.8
UTMO				*i* S	Sn	15 01 00.4	-5.0
CMIG	**Matias Romero**	**2.41**	**67**	*i* P	Pn	15 00 50.0	-1.7
CMIG				*i* S	Sn	15 01 17.3	-3.7
CAIG	**El Cayaco**	**3.08**	**287**	*i* P	Pn	15 00 57.0	-3.9
CAIG				*i* S	Sn	15 01 34.7	-3.0
PPM	**Popocatepetl**	**3.21**	**335**	*i* P	Pn	15 01 00.8	-1.9
PPM				*i* S	Sn	15 01 38.6	-2.3
LVIG	**Laguna Verde**	**3.63**	**12**	*e*P	Pn	15 01 06.8	-1.7
PCIG		**3.85**	**96**	*e*P	Pn	15 01 06.2	-5.2
PCIG				*i* S	Sn	15 01 49.8	-7.0
TGIG		**3.96**	**80**	*i* P	Pn	15 01 10.6	-2.4
TGIG				*i* S	Sn	15 01 55.6	-3.7
ZIIG	**Zihuatanejo**	**4.34**	**290**	*i* P	Pn	15 01 16.5	-1.8
ZIIG				*i* S	Sn	15 02 04.6	-4.2
CCIG	**Comitan**	**4.86**	**88**	*e*P	Pn	15 01 29.3	+3.9

*ISCJB **21** 15:00:48.6±0.5, 35.16N±.004×2923E±.008, h10km, Error ellipse: s-maj=9.8km s-min=4.8km az=165.4*
*CSEM **21** 15:00:48.7±0.1, 35.17N×2936E, h10km, ML3.7, Error ellipse: s-maj=6.9km s-min=3.0km az=58.0*
*ATH **21** 15:00:50.7, 3522N×2907E, h10km, MD3.3/3*
*HLW **21** 15:00:54.4, 3508N×2918E, h30km, Mb3.7*

ISC 21 15:00:49.9±0.5, 3522N±.004×2916E±.008, h10km, n19, σ0°60/21, 2C-1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.99**	**20**	*e*PB	**Pb**	**15 01 10.0**	**+0.8**
ARG	**Arkhangelos**	**1.31**	**320**	*e*PB	**Pb**	**15 01 14.5**	**0.0**
KARP	**Karpathos**	**1.67**	**282**	*e*PB	**Pb**	**15 01 20.6**	**-0.1**
TURN	**Turunc**	**1.71**	**345**	*i* P	**Pn**	**15 01 20.3**	**+0.4**
TURN	**Turunc**	**1.71**	**345**	*i* P	**Pn**	**15 01 20.3**	**+0.5**
TURN				*i* S	**Sn**	**15 01 40.1**	**-1.7**
GOLH	**Golhisar**	**2.04**	**9**	*i* P	**Pn**	**15 01 25.6**	**+1.3**
GOLH	**Golhisar**	**2.04**	**9**	*i* P	**Pn**	**15 01 25.6**	**+1.2**
GOLH				*i* S	**Sn**	**15 01 49.8**	**-0.1**
BDRM	**Kayabasi**	**2.31**	**324**	*i* P	**Pn**	**15 01 28.1**	**+0.1**
BDRM	**Kayabasi**	**2.31**	**324**	*i* P	**Pn**	**15 01 28.1**	**+0.1**
MANT	**Manisa**	**3.31**	**352**	*i* P	**Pn**	**15 01 41.5**	**-0.1**
MANT	**Manisa**	**3.31**	**352**	*i* P	**Pn**	**15 01 41.5**	**-0.2**
HMAT	**Matruh**	**4.46**	**203**	P	**Pn**	**15 01 58.0**	**+0.4**
SLUM		**4.97**	**223**	P	**Pn**	**15 02 05.0**	**+0.4**
AMAG	**Maghara**	**5.69**	**142**	↑*i*P	**Pn**	**15 02 13.8**	**-0.6**
KOT	**Kottamia**	**5.73**	**156**	P	**Pn**	**15 02 14.9**	**-0.2**
HHAG	**Hagoal**	**5.80**	**154**	↑*i*P	**Pn**	**15 02 16.0**	**0.0**
GLL	**Jalalah**	**6.02**	**158**	P	**Pn**	**15 02 18.8**	**-0.2**
HBST	**Basata**	**7.62**	**140**	↓*i*P	**Pn**	**15 02 41.0**	**0.0**
TR2		**7.84**	**149**	P	**Pn**	**15 02 43.5**	**-0.5**

*ISCJB **21** 15:02:06.8±0.2, 45.13N±.001×120.92W±.002, h25km±2km, Error ellipse: s-maj=2.3km s-min=2.2km az=178.1*
*NEIC **21** 15:02:06.0, 45.13N×120.94W, h20km, MD3.3(SEA), After SEA.*
*PNSN **21** 15:02:06.6, 45.13N×120.94W, h20km, MD3.3, Fault plane solution: NP1:φ=75.00000°, δ=80.00000°, NP2: φ=167.00000°, δ=80.00000°, Principal axes: T Plg0.0000°, Azm301.0000°; P Plg14.0000°, Azm31.0000°;*

ISC 21 15:02:06.5±0.3, 4512N±.001×12094W±.002, h16km±2km, n112, σ0°64/141, 39C-41D, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROR	**Criterion Ridg**	**0.14**	**194**	↑P	**Pg**	**15 02 11.1**	**+0.7**
G06A	**Carlson Farm,**	**0.24**	**62**	↓P	**Pg**	**15 02 12.4**	**+0.5**
	baz=0.2,SNR=1000						
G06A				↑S	**Sg**	**15 02 16.3**	**+0.7**
	baz=0.2						
VTHM	**Trough**	**0.27**	**78**	↑P	**Pg**	**15 02 12.8**	**+0.4**
G05A	**Wamic**	**0.29**	**294**	↑P	**Pg**	**15 02 13.1**	**+0.4**
	baz=0.3,SNR=1000						
G05A				↑S	**Sg**	**15 02 17.8**	**+0.8**
	baz=0.3						
VGB	**Gordon Butte**	**0.41**	**16**	↓P	**Pg**	**15 02 15.0**	**+0.2**
VFP	**Flag Point**	**0.42**	**298**	↑P	**Pg**	**15 02 15.3**	**+0.3**
VBEM	**Beaver Butte**	**0.46**	**262**	↑P	**Pg**	**15 02 16.0**	**+0.2**
H05A	**Madras**	**0.52**	**203**	↓P	**Pg**	**15 02 17.0**	**+0.2**
	baz=0.5						
H05A				↓S	**Sg**	**15 02 24.4**	**+0.6**
	baz=0.5						
HOOD	**Mount Hood Mea**	**0.54**	**292**	↑P	**Pg**	**15 02 16.9**	**-0.3**
H06A	**Lindquist Farm**	**0.58**	**132**	P	**Pg**	**15 02 17.8**	**-0.2**
	baz=0.6,SNR=616						
H06A				↓S	**Sg**	**15 02 26.2**	**+0.5**
	baz=0.6						
VLL	**Laurance Lake**	**0.62**	**303**	P	**Pg**	**15 02 18.4**	**-0.3**
TDH	**Tom, Dick, Har**	**0.62**	**286**	↑P	**Pg**	**15 02 18.3**	**-0.5**
F06A	**Goldendale**	**0.65**	**10**	P	**Pg**	**15 02 18.9**	**-0.4**
	baz=0.6,SNR=149						
F06A				↑S	**Sg**	**15 02 28.2**	**+0.2**
	baz=0.6						
VIPM	**Ingram Point**	**0.66**	**160**	↑P	**Pg**	**15 02 19.4**	**+0.1**
GMO	**Grizzlie Mount**	**0.69**	**181**	P	**Pg**	**15 02 19.8**	**-0.1**
BPO	**Bald Peter**	**0.71**	**229**	↓P	**Pg**	**15 02 20.3**	**-0.1**
APM	**Augspurger Mou**	**0.81**	**320**	P	**Pb**	**15 02 21.9**	**-0.3**
GL2	**New Goldendale**	**0.84**	**6**	P	**Pb**	**15 02 22.5**	**-0.2**
F05A	**White Salmon**	**0.84**	**335**	↓P	**Pb**	**15 02 22.3**	**-0.5**
	baz=0.8,SNR=15						
F05A				↓S	**Sb**	**15 02 34.3**	**+0.4**
	baz=0.8						
JBO	**Jordan Butte**	**0.85**	**66**	↓P	**Pb**	**15 02 22.7**	**-0.1**
VLMM	**Larch Mountain**	**0.88**	**299**	P	**Pb**	**15 02 23.2**	**-0.1**
G07A	**Ruggs Ranch, H**	**0.91**	**81**	P	**Pb**	**15 02 23.4**	**-0.5**
	baz=0.9,SNR=378						
G07A				↓S	**Sb**	**15 02 35.8**	**+0.1**
	baz=0.9						
GULW	**Guler Mountain**	**0.92**	**330**	P	**Pb**	**15 02 24.0**	**-0.2**
GT2	**Goat Mountain**	**0.94**	**272**	P	**Pb**	**15 02 24.1**	**-0.4**
BKCOR	**Black Crater**	**0.98**	**213**	↓P	**Pb**	**15 02 24.9**	**-0.2**
H04A	**Detroit Lake**	**0.99**	**244**	↑P	**Pb**	**15 02 24.5**	**-0.8**
	baz=1.0						
H04A				↓S	**Sb**	**15 02 37.8**	**-0.2**
	baz=1.0						
I05A	**Bend**	**0.99**	**194**	↑P	**Pb**	**15 02 24.8**	**-0.5**
	baz=1.0,SNR=10						
I05A				↓S	**Sb**	**15 02 38.1**	**+0.1**
	baz=1.0						
F07A	**Phinny Hill Vi**	**1.05**	**42**	↓P	**Pb**	**15 02 25.9**	**-0.4**
	baz=1.0,SNR=378						
F07A				↑S	**Sb**	**15 02 40.6**	**+0.9**
	baz=1.0						
G04A	**Mulino**	**1.09**	**275**	↓P	**Pb**	**15 02 26.5**	**-0.5**
	baz=1.1,SNR=21						
G04A				↑S	**Sb**	**15 02 41.7**	**+0.7**
	baz=1.1						
BEND	**Bend**	**1.09**	**195**	P	**Pb**	**15 02 26.6**	**-0.4**
SSOR	**Sweet Springs**	**1.11**	**257**	↓P	**Pb**	**15 02 27.1**	**-0.2**
ASR	**Mount Adams--S**	**1.12**	**336**	P	**Pb**	**15 02 27.4**	**-0.1**
HUOR	**Husband**	**1.20**	**213**	P	**Pn**	**15 02 28.4**	**-0.2**
FRIS	**Frissel Point**	**1.23**	**223**	↓P	**Pn**	**15 02 29.0**	**-0.1**
WIFE	**Three Sisters-**	**1.23**	**211**	↓P	**Pn**	**15 02 28.7**	**-0.4**
CDFW	**Cedar Flats**	**1.26**	**322**	P	**Pn**	**15 02 29.1**	**-0.4**
MTMW	**Mount Mitchell**	**1.27**	**316**	P	**Pn**	**15 02 29.2**	**-0.4**
I06A	**Prineville**	**1.29**	**156**	↑P	**Pn**	**15 02 29.5**	**-0.3**
	baz=1.3,SNR=123						
I06A				↑S	**Sb**	**15 02 47.1**	**+0.4**
	baz=1.3						
PINOR	**Pine Mountain**	**1.31**	**178**	P	**Pn**	**15 02 30.4**	**+0.2**
F04A	**Amboy**	**1.32**	**308**	P	**Pn**	**15 02 29.9**	**-0.4**
	baz=1.3,SNR=167						
F04A				↑S	**Sn**	**15 02 47.7**	**+0.2**
	baz=1.3						
JLK	**June Lake**	**1.33**	**321**	P	**Pn**	**15 02 30.5**	**+0.1**
HSR	**South Ridge**	**1.36**	**321**	P	**Pn**	**15 02 31.2**	**+0.3**
BROR	**Big Rock Looko**	**1.38**	**232**	P	**Pn**	**15 02 31.0**	**-0.1**
LVP	**Lakeview Peak**	**1.40**	**313**	P	**Pn**	**15 02 31.2**	**-0.1**
PRW	**Prosser**	**1.40**	**38**	P	**Pn**	**15 02 31.0**	**-0.3**
SOSW	**Source of Smit**	**1.40**	**324**	P	**Pn**	**15 02 31.5**	**+0.1**
SHW	**Mount Saint He**	**1.40**	**320**	P	**Pn**	**15 02 31.7**	**+0.3**
G08A	**Pilot Rock**	**1.41**	**83**	↓P	**Pn**	**15 02 31.1**	**-0.4**
	baz=1.4,SNR=248						
G08A				↑Sb	**Sb**	**15 02 50.7**	**+0.6**
	baz=1.4						
E06A	**Yakima**	**1.42**	**359**	↑P	**Pn**	**15 02 31.4**	**-0.2**
	baz=1.4,SNR=694						
NCOR	**Newberry Crate**	**1.43**	**186**	P	**Pn**	**15 02 32.6**	**+0.9**
FL2	**Flat Top 2**	**1.46**	**318**	P	**Pn**	**15 02 32.4**	**+0.2**
IRO	**Indian Ridge**	**1.46**	**221**	P	**Pn**	**15 02 32.3**	**+0.1**
I07A	**Izee**	**1.46**	**135**	↑P	**Pn**	**15 02 32.5**	**+0.3**
	baz=1.5,SNR=830						
I07A				↓Sb	**Sb**	**15 02 52.8**	**+1.2**
	baz=1.5						
BRVW	**Black Rock Val**	**1.51**	**26**	P	**Pn**	**15 02 32.8**	**-0.1**
GLK	**Glacier Lake**	**1.51**	**342**	P	**Pn**	**15 02 33.7**	**+0.7**
MXC	**Moxie City**	**1.52**	**17**	↓P	**Pn**	**15 02 33.0**	**-0.1**
E05A	**Randle**	**1.55**	**339**	↓P	**Pn**	**15 02 33.6**	**+0.2**
	baz=1.5,SNR=127						
E05A				↑Sb	**Sb**	**15 02 55.1**	**+1.0**
	baz=1.5						
RSW	**Rattlesnake Hi**	**1.58**	**36**	P	**Pn**	**15 02 33.6**	**-0.2**
HAWA	**Hanford**	**1.61**	**37**	*e*Pn	**Pn**	**15 02 33.6**	**-0.6**
HAWA				*e*S	**Sn**	**15 02 54.2**	**-0.4**
SNIWA	**Snively Ranch**	**1.61**	**33**	P	**Pn**	**15 02 34.1**	**-0.2**
E07A	**Sunnyside**	**1.62**	**27**	↑P	**Pn**	**15 02 34.2**	**-0.2**
	baz=1.6,SNR=60						
BENWA	**Benson Ranch**	**1.64**	**31**	P	**Pn**	**15 02 34.6**	**0.0**
H2OWA	**Water**	**1.66**	**39**	↓P	**Pn**	**15 02 34.6**	**-0.3**
F08A	**Pendleton**	**1.66**	**65**	↑P	**Pn**	**15 02 34.5**	**-0.5**
	baz=1.7,SNR=61						
G03A	**Yamhill**	**1.67**	**277**	↑P	**Pn**	**15 02 35.1**	**+0.1**
	baz=1.7,SNR=27						
G03A				↑Sb	**Sb**	**15 02 58.7**	**+1.2**
	baz=1.7						
YPT	**Yellepit**	**1.67**	**56**	P	**Pn**	**15 02 34.6**	**-0.4**
MDW	**Midway**	**1.70**	**29**	↓P	**Pn**	**15 02 35.4**	**-0.1**
H08A	**Prairie City**	**1.72**	**110**	↑P	**Pn**	**15 02 35.8**	**0.0**
	baz=1.7,SNR=172						
H08A				↑Sb	**Sb**	**15 03 00.1**	**+0.9**
	baz=1.7						
H03A	**Soap Creek Ran**	**1.73**	**256**	↓P	**Pn**	**15 02 36.2**	**+0.3**
	baz=1.7,SNR=17						
H03A				↑Sb	**Sb**	**15 03 00.1**	**+0.7**
	baz=1.7						
WIW	**Wooded Island**	**1.74**	**41**	P	**Pn**	**15 02 36.0**	**-0.1**
COR	**Corvallis**	**1.77**	**253**	*e*Pn	**Pn**	**15 02 37.1**	**+0.7**
COR				*e*Sg	**Sg**	**15 03 01.4**	**-2.0**
MJ2	**May Junction 2**	**1.81**	**37**	P	**Pn**	**15 02 37.1**	**+0.1**
E08A	**Dider Farm, El**	**1.90**	**43**	P	**Pn**	**15 02 38.0**	**-0.2**
	baz=1.9,SNR=33						
E04A	**Onalaska**	**1.93**	**320**	↑Sb	**Sb**	**15 03 06.7**	**+1.7**
	baz=1.9						
J06A	**Christmas Vall**	**1.96**	**163**	↓P	**Pn**	**15 02 39.1**	**+0.1**
	baz=2.0,SNR=55						
HEBO	**Mount Hebo**	**1.99**	**274**	*e*Pn	**Pn**	**15 02 40.0**	**+0.4**
HEBO				*e*Sg	**Sg**	**15 03 08.5**	**-2.1**
LNOR	**Lincton Mounta**	**2.01**	**67**	*e*Pn	**Pn**	**15 02 39.1**	**-0.6**
LNOR				*e*Sn	**Sn**	**15 03 03.1**	**-1.5**
I03A	**Eugene**	**2.03**	**236**	↓P	**Pn**	**15 02 40.4**	**+0.4**
	baz=2.0,SNR=30						
D06A	**Cle Elum**	**2.07**	**2**	↑Sb	**Sb**	**15 03 10.1**	**+0.9**
	baz=2.1						
I08A	**Drewsey**	**2.08**	**125**	↓P	**Pn**	**15 02 40.9**	**+0.1**
	baz=2.1						
BMW	**Boistfort Moun**	**2.10**	**311**	Pn	**Pn**	**15 02 40.6**	**-0.3**
BMW				*e*Sg	**Sg**	**15 03 10.5**	**-3.4**
D07A	**Quincy**	**2.18**	**18**	↓P	**Pn**	**15 02 42.4**	**+0.4**
	baz=2.2						
G09A	**Cove**	**2.24**	**85**	P	**Pn**	**15 02 42.9**	**0.0**
	baz=2.2,SNR=18						
H09A	**Durkee**	**2.37**	**100**	↓P	**Pn**	**15 02 44.9**	**+0.2**
	baz=2.4,SNR=26						
H09A				↑Sb	**Sb**	**15 03 19.4**	**+1.6**
	baz=2.4						
D04A	**Dobbs Creek Ra**	**2.37**	**328**	↑Sb	**Sb**	**15 03 20.1**	**+2.2**
	baz=2.4						
D08A	**Wollman Farm,**	**2.39**	**35**	P	**Pn**	**15 02 44.6**	**-0.3**
	baz=2.4,SNR=104						
E09A	**Wood Farm, Sta**	**2.40**	**54**	↓P	**Pn**	**15 02 44.2**	**-0.9**
	baz=2.4,SNR=13						
J08A	**Circle Bar Ran**	**2.50**	**134**	↓P	**Pn**	**15 02 46.4**	**-0.1**
	baz=2.5						
ETW	**Entiat**	**2.52**	**9**	*e*Pn	**Pn**	**15 02 46.9**	**+0.2**
ETW				*e*Sg	**Sg**	**15 03 22.4**	**-4.9**
BMO	**Blue Mountains**	**2.59**	**95**	*e*Pn	**Pn**	**15 02 47.4**	**-0.4**
BMO				*e*Sg	**Sg**	**15 03 25.3**	**-4.5**
C07A	**Waterville**	**2.64**	**13**	↑P	**Pn**	**15 02 48.2**	**-0.2**
	baz=2.6,SNR=24						
D09A	**Jones Farm, Ri**	**2.67**	**42**	↓P	**Pn**	**15 02 47.9**	**-0.9**
	baz=2.7,SNR=57						
OD2	**Odessa Site #2**	**2.74**	**33**	*e*Pn	**Pn**	**15 02 48.9**	**-0.9**
C08A	**Higginbotham F**	**2.97**	**26**	↓P	**Pn**	**15 02 52.4**	**-0.5**
	baz=3.0,SNR=17						
H10A	**Noah's Angus R**	**3.03**	**99**	↑P	**Pn**	**15 02 53.7**	**0.0**
	baz=3.0,SNR=20						
NLWA	**Neilton Lookou**	**3.04**	**319**	*e*P	**Pn**	**15 02 58.8**	**+4.9**
JCW	**Jim Creek**	**3.15**	**348**	*e*Pn	**Pn**	**15 02 56.3**	**+1.0**
JCW				*e*Sg	**Sg**	**15 03 41.5**	**-6.0**
WVOR	**Wild Horse Val**	**3.16**	**147**	*e*Pg	**Pg**	**15 03 05.7**	**-1.4**
C09A	**Chrisman Ranch**	**3.25**	**34**	P	**Pn**	**15 02 55.9**	**-0.9**
	baz=3.2,SNR=19						
G11A	**Walters Elk Ra**	**3.31**	**84**	↓P	**Pn**	**15 02 58.1**	**+0.5**
	baz=3.3,SNR=12						
RPW	**Rockport**	**3.35**	**353**	P	**Pn**	**15 03 03.4**	**+5.2**
B07A	**Winthrop**	**3.38**	**9**	↓P	**Pn**	**15 02 59.0**	**+0.4**
	baz=3.4,SNR=43						
B08A	**Colville Reser**	**3.42**	**18**	↑P	**Pn**	**15 02 58.5**	**-0.6**
	baz=3.4,SNR=5.9						
H11A	**Donnelly**	**3.52**	**95**	↑P	**Pn**	**15 03 01.2**	**+0.6**
	baz=3.5						
E11A	**Bogner Ranch,**	**3.53**	**68**	↓P	**Pn**	**15 03 00.7**	**+0.1**
	baz=3.5						
K10A	**MacKenzie Ranc**	**3.76**	**127**	↓P	**Pn**	**15 03 03.9**	**+0.1**
	baz=3.8						
I11A	**Placerville**	**3.76**	**107**	↓P	**Pn**	**15 03 03.9**	**0.0**
	baz=3.8						
A07A	**Ashnola River,**	**3.94**	**5**	↑P	**Pn**	**15 03 07.2**	**+0.9**
	baz=3.9						
A08A	**Turner Farm, O**	**4.00**	**16**	↑P	**Pn**	**15 03 07.1**	**+0.1**
	baz=4.0,SNR=17						
NEW	**Newport**	**4.09**	**39**	*e*Pn	**Pn**	**15 03 06.9**	**-1.5**
NEW				*e*Sn	**Sn**	**15 03 53.0**	**-3.0**
A10A	**Northport**	**4.50**	**30**	↓P	**Pn**	**15 03 14.2**	**+0.3**
	baz=4.5						
A11A	**Hall Mountain,**	**4.95**	**38**	↓P	**Pn**	**15 03 20.6**	**+0.5**
	baz=4.9,SNR=7.4						

*ISCJB **21** 15:11:40.5±0.9, 15.13S±0.10×745W±0.1, h100km±10km, mb3.8/4, Error ellipse: s-maj=21.6km s-min=8.1km az=136.4*
*NEIC **21** 15:11:40.7±1.1, 15.12S×745.8W, h88km±11km, MG4.0(LIM), Error ellipse: s-maj=21.2km s-min=11.4km az=53.0*
NEIC Felt [III] at Nazca.
*IDC **21** 15:11:40.9±0.8, 15.06S×743.3W, h83km±6km, mb3.7/4, mb1 3.9/7, mb1mx3.6/20, mbtmp3.8/7, Error ellipse: s-maj=29.9km s-min=12.0km az=52.0*

ISC 21 15:11:42.5±0.9, 1514S±.010×744W±.01, h101km±10km, n21, σ1°22/23, mb3.8/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**3.10**	**116**	*e*P	**Pn**	**15 12 29.0**	**-0.6**
ARE				*e*S	**Sn**	**15 13 06.0**	**0.0**
NNA	**Nana**	**3.92**	**323**	P	**Pn**	**15 12 36.9**	**-3.8**
	20nm,0.3s,baz=140,slow=10,SNR=20						
NNA				S	**Sn**	**15 13 24.8**	**-1.0**
	73nm,0.3s,baz=200,slow=15,SNR=6.7						
NNA	**Nana**	**3.92**	**323**	*e*P	**Pn**	**15 12 36.7**	**-4.1**
NNA				*e*S	**Sn**	**15 13 21.3**	**-4.6**
LPAZ	**La Paz**	**6.15**	**102**	P	**Pn**	**15 13 13.9**	**+3.0**
	1.1nm,0.3s,baz=299,slow=8.7,SNR=34						
ATAH	**Atahualpa**	**8.98**	**334**	P	**Pn**	**15 13 51.0**	**+1.6**
	1.3nm,0.3s,baz=123,slow=9.7,SNR=4.6						
ATAH				S	**Sn**	**15 15 38.0**	**+9.2**

*ATH **21** 15:52:28.9, 3587N×2821E, h13km, MD3.0/3*
*ISK **21** 15:52:28.2, 3625N×2750E, h5km, MD2.9*
*ISCJB **21** 15:52:29.5±1.1, 3627N±.004×2777E±.006, h6km±10km, Error ellipse: s-maj=8.1km s-min=6.5km az=13.7*
*CSEM **21** 15:52:29.5±0.1, 3633N×2770E, h0km±1km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.9km az=127.0*
*DDA **21** 15:52:34.7, 3708N×2815E, h7km±8km, Md3.0*

ISC 21 15:52:29.9±0.8, 3625N±.004×2771E±.006, h6km±10km, n12, σ0°67/16, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.34**	**96**	*e*PB	**Pg**	**15 52 36.1**	**-0.3**
ARG				*e*SB	**Sg**	**15 52 41.2**	**+0.3**
DAT	**Datca**	**0.49**	**348**	*e*PG	**Pg**	**15 52 38.7**	**-0.6**
DAT				*e*SG	**Sg**	**15 52 46.5**	**+0.9**
KARP	**Karpathos**	**0.83**	**212**	*e*PB	**Pb**	**15 52 46.3**	**-0.4**
KARP				*e*SB	**Sb**	**15 52 59.0**	**+0.8**
BDRM	**Kayabasi**	**0.84**	**345**	*i* P	**Pg**	**15 52 45.4**	**-0.5**
BDRM				*i* S	**Sg**	**15 52 57.0**	**+0.2**
BDRM	**Kayabasi**	**0.84**	**345**	*i* P	**Pg**	**15 52 45.4**	**-0.5**
BDRM				*i* S	**Sg**	**15 52 57.0**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.91**	**55**	*e*PG	**Pn**	**15 52 49.5**	**+0.3**
TURN	**Turunc**	**0.95**	**49**	*i* P	Px	15 52 41.7	
TURN				*i* S	Sx	15 52 50.5	
YER	**Yerkesik**	**0.99**	**28**	*e*PN	**Pn**	**15 52 50.4**	**0.0**
MLSB	**Milas**	**1.04**	**3**	*e*PG	**Pg**	**15 52 50.0**	**+0.2**
GCAM	**G?zelcaml?**	**1.49**	**345**	*i* P	**Pn**	**15 52 53.7**	**-3.5**
NPS	**Neapolis**	**1.97**	**240**	*e*PN	**Pg**	**15 53 07.0**	**-0.6**
NPS	**Neapolis**	**1.97**	**240**	*e*Pg	**Pg**	**15 53 11.5**	**+3.9**

IDC 21 16:03:38.5±2.5, 817S×12002E, h201km±26km, mb2.9/2, mb1 3.1/5, mb1mx2.9/18, mbtmp3.0/5, Error ellipse: s-maj=78.2km s-min=17.1km az=46.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.15**	**355**	P	Pn	16 04 29.6	-0.3
	1.3nm,0.3s,baz=175,slow=12,SNR=6.2						
BATI	**Baumata**	**4.12**	**120**	P	Pn	16 04 42.0	+0.1
	5.6nm,0.3s,baz=286,slow=8.1,SNR=11						
BATI				S	Sn	16 05 32.2	+0.6
	7.2nm,0.3s,baz=140,slow=19,SNR=7.8						
WRA	**Warramunga Arr**	**18.14**	**132**	P	P	16 07 35.8	-0.1
	0.3nm,0.3s,baz=305,slow=12,SNR=7.5						
WRA				S	S	16 10 53.6	+0.4
	0.1nm,0.3s,baz=307,slow=24,SNR=3.4						
ASAR	**Alice Springs**	**20.36**	**141**	P	P	16 07 59.9	+0.2
	0.3nm,0.3s,baz=309,slow=9.4,SNR=15						
STKA	**Stephens Creek**	**30.97**	**143**	P	P	16 09 37.3	+0.4
	1.1nm,0.7s,baz=310,slow=7.9,SNR=2.9						

*ISCJB **21** 16:45:33.1±5.6, 628S±.01×1583W±.03, h0km±32km, mb4.7/12, MS4.7/15, Error ellipse: s-maj=27.8km s-min=13.9km az=40.1*
*IDC **21** 16:45:34.8±0.8, 6237S×15826W, h0km, mb4.4/7, mb1 4.5/8, mb1mx4.4/11, mbtmp4.3/8, ML4.0/1, MS4.7/16, Ms1 4.6/16, ms1mx4.6/17, Error ellipse: s-maj=32.7km s-min=18.6km az=19.0*
*NEIC **21** 16:45:36.6±0.7, 6264S×15832W, h10km, mb4.9/7, Error ellipse: s-maj=20.0km s-min=15.8km az=219.0*
*GCMT **21** 16:45:36.6±0.1, 6289S×15842W, h12km, MW5.4/90, Moment Tensor Solution. s74,c125; s90,c156; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr-0.21±.02; Mθθ1.60±.02; Mφφ-1.39±.02; Mrθ0.04±.05; Mθφ0.55±.02; Mφr0.57±.05; Best double couple: M0 1.70200×10^17 NP1:φs123.00000°, δ73.00000°, λ-12.00000°. NP2:φs217.00000°, δ79.00000°, λ-162.00000°. Principal axes: T 1.7080, Plg4.0000°, Azm349.0000°; N -0.0120, Plg69.0000°, Azm248.0000°; P -1.6960, Plg21.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 16:45:36.9±6.4, 628S±.01×1584W±.03, h12km±37km, n43, σ1°28/26, mb4.6/12, MS4.7/15, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**18.57**	**202**	*e*P	**Pn**	**16 49 55.0**	**+1.4**
	122nm,1.8s						
VNDA	**Vanda**	**19.31**	**205**	P	**Pn**	**16 50 04.7**	**+2.3**
	0.5nm,0.3s,baz=69,slow=14,SNR=48						
VNDA				LR	LR	16 55 32.3	
	comp=Z,3μm,21.0s,baz=65,

	712nm,25.2s							
PPT				*e*LQ			17 04 21.3	
	4µm,30.0s							
PPT				*e*LR	LR		17 06 30.2	
	5µm,27.5s,baz=189							
PPT	**Papeete**	**45.61**	**12**	LR	LR		17 07 57.5	
	comp=Z,1µm,18.9s,MS4.9,baz=189,slow=30							
MAW	**Mawson**	**46.52**	**200**	P		**P**	**16 54 07.6**	**+4.1**
	7.9nm,1.0s,mb4.6,baz=169,slow=9.5,SNR=5.1							
MAW				LR	LR		17 11 34.8	
	comp=Z,608nm,20.3s,MS4.5,baz=54,slow=33							
STKA	**Stephens Creek**	**48.56**	**280**	P		**P**	**16 54 20.6**	**+0.8**
	4.8nm,0.7s,mb4.6,baz=153,slow=7.1,SNR=8.1							
STKA				LR	LR		17 11 56.0	
	comp=Z,1µm,18.1s,MS4.9,baz=144,slow=33							
STKA	**Stephens Creek**	**48.56**	**280**	*e*P		**P**	**16 54 20.6**	**+0.8**
STKA				LR	LR		17 11 56.0	
EIDS	**Eidsvold**	**50.03**	**294**	*e*P		**P**	**16 54 32.0**	**+1.0**
	35nm,1.4s,mb5.2							
PLCA	**Paso Flores**	**53.79**	**110**	P		**P**	**16 54 58.7**	**-0.2**
	3.1nm,0.9s,mb4.2,baz=211,slow=3.7,SNR=4.8							
PLCA				LR	LR		17 12 04.5	
	comp=Z,532nm,21.4s,MS4.6,baz=212,slow=30							
PLCA	**Paso Flores**	**53.79**	**110**	*e*P		**P**	**16 54 58.0**	**-0.9**
	9.4nm,1.4s,mb4.5							
PLCA				LR	LR		17 12 04.5	
CTA	**Charters Tower**	**56.74**	**292**	LR	LR		17 16 37.3	
	comp=Z,660nm,19.1s,MS4.8,baz=153,slow=33							
ASAR	**Alice Springs**	**59.07**	**278**	P		**P**	**16 55 36.1**	**-0.6**
	2.4nm,0.6s,mb4.4,baz=147,slow=4.5,SNR=33							
HNR	**Honiara**	**61.12**	**311**	LR	LR		17 17 10.1	
	comp=Z,440nm,21.0s,MS4.6,baz=350,slow=31							
WB2	**Warramunga Arr**	**62.10**	**281**	*e*P		**P**	**16 55 56.5**	**-1.0**
WRA	**Warramunga Arr**	**62.11**	**281**	P		**P**	**16 55 56.1**	**-1.4**
	5.5nm,0.9s,mb4.7,baz=152,slow=5.8,SNR=16							
WRA				LR	LR		17 19 48.5	
	comp=Z,714nm,18.4s,MS4.9,baz=160,slow=33							
WRAB	**Tennant Creek**	**62.11**	**281**	*e*P		**P**	**16 55 59.3**	**+1.8**
	16nm,1.1s,mb5.1							
BATI	**Baumata**	**75.50**	**276**	LR	LR		17 27 15.5	
	comp=Z,1µm,20.4s,MS5.2,baz=266,slow=33							
LPAZ	**La Paz**	**75.76**	**98**	P		**P**	**16 57 23.3**	**+0.8**
	6.2nm,1.2s,mb4.4,baz=127,slow=3.8,SNR=13							
LPAZ	**La Paz**	**75.76**	**98**	*e*P		**P**	**16 57 22.9**	**+0.5**
KAPI	**Kapang**	**81.86**	**275**	LR	LR		17 30 49.7	
	comp=Z,531nm,20.2s,MS4.9,baz=155,slow=33							
BDFB	**Brasilia**	**85.17**	**115**	LR	LR		17 33 16.2	
	comp=Z,450nm,19.5s,MS4.9,baz=13,slow=34							
OTAV	**Otavalo**	**85.59**	**81**	*e*P		**P**	**16 58 16.9**	**+1.9**
	22nm,1.4s,mb5.2							
GUMO	**Guam**	**87.86**	**306**	LR	LR		17 32 55.1	
	comp=Z,98nm,21.3s,MS4.2,baz=166,slow=32							
ROSC	**El Rosal**	**91.55**	**82**	LR	LR		17 32 27.2	
	comp=Z,134nm,18.1s,MS4.4,baz=20,slow=31							
TORD	**Torodi Ar. Bea**	**128.41**	**155**	PKP	PKPdf		17 04 44.8	**+1.6**
	1.3nm,1.1s,baz=166,slow=0.6,SNR=3.2							
MKAR	**Makanchi Array**	**143.14**	**273**	PKP	PKPdf		17 05 07.1	**-2.5**
	1.1nm,1.0s,baz=135,slow=3.0,SNR=4.2							
MKAR	**Makanchi Array**	**143.14**	**273**	PKP	PKPdf		17 05 07.1	**-2.5**
ZAA0	**Zalesovo Array**	**147.04**	**284**	*e*PKPdf	PKPdf		17 05 15.8	**-0.2**
ZALV	**Zalesovo Beam**	**147.04**	**284**	PKPbc	PKPbc		17 05 16.1	**-2.0**
	0.8nm,0.5s,baz=104,slow=4.6,SNR=4.0							
KURK	**Kurchatov**	**147.66**	**275**	*e*PKPbc	PKPbc		17 05 18.4	**-1.6**
ESDC	**Sonseca Array**	**152.19**	**134**	PKPbc	PKPbc		17 05 33.6	**+2.2**
	0.2nm,0.2s,baz=228,slow=1.7,SNR=3.5							
BRTR	**Keskin Array B**	**155.78**	**203**	PKPab	PKPab		17 05 56.2	**-0.2**
	0.7nm,0.7s,baz=162,slow=5.9,SNR=3.2							

*IDC **21** 16:54:11.2±2.0, 1138N×9223E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/21, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=64.5km s-min=21.0km az=67.0*
*NEIC **21** 16:54:12.8±1.3, 1091N×9127E, h35km, mb4.2/1, Error ellipse: s-maj=34.1km s-min=15.6km az=73.0*
*ISCJB **21** 16:54:14.7±1.3, 115N±0.1×924E±0.2, h33km, mb3.6/6, Error ellipse: s-maj=33.7km s-min=15.1km az=163.4*

ISC 21 16:54:16.8±1.3, 114N±0.1×924E±0.2, h35km, n9, σ0§21/9, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.45**	**42**	Pn	**Pn**	**16 56 30.3**	**-0.1**
	0.1nm,0.3s,baz=234,slow=15,SNR=11						
MKAR	**Makanchi Array**	**36.25**	**348**	P	**P**	**17 01 16.1**	**-0.3**
	0.6nm,0.8s,mb3.6,baz=186,slow=6.8,SNR=3.1						
SONM	**Songino Array**	**38.15**	**15**	P	**P**	**17 01 32.9**	**+0.4**
	0.4nm,0.7s,mb3.3,baz=190,slow=7.3,SNR=2.6						
SONM	**Songino Array**	**38.15**	**15**	P	**P**	**17 01 32.9**	**+0.4**
ZALV	**Zalesovo Beam**	**42.82**	**353**	P	**P**	**17 02 11.2**	**+0.1**
	0.8nm,0.7s,mb3.6,baz=178,slow=8.5,SNR=4.0						
WRA	**Warramunga Arr**	**51.78**	**127**	P	**P**	**17 03 21.3**	**-0.1**
	0.5nm,0.3s,mb3.9,baz=308,slow=8.4,SNR=12						
WRAB	**Tennant Creek**	**51.78**	**127**	*e*P	**P**	**17 03 21.6**	**+0.2**
	0.9nm,0.3s,mb4.2						
WB2	**Warramunga Arr**	**51.79**	**127**	*e*P	**P**	**17 03 21.2**	**-0.2**
ASAR	**Alice Springs**	**53.56**	**131**	P	**P**	**17 03 34.5**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=306,slow=7.6,SNR=9.6						

*ISCJB **21** 17:19:05.2±0.4, 74N±0.1×1240E±0.2, h592km±6km, mb4.2/22, Error ellipse: s-maj=27.9km s-min=9.3km az=145.1*
*IDC **21** 17:19:07.9±1.6, 726N×12385E, h607km±19km, mb3.2/10, mb1 3.3/10, mb1mx3.1/19, mbtmp3.2/10, Error ellipse: s-maj=46.7km s-min=8.3km az=65.0*
*NEIC **21** 17:19:08.2±1.9, 736N×12392E, h615km±26km, mb4.2/3, Error ellipse: s-maj=39.6km s-min=8.7km az=62.0*

ISC 21 17:19:06.2±0.4, 74N±0.1×1240E±0.2, h585km±5km, n36, σ0§57/37, mb4.2/22, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	**0.74**	**306**	*e*P	**P**	**17 20 15.2**	**-0.2**
BUKP	**Musuan**	**1.16**	**66**	*e*P	**P**	**17 20 17.6**	**+1.3**
IPIL	**Ipil**	**1.45**	**285**	*e*P	**P**	**17 20 16.8**	**-0.3**
SNPH	**Sibulan**	**2.06**	**339**	*e*P	**P**	**17 20 19.5**	**+0.2**
MATI	**Mati**	**2.30**	**101**	*e*P	**P**	**17 20 20.7**	**+0.3**
MSLP	**Maasin**	**2.84**	**18**	*e*P	**P**	**17 20 22.3**	**-0.9**
GUIM	**Jordan**	**3.48**	**337**	*e*P	**P**	**17 20 25.8**	**-1.3**
ENPP	**El Nido**	**5.88**	**310**	*e*P	**P**	**17 20 45.4**	**0.0**
LUBP	**Lubang**	**7.28**	**330**	*e*P	**P**	**17 20 58.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**26.73**	**297**	P	**P**	**17 24 00.7**	**+0.2**
	0.9nm,0.6s,mb3.6,baz=109,slow=7.3,SNR=7.5						
WRAB	**Tennant Creek**	**29.02**	**160**	*e*P	**P**	**17 24 20.1**	**-0.2**
	4.4nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**29.02**	**160**	P	**P**	**17 24 20.2**	**-0.2**
	3.4nm,0.4s,mb4.3,baz=335,slow=10,SNR=58						
WRA				PcP	PcP	17 27 09.3	-0.3
	0.4nm,0.6s,baz=329,slow=3.0,SNR=4.3						
WRA				S	**S**	**17 28 26.8**	**-4.9**
	1.0nm,0.6s,baz=336,slow=15,SNR=8.9						
WRA				ScP	ScP	17 29 54.9	-1.6
	0.2nm,0.5s,baz=342,slow=3.3,SNR=3.5						
ASAR	**Alice Springs**	**32.37**	**163**	P	**P**	**17 24 49.7**	**+0.8**
	2.0nm,0.3s,mb4.2,baz=340,slow=7.6,SNR=203						
ASAR				PcP	PcP	17 27 18.6	-0.1
	0.7nm,0.4s,baz=343,slow=2.7,SNR=14						
ASAR				S	**S**	**17 29 20.8**	**-2.0**
	2.3nm,0.8s,baz=351,slow=21,SNR=20						
ASAR				ScP	ScP	17 30 06.3	-1.3
	0.2nm,0.7s,baz=345,slow=2.9,SNR=2.6						
TAPN	**Taplejung**	**39.67**	**304**	*e*P	**P**	**17 25 49.4**	**+0.3**
	11nm,0.5s,mb4.7						
ODAN	**Odare**	**39.75**	**304**	*e*P	**P**	**17 25 49.8**	**+0.1**
	15nm,0.6s,mb4.7						
RAMN	**Ramite**	**40.44**	**303**	*e*P	**P**	**17 25 55.4**	**+0.3**
	6.7nm,0.4s,mb4.6						
JIRN	**Jiri**	**41.04**	**304**	*e*P	**P**	**17 26 00.1**	**+0.2**
	17nm,0.7s,mb4.7						
GUN	**Gumba**	**41.39**	**304**	*e*P	**P**	**17 26 02.8**	**+0.2**
	20nm,0.6s,mb4.8						
KKN	**Kakani**	**41.84**	**304**	*e*P	**P**	**17 26 05.9**	**-0.3**
	5.7nm,0.4s,mb4.4						
DMN	**Daman**	**41.91**	**304**	*e*P	**P**	**17 26 06.5**	**-0.3**
	7.0nm,0.5s,mb4.5						
GKN	**Gorkha**	**42.44**	**304**	*e*P	**P**	**17 26 10.5**	**-0.4**
	5.8nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**42.53**	**158**	P	**P**	**17 26 12.4**	**+0.9**
	2.2nm,0.7s,mb3.8,baz=340,slow=5.9,SNR=5.8						
STKA	**Stephens Creek**	**42.53**	**158**	*e*P	**P**	**17 26 11.7**	**+0.3**
	0.3nm,0.6s,mb3.0						
SONM	**Songino Array**	**42.98**	**343**	P	**P**	**17 26 15.5**	**+0.8**
	1.3nm,0.5s,mb3.7,baz=166,slow=8.3,SNR=7.7						
KOLN	**Koldanda**	**43.22**	**303**	*e*P	**P**	**17 26 17.1**	**+0.1**
	23nm,0.2s						
DANN	**Dangsing**	**43.29**	**304**	*e*P	**P**	**17 26 17.6**	**+0.1**
	32nm,0.5s,mb5.1						
PYUN	**Piuthan**	**43.84**	**303**	*e*P	**P**	**17 26 22.0**	**+0.2**
	13nm,0.4s,mb4.8						
MKAR	**Makanchi Array**	**53.00**	**325**	P	**P**	**17 27 29.8**	**+0.6**
	4.3nm,0.4s,mb4.1,baz=118,slow=7.5,SNR=106						
MKAR	**Makanchi Array**	**53.00**	**325**	P	**P**	**17 27 29.8**	**+0.6**
ZALV	**Zalesovo Beam**	**56.10**	**333**	P	**P**	**17 27 50.3**	**-0.4**
	1.7nm,0.3s,mb3.7,baz=131,slow=6.4,SNR=7.2						
KURK	**Kurchatov**	**57.19**	**327**	*e*P	**P**	**17 27 58.3**	**0.0**
	14nm,0.7s,mb4.3						
BRVK	**Borovoye**	**62.84**	**327**	*e*P	**P**	**17 28 35.9**	**+0.3**
BRTR	**Keskin Array B**	**85.59**	**309**	P	**P**	**17 30 42.7**	**-1.1**
	0.5nm,0.5s,mb3.4,baz=112,slow=3.6,SNR=3.6						
ARCES	**ARCESS Array B**	**86.08**	**340**	P	**P**	**17 30 44.6**	**-0.8**
	1.3nm,0.7s,mb3.7,baz=79,slow=5.6,SNR=3.5						
VNDA	**Vanda**	**87.40**	**172**	P	**P**	**17 30 51.6**	**+0.2**
	0.7nm,0.5s,mb3.6,baz=319,slow=6.0,SNR=9.5						
TORD	**Torodi Ar. Bea**	**119.16**	**289**	PKP	PKPdf	17 36 49.3	-1.1
	0.2nm,0.3s,baz=55,slow=1.5,SNR=5.2						

IDC 21 17:32:36.6±54.0, 1343S×16672E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/17, mbtmp4.1/3, Error ellipse: s-maj=919.9km s-min=107.0km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.45**	**227**	P	P	17 38 42.2	0.0
	1.2nm,0.6s,baz=54,slow=8.7,SNR=6.8						
WRA	**Warramunga Arr**	**31.64**	**254**	P	P	17 39 02.1	+0.3
	0.8nm,0.3s,baz=84,slow=8.6,SNR=13						
ASAR	**Alice Springs**	**32.66**	**247**	P	P	17 39 10.4	-0.2
	1.6nm,0.5s,baz=75,slow=9.8,SNR=75						

TRN 21 17:35:23.4, 1638N×5990W, h3km, MD3.8, M3.5(FDF), 1C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**1.11**	**267**	*e*P	Pg	17 35 47.7	+2.9
MGG	**Marie-Galante**	**1.43**	**252**	*e*P	Pn	17 35 53.3	+3.0
BCG	**Bois Riant Cap**	**1.68**	**260**	*e*P	Pn	17 35 57.0	+3.4
DOG	**Dongo Capester**	**1.68**	**259⇑**	*e*P	Pn	17 35 57.1	+3.4
TBG	**Guadaloupe-3**	**1.75**	**253**	*e*P	Pn	17 35 57.8	+3.1
LZG	**Guadaloupe-1**	**1.81**	**263**	*e*P	Pn	17 35 58.5	+3.0
BPA	**Boggy Peak**	**1.99**	**290**	*e*P	Pn	17 35 59.1	+1.1
BPA				*e*S	Sn	17 36 27.1	+3.6
FDF	**Fort de France**	**2.03**	**217⇓**	*i*P	Pn	17 36 01.0	+2.5
FDF			⇓	*e*S	Sn	17 36 28.3	+3.9
MVM	**Montagne Vaucl**	**2.05**	**208**	*e*P	Pn	17 36 00.9	+2.1
BIM	**Bigot**	**2.16**	**212**	*e*P	Pn	17 36 02.7	+2.3
BIM				*e*S	Sn	17 36 31.2	+3.4

*NEIC **21** 17:36:49.9, 3678S×7310W, h24km, ML2.8(GUC), After GUC.*

GUC 21 17:36:49.9±0.6, 3678S×7310W, h24km±4km, MD3.7, ML2.8, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	**Chillan**	**0.84**	**78**	*e*P	Pb	17 37 05.2	-0.7
CCHI				*e*S	Sb	17 37 16.4	-0.4
CCHI	**Chillan**	**0.84**	**78**	*e*P	Pb	17 37 05.2	-0.7
CCHI				*e*S	Sb	17 37 16.4	-0.4
CCHI				AML	AML	17 37 21.4	
	comp=E,658nm,0.7s						
CNCO	**Chanco**	**1.14**	**24**	*e*P	Pn	17 37 09.6	-0.8
CNCO				*i* S	Sn	17 37 24.9	-0.4
LNCH	**Linares**	**1.53**	**53**	*e*P	Pn	17 37 16.2	+0.5
LNCH				*i* S	Sn	17 37 36.1	+1.2

*GUC **21** 17:39:51.0±2.1, 2268S×7074W, h34km±18km, ML4.4*
*ISCJB **21** 17:39:53.2±0.7, 2268S±0.003×7064W±0.007, h41km±7km, mb4.2/12, Error ellipse: s-maj=10.4km s-min=5.2km az=15.5*
*IDC **21** 17:39:57.8±2.1, 2260S×7038W, h63km±18km, mb3.9/8, mb1 4.2/12, mb1mx4.0/19, mbtmp4.0/12, MS3.2/3, Ms1 3.2/3, ms1mx3.0/25, Error ellipse: s-maj=22.4km s-min=18.6km az=69.0*
*NEIC **21** 17:39:58.0±1.0, 2259S×7034W, h68km±9km, mb4.4/4, Error ellipse: s-maj=13.2km s-min=8.2km az=87.0*

ISC 21 17:39:51.0±1.1, 2265S±0.003×7071W±0.004, h11km±7km, n49, σ1§23/56, mb4.2/12, 5C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.51**	**152⇑**	*i*P	**Pg**	**17 40 01.0**	**-0.1**
MECH				*i* S	**Sg**	**17 40 09.0**	**+1.1**
MECH				AML	AML	17 40 18.3	
	comp=N,40µm,0.5s						
CEN1	**Los Morros**	**0.88**	**148⇑**	*i*P	**Pb**	**17 40 08.2**	**0.0**
CEN1				*i* S	**Sb**	**17 40 21.8**	**+1.9**
CEN1				AML	AML	17 40 24.9	
	comp=E,7µm,0.7s						
PB06	**Plate Boundary**	**1.05**	**93**	*e*P	**Pb**	**17 40 10.2**	**-1.0**
PB06				*i* S	**Sb**	**17 40 24.3**	**-0.7**
ANCH	**Antofagasta**	**1.07**	**165⇑**	*i*P	**Pb**	**17 40 10.8**	**-0.6**
ANCH				*i* S	**Sb**	**17 40 25.2**	**-0.1**
PB07	**Plate Boundary**	**1.19**	**40⇓**	*i*P	**Pn**	**17 40 12.9**	**-0.7**
PB07				*i* S	**Sb**	**17 40 29.3**	**+0.3**
PB04	**Plate Boundary**	**1.19**	**72**	*i* S	**Pn**	**17 40 12.6**	**-1.0**
PB04				AML	AML	17 40 15.2	
	comp=E,89µm,0.4s						
LVC	**Limon Verde**	**1.66**	**89**	P	**Pn**	**17 40 20.5**	**+0.5**
	baz=262,slow=15						
LVC				S	**Sn**	**17 40 42.9**	**+1.6**
	comp=E,1µm,0.3s,baz=156,slow=20,SNR=19						
LVC	**Limon Verde**	**1.66**	**89**	*e*P	**Pn**	**17 40 20.4**	**+0.4**
LVC	**Limon Verde**	**1.66**	**89**	P	**Pn**	**17 40 20.5**	**+0.5**
LVC				S	**Sn**	**17 40 42.9**	**+1.6**
LVC	**Limon Verde**	**1.66**	**89⇑**	*i*P	**Pn**	**17 40 20.1**	**+0.1**
LVC				*i* S	**Sn**	**17 40 42.5**	**+1.1**
LVC				AML	AML	17 40 47.0	
	comp=N,6µm,0.5s						
PB01	**Plate Boundary**	**1.96**	**36**	*e*P	**Pn**	**17 40 24.0**	**-0.1**
PB01				*i* S	**Sn**	**17 40 51.4**	**+2.7**
PB01				AML	AML	17 40 59.7	
	comp=N,5µm,0.4s						
CPN1	**Cerro Paranal**	**1.99**	**172**	*e*P	**Pn**	**17 40 22.4**	**-2.1**
ARE	**Arequipa**	**6.20**	**353⇑**	*i*P	**Pn**	**17 41 21.6**	**-0.8**
ARE				*i* S	**Sn**	**17 42 30.8**	**-2.5**
LCO	**Las Campanas**	**6.34**	**180**	P	**Pn**	**17 41 28.4**	**+4.1**
	comp=N,52nm,0.6s						
LPAZ	**La Paz**	**6.78**	**21**	P	**Pn**	**17 41 33.5**	**+3.1**
LPAZ	comp=N,3.8nm,0.3s,baz=204,slow=7.4,SNR=40			S	**Sn**	**17 42 56.0**	**+8.5**
	comp=N,1.1nm,0.3s,baz=180,slow=18,SNR=1.4						
LPAZ	**La Paz**	**6.78**	**21**	*e*P	**Pn**	**17 41 33.3**	**+2.9**
LPAZ				S	**Sn**	**17 42 56.0**	**+8.5**
CFAA	**Coronel Fontan**	**9.19**	**167**	P	**Pn**	**17 42 09.4**	**+6.0**
	comp=N,0.6nm,0.3s,baz=350,slow=12,SNR=38						
CFAA				S	**Sn**	**17 43 58.6**	**+12**
	baz=210,slow=18,SNR=6.9						
CFAA				LR	LR	17 45 25.8	
	comp=N,46nm,21.3s,baz=328,slow=36						
SIV	**San Ignacio**	**11.25**	**56**	P	**Pn**	**17 42 30.7**	**-1.0**
	comp=N,2.3nm,0.3s,baz=251,slow=12,SNR=53						
SIV				S	**Sn**	**17 44 38.8**	**+1.3**
	comp=N,0.2nm,0.3s,baz=270,slow=20,SNR=4.3						
PLCA	**Paso Flores**	**18.03**	**180**	P	**Pn**	**17 44 03.2**	**+1.8**
	comp=N,0.1nm,0.3s,baz=5.2,slow=18,SNR=4.0						
PLCA				LR	LR	17 50 34.3	
	comp=N,116nm,19.8s,baz=10,slow=35						
PLCA	**Paso Flores**	**18.03**	**180**	*e*P	**Pn**	**17 44 02.7**	**+1.2**
PLCA				LR	LR	17 50 34.3	
BDFB	**Brasilia**	**22.53**	**76**	P	**P**	**17 44 49.1**	**-1.8**
	comp=N,5.2nm,0.5s,mb4.2,baz=245,slow=16,SNR=17						
BDFB				LR	LR	17 54 53.7	
	comp=N,176nm,19.2s,baz=80,slow=40						
OTAV	**Otavalo**	**23.96**	**341**	P	**P**	**17 45 07.4**	**+2.0**
	comp=N,7.0nm,1.0s,mb4.0						
SWET	**Sewanee**	**59.33**	**346**	*e*P	**P**	**17 49 53.0**	**+0.1**
VNA3	**Neumayer Olymp**	**59.54**	**161**	*e*	**P**	**17 49 53.1**	**-0.8**
VNA3				*e*		17 50 02.4	
VNA3				*e*		17 50 05.5	
VNA1	**Neumayer--Stat**	**59.77**	**160**	*e*	**P**	**17 49 55.4**	**-0.2**
VNA1				*e*		17 50 04.9	
VNA1				*e*		17 50 07.5	
VNA2	**Neumayer--Watz**	**60.13**	**160**	*e*	**P**	**17 49 57.5**	**-0.6**
	baz=286,slow=9.2						
VNA2				*e*		17 50 06.5	
VNA2				*e*		17 50 09.6	
TXAR	**Lajitas Array**	**60.64**	**327**	P	**P**	**17 50 02.4**	**+0.3**
	comp=N,0.8nm,0.6s,mb4.0,baz=149,slow=7.8,SNR=9.2						
SNAA	**Sanae**	**61.75**	**161**	*e*	**P**	**17 50 04.6**	**-4.4**
SNAA				*e*		17 50 14.1	
SNAA				*e*		17 50 17.1	
SNAA	**Sanae**	**61.75**	**161**	*e*P	**P**	**17 50 04.8**	**-4.3**
	comp=N,3.4nm,0.6s,mb4.7						
BNM	**Barren Site**	**66.01**	**328**	*e*P	**P**	**17 50 37.8**	**+0.3**
QSPA	**South Pole Qui**	**67.55**	**180**	*e*P	**P**	**17 50 46.5**	**-0.2**
	comp=N,4.9nm,0.7s,mb4.7						
SDCO	**Great Sand Dun**	**68.41**	**331**	*e*P	**P**	**17 50 54.1**	**+1.4**
	comp=N,3.1nm,0.8s,mb4.4						
DBIC	**Dimbokro**	**70.66**	**74**	P	**P**	**17 51 05.7**	**-1.5**
	comp=N,4.5nm,0.6s,mb4.6,baz=211,slow=7.5,SNR=8.8						
MSU	**Marysvale**	**72.20**	**327**	*e*P	**P**	**17 51 17.0**	**+1.1**
PDAR	**Pinedale Array**	**74.29**	**331**	P	**P**	**17 51 29.5**	**+1.4**
	comp=N,0.3nm,0.6s,mb3.4,baz=189,slow=8.9,SNR=3.4						
NVAR	**Mina Array Bea**	**75.38**	**323**	P	**P**	**17 51 37.0**	**+2.5**
	comp=N,0.5nm,0.7s,mb3.6,baz=144,slow=5.8,SNR=3.9						
TOA0	**Torodi Ar. Sit**	**79.31**	**71**	*e*P	**P**	**17 51 55.5**	**-1.6**
TORD	**Torodi Ar. Bea**	**79.31**	**71**	P	**P**	**17 51 55.5**	**-1.6**
	comp=N,10nm,0.6s,mb5.0,baz=255,slow=5.2,SNR=77						
TORD	**Torodi Ar. Bea**	**79.31**	**71**	P	**P**	**17 51 55.5**	**-1.6**
MAW	**Mawson**	**83.71**	**164**	P	**P**	**17 52 19.0**	**-0.5**
	comp=N,2.2nm,0.8s,mb4.3,baz=229,slow=9.3,SNR=2.8						
YKA	**Yellowknife Ar**	**91.72**	**341**	P	**P**	**17 52 57.3**	**-0.7**
	comp=N,0.5nm,0.5s,mb4.1,baz=140,slow=5.0,SNR=3.1						
YKA	**Yellowknife Ar**	**91.72**	**341**	P	**P**	**17 52 57.3**	**-0.7**
ASAR	**Alice Springs**	**128.12**	**209**	PKP	PKPdf	17 58 56.8	-1.1
	comp=N,0.4nm,0.7s,baz=120,slow=2.3,SNR=6.5						
WRA	**Warramunga Arr**	**131.11**	**212**	PKP	PKPdf	17 59 02.7	-0.9
	comp=N,0.2nm,0.5s,baz=160,slow=1.8,SNR=3.4						
BVAR	**Borovoye Array**	**137.68**	**34**	PKP	PKPdf	17 59 15.0	+0.2
	comp=N,0.5nm,0.6s,baz=250,slow=2.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**143.69**	**24**	PKP	PKPdf	17 59 22.9	-2.8
	comp=N,1.7nm,0.7s,baz=297,slow=1.9,SNR=8.1						
MKAR	**Makanchi Array**	**147.54**	**36**	PKPbc	PKPbc	17 59 34.2	-0.8
	comp=N,2.7nm,0.6s,baz=304,slow=3.6,SNR=24						
SONM	**Songino Array**	**154.76**	**5**	PKP	PKPdf	17 59 43.6	+0.1
	comp=N,0.3nm,0.6s,baz=62,slow=3.9,SNR=2.3						
SONM				PKPbc	PKPbc	17 59 51.8	-0.3
	comp=N,0.7nm,0.7s,baz=7.4,slow=1.5,SNR=4.5						
SONM				PKPab	PKPab	18 00 07.2	+0.2
	comp=N,0.4nm,0.6s,baz=320,slow=4.4,SNR=3.1						
CMAR	**Chiang Mai Arr**	**169.45**	**111**	PKPab	PKPab	18 01 10.4	-1.8
	comp=N,0.4nm,0.7s,baz=262,slow=4.4,SNR=3.2						

*CSEM **21** 17:49:04.5±0.1, 3751N×3555E, h10km, MD3.0, Error ellipse: s-maj=1.6km s-min=1.2km az=150.0*
*DDA **21** 17:49:04.2, 3758N×3560E, h7km±7km, Md3.0*
*ISCJB **21** 17:49:05.5±0.8, 3751N±0.004×3558E±0.005, h16km±13km, Error ellipse: s-maj=7.6km s-min=6.5km az=35.2*
*ISK **21** 17:49:05.3, 3750N×3550E, h17km, MD3.0*

ISC 21 17:49:05.3±0.7, 3753N±0.004×3555E±0.005, h17km±7km, n15, σ1§06/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARA	**Karaisali**	**0.47**	**236**	PG	**Pg**	**17 49 14.2**	**-0.6**
KARA				*e*SG	**Sg**	**17 49 21.0**	**-0.3**
CEYT	**Ceyhan**	**0.54**	**163**	*e*PG	**Pg**	**17 49 16.1**	**0.0**
CEYT				*e*SG	**Sg**	**17 49 24.5**	**+1.2**
ANDN	**Andirin**	**0.64**	**85**	*i* P	**Pg**	**17 49 16.9**	**-1.0**
GULE	**Gulek**	**0.66**	**249**	*i* P	Px	17 48 56.3	
GULE				*i* S	Sx

9.8nm,0.2s,SNR=40
EBER S **Sn** **18 01 18.2 -0.1**
80nm,0.5s
EBER **Berja** **1.74 318** P **Pn** **18 00 56.4 +0.4**
9.8nm,0.2s,SNR=40
EBER S **Sn** **18 01 18.2 0.0**
80nm,0.5s
OKGL **Djebel Kef Gue** **1.75 75** P **Pn** **18 00 56.5 +0.3**
OJGS **Djebel Guires** **1.79 93** P **Pn** **18 01 02.6 +5.9**
TOU **Touzarine** **2.00 252** P **Pg** **18 01 12.0 +7.9**
TOU S **Sg** **18 01 35.0 +5.0**
MPAL **Palemas** **2.08 260** P **Pg** **18 01 13.5 +7.9**
MPAL S **Sg** **18 01 38.0 +5.5**
EANR **'Ain N'Sour** **2.10 80** P **Pn** **18 00 58.0 -2.9**
EGUA **Guajares** **2.11 306** P **Pn** **18 01 01.0 -0.1**
7.2nm,0.2s,SNR=7.9
EGUA S **Sn** **18 01 26.9 -0.4**
204nm,0.8s,SNR=7.9
EMUR **La Murta** **2.24 4** P **Pn** **18 01 02.4 -0.5**
2.2nm,0.1s,SNR=10
EMUR S **Sn** **18 01 29.8 -0.7**
20nm,0.3s
EMUR **La Murta** **2.24 4** P **Pn** **18 01 02.4 -0.5**
2.2nm,0.1s,SNR=10
EMUR S **Sn** **18 01 29.8 -0.7**
20nm,0.3s
ETRT **Tiaret** **2.25 95** P **Pn** **18 00 59.8 -3.2**
EQUE **Quentar** **2.27 315** P **Pn** **18 01 05.0 +1.7**
31nm,0.4s,SNR=114
EQUE S **Sn** **18 01 32.3 +1.0**
21nm,0.3s,SNR=6.7
ERON **Agron** **2.37 307** P **Pn** **18 01 06.2 +1.5**
1.9nm,0.2s,SNR=7.9
ERON S **Sn** **18 01 32.8 -1.1**
13nm,0.3s,SNR=7.9
ECOG **Cogollos-Vega** **2.39 315** P **Pn** **18 01 06.6 +1.6**
0.8nm,0.1s,SNR=7.9
ECOG S **Sn** **18 01 33.7 -0.6**
14nm,0.4s,SNR=7.9
EHUE **Huescar** **2.39 338** P **Pn** **18 01 06.6 +1.7**
0.2nm,0.2s,SNR=7.9
EHUE S **Sn** **18 01 33.8 -0.5**
3.8nm,0.2s,SNR=7.9
EBNR **Beni Rached** **2.51 73** P **Pn** **18 01 02.0 -4.6**
EQES **Quesada** **2.55 330** P **Pn** **18 01 10.1 +2.9**
11nm,0.2s,SNR=53
EQES **Quesada** **2.55 330** P **Pn** **18 01 10.1 +2.9**
11nm,0.2s,SNR=53
EQES S **Sn** **18 01 39.5 +1.2**
53nm,0.4s,SNR=8.3
ELOJ **Sierra Loja** **2.67 306** P **Pn** **18 01 10.1 +1.2**
0.6nm,0.1s,SNR=7.9
ELOJ S **Sn** **18 01 42.4 +1.1**
3.6nm,0.3s,SNR=7.9
TZK **Tazeka** **2.72 237** P **Pg** **18 01 21.5 +3.7**
TZK S **Sg** **18 01 53.0 0.0**
EMIJ **Mijas** **2.86 290** P **Pn** **18 01 10.8 -0.6**
3.6nm,0.2s,SNR=7.9
EMIJ S **Sn** **18 01 44.7 -1.2**
23nm,0.4s,SNR=7.9
ELUQ **Luque** **2.99 311** P **Pn** **18 01 15.1 +1.8**
0.2nm,0.1s,SNR=7.9
ELUQ S **Sn** **18 01 47.5 -1.7**
6.3nm,0.3s,SNR=7.9
ETOB **Tobarra** **3.03 358** P **Pn** **18 01 15.0 +1.2**
3.6nm,0.1s,SNR=36
ETOB S **Sn** **18 01 49.4 -0.8**
24nm,0.4s
ETOB **Tobarra** **3.03 358** P **Pn** **18 01 15.0 +1.2**
3.6nm,0.1s,SNR=36
ETOB S **Sn** **18 01 49.4 -0.8**
24nm,0.4s
EVIA **Vianos** **3.14 345** P **Pn** **18 01 18.0 +2.7**
0.8nm,0.2s,SNR=5.1
EVIA S **Sn** **18 01 53.0 +0.1**
16nm,0.3s
EBAN **Banos Encina** **3.17 324** P **Pn** **18 01 19.2 +3.5**
3.5nm,0.2s,SNR=7.9
EBAN S **Sn** **18 01 53.6 +0.1**
6.8nm,0.2s,SNR=7.9
ECEU **Ceuta** **3.21 276** P **Pn** **18 01 16.1 -0.2**
0.9nm,0.1s,SNR=7.9
ECEU **Ceuta** **3.21 276** P **Pn** **18 01 16.1 -0.1**
0.9nm,0.1s,SNR=7.9
EBEN **Beniarda** **3.24 17** P **Pn** **18 01 16.9 +0.2**
EBEN S **Sn** **18 01 54.0 -1.3**
6.7nm,0.5s,SNR=7.9
EBEN **Beniarda** **3.24 17** P **Pn** **18 01 16.8 +0.2**
3.9nm,0.3s,SNR=9.2
EBEN S **Sn** **18 01 54.0 -1.3**
6.7nm,0.5s,SNR=7.9
EJIF **Jimena Fronter** **3.37 286** P **Pn** **18 01 20.9 +2.5**
EJIF S **Sn** **18 01 53.9 -4.6**
EJIF **Jimena Fronter** **3.37 286** P **Pn** **18 01 20.9 +2.5**
EADA **Adamuz** **3.58 316** P **Pn** **18 01 22.6 +1.2**
0.2nm,0.2s,SNR=7.9
EADA S **Sn** **18 02 02.2 -1.5**
12nm,0.6s,SNR=7.9
EADA **Adamuz** **3.58 316** P **Pn** **18 01 22.6 +1.2**
0.2nm,0.2s,SNR=7.9
EADA S **Sn** **18 02 02.2 -1.5**
12nm,0.6s,SNR=7.9
EMHD **Djebel Mahouad** **3.62 79** P **Pn** **18 01 25.8 +4.0**
ESPR **Espera** **3.78 291** P **Pn** **18 01 25.3 +1.2**
0.4nm,0.1s,SNR=4.0
ESPR S **Sn** **18 02 08.9 +0.2**
7.0nm,0.4s,SNR=4.0
ESPR **Espera** **3.78 291** P **Pn** **18 01 25.3 +1.2**
0.4nm,0.1s,SNR=4.0
ESPR S **Sn** **18 02 08.9 +0.2**
7.0nm,0.4s,SNR=4.0
MIF **Mishlifen** **3.82 236** P **Pg** **18 01 36.0 -2.9**
MIF S **Sg** **18 02 19.0 -9.4**
CZD **Col de Zad** **3.93 230** P **Pg** **18 01 40.0 -1.1**
CZD S **Sg** **18 02 23.0 -9.1**
ECHE **Chera** **3.99 5** P **Pn** **18 01 28.5 +1.5**
0.6nm,0.2s,SNR=7.9
ECHE S **Sn** **18 02 11.9 -2.0**
1.2nm,0.2s,SNR=7.9
EIBI **Ibiza** **4.07 32** P **Pn** **18 01 27.2 -0.9**
1.1nm,0.1s,SNR=12
EIBI S **Sn** **18 02 11.1 -4.7**
8.2nm,0.2s
EIBI **Ibiza** **4.07 32** P **Pn** **18 01 27.2 -0.9**
1.1nm,0.1s,SNR=12
EIBI S **Sn** **18 02 11.1 -4.7**
8.2nm,0.2s
ZFT **Errachidia** **4.31 215** P **Pg** **18 01 43.0 -5.3**
ZFT S **Sg** **18 02 30.0 -14**
EMIN **Mina Concepcio** **4.72 299** P **Pn** **18 01 36.9 -0.1**
0.4nm,0.3s,SNR=7.9
EMIN S **Sn** **18 02 29.6 -2.3**
1.5nm,0.4s,SNR=7.9
EMIN **Mina Concepcio** **4.72 299** P **Pn** **18 01 36.9 -0.1**
0.4nm,0.3s,SNR=7.9
EMIN S **Sn** **18 02 29.6 -2.2**
1.5nm,0.4s,SNR=7.9
EMOS **Mosqueruela** **4.81 9** P **Pn** **18 01 40.0 +1.8**
1.2nm,0.3s,SNR=7.8
EMOS S **Sn** **18 02 30.9 -3.1**
1.1nm,0.5s,SNR=7.9
EMOS **Mosqueruela** **4.81 9** P **Pn** **18 01 40.0 +1.7**
1.2nm,0.3s,SNR=7.8
EMOS S **Sn** **18 02 30.9 -3.1**
1.1nm,0.5s,SNR=7.9
ETOR **Torete** **5.23 355** P **Pn** **18 01 45.5 +1.6**
1.5nm,0.2s,SNR=7.9
ETOS **Mallorca** **5.35 38** P **Pn** **18 01 45.7 0.0**
0.8nm,0.2s,SNR=6.9
ETOS S **Sn** **18 02 44.1 -3.2**
10nm,0.5s,SNR=7.9
ETOS **Mallorca** **5.35 38** P **Pn** **18 01 45.7 0.0**
0.8nm,0.2s,SNR=6.9
ETOS S **Sn** **18 02 44.1 -3.2**
10nm,0.5s,SNR=7.9
ERTA **Horta de San J** **5.52 14** P **Pn** **18 01 48.9 +0.9**
1.3nm,0.3s,SNR=7.9
ERTA S **Sn** **18 02 48.5 -3.0**
2.6nm,0.4s,SNR=4.0
ERTA **Horta de San J** **5.52 14** P **Pn** **18 01 48.9 +0.9**
1.3nm,0.3s,SNR=7.9
ERTA S **Sn** **18 02 48.5 -3.0**
2.6nm,0.4s,SNR=4.0
EPOB **Poblet** **6.07 18** P **Pn** **18 01 55.8 +0.3**
1.2nm,0.3s,SNR=7.9
EPOB **Poblet** **6.07 18** P **Pn** **18 01 55.8 +0.3**
1.2nm,0.3s,SNR=7.9
EPOB S **Sn** **18 03 00.9 -4.1**
1.3nm,0.5s,SNR=4.0

*ISCJB **21** 18:03:44.8±0.7,254S±0.1×70.1E±0.02,h10km,mb3.9/11, MS4.0/6,Error ellipse: s-maj=25.3km s-min=18.1km az=164.6*
*IDC **21** 18:03:45.0±0.8,2543S×7002E,h0km,mb3.9/11, mb1 4.0/11,mb1mx3.9/22,mbtmp3.9/11,MS4.0/6, Ms1 4.0/6,ms1mx3.5/30,Error ellipse: s-maj=29.7km s-min=21.1km az=73.0*
*NEIC **21** 18:03:46.7±0.5,2544S×7002E,h10km,mb4.0/1,Error ellipse: s-maj=17.9km s-min=12.7km az=74.0*
ISC 21 18:03:46.9±0.7,254S±01×701E±02,h10km,n17,σ0s38/12, mb3.9/11,MS4.0/6,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KAPI	**Kappang**	**51.70**	**76**	LR		LR	18 30 42.2	
	comp=Z,87nm,18.7s,MS3.8,baz=66,slow=31							
CMAR	**Chiang Mai Arr**	**51.89**	**36**	P		**P**	**18 12 56.5**	**+0.7**
	2.3nm,1.0s,mb4.1,baz=227,slow=7.7,SNR=15							
CMAR				LR		LR	18 33 55.8	
	comp=Z,45nm,18.3s,MS3.5,baz=45,slow=35							
BATI	**Baumata**	**52.90**	**84**	LR		LR	18 33 24.4	
	comp=Z,266nm,18.1s,MS4.3,baz=275,slow=34							
ASAR	**Alice Springs**	**57.61**	**103**	P		**P**	**18 13 37.2**	**-0.1**
	1.5nm,0.9s,mb4.0,baz=251,slow=6.3,SNR=22							
WRA	**Warramunga Arr**	**59.09**	**99**	P		**P**	**18 13 47.3**	**-0.4**
	1.2nm,0.9s,mb3.9,baz=246,slow=6.6,SNR=4.5							
STKA	**Stephens Creek**	**62.11**	**114**	LR		LR	18 35 44.6	
	comp=Z,122nm,19.4s,MS4.1,baz=204,slow=31							
EIL	**Elat**	**64.29**	**326**	LR		LR	18 37 49.4	
	comp=Z,126nm,18.2s,MS4.1,baz=93,slow=32							
QSPA	**South Pole Qui**	**64.71**	**180**	P		**P**	**18 14 24.9**	**+0.2**
	3.1nm,1.1s,mb4.2,baz=311,slow=3.2,SNR=3.8							
VNDA	**Vanda**	**65.77**	**166**	P		**P**	**18 14 31.6**	**0.0**
	0.5nm,0.7s,mb3.6,baz=289,slow=6.8,SNR=3.8							
MKAR	**Makanchi Array**	**72.72**	**9**	P		**P**	**18 15 14.4**	**-0.4**
	1.0nm,0.7s,mb3.9,baz=197,slow=5.3,SNR=8.2							
BRTR	**Keskin Array B**	**73.17**	**331**	P		**P**	**18 15 17.1**	**-0.5**
	0.6nm,0.8s,mb3.6,baz=178,slow=8.3,SNR=2.9							
KURK	**Kurchatov**	**76.17**	**6**	P		**P**	**18 15 34.5**	**-0.3**
	0.6nm,0.3s,mb4.0,baz=195,slow=6.9,SNR=3.9							
KURK	**Kurchatov**	**76.17**	**6**	*eP*		**P**	**18 15 35.4**	**+0.6**
	1.1nm,0.7s,mb3.9							
JOW	**Kunigami**	**76.48**	**51**	LR		LR	18 41 55.7	
	comp=Z,170nm,22.0s,MS4.3,baz=93,slow=30							
TORD	**Torodi Ar. Bea**	**76.79**	**292**	P		**P**	**18 15 39.4**	**+0.2**
	0.7nm,0.9s,mb3.6,baz=106,slow=5.1,SNR=3.6							
SONM	**Songino Array**	**79.90**	**24**	P		**P**	**18 15 55.9**	**+0.3**
	1.3nm,0.9s,mb3.9,baz=211,slow=1.7,SNR=6.9							
ZALV	**Zalesovo Beam**	**80.06**	**9**	P		**P**	**18 15 56.1**	**-0.2**
	0.6nm,0.5s,mb3.8,baz=197,slow=4.6,SNR=4.3							

*ISCJB **21** 18:29:31.6±0.6,877N±004×126.19E±007,h110km±5km, mb3.6/7,Error ellipse: s-maj=12.4km s-min=5.3km az=165.0*
*IDC **21** 18:29:31.0±1.2,899N×12650E,h93km±8km,mb3.4/7, mb1 3.6/7,mb1mx3.4/20,mbtmp3.4/7,Error ellipse: s-maj=74.0km s-min=13.9km az=62.0*
*MAN **21** 18:29:34,872N×12604E,h77km,mb5.2,ML4.2,MS4.4*
ISC 21 18:29:32.7±0.6,876N±004×12620E±007,h100km±5km, h98km±2.2km:pP-P,n26,σ0s87/34,mb3.6/7,3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.59**	**164**	*i*	P	**Pn**	**18 29 49.4**	**+0.1**
BUTP	**Butuan**	**0.60**	**290**	*e*	P	**Pn**	**18 29 48.5**	**-0.8**
BUTP				*e*	S	**Sn**	**18 30 00.0**	**-1.7**
SCPH	**Surigao**	**1.23**	**326**	*i*	*e*P	**Pn**	**18 29 55.7**	**-0.1**
SCPH				*e*	S	**Sn**	**18 30 13.6**	**+0.4**
BUKP	**Musuan**	**1.42**	**232**	*e*	P	**Pn**	**18 29 57.9**	**-0.1**
BUKP				*e*	S	**Sn**	**18 30 13.8**	**-3.3**
DAV	**Davao City (W)**	**1.78**	**200**	S		**Sn**	**18 30 25.5**	**+0.3**
	baz=90,slow=12,SNR=3.9							
MATI	**Mati**	**1.80**	**178**	*e*	P	**Pn**	**18 30 03.2**	**+0.5**
MATI				*e*	S	**Sn**	**18 30 19.6**	**-6.0**
MSLP	**Maasin**	**1.90**	**316**	*e*	P	**Pn**	**18 30 04.0**	**0.0**
MSLP				*e*	S	**Sn**	**18 30 28.6**	**+0.8**
KCP	**Kidapawan**	**2.05**	**212**	*i*	*e*P	**Pn**	**18 30 06.8**	**+0.8**
KCP				*i*	S	**Sn**	**18 30 32.6**	**+1.2**
TBP	**Tagbilaran**	**2.48**	**292**	*e*	P	**Pn**	**18 30 11.4**	**-0.2**
TBP				*e*	S	**Sn**	**18 30 41.5**	**+0.1**
PLP	**Palo**	**2.68**	**333**	*i*	P	**Pn**	**18 30 14.6**	**+0.5**
PLP				*e*	S	**Sn**	**18 30 47.0**	**+1.0**
LLP	**Lapu-Lapu**	**2.69**	**305**	*i*	P	**Pn**	**18 30 14.5**	**+0.2**
LLP				*e*	S	**Sn**	**18 30 46.0**	**-0.3**
OCLP	**Ormoc**	**2.76**	**326**	*e*	P	**Pn**	**18 30 14.8**	**-0.5**
OCLP				*e*	S	**Sn**	**18 30 49.2**	**+1.1**
DCPH	**Dipolog City**	**2.82**	**267**	*i*	P	**Pn**	**18 30 14.1**	**-1.9**
PAGZ	**Pagadian**	**2.93**	**252**	*e*	P	**Pn**	**18 30 17.8**	**+0.3**
SNPH	**Sibulan**	**2.98**	**281**	*e*	P	**Pn**	**18 30 19.0**	**+0.8**
IPIL	**Ipil**	**3.71**	**255**	*e*	P	**Pn**	**18 30 28.6**	**+0.5**
GUIM	**Jordan**	**4.01**	**298**	*e*	P	**Pn**	**18 30 30.8**	**-1.3**
GUIM	**Jordan**	**4.01**	**298**	*e*	S	Px	18 30 36.8	
CMAR	**Chiang Mai Arr**	**28.15**	**293**	P		**P**	**18 35 17.0**	**+1.3**
	0.6nm,0.8s,mb3.2,baz=116,slow=6.2,SNR=4.7							
WRA	**Warramunga Arr**	**29.62**	**164**	P		**P**	**18 35 27.8**	**-0.9**
	0.6nm,0.6s,mb3.4,baz=346,slow=9.4,SNR=5.2							
WRA				pP		pP	18 35 50.5	-0.6
	0.3nm,0.7s,baz=354,slow=9.9,SNR=1.4							
ASAR	**Alice Springs**	**33.09**	**167**	P		**P**	**18 35 59.0**	**-0.1**
	0.4nm,0.4s,mb3.6,baz=351,slow=7.1,SNR=29							
ASAR				PcP		PcP	18 38 40.4	0.0
	0.1nm,0.4s,baz=343,slow=2.2,SNR=5.6							
STKA	**Stephens Creek**	**43.00**	**161**	P		**P**	**18 37 22.7**	**+0.5**
	1.9nm,0.4s,mb4.1,baz=335,slow=9.4,SNR=14							
MKAR	**Makanchi Array**	**53.19**	**323**	P		**P**	**18 38 39.4**	**-1.1**
	0.3nm,0.6s,mb3.5,baz=120,slow=8.3,SNR=4.2							
MKAR				pP		pP	18 39 02.4	-2.3
	0.5nm,0.7s,baz=114,slow=8.3,SNR=2.5							
KURK	**Kurchatov**	**57.27**	**326**	P		**P**	**18 39 08.2**	**-1.5**
	0.5nm,0.6s,mb3.7,baz=124,slow=7.0,SNR=3.4							
KURK				pP		pP	18 39 31.6	-2.7
	0.5nm,0.4s,baz=124,slow=7.2,SNR=4.5							
VNDA	**Vanda**	**88.45**	**173**	P		**P**	**18 42 13.6**	**+0.5**
	0.4nm,0.5s,mb3.7,baz=330,slow=7.6,SNR=6.2							
PLCA	**Paso Flores**	**144.85**	**158**	PKP		PKPdf	18 48 58.9	+0.6
	0.8nm,0.6s,baz=213,slow=2.5,SNR=3.0							

*ISK **21** 19:03:00.6,3935N×3828E,h13km,MD2.8*
*DDA **21** 19:03:00.4,3931N×3816E,h7km±2km,Md3.0*
*CSEM **21** 19:03:00.6±0.0,3936N×3830E,h15km,MD3.0,Error ellipse: s-maj=1.4km s-min=0.8km az=11.0*
*ISCJB **21** 19:03:01.2±1.1,3936N±006×3826E±005,h13km±7km, Error ellipse: s-maj=10.6km s-min=6.9km az=3.7*
ISC 21 19:03:01.7±1.0,3934N±006×3826E±006,h17km±6km,n9, σ0s74/14,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KEMA	**Kemaliye**	**0.19**	**112**	*i*	P	**Pg**	**19 03 06.0**	**-0.3**
KEMA				*i*	S	**Sg**	**19 03 09.9**	**+0.3**
DARE	**Darende-Malaty**	**0.53**	**223**	*e*	PG	**Sg**	**19 03 20.0**	**+0.8**
PTK	**Pertek**	**0.99**	**117**	*e*	PG	**Pg**	**19 03 19.9**	**-0.9**
PTK				*e*	SG	**Sg**	**19 03 33.8**	**0.0**
ELZG	**Elazig**	**1.01**	**146**	*i*	P	**Pb**	**19 03 21.2**	**+0.4**
ELZG				*i*	S	**Sb**	**19 03 35.1**	**+1.3**
AKCD	**Akcadag**	**1.08**	**194**	*i*	P	**Pb**	**19 03 20.6**	**-1.3**
AKCD				*i*	S	**Sb**	**19 03 34.6**	**-1.1**
SVSK	**Karacayir**	**1.13**	**301**	*e*	PN	**Pn**	**19 03 22.9**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.26**	**139**	*e*	PN	**Pn**	**19 03 24.5**	**0.0**
EZC	**Erzincan**	**1.27**	**71**	*e*	PG	**Pn**	**19 03 18.8**	**-5.9**
EZC				*e*	SG	**Sn**	**19 03 31.9**	**-9.4**
BNN	**Bunyan**	**1.94**	**256**	*e*	PN	**Pn**	**19 03 34.6**	**+0.6**

*BJI **21** 19:03:57.9,757N×9355E,h33km,mB5.2,mb5.1,Ms4.5, Msz4.4*
*ISCJB **21** 19:04:00.9±0.6,772N±003×9365E±003,h44km±5km, mb5.0/130,MS4.2/39,Error ellipse: s-maj=5.6km s-min=4.6km az=148.0*
*IDC **21** 19:04:01.1±1.7,774N×9375E,h32km±11km,mb4.6/30, mb1 4.7/30,mb1mx4.6/31,mbtmp4.6/30,MS4.1/18, Ms1 4.1/18,ms1mx3.9/36,Error ellipse: s-maj=18.2km s-min=9.8km az=54.0*
*NEIC **21** 19:04:01.4±0.2,767N×9365E,h35km,mb5.1/47,Error ellipse: s-maj=6.6km s-min=5.0km az=56.0*
*GCMT **21** 19:04:01.4±0.3,776N×9379E,h18km,MW4.9/66, Moment Tensor Solution. s28,c38; s66,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.53±.15; $M_{\theta\theta}$2.15±.09; $M_{\Phi\Phi}$0.37±.10; $M_{r\theta}$0.54±.21; $M_{r\Phi}$0.77±.07; $M_{\theta\Phi}$-0.32±.31; Best double couple: M_o2.55700×10^{16} NP1:ϕ_s60.00000°,δ41.00000°,λ-105.00000°. NP2: ϕ_s260.00000°,δ50.00000°,λ-77.00000°. Principal axes: T 2.4670, Plg5.0000°, Azm341.0000°; N 0.1570, Plg10.0000°, Azm71.0000°; P -2.6470, Plg79.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **21** 19:04:02.9±0.0,772N×9365E,h10km,mB5.5/4, Mjma4.3/3,MLv5.2/3,Mw(mB)5.2/4,Mwp5.7/1*
*SZGRF **21** 19:04:03.2,776N×9294E,h33km,mb4.9,Nicobar Islands, India, region*
*MOS **21** 19:04:05.5±0.8,790N×9375E,h80km,mb5.0/53, MS4.2/12,Error ellipse: s-maj=9.4km s-min=4.6km az=115.3*
ISC 21 19:04:04.0±0.5,774N±003×9369E±003,h57km±4km, h36km±1.4km:pP-P,n552,σ0s91/352,mb5.0/130,MS4.2/39, 106C-112D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**2.74**	**144**	P		**Pn**	**19 04 43.2**	**-2.4**
PBA	**Port Blair**	**4.00**	**347**	*e*P		x	19 05 42.9	
PBA				*e*S		x	19 06 30.4	
SNG	**Songkhla**	**6.89**	**94**	P		**Pn**	**19 05 43.0**	**+0.5**
	200nm,0.9s							
NNT	**Nongplab**	**7.65**	**50**	P		**Pn**	**19 05 52.3**	**-0.6**
TRSI	**Tarutung**	**7.73**	**137**	P		**Pn**	**19 05 55.2**	**+1.2**
	418nm,0.7s,3µm1.1nm							
IPM	**Ipoh**	**7.98**	**114**	P		**Pn**	**19 05 57.9**	**+0.5**
	74nm,0.8s,762nm0.4nm							
NST	**Nakhon Sawan**	**10.09**	**38**	P		**Pn**	**19 06 23.0**	**-3.3**
PPI	**Padang Panjang**	**10.54**	**140**	P		**Pn**	**19 06 31.6**	**-0.8**
	52nm,0.9s							
BDT	**Bhumibol Dam**	**10.77**	**28**	P		**Pn**	**19 06 37.0**	**+1.4**
	18nm,1.0s							
PDSI	**Padang**	**10.93**	**142**	P		**Pn**	**19 06 39.1**	**+1.3**
	50nm,0.6s							
MYKOM	**Kota Tinggi**	**11.72**	**120**	P		**Pn**	**19 06 51.4**	**+2.8**
CM31	**Chiang Mai Arr**	**11.81**	**25**	*e*P		**Pn**	**19 06 51.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**11.81**	**25**	Pn		**Pn**	**19 06 50.8**	**+1.0**
	0.8nm,0.3s,baz=213,slow=14,SNR=148							
CMAR				LR		LR	19 11 19.9	
	comp=Z,415nm,18.6s,baz=214,slow=37							
CMAR				ScP		ScP	19 16 04.8	+2.1
	0.1nm,0.3s,baz=232,slow=3.4,SNR=7.8							
CHG	**Chiang Mai**	**12.13**	**24**	↓P		**Pn**	**19 06 55.4**	**+1.2**
	24nm,0.9s							
CHTO	**Chiang Mai**	**12.13**	**24**	*e*Pn		**Pn**	**19 06 55.4**	**+1.2**
	13nm,0.6s							
CHTO	**Chiang Mai**	**12.13**	**24**	*e*P		**Pn**	**19 06 55.4**	**+1.2**
CHTO				pmax		pmax		
	comp=Z,13nm,0.6s							
NANT	**Nan**	**12.93**	**31**	P		**Pn**	**19 07 06.0**	**+0.9**
VIS	**Vishakhapatnam**	**14.15**	**315**	*e*P		**Pn**	**19 07 20.6**	**-1.1**
VIS				AMb		AMB	19 07 28.0	
	comp=Z,139nm,0.9s							
VIS				*i* x		x	19 09 47.6	
MDRS	**Chennai**	**14.24**	**293**	*e*x		x	19 07 09.4	
KSI	**Kapahiang**	**14.38**	**142**	P		**Pn**	**19 07 30.0**	**+5.3**
	comp=Z,158nm,0.7s							
BWNR	**Bhubaneshwar**	**14.63**	**329**	*e*x		**Pn**	**19 07 22.0**	**-5.9**
BWNR				*e*x		x	19 09 55.0	
KOD	**Kodaikanal**	**16.22**	**280**	*e*P		**Pn**	**19 07 50.2**	**+1.9**
KOD				AMb		AMB	19 08 00.1	
	comp=Z,94nm,1.3s							
TRD	**Trivandrum**	**16.59**	**274**	*e*x		x	19 10 46.5	
IMP	**Imphal**	**16.95**	**1**	*i* P		**Pn**	**19 07 54.0**	**-3.4**
HYB	**Hyderabad**	**17.62**	**305**	*e*P		**Pn**	**19 08 07.5**	**+1.8**
	comp=Z,50nm,1.0s							
HYB				*e*S		**S**	**19 11 08.0**	**-18**
HYB	**Hyderabad**	**17.62**	**305**	*e*P		**Pn**	**19 08 07.5**	**+1.8**
HYB				*e*S		**S**	**19 11 08.0**	**-18**
HYB				pmax		pmax		
	comp=Z,50nm,1.0s							
HYB	**Hyderabad**	**17.62**	**305**	*i* P		**Pn**	**19 08 07.5**	**+1.8**
	comp=Z,50nm,1.0s							
HYB				*e*			19 11 08.0	
HYB				*e*S		**S**	**19 11 21.0**	**-5.1**
BOK	**Bokaro**	**17.63**	**336**	*e*P		**Pn**	**19 08 05.0**	**-0.8**
BOK				AMb		AMB	19 08 12.9	
	comp=Z,47nm,0.7s							
BOK				*e*x		x	19 11 04.6	
SHL	**Shillong**	**17.81**	**355**	*i* P		**Pn**	**19 08 06.5**	**-1.5**
SHL				*e*x		x	19 11 22.0	
SBUM	**Sibu**	**19.18**	**105**	P		**Pn**	**19 08 26.6**	**+1.9**
CBJI	**Citeko**	**19.24**	**137**	P		**Pn**	**19 08 26.2**	**+0.9**
	comp=Z,170nm,0.4s							
QIZ	**Qiongzhong**	**19.29**	**53**	P		**Pn**	**19 08 23.8**	**-2.0**
QIZ				S		**S**	**19 12 00.6**	**+0.8**
QIZ				LR		LR		
	comp=N,1µm,14.9s							
QIZ				LR		LR		
	comp=Z,1µm,9.2s							
KMI	**Kunming**	**19.32**	**26**	P		**Pn**	**19 08 27.0**	**+0.8**
KMI				AP		pP	19 08 36.0	-1.2
KMI				XP		sP	19 08 40.3	-4.1
KMI				PP			19 08 44.3	
KMI				S		**S**	**19 11 59.3**	**-1.2**
KMI				XS		sS	19 12 10.8	-10
KMI				SS			19 12 26.8	
KMI				AMB		AMB		
	comp=Z,237nm,4.6s							
KMI				LR		LR		
	comp=N,688nm,12.0s							
KMI				LR		LR		
	comp=E,546nm,15.8s							
KMI				LR		LR		
	comp=Z,598nm,12.6s							
NGP	**Nagpur**	**19.44**	**315**	*e*P		**Pn**	**19 08 25.5**	**-2.1**
NGP				*e*S		**S**	**19 12 04.2**	**+1.4**
LATR	**Latur**	**19.76**	**304**	*e*x		x	19 13 30.5	
ODAN	**Odare**	**19.93**	**343**	*e*P		**Pn**	**19 08 31.5**	**-1.9**
	comp=Z,94nm,0.5s							
LEM	**Lembang**	**20.06**	**136**	P		**P**	**19 08 37.9**	**+5.2**
	comp=Z,41nm,1.2s,comp=Z,3µm							
RAMN	**Ramite**	**20.26**	**341**	*e*P		**P**	**19 08 35.6**	**+0.8**
	comp=Z,247nm,0.9s							
TAPN	**Taplejung**	**20.31**	**345**	*e*P		**P**	**19 08 35.4**	**0.0**
	comp=Z,296nm,0.7s							
AKL	**Akola**	**20.64**	**310**	*e*P		**P**	**19 08 38.5**	**-0.6**
GOA	**Goa**	**20.92**	**293**	*e*P		**P**	**19 08 41.0**	**-1.1**
JIRN	**Jiri**	**21.05**	**341**	*e*P		**P**	**19 08 43.3**	**0.0**
	comp=Z,307nm,0.9s,mb5.6							
PKI	**Pulchoki**	**21.23**	**339**	*e*P		**P**	**19 08 45.3**	**0.0**
	comp=Z,114nm,0.6s,mb5.4							
PKIN	**Phulchoki**	**21.24**	**339**	*e*P		**P**	**19 08 45.6**	**+0.2**
	comp=Z,66nm,0.4s,mb5.3							
KAD	**Karad**	**21.27**	**298**	*e*P		**P**	**19 08 45.7**	**-0.1**
KAD				AMb		AMB	19 08 57.1	
	comp=Z,82nm,1.4s,mb4.9							
DMN	**Daman**	**21.37**	**339**	*e*P		**P**	**19 08 46.7**	**-0.1**
	comp=Z,228nm,

POO Poona 22.07 301 *e*P **P** **19 08 52.0 -2.4**
POO *i* x x 19 12 54.0
KOLN Koldanda 22.09 336 *e*P **P** **19 08 54.5 0.0**
comp=Z,187nm,0.7s,mb5.6
GYA Guiyang 22.33 32⇓ *i*P **P** **19 08 57.4 +0.3**
GYA AP 19 09 06.8
GYA XP sP 19 09 11.0 -6.0
GYA PP 19 09 26.1
GYA S **S** **19 12 57.1 -2.4**
GYA XS sS 19 13 12.5 -8.1
GYA SS 19 13 40.4
GYA SCP ScP 19 16 25.4 +1.6
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.3
GYA AMB AMB
comp=Z,140nm,6.0s
GYA LR LR
comp=N,560nm,12.2s,MS4.4
GYA LR LR
comp=E,760nm,14.0s,MS4.4
GYA LR LR
comp=Z,1μm,13.7s,MS4.4
DANN Dangsing 22.55 337 *e*P **P** **19 08 59.2 -0.1**
comp=Z,257nm,0.8s,mb5.7
PYUN Piuthan 22.64 335 *e*P **P** **19 09 00.3 0.0**
comp=Z,105nm,0.5s,mb5.5
CD2 Chengdu 24.90 21 P **P** **19 09 21.9 +0.2**
CD2 AP 19 09 31.3
CD2 XP sP 19 09 35.4 -7.2
CD2 PP 19 10 00.3
CD2 S **S** **19 13 41.3 +0.3**
CD2 XS sS 19 13 56.8 -8.2
CD2 SS 19 14 40.5
CD2 AMB AMB
comp=Z,50nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,210nm,4.8s
CD2 LR LR
comp=N,540nm,12.0s,MS4.4
CD2 LR LR
comp=E,530nm,13.2s,MS4.4
CD2 LR LR
comp=Z,580nm,8.8s
LGTI Lohaghat 25.03 331 *e*P **P** **19 09 22.9 0.0**
PTH Pithoragarh 25.12 331 *e*P **P** **19 09 25.0 +1.3**
PTH *ex* x 19 10 05.0
AJM Ajmer 25.98 318 *e*P **P** **19 09 32.0 +0.4**
AJM AMb AMB 19 09 43.0
comp=Z,23nm,1.3s,mb4.5
NDI New Delhi 25.99 325 *e*P **P** **19 09 31.0 -0.6**
DDI Dehra Dun 26.82 329 *e*P **P** **19 09 37.4 -1.7**
DDI *ex* x 19 14 19.0
SMLA Simla 27.93 329 *i* P **P** **19 09 47.8 -1.2**
LZH Lanzhou 29.70 17 *e*P **P** **19 10 04.9 +0.2**
LZH AP pP 19 10 13.3 -5.6
LZH XP sP 19 10 17.1 -8.6
LZH PP PP 19 11 03.0 -10
LZH S **S** **19 14 59.0 +2.4**
LZH XS sS 19 15 14.0 -6.9
LZH SS SS 19 16 33.8 -31
LZH AMB AMB
comp=Z,41nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,260nm,5.5s
LZH LR LR
comp=N,620nm,13.2s
LZH LR LR
comp=Z,960nm,14.6s,MS4.6
XAN Xi'an 29.71 26 P **P** **19 10 03.1 -1.6**
XAN AP pP 19 10 12.6 -6.4
XAN XP sP 19 10 16.6 -9.2
XAN PP PP 19 10 59.5 -13
XAN S **S** **19 14 54.3 -2.5**
XAN XS sS 19 15 10.3 -11
XAN AMB AMB
comp=Z,34nm,0.8s,mb5.1
XAN AMB AMB
comp=Z,143nm,4.6s
XAN LR LR
comp=N,236nm,14.7s,MS4.2
XAN LR LR
comp=E,414nm,16.9s,MS4.2
XAN LR LR
comp=Z,815nm,15.6s,MS4.5
THN Thein Dam 29.71 328 *e*P **P** **19 10 04.0 -0.8**
WHN Wuhan 29.81 38 P **P** **19 10 07.3 +1.6**
GTA Gaotai 32.01 9 P **P** **19 10 25.1 +0.1**
GTA AP pP 19 10 34.8 -4.5
GTA XP sP 19 10 39.1 -6.9
GTA PP PP 19 11 29.0 -9.2
GTA PCP PcP 19 13 15.8 +2.0
GTA S **S** **19 15 33.5 +0.9**
GTA SS SS 19 17 24.8 -27
GTA AMB AMB
comp=Z,25nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,278nm,8.1s
GTA LR LR
comp=N,165nm,14.7s,MS4.1
GTA LR LR
comp=E,232nm,13.8s,MS4.1
GTA LR LR
comp=Z,235nm,15.9s,MS4.0
NJ2 Nanjing 33.66 41 *e*P **P** **19 10 41.9 +2.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
SSE Sheshan 34.63 44 P **P** **19 10 49.1 +1.2**
SSE AP pP 19 11 00.3 -2.0
SSE S **S** **19 16 18.0 +4.5**
SSE XS sS 19 16 36.9 -1.0
SSE AMB AMB
comp=Z,37nm,0.6s,mb5.5
SSE AMB AMB
comp=Z,246nm,5.8s
SSE LR LR
comp=N,412nm,19.1s,MS4.3
SSE LR LR
comp=E,267nm,19.1s,MS4.3
SSE LR LR
comp=Z,475nm,10.4s
BATI Baumata 34.76 120 P **P** **19 10 45.0 -4.3**
comp=Z,22nm,0.5s,mb5.3,baz=188,slow=0.8,SNR=11
BATI ScP ScP 19 17 06.2 +3.4
comp=Z,11nm,0.7s,baz=156,slow=23,SNR=4.4
KBL Kabul 35.01 323 *e*P **P** **19 10 51.5 +0.3**
comp=Z,12nm,0.8s,mb4.9
KBL *e*PcP PcP 19 13 23.8 +1.4
KBL Kabul 35.01 323 *e*P **P** **19 10 51.5 +0.3**
KBL *e* 19 13 23.8
KBL pmax pmax
comp=Z,12nm,0.8s,mb4.9
KSH Kashi 35.41 336 *e*P **P** **19 10 55.0 +0.5**
KSH *e*AP pP 19 11 04.8 -4.2
KSH *e*XP sP 19 11 08.6 -7.1
KSH *e*PP PP 19 12 14.3 -1.6
KSH *e*PCP PcP 19 13 26.1 +2.7
KSH *e*S **S** **19 16 25.6 +0.3**
KSH *e*XS sS 19 16 41.3 -8.5
KSH *e*SCP ScP 19 17 07.5 +2.9
KSH *e*PCS PcS 19 17 11.4 +0.9
KSH *e*SS SS 19 18 42.8 -19
KSH *e*SCS ScS 19 21 10.4 +1.4
KSH AMB AMB
comp=Z,49nm,0.4s,mb5.8
KSH AMB AMB
comp=Z,402nm,3.2s
KSH LR LR
comp=Z,391nm,3.8s
WMQ Urumqi 36.32 353 P **P** **19 11 03.0 +0.7**
WMQ AP pP 19 11 13.0 -3.7
WMQ XP sP 19 11 17.0 -6.4
WMQ PP PP 19 12 27.0 +1.2
WMQ S **S** **19 16 41.0 +1.9**
WMQ SS SS 19 19 07.0 -13
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,74nm,3.0s
WMQ LR LR
comp=N,224nm,15.0s,MS4.2
WMQ LR LR
comp=E,225nm,15.0s,MS4.2
WMQ LR LR
comp=Z,224nm,15.0s,MS4.1

HHC Hu-ho-hao-te 36.61 23 *e*P **P** **19 11 05.5 +0.7**
HHC AP pP 19 11 16.3 -3.0
HHC XP sP 19 11 19.9 -6.1
HHC PP PP 19 12 31.3 +2.2
HHC PCP PcP 19 13 28.3 +1.3
HHC S **S** **19 16 49.3 +5.6**
HHC XS sS 19 17 04.8 -3.4
HHC SS SS 19 19 15.6 -10
HHC SCS ScS 19 21 15.8 +0.2
HHC AMB AMB
comp=Z,26nm,1.0s,mb5.0
HHC AMB AMB
comp=Z,257nm,6.2s
HHC LR LR
comp=N,452nm,19.0s,MS4.5
HHC LR LR
comp=E,505nm,17.8s,MS4.5
HHC LR LR
comp=Z,404nm,19.0s,MS4.2
KZA Kyzart 37.89 337 P **P** **19 11 14.0 -1.6**
SNR=7.1
BJT Baijiatuau 37.91 29 *e*P **P** **19 11 17.3 +1.5**
comp=Z,22nm,0.6s,mb5.0
BJT Baijiatuau 37.91 29 *e*P **P** **19 11 17.3 +1.5**
BJT pmax pmax
comp=Z,22nm,0.6s
BJI Beijing 37.93 29 P **P** **19 11 17.0 +1.0**
BJI S **S** **19 17 11.3 +7.6**
BJI AMB AMB
comp=Z,36nm,0.5s,mb5.4
BJI LR LR
comp=N,568nm,19.5s,MS4.5
BJI LR LR
comp=E,528nm,21.0s,MS4.5
BJI LR LR
comp=Z,197nm,19.6s,MS3.9
UCH Uchtor 38.30 337 *e*P **P** **19 11 17.7 -1.4**
comp=Z,10nm,0.9s,mb4.5
MBWA Marble Bar 38.45 139 *e*P **P** **19 11 18.9 -1.7**
TKM2 Tokmak 2 38.49 338 *e*P **P** **19 11 20.8 +0.2**
comp=Z,8.0nm,0.5s,mb4.7
TKM2 Tokmak 2 38.49 338 *e*P **P** **19 11 20.8 +0.2**
TKM2 pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
TKM2 Tokmak 2 38.49 338 P **P** **19 11 20.9 +0.3**
SNR=12
KBK Karagaybulak 38.50 338 P **P** **19 11 21.8 +1.1**
SNR=48
AML Almayashu 38.54 336 *e*P **P** **19 11 22.0 +0.9**
comp=Z,62nm,0.7s,mb5.5
AML Almayashu 38.54 336 P **P** **19 11 22.5 +1.4**
SNR=6.6
AAK Ala-Archa 38.65 337 P **P** **19 11 22.9 +0.9**
SNR=17
CHMS Chumysh 38.87 338 P **P** **19 11 24.3 +0.5**
SNR=12
EKS2 Erkin-Say 38.96 336 *e*P **P** **19 11 25.3 +0.8**
comp=Z,20nm,0.7s,mb4.9
EKS2 Erkin-Say 38.96 336 P **P** **19 11 25.5 +1.0**
SNR=39
USP Ospenovka 39.19 338 P **P** **19 11 26.6 +0.1**
SNR=42
MK31 Makanchi Array 40.12 348 *e*P **P** **19 11 33.5 -0.6**
MKAR Makanchi Array 40.12 348 P **P** **19 11 33.5 -0.6**
comp=Z,8.2nm,0.7s,mb4.6,baz=171,slow=8.3,SNR=70
MKAR PcP PcP 19 13 39.2 +1.4
comp=Z,2.6nm,0.8s,baz=188,slow=3.3,SNR=3.8
MKAR ScP ScP 19 17 25.6 +3.4
comp=Z,1.3nm,1.0s,baz=169,slow=2.9,SNR=4.1
MKAR LR LR 19 31 34.2
comp=Z,197nm,18.5s,MS4.0,baz=163,slow=41
MKAR Makanchi Array 40.12 348 P **P** **19 11 33.6 -0.6**
MKAR 19 13 39.2
MKAR 19 17 25.6
SONM Songino Array 41.39 13 P **P** **19 11 44.4 -0.2**
comp=Z,14nm,0.6s,mb4.8,baz=195,slow=9.0,SNR=44
SONM PcP PcP 19 13 43.3 +1.5
comp=Z,7.3nm,0.6s,baz=201,slow=3.3,SNR=10
SONM ScP ScP 19 17 29.9 +2.7
comp=Z,1.0nm,0.7s,baz=186,slow=4.3,SNR=3.3
SONM LR LR 19 30 48.9
comp=Z,199nm,18.5s,MS4.0,baz=220,slow=39
SONM Songino Array 41.39 13 P **P** **19 11 44.4 -0.2**
SONM 19 13 43.3
ULN Ulaanbaatar 41.57 14 *e*P **P** **19 11 45.4 -0.7**
comp=Z,15nm,0.8s,mb4.7
ULN *e*PcP PcP 19 13 42.1 -0.3
KSRS Korea Array 42.86 41 P **P** **19 11 56.1 -0.6**
comp=Z,4.1nm,1.1s,mb4.1,baz=231,slow=9.6,SNR=5.8
SNY Shenyang 43.02 33⇑ P **P** **19 11 58.6 +0.6**
SNY AMB AMB
comp=Z,27nm,1.2s,mb4.8
ZAK Zakamensk 43.25 9 *e*P **P** **19 11 56.9 -2.8**
ZAK *e* 19 13 48.9
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
HVS Khovu-Aksy 43.26 0*c i*P **P** **19 11 59.9 +0.2**
HVS pmax pmax
comp=Z,77nm,0.6s,mb5.6
ABKT Ailbek 44.00 319 P **P** **19 12 07.1 +1.1**
comp=Z,417nm,0.5s,SNR=16
KURK Kurchatov 44.63 346 P **P** **19 12 10.2 -0.6**
comp=Z,14nm,0.7s,mb4.9,baz=169,slow=7.1,SNR=45
KURK PcP PcP 19 13 53.5 +0.8
comp=Z,9.6nm,0.8s,baz=160,slow=2.9,SNR=12
KURK ScP ScP 19 17 43.7 +3.5
comp=Z,1.6nm,0.8s,baz=167,slow=3.6,SNR=6.5
KURK LR LR 19 33 51.2
comp=Z,305nm,19.1s,MS4.2,baz=175,slow=40
KURK Kurchatov 44.63 346 *e*P **P** **19 12 10.7 -0.1**
comp=Z,15nm,0.9s,mb4.8
KURK *e*PcP PcP 19 13 53.4 +0.7
KURK *e*ScP ScP 19 17 43.3 +3.1
KURK Kurchatov 44.63 346 *e*P **P** **19 12 10.7 -0.1**
KURK *e* 19 13 53.4
KURK pmax pmax
comp=Z,15nm,0.9s,mb4.8
CN2 Changchun 45.38 32 *e*P **P** **19 12 16.9 +0.1**
CN2 *e*XP sP 19 12 30.8 -7.5
CN2 PCP PcP 19 13 55.9 +0.5
CN2 *e*S **S** **19 18 55.1 +1.3**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
CN2 AMB AMB
comp=Z,800nm,5.0s
NWAO Narrogin (SRO) 46.23 152 P **P** **19 12 23.8 +0.1**
comp=Z,22nm,0.7s,mb5.2,baz=330,slow=7.5,SNR=21
NWAO LR LR 19 29 04.1
comp=Z,247nm,20.6s,MS4.1,baz=279,slow=32
NWAO Narrogin (SRO) 46.23 152 *e*P **P** **19 12 23.8 +0.1**
comp=Z,21nm,0.7s,mb5.2
NWAO Narrogin (SRO) 46.23 152 *e*P **P** **19 12 23.8 +0.1**
NWAO pmax pmax
comp=Z,21nm,0.7s
ZAA0 Zalesovo Array 46.63 353 *e*P **P** **19 12 26.2 -0.3**
ZAA0 *e*PcP PcP 19 13 59.2 -0.4
ZALV Zalesovo Beam 46.63 353 P **P** **19 12 26.4 -0.1**
comp=Z,32nm,0.4s,mb5.6,baz=183,slow=7.8,SNR=170
ZALV PcP PcP 19 13 58.9 -0.7
comp=Z,4.7nm,0.6s,baz=174,slow=4.2,SNR=3.0
ZALV LR LR 19 36 47.0
comp=Z,184nm,18.3s,MS4.1,baz=228,slow=42
ZALV Zalesovo Beam 46.63 353 P **P** **19 12 26.4 -0.1**
ZALV PcP PcP 19 13 58.9 -0.7
ZALV LR LR 19 36 47.0
ZALV Zalesovo Beam 46.63 353 P **P** **19 12 26.4 -0.1**
ZALV 19 13 58.9
HIA Hailar 46.82 23 *e*P **P** **19 12 28.4 +0.4**
comp=Z,54nm,0.8s,mb5.5
HIA Hailar 46.82 23 *e*P **P** **19 12 28.4 +0.4**
HIA pmax pmax
comp=Z,54nm,0.8s
NVS Novosibirsk 47.71 352 *i* P **P** **19 12 33.6 -1.3**
NVS *e* 19 14 01.8
NVS *e*S **S** **19 19 22.1 -4.7**
NVS pmax pmax
comp=N,19nm,0.9s
NVS pmax pmax
comp=Z,30nm,0.9s,mb5.3
NVS pmax pmax
comp=E,10.0nm,0.6s
NVS smax
comp=N,23nm,2.1s
KRAR Krasnoyarsk 48.15 359⇓ *e*P **P** **19 12 38.7 +0.5**
KRAR pmax pmax
comp=Z,53nm,1.2s,mb5.5

MDJ Mudanjiang 48.17 34 P **P** **19 12 39.4 +0.8**
MDJ AMB AMB
comp=Z,17nm,1.1s,mb5.0
MDJ AMB AMB
comp=Z,418nm,6.1s
MDJ Mudanjiang 48.17 34 *e*P **P** **19 12 36.9 -1.7**
comp=Z,7.9nm,0.8s,mb4.8
RDF Al-Radifah 48.22 302 *e*P **P** **19 12 39.8 +0.5**
baz=302
RDF AMb AMB 19 12 42.8
comp=Z,63nm,1.1s,mb5.6,baz=302
WRA Warramunga Arr 48.55 125 P **P** **19 12 40.2 -1.6**
comp=Z,15nm,0.6s,mb5.2,baz=305,slow=9.0,SNR=97
WRA PcP PcP 19 14 07.1 0.0
comp=Z,3.1nm,0.6s,baz=316,slow=2.7,SNR=7.4
WRA ScP ScP 19 17 57.2 -0.1
comp=Z,1.2nm,0.6s,baz=316,slow=3.7,SNR=8.0
WRA LR LR 19 36 15.4
comp=Z,150nm,19.1s,MS4.0,baz=290,slow=40
WRA Warramunga Arr 48.55 125 P **P** **19 12 40.2 -1.7**
WRA 19 14 07.1
WRAB Tennant Creek 48.55 125 *e*P **P** **19 12 39.9 -2.0**
comp=Z,19nm,0.7s,mb5.2
WRAB Tennant Creek 48.55 125 *e*P **P** **19 12 39.9 -2.0**
WRAB pmax pmax
comp=Z,19nm,0.7s,mb5.2
WB2 Warramunga Arr 48.56 125 *e*P **P** **19 12 40.1 -1.8**
NAY Al-Naaiem 48.57 302 *e*P **P** **19 12 42.1 +0.2**
baz=302
NAY AMb AMB 19 12 45.5
comp=Z,26nm,0.8s,mb5.3,baz=302
MIB Mutribah 48.65 303 *e*P **P** **19 12 42.7 +0.1**
baz=303
MIB AMb AMB 19 12 46.2
comp=Z,50nm,0.8s,mb5.6,baz=303
BVAR Borovoye Array 48.97 342 P **P** **19 12 44.1 -0.5**
comp=Z,4.9nm,0.5s,mb4.8,baz=143,slow=9.4,SNR=40
BVAR PcP PcP 19 14 08.6 +0.7
comp=Z,6.9nm,0.6s,baz=189,slow=2.7,SNR=15
BVAR ScP ScP 19 17 59.9 +1.5
comp=Z,1.2nm,0.9s,baz=134,slow=6.2,SNR=4.4
BVAR LR LR 19 34 58.5
comp=Z,159nm,21.4s,MS4.0,baz=155,slow=38
BVAR Borovoye Array 48.97 342 P **P** **19 12 44.1 -0.5**
BVAR 19 14 08.6
BRVK Borovoye 49.03 341 *e*P **P** **19 12 44.6 -0.5**
comp=Z,11nm,0.8s,mb5.0
BRVK *e*PcP PcP 19 14 08.5 +0.3
BRVK Borovoye 49.03 341 *e*P **P** **19 12 44.6 -0.5**
BRVK *e* 19 14 08.5
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.9
MJAR Matsushiro Arr 49.58 48 P **P** **19 12 50.2 +0.7**
comp=Z,1.4nm,0.6s,mb4.2,baz=140,slow=30,SNR=6.3
MJAR PcP PcP 19 14 10.8 +0.2
comp=Z,5.9nm,0.9s,baz=250,slow=3.5,SNR=8.1
MJAR LR LR 19 36 02.4
comp=Z,190nm,19.7s,MS4.1,baz=255,slow=39
MJAR Matsushiro Arr 49.58 48 P **P** **19 12 50.2 +0.6**
MJAR 19 14 10.8
ASAR Alice Springs 50.17 130 P **P** **19 12 52.8 -1.5**
comp=Z,10nm,0.8s,mb4.9,baz=302,slow=7.3,SNR=120
ASAR PcP PcP 19 14 13.2 +0.3
comp=Z,4.8nm,0.7s,baz=307,slow=3.4,SNR=10
ASAR ScP ScP 19 18 04.3 +0.2
comp=Z,0.6nm,0.6s,baz=308,slow=4.9,SNR=5.9
ASAR Alice Springs 50.17 130 P **P** **19 12 52.8 -1.4**
ASAR 19 14 13.2
FORT Forrest 50.51 141 *e*P **P** **19 12 56.9 +0.3**
comp=Z,129nm,1.3s,mb5.7
AKTK Aktyubinsk 51.85 332 P **P** **19 13 06.4 0.0**
AKTK PcP PcP 19 14 19.6 +0.9
AKTK LR LR 19 35 44.6
AKTO Aktyubinsk 51.85 332 P **P** **19 13 06.4 0.0**
comp=Z,11nm,0.5s,mb5.0,baz=115,slow=7.8,SNR=58
AKTO PcP PcP 19 14 19.6 +0.9
comp=Z,9.7nm,0.7s,baz=122,slow=4.7,SNR=4.6
AKTO LR LR 19 35 44.6
comp=Z,105nm,19.9s,MS3.9,baz=311,slow=37
AKTO Aktyubinsk 51.85 332 P **P** **19 13 06.4 0.0**
AKTO 19 14 19.6
KLR Kul'dur 52.23 31 *e*P **P** **19 13 16.0 +6.8**
BOD Bodaibo 52.38 14 *e*P **P** **19 13 09.9 -0.3**
BOD pmax pmax
comp=Z,15nm,0.9s,mb4.9
HABR Khabarovsk 53.50 33 *e*P **P** **19 13 17.2 -1.4**
HABR *e* 19 14 22.9
HABR *e* 19 21 05.9
HABR *e* 19 23 03.0
GNI Garni 54.21 315 P **P** **19 13 23.6 -0.4**
comp=Z,1.9nm,0.3s,mb4.5,baz=146,slow=11,SNR=3.0
GNI Garni 54.21 315⇑ *e*P **P** **19 13 24.2 +0.2**
GNI pmax pmax
comp=Z,3.0nm,0.3s
GNI MLR MLR
comp=Z,200nm,30.0s
SVE Sverdlovsk 55.36 339⇑ *e*P **P** **19 13 32.5 +0.5**
SVE pmax pmax
comp=Z,45nm,0.6s,mb5.7
ARU Arti 55.84 337 *e*P **P** **19 13 35.3 -0.1**
comp=Z,17nm,0.6s,mb5.3
ARU Arti 55.84 337*d i*P **P** **19 13 35.2 -0.2**
ARU 19 15 39.8
ARU *e*S **S** **19 21 23.3 +4.9**
ARU pmax pmax
comp=Z,38nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,359nm,20.0s,MS4.5
KIV Kislovodsk 57.12 318 *e*P **P** **19 13 44.7 0.0**
comp=Z,16nm,0.7s,mb5.2
KIV Kislovodsk 57.12 318 *e*P **P** **19 13 45.2 +0.4**
KIV pmax pmax
comp=Z,15nm,0.7s,mb5.1
KIV MLR MLR
comp=Z,118nm,18.0s,MS4.0
YSS Yuzh-Sakhalins 57.16 38 *e*P **P** **19 13 45.3 +0.3**
CTA Charters Tower 58.63 119 PcP PcP 19 14 45.7 +0.3
comp=Z,3.0nm,0.4s,baz=297,slow=6.7,SNR=7.2
SOKR Solikamsk 58.76 339*d i*P **P** **19 13 56.4 +0.4**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,560nm,23.0s,MS4.6
SOC Sochi 58.97 317 *e*P **P** **19 13 56.6 -1.2**
SOC *e* 19 14 42.9
SOC *e* 19 16 04.9
SOC *e*PPP 19 17 29.0
SOC *e*S **S** **19 22 02.4 +2.4**
SOC *e* 19 23 40.4
SOC *e*SS SS 19 25 55.9 +1.4
SOC pmax pmax
comp=Z,51nm,1.1s,mb5.5
YAK Yakutsk 60.26 19 *e*P **P** **19 14 05.5 -0.7**
YAK Yakutsk 60.26 19⇑ *e*P **P** **19 14 05.3 -1.0**
YAK pmax pmax
comp=Z,34nm,0.6s,mb5.5
YAK MLR MLR
comp=Z,100nm,13.0s,MS4.1
STKA Stephens Creek 60.34 133 P **P** **19 14 05.9 -1.4**
comp=Z,7.8nm,0.8s,mb4.8,baz=317,slow=8.5,SNR=15
STKA LR LR 19 37 51.6
comp=Z,175nm,22.0s,MS4.2,baz=19,slow=34
STKA Stephens Creek 60.34 133 *e*P **P** **19 14 05.7 -1.6**
comp=Z,1.9nm,0.9s,mb4.1
BR131 Keskin Array S 62.18 311 *e*P **P** **19 14 18.8 -0.9**
comp=Z,4.1nm,0.6s,mb4.7
BRTR Keskin Array B 62.18 311 P **P** **19 14 18.7 -1.0**
comp=Z,4.6nm,0.7s,mb4.8,baz=130,slow=6.9,SNR=23
BRTR LR LR 19 46 23.0
comp=Z,71nm,18.7s,MS3.9,baz=103,slow=41
BRTR Keskin Array B 62.18 311 *i* P **P** **19 14 19.0 -0.7**
BRTR pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 65.25 328⇑ *e*P **P** **19 14 39.2 -0.4**
OBN *e* 19 15 10.2
OBN *e* 19 17 03.8
OBN *e*SS SS 19 27 33.8 +1.5
OBN pmax pmax
comp=Z,19nm,1.1s,mb5.0
OBN MLR MLR
comp=Z,200nm,23.0s,MS4.2
KLMR Klimovskoe 66.38 334 *e*P **P** **19 14 45.9 -0.9**
KLMR pmax pmax
comp=Z,47nm,1.6s,mb5.3
TIRR Tirgusor 67.03 315⇑ P **P** **19 14 50.8 -0.5**
TIRR Tirgusor 67.03 315⇑ *i*P **P** **19 14 50.8 -0.5**

AKASG Malin Array Be 67.98 322 P **P** **19 14 55.5 -1.6**
comp=Z,1.7nm,0.5s,mb4.3,baz=86,slow=5.3,SNR=8.9
HNR Honiara 68.16 103 P **P** **19 14 58.0 -1.0**
comp=Z,56nm,0.6s,mb5.8,baz=232,slow=4.8,SNR=6.2
PETK Petropavlovsk- 68.37 36 P **P** **19 14 58.5 -1.0**
comp=Z,1.5nm,0.6s,mb4.2,baz=259,slow=1.5,SNR=5.1
VRI Vrincioaia 68.49 316⇑P **P** **19 15 01.0 +0.6**
VRI Vrincioaia 68.49 316⇑*i*P **P** **19 15 01.0 +0.6**
PLOR Plostina 68.54 316⇑*i*P **P** **19 15 01.4 +0.7**
LSZ Lusaka 68.81 250 LR LR 19 42 28.2
comp=Z,279nm,18.9s,MS4.5,baz=12,slow=34
LSZ Lusaka 68.81 250 *e*P **P** **19 15 04.9 +2.0**
comp=Z,9.5nm,1.0s,mb4.7
LSZ Lusaka 68.81 250 *e*P **P** **19 15 04.9 +2.0**
LSZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MLR Muntele Rosu 68.96 316 P **P** **19 15 03.0 -0.3**
comp=Z,8.2nm,0.7s,mb4.8,baz=173,slow=4.2,SNR=23
MLR Muntele Rosu 68.96 316⇑*i*P **P** **19 15 04.1 +0.8**
SEY Seymchan 69.23 25⇑*e*P **P** **19 15 03.7 -1.0**
VOIR 69.57 316⇑P **P** **19 15 06.6 -0.4**
VOIR 69.57 316⇑*i*P **P** **19 15 06.6 -0.5**
BURAR Bucovina Array 69.85 318⇑*i*P **P** **19 15 09.0 +0.2**
BUR08 Bucovina Ar. S 69.86 318 *e*P **P** **19 15 08.6 -0.3**
JOF Joensuu 70.78 335 *e*p **P** **19 15 14.1 0.0**
comp=Z,7.9nm,0.4s,mb5.0
JOF Joensuu 70.78 335 *e*P **P** **19 15 14.1 0.0**
JOF pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
DRGR 71.39 317⇑P **P** **19 15 18.5 +0.3**
DRGR 71.39 317⇑*i*P **P** **19 15 18.5 +0.3**
VSU Vasula 71.48 329⇓*e*P **P** **19 15 18.0 -0.4**
VSU pmax pmax
comp=Z,11nm,0.4s,mb5.1
LVZ Lovozero 71.53 340⇓*e*P **P** **19 15 18.4 -0.2**
LVZ pmax pmax
comp=Z,24nm,0.4s,mb5.5
LVZ MLR MLR
comp=Z,200nm,15.0s,MS4.5
KRUS Krusevo 71.75 311 *e*P **P** **19 15 19.4 -1.1**
APA Apatity 71.82 339⇓*i*P **P** **19 15 20.6 +0.3**
APA *i* 19 15 42.0
APA pmax pmax
comp=Z,45nm,0.6s,mb5.6
KWP Kalwaria 71.84 320 *e*P **P** **19 15 20.9 +0.1**
KWP Kalwaria 71.84 320 *e*P **P** **19 15 20.9 +0.1**
KWP Kalwaria 71.84 320⇑*i*P **P** **19 15 21.0 +0.2**
KOLS Kolonicke sedl 72.01 319 *e*P **P** **19 15 22.3 +0.4**
KOLS Kolonicke sedl 72.01 319 *e*P **P** **19 15 22.2 +0.3**
SUW Suwalki 72.35 324 *e*P **P** **19 15 23.3 -0.5**
CRVS Cervenica-Dubn 72.54 319 *e*P **P** **19 15 25.4 +0.4**
KAF Kangasniemi 72.71 333 *e*p **P** **19 15 25.9 +0.2**
comp=Z,6.4nm,0.3s,mb5.0,baz=105,slow=5.6
KAF Kangasniemi 72.71 333 *e*P **P** **19 15 25.9 +0.2**
KAF pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
STHS Stebnicka Huta 72.75 319 *e*P **P** **19 15 25.4 -0.9**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LBTB Lobatse 73.79 241 *e*P **P** **19 15 34.3 +1.4**
comp=Z,15nm,0.9s,mb4.9
LBTB Lobatse 73.79 241 *e*P **P** **19 15 34.3 +1.5**
LBTB pmax pmax
comp=Z,15nm,0.9s,mb4.9
OJC Ojcow 73.79 320 *e*P **P** **19 15 32.7 +0.3**
PKSM Moragy 74.11 316⇓P **P** **19 15 34.0 -0.3**
PKSM Moragy 74.11 316⇓*i*P **P** **19 15 34.0 -0.3**
VYHS Vyhne 74.21 318 *e*P **P** **19 15 34.3 -0.5**
OKC Ostrava-Krasne 74.80 319 *e*P **P** **19 15 38.4 +0.1**
KEV Kevo 74.81 341 *e*p **P** **19 15 37.7 -0.2**
comp=Z,5.6nm,0.4s,mb4.8
KEV Kevo 74.81 341 *e*P **P** **19 15 37.7 -0.2**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
MORC Moravsky Berou 75.19 319 *e*P **P** **19 15 40.3 -0.2**
comp=Z,4.2nm,0.8s,mb4.4
MORC Moravsky Berou 75.19 319 *e*P **P** **19 15 40.3 -0.2**
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MODS Modra-Piesok 75.23 318 *e*P **P** **19 15 40.1 -0.7**
MODS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
ARCES ARCESS Array B 75.24 340 P **P** **19 15 40.7 +0.3**
comp=Z,16nm,0.4s,mb5.2,baz=102,slow=5.9,SNR=56
ARCES LR LR 19 51 55.2
comp=Z,424nm,19.0s,MS4.8,baz=265,slow=38
ARCES ARCESS Array B 75.24 340 P **P** **19 15 40.7 +0.3**
ARCES LR LR 19 51 55.2
ZST Bratislava 75.33 318 *e*P **P** **19 15 42.2 +0.9**
ZST pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
DPC Dobruska-Polom 76.02 320 *e*P **P** **19 15 45.8 +0.6**
KSP Ksiaz 76.08 320 *e*P **P** **19 15 46.6 +1.1**
KSP Ksiaz 76.08 320 *e*P **P** **19 15 46.3 +0.7**
UPC Upice 76.23 320 *e*P **P** **19 15 46.9 +0.5**
BILL Bilibino 76.38 22 *e*P **P** **19 15 42.2 -4.7**
TREC Trest 76.48 319 *e*P **P** **19 15 47.7 -0.2**
PRU Pruhonice 77.14 319 *e*P **P** **19 15 51.9 +0.3**
PVCC Panska Ves 77.15 320 *e*P **P** **19 15 52.2 +0.6**
BRG Berggiesshubel 77.57 320 *e*P **P** **19 15 54.2 +0.3**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRG Berggiesshubel 77.57 320 *e*P **P** **19 15 54.1 +0.2**
comp=Z,4.0nm,0.8s,mb4.4
BRG Berggiesshubel 77.57 320 *e*P **P** **19 15 54.2 +0.3**
comp=Z,4.2nm,0.8s,mb4.4
GEC2 GERESS Array S 77.63 318 *e*P **P** **19 15 54.1 -0.2**
GEC2 GERESS Array S 77.63 318 *e*P **P** **19 15 54.5 +0.2**
GEC2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
GEC2 GERESS Array S 77.63 318 *e*P **P** **19 15 54.5 +0.2**
comp=Z,9.0nm,0.7s,mb4.8
GERES GERESS Array B 77.63 318 P **P** **19 15 54.7 +0.4**
comp=Z,4.9nm,0.6s,mb4.6,baz=88,slow=5.5,SNR=44
GERES LR LR 19 55 06.7
comp=Z,72nm,19.4s,MS4.0,baz=278,slow=40
KHC Kasperske Hory 77.72 319⇑*e*P **P** **19 15 55.5 +0.7**
KHC Kasperske Hory 77.72 319 *e*P **P** **19 15 55.0 +0.2**
CLL Collm 78.18 321 *e*P **P** **19 15 55.0 -2.3**
CLL LR LR
comp=Z,100nm,15.1s,MS4.3
CLL Collm 78.18 321 *e*P **P** **19 15 55.0 -2.3**
CLL *e*pP pP 19 16 05.0 -8.4
WET Wettzell 78.18 319 *e*P **P** **19 15 57.6 +0.2**
WET pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
WET Wettzell 78.18 319 *e*P **P** **19 15 57.6 +0.2**
comp=Z,10.0nm,1.2s,mb4.6
RJOB Jochberg 78.20 317 *e*P **P** **19 15 58.0 +0.5**
comp=Z,8.0nm,1.0s,mb4.6
MAW Mawson 78.31 192 P **P** **19 15 58.2 +0.6**
comp=Z,2.0nm,0.5s,mb4.3,baz=16,slow=6.9,SNR=10
HFS Hagfors 78.35 330 P **P** **19 15 58.1 +0.1**
comp=Z,6.2nm,0.4s,mb4.9,baz=102,slow=5.1,SNR=39
NKC Novy Kostel 78.50 320 *e*P **P** **19 15 55.6 -3.5**
ROTZ Rotzenmuhle 78.64 319 *e*P **P** **19 16 00.8 +0.9**
comp=Z,10.0nm,1.1s,mb4.7
MANZ Manzenberg 78.71 319 *e*P **P** **19 16 00.6 +0.3**
comp=Z,9.0nm,0.9s,mb4.7
WTTA Wattenberg 78.97 317⇓*i*P **P** **19 16 01.6 -0.2**
comp=Z,14nm,0.9s,mb4.9
WATA Walderalm 79.02 317⇑*i*P **P** **19 16 01.4 -0.6**
comp=Z,4.1nm,0.5s,mb4.6
SQTA Sankt Quirin 79.27 317⇓*i*P **P** **19 16 03.1 -0.3**
GRF Grafenberg Arr 79.28 319 *e*P **P** **19 16 04.0 +0.6**
GRF pmax pmax
comp=Z,43nm,1.6s,mb5.1
GRF Grafenberg Arr 79.28 319 *e*P **P** **19 16 04.0 +0.6**
GRF pmax pmax
comp=Z,43nm,1.6s,mb5.1
GRF Grafenberg Arr 79.28 319 *e*P **P** **19 16 04.0 +0.6**
comp=Z,43nm,1.6s,mb5.1
MOTA Moosalm 79.34 317⇑*i*P **P** **19 16 03.4 -0.4**
comp=Z,12nm,0.8s,mb4.8
RETA Reutte 79.57 317⇑*i*P **P** **19 16 05.0 0.0**
comp=Z,8.6nm,0.5s,mb4.9
NB2 NORSAR Subarra 79.63 331 P **P** **19 16 04.7 -0.4**
comp=Z,4.8nm,0.5s,mb4.7,baz=94,slow=6.5
NOA NORSAR Array B 79.63 331 P **P** **19 16 04.7 -0.4**
comp=Z,6.3nm,0.8s,mb4.6,baz=98,slow=5.5,SNR=17
NOA LR LR 19 56 26.9
comp=Z,147nm,18.5s,MS4.4,baz=105,slow=40
SPITS Spitsbergen Ar 79.88 348 P **P** **19 16 05.7 -0.4**
comp=Z,8.1nm,0.5s,mb4.9,baz=352,slow=11,SNR=35
BSEG Bad Segeberg 79.89 323 *e*P **P** **19 16 07.5 +0.9**
BSEG pmax pmax
comp=Z,21nm,0.9s,mb5.1
BSEG Bad Segeberg 79.89 323 *e*P **P** **19 16 07.5 +0.9**
comp=Z,21nm,0.9s,mb5.1
DAVA Damuels 80.17 317⇓*i*P **P** **19 16 08.6 +0.3**
comp=Z,6.8nm,0.6s,mb4.8
DAVOX Davos/Dischmat 80.18 316 P **P** **19 16 09.0 +0.7**
comp=Z,12nm,0.7s,mb4.9,baz=91,slow=6.1,SNR=10
DAVOS Davos 80.24 316 P **P** **19 16 09.0 +0.3**
PGF Pioggiola 80.92 312 *e*P **P** **19 16 12.1 -0.3**
comp=Z,112nm,1.3s,mb5.3
PGF Pioggiola 80.92 312 *e*P **P** **19 16 12.1 -0.3**
comp=Z,56nm,1.3s,mb5.3
PGF Pioggiola 80.92 312 *e*P **P** **19 16 12.1 -0.3**
PGF pmax pmax
comp=Z,56nm,1.3s,mb5.3
KEST Kesra 80.95 305 P **P** **19 16 14.0 +1.2**
comp=Z,2.1nm,0.7s,mb4.2,baz=217,slow=2.2,SNR=6.7
BFO Black Forest 81.19 318 *e*P **P** **19 16 13.9 +0.2**
BFO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BFO Black Forest 81.19 318 *e*P **P** **19 16 13.9 +0.2**
comp=Z,10.0nm,1.1s,mb4.7
CDF Champ du Feu 81.89 318 *e*P **P** **19 16 16.9 -0.5**
HINF Hinteralfeld 82.20 317 *e*P **P** **19 16 19.1 0.0**
LPG La Plagne 82.40 315 *e*P **P** **19 16 20.4 +0.3**
comp=Z,45nm,1.1s,mb5.0
LPG La Plagne 82.40 315 *e*P **P** **19 16 20.4 +0.3**
comp=Z,22nm,1.1s,mb5.0
LPG La Plagne 82.40 315 *e*P **P** **19 16 20.4 +0.3**
LPG pmax pmax
comp=Z,22nm,1.1s,mb5.0
LPL La Plagne 82.41 315 *e*P **P** **19 16 20.5 +0.3**
comp=Z,59nm,1.1s,mb5.2
LPL La Plagne 82.41 315 *e*P **P** **19 16 20.5 +0.3**
comp=Z,30nm,1.1s,mb5.1
LPL La Plagne 82.41 315 *e*P **P** **19 16 20.5 +0.3**
LPL pmax pmax
comp=Z,30nm,1.1s,mb5.1
MBDF Montbardon 82.43 314 *e*P **P** **19 16 20.5 +0.2**
comp=Z,41nm,1.2s,mb4.9
MBDF Montbardon 82.43 314 *e*P **P** **19 16 20.5 +0.2**
comp=Z,20nm,1.2s,mb4.9
MBDF Montbardon 82.43 314 *e*P **P** **19 16 20.5 +0.2**
MBDF pmax pmax
comp=Z,20nm,1.2s,mb4.9
HAU Haudompre 82.53 317 *e*P **P** **19 16 20.3 -0.5**
comp=Z,23nm,0.8s,mb4.9
HAU *e*MLR MLR
comp=Z,64nm,17.2s,MS3.8
HAU Haudompre 82.53 317 *e*P **P** **19 16 20.3 -0.5**
comp=Z,11nm,0.8s,mb5.0
HAU LR LR
comp=Z,60nm,17.3s,MS4.0
HAU Haudompre 82.53 317 *e*P **P** **19 16 20.3 -0.5**
HAU pmax pmax
comp=Z,11nm,0.8s,mb4.9
HAU MLR MLR
comp=Z,60nm,17.3s,MS4.0
FRF La Foret Royal 82.59 313 *e*P **P** **19 16 20.9 -0.3**
comp=Z,88nm,1.3s,mb5.3
FRF La Foret Royal 82.59 313 *e*P **P** **19 16 20.9 -0.3**
comp=Z,44nm,1.3s,mb5.3
FRF La Foret Royal 82.59 313 *e*P **P** **19 16 20.9 -0.3**
FRF pmax pmax
comp=Z,44nm,1.3s,mb5.3
CABF La Chapelle 82.79 316 *e*P **P** **19 16 22.3 +0.1**
ORIF Oris-en-Rattie 83.05 314 *e*P **P** **19 16 23.2 -0.3**
comp=Z,24nm,1.0s,mb4.9
ORIF *e*MLR MLR
comp=Z,118nm,23.0s,MS3.9
ORIF Oris-en-Rattie 83.05 314 *e*P **P** **19 16 23.2 -0.3**
comp=Z,12nm,1.0s,mb4.9
ORIF Oris-en-Rattie 83.05 314 *e*P **P** **19 16 23.2 -0.3**
ORIF pmax pmax
comp=Z,12nm,1.0s,mb4.9
BAIF Baives 83.80 320 *e*P **P** **19 16 27.3 0.0**
VIVF Saint-Julien-l 83.91 314 *e*P **P** **19 16 27.8 -0.2**
comp=Z,30nm,1.0s,mb5.1
VIVF Saint-Julien-l 83.91 314 *e*P **P** **19 16 27.8 -0.2**
comp=Z,15nm,1.0s,mb5.1
VIVF Saint-Julien-l 83.91 314 *e*P **P** **19 16 27.8 -0.2**
VIVF pmax pmax
comp=Z,15nm,1.0s,mb5.1
LOR Lormes 84.27 317 *e*P **P** **19 16 29.3 -0.4**
comp=Z,57nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,98nm,17.2s,MS4.0
LOR Lormes 84.27 317 *e*P **P** **19 16 29.3 -0.4**
comp=Z,28nm,1.3s,mb5.2
LOR LR LR
comp=Z,100nm,17.3s,MS4.3
LOR Lormes 84.27 317 *e*P **P** **19 16 29.3 -0.4**
LOR pmax pmax
comp=Z,28nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,100nm,17.3s,MS4.3
SMF Signal de Mont 84.33 316 *e*P **P** **19 16 29.7 -0.4**
comp=Z,44nm,1.3s,mb5.1
SMF Signal de Mont 84.33 316 *e*P **P** **19 16 29.7 -0.4**
comp=Z,22nm,1.3s,mb5.1
SMF Signal de Mont 84.33 316 *e*P **P** **19 16 29.7 -0.4**
SMF pmax pmax
comp=Z,22nm,1.3s,mb5.1
SSF Saint Saulge 84.52 317 *e*P **P** **19 16 30.6 -0.4**
comp=Z,39nm,1.5s,mb5.0
SSF Saint Saulge 84.52 317 *e*P **P** **19 16 30.6 -0.4**
comp=Z,19nm,1.5s,mb5.0
SSF Saint Saulge 84.52 317 *e*P **P** **19 16 30.6 -0.4**
SSF pmax pmax
comp=Z,19nm,1.5s,mb5.0
AVF Avril sur Loir 84.65 316 *e*P **P** **19 16 31.3 -0.4**
comp=Z,19nm,1.1s,mb4.8
AVF Avril sur Loir 84.65 316 *e*P **P** **19 16 31.3 -0.4**
comp=Z,9.6nm,1.1s,mb4.8
AVF Avril sur Loir 84.65 316 *e*P **P** **19 16 31.3 -0.4**
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
BGF Bois d'Agland 85.02 316 *e*P **P** **19 16 33.5 0.0**
comp=Z,17nm,0.9s,mb4.8
BGF Bois d'Agland 85.02 316 *e*P **P** **19 16 33.5 0.0**
comp=Z,8.4nm,0.9s,mb4.9
BGF Bois d'Agland 85.02 316 *e*P **P** **19 16 33.5 0.0**
BGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SYO Syowa Base 85.15 197⇑*e*P **P** **19 16 34.0 +0.4**
TAM Tamanrasset 85.37 292 *e*P **P** **19 16 37.4 +1.7**
TCF Toulx Ste Croi 85.49 316 *e*P **P** **19 16 35.7 -0.2**
comp=Z,39nm,1.4s,mb5.1
TCF Toulx Ste Croi 85.49 316 *e*P **P** **19 16 35.7 -0.2**
comp=Z,19nm,1.4s,mb5.0
TCF Toulx Ste Croi 85.49 316 *e*P **P** **19 16 35.7 -0.2**
TCF pmax pmax
comp=Z,19nm,1.4s,mb5.0
CAF Calviac 85.75 315 *e*P **P** **19 16 37.5 +0.3**
comp=Z,23nm,1.1s,mb5.0
CAF Calviac 85.75 315 *e*P **P** **19 16 37.5 +0.3**
comp=Z,12nm,1.1s,mb5.0
CAF Calviac 85.75 315 *e*P **P** **19 16 37.5 +0.3**
CAF pmax pmax
comp=Z,12nm,1.1s,mb5.0
MTLF Montolieu 85.82 313 *e*P **P** **19 16 37.6 0.0**
comp=Z,50nm,1.5s,mb5.2
MTLF Montolieu 85.82 313 *e*P **P** **19 16 37.6 0.0**
comp=Z,25nm,1.5s,mb5.2
MTLF Montolieu 85.82 313 *e*P **P** **19 16 37.6 0.0**
MTLF pmax pmax
comp=Z,25nm,1.5s,mb5.2
RJF Les Rejaudoux 86.09 315 *e*P **P** **19 16 39.3 +0.4**
comp=Z,42nm,1.4s,mb5.2
RJF *e*MLR MLR
comp=Z,119nm,21.0s,MS4.0
RJF Les Rejaudoux 86.09 315 *e*P **P** **19 16 39.3 +0.4**
comp=Z,21nm,1.4s,mb5.2
RJF LR LR
comp=Z,120nm,21.0s,MS4.3
RJF Les Rejaudoux 86.09 315 *e*P **P** **19 16 39.3 +0.4**
RJF pmax pmax
comp=Z,21nm,1.4s,mb5.2
RJF MLR MLR
comp=Z,120nm,21.0s,MS4.3
LDF La Druitiere 86.77 318 *e*P **P** **19 16 41.9 -0.3**
comp=Z,49nm,1.2s,mb5.3
LDF La Druitiere 86.77 318 *e*P **P** **19 16 41.9 -0.3**
comp=Z,25nm,1.2s,mb5.3
LDF La Druitiere 86.77 318 *e*P **P** **19 16 41.9 -0.3**
LDF pmax pmax
comp=Z,25nm,1.2s,mb5.3
FLN La Foliniere 86.99 319 *e*P **P** **19 16 42.9 -0.3**
comp=Z,58nm,1.1s,mb5.4
FLN *e*MLR MLR
comp=Z,112nm,19.5s,MS4.0
FLN La Foliniere 86.99 319 *e*P **P** **19 16 42.9 -0.3**
comp=Z,29nm,1.1s,mb5.4
FLN LR LR
comp=Z,110nm,19.5s,MS4.3
FLN La Foliniere 86.99 319 *e*P **P** **19 16 42.9 -0.3**
FLN pmax pmax
comp=Z,29nm,1.1s,mb5.4
FLN MLR MLR
comp=Z,110nm,19.5s,MS4.3
MFF Saint Martin d 87.07 316 *e*P **P** **19 16 43.5 -0.1**
comp=Z,56nm,1.3s,mb5.3
MFF Saint Martin d 87.07 316 *e*P **P** **19 16 43.5 -0.1**
comp=Z,28nm,1.3s,mb5.3
MFF Saint Martin d 87.07 316 *e*P **P** **19 16 43.5 -0.1**
MFF pmax pmax
comp=Z,28nm,1.3s,mb5.3
EKA Eskdalemuir Ar 87.58 325 P **P** **19 16 46.6 +0.7**
comp=Z,5.0nm,0.8s,mb4.8,baz=89,slow=5.4,SNR=12
ALE Alert 89.22 357 P **P** **19 16 53.0 -0.2**
comp=Z,114nm,0.8s,mb6.2,SNR=8.5
TOA0 Torodi Ar. Sit 90.20 283 *e*P **P** **19 16 59.8 +0.8**
TORD Torodi Ar. Bea 90.20 283 P **P** **19 17 00.5 +1.4**
comp=Z,3.4nm,0.6s,mb4.8,baz=89,slow=4.8,SNR=23
TORD LR LR 19 57 20.7
comp=Z,94nm,18.9s,MS4.2,baz=20,slow=36
TORD Torodi Ar. Bea 90.20 283 P **P** **19 17 00.5 +1.4**
TORD LR LR 19 57 20.7
ESDC Sonseca Array 90.96 310 P **P** **19 17 03.3 +1.1**
comp=Z,2.3nm,0.7s,mb4.6,baz=58,slow=4.6,SNR=9.9
VNDA Vanda 92.89 168 P **P** **19 17 10.1 -0.1**
comp=Z,1.4nm,0.8s,mb4.5,baz=295,slow=5.6,SNR=10.0
DBIC Dimbokro 97.52 278 LR LR 20 01 24.1
comp=Z,170nm,18.6s,MS4.6,baz=61,slow=35
RES Resolute Bay 97.55 2 *e*P **P** **19 17 32.5 +0.9**
E03A Lebam 116.59 28⇑P PKPdf 19 22 41.8 0.0
baz=116
B08A Colville Reser 117.03 24⇓P PKPdf 19 22 42.9 +0.3
baz=117
F03A Seaside 117.05 28⇓P PKPdf 19 22 42.9 +0.1
baz=117
A10A Northport 117.23 23⇑P PKPdf 19 22 42.9 -0.1
baz=117
C07A Waterville 117.26 25⇑P PKPdf 19 22 42.7 -0.5
baz=117
B09A Rice 117.45 23⇑P PKPdf 19 22 43.6 +0.2
baz=117
A11A Hall Mountain, 117.69 22⇑P PKPdf 19 22 44.8 +0.9
baz=118
H02A Toledo 117.76 30⇓P PKPdf 19 22 44.8 +0.6
baz=118
E06A Yakima 117.76 26⇑P PKPdf 19 22 44.8 +0.6
baz=118
C09A Chrisman Ranch 117.91 24⇓P PKPdf 19 22 44.8 +0.4
baz=118
D09A Jones Farm, Ri 118.48 24⇓P PKPdf 19 22 45.9 +0.4
baz=118
H04A Detroit Lake 118.62 28⇑P PKPdf 19 22 45.8 -0.1
baz=118
I03A Eugene 118.63 30⇓P PKPdf 19 22 46.5 +0.6
baz=118
C11A Tepee Creek (N 118.66 23⇑P PKPdf 19 22 46.0 +0.2
baz=118
A14A Double T Ranch 118.72 20⇓P PKPdf 19 22 46.4 +0.4
baz=119
B13A Whitefish 118.87 21⇑P PKPdf 19 22 46.6 +0.4
baz=119
D10A Wagner Farm, O 118.91 24⇓P PKPdf 19 22 46.7 +0.4
baz=119
G06A Carlson Farm, 118.92 27⇓P PKPdf 19 22 46.9 +0.5
baz=119
A15A Johnson Ranch, 118.95 20⇑P PKPdf 19 22 46.3 -0.1
baz=119
E09A Wood Farm, Sta 118.99 25⇑P PKPdf 19 22 46.8 +0.3
baz=119
F08A Pendleton 119.30 26⇓P PKPdf 19 22 48.1 +1.0
baz=119
B14A Marquette Ranc 119.30 20⇑P PKPdf 19 22 46.6 -0.4
baz=119
PMOR Pomariorio Ree 119.35 103 *e*T 19 19 02.4
comp=Z,3.6nm,0.3s
A16A West Butte Ran 119.35 19⇑P PKPdf 19 22 47.6 +0.5
baz=119
C13A Hot Springs 119.42 22⇓P PKPdf 19 22 47.8 +0.5
baz=119
H06A Lindquist Farm 119.44 27⇑P PKPdf 19 22 47.8 +0.3
baz=119
LNOR Lincton Mounta 119.45 25 *e*PKPdf PKPdf 19 22 47.2 -0.2
B15A Bradely Ranch, 119.58 20⇓P PKPdf 19 22 47.5 -0.1
baz=119,SNR=8.1
VAH Vaihoa 119.61 103 *e*T 19 18 47.1
comp=Z,54nm,0.2s
G08A Pilot Rock 119.62 26⇓P PKPdf 19 22 48.0 +0.2
baz=120
F09A S2 Ranch, Elgi 119.73 25⇓P PKPdf 19 22 48.3 +0.4
baz=120
B16A M & M Farms, S 119.78 19⇓P PKPdf 19 22 48.1 +0.1
baz=120
L02A Cave Junction 119.78 31⇓P PKPdf 19 22 48.1 0.0
baz=120
F10A Beach Ranch, E 119.80 24⇓P PKPdf 19 22 48.8 +0.7
baz=120
E11A Bogner Ranch, 119.90 23⇑P PKPdf 19 22 48.2 0.0
baz=120
H07A Lands Inn, Kim 119.90 27⇑P PKPdf 19 22 48.3 0.0
baz=120
D13A Huson 119.95 22⇑P PKPdf 19 22 48.3 0.0
baz=120
C15A Salmond Ranch, 120.03 20⇑P PKPdf 19 22 48.7 +0.2
baz=120,SNR=6.5
I06A Prineville 120.11 28⇓P PKPdf 19 22 48.6 -0.2
baz=120
F11A Grangeville 120.31 24⇓P PKPdf 19 22 48.7 -0.4
baz=120
D14A Greenough 120.31 21⇓P PKPdf 19 22 49.1 +0.1
baz=120
I07A Izee 120.32 27⇑P PKPdf 19 22 49.3 +0.1
baz=120
H08A Prairie City 120.35 26⇓P PKPdf 19 22 49.5 +0.3
baz=120
G10A Bishop Farm, J 120.40 25⇓P PKPdf 19 22 49.0 -0.3
baz=120
E13A Victor 120.61 22⇓P PKPdf 19 22 49.5 -0.1
baz=120,SNR=5.4
J06A Christmas Vall 120.67 28⇑P PKPdf 19 22 50.1 +0.2
baz=120
D15A Lincoln 120.69 21⇓P PKPdf 19 22 50.1 +0.4
baz=120
K05A Summer Lake 120.71 29⇑P PKPdf 19 22 51.3 +1.4
baz=121
EGMT Eagleton 120.74 18 *e*PKPdf PKPdf 19 22 50.7 +0.9
EGMT Eagleton 120.74 18⇑P PKPdf 19 22 50.7 +0.9
baz=121
C17A Wharram Farm, 120.77 19⇓P PKPdf 19 22 49.9 0.0
baz=121
I08A Drewsey 120.88 27⇓P PKPdf 19 22 50.8 +0.6
baz=121
E14A Clinton 120.88 22⇓P PKPdf 19 22 50.9 +0.8
baz=121
J07A Hines 120.96 28⇑P PKPdf 19 22 50.8 +0.4
baz=121
D16A Dana Ranch, Ca 121.04 20⇑P PKPdf 19 22 50.8 +0.3
baz=121
F13A Darby 121.10 23⇑P PKPdf 19 22 50.8 +0.2
baz=121
H10A Noah's Angus R 121.12 25⇓P PKPdf 19 22 50.4 -0.3
baz=121
D17A Six Diamond Ra 121.22 19⇓P PKPdf 19 22 51.1 +0.4
baz=121
H11A Donnelly 121.34 24⇑P PKPdf 19 22 51.4 +0.3
baz=121
D18A Linhart Farms, 121.46 19⇑P PKPdf 19 22 51.9 +0.7
baz=121
K07A Rock Creek Ran 121.52 28⇓P PKPdf 19 22 52.7 +1.2
baz=121
ULM Lac du Bonnet 121.65 7 PKP PKPdf 19 22 50.9 -0.6
comp=Z,4.1nm,0.4s,baz=25,slow=3.7,SNR=3.7
ULM Lac du Bonnet 121.65 7 PKP PKPdf 19 22 50.9 -0.6
J09A Fry Pan Ranch, 121.69 27⇓P PKPdf 19 22 52.3 +0.5
baz=122
G13A Cobalt 121.72 23⇑P PKPdf 19 22 52.1 +0.3
baz=122
F15A Butte 121.74 21⇓P PKPdf 19 22 52.1 +0.3
baz=122

E17A **Martinsdale** 121.77 20 ⇑P PKPdf 19 22 52.3 +0.4
baz=122
K08A **Mann Creek Ran** 121.84 28 ⇓P PKPdf 19 22 52.7 +0.6
baz=122
DGMT **Dagmar** 121.86 14 ⇓P PKPdf 19 22 52.2 +0.3
baz=122
G14A **Jackson** 121.89 22 ⇑P PKPdf 19 22 53.2 +1.1
baz=122,SNR=14
H12A **Diamond D Ranc** 121.93 24 ⇑P PKPdf 19 22 52.8 +0.6
baz=122
E18A **Harlowton** 121.98 19 ⇓P PKPdf 19 22 52.9 +0.6
baz=122
L07A **Adell** 122.00 29 ⇑P PKPdf 19 22 53.0 +0.5
baz=122
H13A **Challis** 122.16 23 ⇓P PKPdf 19 22 53.2 +0.5
baz=122,SNR=5.8
BOZ **Bozeman (W)** 122.21 21 ⇓P PKPdf 19 22 53.9 +1.2
baz=122
K09A **Rome** 122.21 27 ⇓P PKPdf 19 22 53.9 +1.1
baz=122
G15A **Dillon** 122.32 22 ⇓P PKPdf 19 22 54.7 +1.8
baz=122,SNR=5.2
F17A **Fitzpatrick Pl** 122.32 20 ⇓P PKPdf 19 22 53.9 +1.0
baz=122
L08A **Fields** 122.33 28 ⇑P PKPdf 19 22 54.2 +1.1
baz=122
O04C **Chester** 122.42 31 ⇓P PKPdf 19 22 53.7 +0.4
baz=122
I12A **Atlanta** 122.44 24 ⇓P PKPdf 19 22 54.6 +1.4
baz=122,SNR=7.3
H14A **Leadore** 122.45 23 ⇑P PKPdf 19 22 54.5 +1.3
baz=122
MFID **Camas Ranch** 122.47 25 ⇑P PKPdf 19 22 54.1 +0.9
baz=122
MCMT **McKenzie Canyo** 122.47 22 *e*PKPdf PKPdf 19 22 54.5 +1.2
G16A **Moss Hill, Enn** 122.51 21 ⇑P PKPdf 19 22 54.0 +0.7
baz=122,SNR=5.8
M07A **Soldier Meadow** 122.56 29 ⇑P PKPdf 19 22 54.0 +0.5
baz=122
F18A **Big Timber** 122.63 19 ⇓P PKPdf 19 22 54.2 +0.7
baz=122
H15A **Lima** 122.73 22 ⇓P PKPdf 19 22 54.0 +0.2
baz=123
N06A **Buffalo Meadow** 122.73 30 ⇓P PKPdf 19 22 54.7 +0.8
baz=123
I13A **Wildhorse Cree** 122.75 24 ⇓P PKPdf 19 22 54.3 +0.5
baz=123
G17A **Pierce Place,** 122.80 20 ⇓P PKPdf 19 22 55.4 +1.5
baz=123
M08A **Happy Creek Ra** 122.89 28 ⇑P PKPdf 19 22 55.6 +1.4
baz=123
K11A **Parker Ranch,** 122.90 26 ⇓P PKPdf 19 22 54.9 +0.7
baz=123
J12A **Stokes Ranch,** 122.91 25 ⇓P PKPdf 19 22 55.2 +1.0
baz=123
HLID **Hailey** 122.93 24 *e*PKPdf PKPdf 19 22 55.1 +0.9
QLMT **Earthquake Lak** 122.99 21 *e*PKPdf PKPdf 19 22 56.0 +1.8
I14A **Mackay** 123.00 23 ⇓P PKPdf 19 22 55.4 +1.1
baz=123
N07B **Gerlach** 123.13 29 ⇓P PKPdf 19 22 55.7 +1.1
baz=123
BEKR **Beckwourth** 123.13 31 ⇑P PKPdf 19 22 55.4 +0.8
baz=123
J13A **Cove Ranch, Pi** 123.16 24 ⇓P PKPdf 19 22 55.9 +1.2
baz=123,SNR=7.1
H16A **Russell Place,** 123.16 21 ⇓P PKPdf 19 22 56.2 +1.6
baz=123
L10A **Juniper Basin** 123.27 27 ⇓P PKPdf 19 22 55.9 +1.0
baz=123
RLMT **Red Lodge** 123.47 19 ⇑P PKPdf 19 22 56.2 +1.1
baz=123
J14A **Carey** 123.49 24 ⇑P PKPdf 19 22 56.4 +1.1
baz=123
L11A **Cat Creek Ranc** 123.51 26 ⇓P PKPdf 19 22 56.1 +0.8
baz=123
O07A **Toulon** 123.65 30 ⇓P PKPdf 19 22 56.5 +0.8
baz=124
H17A **Grant Village** 123.67 21 ⇓P PKPdf 19 22 56.8 +1.3
baz=124
I16A **Newdale** 123.79 22 ⇑P PKPdf 19 22 57.1 +1.2
baz=124
J15A **Blackfoot** 123.84 23 ⇓P PKPdf 19 22 57.4 +1.4
baz=124
I17A **Pilgram Creek** 124.08 21 ⇓P PKPdf 19 22 57.5 +1.2
baz=124
J16A **Bone** 124.26 22 ⇑P PKPdf 19 22 57.3 +0.6
baz=124
K14A **Jones Ranch, D** 124.28 24 ⇓P PKPdf 19 22 57.7 +0.9
baz=124
LOHW **Long Hollow** 124.34 21 *e*PKPdf PKPdf 19 22 58.3 +1.4
L13A **Double Diamond** 124.34 25 ⇓P PKPdf 19 22 58.0 +1.1
baz=124
M12A **Wells** 124.49 26 ⇑P PKPdf 19 22 58.5 +1.3
baz=124,SNR=7.4
J17A **Brown Place, J** 124.52 21 ⇑P PKPdf 19 22 58.4 +1.2
baz=124
K16A **Soda Springs** 124.65 22 ⇑P PKPdf 19 22 58.3 +0.8
baz=124
L14A **Malta** 124.68 24 ⇓P PKPdf 19 22 58.1 +0.6
baz=124
M13A **Montello** 124.85 25 ⇑P PKPdf 19 22 58.9 +1.0
baz=125
ELK **Elko** 124.89 27 PKP PKPdf 19 22 59.8 +1.8
comp=Z,2.1nm,0.6s,baz=326,slow=3.1,SNR=9.1
N12A **Clover Valley,** 124.89 26 ⇑P PKPdf 19 22 58.8 +0.8
baz=125,SNR=5.7
L15A **Malad City** 125.05 24 ⇓P PKPdf 19 22 58.6 +0.4
baz=125
M14A **Sheep Mountain** 125.08 25 ⇑P PKPdf 19 22 58.5 +0.1
baz=125
O11A **Cowboy Ranch,** 125.20 27 ⇑P PKPdf 19 22 59.6 +0.9
baz=125,SNR=8.0
P10A **Eureka** 125.23 28 ⇑P PKPdf 19 22 59.6 +0.9
baz=125
NVAR **Mina Array Bea** 125.26 31 PKP PKPdf 19 23 00.6 +1.8
comp=Z,3.5nm,0.6s,baz=313,slow=2.1,SNR=24
BW06 **Boulder Array** 125.45 21 ⇓P PKPdf 19 22 59.4 +0.4
baz=125
PDAR **Pinedale Array** 125.45 21 PKP PKPdf 19 22 59.8 +0.7
comp=Z,4.6nm,0.8s,baz=105,slow=0.6,SNR=32
O12A **Currie** 125.50 27 ⇓P PKPdf 19 23 00.1 +0.9
baz=125
N14A **Grayback Hills** 125.69 25 ⇑P PKPdf 19 23 00.8 +1.2
baz=126
Q10A **Clear Creek Ra** 125.89 29 ⇓P PKPdf 19 23 00.8 +0.8
baz=126
L18A **Fontenelle, Gr** 126.01 22 ⇑P PKPdf 19 23 00.8 +0.6
baz=126
L19A **Farson** 126.11 21 ⇑P PKPdf 19 23 00.8 +0.5
baz=126
M17A **Scullys Gap (B** 126.17 23 ⇓P PKPdf 19 23 01.1 +0.6
baz=126
Q11A **Duckwater** 126.23 28 ⇑P PKPdf 19 23 01.4 +0.8
baz=126
DUG **Dugway** 126.39 25 ⇓P PKPdf 19 23 01.7 +0.8
baz=126
DUG **Dugway** 126.39 25 *e*PKIKP PKPdf 19 23 02.3 +1.4
M18A **Lyman** 126.43 22 ⇓P PKPdf 19 23 01.6 +0.6
baz=126
P13A **Bates Ranch, G** 126.48 27 ⇓P PKPdf 19 23 02.2 +1.1
baz=126
S10A **Tonopah Range,** 126.50 30 ⇑P PKPdf 19 23 02.2 +1.0
baz=126,SNR=6.9
L20A **Wamsutter** 126.55 20 ⇑P PKPdf 19 23 02.2 +1.0
baz=126
N17A **Moffit Pass** 126.56 23 ⇑P PKPdf 19 23 02.2 +1.0
baz=126
R11A **Troy Canyon, C** 126.66 29 ⇓P PKPdf 19 23 02.8 +1.3
baz=126,SNR=11
M19A **Rock Springs** 126.70 21 ⇓P PKPdf 19 23 02.6 +1.1
baz=126
P14A **Drum Mountains** 126.79 26 ⇓P PKPdf 19 23 02.8 +1.1
baz=127
Q13A **Wheeler Ranch,** 126.89 27 ⇓P PKPdf 19 23 02.8 +0.9
baz=127
L21A **Rawlins** 126.91 20 ⇑P PKPdf 19 23 02.7 +0.8
baz=127
P15A **Leamington** 127.14 25 ⇑P PKPdf 19 23 02.9 +0.6
baz=127
Q14A **Sevier Lake (B** 127.19 26 ⇓P PKPdf 19 23 03.4 +1.0
baz=127
N19A **John Jarvie Ra** 127.23 22 ⇑P PKPdf 19 23 03.4 +0.9
baz=127
O17A **Robinson Place** 127.24 23 ⇓P PKPdf 19 23 03.3 +0.8
baz=127
SADO **Sadowa** 127.34 354 PKP PKPdf 19 23 02.9 +0.4
comp=Z,3.8nm,0.7s,baz=11,slow=5.2,SNR=3.0
SADO **Sadowa** 127.34 354 PKP PKPdf 19 23 02.9 +0.3

TPNV **Topopah Spring** 127.44 30 ⇓P PKPdf 19 23 03.6 +0.6
baz=127
MPMC **Manual Prospec** 127.49 32 ⇓P PKPdf 19 23 04.9 +1.7
baz=127
R13A **O'Grain Ranch,** 127.55 27 ⇑P PKPdf 19 23 05.1 +2.0
baz=127
Q15A **Fillmore** 127.57 26 ⇓P PKPdf 19 23 05.0 +1.8
baz=127
T11A **Corn Creek, Al** 127.71 29 ⇑P PKPdf 19 23 04.6 +1.1
baz=128,SNR=6.3
P18A **Preston Nutter** 127.92 23 ⇑P PKPdf 19 23 05.2 +1.4
baz=128
MSU **Marysvale** 128.07 26 *e*PKPdf PKPdf 19 23 06.3 +2.2
S13A **Holt Ranch, En** 128.08 28 ⇓P PKPdf 19 23 05.6 +1.4
baz=128
Q16A **Castle Valley** 128.15 25 ⇓P PKPdf 19 23 05.9 +1.6
baz=128
P19A **Cripple Cowboy** 128.40 22 ⇓P PKPdf 19 23 06.3 +1.6
baz=128
Q18A **Rafter H Ranch** 128.41 24 ⇑P PKPdf 19 23 06.0 +1.2
baz=128
GSC **Goldstone** 128.42 32 *e*PKPdf PKPdf 19 23 06.9 +2.0
R16A **Teasdale** 128.56 25 ⇑P PKPdf 19 23 06.5 +1.4
baz=128
U12A **Valley of Fire** 128.69 29 ⇓P PKPdf 19 23 07.0 +1.6
baz=128
R17A **Hanksville Air** 128.76 25 ⇓P PKPdf 19 23 06.6 +1.1
baz=129
Q19A **Hogan Spring (** 128.88 23 ⇓P PKPdf 19 23 06.9 +1.2
baz=129
S16A **Weppner Ranch,** 128.98 26 ⇑P PKPdf 19 23 07.4 +1.5
baz=129
HEC **Hector,Ludlow** 129.04 32 ⇑P PKPdf 19 23 07.8 +1.7
baz=129
R18A **Canyonlands Na** 129.12 24 ⇓P PKPdf 19 23 07.7 +1.5
baz=129
U14A **Mt Trumbull** 129.34 28 ⇓P PKPdf 19 23 07.8 +1.2
baz=129
V13A **Grand Canyon W** 129.42 29 ⇓P PKPdf 19 23 08.1 +1.3
baz=129
S18A **Hurst Farm, Bl** 129.68 24 ⇑P PKPdf 19 23 08.8 +1.5
baz=130
U15A **North Rim** 129.75 27 ⇑P PKPdf 19 23 09.1 +1.7
baz=130
T17A **Navajo Res., N** 129.93 26 ⇑P PKPdf 19 23 09.3 +1.6
baz=130
V14A **Boquillas Ranc** 130.01 29 ⇓P PKPdf 19 23 09.4 +1.4
baz=130
W13A **Hualapai Mount** 130.07 30 ⇓P PKPdf 19 23 09.4 +1.3
baz=130
T18A **Mexican Hat** 130.20 25 ⇓P PKPdf 19 23 10.0 +1.7
baz=130
V15A **Kaibab Nationa** 130.30 28 ⇑P PKPdf 19 23 09.9 +1.4
baz=130
U17A **Shonto** 130.32 26 ⇑P PKPdf 19 23 10.7 +2.2
baz=130
W14A **Seligman** 130.37 29 ⇑P PKPdf 19 23 10.0 +1.3
baz=130
MONP **Monument Peak** 130.46 34 ⇓P PKPdf 19 23 10.4 +1.5
baz=130
T19A **Beclabito** 130.81 24 ⇑P PKPdf 19 23 10.5 +1.0
baz=131
U18A **Rough Rock, Ch** 130.81 25 ⇓P PKPdf 19 23 11.0 +1.6
baz=131
X15A **Humboldt** 131.36 29 ⇑P PKPdf 19 23 11.9 +1.4
baz=131
Y15A **Casa Rosa Ranc** 131.75 29 ⇑P PKPdf 19 23 12.8 +1.5
baz=132
V19A **Window Rock** 131.76 25 ⇓P PKPdf 19 23 12.8 +1.5
baz=132
X16A **Lo Mia Camp, P** 131.79 28 ⇑P PKPdf 19 23 12.9 +1.6
baz=132
Y17A **Roosevelt** 132.67 28 ⇓P PKPdf 19 23 14.5 +1.5
baz=132
Y19A **Nutrioso** 133.17 26 ⇓P PKPdf 19 23 15.3 +1.4
baz=133
ANMO **Albuquerque** 133.47 23 PKP PKPdf 19 23 15.8 +1.3
comp=Z,3.5nm,0.8s,baz=317,slow=1.9,SNR=8.8
LAZ **Ladron** 133.68 24 *e*PKPdf PKPdf 19 23 17.6 +2.7
118A **Homack Ranch,** 133.95 28 ⇓P PKPdf 19 23 17.1 +1.6
baz=134
BNM **Barren Site** 134.10 24 *e*PKPdf PKPdf 19 23 18.1 +2.4
119A **Ashpeak Ranch,** 134.15 27 ⇑P PKPdf 19 23 17.6 +1.7
baz=134
217A **Green Valley** 134.26 30 ⇑P PKPdf 19 23 17.8 +1.7
baz=134
218A **Dragoon** 134.47 29 ⇑P PKPdf 19 23 18.4 +1.9
baz=134
219A **White Tail Can** 134.81 28 ⇓P PKPdf 19 23 19.1 +2.0
baz=135
318A **Bisbee** 134.93 29 ⇓P PKPdf 19 23 19.0 +1.7
baz=135
319A **Douglas** 135.32 28 ⇑P PKPdf 19 23 19.8 +1.8
baz=135
WVT **Waverly** 136.34 2 *e*PKPdf PKPdf 19 23 20.0 +0.2
TKL **Tuckaleechee C** 136.77 357 PKP PKPdf 19 23 20.7 +0.1
comp=Z,2.3nm,0.5s,baz=166,slow=1.7,SNR=3.9
MIAR **Mount Ida** 137.39 9 *e*PKPpre 19 23 19.2
TXAR **Lajitas Array** 139.53 24 PKhKP 19 23 18.0
comp=Z,0.4nm,0.4s,baz=24,slow=0.7,SNR=11
TXAR PKP PKPdf 19 23 26.6 +0.7
comp=Z,2.7nm,0.7s,baz=206,slow=0.6,SNR=19
TXAR SKPbc SKPbc 19 26 58.9 +2.1
comp=Z,1.2nm,0.8s,baz=298,slow=2.7,SNR=6.0
TXAR **Lajitas Array** 139.53 24 PKHKP 19 23 18.0
TXAR 19 23 26.6
JCT **Junction City** 139.85 18 *e*PKPdf PKPdf 19 23 27.7 +1.2
BDFB **Brasilia** 141.74 255 PKP PKPdf 19 23 30.7 +0.5
comp=Z,1.1nm,0.5s,baz=359,slow=11,SNR=3.6
PLCA **Paso Flores** 144.27 201 PKP PKPdf 19 23 33.5 -0.5
comp=Z,6.1nm,0.8s,baz=173,slow=3.5,SNR=12
FDF **Fort de France** 146.52 312 *e*PKPbc PKPbc 19 23 40.8 +0.8
MTP **Monte Pirata** 147.15 322 *e*PKPbc PKPbc 19 23 42.4 +0.6
CMIG **Matas Romero** 153.91 19 PKPbc PKPbc 19 23 57.5 -0.5
comp=Z,5.2nm,0.8s,baz=82,slow=1.5,SNR=8.7
LPAZ **La Paz** 160.31 243 PKP PKPdf 19 23 60.0 +1.8
comp=Z,2.8nm,0.9s,baz=46,slow=0.8,SNR=6.7

IDC 21 19:04:32.9±11.0, 140S×13476E, h0km, mb3.9/2, mb1 4.3/3, mb1mx3.7/15, mbtmp4.1/3, ML4.5/1, Error ellipse: s-maj=167.7km s-min=108.1km az=160.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.44**	**181**	P	Pn	19 08 50.3	+0.2
	1.5nm,0.3s,baz=360,slow=12,SNR=30						
ASAR	**Alice Springs**	**22.15**	**182**	P	P	19 09 31.1	+0.6
	3.9nm,0.8s,baz=7.5,slow=12,SNR=53						
STKA	**Stephens Creek**	**31.00**	**169**	P	P	19 10 51.5	-0.7
	1.2nm,0.6s,baz=354,slow=9.2,SNR=2.8						

NIED ***21*** *19:28:00, 2900N×131.10E, h8km, Mw4.4 Best double couple: M₀4.94000×10¹⁵ NP1:φ₀179.00000°, δ77.00000°, λ-116.00000°. NP2:φ₀66.00000°, δ29.00000°, λ-27.00000°.*

IDC ***21*** *19:28:39.3±0.7, 2901N×13097E, h0km, mb4.3/14, mb1 4.4/19, mb1mx4.3/28, mbtmp4.3/19, ML4.5/4, MS3.6/6, Ms1 3.6/6, ms1mx3.3/34, Error ellipse: s-maj=21.1km s-min=14.7km az=71.0*

ISCJB ***21*** *19:28:40.7±0.8, 2899N±002×131.11E±004, h16km±6km, mb4.5/39, MS3.8/6, Error ellipse: s-maj=6.0km s-min=3.5km az=17.0*

JMA ***21*** *19:28:42.7±0.1, 2898N×131.05E, h74km±4km, M4.3*

MOS ***21*** *19:28:43.5±1.6, 2902N×131.10E, h33km, mb4.6/24, Error ellipse: s-maj=13.2km s-min=7.0km az=117.2*

BJI ***21*** *19:28:45.3, 2900N×13057E, h14km, mB5.0, mb4.4, Ms4.3, Msz4.0*

NEIC ***21*** *19:28:45.0±0.5, 2890N×13103E, h35km, mb4.5/4, MW4.4(NIED), Error ellipse: s-maj=13.7km s-min=9.7km az=99.0*

SZGRF ***21*** *19:28:55.0, 3021N×13026E, h33km, mb4.9, Kyushu, Japan*

ISC 21 19:28:41.6±1.4, 2903N±002×13100E±004, h9km±9km, n126, σ1§12/143, mb4.5/39, MS3.8/6, 20C-6D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**1.15**	**232**	P	**Pb**	**19 29 03.7**	**+0.1**
JZK				*e*S	**Sb**	**19 29 19.8**	**+1.2**
JNN	**Nakanoshima**	**1.27**	**310**	P	**Pn**	**19 29 06.1**	**+0.5**
JNN				*e*S	**Sb**	**19 29 23.2**	**+1.0**
JAM	**Amami Oshima**	**1.37**	**244**	P	**Pn**	**19 29 06.3**	**-0.6**
JAM				*e*S	**Sb**	**19 29 23.6**	**-1.4**
JKC	**Kuchinoerabu**	**1.59**	**334**	P	**Pn**	**19 29 10.5**	**+0.5**
JKC				S	**Sn**	**19 29 30.2**	**-0.5**
JTN	**Tanegashima 3**	**1.62**	**360**	P	**Pn**	**19 29 10.1**	**-0.3**
JTN				S	**Sn**	**19 29 30.3**	**-1.2**
JTSR	**Tashiro 2**	**2.13**	**358**	P	**Pn**	**19 29 17.8**	**+0.3**
JTSR				S	**Sn**	**19 29 43.6**	**-0.5**
JTK	**Tokunoshima**	**2.19**	**236**	P	**Pn**	**19 29 18.0**	**-0.2**
JTK				*e*S	**Sn**	**19 29 44.4**	**-0.9**
JNAR	**Kushima--Naru**	**2.50**	**5**	P	**Pn**	**19 29 22.9**	**+0.3**
JNAR				*e*S	**Sn**	**19 29 52.0**	**-1.2**
JSU	**Suzuyama**	**2.52**	**349**	P	**Pn**	**19 29 22.7**	**0.0**
JSU				*e*S	**Sn**	**19 29 52.3**	**-1.2**
JSJ	**Shimokoshiki**	**2.87**	**338**	P	**Pn**	**19 29 27.7**	**+0.2**
JSJ				*e*S	**Sn**	**19 30 01.1**	**-1.1**
JTZ	**Takazaki**	**2.87**	**2**	P	**Pn**	**19 29 27.8**	**+0.3**
JTZ				S	**Sn**	**19 30 01.2**	**-1.0**
JZO	**Okuchi**	**3.12**	**354**	P	**Pn**	**19 29 31.6**	**+0.5**
JZO				*e*S	**Sn**	**19 30 07.9**	**-0.6**
JMZ	**Minamidaito 2**	**3.20**	**176**	P	**Pn**	**19 29 29.6**	**-2.5**
JMZ				S	**Sn**	**19 30 03.7**	**-6.7**
JTSN	**Tsuno**	**3.24**	**8**	P	**Pn**	**19 29 32.1**	**-0.6**
JOW	**Kunigami**	**3.25**	**228**	Pn	**Pn**	**19 29 31.9**	**-1.0**
	67nm,0.3s,baz=102,slow=23,SNR=144						
JOW				Sn	**Sn**	**19 30 08.2**	**-3.4**
	64nm,0.3s,baz=238,slow=29,SNR=10						
JOW	**Kunigami**	**3.25**	**228**	P	**Pn**	**19 29 31.8**	**-1.0**
JIH	**Iheya**	**3.33**	**234**	P	**Pn**	**19 29 33.1**	**-0.8**
JIU2	**Izumi 2**	**3.51**	**358**	P	**Pn**	**19 29 36.8**	**+0.4**
JIU2				S	**Sn**	**19 30 16.1**	**-2.0**
JHJ	**Hachijo jima 2**	**8.57**	**59**	Pn	**Pn**	**19 30 46.1**	**+0.2**
	28nm,0.3s,baz=265,slow=20,SNR=4.5						
JHJ				LR	LR	19 33 31.5	
	comp=Z,247nm,19.2s,baz=228,slow=34						
KSRS	**Korea Array**	**8.79**	**344**	Pn	**Pn**	**19 30 47.0**	**-1.8**
	0.1nm,0.3s,baz=122,slow=40,SNR=3.9						
MAJO	**Matsushiro**	**9.64**	**37**	*e*P	**Pn**	**19 31 01.2**	**+0.6**
	10nm,0.4s						
MAJO	**Matsushiro**	**9.64**	**37**	*e*P	**Pn**	**19 31 01.2**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAT	**Matsushiro**	**9.64**	**37**	P	**Pn**	**19 31 00.9**	**+0.3**
MJAR	**Matsushiro Arr**	**9.64**	**37**	Pn	**Pn**	**19 31 01.6**	**+1.0**
	comp=Z,1.9nm,0.3s,baz=210,slow=13,SNR=24						
MJAR	**Matsushiro Arr**	**9.64**	**37**	P	**Pn**	**19 31 01.6**	**+1.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CBIJ	**Chichi jima**	**10.07**	**98**	Pn	**Pn**	**19 31 05.5**	**-0.9**
	comp=Z,38nm,0.3s,baz=276,slow=20,SNR=18						
CN2	**Changchun**	**15.40**	**345**	*e*P	**Pn**	**19 32 23.1**	**+4.0**
CN2				AMB	AMB		
	comp=Z,60nm,0.9s						
XAN	**Xi'an**	**19.46**	**290**	P	**Pn**	**19 33 07.0**	**-2.8**
XAN				AMB	AMB		
	comp=Z,3.0nm,0.4s						
XAN				AMB	AMB		
	comp=Z,75nm,3.9s						
HHC	**Hu-ho-hao-te**	**19.77**	**312**	*e*P	**Pn**	**19 33 13.5**	**0.0**
HHC				AP	pP	19 33 17.0	+2.5
HHC				PP		19 33 30.5	
HHC				S	**Sn**	**19 36 45.3**	**-10**
HHC				AMB	AMB		
	comp=Z,21nm,0.9s						
HHC				AMB	AMB		
	comp=Z,361nm,5.2s						
HHC				LR	LR		
	comp=N,390nm,10.7s						
HHC				LR	LR		
	comp=E,386nm,10.7s						
HHC				LR	LR		
	comp=Z,416nm,14.3s						
LZH	**Lanzhou**	**23.90**	**294**	*e*P	**P**	**19 33 55.8**	**+0.1**
LZH				AP		19 34 06.5	
LZH				XP	sP	19 34 10.5	+11
LZH				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.3						
LZH				AMB	AMB		
	comp=Z,69nm,4.2s						
ULN	**Ulaanbaatar**	**26.38**	**322⇑**	*e*P	**P**	**19 34 18.1**	**-0.1**
SONM	**Songino Array**	**26.72**	**321**	P	**P**	**19 34 20.8**	**-0.4**
	comp=Z,1.8nm,0.6s,mb3.8,baz=133,slow=11,SNR=4.9						
SONM				LR	LR	19 45 57.8	
	comp=Z,219nm,18.7s,MS3.7,baz=148,slow=39						
SONM	**Songino Array**	**26.72**	**321**	P	**P**	**19 34 20.8**	**-0.5**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,219nm,18.7s						
GTA	**Gaotai**	**27.66**	**300**	P	**P**	**19 34 36.3**	**+6.5**
GTA				AP	pP	19 34 40.5	+8.0
GTA				XP	sP	19 34 44.1	+11
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.0						
CMAR	**Chiang Mai Arr**	**31.08**	**257**	P	**P**	**19 35 00.6**	**+0.3**
	comp=Z,0.9nm,0.9s,mb3.6,baz=51,slow=6.8,SNR=6.2						
CMAR	**Chiang Mai Arr**	**31.08**	**257**	P	**P**	**19 35 00.6**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YAK	**Yakutsk**	**33.02**	**359**	*e*P	**P**	**19 35 13.7**	**-3.2**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
LSA	**Lhasa**	**34.62**	**281**	P	**P**	**19 35 30.2**	**-1.0**
	comp=Z,3.6nm,0.9s,mb4.3						
LSA	**Lhasa**	**34.62**	**281**	P	**P**	**19 35 30.2**	**-1.0**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
HVS	**Khovu-Aksy**	**35.53**	**319⇓**	*e*P	**P**	**19 35 38.0**	**-0.8**
HVS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
TAPN	**Taplejung**	**38.03**	**278**	*e*P	**P**	**19 36 01.7**	**+1.3**
	comp=Z,35nm,1.5s,mb4.8						
ODAN	**Odare**	**39.42**	**278**	*e*P	**P**	**19 36 03.7**	**0.0**
RAMN	**Ramite**	**39.09**	**278**	*e*P	**P**	**19 36 08.8**	**-0.5**
JIRN	**Jiri**	**39.28**	**279**	*e*P	**P**	**19 36 11.5**	**+0.6**
GUN	**Gumba**	**39.49**	**280**	*e*P	**P**	**19 36 13.4**	**+0.7**
	comp=Z,20nm,0.5s,mb5.1						
PKI	**Pulchoki**	**39.98**	**279**	*e*P	**P**	**19 36 17.1**	**+0.4**
	comp=Z,19nm,0.8s,mb4.9						
KKN	**Kakani**	**40.04**	**280**	*e*P	**P**	**19 36 18.0**	**+0.8**
DMN	**Daman**	**40.23**	**279**	*e*P	**P**	**19 36 19.2**	**+0.4**
GKN	**Gorkha**	**40.55**	**280**	*e*P	**P**	**19 36 21.8**	**+0.4**
	comp=Z,12nm,0.7s,mb4.6						
DANN	**Dangsing**	**41.22**	**281**	*e*P	**P**	**19 36 27.8**	**+0.8**
	comp=Z,28nm,0.8s,mb5.0						
KOLN	**Koldanda**	**41.49**	**280**	*e*P	**P**	**19 36 28.6**	**-0.6**
MK31	**Makanchi Array**	**41.60**	**309**	*e*P	**P**	**19 36 29.9**	**+0.1**
MKAR	**Makanchi Array**	**41.60**	**309**	P	**P**	**19 36 27.7**	**-2.2**
	comp=Z,1.4nm,0.5s,mb3.8,baz=90,slow=11,SNR=24						
MKAR				LR	LR	19 53 13.3	
	comp=Z,48nm,19.3s,MS3.4,baz=352,slow=35						
MKAR	**Makanchi Array**	**41.60**	**309**	P	**P**	**19 36 27.7**	**-2.2**
MKAR				LR	LR	19 53 13.3	
MKAR	**Makanchi Array**	**41.60**	**309**	P	**P**	**19 36 27.7**	**-2.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,48nm,19.3s						
ZALV	**Zalesovo Beam**	**41.60**	**320**	P	**P**	**19 36 28.3**	**-1.4**
	comp=Z,1.2nm,0.3s,mb4.0,baz=99,slow=9.2,SNR=8.0						
ZALV				LR	LR	19 56 00.4	
	comp=Z,72nm,18.4s,MS3.6,baz=45,slow=40						
ZALV	**Zalesovo Beam**	**41.60**	**320**	P	**P**	**19 36 28.3**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ZALV				MLR	MLR		
	comp=Z,72nm,18.4s,MS3.6						
PYUN	**Piuthan**	**41.94**	**281**	*e*P	**P**	**19 36 33.0**	**+0.1**
	comp=Z,15nm,0.7s,mb4.7						
TIXI	**Tiksi**	**42.69**	**359**	*e*P	**P**	**19 36 37.1**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**44.56**	**314**	P	**P**	**19 36 53.5**	**-0.3**
	comp=Z,9.1nm,0.5s,mb4.8,baz=100,slow=8.9,SNR=30						
KURK				LR	LR	19 54 58.4	
	comp=Z,120nm,21.3s,MS3.8,baz=350,slow=35						
KURK	**Kurchatov**	**44.56**	**314**	P	**P**	**19 36 53.5**	**-0.3**
KURK				LR	LR	19 54 58.4	
KURK	**Kurchatov**	**44.56**	**314⇑**	*e*P	**P**	**19 36 53.9**	**+0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
KURK				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.0						
WRAB	**Tennant Creek**	**48.78**	**176**	P	**P**	**19 37 25.3**	**-1.7**

0.3nm,1.0s,baz=298,slow=4.2,SNR=3.7

*NEIC **21** 20:18:13.2, 1604N×9495W, h60km, MD4.1(MEX), After MEX.*

MEX 21 20:18:13.2±0.8, 1604N×9495W, h60km±41km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.05**	**3**	*i* P	Pn	20 18 30.7	-1.3
CMIG				*i* S	Sn	20 18 44.0	-1.9
PCIG		**1.70**	**101**	*i* P	Pn	20 18 39.3	-1.2
PCIG				*i* S	Sn	20 18 58.9	-2.4
TGIG		**1.90**	**67**	*i* P	Pn	20 18 41.7	-1.7
TGIG				*i* S	Sn	20 19 04.2	-2.1
VHO	**Vista Hermosa**	**2.00**	**301**	*e*P	Pn	20 18 42.9	-1.8
VHO				*i* S	Sn	20 19 07.8	-0.8
SCX	**San Cristobal**	**2.33**	**72**	*i* P	Pn	20 18 49.0	-0.1
PNIG	**Pinotepa**	**3.07**	**277**	*i* P	Pn	20 18 58.7	-0.6
PNIG				*i* S	Sn	20 19 32.4	-2.5

*BJI **21** 20:30:00.4, 1.17N×12644E, h47km, mB5.4, mb4.9, Ms4.7, Msz4.5*

*MOS **21** 20:30:01.8±1.1, 162N×12627E, h33km, mb5.3/30, MS4.3/4, Error ellipse: s-maj=16.0km s-min=6.3km az=110.4*

*ISCJB **21** 20:30:04.0±0.5, 156N±002×12640E±004, h54km±4km, mb5.0/82, MS4.3/25, Error ellipse: s-maj=7.2km s-min=3.8km az=169.4*

*GCMT **21** 20:30:05.3±0.2, 175N×126.11E, h31km, MW5.2/66, Moment Tensor Solution. s54,c79; s66,c101; Duration: 1ŝ0 Moment tensor: Scale 10^16Nm; Mrr5.37±.23; Mθθ-0.52±.14; Mφφ-4.85±.18; Mrθ-1.00±.23; Mrφ-2.94±.12; Mθφ-5.08±.34; Best double couple: M₀7.83400×10^16 NP1:φs=40.00000°, δ66.00000°, λ79.00000°. Principal axes: T 7.4710, Plg67.0000°, Azm86.0000°; N 0.7310, Plg10.0000°, Azm200.0000°; P -8.1960, Plg20.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 20:30:05.3±1.0, 153N×12636E, h50km, 9km, mb5.1/29 Error ellipse: s-maj=9.7km s-min=4.9km az=69.0*

*IDC **21** 20:30:06.1±1.8, 151N×12636E, h57km±15km, mb4.5/18, mb1 4.6/21, mb1mx4.6/22, mbtmp4.5/21, MS4.2/10, Ms1 4.2/10, ms1mx4.0/23, Error ellipse: s-maj=19.1km s-min=7.7km az=81.0*

*DJA **21** 20:30:07.7±0.0, 153N×12679E, h49km, mB5.6/13, Mjma4.4/4, MLv5.1/4, Mw(mB)5.4/13, Mwp5.0/9*

ISC 21 20:30:06.0±0.4, 154N±002×12643E±004, h58km±3km, h44km±1.7km:pP-P, n231, σ1ŝ27/232, mb5.0/82, MS4.3/25, 13C-19D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.41**	**154**	P	**Pn**	**20 30 42.2**	**-0.9**
GSPH	**General Santos**	**4.76**	**342**	⇓*e*P	**Pn**	**20 31 12.8**	**-2.4**
GSPH				*e*S	**Sn**	**20 32 08.1**	**-1.0**
AAI	**Ambon**	**5.48**	**161**	P	**Pn**	**20 31 27.1**	**+2.0**
	217nm,0.6s,2μm0.7nm						
DAV	**Davao City (W)**	**5.56**	**351**	P	**Pn**	**20 31 26.5**	**+0.2**
	28nm,0.3s,baz=229,slow=23,SNR=3.0						
DAV				S	**Sn**	**20 32 31.6**	**+2.7**
	baz=243,slow=22,SNR=3.3						
DMPH	**Davao City--Mi**	**5.59**	**351**	⇓*i*P	**Pn**	**20 31 27.5**	**+0.9**
KCP	**Kidapawan**	**5.60**	**346**	⇓*e*P	**Pn**	**20 31 26.2**	**-0.5**
KCP				*i* S	**Sn**	**20 32 32.1**	**+2.3**
CTBH	**Cotabato--PC H**	**6.05**	**339**	*e*P	**Pn**	**20 31 31.4**	**-1.6**
CTBH				*i* S	**Sn**	**20 32 37.9**	**-3.1**
BUKP	**Musuan**	**6.45**	**348**	*e*P	**Pn**	**20 31 38.0**	**-0.4**
BUKP				*e*S	**Sn**	**20 32 51.9**	**+1.3**
KDI	**Kendari**	**6.65**	**215**	P	**Pn**	**20 31 41.3**	**0.0**
	161nm,0.9s,4μm0.5nm						
ZMPH	**Zamboanga City**	**6.92**	**321**	⇓*e*P	**Pn**	**20 31 41.5**	**-3.4**
PAGZ	**Pagadian**	**6.97**	**334**	*e*P	**Pn**	**20 31 42.0**	**-3.5**
PCI	**Palu**	**7.03**	**250**	P	**Pn**	**20 31 47.0**	**+0.7**
	438nm,1.1s,4μm1.4nm						
IPIL	**Ipil**	**7.30**	**328**	*e*P	**Pn**	**20 31 46.8**	**-3.3**
BUTP	**Butuan**	**7.43**	**354**	*e*P	**Pn**	**20 32 00.9**	**+9.1**
SCPH	**Surigao**	**8.25**	**354**	⇓*e*P	**Pn**	**20 32 05.6**	**+2.6**
MSLP	**Maasin**	**8.68**	**350**	*e*P	**Pn**	**20 32 09.1**	**0.0**
MYLDM	**Lahad Datu**	**8.71**	**295**	⇓P	**Pn**	**20 32 10.5**	**+1.2**
MYLDM	**Lahad Datu**	**8.71**	**295**	P	**Pn**	**20 32 10.0**	**+0.7**
TSM	**Tawau**	**8.97**	**288**	⇑P	**Pn**	**20 32 11.2**	**-1.8**
KAPI	**Kappang**	**9.32**	**226**	Pn	**Pn**	**20 32 18.9**	**+1.1**
	737nm,0.5s,SNR=7.4						
KAPI	**Kappang**	**9.32**	**226**	P	**Pn**	**20 32 16.5**	**-1.3**
	5.6nm,0.3s,baz=84,slow=4.6,SNR=8.7						
KAPI				S	**Sn**	**20 33 58.8**	**-2.4**
	baz=88,slow=21,SNR=1.3						
KAPI	**Kappang**	**9.32**	**226**	*e*Pn	**Pn**	**20 32 16.7**	**-1.0**
KAPI	**Kappang**	**9.32**	**226**	P	**Pn**	**20 32 16.7**	**-1.1**
	57nm,1.3s,604nm						
GUIM	**Jordan**	**9.80**	**337**	*e*P	**Pn**	**20 32 27.1**	**+2.7**
SDKM	**Sandakan**	**10.08**	**294**	⇓P	**Pn**	**20 32 27.1**	**-1.1**
CUYO	**Cuyo Island**	**10.70**	**330**	*e*P	**Pn**	**20 32 35.2**	**-1.4**
KDM	**Kudat**	**10.96**	**299**	⇓P	**Pn**	**20 32 41.0**	**+0.8**
KKM	**Kota Kinabalu**	**11.13**	**294**	*e*P	**Pn**	**20 32 42.9**	**+0.3**
KKM	**Kota Kinabalu**	**11.13**	**294**	⇑P	**Pn**	**20 32 43.4**	**+0.8**
KKM	**Kota Kinabalu**	**11.13**	**294**	P	Px	20 32 53.0	
	199nm,2.2s						
BATP	**Batuputih**	**11.22**	**310**	*e*P	**Pn**	**20 32 47.0**	**+3.3**
BATI	**Baumata**	**11.98**	**193**	P	**Pn**	**20 32 55.7**	**+1.5**
	2.4nm,0.3s,baz=66,slow=3.2,SNR=9.1						
BATI	**Baumata**	**11.98**	**193**	P	**Pn**	**20 32 59.9**	**+5.7**
	65nm,1.1s,768nm						
SJMP	**San Jose**	**12.06**	**334**	*e*P	**Pn**	**20 32 54.7**	**-0.5**
BBKI	**Banjar Baru**	**12.60**	**247**	P	**Pn**	**20 33 11.1**	**+8.5**
	223nm,1.9s						
PLKI	**Palangkaraya**	**13.03**	**253**	P	**Pn**	**20 33 15.7**	**+7.2**
	175nm,1.5s,2μm						
BTM	**Bintulu**	**13.44**	**277**	⇓P	**Pn**	**20 33 20.6**	**+6.6**
SBUM	**Sibu**	**14.23**	**274**	⇑P	**Pn**	**20 33 30.0**	**+5.4**
SBUM	**Sibu**	**14.23**	**274**	P	**Pn**	**20 33 31.6**	**+7.0**
KHKI	**Kahang-Kahang**	**14.60**	**227**	P	Px	20 33 39.9	
STKI	**Sintang**	**15.02**	**265**	P	**Pn**	**20 33 36.8**	**+1.8**
	179nm,2.2s,3μm						
KMMI	**Kalianget**	**15.08**	**235**	P	Px	20 33 45.9	
	277nm,1.9s						
CAUP	**Cauayan**	**15.97**	**344**	*e*P	**Pn**	**20 33 47.0**	**0.0**
KSM	**Kuching**	**16.12**	**270**	*e*P	**Pn**	**20 33 54.4**	**+5.4**
KSM	**Kuching**	**16.12**	**270**	⇑P	**Pn**	**20 33 52.8**	**+3.8**
KSM	**Kuching**	**16.12**	**270**	P	**Pn**	**20 33 55.8**	**+6.8**
	92nm,1.4s,2μm						
KRKI	**Kangkates**	**16.94**	**235**	P	**Pn**	**20 34 08.8**	**+10**
SJI	**Sawahan**	**17.28**	**238**	P	**Pn**	**20 34 06.5**	**+3.0**
BJII	**Banjamegara**	**18.87**	**242**	P	**Pn**	**20 34 25.3**	**+2.5**
LEM	**Lembang**	**20.53**	**246**	P	**P**	**20 34 45.4**	**+5.6**
	60nm,1.2s,2μm						
CBJI	**Citeko**	**21.09**	**248**	P	**P**	**20 34 52.1**	**+6.3**
	160nm,1.1s,mb5.3						
GUMO	**Guam**	**21.82**	**56**	LR	LR	20 43 13.2	
	comp=Z,402nm,19.1s,MS3.9,baz=230,slow=36						
MYKOM	**Kota Tinggi**	**22.57**	**271**	⇑P	**P**	**20 35 04.3**	**+2.6**
MYKOM	**Kota Tinggi**	**22.57**	**271**	P	**P**	**20 35 06.6**	**+4.9**
COEN	**Coen**	**22.63**	**133**	*e*P	**P**	**20 34 59.9**	**-2.4**
	18nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**22.71**	**160**	P	**P**	**20 35 01.9**	**-1.1**
	761nm,0.8s,mb6.2,SNR=91						
WRAB	**Tennant Creek**	**22.71**	**160**	*e*P	**P**	**20 35 01.8**	**-1.1**
	125nm,1.1s,mb5.3						
WRAB	**Tennant Creek**	**22.71**	**160**	*e*P	**P**	**20 35 01.8**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,125nm,1.1s,mb5.3						
WRAB	**Tennant Creek**	**22.71**	**160**	P	**P**	**20 35 02.0**	**-1.0**
	comp=Z,143nm,1.0s,mb5.3						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**20 35 01.8**	**-1.2**
	comp=Z,51nm,0.7s,mb5.1,baz=337,slow=11,SNR=60						
WRA				S	**S**	**20 39 06.8**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=345,slow=16,SNR=5.9						
WB2	**Warramunga Arr**	**22.71**	**160**	*e*P	**P**	**20 35 01.9**	**-1.1**
KGM	**Kluang**	**23.11**	**272**	⇓P	**P**	**20 35 11.3**	**+4.0**
MBWA	**Marble Bar**	**23.49**	**196**	*e*P	**P**	**20 35 09.9**	**-0.8**
	comp=Z,26nm,0.8s,mb4.7						
MBWA	**Marble Bar**	**23.49**	**196**	P	**P**	**20 35 10.1**	**-0.7**
	comp=Z,50nm,0.8s,mb5.0						
KTGM	**Kuala Trenggan**	**23.55**	**280**	⇑P	**P**	**20 35 15.5**	**+4.0**
QIZ	**Qiongzhong**	**23.80**	**318**	P	**P**	**20 35 13.4**	**-0.2**
QIZ				XP	sP	20 35 29.4	-5.5
QIZ				S	**S**	**20 39 27.5**	**+2.2**
QIZ				LR	LR		
	comp=N,983nm,21.4s						
QIZ				LR	LR		
	comp=Z,1μm,24.1s,MS4.3						
FRIM	**Kepong**	**24.84**	**274**	⇑P	**P**	**20 35 26.7**	**+3.5**
JOW	**Kunigami**	**25.21**	**4**	P	**P**	**20 35 26.1**	**-0.3**
	comp=Z,45nm,0.6s,mb5.2,baz=39,slow=22,SNR=6.4						
IPM	**Ipoh**	**25.54**	**277**	⇓P	**P**	**20 35 30.6**	**+1.0**
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**20 35 34.4**	**0.0**
	comp=Z,11nm,0.5s,mb4.7,baz=346,slow=7.4,SNR=138						
ASAR				PcP	PcP	20 39 01.8	+0.8
	comp=Z,3.8nm,0.7s,baz=348,slow=2.4,SNR=5.9						
ASAR				S	**S**	**20 40 03.2**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=351,slow=20,SNR=5.5						
KKTK	**Khon Kaen**	**27.51**	**304**	P	**P**	**20 35 46.0**	**-1.3**
CTA	**Charters Tower**	**28.98**	**139**	P	**P**	**20 36 01.1**	**+0.8**
	comp=Z,14nm,0.9s,mb4.7,baz=322,slow=9.7,SNR=8.1						
CTAO	**Charters Tower**	**28.98**	**139**	*e*P	**P**	**20 36 02.0**	**+1.7**
	comp=Z,77nm,1.7s,mb5.2						
CTAO	**Charters Tower**	**28.98**	**139**	*e*P	**P**	**20 36 02.0**	**+1.7**
CTAO				pmax	pmax		
	comp=Z,77nm,1.7s,mb5.2						
SSE	**Sheshan**	**29.82**	**351**	P	**P**	**20 36 08.9**	**+1.3**
SSE				AP	pP	20 36 19.8	-2.3
SSE				PCP	PcP	20 39 10.0	0.0
SSE				S	**S**	**20 41 04.3**	**+4.0**
SSE				XS	sS	20 41 23.4	-1.5
SSE				AMB	AMB		
	comp=Z,48nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,155nm,5.5s						
SSE				LR	LR		
	comp=N,263nm,24.8s,MS4.2						
SSE				LR	LR		
	comp=E,631nm,24.8s,MS4.2						
SSE				LR	LR		
	comp=Z,539nm,20.4s,MS4.2						
NANT	**Nan**	**30.50**	**306**	P	**P**	**20 36 11.0**	**-2.9**
WHN	**Wuhan**	**31.04**	**340**	P	**P**	**20 36 20.3**	**+1.9**
NJ2	**Nanjing**	**31.18**	**348**	*e*P	**P**	**20 36 21.3**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GYA	**Guiyang**	**31.23**	**324**	⇓*i*P	**P**	**20 36 22.3**	**+2.2**
GYA				AP	pP	20 36 33.8	-0.9
GYA				XP	sP	20 36 39.3	-2.2
GYA				PP	PP	20 37 26.4	-5.2
GYA				PCP	PcP	20 39 15.3	+1.5
GYA				S	**S**	**20 41 25.0**	**+2.5**
GYA				XS	sS	20 41 44.3	-2.9
GYA				SCP	ScP	20 42 53.6	+1.6
GYA				SS	SS	20 43 11.3	-27
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,240nm,6.0s						
GYA				LR	LR		
	comp=N,1μm,15.0s,MS4.7						
GYA				LR	LR		
	comp=E,860nm,16.3s,MS4.7						
GYA				LR	LR		
	comp=Z,1μm,15.8s,MS4.7						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P	**P**	**20 36 24.9**	**-0.2**
	comp=Z,3.1nm,0.9s,mb4.2,baz=115,slow=6.3,SNR=15						
CMAR				PcP	PcP	20 39 17.4	+2.0
	comp=Z,4.2nm,0.9s,baz=158,slow=1.6,SNR=14						
CMAR				LR	LR	20 50 16.1	
	comp=Z,446nm,18.4s,MS4.2,baz=312,slow=38						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	*i* P	**P**	**20 36 27.5**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHTO	**Chiang Mai**	**31.95**	**304**	*e*P	**P**	**20 36 25.6**	**-1.0**
	comp=Z,7.8nm,0.7s,mb4.7						
CHTO	**Chiang Mai**	**31.95**	**304**	*e*P	**P**	**20 36 25.6**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
FORT	**Forrest**	**32.17**	**177**	*e*P	**P**	**20 36 28.5**	**+0.2**
	comp=Z,42nm,0.8s,mb5.3						
KMI	**Kunming**	**32.75**	**318**	P	**P**	**20 36 34.5**	**+1.0**
KMI				AP	pP	20 36 47.1	-1.0
KMI				XP	sP	20 36 51.8	-3.2
KMI				PP	PP	20 37 46.3	-2.2
KMI				PCP	PcP	20 39 20.4	+2.4
KMI				S	**S**	**20 41 49.3**	**+3.0**
KMI				XS	sS	20 42 09.0	-2.1
KMI				SCP	ScP	20 42 59.8	+2.6
KMI				PCS	PcS	20 43 04.3	+0.9
KMI				SS	SS	20 43 49.3	-20
KMI				SCS	ScS	20 46 58.0	+0.8
KMI				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.6						
KMI				AMB	AMB		
	comp=Z,234nm,3.7s						
KMI				LR	LR		
	comp=N,595nm,17.3s,MS4.4						
KMI				LR	LR		
	comp=E,451nm,19.2s,MS4.4						
KMI				LR	LR		
	comp=Z,915nm,19.2s,MS4.5						
NWAO	**Narrogin (SRO)**	**35.36**	**193**	P	**P**	**20 36 56.3**	**+0.3**
	comp=Z,12nm,0.6s,mb5.0,baz=10,slow=9.4,SNR=12						
NWAO	**Narrogin (SRO)**	**35.36**	**193**	*e*P	**P**	**20 36 56.2**	**+0.2**
	comp=Z,52nm,1.4s,mb5.3						
NWAO	**Narrogin (SRO)**	**35.36**	**193**	*e*P	**P**	**20 36 56.2**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,51nm,1.4s						
KSRS	**Korea Array**	**35.77**	**2**	P	**P**	**20 36 59.3**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.4,baz=177,slow=10,SNR=7.7						
KSRS				PcP	PcP	20 39 28.1	+1.8
	comp=Z,2.0nm,0.8s,baz=193,slow=3.9,SNR=4.7						
EIDS	**Eidsvold**	**35.84**	**140**	*e*P	**P**	**20 37 00.5**	**+0.2**
	comp=Z,49nm,1.3s,mb5.3						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**20 37 03.3**	**0.0**
	comp=Z,25nm,0.8s,mb5.2,baz=328,slow=8.3,SNR=41						
STKA	**Stephens Creek**	**36.21**	**158**	*e*P	**P**	**20 37 03.3**	**0.0**
	comp=Z,4.3nm,0.8s,mb4.4						
XAN	**Xi'an**	**36.25**	**335**	P	**P**	**20 37 01.6**	**-2.0**
XAN				AP	pP	20 37 12.5	-5.9
XAN				XP	sP	20 37 17.9	-7.3
XAN				PP	PP	20 38 29.6	+2.5
XAN				S	**S**	**20 42 46.6**	**+6.6**
XAN				XS	sS	20 43 04.3	-0.7
XAN				SS	SS	20 45 15.3	-5.0
XAN				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.9						
XAN				AMB	AMB		
	comp=Z,56nm,4.5s						
XAN				LR	LR		
	comp=N,267nm,19.3s,MS4.2						
XAN				LR	LR		
	comp=E,333nm,18.9s,MS4.2						
XAN				LR	LR		
	comp=Z,657nm,23.8s,MS4.3						
CD2	**Chengdu**	**36.26**	**326**	*e*P	**P**	**20 37 02.8**	**-0.9**
CD2				AP	pP	20 37 14.3	-4.2
CD2				XP	sP	20 37 18.6	-6.7
CD2				PP	PP	20 38 26.8	-0.4
CD2				PCP	PcP	20 39 27.0	-0.9
CD2				S	**S**	**20 42 41.4**	**+1.2**
CD2				XS	sS	20 42 59.0	-6.2
CD2				PCS	PcS	20 43 12.6	-3.1
CD2				SS	SS	20 45 07.4	-13
CD2				SCS	ScS	20 47 14.6	-1.1
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=N,770nm,19.2s,MS4.6						
CD2				LR	LR		
	comp=E,800nm,21.6s,MS4.6						
CD2				LR	LR		
	comp=Z,720nm,24.4s,MS4.4						
MAJO	**Matsushiro**	**36.50**	**16**	*e*P	**P**	**20 37 05.2**	**-0.6**
	comp=Z,168nm,2.1s,mb5.6						
MAJO	**Matsushiro**	**36.50**	**16**	*e*P	**P**	**20 37 05.2**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,168nm,2.1s,mb5.6						
MAT	**Matsushiro**	**36.50**	**16**	P	**P**	**20 37 04.4**	**-1.3**
MAT				S	**S**	**20 42 44.0**	**+0.2**
MJAR	**Matsushiro Arr**	**36.50**	**16**	P	**P**	**20 37 04.9**	**-0.8**
	comp=Z,6.8nm,0.9s,mb4.6,baz=188,slow=8.5,SNR=11						
MJAR				LR	LR	20 50 32.0	
	comp=Z,250nm,21.5s,MS4.0,baz=205,slow=34						
DL2	**Dalian**	**37.45**	**354**	*e*P	**P**	**20 37 13.9**	**+0.1**

PRU 21 19:28:49.0, 5022N×1915E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.42**	**90**	*e*Pg	Pg	19 28 56.8	-0.2
OJC				*e*Sg	Sg	19 29 02.7	+0.3
OKC	**Ostrava-Krasne**	**0.75**	**240**	*e*PG	Pg	19 29 01.7	-1.7
OKC				*e*SG	Sg	19 29 13.0	-0.1
	comp=Z,5.4nm,0.4s						
NIE	**Niedzica**	**1.10**	**136**	*e*Pg	Pg	19 29 09.8	-0.3
NIE				*e*Sg	Sg	19 29 24.6	+0.3
DPC	**Dobruska-Polom**	**1.82**	**275**	*e*PG	Pg	19 29 22.8	-1.0
DPC				*e*SG	Sg	19 29 46.3	-1.1
	comp=Z,5.1nm,0.8s						
UPC	**Upice**	**2.03**	**279**	*e*SG	Sg	19 29 54.3	+0.1

IDC 21 19:35:46.4±1.6, 1190N×5777E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.6/23, mbtmp3.8/7, Error ellipse: s-maj=38.2km s-min=25.8km az=29.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**37.79**	**314**	P	P	19 43 04.9	+0.4
	28nm,1.1s,baz=72,slow=10,SNR=3.1						
AKTO	**Aktyubinsk**	**38.42**	**0**	P	P	19 43 10.2	+0.6
	3.6nm,0.7s,baz=173,slow=8.7,SNR=13						
CMAR	**Chiang Mai Arr**	**40.20**	**75**	P	P	19 43 25.1	+0.2
	0.7nm,0.9s,baz=272,slow=7.2,SNR=5.5						
MKAR	**Makanchi Array**	**40.48**	**26**	P	P	19 43 26.7	-0.1
	0.9nm,0.6s,baz=211,slow=8.1,SNR=7.8						
KURK	**Kurchatov**	**42.30**	**20**	P	P	19 43 40.8	-1.0
	0.7nm,0.4s,baz=217,slow=8.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**47.12**	**22**	P	P	19 44 19.3	-0.9
	1.9nm,0.5s,baz=226,slow=8.1,SNR=10						
ESDC	**Sonseca Array**	**60.79**	**309**	P	P	19 46 00.1	-0.3
	0.6nm,0.5s,baz=83,slow=5.6,SNR=4.5						
WRA	**Warramunga Arr**	**81.70**	**112**	P	P	19 48 07.5	+0.1

DL2 eS S 20 42 59.5 +1.3
DL2 AMB AMB
comp=Z,30nm,0.8s,mb5.2
DL2 LR LR
comp=E,600nm,10.2s
DL2 LR LR
comp=Z,350nm,16.7s
BJT Baijiatuau 39.42 348 eP P 20 37 30.2 -0.1
comp=Z,34nm,0.8s,mb5.1
BJT Baijiatuau 39.42 348 eP P 20 37 30.2 -0.1
BJT pmax pmax
comp=Z,34nm,0.8s
BJI Beijing 39.44 348 P P 20 37 30.1 -0.4
BJI S S 20 43 31.3 +3.1
BJI SS SS 20 46 22.6 -2.0
BJI AMB AMB
comp=Z,45nm,0.8s,mb5.2
BJI LR LR
comp=Z,308nm,26.5s,MS4.0
ARMA Armidale 39.83 145 eP P 20 37 35.3 +1.4
comp=Z,2.1nm,1.0s
LZH Lanzhou 40.25 331 eP P 20 37 37.1 -0.2
LZH AP pP 20 37 49.0 -3.2
LZH XP sP 20 37 54.3 -4.7
LZH PP PP 20 39 14.5 +3.6
LZH eS S 20 43 42.3 +1.8
LZH XS sS 20 44 01.5 -4.1
LZH SS SS 20 46 37.3 -3.5
LZH AMB AMB
comp=Z,52nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,210nm,4.0s
LZH LR LR
comp=E,572nm,14.6s
LZH LR LR
comp=Z,990nm,16.4s,MS4.7
SHL Shillong 40.97 309 eP P 20 37 43.5 +0.1
SHL ex x 20 39 45.5
HHC Hu-ho-hao-te 41.38 343 eP P 20 37 48.5 +2.0
HHC AP pP 20 38 00.9 -0.6
HHC XP sP 20 38 05.8 -2.4
HHC PP PP 20 39 23.0 -0.1
HHC PCP PcP 20 39 44.4 +0.6
HHC S S 20 44 01.3 +4.1
HHC XS sS 20 44 23.9 +1.5
HHC SCS ScS 20 47 44.9 -0.2
HHC AMB AMB
comp=Z,296nm,6.7s
HHC LR LR
comp=N,475nm,20.2s,MS4.5
HHC LR LR
comp=E,502nm,23.8s,MS4.5
HHC LR LR
comp=Z,612nm,23.8s,MS4.4
MDJ Mudanjiang 42.99 3 P P 20 37 59.6 +0.1
MDJ AMB AMB
comp=Z,19nm,1.1s,mb4.7
MDJ AMB AMB
comp=Z,401nm,4.2s
MDJ Mudanjiang 42.99 3 eP P 20 38 00.4 +0.9
comp=Z,20nm,0.9s,mb4.8
LSA Lhasa 43.69 313 eP P 20 38 05.5 +0.1
comp=Z,188nm,2.4s,mb5.4
LSA Lhasa 43.69 313 eP P 20 38 05.5 +0.1
LSA pmax pmax
comp=Z,188nm,2.4s,mb5.4
GTA Gaotai 44.83 331 eP P 20 38 13.8 -0.6
GTA AP pP 20 38 26.4 -3.1
GTA XP sP 20 38 31.3 -4.9
GTA PCP PcP 20 39 57.3 +1.9
GTA PP PP 20 39 59.3 -0.8
GTA S S 20 44 44.9 -2.8
GTA XS sS 20 45 07.4 -5.8
GTA SS SS 20 48 06.9 -3.7
GTA AMB AMB
comp=Z,6.0nm,1.6s,mb4.2
GTA AMB AMB
comp=Z,135nm,8.1s
GTA LR LR
comp=N,397nm,16.5s,MS4.5
GTA LR LR
comp=E,178nm,16.8s,MS4.5
GTA LR LR
comp=Z,626nm,18.0s,MS4.6
MDRS Chennai 47.13 286 ex x 20 39 23.0
MDRS AMb AMB 20 39 30.0
comp=Z,83nm,0.1s
HABR Khabarovsk 47.34 8 eP P 20 38 31.9 -2.1
HABR e*PP pP 20 38 40.5 -8.7
HABR e 20 40 01.2
HABR ePPP 20 41 06.9
HABR eS S 20 45 23.3 -0.2
HABR e 20 45 40.3
HABR e 20 48 22.3
HABR eSS SS 20 48 51.9 +0.1
HABR eSSS 20 49 54.7
YSS Yuzh-Sakhalins 47.42 15 *i* P P 20 38 33.8 -0.8
YSS pmax pmax
comp=Z,104nm,2.0s,mb5.4
HIA Hailar 47.90 354 eP P 20 38 39.1 +0.8
comp=Z,34nm,1.1s,mb5.3
HIA Hailar 47.90 354 eP P 20 38 39.1 +0.9
HIA pmax pmax
comp=Z,34nm,1.1s
ULN Ulaanbaatar 49.10 343 eP P 20 38 47.7 +0.1
comp=Z,11nm,0.9s,mb4.9
ULN Ulaanbaatar 49.10 343 eP P 20 38 47.7 +0.1
ULN pmax pmax
comp=Z,11nm,0.9s,mb4.9
SONM Songino Array 49.27 342 P P 20 38 49.2 +0.4
comp=Z,8.2nm,0.9s,mb4.8,baz=158,slow=7.4,SNR=12
SONM PcP PcP 20 40 11.3 +0.3
comp=Z,6.4nm,0.9s,baz=144,slow=2.2,SNR=5.0
SONM LR LR 21 01 44.5
comp=Z,403nm,21.6s,MS4.4,baz=14,slow=38
SONM Songino Array 49.27 342 P P 20 38 49.2 +0.3
SONM 20 40 11.3
HYB Hyderabad 49.61 292 eP P 20 38 52.0 +0.1
HYB Hyderabad 49.61 292 *i* P P 20 38 52.0 +0.1
TRD Trivandrum 49.73 280 eP P 20 38 52.3 -0.6
CIT Chita 51.46 350 eP P 20 39 06.2 +0.9
BHPL Bhopal 52.15 298 eP P 20 39 09.5 -1.5
ZAK Zakamensk 52.49 342 eP P 20 39 15.9 +2.9
ZAK e 20 40 22.3
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TLY Talaya 53.51 343 eP P 20 39 17.2 -3.3
TLY e 20 41 17.0
TLY eS S 20 46 47.8 -1.2
TLY pmax pmax
comp=Z,11nm,1.1s,mb4.7
TLY MLR MLR
comp=Z,366nm,26.0s,MS4.3
KAD Karad 53.66 290 eP P 20 39 21.5 -0.7
KAD AMb AMB 20 39 37.7
comp=Z,19nm,1.0s,mb5.0
WMQ Urumqi 54.35 326 P P 20 39 28.0 +1.2
WMQ AP pP 20 39 41.0 -1.3
WMQ XP sP 20 39 46.0 -2.9
WMQ PP PP 20 41 31.0 +1.6
WMQ S S 20 47 01.0 +0.3
WMQ SCS ScS 20 49 10.0 -1.0
WMQ SS SS 20 50 44.0 +0.3
WMQ AMB AMB
comp=Z,32nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,71nm,4.0s
WMQ LR LR
comp=N,495nm,16.0s,MS4.8
WMQ LR LR
comp=E,445nm,16.0s,MS4.8
WMQ LR LR
comp=Z,444nm,16.0s,MS4.6
SMLA Simla 55.03 308 *i* P P 20 39 30.5 -1.5
SMLA AMb AMB 20 39 38.2
comp=Z,53nm,0.6s,mb5.7
CLNS Chul'man 55.15 359 eP P 20 39 33.0 +0.7
CLNS pmax pmax
comp=Z,22nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=N,17nm,0.9s
DLH Dalhousie 56.52 309 ex x 20 40 39.0

HVS Khovu-Aksy 56.60 336⇓ eP P 20 39 42.3 -0.5
HVS pmax pmax
comp=Z,37nm,0.9s,mb5.4
THN Thein Dam 56.67 308 eP P 20 39 41.9 -1.8
BOD Bodaibo 56.98 352 eP P 20 39 44.5 -0.8
BOD pmax pmax
comp=Z,26nm,1.3s,mb5.1
PETK Petropavlovsk- 57.56 22 P P 20 39 50.9 +1.3
comp=Z,9.7nm,0.6s,mb5.0,baz=184,slow=3.9,SNR=17
MK31 Makanchi Array 59.19 326 eP P 20 40 00.3 -0.7
MK31 Makanchi Array 59.19 326 eP P 20 40 00.1 -0.9
MK31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
MKAR Makanchi Array 59.19 326 P P 20 40 00.2 -0.8
comp=Z,12nm,0.6s,mb5.1,baz=120,slow=8.0,SNR=57
MKAR PcP PcP 20 40 48.8 -0.2
comp=Z,12nm,0.9s,baz=131,slow=5.6,SNR=5.9
MKAR LR LR 21 06 00.5
comp=Z,445nm,21.9s,MS4.5,baz=119,slow=36
MKAR Makanchi Array 59.19 326 *i* P P 20 40 00.3 -0.7
MKAR pmax pmax
comp=Z,12nm,0.6s
KSH Kashi 59.39 316 eP P 20 40 06.6 +4.0
KSH eAP pP 20 40 19.0 +0.7
KSH eXP sP 20 40 24.5 -0.4
KSH ePCP PcP 20 40 53.3 +3.4
KSH ePP PP 20 42 20.4 +6.1
KSH eSCP ScP 20 44 48.4 +2.5
KSH ePCS PcS 20 44 53.8 +1.9
KSH eS S 20 48 11.5 +4.2
KSH eXS sS 20 48 33.6 -0.1
KSH eSCS ScS 20 49 49.3 +1.5
KSH eSS SS 20 52 08.6 +5.4
KSH AMB AMB
comp=Z,36nm,0.3s,mb5.9
KSH AMB AMB
comp=Z,751nm,2.7s,mb6.2
KSH LR LR
comp=N,326nm,5.0s
KSH LR LR
comp=E,426nm,3.4s
KSH LR LR
comp=Z,408nm,3.8s
YAK Yakutsk 60.40 2 eP P 20 40 09.4 +0.4
comp=Z,50nm,0.8s,mb5.6
YAK Yakutsk 60.40 2⇓ eP P 20 40 08.7 -0.3
YAK pmax pmax
comp=Z,43nm,0.6s,mb5.7
YAK MLR MLR
comp=Z,200nm,18.0s,MS4.3
TKM2 Tokmak 2 61.20 319 eP P 20 40 13.0 -1.8
comp=Z,10.0nm,0.7s,mb5.0
TKM2 Tokmak 2 61.20 319 eP P 20 40 13.0 -1.8
TKM2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AML Almayashu 62.09 318 eP P 20 40 20.5 -0.4
comp=Z,13nm,0.8s,mb5.1
EKS2 Erkin-Say 62.27 319 eP P 20 40 22.1 0.0
comp=Z,10nm,0.8s,mb5.0
ZAA0 Zalesovo Array 62.40 334 eP P 20 40 21.5 -1.3
ZALV Zalesovo Beam 62.40 334 P P 20 40 21.4 -1.3
comp=Z,2.3nm,0.4s,mb4.7,baz=118,slow=6.1,SNR=11
ZALV LR LR 21 08 55.2
comp=Z,127nm,21.9s,MS4.0,baz=91,slow=37
KBL Kabul 62.63 308 eP P 20 40 24.3 -0.3
comp=Z,12nm,0.6s,mb5.2
KBL Kabul 62.63 308 eP P 20 40 24.3 -0.3
KBL pmax pmax
comp=Z,12nm,0.6s,mb5.2
KURK Kurchatov 63.43 328 P P 20 40 28.6 -1.0
comp=Z,432nm,0.6s,SNR=58
KURK Kurchatov 63.43 328 eP P 20 40 29.0 -0.6
comp=Z,50nm,0.6s,mb5.8
KURK Kurchatov 63.43 328 eP P 20 40 29.0 -0.6
KURK pmax pmax
comp=Z,50nm,0.6s,mb5.8
NVS Novosibirsk 63.69 334 eP P 20 40 29.7 -1.5
NVS *i* 20 41 03.6
NVS pmax pmax
comp=Z,24nm,1.7s,mb5.0
SEY Seymchan 64.22 13⇓ eP P 20 40 35.8 +1.2
KK31 Karatay Array 64.64 318 *i* P P 20 40 36.8 -0.9
KK31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BVA0 Borovoye Array 68.99 328 *i* P P 20 41 04.2 -1.0
BVA0 pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
BRVK Borovoye 69.06 328 P P 20 41 05.0 -0.6
comp=Z,102nm,0.5s,mb6.0,SNR=12
BRVK Borovoye 69.06 328 eP P 20 41 05.1 -0.5
comp=Z,13nm,0.7s,mb5.0
BRVK Borovoye 69.06 328 eP P 20 41 05.1 -0.5
BRVK pmax pmax
comp=Z,13nm,0.7s,mb5.0
TIXI Tiksi 70.03 1 eP P 20 41 10.0 -1.2
comp=Z,41nm,1.3s,mb5.2
TIXI Tiksi 70.03 1 eP P 20 41 10.9 -0.3
TIXI pmax pmax
comp=Z,37nm,1.2s,mb5.2
BILL Bilibino 71.74 15 eP P 20 41 23.1 +1.4
AB31 Akbulak array 73.66 321 P P 20 41 32.1 -1.3
AB31 pmax pmax
comp=Z,12nm,0.8s,mb4.9
AKTO Aktyubinsk 75.19 322 P P 20 41 41.6 -0.7
AKTO pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
SVE Sverdlovsk 75.67 329⇑ eP P 20 41 44.9 0.0
SVE pmax pmax
comp=Z,33nm,0.9s,mb5.3
ARU Arti 76.62 328 P P 20 41 49.5 -0.8
comp=Z,143nm,0.6s,mb6.1,SNR=8.5
ARU Arti 76.62 328 eP P 20 41 49.2 -1.2
comp=Z,15nm,0.7s,mb5.0
ARU Arti 76.62 328 *d* *i* P P 20 41 49.1 -1.2
ARU *e* 20 44 42.7
ARU ePPP 20 46 26.0
ARU eS S 20 51 33.9 +1.7
ARU eSS SS 20 56 34.8 +6.2
ARU pmax pmax
comp=Z,18nm,0.8s,mb5.0
SOKR Solikamsk 78.47 331 eP P 20 41 59.0 -1.6
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
QRN Al-Qurain 79.19 299 eP P 20 42 03.8 -1.4
baz=299
QRN AMb AMB 20 42 11.7
comp=Z,86nm,1.2s,mb5.6,baz=299
MIB Mutribah 79.77 300 eP P 20 42 06.8 -1.6
baz=300
MIB AMb AMB 20 42 09.5
comp=Z,49nm,0.9s,mb5.4,baz=300
NAY Al-Naaiem 79.82 299 eP P 20 42 06.6 -2.0
baz=299
NAY AMb AMB 20 42 12.4
comp=Z,24nm,1.2s,mb5.0,baz=299
VNDA Vanda 81.30 173 P P 20 42 16.2 +0.6
comp=Z,5.8nm,0.6s,mb4.7,baz=309,slow=6.6,SNR=21
MAW Mawson 81.61 200 P P 20 42 18.7 +1.4
comp=Z,3.8nm,0.6s,mb4.5,baz=88,slow=6.4,SNR=8.6
MAW LR LR 21 13 39.0
comp=Z,144nm,21.5s,MS4.3,baz=241,slow=32
SBA Scott Base 82.22 172 eP P 20 42 22.7 +2.3
comp=Z,22nm,1.6s,mb4.8
SBA Scott Base 82.22 172 eP P 20 42 22.7 +2.3
SBA pmax pmax
comp=Z,22nm,1.6s,mb4.8
SVW2 Sparrevohn 82.86 29 eP P 20 42 25.9 +1.9
GOF Gofitskoye 84.25 315 eP pP 20 42 42.7 -5.3
KIV Kislovodsk 84.43 314 eP P 20 42 35.4 +3.0
comp=Z,18nm,0.7s,mb5.3
KIV Kislovodsk 84.43 314⇑ eP P 20 42 35.0 +2.6
KIV pmax pmax
comp=Z,11nm,0.6s,mb5.2
KIV MLR MLR
comp=Z,100nm,15.0s,MS4.3
DAGI Agillar 84.86 311 *i* P P 20 42 27.3 -7.4
DBAD Bademkaya 85.02 311 *i* P P 20 42 35.8 +0.3
ERZM Erzurum 85.23 310 *i* P P 20 42 36.2 -0.4
VRHR Novokhopersk 85.54 321 eP P 20 42 37.4 -0.5
VRHR pmax pmax
comp=Z,70nm,1.2s,mb5.8
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.7s
COLD Coldfoot 86.02 23 eP P 20 42 41.4 +1.5
comp=E,12nm,0.8s,mb5.2
VORD Divnogorie 87.01 321 eP P 20 42 44.7 -0.4
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.7
VORD pmax pmax
comp=N,110nm,0.8s
VORD pmax pmax
comp=E,90nm,1.0s
ELZG Elazig 87.05 308 *i* P P 20 42 45.1 -0.4
VSR Storozhevoye 87.09 321 eP P 20 42 45.1 -0.4
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
VSR pmax pmax
comp=N,6.0nm,1.8s
VSR pmax pmax
comp=E,10.0nm,1.1s
KLMR Klimovskoe 87.16 331 eP P 20 42 44.5 -1.1
KLMR pmax pmax
comp=Z,36nm,1.2s,mb5.5
KEMA Kemaliye 87.44 309 *i* P P 20 42 48.5 +1.0
MOS Moscow 88.07 326 eP P 20 42 50.7 +0.7
GZT Gaziantep 88.18 307 *i* P P 20 42 48.6 -2.4
OBN Obninsk 88.67 325⇓ eP P 20 42 52.6 -0.3
OBN *e* 20 46 18.4
OBN pmax pmax
comp=Z,12nm,0.8s,mb5.3
OBN MLR MLR
comp=Z,200nm,23.0s,MS4.5
SYO Syowa Base 90.28 201⇓ eP P 20 43 00.6 +0.4
DAWY Dawson 90.47 26 eP P 20 43 02.2 +1.1
JOF Joensuu 90.98 333 ep P 20 43 04.5 +1.0
comp=Z,0.8nm,0.5s,mb4.3
JOF Joensuu 90.98 333 eP P 20 43 04.5 +1.0
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.4
BR131 Keskin Array S 91.18 310 eP P 20 43 04.6 -0.4
BRTR Keskin Array B 91.18 310 P P 20 43 04.5 -0.5
comp=Z,2.3nm,0.9s,mb4.5,baz=125,slow=5.6,SNR=8.9
BRTR LR LR 21 31 26.1
comp=Z,68nm,21.3s,MS4.1,baz=191,slow=40
BRTR Keskin Array B 91.18 310 *i* P P 20 43 04.5 -0.5
BRTR pmax pmax
comp=Z,2.0nm,0.9s
QSPA South Pole Qui 91.46 180 eP P 20 43 07.3 +1.9
comp=Z,120nm,2.9s,mb5.7
INK Inuvik 92.30 21 eP P 20 43 10.1 +0.6
comp=Z,509nm,1.3s
ARCES ARCESS Array B 92.39 340 P P 20 43 09.2 -0.7
comp=Z,14nm,1.0s,mb5.2,baz=54,slow=6.3,SNR=7.0
ARCES LR LR 21 33 35.7
comp=Z,221nm,18.6s,MS4.6,baz=271,slow=41
KAF Kangasniemi 93.39 332 ep P 20 43 14.2 -0.5
comp=Z,1.3nm,0.4s,mb4.7
KAF Kangasniemi 93.39 332 eP P 20 43 14.2 -0.5
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.6
AKASG Malin Array Be 93.39 321 P P 20 43 14.0 -1.0
comp=Z,1.9nm,0.6s,mb4.7,baz=71,slow=4.4,SNR=6.3
AKASG LR LR 21 32 16.4
comp=Z,102nm,19.6s,MS4.3,baz=55,slow=40
AKASG Malin Array Be 93.39 321 *i* P P 20 43 17.7 +2.7
AKASG pmax pmax
comp=Z,2.0nm,0.6s
TIRR Tirgusor 94.66 315⇓ *i* P P 20 43 25.1 +4.2
VRI Vrincioaia 95.66 316⇑ *i* P P 20 43 25.2 -0.3
MLR Muntele Rosu 96.26 316⇓ *i* P P 20 43 21.7 -6.5
BURAR Bucovina Array 96.43 318⇑ *i* P P 20 43 29.4 +0.5
BUR08 Bucovina Ar. S 96.43 318 eP P 20 43 29.0 0.0
KWP Kalwaria 97.70 320⇑ *i* P P 20 43 34.8 +0.2
NOA NORSAR Array B 100.61 333 P Pdif 20 43 46.1 -1.3
comp=Z,1.0nm,0.6s,baz=69,slow=4.8,SNR=4.5
GERES GERESS Array B 103.60 321 Pdiff Pdif 20 44 04.5 +3.7
comp=Z,0.2nm,0.6s,baz=90,slow=3.9,SNR=4.1
ANMO Albuquerque 118.50 48 ePKPdf PKPdf 20 48 50.5 +2.3
ECSD EROS,Sioux Fal 120.75 35 ePKPdf PKPdf 20 48 52.6 +0.8
SCHQ Schefferville 122.77 9 PKP PKPdf 20 48 55.4 +0.1
comp=Z,2.4nm,0.5s,baz=47,slow=6.8,SNR=4.2
TXAR Lajitas Array 123.16 53 PKP PKPdf 20 48 58.2 +1.4
comp=Z,1.2nm,0.8s,baz=302,slow=1.0,SNR=12
TOA0 Torodi Ar. Sit 123.29 287 ePKPdf PKPdf 20 48 58.2 +0.7
TORD Torodi Ar. Bea 123.29 287 PKP PKPdf 20 48 58.0 +0.6
comp=Z,7.1nm,1.1s,baz=52,slow=1.6,SNR=17
JFWS Jewell Farm 124.81 32 ePKPdf PKPdf 20 48 59.9 +0.3
JCT Junction City 125.70 50 ePKPdf PKPdf 20 49 03.3 +1.6
OLIL Olney 128.87 35 ePKPdf PKPdf 20 49 07.3 -0.2
DBIC Dimbokro 130.70 280 PKP PKPdf 20 49 10.8 -0.9
comp=Z,8.0nm,1.1s,baz=45,slow=2.9,SNR=2.4
WVT Waverly 130.79 37 ePKPdf PKPdf 20 49 12.9 +1.7
LRAL Lakeview Retre 133.34 40 ePKPdf PKPdf 20 49 18.4 +2.3
PLCA Paso Flores 138.06 161 PKP PKPdf 20 49 24.6 -0.1
comp=Z,2.7nm,0.8s,baz=188,slow=7.1,SNR=4.8
LPAZ La Paz 159.49 136 PKP PKPdf 20 49 59.9 +0.7
comp=Z,2.5nm,1.0s,baz=276,slow=2.0,SNR=6.5

JMA 21 20:31:34.1±0.2, 2701N×12691E, h101km±3km, M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGN	**Aguni-jima**	**0.51**	**145**	P	Pn	20 31 50.3	+0.2
JAGN				eS	Sn	20 32 02.2	+0.2
JKE	**Kume jima 2**	**0.69**	**189**	P	Pn	20 31 51.4	-0.1
JKE				eS	Sn	20 32 04.5	-0.1
JIH	**Iheya**	**0.94**	**88**	P	Pn	20 31 54.3	+0.3
JIH				S	Sn	20 32 09.1	+0.2
NAH1	**Naha**	**1.06**	**139**	P	Pn	20 31 55.6	+0.3
NAH1				eS	Sn	20 32 10.7	-0.5
JJT2	**Tamagusuku 2**	**1.15**	**139**	P	Pn	20 31 56.5	+0.3
JOW	**Kunigami**	**1.23**	**98**	P	Pn	20 31 57.3	+0.1
JOW				S	Sn	20 32 13.9	-0.7
JTK	**Tokunoshima**	**1.97**	**66**	P	Pn	20 32 06.3	0.0
JTK				eS	Sn	20 32 29.9	-1.0
JAM	**Amami Oshima**	**2.77**	**59**	P	Pn	20 32 16.5	-0.2
JAM				eS	Sn	20 32 48.3	-1.3
JMZ	**Minamidaito 2**	**4.04**	**106**	P	Pn	20 32 31.9	-2.0
JMZ				eS	Sn	20 33 13.5	-6.7

IDC 21 20:43:19.4±1.3, 149N×12603E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx3.0/30, Error ellipse: s-maj=148.3km s-min=21.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**5.56**	**355**	LR	LR	20 47 00.6	
	comp=Z,406nm,21.4s,baz=148,slow=40						
WRA	**Warramunga Arr**	**22.81**	**159**	P	P	20 48 23.6	-0.4
	2.3nm,0.5s,baz=338,slow=11,SNR=12						
WRA				PcP	PcP	20 52 15.9	+0.1
	0.2nm,0.5s,baz=326,slow=2.0,SNR=2.2						
ASAR	**Alice Springs**	**26.15**	**163**	P	P	20 48 56.0	+0.5
	0.5nm,0.6s,baz=344,slow=8.0,SNR=16						
ASAR				PcP	PcP	20 52 22.9	-0.2
	0.2nm,0.5s,baz=352,slow=3.0,SNR=4.2						
STKA	**Stephens Creek**	**36.32**	**157**	P	P	20 50 24.8	-0.2
	1.4nm,0.8s,baz=344,slow=7.4,SNR=2.7						
MKAR	**Makanchi Array**	**59.00**	**326**	P	P	20 53 20.8	-0.1
	0.7nm,0.5s,baz=116,slow=7.5,SNR=11						

ISC 21 21:07:07.1±2.4, 364N±01×714E±04, h202km±13km, n19, σ0:89/23, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.35**	**136**	eP	**Pn**	**21 08 27.1**	**+1.1**
THN				eS	**Sn**	**21 09 29.8**	**+1.5**
DLH	**Dalhousie**	**5.41**	**134**	eS	**Sn**	**21 09 29.0**	**-0.7**
AML	**Almayashu**	**6.02**	**17**	P	**Pn**	**21 08 34.4**	**-0.1**
	SNR=46						
EKS2	**Erkin-Say**	**6.54**	**16**	P	**Pn**	**21 08 41.5**	**+0.3**
	SNR=7.6						
AAK	**Ala-Archa**	**6.70**	**20**	P	**Pn**	**21 08 43.3**	**+0.1**
	SNR=8.3						
KK31	**Karatay Array**	**6.74**	**355**	Pn	**Pn**	**21 08 42.4**	**-1.4**
	1.0nm,0.3s,baz=188,slow=14,SNR=16						
KK31				Sn	**Sn**	**21 09 54.6**	**-6.0**
	4.8nm,0.3s,baz=182,slow=23,SNR=16						
KBK	**Karagaybulak**	**6.85**	**23**	P	**Pn**	**21 08 46.2**	**+1.0**
	SNR=5.0						
SMLA	**Simla**	**7.14**	**136**	*i* P	**Pn**	**21 08 49.9**	**+0.7**
SMLA				eS	**Sn**	**21 10 07.6**	**-2.7**
SMLA				ex	x	21 10 12.6	
	comp=E,151nm,0.3s						

SMLA				*ex*		x	21 10 12.6	
	comp=N,182nm,0.3s							
TKM2	**Tokmak 2**	**7.30**	**25**	P		**Pn**	**21 08 50.9**	**-0.2**
	SNR=5.4							
KLP	**Kalpa**	**7.50**	**128**	*eP*		**Pn**	**21 08 49.7**	**-4.2**
KLP				*eS*		**Sn**	**21 10 04.5**	**-14**
KLP				AML		AML	21 10 21.0	
	comp=N,57nm,0.4s							
KLP				AML		AML	21 10 23.8	
	comp=E,52nm,0.6s							
PYUN	**Piuthan**	**12.85**	**127**	*eP*		**Pn**	**21 10 01.5**	**-1.2**
	comp=E,7.5nm,0.4s							
DANN	**Dangsing**	**13.19**	**124**	*eP*		**Pn**	**21 10 07.6**	**+0.6**
	comp=E,5.7nm,0.3s							
KOLN	**Koldanda**	**13.47**	**126**	*eP*		**Pn**	**21 10 10.4**	**0.0**
	comp=E,2.5nm,0.3s							
GKN	**Gorkha**	**14.01**	**123**	*eP*		**Pn**	**21 10 16.8**	**-0.3**
	comp=E,16nm,0.5s							
DMN	**Daman**	**14.58**	**123**	*eP*		**Pn**	**21 10 24.1**	**0.0**
	comp=E,8.5nm,0.5s							
KKN	**Kakani**	**14.58**	**122**	*eP*		**Pn**	**21 10 23.5**	**-0.6**
	comp=E,18nm,0.5s							
JIRN	**Jiri**	**15.29**	**120**	*eP*		**Pn**	**21 10 33.0**	**+0.2**
	comp=E,13nm,0.4s							
RAMN	**Ramite**	**16.02**	**122**	*eP*		**P**	**21 10 40.9**	**-0.2**
	comp=E,10nm,0.6s							
TAPN	**Taplejung**	**16.55**	**118**	*eP*		**P**	**21 10 47.9**	**+1.0**
	comp=E,9.4nm,0.6s							

*ISCJB **21** 21:10:56.2±1.6, 2268S×007W×706W±0.1, h33km, mb4.0/2, Error ellipse: s-maj=16.5km s-min=9.6km az=16.7*
*GUC **21** 21:10:58.7±0.6, 2283S×7034W, h32km±5km, ML2.8*
*IDC **21** 21:11:05.0±5.4, 2305S×6799W, h0km, mb4.2/2, mb1 4.0/3, mb1mx3.6/16, mbtmp4.0/3, ML3.5/1, Error ellipse: s-maj=141.9km s-min=51.5km az=61.0*

ISC 21 21:10:57.8±1.6, 2275S±008×705W±01, h35km, n7, σ0 91/9, mb4.0/2, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.36**	**166**	⇑*iP*	**Pn**	**21 11 05.6**	**-0.9**
MECH				*i* S	**Sn**	**21 11 11.1**	**-1.4**
MECH				AML	AML	21 11 12.5	
	comp=N,3μm,0.3s						
CEN1	**Los Morros**	**0.71**	**154**	⇑*iP*	**Pn**	**21 11 12.0**	**+0.7**
CEN1				*i* S	**Sn**	**21 11 22.5**	**+1.5**
CEN1				AML	AML	21 11 25.6	
	comp=E,198nm,0.4s						
LVC	**Limon Verde**	**1.51**	**85**	*eP*	**Pn**	**21 11 22.6**	**+0.3**
LVC				*i* S	**Sn**	**21 11 40.1**	**-0.6**
LPAZ	**La Paz**	**6.82**	**20**	Pn	**Pn**	**21 12 45.6**	**+10**
	comp=E,0.5nm,0.3s,baz=173,slow=4.5,SNR=6.6						
DBIC	**Dimbokro**	**70.54**	**74**	P	**P**	**21 22 09.2**	**-0.5**
	comp=E,5.3nm,1.1s,mb4.4,baz=209,slow=6.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**79.19**	**71**	P	**P**	**21 23 00.5**	**+0.8**
	comp=E,0.3nm,0.3s,mb3.7,baz=247,slow=4.9,SNR=12						
MKAR	**Makanchi Array**	**147.53**	**36**	PKPbc	PKPbc	21 30 47.0	+8.9
	comp=E,0.2nm,0.6s,baz=315,slow=3.2,SNR=2.7						

*DDA **21** 21:14:41.4, 3693N×2922E, h15km±1km, Md3.4*
*ISK **21** 21:14:42.8, 3704N×2922E, h8km, MD3.4*
*NEIC **21** 21:14:42.5, 3706N×2920E, h5km, MD3.4(ISK), ML3.1(ATH), After ISK.*
*CSEM **21** 21:14:42.6±0.3, 3705N×2920E, h6km±1km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.3km az=159.0*
*ISCJB **21** 21:14:43.1±0.4, 3701N±004×2926E±003, h10km, Error ellipse: s-maj=5.4km s-min=3.3km az=156.0*

ISC 21 21:14:43.6±0.4, 3698N±004×2926E±003, h10km, n53, σ1 0 1/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**44**	*iP*	**Pg**	**21 14 49.3**	**-1.2**
TURN	**Turunc**	**0.54**	**258**	*iP*	**Pg**	**21 14 57.9**	**+3.9**
DALT	**Dalyan (Mudla)**	**0.54**	**247**	*e*PG	**Pg**	**21 14 53.1**	**-1.1**
DALT				*e*SG	**Sg**	**21 15 01.4**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.54**	**247**	Pg	**Pg**	**21 14 53.0**	**-1.1**
DALT				Sg	**Sg**	**21 15 01.0**	**-0.2**
DENT	**Denizli**	**0.79**	**347**	*e*PG	**Pg**	**21 14 56.8**	**-2.0**
YER	**Yerkesik**	**0.80**	**281**	*e*PG	**Pg**	**21 14 58.8**	**-0.2**
YER	**Yerkesik**	**0.80**	**281**	Pg	**Pg**	**21 14 57.5**	**-1.4**
YER	**Yerkesik**	**0.80**	**281**	Pg	**Pg**	**21 14 57.5**	**-1.4**
KSL	**Kastellorizon**	**0.87**	**162**	*eP*	**Pg**	**21 14 58.5**	**-1.9**
ANTB	**Antalya**	**1.12**	**94**	*e*PN	**Pn**	**21 15 05.8**	**+0.4**
BCK	**Bucak**	**1.16**	**65**	*e*PN	**Pn**	**21 15 04.9**	**-1.1**
ARG	**Arkhangelos**	**1.19**	**230**	*eP*	**Pb**	**21 15 05.3**	**-0.9**
ARG	**Arkhangelos**	**1.19**	**230**	*P*	**Pb**	**21 15 05.5**	**-0.7**
MLSB	**Milas**	**1.22**	**285**	*e*PN	**Pn**	**21 15 06.7**	**-0.1**
MLSB	**Milas**	**1.22**	**285**	Pn	**Pn**	**21 15 05.3**	**-1.5**
MLSB	**Milas**	**1.22**	**285**	Pn	**Pn**	**21 15 05.3**	**-1.4**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**21 15 07.5**	**-1.0**
DAT	**Datca**	**1.37**	**260**	*e*PN	**Pn**	**21 15 08.9**	**+0.1**
KHAL	**Karahalli**	**1.40**	**8**	*i* P	**Pn**	**21 15 08.9**	**-0.2**
BDRM	**Kayabasi**	**1.45**	**274**	*i* P	**Pn**	**21 15 10.8**	**+0.9**
BDRM				*i* S	**Sn**	**21 15 28.1**	**-0.9**
KULA	**Kula-Manisa**	**1.60**	**343**	*e*PN	**Pn**	**21 15 11.2**	**-0.7**
GCAM	**G?zelcaml?**	**1.77**	**295**	*i* P	**Pn**	**21 15 14.6**	**+0.4**
GCAM				*i* S	**Sn**	**21 15 38.7**	**+2.0**
SHUT	**Suhut-Afyon**	**1.87**	**33**	*e*PN	**Pn**	**21 15 15.8**	**+0.1**
SMG	**Samos**	**2.06**	**291**	*eP*	**Pn**	**21 15 18.3**	**+0.1**
SMG	**Samos**	**2.06**	**291**	P	**Pn**	**21 15 18.7**	**+0.5**
DEMI	**Demirci**	**2.10**	**348**	*i* P	**Pn**	**21 15 18.7**	**-0.1**
GDZ	**Gediz**	**2.11**	**5**	*i* P	**Pn**	**21 15 19.2**	**+0.3**
KDAG	**Bornova**	**2.12**	**312**	*i* P	**Pn**	**21 15 18.6**	**-0.5**
KDAG				*i* S	**Sn**	**21 15 44.2**	**-1.3**
ALT	**Altintas**	**2.17**	**18**	*e*PN	**Pn**	**21 15 19.7**	**-0.1**
AKHS	**Akhisar**	**2.21**	**329**	*i* P	**Pn**	**21 15 19.9**	**-0.4**
AKS	**Akhisar**	**2.21**	**329**	*e*PN	**Pn**	**21 15 19.8**	**-0.6**
AKS	**Akhisar**	**2.21**	**329**	Pn	**Pn**	**21 15 19.5**	**-0.8**
KARP	**Karpathos**	**2.22**	**230**	*eP*	**Pn**	**21 15 21.4**	**+1.0**
KARP	**Karpathos**	**2.22**	**230**	P	**Pn**	**21 15 22.1**	**+1.7**
BLCB	**Balcova**	**2.25**	**309**	*e*PN	**Pn**	**21 15 20.2**	**-0.6**
KONT	**Konya--Tatoy**	**2.65**	**68**	*e*PN	**Pn**	**21 15 27.6**	**+1.2**
LADK	**Ladik-KONYA**	**2.75**	**63**	*e*PN	**Pn**	**21 15 29.0**	**+1.2**
KIZT	**Kizilcal**	**2.81**	**47**	*e*PN	**Pn**	**21 15 29.4**	**+0.9**
BALB	**Balikesir**	**2.87**	**338**	*e*PN	**Pn**	**21 15 28.7**	**-0.6**
PRK	**Paraskevi**	**3.26**	**315**	*eP*	**Pn**	**21 15 35.2**	**+0.4**
NPS	**Neapolis**	**3.42**	**241**	*eP*	**Pn**	**21 15 38.5**	**+1.6**
NPS	**Neapolis**	**3.42**	**241**	P	**Pn**	**21 15 39.0**	**+2.1**
ADVT	**Abdulvahap**	**3.46**	**6**	*e*PN	**Pn**	**21 15 37.8**	**+0.2**
YLV	**Yalova**	**3.58**	**1**	*e*PN	**Pn**	**21 15 40.3**	**+1.2**
GULT	**Gulveren**	**3.58**	**16**	*e*PN	**Pn**	**21 15 40.1**	**+0.9**
EYL	**Eskiyayla**	**3.65**	**11**	Pn	**Pn**	**21 15 40.5**	**+0.5**
EYL	**Eskiyayla**	**3.65**	**11**	Pn	**Pn**	**21 15 40.5**	**+0.5**
EZN	**Ezine**	**3.66**	**322**	*e*PN	**Pn**	**21 15 40.3**	**+0.1**
GADA	**Gvkgeada**	**4.15**	**322**	*e*PN	**Pn**	**21 15 47.2**	**+0.3**
LIA	**Limnos Island**	**4.33**	**314**	P	**Pn**	**21 15 51.3**	**+1.9**
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn	**Pn**	**21 15 49.0**	**-1.4**
BR131				*e*Sn	**Sn**	**21 16 41.8**	**+0.2**
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn	**Pn**	**21 15 49.0**	**-1.4**
BR131				*e*Sn	**Sn**	**21 16 41.8**	**+0.1**
NVR	**Nevrokopi**	**6.05**	**318**	P	**Pn**	**21 16 15.0**	**+2.0**

JMA 21 22:18:36.5±0.2, 3278N×14092E, h47km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.98**	**290**	P	Pn	22 18 54.4	+0.5
JHJ2				S	Sn	22 19 07.1	+0.3
BSO1	**Boso 1**	**1.87**	**1**	P	Pn	22 19 06.1	+0.1
BSO3	**Boso 3**	**2.04**	**351**	P	Pn	22 19 08.8	+0.4
BSO3				*e*S	Sn	22 19 33.0	+0.3
JKO	**Kozu shima**	**2.05**	**314**	P	Pn	22 19 10.2	+1.8
JKO				*e*S	Sn	22 19 33.9	+1.1
NJJJ	**Nii jima 2**	**2.12**	**320**	*e*S	Sn	22 19 36.3	+1.8
JIM2	**Oshima 3**	**2.30**	**328**	P	Pn	22 19 12.9	+1.0
JIM2				*e*S	Sn	22 19 40.2	+1.3
JIZS	**Izushimoda**	**2.58**	**319**	*e*S	Sn	22 19 46.6	+0.9
JOD2	**Odawara 2**	**2.91**	**329**	P	Pn	22 19 21.6	+1.4
JOD2				*e*S	Sn	22 19 54.7	+0.8
TK04	**Tokai 4**	**3.00**	**303**	*e*S	Sn	22 19 59.7	+3.4
JYN	**Shimob**	**3.35**	**325**	P	Pn	22 19 29.1	+2.8
JRY	**Ryogami san**	**3.63**	**333**	P	Pn	22 19 32.7	+2.5
JRY				*e*S	Sn	22 20 12.7	+0.9
JAG	**Ashikaga**	**3.83**	**342**	P	Pn	22 19 35.0	+2.1
MAT	**Matsushiro**	**4.37**	**330**	P	Pn	22 19 43.6	+3.3
MAT				S	Sn	22 20 31.5	+1.6

IDC 21 22:26:07.4±42.0, 4008S×7881E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=1003.0km s-min=56.1km az=49.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.81**	**88**	P	P	22 34 54.4	-0.1
	0.2nm,0.5s,baz=247,slow=5.6,SNR=4.0						
WRA	**Warramunga Arr**	**51.24**	**84**	P	P	22 35 13.0	0.0
	1.2nm,0.7s,baz=233,slow=7.4,SNR=5.0						
CMAR	**Chiang Mai Arr**	**61.18**	**22**	P	P	22 36 23.9	+0.1
	0.7nm,0.9s,baz=213,slow=6.8,SNR=4.4						

*ISCJB **21** 22:44:26.6±1.8, 2312S±005×7096W±009, h18km±11km, Error ellipse: s-maj=14.1km s-min=7.9km az=18.6*
*GUC **21** 22:44:29.6±0.9, 2313S×7076W, h32km±6km, ML3.5*
*NEIC **21** 22:44:29.6, 2313S×7076W, h32km, ML3.5(GUC), After GUC.*

ISC 21 22:44:27.9±1.7, 2315S±005×7089W±008, h13km±7km, n12, σ0 76/21, 5C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.41**	**84**	⇑*iP*	**Pg**	**22 44 36.5**	**+0.4**
MECH				*i* S	**Sg**	**22 44 42.1**	**+0.4**
MECH				AML	AML	22 44 47.2	
	comp=E,30μm,0.4s						
CEN1	**Los Morros**	**0.68**	**111**	⇑*iP*	**Pg**	**22 44 41.0**	**-0.1**
CEN1				*i* S	**Sg**	**22 44 49.1**	**-1.0**
ANCH	**Antofagasta**	**0.69**	**140**	⇑*iP*	**Pg**	**22 44 41.6**	**+0.2**
ANCH				*i* S	**Sg**	**22 44 50.5**	**0.0**
ANCH	**Antofagasta**	**0.69**	**140**	⇑*iP*	**Pg**	**22 44 41.6**	**+0.2**
ANCH				*i* S	**Sg**	**22 44 50.5**	**0.0**
ANCH				AML	AML	22 44 55.4	
	comp=N,4μm,0.5s						
CPN1	**Cerro Paranal**	**1.54**	**163**	⇑*iP*	**Pn**	**22 44 55.4**	**+0.3**
CPN1				*i* S	**Sn**	**22 45 15.2**	**+0.3**
CPN1				AML	AML	22 45 19.2	
	comp=E,2μm,0.7s						
LVC	**Limon Verde**	**1.90**	**74**	*eP*	**Pn**	**22 45 00.7**	**+0.6**
LVC				*i* S	**Sn**	**22 45 24.1**	**+0.1**
LVC	**Limon Verde**	**1.90**	**74**	*eP*	**Pn**	**22 45 00.7**	**+0.6**
LVC				*i* S	**Sn**	**22 45 24.1**	**+0.1**
LVC				AML	AML	22 45 28.6	
	comp=N,366nm,0.3s						
LCO	**Las Campanas**	**5.84**	**178**	Pn	**Pn**	**22 45 48.7**	**-5.6**
	comp=N,35nm,0.4s						
LCO				*e*Sn	**Sn**	**22 47 00.9**	**-0.2**
LPAZ	**La Paz**	**7.30**	**21**	*e*Pn	**Pn**	**22 46 13.6**	**-0.7**
	comp=N,2.1nm,0.5s						
LPAZ				*e*Sn	**Sn**	**22 47 31.2**	**-6.0**
PLCA	**Paso Flores**	**17.54**	**179**	*e*Pn	**Pn**	**22 48 32.4**	**+0.3**
VNA2	**Neumayer--Watz**	**59.72**	**160**	*e*	**P**	**22 54 33.2**	**+1.3**
	baz=303,slow=7.9						
SNAA	**Sanae**	**61.34**	**160**	*e*	**P**	**22 54 40.4**	**-2.6**

*ISCJB **21** 22:51:35.4±0.9, 3780N±005×3901E±008, h2km±14km, Error ellipse: s-maj=10.9km s-min=7.5km az=30.4*
*CSEM **21** 22:51:36.6, 3784N×3896E, h7km, MD2.9, After ERD*
*DDA **21** 22:51:36.6, 3784N×3896E, h7km±2km, Md2.9*

ISC 21 22:51:35.9±0.8, 3779N±005×3901E±006, h10km±11km, n7, σ0 75/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.38**	**203**	*e*PG	**Pg**	**22 51 41.9**	**-1.4**
URFA				*e*SG	**Sg**	**22 51 48.9**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.64**	**22**	*e*PG	**Pg**	**22 51 47.9**	**-0.3**
DIYA	**Diyarbakir**	**0.89**	**81**	*i* P	**Pg**	**22 51 54.4**	**+1.3**
AKCD	**Akcadag**	**1.00**	**301**	*i* P	**Pg**	**22 51 55.4**	**+0.3**
AKCD				*i* S	**Sg**	**22 52 08.6**	**+0.5**
PTK	**Pertek**	**1.14**	**15**	*e*PN	**Pg**	**22 51 57.0**	**-0.9**
GZT	**Gaziantep**	**1.23**	**250**	*i* P	**Pn**	**22 51 59.1**	**+0.1**
MARD	**Mardin**	**1.48**	**108**	*i* P	**Pn**	**22 52 02.6**	**0.0**

*ISCJB **21** 23:01:04.5±0.5, 952S±009×15670E±006, h10km, mb4.1/9, Error ellipse: s-maj=13.2km s-min=7.9km az=167.6*
*IDC **21** 23:01:04.8±3.6, 946S×15671E, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/16, mbtmp4.1/6, Error ellipse: s-maj=106.1km s-min=24.9km az=106.0*
*NEIC **21** 23:01:09.3±0.4, 959S×15679E, h35km, mb4.1/3, Error ellipse: s-maj=11.8km s-min=8.0km az=135.0*

ISC 21 23:01:06.1±0.5, 952S±009×15672E±006, h10km, n19, σ0 57/20, mb4.1/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.19**	**89**	*e*Pn	**Pn**	**23 01 55.9**	**-0.4**
HNR				Sn	**Sn**	**23 02 35.0**	**+0.6**
CTAO	**Charters Tower**	**14.58**	**223**	Pn	**Pn**	**23 04 31.8**	**-0.7**
WRAB	**Tennant Creek**	**23.95**	**242**	*eP*	**P**	**23 06 20.6**	**-0.1**
	3.8nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**23.96**	**242**	P	**P**	**23 06 21.5**	**+0.7**
	3.1nm,1.1s,mb3.7,baz=70,slow=9.8,SNR=4.5						
ASAR	**Alice Springs**	**25.94**	**234**	P	**P**	**23 06 39.1**	**+0.3**
	1.9nm,0.7s,mb3.7,baz=69,slow=10.0,SNR=20						
STKA	**Stephens Creek**	**26.30**	**210**	P	**P**	**23 06 42.6**	**+0.7**
	2.6nm,0.6s,mb3.9,baz=32,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**26.30**	**210**	*eP*	**P**	**23 06 42.4**	**+0.5**
	0.8nm,0.7s,mb3.4						
TAU	**Tasmania Unive**	**34.27**	**192**	P	**P**	**23 07 51.9**	**-0.4**
YHNB	**Yeheng**	**48.40**	**315**	P	**P**	**23 09 48.8**	**+0.1**
KSRS	**Korea Array**	**53.95**	**332**	P	**P**	**23 10 29.4**	**-0.7**
	1.6nm,0.7s,mb4.1,baz=153,slow=8.2,SNR=4.3						
SONM	**Songino Array**	**72.36**	**327**	P	**P**	**23 12 33.6**	**+1.4**
	1.4nm,0.6s,mb4.1,baz=131,slow=8.2,SNR=3.7						
TLY	**Talaya**	**76.09**	**329**	P	**P**	**23 12 53.7**	**-0.1**
MCK	**McKinley**	**83.76**	**21**	*eP*	**P**	**23 13 34.9**	**-0.1**
	1.2nm,0.4s,mb4.4						
MK31	**Makanchi Array**	**86.41**	**318**	*eP*	**P**	**23 13 48.5**	**-0.2**
MKAR	**Makanchi Array**	**86.41**	**318**	P	**P**	**23 13 48.5**	**-0.3**
	1.0nm,0.6s,mb4.2,baz=101,slow=5.3,SNR=8.5						
MKAR	**Makanchi Array**	**86.41**	**318**	P	**P**	**23 13 48.5**	**-0.3**
EKS2	**Erkin-Say**	**91.23**	**313**	*eP*	**P**	**23 14 12.1**	**+0.4**
BRVK	**Borovoye**	**95.39**	**323**	P	**P**	**23 14 30.7**	**+0.1**
DLMT	**Dillon**	**97.17**	**45**	*eP*	**P**	**23 14 37.9**	**-1.1**
	9.6nm,0.9s,mb5.2						

*DDA **21** 23:31:18.5, 3732N×2929E, h7km±5km, Md3.0*
*ISCJB **21** 23:31:19.9±0.7, 3715N±008×2912E±005, h10km, Error ellipse: s-maj=11.5km s-min=4.9km az=168.5*
*ISK **21** 23:31:20.7, 3716N×2904E, h24km, MD3.0*
*CSEM **21** 23:31:20.7±0.1, 3716N×2904E, h20km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.0km az=161.0*

ISC 21 23:31:19.9±0.8, 3715N±008×2915E±005, h4km±9km, n10, σ1 0 21/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**75**	*iP*	**Pg**	**23 31 23.8**	**-2.7**
GOLH				*i* S	**Sg**	**23 31 30.9**	**0.0**
TURN	**Turunc**	**0.52**	**238**	*iP*	**Pg**	**23 31 31.0**	**+1.2**
TURN				*i* S	**Sg**	**23 31 43.2**	**+6.6**
DENT	**Denizli**	**0.61**	**351**	*e*PG	**Pg**	**23 31 32.8**	**+1.2**
YER	**Yerkesik**	**0.69**	**269**	*e*PG	**Pg**	**23 31 33.2**	**0.0**
YER				*e*SG	**Sg**	**23 31 43.0**	**+0.8**
MLSB	**Milas**	**1.11**	**278**	*e*PG	**Pg**	**23 31 39.6**	**-1.5**
BCK	**Bucak**	**1.19**	**74**	*e*PN	**Pn**	**23 31 44.5**	**+1.3**
KHL	**Karahalli**	**1.21**	**14**	*e*PN	**Pn**	**23 31 43.2**	**-0.3**
ANTB	**Antalya**	**1.23**	**101**	*e*PN	**Pn**	**23 31 44.6**	**+0.8**
DAT	**Datca**	**1.33**	**252**	*e*PN	**Pn**	**23 31 42.5**	**-2.7**
KULA	**Kula-Manisa**	**1.42**	**344**	*e*PN	**Pn**	**23 31 46.1**	**-0.3**

*NNC **22** 00:18:20.6±3.4, 3955N×7597E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=32.6km s-min=24.4km az=149.0*
*IDC **22** 00:18:23.2±0.8, 3979N×7585E, h0km, mb4.0/12, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, ML3.6/4, MS3.7/10, Ms1 3.8/10, ms1mx3.5/29, Error ellipse: s-maj=16.4km s-min=14.7km az=43.0*
*MOS **22** 00:18:27.9±1.5, 3992N×7594E, h51km, mb4.2/12, Error ellipse: s-maj=9.8km s-min=5.5km az=96.0*
*ISCJB **22** 00:18:27.7±0.4, 3983N±002×7608E±005, h58km±5km, mb4.0/18, MS3.6/7, Error ellipse: s-maj=6.1km s-min=3.2km az=165.4*
*BJI **22** 00:18:28.9, 4003N×7600E, h55km, mb4.3, ML4.2, Ms3.9*
*NEIC **22** 00:18:30.5±0.8, 3999N×7596E, h58km±8km, mb4.0/4, Error ellipse: s-maj=8.2km s-min=7.1km az=205.0*

ISC 22 00:18:29.2±0.3, 3986N±002×7607E±005, h52km±5km, n107, σ1 9 47/125, mb4.0/18, MS3.6/7, 13C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**2.64**	**334**	*e*Pn	**Pn**	**00 19 09.9**	**+0.6**
UCH				*e*Sn	**Sn**	**00 19 40.8**	**+0.7**
AML	**Almayashu**	**2.90**	**322**	*e*Pn	**Pn**	**00 19 13.3**	**+0.5**
TKM2	**Tokmak 2**	**3.08**	**354**	⇑Pn	**Pn**	**00 19 16.6**	**+1.3**
	468nm,0.6s						
TKM2				⇑Sn	**Sn**	**00 19 57.6**	**+6.7**
	2μm,0.9s						
TKM2	**Tokmak 2**	**3.08**	**354**	*e*Pn	**Pn**	**00 19 17.0**	**+1.7**
TKM2				*e*Sn	**Sn**	**00 19 54.1**	**+3.2**
FRU	**Bishkek**	**3.17**	**340**	⇑*i*PN	**Pn**	**00 19 18.0**	**+1.5**
FRU				*i* S	**Sn**	**00 19 58.0**	**+5.0**
FRU				pmax	pmax		
	comp=Z,1μm,1.6s						
FRU				smax			
	comp=N,2μm,2.0s						
EKS2	**Erkin-Say**	**3.29**	**329**	*e*Pn	**Pn**	**00 19 18.9**	**+0.7**
EKS2				*e*Sn	**Sn**	**00 19 54.8**	**-1.2**
KNDC	**Almaty**	**3.42**	**11**	⇓Pn	**Pn**	**00 19 21.8**	**+1.8**
	comp=N,171nm,0.6s						
KNDC				Sn	**Sn**	**00 20 05.7**	**+6.4**
AAA	**Alma-Ata**	**3.48**	**11**	*i* PN	**Pn**	**00 19 21.8**	**+1.1**
AAA				*i* S	**Sn**	**00 20 09.7**	**+9.2**
KK31	**Karatay Array**	**5.29**	**310**	⇑Pn	**Pn**	**00 19 44.5**	**-1.0**
	comp=N,2.8nm,0.3s,baz=120,slow=13,SNR=25						
KK31				⇑Lg		00 21 06.2	
	comp=N,113nm,0.7s,baz=125,slow=29,SNR=6.1						
KK31	**Karatay Array**	**5.29**	**310**	*i* PN	**Pn**	**00 19 44.5**	**-1.0**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.3s						
CHCP	**Chirah Chowk**	**6.58**	**201**	⇑P	**Pn**	**00 20 08.2**	**+4.9**
CEP	**Cherat**	**6.88**	**210**	P	**Pn**	**00 20 11.2**	**+3.7**
DLH	**Dalhousie**	**7.30**	**181**	*eP*	**Pn**	**00 20 15.0**	**+1.8**
DLH				*eS*	**Sn**	**00 21 36.0**	**+1.3**
THN	**Thein Dam**	**7.41**	**182**	*eP*	**Pn**	**00 20 17.4**	**+2.7**
THN				*ex*	x	00 21 45.6	
KBL	**Kabul**	**7.72**	**229**	*e*Pn	**Pn**	**00 20 21.5**	**+2.6**
	comp=Z,25nm,0.4s						
KBL				*e*Sn	**Sn**	**00 21 38.0**	**-6.9**
KBL	**Kabul**	**7.72**	**229**	*eP*	**Pn**	**00 20 21.5**	**+2.6**
KBL				*e*		00 21 38.0	
KBL				pmax	pmax		
	comp=Z,25nm,0.4s						
THW	**Thamme Wali**	**7.86**	**208**	P	**Pn**	**00 20 24.0**	**+3.1**
MK31	**Makanchi Array**	**8.28**	**31**	⇑Pn	**Pn**	**00 20 27.8**	**+1.3**
	comp=Z,8.8nm,0.6s,baz=203,slow=13,SNR=29						
MK31				⇓Lg		00 22 49.7	
	comp=Z,37nm,1.1s						
MK31	**Makanchi Array**	**8.28**	**31**	*e*Pn	**Pn**	**00 20 27.9**	**+1.4**
MK31				*e*Sn	**Sn**	**00 22 00.9**	**+2.3**
MKAR	**Makanchi Array**	**8.28**	**31**	Pn	**Pn**	**00 20 27.8**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=206,slow=14,SNR=26						
MKAR				Lg		00 22 44.0	
	comp=Z,0.5nm,0.3s,baz=204,slow=20,SNR=3.5						
MKAR				LR	LR	00 23 58.1	
	comp=Z,545nm,20.1s,baz=213,slow=40						
MKAR	**Makanchi Array**	**8.28**	**31**	Pn	**Pn**	**00 20 27.8**	**+1.3**
MKAR				Lg		00 22 44.0	
MKAR				LR	LR	00 23 58.1	
MKAR	**Makanchi Array**	**8.28**	**31**	*i* P	**Pn**	**00 20 28.2**	**+1.7**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BHK	**Bhakra**	**8.43**	**178**	*ex*	x	00 21 40.8	
SMLA	**Simla**	**8.76**	**174**	*eP*	**Pn**	**00 20 35.6**	**+2.5**
SMLA				*eS*	**Sn**	**00 22 10.7**	**+0.3**
DDI	**Dehra Dun**	**9.65**	**170**	*eP*	**Pn**	**00 20 45.0**	**-0.4**
DDI				*eS*	**Sn**	**00 22 34.0**	**+1.7**
LGTI	**Lohaghat**	**10.94**	**160**	*eP*	**Pn**	**00 21 03.2**	**+0.3**
LGTI				*eS*	**Sn**	**00 23 01.5**	**-2.3**
KURK	**Kurchatov**	**11.01**	**9**	Pn	**Pn**	**00 21 00.2**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=12

SVE	**Sverdlovsk**	**19.76**	**334**⇑	*e*P		**Pn**	**00 22 54.7**	**-1.7**
SVE				pmax	pmax				
	comp=Z,24nm,1.5s								
ARU	**Arti**	**20.18**	**331**	*e*P		**P**	**00 22 59.3**	**+0.1**
	comp=Z,19nm,0.9s								
ARU				*e*S		**S**	**00 26 45.7**	**+3.0**
ARU	**Arti**	**20.18**	**331**	*d i*P		**P**	**00 22 57.2**	**-2.0**
ARU				*e*			00 23 19.6		
ARU				*e*S		**S**	**00 26 35.0**	**-7.7**
ARU				pmax	pmax				
	comp=Z,27nm,2.5s								
ZAK	**Zakamensk**	**21.78**	**52**	*e*P		**P**	**00 23 17.4**	**+1.0**
ZAK				pmax	pmax				
	comp=Z,6.0nm,1.4s,mb3.8								
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.8s,mb3.4								
HYB	**Hyderabad**	**22.46**	**174**	*e*P		**P**	**00 23 26.0**	**+2.1**
HYB	**Hyderabad**	**22.46**	**174**	*i* P		**P**	**00 23 26.0**	**+2.1**
SONM	**Songino Array**	**23.17**	**60**	P		**P**	**00 23 33.0**	**+1.8**
	comp=Z,1.0nm,0.7s,mb3.3,baz=263,slow=11,SNR=3.5								
SONM				LR	LR		00 33 29.7		
	comp=Z,278nm,19.1s,MS3.7,baz=290,slow=39								
SONM	**Songino Array**	**23.17**	**60**	P		**P**	**00 23 33.0**	**+1.9**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.7s								
SONM				MLR	MLR				
	comp=Z,278nm,19.1s								
ULN	**Ulaanbaatar**	**23.61**	**60**	*e*P		**P**	**00 23 36.3**	**+1.1**
	comp=Z,7.2nm,1.3s,mb3.9								
ULN	**Ulaanbaatar**	**23.61**	**60**	*e*P		**P**	**00 23 36.3**	**+1.0**
ULN				pmax	pmax				
	comp=Z,7.0nm,1.3s,mb3.9								
GNI	**Garni**	**23.94**	**281**	P		**P**	**00 23 38.7**	**+0.3**
	comp=Z,1.8nm,0.6s,mb3.7,baz=18,slow=19,SNR=2.4								
GNI	**Garni**	**23.94**	**281**	*e*P		**P**	**00 23 39.0**	**+0.7**
GNI	**Garni**	**23.94**	**281**	P		**P**	**00 23 38.7**	**+0.3**
GNI				pmax	pmax				
	comp=Z,2.0nm,0.6s								
KIV	**Kislovodsk**	**25.08**	**290**	P		**P**	**00 23 48.7**	**0.0**
KIV	**Kislovodsk**	**25.08**	**290**	*e*P		**P**	**00 23 45.3**	**-3.4**
KIV				*e**PP		pP	00 24 02.6	+0.9
KIV				*e*S		**S**	**00 28 03.3**	**-6.1**
KIV				pmax	pmax				
	comp=Z,11nm,1.1s,mb4.3								
KIV				MLR	MLR				
	comp=Z,67nm,13.0s,MS3.3								
CMAR	**Chiang Mai Arr**	**29.06**	**131**	P		**P**	**00 24 27.0**	**+2.3**
	comp=Z,0.4nm,0.3s,mb3.6,baz=315,slow=11,SNR=2.5								
OBN	**Obninsk**	**30.26**	**314**⇑	*e*P		**P**	**00 24 41.0**	**+6.1**
OBN				pmax	pmax				
	comp=Z,21nm,1.6s,mb4.6								
OBN				MLR	MLR				
	comp=Z,200nm,17.0s,MS3.8								
BR131	**Keskin Array S**	**32.38**	**284**	*e*P		**P**	**00 24 53.4**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.0								
BRTR	**Keskin Array B**	**32.38**	**284**	P		**P**	**00 24 53.4**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.0,baz=94,slow=6.5,SNR=7.4								
BRTR	**Keskin Array B**	**32.38**	**284**	*i* P		**P**	**00 24 55.0**	**+1.3**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.6s								
WHN	**Wuhan**	**32.43**	**95**	P		**P**	**00 24 53.5**	**-0.7**
AKASG	**Malin Array Be**	**34.16**	**304**	P		**P**	**00 25 08.7**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=83,slow=8.4,SNR=4.0								
NJ2	**Nanjing**	**35.23**	**89**	*e*P		**P**	**00 25 23.3**	**+4.7**
MLR	**Muntele Rosu**	**36.79**	**296**	⇓*i*P		**P**	**00 25 33.0**	**+1.3**
BURAR	**Bucovina Array**	**36.98**	**299**	⇓*i*P		**P**	**00 25 32.1**	**-1.2**
KWP	**Kalwaria**	**38.40**	**303**	P		**P**	**00 25 44.9**	**-0.4**
KEV	**Kevo**	**39.29**	**335**	P		**P**	**00 25 52.0**	**-0.4**
ARCES	**ARCESS Array B**	**39.69**	**335**	P		**P**	**00 25 55.3**	**-0.5**
	comp=Z,2.2nm,0.8s,mb4.0,baz=94,slow=7.3,SNR=5.1								
ARCES				LR	LR		00 43 22.9		
	comp=Z,192nm,20.3s,MS3.9,baz=73,slow=38								
ARCES	**ARCESS Array B**	**39.69**	**335**	P		**P**	**00 25 55.3**	**-0.5**
ARCES				pmax	pmax				
	comp=Z,2.0nm,0.8s								
ARCES				MLR	MLR				
	comp=Z,192nm,20.3s								
KSRS	**Korea Array**	**40.10**	**76**	LR		LR	00 43 47.1		
	comp=Z,35nm,20.9s,MS3.2,baz=263,slow=38								
PSZ	**Piszkesteto**	**40.49**	**301**	*e*P		**P**	**00 26 02.7**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.0								
PSZ	**Piszkesteto**	**40.49**	**301**	*e*P		**P**	**00 26 02.7**	**0.0**
PSZ				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.0								
TIXI	**Tiksi**	**41.16**	**23**⇑	*i*P		**P**	**00 26 08.7**	**+0.8**
TIXI				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.4								
HABR	**Khabarovsk**	**42.23**	**58**	P		**P**	**00 26 17.9**	**+0.9**
HABR				*e**PP		pP	00 26 37.0	+6.4
HABR				*e*			00 28 10.6		
HABR				*e*S		**S**	**00 32 32.8**	**-0.7**
HABR				*e*SS		SS	00 35 45.1	+2.3
HABR				*e*			00 36 11.9		
HABR				*e*SSS			00 36 20.9		
NB2	**NORSAR Subarra**	**44.21**	**321**	P		**P**	**00 26 32.4**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.2,baz=88,slow=7.9								
NOA	**NORSAR Array B**	**44.21**	**321**	P		**P**	**00 26 32.6**	**-0.1**
	comp=Z,2.5nm,0.9s,mb3.9,baz=88,slow=8.3,SNR=4.8								
NOA				LR	LR		00 46 06.3		
	comp=Z,91nm,19.9s,MS3.7,baz=80,slow=38								
NOA	**NORSAR Array B**	**44.21**	**321**	*e*P		**P**	**00 26 38.8**	**+6.1**
NOA				pmax	pmax				
	comp=Z,2.0nm,0.7s								
GERES	**GERESS Array B**	**44.35**	**303**	P		**P**	**00 26 34.7**	**+0.7**
	comp=Z,0.7nm,0.6s,mb3.6,baz=68,slow=7.5,SNR=7.5								
GERES				LR	LR		00 46 48.6		
	comp=Z,110nm,18.0s,MS3.8,baz=254,slow=38								
GERES	**GERESS Array B**	**44.35**	**303**	P		**P**	**00 26 34.7**	**+0.6**
GERES				pmax	pmax				
	comp=Z,1.0nm,0.6s								
GERES				MLR	MLR				
	comp=Z,110nm,18.0s								
TIP	**Timpagrande**	**45.01**	**289**	P		**P**	**00 26 38.6**	**-0.8**
TORD	**Torodi Ar. Bea**	**69.74**	**270**	P		**P**	**00 29 33.6**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.1,baz=46,slow=5.3,SNR=19								
YKA	**Yellowknife Ar**	**77.64**	**5**	P		**P**	**00 30 20.2**	**+0.7**
	comp=Z,2.6nm,0.7s,mb4.3,baz=346,slow=5.7,SNR=8.6								
YKA	**Yellowknife Ar**	**77.64**	**5**	P		**P**	**00 30 20.2**	**+0.7**
YKA				pmax	pmax				
	comp=Z,3.0nm,0.7s								
WRA	**Warramunga Arr**	**80.54**	**126**	P		**P**	**00 30 38.4**	**+2.5**
	comp=Z,1.2nm,0.6s,mb4.0,baz=314,slow=6.4,SNR=5.2								
WRA	**Warramunga Arr**	**80.54**	**126**	P		**P**	**00 30 38.4**	**+2.5**
WRA				pmax	pmax				
	comp=Z,1.0nm,0.6s								
ASAR	**Alice Springs**	**83.05**	**129**	P		**P**	**00 30 51.5**	**+2.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=313,slow=5.1,SNR=17								
ASAR	**Alice Springs**	**83.05**	**129**	P		**P**	**00 30 51.5**	**+2.4**
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.6s								

*IDC **22** 00:22:08.4±1.1,3974N×7604E,h0km,mb3.8/7, mb1 4.0/10,mb1mx3.8/24,mbtmp3.9/10,ML3.6/3,MS3.3/3, Ms1 3.3/3,ms1mx3.0/28,Error ellipse: s-maj=28.2km s-min=20.5km az=172.0*

*NNC **22** 00:22:11.0±2.3,3969N×7551E,h0km,mb4.9,mpv4.5, Error ellipse: s-maj=22.7km s-min=11.5km az=139.0*

*MOS **22** 00:22:11.3±1.3,3968N×7598E,h33km,mb4.5/4,Error ellipse: s-maj=13.7km s-min=8.5km az=93.4*

*BJI **22** 00:22:14.3,4009N×7573E,h36km,ML3.7*

*ISCJB **22** 00:22:14.7±0.5,3979N±003×7605E±006,h62km±4km, mb3.9/11,Error ellipse: s-maj=7.9km s-min=5.7km az=179.2*

*NEIC **22** 00:22:16.1±0.9,3990N×7616E,h63km±8km,mb4.2/3, Error ellipse: s-maj=10.0km s-min=8.0km az=181.0*

ISC 22 00:22:15.8±0.5,3979N±004×7612E±006,h57km±4km,n54, σ1§05/63,mb3.9/11,6C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.30**	**203**	⇓*i*P		P	**Pn**	**00 22 24.5**	**-1.0**
KSH				S		S	**Sn**	**00 22 32.8**	**+0.3**
KSH				Smax					
	comp=N,3μm,0.7s								
KSH				Smax					
	comp=E,2μm,0.4s								
ULHL	**Ulahol**	**2.45**	**2**	P		**Pn**		**00 22 54.0**	**+0.6**
	SNR=20								
UCH	**Uchtor**	**2.72**	**334**	*e*Pn		**Pn**		**00 22 56.7**	**-0.3**
UCH				*e*Sn		**Sn**		**00 23 29.1**	**+0.5**
UCH	**Uchtor**	**2.72**	**334**	P		**Pn**		**00 22 56.7**	**-0.3**
	SNR=63								
AML	**Almayashu**	**2.98**	**323**	*e*Pn		**Pn**		**00 22 59.7**	**-0.7**
AML				*e*Sn		**Sn**		**00 23 32.8**	**-2.1**
AML	**Almayashu**	**2.98**	**323**	P		**Pn**		**00 23 00.1**	**-0.4**
	SNR=27								
KBK	**Karagaybulak**	**3.00**	**343**	P		**Pn**		**00 23 01.3**	**+0.5**
	SNR=22								
AAK	**Ala-Archa**	**3.09**	**337**	P		**Pn**		**00 23 01.9**	**-0.2**
	SNR=38								
TKM2	**Tokmak 2**	**3.15**	**353**	⇑Pn		**Pn**		**00 23 03.3**	**+0.4**
	comp=E,313nm,0.6s								
TKM2				⇓Sn		**Sn**		**00 23 43.0**	**+3.8**
	comp=E,846nm,1.1s								
TKM2	**Tokmak 2**	**3.15**	**353**	*e*Pn		**Pn**		**00 23 03.3**	**+0.4**
TKM2				*e*Sn		**Sn**		**00 23 39.8**	**+0.5**
TKM2	**Tokmak 2**	**3.15**	**353**	P		**Pn**		**00 23 03.5**	**+0.6**
	SNR=20								
CHMS	**Chumysh**	**3.37**	**343**	P		**Pn**		**00 23 05.7**	**-0.1**
	SNR=22								
EKS2	**Erkin-Say**	**3.37**	**329**	*e*Pn		**Pn**		**00 23 05.7**	**-0.1**
EKS2				*e*Sn		**Sn**		**00 23 45.2**	**+0.6**
EKS2	**Erkin-Say**	**3.37**	**329**	P		**Pn**		**00 23 06.0**	**+0.1**
	SNR=19								
KNDC	**Almaty**	**3.48**	**10**	⇑Pn		**Pn**		**00 23 08.8**	**+1.4**
	comp=E,202nm,0.7s								
KNDC				⇑Sn		**Sn**		**00 23 56.0**	**+8.7**
	comp=E,479nm,0.8s								
AAA	**Alma-Ata**	**3.53**	**10**	*i* PN		**Pn**		**00 23 07.7**	**-0.4**
AAA				*i* S		**Sn**		**00 23 55.9**	**+7.3**
USP	**Ospenovka**	**3.68**	**341**	P		**Pn**		**00 23 10.1**	**0.0**
	SNR=42								
KK31	**Karatay Array**	**5.36**	**310**	⇑Pn		**Pn**		**00 23 31.4**	**-1.7**
	comp=E,12nm,0.7s,baz=122,slow=12,SNR=5.0								
KK31				⇑Pg		**Pn**		**00 23 43.5**	**+10**
	comp=E,20nm,0.5s,baz=137,slow=12,SNR=4.5								
KK31				Lg				00 24 51.3	
	comp=E,57nm,0.6s,baz=127,slow=29,SNR=7.5								
KK31	**Karatay Array**	**5.36**	**310**	PN		**Pn**		**00 23 43.4**	**+10**
KK31								00 24 51.3	
KK31				pmax	pmax				
	comp=Z,20nm,0.5s								
KK31				pmax	pmax				
	comp=N,57nm,0.6s								
KBL	**Kabul**	**7.71**	**229**	*e*Pn		**Pn**		**00 24 08.1**	**+2.8**
KBL				*e*Sn		**Sn**		**00 25 32.0**	**+0.9**
MKAR	**Makanchi Array**	**8.32**	**31**	Pn		**Pn**		**00 24 12.3**	**-1.3**
	comp=N,1.0nm,0.3s,baz=201,slow=15,SNR=3.8								
MKAR				Lg				00 26 28.8	
	comp=N,0.5nm,0.3s,baz=219,slow=29,SNR=2.9								
MKAR				LR	LR			00 27 42.7	
	comp=N,181nm,18.3s,baz=263,slow=40								
KURK	**Kurchatov**	**11.06**	**8**	Lg				00 27 48.6	
	comp=N,0.2nm,0.3s,baz=202,slow=29,SNR=4.0								
KURK				LR	LR			00 29 10.6	
	comp=N,154nm,19.8s,baz=195,slow=38								
KURK	**Kurchatov**	**11.06**	**8**	*i* P		**Pn**		**00 24 53.3**	**+2.2**
BVAR	**Borovoye Array**	**13.81**	**345**	Lg				00 29 18.9	
	comp=N,0.4nm,0.3s,baz=161,slow=27,SNR=5.5								
BVAR				LR	LR			00 30 58.0	
	comp=N,164nm,19.9s,baz=58,slow=38								
ZALV	**Zalesovo Beam**	**15.34**	**20**	Pn		**Pn**		**00 25 45.9**	**-2.6**
	comp=N,0.2nm,0.3s,baz=216,slow=14,SNR=3.6								
LSA	**Lhasa**	**15.91**	**125**	Pn		**Pn**		**00 25 55.2**	**-0.7**
AKTK	**Aktyubinsk**	**16.59**	**316**	Pn		**Pn**		**00 26 00.4**	**-3.9**
AKTO	**Aktyubinsk**	**16.59**	**316**	Pn		**Pn**		**00 26 00.4**	**-3.9**
	comp=N,0.2nm,0.3s,baz=106,slow=17,SNR=2.7								
HVS	**Khovu-Aksy**	**16.71**	**41**	*i* P		**Pn**		**00 26 05.5**	**-0.3**
HVS				pmax	pmax				
	comp=Z,28nm,1.3s								
ARU	**Arti**	**20.26**	**331**	*d i*P		**P**		**00 26 47.0**	**+0.8**
ARU				*e*				00 26 57.0	
ARU				S		**S**		**00 30 32.3**	**+2.1**
ARU				*e*SS				00 30 52.0	
ARU				pmax	pmax				
	comp=Z,29nm,2.5s								
MAK	**Makhachkala**	**21.66**	**288**	*e*P		**P**		**00 27 10.3**	**+8.9**
MAK				MLR	MLR				
	comp=Z,185nm,11.0s								
SONM	**Songino Array**	**23.16**	**60**	P		**P**		**00 27 17.8**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.2,baz=266,slow=13,SNR=2.4								
SONM	**Songino Array**	**23.16**	**60**	P		**P**		**00 27 17.8**	**+0.5**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.6s								
ULN	**Ulaanbaatar**	**23.61**	**60**	*e*P		**P**		**00 27 20.4**	**-0.9**
	comp=Z,19nm,2.0s,mb4.2								
ULN	**Ulaanbaatar**	**23.61**	**60**	*e*P		**P**		**00 27 20.4**	**-1.0**
ULN				pmax	pmax				
	comp=Z,19nm,2.0s,mb4.2								
KIV	**Kislovodsk**	**25.14**	**290**	P		**P**		**00 27 34.3**	**-1.1**
KIV	**Kislovodsk**	**25.14**	**290**	P		**P**		**00 27 34.3**	**-1.1**
OBN	**Obninsk**	**30.34**	**314**	P		**P**		**00 28 21.0**	**-0.7**
OBN	**Obninsk**	**30.34**	**314**⇑	*e*P		**P**		**00 28 21.8**	**+0.1**
OBN				*e*				00 29 23.7	
OBN				*e*SS		PcS		00 35 02.0	-1.8
OBN				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.3								
BR131	**Keskin Array S**	**32.44**	**284**	*e*P		**P**		**00 28 40.0**	**-0.3**
	comp=Z,1.2nm,0.6s,mb3.9								
BRTR	**Keskin Array B**	**32.44**	**284**	P		**P**		**00 28 40.5**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.8,baz=84,slow=6.7,SNR=6.9								
BRTR	**Keskin Array B**	**32.44**	**284**	*e*P		**P**		**00 28 41.0**	**+0.7**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.6s								
TIRR	**Tirgusor**	**35.30**	**294**	*e*P		**P**		**00 29 02.8**	**-2.3**
KWP	**Kalwaria**	**38.48**	**303**	P		**P**		**00 29 31.0**	**-1.0**
PSZ	**Piszkesteto**	**40.56**	**301**	*e*P		**P**		**00 29 48.9**	**-0.5**
TIXI	**Tiksi**	**41.20**	**23**	*e*P		**P**		**00 29 55.3**	**+0.9**
TIXI				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.1								
NOA	**NORSAR Array B**	**44.28**	**321**	P		**P**		**00 30 18.6**	**-0.8**
	comp=Z,1.4nm,0.8s,mb3.7,baz=90,slow=7.7,SNR=3.4								
NOA	**NORSAR Array B**	**44.28**	**321**	*e*P		**P**		**00 30 21.6**	**+2.2**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
GERES	**GERESS Array B**	**44.42**	**303**	P		**P**		**00 30 20.8**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.5,baz=64,slow=9.1,SNR=5.0								
GERES	**GERESS Array B**	**44.42**	**303**	P		**P**		**00 30 20.8**	**+0.1**
GERES				pmax	pmax				
	comp=Z,1.0nm,0.5s								
TIP	**Timpagrande**	**45.07**	**289**	*e*P		**P**		**00 30 26.4**	**+0.4**
	comp=Z,5.9nm,1.0s,mb4.4								
TORD	**Torodi Ar. Bea**	**69.78**	**270**	P		**P**		**00 33 20.0**	**-0.3**
	comp=Z,1.4nm,0.5s,mb4.1,baz=48,slow=5.3,SNR=12								
YKA	**Yellowknife Ar**	**77.70**	**5**	P		**P**		**00 34 06.5**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.1,baz=346,slow=5.6,SNR=6.5								
ASAR	**Alice Springs**	**82.98**	**129**	P		**P**		**00 34 35.9**	**+1.1**
	comp=Z,0.1nm,0.4s,mb3.2,baz=324,slow=6.0,SNR=2.5								

IDC 22 00:30:34.9±2.7,111N×9695E,h0km,mb3.7/6,mb1 3.7/7, mb1mx3.6/21,mbtmp3.6/7,ML3.7/1,Error ellipse: s-maj=109.2km s-min=22.5km az=59.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.35**	**6**	P		P	Pn	00 34 40.5	+1.9
	0.1nm,0.3s,baz=204,slow=11,SNR=4.3								
WRA	**Warramunga Arr**	**42.20**	**122**	P		P		00 38 29.5	-0.4
	0.5nm,0.3s,baz=301,slow=8.7,SNR=3.2								
ASAR	**Alice Springs**	**43.54**	**127**	P		P		00 38 41.2	+0.5
	0.3nm,0.8s,baz=294,slow=7.0,SNR=2.7								
SONM	**Songino Array**	**47.26**	**9**	P		P		00 39 09.0	-0.8
	0.8nm,0.6s,baz=194,slow=3.1,SNR=4.6								
MKAR	**Makanchi Array**	**47.27**	**346**	P		P		00 39 10.1	+0.1
	0.8nm,0.7s,baz=160,slow=9.1,SNR=7.2								
KURK	**Kurchatov**	**51.82**	**345**	P		P		00 39 44.2	-0.3
	0.5nm,0.6s,baz=165,slow=6.6,SNR=3.5								
ZALV	**Zalesovo Beam**	**53.61**	**351**	P		P		00 39 57.6	-0.2
	1.0nm,0.4s,baz=184,slow=6.0,SNR=6.5								

*CSEM **22** 00:34:13.5±0.1,4146N×2002E,h5km,ML3.2/1,Error ellipse: s-maj=3.9km s-min=1.5km az=39.0*

*ISCJB **22** 00:34:14.2±0.4,4145N±003×2003E±004,h10km,Error ellipse: s-maj=5.2km s-min=2.4km az=44.4*

*PDG **22** 00:34:14.3±0.1,4145N×1995E,h6km,ML2.2/9,Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

*SKO **22** 00:34:14.7,4136N×2000E,h14km,M2.0,ML2.4*

*THE **22** 00:34:15.6,4140N×2004E,h0km±4km,ML3.2/1,Error ellipse: s-maj=8.4km s-min=1.5km az=1.0*

ISC 22 00:34:14.6±0.5,4142N±003×2002E±004,h11km±4km,n24, σ1§27/45,7C-4D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.14**	**238**	P		P	**Pg**	**00 34 17.9**	**0.0**
TIR				S		S	**Sg**	**00 34 21.1**	**+0.9**
OHR	**Ohrid**	**0.66**	**118**	P		P	**Pg**	**00 34 26.9**	**-0.5**
OHR				S		S	**Sg**	**00 34 37.3**	**+1.2**
OHR	**Ohrid**	**0.66**	**118**	*e*Pg		**Pg**		**00 34 26.8**	**-0.6**
OHR				*e*Sg		**Sg**		**00 34 37.0**	**+0.9**
OHR	**Ohrid**	**0.66**	**118**	*e*Pg		**Pg**		**00 34 26.9**	**-0.6**
OHR				*e*Sg		**Sg**		**00 34 37.0**	**+0.9**
OHR				*e*Lg				00 34 37.7	
	comp=E,70nm,0.5s								
OHR				*e*Lg				00 34 37.8	
	comp=N,203nm,0.5s								
ULC	**Ulcinj**	**0.79**	**313**	⇓*i*Pg		**Pg**		**00 34 27.8**	**-2.1**
ULC				*e*Sg		**Sg**		**00 34 39.4**	**-0.9**
BIA	**Bitola**	**1.06**	**112**	P		**Pg**		**00 34 35.0**	**0.0**
BIA				S		**Sg**		**00 34 49.8**	**+1.0**
BIA	**Bitola**	**1.06**	**112**	*e*Pg		**Pg**		**00 34 33.6**	**-1.4**
BIA	**Bitola**	**1.06**	**112**	P		**Pg**		**00 34 35.0**	**0.0**
BIA				*e*Sg		**Sg**		**00 34 48.3**	**-0.5**
BIA				S		**Sg**		**00 34 49.8**	**+1.0**
BIA	**Bitola**	**1.06**	**112**	*e*Pg		**Pn**		**00 34 33.7**	**-1.7**
BIA				*e*Sg		**Sg**		**00 34 48.4**	**-0.4**
PDG	**Podgorica**	**1.16**	**331**⇑	*i*Pg		**Pn**		**00 34 34.4**	**-2.4**
PDG				*e*Sg		**Sg**		**00 34 51.9**	**0.0**
TTG	**Podgorica**	**1.16**	**331**⇑	*i*Pg		**Pn**		**00 34 34.4**	**-2.4**
TTG				*e*Sg		**Sg**		**00 34 51.9**	**0.0**
PVY	**Plav**	**1.17**	**358**⇑	*i*Pg		**Pn**		**00 34 35.1**	**-1.9**
PVY				*e*Sg		**Sg**		**00 34 53.4**	**+1.0**
FNA	**Florina**	**1.21**	**122**	P		**Pn**		**00 34 36.9**	**-0.5**
FNA				S		**Sb**		**00 34 55.2**	**+2.2**
BUM	**Brajici-Budva**	**1.22**	**317**⇑	*i*Pg		**Pn**		**00 34 35.7**	**-1.9**
BUM				*e*Sg		**Sg**		**00 34 53.7**	**-0.1**
BEY	**Berane**	**1.45**	**356**⇑	*i*Pg		**Pn**		**00 34 40.5**	**-0.3**
BEY				*e*Sg		**Sg**		**00 35 02.6**	**+1.3**
IVA	**Berane**	**1.45**	**356**⇑	*i*Pg		**Pn**		**00 34 40.5**	**-0.3**
IVA				*e*Sg		**Sg**		**00 35 02.6**	**+1.3**
HCY	**Herceg Novi**	**1.53**	**312**	⇓*i*Pg		**Pn**		**00 34 41.5**	**-0.4**
HCY				*e*Sg		**Sg**		**00 35 04.5**	**+0.6**
NKY	**Niksic**	**1.58**	**332**⇑	*i*Pg		**Pn**		**00 34 42.5**	**-0.2**
NKY				*e*Sg		**Sg**		**00 35 06.2**	**+0.6**
BRY	**Bratogost**	**1.84**	**324**	⇓*i*Pn		**Pn**		**00 34 46.7**	**+0.5**
BRY				*e*Sn		**Sn**		**00 35 12.3**	**+2.8**
GRG	**Griva**	**1.85**	**104**	P		**Pn**		**00 34 46.8**	**+0.5**
GRG				S		**Sn**		**00 35 14.5**	**+4.7**
IGT	**Igoumenitsa**	**1.90**	**173**	P		**Pn**		**00 34 49.1**	**+2.1**
VAY	**Valandovo**	**1.92**	**92**	*e*Pg		**Pg**		**00 34 49.5**	**-1.9**
VAY	**Valandovo**	**1.92**	**92**	*e*Pg		**Pg**		**00 34 49.5**	**-1.9**
UPM	**Unac-Piva**	**1.96**	**335**	⇓*i*Pn		**Pn**		**00 34 48.6**	**+0.6**
UPM				*e*Sn		**Sn**		**00 35 15.4**	**+3.0**

*NEIC **22** 01:03:58.0,15.12N×9360W,h38km,MD4.3(MEX),After MEX.*

MEX 22 01:03:57.9±0.4,1510N×9362W,h33km±5km,MD4.3,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.71**	**32**	*i* P		P	Pn	01 04 09.7	-2.0
PCIG				*i* S		S	Sn	01 04 18.6	-2.8
THIG		**1.32**	**98**	*e*P		P	Pn	01 04 18.0	-2.0
THIG				*i* S		S	Sn	01 04 33.8	-2.6
TGIG		**1.73**	**16**	*i* P		P	Pn	01 04 23.9	-1.8
TGIG				*i* S		S	Sn	01 04 44.2	-2.5
SCX	**San Cristobal**	**1.88**	**30**	*i* P		P	Pn	01 04 26.3	-1.4
SCX				*i* S		S	Sn	01 04 47.5	-2.8
SCX	**San Cristobal**	**1.88**	**30**	*e*P		P	Pn	01 04 26.7	-1.0
SCX				*i* S		S	Sn	01 04 48.9	-1.3
CMIG	**Matias Romero**	**2.32**	**329**	*i* P		P	Pn	01 04 32.4	-1.4
CMIG				*i* S		S	Sn	01 04 58.6	-2.6
VHO	**Vista Hermosa**	**3.58**	**304**	*e*P		P	Pn	01 04 50.6	-0.5
V

11nm,0.4s
STKA Stephens Creek 34.97 248 P P 01 39 39.7 +0.3
1.3nm,0.4s,baz=121,slow=12,SNR=3.4
STKA Stephens Creek 34.97 248 P P 01 39 39.7 +0.3
ASAR Alice Springs 42.21 260 P P 01 40 38.1 -0.2
2.6nm,0.6s,baz=96,slow=8.1,SNR=32
ASAR ScP ScP 01 45 22.6 -0.1
0.4nm,0.5s,baz=113,slow=4.5,SNR=5.5
WB2 Warramunga Arr 42.53 266 *e*P P 01 40 39.8 -1.0
WRAB Tennant Creek 42.54 266 *e*P P 01 40 39.9 -1.0
3.9nm,0.8s
WRA Warramunga Arr 42.54 266 P P 01 40 40.1 -0.9
4.4nm,0.5s,baz=102,slow=8.1,SNR=17
MBWA Marble Bar 55.55 260 *e*P P 01 42 16.0 -1.3
1.2nm,0.4s
NOA NORSAR Array B 141.71 351 PKhKP 01 51 58.2
0.4nm,0.6s,baz=32,slow=5.2,SNR=3.0
AKASG Malin Array Be 144.69 328 PKP PKPdf 01 52 07.8 -0.7
1.6nm,0.4s,baz=45,slow=4.1,SNR=11
BRTR Keskin Array B 147.42 308 PKPbc PKPbc 01 52 16.2 -0.5
0.8nm,0.8s,baz=59,slow=2.9,SNR=3.5
BRTR PKPab PKPab 01 52 20.5 +0.1
0.6nm,0.8s,baz=85,slow=4.0,SNR=3.8
CLL Collm 150.51 343 *e*PKPbc PKPbc 01 52 23.0 -0.8

GUC 22 01:36:29.7±0.8, 2278S×6882W, h98km±5km, MD3.7, ML3.4, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.18**	**332**	*e*P	Pn	01 36 44.0	+0.3
LVC				*i* S	Sn	01 36 55.5	+1.5
LVC				AML	AML	01 36 56.4	
	comp=E,3μm,0.2s						
SPCH	**San Pedro de A**	**0.59**	**103**	*e*P	Pn	01 36 47.0	+1.0
SPCH				*i* S	Sn	01 37 00.0	+1.9
SPCH				AML	AML	01 37 00.7	
	comp=E,6μm,0.2s						
MACH	**Maria Elena**	**1.04**	**303**	*e*P	Pn	01 36 51.5	+1.0
MACH				*i* S	Sn	01 37 07.7	+1.7
CEN1	**Los Morros**	**1.41**	**244↓**	*e*P	Pn	01 36 57.6	+2.9
CEN1				*i* S	Sn	01 37 18.9	+5.2
CEN1				AML	AML	01 37 23.1	
	comp=E,196nm,0.5s						
MECH	**Mejillones**	**1.54**	**257**	*e*P	Pn	01 36 56.8	+0.5
MECH				*i* S	Sn	01 37 17.8	+1.3
MECH				AML	AML	01 37 27.6	
	comp=N,390nm,0.4s						
ANCH	**Antofagasta**	**1.72**	**238**	*e*P	Pn	01 36 60.0	+1.4
ANCH				*i* S	Sn	01 37 22.4	+1.8
PB01	**Plate Boundary**	**1.83**	**340**	*e*P	Pn	01 37 01.0	+0.9
PB01				*e*S	Sn	01 37 24.8	+1.7

*CSEM **22** 02:50:46.3±0.1, 3950N×2992E, h2km, MD2.8, Error ellipse: s-maj=1.6km s-min=1.0km az=95.0*
*ISCJB **22** 02:50:47.1±0.5, 3950N±002×2992E±004, h1km±6km, Error ellipse: s-maj=5.3km s-min=3.7km az=180.0*
*ISK **22** 02:50:47.4, 3951N×2996E, h8km, MD2.8*
*DDA **22** 02:50:47.1, 3947N×2993E, h7km±5km, Md2.9*
ISC 22 02:50:47.8±0.4, 3950N±002×2993E±004, h4km±6km, n17, σ0s61/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.46**	**162**	*e*PG	**Pg**	**02 50 57.2**	**+0.6**
ALT				*e*SG	**Sg**	**02 51 03.5**	**+0.8**
GDZ	**Gediz**	**0.53**	**220**	*i* P	**Pg**	**02 50 57.7**	**-0.3**
GDZ				*i* S	**Sg**	**02 51 05.1**	**+0.2**
BORA	**Eskisehir**	**0.56**	**47**	*i* P	**Pg**	**02 50 58.3**	**-0.2**
BORA				*i* S	**Sg**	**02 51 06.5**	**+0.7**
CAVI	**Cavuskoy**	**0.71**	**355**	*e*PG	**Pg**	**02 51 01.3**	**-0.1**
CAVI				*e*SG	**Sg**	**02 51 11.4**	**+0.8**
GPA	**Golpazari**	**0.85**	**20**	*e*PG	**Pg**	**02 51 03.6**	**-0.4**
ULDT	**Uludag**	**0.89**	**317**	*i* P	**Pg**	**02 51 03.7**	**-1.1**
ADVT	**Abdulvahap**	**0.95**	**351**	*e*PG	**Pg**	**02 51 05.8**	**-0.1**
GULT	**Gulveren**	**1.04**	**26**	*e*PG	**Pg**	**02 51 07.4**	**-0.3**
DEMI	**Demirci**	**1.04**	**245**	*i* P	**Pg**	**02 51 07.0**	**-0.7**
DEMI				*i* S	**Sg**	**02 51 20.7**	**-0.5**
SHUT	**Suhut-Afyon**	**1.06**	**152**	*e*PG	**Pg**	**02 51 07.8**	**-0.3**
EYL	**Eskiyayla**	**1.08**	**9**	*e*PG	**Pg**	**02 51 08.2**	**-0.4**
EYL				*e*SG	**Sg**	**02 51 23.4**	**+0.8**
BOLV	**Bolvadin**	**1.11**	**134**	*i* P	**Pg**	**02 51 09.4**	**+0.3**
BOLV				*i* S	**Sg**	**02 51 23.0**	**-0.5**
DURS	**Dursunbey**	**1.13**	**276**	*i* P	**Pg**	**02 51 08.9**	**-0.5**
DURS				*i* S	**Sg**	**02 51 25.5**	**+1.5**
YLV	**Yalova**	**1.15**	**339**	*e*PN	**Pn**	**02 51 09.9**	**-0.8**
KHL	**Karahalli**	**1.21**	**195**	*e*PN	**Pn**	**02 51 10.9**	**-0.5**
KULA	**Kula-Manisa**	**1.39**	**226**	*e*PN	**Pn**	**02 51 13.8**	**-0.1**
KULA				*e*SN	**Sn**	**02 51 33.6**	**+0.9**
KCT	**Karacabey**	**1.43**	**303**	*e*PN	**Pn**	**02 51 14.1**	**-0.4**
KCT				*e*SN	**Sn**	**02 51 34.2**	**+0.4**

IDC 22 03:28:34.8±10.0, 045S×1272W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.8/29, Error ellipse: s-maj=250.3km s-min=117.6km az=173.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**10.57**	**48**	LR	LR	03 34 35.9	
	comp=Z,94nm,18.7s,baz=294,slow=34						
TORD	**Torodi Ar. Bea**	**19.67**	**46**	P	Pn	03 33 05.7	-1.3
	0.1nm,0.3s,baz=232,slow=10,SNR=6.2						
TORD				LR	LR	03 38 54.5	
	comp=Z,43nm,19.6s,baz=150,slow=32						
GERES	**GERESS Array B**	**54.15**	**21**	P	P	03 38 01.9	+0.1
	0.5nm,0.7s,baz=211,slow=7.5,SNR=5.2						
BRTR	**Keskin Array B**	**58.18**	**41**	P	P	03 38 30.9	+0.2
	0.5nm,0.7s,baz=229,slow=7.7,SNR=4.5						

GUC 22 03:41:08.2±0.7, 2285S×7057W, h38km±4km, ML3.8, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.28**	**155↓**	*i*P	Pn	03 41 15.6	-0.5
MECH				*i* S	Sn	03 41 21.4	0.0
MECH				AML	AML	03 41 22.4	
	comp=N,13μm,0.3s						
CEN1	**Los Morros**	**0.64**	**147↓**	*e*P	Pn	03 41 22.2	+1.5
CEN1				*i* S	Sn	03 41 32.8	+3.1
ANCH	**Antofagasta**	**0.84**	**170↑**	*e*P	Pn	03 41 23.8	+0.2
ANCH				*i* S	Sn	03 41 34.9	+0.2
MACH	**Maria Elena**	**1.00**	**49↓**	*i*P	Pn	03 41 26.4	+0.6
MACH				*i* S	Sn	03 41 40.4	+1.8
LVC	**Limon Verde**	**1.55**	**82**	*e*P	Pn	03 41 35.6	+2.3
LVC				*i* S	Sn	03 41 56.4	+4.1
CPN1	**Cerro Paranal**	**1.77**	**175↓**	*e*P	Pn	03 41 36.9	+0.5
CPN1				*i* S	Sn	03 41 58.2	+0.5
CPN1				AML	AML	03 42 04.8	
	comp=E,652nm,0.5s						
SPCH	**San Pedro de A**	**2.19**	**92**	*e*P	Pn	03 41 48.6	+6.5
SPCH				*i* S	Sn	03 42 19.2	+11
SPCH				AML	AML	03 42 27.2	
	comp=N,2μm,0.4s						

*BGS **22** 03:44:20.1±1.9, 2361N×5752E, h15km, mb5.4*
*TEH **22** 03:44:39.4, 2683N×5473E, h26km, ML5.1*
*BJI **22** 03:44:49.7, 2690N×5470E, h14km, mB5.3, mb5.0, Ms4.8, Msz4.6*
*CSEM **22** 03:44:49.2±0.1, 2687N×5476E, h13km, mb5.2/99, Ms4.2, Error ellipse: s-maj=2.2km s-min=1.3km az=6.0*
*ISCJB **22** 03:44:49.6±0.1, 2684N±002×5471E±001, h14km, mb5.2/272, MS4.2/45, Error ellipse: s-maj=2.8km s-min=1.8km az=6.9*
*THR **22** 03:44:50.7±0.3, 2687N×5469E, h14km±3km, ML5.0*
*NEIC **22** 03:44:50.7, 2687N×5469E, h15km, mb5.3/120, ML5.0(THR), MN5.1(TEH), After THR.*
*MOS **22** 03:44:52.4±0.9, 2694N×5475E, h33km, mb5.4/115, MS4.0/33, Error ellipse: s-maj=5.8km s-min=2.6km az=128.2*
*IDC **22** 03:44:54.4±1.7, 2691N×5483E, h36km±13km, mb4.8/34, mb1 4.9/35, mb1mx4.9/38, mbtmp4.8/35, ML4.5/1, MS4.1/24, Ms1 4.1/24, ms1mx4.0/35, Error ellipse: s-maj=11.1km s-min=8.3km az=24.0*
*DJA **22** 03:45:03.4±0.0, 2713N×5465E, h115km, mB5.7/3, Mw(mB)5.4/3, Mwp5.7/4*
*SZGRF **22** 03:45:16.0, 2857N×5232E, h16km, mb5.1, Southern Iran*
ISC 22 03:44:51.4±0.1, 2681N±002×5471E±001, h15km, h15km±.7km:pP-P, n1139, σ1s02/1152, mb5.2/272, MS4.2/45, 167C-19D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.43**	**65**	*e*Pg	**Pn**	**03 45 17.0**	**+0.2**
BNDS				*e*Sg	**Sn**	**03 45 36.0**	**+0.7**
BNDS				AML	AML	03 45 45.4	
	comp=N,21μm,0.6s						
BNDS				AML	AML	03 45 46.2	
	comp=E,22μm,0.4s						
BNDS	**Bandar-Abbas**	**1.43**	**65**	Pg	**Pn**	**03 45 16.0**	**-0.8**
BNDS				*e*Sg	**Sn**	**03 45 36.0**	**+0.6**
	SNR=90						
BANOM	**Banah**	**1.68**	**121**	P	**Pn**	**03 45 21.6**	**+1.4**
	SNR=420						
IBND	**Bandar-abas**	**1.75**	**68**	*e*Pn	**Pn**	**03 45 22.2**	**+1.0**
IBND	**Bandar-abas**	**1.75**	**68**	*e*Pn	**Pn**	**03 45 22.2**	**+1.0**
IBND				*e*Sg	**Sg**	**03 45 48.3**	**+0.4**
IBND				*e*		03 46 03.2	
GHIR	**Ghir-Karzin**	**2.12**	**314**	*e*Pg	**Pn**	**03 45 28.4**	**+2.0**
GHIR				*e*Sg	**Sn**	**03 45 56.0**	**+3.5**
GHIR				AML	AML	03 46 07.8	
	comp=E,15μm,0.5s						
GHIR				AML	AML	03 46 17.0	
	comp=N,10μm,0.6s						
GHIR	**Ghir-Karzin**	**2.12**	**314**	Pg	**Pn**	**03 45 28.0**	**+1.6**
GHIR				Sg	**Sn**	**03 45 55.0**	**+2.5**
HATD	**Hatta, Dubai**	**2.35**	**147**	P	**Pn**	**03 45 33.0**	**+3.5**
	SNR=29						
ISRV	**Sarvestan**	**2.93**	**332**	*e*Pn	**Pn**	**03 45 38.7**	**+1.3**
ISRV				*e*		03 46 46.1	
IPAR	**Pars**	**3.36**	**335**	Pn	**Pn**	**03 45 44.4**	**+1.0**
IPAR	**Pars**	**3.36**	**335**	*e*Pn	**Pn**	**03 45 44.5**	**+1.1**
IPAR				*e*		03 46 59.4	
KRBR	**Kerman**	**3.64**	**29**	*e*Pn	**Pn**	**03 45 48.5**	**+1.2**
KRBR	**Kerman**	**3.64**	**29**	Pn	**Pn**	**03 45 48.0**	**+0.7**
ARQ	**Araqi**	**3.82**	**154**	P	**Pn**	**03 45 52.7**	**+3.0**
	SNR=31						
SLWS		**4.17**	**242**	P	**Pn**	**03 45 57.7**	**+3.1**
BTHS		**4.44**	**233**	P	**Pn**	**03 46 01.0**	**+2.7**
BIDO	**Bidbid**	**4.50**	**136**	P	**Pn**	**03 46 01.2**	**+2.2**
	SNR=11						
BIDO	**Bidbid**	**4.50**	**136**	P	**Pn**	**03 46 01.2**	**+2.1**
	SNR=11						
IMEH	**Mehriz**	**4.57**	**359**	*e*Pn	**Pn**	**03 46 01.3**	**+1.3**
IMEH				*e*		03 47 32.0	
BSY	**Bisya**	**4.63**	**150**	P	**Pn**	**03 46 04.1**	**+3.2**
	SNR=17						
BSYO	**Bisya**	**4.66**	**150**	P	**Pn**	**03 46 04.1**	**+2.8**
	SNR=17						
SMDO	**Samad**	**4.81**	**140**	P	**Pn**	**03 46 06.5**	**+3.3**
	SNR=9.7						
IBAF	**Bafgh**	**4.83**	**9**	*e*Pn	**Pn**	**03 46 04.2**	**+0.7**
IBAF				*e*		03 46 06.4	
BQQSS		**4.88**	**260**	P	**Pn**	**03 46 06.6**	**+2.3**
ISAD	**Sadrabad**	**5.17**	**350**	Pn	**Pn**	**03 46 09.9**	**+1.7**
ISAD				Sn	**Sn**	**03 47 04.8**	**-2.8**
ISAD	**Sadrabad**	**5.17**	**350**	*e*Pn	**Pn**	**03 46 10.0**	**+1.8**
ISAD				*e*Sn	**Sn**	**03 47 04.9**	**-2.7**
ISAD				*e*		03 47 13.6	
JMDO	**Jabal Madar**	**5.39**	**144**	P	**Pn**	**03 46 14.5**	**+3.2**
	SNR=20						
ICHK	**Chekchek**	**5.43**	**357**	Pn	**Pn**	**03 46 13.0**	**+1.2**
ICHK	**Chekchek**	**5.43**	**357**	*e*Pn	**Pn**	**03 46 13.1**	**+1.3**
ICHK				*e*		03 46 17.2	
WBK	**Wadi Bani Khal**	**5.70**	**136**	P	**Pn**	**03 46 17.1**	**+1.6**
	SNR=25						
IGAR	**Gharneh**	**6.04**	**338**	*e*Pn	**Pn**	**03 46 21.7**	**+1.5**
IGAR				*e*		03 47 34.6	
KFJS		**6.17**	**284**	S	**Sn**	**03 47 28.7**	**-3.5**
KFJS		**6.17**	**284**	P	**Pn**	**03 46 22.6**	**+0.7**
NASN	**Na'in**	**6.20**	**345**	*e*Pn	**Pn**	**03 46 23.3**	**+0.9**
NASN	**Na'in**	**6.20**	**345**	Pn	**Pn**	**03 46 23.0**	**+0.6**
IZEF	**Zefreh**	**6.41**	**342**	Pn	**Pn**	**03 46 24.8**	**-0.5**
IZEF				Sn	**Sn**	**03 47 34.1**	**-4.1**
IZEF	**Zefreh**	**6.41**	**342**	*e*Pn	**Pn**	**03 46 24.8**	**-0.5**
IZEF				*e*		03 47 07.7	
IZEF				*e*Sn	**Sn**	**03 47 34.2**	**-4.0**
KBD	**Kabd**	**6.64**	**292**	*e*P	**Pn**	**03 46 29.6**	**+1.2**
	baz=291						
KBD				AML	AML	03 47 45.3	
	comp=Z,265nm,0.3s,baz=291						
RDF	**Al-Radifah**	**6.68**	**290**	*e*P	**Pn**	**03 46 30.2**	**+1.2**
	baz=289						
RDF				AML	AML	03 47 48.8	
	comp=Z,526nm,0.5s,baz=289						
IPIR	**Pirpir**	**6.73**	**331**	*e*Pn	**Pn**	**03 46 30.3**	**+0.6**
IPIR				*e*		03 47 54.6	
UMR	**Umm Al-Rimmam**	**6.75**	**296**	*e*P	**Pn**	**03 46 31.3**	**+1.3**
	baz=294						
UMR				AML	AML	03 47 45.6	
	comp=Z,359nm,0.7s,baz=294						
ITEG	**Tejag**	**7.01**	**29**	*e*Pn	**Pn**	**03 46 33.8**	**+0.3**
ITEG	**Tejag**	**7.01**	**29**	*e*Pn	**Pn**	**03 46 33.8**	**+0.3**
NAY	**Al-Naaiem**	**7.04**	**292**	*e*P	**Pn**	**03 46 35.2**	**+1.3**
	baz=291						
NAY				AML	AML	03 47 55.5	
	comp=Z,429nm,0.6s,baz=291						
IKLH	**Kolahrood**	**7.04**	**338**	*e*Pn	**Pn**	**03 46 34.3**	**+0.4**
IKLH				*e*		03 47 57.0	
MIB	**Mutribah**	**7.15**	**296**	*e*P	**Pn**	**03 46 36.8**	**+1.4**
	baz=295						
MIB				AML	AML	03 47 59.0	
	comp=Z,1μm,0.8s,baz=295						
SHGR	**Shooshtar-Gavs**	**7.38**	**317**	*e*Pn	**Pn**	**03 46 39.5**	**+0.9**
SHGR	**Shooshtar-Gavs**	**7.38**	**317**	Pn	**Pn**	**03 46 39.0**	**+0.4**
IDAH	**Dahanechah**	**7.42**	**36**	*e*Pn	**Pn**	**03 46 40.3**	**+1.2**
IDAH	**Dahanechah**	**7.42**	**36**	*e*Pn	**Pn**	**03 46 40.3**	**+1.2**
IMON	**Monand**	**7.68**	**33**	*e*Pn	**Pn**	**03 46 43.4**	**+0.7**
IMON	**Monand**	**7.68**	**33**	*e*Pn	**Pn**	**03 46 43.4**	**+0.7**
GHVR	**GHOM**	**8.20**	**340**	*e*Pn	**Pn**	**03 46 50.8**	**+1.0**
GHVR	**GHOM**	**8.20**	**340**	Pn	**Pn**	**03 46 50.0**	**+0.2**
LYLS		**8.29**	**237**	P	**Pn**	**03 46 51.4**	**+0.2**
IVRN	**Varamin**	**8.56**	**343**	*e*Pn	**Pn**	**03 46 54.4**	**-0.3**
IANJ	**Anjilo**	**8.66**	**356**	*e*Pn	**Pn**	**03 46 56.4**	**+0.2**
IANJ	**Anjilo**	**8.66**	**356**	*e*Pn	**Pn**	**03 46 56.4**	**+0.2**
IFIR	**Firoozkooh**	**8.97**	**350**	*e*Pn	**Pn**	**03 47 01.2**	**+0.8**
IDMV	**Damavand**	**9.04**	**346**	Pn	**Pn**	**03 47 01.9**	**+0.5**
IDMV	**Damavand**	**9.04**	**346**	*e*Pn	**Pn**	**03 47 02.0**	**+0.6**
ISHM	**Shahmirzad**	**9.05**	**353**	Pn	**Pn**	**03 47 02.0**	**+0.4**
ISHM	**Shahmirzad**	**9.05**	**353**	*e*Pn	**Pn**	**03 47 02.1**	**+0.5**
ASYS		**9.26**	**277**	P	**Pn**	**03 47 03.1**	**-1.3**
IALA	**Alasht**	**9.39**	**351**	*e*Pn	**Pn**	**03 47 07.2**	**+1.0**
IALA	**Alasht**	**9.39**	**351**	*e*Pn	**Pn**	**03 47 07.2**	**+1.0**
IKIA	**Kiasar**	**9.41**	**355**	Pn	**Pn**	**03 47 06.7**	**+0.2**
IKIA	**Kiasar**	**9.41**	**355**	*e*Pn	**Pn**	**03 47 06.8**	**+0.3**
IRAZ	**Razeghan**	**9.50**	**336**	Pn	**Pn**	**03 47 07.4**	**-0.3**
IRAZ	**Razeghan**	**9.50**	**336**	*e*Pn	**Pn**	**03 47 07.5**	**-0.2**
IRAZ				*e*		03 49 15.1	
IPRN	**Peran**	**9.62**	**348**	Pn	**Pn**	**03 47 10.4**	**+1.1**
IPRN	**Peran**	**9.62**	**348**	*e*Pn	**Pn**	**03 47 10.4**	**+1.1**
IGLO	**Ghaloghah**	**9.70**	**356**	Pn	**Pn**	**03 47 11.7**	**+1.3**
IGLO	**Ghaloghah**	**9.70**	**356**	*e*Pn	**Pn**	**03 47 11.7**	**+1.3**
IVIS	**Veis**	**10.24**	**321**	*e*Pn	**Pn**	**03 47 15.9**	**-2.0**
IVIS	**Veis**	**10.24**	**321**	*e*Pn	**Pn**	**03 47 15.9**	**-2.0**
IPAY	**Payeh**	**10.28**	**20**	Pn	**Pn**	**03 47 19.8**	**+1.4**
IPAY	**Payeh**	**10.28**	**20**	*e*Pn	**Pn**	**03 47 19.9**	**+1.5**
ISRO	**Mashad**	**10.30**	**22**	*e*Pn	**Pn**	**03 47 20.5**	**+1.8**
IAKL	**Akhelmad**	**10.36**	**18**	Pn	**Pn**	**03 47 20.4**	**+1.0**
IAKL	**Akhelmad**	**10.36**	**18**	*e*Pn	**Pn**	**03 47 20.5**	**+1.1**
IKRD	**Kardeh**	**10.45**	**17**	Pn	**Pn**	**03 47 26.8**	**+6.1**
IKRD	**Kardeh**	**10.45**	**17**	*e*Pn	**Pn**	**03 47 26.8**	**+6.1**
IMYA	**Miami**	**10.56**	**24**	Pn	**Pn**	**03 47 24.8**	**+2.6**
IMYA	**Miami**	**10.56**	**24**	*e*Pn	**Pn**	**03 47 24.9**	**+2.7**
ISFR	**Sfrayin**	**10.59**	**14**	*e*Pn	**Pn**	**03 47 23.2**	**+0.6**
ISFR	**Sfrayin**	**10.59**	**14**	*e*Pn	**Pn**	**03 47 23.2**	**+0.6**
IDHR	**Dehrash**	**10.63**	**320**	Pn	**Pn**	**03 47 22.6**	**-0.6**
IDHR	**Dehrash**	**10.63**	**320**	*e*Pn	**Pn**	**03 47 22.7**	**-0.5**
IDHR	**Dehrash**	**10.63**	**320**	*e*Pn	**Pn**	**03 47 22.7**	**-0.5**
ISHV	**Shirvan**	**10.99**	**13**	*e*Pn	**Pn**	**03 47 28.7**	**+0.6**
ISHV	**Shirvan**	**10.99**	**13**	*e*Pn	**Pn**	**03 47 28.7**	**+0.6**
KAMS	**Al Khamasin**	**11.31**	**237**	P	**Pn**	**03 47 31.5**	**-1.1**
ABKT	**Ailbek**	**11.46**	**14**	Pn	**Pn**	**03 47 35.4**	**+0.9**
	comp=Z,283nm,1.1s,SNR=6.7						
ISRB	**Sarab**	**12.49**	**333**	Pn	**Pn**	**03 47 48.7**	**+0.1**
ISRB	**Sarab**	**12.49**	**333**	*e*Pn	**Pn**	**03 47 48.7**	**+0.1**
IBST	**Bostanabad**	**12.71**	**331**	Pn	**Pn**	**03 47 48.7**	**-2.9**
IBST	**Bostanabad**	**12.71**	**331**	*e*Pn	**Pn**	**03 47 48.7**	**-2.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**13.17**	**333**	Pn	**Pn**	**03 47 57.5**	**-0.4**
IHRS	**Heris**	**13.17**	**333**	*e*Pn	**Pn**	**03 47 57.5**	**-0.4**
MUKL	**Al Mukalla**	**13.36**	**204**	*e*P	**Pn**	**03 47 56.2**	**-4.5**
MUKL				*i* S	**Sn**	**03 50 26.7**	**-2.3**
GLBA	**Clilabad**	**13.48**	**338**	P	**Pn**	**03 48 02.0**	**-0.1**
	SNR=4.5						
MSL	**Mosul**	**13.74**	**317**	*ex*	x	03 47 31.0	
MSL				*ex*	x	03 48 02.0	
MSL				*ex*	x	03 49 36.0	
MSL				*ex*	x	03 50 26.0	
ISHB	**Shabestar**	**13.77**	**328**	Pn	**Pn**	**03 48 03.8**	**-2.2**
ISHB	**Shabestar**	**13.77**	**328**	*e*Pn	**Pn**	**03 48 03.9**	**-2.1**
IMRD	**Marand**	**14.07**	**330**	Pn	**Pn**	**03 48 09.7**	**-0.5**
IMRD	**Marand**	**14.07**	**330**	*e*Pn	**Pn**	**03 48 09.8**	**-0.4**
HAKT	**HAKKARI**	**14.19**	**322**	*i* P	**Pn**	**03 48 10.6**	**-1.3**
KBL	**Kabul**	**14.54**	**55**	*e*Pn	**Pn**	**03 48 19.4**	**+2.9**
	comp=Z,48nm,1.1s						
KBL	**Kabul**	**14.54**	**55**	*e*P	**Pn**	**03 48 19.4**	**+2.9**
KBL				pmax	pmax		
	comp=Z,49nm,1.1s						
NAX	**Nakhchivan**	**14.54**	**330**	P	**Pn**	**03 48 17.8**	**+1.2**
	SNR=8.0						
TVAN	**Van**	**15.06**	**324**	*i* P	**Pn**	**03 48 22.2**	**-1.4**
VANB	**Van**	**15.12**	**324**	*e*P	**Pn**	**03 48 22.7**	**-1.7**
HAJJ	**Hajjah**	**15.13**	**225**	*e*P	**Pn**	**03 48 20.0**	**-4.7**
	comp=Z,129nm,1.7s						
HAJJ				*i* S	**Sn**	**03 51 09.2**	**-3.0**
HAJJ	**Hajjah**	**15.13**	**225**	*e*P	**Pn**	**03 48 20.1**	**-4.7**
HAJJ				AMb	AMB	03 48 21.0	
	comp=Z,259nm,1.7s						
HAJJ				*i* S	**Sn**	**03 51 09.2**	**-3.0**
CLDR	**Caldiran**	**15.26**	**326**	*e*P	**Pn**	**03 48 27.3**	**+1.0**
BDHA	**Al Bayda'**	**15.36**	**216**	*e*P	**Pn**	**03 48 23.2**	**-4.6**
	comp=Z,37nm,1.9s						
BDHA				*i* S	**Sn**	**03 51 15.2**	**-2.6**
BDHA	**Al Bayda'**	**15.36**	**216**	*e*P	**Pn**	**03 48 23.2**	**-4.5**
BDHA				AMb	AMB	03 48 24.4	
	comp=Z,74nm,1.9s						
BDHA				*i* S	**Sn**	**03 51 15.2**	**-2.6**
GANJ	**Ganja**	**15.46**	**335**	P	**Pn**	**03 48 30.8**	**+2.0**
	SNR=48						
DHBB	**Dhamar BB**	**15.52**	**220**	*e*P	**Pn**	**03 48 25.2**	**-4.6**
	comp=Z,97nm,1.3s						
DHBB				*i* S	**Sn**	**03 51 19.3**	**-2.4**
DHBB	**Dhamar BB**	**15.52**	**220**	*e*P	**Pn**	**03 48 25.2**	**-4.6**
DHBB				AMb	AMB	03 48 26.7	
	comp=Z,194nm,1.3s						
DHBB				*i* S	**Sn**	**03 51 19.3**	**-2.3**
LBOS		**15.62**	**216**	*e*P	**Pn**	**03 48 26.6**	**-4.5**
LBOS				*i* S	**Sn**	**03 51 21.6**	**-2.3**
SEKA	**Sheki**	**15.65**	**339**	P	**Pn**	**03 48 33.0**	**+1.7**
	SNR=7.9						
GNI	**Garni**	**15.68**	**331**	*e*P	**Pn**	**03 48 34.0**	**+2.3**
GNI	**Garni**	**15.68**	**331**	P	**Pn**	**03 48 37.5**	**+5.8**
	SNR=12						
GNI	**Garni**	**15.68**	**331**	Pn	**Pn**	**03 48 30.5**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=19,slow=1.8,SNR=8.9						
GNI				Sn	**Sn**	**03 51 35.0**	**+10**
	comp=Z,0.4nm,0.3s,baz=135,slow=13,SNR=2.4						
GNI				LR	LR	03 55 46.0	
	comp=Z,741nm,21.1s,baz=321,slow=42						
GNI	**Garni**	**15.68**	**331**	*e*Pn	**Pn**	**03 48 32.6**	**+0.9**
	comp=Z,168nm,0.7s						
GNI	**Garni**	**15.68**	**331**	P	**Pn**	**03 48 33.6**	**+1.9**
	SNR=45						
DYDN	**Diyadin**	**15.68**	**327**	*i* P	**Pn**	**03 48 36.0**	**+4.3**
MARD	**Mardin**	**15.77**	**315**	*i* P	**Pn**	**03 48 30.2**	**-2.7**
BEST	**Besiri**	**15.83**	**318**	*i* P	**Pn**	**03 48 28.4**	**-5.3**
THW	**Thamme Wali**	**15.94**	**64**	P	**Pn**	**03 48 35.1**	**-2.0**
AGRB	**Hanur-Agry**	**16.05**	**325**	*e*P	**Pn**	**03 48 36.6**	**0.0**
ASF	**Jabal al Asfar**	**16.40**	**293**	Pn	**Pn**	**03 48 39.2**	**-1.9**
	comp=Z,1.5nm,0.3s,baz=335,slow=12,SNR=11						
ASF				Sn	**Sn**	**03 51 31.0**	**-12**
	comp=Z,0.7nm,0.3s,baz=264,slow=18,SNR=2.4						
ASF				LR	LR	03 56 42.0	
	comp=Z,661nm,18.7s,baz=333,slow=43						
CEP	**Cherat**	**16.41**	**61**	P	**Pn**	**03 48 43.2**	**+2.1**
DGRG	**David-gareji**	**16.51**	**335**	P	**Pn**	**03 48 44.0**	**+1.6**
DIYA	**Diyarbakir**	**16.55**	**316**	*i* P	**Pn**	**03 48 43.3**	**+0.3**
BNGL	**BİNGOL**	**16.60**	**320**	*i* P	**Pn**	**03 48 42.9**	**-0.7**
KARS	**Kars**	**16.80**	**328**	*e*P

SOC eSS 03 53 43.2
SOC pmax pmax
comp=Z,185nm,0.9s
SOC MLR MLR
comp=Z,337nm,8.0s
KK31 Karatay Array 20.73 34 *i* P **P** **03 49 30.8 -0.5**
KK31 pmax pmax
comp=Z,117nm,1.4s
KK31 Karatay Array 20.73 34 *i* P **P** **03 49 30.9 -0.4**
PPCY Paphos 20.79 298 P **P** **03 49 33.6 +1.5**
DDI Dehra Dun 20.79 75 *eP* **P** **03 49 29.5 -2.6**
DDI *ex* x 03 49 29.5
BHPL Bhopal 20.88 95 *eP* **P** **03 49 31.7 -1.4**
CORM Corum 21.35 314 *eP* **P** **03 49 41.1 +3.1**
CTKT Corum 21.49 315 *i* P **P** **03 49 41.1 +1.6**
KAMT Kaman 21.54 311 *eP* **P** **03 49 41.2 +1.2**
BR131 Keskin Array S 21.76 312 *eP* **P** **03 49 43.3 +0.8**
comp=Z,72nm,0.7s,mb5.2
BR131 Keskin Array S 21.76 312 *eP* **P** **03 49 43.3 +0.8**
comp=Z,72nm,0.7s,mb5.2
BRTR Keskin Array B 21.76 312 P **P** **03 49 43.2 +0.8**
comp=Z,157nm,1.0s,mb5.4,baz=131,slow=12,SNR=219
BRTR S **S** **03 53 43.4 +0.7**
comp=Z,2.3nm,1.0s,baz=134,slow=19,SNR=3.1
BRTR ScP ScP 03 57 16.5 -2.9
comp=Z,2.1nm,1.0s,baz=111,slow=2.8,SNR=4.7
BRTR Keskin Array B 21.76 312 P **P** **03 49 43.3 +0.8**
BRTR S **S** **03 53 43.4 +0.7**
BRTR pmax pmax
comp=Z,157nm,1.0s
BRTR smax
comp=N,2.0nm,1.0s
BRTR pmax pmax
comp=N,2.0nm,1.0s
BRTR Keskin Array B 21.76 312 P **P** **03 49 43.2 +0.7**
KSH Kashi 21.79 49 *eP* **P** **03 49 46.3 +3.6**
KSH *e*PP 03 50 12.0
KSH *e*S **S** **03 53 40.3 -2.9**
KSH *e*PCP PcP 03 53 46.6 +3.9
KSH *e*SS 03 54 18.8
KSH *e*SCP ScP 03 57 19.8 +0.3
KSH *e*PCS PcS 03 57 23.8 +2.8
KSH AMB AMB
comp=Z,103nm,0.4s,mb5.6
KSH AMB AMB
comp=Z,956nm,4.8s
KSH LR LR
comp=N,5μm,10.3s
KSH LR LR
comp=E,8μm,7.4s
KSH LR LR
comp=Z,9μm,9.3s
DIKM Dikmen 21.79 318 *eP* **P** **03 49 49.8 +7.1**
AML Almayashu 21.81 41 P **P** **03 49 42.6 -0.2**
SNR=7.8
AML Almayashu 21.81 41 *eP* **P** **03 49 42.4 -0.5**
comp=Z,93nm,0.8s,mb5.3
KONT Konya--Tatoy 21.85 306 *eP* **P** **03 49 44.8 +1.4**
BOYT Boyabat 21.87 317 *i* P **P** **03 49 44.6 +1.0**
LADK Ladik-KONYA 21.95 307 *eP* **P** **03 49 45.7 +1.2**
BYBT Boyabat 21.98 317 *eP* **P** **03 49 45.5 +0.7**
EKS2 Erkin-Say 22.19 40 P **P** **03 49 46.8 -0.2**
SNR=53
EKS2 Erkin-Say 22.19 40 *eP* **P** **03 49 46.6 -0.4**
comp=Z,102nm,1.0s,mb5.2
TOS Tosya 22.20 315 *eP* **P** **03 49 48.5 +1.3**
CANT Cankiri 22.23 314 *eP* **P** **03 49 48.5 +1.1**
KDHN Kadinhani 22.26 307 *i* P **P** **03 49 48.9 +1.1**
ELDT Eldivan 22.29 313 *i* P **P** **03 49 48.7 +0.6**
UCH Uchtor 22.35 41 *eP* **P** **03 49 48.4 -0.3**
comp=Z,21nm,1.0s,mb4.5
UCH Uchtor 22.35 41 *eP* **P** **03 49 48.4 -0.3**
comp=Z,21nm,1.0s,mb4.5
ANTO Ankara 22.40 311 *eP* **P** **03 49 50.0 +0.8**
ANTO Ankara 22.40 311 *eP* **P** **03 49 49.9 +0.6**
comp=Z,219nm,1.1s,mb5.5
ANTO Ankara 22.40 311 *eP* **P** **03 49 49.9 +0.6**
ANTO pmax pmax
comp=Z,219nm,1.1s,mb5.5
ANTO Ankara 22.40 311 *eP* **P** **03 49 49.9 +0.6**
comp=Z,219nm,1.1s,mb5.5
ANTO Ankara 22.40 311⇑ *iP* **P** **03 49 50.2 +0.9**
LOD Lodumlu 22.43 311 *eP* **P** **03 49 50.1 +0.6**
KIZT Kizilcal 22.58 308 *eP* **P** **03 49 52.4 +1.2**
AAK Ala-Archa 22.58 41 P **P** **03 49 51.9 +0.7**
comp=Z,362nm,0.8s,mb5.9,SNR=16
AAK Ala-Archa 22.58 41 P **P** **03 49 51.4 +0.3**
SNR=16
LGTI Lohaghat 22.66 77 *eP* **P** **03 49 50.5 -1.7**
ANN Anapa 22.69 327 *eP* **P** **03 49 52.4 +0.1**
ANN *e*PPP 03 50 23.7
ANN *e*S **S** **03 53 57.5 -3.0**
ANN *e*SS 03 54 33.6
ANN *e*SSS 03 54 51.0
ANN pmax pmax
comp=Z,124nm,1.8s,mb5.0
KZA Kyzart 22.70 43 P **P** **03 49 53.6 +1.2**
SNR=15
FRU Bishkek 22.78 40 *eP* **P** **03 49 54.0 +0.8**
FRU *e* 03 50 24.0
FRU pmax pmax
comp=Z,80nm,1.8s,mb4.8
KBK Karagaybulak 22.86 41 P **P** **03 49 54.1 -0.1**
SNR=22
NGP Nagpur 22.92 99 *ex* **P** **03 49 51.7 -3.3**
USP Ospenovka 22.98 39 P **P** **03 49 53.9 -1.5**
SNR=14
SAFT Safranbolu 23.16 314 *eP* **P** **03 49 57.9 +0.6**
BOLV Bolvadin 23.17 307 *i* P **P** **03 49 57.6 +0.1**
SHUT Suhut-Afyon 23.39 306 *eP* **P** **03 49 59.5 -0.3**
ULHL Ulahol 23.40 43 P **P** **03 50 01.6 +1.8**
SNR=6.8
TKM2 Tokmak 2 23.40 41 *eP* **P** **03 49 58.6 -1.2**
comp=Z,26nm,0.9s,mb4.7
TKM2 Tokmak 2 23.40 41 *eP* **P** **03 49 58.6 -1.2**
TKM2 pmax pmax
comp=Z,26nm,0.9s,mb4.7
TKM2 Tokmak 2 23.40 41 P **P** **03 49 59.2 -0.6**
SNR=12
TKM2 Tokmak 2 23.40 41 *eP* **P** **03 49 58.6 -1.2**
comp=Z,26nm,0.9s,mb4.7
ESKT Eskisehir 23.58 309 *i* P **P** **03 50 01.5 -0.1**
SEYT Eskyehyr 23.58 309 *i* P **P** **03 50 01.5 -0.1**
GOLH Golhisar 23.66 302 *i* P **P** **03 50 03.3 +0.9**
AKTK Aktyubinsk 23.73 5 P **P** **03 50 02.6 -0.2**
AKTK S **S** **03 54 13.3 -3.9**
AKTK LR LR 04 01 41.6
AKTK Aktyubinsk 23.73 5 P **P** **03 50 02.7 -0.2**
AKTK S **S** **03 54 13.3 -4.0**
AKTO Aktyubinsk 23.73 5 P **P** **03 50 02.6 -0.2**
comp=Z,47nm,0.7s,mb5.1,baz=184,slow=9.2,SNR=89
AKTO S **S** **03 54 13.3 -3.9**
comp=Z,4.4nm,1.0s,baz=38,slow=21,SNR=4.2
AKTO LR LR 04 01 41.6
comp=Z,481nm,18.5s,MS4.0,baz=184,slow=43
AKTO Aktyubinsk 23.73 5 P **P** **03 50 02.7 -0.2**
AKTO S **S** **03 54 13.3 -4.0**
AKTO pmax pmax
comp=Z,47nm,0.7s,mb5.0
AKTO smax
comp=N,4.0nm,1.0s
AKTO MLR MLR
comp=Z,481nm,18.5s,MS4.0
MDU Mudurnu 23.75 311 *eP* **P** **03 50 03.5 +0.4**
ALT Altintas 23.91 307 *eP* **P** **03 50 04.5 -0.2**
KDZE Karadeniz Ereo 24.00 313 *eP* **P** **03 50 05.5 0.0**
BORA Eskisehir 24.01 309 *i* P **P** **03 50 06.2 +0.6**
KHAL Karahalli 24.10 305 *i* P **P** **03 50 07.2 +0.8**
HENT Hendek 24.13 311 *i* P **P** **03 50 07.0 +0.4**
GULT Gulveren 24.21 310 *eP* **P** **03 50 07.3 -0.1**
TURN Turunc 24.28 301 *i* P **P** **03 50 11.1 +3.1**
GPA Golpazari 24.29 310 *eP* **P** **03 50 09.2 +1.1**
GDZ Gediz 24.37 307 *i* P **P** **03 50 08.2 -0.7**
CAVI Cavuskoy 24.57 309 *eP* **P** **03 50 10.5 -0.2**
YER Yerkesik 24.60 301 *eP* **P** **03 50 11.3 +0.3**
ADVT Abdulvahap 24.74 310 *eP* **P** **03 50 12.8 +0.6**
KULA Kula-Manisa 24.76 305 *eP* **P** **03 50 10.7 -1.7**
MANT Manisa 24.83 305 *i* P **P** **03 50 13.7 +0.6**
DEMI Demirci 24.91 306 *i* P **P** **03 50 14.5 +0.8**
HRT Hereke 24.96 310 *eP* **P** **03 50 14.4 +0.2**
MLSB Milas 25.03 301 *eP* **P** **03 50 14.5 -0.4**
ULDT Uludag 25.04 309 *i* P **P** **03 50 15.9 +1.0**
YLV Yalova 25.05 310 *eP* **P** **03 50 15.6 +0.6**
PYUN Piuthan 25.11 81 *eP* **P** **03 50 17.2 +1.5**
comp=Z,112nm,0.8s,mb5.4
SILT Sile 25.12 311 *eP* **P** **03 50 15.5 -0.2**
BDRM Kayabasi 25.22 301 *i* P **P** **03 50 16.3 -0.4**
ISK Istanbul-Kandi 25.48 310 *eP* **P** **03 50 18.4 -0.6**
AKHS Akhisar 25.51 305 *i* P **P** **03 50 18.6 -0.6**
AKS Akhisar 25.51 305 *eP* **P** **03 50 20.0 +0.7**
KLYT Kilyos 25.57 311 *eP* **P** **03 50 18.7 -1.1**
KOLN Koldanda 25.67 81 *eP* **P** **03 50 21.9 +1.1**
comp=Z,192nm,1.0s,mb5.6
BALB Balikesir 25.73 307 *eP* **P** **03 50 21.7 +0.5**
KDAG Bornova 25.75 304 *i* P **P** **03 50 22.8 +1.3**
DANN Dangsing 25.77 80 *eP* **P** **03 50 23.3 +1.6**
comp=Z,558nm,0.9s,mb6.1
BLCB Balcova 25.91 303 *eP* **P** **03 50 21.2 -1.7**
CTKS Kestanelik-??a 25.93 310 *eP* **P** **03 50 21.7 -1.4**
ELBA Catalca 25.94 310 *i* P **P** **03 50 22.6 -0.5**
ELBA Catalca 25.94 310 *i* P **P** **03 50 22.6 -0.5**
CTT Catalca 25.94 310 *eP* **P** **03 50 23.8 +0.6**
BNT Bandirma 25.97 308 *eP* **P** **03 50 23.6 +0.1**
SLVT Silivri 26.13 310 *eP* **P** **03 50 24.3 -0.5**
CTYL Yal??k??y-??at 26.18 311 *eP* **P** **03 50 23.7 -1.6**
VRHR Novokhopersk 26.22 341 *c iP* **P** **03 50 25.1 -0.4**
VRHR pmax pmax
comp=Z,100nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,50nm,1.0s
VRHR pmax pmax
comp=E,20nm,0.8s
LAST Lasithi 26.34 296 P **P** **03 50 28.0 +1.2**
CRLT Corlu 26.41 310 *eP* **P** **03 50 26.5 -0.9**
AYVA Ayvalik 26.47 305 *i* P **P** **03 50 28.1 +0.1**
AYVA Ayvalik 26.47 305 *i* P **P** **03 50 28.0 0.0**
GKN Gorkha 26.57 81 *eP* **P** **03 50 29.6 +0.7**
comp=E,79nm,0.8s,mb5.3
RKY Sarkoy-Tekirda 26.62 308 *eP* **P** **03 50 26.4 -2.9**
THR6 Thira Island, 26.64 298 P **P** **03 50 37.9 +8.4**
CHOS Chios island 26.66 303 P **P** **03 50 30.8 +1.2**
THR5 Thira Island, 26.69 298 P **P** **03 50 35.8 +5.8**
APE Apeiranthos 26.70 300 P **P** **03 50 30.5 +0.5**
APE Apeiranthos 26.70 300 P **P** **03 50 30.8 +0.8**
APE Apeiranthos 26.70 300 *i* P **P** **03 50 32.3 +2.3**
APE Apeiranthos 26.70 300 P **P** **03 50 30.8 +0.8**
IDI Anoyia 26.84 296 P **P** **03 50 32.7 +1.4**
comp=E,37nm,0.5s,mb5.2,baz=109,slow=9.7,SNR=16
IDI LR LR 04 04 31.4
comp=E,186nm,19.4s,MS3.6,baz=306,slow=44
VORD Divnogorie 26.84 338 *eP* **P** **03 50 30.1 -1.0**
VORD pmax pmax
comp=Z,30nm,0.8s,mb4.9
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=E,90nm,0.8s
EZN Ezine 26.92 306 *eP* **P** **03 50 32.9 +1.0**
DMN Daman 27.02 81 *eP* **P** **03 50 33.7 +0.7**
comp=E,64nm,1.1s,mb5.1
KOD Kodaikanal 27.07 123 *eP* **P** **03 50 32.9 -0.7**
VSR Storozhevoye 27.09 338 *eP* **P** **03 50 32.2 -1.2**
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb4.4
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,1.4s
KKN Kakani 27.15 81 *eP* **P** **03 50 35.3 +1.1**
comp=E,87nm,0.9s,mb5.3
PKI Pulchoki 27.29 81 *eP* **P** **03 50 36.1 +0.7**
comp=E,75nm,0.9s,mb5.2
ENEZ Enez 27.36 308 *eP* **P** **03 50 35.5 -0.4**
EDRB Edirne 27.39 310 *eP* **P** **03 50 34.4 -1.8**
ALN Alexandroupoli 27.50 308 P **P** **03 50 37.3 +0.1**
TIRR Tirgusor 27.52 317 *eP* **P** **03 50 36.8 -0.5**
comp=E,36nm,1.0s,mb5.0
TIRR Tirgusor 27.52 317 *eP* **P** **03 50 36.8 -0.5**
TIRR pmax pmax
comp=Z,36nm,1.0s,mb5.0
TIRR Tirgusor 27.52 317 *eP* **P** **03 50 36.8 -0.5**
comp=Z,36nm,1.0s,mb5.0
TIRR Tirgusor 27.52 317⇑ *iP* **P** **03 50 37.2 -0.1**
VOR Voronezh 27.52 339⇓ *iP* **P** **03 50 36.0 -1.2**
VOR pmax pmax
comp=Z,160nm,1.0s,mb5.6
PRD Provadia 27.54 313 P **P** **03 50 38.0 +0.5**
GUN Gumba 27.67 81 *eP* **P** **03 50 39.7 +0.8**
comp=Z,100nm,1.0s,mb5.4
LIA Limnos Island 27.77 306 P **P** **03 50 40.3 +0.7**
HARR Harsova 27.93 317 P **P** **03 50 41.3 +0.3**
HARR Harsova 27.93 317 P **P** **03 50 41.3 +0.3**
HARR Harsova 27.93 317⇓ *iP* **P** **03 50 41.2 +0.2**
RDO Rodhopi 27.95 308 P **P** **03 50 41.8 +0.6**
JIRN Jiri 27.97 81 *eP* **P** **03 50 42.2 +0.7**
comp=Z,43nm,0.7s,mb5.2
BOK Bokaro 28.31 89 *eP* **P** **03 50 45.6 +1.0**
RAMN Ramite 28.41 82 *eP* **P** **03 50 45.6 +0.1**
comp=Z,44nm,0.8s,mb5.2
SZH Strazhica 28.53 313 *i* P **P** **03 50 46.1 -0.3**
DID Didima 28.58 300 P **P** **03 50 46.6 -0.3**
KIS Kishinev 28.68 321 *eP* **P** **03 50 47.0 -0.6**
KIS *e* 03 55 40.0
BRVK Borovoye 28.68 20 P **P** **03 50 47.6 0.0**
comp=Z,191nm,0.8s,mb5.9,SNR=7.5
BRVK Borovoye 28.68 20 *eP* **P** **03 50 46.4 -1.2**
comp=Z,26nm,0.9s,mb5.0
BRVK Borovoye 28.68 20 P **P** **03 50 46.8 -0.8**
BRVK pmax pmax
comp=Z,94nm,1.4s,mb5.3
BRVK Borovoye 28.68 20 *eP* **P** **03 50 46.3 -1.3**
comp=Z,26nm,0.9s,mb5.0
BVA0 Borovoye Array 28.69 20 *i* P **P** **03 50 46.7 -0.9**
BVA0 pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
BVAR Borovoye Array 28.69 20 P **P** **03 50 46.9 -0.7**
comp=Z,13nm,0.7s,mb4.8,baz=208,slow=8.0,SNR=38
BVAR PcP PcP 03 53 57.5 -0.4
comp=Z,3.7nm,0.6s,baz=224,slow=2.4,SNR=5.9
BVAR LR LR 04 04 02.2
comp=Z,840nm,18.2s,MS4.4,baz=50,slow=40
BVAR Borovoye Array 28.69 20 P **P** **03 50 46.9 -0.7**
BVAR 03 53 57.5
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR MLR MLR
comp=Z,840nm,18.2s
BVAR Borovoye Array 28.69 20 PcP PcP 03 53 57.5 -0.4
RZN Rozhen 28.72 309 *i* P **P** **03 50 48.8 +0.7**
OUR Ouranopolis 28.78 306 P **P** **03 50 50.0 +1.4**
PAIG Paliouri 28.88 305 P **P** **03 50 50.2 +0.7**
PLD Plovdiv 28.89 310 P **P** **03 50 50.2 +0.7**
PLD Plovdiv 28.89 310 P **P** **03 50 50.8 +1.3**
LTK Loutraki 28.91 301 P **P** **03 50 49.6 -0.2**
ODAN Odare 29.12 82 *eP* **P** **03 50 51.6 -0.2**
comp=Z,27nm,0.7s,mb5.1
PLG Polygyros 29.18 306 P **P** **03 50 53.4 +1.2**
VRI Vrincioaia 29.26 318⇑ P **P** **03 50 53.6 +0.7**
VRI Vrincioaia 29.26 318⇑ *iP* **P** **03 50 53.6 +0.8**
PLOR Plostina 29.30 318⇑ *iP* **P** **03 50 54.8 +1.6**
TAPN Taplejung 29.34 81 *eP* **P** **03 50 53.7 -0.1**
comp=Z,26nm,0.7s,mb4.9
MMB Musomiste 29.38 308 *iP* **P** **03 50 54.3 +0.4**
SOH Sokhos 29.39 306 P **P** **03 50 55.3 +1.3**
SOH Sokhos 29.39 306 P **P** **03 50 55.2 +1.2**
PGB Panagyurishte 29.42 310 *iP* **P** **03 50 54.9 +0.6**
HORT Hortiatis 29.50 306 P **P** **03 50 56.2 +1.2**
MK31 Makanchi Array 29.52 40 *eP* **P** **03 50 54.0 -1.1**
MK31 Makanchi Array 29.52 40 *iP* **P** **03 50 54.4 -0.7**
MK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
MK31 Makanchi Array 29.52 40 *eP* **P** **03 50 54.0 -1.1**
MKAR Makanchi Array 29.52 40 P **P** **03 50 54.3 -0.8**
comp=Z,1.8nm,0.4s,mb4.1,baz=243,slow=6.4,SNR=26
MKAR PcP PcP 03 53 58.3 -1.8
comp=Z,2.1nm,0.7s,baz=248,slow=4.2,SNR=3.8
MKAR LR LR 04 04 47.7
comp=Z,640nm,18.1s,MS4.3,baz=35,slow=41
MKAR Makanchi Array 29.52 40 P **P** **03 50 54.3 -0.8**
MKAR 03 53 58.3
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,640nm,18.1s
MLR Muntele Rosu 29.55 317 P **P** **03 50 56.7 +1.3**
comp=Z,19nm,0.7s,mb4.9,baz=20,slow=2.6,SNR=44
MLR LR LR 04 06 40.1
comp=Z,407nm,18.2s,MS4.1,baz=102,slow=44
MLR Muntele Rosu 29.55 317 P **P** **03 50 57.1 +1.7**
MLR Muntele Rosu 29.55 317⇑ *iP* **P** **03 50 56.7 +1.3**
THE Thessaloniki 29.61 306 P **P** **03 50 57.2 +1.2**
PYL PYLOS 29.63 298 P **P** **03 50 55.6 -0.6**
AGG Agios Georgios 29.63 302 P **P** **03 50 55.5 -0.7**
ARU Arti 29.73 4 P **P** **03 50 57.3 +0.5**
comp=Z,172nm,0.9s,mb5.8,SNR=5.6
ARU Arti 29.73 4 *d iP* **P** **03 50 55.9 -0.9**
ARU *e* 03 51 52.7
ARU *eS* **S** **03 55 52.4 +0.2**
ARU SS SS 03 57 22.4 -36
ARU pmax pmax
comp=Z,20nm,1.2s,mb4.7
ARU Arti 29.73 4 *eP* **P** **03 50 56.2 -0.6**
comp=Z,35nm,1.1s,mb5.0
LIT Litokhoron 29.80 305 P **P** **03 50 57.7 0.0**
LIT Litokhoron 29.80 305 P **P** **03 50 58.6 +0.9**
KNT Kendrikon 29.82 307 P **P** **03 50 58.6 +0.7**
KKB Krupnik 29.93 308 *i* P **P** **03 50 59.5 +0.7**
THL Klokotos Trika 30.01 303 P **P** **03 50 59.1 -0.4**
KURK Kurchatov 30.04 31 P **P** **03 50 59.3 -0.4**
comp=Z,120nm,0.8s,mb5.7,SNR=8.8
KURK Kurchatov 30.04 31 P **P** **03 50 58.3 -1.4**
comp=Z,9.4nm,0.8s,mb4.6,baz=231,slow=8.4,SNR=32
KURK PcP PcP 03 54 00.4 -1.0
comp=Z,2.6nm,0.5s,baz=224,slow=2.7,SNR=4.2
KURK LR LR 04 05 12.9
comp=Z,728nm,18.1s,MS4.4,baz=235,slow=41
KURK Kurchatov 30.04 31 *eP* **P** **03 50 57.8 -1.8**
comp=Z,21nm,1.0s,mb4.8
KURK Kurchatov 30.04 31 P **P** **03 50 58.3 -1.4**
KURK 03 54 00.4
KURK pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
KURK pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
KURK MLR MLR
comp=Z,728nm,18.1s,MS4.4
KURK Kurchatov 30.04 31 *eP* **P** **03 50 57.8 -1.9**
comp=Z,21nm,1.0s,mb4.8
VOIR 30.08 316 P **P** **03 51 01.0 +1.0**
VOIR 30.08 316 P **P** **03 51 01.0 +0.9**
VOIR 30.08 316⇓ *iP* **P** **03 51 01.1 +1.0**
VTS Vitosha 30.10 310 *i* P **P** **03 51 01.2 +0.9**
VAY Valandovo 30.11 307 P **P** **03 51 00.3 -0.1**
VAY Valandovo 30.11 307 P **P** **03 51 00.8 +0.4**
VAY Valandovo 30.11 307 *i* P **P** **03 51 00.2 -0.2**
GRG Griva 30.12 306 P **P** **03 51 01.1 +0.6**
SVE Sverdlovsk 30.30 6 *eP* **P** **03 51 01.3 -0.6**
SVE *e* 03 51 55.9
SVE *e* 03 54 01.1
SVE pmax pmax
comp=Z,35nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,1μm,13.0s,MS4.8
KFL Anninata 30.60 300 P **P** **03 51 04.6 -0.2**
VLS Valsamata 30.77 300 P **P** **03 51 05.8 -0.5**
AKASG Malin Array Be 30.77 328 P **P** **03 51 05.0 -1.1**
comp=Z,24nm,0.8s,mb5.1,baz=131,slow=8.0,SNR=68
AKASG PcP PcP 03 54 02.7 -0.6
comp=Z,3.0nm,0.8s,baz=107,slow=2.3,SNR=4.0
AKASG Malin Array Be 30.77 328 P **P** **03 51 05.0 -1.1**
AKASG PcP PcP 03 54 02.7 -0.6
AKASG Malin Array Be 30.77 328 P **P** **03 51 05.0 -1.1**
AKASG 03 54 02.7
AKASG pmax pmax
comp=Z,24nm,0.8s
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 30.77 328 PcP PcP 03 54 02.7 -0.6
AKBB Malin Array Si 30.77 328 *eP* **P** **03 51 04.9 -1.2**
AKBB Malin Array Si 30.77 328 *eP* **P** **03 51 04.9 -1.2**
KIEV Kiev 30.77 328 *eP* **P** **03 51 04.6 -1.6**
comp=Z,69nm,1.0s,mb5.4
KIEV Kiev 30.77 328 *eP* **P** **03 51 04.6 -1.5**
KIEV pmax pmax
comp=Z,69nm,1.0s,mb5.4
KIEV Kiev 30.77 328 *eP* **P** **03 51 04.6 -1.5**
comp=Z,69nm,1.0s,mb5.4
FNA Florina 30.81 305 P **P** **03 51 07.0 +0.4**
MDB Medias 30.82 317 P **P** **03 51 08.9 +2.3**
MDB Medias 30.82 317 P **P** **03 51 08.9 +2.3**
BIA Bitola 30.91 306 P **P** **03 51 07.7 +0.2**
BIA Bitola 30.91 306 P **P** **03 51 08.2 +0.7**
BIA Bitola 30.91 306 *eP* **P** **03 51 07.5 0.0**
BURAR Bucovina Array 31.06 320⇑ P **P** **03 51 09.3 +0.7**
BURAR Bucovina Array 31.06 320⇑ *iP* **P** **03 51 09.4 +0.7**
BUR08 Bucovina Ar. S 31.08 320 *eP* **P** **03 51 08.7 -0.2**
BUR08 Bucovina Ar. S 31.08 320 *eP* **P** **03 51 08.7 -0.2**
SKO Skopje 31.12 308 P **P** **03 51 10.2 +0.9**
SKO Skopje 31.12 308 P **P** **03 51 10.6 +1.3**
SKO Skopje 31.12 308 *i* P **P** **03 51 10.3 +1.0**
BARS Barje 31.14 309 P **P** **03 51 09.5 +0.1**
KBN Korca 31.20 305 *eP* **P** **03 51 10.2 +0.2**
OBN Obninsk 31.23 340 P **P** **03 51 10.7 +0.6**
comp=Z,1μm,0.4s,SNR=8.7
OBN Obninsk 31.23 340⇑ *eP* **P** **03 51 09.6 -0.5**
OBN *e* 03 52 15.5
OBN *eS* **S** **03 56 10.5 -5.2**
OBN *e*SS SS 03 58 15.8 -14
OBN pmax pmax
comp=Z,106nm,0.9s,mb5.7
OBN MLR MLR
comp=Z,200nm,24.0s,MS3.7
OBN Obninsk 31.23 340 *eP* **P** **03 51 09.4 -0.7**
comp=Z,89nm,0.8s,mb5.7
IGT Igoumenitsa 31.26 303 P **P** **03 51 10.2 -0.4**
OHR Ohrid 31.32 306 P **P** **03 51 10.9 -0.2**
OHR Ohrid 31.32 306 P **P** **03 51 11.9 +0.8**
OHR Ohrid 31.32 306 *i* P **P** **03 51 10.6 -0.5**
BOLS Boljevac 31.41 311⇑ *iP* **P** **03 51 11.8 0.0**
MOS Moscow 31.45 341 *eP* **P** **03 51 10.8 -1.2**
MOS pmax pmax
comp=Z,115nm,1.3s,mb5.5
GZR Gura Zlata 31.49 314 P **P** **03 51 12.9 +0.4**
GZR Gura Zlata 31.49 314 P **P** **03 51 12.9 +0.4**
GZR Gura Zlata 31.49 314⇓ *iP* **P** **03 51 12.2 -0.3**
WMQ Urumqi 31.55 49 *eP* **P** **03 51 14.0 +0.9**
WMQ XP sP 03 51 21.0 +1.4
WMQ PP PP 03 52 18.0 -6.4
WMQ S **S** **03 56 20.0 -1.1**
WMQ SS SS 03 58 09.0 -27
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,84nm,3.0s
WMQ LR LR
comp=N,845nm,14.0s,MS4.6
WMQ LR LR
comp=E,497nm,14.0s,MS4.6
WMQ LR LR
comp=Z,428nm,14.0s,MS4.3
SRN Sarande 31.59 303 *eP* **P** **03 51 12.5 -1.0**
KEK Kerkira 31.70 303 P **P** **03 51 14.8 +0.3**
QSH Qafa e Shtames 32.08 306 *eP* **P** **03 51 19.0 +1.2**
BMR Baia Mare 32.09 319 P **P** **03 51 18.6 +0.8**
BMR Baia Mare 32.09 319 P **P** **03 51 18.6 +0.8**
BMR Baia Mare 32.09 319⇓ *iP* **P** **03 51 19.3 +1.5**
DRGR 32.15 317 P **P** **03 51 19.0 +0.8**
DRGR 32.15 317⇑ *iP* **P** **03 51 19.0 +0.7**
LSA Lhasa 32.15 76 *eP* **P** **03 51 19.5 +1.0**
comp=Z,18nm,0.9s,mb4.9
LSA Lhasa 32.15 76 *eP* **P** **03 51 19.5 +1.0**
LSA pmax pmax
comp=Z,19nm,0.9s,mb4.9
LSA Lhasa 32.15 76 *eP* **P** **03 51 19.5 +1.0**
comp=Z,18nm,0.9s,mb4.9
PUK Puka 32.24 307 *eP* **P** **03 51 18.8 -0.4**
GRUS Gruza 32.26 311 P **P** **03 51 19.4 +0.1**
BZS Buzias 32.32 314 P **P** **03 51 20.3 +0.4**
BZS Buzias 32.32 314⇑ *iP* **P** **03 51 20.3 +0.5**
PVY Plav 32.35 308⇑ *iP* **P** **03 51 19.3 -0.8**
BEY Berane 32.49 309⇑ *iP* **P** **03 51 20.2 -1.1**
IVA Berane 32.49 309⇑ *iP* **P** **03 51 20.2 -1.1**
SJES Sjenica 32.56 309⇑ *iP* **P** **03 51 22.9 +1.0**
ULC Ulcinj 32.68 307⇑ *iP* **P** **03 51 22.2 -0.8**
SOKR Solikamsk 32.78 2 *c iP* **P** **03 51 23.0 -0.7**
SOKR pmax pmax
comp=Z,70nm,1.0s,mb5.5

SOKR MLR MLR
comp=Z,510nm,16.0s,MS4.3
PDG Podgorica 32.80 308 *eP* **P 03 51 22.5 -1.6**
TTG Podgorica 32.80 308 *eP* **P 03 51 22.5 -1.6**
TRPA Tarpa 32.88 319⇓ *iP* **P 03 51 25.1 +0.4**
LVV L'vov 32.90 323 *eP* **P 03 51 23.4 -1.4**
LVV L'vov 32.90 323 *i P* **P 03 51 23.7 -1.1**
PLE Plievlja 32.98 309⇑ *iP* **P 03 51 25.8 +0.2**
BUM Brajici-Budva 33.02 307⇑ *iP* **P 03 51 25.1 -0.9**
NKY Niksic 33.10 308⇑ *iP* **P 03 51 26.0 -0.7**
BBLS Lazići 33.14 310 P **P 03 51 27.6 +0.5**
UZH Uzhgorod 33.26 320 *i P* **P 03 51 28.6 +0.6**
UPM Unac-Piva 33.28 309⇑ *iP* **P 03 51 27.3 -0.9**
SHL Shillong 33.31 84 *eP* **P 03 51 29.0 +0.3**
FGSL Fruska Gora 33.32 313⇑ *iP* **P 03 51 28.8 +0.2**
HCY Herceg Novi 33.35 307 *eP* **P 03 51 27.7 -1.1**
KOLS Kolonicke sedl 33.42 320 *i P* **P 03 51 30.3 +0.9**
KOLS Kolonicke sedl 33.42 320 P **P 03 51 31.3 +1.9**
BRY Bratogost 33.44 308⇑ *iP* **P 03 51 28.0 -1.7**
KWP Kalwaria 33.53 321 *eP* **P 03 51 30.6 +0.3**
KWP Kalwaria 33.53 321⇑ *iP* **P 03 51 30.5 +0.2**
CRVS Cervenica-Dubn 33.88 320 *i P* **P 03 51 33.8 +0.4**
CRVS Cervenica-Dubn 33.88 320 P **P 03 51 34.4 +1.0**
TIP Timpagrande 33.90 301 *eP* **P 03 51 34.8 +1.0**
comp=Z,92nm,1.3s,mb5.5
TIP Timpagrande 33.90 301 *eP* **P 03 51 34.8 +1.1**
comp=Z,92nm,1.3s,mb5.5
PKSN Nyarlorinc 33.95 315 *eP* **P 03 51 35.3 +1.2**
MNK Minsk 33.97 332 *eP* **P 03 51 31.0 -3.1**
STON Ston 34.03 308 *i P* **P 03 51 33.7 -1.1**
STHS Stebnicka Huta 34.25 320 *eP* **P 03 51 36.9 +0.3**
STHS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
STHS Stebnicka Huta 34.25 320 P **P 03 51 38.2 +1.6**
PSZ Piszkesteto 34.36 317 *eP* **P 03 51 37.7 +0.1**
comp=Z,13nm,0.7s,mb5.0
PSZ Piszkesteto 34.36 317 *eP* **P 03 51 37.7 +0.1**
comp=Z,13nm,0.7s,mb5.0
PSZ Piszkesteto 34.36 317⇑ *iP* **P 03 51 37.7 +0.1**
PKSM Moragy 34.47 314⇑ *iP* **P 03 51 38.9 +0.4**
RHK3 Tenkes 34.60 313⇑ *eP* **P 03 51 39.7 0.0**
PTRP Pietrapertosa 34.67 303 P **P 03 51 41.7 +1.3**
PENC Penc 34.68 317⇑ *eP* **P 03 51 40.4 0.0**
BUD Budapest 34.72 316⇓ *eP* **P 03 51 41.3 +0.6**
BUD Budapest 34.72 316 P **P 03 51 41.2 +0.5**
CUC Castrocucco 34.76 302 *eP* **P 03 51 41.9 +0.8**
comp=Z,121nm,1.0s,mb5.8
CUC Castrocucco 34.76 302 *eP* **P 03 51 41.9 +0.7**
comp=Z,121nm,1.0s,mb5.8
NIE Niedzica 34.78 320 *eP* **P 03 51 41.5 +0.3**
ACER Acerenza 34.81 304 P **P 03 51 42.9 +1.3**
NVS Novosibirsk 34.90 29 *eP* **P 03 51 40.5 -1.7**
NVS *ePPP* 03 53 13.5
NVS *eS* **S 03 57 08.0 -4.8**
NVS pmax pmax
comp=Z,39nm,1.0s,mb5.3
NVS pmax pmax
comp=N,35nm,1.5s
NVS smax
comp=N,75nm,2.0s
NVS smax
comp=E,40nm,2.0s
ZAA0 Zalesovo Array 35.03 31 *eP* **P 03 51 42.1 -1.2**
ZAA0 Zalesovo Array 35.03 31 *eP* **P 03 51 42.1 -1.2**
ZALV Zalesovo Beam 35.03 31 P **P 03 51 42.3 -1.0**
comp=E,38nm,0.5s,mb5.6,baz=241,slow=9.5,SNR=121
ZALV PcP PcP 03 54 14.1 -1.0
comp=E,3.7nm,0.6s,baz=228,slow=3.9,SNR=3.3
ZALV LR LR 04 05 54.7
comp=E,108nm,18.4s,MS3.6,baz=69,slow=36
ZALV Zalesovo Beam 35.03 31 P **P 03 51 42.3 -1.0**
ZALV 03 54 14.1
ZALV pmax pmax
comp=Z,39nm,0.5s,mb5.6
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ZALV MLR MLR
comp=Z,108nm,18.4s,MS3.6
SGO Sicignano 35.24 303 P **P 03 51 46.8 +1.5**
VYHS Vyhne 35.25 318 *i P* **P 03 51 45.1 -0.1**
VYHS Vyhne 35.25 318 P **P 03 51 45.7 +0.5**
RGNG Rignano Grg 35.26 305 P **P 03 51 46.4 +1.0**
FG5 Orsara di Pugl 35.41 304 P **P 03 51 48.5 +1.7**
OJC Ojcow 35.45 321 *eP* **P 03 51 46.2 -0.8**
OJC *epP* pP 03 51 55.3 +3.7
OJC *eS* **S 03 57 17.3 -4.1**
OJC L 04 09 30.3
comp=Z,0.2nm,20.8s
VAE Valguarnera 35.51 298 P **P 03 51 49.6 +2.0**
comp=Z,33nm,1.0s,mb5.2,baz=360,slow=6.6,SNR=5.1
CSSN Cassano Irpino 35.51 304 P **P 03 51 49.7 +2.1**
KOLL Kolacno 35.55 317 *eP* **P 03 51 47.9 +0.1**
KOLL *epP* pP 03 51 52.2 -0.2
KLMR Klimovskoe 35.57 347 *i P* **P 03 51 46.8 -1.1**
KLMR pmax pmax
comp=Z,115nm,1.5s,mb5.6
MRB1 Monte Rocchett 35.60 304 P **P 03 51 50.4 +2.0**
SUW Suwalki 35.74 328 *eP* **P 03 51 48.4 -1.0**
CIGN Sant'Elia a Pi 35.75 305 P **P 03 51 51.1 +1.4**
SGG Gregorio Mates 36.09 304 P **P 03 51 53.9 +1.3**
KOGS Kog 36.10 313 *i P* **P 03 51 52.9 +0.3**
SMOL Smolenice 36.11 317 *eP* **P 03 51 53.0 +0.4**
MODS Modra-Piesok 36.15 317 *eP* **P 03 51 52.6 -0.4**
MODS pmax pmax
comp=Z,18nm,1.5s,mb4.8
MODS Modra-Piesok 36.15 317 *eP* **P 03 51 52.6 -0.4**
comp=Z,18nm,1.5s,mb4.8
ZST Bratislava 36.19 316 *eP* **P 03 51 53.1 -0.2**
ZST pmax pmax
comp=Z,19nm,0.7s,mb5.1
ZST Bratislava 36.19 316 *eP* **P 03 51 53.1 -0.2**
ZST *epP* pP 03 51 56.8 -1.2
ZST Bratislava 36.19 316 *eP* **P 03 51 53.1 -0.2**
comp=Z,19nm,0.7s,mb5.1
MIDA Miranda 36.23 305 P **P 03 51 53.9 +0.1**
OKC Ostrava-Krasne 36.23 319 *eP* **P 03 51 53.4 -0.3**
SOP Sopron 36.34 315⇑ *eP* **P 03 51 54.6 0.0**
NVLJ Novalja 36.46 310 P **P 03 51 54.4 -1.3**
NVLJ Novalja 36.46 310 *i P* **P 03 51 54.4 -1.3**
BOJS Bojanci 36.47 311 *eP* **P 03 51 56.2 +0.4**
INTR Introdacqua 36.56 305 P **P 03 51 58.1 +1.5**
MORC Moravsky Berou 36.56 319 *eP* **P 03 51 55.5 -1.0**
comp=Z,36nm,0.9s,mb5.2
MORC Moravsky Berou 36.56 319 *eP* **P 03 51 55.5 -1.0**
MORC pmax pmax
comp=Z,36nm,0.9s,mb5.2
MORC Moravsky Berou 36.56 319 *eP* **P 03 51 55.5 -1.0**
comp=Z,36nm,0.9s,mb5.2
MORC Moravsky Berou 36.56 319⇑ *iP* **P 03 51 56.2 -0.3**
SDI San Donato 36.57 305 P **P 03 51 57.9 +1.2**
ARSA Arzberg 36.84 314⇑ *iP* **P 03 51 59.2 +0.3**
comp=Z,27nm,1.1s,mb5.0,SNR=8.4
ARSA Arzberg 36.84 314 P **P 03 51 59.4 +0.5**
CONA Conrad Observa 36.86 315⇑ *iP* **P 03 51 59.1 0.0**
comp=Z,28nm,1.2s,mb5.0,SNR=15
CSNA Conrad Observa 36.86 315⇑ *iP* **P 03 51 59.1 0.0**
comp=Z,28nm,1.2s,mb5.0
TERO Teramo 36.90 306 P **P 03 52 00.6 +1.1**
PERS Pernice 36.91 313 *i P* **P 03 51 59.5 +0.1**
PTQR Pietraquaria 36.93 305 P **P 03 52 00.9 +1.2**
comp=Z,78nm,0.6s,mb5.7
VRAC Vranov 36.93 318 P **P 03 51 59.8 +0.2**
comp=Z,23nm,0.8s,mb5.1,baz=112,slow=7.7,SNR=20
VRAC LR LR 04 09 35.6
comp=Z,195nm,18.8s,MS3.9,baz=350,slow=40
VRAC Vranov 36.93 318⇑ *P* **P 03 52 00.0 +0.4**
VRAC Vranov 36.93 318 P **P 03 51 59.8 +0.2**
VRAC pmax pmax
comp=Z,23nm,0.8s
VRAC MLR MLR
comp=Z,195nm,18.8s
VRAC Vranov 36.93 318⇑ *iP* **P 03 52 00.0 +0.4**
SOKA Soboth 36.97 313⇑ *iP* **P 03 52 00.1 +0.1**
comp=Z,26nm,1.5s,mb4.8
SOKA Soboth 36.97 313 P **P 03 52 00.1 +0.1**
comp=Z,26nm,1.5s,mb4.8
AQU L'Aquila 36.99 306 *eP* **P 03 52 01.7 +1.4**
comp=Z,69nm,0.9s,mb5.5
AQU L'Aquila 36.99 306 *eP* **P 03 52 01.7 +1.5**
AQU pmax pmax
comp=Z,69nm,0.9s,mb5.5
AQU L'Aquila 36.99 306 *eP* **P 03 52 01.7 +1.5**
comp=Z,69nm,0.9s,mb5.5
AOI Ancona 37.10 308 P **P 03 52 01.9 +0.7**

LJU Ljubljana 37.11 312 *i P* **P 03 52 02.0 +0.8**
FIAM Fiamignano 37.18 305 P **P 03 52 03.3 +1.4**
VSU Vasula 37.21 336⇓ *eP* **P 03 52 00.7 -1.1**
VSU pmax pmax
comp=Z,191nm,1.4s,mb5.7
VSU MLR MLR
comp=Z,100nm,15.0s,MS3.7
VSU Vasula 37.21 336⇓ *eP* **P 03 52 00.8 -1.0**
OBKA Obir 37.24 313⇑ *iP* **P 03 52 02.8 +0.5**
comp=Z,27nm,1.1s,mb5.0
NRCA Norcia 37.30 306 P **P 03 52 03.9 +1.1**
CING Cingoli 37.35 307 P **P 03 52 03.9 +0.6**
SNTG Esanatoglia 37.51 307 P **P 03 52 05.6 +1.0**
DPC Dobruska-Polom 37.51 319 *eP* **P 03 52 04.2 -0.4**
MNS Montasola 37.52 305 P **P 03 52 05.3 +0.6**
VOY Vojsko 37.53 312⇑ *eP* **P 03 52 04.7 -0.1**
VOY *e* 03 52 24.7
VOY *e* 03 52 46.7
VOY *e* 03 52 48.5
VOY *e* 03 53 18.7
TREC Trest 37.59 317 P **P 03 52 04.9 -0.4**
TREC *epP* pP 03 52 09.2 -0.7
TREC Trest 37.59 317 *eP* **P 03 52 04.9 -0.4**
TREC *epP* pP 03 52 09.2 -0.7
TREC AMS AMS 04 11 00.0
comp=Z,300nm,15.0s
ASS Assisi 37.67 307 P **P 03 52 06.7 +0.7**
ASS pmax pmax
comp=Z,57nm,0.9s,mb5.3
ASS Assisi 37.67 307 P **P 03 52 06.7 +0.7**
comp=Z,57nm,0.9s,mb5.3
CADS Cadrg 37.69 312 *eP* **P 03 52 06.1 -0.1**
FSSB Fossombrone 37.72 308 P **P 03 52 07.4 +1.0**
KSP Ksiaz 37.74 320 *eP* **P 03 52 06.4 -0.1**
KSP *e* pP 03 52 10.8 -0.3
KSP Ksiaz 37.74 320⇈ *eP* **P 03 52 06.1 -0.3**
KSP *epP* pP 03 52 10.0 -1.1
UPC Upice 37.76 319 *eP* **P 03 52 06.2 -0.4**
UPC *epP* pP 03 52 10.1 -1.2
MURB Monte Urbino 37.81 307 P **P 03 52 08.6 +1.5**
MOA Molln 37.84 315⇑ *iP* **P 03 52 07.4 +0.1**
comp=Z,50nm,1.4s,mb5.0,SNR=22
MOA Molln 37.84 315 P **P 03 52 07.3 -0.1**
PIEI Pieia 37.85 307 P **P 03 52 08.6 +1.1**
MYKA Terra Mystica 37.87 312⇓ *iP* **P 03 52 07.1 -0.5**
comp=Z,29nm,0.9s,mb5.0
PTCC Patocco-Chiusa 38.00 312 P **P 03 52 08.9 +0.2**
comp=Z,62nm,0.7s,mb5.5
RSM Repubblica di 38.00 308 P **P 03 52 10.7 +1.9**
GMNA Gemona 38.04 312 P **P 03 52 09.3 +0.2**
comp=Z,348nm,0.9s,mb6.1
BADI Badiali 38.06 307 P **P 03 52 11.1 +1.9**
HVS Khovu-Aksy 38.19 40⇈ *eP* **P 03 52 09.4 -0.8**
HVS pmax pmax
comp=Z,34nm,1.2s,mb5.0
HVS MLR MLR
comp=Z,900nm,12.0s,MS4.8
KBA Koelnbreinsper 38.20 313⇑ *iP* **P 03 52 10.5 +0.1**
comp=Z,61nm,0.8s,mb5.4,SNR=40
GKP Gorka Klasztor 38.31 324 *eP* **P 03 52 11.2 0.0**
GKP *e* pP 03 52 15.3 -0.6
GKP Gorka Klasztor 38.31 324 *eP* **P 03 52 11.2 0.0**
GKP *e* pP 03 52 15.3 -0.6
SFI Santa Sofia 38.42 308 P **P 03 52 14.1 +1.8**
PRU Pruhonice 38.42 318 *eP* **P 03 52 11.4 -0.9**
PRU *epP* pP 03 52 14.8 -2.1
PRU Pruhonice 38.42 318 *eP* **P 03 52 11.4 -0.9**
PRU *epP* pP 03 52 14.8 -2.1
PRU AMS AMS 04 13 40.0
comp=Z,200nm,16.1s
GEC2 GERESS Array S 38.53 316 *eP* **P 03 52 12.2 -0.9**
GEC2 GERESS Array S 38.53 316 *eP* **P 03 52 12.3 -0.9**
GEC2 pmax pmax
comp=Z,17nm,1.1s,mb4.7
GEC2 GERESS Array S 38.53 316 *eP* **P 03 52 12.3 -0.9**
comp=Z,17nm,1.1s,mb4.7
GEC2 GERESS Array S 38.53 316 *eP* **P 03 52 12.2 -1.0**
GERES GERESS Array B 38.53 316 P **P 03 52 12.6 -0.6**
comp=Z,6.9nm,0.5s,mb4.6,baz=110,slow=7.8,SNR=34
GERES PcP PcP 03 54 25.5 -0.3
comp=Z,3.4nm,1.0s,baz=132,slow=2.9,SNR=3.4
GERES ScP ScP 03 58 11.7 -1.6
comp=Z,4.3nm,1.1s,baz=112,slow=3.6,SNR=8.8
GERES LR LR 04 09 51.2
comp=Z,132nm,18.6s,MS3.8,baz=286,slow=39
GERES GERESS Array B 38.53 316 P **P 03 52 12.6 -0.6**
GERES 03 54 25.5
GERES 03 58 11.7
GERES pmax pmax
comp=Z,7.0nm,0.5s
GERES pmax pmax
comp=Z,3.0nm,1.0s
GERES pmax pmax
comp=N,4.0nm,1.1s
GERES MLR MLR
comp=Z,132nm,18.6s
GERES GERESS Array B 38.53 316 PcP PcP 03 54 25.5 -0.2
PVCC Panska Ves 38.61 319 *eP* **P 03 52 13.4 -0.4**
ABTA Abfaltersbach 38.65 312⇑ *iP* **P 03 52 14.2 0.0**
comp=Z,51nm,1.1s,mb5.2,SNR=30
KHC Kasperske Hory 38.70 316 *eP* **P 03 52 14.1 -0.5**
KHC *epP* pP 03 52 18.3 -1.0
KHC Kasperske Hory 38.70 316 *eP* **P 03 52 14.1 -0.5**
KHC *epP* pP 03 52 18.3 -1.0
KHC AMS AMS 04 12 30.0
comp=Z,300nm,15.4s
RJOB Jochberg 38.75 314 *eP* **P 03 52 14.5 -0.5**
comp=Z,32nm,0.8s,mb5.1
SEI Scarperia 38.80 308 P **P 03 52 16.7 +1.2**
comp=Z,319nm,0.5s,mb6.3
SEST Monte Rota 38.85 312 P **P 03 52 16.3 +0.5**
CTI Castel Tesino 39.04 311 P **P 03 52 17.6 +0.1**
BRG Berggiesshubel 39.11 319 *i P* **P 03 52 17.6 -0.4**
BRG *e* 03 54 32.1
BRG pmax pmax
comp=Z,13nm,0.9s,mb4.7
BRG Berggiesshubel 39.11 319 *eP* **P 03 52 17.5 -0.5**
comp=Z,27nm,0.9s,mb5.0
BRG *epP* pP 03 52 21.7 -1.0
BRG Berggiesshubel 39.11 319 *i P* **P 03 52 17.6 -0.4**
comp=Z,22nm,0.9s,mb4.8
BRG *i* pP 03 52 21.5 -1.2
comp=Z,27nm,0.9s
BRG *e* 03 54 32.1
comp=Z,11nm,1.3s
WET Wettzell 39.14 316 *eP* **P 03 52 17.2 -1.1**
WET pmax pmax
comp=Z,23nm,0.9s,mb4.9
WET Wettzell 39.14 316 *eP* **P 03 52 17.2 -1.1**
comp=Z,23nm,0.9s,mb4.9
WET *epP* pP 03 52 21.5 -1.5
JOF Joensuu 39.26 343 *ep* **P 03 52 18.1 -1.0**
comp=Z,4.6nm,0.3s,mb4.7
JOF Joensuu 39.26 343 *eP* **P 03 52 18.1 -1.0**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb4.7
WTTA Wattenberg 39.37 313⇑ *iP* **P 03 52 20.0 -0.2**
comp=Z,108nm,0.8s,mb5.6,SNR=45
WTTA Wattenberg 39.37 313 P **P 03 52 19.9 -0.3**
GSCL Gusciola 39.40 308 P **P 03 52 21.6 +1.1**
comp=Z,52nm,0.8s,mb5.3
WATA Walderalm 39.43 313⇑ *iP* **P 03 52 20.1 -0.5**
comp=Z,62nm,0.8s,mb5.4,SNR=14
WATA Walderalm 39.43 313 P **P 03 52 20.3 -0.4**
GTA Gaotai 39.44 60 P **P 03 52 21.5 +0.6**
GTA AP pP 03 52 25.6 0.0
GTA XP sP 03 52 28.6 +1.2
GTA PP PP 03 53 57.0 +5.6
GTA S **S 03 58 24.4 +2.2**
GTA XS sS 03 58 29.8 -0.1
GTA AMB AMB
comp=Z,37nm,1.0s,mb5.1
GTA AMB AMB
comp=Z,155nm,5.7s
GTA LR LR
comp=N,359nm,15.3s,MS4.6
GTA LR LR
comp=E,451nm,13.2s,MS4.6
GTA LR LR
comp=Z,382nm,16.8s,MS4.3
FBE Freiberg 39.48 319 *eP* **P 03 52 20.6 -0.5**
comp=Z,39nm,1.5s,mb4.9
KEST Kesra 39.49 294 P **P 03 52 23.1 +1.7**
comp=Z,6.6nm,1.0s,mb4.3,baz=314,slow=1.5,SNR=10

FINES FINESS Array B 39.62 339 P **P 03 52 20.0 -2.1**
VSL Villasalto 39.62 300 *eP* **P 03 52 22.9 +0.4**
comp=Z,108nm,1.0s,mb5.5
VSL Villasalto 39.62 300 *eP* **P 03 52 22.9 +0.5**
comp=Z,108nm,1.0s,mb5.5
SQTA Sankt Quirin 39.64 313⇑ *iP* **P 03 52 22.1 -0.3**
comp=Z,50nm,0.4s,mb5.6
SQTA Sankt Quirin 39.64 313 P **P 03 52 22.1 -0.3**
comp=Z,50nm,0.4s,mb5.6
MAGA Magasa 39.67 310 P **P 03 52 23.9 +1.1**
BERN Bernov 39.73 318⇑ *iP* **P 03 52 27.7 +4.5**
MOTA Moosalm 39.74 313⇑ *iP* **P 03 52 22.7 -0.6**
comp=Z,144nm,1.0s,mb5.7,SNR=44
MOTA ⇓ *i* ScP ScP 03 58 17.1 -0.9
comp=Z,3.9nm,0.8s
ROTZ Rotzenmuhle 39.76 317 *eP* **P 03 52 23.3 -0.1**
comp=Z,32nm,0.9s,mb5.0
ROTZ *epP* pP 03 52 27.5 -0.6
NKC Novy Kostel 39.77 318 *eP* **P 03 52 23.5 0.0**
MABI Malga Bissina 39.81 311 P **P 03 52 23.5 -0.4**
CLL Collm 39.83 319⇑ *iP* **P 03 52 23.6 -0.4**
comp=Z,47nm,1.2s,mb5.1
CLL *i* pP 03 52 27.7 -0.9
CLL LR LR
comp=Z,300nm,18.4s,MS4.2
CLL Collm 39.83 319⇑ *iP* **P 03 52 23.6 -0.4**
CLL pmax pmax
comp=Z,47nm,1.2s,mb5.1
CLL MLR MLR
comp=Z,300nm,18.4s,MS4.2
CLL Collm 39.83 319 *eP* **P 03 52 23.7 -0.3**
comp=Z,46nm,1.2s,mb5.1
CLL *epP* pP 03 52 27.9 -0.7
CLL Collm 39.83 319⇑ *iP* **P 03 52 23.6 -0.4**
comp=Z,47nm,1.2s,mb5.1
CLL *i* pP pP 03 52 27.7 -0.9
CLL *ePPPP* 03 54 28.0
CLL *eS* **S 03 58 24.0 -3.7**
CLL *eSS* SS 04 01 24.0 +0.2
CLL *e*(SSSS) 04 02 30.0
WERN Wernitzgruen 39.83 318 *eP* **P 03 52 23.8 -0.2**
comp=Z,34nm,1.4s,mb4.9
RUE Ruedersdorf 39.84 321 *eP* **P 03 52 23.8 -0.2**
comp=Z,68nm,0.8s,mb5.4
RUE Ruedersdorf 39.84 321 *eP* **P 03 52 23.9 -0.1**
comp=Z,131nm,1.2s,mb5.5
RUE *epP* pP 03 52 28.0 -0.7
RUE Ruedersdorf 39.84 321 *eP* **P 03 52 23.8 -0.2**
comp=Z,68nm,0.8s,mb5.4
FUR Furstenfeldbru 39.85 314 *eP* **P 03 52 23.5 -0.7**
FUR pmax pmax
comp=Z,114nm,1.4s,mb5.4
FUR Furstenfeldbru 39.85 314 *eP* **P 03 52 23.5 -0.7**
comp=Z,114nm,1.4s,mb5.4
GUNZ Gunzen 39.89 318 *eP* **P 03 52 24.3 -0.2**
comp=Z,12nm,1.0s,mb4.6
MANZ Manzenberg 39.89 317 *eP* **P 03 52 24.1 -0.4**
comp=Z,15nm,1.0s,mb4.7
FETA Feichten 39.90 312⇑ *iP* **P 03 52 24.6 0.0**
comp=Z,128nm,0.8s,mb5.7,SNR=120
FETA ⇑ *e* ScP ScP 03 58 12.0 -6.7
comp=Z,12nm,1.9s
RETA Reutte 40.00 313⇑ *iP* **P 03 52 24.7 -0.8**
comp=Z,59nm,0.7s,mb5.4,SNR=19
RETA ⇑ *e* ScP ScP 03 58 19.0 0.0
comp=Z,11nm,1.1s
BRMO Bormio 40.01 311 P **P 03 52 25.8 +0.3**
KRAR Krasnoyarsk 40.02 33 *i P* **P 03 52 24.4 -1.1**
KRAR MLR MLR
comp=Z,900nm,23.0s,MS4.5
KAF Kangasniemi 40.05 340 *ep* **P 03 52 24.7 -0.9**
comp=Z,6.2nm,0.4s,mb4.7,baz=137,slow=8.6
KAF Kangasniemi 40.05 340 *eP* **P 03 52 24.7 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
FUORN Ofenpass-Fuorn 40.11 311⇑ *iP* **P 03 52 26.8 +0.4**
comp=Z,190nm,2.5s,mb5.4
FUORN Ofenpass-Fuorn 40.11 311⇑ *iP* **P 03 52 20.0 -6.4**
comp=Z,190nm,2.5s,mb5.4
BERNI Berninapass 40.23 311⇑ *iP* **P 03 52 27.9 +0.5**
comp=Z,228nm,2.0s,mb5.6
BERNI Berninapass 40.23 311⇑ *iP* **P 03 52 24.6 -2.8**
comp=Z,228nm,2.0s,mb5.6
GRF Grafenberg Arr 40.34 316 *eP* **P 03 52 28.0 -0.3**
GRF pmax pmax
comp=Z,117nm,1.4s,mb5.4
GRF Grafenberg Arr 40.34 316 *eP* **P 03 52 28.0 -0.3**
GRF pmax pmax
comp=Z,117nm,1.4s,mb5.4
GRF Grafenberg Arr 40.34 316 *eP* **P 03 52 28.0 -0.3**
comp=Z,117nm,1.4s,mb5.4
BSD Bornholm Skovb 40.39 325 *i P* **P 03 52 26.4 -2.2**
BSD pmax pmax
comp=Z,56nm,0.8s,mb5.3
BSD Bornholm Skovb 40.39 325 *i P* **P 03 52 26.4 -2.2**
comp=Z,56nm,0.8s,mb5.3
DAVOX Davos/Dischmat 40.41 312 P **P 03 52 28.7 -0.1**
comp=Z,44nm,0.5s,mb5.4,baz=110,slow=7.4,SNR=31
DAVOX S **S 03 58 32.2 -4.3**
comp=Z,6.1nm,1.0s,baz=160,slow=23,SNR=3.8
DAVOX Davos/Dischmat 40.41 312⇑ *iP* **P 03 52 28.8 -0.1**
comp=Z,85nm,0.6s,mb5.7
MOX Moxa 40.41 318 *eP* **P 03 52 28.6 -0.2**
comp=Z,17nm,1.1s,mb4.7
MOX Moxa 40.41 318 *eP* **P 03 52 28.6 -0.2**
MOX pmax pmax
comp=Z,17nm,1.1s,mb4.7
MOX Moxa 40.41 318 *eP* **P 03 52 28.5 -0.3**
comp=Z,17nm,1.3s,mb4.6
UBR Ueberruh 40.48 313 P **P 03 52 28.8 -0.6**
DAVOS Davos 40.48 312 P **P 03 52 28.7 -0.7**
DAVOS S **S 03 58 32.2 -5.4**
DAVA Damuels 40.53 312⇑ *iP* **P 03 52 29.6 -0.3**
comp=Z,221nm,0.9s,mb5.8,SNR=55
DAVA ⇓ *i* pP pP 03 52 33.6 -0.9
comp=Z,236nm,0.5s
DAVA ⇑ *e* S **S 03 58 30.2 -8.2**
comp=Z,32nm,1.4s
DAVA Damuels 40.53 312 P **P 03 52 29.5 -0.4**
HDH Heidenheim-Cha 40.65 314 P **P 03 52 29.5 -1.4**
TUE Stuetta 40.70 311 *eP* **P 03 52 30.9 -0.3**
comp=Z,47nm,1.0s,mb5.1
MUGIO Muggio 40.79 310⇑ *iP* **P 03 52 31.5 -0.5**
comp=Z,215nm,2.4s,mb5.4
MUGIO Muggio 40.79 310⇑ *iP* **P 03 52 27.9 -4.1**
comp=Z,215nm,2.4s,mb5.4
LIENZ Kamor/St.Gall 40.79 312⇑ *iP* **P 03 52 31.1 -0.9**
comp=Z,130nm,0.7s,mb5.7
LIENZ Kamor/St.Gall 40.79 312⇑ *iP* **P 03 52 26.8 -5.2**
comp=Z,130nm,0.7s,mb5.7
PLONS Plons/SG 40.80 312⇑ *iP* **P 03 52 31.5 -0.6**
comp=Z,164nm,0.7s,mb5.8
PLONS Plons/SG 40.80 312⇑ *iP* **P 03 52 28.8 -3.3**
comp=Z,164nm,0.7s,mb5.8
RGN Rugen 40.96 324 *eP* **P 03 52 33.4 +0.1**
comp=Z,209nm,1.1s,mb5.7
RGN *epP* pP 03 52 37.2 -0.8
VAI Varese 40.96 310 P **P 03 52 32.5 -0.9**
VAI pmax pmax
comp=Z,26nm,0.5s,mb5.1
VAI Varese 40.96 310 P **P 03 52 32.5 -0.9**
comp=Z,26nm,0.5s,mb5.1
LLS Linth-Limmern 41.01 312⇑ *iP* **P 03 52 33.3 -0.5**
comp=Z,74nm,0.6s,mb5.5
BUCH Bad Urach 41.17 314 P **P 03 52 34.4 -0.7**
WEIN Weingarten 41.18 313⇑ *iP* **P 03 52 34.8 -0.4**
comp=Z,314nm,1.1s,mb5.8
WEIN Weingarten 41.18 313⇑ *iP* **P 03 52 31.1 -4.1**
comp=Z,314nm,1.1s,mb5.8
WILA Wila 41.20 312⇑ *iP* **P 03 52 35.1 -0.3**
comp=Z,232nm,1.0s,mb5.8
WILA Wila 41.20 312⇑ *iP* **P 03 52 34.9 -0.5**
GUT Gutenstein 41.22 313 P **P 03 52 34.6 -1.0**
SISB Singen-Schiene 41.23 313 P **P 03 52 35.0 -0.6**
IMI Imperia 41.23 307 P **P 03 52 36.1 +0.4**
MUO Muotathal 41.28 312⇑ *iP* **P 03 52 35.5 -0.6**
comp=Z,92nm,0.8s,mb5.5
MUO Muotathal 41.28 312⇑ *P* **P 03 52 35.6 -0.5**
STU Stuttgart 41.35 314 *eP* **P 03 52 35.5 -1.1**
comp=Z,57nm,1.7s,mb4.9
CHG Chiang Mai 41.38 92⇑ *P* **P 03 52 37.5 +0.3**
comp=Z,14nm,0.8s,mb4.7
CHTO Chiang Mai 41.38 92 *eP* **P 03 52 37.5 +0.3**
comp=Z,14nm,1.1s,mb4.5
CHTO Chiang Mai 41.38 92 *eP* **P 03 52 37.5 +0.3**
CHTO pmax pmax

comp=Z,14nm,1.1s,mb4.5
CHTO Chiang Mai 41.38 92 *e*P **P 03 52 37.5 +0.3**
comp=Z,14nm,1.1s,mb4.5
CHTO Chiang Mai 41.38 92 P **P 03 52 37.9 +0.7**
comp=Z,16nm,1.2s,mb4.5
TRULL Truellikon 41.41 313⇑*i*P **P 03 52 36.4 -0.7**
comp=Z,356nm,1.6s,mb5.8
TRULL Truellikon 41.41 313⇑*i*P **P 03 52 33.3 -3.8**
comp=Z,356nm,1.6s,mb5.8
ZUR Degenried 41.41 312⇑*i*P **P 03 52 36.7 -0.4**
comp=Z,284nm,0.9s,mb5.9
UBBA Unterbreizbach 41.44 318 *e*P **P 03 52 37.1 -0.2**
comp=Z,12nm,0.8s,mb4.6
SPAK Spaichingen-Ko 41.45 313 *e*P **P 03 52 36.9 -0.5**
ORO Oropa 41.46 309 P **P 03 52 36.3 -1.2**
ORO pmax pmax
comp=Z,6.0nm,0.3s,mb4.7
ORO Oropa 41.46 309 P **P 03 52 36.3 -1.2**
comp=Z,5.7nm,0.3s,mb4.7
CMAR Chiang Mai Arr 41.50 92 P **P 03 52 38.1 0.0**
comp=Z,4.2nm,0.6s,mb4.2,baz=280,slow=9.4,SNR=20
CMAR PcP PcP 03 54 34.8 -1.0
comp=Z,2.1nm,0.6s,baz=279,slow=4.7,SNR=4.5
CMAR ScP ScP 03 58 20.6 -4.8
comp=Z,0.7nm,0.4s,baz=266,slow=4.2,SNR=4.3
CMAR LR LR 04 11 28.6
comp=Z,176nm,20.7s,MS3.9,baz=286,slow=38
CMAR Chiang Mai Arr 41.50 92 P **P 03 52 38.2 0.0**
CMAR 03 54 34.8
CMAR pmax pmax
comp=Z,4.0nm,0.6s
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR pmax pmax
comp=N,1.0nm,0.4s
CMAR MLR MLR
comp=Z,176nm,20.7s
CMAR Chiang Mai Arr 41.50 92 PcP PcP 03 54 34.8 -1.0
CLZ Clausthal 41.55 319 *e*P **P 03 52 38.6 +0.4**
CLZ pmax pmax
comp=Z,121nm,1.4s,mb5.3
CLZ Clausthal 41.55 319 *e*P **P 03 52 38.6 +0.4**
comp=Z,121nm,1.4s,mb5.3
CLZ *e*pP pP 03 52 42.6 -0.3
SLE Schleitheim 41.56 313⇑*i*P **P 03 52 37.4 -0.9**
comp=Z,95nm,0.7s,mb5.5
LBG Lerchenberg 41.58 314 P **P 03 52 37.4 -1.1**
SULZ Cheisacher 41.75 312⇑*i*P **P 03 52 39.1 -0.8**
comp=Z,224nm,1.6s,mb5.5
SULZ Cheisacher 41.75 312 ⇑P **P 03 52 39.2 -0.7**
BFO Black Forest 41.80 314 P **P 03 52 40.7 +0.4**
comp=Z,150nm,0.6s,mb5.8,SNR=6.7
BFO Black Forest 41.80 314 *e*P **P 03 52 40.1 -0.1**
comp=Z,16nm,0.7s,mb4.8
BFO Black Forest 41.80 314 *e*P **P 03 52 40.3 0.0**
BFO pmax pmax
comp=Z,20nm,0.7s,mb4.9
BFO Black Forest 41.80 314 *e*P **P 03 52 40.3 0.0**
comp=Z,20nm,0.7s,mb4.9
BFO Black Forest 41.80 314 *e*P **P 03 52 40.1 -0.2**
comp=Z,16nm,0.7s,mb4.8
TOD Tromm 41.82 316 *e*P **P 03 52 39.7 -0.7**
LKBD Leukerbad 41.84 311 ⇓P **P 03 52 39.8 -0.9**
SWS Schriesheim-Wi 41.85 315 P **P 03 52 40.4 -0.3**
WIMIS Wimmis 41.90 311⇑*i*P **P 03 52 40.1 -1.0**
comp=Z,87nm,0.7s,mb5.5
WIMIS Wimmis 41.90 311⇑*i*P **P 03 52 36.4 -4.7**
comp=Z,87nm,0.7s,mb5.5
FELD Feldberg im Sc 41.90 313 *e*P **P 03 52 40.6 -0.5**
COP Copenhagen 41.91 325⇑*i*P **P 03 52 41.3 +0.2**
COP pmax pmax
comp=Z,58nm,0.8s,mb5.3
COP Copenhagen 41.91 325⇑*i*P **P 03 52 41.3 +0.2**
comp=Z,58nm,0.8s,mb5.3
DIX Grande Dixence 41.93 310 ⇑P **P 03 52 40.8 -0.6**
KIZ Kirchzarten 41.98 313 P **P 03 52 42.0 +0.3**
BALST Balsthal 41.99 312⇑*i*P **P 03 52 41.2 -0.6**
comp=Z,265nm,1.0s,mb5.8
BALST Balsthal 41.99 312⇑*i*P **P 03 52 36.7 -5.1**
comp=Z,265nm,1.0s,mb5.8
BBS Basel-Blauen 42.14 312 *e*P **P 03 52 41.0 -2.1**
MBDF Montbardon 42.15 308 *e*P **P 03 52 42.6 -0.6**
comp=Z,56nm,0.7s,mb5.0
MBDF Montbardon 42.15 308 *e*P **P 03 52 42.6 -0.6**
MBDF pmax pmax
comp=Z,28nm,0.7s,mb5.0
MBDF Montbardon 42.15 308 *e*P **P 03 52 42.6 -0.6**
comp=Z,28nm,0.7s,mb5.0
KTD Kalmit 42.20 315 *e*P **P 03 52 42.8 -0.7**
TNS Taunus Mts 42.21 316 *e*P **P 03 52 43.2 -0.4**
TNS pmax pmax
comp=Z,64nm,1.4s,mb5.1
TNS Taunus Mts 42.21 316 *e*P **P 03 52 43.2 -0.4**
comp=Z,64nm,1.4s,mb5.1
STR Strasbourg 42.22 314 *e*P **P 03 52 41.7 -2.0**
LIBD Limburg 42.23 313 *e*P **P 03 52 43.5 -0.3**
BNI Bardonecchia 42.27 308 *e*P **P 03 52 43.4 -0.7**
BNI pmax pmax
comp=Z,35nm,0.8s,mb5.0
BNI Bardonecchia 42.27 308 *e*P **P 03 52 43.4 -0.7**
comp=Z,35nm,0.8s,mb5.0
EMV Vieux Emosson 42.28 310 ⇓P **P 03 52 43.7 -0.5**
LPG La Plagne 42.28 309⇑*i*P **P 03 52 43.5 -0.8**
comp=Z,65nm,0.7s,mb5.0
LPG La Plagne 42.28 309⇑*i*P **P 03 52 43.5 -0.8**
LPG pmax pmax
comp=Z,32nm,0.7s,mb5.1
LPG La Plagne 42.28 309⇑*i*P **P 03 52 43.5 -0.8**
comp=Z,32nm,0.7s,mb5.0
LANF Langenberg 42.29 314 *e*P **P 03 52 42.1 -2.2**
LPL La Plagne 42.30 309⇑*i*P **P 03 52 43.5 -0.9**
comp=Z,57nm,0.7s,mb5.0
LPL La Plagne 42.30 309⇑*i*P **P 03 52 43.5 -0.9**
LPL pmax pmax
comp=Z,28nm,0.7s,mb5.0
LPL La Plagne 42.30 309⇑*i*P **P 03 52 43.5 -0.9**
comp=Z,28nm,0.7s,mb5.0
BOURR Bourrignon 42.31 312⇑*i*P **P 03 52 44.1 -0.4**
comp=Z,158nm,1.2s,mb5.5
BOURR Bourrignon 42.31 312⇑*i*P **P 03 52 37.4 -7.1**
comp=Z,158nm,1.2s,mb5.5
BSEG Bad Segeberg 42.32 322 *e*P **P 03 52 44.5 0.0**
BSEG pmax pmax
comp=Z,55nm,1.0s,mb5.1
BSEG Bad Segeberg 42.32 322 *e*P **P 03 52 44.5 0.0**
comp=Z,55nm,1.0s,mb5.1
RSL Roselend 42.40 309 *e*P **P 03 52 44.4 -0.9**
MOF Molkenrain 42.47 313 *e*P **P 03 52 44.8 -1.0**
OG01 Vacheresse 42.47 310 *e*P **P 03 52 45.9 +0.1**
CDF Champ du Feu 42.50 313⇑*i*P **P 03 52 44.8 -1.2**
comp=Z,49nm,0.9s,mb4.8
CDF Champ du Feu 42.50 313⇑*i*P **P 03 52 44.8 -1.2**
CDF pmax pmax
comp=Z,24nm,0.9s,mb4.8
CDF Champ du Feu 42.50 313⇑*i*P **P 03 52 44.8 -1.2**
comp=Z,24nm,0.9s,mb4.8
ECH Echery 42.53 313 *e*P **P 03 52 45.4 -0.9**
ECH Echery 42.53 313 *e*P **P 03 52 45.1 -1.2**
LZH Lanzhou 42.55 65 *e*P **P 03 52 46.9 +0.3**
LZH AP pP 03 52 51.5 +0.2
LZH XP sP 03 52 55.5 +2.3
LZH PP PP 03 54 28.5 +3.3
LZH *e*S **S 03 59 07.0 -1.6**
LZH SS SS 04 02 11.0 -7.3
LZH AMB AMB
comp=Z,39nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,250nm,5.4s
LZH LR LR
comp=N,470nm,15.8s
LZH LR LR
comp=Z,690nm,16.5s,MS4.6
LOMF Lomont 42.57 312 *e*P **P 03 52 47.0 +0.4**
MOY Mondy 42.64 42 *e*P **P 03 52 47.6 +0.5**
HINF Hinteralfeld 42.65 312⇑*i*P **P 03 52 46.2 -1.0**
comp=Z,58nm,0.8s,mb5.1
HINF Hinteralfeld 42.65 312⇑*i*P **P 03 52 46.2 -1.0**
HINF pmax pmax
comp=Z,29nm,0.8s,mb5.1
HINF Hinteralfeld 42.65 312⇑*i*P **P 03 52 46.2 -1.0**
comp=Z,29nm,0.8s,mb5.1
ABH Alteburg 42.68 316 *e*P **P 03 52 46.6 -0.8**
APA Apatity 42.80 348⇑*i*P **P 03 52 47.4 -0.7**
APA *i* 03 52 59.0
APA *i* 03 54 28.2
APA pmax pmax
comp=Z,29nm,1.2s,mb4.9
CABF La Chapelle 42.93 311⇑*i*P **P 03 52 49.1 -0.4**
comp=Z,106nm,0.7s,mb5.4
CABF La Chapelle 42.93 311⇑*i*P **P 03 52 49.1 -0.4**
CABF pmax pmax
comp=Z,53nm,0.7s,mb5.4
CABF La Chapelle 42.93 311⇑*i*P **P 03 52 49.1 -0.4**
comp=Z,53nm,0.7s,mb5.4
RUP Ruppelstein 42.94 315 *e*P **P 03 52 49.0 -0.6**
NANT Nan 42.95 91 P **P 03 52 49.0 -1.0**
KMI Kunming 43.01 81⇑P **P 03 52 51.3 +0.8**
KMI AP pP 03 52 55.6 +0.4
KMI XP sP 03 52 57.5 +0.4
KMI PP PP 03 54 33.5 +3.1
KMI S **S 03 59 16.3 +0.6**
KMI XS sS 03 59 23.5 +0.1
KMI SS SS 04 02 21.8 -6.0
KMI AMB AMB
comp=Z,20nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,124nm,3.1s
KMI LR LR
comp=N,296nm,11.6s,MS4.6
KMI LR LR
comp=E,302nm,11.6s,MS4.6
KMI LR LR
comp=Z,221nm,14.3s,MS4.2
HAU Haudompre 43.02 313⇑*i*P **P 03 52 49.1 -1.1**
comp=Z,50nm,0.8s,mb5.0
HAU *e*MLR MLR
comp=Z,155nm,22.8s,MS3.5
HAU Haudompre 43.02 313⇑*i*P **P 03 52 49.1 -1.1**
comp=Z,25nm,0.8s,mb5.0
HAU LR LR
comp=Z,150nm,22.8s,MS3.8
HAU Haudompre 43.02 313⇑*i*P **P 03 52 49.1 -1.1**
HAU pmax pmax
comp=Z,25nm,0.8s,mb5.0
HAU MLR MLR
comp=Z,150nm,22.8s,MS3.8
IBBN Ibbenburen 43.23 319 *e*P **P 03 52 52.7 +0.9**
comp=Z,66nm,1.0s,mb5.3
BUG Bochum--Univer 43.27 318 *e*P **P 03 52 53.3 +1.1**
comp=Z,61nm,1.0s,mb5.3
THEF They Montfort 43.30 313 *e*P **P 03 52 52.4 -0.1**
HFS Hagfors 43.46 331 P **P 03 52 52.8 -0.8**
comp=Z,27nm,0.7s,mb5.1,baz=120,slow=10,SNR=48
HFS LR LR 04 14 11.3
comp=Z,344nm,19.5s,MS4.3,baz=266,slow=40
HFS Hagfors 43.46 331 P **P 03 52 52.8 -0.8**
HFS pmax pmax
comp=Z,27nm,0.7s
HFS MLR MLR
comp=Z,345nm,19.5s
HFA0 Hagfors New Ar 43.47 331 P **P 03 52 52.0 -1.7**
WLF Walferdange 43.50 315 P **P 03 52 53.7 -0.4**
comp=Z,39nm,1.1s,mb5.0
WLF Walferdange 43.50 315 *e*P **P 03 52 53.1 -1.0**
comp=Z,71nm,1.1s,mb5.3
WLF Walferdange 43.50 315 *e*P **P 03 52 53.1 -1.0**
WLF pmax pmax
comp=Z,71nm,1.1s,mb5.3
WLF Walferdange 43.50 315 *e*P **P 03 52 53.7 -0.4**
comp=Z,68nm,1.3s,mb5.2
WLF *e*pP pP 03 52 57.9 -0.9
WLF Walferdange 43.50 315 *e*P **P 03 52 53.1 -1.0**
comp=Z,71nm,1.1s,mb5.3
VIVF Saint-Julien-l 43.65 308 *e*P **P 03 52 54.4 -0.9**
comp=Z,60nm,1.1s,mb4.9
VIVF Saint-Julien-l 43.65 308 *e*P **P 03 52 54.4 -0.9**
VIVF pmax pmax
comp=Z,30nm,1.1s,mb4.9
VIVF Saint-Julien-l 43.65 308 *e*P **P 03 52 54.4 -0.9**
comp=Z,30nm,1.1s,mb4.9
ZAK Zakamensk 43.68 44 *e* **P 03 52 55.0 -0.5**
ZAK *e* 03 54 39.2
ZAK pmax pmax
comp=Z,3.0nm,2.2s
WTSB Winterswijk 43.70 318 *e*P **P 03 52 55.9 +0.3**
comp=Z,72nm,0.9s,mb5.4
HLG Helgoland 43.75 322 *e*P **P 03 52 56.4 +0.3**
comp=Z,550nm,1.6s,mb6.0
SSB Saint Sauveur 43.79 308 *e*P **P 03 52 55.1 -1.4**
SSB Saint Sauveur 43.79 308 *e*P **P 03 52 55.1 -1.4**
MEM Membach 43.82 316 P **P 03 52 57.2 +0.6**
comp=Z,20nm,1.3s,mb4.7
MUD Monsted U'grnd 43.89 325⇑*i*P **P 03 52 57.4 +0.3**
MUD pmax pmax
comp=Z,38nm,0.8s,mb5.2
MUD Monsted U'grnd 43.89 325⇑*i*P **P 03 52 57.4 +0.3**
comp=Z,38nm,0.8s,mb5.2
HGN Heimansgroeve 43.90 316 *e*P **P 03 52 57.4 +0.1**
comp=Z,58nm,1.0s,mb5.2
HGN Heimansgroeve 43.90 316 *e*P **P 03 52 57.4 +0.1**
comp=Z,58nm,1.0s,mb5.2
MEZF Maizieres J'vi 43.97 313⇑*i*P **P 03 52 57.4 -0.4**
comp=Z,289nm,1.3s,mb5.5
MEZF Maizieres J'vi 43.97 313⇑*i*P **P 03 52 57.4 -0.4**
comp=Z,144nm,1.3s,mb5.5
LASF Ste Croix 44.14 307⇑*i*P **P 03 52 58.9 -0.4**
comp=Z,157nm,1.3s,mb5.3
LASF Ste Croix 44.14 307⇑*i*P **P 03 52 58.9 -0.4**
comp=Z,79nm,1.3s,mb5.3
BCLA Clavier 44.21 316 P **P 03 53 00.2 +0.5**
comp=Z,32nm,1.4s,mb4.9
TLY Talaya 44.23 42 *e*S **S 03 59 29.0 -3.8**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,528nm,13.0s,MS4.6
TLY Talaya 44.23 42⇓*e*P **P 03 52 59.9 0.0**
GIVF Givet 44.44 315⇑*i*P **P 03 53 01.8 +0.2**
comp=Z,167nm,1.2s,mb5.3
GIVF Givet 44.44 315⇑*i*P **P 03 53 01.8 +0.2**
GIVF pmax pmax
comp=Z,83nm,1.2s,mb5.3
GIVF Givet 44.44 315⇑*i*P **P 03 53 01.8 +0.2**
comp=Z,83nm,1.2s,mb5.3
SMF Signal de Mont 44.46 310⇑*i*P **P 03 53 01.0 -0.9**
comp=Z,93nm,0.8s,mb5.2
SMF Signal de Mont 44.46 310⇑*i*P **P 03 53 01.0 -0.9**
SMF pmax pmax
comp=Z,47nm,0.8s,mb5.3
SMF Signal de Mont 44.46 310⇑*i*P **P 03 53 01.0 -0.9**
comp=Z,47nm,0.8s,mb5.2
PLDF La Plantade 44.52 309 *e*P **P 03 53 01.4 -0.9**
LOR Lormes 44.54 311⇑*i*P **P 03 53 01.5 -1.0**
comp=Z,36nm,0.8s,mb5.0
LOR *e*MLR MLR
comp=Z,211nm,17.5s,MS3.8
LOR Lormes 44.54 311⇑*i*P **P 03 53 01.5 -1.0**
comp=Z,18nm,0.8s,mb5.0
LOR LR LR
comp=Z,210nm,17.5s,MS4.1
LOR Lormes 44.54 311⇑*i*P **P 03 53 01.5 -1.0**
LOR pmax pmax
comp=Z,18nm,0.8s,mb5.0
LOR MLR MLR
comp=Z,210nm,17.5s,MS4.1
DOU Dourbes 44.58 315 P **P 03 53 02.9 +0.2**
comp=Z,41nm,1.3s,mb5.1
TAM Tamanrasset 44.61 276 *e*P **P 03 53 04.6 +1.2**
TAM Tamanrasset 44.61 276 *e*P **P 03 53 04.6 +1.2**
OSL Oslo 44.66 330 *i*P **P 03 53 02.6 -0.6**
OSL Oslo 44.66 330 *e*P **P 03 53 02.1 -1.1**
OSL Oslo 44.66 330 *i*P **P 03 53 02.6 -0.6**
ETOS Mallorca 44.69 300 P **P 03 53 07.1 +3.3**
comp=Z,83nm,1.5s,mb5.3
LBL Lubilhac 44.70 308 *e*P **P 03 53 02.2 -1.5**
SSF Saint Saulge 44.75 311⇑*i*P **P 03 53 03.4 -0.7**
comp=Z,126nm,1.1s,mb5.4
SSF Saint Saulge 44.75 311⇑*i*P **P 03 53 03.4 -0.7**
SSF pmax pmax
comp=Z,63nm,1.1s,mb5.4
SSF Saint Saulge 44.75 311⇑*i*P **P 03 53 03.4 -0.7**
comp=Z,63nm,1.1s,mb5.4
AVF Avril sur Loir 44.82 310⇑*i*P **P 03 53 03.6 -1.1**
comp=Z,41nm,0.8s,mb5.0
AVF Avril sur Loir 44.82 310⇑*i*P **P 03 53 03.6 -1.1**
AVF pmax pmax
comp=Z,21nm,0.8s,mb5.0
AVF Avril sur Loir 44.82 310⇑*i*P **P 03 53 03.6 -1.1**
comp=Z,21nm,0.8s,mb5.0
BAIF Baives 44.82 315⇑*i*P **P 03 53 04.9 +0.3**
comp=Z,144nm,0.8s,mb5.5
BAIF Baives 44.82 315⇑*i*P **P 03 53 04.9 +0.3**
BAIF pmax pmax
comp=Z,72nm,0.8s,mb5.5
BAIF Baives 44.82 315⇑*i*P **P 03 53 04.9 +0.3**
comp=Z,72nm,0.8s,mb5.5
SNF Seneffe 44.87 316 P **P 03 53 05.4 +0.3**
comp=Z,37nm,1.5s,mb5.0
SNF Seneffe 44.87 316 P **P 03 53 05.3 +0.3**
comp=Z,37nm,1.5s,mb5.0
AGO Saint Agoulin 44.87 309 *e*P **P 03 53 04.9 -0.2**
UCC Uccle 44.88 316 P **P 03 53 05.6 +0.5**
comp=Z,49nm,1.4s,mb5.2
PYM Petit Puy Mans 44.92 309 *e*P **P 03 53 04.4 -1.1**
NB2 NORSAR Subarra 44.98 332 P **P 03 53 04.3 -1.4**
comp=Z,20nm,0.7s,mb5.0,baz=118,slow=7.9
NB2 NORSAR Subarra 44.98 332 P **P 03 53 08.0 +2.3**
NOA NORSAR Array B 44.98 332 P **P 03 53 04.4 -1.4**
comp=Z,18nm,0.7s,mb5.0,baz=119,slow=7.9,SNR=59
NOA PP PP
NOA 03 54 57.5 +6.8
comp=Z,6.3nm,0.9s,baz=112,slow=9.3,SNR=3.5
NOA LR LR 04 13 03.4
comp=Z,84nm,19.1s,MS3.7,baz=125,slow=38
NOA NORSAR Array B 44.98 332 P **P 03 53 04.4 -1.3**
NOA 03 54 57.5
NOA pmax pmax
comp=Z,18nm,0.7s
NOA pmax pmax
comp=Z,6.0nm,0.9s
NOA MLR MLR
comp=Z,84nm,19.1s
KONO Kongsberg 45.03 329⇑*e*P **P 03 53 07.7 +1.5**
BGF Bois d'Agland 45.13 310⇑*i*P **P 03 53 06.5 -0.7**
comp=Z,44nm,0.7s,mb5.1
BGF Bois d'Agland 45.13 310⇑*i*P **P 03 53 06.5 -0.7**
BGF pmax pmax
comp=Z,22nm,0.7s,mb5.1
BGF Bois d'Agland 45.13 310⇑*i*P **P 03 53 06.5 -0.7**
comp=Z,22nm,0.7s,mb5.1
SONM Songino Array 45.19 48 P **P 03 53 07.5 -0.1**
comp=Z,3.0nm,1.0s,mb4.1,baz=270,slow=10,SNR=17
SONM S **S 03 59 46.0 -0.8**
comp=Z,0.3nm,0.6s,baz=255,slow=10,SNR=3.6
SONM LR LR 04 14 34.2
comp=Z,364nm,19.5s,MS4.3,baz=64,slow=40
SONM Songino Array 45.19 48 P **P 03 53 07.5 -0.1**
SONM S **S 03 59 46.0 -0.8**
SONM LR LR 04 14 34.2
SONM Songino Array 45.19 48 P **P 03 53 07.5 -0.1**
SONM S **S 03 59 46.0 -0.8**
SONM pmax pmax
comp=Z,3.0nm,1.0s
SONM MLR MLR
comp=Z,364nm,19.5s
FRNF Fournols 45.19 308 *e*P **P 03 53 07.9 +0.2**
MTLF Montolieu 45.27 305 *e*P **P 03 53 08.7 +0.4**
comp=Z,160nm,1.3s,mb5.4
MTLF Montolieu 45.27 305 *e*P **P 03 53 08.7 +0.4**
MTLF pmax pmax
comp=Z,80nm,1.3s,mb5.4
MTLF Montolieu 45.27 305 *e*P **P 03 53 08.7 +0.4**
comp=Z,80nm,1.3s,mb5.4
HYF Humbligny 45.37 311 *e*P **P 03 53 08.9 -0.1**
CAF Calviac 45.50 308⇑*i*P **P 03 53 10.0 -0.1**
comp=Z,74nm,0.9s,mb5.2
CAF Calviac 45.50 308⇑*i*P **P 03 53 10.0 -0.1**
CAF pmax pmax
comp=Z,37nm,0.9s,mb5.2
CAF Calviac 45.50 308⇑*i*P **P 03 53 10.0 -0.1**
comp=Z,37nm,0.9s,mb5.2
TCF Toulx Ste Croi 45.53 310⇑*i*P **P 03 53 09.9 -0.5**
comp=Z,40nm,0.7s,mb5.2
TCF Toulx Ste Croi 45.53 310⇑*i*P **P 03 53 09.9 -0.5**
TCF pmax pmax
comp=Z,20nm,0.7s,mb5.2
TCF Toulx Ste Croi 45.53 310⇑*i*P **P 03 53 09.9 -0.5**
comp=Z,20nm,0.7s,mb5.2
ULN Ulaanbaatar 45.63 48 *e*P **P 03 53 10.3 -0.8**
comp=Z,6.5nm,0.3s,mb5.0
ULN Ulaanbaatar 45.63 48 *e*P **P 03 53 10.3 -0.8**
ULN pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
ULN Ulaanbaatar 45.63 48 *e*P **P 03 53 10.3 -0.8**
comp=Z,6.5nm,0.3s,mb5.0
ULN Ulaanbaatar 45.63 48 P **P 03 53 10.9 -0.2**
comp=Z,36nm,1.1s,mb5.2
OPO Ambohidratompo 45.69 190 P **P 03 53 14.5 +2.7**
comp=Z,14nm,0.9s,mb4.9,baz=360,slow=6.1,SNR=17
EMIR Miracle 45.71 303 P **P 03 53 16.4 +4.6**
comp=Z,32nm,0.8s,mb5.3
EBNR Beni Rached 45.81 296 P **P 03 53 09.4 -3.3**
KEV Kevo 45.90 347 *ep* **P 03 53 11.8 -1.1**
comp=Z,6.3nm,0.4s,mb4.9
KEV Kevo 45.90 347 *e*P **P 03 53 11.8 -1.1**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
RJF Les Rejaudoux 45.92 308⇑*i*P **P 03 53 13.5 +0.1**
comp=Z,142nm,1.1s,mb5.5
RJF *e*MLR MLR
comp=Z,245nm,17.8s,MS3.9
RJF Les Rejaudoux 45.92 308⇑*i*P **P 03 53 13.5 +0.1**
comp=Z,71nm,1.1s,mb5.5
RJF LR LR
comp=Z,250nm,17.8s,MS4.2
RJF Les Rejaudoux 45.92 308⇑*i*P **P 03 53 13.5 +0.1**
RJF pmax pmax
comp=Z,71nm,1.1s,mb5.5
RJF MLR MLR
comp=Z,250nm,17.8s,MS4.2
ECHA Ech Chlef 45.95 295 P **P 03 53 14.0 +0.2**
ARCES ARCESS Array B 46.03 346 P **P 03 53 13.6 -0.4**
comp=Z,9.1nm,0.6s,mb4.9,baz=147,slow=8.7,SNR=68
ARCES LR LR 04 14 54.8
comp=Z,206nm,18.7s,MS4.1,baz=27,slow=39
ARCES ARCESS Array B 46.03 346 P **P 03 53 13.6 -0.4**
ARCES LR LR 04 14 54.9
ARCES ARCESS Array B 46.03 346 P **P 03 53 13.6 -0.4**
ARCES pmax pmax
comp=Z,9.0nm,0.6s
ARCES MLR MLR
comp=Z,206nm,18.7s
EPOB Poblet 46.03 303 P **P 03 53 18.9 +4.5**
comp=Z,79nm,1.5s,mb5.4
ETRT Tiaret 46.06 294 P **P 03 53 15.0 +0.3**
KTK1 Kautokeino 46.13 345 *e*P **P 03 53 14.4 -0.3**
KTK1 *ep*P pP 03 53 18.4 -1.1
GYA Guiyang 46.17 78⇓*i*P **P 03 53 15.8 +0.1**
GYA AP pP 03 53 20.3 -0.1
GYA XP sP 03 53 22.8 +0.5
GYA PP PP 03 55 04.3 +0.3
GYA SCP ScP 03 58 43.3 -1.1
GYA S **S 03 59 59.8 -1.7**
GYA XS sS 04 00 08.4 -0.9
GYA SCS ScS 04 03 07.5 -3.6
GYA SS SS 04 03 18.0 -8.7
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,310nm,6.9s
GYA LR LR
comp=N,890nm,17.0s,MS4.9
GYA LR LR
comp=E,750nm,16.6s,MS4.9
GYA LR LR
comp=Z,1μm,18.4s,MS4.9
EANR 'Ain N'Sour 46.18 295 P **P 03 53 14.7 -0.9**
DOMB Dombas 46.36 332 *e*P **P 03 53 16.5 -0.1**
DOMB AMb AMB 03 53 20.7
comp=Z,49nm,2.7s,mb5.0
BLS5 Blasjo 46.39 328 *e*P **P 03 53 17.1 +0.2**
LFF La Frestale 46.44 308⇑*i*P **P 03 53 17.5 0.0**
comp=Z,54nm,0.6s,mb5.3
LFF La Frestale 46.44 308⇑*i*P **P 03 53 17.5 0.0**
LFF pmax pmax
comp=Z,27nm,0.6s,mb5.3
LFF La Frestale 46.44 308⇑*i*P **P 03 53 17.5 0.0**
comp=Z,27nm,0.6s,mb5.3
ODD1 Odda 46.51 329 *e*P **P 03 53 18.2 +0.4**
ODD1 AMb AMB 03 53 30.2
comp=Z,167nm,3.9s
NSS Namsos 46.51 336 *e*P **P 03 53 16.2 -1.5**
NSS *es*P sP 03 53 23.3 -1.1
ERTA Horta de San J 46.59 302 P **P 03 53 19.4 +0.5**
comp=Z,131nm,1.6s,mb5.6
ERTA Horta de San J 46.59 302 P **P 03 53 19.4 +0.6**
comp=Z,131nm,1.6s,mb5.6
MOR8 Moi Rana 46.61 339 *e*P **P 03 53 17.6 -1.0**
MOR8 AMb AMB 03 53 22.6

comp=Z,60nm,2.9s,mb5.0
EPF Esparros 46.63 305 *e*P **P 03 53 18.0 -1.0**
comp=Z,17nm,0.8s,mb4.7
EPF Esparros 46.63 305 *e*P **P 03 53 18.0 -1.0**
EPF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
EPF Esparros 46.63 305 *e*P **P 03 53 18.0 -1.0**
comp=Z,8.3nm,0.8s,mb4.7
EBIE Bielsa 46.76 304 P **P 03 53 21.5 +1.4**
comp=Z,69nm,1.3s,mb5.4
EBIE Bielsa 46.76 304 P **P 03 53 21.5 +1.4**
comp=Z,69nm,1.3s,mb5.4
XAN Xi'an 46.85 67 P **P 03 53 19.8 -1.1**
XAN AP pP 03 53 24.3 -1.4
XAN PP PP 03 55 09.3 -1.7
XAN S **S 04 00 07.5 -3.5**
XAN SS SS 04 03 27.4 -10
XAN AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
XAN AMB AMB
comp=Z,173nm,6.7s
XAN LR LR
comp=N,204nm,10.0s,MS4.7
XAN LR LR
comp=E,379nm,12.3s,MS4.7
XAN LR LR
comp=Z,492nm,15.5s,MS4.6
STOK Stokkvaagen 47.17 339 *e*P **P 03 53 22.2 -0.7**
MFF Saint Martin d 47.19 310 *e*P **P 03 53 22.2 -1.2**
comp=Z,183nm,1.7s,mb5.4
MFF Saint Martin d 47.19 310 *e*P **P 03 53 22.2 -1.2**
MFF pmax pmax
comp=Z,91nm,1.7s,mb5.4
MFF Saint Martin d 47.19 310 *e*P **P 03 53 22.2 -1.2**
comp=Z,91nm,1.7s,mb5.4
ESAC San Caprasio 47.20 303 P **P 03 53 24.2 +0.6**
comp=Z,146nm,0.9s,mb5.9
EMOS Mosqueruela 47.21 301 P **P 03 53 26.2 +2.6**
comp=Z,28nm,0.9s,mb5.2
EMOS Mosqueruela 47.21 301 P **P 03 53 26.2 +2.5**
comp=Z,28nm,0.9s,mb5.2
ETSF Etsaut 47.28 305⇑*i*P **P 03 53 24.6 +0.4**
comp=Z,50nm,0.8s,mb5.2
ETSF Etsaut 47.28 305⇑*i*P **P 03 53 24.6 +0.4**
ETSF pmax pmax
comp=Z,25nm,0.8s,mb5.2
ETSF Etsaut 47.28 305⇑*i*P **P 03 53 24.6 +0.4**
comp=Z,25nm,0.8s,mb5.2
LDF La Druitiere 47.38 312 *e*P **P 03 53 23.6 -1.2**
comp=Z,62nm,0.9s,mb5.2
LDF La Druitiere 47.38 312 *e*P **P 03 53 23.6 -1.2**
LDF pmax pmax
comp=Z,31nm,0.9s,mb5.2
LDF La Druitiere 47.38 312 *e*P **P 03 53 23.6 -1.2**
comp=Z,31nm,0.9s,mb5.2
ECHE Chera 47.62 300 P **P 03 53 28.0 +1.2**
comp=Z,19nm,0.9s,mb5.1
ECHE Chera 47.62 300 P **P 03 53 28.0 +1.2**
ECHE pmax pmax
comp=Z,19nm,0.9s,mb5.1
ECHE Chera 47.62 300 P **P 03 53 28.0 +1.2**
comp=Z,19nm,0.9s,mb5.1
TRO Tromso 47.62 344 *e*P **P 03 53 25.7 -0.8**
FLN La Foliniere 47.63 313 *e*P **P 03 53 25.7 -1.1**
comp=Z,112nm,1.0s,mb5.6
FLN *e*MLR MLR
comp=Z,147nm,19.2s,MS3.7
FLN La Foliniere 47.63 313 *e*P **P 03 53 25.7 -1.1**
comp=Z,56nm,1.0s,mb5.5
FLN LR LR
comp=Z,150nm,19.3s,MS4.0
FLN La Foliniere 47.63 313 *e*P **P 03 53 25.7 -1.1**
FLN pmax pmax
comp=Z,56nm,1.0s,mb5.5
FLN MLR MLR
comp=Z,150nm,19.3s,MS4.0
SJPF Ste Jean 47.77 305 *e*P **P 03 53 28.2 +0.2**
comp=Z,46nm,0.6s,mb5.4
SJPF Ste Jean 47.77 305 *e*P **P 03 53 28.2 +0.2**
SJPF pmax pmax
comp=Z,23nm,0.6s,mb5.4
SJPF Ste Jean 47.77 305 *e*P **P 03 53 28.2 +0.2**
comp=Z,23nm,0.6s,mb5.4
GRR Gorron 47.84 312 *e*P **P 03 53 27.2 -1.2**
ELIZ Elizondo 48.00 305 P **P 03 53 29.8 0.0**
comp=Z,6.1nm,0.5s,mb4.9
ELIZ Elizondo 48.00 305 P **P 03 53 29.8 +0.1**
ELIZ pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
ELIZ Elizondo 48.00 305 P **P 03 53 29.8 +0.1**
comp=Z,6.1nm,0.5s,mb4.9
WOL Wolverton 48.44 316 *e*P **P 03 53 31.9 -1.1**
HHC Hu-ho-hao-te 48.47 58 *e*P **P 03 53 34.1 +0.7**
HHC AP pP 03 53 38.3 +0.1
HHC XP sP 03 53 41.8 +1.7
HHC PCP PcP 03 54 59.0 -0.5
HHC PP PP 03 55 26.4 +0.3
HHC S **S 04 00 30.8 -3.2**
HHC XS sS 04 00 41.5 -0.3
HHC SCS ScS 04 03 23.3 -2.5
HHC AMB AMB
comp=Z,33nm,1.3s,mb5.2
HHC AMB AMB
comp=Z,225nm,3.7s
HHC LR LR
comp=N,362nm,23.8s,MS4.5
HHC LR LR
comp=E,511nm,21.4s,MS4.5
HHC LR LR
comp=Z,198nm,21.4s,MS4.1
CWF Charnwood Fore 48.71 318 P **P 03 53 34.4 -0.7**
CWF AMb AMB 03 53 35.5
comp=Z,86nm,1.5s,mb5.6
CWF Charnwood Fore 48.71 318 *e*P **P 03 53 34.4 -0.7**
CWF AMb AMB 03 53 35.5
comp=Z,86nm,1.5s,mb5.6
CWF Charnwood Fore 48.71 318 *e*P **P 03 53 34.4 -0.7**
comp=Z,86nm,1.5s,mb5.6
ECRI Cripan 48.72 304 P **P 03 53 35.6 +0.3**
comp=Z,13nm,0.7s,mb5.1
ECRI Cripan 48.72 304 P **P 03 53 35.6 +0.3**
ECRI pmax pmax
comp=Z,13nm,0.7s,mb5.1
ECRI Cripan 48.72 304 P **P 03 53 35.6 +0.3**
comp=Z,13nm,0.7s,mb5.1
EVIA Vianos 48.86 299 P **P 03 53 37.3 +0.9**
comp=Z,29nm,0.7s,mb5.4
EVIA Vianos 48.86 299 P **P 03 53 37.3 +0.9**
EVIA pmax pmax
comp=Z,29nm,0.7s,mb5.4
EVIA Vianos 48.86 299 P **P 03 53 37.3 +0.9**
comp=Z,29nm,0.7s,mb5.4
SGMF Saint Gilles 48.96 312 *e*P **P 03 53 36.1 -0.9**
comp=Z,124nm,1.1s,mb5.5
SGMF Saint Gilles 48.96 312 *e*P **P 03 53 36.1 -0.9**
SGMF pmax pmax
comp=Z,62nm,1.1s,mb5.5
SGMF Saint Gilles 48.96 312 *e*P **P 03 53 36.1 -0.9**
comp=Z,62nm,1.1s,mb5.5
EHUE Huescar 48.99 298 P **P 03 53 37.2 -0.2**
EHUE pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
EHUE Huescar 48.99 298 P **P 03 53 37.2 -0.2**
comp=Z,4.2nm,0.6s,mb4.7
KWE Weaver Farm 49.08 318 *e*P **P 03 53 36.7 -1.2**
LSZ Lusaka 49.13 215 *e*P **P 03 53 40.8 +2.2**
comp=Z,21nm,1.0s,mb5.1
LSZ Lusaka 49.13 215 *e*P **P 03 53 40.8 +2.2**
LSZ pmax pmax
comp=Z,21nm,1.0s,mb5.1
LSZ Lusaka 49.13 215 *e*P **P 03 53 40.8 +2.2**
comp=Z,21nm,1.0s,mb5.1
LHO Holmfirth 49.17 319 *e*P **P 03 53 38.1 -0.5**
QUIF Quistinic 49.34 311 *e*P **P 03 53 38.7 -1.3**
comp=Z,66nm,0.9s,mb5.3
QUIF Quistinic 49.34 311 *e*P **P 03 53 38.7 -1.3**
QUIF pmax pmax
comp=Z,33nm,0.9s,mb5.4
QUIF Quistinic 49.34 311 *e*P **P 03 53 38.7 -1.3**
comp=Z,33nm,0.9s,mb5.3
ROSF Rostrenen 49.44 312 *e*P **P 03 53 39.6 -1.1**
comp=Z,179nm,1.4s,mb5.6
ROSF Rostrenen 49.44 312 *e*P **P 03 53 39.6 -1.1**
ROSF pmax pmax
comp=Z,89nm,1.4s,mb5.6
ROSF Rostrenen 49.44 312 *e*P **P 03 53 39.6 -1.1**
comp=Z,89nm,1.4s,mb5.6
XAL Allendale 49.61 321 *e*P **P 03 53 41.4 -0.5**
MCH1 Michaelchurch 49.63 317 *e*P **P 03 53 41.7 -0.4**
MCH1 AMb AMB 03 53 43.1
comp=Z,151nm,1.5s,mb5.8
MCH1 Michaelchurch 49.63 317 *e*P **P 03 53 41.7 -0.4**
comp=Z,151nm,1.5s,mb5.8
XSO Sourhope Farm 49.75 321 *e*P **P 03 53 42.1 -0.9**
ECOG Cogollos-Vega 49.81 297 P **P 03 53 43.5 -0.2**
comp=Z,4.7nm,0.6s,mb4.7
ECOG Cogollos-Vega 49.81 297 P **P 03 53 43.5 -0.2**
ECOG pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ECOG Cogollos-Vega 49.81 297 P **P 03 53 43.5 -0.2**
comp=Z,4.7nm,0.6s,mb4.7
EGUA Guajares 49.85 297 P **P 03 53 43.6 -0.5**
EGUA Guajares 49.85 297 P **P 03 53 43.6 -0.4**
EBAN Banos Encina 49.90 299 P **P 03 53 44.6 +0.3**
comp=Z,15nm,0.8s,mb5.1
EBAN Banos Encina 49.90 299 P **P 03 53 44.6 +0.2**
EBAN pmax pmax
comp=Z,15nm,0.8s,mb5.1
EBAN Banos Encina 49.90 299 P **P 03 53 44.6 +0.2**
comp=Z,15nm,0.8s,mb5.1
ESDC Sonseca Array 49.92 300 P **P 03 53 44.7 +0.2**
comp=Z,4.2nm,0.5s,mb4.7,baz=64,slow=7.7,SNR=30
ESDC PcP PcP 03 55 03.9 -0.8
comp=Z,1.0nm,0.4s,baz=57,slow=3.4,SNR=3.4
ESDC LR LR 04 16 45.9
comp=Z,65nm,18.3s,MS3.7,baz=95,slow=38
GUD Guadarrama 50.01 302 P **P 03 53 44.9 -0.3**
comp=Z,21nm,0.8s,mb5.2
GUD Guadarrama 50.01 302 P **P 03 53 44.9 -0.3**
GUD pmax pmax
comp=Z,21nm,0.8s,mb5.2
GUD Guadarrama 50.01 302 P **P 03 53 44.9 -0.3**
comp=Z,21nm,0.8s,mb5.2
ERON Agron 50.02 297 P **P 03 53 45.0 -0.3**
comp=Z,8.8nm,0.6s,mb5.0
ERON Agron 50.02 297 P **P 03 53 45.0 -0.3**
comp=Z,8.8nm,0.6s,mb5.0
ESY Stoneypath 50.03 322 *e*P **P 03 53 44.3 -0.8**
DYA Yadsworthy 50.04 315 P **P 03 53 44.5 -0.8**
DYA AMb AMB 03 53 50.5
comp=Z,86nm,1.4s,mb5.6
DYA Yadsworthy 50.04 315 *e*P **P 03 53 44.5 -0.8**
DYA AMb AMB 03 53 50.5
comp=Z,86nm,1.4s,mb5.6
DYA Yadsworthy 50.04 315 *e*P **P 03 53 44.5 -0.8**
comp=Z,86nm,1.4s,mb5.6
ECK Cauldkaine Hil 50.19 321 *e*P **P 03 53 45.2 -1.1**
PAB San Pablo 50.23 300 *e*P **P 03 53 46.7 -0.2**
comp=Z,29nm,1.0s,mb5.3
PAB San Pablo 50.23 300 *e*P **P 03 53 46.7 -0.2**
PAB pmax pmax
comp=Z,29nm,1.0s,mb5.3
PAB San Pablo 50.23 300 *e*P **P 03 53 46.7 -0.2**
comp=Z,29nm,1.0s,mb5.3
EBL Broad Law 50.24 322 *e*P **P 03 53 45.9 -0.8**
ESK Eskdalemuir 50.25 321 *e*P **P 03 53 46.3 -0.5**
comp=Z,37nm,1.0s,mb5.4
ESK Eskdalemuir 50.25 321 *e*P **P 03 53 45.3 -1.5**
ESK AMb AMB 03 53 47.1
comp=Z,111nm,1.7s,mb5.6
ESK Eskdalemuir 50.25 321 *e*P **P 03 53 46.3 -0.5**
ESK pmax pmax
comp=Z,37nm,1.0s,mb5.4
ESK Eskdalemuir 50.25 321 *e*P **P 03 53 46.3 -0.5**
comp=Z,37nm,1.0s,mb5.4
ELOJ Sierra Loja 50.28 297 P **P 03 53 46.6 -0.8**
comp=Z,7.2nm,0.7s,mb4.8
ELOJ Sierra Loja 50.28 297 P **P 03 53 46.6 -0.7**
ELOJ pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ELOJ Sierra Loja 50.28 297 P **P 03 53 46.6 -0.7**
comp=Z,7.2nm,0.7s,mb4.8
ELUQ Luque 50.33 298 P **P 03 53 46.5 -1.2**
comp=Z,3.8nm,0.4s,mb4.8
ELUQ Luque 50.33 298 P **P 03 53 46.5 -1.2**
ELUQ pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ELUQ Luque 50.33 298 P **P 03 53 46.5 -1.2**
comp=Z,3.8nm,0.4s,mb4.8
EDI Edinburgh 50.35 322 *e*P **P 03 53 46.2 -1.3**
EDI AMb AMB 03 53 48.3
comp=Z,122nm,1.8s,mb5.6
EDI Edinburgh 50.35 322 *e*P **P 03 53 46.2 -1.3**
comp=Z,122nm,1.8s,mb5.6
EAU Auchinoon 50.48 322 *e*P **P 03 53 48.2 -0.3**
EADA Adamuz 50.52 299 P **P 03 53 49.0 -0.1**
comp=Z,77nm,1.8s,mb5.3
EADA Adamuz 50.52 299 P **P 03 53 49.0 -0.1**
comp=Z,77nm,1.8s,mb5.3
EBH Black Hill 50.59 322 *e*P **P 03 53 48.3 -1.0**
MCD Coleburn Disti 50.71 324 *e*P **P 03 53 49.5 -0.7**
EMIJ Mijas 50.84 297 P **P 03 53 50.8 -0.8**
comp=Z,26nm,1.2s,mb5.0
EMIJ Mijas 50.84 297 P **P 03 53 50.8 -0.8**
comp=Z,26nm,1.2s,mb5.0
EAB Aberfoyle 51.03 322 *e*P **P 03 53 50.7 -1.9**
GAL1 Galloway 51.04 320 *e*P **P 03 53 50.5 -2.2**
GAL1 AMb AMB 03 53 52.8
comp=Z,84nm,1.3s,mb5.5
ZFT Errachidia 51.17 291 *i*P **P 03 53 55.0 +0.9**
TOA0 Torodi Ar. Sit 51.31 266 *e*P **P 03 53 55.5 +0.2**
TORD Torodi Ar. Bea 51.31 266 P **P 03 53 55.7 +0.4**
comp=Z,73nm,0.8s,mb5.7,baz=63,slow=8.3,SNR=553
TORD LR LR 04 18 20.9
comp=Z,348nm,19.1s,MS4.4,baz=60,slow=39
TORD Torodi Ar. Bea 51.31 266 P **P 03 53 55.7 +0.4**
TORD LR LR 04 18 20.9
EJIF Jimena Fronter 51.41 297 P **P 03 53 54.4 -1.5**
comp=Z,26nm,1.4s,mb5.0
EJIF Jimena Fronter 51.41 297 P **P 03 53 54.4 -1.5**
EJIF pmax pmax
comp=Z,26nm,1.4s,mb5.0
EJIF Jimena Fronter 51.41 297 P **P 03 53 54.4 -1.5**
comp=Z,26nm,1.4s,mb5.0
BOD Bodaibo 51.45 36 *e*P **P 03 53 54.4 -1.4**
BOD pmax pmax
comp=Z,43nm,1.1s,mb5.3
PPI Padang Panjang 51.63 114 P **P 03 53 59.9 +2.2**
comp=Z,25nm,1.1s,comp=Z,810nm,mb5.0
ESPR Espera 51.67 297 P **P 03 53 56.4 -1.4**
comp=Z,55nm,1.5s,mb5.3
ESPR Espera 51.67 297 P **P 03 53 56.4 -1.4**
comp=Z,55nm,1.5s,mb5.3
PBRG Braganca 51.89 303 *e*P **P 03 53 59.6 +0.3**
WHN Wuhan 51.94 71 P **P 03 53 59.5 -0.4**
PDSI Padang 51.94 115 P **P 03 54 01.1 +1.0**
comp=Z,40nm,0.4s,comp=Z,4μm,mb5.7
BJI Beijing 52.03 59 P **P 03 53 59.8 -0.6**
BJI S **S 04 01 23.4 -0.2**
BJI SS SS 04 05 01.3 +0.8
BJI AMB AMB
comp=Z,30nm,0.5s,mb5.5
BJI LR LR
comp=N,397nm,16.6s,MS4.7
BJI LR LR
comp=E,445nm,21.1s,MS4.7
BJI LR LR
comp=Z,198nm,22.9s,MS4.1
MVO Moncorvo 52.15 303 *e*P **P 03 54 01.7 +0.4**
PMRV Marv??o 52.58 300 *e*P **P 03 54 04.5 0.0**
MTE Manteigas 52.60 302 *e*P **P 03 54 05.3 +0.6**
PVIS Viseu 52.84 302 *e*P **P 03 54 07.3 +0.9**
PBEJ Beja 53.11 299 *e*P **P 03 54 07.8 -0.7**
EVO Evora 53.16 299⇑*i*P **P 03 54 08.7 -0.1**
comp=Z,28nm,0.8s,mb4.9
EVO *e*MLR MLR
comp=Z,102nm,19.5s,MS3.6
EVO Evora 53.16 299 *e*P **P 03 54 08.8 0.0**
EVOP Sao Brissos 53.25 299⇑*i*P **P 03 54 08.7 -0.8**
comp=Z,14nm,0.8s,mb4.9
HIA Hailar 54.12 47 *e*P **P 03 54 15.0 -0.7**
comp=Z,11nm,0.8s,mb4.8
HIA Hailar 54.12 47 *e*P **P 03 54 15.0 -0.7**
HIA pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 54.12 47 *e*P **P 03 54 15.0 -0.7**
comp=Z,11nm,0.8s,mb4.8
SPITS Spitsbergen Ar 54.31 351 P **P 03 54 16.2 -0.4**
comp=Z,18nm,0.7s,mb5.1,baz=324,slow=5.6,SNR=11
SPITS Spitsbergen Ar 54.31 351 P **P 03 54 16.2 -0.4**
SPITS pmax pmax
comp=Z,18nm,0.7s
KSI Kapahiang 55.26 116 P **P 03 54 27.6 +3.2**
comp=Z,163nm,0.5s,mb6.4
NJ2 Nanjing 55.40 68 *e*P **P 03 54 27.1 +1.9**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
TSUM Tsumeb 58.21 222 *e*P **P 03 54 47.0 +1.8**
comp=Z,30nm,1.0s,mb5.3
TSUM Tsumeb 58.21 222 *e*P **P 03 54 47.0 +1.8**
comp=Z,30nm,1.0s,mb5.3
CN2 Changchun 58.48 53 *e*P **P 03 54 46.4 -0.4**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
LBTB Lobatse 58.68 211 *e*P **P 03 54 49.5 +1.1**
comp=Z,45nm,1.0s,mb5.5
LBTB Lobatse 58.68 211 *e*P **P 03 54 49.5 +1.1**
LBTB pmax pmax
comp=Z,45nm,1.0s,mb5.5
LBTB Lobatse 58.68 211 *e*P **P 03 54 49.5 +1.1**
comp=Z,45nm,1.0s,mb5.5
YAK Yakutsk 59.68 32⇑*e*P **P 03 54 53.9 -1.0**
YAK pmax pmax
comp=Z,21nm,0.6s,mb5.3
YAK MLR MLR
comp=Z,700nm,18.0s,MS4.8
YAK Yakutsk 59.68 32⇑*e*P **P 03 54 53.0 -1.9**
TIXI Tiksi 59.82 21 *e*P **P 03 54 53.9 -1.8**
comp=Z,18nm,1.0s,mb5.1
TIXI Tiksi 59.82 21⇓*e*P **P 03 54 54.0 -1.7**
TIXI pmax pmax
comp=Z,14nm,1.3s,mb4.8
TIXI MLR MLR
comp=Z,200nm,16.0s,MS4.3
TIXI Tiksi 59.82 21 *e*P **P 03 54 53.9 -1.8**
comp=Z,18nm,1.0s,mb5.1
DBIC Dimbokro 59.90 262 P **P 03 54 57.8 +0.6**
comp=Z,56nm,0.7s,mb5.7,baz=41,slow=7.6,SNR=58
DBIC LR LR 04 24 29.0
comp=Z,143nm,18.9s,MS4.1,baz=47,slow=40
DBIC Dimbokro 59.90 262 *e*P **P 03 54 57.4 +0.2**
comp=Z,66nm,0.8s,mb5.7
DBIC Dimbokro 59.90 262 P **P 03 54 57.8 +0.6**
DBIC pmax pmax
comp=Z,56nm,0.7s
DBIC MLR MLR
comp=Z,143nm,18.9s
DBIC Dimbokro 59.90 262 *e*P **P 03 54 57.4 +0.2**
comp=Z,66nm,0.8s,mb5.7
KIC Kosan Boka 59.94 261 *e*P **P 03 54 58.0 +0.6**
comp=Z,334nm,1.1s,mb6.3
TIC Toumodi 60.06 262 *e*P **P 03 54 58.7 +0.5**
comp=Z,178nm,0.8s,mb6.1
TIC Toumodi 60.06 262 *e*P **P 03 54 58.7 +0.5**
TIC pmax pmax
comp=Z,178nm,0.8s,mb6.2
LIC Lamto 60.26 261 *e*P **P 03 55 00.0 +0.4**
comp=Z,215nm,1.2s,mb6.0
LIC Lamto 60.26 261⇑*i*P **P 03 55 00.1 +0.5**
LIC *e*MLR MLR
comp=Z,161nm,20.0s,MS3.9
LIC Lamto 60.26 261⇑*i*P **P 03 55 00.1 +0.5**
comp=Z,38nm,0.8s,mb5.5
LIC LR LR
comp=Z,80nm,20.0s,MS3.9
DAG Danmarks Havn 60.30 345⇑*i*P **P 03 54 58.1 -0.9**
DAG pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
DAG Danmarks Havn 60.30 345⇑*i*P **P 03 54 58.1 -0.9**
comp=Z,8.5nm,0.4s,mb5.1
MDJ Mudanjiang 61.29 52 P **P 03 55 04.4 -1.8**
MDJ PP PP 03 57 18.8 -2.1
MDJ SCP ScP 03 59 48.8 -0.9
MDJ PCS PcS 03 59 50.3 -1.0
MDJ S **S 04 03 25.4 -0.4**
MDJ AMB AMB
comp=Z,5.0nm,1.4s,mb4.5
MDJ AMB AMB
comp=Z,35nm,4.1s
MDJ LR LR
comp=N,487nm,6.5s
MDJ LR LR
comp=E,511nm,7.0s
MDJ LR LR
comp=Z,607nm,7.0s
KSRS Korea Array 61.51 60 P **P 03 55 06.3 -1.4**
comp=Z,4.6nm,0.5s,mb4.8,baz=272,slow=6.9,SNR=12
KSRS LR LR 04 25 40.6
comp=Z,115nm,20.0s,MS4.0,baz=113,slow=40
KSRS Korea Array 61.51 60 P **P 03 55 06.4 -1.4**
KSRS pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
KSRS MLR MLR
comp=Z,115nm,20.0s,MS4.0
HABR Khabarovsk 64.24 47 *e*P **P 03 55 23.5 -2.3**
HABR *e**PP pP 03 55 33.2 +2.5
HABR *e*SP 03 55 37.3
HABR *e* 03 55 57.0
HABR *e* 03 57 43.1
HABR *e*S **S 04 03 58.7 -4.1**
HABR *e*PS 04 04 11.3
HABR *e* 04 05 13.7
HABR *e*SS SS 04 08 08.5 -3.3
SUMG Summit 65.62 341 *e*P **P 03 55 34.5 +0.2**
comp=Z,12nm,0.8s,mb5.0
SUMG Summit 65.62 341 *e*P **P 03 55 34.5 +0.2**
comp=Z,12nm,0.8s,mb5.0
ALE Alert 66.97 353 P **P 03 55 42.0 -0.9**
comp=Z,147nm,0.8s,mb6.1,SNR=12
SUR Sutherland 67.13 211 *e*P **P 03 55 46.3 +1.8**
comp=Z,20nm,0.8s,mb5.2
SUR Sutherland 67.13 211 *e*P **P 03 55 46.3 +1.8**
comp=Z,20nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 69.66 47⇑*i*P **P 03 55 58.0 -2.3**
YSS *e* 03 56 04.8
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.4
YSS Yuzh-Sakhalins 69.66 47⇑*e*P **P 03 55 58.7 -1.6**
MJAR Matsushiro Arr 69.67 59 P **P 03 55 59.4 -1.2**
comp=Z,2.8nm,0.9s,mb4.2,baz=284,slow=6.9,SNR=3.6
MJAR LR LR 04 29 49.4
comp=Z,167nm,18.2s,MS4.3,baz=245,slow=39
MJAR Matsushiro Arr 69.67 59 P **P 03 55 59.4 -1.2**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR MLR MLR
comp=Z,167nm,18.2s
SEY Seymchan 69.86 29⇓*e*P **P 03 56 01.3 +0.1**
KAPI Kappang 70.32 106 P **P 03 56 03.4 -1.4**
comp=Z,10nm,0.5s,mb5.1,baz=332,slow=1.1,SNR=6.6
KAPI Kappang 70.32 106 *e*P **P 03 56 03.3 -1.6**
comp=Z,52nm,1.2s,mb5.3
KAPI Kappang 70.32 106 *e*P **P 03 56 03.3 -1.5**
comp=Z,52nm,1.2s,mb5.3
KAPI Kappang 70.32 106 P **P 03 56 04.7 -0.1**
comp=Z,24nm,1.6s,mb4.9
ASAJ Asahikawa 70.43 50 P **P 03 56 03.2 -1.8**
comp=Z,15nm,1.0s,mb4.9,baz=270,slow=8.1,SNR=3.5
ASAJ Asahikawa 70.43 50 P **P 03 56 03.3 -1.8**
ASAJ pmax pmax
comp=Z,15nm,1.0s
KDI Kendari 72.27 104 P **P 03 56 17.3 +0.7**
comp=Z,58nm,1.1s,mb5.4
BATI Baumata 76.29 109 P **P 03 56 39.4 -0.7**
comp=Z,31nm,0.7s,mb5.4,baz=29,slow=10,SNR=4.0
PETK Petropavlovsk- 76.31 37 LR LR 04 33 16.1
comp=Z,69nm,18.5s,MS4.0,baz=81,slow=38
RES Resolute Bay 76.85 352 *e*P **P 03 56 41.3 -0.9**
comp=Z,335nm,1.2s,mb6.2
SWI Sorong 78.39 97 P **P 03 56 51.5 -0.4**
comp=Z,50nm,1.1s,mb5.4
NWAO Narrogin (SRO) 84.02 131 P **P 03 57 20.2 -1.1**
comp=Z,20nm,0.9s,mb5.2,baz=277,slow=6.0,SNR=8.4
NWAO Narrogin (SRO) 84.02 131 P **P 03 57 20.3 -1.1**
NWAO pmax pmax
comp=Z,20nm,0.9s
NWAO Narrogin (SRO) 84.02 131 P **P 03 57 20.2 -1.1**
COLD Coldfoot 84.40 9 *e*P **P 03 57 22.8 0.0**
comp=Z,20nm,1.0s,mb5.2
COLD Coldfoot 84.40 9 *e*P **P 03 57 22.8 0.0**
comp=Z,20nm,1.0s,mb5.2
SCHQ Schefferville 84.53 330 P **P 03 57 22.8 -0.9**
comp=Z,12nm,0.6s,mb5.2,baz=46,slow=4.6,SNR=17
INK Inuvik 84.98 3 *e*P **P 03 57 24.6 -1.1**
comp=Z,295nm,0.9s,mb6.4
INK Inuvik 84.98 3 *e*P **P 03 57 24.6 -1.1**
comp=Z,295nm,0.9s,mb6.4
COLA College 86.95 9 *e*P **P 03 57 34.2 -1.3**

	comp=Z,13nm,1.1s,mb5.1								
COLA	**College**	**86.95**	**9**	*e*P		**P**	**03 57 34.2**	**-1.3**	
	comp=Z,13nm,1.1s,mb5.1								
CHUM	**Lake Minchumin**	**87.14**	**12**	*e*P		**P**	**03 57 36.3**	**-0.2**	
	comp=Z,42nm,1.0s,mb5.6								
BPAW	**Bear Paw Mtn.**	**87.18**	**11**	*e*P		**P**	**03 57 36.2**	**-0.4**	
	comp=Z,34nm,1.0s,mb5.5								
BPAW	**Bear Paw Mtn.**	**87.18**	**11**	*e*P		**P**	**03 57 36.2**	**-0.4**	
	comp=Z,34nm,1.0s,mb5.5								
KTH	**Kantishna Hill**	**87.69**	**11**	*e*P		**P**	**03 57 38.7**	**-0.4**	
	comp=Z,24nm,1.3s,mb5.3								
KTH	**Kantishna Hill**	**87.69**	**11**	*e*P		**P**	**03 57 38.7**	**-0.4**	
	comp=Z,24nm,1.3s,mb5.3								
MCK	**McKinley**	**87.86**	**10**	*e*P		**P**	**03 57 38.8**	**-1.1**	
	comp=Z,36nm,1.2s,mb5.5								
MCK	**McKinley**	**87.86**	**10**	*e*P		**P**	**03 57 38.8**	**-1.1**	
MCK					pmax	pmax			
	comp=Z,35nm,1.2s,mb5.5								
MCK	**McKinley**	**87.86**	**10**	*e*P		**P**	**03 57 38.8**	**-1.1**	
	comp=Z,36nm,1.2s,mb5.5								
EGAK	**Eagle**	**87.89**	**7**	*e*P		**P**	**03 57 39.0**	**-1.1**	
	comp=Z,28nm,1.0s,mb5.5								
EGAK	**Eagle**	**87.89**	**7**	*e*P		**P**	**03 57 39.0**	**-1.0**	
	comp=Z,28nm,1.0s,mb5.5								
DAWY	**Dawson**	**88.76**	**6**	*e*P		**P**	**03 57 43.3**	**-0.9**	
DAWY	**Dawson**	**88.76**	**6**	*e*P		**P**	**03 57 43.3**	**-0.9**	
WRA	**Warramunga Arr**	**90.04**	**112**	P		**P**	**03 57 50.0**	**-0.9**	
	comp=Z,4.4nm,0.5s,mb5.0,baz=313,slow=4.1,SNR=17								
WRA					PKKPbc	PKKPbc	04 15 22.2	+0.7	
	comp=Z,0.4nm,0.3s,baz=108,slow=3.0,SNR=7.1								
WRAB	**Tennant Creek**	**90.05**	**112**	P		**P**	**03 57 50.9**	**0.0**	
	comp=Z,70nm,0.7s,mb6.1,SNR=11								
WRAB	**Tennant Creek**	**90.05**	**112**	*e*P		**P**	**03 57 50.0**	**-0.9**	
FORT	**Forrest**	**90.46**	**124**	*e*P		**P**	**03 57 52.1**	**-0.5**	
	comp=Z,28nm,0.8s,mb5.7								
FORT	**Forrest**	**90.46**	**124**	*e*P		**P**	**03 57 52.1**	**-0.5**	
	comp=Z,28nm,0.8s,mb5.7								
YKA	**Yellowknife Ar**	**90.60**	**355**	P		**P**	**03 57 52.1**	**-0.7**	
	comp=Z,7.4nm,0.9s,mb5.0,baz=3.3,slow=5.0,SNR=9.0								
YKA	**Yellowknife Ar**	**90.60**	**355**	*i* P		**P**	**03 57 52.7**	**-0.1**	
YKA					pmax	pmax			
	comp=Z,7.0nm,0.9s								
ASAR	**Alice Springs**	**91.45**	**116**	P		**P**	**03 57 56.8**	**-0.6**	
	comp=Z,6.3nm,0.6s,mb5.1,baz=303,slow=4.7,SNR=34								
ASAR					PKKPbc	PKKPbc	04 15 18.1	+0.1	
	comp=Z,0.2nm,0.3s,baz=114,slow=3.0,SNR=4.2								
MAW	**Mawson**	**94.32**	**177**	LR		LR	04 30 14.8		
	comp=Z,103nm,20.9s,MS4.3,baz=120,slow=29								
EDM	**Edmonton**	**99.64**	**353**	*e*P		Pdif	03 58 33.8	-0.5	
EDM	**Edmonton**	**99.64**	**353**	*e*P		Pdif	03 58 33.8	-0.5	
CTA	**Charters Tower**	**100.12**	**107**	P		Pdif	03 58 35.8	-0.7	
	comp=Z,1.6nm,0.4s,baz=270,slow=1.0,SNR=4.0								
CTA	**Charters Tower**	**100.12**	**107**	P		Pdif	03 58 35.8	-0.7	
CTA					pmax	pmax			
	comp=Z,2.0nm,0.4s								
VNA2	**Neumayer--Watz**	**106.62**	**198**	*e*PKiKP		PKiKP	04 03 15.1	+0.1	
	baz=358,slow=3.8								
VNA2				*e*			04 03 28.6		
VNA1	**Neumayer--Stat**	**106.71**	**198**	*e*PKiKP		PKiKP	04 03 15.0	-0.2	
VNA1				*e*			04 03 28.8		
VNA3	**Neumayer Olymp**	**107.42**	**198**	*e*PKiKP		PKiKP	04 03 16.4	-0.1	
PDAR	**Pinedale Array**	**109.27**	**348**	PKiKP		PKiKP	04 03 21.9	+0.9	
	comp=Z,0.5nm,1.0s,baz=20,slow=2.9,SNR=2.6								
WVOR	**Wild Horse Val**	**110.83**	**355**	*e*PKP		PKiKP	04 03 22.8	-1.2	
WVOR	**Wild Horse Val**	**110.83**	**355**	*e*PKiKP		PKiKP	04 03 22.8	-1.2	
JLU	**Jordanelle**	**111.72**	**349**	*e*PKP		PKiKP	04 03 26.0	+0.3	
JLU	**Jordanelle**	**111.72**	**349**	*e*PKiKP		PKiKP	04 03 26.0	+0.3	
DUG	**Dugway**	**112.34**	**350**	*e*PKP		PKiKP	04 03 25.9	-1.0	
DUG	**Dugway**	**112.34**	**350**	*e*PKiKP		PKiKP	04 03 25.9	-1.0	
NVAR	**Mina Array Bea**	**114.78**	**354**	PKP		PKiKP	04 03 31.1	-0.5	
	comp=Z,0.9nm,0.7s,baz=30,slow=1.7,SNR=6.9								
TUC	**Tucson**	**119.61**	**346**	*e*PKPdf		PKPdf	04 03 40.0	-1.1	
TUC	**Tucson**	**119.61**	**346**	*e*PKiKP		PKPdf	04 03 40.0	-1.1	
VNDA	**Vanda**	**119.68**	**166**	PKP		PKPdf	04 03 39.2	-0.6	
	comp=Z,0.5nm,0.7s,baz=225,slow=1.4,SNR=2.9								
VNDA	**Vanda**	**119.68**	**166**	PKiKP		PKPdf	04 03 39.2	-0.6	
VNDA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
TGUH	**Tegucigalpa,Un**	**125.10**	**313**	*e*PKPdf		PKPdf	04 03 51.7	-0.3	
TGUH	**Tegucigalpa,Un**	**125.10**	**313**	*e*PKiKP		PKPdf	04 03 51.7	-0.3	
LPAZ	**La Paz**	**126.19**	**269**	PKP		PKPdf	04 03 54.9	+0.9	
	comp=Z,2.0nm,0.9s,baz=63,slow=2.7,SNR=7.4								
LPAZ	**La Paz**	**126.19**	**269**	*e*PKiKP		PKPdf	04 03 52.7	-1.3	
LPAZ				*e*			04 05 46.6		
LPAZ	**La Paz**	**126.19**	**269**	*e*PP		PP	04 05 46.5	-2.1	
OTAV	**Otavalo**	**127.56**	**293**	*e*PKPdf		PKPdf	04 03 56.5	-0.3	
OTAV				*e*PP		PP	04 05 55.6	-1.7	
PLCA	**Paso Flores**	**133.13**	**238**	PKP		PKPdf	04 04 07.1	+0.6	
	comp=Z,2.0nm,0.7s,baz=50,slow=9.9,SNR=4.5								
PLCA	**Paso Flores**	**133.13**	**238**	*e*PKPdf		PKPdf	04 04 07.1	+0.6	
PLCA	**Paso Flores**	**133.13**	**238**	PKiKP		PKPdf	04 04 07.1	+0.6	
PLCA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
PLCA	**Paso Flores**	**133.13**	**238**	*e*PKiKP		PKPdf	04 04 07.1	+0.6	

IDC 22 03:46:16.1±0.9, 1679S×17350W, h0km, mb4.1/7, mb1 4.4/8, mb1mx4.2/20, mbtmp4.1/8, ML2.5/1, MS4.0/1, Ms1 3.9/1, ms1mx2.9/28, Error ellipse: s-maj=41.2km s-min=18.9km az=132.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.31**	**30**	Pn	Pn	03 47 10.8	+1.5
	27nm,0.3s,baz=251,slow=2.3,SNR=18						
AFI				Sn	Sn	03 47 45.7	-3.7
	50nm,0.3s,baz=23,slow=23,SNR=12						
URZ	**Urewera**	**22.92**	**199**	P	P	03 51 21.5	-0.2
	7.5nm,0.4s,baz=43,slow=3.6,SNR=11						
STKA	**Stephens Creek**	**43.27**	**241**	P	P	03 54 19.9	+0.3
	3.6nm,0.7s,baz=83,slow=9.5,SNR=5.5						
WRA	**Warramunga Arr**	**49.45**	**258**	P	P	03 55 08.2	-0.2
	0.9nm,0.5s,baz=97,slow=7.2,SNR=4.7						
ASAR	**Alice Springs**	**49.60**	**253**	P	P	03 55 09.3	-0.2
	6.0nm,0.6s,baz=87,slow=8.5,SNR=40						
VNDA	**Vanda**	**61.99**	**186**	P	P	03 56 38.0	+0.4
	0.4nm,0.6s,baz=21,slow=6.6,SNR=4.2						
NVAR	**Mina Array Bea**	**75.42**	**42**	P	P	03 58 02.5	+0.5
	0.9nm,0.9s,baz=207,slow=7.9,SNR=5.1						
PDAR	**Pinedale Array**	**83.36**	**42**	P	P	03 58 44.6	-0.5
	0.6nm,0.7s,baz=204,slow=3.3,SNR=6.6						

*ISCJB **22** 03:49:05.7±0.7, 245N±008×1279E±02, h77km, mb4.4/12, Error ellipse: s-maj=23.8km s-min=9.5km az=166.0*
*IDC **22** 03:49:07.6±0.9, 243N×12784E, h78km±7km, mb4.0/9, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, MS3.6/3, Ms1 3.6/3, ms1mx3.1/27, Error ellipse: s-maj=44.4km s-min=13.0km az=73.0*
*NEIC **22** 03:49:07.4±0.5, 242N×12797E, mb4.5/5, Error ellipse: s-maj=18.8km s-min=7.2km az=76.0*
ISC 22 03:49:07.7±0.6, 241N±007×1280E±02, h79km, h79km±1.4km: pP-P, n20, σ0s72/18, mb4.4/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**5.20**	**333**	P	**Pn**	**03 50 24.6**	**+1.5**
	33nm,0.3s,baz=148,slow=6.6,SNR=3.6						
DAV				S	**Sn**	**03 51 26.0**	**+4.1**
	120nm,0.3s,baz=248,slow=19,SNR=2.6						
KAPI	**Kappang**	**11.02**	**228**	P	**Pn**	**03 51 43.1**	**+0.6**
	2.6nm,0.3s,baz=61,slow=0.8,SNR=7.4						
BATI	**Baumata**	**13.24**	**199**	LR	LR	03 57 42.4	
	comp=Z,108nm,19.3s,baz=315,slow=39						
WRAB	**Tennant Creek**	**23.07**	**164**	*e*P	**P**	**03 54 07.0**	**+0.3**
	36nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**23.07**	**165**	P	**P**	**03 54 06.9**	**+0.1**
	31nm,0.9s,mb4.7,baz=343,slow=11,SNR=81						
MBWA	**Marble Bar**	**24.77**	**199**	*e*P	**P**	**03 54 21.9**	**-0.3**
	12nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**26.55**	**168**	P	**P**	**03 54 38.9**	**+0.5**
	2.3nm,0.9s,mb3.7,baz=359,slow=7.8,SNR=17						
FORT	**Forrest**	**33.00**	**180**	*e*P	**P**	**03 55 34.9**	**-0.5**
	19nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**36.47**	**160**	P	**P**	**03 56 06.7**	**+1.4**
	24nm,0.6s,mb5.3,baz=338,slow=7.9,SNR=41						
STKA				LR	LR	04 10 23.1	
	comp=Z,108nm,20.8s,baz=203,slow=35						
NWAO	**Narrogin (SRO)**	**36.58**	**195**	P	**P**	**03 56 05.2**	**-0.9**
	7.1nm,0.7s,mb4.7,baz=12,slow=8.1,SNR=5.6						
NWAO	**Narrogin (SRO)**	**36.58**	**195**	*e*P	**P**	**03 56 05.6**	**-0.6**
	4.2nm,0.5s,mb4.6						
SONM	**Songino Array**	**48.94**	**341**	P	**P**	**03 57 45.7**	**-0.2**
	1.0nm,0.6s,mb3.9,baz=161,slow=10,SNR=3.5						
SONM				pP	pP	03 58 05.1	-0.2
	1.3nm,0.7s,baz=148,slow=6.8,SNR=4.1						
MK31	**Makanchi Array**	**59.33**	**325**	*e*P	**P**	**03 59 01.0**	**-0.6**
MKAR	**Makanchi Array**	**59.33**	**325**	P	**P**	**03 59 01.0**	**-0.6**
	2.1nm,0.5s,mb4.4,baz=114,slow=7.5,SNR=15						
MKAR				pP	pP	03 59 20.1	-1.5
	0.9nm,0.4s,baz=129,slow=7.9,SNR=3.0						
KURK	**Kurchatov**	**63.51**	**327**	P	**P**	**03 59 29.0**	**-0.6**
	1.8nm,0.5s,mb4.2,baz=128,slow=6.2,SNR=7.0						
KURK				pP	pP	03 59 48.4	-1.4
	1.7nm,0.7s,baz=129,slow=6.1,SNR=3.2						
KURK	**Kurchatov**	**63.51**	**327**	*e*P	**P**	**03 59 28.6**	**-1.0**
	3.8nm,0.8s,mb4.3						
KURK				pP	pP	03 59 48.4	-1.4
BVAR	**Borovoye Array**	**69.09**	**327**	P	**P**	**04 00 04.9**	**-0.4**
	0.8nm,0.6s,mb3.8,baz=145,slow=8.6,SNR=3.0						
BVAR				pP	pP	04 00 25.8	+0.1
	2.1nm,0.8s,baz=116,slow=6.8,SNR=4.0						
VNDA	**Vanda**	**81.97**	**173**	P	**P**	**04 01 18.1**	**-0.4**
	1.3nm,0.8s,mb3.8,baz=330,slow=5.8,SNR=8.7						
TOA0	**Torodi Ar. Sit**	**124.49**	**288**	*e*PKPdf	PKPdf	04 07 59.3	+0.3
TORD	**Torodi Ar. Bea**	**124.49**	**288**	PKP	PKPdf	04 07 58.5	-0.4
	1.2nm,0.7s,baz=70,slow=1.5,SNR=7.8						

BER 22 03:54:20.1±0.7, 7098N×653W, h1km±999km, MD2.4, ML2.0, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.58**	**272**	*e*P	Pg	03 54 30.3	-0.9
JNE				*e*S	Sg	03 54 37.2	-1.5
JNE	**Jan Mayen East**	**0.58**	**272**	*e*P	Pg	03 54 30.3	-0.9
JNE				*e*S	Sg	03 54 37.2	-1.5
JNE				AML	AML	03 54 39.6	
	comp=Z,130nm,0.2s						
JNW	**Jan Mayen West**	**0.62**	**275**	*e*P	Pg	03 54 31.0	-1.1
JNW				*e*S	Sg	03 54 39.3	-0.8
JNW	**Jan Mayen West**	**0.62**	**275**	*e*P	Pg	03 54 31.0	-1.1
JNW				*e*S	Sg	03 54 39.3	-0.8
JNW				AML	AML	03 54 39.5	
	comp=Z,124nm,0.1s						
JMI	**Jan Mayen**	**0.73**	**267**	*e*S	Sg	03 54 42.3	-1.0
JMI				AML	AML	03 54 43.8	
	comp=Z,26nm,0.1s						

KRSC 22 04:05:00.9±0.2, 5305N×16260E, h42km±41km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.56**	**273**	*e*P	Pn	04 05 28.0	+2.0
SPN				*i* S	Sn	04 05 47.0	+2.1
NLC	**Nalytchevo**	**1.97**	**275**	*e*P	Pn	04 05 32.8	+1.1
NLC				*i* S	Sn	04 05 55.8	+0.8
AVH	**Avacha**	**2.33**	**277**	*e*P	Pn	04 05 39.8	+3.1
AVH				*i* S	Sn	04 06 07.1	+3.0
PET	**Petropavlovsk**	**2.38**	**271**	P	Pn	04 05 39.8	+2.4
PET				*i* S	Sn	04 06 07.6	+2.3
TUMR	**Tumrok**	**2.66**	**328**	P	Pn	04 05 44.4	+3.2
GRL	**Gorelyy**	**2.79**	**262**	P	Pn	04 05 46.4	+3.4
GNL	**Ganaly**	**2.86**	**285**	*e*P	Pn	04 05 47.4	+3.4
GNL				*i* S	Sn	04 06 20.2	+3.0
KMNR	**Kamenistaya**	**3.04**	**334**	*e*P	Pn	04 05 50.0	+3.6
KMNR				*e*S	Sn	04 06 26.5	+4.9
ZLN	**Zelenaya**	**3.15**	**341**	P	Pn	04 05 51.7	+3.8
KBTR	**Krutoberegovo**	**3.17**	**2**	*e*P	Pn	04 05 48.6	+0.5
KBTR				*i* S	Sn	04 06 24.6	0.0
KOZ	**Kozyrevsk**	**3.41**	**333**	P	Pn	04 05 55.6	+4.2
SRDR	**Sredinnyy**	**3.68**	**334**	P	Pn	04 05 58.3	+3.2
SRKR	**Sorokina**	**3.71**	**348**	P	Pn	04 05 58.5	+3.0
SRKR				*i* S	Sn	04 06 40.6	+2.7

*IDC **22** 04:21:39.3±0.8, 6008N×153.15W, h83km±8km, mb3.8/14, mb1 4.1/16, mb1mx3.9/25, mbtmp3.9/16, Error ellipse: s-maj=13.5km s-min=9.1km az=77.0*
*ISCJB **22** 04:21:41.5±0.3, 5989N±003×15309W±005, h122km, mb4.1/18, Error ellipse: s-maj=4.3km s-min=3.3km az=42.8*
*NEIC **22** 04:21:44.2, 5989N×153.06W, h125km, MG4.1(AEIC), After AEIC.*
*BJI **22** 04:21:45.6, 6065N×154.05W, h124km, mB5.1, mb4.7*
ISC 22 04:21:42.9±0.3, 5987N±003×15301W±005, h124km, h124km±5.2km: pP-P, n71, σ0s96/82, mb4.1/18, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.54**	**204**	P	**Pn**	**04 22 02.5**	**+1.1**
AUL				S	**Sn**	**04 22 17.1**	**+1.7**
SLKM	**Skilak Lake**	**1.53**	**64**	P	**Pn**	**04 22 11.7**	**+0.9**
SVW2	**Sparrevohn**	**1.77**	**315**	P	**Pn**	**04 22 13.2**	**-0.4**
SEW	**Seward**	**1.81**	**81**	P	**Pn**	**04 22 14.9**	**+0.9**
SEW				S	**Sn**	**04 22 37.6**	**-0.2**
FIB	**Fire Island**	**1.91**	**46**	P	**Pn**	**04 22 17.1**	**+1.8**
FIB				S	**Sn**	**04 22 42.9**	**+2.7**
RC01	**Rabbit Creek A**	**2.03**	**52**	P	**Pn**	**04 22 17.4**	**+0.6**
RC01				S	**Sn**	**04 22 42.9**	**+0.1**
KDAK	**Kodiak Island**	**2.11**	**174**	P	**Pn**	**04 22 17.4**	**-0.4**
	154nm,0.3s,baz=13,slow=7.5,SNR=1131						
KDAK				S	**Sn**	**04 22 43.8**	**-0.7**
	281nm,0.3s,baz=324,slow=23,SNR=39						
KDAK	**Kodiak Island**	**2.11**	**174**	P	**Pn**	**04 22 17.8**	**0.0**
KDAK				S	**Sn**	**04 22 44.8**	**+0.3**
SKT	**Skwentna**	**2.24**	**18**	P	**Pn**	**04 22 19.6**	**+0.2**
SKT				S	**Sn**	**04 22 48.2**	**+0.8**
PMR	**Palmer**	**2.57**	**46**	P	**Pn**	**04 22 23.1**	**-0.5**
PMR				S	**Sn**	**04 22 53.4**	**-1.6**
OHAK	**Old Harbor**	**2.66**	**183**	P	**Pn**	**04 22 24.2**	**-0.6**
OHAK				S	**Sn**	**04 22 55.4**	**-1.6**
KNK	**Knik Glacier**	**2.72**	**53**	P	**Pn**	**04 22 25.4**	**-0.2**
SML	**Sawmill**	**3.00**	**48**	P	**Pn**	**04 22 28.9**	**-0.3**
SML				S	**Sn**	**04 23 03.5**	**-1.4**
PPLA	**Purkeypile**	**3.06**	**7**	P	**Pn**	**04 22 31.0**	**+1.0**
PPLA				S	**Sn**	**04 23 07.6**	**+1.2**
TT01	**Tatalina**	**3.37**	**336**	P	**Pn**	**04 22 33.5**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.69**	**76**	P	**Pn**	**04 22 39.0**	**+0.8**
EYAK				S	**Sn**	**04 23 20.4**	**-0.6**
TRF	**Thorofare Moun**	**3.82**	**19**	P	**Pn**	**04 22 39.9**	**-0.1**
KTH	**Kantishna Hill**	**3.83**	**14**	P	**Pn**	**04 22 39.4**	**-0.6**
CHUM	**Lake Minchumin**	**4.04**	**4**	*e*Pn	**Pn**	**04 22 42.7**	**-0.2**
MCK	**McKinley**	**4.33**	**25**	P	**Pn**	**04 22 46.5**	**-0.3**
BPAW	**Bear Paw Mtn.**	**4.35**	**12**	P	**Pn**	**04 22 46.5**	**-0.6**
CHGN	**Chignik**	**4.59**	**221**	P	**Pn**	**04 22 50.2**	**0.0**
GCSA	**Galena City Sc**	**5.21**	**341**	P	**Pn**	**04 22 58.2**	**-0.4**
MENT	**Mentasta**	**5.42**	**51**	*e*P	**Pn**	**04 23 01.5**	**+0.2**
COLA	**College**	**5.56**	**23**	P	**Pn**	**04 23 02.5**	**-0.8**
IL1	**Eielson Array**	**5.68**	**27**	P	**Pn**	**04 23 04.0**	**-0.9**
DOT	**Dot Lake**	**5.69**	**44**	P	**Pn**	**04 23 04.9**	**-0.1**
SDPT	**Sand Point**	**6.05**	**225**	P	**Pn**	**04 23 09.0**	**-0.9**
IM3	**Indian Mountai**	**6.15**	**357**	P	**Pn**	**04 23 10.8**	**-0.3**
BCA3	**Beaver Creek A**	**6.26**	**54**	P	**Pn**	**04 23 12.9**	**+0.3**
PNL	**Peninsula**	**6.88**	**86**	P	**Pn**	**04 23 21.4**	**+0.4**
EGAK	**Eagle**	**7.39**	**43**	*e*Pn	**Pn**	**04 23 27.0**	**-0.9**
	26nm,0.6s						
COLD	**Coldfoot**	**7.49**	**8**	P	**Pn**	**04 23 28.4**	**-0.8**
FALS	**False Pass**	**7.54**	**233**	P	**Pn**	**04 23 29.4**	**-0.6**
DAWY	**Dawson**	**7.67**	**51**	P	**Pn**	**04 23 31.6**	**0.0**
TNA	**Tin City**	**8.90**	**316**	*e*Pn	**Pn**	**04 23 49.3**	**+1.0**
SKAG	**Skagway**	**8.96**	**85**	*e*P	**Pn**	**04 23 52.6**	**+3.5**
	15nm,0.5s						
WHY	**Whitehorse**	**9.04**	**77**	P	**Pn**	**04 23 49.8**	**-0.4**
DLBC	**Dease Lake**	**11.87**	**87**	P	**Pn**	**04 24 31.1**	**+3.2**
	2.8nm,0.3s,baz=290,slow=8.8,SNR=40						
DLBC				S	**Sn**	**04 26 36.5**	**-1.9**
	0.5nm,0.3s,baz=176,slow=25,SNR=3.5						
DLBC	**Dease Lake**	**11.87**	**87**	P	**Pn**	**04 24 31.1**	**+3.2**
DLBC				S	**Sn**	**04 26 36.5**	**-1.9**
INK	**Inuvik**	**11.95**	**37**	*e*Pn	**Pn**	**04 24 28.1**	**-0.7**
	288nm,0.7s						
YKA	**Yellowknife Ar**	**18.51**	**65**	P	**P**	**04 25 50.2**	**+1.1**
	2.0nm,0.3s,baz=276,slow=10.0,SNR=38						
YKA				PcP	PcP	04 30 13.4	+0.4
	0.2nm,0.3s,baz=278,slow=1.2,SNR=11						
YKA	**Yellowknife Ar**	**18.51**	**65**	P	**P**	**04 25 50.2**	**+1.1**
YKA				PcP	PcP	04 30 13.4	+0.4
PETK	**Petropavlovsk-**	**27.47**	**278**	P	**P**	**04 27 17.0**	**+0.1**
	2.9nm,0.4s,mb4.2,baz=70,slow=14,SNR=11						
PETK	**Petropavlovsk-**	**27.47**	**278**	P	**P**	**04 27 17.0**	**+0.1**
NVAR	**Mina Array Bea**	**30.66**	**119**	P	**P**	**04 27 48.8**	**+3.5**
	0.6nm,0.5s,mb3.6,baz=305,slow=8.9,SNR=5.9						
NVAR				pP	pP	04 28 05.7	-6.4
	0.6nm,0.6s,baz=323,slow=9.2,SNR=4.3						
NVAR				PcP	PcP	04 30 41.4	+1.2
	0.8nm,0.6s,baz=297,slow=2.5,SNR=5.9						
NVAR	**Mina Array Bea**	**30.66**	**119**	P	**P**	**04 27 48.8**	**+3.5**
NVAR				pP	pP	04 28 05.7	-6.4
NVAR				PcP	PcP	04 30 41.4	+1.2
PDAR	**Pinedale Array**	**31.37**	**103**	P	**P**	**04 27 54.4**	**+2.9**
	0.4nm,0.7s,mb3.3,baz=338,slow=1.6,SNR=4.0						
PDAR				pP	pP	04 28 10.8	-7.6
	0.5nm,0.4s,baz=339,slow=4.3,SNR=3.6						
TXAR	**Lajitas Array**	**44.94**	**110**	P	**P**	**04 29 48.2**	**+3.1**
	0.7nm,0.8s,mb3.5,baz=311,slow=6.8,SNR=3.8						
MDJ	**Mudanjiang**	**46.92**	**287**	P	**P**	**04 30 00.3**	**-0.2**
MDJ				AMB	AMB		
	comp=Z,130nm,4.0s						
MJAR	**Matsushiro Arr**	**48.78**	**274**	P	**P**	**04 30 14.0**	**-0.9**
	comp=Z,1.1nm,0.3s,mb4.2,baz=15,slow=10,SNR=3.8						
CN2	**Changchun**	**49.52**	**290**	*e*P	**P**	**04 30 20.4**	**0.0**
KSRS	**Korea Array**	**53.20**	**283**	P	**P**	**04 30 48.9**	**+1.0**
	comp=Z,8.3nm,0.8s,mb4.8,baz=35,slow=7.2,SNR=19						
SONM	**Songino Array**	**54.86**	**306**	P	**P**	**04 31 01.0**	**+1.2**
	comp=Z,6.4nm,0.4s,mb5.0,baz=46,slow=6.2,SNR=56						
ZALV	**Zalesovo Beam**	**57.48**	**324**	P	**P**	**04 31 18.3**	**0.0**
	comp=Z,17nm,0.4s,baz=33,slow=7.0,SNR=74						
ZALV	**Zalesovo Beam**	**57.48**	**324**	P	**P**	**04 31 18.3**	**0.0**
EKA	**Eskdalemuir Ar**	**62.66**	**19**	P	**P**	**04 31 53.0**	**-0.5**
	comp=Z,2.0nm,0.4s,mb4.4,baz=329,slow=5.4,SNR=17						
GTA	**Gaotai**	**64.50**	**305**	*e*P	**P**	**04 32 06.3**	**+0.4**
GTA				AP	pP	04 32 37.4	+1.4
GTA				XP	sP	04 32 51.1	+1.6
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.4						
MKAR	**Makanchi Array**	**64.53**	**321**	P	**P**	**04 32 05.4**	**-0.6**
	comp=Z,3.1nm,0.5s,mb4.4,baz=39,slow=6.9,SNR=44						
LZH	**Lanzhou**	**65.58**	**300**	*e*P	**P**	**04 32 13.0**	**0.0**
LZH				AP	pP	04 32 44.3	+1.2
LZH				XP	sP	04 32 58.0	+1.4
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,89nm,5.0s						
AKTK	**Aktyubinsk**	**67.21**	**339**	P	**P**	**04 32 22.8**	**-0.3**
AKTO	**Aktyubinsk**	**67.21**	**339**	P	**P**	**04 32 22.8**	**-0.3**
	comp=Z,1.8nm,0.4s,mb4.2,baz=25,slow=8.1,SNR=11						
AKASG	**Malin Array Be**	**69.77**	**358**	P	**P**	**04 32 37.4**	**-1.6**
	comp=Z,0.9nm,0.5s,mb3.9,baz=3.1,slow=6.2,SNR=4.0						
AKASG				pP	pP	04 33 00.7	-8.8
	comp=Z,0.3nm,0.3s,baz=39,slow=6.2,SNR=1.5						
GYA	**Guiyang**	**72.45**	**292**	P	**P**	**04 32 56.8**	**+1.3**
GYA				PCP	PcP	04 33 13.8	+1.2
GYA				AP	pP	04 33 24.9	-1.3
GYA				XP	sP	04 33 41.6	+2.1
GYA				PP	PP	04 35 40.5	+2.8
GYA				S	S	04 42 07.0	-2.3
GYA				SKS		04 42 47.9	
GYA				AM

	comp=N,11nm,0.6s							
TKM2	**Tokmak 2**	**7.33**	**24**	*e*PN		**Pn**	**04 49 41.8**	**+0.6**
TKM2				pmax		pmax		
	comp=Z,11nm,0.6s							
TKM2	**Tokmak 2**	**7.33**	**24**	P		**Pn**	**04 49 42.4**	**+1.1**
	SNR=9.3							
USP	**Ospenovka**	**7.34**	**17**	P		**Pn**	**04 49 42.2**	**+0.8**
	SNR=5.3							
DDI	**Dehra Dun**	**8.06**	**136**	*e*S		**Sn**	**04 51 21.0**	**+0.4**
JOSI	**Joshimath**	**8.80**	**128**	*e*S		**Sn**	**04 51 35.4**	**-3.1**
JOSI				AML		AML	04 51 45.6	
	comp=N,183nm,0.6s							
JOSI				AML		AML	04 51 46.1	
	comp=E,121nm,0.5s							
KUDL	**Kundal**	**9.13**	**151**	*e*S		**Sn**	**04 51 41.2**	**-5.3**
LGTI	**Lohaghat**	**9.99**	**130**	*e*P		**Pn**	**04 50 16.0**	**-1.3**
LGTI				*e*S		**Sn**	**04 52 03.0**	**-4.5**
PYUN	**Piuthan**	**12.66**	**127**	*e*P		**Pn**	**04 50 51.6**	**-1.0**
	comp=E,38nm,0.4s							
DANN	**Dangsing**	**13.00**	**124**	*e*P		**Pn**	**04 50 56.7**	**-0.4**
	comp=E,30nm,0.4s							
MK31	**Makanchi Array**	**13.22**	**34**	*e*Pn		**Pn**	**04 51 00.2**	**+0.4**
MKAR	**Makanchi Array**	**13.22**	**34**	Pn		**Pn**	**04 50 59.2**	**-0.6**
	comp=E,0.1nm,0.3s,baz=224,slow=15,SNR=3.5							
KOLN	**Koldanda**	**13.28**	**126**	*e*P		**Pn**	**04 51 00.2**	**-0.5**
	comp=E,8.1nm,0.2s							
GKN	**Gorkha**	**13.82**	**123**	*e*P		**Pn**	**04 51 07.1**	**-0.5**
	comp=E,31nm,0.3s							
DMN	**Daman**	**14.39**	**123**	*e*P		**Pn**	**04 51 14.9**	**0.0**
	comp=E,20nm,0.3s							
KKN	**Kakani**	**14.39**	**122**	*e*P		**Pn**	**04 51 14.7**	**-0.2**
	comp=E,24nm,0.5s							
PKI	**Pulchoki**	**14.62**	**123**	*e*P		**Pn**	**04 51 16.8**	**-1.0**
	comp=E,19nm,0.5s							
GUN	**Gumba**	**14.73**	**120**	*e*P		**Pn**	**04 51 18.1**	**-1.1**
	comp=E,17nm,0.3s							
JIRN	**Jiri**	**15.10**	**121**	*e*P		**Pn**	**04 51 23.6**	**-0.3**
	comp=E,38nm,0.3s							
KURK	**Kurchatov**	**15.31**	**17**	Pn		**Pn**	**04 51 19.9**	**-6.4**
	comp=E,0.0nm,0.3s,baz=206,slow=11,SNR=2.7							
AB07	**Akbulak array**	**15.47**	**330**	⇓Pn		**Pn**	**04 51 25.6**	**-2.8**
	comp=E,1.9nm,0.7s							
AB07				⇑Sn		**Sn**	**04 54 06.4**	**-13**
	comp=E,5.1nm,0.6s							
RAMN	**Ramite**	**15.83**	**122**	*e*P		**Pn**	**04 51 32.5**	**-0.5**
	comp=E,15nm,0.3s							
TAPN	**Taplejung**	**16.36**	**118**	*e*P		**Pn**	**04 51 39.5**	**0.0**
	comp=E,24nm,0.5s							
ODAN	**Odare**	**16.43**	**120**	*e*P		**Pn**	**04 51 39.8**	**-0.6**
	comp=E,22nm,0.5s							
BVAR	**Borovoye Array**	**16.77**	**358**	P		**Pn**	**04 51 44.3**	**+0.1**
	comp=E,0.2nm,0.3s,baz=180,slow=9.5,SNR=2.8							
AKTK	**Aktyubinsk**	**17.19**	**330**	P		**Pn**	**04 51 48.5**	**-0.9**
AKTK				S		**S**	**04 54 44.0**	**-17**
AKTO	**Aktyubinsk**	**17.19**	**330**	⇓Pn		**Pn**	**04 51 49.4**	**0.0**
	comp=E,1.1nm,0.7s							
AKTO				⇑Sn		**Sn**	**04 54 49.1**	**-12**
	comp=E,0.6nm,0.7s							
AKTO	**Aktyubinsk**	**17.19**	**330**	P		**Pn**	**04 51 48.5**	**-0.9**
	comp=E,0.6nm,0.3s,baz=136,slow=9.8,SNR=30							
AKTO				S		**S**	**04 54 44.0**	**-17**
	comp=E,0.1nm,0.3s,baz=108,slow=19,SNR=3.2							
ZAA0	**Zalesovo Array**	**19.94**	**23**	*e*P		**P**	**04 52 20.2**	**+1.1**
ZALV	**Zalesovo Beam**	**19.94**	**23**	P		**P**	**04 52 20.3**	**+1.2**
	comp=E,2.5nm,0.3s,baz=203,slow=11,SNR=14							
ZALV	**Zalesovo Beam**	**19.94**	**23**	P		**P**	**04 52 20.3**	**+1.2**
ZALV	**Zalesovo Beam**	**19.94**	**23**	P		**P**	**04 52 20.3**	**+1.2**
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.3s							
AKASG	**Malin Array Be**	**33.42**	**309**	P		**P**	**04 54 24.2**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.8,baz=81,slow=7.3,SNR=4.4							
AKASG	**Malin Array Be**	**33.42**	**309**	P		**P**	**04 54 24.2**	**+0.3**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
ARCES	**ARCESS Array B**	**41.52**	**338**	P		**P**	**04 55 33.0**	**+1.2**
	comp=Z,4.6nm,0.9s,mb4.2,baz=114,slow=8.3,SNR=6.4							
ARCES	**ARCESS Array B**	**41.52**	**338**	P		**P**	**04 55 33.0**	**+1.2**
ARCES				pmax		pmax		
	comp=Z,5.0nm,1.0s							
NB2	**NORSAR Subarra**	**44.82**	**323**	P		**P**	**04 55 59.4**	**+1.0**
	comp=Z,1.9nm,0.5s,mb4.1,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.82**	**323**	P		**P**	**04 55 59.6**	**+1.2**
	comp=Z,1.7nm,0.5s,mb4.0,baz=96,slow=7.8,SNR=9.2							
NOA	**NORSAR Array B**	**44.82**	**323**	P		**P**	**04 55 59.7**	**+1.3**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**66.15**	**269**	P		**P**	**04 58 30.4**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=48,slow=5.6,SNR=13							
TORD	**Torodi Ar. Bea**	**66.15**	**269**	P		**P**	**04 58 30.4**	**-1.3**
WRA	**Warramunga Arr**	**81.50**	**122**	P		**P**	**05 00 03.2**	**+2.2**
	comp=Z,0.2nm,0.5s,mb3.2,baz=328,slow=4.9,SNR=2.2							

IDC 22 05:08:33.2±2.0, 226N×12724E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=180.4km s-min=23.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**163**	P	P	05 13 41.8	+0.5
	1.3nm,0.5s,baz=340,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.57**	**166**	P	P	05 14 13.3	+0.2
	0.2nm,0.4s,baz=358,slow=8.2,SNR=6.2						
STKA	**Stephens Creek**	**36.58**	**159**	P	P	05 15 40.2	-0.9
	0.9nm,0.3s,baz=345,slow=8.3,SNR=2.9						
MKAR	**Makanchi Array**	**59.04**	**326**	P	P	05 18 35.2	+0.2
	0.8nm,0.6s,baz=114,slow=7.9,SNR=8.1						

IDC 22 05:51:03.4±11.0, 022S×1304W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, MS4.0/1, Ms1 3.9/1, ms1mx2.8/28, Error ellipse: s-maj=263.0km s-min=117.4km az=174.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**19.74**	**47**	P	Pn	05 55 35.0	-1.4
	0.0nm,0.3s,baz=228,slow=10,SNR=5.4						
GERES	**GERESS Array B**	**54.05**	**22**	P	P	06 00 29.7	+0.1
	0.8nm,0.9s,baz=208,slow=5.6,SNR=4.6						
BRTR	**Keskin Array B**	**58.21**	**41**	P	P	06 00 59.8	+0.2
	0.7nm,0.8s,baz=238,slow=8.3,SNR=3.9						
TXAR	**Lajitas Array**	**90.65**	**299**	LR	LR	06 45 28.5	
	comp=Z,61nm,18.7s,baz=180,slow=36						

*ISCJB **22** 05:56:53.5±0.6, 3979N±002×2068E±004, h4km±5km, Error ellipse: s-maj=5.8km s-min=4.0km az=10.3*
*THE **22** 05:56:53.6, 3979N×2072E, h0km±2km, ML2.9/5, Error ellipse: s-maj=2.2km s-min=0.8km az=306.0*
*ATH **22** 05:56:53.1, 3984N×2069E, h6km, MD2.9/3*
*CSEM **22** 05:56:53.3±0.1, 3982N×2068E, h8km, ML2.9/5, Error ellipse: s-maj=1.7km s-min=1.1km az=101.0*
*SKO **22** 05:56:54.2, 3974N×2071E, h12km*

ISC 22 05:56:54.1±0.5, 3978N±003×2069E±004, h7km±4km, n18, σ0=86/31, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**134**	*e*PG	**Pg**	**05 56 57.4**	**-0.3**
JAN				*e*SG	**Sg**	**05 57 00.7**	**+0.7**
IGT	**Igoumenitsa**	**0.37**	**229**	P	**Pg**	**05 57 00.8**	**-0.5**
IGT				S	**Sg**	**05 57 07.7**	**+1.6**
KEK	**Kerkira**	**0.69**	**265**	*e*PB	**Pg**	**05 57 06.4**	**-1.0**
THL	**Klokotos Trika**	**1.04**	**101**	P	**Pg**	**05 57 12.6**	**-1.6**
THL				S	**Sg**	**05 57 27.7**	**0.0**
THL	**Klokotos Trika**	**1.04**	**101**	*e*Pb	**Pg**	**05 57 13.2**	**-1.0**
THL				S	**Sg**	**05 57 27.7**	**0.0**
FNA	**Florina**	**1.14**	**27**	P	**Pg**	**05 57 15.2**	**-0.7**
FNA				S	**Sg**	**05 57 31.1**	**+0.4**
BIA	**Bitola**	**1.33**	**21**	P	**Pn**	**05 57 17.0**	**-2.1**
BIA	**Bitola**	**1.33**	**21**	*e*Pn	**Pn**	**05 57 17.7**	**-1.4**
BIA				*e*Sg	**Sg**	**05 57 37.6**	**+0.6**
BIA	**Bitola**	**1.33**	**21**	*e*Pn	**Pn**	**05 57 17.8**	**-1.3**
BIA				*e*Sg	**Sg**	**05 57 37.6**	**+0.6**
OHR	**Ohrid**	**1.34**	**4**	*e*Pn	**Pn**	**05 57 20.0**	**+0.8**
OHR				*e*Sg	**Sg**	**05 57 38.4**	**+1.3**
OHR	**Ohrid**	**1.34**	**4**	*e*Pn	**Pn**	**05 57 20.0**	**+0.9**
OHR				*e*Sg	**Sg**	**05 57 38.5**	**+1.3**
LIT	**Litokhoron**	**1.42**	**76**	P	**Pn**	**05 57 19.5**	**-0.8**
LIT				S	**Sb**	**05 57 40.3**	**+1.1**
AGG	**Agios Georgios**	**1.48**	**120**	P	**Pn**	**05 57 20.2**	**-0.9**
AGG				S	**Sn**	**05 57 41.7**	**+1.1**
VLS	**Valsamata**	**1.60**	**183**	P	**Pn**	**05 57 22.8**	**0.0**
VLS				S	**Sn**	**05 57 44.5**	**+0.9**
KFL	**Anninata**	**1.67**	**177**	P	**Pn**	**05 57 23.6**	**-0.1**
GRG	**Griva**	**1.76**	**47**	P	**Pn**	**05 57 24.5**	**-0.5**
GRG				S	**Sn**	**05 57 48.3**	**+0.7**
KNT	**Kendrikon**	**2.18**	**50**	P	**Pn**	**05 57 30.2**	**-0.6**
PAIG	**Paliouri**	**2.31**	**85**	P	**Pn**	**05 57 31.8**	**-0.7**

IDC 22 06:00:35.9±3.5, 1577S×17319W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.9/18, mbtmp3.8/4, MS3.9/15, Ms1 3.9/15, ms1mx3.7/24, Error ellipse: s-maj=244.9km s-min=26.0km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.29**	**37**	Pn	Pn	06 01 08.6	-6.5
	39nm,0.3s,baz=241,slow=2.6,SNR=33						
AFI				Sn	Sn	06 01 29.9	-14
	148nm,0.3s,baz=36,slow=23,SNR=12						
AFI				LR	LR	06 01 59.3	
	comp=Z,1μm,21.9s,baz=45,slow=36						
RAR	**Rarotonga**	**13.83**	**115**	LR	LR	06 08 22.0	
	comp=Z,391nm,18.1s,baz=294,slow=34						
PPT	**Papeete**	**22.69**	**98**	*e*LQ		06 10 15.5	
	870nm,28.0s						
PPT				*e*LR	LR	06 11 11.5	
	235nm,26.2s						
PPT	**Papeete**	**22.69**	**98**	LR	LR	06 11 52.0	
	comp=Z,188nm,18.3s,baz=288,slow=30						
URZ	**Urewera**	**23.99**	**199**	LR	LR	06 14 22.4	
	comp=Z,231nm,18.1s,baz=18,slow=34						
HNR	**Honiara**	**26.95**	**280**	LR	LR	06 14 37.7	
	comp=Z,232nm,21.6s,baz=124,slow=31						
RKT	**Rikitea**	**36.69**	**108**	*e*LR	LR	06 17 44.0	
STKA	**Stephens Creek**	**44.03**	**240**	LR	LR	06 26 02.7	
	comp=Z,103nm,18.3s,baz=23,slow=35						
WRA	**Warramunga Arr**	**49.96**	**257**	P	P	06 09 31.5	-0.6
	0.4nm,0.6s,baz=90,slow=6.9,SNR=9.6						
WRA				LR	LR	06 28 48.8	
	comp=Z,72nm,18.1s,baz=270,slow=34						
ASAR	**Alice Springs**	**50.20**	**252**	P	P	06 09 33.8	0.0
	3.4nm,0.7s,baz=87,slow=8.3,SNR=36						
MJAR	**Matsushiro Arr**	**69.35**	**320**	LR	LR	06 34 44.1	
	comp=Z,104nm,21.0s,baz=90,slow=30						
PETK	**Petropavlovsk-**	**73.04**	**342**	LR	LR	06 36 28.6	
	comp=Z,62nm,22.0s,baz=255,slow=30						
NVAR	**Mina Array Bea**	**74.46**	**42**	P	P	06 12 17.1	+0.9
	0.2nm,0.3s,baz=207,slow=5.8,SNR=5.1						
KSRS	**Korea Array**	**76.56**	**316**	LR	LR	06 40 24.2	
	comp=Z,41nm,19.9s,baz=359,slow=31						
PDAR	**Pinedale Array**	**82.40**	**42**	P	P	06 12 58.8	-1.2
	0.6nm,1.0s,baz=200,slow=10,SNR=3.7						
PDAR				LR	LR	06 42 36.9	
	comp=Z,107nm,18.9s,baz=173,slow=31						
MAW	**Mawson**	**87.52**	**199**	LR	LR	06 48 25.5	
	comp=Z,88nm,18.2s,baz=360,slow=33						
PLCA	**Paso Flores**	**89.11**	**132**	LR	LR	06 45 30.9	
	comp=Z,88nm,21.1s,baz=76,slow=30						
CMAR	**Chiang Mai Arr**	**92.92**	**288**	LR	LR	06 53 29.5	
	comp=Z,52nm,19.1s,baz=131,slow=34						
SONM	**Songino Array**	**95.25**	**318**	LR	LR	06 49 25.5	
	comp=Z,97nm,20.8s,baz=117,slow=31						
BRTR	**Keskin Array B**	**146.57**	**321**	PKPbc	PKPbc	06 20 21.0	+1.4
	0.8nm,0.7s,baz=59,slow=2.8,SNR=3.8						

*ISCJB **22** 06:25:12.0±1.3, 3971N±005×2058E±009, h14km±13km, Error ellipse: s-maj=11.4km s-min=8.7km az=166.6*
*NEIC **22** 06:25:12.3, 3980N×2065E, h14km, MD3.0(ATH), After ATH.*
*ATH **22** 06:25:12.3, 3978N×2065E, h16km±2km, MD3.0/5*
*CSEM **22** 06:25:12.7±0.2, 3980N×2063E, h10km, MD3.0, Error ellipse: s-maj=5.7km s-min=4.1km az=43.0*

ISC 22 06:25:12.5±1.0, 3970N±005×206E±01, h16km±8km, n8, σ0=78/11, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.21**	**102**	*e*PB	**Pg**	**06 25 17.0**	**-0.4**
JAN				*e*SB	**Sg**	**06 25 20.2**	**-0.4**
KEK	**Kerkira**	**0.61**	**272**	*e*PN	**Pn**	**06 25 25.1**	**-1.4**
THL	**Klokotos Trika**	**1.11**	**96**	*e*PN	**Pn**	**06 25 32.7**	**-0.6**
EVR	**Evrytania**	**1.23**	**129**	*e*PN	**Pn**	**06 25 35.5**	**+0.5**
EVR	**Evrytania**	**1.23**	**129**	*e*Pn	**Pn**	**06 25 35.4**	**+0.4**
OHR	**Ohrid**	**1.42**	**6**	*e*Pn	**Pn**	**06 25 38.4**	**+0.8**
OHR				*e*Sg	**Sg**	**06 25 58.7**	**+0.3**
OHR	**Ohrid**	**1.42**	**6**	*e*Pn	**Pn**	**06 25 38.4**	**+0.8**
OHR				*e*Sg	**Sg**	**06 25 58.8**	**+0.4**
VLS	**Valsamata**	**1.52**	**180**	*e*PN	**Pg**	**06 25 42.9**	**+1.2**

SKHL 22 06:50:45.7±0.8, 5290N×14340E, h10km, mb4.3/4, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.71**	**337**	*e*Pg	Pg	06 51 00.5	+1.1
OKH				AMB	AMB	06 51 01.4	
	3μm,0.2s						
OKH				*i* Sg	Sg	06 51 10.3	+1.6
OKH				A		06 51 12.0	
	14μm,0.5s						
OKH				A		06 51 12.0	
	19μm,0.5s						
NKL	**Nikolayevsk**	**1.66**	**280**	*e*P	Pn	06 51 15.2	+0.4
NKL				AMB	AMB	06 51 16.5	
	31nm,0.4s						
NKL				*e*Pg	Pg	06 51 18.5	+1.0
NKL				AMB	AMB	06 51 23.5	
	150nm,0.3s						
NKL				*e*S	Sn	06 51 36.0	-0.2
NKL				*e*Sg	Sg	06 51 42.0	+2.9
NKL				A		06 51 44.6	
	870nm,0.5s						
NKL				A		06 51 44.6	
	2μm,0.5s						
TYV	**Tymovskoe**	**2.09**	**193**	*e*Pg	Pg	06 51 28.0	+2.2
TYV				*e*Sg	Sg	06 51 56.5	+3.7
GRNR	**Gornyy**	**4.83**	**247**	*e*P	Pn	06 52 00.5	+2.2
GRNR				AMB	AMB	06 52 04.5	
	14nm,0.5s						
GRNR				*e*Pg	Pg	06 52 20.5	+2.5
GRNR				*e*Sg	Sg	06 53 32.0	+12
GRNR				A		06 53 44.0	
	42nm,0.6s						
GRNR				A		06 53 44.0	
	25nm,0.6s						
EKMR	**Ekimchan**	**6.32**	**276**	*e*P	Pn	06 52 23.0	+4.3
EKMR				*e*Pg	Pg	06 52 50.4	+3.9
EKMR				AMB	AMB	06 52 55.4	
	4.0nm,0.5s						
EKMR				*e*Sg	Sg	06 54 16.5	+8.3
EKMR				A		06 54 32.5	
	45nm,0.7s						
EKMR				A		06 54 32.5	
	12nm,0.7s						
KLR	**Kul'dur**	**8.21**	**248**	*e*rx	rx	06 55 04.1	
KLR				*e*rx	rx	06 55 37.2	
BMKR	**Bomnak**	**8.81**	**288**	*e*P	Pn	06 52 56.0	+3.1
BMKR				*e*Sg	Sn	06 55 24.9	+53
BMKR				A		06 55 40.0	
	5.0nm,0.8s						
ZEA	**Zeya**	**9.70**	**281**	*e*Sg		06 56 04.3	
ZEA				A		06 56 12.1	
	36nm,1.2s						
KROS	**Kirovskiy**	**9.87**	**285**	*e*Sg	Sn	06 55 52.2	+54
KROS				A		06 55 54.1	
	3.0nm,0.6s						

*ISCJB **22** 07:01:52.2±0.2, 1826N±003×6449W±002, h141km±2km, mb4.2/52, Error ellipse: s-maj=5.6km s-min=2.9km az=22.3*
*TRN **22** 07:01:52.5, 1819N×6453W, h136km, MD4.6, M4.7(FDF)*
*NEIC **22** 07:01:54.0, 1817N×6453W, h134km, mb4.4/33, MD4.6(TRN), MD4.2(RSPR), After RSPR.*
NEIC Felt [IV] on Saint Thomas. Also felt on Saint John.
*RSPR **22** 07:01:54.0, 1817N×6453W, h134km, MD4.2/16, MD4.2/16*
*IDC **22** 07:01:55.3±1.9, 1808N×6461W, h166km±17km, mb3.8/19, mb1 4.0/21, mb1mx4.0/24, mbtmp3.8/21, MS2.7/2, Ms1 2.7/2, ms1mx2.5/31, Error ellipse: s-maj=12.5km s-min=10.1km az=86.0*

ISC 22 07:01:53.4±0.2, 1819N±003×6452W±002, h139km±2km, n111, σ0=77/135, mb4.2/52, 18C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.25**	**338**	⇓*e*P	**Pn**	**07 02 12.4**	**0.0**
STVI	**Saint Thomas**	**0.44**	**292**	⇑*e*P	**Pn**	**07 02 13.3**	**+0.2**
STVI				*e*S	**Sn**	**07 02 27.8**	**-0.3**
ABV	**Anegada**	**0.57**	**18**	⇑*e*P	**Pn**	**07 02 14.0**	**+0.2**
ABV				*e*S	**Sn**	**07 02 29.3**	**-0.1**
ABV				*e*S	**Sn**	**07 02 29.7**	**+0.3**
HUMP	**Col San Antoni**	**1.27**	**268**	⇓*e*P	**Pn**	**07 02 19.7**	**+0.1**
HUMP	**Col San Antoni**	**1.27**	**268**	⇑*e*P	**Pn**	**07 02 20.0**	**+0.4**
HUMP				*e*S	**Sn**	**07 02 39.4**	**-0.2**
CBYP	**Canovanas**	**1.27**	**274**	⇑*e*P	**Pn**	**07 02 20.0**	**+0.3**
CBYP				*e*S	**Sn**	**07 02 39.4**	**-0.3**
CPD	**Cerro la Pandu**	**1.33**	**264**	⇓*e*P	**Pn**	**07 02 20.6**	**+0.3**
CPD	**Cerro la Pandu**	**1.33**	**264**	⇑*e*P	**Pn**	**07 02 20.6**	**+0.3**
CPD				*e*S	**Sn**	**07 02 39.4**	**-1.4**
CPD	**Cerro la Pandu**	**1.33**	**264**	⇑*e*P	**Pn**	**07 02 20.6**	**+0.3**
CPD				*e*S	**Sn**	**07 02 39.4**	**-1.4**
CPD				*e*S	**Sn**	**07 02 40.9**	**+0.1**
SABA	**Saba**	**1.34**	**115**	⇑*e*P	**Pn**	**07 02 20.8**	**+0.4**
SABA				*e*S	**Sn**	**07 02 41.5**	**+0.6**
SABA				*e*S	**Sn**	**07 02 41.6**	**+0.7**
SMRT	**St. Maarten**	**1.38**	**95**	⇑*e*P	**Pn**	**07 02 20.7**	**-0.1**
SMRT				*e*S	**Sn**	**07 02 41.5**	**-0.2**
SJG	**San Juan**	**1.55**	**268**	⇓*i* Pn	**Pn**	**07 02 22.8**	**+0.1**
SJG				*e*Sn	**Sn**	**07 02 44.5**	**-0.5**
SJG	**San Juan**	**1.55**	**268**	⇑*e*P	**Pn**	**07 02 23.0**	**+0.3**
SJG				*e*S	**Sn**	**07 02 45.0**	**0.0**
SEUS	**St. Eustatius**	**1.62**	**115**	⇑*e*P	**Pn**	**07 02 23.6**	**+0.1**
SEUS				*e*S	**Sn**	**07 02 46.6**	**+0.2**
ICM	**Isla Caja Muer**	**1.93**	**262**	⇓*e*P	**Pn**	**07 02 26.8**	**-0.1**
ICM				*e*S	**Sn**	**07 02 52.6**	**-0.1**
OBIP	**Obispado Ponce**	**1.99**	**266**	⇑*e*P	**Pn**	**07 02 27.8**	**+0.1**
OBIP				*e*S	**Sn**	**07 02 54.0**	**+0.1**
OBIP				*e*S	**Sn**	**07 02 54.2**	**+0.2**
AOPR	**Arecibo Observ**	**2.13**	**275**	⇑*e*P	**Pn**	**07 02 29.5**	**+0.1**
AOPR				*e*S	**Sn**	**07 02 55.4**	**-1.6**
CRPR	**Cabo Rojo, PR**	**2.47**	**266**	⇓*e*P	**Pn**	**07 02 33.4**	**-0.2**
CRPR				*e*S	**Sn**	**07 03 04.2**	**-0.3**
AGPR	**Aguadilla, PR**	**2.48**	**277**	⇑*e*P	**Pn**	**07 02 33.5**	**-0.2**
MPR	**Mayaguez**	**2.49**	**271**	⇑*e*P	**Pn**	**07 02 33.7**	**-0.1**
ANWB	**Willy Bob**	**2.65**	**101**	*e*Pn	**Pn**	**07 02 34.5**	**-1.4**
ANWB				*e*Sn	**Sn**	**07 02 58.2**	**-10**
BPA	**Boggy Peak**	**2.78**	**114**	⇓*e*P	**Pn**	**07 02 38.3**	**+0.8**
BPA				*e*S	**Sn**	**07 03 10.9**	**-0.6**
LZG	**Guadaloupe-1**	**3.32**	**127**	*e*P	**Pn**	**07 02 44.7**	**+0.2**
SCG	**Saint Claude**	**3.46**	**128**	*e*P	**Pn**	**07 02 46.3**	**+0.1**
HMG	**Houelmont**	**3.48**	**129**	*e*P	**Pn**	**07 02 46.5**	**0.0**
DOG	**Dongo Capester**	**3.51**	**127**	*e*P	**Pn**	**07 02 47.0**	**+0.2**
TBG	**Guadaloupe-3**	**3.60**	**130**	*e*P	**Pn**	**07 02 47.8**	**-0.3**
DEG	**La Desirade**	**3.79**	**119**	*e*P	**Pn**	**07 02 49.3**	**-1.4**
DEG				*e*S	**Sn**	**07 03 34.4**	**-0.7**
MGG	**Marie-Galante**	**3.80**	**126**	*e*P	**Pn**	**07 02 50.0**	**-0.8**
FDF	**Fort de France**	**4.71**	**136**	*e*Pn	**Pn**	**07 03 02.9**	**0.0**
FDF	**Fort de France**	**4.71**	**136**	⇑*e*P	**Pn**	**07 03 02.6**	**-0.2**
FDF				⇑*e*S	**Sn**	**07 04 00.4**	**+3.5**
BIM	**Bigot**	**4.93**	**137**	⇑*e*P	**Pn**	**07 03 06.0**	**+0.3**
MVM	**Montagne Vaucl**	**5.01**	**136**	*e*P	**Pn**	**07 03 07.0**	**+0.2**
SLW	**Petit Monier**	**5.38**	**140**	*e*P	**Pn**	**07 03 12.2**	**+0.5**
SLB	**Belfond**	**5.47**	**142**	*e*P	**Pn**	**07 03 13.7**	**+0.7**
SLB				*e*S	Sn	07 03 52.9	-22
SVV	**Soufriere Volc**	**5.79**	**146**	*e*P	**Pn**	**07 03 18.5**	**+1.3**
SSV	**Crater Summit**	**5.80**	**146**	*e*P	**Pn**	**07 03 17.6**	**+0.4**
FCV	**Fort Charlotte**	**5.91**	**147**	*e*P	**Pn**	**07 03 19.4**	**+0.6**
SDDR	**Presa de Saban**	**6.47**	**278**	⇑*i* Pn	**Pn**	**07 03 25.5**	**-0.8**
	299nm,0.6s						
SDDR				*e*Sn	**Sn**	**07 04 33.2**	**-5.7**
GRGR	**Grenville**	**6.62**	**155**	*e*Pn	**Pn**	**07 03 27.6**	**-0.8**
BBGH	**Gun Hill**	**6.92**	**136**	⇓*i* Pn	**Pn**	**07 03 32.9**	**+0.4**
BBGH				*e*Sn	**Sn**	**07 04 49.9**	**0.0**
PCRV	**Puerto La Cruz**	**7.96**	**181**	P	**Pn**	**07 03 48.1**	**+1.8**
	2.5nm,0.3s,baz=355,slow=5.8,SNR=14						
PCRV				LR	LR	07 06 07.3	
	comp=Z,44nm,18.2s,baz=98,slow=32						
SDV	**Santo Domingo**	**10.99**	**214**	P	**Pn**	**07 04 28.4**	**+1.7**
	0.7nm,0.3s,baz=58,slow=8.9,SNR=9.9						
SDV				S	**Sn**	**07 06 29.5**	**+1.4**
	0.3nm,0.3s,baz=163,slow=23,SNR=2.6						
SDV				LR	LR	07 08 49.2	
	comp=Z,50nm,21.4s,baz=150,slow=38						
ROSC	**El Rosal**	**16.35**	**217**	P	**Pn**	**07 05 37.0**	**+1.9**
	1.2nm,0.3s,baz=85,slow=7.3,SNR=10						
ROSC				S	**S**	**07 08 35.0**	**-2.5**
	0.5nm,0.3s,baz=297

3.9nm,0.6s,mb4.2
CCUT Cedar City 46.72 305 *e*P **P** 07 10 09.3 **+0.8**
7.3nm,1.0s,mb4.3
CCUT *e*PcP PcP 07 11 40.1 +0.4
ARUT Antelope Range 46.83 305 *e*P **P** **07 10 10.1 +0.8**
17nm,0.9s,mb4.7
DUG Dugway 46.85 308 *e*P **P** **07 10 09.6 +0.2**
13nm,1.3s,mb4.4
QLMT Earthquake Lak 47.15 315 *e*P **P** **07 10 13.0 +1.3**
9.4nm,0.6s,mb4.6
BGU Big Grassy Mou 47.18 309 *e*P **P** **07 10 12.1 +0.1**
16nm,0.9s,mb4.7
EGMT Eagleton 47.21 319 *e*P **P** **07 10 12.7 +0.6**
9.0nm,1.1s,mb4.3
HRY Holter Researc 48.04 317 *e*P **P** **07 10 18.9 +0.4**
3.7nm,0.7s,mb4.1
TPNV Topopah Spring 48.90 303 *e*P **P** **07 10 26.3 +1.0**
7.8nm,0.9s,mb4.3
CFAA Coronel Fontan 49.63 184 P **P** **07 10 28.4 -2.3**
0.8nm,0.8s,mb3.4,baz=354,slow=7.0,SNR=12
CFAA Coronel Fontan 49.63 184 P **P** **07 10 28.4 -2.3**
NVAR Mina Array Bea 50.72 305 P **P** **07 10 38.9 -0.1**
2.6nm,0.6s,mb4.0,baz=98,slow=6.7,SNR=22
EDM Edmonton 51.38 325 *e*P **P** **07 10 42.7 -1.0**
OD2 Odessa Site #2 52.73 316 *e*P **P** **07 10 53.5 -0.3**
14nm,1.1s,mb4.6
OHCM Honcut 53.29 306 *e*P **P** **07 10 57.6 -0.4**
YKA Yellowknife Ar 56.09 335 P **P** **07 11 16.3 -1.4**
3.4nm,0.7s,mb4.3,baz=105,slow=7.7,SNR=6.9
ESDC Sonseca Array 56.09 54 P **P** **07 11 18.5 +0.3**
1.6nm,0.5s,mb4.1,baz=265,slow=7.5,SNR=9.3
SUMG Summit 56.42 9 *e*P **P** **07 11 20.8 +0.8**
3.8nm,0.9s,mb4.2
PLCA Paso Flores 58.88 185 P **P** **07 11 35.8 -1.7**
2.9nm,0.9s,mb4.1,baz=340,slow=16,SNR=4.9
DBIC Dimbokro 59.15 93 P **P** **07 11 40.0 0.0**
2.6nm,0.5s,mb4.3,baz=243,slow=8.1,SNR=7.1
TORD Torodi Ar. Bea 63.67 84 P **P** **07 12 10.0 -0.4**
1.7nm,0.7s,mb4.0,baz=280,slow=6.2,SNR=9.5
INK Inuvik 65.50 338 *e*P **P** **07 12 20.2 -1.1**
191nm,0.5s
NB2 NORSAR Subarra 67.36 31 P **P** **07 12 33.4 +0.2**
comp=Z,5.7nm,0.9s,mb4.4,baz=266,slow=6.5
NOA NORSAR Array B 67.36 31 P **P** **07 12 33.8 +0.6**
comp=Z,2.9nm,0.8s,mb4.2,baz=266,slow=6.4,SNR=7.1
CLL Coilm 68.26 41 *e*P **P** **07 12 39.0 -0.1**
GERES GERESS Array B 68.83 44 P **P** **07 12 42.4 -0.3**
comp=Z,0.6nm,0.4s,mb3.6,baz=266,slow=5.4,SNR=4.4
ARCES ARCESS Array B 73.13 22 P **P** **07 13 08.1 -0.2**
comp=Z,4.8nm,0.7s,mb4.3,baz=288,slow=4.4,SNR=11
ARCES ARCESS Array B 73.13 22 P **P** **07 13 08.1 -0.2**
AKASG Malin Array Be 78.47 40 P **P** **07 13 38.1 -0.8**
comp=Z,0.3nm,0.3s,mb3.4,baz=274,slow=4.2,SNR=5.5
BRTR Keskin Array B 84.64 50 P **P** **07 14 11.2 -0.4**
comp=Z,1.2nm,0.7s,mb3.7,baz=274,slow=4.4,SNR=6.9
ASAR Alice Springs 161.95 249 PKP PKPdf 07 21 36.8 -1.9
comp=Z,0.3nm,0.7s,baz=106,slow=2.0,SNR=3.2
ASAR PKPab PKPab 07 22 23.2 -2.3
comp=Z,0.3nm,0.7s,baz=92,slow=4.7,SNR=4.7
WRA Warramunga Arr 162.09 261 PKP PKPdf 07 21 36.9 -2.1
comp=Z,0.6nm,1.0s,baz=73,slow=0.9,SNR=5.1
WRA PKPab PKPab 07 22 23.8 -2.5
comp=Z,0.3nm,0.8s,baz=80,slow=4.0,SNR=5.0

IDC 22 07:02:02.3±2.0, 141S×1272W, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/23, mbtmp3.9/6, MS3.1/2, Ms1 3.1/2, ms1mx2.8/24, Error ellipse: s-maj=128.3km s-min=34.0km az=113.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**11.22**	**44**	LR	LR	07 08 21.4	
	comp=Z,82nm,21.3s,baz=274,slow=34						
TORD	**Torodi Ar. Bea**	**20.34**	**44**	P	P	07 06 39.2	-1.1
	1.2nm,0.7s,baz=229,slow=11,SNR=7.6						
TORD				LR	LR	07 13 49.8	
	comp=Z,68nm,20.1s,baz=350,slow=35						
GERES	**GERESS Array B**	**55.03**	**21**	P	P	07 11 35.6	0.0
	1.5nm,0.7s,baz=197,slow=8.4,SNR=7.7						
BRTR	**Keskin Array B**	**58.90**	**41**	P	P	07 12 05.2	+2.0
	0.9nm,0.7s,baz=234,slow=8.4,SNR=4.9						
BVAR	**Borovoye Array**	**86.96**	**37**	P	P	07 14 49.1	-0.1
	0.4nm,0.5s,baz=245,slow=3.0,SNR=2.4						
QSPA	**South Pole Qui**	**88.67**	**180**	P	P	07 14 57.4	+0.5
	4.7nm,1.1s,baz=212,slow=2.3,SNR=5.2						
KURK	**Kurchatov**	**91.93**	**39**	P	P	07 15 11.1	-1.6
	0.3nm,0.3s,baz=265,slow=4.6,SNR=4.1						

PRE 22 07:45:33.2±0.6, 2145S×3357E, h5km, ML4.2, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**2.88**	**224**	*e*P	Pn	07 46 20.0	+0.3
MOPA				*e*S	Sn	07 46 54.5	-0.2
MOPA				AML	AML	07 47 02.9	
	comp=Z,913nm,0.6s						
MSNA	**Messina**	**3.41**	**254**	*e*P	Pn	07 46 28.3	+1.2
MSNA				*e*S	Sn	07 47 08.3	+0.3
MSNA				AML	AML	07 47 19.9	
	comp=Z,173nm,0.6s						
POGA	**Pongola**	**6.16**	**196**	*e*P	Pn	07 47 05.3	+0.5
POGA				*e*S	Sn	07 48 12.3	-3.4
POGA				AML	AML	07 49 00.3	
	comp=Z,38nm,0.6s						
PRYS	**Parys**	**7.86**	**225**	*e*P	Pn	07 47 29.1	+0.9
PRYS				*e*S	Sn	07 48 54.4	-3.3
PRYS				AML	AML	07 49 55.4	
	comp=Z,22nm,0.6s						
LBTB	**Lobatse**	**8.14**	**243**	*e*P	Pn	07 47 33.5	+1.4
LBTB				*e*S	Sn	07 49 01.2	-3.4
LBTB				AML	AML	07 49 55.4	
	comp=Z,31nm,0.6s						
SWZ	**Schweizer**	**9.43**	**231**	*e*P	Pn	07 47 51.1	+1.3
SWZ				*e*S	Sn	07 49 31.6	-4.7
SWZ				AML	AML	07 50 34.5	
	comp=Z,34nm,0.7s						
UPI	**Upington**	**13.12**	**236**	*e*P	Pn	07 48 41.9	+1.7

MEX 22 07:57:35.3±1.2, 1903N×10456W, h8km±13km, MD3.9, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
R15V		**0.56**	**76**	*i* P	Pg	07 57 45.5	-0.7
R15V				*i* S	Sg	07 57 53.1	-0.5
CJM	**Chamela**	**0.65**	**316**	*e*P	Pg	07 57 46.8	-1.0
CJM				*i* S	Sg	07 57 55.4	-0.9
EZ5V		**1.01**	**64**	*i* P	Pg	07 57 52.3	-2.4
EZ5V				*i* S	Sg	07 58 05.4	-2.4
MMIG	**Aquila**	**1.37**	**123**	*i* P	Pn	07 57 57.7	-3.1
MMIG				*i* S	Sb	07 58 14.7	-4.3
GDLC		**1.98**	**34**	*i* S	Sn	07 58 31.5	-2.8
ANIG	**Ahuacatlan**	**2.01**	**1**	*e*P	Pn	07 58 05.4	-4.2
ANIG				*i* S	Sn	07 58 32.1	-2.9
SFJM	**Santa Fe**	**2.04**	**45**	*i* P	Pn	07 58 07.2	-2.8
SFJM				*i* S	Sn	07 58 30.7	-4.9
ZIIG	**Zihuatanejo**	**3.27**	**115**	*i* P	Pn	07 58 24.8	-2.1
ZIIG				*i* S	Sn	07 59 00.5	-5.5

IDC 22 08:16:15.5±2.0, 271N×12550E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=188.1km s-min=26.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.13**	**159**	P	P	08 21 33.0	-0.3
	2.0nm,0.4s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**27.47**	**163**	P	P	08 22 04.5	+1.0
	0.3nm,0.4s,baz=350,slow=8.3,SNR=5.6						
MKAR	**Makanchi Array**	**57.70**	**326**	P	P	08 26 07.6	-0.4
	0.2nm,0.3s,baz=132,slow=6.7,SNR=5.3						

*ATH **22** 08:24:05.1, 3979N×2071E, h21km, MD3.4/6*
*CSEM **22** 08:24:05.6±0.2, 3979N×2069E, h10km, MD3.4, Error ellipse: s-maj=3.9km s-min=3.0km az=109.0*
*NEIC **22** 08:24:05.1, 3979N×2071E, h21km, MD3.4(ATH), After ATH.*
*ISCJB **22** 08:24:06.2±0.5, 3975N±002×2073E±003, h7km±4km, Error ellipse: s-maj=4.4km s-min=3.7km az=7.0*

*THE **22** 08:24:06.4, 3975N×2076E, h0km±2km, ML3.5/9, Error ellipse: s-maj=2.5km s-min=1.0km az=261.0*
*SKO **22** 08:24:06.3, 3972N×2079E, h6km*
*TIR **22** 08:24:11.3±0.3, 4002N×2002E, h34km±17km*

ISC 22 08:24:06.8±0.5, 3973N±002×2072E±003, h9km±3km, n37, σ1§10/58, 2C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.12**	**126**	*i*↑P	**Pg**	**08 24 09.9**	**+0.3**
JAN				*e*S	**Sg**	**08 24 13.4**	**+1.9**
IGT	**Igoumenitsa**	**0.36**	**237**	P	**Pg**	**08 24 13.5**	**-0.3**
IGT				S	**Sg**	**08 24 20.2**	**+1.6**
SRN	**Sarande**	**0.58**	**285**	*e*PG	**Pg**	**08 24 17.7**	**-0.3**
KEK	**Kerkira**	**0.71**	**269**	*e*PN	**Pg**	**08 24 19.0**	**-1.5**
KBN	**Korca**	**0.90**	**3**	*e*PG	**Pg**	**08 24 28.0**	**+3.9**
KZN	**Kozani**	**0.99**	**54**	*e*PN	**Pg**	**08 24 23.8**	**-2.1**
THL	**Klokotos Trika**	**1.01**	**99**	P	**Pg**	**08 24 24.9**	**-1.4**
THL				S	**Sg**	**08 24 39.7**	**+0.3**
THL	**Klokotos Trika**	**1.01**	**99**	*e*Pn	**Pg**	**08 24 24.8**	**-1.5**
THL				S	**Sg**	**08 24 39.7**	**+0.3**
FNA	**Florina**	**1.17**	**25**	P	**Pb**	**08 24 27.5**	**-1.7**
FNA				S	**Sb**	**08 24 45.2**	**+0.8**
EVR	**Evrytania**	**1.17**	**134**	*e*PN	**Pn**	**08 24 28.2**	**-1.2**
BIA	**Bitola**	**1.37**	**19**	P	**Pn**	**08 24 30.9**	**-1.2**
BIA				S	**Sb**	**08 24 52.3**	**+2.1**
BIA	**Bitola**	**1.37**	**19**	*e*Pn	**Pn**	**08 24 30.9**	**-1.2**
BIA				*e*Sg	**Sg**	**08 24 52.0**	**+1.1**
BIA				S	**Sb**	**08 24 52.3**	**+2.1**
BIA	**Bitola**	**1.37**	**19**	*e*Pn	**Pn**	**08 24 31.0**	**-1.2**
BIA				*e*Sg	**Sg**	**08 24 52.0**	**+1.2**
OHR	**Ohrid**	**1.38**	**2**	P	**Pn**	**08 24 31.2**	**-1.1**
OHR				S	**Sb**	**08 24 51.7**	**+1.1**
OHR	**Ohrid**	**1.38**	**2**	*e*Pn	**Pn**	**08 24 31.6**	**-0.7**
OHR				*e*Sg	**Sg**	**08 24 51.8**	**+0.5**
OHR	**Ohrid**	**1.38**	**2**	*e*Pn	**Pn**	**08 24 31.7**	**-0.6**
OHR				*e*Sg	**Sg**	**08 24 51.9**	**+0.6**
LIT	**Litokhoron**	**1.41**	**74**	P	**Pn**	**08 24 31.2**	**-1.5**
LIT				S	**Sn**	**08 24 52.3**	**+0.9**
AGG	**Agios Georgios**	**1.43**	**119**	P	**Pn**	**08 24 32.4**	**-0.6**
AGG				S	**Sn**	**08 24 54.2**	**+2.3**
VLS	**Valsamata**	**1.55**	**184**	P	**Pn**	**08 24 35.3**	**+0.7**
VLS				S	**Sn**	**08 24 57.1**	**+2.2**
KFL	**Anninata**	**1.62**	**178**	P	**Pn**	**08 24 35.4**	**-0.1**
GRG	**Griva**	**1.78**	**46**	P	**Pn**	**08 24 36.7**	**-1.0**
	225nm,0.5s						
GRG				S	**Sn**	**08 25 01.0**	**+0.6**
XOR	**Xorichti**	**1.94**	**100**	P	**Pn**	**08 24 40.8**	**+0.8**
PHP	**Peshkopia**	**1.97**	**354**	*e*PN	**Pn**	**08 24 41.5**	**+1.2**
NEO	**Neokhori**	**1.98**	**101**	*e*PN	**Pn**	**08 24 40.0**	**-0.5**
HORT	**Hortiatis**	**2.02**	**64**	P	**Pn**	**08 24 40.6**	**-0.4**
HORT				S	**Sn**	**08 25 07.2**	**+0.8**
VAY	**Valandovo**	**2.12**	**41**	P	**Pn**	**08 24 41.2**	**-1.3**
VAY	**Valandovo**	**2.12**	**41**	*e*Pn	**Pn**	**08 24 40.5**	**-2.0**
VAY	**Valandovo**	**2.12**	**41**	P	**Pn**	**08 24 41.2**	**-1.3**
VAY				*e*Sg	**Sn**	**08 25 09.2**	**+0.2**
VAY	**Valandovo**	**2.12**	**41**	*e*Pn	**Pn**	**08 24 40.6**	**-1.9**
VAY				*e*Sg	**Sn**	**08 25 09.2**	**+0.2**
PLG	**Polygyros**	**2.19**	**72**	P	**Pn**	**08 24 44.6**	**+1.2**
KNT	**Kendrikon**	**2.19**	**49**	P	**Pn**	**08 24 42.7**	**-0.7**
PAIG	**Paliouri**	**2.29**	**84**	P	**Pn**	**08 24 43.8**	**-0.9**
PAIG				S	**Sn**	**08 25 11.9**	**-1.1**
SOH	**Sokhos**	**2.29**	**61**	P	**Pn**	**08 24 44.4**	**-0.4**
SOH				S	**Sn**	**08 25 13.5**	**+0.4**
PUK	**Puka**	**2.40**	**345**	*e*PN	**Pn**	**08 24 46.5**	**+0.3**
OUR	**Ouranopolis**	**2.58**	**75**	P	**Pn**	**08 24 47.8**	**-0.9**
PYL	**PYLOS**	**2.94**	**164**	P	**Pn**	**08 24 53.3**	**-0.4**
BARS	**Barje**	**3.19**	**15**	*i*↑Pn	**Pn**	**08 24 57.3**	**+0.1**

*NEIC **22** 08:25:21.4, 3691N×2929E, h5km, MD3.3(ATH), MD3.2(ISK), After ISK.*
*ISK **22** 08:25:21.9, 3690N×2928E, h7km, MD3.1*
*CSEM **22** 08:25:21.4±0.1, 3689N×2930E, h5km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.2km az=153.0*
*ISCJB **22** 08:25:22.7±0.7, 3690N±003×2928E±003, h6km±4km, Error ellipse: s-maj=5.8km s-min=3.5km az=152.7*
*DDA **22** 08:25:23.6, 3695N×2922E, h6km±5km, Md3.2*
*ATH **22** 08:25:25.2, 3694N×2901E, h16km, MD3.3/4*

ISC 22 08:25:22.9±0.7, 3689N±003×2929E±003, h7km±4km, n26, σ0§88/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.41**	**32**	*i* P	**Pg**	**08 25 30.8**	**-0.1**
GOLH				*i* S	**Sg**	**08 25 37.9**	**+1.6**
DALT	**Dalyan (Mudla)**	**0.54**	**258**	*e*PG	**Pg**	**08 25 32.5**	**-0.8**
DALT				*e*SG	**Sg**	**08 25 42.0**	**-0.1**
DALT	**Dalyan (Mudla)**	**0.54**	**258**	Pg	**Pg**	**08 25 32.8**	**-0.5**
TURN	**Turunc**	**0.55**	**269**	*i* P	**Pg**	**08 25 38.0**	**+4.4**
TURN				*i* S	**Sg**	**08 25 49.2**	**+8.4**
KSL	**Kastellorizon**	**0.77**	**162**	*e*PN	**Pn**	**08 25 42.5**	**+2.3**
YER	**Yerkesik**	**0.84**	**287**	*e*PG	**Pg**	**08 25 38.4**	**-0.7**
YER				*e*SG	**Sg**	**08 25 50.5**	**+0.3**
DENT	**Denizli**	**0.89**	**347**	*e*PG	**Pg**	**08 25 39.1**	**-1.0**
DENT				*e*SG	**Sg**	**08 25 51.8**	**+0.2**
ANTB	**Antalya**	**1.09**	**89**	*e*PN	**Pn**	**08 25 43.6**	**-1.0**
ANTB				*e*SN	**Sn**	**08 25 58.9**	**-1.1**
ARG	**Arkhangelos**	**1.15**	**235**	*e*PN	**Pn**	**08 25 44.5**	**-1.0**
BCK	**Bucak**	**1.18**	**61**	*e*PN	**Pn**	**08 25 45.0**	**-0.9**
BCK				*e*SN	**Sn**	**08 26 01.8**	**-0.5**
MLSB	**Milas**	**1.28**	**289**	*e*PN	**Pn**	**08 25 46.5**	**-0.8**
ISP	**Isparta**	**1.36**	**45**	*e*PN	**Pn**	**08 25 48.2**	**-0.2**
ISP				*e*SN	**Sn**	**08 26 06.8**	**+0.1**
ISP	**Isparta**	**1.36**	**45**	Pn	**Pn**	**08 25 50.9**	**+2.5**
ISP				*e*Sn	**Sn**	**08 26 09.1**	**+2.4**
DAT	**Datca**	**1.39**	**264**	*e*PN	**Pn**	**08 25 48.3**	**-0.4**
DAT				*e*SN	**Sn**	**08 26 07.4**	**+0.2**
KHL	**Karahalli**	**1.45**	**7**	*e*PN	**Pn**	**08 25 49.0**	**-0.6**
KHL				*e*SN	**Sn**	**08 26 08.7**	**-0.1**
KHAL	**Karahalli**	**1.49**	**6**	*i* P	**Pn**	**08 25 50.9**	**+0.8**
KHAL				*i* S	**Sn**	**08 26 10.1**	**+0.2**
BDRM	**Kayabasi**	**1.49**	**277**	*i* P	**Pn**	**08 25 50.7**	**+0.6**
BDRM				*i* S	**Sn**	**08 26 10.8**	**+0.9**
KULA	**Kula-Manisa**	**1.70**	**343**	*e*PN	**Pn**	**08 25 52.3**	**-0.7**
KULA				*e*SN	**Sn**	**08 26 15.1**	**0.0**
GCAM	**G?zelcaml?**	**1.83**	**297**	*e*P	**Pn**	**08 25 55.9**	**+1.0**
GCAM				*i* S	**Sn**	**08 26 17.5**	**-0.8**
SHUT	**Suhut-Afyon**	**1.94**	**31**	*e*PN	**Pn**	**08 25 56.1**	**-0.3**
SHUT				*e*SN	**Sn**	**08 26 18.1**	**+0.1**
SMG	**Samos**	**2.12**	**293**	*e*PN	**Pn**	**08 25 59.1**	**+0.3**
KARP	**Karpathos**	**2.18**	**233**	*e*PN	**Pn**	**08 26 01.1**	**+1.5**
DEMI	**Demirci**	**2.20**	**348**	*i* P	**Pn**	**08 25 59.5**	**-0.4**
DEMI				*e*S	**Sn**	**08 26 32.4**	**+5.0**
ALT	**Altintas**	**2.26**	**16**	*e*PN	**Pn**	**08 26 00.2**	**-0.5**
ALT				*e*SN	**Sn**	**08 26 28.6**	**-0.2**
BR131	**Keskin Array S**	**4.44**	**49**	*e*Pn	**Pn**	**08 26 34.0**	**+3.3**
BR131	**Keskin Array S**	**4.44**	**49**	*e*Pn	**Pn**	**08 26 34.0**	**+3.3**

*BJI **22** 08:29:56.1, 5190N×17640E, h38km, mB4.8, mb4.5*
*ISCJB **22** 08:29:57.2±1.0, 517N±0.1×17627E±008, h62km±8km, mb3.8/11, Error ellipse: s-maj=20.1km s-min=6.8km az=16.3*
*IDC **22** 08:29:57.8±4.9, 5160N×17628E, h54km±45km, mb3.4/9, mb1 3.8/11, mb1mx3.6/26, mbtmp3.6/11, ML3.5/2, Error ellipse: s-maj=31.9km s-min=18.1km az=168.0*
*NEIC **22** 08:29:58.1±0.9, 5194N×17638E, h39km±13km, ML3.9(PMR), ML3.7(AEIC), Error ellipse: s-maj=29.2km s-min=8.2km az=193.0*

ISC 22 08:29:58.2±0.9, 516N±01×17628E±008, h54km±8km, n19, σ1§05/22, mb3.8/11, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**1.73**	**310**	P	**Pn**	**08 30 23.4**	**-2.4**
SMY				S	**Sn**	**08 30 47.4**	**+0.6**
AMKA	**Amchitka**	**1.90**	**97**	P	**Pn**	**08 30 28.1**	**-0.2**
AMKA				S	**Sn**	**08 30 52.0**	**+0.9**
FX1	**Attu Island--F**	**2.29**	**304**	P	**Pn**	**08 30 32.1**	**-1.3**
FX1				S	**Sn**	**08 31 01.6**	**+1.2**
PETK	**Petropavlovsk-**	**11.46**	**285**	P	**Pn**	**08 32 39.4**	**+0.6**
	0.1nm,0.3s,baz=120,slow=5.7,SNR=3.7						
KDAK	**Kodiak Island**	**18.89**	**59**	P	**Pn**	**08 34 11.8**	**-3.2**
	0.6nm,0.3s,baz=291,slow=13,SNR=7.4						
KDAK	**Kodiak Island**	**18.89**	**59**	P	**Pn**	**08 34 11.8**	**-3.2**
DAWY	**Dawson**	**26.04**	**44**	P	**P**	**08 35 26.0**	**+0.1**
MDJ	**Mudanjiang**	**31.49**	**276**	P	**P**	**08 36 15.1**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,15nm,1.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,156nm,4.0s						
YKA	**Yellowknife Ar**	**37.26**	**46**	P	**P**	**08 37 03.9**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=287,slow=7.3,SNR=6.4						
YKA	**Yellowknife Ar**	**37.26**	**46**	P	**P**	**08 37 03.9**	**-0.4**
SONM	**Songino Array**	**43.76**	**294**	P	**P**	**08 37 58.6**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.4,baz=46,slow=6.2,SNR=3.1						
NVAR	**Mina Array Bea**	**46.55**	**80**	P	**P**	**08 38 21.1**	**+0.8**
	comp=Z,0.2nm,0.5s,mb3.3,baz=293,slow=6.9,SNR=4.1						
PDAR	**Pinedale Array**	**49.13**	**70**	P	**P**	**08 38 40.6**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=315,slow=3.5,SNR=5.9						
GYA	**Guiyang**	**57.24**	**272**	P	**P**	**08 39 42.8**	**+2.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
ARCES	**ARCESS Array B**	**57.26**	**348**	P	**P**	**08 39 39.5**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=22,slow=7.7,SNR=2.2						
MKAR	**Makanchi Array**	**57.42**	**306**	P	**P**	**08 39 40.0**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=51,slow=7.2,SNR=4.7						
NOA	**NORSAR Array B**	**67.03**	**352**	P	**P**	**08 40 44.8**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=12,slow=6.5,SNR=3.0						
WRA	**Warramunga Arr**	**80.16**	**220**	P	**P**	**08 42 01.9**	**-0.5**
	comp=Z,0.3nm,0.9s,mb3.2,baz=29,slow=5.8,SNR=3.1						
ASAR	**Alice Springs**	**83.69**	**218**	P	**P**	**08 42 19.7**	**-1.2**
	comp=Z,0.3nm,0.9s,mb3.4,baz=22,slow=5.1,SNR=4.1						

*SGS **22** 08:35:43.3, 3022N×3637E, h10km*
*ISCJB **22** 08:35:44.9±0.9, 2986N±004×3627E±005, h0km, Error ellipse: s-maj=6.4km s-min=5.3km az=152.8*
*GII **22** 08:35:45.4±0.5, 2987N×3617E, h0km, ML2.6/3, EXPLOSION*

ISC 22 08:35:45.0±0.9, 2986N±004×3631E±005, h0km, n16, σ0§58/21, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.10**	**264**	Pg	**Pg**	**08 36 05.7**	**-0.5**
HRFI	**Mount Harif**	**1.12**	**280**	Pg	**Pg**	**08 36 05.7**	**-0.8**
HRFI				Sg	**Sg**	**08 36 21.8**	**+0.7**
EIL	**Elat**	**1.20**	**261**	Pg	**Pg**	**08 36 07.5**	**-0.4**
EIL				Sg	**Sg**	**08 36 23.7**	**+0.2**
ZFRI	**Zfri**	**1.20**	**306**	Pg	**Pg**	**08 36 07.8**	**-0.3**
MBRI	**Mt Berech**	**1.22**	**267**	Pg	**Pg**	**08 36 07.6**	**-0.8**
MBRI				Sg	**Sg**	**08 36 24.5**	**+0.4**
HQLS		**1.22**	**243**	S	**Sg**	**08 36 24.1**	**-0.1**
HQLS		**1.22**	**243**	P	**Pg**	**08 36 07.8**	**-0.6**
PRNI	**Paran**	**1.24**	**294**	Pg	**Pg**	**08 36 08.0**	**-0.7**
PRNI				Sg	**Sg**	**08 36 25.1**	**+0.4**
JLOS		**1.33**	**213**	P	**Pg**	**08 36 10.6**	**+0.2**
KRMI	**Paran Flat**	**1.40**	**281**	Sg	**Sg**	**08 36 29.8**	**-0.2**
TBKS	**Tabuk**	**1.64**	**173**	P	**Pn**	**08 36 15.3**	**+0.2**
MZDA	**Masada**	**1.67**	**331**	Pn	**Pn**	**08 36 15.4**	**0.0**
MZDA				Sn	**Sn**	**08 36 38.3**	**+0.8**
BDAS	**Al Bad'**	**1.77**	**217**	S	**Sn**	**08 36 41.7**	**+1.6**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**08 36 16.8**	**-0.1**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**08 36 19.0**	**+0.5**
RSHS		**2.04**	**221**	P	**Pn**	**08 36 20.2**	**-0.4**

*BJI **22** 08:48:23.3, 632S×14751E, h73km, mB6.4, mb5.5, Ms6.3, Msz6.3*
*MOS **22** 08:48:26.9±1.1, 574S×14700E, h58km, mb6.1/54, MS6.2/71, Error ellipse: s-maj=7.2km s-min=5.2km az=104.2*
*GCMT **22** 08:48:27.5±0.1, 596S×14705E, h56km, MW6.8/116, Moment Tensor Solution. s113,c278; s116,c532; Duration: 5s8 Moment tensor: Scale 10¹⁹Nm; Mrr1.65±.01; Mθθ-1.60±.01; Mϕϕ-0.05±.01; Mrθ-0.07±.01; Mθϕ0.45±.01; Mϕr0.11±.01; Best double couple: M₀1.69200×10¹⁹ NP1:ϕ₁102.00000°, δ43.00000°, λ86.00000°. NP2:ϕ₂288.00000°, δ47.00000°, λ94.00000°. Principal axes: T 1.6580, Plg87.0000°, Azm256.0000°; N 0.0660, Plg3.0000°, Azm105.0000°; P -1.7260, Plg2.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **22** 08:48:27.5±0.1, 576S×147.10E, h53km, mb6.0/133, ME6.2, MW6.7 Error ellipse: s-maj=4.5km s-min=4.4km az=200.0 Broadband fault plane solution: P waves. NP1: ϕs110.00000°, δ50.00000°, λ90.00000°. NP2: ϕs290.00000°, δ40.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm20.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm200.0000°; Moment Tensor Solution. s20 Moment tensor: Scale 10¹⁹ Nm; Mrr1.60; Mθθ-1.35; Mϕϕ-0.25; Mrθ-0.22; Mθϕ0.22; Mϕr-0.06; Best double couple: M₀1.50000×10¹⁹ NP1:ϕs104.00000°, δ41.00000°, λ95.00000°. NP2:ϕs278.00000°, δ49.00000°, λ86.00000°. Principal axes: T 1.6200, Plg84.0000°, Azm251.0000°; N -0.2100, Plg3.0000°, Azm280.0000°; P -1.4100, Plg3.0000°, Azm10.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC One water tower damaged and power knocked out at Lae. Felt [V] at Lae. Also felt at Bulolo, Goroka, Kainantu, Madang and Port Moresby.
*ISCJB **22** 08:48:28.7±0.1, 580S±002×14708E±002, h75km, mb5.9/194 Error ellipse: s-maj=3.3km s-min=3.0km az=143.8*
*IDC **22** 08:48:30.5±2.0, 580S×14706E, h75km±18km, mb5.3/27, mb1 5.3/31, mb1mx5.3/31, mbtmp5.4/31, MS6.4/16, Ms1 6.4/16, ms1mx6.1/21, Error ellipse: s-maj=10.8km s-min=8.1km az=87.0*
*DJA **22** 08:48:33, 594S×147.14E, h100km, Mw6.9/29*
*SZGRF **22** 08:48:46.9, 485

WRAB pmax pmax
comp=Z,9μm,1.7s
WRAB Tennant Creek 18.73 220 P **Pn** **08 52 43.2 -1.2**
comp=Z,2μm,1.0s
WRA Warramunga Arr 18.74 220 P **Pn** **08 52 41.5 -3.0**
comp=Z,7.7nm,0.3s,baz=48,slow=12,SNR=142
WRA S **S** **08 56 09.7 -3.0**
comp=Z,9.0nm,0.3s,baz=46,slow=22,SNR=4.6
WRA LR LR 09 01 03.4
comp=Z,599μm,19.2s,baz=45,slow=40
WRA P3KP 09 27 54.7
comp=Z,0.0nm,0.3s,baz=135,slow=2.3,SNR=4.6
WRA Warramunga Arr 18.74 220 P **Pn** **08 52 41.5 -3.0**
WRA S **S** **08 56 09.7 -3.0**
WRA LR LR 09 01 03.4
WRA Warramunga Arr 18.74 220 P **Pn** **08 52 41.5 -3.0**
WRA S **S** **08 56 09.7 -3.0**
WRA pmax pmax
comp=Z,8.0nm,0.3s
WRA smax
comp=N,9.0nm,0.3s
WRA MLR MLR
comp=Z,599μm,19.2s
AAI Ambon 18.95 276 P **Pn** **08 52 47.1 -0.1**
comp=Z,7μm,0.8s
GUMO Guam 19.40 353 P **Pn** **08 52 51.5 -0.9**
comp=Z,42nm,0.3s,baz=166,slow=9.2,SNR=18
GUMO LR LR 08 59 15.9
comp=Z,53μm,21.1s,baz=148,slow=33
GUMO Guam 19.40 353 *e*P **Pn** **08 52 52.4 0.0**
comp=Z,7μm,1.6s
GUMO *e*S **S** **08 56 43.4 +18**
GUMO Guam 19.40 353 P **Pn** **08 52 51.5 -0.9**
GUMO pmax pmax
comp=Z,42nm,0.3s
GUMO MLR MLR
comp=Z,53μm,21.1s
GUMO Guam 19.40 353 P **Pn** **08 52 52.8 +0.4**
comp=Z,2μm,1.5s
EIDS Eidsvold 19.82 169 *e*P **Pn** **08 52 54.6 -2.6**
comp=Z,4μm,1.9s
EIDS *e*S **S** **08 56 29.4 -4.8**
LBMI Labuha 20.22 284 P **P** **08 53 03.7 +4.2**
comp=Z,5μm,1.3s
ASAR Alice Springs 21.83 214 P **P** **08 53 16.6 -0.1**
comp=Z,285nm,0.9s,mb5.6,baz=51,slow=8.9,SNR=266
ASAR S **S** **08 57 16.4 +2.8**
comp=Z,106nm,1.0s,baz=38,slow=16,SNR=5.1
ASAR P3KPbc 09 27 07.2
comp=Z,1.0nm,0.8s,baz=198,slow=3.5,SNR=6.3
ASAR Alice Springs 21.83 214 P **P** **08 53 16.6 -0.1**
ASAR S **S** **08 57 16.4 +2.8**
ASAR Alice Springs 21.83 214 P **P** **08 53 16.6 -0.1**
ASAR S **S** **08 57 16.4 +2.8**
ASAR pmax pmax
comp=Z,285nm,0.9s
ASAR smax
comp=N,106nm,1.0s
MNI Manado 23.37 287 P **P** **08 53 33.6 +1.1**
comp=N,3μm,1.4s,mb6.5
BATI Baumata 23.61 258 P **P** **08 53 36.3 +1.6**
comp=N,2μm,1.0s,mb6.4,baz=130,slow=1.8,SNR=107
BATI Baumata 23.61 258 P **P** **08 53 36.2 +1.5**
comp=N,3μm,1.1s,mb6.5
KDI Kendari 24.46 273 P **P** **08 53 43.0 +0.5**
comp=N,832nm,1.3s,mb5.9
DZM Mont Dzumac 24.72 133 *e*P **P** **08 53 43.9 -0.8**
comp=N,1μm,1.1s,mb6.2
ARMA Armidale 24.85 171 *e*P **P** **08 53 46.4 +0.6**
comp=N,100nm,1.2s,mb5.1
ARMA *e*S **S** **08 58 09.7 +6.5**
BIPH Bislig 24.92 304⇑ *e*P **P** **08 53 45.2 -1.5**
DAV Davao City (W) 25.00 301 P **P** **08 53 48.0 +0.7**
comp=N,119nm,0.3s,mb5.8,baz=183,slow=5.0,SNR=1.7
DAV LR LR 09 02 54.7
comp=N,48μm,20.2s,baz=140,slow=35
DAV Davao City (W) 25.00 301 *e*P **P** **08 53 46.6 -0.7**
comp=N,224nm,0.7s,mb5.7
DAV LR LR
comp=Z,61μm,19.0s
DAV Davao City (W) 25.00 301⇑ *e*P **P** **08 53 46.8 -0.6**
BUKP Musuan 25.85 302 *e*P **P** **08 53 55.5 +0.4**
CTBH Cotabato--PC H 26.22 299 *e*P **P** **08 53 57.8 -0.6**
STKA Stephens Creek 26.44 191 P **P** **08 54 00.0 -0.2**
comp=Z,126nm,0.9s,mb5.4,baz=358,slow=8.5,SNR=81
STKA LR LR 09 05 12.7
comp=Z,405μm,20.2s,baz=8.0,slow=38
STKA PKPPKP 09 28 32.3
comp=Z,4.4nm,1.0s,baz=325,slow=5.0,SNR=3.3
STKA Stephens Creek 26.44 191 *e*P **P** **08 54 00.1 -0.1**
comp=Z,496nm,1.6s,mb5.7
SCPH Surigao 26.52 306⇑ *e*P **P** **08 54 01.6 +0.4**
TARA Tarawa 26.75 75 *e*P **P** **08 54 01.9 -1.4**
comp=Z,658nm,1.1s,mb6.1
TARA LR LR
comp=Z,36μm,21.0s
MSLP Maasin 27.23 305 *e*P **P** **08 54 12.7 +5.2**
KAPI Kappang 27.23 270 P **P** **08 54 07.1 -0.5**
comp=Z,4μm,0.9s,mb6.9,SNR=28
KAPI Kappang 27.23 270⇑P **P** **08 54 07.3 -0.3**
SNR=52
KAPI Kappang 27.23 270 P **P** **08 54 07.2 -0.4**
comp=Z,671nm,1.1s,mb6.1,baz=94,slow=4.9,SNR=38
KAPI Kappang 27.23 270 *e*P **P** **08 54 07.3 -0.3**
comp=Z,853nm,1.1s,mb6.2
KAPI LR LR
comp=Z,91μm,20.0s
KAPI Kappang 27.23 270 P **P** **08 54 07.2 -0.4**
comp=Z,488nm,1.5s,comp=Z,8μm,mb5.8
PAGZ Pagadian 27.27 300 *e*P **P** **08 54 07.9 0.0**
PCI Palu 27.64 279 P **P** **08 54 14.0 +2.8**
comp=Z,2μm,1.1s,mb6.6
TBP Tagbilaran 27.81 304 *e*P **P** **08 54 14.9 +2.3**
CAN Canberra 29.42 177 *e*P **P** **08 54 26.7 0.0**
comp=Z,416nm,1.1s,mb6.0
CAN *e*S **S** **08 59 16.2 +1.0**
RCP Roxas 29.75 305⇓ *e*P **P** **08 54 29.8 -0.1**
PVCP Virac 29.84 310 *e*P **P** **08 54 30.9 +0.1**
SMKI Samarinda 30.31 279 P **P** **08 54 41.9 +7.0**
MYLDM Lahad Datu 30.57 290⇑P **P** **08 54 39.4 +2.2**
MYLDM Lahad Datu 30.57 290 P **P** **08 54 39.2 +2.0**
MBWA Marble Bar 30.59 237 P **P** **08 54 38.2 +0.9**
SNR=42
MBWA Marble Bar 30.59 237 *e*P **P** **08 54 37.7 +0.4**
comp=Z,582nm,1.1s,mb6.2
MBWA *e*S **S** **08 59 33.4 -0.5**
MBWA LR LR
comp=Z,226μm,19.0s
MBWA Marble Bar 30.59 237 P **P** **08 54 37.4 +0.1**
comp=Z,638nm,1.1s,mb6.3
FORT Forrest 30.61 213 *e*P **P** **08 54 37.5 +0.1**
comp=Z,693nm,0.9s,mb6.4
OTRP Odiongan 30.78 306 *e*P **P** **08 54 38.8 -0.3**
CUYO Cuyo Island 30.79 302 *e*P **P** **08 54 38.5 -0.6**
TSM Tawau 30.86 288⇑P **P** **08 54 39.5 -0.3**
GQP Guinayangan 31.34 309 *e*P **P** **08 54 43.4 -0.6**
KHKI Kahang-Kahang 31.35 263 P **P** **08 54 43.8 -0.3**
SJMP San Jose 31.57 305 *e*P **P** **08 54 46.4 +0.5**
DNP Denpasar 31.75 263 P **P** **08 54 54.7 +7.0**
SDKM Sandakan 31.95 290⇓P **P** **08 54 49.0 -0.3**
FUNA Funafuti 31.96 97 *e*P **P** **08 54 48.1 -1.3**
comp=Z,337nm,1.0s,mb6.0
FUNA LR LR
comp=Z,25μm,22.0s
PPR Puerto Princes 32.23 299⇓ *e*P sP 08 55 25.0 +6.1
BBKI Banjar Baru 32.23 273 P **P** **08 54 52.6 +0.7**
comp=Z,1μm,1.0s,mb6.6
ENPP El Nido 32.31 302 *e*P **P** **08 54 52.2 -0.3**
NBBI Negara 32.32 264 P **P** **08 54 52.8 +0.2**
comp=Z,1μm,1.5s,mb6.4
BATP Bataraza 32.61 296 *e*P **P** **08 54 54.5 -0.7**
KDM Kudat 32.74 292⇓P **P** **08 55 00.4 +4.1**
KMMI Kalianget 32.94 266 P **P** **08 54 59.8 +1.7**
comp=Z,486nm,1.4s,mb6.1
LUBP Lubang 32.98 306 *e*P **P** **08 55 01.5 +3.2**
KKM Kota Kinabalu 33.00 290 *e*P **P** **08 54 57.5 -1.1**
comp=Z,664nm,1.2s,mb6.3
KKM LR LR
comp=Z,26μm,22.0s
KKM Kota Kinabalu 33.00 290⇑P **P** **08 54 58.2 -0.3**
CBIJ Chichi jima 33.05 352 P **P** **08 54 58.7 -0.1**
comp=Z,268nm,0.4s,mb6.4,baz=213,slow=5.9,SNR=13
BALP Baler 33.12 311 *e*P **P** **08 54 58.8 -0.8**
PLKI Palangkaraya 33.26 275 P **P** **08 55 01.8 +1.0**
comp=Z,2μm,1.9s,mb6.5
PCPH Palayan 33.38 310⇑ *e*P **P** **08 55 06.3 +4.5**

CAUP Cauayan 33.70 313 *e*P **P** **08 55 05.0 +0.5**
KRKI Karangkates 34.46 264 P **P** **08 55 11.6 +0.4**
BTM Bintulu 35.13 284⇓P **P** **08 55 22.1 +5.1**
SJI Sawahan 35.13 265 P **P** **08 55 16.8 -0.2**
SBUM Sibu 35.79 282⇓P **P** **08 55 22.4 -0.3**
STKI Sintang 36.03 278 P **P** **08 55 26.3 +1.5**
comp=Z,504nm,1.5s,mb6.2
TAU Tasmania Unive 36.95 180 P **P** **08 55 33.0 +0.9**
comp=Z,1μm,1.0s,mb6.8,SNR=12
TAU Tasmania Unive 36.95 180 *e*P **P** **08 55 33.0 +0.9**
comp=Z,550nm,1.3s,mb6.3
TAU *e*S **S** **09 01 13.5 +1.9**
TAU LR LR
comp=Z,107μm,22.0s
BJII Banjamegara 37.17 266 P **P** **08 55 34.9 +0.5**
KSM Kuching 37.44 280 *e*P **P** **08 55 36.5 -0.3**
comp=Z,369nm,1.1s,mb6.2
KSM Kuching 37.44 280⇑P **P** **08 55 36.4 -0.4**
CLJI Cilicap 37.86 265 P **P** **08 55 46.0 +5.8**
JCJI Jatiwangi 38.60 267 P **P** **08 55 46.9 +0.4**
comp=Z,3μm,1.4s,mb6.9
NWAO Narrogin (SRO) 38.73 222 P **P** **08 55 48.1 +0.7**
SNR=27
NWAO Narrogin (SRO) 38.73 222 P **P** **08 55 47.7 +0.4**
comp=Z,100nm,0.8s,mb5.7,baz=53,slow=8.2,SNR=42
NWAO Narrogin (SRO) 38.73 222 *e*P **P** **08 55 47.5 +0.2**
comp=Z,738nm,1.4s,mb6.3
NWAO LR LR
comp=Z,354μm,19.0s
NWAO Narrogin (SRO) 38.73 222 P **P** **08 55 47.7 +0.4**
NWAO pmax pmax
comp=Z,100nm,0.8s
NACB Ninganchiao 38.81 321 *e*P **P** **08 55 48.4 +0.4**
comp=Z,1μm,1.3s,mb6.5
LEM Lembang 39.25 266 P **P** **08 55 52.2 +0.3**
comp=Z,3μm,1.0s,mb7.0
YHNB Yeheng 39.31 321 *e*P **P** **08 55 52.9 +0.7**
comp=Z,738nm,0.9s,mb6.5
YHNB LR LR
comp=Z,32μm,22.0s
TATO Taipei 39.46 322 *e*P **P** **08 55 53.6 +0.2**
comp=Z,1μm,1.2s,mb6.6
TATO LR LR
comp=Z,40μm,22.0s
RAO Raoul Island 40.43 129 P **P** **08 56 02.5 +1.0**
comp=Z,210nm,0.5s,mb6.3,baz=77,slow=21,SNR=5.2
RAO Raoul Island 40.43 129 *e*P **P** **08 56 02.7 +1.2**
comp=Z,411nm,0.8s,mb6.3
RAO LR LR
comp=Z,69μm,22.0s
RAO Raoul Island 40.43 129 *e*P **P** **08 56 02.7 +1.2**
RAO pmax pmax
comp=Z,411nm,0.8s,mb6.3
RAO MLR MLR
comp=Z,69μm,22.0s
AFI Afiamalu 41.26 104 P **P** **08 56 09.1 +0.6**
comp=Z,168nm,1.0s,mb5.8,baz=97,slow=9.4,SNR=12
AFI Afiamalu 41.26 104 *e*P **P** **08 56 07.7 -0.8**
comp=Z,824nm,1.0s,mb6.5
AFI LR LR
comp=Z,21μm,19.0s
AFI Afiamalu 41.26 104 *e*P **P** **08 56 07.7 -0.8**
AFI pmax pmax
comp=Z,824nm,1.0s,mb6.5
AFI MLR MLR
comp=Z,21μm,19.0s
XMIS Christmas Isla 41.26 261 *e*P **P** **08 56 09.7 +1.1**
QZH Quanzhou 41.28 319⇑ *i*P **P** **08 56 09.3 +0.8**
QZH XP sP 08 56 35.3 -0.7
QZH S **S** **09 02 20.0 +2.9**
QZH XS sS 09 02 49.0 -0.1
QZH AMB AMB
comp=Z,460nm,1.1s,mb6.2
QZH LR LR
comp=N,28μm,16.8s
QZH LR LR
comp=E,35μm,20.4s
QZH LR LR
comp=Z,132μm,42.8s
URZ Urewera 42.25 144 P **P** **08 56 16.5 +0.2**
comp=Z,16nm,0.4s,mb5.1,baz=288,slow=1.1,SNR=20
HKC Hong Kong Obse 42.65 312⇑ *i*P **P** **08 56 20.0 +0.3**
MJAR Matsushiro Arr 42.95 349 P **P** **08 56 22.0 +0.2**
comp=Z,86nm,1.1s,mb5.4,baz=176,slow=8.3,SNR=60
MJAR ScP ScP 09 01 56.7 +1.0
comp=Z,19nm,1.2s,baz=163,slow=5.0,SNR=3.8
MJAR PKPPKP 09 28 12.4
comp=Z,0.5nm,0.3s,baz=168,slow=5.2,SNR=4.1
MAJO Matsushiro 42.95 349 *e*P **P** **08 56 21.7 -0.2**
MAJO *e*pP pP 08 56 39.4 -1.2
MAJO *e*S **S** **09 02 42.2 +0.8**
MAJO LR LR
comp=Z,16μm,19.0s
MAT Matsushiro 42.95 349 P **P** **08 56 20.9 -1.0**
MAT S **S** **09 02 42.0 +0.6**
SNZO South Karori 43.09 149 *e*P **P** **08 56 22.4 -0.6**
SNZO *e*pP pP 08 56 38.1 -3.7
SNZO *e*S **S** **09 02 42.0 -1.4**
SNZO LR LR
comp=Z,36μm,21.0s
RPZ Rata Peaks 43.24 155 P **P** **08 56 25.3 +1.2**
comp=Z,143nm,0.8s,mb5.8,baz=353,slow=1.6,SNR=34
GZH Guangzhou 43.74 312 P **P** **08 56 29.3 +0.8**
GZH S **S** **09 02 56.1 +2.8**
GZH LR LR
comp=N,28μm,21.3s
GZH LR LR
comp=E,23μm,19.7s
GZH LR LR
comp=Z,33μm,40.4s
MYKOM Kota Tinggi 43.84 279⇓P **P** **08 56 29.5 0.0**
QIZ Qiongzhong 44.23 305 P **P** **08 56 31.4 -1.1**
QIZ AP pP 08 56 50.8 -0.5
QIZ XP sP 08 56 59.1 -1.0
QIZ PP PP 08 58 17.6 +0.6
QIZ S **S** **09 02 58.3 -2.3**
QIZ XS sS 09 03 32.8 0.0
QIZ SS SS 09 06 24.1 +2.7
QIZ AMB AMB
comp=Z,46nm,2.0s,mb4.9
QIZ LR LR
comp=E,20μm,24.9s
QIZ LR LR
comp=Z,42μm,34.7s
QIZ Qiongzhong 44.23 305 *e*P **P** **08 56 31.1 -1.3**
comp=Z,223nm,1.1s,mb5.8
QIZ LR LR
comp=Z,34μm,22.0s
SSE Sheshan 44.27 328 P **P** **08 56 33.3 +0.7**
SSE XP sP 08 57 02.1 +1.8
SSE PP PP 08 58 16.6 -0.7
SSE S **S** **09 03 01.9 +1.0**
SSE XS sS 09 03 34.0 +0.9
SSE SS SS 09 06 24.1 +2.1
SSE AMB AMB
comp=Z,125nm,0.9s,mb5.6
SSE AMB AMB
comp=Z,1μm,5.5s
SSE LR LR
comp=N,25μm,18.3s
SSE LR LR
comp=E,26μm,18.3s
SSE LR LR
comp=Z,50μm,15.8s
KGM Kluang 44.41 279⇑P **P** **08 56 33.8 -0.2**
KTGM Kuala Trenggan 45.27 283⇓P **P** **08 56 40.7 -0.2**
NJ2 Nanjing 46.28 326 *e*P **P** **08 56 49.8 +1.3**
NJ2 AP pP 08 57 08.3 +0.8
NJ2 XP sP 08 57 18.0 +1.7
NJ2 PP PP 08 58 40.6 +2.1
NJ2 S **S** **09 03 30.0 +0.2**
NJ2 XS sS 09 04 02.0 -0.2
NJ2 AMB AMB
comp=Z,170nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,9μm,8.5s
NJ2 LR LR
comp=N,17μm,28.0s
NJ2 LR LR
comp=E,31μm,25.2s
NJ2 LR LR
comp=Z,38μm,18.5s
FRIM Kepong 46.29 280⇑P **P** **08 56 48.7 -0.2**
KSRS Korea Array 46.61 339 P **P** **08 56 51.9 +0.9**
comp=Z,70nm,0.9s,mb5.4,baz=158,slow=9.1,SNR=57

KSRS LR LR 09 13 27.2
comp=Z,42μm,21.2s,baz=138,slow=32
KSRS PKPPKP 09 27 56.1
comp=Z,3.5nm,0.9s,baz=7.5,slow=3.1,SNR=5.3
UBT Ubonrachathani 46.65 297 P **P** **08 56 58.5 +6.9**
IPM Ipoh 47.13 282⇓P **P** **08 56 55.3 -0.1**
KULM Kulim 47.67 283⇓P **P** **08 56 59.5 -0.1**
ERM Erimo 47.73 356 *e*P **P** **08 56 59.7 +0.1**
comp=Z,859nm,1.5s,mb6.4
ERM LR LR
comp=Z,22μm,20.0s
ERM Erimo 47.73 356 *de*P **P** **08 56 59.5 -0.1**
ERM pmax pmax
comp=Z,204nm,1.7s,mb5.7
WHN Wuhan 47.85 321⇓P **P** **08 57 01.8 +1.0**
WHN XP sP 08 57 28.1 -0.5
WHN S **S** **09 03 58.0 +5.8**
WHN AMB AMB
comp=Z,178nm,0.8s,mb6.0
WHN AMB AMB
comp=Z,4μm,8.0s
WHN LR LR
comp=N,25μm,15.4s
WHN LR LR
comp=E,10μm,12.6s
WHN LR LR
comp=Z,37μm,21.1s
MIDW Midway 48.15 44 *e*P **P** **08 57 03.0 -0.1**
comp=Z,300nm,1.1s,mb6.0
MIDW LR LR
comp=Z,11μm,19.0s
KKTK Khon Kaen 49.02 297 P **P** **08 57 13.0 +3.1**
comp=Z,2μm,0.5s
MCQ Macquarie Isla 49.48 171 *e*P **P** **08 57 11.1 -1.8**
MCQ Macquarie Isla 49.48 171 P **P** **08 57 16.5 +3.6**
YUK Yuzh-Kuril'sk 49.63 359 *e*P **P** **08 57 19.5 +5.4**
YUK *i* SP 08 57 42.0
YUK *e* 08 58 40.0
YUK *e* 08 59 11.0
YUK *e*S **S** **09 04 20.5 +3.8**
YUK *e* 09 07 50.0
YUK pmax pmax
comp=Z,8μm,6.0s
YUK smax
comp=N,19μm,13.0s
YUK smax
comp=E,11μm,13.0s
YUK MLR MLR
comp=N,12μm,18.0s
YUK MLR MLR
comp=E,10μm,18.0s
YUK MLR MLR
comp=Z,18μm,18.0s
ASAJ Asahikawa 49.86 356 P **P** **08 57 17.2 +1.3**
comp=Z,130nm,1.0s,mb5.8,baz=186,slow=9.4,SNR=11
ASAJ LR LR 09 16 00.3
comp=Z,26μm,21.9s,baz=183,slow=33
COCO West Island 49.99 259⇑P **P** **08 57 18.7 +1.3**
SNR=5.3
COCO West Island 49.99 259 *e*P **P** **08 57 18.3 +0.9**
comp=Z,4μm,1.8s,mb7.0
COCO *e*pP pP 08 57 35.7 -0.9
COCO LR LR
comp=Z,42μm,21.0s
DL2 Dalian 50.36 334 P **P** **08 57 20.3 +0.5**
DL2 AP pP 08 57 38.9 -0.1
DL2 XP sP 08 57 47.8 +0.1
DL2 PP PP 08 59 15.8 -0.3
DL2 S **S** **09 04 26.0 -1.2**
DL2 SS SS 09 07 57.6 -4.4
DL2 AMB AMB
comp=Z,100nm,1.0s,mb5.7
DL2 AMB AMB
comp=Z,1μm,5.0s
DL2 LR LR
comp=N,13μm,23.1s
DL2 LR LR
comp=E,5μm,21.0s
DL2 LR LR
comp=Z,21μm,22.3s
TIA Tai'an 50.37 328⇑P **P** **08 57 19.5 -0.4**
TIA S **S** **09 04 38.5 +11**
TIA LR LR
comp=E,10μm,17.0s
NNT Nongplab 50.50 291 P **P** **08 57 26.6 +5.4**
GYA Guiyang 50.63 311⇑ *i*P **P** **08 57 22.8 +0.7**
GYA AP pP 08 57 41.8 +0.5
GYA XP sP 08 57 50.9 +0.9
GYA PCP PcP 08 58 39.8 +1.1
GYA PP PP 08 59 22.3 +3.5
GYA SCP ScP 09 02 24.3 -3.8
GYA PCS PcS 09 02 35.8 -0.4
GYA S **S** **09 04 36.5 +5.2**
GYA SCS ScS 09 07 02.8 -3.2
GYA SS SS 09 08 09.8 +3.1
GYA AMB AMB
comp=Z,560nm,1.0s,mb6.5
GYA AMB AMB
comp=Z,10μm,11.7s
GYA LR LR
comp=N,15μm,20.1s
GYA LR LR
comp=E,13μm,21.3s
GYA LR LR
comp=Z,25μm,20.6s
KUR Kuril'sk 50.82 1 *e*P **P** **08 57 21.5 -1.6**
NST Nakhon Sawan 51.17 295⇓P **P** **08 57 26.0 -0.2**
comp=Z,333nm,1.0s,mb6.3
NANT Nan 51.85 299⇑P **P** **08 57 29.0 -2.3**
comp=Z,2μm,1.0s,mb7.0
SNY Shenyang 52.05 338⇑P **P** **08 57 32.8 +0.4**
SNY S **S** **09 04 51.6 +1.3**
SNY AMB AMB
comp=Z,109nm,2.5s,mb5.4
SNY AMB AMB
comp=Z,3μm,5.3s
SNY LR LR
comp=N,15μm,22.9s
SNY LR LR
comp=E,20μm,20.8s
SNY LR LR
comp=Z,54μm,33.3s
MDJ Mudanjiang 52.61 344 P **P** **08 57 37.6 +1.2**
MDJ AP pP 08 57 55.0 -0.8
MDJ XP sP 08 58 03.5 -1.0
MDJ SCP ScP 09 02 37.6 +1.4
MDJ S **S** **09 04 58.5 +0.6**
MDJ SCS ScS 09 07 19.3 +0.4
MDJ SS SS 09 08 41.3 +3.9
MDJ AMB AMB
comp=Z,37nm,2.2s,mb5.0
MDJ AMB AMB
comp=Z,1μm,6.6s
MDJ LR LR
comp=N,11μm,29.6s
MDJ LR LR
comp=E,26μm,46.9s
MDJ LR LR
comp=Z,34μm,35.2s
MDJ Mudanjiang 52.61 344 *e*P **P** **08 57 35.0 -1.4**
comp=Z,102nm,0.9s,mb5.8
MDJ LR LR
comp=Z,16μm,22.0s
YSS Yuzh-Sakhalins 52.67 356⇑ *e*P **P** **08 57 37.8 +0.9**
YSS Yuzh-Sakhalins 52.67 356⇑ *i*P **P** **08 57 38.0 +1.1**
YSS *i* pP 08 57 59.0 +2.8
YSS *e* 08 58 42.0
YSS *e*PPP 09 00 38.0
YSS *e*S **S** **09 04 58.0 -0.7**
YSS *e*PS 09 05 01.0
YSS pmax pmax
comp=Z,180nm,1.1s,mb6.0
YSS pmax pmax
comp=Z,3μm,8.0s
YSS MLR MLR
comp=Z,6μm,16.0s
YSS MLR MLR
comp=N,8μm,17.0s
YSS MLR MLR
comp=E,11μm,18.0s
BDT Bhumibol Dam 52.74 297 P **P** **08 57 37.5 -0.4**
comp=E,73nm,1.1s,mb5.6
KMI Kunming 52.96 307 P **P** **08 57 40.6 +1.2**
KMI AP pP 08 58 00.8 +2.0
KMI XP sP 08 58 08.9 +1.4

KMI PP PP 08 59 44.8 +4.9
KMI S **S** **09 05 04.4 +1.1**
KMI XS sS 09 05 37.3 +0.9
KMI SCS ScS 09 07 20.9 -1.3
KMI SS SS 09 08 42.9 -0.7
KMI AMB AMB
comp=Z,25nm,1.2s,mb5.1
KMI AMB AMB
comp=Z,3μm,14.1s
KMI LR LR
comp=N,14μm,24.1s
KMI LR LR
comp=E,12μm,28.4s
KMI LR LR
comp=Z,32μm,30.7s
CN2 Changchun 53.12 340 *e*P **P** **08 57 42.8 +2.6**
CN2 AMB AMB
comp=Z,70nm,1.3s,mb5.5
CM31 Chiang Mai Arr 53.25 298 *e*P **P** **08 57 42.2 +0.6**
comp=Z,18nm,0.6s,mb5.3
CM31 LR LR
comp=Z,16μm,21.0s
CMAR Chiang Mai Arr 53.25 298 P **P** **08 57 41.8 +0.1**
comp=Z,6.4nm,0.6s,mb4.8,baz=120,slow=5.3,SNR=23
CMAR LR LR 09 19 09.5
comp=Z,18μm,21.9s,baz=299,slow=35
CMAR PKPPKP 09 27 56.1
comp=Z,1.0nm,0.6s,baz=251,slow=4.4,SNR=4.8
CMAR Chiang Mai Arr 53.25 298 P **P** **08 57 41.8 +0.1**
CMAR LR LR 09 19 09.5
CMAR P'P' 09 27 56.1
CHG Chiang Mai 53.38 298 ⇑P **P** **08 57 42.6 0.0**
comp=Z,194nm,1.0s,mb6.1
CHTO Chiang Mai 53.38 298 P **P** **08 57 43.1 +0.5**
SNR=14
CHTO Chiang Mai 53.38 298 *e*P **P** **08 57 42.7 +0.1**
comp=Z,486nm,1.3s,mb6.4
CHTO LR LR
comp=Z,13μm,22.0s
CHTO Chiang Mai 53.38 298 *e*P **P** **08 57 42.7 +0.1**
CHTO pmax pmax
comp=Z,486nm,1.3s,mb6.4
CHTO MLR MLR
comp=Z,13μm,22.0s
XAN Xi'an 53.60 320 P **P** **08 57 43.8 -0.1**
XAN AP pP 08 58 02.8 -0.6
XAN XP sP 08 58 11.6 -0.4
XAN PCP PcP 08 58 49.0 -0.6
XAN PP PP 08 59 47.1 +1.6
XAN S **S** **09 05 07.8 -3.9**
XAN AMB AMB
comp=Z,84nm,1.2s,mb5.7
XAN LR LR
comp=N,6μm,19.2s
XAN LR LR
comp=E,8μm,19.2s
XAN LR LR
comp=Z,38μm,32.8s
RAR Rarotonga 53.62 112 *e*P **P** **08 57 43.4 -0.9**
comp=Z,482nm,1.1s,mb6.4
RAR LR LR
comp=Z,14μm,19.0s
RAR Rarotonga 53.62 112 *e*P **P** **08 57 43.4 -0.9**
RAR pmax pmax
comp=Z,482nm,1.1s
RAR MLR MLR
comp=Z,14μm,19.0s
BJT Baijiatuau 53.77 331 P **P** **08 57 45.1 0.0**
comp=Z,838nm,1.4s,mb6.6
BJT LR LR
comp=Z,51μm,22.0s
BJT Baijiatuau 53.77 331 P **P** **08 57 45.1 0.0**
BJT pmax pmax
comp=Z,839nm,1.4s
BJT MLR MLR
comp=Z,51μm,22.0s
BJI Beijing 53.78 331 P **P** **08 57 45.4 +0.2**
BJI PP PP 08 59 50.8 +3.7
BJI S **S** **09 05 11.4 -2.6**
BJI SS SS 09 09 01.6 +5.5
BJI AMB AMB
comp=Z,67nm,1.3s,mb5.5
BJI AMB AMB
comp=Z,2μm,6.2s
BJI LR LR
comp=N,17μm,19.9s
BJI LR LR
comp=E,29μm,20.4s
BJI LR LR
comp=Z,42μm,28.6s
HABR Khabarovsk 55.08 350⇑ *e*P **P** **08 57 55.4 +1.0**
HABR *e**PP pP 08 58 17.3 +3.4
HABR *e* 08 58 52.9
HABR *e* 08 59 52.8
HABR *e*S **S** **09 05 28.5 -2.6**
HABR *e* 09 07 31.0
HABR *e*SS SS 09 09 10.5 -5.7
HABR pmax pmax
comp=Z,672nm,1.6s,mb6.4
HABR pmax pmax
comp=Z,4μm,6.3s
HABR MLR MLR
comp=Z,11μm,20.0s
CD2 Chengdu 55.21 314 P **P** **08 57 55.8 +0.1**
CD2 AP pP 08 58 14.8 -0.4
CD2 XP sP 08 58 23.5 -0.4
CD2 PCP PcP 08 58 54.9 -1.0
CD2 PP PP 09 00 01.9 +1.9
CD2 PCS PcS 09 02 53.6 -2.4
CD2 S **S** **09 05 32.8 -0.8**
CD2 XS sS 09 06 05.8 -1.0
CD2 SCS ScS 09 07 34.3 -3.7
CD2 SS SS 09 09 18.0 -1.0
CD2 AMB AMB
comp=Z,220nm,0.6s,mb6.4
CD2 AMB AMB
comp=Z,14μm,11.2s
CD2 LR LR
comp=N,26μm,20.4s
CD2 LR LR
comp=E,28μm,19.2s
CD2 LR LR
comp=Z,29μm,28.2s
XMAS Kiritimati 55.93 84 *e*P **P** **08 58 01.3 +0.1**
comp=Z,953nm,1.4s,mb6.6
KLR Kul'dur 56.43 348 *e*P **P** **08 58 00.0 -4.0**
KLR *e*S **S** **09 05 45.5 -3.5**
KLR pmax pmax
comp=N,130nm,2.2s
KLR pmax pmax
comp=Z,650nm,2.2s,mb6.3
KLR pmax pmax
comp=Z,4μm,7.5s
HHC Hu-ho-hao-te 56.72 328 *e*P **P** **08 58 06.9 +0.6**
HHC AP pP 08 58 26.8 +0.9
HHC XP sP 08 58 35.1 +0.6
HHC PCP PcP 08 59 01.3 -0.2
HHC PP PP 09 00 16.3 +3.0
HHC S **S** **09 05 52.8 -0.5**
HHC XS sS 09 06 27.3 +0.7
HHC SCS ScS 09 07 45.8 -2.7
HHC SS SS 09 09 45.8 +3.4
HHC AMB AMB
comp=Z,52nm,1.0s,mb5.5
HHC AMB AMB
comp=Z,2μm,8.1s
HHC LR LR
comp=N,17μm,20.2s
HHC LR LR
comp=E,20μm,20.4s
HHC LR LR
comp=Z,51μm,23.3s
SKR Severo-Kuril's 56.80 7 *e*P **P** **08 58 04.0 -2.7**
SKR *e*PPP 09 01 34.0
SKR *e*S **S** **09 06 05.0 +11**
SKR *e*SSS 09 11 53.0
SKR pmax pmax
comp=Z,160nm,0.8s,mb6.1
SKR pmax pmax
comp=N,11μm,18.0s
SKR pmax pmax
comp=E,9μm,18.0s
SKR pmax pmax
comp=Z,15μm,18.0s
SKR pmax pmax
comp=Z,8μm,14.0s
SKR smax
comp=N,38μm,20.0s
SKR smax
comp=E,20μm,20.0s
SKR MLR MLR
comp=Z,13μm,20.0s
SKR MLR MLR
comp=N,9μm,18.0s
SKR MLR MLR
comp=E,9μm,18.0s
BTO Baotou 57.37 327 *e*P **P** **08 58 11.5 +0.6**
BTO S **S** **09 05 59.3 -2.5**
BTO AMB AMB
comp=Z,20nm,0.9s,mb5.2
LZH Lanzhou 58.13 319 ⇓P **P** **08 58 17.0 +0.7**
LZH AP pP 08 58 37.0 +1.0
LZH XP sP 08 58 45.4 +0.8
LZH PP PP 09 00 28.0 +2.1
LZH *e*S **S** **09 06 13.3 +1.4**
LZH XS sS 09 06 45.0 -0.4
LZH AMB AMB
comp=Z,220nm,1.2s,mb6.1
LZH AMB AMB
comp=Z,810nm,4.9s
LZH LR LR
comp=E,14μm,18.8s
LZH LR LR
comp=Z,27μm,19.8s
PETK Petropavlovsk- 59.38 7 P **P** **08 58 26.1 +1.5**
comp=Z,30nm,0.5s,mb5.6,baz=162,slow=5.7,SNR=84
PETK LR LR 09 20 33.7
comp=Z,14μm,21.9s,baz=198,slow=32
PETK PKP2bc 09 28 03.8
comp=Z,6.4nm,0.9s,baz=37,slow=3.7,SNR=3.8
PETK PKP2ab 09 28 16.8
comp=Z,12nm,1.0s,baz=77,slow=8.1,SNR=4.9
PETK Petropavlovsk- 59.38 7 P **P** **08 58 26.1 +1.5**
PETK LR LR 09 20 33.7
PETK ⇑*e* 09 28 03.8
PETK P'P'ab 09 28 16.8
PET Petropavlovsk 59.42 8 *e*P **P** **08 58 24.8 -0.1**
PET Petropavlovsk 59.42 8*c i*P **P** **08 58 27.8 +2.9**
PET *e* 09 00 46.3
PET *i* S **S** **09 06 34.2 +6.2**
PET *e*SS SS 09 10 28.3 +3.9
PET *e*SSS 09 12 52.6
PET pmax pmax
comp=Z,79nm,0.7s,mb5.8
PET pmax pmax
comp=Z,10μm,9.8s
PET pmax pmax
comp=Z,13μm,16.2s
PET pmax pmax
comp=Z,6μm,15.3s
PET pmax pmax
comp=Z,5μm,18.0s
PET smax
comp=N,5μm,10.9s
PET smax
comp=N,8μm,19.6s
HIA Hailar 59.81 340 *e*P **P** **08 58 27.6 0.0**
comp=N,277nm,0.9s,mb6.3
HIA LR LR
comp=Z,20μm,20.0s
HIA Hailar 59.81 340 *e*P **P** **08 58 27.6 0.0**
HIA pmax pmax
comp=Z,277nm,0.9s
HIA MLR MLR
comp=Z,20μm,20.0s
IMP Imphal 59.98 303 *e*P **P** **08 58 28.0 -1.3**
IMP *ex* x 09 00 10.0
KIP Kipapa 60.22 61 *e*P **P** **08 58 33.5 +2.5**
comp=Z,217nm,1.1s,mb6.1
KIP LR LR
comp=Z,16μm,20.0s
KIP Kipapa 60.22 61 *e*P **P** **08 58 33.5 +2.5**
KIP pmax pmax
comp=Z,217nm,1.1s,mb6.1
KIP MLR MLR
comp=Z,16μm,20.0s
DRV Dumont d'Urvil 60.95 183 P **P** **08 58 38.0 +2.8**
DRV S **S** **09 06 52.0 +4.8**
DRV SS SS 09 11 09.0 +21
DRV L 09 14 00.0
DRV R 09 18 00.0
POHA Pohakuloa 61.87 64 *e*P **P** **08 58 42.7 +0.5**
comp=Z,375nm,1.1s,mb6.3
POHA LR LR
comp=Z,26μm,20.0s
SHL Shillong 62.00 303⇑ *i*P **P** **08 58 42.5 -0.5**
SHL *e*S **S** **09 07 03.0 +1.1**
GTA Gaotai 62.66 320 P **P** **08 58 47.9 +0.8**
GTA AP pP 08 59 07.4 +0.4
GTA XP sP 08 59 16.5 +0.9
GTA PP PP 09 01 07.6 +1.7
GTA SCP ScP 09 03 19.6 -1.1
GTA S **S** **09 07 10.9 +1.2**
GTA XS sS 09 07 44.6 +1.1
GTA SS SS 09 11 20.8 +5.1
GTA AMB AMB
comp=Z,29nm,1.4s,mb5.0
GTA AMB AMB
comp=Z,2μm,8.1s
GTA LR LR
comp=N,10μm,18.6s
GTA LR LR
comp=E,10μm,20.4s
GTA LR LR
comp=Z,15μm,21.0s
SMY Shemya 62.66 18 *e*P **P** **08 58 49.3 +2.5**
comp=Z,1μm,2.1s,mb6.5
SMY LR LR
comp=Z,9μm,20.0s
SMY Shemya 62.66 18 *e*P **P** **08 58 49.3 +2.5**
SMY pmax pmax
comp=Z,1μm,2.1s,mb6.5
SMY MLR MLR
comp=Z,9μm,20.0s
PAE Papea 62.86 107 *e*P **P** **08 58 50.4 +1.5**
comp=Z,2μm,1.0s,mb7.0
PPT Papeete 62.86 107 *e*P **P** **08 58 50.8 +1.9**
comp=Z,294nm,1.2s,mb6.1
PPT *e*S **S** **09 07 16.6 +3.7**
comp=Z,61μm,26.5s
PPT *e*LQ 09 14 58.1
comp=Z,47μm,30.8s
PPT *e*LR LR 09 17 42.4
comp=Z,65μm,27.0s,baz=266
PPT Papeete 62.86 107 P **P** **08 58 51.2 +2.4**
comp=Z,48nm,0.8s,mb5.5,baz=299,slow=3.2,SNR=6.7
PPT LR LR 09 22 27.6
comp=Z,11μm,21.0s,baz=285,slow=32
TIAR Tiarei 63.08 107 *e*P **P** **08 58 52.0 +1.7**
comp=Z,6μm,1.0s
TVO Taravao 63.17 107 *e*P **P** **08 58 52.9 +1.9**
comp=Z,4μm,1.2s
AMKA Amchitka 63.30 22 P **P** **08 58 50.8 -0.3**
AMKA *e*pP pP 08 59 11.0 0.0
CAL Calcutta 63.98 298 *e*P **P** **08 58 55.8 -0.5**
CAL *ex* x 09 08 02.2
ULN Ulaanbaatar 63.99 331 P **P** **08 58 57.0 +1.3**
SNR=59
ULN Ulaanbaatar 63.99 331 *e*P **P** **08 58 56.6 +0.9**
comp=Z,184nm,1.0s,mb5.9
ULN *e*S **S** **09 07 24.7 -1.2**
ULN LR LR
comp=Z,24μm,21.0s
ULN Ulaanbaatar 63.99 331 *e*P **P** **08 58 56.6 +0.9**
ULN *e*S **S** **09 07 24.7 -1.2**
ULN pmax pmax
comp=Z,184nm,1.0s,mb5.9
ULN MLR MLR
comp=Z,24μm,21.0s
LSA Lhasa 64.21 307 P **P** **08 58 58.5 +1.0**
LSA AP pP 08 59 22.5 +5.0
LSA XS sS 09 08 04.8 +1.5
LSA AMB AMB
comp=Z,240nm,1.0s,mb6.0
LSA LR LR
comp=N,6μm,22.0s
LSA LR LR
comp=E,17μm,29.0s
LSA LR LR
comp=Z,16μm,30.0s
LSA Lhasa 64.21 307 *e*P **P** **08 58 58.3 +0.8**
comp=Z,208nm,0.9s,mb6.0
LSA *e*S **S** **09 07 41.2 +12**
LSA LR LR
comp=Z,11μm,20.0s
LSA Lhasa 64.21 307 *e*P **P** **08 58 58.3 +0.8**
LSA *e*S **S** **09 07 41.2 +12**
LSA pmax pmax
comp=Z,208nm,0.9s,mb6.0
LSA MLR MLR
comp=Z,11μm,20.0s
SONM Songino Array 64.29 331 P **P** **08 58 58.3 +0.6**
comp=Z,54nm,1.0s,mb5.3,baz=145,slow=5.7,SNR=113
SONM PKPPKP 09 27 42.1
comp=Z,3.1nm,1.0s,baz=336,slow=3.3,SNR=5.2
SONM PKP2ab 09 27 54.8
comp=Z,9.6nm,0.9s,baz=305,slow=2.0,SNR=7.7
SONM LR LR 09 28 26.9
comp=Z,29μm,20.2s,baz=143,slow=37
MEH Mehetia 64.31 107 *e*P **P** **08 58 59.8 +1.4**
comp=Z,7μm,1.1s
CIT Chita 64.32 338 *e*P **P** **08 58 59.2 +1.4**
CIT *e* 08 59 29.5
CLNS Chul'man 65.02 347 *e*P **P** **08 59 05.4 +3.1**
CLNS *e* 08 59 39.2
CLNS *e* 09 01 25.8
CLNS *e*PPP 09 02 59.1
CLNS *e*S S 09 07 43.1 +4.8
CLNS *e*SS SS 09 11 56.7 +4.8
CLNS pmax pmax
comp=Z,208nm,1.1s,mb5.9
CLNS pmax pmax
comp=N,123nm,1.2s
CLNS pmax pmax
comp=E,42nm,1.1s
CLNS pmax pmax
comp=E,34nm,1.1s
CLNS pmax pmax
comp=Z,48nm,1.1s,mb5.2
CLNS pmax pmax
comp=N,75nm,1.2s
CLNS smax
comp=N,10μm,13.1s
CLNS smax
comp=E,6μm,13.5s
CLNS MLR MLR
comp=N,4μm,23.0s
CLNS MLR MLR
comp=Z,10μm,18.0s
CLNS MLR MLR
comp=E,3μm,20.0s
SHBG Sahibganj 65.44 301 *ex* x 08 59 13.0
CASY Casey 65.46 195 *e*P **P** **08 59 04.9 -0.1**
comp=E,204nm,1.0s,mb5.9
CASY *e*pP pP 08 59 22.4 -2.7
CASY *e*S S 09 07 43.1 -0.4
CASY LR LR
comp=Z,81μm,20.0s
BWNR Bhubaneshwar 65.55 295 *ex* x 08 58 55.0
TAPN Taplejung 66.13 303 *e*P **P** **08 59 10.1 +0.1**
ODAN Odare 66.23 303 *e*P **P** **08 59 10.6 -0.1**
BOK Bokaro 66.51 299 *e*P **P** **08 59 12.1 -0.5**
BOK AMb AMB 08 59 58.4
comp=Z,387nm,1.5s,mb6.0
BOK *ex* x 09 07 50.9
RAMN Ramite 66.92 302 *e*P **P** **08 59 14.8 -0.3**
comp=Z,88nm,0.7s,mb5.7
VIS Vishakhapatnam 67.12 292 *i* P **P** **08 59 17.6 +1.1**
VIS AMb AMB 08 59 53.3
comp=Z,444nm,1.3s,mb6.1
VIS *i* x x 09 08 37.5
JIRN Jiri 67.50 303 *e*P **P** **08 59 18.7 -0.1**
comp=Z,58nm,0.6s,mb5.6
ZAK Zakamensk 67.52 331⇓ *i*P **P** **08 59 18.4 0.0**
ZAK pmax pmax
comp=Z,217nm,1.1s,mb5.9
GUN Gumba 67.85 303 *e*P **P** **08 59 20.9 0.0**
comp=Z,108nm,0.4s,mb6.0
PKI Pulchoki 68.13 303 *e*P **P** **08 59 22.1 -0.6**
TLY Talaya 68.22 333 P **P** **08 59 23.6 +0.8**
comp=Z,571nm,1.3s,mb6.2,SNR=14
TLY Talaya 68.22 333 P **P** **08 59 23.7 +1.0**
SNR=50
TLY Talaya 68.22 333 *e*P **P** **08 59 22.8 0.0**
comp=Z,132nm,1.1s,mb5.7
TLY *e*S S 09 08 09.7 -7.4
TLY LR LR
comp=Z,26μm,22.0s
TLY Talaya 68.22 333*c i*P **P** **08 59 23.2 +0.4**
TLY *e* 08 59 50.6
TLY *e* 09 02 01.5
TLY *e*S S 09 08 14.9 -2.3
TLY *e*PS 09 08 47.0
TLY *e* 09 09 12.6
TLY *e*SS SS 09 12 45.0 +3.3
TLY *e*SSS 09 15 45.1
TLY pmax pmax
comp=Z,139nm,1.1s,mb5.7
TLY MLR MLR
comp=Z,13μm,22.0s
KKN Kakani 68.31 303 *e*P **P** **08 59 22.7 -1.1**
IRK Irkutsk 68.32 333 *e*P **P** **08 59 23.3 -0.1**
IRK *e* 08 59 54.4
IRK pmax pmax
comp=Z,227nm,1.4s,mb5.8
DMN Daman 68.39 303 *e*P **P** **08 59 24.2 -0.2**
SEY Seymchan 68.67 3⇓ *e*P **P** **08 59 26.4 +1.1**
BOD Bodaibo 68.83 342 *e*P **P** **08 59 26.2 -0.2**
BOD pmax pmax
comp=Z,60nm,0.8s,mb5.5
GKN Gorkha 68.91 303 *e*P **P** **08 59 26.9 -0.7**
comp=Z,138nm,0.8s,mb5.8
YAK Yakutsk 68.97 351 *e*P **P** **08 59 27.9 +0.7**
YAK Yakutsk 68.97 351 *e*P **P** **08 59 27.7 +0.5**
YAK *e* pP 08 59 49.8 +2.4
YAK *e* 09 02 09.3
YAK *e*S S 09 08 32.5 +6.9
YAK *e**SS sS 09 09 00.2 +0.2
YAK *e*SS SS 09 12 56.5 +3.7
YAK pmax pmax
comp=E,16nm,1.4s
YAK pmax pmax
comp=N,54nm,1.3s
YAK pmax pmax
comp=Z,126nm,1.2s,mb5.6
YAK pmax pmax
comp=Z,2μm,6.1s
YAK smax
comp=N,2μm,5.5s
YAK smax
comp=E,786nm,3.2s
MDRS Chennai 68.99 286 *e*P **P** **08 59 29.4 +1.1**
NIKO Nikolski 69.37 27 *e*P **P** **08 59 25.4 -4.4**
comp=E,256nm,1.3s,mb5.9
MOY Mondy 69.45 331 *e*P **P** **08 59 31.0 +0.6**
MOY pmax pmax
comp=Z,27nm,3.4s
KOLN Koldanda 69.71 302 *e*P **P** **08 59 31.9 -0.6**
comp=Z,220nm,0.7s,mb6.1
DANN Dangsing 69.76 303 *e*P **P** **08 59 32.1 -0.7**
comp=Z,116nm,0.8s,mb5.8
PYUN Piuthan 70.32 302 *e*P **P** **08 59 35.4 -0.9**
comp=Z,87nm,0.5s,mb5.9
MIR Mirnyy 70.99 200⇑ *i*P **P** **08 59 41.0 +1.4**
MIR *i* pP 09 00 02.0 +2.1
MIR *i* S S 09 08 52.0 +2.8
MIR *i* PS 09 09 22.0
MIR pmax pmax
comp=Z,900nm,1.8s,mb6.3
MIR pmax pmax
comp=E,2μm,14.0s
UNV Unalaska Valle 71.00 27 *e*P **P** **08 59 39.6 -0.2**
comp=E,206nm,1.2s,mb5.8
KOD Kodaikanal 71.15 283 *e*P **P** **08 59 42.0 +0.4**
KOD AMb AMB 09 00 15.8
comp=Z,786nm,1.6s,mb6.3
TRD Trivandrum 71.36 281⇓ *e*P pP 08 59 58.0 -5.2
TRD AMb AMB 09 00 18.2
comp=Z,569nm,1.5s,mb6.2
TRD *e*S S 09 09 08.0 +13
HYB Hyderabad 71.49 290 *e*P **P** **08 59 42.0 -1.5**
comp=Z,50nm,1.0s,mb5.3
HYB *e*S SKSac 09 09 28.0 -13
HYB Hyderabad 71.49 290 *e*P **P** **08 59 42.0 -1.5**
HYB *e*S SKSac 09 09 28.0 -13
HYB pmax pmax

comp=Z,50nm,1.0s,mb5.3
HYB Hyderabad 71.49 290 *i* P P **08 59 42.0 -1.5**
comp=Z,50nm,1.0s,mb5.3
HYB *e*pP pP 09 00 01.0 -2.8
HYB *e*sP sP 09 00 06.0 -6.3
HYB *e*S S 09 08 58.0 +1.3
HYB *e*SP 09 09 22.0
HYB *e*SKS 09 09 39.5
HYB *e*sSKS 09 10 16.0
HYB *e*SS SS 09 13 48.0 +15
HYB *e*PKPPKP 09 27 35.0
HYB LR LR 09 34 00.0
comp=Z,17nm,24.0s
AKUT Akutan 71.52 27 *e*P P **08 59 40.7 -2.3**
comp=Z,329nm,1.4s,mb6.0
NGP Nagpur 71.87 294 *e*P P **08 59 54.9 +9.1**
NGP *ex* x 09 00 14.0
comp=Z,277nm,1.8s
NGP *e*S S 09 09 14.1 +13
VNDA Vanda 72.09 177 P P **08 59 46.6 +0.6**
comp=Z,69nm,0.7s,mb5.6,baz=330,slow=6.4,SNR=102
VNDA LR LR 09 32 37.6
comp=Z,32µm,19.1s,baz=346,slow=37
VNDA Vanda 72.09 177 *e*P P **08 59 46.5 +0.4**
comp=Z,529nm,1.3s,mb6.2
VNDA LR LR
comp=Z,31µm,19.0s
VNDA Vanda 72.09 177 P P **08 59 46.6 +0.5**
VNDA pmax pmax
comp=Z,69nm,0.7s
VNDA MLR MLR
comp=Z,32µm,19.2s
TAOE Nuku Hiva Isla 72.13 97 *e*P P **08 59 48.2 +0.7**
comp=Z,2µm,1.3s,mb6.8
TAOE *e*S S 09 09 08.1 +3.9
comp=Z,39µm,24.8s
TAOE *e*LQ 09 18 52.4
comp=Z,49µm,30.6s
TAOE *e*LR LR 09 22 01.4
comp=Z,47µm,21.5s
TAOE Nuku Hiva Isla 72.13 97 *e*P P **08 59 48.2 +0.7**
comp=Z,2µm,1.3s,mb6.9
TAOE *e*S S 09 09 08.1 +3.9
TAOE *e*LQ 09 18 52.4
WMQ Urumqi 72.71 319 P P **08 59 50.0 -0.3**
WMQ AP pP 09 00 10.0 -0.7
WMQ XP sP 09 00 20.0 +0.9
WMQ PP PP 09 02 34.0 +0.9
WMQ S S 09 09 07.0 -2.7
WMQ ScS ScS 09 09 47.0 -4.0
WMQ AMB AMB
comp=Z,68nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,2µm,7.0s
WMQ LR LR
comp=N,20µm,20.0s
WMQ LR LR
comp=E,23µm,20.0s
WMQ LR LR
comp=Z,22µm,20.0s
SBA Scott Base 72.74 176 *e*P P **08 59 51.5 +1.6**
comp=Z,417nm,1.3s,mb6.1
SBA LR LR
comp=Z,37µm,22.0s
HVS Khovu-Aksy 72.80 328⇓ *e*P P **08 59 50.0 -0.7**
HVS pmax pmax
comp=Z,511nm,1.2s,mb6.2
HVS MLR MLR
comp=Z,87µm,19.0s
LGTI Lohaghat 73.03 303 *e*P P **08 59 51.0 -1.5**
LGTI *ex* x 09 01 50.2
PTH Pithoragarh 73.08 303 *e*P P **08 59 52.0 -0.8**
PTH *ex* x 09 04 19.0
LATR Latur 73.55 291 *ex* x 09 00 06.0
AKL Akola 73.62 293 *e*P P **08 59 56.1 -0.1**
AKL AMb AMB 09 00 29.7
comp=Z,366nm,0.4s,mb6.5
BHPL Bhopal 73.83 296 *e*P P **08 59 55.1 -2.2**
BHPL AMb AMB 09 00 43.9
comp=Z,276nm,1.7s,mb5.7
BHPL *ex* x 09 09 36.8
MNGI Mangalore 74.16 285 *i* P P **08 59 58.7 -0.7**
MNGI AMb AMB 09 00 33.5
comp=Z,220nm,1.7s,mb5.6
MNGI *i* x x 09 03 19.2
SDPT Sand Point 74.69 28 *e*P P **09 00 00.5 -1.1**
comp=Z,225nm,0.8s,mb6.0
BILL Bilibino 74.91 7⇑ *e*P P **09 00 03.5 +0.9**
BILL *e* 09 02 53.8
BILL pmax pmax
comp=Z,95nm,1.4s,mb5.3
DDI Dehra Dun 75.10 303 *e*P P **09 00 02.7 -1.8**
DDI *ex* x 09 09 53.0
MNCY Minicoy 75.17 280 *e*P P **09 00 05.0 -0.3**
NDI New Delhi 75.36 301 *ex* P **09 00 03.0 -3.1**
NDI *ex* x 09 10 18.0
KAD Karad 75.55 289 *e*P P **09 00 05.8 -1.6**
KAD AMb AMB 09 00 48.8
comp=Z,438nm,1.5s,mb6.0
KAD *i* x x 09 03 04.2
GOA Goa 75.56 288⇑ *i* x P **09 00 02.9 -4.6**
GOA AMb AMB 09 00 50.8
comp=Z,477nm,0.3s,mb6.7
GOA *i* x x 09 10 11.6
KRAR Krasnoyarsk 75.91 332 *e*P P **09 00 07.5 -1.1**
KRAR MLR MLR
comp=Z,10µm,17.0s
GAMB Gambell 75.97 18 *e*P P **09 00 09.1 +0.4**
comp=Z,179nm,1.5s,mb5.6
SMLA Simla 76.05 304 *e*P P **09 00 07.1 -2.8**
SMLA *ex* x 09 00 44.6
comp=E,93nm,0.3s
SMLA *i* x x 09 00 45.5
SMLA *ex* x 09 00 47.5
comp=N,144nm,0.4s
SMLA AMb AMB 09 00 58.3
comp=Z,582nm,0.5s,mb6.6
POO Poona 76.09 291 *e*P P **09 00 08.8 -1.6**
POO *ex* x 09 10 16.7
SDNR Sundarnagar 76.31 304 *ex* x 08 59 56.6
SDNR *ex* x 09 01 09.0
RKT Rikitea 76.66 112 *e*PP PP 09 03 06.8 -0.1
comp=Z,4µm,32.5s
RKT *e*S S 09 09 58.8 +4.2
comp=Z,13µm,28.0s
RKT Rikitea 76.66 112 *e*LR LR 09 24 05.0
comp=Z,52µm,39.0s,baz=269
RKT Rikitea 76.66 112 *e*P P **09 00 14.1 +0.5**
comp=Z,667nm,1.0s,mb6.3
RKT *e*PP PP 09 03 06.8 -0.1
RKT *e*S S 09 09 58.8 +4.2
RKT Rikitea 76.66 112 *e*P P **09 00 14.1 +0.5**
RKT *e* 09 03 06.8
RKT *e*S S 09 09 58.8 +4.2
RKT pmax pmax
comp=Z,667nm,1.0s,mb6.3
AJM Ajmer 77.04 299 *e*P P **09 00 14.1 -1.6**
AJM *i* x x 09 00 56.0
AJM AMb AMB 09 00 57.9
comp=Z,473nm,1.2s,mb6.1
PAF Port-aux-Franc 77.07 221 *e*P P **09 00 15.8 +0.4**
comp=Z,1µm,1.5s,mb6.4
PAF Port-aux-Franc 77.07 221 *e*P P **09 00 15.8 +0.4**
PAF pmax pmax
comp=Z,1µm,1.5s,mb6.4
BOM Bombay 77.13 291 *ex* x 09 00 04.1
BOM *e*S S 09 09 59.5 -0.3
DLH Dalhousie 77.41 305 *e*P P **09 00 16.0 -1.6**
DLH *ex* x 09 00 48.0
MK31 Makanchi Array 77.41 320 *e*P P **09 00 16.6 -0.7**
MK31 Makanchi Array 77.41 320 *i* P P **09 00 16.7 -0.6**
MK31 pmax pmax
comp=Z,16nm,0.4s,mb5.1
MKAR Makanchi Array 77.41 320 P P **09 00 16.7 -0.6**
comp=Z,7.0nm,0.5s,mb4.7,baz=98,slow=8.2,SNR=52
MKAR PKKPbc PKKPbc 09 19 22.4 -1.6
comp=Z,2.3nm,0.8s,baz=290,slow=1.7,SNR=6.7
MKAR PKPPKP 09 27 23.1
comp=Z,2.2nm,0.8s,baz=311,slow=2.6,SNR=6.0
MKAR Makanchi Array 77.41 320 P P **09 00 16.7 -0.6**
MKAR PKKPbc PKKPbc 09 19 22.4 -1.6
MKAR P'P' 09 27 23.1
MKAR LR LR 09 34 52.5
THN Thein Dam 77.59 305 *e*P P **09 00 20.0 +1.4**
TIXI Tiksi 78.23 354⇓ *e*P P **09 00 20.4 -0.9**
TIXI Tiksi 78.23 354 *e*P P **09 00 19.7 -1.6**
TIXI *e* 09 00 26.7
TIXI *e*S S 09 10 09.3 -0.4
TIXI *e* 09 10 35.6
TIXI *e**SS sS 09 10 54.1 +9.3
TIXI *e*SS SS 09 15 15.1 +1.5
TIXI pmax pmax
comp=Z,112nm,2.0s,mb5.2
TIXI MLR MLR
comp=Z,6µm,16.0s
TIXI MLR MLR
comp=N,3µm,14.0s
TIXI MLR MLR
comp=E,3µm,16.0s
TNA Tin City 78.38 17 *e*P P **09 00 22.3 +0.1**
comp=E,45nm,0.9s,mb5.2
TNA *e*pP pP 09 00 41.9 -1.0
ZALV Zalesovo Beam 78.90 328 PKKPbc PKKPbc 09 19 18.3 -2.8
comp=E,3.9nm,0.5s,baz=296,slow=2.2,SNR=9.6
ZALV PKPPKP 09 27 15.2
comp=E,4.0nm,0.9s,baz=298,slow=3.2,SNR=5.2
ZALV LR LR 09 34 52.6
comp=E,14µm,21.6s,baz=115,slow=35
KSH Kashi 79.33 312 *e*P P **09 00 30.3 +2.3**
KSH *e*PCP PcP 09 00 38.5 +2.5
KSH *e*AP pP 09 00 50.3 +1.7
KSH XP sP 09 00 58.6 +1.6
KSH PP PP 09 03 31.6 +2.6
KSH S S 09 10 21.1 -1.5
KSH *e*SKS 09 10 33.6
KSH *e*SCS ScS 09 10 42.3 -2.3
KSH XS sS 09 10 56.3 -1.5
KSH AMB AMB
comp=Z,237nm,1.0s,mb6.0
KSH AMB AMB
comp=Z,2µm,4.2s
KSH LR LR
comp=N,37µm,20.7s
KSH LR LR
comp=E,73µm,20.2s
KSH LR LR
comp=Z,34µm,18.0s
KDAK Kodiak Island 79.69 28 P P **09 00 29.4 -0.2**
comp=Z,41nm,1.2s,mb5.2,baz=184,slow=3.2,SNR=6.3
KDAK Kodiak Island 79.69 28 P P **09 00 29.4 -0.2**
KDAK LR LR
comp=Z,9µm,21.0s
AAA Alma-Ata 79.74 316 *e*P P **09 00 27.6 -2.6**
AAA Alma-Ata 79.74 316 *i* P P **09 00 27.6 -2.6**
AAA *i* S S 09 10 21.2 -5.7
AAA pmax pmax
comp=Z,9µm,12.7s
AAA smax
comp=E,10µm,21.8s
AAA MLR MLR
comp=Z,14µm,22.0s
SVW2 Sparrevohn 80.03 25 *e*P P **09 00 31.6 +0.3**
NVS Novosibirsk 80.13 328 *e*P P **09 00 29.4 -2.6**
NVS *i* *PP pP 09 00 52.3 -0.3
NVS *e*S S 09 10 31.0 +0.6
NVS pmax pmax
comp=Z,175nm,1.5s,mb5.7
NVS pmax pmax
comp=N,56nm,1.4s
NVS pmax pmax
comp=E,143nm,1.6s
NVS smax
comp=N,143nm,1.9s
NVS smax
comp=E,497nm,3.2s
TKM2 Tokmak 2 80.58 315 *e*P P **09 00 34.1 -0.6**
comp=E,76nm,1.0s,mb5.5
TKM2 LR LR
comp=Z,10µm,21.0s
TKM2 Tokmak 2 80.58 315 *e*P P **09 00 34.1 -0.6**
TKM2 pmax pmax
comp=Z,76nm,1.0s,mb5.5
TKM2 MLR MLR
comp=Z,10µm,21.0s
TKM2 Tokmak 2 80.58 315 P P **09 00 34.4 -0.3**
SNR=16
KZA Kyzart 80.58 314 P P **09 00 35.5 +0.8**
SNR=16
BHJ Bhuj 80.83 295 *ex* P **09 00 32.8 -3.6**
BHJ AMb AMB 09 01 09.4
comp=Z,435nm,0.8s,mb6.3
KURK Kurchatov 81.12 323 P P **09 00 36.3 -1.1**
comp=Z,409nm,1.1s,mb6.2,SNR=23
KURK Kurchatov 81.12 323⇑P P **09 00 38.0 +0.7**
SNR=48
KURK Kurchatov 81.12 323 P P **09 00 36.5 -0.9**
comp=Z,14nm,1.0s,mb4.8,baz=111,slow=4.4,SNR=22
KURK PP PP 09 03 51.0 +7.5
comp=Z,21nm,1.1s,baz=101,slow=6.4,SNR=3.5
KURK Kurchatov 81.12 323 *e*P P **09 00 36.3 -1.0**
comp=Z,120nm,1.0s,mb5.7
KURK LR LR
comp=Z,12µm,20.0s
KURK Kurchatov 81.12 323 P P **09 00 36.5 -0.9**
KURK 09 03 51.0
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.8
KURK pmax pmax
comp=Z,21nm,1.1s,mb4.9
UCH Uchtor 81.15 314 *e*P P **09 00 38.1 +0.3**
comp=Z,161nm,1.4s,mb5.7
UCH LR LR
comp=Z,6µm,22.0s
UCH Uchtor 81.15 314 P P **09 00 45.6 +7.9**
SNR=6.1
FRU Bishkek 81.25 315α*e*P P **09 00 37.5 -0.8**
FRU pmax pmax
comp=Z,650nm,2.1s,mb6.1
AAK Ala-Archa 81.28 315 P P **09 00 38.6 +0.2**
comp=Z,252nm,0.9s,mb6.0,SNR=6.4
AAK Ala-Archa 81.28 315 P P **09 00 38.2 -0.2**
SNR=12
USP Ospenovka 81.45 315 P P **09 00 38.8 -0.6**
SNR=11
AML Almayashu 81.71 314 *e*P P **09 00 40.9 +0.2**
AML LR LR
comp=Z,7µm,20.0s
AML Almayashu 81.71 314 P P **09 00 50.0 +9.2**
SNR=6.3
EKS2 Erkin-Say 81.79 314 *e*P P **09 00 40.8 -0.3**
comp=Z,189nm,1.1s,mb5.8
EKS2 LR LR
comp=Z,10µm,21.0s
EKS2 Erkin-Say 81.79 314 P P **09 00 41.0 -0.1**
SNR=5.2
SLKM Skilak Lake 82.04 26 *e*P P **09 00 40.9 -1.1**
SLKM Skilak Lake 82.04 26 P P **09 00 41.5 -0.5**
SEW Seward 82.20 27 *e*P P **09 00 43.2 +0.3**
comp=Z,354nm,1.3s,mb6.0
PPLA Purkeypile 82.33 24 *e*P P **09 00 43.8 +0.4**
comp=Z,635nm,1.6s,mb6.2
MAW Mawson 82.46 203 P P **09 00 44.2 0.0**
comp=Z,60nm,0.9s,mb5.4,baz=78,slow=6.2,SNR=46
MAW LR LR 09 36 50.1
comp=Z,37µm,18.7s,baz=72,slow=35
MAW Mawson 82.46 203 *e*P P **09 00 43.9 -0.2**
comp=Z,65nm,1.0s,mb5.4
MAW *e*pP pP 09 01 02.9 -2.0
MAW *e*S S 09 10 53.6 -0.6
MAW LR LR
comp=Z,82µm,22.0s
MAW Mawson 82.46 203 *e*P P **09 00 43.9 -0.2**
MAW *e**PP pP 09 01 02.9 -2.0
MAW *e*S S 09 10 53.6 -0.6
MAW pmax pmax
comp=Z,65nm,1.0s
MAW MLR MLR
comp=Z,82µm,22.0s
RC01 Rabbit Creek A 82.51 26 *e*P P **09 00 44.2 -0.3**
comp=Z,329nm,1.2s,mb6.0
CHUM Lake Minchumin 82.76 23 *e*P P **09 00 45.6 0.0**
comp=Z,402nm,1.2s,mb6.1
PMR Palmer 83.00 26 *e*P P **09 00 47.1 +0.1**
comp=Z,117nm,1.3s,mb5.6
PMR LR LR
comp=Z,7µm,22.0s
PMR Palmer 83.00 26 *e*P P **09 00 47.1 +0.1**
PMR pmax pmax
comp=Z,117nm,1.3s,mb5.5
PMR MLR MLR
comp=Z,7µm,22.0s
KTH Kantishna Hill 83.14 23 *e*P P **09 00 47.2 -0.5**
comp=Z,199nm,1.2s,mb5.8
TRF Thorofare Moun 83.35 24 *e*P P **09 00 48.7 -0.1**
comp=Z,80nm,0.9s,mb5.5
BPAW Bear Paw Mtn. 83.38 23 *e*P P **09 00 48.5 -0.4**
comp=Z,130nm,1.1s,mb5.7
BPAW *e*pP pP 09 01 08.0 -1.7
KBL Kabul 83.50 306 *e*P P **09 00 48.2 -2.0**
comp=Z,56nm,0.8s,mb5.4
KBL *e*pP pP 09 01 09.5 -1.4
KBL Kabul 83.50 306 *e*P P **09 00 48.2 -2.0**
KBL *e**PP pP 09 01 09.5 -1.5
KBL pmax pmax
comp=Z,56nm,0.8s,mb5.5
MCK McKinley 84.02 24 *e*P P **09 00 51.2 -0.9**
comp=Z,508nm,1.3s,mb6.2
MCK McKinley 84.02 24 P P **09 00 51.2 -1.0**
MCK pmax pmax
comp=Z,510nm,1.2s,mb6.2
QSPA South Pole Qui 84.16 180 P P **09 00 52.2 -0.5**
comp=Z,195nm,0.6s,mb6.2,baz=350,slow=1.8,SNR=184
QSPA PKKPbc PKKPbc 09 19 09.9 +0.5
comp=Z,2.6nm,0.5s,baz=298,slow=2.3,SNR=4.9
QSPA South Pole Qui 84.16 180 P P **09 00 52.2 -0.5**
QSPA PKKPbc PKKPbc 09 19 09.9 +0.5
QSPA LR LR
comp=Z,57µm,20.0s
KK31 Karatay Array 84.23 314 *i* P P **09 00 52.7 -1.0**
KK31 Karatay Array 84.23 314 *i* P P **09 00 52.6 -1.1**
KK31 pmax pmax
comp=Z,314nm,1.4s,mb6.0
COLA College 84.94 23 *e*P P **09 00 55.5 -1.3**
comp=Z,149nm,0.9s,mb5.9
COLA LR LR
comp=Z,7µm,21.0s
COLA College 84.94 23 *e*P P **09 00 55.5 -1.3**
COLA pmax pmax
comp=Z,149nm,0.9s,mb5.9
COLA MLR MLR
comp=Z,7µm,21.0s
COLD Coldfoot 85.12 20 *e*P P **09 00 58.1 +0.4**
comp=Z,185nm,1.1s,mb5.9
MENT Mentasta 85.85 25 *e*P P **09 01 01.7 +0.3**
VOSK Vostochnaya 86.25 324 P P **09 01 06.3 +2.7**
VOSK pmax pmax
comp=Z,46nm,1.8s,mb5.1
BVA0 Borovoye Array 86.67 324 P P **09 01 03.9 -1.7**
BVA0 pmax pmax
comp=Z,21nm,1.4s,mb4.9
BVAR Borovoye Array 86.67 324 P P **09 01 03.9 -1.7**
comp=Z,13nm,0.6s,mb5.0,baz=104,slow=6.3,SNR=27
BVAR Borovoye Array 86.67 324 P P **09 01 03.9 -1.7**
BVAR pmax pmax
comp=Z,13nm,0.6s
BRVK Borovoye 86.74 324 P P **09 01 05.4 -0.6**
comp=Z,269nm,0.8s,mb6.2,SNR=5.5
BRVK Borovoye 86.74 324⇑P P **09 01 06.6 +0.6**
SNR=14
BRVK Borovoye 86.74 324 *e*P P **09 01 04.3 -1.7**
comp=Z,69nm,1.0s,mb5.5
BRVK LR LR
comp=Z,11µm,21.0s
BRVK Borovoye 86.74 324 *e*P P **09 01 04.3 -1.7**
BRVK pmax pmax
comp=Z,69nm,1.0s,mb5.5
BRVK MLR MLR
comp=Z,11µm,21.0s
PNL Peninsula 86.75 29 *e*P P **09 01 07.2 +1.4**
comp=Z,338nm,1.0s,mb6.2
EGAK Eagle 87.55 24 *e*P P **09 01 09.5 -0.1**
comp=Z,363nm,1.2s,mb6.3
EGAK *e*pP pP 09 01 29.3 -1.3
EGAK LR LR
comp=Z,6µm,20.0s
DAWY Dawson 88.06 25 *e*P P **09 01 12.1 0.0**
DAWY *e*pP pP 09 01 33.6 +0.6
SIT Sitka 88.12 32 PFAKE 09 01 20.0 +7.5
SIT LR LR
comp=Z,14µm,20.0s
SKAG Skagway 88.69 30 *e*P P **09 01 16.4 +1.3**
comp=Z,440nm,2.2s,mb6.1
WRAK Wrangell Islan 89.59 33 *e*P P **09 01 20.8 +1.4**
comp=Z,154nm,1.3s,mb6.0
WRAK *e*pP pP 09 01 41.0 +0.6
SYO Syowa Base 90.80 200⇓ *i* X P **09 01 21.4 -3.5**
MSEY Mahe Island 91.14 265 *e*P P **09 01 27.7 +0.1**
comp=Z,163nm,1.4s,mb6.0
MSEY *e*pP pP 09 01 48.0 -0.7
MSEY LR LR
comp=Z,18µm,22.0s
DLBC Dease Lake 91.18 31 P P **09 01 26.4 -0.4**
comp=Z,6.0nm,0.8s,mb4.8,baz=258,slow=4.0,SNR=11
INK Inuvik 91.44 21 *e*P P **09 01 26.6 -1.2**
comp=Z,4µm,1.1s
INK *e*pP pP 09 01 48.5 -0.3
HOQ Hoqain 92.10 293⇓P P **09 01 31.7 -0.1**
SNR=6.3
AB31 Akbulak array 92.50 319 P P **09 01 31.2 -1.9**
AB31 pmax pmax
comp=Z,113nm,1.2s,mb6.0
SVE Sverdlovsk 92.88 327 *e*P P **09 01 39.0 +4.3**
SVE *e*S SKSac 09 12 02.0 +0.5
SVE *e* 09 12 35.8
SVE pmax pmax
comp=Z,72nm,1.3s,mb5.8
SVE MLR MLR
comp=Z,13µm,22.0s
KCPM Cahto Peak 93.14 51 *e*P P **09 01 34.9 -1.4**
comp=Z,49nm,1.4s,mb5.6
KCPM *e*pP pP 09 01 55.8 -1.5
BANOM Banah 93.22 296⇑P P **09 01 37.5 +0.5**
SNR=9.6
KIPM Iron Peak 93.23 50 *e*P P **09 01 38.1 +1.4**
comp=Z,146nm,1.6s,mb6.1
KIPM *e*pP pP 09 01 57.6 -0.1
KIPM *e*sP sP 09 02 08.1 +2.0
HOPS Hopland 93.48 51 *e*P P **09 01 37.5 -0.4**
comp=Z,114nm,1.6s,mb6.0
HOPS LR LR
comp=Z,13µm,19.0s
MCCM Marconi Confer 93.56 52 PFAKE 09 01 50.0 +12
MCCM LR LR
comp=Z,7µm,20.0s
NLWA Neilton Lookou 93.58 43 *e*P P **09 01 38.7 +0.6**
comp=Z,107nm,1.5s,mb6.0
NLWA LR LR
comp=Z,9µm,20.0s
COR Corvallis 93.75 46 PFAKE 09 01 50.0 +11
COR LR LR
comp=Z,9µm,19.0s
NSHM Saint Helena R 93.81 52 *e*P P **09 01 39.3 -0.1**
AKTK Aktyubinsk 93.85 320 P P **09 01 38.5 -0.8**
AKTK PKKPbc PKKPbc 09 18 42.4 -2.2
AKTK LR LR 09 46 09.9
AKTO Aktyubinsk 93.85 320 P P **09 01 38.5 -0.8**
comp=Z,1.7nm,0.6s,baz=95,slow=6.8,SNR=6.9
AKTO PKKPbc PKKPbc 09 18 42.4 -2.2
comp=Z,4.2nm,0.9s,baz=257,slow=4.0,SNR=6.1
AKTO LR LR 09 46 09.9
comp=Z,12µm,21.0s,baz=105,slow=37
HUMO Hull Mountain 93.85 48 *e*P P **09 01 38.4 -1.1**
comp=Z,92nm,1.2s,mb6.0
HUMO LR LR
comp=Z,13µm,21.0s
PGC Sidney 93.95 42 *e*P P **09 01 39.7 -0.1**
comp=Z,80nm,1.1s,mb6.0
YBH Yreka Blue Hor 93.97 49 *e*P P **09 01 40.0 0.0**
comp=Z,128nm,1.4s,mb6.1
YBH LR LR
comp=Z,11µm,20.0s
YBH Yreka Blue Hor 93.97 49 *e*P P **09 01 40.0 0.0**
YBH pmax pmax
comp=Z,128nm,1.4s
YBH MLR MLR
comp=Z,11µm,20.0s
ARU Arti 93.98 326 *e*P P **09 01 37.4 -2.4**
comp=Z,40nm,0.9s,mb5.7
ARU LR LR
comp=Z,15µm,21.0s
ARU Arti 93.98 326*d* *i*P P **09 01 37.5 -2.3**
ARU *PP pP 09 02 04.1 +3.3
ARU 09 05 23.4
ARU S SKSac 09 12 02.3 -5.3
ARU SP SP 09 14 01.3 +3.3
ARU PS PS 09 14 11.6 +3.5
ARU pmax pmax

	comp=Z,37nm,2.5s,mb5.3									
ARU					MLR	MLR				
	comp=Z,13µm,21.0s									
WDC	**Whiskeytown Da**	**94.01**	**50**	*e*P		**P**		**09 01 40.0**	**-0.3**	
	comp=Z,190nm,1.5s,mb6.2									
WDC					LR	LR				
	comp=Z,9µm,21.0s									
WDC	**Whiskeytown Da**	**94.01**	**50**	*e*P		**P**		**09 01 40.0**	**-0.3**	
WDC					pmax	pmax				
	comp=Z,190nm,1.5s,mb6.2									
WDC					MLR	MLR				
	comp=Z,9µm,21.0s									
SAO	**San Andreas Ge**	**94.60**	**54**	PFAKE				09 01 50.0	+6.9	
SAO					LR	LR				
	comp=Z,8µm,19.0s									
OHCM	**Honcut**	**94.74**	**51**	*e*P		**P**		**09 01 43.0**	**-0.7**	
JCW	**Jim Creek**	**94.94**	**42**	*e*P		**P**		**09 01 44.5**	**+0.2**	
LON	**Longmire**	**94.94**	**44**	*e*P		**P**		**09 01 43.1**	**-1.3**	
	comp=Z,34nm,1.5s,mb5.5									
LON	**Longmire**	**94.94**	**44**	*e*P		**P**		**09 01 43.1**	**-1.3**	
LON					pmax	pmax				
	comp=Z,34nm,1.5s,mb5.6									
SOKR	**Solikamsk**	**95.12**	**329**	*e*P		**P**		**09 01 42.4**	**-2.5**	
SOKR								09 14 14.0		
SOKR					pmax	pmax				
	comp=Z,20nm,1.3s,mb5.4									
SOKR					MLR	MLR				
	comp=Z,21µm,20.0s									
RPW	**Rockport**	**95.23**	**42**	*e*P		**P**		**09 01 45.8**	**+0.2**	
	comp=Z,12nm,0.9s,mb5.3									
CMB	**Columbia Colle**	**95.52**	**52**	*e*P		**P**		**09 01 46.6**	**-0.6**	
	comp=Z,27nm,1.5s,mb5.5									
CMB					LR	LR				
	comp=Z,8µm,20.0s									
CMB	**Columbia Colle**	**95.52**	**52**	*e*P		**P**		**09 01 46.7**	**-0.5**	
CMB					pmax	pmax				
	comp=Z,27nm,1.5s,mb5.5									
CMB					MLR	MLR				
	comp=Z,8µm,20.0s									
PTRM	**Twissleman Ran**	**95.53**	**55**	*e*Pdif		**P**		**09 01 48.4**	**+1.0**	
MOD	**Modoc**	**95.77**	**49**	*e*P		**P**		**09 01 48.1**	**-0.2**	
	comp=Z,80nm,1.4s,mb6.0									
MOD					LR	LR				
	comp=Z,13µm,20.0s									
SNCC	**San Nicolas Is**	**95.97**	**57**	PFAKE				09 02 00.0	+11	
SNCC					LR	LR				
	comp=Z,14µm,20.0s									
ETW	**Entiat**	**95.98**	**43**	*e*P		**P**		**09 01 49.1**	**0.0**	
	comp=Z,152nm,1.4s,mb6.2									
PAHR	**Pah Rah Range**	**96.38**	**51**	*e*P		**P**		**09 01 51.0**	**-0.1**	
	comp=Z,100nm,1.5s,mb6.0									
RSW	**Rattlesnake Hi**	**96.45**	**44**	*e*P		**P**		**09 01 51.6**	**+0.4**	
	comp=Z,46nm,1.0s,mb5.9									
RSW				*e*pP		pP		09 02 10.6	-1.7	
HAWA	**Hanford**	**96.49**	**44**	*e*P		**P**		**09 01 51.1**	**-0.4**	
	comp=Z,31nm,1.0s,mb5.7									
HAWA					LR	LR				
	comp=Z,8µm,20.0s									
ISA	**Isabella**	**96.95**	**55**	*e*P		**P**		**09 01 53.4**	**-0.4**	
	comp=Z,53nm,1.4s,mb5.8									
ISA					LR	LR				
	comp=Z,12µm,19.0s									
ISA	**Isabella**	**96.95**	**55**	*e*P		**P**		**09 01 53.4**	**-0.4**	
ISA					pmax	pmax				
	comp=Z,53nm,1.4s,mb5.8									
ISA					MLR	MLR				
	comp=Z,12µm,19.0s									
WVOR	**Wild Horse Val**	**97.03**	**48**	*e*P		**P**		**09 01 54.0**	**0.0**	
	comp=Z,45nm,1.4s,mb5.7									
WVOR	**Wild Horse Val**	**97.03**	**48**	*e*P		**P**		**09 01 54.0**	**0.0**	
WVOR					pmax	pmax				
	comp=Z,45nm,1.4s,mb5.7									
OD2	**Odessa Site #2**	**97.08**	**43**	*e*P		**P**		**09 01 53.9**	**-0.1**	
	comp=Z,105nm,1.2s,mb6.1									
NVAR	**Mina Array Bea**	**97.17**	**52**	P		**P**		**09 01 54.9**	**+0.1**	
	comp=Z,4.0nm,0.9s,mb4.8,baz=262,slow=6.2,SNR=15									
NVAR					PP	PP		09 05 55.5	+3.5	
	comp=Z,5.3nm,1.0s,baz=251,slow=7.3,SNR=3.5									
NVAR					PKiKP	PKiKP		09 06 30.1	0.0	
	comp=Z,7.0nm,0.9s,baz=267,slow=7.4,SNR=3.6									
NVAR	**Mina Array Bea**	**97.17**	**52**	P		**P**		**09 01 54.9**	**+0.1**	
NVAR					PP	PP		09 05 55.5	+3.5	
MWC	**Mount Wilson**	**97.23**	**56**	*e*P		**P**		**09 01 55.3**	**+0.2**	
	comp=Z,73nm,1.2s,mb6.0									
MWC					LR	LR				
	comp=Z,12µm,21.0s									
LNOR	**Lincton Mounta**	**97.35**	**45**	*e*P		**P**		**09 01 54.9**	**-0.5**	
	comp=Z,24nm,1.5s,mb5.4									
LNOR	**Lincton Mounta**	**97.35**	**45**	*e*P		**P**		**09 01 54.9**	**-0.4**	
LNOR					pmax	pmax				
	comp=Z,24nm,1.5s,mb5.4									
DAC	**Darwin (Calif)**	**97.68**	**54**	PFAKE				09 02 10.0	+13	
DAC					LR	LR				
	comp=Z,10µm,21.0s									
NVL	**N'lazarevskaya**	**98.01**	**194**	*c i*P		**P**		**09 01 52.6**	**-5.2**	
NVL				*e*				09 05 57.4		
NVL					S	SKSac		09 12 28.4	0.0	
NVL				*e*				09 14 45.1		
NVL					SS	SS		09 20 05.5	+5.1	
NVL					pmax	pmax				
	comp=Z,44nm,1.7s,mb5.7									
NVL					MLR	MLR				
	comp=N,19µm,20.0s									
NVL					MLR	MLR				
	comp=E,39µm,20.0s									
NVL					MLR	MLR				
	comp=Z,62µm,20.0s									
TPH	**Tonopah**	**98.02**	**52**	PFAKE				09 02 10.0	+11	
TPH					LR	LR				
	comp=Z,8µm,21.0s									
MAIT	**Maitri**	**98.03**	**194**	*e*P		**P**		**09 01 56.9**	**-1.0**	
BMO	**Blue Mountains**	**98.03**	**46**	*e*P		**P**		**09 01 58.2**	**-0.2**	
	comp=Z,92nm,0.8s,mb6.4									
BMO					LR	LR				
	comp=Z,6µm,21.0s									
BMN	**Battle Mountai**	**98.06**	**50**	PFAKE				09 02 10.0	+11	
BMN					LR	LR				
	comp=Z,10µm,20.0s									
NEW	**Newport**	**98.15**	**42**	*e*P		**P**		**09 01 58.8**	**-0.1**	
	comp=Z,35nm,1.0s,mb5.8									
NEW					LR	LR				
	comp=Z,8µm,20.0s									
NEW	**Newport**	**98.15**	**42**	*e*P		**P**		**09 01 58.8**	**-0.1**	
NEW					pmax	pmax				
	comp=Z,35nm,1.0s									
NEW					MLR	MLR				
	comp=Z,8µm,20.0s									
GSC	**Goldstone**	**98.30**	**55**	*e*P		**P**		**09 02 00.1**	**+0.3**	
	comp=Z,28nm,1.6s,mb5.5									
GSC					LR	LR				
	comp=Z,12µm,21.0s									
GSC	**Goldstone**	**98.30**	**55**	*e*P		**P**		**09 02 00.2**	**+0.3**	
GSC					pmax	pmax				
	comp=Z,28nm,1.6s,mb5.5									
GSC					MLR	MLR				
	comp=Z,12µm,21.0s									
PFO	**Pinyon Flat Ob**	**98.55**	**57**	*e*P		**P**		**09 02 01.1**	**+0.1**	
	comp=Z,45nm,1.5s,mb5.8									
PFO					LR	LR				
	comp=Z,14µm,20.0s									
PFO	**Pinyon Flat Ob**	**98.55**	**57**	*e*P		**P**		**09 02 01.1**	**+0.1**	
PFO					pmax	pmax				
	comp=Z,45nm,1.5s,mb5.8									
PFO					MLR	MLR				
	comp=Z,14µm,20.0s									
TPNV	**Topopah Spring**	**98.77**	**54**	PFAKE				09 02 10.0	+8.0	
TPNV					LR	LR				
	comp=Z,11µm,22.0s									
YKA	**Yellowknife Ar**	**98.96**	**28**	P		**P**		**09 02 02.7**	**+0.6**	
	comp=Z,4.7nm,0.9s,mb5.0,baz=274,slow=4.9,SNR=8.6									
YKA					PP	PP		09 06 05.9	+1.1	
	comp=Z,4.5nm,0.9s,baz=274,slow=6.4,SNR=3.4									
YKA					PKiKP	PKiKP		09 06 33.3	+0.8	
	comp=Z,2.5nm,0.7s,baz=271,slow=1.4,SNR=5.9									
YKA					PKKPbc	PKKPbc		09 18 27.7	-3.4	
	comp=Z,3.9nm,0.8s,baz=88,slow=3.0,SNR=7.6									
YKA	**Yellowknife Ar**	**98.96**	**28**	P		**P**		**09 02 02.7**	**+0.6**	
YKA					PP	PP		09 06 05.9	+1.1	
YKA	**Yellowknife Ar**	**98.96**	**28**	P		**P**		**09 02 02.7**	**+0.5**	
YKA								09 06 05.9		
YKA					pmax	pmax				
	comp=Z,5.0nm,0.9s									
YKA					pmax	pmax				
	comp=Z,5.0nm,0.9s									
RPN	**Rapa Nui**	**99.35**	**119**	PFAKE				09 02 20.0	+15	
RPN					LR	LR				
	comp=Z,9µm,21.0s									
ELK	**Elko**	**99.57**	**50**	*e*Pdif		Pdif		09 02 04.4	-0.7	
	comp=Z,27nm,1.2s									
ELK					LR	LR				
	comp=Z,9µm,19.0s									
ELK	**Elko**	**99.57**	**50**	*e*P		Pdif		09 02 04.4	-0.7	
ELK					pmax	pmax				
	comp=Z,27nm,1.2s									
ELK					MLR	MLR				
	comp=Z,9µm,19.0s									
GLA	**Glamis**	**99.90**	**58**	PFAKE				09 02 20.0	+13	
GLA					LR	LR				
	comp=Z,12µm,20.0s									
HLID	**Hailey**	**100.13**	**47**	*e*Pdif		Pdif		09 02 06.9	-0.7	
	comp=Z,214nm,0.2s									
HLID					LR	LR				
	comp=Z,11µm,22.0s									
SNAA	**Sanae**	**100.20**	**189**	*e*Pdiff		Pdif		09 02 02.6	-5.3	
SNAA				*e*				09 02 21.1		
SNAA				*e*				09 02 24.4		
SNAA				*e*				09 06 35.0		
SNAA				*e*				09 06 56.1		
SNAA				*e*				09 18 28.9		
SNAA	**Sanae**	**100.20**	**189**	*e*Pdif		Pdif		09 02 02.4	-5.5	
	comp=Z,53nm,1.1s									
SNAA	**Sanae**	**100.20**	**189**	*e*P		Pdif		09 02 02.4	-5.5	
SNAA					pmax	pmax				
	comp=Z,53nm,1.1s									
EDM	**Edmonton**	**100.35**	**37**	*e*Pdif		Pdif		09 02 09.0	+0.4	
CHMT	**Chamberlain Mo**	**100.81**	**43**	*e*Pdif		Pdif		09 02 10.7	0.0	
	comp=Z,26nm,1.5s									
MAK	**Makhachkala**	**100.95**	**313**	*e*P		Pdif		09 02 10.0	-1.3	
MAK				*i*				09 06 17.0		
MAK				*i*	S	SKSac		09 12 39.7	-4.2	
MAK				*e*	SP	SP		09 15 20.9	+6.6	
MAK				*e*	SSS			09 24 36.0		
MAK					pmax	pmax				
	comp=Z,326nm,1.5s									
MAK					MLR	MLR				
	comp=Z,8µm,21.0s									
ARUT	**Antelope Range**	**101.01**	**53**	*e*Pdif		Pdif		09 02 12.6	+1.1	
	comp=Z,17nm,1.6s									
ARUT	**Antelope Range**	**101.01**	**53**	*e*P		Pdif		09 02 12.6	+1.1	
ARUT					pmax	pmax				
	comp=Z,17nm,1.6s									
MCMT	**McKenzie Canyo**	**101.20**	**46**	*e*Pdif		Pdif		09 02 12.8	+0.4	
	comp=Z,7.5nm,1.2s									
HVU	**Hansel Valley**	**101.40**	**49**	*e*Pdif		Pdif		09 02 14.1	+0.9	
	comp=Z,79nm,1.5s									
HVU	**Hansel Valley**	**101.40**	**49**	*e*P		Pdif		09 02 14.1	+0.9	
HVU					pmax	pmax				
	comp=Z,79nm,1.5s									
DUG	**Dugway**	**101.43**	**50**	*e*Pdif		Pdif		09 02 13.2	-0.1	
	comp=Z,20nm,1.2s									
DUG					LR	LR				
	comp=Z,7µm,19.0s									
DUG	**Dugway**	**101.43**	**50**	*e*P		Pdif		09 02 13.3	-0.1	
DUG					pmax	pmax				
	comp=Z,20nm,1.2s									
DUG					MLR	MLR				
	comp=Z,7µm,19.0s									
VNA2	**Neumayer--Watz**	**101.55**	**188**	*e*Pdiff		Pdif		09 02 13.5	-0.4	
	baz=134,slow=3.7									
VNA2				*e*				09 02 31.6		
VNA2				*e*				09 02 35.9		
VNA2				*e*				09 02 44.5		
VNA2				*e*				09 06 40.1		
VNA2				*e*				09 07 00.8		
VNA2				*e*				09 18 26.4		
VNA3	**Neumayer Olymp**	**101.57**	**187**	*e*Pdiff		Pdif		09 02 13.0	-1.0	
VNA3				*e*				09 02 31.4		
VNA3				*e*				09 02 35.4		
VNA3				*e*				09 02 43.9		
VNA3				*e*				09 06 39.8		
VNA3				*e*				09 07 01.2		
VNA3				*e*				09 18 26.3		
HRY	**Holter Researc**	**101.80**	**44**	*e*Pdif		Pdif		09 02 15.0	0.0	
	comp=Z,6.8nm,1.0s									
VNA1	**Neumayer--Stat**	**101.92**	**188**	*e*Pdiff		Pdif		09 02 15.1	-0.5	
VNA1				*e*				09 02 33.2		
VNA1				*e*				09 02 37.6		
VNA1				*e*				09 06 42.1		
VNA1				*e*				09 18 27.3		
MVU	**Marysvale**	**101.96**	**52**	PFAKE				09 02 30.0	+14	
MVU					LR	LR				
	comp=Z,7µm,20.0s									
MSU	**Marysvale**	**101.98**	**52**	*e*Pdif		Pdif		09 02 16.2	+0.4	
	comp=Z,10nm,1.6s									
MSU	**Marysvale**	**101.98**	**52**	*e*P		Pdif		09 02 16.2	+0.4	
MSU					pmax	pmax				
	comp=Z,10.0nm,1.6s									
BOZ	**Bozeman (W)**	**102.01**	**45**	*e*Pdif		Pdif		09 02 16.4	+0.4	
	comp=Z,18nm,1.3s									
BOZ					LR	LR				
	comp=Z,7µm,20.0s									
BOZ	**Bozeman (W)**	**102.01**	**45**	*e*P		Pdif		09 02 16.4	+0.4	
BOZ					pmax	pmax				
	comp=Z,18nm,1.3s									
BOZ					MLR	MLR				
	comp=Z,7µm,20.0s									
QLMT	**Earthquake Lak**	**102.21**	**46**	*e*Pdif		Pdif		09 02 18.5	+1.6	
	comp=Z,9.6nm,1.1s									
HWUT	**Hardware Ranch**	**102.31**	**49**	*e*Pdif		Pdif		09 02 17.0	-0.3	
	comp=Z,8.2nm,0.9s									
HWUT					LR	LR				
	comp=Z,5µm,20.0s									
MPU	**Maple Canyon**	**102.34**	**50**	PFAKE				09 02 30.0	+13	
MPU					LR	LR				
	comp=Z,8µm,20.0s									
RRI2	**Red Ridge**	**102.39**	**47**	*e*Pdif		Pdif		09 02 18.0	+0.3	
	comp=Z,25nm,1.1s									
JLU	**Jordanelle**	**102.45**	**50**	*e*Pdif		Pdif		09 02 18.8	+0.9	
	comp=Z,49nm,1.5s									
YMR	**Madison River**	**102.55**	**46**	*e*Pdif		Pdif		09 02 18.5	+0.1	
	comp=Z,5.5nm,0.8s									
YMR					LR	LR				
	comp=Z,9µm,19.0s									
AHID	**Auburn Hatcher**	**102.58**	**48**	PFAKE				09 02 30.0	+11	
AHID					LR	LR				
	comp=Z,10µm,21.0s									
DGRG	**David-gareji**	**102.61**	**311**	P		PP		09 06 51.0	+18	
IMW	**Indian Meadow**	**102.63**	**46**	*e*Pdif		Pdif		09 02 19.1	+0.4	
	comp=Z,18nm,1.3s									
WUAZ	**Wupatki**	**102.73**	**55**	*e*Pdif		Pdif		09 02 19.6	+0.4	
	comp=Z,26nm,1.6s									
LKWY	**Lake**	**102.96**	**46**	PFAKE				09 02 30.0	+10	
LKWY					LR	LR				
	comp=Z,12µm,20.0s									
MTA	**Mtatsminda**	**103.03**	**311**	P		PP		09 06 49.4	+13	
EGMT	**Eagleton**	**103.09**	**42**	*e*Pdif		Pdif		09 02 21.1	+0.3	
	comp=Z,8.2nm,1.0s									
EGMT					LR	LR				
	comp=Z,5µm,20.0s									
GNI	**Garni**	**103.17**	**310**	*e*P		Pdif		09 02 25.3	+4.2	
GNI	**Garni**	**103.17**	**310**	*e*P		Pdif		09 02 20.8	-0.3	
GNI					LR	LR				
	comp=Z,4µm,21.0s									
SRU	**San Rafael**	**103.25**	**51**	*e*Pdif		Pdif		09 02 21.2	-0.3	
	comp=Z,20nm,1.3s									
SRU	**San Rafael**	**103.25**	**51**	*e*P		Pdif		09 02 21.2	-0.2	
SRU					pmax	pmax				
	comp=Z,20nm,1.3s									
TUC	**Tucson**	**103.32**	**58**	PFAKE				09 02 30.0	+8.2	
TUC					LR	LR				
	comp=Z,8µm,21.0s									
GCMT	**Greycliff**	**103.37**	**44**	*e*Pdif		Pdif		09 02 22.5	+0.5	
	comp=Z,7.4nm,1.3s									
KLMR	**Klimovskoe**	**103.58**	**331**	*e*P		Pdif		09 02 20.0	-2.9	
KLMR				*e*				09 06 40.5		
KLMR					pmax	pmax				
	comp=Z,22nm,1.2s									
KBS	**Kingsbay**	**103.59**	**352**	*e*		Pdif		09 02 32.5	+10	
KBS				*e*PP		PP		09 06 39.1	-0.2	
KBS					AMS	AMS		09 47 31.8		
	comp=Z,5µm,18.4s									
LVZ	**Lovozero**	**103.70**	**339**	PFAKE				09 02 30.0	+6.5	
LVZ					LR	LR				
	comp=Z,7µm,20.0s									
RLMT	**Red Lodge**	**103.71**	**45**	PFAKE				09 02 30.0	+6.5	
RLMT					LR	LR				
	comp=Z,6µm,20.0s									
BW06	**Boulder Array**	**103.72**	**48**	PFAKE				09 02 40.0	+16	
BW06					LR	LR				
	comp=Z,10µm,20.0s									
PDAR	**Pinedale Array**	**103.72**	**48**	Pdiff		Pdif		09 02 23.3	-0.3	
	comp=Z,2.2nm,0.9s,baz=206,slow=0.4,SNR=15									
PDAR					PP	PP		09 06 47.4	+6.1	
	comp=Z,5.2nm,1.0s,baz=291,slow=4.1,SNR=6.6									
PDAR					PKKPbc	PKKPbc		09 18 15.0	-1.7	
	comp=Z,2.2nm,0.7s,baz=110,slow=5.2,SNR=6.6									
PDAR					PKPPKP			09 26 41.5		
	comp=Z,2.6nm,1.0s,baz=95,slow=3.4,SNR=8.5									
ONI	**Oni**	**103.96**	**312**	P		PP		09 06 57.0	+14	
APA	**Apatity**	**104.26**	**339**	*e*P		Pdif		09 02 24.0	-2.0	
APA				*i*				09 06 49.0		
APA				*i*	PS	PS		09 16 03.0	+5.0	
APA					pmax	pmax				
	comp=Z,2µm,22.0s									
VANB	**Van**	**104.31**	**308**	*e*P		Pdif		09 02 32.6	+6.4	
KIV	**Kislovodsk**	**104.38**	**314**	*e*P		Pdif		09 02 25.6	-0.9	
KIV					LR	LR				
	comp=Z,6µm,22.0s									
KIV	**Kislovodsk**	**104.38**	**314**	*e*P		Pdif		09 02 25.8	-0.7	
KIV				*e*				09 06 45.6		
KIV				*e*				09 12 55.4		
KIV				*e*PS		PS		09 15 57.4	-2.9	
KIV				*e*SS		SS		09 21 27.7	-3.2	
KIV				*e*SSS				09 25 20.4		
KIV					pmax	pmax				
	comp=Z,9.0nm,0.9s									
KIV					MLR	MLR				
	comp=Z,5µm,21.0s									
PV10	**Paradox Valley**	**104.45**	**52**	*e*Pdif		Pdif		09 02 27.1	+0.3	
	comp=Z,140nm,0.8s									
AGRB	**Hanur-Agry**	**104.55**	**309**	*e*P		Pdif		09 02 35.0	+7.8	
PV01	**Paradox Valley**	**104.84**	**52**	*e*Pdif		Pdif		09 02 29.9	+1.3	
	comp=Z,2µm,1.3s									
MVCO	**Mesa Verde**	**104.96**	**53**	*e*Pdif		Pdif		09 02 33.5	+4.4	
	comp=Z,9.2nm,1.4s									
MVCO					LR	LR				
	comp=Z,8µm,19.0s									
DAGI	**Agillar**	**105.24**	**311**	*i* P		PP		09 07 08.7	+16	
HOMI	**Horasan**	**105.34**	**310**	*i* P		PP		09 06 59.9	+6.5	
KEV	**Kevo**	**105.54**	**342**	PFAKE				09 07 00.0	+16	
KEV					LR	LR				
	comp=Z,10µm,20.0s									
RWWY	**Rawlins**	**105.56**	**48**	*e*Pdif		Pdif		09 02 35.1	+3.4	
	comp=Z,15nm,1.3s									
LAO	**LASA Array**	**105.64**	**43**	*e*Pdif		Pdif		09 02 31.4	-0.7	
	comp=Z,54nm,1.6s									
LAO					LR	LR				
	comp=Z,7µm,19.0s									
MOS	**Moscow**	**105.69**	**326**	*e*		PP		09 06 54.3	-1.1	
MOS					MLR	MLR				
	comp=Z,18µm,24.0s									
PMSA	**Palmer Station**	**105.91**	**167**	PFAKE				09 07 00.0	+15	
PMSA					LR	LR				
	comp=Z,13µm,19.0s									
SMCO	**Snowmass**	**105.99**	**51**	*e*Pdif		Pdif		09 02 34.5	+0.9	
	comp=Z,30nm,1.4s									
BNGL	**BINGOL**	**106.03**	**309**	*e*P		PP		09 07 12.0	+13	
ARCES	**ARCESS Array B**	**106.11**	**342**	Pdiff		Pdif		09 02 32.2	-2.0	
	comp=Z,11nm,1.0s,baz=65,slow=6.8,SNR=7.1									
ARCES					PKiKP	PKiKP		09 06 45.4	+0.1	
	comp=Z,11nm,1.1s,baz=97,slow=1.7,SNR=14									
ARCES					PKKPbc	PKKPbc		09 18 07.8	-2.5	
	comp=Z,3.8nm,0.6s,baz=263,slow=2.2,SNR=12									
ARCES	**ARCESS Array B**	**106.11**	**342**	P		Pdif		09 02 32.2	-2.0	
ARCES					pmax	pmax				
	comp=Z,11nm,1.0s									
ARCES					pmax	pmax				
	comp=Z,11nm,1.1s									
ARCES					pmax	pmax				
	comp=Z,4.0nm,0.6s									
KOPT	**Kop Dagi**	**106.42**	**310**	*i* P		PP		09 07 06.5	+5.1	
OBN	**Obninsk**	**106.43**	**326**	PFAKE				09 07 00.0	+14	
OBN					LR	LR				
	comp=Z,11µm,22.0s									
OBN	**Obninsk**	**106.43**	**326**	*e*P		Pdif		09 02 33.9	-1.7	
OBN				*e*				09 07 04.1		
OBN				*e*S		SKSac		09 13 14.5	+5.8	
OBN					pmax	pmax				
	comp=Z,4.0nm,0.5s									
OBN					MLR	MLR				
	comp=Z,10µm,20.0s									
MARD	**Mardin**	**106.47**	**307**	*i* P		PKiKP		09 07 03.2	+16	
DGMT	**Dagmar**	**106.70**	**41**	PFAKE				09 07 00.0	+13	
DGMT					LR	LR				
	comp=Z,7µm,21.0s									
FFC	**Flin Flon**	**106.74**	**34**	PFAKE				09 07 00.0	+13	
FFC					LR	LR				
	comp=Z,6µm,20.0s									
ANMO	**Albuquerque**	**106.78**	**55**	*e*PKPdf		PKiKP		09 06 47.4	-0.2	
ANMO					LR	LR				
	comp=Z,8µm,22.0s									
DIYA	**Diyarbakir**	**106.94**	**308**	*i* P		PP		09 07 12.0	+6.7	
ISCO	**Idaho Springs**	**106.97**	**50**	*e*PKPdf		PKiKP		09 06 47.6	-0.1	
ISCO					LR	LR				
	comp=Z,10µm,21.0s									
SDCO	**Great Sand Dun**	**107.29**	**52**	PFAKE				09 07 00.0	+12	
SDCO					LR	LR				
	comp=Z,9µm,21.0s									
PTK	**Pertek**	**107.40**	**309**	*e*P		Pdif		09 02 39.8	-0.1	
RSSD	**Black Hills**	**107.55**	**46**	*e*PKPdf		PKiKP		09 06 49.4	+0.7	
RSSD					LR	LR				
	comp=Z,8µm,22.0s									
ELZG	**Elazig**	**107.76**	**308**	*i* P		PP		09 07 12.0	+0.7	
ANN	**Anapa**	**108.00**	**315**	*e*P		Pdif		09 02 39.5	-3.1	
ANN				*i*				09 07 14.3		
ANN				*e*				09 13 12.2		
ANN				*e*				09 13 53.5		
AN

comp=Z,4.7nm,1.0s,baz=209,slow=5.2,SNR=6.8
BRTR PKPPKP 09 26 23.1
comp=Z,1.3nm,1.0s,baz=2.9,slow=2.5,SNR=3.9
BRTR Keskin Array B 111.68 310 *i* PKiKP PKiKP 09 06 59.6 +3.0
BRTR 09 07 40.1
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,1.0s
ELDT Eldivan 111.70 311 *i* P PP 09 07 28.4 -11
AKASG Malin Array Be 111.93 323 PKiKP PKiKP 09 06 55.9 -0.9
comp=Z,1.3nm,0.4s,baz=54,slow=2.9,SNR=4.4
AKASG PP PP 09 07 40.4 -0.4
comp=Z,28nm,1.2s,baz=58,slow=3.7,SNR=5.0
AKASG PKKPbc PKKPbc 09 17 50.2 -0.9
comp=Z,3.6nm,0.6s,baz=260,slow=4.1,SNR=10
AKASG Malin Array Be 111.93 323 *i* PKiKP PKiKP 09 06 55.9 -0.9
AKASG 09 07 40.4
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG pmax pmax
comp=Z,28nm,1.2s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
KIEV Kiev 111.94 323 PFAKE 09 07 10.0 +13
KIEV LR LR
comp=Z,8µm,22.0s
AGMN Agassiz Refuge 112.14 40 PFAKE 09 07 10.0 +13
AGMN LR LR
comp=Z,6µm,20.0s
ANTO Ankara 112.30 311 PFAKE 09 07 10.0 +12
ANTO LR LR
comp=Z,4µm,20.0s
USHA Ushuaia 112.73 159 PKiKP PKiKP 09 06 59.1 +0.9
comp=Z,12nm,0.8s,baz=10,slow=4.8,SNR=3.7
CSS Prodhromos 112.75 305 PFAKE 09 07 10.0 +11
CSS LR LR
comp=Z,10µm,20.0s
JCT Junction City 112.81 59 *e*PKPdf PKiKP 09 06 56.0 -3.1
JCT LR LR
comp=Z,10µm,20.0s
ECSD EROS,Sioux Fal 112.87 45 *e*PKPdf PKiKP 09 06 57.3 -1.5
ECSD LR LR
comp=Z,9µm,19.0s
LADK Ladik-KONYA 112.95 309 *e*P Pdif 09 03 09.6 +5.0
KONT Konya--Tatoy 113.00 309 *e*P Pdif 09 03 08.4 +3.6
WMOK Wichita Mounta 113.07 55 *e*PKPdf PKiKP 09 06 58.1 -1.3
WMOK LR LR
comp=Z,7µm,19.0s
KDHN Kadinhani 113.08 309 *e*P PP 09 07 55.7 +6.2
JMIC Jan Mayen 113.08 352 *e*PP PP 09 07 47.4 -0.9
KIS Kishinev 113.33 319 *e*P Pdif 09 03 16.0 +10
KIS MLR MLR
comp=E,9µm,25.0s
KIS MLR MLR
comp=Z,15µm,25.0s
KIS MLR MLR
comp=Z,14µm,25.0s
KIS Kishinev 113.33 319 *e*PKP PKiKP 09 07 06.0 +6.5
KIS *ep*PKP 09 07 33.0
KIS Kishinev 113.33 319 *e*PP PP 09 08 16.0 +25
KIS Kishinev 113.33 319 *e*PPP 09 10 45.0
KIS Kishinev 113.33 319 *i* PS PS 09 17 38.0 +10
KIS LRM 09 53 36.0
comp=Z,14µm,25.0s
KSU1 Kansas State U 113.96 50 *e*PKPdf PKiKP 09 07 01.9 +0.9
KSU1 LR LR
comp=Z,8µm,19.0s
BORA Eskisehir 114.05 311 *i* P PP 09 08 05.5 +9.2
SHUT Suhut-Afyon 114.27 310 *e*P Pdif 09 03 13.2 +2.7
CAVI Cavuskoy 114.43 312 *e*P Pdif 09 03 25.1 +14
ISP Isparta 114.46 309 *e*P Pdif 09 03 15.9 +4.6
ISP Isparta 114.46 309 PFAKE 09 07 10.0 +8.0
ISP LR LR
comp=Z,6µm,20.0s
BCK Bucak 114.47 309 *e*P Pdif 09 03 13.2 +1.8
ALT Altintas 114.50 310 *e*P Pdif 09 03 13.2 +1.7
YLV Yalova 114.69 312 *e*P Pdif 09 03 29.6 +17
KLYT Kilyos 114.77 313 *e*P Pdif 09 03 15.6 +2.9
ISK Istanbul-Kandi 114.80 313 *e*P Pdif 09 03 22.7 +10
KVTX Kingsville 114.82 62 PFAKE 09 07 10.0 +7.0
KVTX LR LR
comp=Z,12µm,19.0s
GDZ Gediz 114.97 310 *i* P PP 09 08 02.3 -0.6
BGKT Bogazkoy 114.98 313 *e*P Pdif 09 03 13.2 -0.4
EYMN Ely 115.03 39 PFAKE 09 07 10.0 +7.2
EYMN LR LR
comp=Z,7µm,21.0s
KHAL Karahalli 115.12 310 *e*P PP 09 08 05.5 +1.6
LBTB Lobatse 115.43 239 *e*PKPdf PKPdf 09 07 05.3 +1.0
LBTB LR LR
comp=Z,30µm,20.0s
BURAR Bucovina Array 115.44 320 ⇓P PKiKP 09 07 11.0 +7.4
BURAR Bucovina Array 115.44 320 ⇓*i*P PKiKP 09 07 11.0 +7.4
DEMI Demirci 115.56 311 *i* P PP 09 08 08.8 +1.8
DURS Dursunbey 115.60 311 *i* P PP 09 08 12.1 +4.8
MLR Muntele Rosu 115.69 318 ⇑*i*P PKiKP 09 07 05.7 +1.6
KULA Kula-Manisa 115.72 310 *e*P Pdif 09 03 19.1 +2.2
SCIA State Center 115.77 46 PFAKE 09 07 20.0 +16
SCIA LR LR
comp=Z,9µm,22.0s
NB2 NORSAR Subarra 115.82 338 PKPdf PKPdf 09 07 02.7 -1.2
comp=Z,3.1nm,0.8s,baz=39,slow=1.9
NB2 NORSAR Subarra 115.82 338 PKPdf PKPdf 09 07 02.7 -1.2
baz=39,slow=1.9
NOA NORSAR Array B 115.82 338 PKP PKPdf 09 07 03.1 -0.8
comp=Z,1.6nm,0.6s,baz=49,slow=1.9,SNR=5.7
NOA PP PP 09 08 05.9 -1.9
comp=Z,5.6nm,1.0s,baz=47,slow=7.8,SNR=5.5
NOA PKKPbc PKKPbc 09 17 37.7 -0.5
comp=Z,5.5nm,0.8s,baz=231,slow=3.6,SNR=10.0
NOA NORSAR Array B 115.82 338 PKiKP PKPdf 09 07 03.1 -0.8
NOA 09 08 05.9
NOA 09 17 37.7
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA pmax pmax
comp=Z,6.0nm,1.0s
NOA pmax pmax
comp=Z,6.0nm,0.8s
LSZ Lusaka 115.97 250 *e*PKPdf PKPdf 09 07 06.3 +0.8
LSZ LR LR
comp=Z,24µm,19.0s
NAO01 NORSAR Array S 116.07 338 PFAKE 09 07 20.0 +16
NAO01 LR LR
comp=Z,16µm,21.0s
MOL Molde 116.09 340 *e* PP 09 08 18.9 +9.3
MOL eSS SS 09 24 10.3 +4.5
DALT Dalyan (Mudla) 116.15 308 *e*P Pdif 09 03 28.7 +10
MBAR Mbarara 116.15 266 PFAKE 09 07 20.0 +14
MBAR LR LR
comp=Z,600nm,20.0s
KWP Kalwaria 116.22 323 PFAKE 09 07 20.0 +15
KWP LR LR
comp=Z,8µm,20.0s
EDRB Edirne 116.26 314 *e*P Pdif 09 03 32.3 +13
HKT Hockley 116.29 60 PFAKE 09 07 20.0 +14
HKT LR LR
comp=Z,9µm,21.0s
VOIR 116.30 318 ⇓P PKPdf 09 07 07.1 +1.8
VOIR 116.30 318 ⇓*i*P PKPdf 09 07 07.1 +1.8
SUR Sutherland 116.40 230 *e*PKPdf PKPdf 09 07 08.1 +2.1
SUR LR LR
comp=Z,39µm,20.0s
OSL Oslo 116.71 337 *i* P PKPdf 09 07 18.9 +13
KOLS Kolonicke sedl 116.76 323 *e*PKP PKPdf 09 07 06.8 +0.7
KOLS *e* 09 07 11.7
KOLS *e* 09 07 42.3
KOLS *e*PS PS 09 18 04.5 +5.3
TRPA Tarpa 116.92 322 ⇓*i*P PKPdf 09 07 09.4 +3.0
NATX Nacogdoches 116.98 57 PFAKE 09 07 20.0 +13
NATX LR LR
comp=Z,11µm,19.0s
DAT Datca 116.98 308 *e*P Pdif 09 03 41.8 +19
BLCB Balcova 116.99 310 *e*P Pdif 09 03 23.9 +1.4
STHS Stebnicka Huta 117.18 323 *e*PKP PKPdf 09 07 06.7 -0.2
STHS *e* 09 07 12.3
STHS *e* 09 07 42.0
CRVS Cervenica-Dubn 117.26 323 *e*PP PP 09 08 42.5 +24
CRVS *e*PS PS 09 18 07.7 +4.0

MIAR Mount Ida 117.33 54 *e*PKPdf PKPdf 09 07 07.6 -0.1
MIAR LR LR
comp=Z,9µm,20.0s
KONO Kongsberg 117.33 337 *e* Pdif 09 03 42.3 +18
KONO *e*PP PP 09 08 17.7 -0.7
KONO AMS AMS 09 50 44.5
comp=Z,11µm,30.1s
DRGR 117.33 320 ⇑P PKPdf 09 07 07.6 +0.3
DRGR 117.33 320 ⇑*i*P PKPdf 09 07 07.6 +0.3
JFWS Jewell Farm 117.56 44 *e*PKPdf PKPdf 09 07 07.6 -0.3
JFWS LR LR
comp=Z,7µm,20.0s
OJC Ojcow 117.67 325 *e*Pdiff Pdif 09 03 32.0 +6.4
OJC *e*PKPdf PKPdf 09 07 07.2 -0.6
OJC *e*PP PP 09 08 32.2 +11
OJC *e*SKSdf SKSdf 09 14 13.9 +0.8
OJC *e*SP SP 09 18 10.0 +13
OJC *e*SKKSdf SKKSdf 09 25 25.2 +20
OJC L 09 55 53.0
comp=Z,13nm,23.9s
OJC Ojcow 117.67 325 *e*P Pdif 09 03 32.0 +6.4
OJC *e* 09 07 07.2
OJC *e* 09 14 13.9
OJC *e*SP SP 09 18 10.0 +13
OJC MLR MLR
comp=Z,13µm,23.9s
SFJD Kangerlussuaq 117.71 8 *e*P PKPdf 09 06 59.6 -7.8
SFJD *i* 09 08 18.7
SFJD *e* 09 10 54.6
SFJD *i* 09 18 09.0
SFJD Kangerlussuaq 117.71 8 *e*PKIKP PKPdf 09 06 59.6 -7.8
SFJD *i* 09 08 18.7
SFJD *e* 09 10 54.6
SFJD *i* 09 18 09.0
SFJD MLR MLR
comp=Z,5µm,24.0s
SFJD Kangerlussuaq 117.71 8 *i* P PKPdf 09 06 59.6 -7.8
SFJD *i* 09 08 18.7
SFJD *e* 09 10 54.6
SFJD *i* 09 18 09.0
SFJD
comp=Z,5µm,24.0s
GZR Gura Zlata 117.82 319 ⇓P PKPdf 09 07 07.3 -0.9
GZR Gura Zlata 117.82 319 ⇓*i*P PKPdf 09 07 07.3 -0.9
UALR University of 118.26 54 *e*PKPdf PKPdf 09 07 09.0 -0.4
ODD1 Odda 118.26 339 *e* PKPdf 09 07 07.9 -0.8
CCM Cathedral Cave 118.29 50 *e*PKPdf PKPdf 09 07 07.5 -1.9
CCM LR LR
comp=Z,10µm,20.0s
BER Bergen 118.39 340 *e*PP PP 09 08 20.1 -5.6
BER eSS SS 09 24 40.1 +4.4
BER AMS AMS 10 01 32.1
comp=Z,12µm,14.8s
CMIG Matias Romero 118.45 74 PKP PKPdf 09 07 09.1 -1.1
comp=Z,1.3nm,0.6s,baz=84,slow=1.2,SNR=6.1
CMIG PKKPbc PKKPbc 09 17 28.1 +0.5
comp=Z,10nm,1.1s,baz=59,slow=3.3,SNR=7.2
BZS Buzias 118.49 319 ⇓P PKPdf 09 07 08.1 -1.4
BZS Buzias 118.49 319 ⇓*i*P PKPdf 09 07 08.1 -1.4
PSZ Piszkesteto 118.63 322 *e*PKPdf PKPdf 09 07 09.4 -0.3
PSZ LR LR
comp=Z,6µm,20.0s
PSZ Piszkesteto 118.63 322 *e*PKP PKPdf 09 07 10.6 +0.9
OKC Ostrava-Krasne 118.79 325 *e*SP SP 09 18 32.6 +25
OKC AMS AMS 09 56 10.0
comp=Z,7µm,20.5s
EFI East Falkland 118.82 162 PFAKE 09 07 20.0 +10
EFI LR LR
comp=Z,13µm,21.0s
FVM French Village 118.93 50 *e*PKPpre 09 07 17.8
HDIL Hopedale 119.00 47 *e*PKPdf PKPdf 09 07 07.5 -3.1
HDIL LR LR
comp=Z,8µm,22.0s
VYHS Vyhne 119.01 323 *e*PKIKP PKPdf 09 07 10.0 -0.4
VYHS *e* 09 07 33.9
VYHS *e* 09 18 13.7
VYHS *e*SS SS 09 24 43.5 -1.2
VYHS Vyhne 119.01 323 *e*PKP PKPdf 09 07 10.0 -0.4
VYHS *e* 09 07 15.1
VYHS *e* 09 07 33.9
VYHS *e*PP PP 09 08 56.6 +26
VYHS *e*PS PS 09 18 13.7 -5.7
VYHS *e*SS SS 09 24 43.5 -1.2
MORC Moravsky Berou 119.17 325 *e*PKPdf PKPdf 09 07 09.6 -1.1
KOLL Kolacno 119.23 324 *e*PKP PKPdf 09 07 11.1 +0.3
KSP Ksiaz 119.34 327 *e*Pdif Pdif 09 03 31.5 -1.5
KSP *e*PKP PKPdf 09 07 09.5 -1.5
KSP *ep*PKP pPKPdf 09 07 31.5 -1.3
KSP *e*PP PP 09 08 38.0 +5.4
KSP *e*SP SP 09 18 17.0 +4.7
KSP *e*SS SS 09 24 40.0 -8.7
KSP LR LR
comp=Z,35µm,23.4s
KSP Ksiaz 119.34 327 *e*P Pdif 09 03 31.5 -1.5
KSP *e* 09 07 09.5
KSP *e* 09 07 31.5
KSP *e* 09 08 38.0
KSP *e*SP SP 09 18 17.0 +4.7
KSP MLR MLR
comp=Z,35µm,23.4s
BUD Budapest 119.34 322 *e*PKP PKPdf 09 07 12.3 +1.2
VAY Valandovo 119.40 315 *e*PKP PKPdf 09 07 06.9 -4.5
DPC Dobruska-Polom 119.57 326 *e*PKIKP PKPdf 09 07 11.5 +0.1
DPC *e* 09 07 32.6
DPC *e* 09 08 38.0
DPC *e*SP SP 09 18 28.1 +14
DPC MLR MLR
comp=Z,14µm,21.8s
DPC Dobruska-Polom 119.57 326 *e*PKPdf PKPdf 09 07 11.5 +0.1
DPC *ep*PKP pPKPdf 09 07 32.6 -0.7
DPC *e*PP PP 09 08 38.0 +3.7
DPC *e*PKKP PKKPbc 09 17 23.0 -1.5
DPC *ex* x 09 17 44.7
DPC *e*PS PS 09 18 28.1 +3.7
DPC AMS AMS 09 57 40.0
comp=Z,14µm,21.8s
UPC Upice 119.66 326 *e*PKIKP PKPdf 09 07 12.7 +1.1
UPC *e* 09 07 29.6
UPC Upice 119.66 326 *e*PKPdf PKPdf 09 07 12.7 +1.1
UPC *ep*PKP pPKPdf 09 07 29.6 -3.9
UPC *e*PKKP PKKPbc 09 17 26.6 +2.5
UPC *ex* x 09 17 44.9
FGSL Fruska Gora 119.84 320 ⇑*i*PKP PKPdf 09 07 10.2 -1.9
SKO Skopje 119.97 316 *e*PKP PKPdf 09 07 11.5 -1.0
MODS Modra-Piesok 119.98 324 ⇑*e*PKIKP PKPdf 09 07 10.9 -1.4
MODS *e* 09 18 21.8
MODS *e*SS SS 09 24 54.5 -2.7
MODS Modra-Piesok 119.98 324 *e*PKP PKPdf 09 07 10.9 -1.4
MODS *e* 09 07 19.2
MODS *e* 09 07 45.0
MODS *e*PP PP 09 08 55.8 +19
PKSM Moragy 120.14 321 ⇓P PKPdf 09 07 12.2 -0.5
PKSM Moragy 120.14 321 ⇓*i*P PKPdf 09 07 12.2 -0.5
ZST Bratislava 120.17 324 *e*PKIKP PKPdf 09 07 12.4 -0.3
ZST *e* 09 18 25.1
ZST *e*SS SS 09 24 53.1 -6.5
ZST Bratislava 120.17 324 *e*PKP PKPdf 09 07 12.4 -0.3
ZST *e* 09 07 19.8
ZST *e* 09 07 45.2
ZST *e*PP PP 09 08 55.6 +17
ZST *e*PS PS 09 18 25.1 -4.7
ZST *e*SS SS 09 24 53.1 -6.5
ZST *e* 09 49 42.2
VBMS Vicksburg 120.33 56 PFAKE 09 07 20.0 +6.5
VBMS LR LR
comp=Z,10µm,19.0s
PVCC Panska Ves 120.44 327 *e*PKIKP PKPdf 09 07 12.0 -1.1
PVCC *e* 09 07 34.8
PVCC *e* 09 08 47.2
PVCC Panska Ves 120.44 327 *e*PKPdf PKPdf 09 07 12.0 -1.1
PVCC *ep*PKP pPKPdf 09 07 34.8 -0.2
PVCC *e*PP PP 09 08 47.2 +7.0
PVCC *ex* x 09 18 48.5
PVCC AMS AMS 09 54 10.0
comp=Z,22µm,29.8s
OLIL Olney 120.45 48 *e*PKPdf PKPdf 09 07 12.6 -1.0
TREC Trest 120.57 325 *e*PKPdf PKPdf 09 07 10.7 -2.7
TREC *e*PP PP 09 08 50.9 +10
TREC *e*PKKP PKKPbc 09 17 19.0 -1.8
TREC *ex* x 09 17 37.7
TREC *e*PS PS 09 18 33.7 +0.4

TREC AMS AMS 09 57 20.0
comp=Z,13µm,22.7s
BORG Borgarnes 120.59 354 PFAKE 09 07 20.0 +7.0
BORG LR LR
comp=Z,3µm,22.0s
BRG Berggiesshubel 120.60 328 Pdif Pdif 09 03 43.0 +4.4
BRG *i* PKP PKPdf 09 07 12.1 -1.3
BRG *i* 09 07 19.5
BRG *i* pPKP pPKPdf 09 07 38.3 +3.0
BRG PP PP 09 08 53.0 +12
BRG *e*SKS SKSdf 09 14 13.9 -4.7
BRG *i* 09 15 49.0
BRG *e* 09 17 01.0
BRG *e* 09 17 22.0
BRG SS SS 09 25 46.0 +41
BRG LR LR
comp=Z,11µm,22.9s
BRG Berggiesshubel 120.60 328 P Pdif 09 03 43.0 +4.4
BRG *i* 09 07 12.1
BRG *e* 09 14 13.9
BRG MLR MLR
comp=Z,11µm,22.9s
BRG Berggiesshubel 120.60 328 *e*Pdiff Pdif 09 03 40.9 +2.3
BRG *e*PP PP 09 08 50.8 +10
BRG *e*PPP 09 11 27.4
BRG Berggiesshubel 120.60 328 *i* PKP PKPdf 09 07 12.1 -1.3
comp=Z,5.3nm,0.9s
BRG *i* 09 07 19.5
comp=Z,30nm,0.9s
BRG *i* pPKP pPKPdf 09 07 38.3 +3.0
comp=Z,67nm,1.5s
BRG PP PP 09 08 53.0 +12
BRG *e*SKS SKSdf 09 14 13.9 -4.7
comp=Z,67nm,2.2s
BRG *i* 09 15 49.0
BRG *e* 09 17 01.0
comp=Z,17nm,1.8s
BRG *e* 09 17 22.0
comp=Z,8.2nm,1.1s
BRG SS SS 09 25 46.0 +41
BRG
comp=N,15µm,25.3s
BRG
comp=E,10µm,21.2s
BRG
comp=Z,18µm,22.9s
GLMI Grayling 120.62 40 PFAKE 09 07 30.0 +16
GLMI LR LR
comp=Z,7µm,20.0s
BSEG Bad Segeberg 120.65 332 *e*Pdiff Pdif 09 03 40.7 +1.9
BSEG *e*PP PP 09 08 51.8 +10
BSEG *e*PPP 09 11 28.3
OXF Oxford 120.67 53 PFAKE 09 07 30.0 +16
OXF LR LR
comp=Z,10µm,22.0s
OHR Ohrid 120.73 315 *e*PKP PKPdf 09 07 11.6 -2.4
SOP Sopron 120.74 323 *e*PKP PKPdf 09 07 19.9 +6.1
PRU Pruhonice 120.74 326 *e*PKIKP PKPdf 09 07 13.2 -0.5
PRU *e* 09 07 37.4
PRU *e* 09 08 44.7
PRU *e*SP SP 09 18 35.7 +11
PRU MLR MLR
comp=Z,13µm,27.9s
PRU Pruhonice 120.74 326 *e*PKPdf PKPdf 09 07 13.2 -0.5
PRU *ep*PKP pPKPdf 09 07 37.4 +1.8
PRU *e*PP PP 09 08 44.7 +2.5
PRU *e*PKKP PKKPbc 09 17 18.7 -1.4
PRU *ex* x 09 17 36.3
PRU *e*PS PS 09 18 35.7 +0.9
PRU AMS AMS 09 54 10.0
comp=Z,13µm,27.9s
CLL Collm 120.86 328 *e*Pdif Pdif 09 03 41.0 +1.3
CLL *i* PKP PKPdf 09 07 13.9 0.0
CLL *i* 09 07 22.0
CLL *i* pPKP pPKPdf 09 07 38.2 +2.5
CLL *e*Sdif Sdif 09 16 04.0 -25
CLL *i* PKKP PKKPdf 09 17 50.7 -2.4
CLL *e*SKKP 09 21 15.0
CLL Collm 120.86 328 *e*P Pdif 09 03 41.0 +1.3
CLL *i* 09 07 13.9
CLL *i* 09 07 38.2
CLL pmax pmax
comp=Z,11nm,0.8s
CLL pmax pmax
comp=Z,42nm,0.8s
CLL pmax pmax
comp=Z,17nm,1.1s
CLL Collm 120.86 328 *e*Pdiff Pdif 09 03 41.8 +2.1
CLL *e*PP PP 09 08 52.6 +10
CLL *e*PPP 09 11 29.5
CLL Collm 120.86 328 *e*Pdif Pdif 09 03 41.0 +1.3
CLL *i* PKPdf PKPdf 09 07 13.9 0.0
comp=Z,11nm,0.8s
CLL *ex* x 09 07 20.0
comp=Z,28nm,0.9s
CLL *i* PKPmax 09 07 22.0
comp=Z,42nm,0.8s
CLL *i* sPKPdf 09 07 38.2
CLL *i* x x 09 07 45.6
CLL *es*PKPmax 09 07 54.0
CLL *ep*PP 09 09 00.0
CLL *ex* x 09 10 23.0
CLL *e*PPP 09 11 29.0
CLL *es*SKKSac 09 16 04.0
CLL *e*PKKPab PKKPab 09 17 20.0 +0.8
comp=Z,58nm,1.8s
CLL *ep*PKKPab 09 17 35.0
comp=Z,44nm,1.7s
CLL *i* PKKPdf PKKPdf 09 17 50.7 -2.4
comp=Z,17nm,1.1s
CLL *e*PS PS 09 18 35.0 -0.8
CLL *ep*PPS 09 20 12.0
CLL *e*SKKPdf 09 21 15.0
CLL *i* pSKKPdf 09 21 42.5
CLL *ex* x 09 22 25.0
CLL *e*SS SS 09 25 05.0 -3.1
CLL *es*SS 09 25 38.0
CLL *es*SSS 09 30 06.0
CLL *ex* x 09 34 42.0
CLL Lm(360 09 54 00.0
comp=N,2µm,20.5s
CLL Lm(360 09 54 00.0
comp=E,4µm,21.4s
CLL Lm(360 09 54 00.0
comp=Z,4µm,21.8s
CONA Conrad Observa 121.03 324 ⇑*i*PKiKP PKiKP 09 07 14.2 -0.2
comp=Z,4.0nm,0.5s
CONA ⇑*e*PKKPab PKKPab 09 17 17.2 -1.3
comp=Z,9.4nm,1.1s
CSNA Conrad Observa 121.03 324 ⇑*i*PKiKP PKiKP 09 07 14.3 -0.2
comp=Z,19nm,0.7s
WVT Waverly 121.46 51 *e*PKPdf PKPdf 09 07 13.4 -2.2
BLO Bloomington 121.47 47 *e*PKPdf PKPdf 09 07 14.2 -1.3
TANN Tannenbergstha 121.64 328 *e*Pdiff Pdif 09 03 45.8 +2.6
TANN *e*PP PP 09 08 58.3 +10
TANN *e*PPP 09 11 36.1
KHC Kasperske Hory 121.73 326 *e*PKIKP PKPdf 09 07 14.0 -1.6
KHC *e* 09 07 36.3
KHC *e* 09 08 53.0
KHC *e*SP SP 09 18 43.8 +10
KHC Kasperske Hory 121.73 326 *e*PKPdf PKPdf 09 07 14.0 -1.6
KHC *ep*PKP pPKPdf 09 07 36.3 -1.2
KHC *e*PP PP 09 08 53.0 +4.0
KHC *e*PKKP PKKPbc 09 17 18.7 +2.3
KHC *ex* x 09 17 35.1
KHC *e*PS PS 09 18 43.8 +0.2
KHC AMS AMS 09 54 40.0
comp=Z,18µm,28.1s
NKC Novy Kostel 121.75 328 *e*PKP PKPdf 09 07 15.7 +0.1
NKC *e* 09 07 39.6
NKC *e*PP PP 09 08 53.1 +4.1
NKC *e*SP SP 09 18 39.1 +5.4
NKC Novy Kostel 121.75 328 *e*PKPdf PKPdf 09 07 15.7 +0.1
NKC *ep*PKP pPKPdf 09 07 39.6 +2.1
NKC *e*PP PP 09 08 53.1 +4.1
NKC *e*SP SP 09 18 39.1 +5.4
NKC AMS AMS 09 58 00.0
comp=Z,20µm,22.8s
GEC2 GERESS Array S 121.81 326 *e*PKPdf PKPdf 09 07 14.1 -1.7
GEC2 GERESS Array S 121.81 326 *e*P Pdif 09 03 45.1 +1.1
GEC2 *e* 09 08 58.9
GEC2 GERESS Array S 121.81 326 *e*Pdiff Pdif 09 03 45.1 +1.1
GEC2 *e*PP PP 09 08 58.9 +9.4

GEC2 ePPP 09 11 37.8
GERES GERESS Array B 121.81 326 PKP PKPdf 09 07 14.5 -1.3
comp=Z,5,4nm,0.5s,baz=82,slow=1.4,SNR=34
GERES PKKPbc PKKPbc 09 17 14.6 -1.5
comp=Z,2.0nm,0.7s,baz=196,slow=3.9,SNR=7.2
GERES GERESS Array B 121.81 326 PKIKP PKPdf 09 07 14.5 -1.3
GERES pmax pmax
comp=Z,5.0nm,0.5s
GERES pmax pmax
comp=Z,2.0nm,0.7s
CLZ Clausthal 121.89 330 ePdiff Pdif 09 03 46.9 +2.6
CLZ ePP PP 09 09 00.2 +10
CLZ ePPP 09 11 38.8
MOX Moxa 121.95 328 ePKIKP PKPdf 09 07 17.1 +1.1
MOX MLR MLR
comp=Z,9μm,22.0s
MOX Moxa 121.95 328 ePdiff Pdif 09 03 47.0 +2.4
MOX ePP PP 09 09 00.3 +10
MOX ePPP 09 11 38.7
WCI Wyandotte Cave 121.95 48 ePKPdf PKPdf 09 07 16.2 -0.2
WCI LR LR
comp=Z,7μm,20.0s
MOA Molln 122.00 324⇑*i*PKiKP PKiKP 09 07 15.7 -0.7
comp=Z,15nm,1.1s
MANZ Manzenberg 122.06 327 ePdiff Pdif 09 03 47.8 +2.7
MANZ ePP PP 09 09 01.2 +10
MANZ ePPP 09 11 39.7
PERS Pernice 122.10 323 ePdiff Pdif 09 04 08.2 +23
PERS ePKPdf PKPdf 09 07 16.0 -0.4
PERS *e* 09 08 41.6
PERS *e* 09 09 20.9
PERS *e* 09 12 01.3
PERS *e* 09 14 31.3
PERS *e* 09 17 34.9
PERS *e* 09 19 00.0
PERS *e* 09 24 21.8
WET Wettzell 122.11 326 eP Pdif 09 03 48.0 +2.7
WET *e* 09 09 01.3
WET Wettzell 122.11 326 ePdiff Pdif 09 03 48.0 +2.7
WET ePP PP 09 09 01.3 +10
WET ePPP 09 11 40.0
ROTZ Rotzenmuhle 122.13 327 ePdiff Pdif 09 03 48.3 +2.9
ROTZ ePP PP 09 09 01.9 +10
ROTZ ePPP 09 11 40.6
SOKA Soboth 122.13 323⇓*i*PKiKP PKiKP 09 07 16.3 -0.4
comp=Z,30nm,0.9s
PLCA Paso Flores 122.23 147 PKP PKPdf 09 07 17.3 +0.4
comp=Z,53nm,0.8s,baz=218,slow=2.6,SNR=66
PLCA Paso Flores 122.23 147 ePKPdf PKPdf 09 07 17.3 +0.3
PLCA LR LR
comp=Z,11μm,22.0s
AAM Ann Arbor 122.30 43 PFAKE 09 07 30.0 +13
AAM LR LR
comp=Z,8μm,21.0s
PAYG Puerto Ayora 122.35 94 PFAKE 09 07 30.0 +12
PAYG LR LR
comp=Z,5μm,19.0s
OBKA Obir 122.51 323⇑*e*PKiKP PKiKP 09 07 16.8 -0.6
comp=Z,12nm,0.8s
OBKA ⇓*e*PKKPab PKKPab 09 17 16.1 +4.0
comp=Z,34nm,0.9s
BOJS Bojanci 122.57 322 ePdiff Pdif 09 04 01.8 +14
BOJS ePKPdf PKPdf 09 07 17.5 +0.1
BOJS *e* 09 07 45.9
BOJS *e* 09 12 07.4
UBBA Unterbreizbach 122.69 329 ePdiff Pdif 09 03 50.1 +2.2
UBBA ePP PP 09 09 05.3 +10
UBBA ePPP 09 11 44.7
GRF Grafenberg Arr 122.70 327 ePdiff Pdif 09 03 50.6 +2.6
GRF ePP PP 09 09 05.8 +10
GRF ePPP 09 11 44.5
GRF *e*PKKPab PKKPab 09 17 12.9 +1.7
GRF *e*PS PS 09 18 53.2 +1.0
GRF *e*SS SS 09 25 36.7 +5.0
GRF *e*L 10 02 29.1
comp=Z,13μm,21.1s
LJU Ljubljana 122.75 322 ePdiff Pdif 09 03 49.9 +1.7
IBBN Ibbenburen 122.88 332 ePdiff Pdif 09 03 50.9 +2.2
IBBN ePP PP 09 09 07.0 +10
IBBN ePPP 09 11 46.0
RJOB Jochberg 122.91 325 ePdiff Pdif 09 03 51.2 +2.3
RJOB ePP PP 09 09 06.6 +10
RJOB ePPP 09 11 47.5
KBA Koelnbreinsper 122.93 324⇑*i*PKiKP PKiKP 09 07 17.7 -0.5
comp=Z,11nm,0.8s
CEY Cerknica 122.96 322 ePKPdf PKPdf 09 07 17.9 -0.2
CEY *e* 09 09 30.5
MYKA Terra Mystica 122.99 323⇓*i*PKiKP PKiKP 09 07 17.6 -0.7
comp=Z,14nm,0.7s
LRAL Lakeview Retre 123.00 54 ePKPdf PKPdf 09 07 17.7 -0.9
LRAL LR LR
comp=Z,10μm,19.0s
VOY Vojsko 123.14 323 ePKPdf PKPdf 09 07 17.4 -1.0
VOY *e* 09 07 25.9
VOY *e* 09 08 08.7
SWET Sewanee 123.21 51 ePKPdf PKPdf 09 07 17.6 -1.3
MCD Coleburn Disti 123.40 341 eP PKPdf 09 07 17.7 -0.9
BRAL Brewton 123.49 57 PFAKE 09 07 30.0 +10
BRAL LR LR
comp=Z,5μm,19.0s
FUR Furstenfeldbru 123.53 326 eP Pdif 09 03 54.0 +2.4
FUR *e* 09 09 10.6
FUR Furstenfeldbru 123.53 326 ePdiff Pdif 09 03 54.0 +2.4
FUR ePP PP 09 09 10.6 +9.4
FUR ePPP 09 11 51.4
WTSB Winterswijk 123.55 332 ePP PP 09 09 10.4 +9.3
ABTA Abfaltersbach 123.59 324⇓*i*PKiKP PKiKP 09 07 18.9 -0.7
comp=Z,22nm,0.8s
ACSO Alum Creek Sta 123.61 45 ePKPdf PKPdf 09 07 15.3 -4.3
ACSO LR LR
comp=Z,9μm,21.0s
BUG Bochum--Univer 123.66 331 ePdiff Pdif 09 03 54.7 +2.5
BUG ePP PP 09 09 12.2 +10
BUG ePPP 09 11 53.2
WATA Walderalm 123.82 325⇓*i*PKiKP PKiKP 09 07 19.4 -0.6
WTTA Wattenberg 123.82 325⇓*i*PKPdf PKPdf 09 07 18.7 -1.0
comp=Z,47nm,0.7s
TNS Taunus Mts 123.84 329 eP Pdif 09 03 55.8 +2.8
TNS *e* 09 09 13.5
TNS Taunus Mts 123.84 329 ePdiff Pdif 09 03 55.8 +2.8
TNS ePP PP 09 09 13.5 +10
TNS ePPP 09 11 54.6
MDO Dochfour 123.86 342 eP PKPdf 09 07 18.4 -1.0
SCHQ Schefferville 124.03 23 PKP PKPdf 09 07 20.2 +0.3
comp=Z,4.0nm,0.6s,baz=337,slow=1.1,SNR=9.4
SCHQ PKKPbc PKKPbc 09 17 06.1 -1.5
comp=Z,9.0nm,0.6s,baz=99,slow=1.8,SNR=12
SCHQ Schefferville 124.03 23 ePKPdf PKPdf 09 07 20.1 +0.2
SCHQ LR LR
comp=Z,9μm,22.0s
MOTA Moosalm 124.08 325⇓*i*PKPdf PKPdf 09 07 18.8 -1.4
comp=Z,87nm,1.2s
MOTA ⇑*i*PKKPab PKKPab 09 17 09.7 +4.3
comp=Z,10nm,0.8s
SQTA Sankt Quirin 124.09 325⇑*i*PKiKP PKiKP 09 07 20.6 +0.1
comp=Z,18nm,0.6s
RGNG Rignano Grg 124.10 317 P PKPdf 09 07 20.2 -0.2
RETA Reutte 124.20 326⇑*e*PKiKP PKiKP 09 07 20.4 -0.3
comp=Z,18nm,1.1s
RETA ⇓*i*PKKPab PKKPab 09 17 06.4 +1.5
comp=Z,8.8nm,0.7s
CPCT Cooper Cave 124.22 51 ePKPdf PKPdf 09 07 19.6 -1.3
STU Stuttgart 124.32 328 ePKPdf PKPdf 09 07 21.7 +1.1
STU Stuttgart 124.32 328 ePdiff Pdif 09 03 57.7 +2.6
STU ePP PP 09 09 16.3 +10
STU ePPP 09 11 58.1
TIP Timpagrande 124.32 314 ePKPdf PKPdf 09 07 21.0 0.0
TIP LR LR
comp=Z,5μm,20.0s
KPL Plockton 124.34 343 AMS AMS 10 06 28.7
comp=Z,6μm,19.2s
TSUM Tsumeb 124.43 242 ePKPdf PKPdf 09 07 22.1 +0.4
TSUM LR LR
comp=Z,25μm,20.0s
CTI Castel Tesino 124.47 324 P PKPdf 09 07 20.6 -0.4
FETA Feichten 124.47 325⇑*i*PKiKP PKiKP 09 07 21.2 -0.1
comp=Z,24nm,1.0s
ESY Stoneypath 124.53 340 eP PKPdf 09 07 20.5 -0.3
EBH Black Hill 124.56 341 eP PKPdf 09 07 20.5 -0.3
TZTN Tazewell 124.59 49 ePKPdf PKPdf 09 07 21.0 -0.5
TZTN LR LR
comp=Z,10μm,22.0s
CUC Castrocucco 124.66 315 PFAKE 09 07 30.0 +8.4
CUC LR LR
comp=Z,6μm,22.0s
TKL Tuckaleechee C 124.73 50 ePKPdf PKPdf 09 07 21.3 -0.5
XSO Sourhope Farm 124.74 339 eP PKPdf 09 07 21.1 -0.1
HGN Heimansgroeve 124.74 331 eP PP 09 09 19.3 +10
HGN Heimansgroeve 124.74 331 ePKS 09 10 54.2
DAVA Damuels 124.81 326⇓*i*PKPdf PKPdf 09 07 20.5 -1.1
comp=Z,36nm,0.7s
DAVA ⇑*i*PKKPab 09 17 04.0
comp=Z,12nn,0.8s
MEM Membach 124.81 331 PKP PKPdf 09 07 21.9 +0.4
ERPA Erie 124.84 42 PFAKE 09 07 30.0 +8.2
ERPA LR LR
comp=Z,7μm,21.0s
EAU Auchinoon 124.87 340 eP PKPdf 09 07 20.6 -0.8
EAB Aberfoyle 124.88 341 eP PKPdf 09 07 21.1 -0.4
LANF Langenberg 124.93 328 PKP PKPdf 09 07 20.6 -1.2
BFO Black Forest 125.05 328 ePKPdf PKPdf 09 07 21.5 -0.5
BFO LR LR
comp=Z,9μm,20.0s
BFO Black Forest 125.05 328 eP Pdif 09 04 00.9 +2.5
BFO *e* 09 09 21.1
BFO Black Forest 125.05 328 ePdiff Pdif 09 04 00.9 +2.5
BFO ePP PP 09 09 21.1 +10
BFO ePPP 09 12 04.1
DAVOX Davos/Dischmat 125.09 325 PKKPbc 09 17 11.0
comp=Z,8.8nm,0.7s,baz=229,slow=7.2,SNR=6.2
EKA Eskdalemuir Ar 125.18 340 PKKPbc 09 17 03.9
comp=Z,3.2nm,0.8s,baz=212,slow=3.9,SNR=5.2
NRCA Norcia 125.20 320 P PKPdf 09 07 22.8 +0.3
ESK Eskdalemuir 125.21 340 PFAKE 09 07 30.0 +7.9
ESK LR LR
comp=Z,9μm,20.0s
ESK Eskdalemuir 125.21 340 eP PKPdf 09 07 21.2 -0.9
ESK AMS AMS 10 05 35.5
comp=Z,8μm,20.4s
XAL Allendale 125.22 339 eP PKPdf 09 07 21.6 -0.5
AQU L'Aquila 125.24 319 PFAKE 09 07 30.0 +7.4
AQU LR LR
comp=Z,8μm,22.0s
PGBU Glenifferbraes 125.24 341 AMS AMS 10 04 21.9
comp=Z,9μm,22.4s
BCLA Clavier 125.27 331 PKP PKPdf 09 07 22.7 +0.3
ECK Cauldkaine Hil 125.29 340 eP PKPdf 09 07 21.9 -0.4
CEL Celeste 125.31 313 PFAKE 09 07 30.0 +7.1
CEL LR LR
comp=Z,15μm,19.0s
WLF Walferdange 125.34 330 E 09 07 25.4
WLF Walferdange 125.34 330 ePKIKP PKPdf 09 07 24.8 +2.2
WLF MLR MLR
comp=Z,23μm,22.0s
WLF Walferdange 125.34 330 ePdiff Pdif 09 04 02.9 +3.2
WLF ePP PP 09 09 24.0 +11
WLF ePPP 09 12 07.5
ASS Assisi 125.38 320 P PKPdf 09 07 24.2 +1.4
PTQR Pietraquaria 125.40 319 P PKPdf 09 07 26.1 +3.2
UCC Uccle 125.47 332 PKP PKPdf 09 07 22.7 -0.1
CDF Champ du Feu 125.55 328 ePKP1 PKPdf 09 07 20.9 -2.1
comp=Z,57nm,1.3s
TUE Stuetta 125.57 325 ePKPdf PKPdf 09 07 22.8 -0.3
TUE LR LR
comp=Z,14μm,22.0s
SNF Seneffe 125.70 332 PKP PKPdf 09 07 22.3 -0.9
GIVF Givet 125.71 331 ePKP1 PKPdf 09 07 21.8 -1.4
comp=Z,68nm,0.9s
GOGA Godfrey 125.71 53 ePKPdf PKPdf 09 07 23.4 -0.4
GOGA LR LR
comp=Z,7μm,20.0s
ECH Echery 125.74 328 PKP PKPdf 09 07 22.2 -1.2
ECH Echery 125.74 328 ePKIKP PKPdf 09 07 22.9 -0.5
DOU Dourbes 125.83 331 PKP PKPdf 09 07 22.8 -0.6
GCD Castle Douglas 125.83 340 eP PKPdf 09 07 22.9 -0.4
TGUH Tegucigalpa,Un 125.92 77 ePKPdf PKPdf 09 07 24.2 -0.5
TGUH LR LR
comp=Z,8μm,21.0s
MOF Molkenrain 125.97 328 PKP PKPdf 09 07 21.7 -2.1
BAIF Baives 126.04 331 ePKP1 PKPdf 09 07 22.3 -1.6
comp=Z,48nm,0.9s
MCWV Mont Chateau 126.04 44 ePKPdf PKPdf 09 07 19.6 -4.6
MCWV LR LR
comp=Z,9μm,21.0s
GAL1 Galloway 126.08 340 eP PKPdf 09 07 23.8 0.0
GAL1 AMS AMS 10 04 11.4
comp=Z,8μm,21.4s
LHO Holmfirth 126.11 338 eP PKPdf 09 07 23.0 -0.9
HINF Hinteralfeld 126.14 328 ePKP1 PKPdf 09 07 22.2 -1.9
comp=Z,73nm,0.9s
VLC Villacollemand 126.23 322 PFAKE 09 07 40.0 +16
VLC LR LR
comp=Z,9μm,20.0s
VAI Varese 126.25 325 P PKPdf 09 07 23.3 -1.1
HAU Haudompre 126.29 328 ePKP1 PKPdf 09 07 22.7 -1.7
comp=Z,78nm,0.8s
HAU *e*MLR MLR
comp=Z,12μm,22.2s
HAU Haudompre 126.29 328 ePKIKP PKPdf 09 07 22.7 -1.7
HAU MLR MLR
comp=Z,12μm,22.3s
THEF They Montfort 126.34 329 PKP PKPdf 09 07 22.4 -2.1
ELN Prospectdale 126.41 47 ePKPdf PKPdf 09 07 24.0 -1.0
LOMF Lomont 126.44 327 PKP PKPdf 09 07 23.4 -1.3
KWE Weaver Farm 126.52 337 eP PKPdf 09 07 24.4 -0.3
CWF Charnwood Fore 126.52 337 AMS AMS 10 00 03.6
comp=Z,5μm,22.4s
MEZF Maizieres J'vi 126.65 329 ePKP1 PKPdf 09 07 23.9 -1.2
BLA Blacksburg 126.66 47 ePKPdf PKPdf 09 07 22.8 -2.6
BLA LR LR
comp=Z,9μm,21.0s
SSPA Standing Stone 126.93 42 ePKPdf PKPdf 09 07 25.2 -0.7
SSPA LR LR
comp=Z,8μm,19.0s
LONY Lake Ozonia 126.95 36 PFAKE 09 07 40.0 +14
LONY LR LR
comp=Z,7μm,21.0s
JSC Jenkinsville 127.14 51 ePKPdf PKPdf 09 07 22.2 -4.3
CLCH Cerro Calan 127.16 140 eP PKPdf 09 07 26.6 0.0
WDD Wield Dalam 127.26 311 PFAKE 09 07 40.0 +13
WDD LR LR
comp=Z,4μm,22.0s
CABF La Chapelle 127.30 327 ePKP1 PKPdf 09 07 25.2 -1.2
comp=Z,89nm,1.0s
FCH Farellones 127.36 140 eP PKPdf 09 07 29.5 +2.5
BINY Binghamton 127.39 40 ePKPdf PKPdf 09 07 24.7 -2.1
BINY LR LR
comp=Z,11μm,22.0s
FRNY Flat Rock 127.41 36 ePKPdf PKPdf 09 07 25.9 -0.8
NCB Newcomb 127.52 37 ePKPdf PKPdf 09 07 24.6 -2.4
NCB LR LR
comp=Z,6μm,20.0s
LPG La Plagne 127.61 325 ePKP1 PKPdf 09 07 25.8 -1.2
comp=Z,35nm,0.8s
LPL La Plagne 127.61 326 ePKP1 PKPdf 09 07 25.9 -1.1
comp=Z,20nm,0.6s
SWN1 Swindon 127.65 336 AMS AMS 10 06 20.6
comp=Z,13μm,21.0s
MCH1 Michaelchurch 127.75 337 eP PKPdf 09 07 27.0 -0.1
MCH1 AMS AMS 10 05 03.2
comp=Z,7μm,20.5s
BNI Bardonecchia 127.92 325 ePKPdf PKPdf 09 07 27.2 -0.4
BNI LR LR
comp=Z,17μm,22.0s
PGF Pioggiola 127.95 321 ePKP1 PKPdf 09 07 26.2 -1.6
HGH Gray Hill 127.96 337 eP PKPdf 09 07 27.6 +0.1
MBDF Montbardon 128.06 325 ePKP1 PKPdf 09 07 26.4 -1.5
LOR Lormes 128.06 329 ePKP1 PKPdf 09 07 26.3 -1.5
comp=Z,72nm,1.2s
LOR *e*MLR MLR
comp=Z,5μm,23.0s
LOR Lormes 128.06 329 ePKIKP PKPdf 09 07 26.3 -1.5
LOR MLR MLR
comp=Z,5μm,23.0s
MDV Middlebury 128.13 36 ePKPdf PKPdf 09 07 26.8 -1.3
SBF Sospel 128.17 323 ePKP1 PKPdf 09 07 26.1 -2.0
SDMD Soldier's Deli 128.22 43 ePKPdf PKPdf 09 07 25.1 -3.2
MVL Millersville 128.26 42 ePKPdf PKPdf 09 07 25.9 -2.6
SSF Saint Saulge 128.38 329 ePKP1 PKPdf 09 07 27.0 -1.4
comp=Z,58nm,1.0s
NHSC New Hope 128.41 52 PFAKE 09 07 40.0 +11
NHSC LR LR
comp=Z,9μm,21.0s
CBN Corbin 128.41 45 ePKPdf PKPdf 09 07 27.8 -1.0
CBN LR LR
comp=Z,8μm,19.0s
ORIF Oris-en-Rattie 128.45 325 ePKP1 PKPdf 09 07 27.0 -1.6
comp=Z,72nm,1.1s
ORIF *e*MLR MLR
comp=Z,10μm,21.2s
SMF Signal de Mont 128.47 328 ePKP1 PKPdf 09 07 27.1 -1.5
comp=Z,81nm,1.0s
AVF Avril sur Loir 128.63 329 ePKP1 PKPdf 09 07 27.2 -1.7
comp=Z,28nm,0.9s
HYF Humbligny 128.68 330 ePKP1 PKPdf 09 07 27.9 -1.1
LBNH Lisbon 128.72 35 ePKPdf PKPdf 09 07 31.1 +1.9
LBNH LR LR
comp=Z,9μm,22.0s
HNH Hanover 128.82 36 ePKPdf PKPdf 09 07 31.1 +1.7
SSB Saint Sauveur 128.97 326 ePKPdf PKPdf 09 07 28.9 -0.8
DWPF Disney 128.99 58 PFAKE 09 07 40.0 +10
DWPF LR LR
comp=Z,6μm,22.0s
TLL Tololo Astrono 129.02 137 eP PKPdf 09 07 30.5 +0.3
LMR La Mourre 129.03 323 ePKP1 PKPdf 09 07 28.1 -1.7
comp=Z,88nm,1.2s
BGF Bois d'Agland 129.05 329 ePKP1 PKPdf 09 07 28.3 -1.4
comp=Z,71nm,0.9s
LDF La Druitiere 129.09 332 ePKP1 PKPdf 09 07 28.0 -1.8
comp=Z,97nm,1.2s
HTL Hartland 129.12 337 AMS AMS 10 06 58.3
comp=Z,7μm,21.0s
FLN La Foliniere 129.13 333 ePKP1 PKPdf 09 07 28.0 -1.8
comp=Z,134nm,1.3s
FLN *e*MLR MLR
comp=Z,23μm,21.8s
FLN La Foliniere 129.13 333 ePKIKP PKPdf 09 07 28.0 -1.8
FLN MLR MLR
comp=Z,23μm,21.8s
VIVF Saint-Julien-l 129.16 326 ePKP1 PKPdf 09 07 28.5 -1.5
comp=Z,84nm,1.3s
VSL Villasalto 129.29 318 PFAKE 09 07 40.0 +10
VSL LR LR
comp=Z,5μm,21.0s
CNNC Cliffs of the 129.33 48 ePKPdf PKPdf 09 07 29.9 -0.7
CNNC LR LR
comp=Z,9μm,21.0s
DYA Yadsworthy 129.34 336 AMS AMS 10 07 52.5
comp=Z,8μm,20.9s
PAL Palisades 129.34 40 ePKPdf PKPdf 09 07 26.8 -3.7
PKME Peaks-Kenny Pk 129.56 33 PFAKE 09 07 40.0 +9.3
PKME LR LR
comp=Z,6μm,21.0s
TCF Toulx Ste Croi 129.56 329 ePKP1 PKPdf 09 07 29.4 -1.3
comp=Z,114nm,1.1s
GRR Gorron 129.58 333 ePKP1 PKPdf 09 07 29.2 -1.5
comp=Z,70nm,1.1s
LCO Las Campanas 129.80 136 ePKPdf PKPdf 09 07 32.2 +0.5
LCO LR LR
comp=Z,14μm,22.0s
LCO Las Campanas 129.80 136 eP PKPdf 09 07 32.4 +0.7
CFAA Coronel Fontan 129.80 140 PKP PKPdf 09 07 31.4 -0.3
comp=Z,6.4nm,0.7s,baz=247,slow=3.3,SNR=27
CFAA PP PP 09 09 48.0 +5.2
comp=Z,1.9nm,1.0s,baz=97,slow=12,SNR=2.6
LASF Ste Croix 130.11 326 ePKP1 PKPdf 09 07 30.7 -1.1
comp=Z,121nm,1.3s
WES Weston 130.17 37 PFAKE 09 07 40.0 +8.0
WES LR LR
comp=Z,8μm,21.0s
SGMF Saint Gilles 130.44 334 ePKP1 PKPdf 09 07 30.7 -1.6
comp=Z,128nm,1.2s
MFF Saint Martin d 130.52 331 ePKP1 PKPdf 09 07 31.2 -1.3
comp=Z,41nm,1.0s
CAF Calviac 130.54 328 ePKP1 PKPdf 09 07 31.2 -1.4
comp=Z,46nm,1.1s
RJF Les Rejaudoux 130.58 328 ePKP1 PKPdf 09 07 31.1 -1.6
RJF *e*MLR MLR
comp=Z,8μm,23.0s
RJF Les Rejaudoux 130.58 328 ePKIKP PKPdf 09 07 31.1 -1.6
RJF MLR MLR
comp=Z,8μm,23.0s
KEST Kesra 131.12 313 PKP PKPdf 09 07 35.2 +1.2
comp=Z,5.7nm,0.9s,baz=269,slow=1.2,SNR=7.4
LFF La Frestale 131.23 328 ePKP1 PKPdf 09 07 32.8 -1.1
EMIR Miracle 132.80 325 PKP PKPdf 09 07 39.7 +2.7
ATAH Atahualpa 132.85 105 PKP PKPdf 09 07 39.4 +1.5
comp=Z,24nm,0.7s,baz=134,slow=3.9,SNR=16
NNA Nana 132.86 112 PKP PKPdf 09 07 38.6 +0.8
comp=Z,13nm,0.5s,baz=322,slow=6.1,SNR=6.4
NNA Nana 132.86 112 ePKPdf PKPdf 09 07 38.3 +0.4
NNA LR LR
comp=Z,7μm,21.0s
CASM Ain Smara 132.90 316 P PKPdf 09 07 43.0 +5.6
EBIE Bielsa 133.07 327 PKP PKPdf 09 07 40.6 +3.1
DFRA Djebel Bou Aff 133.18 316 P PKPdf 09 07 45.0 +7.1
TRIS Tristan da Cun 133.21 203 ePKPdf PKPdf 09 07 39.6 +1.6
TRIS LR LR
comp=Z,26μm,21.0s
ETOS Mallorca 133.37 322 PKP PKPdf 09 07 41.6 +3.5
BCIP Isla Barro Col 133.37 83 ePKPdf PKPdf 09 07 37.4 -1.4
BCIP LR LR
comp=Z,7μm,19.0s
EPOB Poblet 133.42 325 PKP PKPdf 09 07 41.2 +3.0
CEN1 Los Morros 133.43 130 eP PKPdf 09 07 38.4 -0.3
EALK Alkurruntz 133.59 328 PKP PKPdf 09 07 41.8 +3.4
ELIZ Elizondo 133.64 328 PKP PKPdf 09 07 41.4 +2.9
ESAC San Caprasio 134.05 326 PKP PKPdf 09 07 41.4 +2.0
ERTA Horta de San J 134.10 325 PKP PKPdf 09 07 41.6 +2.1
OTAV Otavalo 134.20 95 ePKPdf PKPdf 09 07 42.1 +1.7
OTAV LR LR
comp=Z,5μm,20.0s
ECRI Cripan 134.54 328 PKP PKPdf 09 07 42.8 +2.5
ELAN Lanestosa 134.57 330 PKP PKPdf 09 07 43.6 +3.4
LVC Limon Verde 134.85 130 PKhKP 09 07 29.1
comp=Z,3.1nm,0.4s,baz=126,slow=4.6,SNR=3.4
LVC PKP PKPdf 09 07 42.9 +1.4
comp=Z,43nm,0.8s,baz=260,slow=5.6,SNR=22
LVC Limon Verde 134.85 130 ePKPpre 09 07 28.3
LVC ePKPdf PKPdf 09 07 43.0 +1.6
LVC LR LR
comp=Z,9μm,20.0s
EMOS Mosqueruela 134.95 325 PKP PKPdf 09 07 45.2 +4.2
ADJB Djebel Djouab 135.04 317 P PKPdf 09 07 41.1 -0.3
EMHD Djebel Mahouad 135.35 318 P PKPdf 09 07 42.0 0.0
EARI Arriondas 135.39 331 PKP PKPdf 09 07 45.7 +3.9
ETOR Torete 135.54 326 PKP PKPdf 09 07 46.0 +3.8
ECHE Chera 135.75 324 PKP PKPdf 09 07 46.9 +4.3
EBEN Beniarda 135.88 323 PKP PKPdf 09 07 47.3 +4.4
EBNR Beni Rached 136.24 319 P PKPdf 09 07 44.7 +1.1
EPON Pontenova 136.28 333 PKP PKPdf 09 07 49.1 +5.7
ECHA Ech Chlef 136.43 319 P PKPdf 09 07 43.0 -1.0
ETOB Tobarra 136.71 324 PKP PKPdf 09 07 51.4 +7.0
EANR 'Ain N'Sour 136.72 319 P PKPdf 09 07 44.3 -0.2
GUD Guadarrama 136.81 328 PKP PKPdf 09 07 45.8 +1.3
ETRT Tiaret 136.91 318 P PKPdf 09 07 43.2 -1.7
ERUA La Rua 137.00 332 PKP PKPdf 09 07 49.2 +4.4
EMUR La Murta 137.04 322 PKP PKPdf 09 07 47.2 +2.1
ECAL Calabor 137.15 331 PKP PKPdf 09 07 47.4 +2.2
STS Santiago 137.26 333 PKP PKPdf 09 07 43.1 -2.2
EVIA Vianos 137.27 324 PKP PKPdf 09 07 47.7 +2.2
ESDC Sonseca Array 137.39 327 PKP PKPdf 09 07 45.8 +0.2
comp=Z,0.7nm,0.3s,baz=347,slow=3.2,SNR=6.9
ESDC PP PP 09 10 38.3 +7.4
comp=Z,4.1nm,0.8s,baz=35,slow=7.5,SNR=4.3
ESDC Sonseca Array 137.39 327 PKP PKPdf 09 07 46.7 +1.1
ESLA Sonseca Array 137.39 327 PFAKE 09 08 00.0 +14
ESLA LR LR
comp=Z,59μm,22.0s
PAB San Pablo 137.69 327 ePKPdf PKPdf 09 07 47.5 +1.3
PAB LR LR
comp=Z,8μm,22.0s
ELOB Lobios 137.84 332 PKP PKPdf 09 07 48.6 +2.2
EHUE Huescar 137.87 323 PKP PKPdf 09 07 46.6 0.0
EQES Quesada 138.16 324 PKP PKPdf 09 07 49.8 +2.7
ENIJ Nijar 138.19 322 PKP PKPdf 09 07 52.2 +5.0
EBAN Banos Encina 138.34 325 PKP PKPdf 09 07 46.3 -1.1
EBER Berja 138.66 323 PKP PKPdf 09 07 53.3 +5.2
MTE Manteigas 138.72 330 ePKPdf PKPdf 09 07 50.8 +2.7
MTE LR LR
comp=Z,13μm,20.0s
ROSC El Rosal 138.75 89 PKhKP 09 07 40.3
comp=Z,5.7nm,0.3s,baz=90,slow=19,SNR=4.2
ROSC PKP PKPdf 09 07 49.7 +0.9
comp=Z,15nm,0.4s,baz=280,slow=23,SNR=10.0
ROSC El Rosal 138.75 89 ePKPdf 09 07 42.4
ROSC PKP PKPdf 09 07 49.7 +0.9
EADA Adamuz 138.78 325 PKP PKPdf 09 07 50.4 +2.1
LPAZ La Paz 138.81 123 PKhKP 09 07 41.4
comp=Z,14nm,0.7s,baz=3.5,slow=1.2,SNR=12
LPAZ PKP PKPdf 09 07 50.4 +1.5
comp=Z,50nm,0.8s,baz=207,slow=2.0,SNR=23

LPAZ	**La Paz**	**138.81**	**123**	*e*PKHKP		09 07 40.6	
LPAZ						09 07 50.4	
LPAZ				MLR	MLR		
	comp=Z,8μm,22.0s						
ECOG	**Cogollos-Vega**	**138.81**	**324**	PKP	PKPdf	09 07 53.5	+5.1
ELUQ	**Luque**	**139.03**	**324**	PKP	PKPdf	09 07 53.8	+5.1
EGUA	**Guajares**	**139.10**	**323**	PKP	PKPdf	09 07 49.6	+0.7
ERON	**Agron**	**139.12**	**324**	PKP	PKPdf	09 07 54.1	+5.2
ELOJ	**Sierra Loja**	**139.24**	**324**	PKP	PKPdf	09 07 56.0	+6.9
TAM	**Tamanrasset**	**139.29**	**298**	*e*PKPdf	PKPdf	09 07 49.7	+0.1
EALB	**Alboran**	**139.37**	**322**	PKP	PKPdf	09 07 51.1	+1.7
EMIJ	**Mijas**	**140.00**	**324**	PKP	PKPdf	09 07 47.5	-3.1
EMIN	**Mina Concepcio**	**140.23**	**327**	PKP	PKPdf	09 07 47.9	-3.0
BBSR	**BB Station**	**140.28**	**44**	PFAKE		09 08 00.0	+8.8
BBSR				LR	LR		
	comp=Z,6μm,20.0s						
EVO	**Evora**	**140.38**	**329**	*e*PKIKP	PKPdf	09 07 49.4	-1.7
	comp=Z,35nm,0.9s						
EVO				*e*MLR	MLR		
	comp=Z,13μm,23.0s						
SDDR	**Presa de Saban**	**140.40**	**67**	PFAKE		09 08 00.0	+8.3
SDDR				LR	LR		
	comp=Z,8μm,21.0s						
ESPR	**Espera**	**140.42**	**325**	PKP	PKPdf	09 07 45.1	-6.2
EJIF	**Jimena Fronter**	**140.49**	**324**	PKP	PKPdf	09 07 48.2	-3.2
LIS	**Lisbon**	**140.81**	**330**	*e*P	PKPdf	09 07 48.9	-3.0
EGRO	**El Granado**	**140.84**	**327**	PKP	PKPdf	09 07 57.0	+4.9
SFS	**San Fernando**	**140.90**	**325**	PFAKE		09 08 00.0	+7.8
SFS				LR	LR		
	comp=Z,21μm,20.0s						
MDT	**Midelt**	**142.37**	**319**	PKP	PKPdf	09 07 54.4	-0.5
	comp=Z,2.8nm,0.6s,baz=4.4,slow=2.0,SNR=6.2						
SDV	**Santo Domingo**	**142.47**	**83**	PKhKP		09 07 49.5	
	comp=Z,18nm,0.3s,baz=301,slow=3.0,SNR=26						
SDV				PKP	PKPdf	09 07 56.8	+1.3
	comp=Z,28nm,0.4s,baz=82,slow=1.7,SNR=28						
SIV	**San Ignacio**	**144.69**	**128**	PKP	PKPdf	09 07 57.6	-1.8
	comp=Z,105nm,0.8s,baz=244,slow=4.3,SNR=176						
TOA0	**Torodi Ar. Sit**	**145.14**	**285**	*e*PKPdf	PKPdf	09 07 58.9	-1.3
TOA0				*e*PP	PP	09 11 19.9	+0.2
TORD	**Torodi Ar. Bea**	**145.14**	**285**	PKPbc	PKPbc	09 08 00.4	+0.5
	comp=Z,52nm,0.9s,baz=80,slow=3.4,SNR=80						
SJG	**San Juan**	**145.33**	**66**	*e*PKPbc	PKPbc	09 08 00.0	-0.4
SJG				LR	LR		
	comp=Z,6μm,22.0s						
SHEL	**Horse Pasture**	**145.50**	**231**	*e*PKPdf	PKPdf	09 08 00.7	-0.1
SHEL				LR	LR		
	comp=Z,20μm,21.0s						
PCRV	**Puerto La Cruz**	**148.29**	**80**	PKPbc	PKPbc	09 08 07.8	-1.2
	comp=Z,31nm,0.4s,baz=258,slow=2.7,SNR=16						
ANWB	**Willy Bob**	**149.42**	**65**	*e*PKPbc	PKPbc	09 08 11.2	-0.6
ANWB				*e*PKPab	PKPab	09 08 15.4	-1.3
BPA	**Boggy Peak**	**149.55**	**66**	*e*P	PKPdf	09 08 08.8	+1.3
BPA	**Boggy Peak**	**149.55**	**66**	*e*	PKPdf	09 08 08.8	+1.3
EFAM	**Famara**	**150.45**	**324**	PKP	PKPbc	09 08 13.3	-0.6
CAM4	**Nova Friburgo**	**150.45**	**162**	*e*P	PKPdf	09 08 09.1	+0.3
CAM4				*i*		09 08 14.3	
CAM4				*i*		09 08 23.6	
CAM4				*i*		09 08 28.0	
CAM4				*i*		09 08 33.4	
CAM4				*i*		09 08 42.2	
CAM4				*i*		09 08 49.1	
CAM4				*i*		09 08 54.0	
DWS	**Wesley**	**150.49**	**69**	*e*P	PKPdf	09 08 08.6	-0.3
FDF	**Fort de France**	**150.86**	**70**	*e*PKPbc	PKPbc	09 08 15.4	+0.1
FDF				*e*PKPab	PKPab	09 08 21.8	-0.9
FDF	**Fort de France**	**150.86**	**70**	*e*P	PKPbc	09 08 15.1	-0.2
GRW	**Mount Saint Ca**	**150.92**	**75**	*e*P	PKPbc	09 08 16.4	+1.0
GRW	**Mount Saint Ca**	**150.92**	**75**	*e*	PKPbc	09 08 16.4	+1.0
GRGR	**Grenville**	**150.93**	**76**	*e*PKPbc	PKPbc	09 08 13.7	-1.8
GRGR				LR	LR		
	comp=Z,11μm,21.0s						
BIM	**Bigot**	**150.99**	**70**	*e*P	PKPbc	09 08 15.4	-0.1
SVV	**Soufriere Volc**	**151.12**	**73**	*e*P	PKPbc	09 08 16.0	+0.1
SVV	**Soufriere Volc**	**151.12**	**73**	*e*	PKPbc	09 08 16.0	+0.1
FCV	**Fort Charlotte**	**151.13**	**73**	*e*P	PKPbc	09 08 16.5	+0.5
FCV	**Fort Charlotte**	**151.13**	**73**	*e*	PKPbc	09 08 16.5	+0.5
MVM	**Montagne Vaucl**	**151.14**	**70**	*e*P	PKPbc	09 08 15.4	-0.5
SSV	**Crater Summit**	**151.14**	**73**	*e*P	PKPbc	09 08 13.1	-2.9
SSV	**Crater Summit**	**151.14**	**73**	*e*	PKPbc	09 08 13.1	-2.9
ALNG	**Atlantic LNG**	**151.17**	**79**	*e*P	PKPbc	09 08 17.0	+0.9
ALNG	**Atlantic LNG**	**151.17**	**79**	*e*	PKPbc	09 08 17.0	+0.9
SLB	**Belfond**	**151.18**	**72**	*e*P	PKPbc	09 08 14.6	-1.4
SLB	**Belfond**	**151.18**	**72**	*e*	PKPbc	09 08 14.6	-1.4
BUAY	**Buenos Aires**	**151.19**	**80**	*e*P	PKPab	09 08 20.8	-3.3
BUAY	**Buenos Aires**	**151.19**	**80**	*e*	PKPab	09 08 20.8	-3.3
CFTV	**Fuerteventura**	**151.30**	**324**	PKP	PKPbc	09 08 13.5	-2.5
SIPA	**Siparia**	**151.36**	**80**	*e*P	PKPab	09 08 19.5	-5.4
SIPA	**Siparia**	**151.36**	**80**	*e*	PKPab	09 08 19.5	-5.4
TPP	**Pointe-a-Pierr**	**151.39**	**79**	*e*P	PKPbc	09 08 18.7	+2.1
TPP	**Pointe-a-Pierr**	**151.39**	**79**	*e*	PKPbc	09 08 18.7	+2.1
TRN	**Trinidad (W)**	**151.40**	**78**	*e*P	PKPbc	09 08 19.6	+3.0
TRN	**Trinidad (W)**	**151.40**	**78**	*e*	PKPbc	09 08 19.6	+3.0
TBH	**Brigand Hill**	**151.75**	**79**	*e*P	PKPbc	09 08 19.7	+2.3
TBH	**Brigand Hill**	**151.75**	**79**	*e*	PKPbc	09 08 19.7	+2.3
TPR	**Prospect**	**151.93**	**77**	*e*P	PKPbc	09 08 19.2	+1.4
TPR	**Prospect**	**151.93**	**77**	*e*	PKPbc	09 08 19.2	+1.4
BOT	**Bacolet**	**151.99**	**77**	*e*P	PKPbc	09 08 16.1	-1.8
BOT	**Bacolet**	**151.99**	**77**	*e*	PKPbc	09 08 16.1	-1.8
KIC	**Kosan Boka**	**151.99**	**273**	*e*PKIKP	PKPbc	09 08 17.2	-0.8
	comp=Z,2μm,1.2s						
DBIC	**Dimbokro**	**152.11**	**273**	PKPbc	PKPbc	09 08 17.2	-1.1
	comp=Z,14nm,0.5s,baz=93,slow=3.3,SNR=21						
DBIC	**Dimbokro**	**152.11**	**273**	*e*PKIKP	PKPbc	09 08 17.6	-0.6
DBIC				MLR	MLR		
	comp=Z,29μm,20.0s						
TIC	**Toumodi**	**152.27**	**273**	*e*PKIKP	PKPbc	09 08 17.4	-1.2
	comp=Z,880nm,0.9s						
LIC	**Lamto**	**152.28**	**272**	*e*PKIKP	PKPbc	09 08 17.4	-1.2
	comp=Z,735nm,0.8s						
LIC	**Lamto**	**152.28**	**272**	*e*PKIKP	PKPdf	09 08 09.9	-1.9
	comp=Z,90nm,0.7s						
LIC				*e*MLR	MLR		
	comp=Z,37μm,19.8s						
LIC	**Lamto**	**152.28**	**272**	*e*PKPdf	PKPdf	09 08 09.9	-1.9
LIC				*e*PKPdf	PKPbc	09 08 17.4	-1.2
LIC				LR	LR		
	comp=Z,19μm,19.8s						
EOSO	**Osorio**	**152.41**	**325**	PKP	PKPbc	09 08 16.4	-2.1
EBAJ	**Bajamar**	**152.48**	**327**	PKP	PKPbc	09 08 16.4	-2.2
CAM3	**Guarapari**	**152.59**	**164**	⇑*i*P	PKPbc	09 08 18.3	-0.7
CAM3				*i*		09 08 21.9	
CAM3				*i*		09 08 24.8	
CAM3				*i*		09 08 28.3	
CAM3				*i*		09 08 32.9	
CAM3				*i*		09 08 38.9	
CAM3				*i*		09 08 39.1	
CAM3				*i*		09 08 49.1	
CAM3				*i*		09 08 54.9	
BBGH	**Gun Hill**	**152.74**	**73**	PFAKE		09 08 20.0	+7.6
BBGH				LR	LR		
	comp=Z,17μm,20.0s						
CCAN	**Las Canadas**	**152.87**	**327**	PKP	PKPbc	09 08 16.1	-3.4
EGOM	**La Gomera**	**153.25**	**328**	PKP	PKPbc	09 08 15.9	-4.4
BDFB	**Brasilia**	**153.96**	**145**	PKP	PKPdf	09 08 15.4	+1.3
	comp=Z,9.9nm,0.9s,baz=189,slow=5.2,SNR=19						
BDFB				PKPbc	PKPbc	09 08 22.7	+0.5
	comp=Z,54nm,0.5s,baz=208,slow=3.1,SNR=44						
BDFB	**Brasilia**	**153.96**	**145**	PKP	PKPdf	09 08 15.4	+1.3
BDFB				PKPbc	PKPbc	09 08 22.7	+0.5
BDFB				LR	LR		
	comp=Z,15μm,20.0s						
BDFB	**Brasilia**	**153.96**	**145**	PKIKP	PKPdf	09 08 15.4	+1.3
BDFB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BDFB				pmax	pmax		
	comp=Z,54nm,0.5s						
CHIE	**El Hierro**	**153.99**	**329**	PKP	PKPdf	09 08 16.9	+3.0
ASCN	**Ascension**	**157.01**	**234**	PFAKE		09 08 30.0	+12
ASCN				LR	LR		
	comp=Z,9μm,20.0s						
RCBR	**Riachuelo**	**168.06**	**165**	*e*PKPdf	PKPdf	09 08 31.2	+2.0
RCBR				*e*PKPab	PKPab	09 09 39.7	+2.9
RCBR				LR	LR		
	comp=Z,56μm,20.0s						

IDC 22 08:51:48.3±2.5, 5813S×2574W, h0km, mb3.7/2, mb1 3.7/2, mb1mx3.6/14, mbtmp3.7/2, Error ellipse: s-maj=87.4km s-min=49.6km az=18.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIV	**San Ignacio**	**49.59**	**313**	P	P	09 00 40.9	-0.1
	0.3nm,0.5s,baz=168,slow=9.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**74.51**	**28**	P	P	09 03 28.4	+0.1
	0.6nm,0.5s,baz=199,slow=6.2,SNR=10						
YKA	**Yellowknife Ar**	**138.24**	**316**	PKP	PKPdf	09 11 13.4	-0.2
	1.2nm,0.8s,baz=138,slow=2.1,SNR=4.2						
SONM	**Songino Array**	**150.02**	**89**	PKPbc	PKPbc	09 11 39.3	-0.2
	0.6nm,0.3s,baz=237,slow=2.4,SNR=4.4						

ISK ***22*** *09:03:48.4, 3470N×3206E, h10km, MD3.7*
CSEM ***22*** *09:03:48.3±0.1, 3468N×3206E, h10km, Mw3.4, Error ellipse: s-maj=2.4km s-min=1.6km az=109.0*
NIC ***22*** *09:03:50.3±0.2, 3465N×3221E, h15km, ML3.5, MW3.4*
NIC Felt earthquake; Maximum Intensity 3; Felt I–III MM at Paphos.
ISCJB ***22*** *09:03:50.2±0.6, 3458N±002×3221E±004, h19km±6km, Error ellipse: s-maj=6.2km s-min=3.7km az=15.1*
GII ***22*** *09:03:52.8±1.0, 3453N×3242E, h10km±3km, ML3.4/5, Mw2.9/7*
HLW ***22*** *09:03:53.4, 3465N×3224E, h30km, Mb3.6*

ISC 22 09:03:51.1±0.6, 3460N±002×3227E±004, h11km±4km, n44, σ0°86/64, 2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPCY	**Paphos**	**0.29**	**12**	⇓*i*P	**Pg**	**09 03 56.4**	**-0.7**
SZAC	**Souni-Zanaja**	**0.53**	**72**	P	**Pg**	**09 04 01.6**	**+0.2**
SZAC				S	**Sg**	**09 04 10.0**	**+1.6**
ALFC	**Alevga**	**0.62**	**26**	⇓P	**Pg**	**09 04 01.7**	**-1.5**
	59nm,0.2s						
ALFC				S	**Sg**	**09 04 11.0**	**-0.3**
LEF	**Lefka**	**0.73**	**44**	*e*PG	**Pg**	**09 04 03.7**	**-1.5**
LEF				*e*SG	**Sg**	**09 04 14.8**	**0.0**
MAMC	**Mammari**	**0.97**	**53**	P	**Pg**	**09 04 09.1**	**-0.6**
LFK	**Lefkose**	**1.24**	**56**	*e*PN	**Pn**	**09 04 13.9**	**-0.4**
LFK				*e*SN	**Sn**	**09 04 32.5**	**+1.5**
PHNC	**Paralimni**	**1.51**	**74**	P	**Pn**	**09 04 19.4**	**+1.4**
	16nm,0.6s						
PHNC				S	**Sn**	**09 04 41.1**	**+3.5**
EREN	**Erenkoy**	**1.82**	**59**	*e*PN	**Pn**	**09 04 22.2**	**-0.1**
EREN				*e*SN	**Sn**	**09 04 46.8**	**+1.6**
IKL	**Isikli**	**2.00**	**35**	*e*PN	**Pn**	**09 04 23.7**	**-1.1**
IKL				*e*SN	**Sn**	**09 04 49.5**	**-0.4**
HNTI	**Hanita**	**2.85**	**121**	Pn	**Pn**	**09 04 35.9**	**-0.6**
HNTI				Sn	**Sn**	**09 05 10.1**	**-0.6**
BHL	**Bhannes**	**2.89**	**103**	*e*P	**Pn**	**09 04 36.9**	**-0.1**
MERS	**Mersin**	**2.91**	**38**	*e*PN	**Pn**	**09 04 37.2**	**-0.1**
MERS				*e*SN	**Sn**	**09 05 12.3**	**0.0**
OFRI	**'Ofer**	**3.00**	**130**	Pn	**Pn**	**09 04 38.9**	**+0.3**
MMA0B	**Mount Meron ar**	**3.05**	**120**	Pn	**Pn**	**09 04 39.1**	**-0.1**
MMA0B				Sn	**Sn**	**09 05 14.4**	**-1.3**
HWQ	**Hawqa**	**3.06**	**95**	*e*P	**Pn**	**09 04 40.3**	**+1.0**
HRSH	**Kfar Ka'horesh**	**3.14**	**126**	P	**Pn**	**09 04 50.4**	**+10**
KSDI	**Kefar Szold**	**3.15**	**115**	Pn	**Pn**	**09 04 40.5**	**-0.1**
KSDI				Sn	**Sn**	**09 05 16.5**	**-1.6**
RCY	**Rachaya**	**3.15**	**110**	*e*P	**Pn**	**09 04 40.4**	**-0.2**
RCY				*e*S	**Sn**	**09 05 17.1**	**-1.0**
BCK	**Bucak**	**3.17**	**335**	*e*PN	**Pn**	**09 04 37.5**	**-3.3**
BCK				*e*SN	**Sn**	**09 05 13.5**	**-5.0**
HRI	**Mount Hermon**	**3.17**	**114**	Pn	**Pn**	**09 04 41.1**	**+0.2**
SLTI	**Sal'it**	**3.30**	**135**	Pn	**Pn**	**09 04 42.4**	**-0.2**
SLTI				Sn	**Sn**	**09 05 20.2**	**-1.7**
KSHT	**Keshet**	**3.36**	**118**	Pn	**Pn**	**09 04 44.0**	**+0.5**
MMLI	**Mount Malkishu**	**3.40**	**128**	Pn	**Pn**	**09 04 44.3**	**+0.3**
MMLI				Sn	**Sn**	**09 05 23.7**	**-0.7**
KARA	**Karaisali**	**3.49**	**40**	*e*PN	**Pn**	**09 04 45.1**	**-0.2**
KARA				*e*SN	**Sn**	**09 05 26.2**	**-0.3**
HTY	**Hatay**	**3.51**	**63**	*e*PN	**Pn**	**09 04 46.4**	**+0.9**
HMDT	**Nahal Hemdat**	**3.59**	**130**	Pn	**Pn**	**09 04 47.5**	**+0.8**
HMDT				Sn	**Sn**	**09 05 28.7**	**-0.2**
CEYT	**Ceyhan**	**3.71**	**49**	*e*PN	**Pn**	**09 04 48.8**	**+0.4**
RSH		**3.83**	**161**	P	**Pn**	**09 04 50.4**	**+0.5**
DSI	**Dead Sea**	**3.99**	**138**	Pn	**Pn**	**09 04 53.0**	**+0.8**
AMAG	**Maghara**	**4.02**	**168**	P	**Pn**	**09 04 53.2**	**+0.6**
MZDA	**Masada**	**4.18**	**141**	Pn	**Pn**	**09 04 55.5**	**+0.6**
MZDA				Sn	**Sn**	**09 05 42.4**	**-1.3**
HHAG	**Hagoal**	**4.63**	**182**	P	**Pn**	**09 05 01.6**	**+0.7**
KMRS	**Kahramanmaras**	**4.74**	**51**	*e*PN	**Pn**	**09 05 03.5**	**+1.0**
SUZ		**4.77**	**174**	P	**Pn**	**09 05 03.8**	**+1.0**
PRNI	**Paran**	**4.82**	**151**	Pn	**Pn**	**09 05 03.7**	**+0.1**
HNKL	**Nakhl**	**4.87**	**162**	P	**Pn**	**09 05 04.8**	**+0.5**
HNKL				S	**Sn**	**09 05 57.6**	**-3.0**
KRMI	**Paran Flat**	**4.93**	**154**	Pn	**Pn**	**09 05 14.1**	**+1.1**
HRFI	**Mount Harif**	**5.12**	**152**	Pn	**Pn**	**09 05 07.6**	**0.0**
MBRI	**Mt Berech**	**5.29**	**154**	Pn	**Pn**	**09 05 10.4**	**+0.4**
MBRI				Sn	**Sn**	**09 06 11.3**	**+0.4**
EIL	**Elat**	**5.41**	**154**	Pn	**Pn**	**09 05 12.3**	**+0.6**
HMAT	**Matruh**	**5.58**	**233**	P	**Pn**	**09 05 13.6**	**-0.4**
HBST	**Basata**	**5.76**	**158**	P	**Pn**	**09 05 16.6**	**+0.2**
HKAT	**Jabal Katrina**	**6.23**	**166**	P	**Pn**	**09 05 23.1**	**+0.1**
HFRF	**Wahat Farafira**	**8.17**	**206**	P	**Pn**	**09 05 49.1**	**-0.4**

IDC 22 10:05:32.2±10.0, 2177N×14279E, h232km±104km, mb3.0/6, mb1 3.2/6, mb1mx3.1/22, mbtmp3.0/6, Error ellipse: s-maj=60.5km s-min=18.4km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.24**	**324**	P	P	10 09 50.0	+0.2
	1.5nm,0.9s,baz=130,slow=11,SNR=4.1						
SONM	**Songino Array**	**39.05**	**321**	P	P	10 12 36.5	0.0
	0.2nm,0.3s,baz=148,slow=6.8,SNR=4.1						
WRA	**Warramunga Arr**	**42.27**	**192**	P	P	10 13 03.6	+0.5
	1.2nm,0.9s,baz=14,slow=8.9,SNR=5.0						
ASAR	**Alice Springs**	**45.98**	**191**	P	P	10 13 31.9	-0.6
	0.4nm,0.8s,baz=14,slow=9.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**53.93**	**322**	P	P	10 14 31.8	+0.1
	0.5nm,0.4s,baz=76,slow=7.9,SNR=3.8						
NVAR	**Mina Array Bea**	**83.39**	**51**	P	P	10 17 34.0	+0.3
	0.7nm,0.9s,baz=294,slow=8.0,SNR=4.1						

ISK ***22*** *10:07:05.3, 3888N×2680E, h9km, MD3.1*
DDA ***22*** *10:07:05.7, 3891N×2681E, h7km±3km, Md2.8*
CSEM ***22*** *10:07:05.4±0.0, 3888N×2682E, h10km, ML3.1/1, Error ellipse: s-maj=1.2km s-min=0.9km az=84.0*
ISCJB ***22*** *10:07:06.0±0.5, 3889N±002×2682E±003, h8km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=148.9*
THE ***22*** *10:07:06.6, 3885N×2678E, h0km±1km, ML3.1/1, Error ellipse: s-maj=1.7km s-min=0.6km az=115.0*

ISC 22 10:07:06.7±0.4, 3888N±002×2682E±003, h11km±4km, n38, σ0°61/65, 1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.53**	**161**	PG	**Pg**	**10 07 16.1**	**-0.8**
BLCB				*e*SG	**Sg**	**10 07 23.9**	**+0.1**
BLCB	**Balcova**	**0.53**	**161**	P	**Pg**	**10 07 16.9**	**0.0**
BLCB				S	**Sg**	**10 07 24.5**	**+0.7**
BLCB	**Balcova**	**0.53**	**161**	*i* Pg	**Pg**	**10 07 16.1**	**-0.8**
BLCB	**Balcova**	**0.53**	**161**	P	**Pg**	**10 07 16.9**	**0.0**
BLCB				*e*Sg	**Sg**	**10 07 23.9**	**+0.1**
URLA	**Izmir**	**0.55**	**199**	*e*P	**Pg**	**10 07 17.3**	**-0.1**
URLA				*e*S	**Sg**	**10 07 24.7**	**+0.1**
PRK	**Paraskevi**	**0.56**	**311**	P	**Pg**	**10 07 17.6**	**0.0**
PRK				S	**Sg**	**10 07 25.8**	**+0.8**
KDAG	**Bornova**	**0.59**	**144**	*e*P	**Pg**	**10 07 18.0**	**-0.1**
KDAG				*e*S	**Sg**	**10 07 26.6**	**+0.6**
AKS	**Akhisar**	**0.77**	**90**	*e*PG	**Pg**	**10 07 21.1**	**-0.5**
AKS				*e*SG	**Sg**	**10 07 32.4**	**+0.6**
AKHS	**Akhisar**	**0.78**	**90**	⇓*i*P	**Pg**	**10 07 21.4**	**-0.3**
AKHS				*i* S	**Sg**	**10 07 32.1**	**+0.3**
CHOS	**Chios island**	**0.78**	**231**	P	**Pg**	**10 07 21.4**	**-0.3**
CHOS				S	**Sg**	**10 07 32.2**	**+0.4**
EZN	**Ezine**	**1.02**	**338**	*e*PG	**Pg**	**10 07 25.3**	**-1.0**
EZN				*e*SG	**Sg**	**10 07 39.8**	**+0.3**
BALB	**Balikesir**	**1.12**	**47**	*e*PN	**Pn**	**10 07 27.4**	**-0.9**
BALB				*e*SN	**Sn**	**10 07 43.5**	**-0.2**
MANT	**Manisa**	**1.41**	**105**	*e*P	**Pn**	**10 07 32.9**	**+0.5**
MANT				*e*S	**Sn**	**10 07 51.1**	**+0.1**
DURS	**Dursunbey**	**1.47**	**60**	*e*P	**Pn**	**10 07 32.6**	**-0.6**
DURS				*e*S	**Sn**	**10 07 52.0**	**-0.4**
KULA	**Kula-Manisa**	**1.48**	**104**	*e*PN	**Pn**	**10 07 33.3**	**0.0**
KULA				*e*SN	**Sn**	**10 07 53.2**	**+0.5**
LPK	**Lapseki**	**1.49**	**358**	*e*PN	**Pn**	**10 07 32.6**	**-0.8**
LPK				*e*SN	**Sn**	**10 07 53.2**	**+0.3**
DST	**Dursunbey**	**1.58**	**62**	*e*PN	**Pn**	**10 07 34.2**	**-0.4**
EDC	**Edincik**	**1.67**	**28**	*e*PN	**Pn**	**10 07 35.0**	**-0.9**
EDC				*e*SN	**Sn**	**10 07 57.6**	**+0.3**
BNT	**Bandirma**	**1.70**	**30**	*e*PN	**Pn**	**10 07 35.0**	**-1.3**
BNT				*e*SN	**Sn**	**10 07 58.1**	**0.0**
KCT	**Karacabey**	**1.82**	**40**	*e*PN	**Pn**	**10 07 37.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.82**	**9**	*e*PN	**Pn**	**10 07 37.8**	**-0.3**
ENEZ	**Enez**	**1.92**	**345**	*e*PN	**Pn**	**10 07 39.5**	**+0.1**
APE	**Apeiranthos**	**2.08**	**210**	P	**Pn**	**10 07 40.9**	**-0.6**
YER	**Yerkesik**	**2.09**	**146**	*e*PN	**Pn**	**10 07 41.9**	**+0.2**
ALN	**Alexandroupoli**	**2.10**	**344**	P	**Pn**	**10 07 42.0**	**+0.2**
ALN				S	**Sn**	**10 08 10.3**	**+2.4**
DAT	**Datca**	**2.23**	**164**	*e*PN	**Pn**	**10 07 43.6**	**0.0**
DALT	**Dalyan (Mudla)**	**2.55**	**145**	*e*PN	**Pn**	**10 07 47.7**	**-0.3**
YLV	**Yalova**	**2.59**	**49**	*e*PN	**Pn**	**10 07 49.7**	**+1.1**
YLV				*e*SN	**Sn**	**10 08 20.7**	**+0.7**

BGS ***22*** *10:38:53.0±1.7, 5051N×17682E, h47km, mb5.3*
IDC ***22*** *10:38:54.1±1.5, 5127N×17973W, h27km±9km, mb4.7/30, mb1 4.9/31, mb1mx4.9/33, mbtmp4.7/31, ML5.6/1, MS5.0/11, Ms1 5.0/11, ms1mx4.6/48, Error ellipse: s-maj=14.3km s-min=9.3km az=171.0*
BJI ***22*** *10:38:54.5, 5120N×17980W, h46km, mB5.6, mb5.2, Ms5.2, Msz5.1*
DJA ***22*** *10:38:54, 51.11N×17972E, h10km, mb5.4/12*
ISCJB ***22*** *10:38:55.4±0.1, 5121N±003×17973W±002, h48km, mb5.3/318, MS5.4/216, Error ellipse: s-maj=4.9km s-min=1.9km az=0.7*
MOS ***22*** *10:38:55.7±0.9, 5120N×17972W, h51km, mb5.5/122, MS5.4/26, Error ellipse: s-maj=6.1km s-min=4.1km az=93.5*
NEIC ***22*** *10:38:56.6±0.1, 5117N×17980W, mb5.4/207, MS5.4/191, ML5.6(AEIC), Error ellipse: s-maj=4.2km s-min=2.0km az=183.0*
SZGRF ***22*** *10:39:01.0, 5206N×17592E, h33km, mb5.3, Rat Islands, Aleutian Islands, United States*

ISC 22 10:38:57.5±0.1, 5125N±003×17975W±002, h50km, h50km±1.3km; pP-P, n824, σ0°86/722, mb5.3/318, MS5.4/216, 37C-28D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.61**	**282**	P	**Pn**	**10 39 06.2**	**-3.7**
AMKA				S	**Sn**	**10 39 15.4**	**-3.6**
SMY	**Shemya**	**4.08**	**294**	P	**Pn**	**10 39 56.9**	**-0.3**
SMY				S	**Sn**	**10 40 47.7**	**+4.1**
FX1	**Attu Island--F**	**4.67**	**293**	P	**Pn**	**10 40 04.5**	**-0.8**
FX1				S	**Sn**	**10 41 01.3**	**+3.3**
NIKO	**Nikolski**	**6.93**	**71**	P	**Pn**	**10 40 36.3**	**0.0**
OKCE	**Okmok Cone E**	**7.42**	**68**	P	**Pn**	**10 40 44.1**	**+1.1**
OKCD	**Okmok Cone D**	**7.46**	**68**	P	**Pn**	**10 40 45.4**	**+1.9**
SPIA	**Saint Paul Isl**	**8.13**	**39**	P	**Pn**	**10 40 55.3**	**+2.5**
UNV	**Unalaska Valle**	**8.48**	**67**	P	**Pn**	**10 40 58.5**	**+1.0**
AKGG	**Akutan Green G**	**8.86**	**65**	P	**Pn**	**10 41 04.2**	**+1.5**
AKLV	**Akutan Long Va**	**8.87**	**65**	P	**Pn**	**10 41 04.4**	**+1.6**
AKUT	**Akutan**	**8.97**	**66**	*e*P	**Pn**	**10 41 05.0**	**+0.8**
	251nm,0.6s						
FALS	**False Pass**	**10.47**	**63**	*e*Pn	**Pn**	**10 41 25.0**	**+0.2**
SDPT	**Sand Point**	**12.23**	**63**	*e*P	**Pn**	**10 41 47.4**	**-1.3**
	292nm,0.6s						
GAMB	**Gambell**	**13.26**	**16**	*e*Pn	**Pn**	**10 42 05.4**	**+2.7**
PET	**Petropavlovsk**	**13.38**	**286**	*e*Pn	**Pn**	**10 42 07.4**	**+3.1**
PET	**Petropavlovsk**	**13.38**	**286**	*e*P	**Pn**	**10 42 06.6**	**+2.3**
PET				*e*S	**Sn**	**10 44 31.3**

YSS pmax pmax
comp=Z,70nm,0.8s,mb5.2
YSS MLR MLR
comp=Z,1μm,16.0s,MS4.5
SKAG Skagway 26.11 54 *e*P **P** **10 44 25.6 -0.6**
comp=Z,39nm,1.4s,mb4.8
ASAJ Asahikawa 26.11 269 P **P** **10 44 27.0 +0.6**
comp=Z,60nm,0.9s,mb5.1,baz=55,slow=5.8,SNR=11
ASAJ LR LR 10 52 42.7
comp=Z,2μm,21.8s,MS4.5,baz=111,slow=32
SIT Sitka 26.27 60 PFAKE 10 44 40.0 +12
SIT LR LR
comp=Z,6μm,20.0s,MS5.1
ERM Erimo 26.84 264 PFAKE 10 44 40.0 +7.0
ERM LR LR
comp=Z,3μm,21.0s,MS4.8
ERM Erimo 26.84 264 *e*P **P** **10 44 34.2 +1.2**
ERM pmax pmax
comp=Z,99nm,1.6s,mb5.1
ERM MLR MLR
comp=Z,2μm,21.0s,MS4.7
INK Inuvik 27.91 35 *e*P **P** **10 44 41.8 -0.5**
comp=Z,1μm,0.8s,mb6.5
INK *e*PcP PcP 10 47 55.6 -0.8
INK *e*ScP ScP 10 51 35.2 +2.4
WRAK Wrangell Islan 27.99 61 PFAKE 10 45 00.0 +17
WRAK LR LR
comp=Z,5μm,19.0s,MS5.1
HABR Khabarovsk 28.92 282 *e*P **P** **10 44 51.3 -0.2**
HABR *e**PP pP 10 45 10.0 +5.7
HABR *e* 10 45 46.5
HABR *e*S **S** **10 49 36.7 -1.6**
HABR *e*SS SS 10 51 08.2 -34
HABR *e* 10 55 26.2
DLBC Dease Lake 28.93 56 P **P** **10 44 51.6 +0.2**
comp=Z,9.0nm,0.9s,mb4.5,baz=271,slow=10,SNR=12
YAK Yakutsk 29.05 311 PFAKE 10 45 00.0 +7.5
YAK LR LR
comp=Z,3μm,22.0s,MS4.8
TIXI Tiksi 30.45 331 PFAKE 10 45 20.0 +15
TIXI LR LR
comp=Z,3μm,19.0s,MS5.0
TIXI Tiksi 30.45 331 *e*P **P** **10 45 06.0 +1.2**
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
TIXI MLR MLR
comp=Z,4μm,17.0s,MS5.1
KLR Kul'dur 30.64 286 *e*P **P** **10 45 02.2 -4.5**
KLR *e* pP 10 45 16.5 -3.0
KLR pmax pmax
comp=Z,120nm,1.4s,mb5.5
MJAR Matsushiro Arr 33.17 260 P **P** **10 45 28.9 -0.2**
comp=Z,7.6nm,1.0s,mb4.6,baz=52,slow=8.2,SNR=8.1
MJAR ScP ScP 10 51 53.2 +2.5
comp=Z,4.0nm,1.0s,baz=349,slow=1.3,SNR=4.3
MJAR LR LR 10 56 47.2
comp=Z,2μm,20.8s,MS4.7,baz=80,slow=32
MAJO Matsushiro 33.18 260 *e*P **P** **10 45 29.0 -0.1**
comp=Z,672nm,2.9s,mb6.1
MAJO LR LR
comp=Z,2μm,20.0s,MS4.8
MAT Matsushiro 33.18 260 P **P** **10 45 29.3 +0.2**
MAT *e*S **S** **10 50 49.0 +3.9**
MDJ Mudanjiang 34.00 279 P **P** **10 45 35.3 -0.9**
MDJ AP pP 10 45 46.3 -2.8
MDJ XP sP 10 45 51.3 -3.7
MDJ PP PP 10 46 52.3 -1.4
MDJ S **S** **10 50 56.3 -1.4**
MDJ XS sS 10 51 16.1 -3.4
MDJ SCP ScP 10 51 54.6 +1.1
MDJ PCS PcS 10 51 59.1 +0.1
MDJ AMB AMB
comp=Z,15nm,1.3s,mb4.8
MDJ AMB AMB
comp=Z,442nm,5.1s
MDJ LR LR
comp=N,1μm,29.6s
MDJ LR LR
comp=E,761nm,23.3s
MDJ LR LR
comp=Z,2μm,22.4s
MDJ Mudanjiang 34.00 279 *e*P **P** **10 45 34.9 -1.3**
comp=Z,15nm,0.9s,mb4.9
MDJ *e*pP pP 10 45 48.2 -0.9
MDJ LR LR
comp=Z,2μm,21.0s,MS4.8
PGC Sidney 35.57 72 *e*P **P** **10 45 50.6 +1.0**
comp=Z,461nm,1.9s,mb6.1
YKW3 Yellowknife Ar 35.73 46 *e*P **P** **10 45 49.6 -1.2**
YKA Yellowknife Ar 35.75 46 P **P** **10 45 50.0 -1.0**
comp=Z,18nm,0.6s,mb5.2,baz=280,slow=7.7,SNR=87
YKA PcP PcP 10 48 17.5 -0.3
comp=Z,3.1nm,0.7s,baz=282,slow=3.0,SNR=4.8
YKA ScP ScP 10 52 01.1 +1.7
comp=Z,2.9nm,0.5s,baz=286,slow=3.6,SNR=14
YKA Yellowknife Ar 35.75 46 P **P** **10 45 50.0 -1.0**
YKA PcP PcP 10 48 17.5 -0.3
YKA ScP ScP 10 52 01.1 +1.7
YKA Yellowknife Ar 35.75 46 P **P** **10 45 50.0 -1.0**
YKA 10 48 17.5
YKA pmax pmax
comp=Z,18nm,0.6s
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA pmax pmax
comp=N,3.0nm,0.5s
NLWA Neilton Lookou 35.88 74 *e*P **P** **10 45 53.7 +1.3**
comp=N,150nm,1.5s,mb5.7
NLWA LR LR
comp=Z,2μm,20.0s,MS4.9
MBW Mount Baker 36.43 71 P **P** **10 45 57.7 +0.8**
JCW Jim Creek 36.68 71 *e*P **P** **10 45 59.8 +0.7**
BMW Boistfort Moun 36.70 75 *e*P **P** **10 45 59.5 +0.2**
RPW Rockport 36.81 71 *e*P **P** **10 46 00.3 +0.1**
CN2 Changchun 36.98 280 *e*P **P** **10 46 01.1 -0.7**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb4.9
LON Longmire 37.43 74 *e*P **P** **10 46 06.0 +0.5**
comp=Z,24nm,0.6s,mb5.2
WRW Wenatchee Ridg 37.46 71 P **P** **10 46 06.3 +0.6**
CBIJ Chichi jima 37.49 245 LR LR 10 58 12.0
comp=Z,1μm,21.8s,MS4.7,baz=340,slow=31
BOD Bodaibo 37.57 307 *e*P **P** **10 46 05.2 -1.4**
BOD *e* 10 51 50.8
BOD pmax pmax
comp=Z,50nm,1.5s,mb5.0
COR Corvallis 37.59 77 *e*P **P** **10 46 08.4 +1.5**
comp=Z,82nm,0.9s,mb5.5
COR LR LR
comp=Z,3μm,19.0s,MS5.0
NLW Nelson Butte 37.68 71 P **P** **10 46 08.3 +0.7**
HIA Hailar 37.78 291 *e*P **P** **10 46 08.1 -0.3**
comp=Z,98nm,1.3s,mb5.4
HIA *e*pP pP 10 46 20.3 -1.1
HIA LR LR
comp=Z,2μm,20.0s,MS5.0
HIA Hailar 37.78 291 *e*P **P** **10 46 08.1 -0.3**
HIA *e**PP pP 10 46 20.3 -1.1
HIA pmax pmax
comp=Z,98nm,1.3s
HIA MLR MLR
comp=Z,2μm,20.0s
ETW Entiat 37.90 72 *e*P **P** **10 46 10.1 +0.7**
TBM Table Mountain 37.95 72 P **P** **10 46 10.5 +0.6**
WTV Waterville 38.08 71 P **P** **10 46 11.2 +0.2**
EBG Ellensburg 38.09 73 P **P** **10 46 12.0 +0.9**
HOOD Mount Hood Mea 38.23 75 *e*P **P** **10 46 13.2 +1.0**
comp=Z,67nm,0.9s,mb5.4
KBO Bosley Butte 38.28 81 *e*P **P** **10 46 13.8 +1.0**
VFP Flag Point 38.34 75 P **P** **10 46 14.2 +1.0**
EPH Ephrata 38.46 71 P **P** **10 46 14.3 +0.1**
WAH2 Wahluke Slope 38.77 72 P **P** **10 46 17.2 +0.4**
HUMO Hull Mountain 38.85 80 *e*P **P** **10 46 19.0 +1.5**
comp=Z,70nm,1.4s,mb5.2
HUMO LR LR
comp=Z,7μm,22.0s,MS5.4
KRMB Red Mountain 38.86 82 *e*P **P** **10 46 19.2 +1.6**
KRMB *e*pP pP 10 46 32.3 +1.6
RSW Rattlesnake Hi 38.93 73 *e*P **P** **10 46 18.9 +0.8**
PRW Prosser 38.97 73 P **P** **10 46 19.2 +0.8**
OD2 Odessa Site #2 38.97 71 *e*P **P** **10 46 18.2 -0.2**
HAWA Hanford 38.97 73 *e*P **P** **10 46 19.0 +0.6**
comp=Z,316nm,1.8s,mb5.7
HAWA LR LR
comp=Z,5μm,22.0s,MS5.3

H2OWA **Water 39.03 73** P **P** **10 46 19.5 +0.5**
KSRS Korea Array 39.04 270 P **P** **10 46 19.6 +0.4**
comp=Z,12nm,0.8s,mb4.7,baz=58,slow=8.0,SNR=34
KSRS ScP ScP 10 52 16.3 +4.1
comp=Z,1.6nm,0.9s,baz=90,slow=5.4,SNR=4.2
KSRS LR LR 11 04 52.2
comp=Z,385nm,18.0s,MS4.3,baz=95,slow=40
KSRS Korea Array 39.04 270 P **P** **10 46 19.6 +0.4**
KSRS 10 52 16.3
KSRS pmax pmax
comp=Z,13nm,0.9s,mb4.7
KSRS pmax pmax
comp=N,2.0nm,0.9s
KSRS MLR MLR
comp=Z,385nm,18.0s,MS4.3
KS15 Wonju Array Si 39.07 270 *e*P **P** **10 46 20.6 +1.2**
SNY Shenyang 39.21 279 ⇑P **P** **10 46 21.3 +0.8**
SNY AMB AMB
comp=Z,31nm,1.6s,mb4.8
VIPM Ingram Point 39.27 76 P **P** **10 46 21.7 +0.7**
KHMM Horse Mountain 39.34 83 *e*P **P** **10 46 23.7 +2.1**
EDM Edmonton 39.39 60 *e*P **P** **10 46 21.1 -0.8**
NEW Newport 39.49 69 *e*P **P** **10 46 22.6 -0.1**
comp=Z,80nm,1.1s,mb5.4
NEW LR LR
comp=Z,7μm,21.0s,MS5.5
YBH Yreka Blue Hor 39.49 81 P **P** **10 46 23.3 +0.4**
comp=Z,20nm,0.6s,mb5.0,baz=329,slow=3.9,SNR=35
YBH Yreka Blue Hor 39.49 81 *e*P **P** **10 46 24.5 +1.7**
comp=Z,30nm,0.8s,mb5.1
YBH LR LR
comp=Z,7μm,22.0s,MS5.5
LNOR Lincton Mounta 39.98 73 *e*P **P** **10 46 27.1 +0.2**
LNOR Lincton Mounta 39.98 73 P **P** **10 46 27.2 +0.3**
RES Resolute Bay 40.10 24 *e*P **P** **10 46 28.5 +0.9**
comp=Z,2μm,1.4s,mb6.6
RES *e*ScP ScP 10 52 16.4 +0.6
KIPM Iron Peak 40.11 84 *e*P **P** **10 46 28.4 +0.4**
KCPM Cahto Peak 40.12 84 *e*P **P** **10 46 28.6 +0.6**
WDC Whiskeytown Da 40.25 82 *e*P **P** **10 46 30.2 +1.1**
comp=Z,26nm,0.9s,mb5.0
WDC LR LR
comp=Z,3μm,22.0s,MS5.2
HOPS Hopland 40.84 85 PFAKE 10 46 50.0 +16
HOPS LR LR
comp=Z,4μm,20.0s,MS5.2
MOD Modoc 40.88 79 *e*P **P** **10 46 35.2 +0.8**
comp=Z,122nm,1.3s,mb5.4
MOD LR LR
comp=Z,8μm,21.0s,MS5.6
WALA Waterton Lakes 40.97 66 *e*P **P** **10 46 34.9 -0.1**
comp=Z,44nm,0.9s,mb5.1
BSMT Bassoo Peak 41.05 68 P **P** **10 46 35.9 +0.2**
BMO Blue Mountains 41.10 74 *e*P **P** **10 46 36.3 +0.2**
comp=Z,40nm,1.0s,mb5.0
BMO LR LR
comp=Z,7μm,21.0s,MS5.5
NSHM Saint Helena R 41.42 85 *e*P **P** **10 46 38.3 -0.5**
MCCM Marconi Confer 41.48 86 PFAKE 10 46 50.0 +11
MCCM LR LR
comp=Z,4μm,21.0s,MS5.3
WVOR Wild Horse Val 41.61 77 *e*P **P** **10 46 40.8 +0.4**
comp=Z,49nm,0.8s,mb5.2
WVOR LR LR
comp=Z,8μm,21.0s,MS5.6
OHCM Honcut 41.63 83 *e*P **P** **10 46 40.4 -0.2**
CHMT Chamberlain Mo 42.43 69 *e*P **P** **10 46 46.5 -0.5**
PAHR Pah Rah Range 42.72 81 *e*P **P** **10 46 50.0 +0.6**
comp=Z,428nm,2.3s,mb5.8
ALE Alert 42.85 10 P **P** **10 46 50.0 0.0**
comp=Z,173nm,0.6s,mb6.0,SNR=13
CMB Columbia Colle 43.10 84 *e*P **P** **10 46 52.6 +0.1**
comp=Z,87nm,1.8s,mb5.2
CMB LR LR
comp=Z,5μm,22.0s,MS5.4
SAO San Andreas Ge 43.22 86 PFAKE 10 47 00.0 +6.5
SAO LR LR
comp=Z,4μm,21.0s,MS5.2
HRY Holter Researc 43.37 68 *e*P **P** **10 46 54.3 -0.2**
HRY *e*ScP ScP 10 52 37.8 +8.6
WAKR Walker 43.41 83 *e*P **P** **10 46 55.7 +0.7**
LRM Limekiln Ridge 43.48 70 *e*P **P** **10 46 55.1 -0.4**
HLID Hailey 43.55 74 *e*P **P** **10 46 56.4 +0.4**
comp=Z,52nm,0.9s,mb5.3
HLID LR LR
comp=Z,10μm,22.0s,MS5.7
BMN Battle Mountai 43.63 79 *e*P **P** **10 46 57.3 +0.5**
comp=Z,39nm,0.6s,mb5.3
BMN LR LR
comp=Z,5μm,19.0s,MS5.5
DLMT Dillon 43.64 70 *e*P **P** **10 46 56.3 -0.5**
comp=Z,69nm,1.6s,mb5.1
DLMT *e*ScP ScP 10 52 33.7 +3.3
MCMT McKenzie Canyo 43.78 71 *e*P **P** **10 46 58.0 +0.1**
MCMT *e*ScP ScP 10 52 36.8 +5.9
EGMT Eagleton 43.88 66 *e*P **P** **10 46 58.0 -0.6**
comp=Z,44nm,0.9s,mb5.2
EGMT LR LR
comp=Z,14μm,21.0s,MS5.8
BOZ Bozeman (W) 44.06 69 *e*P **P** **10 47 00.2 +0.1**
comp=Z,68nm,0.6s,mb5.5
BOZ LR LR
comp=Z,8μm,20.0s,MS5.6
NVAR Mina Array Bea 44.16 82 P **P** **10 47 01.4 +0.3**
comp=Z,9.3nm,0.6s,mb4.7,baz=291,slow=7.4,SNR=70
NVAR ScP ScP 10 52 36.7 +4.1
comp=Z,1.1nm,0.9s,baz=310,slow=4.6,SNR=4.7
QLMT Earthquake Lak 44.62 70 *e*P **P** **10 47 04.6 -0.1**
QLMT *e*ScP ScP 10 52 40.1 +5.7
MTUM Tungsten Hills 44.66 83 *e*P **P** **10 47 05.7 +0.6**
ELK Elko 44.67 77 *e*P **P** **10 47 05.5 +0.5**
comp=Z,35nm,0.6s,mb5.4
ELK LR LR
comp=Z,8μm,21.0s,MS5.6
PTRM Twissleman Ran 44.70 86 *e*P **P** **10 47 05.5 +0.2**
FFC Flin Flon 44.70 54 PFAKE 10 47 20.0 +15
FFC LR LR
comp=Z,14μm,20.0s,MS5.9
BJI Beijing 44.82 282 P **P** **10 47 06.3 +0.1**
BJI S **S** **10 53 37.8 -2.0**
BJI AMB AMB
comp=Z,39nm,0.8s,mb5.3
BJI AMB AMB
comp=Z,224nm,4.7s
BJI LR LR
comp=N,722nm,21.4s,MS5.0
BJI LR LR
comp=E,2μm,23.7s,MS5.0
BJI LR LR
comp=Z,1μm,30.0s
BJT Baijiatuan 44.83 282 *e*P **P** **10 47 06.7 +0.4**
comp=Z,28nm,0.6s,mb5.3
BJT *e*pP pP 10 47 19.5 -0.2
BJT LR LR
comp=Z,2μm,20.0s,MS5.0
BJT Baijiatuan 44.83 282 *e*P **P** **10 47 06.7 +0.3**
BJT *e**PP pP 10 47 19.5 -0.1
BJT pmax pmax
comp=Z,28nm,0.6s
BJT MLR MLR
comp=Z,2μm,20.0s
YMR Madison River 44.99 70 *e*P **P** **10 47 07.6 0.0**
comp=Z,104nm,0.8s,mb5.7
YMR LR LR
comp=Z,10μm,21.0s,MS5.7
IRK Irkutsk 45.00 302 *e*P **P** **10 47 06.9 -0.6**
IRK pmax pmax
comp=Z,67nm,1.9s,mb5.2
TPH Tonopah 45.05 82 *e*P **P** **10 47 08.5 +0.4**
comp=Z,43nm,0.8s,mb5.3
TPH LR LR
comp=Z,5μm,19.0s,MS5.5
GCMT Greycliff 45.13 68 *e*P **P** **10 47 08.6 0.0**
YNR Norris Junctio 45.13 70 *e*P **P** **10 47 09.2 +0.6**
YNR *e*ScP ScP 10 52 47.0 +11
YFT Old Faithful 45.19 70 *e*P **P** **10 47 10.5 +1.3**
LKWY Lake 45.38 70 *e*P **P** **10 47 12.1 +1.4**
comp=Z,55nm,0.8s,mb5.4
LKWY LR LR
comp=Z,12μm,21.0s,MS5.8
LKWY Lake 45.38 70 *e*P **P** **10 47 12.1 +1.5**
LKWY pmax pmax
comp=Z,55nm,0.8s,mb5.4
LKWY MLR MLR
comp=Z,12μm,21.0s,MS5.8
IMW Indian Meadow 45.44 71 *e*P **P** **10 47 11.7 +0.6**
comp=Z,41nm,0.8s,mb5.3
DCID1 Drake Creek 45.47 72 *e*P **P** **10 47 11.5 +0.1**
comp=Z,96nm,1.8s,mb5.3
RRI2 Red Ridge 45.53 72 *e*P **P** **10 47 12.6 +0.8**
comp=Z,639nm,2.6s,mb6.1
HVU Hansel Valley 45.56 75 *e*P **P** **10 47 12.6 +0.5**
comp=Z,49nm,0.5s,mb5.7
HVU Hansel Valley 45.56 75 *e*P **P** **10 47 12.6 +0.5**
HVU pmax pmax
comp=Z,49nm,0.5s,mb5.7
TLY Talaya 45.63 302 P **P** **10 47 12.6 +0.1**
comp=Z,199nm,0.8s,mb6.1,SNR=7.7
TLY Talaya 45.63 302 *e*P **P** **10 47 12.7 +0.2**
comp=Z,18nm,0.5s,mb5.3
TLY LR LR
comp=Z,4μm,21.0s,MS5.3
TLY Talaya 45.63 302 *e*P **P** **10 47 12.6 +0.1**
TLY *e* pP 10 47 25.5 -0.3
TLY pmax pmax
comp=Z,20nm,0.8s,mb5.1
TLY MLR MLR
comp=Z,3μm,20.0s,MS5.3
MOOW Moose Ponds 45.64 71 *e*P **P** **10 47 12.6 -0.1**
comp=Z,16nm,0.9s,mb5.0
TPAW Teton Pass 45.67 72 *e*P **P** **10 47 13.5 +0.6**
comp=Z,236nm,2.1s,mb5.8
RLMT Red Lodge 45.73 69 *e*P **P** **10 47 13.7 +0.3**
comp=Z,103nm,0.8s,mb5.8
RLMT LR LR
comp=Z,10μm,20.0s,MS5.8
ISA Isabella 45.78 85 *e*P **P** **10 47 13.2 -0.7**
comp=Z,13nm,0.8s,mb4.9
ISA LR LR
comp=Z,4μm,21.0s,MS5.3
ULN Ulaanbaatar 45.78 296 *e*P **P** **10 47 14.0 +0.2**
ULN LR LR
comp=Z,4μm,21.0s,MS5.3
ULN Ulaanbaatar 45.78 296 P **P** **10 47 14.0 +0.3**
comp=Z,57nm,1.2s,mb5.4
REDW Red Top Meadow 45.80 72 *e*P **P** **10 47 14.4 +0.4**
comp=Z,87nm,1.4s,mb5.5
SNOW Snow King Moun 45.80 71 *e*P **P** **10 47 15.3 +1.3**
comp=Z,119nm,1.6s,mb5.6
LOHW Long Hollow 45.80 71 *e*P **P** **10 47 13.6 -0.3**
comp=Z,21nm,0.8s,mb5.1
BGU Big Grassy Mou 45.91 76 *e*P **P** **10 47 14.9 +0.1**
DAC Darwin (Calif) 45.94 84 PFAKE 10 47 30.0 +15
DAC LR LR
comp=Z,4μm,21.0s,MS5.3
AHID Auburn Hatcher 45.99 72 *e*P **P** **10 47 16.2 +0.7**
comp=Z,205nm,1.8s,mb5.8
AHID LR LR
comp=Z,12μm,21.0s,MS5.8
SPUT South Promonto 46.04 75 *e*P **P** **10 47 16.7 +0.9**
SONM Songino Array 46.17 296 P **P** **10 47 17.3 +0.5**
comp=Z,20nm,0.8s,mb5.1,baz=59,slow=8.3,SNR=58
SONM ScP ScP 10 52 42.4 +1.7
comp=Z,3.7nm,0.9s,baz=56,slow=4.0,SNR=8.9
SONM Songino Array 46.17 296 P **P** **10 47 17.3 +0.5**
SONM pmax pmax
comp=Z,21nm,0.8s
SONM pmax pmax
comp=N,4.0nm,0.9s
OSI Osito Adit 46.30 86 *e*P **P** **10 47 18.0 0.0**
comp=N,43nm,0.6s,mb5.5
TPNV Topopah Spring 46.36 82 *e*P **P** **10 47 18.6 +0.1**
comp=N,102nm,0.9s,mb5.8
TPNV LR LR
comp=Z,5μm,21.0s,MS5.4
HWUT Hardware Ranch 46.40 74 *e*P **P** **10 47 18.9 +0.3**
comp=Z,387nm,2.5s,mb5.9
HWUT LR LR
comp=Z,12μm,22.0s,MS5.8
FCC Fort Churchill 46.48 46 *e*P **P** **10 47 17.5 -1.6**
comp=Z,19nm,0.8s,mb5.1
FCC Fort Churchill 46.48 46 *e*P **P** **10 47 17.5 -1.6**
FCC pmax pmax
comp=Z,19nm,0.8s,mb5.1
DUG Dugway 46.48 76 *e*P **P** **10 47 19.7 +0.4**
comp=Z,54nm,0.8s,mb5.5
DUG LR LR
comp=Z,6μm,22.0s,MS5.5
ZAK Zakamensk 46.51 301 ⇑*i*P **P** **10 47 19.7 +0.3**
ZAK pmax pmax
comp=Z,30nm,1.3s,mb5.1
TIA Tai'an 46.59 277 *e*P **P** **10 47 20.3 +0.1**
LAO LASA Array 46.62 65 *e*P **P** **10 47 20.3 -0.1**
comp=Z,402nm,1.8s,mb6.0
LAO LR LR
comp=Z,13μm,21.0s,MS5.8
NOQ North Oquirrh 46.63 75 *e*P **P** **10 47 21.3 +0.8**
comp=Z,90nm,1.2s,mb5.6
SNCC San Nicolas Is 46.69 88 PFAKE 10 47 30.0 +8.9
SNCC LR LR
comp=Z,3μm,21.0s,MS5.2
DGMT Dagmar 46.77 62 *e*P **P** **10 47 20.8 -0.7**
comp=Z,42nm,1.3s,mb5.2
DGMT LR LR
comp=Z,12μm,20.0s,MS5.9
CTU Camp Tracy 46.83 75 *e*P **P** **10 47 21.6 -0.5**
comp=Z,47nm,1.1s,mb5.3
BW06 Boulder Array 46.92 72 *e*P **P** **10 47 22.8 0.0**
comp=Z,102nm,0.6s,mb5.9
BW06 LR LR
comp=Z,10μm,21.0s,MS5.8
PDAR Pinedale Array 46.92 72 P **P** **10 47 22.8 0.0**
comp=Z,99nm,0.5s,mb6.0,baz=314,slow=3.4,SNR=478
PDAR ScP ScP 10 52 47.3 +3.4
comp=Z,1.3nm,0.8s,baz=336,slow=4.2,SNR=3.7
MWC Mount Wilson 46.97 86 *e*P **P** **10 47 23.2 -0.1**
comp=Z,132nm,1.8s,mb5.6
MWC LR LR
comp=Z,5μm,20.0s,MS5.5
MOY Mondy 47.04 303 *e*P **P** **10 47 23.5 0.0**
MOY pmax pmax
comp=Z,8.0nm,2.3s,mb4.2
GSC Goldstone 47.05 84 *e*P **P** **10 47 23.9 -0.1**
comp=Z,47nm,0.8s,mb5.5
GSC LR LR
comp=Z,5μm,22.0s,MS5.4
JLU Jordanelle 47.06 75 *e*P **P** **10 47 24.4 +0.5**
NLU North Lily Min 47.08 76 *e*P **P** **10 47 21.2 -2.8**
HHC Hu-ho-hao-te 47.15 285 *e*P **P** **10 47 25.8 +1.2**
HHC AP pP 10 47 37.9 0.0
HHC XP sP 10 47 43.9 +0.2
HHC PCP PcP 10 48 57.6 +2.1
HHC PP PP 10 49 13.1 -2.4
HHC S **S** **10 54 11.6 -1.7**
HHC XS sS 10 54 31.8 -3.9
HHC SCS ScS 10 57 13.5 -0.5
HHC SS SS 10 57 32.6 -7.9
HHC AMB AMB
comp=Z,25nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,798nm,8.8s
HHC LR LR
comp=N,1μm,17.8s,MS5.1
HHC LR LR
comp=E,2μm,22.6s,MS5.1
HHC LR LR
comp=Z,2μm,20.8s,MS5.0
DAU Daniels Canyon 47.30 75 *e*P **P** **10 47 26.7 +1.0**
MPU Maple Canyon 47.31 76 *e*P **P** **10 47 26.2 +0.4**
comp=Z,29nm,0.7s,mb5.3
MPU LR LR
comp=Z,11μm,21.0s,MS5.8
ARUT Antelope Range 47.57 79 *e*P **P** **10 47 27.5 -0.4**
CCUT Cedar City 47.77 80 *e*P **P** **10 47 29.5 +0.1**
MVU Marysvale 47.88 78 PFAKE 10 47 40.0 +10
MVU LR LR
comp=Z,8μm,21.0s,MS5.6
MSU Marysvale 47.90 78 *e*P **P** **10 47 30.9 +0.5**
NJ2 Nanjing 48.22 271 *e*P **P** **10 47 32.8 -0.2**
NJ2 AP pP 10 47 48.1 +1.7
NJ2 XP sP 10 47 55.0 +2.9
NJ2 PP PP 10 49 28.0 +2.5
NJ2 S **S** **10 54 26.0 -2.7**
NJ2 XS sS 10 54 53.0 +1.9
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
NJ2 AMB AMB
comp=Z,1μm,5.2s
NJ2 LR LR
comp=N,1μm,22.5s,MS5.0
NJ2 LR LR
comp=E,1μm,25.6s,MS5.0

NJ2 LR LR
comp=Z,9μm,25.0s,MS5.7
BTO Baotou 48.23 286 *eP* **P 10 47 33.8 +0.9**
LDFC Landfair 48.26 83 *eP* **P 10 47 32.9 -0.3**
comp=Z,64nm,0.6s,mb5.8
PFO Pinyon Flat Ob 48.38 86 P **P 10 47 33.1 -1.1**
comp=Z,102nm,1.2s,mb5.7,SNR=5.4
PFO Pinyon Flat Ob 48.38 86 P **P 10 47 32.8 -1.4**
comp=Z,6.4nm,0.7s,mb4.7,baz=318,slow=7.0,SNR=18
PFO Pinyon Flat Ob 48.38 86 *eP* **P 10 47 32.8 -1.4**
comp=Z,6.4nm,0.7s,mb4.8
PFO LR LR
comp=Z,4μm,19.0s,MS5.4
SRU San Rafael 48.54 76 *eP* **P 10 47 35.6 +0.2**
comp=Z,72nm,0.5s,mb6.0
SRU San Rafael 48.54 76 *eP* **P 10 47 35.6 +0.3**
SRU pmax pmax
comp=Z,49nm,0.5s,mb5.8
RWWY Rawlins 48.96 71 *eP* **P 10 47 38.0 -0.5**
comp=Z,354nm,1.9s,mb6.1
RSSD Black Hills 49.36 67 *eP* **P 10 47 40.8 -0.7**
comp=Z,18nm,0.7s,mb5.2
RSSD LR LR
comp=Z,11μm,20.0s,MS5.8
GLA Glamis 49.77 85 *eP* **P 10 47 44.6 -0.2**
comp=Z,528nm,2.6s,mb6.1
GLA LR LR
comp=Z,4μm,20.0s,MS5.4
KBS Kingsbay 49.89 357 *eP* **P 10 47 47.7 +2.5**
comp=Z,43nm,0.9s,mb5.5
KBS LR LR
comp=Z,4μm,20.0s,MS5.4
KBS Kingsbay 49.89 357 *eP* **P 10 47 47.7 +2.5**
KBS pmax pmax
comp=Z,43nm,0.9s,mb5.5
KBS MLR MLR
comp=Z,4μm,20.0s,MS5.4
PV10 Paradox Valley 49.90 76 *eP* **P 10 47 46.3 +0.5**
TARA Tarawa 50.10 190 PFAKE 10 48 00.0 +13
TARA LR LR
comp=Z,2μm,21.0s,MS5.0
PHWY Pilot Hill 50.24 71 *eP* **P 10 47 47.9 -0.4**
comp=Z,17nm,0.5s,mb5.3
ULM Lac du Bonnet 50.25 56 P **P 10 47 46.9 -1.4**
comp=Z,6.7nm,0.4s,mb5.0,baz=306,slow=8.4,SNR=6.6
ULM Lac du Bonnet 50.25 56 *eP* **P 10 47 46.3 -1.9**
comp=Z,6.7nm,0.6s,mb4.8
ULM LR LR
comp=Z,11μm,19.0s,MS5.9
WUAZ Wupatki 50.30 80 *eP* **P 10 47 49.1 +0.3**
comp=Z,32nm,0.8s,mb5.4
WUAZ LR LR
comp=Z,4μm,20.0s,MS5.4
PV01 Paradox Valley 50.34 76 *eP* **P 10 47 48.8 -0.3**
SPB4 Spitsbergen Ar 50.46 356 *eP* **P 10 47 48.8 -0.7**
SMCO Snowmass 50.65 74 *eP* **P 10 47 51.2 -0.2**
comp=Z,159nm,2.1s,mb5.6
MVCO Mesa Verde 50.98 77 *eP* **P 10 47 53.7 -0.2**
comp=Z,26nm,0.5s,mb5.4
MVCO LR LR
comp=Z,5μm,20.0s,MS5.6
ISCO Idaho Springs 51.08 72 *eP* **P 10 47 55.0 +0.4**
comp=Z,21nm,0.8s,mb5.1
ISCO LR LR
comp=Z,6μm,21.0s,MS5.6
HVS Khovu-Aksy 51.10 306*c iP* **P 10 47 55.1 +0.5**
HVS pmax pmax
comp=Z,389nm,1.2s,mb6.2
HVS MLR MLR
comp=Z,7μm,20.0s,MS5.7
AGMN Agassiz Refuge 51.41 58 *eP* **P 10 47 55.6 -1.4**
comp=Z,28nm,1.4s,mb5.0
AGMN LR LR
comp=Z,6μm,20.0s,MS5.6
TATO Taipei 51.51 262 PFAKE 10 48 10.0 +12
TATO LR LR
comp=Z,2μm,20.0s,MS5.1
DAG Danmarks Havn 51.68 5⇑*eP* **P 10 47 58.0 -0.6**
DAG pmax pmax
comp=Z,12nm,0.4s,mb5.2
DAG MLR MLR
comp=N,6μm,22.0s
DAG MLR MLR
comp=Z,10μm,22.0s,MS5.8
DAG Danmarks Havn 51.68 5⇑*iP* **P 10 47 58.0 -0.6**
comp=Z,12nm,0.4s,mb5.2
DAG
comp=Z,9μm,22.0s
YHNB Yeheng 51.80 262 PFAKE 10 48 10.0 +10
YHNB LR LR
comp=Z,2μm,22.0s,MS5.0
WHN Wuhan 52.07 273 P **P 10 48 00.5 -1.6**
SDCO Great Sand Dun 52.45 74 *eP* **P 10 48 05.2 +0.3**
comp=Z,29nm,1.0s,mb5.2
SDCO LR LR
comp=Z,7μm,20.0s,MS5.7
OGNE Ogallala 52.48 69 *eP* **P 10 48 05.0 -0.1**
comp=Z,315nm,1.4s,mb6.0
OGNE LR LR
comp=Z,9μm,20.0s,MS5.8
XMAS Kiritimati 52.51 151 PFAKE 10 48 20.0 +15
XMAS LR LR
comp=Z,2μm,19.0s,MS5.2
TUC Tucson 52.79 83 *eP* **P 10 48 07.0 -0.4**
TUC LR LR
comp=Z,3μm,21.0s,MS5.4
XAN Xi'an 53.10 280 P **P 10 48 09.4 -0.3**
XAN AP pP 10 48 22.0 -1.3
XAN XP sP 10 48 27.3 -1.7
XAN PP PP 10 50 10.5 +0.8
XAN S **S 10 55 33.1 -3.1**
XAN XS sS 10 55 54.3 -4.6
XAN AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
XAN AMB AMB
comp=Z,239nm,9.9s
XAN LR LR
comp=N,656nm,24.5s,MS4.9
XAN LR LR
comp=E,1μm,21.9s,MS4.9
XAN LR LR
comp=Z,2μm,26.1s,MS5.0
SUMG Summit 53.56 14 *eP* **P 10 48 13.1 +0.6**
comp=Z,13nm,0.7s,mb5.0
LAZ Ladron 53.65 78 *eP* **P 10 48 13.7 0.0**
ZALV Zalesovo Beam 53.68 313 P **P 10 48 12.8 -0.9**
comp=Z,3.4nm,0.5s,mb4.6,baz=31,slow=8.3,SNR=10
ZALV ScP ScP 10 53 14.2 +1.4
comp=Z,1.9nm,0.9s,baz=22,slow=4.8,SNR=3.7
ZALV Zalesovo Beam 53.68 313 P **P 10 48 12.8 -0.9**
ZALV pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
ZALV pmax pmax
comp=N,2.0nm,0.9s
ANMO Albuquerque 53.70 77 *eP* **P 10 48 13.8 -0.3**
comp=N,15nm,0.9s,mb4.9
ANMO LR LR
comp=Z,5μm,19.0s,MS5.6
ANMO Albuquerque 53.70 77*d iP* **P 10 48 14.0 -0.1**
ECSD EROS,Sioux Fal 53.82 63 *eP* **P 10 48 13.2 -1.7**
comp=Z,6.8nm,0.4s,mb4.9
ECSD LR LR
comp=Z,15μm,20.0s,MS6.0
NVS Novosibirsk 53.84 315 *eP* **P 10 48 13.3 -1.5**
NVS *e* 10 49 15.8
NVS *eS* **S 10 55 41.1 -4.6**
NVS *e* 10 57 50.6
NVS pmax pmax
comp=N,62nm,2.5s
NVS pmax pmax
comp=Z,108nm,2.5s,mb5.3
NVS pmax pmax
comp=E,51nm,2.0s
NVS smax
comp=N,38nm,2.3s
LENM Lemitar 53.91 79 *eP* **P 10 48 16.2 +0.6**
EYMN Ely 53.94 56 *eP* **P 10 48 14.6 -1.1**
comp=N,77nm,1.4s,mb5.4
EYMN LR LR
comp=Z,6μm,20.0s,MS5.6
LPM Los Pinos Moun 54.02 78 *eP* **P 10 48 16.7 +0.3**
BNM Barren Site 54.13 78 *eP* **P 10 48 17.3 +0.1**
LZH Lanzhou 54.84 286 ⇓P **P 10 48 23.5 +1.1**
LZH PP PP 10 50 28.0 +2.7
LZH *eS* **S 10 55 55.0 -4.8**
LZH XS sS 10 56 23.3 +0.7
LZH SS SS 10 59 40.0 -3.1
LZH AMB AMB
comp=Z,61nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,290nm,6.0s
LZH LR LR
comp=N,2μm,17.4s
LZH LR LR
comp=Z,2μm,19.4s,MS5.3
GTA Gaotai 55.06 291 *eP* **P 10 48 24.1 +0.2**
GTA AP pP 10 48 37.9 +0.4
GTA XP sP 10 48 46.5 +3.3
GTA PCP PcP 10 49 25.6 +0.7
GTA PP PP 10 50 33.0 +5.9
GTA SCP ScP 10 53 19.6 +0.5
GTA S **S 10 56 05.5 +3.0**
GTA XS sS 10 56 25.5 +0.1
GTA SCS ScS 10 58 08.5 0.0
GTA AMB AMB
comp=Z,18nm,1.0s,mb5.1
GTA AMB AMB
comp=Z,808nm,7.8s
GTA LR LR
comp=N,1μm,17.4s,MS5.2
GTA LR LR
comp=E,1μm,18.9s,MS5.2
GTA LR LR
comp=Z,2μm,19.2s,MS5.1
CBKS Cedar Bluff 55.20 70 *eP* **P 10 48 25.0 +0.1**
comp=Z,152nm,0.5s,mb6.3
CBKS *ep*P pP 10 48 38.3 -0.3
CBKS LR LR
comp=Z,6μm,21.0s,MS5.6
SFJD Kangerlussuaq 55.99 22 PFAKE 10 48 40.0 +10
SFJD LR LR
comp=Z,6μm,20.0s,MS5.7
AMTX Amarillo 56.66 74 *eP* **P 10 48 35.1 -0.3**
comp=Z,28nm,0.6s,mb5.5
AMTX LR LR
comp=Z,6μm,20.0s,MS5.7
KSU1 Kansas State U 56.84 67 *eP* **P 10 48 35.6 -1.0**
comp=Z,49nm,0.5s,mb5.8
KSU1 LR LR
comp=Z,4μm,20.0s,MS5.6
GDL2 Guadalupe Moun 56.84 79 *eP* **P 10 48 36.9 +0.1**
SCIA State Center 56.91 63 *eP* **P 10 48 36.1 -1.0**
comp=Z,44nm,0.4s,mb5.8
SCIA LR LR
comp=Z,12μm,20.0s,MS6.0
KEV Kevo 57.73 349 *ep* **P 10 48 43.6 +1.1**
comp=Z,2.3nm,0.3s,mb4.7
KEV Kevo 57.73 349 PFAKE 10 48 50.0 +7.5
KEV LR LR
comp=Z,4μm,20.0s,MS5.6
KEV Kevo 57.73 349 *eP* **P 10 48 43.6 +1.1**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
JFWS Jewell Farm 57.88 60 *eP* **P 10 48 42.6 -1.3**
comp=Z,38nm,0.7s,mb5.5
JFWS LR LR
comp=Z,8μm,19.0s,MS5.8
ARCES ARCESS Array B 58.11 350 P **P 10 48 44.3 -0.9**
comp=Z,4.4nm,0.4s,mb4.9,baz=28,slow=8.3,SNR=34
ARCES ARCESS Array B 58.11 350 P **P 10 48 44.3 -0.8**
ARCES pmax pmax
comp=Z,4.0nm,0.4s
CD2 Chengdu 58.41 281 *eP* **P 10 48 48.3 +0.5**
CD2 AP pP 10 49 01.0 -0.6
CD2 XP sP 10 49 06.5 -0.7
CD2 PCP PcP 10 49 38.5 +0.4
CD2 PP PP 10 50 59.5 +2.3
CD2 PCS PcS 10 53 38.6 -1.2
CD2 S **S 10 56 46.3 -0.8**
CD2 XS sS 10 57 07.6 -2.5
CD2 SCS ScS 10 58 30.4 -2.7
CD2 SS SS 11 00 40.3 +0.9
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,140nm,5.2s
CD2 LR LR
comp=N,1μm,16.8s,MS5.1
CD2 LR LR
comp=E,750nm,16.8s,MS5.1
CD2 LR LR
comp=Z,1μm,16.8s,MS5.1
LVZ Lovozero 58.41 345 P **P 10 48 46.4 -0.9**
comp=Z,412nm,1.4s,mb6.3,SNR=6.0
LVZ Lovozero 58.41 345 PFAKE 10 49 00.0 +13
LVZ LR LR
comp=Z,6μm,20.0s,MS5.7
LVZ Lovozero 58.41 345*d iP* **P 10 48 46.2 -1.1**
LVZ pmax pmax
comp=Z,84nm,1.1s,mb5.7
LVZ MLR MLR
comp=Z,2μm,19.0s,MS5.2
WMOK Wichita Mounta 58.50 73 *eP* **P 10 48 48.2 -0.2**
comp=Z,21nm,0.6s,mb5.3
WMOK LR LR
comp=Z,5μm,20.0s,MS5.7
KURK Kurchatov 58.67 313 P **P 10 48 49.0 -0.3**
comp=Z,264nm,0.6s,mb6.4,SNR=26
KURK Kurchatov 58.67 313 P **P 10 48 50.0 +0.6**
comp=Z,18nm,0.6s,mb5.3,baz=43,slow=6.5,SNR=59
KURK Kurchatov 58.67 313 *eP* **P 10 48 48.5 -0.8**
comp=Z,66nm,1.0s,mb5.6
KURK *eS* **S 10 56 50.3 +0.4**
KURK LR LR
comp=Z,4μm,22.0s,MS5.5
KURK Kurchatov 58.67 313*c iP* **P 10 48 49.1 -0.2**
KURK pmax pmax
comp=Z,53nm,1.3s,mb5.4
KURK MLR MLR
comp=Z,4μm,23.0s,MS5.4
WMQ Urumqi 58.91 302 P **P 10 48 53.0 +1.9**
WMQ AP pP 10 49 06.0 +1.2
WMQ XP sP 10 49 11.0 +0.5
WMQ PP PP 10 51 05.0 +3.8
WMQ S **S 10 56 54.0 +0.9**
WMQ SCS ScS 10 58 35.0 -1.4
WMQ SS SS 11 00 49.0 +2.5
WMQ AMB AMB
comp=Z,45nm,1.1s,mb5.4
WMQ AMB AMB
comp=Z,217nm,5.0s
WMQ LR LR
comp=N,4μm,18.0s,MS5.7
WMQ LR LR
comp=E,4μm,20.0s,MS5.7
WMQ LR LR
comp=Z,5μm,20.0s,MS5.6
APA Apatity 58.91 346⇓*iP* **P 10 48 50.0 -0.7**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.0
TXAR Lajitas Array 59.26 80 P **P 10 48 53.1 -0.6**
comp=Z,10nm,0.7s,mb5.0,baz=301,slow=4.6,SNR=30
TXAR Lajitas Array 59.26 80 P **P 10 48 53.1 -0.6**
TXAR pmax pmax
comp=Z,10.0nm,0.7s
FUNA Funafuti 59.54 181 PFAKE 10 49 10.0 +14
FUNA LR LR
comp=Z,5μm,19.0s,MS5.7
GLMI Grayling 59.57 55 PFAKE 10 49 10.0 +14
GLMI LR LR
comp=Z,5μm,19.0s,MS5.6
MK31 Makanchi Array 59.64 308 *eP* **P 10 48 55.2 -0.9**
MK31 Makanchi Array 59.64 308 *iP* **P 10 48 55.2 -0.9**
MK31 pmax pmax
comp=Z,13nm,0.4s,mb5.3
MKAR Makanchi Array 59.64 308 P **P 10 48 55.4 -0.7**
comp=Z,13nm,0.4s,mb5.3,baz=51,slow=6.0,SNR=213
MKAR Makanchi Array 59.64 308 P **P 10 48 55.4 -0.7**
MKAR pmax pmax
comp=Z,13nm,0.4s
GYA Guiyang 59.74 275⇓*iP* **P 10 48 56.5 -0.6**
GYA AP pP 10 49 12.5 +1.7
GYA XP sP 10 49 19.6 +3.1
GYA PCP PcP 10 49 43.0 -0.5
GYA SCP ScP 10 53 38.0 -2.0
GYA PCS PcS 10 53 44.8 -1.0
GYA S **S 10 56 57.9 -6.4**
GYA XS sS 10 57 25.5 -1.9
GYA SS SS 11 00 54.6 -5.8
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,300nm,6.6s
GYA LR LR
comp=N,590nm,18.2s,MS5.0
GYA LR LR
comp=E,740nm,17.6s,MS5.0
GYA LR LR
comp=Z,1μm,20.0s,MS5.0
HDIL Hopedale 60.00 62 *eP* **P 10 48 57.7 -1.0**
comp=Z,85nm,0.5s,mb6.0
HDIL LR LR
comp=Z,4μm,19.0s,MS5.6
SCHQ Schefferville 60.47 38 P **P 10 48 59.0 -2.6**
comp=Z,15nm,0.6s,mb5.2,baz=349,slow=8.0,SNR=20
SCHQ Schefferville 60.47 38 *eP* **P 10 49 00.9 -0.7**
comp=Z,40nm,1.0s,mb5.4
SCHQ LR LR
comp=Z,4μm,19.0s,MS5.6
VOSK Vostochnaya 60.58 319 P **P 10 49 02.7 +0.3**
VOSK pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
BVA0 Borovoye Array 60.60 319 *i* P **P 10 49 02.0 -0.5**
BVA0 pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BVAR Borovoye Array 60.60 319 P **P 10 49 02.0 -0.6**
comp=Z,9.1nm,0.6s,mb5.1,baz=55,slow=6.2,SNR=42
BVAR Borovoye Array 60.60 319 P **P 10 49 02.0 -0.5**
BVAR pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 60.62 319 P **P 10 49 01.5 -1.1**
comp=Z,146nm,1.1s,mb6.0,SNR=9.9
BRVK Borovoye 60.62 319 *eP* **P 10 49 03.2 +0.6**
comp=Z,25nm,0.9s,mb5.3
BRVK LR LR
comp=Z,5μm,22.0s,MS5.6
BRVK Borovoye 60.62 319 *eP* **P 10 49 03.3 +0.7**
BRVK pmax pmax
comp=Z,25nm,0.9s,mb5.3
BRVK MLR MLR
comp=Z,5μm,22.0s,MS5.6
CCM Cathedral Cave 60.63 65 *eP* **P 10 49 01.3 -1.7**
CCM LR LR
comp=Z,7μm,19.0s,MS5.8
SLM Saint Louis 60.80 64 *eP* **P 10 49 03.4 -0.8**
comp=Z,52nm,0.6s,mb5.8
JCT Junction City 60.84 77 *eP* **P 10 49 03.3 -1.2**
comp=Z,18nm,0.5s,mb5.5
JCT LR LR
comp=Z,2μm,20.0s,MS5.3
FVM French Village 61.15 64 *eP* **P 10 49 05.2 -1.3**
comp=Z,43nm,0.5s,mb5.8
SVE Sverdlovsk 61.38 327 *eP* **P 10 49 08.2 +0.5**
SVE pmax pmax
comp=Z,39nm,1.6s,mb5.3
SVE MLR MLR
comp=Z,4μm,20.0s,MS5.5
MIAR Mount Ida 61.73 69 *eP* **P 10 49 09.9 -0.5**
comp=Z,43nm,0.7s,mb5.7
MIAR LR LR
comp=Z,5μm,19.0s,MS5.7
AAM Ann Arbor 61.83 57 PFAKE 10 49 20.0 +9.0
AAM LR LR
comp=Z,3μm,19.0s,MS5.5
OLIL Olney 61.93 62 *eP* **P 10 49 11.1 -0.7**
comp=Z,60nm,0.7s,mb5.8
SIUC Southern Illin 62.02 64 *eP* **P 10 49 11.6 -0.8**
comp=Z,24nm,0.5s,mb5.6
UALR University of 62.29 68 *eP* **P 10 49 13.5 -0.8**
comp=Z,42nm,0.8s,mb5.6
ARU Arti 62.39 328 *eP* **P 10 49 13.7 -0.9**
comp=Z,21nm,0.8s,mb5.3
ARU *ep*P pP 10 49 25.4 -3.1
ARU LR LR
comp=Z,3μm,21.0s,MS5.4
ARU Arti 62.39 328*d iP* **P 10 49 14.0 -0.6**
ARU *e* 10 51 28.4
ARU *eS* **S 10 57 34.7 -2.5**
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.8
PARMO Parma 62.45 65 *eP* **P 10 49 14.2 -1.1**
BLO Bloomington 62.49 61 *eP* **P 10 49 14.5 -1.1**
comp=Z,26nm,0.5s,mb5.6
USIN University of 62.71 63 *eP* **P 10 49 16.4 -0.6**
comp=Z,99nm,0.6s,mb6.1
HBAR Harrisburg 62.72 67 *eP* **P 10 49 16.5 -0.5**
GNAR Gosnell 62.80 66 *eP* **P 10 49 15.8 -1.8**
comp=Z,488nm,0.5s
HNR Honiara 62.94 203 PFAKE 10 49 30.0 +11
HNR LR LR
comp=Z,2μm,20.0s,MS5.2
NATX Nacogdoches 63.05 72 *eP* **P 10 49 19.7 +0.4**
comp=Z,39nm,0.9s,mb5.5
NATX LR LR
comp=Z,3μm,20.0s,MS5.5
BORG Borgarnes 63.13 10 PFAKE 10 49 30.0 +11
BORG LR LR
comp=Z,1μm,19.0s,MS5.1
KMI Kunming 63.15 277 P **P 10 49 20.8 +0.7**
KMI AP pP 10 49 38.8 +4.8
KMI PP PP 10 51 41.5 +2.4
KMI S **S 10 57 45.4 -2.2**
KMI SS SS 11 01 53.6 -0.2
KMI AMB AMB
comp=Z,11nm,1.0s,mb4.9
KMI AMB AMB
comp=Z,196nm,4.0s
KMI LR LR
comp=N,729nm,15.0s,MS5.1
KMI LR LR
comp=E,570nm,14.1s,MS5.1
KMI LR LR
comp=Z,1μm,24.7s
QIZ Qiongzhong 63.16 267 PFAKE 10 49 30.0 +10
QIZ LR LR
comp=Z,984nm,20.0s,MS5.0
UTMT University of 63.19 65 *eP* **P 10 49 19.3 -0.8**
comp=Z,184nm,1.0s,mb6.2
UTMT *ep*P pP 10 49 37.9 +3.9
WCI Wyandotte Cave 63.29 62 *eP* **P 10 49 19.2 -1.6**
WCI LR LR
comp=Z,2μm,19.0s,MS5.2
MET Memphis--Engin 63.44 66 *eP* **P 10 49 22.1 +0.2**
JOF Joensuu 63.56 345 *ep* **P 10 49 20.9 -1.3**
comp=Z,7.1nm,0.4s,mb5.0
JOF Joensuu 63.56 345 *eP* **P 10 49 20.9 -1.3**
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
HKT Hockley 63.63 74 *eP* **P 10 49 23.6 +0.4**
comp=Z,112nm,1.8s,mb5.6
HKT LR LR
comp=Z,5μm,19.0s,MS5.7
ACSO Alum Creek Sta 63.66 58 *eP* **P 10 49 23.0 -0.3**
comp=Z,14nm,0.6s,mb5.2
ACSO LR LR
comp=Z,1μm,19.0s,MS5.1
ERPA Erie 63.87 55 PFAKE 10 49 40.0 +15
ERPA LR LR
comp=Z,2μm,20.0s,MS5.4
KLMR Klimovskoe 63.89 340 P **P 10 49 21.9 -2.5**
KLMR pmax pmax
comp=Z,46nm,1.3s,mb5.3
WVT Waverly 63.92 64 *eP* **P 10 49 24.2 -0.8**
comp=Z,20nm,0.6s,mb5.3
WVT LR LR
comp=Z,5μm,20.0s,MS5.7
WVT Waverly 63.92 64 *eP* **P 10 49 24.2 -0.8**
WVT pmax pmax
comp=Z,20nm,0.6s,mb5.3
WVT MLR MLR
comp=Z,5μm,20.0s,MS5.7
KVTX Kingsville 64.10 78 PFAKE 10 49 40.0 +14
KVTX LR LR
comp=Z,4μm,20.0s,MS5.6
ALLY Alegheny Colle 64.13 55 *eP* **P 10 49 26.9 +0.6**
comp=Z,35nm,0.6s,mb5.6
OXF Oxford 64.18 67 *eP* **P 10 49 25.9 -0.8**
comp=Z,239nm,1.0s,mb6.2
OXF LR LR
comp=Z,3μm,20.0s,MS5.5
OXF Oxford 64.18 67 *eP* **P 10 49 25.9 -0.8**
OXF pmax pmax
comp=Z,239nm,1.0s,mb6.2
OXF MLR MLR
comp=Z,3μm,20.0s,MS5.5
LONY Lake Ozonia 64.72 50 PFAKE 10 49 40.0 +10
LONY LR LR
comp=Z,3μm,19.0s,MS5.5

FRNY **Flat Rock** 65.03 49 *e*P P 10 49 30.5 -1.6
comp=Z,6.5nm,0.6s,mb4.8
KAF **Kangasniemi** 65.10 347 *e*p P 10 49 30.8 -1.5
comp=Z,5.7nm,0.4s,mb5.0,baz=15,slow=5.8
KAF **Kangasniemi** 65.10 347 *e*P P 10 49 30.8 -1.5
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VBMS **Vicksburg** 65.18 69 *e*P P 10 49 33.5 +0.2
comp=Z,35nm,0.5s,mb5.7
VBMS *e*pP pP 10 49 46.6 -0.6
VBMS LR LR
comp=Z,3μm,20.0s,MS5.5
AFI **Afiamalu** 65.26 171 PFAKE 10 49 50.0 +16
AFI LR LR
comp=Z,1μm,20.0s,MS5.2
NCB **Newcomb** 65.37 50 *e*P P 10 49 33.5 -0.9
comp=Z,10nm,0.6s,mb5.0
NCB LR LR
comp=Z,2μm,20.0s,MS5.4
SWET **Sewanee** 65.65 64 *e*P P 10 49 35.7 -0.6
TKM2 **Tokmak 2** 65.73 309 *e*P P 10 49 37.3 +0.6
comp=Z,53nm,1.1s,mb5.5
TKM2 LR LR
comp=Z,3μm,22.0s,MS5.4
TKM2 **Tokmak 2** 65.73 309 *e*P P 10 49 37.3 +0.6
TKM2 pmax pmax
comp=Z,53nm,1.1s,mb5.5
TKM2 MLR MLR
comp=Z,3μm,22.0s,MS5.4
TKM2 **Tokmak 2** 65.73 309 P P 10 49 37.5 +0.8
SNR=39
MCWV **Mont Chateau** 65.73 57 PFAKE 10 49 50.0 +13
MCWV LR LR
comp=Z,3μm,19.0s,MS5.5
BINY **Binghamton** 65.83 52 *e*P P 10 49 37.4 0.0
comp=Z,20nm,0.5s,mb5.4
BINY LR LR
comp=Z,2μm,20.0s,MS5.3
MDV **Middlebury** 65.85 49 *e*P P 10 49 37.3 -0.2
ULHL **Ulahol** 65.92 308 P P 10 49 38.2 +0.3
SNR=28
USP **Ospenovka** 66.01 310 P P 10 49 39.1 +0.7
SNR=48
TZTN **Tazewell** 66.02 61 *e*P P 10 49 39.1 +0.5
comp=Z,22nm,0.7s,mb5.3
TZTN LR LR
comp=Z,3μm,19.0s,MS5.6
SSPA **Standing Stone** 66.03 55 *e*P P 10 49 37.5 -1.1
comp=Z,16nm,0.6s,mb5.2
SSPA LR LR
comp=Z,2μm,19.0s,MS5.4
ACCN **Adirondack Com** 66.08 50 *e*P P 10 49 38.2 -0.7
comp=Z,14nm,0.6s,mb5.2
CHMS **Chumysh** 66.09 309 P P 10 49 39.5 +0.6
SNR=10
KBK **Karagaybulak** 66.25 309 P P 10 49 41.0 +1.0
SNR=12
LBNH **Lisbon** 66.26 48 PFAKE 10 49 50.0 +10
LBNH LR LR
comp=Z,3μm,20.0s,MS5.5
CPCT **Cooper Cave** 66.27 63 *e*P P 10 49 39.4 -0.9
FRU **Bishkek** 66.28 309⇑ *e*P P 10 49 41.0 +0.8
FRU pmax pmax
comp=Z,290nm,2.0s,mb6.0
FRU MLR MLR
comp=Z,2μm,22.0s,MS5.3
SWI **Sorong** 66.38 235 P P 10 49 40.9 -0.2
comp=Z,84nm,1.0s,mb5.7
AAK **Ala-Archa** 66.48 309 P P 10 49 42.5 +1.0
comp=Z,224nm,0.6s,mb6.4,SNR=24
AAK **Ala-Archa** 66.48 309 P P 10 49 42.3 +0.8
SNR=30
TKL **Tuckaleechee C** 66.54 62 *e*P P 10 49 41.2 -0.7
TKL **Tuckaleechee C** 66.54 62 P P 10 49 41.6 -0.4
LRAL **Lakeview Retre** 66.63 66 *e*P P 10 49 41.2 -1.4
comp=Z,31nm,0.8s,mb5.4
LRAL LR LR
comp=Z,3μm,19.0s,MS5.5
PKME **Peaks-Kenny Pk** 66.70 46 PFAKE 10 50 00.0 +17
PKME LR LR
comp=Z,2μm,19.0s,MS5.4
UCH **Uchtor** 66.78 309 *e*P P 10 49 45.2 +1.8
comp=Z,49nm,1.6s,mb5.3
UCH *e*pP pP 10 49 58.4 +1.0
UCH LR LR
comp=Z,792nm,21.0s,MS4.9
EKS2 **Erkin-Say** 66.81 310 *e*P P 10 49 44.5 +0.9
comp=Z,47nm,0.8s,mb5.6
EKS2 *e*pP pP 10 49 57.7 +0.2
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.4
EKS2 **Erkin-Say** 66.81 310 P P 10 49 44.7 +1.1
SNR=18
PMG **Port Moresby** 66.84 216 PFAKE 10 50 00.0 +16
PMG LR LR
comp=Z,2μm,21.0s,MS5.2
LSA **Lhasa** 66.92 289 *e*P P 10 49 45.9 +1.4
comp=Z,27nm,0.8s,mb5.3
LSA *e*pP pP 10 49 59.2 +0.8
LSA LR LR
comp=Z,1μm,21.0s,MS5.1
LSA **Lhasa** 66.92 289 *e*P P 10 49 45.9 +1.4
LSA *e**PP pP 10 49 59.2 +0.7
LSA pmax pmax
comp=Z,27nm,0.8s,mb5.3
LSA MLR MLR
comp=Z,1μm,21.0s,MS5.1
ELN **Prospectdale** 67.04 59 *e*P P 10 49 45.1 0.0
BLA **Blacksburg** 67.23 59 *e*P P 10 49 46.4 +0.1
comp=Z,24nm,0.7s,mb5.3
BLA LR LR
comp=Z,2μm,19.0s,MS5.4
BLA **Blacksburg** 67.23 59 *e*P P 10 49 46.4 +0.1
BLA pmax pmax
comp=Z,24nm,0.7s,mb5.3
BLA MLR MLR
comp=Z,2μm,19.0s,MS5.4
AML **Almayashu** 67.25 309 *e*P P 10 49 47.8 +1.4
comp=Z,26nm,0.6s,mb5.5
AML LR LR
comp=Z,2μm,21.0s,MS5.3
AML **Almayashu** 67.25 309 P P 10 49 48.3 +1.9
SNR=13
MVL **Millersville** 67.29 54 *e*P P 10 49 45.9 -0.8
comp=Z,16nm,0.7s,mb5.2
LUPA **Lehigh Univers** 67.33 53 *e*P P 10 49 46.3 -0.7
AKTK **Aktyubinsk** 67.44 324 P P 10 49 46.9 -0.5
AKTO **Aktyubinsk** 67.44 324 P P 10 49 46.9 -0.5
comp=Z,4.6nm,0.4s,mb4.8,baz=59,slow=7.0,SNR=22
AKTO **Aktyubinsk** 67.44 324 P P 10 49 46.9 -0.5
AKTO pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
NOA **NORSAR Array B** 67.71 354 P P 10 49 48.0 -1.0
comp=Z,29nm,1.0s,mb5.3,baz=7.8,slow=6.3,SNR=45
NOA **NORSAR Array B** 67.71 354 P P 10 49 48.0 -1.0
NOA pmax pmax
comp=Z,29nm,1.0s
PAL **Palisades** 67.75 52 *e*P P 10 49 48.6 -1.0
comp=Z,26nm,0.6s,mb5.4
CPNY **Central Park** 67.89 52 *e*P P 10 49 49.7 -0.8
comp=Z,37nm,0.7s,mb5.5
CPNY *e*pP pP 10 50 02.1 -2.3
WES **Weston** 67.96 49 *e*P P 10 49 49.8 -1.1
comp=Z,30nm,0.6s,mb5.5
WES LR LR
comp=Z,3μm,20.0s,MS5.5
WES **Weston** 67.96 49 *e*P P 10 49 49.8 -1.1
WES pmax pmax
comp=Z,30nm,0.6s,mb5.5
WES MLR MLR
comp=Z,3μm,20.0s,MS5.5
KK31 **Karatay Array** 68.03 312 *i* P P 10 49 51.3 0.0
KK31 pmax pmax
comp=Z,11nm,0.5s,mb5.1
BRAL **Brewton** 68.07 68 *e*P P 10 49 50.7 -1.0
comp=Z,128nm,1.1s,mb5.9
BRAL LR LR
comp=Z,2μm,19.0s,MS5.5
KSH **Kashi** 68.09 306 *e*P P 10 49 53.4 +1.6
KSH *e*AP pP 10 50 09.8 +4.0
KSH *e*PCP PcP 10 50 20.3 +2.8
KSH *e*PP PP 10 52 24.8 +2.9
KSH *e*SCP 10 54 17.1
KSH *e*PCS 10 54 23.6
KSH *e*S S 10 58 44.3 -3.2
KSH *e*XS sS 10 59 12.0 +1.0
KSH *e*SCS ScS 10 59 42.5 -4.0
KSH *e*SS SS 11 03 07.3 -2.5
KSH AMB AMB
comp=Z,342nm,1.1s,mb6.3
KSH AMB AMB
comp=Z,2μm,6.1s
KSH LR LR
comp=N,4μm,16.0s,MS5.9
KSH LR LR
comp=E,5μm,17.2s,MS5.9
KSH LR LR
comp=Z,5μm,15.9s,MS5.8
CBN **Corbin** 68.10 56 PFAKE 10 50 00.0 +8.2
CBN LR LR
comp=Z,2μm,19.0s,MS5.3
BRYW **Bryant College** 68.22 50 *e*P P 10 49 52.3 -0.2
comp=Z,124nm,1.2s,mb5.8
GOGA **Godfrey** 68.36 63 *e*P P 10 49 52.3 -1.2
comp=Z,25nm,0.9s,mb5.2
GOGA LR LR
comp=Z,4μm,19.0s,MS5.7
GOGA **Godfrey** 68.36 63 *e*P P 10 49 52.3 -1.2
GOGA pmax pmax
comp=Z,25nm,0.9s,mb5.2
GOGA MLR MLR
comp=Z,4μm,19.0s,MS5.7
VSU **Vasula** 68.53 345 *c i*P P 10 49 53.0 -1.1
VSU pmax pmax
comp=Z,21nm,0.7s,mb5.2
VSU MLR MLR
comp=Z,2μm,16.0s,MS5.3
MYLDM **Lahad Datu** 68.53 251 P P 10 49 57.1 +2.3
JSC **Jenkinsville** 68.94 61 *e*P P 10 49 56.8 -0.3
JSC **Jenkinsville** 68.94 61 P P 10 49 56.9 -0.2
MOS **Moscow** 68.96 338 *e*P P 10 49 53.1 -3.8
MOS *e* pP 10 50 03.5 -7.4
MOS pmax pmax
comp=Z,66nm,1.0s,mb5.5
MOS MLR MLR
comp=Z,2μm,21.0s,MS5.4
NANT **Nan** 69.07 274 P P 10 49 55.0 -3.1
KONO **Kongsberg** 69.19 355 *e*P P 10 49 59.2 +1.0
comp=Z,37nm,1.0s,mb5.3
KONO LR LR
comp=Z,2μm,19.0s,MS5.3
KKM **Kota Kinabalu** 69.21 253 PFAKE 10 50 10.0 +11
KKM LR LR
comp=Z,1μm,21.0s,MS5.2
SHL **Shillong** 69.51 285 *e*P P 10 50 00.0 -0.8
SHL AMb AMB 10 50 10.6
comp=Z,98nm,1.5s,mb5.5
SHL *e*S S 10 59 05.0 +0.3
OBN **Obninsk** 69.77 339 PFAKE 10 50 10.0 +8.1
OBN LR LR
comp=Z,3μm,21.0s,MS5.5
OBN **Obninsk** 69.77 339⇑ *i*P P 10 50 01.5 -0.4
OBN *e* 10 52 33.4
OBN *e*S S 10 59 00.9 -6.0
OBN pmax pmax
comp=Z,52nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,3μm,23.0s,MS5.5
COW **Cow Castle Cre** 69.92 62 *e*P P 10 50 03.4 +0.2
CNNC **Cliffs of the** 70.06 58 PFAKE 10 50 20.0 +16
CNNC LR LR
comp=Z,2μm,20.0s,MS5.4
CHG **Chiang Mai** 70.16 275 ⇑P P 10 50 04.3 -0.5
comp=Z,17nm,1.0s,mb4.9
CHTO **Chiang Mai** 70.16 275 *e*P P 10 50 04.4 -0.5
comp=Z,39nm,1.5s,mb5.1
CHTO LR LR
comp=Z,1μm,20.0s,MS5.1
CHTO **Chiang Mai** 70.16 275 P P 10 50 03.6 -1.2
comp=Z,18nm,1.7s,mb4.7
NHSC **New Hope** 70.42 61 *e*P P 10 50 06.3 0.0
comp=Z,359nm,1.6s,mb6.0
NHSC LR LR
comp=Z,3μm,21.0s,MS5.5
CM31 **Chiang Mai Arr** 70.43 275 *e*P P 10 50 05.7 -0.7
comp=Z,11nm,1.0s,mb4.8
CM31 LR LR
comp=Z,786nm,19.0s,MS5.0
CMAR **Chiang Mai Arr** 70.43 275 P P 10 50 05.8 -0.7
comp=Z,7.1nm,0.8s,mb4.7,baz=27,slow=6.8,SNR=34
CMAR **Chiang Mai Arr** 70.43 275 P P 10 50 05.8 -0.7
CMAR pmax pmax
comp=Z,7.0nm,0.8s
TAPN **Taplejung** 70.69 290 *e*P P 10 50 08.5 +0.5
comp=Z,158nm,0.8s,mb6.0
ODAN **Odare** 71.24 290 *e*P P 10 50 12.4 +1.1
comp=Z,88nm,1.0s,mb5.6
GUN **Gumba** 71.35 291 *e*P P 10 50 12.6 +0.7
comp=Z,276nm,0.9s,mb6.2
JIRN **Jiri** 71.35 291 *e*P P 10 50 12.8 +0.8
comp=Z,188nm,0.8s,mb6.0
MCD **Coleburn Disti** 71.49 2 *e*P P 10 50 12.5 +0.2
MDO **Dochfour** 71.60 3 *e*P P 10 50 13.5 +0.5
RAMN **Ramite** 71.64 290 *e*P P 10 50 14.0 +0.3
comp=Z,160nm,0.8s,mb6.0
KKN **Kakani** 71.79 292 *e*P P 10 50 14.9 +0.3
comp=Z,68nm,0.5s,mb5.9
PKI **Pulchoki** 71.88 291 *e*P P 10 50 15.4 +0.3
GKN **Gorkha** 72.00 292 *e*P P 10 50 15.8 -0.1
comp=Z,110nm,0.9s,mb5.8
DMN **Daman** 72.03 292 *e*P P 10 50 17.3 +1.3
comp=Z,110nm,1.1s,mb5.7
DANN **Dangsing** 72.25 293 *e*P P 10 50 17.8 +0.4
comp=Z,156nm,0.9s,mb5.9
COEN **Coen** 72.52 218 *e*P P 10 50 17.5 -1.4
comp=Z,14nm,1.1s,mb4.8
COEN *e*pP pP 10 50 31.1 -2.0
KOLN **Koldanda** 72.78 293 *e*P P 10 50 20.5 0.0
EBH **Black Hill** 72.82 2 *e*P P 10 50 21.4 +1.1
EAB **Aberfoyle** 72.86 3 *e*P P 10 50 21.0 +0.5
PYUN **Piuthan** 72.88 294 *e*P P 10 50 21.3 +0.2
comp=Z,53nm,0.6s,mb5.6
LGTI **Lohaghat** 73.42 296 *e*P P 10 50 24.0 -0.3
PPT **Papeete** 73.45 150 *e*LR LR 11 12 42.5
comp=Z,3μm,27.5s,baz=335
PPT **Papeete** 73.45 150 *e*T 12 10 43.0
comp=Z,18nm,0.3s
DWPF **Disney** 73.48 66 *e*P P 10 50 24.6 0.0
comp=Z,40nm,0.6s,mb5.5
DWPF LR LR
comp=Z,2μm,19.0s,MS5.3
TIAR **Tiarei** 73.51 150 *e*T 12 10 47.4
comp=Z,98nm,0.3s
PAE **Paea** 73.53 150 *e*T 12 10 49.7
comp=Z,60nm,0.3s
XSO **Sourhope Farm** 73.60 1 *e*P P 10 50 24.8 -0.1
TVO **Taravao** 73.75 150 *e*T 12 11 05.9
comp=Z,22nm,0.3s
ESK **Eskdalemuir** 73.76 2 PFAKE 10 50 40.0 +14
ESK LR LR
comp=Z,1μm,19.0s,MS5.2
ESK **Eskdalemuir** 73.76 2 *e*P P 10 50 26.1 +0.3
ESK AMb AMB 10 50 28.1
comp=Z,97nm,1.5s,mb5.5
SMLA **Simla** 73.85 300 *i* P P 10 50 26.8 +0.1
SMLA *ex* x 10 50 31.2
comp=Z,236nm,0.8s
ECK **Cauldkaine Hil** 73.90 2 *e*P P 10 50 26.7 +0.1
DDI **Dehra Dun** 73.98 298 *ex* P 10 50 25.5 -2.0
DDI *e*P 10 50 25.5
DDI *ex* x 10 59 54.5
MEH **Mehetia** 74.22 149 *e*T 12 11 40.3
comp=Z,260nm,0.3s
XAL **Allendale** 74.24 1 *e*P P 10 50 28.6 0.0
BOK **Bokaro** 74.44 289 *e*P P 10 50 30.7 +0.4
BOK AMb AMB 10 50 43.9
comp=Z,63nm,1.5s,mb5.3
SBUM **Sibu** 74.46 254 P P 10 50 30.9 +0.4
GMM **Mts of Mourne** 74.75 4 *e*P P 10 50 32.1 +0.5
BSEG **Bad Segeberg** 74.84 354 *e*P P 10 50 32.4 +0.3
BSEG pmax pmax
comp=Z,61nm,1.3s,mb5.4
BSEG **Bad Segeberg** 74.84 354 *e*P P 10 50 32.4 +0.3
comp=Z,61nm,1.3s,mb5.4
DMUB **Kingscourt** 75.05 4 *e*P P 10 50 33.0 -0.3
KBL **Kabul** 75.44 307 *e*P P 10 50 35.8 -0.1
comp=Z,75nm,1.0s,mb5.6
KBL *e*pP pP 10 50 48.2 -2.0
KBL **Kabul** 75.44 307 *e*P P 10 50 35.8 -0.1
KBL *e**PP pP 10 50 48.2 -1.9
KBL pmax pmax
comp=Z,75nm,1.0s,mb5.6
AKASG **Malin Array Be** 75.48 341 P P 10 50 34.9 -1.0
comp=Z,9.6nm,0.5s,mb5.0,baz=20,slow=5.7,SNR=35
AKASG LR LR 11 28 30.7
comp=Z,1μm,18.4s,MS5.3,baz=25,slow=39
AKASG **Malin Array Be** 75.48 341 P P 10 50 34.9 -1.0
AKASG pmax pmax
comp=Z,10.0nm,0.5s
AKASG MLR MLR
comp=Z,1μm,18.4s
AKBB **Malin Array Si** 75.48 341 *e*P P 10 50 34.5 -1.3
AKBB *e*pP pP 10 50 48.1 -2.0
KIEV **Kiev** 75.49 341 *e*P P 10 50 34.3 -1.6
comp=Z,23nm,0.8s,mb5.2
KIEV LR LR
comp=Z,2μm,20.0s,MS5.3
KIEV **Kiev** 75.49 341 *e*P P 10 50 34.3 -1.6
KIEV pmax pmax
comp=Z,23nm,0.8s,mb5.2
KIEV MLR MLR
comp=Z,2μm,20.0s,MS5.3
DLF **Lyons Farm** 75.67 4 *e*P P 10 50 33.5 -3.4
NDI **New Delhi** 75.71 298 *ex* x 10 51 36.0
KBI1 **Birley Grange** 75.86 1 *e*P P 10 50 38.0 0.0
KAPI **Kappang** 76.07 243 PFAKE 10 50 50.0 +10
KAPI LR LR
comp=Z,827nm,20.0s,MS5.0
SBD1 **Bryn Du** 76.17 2 *e*P P 10 50 39.8 0.0
KSM **Kuching** 76.39 255 P P 10 50 42.8 +1.2
comp=Z,39nm,1.5s,mb5.1
IBBN **Ibbenburen** 76.62 355 *e*P P 10 50 43.0 +0.7
comp=Z,117nm,1.1s,mb5.7
STKI **Sintang** 76.80 253 P P 10 50 45.2 +1.3
comp=Z,62nm,0.2s,mb6.2
CLZ **Clausthal** 76.92 354 *e*P P 10 50 44.3 +0.3
CLZ pmax pmax
comp=Z,61nm,1.1s,mb5.4
CLZ **Clausthal** 76.92 354 *e*P P 10 50 44.3 +0.3
comp=Z,61nm,1.1s,mb5.4
HTR **Trewern Hill** 77.00 2 *e*P P 10 50 44.1 -0.4
CTA **Charters Tower** 77.05 213 P P 10 50 43.5 -1.4
comp=Z,4.6nm,0.5s,mb4.7,baz=17,slow=8.2,SNR=8.2
CTA **Charters Tower** 77.05 213 P P 10 50 43.6 -1.4
CTA pmax pmax
comp=Z,5.0nm,0.5s
CTAO **Charters Tower** 77.05 213 *e*P P 10 50 43.5 -1.5
comp=Z,42nm,1.5s,mb5.1
CTAO *e*pP pP 10 50 58.2 -1.1
CTAO LR LR
comp=Z,1μm,20.0s,MS5.3
CTAO **Charters Tower** 77.05 213 *e*P P 10 50 43.5 -1.5
CTAO *e**PP pP 10 50 58.2 -1.0
CTAO pmax pmax
comp=Z,42nm,1.5s,mb5.2
CTAO MLR MLR
comp=Z,1μm,20.0s,MS5.3
CTAO **Charters Tower** 77.05 213 P P 10 50 45.2 +0.2
comp=Z,28nm,1.2s,mb5.1
MCH1 **Michaelchurch** 77.09 2 *e*P P 10 50 44.6 -0.3
MCH1 AMb AMB 10 50 48.8
comp=Z,58nm,2.0s,mb5.2
CLL **Collm** 77.25 352⇓ *i*P P 10 50 45.3 -0.5
CLL pmax pmax
comp=Z,22nm,1.3s,mb4.9
CLL **Collm** 77.25 352 *e*P P 10 50 45.2 -0.6
comp=Z,22nm,1.3s,mb4.9
CLL **Collm** 77.25 352⇓ *i*P P 10 50 45.3 -0.5
comp=Z,22nm,1.3s,mb4.9
LVV **L'vov** 77.28 344 *e*P P 10 50 45.8 -0.3
LVV *e* pP 10 51 03.9 +3.6
HGH **Gray Hill** 77.45 2 *e*P P 10 50 47.0 0.0
BUG **Bochum--Univer** 77.51 356 *e*P P 10 50 47.8 +0.5
comp=Z,51nm,1.2s,mb5.3
OJC **Ojcow** 77.54 347 *e*P P 10 50 47.9 +0.4
BRG **Berggiesshubel** 77.59 351 *e*P P 10 50 47.0 -0.8
BRG pmax pmax
comp=Z,19nm,1.6s,mb4.8
BRG **Berggiesshubel** 77.59 351 *e*P P 10 50 46.9 -0.9
comp=Z,17nm,1.1s,mb4.9
BRG **Berggiesshubel** 77.59 351 *e*P P 10 50 47.0 -0.8
comp=Z,32nm,1.6s,mb5.0
KWP **Kalwaria** 77.68 345 PFAKE 10 51 00.0 +12
KWP LR LR
comp=Z,2μm,20.0s,MS5.4
UPC **Upice** 77.73 350 *e*P P 10 50 48.5 -0.1
DPC **Dobruska-Polom** 77.85 350 *e*P P 10 50 49.3 0.0
PVCC **Panska Ves** 77.87 351 *e*P P 10 50 48.2 -1.1
UBBA **Unterbreizbach** 77.97 354 *e*P P 10 50 49.8 -0.1
comp=Z,34nm,1.6s,mb5.0
MOX **Moxa** 78.02 353 *e*P P 10 50 50.0 -0.2
comp=Z,40nm,1.5s,mb5.1
MOX **Moxa** 78.02 353 *e*P P 10 50 50.0 -0.2
MOX pmax pmax
comp=Z,40nm,1.5s,mb5.1
STHS **Stebnicka Huta** 78.12 346 *e*P P 10 50 50.9 +0.2
STHS pmax pmax
comp=Z,24nm,1.1s,mb5.0
OKC **Ostrava-Krasne** 78.14 348 *e*P P 10 50 51.2 +0.4
TANN **Tannenbergstha** 78.18 352 *e*P P 10 50 51.1 0.0
comp=Z,27nm,1.6s,mb4.9
UCC **Uccle** 78.27 357 E 10 50 53.0
MORC **Moravsky Berou** 78.27 349 *e*P P 10 50 50.8 -0.8
comp=Z,11nm,1.1s,mb4.7
MORC *e*PcP PcP 10 50 59.7 -1.2
MORC **Moravsky Berou** 78.27 349 *e*P P 10 50 50.8 -0.8
MORC *e* pP 10 51 00.0 -5.9
MORC pmax pmax
comp=Z,11nm,1.1s,mb4.7
MORC **Moravsky Berou** 78.27 349⇓ *i*P P 10 50 51.5 -0.1
KIV **Kislovodsk** 78.28 330 PFAKE 10 51 00.0 +8.2
KIV LR LR
comp=Z,1μm,21.0s,MS5.2
KIV **Kislovodsk** 78.28 330 *e*P P 10 50 52.3 +0.5
KIV *e*S S 11 00 42.4 -0.4
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,1μm,20.0s,MS5.2
NKC **Novy Kostel** 78.36 352 *e*P P 10 50 51.6 -0.5
MEM **Membach** 78.40 356 P P 10 50 52.3 +0.1
comp=Z,24nm,1.3s,mb5.0
PRU **Pruhonice** 78.40 351 *e*P P 10 50 50.6 -1.7
PRU *e*PCP PcP 10 50 58.2 -3.2
KOLS **Kolonicke sedl** 78.43 345 *e*P P 10 50 52.6 +0.1
SNF **Seneffe** 78.56 357 P P 10 50 53.1 -0.1
CRVS **Cervenica-Dubn** 78.59 346 *e*P P 10 50 53.3 0.0
BCLA **Clavier** 78.61 357 P P 10 50 53.3 -0.2
comp=Z,18nm,1.3s,mb4.8
DYA **Yadsworthy** 78.63 3 *e*P P 10 50 53.5 0.0
DYA AMb AMB 10 51 01.9
comp=Z,112nm,1.4s,mb5.6
MANZ **Manzenberg** 78.63 352 *e*P P 10 50 53.3 -0.3
comp=Z,10.0nm,1.1s,mb4.7
TNS **Taunus Mts** 78.66 355 *e*P P 10 50 54.1 +0.4
TNS pmax pmax
comp=Z,45nm,1.4s,mb5.2
TNS **Taunus Mts** 78.66 355 *e*P P 10 50 54.1 +0.4
comp=Z,45nm,1.4s,mb5.2
ROTZ **Rotzenmuhle** 78.84 352 *e*P P 10 50 55.0 +0.3
comp=Z,19nm,1.2s,mb4.9
AJM **Ajmer** 78.85 298 *e*P P 10 50 55.4 +0.3
AJM AMb AMB 10 51 11.6
comp=Z,73nm,1.3s,mb5.4
VRAC **Vranov** 78.85 349 ⇓P P 10 50 55.3 +0.5
VRAC **Vranov** 78.85 349⇓ *i*P P 10 50 55.3 +0.5
GIVF **Givet** 78.95 357 *e*P P 10 50 54.9 -0.4
comp=Z,64nm,1.1s,mb5.2
GIVF **Givet** 78.95 357 *e*P P 10 50 54.9 -0.4
comp=Z,32nm,1.0s,mb5.2
GIVF **Givet** 78.95 357 *e*P P 10 50 54.9 -0.4
GIVF pmax pmax
comp=Z,32nm,1.0s,mb5.2
DOU **Dourbes** 78.96 357 P P 10 50 54.5 -0.9
comp=Z,24nm,1.7s,mb4.8
GRF **Grafenberg Arr** 79.00 353 *e*P P 10 50 55.8 +0.2
GRF pmax pmax
comp=Z,68nm,1.5s,mb5.4
GRF **Grafenberg Arr** 79.00 353 *e*P P 10 50 55.8 +0.2
GRF pmax pmax
comp=Z,68nm,1.5s,mb5.4
GRF **Grafenberg Arr** 79.00 353 *e*P P 10 50 55.8 +0.2
comp=Z,68nm,1.5s,mb5.4
BAIF **Baives** 79.01 357 *e*P P 10 50 55.7 +0.1
comp=Z,144nm,1.2s,mb5.5
BAIF **Baives** 79.01 357 *e*P P 10 50 55.7 +0.1
comp=Z,72nm,1.2s,mb5.5

BAIF Baives 79.01 357 *e*P **P** **10 50 55.7 +0.1**
BAIF pmax pmax
comp=Z,72nm,1.2s,mb5.5
KIS Kishinev 79.09 341 *e*P pP 10 51 08.0 -2.4
BBSR BB Station 79.09 51 PFAKE 10 51 10.0 +14
BBSR LR LR
comp=Z,2µm,20.0s,MS5.4
TRPA Tarpa 79.17 345⇓*i*P **P** **10 50 57.1 +0.6**
BUR08 Bucovina Ar. S 79.18 343 *e*P **P** **10 50 56.5 -0.1**
BURAR Bucovina Array 79.20 343⇑P **P** **10 50 56.8 0.0**
BURAR Bucovina Array 79.20 343⇑*i*P **P** **10 50 56.8 +0.1**
TOD Tromm 79.25 354 *e*P **P** **10 50 56.9 -0.1**
RUP Ruppelstein 79.26 356 *e*P **P** **10 50 57.0 0.0**
WLF Walferdange 79.33 356 P **P** **10 50 57.2 -0.2**
comp=Z,14nm,1.2s,mb4.8
WLF Walferdange 79.33 356 PFAKE 10 51 10.0 +13
WLF LR LR
comp=Z,1µm,19.0s,MS5.3
WLF Walferdange 79.33 356 *e*P **P** **10 50 58.6 +1.2**
comp=Z,34nm,1.2s,mb5.2
KOLL Kolacno 79.34 348 *e*P **P** **10 50 56.7 -0.8**
KHC Kasperske Hory 79.35 351 *e*P **P** **10 50 57.4 -0.1**
VYHS Vyhne 79.36 348 *e*P **P** **10 50 57.4 -0.2**
WET Wettzell 79.40 352 *e*P **P** **10 50 57.6 -0.2**
WET pmax pmax
comp=Z,24nm,1.4s,mb4.9
WET Wettzell 79.40 352 *e*P **P** **10 50 57.6 -0.2**
comp=Z,24nm,1.4s,mb4.9
GEC2 GERESS Array S 79.62 351 *e*P **P** **10 50 58.7 -0.3**
GEC2 pmax pmax
comp=Z,25nm,1.5s,mb4.9
GEC2 GERESS Array S 79.62 351 *e*P **P** **10 50 58.7 -0.3**
comp=Z,25nm,1.5s,mb4.9
GERES GERESS Array B 79.62 351 P **P** **10 50 58.8 -0.2**
comp=Z,2.3nm,0.5s,mb4.4,baz=21,slow=5.7,SNR=20
GERES GERESS Array B 79.62 351 P **P** **10 50 58.8 -0.2**
GERES pmax pmax
comp=Z,2.0nm,0.5s
MODS Modra-Piesok 79.69 349 *e*P **P** **10 51 00.0 +0.6**
MODS pmax pmax
comp=Z,12nm,1.1s,mb4.7
PSZ Piszkesteto 79.78 347 *e*P **P** **10 51 00.6 +0.8**
comp=Z,37nm,1.2s,mb5.2
PSZ LR LR
comp=Z,1µm,19.0s,MS5.3
PSZ Piszkesteto 79.78 347 *e*P **P** **10 51 01.7 +1.8**
PSZ Piszkesteto 79.78 347⇑*i*P **P** **10 51 00.2 +0.3**
ZST Bratislava 79.88 349 *e*P **P** **10 51 01.0 +0.6**
ZST pmax pmax
comp=Z,25nm,1.0s,mb5.1
JQE Queens East 79.91 2 *e*P **P** **10 51 00.3 -0.3**
LANF Langenberg 79.94 355 *e*P **P** **10 51 01.2 +0.5**
STU Stuttgart 80.06 354 *e*P **P** **10 51 01.8 +0.4**
comp=Z,72nm,1.8s,mb5.3
RAO Raoul Island 80.17 178 LR LR 11 21 57.4
comp=Z,1µm,19.2s,MS5.2,baz=52,slow=32
RAO Raoul Island 80.17 178 PFAKE 10 51 10.0 +8.0
RAO LR LR
comp=Z,2µm,21.0s,MS5.3
CONA Conrad Observa 80.29 349⇑*i*P **P** **10 51 03.0 +0.3**
comp=Z,31nm,1.3s,mb5.1
CSNA Conrad Observa 80.30 349⇑*i*P **P** **10 51 02.9 +0.3**
comp=Z,28nm,1.2s,mb5.0
BUD Budapest 80.33 347⇓*e*P **P** **10 51 04.5 +1.7**
FLN La Foliniere 80.36 0 *e*P **P** **10 51 02.4 -0.6**
comp=Z,322nm,1.4s,mb5.8
FLN La Foliniere 80.36 0 *e*P **P** **10 51 02.4 -0.6**
comp=Z,161nm,1.4s,mb5.8
FLN La Foliniere 80.36 0 *e*P **P** **10 51 02.4 -0.6**
FLN pmax pmax
comp=Z,161nm,1.4s,mb5.8
DRGR 80.44 345⇓*i*P **P** **10 51 03.3 -0.2**
DRGR 80.44 345⇓*i*P **P** **10 51 03.3 -0.1**
SOP Sopron 80.45 349⇓*e*P **P** **10 51 05.2 +1.7**
NGP Nagpur 80.50 292 *ex* x 10 50 58.5
NGP AMb AMB 10 51 04.8
comp=Z,44nm,1.9s,mb5.1
EIDS Eidsvold 80.50 207 *e*P **P** **10 51 03.3 -0.6**
comp=Z,16nm,1.0s,mb4.9
EIDS *e*pP pP 10 51 17.4 -0.8
CDF Champ du Feu 80.53 355 *e*P **P** **10 51 03.7 -0.2**
LDF La Druitiere 80.53 0 *e*P **P** **10 51 03.3 -0.6**
comp=Z,40nm,0.6s,mb5.2
LDF La Druitiere 80.53 0 *e*P **P** **10 51 03.3 -0.6**
comp=Z,20nm,0.6s,mb5.2
LDF La Druitiere 80.53 0 *e*P **P** **10 51 03.3 -0.6**
LDF pmax pmax
comp=Z,20nm,0.6s,mb5.2
MEZF Maizieres J'vi 80.54 357 *e*P **P** **10 51 04.0 0.0**
comp=Z,88nm,1.1s,mb5.3
MEZF Maizieres J'vi 80.54 357 *e*P **P** **10 51 04.0 0.0**
comp=Z,88nm,1.1s,mb5.6
MOA Molln 80.55 350⇑*i*P **P** **10 51 04.4 +0.4**
comp=Z,14nm,1.4s,mb4.7
BFO Black Forest 80.56 355 *e*P **P** **10 51 04.5 +0.5**
comp=Z,9.9nm,0.9s,mb4.7
BFO LR LR
comp=Z,998nm,19.0s,MS5.2
BFO Black Forest 80.56 355 *e*P **P** **10 51 04.5 +0.5**
BFO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BFO MLR MLR
comp=Z,998nm,19.0s,MS5.2
BFO Black Forest 80.56 355 *e*P **P** **10 51 04.2 +0.2**
comp=Z,36nm,1.3s,mb5.1
VRI Vrincioaia 80.60 342⇑*i*P **P** **10 51 07.3 +3.0**
VRI Vrincioaia 80.60 342⇑*i*P **P** **10 51 07.3 +3.0**
VIS Vishakhapatnam 80.61 286 *e*P **P** **10 51 02.3 -2.5**
VIS AMb AMB 10 51 05.9
comp=Z,25nm,1.0s,mb5.1
PLOR Plostina 80.63 342⇓*i*P **P** **10 51 06.9 +2.4**
TGUH Tegucigalpa,Un 80.71 79 *e*P **P** **10 51 06.2 +0.8**
comp=Z,126nm,1.3s,mb5.7
TGUH LR LR
comp=Z,1µm,19.0s,MS5.2
ECH Echery 80.73 355 *e*P **P** **10 51 04.3 -0.7**
GRR Gorron 80.73 1 *e*P **P** **10 51 04.7 -0.3**
comp=Z,77nm,0.8s,mb5.4
GRR Gorron 80.73 1 *e*P **P** **10 51 04.7 -0.3**
comp=Z,38nm,0.8s,mb5.4
GRR Gorron 80.73 1 *e*P **P** **10 51 04.7 -0.3**
GRR pmax pmax
comp=Z,38nm,0.8s,mb5.4
ROSF Rostrenen 80.75 2 *e*P **P** **10 51 05.0 -0.1**
comp=Z,226nm,1.5s,mb5.6
ROSF Rostrenen 80.75 2 *e*P **P** **10 51 05.0 -0.1**
comp=Z,113nm,1.5s,mb5.6
ROSF Rostrenen 80.75 2 *e*P **P** **10 51 05.0 -0.1**
ROSF pmax pmax
comp=Z,113nm,1.5s,mb5.6
SPAK Spaichingen-Ko 80.75 354 *e*P **P** **10 51 05.0 -0.1**
THEF They Montfort 80.78 356 *e*P **P** **10 51 04.5 -0.7**
RJOB Jochberg 80.80 351 *e*P **P** **10 51 05.5 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
SGMF Saint Gilles 80.84 2 *e*P **P** **10 51 05.5 -0.1**
comp=Z,76nm,0.7s,mb5.5
SGMF Saint Gilles 80.84 2 *e*P **P** **10 51 05.5 -0.1**
comp=Z,38nm,0.7s,mb5.4
SGMF Saint Gilles 80.84 2 *e*P **P** **10 51 05.5 -0.1**
SGMF pmax pmax
comp=Z,38nm,0.7s,mb5.4
HAU Haudompre 80.98 356 *e*P **P** **10 51 06.1 -0.2**
comp=Z,80nm,1.3s,mb5.2
HAU Haudompre 80.98 356 *e*P **P** **10 51 06.1 -0.2**
comp=Z,40nm,1.3s,mb5.2
HAU Haudompre 80.98 356 *e*P **P** **10 51 06.1 -0.2**
HAU pmax pmax
comp=Z,40nm,1.3s,mb5.2
ARSA Arzberg 81.00 350⇑*i*P **P** **10 51 07.0 +0.5**
comp=Z,27nm,1.3s,mb5.0
FELD Feldberg im Sc 81.03 355 *e*P **P** **10 51 06.2 -0.4**
GNI Garni 81.03 327 PFAKE 10 51 20.0 +13
GNI LR LR
comp=Z,2µm,19.0s,MS5.5
GNI Garni 81.03 327 *e*P **P** **10 51 07.4 +0.7**
GNI pmax pmax
comp=Z,13nm,1.3s
MOF Molkenrain 81.10 355 *e*P **P** **10 51 07.4 +0.5**
MLR Muntele Rosu 81.11 342 LR LR 11 30 38.8
comp=Z,2µm,20.9s,MS5.4,baz=209,slow=38
MLR Muntele Rosu 81.11 342⇑P **P** **10 51 06.9 -0.1**
MLR Muntele Rosu 81.11 342⇑*i*P **P** **10 51 06.9 -0.2**
HINF Hinteralfeld 81.15 356 *e*P **P** **10 51 06.8 -0.4**
QUIF Quistinic 81.17 2 *e*P **P** **10 51 08.1 +0.8**
comp=Z,261nm,1.5s,mb5.6
QUIF Quistinic 81.17 2 *e*P **P** **10 51 08.1 +0.8**
comp=Z,130nm,1.5s,mb5.6
QUIF Quistinic 81.17 2 *e*P **P** **10 51 08.1 +0.8**
QUIF pmax pmax
comp=Z,130nm,1.5s,mb5.6
RETA Reutte 81.23 353⇑*e*P **P** **10 51 07.0 -0.6**
comp=Z,18nm,1.2s,mb4.9
WATA Walderalm 81.31 352⇑*i*P **P** **10 51 07.8 -0.3**
comp=Z,48nm,1.1s,mb5.3
VOIR 81.33 343⇓P **P** **10 51 09.0 +0.8**
VOIR 81.33 343⇓*i*P **P** **10 51 09.0 +0.8**
MOTA Moosalm 81.34 353⇑*i*P **P** **10 51 08.7 +0.5**
comp=Z,45nm,1.2s,mb5.3,SNR=9.5
WTTA Wattenberg 81.38 352⇓*i*P **P** **10 51 09.1 +0.7**
comp=Z,66nm,1.6s,mb5.3,SNR=8.5
WTTA ⇑*i*pP pP 10 51 22.6 -0.2
comp=Z,36nm,0.6s
KBA Koelnbreinsper 81.40 351⇑*i*P **P** **10 51 09.4 +0.8**
comp=Z,68nm,0.9s,mb5.6,SNR=19
DSRI Dabo 81.43 258 P **P** **10 51 10.5 +1.3**
comp=Z,49nm,1.3s,mb5.3
SQTA Sankt Quirin 81.45 352⇑*i*P **P** **10 51 09.7 +0.9**
DAVA Damuels 81.49 353⇑*i*PcP PcP 10 51 10.7 -4.2
comp=Z,20nm,1.2s
WRAB Tennant Creek 81.50 223 P **P** **10 51 07.9 -1.4**
comp=Z,124nm,1.4s,mb5.7,SNR=9.0
WRAB Tennant Creek 81.50 223 *e*P **P** **10 51 07.3 -1.9**
comp=Z,19nm,0.9s,mb5.0
WRAB *e*pP pP 10 51 21.7 -2.0
WRAB LR LR
comp=Z,1µm,19.0s,MS5.2
WRAB Tennant Creek 81.50 223 *e*P **P** **10 51 07.3 -2.0**
WRAB *e**PP pP 10 51 21.7 -1.9
WRAB pmax pmax
comp=Z,19nm,0.9s,mb5.0
WRAB MLR MLR
comp=Z,1µm,19.0s,MS5.2
WRAB Tennant Creek 81.50 223 P **P** **10 51 08.1 -1.2**
comp=Z,30nm,1.1s,mb5.1
WRA Warramunga Arr 81.51 223 P **P** **10 51 07.5 -1.8**
comp=Z,4.4nm,0.5s,mb4.7,baz=31,slow=5.8,SNR=110
WRA PKKPbc PKKPbc 11 09 44.7 +3.3
comp=Z,0.2nm,0.5s,baz=222,slow=2.3,SNR=5.1
LOMF Lomont 81.61 355 *e*P **P** **10 51 09.4 -0.3**
SOKA Soboth 81.62 350⇓*i*P **P** **10 51 10.2 +0.5**
comp=Z,56nm,1.2s,mb5.4
PKSM Moragy 81.63 347⇑P **P** **10 51 09.7 -0.1**
PKSM Moragy 81.63 347⇑*i*P **P** **10 51 09.7 -0.1**
PERS Pernice 81.65 350 *e*P **P** **10 51 10.1 +0.2**
FETA Feichten 81.69 353⇓*i*P **P** **10 51 10.6 +0.5**
comp=Z,25nm,1.1s,mb5.0,SNR=6.6
KOGS Kog 81.71 349 *e*P **P** **10 51 10.9 +0.7**
BZS Buzias 81.76 345⇓P **P** **10 51 10.4 -0.1**
BZS Buzias 81.76 345⇓*i*P **P** **10 51 10.4 -0.1**
GZR Gura Zlata 81.78 344⇑P **P** **10 51 11.0 +0.4**
GZR Gura Zlata 81.78 344⇑*i*P **P** **10 51 11.0 +0.4**
ABTA Abfaltersbach 81.81 352⇓*i*P **P** **10 51 10.9 +0.1**
comp=Z,35nm,1.1s,mb5.2
LOR Lormes 81.81 358 *e*P **P** **10 51 10.6 -0.1**
comp=Z,74nm,1.2s,mb5.2
LOR Lormes 81.81 358 *e*P **P** **10 51 10.6 -0.1**
comp=Z,37nm,1.2s,mb5.2
LOR Lormes 81.81 358 *e*P **P** **10 51 10.6 -0.1**
LOR pmax pmax
comp=Z,37nm,1.2s,mb5.2
MYKA Terra Mystica 81.82 351⇑*i*PcP PcP 10 51 12.2 -4.2
comp=Z,16nm,1.0s
OBKA Obir 81.84 350⇓*i*P **P** **10 51 11.6 +0.7**
comp=Z,34nm,1.0s,mb5.2,SNR=7.2
OBKA ⇑*i*pP pP 10 51 24.9 -0.4
comp=Z,30nm,0.7s
DAVOS Davos 81.94 353 P **P** **10 51 11.6 +0.2**
DAVOX Davos/Dischmat 82.00 353 P **P** **10 51 11.6 -0.1**
comp=Z,7.5nm,0.5s,mb4.9,baz=307,slow=5.2,SNR=7.6
SSF Saint Saulge 82.03 358 *e*P **P** **10 51 11.6 -0.3**
comp=Z,86nm,1.4s,mb5.2
SSF Saint Saulge 82.03 358 *e*P **P** **10 51 11.6 -0.3**
comp=Z,43nm,1.4s,mb5.2
SSF Saint Saulge 82.03 358 *e*P **P** **10 51 11.6 -0.3**
SSF pmax pmax
comp=Z,43nm,1.4s,mb5.2
PTCC Patocco-Chiusa 82.07 351 P **P** **10 51 11.9 -0.2**
CADS Cadrg 82.20 351 *e*P **P** **10 51 12.4 -0.4**
AVF Avril sur Loir 82.30 358 *e*P **P** **10 51 13.1 -0.2**
comp=Z,104nm,1.4s,mb5.3
AVF Avril sur Loir 82.30 358 *e*P **P** **10 51 13.1 -0.2**
comp=Z,52nm,1.4s,mb5.3
AVF Avril sur Loir 82.30 358 *e*P **P** **10 51 13.1 -0.2**
AVF pmax pmax
comp=Z,52nm,1.4s,mb5.3
TUE Stuetta 82.34 354 *e*P **P** **10 51 13.4 -0.1**
comp=Z,27nm,0.8s,mb5.2
TUE *e*pP pP 10 51 25.8 -2.0
TUE LR LR
comp=Z,2µm,20.0s,MS5.4
CABF La Chapelle 82.39 356 *e*P **P** **10 51 13.8 0.0**
SMF Signal de Mont 82.43 358 *e*P **P** **10 51 13.7 -0.3**
comp=Z,137nm,1.3s,mb5.4
SMF Signal de Mont 82.43 358 *e*P **P** **10 51 13.7 -0.3**
comp=Z,68nm,1.3s,mb5.4
SMF Signal de Mont 82.43 358 *e*P **P** **10 51 13.7 -0.3**
SMF pmax pmax
comp=Z,69nm,1.3s,mb5.4
MFF Saint Martin d 82.53 0 *e*P **P** **10 51 14.4 -0.1**
comp=Z,32nm,0.8s,mb5.1
MFF Saint Martin d 82.53 0 *e*P **P** **10 51 14.4 -0.1**
comp=Z,16nm,0.8s,mb5.1
MFF Saint Martin d 82.53 0 *e*P **P** **10 51 14.4 -0.1**
MFF pmax pmax
comp=Z,16nm,0.8s,mb5.1
BGF Bois d'Agland 82.55 358 *e*P **P** **10 51 14.4 -0.2**
CTI Castel Tesino 82.58 352 P **P** **10 51 16.0 +1.2**
comp=Z,17nm,0.8s,mb5.1
CTI Castel Tesino 82.58 352 P **P** **10 51 16.0 +1.2**
CTI pmax pmax
comp=Z,17nm,0.8s,mb5.1
TCF Toulx Ste Croi 82.83 359 *e*P **P** **10 51 15.8 -0.2**
comp=Z,29nm,1.0s,mb5.0
TCF Toulx Ste Croi 82.83 359 *e*P **P** **10 51 15.8 -0.2**
comp=Z,14nm,1.0s,mb5.0
TCF Toulx Ste Croi 82.83 359 *e*P **P** **10 51 15.8 -0.2**
TCF pmax pmax
comp=Z,14nm,1.0s,mb5.0
AGO Saint Agoulin 83.04 358 *e*P **P** **10 51 17.7 +0.5**
PLDF La Plantade 83.11 358 *e*P **P** **10 51 18.2 +0.7**
PYM Petit Puy Mans 83.35 358 *e*P **P** **10 51 19.0 +0.2**
LPL La Plagne 83.45 355 *e*P **P** **10 51 20.2 +0.9**
comp=Z,25nm,0.8s,mb5.0
LPL La Plagne 83.45 355 *e*P **P** **10 51 20.2 +0.9**
comp=Z,13nm,0.8s,mb5.0
LPL La Plagne 83.45 355 *e*P **P** **10 51 20.2 +0.9**
LPL pmax pmax
comp=Z,13nm,0.8s,mb5.0
LPG La Plagne 83.47 355 *e*P **P** **10 51 20.4 +1.0**
comp=Z,31nm,0.8s,mb5.1
LPG La Plagne 83.47 355 *e*P **P** **10 51 20.4 +1.0**
comp=Z,16nm,0.8s,mb5.1
LPG La Plagne 83.47 355 *e*P **P** **10 51 20.4 +1.0**
LPG pmax pmax
comp=Z,16nm,0.8s,mb5.1
HYB Hyderabad 83.70 290 *e*P **P** **10 51 21.0 0.0**
comp=Z,50nm,1.0s,mb5.6
HYB *e*S S 11 01 40.0 +0.1
HYB Hyderabad 83.70 290 *e*P **P** **10 51 21.0 0.0**
HYB *e*S S 11 01 40.0 +0.1
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.6
HYB Hyderabad 83.70 290 *i* P **P** **10 51 21.0 0.0**
comp=Z,50nm,1.0s,mb5.6
HYB *e*pP pP 10 51 34.0 -1.4
HYB *e*S S 11 01 40.0 +0.1
RJF Les Rejaudoux 83.82 359 *e*P **P** **10 51 20.8 -0.4**
comp=Z,119nm,1.5s,mb5.5
RJF Les Rejaudoux 83.82 359 *e*P **P** **10 51 20.8 -0.4**
comp=Z,60nm,1.5s,mb5.5
RJF Les Rejaudoux 83.82 359 *e*P **P** **10 51 20.8 -0.4**
RJF pmax pmax
comp=Z,59nm,1.5s,mb5.5
RKT Rikitea 83.86 139 *e*T 12 23 35.8
comp=Z,2.2nm,0.3s
LBL Lubilhac 83.86 358 *e*P **P** **10 51 21.2 -0.2**
BNI Bardonecchia 83.92 355 *e*P **P** **10 51 22.7 +1.0**
comp=Z,24nm,0.8s,mb5.4
BNI *e*pP pP 10 51 37.1 +1.0
BNI LR LR
comp=Z,1µm,19.0s,MS5.4
BNI Bardonecchia 83.92 355 *e*P **P** **10 51 22.7 +1.0**
BNI *e**PP pP 10 51 37.1 +1.0
BNI pmax pmax
comp=Z,24nm,0.8s,mb5.4
BNI MLR MLR
comp=Z,1µm,19.0s,MS5.4
ORIF Oris-en-Rattie 84.09 356 *e*P **P** **10 51 22.0 -0.5**
comp=Z,57nm,1.1s,mb5.3
ORIF Oris-en-Rattie 84.09 356 *e*P **P** **10 51 22.0 -0.5**
comp=Z,29nm,1.1s,mb5.3
ORIF Oris-en-Rattie 84.09 356 *e*P **P** **10 51 22.0 -0.5**
ORIF pmax pmax
comp=Z,29nm,1.1s,mb5.3
LFF La Frestale 84.19 360 *e*P **P** **10 51 23.1 0.0**
comp=Z,135nm,1.2s,mb5.6
LFF La Frestale 84.19 360 *e*P **P** **10 51 23.1 0.0**
comp=Z,68nm,1.2s,mb5.7
LFF La Frestale 84.19 360 *e*P **P** **10 51 23.1 0.0**
LFF pmax pmax
comp=Z,68nm,1.2s,mb5.7
CAF Calviac 84.19 359 *e*P **P** **10 51 23.3 +0.2**
comp=Z,69nm,1.3s,mb5.3
CAF Calviac 84.19 359 *e*P **P** **10 51 23.3 +0.2**
comp=Z,34nm,1.3s,mb5.3
CAF Calviac 84.19 359 *e*P **P** **10 51 23.3 +0.2**
CAF pmax pmax
comp=Z,34nm,1.3s,mb5.3
VIVF Saint-Julien-l 84.20 357 *e*P **P** **10 51 23.4 +0.3**
comp=Z,34nm,1.0s,mb5.2
VIVF Saint-Julien-l 84.20 357 *e*P **P** **10 51 23.4 +0.3**
comp=Z,17nm,1.0s,mb5.1
VIVF Saint-Julien-l 84.20 357 *e*P **P** **10 51 23.4 +0.3**
VIVF pmax pmax
comp=Z,17nm,1.0s,mb5.1
MBDF Montbardon 84.23 355 *e*P **P** **10 51 23.9 +0.6**
comp=Z,23nm,0.7s,mb5.1
MBDF Montbardon 84.23 355 *e*P **P** **10 51 23.9 +0.6**
comp=Z,11nm,0.7s,mb5.1
MBDF Montbardon 84.23 355 *e*P **P** **10 51 23.9 +0.6**
MBDF pmax pmax
comp=Z,11nm,0.7s,mb5.1
GSI Gunungsitoli 84.39 265 P **P** **10 51 23.9 -0.6**
VLC Villacollemand 84.56 353 PFAKE 10 51 40.0 +15
VLC LR LR
comp=Z,982nm,20.0s,MS5.2
BR131 Keskin Array S 84.81 335 *e*P **P** **10 51 26.3 0.0**
comp=Z,4.5nm,0.7s,mb4.7
BRTR Keskin Array B 84.81 335 P **P** **10 51 25.4 -0.9**
comp=Z,4.4nm,1.0s,mb4.5,baz=36,slow=2.3,SNR=11
BRTR Keskin Array B 84.81 335 P **P** **10 51 25.4 -0.9**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
FSSB Fossombrone 84.81 351 P **P** **10 51 27.1 +0.9**
ANTO Ankara 84.90 335 PFAKE 10 51 40.0 +13
ANTO LR LR
comp=Z,919nm,20.0s,MS5.2
ASAR Alice Springs 84.99 222 P **P** **10 51 26.2 -1.0**
comp=Z,6.4nm,0.7s,mb4.9,baz=30,slow=5.6,SNR=82
ASAR Alice Springs 84.99 222 P **P** **10 51 26.2 -1.0**
ASAR pmax pmax
comp=Z,6.0nm,0.7s
LASF Ste Croix 85.00 357 *e*P **P** **10 51 27.2 0.0**
SMRF Simiane la Rot 85.04 356 *e*P **P** **10 51 28.1 +0.7**
comp=Z,179nm,1.4s,mb5.7
SMRF Simiane la Rot 85.04 356 *e*P **P** **10 51 28.1 +0.7**
comp=Z,179nm,1.4s,mb6.0
SBF Sospel 85.06 355 *e*P **P** **10 51 27.2 -0.3**
comp=Z,102nm,1.0s,mb5.6
SBF Sospel 85.06 355 *e*P **P** **10 51 27.2 -0.3**
comp=Z,51nm,1.0s,mb5.6
SBF Sospel 85.06 355 *e*P **P** **10 51 27.2 -0.3**
SBF pmax pmax
comp=Z,51nm,1.0s,mb5.6
CING Cingoli 85.08 351 P **P** **10 51 27.3 -0.3**
comp=Z,214nm,2.6s,mb5.8
ARMA Armidale 85.14 205 *e*P **P** **10 51 28.0 +0.2**
comp=Z,4.6nm,1.4s,mb4.4
SNTG Esanatoglia 85.23 351 P **P** **10 51 28.9 +0.6**
comp=Z,23nm,0.5s,mb5.6
FRF La Foret Royal 85.40 355 *e*P **P** **10 51 28.6 -0.6**
ASS Assisi 85.45 351 P **P** **10 51 30.9 +1.5**
comp=Z,31nm,0.6s,mb5.6
ASS Assisi 85.45 351 P **P** **10 51 30.9 +1.5**
ASS pmax pmax
comp=Z,31nm,0.6s,mb5.6
POO Poona 85.56 294 *e*P **P** **10 51 28.5 -1.9**
EPON Pontenova 85.58 5 P **P** **10 51 29.0 -1.1**
comp=Z,126nm,3.1s
NRCA Norcia 85.63 351 P **P** **10 51 31.3 +1.0**
LMR La Mourre 85.64 355 *e*P **P** **10 51 30.4 0.0**
EARI Arrionday 85.71 4 P **P** **10 51 30.5 -0.2**
comp=Z,48nm,1.4s,mb5.5
MTLF Montolieu 85.77 359 *e*P **P** **10 51 31.0 0.0**
comp=Z,57nm,1.4s,mb5.3
MTLF Montolieu 85.77 359 *e*P **P** **10 51 31.0 0.0**
comp=Z,28nm,1.4s,mb5.3
MTLF Montolieu 85.77 359 *e*P **P** **10 51 31.0 0.0**
MTLF pmax pmax
comp=Z,29nm,1.4s,mb5.3
ELAN Lanestosa 85.84 3 P **P** **10 51 30.6 -0.7**
comp=Z,70nm,1.5s,mb5.7
EALK Alkurruntz 85.90 1 P **P** **10 51 31.0 -0.6**
comp=Z,26nm,1.1s,mb5.4
SJPF Ste Jean 86.01 1 *e*P **P** **10 51 32.6 +0.4**
comp=Z,20nm,0.6s,mb5.2
SJPF Ste Jean 86.01 1 *e*P **P** **10 51 32.6 +0.4**
comp=Z,10.0nm,0.6s,mb5.2
SJPF Ste Jean 86.01 1 *e*P **P** **10 51 32.6 +0.4**
SJPF pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
AQU L'Aquila 86.07 350 *e*P **P** **10 51 32.7 +0.2**
comp=Z,31nm,0.7s,mb5.6
AQU LR LR
comp=Z,933nm,20.0s,MS5.2
AQU L'Aquila 86.07 350 *e*P **P** **10 51 32.7 +0.2**
AQU pmax pmax
comp=Z,31nm,0.7s,mb5.7
AQU MLR MLR
comp=Z,933nm,20.0s,MS5.2
AQU L'Aquila 86.07 350⇑*i*P **P** **10 51 36.8 +4.3**
EPF Esparros 86.10 360 *e*P **P** **10 51 33.1 +0.5**
ETSF Etsaut 86.23 1 *e*P **P** **10 51 33.4 +0.1**
comp=Z,45nm,1.1s,mb5.3
ETSF Etsaut 86.23 1 *e*P **P** **10 51 33.4 +0.1**
comp=Z,22nm,1.1s,mb5.3
ETSF Etsaut 86.23 1 *e*P **P** **10 51 33.4 +0.1**
ETSF pmax pmax
comp=Z,22nm,1.1s,mb5.3
PGF Pioggiola 86.27 354 *e*P **P** **10 51 33.4 -0.1**
KAD Karad 86.34 293 *e*P **P** **10 51 32.5 -1.7**
KAD AMb AMB 10 51 43.3
comp=Z,40nm,1.3s,mb5.5
SDDR Presa de Saban 86.38 64 PFAKE 10 51 50.0 +16
SDDR LR LR
comp=Z,1µm,21.0s,MS5.3
PTQR Pietraquaria 86.40 350 P **P** **10 51 35.0 +0.8**
EBIE Bielsa 86.44 0 P **P** **10 51 37.1 +2.7**
comp=Z,22nm,1.1s,mb5.3
ECAL Calabor 86.99 5 P **P** **10 51 36.7 -0.3**
comp=Z,35nm,1.2s,mb5.5
ISP Isparta 87.39 336 PFAKE 10 51 50.0 +11
ISP LR LR
comp=Z,733nm,19.0s,MS5.1
CUC Castrocucco 88.12 348 PFAKE 10 51 50.0 +7.5
CUC LR LR
comp=Z,2µm,19.0s,MS5.5
ETOR Torete 88.28 2 P **P** **10 51 42.6 -0.7**
comp=Z,9.0nm,0.9s,mb5.0
ETOR Torete 88.28 2 P **P** **10 51 42.6 -0.7**
ETOR pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
GUD Guadarrama 88.40 3 P **P** **10 51 43.2 -0.6**
comp=Z,3.9nm,1.2s,mb4.5
GUD Guadarrama 88.40 3 P **P** **10 51 43.2 -0.6**
GUD pmax pmax
comp=Z,4.0nm,1.2s,mb4.5
MTE Manteigas 88.47 6 PFAKE 10 52 00.0 +16
MTE LR LR
comp=Z,1µm,21.0s,MS5.2
TIP Timpagrande 88.79 347 PFAKE 10 52 00.0 +14
TIP LR LR
comp=Z,1µm,20.0s,MS5.3
BCIP Isla Barro Col 89.07 77 PFAKE 10 52 00.0 +13
BCIP LR LR
comp=Z,707nm,20.0s,MS5.1
VSL Villasalto 89.28 353 PFAKE 10 52 00.0 +12

VSL					LR	LR			
	comp=Z,1μm,20.0s,MS5.3								
CSS	**Prodhromos**	**89.36**	**333**		PFAKE			10 52 00.0	+12
CSS					LR	LR			
	comp=Z,782nm,19.0s,MS5.2								
ESDC	**Sonseca Array**	**89.38**	**3**		P	**P**		**10 51 47.5**	**-0.9**
	comp=Z,1.2nm,0.4s,mb4.6,baz=2.5,slow=5.2,SNR=10								
ESDC	**Sonseca Array**	**89.38**	**3**		P	**P**		**10 51 47.6**	**-0.8**
	comp=Z,3.6nm,0.8s,mb4.8								
ESLA	**Sonseca Array**	**89.38**	**3**		PFAKE			10 52 00.0	+12
ESLA					LR	LR			
	comp=Z,4μm,20.0s,MS5.8								
MBWA	**Marble Bar**	**89.45**	**234**		*e*P	**P**		**10 51 46.2**	**-2.6**
	comp=Z,16nm,0.8s,mb5.4								
MBWA					*e*pP	pP		10 52 01.3	-2.1
MBWA					LR	LR			
	comp=Z,1μm,22.0s,MS5.3								
PAB	**San Pablo**	**89.49**	**4**		PFAKE			10 52 00.0	+11
PAB					LR	LR			
	comp=Z,1μm,19.0s,MS5.3								
STKA	**Stephens Creek**	**89.50**	**212**		P	**P**		**10 51 48.0**	**-0.8**
	comp=Z,13nm,0.7s,mb5.4,baz=353,slow=4.7,SNR=23								
STKA	**Stephens Creek**	**89.50**	**212**		*e*P	**P**		**10 51 48.1**	**-0.7**
	comp=Z,39nm,1.8s,mb5.4								
CEL	**Celeste**	**89.81**	**348**		PFAKE			10 52 00.0	+10
CEL					LR	LR			
	comp=Z,47μm,21.0s,MS6.9								
SJG	**San Juan**	**89.94**	**61**		PFAKE			10 52 00.0	+8.6
SJG					LR	LR			
	comp=Z,2μm,21.0s,MS5.4								
PAYG	**Puerto Ayora**	**90.19**	**91**		PFAKE			10 52 00.0	+7.5
PAYG					LR	LR			
	comp=Z,1μm,19.0s,MS5.4								
SNZO	**South Karori**	**92.31**	**184**		PFAKE			10 52 10.0	+8.4
SNZO					LR	LR			
	comp=Z,1μm,22.0s,MS5.3								
WDD	**Wield Dalam**	**92.35**	**348**		PFAKE			10 52 10.0	+7.7
WDD					LR	LR			
	comp=Z,961nm,19.0s,MS5.3								
SFS	**San Fernando**	**92.47**	**5**		PFAKE			10 52 10.0	+7.2
SFS					LR	LR			
	comp=Z,2μm,19.0s,MS5.5								
KEST	**Kesra**	**93.02**	**353**		P	**P**		**10 52 05.8**	**+0.4**
	comp=Z,1.7nm,0.9s,mb4.5,baz=276,slow=4.9,SNR=3.2								
RPZ	**Rata Peaks**	**94.92**	**187**		LR	LR		11 31 16.6	
	comp=Z,1μm,18.1s,MS5.5,baz=72,slow=33								
MDT	**Midelt**	**96.19**	**4**		LR	LR		11 33 22.6	
	comp=Z,811nm,20.2s,MS5.2,baz=229,slow=34								
OTAV	**Otavalo**	**96.89**	**81**		PFAKE			10 52 30.0	+6.6
OTAV					LR	LR			
	comp=Z,639nm,19.0s,MS5.1								
GRGR	**Grenville**	**97.30**	**60**		PFAKE			10 52 40.0	+15
GRGR					LR	LR			
	comp=Z,941nm,20.0s,MS5.3								
BBGH	**Gun Hill**	**97.59**	**58**		PFAKE			10 52 40.0	+13
BBGH					LR	LR			
	comp=Z,2μm,22.0s,MS5.6								
TAU	**Tasmania Unive**	**98.06**	**204**		PFAKE			10 52 40.0	+12
TAU					LR	LR			
	comp=Z,1μm,21.0s,MS5.4								
RPN	**Rapa Nui**	**99.50**	**122**		LR	LR		11 28 43.5	
	comp=Z,796nm,18.1s,MS5.3,baz=9.5,slow=30								
NWAO	**Narrogin (SRO)**	**100.43**	**230**		PFAKE			10 52 50.0	+11
NWAO					LR	LR			
	comp=Z,931nm,21.0s,MS5.3								
NNA	**Nana**	**107.33**	**88**		PFAKE			10 57 30.0	+12
NNA					LR	LR			
	comp=Z,541nm,20.0s,MS5.1								
MSEY	**Mahe Island**	**114.84**	**296**		PFAKE			10 57 40.0	+7.3
MSEY					LR	LR			
	comp=Z,829nm,19.0s,MS5.4								
TORD	**Torodi Ar. Bea**	**115.86**	**358**		PKP	PKPdf		10 57 33.0	-1.6
	comp=Z,0.9nm,0.5s,baz=352,slow=2.4,SNR=11								
TORD					SKP			11 01 05.2	
	comp=Z,0.7nm,0.4s,baz=338,slow=2.3,SNR=8.8								
TORD					PKKPbc	PKKPbc		11 08 03.8	-0.2
	comp=Z,3.4nm,0.7s,baz=168,slow=2.1,SNR=15								
TORD	**Torodi Ar. Bea**	**115.86**	**358**		PKP	PKPdf		10 57 33.0	-1.6
TORD					SKP			11 01 05.2	
TORD					PKKPbc	PKKPbc		11 08 03.8	-0.2
LPAZ	**La Paz**	**116.05**	**84**		PFAKE			10 57 50.0	+15
LPAZ					LR	LR			
	comp=Z,654nm,21.0s,MS5.2								
SIV	**San Ignacio**	**120.20**	**78**		PKP	PKPdf		10 57 42.1	-0.7
	comp=Z,0.6nm,0.7s,baz=289,slow=4.3,SNR=2.6								
SIV					PP	PP		10 59 08.7	0.0
	comp=Z,1.1nm,0.5s,baz=309,slow=14,SNR=5.3								
LVC	**Limon Verde**	**120.26**	**89**		PFAKE			10 57 50.0	+7.2
LVC					LR	LR			
	comp=Z,496nm,19.0s,MS5.2								
DBIC	**Dimbokro**	**122.14**	**6**		PKP	PKPdf		10 57 46.1	-0.7
	comp=Z,2.0nm,0.4s,baz=22,slow=3.8,SNR=9.2								
DBIC	**Dimbokro**	**122.14**	**6**		PKIKP	PKPdf		10 57 46.1	-0.7
DBIC					pmax	pmax			
	comp=Z,2.0nm,0.4s								
TIC	**Toumodi**	**122.16**	**6**	*e*	PKIKP	PKPdf		10 57 45.8	-1.0
	comp=Z,54nm,0.8s								
KIC	**Kosan Boka**	**122.46**	**6**	*e*	PKIKP	PKPdf		10 57 46.2	-1.2
	comp=Z,42nm,0.7s								
LIC	**Lamto**	**122.57**	**6**	*e*	PKIKP	PKPdf		10 57 46.6	-1.0
	comp=Z,57nm,1.0s								
LIC	**Lamto**	**122.57**	**6**	*e*	PKIKP	PKPdf		10 57 46.7	-0.9
	comp=Z,43nm,1.0s								
MBAR	**Mbarara**	**123.34**	**323**		PFAKE			10 58 00.0	+11
MBAR					LR	LR			
	comp=Z,692nm,19.0s,MS5.3								
LCO	**Las Campanas**	**123.71**	**96**		PFAKE			10 58 00.0	+11
LCO					LR	LR			
	comp=Z,713nm,20.0s,MS5.3								
RCBR	**Riachuelo**	**125.68**	**46**		PFAKE			10 58 00.0	+6.5
RCBR					LR	LR			
	comp=Z,769nm,21.0s,MS5.3								
BDFB	**Brasilia**	**127.70**	**65**		PFAKE			10 58 10.0	+13
BDFB					LR	LR			
	comp=Z,525nm,22.0s,MS5.2								
CASY	**Casey**	**128.55**	**209**		PFAKE			10 58 10.0	+13
CASY					LR	LR			
	comp=Z,1μm,20.0s,MS5.5								
VNDA	**Vanda**	**129.01**	**185**		PKP	PKPdf		10 57 57.5	-0.5
	comp=Z,0.8nm,0.7s,baz=44,slow=5.6,SNR=5.5								
VNDA	**Vanda**	**129.01**	**185**		PKIKP	PKPdf		10 57 57.5	-0.4
VNDA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
SBA	**Scott Base**	**129.11**	**184**		PFAKE			10 58 10.0	+12
SBA					LR	LR			
	comp=Z,726nm,21.0s,MS5.3								
PLCA	**Paso Flores**	**131.50**	**107**		PKP	PKPdf		10 58 03.9	+0.2
	comp=Z,3.7nm,0.5s,baz=248,slow=2.6,SNR=21								
PLCA					SKPbc	SKPbc		11 01 26.6	+2.0
	comp=Z,2.8nm,0.9s,baz=300,slow=6.6,SNR=4.3								
PLCA	**Paso Flores**	**131.50**	**107**	*e*	PKIKP	PKPdf		10 58 03.2	-0.5
PLCA				*e*				10 58 19.4	
PLCA					MLR	MLR			
	comp=Z,727nm,21.0s								
LSZ	**Lusaka**	**137.69**	**318**		PFAKE			10 58 30.0	+14
LSZ					LR	LR			
	comp=Z,926nm,21.0s,MS5.5								
QSPA	**South Pole Qui**	**141.00**	**180**		PFAKE			10 58 30.0	+10
QSPA					LR	LR			
	comp=Z,658nm,19.0s,MS5.4								
EFI	**East Falkland**	**144.51**	**114**		PFAKE			10 58 40.0	+13
EFI					LR	LR			
	comp=Z,1μm,19.0s,MS5.6								
PMSA	**Palmer Station**	**145.05**	**138**		PKPbc	PKPbc		10 58 26.8	-0.4
	comp=Z,18nm,0.5s,baz=350,slow=3.4,SNR=7.4								
PMSA	**Palmer Station**	**145.05**	**138**		PFAKE			10 58 40.0	+13
PMSA					LR	LR			
	comp=Z,839nm,19.0s,MS5.5								
TSUM	**Tsumeb**	**145.21**	**330**	*e*	PKPdf	PKPdf		10 58 29.3	-0.1
TSUM				*ep*	PKPdf	pPKPdf		10 58 42.5	-2.0
TSUM					LR	LR			
	comp=Z,660nm,20.0s,MS5.4								
MAW	**Mawson**	**146.02**	**218**		PKPbc	PKPbc		10 58 29.2	-1.0
	comp=Z,9.8nm,0.5s,baz=90,slow=3.4,SNR=56								
MAW	**Mawson**	**146.02**	**218**	*e*	PKPdf	PKPdf		10 58 28.9	-0.3
MAW				*ep*	PKPdf	pPKPdf		10 58 43.7	-0.7
LBTB	**Lobatse**	**147.39**	**314**	*e*	PKPbc	PKPbc		10 58 35.9	+0.4
LBTB					LR	LR			
	comp=Z,788nm,20.0s,MS5.5								
SYO	**Syowa Base**	**154.25**	**212**	↓*e*	X	PKPbc		10 58 48.0	-2.4
SYO	**Syowa Base**	**154.25**	**212**	↓*es**	PKPdf	PKPab		10 59 01.6	-3.0
VNA3	**Neumayer Olymp**	**159.44**	**171**	*e*	PKPdf	PKPdf		10 58 46.4	-2.3
VNA3				*e*				10 58 56.9	
VNA3				*e*				10 59 14.8	
VNA3				*e*				10 59 25.3	
SNAA	**Sanae**	**159.46**	**177**	*e*	PKPdf	PKPab		10 59 20.5	-6.5
SNAA				*e*				10 59 28.9	
VNA2	**Neumayer--Watz**	**159.95**	**173**	*e*	PKPdf	PKPdf		10 58 47.3	-2.0
	baz=296,slow=1.5								
VNA2				*e*				10 58 57.7	
VNA2				*e*				10 59 15.6	
VNA2				*e*				10 59 27.9	
VNA1	**Neumayer--Stat**	**160.14**	**172**	*e*	PKPdf	PKPdf		10 58 48.3	-1.2
VNA1				*e*				10 59 29.1	

TIR ***22*** *10:40:39.3±2.8, 4180N×2025E, h15km±29km, ML2.6*
PDG ***22*** *10:40:40.1±0.1, 4178N×2020E, h10km, ML2.6/9, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
ISCJB ***22*** *10:40:40.3±0.4, 4180N±002×2021E±003, h10km, Error ellipse: s-maj=3.9km s-min=2.1km az=36.1*
CSEM ***22*** *10:40:40.1±0.2, 4176N×2025E, h2km, ML2.6/9, Error ellipse: s-maj=4.6km s-min=2.5km az=43.0*
NEIC ***22*** *10:40:40.1, 4178N×2020E, h10km, ML2.6(PDG), After PDG.*
BEO ***22*** *10:40:41.5±0.3, 4176N×2021E, h9km±3km, ML2.2/7*
SKO ***22*** *10:40:42.1, 4176N×2016E, h2km*

ISC 22 10:40:40.9±0.4, 4178N±002×2020E±003, h3km±4km, n38, σ1§17/74, 9C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QSH	**Qafa e Shtames**	**0.34**	**221**	*e*	Pg	**Pg**		**10 40 50.0**	**+2.6**
PUK	**Puka**	**0.35**	**319**	*e*	Pg	**Pg**		**10 40 46.8**	**-0.9**
PUK				*i*	Sg	**Sg**		**10 40 52.2**	**-0.1**
ULC	**Ulcinj**	**0.73**	**285**	↑*i*	Pg	**Pg**		**10 40 53.7**	**-1.3**
ULC				*e*	Sg	**Sg**		**10 41 05.2**	**+0.6**
ULC	**Ulcinj**	**0.73**	**285**	*i*	Pg	**Pg**		**10 40 53.7**	**-1.3**
ULC				*i*	Sg	**Sg**		**10 41 05.2**	**+0.6**
OHR	**Ohrid**	**0.80**	**146**	*e*	Pg	**Pg**		**10 40 55.2**	**-1.1**
OHR				*e*	Sg	**Sg**		**10 41 07.4**	**+0.7**
OHR	**Ohrid**	**0.80**	**146**	*e*	Pg	**Pg**		**10 40 55.2**	**-1.1**
OHR				*e*	Sg	**Sg**		**10 41 07.6**	**+0.9**
OHR	**Ohrid**	**0.80**	**146**	*i*	Pg	**Pg**		**10 40 55.7**	**-0.6**
OHR				*e*	Sg	**Sg**		**10 41 07.7**	**+1.0**
PVY	**Plav**	**0.83**	**348**	↑*i*	Pg	**Pg**		**10 40 55.4**	**-1.6**
PVY				*e*	Sg	**Sg**		**10 41 08.5**	**+0.7**
PVY	**Plav**	**0.83**	**348**	*i*	PG	**Pg**		**10 40 55.4**	**-1.6**
PVY				*i*	SG	**Sg**		**10 41 08.5**	**+0.7**
KRUS	**Krusevo**	**0.89**	**117**	*e*	Pg	**Pg**		**10 40 58.4**	**+0.5**
KRUS				*e*	Sg	**Sg**		**10 41 11.3**	**+2.0**
SKO	**Skopje**	**0.94**	**78**	*e*	Pg	**Pg**		**10 40 58.5**	**-0.5**
SKO				*e*	Sg	**Sg**		**10 41 11.6**	**+0.3**
SKO	**Skopje**	**0.94**	**78**	*e*	Pg	**Pg**		**10 40 58.5**	**-0.5**
SKO				*e*	Sg	**Sg**		**10 41 12.6**	**+1.3**
SKO	**Skopje**	**0.94**	**78**	*e*	Pg	**Pg**		**10 41 00.4**	**+1.4**
SKO				*e*	Sg	**Sg**		**10 41 12.6**	**+1.4**
PDG	**Podgorica**	**0.96**	**313**	*i*	PG	**Pg**		**10 40 57.3**	**-2.0**
PDG				*i*	SG	**Sg**		**10 41 12.7**	**+1.0**
PDG	**Podgorica**	**0.96**	**313**	↑*i*	Pg	**Pg**		**10 40 57.3**	**-2.0**
PDG				*e*	Sg	**Sg**		**10 41 12.7**	**+1.0**
TTG	**Podgorica**	**0.96**	**313**	↑*i*	Pg	**Pg**		**10 40 57.3**	**-2.0**
TTG				*e*	Sg	**Sg**		**10 41 12.7**	**+1.0**
BUM	**Brajici-Budva**	**1.10**	**299**	↓*i*	Pg	**Pg**		**10 41 00.4**	**-1.7**
BUM				*e*	Sg	**Sg**		**10 41 17.8**	**+1.4**
BUM	**Brajici-Budva**	**1.10**	**299**	*i*	PG	**Pg**		**10 41 00.4**	**-1.7**
BUM				*i*	SG	**Sg**		**10 41 17.8**	**+1.4**
BEY	**Berane**	**1.12**	**348**	*i*	Pg	**Pg**		**10 41 00.7**	**-1.7**
BEY				*i*	SG	**Sg**		**10 41 17.9**	**+1.1**
BEY	**Berane**	**1.12**	**348**	↑*i*	Pg	**Pg**		**10 41 00.7**	**-1.7**
BEY				*e*	Sg	**Sg**		**10 41 17.9**	**+1.1**
IVA	**Berane**	**1.12**	**348**	↑*i*	Pg	**Pg**		**10 41 00.7**	**-1.7**
IVA				*e*	Sg	**Sg**		**10 41 17.9**	**+1.1**
BIA	**Bitola**	**1.13**	**132**	*e*	Pg	**Pg**		**10 41 01.1**	**-1.5**
BIA				*e*	Sg	**Sg**		**10 41 17.5**	**+0.2**
BIA	**Bitola**	**1.13**	**132**	*e*	Pg	**Pg**		**10 41 01.1**	**-1.5**
BIA				*e*	Sg	**Sg**		**10 41 18.6**	**+1.3**
BIA	**Bitola**	**1.13**	**132**	*e*	Pg	**Pg**		**10 41 02.9**	**+0.2**
BIA				*e*	Sg	**Sg**		**10 41 18.6**	**+1.3**
NKY	**Niksic**	**1.37**	**320**	↑*i*	Pg	**Pg**		**10 41 05.3**	**-1.8**
NKY				*e*	Sg	**Sg**		**10 41 26.5**	**+1.6**
NKY	**Niksic**	**1.37**	**320**	*i*	PG	**Pg**		**10 41 05.3**	**-1.8**
NKY				*i*	SG	**Sg**		**10 41 26.5**	**+1.6**
HCY	**Herceg Novi**	**1.43**	**298**	↑*i*	Pg	**Pg**		**10 41 05.8**	**-2.6**
HCY				*e*	Sg	**Sg**		**10 41 28.6**	**+1.6**
HCY	**Herceg Novi**	**1.43**	**298**	*i*	PG	**Pg**		**10 41 05.8**	**-2.6**
HCY				*i*	SG	**Sg**		**10 41 28.6**	**+1.6**
SJES	**Sjenica**	**1.49**	**354**	*e*	Pg	**Pg**		**10 41 08.4**	**-1.2**
SJES				*e*	Sg	**Sg**		**10 41 30.1**	**+1.2**
BARS	**Barje**	**1.58**	**48**	*e*	Pg	**Pg**		**10 41 10.7**	**-0.6**
BARS				*e*	Sg	**Sg**		**10 41 31.8**	**0.0**
PLE	**Pljevlja**	**1.66**	**339**	↓*i*	Pn	**Pn**		**10 41 10.1**	**-0.9**
PLE				*e*	Sn	**Sn**		**10 41 34.1**	**+1.3**
BRY	**Bratogost**	**1.67**	**313**	↑*i*	Pn	**Pn**		**10 41 10.2**	**-0.8**
BRY				*e*	Sn	**Sg**		**10 41 34.6**	**+0.2**
BRY	**Bratogost**	**1.67**	**313**	*i*	PG	**Pn**		**10 41 10.2**	**-0.8**
BRY				*i*	SG	**Sg**		**10 41 34.6**	**+0.2**
TREB	**Trebinje**	**1.67**	**305**	*e*	Pn	**Pn**		**10 41 10.2**	**-0.8**
TREB				*e*	Sg	**Sg**		**10 41 35.2**	**+0.8**
UPM	**Unac-Piva**	**1.72**	**327**	↓*i*	Pn	**Pn**		**10 41 10.4**	**-0.5**
UPM				*e*	Sn	**Sn**		**10 41 35.3**	**+1.2**
VAY	**Valandovo**	**1.83**	**104**	*e*	Pn	**Pn**		**10 41 13.3**	**0.0**
VAY				*e*	Sn	**Sn**		**10 41 36.1**	**-0.9**
GRUS	**Gruza**	**2.14**	**10**	*e*	Pn	**Pn**		**10 41 18.1**	**+0.5**
GRUS				*e*	Sg	**Sg**		**10 41 49.4**	**-0.4**
BBLS	**Lazići**	**2.17**	**345**	*e*	Pn	**Pn**		**10 41 18.3**	**+0.4**

NNC ***22*** *11:01:00.8±1.3, 4362N×7688E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=40.4km s-min=7.2km az=141.0*
ISCJB ***22*** *11:01:03.8±1.2, 432N±02×772E±0.1, h33km, Error ellipse: s-maj=27.0km s-min=10.3km az=151.8*

ISC 22 11:01:05.0±1.3, 431N±02×772E±0.1, h35km, n9, σ1§04/10, 2C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.10**	**219**	P		**Pn**		**11 01 23.5**	**-0.4**
	SNR=9.8								
TKM2	**Tokmak 2**	**1.17**	**261**	↓P		**Pn**		**11 01 22.5**	**-2.4**
	8.4nm,0.4s								
TKM2				↑S		**Sn**		**11 01 39.7**	**0.0**
	6.9nm,0.5s								
TKM2	**Tokmak 2**	**1.17**	**261**	P		**Pn**		**11 01 22.7**	**-2.1**
	SNR=13								
KBK	**Karagaybulak**	**1.70**	**255**	P		**Pn**		**11 01 32.8**	**+0.7**
	SNR=7.1								
USP	**Ospenovka**	**1.96**	**276**	P		**Pn**		**11 01 35.4**	**-0.3**
	SNR=17								
AAK	**Ala-Archa**	**2.03**	**257**	P		**Pn**		**11 01 37.9**	**+1.3**
	SNR=11								
UCH	**Uchtor**	**2.15**	**247**	P		**Pn**		**11 01 42.2**	**+3.8**
	SNR=6.1								
KK31	**Karatay Array**	**4.88**	**272**	Pg		**Pn**		**11 02 25.7**	**+10**
	0.3nm,0.3s,baz=4.0,slow=26,SNR=6.6								
KK31				↓Lg				11 03 27.9	
	2.4nm,0.6s,baz=4.0,slow=26,SNR=5.2								
MK31	**Makanchi Array**	**5.17**	**43**	Pn		**Pn**		**11 02 19.9**	**+0.1**
	0.8nm,0.4s,baz=219,slow=14,SNR=12								
MK31				↑Lg				11 03 37.3	
	1.8nm,0.8s,baz=223,slow=28,SNR=4.3								

GUC 22 11:07:15.1±0.7, 2129S×6876W, h129km±7km, ML3.7, 1C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.29**	**225**	↓*i*	P		Pn	11 07 41.7	+0.9
MACH				*i*	S		Sn	11 08 02.1	+1.7
LVC	**Limon Verde**	**1.33**	**186**	↑*i*	P		Pn	11 07 42.1	+0.9
LVC				*i*	S		Sn	11 08 03.1	+2.0
LVC					AML	AML		11 08 04.5	
	comp=E,513nm,0.4s								
CEN1	**Los Morros**	**2.48**	**212**	*e*	P		Pn	11 07 58.9	+4.0
CEN1				*i*	S		Sn	11 08 32.1	+6.5
CEN1					AML	AML		11 08 43.7	
	comp=E,430nm,0.4s								
CPN1	**Cerro Paranal**	**3.65**	**204**	*e*	P		Pn	11 08 12.8	+2.6
VNA3	**Neumayer Olymp**	**60.23**	**161**	*e*	P			11 17 13.0	+3.8
VNA2	**Neumayer--Watz**	**60.80**	**161**	*e*	P			11 17 16.8	+3.7
	baz=297,slow=6.5								
SNAA	**Sanae**	**62.44**	**161**	*e*	P			11 17 23.4	-0.7

GUC ***22*** *11:20:58.8±1.1, 2350S×7101W, h27km±11km, ML3.3*

IDC ***22*** *11:21:11.3±5.5, 2375S×6764W, h0km, mb4.0/1, mb1 3.9/2, mb1mx3.6/16, mbtmp3.8/2, ML3.4/1, MS5.1/1, Ms1 5.1/1, ms1mx3.7/21, Error ellipse: s-maj=166.4km s-min=55.3km az=64.0*

ISC 22 11:20:56.3±2.0, 2351S±005×711W±01, h3km±9km, n10, σ0§68/13, 3C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.66**	**105**	↑*i*	P	**Pg**		**11 21 10.0**	**+1.0**
ANCH				*i*	S	**Sg**		**11 21 17.6**	**0.0**
ANCH					AML	AML		11 21 18.7	
	comp=E,3μm,0.6s								
MECH	**Mejillones**	**0.73**	**57**	↓*i*	P	**Pg**		**11 21 10.4**	**+0.2**
MECH				*i*	S	**Sg**		**11 21 20.0**	**+0.3**
MECH					AML	AML		11 21 23.4	
	comp=E,6μm,0.4s								
CEN1	**Los Morros**	**0.84**	**82**	↑*i*	P	**Pg**		**11 21 10.4**	**-2.0**
CEN1				*i*	S	**Sg**		**11 21 18.8**	**-4.7**
CEN1					AML	AML		11 21 19.5	
	comp=N,2μm,0.6s								
CPN1	**Cerro Paranal**	**1.28**	**150**	*e*	P	**Pg**		**11 21 21.2**	**+0.2**
CPN1				*i*	S	**Sg**		**11 21 37.6**	**0.0**
CPN1					AML	AML		11 21 43.4	
	comp=N,886nm,0.3s								
MACH	**Maria Elena**	**1.81**	**44**	*e*	P	**Pn**		**11 21 29.1**	**+0.7**
MACH				*i*	S	**Sn**		**11 21 51.8**	**0.0**
LVC	**Limon Verde**	**2.21**	**67**	↑*i*	P	**Pn**		**11 21 33.7**	**-0.2**
LVC				*i*	S	**Sn**		**11 22 01.9**	**+0.1**
LVC					AML	AML		11 22 06.0	
	comp=N,521nm,0.5s								
LPAZ	**La Paz**	**7.71**	**22**	Pn		Px		11 23 01.7	
	comp=N,0.3nm,0.3s,baz=189,slow=7.4,SNR=6.1								
TORD	**Torodi Ar. Bea**	**79.94**	**71**	P		**P**		**11 33 06.7**	**-0.5**
	comp=N,1.3nm,0.8s,baz=255,slow=5.2,SNR=5.5								
RAO	**Raoul Island**	**92.24**	**237**	LR		LR		12 05 29.2	
	comp=N,922nm,20.4s,baz=8.8,slow=28								
MKAR	**Makanchi Array**	**148.45**	**36**	PKPbc		PKPab		11 40 54.3	+6.8
	comp=N,0.9nm,0.7s,baz=299,slow=2.5,SNR=4.3								

BJI ***22*** *11:31:09.2, 3975N×7570E, h15km, ML3.0*

ISC 22 11:31:05.2±2.7, 395N±01×770E±02, h35km, n13, σ0§81/15, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.78**	**274**	P		**Pn**		**11 31 20.1**	**+0.5**
KSH				S		**Sn**		**11 31 30.3**	**+0.3**
KSH				Smax					
	comp=N,729nm,0.3s								
KSH				Smax					
	comp=E,348nm,0.4s								
ULHL	**Ulahol**	**2.84**	**349**	P		**Pn**		**11 31 49.0**	**+1.0**
	SNR=75								
KZA	**Kyzart**	**2.92**	**334**	P		**Pn**		**11 31 47.5**	**-1.6**
	SNR=14								
UCH	**Uchtor**	**3.33**	**327**	P		**Pn**		**11 31 55.4**	**+0.6**
	SNR=59								
KBK	**Karagaybulak**	**3.54**	**335**	P		**Pn**		**11 31 58.4**	**+0.8**
	SNR=97								
TKM2	**Tokmak 2**	**3.61**	**344**	↑Pn		**Pn**		**11 31 58.5**	**0.0**
	comp=E,47nm,0.5s,baz=200,slow=30								
TKM2				↓Sn		**Sn**		**11 32 40.2**	**+0.3**
	comp=E,114nm,0.6s,baz=200,slow=30								
TKM2	**Tokmak 2**	**3.61**	**344**	P		**Pn**		**11 31 58.5**	**0.0**
	SNR=40								
AML	**Almayashu**	**3.65**	**318**	P		**Pn**		**11 31 57.6**	**-1.5**
	SNR=35								
AAK	**Ala-Archa**	**3.68**	**330**	P		**Pn**		**11 31 59.4**	**-0.1**
	SNR=59								
CHMS	**Chumysh**	**3.91**	**335**	P		**Pn**		**11 32 07.0**	**+4.4**
	SNR=8.7								
EKS2	**Erkin-Say**	**4.01**	**324**	P		**Pn**		**11 32 03.3**	**-0.7**
	SNR=17								
USP	**Ospenovka**	**4.23**	**335**	P		**Pn**		**11 32 07.3**	**+0.2**
	SNR=14								
KK31	**Karatay Array**	**6.08**	**309**	↑Pg		**Pn**		**11 32 37.2**	**+4.8**
	comp=E,6.1nm,0.8s,baz=129,slow=14,SNR=18								
KK31			

HORT	Hortiatis	1.00	79	P	Pg	12 32 56.3	-1.0
HORT				S	Sg	12 33 11.5	+1.2
KRUS	Krusevo	1.04	336	ePn	Pn	12 32 58.3	-1.6
KRUS				eSn	Sn	12 33 17.3	+2.1
KRUS	Krusevo	1.04	336	ePn	Pn	12 32 58.3	-1.6
KRUS				eSn	Sn	12 33 17.4	+2.2
VAY	Valandovo	1.07	32	ePn	Pn	12 32 58.4	-2.0
VAY				eSn	Sn	12 33 17.6	+1.6
KNT	Kendrikon	1.11	48	P	Pg	12 32 57.9	-1.6
PLG	Polygyros	1.25	91	P	Pg	12 33 02.4	+0.3
XOR	Xorichti	1.49	134	P	Pn	12 33 05.1	-1.0

*ISCJB **22** 12:38:22.8±0.8, 4298N±006×14514.5E±007, h99km±4km, mb3.8/3, Error ellipse: s-maj=11.4km s-min=7.8km az=154.8*
*JMA **22** 12:38:24.2±0.1, 4299N×145.13E, h92km±1km, M3.4*
JMA Felt I J1.
*IDC **22** 12:38:27.2±6.6, 43.16N×144.93E, h115km±33km, mb3.6/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.6/4, MS3.7/1, Ms1 3.7/1, ms1mx3.0/41, Error ellipse: s-maj=156.9km s-min=60.1km az=29.0*

ISC 22 12:38:23.7±0.8, 4298N±006×14514E±007, h94km±4km, n17, σ0§48/27, mb3.8/3, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.33	274	P	Pn	12 38 37.9	+0.2
JAK				eS	Sn	12 38 48.3	+0.2
NEM2	Nemuro 2	0.59	48	P	Pn	12 38 39.6	+0.1
NEM2				eS	Sn	12 38 50.8	-0.6
JNK	Nakash	0.68	333	P	Pn	12 38 40.1	-0.3
JNK				eS	Sn	12 38 51.9	-0.9
JRA	Rausu	0.96	359	P	Pn	12 38 43.6	+0.4
JRA				eS	Sn	12 38 58.2	+0.3
JOB	Onbets	0.96	266	P	Pn	12 38 43.6	+0.4
JOB				S	Sn	12 38 58.2	+0.3
JAR	Ashorobuto	1.05	288	P	Pn	12 38 44.5	+0.2
JAR				S	Sn	12 38 59.3	-0.4
JTKR	Abashiri--Toko	1.34	318	P	Pn	12 38 48.1	+0.5
JTKR				eS	Sn	12 39 05.6	-0.1
JCH	Churui	1.36	255	P	Pn	12 38 48.2	+0.3
JCH				eS	Sn	12 39 05.6	-0.5
JMP	Maruseppu	1.66	309	P	Pn	12 38 52.0	+0.4
JMP				eS	Sn	12 39 12.6	-0.1
JFR	Furan	1.88	277	P	Pn	12 38 54.7	+0.3
JFR				eS	Sn	12 39 17.3	-0.5
JNBK	Urakawa-nobuka	1.90	249	P	Pn	12 38 54.2	-0.5
ASAJ	Asahikawa	2.17	303	P	Pn	12 38 59.6	+1.4
	13nm,0.3s,baz=142,slow=8.1,SNR=88						
ASAJ				S	Sn	12 39 24.9	+0.2
	5.7nm,0.3s,baz=260,slow=32,SNR=23						
JOW	Kunigami	21.17	226	LR	LR	12 52 04.3	
	comp=Z,228nm,20.3s,baz=289,slow=39						
SONM	Songino Array	27.43	294	P	P	12 44 00.2	-0.2
	2.3nm,0.8s,mb3.8,baz=89,slow=8.0,SNR=14						
ZALV	Zalesovo Beam	40.30	307	P	P	12 45 50.6	-0.8
	0.6nm,0.4s,mb3.8,baz=93,slow=8.9,SNR=3.8						
MKAR	Makanchi Array	43.65	298	P	P	12 46 18.2	-0.5
	0.8nm,0.5s,mb3.7,baz=83,slow=8.7,SNR=4.7						
KURK	Kurchatov	44.75	304	P	P	12 46 27.8	+0.3
	1.8nm,0.5s,baz=72,slow=9.1,SNR=4.3						

IDC 22 13:09:25.8±3.0, 3225S×17967W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, ML3.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/21, Error ellipse: s-maj=67.8km s-min=38.3km az=98.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.55	203	Pn	Pn	13 11 03.6	+0.3
	0.4nm,0.3s,baz=52,slow=17,SNR=7.0						
URZ				Sn	Sn	13 12 18.4	-0.4
	0.5nm,0.3s,baz=343,slow=20,SNR=2.7						
RAR	Rarotonga	20.86	63	LR	LR	13 19 37.7	
	comp=Z,228nm,19.9s,baz=328,slow=29						
ASAR	Alice Springs	41.62	270	P	P	13 17 16.2	+0.4
	0.8nm,0.8s,baz=111,slow=8.1,SNR=6.5						
WRA	Warramunga Arr	42.78	275	P	P	13 17 24.8	-0.5
	1.2nm,0.8s,baz=113,slow=7.7,SNR=3.9						
BRTR	Keskin Array B	152.15	295	PKPbc	PKPbc	13 29 23.3	+0.1
	1.6nm,0.6s,baz=77,slow=9.0,SNR=8.7						

*IDC **22** 13:11:03.4±1.2, 007S×126.00E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.7/6, Error ellipse: s-maj=132.3km s-min=20.0km az=67.0*
*NEIC **22** 13:11:04.8±0.7, 003S×126.07E, h10km, mb4.2/2, Error ellipse: s-maj=109.0km s-min=10.7km az=67.0*
*ISCJB **22** 13:11:06.2±0.8, 00N±03×126.2E±08, h33km, mb3.8/8, Error ellipse: s-maj=117.7km s-min=12.7km az=157.2*

ISC 22 13:11:08.5±0.8, 01S±03×126.1E±08, h35km, n10, σ0§68/10, mb3.8/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	Tennant Creek	21.35	158	eP	P	13 15 53.1	+0.3
	13nm,1.4s,mb4.1						
WRA	Warramunga Arr	21.35	158	P	P	13 15 51.6	-1.3
	1.2nm,0.5s,mb3.5,baz=337,slow=11,SNR=11						
ASAR	Alice Springs	24.67	163	P	P	13 16 27.1	+1.0
	0.8nm,0.8s,mb3.3,baz=355,slow=12,SNR=11						
ULN	Ulaanbaatar	50.52	343	eP	P	13 20 02.5	-0.7
	2.0nm,0.5s,mb4.3						
SONM	Songino Array	50.68	343	P	P	13 20 05.4	+1.0
	0.7nm,0.9s,mb3.6,baz=146,slow=6.6,SNR=4.0						
MKAR	Makanchi Array	60.32	327	P	P	13 21 13.4	-0.4
	0.3nm,0.5s,mb3.6,baz=122,slow=7.2,SNR=5.4						
KURK	Kurchatov	64.60	329	P	P	13 21 42.2	0.0
	1.0nm,0.8s,mb3.9,baz=124,slow=6.0,SNR=4.6						
KURK	Kurchatov	64.60	329	P	P	13 21 42.2	-0.1
AKTK	Aktyubinsk	76.23	322	P	P	13 22 53.4	0.0
AKTO	Aktyubinsk	76.23	322	P	P	13 22 53.4	0.0
	1.4nm,0.7s,mb4.0,baz=97,slow=10,SNR=4.6						

*ISCJB **22** 13:42:57.2±0.5, 289S±0.1×618E±0.1, h10km, mb4.2/18, Error ellipse: s-maj=17.5km s-min=13.1km az=28.3*
*IDC **22** 13:42:57.7±0.6, 2885S×6182E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/23, mbtmp4.2/13, ML4.1/1, Error ellipse: s-maj=24.0km s-min=17.6km az=54.0*
*NEIC **22** 13:42:58.8±0.5, 2891S×6172E, h10km, mb4.4/7, Error ellipse: s-maj=17.5km s-min=12.7km az=201.0*

ISC 22 13:42:59.2±0.5, 289S±01×618E±01, h10km, n25, σ0§94/23, mb4.2/18, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	Ambohidratompo	16.81	304	Pn	Pn	13 46 57.1	+2.3
	0.7nm,0.3s,baz=124,slow=11,SNR=11						
OPO				Sn	Sn	13 49 50.9	-11
	0.2nm,0.3s,baz=42,slow=15,SNR=3.1						
LBTB	Lobatse	32.39	268	eP	P	13 49 26.1	-3.1
	14nm,1.1s,mb4.7						
LSZ	Lusaka	33.79	286	eP	P	13 49 42.1	+0.5
	3.3nm,0.8s,mb4.3						
CMAR	Chiang Mai Arr	59.20	42	P	P	13 53 01.4	+0.7
	0.7nm,0.3s,mb4.1,baz=236,slow=7.8,SNR=6.2						
QSPA	South Pole Qui	61.28	180	P	P	13 53 15.0	+0.8
	8.6nm,1.0s,mb4.8,baz=270,slow=2.6,SNR=15						
ASAR	Alice Springs	64.00	104	P	P	13 53 33.2	0.0
	2.5nm,0.8s,mb4.3,baz=246,slow=6.1,SNR=24						
VNDA	Vanda	64.19	166	P	P	13 53 34.0	+0.4
	2.5nm,0.8s,mb4.3,baz=280,slow=5.7,SNR=8.3						
WRA	Warramunga Arr	65.80	100	P	P	13 53 44.4	-0.5
	3.4nm,1.0s,mb4.3,baz=246,slow=5.7,SNR=15						
WRAB	Tennant Creek	65.81	100	eP	P	13 53 45.2	+0.2
	4.0nm,0.8s,mb4.5						
TOA0	Torodi Ar. Sit	71.47	297	P	P	13 54 17.4	-2.9
TORD	Torodi Ar. Bea	71.47	297	P	P	13 54 20.2	-0.1
	1.2nm,0.9s,mb3.8,baz=116,slow=5.5,SNR=6.3						
EKS2	Erkin-Say	72.03	9	eP	P	13 54 22.8	-0.3
	1.6nm,0.8s,mb4.0						
TKM2	Tokmak 2	72.56	11	P	P	13 54 26.6	+0.4
	2.0nm,0.8s,mb4.1						
BRTR	Keskin Array B	73.09	338	P	P	13 54 29.7	+0.2
	1.0nm,0.6s,mb3.9						
DBIC	Dimbokro	73.12	288	P	P	13 54 31.3	+1.0
	1.4nm,0.5s,mb4.1,baz=108,slow=6.4,SNR=3.9						
DBIC	Dimbokro	73.12	288	eP	P	13 54 30.8	+0.5
	20nm,1.6s,mb4.8						
MKAR	Makanchi Array	77.57	14	P	P	13 54 55.6	+0.6
	0.7nm,1.0s,mb3.5,baz=143,slow=10,SNR=4.0						
KURK	Kurchatov	80.63	11	eP	P	13 55 10.9	-0.7
	3.1nm,1.0s,mb4.2						
AKASG	Malin Array Be	84.29	340	P	P	13 55 30.8	0.0
	0.3nm,0.3s,mb3.9,baz=146,slow=3.8,SNR=4.4						
ZAA0	Zalesovo Array	84.86	13	eP	P	13 55 32.5	-1.2
ZALV	Zalesovo Beam	84.86	13	P	P	13 55 33.1	-0.5
	3.9nm,0.9s,mb4.5,baz=197,slow=4.6,SNR=15						
SONM	Songino Array	86.24	28	P	P	13 55 41.1	+0.5
	0.5nm,0.9s,mb3.8,baz=224,slow=4.1,SNR=4.9						
YKA	Yellowknife Ar	146.29	357	PKPbc	PKPbc	14 02 37.7	-1.6
	2.0nm,0.7s,baz=342,slow=3.6,SNR=8.1						
YKA	Yellowknife Ar	146.29	357	PKPbc	PKPbc	14 02 37.7	-1.6
PDAR	Pinedale Array	164.46	335	PKPab	PKPab	14 03 57.6	0.0
	0.5nm,0.8s,baz=41,slow=2.9,SNR=4.9						

MAN 22 13:50:39, 818N×12328E, h19km, mb3.5, ML2.2, MS1.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAGZ	Pagadian	0.35	162	eP	Pg	13 50 48.9	+2.5
PAGZ				eS	Sg	13 50 55.7	+4.3
DCPH	Dipolog City	0.41	11⇑	eP	Pg	13 50 47.5	0.0
IPIL	Ipil	0.80	241	eP	Pb	13 50 54.4	+0.1
IPIL				eS	Sb	13 51 03.4	-1.3
SNPH	Sibulan	1.16	358	eP	Pn	13 51 00.0	-0.2

*IDC **22** 14:11:25.8±1.1, 35.19N×69.73E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/23, mbtmp3.8/6, ML3.9/2, MS3.8/1, Ms1 3.8/1, ms1mx2.7/36, Error ellipse: s-maj=32.2km s-min=28.2km az=65.0*
*ISCJB **22** 14:11:38.2±0.6, 3569N±005×6972E±009, h110km±8km, mb3.6/4, Error ellipse: s-maj=12.4km s-min=7.5km az=18.4*
*NEIC **22** 14:11:38.9±0.8, 3561N×6973E, h107km±9km, mb4.5/4, Error ellipse: s-maj=18.4km s-min=9.8km az=111.0*
*MOS **22** 14:11:38.6±1.8, 3560N×6955E, h120km, mb4.1/1, Error ellipse: s-maj=33.4km s-min=11.7km az=76.5*
*NNC **22** 14:11:42.9±3.6, 3644N×6956E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=30.0km s-min=27.3km az=116.0*

ISC 22 14:11:39.4±0.6, 3567N±005×697E±01, h106km±7km, n31, σ1§04/36, mb3.6/4, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.25	206	ePg	Pn	14 12 02.8	-0.2
KBL				eSg	Sn	14 12 20.7	-0.1
DLH	Dalhousie	6.06	119	eP	Px	14 13 33.0	
AML	Almayashu	7.17	25	ePn	Pn	14 13 21.0	-0.4
	26nm,0.6s						
AML				eSn	Sn	14 14 36.1	-5.2
AML	Almayashu	7.17	25	P	Pn	14 13 22.6	+1.1
	SNR=19						
KK31	Karatay Array	7.45	5	⇓Pn	Pn	14 13 25.3	-0.1
	2.9nm,0.3s,baz=181,slow=12,SNR=52						
KK31				⇓Sn	Sn	14 14 45.8	-2.4
	2.9nm,0.5s,baz=182,slow=21,SNR=4.2						
EKS2	Erkin-Say	7.67	23	ePn	Pn	14 13 28.1	-0.1
	5.7nm,0.5s						
EKS2				eSn	Sn	14 14 49.1	-4.3
EKS2	Erkin-Say	7.67	23	P	Pn	14 13 29.0	+0.8
	SNR=27						
AAK	Ala-Archa	7.89	27	P	Pn	14 13 31.8	+0.5
	SNR=19						
CHMS	Chumysh	8.30	27	P	Pn	14 13 37.1	+0.2
	SNR=7.7						
USP	Ospenovka	8.45	25	P	Pn	14 13 38.8	0.0
	SNR=7.6						
TKM2	Tokmak 2	8.56	30	⇑Pn	Pn	14 13 39.8	-0.6
	3.9nm,0.6s						
TKM2				⇓Sn	Sn	14 15 14.1	-1.0
	2.1nm,0.7s						
TKM2	Tokmak 2	8.56	30	ePn	Pn	14 13 39.8	-0.6
	5.0nm,0.5s						
TKM2	Tokmak 2	8.56	30	ePN	Pn	14 13 39.8	-0.6
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TKM2	Tokmak 2	8.56	30	P	Pn	14 13 40.1	-0.3
	SNR=8.7						
MK31	Makanchi Array	14.58	36	Pn	Pn	14 15 03.2	+2.8
MKAR	Makanchi Array	14.58	36	Pn	Pn	14 15 02.3	+1.9
	comp=Z,0.1nm,0.3s,baz=223,slow=12,SNR=3.5						
AB09	Akbulak array	15.36	335	⇓Pn	Pn	14 15 10.1	-0.1
	comp=Z,1.1nm,0.3s						
AB09				⇑Sn	Sn	14 17 53.6	-6.3
	comp=Z,1.4nm,0.7s						
AKTK	Aktyubinsk	17.02	334	P	Pn	14 15 31.8	+1.1
AKTO	Aktyubinsk	17.02	334	⇑Pn	Pn	14 15 32.5	+1.8
	comp=Z,0.6nm,1.2s						
AKTO				⇑Sn	Sn	14 18 34.4	-5.3
	comp=Z,0.3nm,0.7s						
AKTO	Aktyubinsk	17.02	334	P	Pn	14 15 31.8	+1.1
	comp=Z,0.4nm,0.3s,baz=140,slow=14,SNR=6.0						
BVAR	Bovoye Array	17.36	1	P	Pn	14 15 34.3	-0.5
	comp=Z,0.4nm,0.3s,baz=173,slow=12,SNR=8.4						
BRVK	Borovoye	17.39	1	ePn	Pn	14 15 34.5	-0.7
	comp=Z,3.3nm,1.0s						
BRVK	Borovoye	17.39	1	eP	Pn	14 15 34.5	-0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	Zalesovo Beam	21.11	25	P	P	14 16 16.4	+1.1
	comp=Z,2.9nm,0.4s,mb3.9,baz=221,slow=11,SNR=15						
ZALV	Zalesovo Beam	21.11	25	P	P	14 16 16.4	+1.1
ZALV	Zalesovo Beam	21.11	25	P	P	14 16 16.4	+1.1
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
ASAJ	Asahikawa	54.89	57	LR	LR	14 46 04.7	
	comp=Z,80nm,20.6s,baz=39,slow=38						
TORD	Torodi Ar. Bea	64.64	268	P	P	14 22 05.6	-0.5
	comp=Z,0.9nm,0.6s,mb3.8,baz=46,slow=6.3,SNR=8.4						
TORD	Torodi Ar. Bea	64.64	268	P	P	14 22 05.6	-0.5
WRA	Warramunga Arr	82.45	121	P	P	14 23 48.9	-1.3
	comp=Z,0.4nm,0.8s,mb3.3,baz=316,slow=5.8,SNR=2.5						
ASAR	Alice Springs	84.65	124	P	P	14 24 00.4	-0.9
	comp=Z,0.3nm,0.7s,mb3.3,baz=317,slow=4.6,SNR=4.1						

*IDC **22** 14:11:36.5±1.4, 602S×14737E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/16, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=64.2km s-min=22.8km az=93.0*
*ISCJB **22** 14:11:48.6±5.2, 62S±0.1×1467E±0.4, h95km±42km, mb3.6/5, Error ellipse: s-maj=60.0km s-min=24.4km az=1.5*
*NEIC **22** 14:11:48.2±3.4, 6.14S×147.00E, h86km±26km, mb3.6/1, Error ellipse: s-maj=42.1km s-min=18.7km az=89.0*

ISC 22 14:11:50.0±4.4, 62S±02×1468E±04, h94km±35km, n10, σ0§70/10, mb3.6/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEN	Coen	8.48	204	ePn	Pn	14 13 50.3	+0.2
	6.4nm,0.5s						
COEN				eSn	Sn	14 15 23.4	-0.7
WRAB	Tennant Creek	18.21	220	eP	Pn	14 15 56.5	-0.3
	2.5nm,0.6s						
WRA	Warramunga Arr	18.23	220	P	Pn	14 15 57.4	+0.5
	0.4nm,0.3s,baz=41,slow=12,SNR=10.0						
WRA				PcP	PcP	14 20 25.4	+0.5
	0.1nm,0.3s,baz=30,slow=2.0,SNR=5.8						
ASAR	Alice Springs	21.32	214	P	P	14 16 30.4	+1.0
	0.9nm,0.4s,mb3.4,baz=51,slow=8.4,SNR=35						
ASAR				PcP	PcP	14 20 30.8	+0.3
	0.3nm,0.6s,baz=358,slow=1.7,SNR=6.5						
STKA	Stephens Creek	26.00	190	P	P	14 17 14.0	-0.1
	1.7nm,0.9s,mb3.5,baz=10,slow=11,SNR=2.4						
STKA	Stephens Creek	26.00	190	P	P	14 17 14.0	-0.1
SONM	Songino Array	64.46	331	P	P	14 22 17.2	+0.7
	0.3nm,0.5s,mb3.4,baz=150,slow=7.0,SNR=3.0						
ZALV	Zalesovo Beam	79.05	328	P	P	14 23 42.3	-1.5
	0.4nm,0.3s,mb3.7,baz=97,slow=7.4,SNR=3.2						
QSPA	South Pole Qui	83.77	180	P	P	14 24 08.3	+0.1
	1.2nm,0.5s,mb4.0,baz=297,slow=2.2,SNR=3.9						
TORD	Torodi Ar. Bea	144.91	284	PKPbc	PKPdf	14 31 16.5	-0.7
	0.6nm,0.8s,baz=68,slow=3.5,SNR=2.6						

*CSEM **22** 14:16:05.9±0.1, 3756N×3553E, h2km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.5km az=129.0*
*ISCJB **22** 14:16:07.1±0.6, 3753N±003×3554E±003, h7km±5km, Error ellipse: s-maj=4.3km s-min=4.0km az=12.4*
*ISK **22** 14:16:07.0, 3755N×3552E, h7km, MD2.9*
*DDA **22** 14:16:07.2, 3751N×3559E, h7km±6km, Md2.9*

ISC 22 14:16:07.5±0.6, 3754N±003×3556E±003, h7km±5km, n18, σ0§90/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARA	Karaisali	0.49	235	PG	Pg	14 16 16.2	-0.6
KARA				eSG	Sg	14 16 23.7	+0.5
CEYT	Ceyhan	0.55	164	ePG	Pg	14 16 18.6	+0.6
CEYT				eSG	Sg	14 16 26.9	+1.7
ANDN	Andirin	0.63	86	iP	Pg	14 16 19.1	-0.4
ANDN				iS	Sg	14 16 29.5	+1.7
NIG	Nigde	0.94	308	ePG	Pg	14 16 25.0	-0.5
NIG				eSG	Sg	14 16 37.9	+0.2
MERS	Mersin	1.06	231	ePG	Pg	14 16 27.5	-0.3
MERS				eSG	Sg	14 16 42.3	+0.7
KMRS	Kahramanmaras	1.07	91	ePN	Pn	14 16 28.7	-0.2
COBT	Iskenderun	1.16	151	iP	Pg	14 16 27.6	-2.2
COBT				iS	Sg	14 16 43.0	-1.8
COBT	Iskenderun	1.16	151	iP	Pg	14 16 27.5	-2.2
COBT				iS	Sg	14 16 43.0	-1.8
PINB	Pinarbasi	1.32	30	iP	Pn	14 16 31.6	-0.7
PINB				iS	Sb	14 16 51.1	+1.5
BNN	Bunyan	1.33	10	ePN	Pn	14 16 32.0	-0.5
BNN				eSN	Sn	14 16 51.0	+0.6
AVNT	Avonos	1.35	336	iP	Pn	14 16 32.8	0.0
AVNT				iS	Sb	14 16 49.5	-1.2
GAZ	Gaziantep	1.37	105	ePN	Pn	14 16 33.5	+0.6
SARI	SarD1z-Kayseri	1.45	38	ePN	Pn	14 16 28.5	-5.6
SARI				eSN	Sn	14 16 44.7	-8.6
GZT	Gaziantep	1.61	96	iP	Pn	14 16 35.6	-0.6
GZT				iS	Sn	14 16 56.7	-0.6
IKL	Isikli	1.98	230	ePN	Pn	14 16 41.9	+0.5
IKL				eSN	Sn	14 17 07.1	+0.5
YOZ	Yozgat	2.10	355	ePN	Pn	14 16 43.3	+0.2
DARE	Darende-Malaty	2.26	51	ePN	Pn	14 16 39.9	-5.4
DARE				eSN	Sn	14 17 04.2	-9.3
HDMB	Hadim	2.52	258	ePN	Pn	14 16 49.0	+0.2

*NEIC **22** 14:17:23.2, 1502N×6067W, h33km, MD3.5(TRN), After TRN.*

TRN 22 14:17:22.5, 1501N×6060W, h31km, MD3.5, M2.4(FDF), 5C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVM	Montagne Vaucl	0.54	213⇓	eP	Pb	14 17 35.2	+1.6
FDF	Fort de France	0.60	243	ePn	Pn	14 17 35.5	+0.5
FDF				eSn	Sn	14 17 45.8	+2.1
FDF	Fort de France	0.60	243⇑	eP	Pb	14 17 36.2	+1.6
FDF				⇑eS	Sb	14 17 46.6	+3.7
BIM	Bigot	0.67	223⇑	eP	Pb	14 17 37.3	+1.5
BIM				⇑eS	Sb	14 17 48.2	+3.4
DWS	Wesley	0.89	309	eP	Pn	14 17 40.1	+1.2
DWS				eS	Sn	14 17 52.2	+1.6
DWS	Wesley	0.89	309	eP	Pn	14 17 40.1	+1.2
DWS				eS	Sn	14 17 52.9	+2.3
SLW	Petit Monier	1.04	199	eP	Pn	14 17 41.9	+0.9
SLW				eS	Sn	14 17 55.8	+1.4
SLB	Belfond	1.25	200⇑	eP	Pn	14 17 45.4	+1.4
SLB				eS	Sn	14 18 01.8	+2.1
MCLT	Moule a Chique	1.33	195	eP	Pn	14 17 47.1	+2.0
MCLT				eS	Sn	14 18 03.8	+2.1
SSV	Crater Summit	1.77	199	eP	Pn	14 17 52.6	+1.5
SSV				eS	Sn	14 18 13.9	+1.4
SSV	Crater Summit	1.77	199	eP	Pn	14 17 52.6	+1.5
SSV				eS	Sn	14 18 14.1	+1.6
SVV	Soufriere Volc	1.79	200	eP	Pn	14 17 53.5	+2.3
SVV				eS	Sn	14 18 15.1	+2.3
SVB	Belmont	1.84	200	eP	Pn	14 17 54.1	+2.1
SVB				eS	Sn	14 18 16.7	+2.5
FCV	Fort Charlotte	1.94	199	eP	Pn	14 17 55.1	+1.7
FCV				eS	Sn	14 18 17.7	+0.9

*ISCJB **22** 14:21:44.4±2.9, 58S±0.1×1468E±0.2, h56km±28km, mb3.7/7, Error ellipse: s-maj=32.1km s-min=14.0km az=24.8*
*NEIC **22** 14:21:44.6±3.4, 580S×147.00E, h48km±30km, mb3.8/1, Error ellipse: s-maj=35.1km s-min=21.8km az=92.0*
*IDC **22** 14:21:49.3±4.0, 581S×146.80E, h83km±37km, mb3.5/7, mb1 3.7/9, mb1mx3.6/16, mbtmp3.6/9, Error ellipse: s-maj=41.7km s-min=13.8km az=101.0*

ISC 22 14:21:45.5±2.3, 59S±01×1469E±02, h50km±21km, n17, σ1§16/18, mb3.7/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEN	Coen	8.83	204	ePn	Pn	14 23 52.2	+1.6
	13nm,0.6s						
COEN				eSn	Sn	14 25 26.5	-2.2
CTA	Charters Tower	14.15	182	P	Pn	14 25 07.0	+3.7
	0.3nm,0.3s,baz=2.9,slow=16,SNR=5.1						
CTAO	Charters Tower	14.15	182	ePn	Pn	14 25 01.5	-1.8
	7.4nm,1.0s						
WRAB	Tennant Creek	18.54	220	eP	Pn	14 25 58.6	-0.2
	5.6nm,0.7s						
WRA	Warramunga Arr	18.55	220	P	Pn	14 25 58.7	-0.2
	0.5nm,0.3s,baz=45,slow=12,SNR=13						
WRA				S	S	14 29 20.4	-6.3
	0.1nm,0.3s,baz=52,slow=22,SNR=3.5						
WRA				PcP	PcP	14 30 26.2	-0.2
	0.1nm,0.3s,baz=26,slow=1.9,SNR=7.8						
ASAR	Alice Springs	21.66	214	P	P	14 26 32.5	+0.5
	1.4nm,0.4s,mb3.7,baz=50,slow=9.0,SNR=37						
ASAR				S	S	14 30 29.9	+0.9
	1.0nm,0.9s,baz=32,slow=24,SNR=5.1						
STKA	Stephens Creek	26.35	190	P	P	14 27 19.8	+2.9
	0.6nm,0.4s,mb3.5,baz=11,slow=13,SNR=3.8						
STKA	Stephens Creek	26.35	190	P	P	14 27 19.8	+2.9
KSRS	Korea Array	46.58	339	P	P	14 30 08.9

ISC 22 14:49:28.5±1.6, 612S±006×14714E±008, h70km±15km, n65, σ0892/57, mb4.4/26, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**8.71**	**206**	*e*Pn	**Pn**	**14 51 31.4**	**-0.4**
	43nm,0.5s						
COEN				*e*Sn	**Sn**	**14 53 06.2**	**-2.4**
COEN	**Coen**	**8.71**	**206**	P	**Pn**	**14 51 32.2**	**+0.4**
	32nm,0.6s,0.1nm						
COEN	**Coen**	**8.71**	**206**	S	**Sn**	**14 53 07.9**	**-0.7**
	32nm,0.6s,0.1nm						
CTA	**Charters Tower**	**13.91**	**183**	Pn	**Pn**	**14 52 42.9**	**+0.4**
	0.8nm,0.3s,baz=3.6,slow=16,SNR=4.1						
CTA				LR	LR	14 57 48.2	
	comp=Z,402nm,20.8s,baz=58,slow=36						
CTAO	**Charters Tower**	**13.91**	**183**	*e*Pn	**Pn**	**14 52 42.0**	**-0.5**
CTAO	**Charters Tower**	**13.91**	**183**	P	**Pn**	**14 52 43.4**	**+1.0**
KAKA	**Kakadu**	**15.91**	**245**	P	Px	14 52 55.3	
KAKA	**Kakadu**	**15.91**	**245**	P	Px	14 52 55.3	
	74nm,0.7s,587nm						
WRAB	**Tennant Creek**	**18.52**	**221**	*e*Pn	**Pn**	**14 53 38.8**	**-1.6**
	14nm,0.8s						
WRAB				*e*Sn	**Sn**	**14 56 58.0**	**-8.9**
WRAB	**Tennant Creek**	**18.52**	**221**	P	**Pn**	**14 53 41.1**	**+0.8**
	20nm,1.0s						
WRA	**Warramunga Arr**	**18.54**	**221**	P	**Pn**	**14 53 39.6**	**-0.9**
	1.3nm,0.3s,baz=40,slow=11,SNR=38						
WRA				S	**S**	**14 57 06.9**	**-0.6**
	0.1nm,0.3s,baz=51,slow=24,SNR=3.7						
WRA				PcP	PcP	14 58 08.1	+1.2
	0.9nm,0.3s,baz=29,slow=1.8,SNR=18						
AAI	**Ambon**	**19.03**	**276**	P	**Pn**	**14 53 47.1**	**+0.6**
	165nm,0.8s,1μm						
AAI	**Ambon**	**19.03**	**276**	P	**Pn**	**14 53 47.0**	**+0.5**
	196nm,0.8s,1μm						
EIDS	**Eidsvold**	**19.51**	**169**	*e*P	**Pn**	**14 53 52.6**	**+0.5**
	6.1nm,0.8s						
LBMI	**Labuha**	**20.34**	**285**	P	**P**	**14 54 01.1**	**+1.8**
	47nm,1.0s						
LBMI	**Labuha**	**20.34**	**285**	P	**P**	**14 54 02.2**	**+2.9**
	57nm,1.0s						
ASAR	**Alice Springs**	**21.60**	**215**	P	**P**	**14 54 13.2**	**+0.5**
	6.4nm,0.5s,mb4.2,baz=46,slow=8.6,SNR=92						
ASAR				S	**S**	**14 58 12.8**	**+4.7**
	2.6nm,0.9s,baz=23,slow=24,SNR=7.4						
MNI	**Manado**	**23.50**	**288**	P	**P**	**14 54 30.9**	**-1.4**
	245nm,1.0s,mb5.5						
BATI	**Baumata**	**23.59**	**259**	P	**P**	**14 54 35.1**	**+2.0**
	25nm,0.6s,mb4.7,baz=86,slow=7.1,SNR=5.9						
BATI	**Baumata**	**23.59**	**259**	P	**P**	**14 54 36.6**	**+3.5**
STKA	**Stephens Creek**	**26.15**	**191**	P	**P**	**14 54 58.0**	**+1.8**
	2.8nm,0.5s,mb4.0,baz=356,slow=9.8,SNR=7.5						
STKA				LR	LR	15 05 46.2	
	comp=Z,297nm,19.4s,baz=292,slow=37						
STKA	**Stephens Creek**	**26.15**	**191**	*e*P	**P**	**14 54 55.8**	**-0.3**
	4.2nm,1.4s,mb3.7						
STKA				LR	LR	15 05 46.2	
MBWA	**Marble Bar**	**30.46**	**238**	*e*P	**P**	**14 55 34.5**	**-0.4**
	12nm,1.0s,mb4.5						
MBWA	**Marble Bar**	**30.46**	**238**	P	**P**	**14 55 38.9**	**+4.1**
NWAO	**Narrogin (SRO)**	**38.54**	**222**	*e*P	**P**	**14 56 48.4**	**+4.0**
YHNB	**Yeheng**	**39.57**	**322**	*e*Pn	**P**	**14 56 53.6**	**+0.5**
AFI	**Afiamalu**	**41.14**	**104**	LR	LR	15 10 49.0	
	comp=Z,502nm,21.2s,baz=93,slow=31						
RPZ	**Rata Peaks**	**42.95**	**154**	P	**P**	**14 57 20.7**	**+0.3**
	3.7nm,0.6s,mb4.3,baz=338,slow=6.5,SNR=5.3						
MJAR	**Matsushiro Arr**	**43.25**	**349**	P	**P**	**14 57 22.8**	**-0.2**
	5.2nm,1.1s,mb4.2,baz=184,slow=8.1,SNR=4.6						
MJAR	**Matsushiro Arr**	**43.25**	**349**	P	**P**	**14 57 22.8**	**-0.2**
MAJO	**Matsushiro**	**43.25**	**349**	*e*P	**P**	**14 57 23.0**	**0.0**
	16nm,1.2s,mb4.6						
PDSI	**Padang**	**46.86**	**274**	P	**P**	**14 57 51.7**	**-0.3**
	30nm,0.7s,mb5.1						
KSRS	**Korea Array**	**46.91**	**339**	P	**P**	**14 57 51.8**	**-0.2**
	3.3nm,1.0s,mb4.0,baz=157,slow=9.4,SNR=7.5						
PPI	**Padang Panjang**	**46.98**	**275**	P	**P**	**14 57 53.4**	**+0.4**
	58nm,0.9s,mb5.3						
PPI	**Padang Panjang**	**46.98**	**275**	P	**P**	**14 57 52.9**	**-0.1**
	69nm,1.0s,mb5.3						
GSI	**Gunungsitoli**	**50.03**	**277**	P	**P**	**14 58 16.6**	**+0.2**
	30nm,0.6s,mb5.4						
GSI	**Gunungsitoli**	**50.03**	**277**	P	**P**	**14 58 16.6**	**+0.2**
	30nm,0.6s,mb5.4						
CMAR	**Chiang Mai Arr**	**53.43**	**298**	P	**P**	**14 58 43.1**	**+1.5**
	1.1nm,0.8s,mb4.0,baz=123,slow=5.9,SNR=10						
CHTO	**Chiang Mai**	**53.56**	**299**	P	**P**	**14 58 49.3**	**+6.7**
PETK	**Petropavlovsk-**	**59.67**	**7**	P	**P**	**14 59 25.6**	**+0.3**
	9.5nm,1.1s,mb4.8,baz=168,slow=4.7,SNR=9.8						
PETK				LR	LR	15 23 27.2	
	comp=Z,25nm,19.6s,baz=272,slow=34						
HIA	**Hailar**	**60.11**	**340**	*e*P	**P**	**14 59 28.0**	**-0.4**
	5.7nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**64.28**	**331**	*e*P	**P**	**14 59 56.0**	**-0.3**
	2.6nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**64.28**	**331**	P	**P**	**14 59 56.8**	**+0.5**
SONM	**Songino Array**	**64.57**	**331**	P	**P**	**14 59 58.6**	**+0.4**
	1.8nm,0.7s,mb4.0,baz=156,slow=6.5,SNR=11						
YAK	**Yakutsk**	**69.28**	**351**	P	**P**	**15 00 28.9**	**+1.1**
VNDA	**Vanda**	**71.79**	**177**	P	**P**	**15 00 43.9**	**+0.9**
	5.6nm,0.6s,mb4.5,baz=333,slow=6.4,SNR=26						
BILL	**Bilibino**	**75.21**	**7**	P	**P**	**15 01 02.1**	**-1.0**
	11nm,1.2s,mb4.5						
MK31	**Makanchi Array**	**77.67**	**320**	*e*P	**P**	**15 01 17.7**	**+0.2**
MKAR	**Makanchi Array**	**77.67**	**320**	P	**P**	**15 01 17.6**	**+0.1**
	0.5nm,0.4s,mb3.6,baz=97,slow=8.5,SNR=10						
TIXI	**Tiksi**	**78.54**	**354**	*e*P	**P**	**15 01 20.6**	**-1.1**
	9.3nm,1.4s,mb4.4						
ZALV	**Zalesovo Beam**	**79.18**	**328**	P	**P**	**15 01 24.1**	**-1.5**
	1.3nm,0.4s,mb4.1,baz=138,slow=7.1,SNR=7.1						
TKM2	**Tokmak 2**	**80.83**	**315**	P	**P**	**15 01 34.8**	**+0.1**
KURK	**Kurchatov**	**81.39**	**323**	P	**P**	**15 01 37.4**	**-0.2**
	0.3nm,0.3s,mb3.7,baz=113,slow=4.4,SNR=2.5						
QSPA	**South Pole Qui**	**83.85**	**180**	*e*P	**P**	**15 01 50.9**	**+1.0**
	7.3nm,0.6s,mb4.7						
MCK	**McKinley**	**84.28**	**24**	P	**P**	**15 01 50.6**	**-1.6**
	19nm,1.1s,mb4.8						
BVAR	**Borovoye Array**	**86.94**	**324**	P	**P**	**15 02 04.6**	**-1.1**
	0.9nm,0.6s,mb3.9,baz=106,slow=5.3,SNR=5.1						
PLCA	**Paso Flores**	**121.95**	**147**	PKP	PKPdf	15 08 16.4	+1.2
	1.1nm,0.6s,baz=173,slow=2.0,SNR=3.7						
GERES	**GERESS Array B**	**122.08**	**326**	PKP	PKPdf	15 08 16.9	+1.7
	0.7nm,0.5s,baz=82,slow=1.9,SNR=5.5						
LPAZ	**La Paz**	**138.61**	**123**	PKhKP		15 08 42.0	
	1.8nm,0.9s,baz=230,slow=7.8,SNR=6.1						
TOA0	**Torodi Ar. Sit**	**145.25**	**284**	*e*PKPdf	PKPdf	15 08 58.4	-0.8
TORD	**Torodi Ar. Bea**	**145.25**	**284**	PKPbc	PKPbc	15 08 58.0	-1.0
	3.7nm,0.6s,baz=76,slow=4.1,SNR=27						
KIC	**Kosan Boka**	**152.05**	**272**	*e*PKIKP	PKPbc	15 09 17.8	+0.9
	15nm,0.6s						
DBIC	**Dimbokro**	**152.17**	**273**	PKPbc	PKPbc	15 09 18.0	+0.8
	3.9nm,0.5s,baz=98,slow=2.7,SNR=18						
TIC	**Toumodi**	**152.33**	**273**	*e*PKIKP	PKPbc	15 09 18.1	+0.6
	11nm,0.2s						
LIC	**Lamto**	**152.33**	**272**	*e*PKIKP	PKPbc	15 09 18.3	+0.8
	17nm,0.5s						

*ISCJB **22** 14:55:30.0±0.6, 3670N±002×3431E±003, h8km±4km, Error ellipse: s-maj=4.2km s-min=3.1km az=146.7*
*ISK **22** 14:55:29.6, 3674N×3430E, h7km, MD3.6, ML3.5*
*CSEM **22** 14:55:29.7±0.1, 3674N×3432E, h8km, Mw3.4, Error ellipse: s-maj=1.5km s-min=1.0km az=167.0*
*DDA **22** 14:55:30.8, 3671N×3432E, h9km, Md3.5*
*NIC **22** 14:55:32.9±0.4, 3673N×3429E, h25km, mb4.0, ML3.7, MW3.4*

ISC 22 14:55:30.5±0.6, 3670N±002×3432E±003, h7km±4km, n38, σ0884/56, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.24**	**43**	PG	**Pg**	**14 55 34.8**	**-0.4**
MERS				*e*SG	**Sg**	**14 55 38.1**	**-0.2**
IKL	**Isikli**	**0.69**	**229**	PG	**Pg**	**14 55 43.6**	**-0.1**
IKL				*e*SG	**Sg**	**14 55 53.9**	**+1.3**
KARA	**Karaisali**	**0.81**	**46**	PG	**Pg**	**14 55 45.1**	**-1.1**
EREN	**Erenkoy**	**1.17**	**186**	*e*PN	**Pn**	**14 55 53.3**	**0.0**
CEYT	**Ceyhan**	**1.19**	**74**	*e*PN	**Pn**	**14 55 52.7**	**-0.9**
CEYT				*e*SN	**Sn**	**14 56 09.4**	**-0.6**
KOZT	**Kozan**	**1.44**	**56**	*e*PN	**Pn**	**14 55 55.7**	**-1.3**
KOZT				*e*SN	**Sn**	**14 56 15.8**	**-0.3**
HDMB	**Hadim**	**1.50**	**281**	*e*PN	**Pn**	**14 55 56.8**	**-1.0**
LFK	**Lefkose**	**1.55**	**205**	*e*PN	**Pn**	**14 55 58.3**	**-0.2**
COBT	**Iskenderun**	**1.57**	**96**	*i*P	**Pn**	**14 55 58.5**	**-0.2**
COBT				*i*S	**Sn**	**14 56 15.1**	**-4.3**
HTY	**Hatay**	**1.57**	**111**	*e*PN	**Pn**	**14 55 59.1**	**+0.3**
HTY				*e*SN	**Sn**	**14 56 20.6**	**+1.1**
PHNC	**Paralimni**	**1.70**	**188**	||P	**Pn**	**14 55 59.8**	**-0.8**
	4.7nm,0.4s						
PHNC				S	**Sn**	**14 56 21.0**	**-1.7**
MAMC	**Mammari**	**1.76**	**211**	P	**Pn**	**14 56 01.2**	**-0.3**
ANDN	**Andirin**	**1.84**	**61**	*i*P	**Pn**	**14 56 02.1**	**-0.5**
ANDN				*i*S	**Sn**	**14 56 25.9**	**-0.2**
KONT	**Konya--Tatoy**	**2.00**	**309**	*e*PN	**Pn**	**14 56 04.3**	**-0.4**
KONT				*e*SN	**Sn**	**14 56 29.1**	**-0.9**
ALFC	**Alevga**	**2.08**	**223**	P	**Pn**	**14 56 04.4**	**-1.4**
	9.1nm,0.3s						
ALFC				S	**Sn**	**14 56 29.8**	**-2.1**
AVNT	**Avonos**	**2.12**	**11**	*i*P	**Pn**	**14 56 06.5**	**+0.1**
AVNT				*i*S	**Sn**	**14 56 34.8**	**+1.7**
LADK	**Ladik-KONYA**	**2.16**	**315**	*e*PN	**Pn**	**14 56 06.5**	**-0.5**
KMRS	**Kahramanmaras**	**2.21**	**68**	*e*PN	**Pn**	**14 56 07.7**	**0.0**
KMRS				*e*SN	**Sn**	**14 56 35.6**	**+0.2**
SZAC	**Souni-Zanaja**	**2.26**	**212**	P	**Pn**	**14 56 10.1**	**+1.8**
	8.2nm,0.2s						
SZAC				S	**Sn**	**14 56 40.5**	**+4.1**
GAZ	**Gaziantep**	**2.36**	**78**	*e*PN	**Pn**	**14 56 10.0**	**+0.2**
GAZ				*e*SN	**Sn**	**14 56 39.5**	**+0.4**
PPCY	**Paphos**	**2.42**	**222**	P	**Pn**	**14 56 13.3**	**+2.8**
BNN	**Bunyan**	**2.47**	**29**	*e*PN	**Pn**	**14 56 11.1**	**-0.1**
BNN				*e*SN	**Sn**	**14 56 41.3**	**-0.3**
KDHN	**Kadinhani**	**2.53**	**317**	*i*P	**Pn**	**14 56 11.9**	**-0.1**
KDHN				*i*S	**Sn**	**14 56 43.2**	**+0.2**
PINB	**Pinarbasi**	**2.58**	**39**	*i*P	**Pn**	**14 56 13.5**	**+0.8**
PINB				*i*S	**Sn**	**14 56 49.5**	**+5.3**
GZT	**Gaziantep**	**2.68**	**75**	*i*P	**Pn**	**14 56 13.7**	**-0.4**
GZT				*i*S	**Sn**	**14 56 47.5**	**+0.7**
KAMT	**Kaman**	**2.71**	**350**	*e*PN	**Pn**	**14 56 14.1**	**-0.5**
SARI	**SarD1z-Kayseri**	**2.73**	**43**	*e*PN	**Pn**	**14 56 10.3**	**-4.5**
HWQ	**Hawqa**	**2.75**	**151**	*e*Pn	**Pn**	**14 56 15.7**	**+0.6**
KIZT	**Kizilcal**	**2.92**	**319**	*e*PN	**Pn**	**14 56 17.8**	**+0.5**
BHL	**Bhannes**	**2.99**	**158**	*e*Pn	**Pn**	**14 56 18.4**	**0.0**
YOZ	**Yozgat**	**3.04**	**15**	*e*PN	**Pn**	**14 56 19.0**	**-0.1**
BCK	**Bucak**	**3.08**	**285**	*e*PN	**Pn**	**14 56 19.7**	**+0.1**
ISP	**Isparta**	**3.25**	**292**	*e*PN	**Pn**	**14 56 22.2**	**+0.3**
RCY	**Rachaya**	**3.43**	**159**	*e*Pn	**Pn**	**14 56 24.9**	**+0.5**
SHUT	**Suhut-Afyon**	**3.52**	**303**	*e*PN	**Pn**	**14 56 26.4**	**+0.8**
URFA	**Urfa**	**3.68**	**77**	*e*PN	**Pn**	**14 56 28.7**	**+0.9**
SVSK	**Karacayir**	**3.84**	**32**	*e*PN	**Pn**	**14 56 30.6**	**+0.5**
DALT	**Dalyan (Mudla)**	**4.57**	**273**	*e*PN	**Pn**	**14 56 41.4**	**+1.4**

*IDC **22** 14:58:07.1±1.1, 6068N×148.16W, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=28.7km s-min=17.3km az=7.0*
*NEIC **22** 14:58:07.2, 6042N×148.20W, h16km, ML3.7(PMR), ML3.4(AEIC), After AEIC.*
*ISCJB **22** 14:58:08.8±0.8, 6037N±003×14832W±006, h27km±7km, mb3.5/3, Error ellipse: s-maj=5.6km s-min=4.6km az=29.8*

ISC 22 14:58:09.1±1.0, 6039N±003×14833W±006, h15km±7km, n39, σ0993/46, mb3.5/3, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEW	**Seward**	**0.63**	**243**	P	**Pg**	**14 58 20.9**	**-0.5**
SEW				S	**Sg**	**14 58 30.0**	**+0.3**
SLKM	**Skilak Lake**	**0.94**	**278**	P	**Pb**	**14 58 26.5**	**-0.6**
RC01	**Rabbit Creek A**	**0.99**	**316**	P	**Pb**	**14 58 26.9**	**-1.0**
RC01				S	**Sb**	**14 58 40.7**	**+0.1**
KNK	**Knik Glacier**	**1.03**	**357**	P	**Pb**	**14 58 27.0**	**-1.6**
KNK				S	**Sb**	**14 58 40.1**	**-1.7**
PMR	**Palmer**	**1.27**	**342**	P	**Pn**	**14 58 31.6**	**-0.6**
PMR				S	**Sb**	**14 58 48.1**	**-0.6**
EYAK	**Cordova Ski Ar**	**1.29**	**82**	P	**Pn**	**14 58 30.9**	**-1.7**
EYAK				S	**Sb**	**14 58 48.8**	**-0.5**
MID	**Middleton Isla**	**1.39**	**133**	*e*P	**Pn**	**14 58 33.7**	**-0.2**
SML	**Sawmill**	**1.43**	**360**	P	**Pn**	**14 58 33.6**	**-0.8**
SML				S	**Sn**	**14 58 52.4**	**-0.4**
SKT	**Skwentna**	**2.23**	**317**	P	**Pn**	**14 58 46.0**	**+0.6**
PAX	**Paxson**	**2.93**	**27**	P	**Pn**	**14 58 55.2**	**+0.2**
PPLA	**Purkeypile**	**3.12**	**326**	P	**Pn**	**14 58 57.9**	**+0.3**
TRF	**Thorofare Moun**	**3.21**	**344**	P	**Pn**	**14 59 00.2**	**+1.3**
MCK	**McKinley**	**3.37**	**355**	P	**Pn**	**14 59 02.4**	**+1.3**
MENT	**Mentasta**	**3.37**	**39**	*e*P	**Pn**	**14 59 02.2**	**+1.1**
KTH	**Kantishna Hill**	**3.40**	**340**	P	**Pn**	**14 59 02.4**	**+0.9**
KDAK	**Kodiak Island**	**3.41**	**222**	Pn	**Pn**	**14 59 02.2**	**+0.5**
	8.5nm,0.3s,baz=40,slow=11,SNR=55						
KDAK				Sn	**Sn**	**14 59 41.2**	**-0.6**
	4.9nm,0.3s,baz=292,slow=22,SNR=6.2						
KDAK	**Kodiak Island**	**3.41**	**222**	P	**Pn**	**14 59 02.2**	**+0.5**
SVW2	**Sparrevohn**	**3.63**	**284**	P	**Pn**	**14 59 06.0**	**+1.3**
DOT	**Dot Lake**	**3.84**	**30**	P	**Pn**	**14 59 07.3**	**-0.2**
BPAW	**Bear Paw Mtn.**	**3.93**	**343**	P	**Pn**	**14 59 09.0**	**+0.3**
CHUM	**Lake Minchumin**	**3.97**	**334**	*e*Pn	**Pn**	**14 59 09.3**	**-0.1**
OHAK	**Old Harbor**	**4.09**	**221**	*e*Pn	**Pn**	**14 59 10.7**	**-0.3**
BCA3	**Beaver Creek A**	**4.11**	**46**	P	**Pn**	**14 59 11.6**	**+0.3**
IL1	**Eielson Array**	**4.45**	**8**	P	**Pn**	**14 59 16.2**	**+0.3**
TT01	**Tatalina**	**4.45**	**308**	P	**Pn**	**14 59 16.2**	**+0.3**
COLA	**College**	**4.51**	**3**	*e*Pn	**Pn**	**14 59 17.8**	**+1.1**
PNL	**Peninsula**	**4.54**	**95**	P	**Pn**	**14 59 15.4**	**-1.7**
EGAK	**Eagle**	**5.51**	**34**	P	**Pn**	**14 59 31.6**	**+1.1**
DAWY	**Dawson**	**5.57**	**45**	P	**Pn**	**14 59 31.9**	**+0.6**
IM3	**Indian Mountai**	**6.13**	**339**	P	**Pn**	**14 59 39.0**	**+0.1**
COLD	**Coldfoot**	**6.92**	**354**	*e*Pn	**Pn**	**14 59 50.5**	**+0.7**
	5.0nm,0.5s						
DLBC	**Dease Lake**	**9.53**	**94**	Pn	**Pn**	**15 00 26.0**	**+0.4**
	0.2nm,0.3s,baz=302,slow=14,SNR=4.6						
DLBC	**Dease Lake**	**9.53**	**94**	Pn	**Pn**	**15 00 26.0**	**+0.4**
UNV	**Unalaska Valle**	**11.82**	**244**	*e*Pn	**Pn**	**15 00 57.3**	**+0.3**
YKA	**Yellowknife Ar**	**16.16**	**68**	Pn	**Pn**	**15 01 58.4**	**+3.2**
	0.2nm,0.3s,baz=275,slow=11,SNR=6.1						
NVAR	**Mina Array Bea**	**28.96**	**126**	P	**P**	**15 04 08.9**	**+1.3**
	0.2nm,0.5s,mb3.1,baz=323,slow=10,SNR=2.8						
SONM	**Songino Array**	**56.41**	**309**	P	**P**	**15 07 49.9**	**+0.5**
	0.7nm,0.8s,mb3.8,baz=44,slow=8.5,SNR=3.8						
MKAR	**Makanchi Array**	**65.53**	**324**	P	**P**	**15 08 50.0**	**-1.3**
	0.4nm,0.6s,mb3.7,baz=17,slow=5.8,SNR=4.1						
HNR	**Honiara**	**80.66**	**232**	P	**P**	**15 10 18.7**	**-2.4**

KRSC 22 15:04:52.5±0.5, 5144N×15848E, h22km±22km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.99**	**1**	*e*P	Pb	15 05 11.6	+0.6
RUS				*e*S	Sb	15 05 25.5	+1.8
PET	**Petropavlovsk**	**1.59**	**4**	P	Pn	15 05 20.1	+0.8
PET				S	Sn	15 05 40.7	+1.6
NLC	**Nalytchevo**	**1.81**	**17**	S	Sn	15 05 44.2	-0.4
AVH	**Avacha**	**1.83**	**5**	*e*P	Pn	15 05 24.9	+2.3
AVH				S	Sn	15 05 47.8	+2.6
SPN	**Mys Shipunski**	**1.91**	**29**	S	Sn	15 05 48.7	+1.6
GNL	**Ganaly**	**2.28**	**352**	*e*P	Pn	15 05 29.1	+0.3

IDC 22 15:15:23.7±8.9, 2106S×17675W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.8/4, MS4.4/2, Ms1 4.4/2, ms1mx3.3/26, Error ellipse: s-maj=248.6km s-min=83.5km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.60**	**245**	P	P	15 22 48.0	-0.7
	1.0nm,0.5s,baz=100,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**45.53**	**257**	P	P	15 23 45.2	-0.2
	1.4nm,0.3s,baz=96,slow=8.1,SNR=12						
WRA	**Warramunga Arr**	**45.68**	**262**	P	P	15 23 47.3	+0.6
	0.9nm,0.7s,baz=94,slow=8.1,SNR=5.4						
ANMO	**Albuquerque**	**86.84**	**51**	LR	LR	15 59 18.6	
	comp=Z,110nm,19.6s,slow=30						
DLBC	**Dease Lake**	**88.11**	**23**	LR	LR	15 59 21.1	
	comp=Z,402nm,20.0s,slow=30						
CMAR	**Chiang Mai Arr**	**91.40**	**289**	P	P	15 28 32.2	0.0
	0.6nm,0.8s,baz=113,slow=3.4,SNR=4.3						

*IDC **22** 15:15:49.4±1.6, 058S×126.90E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/17, mbtmp3.7/5, ML4.3/1, Error ellipse: s-maj=51.8km s-min=25.1km az=61.0*
*ISCJB **22** 15:15:55.8±0.8, 08S±0.1×12674E±007, h63km±11km, mb3.7/3, Error ellipse: s-maj=17.6km s-min=11.6km az=2.8*
*DJA **22** 15:15:56, 089S×12673E, h10km, MLv4.1/4*

ISC 22 15:15:57.5±0.7, 081S±009×12679E±006, h57km±11km, n11, σ0987/11, mb3.7/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.73**	**77**	P	**Pn**	**15 16 11.0**	**-0.9**
LBMI	**Labuha**	**0.73**	**77**	S	**Sn**	**15 16 22.6**	**+0.1**
MNI	**Manado**	**2.96**	**319**	P	**Pn**	**15 16 44.0**	**+1.9**
AAI	**Ambon**	**3.19**	**154**	P	**Pn**	**15 16 45.7**	**+0.5**
KDI	**Kendari**	**5.21**	**233**	P	**Pn**	**15 17 12.9**	**0.0**
	53nm,0.6s,0.1nm						
PCI	**Palu**	**6.95**	**269**	P	**Pn**	**15 17 36.5**	**-0.3**
KAPI	**Kappang**	**8.18**	**239**	Pn	**Pn**	**15 17 52.6**	**-0.9**
	3.3nm,0.3s,baz=91,slow=5.0,SNR=14						
WRA	**Warramunga Arr**	**20.41**	**159**	P	**P**	**15 20 29.4**	**-0.5**
	0.4nm,0.4s,baz=337,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**23.75**	**164**	P	**P**	**15 21 05.2**	**+0.6**
	0.7nm,0.4s,mb3.4,baz=347,slow=13,SNR=31						
STKA	**Stephens Creek**	**33.92**	**157**	P	**P**	**15 22 36.1**	**+0.9**
	1.2nm,0.7s,mb3.9,baz=336,slow=10.0,SNR=2.4						
MKAR	**Makanchi Array**	**61.32**	**327**	P	**P**	**15 26 05.9**	**-1.2**
	0.5nm,0.6s,mb3.8,baz=112,slow=7.5,SNR=4.6						

*ISCJB **22** 15:20:32.1±0.5, 150S±01×6701E±0.10, h10km, mb4.0/15, MS3.9/4, Error ellipse: s-maj=16.9km s-min=12.8km az=152.9*
*IDC **22** 15:20:32.1±0.8, 1507S×6697E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/22, mbtmp3.9/10, MS4.9/4, Ms1 3.9/4, ms1mx3.4/24, Error ellipse: s-maj=29.5km s-min=18.8km az=175.0*
*NEIC **22** 15:20:33.4±0.5, 1516S×6694E, h10km, mb4.4/6, Error ellipse: s-maj=18.4km s-min=13.7km az=160.0*

ISC 22 15:20:34.1±0.5, 150S±01×6697E±010, h10km, n23, σ1903/19, mb4.0/15, MS3.9/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COCO	**West Island**	**29.15**	**88**	P	**P**	**15 26 33.8**	**-1.9**
LSZ	**Lusaka**	**37.41**	**264**	P	**P**	**15 27 48.1**	**+0.6**
	2.1nm,0.7s,mb4.1,baz=109,slow=7.5,SNR=3.3						
LSZ				LR	LR	15 41 51.7	
	comp=Z,191nm,18.1s,MS3.9,baz=46,slow=34						
LBTB	**Lobatse**	**39.99**	**249**	P	**P**	**15 28 09.2**	**0.0**
	2.2nm,0.8s,mb4.0,baz=79,slow=9.9,SNR=5.0						
LBTB	**Lobatse**	**39.99**	**249**	P	**P**	**15 28 08.3**	**-1.0**
	4.8nm,0.8s,mb4.3						
CM31	**Chiang Mai Arr**	**45.81**	**44**	P	**P**	**15 28 58.1**	**+1.7**
	3.0nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**45.81**	**44**	P	**P**	**15 28 58.2**	**+1.8**
	1.3nm,0.9s,mb3.9,baz=232,slow=6.0,SNR=5.1						
MKAR	**Makanchi Array**	**63.05**	**12**	P	**P**	**15 31 00.2**	**-1.1**
	0.7nm,0.6s,mb4.0,baz=208,slow=7.7,SNR=4.0						
ASAR	**Alice Springs**	**63.26**	**109**	P	**P**	**15 31 02.9**	**-0.4**
	0.6nm,0.6s,mb3.9,baz=271,slow=5.9,SNR=17						
WRA	**Warramunga Arr**	**64.08**	**105**	P	**P**	**15 31 08.0**	**-0.8**
	1.2nm,0.7s,mb4.1,baz=268,slow=6.1,SNR=7.9						
WRAB	**Tennant Creek**	**64.09**	**105**	*e*P	**P**	**15 31 09.5**	**+0.6**
	4.3nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**69.31**	**119**	LR	LR	15 56 56.4	
	comp=Z,102nm,18.6s,MS4.1,baz=205,slow=32						
SNAA	**Sanae**	**69.53**	**198**	*e*P	**P**	**15 31 38.8**

IBND	**Bandar-abas**	1.70	71	*e*Pn		**Pn**	**16 21 18.8**	**+0.5**
IBND	**Bandar-abas**	1.70	71	*e*Pn		**Pn**	**16 21 18.8**	**+0.5**
IBND				*e*Sn		**Sn**	**16 21 40.2**	**+0.6**
IBND				*e*			16 22 03.3	
BANOM	**Banah**	1.71	124	P		**Pn**	**16 21 18.6**	**+0.2**
	SNR=209							
BANOM	**Banah**	1.71	124	Pn		**Pn**	**16 21 18.6**	**+0.2**
	SNR=209							
BANOM				Sn		**Sn**	**16 21 39.6**	**-0.2**
GHIR	**Ghir-Karzin**	2.08	312	Pn		**Pn**	**16 21 25.0**	**+1.6**
GHIR	**Ghir-Karzin**	2.08	312	*e*Pn		**Pn**	**16 21 25.2**	**+1.7**
GHIR				*e*Sg		**Sg**	**16 21 56.3**	**0.0**
GHIR				AML	AML		16 22 05.7	
	comp=N,4µm,0.5s							
GHIR				AML	AML		16 22 11.7	
	comp=E,3µm,0.6s							
GHIR	**Ghir-Karzin**	2.08	312	*e*Pn		**Pn**	**16 21 25.2**	**+1.8**
	SNR=52							
GHIR				*e*Sg		**Sg**	**16 21 56.3**	**0.0**
	SNR=91							
NAZ	**Nazwa, Dubai**	2.08	156	Pn		**Pn**	**16 21 25.6**	**+2.1**
NAZ				Sn		**Sn**	**16 21 52.8**	**+3.8**
FAQ	**Al Faqa, Dubai**	2.28	160	Pn		**Pn**	**16 21 28.3**	**+2.0**
	SNR=34							
FAQ				Sn		**Sn**	**16 21 57.9**	**+3.9**
ASUD	**Al Ashush, Dub**	2.33	167	Pn		**Pn**	**16 21 29.6**	**+2.7**
	SNR=107							
HATD	**Hatta, Dubai**	2.42	148	P		**Pn**	**16 21 29.7**	**+1.6**
	SNR=52							
HATD				P			16 21 30.2	
	SNR=19							
HATD	**Hatta, Dubai**	2.42	148	Pn		**Pn**	**16 21 29.4**	**+1.2**
	SNR=80							
IMOK	**Mouk**	2.79	321	Pn		**Pn**	**16 21 34.7**	**+1.5**
IMOK				Sn		**Sn**	**16 22 07.4**	**+1.0**
IMOK	**Mouk**	2.79	321	*e*Pn		**Pn**	**16 21 34.8**	**+1.6**
IMOK				*e*Sn		**Sn**	**16 22 07.4**	**+1.0**
IMOK				*e*			16 22 35.7	
ISRV	**Sarvestan**	2.86	330	Pn		**Pn**	**16 21 36.4**	**+2.2**
ISRV	**Sarvestan**	2.86	330	*e*Pn		**Pn**	**16 21 36.5**	**+2.3**
ISRV				*e*			16 22 36.6	
IPAR	**Pars**	3.29	334	*e*Pn		**Pn**	**16 21 41.7**	**+1.6**
IPAR				*e*Sn		**Sn**	**16 22 17.8**	**-0.9**
IPAR	**Pars**	3.29	334	*e*Pn		**Pn**	**16 21 41.7**	**+1.6**
IPAR				*e*Sn		**Sn**	**16 22 17.8**	**-0.9**
IPAR				*e*			16 23 06.8	
SHI	**Shiraz**	3.36	325	*e*Pn		**Pn**	**16 21 44.4**	**+3.3**
SHI				*e*			16 22 59.6	
KRBR	**Kerman**	3.55	30	Pn		**Pn**	**16 21 45.0**	**+1.3**
KRBR	**Kerman**	3.55	30	*e*Pn		**Pn**	**16 21 45.6**	**+1.8**
ARQ	**Araqi**	3.90	155	P		**Pn**	**16 21 50.1**	**+1.6**
	SNR=23							
SLWS		4.24	241	P		**Pn**	**16 21 54.7**	**+1.5**
IMEH	**Mehriz**	4.47	359	Pn		**Pn**	**16 21 58.4**	**+2.0**
IMEH				Sn		**Sn**	**16 22 48.5**	**+0.4**
IMEH	**Mehriz**	4.47	359	*e*Pn		**Pn**	**16 21 58.4**	**+2.0**
IMEH				*e*			16 22 02.3	
IMEH				*e*Sn		**Sn**	**16 22 48.5**	**+0.4**
BTHS		4.52	232	P		**Pn**	**16 21 57.6**	**+0.5**
BIDO	**Bidbid**	4.56	137	P		**Pn**	**16 21 58.2**	**+0.6**
	SNR=9.0							
BSY	**Bisya**	4.71	151	⇓P		**Pn**	**16 22 02.3**	**+2.6**
	SNR=8.2							
IBAF	**Bafgh**	4.73	9	*e*Pn		**Pn**	**16 22 01.0**	**+1.1**
IBAF				*e*			16 22 02.9	
SMDO	**Samad**	4.87	141	⇓P		**Pn**	**16 22 03.1**	**+1.3**
	SNR=28							
BOQSS		4.91	259	P		**Pn**	**16 22 04.2**	**+1.7**
ISAD	**Sadrabad**	5.08	350	Pn		**Pn**	**16 22 07.4**	**+2.7**
ISAD				Sn		**Sn**	**16 23 03.0**	**0.0**
ISAD	**Sadrabad**	5.08	350	*e*Pn		**Pn**	**16 22 07.5**	**+2.8**
ISAD				*e*			16 22 15.2	
ISAD				*e*Sn		**Sn**	**16 23 03.0**	**0.0**
ICHK	**Chekchek**	5.33	357	*e*Pn		**Pn**	**16 22 09.9**	**+1.7**
ICHK				*e*			16 22 18.7	
JMDO	**Jabal Madar**	5.45	145	P		**Pn**	**16 22 10.9**	**+1.0**
	SNR=6.2							
WBK	**Wadi Bani Khal**	5.75	137	P		**Pn**	**16 22 13.9**	**-0.1**
	SNR=23							
IGAR	**Gharneh**	5.96	338	*e*Pn		**Pn**	**16 22 18.7**	**+1.8**
IGAR				*e*			16 22 27.4	
KFJS		6.17	284	P		**Pn**	**16 22 21.7**	**+2.0**
HRDDS		6.21	232	S		**Sn**	**16 23 28.7**	**-2.2**
HRDDS		6.21	232	P		**Pn**	**16 22 20.5**	**+0.2**
QRN	**Al-Qurain**	6.31	288	*e*P		**Pn**	**16 22 22.7**	**+1.0**
	baz=288							
QRN				AML	AML		16 23 35.4	
	comp=Z,349nm,0.3s,baz=288							
IZEF	**Zefreh**	6.33	341	*e*Pn		**Pn**	**16 22 22.2**	**+0.3**
IZEF				*e*			16 22 29.5	
KBD	**Kabd**	6.62	292	*e*P		**Pn**	**16 22 27.1**	**+1.2**
IKOO	**Kooshah**	6.64	33	*e*Pn		**Pn**	**16 22 27.2**	**+1.0**
IKOO	**Kooshah**	6.64	33	*e*Pn		**Pn**	**16 22 27.6**	**+1.4**
IKOO				*e*			16 22 30.2	
IPIR	**Pirpir**	6.66	331	Pn		**Pn**	**16 22 27.2**	**+0.7**
IPIR	**Pirpir**	6.66	331	*e*Pn		**Pn**	**16 22 27.3**	**+0.8**
IPIR				*e*			16 22 31.7	
RDF	**Al-Radifah**	6.67	289	*e*P		**Pn**	**16 22 27.1**	**+0.5**
	baz=289							
RDF				AML	AML		16 23 43.0	
	comp=Z,104nm,0.4s,baz=289							
UMR	**Umm Al-Rimmam**	6.73	295	*e*P		**Pn**	**16 22 28.4**	**+1.0**
	baz=295							
UMR				AML	AML		16 23 45.0	
	comp=Z,115nm,0.3s,baz=295							
ITEG	**Tejag**	6.92	29	*e*Pn		**Pn**	**16 22 30.4**	**+0.4**
ITEG	**Tejag**	6.92	29	*e*Pn		**Pn**	**16 22 30.4**	**+0.4**
ITEG				*e*			16 24 41.4	
IKLH	**Kolahrood**	6.96	338	Pn		**Pn**	**16 22 31.2**	**+0.7**
IKLH	**Kolahrood**	6.96	338	*e*Pn		**Pn**	**16 22 31.3**	**+0.8**
IKLH				*e*			16 22 45.5	
NAY	**Al-Naaiem**	7.02	291	*e*P		**Pn**	**16 22 33.0**	**+1.6**
	baz=291							
NAY				AML	AML		16 23 53.5	
	comp=Z,140nm,0.7s,baz=291							
MIB	**Mutribah**	7.13	296	*e*P		**Pn**	**16 22 33.6**	**+0.7**
	baz=295							
MIB				AML	AML		16 23 58.2	
	comp=Z,164nm,0.4s,baz=295							
IDAH	**Dahanechah**	7.33	36	*e*Pn		**Pn**	**16 22 37.4**	**+1.7**
IDAH	**Dahanechah**	7.33	36	*e*Pn		**Pn**	**16 22 37.3**	**+1.6**
IDAH				*e*			16 22 39.0	
IMON	**Monand**	7.59	33	*e*Pn		**Pn**	**16 22 41.0**	**+1.8**
IMON				*e*			16 22 42.9	
ISFB	**Sefidab**	7.73	344	*e*Pn		**Pn**	**16 22 41.2**	**0.0**
ISFB	**Sefidab**	7.73	344	*e*Pn		**Pn**	**16 22 41.2**	**0.0**
IVRN	**Varamin**	8.47	343	*e*Pn		**Pn**	**16 22 51.4**	**+0.1**
IVRN				*e*			16 22 52.8	
IANJ	**Anjilo**	8.57	356	*e*Pn		**Pn**	**16 22 53.2**	**+0.6**
IANJ				*e*			16 22 58.3	
ILAS	**Lasjerd**	8.59	350	Pn		**Pn**	**16 22 53.4**	**+0.5**
ILAS	**Lasjerd**	8.59	350	*e*Pn		**Pn**	**16 22 53.5**	**+0.6**
ILAS				*e*			16 22 57.9	
IFIR	**Firoozkooh**	8.88	349	Pn		**Pn**	**16 22 57.9**	**+1.0**
IFIR	**Firoozkooh**	8.88	349	*e*Pn		**Pn**	**16 22 58.0**	**+1.1**
IFIR				*e*			16 23 01.7	
IDMV	**Damavand**	8.95	346	*e*Pn		**Pn**	**16 22 58.7**	**+0.8**
IDMV				*e*			16 23 25.7	
ISHM	**Shahmirzad**	8.96	352	*e*Pn		**Pn**	**16 22 58.5**	**+0.4**
ISHM				*e*			16 23 14.6	
WHFO	**Wadi Hawf**	8.98	186	P		**Pn**	**16 22 58.5**	**+0.1**
	SNR=86							
IALA	**Alasht**	9.30	350	*e*Pn		**Pn**	**16 23 04.2**	**+1.5**
IALA				*e*			16 23 08.2	
IKIA	**Kiasar**	9.32	355	Pn		**Pn**	**16 23 04.2**	**+1.2**
IKIA	**Kiasar**	9.32	355	*e*Pn		**Pn**	**16 23 04.3**	**+1.3**
IKIA				*e*			16 23 33.4	
RBK	**Rabkut**	9.37	183	P		**Pn**	**16 23 04.7**	**+1.1**
	SNR=26							
IMHD	**Mahdasht**	9.42	339	Pn		**Pn**	**16 23 04.1**	**-0.2**
IMHD	**Mahdasht**	9.42	339	*e*Pn		**Pn**	**16 23 04.2**	**-0.1**
IMHD				*e*			16 23 06.2	
IRAZ	**Razeghan**	9.42	335	Pn		**Pn**	**16 23 04.7**	**+0.4**
IRAZ	**Razeghan**	9.42	335	*e*Pn		**Pn**	**16 23 04.8**	**+0.5**
IRAZ				*e*			16 23 06.0	
IPRN	**Peran**	9.53	348	Pn		**Pn**	**16 23 07.8**	**+1.9**
IPRN	**Peran**	9.53	348	*e*Pn		**Pn**	**16 23 07.8**	**+1.9**
IPRN				*e*			16 23 13.7	
IKOM	**Komasi**	9.55	321	*e*Pn		**Pn**	**16 23 05.2**	**-1.0**
IKOM				*e*			16 23 08.5	
ABTO	**Aybut**	9.59	188	⇓P		**Pn**	**16 23 06.5**	**-0.3**
	SNR=8.1							
IGLO	**Ghaloghah**	9.60	356	Pn		**Pn**	**16 23 08.8**	**+2.0**
IGLO	**Ghaloghah**	9.60	356	*e*Pn		**Pn**	**16 23 08.9**	**+2.1**
IGLO				*e*			16 23 27.8	
IMOG	**Moghan**	9.98	22	Pn		**Pn**	**16 23 12.3**	**+0.3**
IMOG	**Moghan**	9.98	22	*e*Pn		**Pn**	**16 23 12.4**	**+0.4**
IMOG				*e*			16 23 18.0	
IVIS	**Veis**	10.19	320	*e*Pn		**Pn**	**16 23 14.0**	**-0.8**
IVIS				*e*			16 25 16.8	
IPAY	**Payeh**	10.19	20	Pn		**Pn**	**16 23 17.6**	**+2.8**
IPAY	**Payeh**	10.19	20	*e*Pn		**Pn**	**16 23 17.7**	**+2.9**
IPAY				*e*			16 23 18.8	
IGHG	**Ghaleghazi**	10.21	318	*e*Pn		**Pn**	**16 23 14.9**	**-0.2**
IGHG				*e*			16 25 22.6	
IKRD	**Kardeh**	10.36	17	Pn		**Pn**	**16 23 24.1**	**+7.0**
IKRD	**Kardeh**	10.36	17	*e*Pn		**Pn**	**16 23 24.1**	**+7.0**
IKRD				*e*			16 23 26.8	
ILIN	**Lien**	10.41	322	Pn		**Pn**	**16 23 17.7**	**-0.2**
ILIN	**Lien**	10.41	322	*e*Pn		**Pn**	**16 23 17.8**	**-0.1**
ILIN				*e*			16 23 20.8	
IMYA	**Miami**	10.46	25	Pn		**Pn**	**16 23 21.2**	**+2.6**
IMYA	**Miami**	10.46	25	*e*Pn		**Pn**	**16 23 21.3**	**+2.7**
IMYA				*e*			16 23 23.9	
IDHR	**Dehrash**	10.57	319	*e*Pn		**Pn**	**16 23 19.2**	**-1.0**
IDHR				*e*			16 25 23.2	
IBST	**Bostanabad**	12.64	330	Pn		**Pn**	**16 23 48.2**	**-0.2**
IBST	**Bostanabad**	12.64	330	*e*Pn		**Pn**	**16 23 48.3**	**-0.1**
IBST				*e*			16 23 54.8	
IHRS	**Heris**	13.09	332	Pn		**Pn**	**16 23 54.9**	**+0.3**
IHRS	**Heris**	13.09	332	*e*Pn		**Pn**	**16 23 55.0**	**+0.4**
IHRS				*e*			16 23 57.6	
MSL	**Mosul**	13.69	317	*ex*		x	16 24 01.0	
MSL				*ex*		x	16 26 26.0	
MSL				*ex*		x	16 29 48.0	
IMRD	**Marand**	14.00	330	*e*Pn		**Pn**	**16 24 07.2**	**+0.2**
IMRD				*e*			16 24 26.4	
HAKT	**HAKKARI**	14.13	321	*i* P		**Pn**	**16 24 09.5**	**+0.8**
KBL	**Kabul**	14.46	55	*e*Pn		**Pn**	**16 24 15.5**	**+2.2**
	comp=Z,9.4nm,0.9s							
KBL	**Kabul**	14.46	55	*e*P		**Pn**	**16 24 15.5**	**+2.2**
KBL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
NAX	**Nakhchivan**	14.47	330	P		**Pn**	**16 24 15.2**	**+1.8**
	SNR=2.9							
PQL	**Pirkuli**	14.76	341	P		**Pn**	**16 24 25.2**	**+8.0**
	SNR=5.0							
GANJ	**Ganja**	15.38	335	P		**Pn**	**16 24 28.8**	**+3.3**
	SNR=13							
SEKA	**Sheki**	15.57	338	P		**Pn**	**16 24 29.9**	**+1.9**
	SNR=7.8							
BEST	**Besiri**	15.77	317	*i* P		**Pn**	**16 24 35.9**	**+5.2**
CEP	**Cherat**	16.34	61	P		**Pn**	**16 24 37.1**	**-0.9**
ASF	**Jabal al Asfar**	16.38	293	Pn		**Pn**	**16 24 37.3**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=320,slow=3.1,SNR=5.7							
ASF				Sn		**Sn**	**16 27 30.7**	**-9.3**
	comp=Z,0.5nm,0.3s,baz=309,slow=18,SNR=3.2							
ASF	**Jabal al Asfar**	16.38	293	P		**Pn**	**16 24 37.3**	**-1.3**
ASF							16 27 30.7	
ASF				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASF				smax				
	comp=N,1.0nm,0.3s							
ASF	**Jabal al Asfar**	16.38	293	*e*P		**Pn**	**16 24 39.4**	**+0.8**
	SNR=81							
ERZM	**Erzurum**	17.08	323	*i* P		**Pn**	**16 24 48.3**	**+0.9**
CHCP	**Chirah Chowk**	17.35	63	P		**Pn**	**16 24 52.5**	**+1.7**
GLFJ		17.58	283	*e*P		**Pn**	**16 24 54.8**	**+1.1**
	SNR=80							
EIL	**Elat**	17.64	284	P		**Pn**	**16 24 54.6**	**+0.2**
	comp=N,0.7nm,0.3s,baz=64,slow=10,SNR=8.6							
MMAI	**Mount Meron Ar**	17.82	295	P		**Pn**	**16 24 56.0**	**-0.5**
	comp=N,1.9nm,0.3s,baz=99,slow=15,SNR=13							
GZT	**Gaziantep**	17.86	310	*i* P		**Pn**	**16 24 57.2**	**+0.1**
KEMA	**Kemaliye**	18.33	316	*i* P		**Pn**	**16 25 05.8**	**+3.0**
COBT	**Iskenderun**	18.39	306	⇑*i*P		**Pn**	**16 25 04.6**	**+1.1**
ANDN	**Andirin**	18.82	309	⇑*i*P		**Pn**	**16 25 08.5**	**-0.3**
PINB	**Pinarbasi**	19.34	312	*i* P		**Pn**	**16 25 16.4**	**+1.4**
KIV	**Kislovodsk**	19.61	333	*e*P		**Pn**	**16 25 19.2**	**+1.0**
KIV				*e*S		**Sn**	**16 28 51.9**	**-6.0**
KIV				pmax	pmax			
	comp=Z,93nm,1.1s							
KIV	**Kislovodsk**	19.61	333	*e*P		**Pn**	**16 25 18.3**	**+0.1**
	comp=Z,58nm,0.8s							
GULE	**Gulek**	19.79	306	*i* P		Px	16 24 59.8	
CSS	**Prodhromos**	20.02	299	*e*P		**P**	**16 25 20.3**	**-1.0**
	comp=Z,26nm,0.9s							
CSS	**Prodhromos**	20.02	299	*e*P		**P**	**16 25 20.3**	**-1.0**
	comp=Z,26nm,0.9s							
AVNT	**Avnos**	20.43	310	*i* P		**P**	**16 25 27.3**	**+1.6**
SOC	**Sochi**	20.62	328	*e*P		**P**	**16 25 30.9**	**+3.1**
SOC				MLR	MLR			
	comp=Z,62nm,5.0s							
KK31	**Karatay Array**	20.64	34	P		**P**	**16 25 27.6**	**-0.4**
KK31				pmax	pmax			
	comp=Z,3.0nm,0.4s							
CTKT	**Corum**	21.43	315	⇑*i*P		**P**	**16 25 38.2**	**+1.6**
BRTR	**Keskin Array B**	21.72	311	P		**P**	**16 25 40.4**	**+0.8**
	comp=Z,24nm,0.7s,mb4.8							
BRTR	**Keskin Array B**	21.72	311	P		**P**	**16 25 40.4**	**+0.7**
BRTR				pmax	pmax			
	comp=Z,24nm,0.7s							
AML	**Almayashu**	21.72	41	P		**P**	**16 25 39.6**	**-0.1**
	SNR=7.3							
AML	**Almayashu**	21.72	41	P		**P**	**16 25 39.5**	**-0.2**
	SNR=7.4							
BOYT	**Boyabat**	21.82	317	*i* P		**P**	**16 25 45.2**	**+4.5**
EKS2	**Erkin-Say**	22.10	40	*e*P		**P**	**16 25 43.0**	**-0.7**
	comp=Z,33nm,0.9s,mb4.8							
EKS2	**Erkin-Say**	22.10	40	P		**P**	**16 25 43.5**	**-0.3**
	SNR=26							
EKS2	**Erkin-Say**	22.10	40	*e*P		**P**	**16 25 43.0**	**-0.7**
	comp=Z,33nm,0.9s,mb4.8							
ANTO	**Ankara**	22.35	311	*e*P		**P**	**16 25 47.3**	**+0.8**
	comp=Z,39nm,1.1s,mb4.8							
ANTO	**Ankara**	22.35	311	*e*P		**P**	**16 25 47.3**	**+0.8**
ANTO				pmax	pmax			
	comp=Z,39nm,1.1s,mb4.8							
ANTO	**Ankara**	22.35	311	*e*P		**P**	**16 25 47.3**	**+0.8**
	comp=Z,39nm,1.1s,mb4.8							
AAK	**Ala-Archa**	22.50	41	P		**P**	**16 25 48.3**	**+0.3**
	SNR=10							
AB31	**Akbulak array**	22.68	9	P		**P**	**16 25 48.9**	**-0.9**
AB31				pmax	pmax			
	comp=Z,9.0nm,0.4s,mb4.5							
FRU	**Bishkek**	22.69	40	*e*P		**P**	**16 25 54.0**	**+4.0**
KBK	**Karagaybulak**	22.78	41	P		**P**	**16 25 51.5**	**+0.6**
	SNR=7.5							
BALT	**Daday**	22.82	315	*i* P		**P**	**16 25 51.0**	**-0.4**
ISP	**Isparta**	23.12	304	*e*P		**P**	**16 25 54.0**	**-0.7**
TKM2	**Tokmak 2**	23.32	41	*e*P		**P**	**16 25 55.4**	**-1.2**
TKM2				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.0							
TKM2	**Tokmak 2**	23.32	41	P		**P**	**16 25 56.2**	**-0.5**
	SNR=6.7							
TKM2	**Tokmak 2**	23.32	41	*e*P		**P**	**16 25 55.4**	**-1.2**
	comp=Z,5.5nm,0.8s,mb4.0							
ESKT	**Eskisehir**	23.53	308	*i* P		**P**	**16 25 59.5**	**+0.6**
SEYT	**Eskypehyr**	23.53	308	*i* P		**P**	**16 25 59.5**	**+0.6**
GOLH	**Golhisar**	23.63	302	*i* P		**P**	**16 26 00.7**	**+0.9**
AKTK	**Aktyubinsk**	23.63	5	P		**P**	**16 25 59.2**	**-0.5**
AKTK				S		**S**	**16 30 13.3**	**+0.2**
AKTK				LR	LR		16 37 32.2	
AKTO	**Aktyubinsk**	23.63	5	P		**P**	**16 25 59.2**	**-0.5**
	comp=Z,8.2nm,0.4s,mb4.5,baz=178,slow=8.5,SNR=47							
AKTO				S		**S**	**16 30 13.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=146,slow=16,SNR=3.6							
AKTO				LR	LR		16 37 32.2	
	comp=Z,72nm,18.8s,MS3.2,baz=17,slow=43							
AKTO	**Aktyubinsk**	23.63	5	P		**P**	**16 25 59.2**	**-0.5**
AKTO				S		**S**	**16 30 13.3**	**+0.1**
AKTO				pmax	pmax			
	comp=Z,8.0nm,0.4s,mb4.5							
AKTO				smax				
	comp=N,1.0nm,0.8s							
AKTO				MLR	MLR			
	comp=Z,72nm,18.8s,MS3.2							
HYB	**Hyderabad**	23.96	108	*e*P		**P**	**16 26 06.5**	**+3.5**
TURN	**Turunc**	24.25	301	*i* P		**P**	**16 26 09.0**	**+3.5**
ULDT	**Uludag**	24.99	308	*i* P		**P**	**16 26 13.2**	**+1.0**
PYUN	**Piuthan**	25.07	81	*e*P		**P**	**16 26 14.1**	**+1.0**
	comp=Z,35nm,0.7s,mb5.0							
KOLN	**Koldanda**	25.64	81	*e*P		**P**	**16 26 18.4**	**+0.2**
	comp=Z,34nm,1.0s,mb4.8							
DANN	**Dangsing**	25.73	80	*e*P		**P**	**16 26 20.5**	**+1.4**
	comp=Z,160nm,0.9s,mb5.5							
VRHR	**Novokhopersk**	26.14	341	*e*P		**P**	**16 26 22.1**	**-0.4**
VRHR				pmax	pmax			
	comp=Z,50nm,0.7s,mb5.2							
VRHR				pmax	pmax			
	comp=N,40nm,0.9s							
VRHR				pmax	pmax			
	comp=E,30nm,0.7s							
GKN	**Gorkha**	26.53	81	*e*P		**P**	**16 26 27.5**	**+1.2**
IDI	**Anoyia**	26.81	296	P		**P**	**16 26 30.0**	**+1.2**
	comp=E,24nm,0.5s,mb5.0,baz=100,slow=8.9,SNR=22							
DMN	**Daman**	26.98	81	*e*P		**P**	**16 26 30.8**	**+0.5**
VSR	**Storozhevoye**	27.01	338	*e*P		**P**	**16 26 29.3**	**-1.0**
VSR				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.1							
VSR				pmax	pmax			
	comp=N,7.0nm,0.9s							
VSR				pmax	pmax			
	comp=E,3.0nm,0.5s							
KKN	**Kakani**	27.12	81	*e*P		**P**	**16 26 32.1**	**+0.5**
	comp=E,24nm,0.8s,mb4.8							
PKI	**Pulchoki**	27.25	82	*e*P		**P**	**16 26 33.4**	**+0.6**
GUN	**Gumba**	27.63	81	*e*P		**P**	**16 26 36.7**	**+0.5**
	comp=E,38nm,0.9s,mb5.0							
JIRN	**Jiri**	27.93	81	*e*P		**P**	**16 26 38.9**	**0.0**
	comp=E,22nm,0.7s,mb4.9							
RAMN	**Ramite**	28.38	83	*e*P		**P**	**16 26 42.5**	**-0.3**
BRVK	**Borovoye**	28.59	20	*e*P		**P**	**16 26 42.7**	**-1.7**
	comp=E,6.5nm,0.9s,mb4.4							
BRVK	**Borovoye**	28.59	20	*e*P		**P**	**16 26 42.7**	**-1.7**
BRVK				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.4							
BRVK	**Borovoye**	28.59	20	*e*P		**P**	**16 26 42.7**	**-1.7**
	comp=Z,6.5nm,0.9s,mb4.4							
BVA0	**Borovoye Array**	28.59	20	*i* P		**P**	**16 26 43.8**	**-0.6**
BVA0				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.9							
BVAR	**Borovoye Array**	28.59	20	P		**P**	**16 26 43.9**	**-0.5**
	comp=Z,12nm,0.9s,mb4.6,baz=201,slow=7.9,SNR=37							
BVAR				PcP	PcP		16 29 55.0	-0.3
	comp=Z,1.3nm,0.4s,baz=212,slow=2.7,SNR=6.8							
BVAR				LR	LR		16 39 54.7	
	comp=Z,89nm,18.7s,MS3.4,baz=212,slow=40							
BVAR	**Borovoye Array**	28.59	20	P		**P**	**16 26 43.9**	**-0.5**
BVAR							16 29 55.0	
BVAR				pmax	pmax			
	comp=Z,12nm,0.9s							
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BVAR				MLR	MLR			
	comp=Z,89nm,18.7s							
ODAN	**Odare**	29.09	83	*e*P		**P**	**16 26 48.9**	**-0.3**
	comp=Z,18nm,1.0s,mb4.8							
VRI	**Vrincioaia**	29.21	318	⇑P		**P**	**16 26 52.2**	**+2.2**
VRI	**Vrincioaia**	29.21	318	⇑*i*P		**P**	**16 26 52.2**	**+2.2**
PLOR	**Plostina**	29.25	318	⇑*i*P		**P**	**16 26 51.1**	**+0.7**
TAPN	**Taplejung**	29.31	82	*e*P		**P**	**16 26 50.1**	**-1.0**
	comp=Z,11nm,0.8s,mb4.7							
MK31	**Makanchi Array**	29.43	40	*e*P		**P**	**16 26 51.1**	**-0.9**
MK31	**Makanchi Array**	29.43	40	*e*P		**P**	**16 26 51.1**	**-0.9**
MKAR	**Makanchi Array**	29.43	40	P		**P**	**16 26 51.4**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.6,baz=244,slow=5.6,SNR=16							
MKAR				PcP	PcP		16 29 56.5	-1.1
	comp=Z,1.1nm,0.7s,baz=259,slow=2.0,SN

comp=Z,14nm,0.8s,mb5.0
CRVS Cervenica-Dubn 33.82 319 *e*P **P 16 27 30.8 +0.3**
TIP Timpagrande 33.87 301 *e*P **P 16 27 30.8 -0.3**
TIP Timpagrande 33.87 301 *e*P **P 16 27 30.8 -0.3**
STHS Stebnicka Huta 34.19 320 *e*P **P 16 27 34.6 +0.8**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
STHS Stebnicka Huta 34.19 320 *e*P **P 16 27 34.6 +0.8**
comp=Z,3.1nm,0.7s,mb4.3
PSZ Piszkesteto 34.31 317 P **P 16 27 33.7 -1.1**
comp=Z,3.8nm,0.7s,mb4.4
PSZ Piszkesteto 34.31 317 P **P 16 27 33.7 -1.1**
PSZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
PSZ Piszkesteto 34.31 317 P **P 16 27 33.7 -1.1**
comp=Z,3.8nm,0.7s,mb4.4
PKSM Moragy 34.42 314 ⇓P **P 16 27 36.1 +0.3**
PKSM Moragy 34.42 314 ⇓*i*P **P 16 27 36.1 +0.3**
CUC Castrocucco 34.73 302 *e*P **P 16 27 39.6 +1.1**
comp=Z,17nm,0.6s,mb5.2
CUC Castrocucco 34.73 302 *e*P **P 16 27 39.6 +1.1**
comp=Z,17nm,0.6s,mb5.2
NVS Novosibirsk 34.81 29 *e*P **P 16 27 37.8 -1.2**
NVS *e*S **S 16 33 06.6 -2.2**
NVS pmax pmax
comp=Z,15nm,1.1s,mb4.8
NVS pmax pmax
comp=N,17nm,1.3s
NVS smax
comp=N,51nm,3.2s
ZAA0 Zalesovo Array 34.94 31 *e*P **P 16 27 39.0 -1.1**
ZAA0 *e*PcP PcP 16 30 10.5 -2.0
ZAA0 Zalesovo Array 34.94 31 *e*P **P 16 27 39.0 -1.2**
ZAA0 Zalesovo Array 34.94 31 *e*PcP PcP 16 30 10.5 -1.9
ZALV Zalesovo Beam 34.94 31 P **P 16 27 39.1 -1.1**
comp=N,16nm,0.4s,mb5.3,baz=241,slow=9.3,SNR=65
ZALV PcP PcP 16 30 11.3 -1.2
comp=N,1.3nm,0.4s,baz=244,slow=4.8,SNR=3.6
ZALV LR LR 16 45 04.2
ZALV Zalesovo Beam 34.94 31 P **P 16 27 39.1 -1.1**
ZALV 16 30 11.3
ZALV pmax pmax
comp=Z,16nm,0.4s,mb5.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV MLR MLR
comp=Z,24nm,19.6s
VYHS Vyhne 35.19 317 *e*P **P 16 27 42.2 -0.2**
SGO Sicignano 35.21 303 P **P 16 27 44.1 +1.4**
OJC Ojcow 35.40 321 *e*P **P 16 27 44.2 0.0**
KLMR Klimovskoe 35.49 347 *e*P **P 16 27 42.9 -1.9**
KLMR pmax pmax
comp=Z,30nm,1.4s,mb5.0
KOGS Kog 36.05 313 *e*P **P 16 27 50.1 +0.2**
MODS Modra-Piesok 36.09 317 *e*P **P 16 27 50.7 +0.5**
MODS pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
MODS Modra-Piesok 36.09 317 *e*P **P 16 27 50.7 +0.5**
comp=Z,5.8nm,1.5s,mb4.3
ZST Bratislava 36.13 316 *e*P **P 16 27 50.3 -0.2**
ZST pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ZST Bratislava 36.13 316 *e*P **P 16 27 50.3 -0.2**
comp=Z,7.5nm,0.7s,mb4.7
OKC Ostrava-Krasne 36.17 319 *e*P **P 16 27 50.3 -0.5**
OKC Ostrava-Krasne 36.17 319 *e*P **P 16 27 50.3 -0.5**
GOLS Golise 36.33 312 *e*P **P 16 27 52.4 +0.2**
MORC Moravsky Berou 36.50 319 *e*P **P 16 27 52.3 -1.4**
comp=Z,10nm,0.8s,mb4.7
MORC Moravsky Berou 36.50 319 *e*P **P 16 27 52.3 -1.3**
MORC pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
MORC Moravsky Berou 36.50 319 *e*P **P 16 27 53.2 -0.4**
MORC Moravsky Berou 36.50 319 ⇓*i*P **P 16 27 53.7 +0.1**
ARSA Arzberg 36.79 314 ⇓*e*P **P 16 27 54.8 -1.4**
comp=Z,9.7nm,1.1s,mb4.5
CONA Conrad Observa 36.81 315 ⇑*i*P **P 16 27 56.1 -0.2**
comp=Z,7.5nm,1.1s,mb4.5
CSNA Conrad Observa 36.81 315 ⇑*i*P **P 16 27 56.1 -0.2**
comp=Z,6.8nm,1.1s,mb4.4
VRAC Vranov 36.88 318 ⇑P **P 16 27 56.6 -0.2**
VRAC Vranov 36.88 318 ⇑*i*P **P 16 27 56.6 -0.2**
NRCA Norcia 37.26 306 P **P 16 28 00.9 +0.7**
comp=Z,11nm,0.6s,mb4.9
DPC Dobruska-Polom 37.46 319 *e*P **P 16 28 01.3 -0.4**
MNS Montasola 37.48 305 P **P 16 28 04.9 +2.8**
TREC Trest 37.54 317 *e*P **P 16 28 02.7 +0.2**
ASS Assisi 37.63 306 P **P 16 28 07.8 +4.4**
FSSB Fossombrone 37.67 307 P **P 16 28 04.7 +1.0**
UPC Upice 37.70 319 *e*P **P 16 28 03.2 -0.6**
UPC *ex* x 16 28 06.8
MOA Molln 37.79 314 ⇑*i*P **P 16 28 04.5 -0.1**
comp=Z,10nm,1.2s,mb4.4
MOA Molln 37.79 314 P **P 16 28 04.5 -0.1**
comp=Z,10nm,1.2s,mb4.4
MYKA Terra Mystica 37.82 312 ⇓*i*P **P 16 28 04.8 -0.1**
comp=Z,5.8nm,0.7s,mb4.4
PTCC Patocco-Chiusa 37.95 312 P **P 16 28 05.9 -0.1**
comp=Z,13nm,0.6s,mb4.8
HVS Khovu-Aksy 38.10 40 *e*P **P 16 28 06.7 -0.5**
HVS pmax pmax
comp=Z,11nm,1.0s,mb4.5
KBA Koelnbreinsper 38.15 313 ⇑*i*P **P 16 28 07.9 +0.3**
comp=Z,19nm,1.3s,mb4.7
PRU Pruhonice 38.37 318 *e*P **P 16 28 11.4 +1.9**
GEC2 GERESS Array S 38.48 316 *e*P **P 16 28 09.4 -1.0**
GEC2 GERESS Array S 38.48 316 *e*P **P 16 28 09.5 -0.9**
GEC2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
GEC2 GERESS Array S 38.48 316 *e*P **P 16 28 09.5 -0.9**
comp=Z,4.0nm,0.6s,mb4.3
GEC2 GERESS Array S 38.48 316 *e*P **P 16 28 09.4 -1.0**
GERES GERESS Array B 38.48 316 P **P 16 28 09.6 -0.8**
comp=Z,2.4nm,0.5s,mb4.2,baz=106,slow=7.6,SNR=16
GERES PKKP 16 52 20.3
comp=Z,0.1nm,0.3s,baz=349,slow=4.1,SNR=3.6
PVCC Panska Ves 38.56 319 *e*P **P 16 28 10.5 -0.5**
ABTA Abfaltersbach 38.60 312 ⇓*i*P **P 16 28 11.5 0.0**
comp=Z,15nm,1.0s,mb4.7
VMG Vicchio 38.60 308 P **P 16 28 13.2 +1.7**
comp=Z,50nm,0.6s,mb5.4
KHC Kasperske Hory 38.65 316 *e*P **P 16 28 11.2 -0.6**
comp=Z,4.3nm,0.6s,mb4.4
KHC *e* pP 16 28 14.3 -2.9
KHC Kasperske Hory 38.65 316 *e*P **P 16 28 11.2 -0.6**
KHC *ex* x 16 28 14.3
RJOB Jochberg 38.70 314 *e*P **P 16 28 11.1 -1.2**
comp=Z,11nm,0.7s,mb4.7
SEI Scarperia 38.76 308 P **P 16 28 14.7 +1.9**
comp=Z,185nm,0.6s,mb6.0
CTI Castel Tesino 39.00 311 P **P 16 28 14.8 0.0**
CTI pmax pmax
comp=Z,34nm,0.7s,mb5.2
CTI Castel Tesino 39.00 311 P **P 16 28 14.8 0.0**
comp=Z,34nm,0.7s,mb5.2
BRG Berggiesshubel 39.05 319 *e*P **P 16 28 14.8 -0.4**
BRG pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
BRG Berggiesshubel 39.05 319 *e*P **P 16 28 14.5 -0.7**
comp=Z,9.0nm,1.2s,mb4.4
BRG Berggiesshubel 39.05 319 *e*P **P 16 28 14.8 -0.4**
comp=Z,9.5nm,1.2s,mb4.4
WET Wettzell 39.09 316 *e*P **P 16 28 14.0 -1.5**
WET pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
WET Wettzell 39.09 316 *e*P **P 16 28 14.0 -1.5**
comp=Z,8.0nm,0.9s,mb4.5
JOF Joensuu 39.18 343 *ep* **P 16 28 15.4 -0.7**
comp=Z,2.2nm,0.3s,mb4.4
JOF Joensuu 39.18 343 *e*P **P 16 28 15.4 -0.7**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
WTTA Wattenberg 39.32 313 ⇓*i*P **P 16 28 17.0 -0.4**
comp=Z,22nm,0.5s,mb5.2
WTTA Wattenberg 39.32 313 P **P 16 28 17.0 -0.5**
comp=Z,22nm,0.5s,mb5.2
GTA Gaotai 39.37 60 *e*P **P 16 28 18.5 +0.5**
GTA AP pP 16 28 26.3 +2.9
GTA XP sP 16 28 30.6 +5.1
GTA AMB AMB
comp=Z,17nm,0.8s,mb4.8
WATA Walderalm 39.38 313 ⇑*i*P **P 16 28 17.3 -0.7**
comp=Z,11nm,0.5s,mb4.8
KEST Kesra 39.47 294 P **P 16 28 18.9 0.0**
comp=Z,1.6nm,0.7s,mb3.9,baz=43,slow=4.7,SNR=3.3
SQTA Sankt Quirin 39.59 313 ⇓*i*P **P 16 28 19.1 -0.6**
VSL Villasalto 39.59 300 *e*P **P 16 28 19.9 +0.1**
comp=Z,62nm,1.3s,mb5.2
VSL Villasalto 39.59 300 *e*P **P 16 28 19.9 +0.1**
comp=Z,62nm,1.3s,mb5.2
MOTA Moosalm 39.69 313 ⇑*i*P **P 16 28 19.6 -1.0**
comp=Z,4.6nm,0.2s,mb5.0
ROTZ Rotzenmuhle 39.71 317 *e*P **P 16 28 20.1 -0.6**
comp=Z,10.0nm,0.9s,mb4.5
CLL Collm 39.77 319 ⇑*i*P **P 16 28 20.7 -0.4**
comp=Z,11nm,1.0s,mb4.5
CLL *i* pP 16 28 24.9 -1.6
CLL Collm 39.77 319 ⇑*i*P **P 16 28 20.7 -0.4**
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.5
CLL Collm 39.77 319 *e*P **P 16 28 20.6 -0.5**
comp=Z,11nm,1.0s,mb4.5
CLL Collm 39.77 319 ⇑*i*P **P 16 28 20.7 -0.4**
comp=Z,11nm,1.0s,mb4.5
CLL *i* pP pP 16 28 24.9 -1.6
CLL *i* sP sP 16 28 27.7 -0.9
FUR Furstenfeldbru 39.80 314 *e*P **P 16 28 20.4 -1.1**
FUR pmax pmax
comp=Z,50nm,1.4s,mb5.0
FUR Furstenfeldbru 39.80 314 *e*P **P 16 28 20.4 -1.1**
comp=Z,50nm,1.4s,mb5.0
MANZ Manzenberg 39.84 317 *e*P **P 16 28 21.5 -0.3**
comp=Z,5.0nm,0.9s,mb4.2
FETA Feichten 39.85 312 ⇓*i*P **P 16 28 21.7 -0.3**
comp=Z,25nm,0.6s,mb5.1
KRAR Krasnoyarsk 39.93 33 *e*P **P 16 28 20.7 -1.7**
KRAR pmax pmax
comp=Z,11nm,1.3s,mb4.4
RETA Reutte 39.95 313 ⇑*i*P **P 16 28 21.8 -1.0**
comp=Z,21nm,0.7s,mb5.0
BRMO Bormio 39.96 311 P **P 16 28 24.3 +1.5**
comp=Z,243nm,3.5s
KAF Kangasniemi 39.97 340 *ep* **P 16 28 22.0 -0.6**
comp=Z,3.3nm,0.4s,mb4.4
KAF Kangasniemi 39.97 340 *e*P **P 16 28 22.0 -0.6**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
GRF Grafenberg Arr 40.29 316 *e*P **P 16 28 25.0 -0.5**
GRF pmax pmax
comp=Z,36nm,1.5s,mb4.9
GRF Grafenberg Arr 40.29 316 *e*P **P 16 28 25.0 -0.5**
GRF pmax pmax
comp=Z,36nm,1.5s,mb4.9
GRF Grafenberg Arr 40.29 316 *e*P **P 16 28 25.0 -0.5**
comp=Z,36nm,1.5s,mb4.9
BSD Bornholm Skovb 40.32 325 *i*P **P 16 28 23.3 -2.4**
BSD *i* 16 29 27.4
DAVA Damuels 40.48 312 ⇑*i*P **P 16 28 26.6 -0.6**
comp=Z,39nm,0.5s,mb5.4
TUE Stuetta 40.65 311 *e*P **P 16 28 26.6 -1.9**
comp=Z,6.1nm,0.6s,mb4.4
TUE Stuetta 40.65 311 *e*P **P 16 28 26.6 -1.9**
comp=Z,6.1nm,0.6s,mb4.4
VAI Varese 40.92 310 P **P 16 28 32.3 +1.6**
CHTO Chiang Mai 41.36 92 *e*P **P 16 28 32.9 -1.8**
comp=Z,2.3nm,0.6s,mb4.0
CHTO Chiang Mai 41.36 92 *e*P **P 16 28 32.9 -1.8**
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
CHTO Chiang Mai 41.36 92 *e*P **P 16 28 32.9 -1.8**
comp=Z,2.3nm,0.6s,mb4.0
CMAR Chiang Mai Arr 41.48 92 P **P 16 28 35.7 0.0**
comp=Z,2.5nm,0.8s,mb3.9,baz=283,slow=9.4,SNR=20
CMAR PcP PcP 16 30 32.6 -0.7
comp=Z,0.8nm,0.6s,baz=279,slow=4.7,SNR=7.5
CMAR Chiang Mai Arr 41.48 92 P **P 16 28 35.7 0.0**
CMAR 16 30 32.7
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CLZ Clausthal 41.49 319 *e*P **P 16 28 35.7 +0.3**
CLZ pmax pmax
comp=Z,29nm,1.3s,mb4.8
CLZ Clausthal 41.49 319 *e*P **P 16 28 35.7 +0.3**
comp=Z,29nm,1.3s,mb4.8
BFO Black Forest 41.75 313 *e*P **P 16 28 34.9 -2.6**
comp=Z,4.6nm,0.7s,mb4.2
BFO Black Forest 41.75 313 *e*P **P 16 28 34.9 -2.6**
BFO pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
BFO Black Forest 41.75 313 *e*P **P 16 28 36.7 -0.8**
BFO Black Forest 41.75 313 *e*P **P 16 28 34.9 -2.6**
comp=Z,4.6nm,0.7s,mb4.2
MBDF Montbardon 42.11 308 *e*P **P 16 28 39.8 -0.7**
comp=Z,18nm,0.7s,mb4.5
MBDF Montbardon 42.11 308 *e*P **P 16 28 39.8 -0.7**
MBDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
MBDF Montbardon 42.11 308 *e*P **P 16 28 39.8 -0.7**
comp=Z,8.9nm,0.7s,mb4.5
TNS Taunus Mts 42.16 316 *e*P **P 16 28 40.2 -0.6**
TNS pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
TNS Taunus Mts 42.16 316 *e*P **P 16 28 40.2 -0.6**
comp=Z,9.0nm,1.0s,mb4.3
LPG La Plagne 42.24 309 *e*P **P 16 28 40.8 -0.8**
comp=Z,26nm,0.8s,mb4.6
LPG La Plagne 42.24 309 *e*P **P 16 28 40.8 -0.8**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.6
LPG La Plagne 42.24 309 *e*P **P 16 28 40.8 -0.8**
comp=Z,13nm,0.8s,mb4.6
LPL La Plagne 42.26 309 *e*P **P 16 28 40.8 -0.9**
comp=Z,18nm,0.6s,mb4.6
LPL La Plagne 42.26 309 *e*P **P 16 28 40.8 -0.9**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
LPL La Plagne 42.26 309 *e*P **P 16 28 40.8 -0.9**
comp=Z,9.1nm,0.6s,mb4.6
BSEG Bad Segeberg 42.26 322 *e*P **P 16 28 41.9 +0.3**
BSEG pmax pmax
comp=Z,16nm,0.9s,mb4.7
BSEG Bad Segeberg 42.26 322 *e*P **P 16 28 41.9 +0.3**
comp=Z,16nm,0.9s,mb4.7
CDF Champ du Feu 42.45 313 *e*P **P 16 28 41.8 -1.5**
comp=Z,23nm,1.0s,mb4.4
CDF Champ du Feu 42.45 313 *e*P **P 16 28 41.8 -1.5**
CDF pmax pmax
comp=Z,12nm,1.0s,mb4.5
CDF Champ du Feu 42.45 313 *e*P **P 16 28 41.8 -1.5**
comp=Z,12nm,1.0s,mb4.4
ECH Echery 42.48 313 *e*P **P 16 28 42.1 -1.4**
ECH Echery 42.48 313 *e*P **P 16 28 42.1 -1.4**
HINF Hinteralfeld 42.60 312 *e*P **P 16 28 43.2 -1.3**
comp=Z,16nm,0.8s,mb4.5
HINF Hinteralfeld 42.60 312 *e*P **P 16 28 43.2 -1.3**
HINF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
HINF Hinteralfeld 42.60 312 *e*P **P 16 28 43.2 -1.3**
comp=Z,8.1nm,0.8s,mb4.5
CABF La Chapelle 42.88 310 *e*P **P 16 28 46.1 -0.7**
comp=Z,24nm,0.7s,mb4.7
CABF La Chapelle 42.88 310 *e*P **P 16 28 46.1 -0.7**
CABF pmax pmax
comp=Z,12nm,0.7s,mb4.7
CABF La Chapelle 42.88 310 *e*P **P 16 28 46.1 -0.7**
comp=Z,12nm,0.7s,mb4.7
HAU Haudompre 42.97 313 *e*P **P 16 28 46.0 -1.5**
comp=Z,15nm,0.7s,mb4.6
HAU Haudompre 42.97 313 *e*P **P 16 28 46.0 -1.5**
HAU pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
HAU Haudompre 42.97 313 *e*P **P 16 28 46.0 -1.5**
comp=Z,7.7nm,0.7s,mb4.6
KMI Kunming 42.98 81 P **P 16 28 47.3 -0.6**
KMI AP pP 16 28 52.3 -1.0
KMI XP sP 16 28 54.4 -1.0
KMI PP PP 16 30 29.4 +1.7
KMI S **S 16 35 10.8 -1.8**
KMI XS sS 16 35 19.6 -1.9
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.2
KMI AMB AMB
comp=Z,224nm,6.6s
KMI LR LR
comp=N,215nm,17.6s,MS4.3
KMI LR LR
comp=E,227nm,12.7s,MS4.3
KMI LR LR
comp=Z,207nm,19.0s
WLF Walferdange 43.45 315 *e*P **P 16 28 50.2 -1.2**
comp=Z,12nm,0.8s,mb4.7
WLF Walferdange 43.45 315 *e*P **P 16 28 50.2 -1.2**
WLF pmax pmax
comp=Z,12nm,0.8s,mb4.7
WLF Walferdange 43.45 315 *e*P **P 16 28 50.9 -0.5**
comp=Z,23nm,1.2s,mb4.8
WLF Walferdange 43.45 315 P **P 16 28 50.7 -0.7**
comp=Z,12nm,1.4s,mb4.4
VIVF Saint-Julien-l 43.61 308 *e*P **P 16 28 51.5 -1.2**
comp=Z,11nm,0.8s,mb4.3
VIVF Saint-Julien-l 43.61 308 *e*P **P 16 28 51.5 -1.2**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
VIVF Saint-Julien-l 43.61 308 *e*P **P 16 28 51.5 -1.2**
comp=Z,5.6nm,0.8s,mb4.3
MEM Membach 43.77 316 P **P 16 28 54.1 +0.2**
comp=Z,13nm,2.9s,mb4.2
MEZF Maizieres J'vi 43.92 313 *e*P **P 16 28 54.5 -0.6**
LASF Ste Croix 44.10 307 *e*P **P 16 28 56.0 -0.7**
comp=Z,37nm,1.1s,mb4.8
LASF Ste Croix 44.10 307 *e*P **P 16 28 56.0 -0.7**
comp=Z,18nm,1.1s,mb4.8
BCLA Clavier 44.16 316 P **P 16 28 56.6 -0.4**
comp=Z,15nm,2.7s,mb4.2
BCLA Clavier 44.16 316 P **P 16 28 56.6 -0.4**
comp=Z,15nm,2.7s,mb4.2
GIVF Givet 44.39 315 *e*P **P 16 28 58.9 0.0**
SMF Signal de Mont 44.42 310 *e*P **P 16 28 58.0 -1.2**
comp=Z,14nm,0.6s,mb4.5
SMF Signal de Mont 44.42 310 *e*P **P 16 28 58.0 -1.2**
SMF pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
SMF Signal de Mont 44.42 310 *e*P **P 16 28 58.0 -1.2**
comp=Z,6.8nm,0.6s,mb4.5
LOR Lormes 44.50 311 *e*P **P 16 28 58.6 -1.2**
comp=Z,8.1nm,0.7s,mb4.3
LOR Lormes 44.50 311 *e*P **P 16 28 58.6 -1.2**
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LOR Lormes 44.50 311 *e*P **P 16 28 58.6 -1.2**
comp=Z,4.1nm,0.7s,mb4.3
DOU Dourbes 44.53 315 P **P 16 28 60.0 0.0**
comp=Z,11nm,1.2s,mb4.5
DOU Dourbes 44.53 315 P **P 16 28 59.9 -0.1**
comp=Z,11nm,1.2s,mb4.5
TAM Tamanrasset 44.62 276 *e*P **P 16 29 01.8 +0.6**
TAM Tamanrasset 44.62 276 *e*P **P 16 29 01.8 +0.6**
SSF Saint Saulge 44.70 311 *e*P **P 16 29 00.5 -0.9**
comp=Z,20nm,0.9s,mb4.7
SSF Saint Saulge 44.70 311 *e*P **P 16 29 00.5 -0.9**
SSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
SSF Saint Saulge 44.70 311 *e*P **P 16 29 00.5 -0.9**
comp=Z,9.9nm,0.9s,mb4.7
BAIF Baives 44.77 315 *e*P **P 16 29 02.0 +0.1**
comp=Z,40nm,0.8s,mb5.0
BAIF Baives 44.77 315 *e*P **P 16 29 02.0 +0.1**
BAIF pmax pmax
comp=Z,20nm,0.8s,mb5.0
BAIF Baives 44.77 315 *e*P **P 16 29 02.0 +0.1**
comp=Z,20nm,0.8s,mb5.0
AVF Avril sur Loir 44.77 310 *e*P **P 16 29 00.7 -1.3**
comp=Z,17nm,1.0s,mb4.5
AVF Avril sur Loir 44.77 310 *e*P **P 16 29 00.7 -1.3**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
AVF Avril sur Loir 44.77 310 *e*P **P 16 29 00.7 -1.3**
comp=Z,8.7nm,1.0s,mb4.5
UCC Uccle 44.83 316 P **P 16 29 02.1 -0.3**
NB2 NORSAR Subarra 44.90 332 P **P 16 29 01.4 -1.4**
comp=Z,4.9nm,0.5s,mb4.6,baz=118,slow=7.9
NOA NORSAR Array B 44.90 332 P **P 16 29 01.6 -1.2**
comp=Z,4.4nm,0.5s,mb4.5,baz=118,slow=7.9,SNR=16
NOA NORSAR Array B 44.90 332 P **P 16 29 01.6 -1.2**
NOA pmax pmax
comp=Z,4.0nm,0.5s
NAO01 NORSAR Array S 44.95 331 *e*P **P 16 29 01.2 -1.9**
NAO01 NORSAR Array S 44.95 331 *e*P **P 16 29 01.2 -2.0**
BGF Bois d'Agland 45.09 310 *e*P **P 16 29 03.6 -0.9**
comp=Z,24nm,0.8s,mb4.8
BGF Bois d'Agland 45.09 310 *e*P **P 16 29 03.6 -0.9**
BGF pmax pmax
comp=Z,12nm,0.8s,mb4.8
BGF Bois d'Agland 45.09 310 *e*P **P 16 29 03.6 -0.9**
comp=Z,12nm,0.8s,mb4.8
SONM Songino Array 45.11 48 P **P 16 29 04.6 0.0**
comp=Z,16nm,0.9s,mb4.5,baz=269,slow=8.7,SNR=29
SONM Songino Array 45.11 48 P **P 16 29 04.6 -0.1**
SONM pmax pmax
comp=Z,8.0nm,0.9s
MTLF Montolieu 45.23 305 *e*P **P 16 29 05.8 +0.1**
CAF Calviac 45.46 308 *e*P **P 16 29 07.0 -0.5**
comp=Z,19nm,0.8s,mb4.7
CAF Calviac 45.46 308 *e*P **P 16 29 07.0 -0.5**
CAF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CAF Calviac 45.46 308 *e*P **P 16 29 07.0 -0.5**
comp=Z,9.4nm,0.8s,mb4.7
TCF Toulx Ste Croi 45.49 309 *e*P **P 16 29 07.0 -0.7**
comp=Z,26nm,1.1s,mb4.7
TCF Toulx Ste Croi 45.49 309 *e*P **P 16 29 07.0 -0.7**
TCF pmax pmax
comp=Z,13nm,1.0s,mb4.7
TCF Toulx Ste Croi 45.49 309 *e*P **P 16 29 07.0 -0.7**
comp=Z,13nm,1.1s,mb4.7
ULN Ulaanbaatar 45.55 48 *e*P **P 16 29 07.9 -0.2**
comp=Z,13nm,1.0s,mb4.5
ULN Ulaanbaatar 45.55 48 *e*P **P 16 29 07.9 -0.3**
ULN pmax pmax
comp=Z,13nm,1.0s,mb4.8
ULN Ulaanbaatar 45.55 48 *e*P **P 16 29 07.9 -0.3**
comp=Z,13nm,1.0s,mb4.8
OPO Ambohidratompo 45.79 190 P **P 16 29 10.9 +0.6**
comp=Z,2.6nm,0.8s,mb4.2,baz=87,slow=19,SNR=5.0
KEV Kevo 45.81 347 *ep* **P 16 29 08.8 -1.1**
comp=Z,3.2nm,0.4s,mb4.6
KEV Kevo 45.81 347 *e*P **P 16 29 08.8 -1.1**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
RJF Les Rejaudoux 45.88 308 *e*P **P 16 29 10.5 -0.3**
ARCES ARCESS Array B 45.94 346 P **P 16 29 10.6 -0.3**
comp=Z,5.2nm,0.7s,mb4.6,baz=145,slow=8.7,SNR=32
ARCES ARCESS Array B 45.94 346 P **P 16 29 10.6 -0.3**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARE0 ARCESS Array S 45.94 346 *e*P **P 16 29 10.5 -0.4**
ARE0 ARCESS Array S 45.94 346 *e*P **P 16 29 10.5 -0.4**
LFF La Frestale 46.40 307 *e*P **P 16 29 14.4 -0.5**
comp=Z,2.6nm,0.7s,mb4.9
LFF La Frestale 46.40 307 *e*P **P 16 29 14.4 -0.5**
LFF pmax pmax
comp=Z,11nm,0.6s,mb5.0
LFF La Frestale 46.40 307 *e*P **P 16 29 14.4 -0.5**
comp=Z,11nm,0.7s,mb4.9
EPF Esparros 46.59 305 *e*P **P 16 29 15.1 -1.3**
MFF Saint Martin d 47.14 310 *e*P **P 16 29 19.7 -1.0**
ETSF Etsaut 47.24 305 *e*P **P 16 29 21.7 +0.1**
comp=Z,17nm,0.6s,mb4.8
ETSF Etsaut 47.24 305 *e*P **P 16 29 21.7 +0.1**
ETSF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ETSF Etsaut 47.24 305 *e*P **P 16 29 21.7 +0.1**
comp=Z,8.4nm,0.6s,mb4.8
LDF La Druitiere 47.33 312 *e*P **P 16 29 20.6 -1.5**
FLN La Foliniere 47.58 313 *e*P **P 16 29 22.7 -1.4**
SJPF Ste Jean 47.74 305 *e*P **P 16 29 25.3 -0.1**
comp=Z,26nm,0.7s,mb5.1
SJPF Ste Jean 47.74 305 *e*P **P 16 29 25.3 -0.1**
SJPF pmax pmax
comp=Z,13nm,0.7s,mb5.1
SJPF Ste Jean 47.74 305 *e*P **P 16 29 25.3 -0.1**
comp=Z,13nm,0.7s,mb5.1
GRR Gorron 47.79 312 *e*P **P 16 29 24.2 -1.5**
HHC Hu-ho-hao-te 48.41 58 *e*P **P 16 29 31.3 +0.7**
HHC AP pP 16 29 36.0 0.0
HHC XP sP 16 29 38.4 +0.2
HHC PCP PcP 16 30 58.1 +1.2
HHC PP PP 16 31 23.8 +0.6
HHC S **S 16 36 31.1 +0.7**
HHC XS sS 16 36 38.3 -1.1
HHC SCS ScS 16 39 20.0 -2.8
HHC SS SS 16 39 55.6 -4.4
HHC AMB AMB
comp=Z,20nm,0.7s,mb5.3

HHC AMB AMB
comp=Z,187nm,5.1s
HHC LR LR
comp=N,234nm,19.0s,MS4.5
HHC LR LR
comp=E,382nm,17.8s,MS4.5
HHC LR LR
comp=Z,141nm,17.8s,MS4.0
SGMF Saint Gilles 48.91 312 *e*P **P 16 29 33.3 -1.0**
LSZ Lusaka 49.22 215 P **P 16 29 38.3 +1.3**
comp=Z,3.1nm,0.9s,mb4.4,baz=19,slow=10,SNR=4.8
LSZ Lusaka 49.22 215 P **P 16 29 38.3 +1.3**
LSZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ROSF Rostrenen 49.39 312 *e*P **P 16 29 36.8 -1.2**
ESDC Sonseca Array 49.89 300 P **P 16 29 41.3 -0.6**
comp=Z,2.0nm,0.5s,mb4.4,baz=66,slow=7.7,SNR=6.9
TOA0 Torodi Ar. Sit 51.34 265 *e*P **P 16 29 52.8 -0.4**
TOA0 Torodi Ar. Sit 51.34 265 *e*P **P 16 29 52.8 -0.4**
TORD Torodi Ar. Bea 51.34 265 P **P 16 29 52.9 -0.3**
comp=Z,16nm,0.5s,mb5.2,baz=61,slow=7.7,SNR=111
BOD Bodaibo 51.37 36 *e*P **P 16 29 51.9 -0.9**
BOD pmax pmax
comp=Z,17nm,1.0s,mb4.9
BJT Baijiatuau 51.96 59 P **P 16 29 56.8 -0.8**
comp=Z,31nm,1.3s,mb5.1
BJT Baijiatuau 51.96 59 P **P 16 29 56.8 -0.8**
BJT pmax pmax
comp=Z,31nm,1.3s
BJT Baijiatuau 51.96 59 P **P 16 29 56.8 -0.8**
comp=Z,31nm,1.3s,mb5.1
SFS San Fernando 51.98 297 P **P 16 29 57.7 -0.1**
comp=Z,738nm,1.0s
SFS San Fernando 51.98 297 P **P 16 29 57.7 0.0**
SFS pmax pmax
comp=Z,738nm,1.0s
SFS San Fernando 51.98 297 P **P 16 29 57.7 0.0**
comp=Z,738nm,1.0s
HIA Hailar 54.04 47 *e*P **P 16 30 12.2 -0.6**
HIA pmax pmax
comp=Z,10.0nm,1.1s
HIA Hailar 54.04 47 *e*P **P 16 30 12.2 -0.6**
comp=Z,10nm,1.1s,mb4.7
TSUM Tsumeb 58.30 222 *e*P **P 16 30 42.5 -0.9**
comp=Z,5.8nm,1.0s,mb4.6
LBTB Lobatse 58.77 211 P **P 16 30 47.2 +0.6**
comp=Z,5.9nm,0.7s,mb4.7,baz=31,slow=8.0,SNR=9.7
LBTB Lobatse 58.77 211 *e*P **P 16 30 47.1 +0.4**
comp=Z,7.2nm,0.8s,mb4.8
LBTB Lobatse 58.77 211 P **P 16 30 47.3 +0.6**
LBTB pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LBTB Lobatse 58.77 211 *e*P **P 16 30 47.1 +0.4**
comp=Z,7.2nm,0.8s,mb4.8
YHNB Yeheng 59.41 76 *e*P **P 16 30 52.3 +1.0**
comp=Z,42nm,1.1s,mb5.4
YHNB Yeheng 59.41 76 *e*P **P 16 30 52.3 +1.0**
comp=Z,42nm,1.1s,mb5.4
YAK Yakutsk 59.59 32 *e*P **P 16 30 49.8 -2.1**
comp=Z,10nm,0.5s,mb5.1
YAK Yakutsk 59.59 32⇑ *e*P **P 16 30 50.1 -1.8**
YAK pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
YAK Yakutsk 59.59 32 *e*P **P 16 30 49.8 -2.1**
comp=Z,10nm,0.5s,mb5.1
TIXI Tiksi 59.72 21⇑ *e*P **P 16 30 51.3 -1.4**
TIXI pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
DBIC Dimbokro 59.94 262 P **P 16 30 54.9 -0.2**
comp=Z,19nm,0.8s,mb5.2,baz=41,slow=7.1,SNR=23
DBIC Dimbokro 59.94 262 *e*P **P 16 30 54.1 -0.9**
comp=Z,19nm,0.8s,mb5.2
DBIC Dimbokro 59.94 262 P **P 16 30 54.9 -0.2**
DBIC pmax pmax
comp=Z,19nm,0.8s
DBIC Dimbokro 59.94 262 *e*P **P 16 30 54.1 -1.0**
comp=Z,19nm,0.8s,mb5.2
KIC Kosan Boka 59.98 261 *e*P **P 16 30 55.2 -0.1**
comp=Z,48nm,0.8s,mb5.6
TIC Toumodi 60.09 262 *e*P **P 16 30 55.8 -0.3**
comp=Z,34nm,0.5s,mb5.7
TIC Toumodi 60.09 262 *e*P **P 16 30 55.8 -0.3**
TIC pmax pmax
comp=Z,34nm,0.5s,mb5.6
LIC Lamto 60.29 261 *e*P **P 16 30 57.1 -0.4**
comp=Z,52nm,1.0s,mb5.5
LIC Lamto 60.29 261 *e*P **P 16 30 57.2 -0.3**
comp=Z,9.4nm,0.4s,mb4.9
LIC Lamto 60.29 261 *e*P **P 16 30 57.2 -0.3**
comp=Z,4.7nm,0.4s,mb4.9
KSRS Korea Array 61.44 60 P **P 16 31 03.3 -1.7**
comp=Z,4.1nm,0.9s,mb4.5,baz=276,slow=6.4,SNR=7.4
KSRS Korea Array 61.44 60 P **P 16 31 03.3 -1.7**
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SUMG Summit 65.53 341 *e*P **P 16 31 31.5 +0.1**
comp=Z,5.3nm,1.0s,mb4.5
SUMG *e* 16 31 53.2
SUMG Summit 65.53 341 *e*P **P 16 31 31.5 0.0**
YSS Yuzh-Sakhalins 69.58 47 *e*P **P 16 31 55.5 -2.0**
comp=Z,19nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 69.58 47 *e*P **P 16 31 55.5 -1.9**
YSS pmax pmax
comp=Z,19nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 69.58 47 *e*P **P 16 31 55.5 -1.9**
comp=Z,19nm,0.8s,mb5.1
BILL Bilibino 72.92 21⇓ *e*P **P 16 32 15.8 -1.5**
BILL *e* 16 35 01.4
BILL *e*S S 16 41 36.6 -6.2
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BATI Baumata 76.30 109 P **P 16 32 37.4 -0.4**
comp=Z,21nm,0.8s,mb5.2,baz=311,slow=5.6,SNR=3.9
RES Resolute Bay 76.76 352 P **P 16 32 38.3 -1.1**
comp=Z,64nm,0.9s,mb5.5
RES Resolute Bay 76.76 352 P **P 16 32 38.3 -1.1**
comp=Z,64nm,0.9s,mb5.5
NWAO Narrogin (SRO) 84.07 131 P **P 16 33 17.3 -1.9**
comp=Z,3.1nm,0.6s,mb4.6,baz=270,slow=7.1,SNR=4.0
NWAO Narrogin (SRO) 84.07 131 P **P 16 33 17.4 -1.8**
NWAO Narrogin (SRO) 84.07 131 P **P 16 33 17.3 -1.9**
NWAO pmax pmax
comp=Z,3.0nm,0.6s
NWAO Narrogin (SRO) 84.07 131 P **P 16 33 17.4 -1.8**
SCHQ Schefferville 84.46 330 P **P 16 33 20.4 -0.5**
comp=Z,5.8nm,0.7s,mb4.8,baz=25,slow=6.0,SNR=9.7
INK Inuvik 84.88 3 *e*P **P 16 33 22.0 -0.9**
comp=Z,211nm,1.4s
INK Inuvik 84.88 3 *e*P **P 16 33 22.0 -0.9**
comp=Z,211nm,1.4s
COLA College 86.85 9 P **P 16 33 30.3 -2.4**
comp=Z,3.7nm,1.1s,mb4.5
COLA College 86.85 9 P **P 16 33 30.3 -2.4**
COLA pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
COLA College 86.85 9 P **P 16 33 30.3 -2.4**
comp=Z,3.7nm,1.1s,mb4.5
EGAK Eagle 87.79 7 *e*P **P 16 33 35.7 -1.5**
comp=Z,6.0nm,1.0s,mb4.8
EGAK Eagle 87.79 7 *e*P **P 16 33 35.7 -1.5**
comp=Z,6.0nm,1.0s,mb4.8
WRA Warramunga Arr 90.06 112 P **P 16 33 47.4 -1.2**
comp=Z,1.9nm,0.5s,mb4.7,baz=314,slow=4.1,SNR=13
WRA Warramunga Arr 90.06 112 P **P 16 33 47.4 -1.2**
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRAB Tennant Creek 90.06 112 *e*P **P 16 33 46.2 -2.4**
comp=Z,2.3nm,0.6s,mb4.7
WRAB Tennant Creek 90.06 112 *e*P **P 16 33 46.3 -2.4**
WRAB pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
WRAB Tennant Creek 90.06 112 *e*P **P 16 33 46.2 -2.5**
comp=Z,2.3nm,0.6s,mb4.7
YKA Yellowknife Ar 90.51 355 P **P 16 33 49.7 -0.4**
comp=Z,1.3nm,0.7s,mb4.4,baz=358,slow=4.7,SNR=8.4
YKA Yellowknife Ar 90.51 355 P **P 16 33 49.7 -0.4**
YKA Yellowknife Ar 90.51 355 P **P 16 33 49.7 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 91.48 116 P **P 16 33 53.8 -1.4**
comp=Z,3.1nm,0.8s,mb4.7,baz=303,slow=4.6,SNR=72
ASAR PKKPbc PKKPbc 16 51 15.2 -0.4
comp=Z,0.4nm,0.9s,baz=121,slow=3.0,SNR=4.8
NVAR Mina Array Bea 114.69 354 PKP PKiKP 16 39 29.0 -0.1
comp=Z,0.3nm,0.6s,baz=40,slow=2.9,SNR=2.8

*ISCJB **22** 16:24:07.8±0.5, 1502S×0.09×6693E±0.09, h10km, mb4.3/26, MS4.2/18, Error ellipse: s-maj=14.5km s-min=10.7km az=39.3*
*IDC **22** 16:24:07.9±0.8, 1505S×6695E, h0km, mb4.1/16, mb1 4.2/17, mb1mx4.1/27, mbtmp4.0/17, ML3.6/1, MS4.2/18, Ms1 4.2/18, ms1mx4.1/27, Error ellipse: s-maj=22.5km s-min=19.5km az=149.0*
*GCMT **22** 16:24:09.5±0.4, 15.13S×66.98E, h12km±1km, MW5.0/58, Moment Tensor Solution. s22,c28; s58,c84; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-4.20±.31; Mθθ1.55±.20; Mφφ2.65±.23; Mrθ0.24±.58; Mθφ-1.33±.14; Mφr1.38±.59; Best double couple: M0 4.09200×10^16 NP1:ϕs317.00000°, δ38.00000°, λ-106.00000°. NP2: ϕs158.00000°, δ53.00000°, λ-77.00000°. Principal axes: T 3.6750, Plg8.0000°, Azm239.0000°; N 0.8350, Plg10.0000°, Azm330.0000°; P -4.5090, Plg77.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **22** 16:24:09.5±0.5, 1507S×66.88E, h10km, mb4.7/12 Error ellipse: s-maj=16.6km s-min=12.1km az=146.0*

ISC 22 16:24:09.8±0.5, 1505S±0.09×6691E±0.09, h10km, n53, σ0 8 87/34, mb4.3/26, MS4.2/18, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**19.20**	**257**	P		**Pn**	**16 28 35.2**	**+0.3**
	0.2nm,0.3s,baz=139,slow=9.3,SNR=3.1							
LSZ	**Lusaka**	**37.34**	**264**	P		**P**	**16 31 23.6**	**+0.9**
	5.7nm,0.9s,mb4.4,baz=92,slow=6.1,SNR=4.7							
LSZ	**Lusaka**	**37.34**	**264**	*e*P		**P**	**16 31 23.1**	**+0.3**
	10nm,1.1s,mb4.6							
LBTB	**Lobatse**	**39.92**	**249**	LR		LR	16 45 36.4	
	comp=Z,559nm,19.8s,MS4.4,baz=96,slow=32							
LBTB	**Lobse**	**39.92**	**249**	P		**P**	**16 31 43.4**	**-1.0**
	14nm,1.2s,mb4.6							
CMAR	**Chiang Mai Arr**	**45.87**	**45**	P		**P**	**16 32 32.8**	**+0.2**
	2.2nm,1.0s,mb4.0,baz=236,slow=8.4,SNR=12							
CMAR				LR		LR	16 51 32.2	
	comp=Z,545nm,18.4s,MS4.5,baz=221,slow=36							
NWAO	**Narrogin (SRO)**	**48.83**	**121**	LR		LR	16 47 58.7	
	comp=Z,250nm,20.9s,MS4.2,baz=298,slow=29							
KBL	**Kabul**	**49.35**	**2**	*e*P		**P**	**16 33 01.2**	**+1.8**
	18nm,1.6s,mb4.8							
LSA	**Lhasa**	**50.26**	**28**	*e*P		**P**	**16 33 10.6**	**+4.2**
	32nm,2.2s,mb5.0							
MAW	**Mawson**	**52.59**	**182**	LR		LR	16 50 19.0	
	comp=Z,189nm,21.4s,MS4.1,baz=325,slow=30							
EKS2	**Erkin-Say**	**57.77**	**6**	P		**P**	**16 34 03.3**	**+2.3**
	5.5nm,1.0s,mb4.5							
TKM2	**Tokmak 2**	**58.23**	**8**	*e*P		**P**	**16 34 03.0**	**-1.3**
	11nm,1.4s,mb4.7							
DAV	**Davao City (W)**	**62.16**	**73**	LR		LR	16 57 43.0	
	comp=Z,293nm,20.1s,MS4.4,baz=168,slow=32							
BRTR	**Keskin Array B**	**62.69**	**332**	P		**P**	**16 34 35.7**	**+0.9**
	0.8nm,0.8s,mb3.9							
MKAR	**Makanchi Array**	**63.09**	**12**	P		**P**	**16 34 36.2**	**-1.1**
	1.2nm,1.0s,mb4.0,baz=193,slow=6.7,SNR=3.2							
MKAR				LR		LR	17 00 14.1	
	comp=Z,144nm,20.1s,MS4.1,baz=177,slow=34							
WRA	**Warramunga Arr**	**64.13**	**105**	P		**P**	**16 34 45.0**	**+0.2**
	1.0nm,0.9s,mb4.0,baz=269,slow=6.6,SNR=6.1							
WRAB	**Tennant Creek**	**64.14**	**105**	*e*P		**P**	**16 34 45.3**	**+0.4**
	14nm,1.1s,mb4.9							
AKTK	**Aktyubinsk**	**65.66**	**354**	P		**P**	**16 34 54.0**	**0.0**
AKTO	**Aktyubinsk**	**65.66**	**354**	P		**P**	**16 34 54.0**	**0.0**
	1.2nm,0.8s,mb4.0,baz=180,slow=6.5,SNR=4.0							
KURK	**Kurchatov**	**66.28**	**8**	P		**P**	**16 34 57.1**	**-0.9**
	0.9nm,0.5s,mb4.1,baz=202,slow=6.8,SNR=3.6							
BVAR	**Borovoye Array**	**67.86**	**2**	P		**P**	**16 35 07.3**	**-0.7**
	1.8nm,0.8s,mb4.1,baz=160,slow=9.1,SNR=7.2							
BRVK	**Borovoye**	**67.88**	**2**	*e*P		**P**	**16 35 07.6**	**-0.6**
	8.1nm,1.3s,mb4.6							
STKA	**Stephens Creek**	**69.35**	**119**	LR		LR	17 01 23.3	
	comp=Z,190nm,18.4s,MS4.4,baz=206,slow=32							
SNAA	**Sanae**	**69.48**	**198**	*e*P		**P**	**16 35 13.2**	**-4.9**
	6.7nm,1.3s,mb4.4							
TORD	**Torodi Ar. Bea**	**70.35**	**290**	P		**P**	**16 35 24.1**	**-0.3**
	1.2nm,0.8s,mb3.9,baz=116,slow=3.6,SNR=3.4							
TORD				LR		LR	17 04 46.0	
	comp=Z,156nm,20.9s,MS4.2,baz=115,slow=35							
ZAA0	**Zalesovo Array**	**70.41**	**11**	*e*P		**P**	**16 35 23.5**	**-0.3**
ZALV	**Zalesovo Beam**	**70.41**	**11**	P		**P**	**16 35 23.2**	**-0.7**
	1.6nm,0.7s,mb4.0,baz=210,slow=5.1,SNR=7.7							
ZALV				LR		LR	17 07 01.4	
	comp=Z,122nm,18.1s,MS4.2,baz=150,slow=37							
ZALV	**Zalesovo Beam**	**70.41**	**11**	P		**P**	**16 35 23.2**	**-0.7**
ZALV				LR		LR	17 07 01.4	
MLR	**Muntele Rosu**	**70.74**	**331**	P		**P**	**16 35 25.7**	**-0.4**
	1.0nm,0.5s,mb4.0,baz=169,slow=10,SNR=2.2							
VNA2	**Neumayer--Watz**	**70.76**	**200**	*e*Pdiff		**P**	**16 35 26.6**	**+0.7**
VNA2				*e*			16 35 33.2	
VNA3	**Neumayer Olymp**	**71.54**	**199**	*e*Pdiff		**P**	**16 35 31.1**	**+0.5**
VNA3				*e*			16 35 37.6	
ARU	**Arti**	**71.55**	**355**	*e*P		**P**	**16 35 32.0**	**+1.3**
	7.2nm,0.9s,mb4.6							
SONM	**Songino Array**	**71.83**	**27**	P		**P**	**16 35 33.4**	**+0.8**
	1.4nm,0.9s,mb3.9,baz=226,slow=5.0,SNR=5.0							
SONM				LR		LR	17 05 59.0	
	comp=Z,257nm,20.3s,MS4.5,baz=194,slow=35							
AKASG	**Malin Array Be**	**73.31**	**336**	P		**P**	**16 35 40.8**	**-0.6**
	2.5nm,0.8s,mb4.2,baz=144,slow=5.4,SNR=5.9							
KEST	**Kesra**	**74.24**	**314**	LR		LR	17 07 14.1	
	comp=Z,62nm,19.9s,MS3.9,baz=254,slow=35							
DBIC	**Dimbokro**	**74.30**	**281**	LR		LR	17 07 01.4	
	comp=Z,150nm,19.0s,MS4.3,baz=91,slow=35							
DBIC	**Dimbokro**	**74.30**	**281**	*e*P		**P**	**16 35 44.2**	**-3.9**
	4.2nm,0.9s,mb4.4							
QSPA	**South Pole Qui**	**75.04**	**180**	P		**P**	**16 35 50.6**	**-0.5**
	1.3nm,0.8s,mb3.9,baz=340,slow=3.9,SNR=8.3							
QSPA	**South Pole Qui**	**75.04**	**180**	*e*P		**P**	**16 35 49.8**	**-1.3**
	10nm,2.2s,mb5.4							
VNDA	**Vanda**	**76.49**	**167**	LR		LR	17 04 57.8	
	comp=Z,95nm,20.8s,MS4.1,baz=264,slow=32							
KSRS	**Korea Array**	**77.50**	**45**	P		**P**	**16 36 05.4**	**-0.4**
	2.6nm,1.1s,mb4.1,baz=243,slow=5.3,SNR=4.3							
KSRS				LR		LR	17 11 50.4	
	comp=Z,200nm,18.9s,MS4.5,baz=234,slow=37							
CLL	**Collm**	**81.00**	**329**	*i* PcP		PcP	16 36 31.9	+0.9
	comp=Z,20nm,1.3s							
GUMO	**Guam**	**82.20**	**74**	LR		LR	17 10 07.0	
	comp=Z,67nm,21.9s,MS4.0,baz=270,slow=34							
MJAR	**Matsushiro Arr**	**84.46**	**50**	LR		LR	17 11 49.6	
	comp=Z,94nm,20.0s,MS4.2,baz=235,slow=34							
ESDC	**Sonseca Array**	**85.39**	**313**	P		**P**	**16 36 47.8**	**+0.3**
	comp=Z,2.3nm,0.8s,mb4.3,baz=109,slow=4.2,SNR=6.3							
ESDC				LR		LR	17 17 33.6	
	comp=Z,70nm,18.2s,MS4.1,baz=290,slow=38							
ARCES	**ARCESS Array B**	**89.23**	**347**	LR		LR	17 17 38.4	
	comp=Z,158nm,18.4s,MS4.5,baz=334,slow=36							
DGMT	**Dagmar**	**145.87**	**349**	*e*PKPdf		PKPab	16 43 51.0	+1.2
TZTN	**Tazewell**	**146.08**	**315**	*e*PKPbc		PKPab	16 43 52.5	+1.4
JCW	**Jim Creek**	**146.15**	**11**	*e*PKPdf		PKPdf	16 43 49.8	+0.5
ECSD	**EROS,Sioux Fal**	**148.13**	**337**	*e*PKPbc		PKPbc	16 43 55.4	-0.7
CHMT	**Chamberlain Mo**	**148.23**	**0**	*e*PKPbc		PKPbc	16 43 57.9	+1.7
HRY	**Holter Researc**	**148.41**	**358**	*e*PKPbc		PKPbc	16 43 57.9	+1.2
PDAR	**Pinedale Array**	**152.21**	**354**	PKPbc		PKPbc	16 44 05.8	-0.1
	comp=Z,0.9nm,0.7s,baz=63,slow=1.8,SNR=9.1							

*TEH **22** 16:25:03.2, 2682N×5475E, h21km, ML3.6*
*ISCJB **22** 16:25:40.8±1.1, 2698N±007×5476E±003, h10km±7km, Error ellipse: s-maj=12.2km s-min=5.1km az=5.1*
*CSEM **22** 16:25:41.8±0.2, 2697N×5480E, h14km, ML3.5, Error ellipse: s-maj=5.0km s-min=1.8km az=12.0*
*THR **22** 16:25:42.2±0.5, 2683N×5482E, h35km±4km, ML3.5*

ISC 22 16:25:42.5±1.2, 2696N±007×5479E±004, h11km±7km, n33, σ0 8 86/44, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.31**	**70**	*e*Pg		**Pg**	**16 26 06.5**	**-1.1**
BNDS				*e*Sg		**Sg**	**16 26 24.6**	**-0.1**
BNDS				AML		AML	16 26 34.5	
	comp=N,825nm,0.4s							
BNDS				AML		AML	16 26 35.7	
	comp=E,914nm,0.4s							
BNDS	**Bandar-Abbas**	**1.31**	**70**	*e*Pg		**Pg**	**16 26 06.5**	**-1.2**
	SNR=99							
BNDS				*e*Sg		**Sg**	**16 26 24.6**	**-0.1**
	SNR=99							
IBND	**Bandar-abas**	**1.64**	**72**	*e*Pn		**Pn**	**16 26 11.8**	**+0.5**
IBND	**Bandar-abas**	**1.64**	**72**	*e*Pn		**Pn**	**16 26 11.8**	**+0.5**
IBND				*e*Sn		**Sn**	**16 26 32.5**	**+0.2**
IBND				*e*			16 26 40.4	
GHIR	**Ghir-Karzin**	**2.07**	**310**	*e*Pn		**Pn**	**16 26 18.3**	**+1.0**
GHIR				*e*Sg		**Sg**	**16 26 49.4**	**+0.3**
GHIR				AML		AML	16 27 03.1	
	comp=E,246nm,0.4s							
GHIR				AML		AML	16 27 08.3	
	comp=N,375nm,0.6s							
GHIR	**Ghir-Karzin**	**2.07**	**310**	*e*Pn		**Pn**	**16 26 18.3**	**+1.0**
	SNR=54							
GHIR				*e*Sg		**Sg**	**16 26 49.4**	**+0.3**
	SNR=95							
IMOK	**Mouk**	**2.77**	**319**	*e*Pn		**Pn**	**16 26 30.1**	**+3.2**
IMOK				*e*Sn		**Sn**	**16 27 00.1**	**-0.2**
IMOK	**Mouk**	**2.77**	**319**	*e*Pn		**Pn**	**16 26 30.1**	**+3.2**
IMOK				*e*Sn		**Sn**	**16 27 00.4**	**+0.1**
IMOK				*e*			16 27 24.9	
ISRV	**Sarvestan**	**2.83**	**329**	*e*Pn		**Pn**	**16 26 28.7**	**+1.0**
ISRV	**Sarvestan**	**2.83**	**329**	*e*Pn		**Pn**	**16 26 28.7**	**+1.0**
ISRV				*e*			16 27 28.1	
IPAR	**Pars**	**3.25**	**332**	*e*Pn		**Pn**	**16 26 33.5**	**0.0**
IPAR				*e*			16 27 42.3	
KRBR	**Kerman**	**3.48**	**30**	*e*Pn		**Pn**	**16 26 37.5**	**+0.9**
IMEH	**Mehriz**	**4.42**	**358**	*e*Pn		**Pn**	**16 26 50.8**	**+1.3**
IMEH				*e*			16 26 54.0	
IBAF	**Bafgh**	**4.66**	**8**	*e*Pn		**Pn**	**16 26 53.2**	**+0.3**
IBAF				*e*Sn		**Sn**	**16 27 46.3**	**-0.7**
IBAF	**Bafgh**	**4.66**	**8**	*e*Pn		**Pn**	**16 26 53.2**	**+0.3**
IBAF				*e*			16 26 55.0	
IBAF				*e*Sn		**Sn**	**16 27 46.3**	**-0.7**
ISAD	**Sadrabad**	**5.03**	**349**	*e*Pn		**Pn**	**16 26 59.4**	**+1.5**
ISAD				*e*Sn		**Sn**	**16 27 54.7**	**-1.3**
ISAD	**Sadrabad**	**5.03**	**349**	*e*Pn		**Pn**	**16 26 59.5**	**+1.6**
ISAD				*e*			16 27 06.8	
ISAD				*e*Sn		**Sn**	**16 27 54.7**	**-1.3**
ICHK	**Chekchek**	**5.28**	**357**	*e*Pn		**Pn**	**16 27 01.3**	**0.0**
ICHK	**Chekchek**	**5.28**	**357**	*e*Pn		**Pn**	**16 27 01.3**	**0.0**
ICHK				*e*			16 27 10.4	
IGAR	**Gharneh**	**5.93**	**337**	*e*Pn		**Pn**	**16 27 10.4**	**+0.1**
IGAR	**Gharneh**	**5.93**	**337**	*e*Pn		**Pn**	**16 27 10.4**	**+0.1**
IGAR				*e*			16 27 19.0	
IZEF	**Zefreh**	**6.29**	**341**⇓	*e*Pn		**Pn**	**16 27 14.6**	**-0.6**
IZEF	**Zefreh**	**6.29**	**341**	*e*Pn		**Pn**	**16 27 14.6**	**-0.6**
QRN	**Al-Qurain**	**6.33**	**288**	*e*P		**Pn**	**16 27 15.3**	**-0.6**
	baz=289							
QRN				AML		AML	16 28 27.1	
	comp=Z,30nm,0.3s,baz=289							
IKOO	**Kooshah**	**6.56**	**33**	*e*Pn		**Pn**	**16 27 17.8**	**-1.2**
IKOO				*e*			16 27 21.3	
IPIR	**Pirpir**	**6.63**	**330**	*e*Pn		**Pn**	**16 27 20.3**	**+0.4**
IPIR				*e*			16 27 23.4	
RDF	**Al-Radifah**	**6.69**	**289**	*e*P		**Pn**	**16 27 19.4**	**-1.4**
	baz=290							
RDF				AML		AML	16 28 34.2	
	comp=Z,9.0nm,0.3s,baz=290							
IKLH	**Kolahrood**	**6.92**	**337**	*e*Pn		**Pn**	**16 27 23.3**	**-0.6**
IKLH	**Kolahrood**	**6.92**	**337**	*e*Pn		**Pn**	**16 27 23.3**	**-0.6**
IKLH				*e*			16 27 37.1	
NAY	**Al-Naaiem**	**7.04**	**291**	*e*P		**Pn**	**16 27 24.9**	**-0.7**
	baz=292							
NAY				AML		AML	16 28 42.7	
	comp=Z,6.0nm,0.6s,baz=292							
MIB	**Mutribah**	**7.14**	**295**	*e*P		**Pn**	**16 27 26.7**	**-0.4**
	baz=296							
IMON	**Monand**	**7.51**	**33**	*e*Pn		**Pn**	**16 27 32.6**	**+0.6**
IMON	**Monand**	**7.51**	**33**	*e*Pn		**Pn**	**16 27 32.6**	**+0.6**
IMON				*e*			16 27 34.6	

*ISCJB **22** 16:27:07.2±2.3, 2055S±02×1782W±02, h485km±34km, mb3.8/7, Error ellipse: s-maj=38.5km s-min=28.8km az=156.1*
*IDC **22** 16:27:09.5±2.5, 2044S×17802W, h510km±29km, mb3.3/6, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=26.2km s-min=21.4km az=159.0*
*NEIC **22** 16:27:09.3±1.7, 2044S×17802W, h510km±22km, mb4.1/2, Error ellipse: s-maj=33.6km s-min=20.1km az=153.0*

ISC 22 16:27:08.6±2.1, 2055S±02×1782W±02, h488km±33km, n14, σ0 8 63/12, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.94**	**44**	P		**P**	**16 29 14.6**	**0.0**
	4.8nm,0.3s,baz=264,slow=23,SNR=8.6							
AFI	**Afiamalu**	**8.94**	**44**	*e*Pn		**P**	**16 29 14.5**	**-0.2**
CTA	**Charters Tower**	**33.34**	**264**	P		**P**	**16 33 06.7**	**+1.2**
	4.2nm,0.5s,mb4.1,baz=102,slow=12,SNR=12							
CTAO	**Charters Tower**	**33.34**	**264**	*e*P		**P**	**16 33 06.6**	**+1.1**
	6.0nm,0.7s,mb4.1							
ASAR	**Alice Springs**	**44.38**	**257**	P		**P**	**16 34 35.3**	**+0.2**
	2.6nm,0.5s,mb3.9,baz=89,slow=8.0,SNR=50							
ASAR				S		**S**	**16 40 29.6**	**-3.9**
	0.7nm,0.7s,baz=95,slow=16,SNR=6.6							
WRAB	**Tennant Creek**	**44.45**	**262**	P		**P**	**16 34 34.7**	**-1.0**
	1.8nm,0.4s,mb3.9							
WRA	**Warramunga Arr**	**44.46**	**262**	P		**P**	**16 34 35.1**	**-0.6**
	2.0nm,0.3s,mb4.0,baz=96,slow=7.5,SNR=21							
QSPA	**South Pole Qui**	**69.59**	**180**	P		**P**	**16 37 27.4**	**+0.1**
	0.7nm,0.6s,mb3.4,baz=4.1,slow=0.1,SNR=3.8							
QSPA	**South Pole Qui**	**69.59**	**180**	P		**P**	**16 37 27.4**	**0.0**
KSRS	**Korea Array**	**76.77**	**319**	P		**P**	**16 38 09.2**	**-0.1**
	0.6nm,0.5s,mb3.4,baz=126,slow=4.6,SNR=5.7							
CMAR	**Chiang Mai Arr**	**89.97**	**290**	P		**P**	**16 39 16.2**	**+0.4**
	0.9nm,0.8s,mb3.7,baz=121,slow=2.9,SNR=7.8							
BVAR	**Borovoye Array**	**118.97**	**320**	PKP		PKPdf	16 44 58.2	-2.7
	0.4nm,0.3s,baz=99,slow=2.9,SNR=3.8							
AKASG	**Malin Array Be**	**142.93**	**331**	PKhKP			16 45 40.4	
	1.0nm,0.5s,baz=43,slow=3.9,SNR=8.3							
CLL	**Collm**	**148.01**	**347**	*e*PKPbc		PKPbc	16 45 56.0	-2.4

**IDC 22 16:27:19.6±2.2, 1512S×6644E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/22, mbtmp3.8/5, MS3.9/2, Ms1 3.9/2, ms1mx3.5/26, Error ell

0.4nm,0.6s,mb3.6,baz=96,slow=7.0,SNR=4.4
KURK Kurchatov 61.34 318 P **P 16 41 27.0 -0.5**
0.6nm,0.4s,mb4.1,baz=94,slow=7.3,SNR=2.9
BVAR Borovoye Array 66.52 320 P **P 16 42 00.9 -0.5**
0.7nm,0.5s,mb4.0,baz=87,slow=7.6,SNR=5.7
ARCES ARCESS Array B 82.33 342 P **P 16 43 33.1 +0.3**
4.6nm,0.9s,mb4.4,baz=64,slow=8.2,SNR=5.1
NVAR Mina Array Bea 82.58 52 P **P 16 43 36.1 +1.3**
0.7nm,0.7s,mb3.8,baz=267,slow=7.9,SNR=5.6

*IDC **22** 16:43:06.7±1.3,2194N×12083E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.6/20,mbtmp3.7/6,Error ellipse: s-maj=59.2km s-min=19.2km az=57.0*
*NEIC **22** 16:43:08.8±0.6,2179N×12066E,h10km,mb4.6/1,Error ellipse: s-maj=17.3km s-min=10.1km az=87.0*
*ISCJB **22** 16:43:10.5±0.5,2185N±003×12052E±004,h33km, mb3.8/6,Error ellipse: s-maj=4.9km s-min=3.9km az=172.3*
*TAP **22** 16:43:11.0,2192N×12057E,h33km,ML3.6,C*
ISC 22 16:43:11.8±0.5,2188N±003×12057E±004,h35km,n51, σ0§70/75,mb3.8/6,2C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEN	**Hengchun**	**0.20**	**51**	⇓*i*P	**Pn**	**16 43 18.4**	**-0.3**
	baz=73						
HEN				*i* S	**Sn**	**16 43 24.0**	**+0.7**
	baz=73						
TWK1	**Hengchun**	**0.22**	**74**	⇓*i*P	**Pn**	**16 43 18.6**	**-0.3**
	baz=84						
TWK1				*i* S	**Sn**	**16 43 24.0**	**+0.3**
	baz=84						
TSEB	**Hengchuen, Pin**	**0.30**	**86**	⇓*i*P	**Pn**	**16 43 19.2**	**-0.6**
	baz=93						
TSEB				*i* S	**Sn**	**16 43 25.6**	**+0.3**
	baz=93						
SCZT	**Fangliau**	**0.49**	**5**	⇑*i*P	**Pn**	**16 43 22.0**	**-0.4**
	baz=14						
SCZT				*i* S	**Sn**	**16 43 29.6**	**0.0**
	baz=14						
TWP	**Hsiaoliuchiu**	**0.50**	**337**	*e*P	**Pn**	**16 43 21.5**	**-1.0**
	baz=335						
TWP				*e*S	**Sn**	**16 43 31.6**	**+1.7**
	baz=335						
EAST	**Anshuo**	**0.56**	**27**	*e*P	**Pn**	**16 43 23.2**	**-0.1**
	baz=29						
EAST				*e*S	**Sn**	**16 43 31.4**	**0.0**
	baz=29						
TAW	**Tawu**	**0.56**	**32**	*i* P	**Pn**	**16 43 23.1**	**-0.2**
	baz=34						
TAW				*i* S	**Sn**	**16 43 31.6**	**+0.2**
	baz=34						
KAU	**Kaohsiung**	**0.73**	**340**	*e*P	**Pn**	**16 43 24.6**	**-1.0**
	baz=340						
ECL	**Taimali**	**0.80**	**26**	*i* P	**Pn**	**16 43 26.2**	**-0.3**
	baz=41						
ECL				S	**Sn**	**16 43 37.6**	**+0.4**
	baz=41						
SGLT	**Jiouru**	**0.84**	**355**	*e*P	**Pn**	**16 43 27.3**	**+0.1**
	baz=354						
SGLT				*e*S	**Sn**	**16 43 38.2**	**-0.1**
	baz=354						
SSD	**Sandimen**	**0.86**	**4**	⇑*i*P	**Pn**	**16 43 26.9**	**-0.5**
	baz=3.0						
SSD				S	**Sn**	**16 43 38.4**	**-0.5**
	baz=3.0						
LAY	**Lan-yu**	**0.92**	**80**	P	**Pn**	**16 43 27.4**	**-0.9**
	baz=69						
LAY				*e*S	**Sn**	**16 43 39.2**	**-1.1**
	baz=69						
TWM1	**Shoushan**	**0.95**	**352**	*e*P	**Pn**	**16 43 29.5**	**+0.9**
	baz=351						
TWG	**Pinlang**	**1.04**	**26**	P	**Pn**	**16 43 30.0**	**0.0**
	baz=39						
TWG				S	**Sn**	**16 43 43.5**	**+0.2**
	baz=39						
SGST	**Jiashian**	**1.20**	**0**	*e*P	**Pn**	**16 43 31.8**	**-0.2**
	baz=347						
STYT	**Tauyuan**	**1.29**	**8**	P	**Pn**	**16 43 33.0**	**-0.3**
	baz=353						
STYT				*e*S	**Sn**	**16 43 49.0**	**-0.3**
	baz=353						
CHN1	**Nanshi**	**1.30**	**358**	*e*P	**Pn**	**16 43 33.0**	**-0.5**
	baz=357						
WTP	**Ta-pu**	**1.36**	**2**	*e*P	**Pn**	**16 43 33.9**	**-0.4**
	baz=346						
WTP				*e*S	**Sn**	**16 43 50.5**	**-0.6**
	baz=346						
ELDTW	**Lidau**	**1.36**	**17**	P	**Pn**	**16 43 34.8**	**+0.4**
	baz=3.0						
ELDTW				S	**Sn**	**16 43 51.3**	**0.0**
	baz=3.0						
CHKT	**Chengkung**	**1.42**	**31**	*e*P	**Pn**	**16 43 35.3**	**+0.2**
	baz=30						
CHKT				*e*S	**Sn**	**16 43 52.8**	**+0.2**
	baz=30						
CHN4	**Tsaushan**	**1.46**	**1**	*e*P	**Pn**	**16 43 35.3**	**-0.4**
	baz=359						
CHN4				*e*S	**Sn**	**16 43 53.9**	**+0.2**
	baz=359						
TWF1	**Yuli**	**1.61**	**24**	*e*P	**Pn**	**16 43 38.3**	**+0.5**
	baz=8.0						
ALS	**Alishan**	**1.64**	**7**	P	**Pn**	**16 43 38.0**	**-0.1**
	baz=351						
ALS				*e*S	**Sn**	**16 43 58.4**	**+0.5**
	baz=351						
YUS	**Yu-Shan**	**1.64**	**12**	*e*P	**Pn**	**16 43 38.6**	**+0.5**
	baz=11						
CHN5	**Tsauling**	**1.71**	**3**	⇓*i*P	**Pn**	**16 43 38.8**	**-0.4**
	baz=348						
CHN5				S	**Sn**	**16 43 59.2**	**-0.6**
	baz=348						
EHY	**Hungye**	**1.76**	**23**	*e*P	**Pn**	**16 43 40.0**	**+0.2**
	baz=7.0						
WGK	**Gukeng**	**1.80**	**360**	P	**Pn**	**16 43 39.6**	**-0.8**
	baz=345						
WGK				*e*S	**Sn**	**16 44 01.8**	**-0.1**
	baz=345						
PNG	**Penghu**	**1.92**	**331**	*e*P	**Pn**	**16 43 40.5**	**-1.6**
	baz=330						
WNT	**Mingjian**	**1.99**	**3**	*e*P	**Pn**	**16 43 41.4**	**-1.6**
	baz=349						
SMLT	**Sun Moon Lake**	**2.02**	**9**	P	**Pn**	**16 43 43.4**	**0.0**
	baz=352						
SMLT				*e*S	**Sn**	**16 44 07.4**	**+0.1**
	baz=352						
TYC	**Yuchr**	**2.03**	**7**	*e*P	**Pn**	**16 43 43.5**	**0.0**
	baz=352						
TYC				*e*S	**Sn**	**16 44 07.2**	**-0.5**
	baz=352						
ESL	**Shilin**	**2.08**	**22**	*e*P	**Pn**	**16 43 45.5**	**+1.3**
	baz=35						
TCU	**Taichung**	**2.26**	**2**	*e*P	**Pn**	**16 43 46.1**	**-0.6**
	baz=347						
TCU				*e*S	**Sn**	**16 44 12.5**	**-0.8**
	baz=347						
WHF	**Hehuan Shan**	**2.34**	**16**	P	**Pn**	**16 43 48.6**	**+0.7**
	baz=14						
TWT	**Tachien**	**2.42**	**13**	*e*P	**Pn**	**16 43 49.5**	**+0.5**
	baz=359						
TWQ1	**Liyutan**	**2.46**	**4**	*e*P	**Pn**	**16 43 49.8**	**+0.3**
	baz=351						
NACB	**Ninganchiao**	**2.47**	**22**	*e*Pn	**Pn**	**16 43 50.5**	**+0.9**
NNS	**Nan Shan**	**2.65**	**16**	*e*P	**Pn**	**16 43 53.1**	**+1.0**
	baz=3.0						
ENA	**Nanau**	**2.75**	**23**	*e*P	**Pn**	**16 43 54.2**	**+0.7**
	baz=20						
ENA				*e*S	**Sn**	**16 44 25.5**	**0.0**
	baz=20						
NSTT	**Nanjuang**	**2.77**	**8**	*e*P	**Pn**	**16 43 52.9**	**-0.7**
	baz=353						
YHNB	**Yeheng**	**2.87**	**15**	*e*Pn	**Pn**	**16 43 56.4**	**+1.2**
NSK	**Sanguang**	**2.87**	**14**	*e*P	**Pn**	**16 43 56.6**	**+1.4**
	baz=13						
TWE	**Neicheng**	**3.00**	**19**	*e*P	**Pn**	**16 43 57.8**	**+0.9**
	baz=29						
KNM	**Kinmen**	**3.20**	**322**	*e*P	**Pn**	**16 43 58.6**	**-1.1**
	baz=330						
CMAR	**Chiang Mai Arr**	**20.59**	**264**	P	**P**	**16 47 50.0**	**+2.1**
	0.6nm,0.8s,baz=78,slow=8.4,SNR=4.8						
MKAR	**Makanchi Array**	**39.63**	**318**	P	**P**	**16 50 41.2**	**+1.1**
	0.5nm,0.6s,mb3.4,baz=115,slow=12,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.89**	**329**	P	**P**	**16 50 58.9**	**+0.3**
	0.3nm,0.4s,mb3.3,baz=110,slow=8.1,SNR=4.5						
WRAB	**Tennant Creek**	**43.69**	**161**	*e*P	**P**	**16 51 12.7**	**-0.8**
	18nm,1.5s,mb4.6						
WRA	**Warramunga Arr**	**43.69**	**161**	P	**P**	**16 51 12.5**	**-1.0**
	1.3nm,0.6s,mb3.8,baz=344,slow=8.9,SNR=38						
ASAR	**Alice Springs**	**47.09**	**163**	P	**P**	**16 51 40.8**	**+0.4**
	0.3nm,0.4s,mb3.6,baz=344,slow=7.3,SNR=27						
STKA	**Stephens Creek**	**57.12**	**159**	P	**P**	**16 52 55.5**	**+0.6**
	0.9nm,0.5s,mb4.1,baz=334,slow=7.6,SNR=5.0						

*ISCJB **22** 16:50:19.5±0.7,149S±0.1×670E±0.1,h10km,mb4.2/15, MS4.0/10,Error ellipse: s-maj=21.6km s-min=14.8km az=0.1*
*IDC **22** 16:50:20.3±0.9,1475S×67.11E,h0km,mb3.8/9,mb1 4.0/9, mb1mx3.8/21,mbtmp3.8/9,MS4.0/10,Ms1 4.0/10, ms1mx3.7/34,Error ellipse: s-maj=31.4km s-min=21.5km az=1.0*
*NEIC **22** 16:50:21.1±0.4,1498S×6695E,h10km,mb4.4/4,Error ellipse: s-maj=16.3km s-min=11.2km az=175.0*
ISC 22 16:50:21.5±0.7,150S±01×670E±01,h10km,n31,σ0§82/20, mb4.2/15,MS4.0/10,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**37.43**	**264**	LR	LR	17 11 21.4	
	comp=Z,597nm,20.0s,MS4.4,baz=19,slow=34						
LSZ	**Lusaka**	**37.43**	**264**	*e*P	**P**	**16 57 36.1**	**+0.9**
	8.6nm,1.4s,mb4.4						
LBTB	**Lobatse**	**40.04**	**249**	P	**P**	**16 58 00.8**	**+3.8**
	5.1nm,0.9s,mb4.3,baz=119,slow=14,SNR=4.8						
LBTB				LR	LR	17 11 50.5	
	comp=Z,231nm,19.8s,MS4.0,baz=133,slow=32						
LBTB	**Lobatse**	**40.04**	**249**	P	**P**	**16 57 55.3**	**-1.7**
	9.9nm,1.1s,mb4.5						
LBTB				LR	LR	17 11 50.5	
SUR	**Sutherland**	**45.34**	**239**	LR	LR	17 15 52.8	
	comp=Z,133nm,21.0s,MS3.9,baz=255,slow=34						
CMAR	**Chiang Mai Arr**	**45.74**	**45**	P	**P**	**16 58 43.1**	**-0.2**
	1.6nm,1.0s,mb3.9,baz=238,slow=8.1,SNR=8.2						
CMAR				LR	LR	17 15 09.3	
	comp=Z,274nm,18.6s,MS4.2,baz=213,slow=33						
MAW	**Mawson**	**52.69**	**182**	LR	LR	17 16 34.6	
	comp=Z,134nm,18.9s,MS4.0,baz=13,slow=30						
ASF	**Jabal al Asfar**	**55.01**	**329**	LR	LR	17 20 59.0	
	comp=Z,39nm,19.6s,MS3.5,baz=75,slow=34						
EKS2	**Erkin-Say**	**57.66**	**6**	P	**P**	**17 00 13.0**	**+1.1**
TKM2	**Tokmak 2**	**58.12**	**7**	*e*P	**P**	**17 00 15.5**	**+0.4**
	3.0nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**63.26**	**109**	P	**P**	**17 00 50.5**	**-0.2**
	0.2nm,0.6s,mb3.4,baz=283,slow=6.1,SNR=5.9						
WRA	**Warramunga Arr**	**64.08**	**105**	P	**P**	**17 00 55.7**	**-0.4**
	1.4nm,1.1s,mb3.9,baz=270,slow=6.0,SNR=4.7						
WRAB	**Tennant Creek**	**64.09**	**105**	P	**P**	**17 00 56.8**	**+0.5**
KURK	**Kurchatov**	**66.17**	**8**	P	**P**	**17 01 03.6**	**-5.4**
	4.7nm,1.0s,mb4.5						
ZALV	**Zalesovo Beam**	**70.29**	**11**	P	**P**	**17 01 34.5**	**-0.3**
	0.6nm,0.5s,mb3.8,baz=214,slow=6.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**70.29**	**11**	P	**P**	**17 01 34.5**	**-0.3**
TOA0	**Torodi Ar. Sit**	**70.39**	**290**	P	**P**	**17 01 35.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**70.39**	**290**	P	**P**	**17 01 36.6**	**+0.3**
	0.6nm,1.0s,mb3.5,baz=105,slow=5.1,SNR=2.9						
TORD				LR	LR	17 31 51.4	
	comp=Z,64nm,18.3s,MS3.9,baz=105,slow=35						
SONM	**Songino Array**	**71.71**	**27**	P	**P**	**17 01 43.9**	**+0.3**
	1.1nm,1.1s,mb3.7,baz=191,slow=1.5,SNR=4.7						
SONM				LR	LR	17 32 27.4	
	comp=Z,142nm,18.6s,MS4.3,baz=192,slow=35						
AKASG	**Malin Array Be**	**73.26**	**336**	P	**P**	**17 01 51.1**	**-1.6**
	0.2nm,0.2s,mb3.7,baz=148,slow=5.3,SNR=4.2						
KIC	**Kosan Boka**	**74.16**	**281**	*e*PKP1	**P**	**17 02 04.4**	**+5.5**
	60nm,1.3s,mb5.4						
KEST	**Kesra**	**74.23**	**314**	LR	LR	17 34 38.2	
	comp=Z,40nm,18.3s,MS3.8,baz=236,slow=36						
LIC	**Lamto**	**74.39**	**281**	*e*PKP1	**P**	**17 02 04.5**	**+4.2**
	40nm,1.5s,mb5.1						
TIC	**Toumodi**	**74.51**	**281**	*e*PKP1	**P**	**17 02 05.8**	**+4.9**
	8.3nm,0.2s,mb5.3						
ESDC	**Sonseca Array**	**85.39**	**313**	P	**P**	**17 02 59.3**	**+0.1**
	0.3nm,0.3s,mb3.9,baz=96,slow=2.4,SNR=3.3						
HNR	**Honiara**	**90.42**	**100**	LR	LR	17 40 21.9	
	comp=Z,76nm,18.4s,MS4.2,baz=54,slow=33						
CHMT	**Chamberlain Mo**	**148.13**	**0**	*e*PKPdf	PKPdf	17 10 04.4	+0.1
HRY	**Holter Researc**	**148.32**	**358**	*e*PKPbc	PKPbc	17 10 08.1	+0.1
RSSD	**Black Hills**	**149.93**	**347**	*e*PKPbc	PKPbc	17 10 11.3	-1.0
PDAR	**Pinedale Array**	**152.12**	**355**	PKPbc	PKPbc	17 10 17.6	+0.2
	0.7nm,0.9s,baz=354,slow=1.5,SNR=5.0						
TXAR	**Lajitas Array**	**163.28**	**330**	PKPab	PKPab	17 11 14.2	-1.1
	0.8nm,0.9s,baz=0.0,slow=3.8,SNR=3.6						

*ISCJB **22** 16:58:18.0±0.7, 151S±02×675E±0.1,h10km,mb4.0/8, MS3.8/3,Error ellipse: s-maj=24.6km s-min=17.8km az=161.8*
*IDC **22** 16:58:18.4±1.1, 1490S×6748E,h0km,mb3.6/6,mb1 3.7/6, mb1mx3.6/21,mbtmp3.6/6,MS3.7/3,Ms1 3.8/3, ms1mx3.4/24,Error ellipse: s-maj=41.1km s-min=26.6km az=10.0*
*NEIC **22** 16:58:19.4±0.6, 1503S×6745E,h10km,mb4.6/3,Error ellipse: s-maj=24.6km s-min=17.4km az=163.0*
ISC 22 16:58:19.8±0.7,151S±02×675E±01,h10km,n13,σ0§87/10, mb4.0/8,MS3.8/3,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**37.88**	**264**	P	**P**	**17 05 37.7**	**+0.5**
	5.5nm,1.1s,mb4.2,baz=111,slow=6.8,SNR=4.3						
LSZ	**Lusaka**	**37.88**	**264**	*e*P	**P**	**17 05 37.3**	**0.0**
	11nm,1.2s,mb4.5						
LBTB	**Lobatse**	**40.42**	**249**	P	**P**	**17 05 58.4**	**-0.1**
	20nm,1.4s,mb4.7						
CMAR	**Chiang Mai Arr**	**45.50**	**44**	P	**P**	**17 06 38.1**	**-1.6**
	0.4nm,1.0s,mb3.3,baz=215,slow=11,SNR=3.3						
CMAR				LR	LR	17 22 24.1	
	comp=Z,172nm,21.4s,MS4.0,baz=220,slow=32						
MAW	**Mawson**	**52.60**	**182**	LR	LR	17 26 38.1	
	comp=Z,44nm,18.3s,MS3.5,baz=164,slow=32						
TKM2	**Tokmak 2**	**58.17**	**7**	P	**P**	**17 08 18.0**	**+4.2**
ASAR	**Alice Springs**	**62.80**	**109**	P	**P**	**17 08 46.1**	**+0.2**
	0.5nm,0.9s,mb3.7,baz=274,slow=7.5,SNR=4.7						
WRA	**Warramunga Arr**	**63.61**	**105**	P	**P**	**17 08 52.8**	**+1.4**
	3.5nm,1.3s,mb4.3,baz=261,slow=5.8,SNR=4.5						
KURK	**Kurchatov**	**66.21**	**8**	LR	LR	17 35 44.4	
	comp=Z,59nm,19.2s,MS3.8,baz=30,slow=34						
SONM	**Songino Array**	**71.60**	**26**	P	**P**	**17 09 41.4**	**+0.2**
	0.2nm,0.4s,mb3.4,baz=210,slow=5.5,SNR=2.3						
AKASG	**Malin Array Be**	**73.54**	**336**	P	**P**	**17 09 53.1**	**+0.4**
	0.2nm,0.2s,mb3.6,baz=143,slow=5.3,SNR=4.2						
QSPA	**South Pole Qui**	**75.03**	**180**	P	**P**	**17 10 00.0**	**-1.0**
	9.5nm,1.3s,mb4.6						
PDAR	**Pinedale Array**	**152.26**	**355**	PKPbc	PKPbc	17 18 14.6	-1.4
	0.3nm,0.7s,baz=11,slow=1.5,SNR=3.6						

IDC 22 17:08:46.2±5.3,955S×15131E,h0km,mb3.3/1,mb1 3.8/2, mb1mx3.4/14,mbtmp3.5/2,ML3.3/1,Error ellipse: s-maj=275.7km s-min=54.0km az=129.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.37**	**236**	P	Pn	17 13 13.1	-1.6
	0.1nm,0.3s,baz=61,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**21.76**	**228**	P	P	17 13 40.2	+0.6
	0.7nm,0.7s,baz=58,slow=10.0,SNR=16						
TORD	**Torodi Ar. Bea**	**150.00**	**280**	PKPbc	PKPbc	17 28 39.4	-0.4
	0.5nm,0.6s,baz=84,slow=3.1,SNR=3.4						

*BJI **22** 17:26:16.5,401S×10070E,h33km,mB5.4,mb5.1,Ms4.6, Msz4.5*
*ISCJB **22** 17:26:22.6±1.3,347S±008×10067E±009,h51km±10km, mb4.8/39,MS4.1/10,Error ellipse: s-maj=19.3km s-min=6.4km az=136.6*
*IDC **22** 17:26:22.0±1.1,348S×10061E,h29km±4km,mb4.2/14, mb1 4.3/15,mb1mx4.1/24,mbtmp4.2/15,ML4.2/1,MS4.0/8, Ms1 3.9/8,ms1mx3.7/26,Error ellipse: s-maj=37.2km s-min=11.0km az=51.0*
*DJA **22** 17:26:22,345S×10052E,h20km,MLv4.6/12*
*NEIC **22** 17:26:23.0±0.7,349S×10066E,h40km,mb4.7/3,Error ellipse: s-maj=28.2km s-min=9.0km az=50.0*
ISC 22 17:26:24.0±1.1,349S±008×10065E±009,h45km±8km, h33km±1.5km:pP-P,n80,σ1§09/68,mb4.8/39,MS4.1/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.95**	**95**	P	**Pn**	**17 26 55.7**	**+1.1**
KSI	**Kapahiang**	**1.95**	**95**	P	**Pn**	**17 26 55.6**	**+1.0**
PDSI	**Padang**	**2.56**	**356**	P	**Pn**	**17 27 01.5**	**-1.6**
PDSI	**Padang**	**2.56**	**356**	P	**Pn**	**17 27 01.1**	**-2.0**
PPI	**Padang Panjang**	**3.02**	**355**	P	**Pn**	**17 27 08.6**	**-0.8**
PPI	**Padang Panjang**	**3.02**	**355**	P	**Pn**	**17 27 08.3**	**-1.1**
RGRI	**Rengat**	**3.54**	**28**	P	**Pn**	**17 27 17.1**	**+0.6**
PMBI	**Palembang**	**4.15**	**82**	P	Px	17 27 44.0	
KLI	**Kotabumi**	**4.41**	**108**	P	**Pn**	**17 27 33.3**	**+4.8**
PPBI	**Pangkal Pinang**	**5.63**	**77**	P	**Pn**	**17 27 44.8**	**-0.5**
GSI	**Gunungsitoli**	**5.67**	**327**	P	**Pn**	**17 27 43.0**	**-2.7**
	37nm,0.9s,0.4nm						
MYKOM	**Kota Tinggi**	**6.14**	**31**	P	**Pn**	**17 27 52.7**	**+0.5**
DBJI	**Dramaga**	**6.80**	**117**	P	**Pn**	**17 28 01.2**	**0.0**
	53nm,1.2s,0.2nm						
DBJI	**Dramaga**	**6.80**	**117**	P	**Pn**	**17 28 03.9**	**+2.7**
	63nm,1.1s,0.2nm						
CBJI	**Citeko**	**6.83**	**115**	P	**Pn**	**17 28 04.5**	**+2.8**
	134nm,0.8s,10μm1.0nm						
CBJI	**Citeko**	**6.83**	**115**	P	Px	17 28 12.8	
	199nm,1.2s,10μm1.0nm						
LEM	**Lembang**	**7.69**	**116**	P	**Pn**	**17 28 14.2**	**+0.7**
	53nm,1.0s,5μm0.2nm						
LEM	**Lembang**	**7.69**	**116**	P	Px	17 28 23.7	
	81nm,1.2s,5μm0.2nm						
IPM	**Ipoh**	**7.92**	**3**	P	**Pn**	**17 28 18.0**	**+1.3**
BSI	**Banda Aceh**	**10.40**	**329**	P	**Pn**	**17 28 49.5**	**-1.2**
BBKI	**Banjar Baru**	**14.16**	**90**	P	**Pn**	**17 29 49.8**	**+7.7**
	112nm,1.4s						
KAPI	**Kappang**	**19.11**	**95**	P	**Pn**	**17 30 42.7**	**-1.8**
	0.7nm,0.3s,baz=280,slow=11,SNR=3.6						
MYLDM	**Lahad Datu**	**19.80**	**64**	P	**Pn**	**17 30 59.6**	**+6.9**
CMAR	**Chiang Mai Arr**	**21.87**	**356**	P	**P**	**17 31 10.7**	**-2.4**
	9.5nm,0.8s,mb4.3,baz=185,slow=9.5,SNR=15						
CMAR				PcP	PcP	17 35 12.9	+1.4
	0.7nm,0.8s,baz=220,slow=3.1,SNR=5.0						
LBMI	**Labuha**	**26.98**	**85**	P	**P**	**17 32 10.7**	**+8.9**
	27nm,1.0s,mb4.7						
DAV	**Davao City (W)**	**27.00**	**67**	P	**P**	**17 31 59.6**	**-2.4**
	410nm,0.5s						
ODAN	**Odare**	**32.78**	**338**	*e*P	**P**	**17 32 54.5**	**+1.6**
	33nm,0.7s,mb5.3						
TAPN	**Taplejung**	**33.10**	**339**	*e*P	**P**	**17 32 57.0**	**+1.2**
	73nm,0.9s,mb5.6						
NWAO	**Narrogin (SRO)**	**33.15**	**154**	LR	LR	17 43 45.8	
	comp=Z,237nm,21.3s,MS3.9,baz=132,slow=32						
RAMN	**Ramite**	**33.16**	**337**	*e*P	**P**	**17 32 57.9**	**+1.6**
	17nm,0.7s,mb5.1						
JIRN	**Jiri**	**33.96**	**337**	*e*P	**P**	**17 33 04.5**	**+1.3**
	39nm,0.7s,mb5.5						
LSA	**Lhasa**	**34.23**	**345**	*e*P	**P**	**17 33 06.9**	**+1.3**
	6.6nm,0.8s,mb4.6						
GUN	**Gumba**	**34.31**	**336**	*e*P	**P**	**17 33 07.6**	**+1.4**
	23nm,0.4s,mb5.5						
DMN	**Daman**	**34.36**	**335**	*e*P	**P**	**17 33 08.3**	**+1.6**
	14nm,0.8s,mb4.9						
KKN	**Kakani**	**34.44**	**335**	*e*P	**P**	**17 33 07.9**	**+0.5**
	19nm,0.7s,mb5.2						
GKN	**Gorkha**	**34.90**	**335**	*e*P	**P**	**17 33 12.0**	**+0.6**
	18nm,0.6s,mb5.2						
KOLN	**Koldanda**	**35.15**	**333**	*e*P	**P**	**17 33 14.4**	**+0.8**
	23nm,0.7s,mb5.2						
DANN	**Dangsing**	**35.58**	**334**	*e*P	**P**	**17 33 18.0**	**+0.8**
	34nm,0.5s,mb5.6						
PYUN	**Piuthan**	**35.71**	**333**	*e*P	**P**	**17 33 19.0**	**+0.6**
	15nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**36.70**	**119**	P	**P**	**17 33 26.1**	**-0.9**
	1.0nm,0.4s,mb4.0,baz=286,slow=7.8,SNR=26						
WRA				pP	pP	17 33 34.7	-4.3
	1.0nm,0.4s,baz=307,slow=9.0,SNR=6.4						
WRA				LR	LR	17 50 00.4	
	comp=Z,143nm,21.1s,MS3.7,baz=285,slow=39						
WRAB	**Tennant Creek**	**36.70**	**119**	*e*P	**P**	**17 33 25.2**	**-1.8**
ASAR	**Alice Springs**	**37.87**	**125**	P	**P**	**17 33 36.1**	**-0.7**
	1.8nm,0.4s,mb4.1,baz=301,slow=7.8,SNR=30						
ASAR				S	**S**	**17 39 29.6**	**+4.4**
	0.3nm,0.7s,baz=292,slow=14,SNR=4.1						
XAN	**Xi'an**	**38.13**	**11**	P	**P**	**17 33 38.1**	**-0.7**
XAN				AMB	AMB		
	comp=Z,28nm,0.7s,mb5.1						
XAN				AMB	AMB		
	comp=Z,60nm,4.1s						
XAN				LR	LR		
	comp=N,205nm,16.3s,MS4.4						
XAN				LR	LR		
	comp=E,377nm,13.5s,MS4.4						
XAN				LR	LR		
	comp=Z,533nm,13.9s,MS4.5						
SONA	**Sohna**	**38.86**	**326**	*e*P	**P**	**17 33 45.7**	**+0.6**
SONA				AMb	AMB	17 33 49.1	
	comp=Z,4.8nm,0.2s,mb4.8						
KALG	**Kalgarh**	**38.95**	**329**	*e*P	**P**	**17 33 45.3**	**-0.4**
KALG				AMb	AMB	17 33 50.9	
	comp=Z,11nm,0.2s,mb5.3						
AYAN	**Aya Nagar**	**39.01**	**326**	*e*P	**P**	**17 33 46.6**	**+0.3**
AYAN				AMb	AMB	17 33 50.8	
	comp=Z,5.0nm,0.1s,mb5.3						
JOSI	**Joshimath**	**39.39**	**331**	*e*P	**P**	**17 33 48.1**	**-1.4**
JOSI				AMb	AMB	17 33 52.6	
	comp=Z,50nm,0.7s,mb5.3						
KHET	**Khetri**	**39.45**	**324**	*e*P	**P**	**17 33 49.8**	**-0.3**
KHET				AMb	AMB	17 34 01.5	
	comp=Z,4.9nm,0.9s,mb4.3						
RTK	**Rohtak**	**39.83**	**326**	*ex*	x	17 34 34.1	
KLP	**Kalpa**	**40.84**	**330**	*e*P	**P**	**17 34 01.5**	**+0.1**
KLP				AMb	AMB	17 34 04.7	
	comp=Z,8.7nm,1.5s,mb4.2						

	comp=Z,3.4nm,0.8s,mb4.5							
AKTK	**Aktyubinsk**	**64.97**	**331**	P	**P**	17 36 58.2	**-0.8**	
AKTK				LR	LR	18 06 28.6		
AKTO	**Aktyubinsk**	**64.97**	**331**	P	**P**	**17 36 58.2**	**-0.8**	
	comp=Z,1.4nm,0.6s,mb4.2,baz=17,slow=3.8,SNR=5.1							
AKTO				LR	LR	18 06 28.6		
	comp=Z,57nm,18.4s,MS3.8,baz=347,slow=37							
MAW	**Mawson**	**69.02**	**195**	LR	LR	18 00 51.8		
	comp=Z,126nm,20.9s,MS4.1,baz=204,slow=30							
ARCES	**ARCESS Array B**	**88.08**	**340**	LR	**P**	18 21 50.1		
	comp=Z,196nm,18.8s,MS4.5,baz=4.5,slow=38							
GERES	**GERESS Array B**	**90.59**	**319**	P	**P**	**17 39 21.9**	**+0.4**	
	comp=Z,0.4nm,0.7s,mb3.9,baz=116,slow=3.1,SNR=4.1							
WMOK	**Wichita Mounta**	**144.05**	**28**	*e*PKPpre		17 45 52.4		
TXAR	**Lajitas Array**	**145.46**	**39**	PKPbc	PKPbc	17 45 58.9	+1.0	
	comp=Z,9.4nm,0.8s,baz=284,slow=1.1,SNR=49							
TXAR				pPKPbc	pPKPbc	17 46 07.0	-4.7	
	comp=Z,2.8nm,0.6s,baz=306,slow=0.9,SNR=7.5							
TXAR	**Lajitas Array**	**145.46**	**39**	PKPbc	PKPbc	17 45 58.9	+1.0	
TXAR				pPKPbc	pPKPbc	17 46 07.0	-4.7	
WVT	**Waverly**	**146.59**	**13**	*e*PKPdf	PKPdf	17 46 00.2	+0.6	
JCT	**Junction City**	**146.92**	**34**	*e*PKPdf	PKPdf	17 46 01.6	+1.4	

*ISCJB **22** 17:34:44.4±0.6,3701N±003×2921E±003,h5km±5km, Error ellipse: s-maj=4.5km s-min=3.8km az=158.8*
*DDA **22** 17:34:44.5,3700N×2927E,h26km±2km,Md3.3*
*CSEM **22** 17:34:44.6±0.1,3700N×2922E,h10km,MD3.3, Error ellipse: s-maj=2.0km s-min=1.3km az=150.0*
*ISK **22** 17:34:45.0,3703N×2912E,h19km,MD3.2*
*ATH **22** 17:34:53.1,3615N×2898E,h10km,MD3.1/3*

ISC 22 17:34:44.8±0.6,3700N±003×2921E±003,h7km±5km,n30, σ1§13/46,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.37**	**50**	*i* P		**Pg**	**17 34 50.8**	**-1.1**
GOLH				*i* S		**Sg**	**17 34 57.6**	**+0.9**
TURN	**Turunc**	**0.50**	**255**	*i* P		**Pg**	**17 35 00.1**	**+5.6**
TURN				*i* S		**Sg**	**17 35 12.8**	**+12**
DALT	**Dalyan (Mudla)**	**0.51**	**243**	*e*PG		**Pg**	**17 34 55.2**	**+0.6**
DALT				*e*SG		**Sg**	**17 35 03.1**	**+1.7**
YER	**Yerkesik**	**0.75**	**280**	*e*PG		**Pg**	**17 34 58.4**	**-0.9**
DENT	**Denizli**	**0.76**	**350**	*e*PG		**Pg**	**17 34 59.8**	**+0.4**
AKAS	**Kas**	**0.83**	**157**	*i* P		**Pg**	**17 35 00.0**	**-0.7**
AKAS				*i* S		**Sg**	**17 35 13.2**	**+1.7**
AKAS	**Kas**	**0.83**	**157**	*i* P		**Pg**	**17 35 00.0**	**-0.7**
AKAS				*i* S		**Sg**	**17 35 13.2**	**+1.7**
KSL	**Kastellorizon**	**0.90**	**160**	*e*PB		**Pb**	**17 35 02.5**	**-0.3**
ANTB	**Antalya**	**1.16**	**95**	*e*PN		**Pn**	**17 35 07.5**	**0.0**
ANTB				*e*SN		**Sn**	**17 35 24.2**	**+0.6**
ARG	**Arkhangelos**	**1.17**	**228**	*e*PB		**Pb**	**17 35 06.5**	**-0.9**
MLSB	**Milas**	**1.18**	**285**	*e*PN		**Pn**	**17 35 05.6**	**-2.1**
BCK	**Bucak**	**1.19**	**67**	*e*PN		**Pn**	**17 35 07.8**	**-0.1**
ISP	**Isparta**	**1.33**	**51**	*e*PN		**Pn**	**17 35 09.9**	**0.0**
ISP				*e*SN		**Sn**	**17 35 28.1**	**+0.3**
DAT	**Datca**	**1.34**	**259**	*e*PN		**Pn**	**17 35 07.8**	**-2.0**
KHL	**Karahalli**	**1.34**	**11**	*e*PN		**Pn**	**17 35 09.0**	**-0.9**
KHAL	**Karahalli**	**1.38**	**9**	*i* P		**Pn**	**17 35 10.2**	**-0.3**
KHAL				*i* S		**Sb**	**17 35 29.8**	**+0.9**
KHAL	**Karahalli**	**1.38**	**9**	*i* P		**Pn**	**17 35 10.2**	**-0.3**
KHAL				*i* S		**Sb**	**17 35 29.8**	**+0.9**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P		**Pn**	**17 35 11.6**	**+0.7**
BDRM				*i* S		**Sb**	**17 35 31.3**	**+1.6**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*PN		**Pn**	**17 35 11.8**	**-1.3**
KULA				*e*SN		**Sn**	**17 35 31.7**	**-2.0**
MANT	**Manisa**	**1.57**	**341**	*i* P		**Pn**	**17 35 13.1**	**-0.1**
MANT				*i* S		**Sn**	**17 35 35.3**	**+1.5**
GCAM	**G?zelcaml?**	**1.72**	**294**	*i* P		**Pn**	**17 35 16.5**	**+1.3**
GCAM				*i* S		**Sn**	**17 35 39.7**	**+2.3**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN		**Pn**	**17 35 17.1**	**-0.2**
SHUT				*e*SN		**Sn**	**17 35 41.1**	**-0.2**
DEMI	**Demirci**	**2.07**	**349**	*i* P		**Pn**	**17 35 20.5**	**+0.5**
DEMI				*i* S		**Sn**	**17 35 47.9**	**+1.7**
DEMI	**Demirci**	**2.07**	**349**	*i* P		**Pn**	**17 35 20.5**	**+0.5**
DEMI				*i* S		**Sn**	**17 35 47.8**	**+1.7**
ALT	**Altintas**	**2.17**	**19**	*e*PN		**Pn**	**17 35 20.8**	**-0.5**
AKS	**Akhisar**	**2.17**	**330**	*e*PN		**Pn**	**17 35 20.1**	**-1.3**
KARP	**Karpathos**	**2.20**	**229**	*e*PB		**Pb**	**17 35 23.1**	**-1.8**
BLCB	**Balcova**	**2.20**	**309**	*e*PN		**Pn**	**17 35 20.3**	**-1.5**
HDMB	**Hadim**	**2.62**	**90**	*e*PN		**Pn**	**17 35 28.3**	**+0.7**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*PN		**Pn**	**17 35 28.9**	**+0.6**

*ISCJB **22** 17:42:27.5±1.1,3605N±005×2646E±007,h29km±11km, Error ellipse: s-maj=10.1km s-min=9.2km az=8.8*
*HLW **22** 17:42:29.6,3608N×2697E,h33km,Mb3.4*
*ATH **22** 17:42:31.8,3652N×2657E,h10km,MD2.9/3*
*CSEM **22** 17:42:34.0±0.1,3653N×2683E,h30km,MD2.9, Error ellipse: s-maj=3.8km s-min=2.7km az=83.0*
*DDA **22** 17:42:36.0,3657N×2735E,h6km±3km,Md2.9*

ISC 22 17:42:27.5±1.1,3613N±005×2655E±008,h22km±13km,n9, σ1§59/11,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.77**	**139**	*e*PB		**Sb**	**17 42 52.2**	**0.0**
APE	**Apeiranthos**	**1.24**	**319**	*e*PB		**Pb**	**17 42 50.8**	**+0.6**
SMG	**Samos**	**1.59**	**8**	*e*PB		**Pb**	**17 42 54.7**	**-1.5**
TURN	**Turunc**	**1.81**	**65**	*i* P		Px	17 42 57.1	
TURN				*i* S		Sx	17 43 17.4	
AKAS	**Kas**	**2.48**	**87**	*i* P		**Pn**	**17 43 10.1**	**+3.6**
AKAS				*i* S		**Sn**	**17 43 37.4**	**+1.3**
GOLH	**Golhisar**	**2.66**	**65**	*i* P		**Pn**	**17 43 11.5**	**+2.4**
GOLH				*i* S		**Sn**	**17 43 38.0**	**-2.7**
SLUM		**4.76**	**194**	P		**Pn**	**17 43 40.0**	**+2.1**
SLUM				S		**Sn**	**17 44 31.1**	**-1.4**
AMAG	**Maghara**	**7.81**	**133**	P		**Pn**	**17 44 17.8**	**-2.0**
HFRF	**Wahat Farafira**	**9.08**	**170**	P		**Pn**	**17 44 37.4**	**+0.1**

*CRAAG **22** 18:00:06.7,3644N×139E,Ml2.9*
*CSEM **22** 18:00:06.7,3644N×139E,h0km,ML2.9, After ALG*
*ISCJB **22** 18:00:07.4±1.1,3651N±006×153E±008,h9km±11km, Error ellipse: s-maj=11.4km s-min=8.9km az=41.0*
*MDD **22** 18:00:08.5±0.7,3647N×157E,h0km,mb3.3/4, Error ellipse: s-maj=8.8km s-min=5.9km az=98.0, PRIMO*

ISC 22 18:00:07.8±1.4,365N±01×16E±01,h7km±26km,n11, σ0§90/15,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.20**	**192**	P		**Pg**	**18 00 11.8**	**0.0**
ECHA	**Ech Chlef**	**0.38**	**207**	P		**Pg**	**18 00 14.5**	**-0.7**
ECHF	**Ech Chlef**	**0.39**	**210**	P		**Pg**	**18 00 14.5**	**-0.8**
EANR	**'Ain N'Sour**	**0.67**	**216**	P		**Pg**	**18 00 20.6**	**0.0**
ETRT	**Tiaret**	**1.12**	**192**	P		**Pg**	**18 00 29.8**	**+0.5**
EMHD	**Djebel Mahouad**	**1.14**	**104**	P		**Pg**	**18 00 29.2**	**-0.5**
EIBI	**Ibiza**	**2.54**	**356**	P		**Pn**	**18 00 50.1**	**+0.8**
	1.6nm,0.1s,SNR=7.9							
EIBI				S		**Sn**	**18 01 19.2**	**-1.2**
	2.8nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	**2.63**	**328**	P		**Pn**	**18 00 52.2**	**+1.6**
	0.4nm,0.2s,SNR=7.9							
EBEN				S		**Sn**	**18 01 22.1**	**-0.7**
	1.8nm,0.1s,SNR=7.9							
EBER	**Berja**	**3.62**	**278**	P		**Pn**	**18 01 04.7**	**+0.6**
	0.3nm,0.1s,SNR=7.9							
EBER				S		**Sn**	**18 01 46.4**	**-0.7**
	0.6nm,0.2s,SNR=7.9							
EQES	**Quesada**	**3.94**	**291**	S		**Sn**	**18 01 55.5**	**+0.4**
	0.3nm,0.1s,SNR=7.9							
EMOS	**Mosqueruela**	**4.19**	**338**	P		**Pn**	**18 01 13.9**	**+1.9**
	0.9nm,0.1s,SNR=9.5							
EMOS				S		**Sn**	**18 02 00.0**	**-1.1**
	0.3nm,0.1s,SNR=7.9							

*DDA **22** 18:13:08.6,3930N×2926E,h7km±5km, Md2.7, Ml2.9*
*CSEM **22** 18:13:08.9±0.1,3929N×2923E,h12km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.4km az=137.0*
*ISCJB **22** 18:13:09.1±0.6,3930N±003×2923E±003,h7km±5km, Error ellipse: s-maj=5.1km s-min=3.7km az=139.1*
*ISK **22** 18:13:09.2,3929N×2922E,h5km, MD2.9*

ISC 22 18:13:09.3±0.5,3932N±003×2923E±003,h4km±6km,n19, σ0§52/30,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.30**	**139**	*i* P		**Pg**	**18 13 15.3**	**+0.3**
GDZ				*i* S		**Sg**	**18 13 18.3**	**-0.7**
DEMI	**Demirci**	**0.48**	**236**	*i* P		**Pg**	**18 13 19.2**	**+0.6**
DEMI				*i* S		**Sg**	**18 13 25.5**	**+0.6**
ALT	**Altintas**	**0.73**	**111**	*e*PG		**Pg**	**18 13 23.7**	**+0.4**
ALT				*e*SG		**Sg**	**18 13 34.0**	**+1.2**
ULDT	**Uludag**	**0.83**	**355**	*i* P		**Pg**	**18 13 25.2**	**0.0**
ULDT				*i* S		**Sg**	**18 13 35.6**	**-0.3**
KULA	**Kula-Manisa**	**0.92**	**209**	*e*PG		**Pg**	**18 13 26.8**	**-0.1**
KULA				*e*SG		**Sg**	**18 13 39.0**	**+0.3**
KHAL	**Karahalli**	**0.96**	**168**	*i* P		**Pg**	**18 13 27.8**	**0.0**
KHAL				*i* S		**Sg**	**18 13 39.9**	**-0.4**
MANT	**Manisa**	**0.98**	**213**	*i* P		**Pg**	**18 13 27.9**	**-0.1**
MANT				*i* S		**Sg**	**18 13 40.3**	**-0.5**
CAVI	**Cavuskoy**	**1.00**	**28**	*e*PG		**Pg**	**18 13 29.0**	**+0.5**
KHL	**Karahalli**	**1.02**	**167**	*e*PG		**Pg**	**18 13 28.9**	**+0.1**
BORA	**Eskisehir**	**1.10**	**59**	*i* P		**Pg**	**18 13 29.9**	**-0.5**
BORA				*i* S		**Sg**	**18 13 44.3**	**-0.3**
GEMT	**Gemlik**	**1.12**	**358**	*e*PN		**Pn**	**18 13 31.2**	**-0.5**
ADVT	**Abdulvahap**	**1.18**	**19**	*e*PN		**Pn**	**18 13 32.4**	**-0.2**
AKS	**Akhisar**	**1.19**	**249**	*e*PN		**Pn**	**18 13 31.9**	**-0.8**
AKS				*e*SN		**Sn**	**18 13 48.7**	**-0.5**
YLV	**Yalova**	**1.25**	**5**	*e*PN		**Pn**	**18 13 34.2**	**+0.6**
ESKT	**Eskisehir**	**1.27**	**80**	*i* P		**Pg**	**18 13 33.0**	**-0.6**
ESKT				*i* S		**Sg**	**18 13 49.4**	**-0.7**
SEYT	**Eskypehyr**	**1.27**	**80**	*i* P		**Pg**	**18 13 33.0**	**-0.6**
SEYT				*i* S		**Sg**	**18 13 49.4**	**-0.7**
SHUT	**Suhut-Afyon**	**1.28**	**126**	*e*PN		**Pn**	**18 13 34.2**	**+0.3**
EYL	**Eskiyayla**	**1.44**	**29**	*e*PN		**Pn**	**18 13 36.6**	**+0.5**
GULT	**Gulveren**	**1.49**	**41**	*e*PN		**Pn**	**18 13 37.8**	**+0.9**

*CSEM **22** 18:13:38.3±0.1,3169N×3558E,h8km,ML2.9, Error ellipse: s-maj=3.6km s-min=2.4km az=113.0*
*ISCJB **22** 18:13:39.1±0.5,3169N±002×3551E±005,h12km±3km, Error ellipse: s-maj=6.9km s-min=2.6km az=13.2*
*GII **22** 18:13:39.5±0.3,3169N×3554E,h10km,ML2.5/8,Mw2.2/9*
*HLW **22** 18:13:42.6,3164N×3550E,h25km,Mb3.0*

ISC 22 18:13:39.4±0.5,3169N±002×3555E±005,h11km±3km,n26, σ0§71/41,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DSI	**Dead Sea**	**0.19**	**232**	Pg		**Pg**	**18 13 43.4**	**0.0**
DSI				Sg		**Sg**	**18 13 46.0**	**-0.1**
MZDA	**Masada**	**0.41**	**204**	Pg		**Pg**	**18 13 47.9**	**+0.5**
MZDA				Sg		**Sg**	**18 13 54.0**	**+1.2**
YTIR	**Yattir**	**0.49**	**229**	Pg		**Pg**	**18 13 49.1**	**+0.1**
HMDT	**Nahal Hemdat**	**0.57**	**358**	Pg		**Pg**	**18 13 50.3**	**-0.1**
HMDT				Sg		**Sg**	**18 13 58.9**	**+1.0**
SLTI	**Sal'it**	**0.70**	**322**	Pg		**Pg**	**18 13 52.8**	**-0.2**
SLTI				Sg		**Sg**	**18 14 02.8**	**+0.6**
MMLI	**Mount Malkishu**	**0.76**	**352**	Pg		**Pg**	**18 13 53.9**	**-0.2**
MMLI				Sg		**Sg**	**18 14 04.4**	**+0.4**
RTMI	**Retamim**	**0.97**	**230**	Pg		**Pg**	**18 13 57.9**	**-0.1**
RTMI				Sg		**Sg**	**18 14 11.2**	**+0.6**
HRSH	**Kfar Ka'horesh**	**1.04**	**347**	P		**Sg**	**18 14 09.3**	**-3.6**
OFRI	**'Ofer**	**1.05**	**333**	Pg		**Pg**	**18 13 58.6**	**-1.0**
BLGI	**Bet Lehem HaGe**	**1.09**	**344**	Pg		**Pg**	**18 13 59.4**	**-0.9**
ZFRI	**Zfri**	**1.17**	**196**	Pg		**Pg**	**18 14 01.1**	**-0.8**
ZFRI				Sg		**Sg**	**18 14 17.3**	**+0.1**
ASF	**Jabal al Asfar**	**1.24**	**67**	*e*P		**Pn**	**18 14 01.8**	**-0.8**
	SNR=48							
ASF				*e*S		**Sb**	**18 14 18.5**	**-0.3**
	SNR=48							
RMNI	**Mount Ramon**	**1.28**	**212**	Pg		**Pg**	**18 14 03.1**	**-0.9**
KSHT	**Keshet**	**1.31**	**9**	Pn		**Pn**	**18 14 03.1**	**-0.5**
MMA0	**Mount Meron ar**	**1.33**	**355**	Pn		**Pn**	**18 14 03.3**	**-0.6**
MMA0				Sn		**Sn**	**18 14 21.7**	**+0.1**
PRNI	**Paran**	**1.41**	**200**	Pn		**Pn**	**18 14 04.8**	**-0.1**
PRNI				Sn		**Sn**	**18 14 23.7**	**+0.2**
KSDI	**Kefar Szold**	**1.50**	**3**	Pn		**Pn**	**18 14 06.0**	**-0.2**
KSDI				Sn		**Sn**	**18 14 26.7**	**+0.8**
HRI	**Mount Hermon**	**1.58**	**5**	Pn		**Pn**	**18 14 07.4**	**0.0**
HRFI	**Mount Harif**	**1.70**	**195**	Pn		**Pn**	**18 14 08.9**	**0.0**
HRFI				Sn		**Sn**	**18 14 31.1**	**+0.3**
KRMI	**Paran Flat**	**1.72**	**205**	Pn		**Pn**	**18 14 09.1**	**-0.1**
KRMI				Sn		**Sn**	**18 14 31.2**	**+0.1**
RSH		**1.73**	**246**	P		**Pn**	**18 14 09.3**	**0.0**
RSH				S		**Sn**	**18 14 28.4**	**-2.9**
RCY	**Rachaya**	**1.81**	**7**	*e*Pn		**Pn**	**18 14 11.4**	**+1.0**
MBRI	**Mt Berech**	**1.96**	**196**	Pn		**Pn**	**18 14 12.7**	**+0.2**
MBRI				Sn		**Sn**	**18 14 37.6**	**+0.4**
HNKL	**Nakhl**	**2.21**	**218**	P		**Pn**	**18 14 15.8**	**-0.2**
BHL	**Bhannes**	**2.21**	**2**	*e*Pn		**Pn**	**18 14 18.5**	**+2.5**
AMAG	**Maghara**	**2.26**	**243**	P		**Pn**	**18 14 16.3**	**-0.4**

IDC 22 18:35:06.0±3.4,2049S×17641W,h0km,mb4.1/4, mb1 4.3/4,mb1mx3.9/17,mbtmp4.1/4,Error ellipse: s-maj=131.8km s-min=57.0km az=144.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.14**	**244**	P		P	18 42 36.5	+1.0
	3.1nm,0.7s,baz=78,slow=9.7,SNR=7.7							
ASAR	**Alice Springs**	**45.97**	**257**	P		P	18 43 30.9	-0.3
	2.4nm,0.7s,baz=96,slow=8.5,SNR=39							
ASAR				PcP		PcP	18 45 06.3	-1.8
	0.5nm,0.6s,baz=108,slow=3.9,SNR=6.3							
WRA	**Warramunga Arr**	**46.08**	**262**	P		P	18 43 31.2	-0.9
	2.1nm,0.8s,baz=97,slow=7.1,SNR=31							
VNA3	**Neumayer Olymp**	**88.05**	**176**	*e*		P	18 48 00.0	+2.1
VNA3				*e*			18 48 03.0	
VNA2	**Neumayer--Watz**	**88.51**	**176**	*e*		P	18 48 01.8	+1.7
VNA2				*e*			18 48 04.9	
CMAR	**Chiang Mai Arr**	**91.52**	**289**	P		P	18 48 16.5	+1.4
	0.3nm,0.7s,baz=137,slow=2.9,SNR=5.8							
AKASG	**Malin Array Be**	**143.71**	**332**	PKP		PKPdf	18 54 43.0	+0.1
	1.4nm,0.4s,baz=44,slow=4.0,SNR=12							

*ISCJB **22** 18:35:35.9±0.8,3794N±003×3174E±005,h9km±6km, Error ellipse: s-maj=6.8km s-min=4.8km az=147.7*
*DDA **22** 18:35:35.7,3804N×3154E,h7km±7km, Md3.2*
*CSEM **22** 18:35:35.4±0.2,3793N×3176E,h12km±1km,MD2.9, Error ellipse: s-maj=2.7km s-min=2.3km az=38.0*
*ISK **22** 18:35:35.6,3793N×3175E,h9km,MD2.9*

ISC 22 18:35:36.3±0.7,3794N±003×3173E±004,h9km±6km,n14, σ0§72/26,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.50**	**89**	*e*PG		**Pg**	**18 35 46.1**	**+0.2**
KONT				*e*SG		**Sg**	**18 35 53.1**	**+0.7**
LADK	**Ladik-KONYA**	**0.56**	**62**	*e*PG		**Pg**	**18 35 46.7**	**-0.5**
LADK				*e*SG		**Sg**	**18 35 54.9**	**+0.3**
KDHN	**Kadinhani**	**0.66**	**27**	*i* P		**Pg**	**18 35 49.3**	**+0.3**
KDHN				*i* S		**Sg**	**18 35 57.7**	**+0.1**
KIZT	**Kizilcal**	**0.95**	**7**	*e*PG		**Pg**	**18 35 54.3**	**-0.2**
KIZT				*e*SG		**Sg**	**18 36 08.1**	**+1.2**
BOLV	**Bolvadin**	**0.99**	**322**	*i* P		**Pg**	**18 35 54.8**	**-0.6**
BOLV				*i* S		**Sg**	**18 36 07.1**	**-1.2**
BCK	**Bucak**	**1.02**	**243**	*e*PG		**Pg**	**18 35 55.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.12**	**304**	*e*PN		**Pn**	**18 35 57.8**	**-0.2**
SHUT				*e*SN		**Sn**	**18 36 14.2**	**+0.6**
HDMB	**Hadim**	**1.14**	**148**	*e*PN		**Pn**	**18 35 57.5**	**-0.8**
HDMB				*e*SN		**Sn**	**18 36 13.2**	**-0.9**
ALT	**Altintas**	**1.69**	**312**	*e*PN		**Pn**	**18 36 06.5**	**+0.4**
ALT				*e*SN		**Sn**	**18 36 28.5**	**+0.7**
ESKT	**Eskisehir**	**1.73**	**337**	*i* P		**Pn**	**18 36 05.1**	**-1.3**
ESKT				*i* S		**Sn**	**18 36 27.8**	**-0.8**
SEYT	**Eskypehyr**	**1.73**	**337**	*i* P		**Pn**	**18 36 05.1**	**-1.4**
SEYT				*i* S		**Sn**	**18 36 27.8**	**-0.8**
GOLH	**Golhisar**	**1.86**	**249**	*i* P		**Pn**	**18 36 09.2**	**+0.9**
GOLH				*i* S		**Sn**	**18 36 33.1**	**+1.2**
GOLH	**Golhisar**	**1.86**	**249**	*i* P		**Pn**	**18 36 09.2**	**+0.9**
GOLH				*i* S		**Sn**	**18 36 33.1**	**+1.2**
IKL	**Isikli**	**2.30**	**137**	*e*PN		**Pn**	**18 36 14.6**	**+0.2**

*NEIC **22** 18:51:51.8,3782N×2115E,h11km,ML3.6(ATH), After ATH.*
*CSEM **22** 18:51:51.9±0.2,3774N×2123E,h2km,ML3.6, Error ellipse: s-maj=3.1km s-min=2.1km az=25.0*
*ATH **22** 18:51:51.8,3782N×2115E,h11km±1km,MD3.6/6,ML3.6*
*ISCJB **22** 18:51:53.3±0.5,3774N±003×2124E±004,h10km, Error ellipse: s-maj=5.6km s-min=3.3km az=151.4*
*THE **22** 18:51:53.4,3774N×2125E,h5km±1km,ML3.7/5, Error ellipse: s-maj=2.0km s-min=0.3km az=230.0*

ISC 22 18:51:54.1±0.6,3775N±003×2125E±005,h10km,n21, σ1§05/33,1C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.35**	**29**	⇑*i*PB		**Pg**	**18 51 58.6**	**-2.4**
RLS				*e*SB		**Sg**	**18 52 03.8**	**-1.9**
KFL	**Anninata**	**0.51**	**315**	P		**Pg**	**18 52 03.1**	**-1.0**
KFL				S		**Sg**	**18 52 11.1**	**+0.3**
ITM	**Ithomi**	**0.78**	**136**	*e*PG		**Pg**	**18 52 08.6**	**-0.6**
ITM				*e*SB		**Sg**	**18 52 21.1**	**+1.7**
PYL	**PYLOS**	**0.94**	**155**	P		**Pg**	**18 52 10.8**	**-1.3**
PYL				S		**Sg**	**18 52 24.1**	**-0.2**
EVR	**Evrytania**	**1.24**	**20**	*e*PB		**Pn**	**18 52 14.9**	**-2.6**
AGG	**Agios Georgios**	**1.53**	**33**	P		**Pn**	**18 52 20.6**	**-0.8**
AGG				S		**Sn**	**18 52 41.8**	**+0.5**
DID	**Didima**	**1.59**	**98**	P		**Pn**	**18 52 21.6**	**-0.7**
DID				S		**Sn**	**18 52 43.6**	**+0.6**
LKR	**Lokris**	**1.64**	**56**	P		**Pn**	**18 52 22.2**	**-0.8**
LKR				S		**Sn**	**18 52 44.8**	**+0.6**
LKR	**Lokris**	**1.64**	**56**	*e*Pb		**Pn**	**18 52 23.3**	**+0.3**
LKR				S		**Sn**	**18 52 44.8**	**+0.6**
THL	**Klokotos Trika**	**1.91**	**18**	P		**Pn**	**18 52 26.4**	**-0.2**
THL				S		**Sn**	**18 52 51.5**	**+0.8**
IGT	**Igoumenitsa**	**1.92**	**338**	P		**Pn**	**18 52 26.1**	**-0.7**
IGT				S		**Sn**	**18 52 51.8**	**+0.8**
ATH	**Athens Observa**	**1.96**	**83**	*e*PN		**Pn**	**18 52 27.8**	**+0.4**
NEO	**Neokhori**	**2.19**	**44**	*e*PN		**Pn**	**18 52 30.6**	**+0.1**
XOR	**Xorichti**	**2.22**	**43**	P		**Pn**	**18 52 30.7**	**-0.2**
AOS	**Alonnisos**	**2.50**	**55**	P		**Pn**	**18 52 34.7**	**-0.1**
LIT	**Litokhoron**	**2.54**	**22**	P		**Pn**	**18 52 34.8**	**-0.5**
LIT				S		**Sn**	**18 53 07.5**	**+1.3**
FNA	**Florina**	**3.03**	**2**	P		**Pn**	**18 52 42.0**	**-0.1**
FNA				S		**Sn**	**18 53 19.9**	**+1.5**
GRG	**Griva**	**3.32**	**15**	P		**Pn**	**18 52 46.1**	**0.0**
KNT	**Kendrikon**	**3.64**	**20**	P		**Pn**	**18 52 50.5**	**+0.1**
TIP	**Timpagrande**	**3.80**	**293**	P		**Pn**	**18 52 55.1**	**+2.4**
SMG	**Samos**	**4.43**	**89**	P		**Pn**	**18 53 02.8**	**+1.5**

*ISCJB **22** 18:54:49.5±0.4,4277N±003×130W±003,h6km±4km, Error ellipse: s-maj=5.4km s-min=3.8km az=166.9*
*STR **22** 18:54:49.9±0.1,4278N×134W,h2km,Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **22** 18:54:50.5±0.1,4281N×132W,h2km,ML2.6/6, Error ellipse: s-maj=1.4km s-min=1.1km az=178.0*
*MDD **22** 18:54:50.8±0.2,4282N×131W,h0km,mbLg2.1/21, Error ellipse: s-maj=1.8km s-min=1.0km az=128.0, PRIMO*
*NEIC **22** 18:54:50.4,4282N×132W,h2km,ML2.5(LDG), ML1.8(STR),MN2.2(MDD), After LDG.*
*LDG **22** 18:54:50.4±0.1,4282N×132W,h2km,Md2.5/2,Ml2.5/6, Error ellipse: s-maj=2.1km s-min=1.4km az=168.0*

ISC 22 18:54:50.3±0.4,4280N±003×130W±003,h0km±6km,n50, σ0§98/66,1C-4D,Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IPRE	**Itoiz**	**0.04**	**281**	Pg		**Pg**	**18 54 50.9**	**-0.2**
	91nm,0.2s,SNR=18							
IPRE				Lg			18 54 51.5	
	4μm,0.3s,SNR=7.9							
IPRE	**Itoiz**	**0.04**	**281**	⇓Pg		**Pg**	**18 54 50.9**	**-0.1**
	91nm,0.2s,SNR=18							
IPRE				Lg			18 54 51.5	
	4μm,0.3s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.10**	**355**	Pg		**Pg**	**18 54 51.8**	**-0.3**
	66nm,0.1s,SNR=18							
EORO				Lg			18 54 53.4	
	786nm,0.2s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.10**	**355**	⇑Pg		**Pg**	**18 54 51.8**	**-0.3**
	66nm,0.1s,SNR=18							
EORO				Lg			18 54 53.4	
	786nm,0.2s,SNR=7.9							
IZUN	**Zunzarren**	**0.13**	**299**	Pg		**Pg**	**18 54 52.6**

ETOR				Lg			18 55 55.7	
	22nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**2.21**	**146**	Pg	**Pg**		**18 55 31.1**	**-1.5**
	SNR=4.0							
ERTA	**Horta de San J**	**2.21**	**146**	Pg	**Pg**		**18 55 31.1**	**-1.4**
	0.2nm,0.1s,SNR=4.0							
ERTA				Lg			18 56 01.0	
	2.1nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**2.29**	**128**	Pg	**Pg**		**18 55 30.8**	**-3.2**
	0.5nm,0.2s,SNR=4.0							
EPOB	**Poblet**	**2.29**	**128**	Pg	**Pg**		**18 55 30.8**	**-3.2**
	0.4nm,0.1s,SNR=4.0							
EPOB				Lg			18 56 03.3	
	5.0nm,0.4s,SNR=7.9							
EMOS	**Mosqueruela**	**2.51**	**165**	Pg	**Pg**		**18 55 38.9**	**+0.5**
	SNR=7.9							
EMOS	**Mosqueruela**	**2.51**	**165**	Pg	**Pg**		**18 55 38.9**	**+0.5**
	0.1nm,0.1s,SNR=7.9							
EMOS				Lg			18 56 12.3	
	2.5nm,0.3s,SNR=7.9							
LFF	**La Frestale**	**2.60**	**34**	*e*P	**Pn**		**18 55 34.1**	**+0.6**
LFF				*e*Sg	**Sg**		**18 56 12.1**	**-1.7**
	10nm,0.5s							
LFF	**La Frestale**	**2.60**	**34**	*e*P	**Pn**		**18 55 34.1**	**+0.6**
LFF				*e*Sg	**Sg**		**18 56 12.1**	**-1.7**
	5.2nm,0.5s							
MTLF	**Montolieu**	**2.63**	**77**	*e*Pg	**Pg**		**18 55 38.8**	**-1.9**
MTLF				*e*Sg	**Sg**		**18 56 13.0**	**-1.9**
	4.5nm,0.4s							
MTLF	**Montolieu**	**2.63**	**77**	*e*Pg	**Pg**		**18 55 38.8**	**-1.9**
MTLF				*e*Sg	**Sg**		**18 56 13.0**	**-1.9**
	2.2nm,0.4s							
EARI	**Arriondas**	**2.91**	**281**	Sn	**Sn**		**18 56 13.4**	**-0.1**
	3.2nm,0.5s,SNR=7.9							
RJF	**Les Rejaudoux**	**3.23**	**38**	*e*P	**Pn**		**18 55 43.0**	**+0.9**
RJF				*e*Sn	**Sn**		**18 56 16.7**	**-4.5**
	5.2nm,0.4s							
RJF	**Les Rejaudoux**	**3.23**	**38**	*e*P	**Pn**		**18 55 43.0**	**+0.9**
RJF				*e*Sn	**Sn**		**18 56 16.7**	**-4.5**
	2.6nm,0.4s							
CAF	**Calviac**	**3.23**	**48**	*e*P	**Pn**		**18 55 43.3**	**+1.1**
CAF				*e*Sn	**Sn**		**18 56 17.1**	**-4.3**
	2.8nm,0.3s							
CAF	**Calviac**	**3.23**	**48**	*e*P	**Pn**		**18 55 43.3**	**+1.1**
CAF				*e*Sn	**Sn**		**18 56 17.1**	**-4.3**
	1.4nm,0.3s							
MFF	**Saint Martin d**	**3.89**	**12**	*e*Sn	**Sn**		**18 56 32.4**	**-5.2**
	1.8nm,0.2s							
MFF	**Saint Martin d**	**3.89**	**12**	*e*Sn	**Sn**		**18 56 32.4**	**-5.2**
	0.9nm,0.2s							

IDC 22 18:59:03.2±5.8, 1972S×17609W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/18, mbtmp4.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/26, Error ellipse: s-maj=250.4km s-min=95.0km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**9.64**	**190**	LR	LR	19 04 27.2	
	comp=Z,176nm,19.9s,baz=144,slow=34						
CTA	**Charters Tower**	**35.36**	**263**	P	P	19 06 02.6	+2.0
	3.1nm,0.4s,baz=91,slow=11,SNR=11						
ASAR	**Alice Springs**	**46.45**	**256**	P	P	19 07 31.1	-1.1
	1.5nm,0.5s,baz=86,slow=6.9,SNR=58						
WRA	**Warramunga Arr**	**46.49**	**261**	P	P	19 07 31.5	-1.0
	1.7nm,0.3s,baz=97,slow=7.5,SNR=63						
AKASG	**Malin Array Be**	**143.17**	**333**	PKP	PKPdf	19 18 39.6	+0.5
	1.0nm,0.5s,baz=44,slow=4.1,SNR=6.0						

*ISK **22** 18:59:24.2, 3586N×2962E, h9km, MD3.6*
*NEIC **22** 18:59:25.4, 3620N×2996E, h39km, MD3.6(ATH), MD3.5(ISK), After ATH.*
*ATH **22** 18:59:25.4, 3620N×2996E, h39km±34km, MD3.6/4*
*ISCJB **22** 18:59:28.9±0.3, 3605N±003×2962E±003, h43km±9km, Error ellipse: s-maj=5.3km s-min=3.8km az=43.5*
*CSEM **22** 18:59:28.6±0.1, 3604N×2962E, h30km, Mw3.1, Error ellipse: s-maj=3.2km s-min=1.9km az=32.0*
*DDA **22** 18:59:29.5, 3619N×2932E, h25km±2km, Md3.5*
*NIC **22** 18:59:34.1±0.4, 3565N×2979E, h34km, ML3.2, MW3.1*
*HLW **22** 18:59:35.5, 3577N×2981E, h33km, Mb3.7*

ISC 22 18:59:30.0±0.5, 3608N±003×2959E±003, h33km±4km, n45, σ1९04/62, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.15**	**3**	*i* P	**Pb**	**18 59 35.6**	**-0.5**
AKAS				*i* S	**Sb**	**18 59 40.3**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.03**	**312**	*e*PN	**Pn**	**18 59 47.8**	**-0.5**
TURN	**Turunc**	**1.12**	**315**	*i* P	**Pn**	**18 59 51.9**	**+2.4**
TURN				*i* S	**Sn**	**19 00 08.4**	**+4.6**
GOLH	**Golhisar**	**1.15**	**359**	*i* P	**Pn**	**18 59 50.1**	**+0.2**
GOLH				*i* S	**Sn**	**19 00 04.5**	**0.0**
ANTB	**Antalya**	**1.18**	**46**	*e*PN	**Pn**	**18 59 49.6**	**-0.7**
ANTB				*e*SN	**Sn**	**19 00 08.2**	**+2.9**
ARG	**Arkhangelos**	**1.20**	**277**	*e*PB	**Pb**	**18 59 51.0**	**-1.1**
ARG				*e*SN	**Sn**	**19 00 10.3**	**+4.7**
YER	**Yerkesik**	**1.49**	**315**	*e*PN	**Pn**	**18 59 54.5**	**0.0**
BCK	**Bucak**	**1.59**	**30**	*e*PN	**Pn**	**18 59 55.7**	**-0.2**
DENT	**Denizli**	**1.73**	**345**	*e*PN	**Pn**	**18 59 58.3**	**+0.5**
DAT	**Datca**	**1.75**	**292**	*e*PN	**Pn**	**18 59 57.2**	**-0.9**
MLSB	**Milas**	**1.90**	**310**	*e*PN	**Pn**	**19 00 00.1**	**0.0**
MLSB				*e*SN	**Sn**	**19 00 26.0**	**+3.1**
ISP	**Isparta**	**1.90**	**22**	*e*PN	**Pn**	**19 00 00.7**	**+0.5**
BDRM	**Kayabasi**	**1.99**	**300**	*i* P	**Pn**	**19 00 01.6**	**+0.2**
BDRM				*i* S	**Sn**	**19 00 24.0**	**-1.2**
KARP	**Karpathos**	**2.05**	**256**	*e*PN	**Pn**	**19 00 03.8**	**+1.6**
KHL	**Karahalli**	**2.24**	**359**	*e*PN	**Pn**	**19 00 05.6**	**+0.8**
KHAL	**Karahalli**	**2.29**	**358**	*i* P	**Pn**	**19 00 04.2**	**-1.2**
KHAL				*i* S	**Sn**	**19 00 31.8**	**-0.7**
GCAM	**G?zelcaml?**	**2.49**	**311**	*i* P	**Pn**	**19 00 07.4**	**-0.8**
GCAM				*i* S	**Sn**	**19 00 33.7**	**-3.8**
HDMB	**Hadim**	**2.49**	**68**	*e*PN	**Pn**	**19 00 08.0**	**-0.3**
KULA	**Kula-Manisa**	**2.54**	**343**	*e*PN	**Pn**	**19 00 09.9**	**+1.0**
PPCY	**Paphos**	**2.54**	**117**	P	**Pn**	**19 00 09.1**	**+0.1**
SHUT	**Suhut-Afyon**	**2.58**	**17**	*e*PN	**Pn**	**19 00 10.0**	**+0.5**
ALFC	**Alevga**	**2.62**	**110**	P	**Pn**	**19 00 09.8**	**-0.2**
	3.7nm,0.1s						
ALFC				S	**Sn**	**19 00 39.3**	**-1.3**
SMG	**Samos**	**2.74**	**307**	*e*PN	**Pn**	**19 00 11.5**	**-0.2**
KONT	**Konya--Tatoy**	**2.89**	**49**	*e*PN	**Pn**	**19 00 13.5**	**-0.3**
KDAG	**Bornova**	**2.97**	**322**	*i* P	**Pn**	**19 00 14.5**	**-0.3**
KDAG				*i* S	**Sn**	**19 00 41.6**	**-7.8**
SZAC	**Souni-Zanaja**	**2.99**	**115**	P	**Pn**	**19 00 15.1**	**-0.1**
	3.5nm,0.2s						
SZAC				S	**Sn**	**19 00 47.3**	**-2.7**
ALT	**Altintas**	**3.00**	**8**	*e*PN	**Pn**	**19 00 16.2**	**+0.9**
DEMI	**Demirci**	**3.04**	**347**	*i* P	**Pn**	**19 00 14.6**	**-1.2**
DEMI				*i* S	**Sn**	**19 00 48.2**	**-2.8**
LADK	**Ladik-KONYA**	**3.06**	**46**	*e*PN	**Pn**	**19 00 16.5**	**+0.4**
BLCB	**Balcova**	**3.07**	**319**	*e*PN	**Pn**	**19 00 16.9**	**+0.6**
MAMC	**Mammari**	**3.09**	**106**	P	**Pn**	**19 00 17.7**	**+1.2**
AKHS	**Akhisar**	**3.13**	**334**	*i* P	**Pn**	**19 00 15.4**	**-1.7**
AKHS				*i* S	**Sn**	**19 00 52.4**	**-0.9**
AKS	**Akhisar**	**3.13**	**334**	*e*PN	**Pn**	**19 00 18.1**	**+1.0**
KDHN	**Kadinhani**	**3.16**	**39**	*i* P	**Pn**	**19 00 18.4**	**+0.9**
KDHN				*i* S	**Sn**	**19 00 54.1**	**+0.1**
KIZT	**Kizilcal**	**3.33**	**32**	*e*PN	**Pn**	**19 00 20.3**	**+0.5**
NPS	**Neapolis**	**3.34**	**257**	*e*PN	**Pn**	**19 00 21.5**	**+1.5**
PHNC	**Paralimni**	**3.77**	**105**	⇑P	**Pn**	**19 00 28.6**	**+2.7**
HMAT	**Matruh**	**5.39**	**203**	P	**Pn**	**19 00 49.9**	**+1.7**
HMAT				S	**Sn**	**19 01 45.4**	**-3.8**
HRSH	**Kfar Ka'horesh**	**5.79**	**124**	P	**Pn**	**19 00 58.2**	**+4.6**
RSH		**6.16**	**145**	P	**Pn**	**19 00 58.2**	**-0.6**
AMAG	**Maghara**	**6.21**	**150**	P	**Pn**	**19 00 59.2**	**-0.3**
AMAG				S	**Sn**	**19 02 01.1**	**-8.2**
HHAG	**Hagoal**	**6.46**	**160**	P	**Pn**	**19 01 03.2**	**+0.3**
HKAT	**Jabal Katrina**	**8.40**	**153**	P	**Pn**	**19 01 28.9**	**-0.7**
TR2		**8.43**	**154**	P	**Pn**	**19 01 29.4**	**-0.5**
HFRF	**Wahat Farafira**	**8.97**	**187**	P	**Pn**	**19 01 37.2**	**-0.1**

MAN 22 19:00:18, 876N×12576E, h64km, mb4.5, ML3.4, MS3.2, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.25**	**327**	*e*P	Pn	19 00 29.8	+1.6
BUTP				*e*S	Sn	19 00 39.1	+3.5
SCPH	**Surigao**	**1.05**	**345**	⇑*e*P	Pn	19 00 35.5	-1.4
BUKP	**Musuan**	**1.11**	**218**	*e*P	Pn	19 00 38.5	+0.8
MSLP	**Maasin**	**1.63**	**327**	*e*P	Pn	19 00 45.6	+1.0
KCP	**Kidapawan**	**1.86**	**201**	⇓*i*P	Pn	19 00 49.7	+2.0
KCP				*i* S	Sn	19 01 12.1	+2.0
MATI	**Mati**	**1.87**	**165**	*e*P	Pn	19 00 48.4	+0.6
TBP	**Tagbilaran**	**2.09**	**296**	*e*P	Pn	19 00 52.5	+1.8
TBP				*e*S	Sn	19 01 14.2	-1.5
LLP	**Lapu-Lapu**	**2.35**	**311**	*e*P	Pn	19 00 56.0	+1.7
LLP				*i* S	Sn	19 01 22.9	+0.8
DCPH	**Dipolog City**	**2.39**	**266**	⇑*i*P	Pn	19 00 56.2	+1.4
PAGZ	**Pagadian**	**2.52**	**249**	*e*P	Pn	19 00 57.6	+1.0
SNPH	**Sibulan**	**2.56**	**283**	*e*P	Pn	19 00 59.0	+1.8
GUIM	**Jordan**	**3.64**	**301**	*e*P	Pn	19 01 13.8	+1.9

*ISCJB **22** 19:02:06.2±0.4, 4378N±003×10526W±005, h0km, Error ellipse: s-maj=4.9km s-min=4.6km az=159.5*
*IDC **22** 19:02:07.8±1.6, 4380N×10550W, h0km, mb1 3.8/5, mb1mx3.5/26, mbtmp3.5/5, ML3.5/5, Error ellipse: s-maj=42.7km s-min=8.7km az=147.0*
*NEIC **22** 19:02:08.1±0.3, 4379N×10527W, h0km, ML3.2, Error ellipse: s-maj=3.4km s-min=3.3km az=75.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.

ISC 22 19:02:08.0±0.4, 4380N±003×10526W±005, h0km, n117, σ0९73/117, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**69**	*e*P	**Pg**	**19 02 26.0**	**-0.1**
PHWY	**Pilot Hill**	**2.50**	**183**	*e*P	**Pn**	**19 02 49.4**	**-0.5**
RWWY	**Rawlins**	**2.55**	**215**	*e*P	**Pn**	**19 02 50.9**	**+0.2**
LAO	**LASA Array**	**2.97**	**347**	*e*P	**Pn**	**19 02 56.2**	**-0.2**
RLMT	**Red Lodge**	**3.16**	**296**	*e*P	**Pn**	**19 02 59.1**	**+0.1**
BW06	**Boulder Array**	**3.31**	**253**	*e*P	**Pn**	**19 03 00.5**	**-0.5**
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	**Pn**	**19 03 00.7**	**-0.3**
	6.2nm,0.3s,baz=76,slow=14,SNR=97						
PDAR				Lg		19 03 45.9	
	22nm,0.3s,baz=72,slow=30,SNR=11						
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	**Pn**	**19 03 00.7**	**-0.3**
PDAR				Lg		19 03 45.9	
OGNE	**Ogallala**	**3.72**	**139**	*e*P	**Pn**	**19 03 06.7**	**0.0**
GCMT	**Greycliff**	**3.72**	**304**	*e*P	**Pn**	**19 03 06.8**	**+0.1**
LKWY	**Lake**	**3.78**	**283**	*e*P	**Pn**	**19 03 08.6**	**+1.0**
LOHW	**Long Hollow**	**3.88**	**269**	*e*P	**Pn**	**19 03 09.2**	**+0.3**
MOOW	**Moose Ponds**	**3.98**	**271**	*e*P	**Pn**	**19 03 10.7**	**+0.5**
YNR	**Norris Junctio**	**4.00**	**285**	*e*P	**Pn**	**19 03 10.3**	**-0.2**
ISCO	**Idaho Springs**	**4.00**	**184**	*e*P	**Pn**	**19 03 10.6**	**0.0**
SNOW	**Snow King Moun**	**4.01**	**267**	*e*P	**Pn**	**19 03 12.3**	**+1.6**
YFT	**Old Faithful**	**4.07**	**281**	P	**Pn**	**19 03 09.4**	**-2.1**
REDW	**Red Top Meadow**	**4.09**	**266**	*e*P	**Pn**	**19 03 12.2**	**+0.4**
IMW	**Indian Meadow**	**4.11**	**273**	*e*P	**Pn**	**19 03 12.1**	**0.0**
TPAW	**Teton Pass**	**4.14**	**268**	*e*P	**Pn**	**19 03 12.4**	**-0.1**
YMR	**Madison River**	**4.19**	**284**	*e*P	**Pn**	**19 03 13.8**	**+0.6**
DCID1	**Drake Creek**	**4.30**	**269**	*e*P	**Pn**	**19 03 10.9**	**-3.8**
AHID	**Auburn Hatcher**	**4.39**	**258**	*e*P	**Pn**	**19 03 15.7**	**-0.2**
RRI2	**Red Ridge**	**4.43**	**266**	*e*P	**Pn**	**19 03 16.5**	**+0.1**
QLMT	**Earthquake Lak**	**4.55**	**285**	*e*P	**Pn**	**19 03 19.9**	**+1.8**
DGMT	**Dagmar**	**4.73**	**9**	*e*P	**Pn**	**19 03 21.7**	**+1.2**
SMCO	**Snowmass**	**4.79**	**196**	*e*P	**Pn**	**19 03 22.9**	**+1.5**
BOZ	**Bozeman (W)**	**4.90**	**294**	*e*P	**Pn**	**19 03 21.9**	**-1.0**
HWUT	**Hardware Ranch**	**5.14**	**247**	*e*P	**Pn**	**19 03 25.7**	**-0.5**
	12nm,0.4s						
EGMT	**Eagleton**	**5.26**	**325**	*e*P	**Pn**	**19 03 27.4**	**-0.5**
	29nm,0.5s						
DLMT	**Dillon**	**5.47**	**289**	*e*P	**Pn**	**19 03 29.6**	**-1.1**
	5.2nm,0.4s						
HRY	**Holter Researc**	**5.48**	**304**	*e*P	**Pn**	**19 03 30.7**	**-0.2**
MCMT	**McKenzie Canyo**	**5.54**	**283**	*e*P	**Pn**	**19 03 27.6**	**-4.1**
DAU	**Daniels Canyon**	**5.60**	**235**	*e*P	**Pn**	**19 03 32.4**	**-0.1**
JLU	**Jordanelle**	**5.60**	**237**	*e*P	**Pn**	**19 03 31.9**	**-0.6**
HVU	**Hansel Valley**	**5.89**	**253**	*e*P	**Pn**	**19 03 36.1**	**-0.4**
	7.3nm,0.6s						
SDCO	**Great Sand Dun**	**6.05**	**182**	*e*P	**Pn**	**19 03 37.8**	**-0.9**
	2.4nm,0.6s						
MPU	**Maple Canyon**	**6.08**	**234**	*e*P	**Pn**	**19 03 38.7**	**-0.4**
	7.1nm,0.5s						
PV10	**Paradox Valley**	**6.12**	**209**	*e*P	**Pn**	**19 03 40.4**	**+0.7**
SRU	**San Rafael**	**6.13**	**222**	*e*P	**Pn**	**19 03 38.8**	**-1.0**
	15nm,0.5s						
PV01	**Paradox Valley**	**6.19**	**205**	*e*P	**Pn**	**19 03 40.9**	**+0.2**
ECSD	**EROS,Sioux Fal**	**6.26**	**88**	*e*P	**Pn**	**19 03 41.7**	**+0.1**
	7.8nm,0.4s						
TMUT	**Trail Mountain**	**6.34**	**227**	*e*P	**Pn**	**19 03 42.5**	**-0.2**
BGU	**Big Grassy Mou**	**6.43**	**246**	*e*P	**Pn**	**19 03 44.1**	**+0.1**
CHMT	**Chamberlain Mo**	**6.44**	**302**	*e*P	**Pn**	**19 03 44.0**	**0.0**
CBKS	**Cedar Bluff**	**6.48**	**138**	*e*P	**Pn**	**19 03 44.6**	**0.0**
	19nm,0.6s						
HLID	**Hailey**	**6.64**	**271**	*e*P	**Pn**	**19 03 47.6**	**+0.8**
	1.8nm,0.5s						
DUG	**Dugway**	**6.68**	**240**	*e*P	**Pn**	**19 03 46.3**	**-1.1**
	3.7nm,0.4s						
MVCO	**Mesa Verde**	**7.03**	**202**	*e*P	**Pn**	**19 03 53.3**	**+1.1**
	4.9nm,0.5s						
MSU	**Marysvale**	**7.42**	**227**	*e*P	**Pn**	**19 03 57.0**	**-0.5**
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**19 04 06.0**	**+0.5**
	0.6nm,0.3s,baz=70,slow=10,SNR=12						
ELK				Lg		19 06 13.8	
	0.1nm,0.3s,baz=142,slow=19,SNR=2.2						
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**19 04 06.0**	**+0.5**
ELK				Lg		19 06 13.8	
ARUT	**Antelope Range**	**8.63**	**229**	*e*P	**Pn**	**19 04 14.5**	**+0.4**
CCUT	**Cedar City**	**8.77**	**227**	*e*P	**Pn**	**19 04 16.0**	**0.0**
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**19 04 20.0**	**-0.4**
	1.6nm,0.3s,baz=232,slow=11,SNR=6.1						
ULM				Lg		19 06 48.5	
	0.7nm,0.3s,baz=322,slow=19,SNR=2.2						
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**19 04 20.0**	**-0.4**
ULM				Lg		19 06 48.5	
WUAZ	**Wupatki**	**9.52**	**212**	*e*P	**Pn**	**19 04 25.9**	**-0.4**
	8.3nm,0.5s						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**19 04 50.4**	**+1.0**
	0.2nm,0.3s,baz=57,slow=12,SNR=3.5						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**19 04 50.4**	**+1.0**
YKA	**Yellowknife Ar**	**19.51**	**347**	P	**Pn**	**19 06 37.3**	**-0.4**
	0.2nm,0.3s,baz=166,slow=12,SNR=6.5						
YKA	**Yellowknife Ar**	**19.51**	**347**	P		**19 06 37.3**	**-0.4**

*IDC **22** 19:28:11.4±2.4, 4063S×176.12E, h0km, mb4.4/2, mb1 4.4/4, mb1mx4.0/15, mbtmp4.2/4, ML3.5/2, MS4.0/2, Ms1 4.0/2, ms1mx3.0/27, Error ellipse: s-maj=59.8km s-min=17.7km az=129.0*
*ISCJB **22** 19:28:14.6±0.7, 4075S±004×17630E±009, h59km±6km, mb4.2/2, MS4.1/2, Error ellipse: s-maj=12.6km s-min=4.3km az=29.6*
*NEIC **22** 19:28:18.3, 4052S×17595E, h18km, ML4.2(WEL), After WEL.*
NEIC Felt in Wairarapa South.

ISC 22 19:28:16.8±0.5, 4065S±003×17606E±006, h33km±4km, n54, σ1९15/56, mb4.2/2, MS4.1/2, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.15**	**103**	P	**Pb**	**19 28 24.2**	**+1.3**
BFZ				S	**Sb**	**19 28 29.4**	**+2.4**
MRZ	**Mangatainoka R**	**0.37**	**268**	P	**Pb**	**19 28 24.8**	**-0.6**
MRZ				S	**Sb**	**19 28 29.6**	**-1.7**
TSZ	**Takapari Road**	**0.59**	**353**	P	**Pb**	**19 28 27.1**	**-1.8**
TSZ				S	**Sb**	**19 28 34.0**	**-3.1**
MTW	**Mount Morrison**	**0.66**	**219**	P	**Pn**	**19 28 31.3**	**+1.4**
PAWZ	**Paruwai Farm**	**0.88**	**213**	P	**Pn**	**19 28 34.3**	**+1.4**
CAW	**Cannon Point**	**0.88**	**238**	P	**Pn**	**19 28 34.0**	**+1.1**
KIW	**Kapiti Island**	**0.90**	**256**	P	**Pn**	**19 28 34.1**	**+0.9**
MSWZ	**Moikau Station**	**0.98**	**218**	P	**Pn**	**19 28 35.4**	**+1.1**
WEL	**Wellington**	**1.17**	**236**	P	**Pn**	**19 28 36.0**	**-0.9**
BHW	**Baring Head**	**1.18**	**229**	P	**Pn**	**19 28 37.8**	**+0.8**
MRW	**Makara Radio**	**1.18**	**240**	P	**Pn**	**19 28 37.9**	**+0.8**
WAZ	**Wanganui**	**1.21**	**317**	P	**Pn**	**19 28 38.4**	**+0.9**
SNZO	**South Karori**	**1.22**	**237**	P	**Pn**	**19 28 38.4**	**+0.8**
MOVZ	**Moawhango**	**1.26**	**349**	P	**Pn**	**19 28 38.2**	**+0.1**
WNVZ	**Wahianoa**	**1.36**	**345**	P	**Pn**	**19 28 40.2**	**+0.6**
TUVZ	**Tukino**	**1.41**	**347**	P	**Pn**	**19 28 41.0**	**+0.8**
FWVZ	**Far West T-bar**	**1.44**	**344**	P	**Pn**	**19 28 41.4**	**+0.7**
TCW	**Tory Channel**	**1.46**	**247**	P	**Pn**	**19 28 41.5**	**+0.6**
NGZ	**Ngauruhoe**	**1.51**	**346**	P	**Pn**	**19 28 42.4**	**+0.8**
BKZ	**Black Stump Fm**	**1.52**	**13**	P	**Pn**	**19 28 41.5**	**-0.2**
TWVZ	**Taurewa**	**1.65**	**343**	P	**Pn**	**19 28 43.9**	**+0.5**
HATZ	**Hinemaiaia**	**1.75**	**1**	P	**Pn**	**19 28 45.1**	**+0.2**
RATZ	**Rangitukua**	**1.79**	**353**	P	**Pn**	**19 28 46.1**	**+0.7**
VRZ	**Vera Road**	**1.82**	**326**	P	**Pn**	**19 28 46.3**	**+0.5**
BSWZ	**Blackbirch Sta**	**1.96**	**236**	P	**Pn**	**19 28 48.1**	**+0.3**
NEZ	**North Egmont**	**2.04**	**312**	P	**Pn**	**19 28 50.4**	**+1.5**
KNZ	**Kokohu**	**2.05**	**38**	P	**Pn**	**19 28 48.3**	**-0.6**
NNZ	**Nelson**	**2.11**	**253**	P	**Pn**	**19 28 50.3**	**+0.5**
PKE	**Pukeiti**	**2.15**	**312**	P	**Pn**	**19 28 51.8**	**+1.4**
NWEZ	**Newall Road**	**2.17**	**308**	P	**Pn**	**19 28 52.4**	**+1.7**
HIZ	**Hauiti**	**2.33**	**336**	P	**Pn**	**19 28 53.3**	**+0.5**
URZ	**Urewera**	**2.52**	**19**	Pn	**Pn**	**19 28 53.9**	**-1.5**
	7.9nm,0.3s,baz=231,slow=5.0,SNR=48						
URZ				Sn	**Sn**	**19 29 23.9**	**-1.1**
	21nm,0.3s,baz=300,slow=5.4,SNR=8.4						
URZ	**Urewera**	**2.52**	**19**	P	**Pn**	**19 28 54.1**	**-1.4**
MWZ	**Matawai**	**2.57**	**27**	P	**Pn**	**19 28 54.8**	**-1.4**
KHZ	**Kahutara**	**2.59**	**226**	P	**Pn**	**19 28 56.0**	**-0.4**
THZ	**Tophouse**	**2.63**	**244**	P	**Pn**	**19 28 56.6**	**-0.3**
TOZ	**Tahuroa Road**	**2.94**	**351**	P	**Pn**	**19 29 03.9**	**+2.6**
PUZ	**Puketiti**	**3.08**	**34**	P	**Pn**	**19 29 01.5**	**-1.7**
DSZ	**Denniston Nort**	**3.39**	**250**	P	**Pn**	**19 29 07.5**	**0.0**
MXZ	**Matakaoa Point**	**3.54**	**30**	P	**Pn**	**19 29 08.6**	**-0.9**
LTZ	**Lake Taylor**	**3.55**	**232**	P	**Pn**	**19 29 08.8**	**-0.8**
MQZ	**McQueen's Vall**	**3.97**	**219**	P	**Pn**	**19 29 13.8**	**-1.6**
WVZ	**Waitaha Valley**	**4.66**	**237**	P	**Pn**	**19 29 24.2**	**-0.6**
RPZ	**Rata Peaks**	**4.82**	**229**	Pn	**Pn**	**19 29 25.7**	**-1.4**
	2.4nm,0.3s,baz=0.4,slow=4.3,SNR=6.8						
RPZ				Pg	**Pn**	**19 29 39.7**	**+13**
	12nm,0.3s,baz=25,slow=4.3,SNR=18						
RPZ				Sn	**Sn**	**19 30 18.9**	**-2.8**
	5.2nm,0.3s,baz=246,slow=9.2,SNR=11						
RPZ				Lg		19 30 47.1	
	0.5nm,0.3s,baz=20,slow=19,SNR=3.1						
FOZ	**Fox Glacier**	**5.56**	**236**	P	**Pn**	**19 29 36.2**	**-1.1**
LBZ	**Lake Benmore**	**5.73**	**227**	P	**Pn**	**19 29 38.5**	**-1.0**
ODZ	**Otahua Downs**	**5.93**	**220**	P	**Pn**	**19 29 40.8**	**-1.5**
JCZ	**Jackson Bay**	**6.40**	**235**	P	**Pn**	**19 29 46.2**	**-2.6**
ASAR	**Alice Springs**	**39.09**	**283**	P	**P**	**19 35 40.6**	**-0.3**
	2.4nm,0.5s,mb4.2,baz=123,slow=7.0,SNR=102						
WRA	**Warramunga Arr**	**41.04**	**288**	P	**P**	**19 35 56.7**	**-0.4**
	3.6nm,0.4s,mb4.3,baz=126,slow=8.1,SNR=34						
USHA	**Ushuaia**	**70.14**	**146**	LR	LR	20 02 32.6	
	comp=Z,102nm,18.9s,MS4.1,baz=12,slow=29						
ATAH	**Atahualpa**	**97.11**	**105**	LR	LR	20 16 15.0	
	comp=Z,64nm,21.5s,MS4.1,baz=2.3,slow=30						
MKAR	**Makanchi Array**	**120.39**	**307**	PKP	PKPdf	19 47 03.5	-0.6
	0.2nm,0.6s,baz=126,slow=2.0,SNR=3.2						
ARCES	**ARCESS Array B**	**147.19**	**341**	PKPbc	PKPbc	19 47 55.0	-0.4
	3.2nm,0.9s,baz=18,slow=3.1,SNR=5.8						

IDC 22 19:40:56.6±27.0, 1626S×17559W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/18, mbtmp4.1/4, MS4.0/13, Ms1 4.0/13, ms1mx3.8/25, Error ellipse: s-maj=513.1km s-min=51.6km az=60.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**13.11**	**189**	LR	LR	19 47 57.7	
	comp=Z,840nm,20.5s,baz=17

TLL	**Tololo Astrono**	**2.00**	**347**	⇓*i*P		**Pn**	**19 47 51.2**	**+0.5**
TLL				*i* S		**Sn**	**19 48 15.3**	**-0.3**
TLL				AML	AML		19 48 25.9	
	comp=N,3μm,0.4s							
LCO	**Las Campanas**	**3.13**	**353**	*e*P		**Pn**	**19 48 05.2**	**-0.3**
PLCA	**Paso Flores**	**8.59**	**181**	P		**Pn**	**19 49 17.9**	**-1.6**
	comp=N,0.7nm,0.3s,baz=359,slow=9.6,SNR=14							
PLCA				LR	LR		19 52 24.2	
	comp=N,34nm,20.3s,baz=180,slow=36							
PLCA	**Paso Flores**	**8.59**	**181**	*e*P		**Pn**	**19 49 17.9**	**-1.6**
PLCA				LR	LR		19 52 24.2	
LVC	**Limon Verde**	**9.56**	**8**	P		**Pn**	**19 49 28.7**	**-4.0**
	comp=N,0.5nm,0.3s,baz=153,slow=9.0,SNR=6.6							
LVC				S		**Sn**	**19 51 26.4**	**+8.1**
	comp=N,1.8nm,0.3s,baz=90,slow=19,SNR=2.3							
LPAZ	**La Paz**	**15.89**	**8**	P		**Pn**	**19 50 56.2**	**+0.2**
	comp=N,0.2nm,0.3s,baz=216,slow=0.6,SNR=4.7							
LPAZ	**La Paz**	**15.89**	**8**	*e*P		**Pn**	**19 50 56.4**	**+0.4**
	comp=N,7.1nm,0.9s							
SIV	**San Ignacio**	**18.12**	**30**	P		**P**	**19 51 21.7**	**-0.5**
	comp=N,0.4nm,0.3s,baz=203,slow=9.7,SNR=13							
VNA3	**Neumayer Olymp**	**50.55**	**159**	*e*		**P**	**19 56 05.9**	**+0.1**
VNA3				*e*			19 56 07.6	
VNA3				*e*			19 56 14.9	
VNA1	**Neumayer--Stat**	**50.83**	**158**	*e*		**P**	**19 56 08.2**	**+0.3**
VNA1				*e*			19 56 10.0	
VNA1				*e*			19 56 17.2	
VNA2	**Neumayer--Watz**	**51.18**	**158**	*e*		**P**	**19 56 10.8**	**+0.3**
	baz=287,slow=8.8							
VNA2				*e*			19 56 12.6	
VNA2				*e*			19 56 19.7	
SNAA	**Sanae**	**52.77**	**158**	*e*		**P**	**19 56 18.0**	**-4.3**
SNAA				*e*			19 56 25.4	
SNAA	**Sanae**	**52.77**	**158**	*e*P		**P**	**19 56 18.1**	**-4.2**
	comp=N,5.6nm,0.6s,mb4.8							
QSPA	**South Pole Qui**	**58.11**	**180**	*e*P		**P**	**19 57 00.5**	**+0.1**
	comp=N,14nm,1.1s,mb4.9							
VNDA	**Vanda**	**66.22**	**191**	P		**P**	**19 57 54.0**	**-0.6**
	comp=N,1.6nm,1.0s,mb3.8,baz=120,slow=11,SNR=4.5							
TXAR	**Lajitas Array**	**68.85**	**329**	P		**P**	**19 58 12.5**	**+0.8**
	comp=N,0.8nm,0.5s,mb3.8,baz=157,slow=8.7,SNR=12							
TXAR				LR	LR		20 25 23.5	
	comp=N,40nm,20.4s,baz=180,slow=33							
DBIC	**Dimbokro**	**73.19**	**71**	P		**P**	**19 58 37.5**	**-0.8**
	comp=N,5.1nm,1.0s,mb4.3,baz=182,slow=5.9,SNR=3.5							
MAW	**Mawson**	**74.55**	**163**	P		**P**	**19 58 45.0**	**-0.5**
	comp=N,2.3nm,0.5s,mb4.2,baz=166,slow=7.6,SNR=5.6							
SDCO	**Great Sand Dun**	**76.88**	**332**	*e*P		**P**	**19 59 00.5**	**+1.5**
	comp=N,1.1nm,0.6s,mb3.8							
BOSA	**Boshof**	**79.63**	**117**	P		**P**	**19 59 14.2**	**-0.4**
	comp=N,5.1nm,0.8s,mb4.4,baz=252,slow=3.7,SNR=5.3							
TORD	**Torodi Ar. Bea**	**82.19**	**69**	P		**P**	**19 59 27.8**	**-0.5**
	comp=N,1.9nm,0.6s,mb4.1,baz=275,slow=5.0,SNR=10.0							
TORD				pP	pP		19 59 55.8	+1.5
	comp=N,1.7nm,0.7s,baz=262,slow=4.7,SNR=4.9							
TORD	**Torodi Ar. Bea**	**82.19**	**69**	P		**P**	**19 59 27.8**	**-0.5**
TORD				pP	pP		19 59 55.8	+1.5
PDAR	**Pinedale Array**	**82.78**	**332**	P		**P**	**19 59 30.5**	**-0.2**
	comp=N,0.4nm,0.5s,mb3.5,baz=127,slow=7.0,SNR=3.6							
MCMT	**McKenzie Canyo**	**85.82**	**331**	*e*P		**P**	**19 59 47.4**	**+1.4**
BRTR	**Keskin Array B**	**119.63**	**59**	PKP	PKPdf		20 05 56.0	-0.1
	comp=N,0.7nm,0.7s							
ASAR	**Alice Springs**	**119.89**	**206**	PKP	PKPdf		20 05 55.4	-1.8
	comp=N,0.4nm,0.7s,baz=133,slow=2.3,SNR=5.6							
WRA	**Warramunga Arr**	**123.10**	**208**	PKP	PKPdf		20 06 02.3	-1.1
	comp=N,1.2nm,0.5s,baz=160,slow=1.7,SNR=34							
BVAR	**Borovoye Array**	**144.91**	**42**	PKP	PKPdf		20 06 42.9	+0.1
	comp=N,4.3nm,0.5s,baz=294,slow=2.5,SNR=20							
KURK	**Kurchatov**	**150.51**	**42**	PKPbc	PKPbc		20 06 57.6	0.0
	comp=N,8.7nm,0.5s,baz=302,slow=3.3,SNR=14							
KURK				pPKPbc	pPKPbc		20 07 27.1	+2.1
	comp=N,3.8nm,0.6s,baz=301,slow=3.4,SNR=5.5							
ZALV	**Zalesovo Beam**	**151.87**	**32**	PKPbc	PKPbc		20 07 00.8	+0.2
	comp=N,15nm,0.5s,baz=291,slow=3.0,SNR=37							
ZALV				pPKPbc	pPKPbc		20 07 29.5	+1.5
	comp=N,2.8nm,0.6s,baz=294,slow=2.8,SNR=3.0							
ZALV	**Zalesovo Beam**	**151.87**	**32**	PKPbc	PKPbc		20 07 00.8	+0.2
ZALV				pPKPbc	pPKPbc		20 07 29.5	+1.5
MKAR	**Makanchi Array**	**154.43**	**47**	PKPbc	PKPbc		20 07 06.2	-0.2
	comp=N,0.7nm,0.7s,baz=344,slow=1.3,SNR=4.6							
MKAR				PKPab	PKPab		20 07 21.0	-0.1
	comp=N,0.9nm,0.6s,baz=323,slow=2.2,SNR=3.6							

*NEIC **22** 20:00:10.7, 3979N×2074E, h24km, MD2.8(ATH), After ATH.*

ATH 22 20:00:10.7, 3979N×2074E, h24km±1km, MD2.8/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**147**	*e*PB	Pb	20 00 15.9	+0.2
JAN				*e*SB	Sb	20 00 19.3	+0.1
KEK	**Kerkira**	**0.73**	**264**	*e*PN	Pn	20 00 25.0	-0.5
KZN	**Kozani**	**0.94**	**57**	*e*PN	Pn	20 00 29.1	+0.7
EVR	**Evrytania**	**1.20**	**136**	*e*PN	Pn	20 00 33.7	+1.7
KRUS	**Krusevo**	**1.62**	**14**	*e*Pn	Pn	20 00 44.1	+6.3
KRUS				*e*Sn	Sn	20 01 05.7	+7.8

*IDC **22** 20:01:28.3±7.1, 3629N×7110E, h163km±63km, mb3.5/8, mb1 3.6/12, mb1mx3.4/27, mbtmp3.5/12, Error ellipse: s-maj=44.6km s-min=25.1km az=171.0*
*ISCJB **22** 20:01:35.7±0.4, 3669N±003×7121E±006, h234km±6km, mb3.5/7, Error ellipse: s-maj=8.4km s-min=4.6km az=165.5*
*BJI **22** 20:01:35.8, 3657N×7126E, h240km*
*MOS **22** 20:01:36.0±0.9, 3673N×7113E, h237km, mb3.8/3, Error ellipse: s-maj=20.0km s-min=10.3km az=86.8*
*NEIC **22** 20:01:36.5±0.8, 3667N×7117E, h230km±8km, mb4.1/5, Error ellipse: s-maj=19.5km s-min=9.0km az=133.0*

ISC 22 20:01:36.7±0.4, 3671N±003×7119E±007, h222km±6km, n55, σ1°9.0/64, mb3.5/7, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.78**	**220**	*e*P	**Pn**	**20 02 25.9**	**+0.9**
CEP	**Cherat**	**2.94**	**168**	⇑P	**Pn**	**20 02 28.2**	**+1.4**
CEP				S	**S**	**20 03 04.0**	**-2.2**
CHCP	**Chirah Chowk**	**3.48**	**150**	⇑P	**Pn**	**20 02 34.7**	**+1.6**
THW	**Thamme Wali**	**3.93**	**173**	P	**Pn**	**20 02 38.0**	**-0.5**
KSH	**Kashi**	**4.70**	**52**	P	**Pn**	**20 02 48.8**	**+0.9**
KSH				S	**S**	**20 03 43.3**	**-0.9**
KSH				Smax			
	comp=N,54nm,0.5s						
KSH				Smax			
	comp=E,54nm,0.5s						
THN	**Thein Dam**	**5.67**	**137**	*e*P	**Pn**	**20 02 59.7**	**-0.4**
THN				*e*S	**S**	**20 04 04.0**	**-2.3**
DLH	**Dalhousie**	**5.72**	**135**	*ex*	x	20 03 54.0	
DLH				*e*S	**S**	**20 04 03.0**	**-4.6**
AML	**Almayashu**	**5.75**	**19**	*e*P	**Pn**	**20 03 01.8**	**+0.7**
	comp=E,43nm,0.4s						
AML	**Almayashu**	**5.75**	**19**	P	**Pn**	**20 03 02.1**	**+1.0**
	SNR=23						
UCH	**Uchtor**	**6.08**	**24**	*e*P	**Pn**	**20 03 06.2**	**+0.9**
	comp=E,8.2nm,0.6s						
UCH	**Uchtor**	**6.08**	**24**	P	**Pn**	**20 03 07.0**	**+1.7**
	SNR=5.3						
EKS2	**Erkin-Say**	**6.27**	**18**	*e*P	**Pn**	**20 03 07.6**	**0.0**
	comp=E,4.9nm,0.5s						
EKS2	**Erkin-Say**	**6.27**	**18**	P	**Pn**	**20 03 08.6**	**+0.9**
	SNR=15						
KK31	**Karatay Array**	**6.41**	**356**	⇑Pn	**Pn**	**20 03 09.3**	**-0.1**
	comp=E,7.3nm,0.5s,baz=173,slow=12						
KK31				Sn	**S**	**20 04 19.9**	**-3.4**
	comp=E,6.6nm,0.3s,baz=180,slow=18,SNR=8.3						
AAK	**Ala-Archa**	**6.45**	**22**	P	**Pn**	**20 03 10.5**	**+0.6**
	SNR=22						
ULHL	**Ulahol**	**6.77**	**34**	P	**Pn**	**20 03 14.3**	**+0.2**
	SNR=10						
TKM2	**Tokmak 2**	**7.07**	**27**	⇑Pn	**Pn**	**20 03 18.5**	**+0.6**
TKM2	comp=E,12nm,1.1s			⇓Sn	**S**	**20 04 37.0**	**-1.8**
	comp=E,23nm,0.9s						
TKM2	**Tokmak 2**	**7.07**	**27**	*e*P	**Pn**	**20 03 18.1**	**+0.2**
	comp=E,8.4nm,0.9s						
TKM2	**Tokmak 2**	**7.07**	**27**	*e*PN	**Pn**	**20 03 18.1**	**+0.2**
TKM2				pmax	pmax		
	comp=E,8.0nm,0.9s						
TKM2	**Tokmak 2**	**7.07**	**27**	P	**Pn**	**20 03 18.4**	**+0.5**
	SNR=7.2						
SMLA	**Simla**	**7.46**	**137**	*e*P	**Pn**	**20 03 22.6**	**-0.4**
SMLA				*i* S	**S**	**20 04 43.0**	**-4.9**
SMLA				*i* S	**S**	**20 04 44.1**	**-3.8**
SMLA				*ex*	x	20 04 46.9	
	comp=N,336nm,0.3s						
SMLA				*ex*	x	20 04 48.4	
	comp=E,532nm,0.4s						
KLP	**Kalpa**	**7.80**	**129**	*e*P	**Pn**	**20 03 28.6**	**+1.1**
KLP				*e*S	**S**	**20 04 51.5**	**-4.5**
KLP				AML	AML	20 04 57.4	
	comp=N,78nm,0.5s						
KLP				AML	AML	20 04 58.6	
	comp=E,87nm,0.4s						
JOSI	**Joshimath**	**9.29**	**129**	*e*P	**Pn**	**20 03 47.5**	**+1.0**
JOSI				*e*S	**S**	**20 05 25.2**	**-5.8**
JOSI				AML	AML	20 05 33.7	
	comp=E,43nm,0.5s						
JOSI				AML	AML	20 05 34.2	
	comp=N,37nm,0.9s						
KHET	**Khetri**	**9.45**	**154**	*e*S	**S**	**20 05 25.6**	**-9.3**
SONA	**Sohna**	**9.79**	**148**	*e*S	**S**	**20 05 33.7**	**-9.1**
MKAR	**Makanchi Array**	**13.04**	**36**	P	**Pn**	**20 04 33.3**	**-0.5**
	comp=N,0.4nm,0.3s,baz=218,slow=16,SNR=14						
PYUN	**Piuthan**	**13.14**	**127**	*e*P	**Pn**	**20 04 34.0**	**-1.3**
DANN	**Dangsing**	**13.48**	**125**	*e*P	**Pn**	**20 04 40.6**	**+1.2**
GKN	**Gorkha**	**14.29**	**124**	*e*P	**Pn**	**20 04 50.3**	**+0.9**
KKN	**Kakani**	**14.86**	**123**	*e*P	**Pn**	**20 04 56.3**	**0.0**
KURK	**Kurchatov**	**14.99**	**19**	P	**Pn**	**20 04 54.1**	**-3.5**
	comp=N,0.4nm,0.3s,baz=210,slow=10,SNR=9.9						
GUN	**Gumba**	**15.19**	**121**	*e*P	**Pn**	**20 05 01.6**	**+1.3**
JIRN	**Jiri**	**15.56**	**121**	*e*P	**Pn**	**20 05 05.4**	**+0.6**
BVAR	**Borovoye Array**	**16.33**	**358**	P	**P**	**20 05 12.7**	**+0.1**
	comp=N,2.1nm,0.3s,baz=163,slow=11,SNR=50						
BVAR	**Borovoye Array**	**16.33**	**358**	P	**P**	**20 05 12.7**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**16.36**	**358**	*e*P	**P**	**20 05 13.3**	**+0.3**
	comp=Z,5.1nm,0.4s						
BRVK	**Borovoye**	**16.36**	**358**	*e*P	**P**	**20 05 13.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKTK	**Aktyubinsk**	**16.68**	**329**	P	**P**	**20 05 17.0**	**+0.6**
AKTO	**Aktyubinsk**	**16.68**	**329**	P	**P**	**20 05 17.0**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=141,slow=9.5,SNR=15						
AKTO	**Aktyubinsk**	**16.68**	**329**	P	**P**	**20 05 17.0**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**16.81**	**119**	*e*P	**P**	**20 05 19.3**	**+1.2**
ZALV	**Zalesovo Beam**	**19.66**	**24**	P	**P**	**20 05 47.9**	**-0.8**
	comp=Z,4.8nm,0.3s,baz=217,slow=11,SNR=20						
ZALV	**Zalesovo Beam**	**19.66**	**24**	P	**P**	**20 05 47.9**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
NVS	**Novosibirsk**	**19.94**	**21**	*e*P	**P**	**20 05 50.0**	**-1.6**
SONM	**Songino Array**	**28.09**	**56**	P	**P**	**20 07 07.9**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.3,baz=234,slow=10,SNR=3.7						
SONM	**Songino Array**	**28.09**	**56**	P	**P**	**20 07 07.9**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**41.01**	**337**	P	**P**	**20 08 58.1**	**+0.3**
	comp=Z,5.2nm,0.9s,mb4.0,baz=118,slow=7.3,SNR=5.1						
ARCES	**ARCESS Array B**	**41.01**	**337**	P	**P**	**20 08 58.1**	**+0.3**
ARCES	**ARCESS Array B**	**41.01**	**337**	P	**P**	**20 08 58.1**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HFS	**Hagfors**	**43.00**	**322**	P	**P**	**20 09 13.3**	**-0.6**
	comp=Z,0.9nm,0.4s,mb3.6,baz=94,slow=12,SNR=7.1						
HFS	**Hagfors**	**43.00**	**322**	P	**P**	**20 09 13.3**	**-0.6**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**20 09 23.6**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.0,baz=104,slow=6.9,SNR=3.1						
ESDC	**Sonseca Array**	**57.50**	**298**	P	**P**	**20 11 01.1**	**-1.6**
	comp=Z,0.7nm,0.6s,mb3.5,baz=55,slow=8.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	**P**	**20 11 56.1**	**-2.8**
	comp=Z,1.1nm,0.6s,mb3.7,baz=48,slow=5.7,SNR=11						
YKA	**Yellowknife Ar**	**81.03**	**3**	P	**P**	**20 13 26.8**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.1,baz=0.6,slow=4.9,SNR=2.5						

*CSEM **22** 20:04:10.1±0.2, 3967N×2070E, h20km, MD2.9, Error ellipse: s-maj=9.4km s-min=7.3km az=24.0*

ATH 22 20:04:09.3, 3969N×2068E, h22km, MD2.9/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.14**	**104**	*e*PB	Pb	20 04 13.7	-0.2
JAN				*e*SB	Sb	20 04 17.0	+0.1
KEK	**Kerkira**	**0.68**	**272**	*e*PN	Pn	20 04 22.7	-0.9
EVR	**Evrytania**	**1.17**	**131**	*e*PN	Pn	20 04 31.5	+1.2
KRUS	**Krusevo**	**1.73**	**14**	*e*Pn	Pn	20 04 41.6	+3.5
KRUS				*e*Sn	Sn	20 05 04.1	+4.6
KRUS	**Krusevo**	**1.73**	**14**	*e*Pn	Pn	20 04 41.6	+3.6
KRUS				*e*Sn	Sn	20 05 04.2	+4.7

*ATH **22** 20:06:26.8, 3830N×2050E, h5km, MD3.7/6, ML3.9*
*ISCJB **22** 20:06:27.4±0.5, 3834N±004×2032E±004, h10km, mb3.8/3, Error ellipse: s-maj=6.1km s-min=4.4km az=13.6*
*NEIC **22** 20:06:27.1, 3831N×2051E, h5km, MD3.6(ATH), After ATH.*
*CSEM **22** 20:06:29.9±0.1, 3834N×2044E, h25km, MD3.6, Error ellipse: s-maj=3.9km s-min=2.6km az=7.0*
*IDC **22** 20:06:30.7±4.2, 3821N×2011E, h67km±30km, mb3.5/3, mb1 3.5/6, mb1mx3.2/25, mbtmp3.4/6, ML2.9/3, Error ellipse: s-maj=75.8km s-min=25.7km az=52.0*

ISC 22 20:06:28.8±1.2, 3834N±004×2038E±004, h15km±9km, n33, σ1°34/43, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.91**	**108**	P	**Pg**	**20 06 44.2**	**-2.1**
EVR	**Evrytania**	**1.26**	**63**	*e*PB	**Pb**	**20 06 49.5**	**-2.7**
JAN	**Janina**	**1.36**	**16**	*e*PB	**Pb**	**20 06 53.3**	**-0.7**
KEK	**Kerkira**	**1.44**	**342**	*e*PB	**Pb**	**20 06 55.5**	**+0.2**
LKR	**Lokris**	**2.08**	**81**	P	**Pn**	**20 07 04.3**	**+1.2**
KZN	**Kozani**	**2.24**	**28**	*e*PN	**Pn**	**20 07 07.5**	**+2.2**
NEO	**Neokhori**	**2.42**	**66**	*e*PN	**Pn**	**20 07 09.5**	**+1.7**
NEO	**Neokhori**	**2.42**	**66**	*e*Pg	**Pg**	**20 07 10.5**	**-4.7**
ATH	**Athens Observa**	**2.66**	**97**	*e*PN	**Pn**	**20 07 11.8**	**+0.8**
OHR	**Ohrid**	**2.78**	**7**	*e*Pn	**Pn**	**20 07 13.4**	**+0.7**
OHR				*e*Sn	**Sn**	**20 07 46.9**	**+0.8**
OHR	**Ohrid**	**2.78**	**7**	*e*Pn	**Pn**	**20 07 13.4**	**+0.7**
OHR				*e*Sn	**Sn**	**20 07 47.0**	**+0.9**
TIP	**Timpagrande**	**2.95**	**288**	*e*P	**Pn**	**20 07 15.2**	**+0.2**
KRUS	**Krusevo**	**3.10**	**12**	*e*Pn	**Pn**	**20 07 17.6**	**+0.6**
KRUS				*e*Sn	**Sn**	**20 07 53.9**	**+0.2**
KRUS	**Krusevo**	**3.10**	**12**	*e*Pn	**Pn**	**20 07 17.7**	**+0.6**
KRUS				*e*Sn	**Sn**	**20 07 54.0**	**+0.2**
GRI	**Girifalco**	**3.14**	**280**	Pn	**Pn**	**20 07 18.4**	**+0.8**
PE1	**Pezze di Greco**	**3.35**	**318**	*e*Pn	**Pn**	**20 07 21.7**	**+1.1**
PE1				*e*Sn	**Sn**	**20 07 59.3**	**-0.8**
SOI	**Samo**	**3.42**	**267**	Pn	**Pn**	**20 07 21.7**	**+0.3**
VAY	**Valandovo**	**3.42**	**29**	*e*Pn	**Pn**	**20 07 23.0**	**+1.5**
VAY				*e*Sn	**Sn**	**20 07 58.3**	**-3.4**
VAY	**Valandovo**	**3.42**	**29**	*e*Pn	**Pn**	**20 07 23.1**	**+1.6**
VAY				*e*Sn	**Sn**	**20 07 58.3**	**-3.4**
CEL	**Celeste**	**3.53**	**270**	*e*P	**Pn**	**20 07 23.2**	**+0.3**
CEL	**Celeste**	**3.53**	**270**	*e*P	**Pn**	**20 07 23.2**	**+0.2**
LTRZ	**Laterza**	**3.56**	**310**	Pn	**Pn**	**20 07 23.3**	**-0.1**
LTRZ				Sn	**Sn**	**20 08 03.7**	**-1.5**
SG1	**Sgolgore (BA)**	**3.79**	**312**	*e*Pn	**Pn**	**20 07 26.7**	**+0.1**
SG1				*e*Sn	**Sn**	**20 08 09.4**	**-1.5**
CUC	**Castrocucco**	**3.91**	**296**	*e*P	**Pn**	**20 07 30.8**	**+2.6**
CUC	**Castrocucco**	**3.91**	**296**	*e*P	**Pn**	**20 07 30.8**	**+2.6**
SSY	**Sortino**	**4.37**	**256**	Pn	**Pn**	**20 07 33.2**	**-1.3**
SGO	**Sicignano**	**4.50**	**301**	Pn	**Pn**	**20 07 37.5**	**+1.1**
IDI	**Assyia**	**4.73**	**129**	P	**Pn**	**20 07 41.2**	**+1.7**
	0.2nm,0.3s,baz=38,slow=19,SNR=2.7						
IDI				S	**Sn**	**20 08 33.5**	**-0.7**
	1.0nm,0.3s,baz=0.0,slow=19,SNR=3.8						
MLR	**Muntele Rosu**	**8.26**	**28**	P	**Pn**	**20 08 31.3**	**+3.4**
	0.1nm,0.3s,baz=221,slow=20,SNR=1.7						
GERES	**GERESS Array B**	**11.55**	**337**	P	**Pn**	**20 09 11.5**	**-1.5**
	0.0nm,0.3s,baz=154,slow=14,SNR=2.4						
HFS	**Hagfors**	**22.22**	**351**	P	**P**	**20 11 23.7**	**-0.7**
	3.3nm,0.9s,mb3.8,baz=170,slow=18,SNR=2.7						
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**20 14 43.5**	**-2.3**
	0.6nm,0.5s,mb3.6,baz=274,slow=7.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**45.67**	**48**	P	**P**	**20 14 45.8**	**-2.8**
	0.7nm,0.5s,mb3.9,baz=270,slow=9.4,SNR=3.9						

*DJA **22** 20:30:09, 1455S×17006E, h10km, mb5.3/8*
*SZGRF **22** 20:30:14.5, 2051S×16933E, h40km, Vanuatu Islands*
*BJI **22** 20:30:15.0, 1913S×16933E, h31km, mB5.4, mb5.0, Ms5.3, Msz4.9*
*LDG **22** 20:30:16.2±0.2, 1879S×16835E, h10km, Mb5.6/3, Ms4.3/10, Error ellipse: s-maj=19.1km s-min=3.5km az=110.0*
*ISCJB **22** 20:30:18.2±0.3, 1921S±004×16871E±005, h38km, mb4.9/44, MS4.3/30, Error ellipse: s-maj=8.0km s-min=3.8km az=28.9*
*MOS **22** 20:30:19.8±2.7, 1902S×16855E, h33km, mb5.2/12, MS4.4/4, Error ellipse: s-maj=11.2km s-min=10.1km az=6.3*
*IDC **22** 20:30:20.0±0.5, 1915S×16867E, h40km±3km, mb4.4/17, mb1 4.5/18, mb1mx4.5/21, mbtmp4.4/18, ML3.0/1, MS4.2/20, Ms1 4.2/20, ms1mx4.0/29, Error ellipse: s-maj=14.4km s-min=11.8km az=94.0*
*NOU **22** 20:30:19.1±0.8, 1894S×16855E, h30km, MD3.0, ML4.5*
*BGS **22** 20:30:20.2±3.0, 1916S×16875E, h33km, mb5.0(NEIC)*
*NEIC **22** 20:30:20.2±0.2, 1916S×16875E, mb5.0/14, Error ellipse: s-maj=8.7km s-min=6.1km az=147.0*
*GCMT **22** 20:30:20.2±0.4, 1917S×16850E, h48km±1km, MW5.1/43, Moment Tensor Solution. s38,c51; s43,c56; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.71±.34; Mθθ0.79±.30; Mφφ-5.49±.24; Mrθ-0.47±.28; Mrφ2.89±.18; Mθφ-0.62±.22; Best double couple: M0 5.75 200×10^16 NP1: ϕs326.00000°, δ44.00000°, λ72.00000°. NP2: ϕs171.00000°, δ48.00000°, λ107.00000°. Principal axes: T 4.8720, Plg77.0000°, Azm150.0000°; N 1.7690, Plg13.0000°, Azm339.0000°; P -6.6320, Plg2.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 20:30:20.0±0.3, 1923S±004×16876E±005, h40km, h40km±1.0km:pP-P,n245,σ0°94/99, mb4.9/44, MS4.3/30, 55C-15D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.56**	**217**	*e*P	**Pn**	**20 31 13.1**	**+0.3**
DZM				*e*S	**Sn**	**20 31 52.9**	**-0.8**
DZM				AMP		20 31 59.7	
	comp=Z,26μm,5.1s						
DZM	**Mont Dzumac**	**3.56**	**217**	*e*P	**Pn**	**20 31 12.2**	**-0.6**
PLUM	**Mont Dore**	**3.62**	**213**	*e*P	**Pn**	**20 31 13.5**	**-0.1**
PLUM				*e*S	**Sn**	**20 31 54.7**	**-0.3**
PLUM				AMP		20 31 58.2	
	comp=Z,4μm,0.2s						
NORM	**Noumea**	**3.67**	**215**	*e*P	**Pn**	**20 31 14.3**	**+0.1**
NORM				*e*S	**Sn**	**20 31 55.1**	**-1.1**
NORM				AMP		20 31 59.8	
	comp=Z,3μm,0.3s						
NOUC	**Port Laguerre**	**3.67**	**218**	*e*P	**Pn**	**20 31 14.5**	**+0.2**
NOUC				*e*S	**Sn**	**20 31 55.9**	**-0.4**
NOUC				AMP		20 32 00.6	
	comp=Z,972nm,0.0s						
ONTRN	**Noumea**	**3.75**	**215**	*e*P	**Pn**	**20 31 16.3**	**+1.0**
ONTRN				*e*S	**Sn**	**20 31 57.4**	**-0.7**
ONTRN				AMP		20 32 00.2	
	comp=Z,4μm,0.9s						
HNR	**Honiara**	**12.95**	**318**	Pn	**Pn**	**20 33 23.7**	**+2.1**
	comp=Z,2.3nm,0.3s,baz=180,slow=4.0,SNR=2.8						
HNR				LR	LR	20 37 27.0	
	comp=Z,554nm,21.6s,baz=351,slow=33						
RAO	**Raoul Island**	**15.70**	**132**	LR	LR	20 38 35.9	
	comp=Z,723nm,21.7s,baz=5.3,slow=31						
EIDS	**Eidsvold**	**17.46**	**246**	*e*P	**Pn**	**20 34 23.5**	**+2.9**
	comp=Z,345nm,2.6s						
ARMA	**Armidale**	**19.10**	**231**	*e*Pn	**Pn**	**20 34 41.2**	**+0.6**
	comp=Z,2.4nm,1.1s						
AFI	**Afiamalu**	**19.38**	**77**	P	**Pn**	**20 34 45.0**	**+1.0**
	comp=Z,2.5nm,0.3s,baz=288,slow=20,SNR=2.8						
AFI				LR	LR	20 40 49.6	
	comp=Z,934nm,20.8s,baz=285,slow=32						
URZ	**Urewera**	**20.30**	**161**	P	**P**	**20 34 54.8**	**+2.3**
	comp=Z,13nm,0.7s,baz=31,slow=4.2,SNR=8.0						
URZ				LR	LR	20 41 26.1	
	comp=Z,444nm,21.2s,MS3.8,baz=326,slow=33						
CTA	**Charters Tower**	**21.21**	**264**	P	**P**	**20 35 03.5**	**+1.0**
	comp=Z,8.3nm,0.

NWAO pmax pmax
comp=Z,22nm,1.0s
KAPI Kappang 49.77 280 *e*PP pP 20 39 18.9 -1.7
RKT Rikitea 52.34 105 *e*LR LR 20 54 39.7
comp=Z,280nm,31.2s
CBIJ Chichi jima 52.77 330 LR LR 21 00 07.7
comp=Z,200nm,21.3s,MS4.1,baz=106,slow=34
VNDA Vanda 58.42 182 P **P** **20 40 11.6 +0.4**
comp=Z,2.4nm,0.8s,mb4.3,baz=357,slow=9.1,SNR=6.4
VNDA LR LR 21 01 22.3
comp=Z,170nm,21.4s,MS4.1,baz=15,slow=32
LEM Lembang 60.56 273 P **P** **20 40 27.7 +0.7**
comp=Z,70nm,0.9s,comp=Z,5µm,mb5.8
DBJI Dramaga 61.47 273 P **P** **20 40 32.8 -0.3**
comp=Z,103nm,1.0s,mb5.9
MJAR Matsushiro Arr 62.54 333 P **P** **20 40 38.7 -1.1**
comp=Z,7.3nm,1.0s,mb4.8,baz=167,slow=6.9,SNR=9.3
MAT Matsushiro 62.54 333 P **P** **20 40 38.7 -1.1**
MAT *e*S **S** **20 49 08.0 +3.4**
KSI Kapahiang 66.32 275 P **P** **20 41 04.8 -0.2**
comp=Z,37nm,1.5s,mb5.2
ASAJ Asahikawa 67.44 340 P **P** **20 41 12.3 +0.9**
comp=Z,34nm,1.0s,mb5.3,baz=148,slow=7.2,SNR=5.9
KSRS Korea Array 68.25 326 P **P** **20 41 16.5 -0.2**
comp=Z,2.5nm,0.9s,mb4.2,baz=152,slow=8.1,SNR=6.0
KSRS pP pP 20 41 27.8 -0.8
comp=Z,1.6nm,0.9s,baz=151,slow=5.4,SNR=3.2
NJ2 Nanjing 69.89 316 *e*P **P** **20 41 28.0 +1.0**
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.5
QSPA South Pole Qui 70.82 180 P **P** **20 41 32.9 +0.9**
comp=Z,18nm,1.0s,mb5.0,baz=33,slow=2.1,SNR=31
QSPA pP pP 20 41 44.4 +0.5
comp=Z,26nm,0.9s,baz=22,slow=2.5,SNR=9.9
QSPA South Pole Qui 70.82 180 *e*P **P** **20 41 32.7 +0.7**
comp=Z,29nm,1.0s,mb5.2
WHN Wuhan 72.01 312 ⇓P **P** **20 41 39.5 -0.4**
WHN AP pP 20 41 50.8 -1.1
PETK Petropavlovsk- 72.67 353 P **P** **20 41 43.0 -0.3**
comp=Z,5.7nm,0.8s,mb4.5,baz=116,slow=4.4,SNR=10
PETK LR LR 21 08 26.9
comp=Z,101nm,20.3s,MS4.1,baz=168,slow=32
MDJ Mudanjiang 72.90 332 P **P** **20 41 44.5 -0.4**
MDJ AP pP 20 41 53.9 -3.0
MDJ XP sP 20 41 57.8 -3.6
MDJ PP PP 20 44 26.3 -1.6
MDJ S S 20 51 08.5 +0.1
MDJ XS sS 20 51 24.8 -3.5
MDJ SCS ScS 20 51 49.6 +0.2
MDJ AMB AMB
comp=Z,25nm,1.3s,mb5.0
MDJ AMB AMB
comp=Z,92nm,4.8s
MDJ Mudanjiang 72.90 332 *e*P **P** **20 41 44.9 0.0**
comp=Z,31nm,1.1s,mb5.2
GYA Guiyang 75.45 305 ⇓*i*P **P** **20 42 01.5 +1.3**
GYA AP pP 20 42 12.1 -0.1
GYA XP sP 20 42 16.0 -0.7
GYA S S 20 51 39.5 +1.7
GYA XS sS 20 51 52.3 -5.5
GYA SKS 20 52 03.8
GYA SS SS 20 56 32.8 +3.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,150nm,7.2s
GYA LR LR
comp=N,260nm,18.1s,MS4.8
GYA LR LR
comp=E,320nm,17.0s,MS4.8
GYA LR LR
comp=Z,300nm,18.9s,MS4.6
BJI Beijing 76.65 321 P **P** **20 42 06.5 -0.2**
BJI S S 20 51 53.3 +2.9
BJI AMB AMB
comp=Z,17nm,1.4s,mb4.8
XAN Xi'an 77.78 313 P **P** **20 42 12.9 -0.3**
XAN AP pP 20 42 24.6 -0.6
XAN AMB AMB
comp=Z,11nm,1.3s,mb4.6
XAN AMB AMB
comp=Z,109nm,5.6s
KMI Kunming 77.89 302 ⇑P **P** **20 42 14.9 +0.9**
KMI AP pP 20 42 26.0 -0.1
KMI XP sP 20 42 29.8 -0.8
KMI PP PP 20 45 13.8 +3.4
KMI S S 20 52 05.8 +1.3
KMI XS sS 20 52 22.5 -2.1
KMI SS SS 20 57 09.8 +3.5
KMI AMB AMB
comp=Z,20nm,1.0s,mb5.0
KMI AMB AMB
comp=Z,199nm,5.3s
KMI LR LR
comp=Z,76nm,24.4s,MS3.9
CMAR Chiang Mai Arr 78.09 294 P **P** **20 42 15.7 +0.5**
comp=Z,3.5nm,1.0s,mb4.2,baz=136,slow=4.4,SNR=18
CMAR pP pP 20 42 27.6 +0.3
comp=Z,6.4nm,0.8s,baz=133,slow=4.2,SNR=20
CHTO Chiang Mai 78.24 295 *e*P **P** **20 42 15.8 -0.3**
CHTO *ep*P pP 20 42 28.2 +0.1
MAW Mawson 78.27 202 P **P** **20 42 16.7 +1.3**
comp=Z,9.9nm,0.9s,mb4.8,baz=103,slow=7.1,SNR=10
MAW pP pP 20 42 28.1 +0.6
comp=Z,21nm,1.1s,baz=146,slow=4.1,SNR=7.6
MAW LR LR 21 12 56.5
comp=Z,220nm,19.5s,MS4.5,baz=98,slow=33
MAW Mawson 78.27 202 P **P** **20 42 16.7 +1.3**
MAW *PP pP 20 42 28.1 +0.6
CD2 Chengdu 79.88 308 *e*P **P** **20 42 25.3 +0.5**
CD2 AP pP 20 42 36.8 -0.1
CD2 XP sP 20 42 41.0 -0.4
CD2 PP PP 20 45 29.8 +2.9
CD2 S S 20 52 26.5 +1.0
CD2 XS sS 20 52 43.9 -1.7
CD2 SS SS 20 57 39.8 +3.8
CD2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
CD2 AMB AMB
comp=Z,120nm,5.9s
CD2 LR LR
comp=N,220nm,13.2s,MS4.9
CD2 LR LR
comp=E,310nm,13.2s,MS4.9
CD2 LR LR
comp=Z,380nm,9.6s
HHC Hu-ho-hao-te 79.92 320 *e*P **P** **20 42 25.0 +0.2**
HHC AP pP 20 42 33.9 -3.0
HHC XP sP 20 42 39.9 -1.5
HHC PP PP 20 45 29.9 +2.8
HHC S S 20 52 26.3 +0.7
HHC XS sS 20 52 43.0 -2.7
HHC SS SS 20 57 40.3 +4.0
HHC AMB AMB
comp=Z,15nm,1.3s,mb4.8
HHC AMB AMB
comp=Z,119nm,4.3s
HHC LR LR
comp=N,242nm,20.2s,MS4.7
HHC LR LR
comp=E,281nm,20.2s,MS4.7
HHC LR LR
comp=Z,224nm,20.2s,MS4.5
HIA Hailar 80.88 330 *e*P **P** **20 42 28.8 -0.9**
LZH Lanzhou 82.39 312 *e*P **P** **20 42 39.4 +1.4**
LZH AP pP 20 42 50.6 +0.4
LZH XP sP 20 42 53.3 -1.4
LZH PP PP 20 45 51.0 +3.4
LZH *e*S S 20 52 52.4 +1.0
LZH XS sS 20 53 09.8 -1.8
LZH SS SS 20 58 17.9 +4.6
LZH AMB AMB
comp=Z,36nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,220nm,5.8s
LZH LR LR
comp=E,271nm,16.0s
LZH LR LR
comp=Z,410nm,17.3s,MS4.9
SEY Seymchan 82.90 353 *e*P **P** **20 42 39.7 -0.3**
SYO Syowa Base 84.81 196 ⇓*e*P **P** **20 42 47.8 -2.2**
SYO Syowa Base 84.81 196 ⇓*e*PcP PcP 20 42 52.4 -0.9
ULN Ulaanbaatar 86.59 324 *e*P **P** **20 42 58.9 -0.1**
comp=Z,41nm,1.1s,mb5.6
ULN *e* pP 20 43 10.6 -0.6
ULN Ulaanbaatar 86.59 324 *e*P **P** **20 42 58.9 -0.1**
ULN *e* pP 20 43 10.6 -0.6
ULN pmax pmax
comp=Z,41nm,1.1s,mb5.6
YAK Yakutsk 86.73 343 *e*P **P** **20 42 58.5 -0.8**
YAK pmax pmax
comp=Z,58nm,1.3s,mb5.7
GTA Gaotai 86.80 314 *e*P **P** **20 43 00.4 +0.2**
GTA AP pP 20 43 10.8 -1.6
GTA XP sP 20 43 14.8 -2.1
GTA PP PP 20 46 27.8 +4.4
GTA SKS 20 53 23.3
GTA S S 20 53 36.8 +1.7
GTA XS sS 20 53 53.5 -2.0
GTA SS SS 20 59 25.9 +7.7
GTA AMB AMB
comp=Z,9.0nm,1.2s,mb4.9
GTA AMB AMB
comp=Z,249nm,6.0s
GTA LR LR
comp=N,152nm,12.0s,MS4.7
GTA LR LR
comp=E,98nm,12.3s,MS4.7
GTA LR LR
comp=Z,82nm,15.0s,MS4.3
SONM Songino Array 86.94 323 P **P** **20 43 00.4 -0.3**
comp=Z,9.8nm,1.1s,mb5.0,baz=133,slow=4.1,SNR=28
SONM pP pP 20 43 12.2 -0.7
comp=Z,18nm,1.0s,baz=136,slow=4.9,SNR=23
SONM LR LR 21 17 17.1
comp=Z,70nm,20.7s,MS4.0,baz=126,slow=32
SONM Songino Array 86.94 323 P **P** **20 43 00.4 -0.3**
SONM *PP pP 20 43 12.2 -0.7
SHL Shillong 86.95 298 *e*P **P** **20 43 01.5 +0.2**
BILL Bilibino 87.04 359 ⇓*e*P **P** **20 42 59.1 -1.6**
BILL *e* 20 46 26.2
BILL *e*S SKSac 20 53 22.1 -2.1
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.3
WDC Whiskeytown Da 87.17 45 *e*P **P** **20 43 02.7 +0.7**
CMB Columbia Colle 87.49 48 *e*P **P** **20 43 03.6 0.0**
YBH Yreka Blue Hor 87.61 44 *e*P **P** **20 43 04.7 +0.7**
ISA Isabella 87.83 51 *e*P **P** **20 43 05.7 +0.4**
MAIT Maitri 88.81 187 *e*P **P** **20 43 08.8 -0.6**
PAHR Pah Rah Range 88.93 47 *e*P **P** **20 43 09.6 -0.8**
BOD Bodaibo 89.13 334 *e*P **P** **20 43 07.5 -3.4**
BOD pmax pmax
comp=Z,10.0nm,2.2s,mb4.8
NVAR Mina Array Bea 89.13 49 P **P** **20 43 10.7 -0.7**
comp=Z,1.9nm,0.7s,mb4.5,baz=233,slow=9.0,SNR=7.3
NVAR pP pP 20 43 25.2 +1.5
comp=Z,1.1nm,0.6s,baz=231,slow=8.9,SNR=3.1
LSA Lhasa 89.14 302 *e*P **P** **20 43 11.7 0.0**
comp=Z,1.5nm,0.6s,mb4.5
LSA *ep*P pP 20 43 23.6 -0.3
LSA Lhasa 89.14 302 *e*P **P** **20 43 11.7 +0.1**
LSA *e**PP pP 20 43 23.6 -0.3
LSA pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
SNAA Sanae 89.15 183 *e*P **P** **20 43 06.0 -4.9**
SNAA *e* pP 20 43 18.1 -5.1
SNAA *e* pP 20 43 20.5 -2.7
SNAA Sanae 89.15 183 *e*P **P** **20 43 05.6 -5.3**
comp=Z,20nm,1.1s,mb5.3
SNAA *ep*P pP 20 43 17.5 -5.7
SNAA Sanae 89.15 183 *e*P **P** **20 43 05.6 -5.3**
SNAA *e**PP pP 20 43 17.5 -5.7
SNAA pmax pmax
comp=Z,20nm,1.1s
GLA Glamis 89.50 55 *e*P **P** **20 43 12.7 -0.5**
VNA3 Neumayer Olymp 89.76 181 *e*P **P** **20 43 13.1 -0.7**
VNA3 *e* pP 20 43 25.1 -1.0
VNA3 *e* 20 43 28.1
ZAK Zakamensk 90.03 324 *e*P **P** **20 43 13.8 -1.5**
ZAK pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
VNA2 Neumayer--Watz 90.04 181 *e*P **P** **20 43 14.9 -0.2**
baz=188,slow=4.3
VNA2 *e* pP 20 43 26.5 -0.9
VNA2 *e* 20 43 30.0
VNA1 Neumayer--Stat 90.33 181 *e*P **P** **20 43 16.3 -0.2**
VNA1 *e* pP 20 43 28.0 -0.8
VNA1 *e* pP 20 43 31.0 +2.2
WVOR Wild Horse Val 90.63 45 *e*P **P** **20 43 17.9 -0.4**
comp=Z,8.4nm,1.0s,mb5.0
WVOR Wild Horse Val 90.63 45 *e*P **P** **20 43 17.9 -0.4**
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
RPW Rockport 91.51 39 *e*P **P** **20 43 21.4 -0.8**
USHA Ushuaia 91.67 151 LR LR 21 14 14.7
comp=Z,164nm,18.7s,MS4.5,baz=219,slow=29
RSW Rattlesnake Hi 91.74 41 *e*P **P** **20 43 24.0 +0.7**
ETW Entiat 91.83 40 *e*P **P** **20 43 23.3 -0.4**
TIXI Tiksi 94.64 348 *e*P **P** **20 43 33.3 -2.8**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
WMQ Urumqi 96.88 314 *e*P **P** **20 43 48.0 +1.0**
WMQ AP pP 20 43 59.0 -0.3
WMQ XP sP 20 44 03.0 -0.7
WMQ PP PP 20 47 46.0 +3.1
WMQ SKS 20 54 20.0
WMQ S S 20 55 05.0 -1.2
WMQ SS SS 21 01 44.0 +1.0
WMQ AMB AMB
comp=Z,26nm,1.2s,mb5.5
WMQ AMB AMB
comp=Z,64nm,7.0s
WMQ LR LR
comp=N,38nm,20.0s,MS4.8
WMQ LR LR
comp=E,307nm,20.0s,MS4.8
WMQ LR LR
comp=Z,124nm,18.0s,MS4.4
PDAR Pinedale Array 96.94 47 LR LR 21 22 05.7
comp=Z,90nm,19.5s,MS4.3,baz=264,slow=32
TXAR Lajitas Array 97.16 62 P **P** **20 43 47.6 -1.0**
comp=Z,1.6nm,1.0s,mb4.4,baz=235,slow=4.4,SNR=5.7
TXAR LR LR 21 20 05.1
comp=Z,137nm,19.5s,MS4.5,baz=165,slow=31
YKA Yellowknife Ar 100.87 27 P Pdif 20 44 04.4 -0.3
comp=Z,0.8nm,0.8s,baz=229,slow=1.8,SNR=3.8
YKA pP 20 44 16.7
comp=Z,1.1nm,0.8s,baz=184,slow=31,SNR=2.9
MKAR Makanchi Array 101.42 316 P Pdif 20 44 06.2 -1.0
comp=Z,2.4nm,1.1s,baz=228,slow=11,SNR=3.9
MKAR PKKPbc PKKPbc 21 00 13.8 -3.4
comp=Z,0.6nm,0.8s,baz=267,slow=2.7,SNR=4.1
BVAR Borovoye Array 110.13 320 PKiKP PKiKP 20 48 46.4 -0.7
comp=Z,0.5nm,0.7s,baz=191,slow=0.8,SNR=3.8
BOSA Boshof 120.79 217 PKP PKPdf 20 49 06.9 -1.6
comp=Z,5.4nm,0.9s,baz=166,slow=3.0,SNR=10
BOSA pPKP pPKPdf 20 49 21.1 -0.1
comp=Z,7.1nm,1.0s,baz=133,slow=7.8,SNR=3.8
ARCES ARCESS Array B 124.95 345 PKP PKPdf 20 49 13.4 -1.6
comp=Z,4.2nm,0.8s,baz=5.7,slow=1.2,SNR=10
ARCES pPKP pPKPdf 20 49 26.1 -1.7
comp=Z,3.2nm,0.7s,baz=85,slow=2.6,SNR=1.7
OBN Obninsk 129.24 327 ⇑*i*PKIKP PKPdf 20 49 22.5 -1.2
OBN *e* 20 56 35.4
OBN pmax pmax
comp=Z,8.0nm,0.7s
NOA NORSAR Array B 135.32 345 PKP PKPdf 20 49 34.4 -0.5
comp=Z,1.7nm,1.0s,baz=111,slow=9.1,SNR=3.2
NOA pPKP pPKPdf 20 49 47.2 -0.5
comp=Z,0.8nm,0.6s,baz=28,slow=2.1,SNR=2.5
DPC Dobruska-Polom 142.00 331 *e*PKP PKPdf 20 49 47.8 +0.2
PVCC Panska Ves 142.66 333 *e*PKP PKPdf 20 49 47.9 -0.8
PVCC *ep*PKP pPKPdf 20 50 00.6 -0.8
BRG Berggiesshubel 142.67 334 *e*PKP PKPdf 20 49 46.9 -1.9
comp=Z,8.0nm,1.4s
BRG *e* 20 49 56.7
comp=Z,11nm,1.2s
CLL Collm 142.72 335 *e*PKIKP PKiKP 20 49 56.0 +4.1
PRU Pruhonice 143.06 332 *e*PKP PKPdf 20 49 46.1 -3.3
PRU *ep*PKP pPKPdf 20 49 57.1 -5.0
TANN Tannenbergstha 143.63 334 *e*PKPbc PKPdf 20 49 47.3 -3.1
TANN *ep*PKPbc 20 49 59.4
NKC Novy Kostel 143.77 334 *e*PKP PKPdf 20 49 47.5 -3.2
NKC *ep*PKP pPKPdf 20 49 55.9 -7.4
VAY Valandovo 143.78 315 *e*PKP PKPdf 20 49 45.0 -6.0
MOX Moxa 143.79 335 *e*PKP PKPdf 20 49 47.7 -3.0
comp=Z,28nm,1.5s
MOX *e* 20 49 59.4
MOX Moxa 143.79 335 *e*PKHKP PKPdf 20 49 47.7 -3.0
MOX pmax pmax
comp=Z,28nm,1.5s
MOX Moxa 143.79 335 *e*PKPbc PKPdf 20 49 47.2 -3.5
MOX *ep*PKPbc 20 49 59.3
IBBN Ibbenburen 143.81 340 *e*PKPbc PKPdf 20 49 47.8 -2.9
CONA Conrad Observa 143.90 329 ⇑*i*PKPdf PKPdf 20 49 49.9 -1.1
comp=Z,19nm,1.3s
CONA ⇓*i*PKPdf pPKPdf 20 50 01.5 -2.1
comp=Z,22nm,1.2s
CSNA Conrad Observa 143.91 329 ⇑*i*PKPdf PKPdf 20 49 49.9 -1.1
comp=Z,17nm,1.3s
CSNA ⇓*i*PKPdf pPKPdf 20 50 01.5 -2.2
comp=Z,30nm,1.9s
MANZ Manzenberg 144.10 334 *e*PKPbc PKPdf 20 49 48.3 -3.0
MANZ *ep*PKPbc 20 50 00.3
KHC Kasperske Hory 144.12 332 *e*PKP PKPdf 20 49 49.1 -2.2
KHC *ep*PKP pPKPdf 20 50 00.2 -3.8
SKO Skopje 144.22 316 *e*PKP PKPdf 20 49 49.6 -2.2
ROTZ Rotzenmuhle 144.23 334 *e*PKPbc PKPdf 20 49 49.1 -2.4
ROTZ *ep*PKPbc 20 50 01.2
UBBA Unterbreizbach 144.27 337 *e*PKPbc PKPdf 20 49 48.9 -2.6
UBBA *ep*PKPbc 20 50 00.8
GEC2 GERESS Array S 144.27 332 *e*PKPbc PKPdf 20 49 49.1 -2.5
GEC2 *ep*PKPbc 20 50 01.3
GERES GERESS Array B 144.27 332 PKP PKPdf 20 49 49.2 -2.4
comp=Z,2.2nm,0.8s,baz=46,slow=3.9,SNR=17
GERES pPKP pPKPdf 20 50 01.3 -3.0
comp=Z,3.6nm,0.8s,baz=46,slow=3.9,SNR=9.3
WET Wettzell 144.42 333 *e*PKPbc PKPdf 20 49 50.1 -1.7
WET *ep*PKPbc 20 50 01.6
ARSA Arzberg 144.53 328 ⇑*i*PKPdf PKPdf 20 49 51.2 -0.9
comp=Z,19nm,1.4s
ARSA ⇑*ip*PKPdf pPKPdf 20 50 02.3 -2.4
comp=Z,35nm,1.4s
KRUS Krusevo 144.63 316 *e*PKP PKPdf 20 49 50.3 -2.2
GRF Grafenberg Arr 144.69 335 *e*PKPbc PKPdf 20 49 50.5 -1.8
GRF *ep*PKPbc 20 50 02.6
BUG Bochum--Univer 144.70 340 *e*PKPbc PKPdf 20 49 49.7 -2.6
MOA Molln 144.73 330 ⇑*i*PKPab PKPdf 20 49 51.1 -1.4
comp=Z,39nm,1.1s
MOA ⇓*i*PKPdf pPKPdf 20 50 03.7 -1.4
comp=Z,28nm,1.0s
OHR Ohrid 145.06 316 *e*PKP PKPdf 20 49 50.9 -2.3
SOKA Soboth 145.17 328 ⇑*i*PKPab PKPab 20 49 52.2 -0.7
comp=Z,33nm,1.3s
SOKA ⇑*ip*PKPbc pPKPbc 20 50 04.2 -1.1
comp=Z,60nm,1.7s
RCBR Riachuelo 145.21 133 *e*PKPdf PKPdf 20 49 52.1 -2.2
KBI1 Birley Grange 145.22 350 *e*P PKPbc 20 49 51.3 -1.5
TNS Taunus Mts 145.33 338 *e*PKPbc PKPbc 20 49 52.7 -0.5
TNS *ep*PKPbc pPKPbc 20 50 04.8 -1.0
RJOB Jochberg 145.50 331 *e*PKPbc PKPbc 20 49 52.8 -1.1
RJOB *ep*PKPbc pPKPbc 20 50 05.2 -1.2
KWE Weaver Farm 145.50 350 *e*P PKPdf 20 49 52.0 -1.6
OBKA Obir 145.53 328 ⇑*e*PKPab PKPab 20 49 54.0 -0.3
comp=Z,15nm,1.3s
OBKA ⇓*ip*PKPbc pPKPbc 20 50 05.5 -1.0
comp=Z,27nm,1.0s
TIR Tirane 145.55 317 PKPdf PKPdf 20 49 53.4 -0.7
CWF Charnwood Fore 145.68 349 *e*P PKPdf 20 49 52.9 -1.0
TOD Tromm 145.71 337 PKP PKPdf 20 49 53.5 -0.6
HGN Heimansgroeve 145.72 341 *e*P PKPdf 20 49 53.3 -0.7
comp=Z,39nm,1.6s
KBA Koelnbreinsper 145.72 330 ⇑*i*PKPbc PKPbc 20 49 53.5 -1.0
comp=Z,22nm,1.1s
KBA ⇓*ip*PKPdf pPKPdf 20 50 06.2 -0.6
comp=Z,38nm,1.2s
SBD1 Bryn Du 145.82 351 *e*P PKPdf 20 49 52.9 -1.2
MEM Membach 145.83 340 PKP PKPdf 20 49 54.3 0.0
MEM APKP pPKPdf 20 50 06.0 -0.9
FUR Furstenfeldbru 145.85 333 *e*PKPbc PKPbc 20 49 54.2 -0.8
FUR *ep*PKPbc pPKPbc 20 50 06.2 -1.3
MYKA Terra Mystica 145.89 329 ⇑*i*PKPdf PKPdf 20 49 53.3 -1.2
comp=Z,31nm,1.7s
MYKA ⇓*ip*PKPdf pPKPdf 20 50 06.5 -0.6
comp=Z,20nm,0.9s
ABH Alteburg 145.93 338 PKP PKPdf 20 49 54.4 0.0
HLM1 Long Mynd 146.15 351 *e*P PKPdf 20 49 53.3 -1.4
UCC Uccle 146.16 342 PKP PKPdf 20 49 54.6 -0.2
UCC APKP pPKPdf 20 50 05.8 -1.7
KTD Kalmit 146.21 337 PKP PKPdf 20 49 55.3 +0.4
BCLA Clavier 146.21 341 PKP PKPdf 20 49 55.3 +0.4
BCLA APKP pPKPdf 20 50 05.7 -1.9
STU Stuttgart 146.23 335 *e*PKPdf PKPdf 20 49 55.7 +0.7
STU *ep*PKPdf pPKPdf 20 50 07.5 -0.1
STU Stuttgart 146.23 335 *e*PKPbc PKPbc 20 49 55.5 -0.6
STU *ep*PKPbc pPKPbc 20 50 07.3 -1.3
RUP Ruppelstein 146.25 338 PKP PKPdf 20 49 55.4 +0.4
WATA Walderalm 146.35 332 ⇑*i*PKPab PKPab 20 49 56.4 -1.0
comp=Z,3.6nm,0.5s
WATA ⇓*ip*PKPbc pPKPbc 20 50 08.2 -0.9
comp=Z,8.0nm,0.7s
ABTA Abfaltersbach 146.35 330 ⇑*e*PKPbc PKPbc 20 49 55.6 -0.9
comp=Z,9.8nm,0.7s
ABTA ⇑*ip*PKPdf pPKPdf 20 50 07.0 -0.9
comp=Z,51nm,1.4s
WTTA Wattenberg 146.38 331 ⇓*e*PKPab PKPab 20 49 56.2 -1.3
comp=Z,25nm,1.2s
WTTA ⇑*ip*PKPbc pPKPbc 20 50 08.3 -0.8
comp=Z,62nm,1.7s
SNF Seneffe 146.44 342 PKP PKPdf 20 49 56.0 +0.8
SNF APKP pPKPdf 20 50 06.3 -1.6
MOTA Moosalm 146.55 332 ⇑*i*PKPab PKPab 20 49 56.9 -1.2
comp=Z,12nm,0.7s
MOTA ⇑*ip*PKPbc pPKPbc 20 50 08.5 -1.1
comp=Z,17nm,0.7s
LANF Langenberg 146.59 337 PKP PKPdf 20 49 56.3 +0.7
RETA Reutte 146.59 333 ⇓*i*PKPab PKPab 20 49 57.0 -1.2
comp=Z,21nm,1.6s
RETA ⇓*ip*PKPbc pPKPbc 20 50 09.2 -0.5
comp=Z,13nm,1.1s
WLF Walferdange 146.59 339 PKP PKPdf 20 49 56.9 +1.3
WLF APKP pPKPdf 20 50 07.2 -1.0
WLF Walferdange 146.59 339 *e*PKPbc PKPbc 20 49 57.0 -0.1
WLF *ep*PKPbc pPKPbc 20 50 08.9 -0.8
SQTA Sankt Quirin 146.60 332 ⇑*i*PKPbc PKPbc 20 49 56.6 -0.6
SQTA ⇑*ip*PKPbc pPKPbc 20 50 08.7 -1.1
HTR Trewern Hill 146.63 351 *e*P PKPdf 20 49 55.1 -0.4
GIVF Givet 146.64 341 ⇑*i*PKP1 PKPbc 20 49 56.3 -0.9
comp=Z,35nm,0.9s
MCH1 Michaelchurch 146.67 351 *e*P PKPdf 20 49 55.4 -0.2
DOU Dourbes 146.71 341 PKP PKPdf 20 49 56.7 +1.0
DOU APKP pPKPdf 20 50 08.7 +0.3
BAIF Baives 146.86 342 ⇑*i*PKP1 PKPbc 20 49 57.1 -0.8
comp=Z,46nm,1.0s
BFO Black Forest 146.93 336 *e*PKPdf PKPdf 20 49 57.0 +0.8
BFO Black Forest 146.93 336 *e*PKPbc PKPbc 20 49 57.0 -1.1
BFO *ep*PKPbc pPKPbc 20 50 09.6 -1.1
SPAK Spaichingen-Ko 146.94 335 PKP PKPdf 20 49 57.0 +0.8
SWN1 Swindon 146.94 349 *e*P 20 49 57.0 +0.9
FETA Feichten 146.97 332 ⇑*i*PKPbc PKPbc 20 49 57.8 -0.5
comp=Z,27nm,1.3s
FETA ⇑*ip*PKPbc pPKPbc 20 50 10.0 -0.8
comp=Z,37nm,1.2s
HGH Gray Hill 146.99 350 *e*P PKPdf 20 49 56.7 +0.6
WOL Wolverton 147.03 348 *e*P PKPdf 20 49 56.8 +0.6
DAVA Damuels 147.13 333 ⇓*i*PKPbc PKPbc 20 49 58.5 -0.2
comp=Z,27nm,1.3s
DAVA ⇑*ip*PKPab pPKPab 20 50 11.5 -1.3
comp=Z,45nm,1.1s
CDF Champ du Feu 147.26 337 ⇑*i*PKP1 PKPbc 20 49 58.2 -0.8
comp=Z,71nm,1.1s
LIBD Limburg 147.35 336 PKP PKPdf 20 49 58.2 +1.3
FELD Feldberg im Sc 147.43 336 PKP PKPdf 20 49 56.8 -0.2
ECH Echery 147.47 337 PKP PKPdf 20 49 57.6 +0.5
ECH Echery 147.47 337 *e*PKIKP PKPdf 20 49 58.3 +1.2
ECH *e* 20 50 10.8
THEF They Montfort 147.88 338 PKP PKPdf 20 49 57.0 -0.8
HINF Hinteralfeld 147.91 337 ⇑*i*PKP1 PKPbc 20 49 59.7 -1.1
comp=Z,23nm,1.0s
HAU Haudompre 147.94 338 ⇑*i*PKP1 PKPbc 20 49 59.9 -1.0
comp=Z,39nm,0.9s
HAU *e*MLR MLR
comp=Z,102nm,21.8s,MS4.3
HAU Haudompre 147.94 338 ⇑*i*PKIKP PKPbc 20 49 59.9 -1.0
HAU MLR MLR
comp=Z,100nm,21.8s,MS4.6
BBS Basel-Blauen 147.96 336 PKP PKPdf 20 49 55.8 -2.1
MEZF Maizieres J'vi 147.97 339 ⇑*i*PKP1 PKPbc 20 50 00.4 -0.6
comp=Z,150nm,1.3s
TUE Stuetta 147.99 333 *e*PKPdf PKPdf 20 49 58.9 +0.9
TUE *ep*PKPdf pPKPdf 20 50 12.7 +2.0

LOMF	**Lomont**	**148.31**	**336**	PKP	PKPbc	20 50 00.8	-1.1
CABF	**La Chapelle**	**149.21**	**336**	⇑*i*PKP1	PKPbc	20 50 03.8	-0.4
	comp=Z,52nm,1.0s						
OG01	**Vacheresse**	**149.21**	**335**	PKP	PKPbc	20 50 05.0	+0.8
FLN	**La Foliniere**	**149.29**	**346**	⇑*i*PKP1	PKPbc	20 50 03.0	-1.4
	comp=Z,28nm,0.7s						
FLN				*e*MLR	MLR		
	comp=Z,101nm,18.2s,MS4.3						
FLN	**La Foliniere**	**149.29**	**346**	⇑*i*PKIKP	PKPbc	20 50 03.0	-1.4
FLN				MLR	MLR		
	comp=Z,100nm,18.3s,MS4.7						
LDF	**La Druitiere**	**149.36**	**345**	⇑*i*PKP1	PKPbc	20 50 03.2	-1.3
	comp=Z,108nm,1.4s						
LOR	**Lormes**	**149.44**	**340**	⇑*i*PKP1	PKPbc	20 50 03.8	-1.0
	comp=Z,67nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,99nm,18.5s,MS4.3						
LOR	**Lormes**	**149.44**	**340**	⇑*i*PKHKP	PKPbc	20 50 03.8	-1.0
LOR				MLR	MLR		
	comp=Z,100nm,18.5s,MS4.6						
GRR	**Gorron**	**149.72**	**346**	⇑*i*PKP1	PKPbc	20 50 04.3	-1.1
	comp=Z,127nm,1.3s						
SSF	**Saint Saulge**	**149.73**	**340**	⇑*i*PKP1	PKPbc	20 50 04.6	-0.9
	comp=Z,71nm,1.0s						
HYF	**Humbligny**	**149.82**	**341**	⇑*i*PKP1	PKPbc	20 50 05.1	-0.6
LPL	**La Plagne**	**149.86**	**334**	⇑*i*PKP1	PKPbc	20 50 05.5	-0.4
	comp=Z,66nm,1.3s						
LPG	**La Plagne**	**149.87**	**334**	⇑*i*PKP1	PKPbc	20 50 05.7	-0.2
	comp=Z,52nm,1.1s						
SMF	**Signal de Mont**	**149.99**	**339**	*e*PKP1	PKPbc	20 50 05.0	-1.1
	comp=Z,66nm,1.4s						
AVF	**Avril sur Loir**	**150.02**	**340**	⇑*i*PKP1	PKPbc	20 50 05.0	-1.2
	comp=Z,30nm,1.1s						
SGMF	**Saint Gilles**	**150.21**	**348**	⇑*i*PKP1	PKPbc	20 50 05.2	-1.4
	comp=Z,30nm,0.9s						
BNI	**Bardonecchia**	**150.26**	**334**	*e*PKPbc	PKPbc	20 50 06.5	-0.4
ROSF	**Rostrenen**	**150.26**	**349**	⇑*i*PKP1	PKPbc	20 50 05.2	-1.5
	comp=Z,11nm,0.8s						
BGF	**Bois d'Agland**	**150.39**	**340**	⇑*i*PKP1	PKPbc	20 50 06.1	-1.0
	comp=Z,37nm,1.0s						
MBDF	**Montbardon**	**150.48**	**333**	*e*PKP1	PKPbc	20 50 06.4	-1.0
QUIF	**Quistinic**	**150.64**	**349**	*e*PKP1	PKPbc	20 50 06.3	-1.4
ORIF	**Oris-en-Rattie**	**150.69**	**335**	⇑*i*PKP1	PKPbc	20 50 07.1	-0.8
	comp=Z,30nm,0.9s						
ORIF				*e*MLR	MLR		
	comp=Z,137nm,21.0s,MS4.4						
AGO	**Saint Agoulin**	**150.74**	**339**	PKP	PKPbc	20 50 06.6	-1.4
TCF	**Toulx Ste Croi**	**150.83**	**341**	⇑*i*PKP1	PKPbc	20 50 07.1	-1.1
	comp=Z,65nm,1.2s						
SBF	**Sospel**	**150.88**	**332**	⇑*i*PKP1	PKPbc	20 50 08.0	-0.4
	comp=Z,163nm,1.3s						
SSB	**Saint Sauveur**	**150.91**	**337**	*e*PKPbc	PKPbc	20 50 07.7	-0.7
PYM	**Petit Puy Mans**	**151.05**	**339**	PKP	PKPbc	20 50 08.4	-0.3
PGF	**Pioggiola**	**151.13**	**328**	*e*PKP1	PKPbc	20 50 08.1	-0.9
	comp=Z,189nm,1.3s						
VIVF	**Saint-Julien-l**	**151.22**	**336**	⇑*i*PKP1	PKPbc	20 50 08.3	-0.8
	comp=Z,33nm,1.1s						
MFF	**Saint Martin d**	**151.22**	**344**	*e*PKP1	PKPbc	20 50 07.9	-1.2
	comp=Z,104nm,1.3s						
LBL	**Lubilhac**	**151.42**	**338**	PKP	PKPbc	20 50 09.2	-0.4
FRF	**La Foret Royal**	**151.47**	**332**	⇑*i*PKP1	PKPbc	20 50 08.5	-1.2
	comp=Z,117nm,1.4s						
SMRF	**Simiane la Rot**	**151.59**	**334**	⇑*i*PKP1	PKPbc	20 50 09.4	-0.6
	comp=Z,83nm,1.3s						
LMR	**La Mourre**	**151.71**	**332**	*e*PKP1	PKPbc	20 50 09.1	-1.2
	comp=Z,76nm,1.2s						
RJF	**Les Rejaudoux**	**151.93**	**341**	⇑*i*PKP1	PKPbc	20 50 09.7	-1.0
	comp=Z,39nm,1.2s						
RJF				*e*MLR	MLR		
	comp=Z,109nm,17.0s,MS4.4						
CAF	**Calviac**	**152.09**	**340**	*e*PKP1	PKPbc	20 50 10.1	-1.0
	comp=Z,25nm,1.2s						
LASF	**Ste Croix**	**152.19**	**336**	*e*PKP1	PKPbc	20 50 10.5	-0.9
	comp=Z,54nm,1.2s						
LFF	**La Frestale**	**152.50**	**341**	*e*PKP1	PKPbc	20 50 10.9	-1.1
	comp=Z,20nm,0.9s						
MTLF	**Montolieu**	**153.43**	**338**	⇑*i*PKP1	PKPbc	20 50 13.0	-1.1
	comp=Z,22nm,1.2s						
ESDC	**Sonseca Array**	**158.68**	**344**	PKPab	PKPab	20 50 47.6	-1.4
	comp=Z,0.3nm,0.4s,baz=14,slow=3.7,SNR=6.5						
ESDC				pPKPab	pPKPab	20 51 00.1	-1.1
	comp=Z,1.3nm,0.8s,baz=6.7,slow=6.3,SNR=2.7						
LIC	**Lamto**	**165.73**	**206**	*e*P	PKPab	20 51 19.1	-1.3
	comp=Z,46nm,1.3s						
LIC	**Lamto**	**165.73**	**206**	⇑*i*PKP2	PKPab	20 51 20.4	0.0
	comp=Z,33nm,1.1s						
LIC				*e*MLR	MLR		
	comp=Z,114nm,22.0s						
DBIC	**Dimbokro**	**166.06**	**207**	PKPab	PKPab	20 51 21.8	0.0
	comp=Z,5.4nm,0.9s,baz=106,slow=6.7,SNR=6.5						
DBIC				pPKPab	pPKPab	20 51 35.1	+1.0
	comp=Z,3.8nm,0.9s,baz=133,slow=11,SNR=2.2						
TORD	**Torodi Ar. Bea**	**166.19**	**246**	PKP	PKPdf	20 50 20.5	-1.2
	comp=Z,3.5nm,1.0s,baz=48,slow=0.9,SNR=14						
TORD				pPKP	pPKPdf	20 50 33.1	-1.3
	comp=Z,3.2nm,0.9s,baz=36,slow=0.4,SNR=9.1						
TORD				PKPab	PKPab	20 51 21.9	-0.7
	comp=Z,4.4nm,1.1s,baz=111,slow=4.4,SNR=8.8						
TORD				pPKPab	pPKPab	20 51 34.1	-0.8
	comp=Z,4.2nm,1.0s,baz=110,slow=4.0,SNR=5.0						

FUNV 22 20:33:58.7, 905N×7097W, h19km, MW3.6, 4C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	**El Vigia**	**0.44**	**242**	⇑*i*P	Pg	20 34 07.8	-0.1
VIGV				*e*S	Sg	20 34 14.0	+0.1
SOCV	**Socops**	**0.77**	**172**	⇓*i*P	Pb	20 34 12.6	-0.8
SOCV				*e*S	Sb	20 34 23.0	-0.4
CURV	**Curarigua**	**1.38**	**46**	⇑*i*P	Pn	20 34 21.9	-1.1
CURV				*e*S	Sn	20 34 39.6	-1.1
SANV	**Sanarito**	**1.48**	**72**	⇑*e*P	Pn	20 34 23.8	-0.6
SANV				*e*S	Sn	20 34 42.5	-0.7
DABV	**Dabajuro**	**1.89**	**10**	*e*P	Pn	20 34 29.3	-0.7
DABV				*e*S	Sn	20 34 52.6	-0.8
SIQV	**Siquisique**	**1.96**	**36**	*e*P	Pn	20 34 30.4	-0.5
SIQV				*e*S	Sn	20 34 53.8	-1.2
TEPV	**Terepaima**	**1.97**	**62**	*e*P	Pn	20 34 31.6	+0.4
TEPV				*e*S	Sn	20 34 55.0	-0.3
VIRV	**Villa del Rosa**	**2.03**	**316**	⇓*e*P	Pn	20 34 30.8	-1.1
VIRV				*e*S	Sn	20 34 55.6	-1.0
ELOV	**Elorza**	**2.51**	**144**	⇑*e*P	Pn	20 34 37.9	-0.5
BAUV	**El Baul**	**2.89**	**92**	*e*P	Pn	20 34 43.1	-0.6
BAUV				*e*S	Sn	20 35 15.5	-2.5
TURV	**Turiamo**	**3.38**	**65**	*e*P	Pn	20 34 49.9	-0.6
BIRV	**Birongo**	**4.84**	**73**	*e*P	Pn	20 35 09.6	-1.0
CAOV	**Caicara del Or**	**4.91**	**110**	*e*P	Pn	20 35 10.6	-0.9
CUPV	**Cœpira**	**5.21**	**78**	*e*P	Pn	20 35 14.8	-0.8

IDC 22 20:40:11.1±52.0, 1592S×17226W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/19, mbtmp3.9/3, MS4.2/1, Ms1 4.2/1, ms1mx3.0/31, Error ellipse: s-maj=1010.0km s-min=197.8km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.73**	**241**	P	P	20 48 26.6	+0.3
	0.6nm,0.4s,baz=84,slow=5.2,SNR=3.5						
WRA	**Warramunga Arr**	**50.80**	**257**	P	P	20 49 13.4	-0.2
	0.3nm,0.5s,baz=95,slow=6.7,SNR=10.0						
ASAR	**Alice Springs**	**51.00**	**252**	P	P	20 49 14.8	-0.2
	2.7nm,0.6s,baz=88,slow=8.4,SNR=51						

*NAO **22** 21:00:58.5±1.8, 6786N×1513E, ML2.7*
*BER **22** 21:00:59.5±3.4, 6785N×1519E, h5km, MD2.7, ML2.5, ML2.7(NAO)*
*NEIC **22** 21:00:59.8, 6788N×1512E, h5km, ML2.7(NAO), ML2.5(BER), After BER.*
*CSEM **22** 21:00:59.5±0.2, 6790N×1469E, h25km, ML2.7, Error ellipse: s-maj=7.2km s-min=5.0km az=130.0*

HEL 22 21:00:58.6±0.1, 6784N×1520E, h10km, ML3.1, MD2.4(BER), ML2.5(BER), 4C, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEI	**Steigen**	**0.10**	**10**	*i*P	Pg	21 01 00.5	-0.6
STEI				*i*S	Sg	21 01 02.4	-0.5
STEI				AML	AML	21 01 02.6	
	comp=Z,2μm,0.1s						
STEI	**Steigen**	**0.10**	**10**	*i*P	Pg	21 01 00.5	-0.6
STEI				*e*S	Sg	21 01 02.4	-0.5
STEI				AML	AML	21 02 02.6	
	comp=Z,2μm,0.1s						
LOF	**Lofoten**	**0.69**	**296**	⇑*i*P	Pg	21 01 11.4	-0.6
LOF				*i*S	Sg	21 01 20.3	-0.6
LOF				AML	AML	21 01 21.3	
	comp=Z,201nm,0.3s						
LOF	**Lofoten**	**0.69**	**296**	⇑*i*P	Pg	21 01 11.4	-0.6
LOF				*e*S	Sg	21 01 20.3	-0.6
LOF	**Lofoten**	**0.69**	**296**	⇑*i*P	Pg	21 01 11.4	-0.6
LOF				*e*S	Sg	21 01 20.3	-0.6
LOF				AML	AML	21 01 21.3	
	comp=Z,201nm,0.3s						
LOF	**Lofoten**	**0.69**	**296**	⇑*i*P	Pg	21 01 11.4	-0.5
LOF				*e*S	Sg	21 01 20.3	-0.6
FLOS	**Flostrand**	**1.67**	**206**	*e*P	Pn	21 01 26.8	-1.0
FLOS				*e*S	Sn	21 01 49.5	+0.3
FLOS				AML	AML	21 01 56.7	
	comp=Z,109nm,0.3s						
MOR8	**Moi Rana**	**1.70**	**190**	*e*P	Pn	21 01 25.4	-2.9
MOR8				AML	AML	21 01 47.9	
	comp=Z,93nm,0.2s						
STOK	**Stokkvaagen**	**1.73**	**211**	*e*P	Pn	21 01 27.5	-1.2
STOK				*e*S	Sn	21 01 51.0	+0.2
STOK				AML	AML	21 01 53.7	
	comp=Z,100nm,0.3s						
STOK	**Stokkvaagen**	**1.73**	**211**	*e*P	Pn	21 01 27.5	-1.2
STOK				*e*S	Sn	21 01 51.0	+0.2
STOK	**Stokkvaagen**	**1.73**	**211**	*e*P	Pn	21 01 27.5	-1.2
STOK				*e*S	Sn	21 01 51.0	+0.2
TRO	**Tromso**	**2.26**	**35**	*e*P	Pn	21 01 36.6	+0.7
TRO				*e*SG	Sg	21 02 09.3	-1.8
KIF	**Kilpisjarvi**	**2.38**	**58**	*e*P	Pn	21 01 38.6	+1.1
KIF				MPN		21 01 42.6	
	comp=Z,13nm,0.2s						
KIF				*e*SB	Sb	21 02 09.1	-1.7
KTK1	**Kautokeino**	**3.20**	**65**	*e*P	Pn	21 01 50.4	+1.6
HEF	**Hetta**	**3.22**	**76**	*e*P	Pn	21 01 49.9	+0.8
HEF				*e*S	Sn	21 02 26.7	-0.7
NSS	**Namsos**	**3.57**	**203**	*e*P	Pn	21 01 53.7	-0.2
NSS				*e*S	Sn	21 02 37.3	+1.3
NSS				AML	AML	21 02 47.0	
	comp=Z,21nm,0.3s						
NSS	**Namsos**	**3.57**	**203**	*e*P	Pn	21 01 53.7	-0.2
NSS				*e*S	Sn	21 02 37.3	+1.3
NSS	**Namsos**	**3.57**	**203**	*e*P	Pn	21 01 53.7	-0.2
NSS				*e*S	Sn	21 02 37.3	+1.2
ARE0	**ARCESS Array S**	**4.13**	**61**	Pn	Pn	21 02 04.1	+2.5
ARE0	**ARCESS Array S**	**4.13**	**61**	Pn	Pn	21 02 04.1	+2.5
ARA0	**ARCESS Array S**	**4.13**	**61**	*e*P	Pn	21 02 01.3	-0.3
ARA0				*e*PG	Pg	21 02 12.8	-4.8
ARA0				*e*S	Sn	21 02 47.9	-2.0
ARA0				*e*SG	Sg	21 03 05.6	-5.5
ARA0	**ARCESS Array S**	**4.13**	**61**	Pn	Pn	21 02 01.3	-0.3
	baz=249,slow=14						
ARA0				Pg	Pg	21 02 12.8	-4.8
	baz=243,slow=16						
ARA0				Sn	Sn	21 02 47.9	-2.0
	baz=244,slow=22						
ARA0				Lg		21 03 05.6	
	baz=251,slow=28						
ARA0	**ARCESS Array S**	**4.13**	**61**	Pg	Pg	21 02 12.8	-4.8
	SNR=3.9						
ARA0				Sn	Sn	21 02 47.9	-2.0
	SNR=6.2						
SGF	**Sodankyl**	**4.35**	**90**	*e*P	Pn	21 02 04.8	+0.2
SGF				*e*S	Sn	21 02 53.3	-1.9
KEV	**Kevo**	**4.70**	**60**	*e*P	Pn	21 02 12.4	+3.0
KEV	**Kevo**	**4.70**	**60**	*e*P	Pn	21 02 12.4	+3.0
OUL	**Oulu**	**5.10**	**118**	*e*S	Sn	21 03 11.0	-2.7
VRF	**Varrio**	**5.47**	**84**	*e*P	Pn	21 02 20.2	+0.3
VRF				MPN		21 02 25.9	
	comp=Z,1.4nm,0.2s						
VRF				*e*S	Sn	21 03 20.8	-2.0
VAF	**Ylistaro**	**5.73**	**144**	*e*P	Pn	21 02 24.2	+0.7
VAF				*e*S	Sn	21 03 26.3	-2.9
MSF	**Maaselka**	**5.78**	**103**	*e*P	Pn	21 02 23.8	-0.5
MSF				*e*S	Sn	21 03 28.3	-2.3
KU6	**Riekki**	**6.05**	**101**	*e*P	Pn	21 02 28.0	0.0
KU6				MPN		21 02 31.0	
	comp=Z,1.1nm,0.2s						
KU6				*e*S	Sn	21 03 33.8	-3.4
KJN	**Kajaani**	**6.34**	**120**	*e*P	Pn	21 02 31.8	-0.2
KJN				MPN		21 02 36.4	
	comp=Z,2.0nm,0.2s						
KJN				*e*S	Sn	21 03 40.5	-3.8
APA0	**Apatity Array**	**6.77**	**84**	Pn	Pn	21 02 36.8	-1.0
	baz=291,slow=12						
APA0				Sn	Sn	21 03 51.2	-3.5
	baz=282,slow=28						
APA0				Lg		21 04 29.8	
	baz=282,slow=56						
APA0	**Apatity Array**	**6.77**	**84**	*e*P	Pn	21 02 36.8	-1.0
APA0				*e*S	Sn	21 03 51.2	-3.5
APA0				*e*SG	Sg	21 04 29.8	-5.7
APA0	**Apatity Array**	**6.77**	**84**	Pn	Pn	21 02 36.8	-0.9
	SNR=4.5						
APA0				Sn	Sn	21 03 51.2	-3.5
	SNR=8.7						
SUF	**Sumiainen**	**6.88**	**133**	*e*P	Pn	21 02 40.1	+0.8
SUF				MPN		21 02 40.7	
	comp=Z,1.3nm,0.2s						
SUF				*e*S	Sn	21 03 55.0	-2.6
KEF	**Keuruu**	**7.00**	**140**	*e*P	Pn	21 02 42.0	+1.0
KEF				MPN		21 02 42.3	
	comp=Z,2.4nm,0.2s						
KEF				*e*S	Sn	21 03 57.2	-3.4
NB2	**NORSAR Subarra**	**7.04**	**196**	*e*P	Pn	21 02 42.1	+0.7
RAF	**Rauma**	**7.40**	**154**	*e*S	Sn	21 04 07.2	-3.2
KAF	**Kangasniemi**	**7.42**	**135**	*e*P	Pn	21 02 47.1	+0.4
KAF				MPN		21 02 47.6	
	comp=Z,2.4nm,0.1s						
KAF				*e*S	Sn	21 04 06.7	-4.0
HFS	**Hagfors**	**7.76**	**186**	Pn	Pn	21 02 49.6	-1.8
	baz=24,slow=9.3						
HFS				Sn	Sn	21 04 14.6	-4.6
	baz=21,slow=28						
HFS				Lg		21 04 58.4	
	baz=8.7,slow=28						
HFS	**Hagfors**	**7.76**	**186**	*e*P	Pn	21 02 49.6	-1.8
HFS				*e*S	Sn	21 04 14.6	-4.6
HFS				*e*SG	Sn	21 04 58.4	+39
HFS	**Hagfors**	**7.76**	**186**	Pn	Pn	21 02 49.6	-1.8
	SNR=4.7						
HFS				Sn	Sn	21 04 14.6	-4.6
FIA0	**FINESS Array S**	**7.92**	**139**	Pn	Pn	21 02 53.9	+0.2
	baz=336,slow=14						
FIA0				Sn	Sn	21 04 19.9	-3.3
	baz=330,slow=22						
FIA0				Lg		21 05 02.0	
	baz=331,slow=28						
FIA0	**FINESS Array S**	**7.92**	**139**	*e*P	Pn	21 02 53.9	+0.2
FIA0				*e*S	Sn	21 04 19.9	-3.3
FIA0				*e*SG	Sn	21 05 02.0	+39
FIA0	**FINESS Array S**	**7.92**	**139**	Pn	Pn	21 02 53.8	+0.2
	SNR=5.5						
FIA0				Sn	Sn	21 04 19.9	-3.3
	SNR=3.2						

*ISCJB **22** 21:02:27.5±0.7, 2223S×003×7063W×005, h38km±7km, mb4.2/9, MS3.7/4, Error ellipse: s-maj=8.3km s-min=5.7km az=3.7*
*NEIC **22** 21:02:27.8, 2226S×7057W, h37km, mb3.9/2, After GUC.*
NEIC Felt [III] at Tocopilla.
*GUC **22** 21:02:27.8±0.5, 2226S×7057W, h37km±2km, ML4.3*
*IDC **22** 21:02:29.2±2.8, 2229S×7045W, h32km±19km, mb4.1/9, mb1 4.3/12, mb1mx4.1/19, mbtmp4.1/12, ML4.2/3, MS3.6/6, Ms1 3.6/6, ms1mx3.2/35, Error ellipse: s-maj=22.7km s-min=17.2km az=38.0*

ISC 22 21:02:27.6±1.0, 2228S±003×7063W±005, h23km±7km, n50, σ1§01/45, mb4.2/9, MS3.7/4, 1C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**0.81**	**84**	⇓*i*P	**Pb**	**21 02 42.5**	**-0.5**
MACH				*i*S	**Sb**	**21 02 53.2**	**-0.4**
MECH	**Mejillones**	**0.83**	**169**	*e*P	**Pb**	**21 02 43.1**	**-0.3**
MECH				*e*S	**Sb**	**21 02 55.2**	**+1.0**
MECH				AML	AML	21 03 01.4	
	comp=N,23μm,0.6s						
CEN1	**Los Morros**	**1.17**	**160**	⇓*i*P	**Pn**	**21 02 50.0**	**+1.4**
CEN1				*i*S	**Sn**	**21 03 08.6**	**+4.7**
CEN1				AML	AML	21 03 17.6	
	comp=E,6μm,0.6s						
ANCH	**Antofagasta**	**1.41**	**172**	⇑*i*P	**Pn**	**21 02 51.0**	**-0.8**
ANCH				*e*S	**Sn**	**21 03 09.7**	**0.0**
LVC	**Limon Verde**	**1.62**	**102**	Pg	**Pn**	**21 02 56.4**	**+1.6**
	comp=E,418nm,0.3s,baz=271,slow=11,SNR=3329						
LVC				Lg		21 03 16.8	
	comp=E,2μm,0.3s,baz=299,slow=9.5,SNR=26						
LVC				LR	LR	21 03 18.8	
	comp=E,984nm,19.2s,baz=3.0,slow=34						
LVC	**Limon Verde**	**1.62**	**102**	*e*Pn	**Pn**	**21 02 56.0**	**+1.2**
LVC				Sn	**Sn**	**21 03 15.2**	**+0.2**
LVC	**Limon Verde**	**1.62**	**102**	*e*P	**Pn**	**21 02 55.3**	**+0.6**
LVC				*i*S	**Sn**	**21 03 16.6**	**+1.6**
LVC				AML	AML	21 03 20.2	
	comp=E,8μm,0.7s						
ARE	**Arequipa**	**5.85**	**352**	*e*P	**Pn**	**21 03 52.0**	**-0.9**
ARE				*e*S	**Sn**	**21 04 59.0**	**-0.2**
LPAZ	**La Paz**	**6.41**	**22**	Pn	**Pn**	**21 04 04.5**	**+3.9**
	comp=E,3.3nm,0.3s,baz=224,slow=7.4,SNR=28						
LPAZ				LR	LR	21 06 48.8	
	comp=E,415nm,21.3s,baz=1.2,slow=41						
LPAZ	**La Paz**	**6.41**	**22**	*e*Pn	**Pn**	**21 04 04.4**	**+3.7**
	comp=E,62nm,0.9s						
LPAZ				*e*PcP	PcP	21 10 56.0	-1.8
LCO	**Las Campanas**	**6.70**	**181**	Pn	**Pn**	**21 04 11.7**	**+7.1**
CFAA	**Coronel Fontan**	**9.53**	**168**	Pn	**Pn**	**21 04 42.3**	**-1.1**
	comp=E,0.1nm,0.3s,baz=358,slow=13,SNR=5.1						
CFAA				Sn	**Sn**	**21 06 43.7**	**+14**
	comp=E,0.4nm,0.3s,baz=230,slow=18,SNR=12						
SIV	**San Ignacio**	**10.98**	**57**	Pn	**Pn**	**21 05 03.3**	**-0.1**
	comp=E,2.5nm,0.3s,baz=248,slow=12,SNR=58						
SIV				Sn	**Sn**	**21 07 07.4**	**+1.8**
	baz=260,slow=15,SNR=3.3						
NNA	**Nana**	**11.83**	**329**	Pn	**Pn**	**21 05 16.3**	**+1.3**
	comp=E,1.2nm,0.3s,baz=250,slow=14,SNR=2.6						
NNA	**Nana**	**11.83**	**329**	Pn	**Pn**	**21 05 15.6**	**+0.6**
ATAH	**Atahualpa**	**16.94**	**333**	Pn	**Pn**	**21 06 28.3**	**+5.1**
	comp=E,0.3nm,0.3s,baz=121,slow=12,SNR=2.6						
ATAH				LR	LR	21 11 59.2	
	comp=E,76nm,21.3s,baz=150,slow=34						
PLCA	**Paso Flores**	**18.39**	**180**	P	**Pn**	**21 06 41.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=354,slow=15,SNR=3.7						
PLCA	**Paso Flores**	**18.39**	**180**	*e*P	**Pn**	**21 06 39.2**	**-1.9**
	comp=E,16nm,1.4s						
BDFB	**Brasilia**	**22.37**	**77**	P	**P**	**21 07 23.9**	**-0.3**
	comp=E,2.8nm,0.5s,mb3.9,baz=257,slow=18,SNR=8.8						
BDFB				LR	LR	21 16 55.5	
	comp=E,88nm,18.1s,MS3.2,baz=59,slow=39						
BDFB	**Brasilia**	**22.37**	**77**	*e*P	**P**	**21 07 23.3**	**-0.9**
	comp=E,2.9nm,0.7s,mb3.8						
ROSC	**El Rosal**	**27.21**	**352**	LR	LR	21 19 50.0	
	comp=E,105nm,18.6s,MS3.4,baz=9.1,slow=38						
VNA3	**Neumayer Olymp**	**59.86**	**161**	*e*	**P**	**21 12 31.3**	**+0.4**
VNA3				*e*		21 12 40.6	
VNA3				*e*		21 12 43.0	
VNA1	**Neumayer--Stat**	**60.09**	**160**	*e*	**P**	**21 12 33.1**	**+0.6**
VNA1				*e*		21 12 42.6	
VNA1				*e*		21 12 45.1	
TXAR	**Lajitas Array**	**60.38**	**327**	P	**P**	**21 12 35.7**	**+0.7**
	comp=E,0.3nm,0.7s,mb3.5,baz=159,slow=7.7,SNR=2.3						
VNA2	**Neumayer--Watz**	**60.45**	**160**	*e*	**P**	**21 12 35.5**	**+0.5**
	baz=284,slow=8.2						
VNA2				*e*		21 12 44.6	
VNA2				*e*		21 12 47.2	
SNAA	**Sanae**	**62.07**	**161**	*e*	**P**	**21 12 41.8**	**-4.2**
SNAA				*e*		21 12 51.2	
SNAA				*e*		21 12 53.9	
LIC	**Lamto**	**70.14**	**74**	*e*P	**P**	**21 13 37.3**	**-1.4**
	comp=E,15nm,0.8s						
TIC	**Toumodi**	**70.33**	**74**	*e*P	**P**	**21 13 38.6**	**-1.3**
	comp=E,8.6nm,0.2s						
KIC	**Kosan Boka**	**70.45**	**74**	*e*P	**P**	**21 13 39.7**	**-0.9**
	comp=E,28nm,0.8s						
DBIC	**Dimbokro**	**70.48**	**74**	P	**P**	**21 13 39.0**	**-1.8**
	comp=E,7.9nm,0.8s,mb4.7,baz=207,slow=4.9,SNR=12						
PPT	**Papeete**	**73.59**	**257**	LR	LR	21 40 09.5	
	comp=E,84nm,18.3s,MS4.1,baz=84,slow=31						
PDAR	**Pinedale Array**	**74.01**	**331**	P	**P**	**21 14 02.4**	**+1.1**
	comp=E,0.2nm,0.5s,mb3.4,baz=143,slow=2.3,SNR=1.9						
NVAR	**Mina Array Bea**	**75.14**	**323**	P	**P**	**21 14 09.6**	**+1.6**
	comp=E,0.5nm,0.5s,mb3.7,baz=151,slow=5.8,SNR=2.5						
SYO	**Syowa Base**	**76.33**	**160**	⇓*e*P	**P**	**21 14 13.0**	**-1.4**
TORD	**Torodi Ar. Bea**	**79.12**	**71**	P	**P**	**21 14 29.9**	**-0.9**
	comp=E,12nm,0.8s,mb4.9,baz=254,slow=4.9,SNR=111						
MAW	**Mawson**	**84.04**	**164**	P	**P**	**21 14 56.6**	**+0.7**
	comp=E,5.4nm,1.0s,mb4.6,baz=284,slow=6.0,SNR=5.0						
MAW				LR	LR	21 53 52.4	
	comp=E,56nm,18.3s,MS4.0,baz=83,slow=37

GTA			AP		21 37 38.8	
GTA			XP		21 37 42.3	
GTA			AMB	AMB		
	comp=Z,14nm,0.8s					
GYA	**Guiyang**	**13.07 117**	P	**Pn**	**21 38 38.6**	**-1.6**
CMAR	**Chiang Mai Arr**	**15.27 161**	Pn	**Pn**	**21 39 06.0**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=330,slow=12,SNR=8.8					
SONM	**Songino Array**	**17.66 29**	P	**Pn**	**21 39 39.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=214,slow=13,SNR=14					
SONM			LR	LR	21 46 11.4	
	comp=Z,33nm,20.9s,baz=36,slow=36					
KBL	**Kabul**	**20.49 281**	*e*P	**P**	**21 40 10.9**	**+0.2**
	comp=Z,3.2nm,0.8s					
KBL	**Kabul**	**20.49 281**	*e*P	**P**	**21 40 10.9**	**+0.2**
KBL			pmax	pmax		
	comp=Z,3.0nm,0.8s					
KURK	**Kurchatov**	**20.85 332**	P	**P**	**21 40 13.8**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=142,slow=11,SNR=9.9					
KURK	**Kurchatov**	**20.85 332**	P	**P**	**21 40 13.8**	**-0.6**
KURK	**Kurchatov**	**20.85 332**	P	**P**	**21 40 13.8**	**-0.6**
KURK			pmax	pmax		
	comp=Z,3.0nm,0.8s					
ZALV	**Zalesovo Beam**	**21.84 346**	P	**P**	**21 40 23.5**	**-1.5**
	comp=Z,0.5nm,0.5s,mb3.2,baz=168,slow=10,SNR=3.0					
ZALV	**Zalesovo Beam**	**21.84 346**	P	**P**	**21 40 23.5**	**-1.5**
ZALV			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5					
WRA	**Warramunga Arr**	**65.46 138**	P	**P**	**21 46 15.2**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.9,baz=335,slow=6.9,SNR=6.2					
WRA	**Warramunga Arr**	**65.46 138**	P	**P**	**21 46 15.2**	**+0.4**
WRA			pmax	pmax		
	comp=Z,1.0nm,0.5s					
ASAR	**Alice Springs**	**68.21 140**	P	**P**	**21 46 33.1**	**+0.9**
	comp=Z,1.3nm,0.7s,mb4.1,baz=327,slow=6.6,SNR=16					
ASAR	**Alice Springs**	**68.21 140**	P	**P**	**21 46 33.1**	**+0.9**
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
CTA	**Charters Tower**	**72.89 129**	LR	LR	22 16 57.5	
	comp=Z,80nm,21.0s,baz=52,slow=34					

NEIC 22 21:49:22.7, 3995S×17380E, h198km, MG4.2(WEL)**, After WEL., Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.66**	**21**	*e*P	Pn	21 49 50.4	+0.1
NWEZ	**Newall Road**	**0.68**	**4**	P	Pn	21 49 50.7	+0.3
NEZ	**North Egmont**	**0.71**	**19**	P	Pn	21 49 50.7	+0.2
PKE	**Pukeiti**	**0.77**	**11**	P	Pn	21 49 51.1	+0.3
PKE				S	Sn	21 50 09.4	-3.1
WAZ	**Wanganui**	**0.93**	**78**	P	Pn	21 49 52.5	+0.7
WAZ				S	Sn	21 50 14.2	0.0
VRZ	**Vera Road**	**1.11**	**42**	P	Pn	21 49 52.6	-0.4
VRZ				S	Sn	21 50 14.6	-1.8
KIW	**Kapiti Island**	**1.24**	**137**	P	Pn	21 49 54.1	+0.1
NNZ	**Nelson**	**1.31**	**194**	P	Pn	21 49 54.3	-0.2
QRZ	**Quartz Range**	**1.31**	**228**	P	Pn	21 49 53.9	-0.6
TCW	**Tory Channel**	**1.31**	**164**	P	Pn	21 49 54.8	+0.3
MRW	**Makara Radio**	**1.45**	**152**	P	Pn	21 49 55.8	+0.1
CAW	**Cannon Point**	**1.51**	**141**	P	Pn	21 49 56.3	+0.1
FWVZ	**Far West T-bar**	**1.52**	**63**	P	Pn	21 49 56.4	0.0
WNVZ	**Wahianoa**	**1.52**	**66**	P	Pn	21 49 56.7	+0.3
SNZO	**South Karori**	**1.52**	**153**	P	Pn	21 49 56.3	0.0
SNZO				*e*Sn	Sn	21 50 19.9	-2.7
WEL	**Wellington**	**1.52**	**151**	P	Pn	21 49 56.4	+0.1
MRZ	**Mangaitainoka R**	**1.54**	**118**	P	Pn	21 49 56.4	-0.1
TWVZ	**Taurewa**	**1.54**	**56**	P	Pn	21 49 56.2	-0.4
WPVZ	**Whakapapa**	**1.54**	**62**	P	Pn	21 49 56.7	+0.1
TUVZ	**Tukino**	**1.58**	**65**	P	Pn	21 49 57.3	+0.3
NGZ	**Ngauruhoe**	**1.59**	**62**	P	Pn	21 49 57.0	0.0
MOVZ	**Moawhango**	**1.60**	**71**	P	Pn	21 49 56.8	-0.3
WTVZ	**West Tongariro**	**1.61**	**60**	P	Pn	21 49 57.1	-0.1
HIZ	**Hauiti**	**1.65**	**30**	P	Pn	21 49 57.1	-0.5
TSZ	**Takapari Road**	**1.66**	**94**	P	Pn	21 49 57.6	-0.1
BHW	**Baring Head**	**1.67**	**151**	P	Pn	21 49 57.4	-0.3
KATZ	**Kakaramea**	**1.76**	**57**	P	Pn	21 49 58.7	+0.1
BSWZ	**Blackbirch Sta**	**1.76**	**178**	P	Pn	21 49 58.8	+0.2
MTW	**Mount Morrison**	**1.77**	**134**	P	Pn	21 49 58.5	-0.2
MSWZ	**Moikau Station**	**1.83**	**143**	P	Pn	21 49 59.0	-0.3
RATZ	**Rangitukua**	**1.87**	**55**	P	Pn	21 49 59.7	0.0
PAWZ	**Paruwai Farm**	**1.89**	**140**	P	Pn	21 50 00.1	+0.2
BFZ	**Birch Farm**	**2.01**	**112**	P	Pn	21 50 01.0	-0.1
HATZ	**Hinemaiaia**	**2.07**	**60**	P	Pn	21 50 01.0	-0.7
WHTZ	**Whakaora**	**2.11**	**53**	P	Pn	21 50 02.3	+0.1
BKZ	**Black Stump Fm**	**2.22**	**70**	P	Pn	21 50 02.9	-0.5
DSZ	**Denniston Nort**	**2.35**	**220**	P	Pn	21 50 04.2	-0.5
KHZ	**Kahutara**	**2.47**	**184**	P	Pn	21 50 05.5	-0.6
LTZ	**Lake Taylor**	**3.06**	**202**	P	Pn	21 50 12.0	-0.8
URZ	**Urewera**	**3.08**	**58**	P	Pn	21 50 11.5	-1.6
KNZ	**Kokohu**	**3.14**	**74**	P	Pn	21 50 13.2	-0.6
MWZ	**Matawai**	**3.32**	**62**	P	Pn	21 50 14.9	-1.1
CRLZ	**Canterbury Las**	**3.73**	**193**	P	Pn	21 50 19.0	-1.9
MQZ	**McQueen's Vall**	**3.85**	**192**	P	Pn	21 50 20.0	-2.4
WVZ	**Waitaha Valley**	**3.88**	**215**	P	Pn	21 50 21.0	-1.8
MXZ	**Matakaoa Point**	**4.25**	**57**	P	Pn	21 50 25.9	-1.6
RPZ	**Rata Peaks**	**4.29**	**208**	P	Pn	21 50 26.3	-1.6
FOZ	**Fox Glacier**	**4.74**	**219**	P	Pn	21 50 30.1	-3.5
LBZ	**Lake Benmore**	**5.18**	**210**	P	Pn	21 50 37.0	-2.3
JCZ	**Jackson Bay**	**5.58**	**221**	P	Pn	21 50 41.9	-2.4
ODZ	**Otahua Downs**	**5.60**	**204**	P	Pn	21 50 42.9	-1.7
WKZ	**Wanaka**	**6.03**	**214**	P	Pn	21 50 46.9	-3.2
TUZ	**Tuapeka**	**6.74**	**206**	P	Pn	21 50 57.1	-2.2
MLZ	**Mavora Lakes**	**6.80**	**216**	P	Pn	21 50 58.8	-1.4
WHZ	**Wether Hill Ro**	**7.33**	**214**	P	Pn	21 51 03.8	-3.2

*ISCJB **22** 21:51:01.1±0.6, 3982N×2069E×005, h8km±6km, Error ellipse: s-maj=6.2km s-min=5.0km az=16.2*
*THE **22** 21:51:01.4, 3981N×2073E, h2km, ML2.7/5, Error ellipse: s-maj=0.8km s-min=0.3km az=303.0*
*ATH **22** 21:51:01.5, 3968N×2067E, h20km, MD3.0/3*
*CSEM **22** 21:51:01.2±0.2, 3978N×2067E, h15km±2km, ML2.7/5, Error ellipse: s-maj=7.3km s-min=4.6km az=23.0*
ISC 22 21:51:01.7±0.6**, 3979N**±003×**2070E**±005**, h11**km±5km**, n11,** σ0**81**/19**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.18**	**138**	*e*PB	**Pg**	**21 51 05.6**	**-0.1**
JAN				*e*SB	**Sg**	**21 51 09.0**	**+0.6**
IGT	**Igoumenitsa**	**0.38**	**227**	P	**Pg**	**21 51 09.1**	**-0.1**
IGT				S	**Sg**	**21 51 15.4**	**+1.0**
KEK	**Kerkira**	**0.69**	**264**	*e*PN	**Pg**	**21 51 14.6**	**-0.6**
THL	**Klokotos Trika**	**1.04**	**102**	P	**Pg**	**21 51 20.4**	**-1.4**
THL				S	**Sg**	**21 51 35.4**	**0.0**
FNA	**Florina**	**1.12**	**28**	P	**Pg**	**21 51 21.8**	**-1.4**
FNA				S	**Sg**	**21 51 37.9**	**+0.1**
EVR	**Evrytania**	**1.23**	**135**	*e*PN	**Pn**	**21 51 23.7**	**-1.0**
LIT	**Litokhoron**	**1.41**	**77**	P	**Pn**	**21 51 26.9**	**-0.4**
LIT				S	**Sn**	**21 51 46.6**	**+0.7**
AGG	**Agios Georgios**	**1.48**	**121**	P	**Pn**	**21 51 28.1**	**-0.1**
AGG				S	**Sn**	**21 51 48.7**	**+1.2**
KRUS	**Krusevo**	**1.63**	**15**	*e*Pn	**Pg**	**21 51 33.2**	**+0.2**
KRUS				*e*Sn	**Sg**	**21 51 55.7**	**+1.5**
KRUS	**Krusevo**	**1.63**	**15**	*e*Pn	**Pg**	**21 51 33.3**	**+0.3**
KRUS				*e*Sn	**Sg**	**21 51 55.7**	**+1.6**
GRG	**Griva**	**1.75**	**48**	P	**Pn**	**21 51 31.6**	**-0.3**

*ISCJB **22** 21:53:22.2±0.5, 535S±004×12957E±007, h256km±5km, mb4.1/20, Error ellipse: s-maj=11.9km s-min=5.5km az=160.3*
*DJA **22** 21:53:24, 529S×12982E, h225km, MLv4.4/5*
*IDC **22** 21:53:25.5±3.2, 553S×12944E, h277km±32km, mb3.5/9, mb1 3.7/12, mb1mx3.6/19, mbtmp3.6/12, Error ellipse: s-maj=33.3km s-min=10.2km az=68.0*
*NEIC **22** 21:53:25.1±2.5, 551S×12948E, h274km±26km, mb4.4/13, Error ellipse: s-maj=34.7km s-min=7.4km az=54.0*
ISC 22 21:53:22.6±0.5**, 546S**±004×**12959E**±007**, h249**km±5km**, n34,** σ0**78**/38**, mb4.2**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.20**	**343**	P	**Pn**	**21 54 05.9**	**-1.0**
MSAI	**Masohi**	**2.20**	**343**	S	**S**	**21 54 39.3**	**-2.6**
AAI	**Ambon**	**2.24**	**322**	P	**Pn**	**21 54 08.2**	**+0.9**
TLE	**Tual**	**3.14**	**93**	P	**Pn**	**21 54 17.3**	**+0.7**
TLE	**Tual**	**3.14**	**93**	S	**S**	**21 54 53.2**	**-6.1**
LBMI	**Labuha**	**5.22**	**336**	P	**Pn**	**21 54 41.8**	**+0.6**
	202nm,0.6s,2μm0.8nm						

BATI	**Baumata**	**7.53 231**	P	**Pn**	**21 55 11.6**	**+1.6**
	4.9nm,0.3s,baz=309,slow=5.3,SNR=4.3					
BATI			S	**S**	**21 56 35.5**	**-0.8**
	3.4nm,0.3s,baz=52,slow=18,SNR=4.1					
KAKA	**Kakadu**	**7.74 159**	P	**Pn**	**21 55 16.5**	**+3.9**
WRAB	**Tennant Creek**	**15.11 163**	*e*P	**Pn**	**21 56 44.4**	**+0.1**
	6.1nm,1.0s					
WRAB			*e*S	**S**	**21 59 30.4**	**-0.6**
WRAB	**Tennant Creek**	**15.11 163**	P	**Pn**	**21 56 44.5**	**+0.2**
WRA	**Warramunga Arr**	**15.12 163**	P	**Pn**	**21 56 44.3**	**-0.1**
	3.5nm,0.3s,baz=347,slow=13,SNR=20					
WRA			S	**S**	**21 59 29.4**	**-1.7**
	2.4nm,0.3s,baz=331,slow=23,SNR=11					
WB2	**Warramunga Arr**	**15.12 163**	*e*P	**Pn**	**21 56 44.3**	**-0.1**
KKM	**Kota Kinabalu**	**17.57 310**	*e*P	**P**	**21 57 11.8**	**+0.9**
	16nm,0.6s					
ASAR	**Alice Springs**	**18.57 167**	P	**P**	**21 57 23.2**	**+1.7**
	2.8nm,0.3s,baz=351,slow=12,SNR=276					
ASAR			S	**S**	**22 00 39.7**	**-0.3**
	baz=351,slow=23,SNR=5.8					
STKA	**Stephens Creek**	**28.59 158**	P	**P**	**21 58 56.8**	**+0.8**
	1.1nm,0.4s,mb3.8,baz=328,slow=9.0,SNR=4.0					
CMAR	**Chiang Mai Arr**	**38.44 309**	P	**P**	**22 00 21.0**	**+0.1**
	1.4nm,0.6s,mb3.7,baz=137,slow=7.5,SNR=8.9					
KSRS	**Korea Array**	**42.72 358**	P	**P**	**22 00 55.4**	**-0.1**
	0.8nm,0.5s,mb3.4,baz=172,slow=8.8,SNR=4.5					
ODAN	**Odare**	**51.95 310**	*e*P	**P**	**22 02 06.7**	**+0.1**
	9.2nm,0.7s,mb4.3					
TAPN	**Taplejung**	**51.97 311**	*e*P	**P**	**22 02 06.8**	**+0.1**
	10.0nm,0.4s,mb4.6					
RAMN	**Ramite**	**52.59 310**	*e*P	**P**	**22 02 11.6**	**+0.2**
	21nm,0.4s,mb4.9					
JIRN	**Jiri**	**53.27 311**	*e*P	**P**	**22 02 16.5**	**+0.2**
	7.5nm,0.6s,mb4.3					
GUN	**Gumba**	**53.64 311**	*e*P	**P**	**22 02 19.0**	**0.0**
	12nm,0.4s,mb4.7					
KKN	**Kakani**	**54.03 310**	*e*P	**P**	**22 02 21.2**	**-0.6**
	4.9nm,0.4s,mb4.4					
DMN	**Daman**	**54.07 310**	*e*P	**P**	**22 02 21.8**	**-0.3**
	5.5nm,0.5s,mb4.3					
GKN	**Gorkha**	**54.63 310**	*e*P	**P**	**22 02 25.7**	**-0.4**
	12nm,0.4s,mb4.8					
KOLN	**Koldanda**	**55.31 309**	*e*P	**P**	**22 02 31.0**	**+0.1**
	5.1nm,0.6s,mb4.3					
DANN	**Dangsing**	**55.47 310**	*e*P	**P**	**22 02 31.9**	**-0.2**
	9.3nm,0.8s,mb4.4					
PYUN	**Piuthan**	**55.94 309**	*e*P	**P**	**22 02 35.6**	**+0.2**
	9.0nm,0.7s,mb4.4					
SONM	**Songino Array**	**56.86 342**	P	**P**	**22 02 41.9**	**+0.4**
	0.8nm,0.5s,mb3.6,baz=164,slow=7.1,SNR=6.9					
MKAR	**Makanchi Array**	**66.72 327**	P	**P**	**22 03 47.5**	**+0.4**
	2.3nm,0.5s,mb4.1,baz=113,slow=8.8,SNR=42					
ZALV	**Zalesovo Beam**	**70.03 334**	P	**P**	**22 04 06.7**	**-0.7**
	1.0nm,0.4s,mb3.8,baz=133,slow=6.3,SNR=5.7					
KURK	**Kurchatov**	**71.00 329**	P	**P**	**22 04 13.5**	**+0.2**
	3.2nm,0.5s,mb4.2,baz=128,slow=4.9,SNR=6.8					
BVAR	**Borovoye Array**	**76.55 328**	P	**P**	**22 04 45.3**	**-0.2**
	0.4nm,0.3s,mb3.5,baz=80,slow=5.8,SNR=5.6					
AKTO	**Aktyubinsk**	**82.61 322**	P	**P**	**22 05 17.0**	**-1.0**
	0.6nm,0.5s,mb3.5,baz=129,slow=13,SNR=2.8					

IDC 22 21:54:01.8±1.9**, 2516N×9835E, h0**km**, mb3.6**/2**, mb1 3.5**/3**, mb1mx3.2**/23**, mbtmp3.5**/3**, ML3.5**/1**, Error ellipse: s-maj=70.2km s-min=19.6km az=80.0, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.70**	**175**	Pn	Pn	21 55 43.1	+1.7
	0.2nm,0.3s,baz=346,slow=13,SNR=3.9						
CMAR				Pg	Pg	21 56 05.7	-4.5
	0.4nm,0.3s,baz=352,slow=18,SNR=11						
CMAR				Lg		21 57 30.4	
	0.5nm,0.3s,baz=353,slow=27,SNR=7.6						
MKAR	**Makanchi Array**	**25.10 333**	P	P		21 59 26.7	-1.3
	1.0nm,1.1s,baz=141,slow=9.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**30.47 344**	P	P		22 00 17.0	+0.9
	0.4nm,0.3s,baz=146,slow=8.7,SNR=4.5						

*ISCJB **22** 22:07:11.9±5.2, 146S±01×1529E±01, h107km±49km, mb4.1/12, Error ellipse: s-maj=24.1km s-min=17.4km az=139.6*
*IDC **22** 22:07:11.8±1.2, 163S×15281E, h87km±8km, mb3.9/10, mb1 4.0/11, mb1mx3.9/19, mbtmp3.9/11, MS3.3/7, Ms1 3.3/7, ms1mx2.9/25, Error ellipse: s-maj=25.7km s-min=14.5km az=82.0*
*NEIC **22** 22:07:12.5±3.2, 161S×15283E, h96km±28km, mb4.3/2, Error ellipse: s-maj=15.3km s-min=11.7km az=211.0*
ISC 22 22:07:13.3±4.8**, 146S**±01×**1528E**±01**, h103**km±46km**, n25,** σ0**82**/17**, mb4.1**/12**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.53**	**125**	LR	LR	22 11 53.0	
	comp=Z,78nm,19.2s,baz=257,slow=33						
CTA	**Charters Tower**	**16.67**	**202**	P	**Pn**	**22 11 00.9**	**+0.1**
	0.2nm,0.3s,baz=23,slow=14,SNR=4.7						
CTA				LR	LR	22 15 23.5	
	comp=Z,75nm,19.8s,baz=53,slow=30						
GUMO	**Guam**	**19.73**	**336**	LR	LR	22 17 18.6	
	comp=Z,136nm,21.3s,baz=140,slow=31						
EIDS	**Eidsvold**	**20.71**	**184**	*e*P	**P**	**22 11 48.0**	**+2.5**
	9.8nm,0.8s						
KAKA	**Kakadu**	**21.70**	**247**	*e*P	Px	22 11 41.9	
DZM	**Mont Dzumac**	**21.80**	**144**	*e*P	**P**	**22 11 55.7**	**-1.4**
DZM	**Mont Dzumac**	**21.80**	**144**	*e*P	**P**	**22 11 56.7**	**-0.4**
WRAB	**Tennant Creek**	**23.59**	**228**	*e*P	**P**	**22 12 14.5**	**-0.3**
	22nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**23.60**	**228**	P	**P**	**22 12 14.7**	**-0.3**
	11nm,0.7s,mb4.3,baz=53,slow=9.5,SNR=37						
WRA				pP		22 12 32.7	
	4.9nm,0.7s,baz=52,slow=9.9,SNR=4.0						
WRA				LR	LR	22 20 58.6	
	comp=Z,51nm,20.1s,baz=195,slow=35						
ASAR	**Alice Springs**	**26.32**	**222**	P	**P**	**22 12 39.0**	**-0.6**
	3.1nm,0.8s,mb3.8,baz=55,slow=8.6,SNR=18						
ASAR				pP	pP	22 12 59.2	-3.0
	3.8nm,0.8s,baz=46,slow=12,SNR=5.8						
STKA	**Stephens Creek**	**29.11**	**200**	P	**P**	**22 13 03.4**	**-1.0**
	4.4nm,0.7s,mb4.2,baz=33,slow=12,SNR=12						
STKA				LR	LR	22 23 15.1	
	comp=Z,114nm,21.9s,baz=24,slow=33						
STKA	**Stephens Creek**	**29.11**	**200**	*e*P	**P**	**22 13 03.7**	**-0.7**
	0.5nm,0.6s,mb3.3						
STKA				LR	LR	22 23 15.1	
MBWA	**Marble Bar**	**36.10**	**240**	*e*P	**P**	**22 14 04.9**	**-0.7**
	17nm,2.0s,mb4.6						
URZ	**Urewera**	**40.13**	**150**	P	**P**	**22 14 38.9**	**-0.3**
	7.2nm,0.8s,mb4.6,baz=50,slow=5.5,SNR=3.7						
RPZ	**Rata Peaks**	**42.14**	**160**	P	**P**	**22 14 56.2**	**+0.7**
	8.8nm,0.7s,mb4.6,baz=243,slow=1.6,SNR=5.5						
MJAR	**Matsushiro Arr**	**43.16**	**343**	LR	LR	22 30 00.2	
	comp=Z,68nm,19.6s,baz=220,slow=32						
KSRS	**Korea Array**	**47.85**	**333**	P	**P**	**22 15 40.9**	**+0.2**
	1.2nm,0.6s,mb3.9,baz=148,slow=7.5,SNR=3.5						
PETK	**Petropavlovsk-**	**57.65**	**3**	P	**P**	**22 16 52.1**	**-0.5**
	0.8nm,0.5s,mb4.0,baz=159,slow=6.3,SNR=4.0						
PETK				LR	LR	22 38 13.8	
	comp=Z,51nm,18.8s,baz=341,slow=32						
CMAR	**Chiang Mai Arr**	**57.83**	**295**	P	**P**	**22 16 56.0**	**+1.4**
	1.1nm,0.6s,mb4.0,baz=115,slow=4.9,SNR=7.5						
CMAR				sP	sP	22 17 26.8	-4.3
	0.4nm,0.4s,baz=98,slow=5.6,SNR=2.8						
VNDA	**Vanda**	**73.02**	**178**	P	**P**	**22 18 32.0**	**+0.5**
	1.6nm,0.8s,mb3.9,baz=327,slow=5.3,SNR=5.3						
MKAR	**Makanchi Array**	**80.21**	**319**	P	**P**	**22 19 12.4**	**-0.1**
	0.7nm,0.8s,mb3.5,baz=81,slow=7.5,SNR=4.8						
TOA0	**Torodi Ar. Sit**	**150.28**	**288**	*e*PKPbc	PKPbc	22 26 54.0	+0.4
TORD	**Torodi Ar. Bea**	**150.28**	**288**	PKPbc	PKPbc	22 26 53.5	-0.1
	3.4nm,0.9s,baz=85,slow=2.0,SNR=18						
TORD				PKPab	PKPab	22 26 59.7	-0.4
	1.6nm,0.8s,baz=66,slow=2.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**150.28**	**288**	PKPbc	PKPbc	22 26 53.5	-0.1
TORD				PKPab	PKPab	22 26 59.7	-0.4
BDFB	**Brasilia**	**151.17**	**135**	PKPbc	PKPbc	22 26 56.4	+0.7
	2.2nm,0.6s,baz=201,slow=27,SNR=7.9						

*ISK **22** 22:41:24.8, 3789N×2922E, h14km, MD2.9*
*CSEM **22** 22:41:24.6±0.1, 3788N×2925E, h10km, MD2.9, Error ellipse: s-maj=2.5km s-min=1.7km az=119.0*
*ISCJB **22** 22:41:25.5±0.6, 3788N±003×2920E±005, h9km±6km, Error ellipse: s-maj=6.6km s-min=4.5km az=4.6*

*DDA **22** 22:41:25.6, 3789N×29.17E, h7km±4km, Md2.8*
ISC 22 22:41:25.9±0.5**, 3789N**±003×**2920E**±005**, h14**km±6km**, n11,** σ0**67**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**225**	*e*PG	**Pg**	**22 41 29.9**	**-0.4**
KHL	**Karahalli**	**0.50**	**30**	*e*PG	**Pg**	**22 41 35.2**	**-0.7**
KHAL	**Karahalli**	**0.53**	**25**	*i* P	**Pg**	**22 41 35.9**	**-0.5**
KHAL				*i* S	**Sg**	**22 41 44.2**	**+0.6**
GOLH	**Golhisar**	**0.71**	**156**	*i* P	**Pg**	**22 41 39.4**	**-0.4**
GOLH				*i* S	**Sg**	**22 41 50.1**	**+0.9**
KULA	**Kula-Manisa**	**0.76**	**326**	*e*PG	**Pg**	**22 41 40.4**	**-0.2**
KULA				*e*SG	**Sg**	**22 41 51.3**	**+0.8**
MANT	**Manisa**	**0.79**	**320**	*i* P	**Pg**	**22 41 41.6**	**+0.4**
MANT				*i* S	**Sg**	**22 41 50.8**	**-0.7**
YER	**Yerkesik**	**1.05**	**224**	*e*PG	**Pg**	**22 41 45.4**	**-0.8**
YER				*e*SG	**Sg**	**22 42 00.6**	**+0.8**
DEMI	**Demirci**	**1.21**	**342**	*i* P	**Pn**	**22 41 48.0**	**-0.4**
DEMI				*i* S	**Sb**	**22 42 03.8**	**-0.4**
DEMI	**Demirci**	**1.21**	**342**	*i* P	**Pn**	**22 41 48.0**	**-0.5**
DEMI				*i* S	**Sb**	**22 42 03.8**	**-0.4**
GDZ	**Gediz**	**1.22**	**10**	*i* P	**Pn**	**22 41 49.6**	**+1.1**
GDZ				*i* S	**Sb**	**22 42 05.4**	**+1.1**
SHUT	**Suhut-Afyon**	**1.25**	**58**	*e*PN	**Pn**	**22 41 48.2**	**-0.8**
SHUT				*e*SN	**Sn**	**22 42 05.4**	**-0.3**

*MOS **22** 22:54:15.5±1.2, 3582N×7071E, h67km, mb4.3/11, Error ellipse: s-maj=12.2km s-min=7.3km az=100.0*
*IDC **22** 22:54:18.1±5.9, 3588N×7078E, h75km±53km, mb3.8/12, mb1 4.0/15, mb1mx3.8/25, mbtmp3.9/15, ML4.2/3, MS4.5/1, Ms1 4.5/1, ms1mx3.1/29, Error ellipse: s-maj=25.9km s-min=18.4km az=10.0*
*ISCJB **22** 22:54:18.2±0.6, 3589N±003×7096E±005, h98km±7km, mb4.1/18, Error ellipse: s-maj=7.5km s-min=3.6km az=158.9*
*BJI **22** 22:54:20.8, 3599N×7095E, h71km, mB4.9, mb4.6*
*NEIC **22** 22:54:20.6±0.7, 3596N×7076E, h97km±7km, mb4.3/4, Error ellipse: s-maj=8.4km s-min=6.3km az=107.0*
*NNC **22** 22:54:23.6±7.2, 3692N×7069E, h0km, mb4.5, mpv4.4, Error ellipse: s-maj=65.1km s-min=49.3km az=48.0*
ISC 22 22:54:19.6±0.5**, 3587N**±003×**7094E**±006**, h96**km±6km**, n100,** σ1**17**/114**, mb4.1**/18**, 7C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.04**	**230**	*e*Pn	**Pn**	**22 54 53.4**	**+0.8**
CEP	**Cherat**	**2.19**	**158**	⇑P	**Pn**	**22 54 58.0**	**+3.5**
CEP				S	**Sn**	**22 55 27.0**	**+5.8**
CHCP	**Chirah Chowk**	**2.92**	**138**	⇑P	**Pn**	**22 55 07.9**	**+3.7**
THW	**Thamme Wali**	**3.14**	**168**	P	**Pn**	**22 55 08.6**	**+1.5**
THN	**Thein Dam**	**5.24**	**129**	*e*P	**Pn**	**22 55 37.3**	**+1.8**
THN				*ex*	x	22 56 39.4	
DLH	**Dalhousie**	**5.33**	**127**	*e*P	**Pn**	**22 55 36.0**	**-0.7**
DLH				*ex*	x	22 56 36.0	
KSH	**Kashi**	**5.40**	**46**	P	**Pn**	**22 55 42.3**	**+4.6**
KSH				S	**Sn**	**22 56 42.5**	**+4.0**
KSH				Smax			
	comp=N,15nm,0.3s						
KSH				Smax			
	comp=E,16nm,0.6s						
BHK	**Bhakra**	**6.37**	**133**	*ex*	**Sn**	**22 57 01.4**	**-0.8**
AML	**Almayashu**	**6.61**	**18**	*e*Pn	**Pn**	**22 55 55.0**	**+0.9**
	comp=E,83nm,0.4s						
AML				*e*Sn	**Sn**	**22 57 06.8**	**-1.1**
AML	**Almayashu**	**6.61**	**18**	P	**Pn**	**22 55 55.0**	**+1.0**
	SNR=15						
SDNR	**Sundarnagar**	**6.65**	**129**	*e*P	**Pn**	**22 55 56.6**	**+1.9**
SDNR				*e*S	**Sn**	**22 57 10.0**	**+1.0**
UCH	**Uchtor**	**6.93**	**23**	*e*Pn	**Pn**	**22 55 59.5**	**+1.0**
	comp=E,8.5nm,0.3s						
UCH				*e*Sn	**Sn**	**22 57 16.0**	**+0.3**
UCH	**Uchtor**	**6.93**	**23**	P	**Sn**	**22 57 16.1**	**+0.3**
	SNR=8.0						
SMLA	**Simla**	**7.03**	**130**	*i* P	**Pn**	**22 56 01.3**	**+1.5**
SMLA				*e*S	**Sn**	**22 57 17.7**	**-0.5**
SMLA				*ex*	x	22 57 23.8	

BVAR	**Borovoye Array**	**17.16**	**359**	P	**Pn**	**22 58 11.8**	**-1.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**17.19**	**359**	*e*P	**Pn**	**22 58 12.2**	**-1.3**
	comp=Z,5.2nm,0.6s						
BRVK	**Borovoye**	**17.19**	**359**	*e*P	**Pn**	**22 58 12.2**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTK	**Aktyubinsk**	**17.31**	**331**	P	**Pn**	**22 58 14.2**	**-0.6**
AKTO	**Aktyubinsk**	**17.31**	**331**	⇑Pn	**Pn**	**22 58 13.7**	**-1.2**
	comp=Z,6.5nm,0.8s						
AKTO	**Aktyubinsk**	**17.31**	**331**	P	**Pn**	**22 58 14.2**	**-0.6**
	comp=Z,4.7nm,0.3s,baz=140,slow=13,SNR=114						
AKTO	**Aktyubinsk**	**17.31**	**331**	P	**Pn**	**22 58 14.2**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
HYB	**Hyderabad**	**19.58**	**158**	*e*P	**Pn**	**22 58 43.0**	**+0.7**
ZAA0	**Zalesovo Array**	**20.51**	**24**	*e*P	**P**	**22 58 50.6**	**+0.8**
ZALV	**Zalesovo Beam**	**20.51**	**24**	P	**P**	**22 58 50.5**	**+0.8**
	comp=Z,9.8nm,0.4s,baz=214,slow=12,SNR=30						
ZALV	**Zalesovo Beam**	**20.51**	**24**	P	**P**	**22 58 50.5**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NVS	**Novosibirsk**	**20.79**	**20**	*e*P	**P**	**22 58 52.1**	**-0.6**
NVS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
ARU	**Arti**	**22.21**	**342**	*e*P	**P**	**22 59 08.3**	**+0.4**
	comp=N,11nm,0.8s,mb4.2						
ARU	**Arti**	**22.21**	**342**	*d i*P	**P**	**22 59 07.7**	**-0.2**
ARU				*e*		22 59 30.7	
ARU				*e*S	**S**	**23 03 09.7**	**+3.9**
ARU				*e*SS		23 03 40.6	
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.0						
KIV	**Kislovodsk**	**23.04**	**299**	*e*P	**P**	**22 59 14.0**	**-2.4**
KIV				*e*S	**S**	**23 03 19.6**	**0.0**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb3.9						
GTA	**Gaotai**	**23.09**	**73**	*e*P	**P**	**22 59 20.3**	**+3.3**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.7						
BRTR	**Keskin Array B**	**29.58**	**289**	P	**P**	**23 00 16.2**	**+0.9**
	comp=Z,1.5nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**29.58**	**289**	P	**P**	**23 00 16.2**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	**Obninsk**	**30.39**	**320**	⇑*e*P	**P**	**23 00 22.1**	**-0.1**
OBN				*e*		23 01 18.7	
OBN				*e*S	**S**	**23 05 12.2**	**-3.4**
OBN				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
AKASG	**Malin Array Be**	**33.30**	**310**	P	**P**	**23 00 47.1**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.0,baz=81,slow=7.7,SNR=6.6						
AKASG	**Malin Array Be**	**33.30**	**310**	P	**P**	**23 00 47.1**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**36.39**	**331**	*e*p	**P**	**23 01 14.2**	**0.0**
	comp=Z,5.2nm,0.3s,mb4.9						
JOF	**Joensuu**	**36.39**	**331**	*e*P	**P**	**23 01 14.2**	**0.0**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.9						
KAF	**Kangasniemi**	**38.13**	**328**	*e*p	**P**	**23 01 29.0**	**+0.1**
	comp=Z,1.3nm,0.3s,mb4.2,baz=112,slow=8.4						
KAF	**Kangasniemi**	**38.13**	**328**	*e*P	**P**	**23 01 29.0**	**+0.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
ARCES	**ARCESS Array B**	**41.71**	**338**	P	**P**	**23 01 59.2**	**+0.8**
	comp=Z,6.8nm,0.7s,mb4.5,baz=114,slow=8.4,SNR=29						
ARCES	**ARCESS Array B**	**41.71**	**338**	P	**P**	**23 01 59.2**	**+0.8**
ARCES	**ARCESS Array B**	**41.71**	**338**	P	**P**	**23 01 59.2**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NB2	**NORSAR Subarra**	**44.86**	**323**	P	**P**	**23 02 23.5**	**-0.3**
	comp=Z,1.9nm,0.5s,mb4.1,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.86**	**323**	P	**P**	**23 02 23.4**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.5,baz=103,slow=7.3,SNR=7.6						
NOA	**NORSAR Array B**	**44.86**	**323**	P	**P**	**23 02 23.4**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KEST	**Kesra**	**49.19**	**289**	P	**P**	**23 02 58.7**	**+0.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=307,slow=20,SNR=9.2						
ESDC	**Sonseca Array**	**57.71**	**298**	P	**P**	**23 03 59.0**	**-1.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=60,slow=7.3,SNR=6.9						
TORD	**Torodi Ar. Bea**	**65.65**	**269**	P	**P**	**23 04 52.4**	**-1.4**
	comp=Z,0.9nm,0.4s,mb3.9,baz=49,slow=6.0,SNR=10						
BOSA	**Boshof**	**77.23**	**220**	P	**P**	**23 06 04.7**	**+1.7**
	comp=Z,4.4nm,0.5s,mb4.4,baz=24,slow=4.0,SNR=18						
BOSA	**Boshof**	**77.23**	**220**	P	**P**	**23 06 04.7**	**+1.7**
BOSA	**Boshof**	**77.23**	**220**	P	**P**	**23 06 04.7**	**+1.7**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**81.70**	**122**	P	**P**	**23 06 29.2**	**+1.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=322,slow=4.7,SNR=4.5						
WRA	**Warramunga Arr**	**81.70**	**122**	P	**P**	**23 06 29.2**	**+1.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRAB	**Tennant Creek**	**81.70**	**122**	*e*P	**P**	**23 06 29.4**	**+1.9**
	comp=Z,25nm,1.9s,mb4.7						
WRAB	**Tennant Creek**	**81.70**	**122**	*e*P	**P**	**23 06 29.4**	**+1.9**
WRAB				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.7						
WB2	**Warramunga Arr**	**81.71**	**122**	*e*P	**P**	**23 06 29.4**	**+1.9**
YKA	**Yellowknife Ar**	**81.88**	**3**	P	**P**	**23 06 29.1**	**+1.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=351,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	**81.88**	**3**	P	**P**	**23 06 29.1**	**+1.3**
YKA	**Yellowknife Ar**	**81.88**	**3**	P	**P**	**23 06 29.1**	**+1.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**83.94**	**125**	P	**P**	**23 06 40.2**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.6,baz=319,slow=5.6,SNR=10.0						
ASAR	**Alice Springs**	**83.94**	**125**	P	**P**	**23 06 40.2**	**+1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DLBC	**Dease Lake**	**84.42**	**11**	LR	LR	23 50 57.2	
	comp=Z,275nm,19.6s,baz=175,slow=40						

BGS ***22*** *23:02:05.5±1.5, 387N×9584E, h33km, mb5.9*
BJI ***22*** *23:02:07.5, 454N×9497E, h35km, mB5.8, mb6.1, Ms5.6, Msz5.6*
MOS ***22*** *23:02:09.6±0.9, 493N×95.10E, h30km, mb6.2/120, MS5.3/81, Error ellipse: s-maj=7.6km s-min=3.3km az=124.6*
SZGRF ***22*** *23:02:09.2, 4.19N×94.72E, h33km, mb6.0, MS5.1, Off west coast of northern Sumatera, Indonesia*
ISCJB ***22*** *23:02:10.8±0.1, 473N L002×9507E L002, h45km, mb5.9/308, MS5.5/250, Error ellipse: s-maj=3.2km s-min=1.9km az=24.6*
NEIC ***22*** *23:02:13.0±0.1, 474N×9506E, mb5.9/152, MS5.6/178, MW5.8, Error ellipse: s-maj=3.9km s-min=2.6km az=30.0, Moment Tensor Solution. s85 Moment tensor: Scale 10^17Nm; Mrr5.80; Mθθ-2.27; Mϕϕ-3.53; Mrθ2.81; Mϕϕ1.87; Mϕr-0.99; Best double couple: M06.20000×10^17 NP1: ϕs334.00000°, δ33.00000°, λ110.00000°. NP2: ϕs130.00000°, δ59.00000°, λ77.00000°. Principal axes: T 6.7000, Plg72.0000°, Azm7.0000°; N -1.2600, Plg10.0000°, Azm136.0000°; P -5.4400, Plg12.0000°, Azm229.0000°;*
NEIC Felt [IV] at Banda Aceh and [III] at Meulaboh.
GCMT ***22*** *23:02:13.0±0.1, 4.46N×95.01E, h52km, MW5.8/105, Moment Tensor Solution. s105,c209; s92,c242; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr4.57±.07; Mθθ-2.61±.05; Mϕϕ-1.95±.06; Mrθ2.73±.05; Mθϕ2.79±.05; Mϕr-2.28±.06; Best double couple: M05.99800×10^17 NP1:ϕs313.00000°, δ27.00000°, λ92.00000°. NP2:ϕs130.00000°, δ63.00000°, λ89.00000°. Principal axes: T 5.7390, Plg72.0000°, Azm38.0000°; N 0.5280, Plg1.0000°, Azm131.0000°; P -6.2570, Plg18.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
IDC ***22*** *23:02:13.1±0.3, 479N×9523E, h51km±2km, mb5.4/26, mb1 5.4/27, mb1mx5.4/28, mbtmp5.3/27, MS5.2/30, Ms1 5.2/30, ms1mx5.2/34 Error ellipse: s-maj=9.9km s-min=5.8km az=49.0*
DJA ***22*** *23:02:14.6±0.0, 468N×95.11E, h59km, mB6.2/41, Mjma5.4/5, MLv6.0/5, Mw(mB)5.9/41, Mwp5.5/38*

ISC 22 23:02:12.7±0.1, 472N L002×9507E L002, h47km, h47km±1.4km: pP-P, n1308, c0§91/1121, mb5.9/308, MS5.5/250, 307C-41D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**0.81**	**16**	P	**Pn**	**23 02 29.4**	**+1.7**
GSI	**Gunungsitoli**	**4.21**	**144**	P	**Pn**	**23 03 13.6**	**-0.8**
KULM	**Kulim**	**5.59**	**84**	⇓P	**Pn**	**23 03 34.6**	**+1.4**
IPM	**Ipoh**	**5.94**	**92**	⇓P	**Pn**	**23 03 39.0**	**+0.9**
IPM	**Ipoh**	**5.94**	**92**	P	**Pn**	**23 03 38.5**	**+0.4**
	2μm,0.7s,10nm						
FRIM	**Kepong**	**6.70**	**102**	⇑P	**Pn**	**23 03 48.8**	**+0.2**
PPI	**Padang Panjang**	**7.40**	**134**	P	**Pn**	**23 03 58.4**	**+0.3**
	946nm,1.2s,9μm3.4nm						
PDSI	**Padang**	**7.76**	**136**	P	**Pn**	**23 04 02.3**	**-0.8**
	1μm,0.8s,5.4nm						
KTGM	**Kuala Trenggan**	**8.05**	**85**	⇓P	**Pn**	**23 04 08.5**	**+1.4**
KGM	**Kluang**	**8.66**	**108**	⇓P	**Pn**	**23 04 16.3**	**+0.9**
RGRI	**Rengat**	**8.83**	**125**	P	**Pn**	**23 04 18.4**	**+0.6**
	1μm,0.8s						
NNT	**Nongplab**	**9.08**	**30**	P	**Pn**	**23 04 23.0**	**+1.8**
MYKOM	**Kota Tinggi**	**9.23**	**108**	⇓P	**Pn**	**23 04 24.0**	**+0.7**
MYKOM	**Kota Tinggi**	**9.23**	**108**	P	**Pn**	**23 04 23.6**	**+0.3**
JMBI	**JAMBI**	**10.63**	**126**	P	**Pn**	**23 04 43.7**	**+1.2**
	1μm,0.9s						
KSI	**Kapahiang**	**11.21**	**138**	P	**Pn**	**23 04 49.3**	**-1.0**
	2μm,0.9s						
NST	**Nakhon Sawan**	**11.97**	**24**	⇑P	**Pn**	**23 05 04.0**	**+3.3**
	450nm,0.6s						
BDT	**Bhumibol Dam**	**13.03**	**17**	P	**Pn**	**23 05 17.0**	**+1.8**
	102nm,1.0s						
KLI	**Kotabumi**	**13.64**	**134**	P	**Pn**	**23 05 23.7**	**+0.1**
	328nm,1.0s,5μm						
KKTK	**Khon Kaen**	**13.83**	**33**	P	**Pn**	**23 05 28.0**	**+1.9**
	3μm,0.5s						
CMAR	**Chiang Mai Arr**	**14.17**	**15**	P	**Pn**	**23 05 31.5**	**+0.8**
	1.1nm,0.3s,baz=201,slow=9.7,SNR=131						
CMAR				S	**Sn**	**23 08 15.5**	**+8.8**
	baz=184,slow=34,SNR=2.1						
CMAR				LR	LR	23 11 00.1	
	comp=Z,16μm,21.0s,baz=207,slow=38						
CMAR				ScP	ScP	23 14 16.7	-0.5
	0.6nm,0.3s,baz=224,slow=3.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**14.17**	**15**	P	**Pn**	**23 05 31.5**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,16μm,21.0s						
CMAR				pmax	pmax		
	comp=N,1.0nm,0.3s						
UBT	**Ubonrachathani**	**14.32**	**42**	⇓P	**Pn**	**23 05 36.5**	**+3.7**
	comp=N,486nm,0.9s						
CHG	**Chiang Mai**	**14.51**	**15**	⇓P	**Pn**	**23 05 36.6**	**+1.3**
	comp=N,83nm,1.0s						
CHTO	**Chiang Mai**	**14.51**	**15**	⇑P	**Pn**	**23 05 36.6**	**+1.3**
	SNR=85						
CHTO	**Chiang Mai**	**14.51**	**15**	*e*P	**Pn**	**23 05 37.1**	**+1.8**
CHTO	**Chiang Mai**	**14.51**	**15**	P	**Pn**	**23 05 37.2**	**+1.9**
	comp=N,965nm,0.9s,comp=N,7μm						
TPI	**Tanjungpandan**	**14.60**	**120**	P	**Pn**	**23 05 36.9**	**+0.4**
	comp=N,185nm,0.9s,comp=N,3μm						
NANT	**Nan**	**15.04**	**21**	⇑P	**Pn**	**23 05 42.0**	**-0.2**
	comp=N,2μm,1.0s						
SBJI	**Serang**	**15.42**	**134**	P	**Pn**	**23 05 51.1**	**+3.9**
KSM	**Kuching**	**15.55**	**101**	Pn	**Pn**	**23 05 49.6**	**+0.7**
KSM	**Kuching**	**15.55**	**101**	⇑P	**Pn**	**23 05 51.6**	**+2.7**
KSM	**Kuching**	**15.55**	**101**	P	**Pn**	**23 05 51.0**	**+2.1**
	comp=N,889nm,0.8s,comp=N,7μm						
CBJI	**Citeko**	**16.14**	**133**	P	**Pn**	**23 05 56.4**	**-0.1**
	comp=N,462nm,0.8s						
DBJI	**Dramaga**	**16.16**	**134**	P	**Pn**	**23 05 55.1**	**-1.6**
	comp=N,209nm,1.1s,comp=N,3μm						
COCO	**West Island**	**16.89**	**174**	⇑P	**Pn**	**23 06 05.4**	**-0.4**
	SNR=6.4						
COCO	**West Island**	**16.89**	**174**	*e*Pn	**Pn**	**23 06 03.6**	**-2.1**
	comp=N,381nm,1.0s						
COCO	**West Island**	**16.89**	**174**	P	**Pn**	**23 06 04.6**	**-1.2**
	comp=N,232nm,1.2s,comp=N,4μm						
LEM	**Lembang**	**16.98**	**132**	P	**Pn**	**23 06 06.1**	**-0.9**
	comp=N,197nm,0.9s						
STKI	**Sintang**	**17.02**	**105**	P	**Pn**	**23 06 07.8**	**+0.2**
	comp=N,441nm,0.9s						
JCJI	**Jatiwangi**	**17.25**	**130**	P	**Pn**	**23 06 12.1**	**+1.8**
	comp=N,419nm,1.0s,comp=N,5μm						
SBUM	**Sibu**	**17.26**	**97**	⇑P	**Pn**	**23 06 11.4**	**+0.9**
SBUM	**Sibu**	**17.26**	**97**	P	**Pn**	**23 06 10.9**	**+0.4**
VIS	**Vishakhapatnam**	**17.30**	**319**	*e*P	**Pn**	**23 06 11.3**	**+0.4**
VIS				AMb	AMB	23 06 17.2	
	comp=Z,354nm,1.1s						
VIS				*i* x	x	23 09 10.6	
BWNR	**Bhubaneshwar**	**17.92**	**331**	*e*x	**Pn**	**23 06 12.0**	**-6.5**
BWNR				*e*x	x	23 09 20.0	
BTM	**Bintulu**	**18.03**	**94**	⇓P	**Pn**	**23 06 21.6**	**+1.6**
PBKI	**Pangkalan Bun**	**18.15**	**114**	P	**Pn**	**23 06 20.5**	**-0.9**
	comp=Z,1μm,1.1s						
KOD	**Kodaikanal**	**18.29**	**288**	*e*P	**Pn**	**23 06 25.0**	**+1.9**
KOD				AMb	AMB	23 06 29.8	
	comp=Z,124nm,0.7s						
TRD	**Trivandrum**	**18.38**	**283**	*e*P	**Pn**	**23 06 25.3**	**+1.1**
XMIS	**Christmas Isla**	**18.41**	**145**	*e*P	**Pn**	**23 06 23.3**	**-1.2**
	comp=Z,437nm,1.2s						
XMIS				*e*Sn	**Sn**	**23 09 37.2**	**-12**
XMIS	**Christmas Isla**	**18.41**	**145**	P	**Pn**	**23 06 24.8**	**+0.3**
	comp=Z,0.0nm,1.0s,comp=Z,0.0nm						
CAL	**Calcutta**	**18.88**	**340**	*e*P	**Pn**	**23 06 28.3**	**-1.8**
CAL				*e*x	x	23 11 27.8	
BJII	**Banjamegara**	**18.88**	**129**	P	**Pn**	**23 06 28.2**	**-2.1**
SMRI	**Semarang**	**19.28**	**127**	P	**Pn**	**23 06 35.0**	**-0.1**
	comp=Z,463nm,1.1s						
IMP	**Imphal**	**19.98**	**357**	*e*x	**Pn**	**23 06 38.0**	**-5.2**
IMP				*e*x	x	23 10 09.0	
PLKI	**Palangkaraya**	**20.08**	**110**	P	**P**	**23 06 43.6**	**+1.2**
	comp=Z,1μm,0.8s,comp=Z,7μm						
QIZ	**Qiongzhong**	**20.25**	**44**	P	**P**	**23 06 44.8**	**+0.6**
QIZ				AP		23 06 52.8	
QIZ				S	**S**	**23 10 31.6**	**+2.6**
QIZ				LR	LR		
	comp=E,11μm,21.9s						
QIZ				LR	LR		
	comp=Z,13μm,18.9s,MS5.3						
QIZ	**Qiongzhong**	**20.25**	**44**	*e*P	**P**	**23 06 45.7**	**+1.5**
	comp=Z,895nm,1.4s						
QIZ				LR	LR		
	comp=Z,13μm,20.0s,MS5.3						
HYB	**Hyderabad**	**20.52**	**309**	*e*P	**P**	**23 06 49.0**	**+1.9**
	comp=Z,330nm,1.0s						
HYB				*e*S	**S**	**23 10 34.0**	**-0.3**
HYB				*e*		23 14 22.0	
HYB	**Hyderabad**	**20.52**	**309**	*e*P	**P**	**23 06 49.0**	**+1.9**
HYB				*e*S	**S**	**23 10 34.0**	**-0.3**
HYB				pmax	pmax		
	comp=Z,330nm,1.0s						
HYB	**Hyderabad**	**20.52**	**309**	*i* P	**P**	**23 06 49.0**	**+1.9**
	comp=Z,330nm,1.0s						
HYB				*e*S	**S**	**23 10 34.0**	**-0.3**
HYB				LR	LR	23 14 22.0	
	comp=Z,5.3nm,20.0s						
SJI	**Sawahan**	**20.75**	**127**	P	**P**	**23 06 53.5**	**+3.9**
BOK	**Bokaro**	**20.93**	**336**	*e*P	**P**	**23 06 51.4**	**-0.1**
BOK				AMb	AMB	23 06 56.6	
	comp=Z,736nm,0.6s						
SHL	**Shillong**	**20.96**	**352**	⇓*i* x	**P**	**23 06 49.0**	**-2.7**
SHL				*e*S	**S**	**23 10 42.3**	**-0.5**
KKM	**Kota Kinabalu**	**21.09**	**85**	*e*P	**P**	**23 06 54.7**	**+1.3**
KKM	**Kota Kinabalu**	**21.09**	**85**	⇑P	**P**	**23 06 55.2**	**+1.8**
KKM	**Kota Kinabalu**	**21.09**	**85**	P	**P**	**23 06 55.4**	**+2.1**
	comp=Z,460nm,0.9s,comp=Z,5μm,mb5.8						
BBKI	**Banjar Baru**	**21.36**	**112**	P	**P**	**23 06 56.9**	**+0.7**
	comp=Z,2μm,0.9s,mb6.4						
KMI	**Kunming**	**21.59**	**19**	⇑P	**P**	**23 07 00.4**	**+1.9**
KMI				AP		23 07 11.3	
KMI				XP	sP	23 07 14.5	-1.2
KMI				PP		23 07 26.9	
KMI				S	**S**	**23 10 54.3**	**-0.8**
KMI				XS	sS	23 11 10.3	-3.0
KMI				SS		23 11 31.9	
KMI				AMB	AMB		
	comp=Z,568nm,1.1s,mb5.9						
KMI				AMB	AMB		
	comp=Z,3μm,4.9s						
KMI				LR	LR		
	comp=N,15μm,12.2s,MS5.6						
KMI				LR	LR		
	comp=E,9μm,16.5s,MS5.6						
KMI				LR	LR		
	comp=Z,17μm,18.6s,MS5.5						
MNGI	**Mangalore**	**21.60**	**294**	*i* P	**P**	**23 07 00.7**	**+1.9**
MNGI				*e*S	**S**	**23 10 59.1**	**+3.6**
KDM	**Kudat**	**21.76**	**83**	⇑P	**P**	**23 07 03.3**	**+2.8**
SDKM	**Sandakan**	**22.05**	**87**	⇓P	**P**	**23 07 03.4**	**-0.3**
MNCY	**Minicoy**	**22.18**	**280**	*ex*	x	23 06 48.0	
MNCY				*ex*	x	23 08 18.0	
KMMI	**Kalianget**	**22.19**	**122**	P	**P**	**23 07 05.9**	**+0.9**
	comp=Z,702nm,1.1s,mb6.0						
NGP	**Nagpur**	**22.56**	**318**	⇑*i*P	**P**	**23 07 05.4**	**-3.5**
NGP				*ex*	x	23 07 19.9	
	comp=Z,453nm,1.0s						
NGP				*e*S	**S**	**23 11 10.2**	**-3.3**
LATR	**Latur**	**22.64**	**308**	*ex*	**P**	**23 07 13.2**	**+3.4**
SMKI	**Samarinda**	**22.70**	**102**	P	**P**	**23 07 11.1**	**+0.6**
	comp=Z,512nm,0.9s,comp=Z,8μm,mb5.9						
TSM	**Tawau**	**22.73**	**90**	⇓P	**P**	**23 07 09.4**	**-1.5**
BATP	**Bataraza**	**22.93**	**79**	*e*P	**P**	**23 07 11.5**	**-1.4**
MYLDM	**Lahad Datu**	**23.34**	**88**	⇑P	**P**	**23 07 17.7**	**+0.5**
MYLDM	**Lahad Datu**	**23.34**	**88**	P	**P**	**23 07 16.9**	**-0.3**
NBBI	**Negara**	**23.43**	**124**	P	**P**	**23 07 17.6**	**-0.4**
	comp=Z,508nm,0.7s,comp=Z,6μm,mb6.0						
GOA	**Goa**	**23.47**	**299**	*e*P	**P**	**23 07 19.5**	**+1.2**
GOA				*i* S	**S**	**23 11 29.1**	**+0.6**
AKL	**Akola**	**23.68**	**314**	*e*P	**P**	**23 07 21.9**	**+1.8**
AKL				AMb	AMB	23 07 25.6	
	comp=Z,449nm,1.0s,mb5.8						
KAD	**Karad**	**23.98**	**303**	*e*P	**P**	**23 07 25.5**	**+2.5**
PPR	**Puerto Princes**	**23.99**	**77**	⇓*e*P	**P**	**23 07 24.0**	**+0.9**
KHKI	**Kahang-Kahang**	**24.25**	**122**	P	**P**	**23 07 24.7**	**-0.8**
GYA	**Guiyang**	**24.30**	**26**	⇑*i*P	**P**	**23 07 25.9**	**+0.1**
GYA				AP		23 07 35.3	
GYA				XP	sP	23 07 39.3	-4.4
GYA				PP		23 08 01.8	
GYA				PCP	PcP	23 11 05.9	+1.0
GYA				S	**S**	**23 11 40.5**	**-1.2**
GYA				XS	sS	23 11 55.5	-6.8
GYA				SS		23 12 35.5	
GYA				SCP	ScP	23 14 39.0	-0.9
GYA				PCS	PcS	23 14 43.8	-1.1
GYA				AMB	AMB		
	comp=Z,180nm,0.8s,mb5.5						
GYA				AMB	AMB		
	comp=Z,2μm,6.4s						
GYA				LR	LR		
	comp=N,14μm,15.3s,MS5.7						
GYA				LR	LR		
	comp=E,10μm,15.1s,MS5.7						
GYA				LR	LR		
	comp=Z,16μm,14.7s,MS5.7						
POO	**Poona**	**24.87**	**305**	*e*P	**P**	**23 07 33.1**	**+2.1**
POO				AMb	AMB	23 07 35.0	
	comp=Z,186nm,0.9s,mb5.6						
POO				*i* S	**S**	**23 11 53.0**	**+2.0**
ENPP	**El Nido**	**24.95**	**74**	*e*P	**P**	**23 07 33.7**	**+1.8**
LSA	**Lhasa**	**25.12**	**352**	P	**P**	**23 07 33.3**	**0.0**
LSA				AP	pP	23 07 44.0	-1.6
LSA				XP	sP	23 07 45.8	-5.4
LSA				S	**S**	**23 11 46.5**	**-8.4**
LSA				AMB	AMB		
	comp=Z,420nm,1.0s,mb5.9						
LSA				AMB	AMB		
	comp=Z,2μm,10.0s						
LSA				LR	LR		
	comp=N,4μm,23.0s,MS5.1						
LSA				LR	LR		
	comp=E,6μm,25.0s,MS5.1						
LSA				LR	LR		
	comp=Z,10μm,23.0s,MS5.3						
LSA	**Lhasa**	**25.12**	**352**	*e*P	**P**	**23 07 33.5**	**+0.3**
	comp=Z,420nm,0.8s,mb6.0						
LSA				*e*PcP	PcP	23 11 09.4	+2.7
LSA	**Lhasa**	**25.12**	**352**	*e*P	**P**	**23 07 33.6**	**+0.3**
LSA				*e*		23 11 09.4	
LSA				pmax	pmax		
	comp=Z,420nm,0.8s,mb6.0						
PCI	**Palu**	**25.36**	**102**	P	**P**	**23 07 35.7**	**+0.1**
	comp=Z,595nm,1.0s,comp=Z,6μm,mb6.1						
GZH	**Guangzhou**	**25.40**	**42**	P	**P**	**23 07 40.4**	**+4.6**
GZH				LR	LR		
	comp=N,8μm,16.6s,MS5.5						
GZH				LR	LR		
	comp=E,9μm,16.5s,MS5.5						
GZH				LR	LR		
	comp=Z,12μm,20.4s,MS5.4						
HKC	**Hong Kong Obse**	**25.45**	**45**	P	**P**	**23 07 36.0**	**-0.3**
BUSP	**Coron**	**25.88**	**72**	*e*P	**P**	**23 07 40.1**	**-0.1**
BOM	**Bombay**	**25.90**	**305**	*e*P	**P**	**23 07 32.6**	**-7.8**
BOM				*ex*	x	23 07 36.2	
	comp=Z,348nm,1.8s						
BOM				*e*S	**S**	**23 12 01.0**	**-6.3**
LUBP	**Lubang**	**26.39**	**68**	*e*P	**P**	**23 07 44.2**	**-0.7**
CUYO	**Cuyo Island**	**26.41**	**75**	*e*P	**P**	**23 07 47.5**	**+2.4**
KAPI	**Kappang**	**26.48**	**111**	⇓P	**P**	**23 07 44.0**	**-1.7**
	SNR=8.0						
KAPI	**Kappang**	**26.48**	**111**	P	**P**	**23 07 44.6**	**-1.1**
	comp=Z,104nm,0.9s,mb5.3,baz=288,slow=8.3,SNR=52						
KAPI				PcP	PcP	23 11 09.9	-0.2
	comp=Z,20nm,0.6s,baz=213,slow=5.9,SNR=2.2						
KAPI				S	**S**	**23 12 15.0**	**-1.7**
	comp=Z,10nm,1.0s,baz=254,slow=20,SNR=1.1						
KAPI				LR	LR	23 18 58.7	
	comp=Z,9μm,20.5s,MS5.3,baz=300

comp=Z,143nm,0.4s,baz=216,slow=7.7,SNR=3.5
DAV Davao City (W) 30.43 84 PFAKE 23 08 30.0 +9.0
DAV LR LR
comp=Z,11µm,22.0s,MS5.5
BHJ Bhuj 30.69 309 *e*P **P 23 08 22.5 -0.6**
BHJ AMb AMB 23 08 27.9
comp=Z,132nm,1.2s,mb5.7
SMLA Simla 31.21 329 *i* P **P 23 08 27.4 -0.2**
SMLA *ex* x 23 08 35.0
comp=Z,345nm,0.5s
SMLA *i* S **S 23 13 31.6 +0.9**
WHN Wuhan 31.47 33 ⇑P **P 23 08 30.3 +0.4**
WHN AP pP 23 08 38.6 -3.7
WHN PP PP 23 09 33.8 -7.9
WHN S **S 23 13 35.8 +1.1**
WHN SCP ScP 23 14 59.9 -1.9
WHN AMB AMB
comp=Z,631nm,1.0s,mb6.4
WHN AMB AMB
comp=Z,2µm,11.9s
WHN LR LR
comp=N,20µm,16.6s,MS6.0
WHN LR LR
comp=E,19µm,16.8s,MS6.0
WHN LR LR
comp=Z,23µm,14.0s,MS6.0
SDNR Sundarnagar 31.61 330 *e*P **P 23 08 36.6 +5.5**
SDNR *e*S **S 23 13 40.6 +3.7**
BHK Bhakra 31.82 329 *e*P **P 23 08 30.2 -2.8**
XAN Xi'an 31.89 22 P **P 23 08 32.8 -0.8**
XAN AP pP 23 08 44.0 -2.0
XAN XP sP 23 08 46.3 -5.3
XAN AMB AMB
comp=Z,1µm,0.8s,mb6.7
XAN AMB AMB
comp=Z,836nm,7.2s
XAN LR LR
comp=N,4µm,14.9s,MS5.5
XAN LR LR
comp=E,6µm,16.2s,MS5.5
XAN LR LR
comp=Z,18µm,16.4s,MS5.8
NACB Ninganchiao 32.03 50 *e*P **P 23 08 36.0 +1.1**
comp=Z,211nm,0.9s,mb6.0
BATI Baumata 32.10 118 S **S 23 13 42.1 -3.0**
comp=Z,56nm,0.8s,baz=189,slow=22,SNR=4.2
BATI LR LR 23 24 22.7
comp=Z,12µm,20.3s,MS5.6,baz=307,slow=42
BATI Baumata 32.10 118 P **P 23 08 32.5 -3.2**
comp=Z,134nm,0.8s,comp=Z,1µm,mb5.8
YHNB Yeheng 32.14 49 *e*P **P 23 08 37.9 +2.1**
comp=Z,393nm,1.1s,mb6.2
YHNB LR LR
comp=Z,6µm,21.0s,MS5.3
LZH Lanzhou 32.25 13 ⇓P **P 23 08 35.8 -0.9**
LZH AP pP 23 08 45.5 -3.6
LZH XP sP 23 08 49.8 -5.0
LZH PP PP 23 09 44.0 -6.2
LZH PCP PcP 23 11 25.4 +1.1
LZH S **S 23 13 44.1 -2.6**
LZH SCP ScP 23 15 05.1 +0.8
LZH SS SS 23 15 43.0 -24
LZH SCS ScS 23 19 01.8 -1.5
LZH AMB AMB
comp=Z,290nm,1.0s,mb6.1
LZH AMB AMB
comp=Z,915nm,5.0s
LZH LR LR
comp=N,4µm,13.8s
LZH LR LR
comp=Z,9µm,15.3s,MS5.6
TATO Taipei 32.39 49 *e*P **P 23 08 39.6 +1.5**
comp=Z,310nm,1.1s,mb6.0
TATO LR LR
comp=Z,7µm,22.0s,MS5.3
LBMI Labuha 32.83 98 P **S 23 13 54.6 -1.8**
LBMI Labuha 32.83 98 P **P 23 08 42.9 +0.8**
comp=Z,334nm,1.1s,comp=Z,4µm,mb6.2
DLH Dalhousie 32.95 329 *ex* **P 23 08 39.0 -3.8**
THN Thein Dam 32.99 329 *e*P **P 23 08 41.6 -1.6**
THN *e*S **S 23 13 58.4 0.0**
AAI Ambon 34.13 104 P **S 23 14 09.9 -6.6**
AAI Ambon 34.13 104 P **S 23 14 10.2 -6.3**
AAI Ambon 34.13 104 P **P 23 08 52.5 -0.9**
comp=Z,758nm,0.8s,comp=Z,9µm,mb6.7
AAI Ambon 34.13 104 P **P 23 08 52.6 -0.8**
comp=Z,758nm,0.8s,comp=Z,9µm,mb6.7
MSAI Masohi 34.76 103 P **S 23 14 16.7 -10**
GTA Gaotai 34.80 6 ⇑*i*P **P 23 08 58.4 -0.5**
GTA AP pP 23 09 07.8 -3.6
GTA XP sP 23 09 12.3 -4.7
GTA PCP PcP 23 11 32.6 +1.2
GTA S **S 23 14 22.3 -4.0**
GTA SCP ScP 23 15 13.3 +0.1
GTA PCS PcS 23 15 17.4 -0.6
GTA SCS ScS 23 19 13.8 -2.7
GTA AMB AMB
comp=Z,434nm,0.8s,mb6.4
GTA AMB AMB
comp=Z,1µm,8.1s
GTA LR LR
comp=N,3µm,19.5s,MS5.2
GTA LR LR
comp=E,3µm,23.7s,MS5.2
GTA LR LR
comp=Z,5µm,25.5s,MS5.1
NJ2 Nanjing 35.16 36 *e*P **P 23 09 02.8 +0.8**
NJ2 AP pP 23 09 12.4 -2.2
NJ2 XP sP 23 09 16.4 -3.8
NJ2 PP PP 23 10 21.5 -1.0
NJ2 S **S 23 14 32.5 +0.6**
NJ2 XS sS 23 14 47.0 -6.0
NJ2 AMB AMB
comp=Z,140nm,0.9s,mb5.9
NJ2 AMB AMB
comp=Z,420nm,3.9s
NJ2 LR LR
comp=N,2µm,14.3s,MS5.5
NJ2 LR LR
comp=E,6µm,13.2s,MS5.5
NJ2 LR LR
comp=Z,13µm,13.2s,MS5.8
MBWA Marble Bar 35.30 138 *e*P **P 23 09 02.5 -0.8**
comp=Z,61nm,0.9s,mb5.5
MBWA *e*PcP PcP 23 11 33.8 +0.6
MBWA *e*ScP ScP 23 15 14.7 -0.6
MBWA LR LR
comp=Z,4µm,22.0s,MS5.1
MBWA Marble Bar 35.30 138 P **P 23 09 02.6 -0.8**
comp=Z,78nm,1.5s,mb5.4
SSE Sheshan 35.94 40 P **P 23 09 09.4 +0.7**
SSE AP pP 23 09 20.3 -1.0
SSE XP sP 23 09 25.6 -1.3
SSE PP PP 23 10 32.3 +1.2
SSE S **S 23 14 45.5 +1.6**
SSE XS sS 23 15 04.9 -0.1
SSE AMB AMB
comp=Z,106nm,0.9s,mb5.8
SSE AMB AMB
comp=Z,681nm,7.9s
SSE LR LR
comp=N,4µm,14.7s,MS5.4
SSE LR LR
comp=E,2µm,14.7s,MS5.4
SSE LR LR
comp=Z,5µm,12.5s,MS5.5
TIY Taiyuan 36.47 23 P **P 23 09 14.4 +1.2**
TIY XP sP 23 09 30.8 -0.6
TIY S **S 23 14 56.4 +4.5**
TIY AMB AMB
comp=Z,1µm,4.6s
TIY LR LR
comp=N,10µm,16.3s,MS5.8
TIY LR LR
comp=E,5µm,13.9s,MS5.8
TIY LR LR
comp=Z,10µm,17.5s,MS5.6
TIA Tai'an 37.34 30 *e*P **P 23 09 20.6 0.0**
TIA PCP PcP 23 11 38.0 -1.1
TIA S **S 23 15 06.0 +0.9**
TIA AMB AMB
comp=Z,594nm,7.0s
TIA LR LR
comp=E,2µm,13.0s
BTO Baotou 38.18 19 *e*P **P 23 09 27.0 -0.6**
BTO AMB AMB
comp=Z,44nm,0.8s,mb5.2
KBL Kabul 38.24 324 *e*P **P 23 09 27.8 -0.4**
comp=Z,39nm,0.7s,mb5.2
KBL Kabul 38.24 324 P **P 23 09 28.0 -0.3**
KBL pmax pmax
comp=Z,39nm,0.7s,mb5.2
KSH Kashi 38.71 336 ⇑*i*P **P 23 09 33.3 +1.2**
KSH *e*AP pP 23 09 42.8 -2.0
KSH XP sP 23 09 47.1 -3.3
KSH PP PP 23 11 05.8 +4.3
KSH *e*PCP PcP 23 11 45.9 +2.6
KSH S **S 23 15 26.8 +0.9**
KSH *e*SCP ScP 23 15 30.0 +2.3
KSH *e*PCS PcS 23 15 33.9 +1.3
KSH XS sS 23 15 43.5 -3.6
KSH *e*SS SS 23 18 09.3 -8.7
KSH SCS ScS 23 19 39.3 +1.0
KSH AMB AMB
comp=Z,504nm,0.6s,mb6.4
KSH LR LR
comp=N,12µm,16.2s
KSH LR LR
comp=E,37µm,25.3s
KSH LR LR
comp=Z,13µm,16.9s,MS5.8
HHC Hu-ho-hao-te 38.91 20 ⇑*i*P **P 23 09 34.4 +0.7**
HHC AP pP 23 09 44.3 -2.1
HHC XP sP 23 09 48.6 -3.4
HHC PP PP 23 11 07.3 +3.7
HHC PCP PcP 23 11 44.1 +0.3
HHC S **S 23 15 25.3 -3.4**
HHC XS sS 23 15 47.9 -2.1
HHC SS SS 23 18 15.4 -6.4
HHC SCS ScS 23 19 38.6 -0.8
HHC AMB AMB
comp=Z,335nm,1.0s,mb6.0
HHC AMB AMB
comp=Z,2µm,5.2s
HHC LR LR
comp=N,12µm,19.0s,MS5.8
HHC LR LR
comp=E,8µm,17.8s,MS5.8
HHC LR LR
comp=Z,12µm,21.4s,MS5.7
TLE Tual 38.99 105 P **P 23 09 34.3 -0.6**
comp=Z,1µm,0.8s,mb6.7
WBK Wadi Bani Khal 39.16 300 ⇑P **P 23 09 37.0 +0.8**
SNR=32
WMQ Urumqi 39.48 352 ⇑*i*P **P 23 09 38.6 +0.1**
WMQ AP pP 23 09 48.6 -2.6
WMQ XP sP 23 09 52.6 -4.2
WMQ PP PP 23 11 13.6 +3.7
WMQ S **S 23 15 38.6 +1.3**
WMQ SS SS 23 18 25.6 -7.7
WMQ AMB AMB
comp=Z,266nm,1.0s,mb5.9
WMQ AMB AMB
comp=Z,2µm,4.0s
WMQ LR LR
comp=N,2µm,16.0s,MS5.5
WMQ LR LR
comp=E,6µm,16.0s,MS5.5
WMQ LR LR
comp=Z,3µm,16.0s,MS5.2
JMDO Jabal Madar 39.83 300 ⇓P **P 23 09 42.5 +0.8**
SNR=18
BJT Baijiatuan 39.97 25 *e*P **P 23 09 44.0 +1.4**
comp=Z,1µm,0.8s,mb6.7
BJT *e*PcP PcP 23 11 48.0 +0.8
BJT LR LR
comp=Z,5µm,22.0s,MS5.3
BJT Baijiatuan 39.97 25 *e*P **P 23 09 44.0 +1.4**
BJT *e* 23 11 48.0
BJT pmax pmax
comp=Z,1µm,0.8s
BJT MLR MLR
comp=Z,5µm,22.0s
BJI Beijing 39.99 25 P **P 23 09 43.9 +1.1**
BJI PP PP 23 11 16.5 +1.1
BJI S **S 23 15 41.1 -3.9**
BJI AMB AMB
comp=Z,2µm,0.8s,mb6.8
BJI LR LR
comp=N,4µm,25.4s,MS5.3
BJI LR LR
comp=E,4µm,24.0s,MS5.3
BJI LR LR
comp=Z,7µm,26.1s,MS5.4
SMDO Samad 40.12 301 ⇑P **P 23 09 44.9 +0.8**
SNR=37
BIDO Bidbid 40.22 301 ⇑P **P 23 09 45.8 +0.8**
SNR=56
MSEY Mahe Island 40.63 257 PFAKE 23 10 00.0 +11
MSEY LR LR
comp=Z,7µm,21.0s,MS5.5
BSY Bisya 40.74 300 ⇓P **P 23 09 50.0 +0.7**
SNR=48
HOQ Hoqain 40.94 301 ⇑P **P 23 09 51.7 +0.8**
SNR=57
ULHL Ulahol 40.96 339 P **P 23 09 51.9 +1.1**
SNR=673
KAKA Kakadu 40.97 115 P Px 23 09 35.8
comp=Z,410nm,0.8s,comp=Z,3µm
KZA Kyzart 41.19 337 P **P 23 09 54.2 +1.5**
SNR=273
ARQ Araqi 41.53 300 ⇑P **P 23 09 56.5 +0.7**
SNR=21
UCH Uchtor 41.60 337 PFAKE 23 10 10.0 +14
UCH LR LR
comp=Z,1µm,20.0s,MS4.8
UCH Uchtor 41.60 337 P **P 23 09 57.8 +1.7**
SNR=141
AAA Alma-Ata 41.61 340 *i* P **P 23 09 56.4 +0.3**
AAA *i* S **S 23 16 09.7 +0.6**
AAA pmax pmax
comp=Z,6µm,3.9s
AAA smax
comp=N,5µm,9.9s
AAA MLR MLR
comp=Z,2µm,18.0s,MS5.1
DL2 Dalian 41.70 32 P **P 23 09 57.5 +0.6**
DL2 AP pP 23 10 07.3 -2.3
DL2 XP sP 23 10 15.0 -0.2
DL2 PP PP 23 11 39.8 +5.8
DL2 S **S 23 16 11.5 +1.0**
DL2 AMB AMB
comp=Z,700nm,0.8s,mb6.3
DL2 AMB AMB
comp=Z,600nm,5.5s
DL2 LR LR
comp=N,3µm,16.7s,MS5.3
DL2 LR LR
comp=E,1µm,18.2s,MS5.3
DL2 LR LR
comp=Z,3µm,22.5s,MS5.2
TKM2 Tokmak 2 41.78 338 *e*P **P 23 09 58.7 +1.2**
comp=Z,1µm,1.4s,mb6.4
TKM2 *e*pP pP 23 10 07.2 -3.0
TKM2 LR LR
comp=Z,2µm,21.0s,MS5.0
TKM2 Tokmak 2 41.78 338 P **P 23 09 58.7 +1.2**
SNR=548
KBK Karagaybulak 41.80 338 P **P 23 09 59.5 +1.8**
SNR=1024
AML Almayashu 41.85 336 *e*P **P 23 09 59.6 +1.6**
comp=Z,1µm,0.8s,mb6.6
AML Almayashu 41.85 336 P **P 23 09 59.8 +1.8**
SNR=225
AAK Ala-Archa 41.95 337 P **P 23 10 00.4 +1.5**
SNR=650
RBK Rabkut 41.96 291 ⇓P **P 23 09 59.8 +0.5**
SNR=5.3
FRU Bishkek 42.08 337 *i* P **P 23 10 00.5 +0.6**
FRU *i* S **S 23 16 18.5 +2.5**
FRU pmax pmax
comp=Z,3µm,2.6s,mb6.5
FRU pmax pmax
comp=Z,4µm,4.0s
FRU smax
comp=E,2µm,3.9s
FRU MLR MLR
comp=Z,2µm,20.0s,MS5.1
FRU MLR MLR
comp=E,3µm,20.0s
CHMS Chumysh 42.17 338 P **P 23 10 01.8 +1.2**
SNR=7.5
EKS2 Erkin-Say 42.26 337 *e*P **P 23 10 03.0 +1.6**
comp=E,380nm,2.0s,mb5.7
EKS2 LR LR
comp=Z,2µm,21.0s,MS5.0
EKS2 Erkin-Say 42.26 337 P **P 23 10 02.9 +1.5**
SNR=664
HATD Hatta, Dubai 42.40 302 ⇑P **P 23 10 03.6 +0.8**
SNR=20
WHFO Wadi Hawf 42.45 291 ⇑P **P 23 10 03.8 +0.5**
SNR=10
USP Ospenovka 42.49 338 P **P 23 10 04.4 +1.1**
SNR=21
BANOM Banah 42.67 304 ⇓P **P 23 10 05.8 +0.7**
SNR=11
ABTO Aybut 42.77 290 ⇑P **P 23 10 06.4 +0.4**
SNR=6.2
NWAO Narrogin (SRO) 42.94 152 P **P 23 10 07.1 +0.1**
comp=Z,34nm,1.0s,mb5.0,baz=329,slow=7.7,SNR=12
NWAO pP pP 23 10 21.7 +1.9
comp=Z,53nm,0.8s,baz=318,slow=9.5,SNR=10
NWAO LR LR 23 28 37.3
comp=Z,3µm,20.1s,MS5.2,baz=328,slow=37
NWAO Narrogin (SRO) 42.94 152 *e*P **P 23 10 07.0 0.0**
comp=Z,181nm,1.4s,mb5.6
NWAO LR LR
comp=Z,3µm,20.0s,MS5.1
NWAO Narrogin (SRO) 42.94 152 P **P 23 10 07.1 +0.1**
NWAO *PP pP 23 10 21.7 +1.9
NWAO pmax pmax
comp=Z,34nm,1.0s
NWAO pmax pmax
comp=Z,53nm,0.8s
NWAO MLR MLR
comp=Z,3µm,20.1s
MK31 Makanchi Array 43.35 347 *e*P **P 23 10 10.1 -0.1**
MK31 Makanchi Array 43.35 347 *i* P **P 23 10 09.8 -0.4**
MK31 pmax pmax
comp=Z,87nm,0.4s,mb5.8
MKAR Makanchi Array 43.35 347 P **P 23 10 09.9 -0.2**
comp=Z,310nm,0.8s,mb6.1,baz=162,slow=7.5,SNR=696
MKAR PcP PcP 23 11 58.4 +0.2
comp=Z,42nm,0.8s,baz=179,slow=3.4,SNR=4.6
MKAR S **S 23 16 34.8 +0.3**
comp=Z,2.7nm,0.7s,baz=175,slow=14,SNR=2.6
MKAR LR LR 23 31 01.0
comp=Z,3µm,21.9s,MS5.1,baz=158,slow=40
MKAR Makanchi Array 43.35 347 P **P 23 10 10.0 -0.2**
MKAR 23 11 58.4
MKAR S **S 23 16 34.8 +0.2**
MKAR pmax pmax
comp=Z,310nm,0.8s
MKAR pmax pmax
comp=Z,42nm,0.9s
MKAR smax
comp=N,3.0nm,0.7s
MKAR MLR MLR
comp=Z,3µm,21.9s
KK31 Karatay Array 43.98 334 P **P 23 10 15.4 +0.1**
KK31 pmax pmax
comp=Z,200nm,0.7s,mb6.0
SONM Songino Array 44.05 11 P **P 23 10 15.0 -0.7**
comp=Z,60nm,0.8s,mb5.3,baz=192,slow=8.7,SNR=194
SONM PcP PcP 23 12 01.0 +0.5
comp=Z,94nm,0.7s,baz=190,slow=3.6,SNR=24
SONM ScP ScP 23 15 47.8 -0.9
comp=Z,14nm,1.0s,baz=192,slow=4.1,SNR=7.6
SONM LR LR 23 31 18.2
comp=Z,4µm,18.2s,MS5.4,baz=189,slow=40
SONM Songino Array 44.05 11 P **P 23 10 15.0 -0.7**
SONM 23 12 01.0
SONM pmax pmax
comp=Z,60nm,0.8s
SONM pmax pmax
comp=Z,94nm,0.7s
SONM pmax pmax
comp=N,14nm,1.0s
SONM MLR MLR
comp=Z,4µm,18.3s
ULN Ulaanbaatar 44.20 12 ⇓P **P 23 10 18.1 +1.2**
SNR=14
ULN Ulaanbaatar 44.20 12 *e*P **P 23 10 15.9 -1.1**
comp=Z,40nm,0.9s,mb5.2
ULN LR LR
comp=Z,6µm,20.0s,MS5.5
ULN Ulaanbaatar 44.20 12 P **P 23 10 16.0 -1.0**
comp=Z,60nm,1.0s,comp=Z,1µm,mb5.3
KS15 Wonju Array Si 44.26 38 *e*P **P 23 10 17.5 -0.2**
KSRS Korea Array 44.29 38 P **P 23 10 17.2 -0.7**
comp=Z,158nm,0.8s,mb5.8,baz=220,slow=8.8,SNR=358
KSRS pP pP 23 10 30.4 -0.4
comp=Z,13nm,0.8s,baz=29,slow=38,SNR=1.9
KSRS PcP PcP 23 12 01.4 -0.3
comp=Z,12nm,0.7s,baz=220,slow=3.3,SNR=5.7
KSRS ScP ScP 23 15 48.1 -1.8
comp=Z,5.9nm,1.1s,baz=239,slow=4.7,SNR=5.1
KSRS LR LR 23 32 31.3
comp=Z,3µm,19.5s,MS5.2,baz=204,slow=41
KSRS Korea Array 44.29 38 P **P 23 10 17.3 -0.6**
KSRS *PP pP 23 10 30.4 -0.4
KSRS 23 12 01.4
KSRS pmax pmax
comp=Z,159nm,0.8s,mb5.8
KSRS pmax pmax
comp=Z,13nm,0.8s,mb4.7
KSRS pmax pmax
comp=Z,12nm,0.7s,mb4.7
KSRS pmax pmax
comp=N,6.0nm,1.1s
KSRS MLR MLR
comp=Z,3µm,19.5s,MS5.2
SNY Shenyang 44.86 30 ⇑P **P 23 10 21.9 -0.4**
SNY PP PP 23 12 10.6 +2.8
SNY AMB AMB
comp=Z,492nm,0.7s,mb6.5
SNY AMB AMB
comp=Z,2µm,2.6s,mb6.5
SNY LR LR
comp=N,3µm,20.3s,MS5.5
SNY LR LR
comp=E,5µm,18.0s,MS5.5
SNY LR LR
comp=Z,5µm,19.1s,MS5.5
WRA Warramunga Arr 45.72 124 P **P 23 10 29.2 -0.3**
comp=Z,451nm,0.7s,mb6.5,baz=302,slow=9.1,SNR=640
WRA pP pP 23 10 42.4 +0.1
comp=Z,266nm,0.8s,baz=300,slow=9.4,SNR=9.9
WRA ScP ScP 23 15 55.1 -1.1
comp=Z,12nm,1.1s,baz=304,slow=3.8,SNR=6.6
WRA S **S 23 17 04.7 -5.0**
comp=Z,15nm,1.1s,baz=294,slow=16,SNR=9.5
WRA LR LR 23 30 34.9
comp=Z,2µm,20.8s,MS5.1,baz=310,slow=37
WRA Warramunga Arr 45.72 124 P **P 23 10 29.2 -0.2**
WRA *PP pP 23 10 42.4 +0.1
WRA S **S 23 17 04.7 -4.9**
WRA pmax pmax
comp=Z,451nm,0.7s
WRA pmax pmax
comp=Z,266nm,0.9s
WRA pmax pmax
comp=N,12nm,1.1s
WRA smax
comp=N,15nm,1.1s
WRA MLR MLR
comp=Z,2µm,20.8s
WRAB Tennant Creek 45.72 124 *e*P **P 23 10 29.6 +0.1**
comp=Z,552nm,0.8s,mb6.5
WRAB Tennant Creek 45.72 124 *e*P **P 23 10 29.6 +0.1**
WRAB pmax pmax
comp=Z,551nm,0.8s,mb6.5
WRAB Tennant Creek 45.72 124 P **P 23 10 29.6 +0.1**
comp=Z,918nm,0.9s,comp=Z,9µm,mb6.7
ZAK Zakamensk 46.03 7 ⇓*i*P **P 23 10 30.2 -1.2**
ZAK pmax pmax
comp=Z,55nm,1.0s,mb5.4
MUKL Al Mukalla 46.33 285 *e*P **P 23 10 36.0 +1.6**
MOY Mondy 47.05 5 *e*P **P 23 10 38.2 -1.2**
MOY pmax pmax
comp=Z,14nm,3.5s
ABKT Ailbek 47.17 320 P **P 23 10 41.6 +1.0**
comp=Z,2µm,0.8s,mb7.2
VAN Vannovskaya 47.19 320 ⇑*i*P **P 23 10 41.5 +0.7**
VAN *i* S **S 23 17 29.4 -0.9**
ASAR Alice Springs 47.21 128 P **P 23 10 40.8 -0.4**
comp=Z,99nm,0.7s,mb5.8,baz=299,slow=8.0,SNR=941
ASAR pP pP 23 10 54.3 +0.2

comp=Z,149nm,0.7s,baz=299,slow=7.8,SNR=13
ASAR PcP PcP 23 12 12.3 +0.2
comp=Z,54nm,0.8s,baz=305,slow=3.9,SNR=6.2
ASAR ScP ScP 23 16 01.6 -0.7
comp=Z,6.6nm,0.9s,baz=310,slow=4.3,SNR=5.6
ASAR S **S** **23 17 28.6 -2.4**
comp=Z,7.2nm,0.8s,baz=290,slow=14,SNR=6.8
ASAR Alice Springs 47.21 128 P **P** **23 10 40.8 -0.4**
ASAR *P P 23 10 54.3 +0.2
ASAR 23 12 12.3
ASAR S **S** **23 17 28.6 -2.4**
ASAR pmax pmax
comp=Z,99nm,0.7s
ASAR pmax pmax
comp=Z,149nm,0.7s
ASAR pmax pmax
comp=Z,55nm,0.8s
ASAR pmax pmax
comp=N,7.0nm,0.9s
ASAR smax
comp=N,7.0nm,0.8s
CN2 Changchun 47.24 30 ⇑P **P** **23 10 40.8 -0.2**
CN2 PP PP 23 12 30.8 -1.6
CN2 *e*S **S** **23 17 27.5 -3.3**
CN2 AMB AMB
comp=Z,420nm,0.7s,mb6.5
CN2 AMB AMB
comp=Z,1μm,3.0s
CN2 LR LR
comp=N,3μm,19.0s,MS5.5
CN2 LR LR
comp=E,4μm,19.0s,MS5.5
CN2 LR LR
comp=Z,5μm,18.0s,MS5.6
FORT Forrest 47.32 140 *e*P **P** **23 10 42.1 +0.2**
FORT comp=Z,224nm,0.7s,mb6.2
FORT *e*PcP PcP 23 12 12.8 +0.5
TLY Talaya 47.35 7 ⇑P **P** **23 10 42.2 +0.4**
SNR=8.4
TLY Talaya 47.35 7 *e*P **P** **23 10 41.6 -0.1**
comp=Z,63nm,1.0s,mb5.5
TLY pP pP 23 10 50.8 -3.9
TLY LR LR
comp=Z,5μm,22.0s,MS5.5
TLY Talaya 47.35 7*c i*P **P** **23 10 41.6 -0.1**
TLY *e* 23 12 12.2
TLY *e* 23 12 32.9
TLY *e*S **S** **23 17 38.3 +6.2**
TLY pmax pmax
comp=Z,68nm,0.8s,mb5.6
TLY MLR MLR
comp=Z,3μm,18.0s,MS5.3
KURK Kurchatov 47.88 346 ⇑P **P** **23 10 46.6 +0.7**
SNR=124
KURK Kurchatov 47.88 346 P **P** **23 10 45.3 -0.6**
comp=Z,334nm,0.8s,mb6.5,baz=169,slow=7.0,SNR=613
KURK pP pP 23 10 57.8 -1.0
comp=Z,82nm,0.8s,baz=168,slow=6.8,SNR=4.8
KURK PcP PcP 23 12 14.1 +0.2
comp=Z,98nm,0.8s,baz=160,slow=2.9,SNR=7.8
KURK Kurchatov 47.88 346 *e*P **P** **23 10 46.0 +0.1**
comp=Z,305nm,0.8s,mb6.4
KURK *e*PcP PcP 23 12 14.9 +1.0
KURK LR LR
comp=Z,2μm,19.0s,MS5.1
KURK Kurchatov 47.88 346 P **P** **23 10 45.3 -0.6**
KURK *P P 23 10 57.8 -1.0
KURK 23 12 14.1
KURK pmax pmax
comp=Z,334nm,0.8s,mb6.4
KURK pmax pmax
comp=Z,82nm,0.8s,mb5.8
KURK pmax pmax
comp=Z,98nm,0.8s,mb5.9
IRK Irkutsk 47.98 8⇓*i*P **P** **23 10 45.0 -1.6**
IRK *e* 23 12 14.0
IRK pmax pmax
comp=Z,139nm,2.1s,mb5.6
HIA Hailar 49.08 21 *e*P **P** **23 10 55.0 -0.1**
comp=Z,219nm,0.8s,mb6.2
HIA LR LR
comp=Z,12μm,20.0s,MS5.9
HIA Hailar 49.08 21 *e*P **P** **23 10 55.0 -0.1**
HIA pmax pmax
comp=Z,219nm,0.8s
HIA MLR MLR
comp=Z,12μm,20.0s
ZAA0 Zalesovo Array 49.79 352 *e*P **P** **23 11 00.3 -0.2**
ZALV Zalesovo Beam 49.79 352 P **P** **23 11 00.1 -0.4**
comp=Z,172nm,0.6s,mb6.2,baz=178,slow=7.4,SNR=465
ZALV pP pP 23 11 13.1 -0.4
comp=Z,60nm,0.5s,baz=179,slow=12,SNR=6.6
ZALV PcP PcP 23 12 20.3 -0.4
comp=Z,35nm,0.6s,baz=193,slow=2.4,SNR=3.0
ZALV ScP ScP 23 16 12.0 -0.6
comp=Z,18nm,0.9s,baz=236,slow=1.6,SNR=5.1
ZALV S **S** **23 18 05.4 -1.0**
comp=Z,20nm,1.0s,baz=173,slow=15,SNR=7.6
ZALV LR LR 23 35 03.8
comp=Z,1μm,21.8s,MS4.8,baz=335,slow=40
ZALV PKPPKP 23 41 49.8
comp=Z,0.6nm,0.3s,baz=2.9,slow=3.0,SNR=4.2
ZALV Zalesovo Beam 49.79 352 P **P** **23 11 00.1 -0.4**
ZALV *PP pP 23 11 13.1 -0.4
ZALV 23 12 20.3
ZALV S **S** **23 18 05.4 -1.0**
ZALV pmax pmax
comp=Z,172nm,0.6s,mb6.3
ZALV pmax pmax
comp=Z,60nm,0.5s,mb5.9
ZALV pmax pmax
comp=Z,35nm,0.6s,mb5.6
ZALV pmax pmax
comp=N,18nm,0.9s
ZALV smax
comp=N,20nm,1.0s
ZALV MLR MLR
comp=Z,1μm,21.8s,MS4.8
ZALV pmax pmax
comp=Z,1.0nm,0.3s
GUMO Guam 49.86 76 LR LR 23 32 31.8
comp=Z,1μm,19.8s,MS5.0,baz=257,slow=37
GUMO Guam 49.86 76 PFAKE 23 11 10.0 +8.3
GUMO LR LR
comp=Z,2μm,22.0s,MS5.1
MDJ Mudanjiang 49.94 32 P **P** **23 11 02.3 +0.5**
MDJ AP pP 23 11 11.3 -3.5
MDJ XP sP 23 11 15.3 -5.0
MDJ PP PP 23 12 56.8 -0.2
MDJ SCP ScP 23 16 15.3 +1.8
MDJ PCS PcS 23 16 18.9 +0.6
MDJ S **S** **23 18 10.8 +2.0**
MDJ XS sS 23 18 27.0 -3.6
MDJ SCS ScS 23 20 51.1 +1.9
MDJ SS SS 23 21 43.9 +1.7
MDJ AMB AMB
comp=Z,356nm,1.3s,mb6.2
MDJ AMB AMB
comp=Z,876nm,5.9s
MDJ LR LR
comp=N,3μm,23.9s,MS5.4
MDJ LR LR
comp=E,3μm,23.4s,MS5.4
MDJ LR LR
comp=Z,5μm,23.0s,MS5.5
MDJ Mudanjiang 49.94 32 *e*P **P** **23 11 02.4 +0.6**
comp=Z,324nm,0.9s,mb6.4
MDJ LR LR
comp=Z,6μm,22.0s,MS5.6
QRN Al-Qurain 50.64 304 *e*P **P** **23 11 08.0 +0.6**
baz=304
QRN AMb AMB 23 11 10.7
comp=Z,474nm,1.0s,mb6.4,baz=304
MAJO Matsushiro 50.64 45 *e*P **P** **23 11 06.5 -0.7**
comp=Z,177nm,1.5s,mb5.8
MAJO *e*PcP PcP 23 12 24.6 +0.3
MAJO LR LR
comp=Z,5μm,21.0s,MS5.5
MAT Matsushiro 50.64 45 P **P** **23 11 06.4 -0.9**
MJAR Matsushiro Arr 50.65 45 P **P** **23 11 06.7 -0.6**
comp=Z,68nm,0.9s,mb5.6,baz=243,slow=8.2,SNR=75
MJAR pP pP 23 11 19.3 -1.1
comp=Z,15nm,0.8s,baz=271,slow=6.0,SNR=4.7
MJAR PcP PcP 23 12 24.6 +0.3
comp=Z,52nm,0.9s,baz=244,slow=4.0,SNR=11
MJAR ScP ScP 23 16 15.3 -1.4
comp=Z,9.1nm,1.1s,baz=233,slow=4.1,SNR=6.0
MJAR LR LR 23 33 45.4
comp=Z,4μm,21.5s,MS5.4,baz=240,slow=38
MJAR Matsushiro Arr 50.65 45 P **P** **23 11 06.7 -0.6**
MJAR *PP pP 23 11 19.3 -1.0
MJAR 23 12 24.6
MJAR pmax pmax
comp=Z,68nm,0.9s
MJAR pmax pmax
comp=Z,15nm,0.8s
MJAR pmax pmax
comp=Z,52nm,0.9s
MJAR pmax pmax
comp=N,9.0nm,1.1s
MJAR MLR MLR
comp=Z,4μm,21.5s
NVS Novosibirsk 50.88 351⇑*i*P **P** **23 11 07.3 -1.4**
NVS *i*S **S** **23 18 18.7 -2.9**
NVS pmax pmax
comp=Z,343nm,1.1s,mb6.2
NVS pmax pmax
comp=N,309nm,1.4s
NVS pmax pmax
comp=E,134nm,1.1s
NVS smax
comp=N,137nm,1.7s
TRBA At Turbah 50.96 283 *e*P **P** **23 11 12.2 +2.3**
KBD Kabd 50.96 304 *e*P **P** **23 11 10.6 +0.7**
baz=304
KBD AMb AMB 23 11 12.8
comp=Z,201nm,1.4s,mb5.9,baz=304
RDF Al-Radifah 51.00 304 *e*P **P** **23 11 10.9 +0.8**
baz=304
RDF AMb AMB 23 11 11.9
comp=Z,392nm,0.9s,mb6.3,baz=304
UMR Umm Al-Rimmam 51.07 305 *e*P **P** **23 11 11.1 +0.5**
baz=304
UMR AMb AMB 23 11 12.6
comp=Z,220nm,1.6s,mb5.8,baz=304
KRAR Krasnoyarsk 51.18 358*c i*P **P** **23 11 10.4 -0.5**
KRAR pmax pmax
comp=Z,471nm,0.8s,mb6.5
COEN Coen 51.20 112 *e*P **P** **23 11 10.5 -1.3**
comp=Z,87nm,0.8s,mb5.7
COEN Coen 51.20 112 P **P** **23 11 10.2 -1.6**
comp=Z,67nm,1.1s,comp=Z,1μm,mb5.5
NAY Al-Naaiem 51.36 304 *e*P **P** **23 11 13.1 +0.3**
baz=304
NAY AMb AMB 23 11 14.3
comp=Z,294nm,0.9s,mb6.2,baz=304
MIB Mutribah 51.46 305 *e*P **P** **23 11 14.4 +0.8**
baz=305
MIB AMb AMB 23 11 15.7
comp=Z,630nm,1.3s,mb6.4,baz=305
VOSK Vostochnaya 51.81 342 P **P** **23 11 15.4 -0.3**
VOSK pmax pmax
comp=Z,432nm,0.7s,mb6.5
BVA0 Borovoye Array 52.26 341 *i* P **P** **23 11 18.7 -0.3**
BVA0 pmax pmax
comp=Z,147nm,0.8s,mb6.0
BVAR Borovoye Array 52.26 341 P **P** **23 11 18.8 -0.2**
comp=Z,554nm,0.7s,mb6.6,baz=143,slow=8.5,SNR=2827
BVAR pP pP 23 11 31.2 -0.9
comp=Z,109nm,0.8s,baz=137,slow=10,SNR=5.2
BVAR Borovoye Array 52.26 341 P **P** **23 11 18.8 -0.2**
BVAR *PP pP 23 11 31.2 -0.9
BVAR pmax pmax
comp=Z,554nm,0.7s
BVAR pmax pmax
comp=Z,109nm,0.8s
BRVK Borovoye 52.32 341 *e*P **P** **23 11 19.7 +0.2**
BRVK LR LR
comp=Z,2μm,22.0s,MS5.2
AB31 Akbulak array 53.43 332 P **P** **23 11 27.7 -0.1**
AB31 pmax pmax
comp=Z,248nm,0.8s,mb6.2
PMG Port Moresby 53.77 105 PFAKE 23 11 40.0 +9.2
PMG LR LR
comp=Z,2μm,22.0s,MS5.0
KLR Kul'dur 54.15 29⇓*e*P **P** **23 11 29.3 -3.7**
KLR *e*S **S** **23 19 04.5 -1.9**
KLR pmax pmax
comp=Z,700nm,1.0s,mb6.5
KLR pmax pmax
comp=Z,2μm,9.0s
KLR MLR MLR
comp=N,3μm,13.5s
KLR MLR MLR
comp=Z,14μm,13.5s,MS6.2
BOD Bodaibo 55.00 12 *e*P **P** **23 11 37.8 -1.2**
BOD pmax pmax
comp=Z,122nm,1.0s,mb5.9
AKTK Aktyubinsk 55.15 332 P **P** **23 11 40.0 -0.3**
AKTK pP pP 23 11 54.3 +0.8
AKTO Aktyubinsk 55.15 332 P **P** **23 11 40.0 -0.3**
comp=Z,104nm,0.9s,mb5.8,baz=131,slow=8.1,SNR=226
AKTO pP pP 23 11 54.3 +0.8
baz=112,slow=11
AKTO Aktyubinsk 55.15 332 P **P** **23 11 40.0 -0.2**
AKTO *PP pP 23 11 54.3 +0.9
AKTO pmax pmax
comp=Z,104nm,0.9s,mb5.9
HABR Khabarovsk 55.31 31⇓*e*P **P** **23 11 37.7 -3.7**
HABR *e*PP pP 23 11 48.1 -6.5
HABR *e*SP 23 11 51.9
HABR *e* 23 12 38.8
HABR *e* 23 13 41.0
HABR *e*PPP 23 14 52.8
HABR *e*S **S** **23 19 18.7 -3.3**
HABR *e*PS 23 19 30.8
HABR *e* 23 19 35.6
HABR *e* 23 21 24.0
HABR *e*SS SS 23 23 04.1 -2.9
HABR *e*SSS 23 25 11.5
HABR pmax pmax
comp=Z,530nm,1.1s,mb6.5
HABR pmax pmax
comp=Z,2μm,3.6s
HABR MLR MLR
comp=Z,5μm,15.8s,MS5.7
CTA Charters Tower 55.99 118 S **S** **23 19 29.8 -2.2**
comp=Z,0.9nm,0.3s,baz=223,slow=23,SNR=4.5
CTA LR LR 23 36 59.1
comp=Z,4μm,21.7s,MS5.5,baz=286,slow=37
CTAO Charters Tower 55.99 118 *e*P **P** **23 11 46.5 -0.3**
comp=Z,118nm,1.1s,mb5.8
CTAO LR LR
comp=Z,4μm,22.0s,MS5.5
CTAO Charters Tower 55.99 118 *e*P **P** **23 11 46.5 -0.3**
CTAO pmax pmax
comp=Z,118nm,1.1s,mb5.8
CTAO MLR MLR
comp=Z,4μm,22.0s,MS5.5
CTAO Charters Tower 55.99 118 P **P** **23 11 46.5 -0.3**
comp=Z,165nm,1.2s,comp=Z,3μm,mb6.0
ERM Erimo 56.59 42 *e*P **P** **23 11 51.2 +0.5**
comp=Z,120nm,0.9s,mb5.9
ERM LR LR
comp=Z,4μm,20.0s,MS5.5
ERM Erimo 56.59 42 *e*P **P** **23 11 51.2 +0.5**
ERM pmax pmax
comp=Z,119nm,0.9s,mb5.9
ERM MLR MLR
comp=Z,4μm,20.0s,MS5.5
MAK Makhachkala 56.69 320*d i*P **P** **23 11 49.8 -1.6**
MAK *e* 23 13 53.6
MAK *i*S **S** **23 19 38.2 -2.4**
MAK *i* 23 21 33.5
MAK *e*SS SS 23 23 26.2 -2.9
MAK pmax pmax
comp=Z,150nm,0.6s,mb6.2
HKR Hakkari 57.02 312 *e*P **P** **23 11 53.2 -0.6**
HAKT HAKKARI 57.04 312⇑*i*P **P** **23 11 56.4 +2.4**
CLNS Chul'man 57.08 19 *e*P **P** **23 11 53.8 -0.1**
CLNS *e**PP pP 23 12 02.9 -4.3
CLNS *e* 23 12 47.9
CLNS *e* 23 13 58.1
CLNS *e*S **S** **23 19 46.6 +1.4**
CLNS *e* 23 21 30.0
CLNS pmax pmax
comp=Z,68nm,0.9s,mb5.7
CLNS pmax pmax
comp=E,30nm,0.9s
CLNS pmax pmax
comp=N,43nm,0.9s
CLNS pmax pmax
comp=Z,27nm,1.2s,mb5.2
CLNS pmax pmax
comp=N,28nm,1.2s
CLNS pmax pmax
comp=E,16nm,0.8s
CLNS smax
comp=E,250nm,12.9s
CLNS smax
comp=N,237nm,11.4s
CLNS MLR MLR
comp=N,6μm,18.0s
CLNS MLR MLR
comp=Z,10μm,18.0s,MS6.0
CLNS MLR MLR
comp=N,6μm,19.0s
STKA Stephens Creek 57.28 133 P **P** **23 11 55.4 -0.4**
comp=N,43nm,0.8s,mb5.5,baz=308,slow=6.5,SNR=91
STKA pP pP 23 12 09.4 +0.4
comp=N,49nm,0.7s,baz=303,slow=5.3,SNR=9.7
STKA S **S** **23 19 48.5 -0.2**
comp=N,2.6nm,1.0s,baz=113,slow=22,SNR=2.0
STKA LR LR 23 39 33.2
comp=N,2μm,20.7s,MS5.3,baz=303,slow=39
STKA Stephens Creek 57.28 133 *e*P **P** **23 11 55.4 -0.4**
DGRG David-gareji 57.42 317 P **P** **23 11 57.4 +0.8**
CLDR Caldiran 57.49 314 *e*P **P** **23 11 57.1 0.0**
TVAN Van 57.62 313 *i* P **P** **23 11 57.5 -0.6**
VANB Van 57.66 313 *e*P **P** **23 11 56.8 -1.5**
DYDN Diyadin 57.81 314⇑*i*P **P** **23 11 59.8 +0.4**
MTA Mtatsminda 57.92 317 P **P** **23 12 00.2 +0.1**
TBLG Delisi 57.97 317 *i* P **P** **23 12 01.6 +1.1**
TBLG Delisi 57.97 317 P **P** **23 12 01.6 +1.1**
AGRB Hanur-Agry 58.32 314 *e*P **P** **23 12 03.2 +0.3**
TUTA Tutak 58.38 314⇑*i*P **P** **23 12 03.6 +0.3**
GOR Gori 58.51 317 P **P** **23 12 04.7 +0.5**
KARS Kars 58.65 315 *e*P **P** **23 12 05.5 +0.2**
SVE Sverdlovsk 58.66 339⇓*e*P **P** **23 12 05.0 0.0**
SVE *e* 23 14 20.8
SVE *e*S **S** **23 20 03.8 -2.1**
SVE *e* 23 21 53.6
SVE *e*SS SS 23 23 59.2 -0.2
SVE pmax pmax
comp=Z,655nm,1.0s,mb6.6
SVE pmax pmax
comp=Z,454nm,7.8s
SVE MLR MLR
comp=Z,2μm,19.0s,MS5.3
YSS Yuzh-Sakhalins 58.73 36 *e*P **P** **23 12 05.9 +0.2**
comp=Z,644nm,1.0s,mb6.6
YSS LR LR
comp=Z,1μm,19.0s,MS5.0
YSS Yuzh-Sakhalins 58.73 36*α i*P **P** **23 12 05.7 +0.1**
YSS *e* pP 23 12 17.0 -1.9
YSS *e* 23 14.0
YSS *e*S **S** **23 20 06.0 -1.1**
YSS *e*SS SS 23 24 02.0 +1.2
YSS *e*SSS 23 26 27.0
YSS pmax pmax
comp=Z,540nm,0.8s,mb6.6
BEST Besiri 58.96 312⇑*i*P **P** **23 12 07.1 -0.4**
MARD Mardin 59.13 311⇑*i*P **P** **23 12 08.6 -0.1**
ARU Arti 59.14 337 *e*P **P** **23 12 07.9 -0.4**
comp=Z,266nm,1.0s,mb6.2
ARU LR LR
comp=Z,2μm,19.0s,MS5.2
ARU Arti 59.14 337*c i*P **P** **23 12 07.8 -0.5**
ARU *e* 23 12 54.4
ARU *e* 23 14 14.8
ARU *e*S **S** **23 20 12.4 +0.2**
ARU *e* 23 21 51.7
ARU pmax pmax
comp=Z,337nm,1.0s,mb6.3
ARU MLR MLR
comp=Z,2μm,19.0s,MS5.2
HOMI Horasan 59.27 314⇑*i*P **P** **23 12 10.1 +0.5**
YUK Yuzh-Kuril'sk 59.27 41 *e*P **P** **23 12 13.0 +3.5**
BNGL BINGOL 59.42 313⇑*i*P **P** **23 12 10.7 +0.1**
ERZM Erzurum 59.60 314⇑*i*P **P** **23 12 12.4 +0.5**
EZM Erzurum 59.60 314 *e*P **P** **23 12 12.1 +0.2**
DAGI Agillar 59.65 315⇑*i*P **P** **23 12 12.4 +0.2**
ARTV Artvin 59.68 316⇑*i*P **P** **23 12 11.5 -0.8**
DDEM Demirkent 59.70 315⇑*i*P **P** **23 12 12.3 -0.2**
DIYA Diyarbakir 59.83 312⇑*i*P **P** **23 12 13.6 +0.2**
DBOC Borcka 59.93 316⇑*i*P **P** **23 12 12.7 -1.3**
BCA Borcka 59.99 316 *e*P **P** **23 12 11.7 -2.8**
KOPT Kop Dagi 60.27 314⇑*i*P **P** **23 12 16.9 +0.5**
KIV Kislovodsk 60.28 319 ⇓P **P** **23 12 16.7 +0.3**
SNR=31
KIV Kislovodsk 60.28 319 PFAKE 23 12 30.0 +14
KIV LR LR
comp=Z,887nm,22.0s,MS4.9
KIV Kislovodsk 60.28 319 *e*P **P** **23 12 15.9 -0.5**
KIV *e* 23 14 29.0
KIV *e*S **S** **23 20 24.8 -2.4**
KIV *e*SS SS 23 24 26.8 +1.5
KIV pmax pmax
comp=Z,282nm,0.9s,mb6.3
KIV pmax pmax
comp=Z,402nm,6.9s
KIV Kislovodsk 60.28 319⇑*i*P **P** **23 12 16.3 -0.1**
URFA Urfa 60.65 311 *e*P **P** **23 12 19.9 +0.9**
EZC Erzincan 60.66 313 *e*P **P** **23 12 22.2 +3.0**
PTK Pertek 60.69 312 *e*P **P** **23 12 19.4 +0.1**
ASF Jabal al Asfar 60.73 304 P **P** **23 12 21.2 +1.5**
comp=Z,24nm,1.1s,mb5.2,baz=336,slow=4.2,SNR=20
ASF pP pP 23 12 34.4 +1.3
comp=Z,35nm,1.2s,baz=331,slow=2.6,SNR=8.8
ASF sP sP 23 12 40.0 +1.6
comp=Z,23nm,0.9s,baz=342,slow=3.7,SNR=6.8
ASF S **S** **23 20 35.8 +2.4**
comp=Z,1.0nm,0.8s,baz=254,slow=22,SNR=2.4
ASF Jabal al Asfar 60.73 304 P **P** **23 12 21.2 +1.5**
ASF *PP pP 23 12 34.4 +1.3
ASF S **S** **23 20 35.8 +2.4**
ASF pmax pmax
comp=Z,24nm,1.1s
ASF pmax pmax
comp=Z,35nm,1.2s
ASF pmax pmax
comp=Z,23nm,0.9s
ASF smax
comp=N,1.0nm,0.8s
MACK Trabzon 61.11 315⇑*i*P **P** **23 12 22.4 +0.2**
KTUT Trabzon 61.13 315 *e*P **P** **23 12 21.8 -0.4**
GUMT Gumushane 61.15 314 *e*P **P** **23 12 22.9 +0.5**
KEMA Kemaliye 61.47 312⇑*i*P **P** **23 12 24.9 +0.3**
GZT Gaziantep 61.58 310⇑*i*P **P** **23 12 26.2 +0.9**
GAZ Gaziantep 61.79 310 *e*P **P** **23 12 27.6 +0.8**
ESPY Espiye-Giresun 61.84 314 *e*P **P** **23 12 26.4 -0.6**
DARE Darende-Malaty 61.88 312 *e*P **P** **23 12 28.6 +1.2**
RCY Rachaya 61.92 306 *e*P **P** **23 12 29.0 +1.2**
HWQ Hawqa 62.01 306 *e*P **P** **23 12 29.5 +1.1**
EIDS Eidsvold 62.01 122 *e*P **P** **23 12 28.2 -0.2**
comp=N,97nm,1.4s,mb5.7
SOKR Solikamsk 62.06 339*c i*P **P** **23 12 28.1 0.0**
SOKR S **S** **23 20 51.3 +2.0**
SOKR pmax pmax
comp=Z,550nm,1.3s,mb6.5
SOKR MLR MLR
comp=Z,1μm,17.0s,MS5.2
SOC Sochi 62.11 317*c i*P **P** **23 12 27.7 -1.1**
SOC *e**SP sP 23 12 39.4 -8.2
SOC *e* 23 14 44.6
SOC *e*S **S** **23 20 45.7 -4.8**
SOC *e**SS sS 23 21 06.3 -6.6
SOC *e*SS SS 23 24 46.3 -7.7
SOC pmax pmax
comp=Z,232nm,0.8s,mb6.4
KMRS Kahramanmaras 62.13 310 *e*P **P** **23 12 29.0 0.0**
MMAI Mount Meron Ar 62.15 305 P **P** **23 12 30.8 +1.5**
comp=Z,33nm,0.7s,mb5.5,baz=95,slow=8.5,SNR=38
MMAI pP pP 23 12 45.1 +2.4
comp=Z,83nm,1.0s,baz=96,slow=13,SNR=14
MMAI sP sP 23 12 49.7 +1.6
comp=Z,9.2nm,0.7s,baz=207,slow=45,SNR=8.7
MMAI S **S** **23 20 55.3 +3.9**
comp=Z,1.8nm,0.8s,baz=315,slow=57,SNR=1.7
BHL Bhannes 62.16 306 *e*P **P** **23 12 30.6 +1.3**
GRSN GIRESUNGRSN 62.17 314 *i* P **P** **23 12 28.9 -0.4**
HTY Hatay 62.33 308 *e*P **P** **23 12 31.1 +0.7**
COBT Iskenderun 62.35 309⇑*i*P **P** **23 12 31.8 +1.2**
ANDN Andirin 62.57 310⇑*i*P **P** **23 12 32.5 +0.4**
SARI SarD1z-Kayseri 62.62 311 *e*P **P** **23 12 33.5 +1.1**
YAK Yakutsk 62.69 18 *e*P **P** **23 12 30.9 -1.5**

comp=Z,352nm,0.8s,mb6.5
YAK LR LR
comp=Z,11µm,19.0s,MS6.0
YAK Yakutsk 62.69 18*c iP* **P 23 12 31.0 -1.3**
YAK *e**PP pP 23 12 47.6 +1.8
YAK *e* 23 13 09.2
YAK *e* 23 14 47.2
YAK *e*S **S 23 20 54.0 -3.2**
YAK *e*S **S 23 20 54.5 -2.7**
YAK *e**SS sS 23 21 14.6 -5.1
YAK *e* 23 22 15.2
YAK *e*SS SS 23 24 54.9 -7.6
YAK *e*SSS 23 27 50.6
YAK pmax pmax
comp=Z,383nm,1.0s,mb6.5
YAK pmax pmax
comp=E,138nm,1.5s
YAK pmax pmax
comp=N,191nm,1.8s
YAK pmax pmax
comp=Z,819nm,5.3s
YAK smax
comp=E,120nm,1.4s
YAK smax
comp=N,386nm,2.6s
YAK MLR MLR
comp=E,7µm,18.0s,MS5.9
YAK MLR MLR
comp=Z,9µm,16.0s,MS6.0
YAK MLR MLR
comp=N,5µm,21.0s,MS5.9
SVSK Karacayir 62.77 313 *eP* **P 23 12 33.2 -0.1**
PINB Pinarbasi 62.84 311⇑*iP* **P 23 12 34.1 +0.3**
CEYT Ceyhan 62.87 309 *eP* **P 23 12 34.0 0.0**
KOZT Kozan 62.94 310 *eP* **P 23 12 34.8 +0.3**
TOKT Tokat 63.23 313 *eP* **P 23 12 36.5 +0.1**
BNN Bunyan 63.31 311 *eP* **P 23 12 37.2 +0.3**
KARA Karaisali 63.47 309 *eP* **P 23 12 39.0 +1.0**
EREN Erenkoy 63.73 307 *eP* **P 23 12 38.8 -1.0**
MERS Mersin 63.78 309 *eP* **P 23 12 40.7 +0.6**
KVT Kavak 63.82 314 *eP* **P 23 12 40.0 -0.2**
YOZ Yozgat 63.92 312 *eP* **P 23 12 40.8 -0.1**
AVNT Avonos 64.03 311⇑*iP* **P 23 12 41.4 -0.3**
NIG Nigde 64.04 310 *eP* **P 23 12 42.7 +1.0**
VRHR Novokhopersk 64.04 326*c iP* **P 23 12 40.2 -1.3**
VRHR *e*S **S 23 21 08.1 -6.4**
VRHR pmax pmax
comp=Z,560nm,0.7s,mb6.7
VRHR pmax pmax
comp=N,70nm,0.8s
VRHR pmax pmax
comp=E,190nm,0.9s
VRHR smax
comp=E,200nm,1.3s
VRHR smax
comp=Z,40nm,1.2s
VRHR smax
comp=N,70nm,1.0s
VRHR MLR MLR
comp=Z,720nm,18.0s,MS4.9
VRHR MLR MLR
comp=N,820nm,17.0s,MS5.0
VRHR MLR MLR
comp=E,590nm,19.0s,MS5.0
ANN Anapa 64.08 318 *eP* **P 23 12 39.9 -1.9**
ANN *e*S **S 23 21 12.2 -2.9**
ANN pmax pmax
comp=Z,121nm,1.2s,mb5.8
LFK Lefkose 64.18 307 *eP* **P 23 12 43.2 +0.5**
CSS Prodhromos 64.27 307 P **P 23 12 43.4 +0.1**
CSS LR LR
comp=Z,2µm,21.0s,MS5.3
IKL Isikli 64.28 308 *eP* **P 23 12 42.9 -0.4**
ARMA Armidale 64.32 127 *eP* **P 23 12 45.3 +1.6**
comp=Z,10.0nm,1.3s,mb4.7
CAN Canberra 64.35 133 *eP* **P 23 12 44.4 +0.6**
MBAR Mbarara 64.48 267 *eP* **P 23 12 45.6 +0.5**
MBAR LR LR
comp=Z,697nm,22.0s,MS4.8
DIKM Dikmen 64.56 314 *eP* **P 23 12 43.6 -1.4**
CTKT Corum 64.59 313⇑*iP* **P 23 12 45.3 0.0**
LEF Lefka 64.66 307 *eP* **P 23 12 46.0 +0.1**
BOYT Boyabat 64.74 314 *i* P **P 23 12 46.2 -0.1**
KAMT Kaman 65.05 311 *eP* **P 23 12 47.8 -0.5**
TOS Tosya 65.27 313 *eP* **P 23 12 49.8 +0.1**
VORD Divnogorie 65.31 325*c iP* **P 23 12 48.4 -1.3**
VORD *e*S S 23 21 23.6 -6.5
VORD *e*PS 23 21 47.0
VORD pmax pmax
comp=Z,380nm,0.7s,mb6.5
VORD pmax pmax
comp=N,220nm,0.8s
VORD pmax pmax
comp=E,300nm,0.8s
VORD smax
comp=N,1µm,7.6s
VORD smax
comp=Z,690nm,5.2s
VORD smax
comp=E,230nm,4.1s
VORD MLR MLR
comp=N,1µm,19.0s,MS5.2
VORD MLR MLR
comp=Z,840nm,19.0s,MS5.0
VORD MLR MLR
comp=E,610nm,17.0s,MS5.2
HDMB Hadim 65.39 309 *eP* **P 23 12 50.6 +0.1**
CANT Cankiri 65.44 313 *eP* **P 23 12 51.2 +0.3**
VSR Storozhevoye 65.49 325*c iP* **P 23 12 49.2 -1.7**
VSR *e**PP pP 23 12 54.5 -10
VSR *e*S S 23 21 25.8 -6.4
VSR pmax pmax
comp=Z,130nm,0.7s,mb6.1
VSR pmax pmax
comp=N,80nm,0.8s
VSR pmax pmax
comp=E,170nm,0.7s
VSR smax
comp=E,300nm,4.6s
VSR smax
comp=Z,140nm,4.2s
VSR smax
comp=N,50nm,5.5s
VSR MLR MLR
comp=Z,440nm,24.0s,MS4.6
VSR MLR MLR
comp=N,380nm,17.0s
VSR MLR MLR
comp=E,1µm,26.0s
ILGA Ilgaz 65.50 313⇑*iP* **P 23 12 51.3 +0.1**
ELDT Eldivan 65.55 313⇑*iP* **P 23 12 51.4 -0.1**
VOR Voronezh 65.69 326 *eP* **P 23 12 51.0 -1.2**
VOR pmax pmax
comp=Z,550nm,1.5s,mb6.4
KONT Konya--Tatoy 65.72 310 *eP* **P 23 12 52.6 -0.1**
LADK Ladik-KONYA 65.77 310 *eP* **P 23 12 52.6 -0.4**
ANTO Ankara 65.86 312 *eP* **P 23 12 52.6 -0.9**
ANTO Ankara 65.86 312 ⇓P **P 23 12 53.7 +0.2**
SNR=28
ANTO Ankara 65.86 312 *eP* **P 23 12 53.4 -0.2**
comp=Z,137nm,0.8s,mb6.0
ANTO LR LR
comp=Z,660nm,19.0s,MS4.9
ANTO Ankara 65.86 312 P **P 23 12 53.3 -0.2**
ANTO pmax pmax
comp=Z,140nm,0.9s,mb6.0
ANTO Ankara 65.86 312⇑*iP* **P 23 12 53.2 -0.3**
BALT Daday 65.87 314⇑*iP* **P 23 12 53.1 -0.4**
LOD Lodumlu 65.89 312 *eP* **P 23 12 53.4 -0.4**
KDHN Kadinhani 66.04 310⇑*iP* **P 23 12 53.7 -1.1**
HNR Honiara 66.16 102 P **P 23 12 54.8 -1.1**
HNR LR LR 23 43 15.8
comp=Z,720nm,19.7s,MS4.9,baz=33,slow=37
HNR Honiara 66.16 102 *eP* **P 23 12 55.3 -0.6**
comp=Z,352nm,0.9s,mb6.4
HNR LR LR
comp=Z,1µm,20.0s,MS5.1
SAFT Safranbolu 66.29 313 *eP* **P 23 12 56.3 0.0**
KIZT Kizilcal 66.30 310 *eP* **P 23 12 56.0 -0.4**
SGKT Sivrigoynuk 66.58 312 *i* P **P 23 12 57.9 -0.3**
ANTB Antalya 66.81 308 *eP* **P 23 12 58.9 -0.8**
TAU Tasmania Unive 66.86 141 PFAKE 23 13 10.0 +10
TAU LR LR
comp=Z,2µm,21.0s,MS5.4
BOLV Bolvadin 66.97 310⇑*iP* **P 23 13 00.3 -0.4**

BCK Bucak 66.98 309 *eP* **P 23 12 59.0 -1.8**
ISP Isparta 67.12 309 *eP* **P 23 13 01.0 -0.6**
ISP Isparta 67.12 309 P **P 23 13 00.8 -0.8**
ISP LR LR
comp=Z,858nm,19.0s,MS5.0
ISP Isparta 67.12 309 P **P 23 13 01.1 -0.5**
ISP pmax pmax
comp=Z,200nm,1.1s,mb6.1
ISP Isparta 67.12 309⇑*iP* **P 23 13 01.0 -0.6**
MDU Mudurnu 67.18 312 *eP* **P 23 13 01.6 -0.3**
KDZE Karadeniz Ereo 67.22 313 *eP* **P 23 13 01.4 -0.8**
SHUT Suhut-Afyon 67.24 310 *eP* **P 23 13 02.0 -0.4**
HENT Hendek 67.50 312⇑*iP* **P 23 13 03.4 -0.5**
AKAS Kas 67.50 307⇑*iP* **P 23 13 01.6 -2.5**
BORA Eskisehir 67.61 311⇑*iP* **P 23 13 04.1 -0.6**
ALT Altintas 67.69 310 *eP* **P 23 13 02.7 -2.5**
GULT Gulveren 67.69 312 *eP* **P 23 13 05.0 -0.2**
GOLH Golhisar 67.73 308⇑*iP* **P 23 13 04.9 -0.6**
GPA Golpazari 67.81 312 *eP* **P 23 13 05.2 -0.7**
EYL Eskiyayla 67.99 312 *eP* **P 23 13 06.5 -0.5**
KHAL Karahalli 68.02 309⇑*iP* **P 23 13 06.7 -0.6**
GDZ Gediz 68.17 310⇑*iP* **P 23 13 07.5 -0.7**
MOS Moscow 68.24 329*c iP* **P 23 13 07.0 -1.3**
MOS *i* *PP pP 23 13 20.9 -1.0
MOS *i* pP 23 13 21.0 -0.9
MOS *e* 23 15 43.2
MOS *i* S S 23 21 59.7 -5.6
MOS *i* *SS sS 23 22 23.6 -4.4
MOS pmax pmax
comp=Z,561nm,0.9s,mb6.6
MOS pmax pmax
comp=Z,700nm,0.9s,mb6.7
MOS MLR MLR
comp=Z,1µm,21.0s,MS5.1
SKR Severo-Kuril's 68.29 37 *eP* **P 23 13 07.9 -0.8**
SKR *e* pP 23 13 21.0 -1.3
SKR pmax pmax
comp=N,160nm,0.9s
SKR pmax pmax
comp=Z,360nm,0.9s,mb6.4
SKR pmax pmax
comp=E,270nm,1.0s
TURN Turunc 68.42 308⇑*iP* **P 23 13 11.2 +1.4**
OBN Obninsk 68.53 328 *eP* **P 23 13 09.5 -0.7**
comp=E,608nm,1.1s,mb6.4
OBN LR LR
comp=Z,1µm,21.0s,MS5.1
OBN Obninsk 68.53 328⇓*eP* **P 23 13 09.0 -1.1**
OBN *e* 23 15 37.2
OBN *e*S S 23 22 05.5 -3.3
OBN pmax pmax
comp=Z,507nm,1.2s,mb6.3
OBN MLR MLR
comp=Z,900nm,21.0s,MS5.0
ULDT Uludag 68.66 311⇑*iP* **P 23 13 10.9 -0.4**
ARG Arkhangelos 68.67 307 *eP* **P 23 13 11.0 -0.4**
DEMI Demirci 68.75 310⇑*iP* **P 23 13 11.4 -0.5**
MANT Manisa 68.76 309⇑*iP* **P 23 13 11.5 -0.4**
DURS Dursunbey 69.04 311⇑*iP* **P 23 13 12.9 -0.8**
LSZ Lusaka 69.13 252 *eP* **P 23 13 16.2 +1.6**
comp=Z,36nm,0.8s,mb5.3
LSZ LR LR
comp=Z,5µm,20.0s,MS5.8
LSZ Lusaka 69.13 252 *eP* **P 23 13 16.2 +1.6**
LSZ pmax pmax
comp=Z,36nm,0.8s,mb5.3
LSZ MLR MLR
comp=Z,5µm,20.0s,MS5.8
KARP Karpathos 69.33 306 *e*PN **P 23 13 15.5 -0.1**
KARP Karpathos 69.33 306 *eP* **P 23 13 16.0 +0.4**
BDRM Kayabasi 69.36 308⇑*iP* **P 23 13 15.1 -0.6**
ELBA Catalca 69.39 312⇑*iP* **P 23 13 15.1 -0.7**
AKHS Akhisar 69.40 310⇑*iP* **P 23 13 15.8 -0.1**
GCAM G?zelcaml? 69.64 308⇑*iP* **P 23 13 17.3 -0.1**
KLMR Klimovskoe 69.68 335⇑*iP* **P 23 13 16.4 -0.8**
KLMR pmax pmax
comp=Z,471nm,1.5s,mb6.2
KDAG Bornova 69.74 309⇑*iP* **P 23 13 18.2 +0.2**
BLCB Balcova 69.91 309 P **P 23 13 19.3 +0.3**
SMG Samos 69.95 308 *e*PN **P 23 13 18.7 -0.6**
SMG Samos 69.95 308 *eP* **P 23 13 19.0 -0.3**
TLCR 70.03 316⇑P **P 23 13 19.3 -0.3**
TLCR 70.03 316⇑*iP* **P 23 13 19.3 -0.3**
ZKR Zakros 70.03 306 P **P 23 13 20.2 +0.3**
PETK Petropavlovsk- 70.04 35 P **P 23 13 18.3 -1.2**
comp=Z,40nm,1.0s,mb5.3,baz=204,slow=2.6,SNR=14
PETK S S 23 22 29.7 +3.1
comp=Z,2.3nm,0.8s,baz=268,slow=28,SNR=2.2
PETK LR LR 23 43 52.0
comp=Z,3µm,20.3s,MS5.5,baz=226,slow=36
PSN Preselentsi 70.12 315 *i* P **P 23 13 20.3 +0.1**
TIXI Tiksi 70.13 11 *eP* **P 23 13 18.1 -1.6**
comp=Z,326nm,0.8s,mb6.3
TIXI LR LR
comp=Z,6µm,19.0s,MS5.9
TIXI Tiksi 70.13 11*c iP* **P 23 13 17.9 -1.9**
TIXI *e*S S 23 22 18.4 -8.7
TIXI pmax pmax
comp=Z,335nm,0.8s,mb6.3
TIXI pmax pmax
comp=N,68nm,1.0s
TIXI pmax pmax
comp=E,37nm,0.9s
TIXI pmax pmax
comp=Z,281nm,7.1s
TIXI MLR MLR
comp=Z,5µm,16.0s,MS5.9
TIRR Tirgusor 70.14 316 *eP* **P 23 13 20.1 -0.2**
comp=Z,244nm,0.8s,mb6.2
TIRR Tirgusor 70.14 316 P **P 23 13 19.7 -0.6**
TIRR pmax pmax
comp=Z,240nm,0.9s,mb6.1
TIRR Tirgusor 70.14 316⇑*iP* **P 23 13 20.1 -0.2**
URLA Izmir 70.25 309⇑*iP* **P 23 13 21.1 -0.1**
CVD Cernavoda 70.37 315 P **P 23 13 22.2 +0.5**
CVD Cernavoda 70.37 315⇑*iP* **P 23 13 21.9 +0.2**
KIS Kishinev 70.47 318 P **P 23 13 21.8 -0.5**
KIS Kishinev 70.47 318⇑*iP* **P 23 13 21.0 -1.3**
KIS *e*PPP 23 17 44.0
KIS *e* 23 22 24.0
KIS *e* 23 22 52.0
KIS pmax pmax
comp=Z,600nm,1.0s,mb6.5
KIS Kishinev 70.47 318⇓*iP* **P 23 13 21.6 -0.7**
HARR Harsova 70.53 316 P **P 23 13 22.8 +0.1**
HARR Harsova 70.53 316⇑*iP* **P 23 13 22.6 -0.1**
NPS Neapolis 70.54 306 *eP* **P 23 13 23.0 0.0**
NPS Neapolis 70.54 306 P **P 23 13 24.1 +1.1**
PET Petropavlovsk 70.55 35 PFAKE 23 13 30.0 +7.4
PET LR LR
comp=Z,5µm,20.0s,MS5.7
PET Petropavlovsk 70.55 35⇑*iP* **P 23 13 21.5 -1.1**
PET *e*S S 23 22 30.5 -2.1
PET *e*PS 23 22 58.4
PET pmax pmax
comp=Z,248nm,1.1s,mb6.0
PET pmax pmax
comp=Z,300nm,14.3s
PET pmax pmax
comp=Z,200nm,15.0s
PET MLR MLR
comp=Z,3µm,20.0s,MS5.6
PRD Provadia 70.57 314 *i* P **P 23 13 23.0 0.0**
LAST Lasithi 70.64 306 P **P 23 13 23.9 +0.3**
PRK Paraskevi 70.65 310 P **P 23 13 23.6 0.0**
PRK Paraskevi 70.65 310 *e*PN **P 23 13 24.4 +0.8**
PRK Paraskevi 70.65 310 *eP* **P 23 13 23.0 -0.6**
CHOS Chios island 70.67 309 P **P 23 13 24.2 +0.5**
THR1 Thera Island 70.83 307 P **P 23 13 23.4 -1.3**
APE Apeiranthos 70.87 308 P **P 23 13 24.2 -0.8**
APE Apeiranthos 70.87 308⇓*iP* **P 23 13 24.4 -0.6**
THR6 Thira Island, 70.87 307 P **P 23 13 24.2 -0.8**
THR3 Thira Island, 70.88 307 P **P 23 13 24.1 -0.9**
THR4 Thira Island, 70.89 307 P **P 23 13 24.4 -0.7**
JMB Yambol 71.01 313 *i* P **P 23 13 26.2 +0.5**
ALN Alexandroupoli 71.11 312 P **P 23 13 25.0 -1.3**
IDI Anoyia 71.13 306 P **P 23 13 21.6 -5.0**
SIVA Sivas 71.16 305 P **P 23 13 27.0 +0.3**
AKASG Malin Array Be 71.19 322 P **P 23 13 25.5 -1.1**
comp=Z,142nm,0.6s,mb6.1,baz=91,slow=5.0,SNR=324
AKASG pP pP 23 13 41.2 +1.0
comp=Z,41nm,0.6s,baz=90,slow=5.7,SNR=5.8
AKASG S S 23 22 35.3 -4.9
comp=Z,0.3nm,0.3s,baz=118,slow=21,SNR=4.7
AKASG PKPPKP 23 41 19.0
comp=Z,0.2nm,0.2s,baz=258,slow=4.8,SNR=4.3
AKASG LR LR 23 50 56.6
comp=Z,682nm,19.2s,MS4.9,baz=80,slow=41
AKASG Malin Array Be 71.19 322 P **P 23 13 25.5 -1.1**
AKASG pP pP 23 13 41.2 +1.0
AKASG S S 23 22 35.3 -4.9
AKASG P'P' 23 41 19.0
AKASG LR LR 23 50 56.6
AKASG Malin Array Be 71.19 322 P **P 23 13 25.5 -1.1**
AKASG *PP pP 23 13 41.2 +1.0
AKASG S S 23 22 35.3 -4.9
AKASG pmax pmax
comp=Z,142nm,0.6s
AKASG pmax pmax
comp=Z,41nm,0.6s
AKASG MLR MLR
comp=Z,682nm,19.2s
AKBB Malin Array Si 71.19 322 *eP* **P 23 13 25.6 -1.0**
KIEV Kiev 71.20 322 *eP* **P 23 13 25.7 -1.0**
comp=Z,168nm,0.8s,mb6.0
KIEV LR LR
comp=Z,1µm,21.0s,MS5.1
KIEV Kiev 71.20 322 *eP* **P 23 13 25.7 -1.0**
KIEV pmax pmax
comp=Z,168nm,0.8s,mb6.0
KIEV MLR MLR
comp=Z,1µm,21.0s,MS5.1
ODB Odobesti 71.37 317 P **P 23 13 29.1 +1.3**
ODB Odobesti 71.37 317⇓*iP* **P 23 13 29.2 +1.4**
SEY Seymchan 71.41 24⇓*eP* **P 23 13 26.8 -0.8**
RDO Rodhopi 71.54 312 *eP* **P 23 13 28.0 -0.9**
ISR Istrita 71.58 316⇑*iP* **P 23 13 30.3 +1.2**
LIA Limnos Island 71.59 310 P **P 23 13 28.7 -0.5**
LIA Limnos Island 71.59 310 *eP* **P 23 13 29.0 -0.2**
VRI Vrincioaia 71.61 317 P **P 23 13 30.0 +0.7**
VRI Vrincioaia 71.61 317⇑*iP* **P 23 13 30.0 +0.8**
SZH Strazhica 71.64 314 *i* P **P 23 13 29.0 -0.4**
PLOR Plostina 71.66 317⇑*iP* **P 23 13 30.2 +0.7**
DIM Dimitrovgrad 71.70 313 *i* P **P 23 13 29.3 -0.5**
CASY Casey 71.70 173 PFAKE 23 13 40.0 +11
CASY LR LR
comp=Z,5µm,20.0s,MS5.7
VAM Vamos 71.71 306 *eP* pP 23 13 42.0 -1.7
KDZ Kurdzhali 71.71 312 *i* P **P 23 13 29.6 -0.3**
BUC1 Bucharest 71.78 315 P **P 23 13 31.2 +0.9**
MLR Muntele Rosu 72.07 316 P **P 23 13 32.5 +0.5**
MLR Muntele Rosu 72.07 316⇑P **P 23 13 32.6 +0.6**
MLR Muntele Rosu 72.07 316⇑*iP* **P 23 13 32.5 +0.5**
RZN Rozhen 72.24 312 *i* P **P 23 13 32.5 -0.6**
PLD Plovdiv 72.32 313 P **P 23 13 33.0 -0.5**
PTL Penteli 72.33 308 *eP* **P 23 13 32.0 -1.7**
OUR Ouranopolis 72.57 311 P **P 23 13 34.7 -0.4**
VOIR 72.68 316 P **P 23 13 35.3 -0.3**
VOIR 72.68 316⇑*iP* **P 23 13 35.0 -0.6**
PAIG Paliouri 72.74 310 P **P 23 13 35.6 -0.5**
DID Didima 72.75 308 P **P 23 13 34.2 -2.0**
NVR Nevrokopi 72.82 312 *eP* **P 23 13 36.0 -0.5**
MMB Musomiste 72.95 312 *i* P **P 23 13 36.7 -0.6**
PLG Polygyros 72.98 311 P **P 23 13 36.7 -0.8**
PLG Polygyros 72.98 311 *eP* **P 23 13 36.5 -1.0**
NEO Neokhori 73.00 310 *eP* **P 23 13 36.0 -1.6**
BURAR Bucovina Array 73.00 318⇑P **P 23 13 38.3 +0.8**
BURAR Bucovina Array 73.00 318⇑*iP* **P 23 13 38.3 +0.8**
BUR08 Bucovina Ar. S 73.02 318 *eP* **P 23 13 38.3 +0.8**
LTK Loutraki 73.03 308 P **P 23 13 35.6 -2.2**
MNK Minsk 73.07 326⇑*eP* **P 23 13 35.0 -2.7**
MNK pmax pmax
comp=Z,340nm,1.0s,mb6.2
LKR Lokris 73.08 309 P **P 23 13 36.1 -2.1**
LKR Lokris 73.08 309 *eP* **P 23 13 36.0 -2.2**
SOH Sokhos 73.11 311 P **P 23 13 37.5 -0.8**
MDB Medias 73.27 317 P **P 23 13 40.1 +1.0**
MDB Medias 73.27 317⇑*iP* **P 23 13 40.1 +1.0**
HORT Hortiatis 73.27 311 P **P 23 13 38.3 -0.9**
CRAR CRAIOVA 73.35 315 P **P 23 13 40.1 +0.5**
THE Thessaloniki 73.38 311 P **P 23 13 37.3 -2.6**
PUL Pulkovo 73.41 331⇑*eP* **P 23 13 39.5 -0.1**
VTS Vitosha 73.49 313 P **P 23 13 40.4 -0.1**
VTS Vitosha 73.49 313 *i* P **P 23 13 40.1 -0.4**
KNT Kendrikon 73.51 311 P **P 23 13 39.7 -0.9**
LBTB Lobatse 73.58 242 *eP* **P 23 13 42.7 +1.3**
comp=Z,186nm,1.3s,mb5.9
LBTB LR LR
comp=Z,6µm,22.0s,MS5.9
LBTB Lobatse 73.58 242 *eP* **P 23 13 42.7 +1.4**
LBTB pmax pmax
comp=Z,186nm,1.3s,mb5.9
LBTB MLR MLR
comp=Z,6µm,22.0s,MS5.9
AGG Agios Georgios 73.65 309 P **P 23 13 39.5 -2.0**
LIT Litokhoron 73.67 310 P **P 23 13 40.3 -1.3**
ITM Ithomi 73.74 307 *eP* **P 23 13 41.0 -1.1**
VAY Valandovo 73.77 312 P **P 23 13 40.7 -1.5**
VAY Valandovo 73.77 312⇑*iP* **P 23 13 40.5 -1.6**
GRG Griva 73.85 311 P **P 23 13 41.6 -1.0**
PYL PYLOS 73.86 307 P **P 23 13 41.4 -1.4**
THL Klokotos Trika 73.96 310 P **P 23 13 41.2 -2.1**
THL Klokotos Trika 73.96 310 *eP* **P 23 13 41.0 -2.3**
EVR Evrytania 74.04 309 *eP* **P 23 13 42.5 -1.3**
JOF Joensuu 74.08 335 *ep* **P 23 13 41.3 -2.2**
comp=Z,236nm,0.8s,mb6.2
JOF Joensuu 74.08 335 *eP* **P 23 13 41.3 -2.2**
JOF pmax pmax
comp=Z,236nm,0.8s,mb6.2
STIP Stip 74.11 312 P **P 23 13 42.5 -1.6**
STIP Stip 74.11 312⇑*iP* **P 23 13 42.3 -1.9**
BMR Baia Mare 74.15 318 P **P 23 13 44.8 +0.6**
BMR Baia Mare 74.15 318⇑*iP* **P 23 13 44.9 +0.7**
RLS Riolos of Patr 74.20 308 *eP* **P 23 13 44.0 -0.8**
LVV L'vov 74.22 320 *eP* **P 23 13 43.7 -0.9**
KZN Kozani 74.24 310 *eP* **P 23 13 43.0 -1.9**
GZR Gura Zlata 74.25 316 P **P 23 13 44.6 -0.3**
GZR Gura Zlata 74.25 316⇑*iP* **P 23 13 44.8 0.0**
DRGR 74.52 317 P **P 23 13 46.9 +0.5**
DRGR 74.52 317⇑*iP* **P 23 13 46.9 +0.5**
FNA Florina 74.60 311 P **P 23 13 45.4 -1.6**
DZM Mont Dzumac 74.64 114 *eP* **P 23 13 47.6 0.0**
DZM Mont Dzumac 74.64 114 *eP* **P 23 13 48.2 +0.6**
BIA Bitola 74.67 311 *i* P **P 23 13 45.1 -2.3**
SKO Skopje 74.70 312 P **P 23 13 46.5 -1.1**
SKO Skopje 74.70 312 *i* P **P 23 13 46.3 -1.2**
BOSA Boshof 74.73 239 P **P 23 13 48.6 +0.7**
comp=Z,33nm,0.9s,mb5.2,baz=82,slow=5.9,SNR=34
BOSA pP pP 23 14 04.5 +2.8
comp=Z,25nm,0.6s,baz=76,slow=5.8,SNR=7.4
BOSA S S 23 23 23.9 +2.8
comp=Z,4.4nm,1.2s,baz=202,slow=21,SNR=1.8
BOSA PKKPbc PKKPbc 23 33 14.1 -0.4
comp=Z,5.5nm,0.9s,baz=102,slow=10,SNR=3.9
BOSA LR LR 23 41 44.8
comp=Z,3µm,21.0s,MS5.5,baz=67,slow=32
BOSA Boshof 74.73 239 *eP* **P 23 13 49.1 +1.2**
comp=Z,94nm,1.2s,mb5.6
BOSA Boshof 74.73 239 P **P 23 13 48.6 +0.7**
BOSA *PP pP 23 14 04.5 +2.8
BOSA S S 23 23 23.9 +2.8
BOSA pmax pmax
comp=Z,33nm,0.9s,mb5.3
BOSA pmax pmax
comp=Z,25nm,0.6s,mb5.3
BOSA smax
comp=N,4.0nm,1.2s
BOSA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BOSA MLR MLR
comp=Z,3µm,21.0s,MS5.5
KFL Anninata 74.74 308 P **P 23 13 47.2 -0.7**
VSU Vasula 74.76 330*c iP* **P 23 13 46.7 -0.8**
KRUS Krusevo 74.77 311⇑*iP* **P 23 13 47.0 -0.9**
LVZ Lovozero 74.82 340⇓*eP* **P 23 13 47.1 -0.6**
LVZ pmax pmax
comp=Z,172nm,0.9s,mb6.0
JAN Janina 74.86 310 *eP* **P 23 13 47.5 -1.0**
TRPA Tarpa 74.87 319⇑*iP* **P 23 13 48.9 +0.5**
KBN Korca 75.02 311 *eP* **P 23 13 47.5 -1.9**
KWP Kalwaria 75.03 320 *eP* **P 23 13 49.7 +0.4**
KWP LMZ 23 42 34.5
comp=Z,1µm,31.6s
KWP Kalwaria 75.03 320 *eP* **P 23 13 49.7 +0.4**
KWP LR LR
comp=Z,986nm,21.0s,MS5.1

KWP **Kalwaria** 75.03 320 *e*P **P** 23 13 49.6 +0.3
KWP pmax pmax
comp=Z,510nm,1.0s,mb6.4
KWP Kalwaria 75.03 320⇓ *i*P **P** 23 13 49.6 +0.3
OHR Ohrid 75.07 311⇑ *i*P **P** 23 13 47.5 -2.2
BZS Buzias 75.09 316 P **P** 23 13 49.6 -0.1
BZS Buzias 75.09 316⇑ *i*P **P** 23 13 49.6 -0.1
APA Apatity 75.11 340⇓ *i*P **P** 23 13 48.7 -0.7
APA *e*S S 23 23 22.0 -2.0
APA pmax pmax
comp=Z,430nm,1.0s,mb6.3
APA MLR MLR
comp=Z,3μm,19.0s,MS5.5
KOLS Kolonicke sedl 75.18 319 *e*P **P** 23 13 50.8 +0.6
IGT Igoumenitsa 75.25 310 P **P** 23 13 49.5 -1.3
TIM Timisoara 75.38 316 P **P** 23 13 52.2 +0.8
PHP Peshkopia 75.41 312 *e*P **P** 23 13 49.8 -1.8
SRN Sarande 75.54 310 *e*P **P** 23 13 50.9 -1.5
SUW Suwalki 75.60 325 *e*P **P** 23 13 51.9 -0.6
SUW *e*PcP PcP 23 14 06.5 +1.3
SUW *e*S S 23 23 24.3 -5.5
SUW LMZ 23 46 13.2
comp=Z,1μm,28.0s
SUW Suwalki 75.60 325 *e*P **P** 23 13 51.9 -0.5
SUW *e* pP 23 14 06.4 +0.2
SUW *e*S S 23 23 24.3 -5.5
MAW Mawson 75.66 192 P **P** 23 13 53.7 +1.3
comp=Z,8.9nm,0.8s,mb4.8,baz=23,slow=7.8,SNR=12
MAW LR LR 23 40 46.5
comp=Z,2μm,21.6s,MS5.3,baz=23,slow=30
MAW Mawson 75.66 192 P **P** 23 13 53.7 +1.3
MAW pmax pmax
comp=Z,9.0nm,0.8s
MAW MLR MLR
comp=Z,2μm,21.6s
KEK Kerkira 75.68 310 *e*P **P** 23 13 51.5 -1.7
CRVS Cervenica-Dubn 75.70 319 *e*P **P** 23 13 53.7 +0.5
BCI Bajram Curri 75.76 312 *e*P **P** 23 13 53.4 -0.3
TIR Tirane 75.80 311 PFAKE 23 14 10.0 +16
TIR LR LR
comp=Z,716nm,20.0s,MS5.0
PVY Plav 75.86 313⇑ *i*P **P** 23 13 53.2 -1.0
STHS Stebnicka Huta 75.93 320 *i* P **P** 23 13 55.2 +0.8
STHS *e* pP 23 14 08.9 +0.7
STHS pmax pmax
comp=Z,187nm,0.7s,mb6.1
STHS Stebnicka Huta 75.93 320 *i* P **P** 23 13 55.2 +0.8
STHS *e*pP pP 23 14 08.9 +0.7
IVA Berane 75.94 313⇑ *i*P **P** 23 13 54.1 -0.6
KAF Kangasniemi 76.01 333 *e*p **P** 23 13 52.5 -2.1
comp=Z,136nm,0.6s,mb6.1,baz=104,slow=5.2
KAF Kangasniemi 76.01 333 *e*P **P** 23 13 52.5 -2.1
KAF pmax pmax
comp=Z,136nm,0.6s,mb6.1
ULC Ulcinj 76.32 312⇑ *i*P **P** 23 13 56.2 -0.7
PDG Podgorica 76.36 312 *i* P **P** 23 13 56.1 -1.0
TTG Podgorica 76.36 312⇑ *i*P **P** 23 13 56.1 -1.0
PLE Pljevlja 76.36 313⇑ *i*P **P** 23 13 57.4 +0.3
NIE Niedzica 76.53 320 *e*P **P** 23 13 58.5 +0.6
PSZ Piszkesteto 76.59 318 *e*P **P** 23 13 58.6 +0.4
comp=Z,192nm,0.9s,mb6.0
PSZ LR LR
comp=Z,720nm,19.0s,MS5.0
PSZ Piszkesteto 76.59 318 P **P** 23 13 58.4 +0.2
PSZ pmax pmax
comp=Z,190nm,0.9s,mb6.0
PSZ Piszkesteto 76.59 318⇑ *e*P **P** 23 13 58.6 +0.4
PSZ Piszkesteto 76.59 318⇑ *i*P **P** 23 13 58.6 +0.4
NKY Niksic 76.60 313⇑ *i*P **P** 23 13 57.6 -0.8
NKY Niksic 76.60 313 *i* P **P** 23 13 59.2 +0.8
BUM Brajici-Budva 76.62 312⇑ *i*P **P** 23 13 57.6 -0.9
UPM Unac-Piva 76.70 313⇑ *i*P **P** 23 13 58.2 -0.8
HCY Herceg Novi 76.93 312⇑ *i*P **P** 23 13 59.2 -1.1
BRY Bratogost 76.94 313⇑ *i*P **P** 23 13 59.6 -0.7
OJC Ojcow 76.98 320 *i* P **P** 23 14 00.6 +0.2
OJC *e*S S 23 23 43.9 -1.3
OJC L 23 58 18.4
comp=Z,0.8nm,20.7s
OJC Ojcow 76.98 320⇑ *i*P **P** 23 14 00.7 +0.3
OJC *e*S S 23 23 43.9 -1.3
OJC MLR MLR
comp=Z,800nm,20.7s,MS5.0
BUD Budapest 77.11 318⇑ *e*P **P** 23 14 01.2 0.0
PKSM Moragy 77.22 316 ⇑P **P** 23 14 01.5 -0.3
PKSM Moragy 77.22 316⇑ *i*P **P** 23 14 01.5 -0.3
VYHS Vyhne 77.37 319 *i* P **P** 23 14 02.7 +0.1
VYHS *e*pP pP 23 14 16.0 -0.4
KOLL Kolacno 77.66 319 *i* P **P** 23 14 04.5 +0.3
TARA Tarawa 77.78 90 PFAKE 23 14 20.0 +14
TARA LR LR
comp=Z,1μm,20.0s,MS5.2
TIP Timpagrande 77.98 309 *e*P **P** 23 14 06.8 +0.6
comp=Z,93nm,1.2s,mb5.6
OKC Ostrava-Krasne 77.98 320⇑ *i*P **P** 23 14 06.4 +0.4
OKC *e*pP pP 23 14 22.0 +2.2
OKC *e*S SKSac 23 24 19.9 +3.7
RAC Raciborz 77.98 320 *e*P **P** 23 14 07.0 +1.0
LTRZ Laterza 78.03 310 P **P** 23 14 06.2 -0.3
DRV Dumont d'Urvil 78.10 163 P **P** 23 14 11.0 +4.8
DRV S S 23 23 56.0 -0.6
DRV R 23 38 00.0
KEV Kevo 78.10 341 *e*P **P** 23 14 04.9 -1.4
comp=Z,163nm,0.7s,mb6.1
KEV LR LR
comp=Z,2μm,19.0s,MS5.5
KEV Kevo 78.10 341 P **P** 23 14 06.2 -0.1
KEV pmax pmax
comp=Z,250nm,0.8s,mb6.2
SMOL Smolenice 78.30 318 *e*P **P** 23 14 08.3 +0.5
MORC Moravsky Berou 78.36 320 *e*P **P** 23 14 08.4 +0.3
comp=Z,195nm,1.1s,mb6.0
MORC Moravsky Berou 78.36 320 *e*P **P** 23 14 08.4 +0.3
MORC pmax pmax
comp=Z,195nm,1.1s,mb6.0
MORC Moravsky Berou 78.36 320⇑ *i*P **P** 23 14 08.7 +0.6
MODS Modra-Piesok 78.38 318 *i* P **P** 23 14 08.7 +0.5
MODS pmax pmax
comp=Z,71nm,1.2s,mb5.5
ZST Bratislava 78.48 318 *e*P **P** 23 14 09.3 +0.5
ZST pmax pmax
comp=Z,239nm,0.8s,mb6.2
ARCES ARCESS Array B 78.53 340 P **P** 23 14 08.6 0.0
comp=Z,121nm,0.6s,mb6.0,baz=92,slow=5.4,SNR=527
ARCES pP pP 23 14 22.9 +0.5
comp=Z,38nm,0.7s,baz=100,slow=6.7,SNR=4.1
ARCES S S 23 24 02.1 +0.9
comp=Z,13nm,1.2s,baz=308,slow=4.0,SNR=4.5
ARCES LR LR 23 52 09.2
comp=Z,2μm,21.2s,MS5.5,baz=111,slow=38
ARCES ARCESS Array B 78.53 340 P **P** 23 14 08.6 0.0
ARCES *PP pP 23 14 23.0 +0.6
ARCES S S 23 24 02.2 +1.0
ARCES pmax pmax
comp=Z,121nm,0.6s
ARCES pmax pmax
comp=Z,38nm,0.7s
ARCES smax
comp=N,13nm,1.2s
ARCES MLR MLR
comp=Z,2μm,21.2s
ARE0 ARCESS Array S 78.53 340 *e*P **P** 23 14 09.0 +0.4
CEL Celeste 78.60 308 *e*P **P** 23 14 09.8 +0.2
comp=Z,145nm,1.0s,mb5.9
CEL LR LR
comp=Z,367nm,22.0s,MS4.7
BILL Bilibino 78.67 21⇑ *i*P **P** 23 14 07.9 -1.5
BILL Bilibino 78.67 21⇑ *e*P **P** 23 14 07.9 -1.5
BILL *e* 23 17 03.7
BILL *e*S S 23 23 58.4 -4.3
BILL pmax pmax
comp=Z,147nm,1.2s,mb5.8
BILL MLR MLR
comp=Z,9μm,21.0s,MS6.1
CUC Castrocucco 78.75 310 *e*P **P** 23 14 09.9 -0.5
comp=Z,46nm,0.7s,mb5.5
CUC LR LR
comp=Z,665nm,20.0s,MS5.0
SOP Sopron 78.80 318⇑ *e*P **P** 23 14 10.7 +0.2
KOGS Kog 78.90 316 *i* P **P** 23 14 11.5 +0.4
KOGS *e*S S 23 24 00.9 -5.1
VRAC Vranov 78.93 319 P **P** 23 14 11.4 +0.2
VRAC Vranov 78.93 319⇓ *i*P **P** 23 14 11.5 +0.3
GKP Gorka Klasztor 78.96 323 *e*P **P** 23 14 11.2 -0.1
GKP *e*S S 23 24 02.3 -4.1
GKP LMZ 23 46 41.5
comp=Z,1μm,31.8s
GKP Gorka Klasztor 78.96 323 *e*P **P** 23 14 11.2 -0.1
GKP *e*S S 23 24 02.3 -4.1
GKP LR LR
comp=Z,1μm,31.8s,MS5.0
GKP Gorka Klasztor 78.96 323 *e*P **P** 23 14 11.2 -0.1
GKP *e*S S 23 24 02.3 -4.1
RGNG Rignano Grg 79.03 311 P **P** 23 14 11.4 -0.5
KTK1 Kautokeino 79.16 340 *e*P **P** 23 14 11.9 -0.2
KTK1 AMb AMB 23 14 18.6
comp=N,86nm,2.4s
DPC Dobruska-Polom 79.21 320⇑ *i*P **P** 23 14 13.5 +0.8
DPC *e*pP pP 23 14 29.5 +3.0
DPC *e*S S 23 24 06.6 -2.5
DPC AMS AMS 23 57 50.0
comp=N,700nm,18.8s
FG5 Orsara di Pugl 79.24 311 P **P** 23 14 13.4 +0.3
comp=N,683nm,2.4s,mb6.2
FG5 Orsara di Pugl 79.24 311 P **P** 23 14 13.4 +0.3
FG5 pmax pmax
comp=Z,683nm,2.4s,mb6.2
KSP Ksiaz 79.27 321 *e*P **P** 23 14 13.7 +0.6
KSP *e*S S 23 24 08.3 -1.6
KSP LMZ 23 44 53.7
comp=Z,2μm,30.0s
KSP Ksiaz 79.27 321⇑ *i*P **P** 23 14 13.6 +0.5
KSP *e**PP pP 23 14 27.7 +0.8
KSP *e*S S 23 24 07.5 -2.3
KSP MLR MLR
comp=Z,2μm,20.3s,MS5.5
CONA Conrad Observa 79.28 318⇑ *i*P **P** 23 14 13.4 +0.2
comp=Z,91nm,1.2s,mb5.6,SNR=34
CSNA Conrad Observa 79.29 318⇑ *i*P **P** 23 14 13.4 +0.2
comp=Z,87nm,1.3s,mb5.5
SUR Sutherland 79.33 236 *e*P **P** 23 14 16.2 +2.4
comp=Z,160nm,1.2s,mb5.8
SUR LR LR
comp=Z,2μm,22.0s,MS5.4
UPC Upice 79.42 320⇑ *i*P **P** 23 14 14.6 +0.7
UPC *e*pP pP 23 14 29.5 +1.8
SLNA Salina 79.45 308 P **P** 23 14 14.3 0.0
comp=Z,106nm,0.5s,mb6.0
ARSA Arzberg 79.46 317⇑ *i*P **P** 23 14 14.8 +0.6
comp=Z,184nm,1.3s,mb5.9,SNR=48
BOJS Bojanci 79.52 315 *i* P **P** 23 14 14.7 +0.2
BOJS *e*S S 23 24 05.7 -7.0
WDD Wield Dalam 79.60 305 PFAKE 23 14 30.0 +15
WDD LR LR
comp=Z,864nm,20.0s,MS5.1
SMY Shemya 79.62 37 *e*P **P** 23 14 14.6 -0.3
comp=Z,670nm,0.9s,mb6.6
SMY Shemya 79.62 37 *e*P **P** 23 14 14.6 -0.3
SMY pmax pmax
comp=Z,670nm,0.9s,mb6.6
TREC Trest 79.65 319⇑ *i*P **P** 23 14 15.4 +0.3
TREC *e*S S 23 24 11.8 -2.1
PERS Pernice 79.69 316 *i* P **P** 23 14 15.9 +0.5
SOKA Soboth 79.75 316⇑ *i*P **P** 23 14 16.4 +0.7
comp=Z,296nm,1.3s,mb6.0
TSUM Tsumeb 79.78 250 *e*P **P** 23 14 18.2 +1.7
comp=Z,40nm,1.0s,mb5.3
TSUM LR LR
comp=Z,3μm,20.0s,MS5.6
CSLB Castelbuono 80.03 308 P **P** 23 14 17.3 -0.2
comp=Z,62nm,0.7s,mb5.7
LJU Ljubljana 80.06 316 *e*P **P** 23 14 17.9 +0.5
OBKA Obir 80.07 316⇑ *i*P **P** 23 14 18.2 +0.7
comp=Z,112nm,0.9s,mb5.8,SNR=24
PRU Pruhonice 80.32 320⇑ *i*P **P** 23 14 19.2 +0.5
PRU *e*pP pP 23 14 33.7 +1.1
PRU *e*S S 23 24 19.2 -1.7
PRU AMS AMS 23 56 50.0
comp=Z,900nm,18.5s
PVCC Panska Ves 80.34 320⇑ *i*P **P** 23 14 19.3 +0.5
PVCC *ex* x 23 14 31.4
PVCC *e*S S 23 24 20.1 -1.0
PVCC AMS AMS 23 55 20.0
comp=Z,1μm,25.1s
MOA Molln 80.35 318⇑ *i*P **P** 23 14 19.0 0.0
comp=Z,53nm,0.8s,mb5.5,SNR=43
VOY Vojsko 80.50 316 *i* P **P** 23 14 19.7 -0.1
VOY *e* pP 23 14 35.5 +1.8
BSD Bornholm Skovb 80.52 325⇑ *i*P **P** 23 14 18.7 -1.0
comp=Z,127nm,0.8s,mb5.9
BSD *i* S S 23 24 18.6 -4.2
BSD Bornholm Skovb 80.52 325⇑ *i*P **P** 23 14 18.7 -1.0
BSD *i* S S 23 24 18.6 -4.2
BSD pmax pmax
comp=Z,130nm,0.8s,mb5.9
BSD MLR MLR
comp=Z,800nm,20.0s,MS5.1
BSD Bornholm Skovb 80.52 325⇑ *i*P **P** 23 14 18.7 -1.0
comp=Z,127nm,0.8s,mb5.9
BSD *i* S S 23 24 18.6 -4.2
BSD
comp=Z,800nm,20.0s
MPG Monte Pellegri 80.59 308 P **P** 23 14 20.6 +0.1
comp=Z,78nm,0.6s,mb5.8
CADS Cadrg 80.62 316 *i* P **P** 23 14 20.4 0.0
CADS *e*S S 23 24 18.1 -6.1
AQU L'Aquila 80.69 312 *e*P **P** 23 14 21.2 +0.3
comp=Z,109nm,0.8s,mb5.8
AQU L'Aquila 80.69 312 *e*P **P** 23 14 21.2 +0.3
AQU pmax pmax
comp=Z,109nm,0.8s,mb5.8
AQU L'Aquila 80.69 312⇑ *i*P **P** 23 14 21.0 +0.1
MYKA Terra Mystica 80.70 316⇑ *i*P **P** 23 14 21.2 +0.3
comp=Z,50nm,0.6s,mb5.6
BRG Berggiesshubel 80.76 321 P **P** 23 14 18.0 -3.1
BRG *i* 23 14 43.0
BRG S S 23 24 24.0 -1.5
BRG *i* 23 24 54.0
BRG SS SS 23 29 35.0 -4.4
BRG LR LR
comp=Z,420nm,19.7s,MS4.8
BRG Berggiesshubel 80.76 321 *e*P **P** 23 14 21.4 +0.3
comp=Z,115nm,1.0s,mb5.8
BRG *e*S S 23 24 24.6 -0.9
BRG Berggiesshubel 80.76 321 P **P** 23 14 18.0 -3.1
BRG *i* 23 14 43.0
BRG S S 23 24 24.0 -1.5
BRG *i* 23 24 54.0
BRG SS SS 23 29 35.0 -4.4
BRG
comp=N,857nm,19.9s
BRG
comp=E,322nm,16.1s
BRG
comp=Z,698nm,19.7s
GEC2 GERESS Array S 80.79 319 *e*P **P** 23 14 21.9 +0.6
GEC2 GERESS Array S 80.79 319 *e*P **P** 23 14 21.7 +0.4
GEC2 *e*S S 23 24 25.4 -0.4
GEC2 pmax pmax
comp=Z,240nm,1.1s,mb6.0
GEC2 GERESS Array S 80.79 319 *e*P **P** 23 14 21.7 +0.4
comp=Z,240nm,1.1s,mb6.0
GEC2 *e*S S 23 24 25.4 -0.4
GERES GERESS Array B 80.79 319 P **P** 23 14 21.7 +0.4
comp=Z,121nm,0.8s,mb5.9,baz=100,slow=5.8,SNR=589
GERES S S 23 24 25.8 -0.1
comp=Z,3.1nm,1.1s,baz=92,slow=9.7,SNR=12
GERES GERESS Array B 80.79 319 P **P** 23 14 21.7 +0.4
GERES S S 23 24 25.8 0.0
GERES pmax pmax
comp=Z,121nm,0.8s
GERES smax
comp=N,3.0nm,1.1s
TRO Tromso 80.79 340 *e*P **P** 23 14 20.1 -0.7
TRO *e* 23 16 20.7
TRO AMS AMS 23 52 59.5
comp=Z,2μm,19.2s,MS5.5
CING Cingoli 80.88 313 P **P** 23 14 22.3 +0.4
KHC Kasperske Hory 80.89 319⇑ *i*P **P** 23 14 22.0 +0.2
KHC *e*pP pP 23 14 35.9 +0.2
KHC *e*S S 23 24 25.8 -1.1
KHC AMS AMS 23 53 20.0
comp=Z,800nm,24.8s
PTCC Patocco-Chiusa 80.89 316 P **P** 23 14 22.0 +0.1
comp=Z,154nm,0.7s,mb6.0
KBA Koelnbreinsper 80.93 317⇑ *i*P **P** 23 14 22.0 -0.1
comp=Z,49nm,0.7s,mb5.6,SNR=47
GMNA Gemona 80.97 316 P **P** 23 14 22.5 +0.2
comp=Z,517nm,0.8s,mb6.5
RUE Ruedersdorf 80.97 322 *e*P **P** 23 14 22.6 +0.4
comp=Z,356nm,1.0s,mb6.2
CERT Cerreto 80.98 312 P **P** 23 14 21.8 -0.7
ASS Assisi 81.26 313 P **P** 23 14 23.5 -0.5
comp=Z,63nm,0.9s,mb5.5
ASS Assisi 81.26 313 P **P** 23 14 23.5 -0.5
ASS pmax pmax
comp=Z,63nm,0.9s,mb5.5
RJOB Jochberg 81.33 317 *e*P **P** 23 14 23.8 -0.4
comp=Z,74nm,0.9s,mb5.6
RJOB *e*S S 23 24 28.8 -2.8
WET Wettzell 81.34 319 *e*P **P** 23 14 24.5 +0.2
WET *e*S S 23 24 31.8 +0.2
WET pmax pmax
comp=Z,108nm,1.0s,mb5.7
WET Wettzell 81.34 319 *e*P **P** 23 14 24.5 +0.2
comp=Z,108nm,1.0s,mb5.7
WET *e*S S 23 24 31.8 +0.2
CLL Collm 81.38 321⇑ *i*P **P** 23 14 24.3 -0.1
comp=Z,102nm,1.2s,mb5.6
CLL *e*S S 23 24 29.0 -2.9
CLL LR LR
comp=Z,1μm,20.0s,MS5.2
CLL Collm 81.38 321⇑ *i*P **P** 23 14 24.3 -0.1
CLL *e*S S 23 24 29.0 -2.9
CLL pmax pmax
comp=Z,102nm,1.2s,mb5.6
CLL MLR MLR
comp=Z,1μm,20.0s,MS5.2
CLL Collm 81.38 321 *e*P **P** 23 14 24.1 -0.3
comp=Z,102nm,1.2s,mb5.6
CLL *e*S S 23 24 29.6 -2.3
CLL Collm 81.38 321⇑ *i*P **P** 23 14 24.3 -0.1
comp=Z,102nm,1.2s,mb5.6
CLL *e*Plp 23 14 25.0
comp=Z,300nm,24.5s
CLL *e*PP PP 23 17 25.0 -5.6
CLL *e*PPP 23 19 26.0
CLL *e*S S 23 24 29.0 -2.9
comp=N,700nm,37.9s
CLL *e*S S 23 24 29.0 -2.9
comp=E,300nm,24.6s
CLL *e*ScS ScS 23 24 48.0 -1.4
CLL *e*PS 23 25 30.0
CLL *e*SS SS 23 29 42.0 -6.6
CLL *e*SSS 23 33 18.0
CLL *ex* x 23 34 54.0
CLL *e*SSSS 23 35 30.0
CLL Lm 23 58 00.0
comp=Z,1μm,20.0s
ABTA Abfaltersbach 81.49 316 *i* P **P** 23 14 24.8 -0.3
comp=Z,45nm,0.7s,mb5.5,SNR=27
ABTA ⇓*e*S S 23 24 31.2 -2.0
comp=Z,17nm,1.4s
BADI Badiali 81.57 313 P **P** 23 14 25.9 +0.3
HFS Hagfors 81.63 330 LR LR 23 56 07.9
comp=Z,1μm,20.4s,MS5.3,baz=93,slow=40
NKC Novy Kostel 81.68 320⇑ *i*P **P** 23 14 26.3 +0.3
NKC *e* pP 23 14 41.6 +1.7
NKC *e*S S 23 24 34.7 -0.3
NKC Novy Kostel 81.68 320⇑ *i*P **P** 23 14 26.3 +0.3
NKC *e*pP pP 23 14 41.6 +1.7
NKC *e*S S 23 24 34.7 -0.3
NKC AMS AMS 23 56 10.0
comp=Z,1μm,18.7s
TANN Tannenbergstha 81.68 320 *e*P **P** 23 14 26.1 +0.1
comp=Z,80nm,1.3s,mb5.5
TANN *e*S S 23 24 34.7 -0.3
TOLF Tolfa 81.72 312 P **P** 23 14 26.3 -0.1
ROTZ Rotzenmuhle 81.81 319 *e*P **P** 23 14 27.3 +0.6
comp=Z,99nm,0.9s,mb5.7
ROTZ *e*S S 23 24 37.8 +1.4
MANZ Manzenberg 81.88 320 *e*P **P** 23 14 27.7 +0.6
comp=Z,159nm,1.1s,mb5.9
MANZ *e*S S 23 24 38.0 +0.8
MOR8 Moi Rana 81.92 336 *e*P **P** 23 14 26.1 -0.8
MOR8 AMb AMB 23 14 26.7
comp=Z,242nm,0.9s,mb6.1
COP Copenhagen 81.97 325 *i* P **P** 23 14 27.4 0.0
COP *i* pP 23 14 42.9 +1.6
COP *e*S S 23 24 38.8 +0.9
COP *i* S S 23 24 43.9 +6.0
COP pmax pmax
comp=Z,46nm,0.8s,mb5.5
COP MLR MLR
comp=Z,360nm,22.0s,MS4.7
COP Copenhagen 81.97 325 *i* P **P** 23 14 27.4 0.0
comp=Z,46nm,0.8s,mb5.5
COP *i* pP 23 14 42.9 +1.6
COP *e*S S 23 24 38.8 +0.9
COP *i* S S 23 24 43.9 +6.0
COP *i* 23 29 29.3
COP
comp=Z,360nm,22.0s
CTI Castel Tesino 82.06 316 P **P** 23 14 28.6 +0.5
VMG Vicchio 82.09 314 P **P** 23 14 29.2 +0.9
comp=Z,114nm,0.6s,mb6.0
WTTA Wattenberg 82.10 317⇑ *i*P **P** 23 14 27.9 -0.3
comp=Z,128nm,0.6s,mb6.0,SNR=92
WTTA ⇑*e*S S 23 24 35.8 -3.8
comp=Z,51nm,1.2s
WATA Walderalm 82.15 317⇑ *i*P **P** 23 14 27.9 -0.6
comp=Z,66nm,0.5s,mb5.8,SNR=52
WATA ⇓*e*S S 23 24 36.8 -3.2
comp=Z,16nm,1.2s
MOX Moxa 82.22 320⇑ *i*P **P** 23 14 28.9 0.0
comp=Z,282nm,2.0s,mb5.8
MOX *e* pP 23 14 46.7 +4.0
MOX
comp=Z,600nm,20.0s
MOX Moxa 82.22 320⇑ *i*P **P** 23 14 28.9 0.0
MOX pmax pmax
comp=Z,282nm,2.0s,mb5.8
MOX MLR MLR
comp=Z,600nm,20.0s,MS5.0
MOX Moxa 82.22 320 *e*P **P** 23 14 28.9 0.0
comp=Z,58nm,0.9s,mb5.5
MOX *e*S S 23 24 40.1 -0.5
SEI Scarperia 82.23 314 P **P** 23 14 29.8 +0.8
comp=Z,475nm,0.6s,mb6.6
APPI Appiano 82.36 316 P **P** 23 14 28.8 -0.9
FUR Furstenfeldbru 82.37 318 *e*P **P** 23 14 29.3 -0.4
FUR *e*S S 23 24 40.1 -2.1
FUR pmax pmax
comp=Z,75nm,0.7s,mb5.7
FUR Furstenfeldbru 82.37 318 *e*P **P** 23 14 29.3 -0.4
comp=Z,75nm,0.7s,mb5.7
FUR *e*S S 23 24 40.1 -2.1
SQTA Sankt Quirin 82.39 317⇑ *i*P **P** 23 14 29.7 -0.2
SQTA ⇑*i*S S 23 24 39.4 -3.1
GRF Grafenberg Arr 82.45 319 *e*P **P** 23 14 30.5 +0.5
GRF *e*S S 23 24 43.8 +0.8
GRF pmax pmax
comp=Z,146nm,0.9s,mb5.9
GRF MLR MLR
comp=Z,800nm,21.3s,MS5.1
GRF Grafenberg Arr 82.45 319 *e*P **P** 23 14 30.5 +0.5
comp=Z,146nm,0.9s,mb5.9
GRF *e*S S 23 24 43.8 +0.8
GRF *e*L 23 57 45.0
comp=Z,846nm,21.3s
MOTA Moosalm 82.47 317⇑ *i*P **P** 23 14 29.8 -0.4
comp=Z,86nm,0.6s,mb5.9,SNR=75
LOF Lofoten 82.49 338 *e*P **P** 23 14 30.9 +1.0
LOF AMb AMB 23 14 31.9
comp=Z,160nm,1.6s,mb5.7
STOK Stokkvaagen 82.51 336 *e*P **P** 23 14 29.4 -0.7
STOK AMb AMB 23 14 33.2
comp=Z,125nm,1.3s,mb5.8
SYO Syowa Base 82.68 197⇑ *e*P **P** 23 14 29.6 -1.2
RETA Reutte 82.70 317⇑ *i*P **P** 23 14 31.3 -0.2
comp=Z,137nm,0.6s,mb6.2,SNR=164
RETA ⇓*e*S S 23 24 42.3 -3.4
comp=Z,29nm,1.7s
FETA Feichten 82.72 317⇑ *i*P **P** 23 14 31.6 +0.1
comp=Z,67nm,0.7s,mb5.8,SNR=71
FETA ⇑*i*S S 23 24 43.7 -2.1
comp=Z,102nm,1.3s
AMKA Amchitka 82.74 39 *e*P **P** 23 14 31.1 -0.4
comp=Z,77nm,0.6s,mb5.9
GSCL Gusciola 82.78 314 P **P** 23 14 33.1 +1.2
comp=Z,73nm,0.7s,mb5.8
NSS Namsos 82.80 334 *e*P **P** 23 14 30.0 -1.5
NSS *e* 23 16 26.7
PII Pisa 82.82 313 P **P** 23 14 30.9 -1.2
comp=Z,36nm,0.6s,mb5.6

PII **Pisa** 82.82 313 P P 23 14 30.9 -1.2
PII pmax pmax
comp=Z,37nm,0.6s,mb5.6
NB2 **NORSAR Subarra** 82.92 331 P P 23 14 31.3 -0.9
comp=Z,256nm,1.4s,mb6.1,baz=94,slow=5.3
NOA **NORSAR Array B** 82.92 331 P P 23 14 31.4 -0.8
comp=Z,70nm,1.0s,mb5.7,baz=94,slow=5.3,SNR=61
NOA pP pP 23 14 46.0 -0.1
comp=Z,32nm,0.8s,baz=93,slow=5.4,SNR=7.6
NOA PP PP 23 17 46.2 +3.2
comp=Z,13nm,0.9s,baz=84,slow=8.4,SNR=5.3
NOA LR LR 23 57 06.8
comp=Z,798nm,19.0s,MS5.1,baz=75,slow=40
NOA **NORSAR Array B** 82.92 331 P P 23 14 31.4 -0.8
NOA pP pP 23 14 46.0 -0.1
NOA PP PP 23 17 46.2 +3.1
NOA LR LR 23 57 06.8
NOA **NORSAR Array B** 82.92 331 P P 23 14 31.4 -0.8
NOA *PP pP 23 14 46.0 -0.1
NOA 23 17 46.2
NOA pmax pmax
comp=Z,70nm,1.0s
NOA pmax pmax
comp=Z,32nm,0.8s
NOA pmax pmax
comp=Z,13nm,0.9s
NOA MLR MLR
comp=Z,798nm,19.0s
VLC **Villacollemand** 82.93 314 eP P 23 14 32.3 -0.3
comp=Z,70nm,1.0s,mb5.6
VLC LR LR
comp=Z,882nm,20.0s,MS5.1
BRMO **Bormio** 82.95 316 P P 23 14 33.2 +0.5
CLZ **Clausthal** 83.04 322 eP P 23 14 33.2 +0.1
CLZ eS S 23 24 46.6 -2.3
CLZ pmax pmax
comp=Z,123nm,0.9s,mb5.9
CLZ **Clausthal** 83.04 322 eP P 23 14 33.2 +0.1
comp=Z,123nm,0.9s,mb5.9
CLZ eS S 23 24 46.6 -2.3
NAO01 **NORSAR Array S** 83.07 331 eP P 23 14 32.8 -0.3
comp=Z,126nm,1.1s,mb5.9
NAO01 pP pP 23 14 43.9 -3.0
SPITS **Spitsbergen Ar** 83.10 348 LR LR 23 57 28.3
comp=Z,2μm,21.4s,MS5.4,baz=330,slow=40
SPB4 **Spitsbergen Ar** 83.10 348 eP P 23 14 32.5 -0.4
OSL **Oslo** 83.11 330 eP P 23 14 32.8 -0.5
OSL AMb AMB 23 14 33.5
comp=Z,8μm,1.2s
BSEG **Bad Segeberg** 83.12 324 eP P 23 14 33.7 +0.3
BSEG eS S 23 24 47.7 -2.0
BSEG pmax pmax
comp=Z,192nm,1.0s,mb6.1
BSEG **Bad Segeberg** 83.12 324 eP P 23 14 33.7 +0.3
comp=Z,192nm,1.0s,mb6.1
BSEG eS S 23 24 47.7 -2.0
UBBA **Unterbreizbach** 83.25 320 eP P 23 14 34.2 0.0
comp=Z,134nm,1.9s,mb5.7
UBBA eS S 23 24 49.9 -1.2
DAVA **Damuels** 83.30 317⇑ iP P 23 14 34.7 +0.2
comp=Z,128nm,1.1s,mb5.9,SNR=30
TUE **Stuetta** 83.66 316 eP P 23 14 36.5 +0.1
comp=Z,51nm,0.8s,mb5.7
TUE epP pP 23 14 47.2 -3.1
TUE LR LR
comp=Z,618nm,20.0s,MS5.0
KONO **Kongsberg** 83.67 329 eP P 23 14 35.8 -0.3
comp=Z,375nm,1.4s,mb6.3
KONO LR LR
comp=Z,1μm,21.0s,MS5.2
KONO **Kongsberg** 83.67 329 eP P 23 14 36.1 0.0
KONO e 23 15 03.0
KONO eS S 23 24 54.9 0.0
KONO eSS SS 23 30 22.8 +0.7
KONO AMS AMS 23 56 58.6
comp=Z,1μm,5.5s
KONO **Kongsberg** 83.67 329 eP P 23 14 35.8 -0.3
KONO pmax pmax
comp=Z,375nm,1.4s,mb6.3
KONO MLR MLR
comp=Z,1μm,21.0s,MS5.2
VSL **Villasalto** 83.71 309 eP P 23 14 37.2 +0.4
comp=Z,72nm,1.0s,mb5.8
STU **Stuttgart** 83.76 318 eP P 23 14 36.9 0.0
comp=Z,37nm,0.7s,mb5.6
STU **Stuttgart** 83.76 318 eP P 23 14 36.9 0.0
STU pmax pmax
comp=Z,37nm,0.7s,mb5.6
STU **Stuttgart** 83.76 318 eP P 23 14 36.6 -0.3
comp=Z,70nm,0.8s,mb5.8
STU eS S 23 24 55.7 -0.6
KEST **Kesra** 83.81 305 P P 23 14 38.8 +1.4
comp=Z,28nm,0.7s,mb5.5,baz=354,slow=0.2,SNR=110
KEST pP pP 23 14 52.5 +1.2
comp=Z,15nm,0.9s,baz=309,slow=5.4,SNR=7.3
KEST PP PP 23 17 56.5 +5.5
comp=Z,1.7nm,0.7s,baz=12,slow=6.2,SNR=3.6
KEST LR LR 23 51 28.9
comp=Z,459nm,20.8s,MS4.8,baz=31,slow=35
MUD **Monsted U'grnd** 83.83 326⇑ iP P 23 14 37.5 +0.5
comp=Z,58nm,0.8s,mb5.8
MUD *i* pP 23 14 53.8 +2.9
MUD *i* S S 23 24 55.7 -1.0
MUD **Monsted U'grnd** 83.83 326⇑ iP P 23 14 37.5 +0.5
MUD *i* pP 23 14 53.8 +2.9
MUD *i* S S 23 24 55.7 -1.0
MUD pmax pmax
comp=Z,58nm,0.8s,mb5.8
MUD MLR MLR
comp=Z,490nm,20.0s,MS4.9
MUD **Monsted U'grnd** 83.83 326⇑ iP P 23 14 37.5 +0.5
comp=Z,58nm,0.8s,mb5.8
MUD *i* pP 23 14 53.8 +2.9
MUD *i* S S 23 24 55.7 -1.0
MUD
comp=Z,490nm,20.0s
PGF **Pioggiola** 83.95 312⇑ iP P 23 14 37.8 -0.1
DOMB **Dombas** 83.99 332⇑ iP P 23 14 37.5 -0.2
DOMB AMb AMB 23 14 38.2
comp=Z,106nm,1.2s,mb5.8
TOD **Tromm** 84.02 319 eP P 23 14 37.6 -0.5
SPAK **Spaichingen-Ko** 84.04 318 eP P 23 14 38.1 -0.2
KBS **Kingsbay** 84.08 349 eP P 23 14 38.0 +0.1
KBS epP pP 23 14 51.9 0.0
KBS *e* 23 15 14.9
KBS AMS AMS 00 00 39.4
comp=Z,2μm,16.6s,MS5.6
KBS **Kingsbay** 84.08 349⇑ eP P 23 14 36.6 -1.3
KBS MLR MLR
comp=Z,2μm,20.0s,MS5.4
TNS **Taunus Mts** 84.25 320 eP P 23 14 39.4 +0.1
TNS eS S 23 25 01.0 -0.1
TNS pmax pmax
comp=Z,92nm,0.9s,mb5.9
TNS **Taunus Mts** 84.25 320 eP P 23 14 39.4 +0.1
comp=Z,92nm,0.9s,mb5.9
TNS eS S 23 25 01.0 -0.1
BFO **Black Forest** 84.34 318 eP P 23 14 39.6 -0.2
comp=Z,60nm,0.8s,mb5.8
BFO LR LR
comp=Z,633nm,21.0s,MS5.0
BFO **Black Forest** 84.34 318 eP P 23 14 39.3 -0.5
BFO eS S 23 25 01.6 -0.5
BFO pmax pmax
comp=Z,78nm,0.8s,mb5.9
BFO **Black Forest** 84.34 318 eP P 23 14 39.3 -0.5
comp=Z,78nm,0.8s,mb5.9
BFO eS S 23 25 01.6 -0.5
KTD **Kalmit** 84.49 319 eP P 23 14 40.3 -0.2
FIN **Finale Ligure** 84.49 314 P P 23 14 40.5 -0.2
FELD **Feldberg im Sc** 84.56 318 eP P 23 14 40.5 -0.5
ORO **Oropa** 84.62 315 P P 23 14 40.1 -1.2
comp=Z,42nm,1.0s,mb5.5
ORO **Oropa** 84.62 315 P P 23 14 40.1 -1.2
ORO pmax pmax
comp=Z,42nm,1.0s,mb5.5
IBBN **Ibbenburen** 84.66 322 eP P 23 14 41.5 +0.2
comp=Z,147nm,0.9s,mb6.1
IBBN eS S 23 25 03.5 -1.6
LANF **Langenberg** 84.68 319 eP P 23 14 41.6 +0.1
MOL **Molde** 84.70 332 eP P 23 14 41.5 +0.2
MOL *e* 23 16 26.7
STR **Strasbourg** 84.71 318 eP P 23 14 41.4 -0.3
IMI **Imperia** 84.73 314 P P 23 14 42.2 +0.3
ABH **Alteburg** 84.83 320 eP P 23 14 42.2 0.0

LIBD **Limburg** 84.83 318 eP P 23 14 41.9 -0.4
FUNA **Funafuti** 84.90 99 PFAKE 23 14 50.0 +6.7
FUNA LR LR
comp=Z,8μm,19.0s,MS6.1
SAOF **Saorge** 84.97 314 eP P 23 14 42.8 -0.3
BUG **Bochum--Univer** 84.97 321 eP P 23 14 43.0 +0.1
comp=Z,119nm,0.9s,mb6.0
BUG eS S 23 25 08.7 +0.4
CDF **Champ du Feu** 85.04 318⇑ iP P 23 14 42.8 -0.5
comp=Z,98nm,0.9s,mb5.6
CDF **Champ du Feu** 85.04 318⇑ iP P 23 14 42.8 -0.5
comp=Z,49nm,0.9s,mb5.6
CDF **Champ du Feu** 85.04 318⇑ iP P 23 14 42.8 -0.5
CDF pmax pmax
comp=Z,49nm,0.9s,mb5.6
SBF **Sospel** 85.06 313⇑ iP P 23 14 43.4 -0.1
comp=Z,235nm,0.7s,mb6.1
SBF **Sospel** 85.06 313⇑ iP P 23 14 43.4 -0.1
comp=Z,117nm,0.7s,mb6.1
SBF **Sospel** 85.06 313⇑ iP P 23 14 43.4 -0.1
SBF pmax pmax
comp=Z,117nm,0.7s,mb6.1
AUTN **L'Aution** 85.06 314 eP P 23 14 43.3 -0.2
REVF **Revere** 85.11 313 eP P 23 14 43.4 -0.4
LUCF **Luceram** 85.12 314 eP P 23 14 43.5 -0.4
ECH **Echery** 85.12 318 eP P 23 14 43.0 -0.8
ECH **Echery** 85.12 318 eP P 23 14 43.3 -0.5
RUP **Ruppelstein** 85.15 319 eP P 23 14 43.9 +0.1
MOF **Molkenrain** 85.15 318 eP P 23 14 42.8 -1.1
ODD1 **Odda** 85.17 330 eP P 23 14 42.9 -0.8
TOUF **Mont Tournerai** 85.19 314 eP P 23 14 44.1 -0.1
WTSB **Winterswijk** 85.25 322 eP P 23 14 44.1 -0.2
comp=Z,142nm,1.3s,mb5.9
MVIF **Mont Vial** 85.26 314 eP P 23 14 44.6 0.0
BLS5 **Blasjo** 85.27 329 eP P 23 14 45.2 +1.0
BLS5 AMb AMB 23 14 45.9
comp=Z,80nm,1.0s,mb5.8
ABSA **Djebel Ababsia** 85.30 306 P P 23 14 47.0 +2.1
SNZO **South Karori** 85.33 132 PFAKE 23 15 00.0 +15
SNZO LR LR
comp=Z,2μm,22.0s,MS5.4
CMAH **Djebel Manchou** 85.33 306 P P 23 14 46.0 +0.9
HINF **Hinteralfeld** 85.34 317⇑ iP P 23 14 43.9 -1.0
comp=Z,47nm,0.9s,mb5.3
HINF **Hinteralfeld** 85.34 317⇑ iP P 23 14 43.9 -1.0
comp=Z,24nm,0.9s,mb5.3
HINF **Hinteralfeld** 85.34 317⇑ iP P 23 14 43.9 -1.0
HINF pmax pmax
comp=Z,24nm,0.9s,mb5.3
HYA **Hoyanger** 85.36 331 eP P 23 14 45.3 +0.6
HYA AMb AMB 23 14 46.3
comp=Z,217nm,1.5s,mb6.1
LOMF **Lomont** 85.38 317 eP P 23 14 44.5 -0.5
CALN **Calern** 85.46 313 eP P 23 14 45.5 0.0
SURF **Saint Ours** 85.49 314 eP P 23 14 45.9 +0.2
LPG **La Plagne** 85.49 315⇑ iP P 23 14 45.9 +0.2
comp=Z,154nm,0.8s,mb5.9
LPG **La Plagne** 85.49 315⇑ iP P 23 14 45.9 +0.2
comp=Z,77nm,0.8s,mb5.9
LPG **La Plagne** 85.49 315⇑ iP P 23 14 45.9 +0.2
LPG pmax pmax
comp=Z,77nm,0.8s,mb5.9
LPL **La Plagne** 85.50 315⇑ iP P 23 14 45.9 +0.2
comp=Z,213nm,0.8s,mb6.1
LPL **La Plagne** 85.50 315⇑ iP P 23 14 45.9 +0.2
comp=Z,107nm,0.8s,mb6.1
LPL **La Plagne** 85.50 315⇑ iP P 23 14 45.9 +0.2
LPL pmax pmax
comp=Z,107nm,0.8s,mb6.1
MBDF **Montbardon** 85.51 314⇑ iP P 23 14 45.1 -0.6
comp=Z,74nm,0.9s,mb5.6
MBDF **Montbardon** 85.51 314⇑ iP P 23 14 45.1 -0.6
comp=Z,37nm,0.9s,mb5.6
MBDF **Montbardon** 85.51 314⇑ iP P 23 14 45.1 -0.6
MBDF pmax pmax
comp=Z,37nm,0.9s,mb5.6
BNI **Bardonecchia** 85.56 315 eP P 23 14 45.7 -0.3
comp=Z,64nm,0.8s,mb5.9
BNI PcP PcP 23 14 49.2 +0.3
BNI LR LR
comp=Z,718nm,21.0s,MS5.0
FRF **La Foret Royal** 85.64 313⇑ iP P 23 14 46.4 0.0
comp=Z,211nm,1.0s,mb6.0
FRF **La Foret Royal** 85.64 313⇑ iP P 23 14 46.4 0.0
comp=Z,106nm,1.0s,mb6.0
FRF **La Foret Royal** 85.64 313⇑ iP P 23 14 46.4 0.0
FRF pmax pmax
comp=Z,106nm,1.0s,mb6.0
HAU **Haudompre** 85.67 318⇑ iP P 23 14 46.0 -0.5
comp=Z,253nm,1.0s,mb6.1
HAU eMLR MLR
comp=Z,696nm,23.0s,MS4.7
HAU **Haudompre** 85.67 318⇑ iP P 23 14 46.0 -0.5
comp=Z,126nm,1.0s,mb6.1
HAU LR LR
comp=Z,700nm,23.0s,MS5.0
HAU **Haudompre** 85.67 318⇑ iP P 23 14 46.0 -0.5
HAU pmax pmax
comp=Z,126nm,1.0s,mb6.1
HAU MLR MLR
comp=Z,700nm,23.0s,MS5.0
WLF **Walferdange** 85.74 319 P P 23 14 47.0 +0.2
comp=Z,56nm,1.5s,mb5.6
WLF **Walferdange** 85.74 319 eP P 23 14 47.2 +0.5
comp=Z,62nm,1.1s,mb5.8
WLF LR LR
comp=Z,652nm,22.0s,MS5.0
WLF **Walferdange** 85.74 319 eP P 23 14 47.3 +0.5
WLF pmax pmax
comp=Z,61nm,1.1s,mb5.7
WLF MLR MLR
comp=Z,652nm,22.0s,MS5.0
WLF **Walferdange** 85.74 319 eP P 23 14 47.2 +0.4
comp=Z,90nm,1.1s,mb5.9
WLF eS S 23 25 15.4 -0.5
LMR **La Mourre** 85.75 313⇑ iP P 23 14 46.9 -0.1
comp=Z,159nm,1.1s,mb5.8
LMR **La Mourre** 85.75 313⇑ iP P 23 14 46.9 -0.1
comp=Z,79nm,1.1s,mb5.9
LMR **La Mourre** 85.75 313⇑ iP P 23 14 46.9 -0.1
LMR pmax pmax
comp=Z,79nm,1.1s,mb5.9
MEM **Membach** 85.80 320 P P 23 14 46.9 -0.2
comp=Z,47nm,1.4s,mb5.5
HGN **Heimansgroeve** 85.84 320 eP P 23 14 46.6 -0.6
comp=Z,64nm,1.8s,mb5.5
HGN **Heimansgroeve** 85.84 320 ePP PP 23 18 06.0 -1.1
ASK **Askoy** 85.87 330 eP P 23 14 46.5 -0.7
THEF **They Montfort** 85.91 318 eP P 23 14 47.0 -0.7
CABF **La Chapelle** 85.91 316⇑ iP P 23 14 47.8 +0.1
comp=Z,177nm,0.9s,mb6.0
CABF **La Chapelle** 85.91 316⇑ iP P 23 14 47.8 +0.1
comp=Z,89nm,0.9s,mb6.0
CABF **La Chapelle** 85.91 316⇑ iP P 23 14 47.8 +0.1
CABF pmax pmax
comp=Z,89nm,0.9s,mb6.0
GDM **Grand'Maison** 85.95 315 eP P 23 14 47.6 -0.3
OG25 **Le Caire** 86.02 314 eP P 23 14 48.2 -0.1
TAVF **Tavernes** 86.07 313 eP P 23 14 48.7 +0.1
CASM **Ain Smara** 86.10 306 P P 23 14 50.0 +1.1
ORIF **Oris-en-Rattie** 86.13 315⇑ iP P 23 14 48.5 -0.3
comp=Z,65nm,0.7s,mb5.7
ORIF eMLR MLR
comp=Z,1μm,21.0s,MS4.9
ORIF **Oris-en-Rattie** 86.13 315⇑ iP P 23 14 48.5 -0.3
comp=Z,33nm,0.7s,mb5.7
ORIF **Oris-en-Rattie** 86.13 315⇑ iP P 23 14 48.5 -0.3
ORIF pmax pmax
comp=Z,33nm,0.7s,mb5.7
STOF **St-Etienne Org** 86.16 314 eP P 23 14 48.7 -0.3
CTEI **Djebel Teioual** 86.18 306 P P 23 14 51.0 +1.7
GRN **Grenoble** 86.21 315 eP P 23 14 49.3 +0.1
VILF **Villemus** 86.30 314 eP P 23 14 50.2 +0.5
PUYF **Puyloubier** 86.33 313 eP P 23 14 50.2 +0.3
BERF **Bertagne** 86.35 313 eP P 23 14 49.7 -0.2
SMRF **Simiane la Rot** 86.40 314⇑ iP P 23 14 50.6 +0.4
comp=Z,98nm,1.0s,mb5.7
SMRF **Simiane la Rot** 86.40 314⇑ iP P 23 14 50.6 +0.4
comp=Z,98nm,1.0s,mb6.0
MEZF **Maizieres J'vi** 86.52 318⇑ iP P 23 14 50.4 -0.2
comp=Z,116nm,1.1s,mb5.7
GELF **Grande-Etoile** 86.54 313 eP P 23 14 47.8 -3.1
TREF **Trevaresse** 86.56 313 eP P 23 14 48.7 -2.3
DFRA **Djebel Bou Aff** 86.58 306 P P 23 14 53.0 +1.8
GIVF **Givet** 86.58 320⇑ iP P 23 14 50.8 -0.1
comp=Z,106nm,1.2s,mb5.7
GIVF **Givet** 86.58 320⇑ iP P 23 14 50.8 -0.1
comp=Z,53nm,1.2s,mb5.7
GIVF **Givet** 86.58 320⇑ iP P 23 14 50.8 -0.1
GIVF pmax pmax
comp=Z,53nm,1.2s,mb5.7
URZ **Urewera** 86.66 129 LR LR 23 52 59.9
comp=Z,2μm,21.9s,MS5.5,baz=278,slow=35
PRAF **Pradon** 86.70 314 eP P 23 14 51.6 -0.1
DOU **Dourbes** 86.72 320 P P 23 14 51.4 -0.2
SNF **Seneffe** 86.90 320 P P 23 14 52.6 +0.1
comp=Z,38nm,1.5s,mb5.4
BAIF **Baives** 86.98 320⇑ iP P 23 14 53.0 +0.1
comp=Z,182nm,1.0s,mb6.0
BAIF **Baives** 86.98 320⇑ iP P 23 14 53.0 +0.1
comp=Z,91nm,1.0s,mb6.0
BAIF **Baives** 86.98 320⇑ iP P 23 14 53.0 +0.1
BAIF pmax pmax
comp=Z,91nm,1.0s,mb6.0
SET **Setif** 86.98 306 P P 23 14 55.0 +1.8
VIVF **Saint-Julien-l** 86.99 315⇑ iP P 23 14 52.9 -0.2
comp=Z,105nm,1.0s,mb5.7
SSB **Saint Sauveur** 87.06 315 eP P 23 14 53.4 0.0
SSB ePP PP 23 18 18.7 +1.6
LOR **Lormes** 87.40 317⇑ iP P 23 14 54.7 -0.3
comp=Z,217nm,1.0s,mb6.0
LOR eMLR MLR
comp=Z,617nm,22.0s,MS4.7
LOR **Lormes** 87.40 317⇑ iP P 23 14 54.7 -0.3
comp=Z,109nm,1.0s,mb6.0
LOR LR LR
comp=Z,620nm,22.0s,MS5.0
LOR **Lormes** 87.40 317⇑ iP P 23 14 54.7 -0.3
LOR pmax pmax
comp=Z,109nm,1.0s,mb6.0
LOR MLR MLR
comp=Z,620nm,22.0s,MS5.0
SMF **Signal de Mont** 87.45 316⇑ iP P 23 14 54.9 -0.3
comp=Z,134nm,0.7s,mb6.0
SMF **Signal de Mont** 87.45 316⇑ iP P 23 14 54.9 -0.3
comp=Z,67nm,0.7s,mb6.0
SMF **Signal de Mont** 87.45 316⇑ iP P 23 14 54.9 -0.3
SMF pmax pmax
comp=Z,67nm,0.7s,mb6.0
LASF **Ste Croix** 87.63 314⇑ iP P 23 14 56.4 +0.2
comp=Z,164nm,1.2s,mb5.8
SSF **Saint Saulge** 87.65 317⇑ iP P 23 14 56.0 -0.2
comp=Z,71nm,0.8s,mb5.6
SSF **Saint Saulge** 87.65 317⇑ iP P 23 14 56.0 -0.2
comp=Z,35nm,0.8s,mb5.7
SSF **Saint Saulge** 87.65 317⇑ iP P 23 14 56.0 -0.2
SSF pmax pmax
comp=Z,35nm,0.8s,mb5.6
PLDF **La Plantade** 87.66 316 eP P 23 14 56.3 +0.1
AVF **Avril sur Loir** 87.78 317⇑ iP P 23 14 56.5 -0.3
comp=Z,126nm,1.0s,mb5.8
AVF **Avril sur Loir** 87.78 317⇑ iP P 23 14 56.5 -0.3
comp=Z,63nm,1.0s,mb5.8
AVF **Avril sur Loir** 87.78 317⇑ iP P 23 14 56.5 -0.3
AVF pmax pmax
comp=Z,63nm,1.0s,mb5.8
TAM **Tamanrasset** 87.78 293 eP P 23 14 59.0 +1.6
TAM ePP PP 23 18 24.1 +0.5
LBL **Lubilhac** 87.97 315 eP P 23 14 58.1 +0.3
AGO **Saint Agoulin** 87.99 316 eP P 23 14 57.7 -0.1
PYM **Petit Puy Mans** 88.10 316 eP P 23 14 58.5 +0.2
BGF **Bois d'Agland** 88.14 316⇑ iP P 23 14 58.7 +0.2
comp=Z,191nm,1.1s,mb5.9
BGF **Bois d'Agland** 88.14 316⇑ iP P 23 14 58.7 +0.2
comp=Z,96nm,1.1s,mb5.9
BGF **Bois d'Agland** 88.14 316⇑ iP P 23 14 58.7 +0.2
BGF pmax pmax
comp=Z,96nm,1.1s,mb5.9
HYF **Humbligny** 88.22 317⇑ iP P 23 14 59.2 +0.3
MENF **Mencas** 88.25 320 eP P 23 14 58.9 0.0
EJON **La Jonquera** 88.46 312 P P 23 14 59.8 -0.4
comp=Z,106nm,1.6s,mb5.8
VERF **Verneugheol** 88.47 316 eP P 23 15 00.2 +0.1
TCF **Toulx Ste Croi** 88.61 316⇑ iP P 23 15 00.9 +0.2
comp=Z,53nm,0.9s,mb5.6
TCF **Toulx Ste Croi** 88.61 316⇑ iP P 23 15 00.9 +0.2
comp=Z,27nm,0.9s,mb5.6
TCF **Toulx Ste Croi** 88.61 316⇑ iP P 23 15 00.9 +0.2
TCF pmax pmax
comp=Z,27nm,0.9s,mb5.6
ETOS **Mallorca** 88.75 310 P P 23 15 01.6 +0.1
comp=Z,398nm,2.7s,mb6.3
CAF **Calviac** 88.83 315⇑ iP P 23 15 02.2 +0.4
comp=Z,77nm,1.1s,mb5.6
CAF **Calviac** 88.83 315⇑ iP P 23 15 02.2 +0.4
comp=Z,38nm,1.1s,mb5.6
CAF **Calviac** 88.83 315⇑ iP P 23 15 02.2 +0.4
CAF pmax pmax
comp=Z,38nm,1.1s,mb5.6
MTLF **Montolieu** 88.88 313⇑ iP P 23 15 02.3 +0.2
comp=Z,142nm,1.2s,mb5.8
MTLF **Montolieu** 88.88 313⇑ iP P 23 15 02.3 +0.2
comp=Z,71nm,1.3s,mb5.8
MTLF **Montolieu** 88.88 313⇑ iP P 23 15 02.3 +0.2
MTLF pmax pmax
comp=Z,71nm,1.3s,mb5.8
EMHD **Djebel Mahouad** 88.96 306 P P 23 15 04.0 +1.4
RJF **Les Rejaudoux** 89.18 315⇑ iP P 23 15 04.0 +0.5
comp=Z,181nm,1.3s,mb6.0
RJF eMLR MLR
comp=Z,660nm,22.5s,MS4.7
RJF **Les Rejaudoux** 89.18 315⇑ iP P 23 15 04.0 +0.5
comp=Z,90nm,1.3s,mb5.9
RJF LR LR
comp=Z,660nm,22.5s,MS5.0
RJF **Les Rejaudoux** 89.18 315⇑ iP P 23 15 04.0 +0.5
RJF pmax pmax
comp=Z,91nm,1.3s,mb6.0
RJF MLR MLR
comp=Z,660nm,22.5s,MS5.0
EMIR **Miracle** 89.52 312 P P 23 15 05.9 +0.8
comp=Z,420nm,2.5s,mb6.3
VNDA **Vanda** 89.67 168 P P 23 15 05.5 +0.5
comp=Z,6.1nm,0.9s,mb4.9,baz=281,slow=5.6,SNR=10
VNDA PKKPbc PKKPbc 23 32 38.9 -3.1
comp=Z,2.2nm,0.9s,baz=59,slow=3.8,SNR=6.3
VNDA LR LR 23 53 56.1
comp=Z,2μm,18.1s,MS5.7,baz=301,slow=35
VNDA **Vanda** 89.67 168 P P 23 15 05.5 +0.5
VNDA pmax pmax
comp=Z,6.0nm,0.9s
VNDA pmax pmax
comp=Z,2.0nm,0.9s
VNDA MLR MLR
comp=Z,2μm,18.1s
RAO **Raoul Island** 89.67 119 PFAKE 23 15 20.0 +14
RAO LR LR
comp=Z,2μm,20.0s,MS5.6
LFF **La Frestale** 89.77 315⇑ iP P 23 15 06.8 +0.6
comp=Z,87nm,0.9s,mb5.8
LFF **La Frestale** 89.77 315⇑ iP P 23 15 06.8 +0.6
comp=Z,44nm,0.9s,mb5.8
LFF **La Frestale** 89.77 315⇑ iP P 23 15 06.8 +0.6
LFF pmax pmax
comp=Z,44nm,0.9s,mb5.8
EPOB **Poblet** 89.91 311 P P 23 15 07.5 +0.5
comp=Z,312nm,2.7s,mb6.2
NIKO **Nikolski** 89.93 37 eP P 23 15 05.8 -1.0
comp=Z,320nm,0.9s,mb6.7
LDF **La Druitiere** 89.93 319⇑ iP P 23 15 07.0 +0.1
comp=Z,250nm,1.1s,mb6.2
LDF **La Druitiere** 89.93 319⇑ iP P 23 15 07.0 +0.1
comp=Z,125nm,1.1s,mb6.2
LDF **La Druitiere** 89.93 319⇑ iP P 23 15 07.0 +0.1
LDF pmax pmax
comp=Z,125nm,1.1s,mb6.2
EIBI **Ibiza** 89.96 309 P P 23 15 08.5 +1.2
comp=Z,223nm,1.7s,mb6.2
JMIC **Jan Mayen** 89.98 341 LR LR 00 01 03.8
comp=Z,1μm,21.8s,MS5.3,baz=67,slow=39
EBNR **Beni Rached** 90.09 306 P P 23 15 09.0 +1.1
CWF **Charnwood Fore** 90.14 323⇑ eP P 23 15 07.8 0.0
CWF AMb AMB 23 15 09.3
comp=Z,103nm,1.5s,mb5.9
FLN **La Foliniere** 90.15 319⇑ iP P 23 15 07.9 0.0
comp=Z,173nm,0.8s,mb6.1
FLN eMLR MLR
comp=Z,1μm,23.0s,MS5.0
FLN **La Foliniere** 90.15 319⇑ iP P 23 15 07.9 0.0
comp=Z,87nm,0.8s,mb6.1
FLN LR LR
comp=Z,1μm,23.0s,MS5.3

FLN La Foliniere 90.15 319⇑ *iP* **P** 23 15 07.9 0.0
FLN pmax pmax
comp=Z,87nm,0.8s,mb6.1
FLN MLR MLR
comp=Z,1μm,23.0s,MS5.3
HPK Haverah Park 90.16 324⇑ *eP* **P** 23 15 08.3 +0.5
HPK AMb AMB 23 15 09.1
comp=Z,245nm,1.3s,mb6.4
MFF Saint Martin d 90.19 317⇑ *iP* **P** 23 15 08.3 +0.1
comp=Z,149nm,1.1s,mb6.0
MFF Saint Martin d 90.19 317⇑ *iP* **P** 23 15 08.3 +0.1
comp=Z,74nm,1.1s,mb5.9
MFF Saint Martin d 90.19 317⇑ *iP* **P** 23 15 08.3 +0.1
MFF pmax pmax
comp=Z,74nm,1.1s,mb5.9
KBI1 Birley Grange 90.20 323 *eP* **P** 23 15 08.1 +0.1
EPF Esparros 90.27 313⇑ *iP* **P** 23 15 08.2 -0.4
comp=Z,19nm,1.0s,mb5.1
EPF Esparros 90.27 313⇑ *iP* **P** 23 15 08.2 -0.4
comp=Z,9.6nm,1.0s,mb5.1
EPF Esparros 90.27 313⇑ *iP* **P** 23 15 08.2 -0.4
EPF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
WOL Wolverton 90.29 321⇑ *eP* **P** 23 15 09.0 +0.5
WOL AMb AMB 23 15 10.4
comp=Z,271nm,1.2s,mb6.5
LHO Holmfirth 90.36 324⇑ *eP* **P** 23 15 07.9 -0.9
XAL Allendale 90.37 325 *eP* **P** 23 15 08.6 -0.2
ETRT Tiaret 90.37 305 P **P** 23 15 11.0 +1.7
KWE Weaver Farm 90.42 323⇑ *eP* **P** 23 15 09.3 +0.2
GRR Gorron 90.44 318⇑ *iP* **P** 23 15 09.5 +0.2
comp=Z,200nm,1.2s,mb6.0
GRR Gorron 90.44 318⇑ *iP* **P** 23 15 09.5 +0.2
comp=Z,100nm,1.2s,mb6.0
GRR Gorron 90.44 318⇑ *iP* **P** 23 15 09.5 +0.2
GRR pmax pmax
comp=Z,100nm,1.2s,mb6.0
EBIE Bielsa 90.46 313 P **P** 23 15 10.4 +0.9
comp=Z,326nm,3.0s
EANR `Ain N'Sour 90.47 306 P **P** 23 15 10.5 +0.8
ERTA Horta de San J 90.52 311 P **P** 23 15 10.5 +0.7
comp=Z,173nm,1.7s,mb6.1
VIEF Viey 90.52 313 *eP* **P** 23 15 10.4 +0.6
SWN1 Swindon 90.62 322 P **P** 23 15 10.1 0.0
SWN1 AMb AMB 23 15 12.8
comp=Z,308nm,1.7s,mb6.3
SWN1 Swindon 90.62 322 *eP* **P** 23 15 10.1 0.0
SWN1 AMb AMB 23 15 12.8
comp=Z,308nm,1.7s,mb6.3
EBL Broad Law 90.69 326 *eP* **P** 23 15 10.5 +0.3
DAG Danmarks Havn 90.74 348⇓ *iP* **P** 23 15 09.0 -1.1
DAG pmax pmax
comp=Z,35nm,0.6s,mb5.9
DAG Danmarks Havn 90.74 348⇓ *iP* **P** 23 15 09.0 -1.1
comp=Z,35nm,0.6s,mb5.9
EDI Edinburgh 90.75 326 *eP* **P** 23 15 10.8 +0.2
EDI AMb AMB 23 15 17.1
comp=Z,105nm,1.6s,mb5.9
SBA Scott Base 90.77 168 *eP* **P** 23 15 11.8 +1.6
comp=Z,86nm,1.4s,mb5.9
SBA LR LR
comp=Z,1μm,19.0s,MS5.4
SBA Scott Base 90.77 168 *eP* **P** 23 15 11.8 +1.6
SBA pmax pmax
comp=Z,86nm,1.4s,mb5.9
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.4
ECK Cauldkaine Hil 90.84 325 *eP* **P** 23 15 10.9 -0.1
ESK Eskdalemuir 90.86 326 PFAKE 23 15 20.0 +8.9
ESK LR LR
comp=Z,1μm,22.0s,MS5.3
EAU Auchinoon 90.91 326 *eP* **P** 23 15 11.2 0.0
MVH1 Achvaich 90.94 328⇓ *eP* **P** 23 15 11.3 -0.1
ETSF Etsaut 90.94 313⇑ *iP* **P** 23 15 12.4 +0.7
comp=Z,41nm,0.7s,mb5.6
ETSF Etsaut 90.94 313⇑ *iP* **P** 23 15 12.4 +0.7
comp=Z,21nm,0.7s,mb5.6
ETSF Etsaut 90.94 313⇑ *iP* **P** 23 15 12.4 +0.7
ETSF pmax pmax
comp=Z,21nm,0.7s,mb5.6
ESAC San Caprasio 91.03 312 P **P** 23 15 12.4 +0.2
comp=Z,314nm,1.9s,mb6.3
JQE Queens East 91.11 319⇓ *eP* **P** 23 15 12.2 -0.1
HLM1 Long Mynd 91.12 323⇓ *eP* **P** 23 15 11.7 -0.6
MDO Dochfour 91.13 328⇓ *eP* **P** 23 15 12.2 -0.1
JRS Jersey 91.14 319 *eP* **P** 23 15 13.0 +0.5
JLP Les Platons 91.14 319 *eP* **P** 23 15 12.3 -0.2
UNV Unalaska Valle 91.19 36 *eP* **P** 23 15 12.3 -0.3
comp=Z,34nm,0.8s,mb5.7
JSA Saint Aubin 91.19 319⇑ *eP* **P** 23 15 12.7 -0.1
JSA AMb AMB 23 15 14.2
comp=Z,88nm,1.4s,mb5.9
EMOS Mosqueruela 91.20 310 P **P** 23 15 14.6 +1.6
comp=Z,310nm,1.6s,mb6.4
EBEN Beniarda 91.21 309 P **P** 23 15 14.3 +1.2
JVM Valle D.L. Mar 91.21 319 *eP* **P** 23 15 12.9 +0.1
HGH Gray Hill 91.22 323⇓ *eP* **P** 23 15 12.4 -0.4
LARF Larrau 91.24 313 *eP* **P** 23 15 13.9 +0.8
MCH1 Michaelchurch 91.28 322⇓ *eP* **P** 23 15 12.8 -0.3
MCH1 AMb AMB 23 15 14.1
comp=Z,77nm,1.2s,mb5.9
SJPF Ste Jean 91.40 313⇑ *iP* **P** 23 15 14.6 +0.7
comp=Z,55nm,0.8s,mb5.6
SJPF Ste Jean 91.40 313⇑ *iP* **P** 23 15 14.6 +0.7
comp=Z,27nm,0.8s,mb5.6
SJPF Ste Jean 91.40 313⇑ *iP* **P** 23 15 14.6 +0.7
SJPF pmax pmax
comp=Z,27nm,0.8s,mb5.6
AKUT Akutan 91.56 36 *eP* **P** 23 15 13.4 -0.9
comp=Z,138nm,1.1s,mb6.2
SGMF Saint Gilles 91.59 318⇑ *iP* **P** 23 15 14.7 +0.1
comp=Z,219nm,1.3s,mb6.0
SGMF Saint Gilles 91.59 318⇑ *iP* **P** 23 15 14.7 +0.1
comp=Z,110nm,1.3s,mb6.0
SGMF Saint Gilles 91.59 318⇑ *iP* **P** 23 15 14.7 +0.1
SGMF pmax pmax
comp=Z,110nm,1.3s,mb6.0
KAC Achnashellach 91.61 328 *eP* **P** 23 15 14.5 0.0
ELIZ Elizondo 91.61 313 P **P** 23 15 15.2 +0.4
comp=Z,132nm,1.8s,mb6.0
ELIZ Elizondo 91.61 313 P **P** 23 15 15.2 +0.4
ELIZ pmax pmax
comp=Z,132nm,1.8s,mb6.0
ECHE Chera 91.67 310 P **P** 23 15 16.5 +1.3
comp=Z,23nm,0.8s,mb5.6
ECHE Chera 91.67 310 P **P** 23 15 16.5 +1.3
ECHE pmax pmax
comp=Z,23nm,0.8s,mb5.6
GAL1 Galloway 91.79 325 *eP* **P** 23 15 15.5 +0.1
GAL1 AMb AMB 23 15 18.1
comp=Z,93nm,1.7s,mb5.8
RRR Rubha Reidh 91.81 328 *eP* **P** 23 15 15.5 +0.1
KPL Plockton 91.83 328⇑ *eP* **P** 23 15 15.6 +0.1
KPL AMb AMB 23 15 18.4
comp=Z,140nm,1.5s,mb6.1
QUIF Quistinic 92.04 318⇑ *iP* **P** 23 15 17.5 +0.8
comp=Z,86nm,0.8s,mb5.8
QUIF Quistinic 92.04 318⇑ *iP* **P** 23 15 17.5 +0.8
comp=Z,43nm,0.8s,mb5.8
QUIF Quistinic 92.04 318⇑ *iP* **P** 23 15 17.5 +0.8
QUIF pmax pmax
comp=Z,43nm,0.8s,mb5.8
ROSF Rostrenen 92.05 319⇑ *iP* **P** 23 15 16.8 +0.1
comp=Z,123nm,1.1s,mb5.9
ROSF Rostrenen 92.05 319⇑ *iP* **P** 23 15 16.8 +0.1
comp=Z,62nm,1.0s,mb5.9
ROSF Rostrenen 92.05 319⇑ *iP* **P** 23 15 16.8 +0.1
ROSF pmax pmax
comp=Z,62nm,1.0s,mb5.9
DYA Yadsworthy 92.12 321 *eP* **P** 23 15 16.7 -0.3
DYA AMb AMB 23 15 22.2
comp=Z,96nm,1.4s,mb5.9
NVL N'lazarevskaya 92.19 199 P **P** 23 15 19.5 +2.7
NVL *e* pP 23 15 34.7 +3.8
NVL *e* 23 26 22.5
NVL pmax pmax
comp=Z,14nm,1.3s,mb5.1
TOA0 Torodi Ar. Sit 92.22 283 *eP* **P** 23 15 18.6 +0.4
TOA0 *ep*P pP 23 15 29.4 -2.9
TORD Torodi Ar. Bea 92.22 283 P **P** 23 15 18.6 +0.4
comp=Z,15nm,1.0s,mb5.3,baz=86,slow=4.8,SNR=68
TORD PP PP 23 18 59.7 +0.6
comp=Z,2.3nm,0.9s,baz=88,slow=4.6,SNR=4.2
TORD PKKP PKKPbc 23 32 33.9 +0.6
comp=Z,1.1nm,0.9s,baz=302,slow=3.6,SNR=8.5
TORD LR LR 23 55 48.6
comp=Z,1μm,20.1s,MS5.3,baz=90,slow=35
MAIT Maitri 92.22 199 *eP* pP 23 15 29.3 -1.7
ETOB Tobarra 92.25 309 P **P** 23 15 19.1 +1.2
comp=Z,111nm,1.6s,mb5.9
RRH Rhenigidale 92.25 328 *eP* **P** 23 15 17.9 +0.4
ALE Alert 92.29 357 P **P** 23 15 17.0 -0.2
comp=Z,418nm,0.6s,mb6.9,SNR=22
ETOR Torete 92.33 311 P **P** 23 15 19.2 +1.0
comp=Z,55nm,0.7s,mb6.0
ETOR Torete 92.33 311 P **P** 23 15 19.2 +1.0
ETOR pmax pmax
comp=Z,55nm,0.7s,mb6.0
ECRI Cripan 92.41 313 P **P** 23 15 19.1 +0.6
comp=Z,10nm,0.7s,mb5.3
ECRI Cripan 92.41 313 P **P** 23 15 19.1 +0.6
ECRI pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
GMM Mts of Mourne 92.62 325 *eP* **P** 23 15 18.4 -0.9
ELAN Lanestosa 92.98 314 P **P** 23 15 22.0 +0.8
EVIA Vianos 92.99 309 P **P** 23 15 22.2 +0.9
comp=Z,23nm,0.9s,mb5.6
EVIA Vianos 92.99 309 P **P** 23 15 22.2 +0.9
EVIA pmax pmax
comp=Z,23nm,0.9s,mb5.6
EHUE Huescar 93.18 308 P **P** 23 15 22.8 +0.6
comp=Z,15nm,0.7s,mb5.5
EHUE Huescar 93.18 308 P **P** 23 15 22.8 +0.6
EHUE pmax pmax
comp=Z,15nm,0.7s,mb5.5
EBER Berja 93.55 307 P **P** 23 15 24.6 +0.7
comp=Z,53nm,0.8s,mb6.0
EQES Quesada 93.55 308 P **P** 23 15 23.9 0.0
comp=Z,7.9nm,0.6s,mb5.3
GUD Guadarrama 93.93 311 P **P** 23 15 26.5 +0.9
comp=Z,22nm,0.8s,mb5.7
GUD Guadarrama 93.93 311 P **P** 23 15 26.5 +0.9
GUD pmax pmax
comp=Z,22nm,0.8s,mb5.6
ESDC Sonseca Array 93.95 310 P **P** 23 15 26.1 +0.4
comp=Z,7.0nm,0.6s,mb5.2,baz=62,slow=4.2,SNR=54
ESDC pP pP 23 15 40.9 +1.1
comp=Z,3.1nm,0.6s,baz=62,slow=4.8,SNR=4.3
ESDC PKKP PKKPbc 23 32 29.2 -0.3
comp=Z,3.5nm,0.8s,baz=281,slow=2.8,SNR=11
ESDC LR LR 00 02 21.2
comp=Z,526nm,20.2s,MS5.0,baz=130,slow=38
ESDC Sonseca Array 93.95 310 P **P** 23 15 26.0 +0.3
comp=Z,6.2nm,0.6s,mb5.2
ESLA Sonseca Array 93.95 310 *eP* **P** 23 15 26.3 +0.6
comp=Z,10nm,1.4s,mb5.1
ESLA LR LR
comp=Z,4μm,20.0s,MS5.8
EBAN Banos Encina 94.06 309 P **P** 23 15 26.0 -0.2
comp=Z,8.9nm,0.6s,mb5.4
EBAN Banos Encina 94.06 309 P **P** 23 15 26.0 -0.2
EBAN pmax pmax
comp=Z,9.0nm,0.6s,mb5.4
EGUA Guajares 94.09 307 P **P** 23 15 27.0 +0.6
comp=Z,276nm,0.8s,mb6.7
EGUA Guajares 94.09 307 P **P** 23 15 27.0 +0.6
EGUA pmax pmax
comp=Z,276nm,0.8s,mb6.7
AFI Afiamalu 94.17 104 PFAKE
AFI LR LR 23 15 40.0 +13
comp=Z,513nm,21.0s,MS5.0
PAB San Pablo 94.26 310 *eP* **P** 23 15 27.7 +0.6
comp=Z,18nm,1.2s,mb5.4
PAB *ep*P pP 23 15 38.5 -2.7
PAB LR LR
comp=Z,508nm,20.0s,MS5.0
PAB San Pablo 94.26 310 *eP* **P** 23 15 27.7 +0.5
PAB *e**PP pP 23 15 38.6 -2.6
PAB pmax pmax
comp=Z,18nm,1.2s,mb5.4
PAB MLR MLR
comp=Z,508nm,20.0s,MS5.0
SDPT Sand Point 94.30 34 *eP* **P** 23 15 25.6 -1.4
comp=Z,309nm,1.5s,mb6.5
EADA Adamuz 94.67 309 P **P** 23 15 29.3 +0.2
comp=Z,14nm,0.6s,mb5.5
COLD Coldfoot 95.00 21 *eP* **P** 23 15 29.9 0.0
comp=Z,109nm,1.7s,mb6.0
COLD PP PP 23 19 20.6 +1.4
SVW2 Sparrevohn 95.11 27 *eP* **P** 23 15 30.9 +0.4
CHGN Chignik 95.17 32 *eP* **P** 23 15 29.5 -1.4
CHUM Lake Minchumin 95.53 24 *eP* **P** 23 15 32.8 +0.4
comp=Z,118nm,1.1s,mb6.2
PPLA Purkeypile 95.96 25 *eP* **P** 23 15 33.9 -0.5
comp=Z,49nm,1.1s,mb5.8
BPAW Bear Paw Mtn. 95.98 24 *eP* **P** 23 15 34.5 +0.1
comp=Z,160nm,1.4s,mb6.3
SFS San Fernando 96.25 307 PFAKE
SFS LR LR 23 15 50.0 +14
comp=Z,1μm,21.0s,MS5.3
EMIN Mina Concepcio 96.37 309 P **P** 23 15 36.5 -0.3
comp=Z,50nm,1.2s,mb5.8
EBAD Badajoz 96.44 310 P **P** 23 15 37.0 -0.1
MTE Manteigas 96.52 311 PFAKE
MTE LR LR 23 15 50.0 +13
comp=Z,586nm,20.0s,MS5.1
BORG Borgarnes 96.68 337 LR LR 00 03 17.7
comp=Z,868nm,21.5s,MS5.2,baz=59,slow=38
BORG Borgarnes 96.68 337 PFAKE
BORG LR LR 23 15 50.0 +12
comp=Z,939nm,22.0s,MS5.2
COLA College 96.88 23 *eP* **P** 23 15 38.1 -0.4
comp=Z,7.8nm,0.8s,mb5.2
COLA LR LR
comp=Z,2μm,20.0s,MS5.6
COLA College 96.88 23 *eP* **P** 23 15 38.1 -0.4
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
COLA MLR MLR
comp=Z,2μm,20.0s,MS5.6
SNAA Sanae 96.94 198⇑ *eP* **P** 23 15 41.6 +3.0
MCK McKinley 96.96 24 *eP* **P** 23 15 38.3 -0.6
comp=Z,38nm,0.9s,mb5.8
MCK McKinley 96.96 24 P **P** 23 15 38.4 -0.5
MCK pmax pmax
comp=Z,38nm,0.9s,mb5.8
RTC Rabat Centre 97.22 305 PFAKE
RTC LR LR 23 15 50.0 +9.2
comp=Z,1μm,19.0s,MS5.4
EVO Evora 97.26 310 *eP* **P** 23 15 40.7 -0.1
comp=Z,83nm,1.8s,mb5.6
EVO *e*MLR MLR
comp=Z,827nm,21.5s,MS4.9
SUMG Summit 97.41 347 *eP* **P** 23 15 41.0 +0.3
comp=Z,16nm,0.9s,mb5.4
SUMG *e*PP PP 23 19 39.0 +1.4
OHAK Old Harbor 97.55 31 *eP* **P** 23 15 41.7 0.0
PMR Palmer 97.80 26 *eP* **P** 23 15 42.0 -0.7
comp=Z,42nm,1.3s,mb5.8
PMR LR LR
comp=Z,3μm,20.0s,MS5.7
PMR Palmer 97.80 26 *eP* **P** 23 15 42.1 -0.6
PMR pmax pmax
comp=Z,42nm,1.3s,mb5.8
PMR MLR MLR
comp=Z,3μm,20.0s,MS5.7
KIC Kosan Boka 99.20 277 *e*PKP1 **P** 23 15 51.0 +0.9
comp=Z,98nm,1.3s,mb6.2
DBIC Dimbokro 99.28 278 P **P** 23 15 51.4 +1.0
comp=Z,4.0nm,0.8s,mb5.0,baz=112,slow=2.9,SNR=7.0
DBIC LR LR 00 00 31.1
comp=Z,1μm,19.1s,MS5.4,baz=66,slow=35
DBIC Dimbokro 99.28 278 P **P** 23 15 51.4 +1.0
DBIC pmax pmax
comp=Z,4.0nm,0.8s
DBIC MLR MLR
comp=Z,1μm,19.2s
MENT Mentasta 99.42 23 *eP* **P** 23 15 50.0 +0.1
EGAK Eagle 99.42 21 PFAKE 23 16 00.0 +10
EGAK LR LR
comp=Z,3μm,20.0s,MS5.8
TIC Toumodi 99.44 278 *e*PKP1 **P** 23 15 52.0 +0.9
comp=Z,27nm,0.8s,mb5.8
LIC Lamto 99.50 277 *e*PKP1 **P** 23 15 51.6 +0.2
comp=Z,38nm,1.2s,mb5.8
SHEL Horse Pasture 101.67 255 PFAKE 23 16 10.0 +10
SHEL LR LR
comp=Z,3μm,19.0s,MS5.8
SFJD Kangerlussuaq 104.39 347 PFAKE
SFJD LR LR 23 16 20.0 +7.8
comp=Z,2μm,20.0s,MS5.5
SIT Sitka 106.19 26 PFAKE 23 20 40.0 +8.3
SIT LR LR
comp=Z,3μm,19.0s,MS5.8
WRAK Wrangell Islan 107.87 25 PFAKE 23 20 50.0 +15
WRAK LR LR
comp=Z,2μm,19.0s,MS5.6
YKA Yellowknife Ar 109.25 14 Pdiff Pdiff 23 16 35.3 +1.5
comp=Z,1.1nm,0.6s,baz=331,slow=5.1,SNR=6.1
YKA PKiKP PKiKP 23 20 36.0 -1.2
comp=Z,2.7nm,0.9s,baz=315,slow=2.4,SNR=6.0
YKA PKKPbc PKKPbc 23 31 42.4 -3.5
comp=Z,1.0nm,0.8s,baz=135,slow=3.3,SNR=3.9
YKA PKKPab PKKPab 23 31 59.2 +2.0
comp=Z,1.3nm,0.7s,baz=153,slow=2.9,SNR=4.8
YKA Yellowknife Ar 109.25 14 Pdif Pdif 23 16 35.3 +1.5
YKA PKPdf PKiKP 23 20 36.0 -1.2
YKA PKKPbc PKKPbc 23 31 42.4 -3.5
YKA PKKPab PKKPab 23 31 59.2 +2.0
YKA Yellowknife Ar 109.25 14 P Pdif 23 16 35.3 +1.5
YKA 23 31 42.4
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.7s
PPT Papeete 115.57 107 *e*PP PP 23 21 42.9 -10
comp=Z,240nm,28.2s
PPT Papeete 115.57 107 *e*PS PS 23 31 33.8 -0.8
comp=Z,2μm,26.8s
PPT Papeete 115.57 107 *e*LR LR 23 55 50.2
comp=Z,1μm,23.8s
OOW Octopus West 117.43 29 P PKPdf 23 20 54.3 +1.1
EDM Edmonton 117.50 19 *e*PKPdf PKPdf 23 20 52.8 -0.4
NLWA Neilton Lookou 117.83 29 PFAKE 23 21 10.0 +16
NLWA LR LR
comp=Z,1μm,20.0s,MS5.5
JCW Jim Creek 118.16 27 *e*PKPdf PKPdf 23 20 54.5 -0.2
RPW Rockport 118.16 27 *e*PKPdf PKPdf 23 20 54.3 -0.3
PMSA Palmer Station 118.22 190 PFAKE 23 21 10.0 +16
PMSA LR LR
comp=Z,1μm,19.0s,MS5.6
SCHQ Schefferville 118.78 348 PKP PKPdf 23 20 55.4 -0.3
comp=Z,18nm,0.6s,baz=47,slow=3.3,SNR=42
SCHQ pPKP pPKPdf 23 21 11.8 +1.6
comp=Z,12nm,0.7s,baz=22,slow=3.7,SNR=4.7
SCHQ PP PP 23 22 13.9 +0.5
comp=Z,16nm,0.8s,baz=11,slow=6.4,SNR=4.7
SCHQ PKKPbc PKKPbc 23 31 09.6 -3.6
comp=Z,3.0nm,0.7s,baz=79,slow=5.2,SNR=7.1
SCHQ Schefferville 118.78 348 *e*PKPdf PKPdf 23 20 55.5 -0.2
SCHQ LR LR
comp=Z,1μm,20.0s,MS5.6
BMW Boistfort Moun 118.78 29 *e*PKPdf PKPdf 23 20 56.6 +0.7
FFC Flin Flon 119.09 11 *e*PKPdf PKPdf 23 20 55.5 -0.8
FFC LR LR
comp=Z,2μm,21.0s,MS5.8
LON Longmire 119.27 28 *e*PKPdf PKPdf 23 20 56.7 -0.1
ETW Entiat 119.32 27 *e*PKPdf PKPdf 23 20 56.7 -0.2
TDL Tradedollar La 119.36 29 P PKPdf 23 20 57.3 +0.3
WTV Waterville 119.41 26 P PKPdf 23 20 56.4 -0.7
COR Corvallis 120.08 31 PFAKE 23 21 10.0 +12
COR LR LR
comp=Z,1μm,22.0s,MS5.5
MXC Moxie City 120.10 27 P PKPdf 23 20 58.5 +0.1
NEW Newport 120.19 24 *e*PKPdf PKPdf 23 20 58.2 -0.3
NEW LR LR
comp=Z,2μm,20.0s,MS5.8
OD2 Odessa Site #2 120.19 26 *e*PKPdf PKPdf 23 20 58.5 -0.1
OD2 *e*PP PP 23 22 25.1 +1.6
RSW Rattlesnake Hi 120.56 27 *e*PKPdf PKPdf 23 21 00.1 +0.7
HAWA Hanford 120.59 27 *e*PKPdf PKPdf 23 20 59.6 +0.2
HAWA LR LR
comp=Z,1μm,20.0s,MS5.6
BROR Big Rock Looko 120.74 31 P PKPdf 23 20 59.8 +0.1
WALA Waterton Lakes 120.80 22 *e*PKPdf PKPdf 23 20 59.5 -0.2
LNOR Lincton Mounta 121.55 27 *e*PKPdf PKPdf 23 21 00.8 -0.4
HUMO Hull Mountain 121.64 32 *e*PKPdf PKPdf 23 21 01.9 +0.3
HUMO LR LR
comp=Z,1μm,21.0s,MS5.6
YBH Yreka Blue Hor 122.37 33 PFAKE 23 21 10.0 +7.0
YBH LR LR
comp=Z,1μm,22.0s,MS5.5
LHEM Herd Peak 122.71 33 P PKPdf 23 21 03.6 -0.1
BMO Blue Mountains 122.77 27 *e*PKPdf PKPdf 23 21 02.5 -1.2
BMO LR LR
comp=Z,973nm,20.0s,MS5.5
CHMT Chamberlain Mo 122.82 23 *e*PKPdf PKPdf 23 21 03.1 -0.5
CHMT *e*PP PP 23 22 42.0 +0.7
CHMT *e*SKPdf SKPdf 23 24 35.3 -0.2
EGMT Eagleton 123.14 20 *e*PKPdf PKPdf 23 21 04.5 +0.2
EGMT *e*SKPdf SKPdf 23 24 36.4 +0.4
EGMT LR LR
comp=Z,2μm,19.0s,MS5.9
KIPM Iron Peak 123.25 35 *e*PKPdf PKPdf 23 21 05.6 +0.9
WDC Whiskeytown Da 123.26 34 *e*PKPdf PKPdf 23 21 04.2 -0.5
WDC LR LR
comp=Z,1μm,22.0s,MS5.6
MOD Modoc 123.53 31 *e*PKPdf PKPdf 23 21 05.8 +0.6
MOD *e*PP PP 23 22 47.9 +1.6
MOD LR LR
comp=Z,2μm,19.0s,MS5.7
HRY Holter Researc 123.53 22 *e*PKPdf PKPdf 23 21 05.2 +0.1
WVOR Wild Horse Val 123.98 30 *e*PKPdf PKPdf 23 21 07.0 +1.0
WVOR LR LR
comp=Z,1μm,21.0s,MS5.6
HOPS Hopland 124.03 36 *e*PKPdf PKPdf 23 21 07.0 +0.8
HOPS LR LR
comp=Z,1μm,19.0s,MS5.6
DLMT Dillon 124.36 23 *e*PKPdf PKPdf 23 21 07.0 +0.3
DGMT Dagmar 124.42 15 *e*PKPdf PKPdf 23 21 07.1 +0.4
DGMT *e*PP PP 23 22 51.0 -0.8
DGMT LR LR
comp=Z,2μm,22.0s,MS5.7
ULM Lac du Bonnet 124.44 9 PKP PKPdf 23 21 05.8 -0.9
comp=Z,45nm,0.7s,baz=351,slow=2.6,SNR=33
ULM pPKP pPKPdf 23 21 22.2 +1.0
comp=Z,33nm,0.7s,baz=340,slow=1.6,SNR=6.8
ULM Lac du Bonnet 124.44 9 *e*PKPdf PKPdf 23 21 05.8 -0.8
ULM LR LR
comp=Z,1μm,20.0s,MS5.6
BOZ Bozeman (W) 124.50 22 *e*PKPdf PKPdf 23 21 07.1 +0.2
NSHM Saint Helena R 124.62 36 *e*PKPdf PKPdf 23 21 08.2 +0.8
MCMT McKenzie Canyo 124.70 24 *e*PKPdf PKPdf 23 21 08.2 +0.8
MCCM Marconi Confer 124.71 36 PFAKE 23 21 20.0 +12
MCCM LR LR
comp=Z,1μm,22.0s,MS5.5
HLID Hailey 125.07 26 *e*PKPdf PKPdf 23 21 08.7 +0.5
HLID LR LR
comp=Z,1μm,19.0s,MS5.6
GCMT Greycliff 125.10 21 *e*PKPdf PKPdf 23 21 08.7 +0.6
QLMT Earthquake Lak 125.26 23 *e*PKPdf PKPdf 23 21 09.7 +1.3
LAO LASA Array 125.45 18 *e*PKPdf PKPdf 23 21 09.6 +0.9
LAO LR LR
comp=Z,2μm,20.0s,MS5.8
YMR Madison River 125.58 23 *e*PKPdf PKPdf 23 21 10.2 +1.2
YMR LR LR
comp=Z,1μm,19.0s,MS5.7
PAHR Pah Rah Range 125.59 32 *e*PKPdf PKPdf 23 21 09.9 +0.7
YNR Norris Junctio 125.64 22 *e*PKPdf PKPdf 23 21 11.0 +1.9
YFT Old Faithful 125.81 23 *e*PKPdf PKPdf 23 21 11.7 +2.2
RLMT Red Lodge 125.82 21 *e*PKPdf PKPdf 23 21 10.1 +0.6
RLMT LR LR
comp=Z,2μm,22.0s,MS5.8
LKWY Lake 125.88 22 *e*PKPdf PKPdf 23 21 11.4 +1.8
LKWY LR LR
comp=Z,2μm,22.0s,MS5.8
BMN Battle Mountai 126.18 30 *e*PKPdf PKPdf 23 21 11.2 +0.9
BMN LR LR
comp=Z,1μm,20.0s,MS5.5
CMB Columbia Colle 126.22 35 *e*PKPdf PKPdf 23 21 10.6 +0.1
CMB LR LR
comp=Z,918nm,21.0s,MS5.4
IMW Indian Meadow 126.23 23 *e*PKPdf PKPdf 23 21 11.0 +0.7
AGMN Agassiz Refuge 126.35 9 *e*PKPdf PKPdf 23 21 09.8 -0.6
AGMN LR LR
comp=Z,2μm,19.0s,MS5.7
DCID1 Drake Creek 126.39 24 *e*PKPdf PKPdf 23 21 11.7 +1.0
MOOW Moose Ponds 126.44 23 *e*PKPdf PKPdf 23 21 11.1 +0.4
SAO San Andreas Ge 126.48 36 PFAKE 23 21 20.0 +9.0
SAO LR LR
comp=Z,1μm,21.0s,MS5.5

RRI2 Red Ridge 126.54 24 *e*PKPdf PKPdf 23 21 11.3 +0.3
TPAW Teton Pass 126.57 23 *e*PKPdf PKPdf 23 21 11.7 +0.7
LOHW Long Hollow 126.61 23 *e*PKPdf PKPdf 23 21 11.6 +0.6
SNOW Snow King Moun 126.67 23 *e*PKPdf PKPdf 23 21 11.9 +0.8
REDW Red Top Meadow 126.72 23 *e*PKPdf PKPdf 23 21 11.6 +0.4
ELK Elko 126.92 29 *e*PKPdf PKPdf 23 21 12.3 +0.6
ELK LR LR
comp=Z,1µm,20.0s,MS5.6
NVAR Mina Array Bea 127.09 33 PKP PKPdf 23 21 13.3 +1.2
comp=Z,25nm,0.8s,baz=268,slow=1.8,SNR=63
NVAR pPKP pPKPdf 23 21 29.1 +2.5
comp=Z,23nm,0.8s,baz=272,slow=0.7,SNR=10
NVAR PP PP 23 23 11.1 +0.9
comp=Z,9.7nm,1.1s,baz=296,slow=5.0,SNR=4.1
AHID Auburn Hatcher 127.12 24 *e*PKPdf PKPdf 23 21 12.1 0.0
AHID LR LR
comp=Z,2µm,19.0s,MS5.8
HVU Hansel Valley 127.22 26 *e*PKPdf PKPdf 23 21 12.9 +0.6
EYMN Ely 127.25 6 *e*PKPdf PKPdf 23 21 11.9 -0.3
EYMN LR LR
comp=Z,2µm,22.0s,MS5.8
MTUM Tungsten Hills 127.73 34 *e*PKPdf PKPdf 23 21 14.6 +1.2
BW06 Boulder Array 127.73 23 PFAKE 23 21 30.0 +17
BW06 LR LR
comp=Z,2µm,22.0s,MS5.7
PDAR Pinedale Array 127.73 23 PKP PKPdf 23 21 12.5 -0.7
comp=Z,29nm,0.9s,baz=117,slow=0.8,SNR=105
PDAR pPKP pPKPdf 23 21 29.2 +1.5
comp=Z,30nm,1.0s,baz=74,slow=2.4,SNR=11
BGU Big Grassy Mou 127.80 27 *e*PKPdf PKPdf 23 21 13.7 +0.3
HWUT Hardware Ranch 127.89 25 *e*PKPdf PKPdf 23 21 13.7 +0.1
HWUT *e*PP PP 23 23 15.3 +0.2
HWUT LR LR
comp=Z,2µm,21.0s,MS5.8
TPH Tonopah 127.93 32 PFAKE 23 21 30.0 +16
TPH LR LR
comp=Z,1µm,20.0s,MS5.6
EFI East Falkland 128.14 201 PFAKE 23 21 30.0 +16
EFI LR LR
comp=Z,1µm,21.0s,MS5.6
PKME Peaks-Kenny Pk 128.32 346 PFAKE 23 21 30.0 +16
PKME LR LR
comp=Z,1µm,21.0s,MS5.5
RKT Rikitea 128.40 116 *e*PP PP 23 23 25.3 +5.2
comp=Z,295nm,30.8s
RKT Rikitea 128.40 116 *e*PS PS 23 33 26.9 -1.6
comp=Z,386nm,27.2s
RKT *e*SS SS 23 40 31.0 -2.2
comp=Z,512nm,35.8s
RKT Rikitea 128.40 116 *e*LR LR 00 01 53.2
comp=Z,2µm,23.5s
NOQ North Oquirrh 128.43 26 *e*PKPdf PKPdf 23 21 14.9 +0.3
RSSD Black Hills 128.43 18 *e*PKPdf PKPdf 23 21 14.7 +0.1
RSSD LR LR
comp=Z,2µm,21.0s,MS5.8
DUG Dugway 128.48 27 *e*PKPdf PKPdf 23 21 15.3 +0.6
DUG LR LR
comp=Z,1µm,19.0s,MS5.6
JLU Jordanelle 128.76 26 *e*PKPdf PKPdf 23 21 15.5 +0.2
ISA Isabella 128.98 35 PFAKE 23 21 30.0 +14
ISA LR LR
comp=Z,1µm,20.0s,MS5.5
DAU Daniels Canyon 129.00 26 *e*PKPdf PKPdf 23 21 16.6 +0.9
NLU North Lily Min 129.01 27 *e*PKPdf PKPdf 23 21 14.0 -1.7
DAC Darwin (Calif) 129.04 34 PFAKE 23 21 30.0 +14
DAC LR LR
comp=Z,1µm,20.0s,MS5.5
MPU Maple Canyon 129.16 26 *e*PKPdf PKPdf 23 21 17.2 +1.2
MPU LR LR
comp=Z,1µm,19.0s,MS5.6
COWI Conover 129.27 4 *e*PKPdf PKPdf 23 21 16.1 0.0
COWI LR LR
comp=Z,2µm,22.0s,MS5.7
TPNV Topopah Spring 129.29 33 *e*PKPdf PKPdf 23 21 17.4 +1.0
TPNV LR LR
comp=Z,1µm,20.0s,MS5.6
RWWY Rawlins 129.54 22 *e*PKPdf PKPdf 23 21 17.1 +0.4
OSI Osito Adit 129.56 37 *e*PKPdf PKPdf 23 21 18.3 +1.3
LBNH Lisbon 129.88 348 *e*PKPdf PKPdf 23 21 17.9 +0.7
LBNH LR LR
comp=Z,1µm,20.0s,MS5.7
TMUT Trail Mountain 129.94 27 *e*PKPdf PKPdf 23 21 19.0 +1.5
LONY Lake Ozonia 130.02 350 PFAKE 23 21 30.0 +12
LONY LR LR
comp=Z,1µm,20.0s,MS5.6
MVU Marysvale 130.12 28 PFAKE 23 21 30.0 +12
MVU LR LR
comp=Z,1µm,19.0s,MS5.5
MSU Marysvale 130.13 28 *e*PKPdf PKPdf 23 21 19.1 +1.2
GSC Goldstone 130.19 34 *e*PKPdf PKPdf 23 21 19.0 +0.9
GSC *e*PP PP 23 23 26.3 -4.3
GSC LR LR
comp=Z,1µm,19.0s,MS5.6
MWC Mount Wilson 130.23 36 *e*PKPdf PKPdf 23 21 19.4 +1.2
MWC LR LR
comp=Z,1µm,22.0s,MS5.6
CCUT Cedar City 130.32 30 *e*PKPdf PKPdf 23 21 19.4 +1.1
SRU San Rafael 130.39 26 *e*PKPdf PKPdf 23 21 18.5 +0.1
SADO Sadowa 130.47 355 SKPbc SKPbc 23 24 38.0 0.0
comp=Z,30nm,1.0s,baz=358,slow=4.3,SNR=5.8
HNH Hanover 130.47 348 *e*PKPdf PKPdf 23 21 19.6 +1.2
PHWY Pilot Hill 130.51 20 *e*PKPdf PKPdf 23 21 18.5 -0.1
NCB Newcomb 130.59 350 *e*PKPdf PKPdf 23 21 19.2 +0.6
NCB *e*SKPbc SKPbc 23 24 39.1 +0.6
NCB LR LR
comp=Z,1µm,21.0s,MS5.5
ECSD EROS,Sioux Fal 130.63 11 *e*PKPdf PKPdf 23 21 18.4 -0.3
ECSD LR LR
comp=Z,1µm,20.0s,MS5.6
GLMI Grayling 130.68 360 *e*PKPdf PKPdf 23 21 19.2 +0.4
GLMI LR LR
comp=Z,1µm,20.0s,MS5.7
RCBR Riachuelo 131.18 266 PFAKE 23 21 30.0 +9.4
RCBR LR LR
comp=Z,2µm,21.0s,MS5.7
WES Weston 131.52 347 PFAKE 23 21 30.0 +10
WES LR LR
comp=Z,737nm,20.0s,MS5.4
PFO Pinyon Flat Ob 131.60 36 PFAKE 23 21 30.0 +9.1
PFO LR LR
comp=Z,1µm,21.0s,MS5.5
PV10 Paradox Valley 131.65 25 *e*PKPdf PKPdf 23 21 22.4 +1.7
ISCO Idaho Springs 131.78 21 *e*PKPdf PKPdf 23 21 22.1 +1.1
ISCO LR LR
comp=Z,2µm,20.0s,MS5.8
SMCO Snowmass 131.81 23 *e*PKPdf PKPdf 23 21 21.2 +0.1
OGNE Ogallala 131.94 17 PFAKE 23 21 30.0 +8.7
OGNE LR LR
comp=Z,921nm,20.0s,MS5.5
JFWS Jewell Farm 132.35 5 *e*PKPdf PKPdf 23 21 21.4 -0.6
JFWS LR LR
comp=Z,1µm,19.0s,MS5.7
BINY Binghamton 132.60 351 *e*PKPdf PKPdf 23 21 23.0 +0.5
BINY *e*SKPbc SKPbc 23 24 45.6 -0.2
BINY LR LR
comp=Z,993nm,20.0s,MS5.5
MVCO Mesa Verde 132.85 26 *e*PKPdf PKPdf 23 21 23.9 +0.8
MVCO LR LR
comp=Z,1µm,21.0s,MS5.6
WUAZ Wupatki 132.90 30 *e*PKPdf PKPdf 23 21 24.1 +0.9
WUAZ LR LR
comp=Z,572nm,20.0s,MS5.3
GLA Glamis 132.95 35 *e*PKPdf PKPdf 23 21 25.7 +2.3
GLA LR LR
comp=Z,1µm,22.0s,MS5.5
SCIA State Center 132.99 8 *e*PKPdf PKPdf 23 21 24.2 +0.9
SCIA *e*PP PP 23 23 44.8 -3.1
SCIA LR LR
comp=Z,2µm,22.0s,MS5.7
ERPA Erie 133.17 355 PFAKE 23 21 40.0 +16
ERPA LR LR
comp=Z,2µm,20.0s,MS5.8
AAM Ann Arbor 133.19 359 PFAKE 23 21 40.0 +16
AAM LR LR
comp=Z,1µm,20.0s,MS5.7
SDCO Great Sand Dun 133.62 23 *e*PKPdf PKPdf 23 21 24.4 -0.1
SDCO LR LR
comp=Z,2µm,21.0s,MS5.7
SSPA Standing Stone 134.41 352 *e*PKPdf PKPdf 23 21 26.4 +0.5
SSPA LR LR
comp=Z,1µm,20.0s,MS5.6
CBKS Cedar Bluff 134.57 16 PFAKE 23 21 40.0 +14
CBKS LR LR
comp=Z,2µm,22.0s,MS5.8
HDIL Hopedale 134.77 5 *e*PKPdf PKPdf 23 21 26.8 +0.2
HDIL LR LR
comp=Z,1µm,21.0s,MS5.7
MVL Millersville 134.81 351 *e*PKPdf PKPdf 23 21 27.3 +0.6
KSU1 Kansas State U 135.09 13 *e*PKPdf PKPdf 23 21 27.2 0.0
KSU1 LR LR
comp=Z,2µm,21.0s,MS5.7
ACSO Alum Creek Sta 135.24 358 *e*PKPdf PKPdf 23 21 27.5 0.0
ACSO *e*PP PP 23 24 04.3 +2.3
ACSO LR LR
comp=Z,1µm,20.0s,MS5.7
MCWV Mont Chateau 135.60 354 PFAKE 23 21 40.0 +12
MCWV LR LR
comp=Z,1µm,20.0s,MS5.7
ANMO Albuquerque 135.64 26 *e*PKPdf PKPdf 23 21 29.2 +0.8
ANMO LR LR
comp=Z,1µm,22.0s,MS5.7
TUC Tucson 135.73 32 *e*PKPdf PKPdf 23 21 28.5 -0.1
TUC LR LR
comp=Z,774nm,20.0s,MS5.4
LAZ Ladron 135.81 27 *e*PKPdf PKPdf 23 21 30.0 +1.3
LENM Lemitar 136.08 27 *e*PKPdf PKPdf 23 21 30.5 +1.2
LPM Los Pinos Moun 136.11 26 *e*PKPdf PKPdf 23 21 30.3 +1.0
BNM Barren Site 136.25 26 *e*PKPdf PKPdf 23 21 31.1 +1.6
BLO Bloomington 136.31 2 *e*PKPdf PKPdf 23 21 29.5 0.0
OLIL Olney 136.67 4 *e*PKPdf PKPdf 23 21 30.6 +0.4
CBN Corbin 136.73 351 PFAKE 23 21 40.0 +10
CBN LR LR
comp=Z,698nm,20.0s,MS5.4
CCM Cathedral Cave 137.04 7 *e*PKPdf PKPdf 23 21 30.4 -0.5
CCM LR LR
comp=Z,754nm,20.0s,MS5.4
FVM French Village 137.21 6 *e*PKPdf PKPdf 23 21 31.3 +0.1
WCI Wyandotte Cave 137.25 2 *e*PKPdf PKPdf 23 21 31.1 -0.2
WCI LR LR
comp=Z,1µm,20.0s,MS5.7
AMTX Amarillo 137.57 21 PFAKE 23 21 40.0 +8.0
AMTX LR LR
comp=Z,2µm,21.0s,MS5.8
BLA Blacksburg 138.08 355 *e*PKPdf PKPdf 23 21 32.8 -0.1
BLA LR LR
comp=Z,2µm,21.0s,MS5.7
ELN Prospectdale 138.09 355 *e*PKPdf PKPdf 23 21 32.6 -0.3
BBSR BB Station 138.40 334 PFAKE 23 21 50.0 +16
BBSR LR LR
comp=Z,816nm,22.0s,MS5.4
PARMO Parma 138.59 6 *e*PKPdf PKPdf 23 21 34.2 +0.4
WMOK Wichita Mounta 138.64 17 PFAKE 23 21 50.0 +16
WMOK LR LR
comp=Z,1µm,20.0s,MS5.7
TZTN Tazewell 138.94 358 *e*PKPdf PKPdf 23 21 34.6 +0.1
TZTN LR LR
comp=Z,2µm,20.0s,MS5.8
GLAT Glass 139.03 5 *e*PKPdf PKPdf 23 21 35.4 +0.8
WVT Waverly 139.28 4 PFAKE 23 21 50.0 +15
WVT LR LR
comp=Z,2µm,22.0s,MS5.8
HBAR Harrisburg 139.58 7 *e*PKPdf PKPdf 23 21 35.8 +0.2
CNNC Cliffs of the 139.71 351 PFAKE 23 21 50.0 +14
CNNC LR LR
comp=Z,2µm,21.0s,MS5.7
TKL Tuckaleechee C 139.83 359 PKhKP 23 21 26.5
TKL PKP PKPdf 23 21 36.4 +0.3
comp=Z,22nm,0.7s
TKL SKPbc SKPbc 23 25 07.2 -1.0
comp=Z,23nm,0.9s,baz=17,slow=4.7,SNR=3.5
TKL Tuckaleechee C 139.83 359 *e*PKPdf PKPdf 23 21 36.1 0.0
TKL Tuckaleechee C 139.83 359 PKHKP 23 21 26.5
TKL 23 21 36.4
TKL pmax pmax
comp=Z,22nm,0.7s
TKL pmax pmax
comp=N,23nm,0.9s
UALR University of 140.10 10 *e*PKPdf PKPdf 23 21 36.7 +0.1
MIAR Mount Ida 140.11 11 PFAKE 23 21 50.0 +13
MIAR LR LR
comp=Z,1µm,20.0s,MS5.6
OXF Oxford 140.76 6 PFAKE 23 21 50.0 +12
OXF LR LR
comp=Z,1µm,20.0s,MS5.6
TXAR Lajitas Array 141.66 27 PKhKP 23 21 33.4
comp=Z,8.9nm,0.7s,baz=207,slow=1.2,SNR=30
TXAR pPKP pPKPdf 23 21 54.4 +0.3
comp=Z,7.6nm,0.8s,baz=297,slow=0.6,SNR=3.2
TXAR PP PP 23 24 42.4 0.0
comp=Z,15nm,1.1s,baz=345,slow=4.4,SNR=6.7
TXAR SKPbc SKPbc 23 25 12.1 -1.1
comp=Z,9.7nm,1.0s,baz=330,slow=4.3,SNR=4.8
TXAR Lajitas Array 141.66 27 PKHKP 23 21 33.4
TXAR 23 24 42.4
TXAR pmax pmax
comp=Z,9.0nm,0.7s
TXAR pmax pmax
comp=Z,8.0nm,0.8s
TXAR pmax pmax
comp=Z,15nm,1.2s
TXAR pmax pmax
comp=N,10.0nm,1.0s
PLCA Paso Flores 141.88 198 PKhKP 23 21 34.6
comp=N,8.0nm,0.8s,baz=102,slow=1.7,SNR=11
PLCA pPKP pPKPdf 23 21 55.1 +1.0
comp=N,11nm,0.8s,baz=118,slow=3.9,SNR=5.7
PLCA Paso Flores 141.88 198 PKP 23 21 34.6
PLCA pPKP pPKPdf 23 21 55.1 +1.0
PLCA LR LR
comp=Z,2µm,22.0s,MS5.8
PLCA Paso Flores 141.88 198 PKHKP 23 21 34.6
PLCA pmax pmax
comp=Z,8.0nm,0.8s
PLCA pmax pmax
comp=Z,11nm,0.8s
GOGA Godfrey 142.06 358 *e*PKPdf PKPdf 23 21 40.5 +0.4
GOGA LR LR
comp=Z,1µm,20.0s,MS5.7
NHSC New Hope 142.12 354 PFAKE 23 21 50.0 +10
NHSC LR LR
comp=Z,1µm,22.0s,MS5.6
BDFB Brasilia 142.15 251 PKhKP 23 21 36.7
comp=Z,6.6nm,0.9s,baz=74,slow=3.8,SNR=6.0
BDFB Brasilia 142.15 251 PKHKP 23 21 36.7
BDFB pmax pmax
comp=Z,7.0nm,0.9s
JCT Junction City 142.22 21 PFAKE 23 21 50.0 +9.4
JCT LR LR
comp=Z,2µm,20.0s,MS5.8
LRAL Lakeview Retre 142.41 3 PFAKE 23 21 50.0 +9.2
LRAL LR LR
comp=Z,1µm,21.0s,MS5.7
NATX Nacogdoches 142.56 14 PFAKE 23 21 50.0 +8.9
NATX LR LR
comp=Z,2µm,19.0s,MS5.8
VBMS Vicksburg 142.89 8 PFAKE 23 21 50.0 +8.3
VBMS LR LR
comp=Z,1µm,22.0s,MS5.6
HKT Hockley 143.98 16 *e*PKPdf PKPdf 23 21 40.8 -2.9
HKT LR LR
comp=Z,1µm,21.0s,MS5.6
BRAL Brewton 144.42 3 PFAKE 23 22 00.0 +16
BRAL LR LR
comp=Z,1µm,20.0s,MS5.7
KVTX Kingsville 145.57 21 *e*PKPbc PKPbc 23 21 48.1 +1.5
KVTX LR LR
comp=Z,2µm,20.0s,MS5.8
DWPF Disney 147.19 354 *e*PKPbc PKPbc 23 21 51.9 +0.5
DWPF LR LR
comp=Z,2µm,20.0s,MS5.8
BBGH Gun Hill 149.18 305 PFAKE 23 22 00.0 +7.2
BBGH LR LR
comp=Z,1µm,19.0s,MS5.8
FDF Fort de France 149.52 310 *e*PKPbc PKPbc 23 21 58.4 +0.6
SLB Belfond 149.98 308 *e*P PKPbc 23 22 00.8 +1.8
MTP Monte Pirata 150.35 320 *e*PKPbc PKPbc 23 22 00.1 +0.3
SSV Crater Summit 150.39 308 *e*P PKPbc 23 22 01.9 +1.9
SJG San Juan 150.72 321 PFAKE 23 22 10.0 +15
SJG LR LR
comp=Z,2µm,21.0s,MS6.0
AGPR Aguadilla, PR 151.03 323 *e*PKPbc PKPbc 23 22 01.8 +0.4
TLL Tololo Astrono 151.39 206 *e*P PKPbc 23 22 02.0 +0.1
GRGR Grenville 151.44 306 *e*PKPbc PKPbc 23 22 02.9 +0.5
GRGR LR LR
comp=Z,822nm,22.0s,MS5.5
LCO Las Campanas 152.33 208 *e*PKPbc PKPbc 23 22 04.4 +0.3
SDDR Presa de Saban 152.89 331 *e*PKPbc PKPbc 23 22 06.3 +0.7
SDDR LR LR
comp=Z,1µm,20.0s,MS5.8
SIV San Ignacio 154.03 243 PKP PKPdf 23 21 59.9 -0.2
comp=Z,5.7nm,0.9s,baz=120,slow=3.4,SNR=11
SIV PKPbc PKPbc 23 22 07.7 -0.5
comp=Z,6.6nm,0.9s,baz=38,slow=2.4,SNR=6.0
SIV pPKP pPKPdf 23 22 14.6 0.0
comp=Z,8.7nm,1.0s,baz=80,slow=3.5,SNR=5.9
SIV PKPab PKPab 23 22 21.0 -0.7
comp=Z,15nm,0.9s,baz=119,slow=4.2,SNR=8.4
PCRV Puerto La Cruz 154.95 306 PKP PKPdf 23 22 00.8 -0.6
comp=Z,12nm,0.9s,baz=337,slow=16,SNR=2.9
PCRV PKPbc PKPbc 23 22 08.5 -1.7
comp=Z,21nm,0.9s,baz=160,slow=1.5,SNR=8.7
CMIG Matias Romero 156.20 24 PKP PKPdf 23 22 02.9 -0.1
comp=Z,10nm,0.9s,baz=307,slow=1.6,SNR=12
CMIG PKPab PKPab 23 22 30.0 -0.7
comp=Z,40nm,0.9s,baz=322,slow=5.8,SNR=14
CMIG Matias Romero 156.20 24 PKP PKPdf 23 22 02.9 -0.1
CMIG PKPab PKPab 23 22 30.0 -0.7
LVC Limon Verde 156.41 220 PKP PKPdf 23 22 03.6 +0.4
comp=Z,5.4nm,0.8s,baz=45,slow=3.9,SNR=2.0
LVC PKPab PKPab 23 22 34.4 +2.8
comp=Z,17nm,0.8s,baz=128,slow=4.2,SNR=4.8
LVC Limon Verde 156.41 220 PKP PKPdf 23 22 03.6 +0.4
LVC PKPab PKPab 23 22 34.4 +2.8
LVC LR LR
comp=Z,1µm,22.0s,MS5.7
LPAZ La Paz 159.90 234 PKP PKPdf 23 22 08.8 +1.2
comp=Z,13nm,0.8s,baz=67,slow=1.6,SNR=39
LPAZ pPKP pPKPdf 23 22 23.3 +1.2
comp=Z,41nm,1.2s,baz=2.1,slow=7.9,SNR=7.9
LPAZ La Paz 159.90 234 *e*PKPdf PKPdf 23 22 08.8 +1.2
LPAZ LR LR
comp=Z,1µm,21.0s,MS5.8
LPAZ La Paz 159.90 234 PKIKP PKPdf 23 22 08.8 +1.3
LPAZ 23 22 23.3
LPAZ pmax pmax
comp=Z,13nm,0.8s
LPAZ pmax pmax
comp=Z,41nm,1.2s
SDV Santo Domingo 160.36 313 PKP PKPdf 23 22 07.8 -0.4
comp=Z,16nm,1.0s,baz=6.6,slow=1.2,SNR=13
SDV pPKP pPKPdf 23 22 23.0 +0.3
comp=Z,25nm,1.1s,baz=21,slow=5.6,SNR=4.1
SDV sPKP 23 22 27.7
comp=Z,35nm,1.2s,baz=312,slow=2.3,SNR=5.7
SDV PKPab PKPab 23 22 49.1 +0.1
comp=Z,28nm,1.1s,baz=64,slow=3.7,SNR=7.0
SDV PP PP 23 26 29.3 -1.3
comp=Z,9.5nm,1.0s,baz=39,slow=6.8,SNR=4.1
SDV Santo Domingo 160.36 313 *e*PKPdf PKPdf 23 22 07.8 -0.3
SDV LR LR
comp=Z,608nm,21.0s
TGUH Tegucigalpa,Un 161.21 7 *e*PKPdf PKPdf 23 22 09.3 +0.3
TGUH LR LR
comp=Z,2µm,21.0s
ARE Arequipa 162.39 227 *e*P PKPdf 23 22 11.0 +0.8
BCIP Isla Barro Col 165.31 340 PFAKE 23 22 20.0 +7.0
BCIP LR LR
comp=Z,2µm,21.0s
ROSC El Rosal 165.77 312 PKP PKPdf 23 22 13.9 +0.5
comp=Z,52nm,1.0s,baz=107,slow=22,SNR=27
ROSC sPKP 23 22 34.0
comp=Z,60nm,1.0s,baz=162,slow=4.4,SNR=8.4
ROSC El Rosal 165.77 312 *e*PKPdf PKPdf 23 22 14.4 +1.0
NNA Nana 169.22 227 PKP PKPdf 23 22 16.2 +0.4
comp=Z,16nm,0.8s,baz=342,slow=5.5,SNR=5.9
NNA pPKP pPKPdf 23 22 30.4 0.0
comp=Z,23nm,0.9s,baz=235,slow=2.5,SNR=3.9
NNA Nana 169.22 227 PKP PKPdf 23 22 16.2 +0.4
NNA pPKP pPKPdf 23 22 30.4 0.0
NNA LR LR
comp=Z,1µm,21.0s
OTAV Otavalo 171.87 307 PFAKE 23 22 30.0 +13
OTAV LR LR
comp=Z,1µm,20.0s
ATAH Atahualpa 173.12 250 PKP PKPdf 23 22 19.4 +1.6
comp=Z,10nm,0.8s,baz=68,slow=1.7,SNR=12
ATAH pPKP pPKPdf 23 22 34.9 +2.5
comp=Z,14nm,0.9s,baz=128,slow=7.1,SNR=3.2
PAYG Puerto Ayora 173.31 53 PFAKE 23 22 30.0 +12
PAYG LR LR
comp=Z,1µm,22.0s

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*ISCJB **22** 23:25:24.7±6.0, 172S±02×1739W±02, h15km±45km, mb4.0/6, Error ellipse: s-maj=48.3km s-min=17.4km az=42.1*
*IDC **22** 23:25:24.0±1.1, 1725S×17384W, h0km, mb4.0/6, mb1 4.3/7, mb1mx4.1/20, mbtmp4.0/7, ML2.0/1, Error ellipse: s-maj=55.4km s-min=19.4km az=137.0*
*NEIC **22** 23:25:29.1±0.6, 1722S×17384W, h35km, Error ellipse: s-maj=31.5km s-min=10.6km az=131.0*
ISC 22 23:25:25.2±8.5, 172S±02×1739W±02, h7km±55km, n11, σ0°37/11, mb4.0/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.87**	**32**	Pn	**Pn**		**23 26 25.1**	**+0.1**
	6.2nm,0.3s,baz=274,slow=19,SNR=3.9							
AFI				Sn	**Sn**		**23 27 01.8**	**-9.0**
	38nm,0.3s,baz=35,slow=20,SNR=9.2							
AFI	**Afiamalu**	**3.87**	**32**	*e*Pn	**Pn**		**23 26 25.0**	**-0.1**
AFI				*e*Sn	**Sn**		**23 27 06.0**	**-4.8**
URZ	**Urewera**	**22.40**	**199**	P	**P**		**23 30 24.3**	**0.0**
	1.8nm,0.3s,mb4.0,baz=320,slow=10,SNR=4.3							
STKA	**Stephens Creek**	**42.74**	**242**	P	**P**		**23 33 22.7**	**-0.7**
	1.2nm,0.5s,mb3.9,baz=60,slow=14,SNR=2.3							
STKA	**Stephens Creek**	**42.74**	**242**	P	**P**		**23 33 22.7**	**-0.7**
WRA	**Warramunga Arr**	**49.00**	**258**	P	**P**		**23 34 13.1**	**+0.2**
	1.0nm,0.8s,mb3.9,baz=95,slow=8.1,SNR=4.6							
ASAR	**Alice Springs**	**49.12**	**253**	P	**P**		**23 34 14.2**	**+0.4**
	11nm,0.7s,mb5.0,baz=86,slow=8.5,SNR=94							
NVAR	**Mina Array Bea**	**75.98**	**42**	P	**P**		**23 37 13.5**	**+0.4**
	1.0nm,0.7s,mb3.8,baz=230,slow=9.2,SNR=3.6							
PDAR	**Pinedale Array**	**83.92**	**42**	P	**P**		**23 37 55.6**	**-0.3**
	0.5nm,0.8s,mb3.7,baz=232,slow=3.6,SNR=3.7							
BVAR	**Borovoye Array**	**119.01**	**322**	PKP	PKPdf		23 44 14.3	-0.2
	0.5nm,0.6s,baz=158,slow=1.6,SNR=3.7							
GERES	**GERESS Array B**	**147.85**	**351**	PKPbc	PKPbc		23 45 11.6	+0.6
	0.4nm,0.7s,baz=25,slow=3.7,SNR=4.2							

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*IDC **22** 23:32:56.8±4.4, 3938N×7574E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.4/24, mbtmp3.6/4, ML3.3/2, MS4.1/2, Ms1 4.1/2, ms1mx3.7/31, Error ellipse: s-maj=117.9km s-min=26.4km az=140.0*
*NNC **22** 23:32:57.8±3.9, 3935N×7498E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=31.4km s-min=17.2km az=166.0*
*ISCJB **22** 23:33:00.5±1.4, 394N±0.1×757E±0.1, h44km±11km, mb3.5/2, Error ellipse: s-maj=19.8km s-min=12.5km az=29.7*
*BJI **22** 23:33:03.7, 3962N×7571E, h15km, ML3.1*
*NEIC **22** 23:33:05.3±1.2, 3964N×7566E, h58km±13km, Error ellipse: s-maj=20.9km s-min=10.5km az=126.0*
ISC 22 23:33:00.9±1.6, 393N±01×756E±0.1, h29km±11km, n24, σ0°97/29, mb3.5/2, 7C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.35**	**57**	⇑*i*PG	**Pb**		**23 33 08.8**	**0.0**
KSH				SG	**Sb**		**23 33 15.0**	**+0.7**
KSH				Smax				
	comp=N,417nm,0.4s							
KSH				Smax				
	comp=E,995nm,0.3s							
KZA	**Kyzart**	**2.76**	**355**	P	**Pn**		**23 33 41.0**	**-2.2**
	SNR=19							
ULHL	**Ulahol**	**2.96**	**9**	P	**Pn**		**23 33 45.2**	**-0.7**
	SNR=44							
UCH	**Uchtor**	**3.01**	**344**	*e*Pn	**Pn**		**23 33 46.6**	**0.0**
UCH				*e*Sn	**Sn**		**23 34 24.1**	**+2.4**
UCH	**Uchtor**	**3.01**	**344**	P	**Pn**		**23 33 46.8**	**+0.2**
	SNR=9.5							
KBK	**Karagaybulak**	**3.36**	**352**	P	**Pn**		**23 33 51.3**	**-0.1**
	SNR=53							
TKM2	**Tokmak 2**	**3.59**	**360**	⇑Pn	**Pn**		**23 33 54.4**	**-0.1**
	comp=E,18nm,0.5s							
TKM2				⇑Sn	**Sn**		**23 34 40.3**	**+4.4**
	comp=E,91nm,0.6s							
TKM2	**Tokmak 2**	**3.59**	**360**	*e*Pn	**Pn**		**23 33 54.6**	**+0.1**
TKM2				*e*Sn	**Sn**		**23 34 40.1**	**+4.1**
TKM2	**Tokmak 2**	**3.59**	**360**	P	**Pn**		**23 33 54.5**	**-0.1**
	SNR=38							
EKS2	**Erkin-Say**	**3.60**	**338**	*e*Pn	**Pn**		**23 33 55.3**	**+0.5**
EKS2				*e*Sn	**Sn**		**23 34 40.8**	**+4.4**

EKS2	**Erkin-Say**	**3.60**	**338**	P		**Pn**	**23 33 55.3**	**+0.5**
	SNR=24							
CHMS	**Chumysh**	**3.72**	**350**	P		**Pn**	**23 33 56.4**	**0.0**
	SNR=30							
KNDC	**Almaty**	**4.02**	**14**	⇓Pn		**Pn**	**23 34 00.7**	**+0.2**
	comp=E,30nm,0.5s							
KNDC				⇑Sn		**Sn**	**23 34 53.2**	**+6.6**
	comp=E,168nm,0.6s							
USP	**Ospenovka**	**4.02**	**348**	P		**Pn**	**23 34 00.0**	**-0.5**
	SNR=40							
KK31	**Karatay Array**	**5.38**	**316**	⇑Pn		**Pn**	**23 34 18.4**	**-0.7**
	comp=E,0.9nm,0.3s,baz=127,slow=12,SNR=42							
KK31				⇑Sn		**Sn**	**23 35 19.4**	**-0.6**
	comp=E,3.0nm,0.5s							
KK31				⇑Lg			23 35 36.8	
	comp=E,5.1nm,0.5s,baz=126,slow=29,SNR=4.6							
KBL	**Kabul**	**7.10**	**230**	*e*Pn		**Pn**	**23 34 50.1**	**+7.3**
MK31	**Makanchi Array**	**8.92**	**31**	*e*Pn		**Pn**	**23 35 08.2**	**+0.5**
MKAR	**Makanchi Array**	**8.92**	**31**	Pn		**Pn**	**23 35 06.7**	**-1.0**
	comp=E,0.2nm,0.3s,baz=212,slow=15,SNR=9.5							
MKAR	**Makanchi Array**	**8.92**	**31**	Pn		**Pn**	**23 35 06.7**	**-1.0**
BVAR	**Borovoye Array**	**14.16**	**347**	LR		LR	23 41 49.8	
	comp=E,779nm,18.6s,baz=150,slow=38							
ZALV	**Zalesovo Beam**	**15.91**	**20**	Pn		**Pn**	**23 36 39.2**	**-3.4**
	comp=E,0.2nm,0.3s,baz=206,slow=9.5,SNR=3.9							
AKTO	**Aktyubinsk**	**16.64**	**318**	LR		LR	23 44 18.3	
	comp=E,690nm,18.3s,baz=125,slow=41							
GERES	**GERESS Array B**	**44.34**	**304**	P		**P**	**23 41 09.0**	**+0.8**
	comp=E,0.6nm,0.8s,mb3.4,baz=67,slow=8.0,SNR=4.1							
TORD	**Torodi Ar. Bea**	**69.38**	**270**	P		**P**	**23 44 07.4**	**+1.2**
	comp=E,0.5nm,0.5s,mb3.7,baz=54,slow=5.6,SNR=10							

PGC 22 23:38:08.0±7.1**, 4998N**×**13005W, h10**km**, ML3.1/6, Mw3.7, 2D, 203km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOLB	**Holberg**	**1.40**	**61**	⇑P		Pn	23 38 31.4	-2.1
BPBC	**Brooks Peninsu**	**1.48**	**82**	⇑P		Pn	23 38 32.2	-2.4
PHC	**Port Hardy**	**1.83**	**65**	⇑Pn		Pn	23 38 37.7	-1.7
PHC				⇑Sn		Sn	23 38 59.0	-3.6
EDB	**Eliza Dome**	**1.89**	**92**	⇑Pn		Pn	23 38 38.0	-2.3
MAYB	**Maynard**	**1.90**	**76**	⇑Pn		Pn	23 38 38.4	-2.0
WOSB	**Woss**	**2.25**	**84**	⇓Pn		Pn	23 38 44.0	-1.2
BBB	**Bella Bella**	**2.52**	**28**	⇓Pn		Pn	23 38 47.4	-1.6
BBB				⇑Sn		Sn	23 39 14.9	-4.9

CSEM ***23*** *00:18:30.9*±*1.9, 1642N*×*4102E, h10km, ML4.0, Error ellipse: s-maj=51.1km s-min=16.1km az=65.0*

DHMR ***23*** *00:18:30.7*±*1.8, 1687N*×*4146E, h3km*±*18km, ML4.0*

IDC ***23*** *00:18:34.8*±*2.1, 1643N*×*4108E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML3.2/1, MS3.9/1, Ms1 3.8/1, ms1mx3.1/29, Error ellipse: s-maj=46.4km s-min=23.9km az=162.0*

ISCJB ***23*** *00:18:34.9*±*0.6, 1650N*±*005*×*4121E*±*005, h10km, mb3.9/12, Error ellipse: s-maj=9.3km s-min=4.8km az=42.3*

SGS ***23*** *00:18:36.8, 1644N*×*4121E, h31km*

NEIC ***23*** *00:18:36.8*±*1.3, 1649N*×*4099E, h10km, mb4.0/3, Error ellipse: s-maj=25.8km s-min=14.9km az=177.0*

ISC 23 00:18:37.2±0.6**, 1656N**±005×**4128E**±005**, h10**km**, n32,** σ1§**51**/37**, mb3.9**/12**, 2C-3D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FRSS	**Farasan al Kab**	**0.82**	**77**	S		**Sg**	**00 19 04.1**	**+0.3**
FRSS	**Farasan al Kab**	**0.82**	**77**	P		**Pg**	**00 18 52.4**	**-0.7**
JAZS	**Jizan**	**1.65**	**72**	P		**Pn**	**00 19 05.3**	**-1.0**
KAMRY	**Kamaran Island**	**1.77**	**133**	⇑*i*P		**Pn**	**00 19 03.4**	**-4.6**
KAMRY				*i* S		**Sn**	**00 19 31.9**	**+1.4**
HAJJ	**Hajjah**	**2.39**	**111**	⇓*i*P		**Pn**	**00 19 13.5**	**-2.9**
	1μm,0.5s							
HAJJ				*i* S		**Sn**	**00 19 44.3**	**-1.4**
HAJJ	**Hajjah**	**2.39**	**111**	⇓*i*P		**Pn**	**00 19 13.5**	**-2.9**
HAJJ				*i* S		**Sn**	**00 19 44.4**	**-1.4**
HAJJ				AML		AML	00 20 00.6	
	comp=Z,3μm,0.5s							
DJNS	**Zahran al Janu**	**2.45**	**62**	P		**Pn**	**00 19 15.5**	**-1.7**
WBHS	**Wadi 'Ibn Hash**	**2.46**	**34**	P		**Pn**	**00 19 15.4**	**-2.0**
BLJS	**Baljurashi**	**3.40**	**5**	P		**Pn**	**00 19 28.4**	**-1.9**
DHBB	**Dhamar BB**	**3.59**	**123**	⇑*i*P		**Pn**	**00 19 30.6**	**-2.3**
DHBB				*i* S		**Sn**	**00 20 17.3**	**+1.9**
TRBA	**At Turbah**	**4.30**	**140**	⇓*i*P		**Pn**	**00 19 41.5**	**-1.1**
TRBA				*i* S		**Sn**	**00 20 36.6**	**+3.7**
TRBA				AML		AML	00 21 08.4	
	comp=N,207nm,0.8s							
LBOS		**4.67**	**124**	*i* P		**Pn**	**00 19 45.5**	**-2.3**
LBOS				*i* S		**Sn**	**00 20 43.5**	**+1.4**
ASF	**Jabal al Asfar**	**16.05**	**346**	Pn		**Pn**	**00 22 21.9**	**-1.1**
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=2.5							
BRTR	**Keskin Array B**	**24.02**	**345**	P		**P**	**00 23 53.5**	**+1.2**
	comp=N,0.9nm,0.8s,mb3.3							
AKASG	**Malin Array Be**	**35.41**	**347**	P		**P**	**00 25 32.7**	**-0.5**
	comp=N,1.5nm,0.6s,mb4.1,baz=172,slow=7.7,SNR=4.4							
AKTK	**Aktyubinsk**	**36.38**	**18**	P		**P**	**00 25 43.0**	**+1.5**
AKTO	**Aktyubinsk**	**36.38**	**18**	P		**P**	**00 25 43.0**	**+1.5**
	comp=N,0.6nm,0.3s,mb4.0,baz=215,slow=12,SNR=4.4							
EKS2	**Erkin-Say**	**38.01**	**40**	*e*P		**P**	**00 25 58.2**	**+2.7**
	comp=N,1.6nm,1.0s,mb3.7							
UCH	**Uchtor**	**38.24**	**41**	P		**P**	**00 26 01.4**	**+4.0**
TORD	**Torodi Ar. Bea**	**38.37**	**270**	P		**P**	**00 25 56.5**	**-2.3**
	comp=N,1.1nm,0.6s,mb3.8,baz=87,slow=7.7,SNR=14							
GERES	**GERESS Array B**	**39.27**	**331**	P		**P**	**00 26 04.9**	**-1.1**
	comp=N,1.3nm,0.7s,mb3.8,baz=134,slow=7.6,SNR=11							
TKM2	**Tokmak 2**	**39.28**	**41**	*e*P		**P**	**00 26 07.6**	**+1.5**
	comp=N,6.3nm,1.8s,mb4.0							
BRVK	**Borovoye**	**42.94**	**25**	P		**P**	**00 26 37.7**	**+1.6**
BVAR	**Borovoye Array**	**42.96**	**26**	P		**P**	**00 26 37.1**	**+0.9**
	comp=N,0.3nm,0.5s,mb3.3,baz=235,slow=5.1,SNR=4.3							
WLF	**Walferdange**	**43.53**	**327**	*e*P		**P**	**00 26 44.0**	**+3.0**
	comp=N,2.4nm,0.6s,mb4.1							
MK31	**Makanchi Array**	**45.33**	**39**	*e*P		**P**	**00 26 56.5**	**+1.1**
MKAR	**Makanchi Array**	**45.33**	**39**	P		**P**	**00 26 56.4**	**+1.0**
	comp=N,0.6nm,0.6s,mb3.6,baz=231,slow=7.9,SNR=5.7							
MKAR	**Makanchi Array**	**45.33**	**39**	P		**P**	**00 26 56.4**	**+1.0**
BOSA	**Boshof**	**47.50**	**199**	LR		LR	00 47 24.7	
	comp=N,126nm,18.3s,baz=91,slow=37							
ZAA0	**Zalesovo Array**	**50.25**	**32**	*e*P		**P**	**00 27 32.8**	**-0.7**
ZALV	**Zalesovo Beam**	**50.25**	**32**	P		**P**	**00 27 34.0**	**+0.5**
	comp=N,3.2nm,0.7s,mb4.5,baz=248,slow=7.8,SNR=12							
SONM	**Songino Array**	**61.24**	**44**	P		**P**	**00 28 53.2**	**+0.8**
	comp=N,0.7nm,0.3s,mb4.2,baz=232,slow=7.3,SNR=4.3							

IDC ***23*** *00:40:09.0*±*0.8, 1139N*×*8636W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/23, mbtmp4.2/13, ML4.1/1, Error ellipse: s-maj=30.3km s-min=15.6km az=48.0*

CASC ***23*** *00:40:11.9*±*2.0, 1089N*×*8685W, h37km*±*655km, MD4.3, ML4.0, mb4.6(NEIC)*

ISCJB ***23*** *00:40:14.4*±*0.6, 1107N*±*005*×*8654W*±*006, h70km*±*4km, mb4.4/54, Error ellipse: s-maj=12.4km s-min=4.3km az=146.3*

NEIC ***23*** *00:40:14.7*±*0.5, 1111N*×*8657W, h54km*±*5km, mb4.6/44, Error ellipse: s-maj=8.4km s-min=4.1km az=52.0*

BJI ***23*** *00:40:14.6, 11.10N*×*8660W, h53km, mB5.0, Ms5.4, Msz5.0*

ISC 23 00:40:15.1±0.6**, 1107N**±004×**8657W**±006**, h59**km**,** ±4**km, n142,** σ0§**91**/122**, mb4.5**/54**, 22C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRUN	**El Crucero**	**0.94**	**16**	⇑*e*P		**Pn**	**00 40 33.3**	**+0.9**
APON	**Apoyo**	**0.97**	**30**	⇑*e*P		**Pn**	**00 40 33.8**	**+1.0**
TICN	**Ticuantepe**	**1.01**	**19**	⇑*e*P		**Pn**	**00 40 34.1**	**+0.8**
CONN	**Concepcion**	**1.04**	**62**	⇑*e*P		**Pn**	**00 40 34.6**	**+0.9**
XAVN	**Gruta Xavier**	**1.10**	**12**	⇑*e*P		**Pn**	**00 40 34.9**	**+0.5**
COPN	**Copaltepe**	**1.10**	**359**	⇓*e*P		**Pn**	**00 40 34.4**	**-0.1**
TISN	**Laguna Tiscapa**	**1.10**	**15**	⇓*e*P		**Pn**	**00 40 35.1**	**+0.6**
CSAN		**1.11**	**7**	⇑*e*P		**Pn**	**00 40 34.6**	**0.0**
MGAN	**Managua**	**1.11**	**16**	⇑*e*P		**Pn**	**00 40 35.3**	**+0.7**
MGAN				AML		AML	00 41 10.2	
	comp=E,3μm,0.5s							
APYN	**Apoyeque**	**1.18**	**10**	⇑*e*P		**Pn**	**00 40 36.0**	**+0.6**
VCR	**Vista de Mar**	**1.31**	**135**	*e*P		**Pn**	**00 40 37.3**	**0.0**
HUEN		**1.32**	**17**	⇑*e*P		**Pn**	**00 40 38.0**	**+0.7**
HUEN				⇑*e*P			00 40 38.0	
MOMJ	**Momotombo**	**1.33**	**1**	⇑*e*P		**Pn**	**00 40 37.3**	**-0.2**
LIM1	**Limonal**	**1.34**	**106**	⇑*e*P		**Pn**	**00 40 36.5**	**-1.1**
MIRN	**Miramar**	**1.37**	**354**	⇑*e*P		**Pn**	**00 40 37.6**	**-0.4**
2RIO	**Dos Rios de Up**	**1.42**	**112**	⇑*e*P		**Pn**	**00 40 35.5**	**-3.1**
CNGN	**Cerro Negro**	**1.43**	**355**	⇑*e*P		**Pn**	**00 40 37.3**	**-1.5**
CNGN				*e*P			00 40 38.0	
CUI	**Cuipilapa**	**1.44**	**106**	⇑*e*P		**Pn**	**00 40 37.9**	**-1.0**
TEL3	**Telica 3**	**1.52**	**350**	⇑*e*P		**Pn**	**00 40 39.4**	**-0.6**
JCR	**Jicaral**	**1.88**	**130**	*e*P		**Pn**	**00 40 44.4**	**-0.5**
FORC	**Fortuna**	**1.96**	**108**	*e*P		**Pn**	**00 40 45.6**	**-0.4**
FORC	**Fortuna**	**1.96**	**108**	⇓*e*P		**Pn**	**00 40 45.5**	**-0.5**
FORC				*e*P			00 40 45.6	
CGA2	**Cerro Gallo 2**	**2.32**	**117**	*e*P		**Pn**	**00 40 50.1**	**-0.8**
PRS1	**Puriscal**	**2.47**	**116**	*e*P		**Pn**	**00 40 53.6**	**+0.6**
CNCH	**Conchagua**	**2.52**	**331**	⇑*e*P		x	00 40 51.1	
LAJ	**Bijagual**	**2.69**	**116**	*e*P		**Pn**	**00 40 51.7**	**-4.3**
LCR2	**La Lucha 2**	**2.85**	**117**	*e*P		**Pn**	**00 40 58.3**	**+0.2**
BLLM	**Bellamira**	**2.87**	**325**	⇓*e*P		x	00 40 55.5	
QCR	**Quepos**	**2.88**	**124**	*e*P		**Pn**	**00 40 58.9**	**+0.4**
VSM	**San Miguel**	**2.88**	**325**	*e*P		x	00 40 55.8	
VSM				*e*S		x	00 41 30.4	
URSC	**Urasca**	**3.00**	**114**	*e*P		**Pn**	**00 41 00.7**	**+0.4**
TGUH	**Tegucigalpa,Un**	**3.05**	**347**	*e*Pn		**Pn**	**00 41 00.1**	**-0.8**
TGUH				*e*Sn		**Sn**	**00 41 25.2**	**-11**
TGUH	**Tegucigalpa,Un**	**3.05**	**347**	*e*P		**Pn**	**00 40 59.9**	**-1.0**
TGUH				⇑*e*P			00 41 00.2	
CAHU	**Cacacuatique**	**3.13**	**329**	*e*P		x	00 41 00.1	
BUS	**Buena Vista**	**3.15**	**118**	*e*P		**Pn**	**00 41 02.3**	**+0.1**
SNVI	**San Vicente**	**3.36**	**319**	*e*P		x	00 41 01.4	
SNVI				*e*S		x	00 41 40.0	
LFRS	**El Faro**	**3.52**	**316**	⇓*e*P		x	00 41 04.0	
BOQS	**Boqueron**	**3.75**	**315**	*e*P		x	00 41 07.2	
SNJE	**San Jose**	**4.07**	**313**	⇑*e*P		x	00 41 12.0	
ACR	**Cerro Adams**	**4.12**	**125**	*e*P		**Pn**	**00 41 15.1**	**-0.5**
RBDL	**Robledal**	**4.29**	**315**	*e*P		x	00 41 15.2	
CMIG	**Matias Romero**	**10.04**	**308**	Pn		**Pn**	**00 42 34.1**	**-2.6**
	comp=E,1.8nm,0.3s,baz=112,slow=10,SNR=26							
OTAV	**Otavalo**	**13.45**	**143**	Pn		**Pn**	**00 43 23.6**	**+0.3**
CHI2		**14.21**	**116**	⇑*e*P		Px	00 40 40.5	
LAPE	**La Pedrera**	**15.20**	**102**	⇑*e*P		Px	00 40 33.7	
SDV	**Santo Domingo**	**15.84**	**96**	Pn		**Pn**	**00 43 55.1**	**+0.6**
	comp=E,0.5nm,0.3s,baz=291,slow=6.4,SNR=16							
DWPF	**Disney**	**17.62**	**15**	Pn		**Pn**	**00 44 16.1**	**-0.5**
HKT	**Hockley**	**20.67**	**337**	*e*P		**P**	**00 44 50.5**	**+0.3**
	comp=E,64nm,1.7s							
VBMS	**Vicksburg**	**21.36**	**351**	*e*P		**P**	**00 44 58.7**	**+1.1**
PCRV	**Puerto La Cruz**	**21.57**	**90**	P		**P**	**00 45 00.1**	**+0.1**
	comp=E,11nm,0.6s,mb4.5,baz=282,slow=3.5,SNR=5.5							
LRAL	**Lakeview Retre**	**21.86**	**359**	*e*P		**P**	**00 45 04.3**	**+1.3**
NATX	**Nacogdoches**	**21.91**	**341**	*e*P		**P**	**00 45 04.0**	**+0.6**
	comp=E,26nm,0.9s,mb4.7							
GOGA	**Godfrey**	**22.42**	**7**	*e*P		**P**	**00 45 10.3**	**+1.5**
	comp=E,19nm,0.7s,mb4.6							
JCT	**Junction City**	**22.89**	**329**	*e*P		**P**	**00 45 13.4**	**-0.5**
	comp=E,5.4nm,0.8s,mb4.0							
OXF	**Oxford**	**23.48**	**354**	*e*P		**P**	**00 45 18.4**	**-1.2**
	comp=E,34nm,0.8s,mb4.8							
JSC	**Jenkinsville**	**23.61**	**11**	*e*P		**P**	**00 45 21.7**	**+0.9**
SWET	**Sewanee**	**24.04**	**1**	*e*P		**P**	**00 45 24.5**	**-0.2**
TXAR	**Lajitas Array**	**24.18**	**321**	P		**P**	**00 45 25.4**	**-0.7**
	comp=E,6.7nm,0.7s,mb4.2,baz=134,slow=10,SNR=47							
TXAR				PcP		PcP	00 49 08.8	+3.1
	comp=E,2.3nm,0.9s,baz=160,slow=5.9,SNR=6.8							
TXAR	**Lajitas Array**	**24.18**	**321**	P		**P**	**00 45 25.4**	**-0.7**
TXAR				PcP		PcP	00 49 08.8	+3.1
MIAR	**Mount Ida**	**24.23**	**346**	*e*P		**P**	**00 45 25.8**	**-0.7**
	comp=E,14nm,0.8s,mb4.5							
CPCT	**CerroCave**	**24.34**	**4**	*e*P		**P**	**00 45 26.5**	**-0.9**
TKL	**Tuckaleechee C**	**24.61**	**5**	P		**P**	**00 45 29.8**	**0.0**
	comp=E,7.5nm,0.6s,mb4.4,baz=172,slow=9.9,SNR=16							
WVT	**Waverly**	**24.97**	**358**	*e*P		**P**	**00 45 32.8**	**-0.4**
	comp=E,14nm,1.3s,mb4.3							
TZTN	**Tazewell**	**25.51**	**6**	*e*P		**P**	**00 45 38.2**	**+0.2**
	comp=E,7.8nm,0.7s,mb4.3							
WMOK	**Wichita Mounta**	**26.06**	**337**	*e*P		**P**	**00 45 43.0**	**0.0**
	comp=E,21nm,1.0s,mb4.6							
ELN	**Prospectdale**	**26.57**	**10**	*e*P		**P**	**00 45 49.1**	**+1.5**
SIUC	**Southern Illin**	**26.64**	**355**	*e*P		**P**	**00 45 47.0**	**-1.2**
	comp=E,9.4nm,0.7s,mb4.4							
WCI	**Wyandotte Cave**	**27.04**	**0**	*e*P		**P**	**00 45 50.4**	**-1.5**
	comp=E,13nm,0.8s,mb4.5							
CCM	**Cathedral Cave**	**27.20**	**352**	*e*P		**P**	**00 45 51.6**	**-1.6**
	comp=E,19nm,1.2s,mb4.5							
AMTX	**Amarillo**	**27.41**	**332**	*e*P		**P**	**00 45 55.3**	**+0.1**
	comp=E,16nm,1.2s,mb4.4							
BLO	**Bloomington**	**27.98**	**0**	*e*P		**P**	**00 45 59.8**	**-0.5**
	comp=E,14nm,0.8s,mb4.7							
ACSO	**Alum Creek Sta**	**29.22**	**6**	*e*P		**P**	**00 46 11.0**	**-0.2**
	comp=E,18nm,0.7s,mb4.9							
BBSR	**BB Station**	**29.24**	**40**	*e*P		**P**	**00 46 11.8**	**+0.2**
KSU1	**Kansas State U**	**29.31**	**344**	*e*P		**P**	**00 46 11.5**	**-0.6**
	comp=E,16nm,0.7s,mb4.8							
HDIL	**Hopedale**	**29.47**	**356**	*e*P		**P**	**00 46 13.1**	**-0.4**
	comp=E,20nm,0.8s,mb4.9							
ANMO	**Albuquerque**	**29.88**	**326**	P		**P**	**00 46 17.1**	**-0.2**
	comp=E,1.7nm,0.7s,mb3.9,baz=138,slow=7.5,SNR=8.2							
TUC	**Tucson**	**30.73**	**317**	*e*P		**P**	**00 46 23.9**	**-0.9**
	comp=E,1.8nm,0.9s,mb3.9							
SDCO	**Great Sand Dun**	**31.53**	**331**	*e*P		**P**	**00 46 32.3**	**+0.6**
	comp=E,3.9nm,0.6s,mb4.4							
JFWS	**Jewell Farm**	**31.89**	**355**	*e*P		**P**	**00 46 34.1**	**-0.6**
	comp=E,14nm,0.9s,mb4.8							
BINY	**Binghamton**	**32.36**	**15**	*e*P		**P**	**00 46 40.0**	**+1.1**
	comp=E,26nm,0.9s,mb5.1							
WUAZ	**Wupatki**	**33.15**	**321**	*e*P		**P**	**00 46 48.5**	**+2.6**
	comp=E,3.2nm,0.8s,mb4.3							
ISCO	**Idaho Springs**	**33.23**	**333**	*e*P		**P**	**00 46 48.0**	**+1.4**
	comp=E,9.6nm,1.8s,mb4.4							
PV01	**Paradox Valley**	**33.38**	**328**	*e*P		**P**	**00 46 48.8**	**+0.9**
ECSD	**EROS,Sioux Fal**	**33.69**	**347**	*e*P		**P**	**00 46 49.2**	**-1.3**
	comp=E,8.1nm,0.6s,mb4.8							
PV10	**Paradox Valley**	**33.81**	**327**	*e*P		**P**	**00 46 51.4**	**-0.2**
SRU	**San Rafael**	**35.14**	**327**	*e*P		**P**	**00 47 03.6**	**+0.5**
	comp=E,8.3nm,0.5s,mb4.9							
MSU	**Marysvale**	**35.63**	**324**	*e*P		**P**	**00 47 08.6**	**+1.2**
RSSD	**Black Hills**	**36.22**	**329**	*e*P		**P**	**00 47 12.9**	**+0.5**
DAU	**Daniels Canyon**	**36.47**	**328**	*e*P		**P**	**00 47 14.4**	**+1.0**
PDAR	**Pinedale Array**	**37.39**	**332**	P		**P**	**00 47 21.8**	**-0.5**
	comp=E,2.5nm,0.6s,mb4.2,baz=131,slow=10,SNR=27							
PDAR				PcP		PcP	00 49 41.5	+1.4
	comp=E,0.3nm,0.6s,baz=137,slow=4.6,SNR=3.5							
PDAR				ScP		ScP	00 53 32.2	+10
	comp=E,0.3nm,0.7s,baz=172,slow=4.5,SNR=3.5							
BW06	**Boulder Array**	**37.39**	**332**	*e*P		**P**	**00 47 22.2**	**-0.1**
	comp=E,19nm,1.8s,mb4.6							
HWUT	**Hardware Ranch**	**37.49**	**329**	*e*P		**P**	**00 47 22.9**	**-0.2**
	comp=E,6.3nm,0.6s,mb4.6							
LVC	**Limon Verde**	**37.68**	**153**	*e*P		**P**	**00 47 25.4**	**+0.5**
	comp=E,6.2nm,0.9s,mb4.3							
ISA	**Isabella**	**37.88**	**315**	P		**P**	**00 47 27.0**	**+0.4**
AGMN	**Agassiz Refuge**	**37.92**	**350**	*e*P		**P**	**00 47 25.4**	**-1.2**
	comp=E,25nm,1.3s,mb4.8							
AHID	**Auburn Hatcher**	**38.12**	**330**	*e*P		**P**	**00 47 29.3**	**+0.8**
	comp=E,5.5nm,0.6s,mb4.5							
REDW	**Red Top Meadow**	**38.45**	**331**	*e*P		**P**	**00 47 31.6**	**+0.3**
	comp=E,14nm,0.7s,mb4.6							
SNOW	**Snow King Moun**	**38.48**	**331**	*e*P		**P**	**00 47 31.9**	**+0.5**
	comp=E,8.1nm,0.6s,mb4.6							
LOHW	**Long Hollow**	**38.53**	**332**	*e*P		**P**	**00 47 33.4**	**+1.5**
	comp=E,3.2nm,0.6s,mb4.2							
TPAW	**Teton Pass**	**38.60**	**331**	*e*P		**P**	**00 47 32.6**	**+0.1**
	comp=E,3.9nm,0.6s,mb4.3							
RRI2	**Red Ridge**	**38.67**	**331**	*e*P		**P**	**00 47 33.3**	**+0.3**
	comp=E,3.5nm,0.8s,mb4.1							
MOOW	**Moose Ponds**	**38.70**	**332**	*e*P		**P**	**00 47 33.6**	**+0.3**
	comp=E,3.0nm,0.8s,mb4.1							
IMW	**Indian Meadow**	**38.90**	**332**	*e*P		**P**	**00 47 35.7**	**+0.7**
	comp=E,2.7nm,0.7s,mb4.1							
NVAR	**Mina Array Bea**	**39.30**	**319**	P		**P**	**00 47 40.5**	**+2.1**
	comp=E,1.7nm,0.7s,mb3.9,baz=140,slow=7.3,SNR=8.3							
NVAR				PcP		PcP	00 49 50.1	+3.9
	comp=E,1.7nm,0.7s,baz=136,slow=4.4,SNR=7.7							
ULM	**Lac du Bonnet**	**39.81**	**351**	P		**P**	**00 47 40.5**	**-1.9**
	comp=E,11nm,0.8s,mb4.7,baz=183,slow=8.1,SNR=6.6							
DGMT	**Dagmar**	**40.09**	**342**	*e*P		**P**	**00 47 44.0**	**-0.8**
	comp=E,10nm,0.6s,mb4.7							
HLID	**Hailey**	**40.36**	**328**	*e*P		**P**	**00 47 47.2**	**+0.1**
MCMT	**McKenzie Canyo**	**40.50**	**331**	*e*P		**P**	**00 47 49.4**	**+1.1**
BOZ	**Bozeman (W)**	**40.56**	**333**	*e*P		**P**	**00 47 48.6**	**-0.2**
	comp=E,2.2nm,0.6s,mb4.0							
LRM	**Limekiln Ridge**	**41.06**	**332**	*e*P		**P**	**00 47 54.3**	**+1.4**
LCO	**Las Campanas**	**42.69**	**159**	*e*P		**P**	**00 48 07.4**	**+1.1**
BMO	**Blue Mountains**	**42.76**	**328**	*e*P		**P**	**00 48 05.9**	**-0.8**
	comp=E,32nm,2.5s,mb4.6							
HAWA	**Hanford**	**44.95**	**328**	*e*P		**P**	**00 48 23.9**	**-0.4**
	comp=E,38nm,2.1s,mb4.9							
NEW	**Newport**	**45.03**	**331**	*e*P		**P**	**00 48 24.7**	**-0.1**
HOOD	**Mount Hood Mea**	**45.42**	**325**	*e*P		**P**	**00 48 30.4**	**+2.4**
	comp=E,10.0nm,0.9s,mb4.7							
SCHQ	**Schefferville**	**46.35**	**16**	P		**P**	**00 48 34.0**	**-1.2**
	comp=E,3.6nm,0.5s,mb4.5,baz=226,slow=5.9,SNR=7.3							
SCHQ	**Schefferville**	**46.35**	**16**	*e*P		**P**	**00 48 33.7**	**-1.5**
BDFB	**Brasilia**	**46.49**	**124**	P		**P**	**00 48 38.1**	**+1.3**
	comp=E,1.9nm,0.5s,mb4.2,baz=286,slow=17,SNR=7.0							
BDFB	**Brasilia**	**46.49**	**124**	*e*P		**P**	**00 48 44.3**	**+7.4**
	comp=E,2.9nm,1.0s,mb4.2							
EDM	**Edmonton**	**47.20**	**338**	*e*P		**P**	**00 48 40.8**	**-1.1**
FCC	**Fort Churchill**	**47.93**	**355**	*e*P		**P**	**00 48 46.6**	**-0.9**
	comp=E,12nm,0.9s,mb4.9							
RCBR	**Riachuelo**	**53.15**	**106**	*e*P		**P**	**00 49 27.9**	**+0.4**
PLCA	**Paso Flores**	**53.63**	**165**	P		**P**	**00 49 35.0**	**+4.5**
	comp=E,1.6nm,0.6s,mb4.1,baz=299,slow=14,SNR=3.8							
PLCA	**Paso Flores**	**53.63**	**165**	*e*P		**P**	**00 49 31.3**	**+0.8**
YKA	**Yellowknife Ar**	**55.16**	**345**	P		**P**	**00 49 40.2**	**-1.2**
	comp=E,1.4nm,0.8s,mb4.1,baz=135,slow=7.8,SNR=6.0							
DLBC	**Dease Lake**	**57.52**	**335**	*e*P		**P**	**00 49 57.8**	**-0.4**
RES	**Resolute Bay**	**63.77**	**358**	*e*P		**P**	**00 50 39.2**	**-1.2**
	comp=E,149nm,1.1s							
INK	**Inuvik**	**64.77**	**343**	*e*P		**P**	**00 50 44.4**	**-2.8**
	comp=E,2μm,2.4s							
SUMG	**Summit**	**67.70**	**14**	P		**P**	**00 51 06.3**	**+0.5**
COLA	**College**	**68.04**	**336**	*e*P		**P**	**00 51 06.9**	**-1.2**
DBIC	**Dimbokro**	**80.64**	**85**	P		**P**	**00 52 22.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**85

OHR	**Ohrid**	**0.43**	**117**	*i* Pg	**Pg**	**01 06 24.9**	**-0.4**
OHR				*i* Sg	**Sg**	**01 06 32.1**	**+1.2**
OHR				*e*Lg		01 06 32.4	
	comp=N,3μm,0.3s						
OHR				*e*Lg		01 06 32.5	
	comp=E,3μm,0.5s						
LACI	**Lac**	**0.55**	**307**	*i* PG	**Pg**	**01 06 26.8**	**-0.7**
LACI				*i* SG	**Sg**	**01 06 35.2**	**+0.6**
KRUS	**Krusevo**	**0.73**	**85**	*i* Pg	**Pg**	**01 06 30.2**	**-0.7**
KRUS				*e*Sg	**Sg**	**01 06 40.4**	**+0.6**
KRUS	**Krusevo**	**0.73**	**85**	*e*Pg	**Pg**	**01 06 30.4**	**-0.6**
KRUS				*e*Sg	**Sg**	**01 06 40.9**	**+0.6**
KRUS				*e*Lg		01 06 42.2	
	comp=E,391nm,0.3s						
KRUS				*e*Lg		01 06 42.2	
	comp=N,451nm,0.4s						
KRUS	**Krusevo**	**0.73**	**85**	*i* Pg	**Pg**	**01 06 30.3**	**-0.7**
KRUS				*i* Sg	**Sg**	**01 06 41.6**	**+1.2**
KRUS				*e*Lg		01 06 42.4	
	comp=N,451nm,0.4s						
KRUS				*e*Lg		01 06 42.5	
	comp=E,293nm,0.2s						
KBN	**Korca**	**0.78**	**151**	*e*PG	**Pg**	**01 06 32.0**	**0.0**
KBN				*i* SG	**Sg**	**01 06 44.5**	**+2.4**
PUK	**Puka**	**0.79**	**338**	*e*PG	**Pg**	**01 06 31.9**	**-0.3**
PUK				*i* SG	**Sg**	**01 06 44.3**	**+1.8**
BIA	**Bitola**	**0.83**	**110**	P	**Pg**	**01 06 31.4**	**-1.6**
BIA				S	**Sg**	**01 06 44.4**	**+0.6**
BIA	**Bitola**	**0.83**	**110**	*e*Pg	**Pg**	**01 06 31.8**	**-1.2**
BIA				*i* Sg	**Sg**	**01 06 44.5**	**+0.7**
BIA	**Bitola**	**0.83**	**110**	*e*Pg	**Pg**	**01 06 31.9**	**-1.1**
BIA				*e*Sg	**Sg**	**01 06 44.2**	**+0.4**
BIA				*e*Lg		01 06 44.4	
	comp=N,383nm,0.2s						
BIA				*e*Lg		01 06 45.1	
	comp=E,490nm,0.2s						
BIA	**Bitola**	**0.83**	**110**	*i* Pg	**Pg**	**01 06 31.4**	**-1.5**
BIA				*i* Sg	**Sg**	**01 06 44.5**	**+0.8**
BIA				*e*Lg		01 06 45.0	
	comp=N,383nm,0.2s						
BIA				*e*Lg		01 06 45.6	
	comp=E,470nm,0.2s						
FNA	**Florina**	**0.97**	**122**	P	**Pg**	**01 06 34.8**	**-0.9**
FNA				S	**Sg**	**01 06 49.9**	**+1.6**
ULC	**Ulcinj**	**1.02**	**310**⇑	*i* Pg	**Pg**	**01 06 35.2**	**-1.3**
ULC				*e*Sg	**Sg**	**01 06 51.7**	**+2.0**
ULC	**Ulcinj**	**1.02**	**310**	*i* PG	**Pg**	**01 06 35.2**	**-1.3**
ULC				*i* SG	**Sg**	**01 06 51.7**	**+2.0**
TPE	**Tepelena**	**1.03**	**192**	*i* PG	**Pg**	**01 06 36.8**	**0.0**
BCI	**Bajram Curri**	**1.07**	**351**	*e*PG	**Pg**	**01 06 37.1**	**-0.5**
SKO	**Skopje**	**1.09**	**52**	*e*Pg	**Pg**	**01 06 37.1**	**-0.8**
SKO				*e*Sg	**Sg**	**01 06 52.0**	**0.0**
SKO	**Skopje**	**1.09**	**52**	P	**Pg**	**01 06 37.0**	**-0.9**
SKO				S	**Sg**	**01 06 52.7**	**+0.7**
SKO	**Skopje**	**1.09**	**52**	*e*Pg	**Pg**	**01 06 36.8**	**-1.1**
SKO				*e*Sg	**Sg**	**01 06 52.0**	**0.0**
SKO				S	**Sg**	**01 06 52.7**	**+0.7**
SKO	**Skopje**	**1.09**	**52**	*e*Pg	**Pg**	**01 06 36.8**	**-1.1**
SKO				*e*Sg	**Sg**	**01 06 51.3**	**-0.7**
SKO				*e*Lg		01 06 52.7	
	comp=E,1μm,1.0s						
SKO				*e*Lg		01 06 52.8	
	comp=N,1μm,0.7s						
SKO	**Skopje**	**1.09**	**52**	*e*Pg	**Pg**	**01 06 37.2**	**-0.7**
SKO				*i* Sg	**Sg**	**01 06 52.6**	**+0.6**
SKO				*e*Lg		01 06 53.1	
	comp=E,1μm,1.0s						
SKO				*e*Lg		01 06 53.8	
	comp=N,1μm,0.7s						
SKO	**Skopje**	**1.09**	**52**	*i* P	**Pg**	**01 06 38.5**	**+0.6**
SKO				*i* S	**Sg**	**01 06 52.9**	**+0.9**
PVY	**Plav**	**1.31**	**350**⇓	*i* Pg	**Pg**	**01 06 40.7**	**-1.4**
PVY				*e*Sg	**Sg**	**01 07 01.8**	**+2.7**
PVY	**Plav**	**1.31**	**350**	*i* PG	**Pg**	**01 06 40.7**	**-1.4**
PVY				*i* SG	**Sg**	**01 07 01.8**	**+2.7**
PDG	**Podgorica**	**1.36**	**326**	*i* PG	**Pg**	**01 06 41.3**	**-1.8**
PDG				*i* SG	**Sg**	**01 07 03.7**	**+3.0**
TTG	**Podgorica**	**1.36**	**326**⇓	*i* Pg	**Pg**	**01 06 41.3**	**-1.8**
TTG				*e*Sg	**Sg**	**01 07 03.7**	**+3.0**
BUM	**Brajici-Budva**	**1.44**	**314**⇓	*i* Pg	**Pg**	**01 06 42.9**	**-1.7**
BUM				*e*Sg	**Sg**	**01 07 05.6**	**+2.4**
BUM	**Brajici-Budva**	**1.44**	**314**	*i* PG	**Pg**	**01 06 42.9**	**-1.7**
BUM				*i* SG	**Sg**	**01 07 05.6**	**+2.4**
SRN	**Sarande**	**1.44**	**189**	*e*PG	**Pg**	**01 06 44.9**	**+0.3**
STIP	**Stip**	**1.48**	**74**	P	**Pn**	**01 06 42.8**	**-1.6**
STIP				S	**Sn**	**01 07 03.2**	**-0.9**
STIP	**Stip**	**1.48**	**74**	*e*Pn	**Pn**	**01 06 43.3**	**-1.1**
STIP				S	**Sn**	**01 07 03.2**	**-0.9**
STIP				*e*Sg	**Sg**	**01 07 04.2**	**-0.3**
STIP				*e*Sn	**Sn**	**01 07 04.7**	**+0.6**
STIP	**Stip**	**1.48**	**74**	*e*Pn	**Pn**	**01 06 43.3**	**-1.0**
STIP				*e*Sg	**Sg**	**01 07 04.3**	**-0.2**
STIP				*e*Lg		01 07 04.7	
	comp=N,86nm,0.4s						
STIP				*e*Lg		01 07 05.2	
	comp=E,31nm,0.3s						
STIP	**Stip**	**1.48**	**74**	*e*Pn	**Pn**	**01 06 42.8**	**-1.5**
STIP				*e*Sn	**Sn**	**01 07 04.8**	**+0.7**
STIP				*e*Lg		01 07 06.2	
	comp=N,86nm,0.4s						
STIP				*e*Lg		01 07 06.5	
	comp=E,31nm,0.3s						
KZN	**Kozani**	**1.50**	**131**	*e*PB	**Pb**	**01 06 46.4**	**+0.9**
BEY	**Berane**	**1.59**	**350**	*i* PG	**Pn**	**01 06 46.2**	**+0.3**
BEY				*e*Sg	**Sg**	**01 07 09.4**	**+1.3**
IVA	**Berane**	**1.59**	**350**⇑	*i* Pn	**Pn**	**01 06 46.2**	**+0.3**
IVA				*e*Sn	**Sg**	**01 07 09.4**	**+1.3**
GRG	**Griva**	**1.63**	**102**	P	**Pn**	**01 06 46.0**	**-0.5**
GRG				S	**Sn**	**01 07 08.0**	**0.0**
KEK	**Kerkira**	**1.64**	**193**	*e*PB	**Pb**	**01 06 47.3**	**-0.4**
JAN	**Janina**	**1.70**	**165**	*e*PB	**Pb**	**01 06 48.4**	**-0.5**
VAY	**Valandovo**	**1.72**	**89**	P	**Pn**	**01 06 46.3**	**-1.4**
VAY				S	**Sn**	**01 07 08.7**	**-1.4**
VAY	**Valandovo**	**1.72**	**89**	*e*Pn	**Pn**	**01 06 48.2**	**+0.5**
VAY				S	**Sn**	**01 07 08.7**	**-1.4**
VAY				*e*Sn	**Sn**	**01 07 10.5**	**+0.4**
VAY				*e*Sg	**Sg**	**01 07 11.4**	**-0.8**
VAY	**Valandovo**	**1.72**	**89**	*e*Pn	**Pn**	**01 06 48.2**	**+0.6**
VAY				*e*Sg	**Sg**	**01 07 11.4**	**-0.8**
VAY				*e*Lg		01 07 14.1	
	comp=N,167nm,0.5s						
VAY				*e*Lg		01 07 14.6	
	comp=E,205nm,0.5s						
VAY	**Valandovo**	**1.72**	**89**	*e*Pn	**Pn**	**01 06 46.5**	**-1.2**
VAY				*e*Sn	**Sn**	**01 07 10.6**	**+0.5**
VAY				*e*Lg		01 07 14.0	
	comp=N,167nm,0.5s						
VAY				*e*Lg		01 07 14.0	
	comp=E,205nm,0.5s						
HCY	**Herceg Novi**	**1.76**	**311**⇑	*i* Pn	**Pn**	**01 06 48.1**	**-0.1**
HCY				*e*Sn	**Sn**	**01 07 13.7**	**+2.7**
HCY	**Herceg Novi**	**1.76**	**311**	*i* PG	**Pg**	**01 06 48.6**	**-2.1**
HCY				*i* SG	**Sg**	**01 07 14.3**	**+0.8**
IGT	**Igoumenitsa**	**1.77**	**179**	P	**Pn**	**01 06 49.5**	**+1.1**
IGT				S	**Sn**	**01 07 12.2**	**+0.8**
NKY	**Niksic**	**1.79**	**328**⇓	*i* Pn	**Pn**	**01 06 48.6**	**0.0**
NKY				*e*Sn	**Sn**	**01 07 14.3**	**+2.6**
NKY	**Niksic**	**1.79**	**328**	*i* PG	**Pg**	**01 06 48.1**	**-3.1**
NKY				*i* SG	**Sg**	**01 07 13.7**	**-0.7**
BARS	**Barje**	**1.89**	**36**	*e*Pn	**Pn**	**01 06 49.8**	**-0.2**
BARS				*e*Sg	**Sg**	**01 07 17.1**	**-0.6**
SJES	**Sjenica**	**1.97**	**353**	*e*Pn	**Pn**	**01 06 51.8**	**+0.7**
SJES				*e*Sg	**Sg**	**01 07 20.2**	**0.0**
KNT	**Kendrikon**	**1.97**	**93**	P	**Pn**	**01 06 50.3**	**-0.9**
KNT				S	**Sn**	**01 07 15.5**	**-0.8**
TREB	**Trebinje**	**2.02**	**315**	*e*Pn	**Pn**	**01 06 52.3**	**+0.5**
TREB				*e*Sn	**Sn**	**01 07 16.1**	**-1.4**
TREB				*e*Sg	**Sg**	**01 07 20.3**	**-1.5**
BRY	**Bratogost**	**2.06**	**321**⇑	*i* Pn	**Pn**	**01 06 52.5**	**+0.2**
BRY				*e*Sn	**Sn**	**01 07 20.7**	**+2.3**
LIT	**Litokhoron**	**2.06**	**125**	P	**Pn**	**01 06 52.1**	**-0.3**
LIT				S	**Sn**	**01 07 19.6**	**+1.1**
PLE	**Pljevlja**	**2.13**	**342**⇑	*i* Pn	**Pn**	**01 06 53.6**	**+0.3**
PLE				*e*Sn	**Sn**	**01 07 22.7**	**+2.5**
UPM	**Unac-Piva**	**2.15**	**332**⇑	*i* Pn	**Pn**	**01 06 54.0**	**+0.3**
UPM				*e*Sn	**Sn**	**01 07 23.0**	**+2.2**
KKB	**Krupnik**	**2.17**	**74**	*i* P	**Pn**	**01 06 54.0**	**+0.1**
KKB				*i* S	**Sn**	**01 07 23.6**	**+2.4**
THL	**Klokotos Trika**	**2.18**	**142**	P	**Pn**	**01 06 53.7**	**-0.4**
THL				S	**Sn**	**01 07 22.2**	**+0.7**
PE1	**Pezze di Greco**	**2.22**	**258**	*e*Pn	**Pn**	**01 06 53.5**	**-1.1**
SOH	**Sokhos**	**2.37**	**101**	P	**Pn**	**01 06 56.2**	**-0.4**
STON	**Ston**	**2.48**	**310**	*e*Pn	**Pn**	**01 06 57.9**	**-0.3**
STON				Sn	**Sn**	**01 07 33.9**	**+5.0**
VTS	**Vitosha**	**2.53**	**59**	*e*Pn	**Pn**	**01 06 59.0**	**+0.2**
VTS				*e*Sn	**Sn**	**01 07 29.8**	**-0.2**
VTS	**Vitosha**	**2.53**	**59**	*i* P	**Pn**	**01 06 59.2**	**+0.4**
PLG	**Polygyros**	**2.57**	**110**	P	**Pn**	**01 06 58.9**	**-0.5**
GRUS	**Gruza**	**2.60**	**7**	*e*Pn	**Pn**	**01 06 59.4**	**-0.4**
GRUS				*e*Sn	**Sn**	**01 07 31.2**	**-0.6**
MMB	**Musomiste**	**2.60**	**83**	*i* P	**Pn**	**01 06 59.7**	**-0.1**
ZAPS	**Zavoj**	**2.62**	**41**	*e*Pn	**Pn**	**01 07 01.0**	**+0.9**
ZAPS				*e*Sn	**Sn**	**01 07 31.9**	**-0.5**
BBLS	**Lazići**	**2.64**	**346**	*e*Pn	**Pn**	**01 07 00.7**	**+0.4**
BBLS				*e*Sn	**Sn**	**01 07 32.0**	**-0.8**
LTRZ	**Laterza**	**2.72**	**256**	Pn	**Pn**	**01 07 00.6**	**-0.8**
AGG	**Agios Georgios**	**2.77**	**145**	P	**Pn**	**01 07 01.5**	**-0.6**
AGG				S	**Sn**	**01 07 36.8**	**+0.9**
SG1	**Sgolgore (BA)**	**2.77**	**261**	*e*Pn	**Pn**	**01 07 02.2**	**+0.1**
BOLS	**Boljevac**	**2.80**	**25**	*e*Pn	**Pn**	**01 07 02.2**	**-0.4**
BOLS				*e*Sg	**Sg**	**01 07 46.7**	**-0.4**
PAIG	**Paliouri**	**2.93**	**117**	P	**Pn**	**01 07 03.2**	**-1.1**
XOR	**Xorichti**	**2.95**	**130**	P	**Pn**	**01 07 05.0**	**+0.4**
OUR	**Ouranopolis**	**2.97**	**108**	P	**Pn**	**01 07 03.4**	**-1.4**
SVIS	**Svilajnac**	**3.04**	**13**	*e*Pn	**Pn**	**01 07 06.6**	**+0.8**
SVIS				*e*Sn	**Sn**	**01 07 42.6**	**+0.1**
ORI	**Oriolo Calabro**	**3.17**	**248**	Pn	**Pn**	**01 07 08.3**	**+0.6**
ORI				Sn	**Sn**	**01 07 43.0**	**-2.9**
KFL	**Anninata**	**3.22**	**173**	P	**Pn**	**01 07 07.9**	**-0.4**
LKR	**Lokris**	**3.37**	**141**	P	**Pn**	**01 07 09.9**	**-0.5**
LKR				S	**Sn**	**01 07 52.7**	**+1.8**
RGNG	**Rignano Grg**	**3.55**	**277**	Pn	**Pn**	**01 07 11.7**	**-1.2**
RGNG				Sn	**Sn**	**01 07 54.2**	**-1.1**
FGS	**Orsara di Pugl**	**3.78**	**271**	Pn	**Pn**	**01 07 16.4**	**+0.3**
SGO	**Sicignano**	**3.85**	**260**	Pn	**Pn**	**01 07 16.7**	**-0.2**
FGSL	**Fruska Gora**	**3.86**	**355**	*e*Pn	**Pn**	**01 07 16.9**	**-0.3**
FGSL				*e*Sn	**Sn**	**01 08 01.8**	**-1.2**
GRI	**Girifalco**	**3.87**	**231**	Pn	**Pn**	**01 07 16.8**	**-0.4**
CSSN	**Cassano Irpino**	**4.00**	**265**	Pn	**Pn**	**01 07 18.8**	**-0.3**
BZS	**Buzias**	**4.42**	**12**	*e*Pn	**Pn**	**01 07 23.5**	**-1.2**
BZS				*e*Sn	**Sn**	**01 08 13.9**	**-2.7**
BZS	**Buzias**	**4.42**	**12**	⇑P	**Pn**	**01 07 23.7**	**-1.1**
BZS	**Buzias**	**4.42**	**12**	⇑*i*P	**Pn**	**01 07 23.7**	**-1.0**
SGG	**Gregorio Mates**	**4.45**	**273**	Pn	**Pn**	**01 07 25.1**	**-0.1**
GZR	**Gura Zlata**	**4.47**	**23**	⇑P	**Pn**	**01 07 26.2**	**+0.7**
GZR	**Gura Zlata**	**4.47**	**23**	⇑*i*P	**Pn**	**01 07 26.2**	**+0.7**
SDI	**San Donato**	**4.88**	**277**	Pn	**Pn**	**01 07 31.7**	**+0.5**
PKSM	**Moragy**	**5.05**	**347**	⇓*i*P	**Pn**	**01 07 33.9**	**+0.5**
NVLJ	**Novalja**	**5.14**	**311**	*e*Pn	**Pn**	**01 07 34.5**	**-0.2**
NVLJ				Sn	**Sn**	**01 08 29.4**	**-5.0**
NVLJ	**Novalja**	**5.14**	**311**	*e*Pn	**Pn**	**01 07 34.4**	**-0.3**
NVLJ				Sn	**Sn**	**01 08 29.4**	**-5.0**
VOIR		**5.39**	**38**	⇓P	**Pn**	**01 07 41.0**	**+2.8**
VOIR		**5.39**	**38**	⇓*i*P	**Pn**	**01 07 41.0**	**+2.8**
NRCA	**Norcia**	**5.55**	**288**	Pn	**Pn**	**01 07 40.0**	**-0.4**
	comp=E,17nm,0.7s						
BOJS	**Bojanci**	**5.57**	**321**	*i* Pn	**Pn**	**01 07 41.0**	**+0.4**
BOJS				*i* Sn	**Sn**	**01 08 40.7**	**-4.4**
BOJS				*i* Sg	**Sn**	**01 08 43.3**	**-1.8**
MLR	**Muntele Rosu**	**5.87**	**43**	⇓P	**Pn**	**01 07 47.7**	**+3.0**
MLR	**Muntele Rosu**	**5.87**	**43**	⇓*i*P	**Pn**	**01 07 47.7**	**+3.0**
ASS	**Assisi**	**5.94**	**290**	Pn	**Pn**	**01 07 45.7**	**0.0**
	comp=E,17nm,0.6s						
FSSB	**Fossombrone**	**6.04**	**296**	Pn	**Pn**	**01 07 46.1**	**-1.0**
PSZ	**Piszkesteto**	**6.62**	**358**	⇓P	**Pn**	**01 07 53.9**	**-1.0**
PSZ	**Piszkesteto**	**6.62**	**358**	⇓*i*P	**Pn**	**01 07 53.9**	**-1.1**
VYHS	**Vyhne**	**7.26**	**352**	*e*PN	**Pn**	**01 08 07.2**	**+3.4**
VYHS				*e*SN	**Sn**	**01 09 25.5**	**-1.1**
MODS	**Modra-Piesok**	**7.38**	**344**	*e*SN	**Sn**	**01 09 24.8**	**-4.8**
CRVS	**Cervenica-Dubn**	**7.64**	**6**	*e*PN	**Pn**	**01 08 10.7**	**+1.7**

*BJI **23** 01:26:43.3, 475S× 152.56E, h157km, mB5.6, mb5.3*
*IDC **23** 01:26:47.3± 0.5, 466S× 151.95E, h147km± 3km, mb4.9/25, mb1 5.0/28, mb1mx5.0/29, mbtmp4.9/28, MS4.7/9, Ms1 4.7/9, ms1mx4.4/26, Error ellipse: s-maj=11.2km s-min=7.8km az=83.0*
*NEIC **23** 01:26:47.4± 0.1, 463S× 151.87E, mb5.5/108, MW5.9, Error ellipse: s-maj=4.0km s-min=3.2km az=130.0, Moment Tensor Solution. s29 Moment tensor: Scale 10^17^Nm; Mrr=4.49; Mθθ=3.65; Mϕϕ=-0.84; Mrθ=5.90; Mrϕ=-2.92; Mθϕ=1.92; Best double couple: M0=8.00000×10^17^ NP1:ϕs=70.00000°, δ=71.00000°, λ=99.00000°. NP2:ϕs=223.00000°, δ=21.00000°, λ=64.00000°. Principal axes: T 7.6000, Plg62.0000°, Azm354.0000°; N 0.7500, Plg8.0000°, Azm246.0000°; P -8.3600, Plg25.0000°, Azm152.0000°;*
*MOS **23** 01:26:47.0± 0.8, 454S× 151.84E, h150km, mb5.5/38, MS4.8/8 Error ellipse: s-maj=7.7km s-min=5.8km az=88.0*
*GCMT **23** 01:26:47.4± 0.1, 481S× 151.94E, h156km, MW5.9/113, Moment Tensor Solution. s106, c222; s113, c316; Duration: 2≥1 Moment tensor: Scale 10^17^Nm; Mrr=4.14±.07; Mθθ=3.49±.09; Mϕϕ=-0.64±.09; Mrθ=6.31±.06; Mθϕ=-0.91±.09; Mrϕ=2.16±.06; Best double couple: M0=7.75000×10^17^ NP1:ϕs=255.00000°, δ=15.00000°, λ=94.00000°. NP2:ϕs=72.00000°, δ=75.00000°, λ=89.00000°. Principal axes: T 7.9450, Plg60.0000°, Azm340.0000°; N -0.3810, Plg1.0000°, Azm72.0000°; P -7.5560, Plg30.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*ISCJB **23** 01:26:47.1± 0.1, 465S± 003× 15191E± 002, h157km, mb5.3/182 Error ellipse: s-maj=3.8km s-min=3.1km az=148.3*
*DJA **23** 01:26:50, 469S× 152.13E, h175km, Mw5.7/22*
*BGS **23** 01:27:05.6± 1.8, 579N× 15356E, h150km, mb5.5(NEIC)*

ISC 23 01:26:48.8± 0.1, 467S± 002× 15195E± 002, h159km, h159km± 1.6km:pP-P, n667, σ1s02/409, mb5.3/180, 54C-27D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.69**	**225**	⇑*i*Pn	**Pn**	**01 28 24.6**	**-0.1**
PMG				*e*Sn	**Sn**	**01 29 38.8**	**-1.2**
PMG	**Port Moresby**	**6.69**	**225**	P	**Pn**	**01 28 25.5**	**+0.8**
	1μm,0.8s,40nm						
HNR	**Honiara**	**9.24**	**121**	P	**Pn**	**01 28 56.1**	**-2.6**
	51nm,0.3s,baz=295,slow=17,SNR=18						
HNR				S	**Sn**	**01 30 56.2**	**+15**
	15nm,0.3s,baz=350,slow=19,SNR=2.1						
HNR	**Honiara**	**9.24**	**121**	*e*Pn	**Pn**	**01 28 57.2**	**-1.4**
	705nm,0.8s						
HNR	**Honiara**	**9.24**	**121**	P	**Pn**	**01 28 57.7**	**-0.9**
JAY	**Jayapura**	**11.42**	**280**	P	**Pn**	**01 29 31.1**	**+3.7**
	120nm,0.9s,8μm						
COEN	**Coen**	**12.65**	**223**	⇓*i*P	**Pn**	**01 29 45.0**	**+1.8**
	298nm,1.0s						
COEN				*e*Sn	**Sn**	**01 31 58.9**	**-4.5**
COEN	**Coen**	**12.65**	**223**	P	**Pn**	**01 29 45.3**	**+2.1**
	202nm,1.2s,3μm						
CTA	**Charters Tower**	**16.30**	**199**	⇓*i*P	**Pn**	**01 30 29.9**	**+1.1**
	54nm,0.7s						
CTA				*i* S	**S**	**01 33 31.2**	**+1.0**
CTA	**Charters Tower**	**16.30**	**199**	P	**Pn**	**01 30 29.4**	**+0.6**
	4.5nm,0.3s,baz=25,slow=13,SNR=46						
CTA				S	**S**	**01 33 31.1**	**+0.9**
	0.0nm,0.3s,baz=72,slow=20,SNR=1.8						
CTAO	**Charters Tower**	**16.30**	**199**	⇓*i*P	**Pn**	**01 30 29.8**	**+1.1**
	3μm,3.0s						
CTAO	**Charters Tower**	**16.30**	**199**	⇓*i*P	**Pn**	**01 30 29.8**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,3μm,3.0s						
CTAO	**Charters Tower**	**16.30**	**199**	P	**Pn**	**01 30 29.6**	**+0.8**
	comp=Z,237nm,2.3s,comp=Z,10μm						
GUMO	**Guam**	**19.45**	**339**	P	**P**	**01 31 02.9**	**-0.4**
	comp=Z,55nm,0.3s,baz=171,slow=5.8,SNR=21						
GUMO	**Guam**	**19.45**	**339**	*e*P	**P**	**01 31 04.2**	**+0.9**
	comp=Z,1μm,1.1s						
GUMO	**Guam**	**19.45**	**339**	*e*P	**P**	**01 31 04.2**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,1μm,1.1s						
GUMO	**Guam**	**19.45**	**339**	P	**P**	**01 31 05.0**	**+1.7**
	comp=Z,2μm,1.2s						
EIDS	**Eidsvold**	**20.60**	**182**	⇓*i*P	**P**	**01 31 15.5**	**0.0**
	comp=Z,144nm,0.8s						
EIDS				*e*S	**S**	**01 34 57.2**	**+0.1**
KAKA	**Kakadu**	**20.86**	**246**	*e*P	Px	01 31 03.9	
	comp=Z,606nm,0.8s						
KAKA				*e*S	Sx	01 34 42.1	
SWI	**Sorong**	**21.00**	**280**	P	**P**	**01 31 21.4**	**+1.4**
	comp=Z,529nm,1.0s,comp=Z,6μm,mb5.8						

TARA	**Tarawa**	**21.79**	**75**	*e*P	**P**	**01 31 28.2**	**-0.2**
	comp=Z,238nm,0.7s,mb5.7						
NOUC	**Port Laguerre**	**22.22**	**143**	*e*P	**P**	**01 31 31.8**	**-0.9**
DZM	**Mont Dzumac**	**22.28**	**142**	*e*P	**P**	**01 31 31.6**	**-1.7**
DZM	**Mont Dzumac**	**22.28**	**142**	⇓*i*P	**P**	**01 31 32.9**	**-0.4**
WRAB	**Tennant Creek**	**22.89**	**227**	*e*P	**P**	**01 31 38.5**	**-0.3**
	comp=Z,207nm,1.0s,mb5.5						
WRAB				*e*S	**S**	**01 35 37.0**	**+0.3**
WRAB	**Tennant Creek**	**22.89**	**227**	*e*P	**P**	**01 31 38.5**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,210nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**22.89**	**227**	P	**P**	**01 31 38.6**	**-0.2**
	comp=Z,264nm,0.9s,comp=Z,4μm,mb5.6						
WB2	**Warramunga Arr**	**22.89**	**227**	⇓*i*P	**P**	**01 31 38.2**	**-0.7**
WB2				*e*S	**S**	**01 35 34.1**	**-2.6**
WRA	**Warramunga Arr**	**22.90**	**227**	P	**P**	**01 31 38.5**	**-0.5**
	comp=Z,85nm,0.5s,mb5.4,baz=51,slow=9.4,SNR=157						
WRA				S	**S**	**01 35 36.4**	**-0.4**
	comp=Z,77nm,0.9s,baz=58,slow=16,SNR=11						
WRA				ScP	ScP	01 38 48.8	+1.1
	comp=Z,14nm,1.0s,baz=47,slow=2.9,SNR=4.6						
WRA	**Warramunga Arr**	**22.90**	**227**	P	**P**	**01 31 38.5**	**-0.5**
WRA				S	**S**	**01 35 36.4**	**-0.4**
LBMI	**Labuha**	**24.74**	**279**	P	**P**	**01 31 58.8**	**+3.0**
	comp=Z,265nm,0.8s,comp=Z,6μm,mb5.8						
ARMA	**Armidale**	**25.62**	**181**	*e*P	**P**	**01 32 03.7**	**+0.2**
ARMA				*e*S	**S**	**01 36 20.7**	**+0.9**
ARMA	**Armidale**	**25.62**	**181**	⇓*i*P	**P**	**01 32 03.8**	**+0.3**
	comp=Z,16nm,1.7s,mb4.4						
ARMA				*e*S	**S**	**01 36 19.5**	**-0.3**
ASAR	**Alice Springs**	**25.68**	**221**	P	**P**	**01 32 03.5**	**-0.7**
	comp=Z,10.0nm,0.4s,mb4.8,baz=57,slow=8.1,SNR=84						
ASAR				pP	pP	01 32 34.3	-2.8
	comp=Z,47nm,0.7s,baz=52,slow=8.5,SNR=8.1						
ASAR				S	**S**	**01 36 19.6**	**-1.5**
	comp=Z,11nm,0.7s,baz=53,slow=14,SNR=4.3						
ASAR				ScP	ScP	01 38 56.2	+0.9
	comp=Z,11nm,0.9s,baz=42,slow=4.3,SNR=6.7						
ASAR				P3KPbc		02 04 51.4	
	comp=Z,0.3nm,0.7s,baz=202,slow=3.5,SNR=4.1						
ASAR	**Alice Springs**	**25.68**	**221**	P	**P**	**01 32 03.5**	**-0.7**
ASAR				pP	pP	01 32 34.3	-2.8
ASAR				S	**S**	**01 36 19.6**	**-1.5**
ASAR				ScP	ScP	01 38 56.2	+0.9
ASAR				*e*		02 04 51.4	
ASAR	**Alice Springs**	**25.68**	**221**	P	**P**	**01 32 03.5**	**-0.7**
ASAR				*PP	pP	01 32 34.3	-2.7
ASAR				S	**S**	**01 36 19.6**	**-1.5**
MNI	**Manado**	**27.76**	**282**	P	**P**	**01 32 23.7**	**+0.8**
	comp=Z,268nm,1.1s,mb5.9						
BATI	**Baumata**	**28.57**	**257**	P	**P**	**01 32 29.9**	**-0.2**
	comp=Z,84nm,0.7s,mb5.5,baz=117,slow=2.3,SNR=11						
BATI	**Baumata**	**28.57**	**257**	P	**P**	**01 32 32.5**	**+2.4**
	comp=Z,67nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**28.76**	**199**	*e*P	**P**	**01 32 30.5**	**-1.0**
	comp=Z,11nm,0.4s,mb4.9						
STKA				*e*		01 37 06.3	
STKA	**Stephens Creek**	**28.76**	**199**	P	**P**	**01 32 30.5**	**-1.0**
	comp=Z,15nm,0.5s,mb4.9,baz=4.2,slow=9.0,SNR=34						
STKA				pP	pP	01 33 02.4	-2.4
	comp=Z,12nm,0.6s,baz=9.2,slow=12,SNR=3.6						
STKA				ScP	ScP	01 39 05.6	+1.1
	comp=Z,8.8nm,0.9s,baz=29,slow=2.9,SNR=3.5						
STKA				LR	LR	01 42

comp=Z,281nm,0.2s,mb6.5
PPBI Pangkal Pinang 45.79 272 P **P** **01 34 55.4 +0.4**
comp=Z,65nm,0.9s,mb5.2
SSE Sheshan 46.12 323 P **P** **01 34 59.3 +2.1**
SSE XP sP 01 35 53.3 +2.9
SSE S **S** **01 41 32.6 +1.5**
SSE XS sS 01 42 35.9 +3.2
SSE AMB AMB
comp=Z,50nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,886nm,8.8s
SSE LR LR
comp=N,611nm,15.8s
SSE LR LR
comp=E,735nm,15.8s
SSE LR LR
comp=Z,768nm,17.7s
XMIS Christmas Isla 46.22 260 *e*P **P** **01 34 57.6 -0.7**
ERM Erimo 47.15 351 *e*P **P** **01 35 05.7 +0.7**
comp=Z,114nm,1.4s,mb5.3
ERM Erimo 47.15 351 *e*P **P** **01 35 05.7 +0.7**
ERM pmax pmax
comp=Z,114nm,1.4s,mb5.3
DSRI Dabo 47.49 274 P **P** **01 35 08.5 +0.2**
comp=Z,116nm,0.8s,comp=Z,5μm,mb5.6
KSRS Korea Array 47.50 334 P **P** **01 35 07.8 -0.1**
comp=Z,18nm,0.9s,mb4.7,baz=152,slow=8.9,SNR=35
KSRS pP pP 01 35 43.2 -0.3
comp=Z,11nm,1.0s,baz=146,slow=9.3,SNR=3.8
KSRS PcP PcP 01 36 35.6 +0.1
comp=Z,3.2nm,0.6s,baz=148,slow=3.8,SNR=6.7
QIZ Qiongzhong 47.67 301 P **P** **01 35 09.0 -0.5**
QIZ XP sP 01 36 00.0 -2.8
QIZ PP PP 01 37 02.3 -0.4
QIZ S **S** **01 41 54.0 +0.4**
QIZ AMB AMB
comp=Z,1μm,8.8s
QIZ LR LR
comp=N,2μm,19.8s
QIZ LR LR
comp=Z,2μm,36.9s
NJ2 Nanjing 48.21 322 *e*P **P** **01 35 14.6 +1.2**
NJ2 AP pP 01 35 48.8 -0.3
NJ2 XP sP 01 36 08.3 +1.5
NJ2 PP PP 01 37 08.3 +0.9
NJ2 S **S** **01 41 59.5 -1.3**
NJ2 XS sS 01 43 03.5 +0.7
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb4.9
NJ2 AMB AMB
comp=Z,880nm,9.2s
NJ2 LR LR
comp=N,250nm,19.2s
NJ2 LR LR
comp=E,920nm,24.1s
NJ2 LR LR
comp=Z,920nm,24.1s
MYKOM **Kota Tinggi 48.48 277** P **P** **01 35 16.9 +1.0**
KGM Kluang 49.04 277 ⇑P **P** **01 35 21.0 +0.9**
KSI Kapahiang 49.23 269 P **P** **01 35 24.0 +2.4**
comp=Z,72nm,0.6s,mb5.5
ASAJ Asahikawa 49.28 351 P **P** **01 35 21.0 -0.4**
comp=Z,13nm,0.7s,mb4.7,baz=171,slow=7.8,SNR=8.0
WHN Wuhan 50.17 317 P **P** **01 35 29.8 +1.4**
WHN LR LR
comp=Z,4μm,32.4s
FRIM Kepong 50.89 278 ⇑P **P** **01 35 33.1 -1.0**
PDSI Padang 51.55 273 P **P** **01 35 36.9 -2.1**
comp=Z,160nm,0.8s,comp=Z,2μm,mb5.7
DL2 Dalian 51.63 330 P **P** **01 35 39.0 -0.1**
DL2 AP pP 01 36 15.0 -0.2
DL2 XP sP 01 36 30.3 -2.5
DL2 PP PP 01 37 39.8 +1.5
DL2 S **S** **01 42 47.0 -1.0**
DL2 AMB AMB
comp=Z,60nm,1.3s,mb5.1
DL2 AMB AMB
comp=Z,520nm,7.5s
PPI Padang Panjang 51.65 273 P **P** **01 35 38.3 -1.5**
comp=Z,187nm,1.0s,comp=Z,2μm,mb5.7
IPM Ipoh 51.67 279 P **P** **01 35 40.0 +0.1**
comp=Z,54nm,1.3s,comp=Z,1μm,mb5.0
KULM Kulim 52.18 280 ⇓P **P** **01 35 42.3 -1.3**
KKTK Khon Kaen 52.87 294 P **P** **01 35 49.8 +1.2**
comp=Z,926nm,0.8s,mb6.6
MDJ Mudanjiang 53.00 340 P **P** **01 35 48.8 -0.3**
MDJ AP pP 01 36 24.9 -0.5
MDJ XP sP 01 36 39.9 -3.0
MDJ PP PP 01 37 51.3 +0.7
MDJ PCS PcS 01 40 52.3 -2.1
MDJ S **S** **01 43 09.0 +2.5**
MDJ XS sS 01 44 13.3 +3.8
MDJ SCS ScS 01 45 21.4 -1.2
MDJ SS SS 01 46 51.5 +3.4
MDJ AMB AMB
comp=Z,21nm,1.3s,mb4.7
MDJ AMB AMB
comp=Z,792nm,10.3s
MDJ LR LR
comp=N,986nm,32.7s
MDJ LR LR
comp=E,651nm,40.4s
MDJ LR LR
comp=Z,2μm,27.1s
MDJ Mudanjiang 53.00 340 *e*P **P** **01 35 48.0 -1.1**
comp=Z,98nm,1.8s,mb5.2
MDJ *e*pP pP 01 36 23.0 -2.4
SNY Shenyang 53.00 334 ⇑P **P** **01 35 46.9 -2.3**
SNY AMB AMB
comp=Z,28nm,1.9s,mb4.7
SNY AMB AMB
comp=Z,810nm,12.0s
GYA Guiyang 53.64 308 ⇓*i*P **P** **01 35 55.6 +1.5**
GYA AP pP 01 36 32.4 +1.9
GYA XP sP 01 36 50.1 +2.1
GYA PCP PcP 01 36 59.8 +1.3
GYA PP PP 01 37 58.9 +2.2
GYA SCP ScP 01 40 41.0 -0.6
GYA PCS PcS 01 40 56.8 -1.2
GYA S **S** **01 43 13.8 -1.9**
GYA XS sS 01 44 19.4 +0.5
GYA SCS ScS 01 45 25.5 -2.4
GYA SS SS 01 46 57.5 -1.3
GYA AMB AMB
comp=Z,110nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,680nm,6.8s
GYA LR LR
comp=N,1μm,13.0s
GYA LR LR
comp=E,1μm,13.7s
GYA LR LR
comp=Z,2μm,14.0s
CN2 Changchun 53.83 336 *e*P **P** **01 35 55.5 +0.3**
CN2 *e*XP sP 01 36 51.3 +2.2
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
CN2 AMB AMB
comp=Z,900nm,9.0s
HABR Khabarovsk 54.95 346 ⇓*e*P **P** **01 36 00.9 -2.2**
HABR *e**PP pP 01 36 37.8 -1.9
HABR *e*SP 01 36 54.9
HABR *e* 01 37 00.9
HABR *e*PPP 01 39 20.5
HABR *e*S **S** **01 43 30.5 -1.9**
HABR *e* 01 44 34.8
HABR *e* 01 45 33.7
NST Nakhon Sawan 55.12 293 P **P** **01 36 06.0 +1.0**
comp=Z,125nm,0.5s,mb5.9
BJT Baijiatuan 55.30 327 *e*P **P** **01 36 05.8 -0.1**
BJI Beijing 55.32 327 P **P** **01 36 05.9 0.0**
BJI AP pP 01 36 41.8 -0.8
BJI XP sP 01 36 56.0 -4.0
BJI S **S** **01 43 36.9 -0.8**
BJI XS sS 01 44 41.8 +0.6
BJI AMB AMB
comp=Z,49nm,2.2s,mb4.8
BJI AMB AMB
comp=Z,2μm,4.8s
BJI LR LR
comp=Z,2μm,34.4s
KIP Kipapa 55.45 60 *e*P **P** **01 36 07.1 -0.1**
comp=Z,265nm,1.4s,mb5.8
KIP Kipapa 55.45 60 P **P** **01 36 07.7 +0.4**
KIP pmax pmax
comp=Z,260nm,1.3s,mb5.8
XAN Xi'an 55.94 317 P **P** **01 36 10.8 +0.3**
XAN AP pP 01 36 50.4 +3.2
XAN XP sP 01 37 06.3 +1.7
XAN AMB AMB
comp=Z,35nm,0.7s,mb5.3
XAN AMB AMB
comp=Z,938nm,9.9s
KMI Kunming 56.21 304 P **P** **01 36 14.6 +2.0**
KMI AP pP 01 36 52.8 +3.5
KMI XP sP 01 37 09.3 +2.6
KMI PP PP 01 38 23.8 +4.1
KMI S **S** **01 43 51.3 +1.3**
KMI XS sS 01 44 57.1 +3.4
KMI SS SS 01 47 38.8 -0.5
KMI AMB AMB
comp=Z,51nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,903nm,7.6s
KMI LR LR
comp=N,531nm,18.0s
KMI LR LR
comp=E,605nm,18.0s
KMI LR LR
comp=Z,476nm,19.9s
KLR Kul'dur 56.48 344 *e*P **P** **01 36 09.0 -5.0**
KLR *e* pP 01 36 46.6 -4.2
KLR pmax pmax
comp=Z,200nm,1.8s,mb5.7
BDT Bhumibol Dam 56.62 294 ⇑P **P** **01 36 17.0 +1.3**
comp=Z,20nm,1.1s,mb4.9
POHA Pohakuloa 57.04 63 *e*P **P** **01 36 19.5 +0.9**
comp=Z,168nm,0.6s,mb6.0
CMAR Chiang Mai Arr 57.05 295 P **P** **01 36 19.6 +0.9**
comp=Z,84nm,0.8s,mb5.6,baz=112,slow=5.3,SNR=208
CMAR ScP ScP 01 40 57.8 +1.0
comp=Z,1.1nm,0.3s,baz=98,slow=3.7,SNR=4.6
CMAR PKPPKP 02 06 09.2
comp=Z,1.1nm,0.3s,baz=266,slow=2.1,SNR=4.3
CMAR PKP2bc 02 06 21.8
comp=Z,2.4nm,0.6s,baz=285,slow=4.0,SNR=13
CMAR Chiang Mai Arr 57.05 295 P **P** **01 36 19.6 +0.9**
CMAR ScP ScP 01 40 57.8 +1.0
CMAR P'P' 02 06 09.2
CMAR ⇑*e* 02 06 21.8
CHG Chiang Mai 57.16 296 ⇓P **P** **01 36 20.7 +1.3**
comp=Z,85nm,0.7s,mb5.7
CHTO Chiang Mai 57.16 296 P **P** **01 36 20.9 +1.5**
SNR=15
CHTO Chiang Mai 57.16 296 *e*P **P** **01 36 19.4 0.0**
comp=Z,96nm,1.0s,mb5.6
CHTO *e*PcP PcP 01 37 12.4 +0.1
CHTO Chiang Mai 57.16 296 *e*P **P** **01 36 19.4 0.0**
CHTO *e* 01 37 12.4
CHTO pmax pmax
comp=Z,96nm,1.0s,mb5.6
BSI Banda Aceh 57.47 279 P **P** **01 36 21.0 -0.7**
comp=Z,53nm,1.0s,comp=Z,825nm,mb5.3
PET Petropavlovsk 57.75 5*d i*P **P** **01 36 29.7 +6.8**
PET *e**SP sP 01 37 20.2 +3.0
PET *e* 01 38 38.1
PET *e*S **S** **01 44 16.0 +6.7**
PET pmax pmax
comp=Z,600nm,16.8s
PET MLR MLR
comp=Z,300nm,21.0s
PEA0B Petropavlovsk- 57.76 4 *e*P **P** **01 36 23.3 +0.4**
PETK Petropavlovsk- 57.76 4 P **P** **01 36 22.1 -0.9**
comp=Z,12nm,0.5s,mb5.0,baz=155,slow=5.6,SNR=41
PETK pP pP 01 36 58.2 -1.6
comp=Z,2.0nm,0.6s,baz=266,slow=32,SNR=2.2
PETK PcP PcP 01 37 14.8 +0.9
comp=Z,5.9nm,0.5s,baz=143,slow=5.0,SNR=4.7
PETK LR LR 01 57 26.2
comp=Z,365nm,20.1s,baz=191,slow=32
PETK Petropavlovsk- 57.76 4 P **P** **01 36 22.1 -0.9**
PETK pP pP 01 36 58.2 -1.6
PETK PcP PcP 01 37 14.8 +0.9
PETK LR LR 01 57 26.2
CD2 Chengdu 58.01 311 ⇓*i*P **P** **01 36 26.1 +1.0**
CD2 AP pP 01 37 03.4 +1.3
CD2 PCP PcP 01 37 16.3 +0.9
CD2 PP PP 01 38 38.3 +2.7
CD2 PCS PcS 01 41 16.3 -0.7
CD2 S **S** **01 44 12.0 -1.4**
CD2 XS sS 01 45 17.4 0.0
CD2 SCS ScS 01 45 56.0 -3.3
CD2 SS SS 01 48 07.3 -0.1
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.3
CD2 AMB AMB
comp=Z,1μm,7.8s
CD2 LR LR
comp=N,580nm,14.4s
CD2 LR LR
comp=E,810nm,15.6s
CD2 LR LR
comp=Z,1μm,15.0s
HHC Hu-ho-hao-te 58.45 325 *e*P **P** **01 36 28.1 +0.1**
HHC AP pP 01 37 04.9 -0.1
HHC XP sP 01 37 22.8 +0.5
HHC PP PP 01 38 41.3 +2.0
HHC S **S** **01 44 13.0 -5.7**
HHC XS sS 01 45 22.0 -0.8
HHC SCS ScS 01 45 57.8 -4.3
HHC SS SS 01 48 11.8 -2.2
HHC AMB AMB
comp=Z,78nm,1.7s,mb5.3
HHC AMB AMB
comp=Z,1μm,6.7s
HHC LR LR
comp=N,564nm,17.8s
HHC LR LR
comp=E,775nm,20.2s
HHC LR LR
comp=Z,725nm,23.8s
PPT Papeete 58.57 108 *e*S **S** **01 44 18.6 -2.6**
comp=Z,3μm,25.2s
PPT *e*LR LR 01 53 51.5
comp=Z,802nm,25.5s
BTO Baotou 59.19 324 *e*P **P** **01 36 32.8 -0.3**
PMOR Pomariorio Ree 59.99 105 *e*P **P** **01 36 40.7 +1.6**
PMOR *e*pP pP 01 37 14.8 -1.5
comp=Z,108nm,1.0s
VAH Vaihoa 60.27 105 *e*P **P** **01 36 42.3 +1.4**
comp=Z,71nm,1.3s,mb5.3
VAH *e*pP pP 01 37 16.4 -1.7
comp=Z,83nm,1.1s
LZH Lanzhou 60.55 316 ⇑P **P** **01 36 43.5 +1.0**
LZH AP pP 01 37 21.5 +1.8
LZH PCP PcP 01 37 23.9 -1.5
LZH PP PP 01 39 00.0 +2.1
LZH SCP ScP 01 41 11.0 -0.8
LZH PCS PcS 01 41 27.3 -0.8
LZH *e*S **S** **01 44 44.0 -1.9**
LZH XS sS 01 45 50.3 -0.1
LZH SS SS 01 48 47.0 -0.1
LZH AMB AMB
comp=Z,220nm,1.4s,mb5.8
LZH AMB AMB
comp=Z,800nm,5.8s
HIA Hailar 60.57 336 *e*P **P** **01 36 41.7 -0.7**
comp=Z,15nm,0.6s,mb5.0
HIA *e*pP pP 01 37 19.0 -0.6
HIA Hailar 60.57 336 *e*P **P** **01 36 41.7 -0.6**
HIA *e**PP pP 01 37 19.0 -0.6
HIA pmax pmax
comp=Z,15nm,0.6s
ADK Adak 62.35 21 *e*P **P** **01 36 55.4 +1.2**
comp=Z,31nm,0.5s,mb5.4
ADK Adak 62.35 21 P **P** **01 36 56.6 +2.4**
ADK pmax pmax
comp=Z,31nm,0.5s,mb5.4
DRV Dumont d'Urvil 62.45 185 P pP 01 37 33.0 +0.9
DRV S **S** **01 45 11.0 +2.2**
DRV L 01 52 00.0
DRV R 01 56 00.0
IMP Imphal 63.50 301 *i* P **P** **01 37 01.0 -1.4**
GTA Gaotai 64.98 318 P **P** **01 37 12.8 +1.0**
GTA AP pP 01 37 51.8 +2.3
GTA XP sP 01 38 08.0 +1.3
GTA S **S** **01 45 42.4 +1.3**
GTA XS sS 01 46 47.4 +1.0
GTA AMB AMB
comp=Z,37nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,865nm,10.8s
GTA LR LR
comp=N,738nm,17.4s
GTA LR LR
comp=E,630nm,18.6s
GTA LR LR
comp=Z,896nm,21.3s
ULN Ulaanbaatar 65.44 328 P **P** **01 37 16.1 +1.6**
SNR=13
ULN Ulaanbaatar 65.44 328⇑*e*P **P** **01 37 14.7 +0.2**
comp=Z,100nm,1.4s,mb5.5
ULN Ulaanbaatar 65.44 328⇑*e*P **P** **01 37 14.7 +0.2**
ULN pmax pmax
comp=Z,100nm,1.4s,mb5.5
SHL Shillong 65.51 301 *ex* x 01 37 10.6
SHL AMb AMB 01 37 12.9
comp=Z,177nm,0.9s,mb5.9
SONM Songino Array 65.76 328 P **P** **01 37 17.1 +0.6**
comp=Z,30nm,0.5s,mb5.4,baz=146,slow=5.3,SNR=66
SONM PcP PcP 01 37 47.3 +0.8
comp=Z,9.7nm,0.5s,baz=147,slow=3.5,SNR=8.4
LSA Lhasa 67.46 305 P **P** **01 37 29.3 +1.5**
LSA XP sP 01 38 20.0 -2.9
LSA S S 01 46 10.6 -0.8
LSA AMB AMB
comp=Z,60nm,1.0s,mb5.4
LSA AMB AMB
comp=Z,660nm,10.0s
LSA LR LR
comp=N,250nm,32.0s
LSA LR LR
comp=E,290nm,29.0s
LSA LR LR
comp=Z,660nm,30.0s
LSA Lhasa 67.46 305⇑*i*P **P** **01 37 28.6 +0.8**
comp=Z,51nm,0.7s,mb5.5
LSA Lhasa 67.46 305⇑*i*P **P** **01 37 28.6 +0.8**
LSA pmax pmax
comp=Z,51nm,0.7s,mb5.5
CAL Calcutta 67.75 297 *e*P **P** **01 37 28.8 -0.9**
CAL *ex* x 01 47 04.6
UNV Unalaska Valle 67.86 25 *e*P **P** **01 37 28.2 -1.5**
comp=Z,26nm,0.6s,mb5.1
CASY Casey 67.89 197 *e*P **P** **01 37 29.3 -0.4**
YAK Yakutsk 68.68 349 *e*P **P** **01 37 33.1 -1.6**
YAK *e* 01 40 08.3
YAK *e*S S 01 46 21.7 -2.9
YAK *e* 01 47 15.7
YAK *e*SS SS 01 50 47.1 -5.5
YAK pmax pmax
comp=Z,23nm,1.2s,mb4.8
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=N,6.0nm,0.4s
YAK pmax pmax
comp=Z,18nm,0.4s,mb5.2
YAK pmax pmax
comp=E,3.0nm,0.4s
YAK smax
comp=N,420nm,3.8s
YAK smax
comp=E,279nm,4.2s
ZAK Zakamensk 68.94 329⇑*i*P **P** **01 37 36.7 +0.2**
ZAK *e* pP 01 38 15.4 +0.7
ZAK pmax pmax
comp=Z,64nm,1.3s,mb5.2
ZAK pmax pmax
comp=Z,21nm,1.4s,mb4.7
BOD Bodaibo 69.37 339 *e*P **P** **01 37 37.8 -1.2**
BOD pmax pmax
comp=Z,20nm,1.5s,mb4.6
TLY Talaya 69.54 330*c i*P **P** **01 37 41.3 +1.1**
TLY *e* 01 38 33.8
TLY *e*S SKSac 01 47 18.2 -7.2
TLY pmax pmax
comp=Z,47nm,1.7s,mb4.9
IRK Irkutsk 69.58 331 *e*P **P** **01 37 39.5 -0.9**
IRK pmax pmax
comp=Z,102nm,19.0s
TAPN Taplejung 69.61 301 *e*P **P** **01 37 41.2 0.0**
comp=Z,99nm,0.5s,mb5.8
ODAN Odare 69.75 301 *e*P **P** **01 37 42.0 0.0**
comp=Z,231nm,0.6s,mb6.1
BOK Bokaro 70.24 297 *e*P **P** **01 37 43.8 -1.3**
BOK AMb AMB 01 37 48.0
comp=Z,91nm,1.0s,mb5.5
RAMN Ramite 70.45 301 *e*P **P** **01 37 46.7 +0.4**
comp=Z,82nm,0.6s,mb5.6
MOY Mondy 70.86 329 *e*P **P** **01 37 48.6 +0.4**
MOY pmax pmax
comp=Z,14nm,2.4s,mb4.3
JIRN Jiri 70.99 301 *e*P **P** **01 37 49.9 +0.3**
comp=Z,111nm,0.7s,mb5.7
VIS Vishakhapatnam 71.22 290 *e*P **P** **01 37 51.6 +0.5**
GUN Gumba 71.33 301 *e*P **P** **01 37 52.0 +0.4**
comp=Z,274nm,0.7s,mb6.1
PKI Pulchoki 71.64 301 *e*P **P** **01 37 53.7 +0.3**
PKIN Phulchoki 71.65 301 *e*P **P** **01 37 53.1 -0.4**
KKN Kakani 71.81 301 *e*P **P** **01 37 54.5 +0.1**
comp=Z,118nm,0.5s,mb5.9
DMN Daman 71.91 301 *e*P **P** **01 37 55.3 +0.3**
comp=Z,479nm,1.0s,mb6.2
GKN Gorkha 72.41 301 *e*P **P** **01 37 58.1 +0.1**
RKT Rikitea 72.62 113 *e*S S 01 47 11.6 -0.2
comp=Z,2μm,27.5s
RKT Rikitea 72.62 113 *e*LR LR 02 00 28.0
comp=Z,1μm,37.5s,baz=280
CHGN Chignik 72.98 26 *e*P **P** **01 38 00.9 +0.2**
VNDA Vanda 72.99 178 P **P** **01 38 00.7 +0.1**
comp=Z,3.4nm,0.8s,mb4.1,baz=340,slow=5.4,SNR=11
VNDA pP pP 01 38 36.7 -2.4
comp=Z,11nm,0.8s,baz=320,slow=6.4,SNR=9.0
VNDA PKPPKP 02 05 36.5
comp=Z,0.4nm,0.9s,baz=229,slow=3.9,SNR=3.2
VNDA Vanda 72.99 178 P **P** **01 38 00.7 +0.2**
VNDA *PP pP 01 38 36.7 -2.4
KOLN Koldanda 73.24 301 *e*P **P** **01 38 02.4 -0.5**
comp=Z,130nm,0.6s,mb5.8
BILL Bilibino 73.24 6 *e*P **P** **01 38 01.8 -0.3**
comp=Z,26nm,1.1s,mb4.9
BILL Bilibino 73.24 6 *e*P **P** **01 38 02.7 +0.7**
BILL *e* 01 40 44.4
BILL pmax pmax
comp=Z,59nm,2.5s,mb4.9
BILL MLR MLR
comp=Z,200nm,16.0s
DANN Dangsing 73.25 301 *e*P **P** **01 38 02.8 -0.1**
comp=Z,142nm,0.6s,mb5.9
SBA Scott Base 73.55 177 *e*P **P** **01 38 03.6 -0.2**
comp=Z,11nm,1.4s,mb4.4
SBA *e*pP pP 01 38 40.9 -1.5
SBA Scott Base 73.55 177 *e*P **P** **01 38 03.6 -0.2**
SBA *e**PP pP 01 38 40.9 -1.5
SBA pmax pmax
comp=Z,11nm,1.4s,mb4.4
PYUN Piuthan 73.84 301 *e*P **P** **01 38 06.1 -0.3**
comp=Z,201nm,0.8s,mb5.9
WMQ Urumqi 75.07 318 P **P** **01 38 14.0 +0.8**
WMQ AP pP 01 38 53.0 +1.1
WMQ XP sP 01 39 11.0 +2.2
WMQ PP PP 01 41 06.0 +2.5
WMQ S S 01 47 37.0 -1.4
WMQ SCS ScS 01 48 08.0 -3.0
WMQ SS SS 01 52 31.0 0.0
WMQ AMB AMB
comp=Z,86nm,1.1s,mb5.3
WMQ AMB AMB
comp=Z,1μm,5.0s
WMQ LR LR
comp=N,569nm,18.0s
WMQ LR LR
comp=E,731nm,18.0s
WMQ LR LR
comp=Z,636nm,16.0s
KOD Kodaikanal 75.63 282 *e*P **P** **01 38 17.4 +0.5**
HYB Hyderabad 75.65 289 *e*P **P** **01 38 15.5 -1.5**
comp=Z,50nm,1.0s,mb5.1
HYB Hyderabad 75.65 289 *e*P **P** **01 38 15.5 -1.5**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.1
HYB Hyderabad 75.65 289 *i* P **P** **01 38 15.5 -1.5**

HYB e 01 39 08.0
comp=Z,500nm,1.0s,mb5.1

OHAK Old Harbor 75.82 27 eP **P** **01 38 16.5 -0.6**
NGP Nagpur 75.84 293 ex x 01 38 12.3
TRD Trivandrum 75.91 280 eP **P** **01 38 17.2 -1.4**
LGTI Lohaghat 76.50 302 eP **P** **01 38 20.9 -0.7**
PTH Pithoragarh 76.55 302 eP **P** **01 38 22.0 +0.1**
AKL Akola 77.63 292 eP **P** **01 38 27.3 -0.8**
AKL AMb AMB 01 38 29.8
comp=Z,96nm,1.4s,mb5.2

TIXI Tiksi 77.66 353⇑ eP **P** **01 38 26.4 -0.8**
TIXI pmax pmax
comp=Z,5.0nm,1.2s,mb4.0

DDI Dehra Dun 78.55 302 ex **P** **01 38 30.0 -3.0**
SLKM Skilak Lake 78.91 25 eP **P** **01 38 29.7 -4.5**
NDI New Delhi 78.93 300 eP **P** **01 38 33.0 -2.1**
PPLA Purkeypile 79.38 23 eP **P** **01 38 35.9 -0.8**
comp=Z,118nm,1.4s,mb5.3

RC01 Rabbit Creek A 79.41 25 eP **P** **01 38 35.8 -1.2**
comp=Z,57nm,0.5s,mb5.5

SMLA Simla 79.47 303 eP **P** **01 38 38.3 +0.3**
MK31 Makanchi Array 79.67 319 eP **P** **01 38 37.9 -0.8**
MK31 Makanchi Array 79.67 319 P **P** **01 38 38.3 -0.4**
MK31 pmax pmax
comp=Z,13nm,0.6s,mb4.7

MKAR Makanchi Array 79.67 319 P **P** **01 38 38.4 -0.3**
comp=Z,14nm,0.5s,mb4.8,baz=99,slow=6.0,SNR=86
MKAR PKPPKP 02 05 37.4
comp=Z,0.6nm,0.8s,baz=253,slow=4.4,SNR=3.6

KAD Karad 79.75 288 eP **P** **01 38 39.4 -0.4**
CHUM Lake Minchumin 79.87 22⇑ iP **P** **01 38 38.7 -0.7**
comp=Z,74nm,0.6s,mb5.5

PMR Palmer 79.92 25 eP **P** **01 38 37.9 -1.8**
comp=Z,132nm,1.4s,mb5.4

PMR Palmer 79.92 25 P **P** **01 38 38.8 -0.9**
PMR pmax pmax
comp=Z,41nm,0.7s,mb5.2

KTH Kantishna Hill 80.22 22 eP **P** **01 38 39.7 -1.5**
comp=Z,84nm,1.1s,mb5.3

POO Poona 80.24 290 ex **P** **01 38 38.4 -4.0**
POO AMb AMB 01 38 46.1
comp=Z,36nm,0.0s

TRF Thorofare Moun 80.40 23 eP **P** **01 38 41.3 -0.9**
comp=Z,28nm,0.5s,mb5.2

BPAW Bear Paw Mtn. 80.48 22 eP **P** **01 38 41.0 -1.7**
comp=Z,11nm,0.6s,mb4.7

ZAA0 Zalesovo Array 80.57 326⇑ eP **P** **01 38 41.6 -1.8**
ZALV Zalesovo Beam 80.57 326 P **P** **01 38 42.0 -1.3**
comp=Z,27nm,0.5s,mb5.1,baz=112,slow=6.6,SNR=59
ZALV LR LR 02 10 44.4
comp=Z,440nm,21.6s,baz=124,slow=33

DLH Dalhousie 80.75 304 ex **P** **01 38 41.0 -3.8**
THN Thein Dam 80.94 304 eP **P** **01 38 44.5 -1.3**
MCK McKinley 81.07 23 eP **P** **01 38 44.5 -1.3**
comp=Z,82nm,0.7s,mb5.5

MCK McKinley 81.07 23 P **P** **01 38 44.9 -0.9**
MCK pmax pmax
comp=Z,82nm,0.7s,mb5.5

NVS Novosibirsk 81.76 327⇑ iP **P** **01 38 47.7 -1.9**
NVS *i* *PP pP 01 39 28.8 -0.1
NVS eS S 01 48 43.0 -6.2
NVS pmax pmax
comp=Z,180nm,2.0s,mb5.3

NVS pmax pmax
comp=N,43nm,1.7s

NVS pmax pmax
comp=E,100nm,1.8s

NVS smax
comp=N,194nm,4.0s

COLA College 82.05 22 eP **P** **01 38 49.1 -1.8**
comp=N,45nm,0.6s,mb5.3

COLA College 82.05 22 eP **P** **01 38 49.1 -1.8**
COLA pmax pmax
comp=Z,45nm,0.6s,mb5.3

KSH Kashi 82.20 311 P **P** **01 38 53.5 +1.2**
KSH ePCP PcP 01 39 00.8 +3.6
KSH AP pP 01 39 33.5 +1.8
KSH XP sP 01 39 50.6 +2.2
KSH ePP PP 01 42 03.8 +0.8
KSH S S 01 48 49.5 -4.9
KSH SKS 01 48 53.0
KSH XS sS 01 49 59.1 -3.5
KSH LR LR
comp=N,2μm,6.2s

KSH LR LR
comp=E,2μm,5.2s

KSH LR LR
comp=Z,2μm,4.7s

COLD Coldfoot 82.41 19 eP **P** **01 38 52.3 -0.4**
comp=Z,27nm,1.1s,mb4.8

KURK Kurchatov 83.14 322 P **P** **01 38 56.9 +0.1**
SNR=19

KURK Kurchatov 83.14 322 P **P** **01 38 56.3 -0.5**
comp=Z,19nm,0.7s,mb5.0,baz=110,slow=3.9,SNR=66

KURK Kurchatov 83.14 322⇑ eP **P** **01 38 55.8 -1.1**
comp=Z,100nm,1.2s,mb5.4

KURK Kurchatov 83.14 322⇑ eP **P** **01 38 55.8 -1.1**
KURK pmax pmax
comp=Z,100nm,1.2s,mb5.4

TKM2 Tokmak 2 83.23 314⇑ eP **P** **01 38 57.7 +0.2**
comp=Z,28nm,0.5s,mb5.2

TKM2 Tokmak 2 83.23 314⇑ eP **P** **01 38 57.7 +0.2**
TKM2 pmax pmax
comp=Z,28nm,0.5s,mb5.2

TKM2 Tokmak 2 83.23 314 P **P** **01 38 58.0 +0.6**
SNR=52

KZA Kyzart 83.30 313 P **P** **01 39 00.3 +2.4**
SNR=16

PNL Peninsula 83.43 28 eP **P** **01 38 58.2 +0.1**
comp=Z,174nm,0.9s,mb5.8

KBK Karagaybulak 83.64 314 P **P** **01 38 60.0 +0.4**
SNR=29

CHMS Chumysh 83.85 314 P **P** **01 39 01.2 +0.5**
SNR=16

UCH Uchtor 83.86 313 eP **P** **01 39 02.2 +1.5**
comp=Z,54nm,1.3s,mb5.1

UCH Uchtor 83.86 313 P **P** **01 39 02.4 +1.6**
SNR=9.7

FRU Bishkek 83.91 314 *i* P **P** **01 39 00.0 -1.0**
FRU *e* 01 49 00.0
FRU *e* 01 50 04.0
FRU *e* 01 50 18.0
FRU pmax pmax
comp=Z,220nm,2.0s,mb5.5

AAK Ala-Archa 83.96 314 P **P** **01 39 01.9 +0.7**
SNR=35

USP Ospenovka 84.09 314 P **P** **01 39 01.7 -0.1**
SNR=101

AML Almayashu 84.44 313 eP **P** **01 39 04.7 +1.1**
comp=Z,240nm,1.1s,mb5.8

AML Almayashu 84.44 313 P **P** **01 39 05.4 +1.7**
SNR=53

EKS2 Erkin-Say 84.48 314⇑ eP **P** **01 39 04.1 +0.2**
comp=Z,127nm,1.1s,mb5.6

EKS2 Erkin-Say 84.48 314 P **P** **01 39 04.8 +1.0**
SNR=60

EGAK Eagle 84.57 23 eP **P** **01 39 03.7 -0.1**
comp=Z,62nm,1.2s,mb5.2

SIT Sitka 84.61 32 eP **P** **01 39 02.5 -1.7**
comp=Z,46nm,0.7s,mb5.3

SIT Sitka 84.61 32 eP **P** **01 39 02.5 -1.6**
SIT pmax pmax
comp=Z,46nm,0.7s,mb5.3

BHJ Bhuj 84.77 294 eP **P** **01 39 05.1 -0.6**
BHJ AMb AMB 01 39 08.0
comp=Z,144nm,1.5s,mb5.5

DAWY Dawson 85.02 24 eP **P** **01 39 06.3 +0.3**
DIB Dawson Inlet, 85.14 36 T 03 12 57.2
SNR=12

SKAG Skagway 85.31 29 eP **P** **01 39 08.3 +0.7**
comp=Z,72nm,1.1s,mb5.3

CRAG Craig 85.35 33 eP **P** **01 39 08.2 +0.4**
comp=Z,37nm,0.8s,mb5.2

MAW Mawson 85.36 203 P **P** **01 39 07.8 +0.1**
comp=Z,6.2nm,0.6s,mb4.5,baz=112,slow=5.1,SNR=16
MAW pP pP 01 39 44.6 -2.8
comp=Z,27nm,0.9s,baz=91,slow=5.5,SNR=9.6
MAW PKKPbc PKKPbc 01 57 11.2 -3.4
comp=Z,3.2nm,0.6s,baz=280,slow=1.5,SNR=8.5
MAW LR LR 02 16 53.7
comp=Z,618nm,18.8s,baz=96,slow=35

MAW Mawson 85.36 203 eP **P** **01 39 07.8 0.0**
comp=Z,11nm,1.5s,mb4.4

MAW epP pP 01 39 44.3 -3.1
MAW Mawson 85.36 203 eP **P** **01 39 07.8 0.0**
MAW e*PP pP 01 39 44.3 -3.1
MAW pmax pmax
comp=Z,11nm,1.5s

WRAK Wrangell Islan 86.01 33 eP **P** **01 39 11.2 +0.1**
comp=Z,184nm,1.3s,mb5.7

KBL Kabul 86.79 305 eP **P** **01 39 12.8 -2.6**
comp=Z,16nm,0.9s,mb4.9

KBL Kabul 86.79 305 eP **P** **01 39 12.8 -2.7**
KBL pmax pmax
comp=Z,16nm,0.9s,mb4.8

KK31 Karatay Array 86.92 314 *i* P **P** **01 39 15.2 -0.7**
KK31 pmax pmax
comp=Z,21nm,0.8s,mb5.0

DLBC Dease Lake 87.70 31 P **P** **01 39 19.8 +0.5**
comp=Z,35nm,0.9s,mb5.2,baz=263,slow=4.4,SNR=26

DLBC Dease Lake 87.70 31 eP **P** **01 39 19.2 0.0**
VOSK Vostochnaya 88.22 323 P **P** **01 39 19.9 -1.9**
VOSK pmax pmax
comp=Z,11nm,1.0s,mb4.6

BVA0 Borovoye Array 88.63 323 *i* P **P** **01 39 22.2 -1.5**
BVA0 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5

INK Inuvik 88.64 21 eP **P** **01 39 22.4 -1.0**
comp=Z,2μm,1.4s

KRMB Red Mountain 88.68 48 eP **P** **01 39 25.2 +0.9**
BRVK Borovoye 88.69 323 P **P** **01 39 23.3 -0.7**
SNR=12

BRVK Borovoye 88.69 323 eP **P** **01 39 22.7 -1.4**
comp=Z,23nm,0.9s,mb5.1

BRVK epP pP 01 40 03.7 -0.3
BRVK ePP PP 01 42 55.8 +0.7
BRVK Borovoye 88.69 323 eP **P** **01 39 22.7 -1.4**
BRVK e*PP pP 01 40 03.7 -0.3
BRVK e 01 42 55.8
BRVK pmax pmax
comp=Z,23nm,0.9s,mb5.1

KCPM Cahto Peak 88.70 50 eP **P** **01 39 24.6 +0.2**
KIPM Iron Peak 88.79 50 eP **P** **01 39 25.8 +1.0**
NLWA Neilton Lookou 89.47 43 eP **P** **01 39 27.9 +0.1**
comp=Z,85nm,1.2s,mb5.5

COR Corvallis 89.50 45 eP **P** **01 39 27.6 -0.5**
comp=Z,71nm,1.3s,mb5.4

COR Corvallis 89.50 45 eP **P** **01 39 27.6 -0.5**
COR pmax pmax
comp=Z,71nm,1.3s,mb5.4

HUMO Hull Mountain 89.52 47 eP **P** **01 39 28.7 +0.6**
comp=Z,73nm,1.1s,mb5.5

WDC Whiskeytown Da 89.60 49 eP **P** **01 39 28.8 +0.3**
comp=Z,11nm,0.6s,mb5.0

WDC Whiskeytown Da 89.60 49 eP **P** **01 39 28.8 +0.2**
WDC pmax pmax
comp=Z,11nm,0.6s,mb5.0

YBH Yreka Blue Hor 89.60 48 P **P** **01 39 29.4 +0.8**
comp=Z,39nm,1.0s,mb5.3,baz=315,slow=1.4,SNR=40

YBH Yreka Blue Hor 89.60 48 eP **P** **01 39 29.3 +0.7**
comp=Z,82nm,1.3s,mb5.5

YBH Yreka Blue Hor 89.60 48 eP **P** **01 39 29.3 +0.7**
YBH pmax pmax
comp=Z,82nm,1.3s

PGC Sidney 89.90 41 eP **P** **01 39 29.8 -0.1**
comp=Z,86nm,0.7s,mb5.8

LASM Arnica Sink 90.43 48 P **P** **01 39 33.3 +0.9**
HOOD Mount Hood Mea 90.75 45 eP **P** **01 39 34.0 +0.2**
comp=Z,114nm,1.6s,mb5.7

LON Longmire 90.79 43 eP **P** **01 39 33.6 -0.4**
comp=Z,9.7nm,0.7s,mb4.9

LON Longmire 90.79 43 eP **P** **01 39 33.6 -0.4**
LON pmax pmax
comp=Z,10.0nm,0.7s,mb5.0

JCW Jim Creek 90.86 42 eP **P** **01 39 34.5 +0.2**
HTW Haystack Looko 90.92 42 P **P** **01 39 34.8 +0.2**
CMB Columbia Colle 91.00 52⇑ eP **P** **01 39 34.9 -0.3**
comp=Z,44nm,1.3s,mb5.3

CMB Columbia Colle 91.00 52⇑ eP **P** **01 39 34.9 -0.3**
CMB pmax pmax
comp=Z,44nm,1.3s,mb5.3

RPW Rockport 91.16 42 eP **P** **01 39 35.3 -0.3**
CROR Criterion Ridg 91.19 45 P **P** **01 39 36.2 +0.3**
MOD Modoc 91.41 48 eP **P** **01 39 37.3 +0.3**
comp=Z,73nm,1.0s,mb5.7

WRW Wenatchee Ridg 91.53 42 P **P** **01 39 37.5 +0.2**
EBG Ellensburg 91.65 43 P **P** **01 39 38.4 +0.4**
TBM Table Mountain 91.66 43 P **P** **01 39 38.2 +0.2**
ETW Entiat 91.87 43 P **P** **01 39 39.3 +0.3**
PAHR Pah Rah Range 91.92 51 eP **P** **01 39 39.7 +0.3**
comp=Z,78nm,1.4s,mb5.5

WTV Waterville 92.14 43 P **P** **01 39 40.2 0.0**
RSW Rattlesnake Hi 92.28 44 eP **P** **01 39 41.3 +0.4**
HAWA Hanford 92.32 44 eP **P** **01 39 41.4 +0.3**
comp=Z,25nm,0.9s,mb5.2

ISA Isabella 92.35 55 eP **P** **01 39 41.8 +0.4**
comp=Z,59nm,1.5s,mb5.4

ISA Isabella 92.35 55 eP **P** **01 39 41.8 +0.3**
ISA pmax pmax
comp=Z,59nm,1.5s,mb5.4

MTUM Tungsten Hills 92.39 53 eP **P** **01 39 42.6 +0.9**
MWC Mount Wilson 92.59 56 eP **P** **01 39 43.5 +0.9**
comp=Z,95nm,1.1s,mb5.8

MWC Mount Wilson 92.59 56 eP **P** **01 39 43.5 +0.9**
MWC pmax pmax
comp=Z,95nm,1.1s,mb5.8

NVAR Mina Array Bea 92.67 52 P **P** **01 39 43.4 +0.5**
comp=Z,19nm,0.6s,mb5.4,baz=251,slow=6.4,SNR=56
NVAR PP PP 01 43 32.7 +5.7
comp=Z,2.0nm,0.9s,baz=254,slow=8.4,SNR=3.6

NVAR Mina Array Bea 92.67 52 P **P** **01 39 43.4 +0.5**
NVAR PP PP 01 43 32.7 +5.7
WVOR Wild Horse Val 92.68 48 eP **P** **01 39 43.4 +0.5**
comp=Z,83nm,1.4s,mb5.7

WVOR Wild Horse Val 92.68 48 eP **P** **01 39 43.4 +0.5**
WVOR pmax pmax
comp=Z,83nm,1.4s,mb5.7

OD2 Odessa Site #2 92.95 43 eP **P** **01 39 44.0 0.0**
LNOR Lincton Mounta 93.15 44 eP **P** **01 39 45.2 +0.3**
TPH Tonopah 93.50 52 eP **P** **01 39 47.5 +0.8**
comp=Z,33nm,1.1s,mb5.4

TPH Tonopah 93.50 52 eP **P** **01 39 47.5 +0.8**
TPH pmax pmax
comp=Z,33nm,1.1s,mb5.4

SYO Syowa Base 93.51 200⇑ eP **P** **01 39 43.8 -2.3**
BMN Battle Mountai 93.63 50 eP **P** **01 39 47.7 +0.4**
comp=Z,68nm,1.5s,mb5.6

BMN Battle Mountai 93.63 50 P **P** **01 39 48.1 +0.8**
BMN pmax pmax
comp=Z,68nm,1.4s,mb5.6

GSC Goldstone 93.68 55 eP **P** **01 39 48.4 +0.8**
comp=Z,78nm,1.5s,mb5.6

GSC ePP PP 01 43 33.9 -1.0
GSC Goldstone 93.68 55 eP **P** **01 39 48.4 +0.8**
GSC e 01 43 33.9
GSC pmax pmax
comp=Z,78nm,1.5s,mb5.6

BMO Blue Mountains 93.79 45 eP **P** **01 39 47.5 -0.3**
comp=Z,75nm,1.4s,mb5.6

BMO Blue Mountains 93.79 45 P **P** **01 39 47.5 -0.4**
BMO pmax pmax
comp=Z,75nm,1.4s,mb5.6

PFO Pinyon Flat Ob 93.88 57 eP **P** **01 39 49.3 +0.7**
comp=Z,39nm,1.3s,mb5.4

PFO Pinyon Flat Ob 93.88 57 P **P** **01 39 49.5 +0.9**
PFO pmax pmax
comp=Z,39nm,1.3s,mb5.4

NEW Newport 94.07 42 eP **P** **01 39 48.5 -0.5**
comp=Z,52nm,1.4s,mb5.5

NEW Newport 94.07 42 P **P** **01 39 49.2 +0.1**
NEW pmax pmax
comp=Z,52nm,1.3s

TPNV Topopah Spring 94.22 53 eP **P** **01 39 50.5 +0.4**
comp=Z,68nm,1.3s,mb5.6

TPNV ePP PP 01 43 35.5 -3.5
TPNV Topopah Spring 94.22 53 eP **P** **01 39 50.5 +0.5**
TPNV e 01 43 35.6
TPNV pmax pmax
comp=Z,68nm,1.3s,mb5.6

WBK Wadi Bani Khal 94.52 292 P **P** **01 39 51.8 0.0**
SNR=5.3

AB31 Akbulak array 94.81 319 P **P** **01 39 50.5 -2.0**
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.5

LDFC Landfair 95.06 55 eP **P** **01 39 55.4 +1.4**
comp=Z,218nm,1.5s,mb6.2

ELK Elko 95.15 50 eP **P** **01 39 54.4 +0.2**
comp=Z,50nm,1.6s,mb5.5

ELK Elko 95.15 50 P **P** **01 39 54.9 +0.7**
ELK pmax pmax
comp=Z,50nm,1.6s

GLA Glamis 95.22 57 eP **P** **01 39 55.8 +1.1**
comp=Z,70nm,1.4s,mb5.7

GLA ePP PP 01 43 45.5 -1.4
GLA Glamis 95.22 57 eP **P** **01 39 55.8 +1.1**
GLA *e* 01 43 45.5
GLA pmax pmax
comp=Z,70nm,1.4s,mb5.7

BIDO Bidbid 95.34 293 P **P** **01 39 55.2 -0.3**
SNR=5.2

YKA Yellowknife Ar 95.70 28 P **P** **01 39 55.2 -1.0**
comp=Z,8.2nm,0.7s,mb5.2,baz=267,slow=4.7,SNR=32
YKA PKiKP PKiKP 01 44 34.3 -0.6
comp=Z,0.8nm,0.5s,baz=270,slow=1.2,SNR=6.2
YKA LR LR 02 20 32.4
comp=Z,101nm,19.3s,baz=145,slow=34

ARU Arti 95.73 326 eP **P** **01 39 54.4 -2.1**
comp=Z,6.4nm,0.5s,mb5.2

ARU Arti 95.73 326 *d iP* **P** **01 39 54.5 -2.0**
ARU 01 43 48.3
ARU S SKSac 01 50 15.0 -2.5
ARU SP SP 01 52 13.9 -5.3
ARU SS SS 01 57 38.6 +5.4
ARU pmax pmax
comp=Z,19nm,1.2s,mb5.3

HLID Hailey 95.83 47 eP **P** **01 39 57.6 +0.4**
comp=Z,16nm,0.9s,mb5.3

AKTO Aktyubinsk 96.08 320 P **P** **01 39 56.9 -1.3**
AKTO pmax pmax
comp=Z,2.0nm,1.2s,mb4.3

WALA Waterton Lakes 96.21 41 eP **P** **01 39 58.9 +0.1**
comp=Z,42nm,1.1s,mb5.1

ARUT Antelope Range 96.48 53 eP **P** **01 40 01.0 +0.7**
ARUT Antelope Range 96.48 53 P **P** **01 40 01.2 +0.9**
EDM Edmonton 96.53 37 eP **P** **01 40 00.1 0.0**
CCUT Cedar City 96.53 53 eP **P** **01 40 01.6 +1.0**
CHMT Chamberlain Mo 96.66 43 eP **P** **01 40 00.4 -0.5**
BGU Big Grassy Mou 96.83 49 eP **P** **01 40 01.8 -0.1**
MCMT McKenzie Canyo 96.96 46 eP **P** **01 40 02.9 +0.6**
DUG Dugway 96.99 50 eP **P** **01 40 02.8 +0.2**
comp=Z,11nm,1.0s,mb5.1

DUG Dugway 96.99 50 eP **P** **01 40 02.8 +0.2**
DUG pmax pmax
comp=Z,11nm,1.0s,mb5.1

HVU Hansel Valley 97.02 49 eP **P** **01 40 02.7 0.0**
comp=Z,18nm,1.1s,mb5.3

HVU Hansel Valley 97.02 49 eP **P** **01 40 02.7 0.0**
HVU pmax pmax
comp=Z,18nm,1.1s,mb5.3

MSU Marysvale 97.48 52 eP **P** **01 40 05.9 +1.1**
MSU ePP PP 01 44 02.6 -1.5
NLU North Lily Min 97.56 50 eP **P** **01 40 02.4 -2.8**
HRY Holter Researc 97.64 44 eP **P** **01 40 05.8 +0.5**
BOZ Bozeman (W) 97.81 45 eP **P** **01 40 06.3 +0.1**
comp=Z,4.4nm,0.6s,mb5.1

BOZ Bozeman (W) 97.81 45 eP **P** **01 40 06.3 +0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.6s,mb5.0

HWUT Hardware Ranch 97.93 49 eP **P** **01 40 06.5 -0.3**
comp=Z,15nm,1.2s,mb5.3

QLMT Earthquake Lak 97.97 46 eP **P** **01 40 07.5 +0.6**
JLU Jordanelle 98.03 50 eP **P** **01 40 07.8 +0.6**
RRI2 Red Ridge 98.08 47 eP **P** **01 40 07.9 +0.5**
comp=Z,9.3nm,0.8s,mb5.3

WUAZ Wupatki 98.12 55 eP **P** **01 40 08.2 +0.4**
comp=Z,26nm,1.2s,mb5.5

DCID1 Drake Creek 98.17 47 eP **P** **01 40 08.8 +1.0**
comp=Z,7.4nm,0.6s,mb5.3

DAU Daniels Canyon 98.18 50 eP **P** **01 40 08.5 +0.6**
AHID Auburn Hatcher 98.25 48 eP **P** **01 40 07.9 -0.3**
comp=Z,17nm,1.2s,mb5.3

YMR Madison River 98.30 46 eP **P** **01 40 09.3 +0.9**
comp=Z,12nm,1.0s,mb5.3

IMW Indian Meadow 98.34 46 eP **P** **01 40 09.1 +0.5**
comp=Z,16nm,1.3s,mb5.3

TPAW Teton Pass 98.34 47 eP **P** **01 40 09.3 +0.7**
comp=Z,5.8nm,0.7s,mb5.1

YFT Old Faithful 98.40 46 eP **P** **01 40 08.6 -0.3**
REDW Red Top Meadow 98.42 47 eP **P** **01 40 09.2 +0.3**
comp=Z,31nm,1.4s,mb5.5

MOOW Moose Ponds 98.49 47 eP **P** **01 40 09.1 -0.1**
comp=Z,3.8nm,0.8s,mb4.9

SNOW Snow King Moun 98.49 47 eP **P** **01 40 09.8 +0.5**
comp=Z,14nm,1.3s,mb5.2

YNR Norris Junctio 98.50 46 eP **P** **01 40 06.1 -3.2**
LOHW Long Hollow 98.59 47 eP **P** **01 40 10.0 +0.3**
comp=Z,11nm,1.3s,mb5.1

SRU San Rafael 98.77 51 eP **P** **01 40 10.2 -0.3**
comp=Z,4.4nm,0.6s,mb5.1

SRU San Rafael 98.77 51 P **P** **01 40 11.0 +0.4**
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.9

EGMT Eagleton 99.00 42 eP **P** **01 40 10.6 -0.8**
comp=Z,30nm,1.4s,mb5.5

GCMT Greycliff 99.17 45 ePdif Pdif 01 40 13.2 +1.2
BW06 Boulder Array 99.39 48 ePdif Pdif 01 40 12.4 -0.6
comp=Z,12nm,0.9s

PDAR Pinedale Array 99.39 48 P Pdif 01 40 12.7 -0.3
comp=Z,7.3nm,0.7s,baz=235,slow=2.2,SNR=46
PDAR PP PP 01 44 17.6 -0.9
comp=Z,0.9nm,0.8s,baz=263,slow=5.4,SNR=4.4
PDAR PKKPbc PKKPbc 01 56 36.4 -1.3
comp=Z,0.2nm,0.4s,baz=102,slow=3.8,SNR=4.9
PDAR LR LR 02 22 03.1
comp=Z,416nm,19.0s,baz=3.3,slow=33

RLMT Red Lodge 99.49 45 ePdif Pdif 01 40 14.0 +0.5
comp=Z,4.9nm,1.0s

PV10 Paradox Valley 99.94 52 ePdif Pdif 01 40 15.4 -0.1
PV01 Paradox Valley 100.32 52 ePdif Pdif 01 40 18.0 +0.9
MVCO Mesa Verde 100.41 53 ePdif Pdif 01 40 19.0 +1.4
comp=Z,14nm,0.6s

RES Resolute Bay 100.49 14 ePdif Pdif 01 40 16.9 -1.1
comp=Z,1μm,2.1s

RES Resolute Bay 100.49 14 eP Pdif 01 40 16.9 -1.0
RES pmax pmax
comp=Z,1μm,2.1s

RWWY Rawlins 101.19 49 ePdif Pdif 01 40 21.2 +0.3
comp=Z,33nm,1.4s

SMCO Snowmass 101.52 51 ePdif Pdif 01 40 23.5 +1.0
comp=Z,11nm,0.9s

LAZ Ladron 101.62 56 ePdif Pdif 01 40 25.4 +2.4
SNAA Sanae 102.04 188 ePdif Pdif 01 40 22.1 -2.7
BNM Barren Site 102.06 56 ePdif Pdif 01 40 28.4 +3.5
ANMO Albuquerque 102.16 55 ePdif Pdif 01 40 27.8 +2.5
comp=Z,1.9nm,0.8s

ANMO Albuquerque 102.16 55 eP Pdif 01 40 27.8 +2.5
ANMO pmax pmax
comp=Z,2.0nm,0.8s

ISCO Idaho Springs 102.53 50 ePdif Pdif 01 40 28.1 +1.2
comp=Z,6.8nm,1.3s

ISCO Idaho Springs 102.53 50 P Pdif 01 40 28.3 +1.3
ISCO pmax pmax
comp=Z,7.0nm,1.2s

SDCO Great Sand Dun 102.77 53 ePdif Pdif 01 40 29.3 +1.2
comp=Z,20nm,1.6s

FFC Flin Flon 103.06 35 ePdif Pdif 01 40 29.3 -0.1
VNA3 Neumayer Olymp 103.27 186 ePdiff Pdif 01 40 30.1 -0.2
VNA3 *e* 01 40 39.6
VNA3 *e* 01 44 49.7
VNA3 *e* 01 56 23.2

RSSD Black Hills 103.29 46 ePdif Pdif 01 40 30.7 +0.3
comp=Z,11nm,0.8s

RSSD Black Hills 103.29 46 P Pdif 01 40 30.9 +0.5
RSSD pmax pmax
comp=Z,11nm,0.8s

VNA2 Neumayer--Watz 103.31 187 ePdiff Pdif 01 40 31.0 +0.5
VNA2 *e* 01 40 40.4
VNA2 *e* 01 44 50.1
VNA2 *e* 01 56 23.5

TXAR Lajitas Array 104.81 61 Pdiff Pdif 01 40 41.0 +3.9
comp=Z,0.5nm,0.5s,baz=285,slow=2.8,SNR=6.7
TXAR PKiKP PKiKP 01 44 52.9 +0.5
comp=Z,0.2nm,0.6s,baz=224,slow=2.5,SNR=2.7
TXAR PP PP 01 44 58.8 -0.8
comp=Z,0.6nm,0.7s,baz=287,slow=6.2,SNR=4.8
TXAR PKKPbc PKKPbc 01 56 21.9 +0.6
comp=Z,1.0nm,0.8s,baz=111,slow=4.9,SNR=6.0

FCC Fort Churchill 106.26 30 ePdif Pdif 01 40 42.8 -0.8
ARCES ARCESS Array B 106.49 343 Pdiff Pdif 01 40 43.9 -0.7
comp=Z,3.7nm,0.9s,baz=54,slow=8.2,SNR=8.2
ARCES PKiKP PKiKP 01 44 53.1 -1.2
comp=Z,2.4nm,0.5s,baz=48,slow=2.2,SNR=14

KIV Kislovodsk 107.06 315⇑ P PP 01 45 14.6 -1.0
KIV Kislovodsk 107.06 315 eP Pdif 01 40 49.0 +1.9
KIV *e* 01 45 16.3
KIV ePS PS 01 54 31.4 -8.2

KIV pmax pmax
comp=Z,6.0nm,1.4s
KIV MLR MLR
comp=Z,200nm,19.0s
KIV Kislovodsk 107.06 315⇑*iP* PP 01 45 14.6 -1.0
JOF Joensuu 107.72 336 *ep* Pdif 01 40 47.9 -2.1
comp=Z,1.3nm,0.4s
JOF Joensuu 107.72 336 *eP* Pdif 01 40 47.9 -2.1
JOF pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 108.16 327 *eP* Pdif 01 40 52.0 0.0
OBN *e* 01 45 22.2
OBN *e*PS PS 01 54 49.9 -0.3
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,300nm,19.0s
WMOK Wichita Mounta 108.47 55 *e*PKP PKiKP 01 44 58.8 -0.2
ECSD EROS,Sioux Fal 108.65 45 *e*PKP PKiKP 01 44 58.6 -0.5
KAF Kangasniemi 110.15 336 *ep* Pdif 01 40 59.3 -1.5
comp=Z,1.7nm,0.4s
KAF Kangasniemi 110.15 336 *ep* PKiKP 01 45 00.2 -1.1
comp=Z,0.7nm,0.4s
KAF Kangasniemi 110.15 336 *eP* Pdif 01 40 59.3 -1.5
KAF pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 113.89 324 PKiKP PKiKP 01 45 07.3 -1.4
comp=Z,4.1nm,0.5s,baz=54,slow=2.7,SNR=17
AKASG PP PP 01 46 02.9 -1.5
comp=Z,0.4nm,0.3s,baz=60,slow=4.7,SNR=5.1
AKASG Malin Array Be 113.89 324 PKPdf PKiKP 01 45 07.3 -1.4
AKASG PP PP 01 46 02.9 -1.5
AKBB Malin Array Si 113.89 324 *e*PKP PKiKP 01 45 08.0 -0.7
BRTR Keskin Array B 114.58 312 PKP PKiKP 01 45 09.1 -1.4
comp=Z,1.6nm,0.5s
ANTO Ankara 115.17 312 *e*PKPdf PKPdf 01 45 10.8 -0.7
ANTO Ankara 115.17 312⇑*iP* PKiKP 01 45 11.1 -0.5
CSS Prodhromos 115.99 307 *e*PKPdf PKPdf 01 45 12.4 -0.9
TLCR 116.26 319⇓*iP* PKPdf 01 45 13.0 -0.5
TLCR 116.26 319⇓*iP* PKPdf 01 45 13.0 -0.5
NB2 NORSAR Subarra116.50 340 PKPdf PKPdf 01 45 12.4 -1.1
comp=Z,4.6nm,0.7s,baz=45,slow=1.9
NB2 NORSAR Subarra116.50 340 PKPdf PKPdf 01 45 12.4 -1.1
baz=45,slow=1.9
NOA NORSAR Array B116.50 340 PKP PKPdf 01 45 12.2 -1.3
comp=Z,4.6nm,0.6s,baz=47,slow=1.9,SNR=17
NAO01 NORSAR Array S116.75 340 *e*PKPdf PKPdf 01 45 13.2 -0.8
WVT Waverly 116.98 52 *e*PKPdf PKPdf 01 45 14.0 -1.1
HARR Harsova 117.03 318⇑*iP* PKPdf 01 45 14.7 -0.3
HARR Harsova 117.03 318⇑*iP* PKPdf 01 45 14.7 -0.3
BLO Bloomington 117.13 48 *e*PKPdf PKPdf 01 45 15.1 -0.2
PLOR Plostina 117.41 320⇓*iP* PKPdf 01 45 16.7 +1.0
BUR08 Bucovina Ar. S 117.57 322 *e*PKPdf PKPdf 01 45 16.3 +0.4
BURAR Bucovina Array 117.57 322⇓*iP* PKPdf 01 45 15.7 -0.2
BURAR Bucovina Array 117.57 322⇓*iP* PKPdf 01 45 15.7 -0.2
WCI Wyandotte Cave 117.58 49 *e*PKPdf PKPdf 01 45 15.6 -0.7
MLR Muntele Rosu 118.01 320⇑*iP* PKPdf 01 45 16.1 -0.7
MLR Muntele Rosu 118.01 320⇑*iP* PKPdf 01 45 16.1 -0.7
VOIR 118.60 320⇑*iP* PKPdf 01 45 18.2 +0.2
KOLS Kolonicke sedl 118.71 325 *e*PKP PKPdf 01 45 17.5 -0.6
TRPA Tarpa 118.94 324⇑*iP* PKPdf 01 45 17.7 -0.9
BOSA Boshof 119.02 234 PKP PKPdf 01 45 18.8 -0.5
comp=Z,2.9nm,0.6s,baz=100,slow=3.3,SNR=11
BOSA PKKPbc PKKPbc 01 55 34.3 -0.1
comp=Z,2.4nm,0.6s,baz=306,slow=3.7,SNR=5.8
BOSA Boshof 119.02 234 *e*PKIKP PKPdf 01 45 19.4 +0.1
STHS Stebnicka Huta 119.06 326 *e*PKP PKPdf 01 45 18.5 -0.2
CRVS Cervenica-Dubn 119.19 325 *e*PKP PKPdf 01 45 18.0 -1.0
OJC Ojcow 119.45 327 *e*PKP PKPdf 01 45 19.4 -0.1
DRGR 119.47 322⇓*iP* PKPdf 01 45 18.8 -0.8
DRGR 119.47 322⇓*iP* PKPdf 01 45 18.8 -0.8
NIE Niedzica 119.58 326 *e*PKP PKPdf 01 45 20.1 +0.4
LBTB Lobatse 120.13 238 *e*PKPdf PKPdf 01 45 20.8 -0.7
PLCA Paso Flores 120.39 143 PKP PKPdf 01 45 21.5 -0.1
comp=Z,2.1nm,0.7s,baz=210,slow=2.5,SNR=5.9
PLCA pPKP pPKPdf 01 46 00.8 -2.6
comp=Z,4.0nm,1.0s,baz=13,slow=3.9,SNR=2.6
PLCA PKKPbc PKKPbc 01 55 29.8 -0.1
comp=Z,3.1nm,1.1s,baz=69,slow=2.7,SNR=3.3
PLCA Paso Flores 120.39 143 *e*PKIKP PKPdf 01 45 21.9 +0.3
OKC Ostrava-Krasne 120.55 327 *e*PKPdf PKPdf 01 45 20.5 -1.1
PSZ Piszkesteto 120.59 325 *e*PKPdf PKPdf 01 45 21.5 -0.2
PSZ Piszkesteto 120.59 325⇑*iP* PKPdf 01 45 20.3 -1.4
BZS Buzias 120.69 322⇑*iP* PKPdf 01 45 21.2 -0.8
BZS Buzias 120.69 322⇑*iP* PKPdf 01 45 21.2 -0.8
LSZ Lusaka 120.89 249 *e*PKPdf PKPdf 01 45 23.1 -0.1
VYHS Vyhne 120.90 326 *e*PKP PKPdf 01 45 21.6 -0.7
MORC Moravsky Berou 120.91 327 *e*PKPdf PKPdf 01 45 21.4 -0.9
MORC Moravsky Berou 120.91 327⇑*iP* PKPdf 01 45 23.4 +1.1
LRW Lerwick 120.99 345 *eP* PKPdf 01 45 21.2 -1.0
WAL1 Walls 121.00 345 *eP* PKPdf 01 45 21.7 -0.4
SCHQ Schefferville 121.03 25 PKP PKPdf 01 45 20.9 -1.5
comp=Z,5.1nm,0.9s,baz=304,slow=8.9,SNR=4.6
KOLL Kolacno 121.09 326 *e*PKP PKPdf 01 45 21.2 -1.5
DPC Dobruska-Polom 121.23 328 *e*PKPdf PKPdf 01 45 22.9 0.0
UPC Upice 121.30 329 *e*PKPdf PKPdf 01 45 22.5 -0.5
UPC *ex* x 01 46 15.1
ZKR Zakros 121.57 309 P PKPdf 01 45 24.2 +0.2
SMOL Smolenice 121.67 326 *e*PKP PKPdf 01 45 23.4 -0.4
BSEG Bad Segeberg 121.82 334 *e*PKPdf PKPdf 01 45 24.2 +0.3
MODS Modra-Piesok 121.83 326 *e*PKP PKPdf 01 45 23.9 -0.2
VAY Valandovo 121.97 317 *e*PKP PKPdf 01 45 21.4 -3.2
PVCC Panska Ves 122.03 329 *e*PKPdf PKPdf 01 45 24.2 -0.2
ZST Bratislava 122.03 326 *e*PKP PKPdf 01 45 23.2 -1.3
STIP Stip 122.07 317 *e*PKP PKPdf 01 45 23.9 -0.8
LAST Lasithi 122.12 309 P PKPdf 01 45 24.7 -0.4
BRG Berggiesshubel 122.13 330 *i* PKP PKPdf 01 45 24.4 -0.2
BRG PP PP 01 47 08.0 +6.9
BRG *i* 01 47 56.0
BRG *i* 01 56 56.0
BRG *i* 01 57 47.0
BRG SS 02 04 13.0
BRG LR LR
comp=Z,370nm,26.7s
BRG Berggiesshubel 122.13 330 *i* PKIKP PKPdf 01 45 24.4 -0.2
BRG 01 47 08.0
BRG *i* 01 56 56.0
BRG SS 02 04 13.0
BRG pmax pmax
comp=Z,24nm,1.5s
BRG MLR MLR
comp=N,225nm,16.1s
BRG MLR MLR
comp=E,201nm,21.3s
BRG MLR MLR
comp=Z,368nm,26.7s
BRG Berggiesshubel 122.13 330 *e*PKPdf PKPdf 01 45 24.3 -0.3
BRG Berggiesshubel 122.13 330 *i* PKP PKPdf 01 45 24.4 -0.2
comp=Z,41nm,1.5s
BRG PP PP 01 47 08.0 +6.9
BRG *i* 01 47 56.0
BRG *i* 01 56 56.0
BRG *i* 01 57 47.0
BRG SS 02 04 13.0
BRG
comp=N,376nm,16.1s
BRG
comp=E,336nm,21.3s
BRG
comp=Z,615nm,26.7s
PKSM Moragy 122.20 323⇑*iP* PKPdf 01 45 23.9 -0.9
PKSM Moragy 122.20 323⇑*iP* PKPdf 01 45 23.9 -1.0
TREC Trest 122.28 328 *e*PKPdf PKPdf 01 45 24.7 -0.2
BLA Blacksburg 122.31 48 *e*PKPdf PKPdf 01 45 24.6 -0.8
CLL Collm 122.32 331 *i* PKP PKPdf 01 45 24.7 -0.3
CLL *e*PP PP 01 47 07.0 +4.7
CLL Collm 122.32 331 *i* PKIKP PKPdf 01 45 24.7 -0.3
CLL *e* 01 47 07.0
CLL pmax pmax
comp=Z,12nm,0.6s
CLL Collm 122.32 331 *e*PKPdf PKPdf 01 45 24.5 -0.5
CLL Collm 122.32 331 *i* PKPdf PKPdf 01 45 24.7 -0.3
comp=Z,12nm,0.6s
CLL *e*PP PP 01 47 07.0 +4.7
CLL *es*PP 01 48 00.0
CLL *e*PPP 01 49 42.0
CLL *es*PPP 01 50 34.0
CLL *e*PS PS 01 56 54.0 -5.3
CLL *es*PS 01 57 42.0
CLL *e*(PPS) 01 58 44.0
CLL *e*SS SS 02 03 36.0 +6.6
CLL *e*(sSS) 02 04 16.0
CLL *e*SSS 02 08 12.0
CLL LmV 02 40 00.0
comp=Z,400nm,19.5s
PRU Pruhonice 122.37 329 *e*PKPdf PKPdf 01 45 24.3 -0.8
SKO Skopje 122.46 318 *e*PKP PKPdf 01 45 25.0 -0.5
JSC Jenkinsville 122.66 52 *e*PKPdf PKPdf 01 45 26.1 0.0
SIVA Sivas 122.69 309 P PKPdf 01 45 26.0 -0.2
KRUS Krusevo 122.85 317 *e*PKP PKPdf 01 45 25.8 -0.5
CONA Conrad Observa 122.87 326 *i* PKiKP PKiKP 01 45 25.7 -0.6
comp=Z,9.9nm,0.5s,SNR=17
CSNA Conrad Observa 122.87 326⇑*iP*KiKP PKiKP 01 45 25.8 -0.5
comp=Z,10nm,0.5s
BIA Bitola 122.95 317 *e*PKP PKPdf 01 45 24.7 -1.8
DID Didima 123.01 312 P PKPdf 01 45 24.7 -2.0
FNA Florina 123.02 317 P PKPdf 01 45 25.5 -1.1
AGG Agios Georgios 123.08 314 P PKPdf 01 45 25.4 -1.4
MLA1 Latheron 123.15 345 *eP* PKPdf 01 45 25.8 -0.5
TANN Tannenbergstha 123.16 330 *e*PKPdf PKPdf 01 45 26.1 -0.5
CLZ Clausthal 123.22 333 *e*PKPdf PKPdf 01 45 26.9 +0.2
OHR Ohrid 123.27 317 *e*PKP PKPdf 01 45 25.0 -2.1
NKC Novy Kostel 123.28 330 *e*PKPdf PKPdf 01 45 26.4 -0.4
KHC Kasperske Hory 123.39 328 *e*PKPdf PKPdf 01 45 26.9 -0.2
MOX Moxa 123.42 331 *e*PKP PKPdf 01 45 27.0 -0.1
MOX
comp=Z,300nm,20.0s
GEC2 GERESS Array S 123.50 328 *e*PKPdf PKPdf 01 45 26.8 -0.5
GEC2 GERESS Array S 123.50 328 *e*PKPdf PKPdf 01 45 26.9 -0.4
GERES GERESS Array B 123.50 328 PKP PKPdf 01 45 26.8 -0.5
comp=Z,10nm,0.5s,baz=72,slow=3.2,SNR=86
MANZ Manzenberg 123.60 330 *e*PKPdf PKPdf 01 45 27.4 -0.1
MVH1 Achvaich 123.69 345 *eP* PKPdf 01 45 26.6 -0.8
ROTZ Rotzenmuhle 123.69 330 *e*PKPdf PKPdf 01 45 27.6 0.0
WET Wettzell 123.74 329 *e*PKPdf PKPdf 01 45 27.7 0.0
MCD Coleburn Disti 123.74 344 *eP* PKPdf 01 45 26.6 -0.9
MOA Molln 123.79 327⇑*i*PKiKP PKiKP 01 45 27.7 -0.5
comp=Z,4.6nm,0.6s
MME1 Meikle Cairn 123.90 344 *eP* PKPdf 01 45 26.7 -1.1
PERS Pernice 124.02 325 *i* PKPdf PKPdf 01 45 27.4 -0.9
SOKA Soboth 124.05 325⇑*i*PKiKP PKiKP 01 45 28.6 -0.1
comp=Z,8.3nm,0.7s
UBBA Unterbreizbach 124.08 332 *e*PKPdf PKPdf 01 45 28.3 0.0
MDO Dochfour 124.16 345 *eP* PKPdf 01 45 27.4 -0.9
GRF Grafenberg Arr 124.23 330 *e*PKPdf PKPdf 01 45 28.6 -0.1
IGT Igoumenitsa 124.28 316 P PKPdf 01 45 28.1 -1.0
CRES Cresnjev 124.28 324 *i* PKPdf PKPdf 01 45 28.4 -0.5
PYL PYLOS 124.34 312 P PKPdf 01 45 27.6 -1.7
KAC Achnashellach 124.35 345 *eP* PKPdf 01 45 28.1 -0.5
OBKA Obir 124.42 325⇑*i*PKiKP PKiKP 01 45 29.2 -0.3
comp=Z,12nm,1.2s
BOJS Bojanci 124.58 324 *i* PKPdf PKPdf 01 45 29.3 -0.1
RJOB Jochberg 124.65 328 *e*PKPdf PKPdf 01 45 29.0 -0.5
LJU Ljubljana 124.69 325 *i* PKPdf PKPdf 01 45 29.3 -0.3
KBA Koelnbreinsper 124.75 327⇑*i*PKiKP PKiKP 01 45 29.3 -0.8
comp=Z,9.4nm,0.5s
MYKA Terra Mystica 124.85 326⇓*i*PKiKP PKiKP 01 45 29.1 -1.2
comp=Z,5.7nm,0.6s
LBNH Lisbon 124.93 37 *e*PKPdf PKPdf 01 45 30.3 +0.1
EBH Black Hill 124.97 344 *eP* PKPdf 01 45 29.0 -0.9
KAR1 Arisaig 125.00 345 *eP* PKPdf 01 45 29.4 -0.5
FUR Furstenfeldbru 125.18 329 *e*PKPdf PKPdf 01 45 30.8 +0.3
TNS Taunus Mts 125.21 332 *e*PKPdf PKPdf 01 45 30.6 +0.1
EAB Aberfoyle 125.25 344 *eP* PKPdf 01 45 29.7 -0.7
EAU Auchinoon 125.30 343 *eP* PKPdf 01 45 30.1 -0.4
ABTA Abfaltersbach 125.41 327⇑*i*PKPdf PKPdf 01 45 30.1 -0.9
comp=Z,14nm,0.7s,SNR=9.3
WATA Walderalm 125.55 328⇑*i*PKiKP PKiKP 01 45 30.9 -0.7
comp=Z,14nm,0.5s
WTTA Wattenberg 125.56 328⇑*i*PKiKP PKiKP 01 45 31.2 -0.5
comp=Z,19nm,0.6s,SNR=6.7
ESK Eskdalemuir 125.69 343 *e*PKPdf PKPdf 01 45 30.8 -0.4
MOTA Moosalm 125.79 328⇑*i*PKiKP PKiKP 01 45 31.4 -0.8
comp=Z,18nm,0.6s,SNR=20
SQTA Sankt Quirin 125.82 328⇑*i*PKiKP PKiKP 01 45 32.0 -0.2
STU Stuttgart 125.84 330 *e*PKPdf PKPdf 01 45 31.8 +0.1
STU Stuttgart 125.84 330 *e*PKPdf PKPdf 01 45 31.6 -0.2
RETA Reutte 125.88 328⇑*i*PKiKP PKiKP 01 45 31.9 -0.5
comp=Z,5.4nm,0.6s
PKME Peaks-Kenny Pk 125.91 35 *e*PKPdf PKPdf 01 45 32.5 +0.5
MEM Membach 126.05 334 PKP PKPdf 01 45 32.2 +0.1
FETA Feichten 126.20 328⇓*i*PKiKP PKiKP 01 45 32.5 -0.4
comp=Z,18nm,0.7s
CTI Castel Tesino 126.31 326 PKP PKPdf 01 45 32.7 -0.1
RGNG Rignano Grg 126.44 320 PKP PKPdf 01 45 32.7 -0.5
DAVA Damuels 126.47 329⇑*i*PKiKP PKiKP 01 45 33.4 -0.1
comp=Z,18nm,0.9s,SNR=9.9
BCLA Clavier 126.49 334 PKP PKPdf 01 45 33.2 +0.3
BFO Black Forest 126.56 330 *e*PKPdf PKPdf 01 45 32.7 -0.4
UCC Uccle 126.62 335 PKP PKPdf 01 45 32.8 -0.4
WLF Walferdange 126.66 333 PKP PKPdf 01 45 34.0 +0.6
WLF Walferdange 126.66 333 *e*PKIKP PKPdf 01 45 33.8 +0.5
WLF Walferdange 126.66 333 *e*PKPdf PKPdf 01 45 34.0 +0.7
LHO Holmfirth 126.77 341 *eP* PKPdf 01 45 32.0 -1.4
SNF Seneffe 126.87 335 PKP PKPdf 01 45 34.3 +0.6
TIP Timpagrande 126.90 317 *e*PKPdf PKPdf 01 45 34.4 +0.2
GIVF Givet 126.94 334 *e*PKP1 PKPdf 01 45 32.8 -1.0
comp=Z,69nm,1.1s
CDF Champ du Feu 127.02 331 *e*PKP1 PKPdf 01 45 32.5 -1.5
comp=Z,19nm,0.8s
DOU Dourbes 127.04 334 PKP PKPdf 01 45 34.0 0.0
SGO Sicignano 127.19 319 PKP PKPdf 01 45 33.9 -0.7
ECH Echery 127.21 331 *e*PKPdf PKPdf 01 45 34.1 -0.4
BAIF Baives 127.23 334 *e*PKP1 PKPdf 01 45 33.2 -1.2
comp=Z,78nm,1.4s
TUE Stuetta 127.28 328 *e*PKPdf PKPdf 01 45 34.7 +0.1
PIEI Pieia 127.30 324 PKP PKPdf 01 45 36.3 +1.6
CFAA Coronel Fontan 127.41 136 PKP PKPdf 01 45 35.1 -0.2
comp=Z,0.4nm,0.4s,baz=222,slow=2.2,SNR=5.5
CFAA pPKP pPKPdf 01 46 13.5 -3.7
comp=Z,0.9nm,0.9s,baz=218,slow=1.7,SNR=4.2
AQU L'Aquila 127.44 322 *e*PKPdf PKPdf 01 45 35.9 +0.9
PTQR Pietraquaria 127.63 321 PKP PKPdf 01 45 35.3 -0.1
HINF Hinteralfeld 127.64 331 *e*PKP1 PKPdf 01 45 33.6 -1.6
comp=Z,42nm,1.0s
FIAM Fiamignano 127.67 322 PKP PKPdf 01 45 36.1 +0.6
HAU Haudompre 127.75 331 *e*PKP1 PKPdf 01 45 33.9 -1.5
comp=Z,20nm,0.6s
HAU *e*MLR MLR
comp=Z,324nm,21.5s
HAU Haudompre 127.75 331 *e*PKIKP PKPdf 01 45 33.9 -1.5
HAU MLR MLR
comp=Z,320nm,21.5s
SBD1 Bryn Du 127.76 341 *eP* PKPdf 01 45 36.0 +0.6
HLM1 Long Mynd 127.97 341 *eP* PKPdf 01 45 35.7 0.0
VAI Varese 127.98 328 PKP PKPdf 01 45 35.3 -0.7
MEZF Maizieres J'vi 128.00 333 *e*PKP1 PKPdf 01 45 34.9 -1.0
comp=Z,40nm,0.7s
ATAH Atahualpa 128.44 103 PKP PKiKP 01 45 40.2 +1.8
comp=Z,18nm,1.0s,baz=235,slow=2.5
MCH1 Michaelchurch 128.45 340 *eP* PKPdf 01 45 36.5 -0.2
HTR Trewern Hill 128.47 341 *eP* PKPdf 01 45 36.3 -0.4
HGH Gray Hill 128.69 340 *eP* PKPdf 01 45 36.8 -0.3
NNA Nana 128.75 109 PKP PKPdf 01 45 38.7 +0.4
comp=Z,2.2nm,0.3s,baz=241,slow=2.8,SNR=3.9
NNA Nana 128.75 109 PKP PKPdf 01 45 38.7 +0.4
CABF La Chapelle 128.85 330 *e*PKP1 PKPdf 01 45 36.7 -0.9
comp=Z,114nm,1.4s
LPL La Plagne 129.28 329 *e*PKP1 PKPdf 01 45 37.5 -0.9
comp=Z,16nm,0.5s
LPG La Plagne 129.28 329 *e*PKP1 PKPdf 01 45 37.6 -0.8
comp=Z,16nm,0.5s
LOR Lormes 129.45 332 *e*PKP1 PKPdf 01 45 37.6 -1.1
comp=Z,32nm,0.9s
LOR *e*MLR MLR
comp=Z,342nm,21.5s
LOR Lormes 129.45 332 *e*PKIKP PKPdf 01 45 37.6 -1.1
LOR MLR MLR
comp=Z,340nm,21.5s
OTAV Otavalo 129.47 94 *e*PKPdf PKPdf 01 45 40.2 +0.4
BNI Bardonecchia 129.62 328 *e*PKPdf PKPdf 01 45 39.6 +0.5
SSF Saint Saulge 129.76 332 *e*PKP1 PKPdf 01 45 38.3 -1.0
comp=Z,77nm,1.4s
MBDF Montbardon 129.79 328 *e*PKP1 PKPdf 01 45 38.0 -1.4
comp=Z,13nm,0.7s
SMF Signal de Mont 129.91 332 *e*PKP1 PKPdf 01 45 38.5 -1.1
comp=Z,65nm,1.3s
PGF Pioggiola 129.96 324 *e*PKP1 PKPdf 01 45 38.6 -1.2
comp=Z,37nm,0.5s
SBF Sospel 130.00 327 *e*PKP1 PKPdf 01 45 39.6 -0.3
HYF Humbligny 130.01 333 *e*PKP1 PKPdf 01 45 39.2 -0.6
AVF Avril sur Loir 130.04 332 *e*PKP1 PKPdf 01 45 38.4 -1.4
ORIF Oris-en-Rattie 130.12 329 *e*PKP1 PKPdf 01 45 38.9 -1.2
comp=Z,17nm,0.6s
ORIF *e*MLR MLR
comp=Z,519nm,20.5s
LDF La Druitiere 130.17 336 *e*PKP1 PKPdf 01 45 39.0 -1.0
comp=Z,27nm,0.8s
FLN La Foliniere 130.18 336 *e*PKP1 PKPdf 01 45 38.9 -1.2
comp=Z,29nm,0.6s
FLN *e*MLR MLR
comp=Z,352nm,23.0s
FLN La Foliniere 130.18 336 *e*PKIKP PKPdf 01 45 38.9 -1.2
FLN MLR MLR
comp=Z,350nm,23.0s
BGF Bois d'Agland 130.44 332 *e*PKP1 PKPdf 01 45 39.6 -1.0
comp=Z,22nm,0.6s
GRR Gorron 130.63 336 *e*PKP1 PKPdf 01 45 39.8 -1.1
comp=Z,28nm,0.6s
FRF La Foret Royal 130.63 327 *e*PKP1 PKPdf 01 45 39.6 -1.5
VIVF Saint-Julien-l 130.78 329 *e*PKP1 PKPdf 01 45 40.2 -1.1
LMR La Mourre 130.86 327 *e*PKP1 PKPdf 01 45 40.2 -1.3
comp=Z,20nm,0.6s
TCF Toulx Ste Croi 130.94 332 *e*PKP1 PKPdf 01 45 40.6 -1.0
comp=Z,40nm,0.9s
SGMF Saint Gilles 131.41 337 *e*PKP1 PKPdf 01 45 41.1 -1.3
comp=Z,25nm,0.6s
VSL Villasalto 131.58 321 *e*PKPdf PKPdf 01 45 43.1 +0.1
ROSF Rostrenen 131.61 338 *e*PKP1 PKPdf 01 45 41.3 -1.5
comp=Z,123nm,1.5s
LVC Limon Verde 131.74 126 PKP PKPdf 01 45 45.2 +1.4
comp=Z,5.5nm,0.6s,baz=280,slow=3.7,SNR=5.7
LVC pPKP pPKPdf 01 46 22.2 -3.5
comp=Z,10nm,1.1s,baz=278,slow=3.2,SNR=2.7
LVC SKPdb 01 48 58.1
comp=Z,2.4nm,0.4s,baz=190,slow=5.0,SNR=4.5
LVC Limon Verde 131.74 126 *e*PKPdf PKPdf 01 45 44.3 +0.5
LASF Ste Croix 131.75 329 *e*PKP1 PKPdf 01 45 42.7 -0.5
MFF Saint Martin d 131.75 334 *e*PKP1 PKPdf 01 45 42.0 -1.1
comp=Z,13nm,0.5s
QUIF Quistinic 131.92 338 *e*PKP1 PKPdf 01 45 43.2 -0.2
RJF Les Rejaudoux 132.00 332 *e*PKP1 PKPdf 01 45 42.9 -0.7
comp=Z,16nm,0.8s
RJF *e*MLR MLR
comp=Z,394nm,21.0s
RJF Les Rejaudoux 132.00 332 *e*PKIKP PKPdf 01 45 42.9 -0.7
RJF MLR MLR
comp=Z,390nm,21.0s
CAF Calviac 132.02 331 *e*PKP1 PKPdf 01 45 43.2 -0.5
LFF La Frestale 132.63 332 *e*PKP1 PKPdf 01 45 44.1 -0.7
comp=Z,17nm,0.7s
KEST Kesra 133.73 317 PKP PKPdf 01 45 48.1 +0.9
comp=Z,5.5nm,0.9s,baz=87,slow=0.6,SNR=9.3
KEST SKPbc SKPbc 01 49 01.9 +0.4
comp=Z,3.2nm,0.8s,baz=22,slow=1.0,SNR=7.8
ROSC El Rosal 133.89 88 PKP PKPdf 01 45 49.3 +1.2
comp=Z,8.5nm,0.4s,baz=283,slow=18,SNR=6.5
ROSC El Rosal 133.89 88 *e*PKPdf PKPdf 01 45 49.3 +1.2
EPF Esparros 134.26 331 *e*PKP1 PKPdf 01 45 47.3 -0.6
comp=Z,9.2nm,0.7s
ETSF Etsaut 134.79 331 *e*PKP1 PKPdf 01 45 47.9 -1.0
comp=Z,26nm,0.6s
SJPF Ste Jean 134.94 332 *e*PKP1 PKPdf 01 45 48.9 -0.3
comp=Z,20nm,0.7s
LPAZ La Paz 135.23 119 PKhKP 01 45 45.5
comp=Z,2.6nm,0.6s,baz=307,slow=4.5,SNR=5.5
LPAZ PKP PKPdf 01 45 52.4 +1.9
comp=Z,7.6nm,0.6s,baz=344,slow=3.4,SNR=18
LPAZ pPKP pPKPdf 01 46 30.6 -1.8
comp=Z,8.2nm,0.8s,baz=31,slow=5.7,SNR=4.1
LPAZ SKP 01 49 10.6
comp=Z,5.0nm,1.0s,baz=233,slow=1.6,SNR=6.3
LPAZ La Paz 135.23 119 PKP 01 45 45.5
LPAZ *e*PKPdf PKPdf 01 45 49.7 -0.8
LPAZ *ep*PKPdf pPKPdf 01 46 30.6 -1.8
LPAZ *e*SKP 01 49 10.5
SDV Santo Domingo 137.53 82 *e*PKPpre 01 45 47.3
SDV *e*PKPdf PKPdf 01 45 55.0 +0.1
SDV *ep*PKPdf pPKPdf 01 46 33.8 -3.0
SDV *e* 01 48.6
SDV *e*SKP 01 49 17.0
ESDC Sonseca Array 138.91 331 PKhKP 01 45 50.9
comp=Z,0.3nm,0.4s,baz=18,slow=2.5,SNR=4.2
ESDC PKP PKPdf 01 45 57.4 +0.7
comp=Z,1.1nm,0.5s,baz=25,slow=2.4,SNR=9.2
MTE Manteigas 139.92 335 *e*PKPdf PKPdf 01 45 59.4 +0.9
SIV San Ignacio 141.41 123 PKhKP 01 45 55.4
comp=Z,2.8nm,0.6s,baz=247,slow=5.7,SNR=15
SIV PKP PKPdf 01 46 00.9 -0.9
comp=Z,6.8nm,0.6s,baz=248,slow=6.7,SNR=17
SIV pPKP pPKPdf 01 46 41.0 -2.8
comp=Z,6.6nm,0.9s,baz=166,slow=1.9,SNR=2.8
SIV SKPbc SKPbc 01 49 25.0 +0.7
comp=Z,3.8nm,0.9s,baz=180,slow=3.7,SNR=4.3
EVO Evora 141.68 334 *e*PKIKP PKPdf 01 46 00.8 -0.9
comp=Z,68nm,1.4s
EVO *e*MLR MLR
comp=Z,308nm,20.2s
TAM Tamanrasset 142.89 302 *e*PKPdf PKPdf 01 46 00.7 -3.6
ANWB Willy Bob 144.56 66 *e*PKPdf PKPdf 01 46 06.7 -0.6
FDF Fort de France 145.93 71 *eP* PKPdf 01 46 12.4 +2.7
GRGR Grenville 145.97 75 *e*PKPbc PKPbc 01 46 08.9 -1.9
BIM Bigot 146.05 71 *eP* PKPdf 01 46 11.0 +1.0
TCE Chacachacare 146.09 78 *eP* PKiKP 01 46 16.6 +2.2
TCE Chacachacare 146.09 78 *e* PKiKP 01 46 16.6 +2.2
TPP Pointe-a-Pierr 146.43 78 *eP* PKPab 01 46 14.3 +0.8
TPP Pointe-a-Pierr 146.43 78 *e* PKPab 01 46 14.3 +0.8
TRN Trinidad (W) 146.44 78 *eP* PKPab 01 46 12.7 -0.8
TRN Trinidad (W) 146.44 78 *e* PKPab 01 46 12.7 -0.8
TBH Brigand Hill 146.79 78 *eP* PKPab 01 46 16.0 +1.1
TBH Brigand Hill 146.79 78 *e* PKPab 01 46 16.0 +1.1
TPR Prospect 146.97 77 *eP* PKPab 01 46 14.6 -1.0
TPR Prospect 146.97 77 *e* PKPab 01 46 14.6 -1.0
TOA0 Torodi Ar. Sit 149.46 288 *e*PKPbc PKPbc 01 46 18.9 -1.3
TORD Torodi Ar. Bea 149.46 288 PKPbc PKPbc 01 46 19.0 -1.2
comp=Z,71nm,0.7s,baz=82,slow=2.8,SNR=154
TORD pPKPbc pPKPbc 01 46 57.9 -4.0
comp=Z,18nm,0.8s,baz=55,slow=1.6,SNR=1.9
CAM4 Nova Friburgo 149.62 153⇑*iP* PKiKP 01 46 21.5 +0.1
CAM4 *i* 01 46 24.3
CAM4 *i* 01 47 00.4
BDFB Brasilia 151.75 136 PKP PKPdf 01 46 20.0 +0.8
comp=Z,3.6nm,1.0s,baz=170,slow=19,SNR=7.5
BDFB PKPbc PKPbc 01 46 25.4 -0.2
comp=Z,7.6nm,0.5s,baz=210,slow=3.1,SNR=25
BDFB PKPab PKPab 01 46 32.8 -2.1
comp=Z,6.6nm,0.6s,baz=153,slow=2.3,SNR=9.3
BDFB pPKPbc pPKPbc 01 47 03.7 -3.6
comp=Z,12nm,0.8s,baz=157,slow=4.5,SNR=5.6
BDFB pPKPab pPKPab 01 47 13.2 -2.1
comp=Z,10nm,0.8s,baz=68,slow=7.7,SNR=4.2
DBIC Dimbokro 156.83 276 PKP PKPdf 01 46 25.9 -0.4
comp=Z,3.8nm,0.8s,baz=121,slow=3.3,SNR=7.6
DBIC PKPab PKPab 01 46 56.4 -0.5
comp=Z,8.7nm,0.5s,baz=69,slow=5.5,SNR=4.9
DBIC Dimbokro 156.83 276 *e*PKPdf PKPdf 01 46 25.5 -0.8
DBIC *e*PKPab PKPab 01 46 56.2 -0.7
LIC Lamto 157.03 275 *e*PKIKP PKPdf 01 46 26.2 -0.4
comp=Z,30nm,1.2s
LIC *e*MLR MLR
comp=Z,292nm,21.8s
LIC Lamto 157.03 275 *e*PKPdf PKPdf 01 46 26.2 -0.4
LIC LR LR
comp=Z,150nm,21.8s

*NEIC **23** 01:52:30.0, 17.15N×101.15W, h14km, MD4.2(MEX), After MEX.*

MEX 23 01:52:29.9±0.8, 1714N×10115W, h14km±14km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.85**	**96**	*i* P		Pg	01 52 43.2	-3.2
CAIG				*i* S		Sg	01 52 54.0	-3.5
ACX	**Acapulco**	**1.21**	**103**	*i* P		Pn	01 52 50.3	-2.2
ACX				*i* S		Sb	01 53 04.2	-4.1
ACX	**Acapulco**	**1.21**	**103**	*e* P		Pn	01 52 49.3	-3.2
ACX				*i* S		Sb	01 53 04.2	-4.1
PLIG	**Platanillo**	**2.01**	**51**	*i* P		Pn	01 53 00.3	-3.2
PLIG				*i* S		Sn	01 53 23.0	-5.4
MMIG	**Aquila**	**2.38**	**299**	*e* P		Pn	01 53 05.3	-3.3
MMIG				*i* S		Sn	01 53 32.0	-5.6
MOIG	**Morelia**	**2.53**	**359**	*i* P		Pn	01 53 09.3	-1.3
MOIG				*i* S		Sn	01 53 38.1	-3.1
YAIG	**Yautepec**	**2.62**	**49**	*i* P		Pn	01 53 08.3	-3.6
YAIG				*i* S		Sn	01 53 40.0	-3.7
MZVM		**2.74**	**42**	*i* P		Pn	01 53 09.9	-3.7
PNIG	**Pinotepa**	**2.99**	**104**	*i* P		Pn	01 53

VHO	**Vista Hermosa**	**4.23**	**90**	*i* S		Sn	01 54 20.2	-2.9
ZAIG	**Zacatecas**	**5.76**	**347**	*i* P		Pg	01 54 13.4	-6.8
ZAIG				*i* S		Sg	01 55 20.3	-15
CMIG	**Matias Romero**	**6.00**	**90**	*i* P		Pn	01 53 55.1	-3.2

MAN 23 01:53:02, 1130N×12462E, h9km, mb4.2, ML3.0, MS2.8, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.25**	**182**	*e*P	Pg	01 53 08.3	+1.2
OCLP				*e*S	Sg	01 53 12.4	+2.0
PLP	**Palo**	**0.38**	**111** ⇑	*i*P	Pg	01 53 11.3	+1.9
PLP				*i* S	Sg	01 53 18.1	+3.6
LLP	**Lapu-Lapu**	**1.17**	**213**	*e*P	Pb	01 53 23.0	-1.4
LLP				*i* S	Sb	01 53 38.7	-1.0
MSLP	**Maasin**	**1.19**	**168**	*e*P	Pb	01 53 24.1	-0.6
TBP	**Tagbilaran**	**1.77**	**205**	*e*P	Pn	01 53 32.6	-0.2
TBP				*e*S	Sn	01 53 57.8	+2.5
GUIM	**Jordan**	**2.10**	**252**	*e*P	Pn	01 53 37.6	+0.2
PVCP	**Virac**	**2.32**	**349**	*e*P	Pn	01 53 41.5	+1.0
PAGZ	**Pagadian**	**3.64**	**200**	*e*P	Pn	01 53 59.6	+1.0

*ISCJB **23** 01:55:52.6±0.7, 3857N±003×3963E±005, h6km±6km, Error ellipse: s-maj=7.0km s-min=4.2km az=143.6*
*DDA **23** 01:55:52.0, 3858N×3959E, h7km±6km, Md3.2*
*CSEM **23** 01:55:52.2±0.1, 3859N×3960E, h10km, MD3.0, Error ellipse: s-maj=5.4km s-min=2.7km az=82.0*
*ISK **23** 01:55:52.2, 3858N×3961E, h6km, MD3.0*

ISC 23 01:55:53.0±0.7, 3858N±003×3962E±005, h9km±6km, n10, σ1§11/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.36**	**330**	PG	**Pg**	**01 55 59.6**	**-0.5**
PTK				*e*SG	**Sg**	**01 56 05.2**	**+0.2**
ELZG	**Elazig**	**0.51**	**261**	*i* P	**Pg**	**01 56 02.7**	**-0.2**
ELZG				*i* S	**Sg**	**01 56 08.7**	**-0.9**
DIYA	**Diyarbakir**	**0.76**	**149**	*i* P	**Pg**	**01 56 08.2**	**+0.6**
DIYA				*i* S	**Sg**	**01 56 19.3**	**+1.7**
KEMA	**Kemaliye**	**1.12**	**308**	*i* P	**Pg**	**01 56 12.8**	**-1.8**
KEMA				*i* S	**Sg**	**01 56 30.0**	**+0.9**
EZC	**Erzincan**	**1.18**	**7**	*e*PN	**Sn**	**01 56 15.4**	**-0.3**
EZC				*e*SN	**Sn**	**01 56 32.4**	**+0.5**
URFA	**Urfa**	**1.30**	**209**	*e*PN	**Pn**	**01 56 17.4**	**+0.1**
URFA				*e*SN	**Sn**	**01 56 35.7**	**+0.9**
BEST	**Besiri**	**1.47**	**117**	*i* P	**Pn**	**01 56 19.4**	**-0.3**
BEST				*i* S	**Sn**	**01 56 39.3**	**+0.4**
DARE	**Darende-Malaty**	**1.47**	**285**	*e*PN	**Pn**	**01 56 22.6**	**+2.9**
DARE				*e*SN	**Sn**	**01 56 45.0**	**+6.0**
MARD	**Mardin**	**1.56**	**144**	*i* P	**Pn**	**01 56 18.9**	**-2.0**
MARD				*i* S	**Sn**	**01 56 38.9**	**-2.3**
GUMT	**Gumushane**	**1.89**	**357**	*e*PN	**Pn**	**01 56 25.9**	**+0.6**

*ISCJB **23** 02:18:30.2±1.4, 3946N±008×20.33E±0.10, h10km, Error ellipse: s-maj=11.9km s-min=10.6km az=7.5*
*ATH **23** 02:18:30.0, 3941N×2022E, h24km, MD2.9/3*
*CSEM **23** 02:18:31.5±0.6, 3950N×2023E, h25km, MD2.9, Error ellipse: s-maj=16.1km s-min=11.1km az=15.0*

ISC 23 02:18:31.0±1.6, 3944N±010×2022E±009, h14km±8km, n6, σ0§76/10, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.42**	**311**	*e*PB	**Pg**	**02 18 39.5**	**0.0**
JAN	**Janina**	**0.54**	**66**	*e*PN	**Pg**	**02 18 40.9**	**-0.7**
JAN				*e*SN	**Sg**	**02 18 49.2**	**+0.4**
EVR	**Evrytania**	**1.34**	**112**	*e*PN	**Pn**	**02 18 55.1**	**-0.2**
BIA	**Bitola**	**1.79**	**28**	*e*Pn	**Pn**	**02 19 02.7**	**+1.2**
BIA				*e*Sn	**Sn**	**02 19 24.6**	**+0.6**
BIA	**Bitola**	**1.79**	**28**	*e*Pn	**Pn**	**02 19 02.7**	**+1.2**
BIA				*e*Sn	**Sn**	**02 19 24.6**	**+0.6**
KRUS	**Krusevo**	**2.08**	**22**	*e*Pn	**Pn**	**02 19 11.8**	**+6.3**
KRUS				*e*Sn	**Sn**	**02 19 30.0**	**-1.2**

*ISCJB **23** 02:44:00.8±0.6, 1060N±005×6254W±003, h93km±7km, Error ellipse: s-maj=8.1km s-min=4.4km az=162.4*
*NEIC **23** 02:44:01.9, 1064N×6243W, h100km, MD3.1(TRN), After TRN.*
*FUNV **23** 02:44:01.9, 1070N×6249W, h89km, MW3.0*
*TRN **23** 02:44:03.2, 1060N×6239W, h91km, MD3.1*

ISC 23 02:44:01.6±0.6, 1062N±005×6254W±003, h88km±7km, n22, σ1§07/37, 2C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.31**	**84** ⇑	*i*P	**Pn**	**02 44 15.2**	**+0.3**
GUIV				*e*S	**Sn**	**02 44 24.1**	**-0.6**
GUNV	**Guanoco**	**0.60**	**222** ⇓	*i*P	**Pn**	**02 44 19.0**	**+1.9**
GUNV				*e*S	**Sn**	**02 44 31.0**	**+2.4**
CRUV	**Carupano**	**0.69**	**275** ⇑	*e*P	**Pn**	**02 44 18.3**	**+0.4**
CRUV				*e*S	**Sn**	**02 44 29.3**	**-0.8**
TCE	**Chacachacare**	**0.77**	**84**	*e*P	**Pn**	**02 44 19.8**	**+1.1**
TCE				*e*S	**Sn**	**02 44 31.3**	**-0.2**
TPP	**Pointe-a-Pierr**	**1.11**	**106**	*e*P	**Pn**	**02 44 22.6**	**+0.2**
TPP				*e*S	**Sn**	**02 44 38.8**	**+0.7**
TPP	**Pointe-a-Pierr**	**1.11**	**106**	*e*P	**Pn**	**02 44 22.6**	**+0.2**
TPP				*e*S	**Sn**	**02 44 37.5**	**-0.6**
TRN	**Trinidad (W)**	**1.11**	**88**	*e*P	**Pn**	**02 44 22.7**	**+0.2**
TRN				*e*S	**Sn**	**02 44 37.0**	**-1.2**
TBH	**Brigand Hill**	**1.45**	**95**	*e*P	**Pn**	**02 44 26.8**	**+0.2**
TBH				*e*S	**Sn**	**02 44 43.5**	**-2.1**
GRW	**Mount Saint Ca**	**1.76**	**29**	*e*P	**Pn**	**02 44 30.1**	**-0.5**
GRW				*e*S	**Sn**	**02 44 52.1**	**-0.5**
GRW	**Mount Saint Ca**	**1.76**	**29**	*e*P	**Pn**	**02 44 31.5**	**+0.9**
GRW				*e*S	**Sn**	**02 44 52.1**	**-0.5**
TPR	**Prospect**	**1.82**	**72**	*e*P	**Pn**	**02 44 30.3**	**-1.1**
TPR				*e*S	**Sn**	**02 44 53.1**	**-0.9**
TPR	**Prospect**	**1.82**	**72**	*e*P	**Pn**	**02 44 31.8**	**+0.5**
TPR				*e*S	**Sn**	**02 44 53.1**	**-0.9**
GRHS	**Sauteurs**	**1.82**	**29**	*e*P	**Pn**	**02 44 33.2**	**+1.7**
GRHS				*e*S	**Sn**	**02 44 55.0**	**+0.9**
PCRV	**Puerto La Cruz**	**2.11**	**258** ⇓	*e*P	**Pn**	**02 44 35.7**	**+0.4**
PCRV				*e*S	**Sn**	**02 44 59.5**	**-1.5**
RIOV	**Rio Grande**	**2.63**	**164**	*e*P	**Pn**	**02 44 42.8**	**+0.6**
PRGV	**PARIAGUAN**	**2.78**	**229**	*e*P	**Pn**	**02 44 44.9**	**+0.7**
GURV	**El Guri**	**2.89**	**191** ⇓	*e*P	**Pn**	**02 44 46.0**	**+0.3**
CUPV	**Cœpira**	**3.25**	**260**	*e*P	**Pn**	**02 44 51.7**	**+1.2**
CUPV				*e*S	**Sn**	**02 45 26.6**	**-1.6**
MERV	**Las Mercedes**	**3.95**	**250**	*e*S	**Sn**	**02 45 42.9**	**-2.3**
LUEV	**Luepa**	**4.86**	**167**	*e*P	**Pn**	**02 45 11.7**	**-0.7**
CAOV	**Caicara del Or**	**4.97**	**229**	*e*P	**Pn**	**02 45 14.7**	**+0.8**
BAUV	**El Baul**	**5.68**	**253**	*e*P	**Pn**	**02 45 22.6**	**-0.9**

IDC 23 02:44:02.5±2.6, 1629S×17336W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.9/19, mbtmp3.9/5, ML1.7/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=143.4km s-min=22.8km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.82**	**33**	Pn	Pn	02 44 47.4	-1.5
	6.2nm,0.3s,baz=225,slow=2.9,SNR=3.0						
AFI				Sn	Sn	02 45 15.6	-8.0
	30nm,0.3s,baz=230,slow=23,SNR=11						
RAR	**Rarotonga**	**13.77**	**113**	LR	LR	02 50 37.5	
	comp=Z,167nm,20.2s,baz=204,slow=29						
HNR	**Honiara**	**26.88**	**281**	LR	LR	02 58 05.1	
	comp=Z,106nm,20.8s,baz=242,slow=31						
STKA	**Stephens Creek**	**43.63**	**241**	P	P	02 52 09.1	+0.1
	1.8nm,0.5s,baz=112,slow=5.4,SNR=3.8						
WRA	**Warramunga Arr**	**49.68**	**257**	P	P	02 52 55.5	-1.1
	0.5nm,0.3s,baz=93,slow=7.1,SNR=3.0						
ASAR	**Alice Springs**	**49.88**	**253**	P	P	02 52 57.6	-0.5
	3.4nm,0.6s,baz=88,slow=8.1,SNR=31						
PDAR	**Pinedale Array**	**82.90**	**42**	P	P	02 56 28.5	-0.7
	0.3nm,0.7s,baz=231,slow=5.7,SNR=3.8						
BRTR	**Keskin Array B**	**146.87**	**320**	PKPbc	PKPbc	03 03 48.3	+1.2
GERES	**GERESS Array B**	**147.03**	**351**	PKPbc	PKPbc	03 03 48.0	+0.7
	0.3nm,0.6s,baz=344,slow=3.3,SNR=2.9						

IDC 23 02:46:46.7±2.5, 2224S×14804E, h0km, mb1 3.4/4, mb1mx3.3/14, mbtmp3.2/4, ML3.3/4, Error ellipse: s-maj=34.8km s-min=19.9km az=67.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.71**	**322**	Pn	Pn	02 47 32.4	+0.8
	5.3nm,0.3s,baz=141,slow=17,SNR=18						
CTA				Pg	Pg	02 47 37.0	-1.6
	6.9nm,0.3s,baz=143,slow=19,SNR=26						
CTA				Lg		02 48 11.9	
	8.6nm,0.3s,baz=170,slow=18,SNR=18						
STKA	**Stephens Creek**	**11.19**	**210**	Pn	Pn	02 49 27.4	-0.5
	0.3nm,0.3s,baz=39,slow=13,SNR=5.1						
STKA				Sn	Sn	02 51 30.8	-2.9
	0.2nm,0.3s,baz=27,slow=2.3,SNR=2.6						
STKA				Lg		02 52 51.2	
	0.1nm,0.3s,baz=357,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**12.99**	**278**	Pn	Pn	02 49 51.2	-1.5
	0.1nm,0.3s,baz=102,slow=11,SNR=2.2						
WRA				Lg		02 53 36.7	
	0.1nm,0.3s,baz=101,slow=30,SNR=2.9						
ASAR	**Alice Springs**	**13.11**	**261**	Pn	Pn	02 49 55.5	+1.3
	0.1nm,0.3s,baz=90,slow=14,SNR=3.8						
ASAR				Lg		02 53 46.6	
	baz=92,slow=27,SNR=3.3						
TORD	**Torodi Ar. Bea**	**146.76**	**260**	PKPbc	PKPbc	03 06 30.5	-1.0
	0.6nm,1.1s,baz=104,slow=3.1,SNR=4.4						

MOS 23 02:49:52.2±0.2, 4285N×4564E, h9km, mb3.5/1, 1C-1D, Error ellipse: s-maj=42.3km s-min=12.1km az=20.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLKR	**Vladikavkaz**	**0.73**	**286**	*e*PG	Pg	02 50 07.0	+0.7
VLKR				*e*S	Sg	02 50 23.4	+7.5
BTKR	**Batakoyurt**	**0.96**	**303**	*e*PG	Pg	02 50 10.8	+0.2
BTKR				*e*S	Sg	02 50 29.9	+6.9
LACR	**Lac**	**0.99**	**269** ⇓	*i*PG	Pg	02 50 11.6	+0.4
LACR				*i* S	Sg	02 50 31.2	+7.2
ARNR	**Ardon**	**1.05**	**289**	*e*PG	Pg	02 50 12.6	+0.2
ARNR				*e*S	Sg	02 50 33.2	+7.1
KMSR	**Komsomolskaya**	**1.11**	**298**	*e*PG	Pg	02 50 13.5	-0.1
KMSR				*e*S	Sg	02 50 34.6	+6.5
ZEI	**Tsey**	**1.28**	**267** ⇑	*i*PG	Pg	02 50 16.1	-0.7
ZEI				*i* S	Sb	02 50 39.2	+6.1
LSNR	**Lesken**	**1.40**	**288**	*e*PG	Pg	02 50 17.9	-1.2
LSNR				*e*S	Sb	02 50 42.6	+6.1
DIGR	**Digorskoe uzhe**	**1.51**	**273**	*e*PG	Pg	02 50 19.4	-1.8
DIGR				*e*S	Sn	02 50 45.5	+6.3

*IDC **23** 02:53:09.2±1.0, 569S×12268E, h0km, mb3.8/4, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML3.7/3, Error ellipse: s-maj=41.5km s-min=18.5km az=54.0*
*ISCJB **23** 02:53:11.8±0.7, 57S±01×12271E±009, h33km, mb4.0/3, Error ellipse: s-maj=19.0km s-min=7.9km az=37.6*
*NEIC **23** 02:53:14.1±0.6, 585S×12257E, h35km, mb4.0/2, Error ellipse: s-maj=33.3km s-min=10.2km az=48.0*

ISC 23 02:53:14.2±0.7, 58S±01×12267E±010, h35km, n11, σ0§93/11, mb4.0/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.00**	**284**	Pn	**Pn**	**02 53 57.9**	**-1.5**
	12nm,0.3s,baz=114,slow=6.7,SNR=34						
KAPI				Sn	**Sn**	**02 54 34.7**	**+0.6**
	6.6nm,0.3s,baz=41,slow=23,SNR=6.6						
KAPI				Lg		02 54 40.9	
	7.5nm,0.3s,baz=225,slow=23,SNR=12						
BATI	**Baumata**	**4.51**	**167**	Pn	**Pn**	**02 54 20.3**	**+0.2**
	2.4nm,0.3s,baz=345,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**18.09**	**142**	P	**Pn**	**02 57 21.0**	**-1.8**
	0.3nm,0.3s,baz=317,slow=13,SNR=10						
WRAB	**Tennant Creek**	**18.09**	**142**	*e*P	**Pn**	**02 57 22.9**	**+0.1**
	18nm,1.4s						
ASAR	**Alice Springs**	**20.82**	**150**	P	**P**	**02 57 54.5**	**+1.7**
	2.3nm,0.8s,baz=325,slow=10,SNR=12						
MK31	**Makanchi Array**	**63.37**	**330**	*e*P	**P**	**03 03 40.5**	**+0.6**
MKAR	**Makanchi Array**	**63.37**	**330**	P	**P**	**03 03 40.3**	**+0.3**
	0.8nm,0.5s,mb4.1,baz=131,slow=7.5,SNR=11						
ZALV	**Zalesovo Beam**	**67.43**	**337**	P	**P**	**03 04 06.2**	**+0.1**
	0.5nm,0.3s,mb4.0,baz=151,slow=3.3,SNR=2.9						
KURK	**Kurchatov**	**67.82**	**331**	P	**P**	**03 04 08.3**	**-0.3**
	0.3nm,0.4s,mb3.7,baz=136,slow=6.2,SNR=3.5						
KURK	**Kurchatov**	**67.82**	**331**	*e*P	**P**	**03 04 08.1**	**-0.5**
	0.9nm,0.6s,mb4.0						
TORD	**Torodi Ar. Bea**	**121.43**	**282**	PKP	PKPdf	03 12 05.2	+0.3
	0.3nm,0.7s,baz=49,slow=1.5,SNR=2.1						

*JMA **23** 02:53:56.8±0.1, 2440N×12244E, h70km, M2.2*
*TAP **23** 02:53:56.4, 2421N×12240E, h57km±1km, ML3.0, C*
*ISCJB **23** 02:53:57.0±0.3, 2417N±004×12243E±002, h33km, Error ellipse: s-maj=6.0km s-min=2.5km az=163.8*

ISC 23 02:53:57.3±0.6, 2421N±006×12242E±003, h46km±19km, n27, σ0§66/49, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.59**	**65**	P	**Pn**	**02 54 09.9**	**+0.4**
YOJ				S	**Sn**	**02 54 19.5**	**+1.2**
TWC	**Suao**	**0.65**	**307**	*i* P	**Pn**	**02 54 09.9**	**-0.4**
	baz=309						
TWC				*i* S	**Sn**	**02 54 19.6**	**0.0**
	baz=309						
ENA	**Nanau**	**0.66**	**289**	P	**Pn**	**02 54 10.0**	**-0.3**
	baz=297						
ENA				S	**Sn**	**02 54 20.1**	**+0.4**
	baz=297						
TWD	**Chiawan**	**0.76**	**260**	P	**Pn**	**02 54 10.9**	**-0.9**
	baz=253						
TWD				S	**Sn**	**02 54 21.6**	**-0.6**
	baz=253						
NNS	**Nan Shan**	**0.98**	**284**	*e*P	**Pn**	**02 54 14.4**	**-0.3**
	baz=284						
NNS				*e*S	**Sn**	**02 54 27.3**	**-0.1**
	baz=284						
ESL	**Shilin**	**0.98**	**247**	*e*P	**Pn**	**02 54 13.8**	**-1.0**
	baz=239						
WHF	**Hehuan Shan**	**1.06**	**267**	P	**Pn**	**02 54 15.3**	**-0.4**
	baz=257						
WHF				S	**Sn**	**02 54 28.6**	**-0.7**
	baz=257						
NSK	**Sanguang**	**1.07**	**296**	*e*P	**Pn**	**02 54 15.6**	**-0.4**
	baz=289						
TWT	**Tachien**	**1.14**	**272**	*e*P	**Pn**	**02 54 17.4**	**+0.6**
	baz=267						
IRIF	**Iriomote-Funau**	**1.20**	**84**	P	**Pn**	**02 54 17.8**	**+0.1**
IRIF				S	**Sn**	**02 54 33.2**	**+0.3**
EHY	**Hungye**	**1.23**	**235**	P	**Pn**	**02 54 17.2**	**-0.8**
	baz=245						
EHY				*e*S	**Sn**	**02 54 32.4**	**-1.1**
	baz=245						
TWF1	**Yuli**	**1.34**	**230**	P	**Pn**	**02 54 18.7**	**-0.9**
	baz=241						
TWF1				*e*S	**Sn**	**02 54 35.6**	**-0.6**
	baz=241						
SMLT	**Sun Moon Lake**	**1.43**	**257**	P	**Pn**	**02 54 20.7**	**-0.1**
	baz=257						
SMLT				S	**Sn**	**02 54 38.2**	**-0.2**
	baz=257						
JKRS	**Kuro-shima**	**1.45**	**89**	S	**Sn**	**02 54 39.5**	**+0.5**
TYC	**Yuchr**	**1.46**	**258**	*e*P	**Pn**	**02 54 21.1**	**-0.1**
	baz=252						
TYC				*e*S	**Sn**	**02 54 39.9**	**+0.7**
	baz=252						
YUS	**Yu-Shan**	**1.52**	**242**	*i* P	**Pn**	**02 54 22.4**	**+0.3**
	baz=241						
YUS				*e*S	**Sn**	**02 54 41.2**	**+0.4**
	baz=241						
JIJ	**Ishigaki jima**	**1.58**	**84**	P	**Pn**	**02 54 22.6**	**-0.3**
JIJ				S	**Sn**	**02 54 41.4**	**-0.7**
ALS	**Alishan**	**1.63**	**245**	*e*P	**Pn**	**02 54 24.1**	**+0.4**
	baz=236						
ALS				*e*S	**Sn**	**02 54 43.8**	**+0.4**
	baz=236						
ELDTW	**Lidau**	**1.64**	**232**	*e*P	**Pn**	**02 54 22.9**	**-0.8**
	baz=223						
ELDTW				*e*S	**Sn**	**02 54 41.9**	**-1.7**
	baz=223						
CHN5	**Tsauling**	**1.71**	**249**	*e*P	**Pn**	**02 54 25.1**	**+0.5**
	baz=249						
CHN5				*e*S	**Sn**	**02 54 45.7**	**+0.4**
	baz=249						
STYT	**Tauyuan**	**1.85**	**236**	*e*P	**Pn**	**02 54 26.8**	**+0.2**
	baz=235						
STYT				*e*S	**Sn**	**02 54 48.9**	**+0.2**
	baz=235						
TWG	**Pinlang**	**1.86**	**222**	*e*P	**Pn**	**02 54 25.7**	**-0.9**
	baz=228						
CHN4	**Tsaushan**	**1.88**	**243**	*e*P	**Pn**	**02 54 27.5**	**+0.5**
	baz=242						
CHN4				*e*S	**Sn**	**02 54 50.6**	**+1.1**
	baz=242						
TWK	**Hsinying**	**2.00**	**242**	*e*P	**Pn**	**02 54 29.2**	**+0.5**
	baz=241						
TWK				*e*S	**Sn**	**02 54 53.1**	**+0.5**
	baz=241						
CHN1	**Nanshi**	**2.01**	**240**	*e*P	**Pn**	**02 54 29.6**	**+0.8**
	baz=239						
CHN1				*e*S	**Sn**	**02 54 54.0**	**+1.2**
	baz=239						
SGST	**Jiashian**	**2.02**	**237**	*e*P	**Pn**	**02 54 29.7**	**+0.7**
	baz=236						
SGST				*e*S	**Sn**	**02 54 54.2**	**+1.2**
	baz=236						
JTJ	**Tarama**	**2.12**	**78**	P	**Pn**	**02 54 30.5**	**+0.2**
JTJ				*e*S	**Sn**	**02 54 54.9**	**-0.6**

MAN 23 03:00:14, 1117N×12449E, h4km, mb4.3, ML3.2, MS3.0, 2C, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.16**	**135**	*e*P	Pg	03 00 18.4	+1.2
PLP	**Palo**	**0.48**	**90** ⇑	*i*P	Pg	03 00 21.4	-1.8
PLP				*i* S	Sg	03 00 28.2	-1.3
LLP	**Lapu-Lapu**	**0.99**	**212** ⇓	*e*P	Pg	03 00 33.1	+0.1
LLP				*i* S	Sg	03 00 49.0	+3.1
MSLP	**Maasin**	**1.09**	**161**	*e*P	Pg	03 00 36.3	+1.4
TBP	**Tagbilaran**	**1.59**	**203**	*e*P	Pn	03 00 43.0	+0.1
TBP				*e*S	Sn	03 01 07.9	+3.9
GUIM	**Jordan**	**1.94**	**254**	*e*P	Pn	03 00 48.6	+0.8
GUIM				*e*S	Sn	03 01 14.3	+1.6

MAN 23 03:19:25, 1127N×12461E, h8km, mb4.0, ML2.8, MS2.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.22**	**181**	*e*P	Pg	03 19 31.0	+1.6
OCLP				*e*S	Sg	03 19 35.2	+2.8
PLP	**Palo**	**0.38**	**106** ⇓	*e*P	Pg	03 19 34.1	+1.7
PLP				*i* S	Sg	03 19 40.8	+3.5
LLP	**Lapu-Lapu**	**1.14**	**214**	*e*P	Pg	03 19 45.7	-1.2
LLP				*e*S	Sg	03 20 01.1	-0.6
MSLP	**Maasin**	**1.16**	**168**	*e*P	Pg	03 19 47.5	+0.3
TBP	**Tagbilaran**	**1.73**	**205**	*e*P	Pn	03 19 55.4	0.0
TBP				*e*S	Sn	03 20 21.2	+3.4
GUIM	**Jordan**	**2.09**	**252**	*e*P	Pn	03 20 00.9	+0.6

GUC 23 03:28:51.6±0.3, 2282S×7063W, h32km±2km, MD3.9, ML3.2, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.33**	**149** ⇑	*i*P	Pb	03 28 59.1	-0.6
MECH				*i* S	Sb	03 29 04.8	-0.4
MECH				AML	AML	03 29 06.5	
	comp=N,8μm,0.4s						
CEN1	**Los Morros**	**0.69**	**145** ⇑	*i*P	Pn	03 29 06.3	+1.1
CEN1				*i* S	Sb	03 29 17.3	+2.6
CEN1				AML	AML	03 29 18.8	
	comp=E,1μm,0.4s						
ANCH	**Antofagasta**	**0.88**	**167**	*i* P	Pn	03 29 06.6	-1.2
ANCH				*i* S	Sn	03 29 18.5	-1.0
MACH	**Maria Elena**	**1.02**	**53**	*i* P	Pn	03 29 10.0	+0.4
MACH				*i* S	Sn	03 29 24.0	+1.2
LVC	**Limon Verde**	**1.60**	**83** ⇓	*i*P	Pn	03 29 19.6	+1.9
LVC				*i* S	Sn	03 29 40.9	+3.7
LVC				AML	AML	03 29 43.9	
	comp=N,402nm,0.5s						

*NEIC **23** 03:33:43.1, 1232N×8697W, h0km, MD4.1(CASC), After CASC.*

CASC 23 03:33:40.4±1.9, 1250N×8718W, h129km±6km, MD4.0, ML2.7, 10C-15D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.24**	**33** ⇓	*e*P	Pn	03 33 58.3	+0.1
CRIN				*e*S	Sn	03 34 13.0	+1.3
TEL3	**Telica 3**	**0.34**	**78** ⇓	*e*P	Pn	03 33 58.5	0.0
MIRN	**Miramar**	**0.46**	**97** ⇓	*e*P	Pn	03 33 59.5	+0.4
CNGN	**Cerro Negro**	**0.47**	**90**	*e*P	Pn	03 33 59.2	0.0
CNGN				⇓ *e*P		03 33 59.2	
CNGN				⇓ *e*P		03 33 59.2	
CNGN				*e*S	Sn	03 34 14.2	+0.9
MOMN	**Momotombo**	**0.64**	**98** ⇓	*e*P	Pn	03 34 00.7	+0.5
COPN	**Copaltepe**	**0.66**	**119** ⇑	*e*P	Pn	03 34 00.0	0.0
COPN				*e*S	Sn	03 34 14.8	-0.6
CSAN		**0.81**	**113** ⇓	*e*P	Pn	03 34 02.1	+0.6
APYN	**Apoyeque**	**0.86**	**108** ⇑	*e*P	Pn	03 34 02.1	+0.2
XAVN	**Gruta Xavier**	**0.91**	**113** ⇑	*e*P	Pn	03 34 02.7	+0.4
TISN	**Laguna Tiscapa**	**0.96**	**112**	*e*P	Pn	03 34 02.9	+0.1
MGAN	**Managua**	**0.98**	**111** ⇓	*e*P	Pn	03 34 03.1	0.0
MGAN				⇑ *e*P		03 34 03.1	
MGAN				AML	AML	03 34 23.1	
	comp=N,47nm,0.3s						
CNCH	**Conchagua**	**1.00**	**321** ⇓	*e*P	x	03 34 03.1	
CNCH				*e*S	x	03 34 22.6	
HUEN		**1.00**	**99** ⇓	*e*P	Pn	03 34 03.5	+0.3
CRUN	**El Crucero**	**1.00**	**121** ⇑	*e*P	Pn	03 34 04.2	+1.0
WILN	**Americas 2**	**1.03**	**109** ⇓	*e*P	Pn	03 34 03.4	-0.1
WILN				*e*S	Sn	03 34 22.3	+1.3
TICN

ellipse: s-maj=156.0km s-min=11.2km az=61.0
IDC ***23*** *03:39:50.4±2.2,2524N×12904E,h0km,mb3.7/7, mb1 3.9/7,mb1mx3.7/22,mbtmp3.7/7,Error ellipse: s-maj=118.9km s-min=17.6km az=68.0*
JMA ***23*** *03:39:52.6±0.4,2523N×12885E,h54km,M3.5*
ISCJB ***23*** *03:39:53.3±0.6,2530N±004×12887E±004,h33km, mb3.8/8,Error ellipse: s-maj=6.7km s-min=5.1km az=41.4*

ISC 23 03:39:53.6±2.4,2532N±005×12885E±005,h25km±19km, n20,σ1§15/29,mb3.8/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.29**	**310**	P	**Pn**	**03 40 15.8**	**-0.2**
JJT2				*e*S	**Sn**	**03 40 32.9**	**+0.4**
NAH1	**Naha**	**1.37**	**310**	P	**Pn**	**03 40 16.6**	**-0.6**
JOW	**Kunigami**	**1.59**	**341**	Pn	**Pn**	**03 40 20.2**	**-0.1**
	96nm,0.3s,baz=160,slow=13,SNR=275						
JOW				Sn	**Sn**	**03 40 38.5**	**-1.5**
	97nm,0.3s,baz=116,slow=18,SNR=10						
JOW	**Kunigami**	**1.59**	**341**	P	**Pn**	**03 40 20.5**	**+0.2**
JOW				*e*S	**Sn**	**03 40 39.1**	**-1.0**
JIH	**Iheya**	**1.89**	**335**	P	**Pn**	**03 40 25.1**	**+0.8**
JIH				*e*S	**Sn**	**03 40 46.7**	**-0.5**
JAGN	**Aguni-jima**	**1.92**	**311**	P	**Pn**	**03 40 24.6**	**-0.2**
JAGN				*e*S	**Sn**	**03 40 47.6**	**-0.6**
JKE	**Kume jima 2**	**2.12**	**299**	P	**Pn**	**03 40 26.3**	**-1.1**
JKE				*e*S	**Sn**	**03 40 50.8**	**-2.1**
JMZ	**Minamidaito 2**	**2.20**	**76**	P	**Pn**	**03 40 27.6**	**-0.9**
JMZ				*e*S	**Sn**	**03 40 53.1**	**-1.8**
JTK	**Tokunoshima**	**2.46**	**2**	P	**Pn**	**03 40 32.9**	**+0.8**
JTK				*e*S	**Sn**	**03 41 00.7**	**-0.7**
JAM	**Amami Oshima**	**3.15**	**12**	P	**Pn**	**03 40 43.5**	**+1.8**
JAM				*e*S	**Sn**	**03 41 19.5**	**+1.0**
MK31	**Makanchi Array**	**42.56**	**312**	*e*P	**P**	**03 47 49.9**	**+2.6**
MKAR	**Makanchi Array**	**42.56**	**312**	P	**P**	**03 47 48.2**	**+0.9**
	0.6nm,0.5s,mb3.6,baz=92,slow=9.2,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.31**	**323**	P	**P**	**03 47 56.6**	**+3.4**
	0.6nm,0.3s,mb3.8,baz=108,slow=7.7,SNR=2.5						
WRAB	**Tennant Creek**	**45.30**	**173**	*e*P	**P**	**03 48 09.3**	**-0.1**
	1.1nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**45.30**	**173**	P	**P**	**03 48 08.8**	**-0.7**
	1.7nm,0.6s,mb4.0,baz=354,slow=8.5,SNR=6.2						
KURK	**Kurchatov**	**45.87**	**317**	P	**P**	**03 48 14.0**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=105,slow=9.0,SNR=2.8						
ASAR	**Alice Springs**	**48.94**	**174**	P	**P**	**03 48 37.5**	**-0.3**
	0.9nm,0.8s,mb3.9,baz=2.2,slow=8.9,SNR=12						
BVAR	**Borovoye Array**	**51.33**	**319**	P	**P**	**03 48 58.3**	**+2.6**
	0.4nm,0.4s,mb3.7,baz=97,slow=7.4,SNR=2.8						
BVAR	**Borovoye Array**	**51.33**	**319**	P	**P**	**03 48 58.3**	**+2.6**
BRTR	**Keskin Array B**	**78.04**	**308**	P	**P**	**03 51 54.2**	**+3.9**
	0.5nm,0.7s,mb3.5						

ISCJB ***23*** *03:57:11.1±0.5,3597S±009×1017W±0.1,h10km,mb4.3/25, MS3.9/14,Error ellipse: s-maj=16.1km s-min=11.2km az=152.5*
IDC ***23*** *03:57:12.4±0.9,3577S×10162W,h0km,mb4.3/10, mb1 4.5/10,mb1mx4.4/19,mbtmp4.3/10,MS3.9/14, Ms1 3.9/14,ms1mx3.7/24,Error ellipse: s-maj=22.7km s-min=21.5km az=10.0*
NEIC ***23*** *03:57:13.8±0.6,3576S×10159W,h10km,mb4.5/15,Error ellipse: s-maj=16.0km s-min=10.5km az=217.0*

ISC 23 03:57:13.2±0.5,3593S±008×1017W±01,h10km,n48, σ0§86/34,mb4.3/25,MS3.9/14,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**10.93**	**321**	LR	LR	04 02 46.4	
	comp=Z,725nm,20.4s,baz=315,slow=31						
PLCA	**Paso Flores**	**24.82**	**111**	P	**P**	**04 02 37.5**	**+2.2**
	3.5nm,0.9s,mb3.9,baz=269,slow=8.9,SNR=4.7						
PLCA				LR	LR	04 09 23.3	
	comp=Z,105nm,20.1s,MS3.3,baz=269,slow=29						
LCO	**Las Campanas**	**26.96**	**84**	*e*P	**P**	**04 02 54.8**	**-0.1**
	7.5nm,0.7s,mb4.3						
CFAA	**Coronel Fontan**	**28.05**	**91**	P	**P**	**04 03 04.5**	**-0.2**
	0.3nm,0.8s,mb3.0,baz=249,slow=8.6,SNR=2.6						
CFAA				LR	LR	04 11 25.4	
	comp=Z,24nm,21.8s,MS2.8,baz=238,slow=30						
USHA	**Ushuaia**	**29.64**	**140**	LR	LR	04 12 12.8	
	comp=Z,377nm,20.2s,MS4.0,baz=296,slow=30						
LVC	**Limon Verde**	**31.36**	**74**	LR	LR	04 12 48.3	
	comp=Z,357nm,21.9s,MS4.0,baz=249,slow=30						
LPAZ	**La Paz**	**35.66**	**66**	P	**P**	**04 04 12.9**	**+1.3**
	13nm,1.1s,mb4.8,baz=226,slow=8.9,SNR=25						
LPAZ				LR	LR	04 15 41.6	
	comp=Z,72nm,18.8s,MS3.5,baz=256,slow=31						
LPAZ	**La Paz**	**35.66**	**66**	*e*P	**P**	**04 04 12.7**	**+1.1**
	26nm,1.2s,mb5.0						
LPAZ				LR	LR	04 15 41.6	
ATAH	**Atahualpa**	**35.83**	**42**	P	**P**	**04 04 13.5**	**+0.5**
	12nm,0.8s,mb4.8,baz=133,slow=4.8,SNR=7.4						
ATAH				LR	LR	04 15 12.9	
	comp=Z,261nm,21.6s,MS4.0,baz=218,slow=30						
PMSA	**Palmer Station**	**36.56**	**154**	LR	LR	04 14 39.5	
	comp=Z,281nm,22.0s,MS4.0,baz=219,slow=29						
SIV	**San Ignacio**	**41.19**	**72**	P	**P**	**04 04 57.3**	**-0.8**
	2.4nm,0.6s,mb4.0,baz=257,slow=8.4,SNR=14						
OTAV	**Otavalo**	**41.98**	**36**	*e*P	**P**	**04 05 04.8**	**+0.4**
	25nm,1.3s,mb4.7						
MEH	**Mehetia**	**44.65**	**281**	*e*T		04 52 39.7	
	252nm,0.2s						
TIAR	**Tiarei**	**45.84**	**281**	*e*T		04 54 09.0	
	36nm,0.2s						
PPT	**Papeete**	**46.02**	**280**	*e*LR	LR	04 18 24.6	
	125nm,25.2s						
ROSC	**El Rosal**	**47.99**	**38**	P	**P**	**04 05 53.2**	**+0.8**
	29nm,1.0s,mb5.3,baz=88,slow=23,SNR=24						
ROSC				LR	LR	04 22 43.8	
	comp=Z,127nm,18.9s,MS3.9,baz=338,slow=32						
ROSC	**El Rosal**	**47.99**	**38**	*e*P	**P**	**04 05 54.0**	**+1.6**
ROSC				LR	LR	04 22 43.9	
BDFB	**Brasilia**	**51.70**	**82**	P	**P**	**04 06 19.1**	**-1.6**
	2.0nm,0.7s,mb4.2,baz=252,slow=15,SNR=7.4						
BDFB				LR	LR	04 25 44.6	
	comp=Z,66nm,20.9s,MS3.6,baz=187,slow=33						
SDV	**Santo Domingo**	**53.31**	**39**	*e*P	**P**	**04 06 30.6**	**-1.9**
	7.4nm,0.8s,mb4.7						
QSPA	**South Pole Qui**	**54.29**	**180**	P	**P**	**04 06 40.6**	**+1.7**
	2.5nm,1.0s,mb4.1,baz=121,slow=2.5,SNR=4.5						
QSPA	**South Pole Qui**	**54.29**	**180**	P	**P**	**04 06 40.6**	**+1.7**
VNDA	**Vanda**	**56.62**	**195**	LR	LR	04 26 38.0	
	comp=Z,77nm,18.4s,MS3.8,baz=110,slow=31						
VNA3	**Neumayer Olymp**	**57.08**	**157**	*e*	**P**	**04 06 58.2**	**-0.8**
VNA3				*e*		04 07 06.2	
VNA1	**Neumayer--Stat**	**57.68**	**157**	*e*	**P**	**04 07 02.6**	**-0.7**
VNA1				*e*		04 07 10.6	
VNA2	**Neumayer--Watz**	**57.88**	**157**	*e*	**P**	**04 07 04.0**	**-0.7**
	baz=258,slow=6.4						
VNA2				*e*		04 07 12.7	
SNAA	**Sanae**	**59.03**	**159**	*e*	**P**	**04 07 07.0**	**-5.7**
SNAA				*e*		04 07 14.8	
SNAA	**Sanae**	**59.03**	**159**	*e*P	**P**	**04 07 07.0**	**-5.7**
	3.3nm,0.9s,mb4.4						
TXAR	**Lajitas Array**	**64.94**	**358**	P	**P**	**04 07 52.1**	**-0.7**
	1.0nm,1.1s,mb3.8,baz=183,slow=11,SNR=4.7						
MVCO	**Mesa Verde**	**73.04**	**354**	*e*P	**P**	**04 08 43.4**	**+0.4**
	9.7nm,1.3s,mb4.6						
PV01	**Paradox Valley**	**73.96**	**354**	*e*P	**P**	**04 08 48.2**	**-0.2**
NVAR	**Mina Array Bea**	**75.56**	**347**	P	**P**	**04 08 58.1**	**+0.4**
	2.0nm,0.9s,mb4.1,baz=173,slow=7.8,SNR=12						
DUG	**Dugway**	**76.44**	**351**	*e*P	**P**	**04 09 02.6**	**0.0**
	3.6nm,1.1s,mb4.2						
DAU	**Daniels Canyon**	**76.47**	**352**	*e*P	**P**	**04 09 03.5**	**+0.6**
BW06	**Boulder Array**	**78.64**	**354**	*e*P	**P**	**04 09 14.8**	**-0.1**
	3.7nm,1.0s,mb4.3						
PDAR	**Pinedale Array**	**78.64**	**354**	P	**P**	**04 09 14.4**	**-0.5**
	1.0nm,0.7s,mb3.9,baz=164,slow=7.3,SNR=8.5						
TPAW	**Teton Pass**	**79.49**	**353**	*e*P	**P**	**04 09 19.0**	**-0.5**
	6.9nm,1.3s,mb4.4						
LOHW	**Long Hollow**	**79.58**	**353**	*e*P	**P**	**04 09 19.7**	**-0.3**
	4.6nm,1.3s,mb4.2						
RSSD	**Black Hills**	**79.70**	**358**	*e*P	**P**	**04 09 20.3**	**-0.4**
	3.0nm,0.9s,mb4.2						
HLID	**Hailey**	**79.96**	**351**	*e*P	**P**	**04 09 22.6**	**+0.6**
	16nm,1.6s,mb4.7						
RLMT	**Red Lodge**	**80.96**	**355**	*e*P	**P**	**04 09 28.4**	**+1.0**
	2.5nm,0.9s,mb4.1						
BOZ	**Bozeman (W)**	**81.69**	**353**	*e*P	**P**	**04 09 31.3**	**0.0**
	2.3nm,1.1s,mb4.0						
LAO	**LASA Array**	**82.34**	**357**	*e*P	**P**	**04 09 34.2**	**-0.4**
	11nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**90.20**	**229**	LR	LR	04 42 06.8	
	comp=Z,138nm,18.5s,MS4.4,baz=93,slow=30						
CTA	**Charters Tower**	**95.00**	**241**	LR	LR	04 46 16.4	
	comp=Z,108nm,19.8s,MS4.3,baz=49,slow=31						
SCHQ	**Schefferville**	**95.22**	**19**	LR	LR	04 47 11.6	
	comp=Z,88nm,20.5s,MS4.2,baz=0.2,slow=32						
BOSA	**Boshof**	**98.66**	**135**	LR	LR	04 53 10.8	
	comp=Z,49nm,19.1s,MS4.0,baz=89,slow=34						
BRTR	**Keskin Array B**	**144.78**	**70**	PKP	PKPdf	04 16 49.9	-0.2
	2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**154.81**	**232**	PKP	PKPdf	04 17 09.0	+2.5
	1.4nm,0.3s,baz=163,slow=3.8,SNR=5.2						
CMAR				PKPab	PKPab	04 17 32.2	+2.1
	1.1nm,0.3s,baz=126,slow=5.8,SNR=3.0						

JMA 23 04:04:04.5±0.3,2918N×12812E,h168km,M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**1.51**	**120**	P	Pn	04 04 35.4	-0.2
JAM				S	Sn	04 04 58.3	-1.1
JTK	**Tokunoshima**	**1.57**	**152**	P	Pn	04 04 36.7	+0.5
JTK				S	Sn	04 05 00.9	+0.4
JNN	**Nakanoshima**	**1.67**	**66**	P	Pn	04 04 37.7	+0.6
JZK	**Kikaishima**	**1.84**	**117**	P	Pn	04 04 39.8	+0.8
JZK				S	Sn	04 05 06.3	+0.8
JIH	**Iheya**	**2.14**	**184**	P	Pn	04 04 42.7	+0.3
JIH				*e*S	Sn	04 05 11.4	-0.2
JOW	**Kunigami**	**2.34**	**177**	P	Pn	04 04 44.4	-0.3
JOW				*e*S	Sn	04 05 14.0	-1.8
JTN	**Tanegashima 3**	**2.88**	**59**	*e*S	Sn	04 05 25.1	-2.2
JKE	**Kume jima 2**	**3.08**	**203**	P	Pn	04 04 53.6	0.0
JTZ	**Takazaki**	**3.73**	**43**	P	Pn	04 05 01.5	-0.2
JTZ				S	Sn	04 05 44.9	-1.4

ISCJB ***23*** *04:28:55.3±0.5,3588N±003×988W±004,h10km,Error ellipse: s-maj=4.9km s-min=4.4km az=12.2*
CSEM ***23*** *04:28:55.0±0.2,3591N×992W,h10km,mb4.2/17,Error ellipse: s-maj=4.7km s-min=3.4km az=128.0*
MDD ***23*** *04:28:56.1±1.1,3582N×1007W,h0km,mbLg3.0/32,Error ellipse: s-maj=11.6km s-min=9.3km az=86.0,PRIMO*
IGIL ***23*** *04:28:58.9,3596N×1007W,h2km,ML2.8*
CNRM ***23*** *04:28:58.4,3568N×1014W,h30km,MD3.4*
NEIC ***23*** *04:28:58.8,3597N×1008W,h11km,MG4.2(MDD),After MDD.*
LDG ***23*** *04:28:59.6±0.2,3598N×1010W,h10km,Ml3.5/3,Error ellipse: s-maj=3.4km s-min=2.5km az=47.0*

ISC 23 04:28:58.7±0.6,3596N±003×985W±004,h10km,n75, σ1§27/143,3C,West of Gibraltar
INMG 23 04:28:59.7±1.6,3600N×1006W,h5km,MD2.6,ML2.8, Error ellipse: s-maj=4.0km s-min=2.9km az=77.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**1.65**	**35**	P	**Pn**	**04 29 28.6**	**+0.8**
MORF				S	**Sn**	**04 29 50.2**	**+1.1**
	0.2nm,0.3s						
EGRO	**El Granado**	**2.47**	**50**	P	**Pn**	**04 29 40.1**	**+1.2**
	11nm,0.1s,SNR=18						
EGRO				S	**Sn**	**04 30 10.1**	**+1.0**
	31nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.47**	**50**	⇑P	**Pn**	**04 29 40.1**	**+1.2**
	11nm,0.1s,SNR=18						
EGRO				S	**Sn**	**04 30 10.1**	**+1.0**
	31nm,0.1s,SNR=7.9						
EVOP	**Sao Brissos**	**2.91**	**28**	*e*Pn	**Pn**	**04 29 44.8**	**-0.2**
EVOP				*e*Sn	**Sn**	**04 30 19.2**	**-0.9**
	31nm,0.2s						
EVO	**Evora**	**2.96**	**29**	*e*Pn	**Pn**	**04 29 44.8**	**-0.9**
EVO				*e*Sn	**Sn**	**04 30 19.2**	**-2.0**
	62nm,0.2s						
EMIN	**Mina Concepcio**	**3.12**	**54**	P	**Pn**	**04 29 48.9**	**+1.0**
	9.0nm,0.2s,SNR=18						
EMIN				S	**Sn**	**04 30 26.1**	**+0.8**
	8.7nm,0.1s,SNR=6.5						
EMIN	**Mina Concepcio**	**3.12**	**54**	⇑P	**Pn**	**04 29 48.9**	**+1.0**
	9.0nm,0.2s,SNR=18						
EMIN				S	**Sn**	**04 30 26.1**	**+0.8**
	8.7nm,0.1s,SNR=6.5						
ESPR	**Espera**	**3.34**	**73**	P	**Pn**	**04 29 52.1**	**+1.1**
	17nm,0.1s,SNR=80						
ESPR				S	**Sn**	**04 30 31.7**	**+0.9**
	67nm,0.3s,SNR=5.4						
ESPR	**Espera**	**3.34**	**73**	P	**Pn**	**04 29 52.1**	**+1.1**
	17nm,0.1s,SNR=80						
ESPR				S	**Sn**	**04 30 31.7**	**+0.9**
	67nm,0.3s,SNR=5.4						
ALMR	**Almeirim**	**3.35**	**17**	*e*P	**Pn**	**04 29 51.2**	**+0.2**
ALMR				*e*S	**Sn**	**04 30 29.4**	**-1.4**
ALMR				*e*S	**Sn**	**04 30 29.5**	**-1.4**
ALMR				AML	AML	04 30 29.9	
	comp=N,17nm,0.3s						
ALMR	**Almeirim**	**3.35**	**17**	P	**Pn**	**04 29 51.2**	**+0.2**
ALMR				S	**Sn**	**04 30 29.4**	**-1.4**
	comp=N,0.0nm,0.3s						
EJIF	**Jimena Fronter**	**3.58**	**81**	P	**Pn**	**04 29 55.9**	**+1.7**
	comp=N,5.2nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**04 30 35.8**	**-0.6**
	comp=N,1.3nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.59**	**38**	P	**Pn**	**04 29 54.8**	**+0.4**
	SNR=18						
EBAD				S	**Sn**	**04 30 36.4**	**-0.4**
	SNR=7.9						
EBAD	**Badajoz**	**3.59**	**38**	⇑P	**Pn**	**04 29 54.8**	**+0.4**
	comp=N,4.5nm,0.1s,SNR=18						
EBAD				S	**Sn**	**04 30 36.4**	**-0.4**
	comp=N,9.0nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**3.63**	**90**	P	**Pn**	**04 29 56.9**	**+2.0**
	comp=N,2.6nm,0.1s,SNR=4.0						
ECEU				S	**Sn**	**04 30 31.4**	**-6.4**
	comp=N,68nm,0.1s,SNR=36						
ECEU	**Ceuta**	**3.63**	**90**	P	**Pn**	**04 29 56.9**	**+2.0**
	comp=N,2.6nm,0.1s,SNR=4.0						
ECEU				S	**Sn**	**04 30 31.4**	**-6.4**
	comp=N,68nm,0.1s,SNR=36						
EMIJ	**Mijas**	**4.15**	**80**	P	**Pn**	**04 30 02.5**	**+0.5**
	comp=N,1.1nm,0.2s,SNR=7.6						
EMIJ				S	**Sn**	**04 30 49.5**	**-1.0**
	comp=N,4.4nm,0.3s						
CIA	**Chichaoua**	**4.48**	**168**	*i* P	**Pn**	**04 30 01.0**	**-5.6**
CIA				*i* S	**Sn**	**04 30 46.0**	**-13**
MIF	**Mishlifen**	**4.58**	**122**	*i* P	**Pn**	**04 30 06.5**	**-1.5**
MIF				*i* S	**Sn**	**04 30 55.0**	**-6.2**
KIB	**El Ksiba**	**4.62**	**136**	*i* P	**Pn**	**04 30 05.0**	**-3.5**
KIB				*i* S	**Sn**	**04 30 55.0**	**-7.2**
TZC	**Tazercounte**	**4.71**	**143**	*i* P	**Pn**	**04 30 06.0**	**-3.8**
TZC				*i* S	**Sn**	**04 30 56.0**	**-8.6**
ELOJ	**Sierra Loja**	**4.74**	**74**	P	**Pn**	**04 30 12.2**	**+2.1**
	comp=N,2.8nm,0.2s,SNR=7.9						
ELOJ				S	**Sn**	**04 31 06.2**	**+1.1**
	comp=N,2.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.76**	**61**	P	**Pn**	**04 30 11.5**	**+1.1**
	comp=N,5.2nm,0.1s,SNR=29						
EADA				S	**Sn**	**04 31 04.4**	**-1.2**
	comp=N,24nm,0.1s						
EADA	**Adamuz**	**4.76**	**61**	P	**Pn**	**04 30 11.5**	**+1.1**
	comp=N,5.2nm,0.1s,SNR=29						
EADA				S	**Sn**	**04 31 04.4**	**-1.1**
	comp=N,24nm,0.1s						
ELUQ	**Luque**	**4.76**	**69**	P	**Pn**	**04 30 10.9**	**+0.5**
	comp=N,2.8nm,0.2s,SNR=7.9						
ELUQ				S	**Sn**	**04 31 05.9**	**+0.3**
	comp=N,4.4nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**4.92**	**125**	*i* P	**Pn**	**04 30 10.0**	**-2.7**
CZD				*i* S	**Sn**	**04 31 04.0**	**-5.8**
OUK	**Oukaimeden**	**5.02**	**160**	*i* P	**Pn**	**04 30 08.0**	**-6.0**
OUK				*i* S	**Sn**	**04 31 01.0**	**-11**
EGUA	**Guajares**	**5.14**	**78**	P	**Pn**	**04 30 17.3**	**+1.6**
	comp=N,4.9nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**04 31 15.9**	**+0.8**
	comp=N,12nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**5.22**	**74**	P	**Pn**	**04 30 18.6**	**+1.8**
	comp=N,3.0nm,0.2s,SNR=7.9						
ECOG				S	**Sn**	**04 31 17.6**	**+0.6**
	comp=N,1.9nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**5.30**	**75**	P	**Pn**	**04 30 20.0**	**+2.1**
	comp=N,1.4nm,0.2s,SNR=8.7						
EQUE				S	**Sn**	**04 31 17.8**	**-1.3**
	comp=N,2.1nm,0.2s,SNR=5.3						
EBAN	**Banos Encina**	**5.32**	**64**	P	**Pn**	**04 30 19.2**	**+1.0**
	comp=N,4.5nm,0.1s,SNR=12						
EBAN				S	**Sn**	**04 31 17.7**	**-1.9**
	comp=N,4.0nm,0.1s						
EBER	**Berja**	**5.69**	**78**	P	**Pn**	**04 30 24.7**	**+1.5**
	comp=N,6.4nm,0.7s,SNR=7.9						
EBER				S	**Sn**	**04 31 28.3**	**-0.3**
	comp=N,12nm,0.7s,SNR=7.9						
EBER	**Berja**	**5.69**	**78**	P	**Pn**	**04 30 24.7**	**+1.5**
	comp=N,6.4nm,0.7s,SNR=7.9						
EBER				S	**Sn**	**04 31 28.3**	**-0.3**
	comp=N,12nm,0.7s,SNR=7.9						
EQES	**Quesada**	**5.74**	**69**	P	**Pn**	**04 30 24.5**	**+0.6**
	comp=N,1.4nm,0.2s,SNR=19						
EQES				S	**Sn**	**04 31 28.5**	**-1.2**
	comp=N,4.4nm,0.3s						
EQES	**Quesada**	**5.74**	**69**	P	**Pn**	**04 30 24.5**	**+0.6**
	comp=N,1.4nm,0.2s,SNR=19						
EQES				S	**Sn**	**04 31 28.5**	**-1.2**
	comp=N,4.4nm,0.3s						
ESDC	**Sonseca Array**	**5.95**	**50**	P	**Pn**	**04 30 27.0**	**+0.1**
	comp=N,24nm,0.1s,SNR=100						
ESDC				S	**Sn**	**04 31 33.2**	**-1.9**
	comp=N,1.7nm,0.3s,SNR=46						
ESDC	**Sonseca Array**	**5.95**	**50**	P	**Pn**	**04 30 27.0**	**+0.2**
	comp=N,24nm,0.1s,baz=236,slow=13,SNR=100						
ESDC				S	**Sn**	**04 31 33.2**	**-1.9**
	comp=N,1.7nm,0.3s,baz=237,slow=23,SNR=46						
ELOB	**Lobios**	**6.06**	**13**	P	**Pn**	**04 30 27.3**	**-1.0**
	comp=N,1.6nm,0.2s,SNR=10						
ELOB				S	**Sn**	**04 31 32.2**	**-5.5**
	comp=N,4.5nm,0.2s						
ELOB	**Lobios**	**6.06**	**13**	P	**Pn**	**04 30 27.3**	**-1.0**
	comp=N,1.6nm,0.2s,SNR=10						
ELOB				S	**Sn**	**04 31 32.2**	**-5.5**
	comp=N,4.5nm,0.2s						
EHUE	**Huescar**	**6.10**	**70**	P	**Pn**	**04 30 29.0**	**+0.1**
	comp=N,1.1nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**04 31 37.7**	**-1.1**
	comp=N,2.3nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**6.25**	**8**	P	**Pn**	**04 30 28.9**	**-2.0**
	comp=N,1.0nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**04 31 36.4**	**-5.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**6.44**	**63**	P	**Pn**	**04 30 34.0**	**+0.5**
	comp=N,1.3nm,0.1s,SNR=8.0						
EVIA				S	**Sn**	**04 31 43.7**	**-3.3**
	comp=N,2.6nm,0.2s						
ECAL	**Calabor**	**6.45**	**21**	P	**Pn**	**04 30 33.0**	**-0.6**
	comp=N,2.5nm,0.3s,SNR=9.3						
ECAL				S	**Sn**	**04 31 43.6**	**-3.6**
	comp=N,10nm,0.5s						
ECAL	**Calabor**	**6.45**	**21**	P	**Pn**	**04 30 33.0**	**-0.6**
	comp=N,2.5nm,0.3s,SNR=9.3						
ECAL				S	**Sn**	**04 31 43.6**	**-3.6**
	comp=N,10nm,0.5s						
GUD	**Guadarrama**	**6.47**	**42**	P	**Pn**	**04 30 34.5**	**+0.5**
	comp=N,1.8nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**04 31 45.4**	**-2.5**
	comp=N,2.0nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**6.76**	**17**	P	**Pn**	**04 30 37.8**	**-0.1**
	comp=N,3.0nm,0.1s,SNR=4.0						
ERUA				S	**Sn**	**04 31 49.5**	**-5.4**
	comp=N,2.4nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**7.01**	**5**	P	**Pn**	**04 30 39.9**	**-1.5**
EMAZ				S	**Sn**	**04 31 52.0**	**-9.2**
EMAZ	**Mazaricos**	**7.01**	**5**	P	**Pn**	**04 30 39.9**	**-1.5**
	SNR=4.0						
EMAZ				S	**Sn**	**04 31 52.0**	**-9.2**
	comp=N,7.6nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**7.01**	**5**	S	**Sn**	**04 31 52.0**	**-9.2**
	comp=N,7.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.14**	**65**	P	**Pn**	**04 30 43.4**	**+0.3**
	comp=N,0.8nm,0.1s,SNR=17						
ETOB				S	**Sn**	**04 32 01.8**	**-2.4**
	comp=N,40nm,1.5s						
ETOB	**Tobarra**	**7.14**	**65**	P	**Pn**	**04 30 43.4**	**+0.3**
	comp=N,0.8nm,0.1s,SNR=17						
ETOB				S	**Sn**	**04 32 01.8**	**-2.4**
	comp=N,1.7nm,0.1s						
EPON	**Pontenova**	**7.65**	**15**	P	**Pn**	**04 30 49.2**	**-0.9**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPON				S	**Sn**	**04 32 10.6**	**-6.1**
	comp=N,1.2nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.65**	**15**	P	**Pn**	**04 30 49.2**	**-0.9**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPON				S	**Sn**	**04 32 10.6**	**-6.1**
	comp=N,1.2nm,0.2s,SNR=7.9						
ETOR	**Torete**	**7.81**	**49**	P	**Pn**	**04 30 53.1**	**+0.8**
	comp=N,13nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**04 32 17.1**	**-3.6**
	SNR=7.9						
**ET

MSAI	**Masohi**	**1.06 252**	P	**Pn**	**04 32 15.4**	**+0.3**
MSAI	**Masohi**	**1.06 252**	S	**Sn**	**04 32 29.2**	**+0.5**
AAI	**Ambon**	**1.87 249**	P	**Pn**	**04 32 26.6**	**+0.5**
AAI	**Ambon**	**1.87 249**	P	**Pn**	**04 32 26.6**	**+0.5**
SWI	**Sorong**	**2.51 32**	P	**Pn**	**04 32 34.9**	**0.0**
SWI	**Sorong**	**2.51 32**	S	**Sn**	**04 33 04.6**	**+0.3**
LBMI	**Labuha**	**3.40 314**	P	**Pn**	**04 32 45.4**	**-1.7**
WRA	**Warramunga Arr**	**17.36 166**	P	**Pn**	**04 35 53.6**	**-2.2**
	0.7nm,0.3s,baz=348,slow=13,SNR=4.9					
WRA			S	**S**	**04 39 02.0**	**-13**
	0.2nm,0.3s,baz=160,slow=36,SNR=3.0					
ASAR	**Alice Springs**	**20.88 170**	P	**P**	**04 36 35.8**	**+0.7**
	6.7nm,0.6s,baz=349,slow=10,SNR=86					
ASAR			S	**S**	**04 40 23.8**	**-1.9**
	0.5nm,0.7s,baz=354,slow=22,SNR=4.0					
CTA	**Charters Tower**	**23.27 138**	P	**P**	**04 37 03.5**	**+2.9**
	1.4nm,0.4s,mb3.7,baz=325,slow=14,SNR=4.4					
STKA	**Stephens Creek**	**30.73 160**	P	**P**	**04 38 08.4**	**+0.8**
	0.9nm,0.3s,mb4.0,baz=343,slow=6.9,SNR=4.0					
MKAR	**Makanchi Array**	**64.90 326**	P	**P**	**04 42 31.5**	**+0.1**
	0.6nm,0.8s,mb3.7,baz=120,slow=8.4,SNR=4.6					

IDC 23 04:35:32.0±8.9, 1079S×16485E, h88km±62km, mb3.5/4, mb1 3.7/5, mb1mx3.5/19, mbtmp3.7/5, ML5.3/1, Error ellipse: s-maj=66.2km s-min=43.8km az=98.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.01**	**285**	P	Pn	04 36 44.1	-0.8
	108nm,0.3s,baz=129,slow=2.5,SNR=18						
HNR				S	Sn	04 37 42.6	+1.1
	72nm,0.3s,baz=45,slow=23,SNR=4.1						
CTA	**Charters Tower**	**20.15**	**240**	P	P	04 40 01.1	+1.7
	1.1nm,0.3s,baz=71,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**30.75**	**249**	P	P	04 41 38.6	-0.5
	0.5nm,0.4s,baz=76,slow=9.3,SNR=3.5						
ASAR	**Alice Springs**	**32.13**	**242**	P	P	04 41 50.5	-0.8
	0.6nm,0.6s,baz=67,slow=9.6,SNR=5.0						
MKAR	**Makanchi Array**	**92.73**	**317**	P	P	04 48 35.0	+0.6
	0.6nm,0.7s,baz=103,slow=6.4,SNR=4.5						

*IDC **23** 04:42:17.0±2.0, 1018N×12170E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/20, mbtmp3.8/5, Error ellipse: s-maj=300.5km s-min=20.2km az=62.0*
*ISCJB **23** 04:42:17.9±0.9, 1134N±004×12378E±004, h29km±10km, mb3.8/5, Error ellipse: s-maj=7.3km s-min=5.3km az=136.4*
*MAN **23** 04:42:17, 1133N×12378E, h22km, mb4.5, ML3.4, MS3.3*
MAN INTENSITY II - MADRIDEJOS, BANTAYAN ISLAND.
ISC 23 04:42:16.6±0.7, 1135N±003×12379E±004, h7km±6km, n25, σ0°97/29, mb3.8/5, 1C-4D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.86**	**110**	*eP*	**Pg**	**04 42 33.3**	**+0.2**
MMPH	**Masbate**	**1.01**	**351**	⇓*eP*	**Pg**	**04 42 35.9**	**-0.1**
MMPH				*i* S	**Sg**	**04 42 49.3**	**+0.1**
RCP	**Roxas**	**1.04**	**281**	⇓*eP*	**Pg**	**04 42 35.9**	**-0.7**
LLP	**Lapu-Lapu**	**1.04**	**170**	⇓*eP*	**Pg**	**04 42 36.8**	**+0.1**
LLP				*eS*	**Sg**	**04 42 50.4**	**+0.2**
PLP	**Palo**	**1.18**	**99**	⇓*eP*	**Pb**	**04 42 38.7**	**-0.6**
PLP				*i* S	**Sb**	**04 42 55.9**	**+1.1**
GUIM	**Jordan**	**1.38**	**239**	*eP*	**Pn**	**04 42 41.1**	**-1.2**
CNP	**Catarman**	**1.43**	**37**	*eP*	**Pn**	**04 42 42.6**	**-0.4**
KALP	**Kalibo**	**1.46**	**283**	⇑*eP*	**Pn**	**04 42 41.7**	**-1.6**
MSLP	**Maasin**	**1.60**	**139**	*eP*	**Pn**	**04 42 45.6**	**+0.3**
TBP	**Tagbilaran**	**1.65**	**177**	*eP*	**Pn**	**04 42 45.9**	**-0.1**
TBP				*eS*	**Sn**	**04 43 09.8**	**+2.3**
OTRP	**Odiongan**	**2.00**	**300**	*eP*	**Pn**	**04 42 50.7**	**-0.1**
SNPH	**Sibulan**	**2.07**	**195**	*eP*	**Pn**	**04 42 52.0**	**+0.3**
PVCP	**Virac**	**2.26**	**9**	*eP*	**Pn**	**04 42 54.9**	**+0.5**
SCPH	**Surigao**	**2.29**	**133**	*eP*	**Pn**	**04 42 54.6**	**-0.1**
CUYO	**Cuyo Island**	**2.77**	**260**	*eP*	**Pn**	**04 43 01.8**	**+0.4**
SJMP	**San Jose**	**2.83**	**293**	*eP*	**Pn**	**04 43 03.7**	**+1.4**
PAGZ	**Pagadian**	**3.51**	**187**	*eP*	**Pn**	**04 43 11.7**	**+0.2**
BUSP	**Coron**	**3.58**	**281**	*eP*	**Pn**	**04 43 13.1**	**+0.7**
LUBP	**Lubang**	**4.19**	**305**	*eP*	**Pn**	**04 43 23.8**	**+2.9**
ENPP	**El Nido**	**4.28**	**268**	*eP*	**Pn**	**04 43 23.1**	**+0.9**
WRA	**Warramunga Arr**	**32.79**	**161**	P	**P**	**04 48 48.5**	**-2.0**
	0.6nm,1.0s,mb3.5,baz=334,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**36.18**	**164**	P	**P**	**04 49 18.4**	**-1.5**
	0.4nm,0.6s,mb3.5,baz=342,slow=6.5,SNR=4.4						
STKA	**Stephens Creek**	**46.24**	**159**	P	**P**	**04 50 40.9**	**-1.7**
	0.9nm,0.3s,mb4.2,baz=320,slow=4.8,SNR=4.2						
MKAR	**Makanchi Array**	**49.70**	**323**	P	**P**	**04 51 09.5**	**+0.2**
	0.9nm,0.8s,mb3.6,baz=120,slow=8.5,SNR=5.7						
KURK	**Kurchatov**	**52.81**	**326**	P	**P**	**04 51 39.6**	**-0.2**
	1.9nm,0.7s,mb4.1,baz=125,slow=7.4,SNR=9.1						

*NEIC **23** 05:00:23.1±2.4, 2299N×12162E, h10km, ML4.6(TAP), Error ellipse: s-maj=25.2km s-min=11.4km az=135.0*
NEIC Recorded [2 TAP] in Hua-lien and T'ai-tung; [1 TAP] in Chia-i, Kao-hsiung and Yun-lin Counties.
*ISCJB **23** 05:00:25.1±0.3, 2299N±002×12148E±002, h31km±2km, Error ellipse: s-maj=3.2km s-min=2.4km az=148.4*
*TAP **23** 05:00:25.5, 2301N×12136E, h41km, ML4.3, B*
*JMA **23** 05:00:26.7±0.2, 2300N×12156E, h89km, M3.7*
ISC 23 05:00:25.6±0.3, 2299N±002×12145E±002, h30km±2km, n75, σ0°88/124, 14C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.13**	**326**	⇑P	**Pb**	**05 00 32.6**	**+1.4**
	baz=11						
CHKT				*eS*	**Sb**	**05 00 37.9**	**+2.9**
	baz=11						
TTN	**Taitung**	**0.36**	**230**	P	**Pb**	**05 00 34.5**	**+0.6**
	baz=219						
TTN				S	**Sb**	**05 00 41.9**	**+2.4**
	baz=219						
TWG	**Pinlang**	**0.38**	**244**	*ePn*	**Pb**	**05 00 33.9**	**-0.3**
TWG				*eSn*	**Sb**	**05 00 39.8**	**-0.3**
TWG	**Pinlang**	**0.38**	**244**	⇓*iP*	**Pb**	**05 00 33.9**	**-0.3**
	baz=236						
TWG				*eS*	**Sb**	**05 00 39.6**	**-0.5**
	baz=236						
TWF1	**Yuli**	**0.39**	**339**	⇑*iP*	**Pb**	**05 00 34.3**	**0.0**
	baz=343						
TWF1				S	**Sb**	**05 00 40.1**	**-0.1**
	baz=343						
YULB	**Yu-li**	**0.42**	**341**	*ePn*	**Pb**	**05 00 34.2**	**-0.6**
ELDTW	**Lidau**	**0.44**	**297**	⇑*iP*	**Pb**	**05 00 34.7**	**-0.4**
	baz=299						
ELDTW				S	**Sb**	**05 00 40.6**	**-1.0**
	baz=299						
EHY	**Hungye**	**0.53**	**347**	⇓*iP*	**Pb**	**05 00 35.9**	**-0.6**
	baz=355						
EHY				S	**Sb**	**05 00 42.8**	**-1.1**
	baz=355						
ECL	**Taimali**	**0.60**	**229**	⇓*iP*	**Pb**	**05 00 36.2**	**-1.4**
	baz=217						
STYT	**Tauyuan**	**0.66**	**285**	⇑*iP*	**Pb**	**05 00 38.1**	**-0.5**
	baz=283						
STYT				S	**Sb**	**05 00 46.9**	**-0.6**
	baz=283						
YUS	**Yu-Shan**	**0.67**	**318**	⇑*iP*	**Pb**	**05 00 39.0**	**+0.1**
	baz=324						
YUS				S	**Sb**	**05 00 47.5**	**-0.4**
	baz=324						
TEGC	**Jichi Village**	**0.72**	**7**	*eP*	**Pb**	**05 00 39.6**	**-0.1**
	baz=2.0						
TEGC				*eS*	**Sb**	**05 00 50.1**	**+0.9**
	baz=2.0						
ALS	**Alishan**	**0.79**	**311**	⇑*iP*	**Pn**	**05 00 40.8**	**+0.1**
	baz=316						
ALS				*eS*	**Sb**	**05 00 51.0**	**-0.1**
	baz=316						
SSD	**Sandimen**	**0.79**	**252**	*eP*	**Pn**	**05 00 39.7**	**-1.0**
	baz=247						
SGST	**Jiashian**	**0.80**	**277**	⇑*iP*	**Pn**	**05 00 40.8**	**0.0**
	baz=276						
SGST				*eS*	**Sb**	**05 00 51.8**	**+0.3**
	baz=276						
TAW	**Tawu**	**0.81**	**219**	*eP*	**Pn**	**05 00 39.2**	**-1.8**
	baz=214						
WTP	**Ta-pu**	**0.81**	**289**	⇑*iP*	**Pn**	**05 00 41.0**	**0.0**
	baz=289						
WTP				S	**Sb**	**05 00 52.0**	**+0.3**
	baz=289						
TPUB	**Ta-pu**	**0.81**	**293**	*ePn*	**Pn**	**05 00 40.5**	**-0.5**
EAST	**Anshuo**	**0.82**	**223**	*eP*	**Pn**	**05 00 38.6**	**-2.5**
	baz=216						
ESL	**Shilin**	**0.82**	**359**	⇓*iP*	**Pn**	**05 00 39.6**	**-1.5**
	baz=4.0						
ESL				*eS*	**Sb**	**05 00 48.9**	**-3.2**
	baz=4.0						
CHN4	**Tsaushan**	**0.86**	**295**	⇑*iP*	**Pn**	**05 00 41.8**	**+0.1**
	baz=296						
CHN4				S	**Sb**	**05 00 53.8**	**+0.5**
	baz=296						
CHN1	**Nanshi**	**0.87**	**283**	⇑*iP*	**Pn**	**05 00 41.9**	**+0.1**
	baz=283						
CHN1				S	**Sb**	**05 00 53.8**	**+0.4**
	baz=283						
SSLB	**Suanglung**	**0.91**	**330**	*ePn*	**Pn**	**05 00 41.9**	**-0.6**
SSLB				*eSn*	**Sn**	**05 00 52.7**	**-1.9**
SGLT	**Jiouru**	**0.92**	**254**	*eP*	**Pn**	**05 00 43.1**	**+0.7**
	baz=251						
TWK	**Hsinying**	**0.92**	**288**	⇑*iP*	**Pn**	**05 00 42.4**	**-0.1**
	baz=288						
TWK				S	**Sn**	**05 00 55.4**	**+0.6**
	baz=288						
CHN5	**Tsauling**	**0.93**	**311**	P	**Pn**	**05 00 42.8**	**+0.1**
	baz=313						
CHN5				S	**Sn**	**05 00 55.4**	**+0.4**
	baz=313						
LAY	**Lan-yu**	**0.95**	**174**	*eP*	**Pn**	**05 00 42.2**	**-0.7**
	baz=163						
TWM1	**Shoushan**	**0.96**	**260**	*eP*	**Pn**	**05 00 43.9**	**+0.9**
	baz=267						
TWM1				*eS*	**Sn**	**05 00 58.4**	**+2.7**
	baz=267						
SCZT	**Fangliau**	**0.98**	**231**	⇓*iP*	**Pn**	**05 00 42.7**	**-0.6**
	baz=228						
HWA	**Hwalien**	**0.99**	**8**	*eP*	**Pn**	**05 00 39.9**	**-3.6**
	baz=3.0						
SMLT	**Sun Moon Lake**	**1.02**	**331**	⇓*iP*	**Pn**	**05 00 44.2**	**+0.3**
	baz=340						
SMLT				*eS*	**Sn**	**05 00 56.9**	**-0.4**
	baz=340						
CHN2	**Minshiung**	**1.04**	**301**	*eP*	**Pn**	**05 00 43.6**	**-0.6**
	baz=303						
CHN2				*eS*	**Sn**	**05 00 58.1**	**+0.3**
	baz=303						
TYC	**Yuchr**	**1.06**	**329**	⇓*iP*	**Pn**	**05 00 44.8**	**+0.4**
	baz=332						
TYC				S	**Sn**	**05 00 58.4**	**+0.2**
	baz=332						
CHY	**Chiayi**	**1.07**	**298**	*eP*	**Pn**	**05 00 44.5**	**-0.1**
	baz=299						
CHY				*eS*	**Sn**	**05 00 58.0**	**-0.4**
	baz=299						
WGK	**Gukeng**	**1.07**	**311**	*eP*	**Pn**	**05 00 44.9**	**+0.4**
	baz=312						
WGK				*eS*	**Sn**	**05 00 59.5**	**+1.1**
	baz=312						
TWD	**Chiawan**	**1.09**	**7**	P	**Pn**	**05 00 43.7**	**-1.2**
	baz=2.0						
WNT	**Mingjian**	**1.13**	**322**	*eP*	**Pn**	**05 00 46.1**	**+0.7**
	baz=324						
WNT				*eS*	**Sn**	**05 01 00.8**	**+1.0**
	baz=324						
KAU	**Kaohsiung**	**1.13**	**248**	*eP*	**Pn**	**05 00 47.0**	**+1.6**
	baz=246						
WHF	**Hehuan Shan**	**1.16**	**352**	⇓*iP*	**Pn**	**05 00 45.3**	**-0.6**
	baz=4.0						
WHF				*eS*	**Sn**	**05 00 59.2**	**-1.5**
	baz=4.0						
SCLT	**Jiali**	**1.17**	**279**	*eP*	**Pn**	**05 00 45.6**	**-0.3**
	baz=279						
SCLT				*eS*	**Sn**	**05 01 01.6**	**+0.8**
	baz=279						
HEN	**Hengchun**	**1.18**	**214**	*eP*	**Pn**	**05 00 45.8**	**-0.2**
	baz=201						
NACB	**Ninganchiao**	**1.19**	**7**	⇑*iPn*	**Pn**	**05 00 44.5**	**-1.7**
NACB				*eSn*	**Sn**	**05 00 57.5**	**-3.8**
TWP	**Hsiaoliuchiu**	**1.19**	**238**	*eP*	**Pn**	**05 00 47.6**	**+1.5**
	baz=236						
TWP				*eS*	**Sn**	**05 01 05.6**	**+4.3**
	baz=236						
CHN8	**Yiju**	**1.19**	**288**	⇑*iP*	**Pn**	**05 00 46.0**	**-0.2**
	baz=288						
CHN8				*eS*	**Sn**	**05 01 01.5**	**+0.1**
	baz=288						
TSEB	**Hengchuen, Pin**	**1.20**	**205**	*eP*	**Pn**	**05 00 45.9**	**-0.4**
	baz=194						
TWK1	**Hengchun**	**1.20**	**210**	*eP*	**Pn**	**05 00 45.4**	**-0.9**
	baz=198						
TWT	**Tachien**	**1.28**	**349**	*eP*	**Pn**	**05 00 47.7**	**+0.2**
	baz=358						
TWT				*eS*	**Sn**	**05 01 02.4**	**-1.3**
	baz=358						
WSF	**Szhu**	**1.30**	**300**	*eP*	**Pn**	**05 00 47.3**	**-0.4**
	baz=301						
WSF				*eS*	**Sn**	**05 01 03.2**	**-0.8**
	baz=301						
TCU	**Taichung**	**1.35**	**329**	*eP*	**Pn**	**05 00 49.2**	**+0.8**
	baz=317						
WTCT	**Ta-ch'eng**	**1.38**	**309**	P	**Pn**	**05 00 48.2**	**-0.6**
	baz=311						
WTCT				S	**Sn**	**05 01 05.9**	**-0.1**
	baz=311						
NNS	**Nan Shan**	**1.45**	**357**	*eP*	**Pn**	**05 00 49.4**	**-0.4**
	baz=9.0						
ENA	**Nanau**	**1.46**	**11**	P	**Pn**	**05 00 48.9**	**-1.0**
	baz=2.0						
TWQ1	**Liyutan**	**1.49**	**336**	*eP*	**Pn**	**05 00 51.0**	**+0.7**
	baz=338						
TWQ1				S	**Sn**	**05 01 10.7**	**+1.9**
	baz=338						
NSY	**Sanyi**	**1.55**	**336**	*eP*	**Pn**	**05 00 52.1**	**+0.9**
	baz=339						
NSY				S	**Sn**	**05 01 12.8**	**+2.4**
	baz=339						
TWC	**Suao**	**1.65**	**13**	*eP*	**Pn**	**05 00 52.4**	**-0.2**
	baz=5.0						
TWC				*eS*	**Sn**	**05 01 13.1**	**+0.2**
	baz=5.0						
YHNB	**Yeheng**	**1.67**	**358**	*ePn*	**Pn**	**05 00 52.9**	**0.0**
YHNB				*eSn*	**Sn**	**05 01 14.2**	**+0.8**
NSK	**Sanguang**	**1.68**	**357**	P	**Pn**	**05 00 53.2**	**+0.2**
	baz=10.0						
NSK				*eS*	**Sn**	**05 01 11.2**	**-2.3**
	baz=10.0						
NSTT	**Nanjuang**	**1.68**	**346**	*eP*	**Pn**	**05 00 53.1**	**+0.1**
	baz=348						
NSTT				*eS*	**Sn**	**05 01 13.8**	**+0.2**
	baz=348						
TWE	**Neicheng**	**1.74**	**7**	*eP*	**Pn**	**05 00 52.9**	**-0.8**
	baz=7.0						
PNG	**Penghu**	**1.83**	**289**	⇑*iP*	**Pn**	**05 00 54.1**	**-0.9**
	baz=289						
TATO	**Taipei**	**1.98**	**1**	*ePn*	**Pn**	**05 00 57.4**	**+0.3**
TATO				*eSn*	**Sn**	**05 01 21.1**	**+0.3**
NCU	**National Centr**	**1.99**	**353**	*eP*	**Pn**	**05 00 58.1**	**+1.0**
	baz=341						
TWA	**Mucha**	**1.99**	**4**	*eP*	**Pn**	**05 00 57.1**	**-0.1**
	baz=13						
YOJ	**Yonaguni jima**	**2.05**	**44**	P	**Pn**	**05 00 59.0**	**+0.9**
YOJ				*eS*	**Sn**	**05 01 23.4**	**+0.8**
YOJ	**Yonaguni jima**	**2.05**	**44**	P	**Pn**	**05 00 58.8**	**+0.7**
	baz=44						
TWB1	**Santiao Chiao**	**2.07**	**14**	*eP*	**Pn**	**05 00 59.1**	**+0.8**
	baz=5.0						
NWF	**Wu-fen Shan**	**2.10**	**8**	⇓*iP*	**Pn**	**05 00 58.8**	**+0.2**
	baz=10.0						
NWF				*eS*	**Sn**	**05 01 24.4**	**+0.6**
	baz=10.0						
TWS1	**Kuangyinshan**	**2.10**	**359**	*eP*	**Pn**	**05 00 58.6**	**-0.1**
	baz=13						
TWS1				*eS*	**Sn**	**05 01 24.2**	**+0.3**
	baz=13						
HATJ	**Hateruma jima**	**2.41**	**63**	P	**Pn**	**05 01 03.5**	**+0.5**
HATJ				*eS*	**Sn**	**05 01 31.2**	**-0.4**
IRIF	**Iriomote-Funau**	**2.49**	**57**	P	**Pn**	**05 01 04.9**	**+0.9**
IRIF				*eS*	**Sn**	**05 01 34.5**	**+1.1**
JKRS	**Kuro-shima**	**2.66**	**62**	P	**Pn**	**05 01 07.3**	**+0.9**
JKRS				*eS*	**Sn**	**05 01 38.0**	**+0.3**
JIJ	**Ishigaki jima**	**2.83**	**61**	P	**Pn**	**05 01 09.2**	**+0.5**
JIJ				*eS*	**Sn**	**05 01 41.3**	**-0.5**
KNM	**Kinmen**	**3.11**	**298**	*eP*	**Pn**	**05 01 12.1**	**-0.4**
	baz=297						
JTJ	**Tarama**	**3.41**	**60**	P	**Pn**	**05 01 17.3**	**+0.6**
JTJ				*eS*	**Sn**	**05 01 55.8**	**-0.3**
JMJ	**Miyako jima 2**	**3.96**	**62**	*eS*	**Sn**	**05 02 09.8**	**0.0**

IGQ 23 05:14:02.9, 098S×7779W, h20km±4km, Mb4.2, Ms4.0, 1C-18D, Error ellipse: s-maj=1.4km s-min=0.6km az=17.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.60**	**263**	⇑P	Pb	05 14 15.4	+0.7
TAMB	**Tambo**	**0.65**	**296**	⇓P	Pb	05 14 16.2	+0.7
ANTI	**Antisana**	**0.65**	**325**	⇓P	Pb	05 14 15.8	+0.3
VC1	**Cotopaxi 1**	**0.70**	**299**	⇓P	Pb	05 14 17.3	+0.8
RUN5	**Runtun**	**0.77**	**236**	⇓P	Pb	05 14 18.1	+0.5
ULBA	**Ulba**	**0.77**	**233**	⇓P	Pb	05 14 18.0	+0.4
CAMI	**Rancho Maria**	**0.78**	**293**	⇓P	Pb	05 14 18.6	+0.9
RETU	**Refugio**	**0.81**	**235**	⇓P	Pb	05 14 18.8	+0.6
RETU	**Refugio**	**0.81**	**235**	⇓S	Sb	05 14 29.2	+0.6
JUI6	**Juive**	**0.81**	**237**	⇓P	Pb	05 14 18.5	+0.2
JUI6	**Juive**	**0.81**	**237**	⇓S	Sb	05 14 28.9	+0.1
PATA	**Patacocha**	**0.83**	**231**	P	Pb	05 14 19.1	+0.6
ARRY	**Arrayan**	**0.84**	**232**	⇓P	Pb	05 14 19.1	+0.2
BIL2	**Estacion Bilba**	**0.85**	**237**	⇓P	Pb	05 14 19.4	+0.3
BIL2	**Estacion Bilba**	**0.85**	**237**	⇓S	Sb	05 14 30.4	+0.4
LAV3	**Lava3-Reventad**	**0.89**	**10**	P	Pb	05 14 20.2	+0.5
CONE	**Cono NE Rev Vo**	**0.92**	**9**	⇓P	Pb	05 14 20.7	+0.5
IGUA	**Igualata**	**0.99**	**239**	P	Pb	05 14 22.3	+0.9
IGUA	**Igualata**	**0.99**	**239**	S	Sb	05 14 33.5	-0.4
CAYA	**Cayambe**	**1.07**	**349**	⇓P	Pb	05 14 23.3	+0.6
QIL2	**Quilotoa**	**1.13**	**276**	⇓P	Pn	05 14 25.1	+1.5
GGP	**Refugio Guagua**	**1.14**	**315**	⇓P	Pn	05 14 25.0	+1.3
TERV	**Terraza Guagua**	**1.15**	**315**	P	Pn	05 14 25.1	+1.4
TERV	**Terraza Guagua**	**1.15**	**315**	S	Sb	05 14 40.9	+2.5
PINO	**Pino**	**1.16**	**315**	⇓P	Pn	05 14 25.4	+1.4
YANA	**Yana**	**1.16**	**318**	P	Pn	05 14 25.3	+1.3
YANA	**Yana**	**1.16**	**318**	S	Sb	05 14 41.0	+2.0
COTA	**Cotacachi**	**1.42**	**337**	P	Pn	05 14 29.8	+2.2

*NEIC **23** 05:19:35.4, 4355N×1391W, h0km, MG4.0(MDD), After MDD.*
MDD 23 05:19:35.4±3.7, 4355N×1391W, h0km, Error ellipse: s-maj=46.2km s-min=31.0km az=14.0, PRIMO, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**3.66**	**98**	P	Pn	05 20 31.4	-1.8
	1.9nm,0.1s,SNR=7.9						
EMAZ				S	Sn	05 21 12.9	-4.1
	1.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**3.66**	**98**	P	Pn	05 20 31.4	-1.8
	1.9nm,0.1s,SNR=7.9						
EMAZ				S	Sn	05 21 12.9	-4.1
	1.2nm,0.1s,SNR=7.9						
STS	**Santiago**	**3.98**	**98**	P	Pn	05 20 36.6	-1.0
	4.5nm,0.2s,SNR=7.9						
STS				S	Sn	05 21 21.7	-3.2
	0.9nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**4.63**	**109**	P	Pn	05 20 45.6	-1.0
	0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	05 21 38.0	-3.0
	0.5nm,0.1s,SNR=7.5						
ELOB	**Lobios**	**4.63**	**109**	P	Pn	05 20 45.6	-1.0
	0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	05 21 38.0	-3.0
	0.5nm,0.1s,SNR=7.5						
EPON	**Pontenova**	**4.93**	**90**	P	Pn	05 20 49.7	-1.0
	0.1nm,0.1s,SNR=7.9						
EPON				S	Sn	05 21 43.2	-5.2
	1.2nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**4.93**	**90**	P	Pn	05 20 49.7	-1.0
	0.1nm,0.1s,SNR=7.9						
EPON				S	Sn	05 21 43.2	-5.2
	1.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.52**	**105**	P	Pn	05 20 58.1	-0.8
ECAL				S	Sn	05 21 59.0	-4.0
ECAL	**Calabor**	**5.52**	**105**	P	Pn	05 20 58.1	-0.8
	0.2nm,0.1s,SNR=7.9						
ECAL				S	Sn	05 21 59.1	-3.9
	3.0nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**5.52**	**105**	P	Pn	05 20 58.1	-0.8
	0.2nm,0.1s,SNR=7.9						
ECAL				S	Sn	05 21 59.1	-4.0
	3.0nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.34**	**89**	P	Pn	05 21 09.2	-0.9
	0.3nm,0.1s,SNR=7.9						
EARI				S	Sn	05 22 17.9	-5.3
	0.1nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**6.34**	**89**	P	Pn	05 21 09.2	-0.9
	0.3nm,0.1s,SNR=7.9						
EARI				S	Sn	05 22 17.9	-5.3
	0.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.98**	**134**	S	Sn	05 22 55.4	-8.1
	SNR=7.9						
EMIN	**Mina Concepcio**	**7.98**	**134**	S	Sn	05 22 55.4	-8.0
	0.0nm,0.1s,SNR=7.9						

*ISCJB **23** 05:28:43.8±1.5, 76N±0.1×1268E±0.2, h150km±11km, mb3.9/8, Error ellipse: s-maj=38.8km s-min=14.1km az=148.5*
*IDC **23** 05:28:46.0±4.6, 754N×12663E, h151km±34km, mb3.8/8, mb1 3.8/8, mb1mx3.6/21, mbtmp3.8/8, Error ellipse: s-maj=95.5km s-min=14.0km az=64.0*
*MAN **23** 05:28:46, 756N×12659E, h131km, mb3.3, ML2.0, MS1.4*
ISC 23 05:28:45.0±1.7, 76N±02×1267E±02, h145km±12km, n14, σ0°35/15, mb3.9/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.79**	**217**	*eP*	**Pn**	**05 29 07.6**	**0.0**
MATI				*eS*	**Sn**	**05 29 24.5**	**-0.3**
DAV	**Davao City (W)**	**1.26**	**246**	P	**Pn**	**05 29 11.8**	**+0.1**
	138nm,0.3s,baz=190,slow=5.8,SNR=5.8						
DAV				S	**Sn**	**05 29 32.3**	**+0.3**
	147nm,0.3s,baz=72,slow=22,SNR=13						
BUKP	**Musuan**	**1.69**	**280**	*eP

HATJ				S	Sg	06 07 15.8	-0.7	
JTJ	**Tarama**	**1.11**	**109**	P	Pg	06 07 06.6	+0.4	
JTJ				*e*S	Sg	06 07 19.9	-0.7	
KSRS	**Korea Array**	**12.95**	**16**	Pn	Px	06 10 03.5		
	0.2nm,0.3s,baz=196,slow=11,SNR=3.6							
MKAR	**Makanchi Array**	**39.28**	**314**	P	**P**	**06 14 20.8**	**+6.4**	
	1.1nm,0.8s,mb3.6,baz=99,slow=9.1,SNR=5.5							
ZALV	**Zalesovo Beam**	**40.76**	**325**	P	**P**	**06 14 33.2**	**+6.6**	
	0.8nm,0.5s,mb3.6,baz=98,slow=8.9,SNR=3.3							
WRA	**Warramunga Arr**	**45.90**	**166**	P	**P**	**06 15 08.0**	**-0.4**	
	0.5nm,0.5s,mb3.7,baz=348,slow=8.5,SNR=5.5							
ASAR	**Alice Springs**	**49.42**	**167**	P	**P**	**06 15 36.2**	**+0.5**	
	0.2nm,0.3s,mb3.6,baz=348,slow=6.9,SNR=4.2							

ISCJB ***23*** *06:10:17.9±0.4, 4050N±002×2897E±004, h10km, Error ellipse: s-maj=4.0km s-min=3.4km az=170.8*
CSEM ***23*** *06:10:17.0±0.1, 4043N×2895E, h5km, MD2.7, Error ellipse: s-maj=1.3km s-min=1.1km az=15.0*
DDA ***23*** *06:10:17.5, 4045N×2895E, h3km±4km, Md2.9*
ISK ***23*** *06:10:17.2, 4043N×2894E, h6km, MD2.7*

ISC 23 06:10:18.1±0.4, 4048N±003×2896E±004, h5km±4km, n28, σ0§77/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GEMT	**Gemlik**	**0.18**	**103**	*e*P			**Pg**	**06 10 21.5**	**-0.2**
GEMT				*e*SG			**Sg**	**06 10 24.8**	**+0.7**
YLV	**Yalova**	**0.33**	**74**	*e*P			**Pg**	**06 10 24.8**	**+0.3**
ULDT	**Uludag**	**0.36**	**158**	*i* P			**Pg**	**06 10 24.8**	**-0.2**
ULDT				*i* S			**Sg**	**06 10 29.5**	**-0.3**
KCT	**Karacabey**	**0.51**	**246**	*e*PG			**Pg**	**06 10 26.7**	**-1.2**
ISK	**Istanbul-Kandi**	**0.59**	**7**	*e*PG			**Pg**	**06 10 30.1**	**+0.6**
ADVT	**Abdulvahap**	**0.60**	**94**	*e*PG			**Pg**	**06 10 29.6**	**0.0**
HRT	**Hereke**	**0.64**	**57**	*e*PG			**Pg**	**06 10 30.6**	**+0.1**
BGKT	**Bogazkoy**	**0.72**	**349**	*e*PG			**Pg**	**06 10 32.3**	**+0.4**
CAVI	**Cavuskoy**	**0.73**	**112**	*e*PG			**Pg**	**06 10 31.5**	**-0.6**
KLYT	**Kilyos**	**0.78**	**5**	*e*PG			**Pg**	**06 10 33.4**	**+0.3**
CTT	**Catalca**	**0.78**	**329**	*e*PG			**Pg**	**06 10 33.3**	**+0.2**
BNT	**Bandirma**	**0.80**	**262**	*e*PG			**Pg**	**06 10 33.0**	**-0.5**
CTKS	**Kestanelik-??a**	**0.83**	**336**	*e*PG			**Pg**	**06 10 34.4**	**+0.2**
SILT	**Sile**	**0.85**	**37**	*e*PG			**Pg**	**06 10 35.0**	**+0.5**
EYL	**Eskiyayla**	**0.92**	**84**	*e*PG			**Pg**	**06 10 35.0**	**-0.8**
DURS	**Dursunbey**	**0.95**	**203**	*i* P			**Pg**	**06 10 36.1**	**-0.3**
DURS				*i* S			**Sg**	**06 10 50.1**	**+1.4**
GPA	**Golpazari**	**1.05**	**100**	*e*PG			**Pg**	**06 10 37.9**	**-0.3**
GULT	**Gulveren**	**1.19**	**92**	*e*PN			**Pn**	**06 10 40.7**	**-0.7**
BORA	**Eskisehir**	**1.29**	**117**	*i* P			**Pn**	**06 10 41.7**	**-1.1**
BORA				*i* S			**Sb**	**06 11 01.1**	**+1.3**
MFT	**Murefte**	**1.31**	**284**	*e*PN			**Pn**	**06 10 43.2**	**0.0**
GDZ	**Gediz**	**1.44**	**164**	*i* P			**Pn**	**06 10 45.1**	**+0.2**
GDZ				*i* S			**Sb**	**06 11 04.5**	**+0.3**
DEMI	**Demirci**	**1.44**	**188**	*e*P			**Pn**	**06 10 45.4**	**+0.4**
DEMI				*i* S			**Sb**	**06 11 03.8**	**-0.4**
DEMI	**Demirci**	**1.44**	**188**	*e*P			**Pn**	**06 10 45.3**	**+0.4**
DEMI				*i* S			**Sb**	**06 11 03.8**	**-0.4**
ALT	**Altintas**	**1.67**	**148**	*e*PN			**Pn**	**06 10 47.1**	**-1.0**
ESKT	**Eskisehir**	**1.74**	**123**	*e*P			**Pn**	**06 10 47.8**	**-1.2**
ESKT				*i* S			**Sn**	**06 11 11.8**	**+0.3**
SEYT	**Eskypehyr**	**1.74**	**123**	*e*P			**Pn**	**06 10 47.8**	**-1.2**
SEYT				*i* S			**Sn**	**06 11 11.8**	**+0.3**
KULA	**Kula-Manisa**	**1.97**	**187**	*e*PN			**Pn**	**06 10 51.3**	**-0.9**
MANT	**Manisa**	**2.01**	**189**	*i* P			**Pn**	**06 10 54.8**	**+2.1**
MANT				*i* S			**Sn**	**06 11 21.4**	**+3.2**

IDC 23 06:28:14.6±45.0, 1486S×17141W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/19, mbtmp4.3/3, Error ellipse: s-maj=880.9km s-min=184.2km az=78.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
STKA	**Stephens Creek**	**45.97**	**240**	P			P	06 36 39.5	-0.2
	2.0nm,0.5s,baz=74,slow=7.9,SNR=5.2								
WRA	**Warramunga Arr**	**51.83**	**256**	P			P	06 37 24.9	0.0
	0.7nm,0.5s,baz=92,slow=6.9,SNR=12								
ASAR	**Alice Springs**	**52.10**	**251**	P			P	06 37 26.9	+0.1
	5.7nm,0.4s,baz=89,slow=8.1,SNR=118								

IDC ***23*** *06:34:09.7±3.9, 1434N×9171W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/21, mbtmp3.5/5, ML3.7/2, Error ellipse: s-maj=121.2km s-min=53.2km az=35.0*
ISCJB ***23*** *06:34:13.9±1.8, 141N±02×9238W±009, h33km, mb3.8/2, Error ellipse: s-maj=31.3km s-min=6.0km az=20.5*
CASC ***23*** *06:34:15.1±1.7, 1404N×9227W, h38km±416km, MD4.3, ML3.2*

ISC 23 06:34:15.3±1.8, 141N±02×9234W±009, h35km, n22, σ0§88/13, mb3.8/2, 6C-5D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
FG6		**1.49**	**71**	⇓*e*P			**Pn**	**06 34 39.8**	**+0.2**
FUG	**Fuego 3**	**1.49**	**76**	⇓*e*P			**Pn**	**06 34 39.4**	**-0.2**
PCG	**Pacaya**	**1.71**	**79**	⇓*e*P			**Pn**	**06 34 42.7**	**+0.1**
PCG				*e*S			**Sn**	**06 35 03.2**	**+0.1**
IXG	**Ixpaco**	**1.83**	**87**	⇑*e*P			**Pn**	**06 34 43.6**	**-0.6**
NBG	**Las Nubes**	**1.99**	**75**	⇑*e*P			**Pn**	**06 34 48.0**	**+1.5**
RBDL	**Robledal**	**2.57**	**89**	⇓*e*P			x	06 34 54.3	
RBDL				*e*S			x	06 35 24.9	
RTR	**El Retiro**	**2.62**	**94**	⇑*e*P			x	06 34 54.3	
SBLS	**San Blas**	**2.65**	**95**	⇓*e*P			x	06 34 54.7	
SNJE	**San Jose**	**2.66**	**94**	⇑*e*P			x	06 34 54.9	
SNJE				*e*S			x	06 35 27.1	
BOQS	**Boqueron**	**2.99**	**96**	*e*P			x	06 34 59.8	
BOQS				AML			x	06 35 41.9	
	comp=Z,120nm,0.3s								
SNET	**Serv Nac Est T**	**3.04**	**97**	*e*S			x	06 35 35.6	
LFRS	**El Faro**	**3.21**	**98**	⇑*e*P			x	06 35 02.5	
LBRS	**Las Brisas**	**3.22**	**96**	⇑*e*P			x	06 35 02.7	
SNVI	**San Vicente**	**3.43**	**97**	*e*P			x	06 35 04.9	
SNVI				*e*S			x	06 35 45.2	
CMIG	**Matias Romero**	**3.87**	**321**	Pn			**Pn**	**06 35 12.7**	**+0.3**
	comp=Z,4.9nm,0.3s,baz=128,slow=13,SNR=134								
CMIG				Sn			**Sn**	**06 35 56.1**	**-0.5**
	comp=Z,15nm,0.3s,baz=86,slow=14,SNR=8.7								
CNCH	**Conchagua**	**4.45**	**100**	*e*P			x	06 35 19.8	
TGUH	**Tegucigalpa,Un**	**4.91**	**90**	*e*P			**Pn**	**06 35 25.6**	**-1.1**
TXAR	**Lajitas Array**	**18.45**	**327**	P			**Pn**	**06 38 28.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=143,slow=12,SNR=3.1								
ANMO	**Albuquerque**	**24.38**	**331**	P			**P**	**06 39 29.5**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=152,slow=9.9,SNR=3.3								
NVAR	**Mina Array Bea**	**33.40**	**321**	P			**P**	**06 40 53.1**	**+2.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=126,slow=9.0,SNR=6.9								
YKA	**Yellowknife Ar**	**50.87**	**347**	P			**P**	**06 43 11.6**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.9,baz=154,slow=7.5,SNR=3.1								
CMAR	**Chiang Mai Arr**	**145.81**	**341**	PKPbc			PKPbc	06 53 50.1	-1.5
	comp=Z,1.2nm,0.3s,baz=341,slow=5.2,SNR=6.1								

GUC 23 06:36:55.3±1.0, 2310S×7025W, h42km±4km, MD4.0, ML2.8,1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MECH	**Mejillones**	**0.18**	**267**	⇓*e*P			Pn	06 37 02.2	-0.5
MECH				*i* S			Sn	06 37 08.1	+0.3
CEN1	**Los Morros**	**0.30**	**171**	*e*P			Pn	06 37 07.2	+3.4
CEN1				*i* S			Sn	06 37 15.6	+5.9
ANCH	**Antofagasta**	**0.60**	**194**	*e*P			Pn	06 37 06.8	-0.7
ANCH				*i* S			Sn	06 37 16.4	+0.2
MACH	**Maria Elena**	**1.00**	**27**	*e*P			Pn	06 37 13.1	+0.1
MACH				*i* S			Sn	06 37 25.1	-0.8
LVC	**Limon Verde**	**1.33**	**69**	*e*P			Pn	06 37 19.4	+2.1
LVC				*i* S			Sn	06 37 37.0	+3.1
LVC				AML			AML	06 37 37.6	
	comp=E,165nm,0.2s								
CPN1	**Cerro Paranal**	**1.53**	**185**	*e*P			Pn	06 37 22.0	+1.9
CPN1				*i* S			Sn	06 37 42.5	+3.7
SPCH	**San Pedro de A**	**1.90**	**85**	*e*P			Pn	06 37 31.6	+6.4
SPCH				*i* S			Sn	06 37 57.4	+9.4
SPCH				AML			AML	06 38 05.8	
	comp=E,260nm,0.8s								

MOS ***23*** *06:40:31.2±1.1, 4927N×156.16E, h10km, mb4.3/1, Error ellipse: s-maj=99.9km s-min=19.0km az=77.3*

KRSC 23 06:40:23.7±2.6, 4883N×15604E, h5km±5km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SKR	**Severo-Kuril's**	**1.86**	**2**	*e*PN			Pn	06 40 56.6	+0.5
SKR				*e*S			Sn	06 41 19.3	-0.6
SKR				pmax			pmax		
	comp=Z,80nm,0.4s								
SKR				smax					
	comp=E,410nm,0.3s								
SKR				smax					
	comp=N,460nm,0.5s								
SKR				smax					
	comp=Z,150nm,0.5s								
RUS	**Russkaya**	**3.94**	**23**	*e*P			Pn	06 41 26.7	+2.0
RUS				*e*S			Sn	06 42 12.6	+1.4
PET	**Petropavlovsk**	**4.51**	**20**	*e*PN			Pn	06 41 37.0	+4.4
PET				*e*S			Sn	06 42 33.4	+8.0
PET				smax					
	comp=N,64nm,0.6s								
PET	**Petropavlovsk**	**4.51**	**20**	S			Sn	06 42 26.4	+1.0
SDLR	**Sedlovina**	**4.80**	**21**	*e*P			Pn	06 41 39.2	+2.6
SDLR				S			Sn	06 42 34.3	+1.8
SPN	**Mys Shipunski**	**4.96**	**29**	P			Pn	06 41 41.5	+2.8
SPN				*e*S			Sn	06 42 38.0	+1.6
KBTR	**Krutoberegovo**	**8.46**	**27**	P			Pn	06 42 30.3	+3.5

IDC 23 06:54:53.4±1.6, 1769S×17859W, h562km±19km, mb3.6/7, mb1 3.9/8, mb1mx3.5/19, mbtmp3.6/8, 2, Error ellipse: s-maj=81.9km s-min=10.9km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AFI	**Afiamalu**	**7.56**	**61**	P			P	06 56 45.8	-1.5
	3.6nm,0.3s,baz=292,slow=5.4,SNR=4.4								
AFI				S				06 58 18.9	-1.6
	2.9nm,0.3s,baz=115,slow=21,SNR=3.8								
CTA	**Charters Tower**	**33.31**	**260**	⇓*i*P			P	07 00 46.2	+0.7
	5.5nm,0.5s								
CTA	**Charters Tower**	**33.31**	**260**	P			P	07 00 46.3	+0.8
	8.1nm,0.6s,baz=88,slow=10.0,SNR=15								
STKA	**Stephens Creek**	**38.58**	**241**	*e*P			P	07 01 29.5	+0.7
	3.9nm,0.6s								
STKA	**Stephens Creek**	**38.58**	**241**	P			P	07 01 29.2	+0.4
	4.1nm,0.4s,baz=71,slow=11,SNR=14								
WB2	**Warramunga Arr**	**44.49**	**259**	⇓*i*P			P	07 02 15.3	-0.3
WRA	**Warramunga Arr**	**44.50**	**259**	P			P	07 02 15.5	-0.2
	5.2nm,0.5s,baz=95,slow=6.9,SNR=79								
ASAR	**Alice Springs**	**44.68**	**254**	P			P	07 02 17.4	+0.3
	40nm,0.6s,baz=88,slow=8.5,SNR=559								
ASAR				PcP			PcP	07 03 44.7	-2.7
	0.5nm,0.5s,baz=102,slow=4.1,SNR=3.0								
ASAR				S			S	07 08 11.8	-1.4
	0.4nm,0.5s,baz=88,slow=15,SNR=7.3								
KAKA	**Kakadu**	**47.41**	**269**	*e*P			Px	07 02 24.3	
	16nm,0.4s								
NVAR	**Mina Array Bea**	**79.39**	**44**	P			P	07 06 02.4	+0.8
	1.5nm,0.7s,baz=224,slow=8.3,SNR=13								
TXAR	**Lajitas Array**	**86.03**	**58**	P			P	07 06 36.4	+1.2
	1.5nm,0.7s,baz=227,slow=5.1,SNR=14								
PDAR	**Pinedale Array**	**87.32**	**44**	P			P	07 06 41.2	+0.3
	1.2nm,0.6s,baz=221,slow=3.0,SNR=12								

CASC 23 07:06:32.1±2.5, 861N×8310W, h6km±6km, MD4.0, MW4.4, 5C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ACR	**Cerro Adams**	**0.08**	**302**	⇑*i*P			Pg	07 06 34.8	+0.9
BRU2	**Volcan**	**0.44**	**66**	⇓*e*P			Pg	07 06 41.4	+0.7
BRU2				*e*S			Sg	07 06 49.2	+2.7
TBS2		**0.47**	**67**	⇓*e*P			Pg	07 06 48.6	+7.4
TBS2				*e*S			Sg	07 06 57.2	+10
BAR1		**0.66**	**341**	*e*P			Pg	07 06 44.2	-0.7
BAR1				*e*S			Sg	07 06 54.7	+1.3
DVD	**David**	**0.67**	**105**	*e*P			Pg	07 06 43.8	-1.1
CNI	**Changuinola**	**0.99**	**36**	⇓*e*P			Pg	07 06 50.4	-0.7
QCR	**Quepos**	**1.33**	**308**	*e*P			Pn	07 06 54.6	-2.6
QCR				*e*S			Sb	07 07 13.6	-1.1
URSC	**Urasca**	**1.39**	**331**	⇑*e*P			Pn	07 06 55.8	-2.3
LCR2	**La Lucha 2**	**1.44**	**322**	*e*P			Pn	07 06 57.8	-0.9
LAJ	**Bijagual**	**1.60**	**321**	*e*P			Pn	07 07 01.9	+0.9
LAJ				*e*S			Sn	07 07 27.4	+5.4
PRS1	**Puriscal**	**1.81**	**319**	⇑*e*P			Pn	07 07 01.9	-2.0
PRS1				*e*S			Sn	07 07 26.4	-0.9
CGA2	**Cerro Gallo 2**	**1.94**	**316**	*e*P			Pn	07 07 04.7	-1.0
CGA2				*e*S			Sn	07 07 31.4	+1.0
JCR	**Jicaral**	**2.34**	**302**	*e*P			Pn	07 07 10.9	-0.2
2RIO	**Dos Rios de Up**	**2.84**	**312**	*e*P			Pn	07 07 23.5	+5.5
CUI	**Cuipilapa**	**2.89**	**315**	*e*P			Pn	07 07 18.9	+0.1
LIM1	**Limonal**	**2.97**	**314**	*e*P			Pn	07 07 20.2	+0.4
BCIP	**Isla Barro Col**	**3.27**	**80**	⇑*e*P			Pn	07 07 23.2	-0.8
LAPE	**La Pedrera**	**11.46**	**94**	*e*P				07 07 22.4	
PTP	**Ponta Puerca**	**19.49**	**59**	⇑*e*P				07 06 40.1	
PTP				*e*S				07 06 49.5	

BJI ***23*** *07:08:17.5, 4892N×155.12E, h54km, mB5.0, mb5.0, Ms4.4, Msz4.3*
ISCJB ***23*** *07:08:17.7±0.2, 4875N±003×15494E±003, h46km, mb4.9/143, MS4.2/46, Error ellipse: s-maj=4.5km s-min=2.1km az=147.3*
MOS ***23*** *07:08:17.2±0.8, 4880N×154.95E, h40km, mb5.1/60, MS4.2/21, Error ellipse: s-maj=8.0km s-min=5.0km az=89.2*
NEIC ***23*** *07:08:19.0±0.2, 4883N×15488E, mb4.9/80, Error ellipse: s-maj=5.5km s-min=3.2km az=164.0*
SKHL ***23*** *07:08:18.5±0.4, 4870N×155.10E, h60km±22km, mb5.7/6, ms4.2/1, msh5.9/2*
GCMT ***23*** *07:08:19.0±0.4, 4884N×15547E, h45km±1km, MW4.9/59, Moment Tensor Solution. s27,c33; s59,c87; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.22±.17; Mθθ -0.22±.14; Mϕϕ -2.00±.11; Mrθ 0.07±.10; Mθϕ -1.40±.09; Mϕr 1.48±.09; Best double couple: M0 2.92200×10^16 NP1: ϕs 226.00000°, δ 33.00000°, λ 118.00000°. NP2: ϕs 14.00000°, δ 61.00000°, λ 73.00000°. Principal axes: T 2.7360, Plg69.0000°, Azm248.0000°; N 0.3740, Plg15.0000°, Azm22.0000°; P -3.1090, Plg14.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***23*** *07:08:22.8±2.6, 4894N×15484E, h75km±22km, mb4.3/20, mb1 4.5/22, mb1mx4.5/24, mbtmp4.3/22, MS4.1/31, Ms1 4.1/31, ms1mx4.0/43 Error ellipse: s-maj=15.4km s-min=11.5km az=141.0*
SZGRF ***23*** *07:08:26.3, 5060N×155.19E, h33km, mb4.9, Kuril Islands, Russia*

ISC 23 07:08:20.0±0.2, 4884N±003×15487E±003, h48km, h48km±2.0km: pP-P, n463, σ0§95/464, mb4.9/143, MS4.2/46, 58C-33D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SKR	**Severo-Kuril's**	**2.02**	**23**	*e*PN			**Pn**	**07 08 50.0**	**-1.5**
SKR				*e*S			**Sn**	**07 09 13.4**	**-2.1**
SKR				pmax			pmax		
	comp=N,460nm,0.5s								
SKR				pmax			pmax		
	comp=E,370nm,0.5s								
SKR				pmax			pmax		
	comp=Z,770nm,0.5s								
SKR				smax					
	comp=N,6μm,0.3s								
SKR				smax					
	comp=E,4μm,0.3s								
SKR				smax					
	comp=Z,880nm,0.5s								
SKR				smax					
	comp=N,10μm,2.0s								
SKR				smax					
	comp=E,15μm,2.0s								
SKR				smax					
	comp=Z,18μm,2.0s								
SKR	**Severo-Kuril's**	**2.02**	**23**	*e*P			**Pn**	**07 08 50.0**	**-1.5**
SKR				AMB			AMB	07 08 55.5	
	comp=Z,460nm,0.5s								
SKR				AMB			AMB	07 08 55.5	
	comp=Z,770nm,0.5s								
SKR				*e*S			**Sn**	**07 09 13.4**	**-2.1**
SKR				A				07 09 20.0	
	comp=Z,6μm,0.2s								
SKR				A				07 09 20.0	
	comp=Z,4μm,0.2s								
SKR				A				07 09 20.0	
	comp=Z,10μm,2.0s								
SKR				A				07 09 20.0	
	comp=Z,15μm,2.0s								
SKR				A				07 09 20.0	
	comp=Z,8μm,4.0s								
SKR				A				07 09 20.0	
	comp=Z,880nm,0.5s								
PEA0B	**Petropavlovsk-**	**4.64**	**22**	*e*Pn			**Pn**	**07 09 28.6**	**+1.2**
PETK	**Petropavlovsk-**	**4.64**	**22**	P			**Pn**	**07 09 28.8**	**+1.3**
	comp=Z,18nm,0.3s,baz=180,slow=11,SNR=106								
PETK				LR			LR	07 11 29.2	
	comp=Z,976nm,20.9s,baz=200,slow=41								
PET	**Petropavlovsk**	**4.83**	**28**	*e*Pn			**Pn**	**07 09 29.6**	**-0.5**
PET				*e*Sn			**Sn**	**07 10 24.2**	**-0.3**
PET	**Petropavlovsk**	**4.83**	**28**	⇓*i*PN			**Pn**	**07 09 29.5**	**-0.5**
PET				*e*S			**Sn**	**07 10 25.1**	**+0.5**
PET				pmax			pmax		
	comp=Z,374nm,0.5s								
PET				smax					
	comp=N,641nm,0.4s								
PET				smax					
	comp=E,1μm,0.7s								
PET				MLR			MLR		
	comp=Z,1μm,20.0s								
KUR	**Kuril'sk**	**5.99**	**236**	*e*PN			**Pn**	**07 09 45.5**	**-0.5**
KUR				*e*S			**Sn**	**07 10 55.0**	**+1.7**
KUR				pmax			pmax		
	comp=Z,4μm,1.6s								
KUR				pmax			pmax		
	comp=N,370nm,0.8s								
KUR				pmax			pmax		
	comp=E,480nm,0.8s								
KUR				pmax			pmax		
	comp=Z,1μm,0.8s								
KUR				smax					
	comp=N,12μm,2.0s								
KUR				smax					
	comp=E,13μm,2.0s								
KUR				smax					
	comp=N,1μm,0.9s								
KUR				smax					
	comp=E,2μm,0.9s								
KUR	**Kuril'sk**	**5.99**	**236**	*e*P			**Pn**	**07 09 45.5**	**-0.5**
KUR				AMB			AMB	07 09 47.0	
	comp=E,4μm,1.6s								
KUR				AMB			AMB	07 09 47.5	
	comp=E,365nm,0.8s								
KUR				AMB			AMB	07 09 47.5	
	comp=E,484nm,0.8s								
KUR				AMB			AMB	07 09 47.5	
	comp=E,1μm,0.8s								
KUR				*e*S			**Sn**	**07 10 55.0**	**+1.7**
KUR				A				07 11 06.7	
	comp=E,12μm,2.0s								
KUR				A				07 11 06.7	
	comp=E,13μm,2.0s								
KUR				A				07 11 10.0	
	comp=E,1μm,0.9s								
KUR				A				07 11 10.0	
	comp=E,2μm,0.9s								
YUK	**Yuzh-Kuril'sk**	**7.86**	**236**	⇓*i*PN			**Pn**	**07 10 13.6**	**+2.0**
YUK				pmax			pmax		
	comp=Z,4μm,1.0s								
YUK				pmax			pmax		
	comp=Z,1μm,0.5s								
YUK				pmax			pmax		
	comp=N,580nm,0.4s								
YUK				pmax			pmax		
	comp=E,900nm,0.6s								
YUK				MLR			MLR		
	comp=Z,6μm,18.0s								
YUK	**Yuzh-Kuril'sk**	**7.86**	**236**	⇓*i*P			**Pn**	**07 10 13.6**	**+2.0**
YUK				AMB			AMB	07 10 18.7	
	comp=Z,4μm,1.0s								
YUK				AMB			AMB	07 10 19.6	
	comp=Z,900nm,0.6s								
YUK				AMB			AMB	07 10 19.6	
	comp=Z,580nm,0.4s								
YUK				AMB			AMB	07 10 19.6	
	comp=Z,1μm,0.5s								
YUK				*e*S			**Sn**	**07 11 37.2**	**-1.9**
YUK				A				07 12 03.4	
	comp=Z,550nm,0.6s								
YUK				A				07 12 03.5	
	comp=Z,440nm,0.5s								
YUK				AMS			AMS	07 13 00.0	
	comp=Z,6μm,18.0s								
YUK				A				07 13 00.0	
	comp=Z,2μm,0.6s								
TYV	**Tymovskoe**	**8.15**	**289**	⇑*e*P			**Pn**	**07 10 20.0**	**+4.4**
TYV				AMB			AMB	07 10 23.5	
	comp=Z,120nm,0.9s								
TYV				*e*S			**Sn**	**07 11 47.5**	**+1.2**
TYV				AMS			AMS	07 14 08.0	
	comp=Z,900nm,16.0s								
JRA	**Rausu**	**8.33**	**238**	P			**Pn**	**07 10 20.7**	**+2.6**
YSS	**Yuzh-Sakhalins**	**8.36**	**262**	*e*Pn			**Pn**	**07 10 19.9**	**+1.4**
YSS				*e*Sn			**Sn**	**07 11 51.5**	**+0.1**
YSS	**Yuzh-Sakhalins**	**8.36**	**262**	⇓*i*PN			**Pn**	**07 10 23.4**	**+4.9**
YSS				pmax			pmax		
	comp=N,80nm,0.6s								
YSS				pmax			pmax		
	comp=E,120nm,0.6s								
YSS				pmax			pmax		
	comp=Z,160nm,0.6s								
YSS				MLR			MLR		
	comp=E,900nm,16.0s								
YSS				MLR			MLR		
	comp=Z,1μm,16.0s								
YSS	**Yuzh-Sakhalins**	**8.36**	**262**	⇓*i*P			**Pn**	**07 10 23.4**	**+4.9**
YSS				AMB			AMB	07 10 24.4	
	comp=Z,80nm,0.6s								
YSS				AMB			AMB	07 10 24.4	
	comp=Z,120nm,0.6s								
YSS				AMB			AMB	07 10 24.4	
	comp=Z,160nm,0.6s								
YSS				*e*S			**Sn**	**07 11 53.7**	**+2.3**
YSS				eLQ				07 12 46.0	
YSS

JNBK eS Sn 07 12 43.6 -5.8
JNB Noboribetsu 11.58 242 P Pn 07 11 02.3 -0.2
JNB eS Sn 07 13 08.1 -2.2
JKB Kayabe 11.95 240 P Pn 07 11 06.1 -1.5
JKB eS Sn 07 13 11.7 -7.6
JSH Shimam 12.06 245 P Pn 07 11 10.6 +1.5
JYM2 Yakumo 2 12.19 242 P Pn 07 11 10.5 -0.3
JSR Shiriuchi 12.53 240 P Pn 07 11 13.8 -1.7
JTM Tenmabayashi 12.67 236 P Pn 07 11 13.9 -3.5
JTM eS Sn 07 13 26.8 -10
JANG Nango 12.72 233 P Pn 07 11 13.5 -4.6
JANG eS Sn 07 13 26.5 -12
JOSM Okushiri--Mats 12.73 244 P Pn 07 11 17.5 -0.8
JTH Tanohata 12.86 231 P Pn 07 11 15.3 -4.6
JTH eS Sn 07 13 30.3 -11
OFUJ Ofunato 13.60 229 P Pn 07 11 25.4 -4.7
OFUJ eS Sn 07 13 47.2 -12
JRG Rokugo 13.89 233 P Pn 07 11 30.5 -3.6
JRG eS Sn 07 13 57.4 -9.4
SEY Seymchan 14.20 355*d iP* Pn 07 11 38.9 +0.8
JIO Ouri 14.24 228 P Pn 07 11 34.0 -4.8
JIO eS Sn 07 14 02.4 -13
JYA Atsumi 14.97 232 P Pn 07 11 46.1 -2.3
KLR Kul'dur 15.16 280 eP Pn 07 11 52.2 +1.4
KLR MLR MLR
comp=N,900nm,12.0s
KLR MLR MLR
comp=Z,4µm,12.0s
JFK Kawauchi 15.33 227 P Pn 07 11 49.1 -4.0
JFY Yanaizu 15.88 230 P Pn 07 11 57.4 -2.7
MJAR Matsushiro Arr 17.30 231 P Pn 07 12 15.2 -2.8
comp=Z,1.5nm,0.3s,baz=29,slow=14,SNR=21
MJAR LR LR 07 19 59.1
comp=Z,422nm,18.9s,baz=25,slow=40
MJAR Matsushiro Arr 17.30 231 P Pn 07 12 15.2 -2.8
MJAR pmax pmax
comp=Z,2.0nm,0.3s
MJAR MLR MLR
comp=Z,422nm,18.9s
MAJO Matsushiro 17.30 231 eP Pn 07 12 16.6 -1.4
comp=Z,74nm,0.7s
MAJO *e* 07 12 29.1
MAJO Matsushiro 17.30 231 eP Pn 07 12 16.6 -1.4
MAJO pmax pmax
comp=Z,74nm,0.7s
MAT Matsushiro 17.30 231 P Pn 07 12 16.9 -1.1
MDJ Mudanjiang 17.81 266 P Pn 07 12 23.9 -0.2
MDJ AP pP 07 12 35.6 +0.2
MDJ XP sP 07 12 42.3 +0.8
MDJ S **S** 07 15 38.8 -7.6
MDJ XS sS 07 16 02.9 -1.2
MDJ PCP PcP 07 16 57.1 -1.8
MDJ SCS ScS 07 24 08.0 -2.1
MDJ AMB AMB
comp=Z,18nm,1.3s
MDJ AMB AMB
comp=Z,230nm,4.8s
MDJ LR LR
comp=N,305nm,19.0s
MDJ LR LR
comp=E,387nm,20.4s
MDJ LR LR
comp=Z,620nm,21.2s
MDJ Mudanjiang 17.81 266 eP Pn 07 12 25.1 +0.9
comp=Z,39nm,1.0s
ZEA Zeya 17.90 296 eP Pn 07 12 25.6 +0.4
ZEA AMB AMB 07 12 30.3
comp=Z,46nm,1.4s
YAK Yakutsk 19.29 323 eP Pn 07 12 40.6 -1.3
comp=Z,68nm,0.8s
YAK Yakutsk 19.29 323 eP Pn 07 12 39.8 -2.1
YAK eS **S** 07 16 14.4 -1.7
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,12nm,1.1s
YAK pmax pmax
comp=Z,118nm,1.0s
YAK pmax pmax
comp=N,23nm,1.0s
YAK pmax pmax
comp=E,170nm,1.6s
YAK smax
comp=N,257nm,2.3s
YAK smax
comp=E,263nm,3.3s
YAK MLR MLR
comp=Z,447nm,20.0s
YAK MLR MLR
comp=N,240nm,20.0s
YAK MLR MLR
comp=E,318nm,24.0s
JHJ Hachijo jima 2 19.34 221 LR LR 07 19 49.5
comp=E,211nm,19.9s,baz=193,slow=35
CLNS Chul'man 19.67 305 eP Pn 07 12 50.2 +3.8
CLNS pmax pmax
comp=Z,49nm,1.1s
CLNS pmax pmax
comp=E,35nm,1.0s
CLNS pmax pmax
comp=N,49nm,1.0s
CLNS MLR MLR
comp=Z,524nm,16.0s
CLNS MLR MLR
comp=N,226nm,13.0s
CLNS MLR MLR
comp=E,383nm,16.0s
BILL Bilibino 20.09 12 eP P 07 12 46.7 -2.5
comp=E,12nm,0.4s
BILL Bilibino 20.09 12 eP P 07 12 47.2 -2.0
BILL eS **S** 07 16 32.2 +0.2
BILL pmax pmax
comp=Z,18nm,1.0s
BILL MLR MLR
comp=Z,400nm,18.0s,MS3.8
CN2 Changchun 20.86 267 eP P 07 12 55.9 -1.8
CN2 AMB AMB
comp=Z,10.0nm,1.0s
CN2 AMB AMB
comp=Z,140nm,3.0s
CN2 LR LR
comp=N,510nm,14.0s,MS4.2
CN2 LR LR
comp=E,510nm,14.0s,MS4.2
CN2 LR LR
comp=Z,640nm,17.0s,MS4.1
KSRS Korea Array 22.59 250 P P 07 13 17.1 +0.8
comp=Z,34nm,0.7s,mb4.9,baz=48,slow=9.8,SNR=58
KSRS PcP PcP 07 17 08.4 +0.6
comp=Z,2.7nm,0.8s,baz=50,slow=2.1,SNR=5.6
KSRS LR LR 07 21 34.0
comp=Z,615nm,19.4s,MS4.0,baz=58,slow=35
KSRS Korea Array 22.59 250 P P 07 13 17.1 +0.8
KSRS 07 17 08.5
KSRS pmax pmax
comp=Z,34nm,0.7s,mb4.9
KSRS MLR MLR
comp=Z,615nm,19.4s,MS4.0
KS15 Wonju Array Si 22.62 250 eP P 07 13 15.7 -0.9
HIA Hailar 22.91 284 eP P 07 13 20.9 +1.5
comp=Z,13nm,0.8s,mb4.4
HIA Hailar 22.91 284 eP P 07 13 20.9 +1.4
HIA pmax pmax
comp=Z,13nm,0.8s
DL2 Dalian 25.76 260 P P 07 13 46.1 +0.1
DL2 eS **S** 07 18 11.5 -0.1
DL2 AMB AMB
comp=Z,30nm,1.6s,mb4.6
DL2 LR LR
comp=N,320nm,23.5s
DL2 LR LR
comp=Z,240nm,23.0s,MS3.7
BJI Beijing 28.73 267 P P 07 14 13.9 +1.2
BJI S **S** 07 18 52.6 -5.9
BJI AMB AMB
comp=Z,15nm,0.9s,mb4.7
BJI LR LR
comp=N,325nm,20.1s,MS4.1
BJI LR LR
comp=E,331nm,21.1s,MS4.1
BJI LR LR
comp=Z,278nm,31.4s
HHC Hu-ho-hao-te 31.37 272 eP P 07 14 36.4 +0.4
HHC AP pP 07 14 48.9 +0.4
HHC XP sP 07 14 51.3 -2.9
HHC PP PP 07 15 41.3 -6.0
HHC S **S** 07 19 39.1 -0.7
HHC SCS ScS 07 25 03.8 -1.2
HHC AMB AMB
comp=Z,22nm,1.3s,mb4.8
HHC AMB AMB
comp=Z,148nm,4.8s
HHC LR LR
comp=N,375nm,19.0s,MS4.2
HHC LR LR
comp=E,498nm,23.8s,MS4.2
HHC LR LR
comp=Z,545nm,25.0s,MS4.1
ULN Ulaanbaatar 31.39 287 eP P 07 14 36.0 0.0
comp=Z,5.2nm,1.0s,mb4.3
ULN *e*PcP PcP 07 17 28.9 +0.3
ULN Ulaanbaatar 31.39 287 eP P 07 14 36.0 0.0
ULN *e* 07 17 28.9
ULN pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
NJ2 Nanjing 31.76 252 eP P 07 14 43.6 +4.1
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
SONM Songino Array 31.81 287 P P 07 14 39.8 +0.1
comp=Z,1.9nm,0.7s,mb4.1,baz=78,slow=8.7,SNR=8.8
SONM PcP PcP 07 17 29.8 +0.1
comp=Z,5.6nm,0.9s,baz=123,slow=2.7,SNR=13
SONM LR LR 07 28 56.4
comp=Z,927nm,18.4s,MS4.5,baz=264,slow=39
SONM Songino Array 31.81 287 P P 07 14 39.8 +0.1
SONM PcP PcP 07 17 29.8 +0.1
SONM Songino Array 31.81 287 P P 07 14 39.8 0.0
SONM 07 17 29.8
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,927nm,18.4s
TLY Talaya 32.33 295 eP P 07 14 44.0 -0.3
comp=Z,6.0nm,0.7s,mb4.5
TLY Talaya 32.33 295 eP P 07 14 45.1 +0.8
TLY pmax pmax
comp=Z,18nm,1.5s,mb4.7
TLY MLR MLR
comp=Z,419nm,18.0s,MS4.2
KTH Kantishna Hill 32.41 43 eP P 07 14 42.6 -2.2
comp=Z,35nm,1.4s,mb5.0
ZAK Zakamensk 32.92 293 eP P 07 14 50.1 +0.6
ZAK *e* 07 17 31.5
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
COLD Coldfoot 32.94 36 eP P 07 14 49.3 -0.2
comp=Z,5.7nm,0.7s,mb4.6
COLD *e*pP pP 07 15 00.9 -1.1
MCK McKinley 33.30 42 eP P 07 14 51.0 -1.6
comp=Z,8.3nm,0.8s,mb4.7
MCK McKinley 33.30 42 eP P 07 14 51.0 -1.6
MCK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
COLA College 33.77 40 eP P 07 14 56.2 -0.5
comp=Z,19nm,0.8s,mb5.1
COLA *e*pP pP 07 15 06.4 -2.8
COLA College 33.77 40 eP P 07 14 56.2 -0.5
COLA *e**PP pP 07 15 06.4 -2.9
COLA pmax pmax
comp=Z,19nm,0.8s,mb5.1
WHN Wuhan 35.62 254 ⇑P P 07 15 13.6 +0.6
WHN AP pP 07 15 29.3 +3.6
WHN AMB AMB
comp=Z,98nm,0.5s,mb6.0
EGAK Eagle 36.63 40 eP P 07 15 20.6 -0.7
comp=Z,213nm,2.6s,mb5.5
EGAK *e*pP pP 07 15 30.0 -4.0
XAN Xi'an 36.90 264 P P 07 15 24.0 +0.1
XAN AMB AMB
comp=Z,6.0nm,1.1s,mb4.3
XAN AMB AMB
comp=Z,136nm,4.5s
XAN LR LR
comp=N,195nm,13.5s,MS4.2
XAN LR LR
comp=E,231nm,17.6s,MS4.2
XAN LR LR
comp=Z,564nm,22.1s,MS4.3
LZH Lanzhou 39.03 270 eP P 07 15 42.8 +0.9
LZH AP pP 07 15 55.5 +0.9
LZH XP sP 07 15 59.3 -1.0
LZH PP PP 07 17 16.4 +4.5
LZH *e*S **S** 07 21 37.3 -0.2
LZH XS sS 07 22 00.1 +1.2
LZH SS SS 07 24 23.0 -7.8
LZH AMB AMB
comp=Z,27nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,120nm,5.8s
LZH LR LR
comp=N,510nm,14.2s
LZH LR LR
comp=Z,840nm,15.3s,MS4.7
INK Inuvik 39.26 34 eP P 07 15 43.4 0.0
comp=Z,372nm,0.8s
INK *e*pP pP 07 15 55.4 -0.7
GTA Gaotai 39.84 278 eP P 07 15 49.3 +0.7
GTA AP pP 07 16 01.9 +0.5
GTA XP sP 07 16 06.9 -0.1
GTA PCP PcP 07 17 54.8 +1.2
GTA S **S** 07 21 50.1 +0.5
GTA XS sS 07 22 11.0 0.0
GTA SS SS 07 24 40.8 -6.1
GTA AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
GTA AMB AMB
comp=Z,113nm,8.1s
GTA LR LR
comp=N,323nm,16.5s,MS4.6
GTA LR LR
comp=E,613nm,16.5s,MS4.6
GTA LR LR
comp=Z,753nm,17.4s,MS4.6
CD2 Chengdu 42.25 264 eP P 07 16 08.5 0.0
CD2 AP pP 07 16 20.1 -1.2
CD2 XP sP 07 16 28.1 +1.2
CD2 PP PP 07 17 49.6 +2.7
CD2 S **S** 07 22 23.8 -1.7
CD2 XS sS 07 22 44.8 -2.3
CD2 SS SS 07 25 26.5 -8.4
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.1
CD2 AMB AMB
comp=Z,90nm,4.2s
CD2 LR LR
comp=N,180nm,15.2s,MS4.3
CD2 LR LR
comp=E,210nm,14.8s,MS4.3
CD2 LR LR
comp=Z,150nm,16.2s,MS4.0
ZAA0 Zalesovo Array 42.38 304 eP P 07 16 07.3 -1.9
ZALV Zalesovo Beam 42.38 304 P P 07 16 07.8 -1.5
comp=Z,2.9nm,0.5s,mb4.2,baz=60,slow=7.2,SNR=11
ZALV PcP PcP
comp=Z,2.4nm,0.7s,baz=56,slow=5.6,SNR=5.0
ZALV LR LR 07 34 13.6
comp=Z,198nm,19.8s,MS4.0,baz=24,slow=37
ZALV Zalesovo Beam 42.38 304 P P 07 16 07.8 -1.5
ZALV PcP PcP 07 18 00.5 -1.2
ZALV Zalesovo Beam 42.38 304 P P 07 16 07.8 -1.4
ZALV 07 18 00.5
ZALV pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
ZALV MLR MLR
comp=Z,198nm,19.8s,MS4.0
GYA Guiyang 43.33 257⇑ *iP* P 07 16 17.8 +0.5
GYA AP pP 07 16 30.4 +0.2
GYA XP sP 07 16 36.0 +0.2
GYA PP PP 07 18 00.3 +1.7
GYA PCP PcP 07 18 08.1 +2.8
GYA SCP ScP 07 21 53.4 +1.0
GYA PCS PcS 07 21 58.9 +0.8
GYA S **S** 07 22 41.1 -0.4
GYA XS sS 07 23 02.6 -0.5
GYA SS SS 07 25 49.3 -6.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,220nm,8.4s
GYA LR LR
comp=N,510nm,17.4s,MS4.5
GYA LR LR
comp=E,290nm,16.8s,MS4.5
GYA LR LR
comp=Z,380nm,18.2s,MS4.3
WMQ Urumqi 45.30 290 eP P 07 16 34.0 +1.2
WMQ AP pP 07 16 46.0 +0.3
WMQ XP sP 07 16 52.0 +0.7
WMQ PP PP 07 18 21.0 +1.9
WMQ S **S** 07 23 10.0 +0.3
WMQ SS SS 07 26 24.0 -9.2
WMQ AMB AMB
comp=Z,24nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,69nm,4.0s
WMQ LR LR
comp=N,254nm,16.0s,MS4.4
WMQ LR LR
comp=E,211nm,16.0s,MS4.4
WMQ LR LR
comp=Z,267nm,16.0s,MS4.3
KMI Kunming 46.80 259 P P 07 16 45.4 +0.6
KMI AP pP 07 17 00.9 +3.1
KMI XP sP 07 17 06.5 +3.1
KMI PP PP 07 18 35.4 +0.1
KMI S **S** 07 23 31.3 -0.2
KMI XS sS 07 23 55.8 +2.5
KMI SS SS 07 26 49.1 -9.2
KMI AMB AMB
comp=Z,31nm,0.8s,mb5.3
KMI AMB AMB
comp=Z,317nm,4.1s
KMI LR LR
comp=N,231nm,22.0s,MS4.3
KMI LR LR
comp=E,211nm,18.5s,MS4.3
KMI LR LR
comp=Z,201nm,21.0s,MS4.0
MK31 Makanchi Array 47.06 296 eP P 07 16 45.3 -1.2
MKAR Makanchi Array 47.06 296 P P 07 16 46.1 -0.4
comp=Z,3.0nm,0.5s,mb4.5,baz=74,slow=8.8,SNR=27
MKAR LR LR 07 37 52.2
comp=Z,404nm,20.1s,MS4.4,baz=357,slow=38
MKAR Makanchi Array 47.06 296 P P 07 16 46.2 -0.3
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR MLR MLR
comp=Z,404nm,20.1s
KURK Kurchatov 47.22 303 LR LR 07 37 48.0
comp=Z,238nm,20.2s,MS4.2,baz=35,slow=37
KURK Kurchatov 47.22 303 eP P 07 16 45.9 -1.8
comp=Z,7.4nm,0.5s,mb4.9
KURK Kurchatov 47.22 303⇑ eP P 07 16 46.4 -1.3
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.7
RES Resolute Bay 48.48 19 eP P 07 16 56.5 -0.7
comp=Z,324nm,1.1s
YKA Yellowknife Ar 48.55 38 P P 07 16 57.9 +0.1
comp=Z,5.5nm,0.8s,mb4.6,baz=297,slow=7.9,SNR=8.6
YKA LR LR 07 40 42.3
comp=Z,46nm,20.3s,MS3.5,baz=250,slow=40
YKA Yellowknife Ar 48.55 38 P P 07 16 57.9 +0.1
YKA Yellowknife Ar 48.55 38 P P 07 16 57.9 +0.1
YKA pmax pmax
comp=Z,6.0nm,0.8s
YKA MLR MLR
comp=Z,46nm,20.3s
BVAR Borovoye Array 50.47 309 LR LR 07 39 32.6
comp=Z,394nm,21.9s,MS4.4,baz=67,slow=37
BRVK Borovoye 50.50 309 eP P 07 17 11.8 -1.1
comp=Z,4.0nm,0.7s,mb4.5
BRVK *e*PcP PcP 07 18 30.2 0.0
BRVK Borovoye 50.50 309 eP P 07 17 11.8 -1.1
BRVK *e* 07 18 30.3
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LSA Lhasa 51.35 273 eP P 07 17 20.9 +1.4
comp=Z,19nm,0.6s,mb5.2
LSA Lhasa 51.35 273 eP P 07 17 21.0 +1.4
LSA pmax pmax
comp=Z,19nm,0.6s,mb5.2
SHL Shillong 53.62 268 eP P 07 17 37.0 +0.6
ETW Entiat 53.62 57 eP P 07 17 35.4 -0.7
CHTO Chiang Mai 53.76 257 eP P 07 17 38.8 +1.3
CHTO pmax pmax
comp=Z,46nm,0.8s,mb5.5
CHTO Chiang Mai 53.76 257 eP P 07 17 38.8 +1.3
CHTO pmax pmax
comp=Z,46nm,0.8s,mb5.5
CMAR Chiang Mai Arr 54.02 256 P P 07 17 40.9 +1.5
comp=Z,25nm,0.7s,mb5.2,baz=31,slow=7.4,SNR=90
CMAR LR LR 07 41 21.6
comp=Z,188nm,18.7s,MS4.2,baz=241,slow=37
CMAR Chiang Mai Arr 54.02 256 P P 07 17 40.9 +1.5
CMAR pmax pmax
comp=Z,25nm,0.7s
CMAR MLR MLR
comp=Z,188nm,18.7s
EDM Edmonton 54.02 48 eP P 07 17 38.9 -0.1
ARU Arti 54.28 317 eP P 07 17 39.6 -1.2
comp=Z,12nm,0.6s,mb5.0
ARU Arti 54.28 317*c iP* P 07 17 39.0 -1.8
ARU *e* 07 18 42.7
ARU eS **S** 07 25 13.4 -1.2
ARU eSS SS 07 28 59.6 +3.3
ARU pmax pmax
comp=Z,22nm,1.0s,mb5.0
TAPN Taplejung 55.17 273 eP P 07 17 48.0 +0.3
comp=Z,18nm,0.6s,mb5.3
ODAN Odare 55.71 273 eP P 07 17 53.0 +1.5
comp=Z,21nm,0.7s,mb5.3
YBH Yreka Blue Hor 55.73 64 eP P 07 17 52.2 +0.6
JIRN Jiri 55.97 274 eP P 07 17 54.4 +1.0
comp=Z,47nm,0.7s,mb5.6
GUN Gumba 56.01 275 eP P 07 17 54.4 +0.8
comp=Z,28nm,0.6s,mb5.5
RAMN Ramite 56.17 273 eP P 07 17 55.4 +0.6
comp=Z,63nm,0.6s,mb5.8
WALA Waterton Lakes 56.21 52 eP P 07 17 54.2 -0.6
comp=Z,4.2nm,0.6s,mb4.7
WALA *e*pP pP 07 18 09.4 +1.3
ARCES ARCESS Array B 56.27 341 P P 07 17 52.8 -2.2
comp=Z,3.6nm,0.6s,mb4.6,baz=27,slow=7.5,SNR=12
ARCES LR LR 07 44 48.6
comp=Z,252nm,18.8s,MS4.3,baz=26,slow=39
ARCES ARCESS Array B 56.27 341 P P 07 17 52.8 -2.1
ARCES pmax pmax
comp=Z,4.0nm,0.6s
ARCES MLR MLR
comp=Z,252nm,18.8s
KKN Kakani 56.48 275 eP P 07 17 57.9 +0.9
PKI Pulchoki 56.54 275 eP P 07 17 58.6 +1.1
WDC Whiskeytown Da 56.54 65 eP P 07 17 57.0 -0.3
DMN Daman 56.72 275 eP P 07 17 59.7 +1.0
comp=Z,79nm,0.8s,mb5.8
GKN Gorkha 56.76 276 eP P 07 17 59.8 +0.8
BMO Blue Mountains 56.94 58 eP P 07 18 00.1 0.0
MOD Modoc 57.05 62 eP P 07 18 01.1 +0.3
DANN Dangsing 57.11 277 eP P 07 18 02.5 +1.0
comp=Z,52nm,0.6s,mb5.8
KOLN Koldanda 57.60 276 eP P 07 18 05.6 +0.7
comp=Z,39nm,0.8s,mb5.5
WVOR Wild Horse Val 57.69 61 eP P 07 18 05.3 -0.1
comp=Z,4.6nm,0.9s,mb4.5
WVOR Wild Horse Val 57.69 61 eP P 07 18 05.3 0.0
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
PYUN Piuthan 57.78 277 eP P 07 18 06.8 +0.6
CHMT Chamberlain Mo 57.88 54 eP P 07 18 06.4 -0.3
OHCM Honcut 57.95 65 eP P 07 18 06.7 -0.6
OHCM *e*pP pP 07 18 16.5 -4.1
AKTO Aktyubinsk 58.22 312 LR LR 07 43 41.1
comp=Z,124nm,19.5s,MS4.0,baz=240,slow=36
SUMG Summit 58.53 5 eP P 07 18 10.4 -0.4
comp=Z,7.4nm,0.8s,mb4.8
HRY Holter Researc 58.77 53 eP P 07 18 13.1 +0.3
KLMR Klimovskoe 58.94 329 eP P 07 18 06.3 -7.5
KLMR pmax pmax
comp=Z,27nm,1.4s,mb5.1
PAHR Pah Rah Range 58.97 64 eP P 07 18 14.7 +0.4
LRM Limekiln Ridge 59.00 55 eP P 07 18 15.3 +0.9
DLMT Dillon 59.22 55 eP P 07 18 16.6 +0.7
HLID Hailey 59.37 58 eP P 07 18 17.2 +0.1
comp=Z,3.1nm,0.8s,mb4.4
MCMT McKenzie Canyo 59.42 56 eP P 07 18 17.1 -0.3

MCMT ep P 07 18 28.6 -2.2
CMB Columbia Colle 59.45 66 *e* P P **07 18 16.6 -1.0**
comp=Z,3.7nm,1.1s,mb4.3
CMB Columbia Colle 59.45 66 *e* P P **07 18 16.7 -0.9**
CMB pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
SMLA Simla 59.55 284 *e* P P **07 18 17.3 -1.2**
BOZ Bozeman (W) 59.56 54 *e* P P **07 18 18.6 +0.3**
comp=Z,3.0nm,0.5s,mb4.6
BOZ Bozeman (W) 59.56 54 *e* P P **07 18 18.6 +0.3**
BOZ pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
WAKR Walker 59.71 65 *e* P P **07 18 19.9 +0.4**
QLMT Earthquake Lak 60.19 55 *e* P P **07 18 23.4 +0.7**
QLMT ep P 07 18 34.7 -1.4
NVAR Mina Array Bea 60.44 64 P P **07 18 24.7 +0.2**
comp=Z,2.2nm,0.5s,mb4.4,baz=300,slow=7.3,SNR=18
ELK Elko 60.73 61 *e* P P **07 18 27.2 +0.8**
comp=Z,2.7nm,0.9s,mb4.4
ELK Elko 60.73 61 *e* P P **07 18 27.2 +0.8**
ELK pmax pmax
comp=Z,3.0nm,0.9s
IMW Indian Meadow 61.07 55 *e* P P **07 18 29.9 +1.2**
RLMT Red Lodge 61.16 54 *e* P P **07 18 29.8 +0.5**
comp=Z,4.7nm,0.7s,mb4.7
RLMT ep P 07 18 43.5 +0.8
RRI2 Red Ridge 61.22 56 *e* P P **07 18 30.8 +1.1**
MOOW Moose Ponds 61.27 55 *e* P P **07 18 31.1 +1.0**
TPAW Teton Pass 61.33 56 *e* P P **07 18 31.7 +1.2**
comp=Z,8.9nm,1.2s,mb4.8
LOHW Long Hollow 61.44 56 *e* P P **07 18 31.9 +0.8**
comp=Z,6.9nm,1.4s,mb4.6
SNOW Snow King Moun 61.46 56 *e* P P **07 18 32.7 +1.4**
comp=Z,11nm,1.2s,mb4.8
REDW Red Top Meadow 61.47 56 *e* P P **07 18 32.1 +0.7**
comp=Z,12nm,1.2s,mb4.9
DGMT Dagmar 61.52 48 *e* P P **07 18 31.8 +0.2**
comp=Z,9.0nm,0.8s,mb5.0
HWUT Hardware Ranch 62.24 58 *e* P P **07 18 37.0 +0.5**
comp=Z,4.6nm,0.6s,mb4.8
DUG Dugway 62.48 60 *e* P P **07 18 38.2 0.0**
comp=Z,9.0nm,1.0s,mb4.8
DUG Dugway 62.48 60 *e* P P **07 18 38.2 0.0**
DUG pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
NOQ North Oquirrh 62.57 59 *e* P P **07 18 40.1 +1.4**
BW06 Boulder Array 62.57 56 *e* P P **07 18 38.9 +0.1**
comp=Z,6.1nm,1.0s,mb4.7
PDAR Pinedale Array 62.57 56 P P **07 18 39.0 +0.2**
comp=Z,3.8nm,0.8s,mb4.6,baz=253,slow=2.2,SNR=23
PDAR LR LR 07 47 57.3
comp=Z,41nm,18.2s,MS3.6,baz=334,slow=38
TPNV Topopah Spring 62.64 64 *e* P P **07 18 39.1 -0.2**
comp=Z,4.8nm,0.9s,mb4.6
TPNV Topopah Spring 62.64 64 *e* P P **07 18 39.1 -0.2**
TPNV pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
NLU North Lily Min 63.06 59 *e* P P **07 18 39.9 -2.1**
DAU Daniels Canyon 63.22 59 *e* P P **07 18 44.6 +1.5**
SHPR Sheep Range 63.58 64 *e* P P **07 18 45.7 +0.1**
ARUT Antelope Range 63.73 62 *e* P P **07 18 46.5 -0.1**
MSU Marysvale 63.97 61 *e* P P **07 18 47.1 -1.0**
MSU ep P 07 19 00.7 -0.9
ULM Lac du Bonnet 64.17 42 LR LR 07 47 35.8
comp=Z,129nm,20.9s,MS4.1,baz=334,slow=37
AJM Ajmer 64.32 281 *ex* P P **07 18 47.5 -3.0**
AJM AMb AMB 07 18 47.9
comp=Z,21nm,0.1s,mb6.1
SRU San Rafael 64.51 59 *e* P P **07 18 52.0 +0.4**
comp=Z,11nm,1.1s,mb4.8
SRU San Rafael 64.51 59 *e* P P **07 18 52.0 +0.4**
SRU pmax pmax
comp=Z,11nm,1.1s,mb4.8
LDFC Landfair 64.58 65 *e* P P **07 18 51.8 -0.3**
RSSD Black Hills 64.58 51 *e* P P **07 18 51.9 -0.2**
comp=Z,12nm,0.9s,mb4.9
RSSD Black Hills 64.58 51 *e* P P **07 18 51.9 -0.1**
RSSD pmax pmax
comp=Z,12nm,0.9s,mb4.9
RWWY Rawlins 64.58 55 *e* P P **07 18 52.2 +0.1**
VIS Vishakhapatnam 64.76 268 *e* P P **07 18 53.5 0.0**
VIS AMb AMB 07 18 55.2
comp=Z,44nm,1.8s,mb5.2
NGP Nagpur 65.15 274 *e* P P **07 18 53.7 -2.3**
PV10 Paradox Valley 65.86 59 *e* P P **07 19 00.8 +0.4**
GLA Glamis 66.14 67 *e* P P **07 19 02.5 +0.2**
SMCO Snowmass 66.46 57 *e* P P **07 19 04.7 +0.5**
comp=Z,2.9nm,0.7s,mb4.4
NB2 NORSAR Subarra 66.63 342 P P **07 19 03.2 -1.7**
comp=Z,2.3nm,0.5s,mb4.5,baz=25,slow=6.5
NOA NORSAR Array B 66.63 342 P P **07 19 03.5 -1.4**
comp=Z,3.1nm,0.6s,mb4.5,baz=25,slow=6.4,SNR=14
NOA LR LR 07 52 00.0
comp=Z,139nm,18.2s,MS4.2,baz=45,slow=39
NOA NORSAR Array B 66.63 342 P P **07 19 03.5 -1.4**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,139nm,18.2s
ISCO Idaho Springs 66.77 56 *e* P P **07 19 06.6 +0.4**
comp=Z,9.7nm,1.1s,mb4.8
ISCO Idaho Springs 66.77 56 *e* P P **07 19 06.6 +0.4**
ISCO pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
HFS Hagfors 66.91 340 LR LR 07 52 25.2
comp=Z,161nm,19.4s,MS4.2,baz=267,slow=40
HYB Hyderabad 68.13 272 *e* P P **07 19 15.5 +0.4**
HYB Hyderabad 68.13 272 *i* P P **07 19 15.5 +0.4**
SDCO Great Sand Dun 68.29 57 *e* P P **07 19 16.1 +0.3**
comp=Z,2.0nm,1.0s,mb4.1
ECSD EROS,Sioux Fal 68.59 48 *e* P P **07 19 16.5 -1.1**
comp=Z,23nm,1.5s,mb4.9
MAK Makhachkala 68.60 311 *e* P P **07 19 19.5 +1.9**
AFI Afiamalu 69.10 145 LR LR 07 48 23.0
comp=Z,119nm,18.2s,MS4.2,baz=56,slow=35
ANMO Albuquerque 69.74 60 *e* P P **07 19 25.1 +0.3**
comp=Z,4.1nm,1.1s,mb4.3
ANMO Albuquerque 69.74 60 *e* P P **07 19 25.1 +0.2**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
LAZ Ladron 69.74 61 *e* P P **07 19 25.4 +0.5**
POO Poona 70.43 276 *e* P P **07 19 30.1 +0.9**
POO AMb AMB 07 19 32.5
comp=Z,63nm,1.2s,mb5.4
AKASG Malin Array Be 70.46 327 P P **07 19 27.4 -1.6**
comp=Z,5.1nm,0.5s,mb4.7,baz=33,slow=6.2,SNR=12
AKASG LR LR 07 52 35.6
comp=Z,162nm,19.5s,MS4.3,baz=325,slow=38
AKASG Malin Array Be 70.46 327 P P **07 19 27.4 -1.6**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG MLR MLR
comp=Z,162nm,19.5s
WRAB Tennant Creek 70.86 200 *e* P P **07 19 30.9 -0.8**
comp=Z,16nm,1.1s,mb4.9
WRAB ep P 07 19 46.0 +0.6
WRAB Tennant Creek 70.86 200 *e* P P **07 19 30.9 -0.8**
WRAB *e* PP pP 07 19 46.0 +0.6
WRAB pmax pmax
comp=Z,16nm,1.1s,mb4.9
WB2 Warramunga Arr 70.87 200 *e* P P **07 19 30.9 -0.8**
WRA Warramunga Ar 70.88 200 P P **07 19 30.8 -1.0**
comp=Z,7.4nm,0.7s,mb4.8,baz=18,slow=6.3,SNR=34
WRA LR LR 07 46 51.5
comp=Z,82nm,20.2s,MS4.0,baz=345,slow=32
SCHQ Schefferville 70.92 24 P P **07 19 30.8 -1.0**
comp=Z,3.2nm,0.5s,mb4.5,baz=38,slow=18,SNR=8.1
SCHQ Schefferville 70.92 24 *e* P P **07 19 31.2 -0.5**
comp=Z,7.1nm,0.9s,mb4.6
KAD Karad 71.09 275 *e* P P **07 19 32.7 -0.7**
KAD AMb AMB 07 19 35.3
comp=Z,71nm,1.1s,mb5.5
SCIA State Center 71.61 47 *e* P P **07 19 35.8 -0.4**
comp=Z,11nm,0.7s,mb4.9
SCIA ep P pP 07 19 50.7 +0.9
SOC Sochi 71.85 316 *i* P P **07 19 34.5 -3.0**
AMTX Amarillo 72.48 57 *e* P P **07 19 41.0 -0.4**
comp=Z,9.8nm,1.1s,mb4.7
GOA Goa 72.64 274 *e* P P **07 19 43.7 +1.1**
GOA AMb AMB 07 19 53.0
comp=Z,106nm,4.0s
KWP Kalwaria 73.63 330 *e* P P **07 19 48.4 +0.4**
KWP Kalwaria 73.63 330 *e* P P **07 19 48.4 +0.4**
KWP Kalwaria 73.63 330 ⇑ *i* P P **07 19 48.8 +0.8**
OJC Ojcow 74.06 332 *e* P P **07 19 50.5 +0.1**

KOD Kodaikanal 74.08 267 *e* P P **07 19 51.8 +0.7**
KOD AMb AMB 07 20 44.2
comp=Z,32nm,3.0s,mb4.7
WMOK Wichita Mounta 74.18 55 *e* P P **07 19 50.7 -0.7**
comp=Z,7.1nm,0.9s,mb4.6
WMOK Wichita Mounta 74.18 55 *e* P P **07 19 50.7 -0.7**
WMOK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 74.30 331 *e* P P **07 19 52.4 +0.5**
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.7
KOLS Kolonicke sedl 74.38 330 *e* P P **07 19 52.8 +0.5**
BUR08 Bucovina Ar. S 74.47 327 *e* P P **07 19 52.3 -0.6**
BURAR Bucovina Array 74.49 327 ⇓ P P **07 19 52.6 -0.4**
BURAR Bucovina Array 74.49 327 ⇓ *i* P P **07 19 52.6 -0.4**
ASAR Alice Springs 74.57 200 P P **07 19 53.9 +0.3**
comp=Z,6.7nm,0.6s,mb4.8,baz=13,slow=5.5,SNR=100
ASAR Alice Springs 74.57 200 P P **07 19 53.9 +0.3**
ASAR pmax pmax
comp=Z,7.0nm,0.6s
NIE Niedzica 74.59 331 *e* P P **07 19 54.1 +0.5**
OKC Ostrava-Krasne 74.90 333 *e* P P **07 19 54.5 -0.8**
UPC Upice 74.94 334 *e* P P **07 19 52.9 -2.6**
DPC Dobruska-Polom 74.98 334 *e* P P **07 19 55.9 +0.1**
CLL Collm 75.05 336 ⇓ *i* P P **07 19 55.9 -0.3**
CLL pmax pmax
comp=Z,14nm,0.9s,mb4.9
CLL MLR MLR
comp=Z,200nm,20.1s,MS4.4
CLL Collm 75.05 336 *e* P P **07 19 55.9 -0.3**
comp=Z,14nm,0.9s,mb4.9
CLL Collm 75.05 336 ⇓ *i* P P **07 19 55.9 -0.3**
comp=Z,14nm,0.9s,mb4.9
CLL LmV 07 55 00.0
comp=Z,200nm,20.1s
MORC Moravsky Berou 75.14 333 ⇑ P P **07 19 57.1 +0.4**
MORC Moravsky Berou 75.14 333 ⇑ *i* P P **07 19 57.1 +0.4**
BRG Berggiesshubel 75.19 336 *e* P P **07 19 56.7 -0.3**
CLZ Clausthal 75.23 338 *e* P P **07 19 57.0 -0.2**
CLZ pmax pmax
comp=Z,18nm,1.2s,mb4.9
CLZ Clausthal 75.23 338 *e* P P **07 19 57.0 -0.2**
comp=Z,18nm,1.2s,mb4.9
PVCC Panska Ves 75.32 335 *e* P P **07 19 57.7 -0.1**
VRI Vrincioaia 75.42 325 ⇓ P P **07 20 01.0 +2.6**
VRI Vrincioaia 75.42 325 ⇓ *i* P P **07 20 01.0 +2.6**
TXAR Lajitas Array 75.45 62 P P **07 19 58.6 -0.3**
comp=Z,5.8nm,0.6s,mb4.7,baz=300,slow=4.9,SNR=63
TXAR Lajitas Array 75.45 62 P P **07 19 58.6 -0.3**
TXAR pmax pmax
comp=Z,6.0nm,0.6s
PRU Pruhonice 75.82 335 *e* P P **07 20 00.5 -0.1**
VRAC Vranov 75.84 333 LR LR 07 56 47.2
comp=Z,272nm,18.2s,MS4.6,baz=26,slow=38
VRAC Vranov 75.84 333 ⇓ P P **07 20 01.1 +0.4**
VRAC Vranov 75.84 333 ⇓ *i* P P **07 20 01.1 +0.4**
VYHS Vyhne 75.87 332 *e* P P **07 20 00.9 0.0**
MOX Moxa 76.01 337 *e* P P **07 20 01.5 -0.2**
comp=Z,5.0nm,0.8s,mb4.5
MLR Muntele Rosu 76.03 326 LR LR 07 54 52.8
comp=Z,209nm,19.1s,MS4.5,baz=217,slow=37
MLR Muntele Rosu 76.03 326 ⇓ *i* P P **07 20 03.0 +1.1**
DRGR 76.08 328 ⇓ P P **07 20 02.0 -0.1**
DRGR 76.08 328 ⇓ *i* P P **07 20 02.0 -0.1**
NKC Novy Kostel 76.17 336 *e* P P **07 20 01.9 -0.7**
VOIR 76.40 326 ⇓ P P **07 20 04.4 +0.4**
VOIR 76.40 326 ⇓ *i* P P **07 20 04.4 +0.4**
MODS Modra-Piesok 76.46 332 *e* P P **07 20 04.1 -0.2**
MODS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MANZ Manzenberg 76.48 336 *e* P P **07 20 04.7 +0.3**
comp=Z,4.0nm,0.9s,mb4.3
ROTZ Rotzenmuhle 76.66 336 *e* P P **07 20 05.5 +0.1**
comp=Z,18nm,1.4s,mb4.8
JCT Junction City 76.82 59 *e* P P **07 20 05.9 -0.7**
comp=Z,4.8nm,0.7s,mb4.5
JCT Junction City 76.82 59 *e* P P **07 20 05.9 -0.7**
JCT pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KHC Kasperske Hory 76.86 335 *e* P P **07 20 07.0 +0.5**
KHC AMS AMS 07 56 50.0
comp=Z,400nm,19.0s
GRF Grafenberg Arr 76.99 337 *e* P P **07 20 07.5 +0.3**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 76.99 337 *e* P P **07 20 07.5 +0.3**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 76.99 337 *e* P P **07 20 07.5 +0.3**
comp=Z,21nm,0.9s,mb5.1
DLF Lyons Farm 77.03 349 ⇑ *i* P P **07 20 07.2 -0.2**
WET Wettzell 77.05 335 *e* P P **07 20 08.0 +0.4**
WET pmax pmax
comp=Z,12nm,1.0s,mb4.8
WET Wettzell 77.05 335 *e* P P **07 20 08.0 +0.4**
comp=Z,12nm,1.0s,mb4.8
GEC2 GERESS Array S 77.09 335 *e* P P **07 20 07.7 -0.1**
GEC2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
GEC2 GERESS Array S 77.09 335 *e* P P **07 20 07.7 -0.1**
comp=Z,5.0nm,0.7s,mb4.5
GERES GERESS Array B 77.09 335 P P **07 20 07.7 -0.1**
comp=Z,3.8nm,0.6s,mb4.5,baz=35,slow=4.9,SNR=14
GERES LR LR 07 57 36.9
comp=Z,339nm,19.3s,MS4.7,baz=275,slow=38
GERES GERESS Array B 77.09 335 P P **07 20 07.7 -0.1**
GERES pmax pmax
comp=Z,4.0nm,0.6s
GERES MLR MLR
comp=Z,339nm,19.3s
TNS Taunus Mts 77.19 339 *e* P P **07 20 08.3 -0.1**
TNS pmax pmax
comp=Z,17nm,0.7s,mb5.1
TNS Taunus Mts 77.19 339 *e* P P **07 20 08.3 -0.1**
comp=Z,17nm,0.7s,mb5.1
GZR Gura Zlata 77.26 328 ⇓ P P **07 20 08.8 0.0**
GZR Gura Zlata 77.26 328 ⇓ *i* P P **07 20 08.9 0.0**
CONA Conrad Observa 77.29 333 ⇓ *i* P P **07 20 09.3 +0.3**
comp=Z,9.4nm,0.7s,mb4.8
CSNA Conrad Observa 77.29 333 ⇓ *i* P P **07 20 09.3 +0.4**
comp=Z,7.4nm,0.7s,mb4.8
MEM Membach 77.40 340 P P **07 20 09.5 0.0**
comp=Z,22nm,1.1s,mb5.0
BZS Buzias 77.47 328 ⇑ *i* P P **07 20 10.1 +0.1**
BRTR Keskin Array B 77.67 318 P P **07 20 12.3 +1.0**
comp=Z,6.2nm,1.0s,mb4.5,baz=54,slow=2.5,SNR=16
BRTR Keskin Array B 77.67 318 P P **07 20 12.3 +1.1**
BRTR pmax pmax
comp=Z,6.0nm,1.0s
TOD Tromm 77.68 338 *e* P P **07 20 10.9 -0.2**
BCLA Clavier 77.73 341 P P **07 20 11.4 0.0**
MOA Molln 77.83 334 ⇓ *i* P P **07 20 12.3 +0.4**
comp=Z,4.9nm,0.7s,mb4.6
ARSA Arzberg 78.00 333 ⇓ *i* P P **07 20 13.5 +0.6**
comp=Z,5.5nm,0.7s,mb4.6
GIVF Givet 78.14 341 *e* P P **07 20 13.1 -0.5**
DOU Dourbes 78.19 341 P P **07 20 14.1 +0.2**
BAIF Baives 78.31 341 *e* P P **07 20 14.2 -0.4**
comp=Z,41nm,1.0s,mb5.0
BAIF Baives 78.31 341 *e* P P **07 20 14.2 -0.4**
comp=Z,20nm,1.0s,mb5.0
BAIF Baives 78.31 341 *e* P P **07 20 14.2 -0.4**
BAIF pmax pmax
comp=Z,21nm,1.0s,mb5.0
RJOB Jochberg 78.35 335 *e* P P **07 20 15.1 +0.2**
comp=Z,7.0nm,0.9s,mb4.6
SOKA Soboth 78.66 333 ⇓ *i* P P **07 20 17.1 +0.5**
comp=Z,16nm,1.0s,mb4.9
PERS Pernice 78.67 333 *i* P P **07 20 16.6 0.0**
GROS Grobnik 78.71 333 *i* P P **07 20 16.7 -0.2**
KBA Koelnbreinsper 78.79 334 ⇓ *i* P P **07 20 18.5 +1.2**
comp=Z,35nm,0.7s,mb5.4
OBKA Obir 78.96 333 ⇓ *i* P P **07 20 17.0 -1.2**
comp=Z,16nm,1.1s,mb4.9
BFO Black Forest 78.98 338 *e* P P **07 20 18.0 -0.3**
comp=Z,9.0nm,1.0s,mb4.7
BFO Black Forest 78.98 338 *e* P P **07 20 18.2 -0.1**
BFO pmax pmax
comp=Z,24nm,1.3s,mb5.0
BFO Black Forest 78.98 338 *e* P P **07 20 18.2 -0.1**
comp=Z,24nm,1.3s,mb5.0
WTTA Wattenberg 79.10 335 ⇓ *i* P P **07 20 20.1 +1.1**
comp=Z,25nm,0.7s,mb5.2
MYKA Terra Mystica 79.11 334 ⇓ *i* P P **07 20 19.2 +0.2**
comp=Z,5.7nm,0.6s,mb4.7

CDF Champ du Feu 79.16 339 ⇑ *i* P P **07 20 19.0 -0.3**
comp=Z,16nm,0.6s,mb4.8
CDF Champ du Feu 79.16 339 ⇑ *i* P P **07 20 19.0 -0.3**
comp=Z,8.1nm,0.6s,mb4.8
CDF Champ du Feu 79.16 339 ⇑ *i* P P **07 20 19.0 -0.3**
CDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
MOTA Moosalm 79.17 336 ⇓ *i* P P **07 20 20.0 +0.6**
comp=Z,6.9nm,0.5s,mb4.9
ABTA Abfaltersbach 79.33 335 ⇓ *i* P P **07 20 20.7 +0.4**
comp=Z,11nm,0.9s,mb4.8
ECH Echery 79.37 339 *e* P P **07 20 20.1 -0.4**
ECH Echery 79.37 339 *e* P P **07 20 20.0 -0.5**
FELD Feldberg im Sc 79.48 338 *e* P P **07 20 20.4 -0.7**
FETA Feichten 79.57 336 ⇓ *i* P P **07 20 22.4 +0.9**
comp=Z,12nm,0.9s,mb4.9
MEZF Maizieres J'vi 79.59 340 *e* P P **07 20 21.6 -0.1**
THEF They Montfort 79.64 339 *e* P P **07 20 21.6 -0.3**
JAVS Javornik 79.66 333 *i* P P **07 20 21.2 -0.9**
MOF Molkenrain 79.72 339 *e* P P **07 20 21.6 -0.8**
HAU Haudompre 79.76 339 *e* P P **07 20 22.2 -0.4**
comp=Z,14nm,0.7s,mb4.7
HAU *e* MLR MLR
comp=Z,201nm,20.8s,MS4.1
HAU Haudompre 79.76 339 *e* P P **07 20 22.2 -0.4**
comp=Z,6.8nm,0.6s,mb4.8
HAU LR LR
comp=Z,200nm,20.8s,MS4.4
HAU Haudompre 79.76 339 *e* P P **07 20 22.2 -0.4**
HAU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
HAU MLR MLR
comp=Z,200nm,20.8s,MS4.4
HINF Hinteralfeld 79.82 339 *e* P P **07 20 22.3 -0.6**
FLN La Foliniere 80.48 344 *e* P P **07 20 25.9 -0.5**
comp=Z,100nm,1.1s,mb5.4
FLN *e* MLR MLR
comp=Z,168nm,19.2s,MS4.1
FLN La Foliniere 80.48 344 *e* P P **07 20 25.9 -0.5**
comp=Z,50nm,1.1s,mb5.4
FLN LR LR
comp=Z,170nm,19.3s,MS4.4
FLN La Foliniere 80.48 344 *e* P P **07 20 25.9 -0.5**
FLN pmax pmax
comp=Z,50nm,1.1s,mb5.4
FLN MLR MLR
comp=Z,170nm,19.3s,MS4.4
LDF La Druitiere 80.57 343 ⇑ *i* P P **07 20 26.5 -0.4**
comp=Z,22nm,0.6s,mb4.9
LDF La Druitiere 80.57 343 ⇑ *i* P P **07 20 26.5 -0.4**
comp=Z,11nm,0.6s,mb5.0
LDF La Druitiere 80.57 343 ⇑ *i* P P **07 20 26.5 -0.4**
LDF pmax pmax
comp=Z,11nm,0.6s,mb5.0
RAR Rarotonga 80.61 138 LR LR 07 48 29.2
comp=Z,162nm,21.8s,MS4.3,baz=277,slow=30
TAOE Nuku Hiva Isla 80.71 115 *e* LR LR 07 45 24.4
comp=Z,1µm,23.5s
SKO Skopje 80.71 327 *e* P P **07 20 28.9 +1.1**
VAY Valandovo 80.86 326 *e* P P **07 20 28.0 -0.7**
GRR Gorron 80.91 344 ⇑ *i* P P **07 20 28.6 -0.1**
comp=Z,90nm,0.9s,mb5.4
GRR Gorron 80.91 344 ⇑ *i* P P **07 20 28.6 -0.1**
comp=Z,45nm,0.9s,mb5.4
GRR Gorron 80.91 344 ⇑ *i* P P **07 20 28.6 -0.1**
GRR pmax pmax
comp=Z,45nm,0.9s,mb5.4
LOR Lormes 81.02 340 ⇑ *i* P P **07 20 29.0 -0.4**
comp=Z,54nm,0.9s,mb5.2
LOR *e* MLR MLR
comp=Z,254nm,20.0s,MS4.3
LOR Lormes 81.02 340 ⇑ *i* P P **07 20 29.0 -0.4**
comp=Z,27nm,0.9s,mb5.2
LOR LR LR
comp=Z,250nm,20.0s,MS4.6
LOR Lormes 81.02 340 ⇑ *i* P P **07 20 29.0 -0.4**
LOR pmax pmax
comp=Z,27nm,0.9s,mb5.2
LOR MLR MLR
comp=Z,250nm,20.0s,MS4.6
CABF La Chapelle 81.13 339 *e* P P **07 20 30.0 0.0**
comp=Z,18nm,0.7s,mb4.8
CABF La Chapelle 81.13 339 *e* P P **07 20 30.0 0.0**
comp=Z,8.9nm,0.7s,mb4.8
CABF La Chapelle 81.13 339 *e* P P **07 20 30.0 0.0**
CABF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
STKA Stephens Creek 81.22 191 *e* P P **07 20 30.0 -0.3**
comp=Z,2.4nm,0.9s,mb4.1
STKA Stephens Creek 81.22 191 P P **07 20 29.6 -0.7**
comp=Z,2.4nm,0.4s,mb4.4,baz=1.6,slow=8.4,SNR=5.9
STKA Stephens Creek 81.22 191 *e* P P **07 20 30.0 -0.3**
comp=Z,1.2nm,1.0s,mb3.8
PMOR Pomariorio Ree 81.23 125 *e* T 08 49 40.3
comp=Z,8.5nm,0.2s
KRUS Krusevo 81.31 327 *e* P P **07 20 31.1 +0.1**
SGMF Saint Gilles 81.34 345 ⇑ *i* P P **07 20 30.9 -0.1**
comp=Z,87nm,0.9s,mb5.4
SGMF Saint Gilles 81.34 345 ⇑ *i* P P **07 20 30.9 -0.1**
comp=Z,44nm,0.9s,mb5.4
SGMF Saint Gilles 81.34 345 ⇑ *i* P P **07 20 30.9 -0.1**
SGMF pmax pmax
comp=Z,44nm,0.9s,mb5.4
ROSF Rostrenen 81.38 345 ⇑ *i* P P **07 20 31.2 0.0**
comp=Z,133nm,1.2s,mb5.5
ROSF Rostrenen 81.38 345 ⇑ *i* P P **07 20 31.2 0.0**
comp=Z,67nm,1.2s,mb5.4
ROSF Rostrenen 81.38 345 ⇑ *i* P P **07 20 31.2 0.0**
ROSF pmax pmax
comp=Z,67nm,1.2s,mb5.5
RAO Raoul Island 81.45 156 LR LR 07 52 29.3
comp=Z,33nm,19.2s,MS3.7,baz=98,slow=32
AVF Avril sur Loir 81.59 341 ⇑ *i* P P **07 20 32.2 -0.2**
comp=Z,46nm,0.9s,mb5.1
AVF Avril sur Loir 81.59 341 ⇑ *i* P P **07 20 32.2 -0.2**
comp=Z,23nm,0.9s,mb5.1
AVF Avril sur Loir 81.59 341 ⇑ *i* P P **07 20 32.2 -0.2**
AVF pmax pmax
comp=Z,23nm,0.9s,mb5.1
SMF Signal de Mont 81.62 340 ⇑ *i* P P **07 20 32.4 -0.1**
comp=Z,44nm,1.0s,mb5.1
SMF Signal de Mont 81.62 340 ⇑ *i* P P **07 20 32.4 -0.1**
comp=Z,22nm,1.0s,mb5.0
SMF Signal de Mont 81.62 340 ⇑ *i* P P **07 20 32.4 -0.1**
SMF pmax pmax
comp=Z,22nm,1.0s,mb5.0
OHR Ohrid 81.70 327 *e* P P **07 20 31.2 -1.9**
QUIF Quistinic 81.77 345 *e* P P **07 20 34.1 +0.8**
comp=Z,126nm,1.5s,mb5.3
QUIF Quistinic 81.77 345 *e* P P **07 20 34.1 +0.8**
comp=Z,63nm,1.5s,mb5.3
QUIF Quistinic 81.77 345 *e* P P **07 20 34.1 +0.8**
QUIF pmax pmax
comp=Z,63nm,1.5s,mb5.3
RSL Roselend 81.87 338 *e* P P **07 20 34.2 +0.3**
BGF Bois d'Agland 81.92 341 *e* P P **07 20 33.9 -0.2**
comp=Z,14nm,0.6s,mb4.7
BGF Bois d'Agland 81.92 341 *e* P P **07 20 33.9 -0.2**
comp=Z,6.9nm,0.6s,mb4.8
BGF Bois d'Agland 81.92 341 *e* P P **07 20 33.9 -0.2**
BGF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LPL La Plagne 82.00 338 ⇑ *i* P P **07 20 35.4 +0.8**
comp=Z,56nm,0.7s,mb5.3
LPL La Plagne 82.00 338 ⇑ *i* P P **07 20 35.4 +0.8**
comp=Z,28nm,0.7s,mb5.3
LPL La Plagne 82.00 338 ⇑ *i* P P **07 20 35.4 +0.8**
LPL pmax pmax
comp=Z,28nm,0.7s,mb5.3
LPG La Plagne 82.01 338 ⇑ *i* P P **07 20 35.6 +1.0**
comp=Z,59nm,0.7s,mb5.3
LPG La Plagne 82.01 338 ⇑ *i* P P **07 20 35.6 +1.0**
comp=Z,30nm,0.7s,mb5.3
LPG La Plagne 82.01 338 ⇑ *i* P P **07 20 35.6 +1.0**
LPG pmax pmax
comp=Z,30nm,0.7s,mb5.3
ASF Jabal al Asfar 82.25 311 LR LR 08 00 46.9
comp=Z,74nm,21.8s,MS4.0,baz=91,slow=38
PLDF La Plantade 82.31 340 *e* P P **07 20 37.4 +1.2**
TCF Toulx Ste Croi 82.31 341 ⇑ *i* P P **07 20 36.2 0.0**
comp=Z,23nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.31 341 ⇑ *i* P P **07 20 36.2 0.0**
comp=Z,12nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.31 341 ⇑ *i* P P **07 20 36.2 0.0**
TCF pmax pmax
comp=Z,12nm,0.9s,mb4.8
AGO Saint Agoulin 82.34 341 *e* P P **07 20 37.7 +1.4**

BNI	**Bardonecchia**	**82.45**	**338**	*e*P		**P**	**07 20 37.6**	**+0.7**
	comp=Z,18nm,1.0s,mb5.0							
BNI	**Bardonecchia**	**82.45**	**338**	*e*P		**P**	**07 20 37.6**	**+0.7**
BNI				pmax	pmax			
	comp=Z,18nm,1.0s,mb5.0							
PPT	**Papeete**	**82.45**	**127**	*e*LR		LR	07 46 30.1	
	comp=Z,175nm,22.0s							
PPT	**Papeete**	**82.45**	**127**	*e*T			08 51 13.2	
	comp=Z,5.1nm,0.3s							
PPT	**Papeete**	**82.45**	**127**	LR		LR	07 56 19.5	
	comp=Z,57nm,18.3s,MS4.0,baz=332,slow=35							
MFF	**Saint Martin d**	**82.49**	**343**	*e*P		**P**	**07 20 37.0**	**-0.1**
	comp=Z,31nm,1.0s,mb4.9							
MFF	**Saint Martin d**	**82.49**	**343**	*e*P		**P**	**07 20 37.0**	**-0.1**
	comp=Z,16nm,1.0s,mb4.9							
MFF	**Saint Martin d**	**82.49**	**343**	*e*P		**P**	**07 20 37.0**	**-0.1**
MFF				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9							
PYM	**Petit Puy Mans**	**82.65**	**341**	*e*P		**P**	**07 20 39.1**	**+1.1**
MBDF	**Montbardon**	**82.73**	**338**	*e*P		**P**	**07 20 38.5**	**+0.1**
	comp=Z,22nm,0.8s,mb5.0							
MBDF	**Montbardon**	**82.73**	**338**	*e*P		**P**	**07 20 38.5**	**+0.1**
	comp=Z,11nm,0.8s,mb4.9							
MBDF	**Montbardon**	**82.73**	**338**	*e*P		**P**	**07 20 38.5**	**+0.1**
MBDF				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9							
ORIF	**Oris-en-Rattie**	**82.77**	**338**	⇑*i*P		**P**	**07 20 39.2**	**+0.6**
	comp=Z,22nm,0.6s,mb5.0							
ORIF				*e*MLR		MLR		
	comp=Z,156nm,22.8s,MS4.0							
ORIF	**Oris-en-Rattie**	**82.77**	**338**	⇑*i*P		**P**	**07 20 39.2**	**+0.6**
	comp=Z,11nm,0.6s,mb5.1							
ORIF	**Oris-en-Rattie**	**82.77**	**338**	⇑*i*P		**P**	**07 20 39.2**	**+0.6**
ORIF				pmax	pmax			
	comp=Z,11nm,0.6s,mb5.1							
FORT	**Forrest**	**82.80**	**203**	*e*P		**P**	**07 20 38.9**	**+0.2**
	comp=Z,30nm,0.6s,mb5.5							
FORT	**Forrest**	**82.80**	**203**	*e*P		**P**	**07 20 39.0**	**+0.3**
	comp=Z,53nm,0.9s,mb5.6							
VIVF	**Saint-Julien-l**	**83.12**	**339**	⇑*i*P		**P**	**07 20 40.7**	**+0.3**
	comp=Z,85nm,1.1s,mb5.4							
VIVF	**Saint-Julien-l**	**83.12**	**339**	⇑*i*P		**P**	**07 20 40.7**	**+0.3**
	comp=Z,42nm,1.1s,mb5.4							
VIVF	**Saint-Julien-l**	**83.12**	**339**	⇑*i*P		**P**	**07 20 40.7**	**+0.3**
VIVF				pmax	pmax			
	comp=Z,43nm,1.1s,mb5.4							
SBF	**Sospel**	**83.37**	**337**	*e*P		**P**	**07 20 41.4**	**-0.3**
RJF	**Les Rejaudoux**	**83.40**	**341**	*e*P		**P**	**07 20 41.9**	**+0.1**
	comp=Z,36nm,1.1s,mb5.0							
RJF				*e*MLR		MLR		
	comp=Z,187nm,21.2s,MS4.1							
RJF	**Les Rejaudoux**	**83.40**	**341**	*e*P		**P**	**07 20 41.9**	**+0.1**
	comp=Z,18nm,1.1s,mb5.0							
RJF				LR		LR		
	comp=Z,190nm,21.3s,MS4.4							
RJF	**Les Rejaudoux**	**83.40**	**341**	*e*P		**P**	**07 20 41.9**	**+0.1**
RJF				pmax	pmax			
	comp=Z,18nm,1.1s,mb5.0							
RJF				MLR		MLR		
	comp=Z,190nm,21.3s,MS4.4							
CAF	**Calviac**	**83.64**	**341**	⇑*i*P		**P**	**07 20 43.5**	**+0.4**
	comp=Z,28nm,0.9s,mb5.1							
CAF	**Calviac**	**83.64**	**341**	⇑*i*P		**P**	**07 20 43.5**	**+0.4**
	comp=Z,14nm,0.9s,mb5.1							
CAF	**Calviac**	**83.64**	**341**	⇑*i*P		**P**	**07 20 43.5**	**+0.4**
CAF				pmax	pmax			
	comp=Z,14nm,0.9s,mb5.1							
FRF	**La Foret Royal**	**83.85**	**337**	*e*P		**P**	**07 20 43.8**	**-0.4**
LFF	**La Frestale**	**83.91**	**342**	*e*P		**P**	**07 20 43.9**	**-0.5**
LMR	**La Mourre**	**84.10**	**337**	⇑*i*P		**P**	**07 20 45.3**	**-0.2**
	comp=Z,148nm,1.1s,mb5.7							
LMR	**La Mourre**	**84.10**	**337**	⇑*i*P		**P**	**07 20 45.3**	**-0.2**
	comp=Z,74nm,1.1s,mb5.7							
LMR	**La Mourre**	**84.10**	**337**	⇑*i*P		**P**	**07 20 45.3**	**-0.2**
LMR				pmax	pmax			
	comp=Z,74nm,1.1s,mb5.7							
PGF	**Pioggiola**	**84.17**	**335**	⇑*i*P		**P**	**07 20 45.4**	**-0.4**
	comp=Z,104nm,1.2s,mb5.5							
PGF	**Pioggiola**	**84.17**	**335**	⇑*i*P		**P**	**07 20 45.4**	**-0.4**
	comp=Z,52nm,1.2s,mb5.5							
PGF	**Pioggiola**	**84.17**	**335**	⇑*i*P		**P**	**07 20 45.4**	**-0.4**
PGF				pmax	pmax			
	comp=Z,52nm,1.2s,mb5.5							
EIL	**Elat**	**85.25**	**311**	LR		LR	08 01 46.1	
	comp=Z,120nm,21.9s,MS4.2,baz=271,slow=38							
EPF	**Esparros**	**85.82**	**342**	*e*P		**P**	**07 20 53.6**	**-0.5**
ETSF	**Etsaut**	**86.13**	**342**	*e*P		**P**	**07 20 55.1**	**-0.5**
	comp=Z,9.5nm,0.6s,mb4.9							
ETSF	**Etsaut**	**86.13**	**342**	*e*P		**P**	**07 20 55.1**	**-0.5**
	comp=Z,4.8nm,0.6s,mb4.9							
ETSF	**Etsaut**	**86.13**	**342**	*e*P		**P**	**07 20 55.1**	**-0.5**
ETSF				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.9							
NWAO	**Narrogin (SRO)**	**88.05**	**211**	*e*P		**P**	**07 21 04.3**	**-0.5**
	comp=Z,11nm,0.9s,mb5.1							
NWAO	**Narrogin (SRO)**	**88.05**	**211**	*e*P		**P**	**07 21 04.3**	**-0.5**
NWAO				pmax	pmax			
	comp=Z,11nm,0.9s							
ESDC	**Sonseca Array**	**89.90**	**344**	P		**P**	**07 21 12.5**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.9,baz=18,slow=5.3,SNR=4.5							
ESDC				LR		LR	08 06 18.1	
	comp=Z,130nm,19.8s,MS4.4,baz=20,slow=39							
KEST	**Kesra**	**90.39**	**333**	P		**P**	**07 21 15.0**	**-1.0**
	comp=Z,1.1nm,0.6s,mb4.4,baz=0.0,slow=3.0,SNR=3.4							
KEST				LR		LR	08 06 58.0	
	comp=Z,66nm,19.5s,MS4.1,baz=277,slow=39							
RKT	**Rikitea**	**94.96**	**120**	*e*LR		LR	07 52 11.6	
	comp=Z,109nm,32.5s							
TORD	**Torodi Ar. Bea**	**113.88**	**331**	PKiKP		PKiKP	07 26 52.2	-1.5
	comp=Z,0.9nm,0.9s,baz=357,slow=1.6,SNR=3.6							
TORD	**Torodi Ar. Bea**	**113.88**	**331**	PKPdf		PKiKP	07 26 52.2	-1.5
DBIC	**Dimbokro**	**121.94**	**336**	PKP		PKPdf	07 27 06.8	-2.4
	comp=Z,3.4nm,0.9s,baz=159,slow=4.5,SNR=3.7							
DBIC	**Dimbokro**	**121.94**	**336**	PKP		PKPdf	07 27 06.8	-2.4
DBIC	**Dimbokro**	**121.94**	**336**	PKiKP		PKPdf	07 27 06.8	-2.4
DBIC				pmax	pmax			
	comp=Z,3.0nm,0.9s							
VNDA	**Vanda**	**126.15**	**178**	PKP		PKPdf	07 27 14.7	-0.6
	comp=Z,0.5nm,0.6s,baz=311,slow=6.0,SNR=3.8							
VNDA	**Vanda**	**126.15**	**178**	PKiKP		PKPdf	07 27 14.7	-0.6
VNDA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
LPAZ	**La Paz**	**132.32**	**62**	PKP		PKPdf	07 27 29.4	+0.6
	comp=Z,1.5nm,0.8s,baz=18,slow=6.7,SNR=5.5							
LPAZ	**La Paz**	**132.32**	**62**	PKP		PKPdf	07 27 29.4	+0.6
LPAZ				*e*PKPdf		PKPdf	07 27 29.6	+0.8
LPAZ	**La Paz**	**132.32**	**62**	PKiKP		PKPdf	07 27 29.5	+0.7
LPAZ				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BOSA	**Boshof**	**136.72**	**279**	PKP		PKPdf	07 27 37.4	+0.6
	comp=Z,1.3nm,0.6s,baz=238,slow=1.1,SNR=5.0							
BOSA	**Boshof**	**136.72**	**279**	PKiKP		PKPdf	07 27 37.4	+0.7
BOSA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
PLCA	**Paso Flores**	**147.17**	**93**	PKPbc		PKPbc	07 27 56.7	-0.5
	comp=Z,1.0nm,0.5s,baz=285,slow=7.2,SNR=5.2							
PLCA	**Paso Flores**	**147.17**	**93**	PKP2		PKPbc	07 27 56.7	-0.5
PLCA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
SNAA	**Sanae**	**154.89**	**196**	*e*PKPdf		PKPab	07 28 25.4	-4.7
SNAA				*e*			07 28 36.0	
VNA2	**Neumayer--Watz**	**156.32**	**194**	*e*PKPdf		PKPab	07 28 35.4	-0.8
	baz=133,slow=3.4							
VNA2				*e*			07 28 47.9	
VNA2				*e*			07 28 52.6	
VNA3	**Neumayer Olymp**	**156.39**	**192**	*e*PKPdf		PKPab	07 28 35.7	-0.8
VNA3				*e*			07 28 48.1	
VNA3				*e*			07 28 52.1	
VNA1	**Neumayer--Stat**	**156.70**	**194**	*e*PKPdf		PKPab	07 28 37.6	-0.3
VNA1				*e*			07 28 49.1	
VNA1				*e*			07 28 53.9	

*ISCJB **23** 07:21:24.6±0.7, 1076N±005×6228W±003, h95km±7km, Error ellipse: s-maj=8.4km s-min=5.5km az=167.1*
*FUNV **23** 07:21:24.6, 1091N×6215W, h90km, MW2.9*
*TRN **23** 07:21:27.2, 1081N×6224W, h73km, MD2.9*
*NEIC **23** 07:21:27.5, 1081N×6223W, h73km, MD2.9(TRN), After TRN.*

ISC 23 07:21:25.6±0.7, 1077N±005×6227W±003, h89km±8km, n19, σ0°81/29, 5C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
GUIV	**Guiria**	**0.14**	**159**	⇑*e*P			**Pn**	**07 21 38.3**	**0.0**
GUIV				*e*S			**Sn**	**07 21 47.0**	**-0.6**
TCE	**Chacachacare**	**0.52**	**99**	*e*P			**Pn**	**07 21 40.9**	**+0.5**
TRN	**Trinidad (W)**	**0.86**	**98**	⇑*e*P			**Pn**	**07 21 44.0**	**+0.3**
TRN				*e*S			**Sn**	**07 21 56.6**	**-0.7**
GUNV	**Guanoco**	**0.90**	**227**	⇑*e*P			**Pn**	**07 21 44.8**	**+0.7**
GUNV				*e*S			**Sn**	**07 22 00.5**	**+2.6**
TPP	**Pointe-a-Pierr**	**0.93**	**119**	*e*P			**Pn**	**07 21 47.8**	**+3.4**
TPP	**Pointe-a-Pierr**	**0.93**	**119**	*e*P			**Pn**	**07 21 44.7**	**+0.3**
CRUV	**Carupano**	**0.95**	**264**	⇑*i*P			**Pn**	**07 21 44.2**	**-0.5**
CRUV				*e*S			**Sn**	**07 21 58.6**	**-0.4**
TBH	**Brigand Hill**	**1.22**	**104**	*e*P			**Pn**	**07 21 48.5**	**+0.7**
TBH				*e*S			**Sn**	**07 22 04.0**	**-0.6**
TBH	**Brigand Hill**	**1.22**	**104**	*e*P			**Pn**	**07 21 48.5**	**+0.7**
TBH				*e*S			**Sn**	**07 22 04.0**	**-0.6**
GRW	**Mount Saint Ca**	**1.50**	**23**	*e*P			**Pn**	**07 21 52.2**	**+0.9**
GRW				*e*S			**Sn**	**07 22 09.9**	**-0.9**
TPR	**Prospect**	**1.52**	**74**	*e*P			**Pn**	**07 21 52.9**	**+1.3**
TPR				*e*S			**Sn**	**07 22 11.0**	**-0.3**
PCRV	**Puerto La Cruz**	**2.40**	**256**	*e*P			**Pn**	**07 22 03.0**	**0.0**
RIOV	**Rio Grande**	**2.73**	**170**	*e*P			**Pn**	**07 22 07.8**	**+0.4**
RIOV				*e*S			**Sn**	**07 22 38.9**	**-0.7**
PRGV	**PARIAGUAN**	**3.08**	**230**	*e*P			**Pn**	**07 22 13.1**	**+0.9**
GURV	**El Guri**	**3.10**	**195**	⇑*i*P			**Pn**	**07 22 12.1**	**-0.4**
CUPV	**Cepira**	**3.53**	**259**	*e*P			**Pn**	**07 22 17.7**	**-0.5**
CUPV				*e*S			**Sn**	**07 22 58.2**	**-0.8**
LUEV	**Luepa**	**4.96**	**171**	*e*P			**Pn**	**07 22 36.4**	**-1.4**
CAOV	**Caicara del Or**	**5.27**	**230**	*e*P			**Pn**	**07 22 42.3**	**+0.5**
BAUV	**El Baul**	**5.97**	**253**	*e*P			**Pn**	**07 22 50.9**	**-0.6**

*IDC **23** 07:32:27.4±4.2, 2299S×7008W, h0km, mb4.3/1, mb1 4.1/2, mb1mx3.6/17, mbtmp4.0/2, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/22, Error ellipse: s-maj=131.8km s-min=60.3km az=86.0*
*NEIC **23** 07:32:32.9, 2254S×7018W, h50km, MD4.3(GUC), After GUC.*
NEIC Felt [III] at Tocopilla.
*ISCJB **23** 07:32:33.3±0.7, 2253S±004×7030W±008, h49km±10km, Error ellipse: s-maj=12.4km s-min=4.9km az=20.2*
*GUC **23** 07:32:33.3±1.4, 2251S×7031W, h35km±6km, MD4.3, ML3.9*

ISC 23 07:32:33.3±0.6, 2249S±003×7034W±006, h41km±13km, n18, σ0°98/28, 3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MECH	**Mejillones**	**0.62**	**189**	*e*P			**Pn**	**07 32 45.4**	**-0.2**
MECH				*i*S			**Sn**	**07 32 55.2**	**+0.8**
MECH				AML		AML		07 32 58.4	
	comp=N,9μm,0.3s								
MACH	**Maria Elena**	**0.62**	**62**	*e*P			**Pn**	**07 32 45.3**	**-0.4**
MACH				*i*S			**Sn**	**07 32 54.2**	**-0.3**
PECH	**Pedro de Valdi**	**0.63**	**100**	*e*P			**Pn**	**07 32 45.4**	**-0.4**
PECH				*i*S			**Sn**	**07 32 53.9**	**-0.8**
PECH				AML		AML		07 32 54.6	
	comp=N,13μm,0.2s								
PB06	**Plate Boundary**	**0.74**	**107**	⇓*i*P			**Pn**	**07 32 46.9**	**-0.4**
PB06				*i*S			**Sn**	**07 32 56.8**	**-0.7**
PB04	**Plate Boundary**	**0.82**	**74**	*e*P			**Pn**	**07 32 40.5**	**-7.9**
PB04				*i*S			**Sn**	**07 32 45.6**	**-14**
PB04				AML		AML		07 32 45.9	
	comp=N,60μm,0.1s								
PB07	**Plate Boundary**	**0.87**	**29**	⇓*i*P			**Pn**	**07 32 49.2**	**+0.1**
PB07				*i*S			**Sn**	**07 33 01.2**	**+0.6**
CEN1	**Los Morros**	**0.90**	**172**	*e*P			**Pn**	**07 32 51.7**	**+2.2**
CEN1				*i*S			**Sn**	**07 33 06.0**	**+4.6**
ANCH	**Antofagasta**	**1.19**	**183**	⇓*e*P			**Pn**	**07 32 51.8**	**-1.7**
ANCH				*i*S			**Sn**	**07 33 07.8**	**-0.5**
LVC	**Limon Verde**	**1.33**	**95**	*e*Pn			**Pn**	**07 32 56.2**	**+0.8**
PB01	**Plate Boundary**	**1.65**	**29**	*e*P			**Pn**	**07 33 00.7**	**+1.0**
PB01				*i*S			**Sn**	**07 33 22.2**	**+2.5**
SPCH	**San Pedro de A**	**2.02**	**102**	P			**Pn**	**07 33 09.4**	**+4.5**
SPCH				S			**Sn**	**07 33 41.3**	**+12**
CPN1	**Cerro Paranal**	**2.12**	**181**	*e*P			**Pn**	**07 33 06.2**	**-0.1**
CPN1				*i*S			**Sn**	**07 33 32.1**	**+0.6**
CPN1				AML		AML		07 33 45.0	
	comp=E,692nm,0.7s								
ARE	**Arequipa**	**6.10**	**350**	*e*P			**Pn**	**07 34 00.0**	**-0.9**
ARE				*e*S			**Sn**	**07 35 08.0**	**-1.4**
LPAZ	**La Paz**	**6.52**	**19**	Pn			**Pn**	**07 34 10.6**	**+3.9**
	comp=E,0.6nm,0.3s,baz=199,slow=9.0,SNR=11								
LPAZ				LR		LR		07 36 58.4	
	comp=E,78nm,19.4s,baz=222,slow=39								
LPAZ	**La Paz**	**6.52**	**19**	Pn			**Pn**	**07 34 10.6**	**+3.9**
PLCA	**Paso Flores**	**18.19**	**181**	LR		LR		07 42 25.1	
	comp=E,43nm,19.3s,baz=102,slow=34								
TORD	**Torodi Ar. Bea**	**78.94**	**71**	P			**P**	**07 44 33.0**	**-0.1**
	comp=E,1.2nm,0.4s,baz=254,slow=5.2,SNR=18								
MKAR	**Makanchi Array**	**147.21**	**36**	PKPbc		PKPbc		07 52 12.6	+0.5
	comp=E,0.3nm,0.5s,baz=309,slow=2.7,SNR=4.6								

*ISCJB **23** 07:32:53.2±1.5, 2496N±010×12354E±006, h25km±13km, mb3.5/6, Error ellipse: s-maj=16.4km s-min=8.5km az=14.9*
*IDC **23** 07:32:53.7±1.2, 2433N×12205E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.6/22, mbtmp3.6/7, Error ellipse: s-maj=67.6km s-min=18.1km az=67.0*
*JMA **23** 07:32:53.3±0.2, 2497N×12352E, h34km±4km, M3.1*

ISC 23 07:32:52.5±1.4, 2499N±007×12356E±005, h8km±11km, n13, σ0°73/16, mb3.5/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
IRIF	**Iriomote-Funau**	**0.67**	**166**	P			**Pg**	**07 33 06.0**	**+0.6**
IRIF				S			**Sg**	**07 33 15.0**	**+0.9**
YOJ	**Yonaguni jima**	**0.72**	**224**	P			**Pg**	**07 33 06.2**	**-0.2**
YOJ				S			**Sg**	**07 33 15.7**	**-0.1**
JIJ	**Ishigaki jima**	**0.82**	**139**	P			**Pg**	**07 33 08.2**	**0.0**
JIJ				S			**Sg**	**07 33 18.8**	**-0.1**
JKRS	**Kuro-shima**	**0.85**	**151**	P			**Pg**	**07 33 09.2**	**+0.3**
JKRS				S			**Sg**	**07 33 19.5**	**-0.5**
HATJ	**Hateruma jima**	**0.95**	**166**	*e*S			**Sg**	**07 33 22.6**	**-0.6**
JTJ	**Tarama**	**1.09**	**108**	P			**Pg**	**07 33 13.2**	**-0.4**
KSRS	**Korea Array**	**12.97**	**16**	Pn			Px	07 36 14.8	
	baz=193,slow=12,SNR=4.1								
SONM	**Songino Array**	**26.54**	**334**	P			**P**	**07 38 32.9**	**+2.2**
	0.5nm,0.7s,mb3.1,baz=142,slow=7.3,SNR=2.6								
MKAR	**Makanchi Array**	**39.30**	**314**	P			**P**	**07 40 20.8**	**-1.0**
	0.3nm,0.6s,mb3.2,baz=102,slow=10.0,SNR=3.2								
ZALV	**Zalesovo Beam**	**40.78**	**326**	P			**P**	**07 40 33.4**	**-0.7**
	0.6nm,0.5s,mb3.5,baz=101,slow=7.6,SNR=2.6								
KURK	**Kurchatov**	**42.89**	**319**	P			**P**	**07 40 51.2**	**-0.1**
	0.3nm,0.3s,mb3.5,baz=110,slow=8.3,SNR=2.4								
WRA	**Warramunga Arr**	**45.87**	**166**	P			**P**	**07 41 14.9**	**-0.6**
	1.2nm,0.7s,mb3.9,baz=347,slow=8.7,SNR=8.1								
ASAR	**Alice Springs**	**49.39**	**167**	P			**P**	**07 41 43.5**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=349,slow=7.2,SNR=9.0								

TAP 23 07:33:00.9, 2341N×12051E, h8km, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CHN4	**Tsaushan**	**0.10**	**128**	*i*P			Pg	07 33 03.8	+0.6
	baz=127								
CHN4				*i*S			Sg	07 33 06.0	+1.2
	baz=127								
TWK	**Hsinying**	**0.14**	**188**	P			Pg	07 33 04.8	+0.8
	baz=188								
TWK				S			Sg	07 33 07.6	+1.5
	baz=188								
WTP	**Ta-pu**	**0.19**	**150**	P			Pg	07 33 05.8	+1.0
	baz=149								
WTP				*i*S			Sg	07 33 09.2	+1.8
	baz=149								
CHN1	**Nanshi**	**0.23**	**176**	P			Pg	07 33 06.4	+1.0
	baz=175								
CHN1				*e*S			Sg	07 33 10.8	+2.3
	baz=175								
SGST	**Jiashian**	**0.33**	**168**	*e*P			Pg	07 33 09.1	+1.7
	baz=168								

*NEIC **23** 07:36:39.3, 1758N×10130W, h39km, MD4.1(MEX), After MEX.*

MEX 23 07:36:39.2±0.5, 1758N×10131W, h39km±6km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
ZIIG	**Zihuatanejo**	**0.15**	**281**	*i*P			Pn	07 36 44.7	-1.4
ZIIG				*i*S			Sn	07 36 48.9	-1.8
CAIG	**El Cayaco**	**1.12**	**118**	*i*P			Pn	07 36 56.7	-1.7
CAIG				*i*S			Sn	07 37 11.1	-1.6
ACX	**Acapulco**	**1.50**	**118**	*i*P			Pn	07 37 02.2	-1.5
ACX				*i*S			Sn	07 37 19.7	-2.4
MEIG	**Mezcala**	**1.64**	**78**	*i*P			Pn	07 37 03.3	-2.3
MEIG				*i*S			Sn	07 37 23.4	-2.1
PLIG	**Platanillo**	**1.90**	**64**	*i*P			Pn	07 37 06.9	-2.2
PLIG				*i*S			Sn	07 37 30.1	-1.7
MMIG	**Aquila**	**2.07**	**290**	*i*P			Pn	07 37 09.8	-1.6
MMIG				*i*S			Sn	07 37 34.2	-1.8
MOIG	**Morelia**	**2.09**	**3**	*i*P			Pn	07 37 11.0	-0.8
MOIG				*i*S			Sn	07 37 34.2	-2.4
PNIG	**Pinotepa**	**3.26**	**111**	*i*P			Pn	07 37 26.1	-1.7
PNIG				*i*S			Sn	07 38 04.0	-1.5
UTMO	**Huajuapan**	**3.35**	**85**	*e*P			Pn	07 37 27.6	-1.4
UTMO				*i*S			Sn	07 38 05.8	-1.7

*IDC **23** 07:37:13.3±10.0, 1952S×17297E, h0km, mb4.2/4, mb1 4.4/5, mb1mx4.0/18, mbtmp4.3/5, ML3.8/1, MS3.6/10, Ms1 3.6/10, ms1mx3.3/28, Error ellipse: s-maj=219.1km s-min=38.4km az=44.0*

ISC 23 07:37:33.2±3.1, 212S±03×1714E±03, h35km, n13, σ0°69/7, mb4.1/4, MS3.6/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PLUM	**Mont Dore**	**4.53**	**256**	*e*P			**Pn**	**07 38 39.7**	**+0.4**
NOUC	**Port Laguerre**	**4.80**	**258**	*e*P			**Pn**	**07 38 42.6**	**-0.4**
HNR	**Honiara**	**16.07**	**315**	LR			LR	07 46 14.4	
	comp=Z,113nm,18.2s,baz=98,slow=34								
URZ	**Urewera**	**17.70**	**165**	P			**Pn**	**07 41 37.0**	**+0.1**
	0.3nm,0.3s,baz=350,slow=4.6,SNR=7.7								
URZ				LR			LR	07 46 44.7	
	comp=Z,240nm,21.1s,baz=184,slow=30								
RPZ	**Rata Peaks**	**22.45**	**181**	LR			LR	07 50 21.9	
	comp=Z,96nm,22.0s,MS3.2,baz=180,slow=33								
CTA	**Charters Tower**	**23.53**	**268**	P			**P**	**07 42 41.7**	**+1.3**
	1.8nm,0.5s,mb3.7,baz=96,slow=11,SNR=4.7								
CTA				LR			LR	07 51 08.4	
	comp=Z,160nm,20.9s,MS3.5,baz=55,slow=33								
STKA	**Stephens Creek**	**28.60**	**242**	P			**P**	**07 43 31.2**	**+5.1**
	3.4nm,0.9s,mb4.1,baz=108,slow=9.6,SNR=4.2								
STKA				LR			LR	07 54 37.5	
	comp=Z,138nm,18.7s,MS3.6,baz=212,slow=34								
WRA	**Warramunga Arr**	**34.65**	**265**	P			**P**	**07 44 18.6**	**-0.9**
	5.6nm,0.8s,mb4.5,baz=101,slow=8.3,SNR=16								
WRA				LR			LR	07 58 15.1	
	comp=Z,135nm,19.0s,MS3.7,baz=190,slow=35								
ASAR	**Alice Springs**	**34.66**	**259**	P			**P**	**07 44 19.1**	**-0.4**
	2.4nm,0.8s,mb4.2,baz=83,slow=8.6,SNR=30								
VNDA	**Vanda**	**56.55**	**182**	LR			LR	08 07 02.4	
	comp=Z,62nm,19.7s,MS3.7,baz=352,slow=31								
KSRS	**Korea Array**	**71.26**	**325**	LR			LR	08 18 13.1	
	comp=Z,10nm,18.2s,MS3.1,baz=30,slow=35								
PDAR	**Pinedale Array**	**96.49**	**47**	LR			LR	08 25 54.6	
	comp=Z,59nm,20.1s,MS4.1,baz=80,slow=31								
YKA	**Yellowknife Ar**	**101.49**	**27**	LR			LR	08 33 11.3	
	comp=Z,26nm,19.9s,MS3.8,baz=70,slow=34								

*ISCJB **23** 07:54:44.6±0.9, 3979N±003×2070E±007, h2km±11km, Error ellipse: s-maj=8.9km s-min=5.3km az=171.2*
*NEIC **23** 07:54:44.8, 3982N×2075E, h11km, MD3.2(ATH), After ATH.*
*SKO **23** 07:54:44.0, 3960N×2086E, h11km*
*ATH **23** 07:54:44.8, 3982N×2075E, h11km, MD3.2/4*
*CSEM **23** 07:54:45.3±0.3, 3979N×2073E, h5km, MD3.2, Error ellipse: s-maj=6.1km s-min=4.7km az=86.0*

ISC 23 07:54:45.1±0.7, 3975N±003×2071E±007, h11km±8km, n12, σ0°98/22, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JAN	**Janina**	**0.15**	**131**	*e*PG			**Pg**	**07 54 48.1**	**-0.3**
JAN				*e*SG			**Sg**	**07 54 51.4**	**+0.6**
KEK	**Kerkira**	**0.70**	**267**	*e*PB			**Pb**	**07 54 58.1**	**-1.2**
KEK				*e*SB			**Sb**	**07 55 09

PET				pmax	pmax		
	comp=Z,46nm,0.7s						
YSS	**Yuzh-Sakhalins**	**8.54**	**263**	⇑*i*	PN	**Pn**	**08 28 56.5 -0.3**
ASAJ	**Asahikawa**	**9.81**	**247**	P		**Pn**	**08 29 18.9 +4.7**
	comp=Z,3.5nm,0.3s,baz=76,slow=16,SNR=12						
ASAJ	**Asahikawa**	**9.81**	**247**	PN		**Pn**	**08 29 18.9 +4.7**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ERM	**Erimo**	**10.75**	**236**	⇑*i*	PN	**Pn**	**08 29 26.4 -0.7**
YAK	**Yakutsk**	**19.56**	**323**	⇓*i*	P	**Pn**	**08 31 21.7 -0.1**
YAK				pmax	pmax		
	comp=Z,32nm,1.7s						
KSRS	**Korea Array**	**22.72**	**251**	P		**P**	**08 31 56.4 +1.7**
	comp=Z,2.2nm,0.7s,mb3.7,baz=46,slow=11,SNR=5.5						
KSRS	**Korea Array**	**22.72**	**251**	P		**P**	**08 31 56.4 +1.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
ULN	**Ulaanbaatar**	**31.63**	**287**	⇑*i*	P	**P**	**08 33 14.8 -0.8**
MKAR	**Makanchi Array**	**47.32**	**297**	LR		LR	08 56 58.6
	comp=Z,21nm,20.1s,baz=175,slow=38						
KURK	**Kurchatov**	**47.48**	**303**	P		**P**	**08 35 24.8 -2.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=69,slow=8.6,SNR=4.4						
KURK	**Kurchatov**	**47.48**	**303**	⇓*i*	P	**P**	**08 35 30.7 +3.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
CMAR	**Chiang Mai Arr**	**54.17**	**257**	P		**P**	**08 36 18.1 0.0**
	comp=Z,0.7nm,0.3s,mb4.0,baz=27,slow=7.0,SNR=6.0						
CMAR	**Chiang Mai Arr**	**54.17**	**257**	*i* P		**P**	**08 36 19.1 +1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVAR	**Mina Array Bea**	**60.33**	**64**	P		**P**	**08 37 01.6 +0.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=301,slow=6.2,SNR=2.6						
PDAR	**Pinedale Array**	**62.51**	**56**	P		**P**	**08 37 15.9 -0.1**
	comp=Z,0.4nm,0.8s,mb3.6,baz=298,slow=3.2,SNR=4.0						
ASAR	**Alice Springs**	**74.47**	**200**	P		**P**	**08 38 30.5 -0.3**
	comp=Z,0.2nm,0.6s,mb3.2,baz=18,slow=5.6,SNR=4.5						
ASAR	**Alice Springs**	**74.47**	**200**	*e*P		**P**	**08 38 31.4 +0.6**
TXAR	**Lajitas Array**	**75.36**	**62**	P		**P**	**08 38 35.4 -0.7**
	comp=Z,0.6nm,0.6s,mb3.7,baz=314,slow=5.2,SNR=6.5						
TXAR	**Lajitas Array**	**75.36**	**62**	P		**P**	**08 38 35.4 -0.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*NEIC **23** 09:04:53.6, 1692N×100.19W, h5km, MD3.8(MEX), After MEX.*

MEX 23 09:04:53.6±0.8, 1692N×10019W, h5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAIG	**El Cayaco**	**0.15**	**330**	*i*	P	Pg	09 04 55.8	-0.8
CAIG				*i*	S	Sg	09 04 58.6	0.0
ACX	**Acapulco**	**0.27**	**101**	*i*	P	Pg	09 04 58.3	-0.5
ACX				*i*	P		09 04 58.3	
ACX				*i*	S	Sg	09 05 02.8	+0.5
ZIIG	**Zihuatanejo**	**1.40**	**299**	*i*	P	Pn	09 05 16.1	-3.7
ZIIG				*i*	S	Sb	09 05 34.2	-4.1
PLIG	**Platanillo**	**1.60**	**24**	*i*	P	Pn	09 05 19.1	-3.5
PLIG				*i*	S	Sn	09 05 38.5	-5.2
PLIG				*i*	S	Sn	09 05 39.5	-4.2
PNIG	**Pinotepa**	**2.04**	**105**	*i*	P	Pn	09 05 25.4	-3.3
PNIG				*i*	S	Sn	09 05 52.0	-2.6
MZVM		**2.44**	**22**	*i*	P	Pn	09 05 34.6	+0.5
MMIG	**Aquila**	**3.30**	**295**	*i*	P	Pn	09 05 51.5	+5.5

*ATH **23** 09:12:06.8, 3837N×2177E, h13km±3km, MD3.4/8, ML3.2*
*THE **23** 09:12:06.9, 3840N×2182E, h0km±1km, ML3.4/3, Error ellipse: s-maj=1.9km s-min=0.7km az=289.0*
*NEIC **23** 09:12:06.9, 3840N×2182E, h0km, ML3.4(THE), ML3.2(ATH), After THE.*
*ISCJB **23** 09:12:07.7±0.4, 3840N±002×2181E±004, h10km, Error ellipse: s-maj=4.0km s-min=3.3km az=176.0*
*CSEM **23** 09:12:08.0±0.1, 3839N×2181E, h20km, ML3.2, Error ellipse: s-maj=2.7km s-min=2.1km az=108.0*

ISC 23 09:12:07.1±0.6, 3838N±002×2180E±004, h2km±5km, n24, σ0§81/40, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EVR	**Evrytania**	**0.54**	**0**	*e*P	B	**Pg**	**09 12 16.8**	**-0.6**
EVR				*e*S	B	**Sg**	**09 12 25.5**	**+1.2**
AGG	**Agios Georgios**	**0.76**	**33**	P		**Pg**	**09 12 20.6**	**-1.1**
AGG				S		**Sg**	**09 12 32.0**	**+0.4**
KFL	**Anninata**	**0.84**	**252**	P		**Pg**	**09 12 22.8**	**-0.5**
LKR	**Lokris**	**0.98**	**74**	P		**Pg**	**09 12 24.6**	**-1.2**
LKR				S		**Sg**	**09 12 38.8**	**+0.3**
LKR	**Lokris**	**0.98**	**74**	P		**Pg**	**09 12 24.6**	**-1.2**
LKR				*e*Pg		**Pg**	**09 12 25.4**	**-0.4**
LKR				S		**Sg**	**09 12 38.8**	**+0.3**
LKR	**Lokris**	**0.98**	**74**	*e*Pg		**Pg**	**09 12 25.4**	**-0.4**
LKR				S		**Sg**	**09 12 38.8**	**+0.3**
VLS	**Valsamata**	**0.98**	**258**	P		**Pg**	**09 12 25.1**	**-0.7**
VLS				S		**Sg**	**09 12 40.9**	**+2.4**
VLS	**Valsamata**	**0.98**	**258**	*e*Pb		**Sg**	**09 12 25.0**	**-14**
VLS				S		**Sg**	**09 12 40.9**	**+2.4**
LTK	**Loutraki**	**0.98**	**111**	P		**Pg**	**09 12 25.6**	**-0.4**
LTK				S		**Sg**	**09 12 39.8**	**+1.1**
THL	**Klokotos Trika**	**1.19**	**8**	P		**Pg**	**09 12 29.6**	**-0.4**
THL				S		**Sg**	**09 12 45.6**	**+0.1**
THL	**Klokotos Trika**	**1.19**	**8**	*e*Pb		**Pb**	**09 12 30.0**	**-0.4**
THL				S		**Sg**	**09 12 45.6**	**+0.1**
ITM	**Ithomi**	**1.20**	**175**	*e*PB		**Pb**	**09 12 29.5**	**-1.1**
DID	**Didima**	**1.43**	**127**	P		**Pn**	**09 12 33.1**	**-0.9**
DID				S		**Sg**	**09 12 53.8**	**+0.7**
XOR	**Xorichti**	**1.46**	**47**	P		**Pn**	**09 12 33.5**	**-1.0**
XOR				S		**Sg**	**09 12 54.6**	**+0.5**
NAIG	**Nisos Aigina**	**1.47**	**115**	*e*PB		**Pb**	**09 12 35.5**	**+0.4**
JAN	**Janina**	**1.48**	**330**	*e*PB		**Pb**	**09 12 35.3**	**+0.1**
PYL	**PYLOS**	**1.48**	**182**	P		**Pn**	**09 12 34.1**	**-0.6**
PYL				S		**Sb**	**09 12 55.9**	**+1.3**
ATH	**Athens Observa**	**1.56**	**105**	*e*PB		**Pb**	**09 12 36.5**	**-0.2**
LIT	**Litokhoron**	**1.80**	**17**	P		**Pn**	**09 12 38.7**	**-0.4**
LIT				S		**Sn**	**09 13 02.8**	**+0.3**
AOS	**Alonnisos**	**1.80**	**63**	P		**Pn**	**09 12 37.7**	**-1.5**
VLI	**Veliai**	**1.89**	**151**	*e*PN		**Pn**	**09 12 41.0**	**+0.7**
KZN	**Kozani**	**1.92**	**359**	*e*PN		**Pn**	**09 12 42.0**	**+1.2**
FNA	**Florina**	**2.42**	**352**	P		**Pn**	**09 12 48.1**	**+0.4**
KRUS	**Krusevo**	**3.02**	**352**	*e*Pn		**Pn**	**09 12 59.9**	**+4.1**
KRUS				*e*Sn		**Sn**	**09 13 32.9**	**+0.4**

*IDC **23** 09:14:21.2±3.2, 077N×9736E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/21, mbtmp3.5/6, Error ellipse: s-maj=136.4km s-min=20.7km az=57.0*
*ISCJB **23** 09:14:23.5±2.7, 07N±05×972E±06, h33km, mb3.5/6, Error ellipse: s-maj=109.4km s-min=15.2km az=144.3*
*NEIC **23** 09:14:25.8±1.9, 069N×9723E, h35km, Error ellipse: s-maj=77.0km s-min=10.7km az=54.0*

ISC 23 09:14:25.9±2.7, 07N±05×973E±06, h35km, n8, σ0§18/8, mb3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**37.36**	**112**	*e*P		**P**	**09 21 35.4**	**-0.1**
WRA	**Warramunga Arr**	**41.73**	**122**	P		**P**	**09 22 11.9**	**+0.1**
	0.3nm,0.7s,mb3.0,baz=298,slow=8.9,SNR=6.5							
ASAR	**Alice Springs**	**43.05**	**127**	P		**P**	**09 22 22.5**	**0.0**
	0.1nm,0.4s,mb2.9,baz=298,slow=8.3,SNR=2.8							
SONM	**Songino Array**	**47.62**	**8**	P		**P**	**09 22 58.5**	**+0.1**
	0.2nm,0.3s,mb3.6,baz=177,slow=9.7,SNR=2.7							
MK31	**Makanchi Array**	**47.74**	**346**	*e*P		**P**	**09 22 59.4**	**0.0**
MKAR	**Makanchi Array**	**47.74**	**346**	P		**P**	**09 22 59.5**	**+0.2**
	0.6nm,0.5s,mb3.9,baz=156,slow=8.4,SNR=7.3							
KURK	**Kurchatov**	**52.29**	**345**	P		**P**	**09 23 33.9**	**+0.1**
	0.3nm,0.2s,mb3.8,baz=164,slow=6.7,SNR=2.1							
ZALV	**Zalesovo Beam**	**54.06**	**351**	P		**P**	**09 23 46.3**	**-0.4**
	0.7nm,0.5s,mb3.9,baz=185,slow=8.7,SNR=3.8							

*ISCJB **23** 09:21:00.5±0.5, 3432N±007×13592E±008, h407km±3km, mb3.5/9, Error ellipse: s-maj=12.8km s-min=9.2km az=138.0*
*IDC **23** 09:21:01.3±0.9, 3436N×13603E, h403km±15km, mb3.2/9, mb1 3.3/12, mb1mx3.2/27, mbtmp3.2/12, Error ellipse: s-maj=28.4km s-min=12.0km az=63.0*
*NEIC **23** 09:21:01.5, 3437N×13581E, h400km, MG3.2(JMA), After JMA.*
*JMA **23** 09:21:01.5±0.1, 3437N×13581E, h400km±1km, M3.2*

ISC 23 09:21:01.5±0.5, 3434N±007×13591E±008, h400km±3km, n34, σ0§59/47, mb3.5/9, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JWY	**Kouya**	**0.29**	**245**	P		**Pn**	**09 21 51.5**	**+0.5**
JKN2	**Miekihoku**	**0.32**	**109**	P		**Pn**	**09 21 51.3**	**+0.3**
JKN2				S		**S**	**09 22 30.2**	**-0.7**
JHE	**Heguri**	**0.36**	**329**	P		**Pn**	**09 21 51.3**	**+0.3**
JHE				S		**S**	**09 22 30.0**	**-1.0**
JIE	**Ise**	**0.66**	**86**	P		**Pn**	**09 21 52.2**	**+0.6**
JIE				S		**S**	**09 22 32.0**	**+0.1**
JWM	**Minabe**	**0.68**	**223**	P		**Pn**	**09 21 51.7**	**0.0**
JWZ	**Kozaga**	**0.83**	**192**	P		**Pn**	**09 21 52.1**	**0.0**
JWZ				S		**S**	**09 22 32.5**	**-0.3**
JWT	**Wachi**	**1.03**	**336**	P		**Pn**	**09 21 52.6**	**0.0**
JWT				S		**S**	**09 22 33.2**	**-0.7**
JAA	**Atsumi**	**1.06**	**74**	P		**Pn**	**09 21 53.3**	**+0.6**
JFM	**Mihama**	**1.18**	**3**	P		**Pn**	**09 21 53.5**	**+0.4**
JFM				S		**S**	**09 22 34.4**	**-0.5**
JAI	**Aioi**	**1.33**	**246**	P		**Pn**	**09 21 54.0**	**+0.1**
JKY	**Yasaka**	**1.44**	**333**	P		**Pn**	**09 21 54.5**	**+0.2**
JGM	**Miyama**	**1.50**	**26**	P		**Pn**	**09 21 55.1**	**+0.5**
JGM				S		**S**	**09 22 37.5**	**0.0**
JKG	**Kaga**	**1.96**	**10**	P		**Pn**	**09 21 57.1**	**0.0**
JYN	**Shimob**	**2.45**	**61**	P		**Pn**	**09 22 00.7**	**+0.3**
JOD2	**Odawara 2**	**2.77**	**70**	P		**Pn**	**09 22 04.1**	**+1.3**
MAJO	**Matsushiro**	**2.88**	**40**	*e*Pn		**Pn**	**09 22 03.8**	**+0.1**
MAJO				*e*S		**S**	**09 22 53.4**	**-0.6**
MAT	**Matsushiro**	**2.88**	**40**	P		**Pn**	**09 22 03.7**	**+0.1**
MAT				S		**S**	**09 22 54.0**	**0.0**
MAT	**Matsushiro**	**2.88**	**40**	P		**Pn**	**09 22 05.2**	**+1.6**
MAT				S		**S**	**09 22 53.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.88**	**40**	P		**Pn**	**09 22 03.8**	**+0.2**
	3.2nm,0.3s,baz=257,slow=7.4,SNR=34							
MJAR				S				
	0.3nm,0.3s,baz=252,slow=37,SNR=6.8							
JRY	**Ryogami san**	**2.96**	**55**	P		**Pn**	**09 22 04.8**	**+0.5**
JRY				S		**S**	**09 22 55.9**	**+0.8**
JTO	**Tosashimizu**	**2.99**	**241**	P		**Pn**	**09 22 04.5**	**-0.1**
BSO1	**Boso 1**	**4.19**	**84**	P		**Pn**	**09 22 13.8**	**-1.6**
KSRS	**Korea Array**	**7.19**	**298**	P		**Pn**	**09 22 47.4**	**+0.2**
	1.7nm,0.3s,baz=118,slow=11,SNR=25							
CBIJ	**Chichi jima**	**9.02**	**142**	P		**Pn**	**09 23 02.5**	**-5.7**
	4.8nm,0.3s,baz=350,slow=17,SNR=3.9							
CBIJ				S		**S**	**09 24 40.9**	**-11**
	10nm,0.3s,baz=277,slow=22,SNR=12							
ASAJ	**Asahikawa**	**11.04**	**26**	P		**Pn**	**09 23 29.8**	**-1.7**
	2.9nm,0.3s,baz=227,slow=13,SNR=21							
SONM	**Songino Array**	**25.83**	**310**	P		**P**	**09 25 59.3**	**+1.0**
	3.1nm,0.8s,mb3.8,baz=120,slow=9.0,SNR=13							
ZALV	**Zalesovo Beam**	**40.52**	**315**	P		**P**	**09 28 03.5**	**0.0**
	0.5nm,0.3s,mb3.3,baz=108,slow=9.3,SNR=2.8							
MKAR	**Makanchi Array**	**41.82**	**304**	P		**P**	**09 28 14.2**	**+0.2**
	1.8nm,0.5s,mb3.6,baz=90,slow=10.0,SNR=13							
KURK	**Kurchatov**	**44.13**	**310**	P		**P**	**09 28 32.2**	**0.0**
	0.6nm,0.4s,mb3.2,baz=89,slow=6.9,SNR=4.1							
BVAR	**Borovoye Array**	**49.11**	**313**	P		**P**	**09 29 10.0**	**-0.2**
	0.8nm,0.5s,mb3.3,baz=92,slow=10,SNR=5.3							
WRA	**Warramunga Arr**	**54.00**	**182**	P		**P**	**09 29 45.7**	**-0.6**
	1.9nm,0.3s,mb3.8,baz=0.2,slow=7.7,SNR=88							
ASAR	**Alice Springs**	**57.72**	**182**	P		**P**	**09 30 12.1**	**-0.2**
	0.6nm,0.6s,mb3.1,baz=18,slow=11,SNR=13							
AKASG	**Malin Array Be**	**73.60**	**321**	P		**P**	**09 31 51.8**	**-0.4**
	0.7nm,0.5s,mb3.6,baz=53,slow=6.5,SNR=2.9							
GERES	**GERESS Array B**	**82.52**	**326**	P		**P**	**09 32 40.2**	**-0.5**
	0.3nm,0.3s,mb3.5,baz=52,slow=6.4,SNR=2.3							

NNC 23 09:30:47.5±4.5, 5073N×8192E, h0km, mb3.0, mpv4.0, 4C-1D, Error ellipse: s-maj=56.4km s-min=23.5km az=36.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KURK	**Kurchatov**	**2.10**	**271**	⇓P		Pn	09 31 24.7	+0.9
	1.3nm,0.6s							
KURK				⇑Lg			09 31 52.1	
	2.4nm,0.8s							
KURBB	**Kurchatov Arra**	**2.16**	**269**	Pn		Pn	09 31 25.4	+0.8
	6μm,0.1s,baz=82,slow=19							
KURBB				⇑Lg			09 31 54.7	
	1.1nm,0.8s,baz=82,slow=19							
MK31	**Makanchi Array**	**3.94**	**176**	⇑Pn		Pn	09 31 50.8	+1.6
	3.0nm,1.1s,baz=279,slow=14,SNR=3.7							
MK31				⇑Lg			09 32 55.9	
	1.5nm,0.7s							

*ISCJB **23** 09:48:32.0±0.8, 2474N±010×12272E±004, h41km±19km, Error ellipse: s-maj=16.3km s-min=5.7km az=7.1*
*JMA **23** 09:48:31.3±0.1, 2486N×12272E, h32km, M2.9*
*TAP **23** 09:48:31.4, 2473N×12261E, h4km±1km, ML3.0, D*

ISC 23 09:48:32.0±1.2, 248N±01×12272E±004, h33km±8km, n22, σ1§05/26, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.42**	**141**	P		**Pb**	**09 48 41.0**	**-0.3**
YOJ				*e*S		**Sb**	**09 48 48.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.42**	**141**	⇑*i*P		**Pb**	**09 48 41.0**	**-0.3**
	baz=125							
YOJ				S		**Sb**	**09 48 47.8**	**0.0**
	baz=125							
TWB1	**Santiao Chiao**	**0.70**	**288**	*e*P		**Pn**	**09 48 44.9**	**-0.6**
	baz=296							
TWC	**Suao**	**0.81**	**258**	*e*P		**Pn**	**09 48 46.2**	**-0.9**
	baz=260							
NWF	**Wu-fen Shan**	**0.90**	**288**	*e*P		**Pn**	**09 48 48.5**	**+0.2**
	baz=294							
TWE	**Neicheng**	**0.96**	**266**	*e*P		**Pn**	**09 48 48.8**	**-0.3**
	baz=269							
ENA	**Nanau**	**0.96**	**248**	*e*P		**Pn**	**09 48 49.0**	**-0.1**
	baz=249							
IRIF	**Iriomote-Funau**	**1.02**	**116**	P		**Pn**	**09 48 50.1**	**+0.1**
NSK	**Sanguang**	**1.24**	**265**	*e*P		**Pn**	**09 48 52.6**	**-0.4**
	baz=267							
NNS	**Nan Shan**	**1.27**	**255**	*e*P		**Pn**	**09 48 54.7**	**+1.2**
	baz=255							
JKRS	**Kuro-shima**	**1.30**	**115**	P		**Pn**	**09 48 54.4**	**+0.6**
JKRS				S		**Sn**	**09 49 09.6**	**-0.3**
JIJ	**Ishigaki jima**	**1.36**	**108**	P		**Pn**	**09 48 54.8**	**+0.1**
JIJ				*e*S		**Sn**	**09 49 11.5**	**-0.1**
WHF	**Hehuan Shan**	**1.47**	**245**	*e*P		**Pn**	**09 48 58.5**	**+2.4**
	baz=244							
ESL	**Shilin**	**1.52**	**231**	*e*P		**Pn**	**09 48 55.4**	**-1.5**
	baz=229							
SMLT	**Sun Moon Lake**	**1.89**	**242**	*e*P		**Pn**	**09 49 04.2**	**+2.3**
	baz=241							
TYC	**Yuchr**	**1.91**	**243**	*e*P		**Pn**	**09 49 00.5**	**-1.8**
	baz=242							
TWF1	**Yuli**	**1.93**	**223**	*e*P		**Pn**	**09 49 01.9**	**-0.6**
	baz=221							
YUS	**Yu-Shan**	**2.07**	**232**	*e*P		**Pn**	**09 49 02.8**	**-1.7**
	baz=230							
ALS	**Alishan**	**2.16**	**234**	*e*P		**Pn**	**09 49 07.3**	**+1.6**
	baz=233							
CHN5	**Tsauling**	**2.21**	**238**	*e*P		**Pn**	**09 49 08.0**	**+1.7**
	baz=237							
STYT	**Tauyuan**	**2.42**	**228**	*e*P		**Pn**	**09 49 09.4**	**+0.2**
	baz=227							
CHN1	**Nanshi**	**2.56**	**232**	*e*P		**Pn**	**09 49 10.2**	**-0.9**
	baz=231							

IDC 23 09:58:32.5±8.1, 287N×9455E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=391.9km s-min=31.1km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**45.03**	**348**	P		P	10 06 49.9	0.0
	0.6nm,0.4s,baz=167,slow=9.1,SNR=3.7							
WRA	**Warramunga Arr**	**45.16**	**122**	P		P	10 06 51.5	+0.1
	0.4nm,0.6s,baz=298,slow=8.9,SNR=4.7							
ASAR	**Alice Springs**	**46.51**	**127**	P		P	10 07 01.8	-0.2
	0.1nm,0.3s,baz=299,slow=7.5,SNR=3.2							

MAN 23 10:01:47, 1374N×12052E, h71km, mb3.8, ML2.6, MS2.2, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.27**	**269**	*e*P		Pn	10 02 00.9	+2.8
PGP	**Puerto Galera**	**0.48**	**119**	*e*P		Pn	10 02 02.3	+2.6
TGY	**Tagaytay City**	**0.54**	**48**	*e*P		Pn	10 02 03.0	+2.7
TGY				*e*S		Sn	10 02 14.4	+4.3
SJMP	**San Jose**	**1.40**	**155**	*e*P		Pn	10 02 12.9	+2.2
SJMP				*e*S		Sn	10 02 32.0	+3.6
BUSP	**Coron**	**1.75**	**190**	*e*P		Pn	10 02 16.6	+1.2
BUSP				*e*S		Sn	10 02 39.0	+2.1

*NEIC **23** 10:05:37.0±0.9, 986S×11758E, h35km, mb3.0/1, Error ellipse: s-maj=27.1km s-min=11.0km az=57.0*
*IDC **23** 10:05:46.6±5.7, 942S×11840E, h111km±49km, mb3.3/4, mb1 3.3/7, mb1mx3.2/19, mbtmp3.3/7, Error ellipse: s-maj=59.8km s-min=13.1km az=61.0*
*ISCJB **23** 10:05:53.9±1.6, 88S±01×1192E±02, h189km±17km, mb3.6/3, Error ellipse: s-maj=31.7km s-min=12.2km az=154.6*

ISC 23 10:05:53.6±1.9, 89S±01×1191E±02, h165km±20km, n13, σ1§17/13, mb3.6/3, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**3.94**	**10**	P		**Pn**	**10 06 53.6**	**0.0**
	3.9nm,0.3s,baz=175,slow=6.9,SNR=8.6							
KAPI				S		Sx	10 07 46.5	
	31nm,0.3s,baz=94,slow=23,SNR=22							
BATI	**Baumata**	**4.71**	**106**	P		**Pn**	**10 07 03.4**	**-0.1**
	7.8nm,0.3s,baz=272,slow=7.5,SNR=4.7							
BATI				S		Sx	10 08 02.4	
	4.2nm,0.3s,baz=333,slow=10,SNR=2.2							
WRA	**Warramunga Arr**	**18.39**	**128**	P		**P**	**10 09 55.3**	**-0.8**
	0.1nm,0.3s,baz=302,slow=12,SNR=10							
WRA				S		Sx	10 13 08.5	
	0.1nm,0.3s,baz=263,slow=7.6,SNR=3.1							
WRAB	**Tennant Creek**	**18.39**	**128**	P		**P**	**10 09 56.4**	**+0.3**
	0.5nm,0.5s							
WB2	**Warramunga Arr**	**18.40**	**128**	*e*P		**P**	**10 09 58.1**	**+1.9**
WB2				*e*S		Sx	10 13 10.2	
ASAR	**Alice Springs**	**20.41**	**138**	P		**P**	**10 10 16.1**	**-1.8**
	0.7nm,0.5s,baz=308,slow=10,SNR=22							
ASAR				S		Sx	10 13 51.8	
	0.2nm,0.7s,baz=312,slow=24,SNR=2.8							
KLBR	**Kellerberrin**	**22.59**	**183**	*e*P		**P**	**10 10 40.5**	**+0.3**
	30nm,1.6s							
KLBR				*e*S		Sx	10 14 16.1	
MUN	**Mundaring**	**23.10**	**186**	*e*P		**P**	**10 10 45.3**	**+0.5**
MUN				*e*S		Sx	10 14 27.8	
SONM	**Songino Array**	**57.61**	**350**	P		**P**	**10 15 28.5**	**+2.4**
	0.5nm,0.6s,mb3.5,baz=166,slow=5.3,SNR=4.2							
MK31	**Makanchi Array**	**64.42**	**333**	*e*P		**P**	**10 16 09.8**	**-2.2**
MKAR	**Makanchi Array**	**64.42**	**333**	P		**P**	**10 16 12.0**	**0.0**
	0.3nm,0.4s,mb3.5,baz=142,slow=5.6,SNR=6.3							
MKAR	**Makanchi Array**	**64.42**	**333**	P		**P**	**10 16 12.0**	**0.0**
ZALV	**Zalesovo Beam**	**68.99**	**339**	P		**P**	**10 16 40.7**	**-0.2**
	0.8nm,0.4s,mb3.8,baz=132,slow=6.0,SNR=3.0							

*DDA **23** 10:19:00.8, 3870N×2641E, h7km±2km, Md2.8*
*CSEM **23** 10:19:00.9±0.2, 3868N×2647E, h10km, MD2.8, Error ellipse: s-maj=9.1km s-min=3.8km az=71.0*
*ISCJB **23** 10:19:01.3±0.9, 3873N±004×2641E±007, h5km±6km, Error ellipse: s-maj=10.7km s-min=4.5km az=154.8*
*ISK **23** 10:19:03.7, 3887N×2658E, h5km, MD3.0*

ISC 23 10:19:01.9±0.9, 3871N±003×2643E±008, h9km±7km, n9, σ0§83/18, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URLA	**Izmir**	**0.37**	**159**	⇑*i*P		**Pg**	**10 19 08.3**	**-0.8**
URLA				*i* S		**Sg**	**10 19 14.5**	**+0.4**
BLCB	**Balcova**	**0.58**	**123**	*e*PG		**Pg**	**10 19 16.3**	**+3.2**
BLCB				*e*SG		**Sg**	**10 19 24.6**	**+3.9**
KDAG	**Bornova**	**0.73**	**114**	*e*P		**Pg**	**10 19 16.3**	**+0.4**
KDAG				*e*S		**Sg**	**10 19 25.5**	**+0.2**
AKHS	**Akhisar**	**1.10**	**81**	*e*P		**Pg**	**10 19 22.3**	**-0.7**
AKHS				*e*S		**Sg**	**10 19 37.5**	**+0.2**
EZN	**Ezine**	**1.12**	**356**	*e*PG		**Pg**	**10 19 23.0**	**-0.4**
EZN				*e*SG		**Sg**	**10 19 37.7**	**-0.3**
GCAM	**G?zelcaml?**	**1.19**	**147**	*e*P		**Pb**	**10 19 23.0**	**-1.7**
GCAM				*e*S		**Sb**	**10 19 40.2**	**+0.1**
GADA	**Gvkgeada**	**1.54**	**345**	*e*PN		**Pn**	**10 19 30.1**	**+0.6**
GADA				*e*SN		**Sn**	**10 19 50.8**	**+1.2**
ENEZ	**Enez**	**2.04**	**354**	*e*PN		**Pn**	**10 19 37.0**	**+0.6**
ENEZ				*e*SN		**Sn**	**10 20 01.8**	**-0.2**
MFT	**Murefte**	**2.18**	**17**	*e*PN		**Pn**	**10 19 38.1**	**-0.2**
MFT				*e*SN		**Sn**	**10 20 04.7**	**-0.8**

*ISCJB **23** 10:24:54.2±1.0, 2487N±005×12275E±003, h10km±7km, mb3.7/7, Error ellipse: s-maj=8.7km s-min=4.5

ALS	**Alishan** baz=232	**2.18**	**233**	*e*P	**Pg**	**10 25 33.5**	**-3.0**
CHN5	**Tsauling** baz=236	**2.23**	**237**	*e*P	**Pg**	**10 25 34.3**	**-3.0**
CHN4	**Tsaushan** baz=232	**2.43**	**233**	*e*P	**Pg**	**10 25 37.5**	**-3.8**
STYT	**Tauyuan** baz=226	**2.44**	**227**	*e*P	**Pn**	**10 25 35.5**	**+0.2**
WTP	**Ta-pu** baz=230	**2.48**	**231**	*e*P	**Pn**	**10 25 36.5**	**+0.5**
TWK	**Hsinying** baz=232	**2.56**	**233**	*e*P	**Pn**	**10 25 37.8**	**+0.8**
CHN1	**Nanshi** baz=230	**2.58**	**231**	*e*P	**Pn**	**10 25 38.8**	**+1.5**
SGST	**Jiashian** baz=227	**2.61**	**228**	*e*P	**Pn**	**10 25 38.1**	**+0.4**
SSD	**Sandimen** baz=222	**2.82**	**223**	*e*P	**Pn**	**10 25 42.0**	**+1.5**
SCZT	**Fangliau** baz=217	**3.11**	**218**	*e*P	**Pn**	**10 25 45.2**	**+0.6**
KSRS	**Korea Array** 0.2nm,0.3s,baz=197,slow=13,SNR=9.3	**13.34**	**18**	Pn	Px	10 28 17.9	
KSRS	comp=Z,86nm,19.3s,baz=185,slow=37			LR	LR	10 33 31.5	
SONM	**Songino Array** 0.7nm,0.8s,mb3.3,baz=134,slow=8.5,SNR=4.3	**26.34**	**335**	P	**P**	**10 30 32.6**	**+0.9**
SONM	comp=Z,92nm,18.1s,baz=21,slow=39			LR	LR	10 41 59.4	
MKAR	**Makanchi Array** 0.3nm,0.5s,mb3.3,baz=258,slow=36,SNR=3.2	**38.85**	**315**	P	**P**	**10 32 21.1**	**+0.1**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,mb3.6,baz=116,slow=6.6,SNR=2.2	**40.47**	**326**	P	**P**	**10 32 33.5**	**-0.9**
KURK	**Kurchatov** 0.8nm,0.9s,mb3.4,baz=118,slow=7.8,SNR=3.3	**42.50**	**319**	P	**P**	**10 32 50.4**	**-0.6**
KURK	**Kurchatov** 2.6nm,1.0s,mb3.8	**42.50**	**319**	*e*P	**P**	**10 32 47.5**	**-3.5**
WRAB	**Tennant Creek** 2.5nm,0.8s,mb4.2	**45.92**	**165**	*e*P	**P**	**10 33 18.4**	**-0.3**
WRA	**Warramunga Arr** 1.8nm,0.8s,mb4.1,baz=347,slow=8.7,SNR=15	**45.92**	**165**	P	**P**	**10 33 18.6**	**-0.1**
ASAR	**Alice Springs** 0.5nm,0.8s,mb3.6,baz=346,slow=9.2,SNR=6.8	**49.42**	**166**	P	**P**	**10 33 46.5**	**+0.6**

TAP ***23*** *10:36:06.7,2482N×12266E,h7km±2km,ML3.2,D*
ISCJB ***23*** *10:36:07.0±1.2,2486N±010×12269E±008,h8km±9km, mb3.3/2,Error ellipse: s-maj=19.9km s-min=6.3km az=35.4*
IDC ***23*** *10:36:13.1±5.8,2413N×12396E,h0km,mb3.4/2, mb1 3.8/3,mb1mx3.4/20,mbtmp3.6/3,MS3.0/2,Ms1 3.0/2, ms1mx2.6/24,Error ellipse: s-maj=340.4km s-min=39.6km az=94.0*

ISC 23 10:36:07.3±1.3,2486N±010×12268E±007,h6km±5km,n31, σ1§01/31,mb3.3/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima** baz=138	**0.50**	**142**	*i* P		**Pg**	**10 36 16.8**	**-0.1**
YOJ	baz=138			S		**Sg**	**10 36 24.1**	**+0.7**
TWB1	**Santiao Chiao** baz=287	**0.64**	**284**	*e*P		**Pg**	**10 36 19.2**	**-0.4**
TWC	**Suao** baz=254	**0.79**	**252**	*e*P		**Pg**	**10 36 22.3**	**-0.2**
NWF	**Wu-fen Shan** baz=287	**0.84**	**285**	*e*P		**Pg**	**10 36 24.0**	**+0.6**
TWE	**Neicheng** baz=264	**0.93**	**262**	*e*P		**Pg**	**10 36 25.8**	**+0.7**
ENA	**Nanau** baz=245	**0.95**	**244**	*e*P		**Pg**	**10 36 24.5**	**-1.1**
TWA	**Mucha** baz=279	**1.00**	**277**	*e*P		**Pg**	**10 36 25.2**	**-1.3**
TWY	**Chenhua** baz=295	**1.06**	**293**	*e*P		**Pg**	**10 36 28.6**	**+0.9**
NSK	**Sanguang** baz=263	**1.21**	**262**	*e*P		**Pg**	**10 36 30.9**	**+0.3**
NNS	**Nan Shan** baz=252	**1.25**	**251**	*e*P		**Pg**	**10 36 30.7**	**-0.7**
WHF	**Hehuan Shan** baz=242	**1.47**	**241**	*e*P		**Pn**	**10 36 31.0**	**-3.4**
TWT	**Tachien** baz=247	**1.49**	**247**	*e*P		**Pn**	**10 36 35.6**	**+0.9**
ESL	**Shilin** baz=228	**1.54**	**228**	*e*P		**Pn**	**10 36 35.5**	**+0.2**
NSTT	**Nanjuang** baz=263	**1.54**	**262**	*e*P		**Pn**	**10 36 36.3**	**+0.9**
TWQ1	**Liyutan** baz=254	**1.80**	**254**	*e*P		**Pn**	**10 36 38.2**	**-0.8**
EHY	**Hungye** baz=223	**1.83**	**223**	*e*P		**Pn**	**10 36 40.7**	**+1.4**
SMLT	**Sun Moon Lake** baz=239	**1.89**	**239**	*e*P		**Pn**	**10 36 43.1**	**+3.0**
TYC	**Yuchr** baz=241	**1.91**	**241**	*e*P		**Pn**	**10 36 40.9**	**+0.5**
TWF1	**Yuli** baz=220	**1.96**	**220**	*e*P		**Pn**	**10 36 38.7**	**-2.4**
YUS	**Yu-Shan** baz=229	**2.08**	**230**	*e*P		**Pn**	**10 36 42.1**	**-0.7**
ALS	**Alishan** baz=232	**2.17**	**232**	*e*P		**Pn**	**10 36 43.5**	**-0.6**
CHN5	**Tsauling** baz=236	**2.21**	**236**	*e*P		**Pn**	**10 36 45.2**	**+0.6**
ELDTW	**Lidau** baz=222	**2.25**	**223**	*e*P		**Pn**	**10 36 46.1**	**+1.0**
CHN4	**Tsaushan** baz=232	**2.42**	**232**	*e*P		**Pn**	**10 36 49.3**	**+1.8**
STYT	**Tauyuan** baz=226	**2.43**	**227**	*e*P		**Pn**	**10 36 47.7**	**+0.1**
CHN1	**Nanshi** baz=230	**2.57**	**230**	*e*P		**Pn**	**10 36 48.4**	**-1.1**
SGST	**Jiashian** baz=227	**2.60**	**228**	*e*P		**Pn**	**10 36 50.0**	**-0.1**
JOW	**Kunigami** comp=Z,145nm,19.6s,baz=119,slow=42	**5.42**	**67**	LR		LR	10 39 30.2	
KSRS	**Korea Array** baz=197,slow=12,SNR=4.8	**13.33**	**18**	Pn		**Pn**	**10 39 28.4**	**+11**
KSRS	comp=Z,65nm,19.9s,baz=200,slow=38			LR		LR	10 44 54.5	
WRA	**Warramunga Arr** 0.7nm,0.8s,mb3.6,baz=348,slow=9.0,SNR=7.6	**45.95**	**165**	P		**P**	**10 44 30.2**	**-1.1**
ASAR	**Alice Springs** 0.1nm,0.6s,mb3.0,baz=351,slow=11,SNR=4.1	**49.45**	**166**	P		**P**	**10 44 57.6**	**-0.8**

JMA ***23*** *10:40:54.8±0.4,2473N×12290E,h30km,M2.0*

TAP 23 10:40:53.4,2458N×12260E,h19km±1km,ML3.0,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.39**	**107**	P		Pg	10 41 01.7	+0.2
YOJ				*e*S		Sg	10 41 06.6	-0.4
YOJ	**Yonaguni jima** baz=106	**0.39**	**107**	*i* P		Pg	10 41 01.8	+0.3
YOJ	baz=106			*e*S		Sg	10 41 08.6	+1.6
TWC	**Suao** baz=272	**0.69**	**273**	*e*P		Pb	10 41 07.3	+0.6
TWC	baz=272			*e*S		Sb	10 41 17.4	+1.5
TWB1	**Santiao Chiao** baz=307	**0.71**	**308**	*e*P		Pb	10 41 07.6	+0.5
TWB1	baz=307			*e*S		Sb	10 41 15.9	-0.5
ENA	**Nanau** baz=259	**0.80**	**260**	*e*P		Pb	10 41 09.6	+0.9
TWE	**Neicheng** baz=279	**0.86**	**280**	*e*P		Pb	10 41 10.3	+0.6
NWF	**Wu-fen Shan** baz=303	**0.90**	**304**	*e*P		Pb	10 41 11.0	+0.8
TWA	**Mucha** baz=293	**1.01**	**294**	*e*P		Pb	10 41 12.3	0.0
IRIF	**Iriomote-Funau**	**1.05**	**103**	P		Pb	10 41 10.7	-2.3
IRIF				*e*S		Sb	10 41 21.6	-4.8
NNS	**Nan Shan** baz=263	**1.13**	**263**	*e*P		Pn	10 41 15.5	+1.4
NSK	**Sanguang** baz=275	**1.14**	**275**	P		Pn	10 41 14.3	+0.1
WHF	**Hehuan Shan** baz=250	**1.29**	**251**	*e*P		Pn	10 41 16.7	+0.3
ESL	**Shilin** baz=234	**1.31**	**235**	*e*P		Pn	10 41 15.3	-1.3
TWT	**Tachien** baz=256	**1.34**	**256**	*e*P		Pn	10 41 16.9	-0.1
JIJ	**Ishigaki jima**	**1.42**	**98**	P		Pn	10 41 14.5	-3.6
NSTT	**Nanjuang**	**1.46**	**272**	*e*P		Pn	10 41 21.1	+2.4
	baz=272							
SMLT	**Sun Moon Lake** baz=246	**1.70**	**246**	*e*P		Pn	10 41 24.1	+2.1
TYC	**Yuchr** baz=247	**1.73**	**248**	*e*P		Pn	10 41 21.3	-1.1
ALS	**Alishan** baz=237	**1.96**	**238**	*e*P		Pn	10 41 23.4	-2.1
ELDTW	**Lidau** baz=226	**2.00**	**227**	*e*P		Pn	10 41 28.1	+1.9
CHN5	**Tsauling** baz=241	**2.01**	**241**	*e*P		Pn	10 41 25.4	-0.8
STYT	**Tauyuan** baz=230	**2.20**	**231**	*e*P		Pn	10 41 28.5	-0.4

ISCJB ***23*** *10:45:09.5±0.7,2490N±005×12279E±004,h15km±6km, mb3.5/5,Error ellipse: s-maj=8.4km s-min=5.0km az=26.5*
TAP ***23*** *10:45:09.1,2490N×12268E,h6km,ML3.5,D*
IDC ***23*** *10:45:10.5±1.2,2442N×12162E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.6/21,mbtmp3.7/6,ML3.3/1,Error ellipse: s-maj=70.6km s-min=19.8km az=69.0*
JMA ***23*** *10:45:12.8±0.1,2475N×12288E,h30km,M2.9*

ISC 23 10:45:09.1±0.7,2489N±005×12275E±004,h3km±4km,n47, σ0§89/49,mb3.5/5,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**151**	P		**Pg**	**10 45 20.1**	**+1.6**
YOJ				*e*S		**Sg**	**10 45 25.3**	**+0.5**
YOJ	**Yonaguni jima** baz=145	**0.49**	**151**	*i* P		**Pg**	**10 45 20.1**	**+1.6**
YOJ	baz=145			*i* S		**Sg**	**10 45 28.5**	**+3.6**
TWB1	**Santiao Chiao** baz=279	**0.70**	**280**	*e*P		**Pg**	**10 45 22.9**	**+0.3**
TWC	**Suao** baz=249	**0.87**	**251**	P		**Pg**	**10 45 25.6**	**-0.2**
NWF	**Wu-fen Shan** baz=281	**0.90**	**282**	*e*P		**Pg**	**10 45 27.0**	**+0.6**
PCYT	**Pengchaiyu** baz=322	**0.96**	**320**	*e*P		**Pg**	**10 45 27.7**	**+0.1**
TWE	**Neicheng** baz=259	**1.00**	**260**	*e*P		**Pg**	**10 45 27.9**	**-0.5**
ENA	**Nanau** baz=241	**1.03**	**244**	*e*P		**Pg**	**10 45 28.6**	**-0.3**
IRIF	**Iriomote-Funau**	**1.05**	**122**	P		**Pg**	**10 45 28.9**	**-0.3**
TWA	**Mucha** baz=274	**1.07**	**275**	*e*P		**Pg**	**10 45 28.2**	**-1.4**
TWY	**Chenhua** baz=291	**1.11**	**290**	*e*P		**Pg**	**10 45 31.7**	**+1.2**
TWS1	**Kuangyinshan** baz=280	**1.23**	**280**	*e*P		**Pg**	**10 45 32.4**	**-0.3**
HATJ	**Hateruma jima**	**1.27**	**131**	*e*S		**Sg**	**10 45 45.4**	**-4.5**
NSK	**Sanguang** baz=259	**1.29**	**261**	*e*P		**Pg**	**10 45 32.7**	**-1.1**
JKRS	**Kuo-shima**	**1.32**	**119**	P		**Pn**	**10 45 33.1**	**-1.3**
TWD	**Chiawan** baz=230	**1.33**	**233**	*e*P		**Pn**	**10 45 33.5**	**-1.1**
NNS	**Nan Shan** baz=249	**1.33**	**251**	*e*P		**Pn**	**10 45 33.9**	**-0.7**
JIJ	**Ishigaki jima**	**1.37**	**112**	P		**Pn**	**10 45 34.1**	**-1.1**
WHF	**Hehuan Shan** baz=239	**1.55**	**242**	*e*P		**Pn**	**10 45 37.9**	**+0.3**
TWT	**Tachien** baz=245	**1.57**	**246**	*e*P		**Pn**	**10 45 38.6**	**+0.7**
ESL	**Shilin** baz=226	**1.61**	**229**	*e*P		**Pn**	**10 45 38.2**	**-0.4**
NSTT	**Nanjuang** baz=260	**1.61**	**261**	*e*P		**Pn**	**10 45 39.0**	**+0.4**
NSY	**Sanyi** baz=254	**1.88**	**256**	*e*P		**Pn**	**10 45 42.5**	**+0.4**
TWQ1	**Liyutan** baz=252	**1.88**	**254**	*e*P		**Pn**	**10 45 43.4**	**+1.2**
EHY	**Hungye** baz=221	**1.90**	**224**	*e*P		**Pn**	**10 45 41.2**	**-1.3**
SMLT	**Sun Moon Lake** baz=238	**1.97**	**240**	*e*P		**Pn**	**10 45 44.7**	**+1.3**
TYC	**Yuchr** baz=239	**1.99**	**241**	*e*P		**Pn**	**10 45 43.4**	**-0.3**
TWF1	**Yuli** baz=219	**2.03**	**221**	*e*P		**Pn**	**10 45 43.3**	**-1.0**
WNT	**Mingjian** baz=240	**2.14**	**242**	*e*P		**Pn**	**10 45 46.0**	**+0.2**
YUS	**Yu-Shan** baz=228	**2.16**	**230**	*e*P		**Pn**	**10 45 44.9**	**-1.2**
ALS	**Alishan** baz=231	**2.25**	**233**	*e*P		**Pn**	**10 45 48.0**	**+0.7**
CHN5	**Tsauling** baz=234	**2.29**	**236**	*e*P		**Pn**	**10 45 48.5**	**+0.7**
ELDTW	**Lidau** baz=221	**2.32**	**223**	*e*P		**Pn**	**10 45 47.3**	**-1.0**
CHN4	**Tsaushan** baz=231	**2.50**	**233**	*e*P		**Pn**	**10 45 49.1**	**-1.6**
STYT	**Tauyuan** baz=225	**2.51**	**227**	*e*P		**Pn**	**10 45 51.2**	**+0.4**
WTP	**Ta-pu** baz=228	**2.55**	**230**	*e*P		**Pn**	**10 45 51.6**	**+0.2**
TWK	**Hsinying** baz=231	**2.63**	**232**	*e*P		**Pn**	**10 45 51.3**	**-1.2**
CHN1	**Nanshi** baz=229	**2.65**	**231**	*e*P		**Pn**	**10 45 54.1**	**+1.3**
SGST	**Jiashian** baz=226	**2.68**	**228**	*e*P		**Pn**	**10 45 54.2**	**+1.0**
SSD	**Sandimen** baz=221	**2.89**	**223**	*e*P		**Pn**	**10 45 56.8**	**+0.8**
SCZT	**Fangliau** baz=216	**3.18**	**218**	*e*P		**Pn**	**10 46 01.5**	**+1.4**
KSRS	**Korea Array** 0.1nm,0.3s,baz=197,slow=12,SNR=14	**13.28**	**18**	Pn		**Pn**	**10 48 31.6**	**+13**
SONM	**Songino Array** 0.7nm,0.7s,mb3.3,baz=144,slow=5.5,SNR=5.3	**26.31**	**335**	P		**P**	**10 50 47.1**	**+1.2**
MKAR	**Makanchi Array** 1.0nm,0.8s,mb3.6,baz=97,slow=9.9,SNR=3.5	**38.84**	**315**	P		**P**	**10 52 34.7**	**-0.8**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,mb3.6,baz=118,slow=5.5,SNR=2.3	**40.45**	**326**	P		**P**	**10 52 48.7**	**0.0**
WRA	**Warramunga Arr** 1.0nm,0.8s,mb3.8,baz=347,slow=8.9,SNR=12	**45.97**	**165**	P		**P**	**10 53 33.8**	**+0.1**
ASAR	**Alice Springs** 0.3nm,0.8s,mb3.4,baz=351,slow=8.0,SNR=5.7	**49.47**	**167**	P		**P**	**10 54 01.4**	**+0.6**

ISCJB ***23*** *10:47:38.1±3.2,2494N±008×12283E±004,h9km±31km, Error ellipse: s-maj=13.1km s-min=5.3km az=16.6*
TAP ***23*** *10:47:38.3,2498N×12285E,h24km±2km,ML3.3,C*
JMA ***23*** *10:47:39.0±0.4,2495N×12282E,h11km,M3.0*

ISC 23 10:47:37.6±0.9,2499N±006×12285E±004,h5km±5km,n30, σ1§12/33,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.55**	**164**	P		**Pg**	**10 47 48.8**	**+0.7**
YOJ				*e*S		**Sg**	**10 47 55.8**	**+0.6**
YOJ	**Yonaguni jima** baz=165	**0.55**	**164**	*i* P		**Pg**	**10 47 48.9**	**+0.8**
YOJ	baz=165			*i* S		**Sg**	**10 47 56.3**	**+1.1**
TWB1	**Santiao Chiao** baz=272	**0.78**	**271**	*e*P		**Pg**	**10 47 53.6**	**+0.9**
PCYT	**Pengchaiyu** baz=312	**0.95**	**312**	*e*P		**Pg**	**10 47 55.9**	**0.0**
NWF	**Wu-fen Shan** baz=276	**0.97**	**275**	*e*P		**Pg**	**10 47 56.6**	**+0.3**
TWC	**Suao** baz=248	**0.99**	**248**	*e*P		**Pg**	**10 47 54.8**	**-1.7**
IRIF	**Iriomote-Funau**	**1.03**	**129**	P		**Pg**	**10 47 58.5**	**+1.1**
TWE	**Neicheng** baz=257	**1.11**	**256**	*e*P		**Pg**	**10 47 56.7**	**-2.1**
TWA	**Mucha** baz=259	**1.15**	**270**	*e*P		**Pg**	**10 47 59.6**	**-0.1**
ENA	**Nanau** baz=232	**1.15**	**241**	*e*P		**Pg**	**10 47 58.2**	**-1.5**
TWY	**Chenhua** baz=285	**1.17**	**284**	*e*P		**Pb**	**10 48 00.5**	**+0.2**
JKRS	**Kuro-shima**	**1.29**	**125**	P		**Pn**	**10 48 02.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.33**	**118**	P		**Pn**	**10 48 02.5**	**-0.3**
JIJ				*e*S		**Sb**	**10 48 18.4**	**-2.0**
NSK	**Sanguang** baz=267	**1.39**	**257**	*e*P		**Pn**	**10 48 03.1**	**-0.6**
NNS	**Nan Shan** baz=248	**1.45**	**248**	*e*P		**Pn**	**10 48 04.3**	**-0.2**
WHF	**Hehuan Shan** baz=240	**1.67**	**240**	*e*P		**Pn**	**10 48 07.5**	**-0.1**
TWT	**Tachien** baz=230	**1.69**	**245**	*e*P		**Pn**	**10 48 08.9**	**+1.1**
NSTT	**Nanjuang** baz=258	**1.72**	**258**	*e*P		**Pn**	**10 48 08.0**	**-0.2**
ESL	**Shilin** baz=228	**1.74**	**228**	*e*P		**Pn**	**10 48 08.1**	**-0.4**
TWQ1	**Liyutan** baz=252	**2.00**	**252**	*e*P		**Pn**	**10 48 13.5**	**+1.5**
EHY	**Hungye** baz=223	**2.03**	**224**	*e*P		**Pn**	**10 48 09.1**	**-3.4**
SMLT	**Sun Moon Lake** baz=224	**2.09**	**239**	*e*P		**Pn**	**10 48 15.5**	**+2.2**
TYC	**Yuchr** baz=225	**2.11**	**240**	*e*P		**Pn**	**10 48 13.9**	**+0.3**
TWF1	**Yuli** baz=235	**2.16**	**221**	*e*P		**Pn**	**10 48 11.8**	**-2.5**
YUS	**Yu-Shan** baz=229	**2.29**	**230**	*e*P		**Pn**	**10 48 15.6**	**-0.4**
CHN5	**Tsauling** baz=235	**2.42**	**235**	*e*P		**Pn**	**10 48 18.9**	**+1.1**
CHN4	**Tsaushan** baz=231	**2.63**	**232**	*e*P		**Pn**	**10 48 23.2**	**+2.5**
STYT	**Tauyuan** baz=226	**2.64**	**227**	*e*P		**Pn**	**10 48 20.6**	**-0.3**
WTP	**Ta-pu** baz=217	**2.68**	**230**	*e*P		**Pn**	**10 48 21.5**	**+0.1**
CHN1	**Nanshi** baz=230	**2.78**	**230**	*e*P		**Pn**	**10 48 22.5**	**-0.3**

IDC 23 10:47:58.7±6.0,303N×9740E,h0km,mb3.5/3,mb1 3.7/3, mb1mx3.4/20,mbtmp3.5/3,Error ellipse: s-maj=307.0km s-min=29.2km az=56.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.9nm,0.4s,baz=302,slow=9.2,SNR=15	**42.85**	**124**	P		P	10 55 58.3	-0.8
ASAR	**Alice Springs** 0.3nm,0.8s,baz=300,slow=8.3,SNR=5.0	**44.35**	**129**	P		P	10 56 12.0	+0.9
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=153,slow=8.9,SNR=4.6	**45.52**	**345**	P		P	10 56 19.9	-0.1

ISCJB ***23*** *10:50:23.3±0.6,2486N±005×12276E±003,h19km±5km, mb3.7/5,MS4.0/2,Error ellipse: s-maj=8.2km s-min=4.4km az=18.5*
TAP ***23*** *10:50:23.4,2491N×12273E,h20km±3km,ML3.6,D*
IDC ***23*** *10:50:23.5±1.2,2447N×12166E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.6/21,mbtmp3.7/6,ML3.4/1,MS3.9/2, Ms1 4.0/2,ms1mx3.3/21,Error ellipse: s-maj=71.3km s-min=20.8km az=69.0*
JMA ***23*** *10:50:23.8±0.2,2495N×12286E,h12km,M3.3*
NEIC ***23*** *10:50:27.2±1.0,2486N×12263E,h35km,MG3.3(JMA), Error ellipse: s-maj=17.5km s-min=14.6km az=61.0*

ISC 23 10:50:22.7±0.6,2485N±005×12275E±003,h10km±4km, n50,σ1§12/51,mb3.7/5,MS4.0/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**149**	P		**Pg**	**10 50 33.5**	**+2.0**
YOJ				*e*S		**Sg**	**10 50 40.4**	**+2.9**
YOJ	**Yonaguni jima** baz=151	**0.45**	**149**	P		**Pg**	**10 50 33.6**	**+2.1**
YOJ	baz=151			*e*S		**Sg**	**10 50 38.2**	**+0.7**
TWB1	**Santiao Chiao** baz=278	**0.71**	**283**	*e*P		**Pg**	**10 50 36.7**	**+0.2**
TWC	**Suao** baz=249	**0.86**	**254**	*e*P		**Pg**	**10 50 38.7**	**-0.5**
NWF	**Wu-fen Shan** baz=281	**0.91**	**284**	*e*P		**Pg**	**10 50 40.4**	**+0.2**
PCYT	**Pengchaiyu** baz=320	**0.99**	**322**	P		**Pg**	**10 50 41.5**	**-0.3**
TWE	**Neicheng** baz=259	**1.00**	**263**	P		**Pg**	**10 50 41.9**	**0.0**
ENA	**Nanau** baz=230	**1.01**	**246**	*e*P		**Pg**	**10 50 42.0**	**-0.2**
IRIF	**Iriomote-Funau**	**1.03**	**120**	P		**Pg**	**10 50 42.6**	**+0.2**
IRIF				S		**Sg**	**10 50 54.9**	**-0.9**
TWA	**Mucha** baz=274	**1.07**	**277**	*e*P		**Pg**	**10 50 41.9**	**-1.4**
TATO	**Taipei**	**1.16**	**276**	*e*P		**Pg**	**10 50 47.0**	**+2.1**
TWS1	**Kuangyinshan** baz=280	**1.24**	**282**	*e*P		**Pn**	**10 50 45.1**	**-1.0**
NACB	**Ninganchiao**	**1.25**	**238**	*e*P		**Pn**	**10 50 46.6**	**+0.3**
YHNB	**Yeheng**	**1.27**	**262**	*e*P		**Pn**	**10 50 45.9**	**-0.6**
NSK	**Sanguang** baz=260	**1.28**	**262**	*e*P		**Pn**	**10 50 45.6**	**-1.1**
JKRS	**Kuro-shima**	**1.30**	**118**	P		**Pn**	**10 50 46.8**	**-0.1**
TWD	**Chiawan** baz=231	**1.30**	**234**	*e*P		**Pn**	**10 50 46.0**	**-1.0**
NNS	**Nan Shan** baz=249	**1.32**	**252**	*e*P		**Pn**	**10 50 47.9**	**+0.7**
JIJ	**Ishigaki jima**	**1.35**	**111**	P		**Pn**	**10 50 47.5**	**-0.2**
JIJ				*e*S		**Sb**	**10 51 03.8**	**-1.8**
HWA	**Hwalien** baz=227	**1.36**	**231**	*e*P		**Pn**	**10 50 46.1**	**-1.7**
WHF	**Hehuan Shan** baz=240	**1.53**	**243**	*e*P		**Pn**	**10 50 50.8**	**+0.7**
TWT	**Tachien** baz=245	**1.56**	**248**	*e*P		**Pg**	**10 50 52.9**	**+0.4**
ESL	**Shilin** baz=227	**1.59**	**230**	*e*P		**Pn**	**10 50 50.5**	**-0.4**
NSTT	**Nanjuang** baz=260	**1.61**	**263**	*e*P		**Pn**	**10 50 53.2**	**+2.0**
NSY	**Sanyi** baz=270	**1.86**	**257**	*e*P		**Pg**	**10 50 57.5**	**-0.9**
EHY	**Hungye** baz=222	**1.87**	**225**	*e*P		**Pn**	**10 50 52.7**	**-2.1**
TWQ1	**Liyutan** baz=253	**1.87**	**255**	*e*P		**Pn**	**10 50 56.3**	**+1.5**
SMLT	**Sun Moon Lake** baz=223	**1.95**	**241**	*e*P		**Pg**	**10 50 58.8**	**-1.2**
TYC	**Yuchr** baz=225	**1.97**	**242**	*e*P		**Pn**	**10 50 57.5**	**+1.4**
TWF1	**Yuli** baz=237	**2.00**	**222**	*e*P		**Pn**	**10 50 54.9**	**-1.7**
YUS	**Yu-Shan** baz=228	**2.13**	**231**	*e*P		**Pn**	**10 50 58.2**	**-0.2**
ALS	**Alishan** baz=216	**2.22**	**234**	*e*P		**Pn**	**10 51 00.9**	**+1.2**
CHN5	**Tsauling** baz=235	**2.27**	**237**	*e*P		**Pn**	**10 51 01.7**	**+1.4**
ELDTW	**Lidau** baz=222	**2.29**	**224**	*e*P		**Pn**	**10 51 00.3**	**-0.3**
CHN4	**Tsaushan** baz=231	**2.48**	**233**	*e*P		**Pn**	**10 51 04.9**	**+1.8**
STYT	**Tauyuan** baz=213	**2.48**	**228**	*e*P		**Pn**	**10 51 03.1**	**-0.1**
WTP	**Ta-pu** baz=215	**2.53**	**231**	*e*P		**Pn**	**10 51 04.0**	**+0.2**
CHN1	**Nanshi** baz=229	**2.62**	**231**	*e*P		**Pn**	**10 51 04.2**	**-0.9**
SGST	**Jiashian** baz=227	**2.65**	**229**	*e*P		**Pn**	**10 51 05.2**	**-0.4**
ECL	**Taimali** baz=214	**2.79**	**217**	*e*P		**Pn**	**10 51 06.7**	**-0.6**
SSD	**Sandimen** baz=221	**2.86**	**223**	*e*P		**Pn**	**10 51 09.7**	**+1.3**
SCZT	**Fangliau** baz=209	**3.15**	**219**	*e*P		**Pn**	**10 51 10.4**	**-2.0**
KSRS	**Korea Array** 0.2nm,0.3s,baz=199,slow=11,SNR=8.5	**13.32**	**18**	Pn		Px	10 53 44.2	
SONM	**Songino Array** 0.7nm,0.8s,mb3.2,baz=153,slow=10.0,SNR=4.6	**26.34**	**335**	P		**P**	**10 56 00.0**	**+1.2**
MKAR	**Makanchi Array** 1.4nm,1.0s,mb3.7,baz=209,slow=42,SNR=2.7	**38.87**	**315**	P		**P**	**10 57 48.3**	**+0.1**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,mb3.8,baz=304,slow=47,SNR=2.1	**40.48**	**326**	P		**P**	**10 58 00.6**	**-0.8**
WRA	**Warramunga Arr** 2.0nm,0.9s,mb4.1,baz=348,slow=8.8,SNR=5.9	**45.93**	**165**	P		**P**	**10 58 46.8**	**+1.0**
ASAR	**Alice Springs** 0.5nm,0.8s,mb3.6,baz=349,slow=10,SNR=4.7	**49.42**	**166**	P		**P**	**10 59 15.0**	**+2.0**
BRTR	**Keskin Array B** comp=Z,44nm,18.6s,MS3.8,baz=64,slow=37	**73.93**	**307**	LR		LR	11 35 25.5	
NOA	**NORSAR Array B** comp=Z,118nm,19.1s,MS4.2,baz=65,slow=38	**78.30**	**332**	LR		LR	11 40 35.5	

ISCJB ***23*** *10:51:02.5±0.8,2494N±004×12276E±004,h15km±5km, mb3.8/8,Error ellipse: s-maj=6.6km s-min=5.7km az=42.4*
TAP ***23*** *10:51:03.1,2489N×12265E,h15km±1km,ML4.0,D*
IDC ***23*** *10:51:03.1±1.2,2439N×12150E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.7/23,mbtmp3.8/8,ML3.6/1,MS3.6/1, Ms1 3.6/1,ms1mx3.0/25,Error ellipse: s-maj=66.1km s-min=19.9km az=66.0*

*NEIC **23** 10:51:06.4±0.7, 2480N×12251E, h35km, mb4.0/1, Error ellipse: s-maj=27.6km s-min=10.9km az=57.0*

ISC 23 10:51:02.4±0.7, 2488N±003×12270E±003, h5km±4km, n52, σ1$14/59, mb3.8/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.50**	**146**	P	**Pg**	**10 51 13.7**	**+1.6**
YOJ	baz=143			S	**Sg**	**10 51 20.4**	**+1.8**
	baz=143						
TWB1	**Santiao Chiao**	**0.66**	**282**	P	**Pg**	**10 51 15.5**	**+0.5**
TWB1	baz=280			S	**Sg**	**10 51 25.1**	**+1.5**
	baz=280						
TWC	**Suao**	**0.82**	**251**	P	**Pg**	**10 51 18.0**	**-0.1**
TWC	baz=247			S	**Sg**	**10 51 29.0**	**+0.3**
	baz=247						
NWF	**Wu-fen Shan**	**0.86**	**283**	*e*P	**Pg**	**10 51 19.5**	**+0.7**
ILA	baz=282 **Ilan**	**0.87**	**263**	*e*P	**Pg**	**10 51 18.2**	**-0.9**
PCYT	baz=260 **Pengchaiyu**	**0.94**	**323**	P	**Pg**	**10 51 20.9**	**+0.5**
TWE	baz=306 **Neicheng**	**0.95**	**261**	P	**Pg**	**10 51 20.7**	**+0.1**
TWE	baz=257			*e*S	**Sg**	**10 51 33.4**	**+0.4**
	baz=257						
ENA	**Nanau**	**0.98**	**243**	P	**Pg**	**10 51 21.6**	**+0.4**
ENA	baz=239			S	**Sg**	**10 51 34.2**	**+0.3**
	baz=239						
TWA	**Mucha**	**1.02**	**276**	*e*P	**Pg**	**10 51 21.1**	**-0.9**
TWY	baz=274 **Chenhua**	**1.07**	**292**	*e*P	**Pg**	**10 51 24.7**	**+1.7**
TAP1	baz=291 **Taipei**	**1.08**	**279**	*e*P	**Pg**	**10 51 25.1**	**+2.0**
TATO	baz=277 **Taipei**	**1.10**	**275**	*e*P	**Pg**	**10 51 23.4**	**-0.1**
TWS1	**Kuangyinshan**	**1.19**	**281**	*e*P	**Pg**	**10 51 24.9**	**-0.3**
NSK	baz=280 **Sanguang**	**1.24**	**261**	P	**Pg**	**10 51 25.1**	**-1.0**
TWD	baz=274 **Chiawan**	**1.28**	**232**	*e*P	**Pn**	**10 51 26.8**	**-0.1**
TWD	baz=227			*e*S	**Sg**	**10 51 43.6**	**+0.1**
	baz=227						
NNS	**Nan Shan**	**1.28**	**250**	*e*P	**Pn**	**10 51 27.4**	**+0.5**
NNS	baz=247			*e*S	**Sg**	**10 51 44.2**	**+0.5**
	baz=247						
HWA	**Hwalien**	**1.34**	**228**	*e*P	**Pn**	**10 51 27.7**	**-0.1**
WHF	baz=224 **Hehuan Shan**	**1.50**	**241**	P	**Pn**	**10 51 30.7**	**+0.8**
WHF	baz=247			*e*S	**Sn**	**10 51 50.0**	**+0.2**
	baz=247						
TWT	**Tachien**	**1.52**	**246**	*e*P	**Pn**	**10 51 31.0**	**+0.8**
TWT	baz=256			*e*S	**Sn**	**10 51 51.9**	**+1.5**
	baz=256						
NSTT	**Nanjuang**	**1.56**	**261**	*e*P	**Pg**	**10 51 32.1**	**-0.3**
ESL	baz=259 **Shilin**	**1.57**	**228**	*e*P	**Pg**	**10 51 32.4**	**-0.1**
NSY	baz=224 **Sanyi**	**1.82**	**256**	*e*P	**Pn**	**10 51 35.1**	**+0.7**
TWQ1	baz=254 **Liyutan**	**1.83**	**254**	*e*P	**Pn**	**10 51 35.2**	**+0.7**
EHY	baz=252 **Hungye**	**1.86**	**223**	*e*P	**Pn**	**10 51 33.4**	**-1.4**
SMLT	baz=219 **Sun Moon Lake**	**1.92**	**239**	*e*P	**Pg**	**10 51 37.4**	**-1.8**
TYC	baz=220 **Yuchr**	**1.94**	**240**	*e*P	**Pg**	**10 51 37.9**	**-1.7**
TCU	baz=222 **Taichung**	**1.98**	**249**	*e*P	**Pg**	**10 51 38.3**	**-2.1**
TWF1	baz=247 **Yuli**	**1.99**	**220**	*e*P	**Pn**	**10 51 35.7**	**-1.0**
WNT	baz=236 **Mingjian**	**2.09**	**242**	*e*P	**Pg**	**10 51 39.5**	**-2.9**
YUS	baz=239 **Yu-Shan**	**2.11**	**229**	*e*P	**Pn**	**10 51 39.0**	**+0.7**
ALS	baz=226 **Alishan**	**2.20**	**232**	*e*P	**Pg**	**10 51 42.5**	**-2.1**
CHN5	baz=212 **Tsauling**	**2.24**	**236**	*e*P	**Pg**	**10 51 42.6**	**-2.8**
ELDTW	baz=233 **Lidau**	**2.28**	**223**	*e*P	**Pn**	**10 51 39.5**	**-1.2**
CHN4	baz=219 **Tsaushan**	**2.45**	**232**	*e*P	**Pn**	**10 51 45.6**	**+2.5**
STYT	baz=229 **Tauyuan**	**2.46**	**227**	*e*P	**Pn**	**10 51 43.9**	**+0.7**
WTP	baz=210 **Ta-pu**	**2.50**	**230**	*e*P	**Pn**	**10 51 44.1**	**+0.3**
TWG	baz=212 **Pinlang**	**2.53**	**216**	*e*P	**Pn**	**10 51 43.6**	**-0.5**
CHN1	baz=212 **Nanshi**	**2.60**	**230**	*e*P	**Pn**	**10 51 46.2**	**+1.1**
SGST	baz=227 **Jiashian**	**2.63**	**228**	*e*P	**Pn**	**10 51 46.7**	**+1.1**
ECL	baz=224 **Taimali**	**2.78**	**216**	*e*P	**Pn**	**10 51 45.3**	**-2.2**
SSD	baz=211 **Sandimen**	**2.84**	**222**	*e*P	**Pn**	**10 51 50.5**	**+2.0**
SCZT	baz=218 **Fangliau**	**3.14**	**218**	*e*P	**Pg**	**10 51 55.1**	**-7.5**
KSRS	baz=201 **Korea Array**	**13.31**	**18**	Pn	Px	10 54 25.2	
JHJ	0.3nm,0.3s,baz=200,slow=11,SNR=10 **Hachijo jima 2**	**17.04**	**57**	LR	LR	11 01 20.0	
SONM	comp=Z,184nm,18.6s,baz=255,slow=34 **Songino Array**	**26.30**	**335**	P	**P**	**10 56 39.6**	**+0.8**
MKAR	1.5nm,1.0s,mb3.5,baz=148,slow=9.0,SNR=5.0 **Makanchi Array**	**38.82**	**315**	P	**P**	**10 58 26.5**	**-1.7**
ZALV	1.4nm,1.0s,mb3.7,baz=112,slow=9.3,SNR=3.9 **Zalesovo Beam**	**40.43**	**326**	P	**P**	**10 58 41.0**	**-0.5**
KURK	2.3nm,0.6s,mb4.1,baz=119,slow=7.6,SNR=6.1 **Kurchatov**	**42.46**	**319**	P	**P**	**10 58 57.2**	**-1.0**
WRAB	0.9nm,0.8s,mb3.5,baz=113,slow=8.9,SNR=2.1 **Tennant Creek**	**45.96**	**165**	*e*P	**P**	**10 59 24.6**	**-1.9**
WRA	1.4nm,0.6s,mb4.1 **Warramunga Arr**	**45.97**	**165**	P	**P**	**10 59 26.4**	**-0.2**
BVAR	1.0nm,0.7s,mb3.9,baz=347,slow=8.7,SNR=4.5 **Borovoye Array**	**48.02**	**320**	P	**P**	**10 59 41.3**	**-1.1**
ASAR	0.9nm,0.5s,mb4.0,baz=240,slow=39,SNR=3.1 **Alice Springs**	**49.46**	**166**	P	**P**	**10 59 54.0**	**+0.3**
	0.4nm,0.7s,mb3.6,baz=350,slow=8.5,SNR=3.2						

*IDC **23** 10:56:42.6±2.4, 907S×10778E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.8/20, mbtmp4.0/8, MS3.7/1, Ms1 3.7/1, ms1mx2.9/39, Error ellipse: s-maj=124.7km s-min=17.8km az=51.0*

*ISCJB **23** 10:56:46.6±1.0, 930S±007×10752E±008, h53km±11km, mb4.0/9, Error ellipse: s-maj=14.1km s-min=9.6km az=34.3*

*NEIC **23** 10:56:46.9±0.4, 927S×10761E, h35km, mb4.4/2, Error ellipse: s-maj=12.6km s-min=9.4km az=55.0*

*DJA **23** 10:56:48, 898S×10696E, h10km, MLv3.4/5*

ISC 23 10:56:47.6±1.0, 932S±007×10753E±008, h41km±11km, n18, σ0$49/18, mb4.0/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XMIS	**Christmas Isla**	**2.18**	**238**	*e*Pn	**Pn**	**10 57 21.9**	**+0.6**
XMIS				*e*Sn	**Sn**	**10 57 46.6**	**-0.5**
XMIS	**Christmas Isla**	**2.18**	**238**	P	**Pn**	**10 57 21.9**	**+0.6**
LEM	**Lembang**	**2.47**	**2**	P	**Pn**	**10 57 25.1**	**-0.3**
DBJI	**Dramaga**	**2.85**	**344**	P	**Pn**	**10 57 30.7**	**+0.2**
JCJI	**Jatiwangi**	**2.90**	**15**	P	**Pn**	**10 57 40.9**	**+10**
BJII	**Banjamegara**	**2.92**	**48**	P	**Pn**	**10 57 31.7**	**+0.1**
CBJI	**Citeko**	**2.95**	**347**	P	**Pn**	**10 57 27.7**	**-4.3**
NWAO	**Narrogin (SRO)**	**25.15**	**161**	*e*P	**P**	**11 02 09.2**	**+0.3**
WRA	46nm,1.5s,mb4.8 **Warramunga Arr**	**27.97**	**115**	P	**P**	**11 02 33.6**	**-1.0**
ASAR	0.3nm,0.7s,mb3.0,baz=290,slow=11,SNR=5.0 **Alice Springs**	**28.96**	**123**	P	**P**	**11 02 43.5**	**+0.2**
STKA	0.5nm,0.7s,mb3.4,baz=303,slow=7.9,SNR=7.4 **Stephens Creek**	**38.73**	**130**	P	**P**	**11 04 08.9**	**+1.0**
STKA	1.5nm,0.6s,mb3.9,baz=298,slow=8.0,SNR=3.7 **Stephens Creek**	**38.73**	**130**	P	**P**	**11 04 07.5**	**-0.4**
CTA	0.4nm,0.8s,mb3.2 **Charters Tower**	**38.87**	**110**	LR	LR	11 18 48.2	
SONM	comp=Z,127nm,21.6s,baz=153,slow=34 **Songino Array**	**56.91**	**359**	P	**P**	**11 06 28.3**	**0.0**
	1.1nm,0.6s,mb4.1,baz=173,slow=7.6,SNR=9.8						
MKAR	**Makanchi Array**	**60.23**	**340**	P	**P**	**11 06 51.9**	**+0.4**
KURK	2.8nm,0.6s,mb4.5,baz=144,slow=7.8,SNR=24 **Kurchatov**	**64.84**	**340**	P	**P**	**11 07 22.2**	**0.0**
ZALV	2.0nm,0.7s,mb4.3,baz=152,slow=5.9,SNR=5.8 **Zalesovo Beam**	**65.89**	**346**	P	**P**	**11 07 28.2**	**-0.7**
BVAR	0.7nm,0.4s,mb4.0,baz=144,slow=5.4,SNR=3.2 **Borovoye Array**	**69.69**	**337**	P	**P**	**11 07 53.2**	**+0.3**
	1.5nm,0.6s,mb4.1,baz=139,slow=9.5,SNR=6.1						

*NIED **23** 11:17:00, 2490N×12270E, h35km, Mw4.3 Best double couple: M0 2.85000×10^15 NP1:φs342.00000°, δ86.00000°, λ-24.00000°. NP2:φs74.00000°, δ66.00000°, λ-175.00000°.*

*IDC **23** 11:17:05.9±1.0, 2450N×12183E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/24, mbtmp4.1/9, ML3.5/1, MS4.2/1, Ms1 4.1/1, ms1mx3.1/42, Error ellipse: s-maj=61.5km s-min=15.6km az=64.0*

*TAP **23** 11:17:05.1, 2484N×12268E, h5km±1km, ML3.7, D*

*JMA **23** 11:17:05.6±0.1, 2487N×12270E, h0km, M3.8*

*ISCJB **23** 11:17:06.3±0.6, 2489N±004×12275E±003, h20km±5km, mb4.1/14, Error ellipse: s-maj=6.4km s-min=4.1km az=23.4*

*NEIC **23** 11:17:10.2±0.6, 2477N×12248E, h35km, mb4.5/6, Error ellipse: s-maj=13.6km s-min=10.4km az=74.0*

*BJI **23** 11:17:11.6, 2506N×12240E, h18km, mB4.8, mb4.4, Ms4.9, Msz4.6*

ISC 23 11:17:05.6±0.7, 2488N±004×12274E±003, h6km±4km, n72, σ1$07/73, mb4.1/14, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**149**	P	**Pg**	**11 17 15.5**	**+0.5**
YOJ				*e*S	**Sg**	**11 17 22.5**	**+1.2**
YOJ	**Yonaguni jima**	**0.49**	**149**	*i* P	**Pg**	**11 17 15.6**	**+0.5**
YOJ	baz=141			*i* S	**Sg**	**11 17 22.3**	**+1.0**
	baz=141						
TWB1	**Santiao Chiao**	**0.69**	**281**	*e*P	**Pg**	**11 17 19.1**	**+0.1**
TWC	baz=285 **Suao**	**0.85**	**252**	*e*P	**Pg**	**11 17 22.0**	**0.0**
NWF	baz=253 **Wu-fen Shan**	**0.89**	**282**	*e*P	**Pg**	**11 17 22.4**	**-0.3**
PCYT	baz=285 **Pengchaiyu**	**0.96**	**321**	*e*P	**Pg**	**11 17 23.9**	**-0.1**
TWE	baz=324 **Neicheng**	**0.99**	**261**	P	**Pg**	**11 17 23.8**	**-0.7**
ENA	baz=262 **Nanau**	**1.01**	**244**	P	**Pg**	**11 17 24.4**	**-0.7**
TWA	baz=244 **Mucha**	**1.05**	**276**	*e*P	**Pg**	**11 17 25.0**	**-0.8**
TWY	baz=278 **Chenhua**	**1.10**	**291**	*e*P	**Pg**	**11 17 26.2**	**-0.7**
TAP1	baz=293 **Taipei**	**1.11**	**278**	*e*P	**Pg**	**11 17 27.7**	**+0.7**
TATO	baz=280 **Taipei**	**1.14**	**275**	*e*Pn	**Pn**	**11 17 26.2**	**-1.8**
TWS1	**Kuangyinshan**	**1.22**	**281**	*e*P	**Pg**	**11 17 29.0**	**0.0**
YHNB	baz=282 **Yeheng**	**1.26**	**261**	*e*Pn	**Pn**	**11 17 28.9**	**-0.8**
NACB	**Ninganchiao**	**1.26**	**236**	*e*Pn	**Pn**	**11 17 28.4**	**-1.3**
NSK	**Sanguang**	**1.27**	**261**	P	**Pn**	**11 17 29.3**	**-0.5**
HATJ	baz=262 **Hateruma jima**	**1.27**	**130**	P	**Pn**	**11 17 30.4**	**+0.5**
TWD	**Chiawan**	**1.31**	**233**	*e*P	**Pn**	**11 17 28.9**	**-1.5**
NNS	baz=232 **Nan Shan**	**1.32**	**251**	*e*P	**Pn**	**11 17 29.9**	**-0.6**
JKRS	baz=251 **Kuro-shima**	**1.32**	**119**	*e*S	**Sb**	**11 17 46.8**	**-1.2**
HWA	**Hwalien**	**1.37**	**229**	*e*P	**Pn**	**11 17 30.5**	**-0.7**
JIJ	baz=228 **Ishigaki jima**	**1.38**	**112**	P	**Pn**	**11 17 32.3**	**+0.9**
JIJ				*e*S	**Sb**	**11 17 49.9**	**+0.3**
WHF	**Hehuan Shan**	**1.53**	**242**	*e*P	**Pn**	**11 17 33.7**	**+0.3**
TWT	baz=241 **Tachien**	**1.55**	**247**	*e*P	**Pn**	**11 17 35.1**	**+1.3**
ESL	baz=247 **Shilin**	**1.60**	**228**	*e*P	**Pn**	**11 17 34.7**	**+0.4**
NSTT	baz=228 **Nanjuang**	**1.60**	**261**	*e*P	**Pn**	**11 17 34.6**	**+0.2**
NSY	baz=262 **Sanyi**	**1.86**	**256**	*e*P	**Pn**	**11 17 39.4**	**+1.4**
TWQ1	baz=256 **Liyutan**	**1.87**	**254**	*e*P	**Pn**	**11 17 38.7**	**+0.6**
EHY	baz=254 **Hungye**	**1.88**	**224**	*e*P	**Pn**	**11 17 36.6**	**-1.7**
SMLT	baz=223 **Sun Moon Lake**	**1.95**	**240**	*e*P	**Pn**	**11 17 40.2**	**+1.0**
TYC	baz=239 **Yuchr**	**1.97**	**241**	*e*P	**Pn**	**11 17 41.4**	**+1.9**
TWF1	baz=240 **Yuli**	**2.01**	**221**	*e*P	**Pn**	**11 17 39.3**	**-0.8**
TCU	baz=220 **Taichung**	**2.02**	**249**	*e*P	**Pn**	**11 17 38.7**	**-1.4**
WNT	baz=249 **Mingjian**	**2.12**	**242**	*e*P	**Pn**	**11 17 43.9**	**+2.3**
YUS	baz=242 **Yu-Shan**	**2.14**	**230**	*e*P	**Pn**	**11 17 41.4**	**-0.5**
ALS	baz=229 **Alishan**	**2.23**	**233**	*e*P	**Pn**	**11 17 42.7**	**-0.4**
CHN5	baz=232 **Tsauling**	**2.27**	**236**	*e*P	**Pn**	**11 17 45.4**	**+1.7**
ELDTW	baz=236 **Lidau**	**2.31**	**223**	*e*P	**Pn**	**11 17 42.8**	**-1.3**
WGK	baz=222 **Gukeng**	**2.32**	**239**	*e*P	**Pn**	**11 17 45.8**	**+1.5**
CHN4	baz=239 **Tsaushan**	**2.48**	**233**	*e*P	**Pn**	**11 17 48.8**	**+2.3**
STYT	baz=232 **Tauyuan**	**2.49**	**227**	*e*P	**Pn**	**11 17 46.0**	**-0.7**
WTP	baz=226 **Ta-pu**	**2.53**	**230**	*e*P	**Pn**	**11 17 47.1**	**-0.1**
TWG	baz=230 **Pinlang**	**2.56**	**217**	*e*P	**Pn**	**11 17 44.5**	**-3.1**
TWK	baz=216 **Hsinying**	**2.61**	**232**	*e*P	**Pn**	**11 17 49.9**	**+1.6**
CHN1	baz=232 **Nanshi**	**2.63**	**231**	*e*P	**Pn**	**11 17 49.7**	**+1.0**
SGST	baz=230 **Jiashian**	**2.66**	**228**	*e*P	**Pn**	**11 17 49.2**	**+0.2**
ECL	baz=227 **Taimali**	**2.80**	**216**	*e*P	**Pn**	**11 17 48.2**	**-2.7**
SSD	baz=215 **Sandimen**	**2.87**	**223**	*e*P	**Pn**	**11 17 52.1**	**+0.2**
TWM1	baz=222 **Shoushan**	**2.95**	**226**	*e*P	**Pn**	**11 17 55.3**	**+2.4**
SCZT	baz=225 **Fangliau**	**3.17**	**218**	*e*P	**Pn**	**11 17 56.1**	**+0.2**
KS15	baz=217 **Wonju Array Si**	**13.27**	**18**	*e*Pn	**Pn**	**11 20 20.5**	**+6.0**
KSRS	**Korea Array**	**13.29**	**18**	Pn	Px	11 20 25.0	
LZH	0.2nm,0.3s,baz=195,slow=12,SNR=14 **Lanzhou**	**19.71**	**309**	*e*P	**Pn**	**11 21 38.8**	**+1.7**
LZH				AMB	AMB		
	comp=Z,26nm,1.0s						
LZH				AMB	AMB		
	comp=Z,87nm,4.2s						
MDJ	**Mudanjiang**	**20.46**	**14**	*e*Pn	**P**	**11 21 38.3**	**-5.5**
GTA	**Gaotai**	**24.13**	**312**	*e*P	**P**	**11 22 23.4**	**+1.2**
GTA				AP		11 22 27.8	
GTA				XP	sP	11 22 30.8	+5.9
GTA				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.0						
ULN	**Ulaanbaatar**	**26.08**	**336**	*e*Pn	**P**	**11 22 40.4**	**+0.5**
SONM	comp=Z,3.3nm,1.0s,mb3.8 **Songino Array**	**26.31**	**335**	P	**P**	**11 22 42.6**	**+0.7**
MKAR	comp=Z,3.6nm,0.9s,mb3.9,baz=155,slow=8.9,SNR=13 **Makanchi Array**	**38.84**	**315**	P	**P**	**11 24 31.7**	**+0.3**
ZALV	comp=Z,3.4nm,0.8s,mb4.1,baz=104,slow=10,SNR=16 **Zalesovo Beam**	**40.45**	**326**	P	**P**	**11 24 43.8**	**-0.8**
TKM2	comp=Z,2.4nm,0.8s,mb4.0,baz=110,slow=8.1,SNR=8.4 **Tokmak 2**	**42.46**	**307**	*e*P	**P**	**11 25 02.4**	**+1.0**
KURK	comp=Z,2.8nm,1.0s,mb3.9 **Kurchatov**	**42.48**	**319**	P	**P**	**11 25 00.3**	**-1.1**
KURK	comp=Z,1.5nm,0.6s,mb3.8,baz=109,slow=8.1,SNR=8.4 **Kurchatov**	**42.48**	**319**	P	**P**	**11 25 00.3**	**-1.1**
WRAB	**Tennant Creek**	**45.96**	**165**	*e*P	**P**	**11 25 28.6**	**-0.9**
WRA	comp=Z,1.2nm,1.0s,mb4.8 **Warramunga Arr**	**45.96**	**165**	P	**P**	**11 25 28.9**	**-0.6**
WB2	comp=Z,4.6nm,0.8s,mb4.5,baz=347,slow=8.3,SNR=20 **Warramunga Arr**	**45.97**	**165**	*e*P	**P**	**11 25 28.8**	**-0.8**
TIXI	**Tiksi**	**46.93**	**3**	*e*P	**P**	**11 25 36.0**	**-0.6**
BVAR	comp=Z,14nm,1.0s,mb4.8 **Borovoye Array**	**48.04**	**320**	P	**P**	**11 25 44.7**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.9,baz=108,slow=9.5,SNR=5.1						
ASAR	**Alice Springs**	**49.46**	**166**	P	**P**	**11 25 56.2**	**-0.4**
CTA	comp=Z,0.7nm,0.8s,mb3.7,baz=348,slow=7.6,SNR=7.5 **Charters Tower**	**50.22**	**151**	P	**P**	**11 26 05.9**	**+3.4**
CTAO	comp=Z,3.4nm,0.8s,mb4.4,baz=28,slow=18,SNR=3.2 **Charters Tower**	**50.22**	**151**	*e*P	**P**	**11 26 07.0**	**+4.5**
STKA	comp=Z,20nm,1.5s,mb4.9 **Stephens Creek**	**59.25**	**161**	P	**P**	**11 27 06.8**	**-1.0**
ULM	comp=Z,0.5nm,1.1s,mb3.5 **Lac du Bonnet**	**97.75**	**24**	LR	LR	12 19 13.7	
	comp=Z,102nm,18.5s,baz=25,slow=38						

TAP 23 11:19:22.2, 2494N×12274E, h5km±2km, ML2.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**153**	P	Pg	11 19 33.4	+1.0
YOJ	baz=153			*e*S	Sg	11 19 41.6	+2.3
	baz=153						
TWB1	**Santiao Chiao**	**0.69**	**276**	*e*P	Pg	11 19 37.4	+2.0
TWC	baz=276 **Suao**	**0.88**	**248**	*e*P	Pg	11 19 40.8	+1.8
NWF	baz=248 **Wu-fen Shan**	**0.88**	**279**	*e*P	Pg	11 19 39.5	+0.3
TWE	baz=278 **Neicheng**	**1.00**	**258**	*e*P	Pg	11 19 42.1	+0.7
ENA	baz=257 **Nanau**	**1.04**	**241**	*e*P	Pg	11 19 42.6	+0.4
	baz=241						

*ISCJB **23** 11:20:04.9±0.5, 2489N±003×12278E±002, h18km±4km, mb4.1/16, MS3.9/20, Error ellipse: s-maj=5.8km s-min=3.2km az=19.1*

*IDC **23** 11:20:05.3±1.1, 2458N×12187E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/23, mbtmp4.0/9, ML3.4/1, MS3.9/24, Ms1 3.9/24, ms1mx3.8/47, Error ellipse: s-maj=65.0km s-min=18.7km az=67.0*

*TAP **23** 11:20:05.6, 2485N×12270E, h24km±1km, ML3.8, C*

*JMA **23** 11:20:06.0±0.1, 2492N×12285E, h22km±4km, M3.3*

*BJI **23** 11:20:09.1, 2480N×12250E, h35km, mB4.9, mb4.3, Ms4.7, Msz4.6*

*NEIC **23** 11:20:09.1±0.4, 2484N×12255E, h35km, mb4.5/8, Error ellipse: s-maj=11.6km s-min=7.5km az=72.0*

ISC 23 11:20:04.0±0.5, 2487N±003×12278E±002, h2km±3km, n89, σ1$03/80, mb4.1/16, MS3.9/20, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.46**	**153**	P	**Pg**	**11 20 15.4**	**+2.6**
YOJ				S	**Sg**	**11 20 22.1**	**+3.3**
YOJ	**Yonaguni jima**	**0.46**	**153**	*i* P	**Pg**	**11 20 15.6**	**+2.8**
YOJ	baz=139			S	**Sg**	**11 20 21.9**	**+3.1**
	baz=139						
TWB1	**Santiao Chiao**	**0.73**	**281**	*e*P	**Pg**	**11 20 17.8**	**-0.2**
TWB1	baz=283			S	**Sg**	**11 20 28.0**	**+0.5**
	baz=283						
TWC	**Suao**	**0.89**	**253**	P	**Pg**	**11 20 20.7**	**-0.3**
NWF	baz=252 **Wu-fen Shan**	**0.93**	**282**	*e*P	**Pg**	**11 20 21.8**	**0.0**
ILA	baz=284 **Ilan**	**0.94**	**264**	*e*P	**Pg**	**11 20 22.9**	**+0.8**
PCYT	baz=264 **Pengchaiyu**	**0.99**	**320**	*e*P	**Pg**	**11 20 22.3**	**-0.7**
IRIF	baz=308 **Iriomote-Funau**	**1.02**	**122**	P	**Pg**	**11 20 24.1**	**+0.6**
IRIF				*e*S	**Sg**	**11 20 37.6**	**+0.9**
TWE	**Neicheng**	**1.02**	**262**	P	**Pg**	**11 20 23.1**	**-0.5**
ENA	baz=261 **Nanau**	**1.04**	**245**	P	**Pg**	**11 20 23.4**	**-0.7**
ENA	baz=243			*e*S	**Sg**	**11 20 37.7**	**+0.1**
	baz=243						
TWA	**Mucha**	**1.09**	**276**	*e*P	**Pg**	**11 20 25.9**	**+0.9**
TWY	baz=276 **Chenhua**	**1.14**	**291**	*e*P	**Pg**	**11 20 25.3**	**-0.7**
TAP1	baz=292 **Taipei**	**1.15**	**278**	*e*P	**Pg**	**11 20 27.7**	**+1.6**
TATO	baz=279 **Taipei**	**1.18**	**275**	*e*P	**Pg**	**11 20 25.5**	**-1.1**
HATJ	**Hateruma jima**	**1.24**	**131**	P	**Pg**	**11 20 27.9**	**+0.2**
HATJ				*e*S	**Sg**	**11 20 43.2**	**-0.6**
TWS1	**Kuangyinshan**	**1.26**	**281**	*e*P	**Pg**	**11 20 29.0**	**+0.9**
JKRS	baz=281 **Kuro-shima**	**1.29**	**119**	P	**Pg**	**11 20 28.4**	**-0.2**
JKRS				*e*S	**Sg**	**11 20 44.2**	**-1.1**
NACB	**Ninganchiao**	**1.29**	**237**	*e*P	**Pg**	**11 20 27.2**	**-1.4**
YHNB	**Yeheng**	**1.29**	**261**	*e*P	**Pg**	**11 20 28.1**	**-0.7**
NSK	**Sanguang**	**1.31**	**262**	P	**Pn**	**11 20 28.1**	**-1.1**
TWD	baz=261 **Chiawan**	**1.34**	**234**	*e*P	**Pn**	**11 20 28.5**	**-1.1**
JIJ	baz=232 **Ishigaki jima**	**1.34**	**112**	P	**Pn**	**11 20 28.7**	**-1.0**
JIJ				*e*S	**Sg**	**11 20 44.8**	**-2.3**
NNS	**Nan Shan**	**1.35**	**252**	*e*P	**Pn**	**11 20 29.1**	**-0.8**
HWA	baz=251 **Hwalien**	**1.40**	**230**	*e*P	**Pn**	**11 20 32.1**	**+1.7**
WHF	baz=229 **Hehuan Shan**	**1.56**	**243**	*e*P	**Pn**	**11 20 32.7**	**0.0**
TWT	baz=241 **Tachien**	**1.59**	**247**	*e*P	**Pn**	**11 20 32.4**	**-0.7**
ESL	baz=246 **Shilin**	**1.62**	**230**	*e*P	**Pn**	**11 20 32.9**	**-0.7**
NSTT	baz=228 **Nanjuang**	**1.64**	**262**	*e*P	**Pn**	**11 20 33.4**	**-0.4**
NSY	baz=261 **Sanyi**	**1.89**	**256**	*e*P	**Pn**	**11 20 39.2**	**+1.9**
TWQ1	baz=270 **Liyutan**	**1.90**	**254**	*e*P	**Pn**	**11 20 38.9**	**+1.5**
EHY	baz=269 **Hungye**	**1.91**	**225**	*e*P	**Pn**	**11 20 36.4**	**-1.1**
SMLT	baz=223 **Sun Moon Lake**	**1.98**	**240**	*e*P	**Pn**	**11 20 38.5**	**0.0**
TYC	baz=224 **Yuchr**	**2.00**	**242**	*e*P	**Pn**	**11 20 38.6**	**-0.1**
TWF1	baz=226 **Yuli**	**2.03**	**222**	*e*P	**Pn**	**11 20 37.9**	**-1.4**
TCU	baz=236 **Taichung**	**2.05**	**250**	*e*P	**Pn**	**11 20 41.4**	**+1.9**
YUS	baz=249 **Yu-Shan**	**2.17**	**231**	*e*P	**Pn**	**11 20 39.3**	**-1.7**
ALS	baz=229 **Alishan**	**2.26**	**233**	*e*P	**Pn**	**11 20 41.2**	**-1.1**
CHN5	baz=218 **Tsauling**	**2.30**	**237**	*e*P	**Pn**	**11 20 44.6**	**+1.6**
ELDTW	baz=236 **Lidau**	**2.33**	**224**	*e*P	**Pn**	**11 20 42.1**	**-1.2**
CHN4	baz=222 **Tsaushan**	**2.51**	**233**	*e*P	**Pn**	**11 20 44.0**	**-1.8**
STYT	baz=232 **Tauyuan**	**2.52**	**228**	*e*P	**Pn**	**11 20 46.0**	**+0.2**
WTP	baz=226 **Ta-pu**	**2.56**	**231**	*e*P	**Pn**	**11 20 46.8**	**+0.3**
TWG	baz=217 **Pinlang**	**2.57**	**218**	*e*P	**Pn**	**11 20 46.4**	**-0.3**
TWK	baz=216 **Hsinying**	**2.64**	**233**	*e*P	**Pn**	**11 20 48.6**	**+1.1**
CHN1	baz=232 **Nanshi**	**2.66**	**231**	*e*P	**Pn**	**11 20 48.7**	**+0.9**
SGST	baz=230 **Jiashian**	**2.69**	**229**	*e*P	**Pn**	**11 20 47.4**	**-0.8**
ECL	baz=227 **Taimali**	**2.82**	**217**	*e*P	**Pn**	**11 20 49.4**	**-0.6**
SSD	baz=215 **Sandimen**	**2.89**	**223**	*e*P	**Pn**	**11 20 52.6**	**+1.6**
TWM1	baz=222 **Shoushan**	**2.97**	**227**	*e*P	**Pn**	**11 20 52.2**	**+0.1**
SCZT	baz=226 **Fangliau**	**3.18**	**219**	*e*P	**Pn**	**11 20 55.0**	**0.0**
KSRS	baz=211 **Korea Array**	**13.29**	**18**	Pn	**Pn**	**11 23 24.6**	**+11**
KSRS	0.2nm,0.3s,baz=194,slow=12,SNR=9.1			LR	LR	11 28 42

HHC			XP	sP	11 24 37.3	+15
HHC			S	**Sn**	**11 27 39.6**	**-8.5**
HHC			XS	sS	11 27 58.0	+4.3
HHC			SS		11 28 08.8	
HHC			AMB	AMB		
	comp=Z,12nm,0.9s					
HHC			AMB	AMB		
	comp=Z,210nm,8.6s					
HHC			LR	LR		
	comp=N,2μm,11.6s					
HHC			LR	LR		
	comp=E,381nm,10.6s					
HHC			LR	LR		
	comp=Z,1μm,13.9s					
LZH	**Lanzhou**	**19.74 309**	*eP*	**Pn**	**11 24 42.5**	**+6.0**
LZH			PP		11 24 57.3	
LZH			AMB	AMB		
	comp=Z,34nm,1.6s					
LZH			AMB	AMB		
	comp=Z,120nm,4.0s					
LZH			LR	LR		
	comp=N,2μm,12.8s					
LZH			LR	LR		
	comp=Z,2μm,14.3s					
GUMO	**Guam**	**23.64 114**	LR	LR	11 34 07.4	
	comp=Z,99nm,21.3s,MS3.2,baz=254,slow=35					
GTA	**Gaotai**	**24.16 312**	*eP*	**P**	**11 25 23.1**	**+1.6**
GTA			AP		11 25 27.0	
GTA			XP	sP	11 25 30.6	+8.2
GTA			AMB	AMB		
	comp=Z,4.0nm,1.2s,mb3.7					
ASAJ	**Asahikawa**	**25.09 35**	LR	LR	11 35 26.1	
	comp=Z,456nm,19.3s,MS4.0,baz=298,slow=36					
ULN	**Ulaanbaatar**	**26.11 335**	*eP*	**P**	**11 25 38.9**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.6					
SONM	**Songino Array**	**26.33 335**	P	**P**	**11 25 41.6**	**+0.5**
	comp=Z,1.4nm,0.7s,mb3.6,baz=145,slow=7.4,SNR=5.4					
SONM			LR	LR	11 37 27.5	
	comp=Z,763nm,19.1s,MS4.3,baz=168,slow=40					
TLY	**Talaya**	**30.50 336**	*eP*	**P**	**11 26 22.5**	**+4.2**
	comp=Z,15nm,1.1s,mb4.7					
BATI	**Baumata**	**34.88 178**	LR	LR	11 40 26.7	
	comp=Z,144nm,21.3s,MS3.7,baz=332,slow=35					
PETK	**Petropavlovsk-**	**38.49 34**	LR	LR	11 44 09.2	
	comp=Z,108nm,20.2s,MS3.7,baz=231,slow=37					
MKAR	**Makanchi Array**	**38.87 315**	P	**P**	**11 27 29.6**	**-1.1**
	comp=Z,1.3nm,0.8s,mb3.7,baz=95,slow=8.8,SNR=5.2					
MKAR			LR	LR	11 44 10.0	
	comp=Z,285nm,18.1s,MS4.1,baz=314,slow=38					
MKAR	**Makanchi Array**	**38.87 315**	P	**P**	**11 27 29.6**	**-1.1**
MKAR			LR	LR	11 44 10.0	
ZALV	**Zalesovo Beam**	**40.47 326**	P	**P**	**11 27 43.4**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.0,baz=116,slow=6.8,SNR=3.7					
ZALV			LR	LR	11 44 43.2	
	comp=Z,245nm,18.2s,MS4.1,baz=130,slow=37					
TKM2	**Tokmak 2**	**42.50 307**	*eP*	**P**	**11 28 00.1**	**-0.5**
	comp=Z,7.9nm,1.1s,mb4.3					
KURK	**Kurchatov**	**42.51 319**	P	**P**	**11 28 00.5**	**-0.2**
	comp=Z,0.6nm,0.2s,mb3.9,baz=113,slow=7.1,SNR=3.1					
KURK			LR	LR	11 48 41.6	
	comp=Z,121nm,18.9s,MS3.8,baz=95,slow=41					
KURK	**Kurchatov**	**42.51 319**	*eP*	**P**	**11 27 59.1**	**-1.5**
	comp=Z,20nm,1.8s,mb4.5					
KURK			LR	LR	11 48 41.6	
WRAB	**Tennant Creek**	**45.94 165**	*eP*	**P**	**11 28 28.5**	**+0.2**
	comp=Z,5.4nm,1.0s,mb4.4					
WRA	**Warramunga Arr**	**45.94 165**	P	**P**	**11 28 29.4**	**+1.0**
	comp=Z,1.2nm,0.7s,mb3.9,baz=346,slow=8.5,SNR=7.4					
WRA			LR	LR	11 47 27.3	
	comp=Z,110nm,18.6s,MS3.8,baz=0.0,slow=36					
TIXI	**Tiksi**	**46.93 3**	*eP*	**P**	**11 28 35.6**	**0.0**
	comp=Z,10nm,1.1s,mb4.7					
BVAR	**Borovoye Array**	**48.07 320**	P	**P**	**11 28 45.0**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=96,slow=11,SNR=6.5					
BRVK	**Borovoye**	**48.14 320**	*eP*	**P**	**11 28 45.7**	**+0.4**
	comp=Z,1.8nm,0.7s,mb4.2					
ASAR	**Alice Springs**	**49.44 167**	P	**P**	**11 28 57.0**	**+1.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=354,slow=7.5,SNR=4.6					
HNR	**Honiara**	**49.75 129**	LR	LR	11 48 47.6	
	comp=Z,60nm,20.1s,MS3.6,baz=136,slow=34					
CTA	**Charters Tower**	**50.19 151**	LR	LR	11 47 50.7	
	comp=Z,188nm,20.5s,MS4.1,baz=355,slow=33					
CTAO	**Charters Tower**	**50.19 151**	*eP*	**P**	**11 29 01.5**	**+0.2**
	comp=Z,8.0nm,1.2s,mb4.6					
NWAO	**Narrogin (SRO)**	**57.72 186**	LR	LR	11 53 20.5	
	comp=Z,77nm,20.2s,MS3.8,baz=78,slow=35					
STKA	**Stephens Creek**	**59.23 161**	LR	LR	11 57 28.6	
	comp=Z,151nm,18.9s,MS4.1,baz=26,slow=38					
ARCES	**ARCESS Array B**	**69.44 338**	LR	LR	12 05 02.8	
	comp=Z,284nm,18.8s,MS4.5,baz=298,slow=39					
ASF	**Jabal al Asfar**	**73.92 298**	LR	LR	12 08 55.5	
	comp=Z,53nm,21.0s,MS3.8,baz=70,slow=40					
BRTR	**Keskin Array B**	**73.93 307**	LR	LR	12 09 13.0	
	comp=Z,72nm,18.5s,MS4.0,baz=47,slow=40					
EIL	**Elat**	**76.35 296**	LR	LR	12 10 19.3	
	comp=Z,91nm,19.2s,MS4.1,baz=292,slow=40					
NOA	**NORSAR Array B**	**78.29 332**	P	**P**	**11 32 05.1**	**-0.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=56,slow=5.6,SNR=2.8					
VRAC	**Vranov**	**81.34 321**	LR	LR	12 09 13.9	
	comp=Z,161nm,18.2s,MS4.4,baz=166,slow=36					
YKA	**Yellowknife Ar**	**81.77 23**	LR	LR	12 16 27.0	
	comp=Z,30nm,18.3s,MS3.7,baz=110,slow=41					
KEST	**Kesra**	**92.91 312**	LR	LR	12 21 14.1	
	comp=Z,45nm,18.5s,MS4.0,baz=201,slow=40					

*ISCJB **23** 11:36:16.6±0.8, 2481N±009×12272E±004, h22km, Error ellipse: s-maj=12.6km s-min=4.0km az=13.1*
*JMA **23** 11:36:16.8±0.8, 2493N×12292E, h0km, M2.6*
*TAP **23** 11:36:17.0, 2479N×12266E, h22km±3km, ML3.1, D*

ISC 23 11:36:16.1±1.0, 2481N±009×12268E±004, h3km±5km, n23, σ1§19/28, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.46**	**139**	P	**Pg**	**11 36 26.4**	**+1.6**
YOJ	**Yonaguni jima**	**0.46**	**139**	*i* P	**Pg**	**11 36 26.4**	**+1.6**
	baz=130						
YOJ				S	**Sg**	**11 36 30.8**	**+0.1**
	baz=130						
TWB1	**Santiao Chiao**	**0.66**	**288**	*e*P	**Pg**	**11 36 29.8**	**+1.0**
	baz=290						
TWC	**Suao**	**0.78**	**256**	*e*P	**Pg**	**11 36 31.4**	**+0.3**
	baz=255						
TWC				*e*S	**Sg**	**11 36 41.4**	**+0.1**
	baz=255						
NWF	**Wu-fen Shan**	**0.86**	**288**	*e*P	**Pg**	**11 36 33.3**	**+0.8**
	baz=290						
TWE	**Neicheng**	**0.93**	**265**	P	**Pg**	**11 36 33.8**	**-0.1**
	baz=265						
TWE				*e*S	**Sg**	**11 36 45.1**	**-0.8**
	baz=265						
ENA	**Nanau**	**0.94**	**246**	*e*P	**Pg**	**11 36 34.0**	**-0.1**
	baz=234						
IRIF	**Iriomote-Funau**	**1.06**	**116**	P	**Pg**	**11 36 35.3**	**-1.1**
NSK	**Sanguang**	**1.21**	**264**	*e*P	**Pb**	**11 36 37.5**	**-2.1**
	baz=280						
NSK				*e*S	**Sg**	**11 36 53.0**	**-2.0**
	baz=280						
NNS	**Nan Shan**	**1.25**	**253**	*e*P	**Pn**	**11 36 39.7**	**-0.6**
	baz=253						
JIJ	**Ishigaki jima**	**1.40**	**108**	P	**Pn**	**11 36 41.0**	**-1.5**
JIJ				*e*S	**Sb**	**11 36 56.5**	**-4.6**
WHF	**Hehuan Shan**	**1.45**	**243**	P	**Pn**	**11 36 43.2**	**0.0**
	baz=243						
TWT	**Tachien**	**1.48**	**248**	*e*P	**Pn**	**11 36 43.9**	**+0.4**
	baz=248						
ESL	**Shilin**	**1.51**	**229**	*e*P	**Pn**	**11 36 45.5**	**+1.5**
	baz=214						
NSTT	**Nanjuang**	**1.54**	**264**	*e*P	**Pn**	**11 36 44.7**	**+0.3**
	baz=280						
TWQ1	**Liyutan**	**1.80**	**256**	*e*P	**Pn**	**11 36 49.7**	**+1.7**
	baz=256						
SMLT	**Sun Moon Lake**	**1.87**	**241**	*e*P	**Pn**	**11 36 50.5**	**+1.6**
	baz=225						
TYC	**Yuchr**	**1.89**	**242**	*e*P	**Pn**	**11 36 50.0**	**+0.8**
	baz=227						
TWF1	**Yuli**	**1.92**	**221**	*e*P	**Pn**	**11 36 47.8**	**-1.9**
	baz=208						
ALS	**Alishan**	**2.15**	**233**	*e*P	**Pn**	**11 36 51.9**	**-0.9**
	baz=218						
CHN5	**Tsauling**	**2.19**	**237**	*e*P	**Pn**	**11 36 54.2**	**+0.9**
	baz=236						
WTP	**Ta-pu**	**2.45**	**231**	*e*P	**Pn**	**11 36 54.9**	**-2.0**
	baz=216						
CHN1	**Nanshi**	**2.55**	**231**	*e*P	**Pn**	**11 37 00.0**	**+1.8**
	baz=230						

GUC 23 11:38:16.6±0.7, 2240S×6995W, h45km±13km, MD3.8, ML2.5, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**0.27**	**40**	*e*P	Pn	11 38 25.4	+0.5
MACH				*i* S	Sn	11 38 32.1	+1.3
LVC	**Limon Verde**	**0.98**	**103**	*e*P	Pn	11 38 35.7	+1.8
LVC				*i* S	Sn	11 38 49.0	+2.4
LVC				AML	AML	11 38 51.0	
	comp=E,163nm,0.2s						
CEN1	**Los Morros**	**1.01**	**193**	*e*P	Pn	11 38 38.2	+3.9
CEN1				*i* S	Sn	11 38 55.0	+7.5
ANCH	**Antofagasta**	**1.34**	**199**	*e*P	Pn	11 38 40.1	+1.2
ANCH				*i* S	Sn	11 38 57.0	+1.4
CPN1	**Cerro Paranal**	**2.25**	**191**	*e*P	Pn	11 38 53.0	+1.6
CPN1				*i* S	Sn	11 39 21.3	+3.3
CPN1				AML	AML	11 39 29.8	
	comp=E,46nm,0.7s						

IDC 23 11:41:25.8±3.3, 1115S×12364E, h88km±65km, mb3.5/1, mb1 3.1/3, mb1mx3.0/15, mbtmp3.0/3, ML2.9/2, Error ellipse: s-maj=117.0km s-min=60.7km az=50.0, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.94**	**1**	P	Pn	11 41 45.7	+0.9
	33nm,0.3s,baz=176,slow=4.1,SNR=23						
BATI				S	Sn	11 41 59.1	+0.2
	11nm,0.3s,baz=165,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	**13.51**	**132**	P	Pn	11 44 33.3	-0.5
	0.1nm,0.3s,baz=299,slow=14,SNR=4.6						
WRA				S	Sn	11 46 51.8	-11
	0.1nm,0.3s,baz=178,slow=24,SNR=8.0						
ASAR	**Alice Springs**	**15.82**	**143**	P	Pn	11 45 05.5	+1.9
	0.1nm,0.3s,baz=321,slow=13,SNR=9.3						
ASAR				S	S	11 47 52.4	-15
	0.0nm,0.3s,baz=313,slow=24,SNR=3.6						
STKA	**Stephens Creek**	**26.46**	**144**	P	P	11 46 54.1	-0.6
	0.5nm,0.3s,baz=352,slow=7.1,SNR=3.5						

*IDC **23** 11:43:12.9±2.3, 1527S×17377W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/18, mbtmp4.1/4, ML2.7/1, Error ellipse: s-maj=150.0km s-min=25.2km az=149.0*
*ISCJB **23** 11:43:15.2±0.9, 148S±10×1739W±04, h33km, mb4.0/4, Error ellipse: s-maj=149.7km s-min=8.9km az=158.6*
*NEIC **23** 11:43:17.1±1.7, 1534S×17366W, h35km, mb3.9/2, Error ellipse: s-maj=117.0km s-min=13.4km az=148.0*

ISC 23 11:43:17.1±0.9, 148S±10×1738W±04, h35km, n9, σ0§75/11, mb4.0/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.18**	**66**	Pn	**Pn**	**11 43 52.5**	**+1.6**
	98nm,0.3s,baz=158,slow=1.1,SNR=205						
AFI				Sn	**Sn**	**11 44 16.0**	**-0.7**
	287nm,0.3s,baz=77,slow=19,SNR=19						
AFI	**Afiamalu**	**2.18**	**66**	*e*Pn	**Pn**	**11 43 52.2**	**+1.3**
AFI				*e*Pn	**Pn**	**11 43 52.4**	**+1.5**
AFI				*e*Sn	**Sn**	**11 44 15.4**	**-1.3**
AFI				Sn	**Sn**	**11 44 16.0**	**-0.7**
PPT	**Papeete**	**23.44**	**100**	*e*LR	LR	11 47 44.9	
	84nm,27.0s						
STKA	**Stephens Creek**	**43.97**	**239**	P	**P**	**11 51 21.0**	**-0.1**
	0.7nm,0.5s,mb3.7,baz=95,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**43.97**	**239**	*e*P	**P**	**11 51 20.7**	**-0.3**
	0.2nm,0.5s,mb3.1						
WRAB	**Tennant Creek**	**49.57**	**256**	P	**P**	**11 52 04.6**	**-0.4**
	1.9nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**49.58**	**256**	P	**P**	**11 52 05.5**	**+0.4**
	1.0nm,0.9s,mb3.9,baz=92,slow=6.8,SNR=20						
ASAR	**Alice Springs**	**49.90**	**251**	P	**P**	**11 52 07.3**	**-0.2**
	5.1nm,0.7s,mb4.7,baz=86,slow=8.1,SNR=68						
BRTR	**Keskin Array B**	**145.45**	**321**	PKPbc	PKPbc	12 02 54.6	+2.9
	0.7nm,0.8s,baz=36,slow=5.4,SNR=3.9						

*TAP **23** 11:43:18.4, 2494N×12273E, h5km±2km, ML2.8, D*
*ISCJB **23** 11:43:20.7±1.0, 249N±01×12277E±005, h33km, Error ellipse: s-maj=16.2km s-min=5.3km az=16.4*
*JMA **23** 11:43:20.9±0.2, 2492N×12287E, h16km, M2.4*

ISC 23 11:43:18.9±1.7, 250N±01×12278E±006, h15km±9km, n15, σ0§97/18, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.55**	**158**	P	**Pg**	**11 43 30.1**	**+0.3**
YOJ				S	**Sg**	**11 43 36.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.55**	**158**	P	**Pg**	**11 43 29.7**	**0.0**
	baz=151						
YOJ				*i* S	**Sg**	**11 43 38.0**	**+0.9**
	baz=151						
TWB1	**Santiao Chiao**	**0.72**	**273**	*e*P	**Pg**	**11 43 32.6**	**-0.4**
	baz=276						
NWF	**Wu-fen Shan**	**0.92**	**276**	*e*P	**Pb**	**11 43 37.4**	**+0.9**
	baz=278						
TWC	**Suao**	**0.92**	**247**	*e*P	**Pb**	**11 43 37.2**	**+0.6**
	baz=247						
TWE	**Neicheng**	**1.04**	**256**	*e*P	**Pb**	**11 43 36.8**	**-1.9**
	baz=257						
ENA	**Nanau**	**1.09**	**241**	*e*P	**Pb**	**11 43 38.0**	**-1.6**
	baz=240						
NSK	**Sanguang**	**1.33**	**258**	*e*P	**Pn**	**11 43 43.1**	**+0.2**
	baz=258						
JKRS	**Kuro-shima**	**1.33**	**123**	P	**Pn**	**11 43 43.0**	**0.0**
JIJ	**Ishigaki jima**	**1.38**	**116**	P	**Pn**	**11 43 44.5**	**+0.9**
JIJ				S	**Sn**	**11 44 00.4**	**-1.1**
NNS	**Nan Shan**	**1.39**	**248**	*e*P	**Pn**	**11 43 42.3**	**-1.5**
	baz=248						
WHF	**Hehuan Shan**	**1.61**	**240**	*e*P	**Pn**	**11 43 47.4**	**+0.6**
	baz=239						
TWT	**Tachien**	**1.63**	**244**	*e*P	**Pn**	**11 43 48.4**	**+1.4**
	baz=244						
TYC	**Yuchr**	**2.05**	**239**	*e*P	**Pn**	**11 43 53.3**	**+0.4**
	baz=238						
CHN5	**Tsauling**	**2.36**	**235**	*e*P	**Pn**	**11 43 58.0**	**+0.9**
	baz=234						

*ISCJB **23** 11:53:03.8±1.1, 2494N±006×12278E±003, h10km±7km, mb3.6/6, Error ellipse: s-maj=10.1km s-min=4.5km az=16.7*
*TAP **23** 11:53:04.9, 2487N×12269E, h9km±3km, ML3.3, D*
*IDC **23** 11:53:05.5±1.2, 2437N×12163E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/21, mbtmp3.6/6, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/37, Error ellipse: s-maj=71.2km s-min=19.3km az=68.0*
*JMA **23** 11:53:06.4±0.2, 2486N×12280E, h24km, M2.7*
*NEIC **23** 11:53:08.7±0.8, 2482N×12259E, h35km, mb4.1/1, Error ellipse: s-maj=16.8km s-min=11.2km az=52.0*

ISC 23 11:53:04.4±0.8, 2492N±006×12275E±004, h8km±5km, n44, σ1§06/46, mb3.6/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.51**	**153**	P	**Pg**	**11 53 15.4**	**+1.1**
YOJ				S	**Sg**	**11 53 21.8**	**+0.9**
YOJ	**Yonaguni jima**	**0.51**	**153**	*i* P	**Pg**	**11 53 15.5**	**+1.2**
	baz=144						
YOJ				*i* S	**Sg**	**11 53 23.3**	**+2.4**
	baz=144						
TWB1	**Santiao Chiao**	**0.70**	**278**	*e*P	**Pg**	**11 53 19.4**	**+1.5**
	baz=282						
TWC	**Suao**	**0.88**	**250**	P	**Pg**	**11 53 21.0**	**-0.3**
	baz=251						
TWC				*e*S	**Sg**	**11 53 33.3**	**+0.6**
	baz=251						
NWF	**Wu-fen Shan**	**0.90**	**280**	*e*P	**Pg**	**11 53 22.4**	**+0.8**
	baz=283						
TWE	**Neicheng**	**1.01**	**259**	*e*P	**Pg**	**11 53 23.8**	**+0.1**
	baz=260						
ENA	**Nanau**	**1.04**	**242**	*e*P	**Pg**	**11 53 23.6**	**-0.8**
	baz=243						
IRIF	**Iriomote-Funau**	**1.06**	**123**	P	**Pg**	**11 53 24.9**	**+0.1**
TWA	**Mucha**	**1.06**	**274**	*e*P	**Pg**	**11 53 23.4**	**-1.5**
	baz=276						
TATO	**Taipei**	**1.15**	**273**	*e*Pn	**Pn**	**11 53 25.7**	**-1.2**
YHNB	**Yeheng**	**1.28**	**259**	*e*Pn	**Pn**	**11 53 28.3**	**-0.3**
NACB	**Ninganchiao**	**1.29**	**235**	*e*Pn	**Pn**	**11 53 28.1**	**-0.6**
NSK	**Sanguang**	**1.29**	**260**	*e*P	**Pn**	**11 53 28.7**	**-0.1**
	baz=260						
JKRS	**Kuro-shima**	**1.33**	**120**	P	**Pn**	**11 53 28.6**	**-0.7**
JKRS				S	**Sb**	**11 53 43.8**	**-3.0**
NNS	**Nan Shan**	**1.34**	**250**	*e*P	**Pn**	**11 53 30.5**	**+1.0**
	baz=250						
JIJ	**Ishigaki jima**	**1.38**	**113**	P	**Pn**	**11 53 29.3**	**-0.7**
WHF	**Hehuan Shan**	**1.56**	**241**	*e*P	**Pn**	**11 53 33.1**	**+0.6**
	baz=240						
TWT	**Tachien**	**1.58**	**246**	*e*P	**Pg**	**11 53 34.9**	**+0.2**
	baz=246						
NSTT	**Nanjuang**	**1.62**	**260**	*e*P	**Pg**	**11 53 35.2**	**-0.3**
	baz=261						
ESL	**Shilin**	**1.63**	**228**	*e*P	**Pn**	**11 53 33.2**	**-0.3**
	baz=227						
TWQ1	**Liyutan**	**1.89**	**253**	*e*P	**Pg**	**11 53 39.3**	**-1.3**
	baz=253						
EHY	**Hungye**	**1.92**	**223**	*e*P	**Pn**	**11 53 36.8**	**-0.6**
	baz=222						
SMLT	**Sun Moon Lake**	**1.98**	**239**	*e*P	**Pn**	**11 53 39.4**	**+1.2**
	baz=238						
TYC	**Yuchr**	**2.00**	**240**	*e*P	**Pg**	**11 53 40.8**	**-2.0**
	baz=240						
TWF1	**Yuli**	**2.05**	**221**	*e*P	**Pn**	**11 53 37.6**	**-1.6**
	baz=220						
YUS	**Yu-Shan**	**2.17**	**230**	*e*P	**Pn**	**11 53 40.4**	**-0.5**
	baz=229						
ALS	**Alishan**	**2.26**	**232**	*e*P	**Pn**	**11 53 43.4**	**+1.2**
	baz=231						
CHN5	**Tsauling**	**2.31**	**236**	*e*P	**Pg**	**11 53 44.5**	**-4.1**
	baz=235						
CHN4	**Tsaushan**	**2.52**	**232**	*e*P	**Pg**	**11 53 47.8**	**-4.8**
	baz=231						
STYT	**Tauyuan**	**2.53**	**227**	*e*P	**Pn**	**11 53 46.4**	**+0.6**
	baz=226						
WTP	**Ta-pu**	**2.57**	**230**	*e*P	**Pg**	**11 53 49.0**	**-4.6**
	baz=229						
CHN1	**Nanshi**	**2.67**	**230**	*e*P	**Pn**	**11 53 49.2**	**+1.5**
	baz=229						
SSD	**Sandimen**	**2.91**	**222**	*e*P	**Pn**	**11 53 52.2**	**+1.2**
	baz=221						
JOW	**Kunigami**	**5.33**	**68**	LR	LR	11 56 59.0	
	comp=Z,124nm,19.1s,baz=341,slow=36						
KSRS	**Korea Array**	**13.26**	**18**	Pn	Px	11 56 27.9	
	0.1nm,0.3s,baz=200,slow=11,SNR=5.3						
KSRS				LR	LR	12 02 10.8	
	comp=Z,53nm,19.2s,baz=170,slow=39						
SONM	**Songino Array**	**26.29**	**335**	P	**P**	**11 58 42.4**	**+2.1**
	0.4nm,0.5s,mb3.2,baz=146,slow=11,SNR=4.1						
MK31	**Makanchi Array**	**38.83**	**315**	P	**P**	**12 00 27.4**	**-2.4**
MKAR	**Makanchi Array**	**38.83**	**315**	P	**P**	**12 00 30.5**	**+0.7**
	1.1nm,0.8s,mb3.6,baz=101,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**38.83**	**315**	P	**P**	**12 00 30.5**	**+0.7**
ZALV	**Zalesovo Beam**	**40.43**	**326**	P	**P**	**12 00 43.9**	**+0.8**
	0.4nm,0.4s,mb3.5,baz=101,slow=7.5,SNR=2.6						
WRAB	**Tennant Creek**	**45.98**	**165**	P	**P**	**12 01 28.3**	**0.0**
	2.0nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**45.99**	**165**	P	**P**	**12 01 28.9**	**+0.6**
	1.5nm,0.8s,mb4.0,baz=347,slow=8.5,SNR=8.9						
WB2	**Warramunga Arr**	**45.99**	**165**	P	**P**	**12 01 27.5**	**-0.8**
ASAR	**Alice Springs**	**49.49**	**167**	P	**P**	**12 01 55.3**	**-0.2**
	0.3nm,0.9s,mb3.3,baz=349,slow=9.0,SNR=3.5						

*ISK **23** 12:03:57.6, 3998N×3354E, h3km, MD2.7*
*DDA **23** 12:03:58.3, 3995N×3346E, h7km±3km, Md3.0*
*CSEM **23** 12:03:58.1±0.2, 3999N×3358E, h5km, MD3.0, Error ellipse: s-maj=6.5km s-min=5.8km az=174.0*
*ISCJB **23** 12:03:59.4±0.5, 3998N±003×3354E±004, h10km, Error ellipse: s-maj=4.4km s-min=4.3km az=146.5*

ISC 23 12:03:59.3±0.6, 3998N±003×3355E±004, h1km±6km, n14, σ1§07/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDT	**Eldivan**	**0.52**	**349**	*i* P	**Pg**	**12 04 08.9**	**-0.4**
ELDT				*i* P		12 04 08.9	
ELDT				*i* S	**Sg**	**12 04 17.3**	**+1.3**
ANTO	**Ankara**	**0.59**	**259**	*e*PG	**Pg**	**12 04 09.7**	**-1.0**
ANTO				*e*SG	**Sg**	**12 04 18.6**	**+0.2**
CANT	**Cankiri**	**0.63**	**5**	*e*PG	**Pg**	**12 04 10.4**	**-0.9**
CDAG	**Cicekdag**	**0.73**	**119**	*i* P	**Pg**	**12 04 13.6**	**+0.4**
CDAG				*i* S	**Sg**	**12 04 23.9**	**+1.3**
TOS	**Tosya**	**1.11**	**19**	*e*PN	**Pn**	**12 04 19.7**	**-2.3**
CTKT	**Corum**	**1.14**	**55**	*i* P	**Pg**	**12 04 21.1**	**-0.1**
CTKT				*i* S	**Sg**	**12 04 35.5**	**-0.5**
CTKT	**Corum**	**1.14**	**55**	*i* P	**Pg**	**12 04 21.1**	**-0.1**
CTKT				*i* S	**Sg**	**12 04 35.5**	**-0.6**
SGKT	**Sivrigoynuk**	**1.29**	**298**	*i* P	**Pg**	**12 04 24.3**	**+0.3**
SGKT				*i* S	**Sg**	**12 04 44.0**	**+3.2**
YOZ	**Yozgat**	**1.40**	**103**	*e*PN	**Pn**	**12 04 24.9**	**-1.1**
BALT	**Daday**	**1.56**	**355**	*i* P	**Pn**	**12 04 28.6**	**+0.5**
BALT				*i* S	**Sn**	**12 04 50.0**	**+1.1**
AVNT	**Avonos**	**1.57**	**140**	*i* P	**Pn**	**12 04 28.3**	**+0.1**
AVNT				*i* S	**Sn**	**12 04 51.6**	**+2.5**
KIZT	**Kizilcal**	**1.70**	**230**	*e*PN	**Pn**	**12 04 28.6**	**-1.5**
KDHN	**Kadinhani**	**1.83**	**218**	*i* P	**Pn**	**12 04 31.3**	**-0.6**
KDHN				*i* S	**Sn**	**12 04 56.1**	**+0.4**
BNN	**Bunyan**	**2.10**	**122**	*e*PN	**Pn**	**12 04 35.0**	**-0.6**

*ISCJB **23** 12:13:14.6±0.6, 2484N±005×12278E±003, h16km±6km, mb3.8/5, Error ellipse: s-maj=9.4km s-min=4.2km az=16.7*
*TAP **23** 12:13:14.6, 2487N×12272E, h9km±2km, ML3.2, D*
*IDC **23** 12:13:15.8±1.3, 2441N×12189E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.6/21, mbtmp3.6/5, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/31, Error ellipse: s-maj=70.6km s-min=22.3km az=70.0*
*JMA **23** 12:13:18.0±0.1, 2478N×12293E, h24km, M2.5*
*NEIC **23** 12:13:19.6±0.8, 2466N×12248E, h35km, mb4.2/1, Error ellipse: s-maj=19.0km s-min=10.8km az=223.0*

ISC 23 12:13:14.0±0.7, 2484N±006×12277E±003, h6km±5km, n41, σ1§18/44, mb3.8/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

baz=229
ALS Alishan 2.23 234 *e*P **Pn 12 13 53.1 +1.5**
baz=232
CHN5 Tsauling 2.27 237 *e*P **Pn 12 13 56.0 +3.9**
baz=235
CHN4 Tsaushan 2.48 234 *e*P **Pn 12 13 53.6 -1.4**
baz=232
STYT Tauyuan 2.48 228 *e*P **Pn 12 13 55.8 +0.8**
baz=226
WTP Ta-pu 2.53 232 *e*P **Pn 12 13 55.0 -0.7**
baz=229
CHN1 Nanshi 2.63 232 *e*P **Pn 12 13 59.1 +2.1**
baz=230
SGST Jiashian 2.66 229 *e*P **Pn 12 13 57.5 +0.1**
baz=227
KSRS Korea Array 13.32 18 Pn Px 12 16 36.5
0.3nm,0.3s,baz=189,slow=12,SNR=3.3
KSRS LR LR 12 22 00.7
comp=Z,102nm,19.6s,baz=200,slow=38
SONM Songino Array 26.36 335 P **P 12 18 53.1 +2.3**
0.7nm,0.8s,mb3.2,baz=133,slow=10,SNR=3.5
MKAR Makanchi Array 38.89 315 P **P 12 20 41.4 +1.2**
1.1nm,0.9s,mb3.6,baz=99,slow=9.2,SNR=4.2
MKAR Makanchi Array 38.89 315 P **P 12 20 41.4 +1.2**
WRAB Tennant Creek 45.91 165 P **P 12 21 38.3 +0.7**
3.0nm,0.9s,mb4.2
WRA Warramunga Arr 45.91 165 P **P 12 21 37.9 +0.2**
2.3nm,0.8s,mb4.1,baz=346,slow=8.2,SNR=5.9
WB2 Warramunga Arr 45.92 165 P **P 12 21 36.5 -1.2**
ASAR Alice Springs 49.41 167 P **P 12 22 06.8 +2.0**
0.7nm,1.0s,mb3.6,baz=357,slow=8.5,SNR=5.3

IDC ***23*** *12:22:46.8±0.4, 1785S×17480W, h0km, mb4.8/20, mb1 5.0/21, mb1mx4.9/25, mbtmp4.8/21, MS4.9/22, Ms1 4.9/22, ms1mx4.7/40, Error ellipse: s-maj=19.2km s-min=12.5km az=135.0*

ISCJB ***23*** *12:22:50.0±0.2, 1802S×17464W±004, h31km, mb5.2/104, MS5.0/39, Error ellipse: s-maj=7.7km s-min=4.7km az=145.1*

NEIC ***23*** *12:22:52.2±0.2, 1792S×17468W, h35km, mb5.3/68, MS5.3/3, Error ellipse: s-maj=9.4km s-min=5.1km az=143.0*

BJI ***23*** *12:22:52.5, 1733S×17444W, h35km, mB5.6, mb5.0, Ms5.3, Msz5.0*

GCMT ***23*** *12:22:52.2±0.1, 1783S×17439W, h12km, MW5.5/105, Moment Tensor Solution. s77,c144; s105,c224; Duration: 1s3 Moment tensor: Scale 1017Nm; Mrr=2.11±.02; Mθθ=0.07±.03; Mϕϕ=2.04±.02; Mrθ=0.22±.06; Mθϕ=0.18±.02; Mϕr=0.05±.06; Best double couple: Mo=2.09500×1017 NP1:ϕs=360.00000°, δ=44.00000°, λ=-98.00000°. NP2:ϕs=191.00000°, δ=46.00000°, λ=-82.00000°. Principal axes: T 2.0570, Plg1.0000°, Azm275.0000°; N 0.0740, Plg6.0000°, Azm5.0000°; P -2.1320, Plg84.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***23*** *12:22:55.3±2.6, 1710S×17470W, h31km, mb5.5/30, MS5.0/10 Error ellipse: s-maj=15.5km s-min=9.4km az=66.0*

SZGRF ***23*** *12:22:55.5, 1633S×17407W, h33km, mb5.3, Tonga Islands*

DJA ***23*** *12:23:11.7±0.0, 1813S×17516W, h177km, mB5.6/1, mb4.7/6*

ISC 23 12:22:52.0±0.2, 1802S±005×17463W±004, h33km, h33km±1.1km:pP-P,n381,σ1ϱ08/200, mb5.2/104, MS5.0/39, 41C-6D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.92**	**34**	Pn		**Pn**	**12 23 54.9**	**-8.7**
	12nm,0.3s,baz=45,slow=19,SNR=17							
AFI				LR		LR	12 25 27.6	
	comp=Z,8μm,21.1s,baz=188,slow=33							
AFI				T			12 28 56.7	
	31nm,0.3s,baz=214,slow=23,SNR=6.5							
AFI	**Afiamalu**	**4.92**	**34**	Pn		**Pn**	**12 23 56.6**	**-7.0**
RAO	**Raoul Island**	**11.58**	**194**	LR		LR	12 29 21.6	
	comp=Z,4μm,18.2s,baz=359,slow=34							
RAO	**Raoul Island**	**11.58**	**194**	Pn		**Pn**	**12 25 38.3**	**+3.4**
	536nm,0.7s							
RAR	**Rarotonga**	**14.36**	**105**	Pn		**Pn**	**12 26 12.3**	**-0.7**
	0.3nm,0.3s,baz=107,slow=23,SNR=2.8							
RAR				LR		LR	12 30 29.4	
	comp=Z,4μm,19.9s,baz=257,slow=32							
RAR				T			12 40 39.8	
	29nm,0.3s,baz=235,slow=11,SNR=11							
RAR	**Rarotonga**	**14.36**	**105**	Pn		**Pn**	**12 26 12.3**	**-0.7**
RAR				LR		LR	12 30 29.4	
DZM	**Mont Dzumac**	**18.23**	**254**	*e*P		**Pn**	**12 27 05.2**	**+2.7**
DZM	**Mont Dzumac**	**18.23**	**254**	*e*P		**Pn**	**12 27 04.5**	**+2.0**
URZ	**Urewera**	**21.42**	**198**	P		**P**	**12 27 36.1**	**-1.1**
	31nm,1.5s,mb4.6,baz=19,slow=7.6,SNR=12							
PPT	**Papeete**	**23.86**	**93**	*e*LR		LR	12 33 44.4	
	20μm,27.5s,baz=260							
PPT	**Papeete**	**23.86**	**93**	LR		LR	12 34 49.3	
	comp=Z,3μm,20.8s,MS4.7,baz=186,slow=30							
TIAR	**Tiarei**	**24.08**	**93**	*e*P		**P**	**12 28 03.5**	**-1.1**
	1μm,1.5s,mb6.2							
SNZO	**South Karori**	**24.95**	**199**	P		**P**	**12 28 10.9**	**-1.4**
PMOR	**Pomariorio Ree**	**25.80**	**87**	*e*P		**P**	**12 28 19.8**	**-0.5**
	231nm,1.4s,mb5.5							
VAH	**Vaihoa**	**26.02**	**88**	*e*P		**P**	**12 28 21.5**	**-0.7**
	143nm,1.3s,mb5.3							
HNR	**Honiara**	**26.10**	**286**	LR		LR	12 37 01.5	
	comp=Z,7μm,20.1s,MS5.2,baz=127,slow=33							
RPZ	**Rata Peaks**	**28.33**	**202**	P		**P**	**12 28 42.3**	**-0.3**
	12nm,0.6s,mb4.7,baz=121,slow=5.9,SNR=3.9							
RPZ				LR		LR	12 39 25.2	
	comp=Z,3μm,19.9s,MS4.9,baz=16,slow=35							
EIDS	**Eidsvold**	**32.62**	**251**	*e*P		**P**	**12 29 20.1**	**-0.7**
	34nm,1.4s,mb5.1							
ARMA	**Armidale**	**33.02**	**242**	*e*P		**P**	**12 29 25.3**	**+1.0**
CNB	**Canberra Magne**	**36.25**	**234**	*e*P		**P**	**12 29 52.0**	**-0.1**
CTA	**Charters Tower**	**36.97**	**260**	*e*P		**P**	**12 29 57.4**	**-1.1**
	16nm,1.0s,mb4.8							
CTA	**Charters Tower**	**36.97**	**260**	P		**P**	**12 29 56.3**	**-2.2**
	13nm,0.8s,mb4.8,baz=99,slow=9.9,SNR=20							
CTA				LR		LR	12 43 06.1	
	comp=Z,5μm,21.4s,MS5.2,baz=91,slow=33							
CTAO	**Charters Tower**	**36.97**	**260**	*e*P		**P**	**12 29 56.5**	**-2.0**
	80nm,1.5s,mb5.3							
CTAO	**Charters Tower**	**36.97**	**260**	*e*P		**P**	**12 29 56.5**	**-2.0**
CTAO				pmax		pmax		
	comp=Z,81nm,1.5s,mb5.3							
CTAO	**Charters Tower**	**36.97**	**260**	P		**P**	**12 29 58.2**	**-0.3**
	comp=Z,34nm,1.4s,mb5.0							
RKT	**Rikitea**	**37.40**	**105**	*e*S		**S**	**12 35 45.4**	**-2.9**
	comp=Z,181nm,26.8s							
RKT				*e*LQ			12 38 36.5	
	comp=Z,1μm,26.8s							
RKT				*e*LR		LR	12 40 04.3	
	comp=Z,12μm,29.5s,baz=273							
TOO	**Toolangi**	**39.92**	**233**	*e*P		**P**	**12 30 23.6**	**+0.5**
COEN	**Coen**	**40.70**	**269**	*e*P		**P**	**12 30 29.1**	**-0.7**
	comp=Z,57nm,1.4s,mb5.0							
COEN	**Coen**	**40.70**	**269**	P		**P**	**12 30 32.3**	**+2.5**
	comp=Z,18nm,1.6s,mb4.4							
STKA	**Stephens Creek**	**41.74**	**242**	*e*P		**P**	**12 30 36.7**	**-1.5**
	comp=Z,9.6nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**41.74**	**242**	P		**P**	**12 30 36.7**	**-1.5**
	comp=Z,5.2nm,0.6s,mb4.3,baz=86,slow=8.3,SNR=14							
STKA				LR		LR	12 46 44.5	
	comp=Z,2μm,18.0s,MS5.1,baz=75,slow=34							
STKA	**Stephens Creek**	**41.74**	**242**	*e*P		**P**	**12 30 38.7**	**+0.5**
	comp=Z,10nm,1.4s,mb4.3							
WB2	**Warramunga Arr**	**48.13**	**259**	*e*P		**P**	**12 31 27.0**	**-2.2**
WRAB	**Tennant Creek**	**48.13**	**259**	*e*P		**P**	**12 31 26.5**	**-2.7**
	comp=Z,27nm,1.2s,mb5.2							
WRAB	**Tennant Creek**	**48.13**	**259**	*e*P		**P**	**12 31 26.5**	**-2.7**
WRAB				pmax		pmax		
	comp=Z,27nm,1.2s,mb5.2							
WRAB	**Tennant Creek**	**48.13**	**259**	P		**P**	**12 31 25.2**	**-4.0**
WRA	**Warramunga Arr**	**48.14**	**259**	P		**P**	**12 31 27.1**	**-2.1**
	comp=Z,5.7nm,0.6s,mb4.8,baz=97,slow=5.8,SNR=51							
WRA				PcP		PcP	12 32 56.8	+0.3
	comp=Z,7.3nm,1.1s,baz=96,slow=3.8,SNR=3.8							
WRA				LR		LR	12 49 50.8	
	comp=Z,4μm,21.6s,MS5.4,baz=95,slow=34							
WRA	**Warramunga Arr**	**48.14**	**259**	P		**P**	**12 31 27.1**	**-2.2**
WRA							12 32 56.8	
ASAR	**Alice Springs**	**48.22**	**254**	P		**P**	**12 31 27.2**	**-2.5**
	comp=Z,27nm,1.0s,mb5.2,baz=89,slow=8.4,SNR=112							
ASAR				PcP		PcP	12 32 56.4	-0.4
	comp=Z,7.6nm,1.0s,baz=108,slow=3.6,SNR=4.7							
KAKA	**Kakadu**	**51.17**	**268**	*e*P		Px	12 31 35.9	
	comp=Z,15nm,0.6s							
FORT	**Forrest**	**53.21**	**245**	*e*P		**P**	**12 32 06.4**	**-1.0**
	comp=Z,52nm,1.0s,mb5.4							
SWI	**Sorong**	**55.78**	**282**	P		**P**	**12 32 25.7**	**-0.5**
	comp=Z,94nm,1.2s,mb5.7							
DRV	**Dumont d'Urvil**	**56.75**	**200**	P		**P**	**12 32 32.0**	**-0.3**
DRV				R			12 50 00.0	
BATI	**Baumata**	**60.12**	**268**	LR		LR	12 56 07.7	
	comp=Z,1μm,21.1s,MS5.0,baz=309,slow=33							
RPN	**Rapa Nui**	**60.41**	**111**	LR		LR	12 51 48.1	
	comp=Z,2μm,20.2s,MS5.3,baz=331,slow=29							
SBA	**Scott Base**	**60.56**	**184**	*e*P		**P**	**12 33 01.5**	**+2.8**
	comp=Z,56nm,1.7s,mb5.4							
VNDA	**Vanda**	**60.67**	**186**	P		**P**	**12 33 02.2**	**+2.8**
	comp=Z,7.7nm,1.2s,mb4.7,baz=5.4,slow=7.0,SNR=15							
CBIJ	**Chichi jima**	**61.36**	**316**	LR		LR	12 56 21.6	
	comp=Z,1μm,19.3s,MS5.1,baz=305,slow=33							
MBWA	**Marble Bar**	**61.53**	**255**	*e*P		**P**	**12 33 07.5**	**+1.3**
	comp=Z,58nm,1.5s,mb5.5							
MBWA	**Marble Bar**	**61.53**	**255**	P		**P**	**12 33 07.8**	**+1.6**
	comp=Z,34nm,2.5s,mb5.0							
KLBR	**Kellerberrin**	**61.99**	**243**	*e*P		**P**	**12 33 07.5**	**-1.7**
	comp=Z,26nm,1.2s,mb5.2							
MUN	**Mundaring**	**63.27**	**243**	*e*P		**P**	**12 33 15.9**	**-1.8**
KAPI	**Kappang**	**65.29**	**273**	LR		LR	12 59 35.6	
	comp=Z,774nm,21.8s,MS4.9,baz=103,slow=34							
CASY	**Casey**	**67.55**	**205**	*e*P		**P**	**12 33 45.5**	**+0.7**
	comp=Z,16nm,1.0s,mb5.0							
NSHM	**Saint Helena R**	**74.42**	**40**	*e*P		**P**	**12 34 25.4**	**-1.4**
PET	**Petropavlovsk**	**74.43**	**344**	*e*P		**P**	**12 34 31.8**	**+5.3**
PET				*e*PS			12 44 39.1	
PET				*e*SS		SS	12 48 33.2	-13
PET				pmax		pmax		
	comp=Z,100nm,8.0s							
PET				MLR		MLR		
	comp=Z,400nm,20.0s,MS4.7							
OSI	**Osito Adit**	**74.57**	**45**	*e*P		**P**	**12 34 28.1**	**+0.3**
	comp=Z,53nm,1.6s,mb5.2							
PETK	**Petropavlovsk-**	**74.76**	**343**	P		**P**	**12 34 28.1**	**-0.3**
	comp=Z,14nm,0.9s,mb4.9,baz=145,slow=11,SNR=6.9							
MWC	**Mount Wilson**	**74.80**	**46**	*e*P		**P**	**12 34 29.1**	**0.0**
	comp=Z,31nm,1.4s,mb5.0							
MWC	**Mount Wilson**	**74.80**	**46**	*e*P		**P**	**12 34 29.1**	**0.0**
MWC				pmax		pmax		
	comp=Z,31nm,1.4s,mb5.0							
YSS	**Yuzh-Sakhalins**	**75.18**	**331**	⇑*i*P		**P**	**12 34 31.2**	**+0.2**
YSS				pmax		pmax		
	comp=Z,64nm,1.3s,mb5.4							
LPIG	**La Paz**	**75.41**	**58**	LR		LR	12 59 40.9	
	comp=Z,890nm,20.3s,MS5.1,baz=67,slow=29							
PFO	**Pinyon Flat Ob**	**75.56**	**47**	P		**P**	**12 34 31.8**	**-1.7**
	comp=Z,9.0nm,1.2s,mb4.6,baz=216,slow=2.7,SNR=6.2							
PFO				LR		LR	12 59 48.4	
	comp=Z,991nm,20.5s,MS5.1,baz=32,slow=29							
PFO	**Pinyon Flat Ob**	**75.56**	**47**	P		**P**	**12 34 31.8**	**-1.7**
PFO				LR		LR	12 59 48.4	
OHCM	**Honcut**	**75.61**	**40**	*e*P		**P**	**12 34 33.1**	**-0.5**
WDC	**Whiskeytown Da**	**75.75**	**38**	*e*P		**P**	**12 34 33.1**	**-1.4**
	comp=Z,37nm,1.4s,mb5.1							
WDC	**Whiskeytown Da**	**75.75**	**38**	*e*P		**P**	**12 34 33.1**	**-1.3**
WDC				pmax		pmax		
	comp=Z,37nm,1.4s,mb5.1							
GSC	**Goldstone**	**76.26**	**45**	*e*P		**P**	**12 34 38.0**	**+0.6**
	comp=Z,19nm,1.2s,mb4.9							
GSC	**Goldstone**	**76.26**	**45**	*e*P		**P**	**12 34 38.0**	**+0.6**
GSC				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.9							
MTUM	**Tungsten Hills**	**76.26**	**43**	*e*P		**P**	**12 34 37.1**	**-0.3**
YBH	**Yreka Blue Hor**	**76.39**	**37**	P		**P**	**12 34 37.7**	**-0.3**
	comp=Z,8.7nm,0.9s,mb4.7,baz=170,slow=3.9,SNR=21							
YBH				LR		LR	13 00 20.0	
	comp=Z,855nm,21.1s,MS5.0,baz=148,slow=30							
GLA	**Glamis**	**76.41**	**48**	*e*P		**P**	**12 34 37.5**	**-0.9**
	comp=Z,44nm,1.5s,mb5.2							
GLA	**Glamis**	**76.41**	**48**	*e*P		**P**	**12 34 37.5**	**-0.8**
GLA				pmax		pmax		
	comp=Z,44nm,1.5s,mb5.2							
LBCM	**Butte Creek Ri**	**76.62**	**39**	P		**P**	**12 34 40.5**	**+1.1**
LTIM	**Timbered Crate**	**76.75**	**38**	P		**P**	**12 34 41.2**	**+1.2**
HUMO	**Hull Mountain**	**76.80**	**37**	*e*P		**P**	**12 34 40.3**	**0.0**
	comp=Z,22nm,1.2s,mb5.0							
NVAR	**Mina Array Bea**	**77.05**	**42**	P		**P**	**12 34 42.9**	**+1.1**
	comp=Z,16nm,1.1s,mb4.9,baz=225,slow=8.4,SNR=16							
NVAR	**Mina Array Bea**	**77.05**	**42**	P		**P**	**12 34 42.9**	**+1.1**
PAHR	**Pah Rah Range**	**77.12**	**41**	*e*P		**P**	**12 34 42.4**	**+0.2**
	comp=Z,59nm,1.5s,mb5.3							
KSRS	**Korea Array**	**77.21**	**317**	P		**P**	**12 34 42.1**	**-0.6**
	comp=Z,6.6nm,1.1s,mb4.5,baz=134,slow=7.2,SNR=10.0							
LDFC	**Landfair**	**77.29**	**46**	*e*P		**P**	**12 34 44.3**	**+1.0**
	comp=Z,66nm,1.3s,mb5.4							
TPH	**Tonopah**	**77.54**	**43**	*e*P		**P**	**12 34 44.7**	**+0.1**
	comp=Z,74nm,1.4s,mb5.4							
TPH	**Tonopah**	**77.54**	**43**	*e*P		**P**	**12 34 44.7**	**+0.1**
TPH				pmax		pmax		
	comp=Z,74nm,1.4s,mb5.4							
TPNV	**Topopah Spring**	**77.55**	**44**	*e*P		**P**	**12 34 45.7**	**+1.0**
	comp=Z,58nm,1.4s,mb5.3							
TPNV	**Topopah Spring**	**77.55**	**44**	*e*P		**P**	**12 34 45.7**	**+1.0**
TPNV				pmax		pmax		
	comp=Z,58nm,1.4s,mb5.3							
KDAK	**Kodiak Island**	**77.71**	**12**	LR		LR	13 01 33.5	
	comp=Z,892nm,20.3s,MS5.1,baz=143,slow=30							
MOD	**Modoc**	**77.90**	**38**	*e*P		**P**	**12 34 45.6**	**-0.9**
	comp=Z,46nm,1.3s,mb5.2							
SSE	**Sheshan**	**78.61**	**308**	P		**P**	**12 34 51.4**	**+0.7**
SSE				XP		sP	12 35 07.6	+2.8
SSE				S		S	12 44 43.3	-2.1
SSE				XS		sS	12 45 02.9	+0.4
SSE				SS		SS	12 49 45.3	-4.9
SSE				AMB		AMB		
	comp=Z,45nm,0.6s,mb5.6							
SSE				AMB		AMB		
	comp=Z,69nm,7.1s							
SSE				LR		LR		
	comp=N,398nm,20.6s,MS5.0							
SSE				LR		LR		
	comp=E,573nm,20.6s,MS5.0							
SSE				LR		LR		
	comp=Z,818nm,20.0s,MS5.1							
BMN	**Battle Mountai**	**78.89**	**41**	*e*P		**P**	**12 34 52.6**	**+0.6**
	comp=Z,47nm,1.3s,mb5.3							
BMN	**Battle Mountai**	**78.89**	**41**	*e*P		**P**	**12 34 52.7**	**+0.7**
BMN				pmax		pmax		
	comp=Z,47nm,1.3s,mb5.3							
TUC	**Tucson**	**78.95**	**51**	*e*P		**P**	**12 34 51.9**	**-0.6**
	comp=Z,26nm,1.4s,mb5.0							
TUC	**Tucson**	**78.95**	**51**	*e*P		**P**	**12 34 51.9**	**-0.6**
TUC				pmax		pmax		
	comp=Z,26nm,1.4s,mb5.0							
WVOR	**Wild Horse Val**	**79.20**	**39**	*e*P		**P**	**12 34 53.8**	**+0.1**
	comp=Z,58nm,1.6s,mb5.3							
WVOR	**Wild Horse Val**	**79.20**	**39**	*e*P		**P**	**12 34 53.8**	**+0.1**
WVOR				pmax		pmax		
	comp=Z,58nm,1.6s,mb5.3							
TDL	**Tradedollar La**	**79.61**	**34**	P		**P**	**12 34 56.9**	**+1.1**
CCUT	**Cedar City**	**79.81**	**45**	*e*P		**P**	**12 34 58.2**	**+1.1**
ARUT	**Antelope Range**	**79.88**	**45**	*e*P		**P**	**12 34 58.0**	**+0.5**
HABR	**Khabarovsk**	**79.93**	**329**	*e*P		**P**	**12 34 54.0**	**-3.4**
HABR				*e*		pP	12 35 02.3	-5.5
HABR				*e**PP		pP	12 35 05.8	-2.0
HABR				*e*PPP			12 39 45.5	
HABR				S		S	12 44 54.5	-4.2
HABR				*e*PS			12 45 09.6	
HABR				*e*			12 45 16.6	
WUAZ	**Wupatki**	**80.12**	**48**	*e*P		**P**	**12 34 59.5**	**+0.7**
	comp=Z,47nm,1.5s,mb5.2							
ELK	**Elko**	**80.31**	**42**	P		**P**	**12 34 59.8**	**+0.1**
	comp=Z,13nm,1.1s,mb4.8,baz=212,slow=6.2,SNR=21							
ELK	**Elko**	**80.31**	**42**	*e*P		**P**	**12 34 59.6**	**-0.1**
MDJ	**Mudanjiang**	**80.38**	**323**	P		**P**	**12 34 59.9**	**-0.1**
MDJ				AP		pP	12 35 09.8	-0.6
MDJ				XP		sP	12 35 13.5	-0.7
MDJ				PP		PP	12 38 01.9	-1.6
MDJ				AMB		AMB		
	comp=Z,8.0nm,1.5s,mb4.4							
MDJ				AMB		AMB		
	comp=Z,356nm,6.6s							
MDJ				LR		LR		
	comp=N,593nm,27.2s,MS4.9							
MDJ				LR		LR		
	comp=E,518nm,25.4s,MS4.9							
MDJ				LR		LR		
	comp=Z,892nm,30.9s							
NJ2	**Nanjing**	**80.81**	**308**	*e*P		**P**	**12 35 03.3**	**+0.7**
NJ2				AMB		AMB		
	comp=Z,20nm,0.6s,mb5.2							
JCW	**Jim Creek**	**80.95**	**33**	*e*P		**P**	**12 35 01.9**	**-1.0**
RSW	**Rattlesnake Hi**	**81.06**	**35**	*e*P		**P**	**12 35 03.0**	**-0.6**
HAWA	**Hanford**	**81.09**	**35**	*e*P		**P**	**12 35 03.9**	**+0.1**
	comp=Z,47nm,1.7s,mb5.1							
MSU	**Marysvale**	**81.11**	**45**	*e*P		**P**	**12 35 04.9**	**+0.9**
RPW	**Rockport**	**81.32**	**33**	*e*P		**P**	**12 35 00.3**	**-4.6**
ETW	**Entiat**	**81.41**	**34**	*e*P		**P**	**12 35 03.4**	**-2.0**
BMO	**Blue Mountains**	**81.41**	**37**	*e*P		**P**	**12 35 04.8**	**-0.7**
	comp=Z,29nm,1.4s,mb5.0							
LNOR	**Lincton Mounta**	**81.46**	**36**	*e*P		**P**	**12 35 04.6**	**-1.1**
DUG	**Dugway**	**81.57**	**43**	*e*P		**P**	**12 35 06.9**	**+0.5**
	comp=Z,22nm,1.4s,mb4.9							
DUG	**Dugway**	**81.57**	**43**	*e*P		**P**	**12 35 06.9**	**+0.4**
DUG				pmax		pmax		
	comp=Z,22nm,1.4s,mb4.9							
WTV	**Waterville**	**81.67**	**34**	P		**P**	**12 35 07.1**	**+0.3**
KLR	**Kul'dur**	**82.07**	**328**	*e*P		**P**	**12 35 05.5**	**-3.4**
OD2	**Odessa Site #2**	**82.14**	**35**	*e*P		**P**	**12 35 08.8**	**-0.5**
MPU	**Maple Canyon**	**82.25**	**44**	*e*P		**P**	**12 35 11.7**	**+1.7**
	comp=Z,30nm,1.3s,mb5.1							
PMSA	**Palmer Station**	**82.28**	**156**	LR		LR	13 03 02.4	
	comp=Z,438nm,20.7s,MS4.8,baz=146,slow=29							
CN2	**Changchun**	**82.34**	**321**	*e*P		**P**	**12 35 11.4**	**+1.0**
CN2				AMB		AMB		
	comp=Z,20nm,1.3s,mb4.9							
CN2				AMB		AMB		
	comp=Z,370nm,6.0s							
CN2				LR		LR		
	comp=N,400nm,20.0s,MS5.0							
CN2				LR		LR		
	comp=E,430nm,20.0s,MS5.0							
CN2				LR		LR		
	comp=Z,310nm,21.0s,MS4.7							
HLID	**Hailey**	**82.39**	**40**	*e*P		**P**	**12 35 10.5**	**-0.2**
	comp=Z,50nm,1.4s,mb5.2							
SNY	**Shenyang**	**82.42**	**318**	⇑P		**P**	**12 35 12.4**	**+1.5**
SNY				AMB		AMB		
	comp=Z,23nm,1.8s,mb4.8							
HVU	**Hansel Valley**	**82.44**	**42**	*e*P		**P**	**12 35 10.7**	**-0.3**
	comp=Z,22nm,1.2s,mb5.0							
HVU	**Hansel Valley**	**82.44**	**42**	*e*P		**P**	**12 35 10.7**	**-0.3**
HVU				pmax		pmax		
	comp=Z,22nm,1.2s,mb5.0							
SRU	**San Rafael**	**82.52**	**45**	*e*P		**P**	**12 35 12.4**	**+1.0**
	comp=Z,38nm,1.3s,mb5.3							
SRU	**San Rafael**	**82.52**	**45**	*e*P		**P**	**12 35 12.4**	**+0.9**
SRU				pmax		pmax		
	comp=Z,39nm,1.3s,mb5.3							
LAZ	**Ladron**	**82.63**	**50**	*e*P		**P**	**12 35 12.9**	**+0.7**
LENM	**Lemitar**	**82.64**	**51**	*e*P		**P**	**12 35 11.7**	**-0.5**
JLU	**Jordanelle**	**82.67**	**43**	*e*P		**P**	**12 35 12.0**	**-0.2**
DAU	**Daniels Canyon**	**82.70**	**43**	*e*P		**P**	**12 35 13.6**	**+1.2**
QIZ	**Qiongzhong**	**82.80**	**293**	P		**P**	**12 35 12.4**	**-0.9**
QIZ				S		S	12 45 27.0	-2.7
QIZ				LR		LR		
	comp=Z,1μm,26.1s,MS5.2							
BNM	**Barren Site**	**82.89**	**51**	*e*P		**P**	**12 35 14.3**	**+0.8**
LPM	**Los Pinos Moun**	**82.96**	**51**	*e*P		**P**	**12 35 15.0**	**+1.1**
MVCO	**Mesa Verde**	**82.98**	**47**	*e*P		**P**	**12 35 13.8**	**-0.1**
	comp=Z,20nm,1.2s,mb5.0							
TXAR	**Lajitas Array**	**83.04**	**56**	P		**P**	**12 35 14.4**	**0.0**
	comp=Z,4.5nm,1.0s,mb4.5,baz=216,slow=5.7,SNR=14							
HWUT	**Hardware Ranch**	**83.12**	**42**	*e*P		**P**	**12 35 13.6**	**-0.9**
	comp=Z,16nm,1.2s,mb4.9							
PV10	**Paradox Valley**	**83.17**	**46**	*e*P		**P**	**12 35 14.9**	**+0.1**
PV01	**Paradox Valley**	**83.37**	**47**	*e*P		**P**	**12 35 14.7**	**-1.2**
ANMO	**Albuquerque**	**83.38**	**50**	*e*P		**P**	**12 35 16.4**	**+0.4**
	comp=Z,28nm,1.2s,mb5.2							
ANMO	**Albuquerque**	**83.38**	**50**	*e*P		**P**	**12 35 16.4**	**+0.4**
ANMO				pmax		pmax		
	comp=Z,28nm,1.2s							
NEW	**Newport**	**83.52**	**35**	*e*P		**P**	**12 35 16.1**	**-0.3**
AHID	**Auburn Hatcher**	**84.01**	**42**	*e*P		**P**	**12 35 19.6**	**+0.5**
	comp=Z,38nm,1.2s,mb5.4							
MCMT	**McKenzie Canyo**	**84.02**	**39**	*e*P		**P**	**12 35 18.4**	**-0.6**
RRI2	**Red Ridge**	**84.17**	**41**	*e*P		**P**	**12 35 20.1**	**+0.2**
	comp=Z,58nm,1.1s,mb5.6							
DCID1	**Drake Creek**	**84.39**	**41**	*e*P		**P**	**12 35 21.7**	**+0.8**
	comp=Z,56nm,1.1s,mb5.6							
DLMT	**Dillon**	**84.46**	**39**	*e*P		**P**	**12 35 20.4**	**-0.8**
	comp=Z,34nm,1.4s,mb5.3							
REDW	**Red Top Meadow**	**84.47**	**41**	*e*P		**P**	**12 35 20.4**	**-1.0**
	comp=Z,64nm,1.3s,mb5.6							
TPAW	**Teton Pass**	**84.48**	**41**	*e*P		**P**

GYA XP sP 12 35 55.8 +1.3
GYA PP PP 12 39 08.6 +0.6
GYA SKS 12 46 01.3
GYA S S 12 46 19.4 -3.6
GYA XS sS 12 46 37.1 -3.2
GYA AMB AMB
comp=Z,30nm,0.9s,mb5.5
GYA AMB AMB
comp=Z,140nm,8.0s
GYA LR LR
comp=N,490nm,20.9s,MS5.0
GYA LR LR
comp=E,370nm,21.2s,MS5.0
GYA LR LR
comp=Z,510nm,20.0s,MS4.9
EDM Edmonton 88.32 32 *e*P **P 12 35 39.6 -0.4**
HIA Hailar 88.57 323 *e*P **P 12 35 41.8 +0.5**
comp=Z,32nm,1.4s,mb5.5
HIA Hailar 88.57 323 *e*P **P 12 35 41.8 +0.5**
HIA pmax pmax
comp=Z,32nm,1.4s
PLCA Paso Flores 88.63 132 P **P 12 35 44.1 +2.1**
comp=Z,5.5nm,1.1s,mb4.8,baz=262,slow=7.1,SNR=3.3
RSSD Black Hills 89.17 43 *e*P **P 12 35 43.8 -0.5**
comp=Z,11nm,1.0s,mb5.2
RSSD Black Hills 89.17 43 *e*P **P 12 35 43.8 -0.5**
RSSD pmax pmax
comp=Z,11nm,1.0s,mb5.1
XAN Xi'an 89.20 306 P **P 12 35 46.4 +1.7**
XAN AP pP 12 35 58.0 +2.8
XAN XP sP 12 36 01.5 +2.6
XAN SKS 12 46 14.6
XAN AMB AMB
comp=Z,14nm,1.3s,mb5.1
XAN AMB AMB
comp=Z,148nm,6.6s
XAN LR LR
comp=N,270nm,19.2s
XAN LR LR
comp=E,414nm,24.6s
XAN LR LR
comp=Z,803nm,31.5s
HKT Hockley 89.56 58 *e*P **P 12 35 45.8 -0.7**
comp=Z,72nm,1.7s,mb5.7
HKT Hockley 89.56 58 *e*P **P 12 35 45.8 -0.6**
HKT pmax pmax
comp=Z,71nm,1.7s,mb5.7
SYO Syowa Base 89.81 192‖ *e*P **P 12 35 44.2 -2.7**
SYO Syowa Base 89.81 192‖ *e*P **P 12 35 46.5 -0.4**
HHC Hu-ho-hao-te 89.94 313 *e*P **P 12 35 49.8 +1.9**
HHC AP pP 12 36 00.9 +2.5
HHC XP sP 12 36 05.6 +3.4
HHC PP PP 12 39 24.3 +3.0
HHC SKS 12 46 15.4
HHC S S 12 46 35.9 -2.5
HHC XS sS 12 46 52.3 -3.5
HHC AMB AMB
comp=Z,31nm,1.4s,mb5.5
HHC AMB AMB
comp=Z,273nm,6.3s
HHC LR LR
comp=N,327nm,15.5s,MS5.0
HHC LR LR
comp=E,326nm,19.0s,MS5.0
HHC LR LR
comp=Z,589nm,22.6s,MS5.0
CLNS Chul'man 89.95 331 *e*P **P 12 35 47.7 +0.1**
CLNS *e* 12 35 54.0
CLNS *e*S SKSac 12 46 15.2 -0.4
CLNS pmax pmax
comp=Z,34nm,1.1s,mb5.6
CLNS pmax pmax
comp=N,15nm,1.0s
CLNS pmax pmax
comp=E,13nm,1.1s
CLNS pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS pmax pmax
comp=N,8.0nm,1.4s
CLNS smax
comp=N,378nm,19.0s
CLNS smax
comp=E,178nm,18.4s
CLNS MLR MLR
comp=E,68nm,17.0s,MS4.7
CLNS MLR MLR
comp=Z,238nm,17.0s,MS4.7
CLNS MLR MLR
comp=N,223nm,15.0s,MS4.7
SNAA Sanae 90.37 177 *e*P **P 12 35 45.3 -4.2**
SNAA *e* 12 35 47.0
SNAA *e* pP 12 35 54.8 -5.2
SNAA Sanae 90.37 177 *e*P **P 12 35 45.7 -3.8**
comp=N,27nm,1.3s,mb5.4
VNA3 Neumayer Olymp 90.37 175 *e*P **P 12 35 50.1 +0.6**
VNA3 *e* 12 35 51.4
VNA3 *e* pP 12 35 59.0 -1.0
VNA3 *e* 12 36 05.3
VNA2 Neumayer--Watz 90.85 176 *e*P **P 12 35 52.8 +1.1**
baz=206,slow=2.9
VNA2 *e* 12 35 54.2
VNA2 *e* pP 12 36 01.7 -0.5
VNA2 *e* 12 36 08.9
DGMT Dagmar 91.00 39 *e*P **P 12 35 53.1 +0.5**
comp=N,51nm,1.1s,mb5.8
YAK Yakutsk 91.04 337⇑ *i*P **P 12 35 50.5 -2.0**
YAK pmax pmax
comp=Z,24nm,1.1s,mb5.4
VNA1 Neumayer--Stat 91.06 175 *e*P **P 12 35 54.5 +1.8**
VNA1 *e* 12 35 55.6
VNA1 *e* pP 12 36 02.8 -0.4
VNA1 *e* 12 36 10.0
KMI Kunming 91.09 296 P **P 12 35 53.9 +0.2**
KMI AP pP 12 36 04.4 +0.2
KMI XP sP 12 36 08.3 +0.3
KMI PP PP 12 39 30.8 0.0
KMI SKS 12 46 21.8
KMI S S 12 46 44.9 -4.8
KMI XS sS 12 47 03.0 -4.1
KMI AMB AMB
comp=Z,13nm,2.0s,mb4.9
KMI AMB AMB
comp=Z,249nm,4.0s
KMI LR LR
comp=N,567nm,24.9s,MS5.0
KMI LR LR
comp=E,539nm,26.4s,MS5.0
KMI LR LR
comp=Z,992nm,26.4s,MS5.1
NATX Nacogdoches 91.14 57 *e*P **P 12 35 54.8 +1.0**
comp=Z,277nm,2.4s,mb6.2
CD2 Chengdu 92.16 302 *e*P **P 12 36 02.0 +3.5**
CD2 AP pP 12 36 11.3 +2.3
CD2 XP sP 12 36 16.3 +3.5
CD2 PP PP 12 39 44.8 +5.6
CD2 SKS 12 46 30.3
CD2 S S 12 46 59.0 -0.1
CD2 XS sS 12 47 15.8 -0.8
CD2 AMB AMB
comp=Z,30nm,1.6s,mb5.4
CD2 AMB AMB
comp=Z,150nm,5.8s
CD2 LR LR
comp=N,280nm,18.2s,MS5.0
CD2 LR LR
comp=E,310nm,14.8s,MS5.0
CD2 LR LR
comp=Z,200nm,16.2s,MS4.7
CMAR Chiang Mai Arr 92.31 289 P **P 12 35 59.5 0.0**
comp=Z,6.2nm,1.1s,mb4.8,baz=109,slow=2.5,SNR=17
CMAR Chiang Mai Arr 92.31 289 *i*P **P 12 36 01.5 +2.0**
CMAR pmax pmax
comp=Z,6.0nm,1.1s
NNA Nana 93.60 104 LR LR 13 07 52.5
comp=Z,456nm,20.4s,MS4.9,baz=160,slow=29
ATAH Atahualpa 93.75 99 LR LR 13 07 58.1
comp=Z,831nm,20.7s,MS5.2,baz=270,slow=29
LZH Lanzhou 93.82 307 *e*P **P 12 36 08.9 +2.9**
LZH AP pP 12 36 20.0 +3.4
LZH XP sP 12 36 23.0 +2.7
LZH PP PP 12 39 57.0 +4.9
LZH SKS 12 46 39.3
LZH *e*S S 12 47 12.0 -1.6
LZH XS sS 12 47 29.0 -2.0
LZH AMB AMB
comp=Z,39nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,150nm,4.6s
LZH LR LR
comp=N,710nm,17.3s
LZH LR LR
comp=Z,1µm,18.6s,MS5.3
CFAA Coronel Fontan 93.95 125 LR LR 13 08 22.6
comp=Z,79nm,21.9s,MS4.1,baz=338,slow=29
UALR University of 93.98 55 *e*P **P 12 36 08.1 +1.2**
comp=Z,23nm,1.1s,mb5.5
ULN Ulaanbaatar 95.59 319⇑ *i*P **P 12 36 14.2 +0.3**
SONM Songino Array 96.00 318 P **P 12 36 16.6 +0.8**
comp=Z,1.2nm,1.2s,mb4.2,baz=49,slow=4.4,SNR=4.3
LVC Limon Verde 96.94 116 LR LR 13 09 44.6
comp=Z,937nm,21.6s,MS5.2,baz=162,slow=29
TIXI Tiksi 97.19 345⇑ *i*P **P 12 36 19.7 -0.9**
TIXI pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
GTA Gaotai 97.89 309 *e*P **P 12 36 25.3 +0.8**
GTA AP pP 12 36 35.3 +0.3
GTA XP sP 12 36 39.9 +1.1
GTA PP PP 12 40 25.5 +2.0
GTA SKS 12 46 58.8
GTA S S 12 47 43.8 -4.8
GTA XS sS 12 48 02.1 -4.0
GTA SS SS 12 54 26.9 -3.9
GTA AMB AMB
comp=Z,3.0nm,1.6s,mb4.6
GTA AMB AMB
comp=Z,74nm,8.1s
GTA LR LR
comp=N,227nm,19.8s
GTA LR LR
comp=E,552nm,26.1s
GTA LR LR
comp=Z,832nm,23.7s,MS5.2
WMQ Urumqi 107.70 311 *e*PDIF Pdif 12 37 08.0 0.0
WMQ PP PP 12 41 38.0 +1.1
WMQ PP PP
comp=Z,45nm,8.0s
WMQ LR LR
comp=N,245nm,20.0s,MS5.1
WMQ LR LR
comp=E,452nm,20.0s,MS5.1
WMQ LR LR
comp=Z,447nm,20.0s,MS5.0
ZALV Zalesovo Beam 110.54 322 PKiKP PKiKP 12 41 20.4 -0.4
MKAR Makanchi Array 111.79 314 PKiKP PKiKP 12 41 22.8 -0.6
comp=Z,1.4nm,1.0s,baz=111,slow=0.8,SNR=4.2
KURK Kurchatov 114.31 318 PKP PKiKP 12 41 27.3 -0.7
comp=Z,1.1nm,0.8s,baz=103,slow=2.5,SNR=5.5
KURK Kurchatov 114.31 318⇑ *i*PKIKP PKiKP 12 41 27.9 -0.2
BVAR Borovoye Array 119.19 321 PKP PKPdf 12 41 37.6 +0.2
comp=Z,2.1nm,0.7s,baz=104,slow=2.0,SNR=8.4
KBL Kabul 121.45 300 *e*PKPdf PKPdf 12 41 43.4 +1.0
ARU Arti 124.91 327 *i* PKIKP PKPdf 12 41 48.3 0.0
ARU 12 48 47.7
ARU SS SS 13 00 20.2 -9.5
ARCES ARCESS Array B 127.01 351 PKP PKPdf 12 41 50.2 -1.7
comp=Z,11nm,1.0s,baz=1.9,slow=3.6,SNR=6.0
AKTK Aktyubinsk 127.27 320 PKP PKPdf 12 41 53.5 +0.5
AKTO Aktyubinsk 127.27 320 PKP PKPdf 12 41 53.5 +0.5
comp=Z,1.3nm,0.7s,baz=38,slow=3.1,SNR=2.8
OBN Obninsk 135.99 335⇑ *i*PKIKP PKPdf 12 42 11.5 +2.2
OBN pmax pmax
comp=Z,29nm,1.7s
KIV Kislovodsk 139.39 318 *i* PKIKP PKPdf 12 42 13.5 -2.4
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,300nm,25.0s,MS4.9
MSL Mosul 142.06 307 *ex* x 12 42 18.0
AKASG Malin Array Be 142.25 335 PKP PKPdf 12 42 18.3 -2.6
comp=Z,2.0nm,0.7s,baz=32,slow=2.7,SNR=4.6
AKASG Malin Array Be 142.25 335 PKP PKPdf 12 42 18.3 -2.6
KEMA Kemaliye 144.33 313⇑ *i*P PKPdf 12 42 23.1 -1.8
LVV L'vov 144.90 339 *e*PKHKP PKPdf 12 42 24.8 -0.8
AKCD Akcadag 145.16 312⇑ *i*P PKPbc 12 42 27.6 +1.6
IBBN Ibbenburen 145.73 357 *e*PKPbc PKPdf 12 42 25.7 -1.2
GZT Gaziantep 145.83 311⇑ *i*P PKPdf 12 42 27.7 +0.2
OJC Ojcow 145.85 343 *e*PKP PKPbc 12 42 28.7 +0.9
CLZ Clausthal 146.02 354 *e*PKPbc PKPdf 12 42 26.6 -0.8
PINB Pinarbasi 146.05 314⇑ *i*P PKPab 12 42 30.0 +0.6
WTSB Winterswijk 146.10 358 *e*PKP PKPbc 12 42 28.6 +0.1
comp=Z,94nm,1.6s
KSP Ksiaz 146.11 348 *e*PKP PKPbc 12 42 29.5 +1.0
KSP Ksiaz 146.11 348 *e*PKP2 PKPab 12 42 29.4 +0.3
CTKT Corum 146.12 318⇑ *i*P PKPbc 12 42 29.8 +0.9
STHS Stebnicka Huta 146.15 341 *e*PKP PKPbc 12 42 29.1 +0.4
CLL Collm 146.23 351 *e*PKP PKPdf 12 42 28.0 +0.2
CLL *i* PKP PKPdf 12 42 28.8 +1.0
CLL *i* 12 42 31.5
CLL LR LR
comp=Z,400nm,23.5s,MS5.1
CLL Collm 146.23 351 *e*PKP2 PKPdf 12 42 28.0 +0.2
CLL *i* 12 42 28.8
CLL pmax pmax
comp=Z,65nm,1.3s
CLL MLR MLR
comp=Z,400nm,23.5s,MS5.1
CLL Collm 146.23 351 *e*PKPbc PKPdf 12 42 27.0 -0.8
CLL Collm 146.23 351 *i* PKPdf PKPdf 12 42 27.2 -0.6
CLL *i* PKPbc PKPbc 12 42 28.4 -0.5
comp=Z,65nm,1.3s
CLL *i* PKiKP PKiKP 12 42 31.5 -0.5
CLL *i* x x 12 42 35.2
KOLS Kolonicke sedl 146.25 340 *e*PKP PKPbc 12 42 29.3 +0.3
BUR08 Bucovina Ar. S 146.28 336 *e*PKPbc PKPbc 12 42 29.3 +0.1
BURAR Bucovina Array 146.30 336 *i*P PKPdf 12 42 28.6 +0.6
NIE Niedzica 146.43 342 *e*PKP PKPab 12 42 30.1 -0.3
UPC Upice 146.48 348 *e*PKP PKPab 12 42 30.2 -0.4
UPC *ex* x 12 42 33.9
UZH Uzhgorod 146.51 340⇑ *i*PKIKP PKPab 12 42 30.5 -0.3
BRG Berggiesshubel 146.51 350 *e*PKIKP PKPbc 12 42 29.5 -0.2
BRG *i* 12 42 36.2
BRG pmax pmax
comp=Z,30nm,1.4s
BRG pmax pmax
comp=Z,62nm,1.6s
BRG Berggiesshubel 146.51 350 *e*PKPbc PKPdf 12 42 28.3 0.0
BRG Berggiesshubel 146.51 350 *e*PKP PKPbc 12 42 29.5 -0.2
comp=Z,49nm,1.4s
BRG *i* 12 42 36.2
comp=Z,103nm,1.6s
CRVS Cervenica-Dubn 146.54 341 *e*PKP PKiKP 12 42 33.5 +0.7
DPC Dobruska-Polom 146.57 347 *e*PKP PKPab 12 42 30.4 -0.5
DPC *ex* x 12 42 34.6
OKC Ostrava-Krasne 146.63 345 *e*PKP PKPbc 12 42 30.8 +0.7
PVCC Panska Ves 146.74 349 *e*PKP PKPab 12 42 31.6 0.0
MORC Moravsky Berou 146.83 346 *e*PKPbc PKPbc 12 42 30.7 0.0
MORC Moravsky Berou 146.83 346⇑ *i*P PKPbc 12 42 30.8 +0.1
BMR Baia Mare 146.90 337 P PKPab 12 42 33.5 +1.1
VRI Vrincioaia 147.05 332⇑ P PKPab 12 42 32.4 -0.5
VRI Vrincioaia 147.05 332⇑ *i*P PKPab 12 42 32.4 -0.6
AVNT Avonos 147.05 315⇑ *i*P PKPdf 12 42 30.3 +0.7
UBBA Unterbreizbach 147.06 355 *e*PKPbc PKPbc 12 42 31.3 0.0
MOX Moxa 147.07 353 *e*PKP PKPab 12 42 32.4 -0.4
comp=Z,103nm,1.8s
MOX Moxa 147.07 353 *e*PKPbc PKPbc 12 42 31.2 -0.1
TANN Tannenbergstha 147.18 352 *e*PKPbc PKPbc 12 42 31.1 -0.5
PRU Pruhonice 147.26 349 *e*PKP PKPbc 12 42 32.4 +0.5
PRU AMS AMS 13 52 10.0
comp=Z,700nm,23.3s
HGN Heimansgroeve 147.32 359 *e*PKP PKPdf 12 42 29.9 +0.3
comp=Z,59nm,1.8s
BR131 Keskin Array S 147.35 317 *e*PKP PKPbc 12 42 32.1 -0.4
BRTR Keskin Array B 147.35 317 PKPbc PKPbc 12 42 32.5 0.0
comp=Z,20nm,1.1s,baz=128,slow=2.0,SNR=33
NKC Novy Kostel 147.36 352 *e*PKP PKPdf 12 42 30.2 +0.5
NKC *ex* x 12 42 35.3
HARR Harsova 147.38 329⇑ P PKPab 12 42 35.8 +1.5
HARR Harsova 147.38 329⇑ *i*P PKPab 12 42 35.8 +1.5
MEM Membach 147.48 359 PKP PKPbc 12 42 32.7 +0.3
VRAC Vranov 147.49 346 PKPbc PKPbc 12 42 33.2 +0.6
comp=Z,11nm,0.9s,baz=9.4,slow=3.6,SNR=10.0
VRAC Vranov 147.49 346 PKP2 PKPab 12 42 35.4 +0.8
VRAC Vranov 147.49 346⇑ *i*P PKPab 12 42 35.3 +0.7
SNF Seneffe 147.57 1 PKP PKPbc 12 42 33.4 +0.7
MANZ Manzenberg 147.65 352 *e*PKPbc PKPbc 12 42 31.7 -1.2
BCLA Clavier 147.67 0 PKP PKPab 12 42 34.8 -0.5
VYHS Vyhne 147.68 343 *e*PKP PKPbc 12 42 34.1 +1.0
MLR Muntele Rosu 147.69 332 PKPbc PKPbc 12 42 34.1 +0.9
comp=Z,23nm,1.1s,baz=4.9,slow=1.2,SNR=8.3
MLR Muntele Rosu 147.69 332 PKP2 PKPab 12 42 34.6 -0.9
MLR Muntele Rosu 147.69 332⇑ *i*P PKPab 12 42 34.2 -1.3
TREC Trest 147.74 348 *e*PKP PKPbc 12 42 32.4 -0.8
TNS Taunus Mts 147.78 356 *e*PKPbc PKPbc 12 42 33.3 0.0
ANTO Ankara 147.81 318 *e*PKPbc PKPbc 12 42 32.8 -0.9
ANTO Ankara 147.81 318 PKP2 PKPab 12 42 35.8 -0.4
ANTO Ankara 147.81 318⇑ *i*P PKPab 12 42 35.6 -0.6
ROTZ Rotzenmuhle 147.85 352 *e*PKPbc PKPbc 12 42 33.0 -0.5
PSZ Piszkesteto 147.90 341 *e*PKPbc PKPbc 12 42 34.0 +0.4
PSZ Piszkesteto 147.90 341‖ *e*pPKP PKPbc 12 42 34.6 +0.9
PSZ Piszkesteto 147.90 341⇑ *i*P PKPbc 12 42 34.7 +1.0
DRGR 147.94 337 PKP2 PKPbc 12 42 35.2 +1.4
DRGR 147.94 337⇑ *i*P PKPbc 12 42 34.3 +0.5
GIVF Givet 147.99 1 *e*PKP1 PKPbc 12 42 33.0 -0.9
comp=Z,205nm,1.7s
DOU Dourbes 147.99 1 PKP PKPbc 12 42 34.6 +0.8
BAIF Baives 148.02 1 *e*PKP1 PKPbc 12 42 33.4 -0.5
comp=Z,240nm,1.7s
GRF Grafenberg Arr 148.05 353 *e*PKIKP PKPdf 12 42 32.4 +1.5
GRF MLR MLR
comp=Z,500nm,18.8s,MS5.3
GRF Grafenberg Arr 148.05 353 *e*PKPbc PKPdf 12 42 32.4 +1.5
VOIR 148.12 333 PKP2 PKPab 12 42 36.2 -1.0
VOIR 148.12 333⇑ *i*P PKPab 12 42 36.0 -1.2
ABH Alteburg 148.16 357 PKP PKPab 12 42 37.6 +0.4
MODS Modra-Piesok 148.20 345 *e*PKP PKPdf 12 42 32.9 +1.7
MODS *e* 12 42 36.1
KHC Kasperske Hory 148.26 350 *e*PKP PKPdf 12 42 33.1 +1.9
KHC *ex* x 12 42 36.4
KHC AMS AMS 13 59 40.0
comp=Z,500nm,18.6s
WET Wettzell 148.36 351 *e*PKPbc PKPbc 12 42 34.1 -0.8
TOD Tromm 148.37 356 PKP PKPbc 12 42 35.8 +0.9
ZST Bratislava 148.41 345 *e*PKP PKPbc 12 42 37.6 +2.6
WLF Walferdange 148.42 359 PKP PKPbc 12 42 36.4 +1.4
WLF Walferdange 148.42 359 *e*PKP2 PKPbc 12 42 36.1 +1.1
WLF Walferdange 148.42 359 *e*PKPbc PKPbc 12 42 34.3 -0.7
GEC2 GERESS Array S 148.51 349 *e*PKPbc PKPbc 12 42 35.1 -0.1
GEC2 GERESS Array S 148.51 349 *e*PKPbc PKPbc 12 42 34.1 -1.2
GERES GERESS Array B 148.51 349 PKPbc PKPbc 12 42 33.9 -1.3
comp=Z,25nm,1.2s,baz=96,slow=1.3,SNR=18
BUD Budapest 148.55 342 *e*PKP PKPbc 12 42 36.2 +0.8
KTD Kalmit 148.70 357 PKP PKPab 12 42 39.3 -0.1
CONA Conrad Observa 148.96 346⇑ *i*PKiKP PKiKP 12 42 37.9 +0.2
comp=Z,57nm,1.6s
CSNA Conrad Observa 148.96 346⇑ *i*PKiKP PKiKP 12 42 37.9 +0.2
comp=Z,37nm,1.1s
FLN La Foliniere 148.97 8 *e*PKP1 PKPbc 12 42 35.5 -0.9
comp=Z,192nm,1.5s
FLN *e*MLR MLR
comp=Z,555nm,22.8s,MS5.0
FLN La Foliniere 148.97 8 *e*PKIKP PKPbc 12 42 35.5 -0.9
FLN MLR MLR
comp=Z,550nm,22.8s,MS5.3
KDHN Kadinhani 149.00 317⇑ *i*P PKPbc 12 42 37.4 +0.5
SOP Sopron 149.02 345 pPKP PKPbc 12 42 38.2 +1.6
LANF Langenberg 149.05 357 PKP PKPbc 12 42 37.6 +1.0
ESKT Eskisehir 149.23 319⇑ *i*P PKPbc 12 42 36.5 -0.9
GRR Gorron 149.28 8 *e*PKP1 PKPbc 12 42 36.5 -0.7
BZS Buzias 149.34 337⇑ P PKPbc 12 42 37.4 -0.1
BZS Buzias 149.34 337⇑ *i*P PKPbc 12 42 37.3 -0.2
MOA Molln 149.37 348⇑ *i*PKiKP PKiKP 12 42 38.5 -0.1
comp=Z,45nm,1.4s
MEZF Maizieres J'vi 149.59 0 *e*PKP1 PKPbc 12 42 37.7 -0.3
comp=Z,238nm,1.6s
CDF Champ du Feu 149.64 357 *e*PKP1 PKPbc 12 42 37.6 -0.5
comp=Z,151nm,1.4s
BOLV Bolvadin 149.64 318⇑ *i*P PKPbc 12 42 39.9 +1.4
BFO Black Forest 149.67 356 *e*PKPbc PKPbc 12 42 39.0 +0.8
BFO Black Forest 149.67 356 *e*PKPbc PKPbc 12 42 37.0 -1.2
ARSA Arzberg 149.67 346⇑ *i*PKiKP PKiKP 12 42 39.2 0.0
comp=Z,28nm,1.3s
RJOB Jochberg 149.74 350 *e*PKPbc PKPbc 12 42 39.2 +0.8
PKSM Moragy 149.81 342 PKP2 PKPbc 12 42 39.9 +1.3
PKSM Moragy 149.81 342‖ *i*P PKPbc 12 42 39.2 +0.6
ECH Echery 149.84 358 PKP PKPbc 12 42 41.7 +3.1
SPAK Spaichingen-Ko 149.86 355 PKP PKPbc 12 42 39.7 +1.0
THEF They Montfort 149.86 359 PKP PKPbc 12 42 40.0 +1.3
ULDT Uludag 149.88 322⇑ *i*P PKPbc 12 42 36.5 -2.4
CSS Prodhromos 149.96 310 *e*PKPbc PKPbc 12 42 39.1 -0.3
HAU Haudompre 150.08 359 *e*PKP1 PKPbc 12 42 38.6 -0.6
comp=Z,127nm,1.5s
FELD Feldberg im Sc 150.14 356 PKP PKPbc 12 42 40.4 +1.0
MOF Molkenrain 150.21 358 PKP PKPbc 12 42 40.6 +1.1
HINF Hinteralfeld 150.25 358 *e*PKP1 PKPbc 12 42 38.9 -0.7
comp=Z,105nm,1.6s
PERS Pernice 150.34 346 *e*PKPbc PKPbc 12 42 40.0 +0.1
WTTA Wattenberg 150.38 351⇑ *i*PKiKP PKiKP 12 42 41.1 +0.3
comp=Z,33nm,1.4s
DAVA Damuels 150.57 354⇑ *i*PKiKP PKiKP 12 42 40.7 -0.5
comp=Z,45nm,1.5s
BBS Basel-Blauen 150.58 357 PKP PKPbc 12 42 42.5 +2.1
FETA Feichten 150.74 352⇑ *i*PKiKP PKiKP 12 42 42.0 +0.6
comp=Z,29nm,1.6s
ABTA Abfaltersbach 150.75 350⇑ *i*PKiKP PKiKP 12 42 41.3 -0.2
KHAL Karahalli 150.77 319⇑ *i*P PKPdf 12 42 33.4 -2.2
LOR Lormes 150.80 2 *e*PKP1 PKPbc 12 42 40.4 -0.6
comp=Z,68nm,1.3s
LOR *e*MLR MLR
comp=Z,548nm,22.5s,MS5.0
SSF Saint Saulge 150.99 3 *e*PKP1 PKPbc 12 42 40.9 -0.5
comp=Z,127nm,1.5s
DAVOS Davos 151.03 354 PKIKP PKPbc 12 42 40.9 -0.6
LJU Ljubljana 151.04 347 *i* PKPbc PKPbc 12 42 41.6 0.0
DAVOX Davos/Dischmat 151.07 354 PKPbc PKPbc 12 42 40.9 -0.7
comp=Z,7.4nm,0.6s,baz=169,slow=3.2,SNR=14
MFF Saint Martin d 151.13 8 *e*PKP1 PKPbc 12 42 41.1 -0.7
comp=Z,148nm,1.5s
AVF Avril sur Loir 151.26 3 *e*PKP1 PKPbc 12 42 42.2 +0.2
SMF Signal de Mont 151.42 2 *e*PKP1 PKPbc 12 42 42.9 +0.5
comp=Z,115nm,1.4s
BGF Bois d'Agland 151.46 4 *e*PKP1 PKPbc 12 42 42.0 -0.5
CABF La Chapelle 151.48 359 *e*PKP1 PKPbc 12 42 42.6 0.0
comp=Z,119nm,1.4s
TCF Toulx Ste Croi 151.69 5 *e*PKP1 PKPbc 12 42 42.2 -0.8
comp=Z,74nm,1.4s
PLDF La Plantade 152.09 3 PKP PKPbc 12 42 46.6 +2.6
PYM Petit Puy Mans 152.28 4 PKP PKPbc 12 42 44.1 -0.3
VAV Valandovo 152.48 331 *e*PKP PKPdf 12 42 38.0 -0.1
LPG La Plagne 152.57 358 *e*PKP1 PKPbc 12 42 45.5 +0.4
comp=Z,102nm,1.7s
RJF Les Rejaudoux 152.60 6 *e*PKP1 PKPbc 12 42 44.7 -0.4
RJF *e*MLR MLR
comp=Z,340nm,21.0s,MS4.8
RJF Les Rejaudoux 152.60 6 *e*PKIKP PKPbc 12 42 44.7 -0.4
RJF MLR MLR
comp=Z,340nm,21.0s,MS5.1
BNI Bardonecchia 153.02 358 *e*PKPbc PKPbc 12 42 47.2 +1.2
BNI *e*PKPab PKPab 12 42 58.5 +1.2
KRUS Krusevo 153.03 333 *e*PKP PKPbc 12 42 44.8 -1.5
OHR Ohrid 153.44 333 *e*PKP PKPdf 12 42 41.1 +1.6
TORD Torodi Ar. Bea 174.00 143 PKP PKPdf 12 42 58.2 -0.8
comp=Z,5.9nm,1.2s,baz=338,slow=1.6,SNR=10
TORD PKPab PKPab 12 44 32.2 +2.3
comp=Z,3.3nm,1.0s,baz=204,slow=3.8,SNR=8.9
TORD Torodi Ar. Bea 174.00 143 PKP PKPdf 12 42 58.2 -0.8
TORD PKPab PKPab 12 44 32.2 +2.3

CSEM ***23*** *12:27:32.4±0.3, 38.30N×3.802E, h20km, MD2.8, Error ellipse: s-maj=7.7km s-min=6.0km az=98.0*
ISCJB ***23*** *12:27:34.0±0.7, 38.37N±003×38.13E±004, h4km±7km, Error ellipse: s-maj=6.0km s-min=4.6km az=34.3*
ISK ***23*** *12:27:33.7, 38.32N×38.16E, h8km, MD2.7*
DDA ***23*** *12:27:34.1, 38.29N×38.12E, h7km±1km, Md2.8*
ISC 23 12:27:34.5±0.5, 3837N±003×3811E±004, h9km±5km, n10, σ1°05′20, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.16**	**242**	*i* P		**Pg**	**12 27 37.9**	**-0.1**
AKCD				*i* S		**Sg**	**12 27 40.5**	**+0.1**
DARE	**Darende-Malaty**	**0.62**	**338**	*e*PG		**Pg**	**12 27 45.6**	**-1.0**
DARE				*e*SG		**Sg**	**12 27 54.0**	**-0.7**
ELZG	**Elazig**	**0.70**	**79**	*i* P		**Pg**	**12 27 47.9**	**-0.2**
ELZG				*i* S		**Sg**	**12 27 59.2**	**+2.0**
ELZG	**Elazig**	**0.70**	**79**	*i* P		**Pg**	**12 27 47.8**	**-0.2**
ELZG				*i* S		**Sg**	**12 27 59.2**	**+2.0**
KEMA	**Kemaliye**	**0.94**	**19**	*i* P		**Pg**	**12 27 53.4**	**+0.7**
KEMA				*i* S		**Sg**	**12 28 08.2**	**+3.2**

KEMA	**Kemaliye**	**0.94**	**19**	*i* P		**Pg**	**12 27 53.4**	**+0.7**
KEMA				*i* S		**Sg**	**12 28 08.1**	**+3.1**
URFA	**Urfa**	**1.09**	**148**	*e*PG		**Pg**	**12 27 53.8**	**-1.7**
URFA				*e*SG		**Sg**	**12 28 08.5**	**-1.0**
GZT	**Gaziantep**	**1.10**	**203**	*i* P		**Pb**	**12 27 56.5**	**+0.7**
GZT				*i* S		**Sb**	**12 28 11.8**	**+1.6**
PTK	**Pertek**	**1.13**	**62**	*e*PN		**Pn**	**12 27 55.8**	**-0.7**
PTK				*e*SN		**Sn**	**12 28 11.4**	**-0.8**
GAZ	**Gaziantep**	**1.39**	**211**	*e*PN		**Pn**	**12 27 60.0**	**-0.1**
GAZ				*e*SN		**Sn**	**12 28 18.8**	**+0.2**

HLW ***23*** *12:29:21.6, 30.19N×36.94E, h26km, Mb3.5*
CSEM ***23*** *12:29:22.7±0.2, 30.11N×36.74E, h35km, ML3.5, Error ellipse: s-maj=5.4km s-min=3.8km az=53.0*
ISCJB ***23*** *12:29:25.1±1.2, 2995N±006×3635E±007, h0km, Error ellipse: s-maj=9.8km s-min=7.3km az=136.2*
GII ***23*** *12:29:26.6±0.0, 2988N×3630E, h0km, ML2.1/2, EXPLOSION*
SGS ***23*** *12:29:27.6, 3006N×36.18E, h8km*

ISC 23 12:29:25.4±1.2, 2992N±006×3638E±007, h0km, n16, σ0s 86/21, 4C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.17**	**261**			Pg	**Pg**	**12 29 47.4**	**-0.4**
HRFI	**Mount Harif**	**1.17**	**276**			Pg	**Pg**	**12 29 48.7**	**+0.9**
ZFRI	**Zfri**	**1.22**	**302**			Pg	**Pg**	**12 29 49.4**	**+0.7**
EIL	**Elat**	**1.27**	**259**			Pg	**Pg**	**12 29 49.3**	**-0.4**
EIL						Sg	**Sg**	**12 30 06.8**	**+0.7**
PRNI	**Paran**	**1.27**	**290**			Pg	**Pg**	**12 29 49.4**	**-0.3**
MBRI	**Mt Berech**	**1.28**	**265**			Pg	**Pg**	**12 29 49.4**	**-0.5**
MBRI						Sg	**Sg**	**12 30 05.8**	**-0.8**
HQLS		**1.30**	**242**	P		P	**Pg**	**12 29 49.0**	**-1.4**
JLOS		**1.41**	**214**	P		P	**Pn**	**12 29 51.6**	**-0.7**
JLOS		**1.41**	**214**	P		P	**Pn**	**12 29 51.6**	**-0.7**
JLOS						S	**Sg**	**12 30 10.4**	**-0.4**
HBST	**Basata**	**1.60**	**244**	⇑*e*P		P	**Pn**	**12 29 55.0**	**+0.1**
TBKS	**Tabuk**	**1.70**	**175**	P		P	**Pn**	**12 29 57.7**	**+1.5**
BDAS	**Al Bad'**	**1.86**	**217**	P		P	**Pn**	**12 29 58.1**	**-0.3**
HNKL	**Nakhl**	**2.08**	**271**	⇓P		P	**Pn**	**12 30 00.6**	**-0.9**
HNKL						S	**Sn**	**12 30 29.4**	**+1.2**
HKAT	**Jabal Katrina**	**2.51**	**237**	⇑P		P	**Pn**	**12 30 07.5**	**+0.1**
HKAT						S	**Sn**	**12 30 41.2**	**+2.5**
TR2		**2.78**	**237**	⇑*e*P		P	**Pn**	**12 30 11.1**	**-0.1**
SUZ		**3.08**	**269**	⇑P		P	**Pn**	**12 30 14.8**	**-0.5**

IDC ***23*** *12:37:29.1±0.5, 1790S×174.79W, h0km, mb4.6/19, mb1 4.8/19, mb1mx4.7/23, mbtmp4.6/19, MS4.9/2, Ms1 4.9/2, ms1mx4.2/11, Error ellipse: s-maj=20.3km s-min=13.5km az=131.0*
BJI ***23*** *12:37:30.8, 18.15S×174.33W, h30km, mB5.7, mb5.0, Ms5.4, Msz5.2*
ISCJB ***23*** *12:37:32.7±0.2, 1799S±006×174.75W±0.05, h33km, mb5.1/96, MS5.1/17, Error ellipse: s-maj=9.5km s-min=5.0km az=143.1*
NEIC ***23*** *12:37:35.0±0.2, 1785S×174.77W, h35km, mb5.3/62, MS5.2/2, Error ellipse: s-maj=12.4km s-min=5.6km az=146.0*
GCMT ***23*** *12:37:35.0±0.1, 1778S×174.41W, h12km, MW5.6/103, Moment Tensor Solution. s62,c95; s103,c226; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr=2.72±.04; Mθθ=0.13±.04; Mϕϕ=2.85±.03; Mrθ=0.74±.15; Mθϕ=0.53±.03; Mrϕ=0.85±.13; Best double couple: M=3.05100×10^17 NP1=ϕs358.00000°, δ37.00000°, λ-109.00000°. NP2=ϕs201.00000°, δ56.00000°, λ-76.00000°. Principal axes: T 3.1040, Plg10.0000°, Azm282.0000°; N -0.1100, Plg11.0000°, Azm13.0000°; P -2.9980, Plg75.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
SZGRF ***23*** *12:37:37.3, 16.95S×173.89W, h33km, Tonga Islands*
MOS ***23*** *12:37:39.0±2.2, 17.10S×174.60W, h44km, mb5.4/34, MS5.1/7, Error ellipse: s-maj=14.7km s-min=8.5km az=64.2*
DJA ***23*** *12:38:03, 19.33S×176.11W, h189km, mb4.6/7*

ISC 23 12:37:34.7±0.2, 1797S±006×17474W±005, h35km, h35km±.8km: pP-P, n336, σ0s 83/192, mb5.1/96, MS5.1/17, 34C-17D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.94**	**36**	Pn		**Pn**	**12 38 39.2**	**-7.3**
	13nm,0.3s,baz=345,slow=3.7,SNR=16							
AFI						Sn	**Sn**	**12 39 34.2**	**-8.3**
	29nm,0.3s,baz=218,slow=22,SNR=3.9							
AFI				T				12 43 41.1	
	50nm,0.3s,baz=22,slow=18,SNR=6.8								
AFI	**Afiamalu**	**4.94**	**36**	*e*P		**Pn**	**12 38 39.0**	**-7.5**
RAR	**Rarotonga**	**14.47**	**105**	LR		LR	12 45 11.1	
	comp=Z,4μm,20.4s,baz=282,slow=32								
RAR				T				12 55 21.5	
	16nm,0.3s,baz=148,slow=9.7,SNR=6.0								
DZM	**Mont Dzumac**	**18.14**	**254**	*e*P		**Pn**	**12 41 47.0**	**+3.1**
DZM	**Mont Dzumac**	**18.14**	**254**	*e*Pn		**Pn**	**12 41 46.8**	**+2.8**
URZ	**Urewera**	**21.44**	**198**	P		**P**	**12 42 17.9**	**-1.9**
	46nm,1.2s,mb4.7,baz=22,slow=6.6,SNR=7.0								
PPT	**Papeete**	**23.96**	**93**	*e*LQ			12 47 25.9		
	3μm,31.0s								
PPT				*e*LR		LR	12 48 26.0		
	19μm,27.2s,baz=262								
PPT	**Papeete**	**23.96**	**93**	LR		LR	12 50 46.8		
	comp=Z,3μm,19.4s,MS4.8,baz=260,slow=33								
RPZ	**Rata Peaks**	**28.33**	**202**	P		**P**	**12 43 24.5**	**-0.6**
	28nm,1.1s,mb4.8,baz=36,slow=8.7,SNR=4.5								
EIDS	**Eidsvold**	**32.54**	**251**	*e*P		**P**	**12 44 02.8**	**+0.2**
	135nm,2.2s,mb5.5								
ARMA	**Armidale**	**32.96**	**242**	*e*P		**P**	**12 44 06.9**	**+0.7**
CNB	**Canberra Magne**	**36.19**	**234**	*e*P		**P**	**12 44 34.3**	**+0.2**
CTA	**Charters Tower**	**36.88**	**260**	*e*P		**P**	**12 44 39.5**	**-0.7**
	15nm,1.0s,mb4.8								
CTA	**Charters Tower**	**36.88**	**260**	P		**P**	**12 44 38.5**	**-1.7**
	11nm,0.7s,mb4.8,baz=90,slow=12,SNR=19								
CTAO	**Charters Tower**	**36.88**	**260**	*e*P		**P**	**12 44 40.0**	**-0.1**
	26nm,1.0s,mb5.0								
CTAO	**Charters Tower**	**36.88**	**260**	*e*P		**P**	**12 44 40.0**	**-0.2**
CTAO				pmax		pmax			
	comp=Z,26nm,1.0s,mb5.0								
CTAO	**Charters Tower**	**36.88**	**260**	P		**P**	**12 44 40.6**	**+0.4**
	comp=Z,34nm,1.7s,mb4.9								
RKT	**Rikitea**	**37.51**	**105**	*e*LQ			12 53 18.4		
	comp=Z,850nm,28.0s								
RKT				*e*LR		LR	12 54 47.9		
	comp=Z,11μm,28.0s,baz=271								
TOO	**Toolangi**	**39.87**	**232**	*e*P		**P**	**12 45 04.9**	**-0.2**
COEN	**Coen**	**40.60**	**269**	P		**P**	**12 45 12.0**	**+0.6**
	comp=Z,11nm,2.1s,mb4.1								
STKA	**Stephens Creek**	**41.67**	**242**	*e*P		**P**	**12 45 19.5**	**-0.6**
	comp=Z,14nm,0.9s,mb4.6								
STKA	**Stephens Creek**	**41.67**	**242**	P		**P**	**12 45 20.6**	**+0.6**
	comp=Z,21nm,1.2s,mb4.7,baz=76,slow=8.8,SNR=15								
STKA	**Stephens Creek**	**41.67**	**242**	*e*P		**P**	**12 45 20.1**	**0.0**
	comp=Z,16nm,1.6s,mb4.4								
WB2	**Warramunga Arr**	**48.04**	**259**	*e*P		**P**	**12 46 09.2**	**-1.7**
WRAB	**Tennant Creek**	**48.04**	**259**	*e*P		**P**	**12 46 09.1**	**-1.8**
	comp=Z,204nm,2.5s,mb5.7								
WRAB	**Tennant Creek**	**48.04**	**259**	*e*P		**P**	**12 46 09.1**	**-1.8**
WRAB				pmax		pmax			
	comp=Z,204nm,2.5s,mb5.7								
WRAB	**Tennant Creek**	**48.04**	**259**	P		**P**	**12 46 11.6**	**+0.7**
	comp=Z,25nm,2.1s,mb4.9								
WRA	**Warramunga Arr**	**48.05**	**259**	P		**P**	**12 46 09.4**	**-1.6**
	comp=Z,5.0nm,0.6s,mb4.7,baz=96,slow=8.6,SNR=57								
ASAR	**Alice Springs**	**48.13**	**254**	P		**P**	**12 46 10.8**	**-0.9**
	comp=Z,27nm,0.9s,mb5.2,baz=86,slow=8.5,SNR=131								
KAKA	**Kakadu**	**51.07**	**268**	*e*P		Px	12 46 19.5		
	comp=Z,12nm,0.6s								
FORT	**Forrest**	**53.14**	**245**	*e*P		**P**	**12 46 51.6**	**+2.3**
	comp=Z,45nm,1.0s,mb5.4								
SWI	**Sorong**	**55.67**	**282**	P		**P**	**12 47 14.8**	**+6.9**
	comp=Z,60nm,1.2s,comp=Z,1μm,mb5.5								
SBA	**Scott Base**	**60.60**	**184**	*e*P		**P**	**12 47 43.9**	**+2.4**
	comp=Z,53nm,1.6s,mb5.4								
VNDA	**Vanda**	**60.70**	**186**	P		**P**	**12 47 43.4**	**+1.2**
	comp=Z,1.8nm,0.8s,mb4.3,baz=8.8,slow=6.8,SNR=11								
VNDA	**Vanda**	**60.70**	**186**	*e*P		**P**	**12 47 42.8**	**+0.7**
	comp=Z,18nm,1.5s,mb5.0								
MBWA	**Marble Bar**	**61.44**	**255**	*e*P		**P**	**12 47 47.7**	**-0.3**
	comp=Z,18nm,1.2s,mb5.1								

KLBR	**Kellerberrin**	**61.93**	**243**	*e*P		**P**	**12 47 50.1**	**-1.1**
	comp=Z,59nm,1.4s,mb5.5								
CASY	**Casey**	**67.55**	**205**	*e*P		**P**	**12 48 26.4**	**-0.8**
	comp=Z,21nm,1.1s,mb5.1								
QSPA	**South Pole Qui**	**72.09**	**180**	P		**P**	**12 48 56.0**	**+1.1**
	comp=Z,8.9nm,0.8s,mb4.7,baz=20,slow=0.2,SNR=6.3								
QSPA	**South Pole Qui**	**72.09**	**180**	P		**P**	**12 48 56.0**	**+1.1**
PET	**Petropavlovsk**	**74.35**	**344**	*e*P		**P**	**12 49 12.9**	**+4.4**
PET				*e*PS			12 59 25.9		
PET				pmax		pmax			
	comp=Z,100nm,7.5s								
PET				MLR		MLR			
	comp=Z,500nm,19.0s,MS4.8								
PETK	**Petropavlovsk-**	**74.69**	**343**	P		**P**	**12 49 10.1**	**-0.3**
	comp=Z,5.7nm,0.8s,mb4.5,baz=119,slow=7.6,SNR=3.2								
MWC	**Mount Wilson**	**74.84**	**46**	*e*P		**P**	**12 49 13.8**	**+2.0**
	comp=Z,29nm,1.4s,mb5.0								
MWC	**Mount Wilson**	**74.84**	**46**	*e*P		**P**	**12 49 13.8**	**+2.0**
MWC				pmax		pmax			
	comp=Z,29nm,1.4s,mb5.0								
YSS	**Yuzh-Sakhalins**	**75.09**	**331**	⇓*i*P		**P**	**12 49 12.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**75.09**	**331**	⇓*i*P		**P**	**12 49 12.4**	**-0.5**
YSS				pmax		pmax			
	comp=Z,33nm,1.0s,mb5.2								
CMB	**Columbia Colle**	**75.53**	**42**	*e*P		**P**	**12 49 15.6**	**-0.1**
	comp=Z,30nm,1.4s,mb5.0								
CMB	**Columbia Colle**	**75.53**	**42**	*e*P		**P**	**12 49 15.6**	**0.0**
CMB				pmax		pmax			
	comp=Z,30nm,1.4s,mb5.0								
PFO	**Pinyon Flat Ob**	**75.60**	**47**	P		**P**	**12 49 15.4**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.1,baz=231,slow=6.5,SNR=3.3								
WDC	**Whiskeytown Da**	**75.78**	**38**	*e*P		**P**	**12 49 17.2**	**+0.1**
	comp=Z,41nm,1.5s,mb5.1								
WDC	**Whiskeytown Da**	**75.78**	**38**	*e*P		**P**	**12 49 17.2**	**+0.2**
WDC				pmax		pmax			
	comp=Z,41nm,1.5s,mb5.1								
MTUM	**Tungsten Hills**	**76.29**	**43**	*e*P		**P**	**12 49 20.6**	**+0.5**
GSC	**Goldstone**	**76.30**	**46**	*e*P		**P**	**12 49 20.2**	**+0.1**
	comp=Z,41nm,1.4s,mb5.2								
GSC	**Goldstone**	**76.30**	**46**	*e*P		**P**	**12 49 20.2**	**+0.1**
GSC				pmax		pmax			
	comp=Z,41nm,1.4s,mb5.2								
WAKR	**Walker**	**76.41**	**42**	*e*P		**P**	**12 49 20.6**	**0.0**
YBH	**Yreka Blue Hor**	**76.41**	**37**	P		**P**	**12 49 20.5**	**-0.1**
	comp=Z,5.1nm,0.7s,mb4.6,baz=239,slow=4.7,SNR=19								
YBH	**Yreka Blue Hor**	**76.41**	**37**	*e*P		**P**	**12 49 21.1**	**+0.5**
	comp=Z,16nm,1.0s,mb4.9								
YBH	**Yreka Blue Hor**	**76.41**	**37**	*e*P		**P**	**12 49 21.1**	**+0.5**
YBH				pmax		pmax			
	comp=Z,16nm,1.0s								
HUMO	**Hull Mountain**	**76.83**	**37**	*e*P		**P**	**12 49 23.4**	**+0.5**
	comp=Z,205nm,2.6s,mb5.6								
NVAR	**Mina Array Bea**	**77.08**	**42**	P		**P**	**12 49 24.8**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.5,baz=225,slow=8.4,SNR=15								
NVAR	**Mina Array Bea**	**77.08**	**42**	P		**P**	**12 49 24.8**	**+0.3**
KSRS	**Korea Array**	**77.11**	**317**	P		**P**	**12 49 24.2**	**-0.4**
	comp=Z,3.8nm,1.1s,mb4.2,baz=145,slow=4.6,SNR=6.2								
PAHR	**Pah Rah Range**	**77.16**	**41**	*e*P		**P**	**12 49 25.1**	**+0.2**
	comp=Z,34nm,1.3s,mb5.1								
LDFC	**Landfair**	**77.33**	**46**	*e*P		**P**	**12 49 26.5**	**+0.5**
TPH	**Tonopah**	**77.58**	**43**	*e*P		**P**	**12 49 27.7**	**+0.4**
	comp=Z,70nm,1.5s,mb5.4								
TPH	**Tonopah**	**77.58**	**43**	*e*P		**P**	**12 49 27.7**	**+0.5**
TPH				pmax		pmax			
	comp=Z,70nm,1.5s,mb5.4								
TPNV	**Topopah Spring**	**77.58**	**44**	*e*P		**P**	**12 49 27.6**	**+0.3**
	comp=Z,38nm,1.3s,mb5.2								
TPNV	**Topopah Spring**	**77.58**	**44**	*e*P		**P**	**12 49 27.6**	**+0.3**
TPNV				pmax		pmax			
	comp=Z,38nm,1.3s,mb5.2								
MOD	**Modoc**	**77.92**	**38**	*e*P		**P**	**12 49 29.1**	**0.0**
	comp=Z,31nm,1.2s,mb5.1								
SHPR	**Sheep Range**	**78.07**	**45**	*e*P		**P**	**12 49 30.2**	**+0.2**
BMN	**Battle Mountai**	**78.92**	**41**	*e*P		**P**	**12 49 34.8**	**+0.2**
	comp=Z,34nm,1.2s,mb5.2								
BMN	**Battle Mountai**	**78.92**	**41**	*e*P		**P**	**12 49 34.8**	**+0.2**
BMN				pmax		pmax			
	comp=Z,34nm,1.2s,mb5.2								
TUC	**Tucson**	**79.00**	**51**	*e*P		**P**	**12 49 35.3**	**0.0**
	comp=Z,13nm,1.1s,mb4.8								
TUC	**Tucson**	**79.00**	**51**	*e*P		**P**	**12 49 35.3**	**0.0**
TUC				pmax		pmax			
	comp=Z,13nm,1.1s,mb4.8								
WVOR	**Wild Horse Val**	**79.23**	**39**	*e*P		**P**	**12 49 35.5**	**-0.7**
	comp=Z,12nm,1.1s,mb4.7								
WVOR	**Wild Horse Val**	**79.23**	**39**	*e*P		**P**	**12 49 35.5**	**-0.8**
WVOR				pmax		pmax			
	comp=Z,12nm,1.1s,mb4.7								
HABR	**Khabarovsk**	**79.83**	**329**	*e*P		**P**	**12 49 38.5**	**-0.9**
HABR				*e**PP		pP	12 49 47.3	-3.0
HABR				*e*SP			12 49 51.9		
HABR				*e*			12 52 37.3		
HABR				*e*S		S	12 59 38.6	-1.4
HABR				*e*PS			12 59 51.2		
HABR				*e*			12 59 58.3		
CCUT	**Cedar City**	**79.84**	**45**	*e*P		**P**	**12 49 39.9**	**+0.1**
ARUT	**Antelope Range**	**79.92**	**45**	*e*P		**P**	**12 49 40.0**	**-0.1**
WUAZ	**Wupatki**	**80.17**	**48**	*e*P		**P**	**12 49 42.4**	**+0.8**
	comp=Z,31nm,1.4s,mb5.0								
MDJ	**Mudanjiang**	**80.28**	**323**	P		**P**	**12 49 42.5**	**+0.6**
MDJ				AP		pP	12 49 52.3	-0.5
MDJ				XP		sP	12 49 56.0	-0.8
MDJ				AMB		AMB			
	comp=Z,22nm,2.4s,mb4.7								
MDJ				AMB		AMB			
	comp=Z,327nm,6.1s								
MDJ				LR		LR			
	comp=N,579nm,19.0s,MS5.1								
MDJ				LR		LR			
	comp=E,695nm,23.3s,MS5.1								
MDJ				LR		LR			
	comp=Z,916nm,25.4s,MS5.0								
ELK	**Elko**	**80.35**	**42**	*e*P		**P**	**12 49 42.5**	**+0.1**
NJ2	**Nanjing**	**80.70**	**308**	*e*P		**P**	**12 49 45.3**	**+0.8**
NJ2				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.9								
JCW	**Jim Creek**	**80.96**	**33**	*e*P		**P**	**12 49 44.3**	**-1.2**
RSW	**Rattlesnake Hi**	**81.08**	**35**	*e*P		**P**	**12 49 45.7**	**-0.4**
HAWA	**Hanford**	**81.11**	**35**	*e*P		**P**	**12 49 46.1**	**-0.2**
	comp=Z,12nm,1.0s,mb4.8								
MSU	**Marysvale**	**81.15**	**45**	*e*P		**P**	**12 49 47.8**	**+1.1**
ETW	**Entiat**	**81.42**	**34**	*e*P		**P**	**12 49 47.1**	**-0.9**
BMO	**Blue Mountains**	**81.44**	**37**	*e*P		**P**	**12 49 47.7**	**-0.4**
	comp=Z,56nm,1.8s,mb5.2								
LNOR	**Lincton Mounta**	**81.48**	**36**	*e*P		**P**	**12 49 47.2**	**-1.0**
DUG	**Dugway**	**81.61**	**43**	*e*P		**P**	**12 49 49.1**	**+0.1**
	comp=Z,23nm,1.5s,mb4.9								
DUG	**Dugway**	**81.61**	**43**	*e*P		**P**	**12 49 49.1**	**0.0**
DUG				pmax		pmax			
	comp=Z,23nm,1.5s,mb4.9								
KLR	**Kul'dur**	**81.98**	**328**	*e*P		**P**	**12 49 52.6**	**+1.8**
OD2	**Odessa Site #2**	**82.16**	**35**	*e*P		**P**	**12 49 49.9**	**-2.0**
CN2	**Changchun**	**82.24**	**321**	*e*P		**P**	**12 49 52.8**	**+0.5**
CN2				AMB		AMB			
	comp=Z,10.0nm,1.3s,mb4.6								
CN2				AMB		AMB			
	comp=Z,400nm,5.0s								
CN2				LR		LR			
	comp=N,460nm,18.0s,MS5.0								
CN2				LR		LR			
	comp=E,490nm,18.0s,MS5.0								
CN2				LR		LR			
	comp=Z,670nm,26.0s								
SNY	**Shenyang**	**82.31**	**318**	⇑P		**P**	**12 49 53.8**	**+1.0**
SNY				AMB		AMB			
	comp=Z,28nm,1.8s,mb4.9								
HLID	**Hailey**	**82.42**	**40**	*e*P		**P**	**12 49 53.2**	**0.0**
	comp=Z,25nm,1.2s,mb5.0								
SRU	**San Rafael**	**82.56**	**45**	*e*P		**P**	**12 49 54.5**	**+0.4**
	comp=Z,65nm,1.6s,mb5.4								
SRU	**San Rafael**	**82.56**	**45**	*e*P		**P**	**12 49 54.5**	**+0.4**
SRU				pmax		pmax			
	comp=Z,65nm,1.6s,mb5.4								
LAZ	**Ladron**	**82.68**	**50**	*e*P		**P**	**12 49 54.7**	**-0.1**
QIZ	**Qiongzhong**	**82.68**	**293**	P		**P**	**12 49 54.8**	**-0.4**
QIZ				S		S	13 00 10.1	-0.7
QIZ				LR		LR			
	comp=Z,1μm,20.7s,MS5.3								
LENM	**Lemitar**	**82.69**	**51**	*e*P		**P**	**12 50 01.4**	**+6.5**
JLU	**Jordanelle**	**82.71**	**43**	*e*P		**P**	**12 49 51.0**	**-3.8**
DAU	**Daniels Canyon**	**82.73**	**44**	*e*P		**P**	**12 49 54.9**	**-0.1**
BNM	**Barren Site**	**82.94**	**51**	*e*P		**P**	**12 49 55.9**	**-0.3**
LPM	**Los Pinos Moun**	**83.01**	**51**	*e*P		**P**	**12 49 57.5**	**+1.0**
TXAR	**Lajitas Array**	**83.10**	**56**	P		**P**	**12 49 57.6**	**+0.5**
	comp=Z,2.8nm,1.1s,mb4.2,baz=224,slow=6.7,SNR=12								

HWUT	**Hardware Ranch**	**83.15**	**42**	*e*P		**P**	**12 49 57.0**	**-0.2**
	comp=Z,20nm,1.2s,mb5.0								
PV10	**Paradox Valley**	**83.21**	**46**	*e*P		**P**	**12 49 57.1**	**-0.4**
PV01	**Paradox Valley**	**83.41**	**47**	*e*P		**P**	**12 49 58.5**	**-0.1**
ANMO	**Albuquerque**	**83.43**	**50**	*e*P		**P**	**12 49 59.0**	**+0.3**
	comp=Z,54nm,1.5s,mb5.4								
ANMO	**Albuquerque**	**83.43**	**50**	*e*P		**P**	**12 49 59.1**	**+0.4**
ANMO				pmax		pmax			
	comp=Z,54nm,1.5s								
GDL2	**Guadalupe Moun**	**83.78**	**53**	*e*P		**P**	**12 50 01.7**	**+1.1**
MCK	**McKinley**	**83.88**	**11**	*e*P		**P**	**12 49 59.4**	**-1.0**
	comp=Z,26nm,1.0s,mb5.3								
MCK	**McKinley**	**83.88**	**11**	*e*P		**P**	**12 49 59.4**	**-0.9**
MCK				pmax		pmax			
	comp=Z,26nm,1.0s,mb5.3								
AHID	**Auburn Hatcher**	**84.04**	**42**	*e*P		**P**	**12 50 01.7**	**0.0**
	comp=Z,21nm,1.0s,mb5.2								
MCMT	**McKenzie Canyo**	**84.05**	**39**	*e*P		**P**	**12 50 01.3**	**-0.4**
RRI2	**Red Ridge**	**84.20**	**41**	*e*P		**P**	**12 50 02.9**	**+0.4**
	comp=Z,60nm,1.3s,mb5.6								
DCID1	**Drake Creek**	**84.42**	**41**	*e*P		**P**	**12 50 02.2**	**-1.4**
DLMT	**Dillon**	**84.49**	**39**	*e*P		**P**	**12 50 04.0**	**+0.1**
	comp=Z,32nm,1.1s,mb5.4								
REDW	**Red Top Meadow**	**84.51**	**41**	*e*P		**P**	**12 50 03.9**	**-0.2**
	comp=Z,49nm,1.2s,mb5.5								
TPAW	**Teton Pass**	**84.51**	**41**	*e*P		**P**	**12 50 04.1**	**+0.1**
	comp=Z,28nm,1.0s,mb5.3								
BSMT	**Bassoo Peak**	**84.59**	**36**	*e*P		**P**	**12 50 03.9**	**-0.4**
SNOW	**Snow King Moun**	**84.62**	**41**	*e*P		**P**	**12 50 05.0**	**+0.5**
	comp=Z,40m,0.9s,mb5.5								
SEY	**Seymchan**	**84.66**	**346**	⇑*i*P		**P**	**12 50 03.7**	**-0.6**
IMW	**Indian Meadow**	**84.73**	**41**	*e*P		**P**	**12 50 05.1**	**0.0**
	comp=Z,32nm,1.1s,mb5.4								
MOOW	**Moose Ponds**	**84.77**	**41**	*e*P		**P**	**12 50 05.5**	**+0.1**
	comp=Z,16nm,1.2s,mb5.0								
LOHW	**Long Hollow**	**84.79**	**41**	*e*P		**P**	**12 50 05.6**	**+0.2**
	comp=Z,17nm,1.0s,mb5.1								
LRM	**Limekiln Ridge**	**84.82**	**38**	*e*P		**P**	**12 50 05.4**	**-0.1**
QLMT	**Earthquake Lak**	**84.91**	**40**	*e*P		**P**	**12 50 06.8**	**+0.8**
CHMT	**Chamberlain Mo**	**84.94**	**37**	*e*P		**P**	**12 50 05.5**	**-0.6**
MAW	**Mawson**	**84.96**	**199**	P		**P**	**12 50 05.6**	**-0.4**
	comp=Z,10nm,0.9s,mb5.0,baz=140,slow=11,SNR=6.6								
MAW	**Mawson**	**84.96**	**199**	*e*P		**P**	**12 50 05.7**	**-0.3**
	comp=Z,2.9nm,1.0s,mb4.4								
SMCO	**Snowmass**	**85.01**	**46**	*e*P		**P**	**12 50 07.2**	**+0.5**
	comp=Z,22nm,1.1s,mb5.2								
BW06	**Boulder Array**	**85.02**	**42**	*e*P		**P**	**12 50 06.0**	**-0.6**
	comp=Z,20nm,1.0s,mb5.2								
PDAR	**Pinedale Array**	**85.02**	**42**	P		**P**	**12 50 05.8**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.8,baz=214,slow=3.4,SNR=59								
YFT	**Old Faithful**	**85.07**	**40**	*e*P		**P**	**12 50 08.3**	**+1.4**
YMR	**Madison River**	**85.11**	**40**	*e*P		**P**	**12 50 07.3**	**+0.3**
	comp=Z,24nm,1.2s,mb5.2								
COLA	**College**	**85.11**	**11**	*e*P		**P**	**12 50 04.7**	**-1.8**
	comp=Z,24nm,0.8s,mb5.4								
COLA	**College**	**85.11**	**11**	*e*P		**P**	**12 50 04.7**	**-1.9**
COLA				pmax		pmax			
	comp=Z,24nm,0.8s,mb5.4								
BOZ	**Bozeman (W)**	**85.21**	**39**	*e*P		**P**	**12 50 07.2**	**-0.3**
	comp=Z,31nm,1.4s,mb5.2								
BOZ	**Bozeman (W)**	**85.21**	**39**	*e*P		**P**	**

baz=173,slow=3.2
VNA2 e 12 50 41.9
VNA2 e pP 12 50 45.3 -0.1
YAK Yakutsk 90.96 337 ⇓*i* P **P 12 50 35.2 +0.6**
YAK Yakutsk 90.96 337 ⇓*i* P **P 12 50 35.1 +0.5**
YAK pmax pmax
comp=Z,27nm,2.5s,mb5.1
KMI Kunming 90.98 296 P **P 12 50 36.6 +1.0**
KMI AP pP 12 50 47.3 +0.7
KMI XP sP 12 50 51.5 +0.9
KMI AMB AMB
comp=Z,12nm,2.0s,mb4.9
KMI AMB AMB
comp=Z,340nm,6.2s
KMI LR LR
comp=N,530nm,23.7s,MS5.2
KMI LR LR
comp=E,936nm,22.6s,MS5.2
KMI LR LR
comp=Z,1μm,23.7s,MS5.3
DGMT Dagmar 91.02 39 *eP* **P 12 50 35.3 +0.1**
comp=Z,36nm,1.2s,mb5.6
INK Inuvik 91.06 14 *eP* **P 12 50 34.2 -0.8**
comp=Z,421nm,1.1s
VNA1 Neumayer--Stat 91.11 176 *eP* **P 12 50 36.3 +0.9**
VNA1 *e* 12 50 42.8
VNA1 *e* pP 12 50 45.7 -0.7
NVL N'lazarevskaya 91.38 182 P **P 12 50 35.9 -0.7**
NVL pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
CD2 Chengdu 92.05 302 *eP* **P 12 50 41.0 +0.5**
CD2 AP pP 12 50 52.3 +0.8
CD2 XP sP 12 50 55.6 +0.2
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.5
CD2 AMB AMB
comp=Z,80nm,5.2s
CD2 LR LR
comp=N,180nm,16.8s
CD2 LR LR
comp=Z,210nm,14.8s,MS4.7
CMAR Chiang Mai Arr 92.20 289 P **P 12 50 42.2 +0.8**
comp=Z,3.4nm,0.9s,mb4.7,baz=107,slow=2.8,SNR=19
CMAR Chiang Mai Arr 92.20 289 *i P* **P 12 50 42.2 +0.8**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CHTO Chiang Mai 92.31 289 *eP* **P 12 50 41.3 -0.6**
comp=Z,17nm,1.8s,mb5.1
CHTO Chiang Mai 92.31 289 *eP* **P 12 50 41.3 -0.6**
CHTO pmax pmax
comp=Z,17nm,1.8s,mb5.1
MIAR Mount Ida 93.01 55 *eP* **P 12 50 45.1 +0.3**
comp=Z,54nm,1.8s,mb5.7
MIAR Mount Ida 93.01 55 *eP* **P 12 50 45.1 +0.3**
MIAR pmax pmax
comp=Z,54nm,1.8s,mb5.7
LZH Lanzhou 93.71 307 *eP* **P 12 50 50.5 +2.5**
LZH AP pP 12 51 01.0 +2.0
LZH XP sP 12 51 05.6 +2.6
LZH AMB AMB
comp=Z,20nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,169nm,5.2s
LZH LR LR
comp=E,1μm,19.0s
LZH LR LR
comp=Z,2μm,20.0s,MS5.5
UALR University of 94.04 55 *eP* **P 12 50 49.7 +0.2**
comp=Z,20nm,1.1s,mb5.5
ULN Ulaanbaatar 95.49 319 ⇓*i* P **P 12 50 56.1 +0.3**
SONM Songino Arrey 95.90 318 P **P 12 50 57.5 -0.2**
comp=Z,0.2nm,0.5s,baz=328,slow=44,SNR=2.7
TIXI Tiksi 97.12 345 ⇑*i* P **P 12 51 01.3 -1.4**
TIXI Tiksi 97.12 345 ⇑*i* P **P 12 51 01.2 -1.5**
TIXI pmax pmax
comp=Z,4.0nm,1.3s,mb4.7
TLY Talaya 98.83 321 *eP* **P 12 51 16.7 +5.9**
TLY *e* 12 55 12.2
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb5.2
TLY MLR MLR
comp=Z,421nm,19.0s,MS5.0
ZALV Zalesovo Beam 110.44 322 PKiKP PKiKP 12 56 01.9 -1.1
comp=Z,1.1nm,0.9s,baz=202,slow=1.6,SNR=4.2
ZALV Zalesovo Beam 110.44 322 PKPdf PKiKP 12 56 01.9 -1.1
MKAR Makanchi Array 111.69 314 PKiKP PKiKP 12 56 04.8 -0.8
comp=Z,0.6nm,0.6s,baz=73,slow=2.0,SNR=3.2
KURK Kurchatov 114.20 318 *i* PKP PKiKP 12 56 07.8 -2.5
BRVK Borovoye 119.15 321 ⇑*i* PKP PKPdf 12 56 17.5 -2.2
ARU Arti 124.82 327 ⇑*i* PKP PKPdf 12 56 30.5 0.0
ARU Arti 124.82 327 *i* PKIKP PKPdf 12 56 30.3 -0.2
ARU 12 58 15.5
ARU 13 03 30.3
ARCES ARCESS Array B 126.95 351 PKP PKPdf 12 56 34.0 -0.2
comp=Z,5.2nm,0.9s,baz=20,slow=3.9,SNR=4.2
OBN Obninsk 135.91 335 ⇑*i* PKP PKPdf 12 56 50.9 -0.7
OBN Obninsk 135.91 335 ⇑*i* PKIKP PKPdf 12 56 50.8 -0.8
OBN pmax pmax
comp=Z,7.0nm,1.1s
KIV Kislovodsk 139.29 318 *i* PKIKP PKPdf 12 57 00.2 +2.0
KIV pmax pmax
comp=Z,5.0nm,0.9s
MSL Mosul 141.96 307 *ex* x 12 57 05.0
AKASG Malin Array Be 142.16 335 PKhKP 12 56 57.4
comp=Z,0.4nm,0.4s,baz=46,slow=3.1,SNR=4.1
MARD Mardin 143.39 309 ⇑*i* P PKPdf 12 57 02.4 -3.4
LVV L'vov 144.82 339 *e*PKIKP PKPdf 12 57 12.0 +4.1
KWP Kalwaria 145.43 340 *e*PKPdf PKPdf 12 57 08.6 -0.3
BOYT Boyabat 145.51 319 ⇑*i* P PKPdf 12 57 10.7 +1.3
IBBN Ibbenburen 145.68 357 *e*PKPbc PKPbc 12 57 08.8 -0.8
OJC Ojcow 145.78 343 *e*PKP PKPdf 12 57 10.1 +0.6
CLZ Clausthal 145.96 354 *e*PKPbc PKPbc 12 57 09.8 -0.7
KSP Ksiaz 146.04 347 *e*PKP PKPdf 12 57 11.0 +1.1
KSP *e* 12 57 16.7
KSP Ksiaz 146.04 347 *e*PKP PKPdf 12 57 10.7 +0.8
KSP *ep*PKP pPKPdf 12 57 16.3 -5.0
STHS Stebnicka Huta 146.08 341 *e*PKP PKPdf 12 57 11.4 +1.4
STHS *e* 12 57 26.1
CLL Collm 146.17 351 ⇓*i* PKP PKPdf 12 57 10.6 +0.5
CLL *e* 12 57 15.0
CLL *i* 12 57 17.7
CLL LR LR
comp=Z,500nm,22.8s,MS5.2
CLL Collm 146.17 351 ⇓*i* PKP2 PKPab 12 57 10.6 -1.2
CLL *e* 12 57 15.0
CLL pmax pmax
comp=Z,46nm,1.1s
CLL MLR MLR
comp=Z,500nm,22.8s,MS5.2
CLL Collm 146.17 351 *e*PKPbc PKPbc 12 57 10.0 -1.1
CLL Collm 146.17 351 ⇓*i* PKPbc PKPbc 12 57 10.6 -0.5
comp=Z,46nm,1.1s
CLL LmH 12 07 00.0
comp=N,400nm,19.4s
CLL LmH 12 07 00.0
comp=E,300nm,20.3s
CLL *e*PKiKP PKiKP 12 57 15.0 +0.6
CLL ⇑*ix* x 12 57 17.7
comp=Z,56nm,0.9s
KOLS Kolonicke sedl 146.17 340 *e*PKP PKPdf 12 57 10.0 -0.2
BUR08 Bucovina Ar. S 146.20 336 *e*PKPbc PKPbc 12 57 11.7 +0.4
BURAR Bucovina Array 146.21 335 ⇑*i* P PKPdf 12 57 11.4 +1.1
NIE Niedzica 146.35 342 *e*PKP PKPdf 12 57 11.8 +1.3
UPC Upice 146.42 348 *e*PKP PKPdf 12 57 11.7 +1.1
UPC *ex* x 12 57 17.8
UZH Uzhgorod 146.43 339 ⇑*i* PKIKP PKPdf 12 57 11.7 +1.1
UZH *i* 12 57 16.7
UZH *i* 12 57 27.0
BRG Berggiesshubel 146.45 350 *i* PKIKP PKPdf 12 57 11.3 +0.7
BRG pmax pmax
comp=Z,31nm,1.5s
BRG pmax pmax
comp=Z,27nm,1.3s
BRG Berggiesshubel 146.45 350 *e*PKPbc PKPbc 12 57 11.3 -0.7
BRG Berggiesshubel 146.45 350 *i* PKP PKPdf 12 57 11.3 +0.7
comp=Z,51nm,1.5s
BRG *i* 12 57 17.3
comp=Z,45nm,1.3s
CRVS Cervenica-Dubn 146.46 341 *e*PKP PKPdf 12 57 11.0 +0.3
ANDN Andirin 146.49 312 ⇑*i* P PKPdf 12 57 13.0 +1.8
DPC Dobruska-Polom 146.50 347 *e*PKP PKPdf 12 57 11.9 +1.2
DPC *ex* x 12 57 18.0
OKC Ostrava-Krasne 146.56 345 *e*PKP PKPdf 12 57 12.1 +1.3
PVCC Panska Ves 146.67 349 *e*PKP PKPdf 12 57 12.7 +1.7
PVCC *ex* x 12 57 17.9
MORC Moravsky Berou 146.76 345 P PKPbc 12 57 13.4 +0.5
MORC Moravsky Berou 146.76 345 ⇑*i* P PKPdf 12 57 11.6 +0.4
AVNT Avonos 146.95 315 ⇑*i* P PKPdf 12 57 13.3 +1.5
VRI Vrincioaia 146.96 332 ⇓*i* P PKPab 12 57 20.7 +5.6
MOX Moxa 147.01 353 *e*PKP PKPbc 12 57 13.6 0.0
comp=Z,119nm,2.2s
MOX Moxa 147.01 353 *e*PKPbc PKPbc 12 57 13.3 -0.3
TANN Tannenbergstha 147.12 352 *e*PKPbc PKPbc 12 57 13.9 0.0
PRU Pruhonice 147.20 349 *e*PKP PKPbc 12 57 14.0 -0.1
PRU *ex* x 12 57 21.1
UCC Uccle 147.24 1 PKP PKPdf 12 57 13.4 +1.4
BR131 Keskin Array S 147.25 317 PKPbc PKPbc 12 57 14.4 -0.3
BRTR Keskin Array B 147.25 317 PKPbc PKPbc 12 57 14.6 0.0
comp=Z,10nm,1.0s,baz=90,slow=2.5,SNR=39
HARR Harsova 147.29 329 ⇑*i* P PKPab 12 57 21.7 +5.3
NKC Novy Kostel 147.30 351 *e*PKP PKPbc 12 57 14.4 0.0
NKC *ex* x 12 57 21.1
VRAC Vranov 147.42 346 ⇑P PKPdf 12 57 14.1 +1.8
VRAC Vranov 147.42 346 ⇑*i* P PKPdf 12 57 14.1 +1.8
MEM Membach 147.43 359 PKP PKPbc 12 57 14.5 -0.3
MANZ Manzenberg 147.59 352 *e*PKPbc PKPbc 12 57 14.8 -0.4
MLR Muntele Rosu 147.60 332 P PKPbc 12 57 15.5 +0.1
MLR Muntele Rosu 147.60 332 ⇓*i* P PKPab 12 57 20.2 +2.6
VYHS Vyhne 147.61 343 *e*PKP PKPbc 12 57 15.2 -0.1
VYHS *e* 12 57 20.9
BCLA Clavier 147.63 360 PKP PKPab 12 57 16.6 -0.9
TREC Trest 147.68 347 *e*PKP PKPbc 12 57 14.8 -0.7
TREC *ex* x 12 57 21.3
ANTO Ankara 147.71 318 *e*PKPbc PKPbc 12 57 16.5 +0.6
ANTO Ankara 147.71 318 PKIKP PKPab 12 57 17.1 -1.1
ANTO Ankara 147.71 318 ⇑*i* P PKPbc 12 57 15.2 -0.7
ROTZ Rotzenmuhle 147.79 352 *e*PKPbc PKPbc 12 57 15.6 -0.2
PSZ Piszkesteto 147.82 341 *e*PKPdf PKPbc 12 57 15.9 0.0
PSZ Piszkesteto 147.82 341 ⇑*e* PKPbc 12 57 16.3 +0.4
PSZ Piszkesteto 147.82 341 ⇓*i* P PKPab 12 57 18.2 -0.2
DRGR 147.85 337 P PKPbc 12 57 16.1 +0.1
DRGR 147.85 337 ⇑*i* P PKPab 12 57 21.2 +2.7
GIVF Givet 147.94 1 *e*PKP1 PKPbc 12 57 15.8 -0.4
comp=Z,34nm,0.9s
DOU Dourbes 147.95 1 PKP PKPdf 12 57 13.7 +0.6
BAIF Baives 147.98 1 *e*PKP1 PKPbc 12 57 16.1 -0.2
comp=Z,51nm,1.0s
GRF Grafenberg Arr 147.99 353 *e*PKPbc PKPbc 12 57 16.1 -0.2
VOIR 148.03 333 P PKPbc 12 57 16.9 +0.3
VOIR 148.03 333 ⇓*i* P PKPbc 12 57 17.5 +0.9
MODS Modra-Piesok 148.13 345 *e*PKP PKPbc 12 57 16.6 -0.1
KHC Kasperske Hory 148.19 350 *e*PKP PKPbc 12 57 16.9 0.0
WET Wettzell 148.30 350 *e*PKPbc PKPbc 12 57 16.9 -0.2
RUP Ruppelstein 148.31 358 PKP PKPbc 12 57 16.7 -0.5
TOD Tromm 148.31 356 PKP PKPbc 12 57 17.2 0.0
ZST Bratislava 148.34 345 *e*PKP PKPbc 12 57 17.6 +0.3
WLF Walferdange 148.37 359 PKP PKPdf 12 57 15.0 +1.2
WLF Walferdange 148.37 359 *e*PKHKP PKPdf 12 57 14.3 +0.4
WLF Walferdange 148.37 359 *e*PKPbc PKPbc 12 57 17.2 -0.1
GEC2 GERESS Array S 148.45 349 *e*PKPbc PKPbc 12 57 17.3 -0.3
GEC2 GERESS Array S 148.45 349 *e*PKPbc PKPbc 12 57 16.8 -0.7
GERES GERESS Array B 148.45 349 PKPbc PKPbc 12 57 17.3 -0.2
comp=Z,6.6nm,1.0s,baz=48,slow=2.0,SNR=18
BHL Bhannes 148.55 306 *eP* PKPbc 12 57 19.0 +0.7
MBAR Mbarara 148.87 236 ⇑*i* PKIKP PKPbc 12 57 19.6 -0.1
CONA Conrad Observa 148.89 346 ⇓*i* PKiKP PKiKP 12 57 19.0 -1.0
comp=Z,34nm,1.2s
CSNA Conrad Observa 148.89 346 ⇓*i* PKiKP PKiKP 12 57 19.0 -1.1
comp=Z,30nm,1.1s
SOP Sopron 148.95 345 ⇓*e* PKPbc 12 57 18.8 -0.1
STU Stuttgart 149.11 355 *e*PKPbc PKPbc 12 57 19.3 +0.1
BZS Buzias 149.25 337 P PKPbc 12 57 19.1 -0.6
BZS Buzias 149.25 337 ⇑*i* P PKPbc 12 57 18.3 -1.4
GRR Gorron 149.25 8 *e*PKP1 PKPbc 12 57 19.0 -0.6
comp=Z,81nm,1.1s
BOLV Bolvadin 149.54 318 ⇑*i* P PKPdf 12 57 13.6 -2.5
CDF Champ du Feu 149.59 357 *e*PKP1 PKPbc 12 57 20.1 -0.3
comp=Z,21nm,0.8s
BFO Black Forest 149.62 356 *e*PKPbc PKPbc 12 57 19.9 -0.6
BFO Black Forest 149.62 356 *e*PKPbc PKPbc 12 57 19.7 -0.8
RJOB Jochberg 149.68 350 *e*PKPbc PKPbc 12 57 21.0 +0.3
PKSM Moragy 149.73 341 ⇑P PKPdf 12 57 18.5 +2.3
PKSM Moragy 149.73 341 ⇑*i* P PKPdf 12 57 18.5 +2.3
ECH Echery 149.79 357 PKP PKPbc 12 57 21.1 +0.2
SPAK Spaichingen-Ko 149.81 355 PKP PKPbc 12 57 21.1 +0.1
THEF They Montfort 149.82 359 PKP PKPbc 12 57 21.5 +0.5
HAU Haudompre 150.03 359 *e*PKP1 PKPbc 12 57 21.2 -0.3
HAU *e*MLR MLR
comp=Z,524nm,20.8s,MS5.0
HAU Haudompre 150.03 359 *e*PKIKP PKPbc 12 57 21.2 -0.3
HAU MLR MLR
comp=Z,520nm,20.8s,MS5.3
FELD Feldberg im Sc 150.09 356 PKP PKPbc 12 57 22.1 +0.4
MOF Molkenrain 150.16 357 PKP PKPbc 12 57 22.1 +0.3
HINF Hinteralfeld 150.20 358 *e*PKP1 PKPbc 12 57 21.3 -0.7
comp=Z,22nm,1.0s
KBA Koelnbreinsper 150.22 349 ⇑*i* PKPbc PKPbc 12 57 21.6 -0.4
comp=Z,9.1nm,1.0s
PERS Pernice 150.28 346 *e*PKPbc PKPbc 12 57 21.3 -0.8
PERS *e*PKPab PKPab 12 57 28.8 +0.4
MOTA Moosalm 150.31 352 ⇑*i* PKPbc PKPbc 12 57 22.2 -0.1
comp=Z,13nm,0.8s
WTTA Wattenberg 150.32 351 ⇑*i* PKiKP PKiKP 12 57 22.5 -0.5
comp=Z,16nm,0.7s
DAVA Damuels 150.52 354 ⇑*i* PKiKP PKiKP 12 57 23.2 -0.3
comp=Z,26nm,1.1s
BBS Basel-Blauen 150.53 357 PKP PKPbc 12 57 22.8 +0.1
FETA Feichten 150.68 352 ⇑*i* PKPbc PKiKP 12 57 23.6 -0.2
comp=Z,33nm,1.2s
ABTA Abfaltersbach 150.68 350 ⇑*i* PKPbc PKPbc 12 57 22.7 -0.4
comp=Z,26nm,0.8s
LOR Lormes 150.76 2 *e*PKP1 PKPbc 12 57 22.8 -0.5
comp=Z,19nm,0.8s
LOR *e*MLR MLR
comp=Z,334nm,18.0s,MS4.9
LOR Lormes 150.76 2 *e*PKHKP PKPbc 12 57 22.8 -0.5
LOR MLR MLR
comp=Z,330nm,18.0s,MS5.2
SSF Saint Saulge 150.95 2 *e*PKP1 PKPbc 12 57 23.5 -0.3
comp=Z,51nm,1.0s
LJU Ljubljana 150.97 347 *e*PKPbc PKPbc 12 57 23.8 0.0
LJU *e*PKPab PKPab 12 57 30.1 -1.1
MFF Saint Martin d 151.10 8 *e*PKP1 PKPbc 12 57 23.5 -0.6
AVF Avril sur Loir 151.22 3 *e*PKP1 PKPbc 12 57 23.7 -0.7
comp=Z,12nm,0.9s
BOJS Bojanci 151.31 345 *e*PKPab PKPab 12 57 30.9 -1.8
SMF Signal de Mont 151.38 2 *e*PKP1 PKPbc 12 57 24.2 -0.6
comp=Z,59nm,1.2s
BGF Bois d'Agland 151.42 3 *e*PKP1 PKPbc 12 57 24.5 -0.4
comp=Z,31nm,0.8s
CABF La Chapelle 151.43 359 *e*PKP1 PKPbc 12 57 25.1 +0.2
comp=Z,60nm,1.0s
TCF Toulx Ste Croi 151.65 4 *e*PKP1 PKPbc 12 57 24.8 -0.6
comp=Z,38nm,1.2s
LPG La Plagne 152.52 358 *e*PKP1 PKPbc 12 57 28.1 +0.7
RJF Les Rejaudoux 152.57 6 *e*PKP1 PKPbc 12 57 26.9 -0.6
RJF *e*MLR MLR
comp=Z,1μm,23.0s,MS5.3
RJF Les Rejaudoux 152.57 6 *e*PKIKP PKPbc 12 57 26.9 -0.6
RJF MLR MLR
comp=Z,1μm,23.0s,MS5.6
ORIF Oris-en-Rattie 153.13 359 *e*PKP1 PKPbc 12 57 28.5 -0.3
ORIF *e*MLR MLR
comp=Z,504nm,20.8s,MS5.0
ESDC Sonseca Array 156.94 18 PKPab PKPab 12 57 56.1 -0.6
comp=Z,1.0nm,0.6s,baz=346,slow=4.7,SNR=5.6
TORD Torodi Ar. Bea 174.10 144 PKP PKPdf 12 57 40.1 -1.4
comp=Z,3.2nm,1.1s,baz=256,slow=2.7,SNR=5.7
TORD PKPab PKPab 12 59 13.1 +0.3
comp=Z,2.4nm,0.9s,baz=220,slow=4.0,SNR=4.4
TORD Torodi Ar. Bea 174.10 144 PKP PKPdf 12 57 40.1 -1.4
TORD PKPab PKPab 12 59 13.1 +0.3

IDC ***23*** *12:38:44.5±0.5, 18.05S×174.71W, h0km, mb4.8/19, mb1 4.9/19, mb1mx4.9/23, mbtmp4.8/19, MS5.1/6, Ms1 5.1/6, ms1mx4.7/11, Error ellipse: s-maj=19.8km s-min=14.0km az=128.0*
ISCJB ***23*** *12:38:48.5±0.2, 18.04S±0.06×174.80W±0.06, h33km, mb5.1/86, MS5.0/12, Error ellipse: s-maj=10.1km s-min=5.4km az=140.1*
NEIC ***23*** *12:38:50.5±0.2, 17.92S×174.83W, h35km, mb5.3/54, MS5.1/2, Error ellipse: s-maj=11.8km s-min=5.6km az=143.0*
BJI ***23*** *12:38:50.0, 17.90S×174.80W, h35km, mB5.7, mb5.1, Ms5.4, Msz5.1*
MOS ***23*** *12:38:51.0±2.3, 17.67S×174.93W, h33km, mb5.5/27, Error ellipse: s-maj=13.3km s-min=8.6km az=53.6*
SZGRF ***23*** *12:38:54.3, 16.65S×174.04W, h33km, Tonga Islands*

ISC 23 12:38:50.4±0.2, 18.03S±0.06×174.78W±0.06, h35km, h35km±1.0km: pP-P, n280, σ0.95/174, mb5.1/86, MS5.0/12, 15C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.01**	**36**	T				12 45 00.9	
	30nm,0.3s,baz=69,slow=23,SNR=3.6								
DZM	**Mont Dzumac**	**18.09**	**254**	*e*P		**Pn**		**12 43 03.5**	**+4.5**
DZM	**Mont Dzumac**	**18.09**	**254**	*e*S		**Pn**		**12 43 03.9**	**+4.9**
URZ	**Urewera**	**21.37**	**198**	P		**P**		**12 43 32.7**	**-2.1**
	28nm,0.9s,mb4.6,baz=21,slow=8.1,SNR=3.4								
URZ				LR		LR		12 50 24.1	
	comp=Z,3μm,19.6s,MS4.7,baz=23,slow=33								
HNR	**Honiara**	**25.97**	**286**	LR		LR		12 52 58.7	
	comp=Z,8μm,19.6s,MS5.3,baz=126,slow=33								
RPZ	**Rata Peaks**	**28.26**	**202**	P		**P**		**12 44 38.5**	**-1.7**
	15nm,1.0s,mb4.6,baz=32,slow=17,SNR=1.8								
RPZ				LR		LR		12 55 23.0	
	comp=Z,4μm,19.1s,MS5.1,baz=16,slow=35								
ARMA	**Armidale**	**32.89**	**242**	*e*P		**P**		**12 45 22.0**	**+0.7**
CNB	**Canberra Magne**	**36.12**	**234**	*e*P		**P**		**12 45 49.8**	**+0.6**
CTA	**Charters Tower**	**36.83**	**260**	*e*P		**P**		**12 45 55.1**	**-0.3**
	8.1nm,0.7s,mb4.7								
CTA	**Charters Tower**	**36.83**	**260**	P		**P**		**12 45 55.3**	**-0.1**
	10nm,0.7s,mb4.8,baz=96,slow=10,SNR=5.9								
CTA				LR		LR		12 58 52.8	
	comp=Z,5μm,21.0s,MS5.3,baz=90,slow=33								
CTAO	**Charters Tower**	**36.83**	**260**	*e*P		**P**		**12 45 55.2**	**-0.2**
	38nm,1.3s,mb5.1								
CTAO	**Charters Tower**	**36.83**	**260**	*e*P		**P**		**12 45 55.2**	**-0.2**
CTAO				pmax	pmax				
	comp=Z,38nm,1.3s,mb5.1								
TOO	**Toolangi**	**39.80**	**232**	*e*P		**P**		**12 46 20.8**	**+0.6**
TAU	**Tasmania Unive**	**40.51**	**224**	*e*P		**P**		**12 46 28.2**	**+2.2**
	comp=Z,38nm,1.2s,mb4.9								
TAU	**Tasmania Unive**	**40.51**	**224**	*e*P		**P**		**12 46 28.2**	**+2.2**
TAU				pmax	pmax				
	comp=Z,38nm,1.2s,mb4.9								
STKA	**Stephens Creek**	**41.61**	**242**	*e*P		**P**		**12 46 35.6**	**+0.4**
	comp=Z,11nm,1.0s,mb4.5								
STKA	**Stephens Creek**	**41.61**	**242**	P		**P**		**12 46 35.6**	**+0.3**
	comp=Z,22nm,1.1s,mb4.7,baz=75,slow=8.2,SNR=7.0								
STKA	**Stephens Creek**	**41.61**	**242**	*e*P		**P**		**12 46 35.6**	**+0.4**
	comp=Z,7.0nm,1.3s,mb4.1								
WB2	**Warramunga Arr**	**47.99**	**259**	*e*P		**P**		**12 47 24.4**	**-1.8**
WRAB	**Tennant Creek**	**47.99**	**259**	*e*P		**P**		**12 47 25.4**	**-0.8**
	comp=Z,17nm,1.0s,mb5.0								
WRAB	**Tennant Creek**	**47.99**	**259**	*e*P		**P**		**12 47 25.4**	**-0.9**
WRAB				pmax	pmax				
	comp=Z,17nm,1.0s,mb5.0								
WRA	**Warramunga Arr**	**48.00**	**259**	P		**P**		**12 47 25.3**	**-1.0**
	comp=Z,11nm,0.8s,mb4.9,baz=96,slow=7.8,SNR=9.3								
WRA				PcP	PcP			12 48 54.3	+0.2
	comp=Z,10.0nm,1.1s,baz=91,slow=3.6,SNR=5.9								
WRA				LR	LR			13 06 31.6	
	comp=Z,4μm,19.5s,MS5.4,baz=95,slow=35								
WRA	**Warramunga Arr**	**48.00**	**259**	P		**P**		**12 47 25.3**	**-1.0**
WRA								12 48 54.3	
ASAR	**Alice Springs**	**48.08**	**254**	P		**P**		**12 47 26.5**	**-0.4**
	comp=Z,33nm,0.8s,mb5.4,baz=85,slow=8.5,SNR=9.8								
ASAR				PcP	PcP			12 48 54.5	+0.2
	comp=Z,7.5nm,0.8s,baz=99,slow=4.4,SNR=6.2								
KAKA	**Kakadu**	**51.03**	**268**	*e*S		Px		12 47 34.9	
SBA	**Scott Base**	**60.54**	**184**	*e*P		**P**		**12 48 59.2**	**+2.5**
VNDA	**Vanda**	**60.64**	**186**	P		**P**		**12 48 58.4**	**+1.0**
VNDA				LR		LR		13 12 08.8	
	comp=Z,281nm,19.1s,MS4.4,baz=19,slow=33								
VNDA	**Vanda**	**60.64**	**186**	*e*P		**P**		**12 48 59.2**	**+1.8**
	comp=Z,10nm,1.3s,mb4.8								
VNDA				LR		LR		13 12 08.8	
VNDA	**Vanda**	**60.64**	**186**	*e*P		**P**		**12 48 59.2**	**+1.8**
VNDA				pmax	pmax				
	comp=Z,10.0nm,1.3s								
MBWA	**Marble Bar**	**61.39**	**255**	*e*P		**P**		**12 48 58.9**	**-4.5**
KLBR	**Kellerberrin**	**61.86**	**243**	*e*P		**P**		**12 49 05.1**	**-1.3**
	comp=Z,36nm,1.5s,mb5.3								
NWAO	**Narrogin (SRO)**	**62.20**	**242**	*e*P		**P**		**12 49 08.5**	**-0.2**
	comp=Z,20nm,1.1s,mb5.2								
NWAO	**Narrogin (SRO)**	**62.20**	**242**	*e*P		**P**		**12 49 08.5**	**-0.2**
NWAO				pmax	pmax				
	comp=Z,20nm,1.1s								
CASY	**Casey**	**67.48**	**205**	*e*P		**P**		**12 49 41.9**	**-0.6**
	comp=Z,31nm,1.3s,mb5.2								
MJAR	**Matsushiro Arr**	**70.11**	**321**	P		**P**		**12 49 57.5**	**-1.7**
	comp=Z,3.1nm,1.0s,mb4.2,baz=147,slow=6.4,SNR=4.3								
QSPA	**South Pole Qui**	**72.03**	**180**	P		**P**		**12 50 08.9**	**-1.4**
	comp=Z,8.6nm,0.8s,mb4.7,baz=79,slow=4.6,SNR=16								
PETK	**Petropavlovsk-**	**74.73**	**343**	P		**P**		**12 50 25.4**	**-1.0**
	comp=Z,16nm,0.9s,mb5.0,baz=122,slow=6.7,SNR=6.2								
MWC	**Mount Wilson**	**74.91**	**46**	*e*P		**P**		**12 50 28.8**	**+1.0**
	comp=Z,29nm,1.4s,mb5.0								
MWC	**Mount Wilson**	**74.91**	**46**	*e*P		**P**		**12 50 28.8**	**+0.9**
MWC				pmax	pmax				
	comp=Z,29nm,1.4s,mb5.0								
YSS	**Yuzh-Sakhalins**	**75.12**	**331**	⇑*i* P		**P**		**12 50 28.3**	**-0.5**
YSS	**Yuzh-Sakhalins**	**75.12**	**331**	⇑*e* P		**P**		**12 50 28.3**	**-0.5**
YSS				pmax	pmax				
	comp=Z,90nm,1.0s,mb5.7								
CMB	**Columbia Colle**	**75.60**	**42**	*e*P		**P**		**12 50 32.1**	**+0.3**
	comp=Z,30nm,1.4s,mb5.0								
CMB	**Columbia Colle**	**75.60**	**42**	*e*P		**P**		**12 50 32.1**	**+0.4**
CMB				pmax	pmax				
	comp=Z,30nm,1.4s,mb5.0								
PFO	**Pinyon Flat Ob**	**75.67**	**47**	P		**P**		**12 50 32.8**	**+0.5**
	comp=Z,6.7nm,1.1s,mb4.5,baz=238,slow=3.2,SNR=5.4								
OHCM	**Honcut**	**75.71**	**40**	*e*P		**P**		**12 50 32.9**	**+0.6**
WDC	**Whiskeytown Da**	**75.85**	**38**	*e*P		**P**		**12 50 33.6**	**+0.4**
	comp=Z,41nm,1.5s,mb5.1								
WDC	**Whiskeytown Da**	**75.85**	**38**	*e*P		**P**		**12 50 33.6**	**+0.5**
WDC				pmax	pmax				
	comp=Z,41nm,1.5s,mb5.1								
MTUM	**Tungsten Hills**	**76.36**	**43**	*e*P		**P**		**12 50 36.8**	**+0.6**
GSC	**Goldstone**	**76.36**	**46**	*e*P		**P**		**12 50 36.9**	**+0.7**
	comp=Z,41nm,1.4s,mb5.2								
GSC	**Goldstone**	**76.36**	**46**	*e*P		**P**		**12 50 36.9**	**+0.7**
GSC				pmax	pmax				
	comp=Z,41nm,1.4s,mb5.2								
WAKR	**Walker**	**76.48**	**42**	*e*P		**P**		**12 50 37.1**	**+0.4**
YBH	**Yreka Blue Hor**	**76.48**	**37**	P		**P**		**12 50 36.2**	**-0.5**
	comp=Z,9.0nm,0.9s,mb4.7,baz=48,slow=3.4,SNR=7.3								
YBH	**Yreka Blue Hor**	**76.48**	**37**	*e*P		**P**		**12 50 36.4**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9								
YBH	**Yreka Blue Hor**	**76.48**	**37**	*e*P		**P**		**12 50 36.4**	**-0.3**
YBH				pmax	pmax				
	comp=Z,16nm,1.0s								
HUMO	**Hull Mountain**	**76.90**	**37**	*e*P		**P**		**12 50 38.7**	**-0.3**
	comp=Z,14nm,1.1s,mb4.8								
BUOR	**Burton Butte**	**77.09**	**37**	P		**P**		**12 50 40.2**	**+0.1**
KSRS	**Korea Array**	**77.12**	**317**	P		**P**		**12 50 41.1**	**+0.8**
	comp=Z,6.6nm,1.1s,mb4.5,baz=135,slow=6.3,SNR=8.0								
NVAR	**Mina Array Bea**	**77.16**	**42**	P		**P**		**12 50 40.0**	**-0.5**
	comp=Z,13nm,1.0s,mb4.8,baz=228,slow=9.2,SNR=12								
PAHR	**Pah Rah Range**	**77.23**	**41**	*e*P		**P**		**12 50 40.3**	**-0.6**
	comp=Z,59nm,1.7s,mb5.2								
LDFC	**Landfair**	**77.40**	**47**	*e*P		**P**		**12 50 42.6**	**+0.6

HABR Khabarovsk 79.86 329 *e*P P **12 50 54.5 -0.7**
HABR *e* 12 51 00.3
HABR *e**PP pP 12 51 03.7 -2.6
HABR *e*SP 12 51 07.9
HABR *e* 12 53 51.6
HABR *e*PPP 12 55 42.4
HABR *e*S S 13 00 52.8 -3.2
HABR *e*PS 13 01 06.0
HABR *e* 13 01 14.0
HABR *e*SS SS 13 06 01.5 -4.8
HABR *e*SSS 13 09 27.7
CCUT Cedar City 79.92 45 *e*P P **12 50 55.3 -0.5**
ARUT Antelope Range 79.99 45 P P **12 50 57.0 +0.8**
WUAZ Wupatki 80.24 48 *e*P P **12 50 58.9 +1.3**
comp=Z,31nm,1.4s,mb5.0
MDJ Mudanjiang 80.31 323 P P **12 50 58.4 +0.7**
MDJ AMB AMB
comp=Z,20nm,1.6s,mb4.8
MDJ AMB AMB
comp=Z,311nm,4.5s
ELK Elko 80.42 42 *e*P P **12 50 58.2 -0.2**
NJ2 Nanjing 80.71 308 *e*P P **12 51 01.8 +1.6**
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.5
RSW Rattlesnake Hi 81.15 35 *e*P P **12 51 01.3 -0.8**
HAWA Hanford 81.18 35 *e*P P **12 51 01.8 -0.6**
comp=Z,12nn,1.0s,mb4.8
MSU Marysvale 81.22 45 *e*P P **12 51 02.8 0.0**
GBL Gable Mountain 81.34 35 P P **12 51 02.4 -0.9**
ETW Entiat 81.50 34 *e*P P **12 51 02.1 -1.9**
BMO Blue Mountains 81.51 37 *e*P P **12 51 04.0 -0.2**
comp=Z,56nm,1.8s,mb5.2
LNOR Lincton Mounta 81.55 36 *e*P P **12 51 02.9 -1.5**
OD2 Odessa Site #2 82.23 35 P P **12 51 07.8 -0.1**
CN2 Changchun 82.26 321 *e*P P **12 51 07.6 -0.5**
CN2 *e*S S 13 01 18.3 -2.8
CN2 AMB AMB
comp=Z,10.0nm,1.3s,mb4.6
CN2 AMB AMB
comp=Z,560nm,4.0s
CN2 LR LR
comp=Z,550nm,20.0s,MS4.9
SNY Shenyang 82.33 318 ⇓P P **12 51 11.1 +2.5**
SNY AMB AMB
comp=Z,28nm,2.4s,mb4.8
HLID Hailey 82.49 40 *e*P P **12 51 09.5 +0.2**
comp=Z,25nm,1.2s,mb5.0
HVU Hansel Valley 82.54 42 *e*P P **12 51 09.9 +0.2**
comp=Z,24nn,1.1s,mb5.1
HVU Hansel Valley 82.54 42 *e*P P **12 51 09.9 +0.3**
HVU pmax pmax
comp=Z,24nm,1.1s,mb5.1
SRU San Rafael 82.63 45 *e*P P **12 51 11.2 +1.0**
comp=Z,65nn,1.6s,mb5.4
SRU San Rafael 82.63 45 *e*P P **12 51 11.2 +1.0**
SRU pmax pmax
comp=Z,65nn,1.6s,mb5.4
LAZ Ladron 82.75 50 *e*P P **12 51 10.3 -0.6**
LENM Lemitar 82.76 51 *e*P P **12 51 11.7 +0.7**
JLU Jordanelle 82.78 43 *e*P P **12 51 12.7 +1.8**
BNM Barren Site 83.01 51 *e*P P **12 51 12.2 -0.1**
LPM Los Pinos Moun 83.08 51 *e*P P **12 51 12.7 +0.1**
TXAR Lajitas Array 83.17 56 P P **12 51 13.3 +0.2**
comp=Z,4.6nm,1.0s,mb4.5,baz=229,slow=5.8,SNR=7.4
HWUT Hardware Ranch 83.22 42 *e*P P **12 51 12.7 -0.4**
comp=Z,20nn,1.2s,mb5.0
PV10 Paradox Valley 83.28 46 *e*P P **12 51 12.5 -1.0**
PV01 Paradox Valley 83.48 47 *e*P P **12 51 14.1 -0.5**
ANMO Albuquerque 83.50 50 *e*P P **12 51 14.8 +0.1**
comp=Z,54nn,1.5s,mb5.4
ANMO Albuquerque 83.50 50 ⇑*i*P P **12 51 14.8 0.0**
GDL2 Guadalupe Moun 83.84 53 *e*P P **12 51 17.3 +0.7**
MCK McKinley 83.94 11 *e*P P **12 51 15.2 -1.1**
comp=Z,26nn,1.0s,mb5.3
MCK McKinley 83.94 11 *e*P P **12 51 15.2 -1.1**
MCK pmax pmax
comp=Z,26nn,1.0s,mb5.3
AHID Auburn Hatcher 84.11 42 *e*P P **12 51 18.4 +0.6**
comp=Z,49nn,1.2s,mb5.5
MCMT McKenzie Canyo 84.12 39 *e*P P **12 51 17.2 -0.5**
RRI2 Red Ridge 84.28 41 *e*P P **12 51 17.9 -0.6**
DCID1 Drake Creek 84.49 41 *e*P P **12 51 19.4 -0.2**
REDW Red Top Meadow 84.58 41 *e*P P **12 51 20.0 -0.1**
comp=Z,49nn,1.2s,mb5.5
TPAW Teton Pass 84.58 41 *e*P P **12 51 20.2 +0.1**
comp=Z,28nn,1.0s,mb5.3
DLBC Dease Lake 84.62 22 *e*P P **12 51 20.4 +0.5**
BSMT Bassoo Peak 84.66 36 *e*P P **12 51 20.3 0.0**
SNOW Snow King Moun 84.69 41 *e*P P **12 51 20.4 -0.2**
comp=Z,40nn,0.9s,mb5.5
SEY Seymchan 84.71 346 ⇓*i*P P **12 51 20.3 0.0**
IMW Indian Meadow 84.80 41 *e*P P **12 51 20.9 -0.2**
comp=Z,32nn,1.1s,mb5.4
MOOW Moose Ponds 84.84 41 *e*P P **12 51 22.0 +0.6**
comp=Z,16nn,1.2s,mb5.0
LOHW Long Hollow 84.86 41 *e*P P **12 51 20.4 -1.1**
comp=Z,25nn,1.3s,mb5.2
LRM Limekiln Ridge 84.89 38 *e*P P **12 51 22.0 +0.5**
MAW Mawson 84.89 199 P P **12 51 20.7 -0.7**
comp=Z,9.1nm,0.9s,mb4.9,baz=106,slow=4.5,SNR=7.5
QLMT Earthquake Lak 84.98 40 *e*P P **12 51 22.8 +0.7**
CHMT Chamberlain Mo 85.01 37 *e*P P **12 51 21.4 -0.8**
SMCO Snowmass 85.08 46 *e*P P **12 51 23.0 +0.3**
comp=Z,22nn,1.1s,mb5.2
BW06 Boulder Array 85.09 42 *e*P P **12 51 21.6 -1.1**
comp=Z,20nn,1.0s,mb5.2
PDAR Pinedale Array 85.09 42 P P **12 51 21.4 -1.2**
comp=Z,16nn,1.0s,mb5.1,baz=212,slow=3.3,SNR=13
YFT Old Faithful 85.15 40 *e*P P **12 51 24.3 +1.4**
YMR Madison River 85.18 40 *e*P P **12 51 22.8 -0.2**
comp=Z,52nn,1.4s,mb5.5
COLA College 85.18 11 *e*P P **12 51 19.7 -2.9**
comp=Z,49nn,1.1s,mb5.5
COLA College 85.18 11 *e*P P **12 51 19.7 -2.9**
COLA pmax pmax
comp=Z,49nn,1.1s,mb5.5
BOZ Bozeman (W) 85.28 39 *e*P P **12 51 23.6 0.0**
comp=Z,31nn,1.4s,mb5.2
BOZ Bozeman (W) 85.28 39 *e*P P **12 51 23.6 0.0**
BOZ pmax pmax
comp=Z,31nn,1.4s,mb5.2
YNR Norris Junctio 85.38 40 *e*P P **12 51 27.1 +3.1**
SDCO Great Sand Dun 85.45 48 *e*P P **12 51 25.3 +0.7**
comp=Z,12nn,1.3s,mb4.8
LKWY Lake 85.47 40 *e*P P **12 51 25.6 +1.0**
comp=Z,25nn,1.1s,mb5.2
LKWY Lake 85.47 40 *e*P P **12 51 25.6 +1.1**
LKWY pmax pmax
comp=Z,25nn,1.1s,mb5.3
HRY Holter Researc 85.72 38 *e*P P **12 51 26.0 +0.2**
RWWY Rawlins 86.10 44 *e*P P **12 51 28.1 +0.5**
comp=Z,27nn,1.3s,mb5.3
BJI Beijing 86.32 314 P P **12 51 29.3 +0.5**
BJI AMB AMB
comp=Z,35nn,1.9s,mb5.3
BJI AMB AMB
comp=Z,558nn,3.6s
EGAK Eagle 86.47 14 *e*P P **12 51 27.8 -1.2**
comp=Z,28nn,1.0s,mb5.5
GCMT Greycliff 86.54 39 *e*P P **12 51 29.2 -0.6**
JCT Junction City 86.70 57 *e*P P **12 51 31.6 +0.7**
comp=Z,21nn,1.1s,mb5.3
JCT Junction City 86.70 57 *e*P P **12 51 31.6 +0.7**
JCT pmax pmax
comp=Z,21nn,1.1s,mb5.3
BILL Bilibino 86.93 353 ⇑*i*P P **12 51 30.0 -1.2**
BILL pmax pmax
comp=Z,45nn,1.2s,mb5.6
COLD Coldfoot 86.93 9 *e*P P **12 51 30.1 -1.1**
comp=Z,98nn,1.9s,mb5.7
GYA Guiyang 88.11 298 ⇓*i*P P **12 51 39.5 +1.7**
GYA AP pP 12 51 50.5 +1.5
GYA XP sP 12 51 56.6 +3.6
GYA PP PP 12 55 08.0 +2.8
GYA SKS 13 02 01.0
GYA S S 13 02 19.5 -0.2
GYA XS sS 13 02 34.9 -3.3
GYA SS SS 13 08 08.5 -0.7
GYA AMB AMB
comp=Z,20nn,1.0s,mb5.3
GYA AMB AMB
comp=Z,140nn,6.8s
GYA LR LR
comp=N,660nn,23.1s,MS5.2
GYA LR LR
comp=E,700nn,22.4s,MS5.2
GYA LR LR
comp=Z,620nn,24.5s,MS4.9
EDM Edmonton 88.41 32 *e*P P **12 51 38.7 +0.1**
HIA Hailar 88.49 323 *e*P P **12 51 38.2 -0.9**
comp=Z,31nn,1.3s,mb5.4
HIA Hailar 88.49 323 *e*P P **12 51 38.2 -0.9**
HIA pmax pmax
comp=Z,31nn,1.3s
LAO LASA Array 89.06 40 *e*P P **12 51 42.0 +0.2**
comp=Z,23nn,1.0s,mb5.5
XAN Xi'an 89.09 306 P P **12 51 44.8 +2.5**
XAN AP pP 12 51 55.9 +2.4
XAN AMB AMB
comp=Z,27nn,1.5s,mb5.4
RSSD Black Hills 89.28 43 *e*P P **12 51 42.1 -0.8**
comp=Z,14nn,1.1s,mb5.2
RSSD Black Hills 89.28 43 *e*P P **12 51 42.1 -0.8**
RSSD pmax pmax
comp=Z,14nn,1.1s,mb5.2
SYO Syowa Base 89.77 192 ⇓*i*X P **12 51 43.8 -1.1**
HHC Hu-ho-hao-te 89.84 313 *e*P P **12 51 46.8 +1.2**
HHC AP pP 12 51 57.8 +1.0
HHC XP sP 12 52 02.5 +1.7
HHC PP PP 12 55 19.9 +1.2
HHC SKS 13 02 12.6
HHC S S 13 02 34.0 -1.4
HHC XS sS 13 02 53.0 -0.9
HHC SS SS 13 08 35.6 +1.8
HHC AMB AMB
comp=Z,35nn,1.2s,mb5.6
HHC AMB AMB
comp=Z,374nn,6.4s
HHC LR LR
comp=N,361nn,22.6s,MS5.0
HHC LR LR
comp=E,572nn,20.0s,MS5.0
HHC LR LR
comp=Z,1μm,22.6s,MS5.2
CLNS Chul'man 89.89 331 *e*P P **12 51 45.4 0.0**
CLNS pmax pmax
comp=Z,36nn,1.2s,mb5.6
CLNS pmax pmax
comp=E,16nn,1.2s
CLNS pmax pmax
comp=N,21nn,1.3s
SNAA Sanae 90.36 177 *e*P P **12 51 44.2 -3.4**
SNAA *e* pP 12 51 55.0 -3.8
SNAA Sanae 90.36 177 *e*P P **12 51 43.1 -4.4**
comp=N,44nn,1.6s,mb5.5
SNAA Sanae 90.36 177 ⇑*i*P P **12 51 45.2 -2.4**
VNA3 Neumayer Olymp 90.37 175 *e*P P **12 51 47.9 +0.3**
VNA3 *e* 12 51 50.9
VNA3 *e* pP 12 51 59.2 +0.4
VNA3 *e* 12 52 02.7
VNA2 Neumayer--Watz 90.85 176 *e*P P **12 51 50.4 +0.5**
baz=197,slow=4.3
VNA2 *e* 12 51 53.7
VNA2 *e* pP 12 52 02.1 +1.1
VNA2 *e* 12 52 05.4
KMI Kunming 90.97 296 P P **12 51 53.1 +1.8**
KMI AP pP 12 52 02.4 -0.1
KMI XP sP 12 52 06.1 -0.4
KMI PP PP 12 55 30.1 +2.0
KMI SKS 13 02 21.5
KMI S S 13 02 45.3 -1.2
KMI XS sS 13 03 00.8 -4.2
KMI SS SS 13 08 46.3 -4.4
KMI AMB AMB
comp=Z,16nm,2.0s,mb5.0
KMI AMB AMB
comp=Z,382nm,4.2s
KMI LR LR
comp=N,432nm,18.9s,MS5.1
KMI LR LR
comp=E,580nm,22.6s,MS5.1
KMI LR LR
comp=Z,677nm,22.6s,MS5.0
YAK Yakutsk 91.00 337 ⇑*i*P P **12 51 49.4 -1.1**
YAK pmax pmax
comp=Z,52nn,2.5s,mb5.4
VNA1 Neumayer--Stat 91.06 176 *e*P P **12 51 51.7 +0.9**
VNA1 *e* 12 51 54.8
VNA1 *e* pP 12 52 03.0 +1.0
VNA1 *e* 12 52 07.2
DGMT Dagmar 91.10 39 *e*P P **12 51 51.6 +0.4**
comp=Z,36nn,1.2s,mb5.6
INK Inuvik 91.13 14 *e*P P **12 51 49.4 -1.6**
comp=Z,421nn,1.1s
CD2 Chengdu 92.05 302 *e*P P **12 51 57.8 +1.7**
CD2 AP pP 12 52 07.5 +0.2
CD2 XP sP 12 52 11.4 0.0
CD2 PP PP 12 55 39.3 +2.8
CD2 SKS 13 02 25.5
CD2 S S 13 02 53.6 -2.4
CD2 XS sS 13 03 11.3 -3.3
CD2 SS SS 13 09 06.3 +0.2
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,160nm,16.2s
CD2 LR LR
comp=Z,210nm,18.0s,MS4.6
CMAR Chiang Mai Arr 92.18 289 P P **12 51 58.5 +1.5**
comp=Z,5.2nn,1.0s,mb4.8,baz=104,slow=2.6,SNR=11
LZH Lanzhou 93.71 307 *e*P P **12 52 04.1 +0.4**
LZH AP pP 12 52 14.6 -0.3
LZH XP sP 12 52 19.0 +0.1
LZH PP PP 12 55 52.0 +2.6
LZH SKS 13 02 35.0
LZH *e*S S 13 03 06.5 -4.0
LZH XS sS 13 03 23.0 -6.2
LZH SS SS 13 09 29.3 -0.4
LZH AMB AMB
comp=Z,42nn,1.5s,mb5.7
LZH AMB AMB
comp=Z,209nn,4.9s
LZH LR LR
comp=E,1μm,19.0s
LZH LR LR
comp=Z,2μm,20.0s,MS5.5
UALR University of 94.11 55 *e*P P **12 52 06.1 +0.6**
comp=Z,20nn,1.1s,mb5.5
ULN Ulaanbaatar 95.51 319 *e*P P **12 52 11.5 -0.1**
comp=Z,50nn,2.4s,mb5.5
ULN Ulaanbaatar 95.51 319 ⇑*i*P P **12 52 11.6 0.0**
SONM Songino Array 95.91 318 P P **12 52 14.6 +1.1**
comp=Z,1.0nn,1.0s,mb4.2,baz=64,slow=4.4,SNR=4.5
AGMN Agassiz Refuge 96.14 41 *e*P P **12 52 14.0 -0.4**
comp=Z,16nn,1.1s,mb5.4
TIXI Tiksi 97.17 345 ⇓*i*P P **12 52 17.7 -0.9**
TIXI pmax pmax
comp=Z,7.0nn,1.3s,mb4.9
MKAR Makanchi Array 111.70 314 PKiKP PKiKP 12 57 19.8 -1.6
comp=Z,0.6nn,0.7s,baz=85,slow=1.8,SNR=2.9
KURK Kurchatov 114.22 318 *i* PKP PKiKP 12 57 26.7 +0.7
BRVK Borovoye 119.17 321 *i* PKP PKPdf 12 57 34.7 -0.8
ARU Arti 124.84 327 *i* PKP PKPdf 12 57 46.6 +0.3
ARU Arti 124.84 327 *i* PKiKP PKPdf 12 57 46.5 +0.2
ARU 12 59 32.5
ARU 13 04 46.2
ARU SS SS 13 16 24.2 -2.6
ARCES ARCESS Array B 127.00 351 PKP PKPdf 12 57 49.0 -1.0
comp=Z,5.9nm,0.9s,baz=26,slow=2.3,SNR=5.0
OBN Obninsk 135.94 335 ⇓*i*PKP PKPdf 12 58 07.9 +0.6
OBN Obninsk 135.94 335 ⇑*i*PKiKP PKPdf 12 58 07.3 0.0
OBN pmax pmax
comp=Z,8.0nn,1.0s
MSL Mosul 141.96 306 *ex* x 12 58 11.0
AKASG Malin Array Be 142.20 335 PKhKP 12 58 12.2
comp=Z,0.4nn,0.3s,baz=39,slow=3.6,SNR=2.5
LVV L'vov 144.86 339 *e*PKiKP PKPdf 12 58 23.4 -0.2
IBBN Ibbenburen 145.74 357 *e*PKPbc PKPbc 12 58 24.6 -0.9
CLZ Clausthal 146.02 354 *e*PKPbc PKPbc 12 58 25.7 -0.6
KSP Ksiaz 146.09 347 *e*PKP PKPdf 12 58 26.0 +0.3
KSP Ksiaz 146.09 347 *e* PKPdf 12 58 26.4 +0.7
WTSB Winterswijk 146.11 358 *e*PKP PKPdf 12 58 25.9 +0.2
comp=Z,127nm,2.0s
STHS Stebnicka Huta 146.12 341 *e*PKP2 PKPab 12 58 28.6 +1.2
STHS Stebnicka Huta 146.12 341 *e*PKP PKPab 12 58 28.5 +1.1
KOLS Kolonicke sedl 146.22 340 *e*PKP PKPdf 12 58 27.7 +1.7
CLL Collm 146.22 351 *e*PKPdf PKPdf 12 58 26.0 +0.1
CLL *e*PKPbc PKPbc 12 58 28.0 +1.0
comp=Z,91nm,1.1s
CLL *i* (PKiKP) 12 58 32.6
BUR08 Bucovina Ar. S 146.23 335 *e*PKPab PKPab 12 58 27.8 0.0
UPC Upice 146.47 347 *e*PKP PKPdf 12 58 28.2 +1.9
UZH Uzhgorod 146.47 339 ⇓*i*PKP2 PKPab 12 58 29.3 +0.6
BRG Berggiesshubel 146.50 350 *i* PKP2 PKPab 12 58 28.6 -0.2
BRG pmax pmax
comp=Z,37nm,1.3s
BRG MLR MLR
comp=N,286nm,27.1s
BRG MLR MLR
comp=E,190nm,18.4s
BRG MLR MLR
comp=Z,363nm,18.0s
BRG Berggiesshubel 146.50 350 *e*PKPbc PKPbc 12 58 27.4 -0.4
BRG Berggiesshubel 146.50 350 *i* PKP PKPab 12 58 28.6 -0.2
comp=Z,62nm,1.3s
BRG
comp=N,478nm,27.1s
BRG
comp=E,317nm,18.4s
BRG
comp=Z,606nm,18.0s
CRVS Cervenica-Dubn 146.51 340 *e*PKP PKPab 12 58 30.1 +1.2
DPC Dobruska-Polom 146.55 347 *e*PKP PKPdf 12 58 27.8 +1.3
OKC Ostrava-Krasne 146.61 345 *e*PKP PKPab 12 58 28.7 -0.5
BUG Bochum--Univer 146.62 358 *e*PKPbc PKPbc 12 58 27.9 -0.2
PVCC Panska Ves 146.72 349 *e*PKP PKPdf 12 58 28.2 +1.4
MORC Moravsky Berou 146.81 345 *e*PKPdf PKPdf 12 58 26.5 -0.5
MOX Moxa 147.06 353 *e*PKP PKPdf 12 58 29.1 +1.8
comp=Z,67nm,1.8s
MOX
comp=Z,300nn,20.0s
MOX Moxa 147.06 353 *e*PKPbc PKPbc 12 58 29.3 -0.1
TANN Tannenbergstha 147.17 351 *e*PKPbc PKPbc 12 58 29.9 +0.2
PRU Pruhonice 147.25 349 *e*PKP PKPdf 12 58 29.5 +1.8
BR131 Keskin Array S 147.27 317 *e*PKPbc PKPbc 12 58 29.9 -0.5
BRTR Keskin Array B 147.27 317 PKPbc PKPbc 12 58 30.2 -0.1
comp=Z,24nn,1.0s,baz=136,slow=2.4,SNR=15
HGN Heimansgroeve 147.34 359 *e*PKP PKPab 12 58 31.3 -0.8
comp=Z,89nm,2.9s
NKC Novy Kostel 147.35 351 *e*PKP PKPab 12 58 31.8 -0.3
MEM Membach 147.49 359 PKP PKPab 12 58 31.6 -1.0
MANZ Manzenberg 147.64 352 *e*PKPbc PKPbc 12 58 30.8 -0.2
VYHS Vyhne 147.65 343 *e*PKP PKPbc 12 58 31.1 0.0
KOLL Kolacno 147.70 344 *e*PKP PKPbc 12 58 31.7 +0.5
TREC Trest 147.72 347 *e*PKP PKPbc 12 58 31.6 +0.3
ANTO Ankara 147.73 318 *e*PKPbc PKPbc 12 58 31.4 -0.3
TNS Taunus Mts 147.78 356 *e*PKPbc PKPbc 12 58 31.4 0.0
ROTZ Rotzenmuhle 147.84 351 *e*PKPbc PKPbc 12 58 31.4 -0.2
PSZ Piszkesteto 147.86 341 *e*PKPbc PKPbc 12 58 30.7 -1.0
PSZ Piszkesteto 147.86 341 *ep*PKP PKPab 12 58 33.9 -0.3
GIVF Givet 148.00 0 *e*PKP1 PKPbc 12 58 31.8 -0.2
comp=Z,126nm,1.3s
DOU Dourbes 148.01 1 PKP PKPbc 12 58 31.7 -0.3
BAIF Baives 148.04 1 *e*PKP1 PKPbc 12 58 32.0 -0.1
comp=Z,82nm,1.2s
GRF Grafenberg Arr 148.05 353 *e*PKPbc PKPbc 12 58 32.2 +0.1
MODS Modra-Piesok 148.18 345 *e*PKP PKPbc 12 58 33.0 +0.5
KHC Kasperske Hory 148.25 350 *e*PKP PKPbc 12 58 34.0 +1.3
WET Wettzell 148.35 350 *e*PKPbc PKPbc 12 58 32.7 -0.3
ZST Bratislava 148.39 345 *e*PKP PKPbc 12 58 32.9 -0.2
WLF Walferdange 148.43 359 PKP PKPbc 12 58 33.0 -0.1
WLF Walferdange 148.43 359 *e*PKiKP PKPbc 12 58 32.6 -0.6
WLF Walferdange 148.43 359 *e*PKPbc PKPbc 12 58 33.3 +0.1
GEC2 GERESS Array S 148.50 349 *e*PKPbc PKPbc 12 58 32.5 -0.9
GEC2 GERESS Array S 148.50 349 *e*PKPbc PKPbc 12 58 33.5 +0.1
GERES GERESS Array B 148.50 349 PKPbc PKPbc 12 58 33.0 -0.4
comp=Z,12nm,1.1s,baz=29,slow=3.0,SNR=9.3
BUD Budapest 148.51 342 *ep*PKP pPKPdf 12 58 35.6 -5.8
CONA Conrad Observa 148.93 346 ⇑*i*PKPab PKPbc 12 58 36.5 +2.0
comp=Z,46nm,1.3s
CSNA Conrad Observa 148.94 346 ⇑*i*PKiKP PKiKP 12 58 36.4 +0.6
comp=Z,43nm,1.2s
FLN La Foliniere 149.00 7 *e*PKP1 PKPbc 12 58 33.2 -1.4
comp=Z,122nm,1.3s
SOP Sopron 149.00 345 *e*PKP PKPab 12 58 36.5 -2.3
LDF La Druitiere 149.21 7 *e*PKP1 PKPbc 12 58 34.6 -0.6
comp=Z,88nm,1.3s
GRR Gorron 149.32 8 *e*PKP1 PKPbc 12 58 34.6 -0.8
MOA Molln 149.35 348 ⇑*i*PKiKP PKiKP 12 58 36.7 0.0
comp=Z,40nm,1.9s
MEZF Maizieres J'vi 149.60 0 *e*PKP1 PKPbc 12 58 36.2 0.0
CDF Champ du Feu 149.65 357 *e*PKP1 PKPbc 12 58 36.1 -0.2
comp=Z,76nm,1.2s
BFO Black Forest 149.67 356 *e*PKPbc PKPbc 12 58 35.8 -0.5
BFO Black Forest 149.67 356 *e*PKPbc PKPbc 12 58 35.8 -0.5
RJOB Jochberg 149.73 350 *e*PKPbc PKPbc 12 58 36.1 -0.4
ECH Echery 149.85 357 *e*PKPbc PKPbc 12 58 37.1 +0.4
CSS Prodhromos 149.86 310 *e*PKPbc PKPbc 12 58 37.6 +0.4
HAU Haudompre 150.09 358 *e*PKP1 PKPbc 12 58 37.1 -0.3
comp=Z,45nm,1.1s
KOGS Kog 150.23 345 *e*PKPbc PKPbc 12 58 38.7 +0.9
HINF Hinteralfeld 150.26 358 *e*PKP1 PKPbc 12 58 37.4 -0.4
comp=Z,37nm,1.0s
PERS Pernice 150.32 346 *e*PKPbc PKPbc 12 58 38.8 +0.8
MOTA Moosalm 150.37 352 ⇑*i*PKiKP PKiKP 12 58 38.3 -0.5
comp=Z,22nm,1.1s
WTTA Wattenberg 150.37 351 ⇑*i*PKPbc PKPbc 12 58 36.9 -1.1
comp=Z,20nm,0.9s
DAVA Damuels 150.57 354 ⇑*i*PKiKP PKiKP 12 58 38.4 -0.8
comp=Z,22nm,0.9s
ABTA Abfaltersbach 150.73 350 ⇑*i*PKPbc PKPbc 12 58 38.1 -0.8
comp=Z,22nm,1.2s
LOR Lormes 150.82 2 *e*PKP1 PKPbc 12 58 38.3 -0.8
GCIS Gornji Cirnik 150.92 345 *e*PKPbc PKPbc 12 58 40.7 +1.3
CADS Cadrg 151.01 348 *e*PKPbc PKPbc 12 58 39.9 +0.3
SSF Saint Saulge 151.01 2 *e*PKP1 PKPbc 12 58 39.5 -0.1
comp=Z,103nm,1.5s
LJU Ljubljana 151.01 347 *e*PKPbc PKPbc 12 58 40.9 +1.2
MFF Saint Martin d 151.16 8 *e*PKP1 PKPbc 12 58 39.4 -0.5
AVF Avril sur Loir 151.28 3 *e*PKP1 PKPbc 12 58 39.7 -0.5
comp=Z,102nm,1.7s
SMF Signal de Mont 151.44 2 *e*PKP1 PKPbc 12 58 40.1 -0.5
comp=Z,102nm,1.4s
BGF Bois d'Agland 151.48 3 *e*PKP1 PKPbc 12 58 40.4 -0.3
comp=Z,34nm,1.0s
CABF La Chapelle 151.49 359 *e*PKP1 PKPbc 12 58 41.1 +0.4
TCF Toulx Ste Croi 151.71 4 *e*PKP1 PKPbc 12 58 40.7 -0.5
comp=Z,81nm,1.5s
RJF Les Rejaudoux 152.63 6 *e*PKP1 PKPbc 12 58 42.9 -0.4
CAF Calviac 153.05 5 *e*PKP1 PKPbc 12 58 43.8 -0.5
ESDC Sonseca Array 157.01 18 PKPab PKPab 12 59 11.9 -0.8
comp=Z,6.2nn,1.0s,baz=331,slow=3.8,SNR=8.5
DBIC Dimbokro 165.03 138 PKPab PKPab 12 59 48.0 -0.5
comp=Z,4.6nm,1.0s,baz=222,slow=7.0,SNR=3.0
TORD Torodi Ar. Bea 174.08 145 PKP PKPdf 12 58 56.0 -1.2
comp=Z,4.2nn,1.1s,baz=324,slow=1.8,SNR=6.6
TORD PKPab PKPab 13 00 28.9 +0.5
comp=Z,3.8nm,1.1s,baz=220,slow=4.1,SNR=4.4

IDC ***23*** *12:44:45.7±0.6,2671S×7088W,h0km,mb4.4/8, mb1 4.3/12,mb1mx4.2/21,mbtmp4.2/12,ML4.1/4,MS3.9/3, Ms1 3.9/3,ms1mx3.3/22,Error ellipse: s-maj=25.4km s-min=14.7km az=106.0*

ISCJB ***23*** *12:44:47.5±1.4,2668S±003×7103W±0.10,h28km±9km, mb4.4/10,Error ellipse: s-maj=14.4km s-min=4.3km az=3.4*

GUC ***23*** *12:44:47.4±0.5,2671S×7107W,h45km±3km,MD4.2, ML4.6*

NEIC ***23*** *12:44:47.4,2671S×7107W,h45km,mb4.9/2, MD4.2(GUC),After GUC.*

ISC 23 12:44:46.9±1.4,2667S±003×7105W±0.08,h12km±7km,n39, σ1§23/44,mb4.4/10,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**0.92**	**138**	*e*P	**Pg**	**12 45 04.2**	**-0.4**
CPCH				*i* S	**Sg**	**12 45 17.3**	**+0.6**
CPN1	**Cerro Paranal**	**2.12**	**16**	*e*P	**Pn**	**12 45 22.4**	**+0.2**
CPN1				*i* S	**Sn**	**12 45 48.8**	**+0.4**
CPN1				AML	AML	12 46 01.9	
	comp=E,7μm,0.6s						
LCO	**Las Campanas**	**2.35**	**173**	*e*P	**Pn**	**12 45 24.8**	**-0.5**
LCO				*i* S	**Sn**	**12 45 52.4**	**-1.8**
LCO	**Las Campanas**	**2.35**	**173**	*e*P	**Pn**	**12 45 24.8**	**-0.5**
LCO				*i* S	**Sn**	**12 45 52.4**	**-1.8**
LCO				AML	AML	12 46 02.9	
	comp=E,4μm,0.4s						
ANCH	**Antofagasta**	**3.03**	**11**	*e*P	**Pn**	**12 45 33.9**	**-0.8**
ANCH				*i* S	**Sn**	**12 46 09.6**	**-1.5**

ANCH	**Antofagasta**	**3.03**	**11**	*eP*	**Pn**	**12 45 33.9**	**-0.8**
ANCH				*i* S	**Sn**	**12 46 09.6**	**-1.5**
ANCH				AML	AML	12 46 31.0	
	comp=E,1μm,0.5s						
CEN1	**Los Morros**	**3.36**	**13**	*eP*	**Pn**	**12 45 33.6**	**-5.6**
TLL	**Tololo Astrono**	**3.49**	**177**	*eP*	**Pn**	**12 45 41.1**	**+0.1**
TLL				*i* S	**Sn**	**12 46 21.2**	**-1.0**
OVCH	**Ovalle**	**3.92**	**182**	*i* S	**Sn**	**12 46 29.1**	**-3.8**
LVC	**Limon Verde**	**4.49**	**26**	Pn	**Pn**	**12 45 56.5**	**+1.8**
	comp=E,6.0nm,0.3s,baz=219,slow=9.2,SNR=13						
LVC				Sn	**Sn**	**12 46 48.5**	**+1.6**
	comp=E,32nm,0.3s,baz=257,slow=16,SNR=4.2						
LVC				Lg		12 47 04.6	
	comp=E,48nm,0.3s,baz=67,slow=5.5,SNR=4.1						
LVC	**Limon Verde**	**4.49**	**26**	*eP*	**Pn**	**12 45 56.7**	**+2.0**
LVC				*i* S	**Sn**	**12 46 47.9**	**+1.1**
CFAA	**Coronel Fontan**	**5.49**	**154**	Pn	**Pn**	**12 46 10.7**	**+2.2**
	comp=E,0.6nm,0.3s,baz=345,slow=10,SNR=20						
CFAA				Sn	**Sn**	**12 47 12.6**	**+0.9**
	comp=E,1.3nm,0.3s,baz=345,slow=20,SNR=3.1						
ARE	**Arequipa**	**10.17**	**358**	*eP*	**Pn**	**12 47 11.0**	**-1.8**
LPAZ	**La Paz**	**10.68**	**15**	Pn	**Pn**	**12 47 20.8**	**+1.0**
	comp=E,0.5nm,0.3s,baz=202,slow=8.8,SNR=12						
LPAZ	**La Paz**	**10.68**	**15**	*eP*	**Pn**	**12 47 20.1**	**+0.3**
	comp=E,11nm,1.1s						
PLCA	**Paso Flores**	**14.03**	**178**	Pn	**Pn**	**12 48 03.5**	**-1.9**
	comp=E,0.1nm,0.3s,baz=18,slow=20,SNR=3.0						
PLCA				LR	LR	12 53 35.6	
	comp=E,250nm,19.4s,baz=352,slow=38						
SIV	**San Ignacio**	**14.11**	**43**	Pn	**Pn**	**12 48 04.1**	**-2.5**
	comp=E,0.6nm,0.3s,baz=232,slow=11,SNR=10.0						
SIV				Sn	**Sn**	**12 50 42.4**	**-0.9**
	comp=E,0.1nm,0.3s,baz=264,slow=21,SNR=2.3						
SIV				LR	LR	12 54 35.6	
	comp=E,247nm,18.6s,baz=175,slow=42						
BDFB	**Brasilia**	**24.08**	**68**	P	**P**	**12 50 01.0**	**-1.4**
	comp=E,4.1nm,0.8s,mb3.9,baz=237,slow=15,SNR=8.0						
SDV	**Santo Domingo**	**35.35**	**1**	*eP*	**P**	**12 51 39.2**	**-3.1**
	comp=E,39nm,2.3s,mb4.9						
RCBR	**Riachuelo**	**39.38**	**65**	P	**P**	**12 52 12.8**	**-3.8**
	comp=E,29nm,1.3s,mb4.8						
VNA3	**Neumayer Olymp**	**55.87**	**160**	*e*	**P**	**12 54 24.2**	**+0.3**
VNA3				*e*		12 54 34.4	
VNA1	**Neumayer--Stat**	**56.13**	**159**	*e*	**P**	**12 54 26.8**	**+1.0**
VNA1				*e*		12 54 37.9	
VNA2	**Neumayer--Watz**	**56.48**	**159**	*e*	**P**	**12 54 28.9**	**+0.6**
	baz=292,slow=8.7						
VNA2				*e*		12 54 38.8	
SNAA	**Sanae**	**58.09**	**160**	*e*	**P**	**12 54 35.8**	**-3.9**
SNAA				*e*		12 54 47.3	
QSPA	**South Pole Qui**	**63.54**	**180**	P	**P**	**12 55 18.0**	**+1.3**
	comp=E,2.8nm,0.6s,mb4.5,baz=120,slow=1.3,SNR=8.4						
TXAR	**Lajitas Array**	**63.87**	**328**	P	**P**	**12 55 21.4**	**+1.9**
	comp=E,0.1nm,0.5s,baz=135,slow=46,SNR=2.0						
DBIC	**Dimbokro**	**72.10**	**73**	P	**P**	**12 56 12.2**	**+0.6**
	comp=E,2.0nm,0.5s,mb4.3,baz=212,slow=7.7,SNR=5.6						
PDAR	**Pinedale Array**	**77.67**	**332**	P	**P**	**12 56 44.4**	**+1.2**
	comp=E,0.5nm,0.9s,mb3.4,baz=156,slow=6.9,SNR=3.4						
MAW	**Mawson**	**79.95**	**164**	P	**P**	**12 56 55.9**	**+0.4**
	comp=E,2.2nm,0.7s,mb4.2,baz=254,slow=7.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**80.93**	**70**	P	**P**	**12 57 02.1**	**+0.5**
	comp=E,10nm,0.9s,mb4.8,baz=256,slow=5.1,SNR=44						
BOSA	**Boshof**	**82.74**	**118**	P	**P**	**12 57 11.1**	**0.0**
	comp=E,3.9nm,0.8s,mb4.5,baz=183,slow=4.4,SNR=3.9						
BOSA				LR	LR	13 28 13.0	
	comp=E,324nm,21.9s,baz=144,slow=32						
BOSA	**Boshof**	**82.74**	**118**	P	**P**	**12 57 11.1**	**0.0**
BOSA				LR	LR	13 28 13.0	
LBTB	**Lobatse**	**84.62**	**115**	P	**P**	**12 57 21.0**	**+0.2**
	comp=E,4.8nm,0.7s,mb4.8,baz=252,slow=6.4,SNR=7.3						
ASAR	**Alice Springs**	**124.45**	**208**	PKP	PKPdf	13 03 46.2	-0.4
	comp=E,0.4nm,0.7s,baz=131,slow=1.5,SNR=9.2						
WRA	**Warramunga Arr**	**127.53**	**211**	PKP	PKPdf	13 03 52.6	0.0
	comp=E,0.9nm,0.7s,baz=159,slow=1.6,SNR=16						
ZALV	**Zalesovo Beam**	**147.44**	**27**	PKPbc	PKPbc	13 04 29.4	-0.9
	comp=E,6.0nm,0.8s,baz=308,slow=3.6,SNR=22						
MKAR	**Makanchi Array**	**150.91**	**39**	PKPbc	PKPbc	13 04 40.1	+0.8
	comp=E,4.1nm,0.7s,baz=312,slow=2.2,SNR=22						
MKAR				PKPab	PKPab	13 04 48.1	+1.5
	comp=E,3.1nm,0.6s,baz=303,slow=2.7,SNR=11						
SONM	**Songino Array**	**158.78**	**5**	PKPab	PKPab	13 05 21.7	+1.7
	comp=E,0.2nm,0.4s,baz=290,slow=2.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**167.66**	**129**	PKP	PKPdf	13 04 54.5	+0.7
	comp=E,0.4nm,0.4s,baz=264,slow=1.4,SNR=4.2						

*ISCJB **23** 12:55:36.2±1.6,3440N±005×320E±0.1,h14km±9km, Error ellipse: s-maj=14.8km s-min=8.5km az=5.8*
*CSEM **23** 12:55:40.6,3456N×3211E,h5km,Mw3.1, After NIC*
*NIC **23** 12:55:40.6±0.5,3456N×3211E,h5km, ML2.8, MW3.1*
*GII **23** 12:55:41.7±0.0,3459N×3281E,h0km, ML2.8/2*

ISC 23 12:55:36.4±1.7,**3438N**±006×**320E**±01,**h6**km±10km,**n23,** σ1¶**12**/27,**6C-1D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPCY	**Paphos**	**0.58**	**30**	P	**Pg**	**12 55 44.8**	**-2.8**
SZAC	**Souni-Zanaja**	**0.83**	**63**	⇓P	**Pg**	**12 55 53.0**	**+0.7**
	22nm,0.3s						
SZAC				S	**Sg**	**12 56 03.7**	**+0.7**
ALFC	**Alevga**	**0.92**	**33**	P	**Pg**	**12 55 54.8**	**+0.7**
	12nm,0.1s						
ALFC				S	**Sg**	**12 56 05.5**	**-0.6**
PHNC	**Paralimni**	**1.79**	**69**	P	**Pn**	**12 56 10.4**	**+2.5**
PHNC				S	**Sn**	**12 56 32.0**	**+1.0**
HNTI	**Hanita**	**2.95**	**115**	Sn	Sx	12 56 55.4	
MMC1	**Mount Meron ar**	**3.15**	**114**	Pn	**Pn**	**12 56 25.8**	**-0.7**
MMA4	**Mount Meron ar**	**3.15**	**115**	Pn	**Pn**	**12 56 26.0**	**-0.5**
MMA3	**Mount Meron ar**	**3.15**	**115**	Pn	**Pn**	**12 56 26.0**	**-0.6**
MMA0	**Mount Meron ar**	**3.15**	**115**	Pn	**Pn**	**12 56 26.0**	**-0.6**
MMA2	**Mount Meron ar**	**3.15**	**115**	Pn	**Pn**	**12 56 26.4**	**-0.3**
MMB1	**Mount Meron ar**	**3.16**	**115**	Pn	**Pn**	**12 56 26.1**	**-0.6**
MMC5	**Mount Meron ar**	**3.16**	**115**	Pn	**Pn**	**12 56 26.0**	**-0.7**
KSDI	**Kefar Szold**	**3.27**	**110**	Pn	**Pn**	**12 56 27.3**	**-0.9**
KSDI				Sn	Sx	12 57 00.9	
HMDT	**Nahal Hemdat**	**3.64**	**125**	Pn	**Pn**	**12 56 34.1**	**+0.9**
HMDT				Sn	**Sn**	**12 57 14.7**	**-1.8**
GULE	**Gulek**	**3.68**	**37**	⇑*i* P	**Pb**	**12 56 41.3**	**-0.5**
DSI	**Dead Sea**	**3.99**	**134**	Pn	**Pn**	**12 56 39.0**	**+0.9**
DSI				Sn	**Sn**	**12 57 25.6**	**+0.3**
KDHN	**Kadinhani**	**4.13**	**1**	⇑*i* P	**Pg**	**12 57 05.4**	**+10**
MZDA	**Masada**	**4.17**	**136**	Pn	**Pn**	**12 56 42.9**	**+2.3**
EIL	**Elat**	**5.33**	**151**	Pn	**Pn**	**12 57 00.3**	**+3.8**
GZT	**Gaziantep**	**5.41**	**55**	⇑*i* P	**Pb**	**12 57 10.4**	**-0.9**
PINB	**Pinarbasi**	**5.57**	**38**	⇑*i* P	**Pb**	**12 57 10.6**	**-3.4**
AKCD	**Akcadag**	**6.18**	**49**	⇑*i* P	**Pn**	**12 57 08.8**	**+0.6**
ULDT	**Uludag**	**6.19**	**339**	⇑*i* P	**Pn**	**12 57 16.4**	**+8.2**

RSPR 23 13:14:17.3,1855N×6884W,h115km±5km,MD3.6/5, MD3.6/5,5C,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.64**	**92**	⇑*eP*	Pn	13 14 45.4	-0.7
AGPR	**Aguadilla, PR**	**1.64**	**92**	*eS*	Sn	13 15 07.9	-0.1
CRPR	**Cabo Rojo, PR**	**1.73**	**108**	⇑*eP*	Pn	13 14 46.7	-0.5
CRPR	**Cabo Rojo, PR**	**1.73**	**108**	*eS*	Sn	13 15 09.1	-0.9
AOPR	**Arecibo Observ**	**1.99**	**95**	⇑*eP*	Pn	13 14 50.8	+0.4
AOPR	**Arecibo Observ**	**1.99**	**95**	*eS*	Sn	13 15 15.8	+0.1
HUMP	**Col San Antoni**	**2.87**	**98**	⇑*eP*	Pn	13 15 01.7	0.0
HUMP	**Col San Antoni**	**2.87**	**98**	*eS*	Sn	13 15 36.4	+0.4
MTP	**Monte Pirata**	**3.15**	**98**	⇑*eP*	Pn	13 15 05.5	0.0

*ISCJB **23** 13:26:13.7±0.5,4261N±004×249W±004,h10km, Error ellipse: s-maj=5.6km s-min=3.6km az=165.0*
*NEIC **23** 13:26:16.3,44.15N×185W,h5km,ML3.1(STR), After STR.*
*CSEM **23** 13:26:16.3±0.3,4268N×256W,h0km,ML4.0/2, Error ellipse: s-maj=3.0km s-min=2.6km az=1.0,After MDD*

ISC 23 13:26:14.6±0.4,**4268N**±003×**253W**±003,**h10**km,**n27,** σ1¶**24**/33,**Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECRI	**Cripan**	**0.07**	**168**	Pg	**Pg**	**13 26 17.8**	**+1.0**
	24nm,0.6s,SNR=7.9						
ECRI				Lg		13 26 18.9	
	105nm,1.0s,SNR=7.9						
EARA	**Aranguren**	**0.71**	**82**	Pg	**Pg**	**13 26 29.6**	**+1.3**
	133nm,0.6s,SNR=5.1						
EARA				Lg		13 26 39.8	
	72nm,0.5s,SNR=11						
IUNC	**Unciti**	**0.76**	**84**	Pg	**Pg**	**13 26 31.3**	**+1.9**
	16nm,0.4s,SNR=7.5						
IUNC				Lg		13 26 42.1	
	63nm,0.5s,SNR=15						
IUSE	**Utxeti**	**0.77**	**69**	Pg	**Pg**	**13 26 30.6**	**+1.1**
	12nm,0.5s,SNR=7.8						
IUSE				Lg		13 26 41.8	
	31nm,0.5s,SNR=10.0						
IZUN	**Zunzarren**	**0.81**	**77**	Pg	**Pg**	**13 26 31.2**	**+0.9**
	48nm,3.5s,SNR=7.9						
IZUN				Lg		13 26 42.1	
	32nm,2.3s,SNR=7.9						
ELAN	**Lanestosa**	**0.86**	**310**	Pg	**Pg**	**13 26 32.4**	**+1.1**
	18nm,0.5s,SNR=12						
ELAN				Lg		13 26 43.7	
	64nm,0.4s,SNR=40						
IPRE	**Itoiz**	**0.87**	**81**	Pg	**Pg**	**13 26 32.2**	**+0.7**
	5.4nm,0.5s,SNR=5.2						
IPRE				Lg		13 26 45.3	
	43nm,0.4s,SNR=26						
ELIZ	**Elizondo**	**0.88**	**56**	Pg	**Pg**	**13 26 31.9**	**+0.3**
	22nm,0.4s,SNR=12						
ELIZ				Lg		13 26 45.7	
	69nm,0.7s,SNR=10						
EORO	**Oroz-Betelu**	**0.92**	**76**	Pg	**Pg**	**13 26 33.1**	**+0.7**
	8.3nm,0.4s,SNR=14						
EORO				Lg		13 26 46.3	
	102nm,0.9s,SNR=26						
EALK	**Alkurruntz**	**0.93**	**54**	Pg	**Pg**	**13 26 30.7**	**-1.8**
	26nm,0.4s,SNR=16						
EALK				Lg		13 26 45.5	
	76nm,0.5s,SNR=5.0						
OSSF	**Osses**	**1.10**	**58**	Pg	**Pg**	**13 26 34.6**	**-1.1**
OSSF				Sg	**Sg**	**13 26 48.8**	**-1.1**
ATE	**Arette**	**1.41**	**73**	Pg	**Pg**	**13 26 41.6**	**0.0**
ATE				Sg	**Sg**	**13 27 00.7**	**+0.9**
REYF	**Montagne du Re**	**1.62**	**75**	Pg	**Pg**	**13 26 44.7**	**-1.0**
REYF				Sg	**Sg**	**13 27 06.0**	**-0.7**
ESAC	**San Caprasio**	**1.81**	**121**	Pg	**Pg**	**13 26 49.3**	**+0.1**
	32nm,0.4s,SNR=5.5						
ESAC				Lg		13 27 15.0	
	50nm,0.4s,SNR=6.1						
ETOR	**Torete**	**1.89**	**169**	Pg	**Pg**	**13 26 51.1**	**+0.2**
	3.3nm,0.6s,SNR=7.9						
ETOR				Sn	**Sn**	**13 27 13.4**	**+2.6**
	16nm,0.4s,SNR=7.9						
ETOR				Lg		13 27 16.9	
	43nm,0.5s,SNR=7.9						
EBIE	**Bielsa**	**1.97**	**89**	Pn	**Pn**	**13 26 49.8**	**+1.7**
	30nm,0.5s						
EBIE				Lg		13 27 19.1	
	31nm,0.5s,SNR=7.7						
EARI	**Arriondas**	**2.06**	**288**	Pn	**Pn**	**13 26 51.2**	**+1.9**
	15nm,0.5s,SNR=6.9						
EARI	**Arriondas**	**2.06**	**288**	Pg	**Pg**	**13 26 53.6**	**-0.6**
	8.5nm,0.5s,SNR=13						
EARI				Sn	**Sn**	**13 27 16.6**	**+1.5**
	6.1nm,0.4s,SNR=10.0						
EARI				Lg		13 27 21.2	
	17nm,0.5s,SNR=6.2						
GUD	**Guadarrama**	**2.37**	**211**	Pg	**Pg**	**13 26 59.1**	**-0.9**
	1.5nm,1.0s,SNR=7.9						
GUD				Lg		13 27 32.8	
	148nm,1.4s,SNR=7.9						
MELF	**Melles**	**2.43**	**84**	Pg	**Pg**	**13 27 00.1**	**-1.1**
MELF				Sg	**Sg**	**13 27 30.5**	**-2.2**
ERTA	**Horta de San J**	**2.75**	**128**	Pg	**Pg**	**13 27 06.0**	**-1.2**
	12nm,0.5s,SNR=13						
ERTA				Lg		13 27 45.5	
	18nm,0.5s,SNR=6.1						
EMOS	**Mosqueruela**	**2.78**	**146**	Pg	**Pg**	**13 27 07.7**	**-0.2**
	7.7nm,0.5s,SNR=7.4						
EPOB	**Poblet**	**3.00**	**115**	Pg	**Pg**	**13 27 12.1**	**0.0**
	7.4nm,0.8s,SNR=7.9						
EMIR	**Miracle**	**3.10**	**103**	Pg	**Pg**	**13 27 14.2**	**+0.1**
	11nm,0.5s,SNR=6.4						
ESDC	**Sonseca Array**	**3.19**	**200**	Pg	**Pg**	**13 27 14.3**	**-1.4**
	0.9nm,0.4s,baz=8.9,slow=14,SNR=24						
ECAL	**Calabor**	**3.21**	**258**	Pg	**Pg**	**13 27 13.7**	**-2.3**
	9.8nm,0.6s,SNR=14						
EPON	**Pontenova**	**3.45**	**282**	Pg	**Pg**	**13 27 18.5**	**-2.2**
	6.2nm,1.5s,SNR=7.9						

*TAP **23** 13:45:30.6,2488N×12269E,h7km±1km,ML2.8,D*
*ISCJB **23** 13:45:31.7±0.9,2488N±009×12273E±005,h17km±9km, Error ellipse: s-maj=16.0km s-min=5.2km az=18.3*
*JMA **23** 13:45:31.2±0.5,2495N×12287E,h0km,M2.5*

ISC 23 13:45:30.7±1.1,**2493N**±009×**12275E**±005,**h10**km±6km, **n21,**σ0¶**89**/24,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.52**	**153**	P	**Pg**	**13 45 41.4**	**+0.5**
YOJ				*eS*	**Sg**	**13 45 48.7**	**+0.9**
YOJ	**Yonaguni jima**	**0.52**	**153**	*i* P	**Pg**	**13 45 41.3**	**+0.4**
	baz=145						
YOJ				S	**Sg**	**13 45 49.3**	**+1.5**
	baz=145						
TWB1	**Santiao Chiao**	**0.69**	**277**	*eP*	**Pg**	**13 45 44.5**	**+0.3**
	baz=281						
TWC	**Suao**	**0.88**	**249**	*eP*	**Pg**	**13 45 46.8**	**-0.8**
	baz=250						
NWF	**Wu-fen Shan**	**0.89**	**279**	*eP*	**Pg**	**13 45 48.7**	**+0.9**
	baz=283						
TWE	**Neicheng**	**1.00**	**258**	*eP*	**Pg**	**13 45 49.3**	**-0.8**
	baz=260						
ENA	**Nanau**	**1.04**	**242**	*eP*	**Pg**	**13 45 50.1**	**-0.7**
	baz=242						
TWA	**Mucha**	**1.06**	**273**	*eP*	**Pg**	**13 45 51.8**	**+0.7**
	baz=275						
IRIF	**Iriomote-Funau**	**1.07**	**123**	P	**Pg**	**13 45 50.9**	**-0.4**
IRIF				*eS*	**Sg**	**13 46 04.3**	**-1.0**
NSK	**Sanguang**	**1.29**	**259**	*eP*	**Pn**	**13 45 53.9**	**-0.9**
	baz=260						
JKRS	**Kuro-shima**	**1.34**	**121**	P	**Pn**	**13 45 55.8**	**+0.3**
NNS	**Nan Shan**	**1.34**	**249**	*eP*	**Pn**	**13 45 56.0**	**+0.4**
	baz=249						
JIJ	**Ishigaki jima**	**1.39**	**114**	P	**Pn**	**13 45 56.3**	**+0.2**
TWT	**Tachien**	**1.58**	**245**	*eP*	**Pn**	**13 45 58.5**	**-0.4**
	baz=245						
ESL	**Shilin**	**1.64**	**227**	*eP*	**Pn**	**13 45 57.9**	**-1.6**
	baz=227						
TWF1	**Yuli**	**2.06**	**220**	*eP*	**Pn**	**13 46 04.0**	**-1.4**
	baz=219						
ALS	**Alishan**	**2.27**	**232**	*eP*	**Pn**	**13 46 08.6**	**+0.3**
	baz=231						
CHN5	**Tsauling**	**2.31**	**235**	*eP*	**Pn**	**13 46 09.7**	**+0.8**
	baz=235						
CHN4	**Tsaushan**	**2.52**	**232**	*eP*	**Pn**	**13 46 13.6**	**+1.9**
	baz=231						
STYT	**Tauyuan**	**2.53**	**226**	*eP*	**Pn**	**13 46 11.3**	**-0.6**
	baz=225						
WTP	**Ta-pu**	**2.57**	**230**	*eP*	**Pn**	**13 46 13.6**	**+1.2**
	baz=229						

*ISCJB **23** 14:56:09.5±0.7,3749N±004×28.16E±006,h16km±12km, Error ellipse: s-maj=7.5km s-min=6.5km az=159.0*
*DDA **23** 14:56:09.9,37.35N×2809E,h6km±7km,Md2.7*
*ISK **23** 14:56:10.2,37.38N×2816E,h16km,MD2.6*
*CSEM **23** 14:56:16.9±0.0,37.11N×2867E,h2km,MD2.6,Error ellipse: s-maj=0.5km s-min=0.5km az=87.0*

ISC 23 14:56:09.5±0.6,**3745N**±005×**2812E**±005,**h28**km±10km, **n10,**σ1¶**17**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.32**	**240**	*e*PG	**Pb**	**14 56 17.3**	**+0.3**
MLSB				*e*SG	**Sb**	**14 56 22.4**	**+0.3**
YER	**Yerkesik**	**0.34**	**158**	*e*PG	**Pb**	**14 56 16.4**	**-1.0**
YER				*e*SG	**Sb**	**14 56 20.8**	**-1.9**
TURN	**Turunc**	**0.69**	**146**	*i* P	**Pb**	**14 56 22.3**	**-0.7**
TURN				*i* S	**Sb**	**14 56 31.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.75**	**290**	*i* P	**Pb**	**14 56 23.5**	**-0.5**
DENT	**Denizli**	**0.79**	**67**	*e*PG	**Pb**	**14 56 25.8**	**+1.2**
DENT				*e*SG	**Sb**	**14 56 37.3**	**+2.4**
DALT	**Dalyan (Mudla)**	**0.80**	**149**	*e*PG	**Pb**	**14 56 24.7**	**0.0**
DALT				*e*SG	**Sb**	**14 56 35.2**	**0.0**
DAT	**Datca**	**0.84**	**211**	*e*PG	**Pb**	**14 56 26.2**	**+0.7**
DAT				*e*SG	**Sb**	**14 56 37.7**	**+1.2**
MANT	**Manisa**	**1.09**	**18**	*i* P	**Pn**	**14 56 28.1**	**-0.8**
MANT				*i* S	**Sn**	**14 56 41.3**	**-1.9**
GOLH	**Golhisar**	**1.17**	**100**	*i* P	**Pn**	**14 56 32.2**	**+2.2**
GOLH				*i* S	**Sn**	**14 56 51.6**	**+6.6**
KHAL	**Karahalli**	**1.42**	**49**	*i* P	**Pn**	**14 56 28.4**	**-5.0**
KHAL				*i* S	**Sn**	**14 56 40.7**	**-11**

*BJI **23** 15:01:54.0,3956N×7691E,h14km,ML3.0*

ISC 23 15:01:28.7±5.5,**378N**±05×**787E**±03,**h10**km,**n12,**σ1¶**31**/14, **1C,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.70**	**310**	PG	**Pn**	**15 02 07.5**	**-4.6**
KSH				SG	**Pg**	**15 02 19.4**	**-1.0**
ULHL	**Ulahol**	**4.79**	**338**	P	**Pn**	**15 02 41.3**	**+0.3**
	SNR=39						
KZA	**Kyzart**	**4.99**	**329**	P	**Pn**	**15 02 41.0**	**-2.7**
	SNR=34						
UCH	**Uchtor**	**5.43**	**325**	P	**Pn**	**15 02 50.9**	**+1.2**
	SNR=7.3						
KBK	**Karagaybulak**	**5.60**	**331**	P	**Pn**	**15 02 54.6**	**+2.5**
	SNR=25						
TKM2	**Tokmak 2**	**5.61**	**336**	P	**Pn**	**15 02 51.4**	**-0.7**
	SNR=6.0						
AML	**Almayashu**	**5.75**	**320**	P	**Pn**	**15 02 54.2**	**+0.1**
	SNR=17						
AAK	**Ala-Archa**	**5.77**	**328**	P	**Pn**	**15 02 58.5**	**+4.2**
	SNR=11						
CHMS	**Chumysh**	**5.97**	**331**	P	**Pn**	**15 02 55.9**	**-1.2**
	SNR=7.9						
EKS2	**Erkin-Say**	**6.11**	**324**	P	**Pn**	**15 03 00.4**	**+1.4**
	SNR=6.0						
USP	**Ospenovka**	**6.29**	**331**	P	**Pb**	**15 03 10.0**	**-8.4**
	SNR=5.9						
KK31	**Karatay Array**	**8.15**	**313**	Pn	**Pb**	**15 03 40.6**	**-9.3**
	0.9nm,0.4s,baz=124,slow=16,SNR=14						
KK31				⇑Sn	**Sn**	**15 04 59.4**	**+0.4**
	7.9nm,0.8s,baz=125,slow=27						

KRSC 23 15:08:15.0±1.3,**5074N×15775E,h10km±10km,ML4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.76**	**15**	*i* P	Pn	15 08 47.1	+1.6
RUS				*i* S	Sn	15 09 10.5	+2.5
GRL	**Gorelyy**	**1.83**	**6**	P	Pn	15 08 47.9	+1.5
SDLR	**Sedlovina**	**2.64**	**15**	*i* P	Pn	15 08 58.4	+0.9
SDLR				*i* S	Sn	15 09 29.7	+0.2
SPN	**Mys Shipunski**	**2.75**	**30**	*e*P	Pn	15 09 00.4	+1.3
SPN				*i* S	Sn	15 09 33.3	+1.0

*ISCJB **23** 15:18:04.9±0.9,1373N±008×14550E±009,h92km±7km, mb4.5/35, Error ellipse: s-maj=14.8km s-min=12.9km az=1.6*
*IDC **23** 15:18:05.9±0.7,1376N×14546E,h82km±4km, mb4.0/18, mb1 4.1/18,mb1mx4.0/25,mbtmp4.0/18,MS3.2/3, Ms1 3.2/3,ms1mx2.8/28, Error ellipse: s-maj=17.3km s-min=11.7km az=149.0*
*BJI **23** 15:18:05.8, 1426N×14547E,h67km,mB5.2,mb4.6*
*NEIC **23** 15:18:05.5±1.2, 1375N×14554E,h85km±10km,mb4.5/8, Error ellipse: s-maj=15.6km s-min=11.0km az=83.0*

ISC 23 15:18:05.2±1.1,**1376N**±008×**14561E**±009,**h80**km±8km, **h86**km±1.1km:**pP-P,n56,**σ0¶**91**/51,**mb4.5**/35,**1D,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.74**	**257**	P	**Pn**	**15 18 21.3**	**0.0**
	1μm,0.3s,baz=137,slow=7.4,SNR=1070						
GUMO				S	**Sn**	**15 18 33.6**	**+0.3**
	3μm,0.3s,baz=356,slow=20,SNR=53						
GUMO	**Guam**	**0.74**	**257**	⇓*i* P	**Pn**	**15 18 21.3**	**0.0**
GUMO				*eS*	**Sn**	**15 18 33.1**	**-0.2**
JOW	**Kunigami**	**20.79**	**311**	P	**P**	**15 22 40.9**	**+1.0**
	16nm,0.5s,baz=111,slow=14,SNR=3.6						
JOW				LR	LR	15 29 00.6	
	comp=Z,129nm,19.1s,baz=37,slow=32						
MJAR	**Matsushiro Arr**	**23.64**	**345**	P	**P**	**15 23 07.8**	**-1.3**
	2.6nm,0.4s,mb4.0,baz=166,slow=10.0,SNR=22						
MJAR				LR	LR	15 31 39.1	
	comp=Z,48nm,21.4s,baz=185,slow=34						
MAJO	**Matsushiro**	**23.64**	**345**	*eP*	**P**	**15 23 08.4**	**-0.7**
	7.6nm,0.3s,mb4.5						
MAT	**Matsushiro**	**23.64**	**345**	P	**P**	**15 23 08.2**	**-0.9**
KSRS	**Korea Array**	**28.38**	**329**	P	**P**	**15 23 52.5**	**+0.6**
	1.9nm,0.4s,mb4.0,baz=148,slow=9.3,SNR=14						
WRAB	**Tennant Creek**	**35.26**	**199**	*eP*	**P**	**15 24 51.7**	**-0.6**
	1.4nm,0.5s,mb4.0						
ASAR	**Alice Springs**	**38.91**	**197**	P	**P**	**15 25 22.9**	**-0.2**
	0.8nm,0.8s,mb3.6,baz=20,slow=12,SNR=10						
HHC	**Hu-

YKA	**Yellowknife Ar**	**82.38**	**27**	P		**P**	**15 30 18.3**	**+0.2**
YKA				pP		pP	15 30 40.4	+0.8
NVAR	**Mina Array Bea**	**86.25**	**52**	P		**P**	**15 30 40.0**	**+1.8**
	comp=Z,0.7nm,0.5s,mb3.9,baz=263,slow=5.7,SNR=4.8							
KEV	**Kevo**	**86.58**	**342**	*ep*		**P**	**15 30 38.0**	**-1.2**
	comp=Z,1.9nm,0.4s,mb4.4							
ARCES	**ARCESS Array B**	**87.15**	**342**	P		**P**	**15 30 42.1**	**+0.2**
	comp=Z,7.3nm,0.7s,mb4.7,baz=74,slow=7.3,SNR=13							
JOF	**Joensuu**	**88.45**	**335**	*ep*		**P**	**15 30 47.4**	**-0.9**
	comp=Z,1.7nm,0.3s,mb4.5							
KAF	**Kangasniemi**	**90.86**	**336**	*ep*		**P**	**15 30 58.2**	**-1.4**
	comp=Z,1.0nm,0.3s,mb4.4							
PDAR	**Pinedale Array**	**91.34**	**45**	P		**P**	**15 31 03.1**	**+0.9**
	comp=Z,0.3nm,0.6s,mb3.6,baz=243,slow=8.0,SNR=3.4							
LPM	**Los Pinos Moun**	**96.47**	**53**	*eP*		**P**	**15 31 25.1**	**-0.8**
NOA	**NORSAR Array B**	**97.15**	**339**	P		**P**	**15 31 27.3**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.2,baz=46,slow=4.5,SNR=2.9							
TORD	**Torodi Ar. Bea**	**135.36**	**305**	PKP		PKPdf	15 37 18.4	+1.7
	comp=Z,0.5nm,0.5s,baz=33,slow=2.2,SNR=8.0							
TORD	**Torodi Ar. Bea**	**135.36**	**305**	PKP		PKPdf	15 37 18.4	+1.7
DBIC	**Dimbokro**	**144.34**	**303**	PKP		PKPdf	15 37 31.6	-1.5
	comp=Z,9.7nm,0.5s,baz=23,slow=3.9,SNR=42							
KIC	**Kosan Boka**	**144.42**	**302**	*e*PKP1		PKPdf	15 37 32.2	-1.0
	comp=Z,59nm,0.5s							
TIC	**Toumodi**	**144.49**	**303**	*e*PKP1		PKPdf	15 37 32.3	-1.0
	comp=Z,17nm,0.2s							
LIC	**Lamto**	**144.73**	**302**	*e*PKP1		PKPdf	15 37 33.2	-0.6
	comp=Z,82nm,0.5s							
LPAZ	**La Paz**	**147.34**	**99**	PKPbc		PKPbc	15 37 41.8	+1.3
	comp=Z,0.5nm,0.4s,baz=288,slow=3.2,SNR=4.0							

*CSEM **23** 15:23:53.4±0.1, 3702N×2919E, h5km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.4km az=176.0*
*ISK **23** 15:23:53.5, 3700N×2914E, h9km, MD3.3, ML3.3*
*NEIC **23** 15:23:53.0, 3702N×2914E, h9km, MD3.8(ATH), MD3.3(ISK), After ISK.*
*ISCJB **23** 15:23:53.1±0.6, 3697N±002×29.17E±002, h1km±4km, Error ellipse: s-maj=3.7km s-min=3.2km az=176.0*
*DDA **23** 15:23:53.2, 3699N×2925E, h26km±2km, Md3.3*
*ATH **23** 15:23:54.3, 3698N×2905E, h16km±1km, MD3.8/7*
ISC 23 15:23:53.6±0.6, 3696N±002×2917E±002, h2km±4km, n37, σ0°91/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.42**	**49**	*i* P	**Pg**	**15 24 00.3**	**-1.3**
GOLH				*i* S	**Sg**	**15 24 07.3**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.47**	**246**	*e*PG	**Pg**	**15 24 02.2**	**-0.4**
DALT				*e*SG	**Sg**	**15 24 10.3**	**+1.6**
YER	**Yerkesik**	**0.73**	**284**	*e*PG	**Pg**	**15 24 07.7**	**+0.1**
DENT	**Denizli**	**0.80**	**352**	*e*PG	**Pg**	**15 24 08.0**	**-0.9**
DENT				*e*SG	**Sg**	**15 24 19.1**	**-0.1**
AKAS	**Kas**	**0.81**	**154**	*i* P	**Pg**	**15 24 08.2**	**-0.9**
AKAS				*i* S	**Sg**	**15 24 22.0**	**+2.4**
KSL	**Kastellorizon**	**0.88**	**158**	*e*PN	**Pn**	**15 24 12.0**	**-0.9**
KSL				*e*SN	**Sn**	**15 24 25.0**	**-1.2**
ARG	**Arkhangelos**	**1.12**	**229**	*e*PN	**Pn**	**15 24 14.5**	**-1.8**
MLSB	**Milas**	**1.16**	**287**	*e*PN	**Pn**	**15 24 16.0**	**-0.8**
MLSB				*e*SN	**Sn**	**15 24 31.7**	**-1.5**
ANTB	**Antalya**	**1.19**	**93**	*e*PN	**Pn**	**15 24 17.1**	**-0.1**
ANTB				*e*SN	**Sn**	**15 24 35.0**	**+1.0**
DAT	**Datca**	**1.30**	**260**	*e*PN	**Pn**	**15 24 17.4**	**-1.2**
ISP	**Isparta**	**1.38**	**50**	*e*PN	**Pn**	**15 24 18.9**	**-1.0**
ISP	**Isparta**	**1.38**	**50**	*e*Pn	**Pn**	**15 24 18.8**	**-1.1**
ISP				*e*Sn	**Sn**	**15 24 38.3**	**-0.4**
ISP	**Isparta**	**1.38**	**50**	*e*Pn	**Pn**	**15 24 18.9**	**-1.0**
ISP				*e*Sn	**Sn**	**15 24 38.3**	**-0.4**
BDRM	**Kayabasi**	**1.39**	**275**	*i* P	**Pn**	**15 24 19.7**	**-0.2**
BDRM				*i* S	**Sb**	**15 24 39.9**	**+1.7**
KHL	**Karahalli**	**1.39**	**12**	*e*PN	**Pn**	**15 24 19.3**	**-0.6**
KHL				*e*SN	**Sn**	**15 24 37.8**	**-1.0**
KHAL	**Karahalli**	**1.43**	**10**	*i* P	**Pn**	**15 24 20.1**	**-0.4**
KHAL				*i* S	**Sb**	**15 24 42.0**	**+2.4**
KULA	**Kula-Manisa**	**1.60**	**346**	*e*PN	**Pn**	**15 24 22.7**	**-0.2**
MANT	**Manisa**	**1.60**	**343**	*i* P	**Pn**	**15 24 22.3**	**-0.6**
MANT				*i* S	**Sn**	**15 24 44.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.71**	**296**	*i* P	**Pn**	**15 24 24.7**	**+0.3**
GCAM				*i* S	**Sn**	**15 24 48.1**	**+1.3**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*e*PN	**Pn**	**15 24 26.7**	**-0.7**
SMG	**Samos**	**2.00**	**293**	*e*PN	**Pn**	**15 24 28.1**	**-0.3**
KDAG	**Bornova**	**2.08**	**314**	*i* P	**Pn**	**15 24 29.5**	**0.0**
KDAG				*i* S	**Sn**	**15 24 57.0**	**+1.0**
GDZ	**Gediz**	**2.14**	**7**	*i* P	**Pn**	**15 24 30.2**	**-0.1**
GDZ				*i* S	**Sn**	**15 24 57.9**	**+0.6**
KARP	**Karpathos**	**2.15**	**230**	*e*PN	**Pn**	**15 24 30.9**	**+0.2**
AKS	**Akhisar**	**2.19**	**331**	*e*PN	**Pn**	**15 24 30.8**	**-0.2**
AKS				*e*SN	**Sn**	**15 24 57.8**	**-0.9**
BLCB	**Balcova**	**2.21**	**311**	*e*PN	**Pn**	**15 24 30.8**	**-0.4**
ALT	**Altintas**	**2.22**	**19**	*e*PN	**Pn**	**15 24 31.3**	**-0.1**
BOLV	**Bolvadin**	**2.25**	**38**	*i* P	**Pn**	**15 24 32.1**	**+0.3**
BOLV				*i* S	**Sn**	**15 25 03.1**	**+3.1**
URLA	**Izmir**	**2.47**	**305**	*i* P	**Pn**	**15 24 34.8**	**-0.1**
HDMB	**Hadim**	**2.66**	**89**	*e*PN	**Pn**	**15 24 38.0**	**+0.6**
HDMB				*e*SN	**Sn**	**15 25 10.5**	**+0.4**
KONT	**Konya--Tatoy**	**2.72**	**68**	*e*PN	**Pn**	**15 24 39.1**	**+0.8**
LADK	**Ladik-KONYA**	**2.82**	**63**	*e*PN	**Pn**	**15 24 40.5**	**+0.8**
LADK				*e*SN	**Sn**	**15 25 14.1**	**-0.2**
KIZT	**Kizilcal**	**2.87**	**47**	*e*PN	**Pn**	**15 24 40.6**	**+0.3**
APE	**Apeiranthos**	**2.91**	**273**	*e*PN	**Pn**	**15 24 41.5**	**+0.6**
ERMK	**Ermenek**	**3.02**	**95**	*i* P	**Pn**	**15 24 46.6**	**+4.2**
ERMK				*i* S	**Sn**	**15 25 27.2**	**+8.1**
PRK	**Paraskevi**	**3.23**	**316**	*e*PN	**Pn**	**15 24 46.0**	**+0.8**
NPS	**Neapolis**	**3.34**	**241**	*e*PN	**Pn**	**15 24 47.0**	**+0.2**

*IDC **23** 15:41:53.3±2.3, 4.44S×101.04E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/18, mbtmp3.9/6, Error ellipse: s-maj=83.6km s-min=24.4km az=59.0*
*ISCJB **23** 15:41:54.6±5.0, 4.7S±002×101.1E±004, h35km±38km, mb3.9/9, Error ellipse: s-maj=73.0km s-min=16.3km az=150.5*
*NEIC **23** 15:41:57.8±1.3, 4.52S×101.17E, h35km, mb4.1/3, Error ellipse: s-maj=52.5km s-min=11.0km az=63.0*
ISC 23 15:41:58.0±4.0, 4.6S±002×1012E±004, h42km±29km, n14, σ0°88/13, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**9.03**	**359**	Pn	**Pn**	**15 44 06.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**23.02**	**355**	P	**P**	**15 46 58.8**	**-0.7**
	1.8nm,0.6s,mb3.7,baz=184,slow=8.6,SNR=22						
WRAB	**Tennant Creek**	**35.72**	**118**	P	**P**	**15 48 52.2**	**-0.6**
	0.9nm,0.8s,mb3.8						
FORT	**Forrest**	**36.32**	**139**	P	**P**	**15 48 58.0**	**+0.2**
	34nm,1.4s,mb5.1						
ASAR	**Alice Springs**	**36.81**	**124**	P	**P**	**15 49 05.0**	**+2.9**
	0.3nm,0.7s,mb3.2,baz=299,slow=7.5,SNR=7.9						
STKA	**Stephens Creek**	**46.57**	**131**	*e*P	**P**	**15 50 18.7**	**-3.2**
	0.3nm,0.7s,mb3.3						
KSRS	**Korea Array**	**48.70**	**28**	P	**P**	**15 50 38.2**	**0.0**
	0.8nm,0.9s,mb3.7,baz=219,slow=5.9,SNR=4.9						
SONM	**Songino Array**	**52.42**	**4**	P	**P**	**15 51 06.6**	**+0.5**
	2.1nm,0.8s,mb4.1,baz=185,slow=9.5,SNR=17						
SONM				PcP	PcP	15 52 16.8	+0.4
	0.3nm,0.5s,baz=163,slow=5.6,SNR=3.3						
MK31	**Makanchi Array**	**53.83**	**344**	*e*P	**P**	**15 51 16.5**	**0.0**
MKAR	**Makanchi Array**	**53.83**	**344**	P	**P**	**15 51 16.8**	**+0.2**
	1.7nm,0.7s,mb4.1,baz=128,slow=7.9,SNR=8.5						
MKAR	**Makanchi Array**	**53.83**	**344**	P	**P**	**15 51 16.8**	**+0.2**
ZAA0	**Zalesovo Array**	**59.93**	**349**	*e*P	**P**	**15 51 59.5**	**0.0**
ZALV	**Zalesovo Beam**	**59.93**	**349**	P	**P**	**15 51 59.6**	**0.0**
	1.1nm,0.5s,mb4.2,baz=186,slow=5.5,SNR=6.7						
TXAR	**Lajitas Array**	**145.98**	**41**	PKPbc	PKPbc	16 01 35.5	+1.8
	1.2nm,0.7s,baz=238,slow=1.1,SNR=13						

*NIED **23** 16:32:00, 4360N×147.40E, h56km, Mw3.9 Best double couple: M0 7.72000×10^14 NP1:φs339.00000°, δ89.00000°, λ-30.00000°. NP2:φs70.00000°, δ60.00000°, λ-179.00000°.*
*MOS **23** 16:32:48.9±1.7, 4369N×14772E, h33km, mb4.2/3, Error ellipse: s-maj=13.9km s-min=12.4km az=71.9*
*NEIC **23** 16:32:52.0±0.8, 4390N×14739E, h35km, mb4.2/1, Error ellipse: s-maj=27.4km s-min=9.1km az=139.0*
*ISCJB **23** 16:32:52.1±1.0, 4370N±007×14746E±009, h62km±9km, mb3.7/9, Error ellipse: s-maj=14.1km s-min=7.5km az=142.3*
*JMA **23** 16:32:52.8±0.2, 4364N×14738E, h29km, M4.3*

*IDC **23** 16:32:53.9±3.0, 4381N×14743E, h58km±27km, mb3.3/7, mb1 3.7/10, mb1mx3.5/23, mbtmp3.4/10, ML3.7/3, MS2.5/1, Ms1 2.5/1, ms1mx2.2/20, Error ellipse: s-maj=41.4km s-min=17.3km az=159.0*
ISC 23 16:32:53.2±0.8, 4373N±007×14746E±008, h53km±8km, n39, σ1°08/51, mb3.7/9, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.20**	**285**	*i* P	**Pn**	**16 33 12.5**	**-1.2**
YUK				*i* S	**Sn**	**16 33 27.3**	**-1.6**
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=N,360nm,0.5s						
YUK				pmax	pmax		
	comp=E,730nm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,0.4s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,6μm,0.4s						
YUK				smax			
	comp=N,8μm,1.0s						
YUK				smax			
	comp=E,9μm,1.0s						
NEM2	**Nemuro 2**	**1.30**	**254**	P	**Pn**	**16 33 14.4**	**-0.7**
NEM2				*e*S	**Sn**	**16 33 30.2**	**-1.2**
KUR	**Kuril'sk**	**1.53**	**11**	*e*PN	**Pn**	**16 33 13.2**	**-5.0**
KUR				*e*S	**Sn**	**16 33 30.9**	**-6.0**
JRA	**Rausu**	**1.71**	**278**	P	**Pn**	**16 33 20.6**	**0.0**
JNK	**Nakash**	**2.00**	**267**	P	**Pn**	**16 33 24.4**	**-0.1**
JNK				*e*S	**Sn**	**16 33 47.5**	**-0.8**
JAK	**Akkeshi**	**2.15**	**251**	P	**Pn**	**16 33 26.2**	**-0.4**
JAK				*e*S	**Sn**	**16 33 50.9**	**-1.1**
JTKR	**Abashiri--Toko**	**2.58**	**277**	P	**Pn**	**16 33 33.5**	**+1.0**
JAR	**Ashorobuto**	**2.72**	**262**	P	**Pn**	**16 33 35.1**	**+0.7**
JAR				*e*S	**Sn**	**16 34 06.7**	**+0.6**
JOB	**Onbets**	**2.77**	**254**	P	**Pn**	**16 33 35.6**	**+0.4**
JOB				*e*S	**Sn**	**16 34 07.0**	**-0.4**
JMP	**Maruseppu**	**2.98**	**277**	P	**Pn**	**16 33 39.2**	**+1.2**
JCH	**Churui**	**3.20**	**251**	P	**Pn**	**16 33 41.2**	**+0.2**
JCH				*e*S	**Sn**	**16 34 17.1**	**-0.8**
JKK2	**Kamakawa 2**	**3.42**	**274**	P	**Pn**	**16 33 46.0**	**+2.0**
ASAJ	**Asahikawa**	**3.54**	**278**	P	**Pn**	**16 33 47.6**	**+2.0**
	comp=E,6.1nm,0.3s,baz=107,slow=12,SNR=25						
ASAJ				S	**Sn**	**16 34 35.0**	**+8.8**
	comp=E,7.9nm,0.3s,baz=4.4,slow=30,SNR=6.0						
ASAJ	**Asahikawa**	**3.54**	**278**	PN	**Pn**	**16 33 47.6**	**+2.0**
ASAJ				S	**Sn**	**16 34 35.0**	**+8.9**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,8.0nm,0.3s						
JFR	**Furan**	**3.59**	**263**	P	**Pn**	**16 33 48.1**	**+1.8**
JFR				*e*S	**Sn**	**16 34 29.0**	**+1.5**
ERM	**Erimo**	**3.60**	**243**	*e*Pn	**Pn**	**16 33 49.0**	**+2.6**
ERM				*e*Sn	**Sn**	**16 34 19.4**	**-8.3**
JSE	**Soyaes**	**3.71**	**291**	P	**Pn**	**16 33 48.8**	**+0.8**
JNBK	**Urakawa-nobuka**	**3.75**	**249**	P	**Pn**	**16 33 48.5**	**0.0**
JNBK				*e*S	**Sn**	**16 34 30.1**	**-1.2**
YSS	**Yuzh-Sakhalins**	**4.63**	**316**	*e*PN	**Pn**	**16 34 01.0**	**+0.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
MAJO	**Matsushiro**	**10.08**	**228**	Pn	**Pn**	**16 35 14.7**	**-0.5**
	comp=Z,3.2nm,0.7s						
MAJO	**Matsushiro**	**10.08**	**228**	PN	**Pn**	**16 35 14.7**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**10.08**	**228**	P	**Pn**	**16 35 15.4**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=29,slow=13,SNR=4.2						
PEA0B	**Petropavlovsk-**	**11.58**	**32**	*e*Pn	**Pn**	**16 35 33.8**	**-1.8**
PETK	**Petropavlovsk-**	**11.58**	**32**	P	**Pn**	**16 35 34.1**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=195,slow=9.6,SNR=13						
KSRS	**Korea Array**	**16.10**	**254**	LR	LR	16 42 00.1	
	comp=Z,20nm,20.6s,baz=220,slow=34						
YAK	**Yakutsk**	**21.11**	**336**	*i* P	**P**	**16 37 36.1**	**+3.1**
YAK				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.1						
SONM	**Songino Array**	**28.69**	**293**	P	**P**	**16 38 44.3**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.1,baz=86,slow=6.2,SNR=2.8						
COLA	**College**	**40.95**	**36**	*i* P	**P**	**16 40 30.7**	**+0.5**
NVS	**Novosibirsk**	**41.91**	**309**	*e*P	**P**	**16 40 33.9**	**-4.2**
MK31	**Makanchi Array**	**44.80**	**298**	P	**P**	**16 41 00.3**	**-1.2**
MKAR	**Makanchi Array**	**44.80**	**298**	P	**P**	**16 41 00.9**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=64,slow=9.8,SNR=2.8						
CM31	**Chiang Mai Arr**	**47.74**	**254**	P	**P**	**16 41 23.7**	**-1.2**
	comp=Z,2.0nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**47.74**	**254**	P	**P**	**16 41 25.3**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=55,slow=7.8,SNR=3.3						
YKA	**Yellowknife Ar**	**55.69**	**34**	P	**P**	**16 42 23.9**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=303,slow=7.5,SNR=3.3						
YKA	**Yellowknife Ar**	**55.69**	**34**	P	**P**	**16 42 23.9**	**+0.3**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**67.40**	**58**	P	**P**	**16 43 43.9**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.8,baz=291,slow=7.3,SNR=4.2						
PDAR	**Pinedale Array**	**69.75**	**50**	P	**P**	**16 43 58.1**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=212,slow=3.2,SNR=3.4						
TXAR	**Lajitas Array**	**82.47**	**56**	P	**P**	**16 45 09.1**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=295,slow=5.0,SNR=6.2						
TXAR	**Lajitas Array**	**82.47**	**56**	P	**P**	**16 45 09.1**	**-0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **23** 16:53:58.9±0.4, 377S±006×12852E±006, h131km±4km, mb3.9/7, Error ellipse: s-maj=12.1km s-min=6.5km az=137.3*
*NEIC **23** 16:54:01.5±2.8, 384S×12849E, h141km±29km, mb4.2/3, Error ellipse: s-maj=26.5km s-min=10.0km az=45.0*
*DJA **23** 16:54:01, 367S×12859E, h104km, MLv4.2/7*
*IDC **23** 16:54:02.5±2.5, 390S×12842E, h148km±23km, mb3.7/7, mb1 3.8/8, mb1mx3.6/18, mbtmp3.7/8, Error ellipse: s-maj=30.8km s-min=10.3km az=67.0*
ISC 23 16:54:00.0±0.4, 379S±006×12852E±006, h124km±4km, n28, σ0°85/27, mb4.0/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.34**	**287**	P	**Pn**	**16 54 17.6**	**0.0**
AAI	**Ambon**	**0.34**	**287**	P	**Pn**	**16 54 17.6**	**0.0**
AAI	**Ambon**	**0.34**	**287**	S	**Sn**	**16 54 30.8**	**-0.1**
MSAI	**Masohi**	**0.59**	**43**	P	**Pn**	**16 54 19.2**	**+0.1**
LBMI	**Labuha**	**3.29**	**342**	P	**Pn**	**16 54 50.0**	**-0.3**
LBMI	**Labuha**	**3.29**	**342**	S	**Sn**	**16 55 27.3**	**-1.9**
TLE	**Tual**	**4.58**	**114**	P	**Pn**	**16 55 09.3**	**+1.8**
TLE	**Tual**	**4.58**	**114**	S	**Sn**	**16 56 00.2**	**+0.3**
KDI	**Kendari**	**5.89**	**268**	P	**Pn**	**16 55 26.1**	**+1.0**
	28nm,0.6s,0.1nm						
KAPI	**Kappang**	**8.83**	**262**	P	**Pn**	**16 56 05.5**	**+0.7**
	1.6nm,0.3s,baz=118,slow=2.3,SNR=8.6						
KAKA	**Kakadu**	**9.68**	**157**	*e*P	Px	16 56 01.2	
	18nm,0.4s						
KAKA				*e*S	Sx	16 57 45.2	
KAKA	**Kakadu**	**9.68**	**157**	*e*Pn	Px	16 56 00.9	
KAKA				*e*Sn	Sx	16 57 45.1	
WRAB	**Tennant Creek**	**17.02**	**161**	*e*P	**Pn**	**16 57 49.6**	**-1.1**
	20nm,1.0s						
WB2	**Warramunga Arr**	**17.03**	**161**	*e*P	**Pn**	**16 57 50.1**	**-0.7**
COEN	**Coen**	**17.64**	**126**	*e*P	**Pn**	**16 57 57.3**	**-0.9**
	25nm,0.9s						
MBWA	**Marble Bar**	**19.27**	**206**	*e*P	**P**	**16 58 14.3**	**-0.7**
	4.3nm,0.5s						
ASAR	**Alice Springs**	**20.44**	**166**	P	**P**	**16 58 28.2**	**+0.6**
	23nm,0.7s,baz=345,slow=12,SNR=248						
ASAR				S	**S**	**17 02 07.7**	**-2.0**
	1.8nm,0.9s,baz=348,slow=24,SNR=9.6						
ASAR				ScP	ScP	17 05 58.5	-1.8
	0.4nm,0.5s,baz=347,slow=2.1,SNR=12						
CTA	**Charters Tower**	**23.69**	**135**	P	**P**	**16 59 01.6**	**+1.0**
	3.7nm,0.6s,mb3.9,baz=323,slow=12,SNR=8.4						
STKA	**Stephens Creek**	**30.52**	**158**	P	**P**	**17 00 01.1**	**-0.6**
	4.4nm,0.7s,mb4.3,baz=329,slow=9.3,SNR=11						
CMAR	**Chiang Mai Arr**	**36.58**	**308**	P	**P**	**17 00 55.4**	**+1.1**
	1.2nm,0.7s,mb3.9,baz=138,slow=7.8,SNR=9.1						
KSRS	**Korea Array**	**41.03**	**359**	P	**P**	**17 01 32.2**	**+1.1**
	1.1nm,0.8s,mb3.8,baz=191,slow=9.2,SNR=3.3						
RAMN	**Ramite**	**50.72**	**310**	*e*P	**P**	**17 02 48.0**	**+0.6**
	9.8nm,0.6s						
GKN	**Gorkha**	**52.75**	**310**	*e*P	**P**	**17 03 02.3**	**-0.2**
KOLN	**Koldanda**	**53.44**	**309**	*e*P	**P**	**17 03 07.6**	**+0.1**
	10nm,0.6s						
DANN	**Dangsing**	**53.60**	**310**	*e*P	**P**	**17 03 08.8**	**+0.2**
	9.9nm,0.7s						
PYUN	**Piuthan**	**54.07**	**309**	*e*P	**P**	**17 03 12.4**	**+0.3**
	2.5nm,0.4s,mb4.6						
MKAR	**Makanchi Array**	**64.75**	**327**	P	**P**	**17 04 24.6**	**-0.5**
	1.3nm,0.5s,mb4.0,baz=124,slow=7.3,SNR=14						
ZALV	**Zalesovo Beam**	**68.07**	**334**	P	**P**	**17 04 45.1**	**-1.0**
	0.5nm,0.3s,mb3.8,baz=114,slow=4.7,SNR=4.4						

*ISCJB **23** 17:00:11.1±0.6, 1395N±008×1445E±0.1, h204km±5km, mb3.8/18, Error ellipse: s-maj=21.9km s-min=12.3km az=176.6*
*NEIC **23** 17:00:12.3±0.6, 1395N×14465E, h202km±5km, mb4.3/6, Error ellipse: s-maj=12.4km s-min=7.8km az=87.0*
*IDC **23** 17:00:12.0±0.5, 1395N×14468E, h199km±4km, mb3.5/12, mb1 3.7/12, mb1mx3.6/21, mbtmp3.5/12, Error ellipse: s-maj=24.5km s-min=13.7km az=83.0*
ISC 23 17:00:12.2±0.6, 1396N±008×1446E±01, h200km±5km, n27, σ0°49/28, mb3.8/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.44**	**148**	P	**Pn**	**17 00 40.1**	**+0.9**
	40nm,0.3s,baz=172,slow=5.8,SNR=70						
GUMO				S	**Sn**	**17 00 59.9**	**-0.1**
	73nm,0.3s,baz=182,slow=22,SNR=7.1						
GUMO	**Guam**	**0.44**	**148**	*e*Pn	**Pn**	**17 00 39.6**	**+0.4**
GUMO				P		17 00 40.1	
GUMO				*e*Sn	**Sn**	**17 00 59.3**	**-0.7**
GUMO				S	**Sn**	**17 00 59.9**	**-0.1**
MJAR	**Matsushiro Arr**	**23.21**	**347**	P	**P**	**17 05 00.8**	**-0.6**
	6.9nm,0.8s,mb4.2,baz=170,slow=11,SNR=14						
MAJO	**Matsushiro**	**23.21**	**347**	*e*P	**P**	**17 05 01.0**	**-0.4**
	19nm,0.8s,mb4.7						
MAT	**Matsushiro**	**23.21**	**347**	P	**P**	**17 05 00.8**	**-0.6**
KSRS	**Korea Array**	**27.73**	**331**	P	**P**	**17 05 41.6**	**-0.4**
	1.6nm,0.5s,mb3.9,baz=144,slow=9.4,SNR=7.7						
WRAB	**Tennant Creek**	**35.17**	**197**	*e*P	**P**	**17 06 47.2**	**+0.1**
	2.3nm,0.6s,mb3.9						
WB2	**Warramunga Arr**	**35.18**	**197**	*e*P	**P**	**17 06 47.5**	**+0.3**
ASAR	**Alice Springs**	**38.84**	**196**	P	**P**	**17 07 17.9**	**-0.2**
	0.3nm,0.3s,mb3.3,baz=23,slow=12,SNR=16						
ASAR				ScP	ScP	17 12 53.7	-0.6
	0.3nm,0.9s,baz=14,slow=3.3,SNR=4.0						
STKA	**Stephens Creek**	**45.67**	**184**	P	**P**	**17 08 12.1**	**-1.0**
	0.8nm,0.5s,mb3.3,baz=350,slow=12,SNR=2.8						
ULN	**Ulaanbaatar**	**45.94**	**325**	*e*P	**P**	**17 08 15.3**	**+0.3**
SONM	**Songino Array**	**46.29**	**325**	P	**P**	**17 08 18.3**	**+0.5**
	1.0nm,0.6s,mb3.3,baz=134,slow=6.8,SNR=7.6						
BILL	**Bilibino**	**55.83**	**10**	*e*P	**P**	**17 09 28.2**	**-0.1**
	7.4nm,1.2s,mb4.1						
MKAR	**Makanchi Array**	**61.06**	**316**	P	**P**	**17 10 05.6**	**+0.8**
	0.9nm,0.5s,mb3.6,baz=90,slow=8.6,SNR=8.5						
ZALV	**Zalesovo Beam**	**61.19**	**324**	P	**P**	**17 10 05.6**	**0.0**
	0.4nm,0.4s,mb3.4,baz=102,slow=4.7,SNR=3.7						
KURK	**Kurchatov**	**64.15**	**320**	*e*P	**P**	**17 10 24.6**	**-0.6**
	4.7nm,0.7s,mb4.2						
BRVK	**Borovoye**	**69.56**	**322**	*e*P	**P**	**17 10 59.4**	**+0.1**
	2.0nm,0.6s,mb3.9						
DLBC	**Dease Lake**	**75.80**	**33**	P	**P**	**17 11 36.0**	**+0.1**
	1.1nm,0.8s,mb3.5,baz=258,slow=14,SNR=2.4						
YKA	**Yellowknife Ar**	**82.64**	**27**	P	**P**	**17 12 12.2**	**-0.6**
	0.6nm,0.5s,mb3.5,baz=288,slow=5.0,SNR=4.6						
RES	**Resolute Bay**	**84.24**	**13**	*e*P	**P**	**17 12 20.9**	**0.0**
	75nm,0.8s						
NEW	**Newport**	**85.10**	**42**	*e*P	**P**	**17 12 25.8**	**+0.1**
CMB	**Columbia Colle**	**85.38**	**52**

NVAR Mina Array Bea 36.48 93 P **P** **17 59 25.7 +0.5**
0.4nm,0.6s,mb3.5,baz=290,slow=8.5,SNR=2.4
PDAR Pinedale Array 39.19 81 P **P** **17 59 48.6 +0.6**
0.1nm,0.4s,mb2.9,baz=291,slow=7.5,SNR=2.3
SONM Songino Array 52.20 302 P **P** **18 01 30.2 -0.5**
0.2nm,0.5s,mb3.3,baz=65,slow=6.8,SNR=2.5
BRTR Keskin Array B 86.25 344 P **P** **18 04 59.8 -1.8**
0.3nm,0.4s,mb3.9,baz=20,slow=4.1,SNR=3.3

BJI ***23*** *17:52:44.3, 4.65S×123.61E, h33km, mB5.1, mb4.9, Ms4.9, Ms4.6*
NEIC ***23*** *17:52:45.6±0.3, 4.24S×123.49E, h10km, mb5.0/25, Error ellipse: s-maj=11.7km s-min=6.3km az=53.0*
MOS ***23*** *17:52:47.4±0.7, 4.18S×123.48E, h33km, mb5.1/25, Error ellipse: s-maj=18.3km s-min=7.8km az=114.5*
ISCJB ***23*** *17:52:47.4±0.3, 4.24S±004×123.44E±004, h32km, mb5.0/61, MS4.0/21, Error ellipse: s-maj=5.8km s-min=5.5km az=149.7*
DJA ***23*** *17:52:49.6±0.0, 4.26S×123.49E, h30km, mB5.4/1, Mjma4.1/7, MLv4.7/7, Mw(mB)5.2/1, Mwp4.0/6*
IDC ***23*** *17:52:51.1±1.9, 4.30S×123.31E, h47km±19km, mb4.3/15, mb1 4.5/18, mb1mx4.4/24, mbtmp4.5/18, ML5.0/3, MS3.8/16, Ms1 3.8/16, ms1mx3.7/23, Error ellipse: s-maj=16.8km s-min=11.8km az=50.0*
ISC 23 17:52:49.8±0.3, 4.24S±004×123.44E±004, h34km, h34km±1.4km; pP-P, n146, σ0.96/150, mb5.0/61, MS4.0/21, 2C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDI	**Kendari**	**0.86**	**289**	P	**Pn**	**17 53 03.1**	**-2.4**
KAPI	**Kappang**	**3.76**	**258**	Pn	**Pn**	**17 53 44.9**	**-0.5**
	5μm,0.6s,SNR=74						
KAPI	**Kappang**	**3.76**	**258**	P	**Pn**	**17 53 44.2**	**-1.2**
	58nm,0.3s,baz=99,slow=6.2,SNR=241						
KAPI				S	**Sn**	**17 54 26.4**	**-2.0**
	92nm,0.3s,baz=322,slow=23,SNR=19						
KAPI				LR	LR	17 54 45.5	
	comp=Z,512nm,21.1s,baz=85,slow=32						
KAPI	**Kappang**	**3.76**	**258**	*e*P	**Pn**	**17 53 43.3**	**-2.0**
KAPI				*e*Sn	**Sn**	**17 54 26.2**	**-2.3**
KAPI	**Kappang**	**3.76**	**258**	P	**Pn**	**17 53 43.7**	**-1.7**
AAI	**Ambon**	**4.78**	**84**	P	**Pn**	**17 53 59.4**	**0.0**
AAI	**Ambon**	**4.78**	**84**	P	**Pn**	**17 53 59.6**	**+0.2**
PCI	**Palu**	**4.89**	**312**	P	**Pn**	**17 54 01.4**	**+0.5**
LBMI	**Labuha**	**5.41**	**49**	P	**Pn**	**17 54 06.9**	**-1.2**
	287nm,1.0s,2μm0.9nm						
MNI	**Manado**	**5.81**	**14**	P	**Pn**	**17 54 24.0**	**+10**
BATI	**Baumata**	**5.94**	**178**	P	**Pn**	**17 54 17.4**	**+2.1**
	20nm,0.3s,baz=13,slow=1.4,SNR=104						
BATI				LR	LR	17 56 50.1	
	comp=Z,956nm,19.2s,baz=9.3,slow=41						
BATI	**Baumata**	**5.94**	**178**	P	**Pn**	**17 54 17.4**	**+2.1**
	153nm,0.7s,0.5nm						
KHKI	**Kahang-Kahang**	**8.80**	**242**	P	**Pn**	**17 54 53.6**	**-1.0**
MYLDM	**Lahad Datu**	**10.57**	**332**	P	**Pn**	**17 55 19.5**	**+0.5**
DAV	**Davao City (W)**	**11.43**	**11**	P	**Pn**	**17 55 34.2**	**+3.4**
	50nm,0.3s,baz=203,slow=7.2,SNR=6.0						
DAV				LR	LR	17 59 37.4	
	comp=Z,473nm,19.7s,baz=299,slow=35						
DAV	**Davao City (W)**	**11.43**	**11**	Pn	**Pn**	**17 55 33.9**	**+3.1**
	235nm,0.9s						
SJI	**Sawahan**	**12.12**	**253**	P	**Pn**	**17 55 45.9**	**+5.8**
BJII	**Banjamegara**	**14.00**	**257**	P	**Pn**	**17 56 16.1**	**+10**
MBWA	**Marble Bar**	**17.20**	**192**	Pn	**Pn**	**17 56 48.4**	**+0.8**
	37nm,1.1s						
PPBI	**Pangkal Pinang**	**17.40**	**276**	P	**Pn**	**17 56 51.9**	**+1.8**
	25nm,1.2s						
XMIS	**Christmas Isla**	**18.69**	**250**	P	**Pn**	**17 57 04.7**	**-1.2**
	0.0nm,1.1s						
WRAB	**Tennant Creek**	**18.88**	**147**	P	**Pn**	**17 57 03.8**	**-4.4**
	312nm,0.7s,SNR=7.2						
WRAB	**Tennant Creek**	**18.88**	**147**	*e*P	**Pn**	**17 57 03.4**	**-4.8**
	36nm,0.8s						
WRAB	**Tennant Creek**	**18.88**	**147**	*e*P	**Pn**	**17 57 03.4**	**-4.8**
WRAB				pmax	pmax		
	comp=Z,36nm,0.8s						
WRAB	**Tennant Creek**	**18.88**	**147**	P	**Pn**	**17 57 04.1**	**-4.1**
	comp=Z,57nm,0.8s						
WB2	**Warramunga Arr**	**18.89**	**147**	*e*P	**Pn**	**17 57 03.5**	**-4.8**
KSI	**Kapahiang**	**20.80**	**271**	P	**P**	**17 57 33.2**	**+4.7**
COEN	**Coen**	**21.73**	**118**	*e*P	**P**	**17 57 34.4**	**-4.0**
	comp=Z,24nm,0.9s,mb4.6						
ASAR	**Alice Springs**	**21.80**	**153**	P	**P**	**17 57 38.6**	**-0.5**
	comp=Z,65nm,0.9s,mb5.1,baz=331,slow=11,SNR=147						
ASAR	**Alice Springs**	**21.80**	**153**	P	**P**	**17 57 38.6**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,65nm,0.9s						
PDSI	**Padang**	**23.19**	**278**	P	**P**	**17 57 56.2**	**+2.3**
	comp=Z,42nm,1.1s,mb4.8						
PPI	**Padang Panjang**	**23.32**	**279**	P	**P**	**17 57 56.7**	**+1.4**
	comp=Z,38nm,1.1s,mb4.8						
CTA	**Charters Tower**	**27.24**	**127**	P	**P**	**17 58 31.4**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=307,slow=15,SNR=2.2						
CTA				LR	LR	18 10 15.4	
	comp=Z,165nm,21.2s,MS3.6,baz=302,slow=38						
CTA	**Charters Tower**	**27.24**	**127**	P	**P**	**17 58 31.4**	**+0.5**
CTA				LR	LR	18 10 15.4	
CTA	**Charters Tower**	**27.24**	**127**	P	**P**	**17 58 31.4**	**+0.4**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CTA				MLR	MLR		
	comp=Z,165nm,21.2s						
CTAO	**Charters Tower**	**27.24**	**127**	P	**P**	**17 58 30.7**	**-0.3**
	comp=Z,12nm,1.2s,mb4.3						
CTAO	**Charters Tower**	**27.24**	**127**	P	**P**	**17 58 30.7**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
GUMO	**Guam**	**27.68**	**50**	LR	LR	18 08 41.8	
	comp=Z,99nm,18.9s,MS3.4,baz=188,slow=34						
GUMO	**Guam**	**27.68**	**50**	P	**P**	**17 58 32.8**	**-2.1**
	comp=Z,283nm,1.2s,mb5.8						
GUMO	**Guam**	**27.68**	**50**	P	**P**	**17 58 32.8**	**-2.1**
GUMO				pmax	pmax		
	comp=Z,283nm,1.2s,mb5.8						
NWAO	**Narrogin (SRO)**	**29.13**	**191**	LR	LR	18 11 38.7	
	comp=Z,168nm,20.8s,MS3.6,baz=279,slow=39						
STKA	**Stephens Creek**	**32.35**	**150**	*e*P	**P**	**17 59 15.2**	**-0.9**
	comp=Z,12nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**32.35**	**150**	P	**P**	**17 59 15.4**	**-0.7**
	comp=Z,4.1nm,0.8s,mb4.3,baz=323,slow=6.4,SNR=8.1						
STKA				LR	LR	18 13 21.4	
	comp=Z,258nm,19.9s,MS3.9,baz=237,slow=38						
STKA	**Stephens Creek**	**32.35**	**150**	*e*P	**P**	**17 59 15.3**	**-0.8**
	comp=Z,7.1nm,1.1s,mb4.4						
STKA				*e*	pP	17 59 26.4	+0.5
CM31	**Chiang Mai Arr**	**33.03**	**314**	*e*P	**P**	**17 59 22.0**	**-0.2**
	comp=Z,4.6nm,0.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**33.03**	**314**	P	**P**	**17 59 22.3**	**+0.1**
	comp=Z,6.3nm,0.7s,mb4.7,baz=138,slow=7.2,SNR=49						
CMAR				PcP	PcP	18 02 06.9	+1.3
	comp=Z,1.9nm,0.8s,baz=150,slow=2.0,SNR=11						
CMAR				LR	LR	18 15 07.2	
	comp=Z,225nm,18.7s,MS3.9,baz=153,slow=40						
CMAR	**Chiang Mai Arr**	**33.03**	**314**	P	**P**	**17 59 22.3**	**+0.1**
CMAR						18 02 06.9	
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,225nm,18.7s						
CHTO	**Chiang Mai**	**33.27**	**314**	*e*P	**P**	**17 59 24.4**	**+0.1**
	comp=Z,13nm,1.1s,mb4.8						
CHTO	**Chiang Mai**	**33.27**	**314**	*e*P	**P**	**17 59 24.4**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
GYA	**Guiyang**	**34.56**	**333**	P	**P**	**17 59 35.4**	**0.0**
GYA				AP	pP	17 59 45.1	-0.1
GYA				XP	sP	17 59 49.0	-0.3
GYA				PP	PP	18 00 51.5	-2.7
GYA				PCP	PcP	18 02 10.8	+1.0
GYA				S	**S**	**18 05 01.0**	**-1.4**
GYA				SCP	ScP	18 05 52.4	-0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,650nm,11.0s,MS4.7						
GYA				LR	LR		
	comp=E,380nm,10.2s,MS4.7						
GYA				LR	LR		
	comp=Z,870nm,10.7s,MS4.8						
KMI	**Kunming**	**35.44**	**326**	P	**P**	**17 59 45.6**	**+2.6**
KMI				AP	pP	17 59 55.9	+3.1
KMI				XP	sP	18 00 00.5	+3.6
KMI				PP	PP	18 01 07.3	+3.4
KMI				S	**S**	**18 05 19.1**	**+3.2**
KMI				XS	sS	18 05 36.1	+4.0
KMI				SS	SS	18 07 39.8	-11
KMI				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
KMI				AMB	AMB		
	comp=Z,197nm,5.6s						
KMI				LR	LR		
	comp=N,274nm,20.7s,MS4.1						
KMI				LR	LR		
	comp=E,249nm,22.8s,MS4.1						
KMI				LR	LR		
	comp=Z,261nm,28.5s						
WHN	**Wuhan**	**35.66**	**346**	⇓P	**P**	**17 59 44.9**	**+0.1**
NJ2	**Nanjing**	**36.35**	**353**	*e*P	**P**	**17 59 51.3**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2	**Chengdu**	**39.68**	**333**	*e*P	**P**	**18 00 18.0**	**-0.8**
CD2				AP	pP	18 00 27.6	-1.1
CD2				XP	sP	18 00 31.8	-1.0
CD2				PP	PP	18 01 54.8	+4.4
CD2				S	**S**	**18 06 21.8**	**+1.6**
CD2				XS	sS	18 06 37.5	+1.0
CD2				SS	SS	18 09 12.8	-3.8
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,380nm,10.8s,MS4.6						
CD2				LR	LR		
	comp=E,210nm,10.8s,MS4.6						
CD2				LR	LR		
	comp=Z,300nm,9.6s						
XAN	**Xi'an**	**40.46**	**341**	P	**P**	**18 00 24.4**	**-0.8**
XAN				AP	pP	18 00 31.1	-4.1
XAN				AMB	AMB		
	comp=Z,27nm,1.0s,mb4.9						
XAN				AMB	AMB		
	comp=Z,182nm,5.5s						
KSRS	**Korea Array**	**41.69**	**5**	P	**P**	**18 00 36.0**	**+0.8**
	comp=Z,5.5nm,0.7s,mb4.3,baz=184,slow=10,SNR=18						
KSRS				LR	LR	18 16 16.5	
	comp=Z,60nm,21.2s,MS3.4,baz=358,slow=34						
KSRS	**Korea Array**	**41.69**	**5**	P	**P**	**18 00 36.0**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,60nm,21.2s,MS3.4						
MJAR	**Matsushiro Arr**	**42.85**	**18**	P	**P**	**18 00 43.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=189,slow=9.1,SNR=4.3						
MJAR	**Matsushiro Arr**	**42.85**	**18**	P	**P**	**18 00 43.6**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LZH	**Lanzhou**	**44.11**	**337**	*e*P	**P**	**18 00 55.9**	**+1.0**
LZH				AP	pP	18 01 06.9	+2.0
LZH				XP	sP	18 01 12.5	+3.5
LZH				PP	PP	18 02 40.5	+2.3
LZH				*e*S	**S**	**18 07 26.0**	**+0.5**
LZH				XS	sS	18 07 42.3	+0.3
LZH				SS	SS	18 10 39.0	-4.9
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,150nm,5.0s						
LZH				LR	LR		
	comp=E,280nm,14.3s						
LZH				LR	LR		
	comp=Z,415nm,15.0s,MS4.5						
BJT	**Baijiatuao**	**44.54**	**352**	*e*P	**P**	**18 00 58.1**	**-0.2**
	comp=Z,44nm,0.7s,mb5.4						
BJT	**Baijiatuao**	**44.54**	**352**	*e*P	**P**	**18 00 58.1**	**-0.2**
BJT				pmax	pmax		
	comp=Z,44nm,0.7s						
BJI	**Beijing**	**44.56**	**352**	P	**P**	**18 00 58.0**	**-0.5**
BJI				S	**S**	**18 07 42.3**	**+10**
BJI				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.5						
LSA	**Lhasa**	**45.78**	**320**	*e*P	**P**	**18 01 08.8**	**+0.5**
	comp=Z,9.1nm,0.6s,mb4.9						
LSA	**Lhasa**	**45.78**	**320**	*e*P	**P**	**18 01 08.8**	**+0.4**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
HHC	**Hu-ho-hao-te**	**46.17**	**348**	*e*P	**P**	**18 01 11.5**	**+0.3**
HHC				AP	pP	18 01 21.9	+0.7
HHC				XP	sP	18 01 25.5	+0.3
HHC				PP	PP	18 02 58.3	-1.7
HHC				S	**S**	**18 07 54.4**	**-0.7**
HHC				XS	sS	18 08 13.4	+1.8
HHC				SCS	ScS	18 11 01.1	-3.1
HHC				SS	SS	18 11 14.8	-6.1
HHC				AMB	AMB		
	comp=Z,23nm,1.1s,mb5.0						
HHC				AMB	AMB		
	comp=Z,140nm,5.9s						
HHC				LR	LR		
	comp=N,202nm,20.2s,MS4.3						
HHC				LR	LR		
	comp=E,256nm,17.8s,MS4.3						
HHC				LR	LR		
	comp=Z,127nm,17.8s,MS3.9						
ODAN	**Odare**	**46.58**	**314**	*e*P	**P**	**18 01 14.9**	**+0.2**
	comp=Z,38nm,0.9s,mb5.3						
TAPN	**Taplejung**	**46.64**	**314**	*e*P	**P**	**18 01 15.3**	**+0.2**
	comp=Z,63nm,1.0s,mb5.5						
RAMN	**Ramite**	**47.20**	**313**	*e*P	**P**	**18 01 19.9**	**+0.3**
	comp=Z,88nm,0.9s,mb5.7						
JIRN	**Jiri**	**47.91**	**314**	*e*P	**P**	**18 01 25.2**	**+0.1**
	comp=Z,45nm,0.9s,mb5.5						
GUN	**Gumba**	**48.28**	**314**	*e*P	**P**	**18 01 28.2**	**+0.3**
	comp=Z,56nm,0.8s,mb5.7						
PKI	**Pulchoki**	**48.43**	**313**	*e*P	**P**	**18 01 28.9**	**-0.1**
PKIN	**Phulchoki**	**48.44**	**313**	*e*P	**P**	**18 01 28.8**	**-0.3**
GTA	**Gaotai**	**48.59**	**336**	P	**P**	**18 01 30.4**	**+0.4**
GTA				AP	pP	18 01 39.5	-0.7
GTA				XP	sP	18 01 44.3	+0.1
GTA				PP	PP	18 03 22.6	-0.7
GTA				S	**S**	**18 08 29.5**	**-0.1**
GTA				XS	sS	18 08 46.8	+0.6
GTA				SS	SS	18 11 58.5	-1.7
GTA				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.0						
GTA				AMB	AMB		
	comp=Z,73nm,3.8s						
GTA				LR	LR		
	comp=N,120nm,12.6s,MS4.2						
GTA				LR	LR		
	comp=E,103nm,12.9s,MS4.2						
GTA				LR	LR		
	comp=Z,160nm,14.4s,MS4.2						
KKN	**Kakani**	**48.65**	**313**	*e*P	**P**	**18 01 30.6**	**-0.1**
	comp=Z,46nm,0.9s,mb5.5						
DMN	**Daman**	**48.67**	**313**	*e*P	**P**	**18 01 31.0**	**+0.1**
	comp=Z,59nm,1.0s,mb5.6						
MDJ	**Mudanjiang**	**48.94**	**6**	P	**P**	**18 01 35.4**	**+2.7**
MDJ				AP	pP	18 01 44.8	+2.0
MDJ				XP	sP	18 01 48.6	+1.8
MDJ				PP	PP	18 03 31.5	+5.1
MDJ				S	**S**	**18 08 43.5**	**+9.1**
MDJ				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,117nm,7.1s						
MDJ	**Mudanjiang**	**48.94**	**6**	*e*P	**P**	**18 01 32.3**	**-0.4**
	comp=Z,9.6nm,0.8s,mb4.9						
GKN	**Gorkha**	**49.23**	**313**	*e*P	**P**	**18 01 34.9**	**-0.3**
KOLN	**Koldanda**	**49.87**	**312**	*e*P	**P**	**18 01 40.1**	**0.0**
	comp=Z,74nm,0.9s,mb5.7						
DANN	**Dangsing**	**50.07**	**313**	*e*P	**P**	**18 01 41.6**	**0.0**
	comp=Z,125nm,0.7s,mb6.1						
PYUN	**Piuthan**	**50.50**	**312**	*e*P	**P**	**18 01 44.8**	**0.0**
	comp=Z,98nm,0.9s,mb5.8						
ASAJ	**Asahikawa**	**51.12**	**18**	P	**P**	**18 01 49.5**	**+0.3**
	comp=Z,15nm,1.0s,mb4.9,baz=286,slow=33,SNR=4.1						
ASAJ	**Asahikawa**	**51.12**	**18**	P	**P**	**18 01 49.5**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,15nm,1.0s						
HIA	**Hailar**	**53.38**	**357**	*e*P	**P**	**18 02 06.0**	**+0.1**
	comp=Z,26nm,1.2s,mb5.0						
HIA	**Hailar**	**53.38**	**357**	*e*P	**P**	**18 02 06.0**	**+0.1**
HIA				pmax	pmax		
	comp=Z,26nm,1.2s						
ULN	**Ulaanbaatar**	**53.84**	**346**	*e*P	**P**	**18 02 09.8**	**+0.5**
	comp=Z,33nm,1.0s,mb5.2						
ULN	**Ulaanbaatar**	**53.84**	**346**	*e*P	**P**	**18 02 09.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
SONM	**Songino Array**	**53.97**	**346**	P	**P**	**18 02 10.9**	**+0.7**
	comp=Z,14nm,0.8s,mb5.0,baz=166,slow=8.8,SNR=91						
SONM				LR	LR	18 25 49.8	
	comp=Z,78nm,18.4s,MS3.8,baz=145,slow=37						
SONM	**Songino Array**	**53.97**	**346**	P	**P**	**18 02 10.9**	**+0.7**
SONM				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM				MLR	MLR		
	comp=Z,78nm,18.4s						
ZAK	**Zakamensk**	**57.11**	**345**	*e*P	**P**	**18 02 32.4**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
WMQ	**Urumqi**	**57.64**	**330**	P	**P**	**18 02 37.6**	**+1.0**
WMQ				AP	pP	18 02 47.6	+0.7
WMQ				XP	sP	18 02 51.6	+0.7
WMQ				PP	PP	18 04 47.6	+2.8
WMQ				S	**S**	**18 10 31.6**	**-1.1**
WMQ				SCS	ScS	18 12 20.6	-3.0
WMQ				SS	SS	18 14 22.6	-0.8
WMQ				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,89nm,4.0s						
WMQ				LR	LR		
	comp=N,134nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=E,167nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,87nm,16.0s,MS4.0						
TLY	**Talaya**	**58.21**	**346**	*e*P	**P**	**18 02 40.7**	**+0.3**
	comp=Z,11nm,0.8s,mb4.9						
TLY	**Talaya**	**58.21**	**346**	*c i*P	**P**	**18 02 40.8**	**+0.3**
TLY				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
URZ	**Urewera**	**59.31**	**132**	P	**P**	**18 02 49.6**	**+1.1**
	comp=Z,3.0nm,0.6s,mb4.5,baz=185,slow=14,SNR=2.1						
BOD	**Bodaibo**	**62.32**	**354**	*e*P	**P**	**18 03 08.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**62.44**	**329**	*e*P	**P**	**18 03 09.4**	**-0.1**
MKAR	**Makanchi Array**	**62.44**	**329**	P	**P**	**18 03 09.8**	**+0.3**
	comp=Z,24nm,0.6s,mb5.5,baz=130,slow=7.7,SNR=197						
MKAR				LR	LR	18 30 44.2	
	comp=Z,65nm,19.5s,MS3.8,baz=247,slow=36						
MKAR	**Makanchi Array**	**62.44**	**329**	P	**P**	**18 03 09.8**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,24nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,65nm,19.5s						
KZA	**Kyzart**	**63.51**	**322**	P	**P**	**18 03 18.1**	**+1.3**
	SNR=7.6						
TKM2	**Tokmak 2**	**63.77**	**323**	*e*P	**P**	**18 03 18.6**	**+0.2**
	comp=Z,9.7nm,0.6s,mb5.0						
TKM2	**Tokmak 2**	**63.77**	**323**	*e*P	**P**	**18 03 18.6**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
TKM2	**Tokmak 2**	**63.77**	**323**	P	**P**	**18 03 19.1**	**+0.7**
	SNR=15						
KBK	**Karagaybulak**	**64.02**	**322**	P	**P**	**18 03 20.9**	**+0.9**
	SNR=11						
KBL	**Kabul**	**64.03**	**312**	*e*P	**P**	**18 03 20.1**	**-0.3**
	comp=Z,50nm,0.7s,mb5.7						
KBL	**Kabul**	**64.03**	**312**	*e*P	**P**	**18 03 20.1**	**-0.2**
KBL				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.7						
AAK	**Ala-Archa**	**64.29**	**322**	P	**P**	**18 03 22.8**	**+1.0**
	comp=Z,144nm,0.7s,mb6.1,SNR=8.8						
AAK	**Ala-Archa**	**64.29**	**322**	P	**P**	**18 03 22.8**	**+0.9**
	SNR=13						
AML	**Almayashu**	**64.51**	**321**	*e*P	**P**	**18 03 23.9**	**+0.6**
	comp=Z,52nm,1.3s,mb5.4						
AML	**Almayashu**	**64.51**	**321**	P	**P**	**18 03 24.3**	**+1.0**
	SNR=14						
USP	**Ospenovka**	**64.63**	**322**	P	**P**	**18 03 24.4**	**+0.3**
	SNR=11						
EKS2	**Erkin-Say**	**64.74**	**322**	*e*P	**P**	**18 03 25.2**	**+0.4**
	comp=Z,25nm,1.0s,mb5.2						
EKS2	**Erkin-Say**	**64.74**	**322**	P	**P**	**18 03 25.7**	**+0.9**
	SNR=10						
KRAR	**Krasnoyarsk**	**65.07**	**342**	⇑*i*P	**P**	**18 03 26.9**	**+0.3**
KRAR				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
YAK	**Yakutsk**	**66.25**	**3**	*e*P	**P**	**18 03 33.5**	**-0.6**
	comp=Z,26nm,0.8s,mb5.3						
YAK	**Yakutsk**	**66.25**	**3**	*e*P	**P**	**18 03 33.2**	**-1.0**
YAK				*e**PP	pP	18 03 41.3	-3.3
YAK				*e*S	S	18 12 19.7	-1.2
YAK				*e*		18 13 26.3	
YAK				*e*SS	SS	18 16 38.4	+0.8
YAK				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,219nm,3.5s						
YAK				pmax	pmax		
	comp=N,275nm,3.2s						
YAK				pmax	pmax		
	comp=E,106nm,2.5s						
YAK				smax			
	comp=E,140nm,3.7s						
YAK				smax			
	comp=N,328nm,3.1s						
YAK				MLR	MLR		
	comp=Z,30nm,10.0s,MS3.8						
ZAA0	**Zalesovo Array**	**66.33**	**336**	*e*P	**P**	**18 03 33.8**	**-1.1**
ZALV	**Zalesovo Beam**	**66.33**	**336**	P	**P**	**18 03 34.0**	**-0.9**
	comp=Z,14nm,0.8s,mb5.1,baz=122,slow=5.4,SNR=61						
ZALV	**Zalesovo Beam**	**66.33**	**336**	P	**P**	**18 03 34.0**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
KURK	**Kurchatov**	**66.85**	**331**	P	**P**	**18 03 38.4**	**+0.2**
	comp=Z,223nm,0.8s,SNR=7.2						
KURK	**Kurchatov**	**66.85**	**331**	*e*P	**P**	**18 03 37.9**	**-0.3**
	comp=Z,31nm,0.9s,mb5.3						
KURK	**Kurchatov**	**66.85**	**331**	*e*P	**P**	**18 03 37.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
NVS	**Novosibirsk**	**67.62**	**336**	*i* P	**P**	**18 03 41.1**	**-1.9**
NVS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
NVS				pmax	pmax		
	comp=N,12nm,1.4s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.4s						
BVAR	**Borovoye Array**	**72.32**	**330**	P	**

comp=Z,10.0nm,0.7s,mb4.8
ARU Arti 79.97 329 *e*P **P 18 04 53.8 -1.6**
comp=Z,8.3nm,0.8s,mb4.7
ARU Arti 79.97 329 *d* i P **P 18 04 53.8 -1.6**
ARU *e*S S 18 14 56.9 +0.2
ARU *e*SS SS 18 20 01.6 -5.5
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
QSPA South Pole Qui 85.72 180 *e*P **P 18 05 25.8 +0.9**
comp=Z,6.3nm,1.1s,mb4.8
BRTR Keskin Array B 92.52 309 P **P 18 05 56.0 -1.8**
comp=Z,0.7nm,0.7s,mb4.2,baz=123,slow=4.6,SNR=4.4
BRTR LR LR 18 51 00.7
comp=Z,27nm,18.4s,MS3.7,baz=296,slow=38
BRTR Keskin Array B 92.52 309 P **P 18 05 56.1 -1.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR MLR MLR
comp=Z,27nm,18.5s
BOSA Boshof 95.16 241 LR LR 18 40 30.6
comp=Z,56nm,21.0s,MS4.0,baz=59,slow=30
AKASG Malin Array Be 95.92 320 LR LR 18 57 45.9
comp=Z,52nm,18.9s,MS4.0,baz=345,slow=41
TORD Torodi Ar. Bea 121.85 283 PKP PKPdf 18 11 40.7 -0.8
comp=Z,1.1nm,0.7s,baz=65,slow=1.7,SNR=6.6
TORD Torodi Ar. Bea 121.85 283 PKP PKPdf 18 11 40.7 -0.8

CSEM ***23*** *17:53:07.9±0.2, 3982N×2074E, h5km, ML2.7/6, Error ellipse: s-maj=5.2km s-min=3.8km az=83.0*
ISCJB ***23*** *17:53:08.6±0.6, 3979N±002×2071E±004, h7km±5km, Error ellipse: s-maj=5.5km s-min=3.9km az=8.1*
THE ***23*** *17:53:08.4, 3979N×2075E, h0km±1km, ML2.7/6, Error ellipse: s-maj=1.9km s-min=0.7km az=304.0*
ATH ***23*** *17:53:09.3, 3971N×2064E, h5km, MD3.0/4*
NEIC ***23*** *17:53:09.3, 3971N×2064E, h5km, MD3.0(ATH), After ATH.*
SKO ***23*** *17:53:09.1, 3969N×2076E, h9km*
ISC 23 17:53:08.9±0.5, 3977N±002×2071E±004, h7km±4km, n46, σ1°01/78, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.16**	**138**	*e*PG	**Pg**	**17 53 12.1**	**-0.1**
JAN				*e*SG	**Sg**	**17 53 15.5**	**+1.2**
IGT	**Igoumenitsa**	**0.38**	**231**	P	**Pg**	**17 53 16.0**	**-0.3**
IGT				S	**Sg**	**17 53 22.4**	**+1.1**
KEK	**Kerkira**	**0.71**	**265**	*e*PB	**Pb**	**17 53 22.0**	**-1.6**
THL	**Klokotos Trika**	**1.03**	**101**	P	**Pg**	**17 53 27.1**	**-1.5**
THL				S	**Sg**	**17 53 41.6**	**-0.3**
FNA	**Florina**	**1.13**	**26**	P	**Pg**	**17 53 29.6**	**-1.0**
FNA				S	**Sg**	**17 53 45.2**	**0.0**
EVR	**Evrytania**	**1.21**	**135**	*e*PB	**Pb**	**17 53 32.5**	**+0.4**
BIA	**Bitola**	**1.33**	**20**	P	**Pn**	**17 53 32.8**	**-1.1**
OHR	**Ohrid**	**1.34**	**3**	*e*Pn	**Pn**	**17 53 34.1**	**+0.1**
OHR				*e*Sg	**Sg**	**17 53 54.0**	**+2.1**
LIT	**Litokhoron**	**1.41**	**76**	P	**Pn**	**17 53 33.2**	**-1.7**
LIT				S	**Sb**	**17 53 54.6**	**+1.0**
AGG	**Agios Georgios**	**1.46**	**120**	P	**Pn**	**17 53 34.9**	**-0.8**
AGG				S	**Sn**	**17 53 55.3**	**+0.2**
VLS	**Valsamata**	**1.60**	**183**	P	**Pn**	**17 53 38.1**	**+0.5**
VLS				S	**Sn**	**17 54 00.1**	**+1.6**
VLS	**Valsamata**	**1.60**	**183**	*e*Pb	**Pb**	**17 53 38.5**	**-0.3**
VLS				S	**Sn**	**17 54 00.1**	**+1.6**
KRUS	**Krusevo**	**1.64**	**14**	*e*Pn	**Pn**	**17 53 39.9**	**+1.7**
KRUS				*e*Sg	**Sg**	**17 54 02.5**	**+0.7**
KRUS	**Krusevo**	**1.64**	**14**	*e*Pn	**Pn**	**17 53 40.0**	**+1.7**
KRUS				*e*Sg	**Sg**	**17 54 02.5**	**+0.8**
GRG	**Griva**	**1.75**	**47**	P	**Pn**	**17 53 39.4**	**-0.3**
GRG				S	**Sn**	**17 54 02.8**	**+0.6**
KNT	**Kendrikon**	**2.17**	**50**	P	**Pn**	**17 53 44.6**	**-0.8**
PLG	**Polygyros**	**2.18**	**73**	P	**Pn**	**17 53 45.2**	**-0.4**
PLG				S	**Sn**	**17 54 13.8**	**+0.9**
PAIG	**Paliouri**	**2.29**	**85**	P	**Pn**	**17 53 46.1**	**-1.0**
PAIG				S	**Sn**	**17 54 16.8**	**+1.3**
LTK	**Loutraki**	**2.48**	**134**	P	**Pn**	**17 53 49.2**	**-0.5**
OUR	**Ouranopolis**	**2.57**	**76**	P	**Pn**	**17 53 49.5**	**-1.5**

CSEM ***23*** *18:19:24.9±0.1, 3875N×4001E, h2km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.1km az=52.0*
ISCJB ***23*** *18:19:25.7±0.8, 3877N±004×4008E±005, h2km±8km, Error ellipse: s-maj=7.7km s-min=4.4km az=43.9*
ISK ***23*** *18:19:25.4, 3877N×4004E, h7km, MD3.0*
DDA ***23*** *18:19:27.7, 3858N×3995E, h28km, Md3.0:*
ISC 23 18:19:26.4±0.8, 3878N±004×4007E±005, h9km±6km, n11, σ0§82/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.54**	**283**	PG	**Pg**	**18 19 36.0**	**-0.9**
PTK				*e*SG	**Sg**	**18 19 43.8**	**-0.2**
DIYA	**Diyarbakir**	**0.85**	**177**	*i* P	**Pg**	**18 19 42.7**	**-0.1**
DIYA				*i* S	**Sg**	**18 19 54.5**	**+0.6**
BNGL	**BINGOL**	**0.86**	**78**	*i* P	**Pg**	**18 19 43.6**	**+0.6**
BNGL				*i* S	**Sg**	**18 19 59.5**	**+5.3**
DIY	**Diyarbakir**	**0.89**	**172**	*e*PG	**Pg**	**18 19 42.8**	**-0.7**
DIY				*e*SG	**Sg**	**18 19 55.4**	**+0.4**
ELZG	**Elazig**	**0.89**	**252**	*i* P	**Pg**	**18 19 42.9**	**-0.7**
ELZG				*i* S	**Sg**	**18 19 58.3**	**+3.1**
EZC	**Erzincan**	**0.99**	**349**	*e*PN	**Pn**	**18 19 47.3**	**+0.8**
BEST	**Besiri**	**1.29**	**133**	*i* P	**Pn**	**18 19 50.1**	**-0.5**
BEST				*i* S	**Sb**	**18 20 07.7**	**+0.1**
KEMA	**Kemaliye**	**1.32**	**292**	*i* P	**Pn**	**18 19 49.5**	**-1.6**
KEMA				*i* S	**Sb**	**18 20 09.9**	**+1.5**
EZM	**Erzurum**	**1.51**	**41**	*e*PN	**Pn**	**18 19 53.7**	**+0.1**
MARD	**Mardin**	**1.56**	**159**	*i* P	**Pn**	**18 19 54.2**	**-0.1**
MARD				*i* S	**Sn**	**18 20 14.6**	**0.0**
URFA	**Urfa**	**1.66**	**217**	*e*PN	**Pn**	**18 19 55.4**	**-0.2**

IDC 23 18:24:17.5±3.2, 713S×12928E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.5/14, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=168.8km s-min=23.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**17.03**	**165**	P	Pn	18 28 18.8	+1.5
ASAR	0.1nm,0.3s,baz=339,slow=9.1,SNR=20			S	Sn	18 31 27.5	+0.2
	0.1nm,0.3s,baz=325,slow=16,SNR=4.9						
CMAR	**Chiang Mai Arr**	**39.27**	**311**	P	P	18 31 48.5	+0.2
	0.4nm,0.5s,baz=145,slow=8.0,SNR=7.1						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	18 35 17.9	-0.3
	0.1nm,0.4s,baz=129,slow=5.6,SNR=5.0						

ISCJB ***23*** *18:26:09.3±0.6, 3923N±003×2868E±004, h4km±7km, Error ellipse: s-maj=5.9km s-min=5.2km az=159.6*
ISK ***23*** *18:26:09.2, 3924N×2866E, h8km, MD2.9*
DDA ***23*** *18:26:09.9, 3923N×2869E, h5km, Md3.1*
CSEM ***23*** *18:26:09.2±0.0, 3924N×2865E, h10km, MD2.9, Error ellipse: s-maj=1.2km s-min=0.8km az=124.0*
ISC 23 18:26:09.9±0.5, 3924N±003×2868E±004, h7km±6km, n15, σ0§48/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DST	**Dursunbey**	**0.37**	**353**	PG	**Pg**	**18 26 17.0**	**-0.2**
DST				*e*SG	**Sg**	**18 26 22.6**	**+0.6**
GDZ	**Gediz**	**0.64**	**103**	*i* P	**Pg**	**18 26 21.9**	**-0.2**
GDZ				*i* S	**Sg**	**18 26 30.5**	**0.0**
KULA	**Kula-Manisa**	**0.72**	**181**	PG	**Pg**	**18 26 23.7**	**0.0**
MANT	**Manisa**	**0.75**	**188**	*i* P	**Pg**	**18 26 24.2**	**-0.1**
MANT				*i* S	**Sg**	**18 26 38.8**	**+4.8**
AKHS	**Akhisar**	**0.76**	**243**	*i* P	**Pg**	**18 26 24.6**	**0.0**
AKHS				*i* S	**Sg**	**18 26 35.1**	**+0.6**
AKS	**Akhisar**	**0.77**	**243**	*e*PG	**Pg**	**18 26 24.1**	**-0.5**
AKS				*e*SG	**Sg**	**18 26 35.1**	**+0.6**
KCT	**Karacabey**	**1.06**	**346**	*e*PG	**Pg**	**18 26 29.9**	**-0.3**
ALT	**Altintas**	**1.12**	**99**	*e*PN	**Pn**	**18 26 31.1**	**-1.0**
GEMT	**Gemlik**	**1.26**	**18**	*e*PN	**Pn**	**18 26 33.7**	**-0.2**
BNT	**Bandirma**	**1.27**	**333**	*e*PN	**Pn**	**18 26 33.5**	**-0.5**
EDC	**Edincik**	**1.28**	**331**	*e*PN	**Pn**	**18 26 33.5**	**-0.7**
CAVI	**Cavuskoy**	**1.32**	**42**	*e*PN	**Pn**	**18 26 34.6**	**-0.1**
YLV	**Yalova**	**1.43**	**22**	*e*PN	**Pn**	**18 26 36.2**	**-0.1**
ESKT	**Eskisehir**	**1.70**	**80**	*e*PN	**Pn**	**18 26 40.0**	**0.0**
ESKT				*e*SN	**Sn**	**18 27 02.8**	**+0.7**
GULT	**Gulveren**	**1.85**	**49**	*e*PN	**Pn**	**18 26 42.4**	**+0.3**
GULT				*e*SN	**Sn**	**18 27 06.7**	**+1.0**

ISK ***23*** *18:58:03.9, 3754N×3556E, h20km, MD2.8*
CSEM ***23*** *18:58:03.8±0.2, 3754N×3555E, h19km±3km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.0km az=5.0*
ISCJB ***23*** *18:58:05.6±0.7, 3750N±004×3557E±004, h19km±13km, Error ellipse: s-maj=6.7km s-min=5.7km az=164.5*
DDA ***23*** *18:58:05.1, 3755N×3556E, h7km±4km, Md2.7*
ISC 23 18:58:05.1±0.8, 3752N±004×3555E±004, h19km±10km, n9, σ0§68/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.23**	**99**	*e*PG	**Pg**	**18 58 09.7**	**-0.8**
KOZT				*e*SG	**Sg**	**18 58 13.8**	**-0.4**
KARA	**Karaisali**	**0.47**	**237**	*e*PG	**Pg**	**18 58 14.2**	**-0.3**
KARA				*e*SG	**Sg**	**18 58 21.7**	**+0.8**
CEYT	**Ceyhan**	**0.53**	**162**	*e*PG	**Pg**	**18 58 15.3**	**-0.4**
CEYT				*e*SG	**Sg**	**18 58 23.8**	**+0.9**
ANDN	**Andirin**	**0.64**	**84**	*i* P	**Pg**	**18 58 17.3**	**-0.5**
ANDN				*i* S	**Sg**	**18 58 27.4**	**+1.1**
GULE	**Gulek**	**0.65**	**249**	*i* P	Px	18 57 56.1	
GULE				*i* S	Sx	18 58 06.8	
NIG	**Nigde**	**0.95**	**309**	*e*PG	**Pg**	**18 58 22.7**	**-0.8**
NIG				*e*SG	**Sg**	**18 58 36.2**	**+0.1**
MERS	**Mersin**	**1.04**	**232**	*e*PG	**Pg**	**18 58 24.3**	**-1.0**
MERS				*e*SG	**Sg**	**18 58 39.3**	**+0.3**
AVNT	**Avonos**	**1.37**	**337**	*i* P	**Pn**	**18 58 29.4**	**+0.1**
AVNT				*i* S	**Sg**	**18 58 50.4**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.47**	**38**	*e*PN	**Pn**	**18 58 24.8**	**-5.9**
SARI				*e*SN	**Sn**	**18 58 39.8**	**-10**

IDC 23 19:17:21.8±1.1, 4828N×15509E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.6/25, mbtmp3.6/9, ML3.3/3, Error ellipse: s-maj=31.9km s-min=21.6km az=142.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.12**	**18**	Pn	Pn	19 18 40.8	+1.2
	0.9nm,0.3s,baz=181,slow=12,SNR=23						
PETK				Sn	Sn	19 19 52.6	+13
	baz=204,slow=14,SNR=2.2						
ASAJ	**Asahikawa**	**9.61**	**249**	Pn	Pn	19 19 42.2	+1.1
	0.7nm,0.3s,baz=0.0,slow=7.1,SNR=5.7						
MJAR	**Matsushiro Arr**	**17.07**	**233**	P	Pn	19 21 20.8	-0.9
	0.0nm,0.3s,baz=190,slow=13,SNR=2.5						
KSRS	**Korea Array**	**22.54**	**251**	P	P	19 22 21.9	-1.2
	0.6nm,0.5s,baz=66,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**47.44**	**297**	P	P	19 25 57.5	-0.3
	0.4nm,0.6s,baz=75,slow=8.9,SNR=3.9						
BVAR	**Borovoye Array**	**50.93**	**309**	P	P	19 26 23.9	-0.5
	0.3nm,0.5s,baz=63,slow=6.6,SNR=3.1						
CMAR	**Chiang Mai Arr**	**54.02**	**257**	P	P	19 26 49.2	+1.4
	0.3nm,0.6s,baz=31,slow=7.7,SNR=3.4						
ASAR	**Alice Springs**	**74.09**	**200**	P	P	19 28 59.7	+0.2
	0.4nm,0.8s,baz=9.0,slow=5.6,SNR=3.7						
TXAR	**Lajitas Array**	**75.59**	**62**	P	P	19 29 08.2	-0.2
	0.5nm,0.7s,baz=307,slow=5.3,SNR=6.3						

ISCJB ***23*** *19:18:45.2±0.3, 5326S±005×94E±02, h10km, mb4.9/24, MS4.9/56, Error ellipse: s-maj=13.4km s-min=6.8km az=1.6*
IDC ***23*** *19:18:45.7±0.5, 5323S×937E, h0km, mb4.6/18, mb1 4.7/18, mb1mx4.7/19, mbtmp4.6/18, MS4.7/19, Ms1 4.7/19, ms1mx4.7/20, Error ellipse: s-maj=18.2km s-min=13.5km az=91.0*
MOS ***23*** *19:18:46.1±1.3, 5322S×937E, h10km, mb5.0/11, MS4.7/12, Error ellipse: s-maj=33.2km s-min=15.8km az=91.0*
BJI ***23*** *19:18:47.4, 5330S×940E, h10km, mB5.6, Ms5.4, Msz4.9*
NEIC ***23*** *19:18:47.4±0.3, 5327S×943E, h10km, mb5.1/17, MS4.9/42, Error ellipse: s-maj=14.6km s-min=9.9km az=94.0*
GCMT ***23*** *19:18:47.4±0.1, 5326S×959E, h14km, MW5.5/102, Moment Tensor Solution. s82,c143; s102,c190; Duration: 1s4 Moment tensor: Scale 10^17Nm; Mrr=0.16±.03; Mθθ=2.21±.03; Mφφ=-2.04±.03; Mrθ=0.15±.05; Mrφ=0.50±.03; Mθφ=0.17±.06; Best double couple: M=2.19600×10^17 NP1=φs128.00000°, δ84.00000°, λ0.00000°. NP2=φs218.00000°, δ90.00000°, λ-174.00000°. Principal axes: T 2.2800, Plg4.0000°, Azm353.0000°; N -0.1610, Plg84.0000°, Azm223.0000°; P -2.1110, Plg5.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 23 19:18:47.1±0.3, 5328S±005×94E±02, h10km, n135, σ1§08/61, mb4.9/24, MS4.9/56, 2C-3D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAIT	**Maitri**	**17.59**	**177**	*e*P	**Pn**	**19 22 50.7**	**-1.2**
MAIT				*e*S	**Sn**	**19 25 51.2**	**-16**
VNA1	**Neumayer--Stat**	**19.16**	**198**	*e*	**Pn**	**19 23 10.9**	**-0.1**
VNA1				*e*		19 23 13.5	
VNA1				*e*		19 23 17.8	
VNA1				*e*		19 23 23.1	
VNA1				*e*		19 26 26.0	
VNA1				*e*		19 26 39.0	
SNAA	**Sanae**	**19.23**	**192**	*e*	**Pn**	**19 23 07.6**	**-4.3**
SNAA				*e*		19 23 10.5	
SNAA				*e*		19 23 16.1	
SNAA				*e*		19 26 33.2	
SNAA	**Sanae**	**19.23**	**192**	*i* P	**Pn**	**19 23 07.5**	**-4.3**
	676nm,1.4s						
SNAA				*e*Sn	Sn	19 26 18.5	-29
SNAA	**Sanae**	**19.23**	**192**	*i* P	**Pn**	**19 23 07.5**	**-4.4**
SNAA				pmax	pmax		
	comp=Z,676nm,1.4s						
VNA2	**Neumayer--Watz**	**19.23**	**197**	*e*	**Pn**	**19 23 11.3**	**-0.6**
	baz=19,slow=3.1						
VNA2				*e*		19 23 13.7	
VNA2				*e*		19 23 19.0	
VNA2				*e*		19 23 23.6	
VNA2				*e*		19 26 28.4	
VNA2				*e*		19 26 40.2	
VNA3	**Neumayer Olymp**	**19.91**	**198**	*e*	**Pn**	**19 23 18.7**	**-1.3**
VNA3				*e*		19 23 21.2	
VNA3				*e*		19 23 25.8	
VNA3				*e*		19 26 55.9	
SYO	**Syowa Base**	**21.10**	**150**	*e*P	**P**	**19 23 30.0**	**-1.3**
SYO	**Syowa Base**	**21.10**	**150**	*i* Pn	**P**	**19 23 31.4**	**+0.1**
SYO	**Syowa Base**	**21.10**	**150**	*i* pP	pP	19 23 36.4	+2.3
SUR	**Sutherland**	**22.45**	**26**	P	**P**	**19 23 46.1**	**+0.1**
	comp=Z,15nm,1.1s,mb4.3,baz=193,slow=14,SNR=3.3						
SUR				LR	LR	19 30 21.1	
	comp=Z,2μm,20.0s,MS4.5,baz=197,slow=31						
SUR	**Sutherland**	**22.45**	**26**	*e*P	**P**	**19 23 45.5**	**-0.5**
	comp=Z,63nm,1.2s,mb4.9						
SUR				LR	LR		
	comp=Z,2μm,21.0s,MS4.6						
BOSA	**Boshof**	**27.27**	**32**	P	**P**	**19 24 31.4**	**0.0**
	comp=Z,9.1nm,1.0s,mb4.3,baz=241,slow=2.6,SNR=5.9						
BOSA				LR	LR	19 33 06.5	
	comp=Z,1μm,19.9s,MS4.5,baz=200,slow=32						
BOSA	**Boshof**	**27.27**	**32**	*e*P	**P**	**19 24 31.3**	**-0.1**
	comp=Z,30nm,1.3s,mb4.7						
BOSA				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
BOSA	**Boshof**	**27.27**	**32**	P	**P**	**19 24 31.4**	**0.0**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
BOSA				MLR	MLR		
	comp=Z,1μm,19.9s,MS4.5						
MAW	**Mawson**	**28.89**	**140**	P	**P**	**19 24 47.0**	**+1.5**
	comp=Z,4.3nm,0.9s,mb4.2,baz=271,slow=13,SNR=4.8						
MAW				LR	LR	19 33 43.5	
	comp=Z,2μm,21.5s,MS4.7,baz=285,slow=31						
MAW	**Mawson**	**28.89**	**140**	*e*P	**P**	**19 24 47.4**	**+2.0**
	comp=Z,4.2nm,0.9s,mb4.2						
MAW				LR	LR		
	comp=Z,3μm,22.0s,MS4.9						
MAW	**Mawson**	**28.89**	**140**	P	**P**	**19 24 47.0**	**+1.5**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAW				MLR	MLR		
	comp=Z,2μm,21.5s						
LBTB	**Lobatse**	**30.75**	**30**	P	**P**	**19 25 02.1**	**-0.1**
	comp=Z,6.9nm,0.8s,mb4.6,baz=216,slow=11,SNR=8.4						
LBTB				LR	LR	19 35 31.6	
	comp=Z,1μm,18.5s,MS4.6,baz=207,slow=33						
LBTB	**Lobatse**	**30.75**	**30**	*e*P	**P**	**19 25 01.7**	**-0.6**
	comp=Z,7.7nm,0.8s,mb4.6						
LBTB				LR	LR		
	comp=Z,1μm,19.0s,MS4.6						
LBTB	**Lobatse**	**30.75**	**30**	P	**P**	**19 25 02.2**	**-0.1**
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
LBTB				MLR	MLR		
	comp=Z,1μm,18.5s,MS4.6						
TSUM	**Tsumeb**	**34.60**	**14**	P	**P**	**19 25 36.1**	**0.0**
	comp=Z,12nm,1.0s,mb4.8,baz=184,slow=9.4,SNR=6.2						
TSUM				LR	LR	19 36 59.1	
	comp=Z,3μm,21.6s,MS5.0,baz=188,slow=32						
TSUM	**Tsumeb**	**34.60**	**14**	*e*P	**P**	**19 25 36.1**	**+0.1**
	comp=Z,53nm,1.3s,mb5.3						
TSUM				LR	LR		
	comp=Z,3μm,22.0s,MS5.0						
QSPA	**South Pole Qui**	**36.96**	**180**	P	**P**	**19 25 54.9**	**-0.8**
	comp=Z,16nm,1.0s,mb4.8,baz=226,slow=4.3,SNR=18						
QSPA	**South Pole Qui**	**36.96**	**180**	*e*P	**P**	**19 25 55.8**	**+0.1**
	comp=Z,20nm,1.0s,mb4.9						
PMSA	**Palmer Station**	**37.27**	**223**	LR	LR	19 37 50.1	
	comp=Z,1μm,18.1s,MS4.8,baz=116,slow=31						
SHEL	**Horse Pasture**	**39.10**	**337**	P	**P**	**19 26 15.2**	**+0.9**
	comp=Z,306nm,1.5s,mb5.8						
SHEL				LR	LR		
	comp=Z,2μm,20.0s,MS4.8						
LSZ	**Lusaka**	**40.71**	**28**	PFAKE		19 26 40.0	+12
LSZ				LR	LR		
	comp=Z,993nm,20.0s,MS4.7						
USHA	**Ushuaia**	**43.50**	**235**	LR	LR	19 39 35.2	
	comp=Z,2μm,21.8s,MS4.9,baz=114,slow=29						
ABPO	**Ambohimpanom**	**44.95**	**55**	PFAKE		19 27 10.0	+7.9
ABPO				LR	LR		
	comp=Z,698nm,20.0s,MS4.6						
CASY	**Casey**	**46.81**	**147**	PFAKE		19 27 30.0	+14
CASY				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
VNDA	**Vanda**	**48.34**	**172**	P	**P**	**19 27 28.7**	**+0.6**
	comp=Z,21nm,0.8s,mb5.2,baz=230,slow=7.8,SNR=59						
VNDA				LR	LR	19 47 07.8	
	comp=Z,2μm,19.2s,MS5.2,baz=191,slow=35						
VNDA	**Vanda**	**48.34**	**172**	*e*P	**P**	**19 27 28.5**	**+0.4**
	comp=Z,29nm,0.9s,mb5.3						
VNDA				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
VNDA	**Vanda**	**48.34**	**172**	P	**P**	**19 27 28.7**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,21nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,2μm,19.2s						
SBA	**Scott Base**	**48.39**	**174**	*e*P	**P**	**19 27 29.6**	**+1.2**
	comp=Z,38nm,1.2s,mb5.3						
SBA				*e*PP	PP	19 29 23.7	+3.2
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
SBA	**Scott Base**	**48.39**	**174**	*e*P	**P**	**19 27 29.6**	**+1.2**
SBA				*e*		19 29 23.7	
SBA				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.0						
PLCA	**Paso Flores**	**53.18**	**249**	P	**P**	**19 28 05.3**	**+0.4**
	comp=Z,8.9nm,0.9s,mb4.7,baz=142,slow=7.3,SNR=12						
PLCA				LR	LR	19 46 50.4	
	comp=Z,763nm,20.8s,MS4.7,baz=135,slow=32						
PLCA	**Paso Flores**	**53.18**	**249**	*e*P	**P**	**19 28 04.8**	**-0.1**
	comp=Z,8.7nm,0.9s,mb4.7						
PLCA				LR	LR		
	comp=Z,842nm,20.0s,MS4.8						
PLCA	**Paso Flores**	**53.18**	**249**	P	**P**	**19 28 05.3**	**+0.3**
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,763nm,20.8s						
DRV	**Dumont d'Urvil**	**54.71**	**158**	S	**S**	**19 36 04.0**	**+8.5**
DRV				SS	SS	19 39 46.0	+8.5
DRV				L		19 42 00.0	
BDFB	**Brasilia**	**58.28**	**287**	P	**P**	**19 28 41.6**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.6,baz=119,slow=8.9,SNR=13						
BDFB				LR	LR	19 48 20.5	
	comp=Z,347nm,20.4s,MS4.5,baz=146,slow=30						
BDFB	**Brasilia**	**58.28**	**287**	*e*P	**P**	**19 28 41.7**	**-0.2**
	comp=Z,12nm,1.0s,mb4.9						
BDFB				*e*		19 28 54.0	
BDFB	**Brasilia**	**58.28**	**287**	P	**P**	**19 28 41.6**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,347nm,20.4s						
RCBR	**Riachuelo**	**59.95**	**305**	PFAKE		19 29 10.0	+17
RCBR				LR	LR		
	comp=Z,665nm,22.0s,MS4.7						
LIC	**Lamto**	**60.53**	**343**	*e*P	**P**	**19 28 56.0**	**-1.3**
	comp=Z,56nm,0.9s,mb5.7						
KIC	**Kosan Boka**	**60.61**	**344**	*e*P	**P**	**19 28 58.6**	**+0.7**
	comp=Z,131nm,1.7s,mb5.8						
DBIC	**Dimbokro**	**60.93**	**344**	P	**P**	**19 28 58.2**	**-1.9**
	comp=Z,13nm,0.5s,mb5.3,baz=148,slow=9.4,SNR=28						
DBIC				LR	LR	19 49 20.0	
	comp=Z,560nm,21.7s,MS4.7,baz=112,slow=30						
DBIC	**Dimbokro**	**60.93**	**344**	*e*P	**P**	**19 28 58.8**	**-1.3**
	comp=Z,21nm,0.8s,mb5.3						
DBIC				LR	LR		
	comp=Z,734nm,22.0s,MS4.8						
DBIC	**Dimbokro**	**60.93**	**344**	*e*P	**P**	**19 28 58.8**	**-1.3**
DBIC				pmax	pmax		
	comp=Z,21nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,734nm,22.0s						
TIC	**Toumodi**	**60.94**	**344**	*e*P	**P**	**19 28 58.8**	**-1.3**
	comp=Z,114nm,0.9s,mb6.0						
MSEY	**Mahe Island**	**61.32**	**55**	PFAKE		19 29 20.0	+17
MSEY				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
LVC	**Limon Verde**	**65.29**	**265**	P	**P**	**19 29 30.9**	**+1.9**
	comp=Z,16nm,1.1s,mb5.0						
LVC				LR	LR		
	comp=Z,686nm,19.0s,MS4.9						
TOA0	**Torodi Ar. Sit**	**66.49**	**352**	*e*P	**P**	**19 29 34.8**	**-1.9**
TORD	**Torodi Ar. Bea**	**66.49**	**352**	P	**P**	**19 29 35.4**	**-1.3

	comp=Z,506nm,21.0s,MS4.9								
ASAR	**Alice Springs**	**89.58**	**131**	P	**P**		**19 31 44.1**	**-0.7**	
	comp=Z,1.1nm,0.9s,mb4.2,baz=214,slow=3.7,SNR=9.4								
ASAR	**Alice Springs**	**89.58**	**131**	P	**P**		**19 31 44.1**	**-0.7**	
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.9s								
ROSC	**El Rosal**	**90.11**	**278**	LR	LR		20 08 36.8		
	comp=Z,707nm,18.4s,MS5.1,baz=183,slow=33								
SFS	**San Fernando**	**90.40**	**347**	PFAKE			19 32 00.0	+12	
SFS				LR	LR				
	comp=Z,664nm,19.0s,MS5.1								
SDV	**Santo Domingo**	**91.15**	**283**	PFAKE			19 32 00.0	+7.9	
SDV				LR	LR				
	comp=Z,208nm,20.0s,MS4.6								
WRAB	**Tennant Creek**	**93.02**	**129**	PFAKE			19 32 10.0	+9.2	
WRAB				LR	LR				
	comp=Z,616nm,22.0s,MS5.0								
ESDC	**Sonseca Array**	**93.30**	**350**	P	**P**		**19 32 03.2**	**+1.8**	
	comp=Z,1.9nm,0.8s,mb4.6,baz=170,slow=4.3,SNR=6.7								
ESDC				LR	LR		20 08 23.1		
	comp=Z,225nm,21.7s,MS4.6,baz=185,slow=32								
ESLA	**Sonseca Array**	**93.30**	**350**	PFAKE			19 32 10.0	+8.6	
ESLA				LR	LR				
	comp=Z,2μm,22.0s,MS5.5								
BRTR	**Keskin Array B**	**94.97**	**19**	P	**P**		**19 32 10.8**	**+1.7**	
	comp=Z,0.2nm,0.5s,mb3.8,baz=165,slow=7.4,SNR=2.2								
BRTR				LR	LR		20 14 25.2		
	comp=Z,339nm,21.1s,MS4.8,baz=190,slow=35								
BATI	**Baumata**	**95.86**	**116**	LR	LR		20 06 50.9		
	comp=Z,409nm,19.6s,MS4.9,baz=36,slow=30								
RKT	**Rikitea**	**97.89**	**213**	*e*SS	SS		19 50 23.3	-5.4	
	comp=Z,463nm,32.5s								
CTAO	**Charters Tower**	**97.97**	**140**	PFAKE			19 32 30.0	+6.6	
CTAO				LR	LR				
	comp=Z,656nm,21.0s,MS5.1								
CLL	**Collm**	**104.26**	**2**	*e*PS	PS		19 46 26.0	+5.4	
CLL				LV			19 19 00.0		
	comp=Z,200nm,21.7s								
CLL				*e*SS	SS		19 51 54.0	-4.7	
CHTO	**Chiang Mai**	**104.58**	**78**	PFAKE			19 33 00.0	+7.2	
CHTO				LR	LR				
	comp=Z,517nm,22.0s,MS5.0								
PPT	**Papeete**	**107.15**	**201**	*e*PP	PP		19 37 26.4	-3.5	
	comp=Z,47nm,26.5s								
PPT	**Papeete**	**107.15**	**201**	*e*SS	SS		19 52 36.5	0.0	
	comp=Z,639nm,26.5s								
PPT	**Papeete**	**107.15**	**201**	*e*LR	LR		20 08 11.8		
	comp=Z,440nm,24.5s								
EKS2	**Erkin-Say**	**110.39**	**45**	PFAKE			19 37 30.0	+11	
EKS2				LR	LR				
	comp=Z,264nm,19.0s,MS4.8								
QIZ	**Qiongzhong**	**111.23**	**86**	PDIF	Pdif		19 33 20.1	-2.3	
QIZ				S	Sdif		19 45 32.0	-8.8	
QIZ				LR	LR				
	comp=N,181nm,44.4s,MS4.4								
QIZ				LR	LR				
	comp=E,181nm,47.9s,MS4.4								
QIZ				LR	LR				
	comp=Z,226nm,35.7s								
TKM2	**Tokmak 2**	**111.38**	**46**	PFAKE			19 37 30.0	+10	
TKM2				LR	LR				
	comp=Z,194nm,20.0s,MS4.7								
KMI	**Kunming**	**111.67**	**77**	PKP	PKiKP		19 37 22.3	+0.7	
GYA	**Guiyang**	**114.98**	**79**	PDIF	Pdif		19 33 40.5	+1.4	
GYA				PP	PP		19 38 31.3	+3.8	
GYA				PKS			19 41 02.6		
GYA				SKS	SKSdf		19 44 37.8	-2.0	
GYA				SKKS	SKKSac		19 45 23.5	-5.0	
GYA				SS	SS		19 54 23.4	0.0	
GYA				PP	PP				
	comp=Z,190nm,7.8s								
GYA				LR	LR				
	comp=N,490nm,20.8s,MS5.2								
GYA				LR	LR				
	comp=E,380nm,21.0s,MS5.2								
GYA				LR	LR				
	comp=Z,470nm,10.3s								
BVAR	**Borovoye Array**	**117.47**	**37**	PKP	PKPdf		19 37 33.0	+1.2	
	comp=Z,0.7nm,0.7s,baz=250,slow=39,SNR=2.0								
BVAR	**Borovoye Array**	**117.47**	**37**	PKIKP	PKPdf		19 37 33.0	+1.2	
BVAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
WMQ	**Urumqi**	**117.61**	**53**	*e*PDIF	Pdif		19 33 53.0	+2.2	
WMQ				PP	PP		19 38 53.0	+7.3	
WMQ				SKS	SKSdf		19 44 46.0	+2.0	
WMQ				SS	SS		19 55 01.0	+3.5	
WMQ				PP	PP				
	comp=Z,68nm,8.0s								
WMQ				LR	LR				
	comp=N,368nm,22.0s,MS5.1								
WMQ				LR	LR				
	comp=E,394nm,22.0s,MS5.1								
WMQ				LR	LR				
	comp=Z,186nm,22.0s,MS4.7								
OXF	**Oxford**	**121.80**	**286**	PFAKE			19 37 50.0	+9.3	
OXF				LR	LR				
	comp=Z,328nm,20.0s,MS5.0								
WVT	**Waverly**	**122.05**	**289**	PFAKE			19 37 50.0	+8.9	
WVT				LR	LR				
	comp=Z,194nm,19.0s,MS4.8								
ZALV	**Zalesovo Beam**	**123.75**	**43**	PKP	PKPdf		19 37 44.5	+0.7	
	comp=Z,0.4nm,0.3s,baz=77,slow=13,SNR=2.1								
MIAR	**Mount Ida**	**124.24**	**283**	PFAKE			19 38 00.0	+15	
MIAR				LR	LR				
	comp=Z,284nm,22.0s,MS4.9								
SCHQ	**Schefferville**	**124.72**	**317**	PFAKE			19 38 00.0	+14	
SCHQ				LR	LR				
	comp=Z,317nm,21.0s,MS5.0								
TXAR	**Lajitas Array**	**126.53**	**271**	PKP	PKPdf		19 37 51.0	+1.0	
	comp=Z,0.1nm,0.4s,baz=195,slow=22,SNR=2.7								
WMOK	**Wichita Mounta**	**127.44**	**280**	PFAKE			19 38 00.0	+8.5	
WMOK				LR	LR				
	comp=Z,197nm,19.0s,MS4.8								
HHC	**Hu-ho-hao-te**	**128.09**	**70**	*e*PKP	PKPdf		19 37 52.8	+0.2	
HHC				XPKP			19 38 01.6		
HHC				PP	PP		19 40 00.5	+3.8	
HHC				PKS			19 41 27.3		
HHC				SKS	SKSdf		19 44 59.0	-4.9	
HHC				SKKS	SKKSac		19 46 49.6	-3.5	
HHC				SS	SS		19 57 09.6	-1.1	
HHC				PP	PP				
	comp=Z,142nm,10.7s								
HHC				LR	LR				
	comp=N,281nm,21.4s,MS5.0								
HHC				LR	LR				
	comp=E,239nm,20.2s,MS5.0								
HHC				LR	LR				
	comp=Z,190nm,20.2s,MS4.8								
KSU1	**Kansas State U**	**129.14**	**285**	PFAKE			19 38 10.0	+15	
KSU1				LR	LR				
	comp=Z,340nm,21.0s,MS5.0								
SONM	**Songino Array**	**129.80**	**61**	PKP	PKPdf		19 37 56.5	+1.0	
	comp=Z,0.4nm,0.8s,baz=270,slow=2.9,SNR=2.2								
ULN	**Ulaanbaatar**	**130.16**	**61**	PFAKE			19 38 10.0	+14	
ULN				LR	LR				
	comp=Z,191nm,19.0s,MS4.8								
ANMO	**Albuquerque**	**132.16**	**274**	PFAKE			19 38 10.0	+10	
ANMO				LR	LR				
	comp=Z,283nm,22.0s,MS4.9								
SDCO	**Great Sand Dun**	**133.47**	**278**	PFAKE			19 38 20.0	+17	
SDCO				LR	LR				
	comp=Z,268nm,19.0s,MS5.0								
HWUT	**Hardware Ranch**	**139.53**	**278**	PFAKE			19 38 30.0	+16	
HWUT				LR	LR				
	comp=Z,243nm,20.0s,MS4.9								
TPH	**Tonopah**	**140.70**	**269**	PFAKE			19 38 30.0	+14	
TPH				LR	LR				
	comp=Z,332nm,19.0s,MS5.1								
NVAR	**Mina Array Bea**	**141.58**	**269**	PKP	PKPdf		19 38 18.3	+0.5	
	comp=Z,0.3nm,0.3s,baz=165,slow=7.3,SNR=1.8								
NVAR	**Mina Array Bea**	**141.58**	**269**	PKP	PKPdf		19 38 18.3	+0.5	
HLID	**Hailey**	**142.38**	**278**	PFAKE			19 38 30.0	+11	
HLID				LR	LR				
	comp=Z,351nm,19.0s,MS5.1								
CMB	**Columbia Colle**	**142.57**	**267**	PFAKE			19 38 30.0	+10	
CMB				LR	LR				
	comp=Z,267nm,19.0s,MS5.0								
RES	**Resolute Bay**	**144.13**	**334**	*e*PKPdf	PKPdf		19 38 20.5	-0.7	
LBCM	**Butte Creek Ri**	**144.92**	**270**	P	PKiKP		19 38 28.0	+0.6	
BSMT	**Bassoo Peak**	**144.92**	**284**	P	PKPdf		19 38 25.3	+1.9	
WALA	**Waterton Lakes**	**145.01**	**287**	*e*PKPdf	PKPdf		19 38 25.0	+1.6	
LHEM	**Herd Peak**	**145.92**	**270**	P	PKiKP		19 38 31.2	+1.8	
YBH	**Yreka Blue Hor**	**146.27**	**270**	PKPbc	PKPbc		19 38 27.1	0.0	
	comp=Z,2.8nm,0.9s,baz=27,slow=4.5,SNR=2.6								
YBH	**Yreka Blue Hor**	**146.27**	**270**	*e*PKPbc	PKPab		19 38 29.4	+1.6	
YBH	**Yreka Blue Hor**	**146.27**	**270**	PKP2	PKPab		19 38 27.1	-0.8	
YBH				pmax	pmax				
	comp=Z,3.0nm,0.9s								
NEW	**Newport**	**146.49**	**283**	*e*PKPbc	PKPab		19 38 30.4	+1.9	
NEW				LR	LR				
	comp=Z,284nm,19.0s,MS5.1								
EDM	**Edmonton**	**146.54**	**293**	*e*PKPbc	PKPbc		19 38 28.9	+1.5	
VIPM	**Ingram Point**	**146.61**	**275**	P	PKiKP		19 38 33.2	+2.5	
HUMO	**Hull Mountain**	**146.94**	**271**	*e*PKPbc	PKPab		19 38 33.2	+2.8	
HAWA	**Hanford**	**146.97**	**279**	*e*PKPbc	PKPab		19 38 32.1	+1.7	
GBL	**Gable Mountain**	**147.03**	**279**	P	PKiKP		19 38 34.7	+3.1	
CROR	**Criterion Ridg**	**147.09**	**276**	P	PKiKP		19 38 35.3	+3.6	
YAK	**Yakutsk**	**147.99**	**50**	*e*PKP2	PKPab		19 38 34.1	+0.1	
YAK				pmax	pmax				
	comp=Z,10.0nm,1.1s								
YAK				pmax	pmax				
	comp=N,3.0nm,1.6s								
YAK				pmax	pmax				
	comp=E,6.0nm,1.5s								
TIXI	**Tiksi**	**148.43**	**32**	*e*PKPbc	PKPbc		19 38 34.1	+2.0	
LON	**Longmire**	**148.50**	**278**	*e*PKPbc	PKPbc		19 38 34.0	+1.0	
LON				*e*PKPab	PKPab		19 38 38.9	+2.4	
BMW	**Boistfort Moun**	**149.21**	**277**	*e*PKPab	PKPab		19 38 41.4	+2.0	
JCW	**Jim Creek**	**149.28**	**280**	*e*PKPab	PKPab		19 38 40.3	+0.6	
YKA	**Yellowknife Ar**	**149.79**	**310**	PKPbc	PKPbc		19 38 36.0	+0.3	
	comp=E,7.0nm,0.9s,baz=93,slow=2.5,SNR=6.8								
YKA	**Yellowknife Ar**	**149.79**	**310**	PKPbc	PKPbc		19 38 36.0	+0.2	
YKA	**Yellowknife Ar**	**149.79**	**310**	PKP2	PKPbc		19 38 36.0	+0.3	
YKA				pmax	pmax				
	comp=Z,7.0nm,0.9s								
NLWA	**Neilton Lookou**	**150.04**	**278**	*e*PKPab	PKPab		19 38 41.9	-0.9	

*ISCJB **23** 19:42:07.9±0.9, 4.1S±02×1013E±02, h28km, mb4.4/25, Error ellipse: s-maj=31.2km s-min=11.1km az=140.4*
*NEIC **23** 19:42:08.9±0.5, 4.32S×100.82E, h35km, mb4.5/9, Error ellipse: s-maj=18.4km s-min=10.4km az=74.0*
*IDC **23** 19:42:09.3±1.1, 4.12S×101.09E, h26km±4km, mb3.9/9, mb1 4.0/9, mb1mx3.8/18, mbtmp3.9/9, Error ellipse: s-maj=41.1km s-min=15.7km az=54.0*

ISC 23 19:42:10.5±0.9, 40S±01×1014E±02, h29km, h29km±1.3km: pP-P, n33, σ1=04/31, mb4.4/25, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**9.26**	**209**	Pn	**Pn**	**19 44 12.1**	**-10**
CMAR	**Chiang Mai Arr**	**22.48**	**354**	P	**P**	**19 47 06.5**	**-1.0**
	3.4nm,0.8s,mb3.8,baz=183,slow=8.7,SNR=23						
CHTO	**Chiang Mai**	**22.83**	**354**	*e*P	**P**	**19 47 11.5**	**+0.2**
	4.4nm,1.0s,mb3.8						
ODAN	**Odare**	**33.55**	**337**	*e*P	**P**	**19 48 49.2**	**+1.2**
	12nm,0.7s,mb4.9						
TAPN	**Taplejung**	**33.87**	**338**	*e*P	**P**	**19 48 52.1**	**+1.3**
	24nm,0.9s,mb5.1						
RAMN	**Ramite**	**33.95**	**336**	*e*P	**P**	**19 48 52.7**	**+1.3**
	7.4nm,0.7s,mb4.8						
JIRN	**Jiri**	**34.74**	**336**	*e*P	**P**	**19 48 59.6**	**+1.3**
	18nm,0.7s,mb5.1						
GUN	**Gumba**	**35.09**	**336**	*e*P	**P**	**19 49 02.6**	**+1.3**
	10nm,0.5s,mb5.0						
KKN	**Kakani**	**35.24**	**335**	*e*P	**P**	**19 49 02.9**	**+0.3**
	3.7nm,0.5s,mb4.6						
GKN	**Gorkha**	**35.70**	**334**	*e*P	**P**	**19 49 07.0**	**+0.5**
	1.9nm,0.3s,mb4.5						
WRAB	**Tennant Creek**	**35.81**	**119**	*e*P	**P**	**19 49 08.0**	**+0.3**
	3.4nm,0.7s,mb4.4						
PYUN	**Piuthan**	**36.52**	**332**	*e*P	**P**	**19 49 14.3**	**+0.7**
	3.3nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**36.97**	**125**	P	**P**	**19 49 17.6**	**+0.1**
	0.9nm,0.6s,mb3.8,baz=298,slow=7.6,SNR=15						
ASAR				pP	pP	19 49 25.8	-0.4
	1.5nm,0.6s,baz=295,slow=8.2,SNR=9.6						
STKA	**Stephens Creek**	**46.79**	**131**	P	**P**	**19 50 38.6**	**+0.9**
	1.0nm,0.7s,mb3.9,baz=191,slow=22,SNR=3.2						
STKA	**Stephens Creek**	**46.79**	**131**	P	**P**	**19 50 38.0**	**+0.4**
	2.5nm,1.4s,mb4.0						
KSRS	**Korea Array**	**48.10**	**29**	P	**P**	**19 50 47.4**	**-0.3**
	2.4nm,0.8s,mb4.3,baz=224,slow=6.6,SNR=6.7						
SONM	**Songino Array**	**51.84**	**4**	P	**P**	**19 51 16.9**	**+1.0**
	3.1nm,0.7s,mb4.3,baz=187,slow=9.5,SNR=21						
ULN	**Ulaanbaatar**	**51.92**	**5**	*e*P	**P**	**19 51 16.3**	**-0.2**
	4.5nm,1.1s,mb4.3						
TKM2	**Tokmak 2**	**52.23**	**336**	P	**P**	**19 51 17.9**	**-1.1**
	4.4nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**52.77**	**335**	*e*P	**P**	**19 51 19.1**	**-3.8**
	5.3nm,1.0s,mb4.4						
MJAR	**Matsushiro Arr**	**53.02**	**37**	P	**P**	**19 51 24.6**	**-0.3**
	1.6nm,0.8s,mb4.0,baz=215,slow=7.6,SNR=4.2						
MK31	**Makanchi Array**	**53.35**	**344**	*e*P	**P**	**19 51 26.8**	**-0.3**
MKAR	**Makanchi Array**	**53.35**	**344**	P	**P**	**19 51 27.3**	**+0.2**
	3.8nm,0.7s,mb4.4,baz=147,slow=8.3,SNR=30						
MKAR	**Makanchi Array**	**53.35**	**344**	P	**P**	**19 51 27.3**	**+0.2**
TLY	**Talaya**	**55.53**	**2**	P	**P**	**19 51 35.6**	**-7.3**
	22nm,1.2s,mb5.1						
KURK	**Kurchatov**	**57.93**	**343**	*e*P	**P**	**19 51 58.8**	**-1.1**
	6.4nm,1.0s,mb4.6						
ZAA0	**Zalesovo Array**	**59.41**	**349**	*e*P	**P**	**19 52 08.6**	**-1.6**
ZAA0				*e*	pP	19 52 17.1	-2.1
ZALV	**Zalesovo Beam**	**59.41**	**349**	P	**P**	**19 52 09.8**	**-0.4**
	1.8nm,0.4s,mb4.4,baz=180,slow=8.2,SNR=13						
ZALV				pP	pP	19 52 17.5	-1.8
	3.2nm,0.7s,baz=173,slow=5.1,SNR=7.2						
ZALV	**Zalesovo Beam**	**59.41**	**349**	P	**P**	**19 52 09.8**	**-0.4**
ZALV				pP	pP	19 52 17.5	-1.8
BRVK	**Borovoye**	**62.62**	**339**	*e*P	**P**	**19 52 29.0**	**-3.0**
	3.0nm,0.8s,mb4.5						
BRVK				*e*	pP	19 52 38.8	-2.2
BRTR	**Keskin Array B**	**75.69**	**313**	P	**P**	**19 53 50.8**	**-2.6**
	0.1nm,0.3s,mb3.2,baz=93,slow=3.2,SNR=3.7						
BRTR				pP	pP	19 53 59.4	-3.3
	0.6nm,0.6s,baz=140,slow=11,SNR=2.7						
TXAR	**Lajitas Array**	**145.41**	**41**	PKPbc	PKPbc	20 01 47.2	+0.8
	1.1nm,0.5s,baz=232,slow=1.3,SNR=16						
TXAR				pPKPbc	pPKPbc	20 01 55.3	-0.7
	1.8nm,0.7s,baz=301,slow=1.9,SNR=11						
TXAR	**Lajitas Array**	**145.41**	**41**	PKPbc	PKPbc	20 01 47.2	+0.8
TXAR				pPKPbc	pPKPbc	20 01 55.3	-0.7

*NEIC **23** 19:52:30.9, 36.06N×101.1W, h0km, MG3.5(MDD), After MDD.*

MDD 23 19:52:31.4±2.5, 3606N×1007W, h0km, mbLg2.3/7, Error ellipse: s-maj=22.0km s-min=17.0km az=60.0, PRIMO, Azores-Cape St. Vincent Ridge

INMG 23 19:52:32.6±0.8, 3601N×999W, h0km, ML1.9, Error ellipse: s-maj=4.9km s-min=3.7km az=83.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**1.69**	**42**	P	Pn	19 53 01.5	-0.6
MORF				S	Sn	19 53 22.5	-1.9
	0.0nm,0.1s						
EGRO	**El Granado**	**2.55**	**54**	P	Pn	19 53 12.9	-1.0
	1.6nm,0.1s,SNR=7.9						
EGRO				S	Sn	19 53 43.3	-2.3
	3.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.21**	**57**	P	Pn	19 53 22.0	-1.1
	1.1nm,0.3s,SNR=9.4						
EMIN				S	Sn	19 53 59.3	-2.7
	0.8nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.49**	**75**	P	Pn	19 53 24.9	-2.0
	2.6nm,0.3s,SNR=13						
ESPR				S	Sn	19 54 04.9	-4.1
	2.6nm,0.7s,SNR=4.6						
EBAD	**Badajoz**	**3.63**	**41**	P	Pn	19 53 27.7	-1.1
	1.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	19 54 09.8	-2.5
	1.3nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.74**	**83**	P	Pn	19 53 29.4	-1.0
EMIJ	**Mijas**	**4.31**	**82**	P	Pn	19 53 36.2	-1.9
	0.6nm,0.2s,SNR=7.9						
EMIJ				S	Sn	19 54 24.5	-4.6
	1.9nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**5.09**	**37**	S	Sn	19 54 44.1	-4.2
	4.6nm,0.9s,SNR=7.9						
ELOB	**Lobios**	**6.00**	**15**	P	Pn	19 53 59.9	-1.6
ELOB				S	Sn	19 55 05.5	-5.4
ELOB	**Lobios**	**6.00**	**15**	S	Sn	19 55 05.5	-5.4
	4.3nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**6.03**	**51**	P	Pn	19 54 00.4	-1.4
	0.6nm,0.2s,baz=237,slow=13,SNR=11						
ESDC				S	Sn	19 55 06.7	-4.8
	3.1nm,0.6s,baz=234,slow=24,SNR=7.9						
EHUE	**Huescar**	**6.24**	**72**	P	Pn	19 54 02.9	-1.8
	0.2nm,0.3s,SNR=7.9						
EHUE				S	Sn	19 55 11.4	-5.3
	0.3nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.42**	**23**	P	Pn	19 54 05.6	-1.5
ECAL				S	Sn	19 55 14.5	-6.6
GUD	**Guadarrama**	**6.52**	**44**	P	Pn	19 54 07.6	-0.9
	0.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.26**	**67**	P	Pn	19 54 17.2	-1.5
ETOB				S	Sn	19 55 35.2	-6.7
ETOB	**Tobarra**	**7.26**	**67**	S	Sn	19 55 35.2	-6.7
	8.8nm,0.6s,SNR=7.9						
ETOR	**Torete**	**7.88**	**51**	P	Pn	19 54 26.7	-0.6
	3.3nm,0.4s,SNR=7.9						

*ISCJB **23** 20:28:45.7±0.7, 3623N±004×2336E±005, h10km±6km, Error ellipse: s-maj=9.1km s-min=4.1km az=44.9*
*NEIC **23** 20:28:45.3, 36.11N×2322E, h14km, MD3.3(ATH), After ATH.*
*ATH **23** 20:28:45.3, 36.11N×2322E, h14km±2km, MD3.3/4*
*CSEM **23** 20:28:46.2±0.1, 3626N×2337E, h12km, MD3.3, Error ellipse: s-maj=3.7km s-min=1.9km az=44.0*
*THE **23** 20:28:48.8, 3625N×2337E, h26km±4km, ML3.0/1, Error ellipse: s-maj=4.7km s-min=0.9km az=187.0*

ISC 23 20:28:46.0±0.7, 3623N±004×2335E±005, h10km±6km, n17, σ0=71/26, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.26**	**282**	*e*PG	**Pg**	**20 28 50.5**	**-0.7**
KYTH				*e*SG	**Sg**	**20 28 54.0**	**-0.7**
VLI	**Veliai**	**0.59**	**326**	*e*PB	**Pg**	**20 28 58.0**	**+0.5**
VLI				*e*SB	**Sg**	**20 29 07.0**	**+1.7**
VAM	**Vamos**	**1.07**	**139**	*e*PB	**Pg**	**20 29 05.5**	**-1.1**
DID	**Didima**	**1.28**	**356**	P	**Pn**	**20 29 10.2**	**+0.2**
DID				S	**Sb**	**20 29 25.6**	**-1.1**
PYL	**PYLOS**	**1.46**	**298**	P	**Pn**	**20 29 12.4**	**+0.1**
PYL				S	**Sn**	**20 29 31.5**	**0.0**
ITM	**Ithomi**	**1.49**	**310**	*e*PB	**Pb**	**20 29 13.4**	**-0.3**
THR5	**Thira Island,**	**1.63**	**83**	P	**Pn**	**20 29 14.8**	**+0.1**
THR6	**Thira Island,**	**1.66**	**85**	P	**Pn**	**20 29 15.4**	**+0.2**
THR3	**Thira Island,**	**1.67**	**83**	P	**Pn**	**20 29 15.2**	**-0.1**
SIVA	**Sivas**	**1.69**	**135**	P	**Pn**	**20 29 16.3**	**+0.7**
SIVA				S	**Sn**	**20 29 37.9**	**+0.5**
THR1	**Thera Island**	**1.71**	**85**	P	**Pn**	**20 29 15.8**	**-0.1**
LTK	**Loutraki**	**1.82**	**350**	P	**Pn**	**20 29 18.1**	**+0.7**
LTK				S	**Sn**	**20 29 38.9**	**-1.6**
APE	**Apeiranthos**	**1.95**	**64**	P	**Pn**	**20 29 18.9**	**-0.2**
APE				S	**Sn**	**20 29 43.4**	**-0.2**
LAST	**Lasithi**	**2.03**	**121**	P	**Pn**	**20 29 19.6**	**-0.7**
LKR	**Lokris**	**2.44**	**354**	P	**Pn**	**20 29 26.3**	**+0.5**
LKR				S	**Sn**	**20 29 55.3**	**-0.4**
ZKR	**Zakros**	**2.59**	**115**	P	**Pn**	**20 29 28.5**	**+0.6**
AGG	**Agios Georgios**	**2.91**	**344**	P	**Pn**	**20 29 33.5**	**+1.2**
AGG				S	**Sn**	**20 30 07.4**	**+0.1**

CASC 23 20:36:40.9±1.2, 1285N×9019W, h10km±11km, MD4.1, 3C-7D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.13**	**29**	*e*P	x	20 37 01.7	
SNJE	**San Jose**	**1.16**	**29**	*e*P	x	20 37 02.2	
RTR	**El Retiro**	**1.17**	**27**	*e*P	x	20 37 02.4	
BOQS	**Boqueron**	**1.25**	**45**	*e*P	x	20 37 03.2	
IXG	**Ixpaco**	**1.34**	**349**	*e*P	Pn	20 37 04.9	-0.8
LFRS	**El Faro**	**1.34**	**55**	*e*P	x	20 37 04.4	
RBDL	**Robledal**	**1.35**	**21**	*e*P	x	20 37 05.1	
LBRS	**Las Brisas**	**1.42**	**52**	*e*P	x	20 37 06.6	
SNVI	**San Vicente**	**1.52**	**60**	*e*P	x	20 37 06.9	
MTO2	**Montecristo 2**	**1.74**	**28**	*e*P	x	20 37 11.5	
CNCH	**Conchagua**	**2.34**	**79**	*e*P	x	20 37 20.6	

*ISK **23** 21:03:35.8, 3698N×2927E, h5km, MD3.4, ML3.4*
*NEIC **23** 21:03:36.5, 3698N×2929E, h6km, MD3.3(ISK), After ISK.*
*IDC **23** 21:03:36.5±1.6, 3659N×2953E, h0km, mb3.7/2, mb1 3.5/3, mb1mx3.3/21, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=125.1km s-min=23.2km az=141.0*
*CSEM **23** 21:03:37.0±0.1, 3703N×2926E, h5km, MD3.5, Error ellipse: s-maj=2.4km s-min=1.4km az=150.0*
*ISCJB **23** 21:03:37.6±0.5, 3700N±002×2925E±002, h6km±3km, mb3.6/2, Error ellipse: s-maj=3.9km s-min=2.8km az=149.8*
*THE **23** 21:03:39.7, 3707N×2924E, h0km, ML3.8/3, Error ellipse: s-maj=1.6km s-min=1.0km az=139.0*
*DDA **23** 21:03:40.2, 3709N×2933E, h28km, Md3.5*
*HLW **23** 21:03:53.0, 3591N×2953E, h26km, Mb3.0*

ISC 23 21:03:38.1±0.5, 3697N±002×2928E±002, h5km±3km, n111, σ1=14/158, mb3.6/2, 1C-5D, Turkey

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

CHOS	Chios island	2.92	300	P	Pn	21 04 24.6	-0.6
CHOS				S	Sn	21 04 59.4	-1.3
APE	Apeiranthos	3.00	273	P	Pn	21 04 25.9	-0.4
APE				S	Sn	21 05 03.9	+1.3
APE	Apeiranthos	3.00	273	ePN	Pn	21 04 26.0	-0.3
APE	Apeiranthos	3.00	273	i/iP	Pn	21 04 25.7	-0.6
ZKR	Zakros	3.09	234	P	Pn	21 04 28.4	+0.8
ZKR				S	Sn	21 05 07.5	+2.6
THR1	Thera Island	3.13	260	P	Pn	21 04 28.5	+0.5
THR4	Thira Island,	3.16	262	P	Pn	21 04 28.5	+0.1
THR3	Thira Island,	3.17	261	P	Pn	21 04 29.5	+1.0
THR6	Thira Island,	3.18	260	P	Pn	21 04 30.2	+1.5
THR5	Thira Island,	3.21	261	P	Pn	21 04 30.3	+1.2
PRK	Paraskevi	3.29	315	P	Pn	21 04 29.8	-0.4
PRK				S	Sn	21 05 09.0	-0.6
PRK	Paraskevi	3.29	315	P	Pn	21 04 30.6	+0.4
PRK	Paraskevi	3.29	315	ePN	Pn	21 04 30.0	-0.2
NPS	Neapolis	3.42	241	ePN	Pn	21 04 32.5	+0.4
NPS	Neapolis	3.42	241	P	Pn	21 04 33.1	+1.0
LAST	Lasithi	3.57	241	P	Pn	21 04 34.4	+0.3
LAST				S	Sn	21 05 19.7	+3.1
IDI	Anoyia	3.93	246	P	Pn	21 04 40.0	+1.0
SIVA	Sivas	4.11	243	P	Pn	21 04 43.0	+1.4
LIA	Limnos Island	4.35	314	P	Pn	21 04 44.5	-0.3
LIA				S	Sn	21 05 35.3	-0.5
BRTR	Keskin Array B 0.6nm,0.3s,baz=229,slow=16,SNR=12	4.40	50	Pn	Pn	21 04 47.0	+1.5
BRTR				Sn	Sn	21 05 39.5	+2.5
	0.4nm,0.3s,baz=227,slow=25,SNR=6.7						
ALN	Alexandroupoli	4.66	328	P	Pn	21 04 48.9	-0.2
ALN				S	Sn	21 05 42.6	-1.0
DID	Didima	4.85	278	P	Pn	21 04 52.0	+0.3
KYTH	Kithira	5.07	264	ePN	Pn	21 04 56.0	+1.3
VLI	Veliai	5.09	269	ePN	Pn	21 04 55.5	+0.5
LTK	Loutraki	5.13	284	P	Pn	21 04 56.6	+1.1
NVR	Nevrokopi	6.07	318	P	Pn	21 05 09.6	+1.2
HMAT	Matruh	6.13	198	↓eP	Pn	21 05 09.0	-0.4
HMAT				S	Sn	21 06 04.1	-16
HRSH	Kfar Ka'horesh	6.52	129	↓P	Pn	21 05 20.4	+5.8
AMAG	Maghara	7.11	151	↑eP	Pn	21 05 20.9	-1.8
MLR	Muntele Rosu	8.88	345	↓iP	Pn	21 05 48.3	+1.4
HFRF	Wahat Farafira	9.82	185	↓eP	Pn	21 05 57.8	-2.2
TORD	Torodi Ar. Bea 0.8nm,0.7s,mb3.8,baz=34,slow=9.0,SNR=8.5	34.22	233	P	P	21 10 23.5	-1.4
MKAR	Makanchi Array 0.8nm,1.1s,mb3.4,baz=276,slow=7.6,SNR=3.8	39.99	59	P	P	21 11 12.8	-0.7

IDC 23 22:03:34.5±10.0, 11975N×16696E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=291.3km s-min=49.5km az=122.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.05	183	eP	Pn	22 06 17.0	+17
DZM				eS	Sn	22 08 05.6	+12
ASAR	Alice Springs 0.4nm,0.7s,baz=68,slow=9.3,SNR=5.0	33.46	245	P	P	22 10 15.7	+0.1
CMAR	Chiang Mai Arr 1.0nm,0.6s,baz=120,slow=4.9,SNR=7.6	73.57	293	P	P	22 15 10.0	0.0
SONM	Songino Array 0.2nm,0.6s,baz=140,slow=5.0,SNR=3.6	80.11	323	P	P	22 15 47.1	+0.7
MKAR	Makanchi Array 0.9nm,0.6s,baz=87,slow=6.3,SNR=18	95.01	317	P	P	22 16 58.6	-0.5

IDC 23 22:19:47.8±5.6, 3125N×3487E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.6/24, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=95.6km s-min=27.1km az=4.0
BJI 23 22:19:51.0, 3190N×3490E, h10km, mB4.8, mb4.8, Ms4.5, Msz4.2
SGS 23 22:19:52.0, 3201N×3463E, h7km
CSEM 23 22:19:53.9±0.1, 3186N×3493E, h20km, Mw3.7, Error ellipse: s-maj=1.5km s-min=1.1km az=95.0
ISCJB 23 22:19:54.3±0.4, 3186N±001×3487E±003, h21km±4km, mb4.4/9, Error ellipse: s-maj=3.8km s-min=2.0km az=7.3
NEIC 23 22:19:54.0, 3186N×3494E, h11km, mb4.4/1, ML4.2(GII), After GII.
NEIC Felt [IV] at Ramla and [III] at Bet Shemesh, Jerusalem, Rehovot and Rishon LeZiyyon, Israel. Also felt at Ashqelon, Azor, Gan Yavne, Giv'atayim, Kefar Sava, Mevo Modi'im, Petah Tiqwa and Qiryat Gat. Felt at Al Birah and Hebron, West Bank.
HLW 23 22:19:54.4, 3200N×3508E, h28km, Mb4.4
GII 23 22:19:54.3±0.2, 3186N×3494E, h11km±1km, mb4.3/2, ML4.2/4, Mw3.2/5
NIC 23 22:19:55.6±0.1, 3193N×3510E, h66km, mb4.1, ML3.7, MW3.7
GRAL 23 22:19:55.6±0.7, 3182N×3489E, h12km±11km, MD4.1

ISC 23 22:19:54.5±0.4, 3185N±001×3490E±003, h13km±3km, n117, σ0°92/146, mb4.4/9, 13C-8D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLTI	Sal'it	0.41	17	Pg	Pg	22 20 02.6	0.0
DSI	Dead Sea	0.49	124	Pg	Pg	22 20 03.9	-0.2
YTIR	Yattir	0.52	159	Pg	Pg	22 20 04.8	+0.2
HMDT	Nahal Hemdat	0.67	53	Pg	Pg	22 20 06.8	-0.7
HMDT				Sg	Sg	22 20 16.0	-0.2
MZDA	Masada	0.67	144	Pg	Pg	22 20 07.0	-0.4
MZDA				Sg	Sg	22 20 16.2	+0.1
MMLI	Mount Malkishu	0.73	37	Pg	Pg	22 20 08.0	-0.7
MMLI				Sg	Sg	22 20 18.0	-0.4
OFRI	'Ofer	0.77	5	Pg	Pg	22 20 09.0	-0.5
RTMI	Retamim	0.81	193	Pg	Pg	22 20 10.4	+0.3
HRSH	Kfar Ka'horesh	0.91	21	P	Pg	22 20 19.1	+7.0
HRSH				S	Sg	22 20 36.7	+13
BLGI	Bet Lehem HaGe	0.92	16	Pg	Pg	22 20 11.3	-0.8
MMC6	Mount Meron ar	1.23	20	Pg	Pn	22 20 16.4	-1.0
HNTI	Hanita	1.25	11	Pg	Pn	22 20 16.9	-0.8
RMNI	Mount Ramon	1.25	185	Pg	Pn	22 20 17.6	-0.1
ZFRI	Zfri	1.31	169	Pg	Pn	22 20 17.8	-0.7
ZFRI				Sn	Sn	22 20 36.4	+0.5
RSH		1.34	229	P	Pn	22 20 19.0	+0.1
RSH				S	Sb	22 20 36.7	+0.1
KSHT	Keshet	1.37	34	Pn	Pn	22 20 18.8	-0.5
KSDI	Kefar Szold	1.48	25	Pn	Pn	22 20 20.5	-0.4
KSDI				Sn	Sn	22 20 40.4	+0.2
PRNI	Paran	1.50	177	Pn	Pn	22 20 20.8	-0.2
PRNI				Sn	Sn	22 20 42.1	+1.8
HRI	Mount Hermon	1.58	26	Pn	Pn	22 20 21.9	-0.3
MATL	Matirih	1.68	12	eP	Pn	22 20 23.5	0.0
ASF	Jabal al Asfar 20nm,0.3s,baz=140,slow=6.8,SNR=134	1.73	79	Pn	Pn	22 20 23.2	-1.0
ASF				Sn	Sn	22 20 44.9	-1.2
	69nm,0.3s,baz=288,slow=23,SNR=22						
ASF	Jabal al Asfar SNR=51	1.73	79	↑eP	Pn	22 20 23.0	-1.2
ASF	Jabal al Asfar	1.73	79	Pn	Pn	22 20 23.2	-1.0
ASF				Sn	Sn	22 20 44.9	-1.2
KRMI	Paran Flat	1.73	185	Pn	Pn	22 20 24.2	-0.1
RCY	Rachaya	1.81	25	eP	Pn	22 20 25.9	+0.6
HRFI	Mount Harif	1.81	176	Pn	Pn	22 20 25.2	-0.2
HRFI				Sn	Sn	22 20 49.5	+1.3
AMAG	Maghara	1.88	231	↓P	Pn	22 20 26.5	+0.1
AMAG				S	Sn	22 20 49.8	-0.1
MBRI	Mt Berech	2.05	180	Pn	Pn	22 20 28.7	+0.1
HNKL	Nakhl	2.07	203	↑iP	Pn	22 20 29.0	+0.1
HNKL				S	Sn	22 20 54.7	+0.1
BEYL	Beyrouth	2.08	14	eP	Pn	22 20 30.0	+0.9
AQBJ	Aqaba	2.12	176	Pn	Pn	22 20 29.7	+0.1
BHL	Bhannes	2.15	17	eP	Pn	22 20 30.5	+0.6
BHL				eS	Sn	22 20 56.5	0.0
EIL	Elat	2.17	179	Pn	Pn	22 20 30.0	-0.4
GLFJ	SNR=51	2.33	178	↓eP	Pn	22 20 32.9	+0.3
HQLS		2.54	177	P	Pn	22 20 34.8	-0.7
HQLS		2.54	177	P	Pn	22 20 34.8	-0.7
HQLS				S	Sn	22 21 06.2	-0.1
HWQ	Hawqa	2.58	20	eP	Pn	22 20 36.9	+1.0
HWQ				eS	Sn	22 21 06.9	-0.2
HBST	Basata	2.63	183	↓P	Pn	22 20 36.8	+0.2
SUZ		2.68	222	↑P	Pn	22 20 37.6	+0.3
ZNM		3.02	216	↑P	Pn	22 20 42.4	+0.4
HHAG	Hagoal	3.06	233	↑P	Pn	22 20 43.4	+0.9
PHNC	Paralimni 6.5nm,0.4s	3.23	347	P	Pn	22 20 44.3	-0.6
PHNC				S	Sn	22 21 21.6	-1.6
KOT	Kottamia	3.26	235	↑P	Pn	22 20 45.6	+0.3
KOT				S	Sn	22 21 23.2	-0.9
ZAF		3.27	219	↓P	Pn	22 20 45.4	0.0
SZAC	Souni-Zanaja 24nm,0.3s	3.36	330	P	Pn	22 20 46.6	0.0
SZAC				S	Sn	22 21 26.4	+0.1
CSS	Prodhromos	3.37	338	ePn	Pn	22 20 46.1	-0.8
CSS				eSn	Sn	22 21 22.9	-3.8
CSS	Prodhromos	3.37	338	ePn	Pn	22 20 46.1	-0.7
CSS				eSn	Sn	22 21 23.0	-3.7
AANS		3.38	244	↑P	Pn	22 20 47.3	+0.3
HKAT	Jabal Katrina	3.41	194	↓P	Pn	22 20 47.4	+0.1
BDAS	Al Bad'	3.41	177	S	Sn	22 21 26.3	-1.4
BDAS	Al Bad'	3.41	177	P	Pn	22 20 46.3	-1.1
RSHS		3.54	181	P	Pn	22 20 47.8	-1.3
RSHS				S	Sn	22 21 29.6	-1.2
GLL	Jalalah	3.56	231	P	Pn	22 20 50.0	+0.6
TR2		3.60	197	↑P	Pn	22 20 49.6	-0.3
LFK	Lefkose	3.61	342	ePN	Pn	22 20 49.8	-0.3
LFK				eSN	Sn	22 21 31.3	-1.3
LFK	Lefkose	3.61	342	Pn	Pn	22 20 51.1	+1.0
LFK	Lefkose	3.61	342	Pn	Pn	22 20 51.1	+1.0
LFK				eSn	Sn	22 21 31.3	-1.2
HSAF	As Saff	3.64	233	↓P	Pn	22 20 50.9	+0.4
LEF	Lefka	3.67	333	ePN	Pn	22 20 51.2	+0.3
LEF				eSN	Sn	22 21 33.0	-1.0
LEF	Lefka	3.67	333	Pn	Pn	22 20 52.3	+1.3
LEF	Lefka	3.67	333	Pn	Pn	22 20 52.3	+1.4
LEF				eSn	Sn	22 21 33.0	-1.1
PPCY	Paphos	3.71	325	P	Pn	22 20 51.5	+0.1
EREN	Erenkoy	3.72	351	ePN	Pn	22 20 52.9	+1.2
EREN				eSN	Sn	22 21 34.4	-1.0
ALFC	Alevga 25nm,0.3s	3.82	330	P	Pn	22 20 53.1	+0.1
ALFC				S	Sn	22 21 38.3	+0.5
AYT	Al 'Ayyat	3.87	237	↑eP	Pn	22 20 53.9	+0.2
TBKS	Tabuk	3.89	158	P	Pn	22 20 53.6	-0.3
TR1		3.92	192	↑P	Pn	22 20 54.2	-0.2
SHRM		4.00	190	↑P	Pn	22 20 55.3	-0.1
HMYD	Mayadein	4.08	241	↑P	Pn	22 20 57.2	+0.6
HTY	Hatay	4.38	13	ePN	Pn	22 21 01.8	+1.0
HTY				eSN	Sn	22 21 51.3	-0.4
IKL	Isikli	4.49	347	ePN	Pn	22 21 03.7	+1.4
HHRG	Al Ghardaqah	4.76	194	↓eP	Pn	22 21 05.5	-0.4
COBT	Iskenderun	4.79	13	iP	Pn	22 21 06.4	0.0
MERS	Mersin	5.02	357	ePN	Pn	22 21 09.7	+0.2
CEYT	Ceyhan	5.20	8	ePN	Pn	22 21 13.3	+1.4
WJHS		5.26	165	P	Pn	22 21 12.4	-0.4
WJHS		5.26	165	P	Pn	22 21 12.4	-0.5
HSFG		5.33	189	↓eP	Pn	22 21 14.0	+0.2
KARA	Karaisali	5.40	1	ePN	Pn	22 21 16.1	+1.4
GULE	Gulek	5.42	359	iP	Px	22 20 53.8	
HDMB	Hadim	5.48	339	ePN	Pn	22 21 17.1	+1.3
HDMB				eSN	Sn	22 22 17.3	-1.4
KOZT	Kozan	5.67	7	ePN	Pn	22 21 20.7	+2.3
ANDN	Andirin	5.84	11	iP	Pn	22 21 22.1	+1.4
GZT	Gaziantep	5.92	21	iP	Pb	22 21 35.9	-1.6
AKAS	Kas	6.20	316	iP	Pn	22 21 24.2	-1.5
NIG	Nigde	6.25	358	ePN	Pn	22 21 28.5	+2.1
AKCD	Akcadag	6.89	20	iP	Pn	22 21 37.0	+1.8
HEDF	Idfu	6.90	193	↓eP	Pn	22 21 35.6	+0.3
AVNT	Avonos	6.92	360	iP	Pn	22 21 35.1	-0.4
DALT	Dalyan (Mudla)	7.14	315	ePN	Pn	22 21 40.4	+1.8
MARD	Mardin	7.29	40	iP	Pn	22 21 43.6	+2.4
KARP	Karpathos	7.43	302	eP	Pn	22 21 41.2	+1.4
KIZT	Kizilcal	7.44	341	ePN	Pn	22 21 44.6	+1.9
SHUT	Suhut-Afyon	7.58	333	eP	Pn	22 21 46.2	+1.6
KHAL	Karahalli	7.87	327	iP	Pn	22 21 48.2	-0.4
KHAL	Karahalli	7.87	327	iP	Pn	22 21 48.2	-0.4
BRTR	Keskin Array B 0.2nm,0.3s,baz=182,slow=15,SNR=7.9	7.93	353	Pn	Pn	22 21 53.4	+4.0
BRTR	Keskin Array B	7.93	353	Pn	Pn	22 21 53.3	+3.9
BEST	Besiri	7.98	39	iP	Pn	22 21 52.9	+2.8
MSL	Mosul	8.18	54	ex	x	22 22 17.0	
MSL				ex	x	22 24 11.0	
NPS	Neapolis	8.47	296	eP	Pn	22 21 55.4	-1.4
DEMI	Demirci	8.77	327	iP	Pn	22 21 59.5	-1.5
SMG	Samos	8.84	314	eP	Pn	22 22 02.1	+0.2
IDI	Anoyia 1.7nm,0.3s,baz=109,slow=14,SNR=34	9.03	295	Pn	Pn	22 22 02.3	-2.2
VAM	Vamos	9.60	295	eP	Pn	22 22 11.0	-1.4
AKASG	Malin Array Be 0.6nm,0.3s,baz=167,slow=11,SNR=3.3	19.30	349	P	Pn	22 24 20.1	+0.1
GERES	GERESS Array B 1.8nm,0.9s,mb3.5,baz=123,slow=9.7,SNR=9.8	23.31	323	P	P	22 25 03.3	+1.1
AKTK	Aktyubinsk	25.28	36	P	P	22 25 19.6	-0.8
AKTO	Aktyubinsk 0.9nm,0.6s,mb3.5,baz=207,slow=4.5,SNR=3.8	25.28	36	P	P	22 25 19.6	-0.8
MOX	Moxa 11nm,1.3s,mb4.2	25.49	324	eP	P	22 25 22.0	-0.3
ARCES	ARCESS Array B	38.11	355	P	P	22 27 12.2	-0.4
ARCES	2.8nm,0.6s,mb4.2,baz=177,slow=8.3,SNR=12 ARCESS Array B	38.11	355	P	P	22 27 12.2	-0.5
WMQ	Urumqi	42.71	58	eP	P	22 27 52.0	+0.9
WMQ	comp=Z,16nm,1.0s,mb4.7			AMB	AMB		
LZH	Lanzhou	56.25	65	eP	P	22 29 36.8	+2.2
LZH				AP	pP	22 29 41.0	+2.3
LZH				XP	sP	22 29 43.5	+3.3
LZH	comp=Z,14nm,1.0s,mb5.0			AMB	AMB		
LZH	comp=Z,58nm,4.2s			AMB	AMB		
CD2	Chengdu	57.84	71	eP	P	22 29 46.3	+0.3
CD2	comp=Z,10.0nm,0.7s,mb5.0			AMB	AMB		
CD2	comp=Z,30nm,8.2s			AMB	AMB		
HHC	Hu-ho-hao-te	60.59	58	eP	P	22 30 04.9	+0.1
HHC				AP	pP	22 30 08.6	-0.3
HHC				XP	sP	22 30 09.8	-0.7
HHC				PCP	PcP	22 30 50.3	+1.1
HHC				PP	PP	22 32 19.4	+1.2
HHC				S	S	22 38 18.6	-2.0
HHC				XS	sS	22 38 25.8	-1.5
HHC				SCS	ScS	22 39 51.3	-4.3
HHC				SS	SS	22 42 16.4	-2.2
HHC	comp=Z,12nm,1.0s,mb5.0			AMB	AMB		
HHC	comp=Z,149nm,5.6s			AMB	AMB		
HHC	comp=N,235nm,17.8s			LR	LR		
HHC	comp=E,253nm,19.0s			LR	LR		
HHC	comp=Z,204nm,20.2s			LR	LR		
GYA	Guiyang	61.87	75	P	P	22 30 13.5	-0.3
GYA	comp=Z,10.0nm,0.8s,mb5.0			AMB	AMB		

ATH 23 22:57:41.7, 3896N×2741E, h24km±3km, MD3.1/3
CSEM 23 22:57:43.7±0.1, 3888N×2709E, h10km, MD3.1, Error ellipse: s-maj=1.4km s-min=1.2km az=115.0
ISK 23 22:57:43.9, 3887N×2708E, h11km, MD3.2
THE 23 22:57:43.8, 3887N×2714E, h0km±1km, ML3.0/3, Error ellipse: s-maj=2.1km s-min=0.7km az=84.0
NEIC 23 22:57:44.4, 3885N×2711E, h17km, MD3.1(ATH), MD2.9(ISK), After ISK.
DDA 23 22:57:44.3, 3887N×2708E, h6km, Md2.9
ISCJB 23 22:57:45.4±0.4, 3887N±002×2712E±003, h18km±5km, Error ellipse: s-maj=3.7km s-min=3.1km az=142.2

ISC 23 22:57:45.0±0.4, 3887N±002×2712E±002, h12km±3km, n38, σ0°77/65, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.49	187	PG	Pg	22 57 53.9	-0.7
BLCB				eSG	Sg	22 58 01.1	+0.1
BLCB	Balcova	0.49	187	P	Pg	22 57 54.0	-0.6
BLCB				S	Sg	22 58 00.8	-0.2
BLCB	Balcova	0.49	187	Pg	Pg	22 57 54.3	-0.3
BLCB				Sg	Sg	22 58 01.3	+0.2
BLCB	Balcova	0.49	187	iPg	Pg	22 57 53.9	-0.7
BLCB				S	Sg	22 58 00.8	-0.2
BLCB				Sg	Sg	22 58 01.3	+0.3
AKS	Akhisar	0.54	89	ePG	Pg	22 57 55.6	0.0
AKS				eSG	Sg	22 58 03.8	+1.0
AKS	Akhisar	0.54	89	Pg	Pg	22 57 55.7	+0.1
AKHS	Akhisar	0.55	89	iP	Pg	22 57 55.1	-0.5
AKHS				iS	Sg	22 58 03.1	+0.3
URLA	Izmir	0.65	219	iP	Pg	22 57 56.1	-1.6
URLA				iS	Sg	22 58 08.9	+2.6
PRK	Paraskevi	0.76	300	P	Pg	22 57 58.7	-0.9
PRK				S	Sg	22 58 10.0	+0.5
PRK	Paraskevi	0.76	300	ePn	Pn	22 57 59.5	-1.9
PRK				S	Sg	22 58 10.0	+0.5
PRK				eSn		22 58 13.0	
CHOS	Chios island	0.96	240	P	Pg	22 58 03.1	-0.4
CHOS				S	Sg	22 58 17.5	+1.5
BALB	Balikesir	0.97	37	ePG	Pg	22 58 03.3	-0.3
BALB				eSG	Sg	22 58 17.4	+1.1
BALB	Balikesir	0.97	37	Pg	Pg	22 58 04.0	+0.4
BALB				Sg	Sg	22 58 17.0	+0.7
EZN	Ezine	1.13	327	ePN	Pn	22 58 05.8	-0.8
EZN				eSN	Sn	22 58 21.7	-0.4
EZN	Ezine	1.13	327	Pn	Pn	22 58 06.4	-0.2
GCAM	G?zelcaml?	1.17	175	iP	Pb	22 58 06.4	-0.8
GCAM				iS	Sb	22 58 22.0	-0.3
SMG	Samos	1.18	191	ePN	Pn	22 58 06.8	-0.5
SMG				eSN	Sn	22 58 24.7	+1.4
MANT	Manisa	1.19	108	iP	Pn	22 58 06.8	-0.6
MANT				iS	Sb	22 58 23.2	+0.4
DEMI	Demirci	1.26	82	iP	Pn	22 58 08.0	-0.4
DEMI				iS	Sb	22 58 24.9	+0.2
KULA	Kula-Manisa	1.26	106	ePN	Pn	22 58 08.2	-0.1
BOZC	Bozcaada	1.27	320	iP	Pn	22 58 07.7	-0.8
BOZC				iS	Sb	22 58 25.8	+0.6
DURS	Dursunbey	1.28	55	iP	Pn	22 58 08.3	-0.4
DURS				iS	Sb	22 58 25.3	-0.1
DST	Dursunbey	1.38	58	ePN	Pn	22 58 09.7	-0.4
LPK	Lapseki	1.52	350	ePN	Pn	22 58 11.6	-0.4
LPK	Lapseki	1.52	350	Pn	Pn	22 58 12.0	0.0
BNT	Bandirma	1.61	22	ePN	Pn	22 58 12.8	-0.3
BNT				eSN	Sn	22 58 34.2	+0.4
BNT	Bandirma	1.61	22	Pn	Pn	22 58 13.1	0.0
KCT	Karacabey	1.69	34	ePN	Pn	22 58 14.3	0.0
KCT				eSN	Sn	22 58 36.5	+0.6
KCT	Karacabey	1.69	34	Pn	Pn	22 58 14.2	-0.1
MRMT	Marmara Adasi	1.77	12	ePN	Pn	22 58 15.9	+0.5
RKY	Sarkoy-Tekirda	1.81	1	ePN	Pn	22 58 16.0	0.0
RKY	Sarkoy-Tekirda	1.81	1	Pn	Pn	22 58 15.8	-0.2
LIA	Limnos Island	1.81	305	P	Pn	22 58 14.9	-1.1
LIA				S	Sn	22 58 39.9	+1.0
LIA	Limnos Island	1.81	305	eP	Pn	22 58 15.6	-0.4
LIA				S	Sn	22 58 39.9	+1.0
MFT	Murefte	1.92	4	ePN	Pn	22 58 18.0	+0.6
MFT				eSN	Sn	22 58 41.5	+0.1
ENEZ	Enez	2.00	339	ePN	Pn	22 58 18.5	-0.1
ALN	Alexandroupoli	2.18	338	P	Pn	22 58 20.1	-1.0
ALN				S	Sn	22 58 49.0	+1.0
APE	Apeiranthos	2.19	215	P	Pn	22 58 20.5	-0.7
APE				S	Sn	22 58 49.3	+1.1

NEIC 23 23:08:12.4, 1607N×9924W, h17km, MD4.4(MEX), After MEX.

MEX 23 23:08:12.5±0.8, 1608N×9923W, h18km±62km, MD4.4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	1.02	320	iP	Pb	23 08 28.0	-0.6
ACX				iS	Sb	23 08 41.0	-3.7
PNIG	Pinotepa	1.11	74	iP	Pn	23 08 29.4	-3.7
PNIG				iS	Sb	23 08 42.7	-4.5
CAIG	El Cayaco	1.38	314	iP	Pn	23 08 33.7	-3.2
CAIG				iS	Sn	23 08 49.7	-5.0
PLIG	Platanillo	2.31	354	iP	Pn	23 08 47.7	-2.0
PLIG				iS	Sn	23 09 14.3	-3.4
VHO	Vista Hermosa	2.59	67	iP	Pn	23 08 51.8	-1.8
VHO				iS	Sn	23 09 20.5	-4.2
ZIIG	Zihuatanejo	2.62	306	iP	Pn	23 08 51.8	-2.2
ZIIG				iS	Sn	23 09 21.6	-3.8
YAIG	Yautepec	2.77	3	iP	Pn	23 08 54.8	-1.2
YAIG				iS	Sn	23 09 27.1	-2.0
YAIG	Yautepec	2.77	3	iP	Pn	23 08 53.6	-2.4
YAIG				iS	Sn	23 09 26.4	-2.6
UNM	Universidad Na	3.23	1	iS	Sn	23 09 35.5	-4.9
UNM	Universidad Na	3.23	1	iS	Sn	23 09 36.0	-4.4
MOIG	Morelia	4.03	333	eP	Pn	23 09 19.7	+6.3
MOIG				iS	Sn	23 09 56.3	-3.8
DEIG	Demacu	4.20	3	iP	Pn	23 09 15.4	-0.3
DEIG				iS	Sn	23 10 01.6	-2.7
CMIG	Matias Romero	4.29	76	iP	Pn	23 09 14.7	-2.2
CMIG				iS	Sn	23 10 04.7	-1.9
MMIG	Aquila	4.50	300	eP	Pn	23 09 20.1	+0.2
MMIG				iS	Sn	23 10 10.0	-1.8
LVIG	Laguna Verde	4.50	36	eP	Pn	23 09 19.1	-0.8
LVIG				iS	Sn	23 10 07.2	-4.6

NEIC 23 23:14:12.4, 1609N×9921W, h16km, mb4.2/6, MD4.5(MEX), After MEX.

MEX 23 23:14:12.6±0.8, 1611N×9921W, h16km±13km, MD4.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	1.02	318	iP	Pb	23 14 28.0	-3.8
ACX				iS	Sb	23 14 41.0	-4.0
PNIG	Pinotepa	1.08	75	iP	Pb	23 14 29.1	-3.8
PNIG				iS	Sb	23 14 41.8	-4.9
CAIG	El Cayaco	1.38	313	iP	Pn	23 14 33.8	-3.4
CAIG				iS	Sn	23 14 49.1	-6.1
PLIG	Platanillo	2.29	353	eP	Pn	23 14 47.5	-2.2
PLIG				iS	Sn	23 15 13.2	-4.4
VHO	Vista Hermosa	2.56	68	iP	Pn	23 14 51.0	-2.5
VHO				iS	Sn	23 15 21.3	-3.0
ZIIG	Zihuatanejo	2.63	305	eP	Pn	23 14 51.8	-2.5
ZIIG				iS	Sn	23 15 22.3	-3.6
Y

NPS	Neapolis	0.69	47	*e*PB	Pb	23 27 52.0	+0.4	JCZ	Jackson Bay	0.49	262	P	Pg	00 21 18.7	+0.1
VAM	Vamos	0.90	314	*e*PB	Sb	23 28 06.4	-0.2	JCZ				S	Sg	00 21 25.0	+0.1
ZKR	Zakros	1.05	72	P	Pn	23 27 57.6	0.0	LBZ	Lake Benmore	0.66	125	P	Pg	00 21 22.6	+0.7
ZKR				S	Sb	23 28 11.3	+0.1	WKZ	Wanaka	0.87	200	P	Pg	00 21 25.6	-0.3
THR6	Thira Island,	1.60	12	P	Pn	23 28 05.5	+0.4	RPZ	Rata Peaks	1.21	77	P	Pg	00 21 32.6	+0.2
THR1	Thera Island	1.62	13	P	Pn	23 28 05.2	-0.2	EAZ	Earnscleugh	1.23	184	P	Pg	00 21 32.2	-0.5
THR5	Thira Island,	1.65	10	P	Pn	23 28 06.0	+0.2	WVZ	Waitaha Valley	1.33	46	P	Pg	00 21 33.7	-1.0
THR3	Thira Island,	1.65	11	P	Pn	23 28 05.3	-0.5	ODZ	Otahua Downs	1.35	140	P	Pg	00 21 34.9	-0.2
KARP	Karpathos	1.93	66	*e*PB	Pb	23 28 12.0	-0.7	MLZ	Mavora Lakes	1.61	213	P	Pn	00 21 39.6	+0.7
APE	Apeiranthos	2.32	11	P	Pn	23 28 14.0	-0.9	TUZ	Tuapeka	1.95	176	P	Pn	00 21 44.9	+1.4
APE				S	Sn	23 28 42.5	-0.2	WHZ	Wether Hill Ro	2.16	209	P	Pn	00 21 48.1	+1.7
DID	Didima	3.06	333	P	Pn	23 28 24.8	-0.4	DCZ	Deep Cove	2.19	227	P	Pn	00 21 47.6	+0.8
DID				S	Sn	23 29 00.5	-0.6	MQZ	McQueen's Vall	2.35	84	P	Pn	00 21 48.4	-0.6
PYL	PYLOS	3.38	309	P	Pn	23 28 29.7	+0.2	LTZ	Lake Taylor	2.41	60	P	Pn	00 21 49.5	-0.3
PYL				S	Sn	23 29 09.2	+0.4	DSZ	Denniston Nort	2.86	38	P	Pn	00 21 54.3	-1.7
LTK	Loutraki	3.62	334	P	Pn	23 28 32.5	-0.3	THZ	Tophouse	3.40	50	P	Pn	00 22 03.1	-0.3
LTK				S	Sn	23 29 14.9	+0.1	QRZ	Quartz Range	3.92	37	P	Pn	00 22 09.6	-1.0
AGG	Agios Georgios	4.73	334	P	Pn	23 28 48.9	+0.7	NNZ	Nelson	4.03	48	P	Pn	00 22 12.2	0.0
AGG				S	Sn	23 29 42.3	0.0								
TIR	Tirane	7.70	330	*e*Pn	Pn	23 29 31.8	+3.0								
TIR	Tirane	7.70	330	*e*Pn	Pn	23 29 31.8	+3.0								

IDC ***23*** *23:28:58.9±2.1, 38.75N×71.43E, h0km, mb3.7/1, mb1 3.5/6, mb1mx3.5/6, mbtmp3.5/6, ML3.3/5, Error ellipse: s-maj=28.9km s-min=21.2km az=157.0*
ISCJB ***23*** *23:29:02.8±0.8, 38.91N±0.06×70.92E±0.09, h33km, Error ellipse: s-maj=10.5km s-min=7.2km az=144.3*
NNC ***23*** *23:29:04.9±2.0, 39.27N×70.94E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=21.1km s-min=11.1km az=43.0*

ISC 23 23:29:05.9±0.8, 3899N±0.06×7095E±0.08, h35km, n20, σ1§28/26, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.77**	**33**	P	**Pn**	**23 30 01.5**	**0.0**
	SNR=50						
KK31	**Karatay Array**	**4.12**	**356**	⇑Pn	**Pn**	**23 30 08.5**	**+2.2**
	3.7nm,0.2s,baz=175,slow=12,SNR=718						
KK31				⇑Sn	**Sn**	**23 30 57.8**	**+4.5**
	20nm,0.4s,baz=172,slow=29,SNR=4.2						
EKS2	**Erkin-Say**	**4.25**	**29**	P	**Pn**	**23 30 08.6**	**+0.6**
	SNR=48						
KZA	**Kyzart**	**4.50**	**45**	P	**Pn**	**23 30 12.0**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**4.53**	**35**	P	**Pn**	**23 30 11.9**	**+0.1**
	SNR=31						
KBK	**Karagaybulak**	**4.75**	**38**	P	**Pn**	**23 30 15.4**	**+0.5**
	SNR=13						
CHMS	**Chumysh**	**4.93**	**34**	P	**Pn**	**23 30 17.2**	**-0.2**
	SNR=21						
USP	**Ospenovka**	**5.04**	**31**	P	**Pn**	**23 30 19.1**	**+0.2**
	SNR=39						
ULHL	**Ulahol**	**5.18**	**49**	P	**Pn**	**23 30 19.2**	**-1.6**
	SNR=6.4						
TKM2	**Tokmak 2**	**5.27**	**40**	P	**Pn**	**23 30 22.5**	**+0.4**
	SNR=7.9						
SMLA	**Simla**	**9.35**	**145**	*i* P	**Pn**	**23 31 17.9**	**-0.1**
SMLA				*i* S	**Sn**	**23 32 58.1**	**-3.8**
SMLA				*ex*	x	23 33 01.1	
	comp=E,100nm,0.5s						
SMLA				*i* S	**Sn**	**23 33 02.1**	**+0.1**
SMLA				*ex*	x	23 33 05.0	
	comp=N,96nm,0.4s						
MK31	**Makanchi Array**	**11.39**	**43**	⇑Pn	**Pn**	**23 31 48.4**	**+2.5**
	comp=N,2.3nm,1.1s,baz=235,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**11.39**	**43**	Pn	**Pn**	**23 31 42.7**	**-3.3**
	comp=N,0.1nm,0.3s,baz=236,slow=13,SNR=4.6						
KURK	**Kurchatov**	**12.92**	**22**	Pn	**Pn**	**23 32 02.1**	**-4.6**
	comp=N,0.0nm,0.3s,baz=214,slow=13,SNR=3.5						
AB31	**Akbulak array**	**12.94**	**326**	Pn	**Pn**	**23 32 06.5**	**-0.6**
	comp=N,0.8nm,0.3s,baz=140,slow=12,SNR=19						
AB31				Sn	**Sn**	**23 34 26.2**	**-3.5**
	comp=N,1.8nm,0.4s,baz=156,slow=24,SNR=6.0						
BVAR	**Borovoye Array**	**14.04**	**359**	Pn	**Pn**	**23 32 21.0**	**-1.1**
	comp=N,0.2nm,0.3s,baz=164,slow=11,SNR=3.1						
AKTO	**Aktyubinsk**	**14.65**	**326**	⇓Pn	**Pn**	**23 32 29.1**	**-1.3**
	comp=N,2.2nm,2.4s						
AKTO				⇑Sn	**Sn**	**23 35 12.6**	**+1.1**
	comp=N,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**14.65**	**326**	Pn	**Pn**	**23 32 27.8**	**-2.6**
	comp=N,0.1nm,0.3s,baz=146,slow=15,SNR=3.2						
AKTO				Sn	**Sn**	**23 35 12.8**	**+1.3**
	comp=N,0.3nm,0.3s,baz=86,slow=23,SNR=6.4						
ZALV	**Zalesovo Beam**	**17.70**	**28**	P	**Pn**	**23 33 06.4**	**-3.0**
	comp=N,0.7nm,0.3s,baz=217,slow=11,SNR=9.7						
TORD	**Torodi Ar. Bea**	**65.76**	**267**	P	**P**	**23 39 48.8**	**+1.4**
	comp=N,0.5nm,0.6s,baz=47,slow=5.5,SNR=5.3						

ISCJB ***24*** *00:12:06.7±0.9, 3708N±0.04×697E±0.1, h124km±14km, Error ellipse: s-maj=14.2km s-min=5.4km az=166.6*
NNC ***24*** *00:12:10.2±4.8, 3729N×6964E, h101km±70km, mb3.4, mpv4.1, Error ellipse: s-maj=36.7km s-min=26.3km az=20.0*

ISC 24 00:12:08.3±0.9, 3708N±0.04×698E±0.1, h117km±12km, n26, σ0§94/30, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.69**	**151**	P	**Pn**	**00 13 03.3**	**-0.3**
CEP				S	**Sn**	**00 13 47.0**	**+0.7**
CHCP	**Chirah Chowk**	**4.45**	**139**	P	**Pn**	**00 13 15.1**	**+1.3**
THW	**Thamme Wali**	**4.57**	**159**	P	**Pn**	**00 13 13.9**	**-1.5**
AML	**Almayashu**	**5.89**	**30**	P	**Pn**	**00 13 33.5**	**+0.4**
	SNR=40						
KK31	**Karatay Array**	**6.05**	**5**	Pn	**Pn**	**00 13 34.9**	**-0.3**
	9.4nm,0.5s,baz=201,slow=15,SNR=187						
KK31				⇓Sn	**Sn**	**00 14 40.8**	**-2.2**
	3.2nm,0.4s,baz=192,slow=23,SNR=3.8						
KK31				⇓Lg		00 15 15.6	
	23nm,0.8s,baz=188,slow=30,SNR=6.1						
EKS2	**Erkin-Say**	**6.38**	**28**	P	**Pn**	**00 13 40.2**	**+0.5**
	SNR=11						
KZA	**Kyzart**	**6.55**	**39**	P	**Pn**	**00 13 42.0**	**0.0**
	SNR=12						
AAK	**Ala-Archa**	**6.64**	**32**	P	**Pn**	**00 13 43.7**	**+0.5**
	SNR=20						
KBK	**Karagaybulak**	**6.85**	**34**	P	**Pn**	**00 13 46.8**	**+0.7**
	SNR=10						
CHMS	**Chumysh**	**7.04**	**31**	P	**Pn**	**00 13 48.9**	**+0.2**
	SNR=28						
USP	**Ospenovka**	**7.17**	**29**	P	**Pn**	**00 13 50.0**	**-0.3**
	SNR=30						
ULHL	**Ulahol**	**7.18**	**42**	P	**Pn**	**00 13 50.2**	**-0.4**
	SNR=15						
TKM2	**Tokmak 2**	**7.36**	**36**	⇑Pn	**Pn**	**00 13 53.0**	**+0.1**
	12nm,0.7s						
TKM2				⇓Sn	**Sn**	**00 15 14.9**	**+0.1**
	3.9nm,0.6s						
TKM2				⇑Lg		00 15 59.9	
	9.8nm,1.0s						
TKM2	**Tokmak 2**	**7.36**	**36**	P	**Pn**	**00 13 53.3**	**+0.4**
	SNR=12						
MK31	**Makanchi Array**	**13.45**	**40**	P	**Pn**	**00 15 13.8**	**-0.4**
	1.2nm,0.7s,baz=220,slow=17,SNR=6.3						
AB01	**Akbulak array**	**14.11**	**333**	⇓P	**Pn**	**00 15 21.4**	**-1.3**
	0.8nm,0.5s						
AB01				⇓S	**Sn**	**00 17 52.8**	**-5.4**
	1.6nm,0.7s						
PYUN	**Piuthan**	**14.29**	**125**	*e*P	**Pn**	**00 15 21.5**	**-3.6**
	4.7nm,0.4s						
DANN	**Dangsing**	**14.63**	**122**	*e*P	**Pn**	**00 15 29.3**	**-0.2**
GKN	**Gorkha**	**15.45**	**122**	*e*P	**Pn**	**00 15 39.6**	**-0.2**
VOSK	**Vostochnaya**	**15.67**	**3**	⇑P	**Pn**	**00 15 43.3**	**+1.0**
	3.4nm,1.0s						
AKTO	**Aktyubinsk**	**15.79**	**331**	⇑P	**Pn**	**00 15 46.4**	**+2.6**
	1.0nm,1.1s						
BVA0	**Borovoye Array**	**15.96**	**1**	P	**Pn**	**00 15 46.9**	**+1.1**
	0.4nm,0.5s,baz=142,slow=15,SNR=19						
KKN	**Kakani**	**16.02**	**121**	*e*P	**Pn**	**00 15 46.7**	**-0.2**
	11nm,0.6s						
GUN	**Gumba**	**16.36**	**119**	*e*P	**Pn**	**00 15 52.4**	**+1.3**
JIRN	**Jiri**	**16.73**	**119**	*e*P	**Pn**	**00 15 54.5**	**-1.1**
	6.9nm,0.4s						
TAPN	**Taplejung**	**17.99**	**117**	*e*P	**P**	**00 16 09.0**	**-0.7**
	11nm,0.6s						

NEIC 24 00:21:09.2, 4401S×16943E, h0km, ML3.9(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOZ	**Fox Glacier**	**0.48**	**23**	P	Pg	00 21 19.7	+1.3

IDC 24 00:28:55.4±58.0, 2005S×17955E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=1039.0km s-min=153.0km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.93**	**243**	*e*P	P	00 35 58.7	+1.0
	1.3nm,0.4s						
STKA	**Stephens Creek**	**35.93**	**243**	P	P	00 35 57.9	+0.2
	1.6nm,0.4s,baz=76,slow=6.7,SNR=5.6						
ASAR	**Alice Springs**	**42.39**	**257**	P	P	00 36 51.7	-0.2
	1.1nm,0.5s,baz=96,slow=7.6,SNR=29						
WRA	**Warramunga Arr**	**42.39**	**262**	P	P	00 36 51.7	-0.2
	0.5nm,0.3s,baz=97,slow=7.8,SNR=5.7						

ISCJB ***24*** *00:32:51.0±1.3, 325N±0.08×1225E±0.2, h595km±19km, mb3.9/20, Error ellipse: s-maj=25.5km s-min=9.8km az=160.0*
IDC ***24*** *00:32:50.6±1.5, 327N×12251E, h563km±17km, mb3.3/15, mb1 3.4/16, mb1mx3.3/25, mbtmp3.4/16, Error ellipse: s-maj=28.9km s-min=7.6km az=68.0*
NEIC ***24*** *00:32:51.1±1.1, 330N×12248E, h573km±15km, mb4.5/7, Error ellipse: s-maj=18.9km s-min=8.5km az=66.0*

ISC 24 00:32:51.7±1.2, 326N±0.08×1225E±0.2, h584km±17km, n32, σ0§64/33, mb3.9/20, 1C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**8.65**	**198**	*e*P	**P**	**00 34 56.6**	**-0.3**
BATI	**Baumata**	**13.43**	**175**	P	**P**	**00 35 44.8**	**-0.2**
	3.3nm,0.3s,baz=0.0,slow=20,SNR=4.0						
KAKA	**Kakadu**	**18.70**	**148**	⇑*i* P	Px	00 36 20.9	
	13nm,0.4s						
MBWA	**Marble Bar**	**24.41**	**186**	P	**P**	**00 37 25.0**	**-0.6**
WRAB	**Tennant Creek**	**25.83**	**154**	*e*P	**P**	**00 37 38.1**	**0.0**
	2.8nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**25.84**	**154**	P	**P**	**00 37 38.0**	**-0.2**
	2.4nm,0.3s,mb4.2,baz=335,slow=9.4,SNR=19						
WRA				PcP	PcP	00 40 49.2	+1.8
	0.4nm,0.5s,baz=313,slow=2.4,SNR=3.5						
WRA				S	**S**	**00 41 26.0**	**-1.7**
	0.3nm,0.6s,baz=333,slow=16,SNR=3.4						
WRA				ScP	ScP	00 43 36.2	+3.8
	0.8nm,0.7s,baz=344,slow=3.4,SNR=7.5						
WRA	**Warramunga Arr**	**25.84**	**154**	P	**P**	**00 37 38.0**	**-0.2**
WRA				PcP	PcP	00 40 49.2	+1.8
WRA				S	**S**	**00 41 26.1**	**-1.7**
WRA				ScP	ScP	00 43 36.2	+3.8
WB2	**Warramunga Arr**	**25.84**	**154**	*e*P	**P**	**00 37 38.2**	**0.0**
WB2	**Warramunga Arr**	**25.84**	**154**	*e*P	**P**	**00 37 38.2**	**0.0**
ASAR	**Alice Springs**	**28.99**	**158**	P	**P**	**00 38 06.6**	**+1.0**
	1.1nm,0.5s,mb3.8,baz=336,slow=7.3,SNR=29						
ASAR				PcP	PcP	00 40 56.8	+1.6
	0.1nm,0.4s,baz=349,slow=2.8,SNR=4.2						
ASAR				S	**S**	**00 42 17.6**	**+0.9**
	0.5nm,0.8s,baz=326,slow=12,SNR=6.1						
ASAR				ScP	ScP	00 43 45.9	+3.8
	0.9nm,0.7s,baz=332,slow=2.6,SNR=8.0						
ASAR	**Alice Springs**	**28.99**	**158**	P	**P**	**00 38 06.6**	**+1.0**
ASAR				PcP	PcP	00 40 56.8	+1.6
ASAR				S	**S**	**00 42 17.6**	**+0.9**
ASAR				ScP	ScP	00 43 45.9	+3.8
KSRS	**Korea Array**	**34.40**	**8**	P	**P**	**00 38 51.8**	**+0.3**
	1.2nm,0.7s,mb3.6,baz=191,slow=10,SNR=3.7						
MJAR	**Matsushiro Arr**	**36.16**	**22**	P	**P**	**00 39 04.9**	**-1.1**
	0.8nm,0.4s,mb3.6,baz=239,slow=15,SNR=3.5						
STKA	**Stephens Creek**	**39.39**	**154**	P	**P**	**00 39 33.4**	**+1.1**
	0.7nm,0.4s,mb3.5,baz=324,slow=8.7,SNR=3.9						
SONM	**Songino Array**	**46.52**	**345**	P	**P**	**00 40 27.9**	**+0.4**
	1.7nm,0.7s,mb3.7,baz=162,slow=9.0,SNR=14						
MKAR	**Makanchi Array**	**55.59**	**328**	P	**P**	**00 41 33.8**	**+0.8**
	2.2nm,0.5s,mb3.6,baz=129,slow=7.7,SNR=41						
MKAR				PcP	PcP	00 42 24.6	+0.7
	2.2nm,0.6s,baz=122,slow=4.6,SNR=13						
PETK	**Petropavlovsk-**	**57.54**	**24**	P	**P**	**00 41 46.7**	**+0.5**
	5.3nm,1.0s,mb3.6,baz=191,slow=4.3,SNR=3.8						
AAK	**Ala-Archa**	**57.90**	**320**	*e*P	**P**	**00 41 48.6**	**-0.4**
	49nm,0.8s,mb4.7						
ZALV	**Zalesovo Beam**	**59.15**	**335**	P	**P**	**00 41 56.7**	**-0.4**
	1.2nm,0.4s,mb3.4,baz=134,slow=6.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**59.15**	**335**	P	**P**	**00 41 56.7**	**-0.4**
KURK	**Kurchatov**	**59.91**	**329**	P	**P**	**00 42 02.5**	**+0.3**
	1.9nm,0.3s,mb3.8,baz=132,slow=1.4,SNR=22						
BVAR	**Borovoye Array**	**65.44**	**328**	P	**P**	**00 42 37.9**	**+0.2**
	0.9nm,0.5s,mb3.4,baz=141,slow=9.6,SNR=5.3						
TIXI	**Tiksi**	**68.42**	**2**	*e*P	**P**	**00 42 55.4**	**-0.2**
	1.5nm,0.3s,mb3.9						
AKTK	**Aktyubinsk**	**71.41**	**323**	P	**P**	**00 43 14.5**	**+0.7**
AKTO	**Aktyubinsk**	**71.41**	**323**	P	**P**	**00 43 14.5**	**+0.7**
	1.4nm,0.4s,mb3.9,baz=91,slow=5.7,SNR=7.5						
JOF	**Joensuu**	**87.65**	**333**	*ep*	**P**	**00 44 38.1**	**-0.5**
	1.8nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**89.41**	**340**	P	**P**	**00 44 46.1**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=90,slow=4.9,SNR=5.4						
KAF	**Kangasniemi**	**90.03**	**332**	*ep*	**P**	**00 44 48.9**	**-0.8**
	1.2nm,0.4s,mb4.1,baz=80,slow=4.9						
SPITS	**Spitsbergen Ar**	**90.11**	**349**	P	**P**	**00 44 50.1**	**+0.4**
	3.1nm,0.3s,mb4.5,baz=3.5,slow=6.4,SNR=28						
HFS	**Hagfors**	**96.43**	**332**	P	**P**	**00 45 17.9**	**-1.0**
	2.9nm,0.9s,mb4.5,baz=74,slow=6.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**119.00**	**287**	PKP	PKPdf	00 50 36.5	+0.7
	0.4nm,0.3s,baz=79,slow=1.6,SNR=20						
TXAR	**Lajitas Array**	**125.22**	**50**	PKP	PKPdf	00 50 49.7	+2.3
	0.2nm,0.6s,baz=309,slow=1.9,SNR=3.1						

NEIC ***24*** *00:37:29.5, 3560S×7297W, h64km, MG4.0(GUC), After GUC.*
NEIC Felt [III] at Constitucion and [II] at Talca.

GUC 24 00:37:29.5±0.9, 3560S×7297W, h64km±8km, ML4.0, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCO	**Chanco**	**0.38**	**110**	⇓*i* P	Pn	00 37 39.1	-1.5
CNCO				*i* S	Sn	00 37 45.4	-3.3
CCHI	**Chillan**	**1.23**	**144**	⇑*i* P	Pn	00 37 47.9	-2.8
CCHI				*i* S	Sn	00 38 01.3	-5.3
CCHI	**Chillan**	**1.23**	**144**	⇑*i* P	Pn	00 37 47.9	-2.8
CCHI				*i* S	Sn	00 38 01.3	-5.3
CCHI				AML	AML	00 38 01.8	
	comp=E,1μm,0.4s						
ANTU	**Antumapu**	**2.80**	**44**	AML	AML	00 38 44.6	
	comp=N,1μm,0.2s						
LMEL	**Las Melosas**	**2.88**	**53**	*e*P	Pn	00 38 08.8	-4.1
LMEL				*i* S	Sn	00 38 39.1	-7.3
LMEL	**Las Melosas**	**2.88**	**53**	*e*P	Pn	00 38 08.8	-4.1
LMEL				*i* S	Sn	00 38 39.1	-7.3
LMEL				AML	AML	00 38 41.7	
	comp=N,530nm,0.2s						
CLCH	**Cerro Calan**	**2.98**	**43**	*i* P	Pn	00 38 11.7	-2.7
CLCH				*i* S	Sn	00 38 42.5	-6.4
CLCH				AML	AML	00 38 55.3	
	comp=N,802nm,0.8s						
YECH	**El Yeso**	**3.07**	**52**	AML	AML	00 38 50.2	
	comp=N,255nm,0.3s						
PEL	**Peldehue**	**3.10**	**38**	AML	AML	00 38 57.4	
	comp=E,628nm,0.4s						
FCH	**Farellones**	**3.17**	**45**	AML	AML	00 38 55.2	
	comp=E,253nm,0.5s						
LCO	**Las Campanas**	**6.85**	**17**	*e*Pn	Pn	00 39 08.6	+1.3

IDC ***24*** *00:40:42.7±2.8, 39.32N×7763E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.6/25, mbtmp3.5/8, ML2.9/3, Error ellipse: s-maj=52.6km s-min=20.3km az=120.0*
NEIC ***24*** *00:40:44.7±2.1, 39.42N×7759E, h10km, Error ellipse: s-maj=34.4km s-min=17.5km az=132.0*
ISCJB ***24*** *00:40:51.3±1.7, 3945N±005×772E±02, h62km±11km, mb3.7/5, Error ellipse: s-maj=27.3km s-min=8.1km az=7.1*
NNC ***24*** *00:40:55.0±11.0, 3964N×7654E, h10km±53km, mb3.9, mpv3.5, Error ellipse: s-maj=74.0km s-min=24.6km az=138.0*

ISC 24 00:40:50.8±1.2, 3947N±005×775E±01, h53km±10km, n24, σ1§17/25, mb3.7/5, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.93**	**341**	P	**Pn**	**00 41 37.6**	**+2.7**
	SNR=19						
KZA	**Kyzart**	**3.12**	**327**	P	**Pn**	**00 41 38.0**	**+0.6**
	SNR=14						
UCH	**Uchtor**	**3.57**	**321**	Pn	**Pn**	**00 41 42.4**	**-1.2**
UCH				*e*Sn	**Sn**	**00 42 23.3**	**-1.2**
KBK	**Karagaybulak**	**3.72**	**330**	P	**Pn**	**00 41 52.3**	**+6.6**
	SNR=28						
TKM2	**Tokmak 2**	**3.73**	**338**	⇑Pn	**Pn**	**00 41 46.3**	**+0.5**
	15nm,0.5s						
TKM2				⇑Lg		00 42 42.1	
	47nm,0.7s						
TKM2	**Tokmak 2**	**3.73**	**338**	P	**Pn**	**00 41 46.6**	**+0.8**
	SNR=7.4						
KNDC	**Almaty**	**3.76**	**354**	⇑Pn	**Pn**	**00 41 51.7**	**+5.4**
	32nm,0.6s						
KNDC				⇑Lg		00 42 48.4	
	103nm,0.7s						
AAK	**Ala-Archa**	**3.89**	**325**	P	**Pn**	**00 41 55.7**	**+7.6**
	SNR=7.8						
AML	**Almayashu**	**3.93**	**314**	P	**Pn**	**00 41 49.1**	**+0.6**
	SNR=9.6						
CHMS	**Chumysh**	**4.09**	**330**	P	**Pn**	**00 41 51.4**	**+0.7**
	SNR=7.6						
EKS2	**Erkin-Say**	**4.25**	**320**	P	**Pn**	**00 41 53.9**	**+0.9**
	SNR=6.2						
KK31	**Karatay Array**	**6.39**	**307**	⇑Pn	**Pn**	**00 42 21.2**	**-1.1**
	0.2nm,0.3s,baz=0.0,slow=0.1,SNR=5.2						
KK31				Pg	**Pn**	**00 42 39.5**	**+17**
	4.5nm,0.7s,baz=130,slow=17,SNR=14						
KK31				⇑Lg		00 43 56.6	
	11nm,0.8s,baz=125,slow=29,SNR=3.5						
CHCP	**Chirah Chowk**	**6.73**	**212**	P	**Pn**	**00 42 28.6**	**+1.6**
CEP	**Cherat**	**7.21**	**220**	P	**Pn**	**00 42 33.0**	**-0.6**
CEP				S	**Sn**	**00 43 53.0**	**-1.1**
MKAR	**Makanchi Array**	**8.11**	**24**	Pn	**Pn**	**00 42 44.2**	**-1.6**
	0.1nm,0.3s,baz=207,slow=12,SNR=3.5						
MKAR				Lg		00 45 05.3	
	0.2nm,0.3s,baz=214,slow=26,SNR=3.6						
KURBB	**Kurchatov Arra**	**11.17**	**3**	⇓Lg		00 46 45.4	
	2.6nm,1.5s						
KURK	**Kurchatov**	**11.27**	**4**	⇓Lg		00 46 48.3	
	11nm,1.1s						
KURK	**Kurchatov**	**11.27**	**4**	Pn	**Pn**	**00 43 24.8**	**-4.2**
	0.0nm,0.3s,baz=186,slow=12,SNR=2.8						
KURK				Lg		00 46 39.2	
	0.1nm,0.3s,baz=191,slow=29,SNR=6.3						
BVAR	**Borovoye Array**	**14.41**	**342**	Pn	**Pn**	**00 44 09.0**	**-2.6**
	0.1nm,0.3s,baz=163,slow=10,SNR=3.6						
BVAR				Lg		00 48 23.8	
	0.2nm,0.3s,baz=160,slow=21,SNR=4.4						
MLR	**Muntele Rosu**	**37.95**	**296**	P	**P**	**00 48 04.5**	**+1.4**
	2.1nm,0.8s,mb3.9,baz=78,slow=12,SNR=3.0						
ARCES	**ARCESS Array B**	**40.51**	**335**	P	**P**	**00 48 24.2**	**+0.1**
	13nm,1.2s,mb4.4,baz=99,slow=9.2,SNR=6.2						
NOA	**NORSAR Array B**	**45.20**	**321**	P	**P**	**00 49 01.8**	**-0.4**
	0.3nm,0.5s,mb3.4,baz=79,slow=7.4,SNR=2.8						
GERES	**GERESS Array B**	**45.49**	**304**	P	**P**	**00 49 05.3**	**+0.7**
	0.5nm,0.7s,mb3.4,baz=64,slow=9.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**70.86**	**271**	P	**P**	**00 52 01.5**	**-0.8**
	0.2nm,0.6s,mb3.3,baz=50,slow=6.2,SNR=4.1						

ISCJB ***24*** *00:45:26.7±1.6, 34N±0.1×1227E±0.2, h557km±21km, mb4.3/19, Error ellipse: s-maj=38.5km s-min=8.0km az=149.0*
IDC ***24*** *00:45:28.7±1.6, 331N×12246E, h562km±19km, mb3.3/9, mb1 3.5/10, mb1mx3.2/22, mbtmp3.4/10, Error ellipse: s-maj=79.1km s-min=8.9km az=65.0*
NEIC ***24*** *00:45:28.2±1.2, 334N×12247E, h558km±15km, mb4.5/3, Error ellipse: s-maj=37.0km s-min=7.3km az=63.0*

ISC 24 00:45:27.9±1.5, 34N±01×1226E±02, h551km±18km, n29, σ0§53/29, mb4.3/19, 1C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**6.91**	**293**	*e*P	**P**	**00 47 14.4**	**-0.7**
BATI	**Baumata**	**13.55**	**176**	P	**P**	**00 48 22.8**	**+0.3**
	12nm,0.3s,baz=296,slow=4.5,SNR=

SSV	**Crater Summit**	**0.84**	**285**↓	*e*P	Pn	01 10 34.0 +1.7
SSV				*e*S	Sn	01 10 46.0 +2.3
SVV	**Soufriere Volc**	**0.86**	**284**↑	*e*P	Pn	01 10 34.1 +1.6
SVV				*e*S	Sn	01 10 46.1 +1.9
FCV	**Fort Charlotte**	**0.87**	**273**	*e*P	Pn	01 10 33.8 +1.2
FCV				*e*S	Sn	01 10 45.7 +1.4
SLPE	**Piton Saint Es**	**0.96**	**320**	*e*P	Pn	01 10 35.7 +1.8
SLPE				*e*S	Sn	01 10 48.5 +2.0
GRIC	**Isle de Caille**	**1.45**	**236**↑	*e*P	Pn	01 10 42.6 +2.1
GRIC				*e*S	Sn	01 11 01.0 +2.6
GRSS	**Sisters**	**1.47**	**237**	*e*P	Pn	01 10 42.3 +1.7
GRSS				*e*S	Sn	01 11 00.3 +1.6
GRHS	**Sauteurs**	**1.53**	**235**	*e*P	Pn	01 10 42.7 +1.2
GRHS				*e*S	Sn	01 11 02.6 +2.3
MVM	**Montagne Vaucl**	**1.53**	**340**	*e*P	Pn	01 10 42.1 +0.5
BIM	**Bigot**	**1.56**	**334**	*e*P	Pn	01 10 42.9 +0.8
GRW	**Mount Saint Ca**	**1.58**	**234**	*e*P	Pn	01 10 44.0 +1.7
GRW				*e*S	Sn	01 11 04.2 +2.6
FDF	**Fort de France**	**1.79**	**335**	*e*P	Pn	01 10 47.0 +1.8
FDF				*e*S	Sn	01 11 08.6 +1.8
TPR	**Prospect**	**1.95**	**192**	*e*P	Pn	01 10 48.8 +1.4
TPR				*e*S	Sn	01 11 10.0 -0.7
TRN	**Trinidad (W)**	**2.65**	**203**	*e*P	Pn	01 10 58.0 +1.1
TRN				*e*S	Sn	01 11 28.4 +0.6

IDC ***24*** *01:32:13.7±2.5,2642N×9685E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.5/23,mbtmp3.7/5,Error ellipse: s-maj=257.5km s-min=20.2km az=60.0*

ISCJB ***24*** *01:32:26.9±3.3,261N±02×960E±03,h145km±37km, mb3.5/5,Error ellipse: s-maj=48.8km s-min=18.2km az=149.1*

ISC 24 01:32:26.9±3.4,**262N**±02×**961E**±03,**h122**km±38km**,n7,** σ0§**63**/9,**mb3.5**/5,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.44**	**235**	*e*P	**Pn**	**01 33 05.0**	**-1.0**
IMP				*e*S	**Sn**	**01 33 37.0**	**+1.0**
SHL	**Shillong**	**3.88**	**262**	*e*PN	**Pn**	**01 33 25.5**	**+0.6**
SHL				*e*SN	**Sn**	**01 34 09.0**	**-0.8**
MKAR	**Makanchi Array**	**23.30**	**335**	P	**P**	**01 37 24.4**	**+0.7**
	0.9nm,0.5s,mb3.4,baz=140,slow=9.6,SNR=25						
KURK	**Kurchatov**	**27.91**	**336**	P	**P**	**01 38 05.1**	**-0.1**
	0.3nm,0.3s,mb3.3,baz=149,slow=8.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**28.96**	**346**	P	**P**	**01 38 14.2**	**-0.2**
	0.5nm,0.4s,mb3.5,baz=162,slow=9.8,SNR=4.2						
WRA	**Warramunga Arr**	**58.99**	**137**	P	**P**	**01 42 13.5**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=326,slow=7.4,SNR=5.5						
ASAR	**Alice Springs**	**61.59**	**140**	P	**P**	**01 42 31.5**	**+0.1**
	0.2nm,0.4s,mb3.5,baz=326,slow=7.3,SNR=7.0						

ISCJB ***24*** *01:39:39.8±0.6,3836N±005×10569E±009,h10km, mb3.4/5,Error ellipse: s-maj=11.3km s-min=5.4km az=31.3*

IDC ***24*** *01:39:41.2±1.1,3847N×10601E,h0km,mb3.4/5, mb1 3.5/7,mb1mx3.4/24,mbtmp3.4/7,ML3.2/1,Error ellipse: s-maj=42.4km s-min=17.0km az=63.0*

BJI ***24*** *01:39:42.0,3864N×10561E,h17km,ML3.6*

ISC 24 01:39:42.0±0.5,**3829N**±004×**10582E**±006,**h10**km**,n12,** σ1§**21**/20,**mb3.4**/5,**Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**2.70**	**216**	P	**Pn**	**01 40 30.1**	**+4.6**
LZH				PG	**Pg**	**01 40 32.9**	**-0.9**
LZH				SG	**Sg**	**01 41 08.8**	**-0.1**
LZH				Smax			
	comp=N,427nm,0.7s						
LZH				Smax			
	comp=E,213nm,0.8s						
BTO	**Baotou**	**3.99**	**53**	*e*P	**Pn**	**01 40 44.9**	**+1.7**
BTO				S	**Sn**	**01 41 29.8**	**-0.2**
BTO				Smax			
	comp=E,11nm,0.4s						
BTO				Smax			
	comp=N,18nm,0.5s						
GTA	**Gaotai**	**4.82**	**285**	PG	**Pg**	**01 41 05.8**	**-8.5**
GTA				SG	**Sg**	**01 42 04.8**	**-12**
GTA				Smax			
	comp=N,73nm,0.7s						
GTA				Smax			
	comp=E,55nm,0.8s						
XAN	**Xi'an**	**4.93**	**148**	PG	**Pg**	**01 41 13.1**	**-3.3**
XAN				S	**Sn**	**01 42 06.9**	**+14**
XAN				SG	**Sg**	**01 42 19.5**	**-0.7**
XAN				Smax			
	comp=N,25nm,0.7s						
XAN				Smax			
	comp=E,20nm,0.8s						
HHC	**Hu-ho-hao-te**	**5.12**	**58**	*e*PG	**Pg**	**01 41 11.6**	**-8.5**
HHC				SG	**Sg**	**01 42 16.6**	**-10**
HHC				Smax			
	comp=N,64nm,0.2s						
HHC				Smax			
	comp=E,83nm,0.3s						
SONM	**Songino Array**	**9.55**	**2**	Pn	**Pn**	**01 41 58.6**	**-0.8**
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=4.1						
SONM				Sn	**Sn**	**01 43 45.2**	**-1.6**
	comp=E,0.3nm,0.3s,baz=183,slow=22,SNR=3.6						
SONM				Lg		01 44 37.6	
	comp=E,0.6nm,0.3s,baz=183,slow=27,SNR=7.9						
MKAR	**Makanchi Array**	**19.25**	**304**	P	**Pn**	**01 44 07.2**	**-0.2**
	baz=105,slow=9.1,SNR=2.4						
ZALV	**Zalesovo Beam**	**21.25**	**324**	P	**P**	**01 44 27.0**	**-1.0**
	comp=E,1.9nm,0.6s,mb3.6,baz=119,slow=11,SNR=9.7						
KURK	**Kurchatov**	**22.89**	**312**	P	**P**	**01 44 47.5**	**+1.9**
	comp=E,0.4nm,0.4s,mb3.2,baz=114,slow=11,SNR=5.2						
BVAR	**Borovoye Array**	**28.47**	**313**	P	**P**	**01 45 37.5**	**+0.6**
	comp=E,0.3nm,0.5s,mb3.2,baz=107,slow=9.2,SNR=3.0						
WRA	**Warramunga Arr**	**63.82**	**150**	P	**P**	**01 50 16.5**	**+2.1**
	comp=E,0.3nm,0.7s,mb3.4,baz=340,slow=7.1,SNR=2.4						
ASAR	**Alice Springs**	**67.03**	**152**	P	**P**	**01 50 36.0**	**+0.8**
	comp=E,0.3nm,0.5s,mb3.6,baz=335,slow=6.3,SNR=5.5						

ISCJB ***24*** *01:50:25.1±0.5,3808N±003×2277E±005,h10km,Error ellipse: s-maj=5.6km s-min=3.3km az=151.1*

THE ***24*** *01:50:25.6,3810N×2280E,h11km±1km,ML2.7/1,Error ellipse: s-maj=2.5km s-min=0.7km az=86.0*

NEIC ***24*** *01:50:25.4,3806N×2280E,h31km,ML2.7(ATH),After ATH.*

ATH ***24*** *01:50:25.4,3806N×2280E,h31km±2km,ML2.7*

CSEM ***24*** *01:50:25.2±0.1,3812N×2276E,h12km,ML2.7/1,Error ellipse: s-maj=3.6km s-min=2.3km az=65.0*

ISC 24 01:50:25.5±0.8,**3808N**±003×**2277E**±007,**h14**km±6km**,n21,** σ0§**64**/30,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.16**	**111**	P	**Pg**	**01 50 28.8**	**-0.7**
LTK				S	**Sg**	**01 50 31.8**	**-0.5**
LKR	**Lokris**	**0.60**	**17**	P	**Pg**	**01 50 35.8**	**-1.4**
LKR				S	**Sg**	**01 50 45.9**	**+0.8**
LKR	**Lokris**	**0.60**	**17**	*e*PN	**Pg**	**01 50 37.5**	**+0.3**
LKR				*e*SN	**Sg**	**01 50 47.6**	**+2.5**
LKR	**Lokris**	**0.60**	**17**	*e*Pb	**Pg**	**01 50 36.5**	**-0.7**
LKR				*e*Sn	**Sg**	**01 50 47.6**	**+2.5**
NAIG	**Nisos Aigina**	**0.65**	**119**	*e*PN	**Pg**	**01 50 38.0**	**-0.2**
NAIG				*e*SN	**Sg**	**01 50 48.0**	**+1.2**
DID	**Didima**	**0.68**	**147**	P	**Pg**	**01 50 38.2**	**-0.6**
DID				S	**Sg**	**01 50 48.2**	**+0.4**
ATH	**Athens Observa**	**0.75**	**98**	*e*PN	**Pg**	**01 50 40.7**	**+0.5**
ATH				*e*SN	**Sg**	**01 50 49.9**	**-0.2**
PTL	**Penteli**	**0.86**	**92**	*e*PN	**Pg**	**01 50 42.0**	**-0.2**
AGG	**Agios Georgios**	**1.00**	**340**	P	**Pb**	**01 50 44.1**	**-0.5**
AGG				S	**Sb**	**01 50 57.9**	**+0.2**
ITM	**Ithomi**	**1.12**	**217**	*e*PN	**Pn**	**01 50 46.3**	**-0.5**
EVR	**Evrytania**	**1.13**	**318**	*e*PN	**Pn**	**01 50 47.5**	**+0.7**
NEO	**Neokhori**	**1.27**	**16**	*e*PN	**Pn**	**01 50 48.8**	**-0.1**
XOR	**Xorichti**	**1.32**	**14**	P	**Pn**	**01 50 49.1**	**-0.5**
XOR				S	**Sb**	**01 51 06.7**	**-0.3**
VLI	**Veliai**	**1.37**	**174**	*e*PN	**Pn**	**01 50 50.5**	**+0.3**
AOS	**Alonnisos**	**1.39**	**38**	P	**Pn**	**01 50 49.7**	**-0.8**
PYL	**PYLOS**	**1.44**	**215**	P	**Pn**	**01 50 51.8**	**+0.6**
THL	**Klokotos Trika**	**1.59**	**338**	P	**Pn**	**01 50 53.5**	**+0.2**
THL	**Klokotos Trika**	**1.59**	**338**	*e*PN	**Pn**	**01 50 53.8**	**+0.5**
THL	**Klokotos Trika**	**1.59**	**338**	P	**Pn**	**01 50 53.5**	**+0.2**
THL	**Klokotos Trika**	**1.59**	**338**	*e*Pn	**Pn**	**01 50 53.8**	**+0.5**
APE	**Apeiranthos**	**2.41**	**114**	P	**Pn**	**01 51 04.4**	**-0.1**

NEIC ***24*** *02:19:17.1±1.1,631S×130.14E,h35km,mb4.1/1,Error ellipse: s-maj=34.2km s-min=12.8km az=69.0*

IDC ***24*** *02:09:23.3±12.0,658S×13007E,h99km±120km,mb3.7/2, mb1 3.9/4,mb1mx3.5/15,mbtmp3.8/4,ML4.2/2,Error ellipse: s-maj=200.2km s-min=40.3km az=62.0*

ISCJB ***24*** *02:09:29.2±2.9,70S±01×1299E±01,h174km±31km, mb3.9/2,Error ellipse: s-maj=19.8km s-min=14.4km az=40.8*

ISC 24 02:09:24.9±4.9,**67S**±02×**1301E**±01,**h113**km±52km**,n13,** σ1§**15**/14,**mb3.9**/2,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**13.77**	**163**	*e*Pn	**Pn**	**02 12 36.1**	**+0.7**
	6.8nm,0.8s						
WRAB	**Tennant Creek**	**13.77**	**163**	P	**Sn**	**02 15 04.4**	**-2.8**
	23nm,0.8s						
WRA	**Warramunga Arr**	**13.77**	**163**	P	**Pn**	**02 12 34.9**	**-0.5**
	1.0nm,0.3s,baz=343,slow=13,SNR=12						
WRA				S	**Sn**	**02 15 02.4**	**-5.0**
	1.9nm,0.3s,baz=332,slow=22,SNR=9.0						
WB2	**Warramunga Arr**	**13.78**	**163**	*e*P	**Pn**	**02 12 34.7**	**-0.8**
WB2				*e*S	Sx	02 14 56.9	
WB2	**Warramunga Arr**	**13.78**	**163**	*e*Pn	**Pn**	**02 12 35.2**	**-0.4**
COEN	**Coen**	**14.76**	**120**	*e*P	**Pn**	**02 12 52.8**	**+4.6**
	12nm,1.4s						
COEN	**Coen**	**14.76**	**120**	P	**Sn**	**02 15 31.8**	**+0.5**
	6.2nm,1.0s						
ASAR	**Alice Springs**	**17.24**	**168**	P	**Pn**	**02 13 21.3**	**+2.6**
	1.3nm,0.3s,baz=351,slow=11,SNR=106						
ASAR				S	Sx	02 16 22.6	
	0.2nm,0.3s,baz=339,slow=21,SNR=5.3						
MBWA	**Marble Bar**	**17.48**	**214**	*e*P	**Pn**	**02 13 22.6**	**+1.0**
	33nm,2.1s						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**02 14 59.0**	**+0.6**
	1.4nm,0.6s,mb3.6,baz=339,slow=9.4,SNR=3.5						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**02 14 59.0**	**+0.6**
MK31	**Makanchi Array**	**68.03**	**327**	*e*P	**P**	**02 20 11.4**	**-0.7**
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**02 20 11.4**	**-0.7**
	1.5nm,0.5s,mb4.1,baz=122,slow=8.1,SNR=26						

NEIC ***24*** *02:14:52.3±2.1,802S×11137E,h75km±24km,mb3.9/3, Error ellipse: s-maj=24.0km s-min=8.6km az=221.0*

IDC ***24*** *02:14:54.4±10.0,800S×11140E,h95km±90km,mb3.8/7, mb1 4.0/7,mb1mx3.7/17,mbtmp3.8/7,MS2.7/1,Ms1 2.7/1, ms1mx2.5/21,Error ellipse: s-maj=72.6km s-min=16.8km az=62.0*

ISCJB ***24*** *02:14:55.7±0.4,813S±01×11144E±006,h124km±5km, mb4.0/9,Error ellipse: s-maj=19.5km s-min=7.2km az=20.5*

DJA ***24*** *02:14:57,827S×11139E,h87km,MLv4.5/11*

ISC 24 02:14:56.7±0.4,**81S**±01×**11143E**±006,**h115**km±5km**,n35,** σ0§**81**/33,**mb4.0**/9,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJI	**Sawahan**	**0.50**	**42**	P	**Pn**	**02 15 14.2**	**+0.1**
SJI	**Sawahan**	**0.50**	**42**	P	**Pn**	**02 15 14.3**	**+0.2**
UGM	**Wanagama**	**0.92**	**282**	P	**Pn**	**02 15 15.9**	**-1.6**
KRKI	**Karangkates**	**1.02**	**93**	P	**Pn**	**02 15 18.7**	**+0.2**
SMRI	**Semarang**	**1.44**	**317**	P	**Pn**	**02 15 23.3**	**+0.2**
BJII	**Banjamegara**	**1.87**	**294**	P	**Pn**	**02 15 28.3**	**0.0**
BJII	**Banjamegara**	**1.87**	**294**	P	**Pn**	**02 15 28.2**	**-0.1**
CLJI	**Cilicap**	**2.42**	**279**	P	**Pn**	**02 15 35.0**	**-0.3**
NBBI	**Negara**	**3.17**	**95**	P	**Pn**	**02 15 45.8**	**+0.7**
IGBI	**Denpasar**	**3.75**	**101**	P	**Pn**	**02 15 52.7**	**-0.1**
LEM	**Lembang**	**3.99**	**288**	P	**Pn**	**02 15 56.6**	**+0.6**
LEM	**Lembang**	**3.99**	**288**	P	**Pn**	**02 15 57.7**	**+1.7**
	147nm,1.1s,3μm						
KHKI	**Kahang-Kahang**	**4.15**	**94**	P	**Pn**	**02 15 57.6**	**-0.6**
CBJI	**Citeko**	**4.84**	**290**	P	**Pn**	**02 16 08.7**	**+1.2**
	557nm,0.6s						
DBJI	**Dramaga**	**4.89**	**288**	P	**Pn**	**02 16 08.6**	**+0.4**
DBJI	**Dramaga**	**4.89**	**288**	P	**Pn**	**02 16 08.5**	**+0.3**
	121nm,1.1s						
XMIS	**Christmas Isla**	**6.17**	**247**	*e*Pn	**Pn**	**02 16 20.9**	**-4.5**
KAPI	**Kappang**	**8.82**	**70**	LR	LR	02 22 00.9	
	comp=Z,48nm,18.6s,baz=120,slow=48						
MBWA	**Marble Bar**	**15.25**	**149**	*e*Pn	**Pn**	**02 18 24.0**	**-2.0**
	9.0nm,1.0s						
KAKA	**Kakadu**	**21.16**	**104**	*e*P	Px	02 19 18.8	
	6.1nm,0.5s						
WRA	**Warramunga Arr**	**25.11**	**120**	P	**P**	**02 20 11.0**	**-0.1**
	8.1nm,0.6s,mb4.3,baz=294,slow=11,SNR=21						
WRA				PcP	PcP	02 23 42.2	-0.4
	0.4nm,0.4s,baz=312,slow=2.1,SNR=2.8						
WRAB	**Tennant Creek**	**25.11**	**120**	*e*P	**P**	**02 20 11.3**	**+0.2**
	6.7nm,0.5s,mb4.3						
WB2	**Warramunga Arr**	**25.12**	**120**	*e*P	**P**	**02 20 10.5**	**-0.6**
WB2	**Warramunga Arr**	**25.12**	**120**	*e*P	**P**	**02 20 11.3**	**+0.2**
ASAR	**Alice Springs**	**26.52**	**128**	P	**P**	**02 20 23.8**	**+0.1**
	3.4nm,0.4s,mb4.2,baz=303,slow=8.3,SNR=21						
ASAR				PcP	PcP	02 23 45.8	0.0
	0.7nm,0.5s,baz=302,slow=1.9,SNR=7.0						
COEN	**Coen**	**31.68**	**103**	*e*P	**P**	**02 21 10.2**	**+0.6**
CTA	**Charters Tower**	**35.73**	**113**	*e*P	**P**	**02 21 45.8**	**+1.1**
	2.8nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**36.69**	**134**	*e*P	**P**	**02 21 53.2**	**+0.6**
	3.6nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**36.69**	**134**	P	**P**	**02 21 53.2**	**+0.6**
	3.9nm,0.5s,mb4.6,baz=314,slow=8.4,SNR=17						
STKA				PcP	PcP	02 24 13.0	-0.1
	1.0nm,0.4s,baz=359,slow=7.7,SNR=3.9						
STKA	**Stephens Creek**	**36.69**	**134**	*e*P	**P**	**02 21 53.5**	**+0.9**
	0.7nm,0.9s,mb3.6						
STKA				*e*PcP	PcP	02 24 13.3	+0.2
SONM	**Songino Array**	**55.87**	**356**	P	**P**	**02 24 22.2**	**-0.1**
	0.2nm,0.3s,mb3.6,baz=171,slow=9.2,SNR=4.0						
MKAR	**Makanchi Array**	**60.50**	**337**	P	**P**	**02 24 53.4**	**-1.2**
	0.5nm,0.4s,mb3.9,baz=155,slow=7.5,SNR=10						
ZALV	**Zalesovo Beam**	**65.78**	**343**	P	**P**	**02 25 28.0**	**-1.3**
	0.6nm,0.4s,mb3.8,baz=142,slow=7.3,SNR=2.6						
VNDA	**Vanda**	**74.10**	**170**	P	**P**	**02 26 20.5**	**+0.6**
	0.5nm,0.5s,mb3.5,baz=316,slow=5.8,SNR=6.0						
VNDA	**Vanda**	**74.10**	**170**	P	**P**	**02 26 20.5**	**+0.6**

ISCJB ***24*** *02:53:41.9±0.5,4058N±003×3061E±003,h10km,Error ellipse: s-maj=5.0km s-min=3.7km az=162.3*

CSEM ***24*** *02:53:41.2±0.1,4055N×3061E,h5km,MD2.7,Error ellipse: s-maj=1.2km s-min=0.8km az=179.0*

ISK ***24*** *02:53:41.4,4055N×3062E,h7km,MD2.7*

DDA ***24*** *02:53:42.3,4056N×3065E,h7km±4km,Md2.7*

ISC 24 02:53:42.3±0.6,**4057N**±003×**3062E**±003,**h13**km±13km**, n13,** σ0§**93**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GULT	**Gulveren**	**0.16**	**211**	*e*PG	**Pg**	**02 53 45.0**	**-1.0**
GULT				*e*SG	**Sg**	**02 53 47.1**	**-1.5**
HENT	**Hendek**	**0.33**	**40**	*i* P	**Pg**	**02 53 49.1**	**+0.1**
HENT				*i* S	**Sg**	**02 53 54.0**	**+0.4**
EYL	**Eskiyayla**	**0.35**	**270**	*e*PG	**Pg**	**02 53 49.3**	**-0.1**
EYL				*e*SG	**Sg**	**02 53 55.0**	**+0.9**
GPA	**Golpazari**	**0.37**	**220**	*e*PG	**Pg**	**02 53 48.7**	**-0.9**
GPA				*e*SG	**Sg**	**02 53 54.0**	**-0.5**
MDU	**Mudurnu**	**0.46**	**103**	*e*PG	**Pg**	**02 53 50.9**	**-0.5**
MDU				*e*SG	**Sg**	**02 53 57.7**	**+0.1**
ADVT	**Abdulvahap**	**0.69**	**259**	*e*PG	**Pg**	**02 53 54.9**	**-0.7**
ADVT				*e*SG	**Sg**	**02 54 04.8**	**+0.1**
BORA	**Eskisehir**	**0.70**	**191**	*i* P	**Pg**	**02 53 54.5**	**-1.3**
BORA				*i* S	**Sg**	**02 54 08.3**	**+3.2**
HRT	**Hereke**	**0.77**	**290**	*e*PG	**Pg**	**02 53 56.4**	**-0.7**
YLV	**Yalova**	**0.95**	**270**	*e*PG	**Pg**	**02 53 59.9**	**-0.8**
ESKT	**Eskisehir**	**1.06**	**170**	*i* P	**Pg**	**02 54 02.4**	**-0.4**
ESKT				*i* S	**Sg**	**02 54 18.2**	**+1.6**
SEYT	**Eskypehyr**	**1.06**	**170**	*i* P	**Pg**	**02 54 02.4**	**-0.3**
SEYT				*i* S	**Sg**	**02 54 18.2**	**+1.6**
ULDT	**Uludag**	**1.21**	**250**	*i* P	**Pg**	**02 54 06.0**	**+0.4**
ULDT				*i* S	**Sg**	**02 54 23.4**	**+2.0**
ISK	**Istanbul-Kandi**	**1.28**	**293**	*e*PN	**Pn**	**02 54 05.6**	**-0.3**

CSEM ***24*** *03:06:57.9±0.2,3692N×2934E,h6km±1km,MD2.9,Error ellipse: s-maj=4.2km s-min=2.1km az=157.0*

ISCJB ***24*** *03:06:58.4±0.8,3689N±004×2934E±004,h2km±5km, Error ellipse: s-maj=6.8km s-min=4.5km az=149.0*

ISK ***24*** *03:06:58.6,3694N×2932E,h6km,MD2.9*

DDA ***24*** *03:06:58.7,3691N×2931E,h1km±1km,Md2.9*

ISC 24 03:06:58.9±0.8,**3688N**±004×**2935E**±004,**h3**km±5km**,n17,** σ0§**88**/29,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.39**	**25**	*i* P	**Pg**	**03 07 06.6**	**+0.2**
GOLH				*i* S	**Sg**	**03 07 13.7**	**+2.2**
GOLH	**Golhisar**	**0.39**	**25**	*i* P	**Pg**	**03 07 06.5**	**+0.2**
GOLH				*i* S	**Sg**	**03 07 13.4**	**+2.0**
DALT	**Dalyan (Mudla)**	**0.58**	**259**	*e*PG	**Pg**	**03 07 09.3**	**-0.8**
DALT				*e*SG	**Sg**	**03 07 18.5**	**+0.9**
TURN	**Turunc**	**0.60**	**269**	*i* P	Px	03 07 14.8	
TURN				*i* S	Sx	03 07 30.2	
AKAS	**Kas**	**0.68**	**162**	*i* P	**Pg**	**03 07 13.0**	**+1.2**
AKAS				*i* S	**Sg**	**03 07 26.3**	**+5.7**
YER	**Yerkesik**	**0.89**	**287**	*e*PG	**Pg**	**03 07 15.3**	**-0.7**
YER				*e*SG	**Sg**	**03 07 27.5**	**0.0**
DENT	**Denizli**	**0.91**	**344**	*e*PG	**Pg**	**03 07 15.2**	**-1.0**
DENT				*e*SG	**Sg**	**03 07 27.2**	**-0.8**
BCK	**Bucak**	**1.14**	**59**	*e*PN	**Pn**	**03 07 20.7**	**-1.0**
BCK				*e*SN	**Sn**	**03 07 36.9**	**-1.0**
MLSB	**Milas**	**1.33**	**289**	*e*PN	**Pn**	**03 07 23.4**	**-0.8**
MLSB				*e*SN	**Sn**	**03 07 41.7**	**-0.7**
DAT	**Datca**	**1.43**	**264**	*e*PN	**Pn**	**03 07 25.5**	**-0.2**
DAT				*e*SN	**Sn**	**03 07 45.0**	**0.0**
KHAL	**Karahalli**	**1.49**	**4**	*i* P	**Pn**	**03 07 26.7**	**+0.2**
KHAL				*i* S	**Sn**	**03 07 47.5**	**+1.0**
BDRM	**Kayabasi**	**1.54**	**277**	*i* P	**Pn**	**03 07 27.0**	**-0.1**
BDRM				*i* S	**Sn**	**03 07 49.7**	**+2.0**
BDRM	**Kayabasi**	**1.54**	**277**	*i* P	**Pn**	**03 07 27.5**	**+0.3**
BDRM				*i* S	**Sn**	**03 07 49.6**	**+2.0**
BDRM	**Kayabasi**	**1.54**	**277**	*i* P	**Pn**	**03 07 27.5**	**+0.3**
MANT	**Manisa**	**1.72**	**339**	*i* P	**Pn**	**03 07 29.5**	**-0.2**
MANT				*i* S	**Sn**	**03 07 53.2**	**+0.9**
AKS	**Akhisar**	**2.33**	**329**	*e*PN	**Pn**	**03 07 37.6**	**-0.5**
BLCB	**Balcova**	**2.37**	**310**	*e*PN	**Pn**	**03 07 38.2**	**-0.4**

IDC ***24*** *03:28:46.6±3.6,1246N×8739W,h0km,mb3.9/4,mb1 4.2/5, mb1mx3.8/21,mbtmp3.9/5,ML3.4/1,Error ellipse: s-maj=64.7km s-min=41.5km az=176.0*

ISCJB ***24*** *03:28:55.1±0.9,1254N±007×8775W±009,h74km±9km, mb3.8/4,Error ellipse: s-maj=17.3km s-min=6.3km az=146.3*

CASC ***24*** *03:28:55.2±2.0,1251N×8781W,h56km±20km,MD4.1, ML3.5*

NEIC ***24*** *03:28:56.3±0.8,1258N×8763W,h72km±9km, MD4.3(CASC),Error ellipse: s-maj=17.4km s-min=8.4km az=50.0*

ISC 24 03:28:55.6±0.7,**1255N**±006×**8779W**±007,**h65**km±9km**,n43,** σ1§**08**/42,**mb3.9**/4,**9C-13D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.72**	**356**↓	*e*P	x	03 29 10.2	
CNCH				*e*S	x	03 29 21.8	
CRIN	**San Cristobal**	**0.73**	**78**↓	*e*P	**Pn**	**03 29 10.5**	**0.0**
CRIN				*e*S	**Sn**	**03 29 23.4**	**+1.9**
TEL3	**Telica 3**	**0.92**	**89**↓	*e*P	**Pn**	**03 29 12.2**	**-0.5**
BLLM	**Bellamira**	**0.99**	**334**	*e*P	x	03 29 13.4	
VSM	**San Miguel**	**0.99**	**331**↓	*e*P	x	03 29 14.2	
VSM				*e*S	x	03 29 28.5	
MIRN	**Miramar**	**1.05**	**96**↓	*e*P	**Pn**	**03 29 13.8**	**-0.7**
CNGN	**Cerro Negro**	**1.06**	**93**	*e*P	**Pn**	**03 29 13.5**	**-1.1**
CNGN				↓*e*P		03 29 13.9	
CNGN				*e*S	**Sn**	**03 29 28.3**	**-0.5**
CNGN				*e*S	**Sn**	**03 29 29.4**	**+0.7**
COPN	**Copaltepe**	**1.22**	**107**↓	*e*P	**Pn**	**03 29 16.0**	**-0.7**
COPN				*e*S	**Sn**	**03 29 31.8**	**-0.7**
MOMN	**Momotombo**	**1.22**	**96**↑	*e*P	**Pn**	**03 29 16.7**	**0.0**
MOMN				*e*S	**Sn**	**03 29 32.5**	**0.0**
CAHU	**Cacacuatique**	**1.28**	**341**↑	*e*P	x	03 29 17.9	
CAHU				*e*S	x	03 29 36.1	
CSAN		**1.38**	**105**↓	*e*P	**Pn**	**03 29 18.7**	**-0.1**
APYN	**Apoyeque**	**1.44**	**102**↑	*e*P	**Pn**	**03 29 19.2**	**-0.4**
SNVI	**San Vicente**	**1.47**	**316**↑	*e*P	x	03 29 19.7	
SNVI				*e*S	x	03 29 37.4	
XAVN	**Gruta Xavier**	**1.48**	**105**↓	*e*P	**Pn**	**03 29 19.8**	**-0.3**
TISN	**Laguna Tiscapa**	**1.54**	**105**↓	*e*P	**Pn**	**03 29 20.6**	**-0.3**
MGAN	**Managua**	**1.56**	**105**↑	*e*P	**Pn**	**03 29 20.7**	**-0.4**
MGAN				*e*S	**Sn**	**03 29 39.3**	**-1.1**
MGAN				AML	AML	03 29 40.5	
	comp=Z,670nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.58**	**18**	*e*Pg	**Pn**	**03 29 22.2**	**+0.7**
TGUH	**Tegucigalpa,Un

ellipse: s-maj=2.3km s-min=1.3km az=29.0
PDG ***24*** *03:36:03.1±0.5, 44.12N×1833E, h1km±1km, MD4.0/10, ML4.0/10, Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
PRU ***24*** *03:36:03.6, 44.00N×1843E, h3km*
IDC ***24*** *03:36:03.1±0.7, 44.05N×18.17E, h0km, mb4.0/9, mb1 4.0/17, mb1mx4.0/30, mbtmp3.9/17, ML4.1/5, MS3.1/10, Ms1 3.1/10, ms1mx2.9/38, Error ellipse: s-maj=12.3km s-min=9.0km az=48.0*
CSEM ***24*** *03:36:03.7±0.0, 44.13N×1838E, h10km, ML3.9/30, Error ellipse: s-maj=1.3km s-min=0.7km az=28.0*
NEIC ***24*** *03:36:04.6±0.2, 44.07N×1820E, h10km, mb3.9/1, ML4.5(THE), ML4.0(PDG), ML3.6(BUC), Error ellipse: s-maj=3.1km s-min=2.1km az=217.0*
NEIC Felt at Visoko.
BEO ***24*** *03:36:04.1±0.3, 44.04N×18.15E, h18km±2km, ML4.0/17*
THE ***24*** *03:36:05.1, 44.05N×1803E, h31km±77km, ML4.5/2, Error ellipse: s-maj=77.9km s-min=4.2km az=0.0*
SOF ***24*** *03:36:08.4, 42.99N×1866E, h2km, MD3.6*
STR ***24*** *03:36:10.0±8.2, 44.27N×1777E, h10km, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
SZGRF ***24*** *03:36:23.4, 44.85N×1684E, h10km, mb3.6, Northwestern Balkan Peninsula*

ISC 24 03:36:04.3±0.3, 44072N±0010×1822E±001, h6km±2km, n382, σ1°27/561, mb4.0/11, MS3.1/4, 49C-30D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
BBLS	**Lazići**	**0.88**	**103**	⇑*i*	**Pg**	**03 36 20.2**	**-1.0**
BBLS				*e*	**Sg**	**03 36 33.9**	**+1.2**
BLY	**Banja Luka**	**1.00**	**313**	⇓*i*	**Pg**	**03 36 22.3**	**-1.2**
BLY				*e*	**Sg**	**03 36 37.5**	**+1.0**
UPM	**Unac-Piva**	**1.00**	**150**	⇑*i*	**Pg**	**03 36 21.7**	**-1.8**
UPM				*e*	**Sg**	**03 36 37.2**	**+0.7**
PLE	**Pljevlja**	**1.13**	**131**	⇑*i*	**Pg**	**03 36 24.0**	**-2.0**
PLE				*i*	**Sg**	**03 36 40.9**	**+0.3**
BRY	**Bratogost**	**1.20**	**168**	⇑*i*	**Pg**	**03 36 24.7**	**-2.5**
BRY				*e*	**Sg**	**03 36 43.8**	**+1.2**
STON	**Ston**	**1.26**	**198**	⇓*i*	**Pg**	**03 36 26.2**	**-2.1**
STON					**Sg**	**03 36 44.5**	**-0.2**
TREB	**Trebinje**	**1.36**	**176**	⇑*i*	**Pg**	**03 36 28.2**	**-2.1**
TREB				*e*	**Sg**	**03 36 46.7**	**-1.2**
NKY	**Niksic**	**1.38**	**155**	⇓*i*	**Pg**	**03 36 28.2**	**-2.5**
NKY				*i*	**Sg**	**03 36 50.5**	**+1.9**
SJES	**Sjenica**	**1.51**	**122**	⇓*i*	**Pg**	**03 36 30.6**	**-2.6**
SJES				*e*	**Sg**	**03 36 52.9**	**+0.1**
SJES	**Sjenica**	**1.51**	**122**	*e*	**Pn**	**03 36 30.3**	**-1.6**
SJES	**Sjenica**	**1.51**	**122**	⇓*i*	**Pg**	**03 36 30.6**	**-2.6**
SJES				*e*	**Sn**	**03 36 50.4**	**-1.5**
FGSL	**Fruska Gora**	**1.57**	**46**	⇑*i*	**Pn**	**03 36 31.7**	**-1.0**
FGSL				*e*	**Sn**	**03 36 53.2**	**-0.2**
FGSL				*e*	**Sg**	**03 36 56.4**	**+1.6**
FGSL	**Fruska Gora**	**1.57**	**46**	⇑*i*	**Pn**	**03 36 31.7**	**-1.0**
FGSL				*e*	**Sn**	**03 36 53.2**	**-0.2**
HCY	**Herceg Novi**	**1.64**	**173**	⇓*i*	**Pn**	**03 36 33.5**	**-0.1**
HCY				*i*	**Sn**	**03 36 59.5**	**+4.6**
BEY	**Berane**	**1.71**	**134**	⇑*i*	**Pn**	**03 36 34.3**	**-0.4**
IVA	**Berane**	**1.71**	**134**	⇑*i*	**Pn**	**03 36 34.3**	**-0.4**
IVA				*e*	**Sn**	**03 37 00.0**	**+3.1**
BEO	**Beograd**	**1.78**	**65**	*e*	**Pn**	**03 36 34.9**	**-0.6**
BEO				*e*	**Sg**	**03 37 02.7**	**+1.4**
PDG	**Podgorica**	**1.81**	**155**	⇓*i*	**Pn**	**03 36 36.1**	**+0.1**
TTG	**Podgorica**	**1.81**	**155**	⇓*i*	**Pn**	**03 36 36.1**	**+0.1**
TTG				*e*	**Sn**	**03 37 03.3**	**+4.1**
GRUS	**Gruza**	**1.81**	**95**	⇑*i*	**Pn**	**03 36 34.7**	**-1.3**
GRUS				*e*	**Sg**	**03 37 02.9**	**+0.4**
RHK3	**Tenkes**	**1.82**	**1**	⇑*e*	**Pn**	**03 36 35.3**	**-0.8**
BUM	**Brajici-Budva**	**1.84**	**164**	⇑*i*	**Pn**	**03 36 37.4**	**+1.0**
BUM				*i*	**Sn**	**03 37 03.9**	**+4.0**
SISC	**Sisak**	**1.92**	**317**	*e*	**Pn**	**03 36 38.0**	**+0.5**
SISC					**Sn**	**03 37 05.4**	**+3.5**
SISC	**Sisak**	**1.92**	**317**	*e*	**Pn**	**03 36 37.9**	**+0.4**
SISC					**Sn**	**03 37 05.4**	**+3.5**
PVY	**Plav**	**1.96**	**138**	*e*	**Pn**	**03 36 38.1**	**+0.1**
PVY				*i*	**Sn**	**03 37 05.7**	**+2.9**
PKSM	**Moragy**	**2.16**	**8**	*e*	**Pn**	**03 36 39.7**	**-1.1**
PKSM				*e*	**Sn**	**03 37 07.3**	**-0.6**
PKSM	**Moragy**	**2.16**	**8**	P	**Pn**	**03 36 39.9**	**-1.0**
PKSM	**Moragy**	**2.16**	**8**	⇓P	**Pn**	**03 36 39.9**	**-1.0**
PKSM				S	**Sn**	**03 37 07.6**	**-0.3**
PKSM	**Moragy**	**2.16**	**8**	*e*	**Pn**	**03 36 39.7**	**-1.1**
PKSM				S	**Sn**	**03 37 07.6**	**-0.3**
PKSM	**Moragy**	**2.16**	**8**	⇓*i*	**Pn**	**03 36 39.8**	**-1.0**
SVIS	**Svilajnac**	**2.17**	**84**	⇑*i*	**Pn**	**03 36 39.5**	**-1.4**
SVIS				*e*	**Sg**	**03 37 15.0**	**+1.1**
BCI	**Bajram Curri**	**2.18**	**141**	*e*	**Pn**	**03 36 41.2**	**+0.2**
ULC	**Ulcinj**	**2.24**	**160**	⇑*i*	**Pn**	**03 36 43.3**	**+1.4**
ULC				*e*	**Sn**	**03 37 13.6**	**+3.8**
PUK	**Puka**	**2.37**	**148**	*e*	**Pn**	**03 36 45.8**	**+2.1**
PUK				*i*	**Sn**	**03 37 15.4**	**+2.3**
NVLJ	**Novalja**	**2.45**	**283**	*e*	**Pn**	**03 36 45.5**	**+0.7**
NVLJ					**Sn**	**03 37 19.7**	**+4.7**
NVLJ	**Novalja**	**2.45**	**283**	*e*	**Pn**	**03 36 45.4**	**+0.6**
NVLJ					**Sn**	**03 37 19.6**	**+4.6**
BOJS	**Bojanci**	**2.55**	**305**	*i*	**Pn**	**03 36 46.7**	**+0.6**
BOJS				*i*		03 36 53.5	
BOJS				*i*	**Sn**	**03 37 19.5**	**+2.4**
TIM	**Timisoara**	**2.71**	**51**	⇓*i*	**Pn**	**03 36 49.6**	**+1.3**
KOGS	**Kog**	**2.75**	**330**	*e*	**Pn**	**03 36 48.3**	**-0.6**
KOGS				*e*	**Sn**	**03 37 22.3**	**-0.2**
BZS	**Buzias**	**2.87**	**56**	⇑*i*	**Pn**	**03 36 49.1**	**-1.4**
BZS				*e*	**Sn**	**03 37 23.2**	**-2.2**
BZS	**Buzias**	**2.87**	**56**	P	**Pn**	**03 36 49.3**	**-1.2**
BZS	**Buzias**	**2.87**	**56**	⇓P	**Pn**	**03 36 49.1**	**-1.4**
BZS				S	**Sn**	**03 37 23.6**	**-1.8**
BZS	**Buzias**	**2.87**	**56**	P	**Pn**	**03 36 49.3**	**-1.2**
BZS				S	**Sn**	**03 37 23.6**	**-1.8**
BZS	**Buzias**	**2.87**	**56**	⇓*i*	**Pn**	**03 36 49.1**	**-1.4**
FGMS	**Monte Sant'Ang**	**2.89**	**216**	P	**Pn**	**03 36 52.1**	**+1.3**
BARS	**Barje**	**2.91**	**114**	⇑*i*	**Pn**	**03 36 50.4**	**-0.6**
BARS				*e*	**Sn**	**03 37 24.4**	**-1.9**
BARS				*e*	**Sg**	**03 37 36.7**	**-0.9**
TIR	**Tirane**	**2.98**	**155**	P	**Pn**	**03 36 52.4**	**+0.3**
TIR	**Tirane**	**2.98**	**155**	*e*	**Pn**	**03 36 53.9**	**+1.8**
TIR				*e*	**Sg**	**03 37 38.1**	**-1.9**
TIR	**Tirane**	**2.98**	**155**	*e*	**PN**	**03 36 54.3**	**+2.2**
TIR				*i*	**Sn**	**03 37 32.9**	**+4.8**
TIR	**Tirane**	**2.98**	**155**	P		**03 36 52.4**	**+0.3**
TIR	**Tirane**	**2.98**	**155**	*e*	**Pn**	**03 36 53.9**	**+1.8**
TIR				*e*	**Sg**	**03 37 38.1**	**-1.9**
PKSN	**Nyarlorinc**	**3.06**	**22**	*e*	**Pn**	**03 36 51.2**	**-1.9**
RGNG	**Rignano Grg**	**3.08**	**220**	Pn	**Pn**	**03 36 53.1**	**-0.3**
DJES	**Djerdap**	**3.14**	**78**	*e*	**Pn**	**03 36 54.1**	**-0.2**
SKO	**Skopje**	**3.16**	**130**	P	**Pn**	**03 36 54.9**	**+0.4**
SKO	**Skopje**	**3.16**	**130**	*e*	**Pn**	**03 36 54.3**	**-0.2**
SKO				*e*	**Sg**	**03 37 43.3**	**-2.5**
SKO	**Skopje**	**3.16**	**130**	*e*	**P**	**03 36 54.5**	**0.0**
SKO				*e*	**Sg**	**03 37 47.6**	**+1.8**
CEY	**Cerknica**	**3.17**	**303**	*e*	**Pn**	**03 36 53.9**	**-0.7**
CEY				*e*	**Sn**	**03 37 31.4**	**-1.3**
FG2	**Serracapriola**	**3.19**	**226**	Pn	**Pn**	**03 36 54.7**	**-0.2**
ZAVS	**Zavodnje**	**3.27**	**317**	⇑*i*	**Pn**	**03 36 56.5**	**+0.5**
LJU	**Ljubljana**	**3.27**	**308**	*i*	**Pn**	**03 36 57.0**	**+0.9**
LJU				*i*		03 37 04.9	
LJU	**Ljubljana**	**3.27**	**308**	*i*	**Pn**	**03 36 57.0**	**+0.9**
LJU				*i*		03 37 04.9	
LJU				*e*		03 37 07.5	
LJU				*e*	**Sn**	**03 37 47.6**	**-1.8**
LJU	**Ljubljana**	**3.27**	**308**	*i*	**Pn**	**03 36 57.0**	**+0.9**
LJU				*e*	**Sn**	**03 37 34.1**	**-1.2**
ZAPS	**Zavoj**	**3.30**	**102**	⇑*i*	**Pn**	**03 36 56.5**	**0.0**
PE1	**Pezze di Greco**	**3.32**	**190**	*e*	**Pn**	**03 36 56.4**	**-0.3**
PERS	**Pernice**	**3.37**	**321**	*i*	**Pn**	**03 36 57.2**	**-0.2**
PERS				*i*	**Sn**	**03 37 36.1**	**-1.5**
SG1	**Sgolgore (BA)**	**3.42**	**200**	*e*	**Pn**	**03 36 57.8**	**-0.4**
CIGN	**Sant'Elia a Pi**	**3.43**	**226**	Pn	**Pn**	**03 36 58.6**	**+0.4**
SOKA	**Soboth**	**3.44**	**320**	⇑*i*	**Pn**	**03 36 57.9**	**-0.4**
	16nm,0.2s						
SOKA				⇑*e*	**Sn**	**03 37 39.9**	**+0.5**
	36nm,0.4s						
BUD	**Budapest**	**3.46**	**9**	*e*	**Pn**	**03 36 58.3**	**-0.3**
BUD				*e*	**Sg**	**03 37 55.0**	**-0.3**
JAVS	**Javornik**	**3.46**	**303**	*i*	**Pn**	**03 36 59.6**	**+0.9**
GZR	**Gura Zlata**	**3.51**	**66**	P	**Pn**	**03 36 59.3**	**0.0**
GZR	**Gura Zlata**	**3.51**	**66**	P	**Pn**	**03 36 59.3**	**0.0**
GZR	**Gura Zlata**	**3.51**	**66**	⇓*i*	**Pn**	**03 36 59.0**	**-0.3**
OHR	**Ohrid**	**3.52**	**146**	P	**Pn**	**03 36 59.5**	**0.0**
OHR				S	**Sn**	**03 37 42.3**	**+0.9**
OHR	**Ohrid**	**3.52**	**146**	*e*	**Pn**	**03 37 01.5**	**+2.0**
OHR				S	**Sn**	**03 37 42.3**	**+0.9**
OHR	**Ohrid**	**3.52**	**146**	*e*	**Pn**	**03 37 01.5**	**+2.1**
OHR				*e*	**Sn**	**03 37 45.5**	**+4.1**
FG5	**Orsara di Pugl**	**3.54**	**219**	Pn	**Pn**	**03 37 00.0**	**+0.3**
OBKA	**Obir**	**3.56**	**315**	⇑*i*	**Pn**	**03 37 00.7**	**+0.8**
	4.0nm,0.2s,SNR=12						
OBKA				⇑*i*	**Sg**	**03 38 01.7**	**+3.4**
	356nm,0.8s						
OBKA	**Obir**	**3.56**	**315**	Pn	**Pn**	**03 37 00.7**	**+0.8**
	4.0nm,0.2s,SNR=12						
OBKA				Sg	**Sg**	**03 38 01.7**	**+3.3**
	356nm,0.8s						
TRI	**Trieste**	**3.56**	**299**	*e*	**Pn**	**03 37 00.6**	**+0.6**
TRI				*e*	**Sg**	**03 37 54.9**	**-3.7**
TRI	**Trieste**	**3.56**	**299**	*e*	**Pn**	**03 37 00.6**	**+0.6**
TRI				*e*	**Sg**	**03 37 54.9**	**-3.7**
VOY	**Vojsko**	**3.64**	**304**	*e*	**Pn**	**03 37 01.5**	**+0.4**
VOY				*e*		03 37 11.8	
VOY				*e*	**Sg**	**03 38 03.0**	**+2.0**
ARSA	**Arzberg**	**3.70**	**330**	⇓*i*	**Pn**	**03 37 01.9**	**-0.1**
	45nm,0.5s,SNR=174						
ARSA				⇑*i*	**Sn**	**03 37 46.3**	**+0.5**
	91nm,0.7s						
ARSA	**Arzberg**	**3.70**	**330**	⇑*i*	**Pn**	**03 37 01.6**	**-0.3**
ARSA				*e*	**Sn**	**03 37 42.5**	**-3.3**
ARSA				*e*	**Sg**	**03 38 00.7**	**-2.2**
ARSA	**Arzberg**	**3.70**	**330**	*e*	**Pn**	**03 37 01.6**	**-0.3**
ARSA				*e*	**Sn**	**03 37 46.2**	**+0.4**
CING	**Cingoli**	**3.71**	**261**	Pn	**Pn**	**03 37 02.4**	**+0.4**
STIP	**Stip**	**3.76**	**128**	P	**Pn**	**03 37 01.8**	**-1.0**
STIP	**Stip**	**3.76**	**128**	*e*	**Pn**	**03 37 01.1**	**-1.7**
STIP				*e*	**Sn**	**03 37 51.8**	**+4.4**
PENC	**Penc**	**3.79**	**11**	⇑*e*	**Pn**	**03 37 03.1**	**-0.1**
SOP	**Sopron**	**3.79**	**343**	*e*	**Pn**	**03 37 03.8**	**+0.6**
SOP				*e*	**Sn**	**03 37 49.2**	**+1.1**
BIA	**Bitola**	**3.82**	**142**	P	**Pn**	**03 37 03.8**	**+0.2**
BIA	**Bitola**	**3.82**	**142**	*e*	**Pn**	**03 37 04.8**	**+1.2**
BIA	**Bitola**	**3.82**	**142**	*e*	**Pn**	**03 37 04.9**	**+1.3**
BIA				*e*	**Sn**	**03 37 53.2**	**+4.4**
PTRP	**Pietrapertosa**	**3.89**	**205**	Pn	**Pn**	**03 37 06.4**	**+1.8**
SGG	**Gregorio Mates**	**3.90**	**228**	Pn	**Pn**	**03 37 06.2**	**+1.5**
SNTG	**Esanatoglia**	**3.91**	**260**	Pn	**Pn**	**03 37 05.4**	**+0.5**
AQU	**L'Aquila**	**3.92**	**246**	*e*	**Pn**	**03 37 06.2**	**+1.3**
AQU				S	**Sn**	**03 37 52.9**	**+1.7**
AQU				*e*	**Sn**	**03 37 53.2**	**+2.0**
AQU	**L'Aquila**	**3.92**	**246**	*e*	**Pn**	**03 37 06.2**	**+1.3**
AQU				S	**Sn**	**03 37 52.9**	**+1.7**
AQU	**L'Aquila**	**3.92**	**246**	⇑*i*	**Pn**	**03 37 05.9**	**+1.0**
NRCA	**Norcia**	**3.92**	**253**	Pn	**Pn**	**03 37 05.6**	**+0.7**
VTS	**Vitosha**	**3.93**	**110**	P	**Pn**	**03 37 05.1**	**0.0**
VTS	**Vitosha**	**3.93**	**110**	*e*	**Pn**	**03 37 04.9**	**-0.2**
VTS	**Vitosha**	**3.93**	**110**	*i*	**Pg**	**03 37 15.7**	**-3.9**
VTS				*i*	**P**	03 37 04.7	
VTS				*i*	**S**	**03 38 09.8**	**-0.7**
VTS	**Vitosha**	**3.93**	**110**	⇑*i*	**Pn**	**03 37 04.8**	**-0.3**
KBN	**Korca**	**3.94**	**150**	*e*	**PN**	**03 37 07.2**	**+2.0**
FSSB	**Fossombrone**	**3.95**	**266**	Pn	**Pn**	**03 37 05.8**	**+0.4**
CSSN	**Cassano Irpino**	**3.98**	**217**	Pn	**Pn**	**03 37 06.3**	**+0.4**
SDI	**San Donato**	**4.01**	**235**	Pn	**Pn**	**03 37 07.3**	**+1.1**
PSZ	**Piszkesteto**	**4.02**	**16**	*e*	**Pn**	**03 37 05.8**	**-0.6**
PSZ	**Piszkesteto**	**4.02**	**16**	⇑*e*	**Pn**	**03 37 05.7**	**-0.7**
PSZ	**Piszkesteto**	**4.02**	**16**	⇓*i*	**P**	**03 37 05.2**	**-1.2**
VVLD	**Villa Vallelon**	**4.03**	**238**	Pn	**Pn**	**03 37 07.3**	**+0.9**
FNA	**Florina**	**4.03**	**143**	P	**Pn**	**03 37 07.0**	**+0.5**
MYKA	**Terra Mystica**	**4.12**	**310**	⇓*i*	**Pn**	**03 37 09.4**	**+1.8**
	22nm,0.5s						
SGO	**Sicignano**	**4.12**	**213**	Pn	**Pn**	**03 37 08.0**	**+0.3**
FIAM	**Fiamignano**	**4.14**	**246**	Pn	**Pn**	**03 37 09.7**	**+1.7**
PIEI	**Pieia**	**4.15**	**265**	Pn	**Pn**	**03 37 08.4**	**+0.3**
PTCC	**Patocco-Chiusa**	**4.15**	**306**	Pn	**Pn**	**03 37 08.2**	**+0.1**
ASS	**Assisi**	**4.17**	**258**	Pn	**Pn**	**03 37 09.1**	**+0.7**
DRGR		**4.17**	**48**	⇓P	**Pn**	**03 37 07.7**	**-0.8**
DRGR		**4.17**	**48**	*i*	**Sg**	**03 38 22.0**	**+3.8**
DRGR				*i*	**Pg**	**03 37 23.2**	**-1.0**
DRGR		**4.17**	**48**	⇓*i*	**Pn**	**03 37 07.7**	**-0.7**
CONA	**Conrad Observa**	**4.19**	**338**	⇑*i*	**Pn**	**03 37 08.7**	**0.0**
	35nm,0.6s,SNR=62						
CONA				⇓*i*	**Sn**	**03 37 59.1**	**+1.2**
	134nm,0.8s						
CSNA	**Conrad Observa**	**4.19**	**338**	⇑*i*	**Pn**	**03 37 08.8**	**+0.1**
	24nm,0.4s						
CSNA				⇓*i*	**Sn**	**03 37 59.1**	**+1.1**
	115nm,0.6s						
CSNA	**Conrad Observa**	**4.19**	**338**	Pn	**Pn**	**03 37 08.8**	**+0.1**
	24nm,0.4s						
ZST	**Bratislava**	**4.20**	**350**	*e*	**Pn**	**03 37 08.6**	**-0.2**
ZST				*e*		03 37 55.3	
ZST				pmax	pmax		
	comp=N,203nm,0.8s						
ZST	**Bratislava**	**4.20**	**350**	*e*	**PN**	**03 37 08.6**	**-0.2**
ZST				*e*	**Sn**	**03 37 55.3**	**-2.8**
MURB	**Monte Urbino**	**4.21**	**261**	Pn	**Pn**	**03 37 10.8**	**+1.9**
VAY	**Valandovo**	**4.23**	**129**	P	**Pn**	**03 37 09.1**	**-0.1**
VAY	**Valandovo**	**4.23**	**129**	*e*	**Pn**	**03 37 08.6**	**-0.6**
VAY				*e*	**Sn**	**03 37 55.9**	**-2.9**
VAY	**Valandovo**	**4.23**	**129**	*e*	**Pn**	**03 37 08.7**	**-0.5**
VAY				*e*	**Sn**	**03 37 55.9**	**-2.9**
VAY	**Valandovo**	**4.23**	**129**	*e*	**P**	**03 37 09.0**	**-0.2**
VAY				*e*	**S**	**03 38 27.7**	**+7.8**
MODS	**Modra-Piesok**	**4.35**	**352**	*e*	**P**	**03 37 11.1**	**+0.2**
MODS				*e*		03 37 58.3	
MODS				pmax	pmax		
	comp=N,78nm,0.7s						
MODS	**Modra-Piesok**	**4.35**	**352**	*e*	**PN**	**03 37 11.1**	**+0.2**
MODS				*e*	**Sn**	**03 37 58.3**	**-3.6**
MNS	**Montasola**	**4.38**	**249**	Pn	**Pn**	**03 37 12.0**	**+0.7**
GRG	**Griva**	**4.39**	**134**	P	**Pn**	**03 37 10.8**	**-0.6**
SRN	**Sarande**	**4.39**	**162**	*i*	**PN**	**03 37 11.0**	**-0.5**
VYHS	**Vyhne**	**4.44**	**5**	*e*	**P**	**03 37 12.4**	**+0.2**
VYHS				*e*		03 38 03.4	
VYHS				pmax	pmax		
	comp=N,60nm,0.7s						
VYHS	**Vyhne**	**4.44**	**5**	*e*	**PN**	**03 37 12.4**	**+0.2**
VYHS				*e*	**PG**	**03 37 28.0**	**-1.4**
VYHS				*e*	**SN**	**03 38 03.4**	**-0.8**
CUC	**Castrocucco**	**4.45**	**204**	*e*	**Pn**	**03 37 13.7**	**+1.4**
CUC	**Castrocucco**	**4.45**	**204**	*e*	**Pn**	**03 37 13.7**	**+1.4**
SMOL	**Smolenice**	**4.48**	**353**	*e*	**PN**	**03 37 12.7**	**+0.1**
SMOL				*e*	**SN**	**03 38 03.0**	**-2.0**
KOLL	**Kolacno**	**4.51**	**2**	*e*	**PN**	**03 37 13.1**	**0.0**
KOLL				*e*	**SN**	**03 38 03.6**	**-2.2**
KEK	**Kerkira**	**4.51**	**164**	*e*	**PN**	**03 37 13.8**	**+0.7**
KNT	**Kendrikon**	**4.52**	**128**	P	**Pn**	**03 37 12.0**	**-1.2**
KBA	**Koelnbreinsper**	**4.55**	**313**	⇑*i*	**Pn**	**03 37 15.6**	**+2.0**
	comp=N,8.9nm,0.3s						
KBA				⇑*e*	**Sn**	**03 38 07.5**	**+0.6**
	comp=N,31nm,0.5s						
KBA	**Koelnbreinsper**	**4.55**	**313**	*e*	**Pn**	**03 37 15.5**	**+1.8**
KBA				*e*	**Sn**	**03 38 07.8**	**+0.9**
KZN	**Kozani**	**4.60**	**144**	*e*	**PB**	**03 37 15.5**	**-10**
SFI	**Santa Sofia**	**4.60**	**270**	Pn	**Pn**	**03 37 15.8**	**+1.5**
MOA	**Molln**	**4.67**	**325**	*i*	**Pn**	**03 37 16.2**	**+0.8**
	comp=N,9.2nm,0.2s,SNR=50						
MOA				⇓*i*	**Sn**	**03 38 13.7**	**+3.9**
	comp=N,73nm,0.5s						
MOA	**Molln**	**4.67**	**325**	*e*	**Pn**	**03 37 16.0**	**+0.7**
MOA				*e*	**Sn**	**03 38 13.6**	**+3.7**
MMB	**Musomiste**	**4.75**	**120**	*e*	**P**	**03 37 17.4**	**+1.0**
MMB				*e*	**Sg**	**03 38 43.4**	**+6.6**
IGT	**Igoumenitsa**	**4.80**	**160**	P	**Pn**	**03 37 16.8**	**-0.3**
IGT				S	**Sn**	**03 38 11.7**	**-1.4**
VMG	**Vicchio**	**4.81**	**271**	Pn	**Pn**	**03 37 18.7**	**+1.5**
ABTA	**Abfaltersbach**	**4.83**	**306**	*i*	**Pn**	**03 37 18.6**	**+1.2**
	comp=N,56nm,0.6s,SNR=80						
JAN	**Janina**	**4.83**	**155**	*e*	**PB**	**03 37 19.0**	**+1.5**
SEI	**Scarperia**	**4.94**	**272**	Pn	**Pn**	**03 37 21.9**	**+2.9**
SOH	**Sokhos**	**5.00**	**129**	P	**Pn**	**03 37 20.4**	**+0.6**
TIP	**Timpagrande**	**5.01**	**193**	*e*	**Pn**	**03 37 20.7**	**+0.8**
	comp=N,30nm,0.7s						
TIP	**Timpagrande**	**5.01**	**193**	*e*	**Pn**	**03 37 20.7**	**+0.7**
	comp=N,30nm,0.7s						
HORT	**Hortiatis**	**5.01**	**132**	P	**Pn**	**03 37 20.0**	**0.0**
CTI	**Castel Tesino**	**5.05**	**295**	P	**Pn**	**03 37 21.1**	**+0.6**
CTI				pmax	pmax		
	comp=Z,128nm,0.8s						
CTI	**Castel Tesino**	**5.05**	**295**	Pn	**Pn**	**03 37 21.1**	**+0.6**
	comp=Z,128nm,0.8s						
VOIR		**5.05**	**72**	⇓*i*	**P**	**03 37 21.1**	**+0.5**
LIT	**Litokhoron**	**5.08**	**140**	P	**Pn**	**03 37 21.3**	**+0.3**
BGLD	**Berchtesgaden**	**5.10**	**316**	⇓*i*	**Pn**	**03 37 22.9**	**+1.7**
RJOB	**Jochberg**	**5.27**	**316**	*e*	**Pn**	**03 37 24.8**	**+1.3**
RJOB				*e*	**Sn**	**03 38 27.1**	**+2.7**
THL	**Klokotos Trika**	**5.32**	**146**	P	**Pn**	**03 37 24.5**	**+0.2**
THL				S	**Sn**	**03 38 25.4**	**-0.5**
CRVS	**Cervenica-Dubn**	**5.33**	**24**	*e*	**PN**	**03 37 26.1**	**+1.8**
CRVS				*e*	**PG**	**03 37 51.6**	**+5.4**
CRVS				*e*	**SG**	**03 39 06.2**	**+11**
RZN	**Rozhen**	**5.34**	**114**	*i*	**P**	**03 37 25.2**	**+0.8**
RZN				*i*	**S**	**03 38 56.8**	**+1.2**
VRAC	**Vranov**	**5.36**	**349**	Pn	**Pn**	**03 37 25.2**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=179,slow=13,SNR=13						
VRAC				Sn	**Sn**	**03 38 26.1**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=123,slow=12,SNR=9.3						
VRAC				LR	LR	03 39 21.1	
	comp=Z,99nm,19.5s,baz=190,slow=37						
VRAC	**Vranov**	**5.36**	**349**	⇑P	**Pn**	**03 37 24.2**	**-0.5**
VRAC	**Vranov**	**5.36**	**349**	P	**Pn**	**03 37 25.2**	**+0.5**
VRAC						03 38 26.1	
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.3s						
VRAC				smax			
	comp=N,3.0nm,0.3s						
VRAC				MLR	MLR		
	comp=Z,99nm,19.5s						
VRAC	**Vranov**	**5.36**	**349**	*e*	**Pn**	**03 37 25.1**	**+0.4**
VRAC	**Vranov**	**5.36**	**349**	⇑*i*	**P**	**03 37 24.2**	**-0.5**
PLG	**Polygyros**	**5.36**	**132**	P	**Pn**	**03 37 24.4**	**-0.4**
UZH	**Uzhgorod**	**5.36**	**30**	*e*	**P**	**03 37 19.0**	**-5.8**
UZH				*e*		03 38 37.7	
UZH				pmax	pmax		
	comp=N,88nm,0.8s						
UZH				pmax	pmax		
	comp=E,60nm,0.8s						
SCE	**Schlegeis**	**5.45**	**305**	⇓*i*	**Pn**	**03 37 27.1**	**+1.2**
APPI	**Appiano**	**5.49**	**298**	Pn	**Pn**	**03 37 27.9**	**+1.4**
	comp=E,65nm,0.6s						
NIE	**Niedzica**	**5.54**	**14**	*e*	**Pn**	**03 37 29.2**	**+2.0**
NIE				*e*	**Pg**	**03 37 53.9**	**+3.6**
NIE				*e*	**Sn**	**03 38 28.4**	**-2.8**
TREC	**Trest**	**5.55**	**341**	*e*	**PN**	**03 37 27.4**	**0.0**
WTTA	**Wattenberg**	**5.61**	**307**	⇑*e*	**Pn**	**03 37 30.6**	**+2.5**
	comp=E,93nm,0.6s,SNR=65						
WTTA	**Wattenberg**	**5.61**	**307**	*e*	**Pn**	**03 37 29.4**	**+1.3**
KOLS	**Kolonicke sedl**	**5.61**	**29**	*e*	**PN**	**03 37 30.8**	**+2.6**
KOLS				*e*	**PG**	**03 37 54.3**	**+2.6**
KOLS				*e*	**SG**	**03 39 09.5**	**+5.2**
SZH	**Strazhica**	**5.66**	**96**	*i*	**P**	**03 37 29.3**	**+0.5**
SZH				*i*	**S**	**03 38 34.3**	**+0.2**
WATA	**Walderalm**	**5.68**	**307**	⇓*i*	**Pn**	**03 37 31.0**	**+1.8**
	SNR=60						
MLR	**Muntele Rosu**	**5.68**	**73**	Pn	**

GRF	**Grafenberg Arr**	**7.38 322**	*e*Pn		**Pn**	**03 37 52.9**	**+0.4**
BRG	**Berggiesshubel**	**7.39 338**	PN		**Pb**	**03 38 04.7**	**-8.2**
BRG			*i*			03 38 16.2	
BRG	**Berggiesshubel**	**7.39 338**	PG		**Pg**	**03 38 33.0**	**+7.2**
BRG			*i*			03 39 02.0	
BRG	**Berggiesshubel**	**7.39 338**	SG		**Sb**	**03 39 38.5**	**-2.7**
	comp=Z,21nm,0.7s						
ORO	**Oropa**	**7.44 286**	Pn		**Pn**	**03 37 51.3**	**-2.0**
TANN	**Tannenbergstha**	**7.45 330**	*e*Pn		**Pn**	**03 37 54.2**	**+0.7**
GUNZ	**Gunzen**	**7.46 330**	*e*Pn		**Pn**	**03 37 55.0**	**+1.5**
WERD	**Werda**	**7.54 330**	*e*Pn		**Pn**	**03 37 55.6**	**+1.0**
DID	**Didima**	**7.58 148**	P		**Pn**	**03 37 54.1**	**-1.2**
SAOF	**Saorge**	**7.69 273**	*e*P		**Pn**	**03 37 56.1**	**-0.6**
SPAK	**Spaichingen-Ko**	**7.69 305**	*e*P		**Pn**	**03 37 55.8**	**-1.0**
AUTN	**L'Aution**	**7.78 273**	*e*P		**Pn**	**03 37 59.4**	**+1.5**
SBF	**Sospel**	**7.78 272**	*e*Pn		**Pn**	**03 37 56.8**	**-1.2**
	SNR=1.0						
SBF			*e*Sn		**Sn**	**03 39 19.9**	**-6.5**
	comp=Z,53nm,0.7s						
LUCF	**Luceram**	**7.84 272**	*e*P		**Pn**	**03 37 59.6**	**+0.8**
TOUF	**Mont Tournerai**	**7.90 273**	*e*P		**Pn**	**03 37 59.7**	**0.0**
MOX	**Moxa**	**7.95 328**	*e*PN		**Pn**	**03 38 00.4**	**+0.1**
MOX			*e*SN		**Sn**	**03 39 29.9**	**-0.7**
MOX	**Moxa**	**7.95 328**	*e*Pn		**Pn**	**03 38 00.4**	**+0.1**
MOX			*e*Sn		**Sn**	**03 39 29.9**	**-0.7**
MOX	**Moxa**	**7.95 328**	*e*Pn		**Pn**	**03 38 01.9**	**+1.6**
CLL	**Collm**	**8.05 336**	*e*Pn		**Pn**	**03 38 06.0**	**+4.4**
CLL			*e*Sb		**Sb**	**03 40 01.0**	**+1.0**
CLL			*e*Sg		**Sg**	**03 40 12.0**	**-10**
CLL	**Collm**	**8.05 336**	*e*Pn		**Pn**	**03 38 06.0**	**+4.4**
CLL			*ex*		x	03 39 55.0	
CLL			*e*Sb		**Sb**	**03 40 01.0**	**+1.0**
CLL			*e*Sg		**Sg**	**03 40 16.0**	**-6.4**
FELD	**Feldberg im Sc**	**8.06 302**	*e*P		**Pn**	**03 38 01.3**	**-0.6**
BFO	**Black Forest**	**8.07 305**	*e*P		**Pn**	**03 38 01.6**	**-0.3**
BFO			pmax		pmax		
	comp=Z,13nm,0.6s						
BFO	**Black Forest**	**8.07 305**	*e*Pn		**Pn**	**03 38 01.6**	**-0.3**
	comp=Z,13nm,0.6s						
VLI	**Velial**	**8.18 152**	*e*PN		**Pn**	**03 38 01.5**	**-2.0**
MBDF	**Montbardon**	**8.22 279**	*e*Pn		**Pn**	**03 38 01.9**	**-2.1**
	SNR=1.0						
MBDF			*e*Sn		**Sn**	**03 39 28.9**	**-8.3**
	comp=Z,47nm,0.7s						
LPG	**La Plagne**	**8.28 284**	*e*Pn		**Pn**	**03 38 04.4**	**-0.4**
	SNR=1.0						
LPG			*e*Sn		**Sn**	**03 39 31.8**	**-6.8**
	comp=Z,52nm,0.7s						
LPL	**La Plagne**	**8.29 284**	*e*Pn		**Pn**	**03 38 04.1**	**-0.9**
	SNR=1.0						
LPL			*e*Sn		**Sn**	**03 39 32.1**	**-6.9**
	comp=Z,98nm,0.9s						
FRF	**La Foret Royal**	**8.38 271**	*e*Pn		**Pn**	**03 38 05.4**	**-0.8**
	SNR=1.0						
FRF			*e*Sn		**Sn**	**03 39 34.1**	**-7.1**
	comp=Z,13nm,0.6s						
RSL	**Roselend**	**8.39 285**	*e*P		**Pn**	**03 38 07.5**	**+1.2**
TOD	**Tromm**	**8.50 314**	*e*P		**Pn**	**03 38 07.8**	**0.0**
LMR	**La Mourre**	**8.52 269**	*e*Pn		**Pn**	**03 38 08.4**	**+0.3**
	SNR=1.0						
LMR			*e*Sn		**Sn**	**03 39 37.6**	**-6.8**
	comp=Z,22nm,1.0s						
MOF	**Molkenrain**	**8.60 300**	*e*P		**Pn**	**03 38 08.9**	**-0.2**
ECH	**Echery**	**8.72 302**	*e*P		**Pn**	**03 38 11.1**	**+0.2**
ECH	**Echery**	**8.72 302**	*e*Pn		**Pn**	**03 38 10.5**	**-0.4**
	comp=Z,5.9nm,0.7s						
ECH	**Echery**	**8.72 302**	*e*P		**Pn**	**03 38 10.5**	**-0.4**
ECH			pmax		pmax		
	comp=Z,6.0nm,0.7s						
ECH	**Echery**	**8.72 302**	*e*Pn		**Pn**	**03 38 10.5**	**-0.4**
	comp=Z,5.9nm,0.7s						
CDF	**Champ du Feu**	**8.73 304**	*e*Pn		**Pn**	**03 38 09.8**	**-1.2**
	SNR=1.0						
CDF			*e*Sn		**Sn**	**03 39 42.2**	**-7.6**
	comp=Z,16nm,0.9s,SNR=1.0						
CDF	**Champ du Feu**	**8.73 304**	*e*Pn		**Pn**	**03 38 09.8**	**-1.2**
	SNR=1.0						
CDF			*e*Sn		**Sn**	**03 39 42.2**	**-7.6**
	comp=Z,8.2nm,0.9s,SNR=1.0						
HINF	**Hinteralfeld**	**8.76 299**	*e*Pn		**Pn**	**03 38 10.7**	**-0.7**
	SNR=1.0						
HINF			*e*Sn		**Sn**	**03 39 42.5**	**-7.8**
	comp=Z,14nm,0.7s						
HINF	**Hinteralfeld**	**8.76 299**	*e*Pn		**Pn**	**03 38 10.7**	**-0.7**
	SNR=1.0						
HINF			*e*Sn		**Sn**	**03 39 42.5**	**-7.8**
	comp=Z,7.0nm,0.7s						
ORIF	**Oris-en-Rattie**	**8.86 280**	*e*Pn		**Pn**	**03 38 12.1**	**-0.7**
	SNR=1.0						
ORIF			*e*Sn		**Sn**	**03 39 45.8**	**-7.1**
	comp=Z,48nm,0.7s						
CABF	**La Chapelle**	**8.91 291**	*e*Pn		**Pn**	**03 38 12.7**	**-0.8**
	SNR=1.0						
CABF			*e*Sn		**Sn**	**03 39 46.4**	**-7.7**
	comp=Z,18nm,0.8s						
CABF	**La Chapelle**	**8.91 291**	*e*Pn		**Pn**	**03 38 12.7**	**-0.8**
	SNR=1.0						
CABF			*e*Sn		**Sn**	**03 39 46.4**	**-7.7**
	comp=Z,8.9nm,0.8s						
APE	**Apeiranthos**	**8.94 139** ⇑	P		**Pn**	**03 38 15.1**	**+1.3**
APE	**Apeiranthos**	**8.94 139** ⇑	*i*P		**Pn**	**03 38 15.1**	**+1.3**
SMRF	**Simiane la Rot**	**9.11 274**	*e*Pn		**Pn**	**03 38 14.8**	**-1.4**
SMRF			*e*Sn		**Sn**	**03 39 51.3**	**-7.7**
	comp=Z,98nm,1.4s						
SMRF	**Simiane la Rot**	**9.11 274**	*e*Pn		**Pn**	**03 38 14.8**	**-1.4**
SMRF			*e*Sn		**Sn**	**03 39 51.3**	**-7.7**
	comp=Z,49nm,1.4s						
HAU	**Haudompre**	**9.14 300**	*e*Pn		**Pn**	**03 38 16.0**	**-0.6**
	SNR=1.0						
HAU			*e*Sn		**Sn**	**03 39 51.8**	**-8.0**
	comp=Z,2.3nm,0.4s						
HAU	**Haudompre**	**9.14 300**	*e*Pn		**Pn**	**03 38 16.0**	**-0.6**
	SNR=1.0						
HAU			*e*Sn		**Sn**	**03 39 51.8**	**-8.0**
	comp=Z,1.1nm,0.4s						
THEF	**They Montfort**	**9.45 300**	*e*P		**Pn**	**03 38 21.1**	**+0.3**
VIVF	**Saint-Julien-l**	**9.72 279**	*e*Pn		**Pn**	**03 38 22.9**	**-1.6**
	SNR=1.0						
VIVF			*e*Sn		**Sn**	**03 40 06.2**	**-7.7**
	comp=Z,12nm,0.6s						
VIVF	**Saint-Julien-l**	**9.72 279**	*e*Pn		**Pn**	**03 38 22.9**	**-1.6**
	SNR=1.0						
VIVF			*e*Sn		**Sn**	**03 40 06.2**	**-7.7**
	comp=Z,5.8nm,0.6s						
WLF	**Walferdange**	**9.97 308**	P		**Pn**	**03 38 30.0**	**+2.0**
WLF	**Walferdange**	**9.97 308**	P		**Pn**	**03 38 29.9**	**+1.9**
MEZF	**Maizieres J'vi**	**10.13 301**	*e*Pn		**Pn**	**03 38 28.0**	**-2.1**
MEZF			*e*Sn		**Sn**	**03 40 14.9**	**-9.1**
	comp=Z,4.3nm,0.4s						
MEZF	**Maizieres J'vi**	**10.13 301**	*e*Pn		**Pn**	**03 38 28.0**	**-2.1**
MEZF			*e*Sn		**Sn**	**03 40 14.9**	**-9.1**
	comp=Z,2.2nm,0.4s						
IDI	**Anoyia**	**10.16 147**	Pn		**Pn**	**03 38 29.4**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=67,slow=13,SNR=11						
IDI			Sn		**Sn**	**03 40 17.5**	**-7.5**
	comp=Z,0.4nm,0.3s,baz=127,slow=20,SNR=2.9						
LASF	**Ste Croix**	**10.34 275**	*e*Pn		**Pn**	**03 38 31.7**	**-1.3**
LASF			*e*Sn		**Sn**	**03 40 21.1**	**-8.0**
	comp=Z,3.3nm,0.6s						
LASF	**Ste Croix**	**10.34 275**	*e*Pn		**Pn**	**03 38 31.7**	**-1.3**
LASF			*e*Sn		**Sn**	**03 40 21.1**	**-8.0**
	comp=Z,1.6nm,0.6s						
SMF	**Signal de Mont**	**10.44 289**	*e*Pn		**Pn**	**03 38 34.0**	**-0.4**
	SNR=1.0						
SMF			*e*Sn		**Sn**	**03 40 22.8**	**-8.8**
	comp=Z,49nm,1.1s						
SMF	**Signal de Mont**	**10.44 289**	*e*Pn		**Pn**	**03 38 34.0**	**-0.4**
	SNR=1.0						
SMF			*e*Sn		**Sn**	**03 40 22.8**	**-8.8**
	comp=Z,24nm,1.1s						
PLDF	**La Plantade**	**10.51 285**	*e*P		**Pn**	**03 38 34.8**	**-0.5**
LOR	**Lormes**	**10.54 293**	*e*Pn		**Pn**	**03 38 34.1**	**-1.7**
	SNR=1.0						
LOR			*e*Sn		**Sn**	**03 40 25.1**	**-9.1**
	comp=Z,26nm,1.0s						
LOR	**Lormes**	**10.54 293**	*e*Pn		**Pn**	**03 38 34.1**	**-1.7**
	SNR=1.0						
LOR			*e*Sn		**Sn**	**03 40 25.1**	**-9.1**
	comp=Z,13nm,1.0s						
MEM	**Membach**	**10.55 313**	P		**Pn**	**03 38 38.2**	**+2.3**
MEM	**Membach**	**10.55 313**	P		**Pn**	**03 38 38.1**	**+2.2**
SSF	**Saint Saulge**	**10.74 291**	*e*Pn		**Pn**	**03 38 36.9**	**-1.6**
	SNR=1.0						
SSF			*e*Sn		**Sn**	**03 40 30.2**	**-8.8**
	comp=Z,28nm,1.0s						
SSF	**Saint Saulge**	**10.74 291**	*e*Pn		**Pn**	**03 38 36.9**	**-1.6**
	SNR=1.0						
SSF			*e*Sn		**Sn**	**03 40 30.2**	**-8.8**
	comp=Z,14nm,1.0s						
KEST	**Kesra**	**10.75 222**	Pn		**Pn**	**03 38 41.9**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=94,slow=17,SNR=5.3						
AVF	**Avril sur Loir**	**10.79 290**	*e*Pn		**Pn**	**03 38 38.6**	**-0.7**
	SNR=1.0						
AVF			*e*Sn		**Sn**	**03 40 31.6**	**-8.7**
	comp=Z,11nm,0.9s						
AVF	**Avril sur Loir**	**10.79 290**	*e*Pn		**Pn**	**03 38 38.6**	**-0.7**
	SNR=1.0						
AVF			*e*Sn		**Sn**	**03 40 31.6**	**-8.7**
	comp=Z,5.4nm,0.9s						
BCLA	**Clavier**	**10.83 310**	P		**Pn**	**03 38 42.1**	**+2.5**
AGO	**Saint Agoulin**	**10.86 286**	*e*P		**Pn**	**03 38 39.6**	**-0.5**
GIVF	**Givet**	**10.94 308**	*e*Pn		**Pn**	**03 38 39.2**	**-2.0**
GIVF			*e*Sn		**Sn**	**03 40 34.3**	**-9.5**
	comp=Z,26nm,1.0s						
GIVF	**Givet**	**10.94 308**	*e*Pn		**Pn**	**03 38 39.2**	**-2.0**
GIVF			*e*Sn		**Sn**	**03 40 34.3**	**-9.5**
	comp=Z,13nm,1.0s						
DOU	**Dourbes**	**11.06 308**	P		**Pn**	**03 38 45.6**	**+2.7**
DOU	**Dourbes**	**11.06 308**	P		**Pn**	**03 38 45.6**	**+2.7**
BGF	**Bois d'Agland**	**11.11 288**	*e*Pn		**Pn**	**03 38 41.9**	**-1.6**
	SNR=1.0						
BGF			*e*Sn		**Sn**	**03 40 39.2**	**-8.8**
	comp=Z,26nm,0.7s						
BGF	**Bois d'Agland**	**11.11 288**	*e*Pn		**Pn**	**03 38 41.9**	**-1.6**
	SNR=1.0						
BGF			*e*Sn		**Sn**	**03 40 39.2**	**-8.8**
	comp=Z,13nm,0.7s						
BAIF	**Baives**	**11.27 307**	*e*Pn		**Pn**	**03 38 43.8**	**-1.9**
BAIF			*e*Sn		**Sn**	**03 40 41.9**	**-10**
	comp=Z,0.6nm,0.4s						
BAIF	**Baives**	**11.27 307**	*e*Pn		**Pn**	**03 38 43.8**	**-1.9**
BAIF			*e*Sn		**Sn**	**03 40 41.9**	**-10**
	comp=Z,0.3nm,0.4s						
HYF	**Humbligny**	**11.36 292**	*e*Pn		**Pn**	**03 38 45.1**	**-1.9**
HYF			*e*Sn		**Sn**	**03 40 44.9**	**-9.2**
TCF	**Toulx Ste Croi**	**11.51 287**	*e*Pn		**Pn**	**03 38 47.4**	**-1.7**
TCF			*e*Sn		**Sn**	**03 40 48.9**	**-9.1**
	comp=Z,19nm,1.0s						
TCF	**Toulx Ste Croi**	**11.51 287**	*e*Pn		**Pn**	**03 38 47.4**	**-1.7**
TCF			*e*Sn		**Sn**	**03 40 48.9**	**-9.1**
	comp=Z,9.6nm,1.0s						
CAF	**Calviac**	**11.57 280**	*e*Pn		**Pn**	**03 38 48.3**	**-1.6**
CAF			*e*Sn		**Sn**	**03 40 50.5**	**-8.8**
	comp=Z,9.9nm,0.9s						
CAF	**Calviac**	**11.57 280**	*e*Pn		**Pn**	**03 38 48.3**	**-1.6**
CAF			*e*Sn		**Sn**	**03 40 50.5**	**-8.8**
	comp=Z,4.9nm,0.9s						
MTLF	**Montolieu**	**11.61 272**	*e*Pn		**Pn**	**03 38 48.8**	**-1.6**
MTLF			*e*Sn		**Sn**	**03 40 51.4**	**-8.8**
	comp=Z,2.1nm,0.6s						
MTLF	**Montolieu**	**11.61 272**	*e*Pn		**Pn**	**03 38 48.8**	**-1.6**
MTLF			*e*Sn		**Sn**	**03 40 51.4**	**-8.8**
	comp=Z,1.0nm,0.6s						
RJF	**Les Rejaudoux**	**11.95 282**	*e*Pn		**Pn**	**03 38 53.6**	**-1.5**
RJF			*e*Sn		**Sn**	**03 40 59.5**	**-9.2**
	comp=Z,1.3nm,0.2s						
RJF	**Les Rejaudoux**	**11.95 282**	*e*Pn		**Pn**	**03 38 53.6**	**-1.5**
RJF			*e*Sn		**Sn**	**03 40 59.5**	**-9.2**
	comp=Z,0.6nm,0.2s						
BRTR	**Keskin Array B**	**12.28 105**	Pn		**Pn**	**03 39 01.0**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=304,slow=13,SNR=7.3						
LFF	**La Frestale**	**12.51 280**	*e*Pn		**Pn**	**03 39 01.1**	**-1.6**
LFF			*e*Sn		**Sn**	**03 41 12.7**	**-10**
	comp=Z,1.5nm,0.4s						
LFF	**La Frestale**	**12.51 280**	*e*Pn		**Pn**	**03 39 01.1**	**-1.6**
LFF			*e*Sn		**Sn**	**03 41 12.7**	**-10**
	comp=Z,0.8nm,0.4s						
EPF	**Esparros**	**13.01 272**	*e*Pn		**Pn**	**03 39 08.1**	**-1.5**
EPF			*e*Sn		**Sn**	**03 41 25.2**	**-9.4**
	comp=Z,1.4nm,0.5s						
MFF	**Saint Martin d**	**13.16 288**	*e*Pn		**Pn**	**03 39 09.7**	**-1.9**
MFF			*e*Sn		**Sn**	**03 41 28.2**	**-10**
	comp=Z,2.2nm,0.6s						
MFF	**Saint Martin d**	**13.16 288**	*e*Pn		**Pn**	**03 39 09.7**	**-1.9**
MFF			*e*Sn		**Sn**	**03 41 28.2**	**-10**
	comp=Z,1.1nm,0.6s						
LDF	**La Druitiere**	**13.45 296**	*e*Pn		**Pn**	**03 39 13.4**	**-2.1**
LDF			*e*Sn		**Sn**	**03 41 34.8**	**-10**
	comp=Z,0.4nm,0.3s						
LDF	**La Druitiere**	**13.45 296**	*e*Pn		**Pn**	**03 39 13.4**	**-2.1**
LDF			*e*Sn		**Sn**	**03 41 34.8**	**-10**
	comp=Z,0.2nm,0.3s						
ETSF	**Etsaut**	**13.69 272**	*e*Pn		**Pn**	**03 39 17.1**	**-1.7**
ETSF			*e*Sn		**Sn**	**03 41 41.4**	**-10**
	comp=Z,0.4nm,0.3s						
FLN	**La Foliniere**	**13.72 297**	*e*Pn		**Pn**	**03 39 16.9**	**-2.3**
FLN			*e*Sn		**Sn**	**03 41 41.2**	**-11**
	comp=Z,0.8nm,0.2s						
FLN	**La Foliniere**	**13.72 297**	*e*Pn		**Pn**	**03 39 16.9**	**-2.3**
FLN			*e*Sn		**Sn**	**03 41 41.2**	**-11**
	comp=Z,0.4nm,0.2s						
GRR	**Gorron**	**13.88 295**	*e*Pn		**Pn**	**03 39 19.6**	**-1.9**
GRR			*e*Sn		**Sn**	**03 41 45.1**	**-11**
	comp=Z,1.6nm,0.4s						
GRR	**Gorron**	**13.88 295**	*e*Pn		**Pn**	**03 39 19.6**	**-1.9**
GRR			*e*Sn		**Sn**	**03 41 45.1**	**-11**
	comp=Z,0.8nm,0.4s						
SJPF	**Ste Jean**	**14.12 273**	*e*Pn		**Pn**	**03 39 22.8**	**-2.0**
SJPF			*e*Sn		**Sn**	**03 41 51.2**	**-11**
	comp=Z,0.5nm,0.4s						
SGMF	**Saint Gilles**	**14.98 294**	*e*Pn		**Pn**	**03 39 34.5**	**-1.9**
SGMF			*e*Sn		**Sn**	**03 42 11.4**	**-11**
	comp=Z,1.4nm,0.3s						
SGMF	**Saint Gilles**	**14.98 294**	*e*Pn		**Pn**	**03 39 34.5**	**-1.9**
SGMF			*e*Sn		**Sn**	**03 42 11.4**	**-11**
	comp=Z,0.7nm,0.3s						
QUIF	**Quistinic**	**15.34 292**	*e*Pn		**Pn**	**03 39 39.1**	**-2.1**
QUIF			*e*Sn		**Sn**	**03 42 20.0**	**-11**
	comp=Z,0.8nm,0.4s						
QUIF	**Quistinic**	**15.34 292**	*e*Pn		**Pn**	**03 39 39.1**	**-2.1**
QUIF			*e*Sn		**Sn**	**03 42 20.0**	**-11**
	comp=Z,0.4nm,0.4s						
OBN	**Obninsk**	**16.18 40** ⇑	*e*P		**Pn**	**03 39 55.3**	**+3.2**
OBN			pmax		pmax		
	comp=Z,28nm,1.6s						
OBN			MLR		MLR		
	comp=Z,100nm,16.0s						
HFS	**Hagfors**	**16.32 352**	Pn		**Pn**	**03 39 52.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=198,slow=13,SNR=2.4						
HFS			LR		LR	03 47 11.4	
	comp=Z,124nm,18.3s,baz=69,slow=41						
ESDC	**Sonseca Array**	**17.08 263**	P		**Pn**	**03 40 02.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=69,slow=12,SNR=5.3						
NOA	**NORSAR Array B**	**17.50 349**	LR		LR	03 46 39.9	
	comp=Z,40nm,20.0s,baz=170,slow=36						
MDT	**Midelt**	**21.05 245**	LR		LR	03 49 37.2	
	comp=Z,43nm,19.0s,MS2.9,baz=286,slow=39						
TAM	**Tamanrasset**	**23.66 210**	*e*P		**P**	**03 41 17.2**	**+0.5**
	comp=Z,3.0nm,0.8s,mb3.8						
TAM	**Tamanrasset**	**23.66 210**	*e*P		**P**	**03 41 17.2**	**+0.6**
TAM			pmax		pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
TAM	**Tamanrasset**	**23.66 210**	*e*P		**P**	**03 41 17.2**	**+0.6**
ARCES	**ARCESS Array B**	**25.80 6**	LR		LR	03 53 23.9	
	comp=Z,59nm,19.0s,MS3.1,baz=16,slow=40						
AKTO	**Aktyubinsk**	**27.50 62**	LR		LR	03 52 40.4	
	comp=Z,44nm,18.1s,MS3.1,baz=106,slow=36						
TOA0	**Torodi Ar. Sit**	**33.92 210**	*e*P		**P**	**03 42 47.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**33.92 210**	P		**P**	**03 42 47.3**	**-0.8**
	comp=Z,2.6nm,0.7s,mb4.3,baz=16,slow=9.3,SNR=18						
TORD			LR		LR	03 58 52.7	
	comp=Z,43nm,18.2s,MS3.2,baz=10.0,slow=40						
BVAR	**Borovoye Array**	**34.97 56**	P		**P**	**03 42 56.9**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=270,slow=6.8,SNR=5.6						
BVAR	**Borovoye Array**	**34.97 56**	P		**P**	**03 42 56.9**	**0.0**
BVAR			pmax		pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**40.42 58**	P		**P**	**03 43 41.8**	**-1.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=287,slow=9.3,SNR=3.8						
KURK	**Kurchatov**	**40.42 58** ⇑	*i*P		**P**	**03 43 44.1**	**+1.1**
KURK			pmax		pmax		
	comp=Z,3.0nm,1.7s,mb3.8						
DBIC	**Dimbokro**	**42.38 215**	P		**P**	**03 43 58.9**	**-0.5**
	comp=Z,3.6nm,0.6s,mb4.2,baz=2.2,slow=9.3,SNR=9.3						
DBIC	**Dimbokro**	**42.38 215**	P		**P**	**03 43 58.9**	**-0.5**
DBIC	**Dimbokro**	**42.38 215**	P		**P**	**03 43 58.9**	**-0.5**
DBIC			pmax		pmax		
	comp=Z,4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**43.26 52**	P		**P**	**03 44 06.2**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.8,baz=289,slow=9.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.26 52**	P		**P**	**03 44 06.2**	**0.0**
ZALV			pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**43.93 63**	P		**P**	**03 44 11.7**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.7,baz=295,slow=6.6,SNR=6.5						
MKAR	**Makanchi Array**	**43.93 63**	P		**P**	**03 44 11.7**	**0.0**
MKAR			pmax		pmax		
	comp=Z,1.0nm,0.8s						
TLY	**Talaya**	**54.68 50** ⇑	*i*P		**P**	**03 45 32.7**	**-1.1**
TLY			pmax		pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
SONM	**Songino Array**	**58.16 52**	P		**P**	**03 45 59.3**	**+0.7**
	comp=Z,2.2nm,0.8s,mb4.2,baz=302,slow=8.5,SNR=5.1						
SONM	**Songino Array**	**58.16 52**	P		**P**	**03 45 59.3**	**+0.7**
SONM			pmax		pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**58.51 52**	*d*iP		**P**	**03 46 01.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**70.83 83** ⇑	*e*P		**P**	**03 47 22.8**	**+0.8**
PDAR	**Pinedale Array**	**81.73 324**	P		**P**	**03 48 23.6**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.7,baz=64,slow=6.8,SNR=8.1						
PDAR	**Pinedale Array**	**81.73 324**	P		**P**	**03 48 23.5**	**-0.1**
TXAR	**Lajitas Array**	**89.69 312**	P		**P**	**03 49 03.0**	**-0.3**
	comp=Z,0.7nm,0.8s,mb4.0,baz=64,slow=5.3,SNR=6.9						
TXAR	**Lajitas Array**	**89.69 312**	P		**P**	**03 49 03.0**	**-0.3**
TXAR			pmax		pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**124.27 91**	PKP		PKPdf	03 55 02.7	-1.3
	comp=Z,0.2nm,0.6s,baz=321,slow=1.3,SNR=3.9						

NEIC ***24*** *03:54:31.1, 1586N×9869W, h17km, MD3.7(MEX), After MEX.*

MEX 24 03:54:29.8±0.6, 1576N×9866W, h24km±21km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.81**	**39**	*i* P		**Pb**		03 54 42.9	-2.4
PNIG				*i* S		**Sb**		03 54 53.3	-2.4
PNIG	**Pinotepa**	**0.81**	**39**	*e*P		**Pb**		03 54 42.5	-2.7
PNIG				*i* S		**Sb**		03 54 53.3	-2.4
ACX	**Acapulco**	**1.63**	**312**	*e*P		**Pn**		03 54 55.3	-1.8
ACX				*i* S		**Sn**		03 55 11.6	-5.8
ACX	**Acapulco**	**1.63**	**312**	*e*P		**Pn**		03 54 55.3	-1.8
ACX				*i* S		**Sn**		03 55 13.9	-3.5
CAIG	**El Cayaco**	**2.01**	**310**	*e*P		**Pn**		03 55 01.1	-1.1
CAIG				*i* S		**Sn**		03 55 22.2	-4.3
CAIG	**El Cayaco**	**2.01**	**310**	*e*P		**Pn**		03 55 00.7	-1.5
CAIG				*i* S		**Sn**		03 55 22.9	-3.7
UTMO	**Huajuapan**	**2.21**	**22**	*i* P		**Pn**		03 55 02.9	-2.2
UTMO				*i* S		**Sn**		03 55 28.0	-3.7
VHO	**Vista Hermosa**	**2.26**	**55**	*i* P		**Pn**		03 55 03.9	-1.8
VHO				*i* S		**Sn**		03 55 30.9	-2.0
ZIIG	**Zihuatanejo**	**3.26**	**305**	*e*P		**Pn**		03 55 14.7	-4.7
ZIIG				*i* S		**Sn**		03 55 59.5	+2.0
ZIIG	**Zihuatanejo**	**3.26**	**305**	*e*P		**Pn**		03 55 17.1	-2.3
ZIIG				*i* S		**Sn**		03 55 54.2	-3.2
MZVM		**3.45**	**351**	*e*P		**Pn**		03 55 24.8	+2.7
MZVM				*i* S		**Sn**		03 55 59.2	-3.1
PBVM	**Pinon**	**3.68**	**354**	*e*P		**Pn**		03 55 28.2	+2.9
IIO	**Organos**	**3.81**	**359**	*e*P		**Pn**		03 55 27.1	+0.1
IIO				*i* S		**Sn**		03 56 10.6	-0.6

ISCJB ***24*** *04:34:05.6±0.3, 1505S×008×17378W±008, h10km, mb4.6/49, MS4.2/5, Error ellipse: s-maj=14.2km s-min=7.0km az=137.7*

IDC ***24*** *04:34:05.4±0.6, 1517S×17354W, h0km, mb4.5/10, mb1 4.7/11, mb1mx4.5/20, mbtmp4.5/11, MS3.6/3, Ms1 3.6/3, ms1mx3.2/23, Error ellipse: s-maj=31.6km s-min=14.7km az=133.

	comp=Z,1.3nm,0.7s,mb4.0							
TXAR	**Lajitas Array**	**80.74**	**56**	P		**P**	**04 46 19.8**	**-1.3**
	comp=Z,3.0nm,1.1s,mb4.2,baz=233,slow=6.1,SNR=14							
TXAR	**Lajitas Array**	**80.74**	**56**	P		**P**	**04 46 19.8**	**-1.4**
PV01	**Paradox Valley**	**80.76**	**47**	*e*P		**P**	**04 46 20.7**	**-0.4**
MCK	**McKinley**	**80.85**	**11**	*e*P		**P**	**04 46 20.9**	**+0.1**
	comp=Z,6.0nm,0.8s,mb4.6							
ANMO	**Albuquerque**	**80.87**	**50**	*e*P		**P**	**04 46 22.1**	**+0.3**
	comp=Z,14nm,1.8s,mb4.6							
MCMT	**McKenzie Canyo**	**81.22**	**39**	*e*P		**P**	**04 46 23.8**	**+0.5**
RRI2	**Red Ridge**	**81.42**	**41**	*e*P		**P**	**04 46 24.9**	**+0.5**
	comp=Z,10nm,1.4s,mb4.6							
BSMT	**Bassoo Peak**	**81.70**	**36**	*e*P		**P**	**04 46 25.7**	**-0.1**
REDW	**Red Top Meadow**	**81.72**	**41**	*e*P		**P**	**04 46 26.3**	**+0.3**
	comp=Z,13nm,1.4s,mb4.7							
TPAW	**Teton Pass**	**81.72**	**41**	*e*P		**P**	**04 46 26.5**	**+0.5**
	comp=Z,17nm,1.4s,mb4.8							
SNOW	**Snow King Moun**	**81.83**	**41**	*e*P		**P**	**04 46 27.2**	**+0.6**
	comp=Z,7.7nm,1.1s,mb4.5							
LOHW	**Long Hollow**	**82.00**	**41**	*e*P		**P**	**04 46 27.1**	**-0.4**
	comp=Z,7.5nm,0.4s,mb5.0							
COLA	**College**	**82.08**	**11**	*e*P		**P**	**04 46 27.0**	**-0.4**
	comp=Z,7.1nm,0.8s,mb4.7							
QLMT	**Earthquake Lak**	**82.09**	**40**	*e*P		**P**	**04 46 28.3**	**+0.4**
BW06	**Boulder Array**	**82.26**	**42**	*e*P		**P**	**04 46 28.6**	**-0.3**
	comp=Z,5.5nm,1.2s,mb4.4							
PDAR	**Pinedale Array**	**82.26**	**42**	P		**P**	**04 46 28.6**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.0,baz=207,slow=3.1,SNR=13							
SMCO	**Snowmass**	**82.34**	**46**	*e*P		**P**	**04 46 29.4**	**0.0**
	comp=Z,1.8nm,0.8s,mb4.0							
BOZ	**Bozeman (W)**	**82.38**	**39**	*e*P		**P**	**04 46 28.7**	**-0.7**
	comp=Z,35nm,2.6s,mb4.8							
HRY	**Holter Researc**	**82.80**	**38**	*e*P		**P**	**04 46 31.7**	**+0.1**
AMTX	**Amarillo**	**84.43**	**52**	*e*P		**P**	**04 46 38.8**	**-1.5**
	comp=Z,4.1nm,0.7s,mb4.7							
USHA	**Ushuaia**	**86.43**	**146**	LR		LR	05 15 08.0	
	comp=Z,997nm,20.9s,MS5.2,baz=355,slow=29							
RSSD	**Black Hills**	**86.46**	**43**	*e*P		**P**	**04 46 49.0**	**-1.1**
	comp=Z,1.8nm,0.8s,mb4.3							
GYA	**Guiyang**	**87.53**	**298**	P		**P**	**04 46 53.8**	**-2.0**
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb5.0							
MAW	**Mawson**	**88.01**	**199**	P		**P**	**04 46 56.9**	**-0.4**
	comp=Z,3.9nm,0.7s,mb4.7,baz=164,slow=5.7,SNR=4.1							
INK	**Inuvik**	**88.02**	**14**	*e*P		**P**	**04 46 57.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**88.50**	**313**	*e*P		**P**	**04 46 58.8**	**-1.3**
HHC				AP		pP	04 47 49.3	+46
HHC				XP		sP	04 48 10.6	+66
HHC				PP		PP	04 50 32.1	+3.7
HHC				SKS			04 57 05.5	
HHC				S		Sx	04 57 24.8	
HHC				XS		sS	04 58 53.4	+62
HHC				SS		SS	05 03 24.8	-12
HHC				AMB		AMB		
	comp=Z,11nm,0.8s,mb5.1							
HHC				AMB		AMB		
	comp=Z,140nm,8.2s							
HHC				LR		LR		
	comp=N,191nm,19.0s,MS4.7							
HHC				LR		LR		
	comp=E,217nm,19.0s,MS4.7							
HHC				LR		LR		
	comp=Z,302nm,20.2s,MS4.7							
CD2	**Chengdu**	**91.29**	**302**	*e*P		**P**	**04 47 11.9**	**-1.5**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb5.3							
CD2				AMB		AMB		
	comp=Z,20nm,5.2s							
LZH	**Lanzhou**	**92.70**	**307**	*e*P		**P**	**04 47 19.5**	**-0.3**
LZH				AP		pP	04 48 09.6	+46
LZH				XP		sP	04 48 31.8	+67
LZH				PP		PP	04 51 06.4	+4.5
LZH				AMB		AMB		
	comp=Z,17nm,1.2s,mb5.3							
LZH				AMB		AMB		
	comp=Z,87nm,5.3s							
VNA3	**Neumayer Olymp**	**93.25**	**175**	*e*P		**P**	**04 47 21.2**	**-0.5**
VNA3				*e*		pP	04 47 25.3	+0.3
VNA3				*e*			04 47 40.3	
SNAA	**Sanae**	**93.28**	**177**	*e*P		**P**	**04 47 17.7**	**-4.1**
SNAA				*e*		pP	04 47 21.0	-4.2
VNA2	**Neumayer--Watz**	**93.74**	**176**	*e*P		**P**	**04 47 24.0**	**+0.1**
	baz=171,slow=2.3							
VNA2				*e*		pP	04 47 27.4	+0.1
VNA2				*e*			04 47 42.1	
VNA1	**Neumayer--Stat**	**93.94**	**175**	*e*P		**P**	**04 47 25.2**	**+0.3**
VNA1				*e*		pP	04 47 28.4	+0.2
BAIF	**Baives**	**145.04**	**2**	*e*PKP1		PKPbc	04 53 44.1	0.0
	comp=Z,20nm,1.0s							
GRF	**Grafenberg Arr**	**145.20**	**354**	*e*PKP		PKPdf	04 53 45.2	+0.1
KHC	**Kasperske Hory**	**145.47**	**351**	*e*PKP		PKPdf	04 53 46.0	+0.4
WLF	**Walferdange**	**145.47**	**0**	*e*PKPbc		PKPbc	04 53 44.4	-1.2
BRTR	**Keskin Array B**	**145.64**	**321**	PKPbc		PKPbc	04 53 48.0	+1.6
	comp=Z,3.1nm,0.9s,baz=157,slow=3.5,SNR=12							
GERES	**GERESS Array B**	**145.73**	**351**	PKPbc		PKPbc	04 53 47.1	+0.7
	comp=Z,1.6nm,0.8s,baz=25,slow=3.5,SNR=12							
CDF	**Champ du Feu**	**146.71**	**359**	*e*PKP1		PKPbc	04 53 49.5	+0.2
	comp=Z,20nm,1.1s							
HAU	**Haudompre**	**147.13**	**360**	*e*PKP1		PKPbc	04 53 50.6	0.0
	comp=Z,13nm,1.0s							
LOR	**Lormes**	**147.81**	**3**	*e*PKP1		PKPbc	04 53 52.4	0.0
	comp=Z,11nm,0.9s							
SSF	**Saint Saulge**	**148.00**	**3**	*e*PKP1		PKPbc	04 53 53.0	0.0
	comp=Z,39nm,1.4s							
CABF	**La Chapelle**	**148.53**	**0**	*e*PKP1		PKPbc	04 53 55.1	+0.7
	comp=Z,60nm,1.4s							

CSEM ***24*** *04:46:11.7±0.2,5152N×16.18E, h2km±1km, ML3.1/8, Error ellipse: s-maj=3.1km s-min=1.4km az=29.0*
ISCJB ***24*** *04:46:11.1±0.6,5143N±003×16.11E±003, h0km, Error ellipse: s-maj=4.4km s-min=2.8km az=19.1*
NEIC ***24*** *04:46:12.2±0.7, 5149N×16.13E, h5km, ML2.5(SZGRF), Error ellipse: s-maj=8.2km s-min=5.6km az=208.0*
PRU ***24*** *04:46:13.3, 5143N×16.13E, h0km*
WAR ***24*** *04:46:13, 5146N×16.10E, Mw2.5*
VIE ***24*** *04:46:14.9±0.6, 5132N×16.17E, h0km, mb2.2/3, ML2.6/4, Error ellipse: s-maj=5.5km s-min=3.5km az=75.0, Suspected Mining induced.*

ISC 24 04:46:11.6±0.5, 5151N±003×1614E±003, h0km, n26, σ1§00/55, 6C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**172**	⇓*i*Pg		**Pg**	**04 46 25.0**	**+0.6**
KSP				*e*Sg		**Sg**	**04 46 33.4**	**+0.3**
UPC	**Upice**	**1.00**	**185**	*e*PG		**Pg**	**04 46 31.0**	**+0.2**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG		**Pg**	**04 46 33.8**	**-0.1**
DPC				*e*SG		**Sg**	**04 46 48.3**	**-0.6**
	comp=Z,16nm,0.4s							
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG		**Pg**	**04 46 38.1**	**-0.2**
PVCC				*e*SG		**Sg**	**04 46 56.6**	**+0.3**
	comp=Z,73nm,0.3s							
BRG	**Berggiesshubel**	**1.52**	**246**	Pg		**Pg**	**04 46 40.8**	**+0.1**
BRG	**Berggiesshubel**	**1.52**	**246**	PN		**Pn**	**04 46 39.4**	**-0.6**
BRG				PG		**Pg**	**04 46 40.8**	**+0.1**
BRG				SG		**Sg**	**04 47 00.9**	**+0.5**
	comp=Z,26nm,0.3s							
PRU	**Pruhonice**	**1.83**	**214**	*e*PN		**Pn**	**04 46 43.7**	**-0.5**
PRU				*e*PG		**Pg**	**04 46 45.4**	**-1.2**
PRU				*e*SG		**Sg**	**04 47 08.6**	**-1.7**
	comp=Z,15nm,0.6s							
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn		**Pn**	**04 46 46.0**	**+0.1**
MORC				*e*Sn		**Sn**	**04 47 13.1**	**+2.0**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn		**Pn**	**04 46 46.0**	**+0.1**
MORC				*e*Sg		**Sg**	**04 47 13.0**	**-1.2**
CLL	**Collm**	**1.97**	**265**	*e*Pn		**Pn**	**04 46 46.0**	**-0.2**
CLL				*e*Pg		**Pg**	**04 46 49.0**	**-0.4**
CLL				*e*Sg		**Sg**	**04 47 15.0**	**0.0**
CLL	**Collm**	**1.97**	**265**	*e*Pn		**Pn**	**04 46 46.0**	**-0.2**
CLL				*e*Pg		**Pg**	**04 46 49.0**	**-0.4**
CLL				*i* x		x	04 46 53.2	
CLL				*e*Sg		**Sg**	**04 47 15.0**	**0.0**
	comp=Z,7.0nm,0.8s							
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PG		**Pg**	**04 46 50.7**	**-1.2**
OKC				*e*SG		**Sg**	**04 47 17.3**	**-1.8**
	comp=Z,27nm,0.8s							
TREC	**Trest**	**2.25**	**191**	*e*PN		**Pn**	**04 46 50.8**	**+0.7**
TREC				*e*PG		**Pg**	**04 46 54.0**	**-0.8**
OJC	**Ojcow**	**2.65**	**118**	*e*Pg		**Pg**	**04 47 03.8**	**+1.4**
OJC				*e*Sg		**Sg**	**04 47 38.2**	**+1.4**
NKC	**Novy Kostel**	**2.66**	**243**	*e*PN		**Pn**	**04 46 56.1**	**+0.4**
NKC				*e*PG		**Pg**	**04 47 02.5**	**-0.1**
NKC				*e*SG		**Sg**	**04 47 37.9**	**+0.8**
	comp=Z,17nm,0.3s							
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN		**Pn**	**04 46 59.1**	**+0.3**
KHC				*e*PG		**Pg**	**04 47 05.1**	**-1.8**
KHC				*e*SN		**Sn**	**04 47 33.0**	**-1.2**
KHC				*e*SG		**Sg**	**04 47 43.1**	**-1.3**
	comp=Z,8.0nm,0.4s							
MOX	**Moxa**	**2.98**	**255**	*e*Pg		**Pg**	**04 47 08.6**	**-0.1**
MOX				*e*Sg		**Sg**	**04 47 48.6**	**+1.3**
MOX				*e*SG		**Sg**	**04 47 48.6**	**+1.3**
MOX	**Moxa**	**2.98**	**255**	*e*PG		**Pg**	**04 47 08.6**	**-0.1**
GEC2	**GERESS Array S**	**3.09**	**211**	*e*Pn		**Pn**	**04 47 03.4**	**+1.8**
GEC2	**GERESS Array S**	**3.09**	**211**	*e*Pn		**Pn**	**04 47 03.4**	**+1.8**
NIE	**Niedzica**	**3.39**	**126**	*e*Pg		**Pg**	**04 47 15.6**	**-0.9**
NIE				*e*Sg		**Sg**	**04 47 59.4**	**-1.0**
CONA	**Conrad Observa**	**3.59**	**183**	⇑*i*Pn		**Pn**	**04 47 09.6**	**+1.2**
CONA				⇑*i*Sg		**Sg**	**04 48 07.2**	**+0.4**
	comp=Z,4.3nm,0.3s							
CSNA	**Conrad Observa**	**3.59**	**183**	⇑*i*Pn		**Pn**	**04 47 09.6**	**+1.2**
CSNA				⇑*i*Sg		**Sg**	**04 48 07.1**	**+0.4**
	comp=Z,4.9nm,0.3s							
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P		**Pn**	**04 47 09.7**	**-0.1**
BSD				*i* S		**Sn**	**04 47 50.9**	**-3.0**
MOA	**Molln**	**3.86**	**199**	⇑*i*Pn		**Pn**	**04 47 12.8**	**+0.7**
MOA				⇓*i*Sg		**Sg**	**04 48 15.2**	**-0.2**
	comp=Z,7.0nm,0.5s							
ARSA	**Arzberg**	**4.28**	**186**	⇓*i*Pn		**Pn**	**04 47 20.1**	**+2.1**
ARSA				⇑*i*Sg		**Sg**	**04 48 29.9**	**+0.9**
	comp=Z,4.1nm,0.5s							

DJA ***24*** *05:02:01,2442S×6862W, h10km, Mw6.1/5*
NEIC ***24*** *05:02:06.8,2377S×6901W, h92km, mb5.6/179, MW5.6, Moment Tensor Solution. s45 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.16; $M_{\theta\theta}$0.84; $M_{\phi\phi}$2.31; $M_{r\theta}$0.94; $M_{\theta\phi}$-0.24; $M_{\phi r}$-1.62; Best double couple: $M_0$3.40000×10^{17} NP1: ϕ_s175.00000°,δ29.00000°,λ-77.00000°. NP2: ϕ_s340.00000°,δ62.00000°,λ-97.00000°. Principal axes: T 2.8700, Plg16.0000°, Azm75.0000°; N 0.8800, Plg6.0000°, Azm343.0000°; P -3.7600, Plg72.0000°, Azm233.0000°; After GUC.*
NEIC Felt [IV] at Antofagasta, Calama, San Pedro de Atacama and Sierra Gorda; [III] at Mejillones and Tocopilla.
GUC ***24*** *05:02:06.8±3.0,2377S×6901W, h94km±24km, ML5.7*
BJI ***24*** *05:02:06.9,2349S×6923W, h93km, mB5.5*
GCMT ***24*** *05:02:06.8±0.1,2373S×6906W, h109km±1km, MW5.6/89, Moment Tensor Solution. s89,c153; s87,c185; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.34±.04; $M_{\theta\theta}$-0.37±.04; $M_{\phi\phi}$2.70±.05; $M_{r\theta}$0.90±.03; $M_{\theta\phi}$-1.19±.04; $M_{\phi r}$-0.93±.04; Best double couple: $M_0$3.04200×10^{17} NP1:ϕ_s178.00000°,δ36.00000°, λ-64.00000°. NP2:ϕ_s327.00000°,δ58.00000°, λ-108.00000°. Principal axes: T 3.3520, Plg12.0000°, Azm69.0000°; N -0.6260, Plg15.0000°, Azm336.0000°; P -2.7320, Plg71.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISCJB ***24*** *05:02:06.1±0.1,2375S±002×6881W±003, h94km, mb5.5/192 Error ellipse: s-maj=4.0km s-min=3.0km az=151.9*
MOS ***24*** *05:02:07.7±1.2,2349S×6876W, h97km, mb5.8/47, MS4.6/7, Error ellipse: s-maj=10.1km s-min=5.1km az=102.9*
IDC ***24*** *05:02:07.6±0.3,2371S×6878W, h94km±2km, mb5.3/15, mb1 5.3/16, mb1mx5.3/18, mbtmp5.2/16, MS4.5/14, Ms1 4.5/14, ms1mx4.3/20, Error ellipse: s-maj=11.2km s-min=9.6km az=67.0*
LDG ***24*** *05:02:09.9±0.8, 2264S×6878W, h97km, Mb5.8/22, Ms4.6/8, Error ellipse: s-maj=51.6km s-min=31.4km az=22.0*

ISC 24 05:02:08.2±0.1, 2371S±003×6882W±003, h96km, h96km±.3km: pP-P, n625, σ1§02/449, mb5.5/192, 25C-10D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.98**	**36**	⇑*i*P		**Pn**	**05 02 29.5**	**+1.3**
SPCH				*i* S		**Sn**	**05 02 46.3**	**+3.1**
SPCH	**San Pedro de A**	**0.98**	**36**	⇑*i*P		**Pn**	**05 02 29.5**	**+1.3**
SPCH				*i* S		**Sn**	**05 02 46.3**	**+3.1**
SPCH				AML		AML	05 02 48.6	
	comp=N,365μm,0.6s							
LVC	**Limon Verde**	**1.10**	**356**	P		**Pn**	**05 02 29.3**	**-0.2**
	comp=N,5μm,0.3s,baz=172,slow=8.8,SNR=8275							
LVC				S		**Sn**	**05 02 46.1**	**+0.6**
	comp=N,19μm,0.3s,baz=42,slow=19,SNR=70							
LVC	**Limon Verde**	**1.10**	**356**	*e*Pn		**Pn**	**05 02 29.5**	**0.0**
LVC				*e*Sn		**Sn**	**05 02 46.3**	**+0.8**
LVC	**Limon Verde**	**1.10**	**356**	⇓*i*P		**Pn**	**05 02 29.5**	**0.0**
LVC				*i* S		**Sn**	**05 02 46.2**	**+0.7**
LVC				AML		AML	05 02 47.5	
	comp=N,198μm,0.5s							
PB06	**Plate Boundary**	**1.22**	**325**	⇓*i*P		**Pn**	**05 02 29.7**	**-1.1**
PB06				*i* S		**Sn**	**05 02 47.1**	**-0.8**
CEN1	**Los Morros**	**1.31**	**284**	*e*P		**Pn**	**05 02 30.0**	**-1.9**
CEN1				*i* S		**Sn**	**05 02 47.5**	**-2.3**
CEN1				AML		AML	05 02 49.7	
	comp=N,196μm,0.6s							
PECH	**Pedro de Valdi**	**1.36**	**325**	⇑*i*P		**Pn**	**05 02 31.6**	**-1.0**
PECH				*i* S		**Sn**	**05 02 50.3**	**-0.7**
ANCH	**Antofagasta**	**1.46**	**271**	⇑*i*P		**Pn**	**05 02 30.1**	**-3.6**
ANCH				*i* S		**Sn**	**05 02 45.8**	**-7.2**
MECH	**Mejillones**	**1.61**	**292**	⇑*i*P		**Pn**	**05 02 33.6**	**-2.0**
MECH				*i* S		**Sn**	**05 02 53.7**	**-2.9**
MECH				AML		AML	05 03 01.5	
	comp=E,231μm,0.7s							
CPN1	**Cerro Paranal**	**1.71**	**238**	⇑*i*P		**Pn**	**05 02 34.0**	**-2.9**
CPN1				*i* S		**Sn**	**05 02 55.0**	**-3.7**
CPN1				AML		AML	05 03 01.2	
	comp=E,45μm,0.6s							
MACH	**Maria Elena**	**1.74**	**330**	⇓*i*P		**Pn**	**05 02 36.4**	**-0.9**
MACH				*i* S		**Sn**	**05 02 58.8**	**-0.6**
TOCH	**Tocopilla**	**2.05**	**321**	*e*P		**Pn**	**05 02 39.9**	**-1.5**
TOCH				*i* S		**Sn**	**05 03 04.8**	**-1.9**
TOCH				AML		AML	05 03 12.3	
	comp=N,47μm,0.1s							
PB07	**Plate Boundary**	**2.21**	**333**	*e*P		**Pn**	**05 02 42.5**	**-0.8**
PB07				*i* S		**Sn**	**05 03 10.5**	**+0.2**
LCO	**Las Campanas**	**5.54**	**197**	Pn		**Pn**	**05 03 26.9**	**-1.2**
	comp=N,5μm,0.9s							
LCO				*e*Sn		**Sn**	**05 04 31.4**	**+0.9**
LPAZ	**La Paz**	**7.42**	**5**	P		**Pn**	**05 03 54.0**	**+0.2**
	comp=N,13nm,0.3s,baz=175,slow=7.1,SNR=199							
LPAZ	**La Paz**	**7.42**	**5**	*e*Pn		**Pn**	**05 03 53.8**	**0.0**
	comp=N,41nm,1.0s							
LPAZ	**La Paz**	**7.42**	**5**	P		**Pn**	**05 03 54.0**	**+0.2**
LPAZ				pmax		pmax		
	comp=Z,13nm,0.3s							
ARE	**Arequipa**	**7.64**	**340**	*e*P		**Pn**	**05 03 53.0**	**-3.8**
ARE				*i* S		**Sn**	**05 05 15.7**	**-6.1**
CFAA	**Coronel Fontan**	**7.88**	**176**	P		**Pn**	**05 03 56.2**	**-3.7**
	comp=Z,11nm,0.3s,baz=354,slow=13,SNR=942							
CFAA				S		**Sn**	**05 05 18.0**	**-9.5**
	comp=Z,6.1nm,0.3s,baz=234,slow=19,SNR=3.0							
SIV	**San Ignacio**	**10.59**	**45**	P		**Pn**	**05 04 33.1**	**-3.9**
	comp=Z,32nm,0.3s,baz=240,slow=12,SNR=230							
SIV				S		**Sn**	**05 06 27.3**	**-6.3**
	comp=Z,3.9nm,0.3s,baz=319,slow=20,SNR=2.5							
NNA	**Nana**	**13.93**	**325**	P		**Pn**	**05 05 21.3**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=153,slow=9.0,SNR=3.2							
NNA				S		**Sn**	**05 07 48.4**	**-6.6**
	comp=Z,2.1nm,0.3s,baz=164,slow=16,SNR=3.0							
NNA	**Nana**	**13.93**	**325**	*e*Pn		**Pn**	**05 05 21.5**	**0.0**
	comp=Z,518nm,1.7s							
PLCA	**Paso Flores**	**17.03**	**184**	P		**Pn**	**05 05 57.6**	**-2.6**
	comp=Z,2.1nm,0.3s,baz=12,slow=13,SNR=41							
PLCA				LR		LR	05 13 29.1	
	comp=Z,1μm,20.1s,baz=14,slow=40							
PLCA	**Paso Flores**	**17.03**	**184**	*e*Pn		**Pn**	**05 05 56.5**	**-3.7**
	comp=Z,543nm,1.2s							
PLCA				*e*Sn		**Sn**	**05 09 02.6**	**-6.9**
PLCA				*e*PcP		PcP	05 10 41.4	+1.1
PLCA	**Paso Flores**	**17.03**	**184**	P		**Pn**	**05 05 57.7**	**-2.6**
PLCA				pmax		pmax		
	comp=Z,2.0nm,0.3s							
PLCA				MLR		MLR		
	comp=Z,1μm,20.1s							
ATAH	**Atahualpa**	**18.99**	**330**	P		**Pn**	**05 06 22.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=163,slow=10,SNR=13							
BDFB	**Brasilia**	**21.16**	**71**	P		**P**	**05 06 43.9**	**-1.8**
	comp=Z,224nm,0.7s,mb5.6,baz=240,slow=17,SNR=320							
BDFB				S		**S**	**05 10 30.6**	**-5.1**
	comp=N,19nm,0.9s,baz=180,slow=20,SNR=1.8							
BDFB				LR		LR	05 16 23.4	
	comp=Z,2μm,18.3s,baz=56,slow=40							
BDFB	**Brasilia**	**21.16**	**71**	*e*P		**P**	**05 06 43.3**	**-2.4**
	comp=Z,341nm,0.8s,mb5.7							
BDFB	**Brasilia**	**21.16**	**71**	P		**P**	**05 06 43.9**	**-1.8**
BDFB				S		**S**	**05 10 30.6**	**-5.1**
BDFB				pmax		pmax		
	comp=Z,224nm,0.7s							
BDFB				smax				
	comp=N,19nm,0.9s							
BDFB				MLR		MLR		
	comp=Z,2μm,18.3s							
CAM4	**Nova Friburgo**	**24.19**	**92**	⇓*e*P		**P**	**05 07 11.8**	**-4.1**
CAM4				*i*			05 07 15.5	
CAM4				*i*			05 07 25.8	
CAM4				*i*			05 07 28.9	
CAM4				*i*			05 07 33.8	
CAM4				*i*			05 07 39.1	
OTAV	**Otavalo**	**25.58**	**337**	*e*P		**P**	**05 07 29.2**	**+0.8**
	comp=Z,20nm,0.9s,mb4.5							
OTAV				*e*PcP		PcP	05 10 59.2	+1.9
ROSC	**El Rosal**	**28.90**	**349**	P		**P**	**05 07 59.7**	**+1.6**
	comp=Z,3.8nm,0.3s,mb4.4,baz=242,slow=23,SNR=3.6							
ROSC				LR		LR	05 19 54.2	
	comp=Z,841nm,20.3s,baz=188,slow=37							
ROSC	**El Rosal**	**28.90**	**349**	P		**P**	**05 07 57.2**	**-0.9**
EFI	**East Falkland**	**29.12**	**166**	P		**P**	**05 07 58.3**	**-1.4**
	comp=Z,4μm,0.6s,SNR=50							
EFI	**East Falkland**	**29.12**	**166**	*e*P		**P**	**05 07 58.1**	**-1.6**
	comp=Z,515nm,0.9s,mb6.2							
EFI	**East Falkland**	**29.12**	**166**	*e*P		**P**	**05 07 58.1**	**-1.6**
EFI				pmax		pmax		
	comp=Z,520nm,0.9s,mb6.2							
USHA	**Ushuaia**	**31.08**	**180**	P		**P**	**05 08 15.6**	**-1.3**
	comp=Z,46nm,0.7s,mb5.3,baz=353,slow=7.1,SNR=53							
SDV	**Santo Domingo**	**32.45**	**357**	*e*P		**P**	**05 08 27.2**	**-2.2**
	comp=Z,122nm,1.5s,mb5.4							
RCBR	**Riachuelo**	**36.31**	**66**	*e*P		**P**	**05 09 01.8**	**-1.1**
	comp=Z,260nm,1.0s,mb6.1							
RCBR				*e*pP		pP	05 09 25.4	+0.4
RPN	**Rapa Nui**	**36.64**	**256**	P		**P**	**05 09 05.8**	**+0.2**
	comp=Z,181nm,1.0s,mb6.0,baz=89,slow=3.7,SNR=4.2							
PMSA	**Palmer Station**	**41.17**	**177**	P		**P**	**05 09 42.6**	**-0.2**
	comp=Z,137nm,0.8s,mb5.8,baz=10,slow=8.0,SNR=12							
PMSA	**Palmer Station**	**41.17**	**177**	*e*P		**P**	**05 09 41.9**	**-0.9**
	comp=Z,154nm,0.8s,mb5.9							
PMSA				*e*pP		pP	05 10 03.8	-1.5
CPD	**Cerro la Pandu**	**41.59**	**4**	*e*P		**P**	**05 09 53.6**	**+6.8**
	comp=Z,194nm,1.5s,mb5.6							
CPD	**Cerro la Pandu**	**41.59**	**4**	*e*P		**P**	**05 09 53.6**	**+6.9**
CPD				pmax		pmax		
	comp=Z,190nm,1.5s,mb5.6							
TGUH	**Tegucigalpa,Un**	**41.65**	**332**	*e*P		**P**	**05 09 47.6**	**+0.4**
	comp=Z,128nm,0.9s,mb5.7							
SJG	**San Juan**	**41.65**	**4**	*e*P		**P**	**05 09 48.9**	**+1.7**
	comp=Z,89nm,0.8s,mb5.5							
SJG	**San Juan**	**41.65**	**4**	*e*P		**P**	**05 09 48.9**	**+1.7**
SJG				pmax		pmax		
	comp=Z,89nm,0.8s							
MTP	**Monte Pirata**	**41.68**	**5**	*e*P		**P**	**05 09 48.0**	**+0.6**
MTP				*e*pP		pP	05 10 06.9	-3.1
SDDR	**Presa de Saban**	**42.50**	**357**	*e*P		**P**	**05 09 56.6**	**+2.5**
	comp=Z,38nm,1.1s,mb5.0							
CMIG	**Matias Romero**	**47.88**	**325**	*i* P		**P**	**05 10 32.7**	**-4.0**
VHO	**Vista Hermosa**	**48.85**	**324**	*i* P		**P**	**05 10 45.6**	**+1.4**
PNIG	**Pinotepa**	**49.08**	**322**	*i* P		**P**	**05 10 46.6**	**+0.6**
CAIG	**El Cayaco**	**50.84**	**320**	*i* P		**P**	**05 10 58.4**	**-0.8**
ZIIG	**Zihuatanejo**	**51.99**	**319**	*i* P		**P**	**05 11 08.2**	**+0.4**
IIO	**Organos**	**51.99**	**323**	*i* P		**P**	**05 11 09.4**	**+1.7**
PBVM	**Pinon**	**52.07**	**323**	*i* P		**P**	**05 11 09.4**	**+1.1**
PTVM	**Pico Tres Padr**	**52.20**	**323**	*i* P		**P**	**05 11 11.1**	**+1.7**
MOIG	**Morelia**	**53.44**	**321**	*i* P		**P**	**05 11 19.6**	**+1.1**
**S

comp=Z,120nm,0.9s,mb5.9
BLA Blacksburg 61.58 349 *e*P **P 05 12 15.2 -0.1**
comp=Z,106nm,1.4s,mb5.7
BLA *e*pP pP 05 12 39.0 -0.2
BLA Blacksburg 61.58 349 *e* **P 05 12 15.2 -0.1**
BLA *e**PP pP 05 12 39.0 -0.3
BLA pmax pmax
comp=Z,106nm,1.4s,mb5.7
ELN Prospectdale 61.65 349 *e*P **P 05 12 15.9 +0.1**
ELN *e*pP pP 05 12 39.3 -0.5
WVT Waverly 62.17 343 *e*P **P 05 12 17.7 -1.6**
comp=Z,75nm,0.8s,mb5.8
WVT *e*pP pP 05 12 41.4 -1.9
UALR University of 62.30 338 *e*P **P 05 12 19.4 -0.8**
comp=Z,152nm,1.3s,mb5.9
UALR *e*pP pP 05 12 43.0 -1.2
HALT Halls 62.40 341 *e*P **P 05 12 19.6 -1.1**
HBAR Harrisburg 62.47 340 *e*P **P 05 12 20.1 -1.2**
HBAR *e*pP pP 05 12 44.5 -0.9
TXAR Lajitas Array 62.49 326 P **P 05 12 21.4 -0.1**
comp=Z,18nm,0.8s,mb5.2,baz=147,slw=8.7,SNR=131
TXAR pP pP 05 12 44.2 -1.4
comp=Z,9.3nm,0.9s,baz=92,slow=10,SNR=4.6
TXAR PKPPKP 05 41 22.1
comp=Z,0.6nm,0.8s,baz=270,slow=1.0,SNR=3.7
TXAR Lajitas Array 62.49 326 P **P 05 12 21.4 -0.1**
TXAR pP pP 05 12 44.2 -1.4
TXAR P'P' 05 41 22.1
TXAR Lajitas Array 62.49 326 P **P 05 12 21.5 -0.1**
TXAR *PP pP 05 12 44.2 -1.4
TXAR pmax pmax
comp=Z,18nm,0.8s
TXAR pmax pmax
comp=Z,9.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
MIAR Mount Ida 62.53 337 *e*P **P 05 12 20.7 -1.0**
comp=Z,95nm,1.0s,mb5.7
MIAR *e*pP pP 05 12 44.8 -1.0
MIAR Mount Ida 62.53 337 *e*P **P 05 12 20.7 -1.0**
MIAR pmax pmax
comp=Z,95nm,1.0s,mb5.7
GNAR Gosnell 62.65 341 *e*P **P 05 12 21.7 -0.8**
comp=Z,5µm,1.3s
GNAR *e*pP pP 05 12 45.3 -1.3
UTMT University of 62.66 342 *e*P **P 05 12 21.4 -1.2**
comp=Z,380nm,1.2s,mb6.2
UTMT *e*pP pP 05 12 45.7 -0.9
GLAT Glass 62.72 341 *e*P **P 05 12 22.0 -0.9**
GLAT *e*pP pP 05 12 45.9 -1.1
PVMO Portageville 62.97 341 *e*P **P 05 12 24.1 -0.4**
comp=Z,338nm,1.1s,mb6.2
PVMO *e*pP pP 05 12 47.6 -1.0
PARMO Parma 63.22 341 *e*P **P 05 12 25.6 -0.6**
PARMO *e*pP pP 05 12 49.1 -1.2
SDMD Soldier's Deli 63.24 353 *e*P **P 05 12 26.7 +0.4**
comp=Z,97nm,1.4s,mb5.5
SDMD *e*pP pP 05 12 50.5 +0.1
WCI Wyandotte Cave 63.76 345 *e*P **P 05 12 28.3 -1.5**
comp=Z,57nm,0.8s,mb5.5
WCI *e*pP pP 05 12 51.9 -2.0
MVL Millersville 63.77 354 *e*P **P 05 12 30.4 +0.6**
comp=Z,32nm,0.9s,mb5.2
MVL *e*pP pP 05 12 53.7 -0.2
USIN University of 63.86 343 *e*P **P 05 12 29.1 -1.3**
comp=Z,138nm,1.1s,mb5.7
USIN *e*pP pP 05 12 52.3 -2.2
MCWV Mont Chateau 63.88 351 *e*P **P 05 12 30.5 0.0**
comp=Z,131nm,1.4s,mb5.6
MCWV *e*pP pP 05 12 54.4 -0.2
SIUC Southern Illin 64.04 342 *e*P **P 05 12 30.5 -1.1**
comp=Z,234nm,1.3s,mb5.9
SIUC *e*pP pP 05 12 54.5 -1.3
SSPA Standing Stone 64.57 352 *e*P **P 05 12 35.1 0.0**
comp=Z,12nm,0.8s,mb4.8
SSPA *e*pP pP 05 12 59.7 +0.5
FVM French Village 64.64 341 *e*P **P 05 12 34.4 -1.2**
comp=Z,168nm,0.8s,mb5.9
FVM French Village 64.64 341 *e*P **P 05 12 34.4 -1.1**
FVM pmax pmax
comp=Z,130nm,0.8s,mb5.8
OLIL Olney 64.69 343 *e*P **P 05 12 33.9 -1.9**
comp=Z,112nm,1.4s,mb5.5
OLIL *e*pP pP 05 12 57.8 -2.3
BLO Bloomington 64.71 345 *e*P **P 05 12 34.1 -1.8**
comp=Z,103nm,1.2s,mb5.5
BLO *e*pP pP 05 12 59.0 -1.2
BLO Bloomington 64.71 345 *e*P **P 05 12 34.1 -1.9**
BLO *e**PP pP 05 12 59.0 -1.2
BLO pmax pmax
comp=Z,103nm,1.2s,mb5.5
MAIT Maitri 64.71 159⇑ *i*P **P 05 12 35.4 -0.3**
MAIT *e*E 05 13 09.9
MAIT *e*S **S 05 21 08.5 +0.4**
WMOK Wichita Mounta 64.71 333 *e*P **P 05 12 34.7 -1.3**
comp=Z,8.9nm,0.8s,mb4.7
WMOK *e*pP pP 05 12 58.6 -1.6
NVL N'lazarevskaya 64.75 159 *d* *i*P **P 05 12 36.6 +0.7**
NVL *e**PP pP 05 13 00.5 +0.5
NVL S **S 05 21 10.2 +1.7**
NVL pmax pmax
comp=Z,360nm,1.0s,mb6.2
CCM Cathedral Cave 64.95 341 *e*P **P 05 12 36.4 -1.1**
comp=Z,124nm,1.0s,mb5.7
CCM *e*pP pP 05 13 01.3 -0.5
GDL2 Guadalupe Moun 65.15 327 *e*P **P 05 12 39.3 +0.3**
SLM Saint Louis 65.19 342 *e*P **P 05 12 37.4 -1.7**
comp=Z,122nm,1.4s,mb5.5
SLM *e*pP pP 05 13 02.2 -1.1
SLM Saint Louis 65.19 342 *e*P **P 05 12 37.4 -1.7**
SLM *e**PP pP 05 13 02.2 -1.1
SLM pmax pmax
comp=Z,120nm,1.4s,mb5.5
BRYW Bryant College 65.35 358 *e*P **P 05 12 41.0 +1.0**
comp=Z,177nm,1.0s,mb5.8
BRYW *e*pP pP 05 13 04.0 -0.2
BINY Binghamton 65.91 354 *e*P **P 05 12 44.0 +0.4**
comp=Z,133nm,1.4s,mb5.6
AMTX Amarillo 66.09 331 *e*P **P 05 12 44.2 -0.8**
comp=Z,70nm,1.1s,mb5.4
ERPA Erie 66.31 351 *e*P **P 05 12 46.0 -0.2**
comp=Z,86nm,0.7s,mb5.7
ERPA *e*pP pP 05 13 09.1 -1.4
QSPA South Pole Qui 66.49 180 pP pP 05 13 12.0 +0.8
baz=162,slow=3.2
HDIL Hopedale 66.72 343 *e*P **P 05 12 46.9 -2.0**
comp=Z,120nm,1.2s,mb5.6
FFD Franklin Falls 66.90 358 *e*P **P 05 12 50.7 +0.8**
comp=Z,24nm,0.9s,mb5.0
AAM Ann Arbor 67.10 348 *e*P **P 05 12 50.3 -0.9**
comp=Z,9.5nm,0.6s,mb4.8
AAM *e*pP pP 05 13 14.8 -0.7
HNH Hanover 67.16 357 *e*P **P 05 12 53.0 +1.4**
comp=Z,169nm,1.2s,mb5.8
NCB Newcomb 67.53 356 *e*P **P 05 12 54.6 +0.7**
comp=Z,61nm,1.2s,mb5.3
LBNH Lisbon 67.68 358 *e*P **P 05 12 56.0 +1.2**
comp=Z,48nm,1.0s,mb5.3
LBNH *e*pP pP 05 13 16.5 -2.7
KSU1 Kansas State U 67.68 337 *e*P **P 05 12 54.0 -1.0**
comp=Z,140nm,1.4s,mb5.6
BNM Barren Site 67.85 327 *e*P **P 05 12 56.9 +0.8**
WVL Waterville 67.95 359 *e*P **P 05 12 57.5 +1.0**
WVL *e*pP pP 05 13 21.3 +0.4
LPM Los Pinos Moun 67.98 327 *e*P **P 05 12 57.5 +0.5**
LPM *e*pP pP 05 13 22.1 +0.8
LENM Lemitar 68.03 326 *e*P **P 05 12 58.2 +0.9**
EMMW East Machias 68.10 1 *e*pP pP 05 13 22.1 +0.2
LONY Lake Ozonia 68.20 356 *e*P **P 05 12 58.2 +0.2**
comp=Z,182nm,1.3s,mb5.8
LAZ Ladron 68.30 327 *e*P **P 05 13 00.1 +1.2**
LAZ *e*pP pP 05 13 24.4 +1.0
ANMO Albuquerque 68.40 327 *e*P **P 05 13 00.2 +0.7**
comp=Z,80nm,1.0s,mb5.5
ANMO *e*pP pP 05 13 24.8 +0.8
ANMO Albuquerque 68.40 327⇑ *e*P **P 05 12 59.9 +0.4**
ANMO *i**PP pP 05 13 24.2 +0.3
CBKS Cedar Bluff 68.61 334 *e*P **P 05 13 00.8 +0.1**
comp=Z,225nm,1.1s,mb5.9
CBKS *e*pP pP 05 13 25.0 -0.2
TUC Tucson 68.63 323 *e*P **P 05 13 01.8 +0.8**
comp=Z,102nm,1.2s,mb5.5
TUC *e*pP pP 05 13 25.9 +0.5
PKME Peaks-Kenny Pk 68.64 360 *e*P **P 05 13 01.1 +0.3**
comp=Z,69nm,1.1s,mb5.4
PKME *e*pP pP 05 13 25.2 0.0
LIC Lamto 68.94 73⇑ *i*P **P 05 13 03.2 -0.2**
comp=Z,111nm,0.9s,mb5.4
LIC *e*pP pP 05 13 27.8 0.0
LIC *e*MLR MLR
comp=Z,1µm,19.0s
LIC Lamto 68.94 73 *e*P **P 05 13 02.8 -0.6**
comp=Z,355nm,1.3s,mb6.0
LIC Lamto 68.94 73⇑ *i*P **P 05 13 03.2 -0.2**
comp=Z,56nm,0.9s,mb5.4
LIC *e*pP pP 05 13 27.8 0.0
LIC LR LR
comp=Z,560nm,19.0s
SCIA State Center 69.08 341 *e*P **P 05 13 03.0 -0.7**
comp=Z,129nm,1.0s,mb5.7
TIC Toumodi 69.14 73 *e*P **P 05 13 04.2 -0.5**
comp=Z,732nm,1.1s,mb6.4
JFWS Jewell Farm 69.17 343 *e*P **P 05 13 03.2 -1.0**
comp=Z,82nm,0.8s,mb5.6
KIC Kosan Boka 69.26 73 *e*P **P 05 13 04.9 -0.5**
comp=Z,743nm,0.9s,mb6.5
DBIC Dimbokro 69.30 73 P **P 05 13 05.5 -0.2**
comp=Z,80nm,0.7s,mb5.6,baz=217,slow=6.3,SNR=89
DBIC *e*pP pP 05 13 29.7 -0.4
comp=Z,185nm,1.0s,baz=215,slow=6.2,SNR=10
DBIC S S 05 22 07.2 +2.3
comp=Z,7.2nm,1.0s,baz=319,slow=23,SNR=10
DBIC LR LR 05 43 38.4
comp=Z,947nm,18.3s,baz=182,slow=36
DBIC Dimbokro 69.30 73 *e*P **P 05 13 05.4 -0.2**
comp=Z,221nm,1.0s,mb5.9
DBIC Dimbokro 69.30 73 P **P 05 13 05.5 -0.1**
DBIC *e**PP pP 05 13 29.7 -0.4
DBIC S S 05 22 07.2 +2.3
DBIC pmax pmax
comp=Z,80nm,0.7s
DBIC pmax pmax
comp=Z,185nm,1.0s
DBIC smax
comp=N,7.0nm,1.0s
DBIC MLR MLR
comp=Z,947nm,18.3s
GLMI Grayling 69.72 348 *e*P **P 05 13 06.6 -0.8**
GLMI *e*pP pP 05 13 31.9 0.0
SDCO Great Sand Dun 70.19 330 P **P 05 13 11.4 +0.9**
comp=Z,98nm,1.2s,mb5.5
MVCO Mesa Verde 71.19 327 *e*P **P 05 13 17.4 +0.8**
comp=Z,196nm,1.3s,mb5.8
OGNE Ogallala 71.35 334 *e*P **P 05 13 17.6 +0.2**
comp=Z,220nm,1.4s,mb5.8
WUAZ Wupatki 71.37 324 *e*P **P 05 13 19.0 +1.2**
comp=Z,116nm,1.0s,mb5.7
GLA Glamis 71.48 320 *e*P **P 05 13 19.3 +0.9**
comp=Z,128nm,1.5s,mb5.5
GLA Glamis 71.48 320 P **P 05 13 19.9 +1.4**
GLA *e* pP 05 13 44.7 +1.6
GLA pmax pmax
comp=Z,180nm,1.7s,mb5.6
ECSD EROS,Sioux Fal 71.80 339 *e*P **P 05 13 19.4 -0.7**
comp=Z,29nm,0.8s,mb5.2
ISCO Idaho Springs 71.91 331 *e*P **P 05 13 21.6 +0.7**
comp=Z,82nm,1.3s,mb5.4
PV01 Paradox Valley 71.95 328 *e*P **P 05 13 22.1 +1.0**
SMCO Snowmass 72.02 330 *e*P **P 05 13 22.9 +1.3**
comp=Z,31nm,0.8s,mb5.2
PFO Pinyon Flat Ob 72.83 320 P **P 05 13 27.0 +0.5**
comp=Z,245nm,1.3s,mb5.9,SNR=11
PFO Pinyon Flat Ob 72.83 320 *e*P **P 05 13 27.3 +0.7**
comp=Z,192nm,1.8s,mb5.6
PFO Pinyon Flat Ob 72.83 320 P **P 05 13 27.5 +1.0**
PFO pmax pmax
comp=Z,190nm,1.8s,mb5.6
PHWY Pilot Hill 73.07 332 *e*P **P 05 13 28.4 +0.7**
comp=Z,81nm,1.3s,mb5.4
PHWY *e*pP pP 05 13 53.0 +0.6
SRU San Rafael 73.67 327 *e*P **P 05 13 32.0 +0.7**
comp=Z,84nm,0.9s,mb5.5
SBA Scott Base 73.68 190 *e*P **P 05 13 31.5 +0.6**
comp=Z,147nm,1.2s,mb5.6
SBA Scott Base 73.68 190 *e*P **P 05 13 31.5 +0.6**
SBA pmax pmax
comp=Z,147nm,1.2s,mb5.6
CCUT Cedar City 73.95 325 *e*P **P 05 13 34.8 +1.8**
VAH Vaihoa 73.97 260 *e*P **P 05 13 34.5 +0.9**
comp=Z,191nm,1.1s,mb5.7
MSU Marysvale 74.05 326 *e*P **P 05 13 34.7 +1.1**
RWWY Rawlins 74.15 331 *e*P **P 05 13 34.9 +0.8**
comp=Z,73nm,1.0s,mb5.4
SHPR Sheep Range 74.16 323 *e*P **P 05 13 35.3 +1.1**
ARUT Antelope Range 74.16 325 *e*P **P 05 13 35.6 +1.4**
ARUT Antelope Range 74.16 325 P **P 05 13 35.7 +1.5**
EYMN Ely 74.18 344 *e*P **P 05 13 33.5 -0.6**
comp=Z,56nm,1.1s,mb5.2
EYMN *e*pP pP 05 13 58.0 -0.8
MWC Mount Wilson 74.22 319 *e*P **P 05 13 35.5 +0.9**
comp=Z,49nm,1.1s,mb5.2
GSC Goldstone 74.23 321 *e*P **P 05 13 35.7 +1.0**
comp=Z,30nm,0.8s,mb5.1
PMOR Pomariorio Ree 74.29 260 *e*P **P 05 13 36.6 +1.1**
comp=Z,285nm,1.2s,mb5.9
SYO Syowa Base 74.41 159⇑ *i*P **P 05 13 33.4 -1.9**
SYO Syowa Base 74.41 159⇑ *i*pP pP 05 13 58.4 -1.6
SYO Syowa Base 74.41 159‖ *e*sP sP 05 14 08.0 -2.5
VNDA Vanda 74.69 190 P **P 05 13 37.5 +0.6**
comp=Z,48nm,0.9s,mb5.2,baz=134,slow=5.1,SNR=230
VNDA PKPPKP 05 41 05.7
comp=Z,0.3nm,0.3s,baz=48,slow=4.6,SNR=7.6
VNDA LR LR 05 47 51.0
comp=Z,168nm,20.1s,baz=138,slow=37
VNDA Vanda 74.69 190 *e*P **P 05 13 37.3 +0.5**
comp=Z,70nm,1.0s,mb5.3
RSSD Black Hills 74.82 335 *e*P **P 05 13 38.2 +0.3**
comp=Z,99nm,1.2s,mb5.4
RSSD Black Hills 74.82 335 P **P 05 13 38.3 +0.4**
RSSD pmax pmax
comp=Z,99nm,1.2s,mb5.4
OSI Osito Adit 74.88 319 *e*P **P 05 13 38.9 +0.4**
comp=Z,127nm,1.4s,mb5.5
PPT Papeete 74.90 257 *e*S S 05 23 10.7 +1.7
comp=Z,2µm,24.2s
PPT Papeete 74.90 257 *e*LR LR 05 36 28.2
comp=Z,4µm,32.2s,baz=113
PPT Papeete 74.90 257 LR LR 05 40 13.1
comp=Z,335nm,19.2s,baz=85,slow=30
MPU Maple Canyon 74.91 327 *e*P **P 05 13 38.9 +0.3**
comp=Z,95nm,1.1s,mb5.4
DAU Daniels Canyon 75.03 328 *e*P **P 05 13 40.4 +1.2**
TPNV Topopah Spring 75.08 322 *e*P **P 05 13 41.1 +1.5**
comp=Z,132nm,1.1s,mb5.6
NLU North Lily Min 75.09 327 *e*P **P 05 13 37.3 -2.2**
JLU Jordanelle 75.27 328 *e*P **P 05 13 41.6 +1.0**
DUG Dugway 75.64 327 *e*P **P 05 13 43.4 +0.7**
comp=Z,84nm,1.1s,mb5.4
DUG Dugway 75.64 327 P **P 05 13 43.4 +0.7**
DUG pmax pmax
comp=Z,83nm,1.1s,mb5.4
AGMN Agassiz Refuge 75.67 342 *e*P **P 05 13 42.0 -0.7**
comp=Z,59nm,0.9s,mb5.3
BW06 Boulder Array 76.06 330 *e*P **P 05 13 45.0 0.0**
PDAR Pinedale Array 76.06 330 P **P 05 13 45.0 0.0**
comp=Z,16nm,1.1s,mb4.7,baz=137,slow=6.0,SNR=60
PDAR pP pP 05 14 09.7 -0.1
comp=Z,14nm,0.9s,baz=134,slow=8.4,SNR=8.5
PDAR PKPPKP 05 41 03.0
comp=Z,0.8nm,1.0s,baz=101,slow=4.7,SNR=4.3
HWUT Hardware Ranch 76.10 328 *e*P **P 05 13 45.5 +0.3**
comp=Z,64nm,0.9s,mb5.4
BGU Big Grassy Mou 76.30 327 *e*P **P 05 13 46.7 +0.3**
BGU *e*pP pP 05 14 11.3 +0.1
SPUT South Promonto 76.30 328 *e*P **P 05 13 47.1 +0.7**
SPUT *e*pP pP 05 14 11.7 +0.4
TPH Tonopah 76.43 323 *e*P **P 05 13 48.1 +0.9**
comp=Z,99nm,1.3s,mb5.4
TPH *e*pP pP 05 14 12.8 +0.7
TPH Tonopah 76.43 323 P **P 05 13 48.2 +1.0**
TPH *e* pP 05 14 12.9 +0.8
TPH pmax pmax
comp=Z,100nm,1.2s,mb5.4
PTRM Twissleman Ran 76.48 319 *e*P **P 05 13 48.5 +0.9**
MTUM Tungsten Hills 76.68 321 *e*P **P 05 13 49.5 +0.9**
AHID Auburn Hatcher 76.77 329 *e*P **P 05 13 49.7 +0.7**
comp=Z,134nm,1.0s,mb5.6
AHID *e*pP pP 05 14 14.1 +0.2
HVU Hansel Valley 76.82 328 *e*P **P 05 13 49.8 +0.5**
comp=Z,64nm,0.9s,mb5.3
REDW Red Top Meadow 77.12 330 *e*P **P 05 13 51.5 +0.6**
comp=Z,122nm,1.3s,mb5.5
SNOW Snow King Moun 77.15 330 *e*P **P 05 13 52.0 +0.9**
comp=Z,66nm,0.9s,mb5.4
LOHW Long Hollow 77.20 330 *e*P **P 05 13 52.1 +0.7**
comp=Z,24nm,0.7s,mb5.0
TPAW Teton Pass 77.26 330 *e*P **P 05 13 52.5 +0.7**
comp=Z,101nm,1.1s,mb5.5
NVAR Mina Array Bea 77.28 322 P **P 05 13 52.7 +0.7**
comp=Z,19nm,0.9s,mb4.8,baz=154,slow=6.6,SNR=88
NVAR pP pP 05 14 16.9 0.0
NVAR comp=Z,30nm,1.0s,baz=149,slow=6.4,SNR=13
PKPPKP 05 41 04.2
comp=Z,0.9nm,0.9s,baz=243,slow=0.3,SNR=4.2
NVAR Mina Array Bea 77.28 322 P **P 05 13 52.7 +0.7**
NVAR pP pP 05 14 16.9 0.0
NVAR P'P' 05 41 04.2
ELK Elko 77.29 326 *e*P **P 05 13 52.5 +0.5**
comp=Z,72nm,1.0s,mb5.4
ELK Elko 77.29 326 P **P 05 13 52.7 +0.7**
ELK pmax pmax
comp=Z,72nm,1.0s
RRI2 Red Ridge 77.32 330 *e*P **P 05 13 52.9 +0.8**
comp=Z,115nm,1.1s,mb5.5
MOOW Moose Ponds 77.37 330 *e*P **P 05 13 52.9 +0.5**
comp=Z,29nm,1.0s,mb5.0
SUR Sutherland 77.40 120 P **P 05 13 54.1 +1.1**
comp=Z,336nm,0.8s,mb6.1,SNR=14
SUR Sutherland 77.40 120 LR LR 05 42 52.2
comp=Z,417nm,19.6s,baz=69,slow=32
SUR Sutherland 77.40 120 *e*P **P 05 13 54.3 +1.3**
comp=Z,225nm,1.3s,mb5.7
ULM Lac du Bonnet 77.44 343 P **P 05 13 51.8 -0.8**
comp=Z,30nm,0.6s,mb5.2,baz=153,slow=5.7,SNR=30
ULM pP pP 05 14 16.0 -1.5
comp=Z,54nm,1.1s,baz=159,slow=6.1,SNR=6.4
ULM LR LR 05 54 06.5
comp=Z,155nm,18.3s,baz=118,slow=40
ULM Lac du Bonnet 77.44 343 *e*P **P 05 13 51.6 -1.0**
comp=Z,164nm,1.5s,mb5.5
ULM *e*pP pP 05 14 15.9 -1.6
DCID1 Drake Creek 77.45 330 *e*P **P 05 13 53.8 +0.9**
comp=Z,84nm,1.1s,mb5.4
IMW Indian Meadow 77.57 330 *e*P **P 05 13 54.4 +0.9**
comp=Z,37nm,0.9s,mb5.1
RLMT Red Lodge 77.80 332 *e*P **P 05 13 55.4 +0.7**
comp=Z,28nm,0.7s,mb5.1
LAO LASA Array 77.81 335 *e*P **P 05 13 55.0 +0.3**
comp=Z,126nm,1.1s,mb5.6
LKWY Lake 77.85 331 *e*P **P 05 13 57.0 +2.0**
comp=Z,58nm,1.1s,mb5.2
LKWY *e*pP pP 05 14 21.6 +1.7
YFT Old Faithful 77.96 331 *e*P **P 05 13 57.9 +2.2**
YFT *e*pP pP 05 14 22.6 +2.0
SAO San Andreas Ge 77.97 319 *e*P **P 05 13 56.4 +0.5**
comp=Z,16nm,0.9s,mb4.8
WAKR Walker 77.97 322 *e*P **P 05 13 56.6 +0.7**
TOA0 Torodi Ar. Sit 78.03 70 *e*P **P 05 13 56.5 -0.1**
TOA0 *e*pP pP 05 14 21.9 +0.3
TORD Torodi Ar. Bea 78.03 70 P **P 05 13 56.1 -0.5**
comp=Z,59nm,0.6s,mb5.5,baz=259,slow=5.3,SNR=988
TORD pP pP 05 14 19.8 -1.8
comp=Z,38nm,0.9s,baz=252,slow=4.5,SNR=5.7
TORD S S 05 23 41.6 -1.5
comp=Z,12nm,1.2s,baz=244,slow=8.0,SNR=12
TORD LR LR 05 49 10.7
comp=Z,236nm,18.1s,baz=210,slow=36
TORD Torodi Ar. Bea 78.03 70 P **P 05 13 56.1 -0.5**
TORD pP pP 05 14 19.8 -1.8
TORD S S 05 23 41.6 -1.5
TORD LR LR 05 49 10.7
YNR Norris Junctio 78.09 331 *e*P **P 05 13 57.6 +1.2**
BMN Battle Mountai 78.10 324 *e*P **P 05 13 56.0 -0.5**
comp=Z,38nm,1.2s,mb5.0
YMR Madison River 78.19 331 *e*P **P 05 13 58.3 +1.5**
comp=Z,393nm,1.4s,mb6.0
YMR *e*pP pP 05 14 23.1 +1.3
CMB Columbia Colle 78.20 321 *e*P **P 05 13 57.4 +0.3**
comp=Z,22nm,1.1s,mb4.8
SCHQ Schefferville 78.24 1 P **P 05 13 56.5 -0.5**
comp=Z,30nm,1.0s,mb5.0,baz=156,slow=4.0,SNR=14
SCHQ LR LR 05 51 09.4
comp=Z,144nm,18.8s,baz=229,slow=38
SCHQ Schefferville 78.24 1 *e*P **P 05 13 56.9 0.0**
comp=Z,100nm,1.3s,mb5.4
GCMT Greycliff 78.50 332 *e*P **P 05 13 59.0 +0.5**
QLMT Earthquake Lak 78.52 331 *e*P **P 05 14 00.2 +1.5**
DGMT Dagmar 78.53 337 *e*P **P 05 13 59.3 +0.6**
comp=Z,153nm,0.9s,mb5.8
DGMT *e*pP pP 05 14 23.9 +0.3
PAHR Pah Rah Range 78.77 323 *e*P **P 05 14 01.4 +1.2**
comp=Z,187nm,1.0s,mb5.9
PAHR *e*pP pP 05 14 26.2 +1.0
HLID Hailey 78.95 328 *e*P **P 05 14 02.3 +1.2**
comp=Z,134nm,1.0s,mb5.7
HLID *e*pP pP 05 14 27.0 +1.0
SAC San Andreas 79.09 319 *e*P **P 05 14 03.0 +1.0**
SAC *e*pP pP 05 14 27.7 +0.7
MCMT McKenzie Canyo 79.17 330 *e*P **P 05 14 03.5 +1.3**
MCMT *e*pP pP 05 14 28.0 +0.8
BOZ Bozeman (W) 79.24 331 *e*P **P 05 14 02.8 +0.2**
comp=Z,16nm,1.0s,mb4.8
BOZ *e*pP pP 05 14 27.4 -0.2
TSUM Tsumeb 79.34 106 *e*P **P 05 14 04.5 +0.6**
comp=Z,241nm,1.1s,mb5.9
TSUM *e*pP pP 05 14 30.0 +1.1
DLMT Dillon 79.46 330 *e*P **P 05 14 04.7 +0.9**
comp=Z,98nm,1.2s,mb5.5
OHCM Honcut 79.71 321 *e*P **P 05 14 05.7 +0.4**
OHCM *e*pP pP 05 14 30.0 -0.3
MCCM Marconi Confer 79.73 320 *e*P **P 05 14 06.0 +0.5**
comp=Z,152nm,1.2s,mb5.7
LRM Limekiln Ridge 79.74 331 *e*P **P 05 14 06.2 +0.8**
NSHM Saint Helena R 79.82 320 *e*P **P 05 14 06.3 +0.3**
NSHM *e*pP pP 05 14 31.4 +0.4
HRY Holter Researc 80.15 332 *e*P **P 05 14 08.3 +0.8**
WVOR Wild Horse Val 80.27 325 *e*P **P 05 14 08.4 +0.1**
comp=Z,54nm,1.3s,mb5.2
WVOR Wild Horse Val 80.27 325 P **P 05 14 08.5 +0.2**
WVOR pmax pmax
comp=Z,54nm,1.3s,mb5.2
EGMT Eagleton 80.30 334 *e*P **P 05 14 08.2 -0.1**
comp=Z,97nm,1.1s,mb5.5
HOPS Hopland 80.41 320 *e*P **P 05 14 09.2 +0.1**
comp=Z,82nm,1.3s,mb5.4
LBCM Butte Creek Ri 80.64 322 P **P 05 14 10.3 +0.1**
MOD Modoc 80.79 324 *e*P **P 05 14 11.2 +0.1**
comp=Z,77nm,1.0s,mb5.5
MOD *e*pP pP 05 14 36.5 +0.3
CHMT Chamberlain Mo 80.94 331 *e*P **P 05 14 12.3 +0.6**
CHMT *e*pP pP 05 14 37.1 +0.3
WDC Whiskeytown Da 81.14 322 *e*P **P 05 14 11.6 -1.3**
comp=Z,42nm,0.8s,mb5.3
WDC *e*pP pP 05 14 37.3 -0.8
WDC Whiskeytown Da 81.14 322 *e*P **P 05 14 11.6 -1.4**
WDC *e**PP pP 05 14 37.3 -0.8
WDC pmax pmax
comp=Z,42nm,0.8s,mb5.3
KCPM Cahto Peak 81.16 320 *e*P **P 05 14 13.7 +0.6**
KCPM *e*pP pP 05 14 39.1 +0.9
KIPM Iron Peak 81.18 321 *e*P **P 05 14 13.8 +0.6**
BMO Blue Mountains 81.31 327 *e*P **P 05 14 14.0 +0.2**
comp=Z,83nm,1.2s,mb5.4
BMO *e*pP pP 05 14 38.9 +0.1
YBH Yreka Blue Hor 82.00 322 *e*P **P 05 14 16.6 -0.9**
comp=Z,22nm,0.9s,mb5.0
YBH Yreka Blue Hor 82.00 322 P **P 05 14 16.7 -0.8**
YBH pmax pmax
comp=Z,21nm,0.9s
KHMM Horse Mountain 82.02 321 *e*P **P 05 14 18.4 +0.8**
MAW Mawson 82.20 163 P **P 05 14 18.1 -0.1**
comp=Z,202nm,0.7s,mb6.1,baz=219,slow=6.4,SNR=218
MAW pP pP 05 14 42.9 -0.4
comp=Z,72nm,0.8s,baz=227,slow=4.0,SNR=4.6
MAW LR LR 05 55 19.0
comp=Z,249nm,18.1s,baz=209,slow=39
MAW Mawson 82.20 163 *e*P **P 05 14 18.1 -0.1**
comp=Z,72nm,0.9s,mb5.5
MAW *e*pP pP 05 14 43.3 0.0
MAW Mawson 82.20 163 P **P 05 14 18.1 -0.1**
MAW *e**PP pP 05 14 42.9 -0.4
MAW pmax pmax
comp=Z,202nm,0.7s
MAW pmax pmax
comp=Z,73nm,0.8s
MAW MLR MLR
comp=Z,249nm,18.1s

BSMT Bassoo Peak 82.33 331 P **P** **05 14 19.6 +0.6**
BOSA Boshof 82.34 118 P **P** **05 14 19.5 -0.2**
comp=Z,50nm,0.9s,mb5.3,baz=241,slow=4.9,SNR=38
BOSA pP pP 05 14 44.2 -0.6
comp=Z,60nm,1.0s,baz=246,slow=4.9,SNR=8.1
BOSA Boshof 82.34 118 *eP* **P** **05 14 19.3 -0.4**
comp=Z,220nm,1.4s,mb5.8
BOSA Boshof 82.34 118 P **P** **05 14 19.5 -0.2**
BOSA *PP pP 05 14 44.3 -0.6
BOSA pmax pmax
comp=Z,50nm,0.9s,mb5.3
BOSA pmax pmax
comp=Z,60nm,1.0s,mb5.4
KTRM Thompson Ridge 82.49 322 P **P** **05 14 20.6 +0.6**
LNOR Lincton Mounta 82.52 328 *eP* **P** **05 14 19.4 -0.7**
KRMB Red Mountain 82.54 322 *eP* **P** **05 14 20.9 +0.6**
HUMO Hull Mountain 82.72 323 *eP* **P** **05 14 20.3 -0.9**
comp=Z,34nm,1.2s,mb5.1
VIPM Ingram Point 82.75 325 P **P** **05 14 22.1 +0.9**
WALA Waterton Lakes 82.85 332 *eP* **P** **05 14 21.9 +0.2**
comp=Z,79nm,0.9s,mb5.5
WALA *epP* pP 05 14 46.4 -0.5
FFC Flin Flon 83.14 341 P **P** **05 14 22.7 -0.4**
comp=Z,223nm,1.3s,mb5.8,SNR=12
FFC Flin Flon 83.14 341 *eP* **P** **05 14 22.1 -1.0**
comp=Z,74nm,1.3s,mb5.4
FFC *epP* pP 05 14 47.1 -1.2
FFC Flin Flon 83.14 341 *eP* **P** **05 14 22.1 -1.0**
FFC *e*PP pP 05 14 47.1 -1.2
FFC pmax pmax
comp=Z,74nm,1.3s,mb5.4
KBO Bosley Butte 83.17 322 *eP* **P** **05 14 24.8 +1.2**
KBO *epP* pP 05 14 49.7 +0.9
HAWA Hanford 83.51 327 *eP* **P** **05 14 25.4 +0.3**
comp=Z,145nm,1.4s,mb5.6
HAWA *epP* pP 05 14 50.4 0.0
RSW Rattlesnake Hi 83.54 327 *eP* **P** **05 14 25.7 +0.4**
RSW *epP* pP 05 14 50.9 +0.4
KEBM Edson Butte 83.66 322 *eP* **P** **05 14 26.6 +0.6**
KEBM *epP* pP 05 14 51.7 +0.5
NEW Newport 83.69 330 *eP* **P** **05 14 25.2 -0.8**
comp=Z,53nm,1.4s,mb5.2
NEW *epP* pP 05 14 48.2 -3.0
NEW Newport 83.69 330 *eP* **P** **05 14 25.2 -0.8**
NEW *e*PP pP 05 14 48.2 -3.1
NEW pmax pmax
comp=Z,53nm,1.4s
OD2 Odessa Site #2 83.81 328 P **P** **05 14 26.9 +0.2**
HOOD Mount Hood Mea 83.84 326 *eP* **P** **05 14 27.3 +0.5**
comp=Z,74nm,1.2s,mb5.4
HOOD *epP* pP 05 14 52.0 -0.1
LBTB Lobatse 84.03 115 *eP* **P** **05 14 28.2 -0.2**
comp=Z,246nm,1.4s,mb5.8
LBTB *epP* pP 05 14 53.7 0.0
LBTB Lobatse 84.03 115 *eP* **P** **05 14 28.2 -0.3**
LBTB *e*PP pP 05 14 53.7 0.0
LBTB pmax pmax
comp=Z,246nm,1.4s,mb5.8
COR Corvallis 84.22 324 *eP* **P** **05 14 29.4 +0.6**
comp=Z,193nm,1.3s,mb5.8
COR *epP* pP 05 14 54.4 +0.3
COR Corvallis 84.22 324 *eP* **P** **05 14 29.4 +0.6**
COR *e*PP pP 05 14 54.4 +0.3
COR pmax pmax
comp=Z,193nm,1.3s,mb5.8
EBG Ellensburg 84.38 327 P **P** **05 14 30.1 +0.6**
ESPR Espera 84.54 46 P **P** **05 14 33.0 +2.4**
comp=Z,6.9nm,0.7s,mb4.7
EJIF Jimena Fronter 84.56 46 P **P** **05 14 32.1 +1.4**
comp=Z,13nm,1.1s,mb4.8
EJIF Jimena Fronter 84.56 46 P **P** **05 14 32.1 +1.4**
EJIF pmax pmax
comp=Z,13nm,1.1s,mb4.8
ETW Entiat 84.74 328 *eP* **P** **05 14 31.5 +0.1**
ETW *epP* pP 05 14 56.2 -0.4
FCC Fort Churchill 84.80 347 *eP* **P** **05 14 30.8 -0.6**
comp=Z,19nm,0.7s,mb5.1
FCC *epP* pP 05 14 56.0 -0.6
FCC Fort Churchill 84.80 347 *eP* **P** **05 14 30.8 -0.6**
FCC *e*PP pP 05 14 56.0 -0.6
FCC pmax pmax
comp=Z,19nm,0.7s,mb5.1
HEBO Mount Hebo 84.87 324 *eP* **P** **05 14 32.7 +0.6**
comp=Z,174nm,1.4s,mb5.8
HEBO *epP* pP 05 14 58.3 +0.9
LON Longmire 84.89 327 *eP* **P** **05 14 31.5 -0.6**
comp=Z,12nm,1.0s,mb4.8
LON *epP* pP 05 14 57.1 -0.3
EMIJ Mijas 85.08 47 P **P** **05 14 33.3 0.0**
comp=Z,5.6nm,0.7s,mb4.6
BMW Boistfort Moun 85.43 326 *eP* **P** **05 14 34.9 0.0**
BMW *epP* pP 05 14 59.9 -0.3
BMW Boistfort Moun 85.43 326 P **P** **05 14 35.0 +0.2**
BMW *e* pP 05 15 00.1 0.0
MTE Manteigas 85.51 42 *eP* **P** **05 14 36.3 +0.9**
comp=Z,21nm,0.8s,mb5.1
TAM Tamanrasset 85.74 63 *eP* **P** **05 14 37.8 +0.8**
TAM *epP* pP 05 15 02.5 +0.2
EDM Edmonton 85.79 335 *eP* **P** **05 14 35.2 -1.3**
EDM *epP* pP 05 15 00.2 -1.6
EDM *es*P sP 05 15 12.6 +0.5
ELOJ Sierra Loja 85.82 46 P **P** **05 14 38.3 +1.3**
comp=Z,12nm,0.8s,mb4.9
ELOJ Sierra Loja 85.82 46 P **P** **05 14 38.3 +1.3**
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb4.9
RPW Rockport 85.90 328 *eP* **P** **05 14 36.2 -0.9**
RPW *epP* pP 05 15 01.2 -1.3
JCW Jim Creek 85.93 328 *eP* **P** **05 14 36.3 -1.0**
JCW *epP* pP 05 15 01.1 -1.5
ELUQ Luque 85.97 46 P **P** **05 14 39.1 +1.4**
comp=Z,10nm,0.8s,mb4.8
ELUQ Luque 85.97 46 P **P** **05 14 39.1 +1.3**
ELUQ pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ERON Agron 85.98 47 P **P** **05 14 38.2 +0.4**
EADA Adamuz 86.11 45 P **P** **05 14 38.8 +0.4**
comp=Z,6.3nm,0.8s,mb4.6
EPLA Plasencia 86.23 43 P **P** **05 14 43.4 +4.5**
comp=Z,16nm,0.8s,mb5.0
EPLA Plasencia 86.23 43 P **P** **05 14 43.4 +4.5**
EPLA pmax pmax
comp=Z,16nm,0.8s,mb5.0
ECOG Cogollos-Vega 86.28 47 P **P** **05 14 40.9 +1.6**
comp=Z,2.4nm,0.6s,mb4.3
ECOG Cogollos-Vega 86.28 47 P **P** **05 14 40.9 +1.6**
ECOG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
NLWA Neilton Lookou 86.37 326 *eP* **P** **05 14 39.6 +0.1**
comp=Z,78nm,1.3s,mb5.5
NLWA *epP* pP 05 15 05.1 +0.3
EBER Berja 86.53 47 P **P** **05 14 39.3 -1.2**
comp=Z,5.7nm,0.6s,mb4.7
EBAN Banos Encina 86.63 46 P **P** **05 14 41.8 +0.9**
comp=Z,14nm,0.8s,mb5.0
EBAN Banos Encina 86.63 46 P **P** **05 14 41.8 +0.9**
EBAN pmax pmax
comp=Z,14nm,0.8s,mb4.9
EQES Quesada 86.90 46 P **P** **05 14 41.1 -1.2**
comp=Z,5.6nm,0.8s,mb4.5
PGC Sidney 86.99 327 *eP* **P** **05 14 42.5 0.0**
comp=Z,184nm,0.9s,mb6.0
PGC *epP* pP 05 15 07.2 -0.6
ENIJ Nijar 87.03 47 P **P** **05 14 41.3 -1.6**
comp=Z,7.0nm,0.6s,mb4.8
ENIJ Nijar 87.03 47 P **P** **05 14 41.3 -1.6**
ENIJ pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
PAB San Pablo 87.03 44 *eP* **P** **05 14 43.5 +0.6**
comp=Z,14nm,0.9s,mb4.9
PAB San Pablo 87.03 44 *eP* **P** **05 14 43.9 +1.0**
PAB *e* pP 05 15 08.6 +0.3
PAB pmax pmax
comp=Z,220nm,1.4s,mb5.9
EHUE Huescar 87.22 47 P **P** **05 14 44.5 +0.6**
comp=Z,6.1nm,1.1s,mb4.4
EHUE Huescar 87.22 47 P **P** **05 14 44.5 +0.6**
EHUE pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
DRV Dumont d'Urvil 87.31 191 P **P** **05 14 51.0 +7.1**
DRV S S 05 25 11.0 -4.9
DRV L 05 38 00.0
DRV R 05 43 00.0
ESDC Sonseca Array 87.35 44 P **P** **05 14 45.1 +0.7**
comp=Z,3.3nm,0.8s,mb4.3,baz=249,slow=4.6,SNR=6.7
ESDC pP pP 05 15 09.1 -0.7
comp=Z,34nm,1.3s,baz=212,slow=5.3,SNR=13
ESDC LR LR 05 54 47.5
comp=Z,252nm,18.3s,baz=260,slow=36
ESDC Sonseca Array 87.35 44 P **P** **05 14 44.6 +0.2**
comp=Z,8.5nm,1.0s,mb4.6
EVIA Vianos 87.73 46 P **P** **05 14 46.7 +0.4**
comp=Z,8.5nm,0.8s,mb4.8
EVIA Vianos 87.73 46 P **P** **05 14 46.7 +0.5**
EVIA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ETOB Tobarra 88.36 46 P **P** **05 14 49.4 +0.1**
comp=Z,9.0nm,0.9s,mb4.8
ETRT Tiaret 88.62 50 P pP 05 15 17.0 +1.0
EANR 'Ain N'Sour 88.76 50 P pP 05 15 19.1 +2.4
ECHA Ech Chlef 89.05 50 P pP 05 15 20.5 +2.5
ETOR Torete 89.20 44 P **P** **05 14 54.0 +0.9**
comp=Z,9.7nm,0.9s,mb4.8
ETOR Torete 89.20 44 P **P** **05 14 54.0 +0.9**
ETOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
EBNR Beni Rached 89.24 50 P pP 05 15 22.0 +3.1
LSZ Lusaka 90.19 107 ⇓P **P** **05 14 59.7 +1.3**
SNR=8.3
LSZ Lusaka 90.19 107 *eP* **P** **05 14 59.8 +1.4**
comp=Z,156nm,1.7s,mb5.9
LSZ *epP* pP 05 15 25.8 +1.9
LSZ Lusaka 90.19 107 *eP* **P** **05 14 59.8 +1.4**
LSZ *e*PP pP 05 15 25.8 +1.9
LSZ pmax pmax
comp=Z,156nm,1.7s,mb5.9
CASY Casey 90.29 180 *eP* **P** **05 14 58.1 +0.2**
comp=Z,259nm,1.1s,mb6.3
CASY *epP* pP 05 15 24.0 +0.6
ERTA Horta de San J 90.81 45 P **P** **05 15 05.0 +4.3**
comp=Z,6.4nm,0.7s,mb4.9
SJPF Ste Jean 90.95 43 *eP* **P** **05 15 00.2 -1.0**
comp=Z,86nm,1.3s,mb5.4
SJPF *epP* pP 05 15 26.4 -0.3
SJPF Ste Jean 90.95 43 *eP* **P** **05 15 00.2 -1.0**
comp=Z,43nm,1.3s,mb5.4
SJPF *epP* pP 05 15 26.4 -0.3
SJPF Ste Jean 90.95 43 *eP* **P** **05 15 00.2 -1.0**
SJPF *e*PP pP 05 15 26.4 -0.3
SJPF pmax pmax
comp=Z,43nm,1.3s,mb5.4
ETSF Etsaut 91.25 43 *eP* **P** **05 15 02.1 -0.5**
comp=Z,190nm,1.6s,mb5.7
ETSF *epP* pP 05 15 28.2 +0.1
ETSF Etsaut 91.25 43 *eP* **P** **05 15 02.1 -0.5**
comp=Z,95nm,1.6s,mb5.7
ETSF *epP* pP 05 15 28.2 +0.1
ETSF Etsaut 91.25 43 *eP* **P** **05 15 02.1 -0.5**
ETSF *e*PP pP 05 15 28.2 +0.1
ETSF pmax pmax
comp=Z,95nm,1.6s,mb5.7
EBIE Bielsa 91.58 44 P **P** **05 15 05.2 +1.1**
comp=Z,5.1nm,0.8s,mb4.8
EPF Esparros 91.88 43 *eP* **P** **05 15 04.8 -0.7**
comp=Z,107nm,1.5s,mb5.5
EPF Esparros 91.88 43 *eP* **P** **05 15 04.8 -0.7**
comp=Z,53nm,1.5s,mb5.5
EPF Esparros 91.88 43 *eP* **P** **05 15 04.8 -0.7**
EPF pmax pmax
comp=Z,53nm,1.5s,mb5.5
LFF La Frestale 93.11 42 *eP* **P** **05 15 09.8 -1.4**
comp=Z,145nm,1.3s,mb5.8
LFF La Frestale 93.11 42 *eP* **P** **05 15 09.8 -1.4**
comp=Z,73nm,1.3s,mb5.8
LFF La Frestale 93.11 42 *eP* **P** **05 15 09.8 -1.4**
LFF pmax pmax
comp=Z,73nm,1.3s,mb5.8
MTLF Montolieu 93.22 44 *eP* **P** **05 15 10.1 -1.6**
comp=Z,145nm,1.6s,mb5.8
MTLF *epP* pP 05 15 36.3 -1.0
MTLF Montolieu 93.22 44 *eP* **P** **05 15 10.1 -1.6**
comp=Z,72nm,1.6s,mb5.8
MTLF *epP* pP 05 15 36.3 -1.0
MTLF Montolieu 93.22 44 *eP* **P** **05 15 10.1 -1.6**
MTLF *e*PP pP 05 15 36.3 -1.0
MTLF pmax pmax
comp=Z,72nm,1.6s,mb5.8
YKA Yellowknife Ar 93.29 341 P **P** **05 15 11.1 -0.5**
comp=Z,33nm,0.9s,mb5.7,baz=137,slow=4.5,SNR=42
YKA pP pP 05 15 35.9 -1.2
comp=Z,22nm,0.9s,baz=138,slow=4.5,SNR=7.5
YKA LR LR 05 58 54.4
comp=Z,77nm,21.9s,baz=160,slow=36
YKA Yellowknife Ar 93.29 341 P **P** **05 15 11.1 -0.5**
YKA *PP pP 05 15 35.9 -1.2
YKA pmax pmax
comp=Z,33nm,0.9s
YKA pmax pmax
comp=Z,22nm,0.9s
YKA MLR MLR
comp=Z,77nm,21.9s
MFF Saint Martin d 93.43 40 *eP* **P** **05 15 11.0 -1.6**
comp=Z,182nm,1.5s,mb5.9
MFF *epP* pP 05 15 37.2 -0.9
MFF Saint Martin d 93.43 40 *eP* **P** **05 15 11.0 -1.6**
comp=Z,91nm,1.5s,mb5.9
MFF *epP* pP 05 15 37.2 -0.9
MFF Saint Martin d 93.43 40 *eP* **P** **05 15 11.0 -1.6**
MFF *e*PP pP 05 15 37.2 -0.9
MFF pmax pmax
comp=Z,91nm,1.5s,mb5.9
RJF Les Rejaudoux 93.77 42 *eP* **P** **05 15 12.5 -1.7**
comp=Z,150nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,490nm,20.0s
RJF Les Rejaudoux 93.77 42 *eP* **P** **05 15 12.5 -1.7**
comp=Z,75nm,1.7s,mb5.7
RJF LR LR
comp=Z,490nm,20.0s
RJF Les Rejaudoux 93.77 42 *eP* **P** **05 15 12.5 -1.7**
RJF pmax pmax
comp=Z,75nm,1.7s,mb5.7
RJF MLR MLR
comp=Z,490nm,20.0s
CAF Calviac 93.91 42 *eP* **P** **05 15 13.6 -1.3**
GRR Gorron 93.95 38 *eP* **P** **05 15 11.5 -3.4**
comp=Z,92nm,1.5s,mb5.6
GRR Gorron 93.95 38 *eP* **P** **05 15 11.5 -3.4**
comp=Z,46nm,1.5s,mb5.6
GRR Gorron 93.95 38 *eP* **P** **05 15 11.5 -3.4**
GRR pmax pmax
comp=Z,46nm,1.5s,mb5.6
KEST Kesra 94.56 53 LR LR 06 02 01.7
comp=Z,330nm,18.1s,baz=4.1,slow=38
LASF Ste Croix 94.62 44 *eP* **P** **05 15 15.6 -2.5**
TCF Toulx Ste Croi 94.68 41 *eP* **P** **05 15 16.5 -1.8**
TCF *epP* pP 05 15 42.9 -1.0
BGF Bois d'Agland 95.19 41 *eP* **P** **05 15 19.1 -1.6**
comp=Z,94nm,1.4s,mb5.7
BGF *epP* pP 05 15 45.3 -0.9
BGF Bois d'Agland 95.19 41 *eP* **P** **05 15 19.1 -1.6**
comp=Z,47nm,1.4s,mb5.7
BGF *epP* pP 05 15 45.3 -0.9
BGF Bois d'Agland 95.19 41 *eP* **P** **05 15 19.1 -1.6**
BGF *e*PP pP 05 15 45.3 -0.9
BGF pmax pmax
comp=Z,47nm,1.4s,mb5.7
VIVF Saint-Julien-l 95.50 43 *eP* **P** **05 15 21.3 -0.9**
comp=Z,140nm,1.7s,mb5.8
VIVF *epP* pP 05 15 47.4 -0.3
VIVF Saint-Julien-l 95.50 43 *eP* **P** **05 15 21.3 -0.9**
comp=Z,70nm,1.7s,mb5.8
VIVF *epP* pP 05 15 47.4 -0.3
VIVF Saint-Julien-l 95.50 43 *eP* **P** **05 15 21.3 -0.9**
VIVF *e*PP pP 05 15 47.4 -0.3
VIVF pmax pmax
comp=Z,70nm,1.7s,mb5.8
AVF Avril sur Loir 95.61 41 *eP* **P** **05 15 20.7 -1.9**
comp=Z,117nm,1.7s,mb5.7
AVF *epP* pP 05 15 46.9 -1.2
AVF Avril sur Loir 95.61 41 *eP* **P** **05 15 20.7 -1.9**
comp=Z,59nm,1.7s,mb5.7
AVF *epP* pP 05 15 46.9 -1.2
AVF Avril sur Loir 95.61 41 *eP* **P** **05 15 20.7 -1.9**
AVF *e*PP pP 05 15 46.9 -1.2
AVF pmax pmax
comp=Z,59nm,1.7s,mb5.7
SMRF Simiane la Rot 95.67 44 *eP* **P** **05 15 22.3 -0.6**
comp=Z,257nm,1.8s,mb6.1
SMRF Simiane la Rot 95.67 44 *eP* **P** **05 15 22.3 -0.6**
comp=Z,257nm,1.8s,mb6.3
SMF Signal de Mont 95.83 41 *eP* **P** **05 15 21.9 -1.7**
comp=Z,205nm,1.8s,mb6.0
SMF Signal de Mont 95.83 41 *eP* **P** **05 15 21.9 -1.7**
comp=Z,102nm,1.8s,mb6.0
SMF Signal de Mont 95.83 41 *eP* **P** **05 15 21.9 -1.7**
SMF pmax pmax
comp=Z,102nm,1.8s,mb6.0
LMR La Mourre 95.97 45 *eP* **P** **05 15 23.2 -1.1**
comp=Z,277nm,1.9s,mb6.1
LMR La Mourre 95.97 45 *eP* **P** **05 15 23.2 -1.1**
comp=Z,139nm,1.9s,mb6.1
LMR La Mourre 95.97 45 *eP* **P** **05 15 23.2 -1.1**
LMR pmax pmax
comp=Z,139nm,1.9s,mb6.1
LOR Lormes 96.14 41 *eP* **P** **05 15 23.0 -2.0**
comp=Z,46nm,1.6s,mb5.4
LOR *ep*P pP 05 15 49.3 -1.3
LOR *e*MLR MLR
comp=Z,270nm,19.0s
LOR Lormes 96.14 41 *eP* **P** **05 15 23.0 -2.0**
comp=Z,23nm,1.6s,mb5.4
LOR *ep*P pP 05 15 49.3 -1.3
LOR LR LR
comp=Z,270nm,19.0s
LOR Lormes 96.14 41 *eP* **P** **05 15 23.0 -2.0**
LOR *e*PP pP 05 15 49.3 -1.3
LOR pmax pmax
comp=Z,23nm,1.6s,mb5.4
LOR MLR MLR
comp=Z,270nm,19.0s
FRF La Foret Royal 96.17 45 *eP* **P** **05 15 24.2 -1.0**
comp=Z,200nm,1.7s,mb6.0
FRF *epP* pP 05 15 50.3 -0.5
FRF La Foret Royal 96.17 45 *eP* **P** **05 15 24.2 -1.0**
comp=Z,100nm,1.7s,mb6.0
FRF *epP* pP 05 15 50.3 -0.5
FRF La Foret Royal 96.17 45 *eP* **P** **05 15 24.2 -1.0**
FRF *e*PP pP 05 15 50.3 -0.5
FRF pmax pmax
comp=Z,100nm,1.7s,mb6.0
DLBC Dease Lake 96.19 332 *eP* **P** **05 15 25.1 +0.1**
DLBC *ep*P pP 05 15 49.8 -0.7
ORIF Oris-en-Rattie 96.29 44 *eP* **P** **05 15 25.2 -0.5**
comp=Z,119nm,1.4s,mb5.8
ORIF *ep*P pP 05 15 51.3 0.0
ORIF *e*MLR MLR
comp=Z,329nm,21.2s
ORIF Oris-en-Rattie 96.29 44 *eP* **P** **05 15 25.2 -0.5**
comp=Z,60nm,1.4s,mb5.8
ORIF *ep*P pP 05 15 51.3 0.0
ORIF Oris-en-Rattie 96.29 44 *eP* **P** **05 15 25.2 -0.5**
ORIF *e*PP pP 05 15 51.3 0.0
ORIF pmax pmax
comp=Z,60nm,1.4s,mb5.8
SBF Sospel 96.81 45 *eP* **P** **05 15 27.3 -0.8**
comp=Z,216nm,1.4s,mb6.1
SBF Sospel 96.81 45 *eP* **P** **05 15 27.3 -0.8**
comp=Z,108nm,1.4s,mb6.1
SBF Sospel 96.81 45 *eP* **P** **05 15 27.3 -0.8**
SBF pmax pmax
comp=Z,108nm,1.4s,mb6.1
LPL La Plagne 97.10 43 *eP* **P** **05 15 29.1 -0.3**
LPG La Plagne 97.10 43 *eP* **P** **05 15 29.3 -0.1**
comp=Z,86nm,1.4s,mb5.7
LPG *epP* pP 05 15 55.3 +0.3
LPG La Plagne 97.10 43 *eP* **P** **05 15 29.3 -0.1**
comp=Z,43nm,1.4s,mb5.7
LPG *epP* pP 05 15 55.3 +0.3
LPG La Plagne 97.10 43 *eP* **P** **05 15 29.3 -0.1**
LPG *e*PP pP 05 15 55.3 +0.3
LPG pmax pmax
comp=Z,43nm,1.4s,mb5.7
HINF Hinteralfeld 98.20 41 *eP* **P** **05 15 32.6 -1.7**
CDF Champ du Feu 98.71 41 *eP* **P** **05 15 35.0 -1.6**
comp=Z,107nm,1.9s,mb5.7
CDF *epP* pP 05 16 01.0 -1.2
CDF Champ du Feu 98.71 41 *eP* **P** **05 15 35.0 -1.6**
comp=Z,54nm,1.9s,mb5.8
CDF *epP* pP 05 16 01.0 -1.2
CDF Champ du Feu 98.71 41 *eP* **P** **05 15 35.0 -1.6**
CDF *e*PP pP 05 16 01.0 -1.2
CDF pmax pmax
comp=Z,54nm,1.9s,mb5.8
GRF Grafenberg Arr 101.61 41 *e*Pdiff 05 16 14.8
GRF *e*PP PP 05 19 56.5 -4.6
GRF *e*SP SP 05 28 56.5 +1.9
GERES GERESS Array B 102.79 42 pP 05 16 18.9
comp=Z,0.5nm,0.6s,baz=288,slow=1.3,SNR=2.8
GERES PKiKP PKiKP 05 20 14.8 0.0
comp=Z,1.0nm,0.8s,baz=197,slow=1.4,SNR=4.9
GERES PKKPbc PKKPbc 05 31 52.5 -1.9
comp=Z,1.7nm,0.9s,baz=90,slow=2.7,SNR=8.1
INK Inuvik 103.04 340 *e*Pdif Pdif 05 15 54.8 -1.2
comp=Z,455nm,1.2s
INK Inuvik 103.04 340 P Pdif 05 15 55.3 -0.7
INK pmax pmax
comp=Z,450nm,1.1s
CLL Collm 103.27 40 *e*PP PP 05 20 10.0 -3.5
comp=Z,38nm,2.0s
CLL *e*SKSac SKSac 05 26 38.0 +11
CLL *e*SP SP 05 29 16.0 +3.9
CLL *e*PPS 05 30 12.0
CLL *e*SS SS 05 34 48.0 -1.5
NOA NORSAR Array B 105.79 30 PKKP PKKPdf 05 31 58.6 +1.7
comp=Z,3.3nm,0.8s,baz=70,slow=4.6,SNR=6.9
KWP Kalwaria 108.65 43 *e*PKP PKiKP 05 20 26.2 +0.7
KWP *e* 05 31 49.4
KWP Kalwaria 108.65 43 *e*PKP PKiKP 05 20 26.3 +0.7
KWP *e* 05 31 49.4
SUW Suwalki 109.98 39 *e*PKP PKiKP 05 20 27.8 -0.2
SUW *e* 05 31 41.8
SUW Suwalki 109.98 39 *e*PKP PKiKP 05 20 27.8 -0.1
SUW *e* 05 31 41.8
AKASG Malin Array Be 112.97 43 PKiKP PKiKP 05 20 32.8 -0.9
comp=Z,4.3nm,0.8s,baz=262,slow=2.9,SNR=14
AKASG PKKPbc PKKPbc 05 31 20.9 -1.2
comp=Z,2.6nm,0.5s,baz=68,slow=3.8,SNR=13
AKASG PKKPab PKKPab 05 31 28.6 +1.2
comp=Z,5.0nm,0.8s,baz=70,slow=3.7,SNR=13
AKASG Malin Array Be 112.97 43 *i* PKiKP PKiKP 05 20 32.8 -0.9
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG pmax pmax
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 113.50 22 PKKPbc PKKPbc 05 31 18.4 -2.6
comp=Z,6.6nm,1.0s,baz=88,slow=3.6,SNR=19
ARCES PKKPab PKKPab 05 31 25.5 +1.2
comp=Z,20nm,1.0s,baz=94,slow=4.0,SNR=7.8
BRTR Keskin Array B 114.02 56 PKiKP PKiKP 05 20 36.0 -0.1
comp=Z,4.4nm,0.8s,baz=201,slow=2.9,SNR=22
BRTR Keskin Array B 114.02 56 *i* PKiKP PKiKP 05 20 36.0 -0.1
BRTR pmax pmax
comp=Z,4.0nm,0.8s
STKA Stephens Creek 117.54 209 *e*PKP PKPdf 05 20 42.8 -0.5
comp=Z,6.1nm,0.9s
STKA Stephens Creek 117.54 209 PKP PKPdf 05 20 42.5 -0.7
comp=Z,6.5nm,0.7s,baz=110,slow=3.0,SNR=14
STKA PKKPbc PKKPbc 05 31 05.4 -0.6
comp=Z,2.4nm,0.8s,baz=304,slow=6.2,SNR=5.0
ANN Anapa 117.61 50 *i* PKiKP PKPdf 05 20 41.4 -1.4
ANN pmax pmax
comp=Z,37nm,1.5s
OBN Obninsk 117.84 39 ⇑*i* PKP PKPdf 05 20 41.4 -1.6
OBN Obninsk 117.84 39 ⇑*i* PKiKP PKPdf 05 20 42.8 -0.2
OBN *i* 05 21 09.0
OBN *e* 05 21 22.1
OBN SS SS 05 38 14.0 +10
OBN pmax pmax
comp=Z,21nm,1.0s
OBN MLR MLR
comp=Z,300nm,18.0s
VSR Storozhevoye 119.27 43 *e*PKiKP PKPdf 05 20 45.0 -0.8
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.6s
KLMR Klimovskoe 119.33 32 *e*PKiKP PKPdf 05 20 43.7 -1.9
VORD Divnogorie 119.34 44 *e*PKiKP PKPdf 05 20 45.2 -0.8
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax

comp=E,7.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
VRHR Novokhopersk 120.81 43 *e*PKIKP PKPdf 05 20 48.9 +0.1
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.8s
KIV Kislovodsk 121.28 52 *e*PKIKP PKPdf 05 20 50.2 +0.2
KIV Kislovodsk 121.28 52α *i* PKIKP PKPdf 05 20 50.2 +0.3
KIV *e* 05 21 30.3
KIV *e*PS PS 05 32 18.4 +2.6
KIV *e*SS SS 05 39 04.3 +15
KIV pmax pmax
comp=Z,28nm,0.9s
KIV MLR MLR
comp=Z,100nm,19.0s
FORT Forrest 123.45 197 *e*pPKP PKPdf 05 20 53.7 -1.0
comp=Z,29nm,0.7s
FORT *e*pPKP pPKPdf 05 21 19.8 -1.4
FORT Forrest 123.45 197 *e*PKPdf PKPdf 05 20 53.3 -1.4
MUN Mundaring 124.41 185 *e*PKP PKPdf 05 20 55.9 -0.6
MUN *e*pPKP pPKPdf 05 21 22.5 -0.6
BILL Bilibino 124.60 338 *e*PKPdf PKPdf 05 20 55.4 -0.2
BILL Bilibino 124.60 338 *i* PKIKP PKPdf 05 20 55.3 -0.3
CTA Charters Tower 124.64 221 *e*PKP PKPdf 05 20 56.8 -0.4
comp=Z,17nm,1.0s
CTA *e*pPKP pPKPdf 05 21 19.7 -4.1
CTA Charters Tower 124.64 221 PKP PKPdf 05 20 56.8 -0.4
comp=Z,19nm,0.9s,baz=142,slow=1.5,SNR=23
CTA pPKP pPKPdf 05 21 23.0 -0.8
comp=Z,7.3nm,0.8s,baz=254,slow=4.2,SNR=3.5
CTA Charters Tower 124.64 221 PKIKP PKPdf 05 20 56.8 -0.4
CTA 05 21 23.0
CTA pmax pmax
comp=Z,19nm,0.9s
CTA pmax pmax
comp=Z,7.0nm,0.8s
CTAO Charters Tower 124.64 221 *e*PKPdf PKPdf 05 20 56.8 -0.4
KLBR Kellerberrin 124.65 187 *e*PKP PKPdf 05 20 56.3 -0.6
comp=Z,31nm,0.6s
KLBR *e*pPKP pPKPdf 05 21 22.3 -1.2
ASAR Alice Springs 127.99 207 PKhKP 05 20 46.2
comp=Z,0.6nm,0.7s,baz=143,slow=1.7,SNR=8.1
ASAR PKP PKPdf 05 21 02.6 -0.9
comp=Z,50nm,0.8s,baz=145,slow=2.1,SNR=143
ASAR pPKP pPKPdf 05 21 29.1 -1.0
comp=Z,4.0nm,0.6s,baz=128,slow=1.5,SNR=6.3
ASAR PP PP 05 23 05.0 -0.9
comp=Z,1.9nm,0.8s,baz=154,slow=6.4,SNR=4.3
ASAR Alice Springs 127.99 207 PKP PKPdf 05 21 02.6 -0.9
ASAR pPKP pPKPdf 05 21 29.1 -1.0
ASAR PP PP 05 23 05.0 -0.9
ARU Arti 129.92 35 *e*PKPdf PKPdf 05 21 06.4 +0.4
ARU Arti 129.92 35 *i* PKIKP PKPdf 05 21 05.1 -0.9
ARU 05 23 16.7
ARU SS SS 05 40 37.5 +1.5
HATD Hatta, Dubai 130.10 77 P PKPdf 05 21 07.0 -0.4
SNR=7.0
BSY Bisya 130.64 80 P PKPdf 05 21 07.7 -0.7
SNR=8.7
TIXI Tiksi 130.99 353⇓ *e*PKP PKPdf 05 21 07.2 -0.5
TIXI Tiksi 130.99 353⇑ *i* PKIKP PKPdf 05 21 07.2 -0.5
WB2 Warramunga Arr 131.08 209 *e*P 05 20 53.8
WB2 Warramunga Arr 131.08 209 *e*PKP PKPdf 05 21 08.9 -0.6
WB2 *e*pPKP pPKPdf 05 21 32.3 -3.8
WB2 *e*PKS 05 24 33.0
WRA Warramunga Arr 131.09 209 PKhKP 05 20 53.9
comp=Z,1.7nm,0.6s,baz=136,slow=2.8,SNR=16
WRA PKP PKPdf 05 21 09.2 -0.3
comp=Z,54nm,0.9s,baz=161,slow=1.6,SNR=80
WRA pPKP pPKPdf 05 21 35.1 -0.9
comp=Z,24nm,1.0s,baz=161,slow=1.5,SNR=5.3
WRA PP PP 05 23 22.8 -3.4
comp=Z,4.9nm,1.1s,baz=156,slow=5.6,SNR=5.9
WRA SKPbc SKPbc 05 24 25.3 -0.1
comp=Z,5.1nm,0.9s,baz=168,slow=4.3,SNR=4.9
WRA Warramunga Arr 131.09 209 PKP PKPdf 05 21 09.2 -0.3
WRA pPKP pPKPdf 05 21 35.1 -0.9
WRA PP PP 05 23 22.8 -3.4
WRA SKPbc SKPbc 05 24 25.3 -0.1
WRA Warramunga Arr 131.09 209 PKIKP PKPdf 05 21 09.2 -0.3
WRA 05 21 35.1
WRAB Tennant Creek 131.09 209 *e*PKPdf PKPdf 05 21 08.8 -0.7
COEN Coen 131.21 223 *e*PKPdf PKPdf 05 21 09.8 0.0
SMDO Samad 131.47 80 P PKPdf 05 21 10.1 +0.1
SNR=16
BIDO Bidbid 131.64 79 P PKPdf 05 21 09.9 -0.5
SNR=6.8
PMG Port Moresby 131.83 231 *e*PKPdf PKPdf 05 21 11.2 +0.2
PMG Port Moresby 131.83 231 P PKPdf 05 21 11.6 +0.6
SEY Seymchan 132.15 336⇑ *e*PKP PKPdf 05 21 10.6 +0.5
SEY Seymchan 132.15 336⇑ *i* PKIKP PKPdf 05 21 10.6 +0.5
WBK Wadi Bani Khal 132.21 80 P PKPdf 05 21 11.7 +0.2
SNR=14
PETK Petropavlovsk- 134.37 322 PKhKP 05 21 04.8
comp=Z,6.8nm,0.9s,baz=113,slow=10,SNR=4.1
PETK PKP PKPdf 05 21 15.0 +0.5
comp=Z,9.2nm,0.8s,baz=95,slow=4.8,SNR=6.1
PETK pPKP pPKPdf 05 21 40.2 -1.0
comp=Z,13nm,1.0s,baz=73,slow=10,SNR=3.6
PETK Petropavlovsk- 134.37 322 PKP PKPdf 05 21 15.0 +0.5
PETK pPKP pPKPdf 05 21 40.2 -1.0
MBWA Marble Bar 134.63 191 *e*PKPdf PKPdf 05 21 15.3 -0.8
MBWA *e*pPKPdf pPKPdf 05 21 42.0 -0.7
BRVK Borovoye 137.48 36 *e*PKPdf PKPdf 05 21 20.7 +0.4
KAKA Kakadu 138.25 212 *e*P Px 05 20 56.2
comp=Z,76nm,1.5s
YAK Yakutsk 139.68 347 *e*PKPdf PKPdf 05 21 23.8 -0.3
YAK Yakutsk 139.68 347 *i* PKIKP PKPdf 05 21 23.7 -0.4
YAK *e* 05 24 16.4
YAK pmax pmax
comp=Z,64nm,1.2s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=Z,56nm,1.4s
YAK pmax pmax
comp=N,60nm,1.6s
YAK pmax pmax
comp=E,44nm,2.0s
NVS Novosibirsk 142.62 27 *i* PKHKP 05 21 25.1
NVS pmax pmax
comp=Z,83nm,1.7s
NVS pmax pmax
comp=N,10.0nm,1.4s
NVS pmax pmax
comp=E,34nm,1.6s
KURK Kurchatov 143.11 35⇑ P PKPdf 05 21 29.6 -1.1
SNR=7.1
KURK Kurchatov 143.11 35 PKPdf 05 21 27.5 -3.1
KURK Kurchatov 143.11 35⇓ *i* PKIKP PKPdf 05 21 28.0 -2.6
EKS2 Erkin-Say 143.81 49 *e*PKPdf PKPdf 05 21 31.2 -0.9
EKS2 Erkin-Say 143.81 49 P PKPdf 05 21 31.3 -0.8
SNR=11
ZAA0 Zalesovo Array 143.90 26 *e*PKPdf PKPdf 05 21 29.8 -2.1
ZAA0 *e*pPKPdf pPKPdf 05 21 56.1 -2.4
ZALV Zalesovo Beam 143.90 26 PKP PKPdf 05 21 29.9 -2.0
comp=E,95nm,1.0s,baz=298,slow=4.2,SNR=188
ZALV pPKP pPKPdf 05 21 56.6 -1.9
comp=E,25nm,0.7s,baz=278,slow=2.2,SNR=4.3
ZALV Zalesovo Beam 143.90 26 PKIKP PKPdf 05 21 29.9 -2.0
ZALV 05 21 56.6
ZALV pmax pmax
comp=Z,95nm,1.0s
ZALV pmax pmax
comp=Z,25nm,0.7s
AML Almayashu 143.93 50 *e*PKPdf PKPdf 05 21 31.9 -0.4
AML *e*pPKPdf pPKPdf 05 21 58.0 -1.0
AML Almayashu 143.93 50 P PKPdf 05 21 32.1 -0.2
SNR=16
TRD Trivandrum 143.94 109 *e*P PKPdf 05 21 31.3 -1.9
GOA Goa 143.96 96 *ex* x 05 20 36.1
USP Ospenovka 144.10 48 P PKPdf 05 21 30.7 -1.9
SNR=8.9
BATI Baumata 144.15 201 PKP PKPdf 05 21 32.0 -1.6
comp=Z,96nm,0.6s,baz=273,slow=0.8,SNR=12
BATI Baumata 144.15 201 P PKPdf 05 21 32.4 -1.2
AAK Ala-Archa 144.32 49 *e*PKPdf PKPdf 05 21 32.6 -0.4
AAK *e*pPKPdf pPKPdf 05 21 59.2 -0.4
AAK Ala-Archa 144.32 49 P PKPdf 05 21 32.8 -0.2
SNR=33
FRU Bishkek 144.34 49 *e*PKIKP PKPdf 05 21 33.0 0.0
FRU *i* 05 21 58.0
FRU pmax pmax
comp=Z,200nm,1.6s
CHMS Chumysh 144.37 48 P PKPdf 05 21 32.7 -0.4
SNR=16
KBK Karagaybulak 144.63 49 P PKPdf 05 21 34.0 +0.4
SNR=46
KAD Karad 144.84 93 *e*P PKPdf 05 21 32.4 -2.2
POO Poona 144.87 91 *e*P PKPdf 05 21 33.2 -1.5
TKM2 Tokmak 2 144.98 48 *e*PKPbc PKPdf 05 21 34.7 +0.5
TKM2 *e*pPKPdf pPKPdf 05 22 00.4 -0.3
TKM2 Tokmak 2 144.98 48 P PKPdf 05 21 34.8 +0.6
SNR=30
KRAR Krasnoyarsk 145.04 18α *i* PKIKP PKPdf 05 21 33.6 -0.2
KOD Kodaikanal 145.19 107 *e*P PKPbc 05 21 35.7 +0.6
CLNS Chul'man 145.43 347 *i* PKIKP PKPdf 05 21 34.5 0.0
CLNS *e* 05 28 25.3
CLNS *e*SS SS 05 43 36.4 -2.1
CLNS pmax pmax
comp=Z,150nm,1.1s
CLNS pmax pmax
comp=N,32nm,1.0s
CLNS pmax pmax
comp=E,24nm,1.2s
CLNS pmax pmax
comp=N,187nm,14.4s
CLNS pmax pmax
comp=E,254nm,16.1s
XMIS Christmas Isla 145.59 170 *e*PKPbc PKPbc 05 21 35.8 -0.6
XMIS *e*pPKPdf pPKPdf 05 22 01.2 -1.5
XMIS Christmas Isla 145.59 170 P PKPdf 05 21 35.8 -0.3
YSS Yuzh-Sakhalins 145.72 320 *e*PKPbc PKPbc 05 21 35.9 +0.1
YSS *e*pPKPdf pPKPdf 05 22 01.9 0.0
YSS Yuzh-Sakhalins 145.72 320⇑ *i* PKP2 PKPab 05 21 35.1 -1.2
YSS pmax pmax
comp=E,110nm,1.1s
YSS pmax pmax
comp=Z,180nm,1.1s
BOD Bodaibo 145.87 357 *e*PKP2 PKPab 05 21 34.6 -1.9
BOD pmax pmax
comp=Z,140nm,1.5s
BOD pmax pmax
comp=Z,126nm,1.5s
KSH Kashi 146.38 54 PKP PKPdf 05 21 38.5 +1.9
KSH *e*XPKP 05 22 15.9
KSH *e*SKS SKSdf 05 28 37.1 +0.3
GUMO Guam 146.61 259 PKPbc PKPbc 05 21 38.1 -1.3
comp=Z,511nm,1.0s,baz=173,slow=8.4,SNR=11
GUMO Guam 146.61 259 *e*PKPbc PKPbc 05 21 38.7 -0.7
GUMO Guam 146.61 259 PKIKP PKPdf 05 21 38.1 +0.4
GUMO pmax pmax
comp=Z,511nm,1.0s
GUMO Guam 146.61 259 P PKPdf 05 21 39.0 +1.3
AJM Ajmer 146.87 77 *e*P PKPdf 05 21 37.4 -0.4
ASAJ Asahikawa 147.22 316 PKPbc PKPbc 05 21 39.1 -1.2
comp=Z,64nm,0.8s,baz=266,slow=8.0,SNR=12
ASAJ Asahikawa 147.22 316 PKP2 PKPbc 05 21 39.1 -1.2
ASAJ pmax pmax
comp=Z,64nm,0.8s
MK31 Makanchi Array 147.35 38 *e*PKPbc PKPdf 05 21 38.6 +0.6
MKAR Makanchi Array 147.35 38 PKPbc PKPdf 05 21 38.0 -0.1
comp=Z,56nm,0.9s,baz=321,slow=1.6,SNR=142
MKAR Makanchi Array 147.35 38 PKIKP PKPdf 05 21 38.0 0.0
MKAR pmax pmax
comp=Z,56nm,0.9s
THN Thein Dam 147.65 66 *e*P PKPdf 05 21 38.5 -0.5
ERM Erimo 147.78 312 *i* PKP2 PKPbc 05 21 42.1 +0.2
KHKI Kahang-Kahang 147.83 188 P PKPbc 05 21 42.0 -0.8
NBBI Negara 147.94 186 P PKPab 05 21 43.3 -2.5
AAI Ambon 148.11 214 P PKPbc 05 21 42.5 -1.1
AKL Akola 148.27 89 *e*P PKPdf 05 21 39.8 -0.5
SWI Sorong 148.73 221 P PKPbc 05 21 44.7 -0.6
HYB Hyderabad 148.87 95 *e*PKP PKPdf 05 21 42.0 +0.6
HYB *e* 05 21 45.5
HYB Hyderabad 148.87 95 *i* PKP PKPdf 05 21 42.0 +0.6
HYB *e* 05 21 45.0
HYB *e*PKPAB PKPab 05 21 50.0 +0.4
HYB *e* 05 22 01.5
HYB *e*pPKP pPKPdf 05 22 12.0 +4.0
HYB *e* 05 22 15.5
HYB *es*PKP 05 22 23.5
HABR Khabarovsk 148.90 329 *i* PKP2 PKPbc 05 21 45.0 +0.4
HABR *e* 05 25 14.0
HABR *e* 05 28 39.9
HABR *e*SS SS 05 44 21.8 +3.4
HABR *e*SSS 05 50 00.1
SMLA Simla 149.01 69 *ex* x 05 22 01.4
NDI New Delhi 149.19 73 *e*P PKPdf 05 21 38.0 -3.6
KLR Kul'dur 149.83 333 *e*PKIKP PKPdf 05 21 38.0 -4.0
KLR pmax pmax
comp=Z,200μm,1.6s
NGP Nagpur 150.22 89 *e*P PKPdf 05 21 41.5 -1.9
KAPI Kappang 150.25 197 P PKPbc 05 21 48.4 -0.6
SNR=39
KAPI Kappang 150.25 197 PKP PKPdf 05 21 43.1 -0.7
comp=Z,145nm,1.1s,baz=202,slow=2.1,SNR=10.0
KAPI PKPbc PKPbc 05 21 48.0 -1.0
comp=Z,283nm,1.1s,baz=215,slow=3.1,SNR=61
KAPI Kappang 150.25 197 *e*PKPdf PKPdf 05 21 43.1 -0.7
KAPI *e*PKPbc PKPbc 05 21 48.1 -0.9
KAPI *e*PKPab PKPab 05 21 54.8 -0.4
KAPI Kappang 150.25 197 P PKPdf 05 21 43.5 -0.3
KDI Kendari 150.32 204 P PKPdf 05 21 45.2 +1.3
MOY Mondy 151.01 13 *e*PKIKP PKPbc 05 21 50.0 +0.4
MOY pmax pmax
comp=Z,15nm,1.4s
IRK Irkutsk 151.03 9⇑ *i* PKIKP PKPdf 05 21 44.0 +0.3
IRK *e* 05 22 23.1
IRK pmax pmax
comp=Z,169nm,1.4s
LBMI Labuha 151.06 216 P PKPbc 05 21 51.6 +0.7
TLY Talaya 151.48 10 *e*PKPbc PKPbc 05 21 51.3 +0.7
TLY *e*PKPab PKPab 05 22 00.3 +1.0
TLY Talaya 151.48 10 *e*PKIKP PKPdf 05 21 45.9 +1.4
TLY *e*SS SS 05 45 26.5 +40
TLY pmax pmax
comp=Z,37nm,1.7s
KSI Kapahiang 151.54 162 P PKPbc 05 21 51.5 -0.5
CIT Chita 151.68 357 *e*PKIKP PKPbc 05 21 51.3 +0.2
CIT *e* 05 21 56.7
CIT *e* 05 22 16.5
CIT pmax pmax
comp=Z,233nm,1.4s
PTH Pithoragarh 151.77 71 *ex* PKPbc 05 21 50.0 -2.1
WMQ Urumqi 152.18 38 PKP PKPdf 05 21 45.0 -0.8
WMQ PP PP 05 25 37.0 +2.3
WMQ SKS SKSdf 05 28 42.0 -2.3
WMQ SKKS SKKSac 05 32 14.0 -2.3
WMQ SS SS 05 44 56.0 +0.8
WMQ PP PP
comp=Z,47nm,10.0s
WMQ LR LR
comp=N,365nm,24.0s
WMQ LR LR
comp=E,506nm,25.0s
WMQ LR LR
comp=Z,382nm,24.0s
ZAK Zakamensk 152.68 11 *e*PKIKP PKPdf 05 21 46.1 -0.2
ZAK pmax pmax
comp=Z,24nm,1.0s
VIS Vishakhapatnam 153.30 98 *e*P PKPdf 05 21 46.2 -2.0
MJAR Matsushiro Arr 153.45 305 PKP PKPdf 05 21 47.3 -0.5
comp=Z,7.5nm,1.1s,baz=278,slow=0.9,SNR=12
MJAR PKPbc PKPbc 05 21 55.4 -0.2
comp=Z,21nm,0.9s,baz=101,slow=0.9,SNR=26
MJAR PKPab PKPab 05 22 07.6 -0.6
comp=Z,34nm,1.0s,baz=80,slow=2.3,SNR=18
MJAR pPKPbc pPKPbc 05 22 21.0 -1.1
comp=Z,20nm,1.1s,baz=193,slow=0.8,SNR=4.2
MJAR pPKPab pPKPab 05 22 32.9 -1.0
comp=Z,28nm,1.1s,baz=81,slow=2.1,SNR=5.0
MJAR Matsushiro Arr 153.45 305 PKP PKPdf 05 21 47.3 -0.5
MJAR PKPbc PKPbc 05 21 55.4 -0.2
MJAR PKPab PKPab 05 22 07.6 -0.6
MJAR pPKPbc pPKPbc 05 22 21.0 -1.1
MJAR pPKPab pPKPab 05 22 32.9 -1.0
MJAR Matsushiro Arr 153.45 305 PKIKP PKPdf 05 21 47.3 -0.6
MJAR 05 22 07.6
MJAR 05 22 21.0
MJAR pmax pmax
comp=Z,8.0nm,1.1s
MJAR pmax pmax
comp=Z,21nm,0.9s
MJAR pmax pmax
comp=Z,35nm,1.0s
MJAR pmax pmax
comp=Z,20nm,1.1s
MJAR pmax pmax
comp=Z,28nm,1.1s
MAJO Matsushiro 153.46 305 *e*PKPdf PKPdf 05 21 48.0 +0.1
MAJO *e*PKPbc PKPbc 05 21 54.9 -0.6
MAJO *e*PKPab PKPab 05 22 08.1 -0.1
MAT Matsushiro 153.46 305 PKP PKPdf 05 21 47.3 -0.6
HIA Hailar 153.62 347 *e*PKPdf PKPdf 05 21 47.8 +0.2
HIA *e*PKPbc PKPbc 05 21 55.4 -0.1
HIA *e*PKPab PKPab 05 22 08.2 -0.1
PPI Padang Panjang 153.79 155 P PKPdf 05 21 49.4 +0.3
MDJ Mudanjiang 154.29 329 PKP PKPdf 05 21 48.6 -0.2
MDJ APKP 05 22 13.6
MDJ PP PP 05 25 46.1 -0.3
MDJ LR LR
comp=N,88nm,38.6s
MDJ LR LR
comp=E,109nm,37.0s
MDJ LR LR
comp=Z,152nm,38.6s
MDJ Mudanjiang 154.29 329 *e*PKPdf PKPdf 05 21 48.9 +0.1
MDJ *e*PKPbc PKPbc 05 21 57.3 +0.2
PYUN Piuthan 154.30 74 *e*P PKPdf 05 21 49.3 0.0
KOLN Koldanda 154.85 75 *e*P PKPdf 05 21 49.8 -0.3
DANN Dangsing 154.96 74 *e*P PKPdf 05 21 50.6 +0.4
SONM Songino Array 155.63 8 PKP PKPdf 05 21 51.2 +0.7
comp=Z,12nm,0.9s,baz=306,slow=1.4,SNR=48
SONM PKPbc PKPdf 05 22 00.4 +10
comp=Z,6.3nm,0.7s,baz=237,slow=0.6,SNR=11
SONM PKPab PKPab 05 22 16.7 -0.3
comp=Z,14nm,0.8s,baz=331,slow=4.7,SNR=16
SONM pPKPab pPKPab 05 22 41.6 -1.0
comp=Z,8.7nm,1.0s,baz=331,slow=4.0,SNR=2.5
SONM Songino Array 155.63 8 PKIKP PKPdf 05 21 51.2 +0.7
SONM 05 22 16.7
SONM pmax pmax
comp=Z,12nm,0.9s
SONM pmax pmax
comp=Z,6.0nm,0.7s
SONM pmax pmax
comp=Z,14nm,0.8s
SONM pmax pmax
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 155.68 7⇓ P PKPdf 05 21 50.7 +0.1
SNR=7.7
ULN Ulaanbaatar 155.68 7 *e*PKIKP PKPdf 05 21 51.1 +0.5
ULN *e* 05 22 18.4
ULN Ulaanbaatar 155.68 7 P PKPdf 05 21 51.3 +0.7
GKN Gorkha 155.76 74 *e*P PKPdf 05 21 50.9 -0.4
DMN Daman 156.20 75 *e*P PKPdf 05 21 51.8 -0.1
BSI Banda Aceh 156.29 137 P PKPdf 05 21 51.7 -0.8
KKN Kakani 156.34 75 *e*P PKPdf 05 21 51.7 -0.4
PKI Pulchoki 156.47 75 *e*P PKPdf 05 21 51.8 -0.5
CN2 Changchun 156.78 333 *e*PKP PKPdf 05 21 51.4 -0.8
CN2 APKP 05 22 18.3
BOK Bokaro 156.85 85 *e*P PKPdf 05 21 51.7 -1.2
BOK AMb AMB 05 21 54.3
comp=Z,24nm,0.9s
GUN Gumba 156.86 74 *e*P PKPdf 05 21 52.6 -0.2
JIRN Jiri 157.15 75 *e*P PKPdf 05 21 52.7 -0.4
RAMN Ramite 157.56 77 *e*P PKPdf 05 21 53.8 +0.1
ODAN Odare 158.27 77 *e*P PKPdf 05 21 54.6 +0.1
comp=Z,41nm,1.0s
TAPN Taplejung 158.52 75 *e*P PKPdf 05 21 54.6 -0.2
comp=Z,60nm,1.4s
KSRS Korea Array 160.16 318 PKP PKPdf 05 21 56.2 -0.2
comp=Z,29nm,1.1s,baz=69,slow=0.6,SNR=57
KSRS pPKP pPKPdf 05 22 22.4 -0.7
comp=Z,12nm,1.0s,baz=72,slow=0.9,SNR=5.2
KSRS PKPab PKPab 05 22 35.3 -1.7
comp=Z,17nm,0.9s,baz=58,slow=4.1,SNR=14
KSRS pPKPab pPKPab 05 23 02.2 -0.4
comp=Z,16nm,1.0s,baz=61,slow=4.1,SNR=4.2
KSRS PP PP 05 26 24.6 +5.6
comp=Z,4.4nm,1.1s,baz=50,slow=7.2,SNR=4.7
KSRS Korea Array 160.16 318 PKIKP PKPdf 05 21 56.2 -0.2
KSRS 05 22 22.5
KSRS 05 22 35.3
KSRS 05 26 24.7
KSRS pmax pmax
comp=Z,29nm,1.1s
KSRS pmax pmax
comp=Z,12nm,1.0s
KSRS pmax pmax
comp=Z,17nm,0.9s
KSRS pmax pmax
comp=Z,16nm,1.0s
KSRS pmax pmax
comp=Z,4.0nm,1.1s
LSA Lhasa 161.15 67 *e*PKPdf PKPdf 05 21 59.2 +1.4
GTA Gaotai 161.62 29 PKP PKPdf 05 21 58.4 +0.5
GTA PKS 05 25 30.5
GTA PP PP 05 26 33.5 +7.1
GTA PP PP
comp=Z,196nm,8.7s
GTA LR LR
comp=N,160nm,18.3s
GTA LR LR
comp=E,139nm,19.8s
GTA LR LR
comp=Z,133nm,17.4s
SHL Shillong 162.36 80 *e*P PKPdf 05 21 58.5 -0.6
HHC Hu-ho-hao-te 162.91 359 *e*PKP PKPdf 05 22 00.4 +1.2
HHC APKP 05 22 27.6
HHC XPKP 05 22 37.1
HHC PKS 05 25 33.1
HHC PP PP 05 26 37.3 +4.6
HHC SKS SKSdf 05 28 54.1 -1.0
HHC SKKS SKKSac 05 33 14.5 +1.8
HHC PP PP
comp=Z,125nm,10.1s
HHC LR LR
comp=N,171nm,22.6s
HHC LR LR
comp=E,338nm,21.0s
HHC LR LR
comp=Z,439nm,20.8s
BJI Beijing 163.18 347 PKP PKPdf 05 21 59.5 0.0
BJI PP PP 05 26 34.6 +0.3
BJI LR LR
comp=Z,229nm,34.5s
BJT Baijiatuan 163.21 347 *e*PKPdf PKPdf 05 21 59.1 -0.4
LZH Lanzhou 166.13 26 *e*PKP PKPdf 05 22 03.1 +0.9
LZH APKP 05 22 30.0
LZH XPKP 05 22 40.6
LZH PKP2 PKPab 05 23 06.8 +3.7
LZH PP PP 05 26 55.0 +5.0
LZH SKS SKSdf 05 28 55.6 -2.0
LZH SKKS SKKSac 05 33 30.8 +1.5
LZH SS SS 05 47 25.0 +3.1
LZH PP PP
comp=Z,356nm,5.8s
LZH LR LR
comp=N,352nm,18.2s
LZH LR LR
comp=Z,427nm,20.3s
NST Nakhon Sawan 166.88 126 P PKPab 05 23 05.0 -2.1
comp=Z,42nm,0.7s
CMAR Chiang Mai Arr 167.44 112 PKP PKPdf 05 22 03.5 -0.1
comp=Z,9.4nm,1.0s,baz=256,slow=2.1,SNR=31
CMAR pPKP pPKPdf 05 22 30.1 -0.2
comp=Z,3.3nm,0.9s,baz=259,slow=2.8,SNR=2.4
CMAR PKPab PKPab 05 23 07.4 -2.2
comp=Z,5.4nm,0.8s,baz=251,slow=4.7,SNR=8.3
CMAR pPKPab pPKPab 05 23 33.3 -1.9
comp=Z,9.8nm,1.1s,baz=244,slow=5.0,SNR=2.9
CMAR Chiang Mai Arr 167.44 112 PKIKP PKPdf 05 22 03.6 0.0
CMAR 05 22 30.2
CMAR 05 23 07.4
CMAR pmax pmax
comp=Z,9.0nm,1.0s
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CMAR pmax pmax
comp=Z,10.0nm,1.2s
CHG Chiang Mai 167.60 111⇓ P PKPdf 05 22 03.3 -0.4
comp=Z,24nm,0.8s
CHTO Chiang Mai 167.60 111⇑ P PKPdf 05 22 04.4 +0.7
SNR=5.1
CHTO Chiang Mai 167.60 111 *e*PKIKP PKPdf 05 22 03.0 -0.7

SSE	**Sheshan**	**168.47**	**312**	PKP	PKPdf	05 22 01.8	-2.2
SSE				PP	PP	05 27 03.4	+0.6
SSE				SS	SS	05 47 45.0	-1.9
SSE				PP	PP		
	comp=Z,231nm,6.9s						
SSE				LR	LR		
	comp=N,115nm,20.2s						
SSE				LR	LR		
	comp=E,279nm,20.2s						
SSE				LR	LR		
	comp=Z,240nm,20.3s						
NJ2	**Nanjing**	**169.28**	**322**	*e*PKP	PKPdf	05 22 04.8	+0.3
NJ2				APKP		05 22 31.3	
NJ2				XPKP		05 22 42.8	
NJ2				PKP2	PKPab	05 23 16.3	-0.9
NJ2				PP	PP	05 27 08.0	+1.5
NJ2				SKS	SKSdf	05 28 56.0	-3.5
NJ2				SKKS	SKKSac	05 33 46.0	+0.9
NJ2				PP	PP		
	comp=Z,340nm,6.9s						
NJ2				LR	LR		
	comp=N,2µm,24.6s						
NJ2				LR	LR		
	comp=E,540nm,27.6s						
NJ2				LR	LR		
	comp=Z,540nm,17.6s						
XAN	**Xi'an**	**169.52**	**10**	PKP	PKPdf	05 22 04.8	+0.2
XAN				APKP		05 22 31.8	
XAN				PKS		05 25 35.8	
XAN				SKS	SKSdf	05 28 56.6	-3.0
XAN				PP	PP		
	comp=Z,214nm,11.6s						
XAN				LR	LR		
	comp=N,393nm,20.3s						
CD2	**Chengdu**	**170.26**	**41**	*e*PKP	PKPdf	05 22 04.5	-0.6
CD2				APKP		05 22 32.0	
CD2				XPKP		05 22 42.3	
CD2				PKP2	PKPab	05 23 23.5	+1.9
CD2				PP	PP	05 27 14.0	+2.5
CD2				SKS	SKSdf	05 28 56.4	-3.6
CD2				SKKS	SKKSac	05 33 49.8	-0.2
CD2				SS	SS	05 48 03.6	-0.6
CD2				PP	PP		
	comp=Z,210nm,10.2s						
CD2				LR	LR		
	comp=N,350nm,12.0s						
CD2				LR	LR		
	comp=Z,390nm,15.8s						
KMI	**Kunming**	**172.18**	**78**	PKP	PKPdf	05 22 05.6	-0.6
KMI				APKP		05 22 32.5	
KMI				PKP2	PKPab	05 23 31.4	+0.9
KMI				PP	PP	05 27 21.1	-1.2
KMI				SS	SS	05 48 22.4	-2.8
KMI				PP	PP		
	comp=Z,346nm,4.1s						
KMI				LR	LR		
	comp=N,280nm,23.1s						
KMI				LR	LR		
	comp=E,247nm,27.9s						
KMI				LR	LR		
	comp=Z,412nm,27.2s						
GYA	**Guiyang**	**175.08**	**55**	PKP	PKPdf	05 22 07.3	0.0
GYA				APKP		05 22 33.6	
GYA				XPKP		05 22 43.6	
GYA				PKP2	PKPab	05 23 45.6	+2.4
GYA				PKS		05 25 38.1	
GYA				PP	PP	05 27 37.3	+1.6
GYA				SKS	SKSdf	05 28 57.9	-3.9
GYA				SKKS	SKKSac	05 34 11.6	-1.9
GYA				SS	SS	05 48 50.0	-2.1
GYA				PP	PP		
	comp=Z,300nm,5.6s						
GYA				LR	LR		
	comp=N,620nm,21.8s						
GYA				LR	LR		
	comp=E,580nm,22.0s						
GYA				LR	LR		
	comp=Z,800nm,21.3s						
QIZ	**Qiongzhong**	**175.18**	**165**	PKP	PKPdf	05 22 06.0	-1.5
QIZ				PP	PP	05 27 35.6	+0.8
QIZ				LR	LR		
	comp=Z,253nm,38.5s						

*ISCJB **24** 05:24:49.9±0.2, 4328N×001×1.10W×002, h28km±2km, Error ellipse: s-maj=2.5km s-min=2.0km az=146.9*
*CSEM **24** 05:24:51.9±0.0, 4320N×104W, h10km, ML3.6/58, Error ellipse: s-maj=0.9km s-min=0.6km az=130.0*
*STR **24** 05:24:52.4±0.2, 4319N×098W, h9km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **24** 05:24:52.4, 4319N×098W, h9km, ML3.7(LDG), ML3.6(STR), MN3.3(MDD), After STR.*
NEIC Felt [II] in the Mauleon-Licharre area, France.
*MDD **24** 05:24:52.2±0.2, 4319N×106W, h16km±1km, mbLg3.2/58, Error ellipse: s-maj=2.0km s-min=1.4km az=174.0, PRIMO*
MDD EMS: II INTENSIDAD MIMA ESPA.
*LDG **24** 05:24:52.1±0.1, 4322N×103W, h10km, Md3.5/3, Ml3.7/39, Error ellipse: s-maj=1.3km s-min=0.8km az=137.0*
ISC 24 05:24:50.8±0.2, 43274N±0010×104W±001, h18km±1km, n239, σ1$22/486, 7C-7D, Pyrenees
INMG 24 05:24:54.3±1.5, 4305N×122W, h16km±4km, ML3.1, Error ellipse: s-maj=5.4km s-min=2.6km az=58.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORDF	**Ordiarp**	**0.10**	**128**	Pg	**Pg**	**05 24 55.7**	**+1.3**
ORDF	**Ordiarp**	**0.10**	**128**	P	**Pg**	**05 24 55.8**	**+1.4**
ORDF				S	**Sg**	**05 24 58.7**	**+1.8**
OSSF	**Osses**	**0.16**	**264**	Pg	**Pg**	**05 24 56.4**	**+1.2**
OSSF				Sg	**Sg**	**05 25 02.5**	**+4.4**
OSSF	**Osses**	**0.16**	**264**	P	**Pg**	**05 24 56.5**	**+1.3**
OSSF				S	**Sg**	**05 24 59.4**	**+1.3**
SJPF	**Ste Jean**	**0.21**	**220**	*e*Pg	**Pg**	**05 24 55.8**	**0.0**
SJPF				*e*Sg	**Sg**	**05 24 58.2**	**-1.1**
	4µm,0.2s,SNR=1.0						
SJPF	**Ste Jean**	**0.21**	**220**	*e*Pg	**Pg**	**05 24 55.8**	**0.0**
SJPF				*e*Sg	**Sg**	**05 24 58.2**	**-1.1**
	2µm,0.2s,SNR=1.0						
LARF	**Larrau**	**0.24**	**170**	Pg	**Pg**	**05 24 55.9**	**-0.4**
LARF	**Larrau**	**0.24**	**170**	P	**Pg**	**05 24 55.9**	**-0.4**
LARF				S	**Sg**	**05 24 58.9**	**-1.2**
ATE	**Arette**	**0.31**	**127**	Pg	**Pg**	**05 24 57.7**	**+0.2**
ATE				Sg	**Sg**	**05 25 02.3**	**+0.2**
ATE	**Arette**	**0.31**	**127**	P	**Pg**	**05 24 57.8**	**+0.3**
ATE				S	**Sg**	**05 25 02.3**	**+0.2**
EALK	**Alkurruntz**	**0.34**	**261**	⇓Pg	**Pg**	**05 24 58.9**	**+0.9**
	658nm,0.1s,SNR=18						
EALK				Lg		05 25 03.6	
	2µm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**0.37**	**253**	⇓Pg	**Pg**	**05 24 58.9**	**+0.4**
	203nm,0.2s,SNR=18						
ELIZ				Lg		05 25 04.1	
	111nm,0.1s,SNR=23						
EORO	**Oroz-Betelu**	**0.43**	**207**	Pg	**Pg**	**05 24 58.6**	**-1.0**
	463nm,0.1s,SNR=18						
EORO				Lg		05 25 03.2	
	892nm,0.1s,SNR=12						
EORO	**Oroz-Betelu**	**0.43**	**207**	⇑Pg	**Pg**	**05 24 58.6**	**-1.0**
	463nm,0.1s,SNR=18						
EORO				Lg		05 25 03.2	
	892nm,0.1s,SNR=12						
IUSE	**Utxeti**	**0.49**	**229**	Pg	**Pg**	**05 25 00.1**	**-0.6**
	65nm,0.1s,SNR=18						
IUSE	**Utxeti**	**0.49**	**229**	⇓Pg	**Pg**	**05 25 00.1**	**-0.6**
	65nm,0.1s,SNR=18						
IUSE				Lg		05 25 05.9	
	869nm,0.1s,SNR=11						
IZUN	**Zunzarren**	**0.51**	**216**	Pg	**Pg**	**05 25 00.1**	**-1.0**
	88nm,0.1s,SNR=18						
IZUN	**Zunzarren**	**0.51**	**216**	⇓Pg	**Pg**	**05 25 00.1**	**-1.0**
	88nm,0.1s,SNR=18						
IZUN				Lg		05 25 06.2	
	510nm,0.1s,SNR=7.9						
ETSF	**Etsaut**	**0.52**	**136**	*e*Pg	**Pg**	**05 25 00.7**	**-0.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**05 25 06.7**	**-1.4**
	5µm,0.4s						
ETSF	**Etsaut**	**0.52**	**136**	*e*Pg	**Pg**	**05 25 00.7**	**-0.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**05 25 06.7**	**-1.4**
	2µm,0.4s						
REYF	**Montagne du Re**	**0.52**	**113**	Pg	**Pg**	**05 25 01.2**	**0.0**
REYF				Sg	**Sg**	**05 25 08.4**	**+0.2**
REYF	**Montagne du Re**	**0.52**	**113**	P	**Pg**	**05 25 01.1**	**-0.1**
REYF				S	**Sg**	**05 25 08.4**	**+0.3**
IPRE	**Itoiz**	**0.52**	**206**	⇓Pg	**Pg**	**05 25 00.2**	**-1.0**
	28nm,0.2s,SNR=18						
IPRE				Lg		05 25 06.3	
	223nm,0.1s,SNR=5.5						
FDAF	**Les Forges d'A**	**0.57**	**142**	P	**Pg**	**05 25 01.6**	**-0.6**
FDAF				S	**Sg**	**05 25 08.4**	**-1.4**
IUNC	**Unciti**	**0.62**	**213**	Pg	**Pg**	**05 25 02.4**	**-0.6**
	55nm,0.1s,SNR=18						
IUNC	**Unciti**	**0.62**	**213**	⇓Pg	**Pg**	**05 25 02.4**	**-0.6**
	55nm,0.1s,SNR=18						
IUNC				Lg		05 25 10.2	
	696nm,0.2s,SNR=8.7						
EARA	**Aranguren**	**0.64**	**218**	Pg	**Pg**	**05 25 02.6**	**-0.8**
	32nm,0.2s,SNR=18						
EARA	**Aranguren**	**0.64**	**218**	⇑Pg	**Pg**	**05 25 02.6**	**-0.7**
	32nm,0.2s,SNR=18						
EARA				Lg		05 25 10.9	
	417nm,0.1s,SNR=17						
LABF	**Labassere**	**0.85**	**105**	Pg	**Pg**	**05 25 07.9**	**+0.6**
LABF				Sg	**Sg**	**05 25 19.5**	**+1.0**
LABF	**Labassere**	**0.85**	**105**	P	**Pb**	**05 25 07.7**	**+0.7**
LABF				S	**Sb**	**05 25 19.5**	**+1.5**
VIEF	**Viey**	**0.87**	**116**	Pg	**Pg**	**05 25 07.5**	**-0.3**
VIEF				Sg	**Sg**	**05 25 18.4**	**-0.9**
VIEF	**Viey**	**0.87**	**116**	P	**Pb**	**05 25 07.3**	**-0.1**
VIEF				S	**Sb**	**05 25 18.2**	**-0.5**
EPF	**Esparros**	**1.04**	**103**	*e*Pg	**Pg**	**05 25 11.4**	**+0.4**
EPF	**Esparros**	**1.04**	**103**	*e*P	**Pb**	**05 25 13.1**	**+2.9**
EPF				*e*Sg	**Sg**	**05 25 25.1**	**+0.5**
	405nm,0.2s						
EPF	**Esparros**	**1.04**	**103**	*e*Pn	**Pn**	**05 25 10.2**	**-0.2**
EPF				*e*Pg	**Pg**	**05 25 11.4**	**+0.4**
EPF				*e*P		05 25 13.1	
EPF	**Esparros**	**1.04**	**103**	*e*Pg	**Pg**	**05 25 11.4**	**+0.4**
EPF	**Esparros**	**1.04**	**103**	*e*P	**Pb**	**05 25 13.1**	**+2.9**
EPF				*e*Sg	**Sg**	**05 25 25.1**	**+0.5**
	202nm,0.2s						
EPF	**Esparros**	**1.04**	**103**	Pn	**Pn**	**05 25 10.2**	**-0.2**
EPF				Pg	**Pg**	**05 25 11.4**	**+0.4**
EPF				Lg		05 25 25.1	
	202nm,0.2s						
EBIE	**Bielsa**	**1.05**	**124**	⇑Pg	**Pg**	**05 25 10.4**	**-0.7**
EBIE	**Bielsa**	**1.05**	**124**	⇑Pg	**Pg**	**05 25 10.3**	**-0.8**
	14nm,0.2s,SNR=18						
EBIE				Lg		05 25 23.1	
	143nm,0.1s,SNR=19						
RESF	**Ens**	**1.11**	**114**	Pg	**Pg**	**05 25 11.8**	**-0.6**
RESF				Sg	**Sg**	**05 25 25.4**	**-1.6**
RESF	**Ens**	**1.11**	**114**	P	**Pn**	**05 25 11.7**	**+0.2**
RESF				S	**Sb**	**05 25 26.4**	**+0.7**
ECRI	**Cripan**	**1.27**	**239**	⇑Pg	**Pg**	**05 25 15.0**	**-0.2**
ECRI				Lg		05 25 31.2	
ECRI	**Cripan**	**1.27**	**239**	⇑Pg	**Pg**	**05 25 15.0**	**-0.2**
	29nm,0.2s,SNR=18						
ECRI				Lg		05 25 31.2	
	100nm,0.1s,SNR=7.9						
MELF	**Melles**	**1.38**	**106**	P	**Pn**	**05 25 17.3**	**+2.2**
MELF				S	**Sn**	**05 25 36.3**	**+3.4**
MLS	**Moulis**	**1.60**	**101**	Pg	**Pg**	**05 25 22.4**	**+0.9**
MLS				Sg	**Sg**	**05 25 42.7**	**+0.4**
MLS	**Moulis**	**1.60**	**101**	P	**Pn**	**05 25 22.4**	**+4.3**
MLS				S	**Sn**	**05 25 42.8**	**+4.6**
ESAC	**San Caprasio**	**1.61**	**165**	Pn	**Pn**	**05 25 18.6**	**+0.3**
	109nm,0.2s,SNR=18						
ESAC	**San Caprasio**	**1.61**	**165**	⇓Pn	**Pn**	**05 25 18.6**	**+0.3**
	109nm,0.2s,SNR=18						
ESAC				Lg		05 25 39.3	
	4µm,0.3s,SNR=7.9						
SALF	**Salau**	**1.72**	**107**	P	**Pn**	**05 25 21.3**	**+1.5**
SALF				S	**Sn**	**05 25 43.3**	**+2.1**
ELAN	**Lanestosa**	**1.75**	**269**	Pn	**Pn**	**05 25 22.0**	**+1.8**
	2.4nm,0.1s,SNR=126						
ELAN				Sn	**Sn**	**05 25 44.9**	**+3.0**
	88nm,0.2s,SNR=12						
ELAN	**Lanestosa**	**1.75**	**269**	Pn	**Pn**	**05 25 22.0**	**+1.8**
	2.4nm,0.1s,SNR=126						
ELAN				Sn	**Sn**	**05 25 44.9**	**+3.0**
	88nm,0.2s,SNR=12						
PAND	**Andorre**	**2.05**	**111**	P	**Pn**	**05 25 28.3**	**+4.0**
PAND				S	**Sn**	**05 25 54.9**	**+5.6**
LFF	**La Frestale**	**2.10**	**37**	*e*Pg	**Pg**	**05 25 31.1**	**-0.1**
LFF				*e*Sn	**Sn**	**05 25 50.8**	**+0.1**
	SNR=1.0						
LFF				*e*Sg	**Sg**	**05 26 00.4**	**+1.9**
	245nm,0.3s						
LFF	**La Frestale**	**2.10**	**37**	*e*Pn	**Pn**	**05 25 26.3**	**+1.3**
LFF				*e*Pg	**Pg**	**05 25 31.1**	**-0.1**
LFF				*e*Sn	**Sn**	**05 25 50.8**	**+0.1**
LFF				*e*Sg	**Sg**	**05 26 00.4**	**+1.9**
LFF	**La Frestale**	**2.10**	**37**	*e*Pg	**Pg**	**05 25 31.1**	**-0.1**
LFF				*e*Sn	**Sn**	**05 25 50.8**	**+0.1**
	SNR=1.0						
LFF				*e*Sg	**Sg**	**05 26 00.4**	**+1.9**
	123nm,0.3s						
LFF	**La Frestale**	**2.10**	**37**	Pn	**Pn**	**05 25 26.3**	**+1.3**
LFF				Pg	**Pg**	**05 25 31.1**	**-0.1**
LFF				Sn	**Sn**	**05 25 50.8**	**+0.1**
LFF				Lg		05 26 00.4	
	122nm,0.3s						
EMIR	**Miracle**	**2.33**	**125**	Pn	**Pn**	**05 25 30.1**	**+1.9**
	5.3nm,0.1s,SNR=32						
EMIR	**Miracle**	**2.33**	**125**	Pg	**Pg**	**05 25 34.3**	**-1.2**
	18nm,0.1s,SNR=10						
EMIR				Sn	**Sn**	**05 25 57.8**	**+1.4**
	24nm,0.1s,SNR=17						
EMIR	**Miracle**	**2.33**	**125**	Pn	**Pn**	**05 25 30.1**	**+1.9**
	5.3nm,0.1s,SNR=32						
EMIR				Pg	**Pg**	**05 25 34.3**	**-1.2**
	18nm,0.1s,SNR=10						
EMIR				Sn	**Sn**	**05 25 57.8**	**+1.4**
	24nm,0.1s,SNR=17						
EMIR				Lg		05 26 03.6	
	208nm,0.2s,SNR=14						
CARF	**Carcanieres**	**2.38**	**103**	Pn	**Pn**	**05 25 32.9**	**+4.1**
CARF				Sg	**Sg**	**05 26 07.7**	**+0.5**
CARF	**Carcanieres**	**2.38**	**103**	P	**Pn**	**05 25 33.4**	**+4.6**
CARF				S	**Sn**	**05 26 03.9**	**+6.5**
MTLF	**Montolieu**	**2.38**	**87**	*e*Pg	**Pg**	**05 25 35.8**	**-0.7**
MTLF				*e*Sn	**Sn**	**05 25 55.6**	**-2.0**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**05 26 07.5**	**+0.2**
	66nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**2.38**	**87**	*e*Pn	**Pn**	**05 25 29.3**	**+0.4**
MTLF				*e*Pg	**Pg**	**05 25 35.8**	**-0.7**
MTLF				*e*Sn	**Sn**	**05 25 55.6**	**-2.0**
MTLF				*e*Sg	**Sg**	**05 26 07.5**	**+0.2**
MTLF	**Montolieu**	**2.38**	**87**	*e*Pg	**Pg**	**05 25 35.8**	**-0.7**
MTLF				*e*Sn	**Sn**	**05 25 55.6**	**-2.0**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**05 26 07.5**	**+0.2**
	33nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**2.38**	**87**	Pn	**Pn**	**05 25 29.3**	**+0.4**
MTLF				Pg	**Pg**	**05 25 35.8**	**-0.7**
MTLF				Sn	**Sn**	**05 25 55.6**	**-2.0**
MTLF				Lg		05 26 07.5	
	33nm,0.3s						
VALF	**Valcebollere**	**2.41**	**110**	P	**Pn**	**05 25 33.3**	**+4.0**
VALF				S	**Sn**	**05 26 07.2**	**+8.9**
EPOB	**Poblet**	**2.48**	**140**	Pn	**Pn**	**05 25 30.8**	**+0.5**
	2.5nm,0.1s,SNR=34						
EPOB	**Poblet**	**2.48**	**140**	Pg	**Pg**	**05 25 36.0**	**-2.4**
	2.9nm,0.1s,SNR=55						
EPOB				Sn	**Sn**	**05 25 58.7**	**-1.4**
	19nm,0.2s,SNR=5.0						
EPOB	**Poblet**	**2.48**	**140**	Pn	**Pn**	**05 25 30.8**	**+0.5**
	2.5nm,0.1s,SNR=34						
EPOB				Pg	**Pg**	**05 25 36.0**	**-2.4**
	2.9nm,0.1s,SNR=55						
EPOB				Sn	**Sn**	**05 25 58.7**	**-1.3**
	19nm,0.2s,SNR=5.0						
EPOB				Lg		05 26 06.8	
	67nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.53**	**156**	Pn	**Pn**	**05 25 31.0**	**0.0**
	2.0nm,0.1s,SNR=32						
ERTA	**Horta de San J**	**2.53**	**156**	Pg	**Pg**	**05 25 37.0**	**-2.3**
	4.1nm,0.1s,SNR=20						
ERTA				Sn	**Sn**	**05 26 01.0**	**-0.3**
	22nm,0.2s,SNR=5.8						
ERTA	**Horta de San J**	**2.53**	**156**	Pn	**Pn**	**05 25 31.0**	**+0.1**
	2.0nm,0.1s,SNR=32						
ERTA				Pg	**Pg**	**05 25 37.0**	**-2.3**
	4.1nm,0.1s,SNR=20						
ERTA				Sn	**Sn**	**05 26 01.0**	**-0.3**
	22nm,0.2s,SNR=5.8						
ERTA				Lg		05 26 08.0	
	64nm,0.2s,SNR=14						
ETOR	**Torete**	**2.57**	**197**	Pn	**Pn**	**05 25 32.2**	**+0.8**
ETOR	**Torete**	**2.57**	**197**	Pn	**Pn**	**05 25 32.2**	**+0.8**
	115nm,0.3s,SNR=7.9						
ETOR				Pg	**Pg**	**05 25 38.5**	**-1.6**
	40nm,0.1s,SNR=7.9						
ETOR				Sn	**Sn**	**05 26 00.7**	**-1.5**
	152nm,0.3s,SNR=7.9						
ETOR				Lg		05 26 10.2	
	572nm,0.3s,SNR=7.9						
RJF	**Les Rejaudoux**	**2.74**	**41**	*e*Pg	**Pg**	**05 25 42.7**	**-0.6**
RJF				*e*Sn	**Sn**	**05 26 05.7**	**-0.7**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**05 26 20.0**	**+1.2**
	112nm,0.2s						
RJF	**Les Rejaudoux**	**2.74**	**41**	*e*Pn	**Pn**	**05 25 34.0**	**+0.2**
RJF				*e*Pg	**Pg**	**05 25 42.7**	**-0.6**
RJF				*e*Sn	**Sn**	**05 26 05.7**	**-0.7**
RJF				*e*Sg	**Sg**	**05 26 20.0**	**+1.2**
RJF	**Les Rejaudoux**	**2.74**	**41**	*e*Pg	**Pg**	**05 25 42.7**	**-0.6**
RJF				*e*Sn	**Sn**	**05 26 05.7**	**-0.7**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**05 26 20.0**	**+1.2**
	56nm,0.2s						
RJF	**Les Rejaudoux**	**2.74**	**41**	Pn	**Pn**	**05 25 34.0**	**+0.2**
RJF				Pg	**Pg**	**05 25 42.7**	**-0.6**
RJF				Sn	**Sn**	**05 26 05.7**	**-0.7**
RJF				Lg		05 26 20.0	
	56nm,0.2s						
FILF	**Fillols**	**2.74**	**104**	Pn	**Pn**	**05 25 36.2**	**+2.4**
FILF				Sg	**Sg**	**05 26 15.4**	**-3.5**
FILF	**Fillols**	**2.74**	**104**	P	**Pn**	**05 25 36.7**	**+2.9**
FILF				S	**Sn**	**05 26 09.6**	**+3.1**
CAF	**Calviac**	**2.78**	**53**	*e*Pg	**Pg**	**05 25 43.4**	**-0.7**
CAF				*e*Sn	**Sn**	**05 26 06.8**	**-0.7**
CAF				*e*Sg	**Sg**	**05 26 20.9**	**+0.7**
	66nm,0.2s						
CAF	**Calviac**	**2.78**	**53**	*e*Pn	**Pn**	**05 25 35.1**	**+0.7**
CAF				*e*Pg	**Pg**	**05 25 43.4**	**-0.7**
CAF				*e*Sn	**Sn**	**05 26 06.8**	**-0.7**
CAF				*e*Sg	**Sg**	**05 26 20.9**	**+0.7**
CAF	**Calviac**	**2.78**	**53**	*e*Pg	**Pg**	**05 25 43.4**	**-0.7**
CAF				*e*Sn	**Sn**	**05 26 06.8**	**-0.7**
CAF				*e*Sg	**Sg**	**05 26 20.9**	**+0.7**
	33nm,0.2s						
CAF	**Calviac**	**2.78**	**53**	Pn	**Pn**	**05 25 35.1**	**+0.7**
CAF				Pg	**Pg**	**05 25 43.4**	**-0.7**
CAF				Sn	**Sn**	**05 26 06.8**	**-0.7**
CAF				Lg		05 26 20.9	
	33nm,0.2s						
EMOS	**Mosqueruela**	**2.94**	**171**	Pn	**Pn**	**05 25 37.0**	**+0.4**
	2.5nm,0.1s,SNR=63						
EMOS	**Mosqueruela**	**2.94**	**171**	Pg	**Pg**	**05 25 43.5**	**-3.6**
	3.3nm,0.2s,SNR=19						
EMOS				Sn	**Sn**	**05 26 09.0**	**-2.4**
	3.7nm,0.1s,SNR=8.2						
EMOS	**Mosqueruela**	**2.94**	**171**	Pn	**Pn**	**05 25 37.0**	**+0.4**
	2.5nm,0.1s,SNR=63						
EMOS				Pg	**Pg**	**05 25 43.5**	**-3.6**
	3.3nm,0.2s,SNR=19						
EMOS				Sn	**Sn**	**05 26 09.0**	**-2.3**
	3.7nm,0.1s,SNR=8.2						
EMOS				Lg		05 26 20.6	
	50nm,0.2s,SNR=7.9						
SJAF	**Saint Jean de**	**2.99**	**104**	P	**Pn**	**05 25 40.9**	**+3.6**
SJAF				S	**Sn**	**05 26 25.3**	**+13**
EJON	**La Jonquera**	**3.01**	**105**	Pn	**Pn**	**05 25 40.5**	**+3.0**
	2.8nm,0.1s,SNR=15						
EJON	**La Jonquera**	**3.01**	**105**	Pg	**Pg**	**05 25 47.4**	**-1.0**
	1.6nm,0.1s,SNR=9.1						
EJON				Sn	**Sn**	**05 26 13.6**	**+0.6**
	6.1nm,0.1s,SNR=9.4						
EJON	**La Jonquera**	**3.01**	**105**	Pn	**Pn**	**05 25 40.5**	**+3.0**
	2.8nm,0.1s,SNR=15						
EJON				Pg	**Pg**	**05 25 47.4**	**-1.0**
	1.6nm,0.1s,SNR=9.1						
EJON				Sn	**Sn**	**05 26 13.6**	**+0.6**
	6.1nm,0.1s,SNR=9.4						
EJON				Lg		05 26 26.6	
	16nm,0.2s,SNR=8.7						
EARI	**Arriondas**	**3.04**	**272**	Pn	**Pn**	**05 25 40.1**	**+2.1**
	6.4nm,0.2s,SNR=7.1						
EARI				Sn	**Sn**	**05 26 14.7**	**+0.8**
	12nm,0.2s,SNR=16						
EARI	**Arriondas**	**3.04**	**272**	Pn	**Pn**	**05 25 40.1**	**+2.2**
	6.4nm,0.2s,SNR=7.1						
EARI				Sn	**Sn**	**05 26 14.7**	**+0.8**
	12nm,0.2s,SNR=16						
FRNF	**Fournols**	**3.34**	**50**	Pn	**Pn**	**05 25 42.7**	**+0.7**
MFF	**Saint Martin d**	**3.39**	**11**	*e*Pn	**Pn**	**05 25 43.9**	**+1.2**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**05 26 21.7**	**-0.7**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**05 26 40.6**	**+1.0**
	119nm,0.4s						
MFF	**Saint Martin d**	**3.39**	**11**	*e*Pn	**Pn**	**05 25 43.9**	**+1.2**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**05 26 21.7**	**-0.7**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**05 26 40.6**	**+1.0**
	59nm,0.4s						
GUD	**Guadarrama**	**3.51**	**222**	Pn	**Pn**	**05 25 45.0**	**+0.6**
	1.4nm,0.1s,SNR=7.9						
GUD				Pg	**Pg**	**05 25 55.7**	**-2.3**
	7.6nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**05 26 23.4**	**-1.9**
	5.2nm,0.2s,SNR=7.9						
GUD				Lg		05 26 38.7	
	14nm,0.2s,SNR=7.9						
VERF	**Verneugheol**	**3.53**	**44**	Pn	**Pn**	**05 25 45.0**	**+0.3**
LASF	**Ste Croix**	**3.64**	**76**	*e*Pn	**Pn**	**05 25 47.0**	**+0.8**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 26 26.4**	**-2.3**
LASF				*e*Sg	**Sg**	**05 26 48.3**	**+0.5**
	45nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**3.64**	**76**	*e*Pn	**Pn**	**05 25 47.0**	**+0.8**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 26 26.4**	**-2.3**
LASF				*e*Sg	**Sg**	**05 26 48.3**	**+0.5**
	22nm,0.4s,SNR=1.0						
LBL	**Lubilhac**	**3.65**	**56**	Pn	**Pn**	**05 25 47.4**	**+1.1**
ECHE	**Chera**	**3.68**	**179**	Pn	**

BGF					*e*Sg	**Sg**	**05 27 08.9**	**+0.4**
	182nm,0.4s,SNR=1.0								
BGF	**Bois d'Agland**	**4.29**	**39**		*e*Pn	**Pn**	**05 25 55.1**	**0.0**
	SNR=1.0								
BGF					*e*Sn	**Sn**	**05 26 43.0**	**-1.6**
BGF					*e*Sg	**Sg**	**05 27 08.9**	**+0.4**
	91nm,0.4s,SNR=1.0								
ECAL	**Calabor**	**4.41**	**254**		Pn	**Pn**	**05 25 57.8**	**+1.1**
	22nm,0.2s,SNR=18								
ECAL					Sn	**Sn**	**05 26 46.1**	**-1.5**
	4.1nm,0.2s,SNR=5.0								
ECAL	**Calabor**	**4.41**	**254**		⇑Pn	**Pn**	**05 25 57.8**	**+1.0**
	22nm,0.2s,SNR=18								
ECAL					Sn	**Sn**	**05 26 46.1**	**-1.5**
	4.1nm,0.2s,SNR=5.0								
ECAL					Lg		05 27 12.2		
	14nm,0.2s,SNR=7.9								
VIVF	**Saint-Julien-l**	**4.41**	**67**		*e*Pg	**Pg**	**05 26 13.5**	**-1.8**
	SNR=1.0								
VIVF					*e*Sn	**Sn**	**05 26 45.2**	**-2.5**
	SNR=1.0								
VIVF					*e*Sg	**Sg**	**05 27 10.7**	**-1.7**
	29nm,0.4s								
VIVF	**Saint-Julien-l**	**4.41**	**67**		*e*Pn	**Pn**	**05 25 57.4**	**+0.6**
VIVF					*e*Pg	**Pg**	**05 26 13.5**	**-1.8**
VIVF					*e*Sn	**Sn**	**05 26 45.2**	**-2.5**
VIVF					*e*Sg	**Sg**	**05 27 10.7**	**-1.7**
VIVF	**Saint-Julien-l**	**4.41**	**67**		*e*Pg	**Pg**	**05 26 13.5**	**-1.8**
	SNR=1.0								
VIVF					*e*Sn	**Sn**	**05 26 45.2**	**-2.5**
	SNR=1.0								
VIVF					*e*Sg	**Sg**	**05 27 10.7**	**-1.7**
	15nm,0.4s								
VIVF	**Saint-Julien-l**	**4.41**	**67**		Pn	**Pn**	**05 25 57.4**	**+0.6**
VIVF					Pg	**Pg**	**05 26 13.5**	**-1.8**
VIVF					Sn	**Sn**	**05 26 45.2**	**-2.5**
VIVF					Lg		05 27 10.7		
	15nm,0.4s								
EPON	**Pontenova**	**4.46**	**273**		Pn	**Pn**	**05 25 59.4**	**+2.0**
	1.1nm,0.1s,SNR=7.9								
EPON					Sn	**Sn**	**05 26 49.0**	**+0.2**
	5.2nm,0.1s,SNR=7.9								
EPON	**Pontenova**	**4.46**	**273**		Pn	**Pn**	**05 25 59.4**	**+2.0**
	1.1nm,0.1s,SNR=7.9								
EPON					Sn	**Sn**	**05 26 49.0**	**+0.2**
	5.2nm,0.1s,SNR=7.9								
PAB	**San Pablo**	**4.48**	**215**		*e*Pn	**Pn**	**05 25 57.2**	**-0.5**
PAB	**San Pablo**	**4.48**	**215**		*e*Pn	**Pn**	**05 25 57.2**	**-0.5**
ETOS	**Mallorca**	**4.54**	**139**		Pn	**Pn**	**05 25 59.1**	**+0.5**
	6.2nm,0.2s,SNR=5.8								
ETOS					Sn	**Sn**	**05 26 47.7**	**-3.3**
	9.8nm,0.3s,SNR=5.0								
ETOS	**Mallorca**	**4.54**	**139**		Pn	**Pn**	**05 25 59.1**	**+0.5**
	6.2nm,0.2s,SNR=5.8								
ETOS					Sn	**Sn**	**05 26 47.7**	**-3.2**
	9.8nm,0.3s,SNR=5.0								
ETOS					Lg		05 27 14.4		
	8.6nm,0.3s,SNR=7.9								
PRAF	**Pradon**	**4.55**	**81**		Pn	**Pn**	**05 26 00.2**	**+1.6**
ERUA	**La Rua**	**4.57**	**261**		Pn	**Pn**	**05 26 00.2**	**+1.2**
	7.8nm,0.1s,SNR=7.9								
ERUA					Sn	**Sn**	**05 26 51.0**	**-0.6**
	7.7nm,0.2s,SNR=7.9								
EBEN	**Beniarda**	**4.61**	**172**		Pn	**Pn**	**05 25 59.7**	**+0.2**
	22nm,0.7s,SNR=9.7								
EBEN					Sn	**Sn**	**05 26 49.2**	**-3.3**
EBEN	**Beniarda**	**4.61**	**172**		Pn	**Pn**	**05 25 59.7**	**+0.2**
	22nm,0.7s,SNR=9.7								
EBEN					Sn	**Sn**	**05 26 49.1**	**-3.4**
	22nm,0.5s,SNR=5.0								
EIBI	**Ibiza**	**4.61**	**156**		Pn	**Pn**	**05 25 59.2**	**-0.3**
	3.6nm,0.1s,SNR=13								
EIBI					Sn	**Sn**	**05 26 48.0**	**-4.6**
	5.1nm,0.2s,SNR=5.0								
EIBI	**Ibiza**	**4.61**	**156**		Pn	**Pn**	**05 25 59.2**	**-0.4**
	3.6nm,0.1s,SNR=13								
EIBI					Sn	**Sn**	**05 26 48.0**	**-4.5**
	5.1nm,0.2s,SNR=5.0								
ETOB	**Tobarra**	**4.64**	**185**		Pn	**Pn**	**05 26 00.8**	**+0.9**
	3.5nm,0.2s,SNR=29								
ETOB					Sn	**Sn**	**05 26 50.7**	**-2.6**
	2.0nm,0.2s,SNR=7.9								
ETOB	**Tobarra**	**4.64**	**185**		Pn	**Pn**	**05 26 00.8**	**+0.8**
	3.5nm,0.2s,SNR=29								
ETOB					Sn	**Sn**	**05 26 50.7**	**-2.6**
	2.0nm,0.2s,SNR=7.9								
ETOB					Lg		05 27 15.8		
	9.2nm,0.3s,SNR=5.0								
TREF	**Trevaresse**	**4.69**	**84**		Pn	**Pn**	**05 26 01.7**	**+1.1**
AVF	**Avril sur Loir**	**4.70**	**40**		*e*Pn	**Pn**	**05 26 01.5**	**+0.8**
	SNR=1.0								
AVF					*e*Sn	**Sn**	**05 26 52.2**	**-2.5**
AVF					*e*Sg	**Sg**	**05 27 20.6**	**-0.9**
	38nm,0.4s,SNR=1.0								
AVF	**Avril sur Loir**	**4.70**	**40**		*e*Pn	**Pn**	**05 26 01.5**	**+0.8**
	SNR=1.0								
AVF					*e*Sn	**Sn**	**05 26 52.2**	**-2.5**
AVF					*e*Sg	**Sg**	**05 27 20.6**	**-0.9**
	19nm,0.4s,SNR=1.0								
EVIA	**Vianos**	**4.76**	**194**		Pn	**Pn**	**05 26 02.1**	**+0.5**
	16nm,0.2s,SNR=35								
EVIA					Lg		05 27 17.9		
	15nm,0.4s,SNR=5.0								
HYF	**Humbligny**	**4.76**	**32**		*e*Pn	**Pn**	**05 26 02.8**	**+1.2**
HYF					*e*Sn	**Sn**	**05 26 54.6**	**-1.7**
HYF					*e*Sg	**Sg**	**05 27 22.9**	**-0.8**
SMF	**Signal de Mont**	**4.83**	**44**		*e*Pn	**Pn**	**05 26 02.4**	**-0.2**
	SNR=1.0								
SMF					*e*Sn	**Sn**	**05 26 55.8**	**-2.3**
SMF					*e*Sg	**Sg**	**05 27 25.8**	**-0.1**
	40nm,0.5s								
SMF	**Signal de Mont**	**4.83**	**44**		*e*Pn	**Pn**	**05 26 02.4**	**-0.2**
	SNR=1.0								
SMF					*e*Sn	**Sn**	**05 26 55.8**	**-2.3**
SMF					*e*Sg	**Sg**	**05 27 25.8**	**-0.1**
	20nm,0.5s								
SMRF	**Simiane la Rot**	**4.86**	**79**		*e*Pn	**Pn**	**05 26 03.9**	**+1.0**
	SNR=1.0								
SMRF					*e*Sg	**Sg**	**05 27 23.9**	**-2.7**
	11nm,0.5s								
SMRF	**Simiane la Rot**	**4.86**	**79**		*e*Pn	**Pn**	**05 26 03.9**	**+1.0**
	SNR=1.0								
SMRF					*e*Sg	**Sg**	**05 27 23.9**	**-2.7**
	5.5nm,0.5s								
QUIF	**Quistinic**	**4.88**	**343**		*e*Pn	**Pn**	**05 26 04.8**	**+1.7**
	SNR=1.0								
QUIF					*e*Sn	**Sn**	**05 26 58.1**	**-1.0**
	SNR=1.0								
QUIF					*e*Sg	**Sg**	**05 27 27.5**	**+0.3**
	24nm,0.3s								
QUIF	**Quistinic**	**4.88**	**343**		*e*Pn	**Pn**	**05 26 04.8**	**+1.7**
	SNR=1.0								
QUIF					*e*Sn	**Sn**	**05 26 58.1**	**-1.0**
	SNR=1.0								
QUIF					*e*Sg	**Sg**	**05 27 27.5**	**+0.3**
	12nm,0.3s								
PUYF	**Puyloubier**	**4.92**	**85**		Pn	**Pn**	**05 26 04.7**	**+0.9**
EPLA	**Plasencia**	**4.95**	**231**		Pn	**Pn**	**05 26 04.0**	**-0.2**
	7.4nm,0.1s,SNR=20								
EPLA					Sn	**Sn**	**05 26 57.2**	**-3.8**
	10nm,0.2s,SNR=7.1								
EPLA	**Plasencia**	**4.95**	**231**		Pn	**Pn**	**05 26 04.0**	**-0.2**
	7.4nm,0.1s,SNR=20								
EPLA					Sn	**Sn**	**05 26 57.2**	**-3.8**
	10nm,0.2s,SNR=7.1								
EPLA					Lg		05 27 25.2		
	6.6nm,0.2s,SNR=4.7								
SSF	**Saint Saulge**	**4.97**	**39**		*e*Pn	**Pn**	**05 26 03.7**	**-0.7**
	SNR=1.0								
SSF					*e*Sn	**Sn**	**05 26 59.5**	**-1.8**
SSF					*e*Sg	**Sg**	**05 27 30.1**	**-0.1**
	28nm,0.4s,SNR=1.0								
SSF	**Saint Saulge**	**4.97**	**39**		*e*Pn	**Pn**	**05 26 03.7**	**-0.7**
	SNR=1.0								
SSF					*e*Sn	**Sn**	**05 26 59.5**	**-1.8**
SSF					*e*Sg	**Sg**	**05 27 30.1**	**-0.1**
	14nm,0.4s,SNR=1.0								
SGMF	**Saint Gilles**	**5.09**	**349**		*e*Pn	**Pn**	**05 26 07.3**	**+1.2**
	SNR=1.0								
SGMF					*e*Sn	**Sn**	**05 27 03.3**	**-1.1**
	SNR=1.0								
SGMF					*e*Sg	**Sg**	**05 27 33.7**	**-0.4**
	59nm,0.6s								
SGMF	**Saint Gilles**	**5.09**	**349**		*e*Pn	**Pn**	**05 26 07.3**	**+1.2**
	SNR=1.0								
SGMF					*e*Sn	**Sn**	**05 27 03.3**	**-1.1**
	SNR=1.0								
SGMF					*e*Sg	**Sg**	**05 27 33.7**	**-0.4**
	30nm,0.6s								
GRR	**Gorron**	**5.12**		**1**	*e*Pn	**Pn**	**05 26 06.8**	**+0.4**
	SNR=1.0								
GRR					*e*Sn	**Sn**	**05 27 03.9**	**-1.1**
GRR					*e*Sg	**Sg**	**05 27 35.0**	**+0.1**
	26nm,0.2s,SNR=1.0								
GRR	**Gorron**	**5.12**		**1**	*e*Pn	**Pn**	**05 26 06.8**	**+0.4**
	SNR=1.0								
GRR					*e*Sn	**Sn**	**05 27 03.9**	**-1.1**
GRR					*e*Sg	**Sg**	**05 27 35.0**	**+0.1**
	13nm,0.2s,SNR=1.0								
TAVF	**Tavernes**	**5.18**		**84**	Pn	**Pn**	**05 26 07.5**	**+0.1**
ORIF	**Oris-en-Rattie**	**5.25**		**69**	*e*Pn	**Pn**	**05 26 09.6**	**+1.3**
	SNR=1.0								
ORIF					*e*Sn	**Sn**	**05 27 04.9**	**-3.4**
	SNR=1.0								
ORIF					*e*Sg	**Sg**	**05 27 37.5**	**-1.7**
	19nm,0.7s								
ORIF	**Oris-en-Rattie**	**5.25**		**69**	*e*Pn	**Pn**	**05 26 09.6**	**+1.3**
	SNR=1.0								
ORIF					*e*Sn	**Sn**	**05 27 04.9**	**-3.4**
	SNR=1.0								
ORIF					*e*Sg	**Sg**	**05 27 37.5**	**-1.7**
	9.6nm,0.7s								
LOR	**Lormes**	**5.28**		**39**	*e*Pn	**Pn**	**05 26 08.4**	**-0.3**
	baz=220,SNR=1.0								
LOR					*e*Sn	**Sn**	**05 27 07.6**	**-1.5**
	baz=225,SNR=1.0								
LOR					*e*Sg	**Sg**	**05 27 39.2**	**-1.1**
	26nm,0.3s,baz=216,SNR=1.0								
LOR	**Lormes**	**5.28**		**39**	*e*Pn	**Pn**	**05 26 08.4**	**-0.3**
	SNR=1.0								
LOR					*e*Sn	**Sn**	**05 27 07.6**	**-1.5**
	SNR=1.0								
LOR					*e*Sg	**Sg**	**05 27 39.2**	**-1.1**
	13nm,0.3s,SNR=1.0								
ROSF	**Rostrenen**	**5.30**	**344**		*e*Pn	**Pn**	**05 26 10.1**	**+1.2**
	SNR=1.0								
ROSF					*e*Sn	**Sn**	**05 27 08.2**	**-1.2**
	SNR=1.0								
ROSF					*e*Sg	**Sg**	**05 27 38.6**	**-2.1**
	23nm,0.5s								
ROSF	**Rostrenen**	**5.30**	**344**		*e*Pn	**Pn**	**05 26 10.1**	**+1.2**
	SNR=1.0								
ROSF					*e*Sn	**Sn**	**05 27 08.2**	**-1.2**
	SNR=1.0								
ROSF					*e*Sg	**Sg**	**05 27 38.6**	**-2.1**
	12nm,0.5s								
LDF	**La Druitiere**	**5.36**		**7**	*e*Pn	**Pn**	**05 26 10.1**	**+0.3**
	SNR=1.0								
LDF					*e*Sn	**Sn**	**05 27 09.8**	**-1.2**
	SNR=1.0								
LDF					*e*Sg	**Sg**	**05 27 42.6**	**-0.1**
	85nm,0.7s								
LDF	**La Druitiere**	**5.36**		**7**	*e*Pn	**Pn**	**05 26 10.1**	**+0.3**
	SNR=1.0								
LDF					*e*Sn	**Sn**	**05 27 09.8**	**-1.2**
	SNR=1.0								
LDF					*e*Sg	**Sg**	**05 27 42.6**	**-0.1**
	42nm,0.7s								
ELOB	**Lobios**	**5.37**	**257**		Pn	**Pn**	**05 26 10.5**	**+0.6**
	3.7nm,0.1s,SNR=7.9								
ELOB					Sn	**Sn**	**05 27 09.8**	**-1.5**
	5.2nm,0.2s,SNR=7.9								
ELOB	**Lobios**	**5.37**	**257**		Pn	**Pn**	**05 26 10.5**	**+0.6**
	3.7nm,0.1s,SNR=7.9								
ELOB					Sn	**Sn**	**05 27 09.8**	**-1.5**
	5.2nm,0.2s,SNR=7.9								
ELOB					Lg		05 27 39.2		
	22nm,0.6s,SNR=7.9								
FLN	**La Foliniere**	**5.50**		**4**	*e*Pn	**Pn**	**05 26 12.4**	**+0.6**
	baz=182,SNR=1.0								
FLN					*e*Sn	**Sn**	**05 27 13.2**	**-1.3**
	SNR=1.0								
FLN					*e*Sg	**Sg**	**05 27 46.9**	**-0.4**
	54nm,0.6s								
FLN	**La Foliniere**	**5.50**		**4**	*e*Pn	**Pn**	**05 26 12.4**	**+0.6**
	SNR=1.0								
FLN					*e*Sn	**Sn**	**05 27 13.2**	**-1.3**
	SNR=1.0								
FLN					*e*Sg	**Sg**	**05 27 46.9**	**-0.4**
	27nm,0.6s								
LMR	**La Mourre**	**5.51**		**87**	*e*Pn	**Pn**	**05 26 12.0**	**+0.1**
LMR					*e*Sn	**Sn**	**05 27 10.6**	**-4.2**
	5.7nm,0.4s,SNR=1.0								
LMR	**La Mourre**	**5.51**		**87**	Pn	**Pn**	**05 26 12.0**	**+0.1**
LMR					Sn	**Sn**	**05 27 10.6**	**-4.2**
	2.8nm,0.4s								
EBAN	**Banos Encina**	**5.51**	**203**		Pn	**Pn**	**05 26 10.7**	**-1.2**
	1.8nm,0.2s,SNR=7.8								
EBAN					Sn	**Sn**	**05 27 10.4**	**-4.4**
	3.2nm,0.2s,SNR=7.9								
EBAN	**Banos Encina**	**5.51**	**203**		Pn	**Pn**	**05 26 10.7**	**-1.2**
	1.8nm,0.2s,SNR=7.8								
EBAN					Sn	**Sn**	**05 27 10.4**	**-4.4**
	3.2nm,0.2s,SNR=7.9								
EBAN					Lg		05 27 42.8		
	6.2nm,0.3s,SNR=7.9								
STS	**Santiago**	**5.51**	**269**		Pn	**Pn**	**05 26 12.8**	**+0.9**
	3.1nm,0.1s,SNR=7.9								
STS					Sn	**Sn**	**05 27 12.3**	**-2.5**
	2.2nm,0.1s,SNR=7.9								
EHUE	**Huescar**	**5.58**	**193**		Pn	**Pn**	**05 26 13.2**	**+0.4**
	2.1nm,0.1s,SNR=7.9								
EHUE					Sn	**Sn**	**05 27 12.7**	**-3.8**
	1.4nm,0.3s,SNR=7.9								
EHUE	**Huescar**	**5.58**	**193**		Pn	**Pn**	**05 26 13.2**	**+0.4**
	2.1nm,0.1s,SNR=7.9								
EHUE					Sn	**Sn**	**05 27 12.7**	**-3.8**
	1.4nm,0.3s,SNR=7.9								
EHUE					Lg		05 27 46.1		
	1.8nm,0.2s,SNR=7.9								
FRF	**La Foret Royal**	**5.61**		**84**	*e*Pn	**Pn**	**05 26 13.7**	**+0.5**
	SNR=1.0								
FRF					*e*Sn	**Sn**	**05 27 13.3**	**-3.8**
	6.7nm,0.4s								
FRF	**La Foret Royal**	**5.61**		**84**	Pn	**Pn**	**05 26 13.7**	**+0.5**
FRF					Sn	**Sn**	**05 27 13.3**	**-3.8**
	3.3nm,0.4s								
EQES	**Quesada**	**5.68**	**196**		Pn	**Pn**	**05 26 14.9**	**+0.7**
	3.7nm,0.2s,SNR=45								
EQES	**Quesada**	**5.68**	**196**		Pg	**Pg**	**05 26 35.4**	**-4.1**
	3.5nm,0.3s,SNR=7.9								
EQES	**Quesada**	**5.68**	**196**		Pn	**Pn**	**05 26 14.9**	**+0.7**
	3.7nm,0.2s,SNR=45								
EQES					Pg	**Pg**	**05 26 35.4**	**-4.1**
	3.5nm,0.3s,SNR=7.9								
EQES					Lg		05 27 47.8		
	11nm,0.4s,SNR=7.9								
EZAM	**Zamans**	**5.75**	**261**		Pn	**Pn**	**05 26 15.4**	**+0.2**
	0.7nm,0.1s,SNR=7.9								
EZAM					Sn	**Sn**	**05 27 17.4**	**-3.2**
	0.2nm,0.1s,SNR=7.9								
EZAM	**Zamans**	**5.75**	**261**		Pn	**Pn**	**05 26 15.4**	**+0.2**
	0.7nm,0.1s,SNR=7.9								
EZAM					Sn	**Sn**	**05 27 17.4**	**-3.3**
	0.2nm,0.1s,SNR=7.9								
EZAM					Lg		05 27 54.7		
	1.2nm,0.3s,SNR=7.9								
EADA	**Adamuz**	**5.76**	**209**		Pn	**Pn**	**05 26 15.5**	**+0.1**
	4.0nm,0.2s,SNR=34								
EADA	**Adamuz**	**5.76**	**209**		Pn	**Pn**	**05 26 15.5**	**+0.1**
	4.0nm,0.2s,SNR=34								
EADA					Sn	**Sn**	**05 27 16.2**	**-4.8**
	1.0nm,0.1s,SNR=7.9								
EADA					Lg		05 27 51.2		
	3.3nm,0.1s,SNR=5.8								
EMAZ	**Mazaricos**	**5.82**	**270**		Pn	**Pn**	**05 26 17.2**	**+1.1**
	19nm,0.2s,SNR=11								
EMAZ					Sn	**Sn**	**05 27 20.2**	**-2.1**
	4.8nm,0.2s,SNR=7.9								
EMAZ	**Mazaricos**	**5.82**	**270**		Pn	**Pn**	**05 26 17.2**	**+1.1**
	19nm,0.2s,SNR=11								
EMAZ					Sn	**Sn**	**05 27 20.2**	**-2.1**
	4.8nm,0.2s,SNR=7.9								
MBDF	**Montbardon**	**5.82**		**73**	*e*Pg	**Pg**	**05 26 39.3**	**-2.9**
MBDF					*e*Sn	**Sn**	**05 27 18.2**	**-4.2**
MBDF					*e*Sg	**Sg**	**05 27 54.8**	**-2.7**
	8.4nm,0.8s								
MBDF	**Montbardon**	**5.82**		**73**	*e*Pn	**Pn**	**05 26 17.0**	**+0.9**
MBDF					*e*Pg	**Pg**	**05 26 39.3**	**-2.9**
MBDF					*e*Sn	**Sn**	**05 27 18.2**	**-4.2**
MBDF					*e*Sg	**Sg**	**05 27 54.8**	**-2.7**
MBDF	**Montbardon**	**5.82**		**73**	Pn	**Pn**	**05 26 17.0**	**+0.9**
MBDF					Pg	**Pg**	**05 26 39.3**	**-2.9**
MBDF					Sn	**Sn**	**05 27 18.2**	**-4.2**
MBDF					Lg		05 27 54.8		
	4.2nm,0.8s								
LPL	**La Plagne**	**6.00**		**65**	*e*Pn	**Pn**	**05 26 19.4**	**+0.7**
	SNR=1.0								
LPL					*e*Sn	**Sn**	**05 27 23.7**	**-3.2**
LPL					*e*Sg	**Sn**	**05 28 01.2**	**+34**
	7.7nm,0.6s								
LPL	**La Plagne**	**6.00**		**65**	*e*Pn	**Pn**	**05 26 19.4**	**+0.7**
	SNR=1.0								
LPL					*e*Sg	**Sn**	**05 28 01.2**	**+34**
	3.8nm,0.6s								
LPL	**La Plagne**	**6.00**		**65**	Pn	**Pn**	**05 26 19.4**	**+0.7**
LPL					Sn	**Sn**	**05 27 23.7**	**-3.2**
LPL					Lg		05 28 01.2		
	3.8nm,0.6s								
LPG	**La Plagne**	**6.01**		**66**	*e*Pn	**Pn**	**05 26 19.9**	**+1.2**
	SNR=1.0								
LPG					*e*Sn	**Sn**	**05 27 23.3**	**-3.8**
LPG					*e*Sg	**Sn**	**05 28 01.4**	**+34**
	15nm,0.8s								
LPG	**La Plagne**	**6.01**		**66**	Pn	**Pn**	**05 26 19.9**	**+1.2**
LPG					Sn	**Sn**	**05 27 23.3**	**-3.8**
LPG					Lg		05 28 01.4		
	7.6nm,0.8s								
CABF	**La Chapelle**	**6.06**		**54**	*e*Pn	**Pn**	**05 26 20.1**	**+0.7**
CABF					*e*Sg	**Sn**	**05 28 02.1**	**+34**
	3.7nm,0.4s								
CABF	**La Chapelle**	**6.06**		**54**	*e*Pn	**Pn**	**05 26 20.1**	**+0.7**
CABF					*e*Sg	**Sn**	**05 28 02.1**	**+34**
	1.9nm,0.4s								
SBF	**Sospel**	**6.19**		**82**	*e*Pn	**Pn**	**05 26 21.6**	**+0.4**
	SNR=1.0								
SBF					*e*Sn	**Sn**	**05 27 27.0**	**-4.4**
	12nm,0.5s,SNR=1.0								
SBF	**Sospel**	**6.19**		**82**	Pn	**Pn**	**05 26 21.6**	**+0.4**
SBF					Sn	**Sn**	**05 27 27.0**	**-4.4**
	6.0nm,0.5s								
ELUQ	**Luque**	**6.21**	**204**		Pn	**Pn**	**05 26 21.7**	**+0.1**
	0.5nm,0.1s,SNR=7.9								
ELUQ					Sn	**Sn**	**05 27 27.2**	**-4.9**
	0.4nm,0.1s,SNR=7.9								
ELUQ					Lg		05 28 06.8		
	1.3nm,0.2s,SNR=7.9								
ECOG	**Cogollos-Vega**	**6.29**	**199**		Pn	**Pn**	**05 26 23.6**	**+1.0**
	1.2nm,0.2s,SNR=9.1								
ECOG					Sn	**Sn**	**05 27 29.7**	**-4.3**
	0.4nm,0.2s,SNR=7.9								
ECOG	**Cogollos-Vega**	**6.29**	**199**		Pn	**Pn**	**05 26 23.6**	**+1.0**
	1.2nm,0.2s,SNR=9.1								
ECOG					Sn	**Sn**	**05 27 29.7**	**-4.4**
	0.4nm,0.2s,SNR=7.9								
ECOG					Lg		05 28 10.3		
	0.7nm,0.2s,SNR=4.6								
EQUE	**Quentar**	**6.33**	**198**		Pn	**Pn**	**05 26 24.1**	**+0.9**
	7.5nm,0.2s,SNR=7.9								
EQUE					Sn	**Sn**	**05 27 31.2**	**-3.8**
	0.4nm,0.1s,SNR=7.9								
EQUE	**Quentar**	**6.33**	**198**		Pn	**Pn**	**05 26 24.1**	**+0.9**
	7.5nm,0.2s,SNR=7.9								
EQUE					Sn	**Sn**	**05 27 31.2**	**-3.8**
	0.4nm,0.1s,SNR=7.9								
EQUE					Lg		05 28 11.3		
	3.8nm,0.2s,SNR=7.9								
ENIJ	**Nijar**	**6.36**	**188**		Pn	**Pn**	**05 26 23.7**	**+0.2**
	1.4nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**6.38**	**227**		Pn	**Pn**	**05 26 23.7**	**-0.2**
	7.7nm,0.2s,SNR=7.9								
EBAD					Sn	**Sn**	**05 27 30.8**	**-5.5**
	1.6nm,0.1s,SNR=7.9								
SFTF	**Sexfontaines**	**6.51**		**39**	*e*Pn	**Pn**	**05 26 26.5**	**+0.9**
	baz=215								
SFTF					*e*Sn	**Sn**	**05 27 37.1**	**-2.3**
SFTF					*e*Sg	Sn	05 28 16.2	+37
	77nm,0.9s,baz=213								
SFTF	**Sexfontaines**	**6.51**		**39**	*e*Pn	**Pn**	**05 26 26.5**	**+0.9**
SFTF					*e*Sn	**Sn**	**05 27 37.1**	**-2.3**
SFTF					*e*Sg	Sn	05 28 16.2	+37
	38nm,0.9s								
EBER	**Berja**	**6.52**	**193**		Pn	**Pn**	**05 26 28.1**	**+2.3**
	31nm,0.4s,SNR=54								
EBER					Sn	**Sn**	**05 27 35.7**	**-4.0**
	1.0nm,0.3s,SNR=7.9								
EBER	**Berja**	**6.52**	**193**		Pn	**Pn**	**05 26 28.1**	**+2.3**
	31nm,0.4s,SNR=54								
EBER					Sn	**Sn**	**05 27 35.7**	**-4.0**
	1.0nm,0.3s,SNR=7.9								
EBER					Lg		05 28 15.7		
	4.9nm,0.4s,SNR=5.0								
ELOJ	**Sierra Loja**	**6.56**	**202**		Pn	**Pn**	**05 26 27.2**	**+0.8**
	2.3nm,0.2s,SNR=7.9								
ERON	**Agron**	**6.60**	**200**		Pn	**Pn**	**05 26 28.0**	**+1.2**
	6.1nm,0.4s,SNR=7.9								
EGUA	**Guajares**	**6.72**	**198**		Pn	**Pn**	**05 26 30.1**	**+1.6**
	34nm,0.4s,SNR=7.9								
MEZF	**Maiz

	SNR=1.0								
BAIF					*e*Sg		Sn	05 28 53.0	+45
	35nm,1.0s								
BAIF	**Baives**	**7.69**	**26**	*e*Pn			**Pn**	**05 26 42.2**	**+0.5**
	SNR=1.0								
BAIF					*e*Sn		**Sn**	**05 28 04.4**	**-3.8**
	SNR=1.0								
BAIF					*e*Sg		Sn	05 28 53.0	+45
	17nm,1.0s								
CDF	**Champ du Feu**	**7.75**	**46**	*e*Pn			**Pn**	**05 26 42.8**	**+0.2**
CDF					*e*Sn		**Sn**	**05 28 05.5**	**-4.4**
CDF					*e*Sg		Sn	05 28 54.8	+45
	24nm,0.9s								
CDF	**Champ du Feu**	**7.75**	**46**	*e*Pn			**Pn**	**05 26 42.8**	**+0.2**
CDF					*e*Sn		**Sn**	**05 28 05.5**	**-4.4**
CDF					*e*Sg		Sn	05 28 54.8	+45
	12nm,0.9s								
GIVF	**Givet**	**7.93**	**28**	*e*Pn			**Pn**	**05 26 46.0**	**+1.0**
	SNR=1.0								
GIVF					*e*Sn		**Sn**	**05 28 11.1**	**-3.1**
	SNR=1.0								
GIVF					*e*Sg		Sn	05 29 00.4	+46
	34nm,0.9s								
GIVF	**Givet**	**7.93**	**28**	*e*Pn			**Pn**	**05 26 46.0**	**+1.0**
	SNR=1.0								
GIVF					*e*Sn		**Sn**	**05 28 11.1**	**-3.1**
	SNR=1.0								
GIVF					*e*Sg		Sn	05 29 00.4	+46
	17nm,0.9s								

*NEIC **24** 06:37:57.0,4455N×1763E,h10km,ML2.6(BUC),After BUC.*
*ISCJB **24** 06:37:58.2±0.5,4479N±002×1756E±002,h8km±3km, Error ellipse: s-maj=3.8km s-min=2.3km az=26.8*
*BEO **24** 06:37:58.9±0.3,4474N×1743E,h12km±2km,ML3.1/11*
*CSEM **24** 06:37:58.2±0.1,4483N×1760E,h10km,ML3.1, Error ellipse: s-maj=2.2km s-min=1.5km az=28.0*

ISC 24 06:37:59.4±0.4,4476N±002×1751E±002,h10km±3km,n64, σ1§11/109,22C-14D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
BLY	**Banja Luka**	**0.23**	**267**	*i*Pg		**Pg**	**06 38 03.6**	**-0.5**
BLY				*e*Sg		**Sg**	**06 38 06.8**	**-0.5**
SISC	**Sisak**	**1.07**	**312**	*e*Pg		**Pg**	**06 38 20.1**	**+0.1**
SISC				Sg		**Sg**	**06 38 34.8**	**+0.8**
SISC	**Sisak**	**1.07**	**312**	*e*Pg		**Pg**	**06 38 20.1**	**+0.1**
SISC				Sg		**Sg**	**06 38 34.7**	**+0.8**
RHK3	**Tenkes**	**1.25**	**25**	⇓*e*Pn		**Pn**	**06 38 22.2**	**-0.5**
RHK3	**Tenkes**	**1.25**	**25**	*e*Pg		**Pg**	**06 38 23.5**	**+0.2**
RHK3				*e*Sn		**Sn**	**06 38 41.2**	**+1.7**
BBLS	**Lazići**	**1.63**	**123**	⇑*i*Pn		**Pn**	**06 38 28.3**	**+0.3**
BBLS				*e*Sg		**Sg**	**06 38 52.3**	**+0.6**
PKSM	**Moragy**	**1.66**	**28**	⇑P		**Pn**	**06 38 27.7**	**-0.7**
PKSM				S		**Sn**	**06 38 52.5**	**+2.9**
PKSM	**Moragy**	**1.66**	**28**	⇓*i*Pn		**Pn**	**06 38 27.7**	**-0.7**
PKSM				*e*Sn		**Sn**	**06 38 52.5**	**+2.8**
PKSM	**Moragy**	**1.66**	**28**	⇑*i*P		**Pn**	**06 38 27.7**	**-0.7**
PKSM	**Moragy**	**1.66**	**28**	S		**Sn**	**06 38 52.5**	**+2.8**
FGSL	**Fruska Gora**	**1.68**	**76**	⇓*i*Pn		**Pn**	**06 38 28.2**	**-0.6**
FGSL				*e*Sn		**Sn**	**06 38 49.6**	**-0.7**
FGSL				*e*Sg		**Sg**	**06 38 54.6**	**+1.2**
FGSL	**Fruska Gora**	**1.68**	**76**	*e*Pn		**Pn**	**06 38 28.4**	**-0.4**
FGSL				*e*Sn		**Sn**	**06 38 49.6**	**-0.7**
NVLJ	**Novalja**	**1.89**	**265**	*e*Pn		**Pn**	**06 38 32.9**	**+1.3**
NVLJ				Sn		**Sn**	**06 38 57.6**	**+2.2**
STON	**Ston**	**1.89**	**176**	*e*Pn		**Pn**	**06 38 33.0**	**+1.4**
STON				Sn		**Sn**	**06 38 58.7**	**+3.2**
KOGS	**Kog**	**1.90**	**333**	*e*Pn		**Pn**	**06 38 31.8**	**0.0**
KOGS				*e*Sn		**Sn**	**06 38 56.2**	**+0.4**
BEO	**Beograd**	**2.11**	**88**	*e*Pn		**Pn**	**06 38 35.1**	**+0.5**
BEO				*e*Sg		**Sg**	**06 39 06.6**	**-0.6**
TREB	**Trebinje**	**2.13**	**163**	*e*Pn		**Pn**	**06 38 33.8**	**-1.1**
TREB				*e*Sg		**Sg**	**06 39 05.9**	**-1.9**
TREB	**Trebinje**	**2.13**	**163**	*e*Pn		**Pn**	**06 38 34.2**	**-0.7**
TREB				*e*Sn		**Sn**	**06 39 01.4**	**0.0**
CEY	**Cerknica**	**2.38**	**295**	*e*Pn		**Pn**	**06 38 38.3**	**-0.1**
CEY				*e*Sn		**Sn**	**06 39 07.4**	**-0.3**
GRUS	**Gruza**	**2.46**	**110**	*e*Pn		**Pn**	**06 38 39.5**	**0.0**
GRUS				*e*Sg		**Sg**	**06 39 19.6**	**+1.2**
SOKA	**Soboth**	**2.58**	**319**	⇑*i*Pn		**Pn**	**06 38 41.6**	**+0.5**
SOKA				⇑*i*Sn		**Sn**	**06 39 10.1**	**-2.5**
	11nm,0.3s							
SOKA	**Soboth**	**2.58**	**319**	Pn		**Pn**	**06 38 41.6**	**+0.5**
SOKA				Sn		**Sn**	**06 39 10.1**	**-2.5**
	11nm,0.3s							
OBKA	**Obir**	**2.71**	**311**	⇑*e*Pn		**Pg**	**06 38 50.8**	**-0.6**
	13nm,0.4s,SNR=7.5							
OBKA				⇑*i*Sn		**Sg**	**06 39 25.7**	**-0.8**
	26nm,0.3s							
VOY	**Vojsko**	**2.84**	**298**	*e*Pn		**Pn**	**06 38 49.6**	**+4.9**
VOY				*e*Sn		**Sn**	**06 39 20.8**	**+1.8**
ARSA	**Arzberg**	**2.85**	**332**	⇑*i*Pn		**Pn**	**06 38 45.0**	**+0.2**
	3.4nm,0.2s,SNR=9.4							
ARSA				⇑*i*Sn		**Sg**	**06 39 29.5**	**-1.3**
	16nm,0.3s							
ARSA	**Arzberg**	**2.85**	**332**	⇑*i*Pn		**Pn**	**06 38 44.9**	**+0.1**
ARSA				*e*Sg		**Sg**	**06 39 29.2**	**-1.6**
BUD	**Budapest**	**2.92**	**21**	*e*Sg		**Sg**	**06 39 34.8**	**+1.7**
SOP	**Sopron**	**3.00**	**348**	⇓*e*Pn		**Pn**	**06 38 47.0**	**+0.2**
SOP				*e*SB		**Sb**	**06 39 36.1**	**+6.7**
BZS	**Buzias**	**3.03**	**72**	*e*Pn		**Pn**	**06 38 46.3**	**-1.0**
BZS				*e*Sn		**Sn**	**06 39 22.4**	**-1.1**
BZS				*e*Sg		**Sg**	**06 39 36.7**	**+0.1**
BZS	**Buzias**	**3.03**	**72**	⇓*i*P		**Pn**	**06 38 45.7**	**-1.6**
BZS				S		**Sn**	**06 39 21.6**	**-1.9**
BZS	**Buzias**	**3.03**	**72**	*e*Pn		**Pn**	**06 38 46.3**	**-1.0**
BZS				S		**Sn**	**06 39 21.6**	**-1.9**
BZS				*e*Sn		**Sn**	**06 39 22.4**	**-1.1**
BZS	**Buzias**	**3.03**	**72**	⇓*i*P		**Pn**	**06 38 45.7**	**-1.6**
PENC	**Penc**	**3.27**	**21**	⇓*e*Pn		**Pn**	**06 38 50.7**	**+0.1**
MYKA	**Terra Mystica**	**3.29**	**306**	⇑*i*Pn		**Pg**	**06 39 00.7**	**-1.6**
	5.1nm,0.4s							
MYKA				⇑*i*Sn		**Sg**	**06 39 43.2**	**-1.8**
	3.2nm,0.3s							
CONA	**Conrad Observa**	**3.37**	**341**	⇑*i*Pn		**Pn**	**06 38 52.3**	**+0.4**
	7.9nm,0.2s,SNR=24							
CONA				⇑*i*Sn		**Sn**	**06 39 31.2**	**-0.6**
CSNA	**Conrad Observa**	**3.37**	**341**	⇑*i*Pn		**Pn**	**06 38 52.3**	**+0.4**
	8.1nm,0.2s							
ZST	**Bratislava**	**3.45**	**355**	*e*Pn		**Pn**	**06 38 52.8**	**-0.2**
PSZ	**Piszkesteto**	**3.56**	**27**	⇓P		**Pn**	**06 38 53.9**	**-0.8**
PSZ				S		**Sn**	**06 39 40.5**	**+3.8**
PSZ	**Piszkesteto**	**3.56**	**27**	⇓*e*PB		**Pb**	**06 39 05.6**	**+3.2**
PSZ	**Piszkesteto**	**3.56**	**27**	⇓*i*P		**Pn**	**06 38 53.9**	**-0.7**
PSZ	**Piszkesteto**	**3.56**	**27**	S		**Sn**	**06 39 40.5**	**+3.8**
MODS	**Modra-Piesok**	**3.62**	**358**	*e*Pn		**Pn**	**06 38 55.4**	**+0.1**
BARS	**Barje**	**3.67**	**120**	*e*Pn		**Pn**	**06 38 56.6**	**+0.5**
BARS				*e*Sn		**Sn**	**06 39 38.6**	**-0.9**
KBA	**Koelnbreinsper**	**3.72**	**310**	⇓*i*Sn		**Sn**	**06 39 40.6**	**+0.2**
GZR	**Gura Zlata**	**3.79**	**79**	⇑P		**Pn**	**06 38 56.0**	**-1.6**
GZR				S		**Sn**	**06 39 40.8**	**-1.4**
GZR	**Gura Zlata**	**3.79**	**79**	⇑P		**Pn**	**06 38 56.0**	**-1.7**
GZR				S		**Sn**	**06 39 40.8**	**-1.4**
GZR	**Gura Zlata**	**3.79**	**79**	⇑*i*P		**Pn**	**06 38 56.0**	**-1.7**
MOA	**Molln**	**3.82**	**325**	⇑*i*Pn		**Pn**	**06 38 59.2**	**+1.1**
	4.9nm,0.1s,SNR=26							
MOA				⇑*i*Sn		**Sn**	**06 39 42.8**	**-0.2**
	8.3nm,0.3s							
VYHS	**Vyhne**	**3.85**	**13**	*e*Pn		**Pn**	**06 38 58.7**	**+0.2**
KOLL	**Kolacno**	**3.87**	**9**	*e*Pn		**Pn**	**06 38 58.8**	**0.0**
ZAPS	**Zavoj**	**3.98**	**110**	*e*Pn		**Pn**	**06 39 01.5**	**+1.1**
ZAPS				*e*Sn		**Sn**	**06 39 47.0**	**-0.1**
ZAPS				*e*Sg		**Sg**	**06 40 08.3**	**+1.0**
DRGR		**4.17**	**59**	⇓P		**Pn**	**06 39 00.3**	**-2.6**
DRGR				S		**Sn**	**06 39 50.3**	**-1.3**
DRGR		**4.17**	**59**	⇓S		**Sn**	**06 39 50.3**	**-2.6**
DRGR				S		**Sn**	**06 39 50.3**	**-1.3**
DRGR		**4.17**	**59**	⇓*i*P		**Pn**	**06 39 00.3**	**-2.6**
GEC2	**GERESS Array S**	**4.85**	**329**	*e*Pn		**Pn**	**06 39 14.2**	**+2.0**
GEC2	**GERESS Array S**	**4.85**	**329**	*e*Pn		**Pn**	**06 39 14.2**	**+1.9**
MORC	**Moravsky Berou**	**5.02**	**0**	*e*Pn		**Pn**	**06 39 14.5**	**-0.1**
	4.2nm,0.6s							
MORC	**Moravsky Berou**	**5.02**	**0**	*e*Pn		**Pn**	**06 39 14.5**	**-0.1**
	4.2nm,0.6s							
KHC	**Kasperske Hory**	**5.13**	**330**	Pn		**Pn**	**06 39 16.9**	**+0.8**
KHC				Sn		**Sn**	**06 40 13.5**	**-1.9**
KHC	**Kasperske Hory**	**5.13**	**330**	*e*Pn		**Pn**	**06 39 16.9**	**+0.8**
KHC				*e*SN		**Sn**	**06 40 13.5**	**-1.9**
KHC				*ex*		x	06 40 28.0	
FETA	**Feichten**	**5.24**	**298**	⇑*i*Pn		**Pg**	**06 39 35.4**	**-4.3**
	2.6nm,0.4s							
PRU	**Pruhonice**	**5.60**	**340**	*e*PN		**Pn**	**06 39 23.2**	**+0.6**
PRU				*e*SN		**Sn**	**06 40 25.0**	**-2.0**
BRG	**Berggiesshubel**	**6.57**	**340**	SG		**Sg**	**06 41 31.0**	**+0.9**
	1.8nm,0.6s							
CLL	**Collm**	**7.21**	**337**	*e*Sb		**Sb**	**06 41 32.0**	**+1.5**
CLL				*e*Sg		**Sg**	**06 41 58.0**	**+7.3**

IDC 24 06:44:02.3±16.0,1752S×17895W,h657km±222km, mb3.0/7,mb1 3.2/7,mb1mx3.1/18,mbtmp3.0/7,Error ellipse: s-maj=111.7km s-min=67.4km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
CTA	**Charters Tower**	**33.01**	**260**	P		P	06 49 46.9	+0.3
	1.1nm,0.3s,baz=75,slow=10,SNR=3.9							
STKA	**Stephens Creek**	**38.37**	**241**	P		P	06 50 30.3	0.0
	3.4nm,0.8s,baz=104,slow=8.3,SNR=4.6							
WRA	**Warramunga Arr**	**44.20**	**259**	P		P	06 51 16.2	+0.1
	1.1nm,0.4s,baz=96,slow=7.1,SNR=26							
ASAR	**Alice Springs**	**44.40**	**254**	P		P	06 51 18.0	+0.3
	6.7nm,0.5s,baz=87,slow=8.6,SNR=124							
NVAR	**Mina Array Bea**	**79.50**	**44**	P		P	06 55 03.6	+0.6
	0.3nm,0.6s,baz=229,slow=8.2,SNR=2.8							
TXAR	**Lajitas Array**	**86.22**	**58**	P		P	06 55 37.1	+0.5
	0.4nm,0.7s,baz=246,slow=6.3,SNR=3.8							
PDAR	**Pinedale Array**	**87.42**	**44**	P		P	06 55 42.0	+0.1
	0.3nm,0.6s,baz=244,slow=3.9,SNR=3.2							

*NEIC **24** 06:47:10.3,3685N×2934E,h6km,MD3.7(ATH), ML3.4(ISK),After ISK.*
*CSEM **24** 06:47:11.0±0.1,3691N×2934E,h5km,MD3.3,Error ellipse: s-maj=2.1km s-min=1.3km az=159.0*
*IDC **24** 06:47:11.3±1.7,3649N×2960E,h0km,mb3.5/2,mb1 3.4/3, mb1mx3.3/21,mbtmp3.4/3,ML3.1/1,Error ellipse: s-maj=84.8km s-min=23.6km az=141.0*
*ISK **24** 06:47:11.2,3684N×2932E,h12km,MD3.4,ML3.4*
*ISCJB **24** 06:47:12.0±0.6,3690N±003×2931E±003,h7km±4km, mb3.5/2,Error ellipse: s-maj=5.2km s-min=3.4km az=150.4*
*ATH **24** 06:47:12.1,3696N×2922E,h8km±1km,MD3.7/7*
*DDA **24** 06:47:13.1,3694N×2943E,h29km,Md3.3*

ISC 24 06:47:12.4±0.6,3689N±003×2932E±003,h7km±4km,n57, σ0§87/81,mb3.5/2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
GOLH	**Golhisar**	**0.40**	**29**	*i*P		**Pg**	**06 47 19.7**	**-0.4**
GOLH				*i*S		**Sg**	**06 47 25.8**	**+0.5**
DALT	**Dalyan (Mudla)**	**0.56**	**258**	PG		**Pg**	**06 47 22.5**	**-0.8**
DALT				*e*SG		**Sg**	**06 47 30.6**	**0.0**
DALT	**Dalyan (Mudla)**	**0.56**	**258**	Pg		**Pg**	**06 47 21.8**	**-1.5**
DALT				Sg		**Sg**	**06 47 30.8**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.56**	**258**	*i*Pg		**Pg**	**06 47 22.5**	**-0.8**
DALT				Sg		**Sg**	**06 47 30.8**	**+0.2**
TURN	**Turunc**	**0.58**	**268**	*i*P		**Pg**	**06 47 27.8**	**+4.2**
TURN				*i*S		**Sg**	**06 47 40.5**	**+9.4**
AKAS	**Kas**	**0.69**	**161**	*i*P		**Pg**	**06 47 26.4**	**+0.7**
AKAS				*i*S		**Sg**	**06 47 41.1**	**+6.4**
KSL	**Kastellorizon**	**0.77**	**164**	*e*PB		**Pb**	**06 47 28.5**	**+0.4**
YER	**Yerkesik**	**0.87**	**287**	*e*PG		**Pg**	**06 47 28.7**	**-0.3**
YER				*e*SG		**Sg**	**06 47 41.5**	**+1.2**
YER	**Yerkesik**	**0.87**	**287**	Pg		**Pg**	**06 47 27.8**	**-1.2**
YER				Sg		**Sg**	**06 47 41.8**	**+1.5**
DENT	**Denizli**	**0.89**	**345**	*e*PG		**Pg**	**06 47 29.9**	**+0.3**
DENT	**Denizli**	**0.89**	**345**	Pg		**Pg**	**06 47 28.5**	**-1.0**
DENT	**Denizli**	**0.89**	**345**	Pg		**Pg**	**06 47 28.5**	**-1.1**
BCK	**Bucak**	**1.16**	**60**	*e*PN		**Pn**	**06 47 34.0**	**-1.1**
BCK				*e*SN		**Sn**	**06 47 50.8**	**-0.4**
BCK	**Bucak**	**1.16**	**60**	Pn		**Pn**	**06 47 33.1**	**-2.0**
ARG	**Arkhangelos**	**1.18**	**235**	*e*PB		**Pb**	**06 47 34.0**	**-1.0**
MLSB	**Milas**	**1.30**	**289**	*e*PN		**Pn**	**06 47 36.0**	**-1.0**
MLSB				*e*SN		**Sn**	**06 47 53.3**	**-1.3**
MLSB	**Milas**	**1.30**	**289**	Pn		**Pn**	**06 47 35.8**	**-1.2**
ISP	**Isparta**	**1.34**	**44**	*e*Pn		**Pn**	**06 47 36.7**	**-0.8**
DAT	**Datca**	**1.41**	**264**	*e*PN		**Pn**	**06 47 37.4**	**-1.1**
DAT				*e*SN		**Sn**	**06 47 56.5**	**-0.8**
KHL	**Karahalli**	**1.44**	**6**	*e*PN		**Pn**	**06 47 38.5**	**-0.5**
KHL				*e*SN		**Sn**	**06 47 58.2**	**+0.2**
KHL	**Karahalli**	**1.44**	**6**	Pn		**Pn**	**06 47 38.3**	**-0.7**
KHL	**Karahalli**	**1.44**	**6**	Pn		**Pn**	**06 47 38.3**	**-0.6**
KHL				*e*Sn		**Sn**	**06 47 58.3**	**+0.2**
KHAL	**Karahalli**	**1.48**	**5**	*i*P		**Pn**	**06 47 40.0**	**+0.4**
KHAL				*i*S		**Sn**	**06 48 00.8**	**+1.6**
BDRM	**Kayabasi**	**1.51**	**277**	*i*P		**Pn**	**06 47 40.2**	**+0.2**
BDRM				*i*S		**Sn**	**06 48 02.8**	**+2.9**
KULA	**Kula-Manisa**	**1.70**	**342**	*e*PN		**Pn**	**06 47 41.5**	**-1.0**
GCAM	**G?zelcaml?**	**1.85**	**297**	*i*P		**Pn**	**06 47 44.8**	**+0.2**
GCAM				*i*S		**Sn**	**06 48 09.4**	**+1.2**
SHUT	**Suhut-Afyon**	**1.93**	**30**	*e*PN		**Pn**	**06 47 45.3**	**-0.3**
SHUT				*e*SN		**Sn**	**06 48 10.0**	**0.0**
SMG	**Samos**	**2.14**	**293**	*e*PN		**Pn**	**06 47 49.0**	**+0.4**
GDZ	**Gediz**	**2.20**	**3**	*i*P		**Pn**	**06 47 49.4**	**+0.1**
KARP	**Karpathos**	**2.20**	**233**	*e*PN		**Pn**	**06 47 51.0**	**+1.6**
KDAG	**Bornova**	**2.22**	**313**	*i*P		**Pn**	**06 47 49.4**	**-0.3**
KDAG				*i*S		**Sn**	**06 48 17.9**	**+0.5**
ALT	**Altintas**	**2.25**	**16**	*e*PN		**Pn**	**06 47 50.3**	**+0.2**
ALT				*e*SN		**Sn**	**06 48 17.4**	**-0.6**
ALT	**Altintas**	**2.25**	**16**	Pn		**Pn**	**06 47 49.6**	**-0.5**
ALT	**Altintas**	**2.25**	**16**	Pn		**Pn**	**06 47 49.6**	**-0.5**
ALT				*e*Sn		**Sn**	**06 48 17.5**	**-0.6**
AKS	**Akhisar**	**2.32**	**329**	*e*PN		**Pn**	**06 47 50.7**	**-0.3**
BLCB	**Balcova**	**2.35**	**310**	*e*PN		**Pn**	**06 47 51.2**	**-0.2**
BLCB	**Balcova**	**2.35**	**310**	Pn		**Pn**	**06 47 51.2**	**-0.2**
URLA	**Izmir**	**2.62**	**305**	*i*P		**Pn**	**06 47 55.1**	**0.0**
URLA				*i*S		**Sn**	**06 48 25.1**	**-2.0**
URLA	**Izmir**	**2.62**	**305**	*i*P		**Pn**	**06 47 55.1**	**0.0**
URLA				*i*S		**Sn**	**06 48 25.0**	**-2.1**
DST	**Dursunbey**	**2.77**	**349**	*e*PN		**Pn**	**06 47 57.1**	**0.0**
DST				*e*SN		**Sn**	**06 48 31.0**	**+0.2**
BALB	**Balikesir**	**2.97**	**338**	*e*PN		**Pn**	**06 48 00.2**	**+0.2**
BALB	**Balikesir**	**2.97**	**338**	Pn		**Pn**	**06 48 00.1**	**+0.1**
BALB	**Balikesir**	**2.97**	**338**	Pn		**Pn**	**06 48 00.1**	**+0.1**
APE	**Apeiranthos**	**3.04**	**274**	*e*PN		**Pn**	**06 48 02.0**	**+1.1**
PRK	**Paraskevi**	**3.37**	**315**	*e*PN		**Pn**	**06 48 06.0**	**+0.6**
NPS	**Neapolis**	**3.42**	**243**	*e*PN		**Pn**	**06 48 07.0**	**+0.9**
GEMT	**Gemlik**	**3.54**	**358**	Pn		**Pn**	**06 48 08.2**	**+0.3**
GEMT	**Gemlik**	**3.54**	**358**	Pn		**Pn**	**06 48 08.1**	**+0.3**
BNT	**Bandirma**	**3.63**	**343**	*e*PN		**Pn**	**06 48 09.3**	**+0.3**
YLV	**Yalova**	**3.67**	**1**	*e*PN		**Pn**	**06 48 11.0**	**+1.4**
LPK	**Lapseki**	**4.01**	**331**	*e*PN		**Pn**	**06 48 14.5**	**+0.2**
LPK	**Lapseki**	**4.01**	**331**	Pn		**Pn**	**06 48 14.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**4.14**	**337**	Pn		**Pn**	**06 48 15.3**	**-0.8**
RKY	**Sarkoy-Tekirda**	**4.14**	**337**	Pn		**Pn**	**06 48 15.3**	**-0.8**
BRTR	**Keskin Array B**	**4.42**	**49**	Pn		**Pn**	**06 48 21.4**	**+1.5**
	0.8nm,0.3s,baz=222,slow=15,SNR=18							
BRTR				Sn		**Sn**	**06 49 15.5**	**+3.9**
	1.0nm,0.3s,baz=227,slow=27,SNR=8.4							
TORD	**Torodi Ar. Bea**	**34.21**	**233**	P		**P**	**06 53 58.0**	**-0.7**
	1.2nm,0.9s,mb3.8,baz=34,slow=8.8,SNR=6.9							
MKAR	**Makanchi Array**	**40.00**	**59**	P		**P**	**06 54 47.8**	**+0.1**
	0.2nm,0.5s,mb3.1,baz=292,slow=6.4,SNR=3.8							

*IDC **24** 07:05:02.7±8.6,1490N×9559W,h0km,mb3.6/3,mb1 4.0/5, mb1mx3.7/22,mbtmp3.6/5,ML3.7/2,MS3.1/1,Ms1 3.1/1, ms1mx2.5/21,Error ellipse: s-maj=134.0km s-min=41.9km az=138.0*
*ISCJB **24** 07:05:13.3±0.6,1577N±005×96.17W±003,h33km,mb3.5/2, Error ellipse: s-maj=7.0km s-min=3.1km az=17.4*
*MEX **24** 07:05:14.7±0.8,1574N×9618W,h10km±9km,MD4.5*
*NEIC **24** 07:05:15.3,1572N×9619W,h20km,MD4.5(MEX),After MEX.*

ISC 24 07:05:14.7±1.8,1577N±006×9616W±003,h33km±17km, n29,σ0§97/52,mb3.5/2,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
VHO	**Vista Hermosa**	**1.41**	**337**	*i*P		**Pn**	**07 05 36.6**	**-1.4**
VHO				*i*S		**Sn**	**07 05 54.0**	**-1.5**
OXX	**Oaxaca**	**1.42**	**338**	*i*P		**Pn**	**07 05 37.7**	**-0.5**
OXX				*i*S		**Sn**	**07 05 55.1**	**-0.6**
CMIG	**Matias Romero**	**1.80**	**43**	Pn		**Pn**	**07 05 42.6**	**-0.8**
	16nm,0.3s,baz=227,slow=11,SNR=322							
CMIG				Sn		**Sn**	**07 06 09.7**	**+4.5**
	99nm,0.3s,baz=152,slow=15,SNR=8.9							
CMIG				LR		LR	07 06 46.1	
	comp=Z,364nm,18.7s,baz=224,slow=45							
CMIG	**Matias Romero**	**1.80**	**43**	*i*P		**Pn**	**07 05 42.7**	**-0.8**
CMIG				*i*S		**Sn**	**07 06 05.7**	**+0.5**
CMIG				Sn		**Sn**	**07 06 09.7**	**+4.5**
CMIG	**Matias Romero**	**1.80**	**43**	*i*P		**Pn**	**07 05 42.7**	**-0.8**
CMIG				*i*S		**Sn**	**07 06 05.7**	**+0.5**
PNIG	**Pinotepa**	**1.99**	**289**	*e*P		**Pn**	**07 05 45.0**	**-1.1**
PNIG				*i*S		**Sn**	**07 06 09.3**	**-0.6**
UTMO	**Huajuapan**	**2.59**	**323**	*i*P		**Pn**	**07 05 54.0**	**-0.2**
UTMO				*i*S		**Sn**	**07 06 24.7**	**+0.2**
PCIG		**2.83**	**91**	*i*P		**Pn**	**07 05 57.7**	**0.0**
PCIG				*i*S		**Sn**	**07 06 30.1**	**-0.6**
TGIG		**3.09**	**71**	*i*P		**Pn**	**07 06 02.0**	**+0.8**
TGIG				*i*S		**Sn**	**07 06 36.9**	**-0.1**
ACX	**Acapulco**	**3.77**	**287**	*i*P		**Pn**	**07 06 10.9**	**+0.4**
ACX				*i*S		**Sn**	**07 06 52.9**	**-0.8**
THIG		**3.85**	**102**	*e*P		**Pn**	**07 06 11.9**	**+0.2**
THIG				*i*S		**Sn**	**07 06 55.5**	**-0.4**
PPM	**Popocatepetl**	**4.04**	**325**	*i*P		**Pn**	**07 06 12.9**	**-1.3**
PPM				*i*S		**Sn**	**07 07 01.4**	**+1.0**
PLIG	**Platanillo**	**4.13**	**310**	*e*P		**Pn**	**07 06 23.8**	**+8.3**
PLIG				*i*S		**Sn**	**07 07 08.5**	**+5.9**
PLIG	**Platanillo**	**4.13**	**310**	*i*P		**Pn**	**07 06 16.6**	**+1.2**
PLIG				*i*S		**Sn**	**07 07 01.6**	**-1.0**
CAIG	**El Cayaco**	**4.14**	**288**	*e*P		**Pn**	**07 06 15.4**	**-0.2**
CAIG				*i*S		**Sn**	**07 07 01.9**	**-1.1**
YAIG	**Yautepec**	**4.14**	**318**	*e*P		**Pn**	**07 06 23.4**	**+7.7**
YAIG				*i*S		**Sn**	**07 07 01.5**	**-1.5**
YAIG	**Yautepec**	**4.14**	**318**	*e*P		**Pn**	**07 06 23.4**	**+7.7**
YAIG				*i*S		**Sn**	**07 07 03.1**	**+0.1**
MZVM		**4.49**	**320**	*e*P		**Pn**	**07 06 22.3**	**+1.8**
MZVM				*i*S		**Sn**	**07 07 12.6**	**+1.0**
IIO	**Organos**	**4.52**	**328**	*e*P		**Pn**	**07 06 20.7**	**-0.1**
IIO				*i*S		**Sn**	**07 07 13.0**	**+0.7**
PBVM	**Pinon**	**4.60**	**323**	*e*P		**Pn**	**07 06 21.2**	**-0.7**
PBVM				*i*S		**Sn**	**07 07 14.2**	**+0.1**
PTVM	**Pico Tres Padr**	**4.73**	**324**	*e*P		**Pn**	**07 06 24.6**	**+0.9**
PTVM				*i*S		**Sn**	**07 07 16.9**	**-0.7**
DEIG	**Demacu**	**5.28**	**329**	*i*S		**Sn**	**07 07 32.5**	**+1.6**
ZIIG	**Zihuatanejo**	**5.40**	**291**	*i*P		**Pn**	**07 06 35.0**	**+2.0**
ZIIG				*i*S		**Sn**	**07 07 37.7**	**+3.6**
TXAR	**Lajitas Array**	**15.17**	**334**	Pn		**Pn**	**07 08 52.3**	**+5.8**
	0.1nm,0.3s,baz=156,slow=12,SNR=6.7							
ANMO	**Albuquerque**	**21.22**	**336**	P		**P**	**07 10 02.7**	**+5.0**
	1.6nm,0.8s,mb3.4,baz=163,slow=14,SNR=3.3							

0.2nm,0.6s,baz=318,slow=5.2,SNR=2.9
MKAR Makanchi Array 60.69 309 P P 08 42 11.2 +0.1
0.3nm,0.3s,baz=47,slow=7.0,SNR=10

*ATH **24** 08:46:01.1, 4153N×1939E, h24km, MD3.9/7*
*ISCJB **24** 08:46:06.1±0.4, 4119N±001×1991E±002, h4km±2km, Error ellipse: s-maj=2.6km s-min=2.0km az=42.7*
*ROM **24** 08:46:06.0±0.9, 4128N×1998E, h10km, Md3.1/11, Ml3.6/8, Error ellipse: s-maj=15.5km s-min=3.3km az=115.0*
*BEO **24** 08:46:07.4±0.6, 4113N×1994E, h8km±2km, ML3.3/15*
*NEIC **24** 08:46:07.4, 4117N×1988E, h15km, ML3.6(ROM), ML3.5(PDG), ML2.9(BUC), After PDG.*
*PDG **24** 08:46:07.4±0.6, 4117N×1988E, h15km±1km, MD3.6/5, ML3.5/9, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
*TIR **24** 08:46:07.2±2.9, 4118N×1993E, h22km±9km, ML3.5*
*SKO **24** 08:46:07.1, 4110N×1993E, h6km*
*CSEM **24** 08:46:07.1±0.1, 4121N×2000E, h10km, ML3.6, Error ellipse: s-maj=1.5km s-min=1.1km az=11.0*
*THE **24** 08:46:08.6, 4122N×2007E, h5km±1km, ML4.1/3, Error ellipse: s-maj=1.7km s-min=1.0km az=5.0*

ISC 24 08:46:07.3±0.3, 4117N±001×1991E±002, h6km±2km, n172, σ1§10/266, 21C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.18**	**348**	P		**Pg**	**08 46 11.8**	**+1.0**
TIR				S		**Sg**	**08 46 16.2**	**+2.9**
TIR	**Tirane**	**0.18**	**348**	P		**Pg**	**08 46 11.4**	**+0.6**
TIR	**Tirane**	**0.18**	**348**	*e*PG		**Sg**	**08 46 11.8**	**+1.0**
TIR				*i* SG		**Sg**	**08 46 16.6**	**+3.3**
TIR	**Tirane**	**0.18**	**348**	⇑*i*Pg		**Pg**	**08 46 11.7**	**+0.9**
TIR				*e*Sg		**Sg**	**08 46 16.4**	**+3.1**
OHR	**Ohrid**	**0.67**	**95**	P		**Pg**	**08 46 18.6**	**-1.6**
OHR				S		**Sg**	**08 46 28.6**	**-0.3**
OHR	**Ohrid**	**0.67**	**95**	*e*Pg		**Pg**	**08 46 19.1**	**-1.1**
OHR				*e*Sg		**Sg**	**08 46 29.0**	**+0.1**
OHR	**Ohrid**	**0.67**	**95**	*e*Pg		**Pg**	**08 46 19.5**	**-0.7**
OHR				*e*Sg		**Sg**	**08 46 28.6**	**-0.3**
KBN	**Korca**	**0.86**	**129**	*e*PG		**Pg**	**08 46 24.0**	**+0.2**
KBN				*i* SG		**Sg**	**08 46 36.4**	**+1.4**
PUK	**Puka**	**0.87**	**359**	*e*PG		**Pg**	**08 46 23.4**	**-0.6**
PUK				*i* SG		**Sg**	**08 46 38.0**	**+2.7**
ULC	**Ulcinj**	**0.93**	**328**	⇑*i*Pg		**Pg**	**08 46 24.5**	**-0.7**
ULC				*e*Sg		**Sg**	**08 46 39.3**	**+2.0**
ULC	**Ulcinj**	**0.93**	**328**	*i* PG		**Pg**	**08 46 24.5**	**-0.7**
ULC				*i* SG		**Sg**	**08 46 39.3**	**+2.0**
BIA	**Bitola**	**1.08**	**98**	P		**Pg**	**08 46 26.2**	**-1.7**
BIA				S		**Sg**	**08 46 40.9**	**-1.0**
BIA	**Bitola**	**1.08**	**98**	⇑*i*Pg		**Pg**	**08 46 26.6**	**-1.3**
BIA				S		**Sg**	**08 46 40.9**	**-1.0**
BIA				*e*Sg		**Sg**	**08 46 41.5**	**-0.4**
BIA	**Bitola**	**1.08**	**98**	*e*Pg		**Pg**	**08 46 25.8**	**-2.2**
BIA				*e*Sg		**Sg**	**08 46 40.5**	**-1.4**
FNA	**Florina**	**1.18**	**109**	P		**Pg**	**08 46 28.6**	**-1.2**
FNA				S		**Sg**	**08 46 44.2**	**-0.8**
BCI	**Bajram Curri**	**1.20**	**6**	*i* PN		**Pn**	**08 46 29.2**	**-1.4**
BCI				*i* SN		**Sn**	**08 46 49.7**	**+2.5**
SRN	**Sarande**	**1.29**	**177**	*i* PN		**Pn**	**08 46 32.3**	**+0.4**
SRN				*i* SN		**Sn**	**08 46 51.5**	**+2.0**
PDG	**Podgorica**	**1.35**	**339**	*i* PG		**Pg**	**08 46 32.5**	**-0.6**
PDG				*i* SG		**Sg**	**08 46 52.7**	**+2.1**
PDG	**Podgorica**	**1.35**	**339**	⇑*i*Pg		**Pg**	**08 46 32.5**	**-0.6**
PDG				*e*Sg		**Sg**	**08 46 52.7**	**+2.1**
TTG	**Podgorica**	**1.35**	**339**	⇑*i*Pg		**Pg**	**08 46 32.5**	**-0.6**
TTG				*e*Sg		**Sg**	**08 46 52.7**	**+2.1**
BUM	**Brajici-Budva**	**1.36**	**326**	⇑*i*Pg		**Pg**	**08 46 32.6**	**-0.7**
BUM				*e*Sg		**Sg**	**08 46 53.2**	**+2.3**
BUM	**Brajici-Budva**	**1.36**	**326**	*i* PG		**Pg**	**08 46 32.6**	**-0.7**
BUM				*i* SG		**Sg**	**08 46 53.2**	**+2.3**
SKO	**Skopje**	**1.40**	**55**	⇓*i*Pg		**Pg**	**08 46 33.3**	**-0.8**
SKO				*e*Sg		**Sg**	**08 46 51.2**	**-1.0**
SKO	**Skopje**	**1.40**	**55**	P		**Pn**	**08 46 33.2**	**-0.1**
SKO				S		**Sb**	**08 46 51.0**	**-0.8**
SKO	**Skopje**	**1.40**	**55**	*e*Pn		**Pn**	**08 46 32.9**	**-0.4**
SKO	**Skopje**	**1.40**	**55**	⇓*i*Pg		**Pg**	**08 46 33.3**	**-0.8**
SKO				S		**Sb**	**08 46 51.0**	**-0.8**
SKO				*e*Sg		**Sg**	**08 46 52.5**	**+0.3**
SKO	**Skopje**	**1.40**	**55**	*e*Pn		**Pn**	**08 46 33.0**	**-0.4**
SKO				*e*Sg		**Sg**	**08 46 52.6**	**+0.4**
PVY	**Plav**	**1.42**	**2**	⇑*i*Pg		**Pg**	**08 46 33.1**	**-1.4**
PVY				*e*Sg		**Sg**	**08 46 55.1**	**+2.1**
PVY	**Plav**	**1.42**	**2**	*i* PG		**Pg**	**08 46 33.1**	**-1.4**
PVY				*i* SG		**Sg**	**08 46 55.1**	**+2.1**
KEK	**Kerkira**	**1.46**	**183**	*e*PN		**Pn**	**08 46 34.0**	**-0.2**
KEK				*e*SN		**Sn**	**08 46 57.0**	**+3.4**
KEK	**Kerkira**	**1.46**	**183**	Pn		**Pn**	**08 46 34.0**	**-0.2**
KEK				Sn		**Sn**	**08 46 55.6**	**+2.0**
KEK	**Kerkira**	**1.46**	**183**	Pn		**Pn**	**08 46 34.0**	**-0.2**
KEK				Sn		**Sn**	**08 46 55.6**	**+2.0**
KEK				*e*S		**Sn**	**08 46 57.0**	**+3.4**
SCTE	**Santa Cesarea** 721nm,0.5s	**1.56**	**225**	Pn		**Pn**	**08 46 36.3**	**+0.8**
HCY	**Herceg Novi**	**1.66**	**321**	⇑*i*Pn		**Pn**	**08 46 36.4**	**-0.5**
HCY				*e*Sn		**Sg**	**08 47 00.1**	**-0.4**
HCY	**Herceg Novi**	**1.66**	**321**	*i* PG		**Pn**	**08 46 36.4**	**-0.5**
HCY				*i* SG		**Sg**	**08 47 00.1**	**-0.4**
KZN	**Kozani**	**1.66**	**121**	*e*PB		**Pb**	**08 46 38.5**	**+0.3**
IGT	**Igoumenitsa**	**1.67**	**169**	P		**Pn**	**08 46 39.3**	**+2.2**
IGT				S		**Sn**	**08 47 00.0**	**+1.2**
JAN	**Janina**	**1.68**	**154**	*e*PN		**Pn**	**08 46 38.0**	**+0.9**
BEY	**Berane**	**1.70**	**360**	*i* PG		**Pg**	**08 46 38.1**	**-1.7**
BEY				*i* SG		**Sg**	**08 47 01.6**	**-0.2**
BEY	**Berane**	**1.70**	**360**	⇓*i*Pn		**Pn**	**08 46 38.0**	**+0.6**
IVA	**Berane**	**1.70**	**360**	⇓*i*Pn		**Pn**	**08 46 38.0**	**+0.6**
IVA				*e*Sn		**Sg**	**08 47 01.6**	**-0.2**
NKY	**Niksic**	**1.77**	**338**	⇓*i*Pn		**Pn**	**08 46 39.1**	**+0.6**
NKY				*e*Sn		**Sg**	**08 47 03.0**	**-1.3**
NKY	**Niksic**	**1.77**	**338**	*i* PG		**Pn**	**08 46 39.1**	**+0.6**
NKY				*i* SG		**Sg**	**08 47 03.0**	**-1.3**
STIP	**Stip**	**1.79**	**72**	*e*Pn		**Pn**	**08 46 39.1**	**+0.4**
STIP	**Stip**	**1.79**	**72**	P		**Pn**	**08 46 37.6**	**-1.1**
STIP				S		**Sn**	**08 47 00.6**	**-1.1**
STIP	**Stip**	**1.79**	**72**	P		**Pn**	**08 46 37.6**	**-1.1**
STIP	**Stip**	**1.79**	**72**	*e*Pn		**Pn**	**08 46 38.7**	**0.0**
STIP				S		**Sn**	**08 47 00.6**	**-1.1**
STIP				*e*Sg		**Sg**	**08 47 02.5**	**-2.2**
STIP	**Stip**	**1.79**	**72**	*e*Pn		**Pn**	**08 46 38.8**	**+0.1**
STIP				*e*Sg		**Sg**	**08 47 02.6**	**-2.1**
GRG	**Griva**	**1.89**	**96**	P		**Pn**	**08 46 39.4**	**-0.7**
PE1	**Pezze di Greco**	**1.92**	**260**	*e*Pn		**Pn**	**08 46 39.4**	**-1.1**
TREB	**Trebinje**	**1.93**	**323**	*e*Pn		**Pn**	**08 46 40.6**	**-0.1**
TREB				*e*Sn		**Sn**	**08 47 04.8**	**-0.5**
BRY	**Bratogost**	**2.00**	**330**	⇓*i*Pn		**Pn**	**08 46 41.8**	**+0.1**
BRY				*e*Sn		**Sn**	**08 47 08.2**	**+1.1**
VAY	**Valandovo**	**2.01**	**85**	*e*Pn		**Pn**	**08 46 40.7**	**-1.0**
VAY				*e*Sg		**Sg**	**08 47 10.9**	**-0.9**
VAY	**Valandovo**	**2.01**	**85**	P		**Pn**	**08 46 40.9**	**-0.8**
VAY				S		**Sn**	**08 47 06.7**	**-0.5**
VAY	**Valandovo**	**2.01**	**85**	P		**Pn**	**08 46 40.9**	**-0.8**
VAY	**Valandovo**	**2.01**	**85**	*e*Pn		**Pn**	**08 46 42.6**	**+0.9**
VAY				S		**Sn**	**08 47 06.7**	**-0.5**
VAY				*e*Sg		**Sg**	**08 47 08.0**	**-3.8**
VAY	**Valandovo**	**2.01**	**85**	*e*Pn		**Pn**	**08 46 42.6**	**+0.9**
VAY				*e*Sg		**Sg**	**08 47 08.1**	**-3.8**
SJES	**Sjenica**	**2.09**	**1**	*e*Pn		**Pn**	**08 46 42.5**	**-0.3**
SJES				*e*Sn		**Sn**	**08 47 11.1**	**+2.0**
SJES				*e*Sg		**Sg**	**08 47 15.8**	**+1.5**
UPM	**Unac-Piva**	**2.16**	**340**	*e*Pn		**Pn**	**08 46 44.3**	**+0.5**
UPM				*e*Sn		**Sn**	**08 47 12.5**	**+1.6**
BARS	**Barje**	**2.17**	**40**	⇓*i*Pn		**Pn**	**08 46 43.3**	**-0.6**
PLE	**Pljevlja**	**2.19**	**350**	⇑*i*Pn		**Pn**	**08 46 44.8**	**+0.6**
PLE				*e*Sn		**Sn**	**08 47 13.4**	**+1.8**
NOCI	**Noci** 300nm,0.4s	**2.19**	**261**	Pn		**Pn**	**08 46 42.9**	**-1.3**
LIT	**Litokhoron**	**2.23**	**118**	P		**Pn**	**08 46 45.3**	**+0.5**
KNT	**Kendrikon**	**2.25**	**89**	P		**Pn**	**08 46 44.2**	**-0.9**
STON	**Ston**	**2.37**	**317**	*e*Pn		**Pn**	**08 46 45.4**	**-1.2**
STON				Sn		**Sn**	**08 47 15.4**	**-0.6**
STON	**Ston**	**2.37**	**317**	*e*Pn		**Pn**	**08 46 45.4**	**-1.2**
STON				Sn		**Sn**	**08 47 15.3**	**-0.7**
LTRZ	**Laterza** 266nm,0.7s	**2.41**	**257**	Pn		**Pn**	**08 46 45.9**	**-1.4**
SOH	**Sokhos**	**2.63**	**97**	P		**Pn**	**08 46 50.6**	**+0.4**
EVR	**Evrytania**	**2.68**	**147**	*e*PN		**Pn**	**08 46 52.0**	**+1.0**
BBLS	**Lazići**	**2.72**	**352**	⇑*i*Pn		**Pn**	**08 46 52.9**	**+1.4**
CRAC	**Craco** 379nm,0.6s	**2.76**	**254**	Pn		**Pn**	**08 46 52.0**	**-0.1**
GRUS	**Gruza**	**2.78**	**12**	*e*Pn		**Pn**	**08 46 52.6**	**+0.3**
PLG	**Polygyros**	**2.80**	**105**	*e*PN		**Pn**	**08 46 53.5**	**+0.9**
AGG	**Agios Georgios**	**2.84**	**138**	P		**Pn**	**08 46 54.1**	**+1.0**
AGG				S		**Sn**	**08 47 28.8**	**+1.2**
VTS	**Vitosha**	**2.84**	**59**	⇑P		**Pn**	**08 46 52.9**	**-0.2**
VTS				S		**Sn**	**08 47 27.2**	**-0.4**
VTS	**Vitosha**	**2.84**	**59**	⇑*i*Pn		**Pn**	**08 46 53.4**	**+0.3**
VTS				*e*Sn		**Sn**	**08 47 27.4**	**-0.2**
VTS	**Vitosha**	**2.84**	**59**	⇑*i*P		**Pn**	**08 46 52.9**	**-0.2**
VTS	**Vitosha**	**2.84**	**59**	S		**Sn**	**08 47 27.3**	**-0.3**
ZAPS	**Zavoj**	**2.91**	**43**	⇑*i*Pn		**Pn**	**08 46 54.5**	**+0.3**
ZAPS				*e*Sn		**Sn**	**08 47 30.4**	**+0.9**
PTRP	**Pietrapertosa**	**2.99**	**259**	Pn		**Pn**	**08 46 55.4**	**+0.2**
FGMS	**Monte Sant'Ang** 165nm,0.8s	**3.02**	**281**	Pn		**Pn**	**08 46 54.7**	**-1.0**
VLS	**Valsamata**	**3.04**	**170**	*e*PN		**Pn**	**08 46 56.0**	**+0.1**
VLS	**Valsamata**	**3.04**	**170**	*e*P		**Pn**	**08 46 54.5**	**-1.4**
XOR	**Xorichti**	**3.09**	**125**	P		**Pn**	**08 46 56.4**	**-0.2**
PAIG	**Paliouri**	**3.13**	**112**	P		**Pn**	**08 46 56.8**	**-0.3**
TIP	**Timpagrande**	**3.13**	**232**	Pn		**Pn**	**08 46 56.6**	**-0.6**
NEO	**Neokhori**	**3.15**	**125**	*e*PN		**Pn**	**08 46 58.5**	**+1.1**
NEO	**Neokhori**	**3.15**	**125**	*e*P		**Pn**	**08 46 57.5**	**+0.1**
NEO	**Neokhori**	**3.15**	**125**	*e*P		**Pn**	**08 46 57.5**	**+0.1**
OUR	**Ouranopolis**	**3.20**	**104**	P		**Pn**	**08 46 57.9**	**-0.2**
SVIS	**Svilajnac**	**3.24**	**17**	*e*Pn		**Pn**	**08 46 58.5**	**-0.1**
RGNG	**Rignano Grg**	**3.29**	**280**	Pn		**Pn**	**08 46 58.1**	**-1.2**
RGNG				Sn		**Sn**	**08 47 35.3**	**-3.5**
CUC	**Castrocucco**	**3.33**	**251**	*e*Pn		**Pn**	**08 46 59.6**	**-0.4**
CUC				*e*Sn		**Sn**	**08 47 40.8**	**+0.9**
CUC	**Castrocucco**	**3.33**	**251**	*e*Pn		**Pn**	**08 46 59.6**	**-0.3**
CUC				*e*Sn		**Sn**	**08 47 40.8**	**+0.9**
MRLC	**Muro Lucano** 299nm,2.4s	**3.38**	**264**	Pn		**Pn**	**08 47 01.0**	**+0.5**
CARO	**Carolei**	**3.42**	**237**	Pn		**Pn**	**08 47 01.8**	**+0.7**
SGO	**Sicignano**	**3.54**	**262**	Pn		**Pn**	**08 47 02.4**	**-0.4**
CDRU	**Civita di Ruta**	**3.56**	**260**	Pn		**Pn**	**08 47 02.2**	**-0.9**
MCRV	**Calabrutti - M** 137nm,0.6s	**3.61**	**265**	Pn		**Pn**	**08 47 02.9**	**-0.9**
PLD	**Plovdiv**	**3.71**	**74**	*e*Pn		**Pn**	**08 47 05.6**	**+0.5**
CSSN	**Cassano Irpino** 30nm,0.6s	**3.71**	**267**	Pn		**Pn**	**08 47 05.0**	**-0.1**
DJES	**Djerdap**	**3.98**	**28**	⇑*i*Pn		**Pn**	**08 47 08.3**	**-0.5**
FGSL	**Fruska Gora**	**3.98**	**359**	⇓*i*Pn		**Pn**	**08 47 09.8**	**+1.0**
FGSL				*e*Sn		**Sn**	**08 47 56.6**	**+0.8**
BLY	**Banja Luka**	**4.10**	**332**	*e*Pn		**Pn**	**08 47 11.3**	**+0.9**
SGG	**Gregorio Mates** 60nm,0.6s	**4.17**	**275**	Pn		**Pn**	**08 47 11.9**	**+0.4**
CERA	**Filignano** 196nm,0.9s	**4.46**	**277**	Pn		**Pn**	**08 47 15.8**	**+0.5**
BZS	**Buzias**	**4.61**	**15**	⇑P		**Pn**	**08 47 16.8**	**-0.7**
BZS				S		**Sn**	**08 48 12.1**	**+0.8**
BZS	**Buzias**	**4.61**	**15**	*e*Pn		**Pn**	**08 47 16.7**	**-0.8**
BZS				S		**Sn**	**08 48 12.1**	**+0.8**
BZS	**Buzias**	**4.61**	**15**	⇑*i*P		**Pn**	**08 47 16.8**	**-0.7**
SDI	**San Donato** 13nm,0.3s	**4.62**	**279**	Pn		**Pn**	**08 47 18.0**	**+0.4**
GZR	**Gura Zlata**	**4.71**	**25**	⇑P		**Pn**	**08 47 19.1**	**+0.3**
GZR	**Gura Zlata**	**4.71**	**25**	⇑*i*Pn		**Pn**	**08 47 19.1**	**+0.3**
PTQR	**Pietraquaria** 53nm,0.4s	**4.96**	**282**	Pn		**Pn**	**08 47 23.2**	**+1.0**
NVLJ	**Novalja**	**5.02**	**314**	Sn		**Sn**	**08 48 18.9**	**-2.5**
VLI	**Veliai**	**5.03**	**151**	*e*P		**Pn**	**08 47 24.0**	**+0.7**
PKSM	**Moragy**	**5.12**	**350**	⇓P		**Pn**	**08 47 25.7**	**+1.2**
PKSM				S		**Sn**	**08 48 23.9**	**0.0**
PKSM	**Moragy**	**5.12**	**350**	⇓P		**Pn**	**08 47 25.7**	**+1.2**
PKSM				S		**Sn**	**08 48 23.9**	**0.0**
PKSM	**Moragy**	**5.12**	**350**	⇓*i*P		**Pn**	**08 47 25.7**	**+1.2**
NRCA	**Norcia** 19nm,0.6s	**5.33**	**290**	Pn		**Pn**	**08 47 26.7**	**-0.7**
BOJS	**Bojanci**	**5.50**	**323**	*i* Pn		**Pn**	**08 47 29.5**	**-0.2**
BOJS				*i* Sn		**Sn**	**08 48 30.9**	**-2.4**
FSSB	**Fossombrone** 23nm,0.5s	**5.85**	**298**	Pn		**Pn**	**08 47 33.2**	**-1.3**
VISS	**Visnje**	**5.92**	**323**	*i* Pn		**Pn**	**08 47 35.3**	**-0.1**
VISS				*i* Sn		**Sn**	**08 48 41.9**	**-1.6**
PIEI	**Pieia** 183nm,2.2s	**5.95**	**296**	Pn		**Pn**	**08 47 34.6**	**-1.3**
DRGR		**5.97**	**19**	⇓P		**Pn**	**08 47 37.1**	**+1.0**
DRGR				S		**Sn**	**08 48 43.5**	**-1.3**
DRGR		**5.97**	**19**	⇓*i*P		**Pn**	**08 47 37.1**	**+1.0**
DRGR		**5.97**	**19**	S		**Sn**	**08 48 43.5**	**-1.2**
APE	**Apeiranthos**	**5.99**	**131**	⇓P		**Pn**	**08 47 36.9**	**+0.5**
APE	**Apeiranthos**	**5.99**	**131**	⇓*i*P		**Pn**	**08 47 36.9**	**+0.5**
MLR	**Muntele Rosu**	**6.16**	**44**	⇓P		**Pn**	**08 47 39.4**	**+0.6**
MLR	**Muntele Rosu**	**6.16**	**44**	⇓*i*P		**Pn**	**08 47 39.3**	**+0.5**
JAVS	**Javornik**	**6.35**	**320**	*i* Pn		**Pn**	**08 47 40.4**	**-0.9**
JAVS				*i* Sn		**Sn**	**08 48 51.9**	**-2.2**
VOY	**Vojsko**	**6.53**	**320**	*e*Pn		**Pn**	**08 47 43.1**	**-0.7**
VOY				*e*Sn		**Sn**	**08 48 56.2**	**-2.4**
PSZ	**Piszkesteto**	**6.74**	**360**	⇑P		**Pn**	**08 47 47.0**	**+0.3**
PSZ	**Piszkesteto**	**6.74**	**360**	⇑*i*P		**Pn**	**08 47 47.0**	**+0.2**
VYHS	**Vyhne**	**7.36**	**354**	*e*PN		**Pn**	**08 47 58.4**	**+3.2**
VYHS				*e*SN		**Sn**	**08 49 17.8**	**-1.2**
MODS	**Modra-Piesok**	**7.44**	**346**	*e*PN		**Pn**	**08 48 02.1**	**+5.8**
MODS				*e*SN		**Sn**	**08 49 23.3**	**+2.4**
KOLS	**Kolonicke sedl**	**7.94**	**11**	*e*PN		**Pn**	**08 48 12.7**	**+10**
STHS	**Stebnicka Huta**	**8.30**	**6**	*e*SN		**Sn**	**08 49 40.6**	**-1.4**
STHS	**Stebnicka Huta**	**8.30**	**6**	*e*		**Pn**	**08 48 14.7**	**+6.7**
KHC	**Kasperske Hory**	**9.13**	**333**	*e*PN		**Pn**	**08 48 20.0**	**+0.6**
KHC				*ex*		x	08 48 25.0	
KHC				*ex*		x	08 48 48.5	

IDC 24 08:52:27.0±5.3, 2572S×6652W, h0km, mb3.3/1, mb1 3.7/2, mb1mx3.6/16, mbtmpg3.6/2, ML4.0/1, Error ellipse: s-maj=162.5km s-min=53.3km az=58.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz** 0.6nm,0.3s,baz=166,slow=5.6,SNR=11	**9.51**	**351**	Pn	Pn	08 54 45.8	+0.6
TORD	**Torodi Ar. Bea** 0.1nm,0.5s,baz=252,slow=6.4,SNR=2.9	**76.79**	**68**	P	P	09 04 21.0	+0.1
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=316,slow=1.9,SNR=5.1	**147.54**	**42**	PKPbc	PKPbc	09 12 12.3	-0.7

*CSEM **24** 09:03:25.5, 1342N×4896E, h4km, ML4.0, After DHMR*

DHMR 24 09:03:25.5±1.8, 1342N×4896E, h4km±999km, ML4.0, 3C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUKL	**Al Mukalla**	**1.06**	**4**	*i* P	Pg	09 03 44.3	-1.5
MUKL				*i* S	Sg	09 04 00.6	+1.1
BDHA	**Al Bayda'**	**3.35**	**280**	⇑*i*P	Pn	09 04 22.3	+3.7
BDHA				*i* S	Sn	09 05 05.0	+6.1
BDHA	**Al Bayda'**	**3.35**	**280**	⇑*i*P	Pn	09 04 22.3	+3.7
BDHA				*i* S	Sn	09 05 05.0	+6.1
BDHA				AML	AML	09 05 09.3	
	comp=N,763nm,0.5s						
LBOS		**3.64**	**278**	⇑*i*P	Pn	09 04 26.3	+3.6
LBOS				*i* S	Sn	09 05 12.5	+6.4
TRBA	**At Turbah**	**4.72**	**268**	*i* P	Pn	09 04 39.2	+1.6
TRBA				*i* S	Sn	09 05 37.1	+4.3

IDC 24 09:07:00.2±1.0, 3151S×7661E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.9/20, mbtmpg4.0/8, MS3.9/6, Ms1 3.9/6, ms1mx3.4/30, Error ellipse: s-maj=36.7km s-min=25.7km az=39.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof** comp=Z,110nm,18.5s,baz=169,slow=30	**44.21**	**260**	LR	LR	09 28 57.4	
ASAR	**Alice Springs** 1.2nm,0.8s,baz=245,slow=6.4,SNR=11	**50.90**	**96**	P	P	09 16 03.2	-0.1
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=247,slow=7.5,SNR=4.0	**52.75**	**92**	P	P	09 16 16.9	-0.2
WRA				LR	LR	09 36 52.3	
	comp=Z,146nm,18.6s,baz=280,slow=34						
STKA	**Stephens Creek** comp=Z,99nm,18.2s,baz=205,slow=34	**54.51**	**109**	LR	LR	09 37 34.8	
VNDA	**Vanda** comp=Z,82nm,18.1s,baz=94,slow=33	**58.46**	**165**	LR	LR	09 38 59.2	
QSPA	**South Pole Qui** 1.3nm,0.7s,baz=333,slow=4.5,SNR=3.4	**58.64**	**180**	P	P	09 16 59.2	+0.7
MKAR	**Makanchi Array** 1.3nm,0.9s,baz=169,slow=4.6,SNR=5.9	**78.11**	**4**	P	P	09 19 00.7	+0.1
BRTR	**Keskin Array B** 0.7nm,0.5s,baz=174,slow=14,SNR=3.8	**81.32**	**328**	P	P	09 19 18.6	+0.4
TORD	**Torodi Ar. Bea**	**84.32**	**289**	P	P	09 19 34.0	-0.5
	1.0nm,1.0s,baz=118,slow=4.9,SNR=4.3						
TORD				LR	LR	09 54 28.0	
	comp=Z,56nm,19.8s,baz=125,slow=34						
BVAR	**Borovoye Array** 0.4nm,0.4s,baz=152,slow=6.5,SNR=4.1	**84.35**	**356**	P	P	09 19 34.1	+0.4
ZALV	**Zalesovo Beam** 1.2nm,0.5s,baz=202,slow=3.2,SNR=8.1	**85.40**	**5**	P	P	09 19 39.1	+0.2
DBIC	**Dimbokro** comp=Z,57nm,19.5s,baz=117,slow=34	**86.22**	**280**	LR	LR	09 55 12.7	

IDC 24 09:11:50.1±2.5, 480S×12941E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.6/15, mbtmpg3.6/3, ML3.9/2, Error ellipse: s-maj=190.6km s-min=28.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=345,slow=12,SNR=15	**15.80**	**163**	Pn	Pn	09 15 32.3	-1.8
WRA				Sn	Sn	09 18 16.4	-14
	0.3nm,0.3s,baz=344,slow=23,SNR=5.6						
ASAR	**Alice Springs** 0.4nm,0.3s,baz=346,slow=9.4,SNR=26	**19.25**	**167**	P	Pn	09 16 17.1	-0.1
ASAR				S	Sn	09 19 42.4	-11
	0.1nm,0.3s,baz=353,slow=22,SNR=4.3						
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=125,slow=6.1,SNR=3.5	**66.07**	**327**	P	P	09 22 39.0	+0.1

*BJI **24** 10:03:54.1, 2625×12853E, h35km, mB5.3, mb5.2, Ms4.8, Msz4.6*
*IDC **24** 10:03:57.1±0.4, 1985×12792E, h0km, mb5.2/16, mb1 5.2/16, mb1mx5.1/18, mbtmpg5.2/16, MS4.3/16, Ms1 4.4/16, ms1mx4.2/30, Error ellipse: s-maj=21.4km s-min=10.0km az=72.0*
*ISCJB **24** 10:03:59.4±0.2, 1965±002×12825E±003, h31km, mb5.3/106, MS4.4/33, Error ellipse: s-maj=4.5km s-min=3.2km az=159.7*
*MOS **24** 10:04:00.0±1.1, 1905×12802E, h33km, mb5.5/46, MS4.3/7, Error ellipse: s-maj=13.4km s-min=6.2km az=110.4*
*NEIC **24** 10:04:02.2±0.2, 2025×12801E, h35km, mb5.3/37, Error ellipse: s-maj=8.7km s-min=5.2km az=71.0*
*GCMT **24** 10:04:02.2±0.2, 1985×12802E, h16km, MW5.2/82, Moment Tensor Solution. s52,c70; s82,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.33±.19; $M_{\theta\theta}$-4.61±.13; $M_{\phi\phi}$0.28±.14; $M_{r\theta}$3.73±.40; $M_{r\phi}$3.39±.11; $M_{\theta\phi}$-3.00±.48; Best double couple: M_o7.20600×10^{16} NP1:ϕ281.00000°, δ26.00000°, λ65.00000°. NP2: ϕ128.00000°, δ67.00000°, λ102.00000°. Principal axes: T 6.2900, Plg66.0000°, Azm59.0000°; N 1.8350, Plg11.0000°, Azm303.0000°; P -8.1210, Plg21.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **24** 10:04:05, 2055×12824E, h54km, Mw5.5/22*

ISC 24 10:04:01.8±0.2, 1945±003×12824E±003, h33km, h33km±.8km:pP-P, n300, σ1§25/295, mb5.3/106, MS4.4/33, 20C-15D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.49**	**330**	P	**Pn**	**10 04 24.8**	**-1.5**
MSAI	**Masohi**	**1.56**	**154**	P	**Pn**	**10 04 30.1**	**+2.

comp=Z,144nm,0.8s
ASAR smax
comp=N,47nm,0.7s
GUMO Guam 22.59 46 P **P** **10 08 59.0 -0.7**
comp=N,201nm,0.9s,mb5.6,baz=154,slow=9.4,SNR=4.7
GUMO Guam 22.59 46 *e*P **P** **10 08 58.1 -1.6**
comp=N,507nm,1.3s,mb5.8
GUMO Guam 22.59 46 P **P** **10 08 59.0 -0.7**
GUMO pmax pmax
comp=Z,201nm,0.9s,mb5.5
GUMO Guam 22.59 46 P **P** **10 09 02.2 +2.5**
comp=Z,362nm,1.3s,mb5.6
KLI Kotabumi 23.52 262 P **P** **10 09 11.2 +1.8**
comp=Z,330nm,1.3s,comp=Z,5µm,mb5.6
XMIS Christmas Isla 23.98 248 *e*P **P** **10 09 10.7 -3.0**
XMIS Christmas Isla 23.98 248 P **P** **10 09 13.3 -0.4**
comp=Z,0.0nm,1.1s
MYKOM Kota Tinggi 24.66 278 ⇑P **P** **10 09 21.5 +1.6**
MYKOM Kota Tinggi 24.66 278 P **P** **10 09 20.7 +0.8**
CTA Charters Tower 25.20 137 *e*P **P** **10 09 26.4 +1.7**
comp=Z,50nm,0.7s,mb5.2
CTA *e*pP pP 10 09 35.1 +1.0
CTA *e*S **S** **10 13 55.6 +7.5**
CTA Charters Tower 25.20 137 P **P** **10 09 26.6 +1.8**
comp=Z,63nm,0.7s,mb5.2,baz=314,slow=10,SNR=55
CTA S **S** **10 13 55.5 +7.3**
comp=Z,11nm,1.0s,baz=326,slow=18,SNR=5.8
CTA Charters Tower 25.20 137 P **P** **10 09 26.6 +1.9**
CTA S **S** **10 13 55.5 +7.4**
CTA pmax pmax
comp=Z,63nm,0.7s
CTA smax
comp=N,11nm,1.0s
CTAO Charters Tower 25.20 137 *e*P **P** **10 09 26.5 +1.8**
comp=N,94nm,0.9s,mb5.3
CTAO Charters Tower 25.20 137 *e*P **P** **10 09 26.5 +1.8**
CTAO pmax pmax
comp=Z,94nm,0.9s,mb5.3
CTAO Charters Tower 25.20 137 P **P** **10 09 26.6 +1.9**
comp=Z,118nm,1.5s,comp=Z,1µm,mb5.2
KGM Kluang 25.22 279 ⇓P **P** **10 09 26.6 +1.6**
KSI Kapahiang 25.67 266 P **P** **10 09 30.0 +0.9**
comp=Z,138nm,2.0s,comp=Z,8µm,mb5.1
KTGM Kuala Trenggan 26.09 286 ⇓P **P** **10 09 33.4 +0.5**
FRIM Kepong 27.09 281 ⇓P **P** **10 09 43.5 +1.6**
QIZ Qiongzhong 27.59 320 P **P** **10 09 47.1 +0.8**
QIZ S **S** **10 14 28.8 +3.0**
QIZ XS sS 10 14 43.3 +1.9
QIZ LR LR
comp=N,777nm,8.3s
QIZ LR LR
comp=Z,626nm,12.7s,MS4.4
PDSI Padang 27.79 272 P **P** **10 09 47.6 -0.5**
PPI Padang Panjang 27.87 273 P **P** **10 09 49.5 +0.6**
comp=Z,56nm,0.9s,comp=Z,2µm,mb5.2
IPM Ipoh 27.93 283 ⇓P **P** **10 09 50.2 +0.8**
IPM Ipoh 27.93 283 P **P** **10 09 49.7 +0.3**
comp=Z,62nm,1.1s,mb5.1
KULM Kulim 28.48 285 ⇓P **P** **10 09 55.0 +0.7**
JOW Kunigami 28.60 0 P **P** **10 09 55.5 +0.2**
comp=Z,67nm,1.0s,mb5.3,baz=155,slow=8.1,SNR=4.9
FORT Forrest 28.68 180 *e*P **P** **10 09 54.1 -1.8**
comp=Z,95nm,0.9s,mb5.5
FORT Forrest 28.68 180 *e*P **P** **10 09 54.2 -1.7**
comp=Z,126nm,0.9s,mb5.7
KKTK Khon Kaen 30.98 307 P **P** **10 10 16.0 -0.4**
comp=Z,309nm,1.0s,mb6.1
KLBR Kellerberrin 31.11 197 *e*P **P** **10 10 15.1 -2.3**
comp=Z,24nm,0.5s,mb5.3
KLBR *e*pP pP 10 10 24.6 -2.2
CBIJ Chichi jima 31.84 24 LR LR 10 22 14.0
comp=Z,382nm,21.3s,MS4.0,baz=215,slow=34
MUN Mundaring 31.96 200 *e*P **P** **10 10 22.9 -1.9**
MUN *e*pP pP 10 10 31.2 -3.1
EIDS Eidsvold 32.05 139 *e*P **P** **10 10 26.3 +0.6**
comp=Z,15nm,0.9s,mb4.8
STKA Stephens Creek 32.33 158 *e*P **P** **10 10 27.5 -0.6**
comp=Z,22nm,0.9s,mb5.0
STKA *e*pP pP 10 10 34.5 -3.1
STKA *e*S **S** **10 15 36.7 -3.3**
STKA Stephens Creek 32.33 158 P **P** **10 10 27.5 -0.6**
comp=Z,33nm,0.8s,mb5.2,baz=333,slow=8.3,SNR=50
STKA S **S** **10 15 36.0 -4.0**
comp=Z,8.2nm,1.1s,baz=270,slow=20,SNR=2.9
STKA LR LR 10 24 19.0
comp=Z,1µm,21.5s,MS4.5,baz=104,slow=38
NWAO Narrogin (SRO) 32.51 197 P **P** **10 10 27.6 -2.0**
comp=Z,28nm,0.7s,mb5.3,baz=14,slow=7.8,SNR=24
NWAO Narrogin (SRO) 32.51 197 *e*P **P** **10 10 27.8 -1.9**
comp=Z,26nm,0.7s,mb5.3
NWAO Narrogin (SRO) 32.51 197 *e*P **P** **10 10 27.8 -1.9**
NWAO pmax pmax
comp=Z,26nm,0.7s
NST Nakhon Sawan 32.84 303 P **P** **10 10 31.5 -1.3**
SSE Sheshan 33.53 349 P **P** **10 10 43.0 +4.4**
SSE AP pP 10 10 54.1 +6.0
SSE S **S** **10 16 03.8 +5.2**
SSE XS sS 10 16 22.1 +7.8
SSE AMB AMB
comp=Z,22nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,76nm,4.5s
SSE LR LR
comp=N,136nm,14.1s,MS4.3
SSE LR LR
comp=E,445nm,14.0s,MS4.3
SSE LR LR
comp=Z,301nm,16.3s,MS4.1
BSI Banda Aceh 33.72 283 P **P** **10 10 39.3 -1.2**
comp=Z,29nm,1.7s,mb4.9
BDT Bhumibol Dam 34.56 305 ⇑P **P** **10 10 48.5 +0.8**
comp=Z,11nm,1.0s,mb4.8
WHN Wuhan 34.91 339 ⇓P **P** **10 10 51.8 +1.2**
WHN AMB AMB
comp=Z,226nm,1.2s,mb6.0
WHN LR LR
comp=Z,2µm,24.2s,MS4.7
NJ2 Nanjing 34.96 346 *e*P **P** **10 10 52.3 +1.3**
NJ2 AP pP 10 11 01.9 +1.4
NJ2 XP sP 10 11 05.8 +1.4
NJ2 PP PP 10 12 10.9 +0.2
NJ2 S **S** **10 16 23.0 +2.4**
NJ2 XS sS 10 16 44.0 +7.7
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
NJ2 AMB AMB
comp=Z,310nm,5.0s
NJ2 LR LR
comp=N,710nm,20.6s,MS4.4
NJ2 LR LR
comp=E,400nm,24.2s,MS4.4
NJ2 LR LR
comp=Z,1µm,24.1s,MS4.6
GYA Guiyang 35.09 325 ⇑*i*P **P** **10 10 52.5 +0.3**
GYA AP pP 10 11 02.3 +0.6
GYA XP sP 10 11 06.3 +0.7
GYA PP PP 10 12 10.4 -1.8
GYA S **S** **10 16 23.3 +0.5**
GYA XS sS 10 16 39.5 +1.0
GYA SCP ScP 10 17 04.8 -2.2
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.2
GYA AMB AMB
comp=Z,370nm,8.0s
GYA LR LR
comp=N,1µm,13.8s,MS5.0
GYA LR LR
comp=E,1µm,14.0s,MS5.0
GYA LR LR
comp=Z,2µm,14.6s,MS5.0
CMAR Chiang Mai Arr 35.24 306 P **P** **10 10 53.2 -0.3**
comp=Z,5.2nm,0.8s,mb4.5,baz=136,slow=7.2,SNR=37
CMAR LR LR 10 25 47.4
comp=Z,308nm,19.9s,MS4.1,baz=275,slow=37
CMAR Chiang Mai Arr 35.24 306 *i* P **P** **10 10 54.0 +0.4**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CHG Chiang Mai 35.43 307 ⇑P **P** **10 10 55.0 -0.2**
comp=Z,34nm,1.1s,mb5.2
CHTO Chiang Mai 35.43 307 P **P** **10 10 56.0 +0.8**
SNR=6.8
CHTO Chiang Mai 35.43 307 *e*P **P** **10 10 55.0 -0.2**
comp=Z,36nm,1.1s,mb5.2
CHTO Chiang Mai 35.43 307 *e*P **P** **10 10 55.0 -0.2**
CHTO pmax pmax
comp=Z,36nm,1.1s,mb5.2

ARMA Armidale 35.97 144 *e*P **P** **10 11 01.2 +1.5**
KMI Kunming 36.53 319 P **P** **10 11 06.3 +1.7**
KMI AP pP 10 11 13.8 -0.3
KMI XP sP 10 11 17.5 -0.6
KMI PP PP 10 12 27.8 -0.3
KMI S **S** **10 16 45.1 +0.1**
KMI AMB AMB
comp=Z,20nm,1.8s,mb4.7
KMI AMB AMB
comp=Z,423nm,4.4s
KMI LR LR
comp=N,306nm,21.9s,MS4.2
KMI LR LR
comp=E,366nm,25.0s,MS4.2
KMI LR LR
comp=Z,396nm,25.0s,MS4.1
JHJ Hachijo jima 2 36.54 16 LR LR 10 25 38.8
comp=Z,712nm,18.5s,MS4.5,baz=347,slow=36
CAN Canberra 38.41 152 *e*P **P** **10 11 21.2 +0.8**
CNB Canberra Magne 38.58 152 *e*P **P** **10 11 23.0 +1.3**
TOO Toolangi 38.85 158 *e*P **P** **10 11 25.3 +1.3**
TOO *e*pP pP 10 11 33.9 +0.3
KSRS Korea Array 39.20 360 P **P** **10 11 27.2 +0.4**
comp=Z,28nm,1.0s,mb4.9,baz=179,slow=9.5,SNR=73
KSRS PcP PcP 10 13 37.1 +1.3
comp=Z,4.4nm,0.8s,baz=191,slow=3.2,SNR=8.1
KSRS LR LR 10 26 52.5
comp=Z,641nm,21.3s,MS4.4,baz=178,slow=35
KSRS Korea Array 39.20 360 P **P** **10 11 27.3 +0.4**
KSRS 10 13 37.1
KSRS pmax pmax
comp=Z,28nm,1.0s,mb5.0
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KSRS MLR MLR
comp=Z,641nm,21.3s,MS4.4
MJAR Matsushiro Arr 39.40 13 P **P** **10 11 27.9 -0.6**
comp=Z,46nm,1.0s,mb5.2,baz=187,slow=9.6,SNR=73
MJAR LR LR 10 27 27.4
comp=Z,732nm,19.2s,MS4.5,baz=195,slow=36
MJAR Matsushiro Arr 39.40 13 P **P** **10 11 28.0 -0.6**
MJAR pmax pmax
comp=Z,46nm,1.0s
MJAR MLR MLR
comp=Z,732nm,19.3s
MAJO Matsushiro 39.40 13 *e*P **P** **10 11 28.3 -0.3**
comp=Z,61nm,0.9s,mb5.3
MAJO Matsushiro 39.40 13 *e*P **P** **10 11 28.3 -0.3**
MAJO pmax pmax
comp=Z,61nm,0.9s,mb5.3
MAT Matsushiro 39.40 13 P **P** **10 11 28.1 -0.5**
MAT S **S** **10 17 44.0 +16**
CD2 Chengdu 40.13 326 *e*P **P** **10 11 34.4 -0.4**
CD2 AP pP 10 11 44.3 -0.1
CD2 XP sP 10 11 48.8 +0.5
CD2 PP PP 10 13 11.8 +4.3
CD2 PCP PcP 10 13 37.9 -1.0
CD2 PCS PcS 10 17 26.5 -2.8
CD2 S **S** **10 17 40.3 +1.1**
CD2 XS sS 10 17 57.8 +2.7
CD2 SS SS 10 20 37.3 -0.5
CD2 SCS ScS 10 21 35.3 -4.1
CD2 AMB AMB
comp=Z,40nm,0.6s,mb5.3
CD2 AMB AMB
comp=Z,460nm,5.8s
CD2 LR LR
comp=N,730nm,12.0s
CD2 LR LR
comp=E,810nm,7.2s
CD2 LR LR
comp=Z,570nm,6.8s
XAN Xi'an 40.14 335 P **P** **10 11 33.9 -0.9**
XAN AP pP 10 11 42.8 -1.6
XAN XP sP 10 11 47.8 -0.6
XAN PP PP 10 13 10.0 +2.4
XAN S **S** **10 17 36.0 -3.3**
XAN AMB AMB
comp=Z,56nm,1.1s,mb5.2
XAN AMB AMB
comp=Z,28nm,3.0s
XAN LR LR
comp=N,250nm,20.6s,MS4.3
XAN LR LR
comp=E,345nm,18.9s,MS4.3
XAN LR LR
comp=Z,434nm,23.2s,MS4.2
DL2 Dalian 41.10 352 P **P** **10 11 40.9 -1.7**
DL2 *e*S **S** **10 17 49.9 -3.5**
DL2 AMB AMB
comp=Z,30nm,1.1s,mb4.8
DL2 AMB AMB
comp=Z,110nm,5.3s
DL2 LR LR
comp=N,450nm,16.8s
DL2 LR LR
comp=Z,300nm,17.4s,MS4.2
DZM Mont Dzumac 42.18 121 *e*P **P** **10 11 54.5 +2.7**
DZM *e*pP pP 10 12 03.1 +1.7
BJT Baijiatuan 43.20 346 *e*P **P** **10 11 58.4 -1.4**
comp=Z,19nm,0.4s,mb5.2
BJT Baijiatuan 43.20 346 *e*P **P** **10 11 58.4 -1.3**
BJT pmax pmax
comp=Z,19nm,0.4s
BJI Beijing 43.21 346 P **P** **10 11 58.9 -1.0**
BJI S **S** **10 18 24.6 0.0**
BJI AMB AMB
comp=Z,57nm,1.0s,mb5.3
BJI LR LR
comp=N,324nm,31.6s
BJI LR LR
comp=E,373nm,22.8s
BJI LR LR
comp=Z,246nm,30.6s,MS3.9
SNY Shenyang 43.77 355 ⇑P **P** **10 12 04.0 -0.3**
SNY AMB AMB
comp=Z,52nm,0.8s,mb5.3
SNY LR LR
comp=N,508nm,17.7s,MS4.6
SNY LR LR
comp=E,427nm,16.8s,MS4.6
SNY LR LR
comp=Z,605nm,19.2s,MS4.5
LZH Lanzhou 44.15 331 *e*P **P** **10 12 08.3 +0.9**
LZH AP pP 10 12 18.1 +0.9
LZH XP sP 10 12 22.3 +1.2
LZH PP PP 10 13 53.8 +3.0
LZH *e*S **S** **10 18 38.5 +0.1**
LZH XS sS 10 18 55.3 +0.9
LZH AMB AMB
comp=Z,131nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,348nm,5.6s
LZH LR LR
comp=E,1µm,18.5s
LZH LR LR
comp=Z,2µm,19.2s,MS5.0
SHL Shillong 44.55 310 *e*P **P** **10 12 10.5 -0.4**
HHC Hu-ho-hao-te 45.22 342 *e*P **P** **10 12 15.6 -0.3**
HHC AP pP 10 12 25.8 +0.1
HHC XP sP 10 12 29.3 -0.3
HHC PP PP 10 14 03.3 +1.2
HHC PCS PcS 10 17 46.8 -2.6
HHC S **S** **10 18 55.8 +2.0**
HHC XS sS 10 19 12.5 +2.7
HHC SS SS 10 22 09.8 -7.8
HHC AMB AMB
comp=Z,30nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,120nm,4.2s
HHC LR LR
comp=N,289nm,21.4s,MS4.3
HHC LR LR
comp=E,322nm,22.6s,MS4.3
HHC LR LR
comp=Z,287nm,21.4s,MS4.2
CN2 Changchun 45.60 357 *e*P **P** **10 12 18.0 -0.9**
CN2 *e*XP sP 10 12 31.8 -0.7
CN2 *e*S **S** **10 18 58.8 -0.5**
CN2 AMB AMB
comp=Z,10.0nm,1.3s,mb4.6
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,710nm,20.0s,MS4.7
CN2 LR LR
comp=E,460nm,20.0s,MS4.7
CN2 LR LR
comp=Z,660nm,22.0s,MS4.5
MDJ Mudanjiang 46.37 1 P **P** **10 12 25.3 +0.4**
MDJ PP PP 10 14 13.8 -0.4
MDJ SCP ScP 10 17 50.0 -0.8
MDJ S **S** **10 19 12.1 +1.9**
MDJ XS sS 10 19 26.5 +0.3
MDJ SS SS 10 22 37.8 +1.5
MDJ AMB AMB
comp=Z,78nm,1.1s,mb5.5
MDJ AMB AMB
comp=Z,115nm,6.2s
MDJ LR LR
comp=N,370nm,26.4s,MS4.3
MDJ LR LR
comp=E,311nm,31.1s,MS4.3
MDJ LR LR
comp=Z,531nm,25.9s
MDJ Mudanjiang 46.37 1 *e*P **P** **10 12 26.1 +1.2**
comp=Z,91nm,1.0s,mb5.7
LSA Lhasa 47.38 315 P **P** **10 12 34.5 +1.4**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA Lhasa 47.38 315 *e*P **P** **10 12 34.1 +0.9**
comp=Z,46nm,0.9s,mb5.4
LSA Lhasa 47.38 315 *e*P **P** **10 12 34.1 +1.0**
LSA pmax pmax
comp=Z,46nm,0.9s,mb5.4
ASAJ Asahikawa 47.62 14 P **P** **10 12 36.0 +1.3**
comp=Z,63nm,0.9s,mb5.7,baz=200,slow=7.3,SNR=14
ASAJ Asahikawa 47.62 14 P **P** **10 12 36.0 +1.3**
ASAJ pmax pmax
comp=Z,63nm,0.9s
TAPN Taplejung 48.67 310 *e*P **P** **10 12 43.1 -0.1**
comp=Z,87nm,1.1s,mb5.7
ODAN Odare 48.68 309 *e*P **P** **10 12 43.1 -0.1**
comp=Z,39nm,0.8s,mb5.5
GTA Gaotai 48.73 331 P **P** **10 12 43.3 0.0**
GTA AP pP 10 12 52.6 -0.5
GTA XP sP 10 12 56.8 -0.2
GTA PP PP 10 14 35.3 -1.4
GTA S **S** **10 19 41.9 -2.0**
GTA AMB AMB
comp=Z,31nm,1.4s,mb5.2
GTA AMB AMB
comp=Z,169nm,6.6s
GTA LR LR
comp=N,247nm,16.8s,MS4.5
GTA LR LR
comp=E,326nm,15.0s,MS4.5
GTA LR LR
comp=Z,433nm,20.4s
RAMN Ramite 49.34 309 *e*P **P** **10 12 48.5 +0.2**
comp=Z,144nm,1.0s,mb6.0
JIRN Jiri 50.00 309 *e*P **P** **10 12 53.3 0.0**
comp=Z,74nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 50.34 13 *e*P **P** **10 12 56.6 +1.1**
comp=Z,67nm,1.2s,mb5.5
YSS Yuzh-Sakhalins 50.34 13 *i* P **P** **10 12 57.2 +1.7**
YSS pmax pmax
comp=Z,72nm,1.2s,mb5.6
GUN Gumba 50.36 309 *e*P **P** **10 12 56.0 -0.1**
comp=Z,90nm,0.9s,mb5.8
HABR Khabarovsk 50.56 6⇓*e*P **P** **10 12 55.8 -1.3**
HABR *e**PP pP 10 13 05.6 -1.4
HABR *e* 10 20 26.4
HABR *e* 10 22 43.7
HABR *e*SS SS 10 23 45.9 +2.1
PKI Pulchoki 50.57 309 *e*P **P** **10 12 57.2 -0.4**
KKN Kakani 50.77 309 *e*P **P** **10 12 58.7 -0.4**
DMN Daman 50.82 308 *e*P **P** **10 12 59.1 -0.4**
comp=Z,95nm,1.0s,mb5.7
KLR Kul'dur 51.06 3 *e*P **P** **10 12 57.2 -3.7**
KLR *e*S S 10 20 37.0 +21
KLR pmax pmax
comp=Z,110nm,1.4s,mb5.6
GKN Gorkha 51.37 309 *e*P **P** **10 13 03.3 -0.4**
comp=Z,111nm,1.2s,mb5.7
HIA Hailar 51.53 353 *e*P **P** **10 13 04.9 +0.5**
comp=Z,26nm,1.1s,mb5.1
HIA Hailar 51.53 353 *e*P **P** **10 13 04.9 +0.5**
HIA pmax pmax
comp=Z,26nm,1.1s
KOLN Koldanda 52.08 308 *e*P **P** **10 13 08.7 -0.2**
comp=Z,226nm,1.1s,mb6.0
DANN Dangsing 52.22 309 *e*P **P** **10 13 09.6 -0.4**
comp=Z,176nm,1.0s,mb5.9
HYB Hyderabad 52.60 294 *e*P **P** **10 13 12.0 -1.0**
comp=Z,45nm,1.0s,mb5.3
HYB Hyderabad 52.60 294 *e*P **P** **10 13 12.0 -1.0**
HYB pmax pmax
comp=Z,45nm,1.0s,mb5.3
HYB Hyderabad 52.60 294 *i* P **P** **10 13 12.0 -1.0**
comp=Z,45nm,1.0s,mb5.3
HYB *e*S **S** **10 20 36.0 -2.4**
PYUN Piuthan 52.71 308 *e*P **P** **10 13 13.5 -0.1**
comp=Z,171nm,1.2s,mb5.8
ULN Ulaanbaatar 52.94 342 ⇑P **P** **10 13 15.0 +0.1**
SNR=17
ULN Ulaanbaatar 52.94 342 *e*P **P** **10 13 15.1 +0.1**
comp=Z,62nm,1.1s,mb5.5
ULN Ulaanbaatar 52.94 342 ⇑*i*P **P** **10 13 15.1 +0.2**
SONM Songino Array 53.12 342 P **P** **10 13 16.0 -0.2**
comp=Z,37nm,1.1s,mb5.2,baz=161,slow=8.3,SNR=11
SONM Songino Array 53.12 342 P **P** **10 13 16.0 -0.2**
SONM pmax pmax
comp=Z,37nm,1.1s
LGTI Lohaghat 55.46 308 *e*P **P** **10 13 33.2 -0.5**
ZAK Zakamensk 56.34 341 *e*P **P** **10 13 38.5 -1.0**
ZAK *e* 10 14 37.7
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
TLY Talaya 57.35 342 P **P** **10 13 46.3 -0.4**
comp=Z,114nm,1.0s,mb5.9,SNR=5.7
TLY Talaya 57.35 342 ⇑*i*P **P** **10 13 46.6 -0.1**
TLY Talaya 57.35 342 *e*P **P** **10 13 46.3 -0.4**
TLY *e*S **S** **10 21 43.5 +2.5**
TLY *e* 10 23 34.1
TLY pmax pmax
comp=Z,29nm,1.3s,mb5.2
TLY MLR MLR
comp=Z,176nm,17.0s,MS4.2
NDI New Delhi 57.57 306 *e*P **P** **10 13 46.0 -2.7**
MOY Mondy 58.19 340 *e*P **P** **10 13 52.8 +0.2**
WMQ Urumqi 58.23 326 P **P** **10 13 52.0 -1.0**
WMQ AP pP 10 14 02.0 -1.0
WMQ XP sP 10 14 06.0 -0.8
WMQ PP PP 10 16 03.0 +0.7
WMQ S **S** **10 21 49.0 -3.8**
WMQ SCS ScS 10 23 35.0 -5.3
WMQ AMB AMB
comp=Z,49nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,45nm,7.0s
WMQ LR LR
comp=N,556nm,16.0s,MS4.8
WMQ LR LR
comp=E,267nm,16.0s,MS4.8
WMQ LR LR
comp=Z,329nm,16.0s,MS4.5
SMLA Simla 58.58 309 *i* P **P** **10 13 55.6 -0.1**
SMLA AMb AMB 10 14 00.6
comp=Z,98nm,1.1s,mb5.8
SMLA *i* S **S** **10 21 55.8 -2.1**
CLNS Chul'man 58.65 358 *e*P **P** **10 13 56.3 +0.6**
CLNS pmax pmax
comp=Z,32nm,1.3s,mb5.2
CLNS pmax pmax
comp=N,27nm,1.4s
CLNS pmax pmax
comp=E,9.0nm,0.9s
PETK Petropavlovsk- 60.15 20 P **P** **10 14 07.7 +1.6**
comp=E,12nm,0.7s,mb5.0,baz=169,slow=3.0,SNR=10
PETK LR LR 10 39 43.9
comp=E,198nm,18.8s,MS4.3,baz=210,slow=36
THN Thein Dam 60.24 309 *e*P **P** **10 14 04.4 -2.8**
PET Petropavlovsk 60.41 21⇓*i*P **P** **10 14 09.1 +1.2**
PET Petropavlovsk 60.41 21 *e*P **P** **10 14 11.7 +3.8**
PET *e*S **S** **10 22 25.8 +5.2**
PET *e*SS SS 10 26 25.8 +6.9
PET pmax pmax
comp=Z,40nm,0.9s,mb5.5
PET MLR MLR

comp=Z,200nm,16.0s,MS4.3
BOD Bodaibo 60.66 351 *e*P P **10 14 08.7 -0.8**
BOD pmax pmax
comp=Z,35nm,1.2s,mb5.4
MK31 Makanchi Array 63.06 326 *e*P P **10 14 25.3 -0.6**
MK31 *e*pP pP 10 14 33.7 -2.3
MKAR Makanchi Array 63.06 326 P P **10 14 25.2 -0.7**
comp=Z,22nm,0.8s,mb5.3,baz=125,slow=7.7,SNR=151
MKAR LR LR 10 42 22.0
comp=Z,165nm,18.4s,MS4.2,baz=241,slow=37
MKAR Makanchi Array 63.06 326 P P **10 14 25.2 -0.7**
MKAR pmax pmax
comp=Z,22nm,0.9s
MKAR MLR MLR
comp=Z,165nm,18.4s
KSH Kashi 63.14 317 *e*P P **10 14 27.3 +0.7**
KSH *e*AP pP 10 14 37.6 +1.0
KSH *e*XP sP 10 14 42.5 +2.0
KSH *e*PCP PcP 10 15 05.3 +1.3
KSH *e*PP PP 10 16 47.3 +1.5
KSH *e*SCP ScP 10 19 03.5 -0.6
KSH *e*PCS PcS 10 19 07.3 -0.2
KSH *e*S S **10 22 51.9 -3.8**
KSH *e*SCS ScS 10 24 13.5 -3.8
KSH AMB AMB
comp=Z,575nm,2.2s,mb6.3
KSH LR LR
comp=Z,1μm,6.0s
YAK Yakutsk 63.81 1 *e*P P **10 14 31.1 +0.6**
comp=Z,141nm,0.7s,mb6.1
YAK Yakutsk 63.81 1 *e*P P **10 14 30.9 +0.4**
YAK *e**PP pP 10 14 38.6 -2.0
YAK *e* 10 15 02.8
YAK *e*S S **10 23 05.7 +2.5**
YAK *e* 10 24 15.0
YAK pmax pmax
comp=Z,100nm,0.9s,mb5.8
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,39nm,1.2s
YAK smax
comp=E,275nm,3.8s
YAK MLR MLR
comp=Z,305nm,22.0s,MS4.4
YAK MLR MLR
comp=N,224nm,25.0s
KZA Kyzart 64.82 319 P P **10 14 33.0 -4.6**
SNR=18
TKM2 Tokmak 2 65.00 320 *e*P P **10 14 38.5 -0.2**
comp=N,45nm,1.3s,mb5.3
TKM2 *e*pP pP 10 14 46.9 -1.9
TKM2 Tokmak 2 65.00 320 *e*P P **10 14 38.5 -0.2**
TKM2 *e**PP pP 10 14 46.9 -1.9
TKM2 pmax pmax
comp=Z,45nm,1.3s,mb5.3
TKM2 Tokmak 2 65.00 320 P P **10 14 38.5 -0.2**
SNR=21
DRV Dumont d'Urvil 65.13 175 P P **10 14 39.0 -0.1**
DRV L 10 31 00.0
DRV R 10 35 00.0
KBK Karagaybulak 65.29 319 P P **10 14 40.8 +0.2**
SNR=10
UCH Uchtor 65.37 319 P P **10 14 40.0 -1.2**
SNR=5.7
CASY Casey 65.42 188 *e*P P **10 14 41.0 0.0**
CASY Casey 65.42 188 *e*P P **10 14 41.4 +0.4**
comp=Z,18nm,1.0s,mb5.1
AAK Ala-Archa 65.58 319 P P **10 14 42.3 -0.2**
comp=Z,118nm,1.2s,mb5.8,SNR=12
AAK Ala-Archa 65.58 319 *e*P P **10 14 42.3 -0.2**
comp=Z,30nm,1.1s,mb5.2
AAK Ala-Archa 65.58 319 *e*P P **10 14 42.3 -0.2**
AAK pmax pmax
comp=Z,30nm,1.1s,mb5.2
AAK Ala-Archa 65.58 319 P P **10 14 42.4 -0.1**
SNR=15
CHMS Chumysh 65.58 320 P P **10 14 42.1 -0.4**
SNR=6.4
USP Ospenovka 65.87 320 P P **10 14 43.8 -0.5**
SNR=45
AML Almayashu 65.87 318 *e*P P **10 14 44.5 +0.1**
comp=Z,46nm,1.0s,mb5.5
AML Almayashu 65.87 318 P P **10 14 44.5 +0.2**
SNR=29
EKS2 Erkin-Say 66.06 319 *e*P P **10 14 45.5 0.0**
comp=Z,58nm,1.2s,mb5.5
EKS2 Erkin-Say 66.06 319 P P **10 14 45.6 +0.1**
SNR=22
KBL Kabul 66.20 309 *e*P P **10 14 45.7 -1.0**
comp=Z,44nm,1.2s,mb5.4
KBL *e*pP pP 10 14 55.9 -0.9
KBL *e*sP sP 10 15 00.7 +0.1
KBL Kabul 66.20 309 *e*P P **10 14 45.7 -1.0**
KBL *e**PP pP 10 14 55.9 -0.9
KBL *e**SP sP 10 15 00.7 +0.1
KBL pmax pmax
comp=Z,44nm,1.2s,mb5.4
ZAA0 Zalesovo Array 66.30 334 *e*P P **10 14 45.3 -1.6**
ZALV Zalesovo Beam 66.30 334 P P **10 14 45.4 -1.5**
comp=Z,17nm,1.0s,mb5.0,baz=117,slow=5.2,SNR=41
ZALV LR LR 10 45 44.3
comp=Z,128nm,20.4s,MS4.1,baz=127,slow=38
ZALV Zalesovo Beam 66.30 334 P P **10 14 45.4 -1.5**
ZALV pmax pmax
comp=Z,17nm,1.0s,mb5.0
ZALV MLR MLR
comp=Z,128nm,20.4s,MS4.1
SEY Seymchan 67.21 12 *i*P P **10 14 54.4 +1.9**
KURK Kurchatov 67.31 328 P P **10 14 52.8 -0.6**
comp=Z,431nm,0.9s,mb6.5,SNR=52
KURK Kurchatov 67.31 328 P P **10 14 52.9 -0.6**
SNR=24
KURK Kurchatov 67.31 328 LR LR 10 44 58.8
comp=Z,99nm,21.7s,MS4.0,baz=100,slow=37
KURK Kurchatov 67.31 328 *e*P P **10 14 52.6 -0.8**
comp=Z,80nm,1.0s,mb5.7
KURK Kurchatov 67.31 328 *i*P P **10 14 52.6 -0.8**
KURK pmax pmax
comp=Z,97nm,1.1s,mb5.8
NVS Novosibirsk 67.58 334 *i*P P **10 14 52.5 -2.5**
NVS *e* 10 15 21.3
NVS *i*S S 10 23 44.8 -4.7
NVS pmax pmax
comp=N,26nm,1.3s
NVS pmax pmax
comp=E,23nm,1.3s
NVS pmax pmax
comp=Z,38nm,1.3s,mb5.3
NVS smax
comp=N,46nm,2.3s
NVS smax
comp=E,40nm,2.3s
KK31 Karatay Array 68.41 318 P P **10 14 58.7 -1.8**
KK31 pmax pmax
comp=Z,38nm,1.0s,mb5.4
WBK Wadi Bani Khal 71.69 294 P P **10 15 20.5 -0.6**
SNR=6.4
VOSK Vostochnaya 72.42 328 P P **10 15 23.0 -1.8**
VOSK pmax pmax
comp=Z,13nm,0.9s,mb4.9
JMDO Jabal Madar 72.44 294 P P **10 15 24.8 -0.8**
SNR=7.4
SMDO Samad 72.61 295 P P **10 15 25.7 -0.8**
SNR=6.5
BIDO Bidbid 72.62 295 P P **10 15 25.9 -0.7**
SNR=11
BVA0 Borovoye Array 72.87 328 *i*P P **10 15 26.2 -1.3**
BVA0 pmax pmax
comp=Z,24nm,1.4s,mb4.9
BRVK Borovoye 72.95 328 P P **10 15 27.3 -0.6**
comp=Z,267nm,0.9s,mb6.2,SNR=23
BRVK Borovoye 72.95 328 P P **10 15 27.5 -0.4**
SNR=19
BRVK Borovoye 72.95 328 *e*P P **10 15 27.2 -0.6**
comp=Z,86nm,1.3s,mb5.5
BRVK Borovoye 72.95 328 *e*P P **10 15 27.3 -0.6**
BRVK pmax pmax
comp=Z,86nm,1.3s,mb5.5
BSY Bisya 73.33 294 P P **10 15 29.7 -1.1**
SNR=8.0
HOQ Hoqain 73.37 295 P P **10 15 30.5 -0.5**
SNR=5.8
TIXI Tiksi 73.46 0 *e*P P **10 15 30.2 -0.3**
comp=Z,36nm,1.0s,mb5.3
TIXI Tiksi 73.46 0 *c i*P P **10 15 30.4 -0.2**
TIXI pmax pmax
comp=Z,46nm,1.3s,mb5.2
HATD Hatta, Dubai 74.63 296 P P **10 15 37.9 -0.5**
SNR=6.7
BILL Bilibino 74.64 14 *c i*P P **10 15 37.9 +0.4**
BILL pmax pmax
comp=Z,11nm,1.5s,mb4.6
ABKT Ailbek 75.63 310 P P **10 15 43.2 -0.7**
comp=Z,128nm,1.0s,mb5.8,SNR=5.6
AB31 Akbulak array 77.48 321 P P **10 15 52.3 -1.8**
AB31 pmax pmax
comp=Z,34nm,1.1s,mb5.2
VNDA Vanda 77.65 173 P P **10 15 54.8 +0.2**
comp=Z,13nm,0.9s,mb4.8,baz=316,slow=5.9,SNR=50
VNDA Vanda 77.65 173 P P **10 15 54.8 +0.3**
VNDA pmax pmax
comp=Z,13nm,0.9s
SBA Scott Base 78.55 172 *e*P P **10 16 01.2 +1.6**
comp=Z,19nm,1.0s,mb5.0
SBA Scott Base 78.55 172 *e*P P **10 16 01.2 +1.7**
SBA pmax pmax
comp=Z,19nm,1.0s,mb5.0
MAW Mawson 79.01 201 *e*P P **10 16 03.2 +1.0**
comp=Z,21nm,1.0s,mb5.0
MAW Mawson 79.01 201 P P **10 16 02.3 +0.2**
comp=Z,30nm,1.1s,mb5.2,baz=62,slow=6.3,SNR=12
MAW Mawson 79.01 201 *e*P P **10 16 03.1 +1.0**
comp=Z,12nm,1.3s,mb4.7
MAW Mawson 79.01 201 *e*P P **10 16 03.1 +0.9**
MAW pmax pmax
comp=Z,12nm,1.3s
AKTO Aktyubinsk 79.02 322 LR LR 10 51 45.7
comp=Z,207nm,20.1s,MS4.5,baz=283,slow=36
AKTO Aktyubinsk 79.02 322 P P **10 16 01.1 -1.5**
AKTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
SVE Sverdlovsk 79.56 329 *e*P P **10 16 04.8 -0.6**
SVE pmax pmax
comp=Z,51nm,1.2s,mb5.3
ARU Arti 80.51 328 *i*P P **10 16 09.3 -1.2**
comp=Z,3.9nm,1.2s,mb4.2
ARU Arti 80.51 328 *d i*P P **10 16 09.4 -1.1**
ARU *e* 10 19 08.6
ARU *e*S S 10 26 15.2 +0.4
ARU *e*SS SS 10 31 28.0 +0.6
ARU pmax pmax
comp=Z,25nm,1.2s,mb5.0
ABPO Ambohimpanom 80.87 251 *e*P P **10 16 14.8 +1.5**
comp=Z,27nm,1.3s,mb5.0
PPT Papeete 81.97 107 *e*LR LR 10 42 07.8
comp=Z,168nm,22.2s
SOKR Solikamsk 82.36 331 *e*P P **10 16 20.2 -0.1**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SVW2 Sparrevohn 85.03 28 *e*P P **10 16 36.2 +2.3**
OHAK Old Harbor 85.39 32 *e*P P **10 16 37.7 +1.9**
OHAK *e*pP pP 10 16 46.8 +0.7
OHAK *e*sP sP 10 16 50.4 +0.5
KDAK Kodiak Island 85.86 32 LR LR 10 49 42.4
comp=Z,494nm,20.7s,MS4.9,baz=244,slow=32
CHUM Lake Minchumin 87.08 26 *e*P P **10 16 46.0 +2.0**
comp=Z,20nm,1.2s,mb5.2
SYO Syowa Base 87.71 201 *e*P P **10 16 45.8 -1.2**
SYO Syowa Base 87.71 201 *i*PcP PcP 10 16 48.6 -0.2
RC01 Rabbit Creek A 87.82 29 *e*P P **10 16 48.9 +1.3**
comp=Z,8.6nm,0.7s,mb5.1
KIV Kislovodsk 88.12 314 *e*P pP 10 17 01.8 +1.9
KIV 10 27 32.0
KIV pmax pmax
comp=Z,15nm,1.2s,mb5.1
PMR Palmer 88.18 28 *e*P P **10 16 50.0 +0.7**
comp=Z,12nm,1.0s,mb5.1
PMR Palmer 88.18 28 *e*P P **10 16 50.0 +0.7**
PMR pmax pmax
comp=Z,12nm,1.0s,mb5.1
COLD Coldfoot 88.50 23 *e*P P **10 16 52.2 +1.5**
comp=Z,15nm,1.1s,mb5.2
MCK McKinley 88.54 26 *e*P P **10 16 51.0 0.0**
comp=Z,20nm,1.1s,mb5.3
MCK *e*pP pP 10 17 01.9 +0.5
MCK McKinley 88.54 26 *e*P P **10 16 51.0 0.0**
MCK *e**PP pP 10 17 01.9 +0.5
MCK pmax pmax
comp=Z,20nm,1.1s,mb5.4
KLMR Klimovskoe 91.05 331 *e*P P **10 16 59.3 -3.5**
KLMR pmax pmax
comp=Z,17nm,1.3s,mb5.2
ANN Anapa 91.93 315 *e*P P **10 17 04.8 -2.4**
ANN pmax pmax
comp=Z,29nm,1.3s,mb5.5
EGAK Eagle 92.00 25 *e*P P **10 17 07.9 +0.9**
comp=Z,8.9nm,1.0s,mb5.0
EGAK *e*pP pP 10 17 19.2 +1.7
OBN Obninsk 92.54 325 *i*P P **10 17 08.7 -1.1**
OBN Obninsk 92.54 325 *i*P P **10 17 08.6 -1.2**
OBN *e* pP 10 17 19.4 -0.8
OBN SS SS 10 34 30.0 +6.4
OBN pmax pmax
comp=Z,20nm,1.2s,mb5.4
BRTR Keskin Array B 94.77 310 P P **10 17 18.2 -2.2**
comp=Z,0.6nm,0.6s,mb4.2,baz=146,slow=2.4,SNR=4.9
BRTR PKKPbc PKKPbc 10 34 19.2 +0.7
comp=Z,0.5nm,0.8s,baz=165,slow=5.1,SNR=3.6
BRTR LR LR 11 09 00.1
comp=Z,66nm,19.0s,MS4.1,baz=313,slow=41
ARCES ARCESS Array B 96.25 340 P P **10 17 25.1 -1.4**
comp=Z,14nm,1.1s,mb5.3,baz=3.2,slow=8.6,SNR=5.2
ARCES LR LR 11 08 36.1
comp=Z,235nm,19.5s,MS4.7,baz=60,slow=40
BUR08 Bucovina Ar. S 100.21 318 *e*Pdif Pdif 10 17 44.9 +0.4
NOA NORSAR Array B 104.50 333 PKKPbc PKKPbc 10 33 51.0 -0.7
comp=Z,1.4nm,1.0s,baz=222,slow=5.6,SNR=3.2
NVAR Mina Array Bea 109.47 50 PP PP 10 23 06.2 +6.6
comp=Z,1.3nm,0.9s,baz=255,slow=7.4,SNR=3.5
NVAR PKKPab PKKPab 10 33 49.5 +2.9
comp=Z,0.5nm,0.7s,baz=127,slow=6.3,SNR=4.1
REDW Red Top Meadow 113.42 43 *e*PKPdf PKiKP 10 22 38.6 +1.8
PDAR Pinedale Array 114.52 43 PKP PKiKP 10 22 39.9 +1.0
comp=Z,0.4nm,0.8s,baz=333,slow=2.3,SNR=3.7
PDAR PKKPbc PKKPbc 10 33 17.9 -1.0
comp=Z,0.6nm,0.8s,baz=90,slow=4.4,SNR=4.9
ANMO Albuquerque 119.58 50 *e*PKPdf PKPdf 10 22 50.9 +2.0
TXAR Lajitas Array 123.70 56 PKP PKPdf 10 22 57.6 +0.6
comp=Z,1.1nm,0.8s,baz=196,slow=0.8,SNR=7.9
TXAR PKKPbc PKKPbc 10 32 47.5 +2.6
comp=Z,0.6nm,1.1s,baz=166,slow=7.3,SNR=3.5
TXAR Lajitas Array 123.70 56 PKIKP PKPdf 10 22 57.6 +0.7
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,1.1s
TORD Torodi Ar. Bea 125.97 285 PKP PKPdf 10 23 01.2 -0.4
comp=Z,1.9nm,0.7s,baz=64,slow=2.0,SNR=12
TORD Torodi Ar. Bea 125.97 285 PKP PKPdf 10 23 01.2 -0.5
PLCA Paso Flores 134.20 160 PKP PKPdf 10 23 17.4 +0.8
comp=Z,3.4nm,0.7s,baz=172,slow=1.7,SNR=9.5
PLCA Paso Flores 134.20 160 PKIKP PKPdf 10 23 17.4 +0.8
PLCA pmax pmax
comp=Z,3.0nm,0.7s
CFAA Coronel Fontan 143.15 156 PKhKP PKPdf 10 23 30.9 -2.3
comp=Z,0.9nm,0.6s,baz=206,slow=4.5,SNR=15
CFAA Coronel Fontan 143.15 156 PKP PKPdf 10 23 30.9 -2.3
LCO Las Campanas 144.27 151 *e*PKPdf PKPdf 10 23 35.3 +0.1
LVC Limon Verde 150.41 147 *e*PKPbc PKPab 10 23 53.1 -4.1
NNA Nana 151.50 120 PKPbc PKPbc 10 23 55.2 +1.5
comp=Z,56nm,0.9s,baz=273,slow=4.8,SNR=19
NNA Nana 151.50 120 *e*PKPbc PKPbc 10 23 55.7 +2.1
ATAH Atahualpa 151.98 109 PKP PKPbc 10 23 50.8 -4.0
comp=Z,4.8nm,0.8s,baz=356,slow=1.9,SNR=3.6
ATAH PKPbc PKPab 10 23 58.2 -5.9
comp=Z,31nm,0.8s,baz=198,slow=2.5,SNR=20
OTAV Otavalo 153.26 93 *e*PKPdf PKPbc 10 23 53.5 -4.2
LPAZ La Paz 155.72 139 PKP PKPdf 10 23 55.9 +2.4
comp=Z,2.4nm,0.7s,baz=294,slow=0.4,SNR=8.3
LPAZ PKPab PKPab 10 24 20.2 +0.4
comp=Z,4.3nm,0.9s,baz=168,slow=5.0,SNR=6.5
LPAZ La Paz 155.72 139 *e*PKPdf PKPdf 10 23 54.7 +1.3
LPAZ La Paz 155.72 139 PKIKP PKPdf 10 23 55.9 +2.4
LPAZ 10 24 20.2
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ pmax pmax
comp=Z,4.0nm,0.9s
SIV San Ignacio 159.95 153 PKP PKPdf 10 24 00.4 +1.7
comp=Z,6.4nm,1.0s,baz=251,slow=0.6,SNR=21
SIV PKPab PKPab 10 24 39.5 +1.6
comp=Z,3.8nm,0.8s,baz=224,slow=5.6,SNR=7.4
SDV Santo Domingo 160.00 69 PKP PKPdf 10 23 60.0 +1.2
comp=Z,9.3nm,0.9s,baz=338,slow=1.1,SNR=9.2
SDV PKPab PKPab 10 24 39.8 +1.4
comp=Z,5.4nm,0.9s,baz=180,slow=9.1,SNR=2.4
SDV Santo Domingo 160.00 69 *e*PKPdf PKPdf 10 23 59.8 +1.0
BDFB Brasilia 162.14 192 PKP PKPdf 10 24 02.0 +0.9
comp=Z,2.9nm,1.0s,baz=353,slow=11,SNR=5.5
BDFB PKPab PKPab 10 24 47.4 -0.1
comp=Z,1.4nm,0.6s,baz=120,slow=20,SNR=3.0
BDFB Brasilia 162.14 192 PKIKP PKPdf 10 24 02.0 +1.0
BDFB 10 24 47.4
BDFB pmax pmax
comp=Z,3.0nm,1.0s
BDFB pmax pmax
comp=Z,1.0nm,0.6s

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*ISCJB **24** 10:16:29.3±1.6, 373N±0.1×2828E±008, h10km±21km, Error ellipse: s-maj=23.7km s-min=5.3km az=22.7*
*DDA **24** 10:16:29.8, 3720N×2821E, h7km±7km, Md2.5*
*CSEM **24** 10:16:30.1±0.3, 37.16N×28.15E, h1km±2km, MD2.9, Error ellipse: s-maj=7.1km s-min=2.8km az=13.0*
*ISK **24** 10:16:30.3, 37.19N×2820E, h12km, MD2.9*
ISC 24 10:16:29.9±1.9, 373N±01×2828E±009, h10km±18km, n8, σ0§97/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**180**	PG	**Pg**	**10 16 33.2**	**0.0**
YER				*e*SG	**Sg**	**10 16 35.5**	**-0.1**
MLSB	**Milas**	**0.40**	**272**	*e*PG	**Pg**	**10 16 37.8**	**0.0**
MLSB				*e*SG	**Sg**	**10 16 43.5**	**+0.3**
TURN	**Turunc**	**0.48**	**148**	*i* P	**Pg**	**10 16 38.0**	**-1.3**
TURN				*i* S	**Sg**	**10 16 45.8**	**+0.1**
DALT	**Dalyan (Mudla)**	**0.59**	**151**	*e*PG	**Pg**	**10 16 41.6**	**+0.4**
BDRM	**Kayabasi**	**0.70**	**252**	*i* P	**Pg**	**10 16 42.2**	**-1.3**
BDRM				*i* S	**Sg**	**10 16 54.4**	**+1.6**
BDRM	**Kayabasi**	**0.70**	**252**	*i* P	**Pg**	**10 16 42.2**	**-1.3**
BDRM				*i* S	**Sg**	**10 16 54.3**	**+1.6**
DAT	**Datca**	**0.79**	**226**	*e*PG	**Pg**	**10 16 43.9**	**-1.2**
AKAS	**Kas**	**1.49**	**134**	*i* P	**Pg**	**10 16 59.9**	**+1.4**
AKAS				*i* S	**Sg**	**10 17 21.8**	**+4.0**

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*GII **24** 10:26:37.8±0.9, 3341N×3562E, h0km, EXPLOSION*
*CSEM **24** 10:26:38.1, 3341N×3574E, h33km, ML2.7, After GRAL*
*GRAL **24** 10:26:38.1±0.3, 3341N×3574E, h33km±1km, MD2.7*
*ISCJB **24** 10:26:39.2±0.6, 3345N±003×3567E±005, h0km, Error ellipse: s-maj=6.0km s-min=3.4km az=17.1*
ISC 24 10:26:39.8±0.5, 3345N±003×3560E±005, h0km, n16, σ1§20/24, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.19**	**79**	*e*P	**Pg**	**10 26 43.8**	**+0.4**
RCY				*e*S	**Sg**	**10 26 47.9**	**+2.1**
HRI	**Mount Hermon**	**0.22**	**148**	Pg	**Pg**	**10 26 42.9**	**-1.0**
MATL	**Matirih**	**0.23**	**280**	*e*P	**Pg**	**10 26 45.9**	**+1.7**
KSDI	**Kefar Szold**	**0.26**	**169**	Pg	**Pg**	**10 26 43.8**	**-1.0**
KSDI				Sg	**Sg**	**10 26 48.5**	**+0.4**
MMC1	**Mount Meron ar**	**0.45**	**201**	Pg	**Pg**	**10 26 47.6**	**-0.8**
BHL	**Bhannes**	**0.46**	**6**	*e*P	**Pg**	**10 26 48.1**	**-0.4**
BHL				*e*S	**Sg**	**10 26 55.4**	**+1.0**
MMA0	**Mount Meron ar**	**0.46**	**201**	Pg	**Pg**	**10 26 47.8**	**-0.8**
MMA0				Sg	**Sg**	**10 26 55.9**	**+1.3**
MMC5	**Mount Meron ar**	**0.47**	**199**	Pg	**Pg**	**10 26 47.8**	**-0.9**
MMC5				Sg	**Sg**	**10 26 55.8**	**+1.1**
MMC6	**Mount Meron ar**	**0.47**	**202**	Pg	**Pg**	**10 26 47.6**	**-1.2**
KSHT	**Keshet**	**0.50**	**159**	Pg	**Pg**	**10 26 49.0**	**-0.3**
KSHT				Sg	**Sg**	**10 26 56.8**	**+1.0**
HNTI	**Hanita**	**0.51**	**224**	Sg	**Sg**	**10 26 58.9**	**+2.7**
HWQ	**Hawqa**	**0.88**	**19**	*e*P	**Pg**	**10 26 53.5**	**-3.1**
OFRI	**'Ofer**	**0.97**	**212**	Pg	**Pg**	**10 26 57.9**	**-0.5**
MMLI	**Mount Malkishu**	**1.02**	**188**	Pg	**Pg**	**10 26 57.9**	**-1.4**
MMLI				Sg	**Sg**	**10 27 13.6**	**+1.1**
HMDT	**Nahal Hemdat**	**1.20**	**183**	Pg	**Pg**	**10 27 01.2**	**-1.5**
HMDT				Sg	**Sg**	**10 27 19.0**	**+0.8**
SLTI	**Sal'it**	**1.29**	**201**	Pg	**Pg**	**10 27 03.4**	**-1.2**

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*CSEM **24** 10:26:41.9, 3564N×2450E, h28km, MD3.6/5, After ATH*
*NEIC **24** 10:26:41.9, 3564N×2450E, h28km, MD3.5(ATH), After ATH.*
ATH 24 10:26:41.9, 3564N×2450E, h28km±5km, MD3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	**Vamos**	**0.34**	**227**	*e*PB	Pb	10 26 50.0	+0.3
NPS	**Neapolis**	**0.98**	**112**	*e*PN	Pn	10 27 01.0	+1.2
KYTH	**Kithira**	**1.35**	**299**	*e*PN	Pn	10 27 07.0	+2.2
VLI	**Veliai**	**1.66**	**311**	*e*PN	Pn	10 27 11.0	+1.9
KARP	**Karpathos**	**2.17**	**92**	*e*PN	Pn	10 27 18.0	+1.9

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*NEIC **24** 10:36:53.0±3.0, 2072N×122.15E, h10km, Error ellipse: s-maj=51.7km s-min=16.2km az=112.0*
*IDC **24** 10:36:58.5±1.5, 2126N×121.37E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, ML3.3/1, Error ellipse: s-maj=44.0km s-min=26.2km az=66.0*
*ISCJB **24** 10:37:02.6±1.8, 2116N±010×1214E±02, h50km±16km, mb3.9/6, Error ellipse: s-maj=27.4km s-min=16.2km az=8.2*
ISC 24 10:37:01.5±2.6, 210N±01×1216E±02, h38km±18km, n13, σ0§93/16, mb3.9/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**1.85**	**344**	*e*Pn	**Pn**	**10 37 31.4**	**+0.6**
YULB	**Yu-li**	**2.37**	**353**	*e*Pn	**Pn**	**10 37 36.3**	**-1.6**
TPUB	**Ta-pu**	**2.44**	**338**	*e*Pn	**Pn**	**10 37 39.9**	**+1.0**
TPUB				Sn	**Sn**	**10 38 16.3**	**+8.9**
SSLB	**Suanglung**	**2.81**	**348**	Pn	**Pn**	**10 37 43.5**	**-0.5**
NACB	**Ninganchiao**	**3.13**	**360**	*e*Pn	**Pn**	**10 37 47.4**	**-0.9**
NACB				*e*Sn	**Sn**	**10 38 24.8**	**+0.3**
YHNB	**Yeheng**	**3.63**	**357**	*e*Pn	**Pn**	**10 37 55.6**	**+0.4**
YHNB				*e*Sn	**Sn**	**10 38 36.8**	**-0.1**
KSRS	**Korea Array**	**17.26**	**17**	P	**Pn**	**10 41 00.8**	**+1.1**
	0.1nm,0.3s,baz=195,slow=12,SNR=6.1						
CMAR	**Chiang Mai Arr**	**21.49**	**267**	P	**P**	**10 41 47.4**	**+0.3**
	1.0nm,0.7s,mb3.3,baz=72,slow=9.8,SNR=4.2						
MKAR	**Makanchi Array**	**40.91**	**318**	P	**P**	**10 44 41.4**	**+1.3**
	0.9nm,0.5s,mb3.6,baz=112,slow=9.6,SNR=12						
ZALV	**Zalesovo Beam**	**43.12**	**329**	P	**P**	**10 44 57.2**	**-0.7**
	1.9nm,0.5s,mb4.1,baz=121,slow=8.3,SNR=8.4						
KURK	**Kurchatov**	**44.78**	**322**	P	**P**	**10 45 11.6**	**+0.2**
	1.9nm,0.8s,mb4.0,baz=113,slow=7.2,SNR=7.1						
BVAR	**Borovoye Array**	**50.38**	**322**	P	**P**	**10 45 53.0**	**-1.8**
	0.7nm,0.6s,mb3.9,baz=126,slow=7.3,SNR=3.1						
STKA	**Stephens Creek**	**55.98**	**159**	P	**P**	**10 46 40.9**	**+4.7**
	1.7nm,0.6s,mb4.3,baz=320,slow=16,SNR=4.1						

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*IDC **24** 10:46:06.5±0.5, 5667S×15784E, h0km, mb4.7/17, mb1 4.8/18, mb1mx4.7/20, mbtmp4.7/18, ML4.4/1, MS4.7/14, Ms1 4.7/14, ms1mx4.5/18, Error ellipse: s-maj=21.8km s-min=13.2km az=76.0*
*BJI **24** 10:46:07.8, 5655S×15831E, h9km, mB5.4, mb5.6, Ms5.4, Msz4.9*
*ISCJB **24** 10:46:07.7±0.3, 5665S±004×1579E±0.1, h14km, mb5.0/31, MS4.7/22, Error ellipse: s-maj=10.6km s-min=5.6km az=0.8*
*NEIC **24** 10:46:08.6±0.3, 5666S×15794E, h10km, mb5.3/8, Error ellipse: s-maj=11.2km s-min=7.1km az=88.0*
*GCMT **24** 10:46:08.6±0.2, 5665S×15774E, h34km±1km, MW5.3/80, Moment Tensor Solution. s65,c106; s80,c131; Duration: 1§1 Moment tensor: Scale 10^17Nm; Mrr0.54±.03; Mθθ0.46±.02; Mϕϕ-0.99±.02; Mrθ0.49±.03; Mθϕ0.10±.02; Mϕr-0.53±.04; Best double couple: M0 1.2000×10^17 NP1:φ=31.0000°, δ39.00000°, λ150.00000°. NP2:φ=145.0000°, δ72.00000°, λ55.00000°. Principal axes: T 1.0440, Plg50.000°, Azm16.0000°; N 0.1520, Plg33.0000°, Azm158.0000°; P -1.1960, Plg19.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **24** 10:46:11.7±1.9, 5659S×15782E, h33km, mb5.3/7, MS4.8/4 Error ellipse: s-maj=32.6km s-min=9.2km az=96.8*

*DJA **24** 10:46:11.2±0.0,5654S×15773E,h10km,mB6.2/3, Mw(mB)5.8/3,Mwp5.1/4*

ISC 24 10:46:09.5±3.8,5665S±004×1580E±01,h14km±24km, h14km±1.6km:pP-P,n150,σ1916/76,mb5.0/31,MS4.7/22, 16C-9D,Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**2.22**	**15**	*e*Pn		**Pn**	**10 46 43.6**	**-2.3**
MCQ				*e*Sn		**Sn**	**10 47 10.0**	**-3.1**
DRV	**Dumont d'Urvil**	**13.11**	**213**	P		**Pn**	**10 49 07.0**	**-8.0**
DRV				SS			10 51 52.0	
DRV				R			10 52 00.0	
TAU	**Tasmania Unive**	**15.34**	**329**	Pn		**Pn**	**10 49 44.2**	**-1.2**
	992nm,1.1s,SNR=14							
TAU	**Tasmania Unive**	**15.34**	**329**	*e*Pn		**Pn**	**10 49 46.3**	**+0.9**
	337nm,1.3s							
TAU				*e*Sn		**Sn**	**10 52 25.3**	**-10**
TAU	**Tasmania Unive**	**15.34**	**329**	*e*P		**Pn**	**10 49 46.3**	**+0.9**
TAU				*e*			10 52 25.3	
TAU				pmax		pmax		
	comp=Z,337nm,1.3s							
RPZ	**Rata Peaks**	**15.38**	**38**	Pn		**Pn**	**10 49 46.5**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=183,slow=9.7,SNR=8.3							
RPZ				Sn		**Sn**	**10 52 29.7**	**-6.3**
	comp=Z,0.9nm,0.3s,baz=54,slow=18,SNR=4.5							
RPZ				LR		LR	10 54 57.3	
	comp=Z,6μm,19.4s,baz=199,slow=34							
TOO	**Toolangi**	**20.82**	**331**	*e*P		**P**	**10 50 51.1**	**+0.7**
VNDA	**Vanda**	**21.01**	**178**	P		**P**	**10 50 51.4**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=335,slow=7.6,SNR=21							
VNDA				LR		LR	10 57 49.9	
	comp=Z,4μm,19.4s,baz=354,slow=34							
SBA	**Scott Base**	**21.52**	**175**	*e*P		**P**	**10 50 58.8**	**+1.2**
	comp=Z,153nm,1.7s,mb5.2							
SBA	**Scott Base**	**21.52**	**175**	*e*P		**P**	**10 50 58.8**	**+1.2**
SBA				pmax		pmax		
	comp=Z,153nm,1.7s,mb5.2							
CNB	**Canberra Magne**	**22.12**	**341**	*e*P		**P**	**10 51 04.8**	**+0.5**
CAN	**Canberra**	**22.18**	**340**	*e*P		**P**	**10 51 06.1**	**+1.1**
URZ	**Urewera**	**22.36**	**43**	P		**P**	**10 51 08.2**	**+1.4**
	comp=Z,63nm,1.2s,mb4.9,baz=249,slow=6.0,SNR=7.1							
URZ				LR		LR	11 00 15.3	
	comp=Z,6μm,18.2s,MS5.1,baz=197,slow=38							
CASY	**Casey**	**24.00**	**227**	*e*P		**P**	**10 51 22.5**	**-0.8**
CASY				*e*			10 51 40.6	
CASY	**Casey**	**24.00**	**227**	*e*P		**P**	**10 51 22.9**	**-0.4**
ARMA	**Armidale**	**26.59**	**348**	*e*P		**P**	**10 51 47.8**	**+0.7**
STKA	**Stephens Creek**	**27.25**	**328**	*e*P		**P**	**10 51 53.1**	**+0.1**
	comp=Z,14nm,1.2s,mb4.4							
STKA	**Stephens Creek**	**27.25**	**328**	P		**P**	**10 51 52.5**	**-0.5**
	comp=Z,20nm,1.2s,mb4.5,baz=168,slow=8.1,SNR=15							
STKA				LR		LR	11 01 46.9	
	comp=Z,4μm,18.7s,MS5.0,baz=162,slow=34							
STKA	**Stephens Creek**	**27.25**	**328**	*e*P		**P**	**10 51 53.7**	**+0.7**
	comp=Z,12nm,1.4s,mb4.2							
STKA				*e*PcP		PcP	10 55 11.7	-0.9
EIDS	**Eidsvold**	**31.64**	**348**	*e*P		**P**	**10 52 32.5**	**+0.5**
	comp=Z,60nm,1.5s,mb5.2							
RAO	**Raoul Island**	**32.24**	**42**	LR		LR	11 02 44.9	
	comp=Z,236nm,21.3s,MS3.9,baz=150,slow=31							
FORT	**Forrest**	**33.22**	**308**	*e*P		**P**	**10 52 45.4**	**-0.4**
	comp=Z,23nm,0.8s,mb5.2							
QSPA	**South Pole Qui**	**33.46**	**180**	P		**P**	**10 52 47.4**	**-0.1**
	comp=Z,3.1nm,0.7s,mb4.3,baz=18,slow=3.0,SNR=21							
QSPA				LR		LR	11 05 33.3	
	comp=Z,943nm,19.5s,MS4.5,baz=202,slow=35							
QSPA	**South Pole Qui**	**33.46**	**180**	P		**P**	**10 52 47.4**	**-0.1**
QSPA				LR		LR	11 05 33.3	
DZM	**Mont Dzumac**	**35.09**	**14**	*e*P		**P**	**10 53 03.7**	**+1.6**
NWAO	**Narrogin (SRO)**	**36.58**	**293**	P		**P**	**10 53 13.8**	**-1.0**
	comp=Z,21nm,1.1s,mb4.9,baz=296,slow=1.4,SNR=3.7							
NWAO				LR		LR	11 02 56.4	
	comp=Z,139nm,20.3s,MS3.7,baz=128,slow=28							
NWAO	**Narrogin (SRO)**	**36.58**	**293**	P		**P**	**10 53 13.8**	**-1.0**
NWAO				LR		LR	11 02 56.4	
ASAR	**Alice Springs**	**37.32**	**322**	P		**P**	**10 53 20.4**	**-0.7**
	comp=Z,33nm,1.0s,mb5.1,baz=160,slow=8.2,SNR=142							
ASAR				PcP		PcP	10 55 37.7	-2.5
	comp=Z,3.7nm,0.9s,baz=152,slow=4.2,SNR=5.7							
KLBR	**Kellerberrin**	**37.38**	**295**	*e*P		**P**	**10 53 20.8**	**-0.8**
	comp=Z,61nm,1.2s,mb5.3							
KLBR				*e*			10 53 38.0	
CTA	**Charters Tower**	**37.53**	**342**	*e*P		**P**	**10 53 22.8**	**-0.1**
	comp=Z,22nm,1.4s,mb4.7							
CTA				*e*			10 53 40.9	
CTA	**Charters Tower**	**37.53**	**342**	P		**P**	**10 53 23.1**	**+0.1**
	comp=Z,23nm,1.1s,mb4.8,baz=185,slow=8.5,SNR=12							
CTAO	**Charters Tower**	**37.53**	**342**	*e*P		**P**	**10 53 23.5**	**+0.5**
	comp=Z,112nm,1.6s,mb5.3							
CTAO	**Charters Tower**	**37.53**	**342**	*e*P		**P**	**10 53 23.5**	**+0.6**
CTAO				pmax		pmax		
	comp=Z,112nm,1.6s,mb5.3							
CTAO	**Charters Tower**	**37.53**	**342**	P		**P**	**10 53 23.5**	**+0.6**
	comp=Z,59nm,1.8s,comp=Z,1μm,mb5.0							
MUN	**Mundaring**	**37.85**	**293**	*e*P		**P**	**10 53 24.5**	**-1.1**
WB2	**Warramunga Arr**	**40.64**	**325**	⇑*i*P		**P**	**10 53 47.4**	**-1.5**
WB2				*e*			10 53 56.3	
WB2				*e*			10 54 05.0	
WB2				*e*			10 55 21.6	
WRA	**Warramunga Arr**	**40.64**	**325**	P		**P**	**10 53 47.4**	**-1.6**
	comp=Z,25nm,1.1s,mb4.8,baz=162,slow=7.0,SNR=69							
WRA				PcP		PcP	10 55 48.5	-2.1
	comp=Z,2.9nm,0.8s,baz=161,slow=3.1,SNR=13							
WRA				LR		LR	11 10 12.4	
	comp=Z,621nm,20.4s,MS4.5,baz=155,slow=36							
WRA	**Warramunga Arr**	**40.64**	**325**	P		**P**	**10 53 47.4**	**-1.6**
WRA							10 55 48.5	
WRAB	**Tennant Creek**	**40.65**	**325**	P		**P**	**10 53 47.2**	**-1.8**
	comp=Z,214nm,1.2s,mb5.7,SNR=11							
WRAB	**Tennant Creek**	**40.65**	**325**	*e*P		**P**	**10 53 47.5**	**-1.5**
	comp=Z,94nm,1.5s,mb5.2							
WRAB				*e*PP		PP	10 55 25.7	+3.0
WRAB	**Tennant Creek**	**40.65**	**325**	*e*P		**P**	**10 53 47.5**	**-1.5**
WRAB				*e*			10 55 25.7	
WRAB				pmax		pmax		
	comp=Z,93nm,1.5s,mb5.2							
WRAB	**Tennant Creek**	**40.65**	**325**	P		**P**	**10 53 47.5**	**-1.5**
	comp=Z,57nm,1.6s,mb4.9							
MAW	**Mawson**	**41.31**	**215**	P		**P**	**10 53 53.9**	**-0.1**
	comp=Z,8.9nm,0.7s,mb4.5,baz=134,slow=10.0,SNR=13							
MAW				LR		LR	11 11 20.1	
	comp=Z,922nm,18.2s,MS4.7,baz=119,slow=37							
COEN	**Coen**	**44.08**	**339**	*e*P		**P**	**10 54 16.8**	**-0.2**
	comp=Z,189nm,1.8s,mb5.5							
COEN	**Coen**	**44.08**	**339**	P		**P**	**10 54 16.8**	**-0.2**
	comp=Z,36nm,1.6s,mb4.9							
SYO	**Syowa Base**	**46.92**	**206**	⇓*e*P		**P**	**10 54 36.8**	**-2.1**
SYO	**Syowa Base**	**46.92**	**206**	⇓*i*pP		pP	10 54 43.2	0.0
SYO	**Syowa Base**	**46.92**	**206**	⇓*e*PcP		PcP	10 56 12.0	+0.8
KAKA	**Kakadu**	**48.03**	**326**	*e*P		Px	10 54 32.8	
	comp=Z,40nm,1.1s							
KAKA	**Kakadu**	**48.03**	**326**	*e*P		Px	10 54 33.3	
SNAA	**Sanae**	**51.27**	**188**	⇑*e*P		**P**	**10 55 13.8**	**+1.7**
SNAA				pmax		pmax		
	comp=Z,16nm,1.4s							
VNA3	**Neumayer Olymp**	**52.11**	**185**	*e*P		**P**	**10 55 17.6**	**-0.8**
VNA3				*e*		pP	10 55 21.7	-1.0
VNA2	**Neumayer--Watz**	**52.30**	**186**	*e*P		**P**	**10 55 18.8**	**-1.1**
	baz=165,slow=4.6							
VNA2				*e*		pP	10 55 22.0	-2.2
VNA1	**Neumayer--Stat**	**52.62**	**186**	*e*P		**P**	**10 55 22.1**	**-0.1**
VNA1				*e*		pP	10 55 25.1	-1.5
PPT	**Papeete**	**55.17**	**67**	*e*S		**S**	**11 03 29.8**	**+5.6**
	comp=Z,1μm,25.5s							
PPT				*e*SS		SS	11 07 20.2	+12
	comp=Z,362nm,24.8s							
PPT				*e*LR		LR	11 11 53.3	
	comp=Z,4μm,28.2s,baz=212							
PPT	**Papeete**	**55.17**	**67**	LR		LR	11 12 48.6	
	comp=Z,1μm,21.6s,MS5.0,baz=254,slow=29							
RKT	**Rikitea**	**58.43**	**84**	*e*S		**S**	**11 04 14.3**	**+7.2**
	comp=Z,636nm,29.0s							
RKT				*e*LR		LR	11 12 49.9	
	comp=Z,1μm,30.5s,baz=210							
KDI	**Kendari**	**59.55**	**318**	P		**P**	**10 56 13.2**	**+0.7**
	comp=Z,41nm,1.7s,comp=Z,9μm,mb5.2							
SWI	**Sorong**	**59.61**	**329**	P		**P**	**10 56 13.8**	**+1.0**
	comp=Z,78nm,1.3s,mb5.6							
KAPI	**Kappang**	**59.68**	**314**	P		**P**	**10 56 11.3**	**-2.1**
	comp=Z,18nm,1.0s,mb5.1,baz=248,slow=8.4,SNR=5.2							
KAPI	**Kappang**	**59.68**	**314**	P		**P**	**10 56 11.3**	**-2.1**
SJI	**Sawahan**	**60.63**	**305**	P		**P**	**10 56 21.1**	**+1.2**
LEM	**Lembang**	**63.35**	**301**	P		**P**	**10 56 40.0**	**+1.9**
	comp=Z,74nm,1.6s,mb5.6							
STKI	**Sintang**	**67.70**	**308**	P		**P**	**10 57 07.0**	**+0.8**
	comp=Z,62nm,1.2s,mb5.5							
PLCA	**Paso Flores**	**74.71**	**144**	P		**P**	**10 57 48.0**	**-0.4**
	comp=Z,3.3nm,1.0s,mb4.2,baz=187,slow=5.7,SNR=5.0							
CFAA	**Coronel Fontan**	**83.78**	**142**	P		**P**	**10 58 36.9**	**-1.2**
	comp=Z,0.8nm,0.7s,mb4.0,baz=222,slow=3.0,SNR=11							
SUR	**Sutherland**	**84.17**	**215**	P		**P**	**10 58 40.0**	**0.0**
	comp=Z,4.1nm,0.7s,mb4.7,baz=148,slow=12,SNR=3.1							
ABPO	**Ambohimpanom**	**85.12**	**243**	*e*P		**P**	**10 58 46.6**	**+1.6**
	comp=Z,8.0nm,1.2s,mb4.7							
QIZ	**Qiongzhong**	**85.48**	**315**	P		**P**	**10 58 48.1**	**+1.5**
QIZ				XP		sP	10 58 53.0	+0.3
QIZ				S		S	11 09 21.3	+3.9
QIZ				XS		sS	11 09 27.1	+2.2
QIZ				LR		LR		
	comp=Z,116nm,27.4s,MS4.1							
BOSA	**Boshof**	**86.12**	**220**	P		**P**	**10 58 49.0**	**-0.9**
	comp=Z,3.4nm,0.6s,mb4.8,baz=176,slow=4.7,SNR=10							
BOSA				LR		LR	11 34 04.6	
	comp=Z,539nm,18.1s,MS5.0,baz=156,slow=33							
CMAR	**Chiang Mai Arr**	**89.56**	**306**	P		**P**	**10 59 05.6**	**-0.6**
	comp=Z,3.7nm,1.0s,mb4.7,baz=176,slow=3.9,SNR=18							
CMAR				LR		LR	11 38 19.8	
	comp=Z,395nm,18.7s,MS4.9,baz=163,slow=35							
CMAR	**Chiang Mai Arr**	**89.56**	**306**	*i* P		**P**	**10 59 06.3**	**0.0**
CMAR				pmax		pmax		
	comp=Z,4.0nm,1.0s							
GYA	**Guiyang**	**93.42**	**316**	*e*P		**P**	**10 59 25.6**	**+1.6**
GYA				PP		PP	11 03 13.6	+4.9
GYA				SKS			11 09 55.5	
GYA				S		S	11 10 31.6	+0.4
GYA				SS		SS	11 16 54.8	+6.1
GYA				AMB		AMB		
	comp=Z,20nm,0.9s,mb5.5							
GYA				AMB		AMB		
	comp=Z,100nm,5.2s							
GYA				LR		LR		
	comp=N,580nm,21.0s,MS5.2							
GYA				LR		LR		
	comp=E,650nm,20.6s,MS5.2							
GYA				LR		LR		
	comp=Z,590nm,21.8s,MS5.0							
KMI	**Kunming**	**93.80**	**312**	P		**P**	**10 59 28.4**	**+2.6**
KMI				AP		pP	10 59 33.3	+3.0
KMI				PP		PP	11 03 16.8	+5.2
KMI				S		S	11 10 36.3	+1.7
KMI				XS		sS	11 10 42.9	+0.7
KMI				SS		SS	11 17 00.8	+6.7
KMI				AMB		AMB		
	comp=Z,7.0nm,1.0s,mb5.0							
KMI				AMB		AMB		
	comp=Z,130nm,5.0s							
KMI				LR		LR		
	comp=N,345nm,16.4s,MS5.0							
KMI				LR		LR		
	comp=E,278nm,18.5s,MS5.0							
KMI				LR		LR		
	comp=Z,297nm,16.6s,MS4.8							
MJAR	**Matsushiro Arr**	**94.33**	**344**	P		**P**	**10 59 27.7**	**-0.2**
	comp=Z,5.6nm,1.2s,mb4.9,baz=177,slow=5.9,SNR=5.8							
MJAR				LR		LR	11 38 54.9	
	comp=Z,167nm,21.8s,MS4.5,baz=215,slow=34							
MAT	**Matsushiro**	**94.33**	**344**	P		**P**	**10 59 27.4**	**-0.5**
MAT				S		S	11 10 47.0	+8.3
NJ2	**Nanjing**	**94.37**	**328**	*e*P		**P**	**10 59 28.3**	**+0.1**
NJ2				AMB		AMB		
	comp=Z,30nm,1.2s,mb5.6							
KSRS	**Korea Array**	**97.13**	**336**	P		**P**	**10 59 40.5**	**-0.1**
	comp=Z,1.0nm,0.9s,mb4.2,baz=173,slow=3.1,SNR=4.5							
KSRS				LR		LR	11 43 03.7	
	comp=Z,162nm,18.8s,MS4.5,baz=307,slow=35							
CD2	**Chengdu**	**98.53**	**315**	*e*P		**P**	**10 59 50.0**	**+2.9**
CD2				AP		pP	10 59 56.0	+4.3
CD2				XP		sP	10 59 58.3	+5.0
CD2				PP		PP	11 03 53.8	+5.6
CD2				SKS			11 10 26.5	
CD2				S		S	11 11 15.8	+0.6
CD2				XS		sS	11 11 23.8	+1.1
CD2				SS		SS	11 18 06.0	+5.0
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb5.4							
CD2				AMB		AMB		
	comp=Z,40nm,6.8s							
CD2				LR		LR		
	comp=N,730nm,18.4s							
CD2				LR		LR		
	comp=Z,560nm,14.8s,MS5.2							
BJI	**Beijing**	**102.58**	**328**	P		Pdif	11 00 10.3	+4.6
BJI				S		Sdif	11 11 54.3	+4.2
BJI				SS		SS	11 19 01.5	+4.2
BJI				AMB		AMB		
	comp=Z,9.0nm,0.8s							
BJI				LR		LR		
	comp=N,311nm,24.3s							
BJI				LR		LR		
	comp=E,254nm,16.4s							
BJI				LR		LR		
	comp=Z,238nm,23.1s,MS4.7							
HHC	**Hu-ho-hao-te**	**104.72**	**325**	PDIF		Pdif	11 00 16.8	+1.6
HHC				PP		PP	11 04 40.9	+6.2
HHC				LR		LR		
	comp=N,204nm,19.0s,MS4.8							
HHC				LR		LR		
	comp=E,233nm,20.2s,MS4.8							
HHC				LR		LR		
	comp=Z,191nm,19.0s,MS4.7							
WMQ	**Urumqi**	**116.11**	**311**	*e*PKP		PKPdf	11 04 54.0	+2.9
WMQ				PP		PP	11 06 04.0	+7.0
WMQ				SKS		SKSdf	11 12 05.0	+2.7
WMQ				SS		SS	11 22 02.0	+2.8
WMQ				PP		PP		
	comp=Z,45nm,8.0s							
WMQ				LR		LR		
	comp=N,148nm,22.0s,MS4.7							
WMQ				LR		LR		
	comp=E,143nm,22.0s,MS4.7							
WMQ				LR		LR		
	comp=Z,125nm,22.0s,MS4.5							
NVAR	**Mina Array Bea**	**117.95**	**62**	PKP		PKPdf	11 04 54.0	-0.8
	comp=Z,0.2nm,0.3s,baz=194,slow=5.5,SNR=4.3							
TXAR	**Lajitas Array**	**118.46**	**79**	PKP		PKPdf	11 04 55.0	-1.1
	comp=Z,0.6nm,0.9s,baz=259,slow=2.6,SNR=4.0							
HUMO	**Hull Mountain**	**119.01**	**56**	*e*PKPdf		PKPdf	11 04 57.0	+0.3
YAK	**Yakutsk**	**120.38**	**345**	⇑*i*PKIKP		PKPdf	11 04 58.3	-0.4
YAK				MLR		MLR		
	comp=Z,200nm,20.0s,MS4.8							
MKAR	**Makanchi Array**	**120.78**	**309**	PKP		PKPdf	11 04 58.4	-1.6
	comp=Z,1.1nm,0.8s,baz=164,slow=4.8,SNR=4.3							
RSW	**Rattlesnake Hi**	**123.46**	**55**	*e*PKPdf		PKPdf	11 05 05.1	-0.1
JCW	**Jim Creek**	**123.78**	**52**	*e*PKPdf		PKPdf	11 05 05.2	-0.6
OD2	**Odessa Site #2**	**124.61**	**55**	*e*PKPdf		PKPdf	11 05 07.0	-0.3
KURK	**Kurchatov**	**125.34**	**310**	PKP		PKPdf	11 05 06.6	-2.0
	comp=Z,4.5nm,1.2s,baz=132,slow=1.3,SNR=8.5							
KURK	**Kurchatov**	**125.34**	**310**	⇑*i*PKIKP		PKPdf	11 05 06.5	-2.1
MCMT	**McKenzie Canyo**	**125.46**	**61**	*e*PKPdf		PKPdf	11 05 09.4	+0.3
PDAR	**Pinedale Array**	**125.56**	**65**	PKP		PKPdf	11 05 08.8	-0.5
	comp=Z,0.7nm,0.8s,baz=96,slow=1.5,SNR=8.7							
DLMT	**Dillon**	**125.97**	**61**	*e*PKPdf		PKPdf	11 05 10.6	+0.6
BPAW	**Bear Paw Mtn.**	**126.61**	**25**	*e*PKPdf		PKPdf	11 05 09.7	-0.9
BOZ	**Bozeman (W)**	**126.64**	**61**	*e*PKPdf		PKPdf	11 05 11.7	+0.4
CHMT	**Chamberlain Mo**	**126.79**	**59**	*e*PKPdf		PKPdf	11 05 11.4	-0.1
RLMT	**Red Lodge**	**127.42**	**63**	*e*PKPdf		PKPdf	11 05 13.5	+0.7
TIXI	**Tiksi**	**129.62**	**348**	⇑*i*PKIKP		PKPdf	11 05 14.9	-1.3
TIXI				MLR		MLR		
	comp=Z,200nm,21.0s,MS4.8							
BVAR	**Borovoye Array**	**130.55**	**307**	PKP		PKPdf	11 05 17.8	-0.7
	comp=Z,1.6nm,0.7s,baz=250,slow=35,SNR=6.0							
EDM	**Edmonton**	**131.18**	**53**	*e*PKPdf		PKPdf	11 05 19.8	+0.1
TOA0	**Torodi Ar. Sit**	**132.92**	**212**	*e*PKPdf		PKPdf	11 05 22.2	-2.0
TORD	**Torodi Ar. Bea**	**132.92**	**212**	PKP		PKPdf	11 05 22.4	-1.8
	comp=Z,1.4nm,0.8s,baz=152,slow=1.6,SNR=8.4							
INK	**Inuvik**	**134.32**	**29**	*e*PKPdf		PKPdf	11 05 23.5	-1.6
KIV	**Kislovodsk**	**138.32**	**281**	⇑*i*PKIKP		PKPdf	11 05 34.5	+1.2
KIV				*e*			11 05 42.8	
KIV				pmax		pmax		
	comp=Z,18nm,1.5s							
KIV				MLR		MLR		
	comp=Z,100nm,14.0s,MS4.7							
APE	**Apeiranthos**	**142.98**	**259**	⇓*i*P		PKiKP	11 05 49.0	+3.8
QUA2	**Belchertown**	**145.14**	**92**	*e*PKPbc		PKPbc	11 05 44.0	-1.2
NCB	**Newcomb**	**145.21**	**89**	*e*PKPbc		PKPbc	11 05 44.8	-0.6
TIRR	**Tirgusor**	**146.48**	**271**	⇑*i*P		PKiKP	11 05 54.7	+2.6
HARR	**Harsova**	**146.89**	**270**	⇑P		PKiKP	11 05 49.7	-3.3
HARR	**Harsova**	**146.89**	**270**	⇑*i*P		PKiKP	11 05 49.7	-3.3
MOS	**Moscow**	**147.70**	**294**	*e*PKIKP		PKiKP	11 05 50.7	-3.6
MOS				pmax		pmax		
	comp=Z,65nm,1.3s							
KIS	**Kishinev**	**147.82**	**275**	*e*PKIKP		PKiKP	11 05 51.0	-3.8
KIS	**Kishinev**	**147.82**	**275**	*e*UNK		PKiKP	11 05 51.0	-3.8
RES	**Resolute Bay**	**147.87**	**29**	*e*PKPbc		PKPbc	11 05 51.5	-0.8
OBN	**Obninsk**	**147.95**	**292**	*e*PKPdf		PKPdf	11 05 51.0	+1.2
OBN	**Obninsk**	**147.95**	**292**	⇑*i*PKP2		PKPdf	11 05 52.2	+2.3
OBN				pmax		pmax		
	comp=Z,161nm,1.9s							
VTS	**Vitosha**	**148.13**	**263**	⇑*i*P		PKPdf	11 05 50.8	+0.2
VRI	**Vrincioaia**	**148.29**	**271**	⇑P		PKPbc	11 05 53.5	-0.7
VRI	**Vrincioaia**	**148.29**	**271**	⇑*i*P		PKPbc	11 05 53.5	-0.7
PLOR	**Plostina**	**148.32**	**271**	⇑*i*P		PKPbc	11 05 53.0	-1.3
KRUS	**Krusevo**	**148.37**	**260**	*e*PKP		PKPbc	11 05 53.2	-1.4
OHR	**Ohrid**	**148.44**	**259**	*e*PKP		PKPdf	11 05 50.9	-0.2
MLR	**Muntele Rosu**	**148.49**	**270**	⇓P		PKPbc	11 05 53.6	-1.1
MLR	**Muntele Rosu**	**148.49**	**270**	⇓*i*P		PKPbc	11 05 53.6	-1.1
SKO	**Skopje**	**148.68**	**261**	*e*PKP		PKPbc	11 05 53.9	-1.5
KLMR	**Klimovskoe**	**148.83**	**304**	*e*PKIKP		PKPdf	11 05 52.4	+1.3
AKASG	**Malin Array Be**	**149.67**	**281**	PKPbc		PKPbc	11 05 55.5	-2.0
	comp=Z,4.4nm,0.5s,baz=91,slow=2.3,SNR=4.8							
AKASG				PKPab		PKPab	11 06 02.8	-0.1
	comp=Z,5.0nm,0.6s,baz=93,slow=2.2,SNR=11							
KIEV	**Kiev**	**149.67**	**281**	*e*PKPbc		PKPbc	11 05 56.3	-1.2
BURAR	**Bucovina Array**	**150.17**	**273**	⇓P		PKPbc	11 05 59.1	+0.3
BURAR	**Bucovina Array**	**150.17**	**273**	⇓*i*P		PKPbc	11 05 59.1	+0.3
BUR08	**Bucovina Ar. S**	**150.19**	**273**	*e*PKPbc		PKPbc	11 05 59.1	+0.2
KEST	**Kesra**	**150.26**	**239**	PKPbc		PKPbc	11 05 58.8	-0.6
	comp=Z,2.6nm,1.0s,baz=127,slow=5.1,SNR=3.5							
BZS	**Buzias**	**150.96**	**266**	⇓*i*P		PKPbc	11 05 59.0	-1.8
DRGR		**151.07**	**269**	⇑P		PKPbc	11 06 00.6	-0.4
DRGR		**151.07**	**269**	⇑*i*P		PKPbc	11 06 00.6	-0.4
LVV	**L'vov**	**152.04**	**276**	*e*PKIKP		PKPbc	11 06 02.0	-1.1
MNK	**Minsk**	**152.22**	**287**	*e*PKIKP		PKPbc	11 06 01.0	-2.3
UZH	**Uzhgorod**	**152.36**	**272**	*e*PKIKP		PKPbc	11 06 02.0	-1.8
UZH				*i*			11 06 10.0	
UZH				*e*			11 06 15.0	
KOLS	**Kolonicke sedl**	**152.53**	**273**	*e*PKIKP		PKPbc	11 06 04.2	0.0
KOLS				*e*			11 06 11.2	
KOLS	**Kolonicke sedl**	**152.53**	**273**	*e*PKP		PKPbc	11 06 04.2	0.0
KOLS				*e*			11 06 11.2	
KOLS				*e*			12 10 38.4	
KWP	**Kalwaria**	**152.67**	**274**	*e*PKP		PKPbc	11 06 03.9	-0.6
KWP				*e*			11 06 11.1	
CRVS	**Cervenica-Dubn**	**152.97**	**272**	*e*		PKPab	11 06 14.0	-2.6
PSZ	**Piszkesteto**	**153.28**	**269**	PKPdf		PKPbc	11 06 02.6	-3.4
VYHS	**Vyhne**	**154.19**	**269**	*e*PKP		PKPbc	11 06 06.0	-1.9
VYHS				*e*			11 06 14.1	
GERES	**GERESS Array B**	**157.22**	**265**	PKPab		PKPab	11 06 31.7	-3.1
	comp=Z,0.3nm,0.6s,baz=112,slow=5.9,SNR=4.0							
KHC	**Kasperske Hory**	**157.44**	**266**	*e*PKPab		PKPab	11 06 29.0	-6.8
CLL	**Collm**	**158.87**	**270**	*i* PKPab		PKPab	11 06 41.2	-0.7
	comp=Z,18nm,1.5s							
CLL				*e*(pPKPab)			11 06 48.0	
CLL				*i* x		x	11 07 00.7	
	comp=Z,23nm,1.4s							
CLL				LmV			11 32 00.0	
	comp=Z,400nm,18.4s							
GRF	**Grafenberg Arr**	**159.04**	**265**	*e*PKP2		PKPab	11 06 41.2	-1.5

*ISCJB **24** 10:48:53.8±0.6,6065S±008×280W±02,h10km,mb4.3/11, Error ellipse: s-maj=16.6km s-

comp=Z,0.2nm,0.7s,mb3.1,baz=5.6,slow=12,SNR=3.6
AKASG **Malin Array Be** 71.09 326 P P 11 04 28.8 +0.3
comp=Z,0.8nm,0.3s,mb4.0,baz=34,slow=6.4,SNR=4.3
AKASG **Malin Array Be** 71.09 326 P P 11 04 28.8 +0.3
AKASG pmax pmax
comp=E,1.0nm,0.3s
ASAR Alice Springs 72.36 198 P P 11 04 36.6 +0.4
comp=Z,0.3nm,0.6s,mb3.3,baz=2.4,slow=5.1,SNR=5.4
ASAR Alice Springs 72.36 198 *eP* P 11 04 36.5 +0.3
TXAR Lajitas Array 77.69 60 P P 11 05 07.5 +0.4
comp=Z,0.3nm,0.6s,mb3.2,baz=304,slow=5.1,SNR=3.5

*NDI **24** 10:57:44.6±3.7, 1696N×7371E, h10km, ML4.8, mb4.8(NEIC)*
*ISCJB **24** 10:57:45.2±1.7, 1718N±004×7382E±006, h15km±13km, mb4.4/18, Error ellipse: s-maj=9.3km s-min=6.5km az=10.5*
*BJI **24** 10:57:45.9, 1777N×7290E, h13km, mB5.1, mb4.6*
*IDC **24** 10:57:45.7±0.6, 1701N×7365E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.0/26, mbtmp4.1/14, Error ellipse: s-maj=17.7km s-min=17.4km az=168.0*
*NEIC **24** 10:57:47.0±0.6, 1688N×7374E, h10km, mb4.8/8, Error ellipse: s-maj=15.0km s-min=11.6km az=145.0*
NEIC Felt strongly in the Chandoli area. Felt at Bombay, Chiplun, Ichalkaranji, Kolhapur, Pune, Ratnagiri, Sangli and Satara.

ISC 24 10:57:48.3±1.1, 1717N±004×7384E±005, h20km±6km, n67, σ1℅62/70, mb4.4/18, 1D, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KAD	**Karad**	**0.36**	**67**	*eP*		**Pg**	**10 57 56.7**	**+0.8**
KAD				*eS*		**Sg**	**10 58 03.1**	**+2.1**
KAD				AML		AML	10 58 03.5	
	comp=N,7μm,0.2s							
KAD				AML		AML	10 58 09.7	
	comp=E,8μm,0.3s							
POO	**Poona**	**1.35**	**0**	*eP*		**Pn**	**10 58 12.7**	**+0.6**
POO				*ex*		x	10 58 31.1	
POO				AML		AML	10 58 31.3	
	comp=E,8μm,0.3s							
POO				AML		AML	10 58 35.8	
	comp=N,6μm,0.3s							
GOA	**Goa**	**1.67**	**181**	⇓*iP*		**Pn**	**10 58 15.6**	**-0.8**
GOA				*i* S		**Sn**	**10 58 36.2**	**-1.0**
GOA				*ex*		x	10 58 41.8	
	comp=N,23μm,0.5s							
GOA				*ex*		x	10 58 42.2	
	comp=E,31μm,0.5s							
BOM	**Bombay**	**1.98**	**331**	*i* P		**Pn**	**10 58 12.0**	**-8.6**
BOM				*eS*		**Sn**	**10 58 37.8**	**-7.1**
BOM				*ex*		x	10 58 39.1	
	comp=E,86μm,0.3s							
BOM				*ex*		x	10 58 39.4	
	comp=N,43μm,0.3s							
LATR	**Latur**	**2.87**	**64**	*eP*		**Pn**	**10 58 33.5**	**+0.5**
LATR				*ex*		x	10 59 17.8	
MNGI	**Mangalore**	**4.31**	**167**	*eP*		**Pn**	**10 58 46.0**	**-6.7**
MNGI				*i* x		x	10 59 30.2	
HYB	**Hyderabad**	**4.51**	**86**	*e*Pn		**Pn**	**10 58 56.0**	**+0.5**
HYB				*e*Pg		**Pg**	**10 59 09.0**	**-5.7**
HYB				*e*Sn		**Sn**	**10 59 47.5**	**+0.1**
HYB				*e*Sg		**Sg**	**11 00 08.0**	**-5.1**
HYB	**Hyderabad**	**4.51**	**86**	*i* Pn		**Pn**	**10 58 56.0**	**+0.5**
HYB				*e*Pg		**Pg**	**10 59 09.0**	**-5.7**
HYB				*e*Sn		**Sn**	**10 59 47.5**	**+0.1**
HYB				*e*Sg		**Sg**	**11 00 08.0**	**-5.1**
AKL	**Akola**	**4.62**	**40**	*eP*		**Pn**	**10 58 59.2**	**+2.1**
AKL				*eS*		**Sn**	**10 59 51.0**	**+0.7**
AKL				AML		AML	11 00 14.5	
	comp=N,3μm,0.5s							
AKL				AML		AML	11 00 14.8	
	comp=E,4μm,0.5s							
NGP	**Nagpur**	**6.32**	**50**	*eP*		**Pn**	**10 59 20.9**	**+0.5**
NGP				*eS*		**Sn**	**11 00 28.7**	**-3.3**
NGP				AML		AML	11 01 08.3	
	comp=N,3μm,0.2s							
NGP				AML		AML	11 01 08.6	
	comp=E,2μm,0.4s							
BHJ	**Bhuj**	**7.22**	**328**	*ex*		x	11 00 55.5	
VIS	**Vishakhapatnam**	**9.07**	**85**	*eP*		**Pn**	**10 59 58.2**	**0.0**
VIS				*ex*		x	11 02 27.3	
VIS				AML		AML	11 02 33.5	
	comp=N,488nm,0.6s							
VIS				AML		AML	11 02 38.8	
	comp=E,378nm,0.4s							
TRD	**Trivandrum**	**9.13**	**160**	*ex*		x	11 02 09.3	
TRD				AML		AML	11 02 37.6	
	comp=E,748nm,0.2s							
TRD				AML		AML	11 02 41.5	
	comp=N,340nm,0.2s							
AJM	**Ajmer**	**9.30**	**4**	*eP*		**Pn**	**11 00 02.0**	**+0.8**
AJM				*i* x		x	11 02 34.0	
ALBI	**Allahabad**	**10.99**	**41**	*ex*		x	11 02 00.0	
ALBI				*ex*		x	11 03 28.5	
KHET	**Khetri**	**11.01**	**9**	*eP*		**Pn**	**11 00 24.3**	**-0.3**
SONA	**Sohna**	**11.43**	**15**	*eP*		**Pn**	**11 00 28.8**	**-1.7**
AYAN	**Aya Nagar**	**11.66**	**14**	*eP*		**Pn**	**11 00 32.9**	**-0.7**
BWNR	**Bhubaneshwar**	**11.76**	**73**	*ex*		x	11 02 41.4	
NDI	**New Delhi**	**11.88**	**15**	*eP*		**Pn**	**11 00 35.0**	**-1.5**
NDI				*ex*		x	11 03 56.5	
BOK	**Bokaro**	**13.07**	**58**	*eP*		**Pn**	**11 00 53.7**	**+0.8**
BOK				*eS*		x	11 03 09.4	
LGTI	**Lohaghat**	**13.56**	**25**	*ex*		**Pn**	**11 01 01.2**	**+1.6**
LGTI				*ex*		x	11 04 49.2	
PTH	**Pithoragarh**	**13.64**	**24**	*ex*		x	11 03 13.0	
PYUN	**Piuthan**	**13.77**	**36**	*eP*		**Pn**	**11 01 00.0**	**-2.4**
	comp=N,101nm,0.5s							
KOLN	**Koldanda**	**13.87**	**39**	*eP*		**Pn**	**11 01 01.2**	**-2.7**
	comp=N,46nm,0.2s							
SMLA	**Simla**	**14.22**	**12**	*i* P		**Pn**	**11 01 07.5**	**-1.1**
SMLA				*i* x		x	11 03 37.8	
JOSI	**Joshimath**	**14.31**	**20**	*eP*		**Pn**	**11 01 09.5**	**-0.4**
BHK	**Bhakra**	**14.38**	**9**	*ex*		x	11 04 09.0	
DANN	**Dangsing**	**14.40**	**38**	*eP*		**Pn**	**11 01 08.8**	**-2.2**
	comp=N,49nm,0.4s							
SDNR	**Sundarnagar**	**14.55**	**11**	*eP*		**Pn**	**11 01 14.4**	**+1.3**
SDNR				*ex*		x	11 05 27.0	
GKN	**Gorkha**	**14.68**	**41**	*eP*		**Pn**	**11 01 12.2**	**-2.6**
	comp=N,79nm,0.3s							
DMN	**Daman**	**14.70**	**43**	*eP*		**Pn**	**11 01 12.3**	**-2.9**
	comp=N,28nm,0.4s							
KLP	**Kalpa**	**14.85**	**15**	*eP*		**Pn**	**11 01 17.7**	**+0.5**
PKI	**Pulchoki**	**14.88**	**44**	*eP*		**Pn**	**11 01 14.7**	**-2.9**
	comp=N,38nm,0.3s							
KKN	**Kakani**	**14.94**	**43**	*eP*		**Pn**	**11 01 15.5**	**-2.9**
	comp=N,79nm,0.5s							
THN	**Thein Dam**	**15.29**	**6**	*ex*		x	11 03 53.1	
RAMN	**Ramite**	**15.31**	**48**	*eP*		**Pn**	**11 01 20.7**	**-2.5**
	comp=N,56nm,0.5s							
GUN	**Gumba**	**15.41**	**44**	*eP*		**Pn**	**11 01 21.7**	**-2.9**
	comp=N,41nm,0.3s							
DLH	**Dalhousie**	**15.43**	**7**	*ex*		x	11 04 34.0	
JIRN	**Jiri**	**15.46**	**45**	*eP*		**Pn**	**11 01 22.4**	**-2.9**
	comp=N,71nm,0.5s							
ODAN	**Odare**	**15.83**	**50**	*eP*		**Pn**	**11 01 27.5**	**-2.5**
TAPN	**Taplejung**	**16.34**	**49**	*eP*		**Pn**	**11 01 34.9**	**-1.7**
	comp=N,32nm,0.3s							
KBL	**Kabul**	**17.83**	**347**	Pn		**Pn**	**11 01 58.8**	**+3.6**
	comp=N,21nm,1.7s							
SHL	**Shillong**	**18.75**	**60**	*eP*		**Pn**	**11 02 07.9**	**+1.3**
SHL				*ex*		x	11 05 17.5	
LSA	**Lhasa**	**20.16**	**49**	*eP*		**P**	**11 02 25.8**	**+4.3**
	comp=N,29nm,0.8s							
CMAR	**Chiang Mai Arr**	**23.93**	**83**	P		P	**11 03 03.8**	**+2.6**
	comp=N,1.8nm,0.8s,baz=276,slow=9.3,SNR=10.0							
AAK	**Ala-Archa**	**25.39**	**1**	*eP*		**P**	**11 03 18.8**	**+4.5**
	comp=N,16nm,1.2s,mb4.4							
EKS2	**Erkin-Say**	**25.41**	**360**	*eP*		**P**	**11 03 17.5**	**+3.1**
	comp=N,28nm,1.1s,mb4.7							
GTA	**Gaotai**	**31.65**	**40**	P		**P**	**11 04 14.4**	**+4.2**
GTA				AP		pP	11 04 19.8	+3.6
GTA				XP		sP	11 04 24.3	+5.7
GTA				AMB		AMB		
	comp=Z,4.0nm,1.2s,mb4.1							
LZH	**Lanzhou**	**32.58**	**49**	*eP*		**P**	**11 04 23.5**	**+5.1**
LZH				AP		pP	11 04 28.3	+3.9
LZH				XP		sP	11 04 31.8	+4.9
LZH				AMB		AMB		
	comp=Z,19nm,1.4s,mb4.8							
LZH				AMB		AMB		
	comp=Z,81nm,4.2s							
KURK	**Kurchatov**	**33.69**	**5**	P		**P**	**11 04 28.6**	**+0.7**
	comp=Z,5.1nm,1.0s,mb4.4,baz=202,slow=8.7,SNR=11							
BVAR	**Borovoye Array**	**35.88**	**356**	P		**P**	**11 04 48.9**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=156,slow=11,SNR=3.3							
ZALV	**Zalesovo Beam**	**37.69**	**11**	P		**P**	**11 05 03.5**	**+1.4**
	comp=Z,2.2nm,0.5s,mb4.1,baz=208,slow=12,SNR=6.8							
HHC	**Hu-ho-hao-te**	**40.11**	**46**	*eP*		**P**	**11 05 24.6**	**+1.9**
HHC					AMB	AMB		
	comp=Z,19nm,0.9s,mb4.8							
HHC					AMB	AMB		
	comp=Z,146nm,4.6s							
ULN	**Ulaanbaatar**	**40.93**	**34**	P		**P**	**11 05 32.3**	**+2.9**
	comp=Z,4.2nm,1.0s,mb4.0							
BRTR	**Keskin Array B**	**41.42**	**311**	P		**P**	**11 05 33.0**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=111,slow=6.8,SNR=5.4							
CN2	**Changchun**	**50.78**	**47**	*eP*		**P**	**11 06 49.3**	**+2.1**
CN2					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
KSRS	**Korea Array**	**51.40**	**56**	P		**P**	**11 06 52.5**	**+0.6**
	comp=Z,1.0nm,0.5s,mb4.0,baz=257,slow=7.3,SNR=6.1							
LSZ	**Lusaka**	**55.38**	**237**	P		**P**	**11 07 19.5**	**-1.9**
	comp=Z,1.6nm,0.5s,mb4.3,baz=69,slow=6.9,SNR=5.5							
ARCES	**ARCESS Array B**	**60.12**	**342**	P		**P**	**11 07 56.9**	**+2.9**
	comp=Z,6.8nm,1.0s,mb4.6,baz=116,slow=4.1,SNR=4.6							
HFS	**Hagfors**	**60.52**	**330**	P		**P**	**11 07 58.7**	**+1.9**
	comp=Z,3.4nm,0.9s,mb4.5,baz=131,slow=5.9,SNR=2.8							
LBTB	**Lobatse**	**62.98**	**229**	P		**P**	**11 08 14.1**	**+0.1**
	comp=Z,2.4nm,0.5s,mb4.6,baz=92,slow=4.4,SNR=7.0							
LBTB	**Lobatse**	**62.98**	**229**	P		**P**	**11 08 14.1**	**+0.1**
BOSA	**Boshof**	**65.40**	**226**	P		**P**	**11 08 28.1**	**-1.7**
	comp=Z,4.1nm,1.0s,mb4.4,baz=326,slow=3.6,SNR=3.2							
TORD	**Torodi Ar. Bea**	**69.40**	**278**	P		**P**	**11 08 54.8**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=92,slow=4.9,SNR=5.9							
WRA	**Warramunga Arr**	**69.91**	**119**	P		**P**	**11 08 59.9**	**+1.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=306,slow=5.9,SNR=23							
ASAR	**Alice Springs**	**71.32**	**123**	P		**P**	**11 09 08.4**	**+1.5**
	comp=Z,1.3nm,0.6s,mb4.0,baz=302,slow=5.9,SNR=15							

*CSEM **24** 11:07:14.1, 3966N×2939E, h7km, MD2.7, After ERD*
DDA 24 11:07:14.1, 3966N×2939E, h7km±7km, Md2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ULDT	**Uludag**	**0.52**	**338**	*i* P		Pg	11 07 24.5	+0.3
ULDT				*i* S		Sg	11 07 32.7	+1.7
GDZ	**Gediz**	**0.57**	**173**	*i* P		Pg	11 07 23.8	-1.4
GDZ				*i* S		Sg	11 07 35.2	+2.6
BORA	**Eskisehir**	**0.85**	**75**	*i* P		Pg	11 07 28.8	-1.5
BORA				*i* S		Sg	11 07 43.5	+2.1
ESKT	**Eskisehir**	**1.14**	**97**	*i* P		Pn	11 07 35.9	-0.5
ESKT				*i* S		Sn	11 07 52.2	0.0
SEYT	**Eskypehyr**	**1.14**	**97**	*i* P		Pn	11 07 35.9	-0.5
SEYT				*i* S		Sn	11 07 52.2	0.0

*IDC **24** 11:35:41.2±1.1, 1702N×7307E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, MS3.7/2, Ms1 3.8/2, ms1mx3.3/26, Error ellipse: s-maj=29.6km s-min=24.7km az=35.0*
*ISCJB **24** 11:35:44.1±0.8, 1728N±004×739E±0.1, h10km, mb3.6/8, MS3.7/2, Error ellipse: s-maj=14.5km s-min=5.0km az=14.7*
*NDI **24** 11:35:45.3±2.7, 17.11N×7372E, h10km, ML4.3, mb4.2(NEIC)*
*NEIC **24** 11:35:47.3±1.4, 1715N×7389E, h10km, mb4.2/3, Error ellipse: s-maj=29.9km s-min=14.0km az=50.0*
ISC 24 11:35:45.2±1.8, 1719N±004×7395E±007, h4km±11km, n41, σ1℅60/44, mb3.6/8, MS3.7/2, 1D, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KAD	**Karad**	**0.26**	**62**	*eP*		**Pg**	**11 35 55.0**	**+4.9**
KAD				*eS*		**Sg**	**11 36 01.6**	**+8.1**
KAD				AML		AML	11 36 07.7	
	comp=N,6μm,0.6s							
KAD				AML		AML	11 36 08.2	
	comp=E,3μm,0.2s							
POO	**Poona**	**1.34**	**356**	*eP*		**Pn**	**11 36 11.4**	**+0.7**
POO				*eS*		**Sb**	**11 36 29.5**	**+1.1**
POO				AML		AML	11 36 30.0	
	comp=E,3μm,0.1s							
POO				AML		AML	11 36 34.2	
	comp=N,3μm,0.3s							
GOA	**Goa**	**1.69**	**184**	⇓*iP*		**Pn**	**11 36 14.2**	**-1.3**
GOA				*i* S		**Sn**	**11 36 35.9**	**-1.7**
GOA				*ex*		x	11 36 40.8	
	comp=E,5μm,0.4s							
GOA				*ex*		x	11 36 41.3	
	comp=N,5μm,0.5s							
BOM	**Bombay**	**2.01**	**328**	*eP*		**Pn**	**11 36 10.8**	**-9.2**
BOM				*eS*		**Sn**	**11 36 37.0**	**-8.6**
BOM				*ex*		x	11 36 37.9	
	comp=N,15μm,0.3s							
BOM				*ex*		x	11 36 38.3	
	comp=E,21μm,0.3s							
LATR	**Latur**	**2.77**	**63**	*eP*		**Pn**	**11 36 32.0**	**+1.6**
LATR				*ex*		x	11 37 17.2	
MNGI	**Mangalore**	**4.31**	**169**	*i* P		**Pn**	**11 36 56.8**	**+5.2**
MNGI				*i* S		**Sn**	**11 37 45.5**	**+3.2**
HYB	**Hyderabad**	**4.41**	**86**	*e*Pn		**Pn**	**11 36 54.0**	**+1.1**
HYB				*e*Pg		**Pg**	**11 37 08.0**	**-1.7**
HYB				*e*Sg		**Sg**	**11 38 07.0**	**+0.2**
HYB	**Hyderabad**	**4.41**	**86**	*i* Pn		**Pn**	**11 36 54.0**	**+1.1**
HYB				*e*Pg		**Pg**	**11 37 08.0**	**-1.7**
HYB				*e*Sg		**Sg**	**11 38 07.0**	**+0.2**
AKL	**Akola**	**4.54**	**39**	*eP*		**Pn**	**11 36 57.1**	**+2.3**
AKL				*eS*		**Sn**	**11 37 50.2**	**+2.1**
AKL				AML		AML	11 38 13.2	
	comp=E,1μm,0.5s							
AKL				AML		AML	11 38 13.5	
	comp=N,997nm,0.3s							
NGP	**Nagpur**	**6.23**	**50**	*eP*		**Pn**	**11 37 19.4**	**+1.5**
NGP				*eS*		**Sn**	**11 38 28.2**	**-1.4**
MDRS	**Chennai**	**7.33**	**123**	*ex*		x	11 39 18.2	
MDRS				*ex*		x	11 40 18.2	
NDI	**New Delhi**	**11.83**	**14**	*eS*		x	11 40 40.0	
LGTI	**Lohaghat**	**13.50**	**24**	*ex*		x	11 41 20.0	
PTH	**Pithoragarh**	**13.58**	**24**	*eS*		x	11 41 22.0	
PYUN	**Piuthan**	**13.69**	**36**	*eP*		**Pn**	**11 38 59.4**	**-0.8**
KOLN	**Koldanda**	**13.79**	**39**	*eP*		**Pn**	**11 39 00.0**	**-1.6**
SMLA	**Simla**	**14.18**	**11**	*eP*		**Pn**	**11 39 06.6**	**-0.4**
SMLA				*eS*		x	11 41 34.2	
DANN	**Dangsing**	**14.32**	**37**	*eP*		**Pn**	**11 39 07.5**	**-1.3**
BHK	**Bhakra**	**14.34**	**9**	*ex*		x	11 42 18.6	
GKN	**Gorkha**	**14.59**	**41**	*eP*		**Pn**	**11 39 10.6**	**-1.9**
DMN	**Daman**	**14.62**	**43**	*eP*		**Pn**	**11 39 10.9**	**-2.0**
PKI	**Pulchoki**	**14.79**	**44**	*eP*		**Pn**	**11 39 12.9**	**-2.3**
KKN	**Kakani**	**14.86**	**43**	*eP*		**Pn**	**11 39 13.6**	**-2.5**
RAMN	**Ramite**	**15.22**	**48**	*eP*		**Pn**	**11 39 19.6**	**-1.4**
THN	**Thein Dam**	**15.26**	**6**	*ex*		x	11 42 29.3	
GUN	**Gumba**	**15.33**	**44**	*eP*		**Pn**	**11 39 20.0**	**-2.5**
JIRN	**Jiri**	**15.37**	**45**	*eP*		**Pn**	**11 39 21.7**	**-1.3**
TAPN	**Taplejung**	**16.25**	**49**	*eP*		**Pn**	**11 39 33.7**	**-0.7**
KBL	**Kabul**	**17.83**	**347**	*e*Pn		**Pn**	**11 39 56.9**	**+2.6**
	comp=N,13nm,1.4s							
LSA	**Lhasa**	**20.07**	**49**	*eP*		**P**	**11 40 23.4**	**+3.7**
	comp=N,16nm,0.8s							
CMAR	**Chiang Mai Arr**	**23.83**	**83**	P		P	**11 41 02.5**	**+2.8**
	comp=N,1.0nm,0.8s,mb3.3,baz=264,slow=8.6,SNR=8.7							
AML	**Almayashu**	**24.86**	**360**	P		**P**	**11 41 11.1**	**+2.3**
	comp=N,7.6nm,1.1s,mb4.1							
MKAR	**Makanchi Array**	**30.32**	**11**	P		**P**	**11 41 58.2**	**+0.5**
	comp=N,0.8nm,0.9s,mb3.5,baz=197,slow=9.1,SNR=6.0							
MKAR	**Makanchi Array**	**30.32**	**11**	P		**P**	**11 41 58.2**	**+0.5**
ZALV	**Zalesovo Beam**	**37.65**	**11**	P		**P**	**11 43 01.4**	**+0.3**
	comp=N,1.0nm,0.6s,mb3.7,baz=200,slow=7.3,SNR=5.9							
KAPI	**Kappang**	**50.33**	**112**	LR		LR	12 05 48.0	
	comp=N,28nm,21.4s,MS3.2,baz=157,slow=35							
KSRS	**Korea Array**	**51.30**	**56**	P		**P**	**11 44 51.7**	**+1.1**
	comp=N,1.0nm,0.8s,mb3.8,baz=259,slow=7.5,SNR=4.0							
NOA	**NORSAR Array B**	**61.98**	**331**	LR		LR	12 17 27.8	
	comp=N,182nm,20.0s,MS4.2,baz=270,slow=41							
TORD	**Torodi Ar. Bea**	**69.50**	**278**	P		**P**	**11 46 46.4**	**-9.2**
	comp=N,0.4nm,0.5s,mb3.6,baz=55,slow=7.2,SNR=3.9							
WRA	**Warramunga Arr**	**69.83**	**119**	P		**P**	**11 46 58.7**	**+1.2**
	comp=N,0.7nm,0.6s,mb3.8,baz=306,slow=5.7,SNR=15							
ASAR	**Alice Springs**	**71.24**	**123**	P		**P**	**11 47 07.5**	**+1.5**
	comp=N,0.4nm,0.6s,mb3.5,baz=309,slow=5.5,SNR=8.6							

*IDC **24** 11:46:18.6±1.6, 1189S×16636E, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/17, mbtmp4.0/7, MS3.5/4, Ms1 3.5/4, ms1mx3.2/26, Error ellipse: s-maj=45.1km s-min=29.1km az=93.0*
*ISCJB **24** 11:46:25.3±3.2, 120S±01×1663E±02, h62km±23km, mb4.0/7, Error ellipse: s-maj=42.6km s-min=17.6km az=153.4*
*NEIC **24** 11:46:29.2±2.7, 12.11S×166.11E, h65km±15km, Error ellipse: s-maj=45.4km s-min=13.7km az=55.0*
ISC 24 11:46:27.5±2.6, 120S±01×1663E±02, h64km±18km, n13, σ0℅71/9, mb4.0/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HNR	**Honiara**	**6.72**	**291**	P		**Pn**	**11 48 03.8**	**+0.3**
DZM	**Mont Dzumac**	**10.06**	**179**	*eP*		**Pn**	**11 48 49.1**	**-0.1**
CTA	**Charters Tower**	**20.87**	**245**	LR		LR	11 58 01.4	
	comp=Z,149nm,20.0s,baz=47,slow=34							
AFI	**Afiamalu**	**21.47**	**98**	LR		LR	11 56 50.6	
	comp=Z,59nm,18.9s,baz=125,slow=30							
URZ	**Urewera**	**27.92**	**162**	LR		LR	12 01 34.4	
	comp=Z,123nm,19.8s,baz=17,slow=33							
STKA	**Stephens Creek**	**30.17**	**225**	P		**P**	**11 52 32.1**	**+0.5**
	1.5nm,0.8s,mb3.8,baz=58,slow=12,SNR=3.8							
STKA				LR		LR	12 02 29.2	
	comp=Z,123nm,19.6s,baz=24,slow=32							
WRA	**Warramunga Arr**	**31.69**	**251**	P		**P**	**11 52 44.6**	**-0.6**
	1.9nm,0.6s,mb4.1,baz=84,slow=9.1,SNR=27							
WRA				PcP		PcP	11 55 36.6	+0.8
	1.0nm,0.7s,baz=76,slow=2.5,SNR=8.8							
ASAR	**Alice Springs**	**32.88**	**245**	P		**P**	**11 52 54.9**	**-0.7**
	1.9nm,0.6s,mb4.2,baz=67,slow=9.9,SNR=37							
ASAR				PcP		PcP	11 55 39.0	-0.1
	1.1nm,0.7s,baz=67,slow=2.6,SNR=11							
PPT	**Papeete**	**42.97**	**103**	*e*LR		LR	12 06 32.4	
	123nm,26.2s							
KSRS	**Korea Array**	**60.92**	**326**	P		**P**	**11 56 32.7**	**-1.1**
	1.3nm,0.9s,mb4.0,baz=137,slow=6.8,SNR=4.4							
VNDA	**Vanda**	**65.60**	**181**	P		**P**	**11 57 04.4**	**+0.2**
	0.5nm,0.6s,mb3.7,baz=337,slow=7.4,SNR=4.2							
CMAR	**Chiang Mai Arr**	**72.96**	**294**	P		**P**	**11 57 52.1**	**+1.5**
	1.0nm,0.8s,mb3.8,baz=134,slow=4.8,SNR=6.4							
MKAR	**Makanchi Array**	**94.54**	**317**	P		**P**	**11 59 41.0**	**0.0**
	1.3nm,0.5s,mb4.6,baz=90,slow=6.7,SNR=23							

ISC 24 12:09:39.8±1.1, 4833N±007×1980E±007, h10km±11km, n5, σ0℅62/10, 1C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PSZ	**Piszkesteto**	**0.41**	**171**	⇑*e*Pg		**Pg**	**12 09 47.3**	**-0.6**
PSZ				*e*Sg		**Sg**	**12 09 54.0**	**+0.6**
VYHS	**Vyhne**	**0.66**	**285**	*e*PG		**Pg**	**12 09 52.2**	**-0.5**
VYHS				*e*SG		**Sg**	**12 10 01.7**	**+0.3**
KOLL	**Kolacno**	**0.96**	**286**	*e*PN		**Pn**	**12 09 59.0**	**-0.4**
KOLL				*e*SN		**Sn**	**12 10 13.2**	**+0.1**
CRVS	**Cervenica-Dubn**	**1.25**	**62**	*e*PN		**Pn**	**12 10 02.8**	**-0.4**
CRVS				*e*SN		**Sn**	**12 10 19.6**	**-0.4**
STHS	**Stebnicka Huta**	**1.45**	**41**	*e*PN		**Pn**	**12 10 06.9**	**+0.8**
STHS				*e*SN		**Sn**	**12 10 28.9**	**+3.8**

MAN 24 12:16:56, 845N×12618E, h20km, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BIPH	**Bislig**	**0.32**	**146**	⇑*iP*		**Pb**	12 17 03.6	+0.5
BIPH				*i* S		Sb	12 17 09.2	+1.4
BUTP	**Butuan**	**0.75**	**313**	*eP*		**Pb**	12 17 10.2	-0.2
BUTP				*eS*		Sb	12 17 19.8	-0.5
BUKP	**Musuan**	**1.24**	**243**	*eP*		Pn	12 17 18.4	+0.1
BUKP				*eS*		Sb	12 17 36.5	+2.1
SCPH	**Surigao**	**1.49**	**333**	*eP*		Pn	12 17 22.0	+0.4
MATI	**Mati**	**1.50**	**177**	*eP*		Pn	12 17 21.7	-0.1
MATI				*eS*		Sn	12 17 41.6	+0.9
BESP	**Borongan**	**3.21**	**347**	*eP*		Pn	12 17 54.0	+8.6
BESP				*eS*		Sn	12 18 32.6	+9.5

*DDA **24** 12:20:47.5, 38.15N×2655E, h7km±5km, Md3.1*
*CSEM **24** 12:20:48.5±0.1, 3821N×2667E, h12km, MD3.1, Error ellipse: s-maj=4.5km s-min=3.2km az=39.0*
*ISCJB **24** 12:20:49.5±0.6, 3820N±003×2670E±004, h11km±4km, Error ellipse: s-maj=5.9km s-min=4.6km az=33.1*
*THE **24** 12:20:49.6, 3824N×2671E, h0km±2km, Error ellipse: s-maj=2.5km s-min=0.8km az=172.0*
ISC 24 12:20:49.7±0.5, 3821N±003×2670E±004, h14km±4km, n18, σ0℅82/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
URLA	**Izmir**	**0.17**	**332**	*i* P		**Pg**

KAD					AML	AML	12 35 50.0		
	comp=N,4μm,0.4s								
KAD					AML	AML	12 35 57.5		
	comp=E,2μm,0.4s								
POO	**Poona**	**1.30**	**360**	*eP*	**Pn**	**Pn**	**12 35 53.9**	**+1.6**	
POO				*eS*	**Sn**	**Sn**	**12 36 11.8**	**+3.1**	
POO					AML	AML	12 36 12.4		
	comp=E,3μm,0.1s								
POO					AML	AML	12 36 14.0		
	comp=N,2μm,0.3s								
GOA	**Goa**	**1.73**	**181**	*iP*	**Pn**	**Pn**	**12 35 56.9**	**-1.3**	
GOA				*i S*	**Sn**	**Sn**	**12 36 18.3**	**-1.0**	
GOA				*ex*	x	x	12 36 22.5		
	comp=N,5μm,0.2s								
GOA				*ex*	x	x	12 36 22.6		
	comp=E,8μm,0.4s								
BOM	**Bombay**	**1.94**	**329**	*eP*	**Pn**	**Pn**	**12 35 53.1**	**-8.0**	
BOM				*eS*	**Sn**	**Sn**	**12 36 18.9**	**-5.7**	
LATR	**Latur**	**2.83**	**65**	*eP*	**Pn**	**Pn**	**12 36 13.6**	**+0.2**	
LATR				*ex*	x	x	12 36 58.0		
MNGI	**Mangalore**	**4.36**	**168**	*eP*	**Pn**	**Pn**	**12 36 34.5**	**+0.1**	
HYB	**Hyderabad**	**4.49**	**87**	*e*Pn	**Pn**	**Pn**	**12 36 38.5**	**+2.3**	
HYB				*e*Pg	**Pn**	**Pn**	**12 36 50.0**	**+14**	
HYB				*e*Sn	**Sn**	**Sn**	**12 37 28.0**	**+0.5**	
HYB				*e*Sg	**Sn**	**Sn**	**12 37 48.5**	**+21**	
AKL	**Akola**	**4.57**	**40**	*eP*	**Pn**	**Pn**	**12 36 40.1**	**+2.8**	
AKL				*eS*	**Sn**	**Sn**	**12 37 31.6**	**+2.1**	
AKL					AML	AML	12 37 36.0		
	comp=N,166nm,0.2s								
AKL					AML	AML	12 37 36.3		
	comp=E,182nm,0.2s								
NGP	**Nagpur**	**6.27**	**51**	*eP*	**Pn**	**Pn**	**12 37 01.6**	**+1.0**	
NGP				*eS*	**Sn**	**Sn**	**12 38 09.8**	**-1.6**	
MDRS	**Chennai**	**7.42**	**123**	*ex*	x	x	12 39 05.2		
VIS	**Vishakhapatnam**	**9.05**	**85**	*iP*	**Pn**	**Pn**	**12 37 39.9**	**+1.0**	
VIS				*i* x	x	x	12 40 09.0		
AJM	**Ajmer**	**9.24**	**4**	*eS*	**Sn**	**Sn**	**12 39 19.0**	**-5.5**	
AJM				*i S*	Sn	Sn	12 40 15.0	+51	
ALBI	**Allahabad**	**10.93**	**41**	*ex*	x	x	12 41 02.5		
NDI	**New Delhi**	**11.81**	**15**	*ex*	x	x	12 40 39.0		
PTH	**Pithoragarh**	**13.58**	**24**	*ex*	x	x	12 41 46.0		
PYUN	**Piuthan**	**13.71**	**36**	*eP*	**Pn**	**Pn**	**12 38 40.9**	**-1.7**	
	comp=E,12nm,0.4s								
KOLN	**Koldanda**	**13.82**	**39**	*eP*	**Pn**	**Pn**	**12 38 42.5**	**-1.6**	
	comp=E,11nm,0.2s								
DANN	**Dangsing**	**14.34**	**38**	*eP*	**Pn**	**Pn**	**12 38 50.1**	**-1.1**	
GKN	**Gorkha**	**14.62**	**41**	*eP*	**Pn**	**Pn**	**12 38 52.7**	**-2.3**	
	comp=E,10nm,0.3s								
DMN	**Daman**	**14.65**	**43**	*eP*	**Pn**	**Pn**	**12 38 54.3**	**-1.1**	
	comp=E,7.0nm,0.3s								
PKI	**Pulchoki**	**14.82**	**44**	*eP*	**Pn**	**Pn**	**12 38 56.4**	**-1.4**	
KKN	**Kakani**	**14.88**	**43**	*eP*	**Pn**	**Pn**	**12 38 57.0**	**-1.6**	
	comp=E,11nm,0.3s								
RAMN	**Ramite**	**15.25**	**48**	*eP*	**Pn**	**Pn**	**12 39 02.8**	**-0.7**	
	comp=E,10nm,0.3s								
GUN	**Gumba**	**15.36**	**44**	*eP*	**Pn**	**Pn**	**12 39 04.1**	**-0.8**	
JIRN	**Jiri**	**15.41**	**45**	*eP*	**Pn**	**Pn**	**12 39 04.1**	**-1.4**	
	comp=E,8.2nm,0.3s								
ODAN	**Odare**	**15.77**	**50**	*eP*	**Pn**	**Pn**	**12 39 09.3**	**-1.0**	
	comp=E,21nm,0.7s								
TAPN	**Taplejung**	**16.29**	**49**	*eP*	**Pn**	**Pn**	**12 39 16.7**	**-0.2**	
CMAR	**Chiang Mai Arr**	**23.90**	**83**	P	**P**	**P**	**12 40 45.9**	**+4.2**	
	comp=E,0.3nm,0.3s,baz=272,slow=10,SNR=6.5								
MKAR	**Makanchi Array**	**30.30**	**12**	P	**P**	**P**	**12 41 40.5**	**+1.6**	
	comp=E,0.4nm,0.8s,baz=189,slow=6.9,SNR=4.0								
ZALV	**Zalesovo Beam**	**37.62**	**11**	P	**P**	**P**	**12 42 44.5**	**+2.2**	
	comp=E,0.5nm,0.5s,mb3.5,baz=214,slow=9.6,SNR=5.0								
KSRS	**Korea Array**	**51.35**	**56**	P	**P**	**P**	**12 44 34.6**	**+2.4**	
	comp=E,0.7nm,0.7s,mb3.7,baz=263,slow=8.4,SNR=3.4								
TORD	**Torodi Ar. Bea**	**69.41**	**278**	P	**P**	**P**	**12 46 36.1**	**0.0**	
	comp=E,0.3nm,0.9s,baz=84,slow=4.5,SNR=2.8								
WRA	**Warramunga Arr**	**69.93**	**119**	P	**P**	**P**	**12 46 40.6**	**+1.4**	
	comp=E,0.5nm,0.6s,mb3.6,baz=306,slow=5.8,SNR=10								
ASAR	**Alice Springs**	**71.33**	**123**	P	**P**	**P**	**12 46 49.4**	**+1.7**	
	comp=E,0.3nm,0.6s,mb3.4,baz=302,slow=5.8,SNR=9.0								

CSEM ***24*** *12:36:14.9±0.3, 40.42N×21.88E, h15km, ML2.5/2, Error ellipse: s-maj=11.7km s-min=8.2km az=68.0*
ISCJB ***24*** *12:36:15.3±1.1, 40.38N±005×2176E±008, h0km±11km, Error ellipse: s-maj=10.6km s-min=8.6km az=150.8*
THE ***24*** *12:36:16.0, 40.39N×21.80E, h15km±8km, ML2.5/2, Error ellipse: s-maj=9.1km s-min=1.9km az=51.0*

ISC 24 12:36:15.7±1.0, 4037N±005×2173E±008, h8km±9km, n14, σ1§05/22, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
FNA	**Florina**	**0.49**	**326**	P		**Pg**	**12**	**36**	**26.1 +0.9**
LIT	**Litokhoron**	**0.64**	**115**	P		**Pg**	**12**	**36**	**26.9 -1.1**
LIT				S		**Sg**	**12**	**37**	**0.0 +0.7**
GRG	**Griva**	**0.77**	**41**	P		**Pg**	**12**	**36**	**28.9 -1.7**
GRG				S		**Sg**	**12**	**37**	**41.4 +0.8**
THL	**Klokotos Trika**	**0.84**	**165**	P		**Pg**	**12**	**36**	**32.6 +0.8**
KRUS	**Krusevo**	**1.06**	**340**	*e*Pn		**Pn**	**12**	**36**	**36.4 -0.5**
KRUS				*e*Sn		**Sn**	**12**	**36**	**56.3 +4.4**
VAY	**Valandovo**	**1.14**	**34**	*e*Pn		**Pn**	**12**	**36**	**36.7 -1.3**
VAY				*e*Sn		**Sn**	**12**	**36**	**55.0 +1.2**

IDC 24 12:43:54.9±9.4, 2275N×14324E, h228km±93km, mb3.0/4, mb1 3.1/5, mb1mx3.0/21, mbtmp2.9/5, Error ellipse: s-maj=55.0km s-min=17.3km az=86.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
KSRS	**Korea Array**	**19.72**	**321**	P		P	**12**	**48**	**07.6 +0.3**
	0.1nm,0.3s,baz=149,slow=8.8,SNR=7.3								
WRA	**Warramunga Arr**	**43.31**	**192**	P		P	12	51	34.6 +0.1
	0.3nm,0.3s,baz=15,slow=9.5,SNR=16								
ASAR	**Alice Springs**	**47.02**	**192**	P		P	12	52	03.4 -0.2
	0.4nm,1.1s,baz=6.2,slow=11,SNR=4.0								
MKAR	**Makanchi Array**	**54.04**	**312**	P		P	12	52	55.6 -0.1
	0.3nm,0.5s,baz=83,slow=8.7,SNR=5.2								
YKA	**Yellowknife Ar**	**75.51**	**28**	P		P	12	55	13.9 +0.1
	0.9nm,0.6s,baz=298,slow=6.3,SNR=4.2								

KRSC 24 12:49:00.0±0.1, 5554N×16274E, h54km±53km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
KBTR	**Krutoberegovo**	**0.67**	**4**	*eP*		Pn	12	49	14.3 +0.8
KBTR				*i S*		Sn	12	49	25.5 +2.1
ZLN	**Zelenaya**	**1.19**	**294**	*eP*		Pn	12	49	22.1 +1.7
ZLN				*i S*		Sn	12	49	37.7 +2.2
BZMR	**Bezymyannaya**	**1.33**	**288**	*eP*		Pn	12	49	24.3 +2.1
BZMR				*i S*		Sn	12	49	41.1 +2.2
KRSR	**Krestovskiy**	**1.40**	**300**	*eP*		Pn	12	49	24.4 +1.2
KRSR				*i S*		Sn	12	49	41.4 +0.9
KLY	**Klyuchi**	**1.41**	**304**	*eP*		Pn	12	49	23.2 0.0
KLY				*i S*		Sn	12	49	40.6 -0.1
SRKR	**Sorokina**	**1.42**	**322**	*eP*		Pn	12	49	24.9 +1.5
SRKR				*i S*		Sn	12	49	43.1 +2.0
KMNR	**Kamenistaya**	**1.44**	**280**	*eP*		Pn	12	49	25.9 +2.3
KMNR				*i S*		Sn	12	49	44.6 +3.2
KPT	**Kopyto**	**1.49**	**288**	*eP*		Pn	12	49	26.5 +2.2
KPT				*i S*		Sn	12	49	46.5 +3.9
TUMR	**Tumrok**	**1.50**	**261**	*eP*		Pn	12	49	26.9 +2.4
TUMR				*i S*		Sn	12	49	45.7 +2.7
KOZ	**Kozyrevsk**	**1.70**	**289**	*eP*		Pn	12	49	30.3 +3.1
KOZ				*i S*		Sn	12	49	52.0 +4.2
SRDR	**Sredinnyy**	**1.87**	**296**	*eP*		Pn	12	49	32.5 +3.0
SRDR				*i S*		Sn	12	49	56.2 +4.2
SPN	**Mys Shipunski**	**2.92**	**214**	P		Pn	12	49	46.0 +2.1
SPN				*i S*		Sn	12	50	18.3 +0.6
NLC	**Nalytchevo**	**3.10**	**221**	P		Pn	12	49	47.8 +1.5
NLC				*i S*		Sn	12	50	23.1 +1.1
AVH	**Avacha**	**3.27**	**227**	P		Pn	12	49	52.0 +3.4

ISCJB ***24*** *13:11:50.0±0.5, 728N±007×7838W±005, h33km, mb3.5/5, Error ellipse: s-maj=9.7km s-min=6.8km az=22.1*
IDC ***24*** *13:11:50.7±0.7, 736N×7838W, h21km±4km, mb3.5/4, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, ML2.9/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/22, Error ellipse: s-maj=30.3km s-min=19.2km az=39.0*
NEIC ***24*** *13:11:51.9±0.6, 728N×7845W, h35km, mb4.4/3, Error ellipse: s-maj=13.7km s-min=10.6km az=76.0*
CASC ***24*** *13:11:52.0±1.2, 728N×7845W, h35km, MD5.0, mb4.4(NEIC)*

ISC 24 13:11:52.3±0.5, 724N±006×7837W±005, h35km, n24, σ1§27/23, mb3.5/5, Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
BCIP	**Isla Barro Col**	**2.40**	**323**	*e*Pn		**Pn**	**13**	**12**	**25.8 -3.4**
BCIP				*e*Sn		**Sn**	**13**	**13**	**00.1 +2.7**
ROSC	**El Rosal**	**4.66**	**120**	Pn		**Pn**	**13**	**13**	**03.4 +3.1**
	2.4nm,0.3s,baz=277,slow=16,SNR=5.2								
ROSC				Sn		**Sn**	**13**	**14**	**01.1 +7.8**
	2.4nm,0.3s,baz=104,slow=23,SNR=5.4								
ROSC				LR		LR	13	14	51.5
	comp=Z,241nm,21.5s,baz=1.2,slow=38								
ROSC	**El Rosal**	**4.66**	**120**	*e*Pn		**Pn**	**13**	**13**	**00.7 +0.4**
ACR	**Cerro Adams**	**4.96**	**287**	*e*P		**Pn**	**13**	**13**	**03.3 -1.0**
BUS	**Buena Vista**	**5.81**	**294**	*e*P		**Pn**	**13**	**13**	**15.0 -1.0**
URSC	**Urasca**	**5.94**	**296**	*e*P		**Pn**	**13**	**13**	**17.5 -0.3**
QCR	**Quepos**	**6.13**	**291**	*e*P		**Pn**	**13**	**13**	**20.8 +0.3**
OTAV	**Otavalo**	**6.96**	**181**	*e*Pn		**Pn**	**13**	**13**	**31.7 -0.1**
	2.8nm,0.6s								
SDV	**Santo Domingo**	**7.83**	**77**	Pn		**Pn**	**13**	**13**	**43.1 -0.8**
	1.4nm,0.3s,baz=274,slow=11,SNR=18								
SDV				Sn		**Sn**	**13**	**15**	**11.0 -0.4**
	2.7nm,0.3s,baz=348,slow=22,SNR=9.1								
SDV				LR		LR	13	17	20.1
	comp=Z,297nm,18.3s,baz=4.7,slow=42								
SDV	**Santo Domingo**	**7.83**	**77**	*e*Pn		**Pn**	**13**	**13**	**43.5 -0.4**
	48nm,0.9s								
SDV				*e*Sn		**Sn**	**13**	**15**	**09.5 -1.9**
SDDR	**Presa de Saban**	**13.55**	**30**	*e*Pn		**Pn**	**13**	**15**	**02.3 +0.1**
	42nm,1.0s								
ATAH	**Atahualpa**	**14.15**	**180**	LR		LR	13	20	25.5
	comp=Z,176nm,21.3s,baz=238,slow=36								
SJG	**San Juan**	**16.08**	**47**	P		**Pn**	**13**	**15**	**36.5 +0.6**
	86nm,1.4s								
CMIG	**Matias Romero**	**18.86**	**303**	LR		LR	13	23	16.3
	comp=Z,126nm,22.0s,baz=5.7,slow=36								
NNA	**Nana**	**19.16**	**175**	*e*P		**Pn**	**13**	**16**	**12.1 -1.9**
	38nm,1.3s								
LPAZ	**La Paz**	**25.48**	**157**	*e*P		**P**	**13**	**17**	**19.1 +1.8**
	4.1nm,1.2s,mb3.8								
SIV	**San Ignacio**	**28.74**	**144**	P		**P**	**13**	**17**	**49.8 +3.1**
	1.4nm,0.9s,mb3.7,baz=0.0,slow=11								
PDAR	**Pinedale Array**	**44.79**	**327**	P		**P**	**13**	**20**	**03.1 +0.5**
	0.2nm,0.6s,mb3.1,baz=126,slow=7.3,SNR=3.2								
PDAR				pP		pP	13	20	08.4 -4.6
	1.3nm,1.1s,baz=139,slow=9.2,SNR=5.4								
NVAR	**Mina Array Bea**	**47.55**	**317**	P		**P**	**13**	**20**	**25.4 +1.0**
	0.6nm,1.0s,mb3.6,baz=119,slow=10,SNR=3.3								
NVAR				pP		pP	13	20	32.6 -2.3
	0.5nm,0.6s,baz=122,slow=5.6,SNR=3.5								
NVAR	**Mina Array Bea**	**47.55**	**317**	P		**P**	**13**	**20**	**25.4 +1.0**
NVAR				pP		pP	13	20	32.6 -2.3
YKA	**Yellowknife Ar**	**61.16**	**342**	LR		LR	13	50	11.8
	comp=Z,45nm,18.2s,baz=70,slow=38								
TORD	**Torodi Ar. Bea**	**78.75**	**78**	P		**P**	**13**	**23**	**50.9 -1.1**
	0.3nm,0.5s,mb3.5,baz=288,slow=7.2,SNR=2.5								
ASAR	**Alice Springs**	**144.99**	**239**	PKPbc		PKPdf	13	31	25.0 -1.7
	1.4nm,0.8s,baz=117,slow=3.8,SNR=11								
ASAR				pPKPbc			13	31	32.1
	3.3nm,0.9s,baz=121,slow=3.9,SNR=15								
WRA	**Warramunga Arr**	**145.87**	**245**	PKPbc		PKPbc	13	31	27.8 -1.1
	0.7nm,0.8s,baz=92,slow=2.3,SNR=6.3								
WRA				pPKPbc		pPKPbc	13	31	36.2 -4.1
	2.1nm,0.9s,baz=100,slow=3.5,SNR=9.9								

IDC ***24*** *13:48:32.0±0.6, 382S×152.02E, h0km, mb4.6/13, mb1 4.6/15, mb1mx4.6/19, mbtmp4.6/15, ML4.0/2, MS4.5/18, Ms1 4.5/18, ms1mx4.4/22, Error ellipse: s-maj=19.1km s-min=12.2km az=91.0*
ISCJB ***24*** *13:48:35.4±1.6, 387S±004×152.12E±005, h27km±10km, mb5.0/83, MS4.7/32, Error ellipse: s-maj=8.4km s-min=6.6km az=154.1*
MOS ***24*** *13:48:36.6±1.3, 378S×151.97E, h33km, mb5.3/24, Error ellipse: s-maj=12.0km s-min=8.2km az=100.3*
NEIC ***24*** *13:48:40.0±1.3, 394S×152.11E, h55km±12km, mb5.0/46, MS4.8/2, Error ellipse: s-maj=7.9km s-min=7.1km az=61.0*
GCMT ***24*** *13:48:43.0±0.1, 370S×152.24E, h12km, MW5.3/100, Moment Tensor Solution. s62,c98; s100,c190; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr=0.24±.02; Mθθ 1.11±.01; Mϕϕ -0.87±.01; Mrθ 0.13±.04; Mθϕ 0.34±.01; Mϕr -0.27±.04; Best double couple: M0 1.10300×10^17 NP1:ϕs37.00000°, δ74.00000°, λ-168.00000°. NP2:ϕs304.00000°, δ79.00000°, λ-17.00000°. Principal axes: T 1.1740, Plg4.0000°, Azm351.0000°; N -0.1410, Plg70.0000°, Azm91.0000°; P -1.0320, Plg20.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***24*** *13:48:44.3, 384S×152.08E, h89km, mB5.3, mb4.9, Ms5.0, Msz4.7*
DJA ***24*** *13:49:02, 473S×150.81E, h134km, Mw5.6/5*

ISC 24 13:48:39.7±1.1, 393S±004×15214E±005, h49km±9km, h83km±2.1km:pP-P, n185, σ1§21/191, mb5.0/83, MS4.7/32, 3C-1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
HNR	**Honiara**	**9.49**	**126**	Pn		**Pn**	**13**	**50**	**51.8 -2.0**
	4.7nm,0.3s,baz=263,slow=8.1,SNR=3.0								
HNR				Sn		**Sn**	**13**	**52**	**43.2 +4.1**
	7.2nm,0.3s,baz=344,slow=20,SNR=3.4								
HNR	**Honiara**	**9.49**	**126**	*e*Pn		**Pn**	**13**	**50**	**54.6 +0.8**
HNR				*e*Sn		**Sn**	**13**	**52**	**44.3 +5.2**
HNR	**Honiara**	**9.49**	**126**	*eP*		**Pn**	**13**	**50**	**57.0 +3.2**
HNR				*e*			13	52	44.3
HNR				pmax		pmax			
	comp=Z,394nm,0.8s								
COEN	**Coen**	**13.32**	**221**	*e*Pn		**Pn**	**13**	**51**	**46.1 -0.1**
COEN	**Coen**	**13.32**	**221**	P		**Pn**	**13**	**51**	**46.7 +0.5**
	comp=Z,11nm,0.9s								
CTA	**Charters Tower**	**17.05**	**199**	*eP*		**Pn**	**13**	**52**	**38.0 +3.2**
	comp=Z,18nm,0.9s								
CTA				*e*S		**S**	**13**	**55**	**49.9 -1.3**
CTA	**Charters Tower**	**17.05**	**199**	P		**Pn**	**13**	**52**	**33.8 -1.0**
	comp=Z,0.1nm,0.3s,baz=304,slow=3.6,SNR=3.1								
CTA				LR		LR	13	58	25.7
	comp=Z,2μm,20.9s,baz=19,slow=35								
CTAO	**Charters Tower**	**17.05**	**199**	*eP*		**Pn**	**13**	**52**	**35.7 +1.0**
	comp=Z,79nm,1.3s								
CTAO	**Charters Tower**	**17.05**	**199**	*eP*		**Pn**	**13**	**52**	**37.4 +2.6**
CTAO				pmax		pmax			
	comp=Z,79nm,1.3s								
CTAO	**Charters Tower**	**17.05**	**199**	P		**Pn**	**13**	**52**	**36.2 +1.4**
	comp=Z,54nm,1.7s								
GUMO	**Guam**	**18.84**	**338**	LR		LR	13	59	04.3
	comp=Z,1μm,19.0s,baz=153,slow=34								
KAKA	**Kakadu**	**21.33**	**245**	*e*P		Px	13	53	08.7
	comp=Z,41nm,0.9s								
EIDS	**Eidsvold**	**21.34**	**183**	*eP*		**P**	**13**	**53**	**18.8 -4.0**
	comp=Z,56nm,1.2s,mb4.8								
DZM	**Mont Dzumac**	**22.75**	**144**	*eP*		**P**	**13**	**53**	**36.6 -1.3**
	comp=Z,57nm,1.0s,mb5.0								
WRAB	**Tennant Creek**	**23.53**	**226**	P		**P**	**13**	**53**	**44.0 -1.7**
	comp=Z,456nm,0.8s,mb6.0,SNR=24								
WRAB	**Tennant Creek**	**23.53**	**226**	*eP*		**P**	**13**	**53**	**44.5 -1.2**
	comp=Z,70nm,0.9s,mb5.1								
WRAB	**Tennant Creek**	**23.53**	**226**	*eP*		**P**	**13**	**53**	**44.5 -1.2**
WRAB				pmax		pmax			
	comp=Z,70nm,0.9s,mb5.1								
WRAB	**Tennant Creek**	**23.53**	**226**	P		**P**	**13**	**53**	**44.7 -1.0**
	comp=Z,101nm,1.0s,comp=Z,1μm,mb5.2								
WB2	**Warramunga Arr**	**23.53**	**226**	*eP*		**P**	**13**	**53**	**44.6 -1.2**
WB2				*eS*		**S**	**13**	**58**	**00.9 +4.6**
WRA	**Warramunga Arr**	**23.54**	**226**	P		**P**	**13**	**53**	**45.1 -0.7**
	comp=Z,38nm,0.9s,mb4.8,baz=50,slow=9.6,SNR=71								
WRA				S		**S**	**13**	**57**	**59.7 +3.3**
	comp=Z,2.3nm,1.1s,baz=48,slow=18,SNR=4.1								
WRA				LR		LR	14	02	49.2
	comp=Z,639nm,20.8s,MS4.1,baz=45,slow=36								
WRA	**Warramunga Arr**	**23.54**	**226**	P		**P**	**13**	**53**	**45.1 -0.7**
WRA				S		**S**	**13**	**57**	**59.7 +3.3**
AAI	**Ambon**	**23.89**	**270**	P		**P**	**13**	**53**	**48.4 -0.7**
	comp=Z,155nm,1.3s,comp=Z,1μm,mb5.3								
LBMI	**Labuha**	**24.83**	**277**	P		**P**	**13**	**53**	**59.0 +1.3**
	comp=Z,296nm,1.2s,comp=Z,3μm,mb5.7								
ARMA	**Armidale**	**26.35**	**181**	*eP*		**P**	**13**	**54**	**11.9 +0.7**
ASAR	**Alice Springs**	**26.36**	**220**	P		**P**	**13**	**54**	**11.1 -0.4**
	comp=Z,9.3nm,0.9s,mb4.3,baz=54,slow=8.5,SNR=44								
MNI	**Manado**	**27.80**	**281**	P		**P**	**13**	**54**	**29.0 +4.5**
	comp=Z,156nm,1.1s,mb5.5								

KDI	**Kendari**	**29.45**	**269**	P		**P**	**13**	**54**	**44.1 +4.9**
	comp=Z,29nm,1.1s,mb4.9								
STKA	**Stephens Creek**	**29.51**	**198**	*eP*		**P**	**13**	**54**	**38.3 -1.2**
	comp=Z,8.2nm,0.6s,mb4.6								
STKA				*eS*		**S**	**13**	**59**	**39.9 +9.1**
STKA	**Stephens Creek**	**29.51**	**198**	P		**P**	**13**	**54**	**37.8 -1.7**
	comp=Z,6.8nm,0.8s,mb4.5,baz=356,slow=7.6,SNR=11								
STKA				LR		LR	14	06	08.0
	comp=Z,936nm,19.1s,MS4.4,baz=14,slow=36								
STKA	**Stephens Creek**	**29.51**	**198**	*eP*		**P**	**13**	**54**	**37.1 -2.3**
	comp=Z,4.9nm,1.3s,mb4.1								
CNB	**Canberra Magne**	**31.33**	**184**	*eP*		**P**	**13**	**54**	**56.1 +0.6**
CAN	**Canberra**	**31.37**	**185**	*eP*		**P**	**13**	**54**	**55.2 -0.6**
	comp=Z,19nm,1.0s,mb4.9								
CAN	**Canberra**	**31.37**	**185**	*eP*		**P**	**13**	**54**	**56.1 +0.3**
KAPI	**Kappang**	**32.30**	**267**	*eP*		**P**	**13**	**55**	**03.0 -1.4**
KAPI	**Kappang**	**32.30**	**267**	P		**P**	**13**	**55**	**02.9 -1.4**
	comp=Z,28nm,1.1s,mb5.0								
PCI	**Palu**	**32.41**	**274**	P		**P**	**13**	**55**	**06.6 +1.3**
	comp=Z,246nm,1.1s,comp=Z,2μm,mb6.0								
TOO	**Toolangi**	**34.03**	**189**	*eP*		**P**	**13**	**55**	**20.5 +1.4**
MYLDM	**Lahad Datu**	**34.80**	**285**	P		**P**	**13**	**55**	**30.2 +4.1**
FORT	**Forrest**	**35.05**	**218**	*eP*		**P**	**13**	**55**	**28.7 +0.7**
	comp=Z,44nm,0.8s,mb5.4								
FORT	**Forrest**	**35.05**	**218**	*eP*		**P**	**13**	**55**	**28.1 0.0**
	comp=Z,46nm,0.7s,mb5.5								
MBWA	**Marble Bar**	**35.84**	**239**	*eP*		**P**	**13**	**55**	**34.9 0.0**
	comp=Z,87nm,1.9s,mb5.4								
BBKI	**Banjar Baru**	**37.22**	**269**	P		**P**	**13**	**55**	**54.9 +8.1**
	comp=Z,108nm,1.6s,mb5.4								
RAO	**Raoul Island**	**37.95**	**135**	LR		LR	14	08	54.0
	comp=Z,1μm,21.2s,MS4.7,baz=269,slow=32								
JOW	**Kunigami**	**38.31**	**324**	LR		LR	14	08	15.2
	comp=Z,905nm,21.1s,MS4.6,baz=155,slow=31								
MOO	**Moorlands**	**38.60**	**186**	*eP*		**P**	**13**	**55**	**58.6 +0.6**
SBUM	**Sibu**	**40.39**	**278**	P		**P**	**13**	**56**	**17.4 +4.0**
NACB	**Ninganchiao**	**40.79**	**315**	*eP*		**P**	**13**	**56**	**14.6 -2.0**
	comp=Z,17nm,0.8s,mb4.7								
STKI	**Sintang**	**40.82**	**275**	P		**P**	**13**	**56**	**18.8 +1.9**
	comp=Z,49nm,1.4s,mb5.0								
URZ	**Urewera**	**41.07**	**150**	P		**P**	**13**	**56**	**18.2 -0.4**
	comp=Z,15nm,1.0s,mb4.6,baz=360,slow=12,SNR=3.7								
KSM	**Kuching**	**42.14**	**277**	*eP*		**P**	**13**	**56**	**27.7 -0.1**
	comp=Z,22nm,0.9s,mb4.8								
KSM	**Kuching**	**42.14**	**277**	P		**P**	**13**	**56**	**35.4 +7.6**
	comp=Z,66nm,1.1s,mb5.2								
MJAR	**Matsushiro Arr**	**42.31**	**343**	P		**P**	**13**	**56**	**25.2 -3.5**
	comp=Z,1.7nm,0.9s,baz=174,slow=10,SNR=3.1								
MJAR				LR		LR	14	12	49.3
	comp=Z,618nm,19.2s,MS4.5,baz=170,slow=35								
KLBR	**Kellerberrin**	**42.42**	**226**	*eP*		**P**	**13**	**56**	**29.7 -0.1**
	comp=Z,18nm,0.8s,mb4.8								
RPZ	**Rata Peaks**	**43.01**	**160**	P		**P**	**13**	**56**	**35.0 +0.7**
	comp=Z,56nm,0.9s,mb5.3,baz=128,slow=22,SNR=11								
MUN	**Mundaring**	**43.74**	**226**	*eP*		**P**	**13**	**56**	**40.8 +0.3**
SSE	**S

comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,130nm,8.5s
GYA LR LR
comp=N,400nm,18.6s,MS4.6
GYA LR LR
comp=E,350nm,19.0s,MS4.6
GYA LR LR
comp=Z,660nm,18.6s,MS4.7
HABR Khabarovsk 54.28 346 *e*P **P 13 57 59.1 -1.7**
HABR *e* 14 00 00.8
HABR *e*PPP 14 01 13.0
HABR *e*S **S** **14 05 31.9 -3.0**
HABR *e* 14 07 40.2
HABR *e*SS SS 14 09 16.4 -1.3
BJI Beijing 54.81 327 P **P** **13 58 04.9 +0.1**
BJI S **S** **14 05 43.8 +1.5**
BJI AMB AMB
comp=Z,13nm,0.8s,mb5.0
BJI LR LR
comp=N,531nm,31.2s
BJI LR LR
comp=E,532nm,25.8s
BJI LR LR
comp=Z,928nm,24.3s
BJI Beijing 54.81 327 P **P** **13 58 04.9 +0.1**
comp=Z,13nm,0.8s,mb5.0
BJI S **S** **14 05 43.8 +1.5**
BJI SS SS 14 09 28.6 +2.3
BJI LR LR
comp=Z,930nm,24.3s,MS4.8
NST Nakhon Sawan 55.01 292 P **P** **13 58 04.0 -2.7**
XAN Xi'an 55.54 316 P **P** **13 58 15.0 +4.8**
XAN AP pP 13 58 35.6 +12
XAN XP sP 13 58 44.5 +15
XAN S **S** **14 05 57.3 +5.0**
XAN XS sS 14 06 30.3 +15
XAN AMB AMB
comp=Z,12nm,1.5s,mb4.7
XAN AMB AMB
comp=Z,131nm,5.6s
XAN LR LR
comp=N,462nm,16.0s,MS4.8
XAN LR LR
comp=E,640nm,20.7s,MS4.8
XAN LR LR
comp=Z,1μm,19.5s,MS5.1
KLR Kul'dur 55.83 344 *e*P **P** **13 58 06.1 -5.9**
KMI Kunming 55.95 304 P **P** **13 58 19.3 +6.0**
KMI PP PP 14 00 27.1 +8.5
KMI AMB AMB
comp=Z,10.0nm,1.4s,mb4.7
KMI AMB AMB
comp=Z,112nm,6.0s
KMI LR LR
comp=N,430nm,20.1s,MS4.7
KMI LR LR
comp=E,537nm,20.1s,MS4.7
KMI LR LR
comp=Z,631nm,20.1s,MS4.7
KMI Kunming 55.95 304 P **P** **13 58 19.2 +5.9**
comp=Z,10.0nm,1.4s,mb4.7
KMI pP pP 13 58 27.3 +0.5
KMI sP sP 13 58 31.2 -1.2
KMI PP PP 14 00 27.1 +8.5
KMI PPP 14 01 44.6
KMI S **S** **14 06 07.6 +9.4**
KMI sS sS 14 06 24.3 +3.6
KMI SS SS 14 09 56.3 +11
KMI SSS 14 12 06.3
KMI LR LR
comp=Z,630nm,20.1s,MS4.7
CM31 Chiang Mai Arr 56.91 295 *e*P **P** **13 58 20.9 +0.7**
comp=Z,11nm,0.9s,mb4.9
CMAR Chiang Mai Arr 56.91 295 P **P** **13 58 21.2 +1.0**
comp=Z,3.8nm,0.7s,mb4.5,baz=116,slow=5.5,SNR=22
PET Petropavlovsk 57.01 5 *e*P **P** **13 58 25.0 +4.7**
PET *e*S **S** **14 06 19.5 +8.4**
PET *e*SS SS 14 10 04.8 +4.3
PET pmax pmax
comp=Z,25nm,0.7s,mb5.3
CHG Chiang Mai 57.02 295 ⇑P **P** **13 58 21.4 +0.4**
comp=Z,13nm,1.1s,mb4.9
CHTO Chiang Mai 57.02 295 *e*P **P** **13 58 22.1 +1.1**
comp=Z,16nm,1.2s,mb4.9
CHTO Chiang Mai 57.02 295 *e*P **P** **13 58 22.1 +1.1**
CHTO pmax pmax
comp=Z,16nm,1.2s,mb4.9
PETK Petropavlovsk- 57.02 4 P **P** **13 58 18.4 -2.0**
comp=Z,28nm,1.0s,mb5.2,baz=156,slow=5.2,SNR=11
PETK LR LR 14 17 38.0
comp=Z,658nm,21.6s,MS4.7,baz=188,slow=31
CD2 Chengdu 57.67 311 *e*P **P** **13 58 25.4 0.0**
CD2 AP pP 13 58 44.8 +5.8
CD2 PCP PcP 13 59 17.0 -1.1
CD2 PP PP 14 00 35.9 +2.1
CD2 PCS PcS 14 03 16.9 -2.5
CD2 S **S** **14 06 17.0 -3.7**
CD2 SCS ScS 14 08 05.3 -5.8
CD2 SS SS 14 10 10.4 -1.4
CD2 AMB AMB
comp=Z,70nm,0.7s,mb5.8
CD2 AMB AMB
comp=Z,400nm,5.2s
CD2 LR LR
comp=N,880nm,18.0s,MS5.1
CD2 LR LR
comp=E,860nm,16.0s,MS5.1
CD2 LR LR
comp=Z,1μm,20.4s,MS5.0
HHC Hu-ho-hao-te 57.96 324 *e*P **P** **13 58 30.8 +3.6**
HHC AP pP 13 58 52.3 +12
HHC XP sP 13 59 01.8 +15
HHC PCP PcP 13 59 21.9 +2.9
HHC PP PP 14 00 41.6 +5.4
HHC S **S** **14 06 24.1 +0.1**
HHC XS sS 14 06 57.4 +11
HHC SCS ScS 14 08 10.0 -2.8
HHC AMB AMB
comp=Z,28nm,0.6s,mb5.5
HHC AMB AMB
comp=Z,158nm,4.8s
HHC LR LR
comp=N,411nm,20.2s,MS4.8
HHC LR LR
comp=E,512nm,19.0s,MS4.8
HHC LR LR
comp=Z,637nm,27.4s
PPT Papeete 58.62 108 *e*S **S** **14 06 35.9 +2.4**
comp=Z,196nm,29.0s
PPT *e*LR LR 14 15 44.3
comp=Z,426nm,24.0s
PPT Papeete 58.62 108 LR LR 14 20 11.8
comp=Z,236nm,18.8s,MS4.3,baz=268,slow=32
BTO Baotou 58.71 323 *e*P **P** **13 58 33.0 +0.5**
HIA Hailar 59.97 336 *e*P **P** **13 58 46.2 +5.2**
comp=Z,35nm,1.4s,mb5.2
HIA Hailar 59.97 336 *e*P **P** **13 58 46.2 +5.2**
HIA pmax pmax
comp=Z,35nm,1.4s
LZH Lanzhou 60.15 316 *e*P **P** **13 58 45.0 +2.5**
LZH AP pP 13 59 06.3 +10
LZH XP sP 13 59 15.6 +14
LZH PP PP 14 01 00.3 +4.6
LZH *e*S **S** **14 06 50.3 -2.3**
LZH *e*SS SS 14 10 50.4 -0.1
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,117nm,5.9s
LZH LR LR
comp=N,623nm,15.0s
LZH LR LR
comp=Z,877nm,18.2s,MS4.9
LZH Lanzhou 60.15 316 *e*P **P** **13 58 45.0 +2.5**
comp=Z,23nm,1.5s,mb5.0
LZH pP pP 13 59 06.3 +10
LZH sP sP 13 59 15.6 +14
LZH PP PP 14 01 00.3 +4.6
LZH *e*S **S** **14 06 50.2 -2.4**
LZH sS sS 14 07 17.0 +1.6
LZH *e*SS SS 14 10 50.4 -0.1
LZH LR LR
comp=Z,880nm,18.2s,MS4.9
GTA Gaotai 64.57 317 *e*P **P** **13 59 14.1 +2.1**
GTA AP pP 13 59 35.0 +9.2
GTA XP sP 13 59 43.1 +12
GTA AMB AMB
comp=Z,8.0nm,1.9s,mb4.4
GTA AMB AMB
comp=Z,166nm,6.9s
GTA LR LR
comp=N,400nm,19.8s,MS4.8
GTA LR LR
comp=E,490nm,19.5s,MS4.8
GTA LR LR
comp=Z,756nm,19.5s,MS4.9
ULN Ulaanbaatar 64.91 328 *e*P **P** **13 59 14.8 +0.8**
comp=Z,26nm,1.3s,mb5.1
ULN Ulaanbaatar 64.91 328 *e*P **P** **13 59 14.8 +0.7**
ULN pmax pmax
comp=Z,26nm,1.3s,mb5.1
SONM Songino Array 65.24 328 P **P** **13 59 15.6 -0.6**
comp=Z,4.3nm,0.8s,mb4.6,baz=134,slow=5.1,SNR=6.7
SONM LR LR 14 25 19.3
comp=Z,841nm,21.0s,MS4.9,baz=299,slow=34
SHL Shillong 65.30 300 *e*P **P** **13 59 17.5 +0.5**
SEY Seymchan 66.68 0⇑ *i*P **P** **13 59 26.2 +1.1**
LSA Lhasa 67.20 304 P **P** **13 59 27.4 -1.8**
LSA AMB AMB
comp=Z,30nm,1.0s,mb5.3
LSA Lhasa 67.20 304 *e*P **P** **13 59 29.8 +0.6**
comp=Z,14nm,1.0s,mb5.0
LSA Lhasa 67.20 304 *e*P **P** **13 59 29.8 +0.6**
LSA pmax pmax
comp=Z,14nm,1.0s,mb5.0
YAK Yakutsk 68.00 349 *e*P **P** **13 59 32.5 -1.0**
comp=Z,50nm,1.2s,mb5.4
YAK Yakutsk 68.00 349 *e*P **P** **13 59 38.4 +4.9**
YAK *e**PP pP 13 59 47.9 +0.6
YAK *e*S S 14 08 29.3 +0.5
YAK *e* 14 09 30.9
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=Z,31nm,1.1s,mb5.2
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK smax
comp=E,70nm,10.2s
YAK smax
comp=N,37nm,9.2s
ZAK Zakamensk 68.41 329 *e*P **P** **13 59 36.0 -0.3**
ZAK pmax pmax
comp=Z,22nm,1.2s,mb5.1
CASY Casey 68.65 197 *e*P **P** **13 59 37.3 -0.2**
comp=Z,20nm,1.1s,mb5.0
BOD Bodaibo 68.75 339 *e*P **P** **13 59 41.9 +3.6**
BOD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TLY Talaya 69.00 330 *e*P **P** **13 59 46.3 +6.4**
comp=Z,11nm,1.0s,mb4.7
TLY Talaya 69.00 330 *e*P **P** **13 59 46.2 +6.3**
TLY *e*S S 14 08 58.8 +18
TLY pmax pmax
comp=Z,15nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,345nm,17.0s,MS4.7
TAPN Taplejung 69.39 301 *e*P **P** **13 59 43.4 +0.5**
ODAN Odare 69.53 300 *e*P **P** **13 59 44.2 +0.4**
RAMN Ramite 70.24 300 *e*P **P** **13 59 48.4 +0.3**
comp=Z,16nm,0.8s,mb5.0
JIRN Jiri 70.78 301 *e*P **P** **13 59 51.7 +0.3**
comp=Z,12nm,0.7s,mb5.0
GUN Gumba 71.11 301 *e*P **P** **13 59 53.8 +0.4**
PKI Pulchoki 71.42 301 *e*P **P** **13 59 55.3 0.0**
KKN Kakani 71.59 301 *e*P **P** **13 59 56.4 +0.1**
comp=Z,9.6nm,0.5s,mb5.0
DMN Daman 71.69 301 *e*P **P** **13 59 57.2 +0.3**
comp=Z,27nm,0.8s,mb5.2
GKN Gorkha 72.19 301 *e*P **P** **13 59 59.6 -0.3**
BILL Bilibino 72.49 6 *e*P **P** **13 59 60.0 -0.9**
comp=Z,22nm,1.0s,mb5.0
BILL Bilibino 72.49 6 *i*P **P** **14 00 00.6 -0.3**
BILL pmax pmax
comp=Z,23nm,1.0s,mb5.1
RKT Rikitea 72.73 113 *e*LR LR 14 22 15.7
comp=Z,817nm,26.2s
KOLN Koldanda 73.03 300 *e*P **P** **14 00 04.1 -0.8**
comp=Z,18nm,0.8s,mb5.1
DANN Dangsing 73.03 301 *e*P **P** **14 00 04.7 -0.2**
comp=Z,14nm,0.7s,mb5.0
PYUN Piuthan 73.63 301 *e*P **P** **14 00 08.0 -0.4**
comp=Z,18nm,0.8s,mb5.0
VNDA Vanda 73.72 178 P **P** **14 00 07.6 -0.5**
comp=Z,5.6nm,1.0s,mb4.4,baz=327,slow=6.2,SNR=8.2
VNDA LR LR 14 28 16.6
comp=Z,324nm,20.4s,MS4.6,baz=343,slow=32
VNDA Vanda 73.72 178 P **P** **14 00 07.6 -0.5**
VNDA LR LR 14 28 16.6
SBA Scott Base 74.27 177 *e*P **P** **14 00 11.9 +0.7**
comp=Z,36nm,1.4s,mb5.1
SBA Scott Base 74.27 177 *e*P **P** **14 00 12.4 +1.1**
SBA pmax pmax
comp=Z,36nm,1.4s,mb5.1
WMQ Urumqi 74.66 317 P **P** **14 00 16.0 +1.9**
WMQ AMB AMB
comp=Z,42nm,1.0s,mb5.3
SVW2 Sparrevohn 76.29 23 *e*P **P** **14 00 23.3 +0.3**
SLKM Skilak Lake 78.17 25 *e*P **P** **14 00 33.0 -0.6**
SLKM Skilak Lake 78.17 25 *e*P **P** **14 00 35.6 +2.0**
CHUM Lake Minchumin 79.12 22 *e*P **P** **14 00 39.3 +0.5**
comp=Z,38nm,1.0s,mb5.3
MK31 Makanchi Array 79.24 319 *e*P **P** **14 00 39.1 -0.7**
MK31 Makanchi Array 79.24 319 *i*P **P** **14 00 39.1 -0.7**
MKAR Makanchi Array 79.24 319 P **P** **14 00 39.0 -0.8**
comp=Z,3.9nm,0.8s,mb4.4,baz=97,slow=5.7,SNR=23
MKAR LR LR 14 35 16.0
comp=Z,404nm,19.3s,MS4.8,baz=252,slow=36
MKAR Makanchi Array 79.24 319 P **P** **14 00 39.0 -0.8**
MKAR LR LR 14 35 16.0
MKAR Makanchi Array 79.24 319⇑ *e*P **P** **14 00 39.0 -0.8**
KTH Kantishna Hill 79.47 22 *e*P **P** **14 00 41.8 +1.1**
comp=Z,8.1nm,0.8s,mb4.7
TRF Thorofare Moun 79.66 23 *e*P **P** **14 00 41.3 -0.4**
comp=Z,6.2nm,0.7s,mb4.7
ZAA0 Zalesovo Array 80.07 326 *e*P **P** **14 00 42.7 -1.4**
ZALV Zalesovo Beam 80.07 326 P **P** **14 00 42.3 -1.8**
comp=Z,2.6nm,0.6s,mb4.4,baz=123,slow=5.5,SNR=9.1
ZALV LR LR 14 34 34.4
comp=Z,260nm,20.1s,MS4.6,baz=127,slow=35
MCK McKinley 80.32 23 *e*P **P** **14 00 43.3 -2.0**
comp=Z,32nm,0.9s,mb5.3
MCK McKinley 80.32 23 *e*P **P** **14 00 43.3 -2.0**
MCK pmax pmax
comp=Z,32nm,0.9s,mb5.2
NVS Novosibirsk 81.25 327 *e*P **P** **14 00 49.0 -1.4**
NVS pmax pmax
comp=N,10.0nm,1.5s
NVS pmax pmax
comp=E,22nm,1.5s
NVS pmax pmax
comp=Z,28nm,1.5s,mb5.0
COLA College 81.30 22 *e*P **P** **14 00 50.0 -0.5**
comp=Z,17nm,0.8s,mb5.0
COLA College 81.30 22 *e*P **P** **14 00 50.0 -0.5**
COLA pmax pmax
comp=Z,17nm,0.8s,mb5.0
KURK Kurchatov 82.68 322 P **P** **14 00 57.5 -0.5**
comp=Z,78nm,1.3s,mb5.6,SNR=5.5
KURK Kurchatov 82.68 322 *i*P **P** **14 00 56.4 -1.6**
KURK pmax pmax
comp=Z,30nm,1.6s,mb5.1
TKM2 Tokmak 2 82.85 314 *e*P **P** **14 00 57.2 -1.9**
comp=Z,12nm,1.1s,mb4.9
TKM2 Tokmak 2 82.85 314 *e*P **P** **14 00 57.2 -1.9**
TKM2 pmax pmax
comp=Z,13nm,1.1s,mb4.9
UCH Uchtor 83.50 313 *e*P **P** **14 01 02.4 -0.1**
comp=Z,22nm,1.4s,mb5.0
FRU Bishkek 83.54 314 *e*P pP 14 01 13.0 -3.9
AAK Ala-Archa 83.59 313 *e*P **P** **14 01 02.2 -0.8**
comp=Z,18nm,1.2s,mb5.1
AAK Ala-Archa 83.59 313 *e*P **P** **14 01 02.2 -0.7**
AAK pmax pmax
comp=Z,18nm,1.2s,mb5.1
EGAK Eagle 83.83 23 *e*P **P** **14 01 05.2 +1.6**
comp=Z,19nm,1.1s,mb5.1
AML Almayashu 84.08 313 *e*P **P** **14 01 06.2 +0.8**
comp=Z,65nm,1.1s,mb5.7
EKS2 Erkin-Say 84.11 313 *e*P **P** **14 01 05.7 0.0**
comp=Z,50nm,1.4s,mb5.5
MAW Mawson 86.11 203 P **P** **14 01 15.9 +0.8**
comp=Z,7.3nm,1.0s,mb4.9,baz=115,slow=14,SNR=2.7
MAW LR LR 14 35 39.1
comp=Z,556nm,21.4s,MS4.9,baz=89,slow=33
MAW Mawson 86.11 203 *e*P **P** **14 01 15.9 +0.8**
comp=Z,3.3nm,1.0s,mb4.5
MAW Mawson 86.11 203 *e*P **P** **14 01 15.9 +0.8**
MAW pmax pmax
comp=Z,3.0nm,1.0s
KBL Kabul 86.52 305 *e*P **P** **14 01 18.3 +0.4**
comp=Z,20nm,1.4s,mb5.2
KBL Kabul 86.52 305 *e*P **P** **14 01 20.2 +2.4**
KBL pmax pmax
comp=Z,20nm,1.4s,mb5.2
KK31 Karatay Array 86.56 313 *i*P **P** **14 01 18.1 +0.3**
KK31 pmax pmax
comp=Z,14nm,1.0s,mb5.2
INK Inuvik 87.89 21 *e*P **P** **14 01 24.5 +0.8**
comp=Z,541nm,1.2s
INK Inuvik 87.89 21 *e*P **P** **14 01 26.0 +2.3**
BVA0 Borovoye Array 88.15 323 *i*P **P** **14 01 23.5 -1.7**
BVA0 pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
BRVK Borovoye 88.22 323 P **P** **14 01 24.3 -1.3**
comp=Z,171nm,0.9s,SNR=6.2
BRVK Borovoye 88.22 323 *e*P **P** **14 01 23.6 -2.0**
comp=Z,32nm,1.0s,mb5.5
BRVK Borovoye 88.22 323 *e*P **P** **14 01 23.6 -2.0**
BRVK pmax pmax
comp=Z,32nm,1.0s,mb5.5
MWC Mount Wilson 92.03 56 *e*P **P** **14 01 45.1 +1.3**
AB31 Akbulak array 94.38 319 P **P** **14 01 52.0 -2.3**
AB31 pmax pmax
comp=Z,12nm,1.2s,mb5.2
YKA Yellowknife Ar 94.97 28 LR LR 14 40 04.9
comp=Z,129nm,18.5s,MS4.4,baz=155,slow=33
ARU Arti 95.23 326 *e*P **P** **14 01 58.0 0.0**
comp=Z,20nm,1.4s,mb5.3
ARU Arti 95.23 326 *e*P **P** **14 01 58.0 0.0**
ARU pmax pmax
comp=Z,20nm,1.4s,mb5.3
PDAR Pinedale Array 98.76 47 LR LR 14 41 45.9
comp=Z,374nm,18.6s,MS4.9,baz=270,slow=32
SWET Sewanee 118.11 52 *e*PKPdf PKPdf 14 07 18.3 -3.5
LHS Liberty Hill 122.35 51 *e*PKPdf PKPdf 14 07 29.8 -0.2
CFAA Coronel Fontan 127.81 136 PKP PKPdf 14 07 40.0 -0.6
comp=Z,0.7nm,1.0s,baz=206,slow=1.0,SNR=6.4
LPAZ La Paz 135.41 118 PKP PKPdf 14 07 57.8 +2.5
comp=Z,1.9nm,0.7s,baz=232,slow=5.4,SNR=7.2
SDV Santo Domingo 137.24 81 *e*PKPdf PKPdf 14 07 56.7 -2.0
TOA0 Torodi Ar. Sit 149.40 289 *e*PKPbc PKPbc 14 08 22.6 -1.8
TORD Torodi Ar. Bea 149.40 289 PKPbc PKPbc 14 08 22.3 -2.2
comp=Z,2.8nm,0.9s,baz=48,slow=2.8,SNR=9.2
TORD Torodi Ar. Bea 149.40 289 PKPbc PKPbc 14 08 22.3 -2.2
BDFB Brasilia 152.15 135 PKPbc PKPbc 14 08 30.6 -0.3
comp=Z,7.1nm,1.0s,baz=222,slow=0.9,SNR=14

SGS ***24*** *14:06:38.0, 3074N×3577E, h5km*
ISCJB ***24*** *14:06:41.6±0.6, 3029N±002×3588E±004, h0km, Error ellipse: s-maj=5.4km s-min=3.0km az=2.3*
GII ***24*** *14:06:42.6±0.6, 3033N×3571E, h0km, ML2.6/4, EXPLOSION*
ISC 24 14:06:42.1±0.7, 3028N±002×3590E±004, h0km, n21, σ0s98/31, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFRI	**Zfri**	**0.69**	**294**	Pg	**Pg**	**14 06 54.9**	**-0.4**
ZFRI				Sg	**Sg**	**14 07 03.7**	**-0.4**
PRNI	**Paran**	**0.78**	**276**	Pg	**Pg**	**14 06 56.4**	**-0.7**
PRNI				Sg	**Sg**	**14 07 06.8**	**-0.5**
HRFI	**Mount Harif**	**0.79**	**252**	Pg	**Pg**	**14 06 56.8**	**-0.4**
HRFI				Sg	**Sg**	**14 07 08.4**	**+0.9**
AQBJ	**Aqaba**	**0.92**	**234**	Pg	**Pg**	**14 07 00.5**	**+0.7**
MBRI	**Mt Berech**	**0.98**	**241**	Pg	**Pg**	**14 07 01.0**	**0.0**
MBRI				Sg	**Sg**	**14 07 15.1**	**+1.3**
ELAT	**Elat**	**1.03**	**234**	Pg	**Pg**	**14 07 01.5**	**-0.3**
EIL				Sg	**Sg**	**14 07 16.5**	**+1.5**
KRMI	**Paran Flat**	**1.03**	**261**	Pg	**Pg**	**14 07 00.9**	**-1.0**
RMNI	**Mount Ramon**	**1.04**	**288**	Pg	**Pg**	**14 07 00.9**	**-1.1**
MZDA	**Masada**	**1.13**	**336**	Pg	**Pg**	**14 07 03.4**	**-0.4**
MZDA				Sg	**Sg**	**14 07 19.1**	**+0.6**
HQLS		**1.22**	**217**	S	**Sg**	**14 07 22.3**	**+1.0**
HQLS		**1.22**	**217**	P	**Pg**	**14 07 04.4**	**-1.0**
RTMI	**Retamim**	**1.30**	**307**	Pg	**Pg**	**14 07 05.7**	**-1.4**
RTMI				Sg	**Sg**	**14 07 22.6**	**-1.3**
DSI	**Dead Sea**	**1.36**	**341**	Pg	**Pg**	**14 07 07.9**	**-0.4**
DSI				Sg	**Sg**	**14 07 28.0**	**+2.0**
JLOS		**1.58**	**193**	S	**Sn**	**14 07 32.9**	**+0.4**
JLOS		**1.58**	**193**	P	**Pn**	**14 07 10.8**	**-0.6**
BDAS	**Al Bad'**	**1.97**	**201**	S	**Sn**	**14 07 43.8**	**+1.7**
BDAS	**Al Bad'**	**1.97**	**201**	P	**Pn**	**14 07 15.4**	**-1.4**
HMDT	**Nahal Hemdat**	**2.00**	**351**	Pn	**Pn**	**14 07 17.9**	**+0.8**
HMDT				Sn	**Sn**	**14 07 44.7**	**+2.0**
SLTI	**Sal'it**	**2.09**	**340**	Pn	**Pn**	**14 07 18.6**	**+0.2**
SLTI				Sn	**Sn**	**14 07 45.6**	**+0.4**
TBKS	**Tabuk**	**2.12**	**165**	P	**Pn**	**14 07 18.7**	**-0.2**
RSHS		**2.20**	**206**	P	**Pn**	**14 07 18.4**	**-1.4**

CASC 24 15:15:56.9±2.1, 1458N×9217W, h22km±999km, MD4.3, 1C-7D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FG6		**1.24**	**91**‖	*e*P	Pn	15 16 19.6	+0.6
FUG	**Fuego 3**	**1.29**	**96**‖	*e*P	Pn	15 16 19.8	+0.2
PCG	**Pacaya**	**1.52**	**97**‖	*e*P	Pn	15 16 23.3	+0.5
PCG				*e*S	Sn	15 16 43.7	+1.8
IXG	**Ixpaco**	**1.71**	**104**‖	*e*P	Pn	15 16 25.4	0.0
IXG				*e*S	Sn	15 16 46.3	-0.2
RBDL	**Robledal**	**2.45**	**101**‖	*e*P	x	15 16 36.3	
RTR	**El Retiro**	**2.54**	**105**‖	*e*P	x	15 16 36.9	
SNJE	**San Jose**	**2.58**	**106**	*e*P	x	15 16 37.5	
SNJE				*e*S	x	15 17 11.5	
BOQS	**Boqueron**	**2.92**	**106**‖	*e*P	x	15 16 42.2	
LFRS	**El Faro**	**3.16**	**107**‖	*e*P	x	15 16 45.4	
LFRS				*e*S	x	15 17 22.2	
SNVI	**San Vicente**	**3.37**	**106**	*e*P	x	15 16 49.4	
SNVI				*e*S	x	15 17 30.0	

ISCJB ***24*** *15:35:27.8±0.7, 1587N±009×1453E±0.1, h376km±8km, mb4.0/22, Error ellipse: s-maj=15.6km s-min=14.7km az=171.7*
IDC ***24*** *15:35:27.5±0.8, 1593N×14548E, h362km±9km, mb3.4/12, mb1 3.7/13, mb1mx3.5/23, mbtmp3.5/13, Error ellipse: s-maj=20.5km s-min=14.3km az=79.0*
NEIC ***24*** *15:35:28.0±0.9, 1587N×14545E, h367km±10km, mb4.2/6, Error ellipse: s-maj=15.7km s-min=12.0km az=79.0*
ISC 24 15:35:28.2±0.7, 1588N±010×1454E±01, h368km±8km, n35, σ0s70/37, mb4.0/22, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.34**	**193**	P	**Pn**	**15 36 24.7**	**+1.0**
	37nm,0.3s,baz=333,slow=4.5,SNR=40						
GUMO				S	**S**	**15 37 07.6**	**-0.6**
	129nm,0.3s,baz=177,slow=23,SNR=20						
GUMO	**Guam**	**2.34**	**193**	*e*Pn	**Pn**	**15 36 23.1**	**-0.6**
GUMO				*e*S	**S**	**15 37 08.4**	**+0.2**
MJAR	**Matsushiro Arr**	**21.55**	**344**	P	**P**	**15 39 48.0**	**-0.9**
	1.3nm,0.9s,mb3.1,baz=170,slow=10,SNR=4.5						
MAJO	**Matsushiro**	**21.55**	**344**	*e*P	**P**	**15 39 49.4**	**+0.4**
	2.0nm,0.4s,mb3.7						
KSRS	**Korea Array**	**26.47**	**328**	P	**P**	**15 40 32.7**	**-0.5**
	3.0nm,0.8s,mb3.6,baz=122,slow=39,SNR=10						
KS15	**Wonju Array Si**	**26.48**	**328**	*e*P	**P**	**15 40 32.9**	**-0.4**
YSS	**Yuzh-Sakhalins**	**31.06**	**356**	*e*P	**P**	**15 41 16.3**	**+2.9**
	66nm,1.6s,mb4.6						
WRA	**Warramunga Arr**	**37.22**	**197**	P	**P**	**15 42 06.0**	**-0.1**
	0.2nm,0.5s,baz=18,slow=8.7,SNR=5.5						
ASAR	**Alice Springs**	**40.88**	**196**	P	**P**	**15 42 36.5**	**+0.4**
	0.1nm,0.6s,baz=24,slow=8.3,SNR=4.8						
CMAR	**Chiang Mai Arr**	**44.37**	**280**	P	**P**	**15 43 04.5**	**+0.5**
	5.4nm,0.7s,mb3.8,baz=82,slow=6.2,SNR=29						
SONM	**Songino Array**	**45.18**	**323**	P	**P**	**15 43 10.1**	**+0.3**
	1.0nm,0.6s,mb3.2,baz=140,slow=8.8,SNR=3.5						
LSA	**Lhasa**	**51.44**	**295**	*e*P	**P**	**15 43 59.1**	**+1.6**
	3.1nm,0.5s,mb3.8						
BILL	**Bilibino**	**53.83**	**10**	*e*P	**P**	**15 44 17.4**	**+3.4**

	6.1nm,0.6s,mb4.1							
TAPN	**Taplejung**	**54.42**	**292**	*e*P		**P**	**15 44 19.4**	**+0.4**
	6.7nm,0.5s,mb4.2							
ODAN	**Odare**	**54.71**	**292**	*e*P		**P**	**15 44 20.8**	**-0.3**
RAMN	**Ramite**	**55.41**	**292**	*e*P		**P**	**15 44 26.0**	**0.0**
	5.7nm,0.6s,mb4.1							
JIRN	**Jiri**	**55.77**	**293**	*e*P		**P**	**15 44 28.8**	**+0.3**
	14nm,0.6s,mb4.5							
GUN	**Gumba**	**56.04**	**293**	*e*P		**P**	**15 44 30.7**	**+0.3**
PKI	**Pulchoki**	**56.46**	**293**	*e*P		**P**	**15 44 32.9**	**-0.5**
KKN	**Kakani**	**56.57**	**293**	*e*P		**P**	**15 44 33.8**	**-0.3**
GKN	**Gorkha**	**57.13**	**293**	*e*P		**P**	**15 44 37.8**	**-0.2**
DANN	**Dangsing**	**57.90**	**294**	*e*P		**P**	**15 44 43.3**	**0.0**
	15nm,0.7s,mb4.5							
KOLN	**Koldanda**	**58.06**	**293**	*e*P		**P**	**15 44 44.1**	**-0.3**
PYUN	**Piuthan**	**58.59**	**293**	*e*P		**P**	**15 44 47.0**	**-1.0**
	5.0nm,0.5s,mb4.2							
ZALV	**Zalesovo Beam**	**60.08**	**324**	P		**P**	**15 44 57.1**	**-0.5**
	1.0nm,0.5s,mb3.5,baz=79,slow=7.7,SNR=4.2							
MK31	**Makanchi Array**	**60.22**	**315**	*e*P		**P**	**15 44 58.6**	**-0.1**
MKAR	**Makanchi Array**	**60.22**	**315**	P		**P**	**15 44 59.0**	**+0.3**
	3.0nm,0.4s,mb4.0,baz=92,slow=8.2,SNR=59							
KURK	**Kurchatov**	**63.18**	**319**	P		**P**	**15 45 18.2**	**0.0**
	8.0nm,0.5s,mb4.5,baz=97,slow=7.4,SNR=11							
BVAR	**Borovoye Array**	**68.46**	**321**	P		**P**	**15 45 51.2**	**-0.4**
	2.3nm,0.4s,mb4.2,baz=102,slow=7.9							
YKA	**Yellowknife Ar**	**80.60**	**28**	P		**P**	**15 46 59.5**	**-0.9**
	1.8nm,0.6s,mb4.0,baz=286,slow=5.1,SNR=5.5							
YKA	**Yellowknife Ar**	**80.60**	**28**	P		**P**	**15 46 59.5**	**-0.9**
BMO	**Blue Mountains**	**84.02**	**45**	*e*P		**P**	**15 47 17.9**	**-0.4**
	4.0nm,0.9s,mb4.2							
NVAR	**Mina Array Bea**	**85.10**	**52**	P		**P**	**15 47 24.5**	**+0.6**
	2.2nm,0.6s,mb4.1,baz=265,slow=5.6,SNR=22							
ELK	**Elko**	**86.68**	**49**	*e*P		**P**	**15 47 31.9**	**+0.4**
	5.8nm,0.8s,mb4.5							
PDAR	**Pinedale Array**	**90.00**	**45**	P		**P**	**15 47 46.2**	**-0.8**
	0.8nm,0.7s,mb3.8,baz=239,slow=3.4,SNR=7.1							

CASC 24 15:43:40.6±2.6, 1180N×8637W, h159km±12km, MD4.0, ML3.7, 10C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TICN	**Ticuantepe**	**0.27**	**30**	*e*P	Pn	15 44 02.4	+0.2
TICN				*e*S	Sn	15 44 22.3	+3.6
APON	**Apoyo**	**0.32**	**69**	*e*P	Pn	15 44 02.9	+0.6
XAVN	**Gruta Xavier**	**0.35**	**7**	*e*P	Pn	15 44 02.5	+0.1
TISN	**Laguna Tiscapa**	**0.35**	**16**	*i*P	Pn	15 44 02.5	+0.1
CSAN		**0.38**	**352**	*e*P	Pn	15 44 02.7	+0.2
WILN	**Americas 2**	**0.40**	**26**	*e*P	Pn	15 44 02.5	-0.1
WILN				*e*S	Sn	15 44 19.6	+0.1
COPN	**Copaltepe**	**0.43**	**330**	*e*P	Pn	15 44 02.5	-0.2
COPN				*e*S	Sn	15 44 19.4	-0.2
COPN				AML	AML	15 44 24.1	
	comp=Z,1μm,0.4s						
HUEN		**0.57**	**20**	*e*P	Pn	15 44 03.2	-0.1
MOMN	**Momotombo**	**0.62**	**345**	*e*P	Pn	15 44 03.7	+0.1
MIRN	**Miramar**	**0.72**	**332**	*e*P	Pn	15 44 04.2	0.0
CONN	**Concepcion**	**0.77**	**108**	*i*P	Pn	15 44 05.1	+0.6
TEL3	**Telica 3**	**0.90**	**329**	*i*P	Pn	15 44 05.6	+0.2
CRIN	**San Cristobal**	**1.11**	**323**	*e*P	Pn	15 44 07.3	+0.1
VCR	**Vista de Mar**	**1.82**	**156**	*e*P	Pn	15 44 15.9	+1.7
VCR				*e*S	Sn	15 44 40.9	+0.8
CNCH	**Conchagua**	**2.05**	**316**	*e*P	x	15 44 16.6	
CNCH				*e*S	x	15 44 46.1	
JCR	**Jicaral**	**2.30**	**147**	*e*P	Pn	15 44 21.4	+1.6
JCR				*e*S	Sn	15 44 50.7	+0.7
CGA2	**Cerro Gallo 2**	**2.58**	**133**	*e*P	Pn	15 44 25.4	+2.2
CGA2				*e*S	Sn	15 44 55.1	-0.9
PRS1	**Puriscal**	**2.71**	**132**	*e*P	Pn	15 44 27.8	+3.1
PRS1				*e*S	Sn	15 45 01.9	+3.0
LAJ	**Bijagual**	**2.93**	**131**	*e*P	Pn	15 44 26.6	-0.9
QCR	**Quepos**	**3.21**	**137**	*e*S	Sn	15 45 11.1	+1.1
URSC	**Urasca**	**3.21**	**127**	*e*S	Sn	15 45 11.4	+1.4
BUS	**Buena Vista**	**3.40**	**131**	*e*P	Pn	15 44 36.1	+2.7
BUS				*e*S	Sn	15 45 17.1	+2.7
ACR	**Cerro Adams**	**4.44**	**135**	*e*S	Sn	15 45 41.4	+2.9
CHI2		**14.38**	**119**	*e*P		15 44 07.0	

IDC 24 15:47:54.2±1.6, 065N×12303E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/18, mbtmp3.3/4, Error ellipse: s-maj=132.3km s-min=21.3km az=57.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.27**	**152**	P	P	15 53 03.6	-0.1
	0.1nm,0.4s,baz=325,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**26.38**	**157**	P	P	15 53 32.6	+0.2
	0.2nm,0.5s,baz=342,slow=15,SNR=6.4						
CMAR	**Chiang Mai Arr**	**29.54**	**308**	P	P	15 54 02.0	+1.2
	0.5nm,0.6s,baz=130,slow=6.4,SNR=5.2						
MKAR	**Makanchi Array**	**58.08**	**328**	P	P	15 57 48.5	-0.8
	0.5nm,0.5s,baz=123,slow=8.9,SNR=7.6						

*NIED **24** 15:47:00, 4650N×15340E, h44km, Mw4.0 Best double couple: M0 1.11000×10^15 NP1:φs 79.00000°, δ80.00000°, λ-118.00000°. NP2:φs 331.00000°, δ30.00000°, λ-20.00000°.*
*NEIC **24** 15:47:52.5±0.7, 4642N×15323E, h35km, Error ellipse: s-maj=18.5km s-min=8.4km az=130.0*
*MOS **24** 15:47:52.1±1.3, 4663N×15296E, h33km, mb4.4/5, Error ellipse: s-maj=20.4km s-min=13.9km az=51.4*
*IDC **24** 15:47:53.8±3.0, 4645N×15325E, h46km±27km, mb3.6/8, mb1 3.7/10, mb1mx3.5/25, mbtmp3.6/10, ML3.4/2, Error ellipse: s-maj=29.5km s-min=19.7km az=138.0*
*ISCJB **24** 15:47:54.4±1.9, 463N±0.1×1528E±02, h46km±15km, mb4.3/14, Error ellipse: s-maj=27.6km s-min=14.0km az=145.2*

ISC 24 15:47:56.0±1.6, 463N±01×1529E±02, h44km±12km, n48, σ1♀39/52, mb4.3/14, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**5.85**	**242**	P	**Pn**	**15 49 18.8**	**-1.3**
NEM2				*e*S	**Sn**	**15 50 24.9**	**-1.0**
JNK	**Nakash**	**6.39**	**248**	P	**Pn**	**15 49 28.0**	**+0.6**
JAK	**Akkeshi**	**6.70**	**243**	P	**Pn**	**15 49 30.5**	**-1.2**
JAK				*e*S	**Sn**	**15 50 45.6**	**-1.0**
JOB	**Onbets**	**7.29**	**245**	P	**Pn**	**15 49 39.3**	**-0.4**
PETK	**Petropavlovsk-**	**7.49**	**23**	P	**Pn**	**15 49 36.5**	**-5.9**
	0.3nm,0.3s,baz=169,slow=13,SNR=14						
ASAJ	**Asahikawa**	**7.57**	**257**	P	**Pn**	**15 49 45.9**	**+2.2**
	0.9nm,0.3s,baz=114,slow=14,SNR=8.0						
ASAJ	**Asahikawa**	**7.57**	**257**	P	**Pn**	**15 49 46.3**	**+2.6**
ASAJ	**Asahikawa**	**7.57**	**257**	PN	**Pn**	**15 49 45.9**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JCH	**Churui**	**7.73**	**245**	P	**Pn**	**15 49 45.2**	**-0.7**
JCH				*e*S	**Sn**	**15 51 11.4**	**-0.7**
JFR	**Furan**	**7.96**	**250**	P	**Pn**	**15 49 51.2**	**+2.3**
JAB	**Ashibetsu**	**8.05**	**253**	P	**Pn**	**15 49 52.9**	**+2.6**
ERM	**Erimo**	**8.19**	**242**	*e*Pn	**Pn**	**15 49 53.6**	**+1.5**
ERM	**Erimo**	**8.19**	**242**	*i* PN	**Pn**	**15 49 55.9**	**+3.8**
JBT2	**Biratori 2**	**8.29**	**249**	P	**Pn**	**15 49 54.2**	**+0.8**
JNBK	**Urakawa-nobuka**	**8.29**	**245**	P	**Pn**	**15 49 52.2**	**-1.3**
JNBK				*e*S	**Sn**	**15 51 24.1**	**-1.7**
JNB	**Noboribetsu**	**9.29**	**250**	P	**Pn**	**15 50 07.8**	**+0.6**
JANG	**Nango**	**10.17**	**238**	P	**Pn**	**15 50 15.2**	**-4.0**
JANG				*e*S	**Sn**	**15 52 04.4**	**-7.4**
MAJO	**Matsushiro**	**14.68**	**234**	*e*Pn	**Pn**	**15 51 20.4**	**-0.2**
	comp=Z,16nm,1.3s						
MAJO	**Matsushiro**	**14.68**	**234**	*e*P	**Pn**	**15 51 20.4**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,16nm,1.3s						
MJAR	**Matsushiro Arr**	**14.68**	**234**	*e*P	pP	15 51 32.7	-3.7
KSRS	**Korea Array**	**20.50**	**253**	P	**P**	**15 52 31.9**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=61,slow=9.7,SNR=7.0						
KSRS	**Korea Array**	**20.50**	**253**	*e*P	**P**	**15 52 32.3**	**+2.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**15 56 20.5**	**-1.8**
MKAR	**Makanchi Array**	**46.99**	**298**	P	**P**	**15 56 20.9**	**-1.5**
	comp=Z,1.2nm,0.8s,mb3.9,baz=75,slow=7.0,SNR=9.6						
MKAR	**Makanchi Array**	**46.99**	**298**	P	**P**	**15 56 20.9**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**47.46**	**304**	P	**P**	**15 56 24.9**	**-1.1**
	comp=Z,0.7nm,0.3s,mb4.0,baz=69,slow=8.6,SNR=6.4						
KURK	**Kurchatov**	**47.46**	**304**	P	**P**	**15 56 24.9**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
CMAR	**Chiang Mai Arr**	**52.10**	**256**	P	**P**	**15 57 01.7**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=32,slow=8.6,SNR=3.5						
TAPN	**Taplejung**	**53.95**	**273**	*e*P	**P**	**15 57 17.3**	**+2.2**
JIRN	**Jiri**	**54.81**	**275**	*e*P	**P**	**15 57 22.1**	**+0.7**
RAMN	**Ramite**	**54.97**	**274**	*e*P	**P**	**15 57 23.2**	**+0.7**
KKN	**Kakani**	**55.35**	**275**	*e*P	**P**	**15 57 26.8**	**+1.5**
	comp=Z,4.0nm,0.5s,mb4.7						
DMN	**Daman**	**55.59**	**275**	*e*P	**P**	**15 57 28.4**	**+1.4**
	comp=Z,5.3nm,0.6s,mb4.7						
GKN	**Gorkha**	**55.66**	**276**	*e*P	**P**	**15 57 28.4**	**+0.9**
	comp=Z,7.2nm,0.6s,mb4.9						
DANN	**Dangsing**	**56.05**	**277**	*e*P	**P**	**15 57 31.9**	**+1.6**
	comp=Z,11nm,0.5s,mb5.1						
KOLN	**Koldanda**	**56.52**	**277**	*e*P	**P**	**15 57 34.8**	**+1.1**
	comp=Z,6.8nm,0.7s,mb4.8						
PYUN	**Piuthan**	**56.74**	**277**	*e*P	**P**	**15 57 36.1**	**+0.9**
	comp=Z,3.5nm,0.5s,mb4.6						
NB2	**NORSAR Subarra**	**68.59**	**341**	P	**P**	**15 58 52.0**	**-1.6**
	comp=Z,0.8nm,0.6s,mb3.8,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.59**	**341**	P	**P**	**15 58 51.2**	**-2.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=27,slow=6.6,SNR=4.1						
NOA	**NORSAR Array B**	**68.59**	**341**	*e*P	**P**	**15 58 52.1**	**-1.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**68.81**	**339**	P	**P**	**15 58 52.6**	**-2.5**
	comp=Z,1.7nm,0.4s,mb4.3,baz=61,slow=7.0,SNR=11						
HFS	**Hagfors**	**68.81**	**339**	P	**P**	**15 58 52.6**	**-2.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAR	**Alice Springs**	**71.73**	**198**	P	**P**	**15 59 11.6**	**-1.6**
	comp=Z,0.3nm,0.8s,mb3.3,baz=12,slow=6.3,SNR=4.3						
ASAR	**Alice Springs**	**71.73**	**198**	*e*P	**P**	**15 59 12.9**	**-0.3**
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**15 59 11.3**	**-2.2**
	comp=Z,1.9nm,0.5s,mb4.3,baz=33,slow=5.9,SNR=10.0						
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**15 59 11.4**	**-2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TXAR	**Lajitas Array**	**77.86**	**60**	P	**P**	**15 59 45.3**	**-3.6**
	comp=Z,0.3nm,0.5s,mb3.4,baz=309,slow=5.7,SNR=3.6						
TXAR	**Lajitas Array**	**77.86**	**60**	*e*P	**P**	**15 59 49.5**	**+0.6**

MAN 24 16:17:01, 938N×12242E, h25km, mb3.6, ML2.3, MS1.8, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.80**	**93**	*e*P	Pb	16 17 16.5	+0.2
GUIM	**Jordan**	**1.25**	**8**	*e*P	Pn	16 17 23.7	+0.8
GUIM				*e*S	Sn	16 17 39.4	+0.5
IPIL	**Ipil**	**1.59**	**175**	*i*P	Pn	16 17 27.4	-0.2
IPIL	**Ipil**	**1.59**	**175**	*e*P	Pn	16 17 27.4	-0.2
IPIL				*e*S	Sn	16 17 45.4	-1.9
PAGZ	**Pagadian**	**1.79**	**148**	*e*P	Pn	16 17 31.6	+1.2
PAGZ				*e*S	Sn	16 17 54.0	+1.7
CUYO	**Cuyo Island**	**2.01**	**317**	*e*P	Pn	16 17 34.6	+1.2

*ISCJB **24** 16:19:33.1±0.6, 3678N±005×13738E±007, h247km±5km, mb3.2/3, Error ellipse: s-maj=9.8km s-min=8.3km az=20.6*
*IDC **24** 16:19:33.8±0.9, 3680N×13737E, h240km±10km, mb2.9/3, mb1 3.1/5, mb1mx2.8/24, mbtmp2.9/5, Error ellipse: s-maj=46.3km s-min=13.8km az=56.0*
*JMA **24** 16:19:33.7±0.1, 3676N×13737E, h243km±1km, M3.2*

ISC 24 16:19:34.0±0.6, 3678N±005×13738E±007, h241km±5km, n21, σ0♀44/30, mb3.2/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.51**	**287**	P	**Pn**	**16 20 05.9**	**0.0**
JSZ	**Suzu**	**0.67**	**359**	P	**Pn**	**16 20 06.5**	**0.0**
MAT	**Matsushiro**	**0.70**	**109**	P	**Pn**	**16 20 06.6**	**-0.1**
MAT				S	**S**	**16 20 32.5**	**+0.3**
MAT	**Matsushiro**	**0.70**	**109**	P	**Pn**	**16 20 06.7**	**0.0**
MAT				*e*S	**S**	**16 20 32.7**	**+0.5**
MJAR	**Matsushiro Arr**	**0.70**	**109**	P	**Pn**	**16 20 06.5**	**-0.2**
	9.5nm,0.3s,baz=281,slow=5.5,SNR=134						
MJAR				S	**S**	**16 20 32.9**	**+0.7**
	0.7nm,0.3s,baz=280,slow=11,SNR=7.3						
JKG	**Kaga**	**0.98**	**240**	P	**Pn**	**16 20 07.9**	**-0.1**
JHG	**Hegura jima**	**1.13**	**341**	P	**Pn**	**16 20 09.1**	**+0.2**
JGM	**Miyama**	**1.20**	**207**	P	**Pn**	**16 20 09.3**	**-0.1**
JGM				S	**S**	**16 20 36.6**	**-0.6**
JRY	**Ryogami san**	**1.44**	**121**	P	**Pn**	**16 20 10.9**	**-0.2**
JRY				*e*S	**S**	**16 20 40.2**	**+0.1**
JSD	**Sado**	**1.44**	**29**	P	**Pn**	**16 20 11.3**	**+0.3**
JSD				S	**S**	**16 20 39.6**	**-0.5**
JYN	**Shimodate**	**1.58**	**143**	P	**Pn**	**16 20 12.0**	**-0.2**
JOD2	**Odawara 2**	**2.05**	**137**	P	**Pn**	**16 20 16.3**	**+0.1**
JWT	**Wachi**	**2.19**	**228**	P	**Pn**	**16 20 17.3**	**-0.3**
JIE	**Ise**	**2.44**	**193**	P	**Pn**	**16 20 20.2**	**+0.1**
JIE				*e*S	**S**	**16 20 56.4**	**0.0**
JMM	**Marumori**	**2.93**	**67**	P	**Pn**	**16 20 25.5**	**+0.4**
JMM				*e*S	**S**	**16 21 05.3**	**-0.2**
JWY	**Kouya**	**2.94**	**210**	P	**Pn**	**16 20 25.5**	**+0.1**
JHJ	**Hachijo jima 2**	**4.15**	**151**	P	**Pn**	**16 20 38.4**	**-0.9**
	3.3nm,0.3s,baz=234,slow=22,SNR=4.7						
JHJ				S	**S**	**16 21 31.1**	**+0.2**
	7.3nm,0.3s,baz=54,slow=23,SNR=8.0						
KSRS	**Korea Array**	**7.59**	**278**	P	**Pn**	**16 21 23.1**	**+1.0**
	0.1nm,0.3s,baz=95,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**41.51**	**302**	P	**P**	**16 26 56.5**	**-1.1**
	0.2nm,0.4s,mb2.9,baz=84,slow=10.0,SNR=7.3						
WRA	**Warramunga Arr**	**56.48**	**183**	P	**P**	**16 28 51.3**	**+0.3**
	0.9nm,0.5s,mb3.6,baz=360,slow=7.6,SNR=37						
ASAR	**Alice Springs**	**60.20**	**184**	P	**P**	**16 29 17.2**	**+0.6**
	0.2nm,0.5s,mb3.0,baz=0.3,slow=6.8,SNR=9.0						

*ISCJB **24** 16:36:21.8±0.7, 2077N±008×1224E±02, h33km, mb3.7/7, MS3.2/3, Error ellipse: s-maj=28.8km s-min=8.1km az=163.9*
*NEIC **24** 16:36:23.9±0.6, 2072N×12235E, h35km, mb3.7/1, Error ellipse: s-maj=23.5km s-min=8.6km az=68.0*
*IDC **24** 16:36:33.0±7.9, 2058N×12207E, h118km±82km, mb3.3/7, mb1 3.4/8, mb1mx3.3/20, mbtmp3.3/8, ML3.4/1, MS3.2/5, Ms1 3.2/5, ms1mx3.0/17, Error ellipse: s-maj=26.3km s-min=15.6km az=67.0*

ISC 24 16:36:24.0±0.7, 2075N±007×1224E±02, h35km, n15, σ0♀63/13, mb3.7/7, MS3.2/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YHNB	**Yeheng**	**4.01**	**347**	*e*Pn	**Pn**	**16 37 23.1**	**+0.2**
YHNB				*e*Sn	**Sn**	**16 38 08.2**	**-0.5**
KSRS	**Korea Array**	**17.34**	**15**	P	**Pn**	**16 40 28.1**	**+4.9**
	0.1nm,0.3s,baz=195,slow=10,SNR=11						
KSRS				LR	LR	16 47 07.5	
	comp=Z,68nm,18.7s,baz=178,slow=36						
JHJ	**Hachijo jima 2**	**19.79**	**48**	LR	LR	16 48 53.8	
	comp=Z,40nm,18.7s,baz=356,slow=37						
MJAR	**Matsushiro Arr**	**20.95**	**38**	P	**P**	**16 41 11.6**	**+7.7**
	1.0nm,0.9s,baz=224,slow=8.5,SNR=3.4						
MJAR				LR	LR	16 48 19.9	
	comp=Z,75nm,20.2s,MS3.1,baz=30,slow=33						
CMAR	**Chiang Mai Arr**	**22.18**	**268**	P	**P**	**16 41 17.1**	**-0.1**
	1.3nm,0.8s,mb3.4,baz=74,slow=9.9,SNR=8.8						
ASAJ	**Asahikawa**	**28.74**	**31**	LR	LR	16 55 09.1	
	comp=Z,66nm,19.1s,MS3.3,baz=17,slow=38						
SONM	**Songino Array**	**29.95**	**338**	P	**P**	**16 42 29.7**	**+1.0**
	1.0nm,0.7s,mb3.7,baz=162,slow=10.0,SNR=3.3						
MK31	**Makanchi Array**	**41.59**	**318**	*e*P	**P**	**16 44 07.3**	**-1.1**
MKAR	**Makanchi Array**	**41.59**	**318**	P	**P**	**16 44 09.4**	**+1.1**
	3.6nm,1.1s,mb3.9,baz=114,slow=8.7,SNR=13						
WRAB	**Tennant Creek**	**42.10**	**163**	*e*P	**P**	**16 44 12.8**	**+0.1**
	1.0nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**42.10**	**163**	P	**P**	**16 44 12.1**	**-0.7**
	0.5nm,0.5s,mb3.4,baz=344,slow=9.2,SNR=17						
WB2	**Warramunga Arr**	**42.10**	**163**	*e*P	**P**	**16 44 12.6**	**-0.2**
PETK	**Petropavlovsk-**	**42.16**	**31**	LR	LR	17 05 48.1	
	comp=Z,39nm,18.3s,MS3.3,baz=85,slow=41						
ZALV	**Zalesovo Beam**	**43.72**	**329**	P	**P**	**16 44 25.3**	**-0.3**
	2.3nm,0.7s,mb4.0,baz=102,slow=6.8,SNR=8.4						
ASAR	**Alice Springs**	**45.55**	**165**	P	**P**	**16 44 41.0**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=348,slow=7.9,SNR=19						

*ISCJB **24** 16:55:43.7±0.5, 3751N±003×3556E±003, h10km±4km, Error ellipse: s-maj=4.4km s-min=3.5km az=169.0*
*DDA **24** 16:55:43.4, 3753N×3563E, h7km±3km, Md3.1*

*CSEM **24** 16:55:43.2±0.1, 3753N×3555E, h10km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.4km az=160.0*
*ISK **24** 16:55:43.1, 3754N×3555E, h10km, MD2.9*

ISC 24 16:55:44.2±0.4, 3751N±003×3556E±003, h11km±4km, n17, σ0♀67/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.21**	**99**	PG	**Pg**	**16 55 48.4**	**-0.3**
KOZT				*e*SG	**Sg**	**16 55 52.1**	**+0.4**
KARA	**Karaisali**	**0.48**	**238**	*e*PG	**Pg**	**16 55 53.2**	**-0.4**
KARA				*e*SG	**Sg**	**16 55 59.9**	**+0.1**
CEYT	**Ceyhan**	**0.52**	**164**	*e*PG	**Pg**	**16 55 54.5**	**+0.2**
CEYT				*e*SG	**Sg**	**16 56 02.7**	**+1.4**
ANDN	**Andirin**	**0.62**	**84**	*i* P	**Pg**	**16 55 55.8**	**-0.5**
ANDN				*i* S	**Sg**	**16 56 05.1**	**+0.6**
GULE	**Gulek**	**0.67**	**250**	*i* P	Px	16 55 35.1	
GULE				*i* S	Sx	16 55 45.1	
NIG	**Nigde**	**0.96**	**309**	*e*PG	**Pg**	**16 56 02.3**	**-0.4**
NIG				*e*SG	**Sg**	**16 56 15.0**	**-0.2**
MERS	**Mersin**	**1.05**	**233**	*e*PG	**Pg**	**16 56 03.9**	**-0.5**
MERS				*e*SG	**Sg**	**16 56 18.2**	**+0.1**
KMRS	**Kahramanmaras**	**1.06**	**90**	*e*PG	**Pg**	**16 56 04.3**	**-0.4**
KMRS				*e*SG	**Sg**	**16 56 18.9**	**+0.4**
COBT	**Iskenderun**	**1.14**	**151**	*i* P	**Pn**	**16 56 04.9**	**-0.9**
COBT				*i* S	**Sb**	**16 56 17.6**	**-3.0**
PINB	**Pinarbasi**	**1.34**	**29**	*i* P	**Pn**	**16 56 08.2**	**-0.6**
PINB				*i* S	**Sb**	**16 56 26.6**	**+0.2**
BNN	**Bunyan**	**1.35**	**9**	*e*PN	**Pn**	**16 56 08.7**	**-0.4**
BNN				*e*SN	**Sn**	**16 56 26.6**	**-0.4**
AVNT	**Avonos**	**1.38**	**336**	*i* P	**Pn**	**16 56 09.9**	**+0.5**
AVNT				*i* S	**Sn**	**16 56 28.8**	**+1.1**
HTY	**Hatay**	**1.46**	**161**	*e*PN	**Pn**	**16 56 10.4**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.47**	**37**	*e*PN	**Pn**	**16 56 05.5**	**-5.1**
SARI				*e*SN	**Sn**	**16 56 20.2**	**-10**
GZT	**Gaziantep**	**1.60**	**95**	*i* P	**Pn**	**16 56 08.2**	**-4.2**
GZT				*i* S	**Sn**	**16 56 33.3**	**+0.2**
IKL	**Isikli**	**1.97**	**230**	*e*PN	**Pn**	**16 56 17.8**	**+0.3**
IKL				*e*SN	**Sn**	**16 56 43.0**	**+0.8**
AKCD	**Akcadag**	**2.02**	**67**	*i* P	**Pn**	**16 56 18.6**	**+0.4**

*NEIC **24** 17:30:31.4, 1732N×10073W, h45km, MD3.7(MEX), After MEX.*

MEX 24 17:30:31.4±0.8, 1731N×10073W, h46km±23km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.52**	**121**	*i* P	Pn	17 30 41.5	-1.1
CAIG				*i* S	Sn	17 30 48.5	-2.1
ZIIG	**Zihuatanejo**	**0.76**	**293**	*i* P	Pn	17 30 44.6	-1.1
ZIIG				*i* S	Sn	17 30 52.6	-3.6
ACX	**Acapulco**	**0.90**	**119**	*i* P	Pn	17 30 45.0	-2.6
ACX				*i* S	Sn	17 30 59.8	+0.2
ACX	**Acapulco**	**0.90**	**119**	*i* P	Pn	17 30 45.0	-2.6
ACX				*i* S	Sn	17 30 59.4	-0.2
PNIG	**Pinotepa**	**2.66**	**110**	*i* P	Pn	17 31 10.3	-1.5
PNIG				*i* S	Sn	17 31 39.8	-2.9
UTMO	**Huajuapan**	**2.84**	**79**	*e*P	Pn	17 31 12.6	-1.6
UTMO				*i* S	Sn	17 31 46.3	-1.0

*NEIC **24** 17:57:40.8, 1606N×9813W, h10km, MD4.0(MEX), After MEX.*

MEX 24 17:57:39.9±0.6, 1603N×9814W, h5km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.36**	**2**	*i* P	Pg	17 57 46.1	-0.7
PNIG				*i* S	Sg	17 57 51.8	+0.3
VHO	**Vista Hermosa**	**1.70**	**52**	*i* P	Pn	17 58 06.7	-3.5
VHO				*i* S	Sn	17 58 27.9	-4.5
OXX	**Oaxaca**	**1.71**	**52**	*e*P

mb1 3.7/13,mb1mx3.5/24,mbtmp3.6/13,Error ellipse: s-maj=24.4km s-min=11.6km az=54.0
*DJA **24** 18:07:53.5±0.0,257N×9882E,h131km*
*NEIC **24** 18:07:58.6±5.7,257N×9923E,h211km±56km,mb4.0/5, Error ellipse: s-maj=25.8km s-min=10.2km az=57.0*
ISC 24 18:07:52.8±0.4,245N×006×9897E±006,h155km±4km,n33, σ0§96/33,mb4.0/16,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRSI	**Tarutung**	**0.42**	**181**	P	**Pn**	**18 08 14.3**	**0.0**
TRSI	**Tarutung**	**0.42**	**181**	S	**Sn**	**18 08 30.7**	**-0.1**
GSI	**Gunungsitoli**	**1.79**	**231**	P	**Pn**	**18 08 25.8**	**-0.1**
GSI	**Gunungsitoli**	**1.79**	**231**	S	**Sn**	**18 08 50.0**	**+4.1**
IPM	**Ipoh**	**2.88**	**45**	P	**Pn**	**18 08 39.0**	**+0.2**
PPI	**Padang Panjang**	**3.22**	**154**	P	**Pn**	**18 08 45.6**	**+2.5**
PDSI	**Padang**	**3.66**	**156**	P	**Pn**	**18 08 50.3**	**+1.6**
PDSI	**Padang**	**3.66**	**156**	S	**Pn**	**18 08 49.3**	**+0.6**
BSI	**Banda Aceh**	**4.75**	**310**	P	**Pn**	**18 09 02.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**15.91**	**360**	P	**Pn**	**18 11 29.8**	**+1.5**
	0.5nm,0.3s,baz=190,slow=11,SNR=22						
KAPI	**Kappang**	**22.05**	**110**	P	**P**	**18 12 34.8**	**-0.6**
	6.0nm,0.3s,mb4.5,baz=294,slow=6.0,SNR=18						
BATI	**Baumata**	**27.62**	**117**	P	**P**	**18 13 25.9**	**-0.1**
	5.3nm,0.4s,mb4.6,baz=300,slow=8.1,SNR=2.6						
WRA	**Warramunga Arr**	**41.23**	**124**	P	**P**	**18 15 22.0**	**-0.8**
	1.2nm,0.3s,mb4.0,baz=322,slow=11,SNR=47						
WRA				ScP	ScP	18 20 53.9	-0.6
	0.3nm,0.6s,baz=311,slow=3.0,SNR=5.8						
WRAB	**Tennant Creek**	**41.24**	**124**	*eP*	**P**	**18 15 22.6**	**-0.2**
WB2	**Warramunga Arr**	**41.24**	**124**	*eP*	**P**	**18 15 22.4**	**-0.5**
ASAR	**Alice Springs**	**42.77**	**129**	P	**P**	**18 15 34.4**	**-0.8**
	1.1nm,0.5s,mb3.7,baz=302,slow=7.7,SNR=37						
ASAR				ScP	ScP	18 21 00.1	-0.5
	0.2nm,0.5s,baz=298,slow=4.1,SNR=7.5						
KSRS	**Korea Array**	**43.83**	**34**	P	**P**	**18 15 43.0**	**-0.5**
	0.8nm,0.7s,mb3.5,baz=214,slow=9.6,SNR=3.5						
SONM	**Songino Array**	**45.66**	**7**	P	**P**	**18 15 58.5**	**+0.7**
	0.7nm,0.4s,mb3.6,baz=191,slow=9.6,SNR=13						
MK31	**Makanchi Array**	**46.49**	**344**	*eP*	**P**	**18 16 03.7**	**-0.6**
MKAR	**Makanchi Array**	**46.49**	**344**	P	**P**	**18 16 04.6**	**+0.3**
	0.5nm,0.4s,mb3.5,baz=157,slow=7.9,SNR=12						
TLY	**Talaya**	**49.22**	**4**	*eP*	**P**	**18 16 21.6**	**-3.5**
ZALV	**Zalesovo Beam**	**52.63**	**350**	P	**P**	**18 16 50.9**	**+0.3**
	1.5nm,0.5s,mb4.0,baz=153,slow=4.3,SNR=5.7						
STKA	**Stephens Creek**	**52.91**	**134**	P	**P**	**18 16 52.5**	**-0.6**
	0.6nm,0.4s,mb3.6,baz=315,slow=5.7,SNR=3.6						
STKA	**Stephens Creek**	**52.91**	**134**	P	**P**	**18 16 52.0**	**-1.1**
	1.2nm,1.3s,mb3.5						
BVAR	**Borovoye Array**	**55.68**	**340**	P	**P**	**18 17 13.3**	**+0.5**
	0.3nm,0.4s,mb3.4,baz=133,slow=8.1,SNR=2.7						
NAY	**Al-Naaiem**	**55.84**	**304**	*eP*	**P**	**18 17 14.6**	**+0.2**
MIB	**Mutribah**	**55.94**	**305**	*eP*	**P**	**18 17 15.3**	**+0.3**
MIB				AMb	AMB	18 17 16.6	
	comp=Z,19nm,0.5s,mb5.2						
ARU	**Arti**	**62.75**	**336**	P	**P**	**18 17 58.8**	**-2.5**
	comp=Z,4.9nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**69.59**	**312**	P	**P**	**18 18 45.0**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.5,baz=116,slow=6.3,SNR=5.2						
TIXI	**Tiksi**	**71.66**	**10**	*eP*	**P**	**18 18 56.9**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.0						
LSZ	**Lusaka**	**72.16**	**253**	P	**P**	**18 19 03.2**	**+2.0**
	comp=Z,1.9nm,0.8s,mb3.9						
BOSA	**Boshof**	**76.93**	**240**	P	**P**	**18 19 30.2**	**+1.7**
	comp=Z,1.4nm,0.3s,mb4.0,baz=98,slow=4.6,SNR=7.2						
BOSA	**Boshof**	**76.93**	**240**	*eP*	**P**	**18 19 30.0**	**+1.5**
	comp=Z,2.7nm,0.7s,mb4.0						

MDD 24 18:16:28.9±3.2,4294N×1319W,h0km,mb4.1/3,Error ellipse: s-maj=27.4km s-min=24.9km az=140.0,PRIMO, North Atlantic Ocean
INMG 24 18:16:32.3±0.9,4292N×1357W,h10km,ML2.3,Error ellipse: s-maj=8.4km s-min=5.1km az=106.0,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMAZ	**Mazaricos**	**3.09**	**88**	S	Sn	18 17 52.5	-4.1
	8.2nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**3.09**	**88**	S	Sn	18 17 52.5	-4.1
	8.2nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**3.41**	**102**	S	Sn	18 18 01.4	-3.1
	0.6nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**3.95**	**104**	P	Pn	18 17 29.7	-1.0
	0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	18 18 14.8	-2.8
	3.5nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**4.44**	**83**	P	Pn	18 17 35.9	-1.5
	0.8nm,0.1s,SNR=7.9						
EPON				S	Sn	18 18 24.3	-5.5
	1.1nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**4.44**	**83**	P	Pn	18 17 35.9	-1.5
	0.8nm,0.1s,SNR=7.9						
EPON				S	Sn	18 18 24.3	-5.5
	1.1nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**4.88**	**100**	S	Sn	18 18 37.2	-3.4
	1.8nm,0.2s,SNR=5.6						
ECAL	**Calabor**	**4.88**	**100**	S	Sn	18 18 37.2	-3.4
	1.8nm,0.2s,SNR=5.6						
EARI	**Arriondas**	**5.85**	**84**	P	Pn	18 17 55.6	-1.2
	1.0nm,0.1s,SNR=7.0						
EARI				S	Sn	18 19 01.0	-3.6
	1.8nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**5.85**	**84**	P	Pn	18 17 55.6	-1.3
	1.0nm,0.1s,SNR=7.0						
EARI				S	Sn	18 19 01.0	-3.6
	1.8nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**6.28**	**130**	S	Sn	18 19 09.1	-5.9
	0.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.28**	**130**	S	Sn	18 19 09.1	-5.9
	0.1nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.13**	**106**	P	Pn	18 18 14.1	-0.3
	0.2nm,0.2s,SNR=4.0						
GUD				S	Sn	18 19 31.1	-5.0
	0.5nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**7.15**	**84**	P	Pn	18 18 13.9	-0.8
	SNR=7.9						
ELAN				S	Sn	18 19 30.8	-5.7
	SNR=7.9						
ELAN	**Lanestosa**	**7.15**	**84**	P	Pn	18 18 13.9	-0.8
	0.0nm,0.0s,SNR=7.9						
ELAN				S	Sn	18 19 30.8	-5.7
	0.0nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.17**	**134**	P	Pn	18 18 12.8	-2.2
	1.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	18 19 29.3	-7.8
	0.2nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.17**	**134**	P	Pn	18 18 12.8	-2.2
	1.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	18 19 29.3	-7.8
	0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.67**	**112**	P	Pn	18 18 21.8	0.0
	0.1nm,0.1s,slow=13,SNR=7.9						
ESDC				S	Sn	18 19 43.9	-5.5
	slow=23,SNR=7.9						
ESDC	**Sonseca Array**	**7.67**	**112**	P	Pn	18 18 21.8	0.0
	0.1nm,0.1s,baz=294,slow=13,SNR=7.9						
ESDC				S	Sn	18 19 43.9	-5.6
	0.0nm,0.2s,baz=294,slow=23,SNR=7.9						

*IDC **24** 18:38:57.0±0.7,2107S×17451W,h0km,mb4.3/11, mb1 4.5/12,mb1mx4.3/21,mbtmp4.3/12,ML5.0/2,MS3.6/8, Ms1 3.6/8,ms1mx3.4/29,Error ellipse: s-maj=26.8km s-min=17.1km az=133.0*
*NEIC **24** 18:38:57.8±0.5,2119S×17448W,h10km,mb4.6/7,Error ellipse: s-maj=17.3km s-min=10.0km az=128.0*
*ISCJB **24** 18:39:00.2±0.5,2108S±009×1746W±01,h33km,mb4.3/17, MS3.6/7,Error ellipse: s-maj=16.6km s-min=11.4km az=35.8*
ISC 24 18:39:02.3±0.5,2113S±009×1746W±01,h35km,n43, σ1§11/33,mb4.3/17,MS3.6/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.67**	**21**	P	**Pn**	**18 40 44.5**	**-7.1**
	5.7nm,0.3s,baz=268,slow=18,SNR=4.6						
AFI				S	**Sn**	**18 42 02.1**	**-15**
	7.6nm,0.3s,baz=212,slow=24,SNR=5.6						
AFI	**Afiamalu**	**7.67**	**21**	*e*Pn	**Pn**	**18 40 42.9**	**-8.7**
AFI				*e*Sn	**Sn**	**18 42 03.7**	**-14**
RAO	**Raoul Island**	**8.63**	**200**	Pn	**Pn**	**18 41 02.6**	**-2.0**
	129nm,0.3s,baz=287,slow=19,SNR=2.1						
RAO				Sn	**Sn**	**18 42 48.9**	**+8.2**
	431nm,0.3s,baz=106,slow=23,SNR=6.2						
RAO				LR	LR	18 43 16.7	
	comp=Z,94nm,21.9s,baz=98,slow=30						
RAO	**Raoul Island**	**8.63**	**200**	Pn	**Pn**	**18 41 02.6**	**-2.0**
RAO				Sn	**Sn**	**18 42 48.9**	**+8.2**
RAO				LR	LR	18 43 16.7	
URZ	**Urewera**	**18.51**	**201**	P	**Pn**	**18 43 15.3**	**-0.6**
	0.6nm,0.3s,baz=62,slow=18,SNR=5.2						
PPT	**Papeete**	**23.86**	**86**	*e*LR	LR	18 49 41.6	
	339nm,27.2s						
PPT	**Papeete**	**23.86**	**86**	LR	LR	18 49 57.9	
	comp=Z,39nm,21.9s,MS2.8,baz=253,slow=28						
RPZ	**Rata Peaks**	**25.50**	**205**	LR	LR	18 54 22.1	
	comp=Z,297nm,19.1s,MS3.8,baz=88,slow=36						
HNR	**Honiara**	**27.13**	**292**	LR	LR	18 53 44.7	
	comp=Z,129nm,18.4s,MS3.5,baz=234,slow=33						
CTA	**Charters Tower**	**36.60**	**264**	P	**P**	**18 46 05.8**	**+0.5**
	1.8nm,0.6s,mb4.1,baz=53,slow=4.7,SNR=3.1						
CTA				LR	LR	18 59 46.3	
	comp=Z,142nm,18.8s,MS3.8,baz=237,slow=34						
CTA	**Charters Tower**	**36.60**	**264**	P	**P**	**18 46 05.8**	**+0.5**
CTA				LR	LR	18 59 46.3	
CTAO	**Charters Tower**	**36.60**	**264**	P	**P**	**18 46 06.4**	**+1.1**
RKT	**Rikitea**	**36.68**	**101**	*e*LR	LR	18 55 40.4	
	244nm,27.8s						
TAU	**Tasmania Unive**	**38.47**	**227**	*e*P	**P**	**18 46 16.8**	**-4.1**
STKA	**Stephens Creek**	**40.40**	**245**	P	**P**	**18 46 37.7**	**+0.5**
	1.6nm,0.6s,mb3.9,baz=105,slow=12,SNR=3.9						
STKA				LR	LR	19 02 20.5	
	comp=Z,101nm,19.9s,MS3.7,baz=26,slow=35						
ASAR	**Alice Springs**	**47.48**	**257**	P	**P**	**18 47 33.6**	**-0.5**
	5.1nm,0.8s,mb4.5,baz=100,slow=7.6,SNR=61						
ASAR				PcP	PcP	18 49 04.8	+0.8
	1.0nm,0.8s,baz=114,slow=4.0,SNR=4.5						
WB2	**Warramunga Arr**	**47.66**	**262**	*e*P	**P**	**18 47 34.6**	**-0.9**
WRAB	**Tennant Creek**	**47.66**	**262**	*e*P	**P**	**18 47 31.2**	**-4.4**
	3.2nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**47.67**	**262**	P	**P**	**18 47 34.2**	**-1.4**
	2.6nm,0.8s,mb4.3,baz=96,slow=8.2,SNR=24						
WRA				PcP	PcP	18 49 05.6	+0.8
	1.1nm,0.8s,baz=92,slow=3.4,SNR=4.6						
SBA	**Scott Base**	**57.48**	**185**	P	**P**	**18 48 49.1**	**+1.8**
VNDA	**Vanda**	**57.59**	**186**	P	**P**	**18 48 50.2**	**+2.1**
	0.8nm,0.7s,mb3.9,baz=2.2,slow=5.4,SNR=7.5						
VNDA	**Vanda**	**57.59**	**186**	P	**P**	**18 48 50.2**	**+2.1**
VNDA				*e*P		18 48 50.5	
MBWA	**Marble Bar**	**60.82**	**257**	*e*P	**P**	**18 49 10.6**	**-0.8**
	13nm,1.0s,mb5.0						
QSPA	**South Pole Qui**	**68.94**	**180**	*e*P	**P**	**18 50 03.2**	**-0.1**
	9.3nm,1.2s,mb4.6						
MJAR	**Matsushiro Arr**	**72.64**	**322**	P	**P**	**18 50 26.9**	**+0.5**
	3.2nm,0.8s,mb4.3,baz=159,slow=6.1,SNR=13						
MAJO	**Matsushiro**	**72.64**	**322**	*e*P	**P**	**18 50 26.2**	**-0.1**
	6.7nm,0.9s,mb4.6						
PETK	**Petropavlovsk-**	**77.74**	**343**	LR	LR	19 26 04.3	
	comp=Z,47nm,18.0s,MS3.9,baz=232,slow=36						
CMB	**Columbia Colle**	**77.80**	**41**	P	**P**	**18 50 55.7**	**-0.3**
	5.5nm,1.2s,mb4.4						
NVAR	**Mina Array Bea**	**79.33**	**42**	P	**P**	**18 51 03.8**	**-0.7**
	5.1nm,1.1s,mb4.4,baz=224,slow=8.9,SNR=20						
KSRS	**Korea Array**	**79.50**	**317**	P	**P**	**18 51 06.8**	**+1.5**
	3.3nm,1.1s,mb4.2,baz=133,slow=6.7,SNR=8.8						
TPNV	**Topopah Spring**	**79.75**	**44**	*e*P	**P**	**18 51 05.6**	**-1.1**
	2.8nm,0.9s,mb4.2						
ANMO	**Albuquerque**	**85.34**	**50**	P	**P**	**18 51 35.6**	**-0.3**
	2.6nm,0.9s,mb4.3,baz=227,slow=7.5,SNR=6.2						
ANMO	**Albuquerque**	**85.34**	**50**	*e*P	**P**	**18 51 35.6**	**-0.3**
	3.3nm,1.1s,mb4.4						
PDAR	**Pinedale Array**	**87.27**	**42**	P	**P**	**18 51 45.0**	**-0.3**
	1.6nm,1.0s,mb4.2,baz=222,slow=4.0,SNR=7.8						
CMAR	**Chiang Mai Arr**	**93.33**	**288**	P	**P**	**18 52 16.2**	**+2.1**
	2.5nm,0.9s,mb4.7,baz=115,slow=2.8,SNR=17						
LPAZ	**La Paz**	**98.87**	**111**	LR	LR	19 26 31.6	
	comp=Z,48nm,18.5s,MS4.0,baz=272,slow=29						
BVAR	**Borovoye Array**	**121.61**	**320**	PKP	PKPdf	18 57 51.8	-0.2
	0.5nm,0.7s,baz=35,slow=5.4,SNR=3.7						
AKASG	**Malin Array Be**	**145.06**	**333**	PKPbc	PKPbc	18 58 34.8	-0.4
	4.0nm,0.6s,baz=41,slow=4.1,SNR=24						
EKA	**Eskdalemuir Ar**	**145.25**	**9**	PKPbc	PKPbc	18 58 34.5	-1.1
	2.2nm,0.7s,baz=347,slow=3.4,SNR=5.7						
CLL	**Collm**	**149.30**	**351**	*e*PKPbc	PKPbc	18 58 46.0	-1.1
BR131	**Keskin Array S**	**149.60**	**314**	*e*PKPbc	PKPbc	18 58 48.2	-0.1
BRTR	**Keskin Array B**	**149.60**	**314**	PKPbc	PKPbc	18 58 48.6	+0.3
	1.5nm,0.8s,baz=150,slow=4.9,SNR=10						
GERES	**GERESS Array B**	**151.56**	**348**	PKPbc	PKPbc	18 58 52.5	-0.2
	1.0nm,0.8s,baz=14,slow=2.8,SNR=7.2						

IDC 24 18:51:00.3±1.6,3149S×7674E,h0km,mb3.8/5,mb1 3.9/5, mb1mx3.6/19,mbtmp3.8/5,MS3.7/4,Ms1 3.6/4, ms1mx3.3/34,Error ellipse: s-maj=62.0km s-min=27.3km az=16.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**34.15**	**103**	LR	LR	19 08 01.8	
	comp=Z,104nm,21.4s,baz=96,slow=30						
BOSA	**Boshof**	**44.33**	**260**	LR	LR	19 15 47.5	
	comp=Z,52nm,18.2s,baz=357,slow=34						
LSZ	**Lusaka**	**47.01**	**279**	P	P	18 59 33.7	+0.1
	0.8nm,0.6s,baz=128,slow=9.3,SNR=4.0						
ASAR	**Alice Springs**	**50.79**	**96**	P	P	19 00 02.5	0.0
	1.3nm,0.9s,baz=248,slow=6.6,SNR=13						
WRA	**Warramunga Arr**	**52.63**	**92**	P	P	19 00 16.3	-0.1
	1.1nm,0.8s,baz=243,slow=7.7,SNR=7.5						
WRA				LR	LR	19 20 21.6	
	comp=Z,79nm,18.2s,baz=55,slow=34						
CTA	**Charters Tower**	**62.71**	**98**	LR	LR	19 28 57.4	
	comp=Z,83nm,19.9s,baz=51,slow=36						
MKAR	**Makanchi Array**	**78.08**	**4**	P	P	19 03 00.2	-0.4
	0.7nm,0.8s,baz=182,slow=7.2,SNR=4.9						
SONM	**Songino Array**	**83.33**	**20**	P	P	19 03 29.5	+0.8
	0.5nm,1.1s,baz=193,slow=5.8,SNR=2.6						

*IDC **24** 18:53:27.3±1.6,2125S×17450W,h0km,mb4.0/6, mb1 4.2/6,mb1mx4.0/18,mbtmp3.9/6,Error ellipse: s-maj=69.9km s-min=27.3km az=149.0*
*NEIC **24** 18:53:28.5±0.9,2055S×17468W,h10km,mb3.9/2,Error ellipse: s-maj=37.5km s-min=17.0km az=131.0*
*ISCJB **24** 18:53:30.6±1.0,209S±02×1746W±02,h33km,mb4.0/8, Error ellipse: s-maj=31.3km s-min=19.3km az=41.3*
ISC 24 18:53:33.2±1.0,210S±02×1746W±02,h35km,n17, σ1§24/14,mb3.9/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.53**	**22**	Pn	**Pn**	**18 55 16.9**	**-3.7**
	2.6nm,0.3s,baz=198,slow=6.4,SNR=3.0						
AFI				Sn	**Sn**	**18 56 32.6**	**-12**
	1.1nm,0.3s,baz=229,slow=19,SNR=3.0						
AFI	**Afiamalu**	**7.53**	**22**	Pn	**Pn**	**18 55 11.5**	**-9.2**
AFI				Sn	**Sn**	**18 56 32.6**	**-12**
DZM	**Mont Dzumac**	**17.65**	**263**	*e*P	**Pn**	**18 57 46.3**	**+10**
PPT	**Papeete**	**23.88**	**86**	*e*LR	LR	19 04 15.3	
	339nm,25.5s						
RKT	**Rikitea**	**36.74**	**101**	*e*LR	LR	19 10 11.9	
	246nm,39.0s						
ASAR	**Alice Springs**	**47.48**	**257**	P	**P**	**19 02 04.3**	**-0.8**
	2.4nm,0.8s,mb4.2,baz=101,slow=7.7,SNR=28						
ASAR				PcP	PcP	19 03 35.6	+0.6
	0.5nm,0.7s,baz=96,slow=4.3,SNR=4.2						
WRAB	**Tennant Creek**	**47.65**	**262**	*e*P	**P**	**19 02 05.6**	**-0.8**
	1.4nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**47.66**	**262**	P	**P**	**19 02 05.1**	**-1.3**
	1.2nm,0.7s,mb4.1,baz=97,slow=8.1,SNR=18						
WRA				PcP	PcP	19 03 36.6	+0.9
	0.4nm,0.6s,baz=96,slow=3.2,SNR=3.3						
VNDA	**Vanda**	**57.74**	**186**	P	**P**	**19 03 20.3**	**+0.1**
	0.6nm,0.9s,mb3.6						
MJAR	**Matsushiro Arr**	**72.50**	**322**	P	**P**	**19 04 57.2**	**+0.8**
	1.0nm,0.7s,mb3.9,baz=154,slow=6.6,SNR=6.8						
MJAR	**Matsushiro Arr**	**72.50**	**322**	P	**P**	**19 04 57.2**	**+0.8**
NVAR	**Mina Array Bea**	**79.24**	**42**	P	**P**	**19 05 34.8**	**-0.1**
	0.8nm,0.7s,mb3.8,baz=226,slow=8.4,SNR=6.9						
KSRS	**Korea Array**	**79.36**	**317**	P	**P**	**19 05 37.7**	**+2.1**
	0.5nm,0.7s,mb3.6,baz=120,slow=7.4,SNR=2.9						
CMAR	**Chiang Mai Arr**	**93.25**	**288**	P	**P**	**19 06 46.9**	**+2.1**
	1.0nm,0.9s,mb4.3,baz=142,slow=2.8,SNR=6.9						
AKASG	**Malin Array Be**	**144.90**	**333**	PKPbc	PKPdf	19 13 05.7	-0.7
	1.9nm,0.5s,baz=40,slow=4.5,SNR=10						
EKA	**Eskdalemuir Ar**	**145.10**	**9**	PKPbc	PKPbc	19 13 06.0	-0.1
	1.4nm,0.8s,baz=316,slow=2.3,SNR=3.5						
BRTR	**Keskin Array B**	**149.47**	**314**	PKPbc	PKPbc	19 13 18.2	-0.6
	0.7nm,0.7s,baz=96,slow=5.0,SNR=4.9						

*NIED **24** 19:33:00,2550N×12470E,h107km,Mw4.1 Best double couple: M₀1.66000×10¹⁵ NP1:φ=43.00000°,δ81.00000°, λ=-49.00000°. NP2:φ=143.00000°,δ42.00000°, λ=-167.00000°.*
*BJI **24** 19:33:50.5,2531N×12482E,h120km,mB4.7,mb4.7*
*ISCJB **24** 19:33:51.6±0.2,2546N±004×12478E±003,h120km±3km, mb4.2/34, Error ellipse: s-maj=7.6km s-min=3.5km az=149.5*
*IDC **24** 19:33:51.7±2.8,2552N×12465E,h103km±26km,mb3.9/22, mb1 4.0/24,mb1mx3.9/31,mbtmp3.9/24,Error ellipse: s-maj=17.8km s-min=12.3km az=67.0*
*JMA **24** 19:33:53.2±0.1,2548N×12469E,h108km,M3.9*
*NEIC **24** 19:33:53.6±0.5,2552N×12472E,h121km±5km,mb4.5/15, Error ellipse: s-maj=7.3km s-min=5.4km az=158.0*
*MOS **24** 19:33:55.2±0.8,2552N×12472E,h154km,mb4.2/25,Error ellipse: s-maj=11.7km s-min=7.6km az=103.9*
ISC 24 19:33:52.7±0.2,2549N±004×12477E±003,h113km±3km, n107,σ0§98/124,mb4.2/34,1C-1D,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMJ	**Miyako jima 2**	**0.82**	**144**	P	**Pn**	**19 34 13.0**	**+0.6**
JMJ				S	**Sn**	**19 34 27.6**	**+0.4**
JTJ	**Tarama**	**0.84**	**184**	P	**Pn**	**19 34 12.8**	**+0.2**
JTJ				S	**Sn**	**19 34 27.4**	**-0.1**
JOGS	**Gusukube**	**0.93**	**141**	P	**Pn**	**19 34 13.4**	**+0.9**
JOGS				S	**Sn**	**19 34 30.0**	**+1.1**
JIJ	**Ishigaki jima**	**1.25**	**207**	P	**Pn**	**19 34 16.5**	**-0.3**
JIJ				S	**Sn**	**19 34 33.4**	**-1.7**
JKRS	**Kuro-shima**	**1.42**	**209**	P	**Pn**	**19 34 18.6**	**-0.1**
JKRS				S	**Sn**	**19 34 38.1**	**-0.4**
IRIF	**Iriomote-Funau**	**1.48**	**220**	P	**Pn**	**19 34 19.3**	**-0.2**
IRIF				S	**Sn**	**19 34 39.2**	**-0.6**
HATJ	**Hateruma jima**	**1.67**	**212**	P	**Pn**	**19 34 21.6**	**-0.1**
HATJ				S	**Sn**	**19 34 43.2**	**-0.6**
YOJ	**Yonaguni jima**	**1.89**	**238**	P	**Pn**	**19 34 25.0**	**+0.6**
YOJ				S	**Sn**	**19 34 47.8**	**-0.8**
JKE	**Kume jima 2**	**2.00**	**65**	P	**Pn**	**19 34 26.7**	**+0.9**
JAGN	**Aguni-jima**	**2.48**	**63**	P	**Pn**	**19 34 32.9**	**+0.9**
JAGN				S	**Sn**	**19 35 01.9**	**-0.3**
NAH1	**Naha**	**2.73**	**74**	*e*S	**Sn**	**19 35 08.1**	**+0.2**
JJT2	**Tamagusuku 2**	**2.77**	**76**	P	**Pn**	**19 34 35.8**	**+0.1**
JJT2				*e*S	**Sn**	**19 35 09.8**	**+1.1**
TATO	**Taipei**	**3.01**	**261**	*e*P	**Pn**	**19 34 40.2**	**+1.2**
NACB	**Ninganchiao**	**3.16**	**246**	*e*P	**Pn**	**19 34 40.7**	**-0.2**
YHNB	**Yeheng**	**3.18**	**256**	*e*Pn	**Pn**	**19 34 43.0**	**+1.8**
JIH	**Iheya**	**3.26**	**61**	P	**Pn**	**19 34 42.8**	**+0.6**
JIH				*e*S	**Sn**	**19 35 19.2**	**-1.3**
JOW	**Kunigami**	**3.43**	**66**	P	**Pn**	**19 34 44.5**	**0.0**
	35nm,0.3s,baz=216,slow=7.9,SNR=32						
JOW				S	**Sn**	**19 35 21.8**	**-2.6**
	22nm,0.3s,baz=104,slow=25,SNR=4.7						
JOW	**Kunigami**	**3.43**	**66**	P	**Pn**	**19 34 44.5**	**+0.1**
JOW				S	**Sn**	**19 35 22.8**	**-1.6**
JTK	**Tokunoshima**	**4.39**	**58**	P	**Pn**	**19 34 56.9**	**-0.4**
JTK				S	**Sn**	**19 35 45.2**	**-2.3**
JAM	**Amami Oshima**	**5.21**	**55**	P	**Pn**	**19 35 07.6**	**-0.8**
JAM				S	**Sn**	**19 36 03.9**	**-3.4**
JMZ	**Minamidaito 2**	**5.83**	**85**	P	**Pn**	**19 35 14.5**	**-2.3**
JMZ				S	**Sn**	**19 36 15.1**	**-7.3**
INCN	**Inchon**	**12.07**	**7**	*e*Pn	**Pn**	**19 36 49.7**	**+8.9**
	12nm,0.6s						
KSRS	**Korea Array**	**12.23**	**12**	P	**Pn**	**19 36 45.3**	**+2.3**
	0.6nm,0.3s,baz=193,slow=13,SNR=26						
KSRS	**Korea Array**	**12.23**	**12**	P	**Pn**	**19 36 45.3**	**+2.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**15.93**	**43**	*e*Pn	**Pn**	**19 37 32.2**	**+1.8**
	comp=Z,2.5nm,0.6s						
MAJO	**Matsushiro**	**15.93**	**43**	*e*P	**

comp=Z,2.0nm,0.6s,mb4.0
WRA Warramunga Arr 46.10 167 P **P** **19 42 05.7 +0.1**
comp=Z,3.3nm,0.6s,mb4.2,baz=349,slow=8.5,SNR=44
WRA Warramunga Arr 46.10 167 P **P** **19 42 05.7 0.0**
WRA pmax pmax
comp=Z,3.0nm,0.6s
WB2 Warramunga Ar 46.11 167 *e*P **P** **19 42 05.6 -0.1**
KBL Kabul 48.57 295 *e*P **P** **19 42 25.3 +0.5**
comp=Z,3.6nm,0.6s,mb4.5
KBL Kabul 48.57 295 *e*P **P** **19 42 25.3 +0.5**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BVAR Borovoye Array 48.78 319 P **P** **19 42 25.4 -0.6**
comp=Z,1.1nm,0.3s,mb4.2,baz=108,slow=8.9,SNR=12
BVAR PcP PcP 19 43 49.3 +0.1
comp=Z,3.3nm,0.6s,baz=116,slow=3.3,SNR=18
BVAR Borovoye Array 48.78 319 P **P** **19 42 25.4 -0.6**
BVAR 19 43 49.3
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
ASAR Alice Springs 49.66 169 P **P** **19 42 33.7 +0.7**
comp=Z,1.8nm,0.5s,mb4.3,baz=358,slow=6.7,SNR=34
ASAR Alice Springs 49.66 169 P **P** **19 42 33.7 +0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
ARU Arti 56.05 322 *e*P **P** **19 43 18.3 -1.4**
comp=Z,4.9nm,0.8s,mb4.6
ARU Arti 56.05 322 *c i*P **P** **19 43 18.5 -1.2**
ARU *e* 19 45 25.7
ARU *e*S **S** **19 50 54.7 -4.7**
ARU *e*SS SS 19 54 41.8 -5.0
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
AKTK Aktyubinsk 56.14 315 P **P** **19 43 21.1 +0.7**
AKTO Aktyubinsk 56.14 315 P **P** **19 43 21.1 +0.7**
comp=Z,0.7nm,0.3s,mb4.1,baz=100,slow=12,SNR=4.4
AKTO Aktyubinsk 56.14 315 P **P** **19 43 21.1 +0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
STKA Stephens Creek 59.26 163 P **P** **19 43 42.3 -0.1**
comp=Z,1.0nm,0.4s,mb4.2,baz=349,slow=10,SNR=3.4
SVW2 Sparrevohn 63.07 32 *e*P **P** **19 44 08.4 +0.7**
BPAW Bear Paw Mtn. 64.90 29 *e*P **P** **19 44 20.7 +1.1**
comp=Z,4.3nm,0.4s,mb4.6
MCK McKinley 65.85 29 *e*P **P** **19 44 26.1 +0.3**
comp=Z,7.3nm,0.6s,mb4.7
MCK McKinley 65.85 29 *e*P **P** **19 44 26.1 +0.3**
MCK pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
PMR Palmer 66.10 31 *e*P **P** **19 44 27.3 -0.1**
comp=Z,6.4nm,0.6s,mb4.6
PMR Palmer 66.10 31 *e*P **P** **19 44 27.3 -0.1**
PMR pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
KIV Kislovodsk 67.30 309 *e*P **P** **19 44 36.5 +1.1**
comp=Z,4.6nm,0.5s,mb4.6
KIV Kislovodsk 67.30 309⇓ *e*P **P** **19 44 36.5 +1.1**
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.6
SPITS Spitsbergen Ar 68.91 348 P **P** **19 44 44.0 -0.8**
comp=Z,4.0nm,0.7s,mb4.4,baz=24,slow=15,SNR=4.8
SPITS Spitsbergen Ar 68.91 348 P **P** **19 44 44.0 -0.9**
SPITS pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 69.17 331 *e*p **P** **19 44 46.1 -0.6**
comp=Z,1.2nm,0.4s,mb4.1
JOF Joensuu 69.17 331 *e*P **P** **19 44 46.1 -0.6**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
ARCES ARCESS Array B 69.55 338 P **P** **19 44 48.6 -0.3**
comp=Z,3.7nm,0.9s,mb4.2,baz=69,slow=8.2,SNR=8.6
ARCES ARCESS Array B 69.55 338 P **P** **19 44 48.6 -0.3**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 70.79 23 *e*P **P** **19 44 56.5 0.0**
KAF Kangasniemi 71.63 331 *e*p **P** **19 45 00.8 -0.9**
comp=Z,0.4nm,0.4s,mb3.6
AKASG Malin Array Be 74.05 319 P **P** **19 45 15.7 -0.5**
comp=Z,0.6nm,0.4s,mb3.7,baz=68,slow=5.5,SNR=3.3
AKASG Malin Array Be 74.05 319 P **P** **19 45 15.7 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BRTR Keskin Array B 75.01 307 P **P** **19 45 21.3 -0.6**
comp=Z,0.9nm,0.6s,mb3.6,baz=105,slow=5.6,SNR=5.3
BRTR Keskin Array B 75.01 307 P **P** **19 45 21.3 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
RES Resolute Bay 76.84 10 P **P** **19 45 30.3 -1.4**
comp=Z,52nm,0.7s
HFS Hagfors 78.01 331 P **P** **19 45 37.7 -0.7**
comp=Z,4.6nm,1.1s,mb4.1,baz=67,slow=8.8,SNR=5.8
HFS Hagfors 78.01 331 P **P** **19 45 37.7 -0.7**
HFS pmax pmax
comp=Z,5.0nm,1.1s
MLR Muntele Rosu 78.07 315 P **P** **19 45 39.2 +0.1**
comp=Z,1.0nm,0.5s,mb3.8,baz=34,slow=7.3,SNR=4.7
MLR Muntele Rosu 78.07 315 P **P** **19 45 39.2 +0.1**
MLR pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 78.58 333 P **P** **19 45 41.0 -0.6**
comp=Z,1.9nm,0.9s,mb3.9,baz=56,slow=5.6,SNR=3.4
NOA NORSAR Array B 78.58 333 P **P** **19 45 41.0 -0.6**
NOA NORSAR Array B 78.58 333 P **P** **19 45 41.0 -0.6**
NOA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 80.49 24 P **P** **19 45 52.1 +0.3**
comp=Z,4.6nm,0.5s,mb4.5,baz=303,slow=5.3,SNR=23
YKA Yellowknife Ar 80.49 24 P **P** **19 45 52.1 +0.2**
YKA pmax pmax
comp=Z,5.0nm,0.5s
CLL Collm 82.95 324 *e*PcP PcP 19 46 10.0 +0.5
IDI Anoyia 83.15 306 P **P** **19 46 05.5 -0.9**
comp=Z,1.0nm,0.4s,mb4.0,baz=72,slow=3.2,SNR=5.0
NVAR Mina Array Bea 93.25 45 P **P** **19 46 57.2 +2.4**
comp=Z,0.1nm,0.3s,mb3.6,baz=293,slow=4.8,SNR=3.7
NVAR Mina Array Bea 93.25 45 P **P** **19 46 57.2 +2.4**

IDC ***24*** *19:46:28.7±0.7, 1.11N×9727E, h0km, mb4.5/15, mb1 4.6/16, mb1mx4.4/24, mbtmp4.5/16, ML4.7/1, MS4.0/9, Ms1 4.1/9, ms1mx3.8/35, Error ellipse: s-maj=23.8km s-min=14.0km az=49.0*
BJI ***24*** *19:46:29.3, 076N×9741E, h34km, mB5.0, mb5.0, Ms4.7, Msz4.4*
MOS ***24*** *19:46:31.5±1.0, 1.12N×9732E, h33km, mb4.9/21, MS4.0/6, Error ellipse: s-maj=14.7km s-min=7.1km az=98.9*
DJA ***24*** *19:46:31.7±0.0, 1.12N×9711E, h21km, mB5.7/2, Mjma4.3/7, MLv5.0/7, Mw(mB)5.4/2, Mwp4.0/5*
NEIC ***24*** *19:46:33.7±0.4, 1.11N×9732E, h35km, mb4.8/24, Error ellipse: s-maj=9.7km s-min=7.9km az=65.0*
ISCJB ***24*** *19:46:33.6±0.6, 1.11N×004×9732E×005, h49km±5km, mb4.8/62, MS4.2/22, Error ellipse: s-maj=8.6km s-min=6.0km az=148.5*

ISC 24 19:46:35.3±0.7, 111N±004×9734E±005, h45km±5km, h38km±1.6km: pP-P, n140, σ1s 07/146, mb4.8/62, MS4.2/22, 6C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.31**	**51**	P	**Pn**	**19 46 42.5**	**-1.6**
GSI	**Gunungsitoli**	**0.31**	**51**	S	**Sn**	**19 46 50.2**	**-0.1**
TRSI	**Tarutung**	**1.86**	**61**	P	**Pn**	**19 47 04.9**	**+0.2**
PPI	**Padang Panjang**	**3.43**	**117**	P	**Pn**	**19 47 26.7**	**+0.4**
PDSI	**Padang**	**3.71**	**123**	P	**Pn**	**19 47 29.2**	**-1.0**
FRIM	**Kepong**	**4.78**	**64**	⇓P	**Pn**	**19 47 45.5**	**+0.7**
BSI	**Banda Aceh**	**4.81**	**335**	P	**Pn**	**19 47 41.1**	**-4.1**
IPM	**Ipoh**	**4.98**	**48**	⇓P	**Pn**	**19 47 48.5**	**+0.9**
IPM	**Ipoh**	**4.98**	**48**	P	**Pn**	**19 47 48.3**	**+0.8**
	212nm,1.0s,1μm0.6nm						
KULM	**Kulim**	**5.31**	**38**	⇓P	**Pn**	**19 47 51.6**	**-0.5**
KGM	**Kluang**	**6.05**	**81**	⇓P	**Pn**	**19 48 04.0**	**+1.8**
MYKOM	**Kota Tinggi**	**6.55**	**84**	⇓P	**Pn**	**19 48 09.4**	**+0.4**
SNG	**Songkhla**	**6.86**	**28**	P	**Pn**	**19 48 13.0**	**-0.4**
	300nm,0.8s						
KSI	**Kapahiang**	**7.07**	**132**	P	**Pn**	**19 48 17.8**	**+1.6**
KTGM	**Kuala Trenggan**	**7.15**	**54**	⇑P	**Pn**	**19 48 17.4**	**+0.1**
UBT	**Ubonrachathani**	**15.96**	**28**	⇓P	**Pn**	**19 50 20.0**	**+3.1**
KKTK	**Khon Kaen**	**16.07**	**19**	P	**Pn**	**19 50 19.0**	**+0.8**
CM31	**Chiang Mai Arr**	**17.31**	**5**	*e*Pn	**Pn**	**19 50 31.9**	**-1.9**
	3.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**17.31**	**5**	P	**Pn**	**19 50 31.8**	**-2.0**
	1.1nm,0.3s,baz=195,slow=12,SNR=46						
CMAR				PcP	PcP	19 55 15.7	+1.0
	0.0nm,0.3s,baz=216,slow=3.1,SNR=5.0						
CMAR				LR	LR	19 58 28.2	
	comp=Z,748nm,18.9s,baz=193,slow=42						
CHG	**Chiang Mai**	**17.67**	**5**	⇑P	**Pn**	**19 50 36.6**	**-1.5**
	11nm,1.0s						
CHTO	**Chiang Mai**	**17.67**	**5**	*e*Pn	**Pn**	**19 50 35.6**	**-2.5**
	8.0nm,0.9s						
CHTO	**Chiang Mai**	**17.67**	**5**	*e*P	**Pn**	**19 50 35.6**	**-2.5**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKM	**Kota Kinabalu**	**19.46**	**75**	*e*P	**Pn**	**19 50 57.8**	**-2.2**
SDKM	**Sandakan**	**20.32**	**77**	⇓P	**P**	**19 51 08.8**	**+1.0**
TSM	**Tawau**	**20.75**	**81**	⇑P	**P**	**19 51 13.1**	**+0.6**
QIZ	**Qiongzhong**	**21.62**	**34**	P	**P**	**19 51 22.8**	**+1.1**
QIZ				S	**S**	**19 55 22.9**	**+4.1**
QIZ				LR	LR		
	comp=Z,146nm,22.5s,MS3.3						
QIZ	**Qiongzhong**	**21.62**	**34**	P	**P**	**19 51 22.6**	**+0.9**
	comp=Z,18nm,0.9s,mb4.5						
KAPI	**Kappang**	**23.20**	**105**	P	**P**	**19 51 37.1**	**-1.5**
	comp=Z,12nm,0.9s,mb4.3,baz=307,slow=12,SNR=5.6						
KAPI	**Kappang**	**23.20**	**105**	*e*P	**P**	**19 51 36.5**	**-2.0**
	comp=Z,23nm,1.1s,mb4.5						
KMI	**Kunming**	**24.44**	**12**	P	**P**	**19 51 50.8**	**+1.0**
KMI				AP		19 52 01.8	
KMI				XP	sP	19 52 05.1	-2.1
KMI				PP		19 52 27.6	
KMI				S	**S**	**19 56 05.9**	**-1.0**
KMI				XS	sS	19 56 22.0	-4.9
KMI				SS		19 57 00.4	
KMI				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.1						
KMI				AMB	AMB		
	comp=Z,246nm,3.4s						
KMI				LR	LR		
	comp=N,790nm,13.8s,MS4.4						
KMI				LR	LR		
	comp=E,302nm,12.9s,MS4.4						
KMI				LR	LR		
	comp=Z,972nm,15.6s,MS4.4						
HYB	**Hyderabad**	**24.57**	**312**	*e*P	**P**	**19 51 54.5**	**+3.3**
HYB	**Hyderabad**	**24.57**	**312**	*i* P	**P**	**19 51 54.5**	**+3.3**
HYB				*e*		19 52 01.5	
SHL	**Shillong**	**24.88**	**348**	⇑*i*P	**P**	**19 51 53.0**	**-0.8**
GYA	**Guiyang**	**26.75**	**19**	⇓*i*P	**P**	**19 52 10.5**	**-0.3**
GYA				AP	pP	19 52 20.8	-2.0
GYA				XP	sP	19 52 25.0	-3.2
GYA				PP		19 52 56.8	
GYA				PCP	PcP	19 55 34.6	+1.3
GYA				S	**S**	**19 56 43.0**	**-0.7**
GYA				XS	sS	19 57 03.9	+0.1
GYA				SS		19 57 55.8	
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,240nm,9.8s						
GYA				LR	LR		
	comp=N,880nm,12.8s,MS4.7						
GYA				LR	LR		
	comp=E,940nm,13.2s,MS4.7						
GYA				LR	LR		
	comp=Z,1μm,13.5s,MS4.7						
ODAN	**Odare**	**27.33**	**340**	*e*P	**P**	**19 52 16.7**	**+0.7**
	comp=Z,19nm,0.5s,mb4.9						
TAPN	**Taplejung**	**27.68**	**341**	*e*P	**P**	**19 52 20.3**	**+1.2**
	comp=Z,67nm,0.9s,mb5.3						
RAMN	**Ramite**	**27.69**	**339**	*e*P	**P**	**19 52 20.4**	**+1.2**
	comp=Z,25nm,0.6s,mb5.0						
JIRN	**Jiri**	**28.48**	**339**	*e*P	**P**	**19 52 27.4**	**+1.1**
	comp=Z,38nm,0.9s,mb5.0						
BATI	**Baumata**	**28.51**	**114**	P	**P**	**19 52 26.5**	**-0.2**
	comp=Z,7.9nm,0.6s,mb4.6,baz=68,slow=6.4,SNR=4.9						
PKI	**Puchokwi**	**28.69**	**338**	*e*P	**P**	**19 52 28.7**	**+0.6**
GUN	**Gumba**	**28.82**	**339**	*e*P	**P**	**19 52 30.3**	**+1.0**
	comp=Z,19nm,0.5s,mb5.1						
DMN	**Daman**	**28.84**	**337**	*e*P	**P**	**19 52 30.0**	**+0.5**
	comp=Z,18nm,0.8s,mb4.8						
KKN	**Kakani**	**28.94**	**338**	*e*P	**P**	**19 52 30.7**	**+0.4**
	comp=Z,18nm,0.8s,mb4.9						
LSA	**Lhasa**	**29.04**	**349**	P	**P**	**19 52 33.0**	**+1.8**
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LSA	**Lhasa**	**29.04**	**349**	*e*P	**P**	**19 52 32.3**	**+1.1**
	comp=Z,17nm,1.0s,mb4.7						
LSA	**Lhasa**	**29.04**	**349**	*e*P	**P**	**19 52 32.3**	**+1.1**
LSA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
GKN	**Gorkha**	**29.38**	**337**	*e*P	**P**	**19 52 34.7**	**+0.5**
KOLN	**Koldanda**	**29.60**	**335**	*e*P	**P**	**19 52 37.1**	**+0.9**
	comp=Z,16nm,0.6s,mb4.9						
DANN	**Dangsing**	**30.04**	**336**	*e*P	**P**	**19 52 40.7**	**+0.6**
	comp=Z,8.6nm,0.4s,mb4.8						
PYUN	**Piuthoki**	**30.15**	**334**	*e*P	**P**	**19 52 41.7**	**+0.6**
	comp=Z,11nm,0.3s,mb5.0						
CD2	**Chengdu**	**30.26**	**11**	*e*P	**P**	**19 52 42.1**	**+0.1**
CD2				AP	pP	19 52 51.8	-2.3
CD2				XP	sP	19 52 55.9	-3.6
CD2				PP	PP	19 53 43.0	-8.0
CD2				S	**S**	**19 57 40.8**	**+2.1**
CD2				XS	sS	19 57 56.3	-2.6
CD2				SS	SS	19 59 22.9	-26
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,50nm,4.8s						
CD2				LR	LR		
	comp=N,870nm,15.6s,MS4.7						
CD2				LR	LR		
	comp=E,1μm,14.4s,MS4.7						
CD2				LR	LR		
	comp=Z,900nm,14.4s,MS4.5						
WHN	**Wuhan**	**33.43**	**27**	*e*P	**P**	**19 53 08.5**	**-1.4**
XAN	**Xi'an**	**34.51**	**17**	P	**P**	**19 53 17.9**	**-1.3**
XAN				AP	pP	19 53 27.3	-4.0
XAN				S	**S**	**19 58 40.6**	**-4.2**
XAN				SS	SS	20 01 03.4	-13
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				AMB	AMB		
	comp=Z,106nm,4.7s						
XAN				LR	LR		
	comp=N,257nm,14.0s,MS4.3						
XAN				LR	LR		
	comp=E,263nm,11.6s,MS4.3						
XAN				LR	LR		
	comp=Z,570nm,14.8s,MS4.4						
LZH	**Lanzhou**	**35.32**	**9**	*e*P	**P**	**19 53 25.0**	**-1.2**
LZH				*e*PP	PP	19 54 45.3	-1.8
LZH				*e*S	**S**	**19 58 57.1**	**-0.2**
LZH				*e*SS	SS	20 01 15.6	-17
LZH				AMB	AMB		
	comp=Z,25nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,97nm,5.2s						
LZH				LR	LR		
	comp=E,653nm,13.5s						
LZH				LR	LR		
	comp=Z,927nm,17.2s,MS4.6						
NJ2	**Nanjing**	**36.87**	**31**	*e*P	**P**	**19 53 39.6**	**+0.1**
NJ2				AP	pP	19 53 49.3	-2.4
NJ2				XP	sP	19 53 53.3	-3.8
NJ2				PP	PP	19 55 05.5	+1.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,170nm,4.4s						
NJ2				LR	LR		
	comp=N,260nm,16.2s,MS4.3						
NJ2				LR	LR		
	comp=E,310nm,17.0s,MS4.3						
NJ2				LR	LR		
	comp=Z,340nm,16.3s,MS4.2						
GTA	**Gaotai**	**38.19**	**3**	P	**P**	**19 53 50.3**	**-0.2**
GTA				AP	pP	19 54 00.0	-2.8
GTA				XP	sP	19 54 03.9	-4.2
GTA				PCP	PcP	19 56 05.8	+1.4
GTA				S	**S**	**19 59 37.3**	**-3.6**
GTA				AMB	AMB		
	comp=Z,23nm,1.2s,mb4.8						
GTA				AMB	AMB		
	comp=Z,147nm,6.3s						
GTA				LR	LR		
	comp=N,263nm,15.9s,MS4.3						
GTA				LR	LR		
	comp=E,260nm,14.4s,MS4.3						
GTA				LR	LR		
	comp=Z,267nm,18.6s,MS4.1						
HHC	**Hu-ho-hao-te**	**41.61**	**16**	*e*P	**P**	**19 54 21.5**	**+2.6**
HHC				AP	pP	19 54 31.5	+0.3
HHC				XP	sP	19 54 36.3	-0.3
HHC				PP	PP	19 55 59.5	+3.7
HHC				PCP	PcP	19 56 17.4	+2.1
HHC				S	**S**	**20 00 36.8**	**+4.8**
HHC				XS	sS	20 00 54.5	+1.8
HHC				SS	SS	20 03 37.4	-1.1
HHC				AMB	AMB		
	comp=Z,15nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,131nm,7.9s						
HHC				LR	LR		
	comp=N,444nm,20.2s,MS4.5						
HHC				LR	LR		
	comp=E,513nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=Z,355nm,20.2s,MS4.2						
WRA	**Warramunga Arr**	**41.87**	**122**	P	**P**	**19 54 20.9**	**-0.5**
	comp=Z,3.6nm,0.7s,mb4.1,baz=300,slow=9.1,SNR=44						
WRA				LR	LR	20 15 28.0	
	comp=Z,161nm,19.3s,MS3.9,baz=290,slow=42						
WRA	**Warramunga Arr**	**41.87**	**122**	P	**P**	**19 54 20.9**	**-0.5**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA				MLR	MLR		
	comp=Z,161nm,19.3s						
WRAB	**Tennant Creek**	**41.88**	**122**	*e*P	**P**	**19 54 21.2**	**-0.2**
	comp=Z,139nm,2.8s,mb5.1						
WRAB	**Tennant Creek**	**41.88**	**122**	*e*P	**P**	**19 54 21.2**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,139nm,2.8s,mb5.1						
WB2	**Warramunga Ar**	**41.88**	**122**	*e*P	**P**	**19 54 21.1**	**-0.3**
BJT	**Baijiatuao**	**42.35**	**22**	*e*P	**P**	**19 54 25.5**	**+0.5**
	comp=Z,43nm,0.8s,mb5.1						
BJT	**Baijiatuao**	**42.35**	**22**	*e*P	**P**	**19 54 25.5**	**+0.5**
BJT				pmax	pmax		
	comp=Z,43nm,0.8s						
BJI	**Beijing**	**42.37**	**22**	P	**P**	**19 54 25.8**	**+0.7**
BJI				S	**S**	**20 00 51.0**	**+7.6**
BJI				AMB	AMB		
	comp=Z,36nm,0.8s,mb5.0						
BJI				AMB	AMB		
	comp=Z,119nm,3.5s						
BJI				LR	LR		
	comp=N,204nm,14.6s						
BJI				LR	LR		
	comp=E,338nm,21.3s						
BJI				LR	LR		
	comp=Z,105nm,18.6s,MS3.8						
KBL	**Kabul**	**42.47**	**325**	P	**P**	**19 54 28.5**	**+2.5**
	comp=Z,2.4nm,0.9s,mb3.8						
KBL	**Kabul**	**42.47**	**325**	P	**P**	**19 54 28.5**	**+2.4**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
ASAR	**Alice Springs**	**43.23**	**127**	P	**P**	**19 54 32.4**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.1,baz=301,slow=7.5,SNR=32						
ASAR	**Alice Springs**	**43.23**	**127**	P	**P**	**19 54 32.4**	**0.0**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	**43.39**	**350**	P	**P**	**19 54 34.0**	**+0.7**
WMQ				AP	pP	19 54 44.0	-1.7
WMQ				XP	sP	19 54 48.0	-3.0
WMQ				PP	PP	19 56 17.0	+2.1
WMQ				S	**S**	**20 00 58.0**	**-0.1**
WMQ				SS	SS	20 04 05.0	-8.4
WMQ				AMB	AMB		
	comp=Z,35nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,84nm,4.0s						
WMQ				LR	LR		
	comp=N,125nm,14.0s,MS4.2						
WMQ				LR	LR		
	comp=E,179nm,15.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,102nm,14.0s,MS3.9						
KS15	**Wonju Array Si**	**45.82**	**34**	*e*P	**P**	**19 54 53.1**	**+0.4**
KSRS	**Korea Array**	**45.85**	**34**	P	**P**	**19 54 52.9**	**-0.2**
	comp=Z,17nm,0.9s,mb5.0,baz=222,slow=9.2,SNR=70						
KSRS				LR	LR	20 14 38.4	
	comp=Z,106nm,21.9s,MS3.7,baz=58,slow=37						
KSRS	**Korea Array**	**45.85**	**34**	P	**P**	**19 54 52.9**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
KSRS				MLR	MLR		
	comp=Z,106nm,21.9s,MS3.7						
TKM2	**Tokmak 2**	**45.95**	**338**	P	**P**	**19 54 54.5**	**+0.7**
	comp=Z,14nm,1.0s,mb4.9						
TKM2	**Tokmak 2**	**45.95**	**338**	P	**P**	**19 54 54.5**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**46.14**	**337**	P	**P**	**19 54 56.9**	**+1.7**
	comp=Z,4.8nm,1.0s,mb4.4						
AAK	**Ala-Archa**	**46.14**	**337**	P	**P**	**19 54 56.9**	**+1.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
EKS2	**Erkin-Say**	**46.45**	**336**	*e*P	**P**	**19 54 58.3**	**+0.6**
	comp=Z,6.0nm,0.9s,mb4.5						
SNY	**Shenyang**	**46.92**	**27**	⇓P	**P**	**19 55 01.4**	**0.0**
SNY				AMB	AMB		
	comp=Z,21nm,0.9s,mb5.1						
SNY				LR	LR		
	comp=N,356nm,15.6s,MS4.6						
SNY				LR	LR		
	comp=E,527nm,18.9s,MS4.6						
SNY				LR	LR		
	comp=Z,331nm,16.5s,MS4.4						
SONM	**Songino Array**	**47.20**	**8**	P	**P**	**19 55 03.9**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9,baz=190,slow=9.2,SNR=49						
SONM				PcP	PcP	19 56 35.2	+0.9
	comp=Z,4.4nm,0.8s,baz=184,slow=4.3,SNR=7.0						
SONM	**Songino Array**	**47.20**	**8**	P	**P**	**19 55 03.9**	**+0.5**
SONM						19 56 35.2	
SONM				pmax	pmax		
	comp=Z,12nm,0.8s						
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**47.33**	**9**	*e*P	**P**	**19 55 02.1**	**-2.3**
	comp=Z,15nm,1.2s,mb4.8						
ULN				*e*PcP	PcP	19 56 35.0	+0.2
ULN	**Ulaanbaatar**	**47.33**	**9**	*e*P	**P**	**19 55 02.2**	**-2.2**
ULN				*e*		19 56 35.0	
ULN				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
MK31	**Makanchi Array**	**47.36**	**346**	*e*P	**P**	**19 55 04.6**	**-0.1**
MKAR	**Makanchi Array**	**47.36**	**346**	P	**P**	**19 55 04.9**	**+0.2**
	comp=Z,7.4nm,0.7s,mb4.7,baz=160,slow=8.3,SNR=78						
MKAR	**Makanchi Array**	**47.36**	**346**	P	**P**	**19 55 04.9**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TLY	**Talaya**	**50.67**	**5**	*e*P	**P**	**19 55 31.1**	**+1.1**
	comp=Z,10nm,0.9s,mb4.8						
TLY	**Talaya**	**50.67**	**5**	*e*P	**P**	**19 55 31.1**	**+1.1**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MJAR	**Matsushiro Arr**	**51.67**	**42**	P	**P**	**19 55 36.8**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.8,baz=232,slow=7.9,SNR=4.8						
MJAR				PcP	PcP	19 56 51.8	+0.9
	comp=Z,2.0nm,1.0s,baz=235,slow=9.9,SNR=4.7						
MJAR				LR	LR	20 17 44.5	
	comp=Z,122nm,21.2s,MS3.9,baz=245,slow=36						
MJAR	**Matsushiro Arr**	**51.67**	**42**	P	**P**	**19 55 36.8**	**-0.9**
MJAR						19 56 51.8	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR				MLR	MLR		
	comp=Z,122nm,21.2s						
HIA	**Hailar**	**51.68**	**19**	*e*P	**P**	**19 55 37.2**	**-0.4**
	comp=Z,12nm,0.9s,mb4.8						
HIA	**Hailar**	**51.68**	**19**	*e*P	**P**	**19 55 37.2**	**-0.4**
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ	**Mudanjiang**	**51.88**	**29**	P	**P**	**19 55 39.3**	**+0.1**
MDJ

comp=E,61nm,18.7s,MS3.8
MDJ LR LR
comp=Z,192nm,18.0s,MS4.2
MDJ Mudanjiang 51.88 29 *e*P **P 19 55 38.9 -0.3**
comp=Z,33nm,1.6s,mb5.0
KURK Kurchatov 51.91 345 *e*P **P 19 55 39.2 -0.1**
comp=Z,15nm,0.9s,mb4.9
KURK Kurchatov 51.91 345 P **P 19 55 39.1 -0.2**
KURK pmax pmax
comp=Z,17nm,1.1s,mb4.9
OPO Ambohidratompo 53.01 246 P **P 19 55 47.9 -0.1**
comp=Z,3.3nm,0.9s,mb4.3,baz=90,slow=4.9,SNR=4.8
STKA Stephens Creek 53.19 132 *e*P **P 19 55 50.0 +0.9**
comp=Z,4.8nm,0.7s,mb4.5
STKA Stephens Creek 53.19 132 P **P 19 55 50.0 +0.8**
comp=Z,5.5nm,0.7s,mb4.6,baz=308,slow=8.3,SNR=15
ZAA0 Zalesovo Array 53.67 351 *e*P **P 19 55 51.9 -0.3**
ZALV Zalesovo Beam 53.67 351 P **P 19 55 52.2 0.0**
comp=Z,10nm,0.3s,mb5.2,baz=176,slow=5.9,SNR=43
ZALV Zalesovo Beam 53.67 351 P **P 19 55 52.2 0.0**
ZALV Zalesovo Beam 53.67 351 P **P 19 55 52.2 0.0**
ZALV pmax pmax
comp=Z,10.0nm,0.3s,mb5.2
NVS Novosibirsk 54.79 350 *e*P **P 19 55 58.7 -1.6**
NVS *e*S **S 20 03 45.7 +7.9**
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=E,6.0nm,1.0s
NVS pmax pmax
comp=Z,13nm,1.0s,mb4.9
NVS smax
comp=N,10.0nm,1.7s
NVS smax
comp=E,6.0nm,1.7s
KLR Kul'dur 56.27 26 *e*P **P 19 56 07.9 -3.2**
KLR pmax pmax
comp=Z,38nm,1.2s,mb5.3
BVA0 Borovoye Array 56.38 341 *i* P **P 19 56 10.7 -1.1**
BVA0 pmax pmax
comp=Z,9.0nm,2.0s,mb4.5
BRVK Borovoye 56.44 341 *e*P **P 19 56 11.6 -0.6**
comp=Z,8.1nm,0.9s,mb4.8
BRVK Borovoye 56.44 341 *e*P **P 19 56 11.6 -0.6**
BRVK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AB31 Akbulak array 57.66 332 P **P 19 56 19.7 -1.2**
AB31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BOD Bodaibo 58.08 10 *e*P **P 19 56 23.4 -0.3**
BOD pmax pmax
comp=Z,17nm,1.0s,mb5.0
ARMA Armidale 60.37 126 *e*P **P 19 56 42.7 +2.6**
ARU Arti 63.32 337 *e*P **P 19 56 58.1 -1.3**
comp=Z,20nm,1.5s,mb5.0
ARU Arti 63.32 337 *c i*P **P 19 56 58.6 -0.8**
ARU *e* 19 59 16.9
ARU *e*S **S 20 05 30.8 +2.6**
ARU pmax pmax
comp=Z,25nm,2.2s,mb5.0
KIV Kislovodsk 64.47 319 *e*P **P 19 57 06.3 -0.9**
comp=Z,7.9nm,0.9s,mb4.7
KIV Kislovodsk 64.47 319‖ *e*P **P 19 57 07.3 +0.1**
KIV *e* pP 19 57 18.5 -1.7
KIV 19 57 42.8
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
YAK Yakutsk 65.47 16 *e*P **P 19 57 12.1 -1.3**
comp=Z,39nm,1.0s,mb5.4
YAK Yakutsk 65.47 16 *c i*P **P 19 57 12.6 -0.8**
YAK *e**PP pP 19 57 25.9 -0.5
YAK *e* 19 57 38.8
YAK *e*S S 20 05 58.8 +4.2
YAK *e* 20 07 03.6
YAK *e*SS SS 20 10 05.5 -3.3
YAK pmax pmax
comp=Z,28nm,1.0s,mb5.2
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK smax
comp=N,26nm,6.7s
YAK MLR MLR
comp=Z,217nm,14.0s,MS4.5
YAK MLR MLR
comp=N,178nm,15.0s,MS4.5
YAK MLR MLR
comp=E,101nm,15.0s,MS4.5
BRTR Keskin Array B 69.27 312 P **P 19 57 36.7 -1.2**
comp=E,1.3nm,0.9s,mb3.9,baz=133,slow=5.5,SNR=7.9
BRTR LR LR 20 28 47.7
comp=E,70nm,18.6s,MS3.9,baz=205,slow=37
BRTR Keskin Array B 69.27 312 *i* P **P 19 57 37.0 -0.9**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
LSZ Lusaka 70.22 253 *e*P **P 19 57 41.8 -2.4**
comp=Z,10.0nm,1.6s,mb4.5
LSZ Lusaka 70.22 253 *e*P **P 19 57 41.8 -2.3**
LSZ pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
OBN Obninsk 72.77 328 P **P 19 57 47.9 -11**
OBN *e* 19 57 55.2
OBN *e* 19 58 08.5
OBN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TIXI Tiksi 73.25 10 *e*P **P 19 58 00.3 -1.0**
comp=Z,10nm,0.9s,mb4.8
TIXI Tiksi 73.25 10 *e*P **P 19 58 00.3 -1.0**
TIXI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LBTB Lobatse 73.97 244 LR LR 20 25 24.2
comp=Z,98nm,18.4s,MS4.1,baz=244,slow=32
LBTB Lobatse 73.97 244 P **P 19 58 06.8 +0.4**
BOSA Boshof 74.85 240 *e*P **P 19 58 11.3 -0.2**
comp=Z,34nm,1.6s,mb5.0
BOSA Boshof 74.85 240 *e*P **P 19 58 11.3 -0.2**
BOSA pmax pmax
comp=Z,34nm,1.6s,mb5.0
AKASG Malin Array Be 75.41 322 *i* P **P 19 58 13.8 -0.5**
SUR Sutherland 79.23 237 LR LR 20 26 47.9
comp=Z,112nm,18.9s,MS4.2,baz=92,slow=31
ARCES ARCESS Array B 82.67 340 P **P 19 58 53.3 -0.3**
comp=Z,5.0nm,0.9s,mb4.6,baz=84,slow=5.0,SNR=7.8
ARCES LR LR 20 42 34.3
comp=Z,191nm,18.4s,MS4.5,baz=294,slow=41
ARCES ARCESS Array B 82.67 340 P **P 19 58 53.3 -0.3**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES MLR MLR
comp=Z,191nm,18.4s
GERES GERESS Array B 84.97 319 P **P 19 59 05.7 -0.1**
comp=Z,1.9nm,0.9s,mb4.2,baz=94,slow=4.1,SNR=12
GERES GERESS Array B 84.97 319 P **P 19 59 05.7 -0.1**
GERES pmax pmax
comp=Z,2.0nm,0.9s
NOA NORSAR Array B 87.15 331 P **P 19 59 14.7 -1.6**
comp=Z,2.1nm,0.9s,mb4.4,baz=65,slow=5.3,SNR=3.6
NOA NORSAR Array B 87.15 331 P **P 19 59 14.7 -1.6**
NOA pmax pmax
comp=Z,2.0nm,0.9s
QSPA South Pole Qui 91.05 180 LR LR 20 34 30.3
comp=Z,121nm,20.6s,MS4.3,baz=214,slow=32
NVAR Mina Array Bea 128.78 36 PKP PKPdf 20 05 40.0 +1.9
comp=Z,0.7nm,0.8s,baz=253,slow=1.9,SNR=6.2
JCT Junction City 144.60 26 *e*PKPdf PKPdf 20 06 05.6 -2.0
LRAL Lakeview Retre 145.80 6 *e*PKPdf PKPdf 20 06 09.0 -0.5

IDC ***24*** *19:54:30.0±0.9, 5875S×2620W, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/15, mbtmp3.9/7, Error ellipse: s-maj=27.7km s-min=24.3km az=53.0*
NEIC ***24*** *19:54:40.1±3.6, 5880S×2624W, h82km±34km, mb4.2/5, Error ellipse: s-maj=18.9km s-min=14.7km az=209.0*
ISCJB ***24*** *19:54:49.8±3.4, 588S±02×263W±03, h189km±34km, mb3.8/9, Error ellipse: s-maj=26.0km s-min=20.6km az=22.3*
ISC 24 19:54:51.4±3.3,**588S**±02×**263W**±03,**h189**km±34km,**n17,** σ0**54**/16,**mb3.8/9,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.08**	**155**	*e*P		**Pn**	**19 58 02.7**	**+0.4**
VNA1				*e*			19 58 08.6	
VNA3	**Neumayer Olymp**	**14.24**	**158**	*e*P		**Pn**	**19 58 03.9**	**-0.5**
VNA2	**Neumayer--Watz**	**14.48**	**155**	*e*P		**Pn**	**19 58 07.6**	**+0.4**
VNA2				*e*			19 58 14.8	
SNAA	**Sanae**	**16.05**	**153**	*e*P		**Pn**	**19 58 19.9**	**-6.5**
SNAA				*e*			19 58 24.7	
SNAA	**Sanae**	**16.05**	**153**	*e*Pn		**Pn**	**19 58 19.7**	**-6.7**
	3.8nm,0.6s							
PLCA	**Paso Flores**	**33.03**	**283**	P		**P**	**20 01 08.2**	**-0.4**
	0.7nm,0.6s,mb3.6,baz=74,slow=15,SNR=3.5							
MAW	**Mawson**	**37.67**	**141**	P		**P**	**20 01 47.2**	**-0.5**
	3.0nm,0.9s,mb3.9,baz=243,slow=16,SNR=3.2							
VNDA	**Vanda**	**43.85**	**183**	P		**P**	**20 02 38.3**	**+0.2**
	0.6nm,0.6s,mb3.4,baz=169,slow=6.9,SNR=7.5							
BOSA	**Boshof**	**46.26**	**72**	P		**P**	**20 02 57.1**	**-0.5**
	1.4nm,0.5s,mb3.8,baz=210,slow=7.2,SNR=6.1							
BOSA	**Boshof**	**46.26**	**72**	*e*P		**P**	**20 02 57.0**	**-0.6**
	3.8nm,0.9s,mb4.0							
LBTB	**Lobatse**	**49.42**	**70**	P		**P**	**20 03 21.5**	**-0.4**
	2.4nm,0.7s,mb3.9							
TSUM	**Tsumeb**	**50.67**	**58**	P		**P**	**20 03 26.1**	**-5.3**
	5.0nm,1.0s,mb4.1							
LPAZ	**La Paz**	**52.37**	**306**	P		**P**	**20 03 44.0**	**0.0**
	0.5nm,0.5s,mb3.4,baz=84,slow=11,SNR=4.1							
LPAZ	**La Paz**	**52.37**	**306**	P		**P**	**20 03 43.8**	**-0.2**
	1.0nm,0.7s,mb3.5							
TORD	**Torodi Ar. Bea**	**75.23**	**28**	P		**P**	**20 06 14.4**	**+1.3**
	0.4nm,0.3s,mb3.5,baz=197,slow=6.0,SNR=16							
ASAR	**Alice Springs**	**96.22**	**162**	P		**P**	**20 07 58.0**	**+0.1**
	0.3nm,0.6s,mb3.8,baz=186,slow=4.5,SNR=8.0							
SONM	**Songino Array**	**150.31**	**91**	PKPbc		PKPbc	20 14 20.0	+1.0
	0.6nm,0.6s,baz=176,slow=3.2,SNR=5.3							

IDC ***24*** *20:15:04.4±0.8, 4585S×9601E, h0km, mb4.5/11, mb1 4.6/11, mb1mx4.5/16, mbtmp4.5/11, MS4.6/13, Ms1 4.6/13, ms1mx4.5/14, Error ellipse: s-maj=27.3km s-min=16.8km az=112.0*
ISCJB ***24*** *20:15:04.1±0.3, 4582S±005×9589E±0.10, h10km, mb4.9/50, MS4.6/15, Error ellipse: s-maj=9.8km s-min=7.4km az=17.9*
GCMT ***24*** *20:15:05.7±0.2, 4575S×9571E, h15km±1km, MW5.2/77, Moment Tensor Solution. s44,c55; s77,c132; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.29±.18; Mθθ-6.06±.20; Mφφ5.77±.20; Mrθ-0.45±.32; Mrφ-2.91±.15; Mθφ-0.15±.31; Best double couple: Mo6.60800×10^16 NP1:φs122.00000°, δ87.00000°, λ-178.00000°. NP2: φs32.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 6.4470, Plg0.0000°, Azm77.0000°; N 0.3240, Plg86.0000°, Azm173.0000°; P -6.7680, Plg4.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***24*** *20:15:05.7±0.4, 4580S×9602E, h10km, mb4.9/18 Error ellipse: s-maj=11.7km s-min=9.1km az=108.0*
BJI ***24*** *20:15:06.7, 4532S×9520E, h16km, mB5.3, mb4.9, Ms5.2, Msz4.8*
DJA ***24*** *20:15:13.9±0.0, 4626S×9632E, h50km, mB5.8/3, Mw(mB)5.5/3, Mwp5.3/5*
ISC 24 20:15:06.0±0.3,**4583S**±005×**9589E**±009,**h10**km, **(h11**km±3.1km:**pP-P),n86,**σ1**03/76,mb4.9**/50,**MS4.6**/15, **1C-1D,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**20.85**	**59**	P		**P**	**20 19 48.1**	**+0.2**
	19nm,0.9s,baz=230,slow=8.0,SNR=5.4							
NWAO				LR		LR	20 25 57.2	
	comp=Z,2μm,19.9s,MS4.6,baz=40,slow=31							
NWAO	**Narrogin (SRO)**	**20.85**	**59**	*e*P		**P**	**20 19 48.0**	**+0.2**
	59nm,1.4s							
NWAO				LR		LR	20 25 57.2	
MUN	**Mundaring**	**20.92**	**56**	*e*P		**P**	**20 19 49.3**	**+0.7**
MUN				*e*S		**S**	**20 23 50.9**	**+9.1**
CASY	**Casey**	**21.96**	**164**	*e*P		**P**	**20 19 59.1**	**-0.4**
CASY	**Casey**	**21.96**	**164**	*e*P		**P**	**20 19 58.4**	**-1.1**
	46nm,1.2s,mb4.8							
KLBR	**Kellerberrin**	**22.11**	**58**	*e*P		**P**	**20 20 01.0**	**-0.4**
	78nm,1.5s,mb4.9							
MAW	**Mawson**	**27.75**	**207**	P		**P**	**20 20 54.7**	**+0.3**
	18nm,1.1s,mb4.6,baz=44,slow=11,SNR=8.6							
MAW				LR		LR	20 29 44.6	
	comp=Z,500nm,18.1s,MS4.1,baz=51,slow=32							
MAW	**Mawson**	**27.75**	**207**	*e*P		**P**	**20 20 53.9**	**-0.5**
	10nm,1.3s,mb4.3							
MAW				LR		LR	20 29 44.6	
MBWA	**Marble Bar**	**31.40**	**46**	P		**P**	**20 21 23.9**	**-3.2**
	14nm,1.1s,mb4.7							
SYO	**Syowa Base**	**36.23**	**210**⇑	*e*P		**P**	**20 22 06.3**	**-2.3**
SYO	**Syowa Base**	**36.23**	**210**‖	*e*P		**P**	**20 22 18.4**	**+10**
STKA	**Stephens Creek**	**37.71**	**85**	*e*P		**P**	**20 22 21.1**	**-0.5**
	7.8nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**37.71**	**85**	P		**P**	**20 22 21.1**	**-0.5**
	9.6nm,0.7s,mb4.6,baz=237,slow=5.6,SNR=28							
STKA				LR		LR	20 34 45.8	
	comp=Z,1μm,21.8s,MS4.8,baz=220,slow=31							
STKA	**Stephens Creek**	**37.71**	**85**	*e*P		**P**	**20 22 20.9**	**-0.6**
	2.2nm,0.7s,mb4.0							
STKA				LR		LR	20 34 45.8	
ASAR	**Alice Springs**	**37.77**	**67**	P		**P**	**20 22 21.5**	**-0.7**
	4.9nm,0.8s,mb4.3,baz=223,slow=7.5,SNR=48							
ASAR				PP		PP	20 23 48.5	+0.1
	0.9nm,0.8s,baz=227,slow=11,SNR=4.6							
ASAR				PcP		PcP	20 24 36.8	-2.2
	1.0nm,0.8s,baz=201,slow=2.7,SNR=5.3							
LEM	**Lembang**	**40.16**	**18**	P		**P**	**20 22 50.7**	**+8.5**
	4.2nm,1.1s,mb5.1							
CBJI	**Citeko**	**40.39**	**17**	P		**P**	**20 22 45.8**	**+1.7**
	131nm,1.0s,mb5.6							
VNDA	**Vanda**	**40.56**	**162**	P		**P**	**20 22 44.9**	**0.0**
	5.3nm,1.2s,mb4.1,baz=278,slow=8.9,SNR=13							
VNDA				LR		LR	20 38 22.0	
	comp=Z,1μm,18.4s,MS4.8,baz=278,slow=34							
VNDA	**Vanda**	**40.56**	**162**	P		**P**	**20 22 44.9**	**0.0**
VNDA				LR		LR	20 38 22.0	
WRA	**Warramunga Arr**	**40.75**	**64**	P		**P**	**20 22 46.3**	**-0.8**
	10nm,0.8s,mb4.5,baz=224,slow=8.4,SNR=124							
WRA				LR		LR	20 37 59.4	
	comp=Z,2μm,18.3s,MS5.0,baz=220,slow=34							
WB2	**Warramunga Arr**	**40.76**	**64**	*e*P		**P**	**20 22 46.3**	**-0.8**
WRAB	**Tennant Creek**	**40.76**	**64**	*e*P		**P**	**20 22 46.3**	**-0.9**
	60nm,1.7s,mb5.0							
WRAB	**Tennant Creek**	**40.76**	**64**	P		**P**	**20 22 46.3**	**-0.9**
	20nm,1.4s,mb4.5							
SBA	**Scott Base**	**41.65**	**162**	*e*P		**P**	**20 22 54.8**	**+0.9**
	29nm,1.5s,mb4.7							
KSI	**Kapahiang**	**42.41**	**10**	P		Px	20 23 12.0	
	38nm,1.2s							
QSPA	**South Pole Qui**	**44.32**	**180**	P		**P**	**20 23 15.3**	**-0.2**
	6.8nm,0.6s,mb4.5,baz=306,slow=3.1,SNR=47							
QSPA	**South Pole Qui**	**44.32**	**180**	*e*P		**P**	**20 23 15.0**	**-0.4**
	35nm,1.2s,mb5.0							
PPBI	**Pangkal Pinang**	**44.40**	**15**	P		**P**	**20 23 21.0**	**+4.2**
	19nm,1.2s,702nm,mb4.7							
KAKA	**Kakadu**	**45.21**	**55**	*e*P		Px	20 23 08.5	
	14nm,0.6s							
PPI	**Padang Panjang**	**45.35**	**6**	P		**P**	**20 23 26.5**	**+2.1**
	16nm,1.0s,mb4.8							
ARMA	**Armidale**	**45.56**	**90**	*e*P		**P**	**20 23 26.3**	**+0.4**
STKI	**Sintang**	**47.72**	**21**	P		**P**	**20 23 50.2**	**+7.3**
	22nm,1.0s,916nm,mb5.1							
KDI	**Kendari**	**47.77**	**37**	P		**P**	**20 23 45.9**	**+2.5**
	15nm,1.2s,mb4.9							
CTA	**Charters Tower**	**48.44**	**75**	*e*P		**P**	**20 23 47.9**	**-0.7**
	6.8nm,0.7s,mb4.8							
CTA				*e*S		**S**	**20 30 52.4**	**+3.0**
CTAO	**Charters Tower**	**48.44**	**75**	*e*P		**P**	**20 23 47.5**	**-1.0**
	24nm,1.3s,mb5.1							
CTAO	**Charters Tower**	**48.44**	**75**	P		**P**	**20 23 49.8**	**+1.2**
	26nm,1.4s,mb5.1							
KSM	**Kuching**	**48.79**	**19**	*e*P		**P**	**20 23 48.6**	**-2.6**
PCI	**Palu**	**49.44**	**32**	P		**P**	**20 24 02.3**	**+6.1**
	55nm,1.1s,606nm,mb5.5							
SNAA	**Sanae**	**49.87**	**204**	*e*		**P**	**20 23 55.1**	**-3.7**
SNAA				*e*		pP	20 23 56.2	-5.8
SNAA				*e*			20 24 00.2	
SNAA				*e*			20 24 04.8	
SNAA	**Sanae**	**49.87**	**204**	*e*P		**P**	**20 23 54.6**	**-4.2**
	18nm,1.0s,mb5.0							
SNAA				*e*PP		PP	20 25 48.6	-4.5
AAI	**Ambon**	**50.54**	**44**	P		**P**	**20 24 06.8**	**+2.2**
	33nm,1.1s,mb5.2							
BSI	**Banda Aceh**	**51.09**	**359**	P		**P**	**20 24 12.1**	**+3.4**
	32nm,1.2s,mb5.1							
VNA2	**Neumayer--Watz**	**51.52**	**204**	*e*		**P**	**20 24 11.5**	**+0.2**
	baz=104,slow=6.3							
VNA2				*e*		pP	20 24 12.7	-1.7
VNA2				*e*			20 24 16.8	
VNA2				*e*			20 24 21.3	
VNA1	**Neumayer--Stat**	**51.90**	**204**	*e*		**P**	**20 24 15.2**	**+1.1**
VNA1				*e*			20 24 15.8	
VNA1				*e*			20 24 20.5	
VNA1				*e*			20 24 24.8	
VNA3	**Neumayer Olymp**	**51.99**	**203**	*e*		**P**	**20 24 15.1**	**+0.3**
VNA3				*e*		pP	20 24 16.3	-1.7
VNA3				*e*			20 24 20.7	
VNA3				*e*			20 24 24.9	
BOSA	**Boshof**	**57.02**	**261**	LR		LR	20 43 18.4	
	comp=Z,594nm,21.6s,MS4.7,baz=134,slow=30							
LSZ	**Lusaka**	**63.69**	**275**	*e*P		**P**	**20 25 38.2**	**+0.5**
	48nm,1.5s,mb5.3							
CMAR	**Chiang Mai Arr**	**64.03**	**3**	P		**P**	**20 25 40.0**	**+0.2**
	6.2nm,1.0s,mb4.6,baz=201,slow=6.0,SNR=30							
CMAR				LR		LR	20 49 16.4	
	comp=Z,412nm,19.3s,MS4.6,baz=192,slow=32							
CHTO	**Chiang Mai**	**64.39**	**3**	*e*P		**P**	**20 25 41.0**	**-1.0**
	16nm,1.5s,mb4.8							
TSUM	**Tsumeb**	**68.43**	**264**	*e*P		**P**	**20 26 09.0**	**+0.8**
	8.1nm,1.1s,mb4.7							
KMI	**Kunming**	**70.88**	**7**	P		**P**	**20 26 24.0**	**+1.1**
KMI				AP		pP	20 26 30.3	+4.1
KMI				XP		sP	20 26 32.8	+5.4
KMI				AMB		AMB		
	comp=Z,8.0nm,1.8s,mb4.3							
KMI				AMB		AMB		
	comp=Z,129nm,3.5s							
KMI				LR		LR		
	comp=N,454nm,19.0s,MS4.8							
KMI				LR		LR		
	comp=E,255nm,22.8s,MS4.8							
KMI				LR		LR		
	comp=Z,361nm,18.2s,MS4.7							
GYA	**Guiyang**	**72.60**	**10**	P		**P**	**20 26 33.3**	**+0.1**
GYA				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
ODAN	**Odare**	**72.75**	**352**	*e*P		**P**	**20 26 33.3**	**-0.8**
	comp=E,26nm,1.0s,mb5.1							
RAMN	**Ramite**	**72.92**	**351**	*e*P		**P**	**20 26 34.4**	**-0.7**
	comp=Z,27nm,1.0s,mb5.1							
TAPN	**Taplejung**	**73.20**	**352**	*e*P		**P**	**20 26 36.5**	**-0.3**
	comp=Z,30nm,1.1s,mb5.1							
JIRN	**Jiri**	**73.66**	**351**	*e*P		**P**	**20 26 38.3**	**-1.2**
	comp=Z,28nm,1.0s,mb5.2							
PKI	**Pulchoki**	**73.66**	**350**	*e*P		**P**	**20 26 38.4**	**-1.1**
DMN	**Daman**	**73.74**	**350**	*e*P		**P**	**20 26 39.7**	**-0.2**
	comp=Z,42nm,1.1s,mb5.3							
KKN	**Kakani**	**73.89**	**350**	*e*P		**P**	**20 26 39.7**	**-1.2**
GUN	**Gumba**	**73.94**	**351**	*e*P		**P**	**20 26 41.2**	**+0.1**
	comp=Z,62nm,0.9s,mb5.5							
KOLN	**Koldanda**	**74.09**	**349**	*e*P		**P**	**20 26 42.0**	**0.0**
	comp=Z,35nm,1.1s,mb5.2							
GKN	**Gorkha**	**74.18**	**350**	*e*P		**P**	**20 26 41.6**	**-0.9**
	comp=Z,34nm,1.0s,mb5.2							
PYUN	**Piuthan**	**74.50**	**348**	*e*P		**P**	**20 26 43.2**	**-1.2**
	comp=Z,26nm,0.9s,mb5.2							
DANN	**Dangsing**	**74.64**	**349**	*e*P		**P**	**20 26 44.3**	**-0.9**
	comp=Z,49nm,1.0s,mb5.4							
LSA	**Lhasa**	**75.29**	**356**	P		**P**	**20 26 49.4**	**+0.5**
LSA				AMB		AMB		
	comp=Z,40nm,0.8s,mb5.4							
LSA	**Lhasa**	**75.29**	**356**	*e*P		**P**	**20 26 48.5**	**-0.4**
	comp=Z,13nm,1.1s,mb4.8							
XAN	**Xi'an**	**80.36**	**11**	P		**P**	**20 27 16.8**	**-0.3**
XAN				AP		pP	20 27 27.9	+7.5
XAN				AMB		AMB		
	comp=Z,6.0nm,1.2s,mb4.4							
XAN				AMB		AMB		
	comp=Z,150nm,4.7s							
KBL	**Kabul**	**83.59**	**338**	*e*P		**P**	**20 27 32.8**	**-1.2**
	comp=Z,18nm,1.1s,mb5.1							
GTA	**Gaotai**	**84.93**	**3**	*e*P		**P**	**20 27 41.4**	**+0.7**
GTA				AP		pP	20 27 46.0	+2.0
GTA				XP		sP	20 27 49.6	+4.4
GTA				AMB		AMB		
	comp=Z,7.0nm,1.2s,mb4.7							
HHC	**Hu-ho-hao-te**	**87.42**	**12**	*e*P		**P**	**20 27 57.6**	**+4.6**
HHC				AP		pP	20 28 02.5	+6.2
HHC				XS		sS	20 38 47.6	+8.8
HHC				AMB		AMB		
	comp=Z,11nm,0.7s,mb5.2							
HHC				AMB		AMB		
	comp=Z,130nm,6.1s							
HHC				LR		LR		
	comp=N,369nm,19.0s,MS5.0							
HHC				LR		LR		
	comp=E,343nm,14.4s,MS5.0							
HHC				LR		LR		
	comp=Z,348nm,16.3s,MS4.8							
KSRS	**Korea Array**	**87.77**	**25**	P		**P**	**20 27 54.8**	**0.0**
	comp=Z,1.0nm,0.8s,mb4.1,baz=192,slow=3.5,SNR=4.8							
KSRS				LR		LR	21 03 45.5	
	comp=Z,57nm,18.9s,MS4.0,baz=210,slow=33							
WMQ	**Urumqi**	**89.56**	**354**	P		**P**	**20 28 03.3**	**+0.3**
WMQ				AMB		AMB		
	comp=Z,21nm,1.0s,mb5.4							
AAK	**Ala-Archa**	**90.11**	**344**	*e*P		**P**	**20 28 06.7**	**+1.1**
	comp=Z,6.3nm,1.2s,mb4.8							
EKS2	**Erkin-Say**	**90.28**	**344**	*e*P		**P**	**20 28 08.0**	**+1.6**
	comp=Z,7.9nm,1.3s,mb4.9							
PLCA	**Paso Flores**	**92.98**	**190**	LR		LR	21 07 29.5	
	comp=Z,375nm,20.2s,MS4.8,baz=179,slow=34							
MKAR	**Makanchi Array**	**93.00**	**351**	P		**P**	**20 28 19.3**	**+0.4**
	comp=Z,1.3nm,1.0s,mb4.3,baz=123,slow=4.5,SNR=5.0							
MKAR				LR		LR	21 07 51.4	
	comp=Z,282nm,18.1s,MS4.8,baz=170,slow=34							
PPT	**Papeete**	**93.58**	**120**	*e*LR		LR	20 58 26.0	
	comp=Z,192nm,22.5s							
PPT	**Papeete**	**93.58**	**120**	LR		LR	20 59 01.7	
	comp=Z,146nm,20.8s,MS4.4,baz=233,slow=28							
SONM	**Songino Array**	**93.73**	**7**	P		**P**	**20 28 22.5**	**+0.2**
	comp=Z,2.6nm,1.1s,mb4.6,baz=191,slow=4.5,SNR=5.6							
SONM				LR		LR	21 08 32.1	
	comp=Z,215nm,20.0s,MS4.6,baz=187,slow=34							
ULN	**Ulaanbaatar**	**93.82**	**8**	*e*P		**P**	**20 28 23.2**	**+0.6**
	comp=Z,3.0nm,1.1s,mb4.6							
RKT	**Rikitea**	**97.31**	**134**	*e*T			22 16 59.5	
	comp=Z,11nm,0.3s							
ZALV	**Zalesovo Beam**	**99.84**	**353**	LR		LR	21 10 42.2	
	comp=Z,160nm,20.3s,MS4.5,baz=95,slow=33							
HUMO	**Hull Mountain**	**152.16**	**83**	*e*PKPbc		PKPbc	20 35 00.1	-1.0
NVAR	**Mina Array Bea**	**153.73**	**94**	PKPbc		PKPbc	20 35 04.9	+0.1
	comp=Z,0.9nm,0.7s,baz=232,slow=3.9,SNR=6.5							
NVAR				PKPab		PKPab	20 35 15.8	-1.9
	comp=Z,1.5nm,0.8s,baz=214,slow=3.5,SNR=6.3							
TXAR	**Lajitas Array**	**157.48**	**130**	PKPab		PKPab	20 35 33.0	-0.9
	comp=Z,2.1nm,1.1s,baz=169,slow=7.1,SNR=5.4							
SDCO	**Great Sand Dun**	**162.16**	**109**	*e*PKPdf		PKPdf	20 35 12.3	+5.1

ISCJB ***24*** *20:31:01.8±0.4, 2321N±002×12167E±002, h28km±2km, Error ellipse: s-maj=3.5km s-min=2.5km az=144.7*
TAP ***24*** *20:31:02.6, 2324N×12157E, h41km, ML4.0, B*
JMA ***24*** *20:31:03.8±0.4, 2341N×12175E, h113km, M3.1*
ISC 24 20:31:02.1±0.4,**2322N**±002×**12165E**±002,**h26**km±2km, **n63,**σ0**80**/105,**16C-1D,Taiwan**

| Code | Station Name | Δ° | AZ° | Phase | ID | ISC | Time

TTN	**Taitung**	**0.65**	**225**	*e*P	**Pb**	**20 31 15.6**	**+0.7**
	baz=229							
TWG	**Pinlang**	**0.66**	**234**	⇑*i*P	**Pb**	**20 31 14.6**	**-0.5**
TWG	baz=237			S	**Sb**	**20 31 23.5**	**-0.4**
	baz=237							
YUS	**Yu-Shan**	**0.70**	**293**	⇑*i*P	**Pb**	**20 31 15.9**	**+0.2**
YUS	baz=293			*e*S	**Sb**	**20 31 24.9**	**0.0**
	baz=293							
HWA	**Hwalien**	**0.76**	**357**	*e*P	**Pb**	**20 31 16.4**	**-0.4**
	baz=9.0							
STYT	**Tauyuan**	**0.82**	**267**	⇑*i*P	**Pb**	**20 31 17.4**	**-0.5**
STYT	baz=256			S	**Sb**	**20 31 27.9**	**-0.7**
	baz=256							
ALS	**Alishan**	**0.83**	**291**	⇑*i*P	**Pb**	**20 31 18.1**	**+0.1**
ALS	baz=287			*e*S	**Sb**	**20 31 28.9**	**+0.1**
	baz=287							
TWD	**Chiawan**	**0.86**	**357**	P	**Pb**	**20 31 17.6**	**-0.9**
TWD	baz=350			S	**Sb**	**20 31 29.0**	**-0.7**
	baz=350							
ECL	**Taimali**	**0.89**	**226**	*e*P	**Pb**	**20 31 17.4**	**-1.5**
ECL	baz=222			*e*S	**Sb**	**20 31 28.1**	**-2.3**
	baz=222							
WTP	**Ta-pu**	**0.95**	**272**	⇑*i*P	**Pn**	**20 31 19.7**	**-0.2**
WTP	baz=270			S	**Sb**	**20 31 32.5**	**+0.2**
	baz=270							
SMLT	**Sun Moon Lake**	**0.96**	**314**	⇑*i*P	**Pn**	**20 31 19.7**	**-0.2**
SMLT	baz=319			*e*S	**Sb**	**20 31 31.6**	**-0.8**
	baz=319							
CHN5	**Tsauling**	**0.97**	**293**	⇑*i*P	**Pn**	**20 31 20.3**	**+0.2**
CHN5	baz=305			S	**Sb**	**20 31 33.0**	**+0.2**
	baz=305							
CHN4	**Tsaushan**	**0.98**	**278**	⇑*i*P	**Pn**	**20 31 20.5**	**+0.3**
CHN4	baz=271			S	**Sb**	**20 31 33.3**	**+0.2**
	baz=271							
WHF	**Hehuan Shan**	**0.99**	**339**	*e*P	**Pn**	**20 31 19.6**	**-0.8**
WHF	baz=343			*e*S	**Sb**	**20 31 31.8**	**-1.6**
	baz=343							
SGST	**Jiashian**	**0.99**	**263**	⇑*i*P	**Pn**	**20 31 20.7**	**+0.3**
SGST	baz=253			*e*S	**Sb**	**20 31 33.3**	**0.0**
	baz=253							
TYC	**Yuchr**	**1.00**	**313**	⇑*i*P	**Pn**	**20 31 20.4**	**-0.1**
TYC	baz=322			*e*S	**Sb**	**20 31 33.6**	**0.0**
	baz=322							
CHN1	**Nanshi**	**1.03**	**269**	⇑*i*P	**Pn**	**20 31 21.2**	**+0.3**
CHN1	baz=266			*e*S	**Sb**	**20 31 35.3**	**+0.8**
	baz=266							
SSD	**Sandimen**	**1.05**	**244**	P	**Pn**	**20 31 20.4**	**-0.7**
SSD	baz=236			*e*S	**Sn**	**20 31 35.0**	**+0.1**
	baz=236							
TWK	**Hsinying**	**1.07**	**273**	*e*P	**Pn**	**20 31 21.5**	**0.0**
TWK	baz=271			*e*S	**Sn**	**20 31 35.5**	**-0.1**
	baz=271							
TAW	**Tawu**	**1.10**	**219**	*e*P	**Pn**	**20 31 20.8**	**-1.1**
	baz=215							
WGK	**Gukeng**	**1.10**	**295**	P	**Pn**	**20 31 22.0**	**0.0**
WGK	baz=306			S	**Sn**	**20 31 36.9**	**+0.6**
	baz=306							
WNT	**Mingjian**	**1.11**	**307**	⇑P	**Pn**	**20 31 22.3**	**+0.3**
WNT	baz=309			*e*S	**Sn**	**20 31 36.3**	**-0.1**
	baz=309							
TWT	**Tachien**	**1.12**	**337**	*e*P	**Pn**	**20 31 21.5**	**-0.7**
TWT	baz=346			*e*S	**Sn**	**20 31 34.7**	**-2.0**
	baz=346							
CHN2	**Minshiung**	**1.13**	**287**	*e*P	**Pn**	**20 31 22.4**	**+0.2**
CHN2	baz=273			S	**Sn**	**20 31 37.9**	**+1.0**
	baz=273							
CHY	**Chiayi**	**1.16**	**284**	P	**Pn**	**20 31 22.9**	**+0.2**
CHY	baz=271			*e*S	**Sn**	**20 31 37.6**	**-0.1**
	baz=271							
LAY	**Lan-yu**	**1.17**	**185**	*e*P	**Pn**	**20 31 22.0**	**-0.9**
	baz=175							
SGLT	**Jiouru**	**1.18**	**246**	*e*P	**Pn**	**20 31 23.8**	**+0.9**
	baz=241							
TWM1	**Shoushan**	**1.20**	**251**	*e*P	**Pn**	**20 31 24.5**	**+1.3**
TWM1	baz=247			*e*S	**Sn**	**20 31 41.8**	**+3.2**
	baz=247							
ENA	**Nanau**	**1.21**	**4**	P	**Pn**	**20 31 22.8**	**-0.6**
	baz=16							
NNS	**Nan Shan**	**1.25**	**348**	*e*P	**Pn**	**20 31 23.6**	**-0.3**
	baz=359							
SCZT	**Fangliau**	**1.27**	**229**	*e*P	**Pn**	**20 31 24.3**	**+0.1**
	baz=217							
TCU	**Taichung**	**1.29**	**316**	*e*P	**Pn**	**20 31 25.2**	**+0.7**
	baz=318							
CHN8	**Yiju**	**1.33**	**276**	*e*P	**Pn**	**20 31 25.2**	**+0.2**
CHN8	baz=274			*e*S	**Sn**	**20 31 42.2**	**+0.3**
	baz=274							
SCLT	**Jiali**	**1.34**	**269**	*e*P	**Pn**	**20 31 25.3**	**+0.1**
SCLT	baz=266			*e*S	**Sn**	**20 31 42.8**	**+0.6**
	baz=266							
WSF	**Szhu**	**1.38**	**288**	*e*P	**Pn**	**20 31 25.1**	**-0.6**
WSF	baz=288			*e*S	**Sn**	**20 31 42.2**	**-0.9**
	baz=288							
TWQ1	**Liyutan**	**1.39**	**325**	P	**Pn**	**20 31 26.8**	**+1.0**
TWQ1	baz=342			*e*S	**Sn**	**20 31 44.1**	**+0.9**
	baz=342							
TWC	**Suao**	**1.40**	**7**	P	**Pn**	**20 31 26.1**	**+0.1**
TWC	baz=10.0			S	**Sn**	**20 31 43.1**	**-0.5**
	baz=10.0							
NSY	**Sanyi**	**1.45**	**326**	⇑P	**Pn**	**20 31 27.6**	**+1.0**
NSY	baz=343			*e*S	**Sn**	**20 31 46.5**	**+1.7**
	baz=343							
HEN	**Hengchun**	**1.47**	**215**	*e*P	**Pn**	**20 31 27.6**	**+0.6**
	baz=204							
NSK	**Sanguang**	**1.48**	**350**	⇓P	**Pn**	**20 31 27.4**	**+0.3**
NSK	baz=353			*e*S	**Sn**	**20 31 44.7**	**-0.9**
	baz=353							
TSEB	**Hengchuen, Pin**	**1.48**	**208**	*e*P	**Pn**	**20 31 26.5**	**-0.6**
	baz=208							
TWK1	**Hengchun**	**1.49**	**212**	*e*P	**Pn**	**20 31 26.5**	**-0.8**
	baz=209							
TWE	**Neicheng**	**1.50**	**1**	*e*P	**Pn**	**20 31 26.9**	**-0.5**
	baz=356							
NSTT	**Nanjuang**	**1.53**	**337**	P	**Pn**	**20 31 28.4**	**+0.6**
NSTT	baz=341			*e*S	**Sn**	**20 31 47.2**	**+0.3**
	baz=341							
YOJ	**Yonaguni jima**	**1.76**	**45**	P	**Pn**	**20 31 31.8**	**+0.9**
YOJ				S	**Sn**	**20 31 52.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.76**	**45**	*e*P	**Pn**	**20 31 31.2**	**+0.3**
	baz=47							
TWA	**Mucha**	**1.76**	**358**	*e*P	**Pn**	**20 31 31.2**	**+0.2**
	baz=1.0							
TWB1	**Santiao Chiao**	**1.81**	**10**	*e*P	**Pn**	**20 31 32.2**	**+0.5**
	baz=12							
NWF	**Wu-ten Shan**	**1.85**	**4**	*e*P	**Pn**	**20 31 32.3**	**+0.1**
	baz=357							
TWS1	**Kuangyinshan**	**1.89**	**354**	*e*P	**Pn**	**20 31 32.0**	**-0.7**
	baz=10.0							
PNG	**Penghu**	**1.96**	**281**	P	**Pn**	**20 31 32.7**	**-0.9**
PNG	baz=267			*e*S	**Sn**	**20 31 54.7**	**-2.7**
	baz=267							
HATJ	**Hateruma jima**	**2.15**	**67**	S	**Sn**	**20 32 01.8**	**-0.2**
IRIF	**Iriomote-Funau**	**2.21**	**59**	P	**Pn**	**20 31 38.0**	**+0.9**
IRIF				*e*S	**Sn**	**20 32 04.6**	**+1.0**
JKRS	**Kuro-shima**	**2.39**	**64**	P	**Pn**	**20 31 40.5**	**+0.9**
JKRS				S	**Sn**	**20 32 08.4**	**+0.4**
PCYT	**Pengchaiyu**	**2.43**	**9**	*e*P	**Pn**	**20 31 41.3**	**+1.1**
	baz=12							
JIJ	**Ishigaki jima**	**2.55**	**63**	P	**Pn**	**20 31 42.0**	**+0.1**
JIJ				S	**Sn**	**20 32 11.2**	**-0.9**
JTJ	**Tarama**	**3.13**	**62**	P	**Pn**	**20 31 49.8**	**0.0**
JTJ				*e*S	**Sn**	**20 32 25.9**	**-0.5**
KNM	**Kinmen**	**3.18**	**293**	*e*P	**Pn**	**20 31 50.5**	**0.0**
	baz=290							

BER 24 20:31:37.3±0.4, 7119N×681W, h11km, MD3.3, ML3.9, MW3.4, 5C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.52**	**249**	⇑*i*P	Pg	20 31 46.7	-0.8
JNE				*e*S	Sg	20 31 53.4	-0.9
JNE				AML	AML	20 31 55.1	
	comp=Z,6μm,0.2s						
JNE	**Jan Mayen East** SNR=101	**0.52**	**249**	⇑*i*P	Pg	20 31 46.7	-0.8
JNE				*e*S	Sg	20 31 53.4	-1.0
	comp=Z,6μm,0.2s,SNR=101						
JNW	**Jan Mayen West**	**0.55**	**254**	⇑*i*P	Pg	20 31 47.3	-0.7
JNW				*e*S	Sg	20 31 54.1	-1.1
JNW				AML	AML	20 31 55.2	
	comp=Z,9μm,0.3s						
JNW	**Jan Mayen West** SNR=100	**0.55**	**254**	⇑*i*P	Pg	20 31 47.3	-0.7
JNW				*e*S	Sg	20 31 54.1	-1.1
	comp=Z,9μm,0.3s,SNR=100						
JMI	**Jan Mayen**	**0.68**	**248**	⇑*i*P	Pg	20 31 49.0	-1.4
JMI				*e*S	Sg	20 31 58.0	-1.2

IDC 24 21:15:45.1±2.9, 370S×12723E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/17, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=358.0km s-min=26.7km az=66.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.58**	**157**	P	Pn	21 19 51.0	-0.7
	0.1nm,0.3s,baz=332,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**20.88**	**163**	P	P	21 20 29.4	+0.5
	0.6nm,0.5s,baz=349,slow=11,SNR=19						
MKAR	**Makanchi Array**	**63.97**	**327**	P	P	21 26 20.2	+0.1
	0.3nm,0.9s,baz=141,slow=7.4,SNR=2.4						

*ISCJB **24** 21:18:25.1±0.4, 4151N±002×2230E±003, h0km±6km, Error ellipse: s-maj=3.7km s-min=3.2km az=167.2*
*CSEM **24** 21:18:25.2±0.1, 4149N×2228E, h8km, ML2.2, Error ellipse: s-maj=2.2km s-min=2.0km az=94.0*
*SKO **24** 21:18:25.2, 4148N×2228E, h15km, M1.7, ML2.1*
*BEO **24** 21:18:26.5±0.3, 4149N×2229E, h0km±2km, ML2.2/10*
*THE **24** 21:18:26.1, 4147N×2230E, h0km±2km, ML2.8/4, Error ellipse: s-maj=2.5km s-min=0.7km az=340.0*

ISC 24 21:18:26.0±0.3, 4150N±002×2230E±003, h2km±5km, n60, σ0§64/105, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STIP	**Stip**	**0.21**	**337**	*e*Pg	**Pg**	**21 18 30.9**	**+0.8**
STIP				*e*Sg	**Sg**	**21 18 33.9**	**+1.0**
STIP	**Stip**	**0.21**	**337**	P	**Pg**	**21 18 30.5**	**+0.4**
STIP				S	**Sg**	**21 18 35.0**	**+2.1**
STIP	**Stip**	**0.21**	**337**	P	**Pg**	**21 18 30.5**	**+0.4**
STIP	**Stip**	**0.21**	**337**	*e*Pg	**Pg**	**21 18 30.7**	**+0.6**
STIP				*e*Sg	**Sg**	**21 18 33.9**	**+1.0**
STIP	**Stip**	**0.21**	**337**	*e*Pg	**Pg**	**21 18 30.7**	**+0.6**
STIP				*e*Sg	**Sg**	**21 18 35.0**	**+2.2**
STIP				*e*Lg		21 18 35.2	
	comp=N,334nm,0.3s						
STIP				*e*Lg		21 18 35.9	
	comp=E,153nm,0.2s						
VAY	**Valandovo**	**0.27**	**131**	P	**Pg**	**21 18 30.7**	**-0.4**
VAY				S	**Sg**	**21 18 34.6**	**0.0**
VAY	**Valandovo**	**0.27**	**131**	⇑*i*Pg	**Pg**	**21 18 30.8**	**-0.3**
VAY				*e*Sg	**Sg**	**21 18 34.8**	**+0.2**
VAY	**Valandovo**	**0.27**	**131**	⇑*i*Pg	**Pg**	**21 18 30.8**	**-0.3**
VAY				*e*Sg	**Sg**	**21 18 34.8**	**+0.2**
VAY				*e*Lg		21 18 34.9	
	comp=N,300nm,0.3s						
VAY				*e*Lg		21 18 35.6	
	comp=E,196nm,0.3s						
GRG	**Griva**	**0.55**	**172**	P	**Pg**	**21 18 36.5**	**+0.1**
GRG				S	**Sg**	**21 18 44.1**	**+0.7**
KNT	**Kendrikon**	**0.56**	**126**	P	**Pg**	**21 18 36.7**	**0.0**
KNT				S	**Sg**	**21 18 44.4**	**+0.4**
SKO	**Skopje**	**0.80**	**307**	*e*Pg	**Pg**	**21 18 40.5**	**-0.8**
SKO				*e*Sg	**Sg**	**21 18 51.3**	**-0.4**
SKO	**Skopje**	**0.80**	**307**	*e*Pg	**Pg**	**21 18 40.5**	**-0.8**
SKO				*e*Sg	**Sg**	**21 18 52.7**	**+1.0**
SKO	**Skopje**	**0.80**	**307**	*e*Pg	**Pg**	**21 18 40.6**	**-0.6**
SKO				*e*Sg	**Sg**	**21 18 52.7**	**+1.1**
SKO				*e*Lg		21 18 54.3	
	comp=E,39nm,0.3s						
SKO				*e*Lg		21 18 54.4	
	comp=N,48nm,0.3s						
BIA	**Bitola**	**0.88**	**237**	*e*Pg	**Pg**	**21 18 42.2**	**-0.6**
BIA				*e*Sg	**Sg**	**21 18 54.3**	**+0.2**
BIA	**Bitola**	**0.88**	**237**	P	**Pg**	**21 18 42.1**	**-0.7**
BIA				S	**Sg**	**21 18 54.7**	**+0.6**
BIA	**Bitola**	**0.88**	**237**	*e*Pg	**Pg**	**21 18 42.0**	**-0.8**
BIA				*e*Sg	**Sg**	**21 18 54.9**	**+0.8**
BIA	**Bitola**	**0.88**	**237**	*e*Pg	**Pg**	**21 18 42.0**	**-0.7**
BIA				*e*Sg	**Sg**	**21 18 55.0**	**+0.9**
BIA				*e*Lg		21 18 55.4	
	comp=E,23nm,0.2s						
BIA				*e*Lg		21 18 55.4	
	comp=N,24nm,0.2s						
FNA	**Florina**	**1.00**	**225**	P	**Pg**	**21 18 44.8**	**-0.3**
FNA				S	**Sg**	**21 18 58.7**	**+0.7**
SOH	**Sokhos**	**1.04**	**130**	P	**Pg**	**21 18 45.1**	**-0.8**
SOH				S	**Sg**	**21 18 59.2**	**-0.3**
HORT	**Hortiatis**	**1.08**	**146**	P	**Pg**	**21 18 45.8**	**-0.9**
HORT				S	**Sg**	**21 19 00.9**	**+0.2**
OHR	**Ohrid**	**1.20**	**252**	*e*Pg	**Pg**	**21 18 47.8**	**-1.0**
OHR				*e*Sg	**Sg**	**21 19 04.5**	**+0.2**
OHR	**Ohrid**	**1.20**	**252**	*i* Pg	**Pg**	**21 18 48.0**	**-0.9**
OHR				*e*Sg	**Sg**	**21 19 04.5**	**+0.2**
OHR				*e*Lg		21 19 05.0	
	comp=N,27nm,0.4s						
OHR				*e*Lg		21 19 05.2	
	comp=E,20nm,0.4s						
VTS	**Vitosha**	**1.29**	**31**	*e*Pg	**Pg**	**21 18 50.6**	**0.0**
VTS				*e*Sg	**Sg**	**21 19 07.5**	**+0.2**
BARS	**Barje**	**1.37**	**345**	*e*Pg	**Pg**	**21 18 51.1**	**-1.0**
BARS				*e*Sg	**Sg**	**21 19 10.2**	**+0.3**
LIT	**Litokhoron**	**1.40**	**174**	P	**Pn**	**21 18 52.2**	**-0.3**
PLG	**Polygyros**	**1.42**	**142**	P	**Pn**	**21 18 52.3**	**-0.5**
PLG				S	**Sb**	**21 19 12.6**	**+1.0**
OUR	**Ouranopolis**	**1.73**	**132**	P	**Pn**	**21 18 57.1**	**+0.1**
ZAPS	**Zavoj**	**1.79**	**8**	*e*Pn	**Pn**	**21 18 58.0**	**+0.1**
ZAPS				*e*Sg	**Sg**	**21 19 23.3**	**-0.2**
PAIG	**Paliouri**	**1.89**	**146**	P	**Pn**	**21 18 58.8**	**-0.4**
PLD	**Plovdiv**	**1.90**	**71**	*e*Pn	**Pn**	**21 19 00.2**	**+0.9**
PLD				*e*Sg	**Sg**	**21 19 27.4**	**+0.5**
AGG	**Agios Georgios**	**2.47**	**179**	P	**Pn**	**21 19 06.9**	**-0.3**
BZS	**Buzias**	**4.15**	**353**	*e*Pn	**Pn**	**21 19 30.4**	**+0.1**
BZS				*e*Sg	**Sg**	**21 20 37.9**	**-1.2**

*IDC **24** 21:24:45.0±8.3, 3685N×7178E, h112km±73km, mb3.3/5, mb1 3.4/9, mb1mx3.2/25, mbtmp3.4/9, ML3.7/4, Error ellipse: s-maj=55.4km s-min=25.5km az=172.0*
*ISCJB **24** 21:24:47.2±0.4, 3691N±003×7193E±005, h154km±7km, mb3.4/5, Error ellipse: s-maj=7.1km s-min=3.9km az=160.9*
*MOS **24** 21:24:47.7±1.2, 3692N×7188E, h159km, mb4.0/2, Error ellipse: s-maj=16.9km s-min=9.9km az=83.4*
*NEIC **24** 21:24:49.1±0.9, 3702N×7178E, h147km±9km, mb4.5/4, Error ellipse: s-maj=18.8km s-min=8.2km az=133.0*
*NNC **24** 21:24:51.3±4.1, 3724N×7156E, h120km±51km, mb3.2, mpv4.1, Error ellipse: s-maj=33.5km s-min=24.6km az=4.0*

ISC 24 21:24:48.2±0.4, 3690N±003×7195E±005, h147km±7km, n62, σ0§97/75, mb3.4/5, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**3.34**	**226**	*e*Pn	**Pn**	**21 25 40.8**	**+1.1**
KBL				Sn	**Sn**	**21 26 20.2**	**+0.6**
AML	**Almayashu**	**5.39**	**14**	*e*Pn	**Pn**	**21 26 06.7**	**+0.1**
	84nm,0.5s						
AML				*e*Sn	**Sn**	**21 27 04.7**	**-3.2**
AML	**Almayashu** SNR=112	**5.39**	**14**	P	**Pn**	**21 26 06.8**	**+0.2**
THN	**Thein Dam**	**5.43**	**144**	*e*P	**Pn**	**21 26 08.1**	**+0.8**
THN				*ex*	x	21 27 11.4	
DLH	**Dalhousie**	**5.47**	**142**	*e*P	**Pn**	**21 26 09.0**	**+1.3**
DLH				*e*S	**Sn**	**21 27 09.0**	**-0.8**
UCH	**Uchtor** 10nm,0.4s	**5.67**	**20**	*e*Pn	**Pn**	**21 26 11.5**	**+1.1**
UCH	**Uchtor** SNR=7.9	**5.67**	**20**	P	**Pn**	**21 26 10.9**	**+0.5**
KZA	**Kyzart** SNR=16	**5.76**	**25**	P	**Pn**	**21 26 11.5**	**0.0**
EKS2	**Erkin-Say** 13nm,0.6s	**5.92**	**13**	*e*Pn	**Pn**	**21 26 13.8**	**+0.2**
EKS2	**Erkin-Say** SNR=16	**5.92**	**13**	P	**Pn**	**21 26 13.6**	**0.0**
AAK	**Ala-Archa** 33nm,0.4s	**6.05**	**18**	*e*Pn	**Pn**	**21 26 15.7**	**+0.3**
AAK	**Ala-Archa**	**6.05**	**18**	*e*PN	**Pn**	**21 26 15.7**	**+0.3**
AAK				pmax	pmax		
	comp=Z,33nm,0.4s						
AAK	**Ala-Archa** SNR=31	**6.05**	**18**	P	**Pn**	**21 26 15.9**	**+0.5**
KBK	**Karagaybulak** SNR=13	**6.19**	**21**	P	**Pn**	**21 26 18.1**	**+0.8**
ULHL	**Ulahol** SNR=16	**6.28**	**31**	P	**Pn**	**21 26 18.5**	**0.0**
KK31	**Karatay Array**	**6.29**	**350**	P	**Pn**	**21 26 17.4**	**-1.2**
	comp=Z,6.9nm,0.3s,baz=161,slow=9.7,SNR=18						
KK31				S	**Sn**	**21 27 23.1**	**-6.3**
	comp=Z,17nm,0.5s,baz=170,slow=22,SNR=17						
CHMS	**Chumysh** SNR=21	**6.46**	**19**	P	**Pn**	**21 26 20.6**	**-0.2**
TKM2	**Tokmak 2**	**6.63**	**24**	⇓P	**Pn**	**21 26 23.0**	**-0.1**
	comp=Z,9.6nm,0.7s						
TKM2				⇓S	**Sn**	**21 27 37.7**	**+0.1**
	comp=Z,5.6nm,0.6s						
USP	**Ospenovka** SNR=12	**6.65**	**16**	P	**Pn**	**21 26 22.9**	**-0.5**
SDNR	**Sundarnagar**	**6.81**	**141**	*e*P	**Pn**	**21 26 26.0**	**+0.4**
SDNR				*e*S	**Sn**	**21 27 41.0**	**-1.0**
SMLA	**Simla**	**7.21**	**142**	⇑*i*P	**Pn**	**21 26 32.4**	**+1.5**
SMLA				*i* S	**Sn**	**21 27 49.3**	**-2.2**
SMLA				*i* S	**Sn**	**21 27 49.8**	**-1.8**
SMLA				*ex*	x	21 27 52.0	
	comp=E,419nm,0.3s						
SMLA				*ex*	x	21 27 52.0	
	comp=N,547nm,0.4s						
KLP	**Kalpa**	**7.48**	**134**	*e*P	**Pn**	**21 26 35.1**	**+0.5**
KLP				*e*S	**Sn**	**21 27 56.7**	**-1.3**
JOSI	**Joshimath**	**8.96**	**133**	*e*P	**Pn**	**21 26 55.4**	**+1.1**
JOSI				*e*S	**Sn**	**21 28 29.4**	**-4.3**
KHET	**Khetri**	**9.39**	**159**	*e*S	**Sn**	**21 28 38.2**	**-5.9**
KUDL	**Kundal**	**9.54**	**155**	*e*S	**Sn**	**21 28 41.0**	**-6.7**
SONA	**Sohna**	**9.65**	**152**	*e*S	**Sn**	**21 28 43.5**	**-7.0**
MK31	**Makanchi Array**	**12.52**	**35**	*e*P	**Pn**	**21 27 42.0**	**+0.9**
MKAR	**Makanchi Array**	**12.52**	**35**	P	**Pn**	**21 27 41.0**	**-0.1**
	comp=N,0.1nm,0.3s,baz=216,slow=14,SNR=7.3						
PYUN	**Piuthan**	**12.79**	**130**	*e*P	**Pn**	**21 27 43.7**	**-1.1**
	comp=N,8.7nm,0.3s						
DANN	**Dangsing**	**13.10**	**127**	*e*P	**Pn**	**21 27 48.2**	**-0.5**
	comp=N,11nm,0.3s						
KOLN	**Koldanda**	**13.40**	**129**	*e*P	**Pn**	**21 27 52.0**	**-0.7**
	comp=N,7.0nm,0.3s						
GKN	**Gorkha**	**13.90**	**126**	*e*P	**Pn**	**21 27 58.4**	**-0.5**
	comp=N,10nm,0.4s						
KKN	**Kakani**	**14.46**	**125**	*e*P	**Pn**	**21 28 05.2**	**-0.8**
	comp=N,10nm,0.4s						
DMN	**Daman**	**14.47**	**126**	*e*P	**Pn**	**21 28 05.9**	**-0.2**
	comp=N,10nm,0.4s						
KURBB	**Kurchatov Arra**	**14.51**	**17**	⇑P	**Pn**	**21 28 08.7**	**+2.4**
	comp=N,0.4nm,0.7s						
KURK	**Kurchatov**	**14.61**	**17**	⇓P	**Pn**	**21 28 08.4**	**+0.7**
	comp=N,6.0nm,1.3s						
KURK	**Kurchatov**	**14.61**	**17**	P	**Pn**	**21 28 02.7**	**-5.0**
	comp=N,0.0nm,0.3s,baz=209,slow=12,SNR=4.0						
KURK	**Kurchatov**	**14.61**	**17**	P	**Pn**	**21 28 09.0**	**+1.3**
PKI	**Pulchoki**	**14.70**	**125**	*e*P	**Pn**	**21 28 09.2**	**+0.3**
	comp=N,3.4nm,0.3s						
GUN	**Gumba**	**14.78**	**123**	*e*P	**Pn**	**21 28 10.2**	**+0.2**
	comp=N,9.5nm,0.3s						
AB01	**Akbulak array**	**15.12**	**328**	⇑P	**Pn**	**21 28 12.3**	**-1.6**
	comp=N,1.6nm,0.5s						
JIRN	**Jiri**	**15.15**	**123**	*e*P	**Pn**	**21 28 14.5**	**-0.1**
	comp=N,20nm,0.3s						
RAMN	**Ramite**	**15.89**	**124**	*e*P	**Pn**	**21 28 24.6**	**+0.8**
	comp=N,4.0nm,0.3s						
BVA0	**Borovoye Array**	**16.16**	**357**	⇑P	**Pn**	**21 28 27.0**	**+0.3**
	comp=N,0.5nm,1.1s,baz=160,slow=12,SNR=8.9						
BVAR	**Borovoye Array**	**16.16**	**357**	P	**Pn**	**21 28 24.6**	**-2.1**
	comp=N,0.4nm,0.3s,baz=154,slow=9.4,SNR=7.7						
TAPN	**Taplejung**	**16.38**	**121**	*e*P	**Pn**	**21 28 30.5**	**+0.8**
	comp=N,4.0nm,0.3s						
ODAN	**Odare**	**16.48**	**123**	*e*P	**Pn**	**21 28 31.7**	**+0.8**
	comp=N,6.4nm,0.4s						
AKTK	**Aktyubinsk**	**16.83**	**328**	P	**Pn**	**21 28 33.6**	**-1.2**
AKTK				S	**S**	**21 31 29.8**	**-12**
AKTO	**Aktyubinsk**	**16.83**	**328**	P	**Pn**	**21 28 33.6**	**-1.3**
	comp=N,0.5nm,0.3s,baz=134,slow=10,SNR=12						
AKTO				S	**S**	**21 31 29.8**	**-12**
	comp=N,0.2nm,0.3s,baz=37,slow=5.1,SNR=3.7						
AKTO	**Aktyubinsk**	**16.83**	**328**	P	**Pn**	**21 28 33.6**	**-1.3**
AKTO				S	**S**	**21 31 29.8**	**-12**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAA0	**Zalesovo Array**	**19.24**	**24**	*e*P	**P**	**21 29 01.0**	**+0.2**
ZALV	**Zalesovo Beam**	**19.24**	**24**	P	**P**	**21 29 00.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=223,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**19.24**	**24**	P	**P**	**21 29 00.8**	**0.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAK	**Makhachkala**	**19.66**	**295**	*e*P	**P**	**21 28 56.2**	**-9.4**
SONM	**Songino Array**	**27.48**	**56**	P	**P**	**21 30 22.6**	**+2.2**
	comp=Z,0.3nm,0.6s,mb3.1,baz=259,slow=7.9,SNR=4.8						
BRTR	**Keskin Array B**	**30.04**	**287**	P	**P**	**21 30 44.2**	**+1.0**
	comp=Z,0.3nm,0.5s,mb3.3,baz=110,slow=8.2,SNR=3.5						
ARCES	**ARCESS Array B**	**41.06**	**337**	P	**P**	**21 32 17.1**	**+0.3**
	comp=Z,2.1nm,0.9s,mb3.8,baz=107,slow=7.8,SNR=4.7						
ARCES	**ARCESS Array B**	**41.06**	**337**	P	**P**	**21 32 17.1**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**

GHIR	**Ghir-Karzin**	**2.83**	**296**	*e*Pn		**Pn**	**21 51 37.2**	**+3.3**
GHIR				*e*Sg		**Sn**	**21 52 21.1**	**+14**
GHIR				AML	AML		21 52 38.5	
	comp=E,89nm,0.3s							
KRBR	**Kerman**	**3.02**	**15**	*e*Pn		**Pn**	**21 51 36.6**	**0.0**
KRBR				*e*Sg		**Sn**	**21 52 19.3**	**+7.3**
KRBR				AML	AML		21 52 32.5	
	comp=N,58nm,0.6s							
KRBR				AML	AML		21 52 35.9	
	comp=E,59nm,1.1s							
KRBR	**Kerman**	**3.02**	**15**	*e*Pn		**Pn**	**21 51 36.6**	**0.0**
	SNR=54							
KRBR				*e*Sg		**Sn**	**21 52 19.3**	**+7.3**
	SNR=94							
NASN	**Na'in**	**6.31**	**336**	*e*Pn		**Pn**	**21 52 24.8**	**+3.0**
RDF	**Al-Radifah**	**7.58**	**286**	*e*P		**Pn**	**21 52 40.1**	**+0.8**
RDF				*e*S		**Sn**	**21 54 03.8**	**-0.6**
	comp=E,25nm,0.5s							
RDF	**Al-Radifah**	**7.58**	**286**	*e*P		**Pn**	**21 52 40.1**	**+0.9**
	baz=286							
RDF				*e*S		**Sn**	**21 54 03.8**	**-0.5**
	baz=286							
RDF				AML	AML		21 54 06.0	
	comp=Z,25nm,0.5s,baz=286							
UMR	**Umm Al-Rimmam**	**7.60**	**291**	*e*P		**Pn**	**21 52 40.1**	**+0.6**
UMR				*e*S		**Sn**	**21 54 03.3**	**-1.5**
UMR	**Umm Al-Rimmam**	**7.60**	**291**	*e*P		**Pn**	**21 52 40.1**	**+0.6**
	baz=291							
UMR				*e*S		**Sn**	**21 54 03.3**	**-1.5**
	baz=291							
UMR				AML	AML		21 54 08.0	
	comp=Z,13nm,0.4s,baz=291							
NAY	**Al-Naaiem**	**7.92**	**288**	*e*P		**Pn**	**21 52 44.9**	**+1.0**
NAY				*e*S		**Sn**	**21 54 11.2**	**-1.4**
NAY	**Al-Naaiem**	**7.92**	**288**	*e*P		**Pn**	**21 52 44.9**	**+1.0**
	baz=288							
NAY				*e*S		**Sn**	**21 54 11.2**	**-1.4**
	baz=288							
NAY				AML	AML		21 54 14.7	
	comp=Z,7.0nm,0.6s,baz=288							
MIB	**Mutribah**	**7.99**	**292**	*e*P		**Pn**	**21 52 46.7**	**+1.9**
MIB				*e*S		**Sn**	**21 54 13.8**	**-0.6**
MIB	**Mutribah**	**7.99**	**292**	*e*P		**Pn**	**21 52 46.7**	**+1.9**
	baz=292							
MIB				*e*S		**Sn**	**21 54 13.8**	**-0.6**
	baz=292							
MIB				AML	AML		21 54 16.3	
	comp=Z,18nm,0.5s,baz=292							

KRSC 24 21:57:50.6±0.5, 5536N×16249E, h34km±33km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.87**	**12**	*e*P	Pn	21 58 07.4	+1.0
KBTR				*i* S	Sn	21 58 19.9	+2.0
ZLN	**Zelenaya**	**1.16**	**305**	*e*P	Pn	21 58 12.0	+1.6
ZLN				*i* S	Sn	21 58 27.2	+2.2
BZMR	**Bezymyannaya**	**1.27**	**298**	*e*P	Pn	21 58 12.9	+1.0
BZMR				*i* S	Sn	21 58 28.8	+1.0
KMNR	**Kamenistaya**	**1.34**	**288**	*i* P	Pn	21 58 14.1	+1.3
KMNR				*i* S	Sn	21 58 31.7	+2.3
TUMR	**Tumrok**	**1.34**	**268**	*e*P	Pn	21 58 14.7	+1.8
TUMR				*i* S	Sn	21 58 31.8	+2.3
KRSR	**Krestovskiy**	**1.39**	**309**	*e*P	Pn	21 58 15.5	+2.0
KRSR				*i* S	Sn	21 58 33.6	+3.0
KLY	**Klyuchi**	**1.41**	**313**	P	Pn	21 58 13.9	+0.1
KLY				*i* S	Sn	21 58 30.2	-1.0
KPT	**Kopyto**	**1.42**	**296**	*e*P	Pn	21 58 15.7	+1.7
KPT				*i* S	Sn	21 58 34.1	+2.7
SRKR	**Sorokina**	**1.50**	**331**	*e*P	Pn	21 58 16.2	+1.2
SRKR				*i* S	Sn	21 58 34.4	+1.1
KOZ	**Kozyrevsk**	**1.64**	**296**	*e*P	Pn	21 58 19.3	+2.4
KOZ				*i* S	Sn	21 58 39.8	+3.0
SRDR	**Sredinnyy**	**1.83**	**303**	P	Pn	21 58 21.8	+2.2
SRDR				*i* S	Sn	21 58 45.2	+3.6
KII	**Karymskiy**	**2.21**	**234**	P	Pn	21 59 27.8	+3.0
KII				*i* S	Sn	21 58 55.3	+4.5
SPN	**Mys Shipunski**	**2.69**	**214**	P	Pn	21 58 32.1	+0.7
SPN				*i* S	Sn	21 59 01.5	-1.2
NLC	**Nalytchevo**	**2.87**	**221**	P	Pn	21 58 36.6	+2.8
NLC				*i* S	Sn	21 59 09.3	+2.2
AVH	**Avacha**	**3.04**	**228**	*e*P	Pn	21 58 39.3	+3.1
AVH				*i* S	Sn	21 59 15.3	+4.0
RUS	**Russkaya**	**3.76**	**220**	P	Pn	21 58 48.7	+2.6
RUS				*i* S	Sn	21 59 31.0	+1.9

CASC ***24*** *22:09:30.7±1.4, 1464N×9554W, h35km±999km, MD4.6, mb4.7(NEIC)*
ISCJB ***24*** *22:09:45.7±1.2, 1484N±004×9425W±003, h20km±8km, mb4.6/46, MS4.2/12, Error ellipse: s-maj=7.5km s-min=3.7km az=24.9*
MEX ***24*** *22:09:46.6±0.8, 1463N×9435W, h20km±40km, MD4.5*
NEIC ***24*** *22:09:46.6, 1463N×9434W, h20km, mb4.7/35, MD4.5(MEX), After MEX.*
IDC ***24*** *22:09:48.4±1.4, 1561N×9350W, h0km, mb4.3/15, mb1 4.5/16, mb1mx4.4/25, mbtmp4.3/16, ML4.2/1, MS4.0/10, Ms1 3.9/10, ms1mx3.6/42, Error ellipse: s-maj=53.4km s-min=11.0km az=42.0*
BJI ***24*** *22:09:50.0, 1460N×9430W, h20km, mB5.4, Ms5.2, Msz4.7*
SZGRF ***24*** *22:09:56.1, 1516N×9229W, h33km, mb5.0, Mexico-Guatemala border region*

ISC 24 22:09:48.0±1.3, 1486N±004×9421W±003, h23km±9km, n160, σ1§35/163, mb4.6/46, MS4.2/12, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.27**	**49**	*i* P	**Pn**	**22 10 09.2**	**-1.1**
PCIG				*i* S	**Sn**	**22 10 27.7**	**+1.0**
THIG		**1.88**	**88**	*i* P	**Pn**	**22 10 17.2**	**-1.6**
THIG				*i* S	**Sn**	**22 10 40.3**	**-1.4**
TGIG		**2.18**	**29**	*i* P	**Pn**	**22 10 23.7**	**+0.9**
TGIG				*i* S	**Sn**	**22 10 51.7**	**+2.7**
CMIG	**Matias Romero**	**2.31**	**344**	Pg	**Pn**	**22 10 24.0**	**-0.7**
	28nm,0.3s,baz=162,slow=12,SNR=114						
CMIG				Lg		22 10 51.5	
	168nm,0.3s,baz=28,slow=14,SNR=13						
CMIG				LR	LR	22 11 04.0	
	comp=Z,1μm,18.7s,baz=159,slow=38						
CMIG	**Matias Romero**	**2.31**	**344**	*i* P	**Pn**	**22 10 23.8**	**-0.9**
CMIG				Lg		22 10 51.5	
CMIG				*i* S	**Sn**	**22 10 52.1**	**-0.2**
CMIG				LR	LR	22 11 04.0	
CMIG	**Matias Romero**	**2.31**	**344**	*i* P	**Pn**	**22 10 23.8**	**-0.9**
CMIG				*i* S	**Sn**	**22 10 52.1**	**-0.2**
TUIG	**Tuzandepetl**	**3.16**	**356**	*i* P	**Pn**	**22 10 35.5**	**-0.8**
TUIG				*i* S	**Sn**	**22 11 15.0**	**+1.6**
FG6		**3.23**	**95**	*e*P	**Pn**	**22 10 38.7**	**+1.4**
OXX	**Oaxaca**	**3.27**	**313**	*i* P	**Pn**	**22 10 35.0**	**-2.9**
OXX				*i* S	**Sn**	**22 11 13.9**	**-2.2**
VHO	**Vista Hermosa**	**3.28**	**313**	*i* P	**Pn**	**22 10 36.3**	**-1.6**
VHO				*i* S	**Sn**	**22 11 14.3**	**-1.8**
FUG	**Fuego 3**	**3.29**	**97**	*e*P	**Pn**	**22 10 37.7**	**-0.4**
PCG	**Pacaya**	**3.52**	**97**	*e*S	**Sn**	**22 11 08.6**	**-14**
IXG	**Ixpaco**	**3.70**	**100**	*e*P	**Pn**	**22 10 43.7**	**-0.1**
NBG	**Las Nubes**	**3.75**	**94**	*e*P	**Pn**	**22 10 45.2**	**+0.8**
PNIG	**Pinotepa**	**4.07**	**293**	*i* P	**Pn**	**22 10 45.8**	**-3.1**
PNIG				*i* S	**Sn**	**22 11 27.7**	**-8.1**
PNIG	**Pinotepa**	**4.07**	**293**	*i* P	**Pn**	**22 10 45.8**	**-3.1**
PNIG				*i* S	**Sn**	**22 11 29.7**	**-6.0**
RBDL	**Robledal**	**4.45**	**99**	*e*P	x	22 10 53.0	
UTMO	**Huajuapan**	**4.54**	**311**	*e*P	**Pn**	**22 10 53.0**	**-2.3**
UTMO				*i* S	**Sn**	**22 11 45.1**	**-2.3**
SNJE	**San Jose**	**4.57**	**102**	*e*P	x	22 10 54.7	
TPIG	**Tehuac#an**	**4.65**	**320**	*i* P	**Pn**	**22 10 55.4**	**-1.5**
TPIG				*i* S	**Sn**	**22 11 47.7**	**-2.5**
SCIG	**Sabancuy**	**5.01**	**35**	*i* P	**Pn**	**22 11 01.4**	**-0.3**
SCIG				*i* S	**Sn**	**22 11 58.3**	**-0.6**
LFRS	**El Faro**	**5.14**	**103**	*e*P	x	22 11 03.5	
LFRS				*e*S	x	22 12 15.1	
ACX	**Acapulco**	**5.84**	**291**	*e*P	**Pn**	**22 11 07.2**	**-6.1**
PPM	**Popocatepetl**	**5.95**	**315**	*e*P	**Pn**	**22 11 15.8**	**+1.2**
PPM				*i* S	**Sn**	**22 12 24.9**	**+2.8**
PPM	**Popocatepetl**	**5.95**	**315**	*e*P	**Pn**	**22 11 09.8**	**-4.8**
PPM				*e*P		22 11 15.8	
PPM				*i* S	**Sn**	**22 12 24.9**	**+2.8**
CAIG	**El Cayaco**	**6.22**	**291**	*i* P	**Pn**	**22 11 17.6**	**-0.7**
CAIG				*i* S	**Sn**	**22 12 25.7**	**-3.1**
IIO	**Organos**	**6.38**	**318**	*e*P	**Pn**	**22 11 17.3**	**-3.4**
IIO				*i* S	**Sn**	**22 12 37.4**	**+4.6**
MZVM		**6.45**	**313**	*e*P	**Pn**	**22 11 16.4**	**-5.1**
MZVM				*i* S	**Sn**	**22 12 31.6**	**-2.8**
PTVM	**Pico Tres Padr**	**6.64**	**316**	*e*P	**Pn**	**22 11 26.2**	**+2.0**
PTVM				*i* S	**Sn**	**22 12 37.4**	**-1.7**
TGUH	**Tegucigalpa,Un**	**6.77**	**96**	*e*Pn	**Pn**	**22 11 27.4**	**+1.5**
	242nm,1.3s						
JCT	**Junction City**	**16.38**	**343**	*e*Pn	**Pn**	**22 13 36.8**	**+0.4**
	23nm,1.0s						
TXAR	**Lajitas Array**	**16.85**	**330**	Pn	**Pn**	**22 13 43.3**	**+1.0**
	0.2nm,0.3s,baz=161,slow=14,SNR=16						
TXAR				LR	LR	22 21 52.1	
	comp=Z,91nm,18.4s,baz=55,slow=44						
TXAR	**Lajitas Array**	**16.85**	**330**	Pn	**Pn**	**22 13 43.3**	**+1.0**
TXAR				LR	LR	22 21 52.1	
LRAL	**Lakeview Retre**	**19.25**	**19**	*e*P	**Pn**	**22 14 08.6**	**-3.2**
GDL2	**Guadalupe Moun**	**19.59**	**334**	*e*Pn	**Pn**	**22 14 16.9**	**+1.0**
MIAR	**Mount Ida**	**19.61**	**2**	*e*P	**Pn**	**22 14 13.5**	**-2.6**
	22nm,0.9s						
UALR	**University of**	**19.90**	**5**	*e*P	**Pn**	**22 14 16.9**	**-2.8**
	44nm,1.4s						
WMOK	**Wichita Mounta**	**20.22**	**349**	*e*P	**P**	**22 14 20.9**	**-0.5**
	8.2nm,0.9s						
GOGA	**Godfrey**	**20.88**	**26**	*e*Pn	**P**	**22 14 29.9**	**+1.4**
	23nm,1.1s						
AMTX	**Amarillo**	**21.04**	**343**	*e*P	**P**	**22 14 30.5**	**+0.3**
	50nm,0.9s,mb4.8						
OTAV	**Otavalo**	**21.30**	**132**	*e*P	**P**	**22 14 40.6**	**+7.3**
	3.7nm,0.9s,mb3.7						
WVT	**Waverly**	**21.94**	**14**	*e*P	**P**	**22 14 38.2**	**-1.6**
ROSC	**El Rosal**	**21.94**	**115**	P	**P**	**22 14 41.8**	**+1.7**
	9.4nm,0.7s,mb4.3,baz=107,slow=22,SNR=2.2						
ROSC	**El Rosal**	**21.94**	**115**	*e*P	**P**	**22 14 46.2**	**+6.1**
BNM	**Barren Site**	**22.25**	**332**	*e*P	**P**	**22 14 44.6**	**+1.4**
LPM	**Los Pinos Moun**	**22.38**	**332**	*e*P	**P**	**22 14 46.7**	**+2.1**
LAZ	**Ladron**	**22.69**	**331**	*e*P	**P**	**22 14 49.5**	**+1.6**
TKL	**Tuckaleechee C**	**22.73**	**22**	P	**P**	**22 14 46.6**	**-1.7**
	6.9nm,0.9s,mb4.1,baz=160,slow=12,SNR=4.4						
TKL				LR	LR	22 26 21.3	
	comp=Z,219nm,18.5s,MS3.6,baz=354,slow=46						
TKL	**Tuckaleechee C**	**22.73**	**22**	*e*P	**P**	**22 14 45.3**	**-3.0**
ANMO	**Albuquerque**	**22.84**	**333**	P	**P**	**22 14 50.2**	**+0.7**
	4.4nm,0.9s,mb3.9,baz=150,slow=12,SNR=13						
ANMO	**Albuquerque**	**22.84**	**333**	*e*P	**P**	**22 14 50.7**	**+1.2**
TUC	**Tucson**	**23.02**	**322**	*e*P	**P**	**22 14 53.2**	**+1.8**
CCM	**Cathedral Cave**	**23.25**	**6**	*e*P	**P**	**22 14 50.3**	**-3.5**
SDV	**Santo Domingo**	**23.81**	**102**	P	**P**	**22 14 57.6**	**-1.8**
	8.7nm,0.8s,mb4.2,baz=318,slow=9.9,SNR=8.6						
SDV	**Santo Domingo**	**23.81**	**102**	*e*P	**P**	**22 15 00.7**	**+1.3**
	5.5nm,0.6s,mb4.2						
KSU1	**Kansas State U**	**24.24**	**355**	*e*P	**P**	**22 15 02.2**	**-0.9**
	59nm,1.5s,mb4.8						
WCI	**Wyandotte Cave**	**24.31**	**15**	*e*P	**P**	**22 15 02.3**	**-1.4**
CBKS	**Cedar Bluff**	**24.36**	**349**	*e*P	**P**	**22 15 04.5**	**+0.3**
OLIL	**Olney**	**24.39**	**12**	*e*P	**P**	**22 15 02.9**	**-1.5**
	20nm,0.8s,mb4.6						
SDCO	**Great Sand Dun**	**24.90**	**338**	*e*P	**P**	**22 15 10.8**	**+1.6**
MVCO	**Mesa Verde**	**25.63**	**333**	*e*P	**P**	**22 15 16.8**	**+1.0**
WUAZ	**Wupatki**	**25.70**	**326**	*e*P	**P**	**22 15 18.7**	**+2.3**
HDIL	**Hopedale**	**25.96**	**9**	*e*P	**P**	**22 15 17.4**	**-1.3**
PV01	**Paradox Valley**	**26.44**	**334**	*e*P	**P**	**22 15 24.9**	**+1.9**
SMCO	**Snowmass**	**26.70**	**338**	*e*P	**P**	**22 15 26.8**	**+1.4**
ISCO	**Idaho Springs**	**26.78**	**340**	*e*P	**P**	**22 15 27.2**	**+1.1**
	6.4nm,0.9s,mb4.2						
PV10	**Paradox Valley**	**26.84**	**334**	*e*P	**P**	**22 15 26.9**	**+0.2**
SCIA	**State Center**	**26.96**	**2**	*e*P	**P**	**22 15 26.4**	**-1.4**
SRU	**San Rafael**	**28.10**	**332**	*e*P	**P**	**22 15 46.5**	**+8.5**
ARUT	**Antelope Range**	**28.49**	**327**	*e*P	**P**	**22 15 43.6**	**+2.1**
ECSD	**EROS,Sioux Fal**	**28.85**	**356**	*e*P	**P**	**22 15 43.8**	**-0.8**
RWWY	**Rawlins**	**29.01**	**340**	*e*P	**P**	**22 15 47.8**	**+1.8**
DAU	**Daniels Canyon**	**29.49**	**333**	*e*P	**P**	**22 15 52.3**	**+2.0**
HWUT	**Hardware Ranch**	**30.60**	**334**	*e*P	**P**	**22 16 01.5**	**+1.3**
	5.8nm,1.0s,mb4.4						
BGU	**Big Grassy Mou**	**30.70**	**331**	*e*P	**P**	**22 16 02.5**	**+1.5**
SPUT	**South Promonto**	**30.74**	**333**	*e*P	**P**	**22 16 03.2**	**+1.8**
PDAR	**Pinedale Array**	**30.78**	**338**	P	**P**	**22 16 02.3**	**+0.5**
	1.9nm,0.9s,mb3.9,baz=145,slow=7.6,SNR=14						
PDAR				LR	LR	22 29 34.3	
	comp=Z,309nm,18.5s,MS4.0,baz=62,slow=39						
HVU	**Hansel Valley**	**31.27**	**333**	*e*P	**P**	**22 16 07.8**	**+1.8**
ELK	**Elko**	**31.63**	**329**	P	**P**	**22 16 11.1**	**+1.8**
	4.7nm,0.9s,mb4.3,baz=132,slow=5.7,SNR=15						
ELK				LR	LR	22 28 52.5	
	comp=Z,204nm,19.4s,MS3.8,baz=319,slow=36						
ELK	**Elko**	**31.63**	**329**	*e*P	**P**	**22 16 10.9**	**+1.7**
	6.3nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**31.67**	**322**	P	**P**	**22 16 11.6**	**+2.0**
	11nm,1.0s,mb4.6,baz=140,slow=8.5,SNR=40						
NVAR				PcP	PcP	22 19 01.6	+0.3
	0.9nm,0.8s,baz=134,slow=2.6,SNR=4.5						
REDW	**Red Top Meadow**	**31.78**	**337**	*e*P	**P**	**22 16 11.7**	**+1.2**
	14nm,1.1s,mb4.7						
SNOW	**Snow King Moun**	**31.83**	**337**	*e*P	**P**	**22 16 12.6**	**+1.6**
LOHW	**Long Hollow**	**31.90**	**337**	*e*P	**P**	**22 16 13.0**	**+1.4**
TPAW	**Teton Pass**	**31.93**	**337**	*e*P	**P**	**22 16 13.2**	**+1.4**
	7.5nm,0.9s,mb4.5						
RRI2	**Red Ridge**	**31.95**	**336**	*e*P	**P**	**22 16 13.3**	**+1.3**
	6.3nm,1.0s,mb4.4						
MOOW	**Moose Ponds**	**32.07**	**337**	*e*P	**P**	**22 16 13.6**	**+0.5**
	6.8nm,0.9s,mb4.1						
SADO	**Sadowa**	**32.44**	**20**	LR	LR	22 31 30.2	
	comp=Z,328nm,18.2s,MS4.1,baz=297,slow=41						
RLMT	**Red Lodge**	**32.75**	**340**	*e*P	**P**	**22 16 19.9**	**+0.9**
	9.2nm,1.2s,mb4.6						
QLMT	**Earthquake Lak**	**33.25**	**337**	*e*P	**P**	**22 16 24.7**	**+1.3**
AGMN	**Agassiz Refuge**	**33.37**	**358**	*e*P	**P**	**22 16 22.6**	**-1.8**
	20nm,1.0s,mb5.0						
HLID	**Hailey**	**33.42**	**333**	*e*P	**P**	**22 16 26.1**	**+1.2**
	7.7nm,1.1s,mb4.5						
MCMT	**McKenzie Canyo**	**33.79**	**336**	*e*P	**P**	**22 16 30.3**	**+2.2**
DLMT	**Dillon**	**34.14**	**337**	*e*P	**P**	**22 16 32.2**	**+1.1**
	15nm,1.1s,mb4.8						
OHCM	**Honcut**	**34.16**	**321**	*e*P	**P**	**22 16 32.9**	**+1.5**
WVOR	**Wild Horse Val**	**34.60**	**327**	*e*P	**P**	**22 16 36.5**	**+1.3**
	17nm,1.3s,mb4.8						
MOD	**Modoc**	**35.13**	**325**	*e*P	**P**	**22 16 40.8**	**+1.1**
	12nm,1.1s,mb4.7						
ULM	**Lac du Bonnet**	**35.32**	**358**	P	**P**	**22 16 39.5**	**-1.7**
	2.9nm,0.4s,mb4.6,baz=177,slow=6.2,SNR=3.5						
ULM				LR	LR	22 33 02.3	
	comp=Z,190nm,19.8s,MS3.9,baz=203,slow=40						
YBH	**Yreka Blue Hor**	**36.38**	**323**	P	**P**	**22 16 50.1**	**-0.4**
	0.6nm,0.4s,mb3.9,baz=126,slow=4.2,SNR=4.0						
EDM	**Edmonton**	**41.16**	**343**	*e*P	**P**	**22 17 30.4**	**+0.1**
SIV	**San Ignacio**	**44.85**	**132**	P	**P**	**22 18 05.3**	**+4.6**
	1.6nm,0.5s,mb4.1,baz=313,slow=9.1,SNR=11						
BBB	**Bella Bella**	**45.98**	**331**	LR	LR	22 37 45.8	
	comp=Z,168nm,18.8s,MS4.0,baz=153,slow=37						
YKA	**Yellowknife Ar**	**49.77**	**348**	P	**P**	**22 18 37.3**	**-0.7**
	3.7nm,0.8s,mb4.5,baz=147,slow=7.9,SNR=6.3						
DLBC	**Dease Lake**	**51.01**	**337**	P	**P**	**22 18 48.4**	**+0.6**
	7.4nm,1.0s,mb4.6,baz=180,slow=2.0,SNR=7.4						
DLBC				LR	LR	22 45 38.2	
	comp=Z,173nm,18.1s,MS4.1,baz=117,slow=42						
DLBC	**Dease Lake**	**51.01**	**337**	P	**P**	**22 18 48.4**	**+0.6**
DLBC				LR	LR	22 45 38.2	
SFJD	**Kangerlussuaq**	**59.36**	**18**	LR	LR	22 45 19.9	
	comp=Z,116nm,19.3s,MS4.0,baz=27,slow=36						
COLA	**College**	**61.63**	**337**	*e*P	**P**	**22 20 02.8**	**-0.7**
	4.5nm,0.9s,mb4.6						
TRF	**Thorofare Moun**	**61.95**	**335**	*e*P	**P**	**22 20 05.7**	**0.0**
	11nm,1.1s,mb4.9						
BORG	**Borgarnes**	**69.37**	**26**	LR	LR	22 50 02.6	
	comp=Z,379nm,21.7s,MS4.6,baz=118,slow=35						
EVO	**Evora**	**77.97**	**53**	*e*P	**P**	**22 21 43.7**	**-0.9**
	85nm,1.6s,mb5.1						
ROSF	**Rostrenen**	**79.67**	**43**	*e*P	**P**	**22 21 54.1**	**+0.4**
	115nm,1.4s,mb5.3						
ROSF	**Rostrenen**	**79.67**	**43**	*e*P	**P**	**22 21 54.1**	**+0.4**
	58nm,1.4s,mb5.3						
SGMF	**Saint Gilles**	**80.16**	**43**	*e*P	**P**	**22 21 56.8**	**+0.4**
	138nm,1.4s,mb5.4						
SGMF	**Saint Gilles**	**80.16**	**43**	*e*P	**P**	**22 21 56.8**	**+0.4**
	69nm,1.4s,mb5.4						
ESDC	**Sonseca Array**	**80.86**	**51**	P	**P**	**22 21 58.5**	**-1.8**
	3.0nm,1.0s,mb4.2,baz=286,slow=5.5,SNR=6.3						
FLN	**La Froiliere**	**81.41**	**42**	*e*P	**P**	**22 22 03.1**	**+0.1**
LDF	**La Druziere**	**81.67**	**42**	*e*P	**P**	**22 22 03.6**	**-0.8**
MFF	**Saint Martin d**	**82.11**	**44**	*e*P	**P**	**22 22 05.7**	**-1.1**
	32nm,1.3s,mb4.8						
MFF	**Saint Martin d**	**82.11**	**44**	*e*P	**P**	**22 22 05.7**	**-1.1**
	16nm,1.3s,mb4.8						
ETSF	**Etsaut**	**82.67**	**48**	*e*P	**P**	**22 22 09.2**	**-0.6**
LFF	**La Frestale**	**83.10**	**45**	*e*P	**P**	**22 22 11.0**	**-1.0**
EPF	**Esparros**	**83.28**	**47**	*e*P	**P**	**22 22 12.1**	**-0.9**
RJF	**Les Rejaudoux**	**83.54**	**45**	*e*P	**P**	**22 22 13.4**	**-0.9**
CAF	**Calviac**	**84.02**	**45**	*e*P	**P**	**22 22 16.2**	**-0.5**
BGF	**Bois d'Agland**	**84.12**	**44**	*e*P	**P**	**22 22 15.9**	**-1.3**
	20nm,0.9s,mb5.0						
BGF	**Bois d'Agland**	**84.12**	**44**	*e*P	**P**	**22 22 15.9**	**-1.3**
	10nm,0.9s,mb5.0						
NB2	**NORSAR Subarra**	**84.41**	**28**	P	**P**	**22 22 18.7**	**+0.4**
	comp=Z,8.3nm,1.1s,mb4.8,baz=291,slow=5.1						
NOA	**NORSAR Array B**	**84.41**	**28**	P	**P**	**22 22 18.1**	**-0.3**
	comp=Z,1.9nm,0.8s,mb4.3,baz=291,slow=5.0,SNR=5.6						
SSF	**Saint Saulge**	**84.42**	**43**	*e*P	**P**	**22 22 17.5**	**-1.2**
	comp=Z,25nm,1.2s,mb4.9						
SSF	**Saint Saulge**	**84.42**	**43**	*e*P	**P**	**22 22 17.5**	**-1.2**
	comp=Z,13nm,1.2s,mb4.9						
GIVF	**Givet**	**84.42**	**40**	*e*P	**P**	**22 22 17.6**	**-1.0**
MTLF	**Montolieu**	**84.53**	**47**	*e*P	**P**	**22 22 18.4**	**-0.9**
LOR	**Lormes**	**84.60**	**43**	*e*P	**P**	**22 22 18.7**	**-0.9**
ARCES	**ARCESS Array B**	**85.99**	**18**	P	**P**	**22 22 27.4**	**+1.3**
	comp=Z,5.6nm,0.9s,mb4.8,baz=316,slow=6.7,SNR=4.7						
HAU	**Haudompre**	**86.00**	**41**	*e*P	**P**	**22 22 25.7**	**-0.9**
	comp=Z,52nm,1.3s,mb5.3						
HAU	**Haudompre**	**86.00**	**41**	*e*P	**P**	**22 22 25.7**	**-0.9**
	comp=Z,26nm,1.3s,mb5.3						
CABF	**La Chapelle**	**86.25**	**43**	*e*P	**P**	**22 22 27.9**	**+0.1**
	comp=Z,32nm,1.3s,mb5.1						
CABF	**La Chapelle**	**86.25**	**43**	*e*P	**P**	**22 22 27.9**	**+0.1**
	comp=Z,16nm,1.3s,mb5.1						
HINF	**Hinteralfeld**	**86.38**	**42**	*e*P	**P**	**22 22 27.4**	**-1.0**
	comp=Z,14nm,1.1s,mb4.8						
HINF	**Hinteralfeld**	**86.38**	**42**	*e*P	**P**	**22 22 27.4**	**-1.0**
	comp=Z,6.8nm,1.1s,mb4.8						
CDF	**Champ du Feu**	**86.46**	**41**	*e*P	**P**	**22 22 28.1**	**-0.7**
	comp=Z,14nm,1.1s,mb4.8						
CDF	**Champ du Feu**	**86.46**	**41**	*e*P	**P**	**22 22 28.1**	**-0.7**
	comp=Z,7.1nm,1.1s,mb4.8						
SMRF	**Simiane la Rot**	**86.69**	**45**	*e*P	**P**	**22 22 29.1**	**-1.0**
LPL	**La Plagne**	**87.01**	**44**	*e*P	**P**	**22 22 31.7**	**+0.1**
LPG	**La Plagne**	**87.03**	**44**	*e*P	**P**	**22 22 31.9**	**+0.2**
MBFF	**Montbardon**	**87.28**	**44**	*e*P	**P**	**22 22 32.6**	**-0.3**
LMR	**La Mourre**	**87.53**	**46**	*e*P	**P**	**22 22 33.4**	**-0.8**
GRF	**Grafenberg Arr**	**88.47**	**39**	*e*P	**P**	**22 22 38.1**	**-0.4**
	comp=Z,28nm,2.3s,mb5.1						
GERES	**GERESS Array B**	**90.30**	**39**	P	**P**	**22 22 46.7**	**-0.3**
	comp=Z,1.0nm,0.9s,mb4.2,baz=328,slow=4.7,SNR=6.8						
TORD	**Torodi Ar. Bea**	**92.25**	**76**	P	**P**	**22 22 56.0**	**-0.8**
	comp=Z,0.4nm,0.9s,mb3.8,baz=302,slow=5.3,SNR=4.9						
TORD				PP	PP	22 26 31.4	-6.0
	comp=Z,1.0nm,1.1s,baz=296,slow=3.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**92.25**	**76**	P	**P**	**22 22 56.0**	**-0.8**
TORD				PP	PP	22 26 31.4	-6.0
CN2	**Changchun**	**111.30**	**330**	*e*PKP	PKiKP	22 28 24.4	+4.2
HHC	**Hu-ho-hao-te**	**119.64**	**338**	*e*PKP	PKPdf	22 28 39.5

FORC Fortuna 0.92 76 *eP* **Pn** **22 23 37.9 +1.3**
FORC ↓*eP* 22 23 38.1
CGA2 Cerro Gallo 2 1.11 102↑ *eP* **Pn** **22 23 39.6 +0.3**
PRS1 Puriscal 1.27 102↑ *eP* **Pn** **22 23 41.3 -0.1**
CONN Concepcion 1.31 358↑ *iP* **Pn** **22 23 43.8 +1.7**
LAJ Bijagual 1.48 105 *eP* **Pn** **22 23 38.6 -5.7**
SJS Escuela Geolog 1.52 101↑ *eP* **Pn** **22 23 46.7 +1.8**
QCR Quepos 1.61 120 *eP* **Pn** **22 23 47.2 +1.1**
APON Apoyo 1.73 344↑ *iP* **Pn** **22 23 49.6 +1.7**
URSC Urasca 1.81 103↑ *eP* **Pn** **22 23 50.1 +1.2**
MASN Masaya 1.83 342↑ *eP* **Pn** **22 23 50.0 +0.9**
CRUN El Crucero 1.87 338↓ *eP* **Pn** **22 23 51.7 +1.9**
TICN Ticuantepe 1.90 340↓ *eP* **Pn** **22 23 51.5 +1.5**
BUS Buena Vista 1.91 111 *eP* **Pn** **22 23 50.9 +0.6**
BUS Buena Vista 1.91 111↑ *eP* **Pn** **22 23 50.9 +0.6**
WILN Americas 2 2.00 342↑ *eP* **Pn** **22 23 52.6 +1.1**
MGAN Managua 2.01 341↑ *eP* **Pn** **22 23 52.5 +1.0**
MGAN *eS* **Sn** **22 24 22.2 +6.7**
MGAN AML AML 22 24 24.8
comp=E,5µm,0.8s
TISN Laguna Tiscapa 2.01 340↓ *eP* **Pn** **22 23 52.7 +1.0**
XAVN Gruta Xavier 2.04 339↑ *eP* **Pn** **22 23 53.1 +1.1**
CSAN 2.10 337↑ *eP* **Pn** **22 23 53.9 +1.0**
APYN Apoyeque 2.12 339↑ *eP* **Pn** **22 23 54.4 +1.2**
HUEN 2.17 344↑ *eP* **Pn** **22 23 54.9 +1.1**
COPN Copaltepe 2.17 333↓ *eP* **Pn** **22 23 54.4 +0.5**
MOMN Momotombo 2.35 336↑ *eP* **Pn** **22 23 57.5 +1.1**
BAR1 2.44 114 *eP* **Pn** **22 23 58.1 +0.6**
MIRN Miramar 2.45 333↑ *eP* **Pn** **22 23 58.6 +0.8**
LIO Limon 2.51 95 *eP* **Pn** **22 23 59.5 +2.4**
LIO Limon 2.51 95 *eP* **Pn** **22 23 59.5 +1.0**
TEL3 Telica 3 2.63 332↓ *eP* **Pn** **22 24 01.2 +1.1**
ACR Cerro Adams 2.85 123 *eP* **Pn** **22 24 04.3 +1.1**
CNCH Conchagua 3.74 324 *eP* x 22 24 16.8
CNCH *eS* x 22 25 02.8
VSM San Miguel 4.13 320 *eP* x 22 24 21.4
VSM *eS* x 22 25 10.2
TGUH Tegucigalpa,Un 4.14 336 *ePn* **Pn** **22 24 21.5 +0.5**
TGUH Tegucigalpa,Un 4.14 336↓ *eP* **Pn** **22 24 24.7 +3.7**
CAHU Cacacuatique 4.36 324 *eP* x 22 24 25.9
SNVI San Vicente 4.63 317 *eP* x 22 24 29.2
SNVI *eS* x 22 25 20.8
LFRS El Faro 4.79 315 *eP* x 22 24 30.2
ICCO Coco Island 4.89 198 *eP* **Pn** **22 24 29.8 -1.5**
BOQS Boqueron 5.02 314 *eP* x 22 24 35.2
SBLS San Blas 5.34 312 *eP* x 22 24 39.6
RBDL Robledal 5.57 314 *eP* x 22 24 42.2
BCIP Isla Barro Col 5.75 100 *ePn* **Pn** **22 24 44.3 +1.1**
BCIP Isla Barro Col 5.75 100↑ *eP* **Pn** **22 24 42.9 -0.3**
CMIG Matias Romero 11.32 308 Pn **Pn** **22 26 00.5 +1.0**
comp=E,1.7nm,0.3s,baz=112,slow=11,SNR=36
OTAV Otavalo 12.20 144 *ePn* **Pn** **22 26 15.9 +4.2**
ROSC El Rosal 12.36 115 LR LR 22 30 35.3
comp=E,665nm,19.8s,baz=337,slow=36
ROSC El Rosal 12.36 115 *ePn* **Pn** **22 26 17.9 +4.2**
CHI2 12.98 115↓ *eP* Px 22 24 03.4
LAPE La Pedrera 14.08 100↓ *eP* Px 22 23 31.5
LAPE *eS* Sx 22 23 41.3
SDV Santo Domingo 14.79 94 Pn **Pn** **22 26 49.3 +2.3**
comp=E,0.3nm,0.3s,baz=275,slow=12,SNR=7.8
SDV PcP PcP 22 31 57.5 +0.4
comp=E,0.2nm,0.3s,baz=359,slow=1.9,SNR=4.1
SDV Santo Domingo 14.79 94 *ePn* **Pn** **22 26 48.8 +1.8**
SDDR Presa de Saban 16.32 56 *eP* **Pn** **22 27 05.3 -1.4**
SDDR *e* 22 27 15.0
ATAH Atahualpa 18.56 157 P **Pn** **22 27 39.5 +5.0**
comp=E,0.4nm,0.3s,baz=308,slow=11,SNR=3.6
ATAH LR LR 22 33 53.6
comp=E,2µm,19.8s,baz=337,slow=34
AOPR Arecibo Observ 19.92 64 *eP* **Pn** **22 27 48.7 -2.1**
comp=E,262nm,2.1s
SJG San Juan 20.38 65 *eP* **P** **22 27 54.1 +0.1**
comp=E,43nm,0.6s
SJG San Juan 20.38 65 *eP* **P** **22 27 54.1 +0.1**
SJG pmax pmax
comp=Z,43nm,0.6s
CPD Cerro la Pandu 20.56 66 *eP* **P** **22 27 55.5 -0.4**
comp=Z,63nm,1.0s
CPD *epP* 22 28 09.5
CPD Cerro la Pandu 20.56 66 *eP* **P** **22 27 55.5 -0.5**
CPD *e**PP 22 28 09.5
CPD pmax pmax
comp=Z,63nm,1.0s
PCRV Puerto La Cruz 20.61 88 P **P** **22 27 58.5 +2.1**
comp=Z,9.9nm,0.5s,baz=248,slow=3.6,SNR=8.3
HUMP Col San Antoni 20.66 65 *ePn* **P** **22 28 00.2 +3.3**
comp=Z,47nm,1.0s
MTP Monte Pirata 20.91 66 *eP* **P** **22 27 59.4 -0.3**
HKT Hockley 21.82 335 *eP* **P** **22 28 08.9 -0.5**
comp=Z,130nm,1.8s,mb5.1
HKT Hockley 21.82 335 *eP* **P** **22 28 08.9 -0.5**
HKT pmax pmax
comp=Z,130nm,1.8s,mb5.1
VBMS Vicksburg 22.34 349 *eP* **P** **22 28 13.8 -1.1**
comp=Z,86nm,1.0s,mb5.1
LRAL Lakeview Retre 22.72 357 *eP* **P** **22 28 19.5 +0.5**
comp=Z,36nm,0.6s,mb5.0
NATX Nacogdoches 23.01 340 *eP* **P** **22 28 21.9 -0.1**
comp=Z,56nm,0.8s,mb5.0
GOGA Godfrey 23.14 4 *eP* **P** **22 28 23.4 +0.1**
comp=Z,70nm,0.8s,mb5.1
GOGA *e* 22 28 33.0
GOGA Godfrey 23.14 4 *eP* **P** **22 28 23.4 0.0**
GOGA *e* 22 28 33.0
GOGA pmax pmax
comp=Z,69nm,0.8s,mb5.1
NNA Nana 23.73 158 LR LR 22 36 54.2
comp=Z,390nm,20.6s,MS3.9,baz=83,slow=34
JCT Junction City 24.11 329 *eP* **P** **22 28 32.0 -0.5**
comp=Z,45nm,0.7s,mb5.0
JCT Junction City 24.11 329 *eP* **P** **22 28 32.0 -0.6**
JCT pmax pmax
comp=Z,45nm,0.7s,mb5.0
JSC Jenkinsville 24.25 9 *eP* **P** **22 28 34.1 +0.2**
JSC *epP* 22 28 43.4
JSC *esP* sP 22 28 47.5 -0.8
OXF Oxford 24.41 352 *eP* **P** **22 28 34.1 -1.2**
comp=Z,84nm,1.0s,mb5.1
OXF *epP* 22 28 44.0
OXF Oxford 24.41 352 *eP* **P** **22 28 34.1 -1.2**
OXF *e**PP 22 28 44.0
OXF pmax pmax
comp=Z,84nm,1.0s,mb5.1
LHS Liberty Hill 24.51 10 *epP* pP 22 28 51.0 +4.6
SWET Sewanee 24.86 359 *eP* **P** **22 28 39.1 -0.3**
CPCT Cooper Cave 25.11 2 *eP* **P** **22 28 41.7 0.0**
UALR University of 25.19 347 *eP* **P** **22 28 41.4 -1.1**
comp=Z,36nm,0.8s,mb5.0
MIAR Mount Ida 25.27 344 *eP* **P** **22 28 41.9 -1.3**
comp=Z,53nm,0.8s,mb5.1
MIAR *epP* pP 22 28 51.7 -1.7
MIAR Mount Ida 25.27 344 *eP* **P** **22 28 41.9 -1.3**
MIAR *e**PP pP 22 28 51.7 -1.6
MIAR pmax pmax
comp=Z,53nm,0.8s,mb5.1
TKL Tuckaleechee C 25.35 3 P **P** **22 28 44.0 +0.1**
comp=Z,32nm,0.8s,mb4.9,baz=179,slow=13,SNR=29
TKL LR LR 22 38 52.5
comp=Z,590nm,18.1s,MS4.1,baz=194,slow=37
TKL Tuckaleechee C 25.35 3 *eP* **P** **22 28 43.9 0.0**
TKL Tuckaleechee C 25.35 3 P **P** **22 28 44.0 +0.1**
TKL pmax pmax
comp=Z,32nm,0.8s,mb4.9
TKL MLR MLR
comp=Z,591nm,18.1s,MS4.1
TXAR Lajitas Array 25.44 321 P **P** **22 28 45.2 +0.5**
comp=Z,24nm,0.8s,mb4.8,baz=137,slow=10.0,SNR=44
TXAR pP pP 22 28 56.0 +1.1
comp=Z,22nm,0.6s,baz=140,slow=10,SNR=13
TXAR PcP PcP 22 32 17.4 +1.1
comp=Z,2.8nm,0.8s,baz=133,slow=5.3,SNR=3.9
TXAR LR LR 22 41 23.5
comp=Z,158nm,18.9s,MS3.6,baz=310,slow=43
TXAR Lajitas Array 25.44 321 P **P** **22 28 45.2 +0.5**
TXAR **PP* pP 22 28 56.0 +1.1
TXAR 22 32 17.4
TXAR pmax pmax
comp=Z,24nm,0.8s
TXAR pmax pmax
comp=Z,22nm,0.6s
TXAR pmax pmax
comp=Z,3.0nm,0.8s
TXAR MLR MLR
comp=Z,158nm,18.9s

WVT Waverly 25.85 356 *eP* **P** **22 28 46.8 -1.6**
comp=Z,42nm,1.7s,mb4.7
WVT *ePcP* PcP 22 32 16.6 -0.5
WVT Waverly 25.85 356 *eP* **P** **22 28 46.8 -1.6**
WVT *e* 22 32 16.6
WVT pmax pmax
comp=Z,42nm,1.7s,mb4.7
TZTN Tazewell 26.25 4 *eP* **P** **22 28 52.3 +0.3**
comp=Z,36nm,0.7s,mb5.0
PARMO Parma 26.57 352 *eP* **P** **22 28 54.2 -0.7**
WMOK Wichita Mounta 27.21 336 *eP* **P** **22 28 59.1 -1.5**
comp=Z,18nm,0.8s,mb4.7
WMOK *epP* pP 22 29 09.4 -1.4
WMOK *esP* sP 22 29 12.2 -3.0
WMOK Wichita Mounta 27.21 336 *eP* **P** **22 28 59.1 -1.5**
WMOK *e**PP pP 22 29 09.4 -1.4
WMOK *e**SP sP 22 29 12.2 -3.0
WMOK pmax pmax
comp=Z,18nm,0.8s,mb4.7
ELN Prospectdale 27.22 8 *eP* **P** **22 29 00.8 +0.1**
LPIG La Paz 27.29 303 LR LR 22 40 39.0
comp=Z,357nm,18.9s,MS4.0,baz=82,slow=38
SIUC Southern Illin 27.55 354 *eP* **P** **22 29 02.9 -0.7**
comp=Z,28nm,0.8s,mb4.9
WCI Wyandotte Cave 27.88 359 *eP* **P** **22 29 05.7 -0.9**
comp=Z,40nm,1.3s,mb4.9
WCI *epP* pP 22 29 15.3 -1.5
WCI Wyandotte Cave 27.88 359 *eP* **P** **22 29 05.7 -0.9**
WCI *e**PP pP 22 29 15.3 -1.5
WCI pmax pmax
comp=Z,40nm,1.3s,mb4.9
GDL2 Guadalupe Moun 27.91 324 *eP* **P** **22 29 07.5 +0.5**
FVM French Village 27.96 352 *eP* **P** **22 29 05.6 -1.8**
comp=Z,1.1nm,0.9s,mb4.3
FVM French Village 27.96 352 *eP* **P** **22 29 05.6 -1.8**
FVM pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
CCM Cathedral Cave 28.16 350 *eP* **P** **22 29 07.8 -1.3**
comp=Z,29nm,1.2s,mb4.8
CCM *epP* pP 22 29 17.4 -1.9
CCM *ePcP* PcP 22 32 22.9 +0.3
CCM Cathedral Cave 28.16 350 *eP* **P** **22 29 07.8 -1.3**
CCM *e**PP pP 22 29 17.4 -1.9
CCM *e* 22 32 22.9
CCM pmax pmax
comp=Z,29nm,1.2s,mb4.8
OLIL Olney 28.46 356 *eP* **P** **22 29 10.9 -0.9**
comp=Z,18nm,0.7s,mb4.8
AMTX Amarillo 28.60 332 *eP* **P** **22 29 12.0 -1.1**
comp=Z,16nm,0.6s,mb4.9
MCWV Mont Chateau 29.73 9 *eP* **P** **22 29 22.9 -0.2**
comp=Z,23nm,0.8s,mb5.0
MCWV *epP* pP 22 29 32.6 -0.8
ACSO Alum Creek Sta 29.96 4 *eP* **P** **22 29 24.4 -0.6**
comp=Z,26nm,0.6s,mb5.2
HDIL Hopedale 30.37 354 *eP* **P** **22 29 27.2 -1.5**
comp=Z,40nm,1.0s,mb5.1
KSU1 Kansas State U 30.38 343 *eP* **P** **22 29 27.5 -1.4**
comp=Z,16nm,1.0s,mb4.7
BNM Barren Site 30.63 324 *eP* **P** **22 29 31.6 +0.6**
SSPA Standing Stone 31.03 11 *eP* **P** **22 29 34.6 +0.1**
comp=Z,13nm,0.7s,mb4.9
SSPA *epP* pP 22 29 44.0 -0.8
ANMO Albuquerque 31.11 325 P **P** **22 29 35.8 +0.5**
comp=Z,4.0nm,0.5s,mb4.5,baz=144,slow=8.6,SNR=19
ANMO Albuquerque 31.11 325 *eP* **P** **22 29 35.9 +0.5**
comp=Z,11nm,1.3s,mb4.5
ANMO Albuquerque 31.11 325 *eP* **P** **22 29 35.9 +0.6**
ANMO pmax pmax
comp=Z,11nm,1.3s
CBKS Cedar Bluff 31.15 338 *eP* **P** **22 29 34.1 -1.4**
comp=Z,15nm,0.9s,mb4.8
CBKS Cedar Bluff 31.15 338 *eP* **P** **22 29 34.1 -1.5**
CBKS pmax pmax
comp=Z,15nm,0.9s,mb4.8
LPAZ La Paz 31.51 147 LR LR 22 43 19.9
comp=Z,683nm,19.5s,MS4.3,baz=267,slow=38
TUC Tucson 32.00 317 *eP* **P** **22 29 44.2 +1.0**
comp=Z,3.7nm,0.8s,mb4.3
TUC Tucson 32.00 317 *eP* **P** **22 29 44.2 +1.0**
TUC pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
SDCO Great Sand Dun 32.73 330 *eP* **P** **22 29 49.9 +0.3**
comp=Z,8.9nm,0.8s,mb4.8
BINY Binghamton 32.92 13 *eP* **P** **22 29 51.2 +0.1**
comp=Z,208nm,2.3s,mb5.7
WUAZ Wupatki 34.41 321 *eP* **P** **22 30 05.3 +1.2**
comp=Z,9.4nm,0.9s,mb4.7
ISCO Idaho Springs 34.41 332 *eP* **P** **22 30 04.0 -0.1**
comp=Z,4.7nm,0.8s,mb4.5
ISCO *ePcP* PcP 22 32 41.0 +1.8
ISCO Idaho Springs 34.41 332 *eP* **P** **22 30 04.0 -0.1**
ISCO *e* 22 32 41.0
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMCO Snowmass 34.57 330 *eP* **P** **22 30 06.0 +0.5**
comp=Z,8.1nm,0.9s,mb4.7
ACCN Adirondack Com 34.61 15 *epP* pP 22 30 16.4 +0.3
ECSD EROS,Sioux Fal 34.72 346 *eP* **P** **22 30 04.2 -2.5**
comp=Z,33nm,1.6s,mb5.0
SADO Sadowa 34.85 8 P **P** **22 30 06.3 -1.5**
comp=Z,12nm,0.6s,mb5.0,baz=213,slow=7.5,SNR=13
SADO pP pP 22 30 16.0 -2.1
comp=Z,12nm,0.8s,baz=223,slow=4.7,SNR=4.1
SADO Sadowa 34.85 8 P **P** **22 30 06.3 -1.5**
SADO pP pP 22 30 16.0 -2.1
PV10 Paradox Valley 35.03 327 *eP* **P** **22 30 09.3 -0.2**
LONY Lake Ozonia 35.54 14 *eP* **P** **22 30 13.2 -0.6**
comp=Z,23nm,1.1s,mb5.0
PHWY Pilot Hill 35.56 334 *eP* **P** **22 30 13.7 -0.3**
SRU San Rafael 36.36 326 *eP* **P** **22 30 21.6 +0.7**
comp=Z,22nm,0.5s,mb5.3
SRU San Rafael 36.36 326 *eP* **P** **22 30 21.6 +0.7**
SRU pmax pmax
comp=Z,22nm,0.5s,mb5.3
LVC Limon Verde 36.51 154 P **P** **22 30 24.3 +2.1**
comp=Z,3.6nm,0.8s,mb4.3,baz=270,slow=13,SNR=2.6
PFO Pinyon Flat Ob 36.65 314 P **P** **22 30 25.3 +1.9**
comp=Z,5.4nm,0.6s,mb4.6,baz=117,slow=3.8,SNR=11
PFO pP pP 22 30 35.4 +1.6
comp=Z,4.9nm,0.8s,baz=88,slow=4.5,SNR=4.2
PFO Pinyon Flat Ob 36.65 314 *eP* **P** **22 30 25.4 +2.0**
comp=Z,33nm,1.7s,mb4.9
PFO Pinyon Flat Ob 36.65 314 P **P** **22 30 25.3 +1.8**
PFO **PP* pP 22 30 35.4 +1.6
PFO pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
PFO pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
MSU Marysvale 36.88 324 *eP* **P** **22 30 26.3 +1.0**
CCUT Cedar City 36.94 322 *eP* **P** **22 30 27.3 +1.4**
ARUT Antelope Range 37.14 322 *eP* **P** **22 30 28.3 +0.7**
ARUT *epP* pP 22 30 38.3 +0.4
RSSD Black Hills 37.35 338 *eP* **P** **22 30 29.0 -0.3**
comp=Z,6.5nm,0.5s,mb4.7
RSSD Black Hills 37.35 338 *eP* **P** **22 30 29.0 -0.2**
RSSD pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
SHPR Sheep Range 37.41 319 *eP* **P** **22 30 31.9 +2.0**
MPU Maple Canyon 37.61 326 *eP* **P** **22 30 31.9 +0.4**
comp=Z,12nm,0.6s,mb4.8
DAU Daniels Canyon 37.69 327 *eP* **P** **22 30 32.9 +0.8**
GSC Goldstone 37.81 316 *eP* **P** **22 30 35.4 +2.1**
comp=Z,22nm,1.4s,mb4.7
GSC Goldstone 37.81 316 *eP* **P** **22 30 35.4 +2.1**
GSC pmax pmax
comp=Z,22nm,1.4s,mb4.7
JLU Jordanelle 37.93 327 *eP* **P** **22 30 34.5 +0.4**
MWC Mount Wilson 38.11 314 *eP* **P** **22 30 36.3 +0.5**
TPNV Topopah Spring 38.38 319 *eP* **P** **22 30 39.9 +1.8**
comp=Z,15nm,0.7s,mb4.8
TPNV Topopah Spring 38.38 319 *eP* **P** **22 30 39.9 +1.8**
TPNV pmax pmax
comp=Z,15nm,0.7s,mb4.8
DUG Dugway 38.38 326 *eP* **P** **22 30 38.6 +0.6**
comp=Z,7.8nm,1.0s,mb4.4
DUG Dugway 38.38 326 *eP* **P** **22 30 38.6 +0.6**
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
BW06 Boulder Array 38.58 331 *eP* **P** **22 30 38.9 -0.7**
comp=Z,4.4nm,0.6s,mb4.4
PDAR Pinedale Array 38.58 331 P **P** **22 30 38.2 -1.4**
comp=Z,5.3nm,0.6s,mb4.4,baz=130,slow=10.0,SNR=22
PDAR PcP PcP 22 32 51.9 +0.2
comp=Z,1.2nm,0.5s,baz=122,slow=4.9,SNR=6.8
PDAR LR LR 22 49 34.8

comp=Z,303nm,18.0s,MS4.2,baz=139,slow=41
HWUT Hardware Ranch 38.71 328 *ePcP* PcP 22 32 53.2 +1.1
SPUT South Promonto 38.96 327 *eP* **P** **22 30 43.2 +0.4**
BGU Big Grassy Mou 39.01 326 *eP* **P** **22 30 43.2 0.0**
BGU *epP* pP 22 30 53.3 -0.4
HVU Hansel Valley 39.47 327 *eP* **P** **22 30 48.0 +0.9**
comp=Z,9.4nm,1.0s,mb4.5
HVU Hansel Valley 39.47 327 *eP* **P** **22 30 48.0 +0.9**
HVU pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
REDW Red Top Meadow 39.65 331 *eP* **P** **22 30 48.0 -0.5**
comp=Z,20nm,0.9s,mb4.8
TPH Tonopah 39.67 320 *eP* **P** **22 30 50.8 +2.0**
comp=Z,17nm,0.7s,mb4.9
TPH Tonopah 39.67 320 *eP* **P** **22 30 50.8 +2.0**
TPH pmax pmax
comp=Z,17nm,0.7s,mb4.9
SNOW Snow King Moun 39.68 331 *eP* **P** **22 30 48.8 0.0**
comp=Z,14nm,0.8s,mb4.8
LOHW Long Hollow 39.72 331 *eP* **P** **22 30 48.4 -0.7**
comp=Z,6.2nm,0.4s,mb4.7
TPAW Teton Pass 39.79 331 *eP* **P** **22 30 49.2 -0.5**
comp=Z,9.9nm,0.6s,mb4.7
RRI2 Red Ridge 39.86 330 *eP* **P** **22 30 50.3 0.0**
comp=Z,10.0nm,0.8s,mb4.6
MOOW Moose Ponds 39.89 331 *eP* **P** **22 30 49.8 -0.7**
comp=Z,5.0nm,0.8s,mb4.3
IMW Indian Meadow 40.09 331 *eP* **P** **22 30 51.9 -0.4**
comp=Z,6.0nm,0.5s,mb4.6
IMW *ePcP* PcP 22 32 58.0 +1.6
IMW *eScP* ScP 22 36 45.9 +2.9
ELK Elko 40.12 324 P **P** **22 30 53.0 +0.5**
comp=Z,12nm,0.8s,mb4.7,baz=113,slow=6.5,SNR=28
ELK pP pP 22 31 03.2 +0.2
comp=Z,8.6nm,0.8s,baz=121,slow=5.0,SNR=9.6
ELK Elko 40.12 324 *eP* **P** **22 30 53.0 +0.5**
ELK Elko 40.12 324 P **P** **22 30 53.0 +0.5**
ELK **PP* pP 22 31 03.2 +0.2
ELK pmax pmax
comp=Z,12nm,0.8s
ELK pmax pmax
comp=Z,9.0nm,0.8s
MTUM Tungsten Hills 40.13 318 *eP* **P** **22 30 54.9 +2.2**
RLMT Red Lodge 40.28 334 *eP* **P** **22 30 52.6 -1.2**
comp=Z,8.9nm,0.9s,mb4.5
NVAR Mina Array Bea 40.57 319 P **P** **22 30 57.5 +1.2**
comp=Z,46nm,0.6s,mb5.3,baz=126,slow=7.3,SNR=340
NVAR pP pP 22 31 07.5 +0.8
comp=Z,13nm,0.6s,baz=123,slow=7.6,SNR=9.4
NVAR PcP PcP 22 32 59.2 +1.1
comp=Z,4.7nm,0.6s,baz=133,slow=4.5,SNR=8.1
NVAR Mina Array Bea 40.57 319 P **P** **22 30 57.5 +1.2**
NVAR pP pP 22 31 07.5 +0.7
NVAR PcP PcP 22 32 59.2 +1.1
YMR Madison River 40.69 332 *eP* **P** **22 30 57.4 +0.2**
comp=Z,8.7nm,0.7s,mb4.5
ULM Lac du Bonnet 40.79 350 P **P** **22 30 54.7 -3.2**
comp=Z,3.5nm,0.4s,mb4.3,baz=155,slow=10,SNR=5.0
ULM LR LR 22 50 06.9
comp=Z,233nm,18.6s,MS4.1,baz=38,slow=40
ULM Lac du Bonnet 40.79 350 P **P** **22 30 54.7 -3.2**
ULM LR LR 22 50 06.9
GCMT Greycliff 40.98 334 *eP* **P** **22 30 58.5 -1.0**
GCMT *epP* pP 22 31 08.1 -2.0
QLMT Earthquake Lak 41.03 332 *eP* **P** **22 31 00.6 +0.6**
BMN Battle Mountai 41.09 322 *eP* **P** **22 31 01.3 +0.8**
comp=Z,23nm,0.6s,mb5.0
BMN Battle Mountai 41.09 322 *eP* **P** **22 31 01.3 +0.8**
BMN pmax pmax
comp=Z,23nm,0.6s,mb5.0
WAKR Walker 41.34 319 *eP* **P** **22 31 04.5 +1.8**
HLID Hailey 41.58 328 *eP* **P** **22 31 04.1 -0.4**
comp=Z,7.8nm,0.8s,mb4.4
MCMT McKenzie Canyo 41.70 331 *eP* **P** **22 31 06.0 +0.6**
MCMT *epP* pP 22 31 15.8 -0.2
CMB Columbia Colle 41.71 317 *eP* **P** **22 31 06.7 +1.0**
comp=Z,9.1nm,0.8s,mb4.5
CMB Columbia Colle 41.71 317 *eP* **P** **22 31 06.7 +1.0**
CMB pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
BOZ Bozeman (W) 41.74 332 *eP* **P** **22 31 05.3 -0.5**
comp=Z,8.2nm,0.7s,mb4.5
BOZ Bozeman (W) 41.74 332 *eP* **P** **22 31 05.3 -0.5**
BOZ pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
SAO San Andreas Ge 41.78 315 *eP* **P** **22 31 07.9 +1.7**
DLMT Dillon 41.98 331 *eP* **P** **22 31 07.8 +0.1**
comp=Z,7.0nm,1.0s,mb4.2
LCCM Lewis and Clar 42.00 332 P **P** **22 31 07.5 -0.4**
LRM Limekiln Ridge 42.25 332 *eP* **P** **22 31 09.8 -0.2**
HRY Holter Researc 42.64 333 *eP* **P** **22 31 12.6 -0.6**
OHCM Honcut 43.13 318 *eP* **P** **22 31 17.6 +0.4**
OHCM *epP* pP 22 31 27.5 -0.3
WVOR Wild Horse Val 43.16 324 *eP* **P** **22 31 17.1 -0.3**
comp=Z,22nm,0.6s,mb5.1
WVOR *epP* pP 22 31 27.4 -0.5
WVOR Wild Horse Val 43.16 324 *eP* **P** **22 31 17.1 -0.3**
WVOR *e**PP pP 22 31 27.4 -0.5
WVOR pmax pmax
comp=Z,22nm,0.6s,mb5.1
MCCM Marconi Confer 43.45 316 *eP* **P** **22 31 22.0 +2.2**
comp=Z,35nm,0.8s,mb5.1
NSHM Saint Helena R 43.46 317 *eP* **P** **22 31 20.6 +0.7**
MOD Modoc 43.83 322 *eP* **P** **22 31 22.5 -0.3**
comp=Z,7.4nm,0.6s,mb4.6
BMO Blue Mountains 43.98 327 *eP* **P** **22 31 22.5 -1.5**
comp=Z,6.5nm,0.8s,mb4.4
LASM Arnica Sink 44.44 321 P **P** **22 31 27.9 +0.2**
WDC Whiskeytown Da 44.49 319 *eP* **P** **22 31 26.6 -1.4**
comp=Z,3.8nm,0.6s,mb4.3
WDC Whiskeytown Da 44.49 319 *eP* **P** **22 31 26.6 -1.5**
WDC pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KIPM Iron Peak 44.70 318 *eP* **P** **22 31 30.8 +1.0**
KCPM Cahto Peak 44.70 318 *eP* **P** **22 31 30.7 +0.9**
CFAA Coronel Fontan 44.80 159 P **P** **22 31 33.9 +3.2**
comp=Z,0.2nm,0.5s,baz=290,slow=4.5,SNR=4.8
LHEM Herd Peak 44.85 321 P **P** **22 31 31.3 +0.3**
LNOR Lincton Mounta 45.17 328 *eP* **P** **22 31 33.6 +0.2**
LNOR *epP* pP 22 31 43.1 -0.9
LNOR *esP* sP 22 31 47.4 -0.9
YBH Yreka Blue Hor 45.22 320 P **P** **22 31 32.2 -1.7**
comp=Z,6.9nm,0.5s,mb4.7,baz=145,slow=3.9,SNR=47
YBH Yreka Blue Hor 45.22 320 *eP* **P** **22 31 32.7 -1.2**
comp=Z,5.4nm,0.6s,mb4.5
YBH Yreka Blue Hor 45.22 320 *eP* **P** **22 31 32.7 -1.2**
YBH pmax pmax
comp=Z,5.0nm,0.6s
BDFB Brasilia 45.22 124 P **P** **22 31 34.6 +0.4**
comp=Z,5.2nm,0.9s,mb4.4,baz=293,slow=14,SNR=13
BDFB LR LR 22 53 28.1
comp=Z,244nm,18.6s,MS4.2,baz=92,slow=40
BDFB Brasilia 45.22 124 P **P** **22 31 34.6 +0.4**
BDFB *eScP* ScP 22 36 58.8 -5.3
BDFB LR LR 22 53 28.1
BDFB Brasilia 45.22 124 P **P** **22 31 34.6 +0.4**
BDFB pmax pmax
comp=Z,5.0nm,0.9s
BDFB MLR MLR
comp=Z,244nm,18.6s
BUOR Burton Butte 45.23 321 P **P** **22 31 33.9 -0.1**
KHMM Horse Mountain 45.41 319 *eP* **P** **22 31 36.4 +1.0**
HUMO Hull Mountain 45.85 321 *eP* **P** **22 31 37.2 -1.6**
comp=Z,4.7nm,0.7s,mb4.5
HAWA Hanford 46.17 328 *eP* **P** **22 31 40.1 -1.2**
comp=Z,12nm,0.8s,mb4.9
RSW Rattlesnake Hi 46.20 328 *eP* **P** **22 31 40.8 -0.8**
RSW *epP* pP 22 31 50.2 -2.0
IRO Indian Ridge 46.22 323 P **P** **22 31 41.2 -0.5**
NEW Newport 46.22 331 *eP* **P** **22 31 40.2 -1.5**
comp=Z,7.6nm,1.3s,mb4.5
NEW Newport 46.22 331 *eP* **P** **22 31 40.2 -1.5**
NEW pmax pmax
comp=Z,8.0nm,1.3s
FRIS Frissel Point 46.25 324 P **P** **22 31 41.8 -0.2**
GBL Gable Mountain 46.26 328 P **P** **22 31 41.3 -0.7**
SNIWA Snively Ranch 46.28 328 P **P** **22 31 41.4 -0.8**
HOOD Mount Hood Mea 46.65 325 *eP* **P** **22 31 45.9 +0.7**
comp=Z,50nm,1.0s,mb5.4
MXC Moxie City 46.69 327 P **P** **22 31 45.4 0.0**
KEBM Edson Butte 46.85 321 *eP* **P** **22 31 47.4 +0.7**
KEBM *epP* pP 22 31 56.8 -0.5
SCHQ Schefferville 46.89 15 P **P** **22 31 44.3 -2.5**
comp=Z,13nm,0.4s,mb5.2,baz=215,slow=5.3,SNR=56
SCHQ LR LR 22 52 18.4

comp=Z,733nm,18.1s,MS4.7,baz=33,slow=37
ETW Entiat 47.37 328 *e*P **P 22 31 50.8 +0.1**
LON Longmire 47.61 327 *e*P **P 22 31 51.8 -0.8**
comp=Z,3.1nm,0.6s,mb4.5
LON Longmire 47.61 327 *e*P **P 22 31 51.8 -0.8**
LON pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
EDM Edmonton 48.33 338 *e*P **P 22 31 56.2 -1.9**
RPW Rockport 48.52 329 *e*P **P 22 31 58.0 -1.6**
PLCA Paso Flores 52.58 166 P **P 22 32 30.7 +0.4**
comp=Z,3.3nm,1.0s,mb4.2,baz=344,slow=9.9,SNR=3.3
PLCA Paso Flores 52.58 166 P **P 22 32 30.7 +0.4**
PLCA Paso Flores 52.58 166 P **P 22 32 30.7 +0.4**
PLCA pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 56.22 344 P **P 22 32 53.9 -2.5**
comp=Z,3.1nm,0.3s,mb4.8,baz=132,slow=8.3,SNR=32
YKA LR LR 23 03 00.7
comp=Z,65nm,18.3s,MS3.8,baz=140,slow=42
YKA Yellowknife Ar 56.22 344 P **P 22 32 53.9 -2.5**
YKA pmax pmax
comp=Z,3.0nm,0.3s
YKA MLR MLR
comp=Z,65nm,18.3s
TAOE Nuku Hiva Isla 57.53 253 *e*T 23 34 49.7
comp=Z,228nm,0.2s
WRAK Wrangell Islan 58.57 332 *e*P **P 22 33 08.6 -4.5**
comp=Z,7.5nm,0.6s,mb4.9
RKT Rikitea 58.62 235 *e*T 23 36 14.8
comp=Z,13nm,0.3s
DLBC Dease Lake 58.68 334 P **P 22 33 13.7 -0.2**
comp=Z,6.7nm,0.8s,mb4.7,baz=124,slow=7.4,SNR=8.8
INK Inuvik 65.85 342 *e*P **P 22 34 00.5 -1.2**
comp=Z,242nm,0.8s
INK *e*pP pP 22 34 10.3 -2.4
EGAK Eagle 66.55 337 *e*P **P 22 34 04.8 -1.5**
comp=Z,84nm,2.6s,mb5.3
PMOR Pomariorio Ree 66.65 249 *e*T 23 46 25.1
comp=Z,9.5nm,0.2s
PPT Papeete 68.99 247 *e*S S 22 43 22.6 -2.6
comp=Z,102nm,22.8s
PPT Papeete 68.99 247 *e*LR LR 22 55 12.7
comp=Z,218nm,25.0s
PPT Papeete 68.99 247 LR LR 22 55 48.6
comp=Z,229nm,21.0s,MS4.4,baz=77,slow=28
COLA College 69.19 336 *e*P **P 22 34 22.0 -0.9**
comp=Z,3.2nm,0.6s,mb4.4
COLA College 69.19 336 *e*P **P 22 34 22.0 -0.9**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MCK McKinley 69.23 335 *e*P **P 22 34 22.3 -0.8**
comp=Z,18nm,0.9s,mb5.0
MCK McKinley 69.23 335 *e*P **P 22 34 22.3 -0.8**
MCK pmax pmax
comp=Z,18nm,0.9s,mb5.0
TRF Thorofare Moun 69.71 334 *e*P **P 22 34 25.1 -1.0**
comp=Z,11nm,0.9s,mb4.8
KTH Kantishna Hill 70.02 334 *e*P **P 22 34 26.7 -1.3**
comp=Z,10nm,0.8s,mb4.8
BPAW Bear Paw Mtn. 70.21 335 *e*P **P 22 34 27.9 -1.3**
comp=Z,13nm,0.8s,mb4.9
BPAW *e*pP pP 22 34 37.9 -2.3
PPLA Purkeypile 70.37 333 *e*P **P 22 34 28.9 -1.2**
comp=Z,7.8nm,0.6s,mb4.8
COLD Coldfoot 70.92 338 *e*P **P 22 34 33.4 0.0**
comp=Z,2.9nm,0.8s,mb4.3
COLD *e*pP pP 22 34 43.8 -0.8
SVW2 Sparrevohn 71.47 331 *e*P **P 22 34 37.1 +0.2**
SVW2 *e*pP pP 22 34 48.0 +0.1
UNV Unalaska Valle 76.45 323 *e*P **P 22 35 06.6 +0.5**
comp=Z,32nm,0.8s,mb5.3
MDT Midelt 76.97 59 LR LR 23 05 26.1
comp=Z,328nm,18.6s,MS4.7,baz=303,slow=33
ESDC Sonseca Array 77.10 52 P **P 22 35 08.0 -2.1**
comp=Z,0.9nm,0.5s,mb3.9,baz=278,slow=5.4,SNR=8.3
ESDC LR LR 23 03 35.9
comp=Z,342nm,20.2s,MS4.7,baz=310,slow=32
EKA Eskdalemuir Ar 77.34 35 P **P 22 35 07.8 -3.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=277,slow=7.8,SNR=3.6
EKA Eskdalemuir Ar 77.34 35 P **P 22 35 07.8 -3.3**
EKA pmax pmax
comp=Z,1.0nm,0.7s
TIC Toumodi 79.58 85 *e*P **P 22 35 24.8 +0.5**
comp=Z,53nm,1.1s,mb5.4
LIC Lamto 79.64 86 *e*P **P 22 35 23.5 -1.2**
comp=Z,19nm,0.5s,mb5.3
DBIC Dimbokro 79.74 85 P **P 22 35 23.9 -1.3**
comp=Z,1.1nm,0.4s,mb4.1,baz=319,slow=14,SNR=3.8
DBIC Dimbokro 79.74 85 P **P 22 35 23.9 -1.3**
DBIC pmax pmax
comp=Z,1.0nm,0.4s
KIC Kosan Boka 79.90 85 *e*P **P 22 35 24.9 -1.2**
comp=Z,57nm,1.3s,mb5.3
NOA NORSAR Array B 84.39 29 P **P 22 35 46.5 -2.2**
comp=Z,0.8nm,0.8s,mb3.9,baz=268,slow=4.9,SNR=2.9
NOA LR LR 23 15 08.8
comp=Z,266nm,18.9s,MS4.7,baz=55,slow=37
NOA NORSAR Array B 84.39 29 P **P 22 35 46.5 -2.1**
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA MLR MLR
comp=Z,266nm,19.0s
TORD Torodi Ar. Bea 85.09 78 P **P 22 35 49.8 -3.2**
comp=Z,0.4nm,0.6s,mb3.7,baz=287,slow=4.7,SNR=5.4
TORD pP pP 22 36 02.5 -1.9
comp=Z,0.6nm,0.8s,baz=286,slow=4.6,SNR=2.2
TORD LR LR 23 11 22.0
comp=Z,198nm,19.7s,MS4.5,baz=310,slow=34
HFS Hagfors 85.78 30 P **P 22 35 52.6 -3.0**
comp=Z,2.1nm,0.6s,mb4.5,baz=247,slow=3.1,SNR=9.5
HFS LR LR 23 16 16.2
comp=Z,264nm,18.8s,MS4.7,baz=256,slow=37
HFS Hagfors 85.78 30 P **P 22 35 52.6 -3.0**
HFS pmax pmax
comp=Z,2.0nm,0.6s
HFS MLR MLR
comp=Z,264nm,18.8s
DAVOX Davos/Dischmat 86.33 43 LR LR 23 08 28.7
comp=Z,231nm,19.4s,MS4.6,baz=285,slow=32
ARCES ARCESS Array B 87.66 19 P **P 22 36 01.7 -2.9**
comp=Z,4.0nm,1.0s,mb4.6,baz=277,slow=4.1,SNR=13
ARCES LR LR 23 13 55.0
comp=Z,166nm,18.1s,MS4.5,baz=288,slow=35
ARCES ARCESS Array B 87.66 19 P **P 22 36 01.7 -2.9**
ARCES LR LR 23 13 55.0
ARCES ARCESS Array B 87.66 19 P **P 22 36 01.7 -2.9**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
ARCES MLR MLR
comp=Z,166nm,18.1s
KEST Kesra 88.05 54 P **P 22 36 08.5 +1.3**
comp=Z,0.6nm,0.7s,mb4.0,baz=273,slow=15,SNR=4.5
PETK Petropavlovsk- 97.24 327 LR LR 23 20 25.7
comp=Z,70nm,18.5s,MS4.2,baz=281,slow=35
AKASG Malin Array Be 97.25 36 LR LR 23 18 50.0
comp=Z,243nm,19.5s,MS4.7,baz=310,slow=34
ZALV Zalesovo Beam 115.54 6 PKP PKPdf 22 41 57.1 -1.3
comp=Z,1.5nm,0.5s,baz=244,slow=2.4,SNR=6.9
ZALV Zalesovo Beam 115.54 6 PKIKP PKPdf 22 41 57.1 -1.3
ZALV pmax pmax
comp=Z,2.0nm,0.5s
KURK Kurchatov 117.76 11 PKP PKPdf 22 42 02.5 -0.2
comp=Z,0.4nm,0.4s,baz=332,slow=2.0,SNR=3.4
CN2 Changchun 119.27 335 *e*PKP PKPdf 22 42 07.0 +1.1
SONM Songino Array 121.21 351 PKP PKPdf 22 42 09.0 -0.5
comp=Z,3.5nm,0.4s,baz=226,slow=0.5,SNR=67
SONM Songino Array 121.21 351 PKIKP PKPdf 22 42 09.0 -0.5
SONM pmax pmax
comp=Z,4.0nm,0.4s
MKAR Makanchi Array 122.20 10 PKP PKPdf 22 42 10.3 -1.1
comp=Z,0.5nm,0.4s,baz=299,slow=3.0,SNR=12
MKAR Makanchi Array 122.20 10 PKIKP PKPdf 22 42 10.3 -1.1
MKAR pmax pmax
comp=Z,1.0nm,0.4s
KSRS Korea Array 123.11 328 PKP PKPdf 22 42 13.2 -0.2
comp=Z,2.6nm,0.6s,baz=22,slow=1.9,SNR=11
KSRS Korea Array 123.11 328 PKIKP PKPdf 22 42 13.3 -0.1
KSRS pmax pmax
comp=Z,3.0nm,0.6s
WMQ Urumqi 125.85 6 *e*PKP PKPdf 22 42 19.0 +0.5
WMQ PP PP 22 44 15.0 +5.0
WMQ SKS SKSdf 22 49 26.0 -1.7
WMQ SKKS SKKSac 22 51 03.0 -3.7
WMQ SS SS 23 01 09.0 +1.5
WMQ PP PP
comp=Z,65nm,9.0s
WMQ LR LR
comp=N,243nm,22.0s,MS4.9
WMQ LR LR
comp=E,145nm,22.0s,MS4.9
WMQ LR LR
comp=Z,215nm,20.0s,MS4.8
BJI Beijing 126.06 339 PKP PKPdf 22 42 18.8 -0.2
BJI SS SS 23 01 15.5 +4.9
BJI LR LR
comp=N,161nm,18.3s,MS4.9
BJI LR LR
comp=E,173nm,18.3s,MS4.9
BJI LR LR
comp=Z,104nm,25.3s
HHC Hu-ho-hao-te 126.76 344 *e*PKP PKPdf 22 42 19.5 -0.8
HHC XPKP 22 42 33.8
HHC PP PP 22 44 20.8 +4.6
HHC PKS 22 45 54.8
HHC SKS SKSdf 22 49 26.4 -3.2
HHC SKKS SKKSac 22 51 06.3 -6.3
HHC SS SS 23 01 17.6 -1.5
HHC PP PP
comp=Z,155nm,8.1s
HHC LR LR
comp=N,234nm,25.0s,MS5.2
HHC LR LR
comp=E,692nm,26.2s,MS5.2
HHC LR LR
comp=Z,204nm,25.0s,MS4.7
GTA Gaotai 130.35 355 PKP PKPdf 22 42 27.3 +0.1
NJ2 Nanjing 131.89 332 *e*PKP PKPdf 22 42 31.8 +1.5
LZH Lanzhou 133.07 350 *e*PKP PKPdf 22 42 32.5 0.0
LZH XPKP 22 42 46.0
LZH *e*PP PP 22 45 00.6 +3.4
LZH SKKS SKKSac 22 51 47.8 -4.1
LZH *e*SS SS 23 02 36.3 -0.3
LZH PP PP
comp=Z,81nm,8.3s
LZH LR LR
comp=N,117nm,18.3s
LZH LR LR
comp=Z,179nm,20.5s,MS4.8
XAN Xi'an 133.86 343 PKP PKPdf 22 42 33.6 -0.4
CD2 Chengdu 138.12 348 *e*PKP PKPdf 22 42 41.6 -0.4
CD2 XPKP 22 42 56.0
CD2 PP PP 22 45 32.0 +3.0
CD2 PKS 22 46 16.4
CD2 SKS SKSdf 22 49 46.8 -3.5
CD2 SKKS SKKSac 22 52 18.3 -4.0
CD2 SS SS 23 03 35.3 -1.8
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,200nm,16.2s
CD2 LR LR
comp=Z,160nm,14.8s,MS4.9
ASAR Alice Springs 140.10 245 PKhKP 22 42 32.5
comp=Z,0.2nm,0.5s,baz=112,slow=4.2,SNR=2.7
ASAR PKP PKPdf 22 42 44.4 -1.4
comp=Z,0.9nm,0.6s,baz=106,slow=2.9,SNR=9.3
ASAR Alice Springs 140.10 245 PKP PKPdf 22 42 44.4 -1.4
DANN Dangsing 140.27 15 *e*P PKPdf 22 42 41.1 -4.9
comp=Z,8.3nm,0.5s
PYUN Piuthan 140.31 16 *e*P PKPdf 22 42 39.6 -6.5
comp=Z,7.3nm,0.6s
WB2 Warramunga Arr 140.36 251 *e*P PKPdf 22 42 40.9 -5.4
WRAB Tennant Creek 140.36 251 *e*PKPdf PKPdf 22 42 47.0 +0.7
WRAB *e*pPKPdf pPKPdf 22 42 58.7 +0.7
WRA Warramunga Arr 140.37 251 PKhKP 22 42 38.1
comp=Z,0.5nm,0.7s,baz=95,slow=2.8,SNR=2.1
WRA PKP PKPdf 22 42 47.0 +0.6
comp=Z,2.1nm,0.7s,baz=92,slow=2.3,SNR=15
WRA Warramunga Arr 140.37 251 PKHKP 22 42 38.1
WRA 22 42 47.0
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA pmax pmax
comp=Z,2.0nm,0.7s
KOLN Koldanda 140.78 15 *e*P PKPdf 22 42 41.1 -5.9
GKN Gorkha 140.82 14 *e*P PKPdf 22 42 41.7 -5.3
comp=Z,5.3nm,0.4s
KKN Kakani 141.17 13 *e*P PKPdf 22 42 41.9 -5.8
comp=Z,4.7nm,0.5s
GUN Gumba 141.18 12 *e*P PKPdf 22 42 43.0 -4.7
comp=Z,8.1nm,0.4s
PKI Pulchoki 141.41 13 *e*P PKPdf 22 42 43.0 -5.1
JIRN Jiri 141.49 12 *e*P PKPdf 22 42 43.9 -4.3
comp=Z,6.3nm,0.4s
GYA Guiyang 141.63 342 PKP PKPdf 22 42 48.3 -0.2
GYA PP PP 22 45 56.3 +5.6
GYA PP PP
comp=Z,40nm,6.0s
TAPN Taplejung 142.07 10 *e*P PKPdf 22 42 43.7 -5.6
comp=Z,2.7nm,0.4s
RAMN Ramite 142.26 11 *e*P PKPdf 22 42 44.9 -4.7
KMI Kunming 143.93 347 PKP PKPdf 22 42 51.9 -0.7
NWAO Narrogin (SRO) 149.17 219 PKPbc PKPbc 22 43 05.1 -0.3
comp=Z,9.5nm,0.9s,baz=135,slow=2.7,SNR=3.2
NWAO Narrogin (SRO) 149.17 219 PKP2 PKPbc 22 43 05.1 -0.3
NWAO pmax pmax
comp=Z,10.0nm,0.9s
CHG Chiang Mai 150.79 351 ⇑P PKPbc 22 43 08.7 -1.0
comp=Z,10nm,1.0s
CHTO Chiang Mai 150.79 351 *e*PKPdf PKPdf 22 43 04.3 +0.1
CHTO *e*PKPbc PKPbc 22 43 08.9 -0.8
CMAR Chiang Mai Arr 151.14 351 PKP PKPdf 22 43 05.1 +0.4
comp=Z,2.0nm,0.4s,baz=313,slow=2.4,SNR=19
CMAR PKPbc PKPbc 22 43 10.1 -0.4
comp=Z,11nm,0.8s,baz=339,slow=3.4,SNR=36
CMAR Chiang Mai Arr 151.14 351 PKIKP PKPdf 22 43 05.1 +0.4
CMAR 22 43 10.1
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR pmax pmax
comp=Z,11nm,0.8s

*IDC **24** 22:23:21.9±1.1,567S×122.66E,h0km,mb3.9/7,mb1 4.1/9, mb1mx4.0/19,mbtmp4.0/9,ML4.0/2,MS3.4/6,Ms1 3.4/6, ms1mx3.2/26,Error ellipse: s-maj=42.5km s-min=20.0km az=48.0*
*ISCJB **24** 22:23:24.8±0.5,57S±0.1×122.69E±009,h33km,mb4.1/9, MS3.5/4,Error ellipse: s-maj=17.9km s-min=7.7km az=36.3*
*NEIC **24** 22:23:26.7±0.5,580S×122.58E,h35km,mb3.9/1,Error ellipse: s-maj=24.6km s-min=7.9km az=49.0*
ISC 24 22:23:27.1±0.5,**58S**±0.1×**122.65E**±009,**h35**km,**n27,**
σ0§**62**/25,**mb4.1**/9,**MS3.5**/4,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**2.98**	**285**	Pn	**Pn**	**22 24 10.2**	**-1.7**
	25nm,0.3s,baz=118,slow=4.4,SNR=60						
KAPI				Sn	**Sn**	**22 24 46.7**	**+0.3**
	17nm,0.3s,baz=49,slow=22,SNR=7.2						
KAPI	**Kappang**	**2.98**	**285**	Pn	**Pn**	**22 24 10.2**	**-1.7**
KAPI				Sn	**Sn**	**22 24 46.7**	**+0.3**
BATI	**Baumata**	**4.51**	**167**	Pn	**Pn**	**22 24 37.9**	**+4.9**
	17nm,0.3s,baz=65,slow=2.1,SNR=12						
BATI				LR	LR	22 26 13.8	
	comp=Z,344nm,19.1s,baz=40,slow=37						
KAKA	**Kakadu**	**11.87**	**126**	*e*P	Px	22 25 58.4	
	7.4nm,0.5s						
KAKA	**Kakadu**	**11.87**	**126**	*e*Pn	Px	22 26 00.1	
WRAB	**Tennant Creek**	**18.09**	**142**	*e*Pn	**Pn**	**22 27 35.6**	**-0.2**
	7.8nm,0.8s						
WRA	**Warramunga Arr**	**18.09**	**142**	P	**Pn**	**22 27 35.0**	**-0.8**
	0.5nm,0.3s,baz=315,slow=12,SNR=26						
WRA				LR	LR	22 35 09.8	
	comp=Z,59nm,20.6s,baz=175,slow=39						
ASAR	**Alice Springs**	**20.82**	**150**	P	**P**	**22 28 06.8**	**+1.1**
	3.1nm,0.8s,baz=331,slow=12,SNR=25						
CTA	**Charters Tower**	**26.99**	**124**	LR	LR	22 40 32.2	
	comp=Z,59nm,20.7s,MS3.1,baz=50,slow=38						
STKA	**Stephens Creek**	**31.44**	**148**	P	**P**	**22 29 50.1**	**+4.9**
	0.9nm,0.5s,mb3.9,baz=311,slow=11,SNR=3.0						
STKA				LR	LR	22 43 58.3	
	comp=Z,82nm,19.9s,MS3.4,baz=206,slow=39						
CMAR	**Chiang Mai Arr**	**33.56**	**316**	P	**P**	**22 30 03.6**	**-0.3**
	0.7nm,0.4s,mb3.9,baz=137,slow=8.1,SNR=5.4						
CMAR				LR	LR	22 44 44.3	
	comp=Z,34nm,19.0s,MS3.1,baz=130,slow=38						
TAPN	**Taplejung**	**47.17**	**316**	*e*P	**P**	**22 31 57.1**	**+0.7**
	22nm,1.1s						
RAMN	**Ramite**	**47.70**	**315**	*e*P	**P**	**22 32 01.0**	**+0.4**
	10nm,0.8s						
JIRN	**Jiri**	**48.42**	**315**	*e*P	**P**	**22 32 06.5**	**+0.4**
	10nm,0.9s						
GUN	**Gumba**	**48.79**	**315**	*e*P	**P**	**22 32 09.3**	**+0.3**
KKN	**Kakani**	**49.14**	**315**	*e*P	**P**	**22 32 12.0**	**+0.3**
DMN	**Daman**	**49.16**	**314**	*e*P	**P**	**22 32 12.3**	**+0.5**
GKN	**Gorkha**	**49.72**	**314**	*e*P	**P**	**22 32 16.0**	**-0.1**
DANN	**Dangsing**	**50.55**	**314**	*e*P	**P**	**22 32 22.7**	**+0.3**
	11nm,0.6s						
PYUN	**Piuthan**	**50.96**	**313**	*e*P	**P**	**22 32 25.6**	**+0.1**
	6.0nm,0.6s,mb4.7						
SONM	**Songino Array**	**55.27**	**347**	P	**P**	**22 32 56.3**	**-0.5**
	0.4nm,0.6s,mb3.6,baz=164,slow=8.7,SNR=4.5						
MKAR	**Makanchi Array**	**63.37**	**330**	P	**P**	**22 33 52.8**	**0.0**
	1.4nm,0.5s,mb4.3,baz=133,slow=7.0,SNR=28						
KBL	**Kabul**	**64.47**	**313**	*e*Pn	**P**	**22 34 00.6**	**+0.3**
	2.9nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**67.43**	**337**	P	**P**	**22 34 17.7**	**-1.2**
	0.9nm,0.5s,mb4.0,baz=134,slow=6.4,SNR=5.7						
KURK	**Kurchatov**	**67.82**	**332**	P	**P**	**22 34 21.4**	**-0.1**
	0.7nm,0.5s,mb4.0,baz=138,slow=6.3,SNR=7.5						
BVAR	**Borovoye Array**	**73.25**	**330**	P	**P**	**22 34 54.6**	**0.0**
	1.7nm,0.7s,mb4.1,baz=134,slow=6.4,SNR=7.8						
AKTO	**Aktyubinsk**	**78.71**	**324**	LR	LR	23 12 59.1	
	comp=Z,153nm,18.5s,MS4.4,baz=220,slow=38						

IDC 24 22:43:00.9±4.8,**561N**×**12418E**,**h549**km±57km,**mb3.0**/3, **mb1 3.4**/5,**mb1mx2.9**/21,**mbtmp3.3**/5,**Error ellipse: s-maj=91.3km s-min=18.3km az=60.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**11.44**	**203**	P	P	22 45 33.7	0.0
	0.5nm,0.3s,baz=19,slow=11,SNR=4.6						
BATI	**Baumata**	**15.72**	**182**	P	P	22 46 16.6	-1.2
	5.1nm,0.3s,baz=320,slow=2.3,SNR=6.3						
KAKA	**Kakadu**	**19.97**	**156**	*e*P	Px	22 46 44.3	
	4.8nm,0.5s						
WRA	**Warramunga Arr**	**27.29**	**159**	P	P	22 48 01.4	-0.5
	1.0nm,0.3s,baz=339,slow=9.6,SNR=9.1						
WB2	**Warramunga Arr**	**27.29**	**159**	*e*P	P	22 48 01.7	-0.3
ASAR	**Alice Springs**	**30.61**	**162**	P	P	22 48 31.2	+0.6
	1.5nm,0.5s,baz=343,slow=7.1,SNR=42						
MKAR	**Makanchi Array**	**54.58**	**326**	P	P	22 51 37.8	+0.1
	0.6nm,0.4s,baz=118,slow=7.8,SNR=26						
MKAR				PcP	PcP	22 52 32.1	-0.2
	0.5nm,0.6s,baz=123,slow=4.4,SNR=5.9						
TORD	**Torodi Ar. Bea**	**119.91**	**289**	PKP	PKPdf	23 00 49.8	-0.5
	0.1nm,0.4s,baz=78,slow=1.3,SNR=7.2						

*DDA **24** 22:51:47.4,3756N×2945E,h5km±1km,Md3.2, Ml3.6*
*CSEM **24** 22:51:47.3±0.1,3761N×2957E,h5km,ML3.6,Error ellipse: s-maj=2.0km s-min=1.2km az=2.0*
*ISK **24** 22:51:47.7,3756N×2956E,h11km,MD3.2*
*NEIC **24** 22:51:48.0,3759N×2956E,h11km,MD3.3(ISK), ML3.0(ATH),After ISK.*
*ISCJB **24** 22:51:48.1±0.5,3757N±002×2954E±003,h6km±4km, Error ellipse: s-maj=3.9km s-min=3.3km az=35.5*
*THE **24** 22:51:50.4,3755N×2961E,h14km±9km,Error ellipse: s-maj=9.8km s-min=1.7km az=341.0*
ISC 24 22:51:48.8±0.5,**3757N**±002×**2954E**±003,**h7**km±4km,**n70,**
σ0§**94**/96,**1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**177**	⇑*i*P	**Pg**	**22 51 54.2**	**-1.1**
GOLH				*i* S	**Sg**	**22 51 59.9**	**+0.1**
DENT	**Denizli**	**0.44**	**294**	PG	**Pg**	**22 51 57.1**	**-0.3**
DENT				*e*SG	**Sg**	**22 52 03.8**	**+0.7**
KHL	**Karahalli**	**0.75**	**359**	*e*PG	**Pg**	**22 52 02.8**	**-0.4**
KHL				*e*SG	**Sg**	**22 52 13.8**	**+0.9**
KHAL	**Karahalli**	**0.80**	**357**	*i* P	**Pg**	**22 52 03.1**	**-1.0**
KHAL				*i* S	**Sg**	**22 52 16.0**	**+1.5**
ISP	**Isparta**	**0.81**	**70**	*e*Pg	**Pg**	**22 52 03.5**	**-1.0**
ISP				*e*Sg	**Sg**	**22 52 18.2**	**+3.2**
ISP	**Isparta**	**0.81**	**70**	*e*Pg	**Pg**	**22 52 03.5**	**-0.9**
ISP				S	**Sg**	**22 52 17.2**	**+2.2**
BCK	**Bucak**	**0.84**	**97**	*e*PG	**Pg**	**22 52 03.8**	**-1.1**
BCK				*e*SG	**Sg**	**22 52 16.1**	**+0.2**
TURN	**Turunc**	**1.02**	**227**	*i* P	**Pg**	**22 52 12.5**	**+4.0**
TURN				*i* S	**Sg**	**22 52 30.9**	**+9.1**
YER	**Yerkesik**	**1.09**	**247**	*e*PN	**Pn**	**22 52 09.2**	**-1.4**
YER				*e*SN	**Sn**	**22 52 24.9**	**-1.0**
KULA	**Kula-Manisa**	**1.17**	**324**	*e*PN	**Pn**	**22 52 10.8**	**-0.8**
KULA				*e*SN	**Sn**	**22 52 27.8**	**0.0**
SHUT	**Suhut-Afyon**	**1.26**	**39**	*e*PN	**Pn**	**22 52 11.6**	**-1.3**
SHUT				*e*SN	**Sn**	**22 52 29.4**	**-0.7**
AKAS	**Kas**	**1.34**	**178**	*i* P	**Pn**	**22 52 13.2**	**-0.7**
AKAS				*i* S	**Sb**	**22 52 34.2**	**+2.6**
KSL	**Kastellorizon**	**1.42**	**179**	*e*PN	**Pn**	**22 52 16.0**	**+0.9**
MLSB	**Milas**	**1.43**	**259**	*e*PN	**Pn**	**22 52 14.5**	**-0.7**
MLSB				*e*SN	**Sn**	**22 52 33.7**	**-0.6**
GDZ	**Gediz**	**1.51**	**358**	*i* P	**Pn**	**22 52 15.7**	**-0.7**
GDZ				*e*S	**Sn**	**22 52 39.6**	**+3.3**
ALT	**Altintas**	**1.54**	**17**	*e*PN	**Pn**	**22 52 15.9**	**-0.9**
BOLV	**Bolvadin**	**1.59**	**44**	*i* P	**Pn**	**22 52 17.3**	**-0.1**
BOLV				*i* S	**Sn**	**22 52 42.8**	**+4.5**
DEMI	**Demirci**	**1.60**	**336**	*i* P	**Pn**	**22 52 17.0**	**-0.6**
DEMI				*e*S	**Sn**	**22 52 40.4**	**+1.8**
BDRM	**Kayabasi**	**1.75**	**254**	*i* P	**Pn**	**22 52 19.6**	**0.0**
BDRM				*i* S	**Sn**	**22 52 43.7**	**+1.7**
ARG	**Arkhangelos**	**1.77**	**220**	*e*PN	**Pn**	**22 52 20.0**	**+0.2**
ARG	**Arkhangelos**	**1.77**	**220**	P	**Pn**	**22 52 21.4**	**+1.6**
DAT	**Datca**	**1.78**	**242**	*e*PN	**Pn**	**22 52 19.7**	**-0.3**
GCAM	**G?zelcaml?**	**1.84**	**275**	*i* P	**Pn**	**22 52 20.3**	**-0.4**
AKHS	**Akhisar**	**1.88**	**314**	*i* P	**Pn**	**22 52 20.4**	**-1.0**
AKHS				*e*S	**Sn**	**22 52 53.2**	**+7.8**
AKS	**Akhisar**	**1.89**	**314**	*e*PN	**Pn**	**22 52 20.6**	**-0.9**
DST	**Dursunbey**	**2.15**	**341**	*e*PN	**Pn**	**22 52 24.9**	**-0.2**
SMG	**Samos**	**2.15**	**274**	*e*PN	**Pn**	**22 52 24.5**	**-0.6**
SMG	**Samos**	**2.15**	**274**	P	**Pn**	**22 52 25.0**	**-0.1**
BALB	**Balikesir**	**2.44**	**328**	*e*PN	**Pn**	**22 52 29.0**	**-0.1**
URLA	**Izmir**	**2.46**	**290**	*e*P	**Pn**	**22 52 28.7**	**-0.6**
URLA				*i* S	**Sn**	**22 53 14.4**	**+15**
KARP	**Karpathos**	**2.79**	**224**	*e*PN	**Pn**	**22 52 34.0**	**+0.2**
KARP	**Karpathos**	**2.79**	**224**	P	**Pn**	**22 52 35.3**	**+1.5**
CHOS	**Chios island**	**2.87**	**287**	P	**Pn**	**22 52 35.1**	**+0.1**
PRK	**Paraskevi**	**3.06**	**304**	P	**Pn**	**22 52 38.8**	**+1.2**
PRK	**Paraskevi**	**3.06**	**304**	*e*PN	**Pn**	**22 52 38.0**	**+0.4**
PRK	**Paraskevi**	**3.06**	**304**	P	**Pn**	**22 52 37.6**	**0.0**
APE	**Apeiranthos**	**3.24**	**262**	*e*PN	**Pn**	**22 52 40.5**	**+0.5**
APE	**Apeiranthos**	**3.24**	**262**	P	**Pn**	**22 52 39.9**	**-0.1**
ZKR	**Zakros**	**3.64**	**229**	P	**Pn**	**22 52 46.4**	**+0.9**
BR131	**Keskin Array S**	**3.86**	**55**	*e*Pn	**Pn**	**22 52 48.8**	**+0.2**
BR131	**Keskin Array S**	**3.86**	**55**	*e*Pn	**Pn**	**22 52 48.8**	**+0.2**
NPS	**Neapolis**	**3.92**	**235**	P	**Pn**	**22 52 51.0**	**+1.6**
CSS	**Prodhromos**	**4.02**	**129**	*e*Pn	**Pn**	**22 52 51.5**	**+0.7**
CSS	**Prodhromos**	**4.02**	**129**	*e*Pn	**Pn**	**22 52 51.5**	**+0.7**
LAST	**Lasithi**	**4.07**	**235**	P	**Pn**	**22 52 51.5**	**+0.1**
LAST				S	**Sn**	**22 53 37.8**	**-1.5**
LIA	**Limnos Island**	**4.12**	**306**	P	**Pn**	**22 52 52.5**	**+0.3**
LIA	**Limnos Island**	**4.12**	**306**	P	**Pn**	**22 52 53.8**	**+1.6**
ALN	**Alexandroupoli**	**4.29**	**322**	P	**Pn**	**22 52 54.4**	**-0.1**
IDI	**Anoyia**	**4.39**	**240**	*e*Pn	**Pn**	**22 52 56.3**	**+0.4**
IDI				*e*Sn	**Sn**	**22 53 47.5**	**+0.2**
IDI	**Anoyia**	**4.39**	**240**	*e*Pn	**Pn**	**22 52 56.3**	**+0.4**
IDI				*e*Sn	**Sn**	**22 53 47.5**	**+0.2**
RDO	**Rodhopi**	**4.73**	**320**	P	**Pn**	**22 53 01.6**	**+1.1**
PAIG	**Paliouri**	**5.15**	**299**	P	**Pn**	**22 53 06.3**	**0.0**

*ISCJB **24** 23:02:29.3±0.7,2201S±005×7009W±008,h81km±5km, Error ellipse: s-maj=12.7km s-min=6.8km az=18.7*
*GUC **24** 23:02:30.8±1.1,2207S×7007W,h68km±6km,ML3.9*
*IDC **24** 23:02:33.9±2.4,2203S×6954W,h100km±13km,mb4.0/1, mb1 3.7/4,mb1mx3.3/19,mbtmp3.6/4,Error ellipse: s-maj=51.1km s-min=23.2km az=95.0*
ISC 24 23:02:29.7±0.8,**2199S**±005×**7009W**±008,**h78**km±5km,**n15,**
σ1§**00**/24,**1C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOCH	**Tocopilla**	**0.14**	**225**	*e*P	**Pn**	**23 02 40.9**	**-0.1**
TOCH				*e*S	**Sn**	**23 02 48.6**	**-0.8**
TOCH				AML	AML	23 02 50.5	
	comp=E,31μm,0.1s						

PECH	**Pedro de Valdi**	**0.72**	**147**	*e*P		**Pn**	**23 02 45.4**	**0.0**
PECH				*i* S		**Sn**	**23 02 56.7**	**-0.3**
PECH				AML	AML		23 02 57.8	
	comp=N,9μm,0.2s							
PB01	**Plate Boundary**	**1.10**	**31⇑**	*e*P		**Pn**	**23 02 50.3**	**+0.5**
PB01				*i* S		**Sn**	**23 03 05.0**	**+0.1**
PB01				AML	AML		23 03 05.6	
	comp=E,7μm,0.2s							
MECH	**Mejillones**	**1.16**	**197**	*e*P		**Pn**	**23 02 50.8**	**+0.3**
MECH				*i* S		**Sn**	**23 03 06.7**	**+0.6**
MECH				AML	AML		23 03 08.1	
	comp=N,14μm,0.4s							
LVC	**Limon Verde**	**1.26**	**120**	P		**Pn**	**23 02 53.4**	**+1.6**
	comp=N,58nm,0.3s,baz=270,slow=8.8,SNR=236							
LVC				S		**Sn**	**23 03 07.9**	**-0.5**
	comp=N,342nm,0.3s,baz=90,slow=22,SNR=96							
LVC	**Limon Verde**	**1.26**	**120**	*e*P		**Pn**	**23 02 52.8**	**+1.1**
LVC				*i* S		**Sn**	**23 03 09.7**	**+1.4**
LVC				AML	AML		23 03 10.6	
	comp=E,2μm,0.2s							
CEN1	**Los Morros**	**1.40**	**184⇓**	*i* P		**Pn**	**23 02 56.1**	**+2.5**
CEN1				*i* S		**Sn**	**23 03 15.8**	**+4.3**
CEN1				AML	AML		23 03 17.1	
	comp=N,2μm,0.4s							
ANCH	**Antofagasta**	**1.71**	**190**	*e*P		**Pn**	**23 02 57.4**	**-0.2**
ANCH				*i* S		**Sn**	**23 03 18.0**	**-0.8**
ANCH				AML	AML		23 03 22.1	
	comp=N,3μm,0.1s							
LPAZ	**La Paz**	**5.97**	**18**	P		**Pn**	**23 03 58.9**	**+3.4**
	comp=N,1.0nm,0.3s,baz=191,slow=6.4,SNR=21							
CFAA	**Coronel Fontan**	**9.72**	**171**	P		**Pn**	**23 04 44.8**	**-1.8**
	comp=N,0.1nm,0.3s,baz=353,slow=13,SNR=3.6							
CFAA				S		**Sn**	**23 06 28.1**	**-5.9**
	comp=N,0.1nm,0.3s,baz=234,slow=18,SNR=2.8							
SIV	**San Ignacio**	**10.41**	**57**	P		**Pn**	**23 04 54.1**	**-2.0**
	comp=N,1.5nm,0.3s,baz=256,slow=11,SNR=22							
PLCA	**Paso Flores**	**18.69**	**181**	P		**Pn**	**23 06 43.3**	**+0.5**
	comp=N,0.1nm,0.3s,baz=348,slow=9.3,SNR=3.1							
TORD	**Torodi Ar. Bea**	**78.55**	**71**	P		**P**	**23 14 22.6**	**-0.5**
	comp=N,1.4nm,0.4s,baz=256,slow=5.4,SNR=42							
MKAR	**Makanchi Array**	**146.67**	**35**	PKPbc	PKPbc		23 22 02.6	+0.3
	comp=N,0.7nm,0.8s,baz=334,slow=3.0,SNR=4.4							

IDC 24 23:03:01.5±3.8, 242N×9705E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/20, mbtmp3.5/5, Error ellipse: s-maj=153.7km s-min=24.2km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.81**	**123**	P	P	23 11 00.9	-0.5
	0.2nm,0.4s,baz=301,slow=9.2,SNR=1.5						
ASAR	**Alice Springs**	**44.25**	**128**	P	P	23 11 13.3	+0.4
	0.2nm,0.5s,baz=304,slow=8.1,SNR=4.3						
SONM	**Songino Array**	**45.96**	**9**	P	P	23 11 26.5	+0.3
	0.3nm,0.5s,baz=205,slow=7.7,SNR=3.2						
MKAR	**Makanchi Array**	**46.03**	**346**	P	P	23 11 26.9	+0.2
	0.7nm,0.8s,baz=162,slow=8.3,SNR=5.2						
ZALV	**Zalesovo Beam**	**52.34**	**351**	P	P	23 12 14.4	-0.6
	0.8nm,0.3s,baz=175,slow=7.2,SNR=2.6						

*ISCJB **24** 23:18:34.3±1.4, 759S×007×12801E±008, h164km±14km, mb4.4/19, Error ellipse: s-maj=16.0km s-min=7.6km az=140.8*
*NEIC **24** 23:18:34.1±1.4, 753S×12805E, h140km±16km, mb4.6/4, Error ellipse: s-maj=21.0km s-min=8.3km az=71.0*
*IDC **24** 23:18:37.8±3.7, 758S×12778E, h168km±35km, mb3.6/7, mb1 3.8/9, mb1mx3.7/16, mbtmp3.7/9, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=35.1km s-min=15.3km az=64.0*
ISC 24 23:18:35.2±1.5, 763S±009×12803E±009, h156km±16km, n33, σ0§78/38, mb4.4/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.02**	**239**	P	**Pn**	**23 19 50.5**	**+1.4**
	29nm,0.3s,baz=94,slow=6.8,SNR=16						
BATI				S	**Sn**	**23 20 45.7**	**-1.0**
	85nm,0.3s,baz=346,slow=21,SNR=18						
BATI				LR	LR	23 22 13.3	
	comp=Z,143nm,19.3s,baz=72,slow=45						
KAKA	**Kakadu**	**6.66**	**140**	*e*P	**Pn**	**23 19 58.7**	**-12**
	192nm,0.6s						
KAKA				*e*S	**Sn**	**23 21 09.2**	**-17**
WRAB	**Tennant Creek**	**13.68**	**154**	*e*Pn	**Pn**	**23 21 43.8**	**+0.8**
	35nm,0.7s						
WRAB				*e*Sn	**Sn**	**23 24 08.1**	**-6.5**
WRA	**Warramunga Arr**	**13.68**	**154**	P	**Pn**	**23 21 42.7**	**-0.3**
	4.9nm,0.3s,baz=322,slow=14,SNR=141						
WRA				S	**Sn**	**23 24 08.4**	**-6.3**
	6.5nm,0.3s,baz=326,slow=24,SNR=12						
WB2	**Warramunga Arr**	**13.69**	**154**	*e*P	**Pn**	**23 21 42.4**	**-0.6**
WB2				*e*S	**Sn**	**23 24 06.7**	**-8.1**
WB2	**Warramunga Arr**	**13.69**	**154**	*e*Pn	**Pn**	**23 21 43.2**	**+0.1**
WB2				*e*Sn	**Sn**	**23 24 06.8**	**-8.1**
DAV	**Davao City (W)**	**14.80**	**350**	*e*Pn	**Pn**	**23 21 55.6**	**-1.5**
	151nm,0.5s						
MBWA	**Marble Bar**	**15.66**	**210**	*e*Pn	**Pn**	**23 22 08.6**	**+1.0**
	3.5nm,0.5s						
ASAR	**Alice Springs**	**16.91**	**161**	P	**Pn**	**23 22 23.6**	**+0.8**
	4.2nm,0.3s,baz=340,slow=12,SNR=282						
ASAR				S	**S**	**23 25 25.9**	**-4.9**
	2.3nm,0.3s,baz=329,slow=19,SNR=9.5						
STKA	**Stephens Creek**	**27.24**	**154**	*e*P	**P**	**23 24 07.5**	**+2.7**
	3.6nm,1.4s,mb3.8						
STKA	**Stephens Creek**	**27.24**	**154**	P	**P**	**23 24 07.2**	**+2.5**
	0.9nm,0.4s,mb3.8,baz=342,slow=16,SNR=4.4						
STKA	**Stephens Creek**	**27.24**	**154**	P	**P**	**23 24 07.2**	**+2.4**
CMAR	**Chiang Mai Arr**	**38.67**	**312**	P	**P**	**23 25 44.2**	**+0.2**
	1.2nm,0.5s,mb3.8,baz=138,slow=6.8,SNR=6.1						
KSRS	**Korea Array**	**44.84**	**360**	P	**P**	**23 26 34.8**	**+0.9**
	2.4nm,0.6s,mb4.0,baz=178,slow=9.3,SNR=10						
LSA	**Lhasa**	**51.33**	**318**	*e*P	**P**	**23 27 24.9**	**+1.1**
	4.8nm,0.6s,mb4.3						
ODAN	**Odare**	**52.22**	**313**	*e*P	**P**	**23 27 30.3**	**-0.1**
	9.0nm,0.5s,mb4.7						
TAPN	**Taplejung**	**52.27**	**313**	*e*P	**P**	**23 27 30.4**	**-0.4**
	6.8nm,0.4s,mb4.7						
RAMN	**Ramite**	**52.85**	**312**	*e*P	**P**	**23 27 35.2**	**+0.1**
	22nm,0.6s,mb5.1						
JIRN	**Jiri**	**53.55**	**313**	*e*P	**P**	**23 27 40.1**	**-0.1**
	6.6nm,0.6s,mb4.5						
GUN	**Gumba**	**53.92**	**313**	*e*P	**P**	**23 27 42.9**	**0.0**
	16nm,0.5s,mb5.0						
PKI	**Pulchoki**	**54.07**	**312**	*e*P	**P**	**23 27 43.7**	**-0.3**
	8.4nm,0.4s,mb4.8						
KKN	**Kakani**	**54.29**	**312**	*e*P	**P**	**23 27 45.3**	**-0.2**
	12nm,0.5s,mb4.8						
GKN	**Gorkha**	**54.88**	**312**	*e*P	**P**	**23 27 49.3**	**-0.5**
	17nm,0.4s,mb5.1						
KOLN	**Koldanda**	**55.52**	**311**	*e*P	**P**	**23 27 54.3**	**-0.1**
	16nm,0.8s,mb4.9						
DANN	**Dangsing**	**55.72**	**312**	*e*P	**P**	**23 27 55.3**	**-0.5**
	7.3nm,0.5s,mb4.8						
PYUN	**Piuthan**	**56.15**	**311**	*e*P	**P**	**23 27 58.7**	**-0.2**
	13nm,0.6s,mb5.0						
SONM	**Songino Array**	**58.44**	**343**	P	**P**	**23 28 15.6**	**+1.1**
	0.8nm,0.7s,mb3.6,baz=158,slow=6.7,SNR=7.9						
MKAR	**Makanchi Array**	**67.70**	**328**	P	**P**	**23 29 15.5**	**-0.1**
	1.0nm,0.5s,mb3.8,baz=116,slow=8.5,SNR=20						
ZALV	**Zalesovo Beam**	**71.30**	**335**	P	**P**	**23 29 37.2**	**-0.4**
	0.7nm,0.3s,mb3.8,baz=100,slow=6.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**71.30**	**335**	P	**P**	**23 29 37.2**	**-0.4**
KURK	**Kurchatov**	**72.05**	**330**	P	**P**	**23 29 41.9**	**-0.2**
	1.9nm,0.6s,mb4.0,baz=135,slow=5.1,SNR=11						
TORD	**Torodi Ar. Bea**	**127.01**	**281**	PKP	PKPdf		23 37 22.0	+0.2
	0.7nm,0.7s,baz=68,slow=1.6,SNR=5.5						
LPAZ	**La Paz**	**151.35**	**146**	PKPbc	PKPbc		23 38 14.4	+3.0
	0.6nm,0.5s,baz=34,slow=5.7,SNR=2.6						
LPAZ				PKPab	PKPab		23 38 23.4	+3.4
	1.2nm,0.6s,baz=242,slow=3.5,SNR=6.3							

*CSEM **24** 23:22:15.9±0.1, 4037N×2705E, h5km, ML2.3/1, Error ellipse: s-maj=3.7km s-min=2.8km az=148.0*
*DDA **24** 23:22:15.5, 4057N×2688E, h7km±2km, Md2.8*
*ISCJB **24** 23:22:17.4±0.6, 4037N±004×2706E±004, h10km, Error ellipse: s-maj=6.2km s-min=4.5km az=163.8*
*THE **24** 23:22:17.5, 4035N×2702E, h2km±2km, ML2.3/1, Error ellipse: s-maj=4.7km s-min=1.2km az=72.0*
ISC 24 23:22:17.0±0.8, 4036N±004×2707E±004, h8km±8km, n15, σ0§36/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.94**	**237**	*i* P	**Pg**	**23 22 34.8**	**-0.3**
BOZC				*i* S	**Sg**	**23 22 47.4**	**+0.2**
ALN	**Alexandroupoli**	**0.95**	**305**	P	**Pg**	**23 22 34.8**	**-0.4**
ALN				S	**Sg**	**23 22 47.6**	**+0.1**
PRK	**Paraskevi**	**1.27**	**209**	P	**Pn**	**23 22 40.3**	**-0.8**
PRK				S	**Sg**	**23 22 58.1**	**+0.2**
ELBA	**Catalca**	**1.29**	**52**	*i* P	**Pn**	**23 22 41.0**	**-0.3**
ELBA				*i* S	**Sg**	**23 22 59.0**	**+0.4**
DURS	**Dursunbey**	**1.32**	**125**	*i* P	**Pn**	**23 22 41.6**	**-0.1**
DURS				*i* S	**Sb**	**23 22 59.3**	**+0.3**
LIA	**Limnos Island**	**1.52**	**253**	P	**Pn**	**23 22 44.7**	**+0.2**
LIA				S	**Sn**	**23 23 05.0**	**+0.6**
CHOS	**Chios island**	**2.12**	**202**	P	**Pn**	**23 22 52.5**	**-0.3**

*CSEM **24** 23:42:32.4±0.2, 3695N×2932E, h8km, ML3.0, Error ellipse: s-maj=5.9km s-min=4.9km az=167.0*
*ISCJB **24** 23:42:33.4±0.7, 3697N±003×2929E±004, h5km±5km, Error ellipse: s-maj=6.0km s-min=4.7km az=156.0*
*ISK **24** 23:42:33.1, 3703N×2925E, h3km, MD3.1*
*DDA **24** 23:42:34.5, 3706N×2930E, h16km, Md3.0, Ml3.0*
ISC 24 23:42:34.0±0.6, 3697N±003×2930E±004, h8km±5km, n12, σ1§11/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.34**	**39**	*i* P	**Pg**	**23 42 39.6**	**-1.0**
GOLH				*i* S	**Sg**	**23 42 46.6**	**+1.5**
TURN	**Turunc**	**0.56**	**260**	*i* P	**Pg**	**23 42 47.1**	**+2.2**
TURN				*i* S	**Sg**	**23 43 00.0**	**+7.8**
AKAS	**Kas**	**0.78**	**161**	*i* P	**Pg**	**23 42 47.7**	**-1.3**
AKAS				*i* S	**Sg**	**23 43 00.3**	**+1.2**
DENT	**Denizli**	**0.81**	**345**	*e*PG	**Pg**	**23 42 48.2**	**-1.3**
YER	**Yerkesik**	**0.83**	**282**	*e*PG	**Pg**	**23 42 48.9**	**-1.0**
YER				*e*SG	**Sg**	**23 43 01.2**	**+0.6**
BCK	**Bucak**	**1.14**	**64**	*e*PN	**Pn**	**23 42 55.8**	**-0.6**
BCK				*e*SN	**Sn**	**23 43 12.6**	**+0.4**
MLSB	**Milas**	**1.25**	**285**	*e*PN	**Pn**	**23 42 56.0**	**-1.9**
MLSB				*e*SN	**Sn**	**23 43 14.1**	**-0.9**
DAT	**Datca**	**1.40**	**260**	*e*PN	**Pn**	**23 43 00.1**	**+0.2**
DAT				*e*SN	**Sn**	**23 43 19.3**	**+0.8**
DAT	**Datca**	**1.40**	**260**	*e*Pn	**Pn**	**23 43 00.0**	**+0.1**
DAT				*e*Sn	**Sn**	**23 43 19.3**	**+0.8**
KHAL	**Karahalli**	**1.40**	**6**	*i* P	**Pn**	**23 42 59.7**	**-0.2**
KHAL				*i* S	**Sb**	**23 43 20.2**	**+1.7**
BDRM	**Kayabasi**	**1.48**	**274**	*i* P	**Pn**	**23 43 00.1**	**-1.0**
BDRM				*i* S	**Sn**	**23 43 22.2**	**+1.5**
KULA	**Kula-Manisa**	**1.62**	**342**	*e*PN	**Pn**	**23 43 02.4**	**-0.5**
KULA				*e*SN	**Sn**	**23 43 23.8**	**-0.1**

*NEIC **25** 00:11:30.1±0.2, 1612S×17262W, h10km, mb5.5/98, MS5.5/199, Error ellipse: s-maj=7.9km s-min=4.6km az=150.0*
*GCMT **25** 00:11:30.1±0.1, 1613S×172.10W, h12km, MW5.6/108, Moment Tensor Solution. s87,c162; s108,c289; Duration: 1§6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.66±.03; $M_{\theta\theta}$0.49±.03; $M_{\phi\phi}$-3.15±.03; $M_{r\theta}$0.26±.10; $M_{\theta\phi}$-0.32±.03; $M_{\phi r}$1.92±.09; Best double couple: M_o3.50300×10^{17} NP1:∅§183.00000°,δ28.00000°, λ87.00000°. NP2:∅§7.00000°,δ62.00000°,λ92.00000°. Principal axes: T 3.2460, Plg73.0000°, Azm281.0000°; N 0.5180, Plg2.0000°, Azm186.0000°; P -3.7610, Plg17.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **25** 00:11:31.9±3.4, 1618S×17274W, h25km±21km, mb4.8/20, mb1 4.9/20, mb1mx4.9/21, mbtmp4.8/20, MS5.1/26, Ms1 5.1/26, ms1mx5.0/36 Error ellipse: s-maj=15.9km s-min=12.0km az=136.0*
*ISCJB **25** 00:11:33.0±0.2, 1621S±005×17258W±004, h42km, mb5.3/138, MS5.4/231, Error ellipse: s-maj=7.2km s-min=4.2km az=153.7*
*BJI **25** 00:11:33.2, 1610S×17260W, h43km, mB5.7, mb5.2, Ms5.4, Msz5.1*
*SZGRF **25** 00:11:35.9, 1603S×171.15W, h33km, mb5.5, Samoa Islands region*
*MOS **25** 00:11:36.7±1.4, 1498S×17274W, h33km, mb5.6/36, MS5.4/44, Error ellipse: s-maj=12.5km s-min=7.5km az=64.5*
*DJA **25** 00:11:46, 1706S×174.30W, h18km, Mw5.8/7*
ISC 25 00:11:34.9±0.2, 1622S±005×17257W±004, h44km, h44km±1.1km:pP-P, n628, σ1§02/280, mb5.3/138, MS5.4/231, 37C-12D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.43**	**19**	Pn	**Pn**	**00 12 02.6**	**-9.4**
	134nm,0.3s,baz=190,slow=17,SNR=64						
AFI				Sn	**Sn**	**00 12 27.9**	**-13**
	344nm,0.3s,baz=22,slow=23,SNR=6.7						
AFI				LR	LR	00 12 39.5	
	comp=Z,10μm,21.7s,baz=210,slow=28						
AFI				T		00 14 42.2	
	56nm,0.3s,baz=114,slow=14,SNR=4.9						
AFI	**Afiamalu**	**2.43**	**19**	*e*P	**Pn**	**00 12 02.9**	**-9.1**
RAR	**Rarotonga**	**13.10**	**114**	Pn	**Pn**	**00 14 28.7**	**-10**
	6.8nm,0.3s,baz=268,slow=10,SNR=9.7						
RAR				Sn	**Sn**	**00 16 45.8**	**-17**
	1.4nm,0.3s,baz=336,slow=18,SNR=2.7						
RAR				LR	LR	00 19 03.7	
	comp=Z,15μm,19.1s,baz=232,slow=34						
RAR				T		00 28 03.9	
	8.6nm,0.3s,baz=291,slow=22,SNR=5.7						
RAR	**Rarotonga**	**13.10**	**114**	*e*Pn	**Pn**	**00 14 31.1**	**-7.2**
RAO	**Raoul Island**	**13.87**	**200**	LR	LR	00 19 29.7	
	comp=Z,5μm,19.8s,baz=22,slow=34						
DZM	**Mont Dzumac**	**20.65**	**250**	*e*P	**P**	**00 16 10.8**	**-0.2**
	441nm,1.6s						
PPT	**Papeete**	**22.04**	**97**	*e*P	**P**	**00 16 25.3**	**-0.6**
	128nm,1.4s,mb5.2						
PPT				*e*LR	LR	00 21 12.6	
	19μm,28.5s,baz=265						
PPT	**Papeete**	**22.04**	**97**	P	**P**	**00 16 24.8**	**-1.1**
	73nm,1.1s,mb5.0,baz=333,slow=9.0,SNR=2.9						
PPT				LR	LR	00 23 37.7	
	comp=Z,6μm,19.6s,MS5.0,baz=298,slow=33						
TIAR	**Tiarei**	**22.26**	**97**	*e*P	**P**	**00 16 27.3**	**-1.0**
	805nm,1.2s,mb6.0						
TARA	**Tarawa**	**22.59**	**319**	*e*P	**P**	**00 16 28.9**	**-2.9**
	241nm,1.3s,mb5.5						
XMAS	**Kiritimati**	**23.51**	**41**	*e*P	**P**	**00 16 39.2**	**-2.1**
	48nm,0.8s,mb5.0						
XMAS				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
URZ	**Urewera**	**23.76**	**200**	P	**P**	**00 16 42.1**	**-1.2**
	comp=Z,34nm,0.6s,mb5.0,baz=20,slow=3.9,SNR=40						
URZ				S	**S**	**00 20 57.1**	**+1.6**
	comp=Z,10nm,0.8s,baz=230,slow=18,SNR=2.6						
URZ				LR	LR	00 25 29.8	
	comp=Z,5μm,18.1s,MS5.0,baz=206,slow=35						
PMOR	**Pomariorio Ree**	**23.79**	**90**	*e*P	**P**	**00 16 42.3**	**-1.5**
	comp=Z,338nm,1.3s,mb5.6						
VAH	**Vaihoa**	**24.03**	**91**	*e*P	**P**	**00 16 44.1**	**-1.8**
	comp=Z,194nm,1.3s,mb5.4						
SNZO	**South Karori**	**27.31**	**201**	PFAKE		00 17 30.0	+15
SNZO				LR	LR		
	comp=Z,7μm,19.0s,MS5.2						
HNR	**Honiara**	**27.61**	**281**	LR	LR	00 26 43.1	
	comp=Z,10μm,20.0s,MS5.4,baz=120,slow=33						
HNR	**Honiara**	**27.61**	**281**	*e*P	**P**	**00 17 17.3**	**-1.2**
	comp=Z,87nm,0.7s,mb5.5						
HNR				LR	LR		
	comp=Z,10μm,21.0s,MS5.4						
HNR	**Honiara**	**27.61**	**281**	*e*P	**P**	**00 17 17.3**	**-1.1**
HNR				pmax	pmax		
	comp=Z,87nm,0.7s,mb5.5						
HNR				MLR	MLR		
	comp=Z,10μm,21.0s,MS5.4						
RPZ	**Rata Peaks**	**30.73**	**204**	P	**P**	**00 17 48.2**	**+2.4**
	comp=Z,14nm,0.5s,mb5.1,baz=14,slow=4.2,SNR=3.7						
RPZ				LR	LR	00 27 42.8	
	comp=Z,2μm,20.8s,MS4.7,baz=75,slow=32						
EIDS	**Eidsvold**	**35.08**	**249**	*e*P	**P**	**00 18 22.4**	**-1.6**
	comp=Z,228nm,2.6s,mb5.6						
ARMA	**Armidale**	**35.62**	**240⇑**	*i* P	**P**	**00 18 26.3**	**-2.2**
RKT	**Rikitea**	**35.99**	**107**	*e*P	**P**	**00 18 29.8**	**-2.0**
	comp=Z,103nm,1.3s,mb5.6						
RKT				*e*S	**S**	**00 24 06.1**	**-1.6**
RKT				*e*LR	LR	00 27 44.3	
	comp=Z,10μm,29.2s,baz=276						
RKT	**Rikitea**	**35.99**	**107**	*e*P	**P**	**00 18 29.8**	**-2.0**
	comp=Z,103nm,1.3s,mb5.6						
RKT				*e*S	**S**	**00 24 06.1**	**-1.6**
CNB	**Canberra Magne**	**38.89**	**233**	*e*P	**P**	**00 18 54.3**	**-2.0**
CNB				*e*S	**S**	**00 25 00.5**	**+8.9**
CAN	**Canberra**	**39.17**	**234**	*e*P	**P**	**00 18 58.0**	**-0.6**
	comp=Z,30nm,1.0s,mb5.0						
CTA	**Charters Tower**	**39.24**	**258**	*e*P	**P**	**00 18 55.4**	**-4.0**
	comp=Z,9.0nm,1.0s,mb4.5						
CTA	**Charters Tower**	**39.24**	**258**	P	**P**	**00 18 55.8**	**-3.6**
	comp=Z,4.7nm,0.9s,mb4.2,baz=79,slow=10,SNR=4.8						
CTAO	**Charters Tower**	**39.24**	**258**	*e*P	**P**	**00 18 55.5**	**-4.0**
	comp=Z,16nm,1.0s,mb4.7						
CTAO				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
CTAO	**Charters Tower**	**39.24**	**258**	*e*P	**P**	**00 18 55.5**	**-3.9**
CTAO				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
CTAO				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.1						
CTAO	**Charters Tower**	**39.24**	**258**	P	**P**	**00 18 58.0**	**-1.4**
	comp=Z,22nm,1.2s,mb4.7						
POHA	**Pohakuloa**	**39.48**	**26**	PFAKE		00 19 10.0	+8.7
POHA				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
PMG	**Port Moresby**	**39.79**	**275**	*e*P	**P**	**00 19 01.7**	**-2.4**
	comp=Z,34nm,1.1s,mb5.0						
PMG				*es*P	sP	00 19 19.9	-1.3
PMG				LR	LR		
	comp=Z,3μm,22.0s,MS5.2						
PMG	**Port Moresby**	**39.79**	**275**	*e*P	**P**	**00 19 01.7**	**-2.4**
PMG				*e**SP	sP	00 19 19.9	-1.2
PMG				pmax	pmax		
	comp=Z,34nm,1.1s						
PMG				MLR	MLR		
	comp=Z,3μm,22.0s						
PMG	**Port Moresby**	**39.79**	**275**	P	**P**	**00 19 03.2**	**-0.9**
	comp=Z,43nm,2.0s,comp=Z,1μm,mb4.8						
KIP	**Kipapa**	**40.05**	**21**	PFAKE		00 19 20.0	+14
KIP				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
TOO	**Toolangi**	**42.57**	**232**	*e*P	**P**	**00 19 25.5**	**-1.1**
COEN	**Coen**	**42.73**	**267**	*e*P	**P**	**00 19 27.4**	**-0.8**
	comp=Z,20nm,0.9s,mb4.9						
COEN	**Coen**	**42.73**	**267**	P	**P**	**00 19 28.7**	**+0.5**
	comp=Z,20nm,2.1s,comp=Z,509nm,mb4.5						
TAU	**Tasmania Unive**	**43.27**	**224**	PFAKE		00 19 40.0	+7.9
TAU				LR	LR		
	comp=Z,12μm,19.0s,MS5.8						
STKA	**Stephens Creek**	**44.33**	**241⇑**	*i* P	**P**	**00 19 39.3**	**-1.5**
	comp=Z,67nm,0.9s,mb5.4						
STKA	**Stephens Creek**	**44.33**	**241**	P	**P**	**00 19 39.1**	**-1.7**
	comp=Z,78nm,0.9s,mb5.4,baz=79,slow=8.1,SNR=41						
STKA				LR	LR	00 36 20.2	
	comp=Z,5μm,18.4s,MS5.4,baz=74,slow=34						
STKA	**Stephens Creek**	**44.33**	**241**	*e*P	**P**	**00 19 39.5**	**-1.3**
	comp=Z,20nm,0.9s,mb4.8						
MIDW	**Midway**	**44.42**	**354**	PFAKE		00 19 50.0	+8.5
MIDW				LR	LR		
	comp=Z,4μm,19.0s,MS5.4						
WB2	**Warramunga Arr**	**50.43**	**257**	*e*P	**P**	**00 20 25.6**	**-2.8**
WRAB	**Tennant Creek**	**50.43**	**257**	*e*P	**P**	**00 20 26.0**	**-2.5**
	comp=Z,118nm,1.8s,mb5.6						
WRAB				*e*pP	pP	00 20 29.8	-11
WRAB				*e*	pP	00 20 38.2	-2.5
WRAB				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
WRAB	**Tennant Creek**	**50.43**	**257**	*e*P	**P**	**00 20 26.0**	**-2.5**
WRAB				*e*	pP	00 20 38.2	-2.5
WRAB				pmax	pmax		
	comp=Z,118nm,1.8s,mb5.6						
WRAB				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.5						
WRAB	**Tennant Creek**	**50.43**	**257**	P	**P**	**00 20 26.7**	**-1.8**
	comp=Z,36nm,1.6s,mb5.1						
WRA	**Warramunga Arr**	**50.44**	**257**	P	**P**	**00 20 24.9**	**-3.6**
	comp=Z,18nm,1.1s,mb5.0,baz=92,slow=7.3,SNR=21						
WRA				LR	LR	00 41 24.6	
	comp=Z,4μm,18.4s,MS5.4,baz=90,slow=36						
ASAR	**Alice Springs**	**50.62**	**253**	P	**P**	**00 20 27.8**	**-2.1**
	comp=Z,88nm,0.9s,mb5.7,baz=85,slow=8.4,SNR=92						
ASAR				S	**S**	**00 27 40.3**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=92,slow=16,SNR=4.9						
KAKA	**Kakadu**	**53.23**	**266**	*e*P	Px	00 20 33.6	
	comp=Z,15nm,0.6s						
FORT	**Forrest**	**55.76**	**244**	*e*P	**P**	**00 21 03.3**	**-4.3**
	comp=Z,39nm,0.7s,mb5.5						
FORT	**Forrest**	**55.76**	**244**	*e*P	**P**	**00 21 06.6**	**-1.0**
	comp=Z,56nm,0.8s,mb5.6						
FORT				*e*pP	pP	00 21 17.0	-3.0
DRV	**Dumont d'Urvil**	**59.09**	**200**	P	**P**	**00 21 39.0**	**+8.6**
DRV	**Dumont d'Urvil**	**59.09**	**200**	PP	PP	00 24 20.0	+39
DRV				S	**S**	**00 29 47.0**	**+13**
DRV				L		00 36 00.0	
DRV				R		00 40 00.0	
AAI	**Ambon**	**59.46**	**275**	P	**P**	**00 21 35.3**	**+1.4**
	comp=Z,57nm,1.3s,comp=Z,1μm,mb5.4						
LBMI	**Labuha**	**61.03**

MAJO pmax pmax
comp=Z,499nm,2.8s,mb6.0
MAJO MLR MLR
comp=Z,1μm,19.0s,MS5.2
MAT Matsushiro 70.08 320 P **P** **00 22 42.2 -0.4**
MAT S S 00 31 54.0 +3.6
ERM Erimo 70.89 327 PFAKE 00 23 00.0 +13
ERM LR LR
comp=Z,2μm,20.0s,MS5.3
MCCM Marconi Confer 71.38 39 PFAKE 00 23 00.0 +10
MCCM LR LR
comp=Z,3μm,20.0s,MS5.5
SAO San Andreas Ge 71.41 41 PFAKE 00 23 00.0 +9.3
SAO LR LR
comp=Z,3μm,19.0s,MS5.5
JOW Kunigami 71.61 306 P **P** **00 22 51.0 -1.0**
comp=Z,39nm,0.9s,mb5.3,baz=309,slow=30,SNR=2.6
NSHM Saint Helena R 71.79 39 *eP* **P** **00 22 52.5 -0.3**
HOPS Hopland 71.81 39 PFAKE 00 23 00.0 +7.0
HOPS LR LR
comp=Z,4μm,19.0s,MS5.7
OSI Osito Adit 71.92 44 *eP* **P** **00 22 53.9 +0.2**
comp=Z,22nm,0.8s,mb5.2
KCPM Cahto Peak 71.95 38 *eP* **P** **00 22 54.4 +0.6**
comp=Z,54nm,1.6s,mb5.2
KIPM Iron Peak 72.09 38 *eP* **P** **00 22 54.6 0.0**
comp=Z,55nm,1.3s,mb5.3
MWC Mount Wilson 72.14 45 *eP* **P** **00 22 55.1 0.0**
comp=Z,100nm,1.7s,mb5.5
MWC LR LR
comp=Z,3μm,19.0s,MS5.5
MWC Mount Wilson 72.14 45 *eP* **P** **00 22 55.1 0.0**
MWC pmax pmax
comp=Z,101nm,1.7s,mb5.5
MWC MLR MLR
comp=Z,3μm,19.0s,MS5.5
KHMM Horse Mountain 72.63 37 *eP* **P** **00 22 58.1 +0.2**
CMB Columbia Colle 72.86 41 PFAKE 00 23 10.0 +11
CMB LR LR
comp=Z,2μm,19.0s,MS5.5
PFO Pinyon Flat Ob 72.90 46 *eP* **P** **00 22 59.6 -0.1**
comp=Z,44nm,1.7s,mb5.1
PFO LR LR
comp=Z,3μm,19.0s,MS5.6
PFO Pinyon Flat Ob 72.90 46 *eP* **P** **00 22 59.6 0.0**
PFO pmax pmax
comp=Z,44nm,1.7s,mb5.1
PFO MLR MLR
comp=Z,3μm,19.0s,MS5.6
KRMB Red Mountain 72.96 36 *eP* **P** **00 22 59.9 +0.2**
comp=Z,94nm,1.6s,mb5.5
OHCM Honcut 72.98 39 *eP* **P** **00 22 59.5 -0.5**
WDC Whiskeytown Da 73.13 38 PFAKE 00 23 10.0 +9.2
WDC LR LR
comp=Z,3μm,20.0s,MS5.5
PET Petropavlovsk 73.30 342 PFAKE 00 23 10.0 +8.5
PET LR LR
comp=Z,3μm,19.0s,MS5.5
PET Petropavlovsk 73.30 342 *eP* **P** **00 23 00.0 -1.5**
PET *eS* S 00 32 24.2 -2.6
PET *ePS* 00 32 56.6
PET pmax pmax
comp=Z,500nm,13.3s
PET MLR MLR
comp=Z,2μm,19.0s,MS5.5
PET MLR MLR
comp=Z,3μm,13.0s
GSC Goldstone 73.60 45 *eP* **P** **00 23 03.2 -0.5**
comp=Z,52nm,1.5s,mb5.2
GSC LR LR
comp=Z,3μm,19.0s,MS5.6
GSC Goldstone 73.60 45 *eP* **P** **00 23 03.3 -0.4**
GSC pmax pmax
comp=Z,52nm,1.5s,mb5.2
GSC MLR MLR
comp=Z,3μm,19.0s,MS5.6
MTUM Tungsten Hills 73.61 42 *eP* **P** **00 23 03.9 +0.2**
DAC Darwin (Calif) 73.62 44 PFAKE 00 23 20.0 +16
DAC LR LR
comp=Z,3μm,19.0s,MS5.6
PETK Petropavlovsk- 73.66 342 P **P** **00 23 03.3 -0.3**
comp=Z,20nm,1.0s,mb5.0,baz=112,slow=7.1,SNR=9.5
PETK LR LR 00 54 03.2
comp=Z,627nm,18.1s,MS4.9,baz=152,slow=35
WAKR Walker 73.74 41 *eP* **P** **00 23 04.6 +0.1**
GLA Glamis 73.75 48 *eP* **P** **00 23 05.5 +0.9**
comp=Z,60nm,1.6s,mb5.3
GLA LR LR
comp=Z,2μm,20.0s,MS5.5
GLA Glamis 73.75 48 *eP* **P** **00 23 05.5 +0.9**
GLA pmax pmax
comp=Z,60nm,1.6s,mb5.3
GLA MLR MLR
comp=Z,2μm,20.0s,MS5.5
YBH Yreka Blue Hor 73.78 37 P **P** **00 23 04.9 +0.3**
comp=Z,18nm,1.0s,mb5.0,baz=214,slow=1.8,SNR=30
YBH Yreka Blue Hor 73.78 37 P **P** **00 23 04.9 +0.3**
YBH MLR MLR
comp=Z,2μm,19.0s
KKM Kota Kinabalu 73.82 281 PFAKE 00 23 20.0 +14
KKM LR LR
comp=Z,760nm,21.0s,MS5.0
LBCM Butte Creek Ri 74.00 38 P **P** **00 23 05.8 -0.2**
LTIM Timbered Crate 74.13 38 P **P** **00 23 06.7 0.0**
SJI Sawahan 74.16 266 P **P** **00 23 10.0 +2.5**
HUMO Hull Mountain 74.20 36 PFAKE 00 23 20.0 +13
HUMO LR LR
comp=Z,2μm,21.0s,MS5.5
BUOR Burton Butte 74.39 36 P **P** **00 23 08.3 +0.1**
NVAR Mina Array Bea 74.41 41 P **P** **00 23 07.8 -0.5**
comp=Z,8.5nm,0.7s,mb4.8,baz=227,slow=9.1,SNR=70
NVAR Mina Array Bea 74.41 41 P **P** **00 23 07.8 -0.5**
YSS Yuzh-Sakhalins 74.59 330 *eP* **P** **00 23 09.9 +0.7**
comp=Z,55nm,1.0s,mb5.4
YSS LR LR
comp=Z,351nm,19.0s,MS4.7
YSS Yuzh-Sakhalins 74.59 330 *eP* **P** **00 23 06.1 -3.1**
YSS *e* pP 00 23 19.9 -2.2
YSS *e**SP sP 00 23 25.9 -1.1
YSS *e*PPS 00 33 27.0
YSS *e*SSS 00 40 30.0
YSS pmax pmax
comp=Z,220nm,2.0s,mb5.7
YSS pmax pmax
comp=Z,1μm,3.0s
LDFC Landfair 74.64 46 *eP* **P** **00 23 09.4 -0.3**
TPNV Topopah Spring 74.89 44 *eP* **P** **00 23 11.2 0.0**
comp=Z,93nm,1.7s,mb5.4
TPNV Topopah Spring 74.89 44 *eP* **P** **00 23 11.2 0.0**
TPNV pmax pmax
comp=Z,93nm,1.7s,mb5.4
TPH Tonopah 74.90 42 *eP* **P** **00 23 11.3 +0.1**
comp=Z,107nm,1.5s,mb5.5
TPH LR LR
comp=Z,2μm,19.0s,MS5.5
TPH Tonopah 74.90 42 *eP* **P** **00 23 11.3 +0.1**
TPH pmax pmax
comp=Z,107nm,1.5s,mb5.5
TPH MLR MLR
comp=Z,2μm,19.0s,MS5.5
MOD Modoc 75.28 38 PFAKE 00 23 20.0 +6.7
MOD LR LR
comp=Z,3μm,19.0s,MS5.5
COR Corvallis 75.30 34 *eP* **P** **00 23 13.3 -0.1**
comp=Z,184nm,1.9s,mb5.7
COR LR LR
comp=Z,2μm,20.0s,MS5.4
COR Corvallis 75.30 34 *eP* **P** **00 23 13.3 -0.1**
COR pmax pmax
comp=Z,184nm,1.9s,mb5.7
COR MLR MLR
comp=Z,2μm,20.0s,MS5.4
SHPR Sheep Range 75.38 45 *eP* **P** **00 23 14.0 0.0**
KDAK Kodiak Island 75.57 11 LR LR 00 51 19.2
comp=Z,1μm,18.6s,MS5.3,baz=9.0,slow=32
KDAK Kodiak Island 75.57 11 PFAKE 00 23 30.0 +15
KDAK LR LR
comp=Z,2μm,19.0s,MS5.5
SSOR Sweet Springs 75.94 34 P **P** **00 23 16.8 -0.2**
YHNB Yeheng 76.14 301 PFAKE 00 23 30.0 +11
YHNB LR LR
comp=Z,2μm,20.0s,MS5.4
TATO Taipei 76.18 301 PFAKE 00 23 30.0 +11
TATO LR LR
comp=Z,1μm,19.0s,MS5.3
BMN Battle Mountai 76.26 40 *eP* **P** **00 23 19.0 0.0**
comp=Z,48nm,1.3s,mb5.3
BMN LR LR
comp=Z,2μm,19.0s,MS5.5
BMN Battle Mountai 76.26 40 *eP* **P** **00 23 19.0 +0.1**
BMN pmax pmax
comp=Z,48nm,1.3s,mb5.3
BMN MLR MLR
comp=Z,2μm,19.0s,MS5.5
TUC Tucson 76.30 50 *eP* **P** **00 23 19.1 -0.2**
comp=Z,30nm,1.1s,mb5.1
TUC LR LR
comp=Z,2μm,19.0s,MS5.5
TUC Tucson 76.30 50 *eP* **P** **00 23 19.1 -0.3**
TUC pmax pmax
comp=Z,30nm,1.1s,mb5.1
TUC MLR MLR
comp=Z,2μm,19.0s,MS5.5
WVOR Wild Horse Val 76.58 38 *eP* **P** **00 23 20.5 -0.3**
WVOR LR LR
comp=Z,3μm,19.0s,MS5.7
BMW Boistfort Moun 76.59 33 *eP* **P** **00 23 20.8 +0.1**
HOOD Mount Hood Mea 76.67 34 *eP* **P** **00 23 22.1 +0.9**
comp=Z,59nm,1.1s,mb5.4
FL2 Flat Top 2 76.87 33 P **P** **00 23 22.5 +0.3**
NLWA Neilton Lookou 76.88 32 *eP* **P** **00 23 23.0 +0.7**
comp=Z,60nm,1.3s,mb5.4
NLWA LR LR
comp=Z,2μm,19.0s,MS5.5
TDL Tradedollar La 77.04 33 P **P** **00 23 23.2 0.0**
CCUT Cedar City 77.15 44 *eP* **P** **00 23 24.4 +0.3**
comp=Z,78nm,1.6s,mb5.4
ARUT Antelope Range 77.23 44 *eP* **P** **00 23 24.7 +0.2**
comp=Z,72nm,1.6s,mb5.4
ARUT Antelope Range 77.23 44 *eP* **P** **00 23 24.7 +0.2**
ARUT pmax pmax
comp=Z,72nm,1.6s,mb5.3
KSRS Korea Array 77.30 315 P **P** **00 23 26.2 +1.3**
comp=Z,15nm,1.1s,mb4.8,baz=125,slow=5.6,SNR=23
KSRS LR LR 00 58 22.5
comp=Z,664nm,18.4s,MS5.0,baz=115,slow=36
WUAZ Wupatki 77.47 47 *eP* **P** **00 23 26.2 +0.3**
comp=Z,41nm,1.4s,mb5.2
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.5
LON Longmire 77.51 33 *eP* **P** **00 23 25.3 -0.6**
comp=Z,73nm,1.6s,mb5.4
LON Longmire 77.51 33 *eP* **P** **00 23 25.3 -0.5**
LON pmax pmax
comp=Z,73nm,1.6s,mb5.4
ELK Elko 77.67 41 *eP* **P** **00 23 26.8 -0.1**
ELK LR LR
comp=Z,3μm,19.0s,MS5.6
PGC Sidney 77.93 31 *eP* **P** **00 23 28.1 0.0**
comp=Z,163nm,1.3s,mb5.8
KSM Kuching 78.06 275 P **P** **00 23 34.3 +4.6**
comp=Z,56nm,1.3s,comp=Z,2μm,mb5.3
INCN Inchon 78.19 315 *eP* **P** **00 23 32.0 +2.1**
comp=Z,705nm,2.4s,mb6.2
INCN LR LR
comp=Z,731nm,20.0s,MS5.0
SVW2 Sparrevohn 78.25 8 *eP* **P** **00 23 28.8 -0.8**
EBG Ellensburg 78.27 33 P **P** **00 23 30.3 +0.2**
LEM Lembang 78.37 266 P **P** **00 23 37.2 +5.8**
comp=Z,121nm,1.3s,mb5.7
JCW Jim Creek 78.39 32 *eP* **P** **00 23 30.5 -0.2**
JCW *e* pP 00 23 40.1 -3.5
MVU Marysvale 78.43 44 PFAKE 00 23 40.0 +8.9
MVU LR LR
comp=Z,2μm,20.0s,MS5.5
MSU Marysvale 78.45 44 *eP* **P** **00 23 32.0 +0.8**
RSW Rattlesnake Hi 78.47 34 *eP* **P** **00 23 31.2 +0.1**
comp=Z,158nm,1.8s,mb5.6
HAWA Hanford 78.50 34 *eP* **P** **00 23 31.2 -0.2**
comp=Z,114nm,1.8s,mb5.5
HAWA LR LR
comp=Z,3μm,19.0s,MS5.6
MDW Midway 78.51 34 P **P** **00 23 31.2 -0.2**
SLKM Skilak Lake 78.56 11 *eP* **P** **00 23 30.6 -0.8**
GBB Gable Butte 78.58 34 P **P** **00 23 31.6 -0.2**
RPW Rockport 78.76 32 *eP* **P** **00 23 32.7 0.0**
comp=Z,10nm,1.4s,mb4.6
BMO Blue Mountains 78.80 37 PFAKE 00 23 40.0 +7.0
BMO LR LR
comp=Z,2μm,19.0s,MS5.4
ETW Entiat 78.83 33 *eP* **P** **00 23 32.9 -0.2**
comp=Z,128nm,1.4s,mb5.7
LNOR Lincton Mounta 78.86 35 *eP* **P** **00 23 33.3 0.0**
comp=Z,27nm,1.6s,mb4.9
LNOR Lincton Mounta 78.86 35 *eP* **P** **00 23 33.3 0.0**
LNOR pmax pmax
comp=Z,27nm,1.6s,mb4.9
DUG Dugway 78.92 42 *eP* **P** **00 23 34.1 +0.3**
comp=Z,46nm,1.3s,mb5.2
DUG LR LR
comp=Z,2μm,19.0s,MS5.5
DUG Dugway 78.92 42 *eP* **P** **00 23 34.1 +0.3**
DUG pmax pmax
comp=Z,46nm,1.3s,mb5.2
DUG MLR MLR
comp=Z,2μm,19.0s,MS5.5
SSE Sheshan 79.09 307 P **P** **00 23 33.5 -1.4**
SSE AMB AMB
comp=Z,41nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,327nm,5.2s
SSE LR LR
comp=N,396nm,32.1s,MS4.7
SSE LR LR
comp=E,462nm,31.4s,MS4.7
SSE LR LR
comp=Z,703nm,28.0s,MS4.8
BGU Big Grassy Mou 79.17 42 *eP* **P** **00 23 34.8 -0.3**
comp=Z,74nm,1.8s,mb5.3
NLU North Lily Min 79.28 43 *eP* **P** **00 23 33.6 -2.1**
SIT Sitka 79.32 20 PFAKE 00 23 50.0 +14
SIT LR LR
comp=Z,3μm,19.0s,MS5.7
HABR Khabarovsk 79.45 328 *eP* **P** **00 23 35.3 -1.2**
HABR *e* 00 23 42.3
HABR *e*SP 00 23 49.7
HABR *e* 00 26 36.4
HABR *e*S S 00 33 36.9 +2.5
HABR *e*PS 00 33 50.2
OD2 Odessa Site #2 79.56 34 P **P** **00 23 37.7 +0.6**
MPU Maple Canyon 79.60 43 *eP* **P** **00 23 38.1 +0.6**
comp=Z,41nm,1.3s,mb5.2
MPU LR LR
comp=Z,5μm,20.0s,MS5.9
NOQ North Oquirrh 79.61 42 *eP* **P** **00 23 37.3 -0.3**
comp=Z,81nm,1.4s,mb5.5
SPUT South Promonto 79.75 42 *eP* **P** **00 23 38.4 +0.1**
HLID Hailey 79.76 39 *eP* **P** **00 23 38.5 +0.2**
comp=Z,61nm,1.4s,mb5.3
HLID LR LR
comp=Z,1μm,19.0s,MS5.3
PMR Palmer 79.77 11 *eP* **P** **00 23 36.9 -1.0**
comp=Z,103nm,1.4s,mb5.6
PMR LR LR
comp=Z,1μm,20.0s,MS5.2
PMR Palmer 79.77 11 *eP* **P** **00 23 36.9 -1.0**
PMR pmax pmax
comp=Z,103nm,1.4s,mb5.6
PMR MLR MLR
comp=Z,1μm,20.0s,MS5.2
HVU Hansel Valley 79.79 41 *eP* **P** **00 23 38.9 +0.3**
comp=Z,40nm,1.3s,mb5.2
HVU Hansel Valley 79.79 41 *eP* **P** **00 23 38.9 +0.4**
HVU pmax pmax
comp=Z,40nm,1.3s,mb5.2
WRAK Wrangell Islan 79.82 21 PFAKE 00 23 50.0 +12
WRAK LR LR
comp=Z,1μm,19.0s,MS5.3
SRU San Rafael 79.87 44 *eP* **P** **00 23 39.1 +0.1**
comp=Z,44nm,1.3s,mb5.2
SRU San Rafael 79.87 44 *eP* **P** **00 23 39.1 +0.1**
SRU pmax pmax
comp=Z,44nm,1.3s,mb5.2
LAZ Ladron 79.97 50 *eP* **P** **00 23 40.2 +0.5**
comp=Z,27nm,1.5s,mb5.0
LENM Lemitar 79.98 50 *eP* **P** **00 23 38.3 -1.4**
JLU Jordanelle 80.02 43 *eP* **P** **00 23 39.9 +0.1**
DAU Daniels Canyon 80.05 43 *eP* **P** **00 23 40.3 +0.3**
MDJ Mudanjiang 80.16 322 P **P** **00 23 41.3 +0.8**
MDJ AP pP 00 23 53.3 -0.1
MDJ XP sP 00 23 58.3 0.0
MDJ PP PP 00 26 43.0 -0.5
MDJ S S 00 33 48.1 +6.0
MDJ SCS ScS 00 34 02.5 +0.2
MDJ SS SS 00 38 55.1 +1.2
MDJ AMB AMB
comp=Z,38nm,2.1s,mb5.0
MDJ AMB AMB
comp=Z,626nm,4.1s
MDJ LR LR
comp=N,573nm,21.4s,MS5.1
MDJ LR LR
comp=E,615nm,19.0s,MS5.1
MDJ LR LR
comp=Z,1μm,16.9s,MS5.3
MDJ Mudanjiang 80.16 322 PFAKE 00 23 50.0 +10
MDJ LR LR
comp=Z,1μm,20.0s,MS5.3
BNM Barren Site 80.23 50 *eP* **P** **00 23 41.4 +0.3**
comp=Z,44nm,1.6s,mb5.1
LPM Los Pinos Moun 80.30 50 *eP* **P** **00 23 41.8 +0.4**
MVCO Mesa Verde 80.32 47 *eP* **P** **00 23 41.4 -0.1**
comp=Z,20nm,1.3s,mb4.9
MVCO LR LR
comp=Z,2μm,19.0s,MS5.5
TXAR Lajitas Array 80.41 56 P **P** **00 23 42.1 -0.1**
comp=Z,7.9nm,1.1s,mb4.6,baz=224,slow=3.5,SNR=22
TXAR LR LR 00 54 01.1
comp=Z,830nm,18.2s,MS5.1,baz=0.0,slow=32
HWUT Hardware Ranch 80.47 42 *eP* **P** **00 23 41.8 -0.4**
comp=Z,72nm,1.9s,mb5.3
HWUT LR LR
comp=Z,3μm,19.0s,MS5.6
PV10 Paradox Valley 80.51 46 *eP* **P** **00 23 42.5 0.0**
comp=Z,295nm,0.8s,mb6.3
PV10 *e*PcP PcP 00 23 49.4 +0.1
PV01 Paradox Valley 80.72 46 *eP* **P** **00 23 43.5 0.0**
comp=Z,5μm,1.6s
ANMO Albuquerque 80.72 50 *eP* **P** **00 23 43.8 +0.1**
comp=Z,44nm,1.6s,mb5.1
ANMO LR LR
comp=Z,3μm,19.0s,MS5.6
ANMO Albuquerque 80.72 50 *eP* **P** **00 23 43.8 +0.1**
ANMO pmax pmax
comp=Z,44nm,1.6s
ANMO MLR MLR
comp=Z,3μm,19.0s
NEW Newport 80.94 34 *eP* **P** **00 23 43.6 -1.0**
comp=Z,66nm,1.8s,mb5.3
NEW LR LR
comp=Z,2μm,20.0s,MS5.4
NEW Newport 80.94 34 *eP* **P** **00 23 43.6 -0.9**
NEW pmax pmax
comp=Z,66nm,1.8s
NEW MLR MLR
comp=Z,2μm,20.0s
GDL2 Guadalupe Moun 81.08 53 *eP* **P** **00 23 43.0 -2.6**
GDL2 *e*PP PP 00 26 51.2 -0.1
SKAG Skagway 81.27 18 *eP* **P** **00 23 48.0 +2.0**
NJ2 Nanjing 81.30 307 *eP* **P** **00 23 47.8 +1.0**
NJ2 AP pP 00 24 00.0 +0.2
NJ2 XP sP 00 24 04.3 -0.4
NJ2 PP PP 00 26 49.1 -4.0
NJ2 S S 00 33 52.0 -2.5
NJ2 XS sS 00 34 10.0 -6.2
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
NJ2 AMB AMB
comp=Z,1μm,6.2s
NJ2 LR LR
comp=N,280nm,15.3s,MS5.0
NJ2 LR LR
comp=E,370nm,14.4s,MS5.0
NJ2 LR LR
comp=Z,230nm,14.4s,MS4.7
AHID Auburn Hatcher 81.37 41 *eP* **P** **00 23 47.2 +0.2**
comp=Z,31nm,1.3s,mb5.1
AHID LR LR
comp=Z,2μm,19.0s,MS5.6
MCMT McKenzie Canyo 81.40 38 *eP* **P** **00 23 47.3 +0.2**
comp=Z,18nm,1.4s,mb4.8
RRI2 Red Ridge 81.54 40 *eP* **P** **00 23 47.8 -0.1**
comp=Z,47nm,1.4s,mb5.2
KLR Kul'dur 81.64 327 *eP* **P** **00 23 44.8 -3.4**
KLR *eS* S 00 34 00.0 +2.7
KLR pmax pmax
comp=Z,500nm,3.2s
KLR smax
comp=N,2μm,11.0s
KLR smax
comp=E,1μm,11.0s
DCID1 Drake Creek 81.75 40 *eP* **P** **00 23 49.9 +0.9**
MCK McKinley 81.78 10 *eP* **P** **00 23 47.6 -1.0**
comp=E,64nm,0.9s,mb5.5
MCK McKinley 81.78 10 *eP* **P** **00 23 47.6 -1.0**
MCK pmax pmax
comp=Z,64nm,0.9s,mb5.5
REDW Red Top Meadow 81.84 40 *eP* **P** **00 23 49.8 +0.4**
comp=Z,89nm,1.6s,mb5.4
DLMT Dillon 81.84 38 *eP* **P** **00 23 49.4 +0.1**
comp=Z,90nm,1.8s,mb5.4
TPAW Teton Pass 81.84 40 *eP* **P** **00 23 49.5 +0.1**
comp=Z,66nm,1.6s,mb5.3
SNOW Snow King Moun 81.95 40 *eP* **P** **00 23 50.7 +0.7**
comp=Z,83nm,1.5s,mb5.4
BSMT Bassoo Peak 81.97 35 *eP* **P** **00 23 49.4 -0.6**
IMW Indian Meadow 82.06 40 *eP* **P** **00 23 50.7 +0.1**
comp=Z,90nm,1.6s,mb5.5
MOOW Moose Ponds 82.10 40 *eP* **P** **00 23 51.2 +0.4**
comp=Z,43nm,1.6s,mb5.1
LRM Limekiln Ridge 82.17 38 *eP* **P** **00 23 51.5 +0.4**
DLBC Dease Lake 82.17 21 *eP* **P** **00 23 50.8 0.0**
CN2 Changchun 82.23 320 *eP* **P** **00 23 52.0 +0.6**
CN2 *eXP* sP 00 24 10.5 +1.1
CN2 *eS* S 00 34 02.3 -1.3
CN2 AMB AMB
comp=Z,30nm,1.9s,mb4.9
CN2 AMB AMB
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,3μm,22.0s,MS5.6
CN2 LR LR
comp=E,2μm,22.0s,MS5.6
CN2 LR LR
comp=Z,690nm,22.0s,MS5.0
QLMT Earthquake Lak 82.25 39 *eP* **P** **00 23 52.2 +0.6**
CHMT Chamberlain Mo 82.31 37 *eP* **P** **00 23 51.6 -0.1**
SMCO Snowmass 82.31 46 *eP* **P** **00 23 52.4 +0.4**
comp=Z,46nm,1.3s,mb5.2
DL2 Dalian 82.32 314 P **P** **00 23 53.3 +1.2**
DL2 S S 00 34 11.0 +6.2
DL2 AMB AMB
comp=Z,30nm,1.7s,mb5.0
DL2 AMB AMB
comp=Z,620nm,3.1s
DL2 LR LR
comp=N,440nm,13.9s
DL2 LR LR
comp=Z,340nm,22.1s
BW06 Boulder Array 82.35 41 PFAKE 00 24 00.0 +7.9
BW06 LR LR
comp=Z,2μm,19.0s,MS5.6
PDAR Pinedale Array 82.35 41 P **P** **00 23 51.1 -1.0**
comp=Z,4.6nm,0.8s,mb4.5,baz=208,slow=2.9,SNR=30
PDAR LR LR 00 56 52.8
comp=Z,2μm,18.1s,MS5.5,baz=249,slow=33
PAYG Puerto Ayora 82.40 88 PFAKE 00 24 00.0 +6.9
PAYG LR LR
comp=Z,1μm,19.0s,MS5.4
YFT Old Faithful 82.41 40 *eP* **P** **00 23 53.7 +1.3**
YMR Madison River 82.45 39 *eP* **P** **00 23 53.7 +1.1**
comp=Z,129nm,1.6s,mb5.6
YMR LR LR
comp=Z,1μm,19.0s,MS5.6
BOZ Bozeman (W) 82.56 38 *eP* **P** **00 23 53.3 +0.2**
comp=Z,59nm,1.5s,mb5.4
BOZ LR LR
comp=Z,2μm,19.0s,MS5.5
BOZ Bozeman (W) 82.56 38 *eP* **P** **00 23 53.3 +0.1**
BOZ pmax pmax
comp=Z,59nm,1.5s,mb5.4
BOZ MLR MLR
comp=Z,2μm,19.0s,MS5.5
YNR Norris Junctio 82.64 39 *eP* **P** **00 23 56.1 +2.5**
SDCO Great Sand Dun 82.68 47 *eP* **P** **00 23 54.0 0.0**
comp=Z,91nm,2.1s,mb5.4
SDCO LR LR
comp=Z,2μm,19.0s,MS5.5

LKWY Lake 82.74 40 PFAKE 00 24 10.0 +16
LKWY LR LR
comp=Z,2µm,19.0s,MS5.6
HRY Holter Researc 83.01 37 *e*P **P** **00 23 55.2 -0.3**
COLA College 83.02 10 *e*P **P** **00 23 53.9 -1.2**
comp=Z,61nm,0.9s,mb5.6
COLA LR LR
comp=Z,1µm,19.0s,MS5.3
COLA College 83.02 10 *e*P **P** **00 23 53.9 -1.2**
COLA pmax pmax
comp=Z,61nm,0.9s,mb5.6
COLA MLR MLR
comp=Z,1µm,19.0s,MS5.3
PMSA Palmer Station 83.10 156 PFAKE 00 24 10.0 +14
PMSA LR LR
comp=Z,2µm,19.0s,MS5.6
WALA Waterton Lakes 83.13 34 *e*P **P** **00 23 56.1 +0.1**
comp=Z,71nm,1.4s,mb5.5
RWWY Rawlins 83.34 43 *e*P **P** **00 23 58.0 +0.7**
comp=Z,218nm,1.9s,mb5.9
SEY Seymchan 83.52 345⇑ *e*P **P** **00 23 56.3 -1.4**
ISCO Idaho Springs 83.53 46 *e*P **P** **00 23 58.8 +0.5**
comp=Z,53nm,1.8s,mb5.4
ISCO LR LR
comp=Z,2µm,19.0s,MS5.5
ISCO Idaho Springs 83.53 46 *e*P **P** **00 23 58.8 +0.5**
ISCO pmax pmax
comp=Z,53nm,1.8s,mb5.4
ISCO MLR MLR
comp=Z,2µm,19.0s,MS5.5
RLMT Red Lodge 83.72 40 *e*P **P** **00 23 59.8 +0.7**
comp=Z,33nm,1.3s,mb5.3
RLMT LR LR
comp=Z,1µm,21.0s,MS5.2
GCMT Greycliff 83.81 39 *e*P **P** **00 23 59.8 +0.2**
comp=Z,43nm,1.5s,mb5.4
JCT Junction City 83.94 56 PFAKE 00 24 10.0 +9.4
JCT LR LR
comp=Z,1µm,19.0s,MS5.3
QIZ Qiongzhong 83.95 292 P **P** **00 24 00.5 -0.4**
QIZ PP PP 00 27 14.1 -1.1
QIZ S S 00 34 21.0 -1.1
QIZ XS sS 00 34 41.8 -2.0
QIZ SS SS 00 39 51.9 +0.7
QIZ AMB AMB
comp=Z,894nm,6.4s
QIZ LR LR
comp=E,735nm,23.4s
QIZ LR LR
comp=Z,1µm,27.4s,MS5.1
QIZ Qiongzhong 83.95 292 PFAKE 00 24 10.0 +9.1
QIZ LR LR
comp=Z,833nm,20.0s,MS5.1
WHN Wuhan 84.21 304 ⇓P **P** **00 24 03.5 +1.5**
WHN S S 00 34 28.8 +4.5
WHN AMB AMB
comp=Z,2µm,5.5s
WHN LR LR
comp=Z,2µm,13.2s,MS5.7
AMTX Amarillo 84.23 51 *e*P **P** **00 24 01.4 -0.6**
comp=Z,140nm,1.9s,mb5.8
AMTX LR LR
comp=Z,3µm,19.0s,MS5.7
EGAK Eagle 84.24 13 *e*P **P** **00 24 00.6 -0.7**
comp=Z,129nm,1.7s,mb5.8
EGAK LR LR
comp=Z,2µm,19.0s,MS5.5
PHWY Pilot Hill 84.32 44 *e*P **P** **00 24 02.5 +0.2**
KVTX Kingsville 84.39 59 PFAKE 00 24 10.0 +7.0
KVTX LR LR
comp=Z,2µm,19.0s,MS5.5
COLD Coldfoot 84.83 9 *e*P **P** **00 24 04.4 +0.2**
comp=Z,192nm,1.3s,mb6.1
EGMT Eagleton 84.90 37 *e*P **P** **00 24 05.0 -0.1**
comp=Z,115nm,1.8s,mb5.7
EGMT LR LR
comp=Z,2µm,19.0s,MS5.5
BILL Bilibino 85.43 352 *e*P **P** **00 24 06.5 -0.8**
comp=Z,57nm,1.4s,mb5.5
BILL *e*PcP PcP 00 24 10.0 -0.1
BILL LR LR
comp=Z,1µm,20.0s,MS5.3
BILL Bilibino 85.43 352 *e*P **P** **00 24 06.1 -1.1**
BILL pmax pmax
comp=Z,39nm,2.2s,mb5.2
EDM Edmonton 85.77 31 *e*P **P** **00 24 08.4 -0.8**
LAO LASA Array 86.33 39 *e*P **P** **00 24 14.1 +1.9**
comp=Z,200nm,2.0s,mb6.0
LAO LR LR
comp=Z,1µm,20.0s,MS5.2
WMOK Wichita Mounta 86.37 52 *e*P **P** **00 24 13.3 +0.6**
comp=Z,42nm,1.8s,mb5.4
WMOK LR LR
comp=Z,2µm,19.0s,MS5.6
WMOK Wichita Mounta 86.37 52 *e*P **P** **00 24 13.3 +0.6**
WMOK pmax pmax
comp=Z,42nm,1.8s,mb5.4
WMOK MLR MLR
comp=Z,2µm,19.0s,MS5.6
OGNE Ogallala 86.49 46 PFAKE 00 24 20.0 +6.9
OGNE LR LR
comp=Z,2µm,19.0s,MS5.6
RSSD Black Hills 86.53 42 *e*P **P** **00 24 13.6 +0.4**
comp=Z,31nm,1.6s,mb5.3
RSSD LR LR
comp=Z,2µm,19.0s,MS5.5
RSSD Black Hills 86.53 42 *e*P **P** **00 24 13.6 +0.4**
RSSD pmax pmax
comp=Z,31nm,1.6s,mb5.3
RSSD MLR MLR
comp=Z,2µm,19.0s,MS5.5
BJT Baijiatuau 86.61 313 PFAKE 00 24 20.0 +6.3
BJT LR LR
comp=Z,698nm,21.0s,MS5.0
BJI Beijing 86.61 313 P **P** **00 24 14.5 +0.7**
BJI XP sP 00 24 30.9 -0.8
BJI PP PP 00 27 35.3 -1.1
BJI S S 00 34 44.1 -3.4
BJI SS SS 00 40 29.6 0.0
BJI AMB AMB
comp=Z,1µm,3.4s
BJI LR LR
comp=N,372nm,17.8s,MS5.2
BJI LR LR
comp=E,653nm,17.1s,MS5.2
BJI LR LR
comp=Z,490nm,32.8s
HKT Hockley 86.94 58 PFAKE 00 24 30.0 +14
HKT LR LR
comp=Z,2µm,20.0s,MS5.4
UBT Ubonrachathani 87.14 287 ⇓P **P** **00 24 19.0 +2.1**
COCO West Island 87.22 258 PFAKE 00 24 30.0 +13
COCO LR LR
comp=Z,2µm,19.0s,MS5.6
CBKS Cedar Bluff 87.24 48 PFAKE 00 24 30.0 +13
CBKS LR LR
comp=Z,2µm,19.0s,MS5.5
MAW Mawson 87.27 198 P **P** **00 24 16.8 +0.3**
comp=Z,13nm,1.0s,mb5.1,baz=81,slow=2.5,SNR=8.3
MAW LR LR 01 02 28.2
comp=Z,3µm,18.5s,MS5.8,baz=115,slow=35
HIA Hailar 88.33 323 PFAKE 00 24 30.0 +8.2
HIA LR LR
comp=Z,1µm,21.0s,MS5.3
HIA Hailar 88.33 323*c i*P **P** **00 24 22.4 +0.6**
PLCA Paso Flores 88.37 132 P **P** **00 24 23.3 +1.0**
comp=Z,12nm,1.1s,mb5.0,baz=237,slow=6.7,SNR=6.2
PLCA LR LR 00 56 17.6
comp=Z,2µm,18.9s,MS5.6,baz=194,slow=30
PLCA Paso Flores 88.37 132 *e*P **P** **00 24 23.2 +0.9**
comp=Z,39nm,1.4s,mb5.4
PLCA LR LR
comp=Z,2µm,19.0s,MS5.6
PLCA Paso Flores 88.37 132 *e*P **P** **00 24 23.2 +0.9**
PLCA pmax pmax
comp=Z,39nm,1.4s
PLCA MLR MLR
comp=Z,2µm,19.0s
DGMT Dagmar 88.37 38 *e*P **P** **00 24 22.0 0.0**
comp=Z,38nm,1.1s,mb5.5
DGMT LR LR
comp=Z,2µm,19.0s,MS5.6
NATX Nacogdoches 88.51 56 PFAKE 00 24 30.0 +6.9
NATX LR LR
comp=Z,1µm,19.0s,MS5.3
INK Inuvik 88.88 14 *e*P **P** **00 24 23.2 -0.7**
comp=Z,3µm,1.8s
GYA Guiyang 89.13 298⇑ *i*P **P** **00 24 27.8 +1.7**
GYA AP pP 00 24 41.6 +2.4
GYA XP sP 00 24 46.4 +2.3
GYA PP PP 00 28 01.5 +4.5
GYA SKS 00 34 48.8
GYA S S 00 35 01.9 -10
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,320nm,8.2s
GYA LR LR
comp=N,950nm,20.4s,MS5.3
GYA LR LR
comp=E,770nm,19.9s,MS5.3
GYA LR LR
comp=Z,600nm,19.0s,MS5.0
TGUH Tegucigalpa,Un 89.46 75 PFAKE 00 24 40.0 +12
TGUH LR LR
comp=Z,1µm,19.0s,MS5.3
KSU1 Kansas State U 89.60 49 PFAKE 00 24 40.0 +12
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.6
XAN Xi'an 89.76 306 P **P** **00 24 29.9 +1.0**
XAN AP pP 00 24 43.3 +1.3
XAN XP sP 00 24 48.5 +1.6
XAN SKS 00 34 49.6
XAN XS sS 00 35 34.3 -5.4
XAN AMB AMB
comp=Z,21nm,1.5s,mb5.2
XAN AMB AMB
comp=Z,469nm,8.7s
XAN LR LR
comp=N,192nm,13.0s,MS5.0
XAN LR LR
comp=E,355nm,17.7s,MS5.0
XAN LR LR
comp=Z,901nm,18.2s,MS5.2
HHC Hu-ho-hao-te 90.17 313 *e*P **P** **00 24 32.8 +2.2**
HHC AP pP 00 24 46.1 +2.3
HHC XP sP 00 24 50.9 +2.3
HHC PP PP 00 28 08.3 +3.4
HHC SKS 00 34 57.4
HHC S S 00 35 21.3 +0.2
HHC XS sS 00 35 40.3 -2.9
HHC AMB AMB
comp=Z,40nm,1.9s,mb5.4
HHC AMB AMB
comp=Z,211nm,5.8s
HHC LR LR
comp=N,498nm,21.4s,MS5.2
HHC LR LR
comp=E,702nm,21.4s,MS5.2
HHC LR LR
comp=Z,522nm,22.6s,MS4.9
YAK Yakutsk 90.18 337 *e*P **P** **00 24 28.9 -1.2**
comp=Z,26nm,1.1s,mb5.5
YAK LR LR
comp=Z,518nm,20.0s,MS5.0
YAK Yakutsk 90.18 337 *e*P **P** **00 24 29.1 -1.1**
YAK *e* 00 28 03.7
YAK *e*PPP 00 30 02.1
YAK *e*S SKSac 00 34 50.3 -7.0
YAK *e* 00 35 15.3
YAK *e*SS SS 00 41 12.3 -8.3
YAK pmax pmax
comp=Z,11nm,0.9s,mb5.2
YAK pmax pmax
comp=Z,123nm,2.0s,mb5.9
YAK pmax pmax
comp=N,65nm,2.5s
YAK pmax pmax
comp=E,68nm,2.7s
YAK smax
comp=E,162nm,12.9s
YAK smax
comp=N,195nm,15.9s
MIAR Mount Ida 90.31 54 PFAKE 00 24 40.0 +8.6
MIAR LR LR
comp=Z,2µm,19.0s,MS5.5
YKA Yellowknife Ar 90.53 23 P **P** **00 24 29.9 -1.8**
comp=Z,3.7nm,0.8s,mb4.8,baz=238,slow=3.5,SNR=5.4
YKA LR LR 01 02 53.5
comp=Z,374nm,18.0s,MS4.9,baz=170,slow=34
YKA Yellowknife Ar 90.53 23 P **P** **00 24 29.9 -1.8**
YKA LR LR 01 02 53.5
BTO Baotou 91.18 312 *e*P **P** **00 24 35.6 +0.3**
ECSD EROS,Sioux Fal 91.28 45 *e*P **P** **00 24 35.2 -0.5**
comp=Z,117nm,2.9s,mb5.7
ECSD LR LR
comp=Z,1µm,19.0s,MS5.4
EFI East Falkland 91.77 145 PFAKE 00 24 50.0 +12
EFI LR LR
comp=Z,2µm,21.0s,MS5.6
NST Nakhon Sawan 91.77 286 P **P** **00 24 41.0 +2.4**
VNA3 Neumayer Olymp 91.97 175 *e*P **P** **00 24 38.6 +0.1**
VNA3 *e* 00 24 43.9
VNA3 *e* pP 00 24 50.6 -1.0
VNA3 *e* 00 24 57.3
VNA3 *e* 00 25 05.1
VBMS Vicksburg 91.99 57 PFAKE 00 24 50.0 +11
VBMS LR LR
comp=Z,946nm,19.0s,MS5.3
SNAA Sanae 92.05 177 *e*P **P** **00 24 32.6 -6.2**
SNAA *e* 00 24 37.8
SNAA *e* pP 00 24 44.5 -7.5
SNAA *e* 00 24 49.6
SNAA *e* 00 24 55.7
SNAA Sanae 92.05 177 *e*P **P** **00 24 34.3 -4.6**
NNA Nana 92.09 103 PFAKE 00 24 50.0 +10
NNA LR LR
comp=Z,1µm,19.0s,MS5.3
KMI Kunming 92.10 295 P **P** **00 24 41.9 +1.9**
KMI AP pP 00 24 54.5 +1.4
KMI XP sP 00 24 59.8 +1.8
KMI PP PP 00 28 23.8 +3.2
KMI SKS 00 35 08.0
KMI S S 00 35 36.5 -2.9
KMI XS sS 00 35 59.0 -2.5
KMI SS SS 00 41 49.0 -0.9
KMI AMB AMB
comp=Z,26nm,1.3s,mb5.4
KMI AMB AMB
comp=Z,718nm,3.7s
KMI LR LR
comp=N,381nm,15.9s,MS5.2
KMI LR LR
comp=E,524nm,16.8s,MS5.2
KMI LR LR
comp=Z,842nm,27.3s
NANT Nan 92.12 289⇑ P **P** **00 24 40.0 -0.2**
comp=Z,162nm,1.0s,mb6.3
LCO Las Campanas 92.24 121 PFAKE 00 24 50.0 +9.4
LCO LR LR
comp=Z,2µm,19.0s,MS5.5
FFC Flin Flon 92.35 33 PFAKE 00 24 50.0 +10
FFC LR LR
comp=Z,2µm,20.0s,MS5.5
VNA2 Neumayer--Watz 92.47 175 *e*P **P** **00 24 41.8 +1.0**
VNA2 *e* 00 24 47.0
VNA2 *e* pP 00 24 53.5 -0.5
VNA2 *e* 00 25 00.2
VNA2 *e* 00 25 08.0
VNA1 Neumayer--Stat 92.67 175 *e*P **P** **00 24 42.5 +0.8**
VNA1 *e* 00 24 48.3
VNA1 *e* pP 00 24 54.5 -0.4
VNA1 *e* 00 25 00.6
VNA1 *e* 00 25 08.6
CD2 Chengdu 92.92 301 P **P** **00 24 43.6 0.0**
CD2 AP pP 00 24 57.3 +0.5
CD2 XP sP 00 25 02.5 +0.9
CD2 PP PP 00 28 28.8 +1.9
CD2 SKS 00 35 11.9
CD2 S S 00 35 42.5 -4.0
CD2 XS sS 00 36 05.4 -3.2
CD2 SS SS 00 42 00.5 -1.0
CD2 AMB AMB
comp=Z,60nm,0.8s,mb6.1
CD2 AMB AMB
comp=Z,500nm,9.2s
CD2 LR LR
comp=N,810nm,19.2s,MS5.3
CD2 LR LR
comp=E,720nm,21.6s,MS5.3
CD2 LR LR
comp=Z,770nm,20.4s,MS5.1
SCIA State Center 93.00 47 PFAKE 00 24 50.0 +6.3
SCIA LR LR
comp=Z,1µm,19.0s,MS5.4
CIT Chita 93.06 324 *e*P **P** **00 24 45.9 +2.1**
NVL N'lazarevskaya 93.18 181 P **P** **00 24 45.2 +1.1**
NVL pmax pmax
comp=Z,15nm,1.7s,mb5.2
NVL MLR MLR
comp=N,1µm,17.0s,MS5.5
NVL MLR MLR
comp=E,544nm,17.0s,MS5.5
NVL MLR MLR
comp=Z,2µm,17.0s,MS5.7
CCM Cathedral Cave 93.21 51 PFAKE 00 25 00.0 +15
CCM LR LR
comp=Z,3µm,19.0s,MS5.7
BDT Bhumibol Dam 93.25 287 P **P** **00 24 47.0 +1.6**
AGMN Agassiz Refuge 93.39 41 PFAKE 00 25 00.0 +15
AGMN LR LR
comp=Z,2µm,19.0s,MS5.6
OXF Oxford 93.56 55 PFAKE 00 25 00.0 +13
OXF LR LR
comp=Z,2µm,19.0s,MS5.7
CM31 Chiang Mai Arr 93.63 288 PFAKE 00 25 00.0 +13
CM31 LR LR
comp=Z,396nm,19.0s,MS4.9
CMAR Chiang Mai Arr 93.63 288 P **P** **00 24 48.4 +1.2**
comp=Z,9.2nm,0.9s,mb5.2,baz=96,slow=2.4,SNR=25
CMAR LR LR 01 02 29.2
comp=Z,427nm,21.6s,MS4.9,baz=286,slow=33
CMAR Chiang Mai Arr 93.63 288 *i* P **P** **00 24 49.4 +2.2**
CMAR pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 93.72 288 *e*P **P** **00 24 49.1 +1.5**
comp=Z,136nm,2.3s,mb6.0
CHTO LR LR
comp=Z,473nm,19.0s,MS5.0
CHTO Chiang Mai 93.72 288 *e*P **P** **00 24 49.1 +1.5**
CHTO pmax pmax
comp=Z,136nm,2.3s,mb6.0
CHTO MLR MLR
comp=Z,473nm,19.0s,MS5.0
OTAV Otavalo 94.02 91 PFAKE 00 25 00.0 +11
OTAV LR LR
comp=Z,398nm,19.0s,MS4.9
ULM Lac du Bonnet 94.07 39 P **P** **00 24 47.8 -0.7**
comp=Z,7.4nm,1.1s,mb5.0,baz=250,slow=12,SNR=3.8
ULM LR LR 01 02 54.6
comp=Z,2µm,19.1s,MS5.6,baz=256,slow=33
LZH Lanzhou 94.35 306⇑ P **P** **00 24 51.0 +0.9**
LZH AP pP 00 25 04.5 +1.2
LZH XP sP 00 25 09.8 +1.7
LZH PP PP 00 28 41.3 +3.3
LZH SKS 00 35 22.0
LZH *e*S S 00 35 56.3 -2.5
LZH XS sS 00 36 19.0 -2.0
LZH *e*SS SS 00 42 22.3 +0.5
LZH AMB AMB
comp=Z,46nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,163nm,7.1s
LZH LR LR
comp=E,643nm,17.2s
LZH LR LR
comp=Z,997nm,19.0s,MS5.3
BRAL Brewton 94.46 59 PFAKE 00 25 00.0 +9.3
BRAL LR LR
comp=Z,885nm,20.0s,MS5.2
BOD Bodaibo 95.04 329 *e*P **P** **00 24 50.9 -1.8**
LRAL Lakeview Retre 95.07 57 PFAKE 00 25 00.0 +6.5
LRAL LR LR
comp=Z,1µm,19.0s,MS5.5
BCIP Isla Barro Col 95.12 82 PFAKE 00 25 10.0 +16
BCIP LR LR
comp=Z,606nm,20.0s,MS5.1
WVT Waverly 95.26 54 PFAKE 00 25 10.0 +16
WVT LR LR
comp=Z,2µm,19.0s,MS5.6
JFWS Jewell Farm 95.40 47 PFAKE 00 25 10.0 +15
JFWS LR LR
comp=Z,2µm,19.0s,MS5.5
HDIL Hopedale 95.40 49 PFAKE 00 25 10.0 +15
HDIL LR LR
comp=Z,2µm,20.0s,MS5.6
ULN Ulaanbaatar 95.58 318 *e*P **P** **00 24 55.4 0.0**
comp=Z,5.1nm,1.0s,mb4.9
ULN LR LR
comp=Z,672nm,22.0s,MS5.1
ULN Ulaanbaatar 95.58 318 *e*P **P** **00 24 55.4 0.0**
ULN pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
ULN MLR MLR
comp=Z,672nm,22.0s,MS5.1
LVC Limon Verde 95.94 115 *e*PP PP 00 28 46.9 -3.3
LVC LR LR
comp=Z,1µm,21.0s,MS5.4
SONM Songino Array 95.99 318 P **P** **00 24 56.8 -0.4**
comp=Z,1.5nm,0.8s,mb4.5,baz=92,slow=4.3,SNR=7.8
SONM LR LR 01 01 17.6
comp=Z,618nm,21.8s,MS5.0,baz=261,slow=31
TIXI Tiksi 96.01 344 *e*P **P** **00 24 55.9 -1.0**
comp=Z,9.6nm,1.4s,mb5.0
TIXI *e*PP PP 00 28 53.3 +3.4
TIXI LR LR
comp=Z,836nm,19.0s,MS5.2
TIXI Tiksi 96.01 344⇑ *e*P **P** **00 24 57.6 +0.8**
TIXI pmax pmax
comp=Z,6.0nm,1.5s,mb4.8
EYMN Ely 96.05 42 PFAKE 00 25 10.0 +12
EYMN LR LR
comp=Z,2µm,19.0s,MS5.6
WCI Wyandotte Cave 97.01 52 PFAKE 00 25 10.0 +7.9
WCI LR LR
comp=Z,2µm,19.0s,MS5.6
GOGA Godfrey 98.03 58 PFAKE 00 25 20.0 +13
GOGA LR LR
comp=Z,784nm,20.0s,MS5.2
GTA Gaotai 98.31 309 *e*P **P** **00 25 09.3 +1.3**
GTA AP pP 00 25 22.8 +1.6
GTA XP sP 00 25 27.9 +1.8
GTA PP PP 00 29 09.3 +0.8
GTA SKS 00 35 42.9
GTA S S 00 36 30.8 -2.0
GTA XS sS 00 36 54.9 -0.1
GTA SS SS 00 43 19.6 +1.9
GTA AMB AMB
comp=Z,8.0nm,1.9s,mb4.9
GTA AMB AMB
comp=Z,215nm,8.4s
GTA LR LR
comp=N,312nm,15.6s,MS5.1
GTA LR LR
comp=E,367nm,18.0s,MS5.1
GTA LR LR
comp=Z,684nm,21.3s,MS5.1
DWPF Disney 98.45 63 PFAKE 00 25 20.0 +11
DWPF LR LR
comp=Z,569nm,22.0s,MS5.0
TZTN Tazewell 98.71 55 PFAKE 00 25 20.0 +10
TZTN LR LR
comp=Z,2µm,20.0s,MS5.6
TLY Talaya 98.77 321 PFAKE 00 25 20.0 +10
TLY LR LR
comp=Z,844nm,19.0s,MS5.3
LPAZ La Paz 98.78 110 P **P** **00 25 13.2 +2.5**
comp=Z,1.1nm,0.9s,mb4.4,baz=243,slow=6.8,SNR=4.9
LPAZ LR LR 01 01 14.1
comp=Z,920nm,19.9s,MS5.3,baz=280,slow=30
LPAZ La Paz 98.78 110 P **P** **00 25 13.2 +2.5**
LPAZ LR LR 01 01 14.1
ROSC El Rosal 99.24 88 LR LR 01 00 16.7
comp=Z,508nm,21.0s,MS5.0,baz=202,slow=29
GLMI Grayling 99.83 46 PFAKE 00 25 30.0 +15
GLMI LR LR
comp=Z,2µm,19.0s,MS5.7
AAM Ann Arbor 99.94 49 PFAKE 00 25 30.0 +15
AAM LR LR
comp=Z,2µm,19.0s,MS5.7
ACSO Alum Creek Sta 99.98 51 PFAKE 00 25 30.0 +15
ACSO LR LR
comp=Z,3µm,19.0s,MS5.8
NHSC New Hope 100.64 59 PFAKE 00 25 30.0 +12
NHSC LR LR
comp=Z,1µm,19.0s,MS5.4

BLA Blacksburg 101.30 54 PFAKE 00 25 30.0 +8.9
BLA LR LR
comp=Z,2µm,19.0s,MS5.7
MCWV Mont Chateau 102.22 52 PFAKE 00 25 40.0 +15
MCWV LR LR
comp=Z,2µm,20.0s,MS5.6
ERPA Erie 102.58 50 PFAKE 00 25 40.0 +13
ERPA LR LR
comp=Z,3µm,19.0s,MS5.8
CNNC Cliffs of the 102.92 57 PFAKE 00 25 40.0 +12
CNNC LR LR
comp=Z,1µm,19.0s,MS5.5
LSA Lhasa 103.20 297 PFAKE 00 25 40.0 +10
LSA LR LR
comp=Z,486nm,21.0s,MS5.0
SDV Santo Domingo 103.83 85 PFAKE 00 25 50.0 +18
SDV LR LR
comp=Z,262nm,20.0s,MS4.8
CBN Corbin 103.86 54 PFAKE 00 25 40.0 +7.5
CBN LR LR
comp=Z,2µm,19.0s,MS5.6
SSPA Standing Stone 103.88 51 PFAKE 00 25 40.0 +7.5
SSPA LR LR
comp=Z,2µm,19.0s,MS5.7
SDDR Presa de Saban 105.52 74 PFAKE 00 30 10.0 +16
SDDR LR LR
comp=Z,1µm,19.0s,MS5.5
BINY Binghamton 105.53 50 PFAKE 00 30 10.0 +17
BINY LR LR
comp=Z,3µm,19.0s,MS5.8
LONY Lake Ozonia 106.84 48 PFAKE 00 30 10.0 +14
LONY LR LR
comp=Z,1µm,20.0s,MS5.4
NCB Newcomb 107.03 48 PFAKE 00 30 10.0 +14
NCB LR LR
comp=Z,1µm,22.0s,MS5.4
WMQ Urumqi 108.01 311 *e*PDIF Pdif 00 25 52.0 +1.1
WMQ PP PP 00 30 24.0 +3.1
WMQ SS SS 00 45 31.0 0.0
WMQ PP PP
comp=Z,64nm,8.0s
WMQ LR LR
comp=N,387nm,22.0s,MS5.0
WMQ LR LR
comp=E,287nm,20.0s,MS5.0
WMQ LR LR
comp=Z,275nm,20.0s,MS4.8
LBNH Lisbon 108.70 48 PFAKE 00 30 10.0 +11
LBNH LR LR
comp=Z,1µm,21.0s,MS5.5
WES Weston 108.98 50 PFAKE 00 30 10.0 +10
WES LR LR
comp=Z,3µm,20.0s,MS5.9
SJG San Juan 110.12 76 PFAKE 00 30 10.0 +7.4
SJG LR LR
comp=Z,881nm,19.0s,MS5.4
ZALV Zalesovo Beam 110.36 322 PP PP 00 30 42.3 +4.7
comp=Z,1.1nm,0.6s,baz=72,slow=4.8,SNR=4.7
PKME Peaks-Kenny Pk 110.64 47 PFAKE 00 30 10.0 +7.2
PKME LR LR
comp=Z,2µm,19.0s,MS5.8
DGAR Diego Garcia 111.51 255 PFAKE 00 30 20.0 +15
DGAR LR LR
comp=Z,2µm,19.0s,MS5.7
SCHQ Schefferville 112.16 37 PFAKE 00 30 20.0 +15
SCHQ LR LR
comp=Z,3µm,19.0s,MS5.9
GRGR Grenville 113.17 84 PFAKE 00 30 20.0 +12
GRGR LR LR
comp=Z,471nm,20.0s,MS5.1
BBSR BB Station 113.42 61 PFAKE 00 30 20.0 +11
BBSR LR LR
comp=Z,631nm,20.0s,MS5.2
KURK Kurchatov 114.28 319 PFAKE 00 30 20.0 +10
KURK LR LR
comp=Z,890nm,19.0s,MS5.4
BDFB Brasilia 116.78 117 PFAKE 00 30 30.0 +15
BDFB LR LR
comp=Z,639nm,19.0s,MS5.3
TKM2 Tokmak 2 116.80 310 PFAKE 00 30 30.0 +15
TKM2 LR LR
comp=Z,657nm,20.0s,MS5.2
SFJD Kangerlussuaq 117.07 22 PFAKE 00 30 30.0 +16
SFJD LR LR
comp=Z,2µm,19.0s,MS5.7
AAK Ala-Archa 117.62 310 PFAKE 00 30 30.0 +14
AAK LR LR
comp=Z,621nm,20.0s,MS5.2
EKS2 Erkin-Say 118.15 310 PFAKE 00 30 30.0 +13
EKS2 LR LR
comp=Z,701nm,19.0s,MS5.3
NIL Nilore 118.77 300 PFAKE 00 30 30.0 +11
NIL LR LR
comp=Z,43nm,21.0s,MS4.1
BVAR Borovoye Array 119.02 322 PKP PKPdf 00 30 17.9 -0.7
comp=Z,0.5nm,0.5s,baz=304,slow=10,SNR=6.9
BRVK Borovoye 119.08 322 PFAKE 00 30 30.0 +11
BRVK LR LR
comp=Z,816nm,20.0s,MS5.4
KBL Kabul 122.26 301 *e*PKPdf PKPdf 00 30 26.2 +0.7
ARU Arti 124.46 328 PFAKE 00 30 40.0 +11
ARU LR LR
comp=Z,844nm,19.0s,MS5.4
ARU Arti 124.46 328 PKIKP PKPdf 00 30 33.8 +4.8
ARCES ARCESS Array B 125.53 352 PKP PKPdf 00 30 30.9 +0.2
comp=Z,8.2nm,1.0s,baz=26,slow=4.3,SNR=2.9
ABPO Ambohimpanom 127.47 230 PFAKE 00 30 50.0 +14
ABPO LR LR
comp=Z,2µm,20.0s,MS5.8
MSEY Mahe Island 128.14 250 PFAKE 00 30 50.0 +13
MSEY LR LR
comp=Z,987nm,20.0s,MS5.5
SUR Sutherland 130.00 195 PFAKE 00 30 50.0 +10
SUR LR LR
comp=Z,1µm,19.0s,MS5.7
RCBR Riachuelo 131.85 114 PFAKE 00 31 00.0 +16
RCBR LR LR
comp=Z,1µm,20.0s,MS5.5
BOSA Boshof 132.21 201 PFAKE 00 31 00.0 +15
BOSA LR LR
comp=Z,1µm,20.0s,MS5.7
OBN Obninsk 135.18 337 PFAKE 00 31 00.0 +11
OBN LR LR
comp=Z,761nm,19.0s,MS5.4
LBTB Lobatse 135.35 204 PFAKE 00 31 00.0 +9.3
LBTB LR LR
comp=Z,1µm,19.0s,MS5.6
KIV Kislovodsk 139.34 320 PFAKE 00 31 10.0 +13
KIV LR LR
comp=Z,635nm,20.0s,MS5.4
KIV Kislovodsk 139.34 320 *i* PKIKP PKPdf 00 31 01.6 +4.2
KIV pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 141.40 338 PKP PKPdf 00 30 59.8 -1.1
comp=Z,2.2nm,0.7s,baz=37,slow=3.6,SNR=4.6
KIEV Kiev 141.41 338 PFAKE 00 31 10.0 +9.1
KIEV LR LR
comp=Z,770nm,21.0s,MS5.4
HAKT HAKKARI 141.63 311 *e*P PKPdf 00 31 02.2 +0.4
LSZ Lusaka 142.59 214 PFAKE 00 31 20.0 +16
LSZ LR LR
comp=Z,1µm,21.0s,MS5.6
TSUM Tsumeb 143.41 196 *e*PKPdf PKPdf 00 31 04.3 -1.1
TSUM LR LR
comp=Z,2µm,19.0s,MS5.9
MARD Mardin 143.84 312 *i* P PKPdf 00 31 03.7 -2.0
LVV L'vov 143.89 342 *e*PKIKP PKPdf 00 31 08.9 +3.6
DIYA Diyarbakir 144.03 313 *i* P PKPdf 00 31 03.9 -2.1
KWP Kalwaria 144.44 343 *e*PKP PKPdf 00 31 04.7 -1.6
KWP Kalwaria 144.44 343 *e*PKP PKPdf 00 31 04.7 -1.6
KWP LR LR
comp=Z,1µm,20.0s,MS5.7
KWP Kalwaria 144.44 343 ⇑*i*P PKPdf 00 31 04.2 -2.1
KEMA Kemaliye 144.47 316 ⇑*i*P PKPdf 00 31 05.7 -1.0
KIS Kishinev 144.56 335 *e*PKIKP PKPdf 00 31 05.0 -1.6
KIS *e* 00 31 14.0
KIS Kishinev 144.56 335 *e*PP PP 00 34 36.0 +14
OJC Ojcow 144.65 346 *e*PKP PKPdf 00 31 05.0 -1.7
CLL Collm 144.72 354 *e*PKP PKPdf 00 31 05.0 -1.7
CLL *e* 00 31 11.0
CLL LR LR
comp=Z,1µm,17.4s,MS5.7
CLL Collm 144.72 354 *e*PKPdf PKPdf 00 31 05.0 -1.7
CLL *e*PKiKP PKiKP 00 31 11.0 +0.5
CLL *ex* x 00 31 24.0
CLL Lm 01 41 00.0
comp=N,900nm,18.0s
CLL Lm 01 41 00.0
comp=E,500nm,19.2s
KSP Ksiaz 144.74 350 *e*PKP PKPdf 00 31 06.6 -0.2
KSP Ksiaz 144.74 350 *e*PKP PKPdf 00 31 05.3 -1.5
KSP *ep*PKP pPKPdf 00 31 20.6 +0.2
KSP LR LR
comp=Z,2µm,19.4s,MS5.9
KSP Ksiaz 144.74 350 *e*PKIKP PKPdf 00 31 05.3 -1.5
KSP *e* 00 31 20.6
STHS Stebnicka Huta 145.04 344 *e*PKP PKPdf 00 31 07.0 -0.4
BRG Berggiesshubel 145.04 353 *e*PKIKP PKPdf 00 31 07.7 +0.4
BRG pmax pmax
comp=Z,50nm,2.3s
BRG Berggiesshubel 145.04 353 *e*PKPbc PKPbc 00 31 06.8 +0.1
BRG Berggiesshubel 145.04 353 *e*PKP PKPdf 00 31 07.7 +0.3
comp=Z,84nm,2.3s
UPC Upice 145.11 350 *e*PKP PKPdf 00 31 06.3 -1.1
KOLS Kolonicke sedl 145.20 343 *e*PKP PKPdf 00 31 06.9 -0.7
DPC Dobruska-Polom 145.21 350 *e*PKP PKPdf 00 31 07.1 -0.5
NIE Niedzica 145.27 345 *e*PKP PKPdf 00 31 07.6 -0.2
PVCC Panska Ves 145.30 352 *e*PKP PKPdf 00 31 07.1 -0.7
PVCC *ep*PKP pPKPdf 00 31 14.2 -7.2
AKCD Akcadag 145.36 315 ⇑*i*P PKPbc 00 31 08.0 -0.2
OKC Ostrava-Krasne 145.37 348 *e*PKP PKPdf 00 31 07.8 -0.1
OKC *ex* x 00 31 13.8
BUR08 Bucovina Ar. S 145.41 339 *e*PKPdf PKPdf 00 31 08.3 +0.3
BURAR Bucovina Array 145.42 339 ⇑P PKPbc 00 31 08.1 0.0
BURAR Bucovina Array 145.42 339 ⇑*i*P PKPbc 00 31 08.1 0.0
UCC Uccle 145.42 3 PKP PKPdf 00 31 08.2 +0.3
UBBA Unterbreizbach 145.43 357 *e*PKPbc PKPbc 00 31 07.6 -0.4
CRVS Cervenica-Dubn 145.45 344 *e*PKP PKPdf 00 31 07.9 -0.2
UZH Uzhgorod 145.46 343 ⇓*e*PKIKP PKPdf 00 31 07.7 -0.4
UZH *i* 00 31 16.0
UZH *e* 00 31 23.0
MOX Moxa 145.50 355 *e*PKP PKPdf 00 31 07.5 -0.6
MOX
comp=Z,1µm,18.0s
MOX Moxa 145.50 355 *e*PKPbc PKPbc 00 31 07.9 -0.3
HGN Heimansgroeve 145.53 2 *e*PKP PKPdf 00 31 09.3 +1.1
comp=Z,108nm,2.6s
MORC Moravsky Berou 145.54 348 *e*PKPdf PKPdf 00 31 08.1 -0.1
MORC Moravsky Berou 145.54 348 ⇑*i*P PKPdf 00 31 08.1 -0.1
TANN Tannenbergstha 145.66 354 *e*PKPbc PKPbc 00 31 08.4 -0.3
MEM Membach 145.68 2 PKP PKPdf 00 31 07.5 -0.9
SNF Seneffe 145.71 4 PKP PKPdf 00 31 08.2 -0.2
PRU Pruhonice 145.83 352 *e*PKP PKPdf 00 31 08.8 +0.1
PRU *ep*PKP pPKPdf 00 31 15.9 -6.4
PRU AMS AMS 01 42 40.0
comp=Z,1µm,18.7s
TRPA Tarpa 145.84 342 ⇑*i*P PKPdf 00 31 10.2 +1.4
BCLA Clavier 145.85 2 PKP PKPdf 00 31 09.1 +0.4
BMR Baia Mare 145.95 340 P PKiKP 00 31 12.4 -0.7
CTKT Corum 146.05 321 *i* P PKPbc 00 31 11.2 +1.0
TNS Taunus Mts 146.08 359 *e*PKPbc PKPbc 00 31 09.5 -0.5
GZT Gaziantep 146.08 314 *i* P PKPbc 00 31 11.1 +0.6
MANZ Manzenberg 146.11 355 *e*PKPbc PKPbc 00 31 09.7 -0.4
DOU Dourbes 146.14 3 PKP PKPdf 00 31 09.5 +0.3
GIVF Givet 146.14 3 *e*PKP1 PKPbc 00 31 09.4 -0.8
comp=Z,129nm,1.2s
BAIF Baives 146.15 4 *e*PKP1 PKPbc 00 31 09.7 -0.5
comp=Z,362nm,1.7s
PINB Pinarbasi 146.17 317 *i* P PKPbc 00 31 11.7 +1.0
VRAC Vranov 146.17 349 P PKPbc 00 31 11.1 +0.8
VRAC Vranov 146.17 349 ⇑*i*P PKPdf 00 31 10.4 +1.1
BALT Daday 146.30 324 *i* P PKPdf 00 31 08.3 -1.5
ROTZ Rotzenmuhle 146.32 354 *e*PKPbc PKPbc 00 31 10.6 -0.1
VRI Vrincioaia 146.32 335 ⇑P PKPbc 00 31 11.6 +0.7
VRI Vrincioaia 146.32 335 ⇑*i*P PKPbc 00 31 11.6 +0.7
PLOR Plostina 146.37 335 ⇑*i*P PKPdf 00 31 10.6 +0.8
TREC Trest 146.37 350 *e*PKP PKPdf 00 31 10.7 +1.1
TREC *ep*PKP pPKPdf 00 31 17.1 -6.1
TREC AMS AMS 01 43 10.0
comp=Z,1µm,14.9s
ILGA Ilgaz 146.42 323 *i* P PKPab 00 31 12.4 +0.2
ABH Alteburg 146.43 360 PKP PKPbc 00 31 11.7 +0.6
GRF Grafenberg Arr 146.48 356 *e*PKPbc PKPbc 00 31 11.3 +0.1
GRF *e*L 01 38 50.9
comp=Z,707nm,19.0s
VYHS Vyhne 146.49 346 *e*PKIKP PKPdf 00 31 11.2 +1.3
VYHS Vyhne 146.49 346 *e*PKP PKPdf 00 31 11.1 +1.2
KOLL Kolacno 146.50 347 *e*PKP PKPbc 00 31 11.6 +0.3
RUP Ruppelstein 146.61 0 PKP PKPbc 00 31 12.2 +0.6
WLF Walferdange 146.63 2 PKP PKPbc 00 31 11.7 0.0
TOD Tromm 146.69 358 PKP PKPbc 00 31 12.2 +0.4
PSZ Piszkesteto 146.77 345 *e*PKPbc PKPbc 00 31 12.2 0.0
PSZ LR LR
comp=Z,826nm,19.0s,MS5.5
PSZ Piszkesteto 146.77 345 ⇓*e*PKP PKPab 00 31 13.4 0.0
PSZ Piszkesteto 146.77 345 ⇓*i*P PKPbc 00 31 12.4 +0.3
SMOL Smolenice 146.77 348 *e*PKP PKPab 00 31 13.1 -0.2
ROSF Rostrenen 146.79 13 *e*PKP1 PKPbc 00 31 11.0 -1.2
comp=Z,133nm,1.3s
ANDN Andirin 146.79 315 *i* P PKPab 00 31 13.2 -0.7
KHC Kasperske Hory 146.80 353 *e*PKP PKPdf 00 31 11.9 +1.5
KHC *ep*PKP pPKPdf 00 31 19.7 -4.3
KHC *ex* x 00 31 28.5
KHC AMS AMS 01 43 10.0
comp=Z,900nm,18.6s
WET Wettzell 146.87 353 *e*PKPbc PKPbc 00 31 12.8 +0.4
FLN La Foliniere 146.91 10 *e*PKP1 PKPbc 00 31 11.4 -1.1
comp=Z,259nm,1.6s
FLN *e*MLR MLR
comp=Z,1µm,18.0s,MS5.4
FLN La Foliniere 146.91 10 *e*PKIKP PKPdf 00 31 11.4 +0.8
FLN MLR MLR
comp=Z,1µm,18.0s,MS5.7
CDAG Cicekdag 146.91 320 *i* P PKPbc 00 31 12.7 -0.2
MODS Modra-Piesok 146.94 348 *e*PKP PKPbc 00 31 13.0 +0.4
ELDT Eldivan 146.94 322 *i* P PKPdf 00 31 12.0 +1.1
MLR Muntele Rosu 146.94 336 P PKPbc 00 31 12.8 +0.1
MLR Muntele Rosu 146.94 336 ⇑*i*P PKPbc 00 31 12.4 -0.3
DRGR 146.98 341 P PKPbc 00 31 12.4 -0.3
DRGR 146.98 341 ⇑*i*P PKPbc 00 31 12.3 -0.5
SGMF Saint Gilles 147.02 12 *e*PKP1 PKPbc 00 31 11.7 -1.1
comp=Z,186nm,1.3s
GEC2 GERESS Array S 147.06 352 *e*PKPbc PKPbc 00 31 12.4 -0.5
GEC2 GERESS Array S 147.06 352 *e*PKPbc PKPbc 00 31 12.8 -0.1
GERES GERESS Array B 147.06 352 PKPbc PKPbc 00 31 12.8 -0.1
comp=Z,9.5nm,0.9s,baz=29,slow=3.0,SNR=31
AVNT Avonos 147.11 318 *i* P PKPbc 00 31 12.9 -0.4
LDF La Druitiere 147.13 9 *e*PKP1 PKPbc 00 31 12.0 -1.1
comp=Z,173nm,1.4s
ZST Bratislava 147.14 348 *e*PKP PKPbc 00 31 13.7 +0.5
GRR Gorron 147.21 10 *e*PKP1 PKPbc 00 31 12.4 -0.9
comp=Z,128nm,1.2s
BR131 Keskin Array S 147.30 321 *e*PKPbc PKPbc 00 31 14.0 +0.1
BR131 LR LR
comp=Z,656nm,21.0s,MS5.4
BRTR Keskin Array B 147.30 321 PKPbc PKPbc 00 31 13.4 -0.5
comp=Z,7.4nm,1.0s,baz=139,slow=1.7,SNR=13
BRTR Keskin Array B 147.30 321 ⇑*i*PKIKP PKPbc 00 31 13.6 -0.3
VOIR 147.34 337 P PKPbc 00 31 14.2 +0.4
VOIR 147.34 337 ⇓*i*P PKPbc 00 31 14.4 +0.6
BUD Budapest 147.39 345 ⇓*e*PKP PKPbc 00 31 14.1 +0.2
COBT Iskenderun 147.41 314 *i* P PKPbc 00 31 15.0 +0.7
STU Stuttgart 147.51 358 *e*PKPbc PKPbc 00 31 13.8 -0.4
CONA Conrad Observa 147.63 349 ⇑*ip*PKPdf PKPbc 00 31 14.7 +0.1
comp=Z,110nm,1.3s,SNR=14
CSNA Conrad Observa 147.63 349 ⇑*ip*PKPdf PKPbc 00 31 14.6 +0.1
comp=Z,100nm,1.3s
ANTO Ankara 147.71 322 *e*PKPbc PKPbc 00 31 15.4 +0.4
ANTO LR LR
comp=Z,648nm,19.0s,MS5.4
ANTO Ankara 147.71 322 ⇓*i*P PKPbc 00 31 14.4 -0.6
ASCN Ascension 147.73 136 PFAKE 00 31 20.0 +7.0
ASCN LR LR
comp=Z,3µm,19.0s,MS6.0
SOP Sopron 147.74 348 ⇓*e*PKP PKPab 00 31 18.1 +0.9
MEZF Maizieres J'vi 147.75 3 *e*PKP1 PKPbc 00 31 14.4 -0.4
comp=Z,248nm,1.7s
CDF Champ du Feu 147.90 0 *e*PKP1 PKPbc 00 31 14.8 -0.4
comp=Z,228nm,1.6s
MOA Molln 147.96 351 ⇑*i*PKPab PKPbc 00 31 16.1 +0.7
comp=Z,41nm,1.4s,SNR=12
BFO Black Forest 147.97 359 *e*PKPbc PKPbc 00 31 15.0 -0.4
BFO LR LR
comp=Z,525nm,19.0s,MS5.3
BFO Black Forest 147.97 359 *e*PKPbc PKPbc 00 31 15.4 0.0
FUR Furstenfeldbru 147.99 355 *e*PKPbc PKPbc 00 31 15.7 +0.2
GULE Gulek 148.00 316 *i* P Px 00 30 51.1
THEF They Montfort 148.06 2 PKP PKPdf 00 31 13.0 +0.5
ECH Echery 148.10 0 PKP PKPbc 00 31 15.4 -0.4
ECH Echery 148.10 0 *e*PKP2 PKPbc 00 31 15.9 +0.1
HENT Hendek 148.16 325 *i* P PKPbc 00 31 17.1 +1.0
NEF NEVSHA 148.18 332 P PKPbc 00 31 17.5 +1.3
GZR Gura Zlata 148.19 339 P PKPbc 00 31 16.8 +0.7
SPAK Spaichingen-Ko 148.19 358 PKP PKPbc 00 31 16.3 +0.3
HAU Haudompre 148.29 1 *e*PKP1 PKPbc 00 31 15.8 -0.5
comp=Z,110nm,1.3s
HAU *e*MLR MLR
comp=Z,1µm,17.8s,MS5.4
HAU Haudompre 148.29 1 *e*PKP2 PKPbc 00 31 15.8 -0.5
HAU MLR MLR
comp=Z,1µm,17.8s,MS5.7
ARSA Arzberg 148.34 349 ⇑*i*PKiKP PKiKP 00 31 17.0 -1.1
comp=Z,34nm,1.4s,SNR=7.1
BZS Buzias 148.37 341 P PKPbc 00 31 16.7 +0.1
BZS Buzias 148.37 341 ⇑*i*P PKPbc 00 31 16.1 -0.5
FELD Feldberg im Sc 148.43 359 PKP PKPbc 00 31 15.8 -0.9
MOF Molkenrain 148.46 0 PKP PKPbc 00 31 16.1 -0.6
HINF Hinteralfeld 148.49 1 *e*PKP1 PKPbc 00 31 16.3 -0.5
PKSM Moragy 148.67 345 P PKPbc 00 31 16.6 -0.8
PKSM Moragy 148.67 345 ⇑*i*P PKPbc 00 31 16.4 -0.9
RETA Reutte 148.71 356 ⇑*i*PKPbc PKPbc 00 31 17.1 -0.2
comp=Z,55nm,1.8s,SNR=5.7
WATA Walderalm 148.79 355 ⇑*i*PKiKP PKiKP 00 31 18.0 -1.0
comp=Z,9.2nm,1.2s
HYF Humbligny 148.79 6 *e*PKP1 PKPbc 00 31 17.3 -0.3
MOTA Moosalm 148.82 355 ⇑*i*PKiKP PKPbc 00 31 18.0 +0.3
comp=Z,28nm,1.1s,SNR=12
WTTA Wattenberg 148.85 354 ⇑*i*PKPbc PKPbc 00 31 17.7 0.0
comp=Z,65nm,1.6s
LOR Lormes 148.90 5 *e*PKP1 PKPbc 00 31 17.6 -0.3
comp=Z,252nm,1.8s
LOR *e*MLR MLR
comp=Z,1µm,19.5s,MS5.4
LOR Lormes 148.90 5 *e*PKP2 PKPbc 00 31 17.6 -0.3
LOR MLR MLR
comp=Z,1µm,19.5s,MS5.7
LOMF Lomont 148.96 1 PKP PKPbc 00 31 17.4 -0.6
DAVA Damuels 148.96 357 ⇑*i*PKPbc PKPbc 00 31 17.6 -0.4
comp=Z,50nm,1.2s,SNR=7.6
KDHN Kadinhani 148.97 321 *i* P PKPbc 00 31 18.2 -0.1
SOKA Soboth 148.98 350 ⇑*i*PKPbc PKPbc 00 31 17.4 -0.7
comp=Z,48nm,1.6s
PERS Pernice 149.01 350 *e*PKPbc PKPbc 00 31 17.8 -0.4
BORA Eskisehir 149.06 324 *i* P PKPbc 00 31 18.5 -0.1
MFF Saint Martin d 149.06 10 *e*PKP1 PKPbc 00 31 17.4 -0.9
comp=Z,359nm,1.7s
ESKT Eskisehir 149.08 323 *e*P PKPdf 00 31 14.6 +0.1
SSF Saint Saulge 149.08 5 *e*PKP1 PKPbc 00 31 18.1 -0.2
comp=Z,332nm,1.6s
FETA Feichten 149.17 356 ⇑*i*PKPbc PKPbc 00 31 18.3 -0.2
comp=Z,77nm,1.6s,SNR=12
OBKA Obir 149.23 350 ⇑*i*PKPbc PKPbc 00 31 17.7 -1.0
comp=Z,28nm,1.4s
ELBA Catalca 149.24 328 *i* P PKPbc 00 31 18.8 -0.2
ABTA Abfaltersbach 149.27 353 ⇑*ip*PKPdf PKPbc 00 31 17.0 -1.8
comp=Z,38nm,1.2s,SNR=7.3
AVF Avril sur Loir 149.34 5 *e*PKP1 PKPbc 00 31 18.2 -0.8
comp=Z,249nm,1.7s
BGF Bois d'Agland 149.52 6 *e*PKP1 PKPbc 00 31 19.0 -0.4
comp=Z,365nm,1.8s
SMF Signal de Mont 149.52 5 *e*PKP1 PKPbc 00 31 19.0 -0.4
comp=Z,104nm,1.3s
BOLV Bolvadin 149.55 322 *i* P PKPdf 00 31 14.5 -0.7
ERMK Ermenek 149.60 317 *i* P PKPbc 00 31 18.9 -1.1
ULDT Uludag 149.60 326 *i* P PKPbc 00 31 17.4 -2.4
APPI Appiano 149.67 355 PKP PKPbc 00 31 18.6 -1.2
TCF Toulx Ste Croi 149.71 7 *e*PKP1 PKPbc 00 31 19.2 -0.7
comp=Z,192nm,1.5s
TUE Stuetta 149.80 357 *e*PKPbc PKPbc 00 31 20.2 +0.1
TUE LR LR
comp=Z,882nm,20.0s,MS5.6
DIM Dimitrovgrad 149.93 332 P PKPbc 00 31 19.8 -0.8
AGO Saint Agoulin 150.04 6 PKP PKPbc 00 31 20.7 0.0
CTI Castel Tesino 150.06 354 PKP PKPbc 00 31 20.5 -0.3
BOJS Bojanci 150.08 349 *e*PKPbc PKPbc 00 31 21.3 +0.5
PGB Panagyurishte 150.10 335 P PKPbc 00 31 21.0 0.0
TRI Trieste 150.13 351 *e*PKPbc PKPbc 00 31 20.4 -0.6
TRI LR LR
comp=Z,960nm,20.0s,MS5.6
GDZ Gediz 150.15 324 *i* P PKPbc 00 31 19.8 -1.4
PLDF La Plantade 150.17 5 PKP PKPbc 00 31 21.7 +0.6
CSS Prodhromos 150.25 314 PFAKE 00 31 30.0 +14
CSS LR LR
comp=Z,457nm,20.0s,MS5.3
ISP Isparta 150.38 321 P PKPbc 00 31 22.0 +0.2
ISP LR LR
comp=Z,545nm,20.0s,MS5.3
VAI Varese 150.43 358 PKP PKPbc 00 31 21.0 -0.7
VTS Vitosha 150.45 336 ⇓PKP2 PKPbc 00 31 23.1 +1.3
VTS Vitosha 150.45 336 P PKPbc 00 31 19.5 -2.3
VTS Vitosha 150.45 336 ⇓*i*P PKPbc 00 31 23.0 +1.2
RJF Les Rejaudoux 150.59 9 *e*PKP1 PKPbc 00 31 21.5 -0.6
comp=Z,340nm,1.7s
RJF *e*MLR MLR
comp=Z,1µm,18.8s,MS5.5
RJF Les Rejaudoux 150.59 9 *e*PKHKP 00 31 21.5
RJF MLR MLR
comp=Z,1µm,18.8s,MS5.8
DEMI Demirci 150.61 325 *e*P PKPbc 00 31 21.8 -0.5
RSL Roselend 150.62 1 PKP PKPdf 00 31 19.2 +2.5
KHAL Karahalli 150.63 323 *i* P PKPbc 00 31 22.3 -0.1
FRNF Fournols 150.64 7 PKP PKPbc 00 31 22.6 +0.4
LPL La Plagne 150.79 1 *e*PKP1 PKPbc 00 31 23.1 +0.6
comp=Z,321nm,1.9s
LPG La Plagne 150.81 1 *e*PKP1 PKPbc 00 31 23.4 +0.8
comp=Z,141nm,1.5s
LFF La Frestale 150.82 10 *e*PKP1 PKPbc 00 31 22.0 -0.6
comp=Z,216nm,1.5s
LBL Lubilhac 150.87 6 PKP PKPbc 00 31 20.9 -1.8
CAF Calviac 151.03 8 *e*PKP1 PKPbc 00 31 22.8 -0.3
comp=Z,204nm,1.8s
KKB Krupnik 151.11 335 P PKPbc 00 31 22.6 -0.8
BNI Bardonecchia 151.25 1 *e*PKPdf PKPdf 00 31 17.8 +0.1
BNI *e*PKPbc PKPbc 00 31 24.9 +1.2
BNI LR LR
comp=Z,836nm,21.0s,MS5.5
VIVF Saint-Julien-l 151.36 4 *e*PKP1 PKPbc 00 31 23.9 0.0
comp=Z,136nm,1.4s
ORIF Oris-en-Rattie 151.37 2 *e*PKP1 PKPbc 00 31 24.0 +0.1
comp=Z,129nm,1.5s
ORIF *e*MLR MLR
comp=Z,2µm,19.2s,MS5.5
MBAR Mbarara 151.56 236 PFAKE 00 31 30.0 +11
MBAR LR LR
comp=Z,713nm,21.0s,MS5.5
STIP Stip 151.61 336 *e*PKP PKPbc 00 31 23.1 -1.5
SKO Skopje 151.65 338 *e*PKP PKPbc 00 31 25.3 +0.6
VAY Valandovo 151.78 335 *e*PKP PKPdf 00 31 19.2 +0.6
AKAS Kas 151.97 320 *i* P PKPdf 00 31 22.0 +3.0
VLC Villacollemand 152.04 355 PFAKE 00 31 30.0 +11
VLC LR LR
comp=Z,1µm,22.0s,MS5.6
LASF Ste Croix 152.07 6 *e*PKP1 PKPbc 00 31 25.5 0.0
comp=Z,237nm,1.7s
SJPF Ste Jean 152.20 14 *e*PKP1 PKPbc 00 31 25.5 -0.4
comp=Z,148nm,1.8s
SMRF Simiane la Rot 152.29 3 *e*PKP1 PKPbc 00 31 26.3 +0.3
GCAM G?zelcaml? 152.38 325 *e*P PKPbc 00 31 26.4 0.0
BIA Bitola 152.52 337 *e*PKP PKPbc 00 31 26.9 +0.2
EPF Esparros 152.60 11 *e*PKP1 PKPbc 00 31 26.4 -0.4
comp=Z,97nm,1.6s
MTE Manteigas 152.62 25 PFAKE 00 31 30.0 +10
MTE LR LR
comp=Z,848nm,20.0s,MS5.5
OHR Ohrid 152.64 338 *e*PKP PKPbc 00 31 26.1 -0.8
BDRM Kayabasi 152.71 323 *e*P PKPbc 00 31 28.4 +1.2
TIR Tirane 152.76 339 PFAKE 00 31 30.0 +10
TIR LR LR
comp=Z,813nm,21.0s,MS5.5
AQU L'Aquila 153.46 350 PFAKE 00 31 30.0 +9.0
AQU LR LR
comp=Z,906nm,19.0s,MS5.6
APE Apeiranthos 153.77 326 ⇓*i*P PKPbc 00 31 29.1 -0.4
PAB San Pablo 154.59 22 PFAKE 00 31 30.0 +7.3
PAB LR LR
comp=Z,737nm,20.0s,MS5.5
ESDC Sonseca Array 154.61 21 PKPab PKPab 00 31 44.8 -1.1
comp=Z,2.5nm,0.8s,baz=326,slow=4.1,SNR=7.3
ESLA Sonseca Array 154.61 21 PFAKE 00 31 30.0 +7.3
ESLA LR LR
comp=Z,6µm,19.0s,MS6.4
CUC Castrocucco 155.22 344 PFAKE 00 31 30.0 +6.4

CUC				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
TIP	**Timpagrande**	**155.72**	**342**	PFAKE		00 31 40.0	+16	
TIP				LR	LR			
	comp=Z,1μm,19.0s,MS5.8							
SFS	**San Fernando**	**156.48**	**28**	PFAKE		00 31 40.0	+15	
SFS				LR	LR			
	comp=Z,2μm,20.0s,MS5.8							
VSL	**Villasalto**	**156.75**	**356**	PFAKE		00 31 40.0	+14	
VSL				LR	LR			
	comp=Z,729nm,19.0s,MS5.5							
CEL	**Celeste**	**156.82**	**343**	PFAKE		00 31 40.0	+14	
CEL				LR	LR			
	comp=Z,766nm,19.0s,MS5.5							
RTC	**Rabat Centre**	**158.13**	**33**	PFAKE		00 31 40.0	+12	
RTC				LR	LR			
	comp=Z,933nm,19.0s,MS5.6							
WDD	**Wield Dalam**	**159.44**	**343**	PFAKE		00 31 40.0	+11	
WDD				LR	LR			
	comp=Z,1μm,19.0s,MS5.8							
LIC	**Lamto**	**164.26**	**128**	*e*PKP2	PKPab	00 32 29.6	+1.0	
	comp=Z,138nm,1.6s							
LIC				*e*MLR	MLR			
	comp=Z,2μm,18.5s							
LIC	**Lamto**	**164.26**	**128**	*e*P	PKPab	00 32 26.7	-1.9	
	comp=Z,104nm,1.6s							
DBIC	**Dimbokro**	**164.68**	**127**	PKP	PKPdf	00 31 34.0	-1.0	
	comp=Z,6.2nm,1.2s,baz=180,slow=4.0,SNR=4.2							
DBIC				PKPab	PKPab	00 32 29.8	-0.6	
	comp=Z,4.2nm,0.9s,baz=211,slow=7.8,SNR=4.3							
DBIC	**Dimbokro**	**164.68**	**127**	PKP	PKPdf	00 31 34.0	-1.0	
DBIC				PKPab	PKPab	00 32 29.8	-0.6	
DBIC				LR	LR			
	comp=Z,1μm,19.0s							
TAM	**Tamanrasset**	**173.22**	**15**	*e*PKPdf	PKPdf	00 31 41.8	+1.7	
TORD	**Torodi Ar. Bea**	**173.66**	**118**	PKP	PKPdf	00 31 39.0	-1.5	
	comp=Z,2.1nm,1.1s,baz=339,slow=4.1,SNR=6.6							
TORD				PKPab	PKPdf	00 33 08.8	-1.4	
	comp=Z,7.1nm,1.0s,baz=262,slow=3.4,SNR=9.4							
TORD				PP	PP	00 37 01.5	-0.6	
	comp=Z,2.3nm,1.2s,baz=287,slow=4.0,SNR=5.1							
TORD	**Torodi Ar. Bea**	**173.66**	**118**	PKP	PKPdf	00 31 39.0	-1.5	
TORD				PKPab	PKPab	00 33 08.8	-1.4	
TORD				PP	PP	00 37 01.5	-0.6	

IDC 25 00:33:49.9±14.0, 2182S×17766W, h270km±142km, mb3.2/5, mb1 3.5/5, mb1mx3.3/16, mbtmp3.2/5, Error ellipse: s-maj=162.2km s-min=35.8km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.52**	**246**	P	P	00 40 38.3	-0.2
	1.5nm,0.4s,baz=90,slow=7.9,SNR=6.3						
ASAR	**Alice Springs**	**44.54**	**258**	P	P	00 41 35.5	-0.1
	1.3nm,0.6s,baz=94,slow=8.2,SNR=12						
WRA	**Warramunga Arr**	**44.75**	**263**	P	P	00 41 37.3	+0.1
	1.1nm,0.7s,baz=98,slow=8.4,SNR=5.8						
NVAR	**Mina Array Bea**	**81.76**	**43**	P	P	00 45 38.2	-0.5
	0.2nm,0.5s,baz=230,slow=7.8,SNR=3.6						
PDAR	**Pinedale Array**	**89.70**	**43**	P	P	00 46 18.7	+1.2
	0.2nm,0.6s,baz=183,slow=3.3,SNR=2.5						
BRTR	**Keskin Array B**	**147.95**	**311**	PKPbc	PKPbc	00 53 03.1	-0.4
	0.4nm,0.7s,baz=139,slow=5.0,SNR=3.7						
GERES	**GERESS Array B**	**151.55**	**344**	PKPbc	PKPbc	00 53 11.8	-0.1
	0.4nm,0.5s,baz=337,slow=1.3,SNR=6.0						

NEIC 25 00:34:18.9, 6412N×15233W, h14km, ML3.5(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHUM	**Lake Minchumin**	**0.24**	**179**	P	Pg	00 34 23.5	-0.6
CHUM				S	Sg	00 34 26.9	-0.8
BPAW	**Bear Paw Mtn.**	**0.59**	**92**	P	Pg	00 34 30.6	+0.2
BPAW				S	Sg	00 34 38.8	+0.5
KTH	**Kantishna Hill**	**0.85**	**132**	P	Pg	00 34 35.1	-0.2
KTH				S	Sg	00 34 46.5	+0.1
TRF	**Thorofare Moun**	**1.13**	**126**	P	Pb	00 34 40.2	0.0
TRF				S	Sb	00 34 55.0	+0.3
PPLA	**Purkeypile**	**1.23**	**177**	P	Pn	00 34 41.1	-0.5
MCK	**McKinley**	**1.55**	**103**	P	Pn	00 34 46.0	0.0
IM3	**Indian Mountai**	**1.96**	**343**	P	Pn	00 34 50.9	-0.7
TT01	**Tatalina**	**2.06**	**235**	P	Pn	00 34 53.1	+0.1
GCSA	**Galena City Sc**	**2.07**	**290**	P	Pn	00 34 53.0	-0.2
COLA	**College**	**2.08**	**67**	P	Pn	00 34 52.7	-0.6
SKT	**Skwentna**	**2.18**	**170**	P	Pn	00 34 54.8	+0.1
SKT				S	Sn	00 35 25.9	+4.4
IL1	**Eielson Array**	**2.45**	**72**	P	Pn	00 34 57.6	-0.7
GHO	**Glory Hole Cre**	**2.83**	**145**	P	Pn	00 35 04.4	+0.9
PMR	**Palmer**	**2.93**	**149**	P	Pn	00 35 06.0	+1.0
PMR				P		00 35 06.3	
SML	**Sawmill**	**2.96**	**140**	P	Pn	00 35 05.6	+0.3
COLD	**Coldfoot**	**3.24**	**15**	P	Pn	00 35 09.4	+0.2
SVW2	**Sparrevohn**	**3.39**	**208**	*e*P	Pn	00 35 10.2	-1.1
SLKM	**Skilak Lake**	**3.76**	**164**	*e*Pn	Pn	00 35 16.9	+0.6
SLKM				*e*Sn	Sn	00 36 08.1	+7.7
EGAK	**Eagle**	**4.88**	**77**	*e*Pn	Pn	00 35 31.7	0.0
EGAK				Sn	Sn	00 36 25.1	-2.8

IDC 25 00:35:51.0±2.1, 248N×12754E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/16, mbtmp3.8/3, MS4.4/1, Ms1 4.4/1, ms1mx3.8/22, Error ellipse: s-maj=182.5km s-min=26.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.26**	**164**	P	P	00 41 00.2	-0.1
	1.4nm,0.7s,baz=343,slow=11,SNR=6.8						
STKA	**Stephens Creek**	**36.69**	**160**	P	P	00 42 59.5	-0.1
	1.7nm,0.5s,baz=348,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**59.03**	**325**	P	P	00 45 52.9	+0.2
	0.4nm,0.5s,baz=115,slow=7.0,SNR=5.4						
MKAR				LR	LR	01 11 13.1	
	comp=Z,313nm,20.2s,baz=96,slow=36						

GUC 25 00:39:29.3±0.8, 2237S×7006W, h42km±7km, MD3.8, ML3.5, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOCH	**Tocopilla**	**0.30**	**335**	⇑*i*P	Pn	00 39 37.5	-0.3
TOCH				*i* S	Sn	00 39 43.5	-0.1
TOCH				AML	AML	00 39 44.3	
	comp=E,21μm,0.1s						
MACH	**Maria Elena**	**0.33**	**58**	*e*P	Pn	00 39 38.6	+0.6
MACH				*i* S	Sn	00 39 45.3	+1.1
MECH	**Mejillones**	**0.81**	**206**	⇓*e*P	Pn	00 39 44.2	-0.1
MECH				*i* S	Sn	00 39 56.0	+0.9
MECH				AML	AML	00 39 58.5	
	comp=N,3μm,0.5s						
CEN1	**Los Morros**	**1.02**	**187**	⇓*e*P	Pn	00 39 50.4	+3.2
CEN1				*i* S	Sn	00 40 05.9	+5.6
CEN1				AML	AML	00 40 06.9	
	comp=E,1μm,0.3s						
LVC	**Limon Verde**	**1.09**	**103**	⇓*e*P	Pn	00 39 49.5	+1.4
LVC				*i* S	Sn	00 40 04.4	+2.3
ANCH	**Antofagasta**	**1.34**	**194**	⇓*e*P	Pn	00 39 51.7	+0.1
ANCH				*i* S	Sn	00 40 09.4	+1.2
CPN1	**Cerro Paranal**	**2.27**	**188**	*e*P	Pn	00 40 03.9	-0.4
CPN1				*i* S	Sn	00 40 31.4	+0.5
CPN1				AML	AML	00 40 41.8	
	comp=E,210nm,0.6s						

CSEM 25 00:39:42.3±0.4, 3482N×2503E, h25km, MD3.5, Error ellipse: s-maj=9.2km s-min=3.3km az=13.0
THE 25 00:39:42.5, 3471N×2500E, h29km±2km, Error ellipse: s-maj=5.4km s-min=1.5km az=2.0
ATH 25 00:39:43.6, 3575N×2516E, h10km, MD3.5/3
ISC 25 00:39:39.4±2.2, 346N±01×2502E±007, h24km±10km, n31, σ0§61/40, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.50**	**339**	P	**Pb**	**00 39 50.1**	**+0.6**
SIVA				S	**Sb**	**00 39 56.6**	**+0.2**
LAST	**Lasithi**	**0.71**	**32**	P	**Pb**	**00 39 53.2**	**0.0**
LAST				S	**Sb**	**00 40 02.8**	**+0.2**
NPS	**Neapolis**	**0.86**	**34**	*e*PB	**Pb**	**00 39 55.0**	**-0.7**
VAM	**Vamos**	**1.09**	**322**	*e*PB	**Pb**	**00 40 00.0**	**+0.5**
ZKR	**Zakros**	**1.13**	**60**	P	**Pn**	**00 40 01.2**	**+1.5**
ZKR				S	**Sn**	**00 40 14.9**	**+0.4**
THR6	**Thira Island,**	**1.83**	**10**	P	**Pn**	**00 40 09.6**	**+0.4**
THR1	**Thera Island**	**1.85**	**11**	P	**Pn**	**00 40 09.0**	**-0.6**
THR3	**Thira Island,**	**1.88**	**9**	P	**Pn**	**00 40 09.9**	**-0.1**
THR5	**Thira Island,**	**1.88**	**8**	P	**Pn**	**00 40 09.8**	**-0.2**
KARP	**Karpathos**	**2.02**	**60**	*e*PB	**Pb**	**00 40 14.5**	**-0.9**
APE	**Apeiranthos**	**2.54**	**9**	P	**Pn**	**00 40 18.2**	**-0.9**
APE	**Apeiranthos**	**2.54**	**9**	P	**Pn**	**00 40 18.2**	**-0.9**
DID	**Didima**	**3.28**	**334**	P	**Pn**	**00 40 28.9**	**-0.4**

CSEM 25 00:54:19.7±0.2, 3698N×2932E, h15km, ML3.0, Error ellipse: s-maj=6.6km s-min=4.3km az=17.0
ISK 25 00:54:19.4, 3685N×2929E, h8km, MD2.9
DDA 25 00:54:20.3, 3697N×2918E, h7km±4km, Md2.9, Ml3.0
ISCJB 25 00:54:21.5±0.8, 3698N±005×2926E±004, h11km±6km, Error ellipse: s-maj=8.7km s-min=4.9km az=175.2
ISC 25 00:54:21.9±0.6, 3697N±004×2927E±004, h15km±5km, n9, σ1§14/18, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**41**	⇑*i*P	**Pg**	**00 54 27.8**	**-1.3**
GOLH				*i* S	**Sg**	**00 54 35.1**	**+1.2**
TURN	**Turunc**	**0.55**	**260**	⇓*i*P	**Pg**	**00 54 34.8**	**+2.2**
TURN				*i* S	**Sg**	**00 54 46.7**	**+6.8**
AKAS	**Kas**	**0.79**	**160**	*i* P	**Pg**	**00 54 35.5**	**-1.7**
AKAS				*i* S	**Sg**	**00 54 49.0**	**+1.5**
YER	**Yerkesik**	**0.81**	**282**	*e*PG	**Pg**	**00 54 36.0**	**-1.5**
YER				*e*SG	**Sg**	**00 54 48.4**	**+0.3**
BCK	**Bucak**	**1.16**	**65**	*e*PN	**Pn**	**00 54 42.9**	**-0.7**
BCK				*e*SN	**Sn**	**00 55 00.0**	**+0.8**
MLSB	**Milas**	**1.24**	**285**	*e*PN	**Pn**	**00 54 44.3**	**-0.3**
MLSB				*e*SN	**Sn**	**00 55 02.3**	**+1.2**
DAT	**Datca**	**1.38**	**260**	*e*PN	**Pn**	**00 54 45.6**	**-1.0**
DAT				*e*SN	**Sn**	**00 55 04.6**	**0.0**
BDRM	**Kayabasi**	**1.47**	**274**	*i* P	**Pn**	**00 54 46.9**	**-0.9**
BDRM				*i* S	**Sn**	**00 55 07.3**	**+0.6**
BDRM	**Kayabasi**	**1.47**	**274**	*i* P	**Pn**	**00 54 46.8**	**-1.0**
BDRM				*i* S	**Sn**	**00 55 07.3**	**+0.6**

GUC 25 00:58:31.2±0.8, 2248S×7042W, h36km±5km, ML3.7, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOCH	**Tocopilla**	**0.44**	**28**	*e*P	Pn	00 58 40.4	-0.6
TOCH				*i* S	Sn	00 58 47.5	-0.2
TOCH				AML	AML	00 58 48.0	
	comp=E,64μm,0.1s						
MECH	**Mejillones**	**0.62**	**182**	⇑*i*P	Pn	00 58 43.1	-0.4
MECH				*i* S	Sn	00 58 52.2	-0.1
MECH				AML	AML	00 58 58.9	
	comp=E,3μm,0.4s						
MACH	**Maria Elena**	**0.68**	**65**	⇓*i*P	Pn	00 58 44.5	+0.2
MACH				*i* S	Sn	00 58 54.6	+0.9
PECH	**Pedro de Valdi**	**0.70**	**100**	⇓*i*P	Pn	00 58 44.9	+0.3
PECH				*i* S	Sn	00 58 55.3	+1.1
PECH				AML	AML	00 58 55.8	
	comp=N,5μm,0.4s						
CEN1	**Los Morros**	**0.93**	**167**	⇓*i*P	Pn	00 58 49.6	+1.8
CEN1				*i* S	Sn	00 59 04.8	+4.9
ANCH	**Antofagasta**	**1.20**	**179**	⇑*i*P	Pn	00 58 49.7	-1.7
ANCH				*i* S	Sn	00 59 05.0	-1.4
LVC	**Limon Verde**	**1.40**	**96**	⇓*i*P	Pn	00 58 56.2	+1.9
LVC				*i* S	Sn	00 59 14.6	+3.1
LVC				AML	AML	00 59 16.0	
	comp=E,795nm,0.4s						
CPN1	**Cerro Paranal**	**2.13**	**180**	*e*P	Pn	00 59 03.4	-1.0

ISCJB 25 01:48:29.4±0.3, 7275S±004×15630E±005, h52km, mb4.8/45, MS4.1/11, Error ellipse: s-maj=6.8km s-min=5.9km az=153.8
MOS 25 01:48:30.7±0.9, 7215S×15635E, h65km, mb4.9/23, Error ellipse: s-maj=10.3km s-min=9.5km az=109.6
IDC 25 01:48:30.9±0.5, 7255S×15631E, h54km±4km, mb4.4/16, mb1 4.5/17, mb1mx4.5/20, mbtmp4.5/17, MS4.0/8, Ms1 4.0/8, ms1mx3.8/19, Error ellipse: s-maj=17.0km s-min=10.3km az=52.0
NEIC 25 01:48:33.2±1.0, 7265S×15638E, h77km±9km, mb4.7/18, Error ellipse: s-maj=7.8km s-min=7.0km az=47.0
BJI 25 01:48:36.5, 7535S×15620E, h119km, mB5.2, mb4.9
DJA 25 01:48:57, 7495S×15507E, h201km, mb4.8/11
ISC 25 01:48:31.3±0.3, 7275S±004×15633E±005, h54km, h54km±1.1km:pP-P, n136, σ1§08/118, mb4.8/45, MS4.1/11, 2C-3D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.18**	**121**	P	**Pn**	**01 49 32.4**	**-0.1**
	18nm,0.3s,baz=174,slow=8.3,SNR=3.3						
HNR				S	**Sn**	**01 50 22.0**	**+1.9**
	58nm,0.3s,baz=306,slow=8.4,SNR=3.1						
HNR	**Honiara**	**4.18**	**121**	P	**Pn**	**01 49 32.4**	**-0.1**
HNR				*e*Pn	**Pn**	**01 49 43.2**	**+11**
HNR				S	**Sn**	**01 50 22.0**	**+1.9**
HNR				*e*Sn	**Sn**	**01 50 26.8**	**+6.8**
HNR	**Honiara**	**4.18**	**121**	P	**Pn**	**01 49 32.4**	**-0.1**
HNR				S	**Sn**	**01 50 22.0**	**+1.9**
HNR				pmax	pmax		
	comp=Z,18nm,0.3s						
HNR				smax			
	comp=N,58nm,0.3s						
PMG	**Port Moresby**	**9.32**	**256**	*e*Pn	**Pn**	**01 50 46.4**	**+3.4**
PMG				*e*Sn	**Sn**	**01 52 26.4**	**0.0**
PMG	**Port Moresby**	**9.32**	**256**	P	**Pn**	**01 50 47.3**	**+4.3**
	comp=N,124nm,0.9s,comp=N,0.3nm						
COEN	**Coen**	**14.53**	**242**	*e*Pn	**Pn**	**01 51 57.0**	**+3.0**
	comp=N,29nm,0.8s						
COEN				*e*P		01 52 01.2	
COEN	**Coen**	**14.53**	**242**	P	**Pn**	**01 52 01.5**	**+7.5**
	comp=N,24nm,0.9s						
CTA	**Charters Tower**	**16.06**	**216**	*e*P	**Pn**	**01 52 15.9**	**+2.3**
	comp=N,12nm,0.8s						
CTA	**Charters Tower**	**16.06**	**216**	P	**Pn**	**01 52 15.7**	**+2.1**
	comp=N,0.4nm,0.3s,baz=34,slow=11,SNR=10						
CTA				LR	LR	01 57 33.6	
	comp=N,342nm,20.7s,baz=49,slow=34						
CTAO	**Charters Tower**	**16.06**	**216**	*e*Pn	**Pn**	**01 52 14.5**	**+0.9**
	comp=N,13nm,0.8s						
CTAO				*e*P		01 52 17.9	
CTAO	**Charters Tower**	**16.06**	**216**	*e*P	**Pn**	**01 52 14.5**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**16.06**	**216**	P	**Pn**	**01 52 21.2**	**+7.6**
	comp=Z,22nm,1.2s						
EIDS	**Eidsvold**	**18.68**	**195**	*e*P	**Pn**	**01 52 46.3**	**+0.3**
	comp=Z,59nm,1.0s						
ARMA	**Armidale**	**23.45**	**190**	*e*P	**P**	**01 53 35.9**	**-0.1**
GUMO	**Guam**	**23.64**	**331**	LR	LR	02 00 18.4	
	comp=Z,150nm,20.5s,MS3.5,baz=93,slow=30						
KAKA	**Kakadu**	**24.13**	**255**	*e*P	Px	01 53 27.4	
	comp=Z,160nm,0.6s						
WRAB	**Tennant Creek**	**24.75**	**237**	*e*P	**P**	**01 53 48.0**	**0.0**
	comp=Z,45nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**24.75**	**237**	*e*P	**P**	**01 53 48.0**	**0.0**
WRAB				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**24.75**	**237**	P	**P**	**01 53 47.8**	**-0.2**
WB2	**Warramunga Arr**	**24.76**	**237**	*e*P	**P**	**01 53 47.6**	**-0.4**
WRA	**Warramunga Arr**	**24.77**	**237**	P	**P**	**01 53 48.0**	**-0.1**
	comp=Z,50nm,0.8s,mb5.1,baz=62,slow=9.5,SNR=144						
WRA				PcP	PcP	01 57 23.5	-0.3
	comp=Z,2.9nm,0.9s,baz=54,slow=2.2,SNR=5.4						
WRA				LR	LR	02 03 13.5	
	comp=Z,342nm,18.5s,MS3.9,baz=70,slow=36						
WRA	**Warramunga Arr**	**24.77**	**237**	P	**P**	**01 53 48.0**	**-0.1**
WRA						01 57 23.5	
WRA				pmax	pmax		
	comp=Z,50nm,0.8s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA				MLR	MLR		
	comp=Z,342nm,18.5s						
SWI	**Sorong**	**25.79**	**283**	P	**P**	**01 54 02.9**	**+5.4**
	comp=Z,45nm,0.8s,mb5.1						
ASAR	**Alice Springs**	**27.00**	**230**	P	**P**	**01 54 07.0**	**-1.3**
	comp=Z,7.5nm,0.5s,mb4.4,baz=60,slow=9.6,SNR=142						
ASAR				PcP	PcP	01 57 28.5	-0.4
	comp=Z,1.3nm,0.8s,baz=57,slow=2.5,SNR=4.2						
ASAR	**Alice Springs**	**27.00**	**230**	P	**P**	**01 54 07.0**	**-1.3**
ASAR						01 57 28.5	
ASAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	**Stephens Creek**	**28.07**	**207**	*e*P	**P**	**01 54 18.0**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**28.07**	**207**	P	**P**	**01 54 17.5**	**-0.3**
	comp=Z,5.0nm,0.6s,mb4.3,baz=35,slow=11,SNR=13						
STKA				PcP	PcP	01 57 30.3	-1.1
	comp=Z,7.6nm,0.8s,baz=336,slow=2.0,SNR=8.3						
STKA				LR	LR	02 04 38.9	
	comp=Z,388nm,20.2s,MS4.0,baz=23,slow=34						
STKA	**Stephens Creek**	**28.07**	**207**	*e*P	**P**	**01 54 18.5**	**+0.7**
	comp=Z,1.0nm,0.8s						
CNB	**Canberra Magne**	**28.64**	**192**	*e*P	**P**	**01 54 22.7**	**-0.1**
FORT	**Forrest**	**35.31**	**225**	⇓*i*P	**P**	**01 55 20.8**	**-0.6**
	comp=Z,39nm,0.6s,mb5.5						
FORT	**Forrest**	**35.31**	**225**	*e*P	**P**	**01 55 20.8**	**-0.6**
	comp=Z,45nm,0.6s,mb5.6						
URZ	**Urewera**	**36.13**	**152**	P	**P**	**01 55 28.2**	**0.0**
	comp=Z,16nm,1.0s,mb4.9,baz=315,slow=2.9,SNR=3.8						
URZ				LR	LR	02 06 23.0	
	comp=Z,632nm,20.4s,MS4.4,baz=186,slow=30						
KAPI	**Kappang**	**36.43**	**271**	*e*P	**P**	**01 55 29.8**	**-1.4**
PCI	**Palu**	**36.92**	**278**	P	**P**	**01 55 37.4**	**+2.0**
	comp=Z,90nm,1.1s,mb5.5						
MBWA	**Marble Bar**	**37.95**	**245**	*e*P	**P**	**01 55 42.8**	**-1.2**
	comp=Z,14nm,0.6s,mb4.8						
MBWA	**Marble Bar**	**37.95**	**245**	P	**P**	**01 55 44.2**	**+0.2**
RPZ	**Rata Peaks**	**38.53**	**163**	P	**P**	**01 55 48.7**	**+0.2**
	comp=Z,24nm,0.8s,mb5.0,baz=80,slow=2.2,SNR=7.8						
KKM	**Kota Kinabalu**	**42.15**	**287**	*e*P	**P**	**01 56 18.6**	**-0.2**
KLBR	**Kellerberrin**	**43.33**	**231**	⇑*i*P	**P**	**01 56 27.0**	**-1.2**
	comp=Z,45nm,0.6s,mb5.4						
MUN	**Mundaring**	**44.69**	**231**	*e*P	**P**	**01 56 37.8**	**-1.3**
BJII	**Banjamegara**	**46.22**	**267**	P	**P**	**01 56 53.7**	**+2.2**
KSM	**Kuching**	**46.73**	**279**	*e*P	**P**	**01 56 55.0**	**-0.5**
MJAR	**Matsushiro Arr**	**46.78**	**340**	P	**P**	**01 56 54.7**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=169,slow=8.9,SNR=5.2						
MJAR	**Matsushiro Arr**	**46.78**	**340**	P	**P**	**01 56 54.7**	**-0.7**
MJAR	**Matsushiro Arr**	**46.78**	**340**	P	**P**	**01 56 54.7**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAJO	**Matsushiro**	**46.78**	**340**	*e*P	**P**	**01 56 56.6**	**+1.2**
	comp=Z,6.2nm,0.7s,mb4.7						
MAJO	**Matsushiro**	**46.78**	**340**	*e*P	**P**	**01 56 56.6**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MAT	**Matsushiro**	**46.78**	**340**	P	**P**	**01 56 54.1**	**-1.3**
MAT				S	**S**	**02 03 25.0**	**-17**
LEM	**Lembang**	**48.33**	**267**	P	**P**	**01 57 08.7**	**+0.8**
CBJI	**Citeko**	**49.11**	**268**	P	**P**	**01 57 14.4**	**+0.5**
	comp=Z,248nm,0.7s						
KSRS	**Korea Array**	**51.80**	**331**	P	**P**	**01 57 34.2**	**+0.4**
	comp=Z,2.8nm,0.8s,mb4.2,baz=145,slow=7.6,SNR=7.1						
KSRS				pP	pP	01 57 48.5	+0.2
	comp=Z,3.0nm,0.7s,baz=143,slow=7.0,SNR=5.7						
KSRS				LR	LR	02 16 03.0	
	comp=Z,99nm,18.6s,MS3.9,baz=353,slow=32						
KSRS	**Korea Array**	**51.80**	**331**	P	**P**	**01 57 34.2**	**+0.4**
KSRS				*PP	pP	01 57 48.6	+0.3
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NJ2	**Nanjing**	**52.97**	**320**	*e*P	**P**	**01 57 43.8**	**+1.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
PPT	**Papeete**	**53.65**	**106**	*e*LR	LR	02 13 57.7	
	comp=Z,274nm,26.0s						
PPT	**Papeete**	**53.65**	**106**	LR	LR	02 14 09.5	
	comp=Z,11nm,20.9s,MS2.9,baz=156,slow=29						
YSS	**Yuzh-Sakhalins**	**55.31**	**349**	*i* P	**P**	**01 58 00.3**	**+1.0**
YSS				pmax	pmax		
	comp=Z,33nm,2.2s,mb5.0						
CN2	**Changchun**	**58.01**	**334**	*e*P	**P**	**01 58 22.4**	**+3.9**
GYA	**Guiyang**	**58.67**	**307**	P	**P**	**01 58 24.8**	**+1.3**
GYA				AP	pP	01 58 53.9	+16
GYA				XP	sP	01 59 06.8	+22
GYA				PP	PP	02 00 37.0	+3.1
GYA				S	**S**	**02 06 17.4**	**-7.0**
GYA				XS	sS	02 07 08.8	+20
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,50nm,5.1s						
NST	**Nakhon Sawan**	**60.14**	**293**	P	**P**	**01 58 34.2**	**+0.4**
PETK	**Petropavlovsk-**	**60.16**	**1**	LR	LR	02 22 00.3	
	comp=Z,95nm,18.6s,MS4.0,baz=336,slow=33						
KMI	**Kunming**	**61.27**	**304**	P	**P**	**01 58 41.4**	**+0.1**
KMI				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**62.10**	**295**	P	**P**	**01 58 47.2**	**+0.2**
	comp=Z,18nm,0.9s,mb5.2,baz=115,slow=4.9,SNR=49						
CMAR				pP	pP	01 59 02.0	+0.1
	comp=Z,10nm,0.8s,baz=118,slow=5.1,SNR=5.1						
CMAR	**Chiang Mai Arr**	**62.10**	**295**	P	**P**	**01 58 47.2**	**+0.2**
CMAR				*PP	pP	01 59 02.1	+0.2
CMAR				pmax	pmax		
	comp=Z,18nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
**CH

ULN	**Ulaanbaatar**	**69.95**	**327**	*e*P		**P**		**01 59 37.2**	**+0.4**
ULN				pmax		pmax				
	comp=Z,2.0nm,0.8s,mb4.1									
VNDA	**Vanda**	**70.28**	**179**	P		**P**		**01 59 38.4**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.5,baz=336,slow=6.2,SNR=25									
VNDA	**Vanda**	**70.28**	**179**	*e*P		**P**		**01 59 38.1**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.4									
VNDA	**Vanda**	**70.28**	**179**	P		**P**		**01 59 38.4**	**0.0**
VNDA				pmax		pmax				
	comp=Z,5.0nm,0.8s									
SONM	**Songino Array**	**70.28**	**327**	P		**P**		**01 59 39.4**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.2,baz=139,slow=7.1,SNR=14									
SONM	**Songino Array**	**70.28**	**327**	P		**P**		**01 59 39.4**	**+0.5**
SONM				pmax		pmax				
	comp=Z,3.0nm,0.7s									
SBA	**Scott Base**	**70.76**	**178**	*e*P		**P**		**01 59 42.8**	**+1.4**
LSA	**Lhasa**	**72.52**	**304**	P		**P**		**01 59 54.0**	**+1.2**
LSA				AMB		AMB				
	comp=Z,30nm,0.9s,mb5.2									
LSA	**Lhasa**	**72.52**	**304**	*e*P		**P**		**01 59 53.3**	**+0.5**
	comp=Z,7.1nm,0.8s,mb4.7									
LSA	**Lhasa**	**72.52**	**304**	*e*P		**P**		**01 59 53.3**	**+0.5**
LSA				pmax		pmax				
	comp=Z,7.0nm,0.8s,mb4.6									
BOD	**Bodaibo**	**73.36**	**338**	*e*P		**P**		**01 59 56.8**	**-0.4**
BOD				pmax		pmax				
	comp=Z,4.0nm,0.9s,mb4.3									
BILL	**Bilibino**	**75.46**	**4**	*e*P		**P**		**02 00 07.8**	**-1.3**
BILL				*e*		pP		02 00 20.8	-3.6
BILL				*e*				02 03 05.1		
BILL				pmax		pmax				
	comp=Z,5.0nm,1.3s,mb4.3									
WMQ	**Urumqi**	**79.93**	**317**	*e*P		**P**		**02 00 36.0**	**+1.4**
WMQ				AMB		AMB				
	comp=Z,21nm,1.0s,mb5.0									
HYB	**Hyderabad**	**80.61**	**289**	*e*P		**P**		**02 00 38.0**	**-0.8**
HYB	**Hyderabad**	**80.61**	**289**	*i* P		**P**		**02 00 38.0**	**-0.8**
TIXI	**Tiksi**	**80.82**	**351**	*i* P		**P**		**02 00 37.5**	**-1.2**
TIXI				pmax		pmax				
	comp=Z,6.0nm,2.3s,mb4.1									
COLA	**College**	**82.86**	**21**	*e*P		**P**		**02 00 49.8**	**+0.1**
MK31	**Makanchi Array**	**84.48**	**318**	*e*P		**P**		**02 00 58.4**	**+0.1**
MK31				*e*pP		pP		02 01 13.2	-0.6
MKAR	**Makanchi Array**	**84.48**	**318**	P		**P**		**02 00 58.1**	**-0.2**
	comp=Z,26nm,0.8s,mb5.4,baz=103,slow=5.9,SNR=112									
MKAR				pP		pP		02 01 13.3	-0.5	
	comp=Z,11nm,0.8s,baz=102,slow=6.2,SNR=9.9									
MKAR	**Makanchi Array**	**84.48**	**318**	P		**P**		**02 00 58.1**	**-0.2**
MKAR				*PP		pP		02 01 13.4	-0.5	
MKAR				pmax		pmax				
	comp=Z,26nm,0.8s									
MKAR				pmax		pmax				
	comp=Z,11nm,0.8s									
MAW	**Mawson**	**84.65**	**203**	P		**P**		**02 00 58.8**	**0.0**
	comp=Z,13nm,0.9s,mb5.0,baz=97,slow=3.2,SNR=7.9									
MAW	**Mawson**	**84.65**	**203**	P		**P**		**02 00 58.8**	**0.0**
MAW				pmax		pmax				
	comp=Z,13nm,0.9s									
ZALV	**Zalesovo Beam**	**85.15**	**326**	P		**P**		**02 01 00.8**	**-0.7**
	comp=Z,6.2nm,0.6s,mb5.0,baz=106,slow=5.4,SNR=26									
ZALV				pP		pP		02 01 16.2	-0.9	
	comp=Z,5.0nm,0.6s,baz=106,slow=5.4,SNR=6.8									
ZALV	**Zalesovo Beam**	**85.15**	**326**	P		**P**		**02 01 00.8**	**-0.7**
ZALV				pP		pP		02 01 16.2	-0.9	
ZALV	**Zalesovo Beam**	**85.15**	**326**	P		**P**		**02 01 00.8**	**-0.7**
ZALV				*PP		pP		02 01 16.2	-0.8	
ZALV				pmax		pmax				
	comp=Z,6.0nm,0.6s,mb4.9									
ZALV				pmax		pmax				
	comp=Z,5.0nm,0.6s,mb4.8									
NVS	**Novosibirsk**	**86.31**	**326**	*e*P		**P**		**02 01 05.0**	**-2.2**
NVS				pmax		pmax				
	comp=N,9.0nm,1.7s									
NVS				pmax		pmax				
	comp=E,9.0nm,1.7s									
NVS				pmax		pmax				
	comp=Z,14nm,1.7s,mb4.9									
KURK	**Kurchatov**	**87.87**	**322**	P		**P**		**02 01 14.0**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.6,baz=99,slow=4.7,SNR=14									
KURK				pP		pP		02 01 29.6	-0.9	
	comp=Z,2.0nm,0.5s,baz=98,slow=4.8,SNR=8.0									
KURK	**Kurchatov**	**87.87**	**322**	*e*P		**P**		**02 01 13.7**	**-1.2**
	comp=Z,7.7nm,0.7s,mb4.6									
KURK	**Kurchatov**	**87.87**	**322**	P		**P**		**02 01 14.0**	**-0.9**
KURK				*PP		pP		02 01 29.6	-0.9	
KURK				pmax		pmax				
	comp=Z,2.0nm,0.6s,mb4.5									
KURK				pmax		pmax				
	comp=Z,2.0nm,0.5s,mb4.6									
TKM2	**Tokmak 2**	**88.16**	**314**	*e*P		**P**		**02 01 16.2**	**-0.3**
	comp=Z,5.7nm,0.6s,mb5.0									
TKM2	**Tokmak 2**	**88.16**	**314**	*e*P		**P**		**02 01 16.2**	**-0.3**
TKM2				pmax		pmax				
	comp=Z,6.0nm,0.6s,mb5.0									
AML	**Almayashu**	**89.39**	**312**	*e*P		**P**		**02 01 22.7**	**+0.4**
	comp=Z,4.4nm,0.3s,mb5.3									
AML				*e*pP		pP		02 01 38.2	+0.3	
EKS2	**Erkin-Say**	**89.43**	**313**	*e*P		**P**		**02 01 22.3**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.8									
NVAR	**Mina Array Bea**	**90.85**	**52**	P		**P**		**02 01 28.8**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.8,baz=249,slow=4.1,SNR=5.0									
KBL	**Kabul**	**91.84**	**304**	*e*P		**P**		**02 01 31.9**	**-1.9**
	comp=Z,5.3nm,0.8s,mb4.9									
KBL	**Kabul**	**91.84**	**304**	*e*P		**P**		**02 01 32.0**	**-1.9**
KBL				pmax		pmax				
	comp=Z,5.0nm,0.8s,mb4.9									
SYO	**Syowa Base**	**92.50**	**199**‖	*e*P		**P**		**02 01 33.4**	**-2.8**
BVAR	**Borovoye Array**	**93.31**	**323**	P		**P**		**02 01 38.8**	**-1.4**
	comp=Z,4.3nm,0.7s,mb5.0,baz=105,slow=5.6,SNR=18									
BVAR				pP		pP		02 01 54.5	-1.4	
	comp=Z,2.0nm,0.6s,baz=109,slow=5.6,SNR=6.3									
BVAR	**Borovoye Array**	**93.31**	**323**	P		**P**		**02 01 38.8**	**-1.4**
BVAR				*PP		pP		02 01 54.5	-1.4	
BVAR				pmax		pmax				
	comp=Z,4.0nm,0.7s									
BVAR				pmax		pmax				
	comp=Z,2.0nm,0.6s									
BRVK	**Borovoye**	**93.38**	**323**	*e*P		**P**		**02 01 38.5**	**-2.0**
	comp=Z,4.4nm,1.1s,mb4.8									
BRVK	**Borovoye**	**93.38**	**323**	*e*P		**P**		**02 01 38.5**	**-2.0**
BRVK				pmax		pmax				
	comp=Z,4.0nm,1.1s,mb4.8									
LPIG	**La Paz**	**95.98**	**67**	LR		LR		02 36 59.2		
	comp=Z,143nm,21.1s,MS4.4,baz=178,slow=30									
AKASG	**Malin Array Be**	**118.53**	**325**	PKP		PKPdf		02 07 11.2	-1.8	
	comp=Z,1.1nm,0.6s,baz=56,slow=2.6,SNR=6.8									
AKASG	**Malin Array Be**	**118.53**	**325**	PKIKP		PKPdf		02 07 11.2	-1.8	
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.6s									
BRTR	**Keskin Array B**	**119.55**	**312**	PKP		PKPdf		02 07 14.2	-1.1	
	comp=Z,0.4nm,0.6s,baz=131,slow=3.7,SNR=4.8									
CLL	**Collm**	**126.68**	**332**	*i* PKPdf		PKPdf		02 07 28.5	-0.2	
	comp=Z,4.0nm,0.7s									
GERES	**GERESS Array B**	**127.97**	**329**	PKP		PKPdf		02 07 30.9	-0.3	
	comp=Z,1.3nm,0.8s,baz=52,slow=1.6,SNR=13									
GERES				pPKP		pPKPdf		02 07 45.5	-1.9	
	comp=Z,0.4nm,0.7s,baz=118,slow=2.3,SNR=2.6									
GERES	**GERESS Array B**	**127.97**	**329**	PKIKP		PKPdf		02 07 30.9	-0.3	
GERES								02 07 45.5		
GERES				pmax		pmax				
	comp=Z,1.0nm,0.8s									
LPAZ	**La Paz**	**130.16**	**118**	PKP		PKPdf		02 07 36.2	-0.1	
	comp=Z,2.4nm,0.9s,baz=26,slow=3.1,SNR=7.5									
LPAZ	**La Paz**	**130.16**	**118**	PKP		PKPdf		02 07 36.2	-0.1	
LPAZ	**La Paz**	**130.16**	**118**	PKIKP		PKPdf		02 07 36.2	-0.1	
LPAZ				pmax		pmax				
	comp=Z,2.0nm,0.9s									
ESDC	**Sonseca Array**	**143.20**	**334**	PKhKP				02 07 55.7		
	comp=Z,1.0nm,0.8s,baz=5.2,slow=3.5,SNR=5.2									
BDFB	**Brasilia**	**146.84**	**133**	PKPbc		PKPbc		02 08 06.6	-1.9	
	comp=Z,6.3nm,0.8s,baz=214,slow=4.2,SNR=18									
BDFB	**Brasilia**	**146.84**	**133**	PKP2		PKPbc		02 08 06.6	-1.9	
BDFB				pmax		pmax				
	comp=Z,6.0nm,0.8s									
TAM	**Tamanrasset**	**147.96**	**302**	*e*PKPbc		PKPbc		02 08 11.3	-0.2	
TOA0	**Torodi Ar. Sit**	**154.37**	**285**	*e*PKPdf		PKPdf		02 08 18.4	0.0	
TOA0				*e*PKPbc		PKPbc		02 08 25.4	-1.3	
TORD	**Torodi Ar. Bea**	**154.37**	**285**	PKP		PKPdf		02 08 17.1	-1.2	
	comp=Z,1.9nm,0.8s,baz=34,slow=1.4,SNR=8.9									
TORD				PKPbc		PKPbc		02 08 25.5	-1.2	
	comp=Z,6.4nm,0.8s,baz=59,slow=2.2,SNR=25									
TORD				PKPab		PKPab		02 08 39.8	-1.2	
	comp=Z,1.6nm,0.6s,baz=91,slow=3.0,SNR=6.3									
TORD	**Torodi Ar. Bea**	**154.37**	**285**	PKP		PKPdf		02 08 17.1	-1.2	
TORD				PKPbc		PKPbc		02 08 25.5	-1.2	
TORD				PKPab		PKPab		02 08 39.8	-1.2	
KIC	**Kosan Boka**	**161.18**	**268**	*e*PKP2		PKPab		02 09 10.0	-0.6	
	comp=Z,40nm,0.9s									
DBIC	**Dimbokro**	**161.31**	**269**	PKP		PKPdf		02 08 26.3	-0.7	
	comp=Z,3.4nm,1.0s,baz=64,slow=4.2,SNR=3.3									
DBIC				PKPab		PKPab		02 09 10.8	-0.4	
	comp=Z,5.2nm,0.6s,baz=85,slow=3.9,SNR=15									
DBIC	**Dimbokro**	**161.31**	**269**	PKP		PKPdf		02 08 26.3	-0.7	
DBIC				*e*PKPab		PKPab		02 09 10.5	-0.6	
DBIC				PKPab		PKPab		02 09 10.8	-0.4	
DBIC	**Dimbokro**	**161.31**	**269**	PKIKP		PKPdf		02 08 26.3	-0.7	
DBIC								02 09 10.8		
DBIC				pmax		pmax				
	comp=Z,3.0nm,1.0s									
DBIC				pmax		pmax				
	comp=Z,5.0nm,0.6s									
LIC	**Lamto**	**161.46**	**268**	*e*PKP2		PKPab		02 09 11.0	-0.8	
	comp=Z,42nm,1.2s									
TIC	**Toumodi**	**161.47**	**269**	*e*PKP2		PKPab		02 09 11.1	-0.7	
	comp=Z,29nm,0.8s									

IDC 25 02:23:06.8±49.0, 1670S×17326W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=938.6km s-min=182.2km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea**	**36.48**	**106**	*e*LR	LR	02 29 26.9	
	305nm,28.2s						
STKA	**Stephens Creek**	**43.52**	**241**	P	P	02 31 12.7	+0.3
	0.9nm,0.4s,baz=76,slow=12,SNR=6.7						
WRA	**Warramunga Arr**	**49.69**	**258**	P	P	02 32 00.6	-0.4
	0.2nm,0.4s,baz=96,slow=6.7,SNR=7.3						
ASAR	**Alice Springs**	**49.85**	**253**	P	P	02 32 02.1	0.0
	1.5nm,0.6s,baz=89,slow=8.5,SNR=34						

*NEIC **25** 02:27:41.3, 1699N×100.14W, h9km, MD4.0(MEX), After MEX.*
NEIC Felt at Acapulco.
MEX 25 02:27:41.3±1.3, 1699N×10014W, h9km±7km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.13**	**298**	*i* P	Pg	02 27 43.5	-0.8
CAIG				*i* S	Sg	02 27 46.4	-0.1
ACX	**Acapulco**	**0.25**	**118**	*i* P	Pg	02 27 45.8	-0.5
ACX				*i* S	Sg	02 27 49.6	-0.1
ZIIG	**Zihuatanejo**	**1.41**	**296**	*i* P	Pn	02 28 03.5	-3.6
ZIIG				*i* S	Sn	02 28 20.4	-5.3
PLIG	**Platanillo**	**1.53**	**23**	*i* P	Pn	02 28 06.2	-2.5
PLIG				*i* S	Sn	02 28 22.0	-6.7
PNIG	**Pinotepa**	**2.02**	**107**	*e*P	Pn	02 28 12.8	-2.8
PNIG				*i* S	Sn	02 28 36.5	-4.4
MZVM		**2.36**	**21**	*i* P	Pn	02 28 18.2	-2.0
MZVM				*i* S	Sn	02 28 46.1	-3.1
UTMO	**Huajuapan**	**2.39**	**69**	*i* P	Pn	02 28 18.2	-2.3
UTMO				*i* S	Sn	02 28 47.3	-2.6
PPM	**Popocatepetl**	**2.52**	**35**	*i* P	Pn	02 28 20.0	-2.4
PPM				*i* S	Sn	02 28 50.8	-2.5
PBVM	**Pinon**	**2.64**	**22**	*e*P	Pn	02 28 21.6	-2.5
PBVM				*i* S	Sn	02 28 52.9	-3.4
PTVM	**Pico Tres Padr**	**2.77**	**21**	*e*P	Pn	02 28 23.6	-2.3
PTVM				*i* S	Sn	02 28 56.8	-2.6
MOIG	**Morelia**	**2.86**	**340**	*e*P	Pn	02 28 23.4	-3.7
MOIG				*i* S	Sn	02 28 58.1	-3.4
IIO	**Organos**	**2.92**	**27**	*i* P	Pn	02 28 26.2	-1.7
IIO				*i* S	Sn	02 29 01.5	-1.7
TPIG	**Tehuac#an**	**3.01**	**61**	*i* S	Sn	02 29 04.2	-1.1
VHO	**Vista Hermosa**	**3.26**	**88**	*e*P	Pn	02 29 29.1	-3.5
VHO				*i* S	Sn	02 29 14.4	+2.8
CMIG	**Matias Romero**	**5.03**	**88**	*e*P	Pn	02 28 50.2	-6.8
CMIG				*i* S	Sn	02 29 43.5	-12

*BJI **25** 02:51:48.9, 3.19S×100.97E, h25km, mB6.0, mb6.0, Ms5.8, Msz5.7*
*IDC **25** 02:51:56.8±0.3, 276S×101.17E, h50km±2km, mb5.4/26, mb1 5.5/27, mb1mx5.5/27, mbtmp5.4/27, MS5.3/22, Ms1 5.3/22, ms1mx5.2/29, Error ellipse: s-maj=13.0km s-min=8.8km az=62.0*
*ISCJB **25** 02:51:56.6±0.1, 283S±002×10107E±002, h61km, mb6.0/245, Error ellipse: s-maj=3.2km s-min=2.1km az=26.8*
*MOS **25** 02:51:56.5±0.9, 270S×101.15E, h57km, mb6.1/96, MS5.4/83, Error ellipse: s-maj=7.7km s-min=3.6km az=120.4*
*GCMT **25** 02:51:57.2±0.1, 3.09S×100.81E, h50km, MW5.9/104, Moment Tensor Solution. s104,c226; s104,c289; Duration: 2≅1 Moment tensor: Scale 10^17^Nm; Mrr=5.97±.07; Mθθ=-3.28±.06; Mφφ=-2.69±.07; Mrθ=3.81±.06; Mθφ=3.87±.05; Mφr=-2.33±.07; Best double couple: M=7.82700×10^17^ NP1:φs=321.00000°, δ=28.00000°, λ=104.00000°. NP2:φs=126.00000°, δ=63.00000°, λ=83.00000°. Principal axes: T 7.4300, Plg71.0000°, Azm19.0000°; N 0.7950, Plg7.0000°, Azm129.0000°; P -8.2250, Plg17.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*DJA **25** 02:51:57.9±0.0, 298S×100.88E, h54km, mB6.4/44, Mjma5.8/15, MLv6.3/15, Mw(mB)6.1/44, Mwp5.7/47*
*NEIC **25** 02:51:57.2±1.1, 281S×101.16E, h56km±9km, mb5.9/113, MS5.6/190, Error ellipse: s-maj=4.9km s-min=3.0km az=214.0*
NEIC Felt [IV] at Mukomuko and [III] at Bengkulu, Kapahiang and Padang.
*SZGRF **25** 02:51:59.0, 332S×100.82E, h72km, mb6.0, Southern Sumatera, Indonesia*
ISC 25 02:51:58.4±0.1, 285S±002×10105E±002, h62km, h62km±1.8km: pP-P, n1198, σ0≅95/969, mb6.0/243, 245C-30D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.73**	**117**	P	**Pn**	**02 52 24.1**	**-2.2**
KSI	**Kapahiang**	**1.73**	**117**	S	**Sn**	**02 52 50.5**	**+3.0**
PDSI	**Padang**	**2.02**	**343**	P	**Pn**	**02 52 29.1**	**-1.0**
PPI	**Padang Panjang**	**2.47**	**345**	P	**Pn**	**02 52 36.6**	**+0.3**
DSRI	**Dabo**	**4.24**	**56**	P	**Pn**	**02 53 00.9**	**+0.3**
KLI	**Kotabumi**	**4.29**	**118**	P	**Pn**	**02 53 01.5**	**+0.3**
BLSI	**Bandar Lampung**	**4.88**	**121**	P	**Pn**	**02 53 09.5**	**+0.3**
PPBI	**Pangkal Pinang**	**5.13**	**82**	P	**Pn**	**02 53 12.1**	**-0.6**
	826nm,1.1s,12nm						
TRSI	**Tarutung**	**5.28**	**337**	P	**Pn**	**02 53 16.9**	**+2.2**
	7µm,1.1s,87nm						
KGM	**Kluang**	**5.34**	**25**	⇑P	**Pn**	**02 53 17.4**	**+1.8**
MYKOM	**Kota Tinggi**	**5.40**	**31**	‖P	**Pn**	**02 53 17.7**	**+1.3**
MYKOM	**Kota Tinggi**	**5.40**	**31**	P	PcS	03 03 51.8	-4.0
MYKOM	**Kota Tinggi**	**5.40**	**31**	P	**Pn**	**02 53 16.6**	**+0.2**
SBJI	**Serang**	**6.02**	**123**	P	**Pn**	**02 53 26.2**	**+1.4**
	1µm,1.1s,9.9nm						
FRIM	**Kepong**	**6.08**	**5**	‖P	**Pn**	**02 53 26.8**	**+1.1**
TNG	**Tangerang**	**6.48**	**121**	P	**Pn**	**02 53 32.6**	**+1.4**
	3µm,1.4s,13nm						
TPI	**Tanjungpandan**	**6.60**	**89**	P	**Pn**	**02 53 33.5**	**+0.7**
	352nm,1.2s,6.7nm						
DBJI	**Dramaga**	**6.77**	**123**	P	PcS	03 04 05.0	+8.2
	91nm,1.2s						
DBJI	**Dramaga**	**6.77**	**123**	P	**Pn**	**02 53 34.3**	**-0.8**
	2µm,1.4s,7.0nm						
CBJI	**Citeko**	**6.78**	**122**	P	**Pn**	**02 53 37.4**	**+2.1**
	4µm,1.1s,20nm						
IPM	**Ipoh**	**7.28**	**360**	⇑P	**Pn**	**02 53 44.5**	**+2.3**
IPM	**Ipoh**	**7.28**	**360**	P	**Pn**	**02 53 43.9**	**+1.7**
	1µm,1.4s,5.0nm						
LEM	**Lembang**	**7.64**	**121**	P	PcS	03 04 05.8	+8.2
	103nm,1.1s						
LEM	**Lembang**	**7.64**	**121**	P	**Pn**	**02 53 46.8**	**-0.3**
	808nm,0.9s,6.0nm						
JCJI	**Jatiwangi**	**8.05**	**117**	P	**Pn**	**02 53 53.5**	**+0.8**
	671nm,1.2s						
KULM	**Kulim**	**8.10**	**357**	⇑P	**Pn**	**02 53 54.4**	**+1.0**
KTGM	**Kuala Trenggan**	**8.39**	**14**	‖P	**Pn**	**02 53 58.8**	**+1.5**
XMIS	**Christmas Isla**	**8.85**	**149**	*e*P	Px	02 53 53.9	
XMIS				*e*S	Sx	02 55 26.5	
XMIS	**Christmas Isla**	**8.85**	**149**	*e*Pn	Px	02 53 54.4	
XMIS				*e*Sn	Sx	02 55 26.8	
XMIS	**Christmas Isla**	**8.85**	**149**	P	Px	02 53 54.3	

BJII	**Banjamegara**	**9.71**	**118**	P		PcS		03 04 06.5	+6.7	
BJII	**Banjamegara**	**9.71**	**118**	P		**Pn**		**02 54 15.6**	**+0.2**	
SNG	**Songkhla**	**9.97**	**358**	P		**Pn**		**02 54 18.0**	**-1.0**	
	2µm,1.1s									
BSI	**Banda Aceh**	**10.09**	**325**	P		**Pn**		**02 54 18.2**	**-2.4**	
	589nm,1.2s,5µm									
COCO	**West Island**	**10.17**	**204**	*e*Pn		**Pn**		**02 54 14.8**	**-6.9**	
	1µm,0.7s									
COCO	**West Island**	**10.17**	**204**	P		**Pn**		**02 54 15.8**	**-5.9**	
	1µm,1.1s,9µm									
KSM	**Kuching**	**10.21**	**65**	*e*Pn		**Pn**		**02 54 22.2**	**0.0**	
KSM	**Kuching**	**10.21**	**65**	⇑P		**Pn**		**02 54 22.8**	**+0.6**	
KSM	**Kuching**	**10.21**	**65**	P		**Pn**		**02 54 22.6**	**+0.4**	
	507nm,1.2s,6µm									
SMRI	**Semarang**	**10.24**	**114**	P		**Pn**		**02 54 23.9**	**+1.2**	
	860nm,0.8s									
UGM	**Wanagama**	**10.69**	**118**	P		**Pn**		**02 54 28.1**	**-0.7**	
	575nm,0.7s									
STKI	**Sintang**	**10.82**	**75**	P		**Pn**		**02 54 34.0**	**+3.4**	
	694nm,1.1s									
PKT	**Phuket**	**11.23**	**345**	P		**Pn**		**02 54 37.5**	**+1.4**	
SJI	**Sawahan**	**11.72**	**115**	P		PcS		03 03 58.2	-4.2	
SJI	**Sawahan**	**11.72**	**115**	P		**Pn**		**02 54 41.4**	**-1.5**	
SBUM	**Sibu**	**12.35**	**65**	‖P		**Pn**		**02 54 55.6**	**+4.1**	
SBUM	**Sibu**	**12.35**	**65**	P		**Pn**		**02 54 54.8**	**+3.3**	
KRKI	**Karangkates**	**12.51**	**115**	P		**Pn**		**02 54 54.8**	**+1.1**	
PLKI	**Palangkaraya**	**12.90**	**88**	P		**Pn**		**02 55 04.4**	**+5.4**	
	1µm,1.0s									
BTM	**Bintulu**	**13.45**	**64**	‖P		**Pn**		**02 55 09.7**	**+3.2**	
KMMI	**Kalianget**	**13.53**	**108**	P		**Pn**		**02 55 09.3**	**+1.8**	
	684nm,1.2s									
BBKI	**Banjar Baru**	**13.79**	**93**	P		**Pn**		**02 55 12.7**	**+1.7**	
	1µm,1.3s									
NBBI	**Negara**	**14.57**	**113**	P		**Pn**		**02 55 22.5**	**+1.2**	
	675nm,0.8s,8µm									
DNP	**Denpasar**	**15.23**	**113**	P		**Pn**		**02 55 39.5**	**+10**	
NNT	**Nongplab**	**15.40**	**355**	P		**Pn**		**02 55 29.2**	**-2.7**	
KHKI	**Kahang-Kahang**	**15.49**	**111**	P		PcS		03 04 14.6	+6.0	
KHKI	**Kahang-Kahang**	**15.49**	**111**	P		**Pn**		**02 55 33.9**	**+0.8**	
SMKI	**Samarinda**	**16.33**	**82**	P		**Pn**		**02 55 48.4**	**+4.6**	
	996nm,1.6s									
KKM	**Kota Kinabalu**	**17.54**	**60**	*e*P		**Pn**		**02 55 59.6**	**+0.9**	
KKM	**Kota Kinabalu**	**17.54**	**60**	‖P		**Pn**		**02 56 00.7**	**+2.0**	
KKM	**Kota Kinabalu**	**17.54**	**60**	P		**Pn**		**02 56 00.8**	**+2.0**	
	999nm,1.6s									
SDKM	**Sandakan**	**18.20**	**62**	‖P		**Pn**		**02 56 08.4**	**+1.5**	
NST	**Nakhon Sawan**	**18.43**	**357**	P		**Pn**		**02 56 06.0**	**-3.5**	
KDM	**Kudat**	**18.51**	**58**	⇑P		**Pn**		**02 56 12.2**	**+1.6**	
KAPI	**Kappang**	**18.78**	**97**	⇑P		**Pn**		**02 56 11.3**	**-2.6**	
	SNR=83									
KAPI	**Kappang**	**18.78**	**97**	P		**Pn**		**02 56 11.0**	**-2.8**	
	15nm,0.3s,baz=284,slow=8.2,SNR=54									
KAPI				S		**S**		**02 59 43.4**	**0.0**	
	0.8nm,0.3s,baz=315,slow=19,SNR=3.6									
KAPI				LR		LR		03 04 21.7		
	comp=Z,14µm,18.7s,baz=279,slow=40									
KAPI				ScS		ScS		03 07 50.5	+0.2	
	1.0nm,0.3s,baz=230,slow=16,SNR=5.1									
KAPI	**Kappang**	**18.78**	**97**	*e*P		**Pn**		**02 56 11.9**	**-1.9**	
	508nm,0.8s									
KAPI	**Kappang**	**18.78**	**97**	P		**Pn**		**02 56 12.0**	**-1.9**	
	456nm,1.1s,6µm									
PCI	**Palu**	**18.88**	**84**	P		**Pn**		**02 56 14.7**	**-0.3**	
	950nm,1.6s									
MYLDM	**Lahad Datu**	**19.18**	**65**	‖P		**Pn**		**02 56 19.5**	**+0.9**	
BDT	**Bhumibol Dam**	**20.07**	**354**	P		**P**		**02 56 24.0**	**-2.8**	
	2.2nm,1.1s									
BATP	**Bataraza**	**20.32**	**55**	*e*P		**P**		**02 56 30.3**	**+0.7**	
CM31	**Chiang Mai Arr**	**21.28**	**354**	PFAKE				02 56 50.0	+10	
CM31				LR		LR				
	comp=Z,16

LLP Lapu-Lapu 26.30 60⇑ eP P 02 57 28.2 -0.2
DAV Davao City (W) 26.39 68 ⇑P P 02 57 28.5 -0.8
SNR=30
DAV Davao City (W) 26.39 68 P P 02 57 30.2 +1.0
comp=Z,1μm,1.0s,mb6.3,baz=225,slow=19,SNR=27
DAV LR LR 03 08 44.7
comp=Z,15μm,21.5s,baz=64,slow=38
DAV Davao City (W) 26.39 68 eP P 02 57 31.0 +1.8
comp=Z,1μm,1.1s,mb6.4
DAV LR LR
comp=Z,15μm,22.0s
DAV Davao City (W) 26.39 68 P P 02 57 31.7 +2.4
comp=Z,1μm,1.1s,mb6.4
LBMI Labuha 26.53 86 P P 02 57 30.3 -0.2
comp=Z,1μm,1.0s,comp=Z,8μm,mb6.3
TRD Trivandrum 26.54 295 eP P 02 57 31.7 +1.1
TRD AMb AMB 02 57 53.4
comp=Z,231nm,1.2s,mb5.6
BOLP Bolinao 26.70 44 eP P 02 57 28.5 -3.4
KOD Kodaikanal 26.84 299 eP P 02 57 35.1 +1.9
KOD AMb AMB 02 57 51.9
comp=Z,171nm,0.4s,mb5.9
VIS Vishakhapatnam 26.89 320 eP P 02 57 34.2 +0.6
VIS AMb AMB 02 57 38.1
comp=Z,345nm,1.0s,mb5.8
PCPH Palayan 26.99 47⇑ eP P 02 57 33.0 -1.5
MSLP Maasin 27.00 61 eP pP 02 57 49.5 -0.3
POLP Polilio Island 27.08 49 eP P 02 57 35.7 +0.3
AAI Ambon 27.11 93 P P 02 57 37.4 +1.6
comp=Z,203nm,1.1s,comp=Z,3μm,mb5.6
BWNR Bhubaneshwar 27.44 328 ex P 02 57 40.9 +2.4
BWNR eS S 03 02 14.6 -0.1
BALP Baler 27.45 47 eP P 02 57 38.7 0.0
KMI Kunming 27.86 3 ⇑P P 02 57 42.6 +0.4
KMI AP pP 02 57 46.6 -11
KMI PP PP 02 58 35.3 -11
KMI PCP PcP 03 00 56.8 -0.2
KMI S S 03 02 26.6 +5.4
KMI SS 03 03 48.8
KMI AMB AMB
comp=Z,116nm,0.8s,mb5.6
KMI AMB AMB
comp=Z,897nm,6.5s
KMI LR LR
comp=N,14μm,16.2s
KMI LR LR
comp=E,12μm,13.2s
KMI LR LR
comp=Z,17μm,16.0s
ABRA Dolores 28.13 43 eP P 02 57 44.3 -0.4
CAL Calcutta 28.13 334 eP P 02 57 45.1 +0.5
CAL ex x 03 02 34.3
PVCP Virac 28.15 54⇑ eP P 02 57 39.4 -5.6
IMP Imphal 28.33 346 eP P 02 57 44.0 -2.4
IMP ex x 03 02 27.0
CAUP Cauayan 28.42 46 eP P 02 57 47.0 -0.3
GZH Guangzhou 28.43 24 P P 02 57 51.6 +4.2
GZH S S 03 02 42.0 +12
GZH LR LR
comp=N,7μm,15.4s
GZH LR LR
comp=E,6μm,16.7s
GZH LR LR
comp=Z,11μm,17.3s
APYP Conner 28.64 43 eP P 02 57 48.5 -0.7
SHL Shillong 29.61 343⇑ iP P 02 57 58.0 +0.2
SHL i x x 03 02 46.0
GYA Guiyang 29.64 10⇑ iP P 02 57 57.3 -0.7
GYA AP pP 02 58 07.5 -5.8
GYA XP sP 02 58 11.9 -8.8
GYA PP PP 02 58 55.0 -11
GYA PCP PcP 03 01 01.8 +0.4
GYA S S 03 02 47.6 -1.6
GYA XS sS 03 03 06.4 -8.9
GYA SCP ScP 03 04 39.6 +1.4
GYA SCS ScS 03 08 35.6 +2.4
GYA AMB AMB
comp=Z,220nm,0.8s,mb5.9
GYA AMB AMB
comp=Z,1μm,5.4s
GYA LR LR
comp=N,10μm,13.5s
GYA LR LR
comp=E,8μm,12.8s
GYA LR LR
comp=Z,10μm,13.0s
HYB Hyderabad 29.97 313 eP P 02 58 01.0 -0.1
comp=Z,70nm,1.0s,mb5.3
HYB Hyderabad 29.97 313 eP P 02 58 01.0 -0.1
HYB pmax pmax
comp=Z,70nm,1.0s,mb5.3
HYB Hyderabad 29.97 313 i P P 02 58 01.0 -0.1
comp=Z,70nm,1.0s,mb5.3
SWI Sorong 30.26 87 P P 02 58 02.2 -1.5
comp=Z,371nm,1.3s,comp=Z,3μm,mb6.0
BOK Bokaro 30.32 332 i P P 02 58 05.6 +1.4
BOK AMb AMB 02 58 08.2
comp=Z,1μm,0.8s,mb6.7
BOK i S S 03 03 02.4 +2.4
MNGI Mangalore 30.40 302 i P P 02 58 06.2 +1.3
MNGI i S S 03 03 04.0 +2.5
LATR Latur 32.07 312 eP P 02 58 19.0 -0.5
NGP Nagpur 32.15 319⇑ iP P 02 58 18.7 -1.5
NGP ex x 02 58 34.3
comp=Z,288nm,1.5s
NGP eS S 03 03 26.9 -1.6
MUN Mundaring 32.29 155 eP P 02 58 21.6 +0.2
MUN eS S 03 03 33.2 +2.5
MUN e 03 04 54.7
ODAN Odare 32.35 337 eP P 02 58 22.8 +0.9
comp=Z,3μm,1.0s,mb7.0
ODAN Odare 32.35 337 eP P 02 58 22.9 +1.0
ODAN Odare 32.35 337 eP P 02 58 23.1 +1.2
comp=Z,3μm,1.0s,mb7.1
ODAN Odare 32.35 337 eP P 02 58 23.1 +1.2
QZH Quanzhou 32.46 31⇑ iP P 02 58 22.5 -0.4
QZH XP sP 02 58 29.3 -16
QZH S S 03 03 31.0 -2.4
QZH AMB AMB
comp=Z,920nm,1.1s,mb6.5
QZH AMB AMB
comp=Z,4μm,4.0s
QZH LR LR
comp=N,6μm,14.6s
QZH LR LR
comp=E,17μm,22.0s
QZH LR LR
comp=Z,23μm,28.3s
GOA Goa 32.52 305⇑ eP P 02 58 24.8 +1.2
GOA eS S 03 03 35.1 +0.5
KAKA Kakadu 32.57 109 eP Px 02 58 05.7
comp=Z,55nm,0.8s
KAKA e 03 04 35.4
KLBR Kellerberrin 32.63 153 eP P 02 58 26.0 +1.6
comp=Z,18nm,0.6s,mb5.2
KLBR e 03 04 54.4
TAPN Taplejung 32.67 338 eP P 02 58 26.2 +1.5
comp=Z,3μm,1.0s,mb7.1
TAPN Taplejung 32.67 338 eP P 02 58 26.1 +1.4
TAPN Taplejung 32.67 338 eP P 02 58 26.1 +1.4
comp=Z,6μm,1.0s
TAPN Taplejung 32.67 338 eP P 02 58 26.1 +1.4
RAMN Ramite 32.75 336 eP P 02 58 26.7 +1.3
comp=Z,3μm,1.1s,mb7.0
RAMN Ramite 32.75 336 eP P 02 58 26.8 +1.4
comp=Z,2μm,1.1s,mb7.0
RAMN Ramite 32.75 336 eP P 02 58 26.8 +1.4
AKL Akola 33.21 316 eP P 02 58 30.9 +1.3
AKL AMb AMB 02 58 46.3
comp=Z,215nm,1.6s,mb5.8
KAD Karad 33.22 308 eP P 02 58 30.3 +0.6
KAD AMb AMB 02 58 32.1
comp=Z,148nm,1.0s,mb5.9
NACB Ninganchiao 33.48 36 eP P 02 58 32.0 +0.1
JIRN Jiri 33.54 336 eP P 02 58 33.7 +1.4
comp=Z,3μm,1.1s,mb7.1
JIRN Jiri 33.54 336 eP P 02 58 33.8 +1.5
JIRN Jiri 33.54 336 eP P 02 58 33.9 +1.6
comp=Z,5μm,1.1s,mb7.3
JIRN Jiri 33.54 336 eP P 02 58 33.9 +1.6
NWAO Narrogin (SRO) 33.55 155 P P 02 58 32.2 -0.1
comp=Z,18nm,0.9s,mb5.0,baz=334,slow=7.5,SNR=12
NWAO Narrogin (SRO) 33.55 155 eP P 02 58 31.9 -0.4
comp=Z,154nm,1.4s,mb5.7
NWAO LR LR
comp=Z,7μm,21.0s
NWAO Narrogin (SRO) 33.55 155 P P 02 58 32.2 -0.1
NWAO pmax pmax
comp=Z,18nm,0.9s
ALBI Allahabad 33.64 327 eP P 02 58 32.0 -1.2
CD2 Chengdu 33.67 4 P P 02 58 31.8 -1.6
CD2 AP pP 02 58 38.3 -11
CD2 XP sP 02 58 41.5 -15
CD2 PP PP 02 59 45.3 -5.4
CD2 PCP PcP 03 01 11.8 -0.4
CD2 S S 03 03 54.8 +2.7
CD2 XS sS 03 04 05.5 -13
CD2 PCS PcS 03 04 55.8 -2.4
CD2 SS SS 03 06 01.3 -19
CD2 SCS ScS 03 08 54.3 +1.2
CD2 AMB AMB
comp=Z,220nm,0.8s,mb6.1
CD2 AMB AMB
comp=Z,2μm,5.7s
CD2 LR LR
comp=N,18μm,18.0s
CD2 LR LR
comp=E,13μm,15.6s
CD2 LR LR
comp=Z,20μm,20.4s
LSA Lhasa 33.73 344 P P 02 58 34.3 +0.4
LSA AP pP 02 58 42.0 -7.3
LSA XP sP 02 58 46.3 -10
LSA S S 03 03 49.6 -3.3
LSA XS sS 03 04 07.8 -11
LSA AMB AMB
comp=Z,390nm,1.0s,mb6.3
LSA AMB AMB
comp=Z,900nm,6.0s
LSA LR LR
comp=N,3μm,25.0s
LSA LR LR
comp=E,4μm,30.0s
LSA LR LR
comp=Z,6μm,27.0s
LSA Lhasa 33.73 344⇑ iP P 02 58 34.3 +0.4
comp=Z,606nm,1.1s,mb6.4
LSA ePcP PcP 03 01 14.1 +1.7
LSA eS S 03 03 52.5 -0.4
LSA LR LR
comp=Z,4μm,21.0s
LSA Lhasa 33.73 344⇑ iP P 02 58 34.3 +0.4
LSA e 03 01 14.1
LSA eS S 03 03 52.5 -0.4
LSA pmax pmax
comp=Z,606nm,1.1s,mb6.4
LSA MLR MLR
comp=Z,4μm,21.0s
YHNB Yeheng 33.74 35 eP P 02 58 34.2 +0.1
comp=Z,349nm,1.0s,mb6.2
YHNB LR LR
comp=Z,6μm,22.0s
PKI Pulchoki 33.79 335 eP P 02 58 35.2 +0.7
comp=Z,1μm,1.2s,mb6.8
PKI Pulchoki 33.79 335 eP P 02 58 35.3 +0.8
comp=Z,1μm,1.2s,mb6.8
PKI Pulchoki 33.79 335 eP P 02 58 35.3 +0.8
PKIN Phulchoki 33.80 335 eP P 02 58 35.3 +0.7
comp=Z,742nm,1.1s,mb6.5
PKIN Phulchoki 33.80 335 eP P 02 58 35.2 +0.6
GUN Gumba 33.89 335 eP P 02 58 36.7 +1.3
comp=Z,3μm,1.1s,mb7.2
GUN Gumba 33.89 335 eP P 02 58 36.7 +1.3
ENH Enshi 33.91 13 PFAKE 02 58 50.0 +15
ENH LR LR
comp=Z,4.0nm,22.0s
DMN Daman 33.96 334 eP P 02 58 36.6 +0.7
comp=Z,1μm,1.1s,mb6.8
DMN Daman 33.96 334 eP P 02 58 36.7 +0.8
comp=Z,1μm,1.1s,mb6.8
DMN Daman 33.96 334 eP P 02 58 36.7 +0.8
KKN Kakani 34.04 335 eP P 02 58 37.5 +0.9
comp=Z,2μm,1.0s,mb7.0
KKN Kakani 34.04 335 eP P 02 58 37.6 +1.0
KKN Kakani 34.04 335 eP P 02 58 37.6 +1.0
TATO Taipei 34.04 34 eP P 02 58 36.4 -0.3
comp=Z,568nm,1.3s,mb6.3
TATO LR LR
comp=Z,5μm,22.0s
POO Poona 34.18 309 eP P 02 58 38.6 +0.5
POO AMb AMB 02 58 40.2
comp=Z,160nm,1.0s,mb5.9
POO ePCP PcP 03 01 14.5 +0.6
POO eSCS ScS 03 08 56.0 -0.3
GKN Gorkha 34.51 334 eP P 02 58 41.6 +0.9
comp=Z,2μm,1.2s,mb7.0
GKN Gorkha 34.51 334 eP P 02 58 41.5 +0.8
comp=Z,2μm,1.2s,mb7.0
GKN Gorkha 34.51 334 eP P 02 58 41.5 +0.8
KOLN Koldanda 34.77 332 eP P 02 58 44.0 +1.0
comp=Z,2μm,1.0s,mb7.1
KOLN Koldanda 34.77 332 eP P 02 58 44.1 +1.1
comp=Z,2μm,1.0s,mb7.1
KOLN Koldanda 34.77 332 eP P 02 58 44.1 +1.1
DANN Dangsing 35.20 333 eP P 02 58 47.6 +1.0
comp=Z,2μm,0.9s,mb7.0
DANN Dangsing 35.20 333 eP P 02 58 47.6 +1.0
comp=Z,2μm,0.8s,mb7.0
PYUN Piuthan 35.34 332 eP P 02 58 48.8 +0.9
PYUN Piuthan 35.34 332 eP P 02 58 48.9 +1.0
PYUN Piuthan 35.34 332 eP P 02 58 48.9 +1.0
WHN Wuhan 35.55 20 ⇑P P 02 58 49.8 +0.1
WHN PP PP 03 00 14.9 +3.4
WHN S S 03 04 25.3 +4.2
WHN SCP ScP 03 04 57.3 -1.1
WHN AMB AMB
comp=Z,734nm,1.0s,mb6.6
WHN AMB AMB
comp=Z,3μm,4.6s
WHN LR LR
comp=N,18μm,13.2s
WHN LR LR
comp=E,6μm,11.4s
WHN LR LR
comp=Z,27μm,15.1s
WRA Warramunga Arr 36.66 120 P P 02 58 57.6 -1.7
comp=Z,78nm,0.6s,mb5.7,baz=306,slow=9.1,SNR=546
WRA S S 03 04 32.7 -5.7
comp=Z,42nm,1.2s,baz=293,slow=17,SNR=9.1
WRA LR LR 03 14 50.4
comp=Z,2μm,20.0s,baz=340,slow=38
WRA P3KPbc 03 29 30.7
comp=Z,0.9nm,0.8s,baz=114,slow=4.3,SNR=7.5
WRA Warramunga Arr 36.66 120 P P 02 58 57.6 -1.7
WRA S S 03 04 32.7 -5.7
WRA LR LR 03 14 50.4
WRA e 03 29 30.7
WRA Warramunga Arr 36.66 120 P P 02 58 57.6 -1.7
WRA S S 03 04 32.7 -5.6
WRA pmax pmax
comp=Z,78nm,0.6s
WRA smax
comp=N,42nm,1.2s
WRA MLR MLR
comp=Z,2μm,20.0s
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 36.66 120 P P 02 58 57.6 -1.7
WRA S S 03 04 32.7 -5.6
WRA pmax pmax
comp=Z,78nm,0.6s
WRA smax
comp=N,42nm,1.2s
WRA MLR MLR
comp=Z,2μm,20.0s
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRAB Tennant Creek 36.67 120⇑ iP P 02 58 57.8 -1.6
comp=Z,198nm,0.9s,mb5.9
WRAB eS S 03 04 35.2 -3.2
WRAB LR LR
comp=Z,2μm,20.0s
WRAB Tennant Creek 36.67 120 eP P 02 58 57.8 -1.6
WRAB pmax pmax
comp=Z,200nm,0.9s,mb6.0
WRAB Tennant Creek 36.67 120 eP P 02 58 57.8 -1.6
WRAB pmax pmax
comp=Z,200nm,0.9s,mb6.0
WRAB Tennant Creek 36.67 120 P P 02 58 57.4 -2.0
comp=Z,300nm,0.9s,comp=Z,3μm,mb6.1
WB2 Warramunga Arr 36.67 120⇑ iP P 02 58 57.7 -1.7
WB2 eS S 03 04 32.0 -6.5
WB2 eSCS ScS 03 09 11.8 +1.9
BHV Bhavnagar 37.38 312 eP P 02 59 04.0 -1.3
XAN Xi'an 37.44 11 P P 02 59 04.1 -1.6
XAN S S 03 04 46.5 -3.2
XAN PCS PcS 03 05 14.0 +2.2
XAN SS SS 03 07 31.3 -3.5
XAN AMB AMB
comp=Z,763nm,0.9s,mb6.5
XAN AMB AMB
comp=Z,1μm,8.7s
XAN LR LR
comp=N,4μm,22.0s
XAN LR LR
comp=E,6μm,18.0s
XAN LR LR
comp=Z,17μm,20.5s
FORT Forrest 37.72 140 eP P 02 59 07.8 -0.3
comp=Z,101nm,0.6s,mb5.7
FORT Forrest 37.72 140⇑ eP P 02 59 07.7 -0.5
comp=Z,145nm,0.8s,mb5.8
LGTI Lohaghat 37.80 330 eP P 02 59 10.4 +1.6
LGTI eS S 03 04 57.1 +1.8
PTH Pithoragarh 37.90 330 eP P 02 59 09.8 +0.2
PTH eS S 03 04 58.4 +1.6
ASAR Alice Springs 37.91 126 P P 02 59 08.8 -1.0
comp=Z,77nm,0.7s,mb5.5,baz=302,slow=7.9,SNR=195
ASAR pP pP 02 59 22.3 -3.1
comp=Z,180nm,0.7s,baz=303,slow=8.0,SNR=17
ASAR sP sP 02 59 28.4 -4.3
comp=Z,227nm,1.0s,baz=305,slow=7.7,SNR=7.7
ASAR PcP PcP 03 01 25.5 +0.6
comp=Z,53nm,1.1s,baz=310,slow=3.0,SNR=5.7
ASAR S S 03 04 53.6 -3.5
comp=Z,80nm,1.1s,baz=298,slow=16,SNR=16
ASAR ScS ScS 03 09 16.9 +0.1
comp=Z,4.1nm,0.9s,baz=308,slow=7.6,SNR=4.1
ASAR P3KPbc 03 29 26.5
comp=Z,0.7nm,0.9s,baz=152,slow=4.3,SNR=5.7
ASAR P3KP 03 30 59.1
comp=Z,1.1nm,1.1s,baz=121,slow=3.6,SNR=4.7
ASAR Alice Springs 37.91 126 P P 02 59 08.8 -1.0
ASAR pP pP 02 59 22.3 -3.1
ASAR sP sP 02 59 28.4 -4.3
ASAR PcP PcP 03 01 25.5 +0.6
ASAR S S 03 04 53.6 -3.5
ASAR ScS ScS 03 09 16.9 +0.1
ASAR e 03 29 26.5
ASAR PKKKP 03 30 59.1
ASAR Alice Springs 37.91 126 P P 02 59 08.9 -0.9
ASAR *PP pP 02 59 22.3 -3.1
ASAR *SP sP 02 59 28.5 -4.2
ASAR 03 01 25.5
ASAR S S 03 04 53.7 -3.5
ASAR 03 09 16.9
ASAR pmax pmax
comp=Z,77nm,0.7s
ASAR pmax pmax
comp=Z,180nm,0.7s
ASAR pmax pmax
comp=Z,227nm,1.0s
ASAR pmax pmax
comp=Z,53nm,1.1s
ASAR smax
comp=N,80nm,1.1s
ASAR pmax pmax
comp=N,4.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,1.1s
ASAR Alice Springs 37.91 126 P P 02 59 08.9 -0.9
ASAR *PP pP 02 59 22.3 -3.1
ASAR *SP sP 02 59 28.5 -4.2
ASAR 03 01 25.5
ASAR S S 03 04 53.7 -3.5
ASAR 03 09 16.9
ASAR pmax pmax
comp=Z,77nm,0.7s
ASAR pmax pmax
comp=Z,180nm,0.7s
ASAR pmax pmax
comp=Z,227nm,1.0s
ASAR pmax pmax
comp=Z,53nm,1.1s
ASAR smax
comp=N,80nm,1.1s
ASAR pmax pmax
comp=N,4.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,1.1s
NJ2 Nanjing 38.61 25 eP P 02 59 15.6 0.0
NJ2 AP pP 02 59 20.3 -11
NJ2 XP sP 02 59 22.3 -16
NJ2 PP PP 03 00 48.5 +3.4
NJ2 S S 03 05 12.0 +4.5
NJ2 AMB AMB
comp=Z,50nm,0.8s,mb5.3
NJ2 AMB AMB
comp=Z,2μm,5.2s
NJ2 LR LR
comp=N,5μm,16.9s
NJ2 LR LR
comp=Z,8μm,17.3s
AJM Ajmer 38.75 320 eP P 02 59 17.5 +0.7
AJM iP PP 03 00 47.4 +0.7
NDI New Delhi 38.82 326 eP P 02 59 15.5 -1.9
NDI ex x 03 06 14.0
LZH Lanzhou 38.83 4 ⇑P P 02 59 16.8 -0.5
LZH AP pP 02 59 26.8 -6.2
LZH XP sP 02 59 30.8 -9.4
LZH PP PP 03 00 50.8 +3.4
LZH PCP PcP 03 01 27.0 -0.5
LZH S S 03 05 10.1 -0.5
LZH SCP ScP 03 05 11.3 +0.8
LZH PCS PcS 03 05 15.0 -2.0
LZH XS sS 03 05 30.3 -6.9
LZH SS SS 03 07 59.3 -4.8
LZH SCS ScS 03 09 21.0 -0.4
LZH AMB AMB
comp=Z,272nm,1.0s,mb5.9
LZH AMB AMB
comp=Z,2μm,5.0s
LZH LR LR
comp=N,16μm,17.0s
LZH LR LR
comp=Z,22μm,18.4s
SSE Sheshan 38.83 28 P P 02 59 17.9 +0.5
SSE S S 03 05 13.6 +2.7
SSE AMB AMB
comp=Z,170nm,1.1s,mb5.7
SSE AMB AMB
comp=Z,1μm,5.6s
SSE LR LR
comp=N,7μm,18.3s
SSE LR LR
comp=E,2μm,18.6s
SSE LR LR
comp=Z,7μm,23.9s
JAY Jayapura 39.61 90 P P 02 59 18.5 -5.8
DDI Dehra Dun 39.63 328 eP P 02 59 24.0 -0.1
DDI ⇑iP 02 59 24.0
DDI ex x 03 05 21.0
BHJ Bhuj 40.12 312 eP P 02 59 29.7 +1.4
BHJ AMb AMB 02 59 31.5
comp=Z,216nm,1.1s,mb5.8
SMLA Simla 40.73 328⇑ iP P 02 59 33.6 +0.3
SMLA ex x 02 59 37.6
comp=Z,440nm,0.4s
SMLA i S S 03 05 39.2 -0.1
SDNR Sundarnagar 41.13 328 eP P 02 59 37.0 +0.5
SDNR eS S 03 05 45.6 +0.4
BHK Bhakra 41.36 327 eP P 02 59 36.8 -1.6
TIA Tai'an 41.66 20 ⇑P P 02 59 39.6 -1.2
TIA S S 03 06 00.0 +7.0
TIA AMB AMB
comp=Z,76nm,0.9s,mb5.3
TIA LR LR
comp=E,3μm,16.0s
GTA Gaotai 42.07 359⇑ iP P 02 59 43.3 -0.7
GTA AP pP 02 59 55.3 -4.6

GTA XP sP 03 00 00.8 -6.3
GTA PP PP 03 01 26.6 +4.0
GTA PCP PcP 03 01 38.3 +0.4
GTA SCP ScP 03 05 23.9 +0.7
GTA S **S** **03 06 04.3 +5.4**
GTA SS SS 03 09 10.8 +2.3
GTA SCS ScS 03 09 39.3 -1.4
GTA AMB AMB
comp=Z,91nm,1.3s,mb5.2
GTA AMB AMB
comp=Z,1μm,8.4s
GTA LR LR
comp=N,8μm,21.0s
GTA LR LR
comp=E,5μm,18.6s
GTA LR LR
comp=Z,11μm,21.3s
DLH Dalhousie 42.47 328 *e*P **P** **02 59 46.0 -1.4**
DLH *ex* x 02 59 59.0
THN Thein Dam 42.52 328 *e*P **P** **02 59 46.5 -1.4**
COEN Coen 43.03 107 *e*P **P** **02 59 48.6 -3.7**
comp=Z,56nm,1.2s,mb5.2
COEN *e*PcP PcP 03 01 41.8 +0.1
COEN *e*ScP ScP 03 05 28.7 +1.1
COEN Coen 43.03 107 P **P** **02 59 49.8 -2.4**
comp=Z,23nm,1.2s,mb4.8
BTO Baotou 44.02 10 *e*P **P** **02 59 58.8 -1.0**
BTO AMB AMB
comp=Z,51nm,1.5s,mb5.0
HHC Hu-ho-hao-te 44.54 11 *e*P **P** **03 00 04.6 +0.7**
HHC XP sP 03 00 14.9 -12
HHC PP PP 03 01 51.3 +2.3
HHC S **S** **03 06 36.8 +1.8**
HHC SS SS 03 09 52.9 -3.9
HHC SCS ScS 03 10 00.0 +3.9
HHC AMB AMB
comp=Z,305nm,1.2s,mb6.0
HHC AMB AMB
comp=Z,2μm,4.3s
HHC LR LR
comp=N,8μm,14.3s
HHC LR LR
comp=E,7μm,15.5s
HHC LR LR
comp=Z,6μm,19.0s
BJT Baijiatuau 44.86 16⇑ *i*P **P** **03 00 06.2 -0.3**
comp=Z,322nm,1.1s,mb6.1
BJT *e*ScP ScP 03 05 35.5 +1.0
BJT LR LR
comp=Z,17μm,19.0s
BJT Baijiatuau 44.86 16⇑ *i*P **P** **03 00 06.3 -0.2**
BJT pmax pmax
comp=Z,322nm,1.1s
BJT MLR MLR
comp=Z,17μm,19.0s
BJI Beijing 44.88 16 P **P** **03 00 06.5 -0.2**
BJI PP PP 03 01 53.3 +0.6
BJI S **S** **03 06 38.8 -1.2**
BJI XS sS 03 06 53.5 -14
BJI AMB AMB
comp=Z,220nm,1.3s,mb5.8
BJI AMB AMB
comp=Z,2μm,4.4s
BJI LR LR
comp=N,14μm,19.0s
BJI LR LR
comp=E,7μm,17.5s
BJI LR LR
comp=Z,12μm,19.8s
MSEY Mahe Island 45.50 266 PFAKE 03 00 20.0 +7.9
MSEY LR LR
comp=Z,5μm,22.0s
DL2 Dalian 45.68 23 P **P** **03 00 12.6 -0.4**
DL2 PP PP 03 01 58.8 -2.4
DL2 S **S** **03 06 51.1 -0.5**
DL2 AMB AMB
comp=Z,90nm,1.5s,mb5.5
DL2 AMB AMB
comp=Z,800nm,6.3s
DL2 LR LR
comp=N,4μm,16.1s
DL2 LR LR
comp=Z,5μm,20.2s
PMG Port Moresby 46.27 100⇑ *i*P **P** **03 00 15.6 -2.5**
PMG *e*PP PP 03 02 06.8 -0.9
PMG *e*ScP ScP 03 05 42.5 +1.5
PMG LR LR
comp=Z,2μm,20.0s
PMG Port Moresby 46.27 100 *c i*P **P** **03 00 16.1 -2.0**
PMG pmax pmax
comp=Z,95nm,1.5s
PMG Port Moresby 46.27 100 P **P** **03 00 17.0 -1.1**
comp=Z,90nm,1.4s,comp=Z,2μm,mb5.5
GUMO Guam 46.44 68 LR LR 03 19 01.7
comp=Z,2μm,21.5s,baz=250,slow=35
GUMO Guam 46.44 68 PFAKE 03 00 30.0 +11
GUMO LR LR
comp=Z,3μm,19.0s
INCN Inchon 46.63 28⇑ *i*P **P** **03 00 19.1 -1.4**
INCN *e*ScP ScP 03 05 42.5 +0.5
INCN LR LR
comp=Z,4μm,19.0s
KSRS Korea Array 47.23 29 P **P** **03 00 24.8 -0.4**
comp=Z,176nm,1.1s,mb5.9,baz=225,slow=8.0,SNR=134
KSRS pP pP 03 00 37.4 -3.9
comp=Z,171nm,1.1s,baz=222,slow=8.2,SNR=9.0
KSRS ScP ScP 03 05 45.2 +0.7
comp=Z,7.9nm,0.9s,baz=217,slow=4.3,SNR=7.5
KSRS S **S** **03 07 19.9 +6.1**
comp=Z,0.7nm,0.8s,baz=215,slow=15,SNR=2.6
KSRS LR LR 03 22 19.0
comp=Z,3μm,18.2s,baz=236,slow=39
KSRS Korea Array 47.23 29 P **P** **03 00 24.8 -0.4**
KSRS *PP pP 03 00 37.4 -3.9
KSRS S **S** **03 07 19.9 +6.1**
KSRS pmax pmax
comp=Z,176nm,1.1s,mb5.9
KSRS pmax pmax
comp=Z,171nm,1.1s,mb5.9
KSRS pmax pmax
comp=N,8.0nm,0.9s
KSRS smax
comp=N,1.0nm,0.8s
KSRS MLR MLR
comp=Z,3μm,18.2s
CTA Charters Tower 47.29 115⇑ *i*P **P** **03 00 24.7 -1.3**
comp=Z,135nm,1.2s,mb5.8
CTA *e* 03 05 46.6
CTA *e*S **S** **03 07 12.1 -3.1**
CTAO Charters Tower 47.29 115⇑ *i*P **P** **03 00 24.6 -1.4**
CTAO *e*ScP ScP 03 05 46.4 +1.3
CTAO LR LR
comp=Z,3μm,21.0s
CTAO Charters Tower 47.29 115 P **P** **03 00 24.5 -1.5**
comp=Z,321nm,1.4s,comp=Z,3μm,mb6.1
STKA Stephens Creek 47.80 132⇑ *i*P **P** **03 00 29.3 -0.5**
comp=Z,126nm,0.7s,mb6.0
STKA *e*S **S** **03 07 20.6 -1.6**
STKA Stephens Creek 47.80 132 P **P** **03 00 29.4 -0.4**
comp=Z,101nm,1.1s,mb5.8,baz=304,slow=7.6,SNR=76
STKA S **S** **03 07 21.7 -0.4**
comp=Z,13nm,0.8s,baz=241,slow=19,SNR=4.2
STKA LR LR 03 21 05.1
comp=Z,6μm,21.6s,baz=294,slow=37
STKA Stephens Creek 47.80 132⇑ *i*P **P** **03 00 29.2 -0.6**
comp=Z,38nm,0.8s,mb5.5
KBL Kabul 47.84 324⇑ *i*P **P** **03 00 29.7 -0.2**
comp=Z,137nm,0.9s,mb6.0
KBL *e*S **S** **03 07 26.5 +4.0**
KBL Kabul 47.84 324⇑ *i*P **P** **03 00 29.7 -0.2**
KBL *e*S **S** **03 07 26.5 +4.0**
KBL pmax pmax
comp=Z,137nm,0.9s,mb6.0
WMQ Urumqi 47.99 347⇑ *i*P **P** **03 00 32.0 +1.1**
WMQ XP sP 03 00 39.0 -15
WMQ PP PP 03 02 23.0 -0.6
WMQ S **S** **03 07 29.0 +4.7**
WMQ SCS ScS 03 10 22.0 +3.6
WMQ SS SS 03 10 52.0 -2.1
WMQ AMB AMB
comp=Z,721nm,1.0s,mb6.7
WMQ AMB AMB
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,4μm,16.0s
WMQ LR LR
comp=E,3μm,16.0s
WMQ LR LR
comp=Z,3μm,16.0s
KSH Kashi 48.05 334 P **P** **03 00 32.3 +0.8**
KSH *e*AP pP 03 00 37.3 -10
KSH *e*XP sP 03 00 39.4 -15
KSH *e*PCP PcP 03 02 00.3 +1.7
KSH *e*PP PP 03 02 23.9 -0.4
KSH *e*SCP ScP 03 05 53.8 +5.9
KSH *e*PCS PcS 03 05 55.5 +1.2
KSH S **S** **03 07 29.3 +3.9**
KSH *e*SCS ScS 03 10 22.3 +3.3
KSH *e*SS SS 03 10 52.6 -2.7
KSH AMB AMB
comp=Z,382nm,0.5s,mb6.7
KSH LR LR
comp=N,5μm,11.0s
KSH LR LR
comp=E,7μm,12.4s
KSH LR LR
comp=Z,4μm,11.9s
WBK Wadi Bani Khal 48.23 304 P **P** **03 00 34.5 +1.3**
SNR=27
JMDO Jabal Madar 48.85 303 P **P** **03 00 39.0 +1.1**
SNR=20
SNY Shenyang 48.96 22⇑ P **P** **03 00 37.0 -1.4**
SNY S **S** **03 07 31.8 -6.2**
SNY AMB AMB
comp=Z,73nm,1.9s,mb5.4
SNY LR LR
comp=N,6μm,17.1s
SNY LR LR
comp=Z,6μm,17.1s
SMDO Samad 49.19 304 P **P** **03 00 41.7 +1.1**
SNR=21
BIDO Bidbid 49.33 304 P **P** **03 00 42.9 +1.3**
SNR=21
BSY Bisya 49.76 303 P **P** **03 00 46.2 +1.2**
SNR=26
HOQ Hoqain 50.03 304 P **P** **03 00 48.1 +1.2**
SNR=26
ULHL Ulahol 50.20 336 P **P** **03 00 48.8 +0.8**
SNR=26
RBK Rabkut 50.42 295⇓ P **P** **03 00 50.6 +0.6**
SNR=12
KZA Kyzart 50.47 335 P **P** **03 00 51.0 +1.1**
SNR=128
ARQ Araqi 50.58 303 P **P** **03 00 52.1 +1.0**
SNR=18
SONM Songino Array 50.69 5 P **P** **03 00 52.2 +0.7**
comp=Z,804nm,0.9s,mb6.7,baz=184,slow=7.0,SNR=1975
SONM PcP PcP 03 02 08.0 0.0
comp=Z,28nm,0.5s,baz=189,slow=4.3,SNR=8.7
SONM ScP ScP 03 05 59.1 +0.2
comp=Z,26nm,1.0s,baz=192,slow=3.9,SNR=9.8
SONM LR LR 03 24 58.4
comp=Z,6μm,19.6s,baz=185,slow=39
SONM PKPPKP 03 31 34.1
comp=Z,0.4nm,0.3s,baz=349,slow=1.5,SNR=4.6
SONM Songino Array 50.69 5 P **P** **03 00 52.2 +0.7**
SONM 03 02 08.0
SONM pmax pmax
comp=Z,804nm,0.9s
SONM pmax pmax
comp=Z,28nm,0.5s
SONM pmax pmax
comp=N,26nm,1.0s
SONM MLR MLR
comp=Z,6μm,19.7s
ULN Ulaanbaatar 50.78 5 P **P** **03 00 53.0 +0.8**
SNR=208
ULN Ulaanbaatar 50.78 5⇑ *i*P **P** **03 00 52.5 +0.4**
ULN *e*PcP PcP 03 02 08.6 +0.3
ULN *e*ScP ScP 03 06 00.0 +0.7
ULN LR LR
comp=Z,6μm,19.0s
ULN Ulaanbaatar 50.78 5 *e*P **P** **03 00 52.8 +0.6**
ULN Ulaanbaatar 50.78 5 P **P** **03 00 52.2 0.0**
comp=Z,800nm,1.0s,comp=Z,7μm,mb6.6
AAA Alma-Ata 50.79 337 *e*P **P** **03 00 52.4 +0.1**
AAA *e*S **S** **03 08 03.9 +0.4**
AAA pmax pmax
comp=Z,5μm,4.1s
AAA smax
comp=N,4μm,5.8s
AAA MLR MLR
comp=Z,2μm,19.0s
UCH Uchtor 50.91 335⇑ *i*P **P** **03 00 54.2 +1.0**
comp=Z,153nm,1.2s,mb5.8
UCH LR LR
comp=Z,1μm,20.0s
UCH Uchtor 50.91 335 P **P** **03 00 54.4 +1.2**
SNR=44
WHFO Wadi Hawf 50.95 296 P **P** **03 00 54.7 +0.8**
SNR=16
TKM2 Tokmak 2 51.03 336⇑ *i*P **P** **03 00 54.6 +0.5**
comp=Z,483nm,0.8s,mb6.5
TKM2 LR LR
comp=Z,2μm,22.0s
TKM2 Tokmak 2 51.03 336⇑ *i*P **P** **03 00 54.6 +0.5**
TKM2 pmax pmax
comp=Z,483nm,0.8s,mb6.5
TKM2 MLR MLR
comp=Z,2μm,22.0s
TKM2 Tokmak 2 51.03 336 P **P** **03 00 55.0 +0.8**
SNR=142
KBK Karagaybulak 51.08 335 P **P** **03 00 55.8 +1.3**
SNR=223
AML Almayashu 51.18 334⇑ *i*P **P** **03 00 56.3 +1.0**
comp=Z,314nm,0.8s,mb6.3
AML Almayashu 51.18 334 P **P** **03 00 56.4 +1.1**
SNR=29
ABTO Aybut 51.19 295 P **P** **03 00 57.2 +1.4**
SNR=12
AAK Ala-Archa 51.25 335 *e*P **P** **03 00 56.3 +0.6**
comp=Z,139nm,0.8s,mb5.9
AAK Ala-Archa 51.25 335 *e*P **P** **03 00 56.3 +0.5**
AAK pmax pmax
comp=Z,139nm,0.8s,mb5.9
AAK Ala-Archa 51.25 335 P **P** **03 00 56.7 +0.9**
SNR=10
CN2 Changchun 51.36 23⇑ P **P** **03 00 55.8 -0.8**
CN2 *e*S **S** **03 08 14.8 +3.5**
CN2 SS SS 03 11 48.8 +0.8
CN2 AMB AMB
comp=Z,250nm,0.9s,mb6.1
CN2 AMB AMB
comp=Z,500nm,10.0s
CN2 LR LR
comp=N,5μm,20.0s
CN2 LR LR
comp=E,3μm,20.0s
CN2 LR LR
comp=Z,6μm,22.0s
FRU Bishkek 51.36 335⇑ *i*P **P** **03 00 57.0 +0.4**
FRU *e* pP 03 01 10.0 -2.9
FRU *i* 03 08 18.0
FRU pmax pmax
comp=Z,970nm,1.6s,mb6.5
FRU MLR MLR
comp=Z,6μm,18.0s
CHMS Chumysh 51.44 335 P **P** **03 00 57.4 +0.2**
SNR=182
HATD Hatta, Dubai 51.53 305 P **P** **03 00 59.3 +1.1**
SNR=15
EKS2 Erkin-Say 51.58 334⇑ *i*P **P** **03 00 59.2 +1.0**
comp=Z,817nm,0.9s,mb6.7
EKS2 *e*S **S** **03 08 17.2 +2.7**
EKS2 LR LR
comp=Z,3μm,20.0s
EKS2 Erkin-Say 51.58 334 P **P** **03 00 59.3 +1.1**
SNR=45
USP Ospenovka 51.77 335 P **P** **03 00 59.7 +0.1**
SNR=318
MK31 Makanchi Array 52.13 344⇑ *i*P **P** **03 01 02.1 -0.2**
MK31 *e*S **S** **03 08 22.6 +0.8**
MKAR Makanchi Array 52.13 344 P **P** **03 01 02.1 -0.2**
comp=Z,346nm,0.8s,mb6.3,baz=150,slow=6.9,SNR=547
MKAR S **S** **03 08 21.7 -0.2**
comp=Z,13nm,1.0s,baz=155,slow=16,SNR=4.7
MKAR LR LR 03 27 59.2
comp=Z,3μm,21.4s,baz=156,slow=42
MKAR Makanchi Array 52.13 344 P **P** **03 01 02.1 -0.2**
MKAR S **S** **03 08 21.7 -0.2**
MKAR pmax pmax
comp=Z,346nm,0.8s
MKAR smax
comp=N,13nm,1.0s
MKAR MLR MLR
comp=Z,3μm,21.4s
MAJO Matsushiro 52.29 38⇑ *i*P **P** **03 01 02.1 -1.5**
MAJO *e*ScP ScP 03 06 06.5 +0.4
MAJO LR LR
comp=Z,2μm,22.0s
MAT Matsushiro 52.29 38 P **P** **03 01 02.2 -1.4**
MAT S **S** **03 08 29.0 +4.6**
MJAR Matsushiro Arr 52.29 38 P **P** **03 01 02.3 -1.4**
comp=Z,100nm,1.0s,mb5.7,baz=211,slow=7.4,SNR=106
MJAR ScP ScP 03 06 06.6 +0.5
comp=Z,31nm,1.1s,baz=221,slow=5.5,SNR=19
MJAR LR LR 03 23 13.2
comp=Z,2μm,21.8s,baz=235,slow=36
MJAR Matsushiro Arr 52.29 38 P **P** **03 01 02.3 -1.3**
MJAR pmax pmax
comp=Z,101nm,1.0s
MJAR pmax pmax
comp=N,31nm,1.1s
MJAR MLR MLR
comp=Z,2μm,21.8s
EIDS Eidsvold 53.03 120⇑ *i*P **P** **03 01 08.5 -0.8**
comp=Z,180nm,1.0s,mb6.0
ZAK Zakamensk 53.06 2⇓ *i*P **P** **03 01 09.4 +0.3**
ZAK *e* 03 10 51.0
ZAK pmax pmax
comp=Z,230nm,1.1s,mb6.0
TOO Toolangi 53.37 136 *e*P **P** **03 01 12.2 +0.5**
TOO *e*S **S** **03 08 43.4 +4.2**
KK31 Karatay Array 53.39 332 *i* P **P** **03 01 11.1 -0.5**
KK31 Karatay Array 53.39 332 *i* P **P** **03 01 11.0 -0.6**
KK31 pmax pmax
comp=Z,225nm,1.1s,mb6.0
MDJ Mudanjiang 53.70 25 P **P** **03 01 13.6 -0.3**
MDJ AP pP 03 01 22.8 -7.4
MDJ XP sP 03 01 26.8 -11
MDJ PP PP 03 03 16.5 +1.1
MDJ SCP ScP 03 06 11.1 -1.0
MDJ PCS PcS 03 06 18.9 +0.5
MDJ S **S** **03 08 40.6 -2.7**
MDJ SCS ScS 03 11 00.8 +3.1
MDJ AMB AMB
comp=Z,62nm,0.9s,mb5.5
MDJ AMB AMB
comp=Z,1μm,7.8s
MDJ LR LR
comp=N,3μm,21.7s
MDJ LR LR
comp=E,6μm,20.1s
MDJ LR LR
comp=Z,8μm,21.2s
MDJ Mudanjiang 53.70 25⇑ *i*P **P** **03 01 13.4 -0.5**
comp=Z,114nm,1.1s,mb5.7
MDJ *e*ScP ScP 03 06 11.2 -0.8
MDJ LR LR
comp=Z,7μm,22.0s
HVS Khovu-Aksy 54.15 354 *d i*P **P** **03 01 16.4 -0.6**
MOY Mondy 54.31 360 *e*P **P** **03 01 18.2 0.0**
MOY pmax pmax
comp=Z,53nm,2.1s,mb5.1
TLY Talaya 54.37 2 P **P** **03 01 19.8 +1.2**
SNR=106
TLY Talaya 54.37 2⇑ *i*P **P** **03 01 19.5 +0.8**
comp=Z,569nm,0.9s,mb6.5
TLY LR LR
comp=Z,7μm,21.0s
TLY Talaya 54.37 2 *c i*P **P** **03 01 19.4 +0.8**
TLY *e* pP 03 01 34.2 -0.8
TLY *e* 03 02 21.2
TLY *e* 03 03 17.5
TLY *e*S **S** **03 08 54.7 +2.6**
TLY *e*SS SS 03 12 37.7 +2.4
TLY *e*SSS 03 14 29.1
TLY pmax pmax
comp=Z,687nm,1.0s,mb6.5
TLY MLR MLR
comp=Z,9μm,17.0s
HIA Hailar 54.38 15⇑ *i*P **P** **03 01 17.7 -1.1**
comp=Z,84nm,1.0s,mb5.6
HIA *e*PcP PcP 03 02 21.3 -0.6
HIA *e*ScP ScP 03 06 15.6 +0.6
HIA LR LR
comp=Z,8μm,19.0s
HIA Hailar 54.38 15⇑ *i*P **P** **03 01 17.7 -1.1**
HIA *e* 03 02 21.3
HIA pmax pmax
comp=Z,84nm,1.0s
HIA MLR MLR
comp=Z,8μm,19.0s
CAN Canberra 54.87 132 *e*P **P** **03 01 22.2 -0.4**
IRK Irkutsk 54.96 2⇑ *i*P **P** **03 01 23.1 +0.2**
IRK *e*S **S** **03 09 00.8 +0.8**
IRK pmax pmax
comp=Z,904nm,1.3s,mb6.6
ABPO Ambohimpanom 54.98 249 *e*P **P** **03 01 24.4 +0.7**
comp=Z,43nm,1.2s,mb5.4
ABPO LR LR
comp=Z,7μm,20.0s
ARMA Armidale 55.06 126 *e*P **P** **03 01 24.6 +0.5**
ARMA *e* 03 06 24.5
ARMA *e*S **S** **03 09 01.1 -1.1**
CNB Canberra Magne 55.13 132 *e*P **P** **03 01 24.2 -0.3**
CNB *e*S **S** **03 09 03.2 +0.2**
CIT Chita 55.69 9 *e*P **P** **03 01 28.9 +0.8**
CIT pmax pmax
comp=Z,701nm,2.5s,mb6.2
KURK Kurchatov 56.72 343 P **P** **03 01 34.8 -0.7**
comp=Z,108nm,0.7s,mb6.0,baz=162,slow=7.3,SNR=180
KURK pP pP 03 01 47.3 -4.7
comp=Z,161nm,1.0s,baz=166,slow=7.5,SNR=8.7
KURK S **S** **03 09 16.8 -6.6**
comp=Z,3.0nm,0.9s,baz=147,slow=15,SNR=5.1
KURK Kurchatov 56.72 343⇑ *i*P **P** **03 01 35.2 -0.3**
comp=Z,325nm,1.0s,mb6.3
KURK *e*S **S** **03 09 22.6 -0.9**
KURK LR LR
comp=Z,4μm,19.0s
KURK Kurchatov 56.72 343⇑ *i*P **P** **03 01 35.2 -0.3**
KURK *e*S **S** **03 09 22.6 -0.8**
KURK pmax pmax
comp=Z,325nm,1.0s,mb6.3
KURK MLR MLR
comp=Z,4μm,19.0s
ABKT Ailbek 56.77 320 P **P** **03 01 36.7 +0.6**
comp=Z,662nm,0.9s,mb6.7,SNR=39
TAU Tasmania Unive 57.26 141 PFAKE 03 01 50.0 +10
TAU LR LR
comp=Z,3μm,20.0s
ZALV Zalesovo Beam 58.20 349 P **P** **03 01 45.5 -0.3**
comp=Z,1μm,0.8s,mb7.0,baz=163,slow=5.7,SNR=1639
ZALV S **S** **03 09 41.1 -1.6**
comp=Z,45nm,1.0s,baz=156,slow=11,SNR=19
ZALV ScS ScS 03 11 26.0 -3.7
comp=Z,13nm,1.0s,baz=157,slow=4.1,SNR=4.5
ZALV LR LR 03 30 04.1
comp=Z,3μm,21.6s,baz=156,slow=39
ZALV PKPPKP 03 31 19.9
comp=Z,0.5nm,0.3s,baz=358,slow=4.3,SNR=4.1
ZALV PKP2bc 03 31 35.4
comp=Z,0.9nm,0.4s,baz=320,slow=4.3,SNR=4.7
ZALV Zalesovo Beam 58.20 349 P **P** **03 01 45.5 -0.3**
ZALV S **S** **03 09 41.1 -1.6**
ZALV ScS ScS 03 11 26.0 -3.7
ZALV LR LR 03 30 04.0
ZALV P'P' 03 31 19.9
ZALV ⇑ *e* 03 31 35.4
KLR Kul'dur 58.29 23⇓ *i*P **P** **03 01 41.5 -5.1**
KLR *e*S **S** **03 09 40.5 -3.6**
KLR *e* 03 11 20.5
KLR pmax pmax
comp=Z,570nm,1.6s,mb6.3
KLR pmax pmax
comp=Z,2μm,7.0s
KLR MLR MLR
comp=E,2μm,13.0s
KLR MLR MLR
comp=Z,13μm,13.0s
ERM Erimo 58.72 36⇓ *i*P **P** **03 01 49.5 -0.2**
comp=Z,102nm,1.0s,mb5.8
ERM LR LR
comp=Z,1μm,19.0s
ERM Erimo 58.72 36⇓ *i*P **P** **03 01 49.6 -0.1**
ERM pmax pmax

comp=Z,102nm,1.0s,mb5.8
ERM MLR MLR
comp=Z,1μm,19.0s
HNR Honiara 58.86 99 PFAKE 03 02 00.0 +8.7
HNR LR LR
comp=Z,1μm,21.0s
KRAR Krasnoyarsk 59.05 355 *i* P **P** **03 01 51.5 -0.2**
HABR Khabarovsk 59.06 26⇑ *i*P **P** **03 01 51.0 -1.0**
HABR *e*SP
HABR 03 02 38.8
HABR *e* 03 04 00.2
HABR *e*S **S** **03 09 56.3 +2.1**
HABR *e* 03 10 10.8
HABR *e* 03 11 38.6
HABR *e*SS SS 03 13 50.8 +1.5
HABR pmax pmax
comp=Z,260nm,1.8s,mb6.0
HABR pmax pmax
comp=Z,1μm,3.6s
NVS Novosibirsk 59.35 348⇑ *i*P **P** **03 01 51.8 -2.1**
NVS *e*S **S** **03 09 49.9 -7.8**
NVS pmax pmax
comp=N,505nm,1.3s
NVS pmax pmax
comp=E,319nm,1.3s
NVS pmax pmax
comp=Z,726nm,1.3s,mb6.5
NVS smax
comp=N,202nm,1.8s
NVS smax
comp=E,182nm,1.5s
ASAJ Asahikawa 59.73 34 P **P** **03 01 56.3 -0.4**
comp=E,113nm,0.7s,mb6.0,baz=239,slow=7.6
ASAJ pP pP 03 02 09.2 -4.1
comp=E,197nm,1.1s,baz=241,slow=21,SNR=2.4
ASAJ Asahikawa 59.73 34 P **P** **03 01 56.3 -0.4**
ASAJ *PP pP 03 02 09.2 -4.1
ASAJ pmax pmax
comp=Z,113nm,0.7s
ASAJ pmax pmax
comp=Z,197nm,1.1s
QRN Al-Qurain 59.83 306 *e*P **P** **03 01 57.3 -0.4**
baz=305
QRN AMb AMB 03 01 59.2
comp=Z,329nm,1.0s,mb6.3,baz=305
KBD Kabd 60.17 306 *e*P **P** **03 01 60.0 0.0**
baz=306
KBD AMb AMB 03 02 01.8
comp=Z,228nm,1.1s,mb6.1,baz=306
NAY Al-Naaiem 60.57 306 *e*P **P** **03 02 02.4 -0.3**
baz=306
NAY AMb AMB 03 02 04.1
comp=Z,167nm,1.0s,mb6.1,baz=306
BVAR Borovoye Array 61.34 339 P **P** **03 02 06.4 -1.0**
comp=Z,206nm,0.8s,mb6.3,baz=142,slow=7.5,SNR=410
BVAR pP pP 03 02 20.2 -3.9
comp=Z,79nm,0.7s,baz=138,slow=8.6,SNR=7.2
BVAR S **S** **03 10 23.1 -0.1**
comp=Z,3.6nm,0.8s,baz=137,slow=15,SNR=4.7
BVAR Borovoye Array 61.34 339 P **P** **03 02 06.4 -1.1**
BVAR *PP pP 03 02 20.2 -3.9
BVAR S **S** **03 10 23.1 -0.1**
BVAR pmax pmax
comp=Z,206nm,0.8s
BVAR pmax pmax
comp=Z,79nm,0.7s
BVAR smax
comp=N,4.0nm,0.8s
BOD Bodaibo 61.37 8 *e*P **P** **03 02 07.1 -0.5**
BOD pmax pmax
comp=Z,327nm,1.1s,mb6.4
BRVK Borovoye 61.41 339⇑ *i*P **P** **03 02 07.0 -0.9**
comp=Z,251nm,0.9s,mb6.3
BRVK *e*S **S** **03 10 26.8 +2.8**
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 61.41 339⇑ *i*P **P** **03 02 07.0 -0.9**
BRVK *e*S **S** **03 10 26.8 +2.8**
BRVK pmax pmax
comp=Z,251nm,0.9s,mb6.3
BRVK MLR MLR
comp=Z,2μm,20.0s
YUK Yuzh-Kuril'sk 61.52 35 *i* P **P** **03 02 08.5 -0.4**
YUK *e* 03 02 52.0
YUK *e* 03 04 19.2
YUK *e* 03 10 50.9
YUK pmax pmax
comp=Z,4μm,2.2s,mb7.2
YUK pmax pmax
comp=N,2μm,0.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK MLR MLR
comp=E,6μm,20.0s
YUK MLR MLR
comp=N,4μm,19.0s
YUK MLR MLR
comp=Z,6μm,13.0s
YSS Yuzh-Sakhalins 61.66 31⇑ *i*P **P** **03 02 09.2 -0.5**
comp=Z,714nm,1.0s,mb6.8
YSS LR LR
comp=Z,674nm,19.0s
YSS Yuzh-Sakhalins 61.66 31α *i*P **P** **03 02 09.3 -0.4**
YSS *e*PP pP 03 02 19.9 -6.5
YSS *e*SP sP 03 02 28.0 -5.4
YSS *e* 03 02 51.0
YSS *e*S **S** **03 10 29.0 +1.6**
YSS *e*PPS 03 10 59.0
YSS *e*SSS 03 17 06.0
YSS pmax pmax
comp=N,250nm,1.0s
YSS pmax pmax
comp=E,160nm,1.0s
YSS pmax pmax
comp=Z,790nm,1.0s,mb6.8
YSS MLR MLR
comp=Z,2μm,16.0s
YSS MLR MLR
comp=N,1μm,18.0s
YSS MLR MLR
comp=E,2μm,16.0s
NRGR Nerungri 62.36 14 *i* P **P** **03 02 14.3 +0.1**
NRGR S **S** **03 10 41.1 +5.2**
NRGR smax
comp=N,58nm,0.9s
CLNS Chul'man 62.56 14 *e*P **P** **03 02 15.0 -0.6**
CLNS *e* 03 02 51.7
CLNS *e* 03 04 38.3
CLNS *e*S **S** **03 10 56.0 +18**
CLNS pmax pmax
comp=Z,270nm,1.0s,mb6.3
CLNS pmax pmax
comp=E,119nm,1.0s
CLNS pmax pmax
comp=N,117nm,0.9s
CLNS pmax pmax
comp=N,40nm,1.2s
CLNS pmax pmax
comp=Z,35nm,1.2s,mb5.4
CLNS pmax pmax
comp=E,23nm,1.3s
CLNS smax
comp=N,256nm,14.3s
CLNS smax
comp=E,238nm,17.5s
CLNS MLR MLR
comp=Z,10μm,16.0s
CLNS MLR MLR
comp=N,7μm,16.0s
CLNS MLR MLR
comp=E,5μm,19.0s
AB31 Akbulak array 62.89 331 P **P** **03 02 17.2 -0.7**
AB31 pmax pmax
comp=Z,548nm,0.8s,mb6.7
CASY Casey 63.66 176 *e*P **P** **03 02 23.1 +0.4**
CASY *i* S **S** **03 10 53.8 +1.9**
CASY Casey 63.66 176 *e*P **P** **03 02 23.6 +1.0**
comp=Z,88nm,1.0s,mb5.8
CASY LR LR
comp=Z,4μm,21.0s
AKTK Aktyubinsk 64.60 331 P **P** **03 02 28.4 -0.8**
AKTK S **S** **03 11 01.5 -2.6**
AKTO Aktyubinsk 64.60 331 P **P** **03 02 28.4 -0.8**
comp=Z,172nm,0.9s,mb6.1,baz=129,slow=6.3,SNR=248
AKTO S **S** **03 11 01.5 -2.6**
comp=Z,4.0nm,0.9s,baz=217,slow=20,SNR=9.4
AKTO Aktyubinsk 64.60 331 P **P** **03 02 28.4 -0.8**
AKTO S **S** **03 11 01.5 -2.6**
AKTO pmax pmax
comp=Z,172nm,1.0s,mb6.0
AKTO smax
comp=N,4.0nm,0.9s
DZM Mont Dzumac 66.16 113 *e*P **P** **03 02 40.0 +0.1**
MAK Makhachkala 66.29 320 *e*P **P** **03 02 38.4 -1.8**
MAK *i* *PP pP 03 02 53.8 -3.3
MAK *e* 03 05 04.0
MAK *e*S S 03 11 24.5 -0.5
MAK *i* *SS sS 03 11 49.8 -3.7
MAK *e* 03 12 32.7
MAK pmax pmax
comp=Z,155nm,0.9s,mb6.0
MAK MLR MLR
comp=Z,1μm,20.0s
MSL Mosul 66.51 312 *ex* x 03 02 42.0
MSL *ex* x 03 11 26.0
MSL *ex* x 03 11 53.0
HAKT HAKKARI 66.53 313 *i* P **P** **03 02 43.7 +1.8**
DGRG David-gareji 67.00 318 P **P** **03 02 46.1 +1.3**
CLDR Caldiran 67.02 315 *e*P **P** **03 02 44.9 0.0**
VANB Van 67.17 314 *e*P **P** **03 02 43.6 -2.3**
DYDN Diyadin 67.34 315 *i* P **P** **03 02 47.5 +0.5**
TBLG Delisi 67.55 318 P **P** **03 02 48.4 +0.1**
AGRB Hanur-Agry 67.85 315 *e*P **P** **03 02 51.3 +1.1**
SVE Sverdlovsk 67.86 337⇓ *e*P **P** **03 02 49.7 -0.2**
SVE *e* pP 03 03 08.8 +2.0
SVE *e*S S 03 11 41.5 -1.9
SVE pmax pmax
comp=Z,690nm,1.0s,mb6.6
SVE pmax pmax
comp=Z,786nm,7.2s
SVE MLR MLR
comp=Z,2μm,18.0s
TUTA Tutak 67.91 315 *i* P **P** **03 02 50.1 -0.5**
KARS Kars 68.20 316 *e*P **P** **03 02 53.1 +0.8**
YAK Yakutsk 68.30 14⇑ *i*P **P** **03 02 51.0 -1.5**
comp=Z,1μm,0.9s,mb6.9
YAK LR LR
comp=Z,11μm,19.0s
YAK Yakutsk 68.30 14*c* *i*P **P** **03 02 51.4 -1.2**
YAK *e* 03 03 13.6
YAK *e**PP pP 03 03 18.0 +8.5
YAK *e*PPP 03 07 04.2
YAK *e*S S 03 11 45.0 -3.5
YAK *e**SS sS 03 12 27.2 +10
YAK *e* 03 12 41.4
YAK *e*SS SS 03 16 10.0 -2.9
YAK pmax pmax
comp=Z,1μm,0.9s,mb6.9
YAK pmax pmax
comp=N,343nm,1.1s
YAK pmax pmax
comp=E,291nm,1.6s
YAK pmax pmax
comp=Z,200nm,2.8s,mb5.7
YAK pmax pmax
comp=N,125nm,2.9s
YAK pmax pmax
comp=E,103nm,2.3s
YAK smax
comp=N,126nm,1.8s
YAK smax
comp=E,138nm,2.2s
ARU Arti 68.40 336⇑ *i*P **P** **03 02 52.4 -0.9**
comp=E,428nm,1.1s,mb6.4
ARU *e*PP PP 03 05 18.4 -6.7
ARU LR LR
comp=Z,3μm,21.0s
ARU Arti 68.40 336*c* *i*P **P** **03 02 52.6 -0.7**
ARU *e* 03 03 16.9
ARU *e* 03 05 23.1
ARU *e*S S 03 11 52.7 +2.8
ARU *e* 03 12 46.9
ARU *e*SS SS 03 16 12.0 -2.6
ARU pmax pmax
comp=Z,529nm,1.2s,mb6.4
ARU MLR MLR
comp=Z,3μm,23.0s
BEST Besiri 68.44 313 *i* P **P** **03 02 54.3 +0.4**
MARD Mardin 68.59 312 *i* P **P** **03 02 55.2 +0.3**
ONI Oni 68.78 318 P **P** **03 02 56.7 +0.8**
HOMI Horasan 68.80 315 *i* P **P** **03 02 56.2 +0.1**
BNGL BINGOL 68.92 314 *i* P **P** **03 02 57.4 +0.5**
EZM Erzurum 69.13 315 *e*P **P** **03 02 59.3 +1.1**
DAGI Agillar 69.20 316 *i* P **P** **03 02 59.1 +0.5**
DRV Dumont d'Urvil 69.22 164 P **P** **03 03 08.0 +10**
DRV S S 03 12 07.0 +7.7
DRV SS SS 03 16 28.0 +1.2
DRV L 03 20 00.0
DRV R 03 23 00.0
ARTV Artvin 69.24 316 *i* P **P** **03 02 59.4 +0.5**
DDEM Demirkent 69.25 316 *i* P **P** **03 02 59.2 +0.3**
DIYA Diyarbakir 69.30 312 *i* P **P** **03 02 59.8 +0.6**
DBAD Bademkaya 69.33 316 *i* P **P** **03 02 59.8 +0.4**
DBOC Borcka 69.48 316 *i* P **P** **03 02 59.9 -0.5**
BCA Borcka 69.55 316 *e*P **P** **03 02 60.0 -0.8**
MAW Mawson 69.72 195 *e*P **P** **03 03 02.5 +1.2**
comp=Z,36nm,0.9s,mb5.3
MAW *e*S S 03 12 08.6 +3.4
MAW Mawson 69.72 195 P **P** **03 03 02.7 +1.4**
comp=Z,9.8nm,0.8s,mb4.8,baz=28,slow=5.0,SNR=9.9
MAW LR LR 03 27 17.2
comp=Z,5μm,21.6s,baz=35,slow=30
MAW PKP2bc 03 31 04.3
comp=Z,23nm,1.1s,baz=230,slow=4.5,SNR=8.7
MAW Mawson 69.72 195 *e*P **P** **03 03 02.1 +0.8**
comp=Z,16nm,1.0s,mb4.9
MAW LR LR
comp=Z,12μm,22.0s
KOPT Kop Dagi 69.79 315 *i* P **P** **03 03 02.6 +0.3**
KIV Kislovodsk 69.87 319⇑ *i*P **P** **03 03 03.2 +0.6**
SNR=45
KIV Kislovodsk 69.87 319⇑ *i*P **P** **03 03 02.8 +0.1**
comp=Z,369nm,1.4s,mb6.1
KIV *e*PP PP 03 05 35.7 -2.2
KIV LR LR
comp=Z,1μm,21.0s
KIV Kislovodsk 69.87 319*c* *i*P **P** **03 03 02.8 +0.2**
KIV *e* pP 03 03 22.4 +2.8
KIV *e* 03 05 34.5
KIV *e*PPP 03 07 19.2
KIV *e*S S 03 12 08.5 +0.8
KIV *e*SS SS 03 16 34.2 -3.6
KIV pmax pmax
comp=Z,161nm,1.1s,mb5.9
KIV pmax pmax
comp=Z,788nm,5.9s
KIV MLR MLR
comp=Z,828nm,19.0s
ASF Jabal al Asfar 69.93 306 P **P** **03 03 04.6 +1.3**
comp=Z,58nm,0.9s,mb5.5,baz=90,slow=2.0,SNR=84
ASF pP pP 03 03 19.0 -1.3
comp=Z,35nm,1.0s,baz=52,slow=2.1,SNR=6.6
ASF Jabal al Asfar 69.93 306 P **P** **03 03 04.6 +1.3**
ASF *PP pP 03 03 19.0 -1.3
ASF pmax pmax
comp=Z,58nm,0.9s
ASF pmax pmax
comp=Z,35nm,1.0s
URFA Urfa 70.09 311 *e*P **P** **03 03 03.7 -0.4**
GOF Gofitskoye 70.12 320⇑ *i*P **P** **03 02 53.2 -11**
GOF *i*S S 03 12 00.2 -10
GOF pmax pmax
comp=Z,136nm,1.0s,mb5.8
GOF smax
comp=E,65nm,1.3s
PTK Pertek 70.17 313 *e*P **P** **03 03 03.2 -1.4**
EZC Erzincan 70.18 314 *e*P **P** **03 03 07.2 +2.5**
MBAR Mbarara 70.30 270 *i* P **P** **03 03 05.3 -0.7**
MBAR LR LR
comp=Z,833nm,22.0s
ELZG Elazig 70.33 313 *i* P **P** **03 03 06.4 +0.8**
MACK Trabzon 70.65 315 *i* P **P** **03 03 08.0 +0.5**
GUMT Gumushane 70.68 315 *e*P **P** **03 03 07.9 +0.2**
KEMA Kemaliye 70.96 313 *i* P **P** **03 03 09.4 -0.1**
SKR Severo-Kuril's 71.00 33 *e*P **P** **03 03 08.0 -1.4**
SKR *e* pP 03 03 25.5 -0.9
SKR pmax pmax
comp=E,270nm,1.0s
SKR pmax pmax
comp=Z,1μm,1.0s,mb6.8
SKR pmax pmax
comp=N,40nm,1.5s
AKCD Akcadag 71.05 312 *i* P **P** **03 03 09.8 -0.2**
RCY Rachaya 71.18 307 *e*P **P** **03 03 12.1 +1.2**
GAZ Gaziantep 71.21 311 *e*P **P** **03 03 11.0 0.0**
SOKR Solikamsk 71.24 338*c* *i*P **P** **03 03 10.6 -0.1**
SOKR *e* pP 03 03 22.5 -5.2
SOKR pmax pmax
comp=Z,570nm,1.1s,mb6.4
SOKR MLR MLR
comp=Z,3μm,18.0s
HWQ Hawqa 71.31 308 *e*P **P** **03 03 12.4 +0.8**
ESPY Espiye-Giresun 71.38 315 *e*P **P** **03 03 11.4 -0.4**
BHL Bhannes 71.43 307 *e*P **P** **03 03 13.3 +0.9**
KMRS Kahramanmaras 71.56 311 *e*P **P** **03 03 12.4 -0.6**
SOC Sochi 71.69 318 *i* P **P** **03 03 13.3 -0.4**
SOC Sochi 71.69 318*c* *i*P **P** **03 03 12.9 -0.8**
SOC *e**PP pP 03 03 23.6 -7.1
SOC *e* pP 03 03 27.4 -3.3
SOC *e* 03 05 49.7
SOC *e*PPP 03 07 41.4
SOC *e*S S 03 12 26.3 -2.5
SOC *e* 03 13 16.1
SOC pmax pmax
comp=Z,106nm,0.6s,mb6.0
SOC pmax pmax
comp=Z,638nm,4.8s
SOC MLR MLR
comp=Z,829nm,19.0s
HTY Hatay 71.71 309 *e*P **P** **03 03 13.9 -0.1**
TARA Tarawa 71.97 88 PFAKE 03 03 30.0 +14
TARA LR LR
comp=Z,2μm,20.0s
ANDN Andirin 72.00 311 *i* P **P** **03 03 16.8 +1.1**
SARI SarD1z-Kayseri 72.08 312 *e*P **P** **03 03 16.2 0.0**
SVSK Karacayir 72.27 313 *e*P **P** **03 03 15.3 -1.9**
CEYT Ceyhan 72.27 310 *e*P **P** **03 03 17.8 +0.4**
PINB Pinarbasi 72.30 312 *i* P **P** **03 03 17.7 +0.2**
KOZT Kozan 72.36 311 *e*P **P** **03 03 17.5 -0.3**
LSZ Lusaka 72.72 255⇑ P **P** **03 03 21.1 +0.7**
SNR=16
LSZ Lusaka 72.72 255 *e*P **P** **03 03 21.0 +0.5**
comp=Z,85nm,1.3s,mb5.5
LSZ LR LR
comp=Z,3μm,20.0s
LSZ Lusaka 72.72 255 *e*P **P** **03 03 21.0 +0.6**
LSZ pmax pmax
comp=Z,85nm,1.3s,mb5.5
LSZ MLR MLR
comp=Z,3μm,20.0s
TOKT Tokat 72.73 314 *e*P **P** **03 03 20.1 +0.1**
BNN Bunyan 72.77 312 *e*P **P** **03 03 18.9 -1.4**
KARA Karaisali 72.88 310 *e*P **P** **03 03 14.6 -6.3**
PETK Petropavlovsk- 73.05 32 P **P** **03 03 20.8 -0.8**
comp=Z,125nm,0.9s,mb5.8,baz=231,slow=1.5,SNR=78
PETK pP pP 03 03 35.4 -3.3
comp=Z,13nm,0.6s,baz=252,slow=2.0,SNR=2.6
PETK LR LR 03 40 07.4
comp=Z,1μm,18.2s,baz=251,slow=40
EREN Erenkoy 73.06 308 *e*P **P** **03 03 21.6 -0.5**
GULE Gulek 73.10 310 *i* P Px 03 03 01.2
MERS Mersin 73.17 310 *e*P **P** **03 03 21.0 -1.7**
KVT Kavak 73.34 314 *e*P **P** **03 03 23.3 -0.3**
NIG Nigde 73.47 311 *e*P **P** **03 03 21.9 -2.5**
AVNT Avonos 73.48 312 *i* P **P** **03 03 24.1 -0.4**
LFK Lefkose 73.50 308 *e*P **P** **03 03 22.7 -1.9**
PET Petropavlovsk 73.51 32⇑ *i*P **P** **03 03 23.8 -0.6**
comp=Z,570nm,1.0s,mb6.5
PET LR LR
comp=Z,2μm,20.0s
PET Petropavlovsk 73.51 32α *i*P **P** **03 03 23.9 -0.4**
PET *e* pP 03 03 38.8 -2.6
PET *e* 03 06 11.5
PET *e*S S 03 12 52.0 +2.8
PET *e*PS 03 13 38.1
PET pmax pmax
comp=Z,2μm,3.2s
PET pmax pmax
comp=Z,698nm,0.8s,mb6.6
PET pmax pmax
comp=Z,1μm,16.5s
PET pmax pmax
comp=Z,600nm,16.9s
PET smax
comp=N,700nm,11.9s
PET MLR MLR
comp=Z,3μm,17.0s
PET MLR MLR
comp=Z,3μm,20.0s
CSS Prodhromos 73.57 308 *e*P **P** **03 03 25.1 0.0**
comp=Z,181nm,1.0s,mb6.0
VRHR Novokhopersk 73.62 326*c* *i*P **P** **03 03 24.4 -0.6**
VRHR *e**SP PcP 03 03 35.8 -4.8
VRHR *e*S S 03 12 46.5 -4.0
VRHR *e*SS SS 03 17 42.7 +7.8
VRHR pmax pmax
comp=Z,480nm,0.8s,mb6.5
VRHR pmax pmax
comp=N,70nm,0.6s
VRHR pmax pmax
comp=E,260nm,1.2s
VRHR smax
comp=N,1μm,2.4s
VRHR smax
comp=Z,200nm,2.6s
VRHR smax
comp=E,590nm,2.1s
VRHR MLR MLR
comp=Z,2μm,17.0s
VRHR MLR MLR
comp=N,2μm,16.0s
VRHR MLR MLR
comp=E,2μm,18.0s
IKL Isikli 73.64 309 *e*P **P** **03 03 24.5 -0.9**
RPZ Rata Peaks 73.64 135 LR LR 03 34 33.1
comp=E,3μm,22.0s,baz=292,slow=35
ANN Anapa 73.66 318*c* *i*P **P** **03 03 22.8 -2.6**
ANN *e* pP 03 03 39.8 -2.7
ANN *e* 03 06 06.6
ANN *e*S S 03 12 47.5 -3.8
ANN pmax pmax
comp=Z,57nm,1.0s,mb5.5
ANN MLR MLR
comp=Z,2μm,21.0s
LEF Lefka 73.96 308 *e*P **P** **03 03 27.8 +0.4**
CDAG Cicekdag 74.10 312 *i* P **P** **03 03 27.7 -0.4**
KAMT Kaman 74.51 312 *e*P **P** **03 03 29.6 -0.9**
BR131 Keskin Array S 74.67 312⇑ *i*P **P** **03 03 30.6 -0.8**
comp=Z,38nm,0.6s,mb5.5
BR131 LR LR
comp=Z,724nm,20.0s
BRTR Keskin Array B 74.67 312 P **P** **03 03 30.7 -0.7**
comp=Z,52nm,0.7s,mb5.5,baz=140,slow=6.8,SNR=262
BRTR PKPPKP 03 30 52.5
comp=Z,1.4nm,0.9s,baz=272,slow=5.6,SNR=3.6
BRTR LR LR 03 39 01.1
comp=Z,485nm,19.2s,baz=218,slow=38
BRTR Keskin Array B 74.67 312 P **P** **03 03 30.7 -0.7**
BRTR pmax pmax
comp=Z,52nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR MLR MLR
comp=Z,485nm,19.2s
HDMB Hadim 74.76 309 *e*P **P** **03 03 31.8 -0.2**
TOS Tosya 74.78 314 *e*P **P** **03 03 32.0 +0.1**
VORD Divnogorie 74.89 325*c* *i*P **P** **03 03 31.6 -0.8**
VORD *e**SP PcP 03 03 45.3 -0.8
VORD *e*S S 03 13 02.4 -2.4
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=Z,190nm,0.9s,mb6.0
VORD pmax pmax
comp=E,190nm,1.3s
VORD smax
comp=E,240nm,2.2s
VORD smax
comp=Z,120nm,2.0s
VORD smax
comp=N,160nm,1.6s
VORD MLR MLR
comp=Z,1μm,22.0s
VORD MLR MLR
comp=N,910nm,21.0s

VORD MLR MLR
comp=E,590nm,21.0s
CANT Cankiri 74.94 313 *eP* **P 03 03 32.7 -0.2**
ILGA Ilgaz 75.00 314 *i* P **P 03 03 33.3 0.0**
ELDT Eldivan 75.05 313 *i* P **P 03 03 33.0 -0.5**
VSR Storozhevoye 75.07 325*c i*P **P 03 03 32.5 -0.9**
VSR *e**SP PcP 03 03 47.1 +0.3
VSR *eS S 03 13 03.6 -3.2
VSR pmax pmax
comp=Z,120nm,0.9s,mb5.8
VSR pmax pmax
comp=N,60nm,1.2s
VSR pmax pmax
comp=E,170nm,1.1s
VSR smax
comp=E,210nm,2.3s
VSR smax
comp=Z,120nm,3.0s
VSR smax
comp=N,110nm,1.2s
VSR MLR MLR
comp=Z,570nm,18.0s
VSR MLR MLR
comp=N,410nm,20.0s
VSR MLR MLR
comp=E,830nm,16.0s
BZK Bozkurt 75.07 315 *eP* **P 03 03 33.0 -0.7**
KONT Konya--Tatoy 75.12 310 *eP* **P 03 03 32.0 -2.0**
LADK Ladik-KONYA 75.19 311 *eP* **P 03 03 34.2 -0.2**
VOR Voronezh 75.26 325⇑*iP* **P 03 03 33.0 -1.5**
VOR *eS S 03 13 06.0 -2.9
VOR pmax pmax
comp=Z,900nm,1.8s,mb6.4
ANTO Ankara 75.33 312⇑*iP* **P 03 03 34.8 -0.5**
comp=Z,109nm,1.0s,mb5.7
ANTO LR LR
comp=Z,741nm,21.0s
ANTO Ankara 75.33 312⇑*iP* **P 03 03 34.8 -0.4**
KDHN Kadinhani 75.46 311 *i* P **P 03 03 34.5 -1.5**
LBTB Lobatse 75.61 245 *eP* **P 03 03 38.5 +1.4**
comp=Z,56nm,1.2s,mb5.4
LBTB LR LR
comp=Z,3μm,19.0s
LBTB Lobatse 75.61 245 *eP* **P 03 03 38.5 +1.3**
LBTB pmax pmax
comp=Z,56nm,1.2s,mb5.4
LBTB MLR MLR
comp=Z,3μm,19.0s
KIZT Kizilcal 75.74 311 *eP* **P 03 03 36.6 -0.9**
SAFT Safranbolu 75.80 314 *eP* **P 03 03 37.4 -0.5**
SNZO South Karori 75.86 132 *eP* **P 03 03 36.8 -1.5**
comp=Z,204nm,1.1s,mb6.0
SNZO LR LR
comp=Z,4μm,22.0s
SIM Simferopol' 75.93 318 *eP* **P 03 03 38.0 -0.5**
SIM pmax pmax
comp=Z,192nm,0.8s,mb6.1
SEY Seymchan 76.03 22⇑*eP* **P 03 03 38.6 0.0**
BOSA Boshof 76.17 241 P **P 03 03 40.7 +0.5**
comp=Z,6.4nm,0.5s,mb4.8,baz=92,slow=7.0,SNR=21
BOSA pP pP 03 03 56.1 -1.3
comp=Z,28nm,0.8s,baz=84,slow=5.2,SNR=10
BOSA LR LR 03 33 57.4
comp=Z,2μm,18.2s,baz=81,slow=33
BOSA Boshof 76.17 241 *eP* **P 03 03 41.2 +0.9**
comp=Z,35nm,0.9s,mb5.3
BOSA LR LR
comp=Z,3μm,22.0s
BOSA Boshof 76.17 241 P **P 03 03 40.7 +0.5**
BOSA *PP pP 03 03 56.2 -1.2
BOSA pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BOSA pmax pmax
comp=Z,28nm,0.8s,mb5.2
BCK Bucak 76.36 309 *eP* **P 03 03 39.0 -2.1**
BOLV Bolvadin 76.40 311 *i* P **P 03 03 40.3 -1.0**
ISP Isparta 76.51 310*c iP* **P 03 03 40.9 -1.1**
ISP Isparta 76.51 310⇑*iP* **P 03 03 40.8 -1.2**
TIXI Tiksi 76.53 9⇑*iP* **P 03 03 39.9 -1.5**
comp=Z,539nm,1.0s,mb6.4
TIXI *ePP PP 03 06 32.1 -2.0
TIXI *eS S 03 13 16.8 -5.4
TIXI LR LR
comp=Z,8μm,19.0s
TIXI Tiksi 76.53 9*c iP* **P 03 03 40.0 -1.4**
TIXI pmax pmax
comp=Z,465nm,1.0s,mb6.4
SHUT Suhut-Afyon 76.66 311 *eP* **P 03 03 39.4 -3.4**
MDU Mudurnu 76.66 313 *eP* **P 03 03 42.0 -0.8**
AKAS Kas 76.83 308 *i* P **P 03 03 41.6 -2.1**
BORA Eskisehir 77.07 312 *i* P **P 03 03 44.5 -0.5**
GOLH Golhisar 77.10 309 *i* P **P 03 03 44.7 -0.6**
ALT Altintas 77.12 311 *eP* **P 03 03 44.5 -0.8**
GULT Gulveren 77.17 312 *eP* **P 03 03 44.8 -0.8**
URZ Urewera 77.30 128 LR LR 03 37 51.1
comp=Z,2μm,21.5s,baz=98,slow=36
SYO Syowa Base 77.40 199⇓*eP* **P 03 03 39.6 -6.7**
SYO Syowa Base 77.40 199⇑*iP* pP 03 04 01.8 -1.8
KHAL Karahalli 77.42 310 *i* P **P 03 03 44.0 -3.0**
GDZ Gediz 77.60 311 *i* P **P 03 03 46.4 -1.7**
TURN Turunc 77.76 309 *i* P **P 03 03 49.9 +0.9**
MOS Moscow 77.76 329 *eP* **P 03 03 43.3 -5.3**
MOS *e* pP 03 03 56.8 -9.0
MOS *e* pP 03 04 02.4 -3.4
MOS *e* 03 06 44.1
MOS *eS S 03 13 31.8 -4.2
MOS *e* 03 13 59.0
MOS pmax pmax
comp=Z,813nm,1.5s,mb6.4
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.6
MOS MLR MLR
comp=Z,3μm,22.0s
MOS MLR MLR
comp=E,2μm,23.0s
MOS MLR MLR
comp=N,1μm,20.0s
ARG Arkhangelos 77.99 308 *eP* **P 03 03 50.5 +0.2**
YLV Yalova 78.04 312 *eP* **P 03 03 49.6 -0.9**
OBN Obninsk 78.07 328⇑*iP* **P 03 03 49.8 -0.4**
comp=N,333nm,0.9s,mb6.3
OBN *ePP PP 03 06 44.1 -3.2
OBN LR LR
comp=Z,2μm,21.0s
OBN Obninsk 78.07 328*c iP* **P 03 03 50.1 -0.2**
OBN *e* 03 03 59.8
OBN *i* 03 06 46.4
OBN *iS S 03 13 40.5 +1.2
OBN pmax pmax
comp=Z,812nm,1.6s,mb6.4
KULA Kula-Manisa 78.09 310 *eP* **P 03 03 49.4 -1.4**
DEMI Demirci 78.17 311 *i* P **P 03 03 51.1 -0.1**
DURS Dursunbey 78.48 311 *i* P **P 03 03 52.2 -0.7**
DAT Datca 78.53 308 *eP* **P 03 03 52.3 -1.0**
KARP Karpathos 78.61 307 *eP* **P 03 03 54.5 +0.8**
BGKT Bogazkoy 78.63 313 *eP* **P 03 03 52.5 -1.3**
BDRM Kayabasi 78.70 309 *i* P **P 03 03 54.0 -0.3**
AKHS Akhisar 78.81 310 *i* P **P 03 03 55.2 +0.4**
AKS Akhisar 78.81 310 *eP* **P 03 03 54.6 -0.2**
ELBA Catalca 78.88 313 *i* P **P 03 03 52.9 -2.1**
BALB Balikesir 78.94 311 *eP* **P 03 03 54.4 -1.0**
GCAM G?zelcaml? 79.00 309 *i* P **P 03 03 54.4 -1.4**
KLMR Klimovskoe 79.05 334⇑*iP* **P 03 03 55.4 -0.2**
KLMR *e* 03 06 49.9
KLMR *eS S 03 13 41.9 -7.7
KLMR pmax pmax
comp=Z,474nm,1.2s,mb6.3
SLVT Silivri 79.06 313 *eP* **P 03 03 55.0 -1.0**
BNT Bandirma 79.07 312 *eP* **P 03 03 55.1 -1.0**
ZKR Zakros 79.28 306 P **P 03 03 57.7 +0.3**
SMG Samos 79.31 309 *eP* **P 03 03 58.5 +1.0**
TLCR 79.60 317⇑*iP* **P 03 03 58.3 -0.6**
URLA Izmir 79.64 310 *i* P **P 03 03 58.5 -0.7**
PSN Preselentsi 79.66 315 P **P 03 03 59.5 +0.2**
TIRR Tirgusor 79.69 316⇑*iP* **P 03 03 59.2 -0.2**
comp=Z,130nm,1.0s,mb5.8
TIRR Tirgusor 79.69 316⇑*iP* **P 03 03 59.2 -0.2**
TIRR pmax pmax
comp=Z,130nm,1.0s,mb5.8
TIRR Tirgusor 79.69 316⇑*iP* **P 03 03 59.0 -0.4**
NPS Neapolis 79.80 306 *eP* **P 03 04 01.0 +0.8**
LAST Lasithi 79.89 306 P **P 03 04 01.1 +0.4**
CVD Cernavoda 79.92 316 P **P 03 04 01.2 +0.5**
CHOS Chios island 80.06 310 P **P 03 04 02.0 +0.5**

KIS Kishinev 80.06 319 P **P 03 04 01.3 -0.1**
KIS Kishinev 80.06 319*b iP* **P 03 04 01.0 -0.4**
KIS *i* 03 04 12.0
KIS *i* pP 03 04 22.0 +3.3
KIS *e* 03 07 06.0
KIS *eS S 03 14 03.0 +2.1
KIS *ePS 03 14 50.0
KIS pmax pmax
comp=Z,550nm,2.2s,mb6.1
KIS pmax pmax
comp=Z,1μm,11.0s
KIS pmax pmax
comp=Z,1μm,12.0s
KIS Kishinev 80.06 319 *i* **P 03 04 01.0 -0.4**
KIS Kishinev 80.06 319 PM 03 04 02.0
comp=Z,600nm,2.2s
KIS Kishinev 80.06 319 *ePP PP 03 07 06.0 +1.8
KIS *eS S 03 14 03.0 +2.1
KIS Kishinev 80.06 319 *ePS 03 14 50.0
KIS *eL 03 32 12.0
KIS LRM 03 49 50.0
comp=Z,1μm,17.0s
KIS Kishinev 80.06 319⇑*iP* **P 03 04 01.2 -0.2**
PRK Paraskevi 80.07 310 *eP* **P 03 04 03.0 +1.4**
PRD Provadia 80.10 315 P **P 03 04 01.6 -0.1**
THR1 Thera Island 80.13 307 P **P 03 04 01.4 -0.6**
THR6 Thira Island, 80.17 307 P **P 03 04 01.7 -0.5**
THR3 Thira Island, 80.18 308 P **P 03 04 01.6 -0.7**
THR4 Thira Island, 80.19 308 P **P 03 04 01.9 -0.4**
NEF NEVSHA 80.20 315 P **P 03 04 02.3 +0.1**
APE Apeiranthos 80.20 308 *eP* **P 03 04 02.5 +0.1**
APE Apeiranthos 80.20 308 P **P 03 04 01.8 -0.6**
APE Apeiranthos 80.20 308⇑*iP* **P 03 04 01.6 -0.8**
THR5 Thira Island, 80.22 308 P **P 03 04 01.9 -0.6**
SUR Sutherland 80.23 238 *eP* **P 03 04 04.2 +1.6**
comp=Z,98nm,1.0s,mb5.7
SUR LR LR
comp=Z,4μm,20.0s
BOZC Bozcaada 80.35 311 *i* P **P 03 04 02.5 -0.6**
SIVA Sivas 80.40 306 P **P 03 04 03.8 +0.3**
JMB Yambol 80.52 314 P **P 03 04 04.6 +0.6**
ALN Alexandroupoli 80.58 312 P **P 03 04 04.0 -0.3**
AKASG Malin Array Be 80.79 322 P **P 03 04 04.3 -0.9**
comp=Z,19nm,0.6s,mb5.2,baz=92,slow=4.6,SNR=118
AKASG pP pP 03 04 20.1 -2.5
comp=Z,41nm,0.8s,baz=92,slow=5.5,SNR=6.9
AKASG PP PP 03 07 09.5 -0.6
comp=Z,17nm,1.0s,baz=84,slow=6.9,SNR=6.2
AKASG S S 03 14 06.1 -2.3
comp=Z,0.2nm,0.3s,baz=116,slow=9.8,SNR=5.2
AKASG PKPPKP 03 30 50.0
comp=Z,0.2nm,0.3s,baz=305,slow=3.3,SNR=4.2
AKASG Malin Array Be 80.79 322 P **P 03 04 04.3 -0.9**
AKASG pP pP 03 04 20.1 -2.5
AKASG PP PP 03 07 09.5 -0.6
AKASG S S 03 14 06.1 -2.3
AKASG P'P' 03 30 50.0
AKASG Malin Array Be 80.79 322 P **P 03 04 04.3 -0.9**
AKASG *PP pP 03 04 20.1 -2.4
AKASG 03 07 09.5
AKASG S S 03 14 06.1 -2.3
AKASG pmax pmax
comp=Z,19nm,0.6s
AKASG pmax pmax
comp=Z,41nm,0.8s
AKASG pmax pmax
comp=Z,17nm,1.0s
AKBB Malin Array Si 80.79 322 *eP* **P 03 04 04.1 -1.1**
KIEV Kiev 80.80 322 *eP* **P 03 04 03.8 -1.4**
comp=Z,67nm,0.9s,mb5.6
KIEV LR LR
comp=Z,2μm,20.0s
KIEV Kiev 80.80 322 *eP* **P 03 04 03.8 -1.5**
KIEV pmax pmax
comp=Z,67nm,0.9s,mb5.6
KIEV MLR MLR
comp=Z,2μm,20.0s
VAM Vamos 80.96 306 *eP* **P 03 04 08.0 +1.5**
VNDA Vanda 81.13 169 P **P 03 04 06.6 +0.1**
comp=Z,7.2nm,0.9s,mb4.6,baz=304,slow=5.9,SNR=27
VNDA pP pP 03 04 21.2 -2.7
comp=Z,18nm,0.8s,baz=299,slow=6.7,SNR=14
VNDA PKKPbc PKKPbc 03 22 41.8 -4.3
comp=Z,1.4nm,0.8s,baz=149,slow=1.0,SNR=6.3
VNDA PKPPKP 03 30 48.7
comp=Z,2.3nm,1.1s,baz=135,slow=2.9,SNR=5.2
VNDA LR LR 03 36 08.6
comp=Z,2μm,21.4s,baz=311,slow=33
VNDA Vanda 81.13 169⇑*iP* **P 03 04 06.6 0.0**
comp=Z,30nm,0.6s,mb5.4
SZH Strazhica 81.16 314 P **P 03 04 07.1 -0.2**
VRI Vrincioaia 81.19 317 P **P 03 04 08.2 +0.8**
VRI Vrincioaia 81.19 317⇓*iP* **P 03 04 07.3 -0.1**
DIM Dimitrovgrad 81.19 313 P **P 03 04 07.5 -0.1**
PLOR Plostina 81.23 317 P **P 03 04 08.4 +0.7**
PLOR Plostina 81.23 317⇓*iP* **P 03 04 07.9 +0.2**
MLR Muntele Rosu 81.64 317 P **P 03 04 10.4 +0.6**
MLR Muntele Rosu 81.64 317⇑*iP* **P 03 04 10.4 +0.6**
ZIMR 81.65 315⇓P **P 03 04 09.9 0.0**
ZIMR 81.65 315⇓*iP* **P 03 04 09.9 0.0**
ATH Athens Observa 81.79 309 *eP* **P 03 04 11.0 +0.2**
PLD Plovdiv 81.81 313 P **P 03 04 10.5 -0.3**
AOS Alonnisos 81.87 310 P **P 03 04 10.4 -0.8**
NAIG Nisos Aigina 81.93 309 *eP* **P 03 04 11.5 0.0**
OUR Ouranopolis 82.01 311 P **P 03 04 11.7 -0.2**
SMY Shemya 82.08 36 *eP* **P 03 04 11.5 -0.5**
comp=Z,577nm,1.2s,mb6.4
SMY LR LR
comp=Z,1μm,19.0s
SMY Shemya 82.08 36 *eP* **P 03 04 11.5 -0.5**
SMY pmax pmax
comp=Z,577nm,1.2s,mb6.4
SMY MLR MLR
comp=Z,1μm,19.0s
DID Didima 82.08 308 P **P 03 04 11.1 -1.2**
PAIG Paliouri 82.16 311 P **P 03 04 12.3 -0.4**
VLI Veliai 82.19 307 *eP* **P 03 04 12.0 -0.9**
SBA Scott Base 82.22 169 *eP* **P 03 04 12.7 +0.4**
comp=Z,62nm,1.1s,mb5.5
SBA LR LR
comp=Z,2μm,21.0s
SBA Scott Base 82.22 169 *eP* **P 03 04 12.7 +0.4**
SBA pmax pmax
comp=Z,62nm,1.1s,mb5.5
SBA MLR MLR
comp=Z,2μm,21.0s
VOIR 82.24 316 P **P 03 04 12.8 -0.1**
VOIR 82.24 316⇑*iP* **P 03 04 12.7 -0.3**
PGB Panagyurishte 82.29 313 P **P 03 04 12.9 -0.4**
LTK Loutraki 82.38 309 P **P 03 04 12.5 -1.4**
PLG Polygyros 82.42 311 *eP* **P 03 04 14.0 0.0**
MMB Musomniste 82.43 312 P **P 03 04 13.4 -0.7**
XOR Xorichti 82.44 310 P **P 03 04 12.6 -1.5**
SOH Sokhos 82.57 312 P **P 03 04 14.0 -0.8**
BURAR Bucovina Array 82.59 319 P **P 03 04 16.1 +1.3**
BURAR Bucovina Array 82.59 319⇑*iP* **P 03 04 15.6 +0.9**
BUR08 Bucovina Ar. S 82.61 319⇑*iP* **P 03 04 15.8 +1.0**
MNK Minsk 82.64 326 *eP* **P 03 04 14.0 -0.9**
MNK pmax pmax
comp=Z,950nm,1.0s,mb6.8
HORT Hortiatis 82.72 311 P **P 03 04 14.7 -0.9**
THE Thessaloniki 82.83 311 P **P 03 04 14.9 -1.2**
PUL Pulkovo 82.87 331⇑*iP* **P 03 04 16.4 +0.5**
CRAR CRAIOVA 82.89 315⇓*iP* **P 03 04 16.7 +0.3**
TSUM Tsumeb 82.90 251 *eP* **P 03 04 17.3 +0.3**
comp=Z,29nm,1.0s,mb5.3
TSUM LR LR
comp=Z,4μm,21.0s
KKB Krupnik 82.95 313 P **P 03 04 16.3 -0.5**
KNT Kendrikon 82.97 312 P **P 03 04 16.1 -0.8**
VTS Vitosha 82.99 313 P **P 03 04 17.1 +0.2**
VTS Vitosha 82.99 313 P **P 03 04 16.9 0.0**
VTS Vitosha 82.99 313⇑*iP* **P 03 04 17.0 +0.1**
AGG Agios Georgios 83.04 310 P **P 03 04 15.6 -1.7**
ITM Ithomi 83.06 308 *eP* **P 03 04 17.0 -0.4**
LIT Litokhoron 83.09 311 P **P 03 04 16.7 -0.8**
PYL PYLOS 83.16 307 P **P 03 04 17.1 -0.9**
VAY Valandovo 83.24 312 P **P 03 04 16.9 -1.4**
VAY Valandovo 83.24 312 *eP* **P 03 04 17.1 -1.2**
GRG Griva 83.30 312 P **P 03 04 17.8 -0.8**
EVR Evrytania 83.42 310 *eP* **P 03 04 19.0 -0.3**
JOF Joensuu 83.43 334 *ep* **P 03 04 17.2 -1.6**
comp=Z,166nm,1.0s,mb6.0

JOF Joensuu 83.43 334 *eP* **P 03 04 17.2 -1.6**
JOF pmax pmax
comp=Z,166nm,1.0s,mb6.0
STIP Stip 83.58 312 *eP* **P 03 04 18.4 -1.6**
BILL Bilibino 83.59 20⇑*iP* **P 03 04 18.4 -1.0**
comp=Z,61nm,0.8s,mb5.8
BILL LR LR
comp=Z,4μm,20.0s
BILL Bilibino 83.59 20*c iP* **P 03 04 18.6 -0.9**
BILL pmax pmax
comp=Z,110nm,1.0s,mb5.9
KZN Kozani 83.67 311 *eP* **P 03 04 24.0 +3.5**
BMR Baia Mare 83.74 318 P **P 03 04 21.8 +1.1**
BMR Baia Mare 83.74 318⇑*iP* **P 03 04 21.5 +0.8**
GZR Gura Zlata 83.80 316 P **P 03 04 21.2 +0.2**
GZR Gura Zlata 83.80 316⇑*iP* **P 03 04 21.0 0.0**
LVV L'vov 83.82 321 *eP* **P 03 04 20.4 -0.6**
LVV *e*PP pP 03 04 38.2 -0.3
LVV *e* 03 07 34.0
LVV *eS S 03 14 36.0 -3.4
LVV *ePS 03 15 24.0
LVV pmax pmax
comp=Z,400nm,1.4s,mb6.4
MIDW Midway 83.93 61 PFAKE 03 04 30.0 +7.9
MIDW LR LR
comp=Z,2μm,19.0s
LVZ Lovozero 83.94 340⇑*eP* **P 03 04 20.9 -0.4**
LVZ Lovozero 83.94 340⇑*eP* **P 03 04 20.8 -0.5**
LVZ pmax pmax
comp=Z,299nm,1.3s,mb6.3
FNA Florina 84.04 311 P **P 03 04 21.2 -1.2**
DRGR 84.10 317 P **P 03 04 23.2 +0.7**
DRGR 84.10 317⇓*iP* **P 03 04 23.2 +0.7**
BIA Bitola 84.12 312 P **P 03 04 21.3 -1.5**
BIA Bitola 84.12 312 *eP* **P 03 04 20.9 -1.8**
SKO Skopje 84.18 312 *eP* **P 03 04 22.6 -0.5**
APA Apatity 84.25 339⇓*iP* **P 03 04 22.0 -0.9**
APA *iS SKSac 03 14 32.0 -8.7
APA pmax pmax
comp=Z,189nm,1.0s,mb6.2
APA MLR MLR
comp=Z,5μm,16.0s
VLS Valsamata 84.26 309 *eP* **P 03 04 23.5 0.0**
VSU Vasula 84.27 329*d iP* **P 03 04 21.9 -1.2**
JAN Janina 84.27 310 *eP* **P 03 04 25.0 +1.4**
TRPA Tarpa 84.46 319⇑*iP* **P 03 04 24.4 +0.1**
OHR Ohrid 84.52 312 P **P 03 04 23.3 -1.5**
OHR Ohrid 84.52 312 *eP* **P 03 04 23.1 -1.7**
KWP Kalwaria 84.62 320 *eP* **P 03 04 26.0 +0.9**
KWP *e* pP 03 04 40.5 -2.0
KWP *eSKS 03 14 34.3
KWP LMZ 03 43 47.1
comp=Z,1μm,26.9s
KWP Kalwaria 84.62 320⇑*eP* **P 03 04 26.0 +0.9**
KWP *e* pP 03 04 40.5 -2.1
KWP *eSKS 03 14 34.3
BZS Buzias 84.64 316 P **P 03 04 25.6 +0.2**
BZS Buzias 84.64 316⇑*iP* **P 03 04 25.3 0.0**
IGT Igoumenitsa 84.65 310 P **P 03 04 25.2 -0.3**
UZH Uzhgorod 84.71 319⇓*iP* **P 03 04 25.5 -0.1**
UZH *i* pP 03 04 42.5 -0.5
UZH *i* 03 04 49.5
UZH *e* 03 07 44.0
UZH *e* 03 09 36.0
UZH *eS S 03 14 45.5 -2.9
UZH *e* 03 15 49.0
KOLS Kolonicke sedl 84.78 319 *iP* **P 03 04 26.9 +1.0**
KOLS pmax pmax
comp=Z,244nm,1.2s,mb6.2
KOLS Kolonicke sedl 84.78 319 *iP* **P 03 04 26.9 +1.0**
KOLS *e* 03 04 36.5
TIM Timisoara 84.94 316 P **P 03 04 27.9 +1.1**
KEK Kerkira 85.08 310 *eP* **P 03 04 28.5 +0.8**
SUW Suwalki 85.18 325 *eP* **P 03 04 27.8 0.0**
comp=Z,900nm,1.2s,mb6.8
SUW *e* pP 03 04 42.4 -2.9
SUW *ePP PP 03 07 53.0 +7.0
SUW *eSKS 03 14 51.1
SUW *eS S 03 14 59.6 +6.8
SUW LMZ 03 41 23.7
comp=Z,1μm,30.6s
SUW Suwalki 85.18 325⇑*eP* **P 03 04 27.8 0.0**
SUW *e* pP 03 04 42.4 -2.9
SUW *ePP PP 03 07 53.0 +7.0
SUW *eSKS 03 14 51.1
SUW *eS S 03 14 59.7 +6.9
TIR Tirane 85.25 312 P **P 03 04 28.0 -0.5**
CRVS Cervenica-Dubn 85.30 319 *iP* **P 03 04 29.1 +0.6**
CRVS pmax pmax
comp=Z,55nm,1.1s,mb5.6
PVY Plav 85.35 313⇑*iP* **P 03 04 28.1 -0.8**
KAF Kangasniemi 85.41 333 *ep* **P 03 04 27.8 -1.0**
comp=Z,134nm,0.8s,mb6.1,baz=100,slow=4.5
KAF Kangasniemi 85.41 333 *eP* **P 03 04 27.8 -1.0**
KAF pmax pmax
comp=Z,134nm,0.8s,mb6.1
IVA Berane 85.44 313⇑*iP* **P 03 04 29.0 -0.4**
STHS Stebnicka Huta 85.53 320 *iP* **P 03 04 30.2 +0.6**
STHS *e* pP 03 04 46.0 -1.1
STHS pmax pmax
comp=Z,50nm,0.9s,mb5.7
STHS Stebnicka Huta 85.53 320 *iP* **P 03 04 30.2 +0.6**
STHS *epP pP 03 04 46.0 -1.1
ULC Ulcinj 85.79 312⇑*iP* **P 03 04 30.5 -0.7**
TTG Podgorica 85.85 313⇑*iP* **P 03 04 30.4 -1.0**
PLE Pljevlja 85.87 314⇑*iP* **P 03 04 31.3 -0.2**
NKY Niksic 86.09 313⇑*iP* **P 03 04 31.8 -0.8**
BUM Brajici-Budva 86.10 313⇑*iP* **P 03 04 31.4 -1.2**
NIE Niedzica 86.12 320 *iP* **P 03 04 33.3 +0.7**
NIE *ePP PP 03 07 54.5 +0.7
WAR Warsaw 86.14 323 *eP* **P 03 04 33.4 +0.8**
WAR *e* pP 03 04 52.6 +2.5
WAR *eSKS 03 14 54.5
WAR *eS S 03 15 03.3 +1.0
WAR LMZ 03 49 38.9
comp=Z,2μm,22.8s
WAR Warsaw 86.14 323 *eP* **P 03 04 33.4 +0.8**
WAR *e* pP 03 04 52.6 +2.5
WAR *eSKS 03 14 54.5
WAR *eS S 03 15 03.3 +1.1
WAR LR LR
comp=Z,2μm,22.8s
WAR Warsaw 86.14 323 *eP* **P 03 04 33.4 +0.8**
WAR *e* pP 03 04 52.6 +2.5
WAR *e* 03 14 54.5
WAR *eS S 03 15 03.3 +1.1
PSZ Piszkesteto 86.17 318⇑*iP* **P 03 04 33.1 +0.2**
comp=Z,46nm,0.9s,mb5.7
PSZ *ePP PP 03 07 49.1 -5.0
PSZ LR LR
comp=Z,1μm,20.0s
PSZ Piszkesteto 86.17 318⇑*iP* **P 03 04 33.1 +0.2**
PSZ *e* 03 07 49.1
PSZ pmax pmax
comp=Z,46nm,0.9s,mb5.7
PSZ MLR MLR
comp=Z,1μm,20.0s
PSZ Piszkesteto 86.17 318⇑*iP* **P 03 04 33.2 +0.3**
UPM Unac-Piva 86.20 313⇑*iP* **P 03 04 32.6 -0.6**
HCY Herceg Novi 86.41 313⇑*iP* **P 03 04 33.7 -0.5**
BRY Bratogost 86.43 313 *eP* **P 03 04 33.8 -0.5**
OJC Ojcow 86.58 321 *eP* **P 03 04 35.1 +0.3**
OJC *es*P PcP 03 04 40.2 +3.1
OJC *ePP PP 03 07 56.3 -1.1
OJC *eS S 03 15 10.7 +4.1
OJC *eSS SS 03 20 47.2 -1.4
OJC L 03 52 11.8
comp=Z,1.7nm,21.8s
OJC Ojcow 86.58 321 *eP* **P 03 04 35.1 +0.3**
OJC *e* 03 07 56.3
OJC *eS S 03 15 10.7 +4.1
OJC *eSS SS 03 20 47.2 -1.4
AFI Afiamalu 86.58 104 *eP* **P 03 04 35.8 +0.2**
comp=Z,285nm,1.3s,mb6.3
AFI LR LR
comp=Z,889nm,19.0s
AFI Afiamalu 86.58 104 *eP* **P 03 04 35.8 +0.2**
AFI pmax pmax
comp=Z,285nm,1.3s,mb6.3
AFI MLR MLR
comp=Z,889nm,19.0s
PKSM Moragy 86.78 316 P **P 03 04 36.5 +0.5**

PKSM **Moragy** 86.78 316⇑ *i*P P 03 04 35.9 0.0
VYHS **Vyhne** 86.95 319 *i* P P 03 04 36.8 +0.1
VYHS *e* pP 03 04 56.2 +2.0
VYHS *e* 03 07 59.4
VYHS pmax pmax
comp=Z,56nm,1.5s,mb5.6
VYHS **Vyhne** 86.95 319 *i* P P 03 04 36.8 +0.1
VYHS *e*pP pP 03 04 56.2 +2.0
VYHS *e*PP PP 03 07 59.4 -1.1
NVL **N'lazarevskaya** 87.07 199 P P 03 04 45.9 +9.1
NVL S S 03 14 57.4 -13
NVL pmax pmax
comp=Z,82nm,1.4s,mb5.8
MAIT **Maitri** 87.10 199⇑ *i*P P 03 04 38.5 +1.5
KEV **Kevo** 87.18 340 *e*p P 03 04 35.5 -1.8
comp=Z,145nm,0.9s,mb6.2
KEV **Kevo** 87.18 340 *e*P P 03 04 35.5 -1.8
KEV pmax pmax
comp=Z,145nm,0.9s,mb6.2
KOLL **Kolacno** 87.25 319 *i* P P 03 04 38.5 +0.4
KOLL *e*pP pP 03 04 58.3 +2.6
KOLL *e*PP PP 03 08 01.6 -1.3
TIP **Timpagrande** 87.36 309⇑ *i*P P 03 04 39.6 +0.7
comp=Z,49nm,1.0s,mb5.7
TIP LR LR
comp=Z,488nm,21.0s
OKC **Ostrava-Krasne** 87.58 320⇑ *i*P P 03 04 40.4 +0.7
OKC *e* pP 03 04 56.2 -1.0
OKC **Ostrava-Krasne** 87.58 320⇑ *i*P P 03 04 40.4 +0.7
OKC *e*pP pP 03 04 56.2 -1.0
OKC AMS AMS 03 52 40.0
comp=Z,2µm,29.2s
RAC **Raciborz** 87.58 320 *e*P P 03 04 40.5 +0.8
GRI **Girifalco** 87.58 309 P P 03 04 41.1 +1.1
ARCES **ARCESS Array B** 87.63 340 P P 03 04 39.5 0.0
comp=Z,156nm,0.9s,mb6.2,baz=100,slow=4.4,SNR=128
ARCES pP pP 03 04 52.6 -4.4
comp=Z,76nm,0.9s,baz=106,slow=4.4,SNR=7.6
ARCES PP PP 03 08 05.9 +0.6
comp=Z,41nm,1.0s,baz=99,slow=7.5,SNR=7.2
ARCES LR LR 03 47 23.4
comp=Z,2µm,21.9s,baz=14,slow=38
ARCES **ARCESS Array B** 87.63 340 P P 03 04 39.5 0.0
ARCES *PP pP 03 04 52.6 -4.4
ARCES 03 08 05.9
ARCES pmax pmax
comp=Z,157nm,0.9s
ARCES pmax pmax
comp=Z,76nm,0.9s
ARCES pmax pmax
comp=Z,41nm,1.0s
ARCES MLR MLR
comp=Z,2µm,22.0s
ARE0 **ARCESS Array S** 87.63 340⇑ *i*P P 03 04 39.6 +0.1
ORI **Oriolo Calabro** 87.68 310 P P 03 04 41.8 +1.4
SOI **Samo** 87.80 308 P P 03 04 41.8 +0.8
SMOL **Smolenice** 87.89 319 *e*P P 03 04 41.7 +0.5
CEL **Celeste** 87.94 308⇑ *i*P P 03 04 42.6 +1.0
comp=Z,172nm,1.2s,mb6.2
CEL LR LR
comp=Z,622nm,20.0s
MODS **Modra-Piesok** 87.97 318 *i* P P 03 04 42.2 +0.6
MODS *e* pP 03 05 01.4 +2.3
MODS pmax pmax
comp=Z,77nm,1.5s,mb5.7
MODS **Modra-Piesok** 87.97 318 *i* P P 03 04 42.2 +0.6
MODS *e*pP pP 03 05 01.4 +2.3
PTRP **Pietrapertosa** 88.02 311 P P 03 04 43.5 +1.5
ZST **Bratislava** 88.07 318 *i* P P 03 04 42.5 +0.5
ZST pmax pmax
comp=Z,51nm,1.0s,mb5.7
ZST **Bratislava** 88.07 318 *i* P P 03 04 42.5 +0.5
ZST *e*PP PP 03 08 08.8 -0.6
MTTG **Motta San Giov** 88.07 308 P P 03 04 43.5 +1.2
SCLL **Scilla** 88.08 308 P P 03 04 43.0 +0.7
comp=Z,72nm,1.2s,mb5.8
CUC **Castrocucco** 88.16 310⇑ *i*P P 03 04 42.4 -0.2
comp=Z,77nm,1.1s,mb5.8
CUC *e*PP PP 03 08 03.6 -6.8
CUC LR LR
comp=Z,2µm,20.0s
KTK1 **Kautokeino** 88.29 339 *e*P P 03 04 43.0 +0.4
KTK1 *e*pP pP 03 04 58.5 -1.7
MGR **Morigerati** 88.37 310 P P 03 04 43.3 -0.4
AGST **Augusta-Monte** 88.38 307 P P 03 04 43.9 +0.1
KOGS **Kog** 88.46 316 *e*P P 03 04 44.5 +0.5
KOGS *e* 03 15 25.6
KOGS *e* 03 15 53.7
RGNG **Rignano Grg** 88.48 312 P P 03 04 44.4 +0.2
VRAC **Vranov** 88.52 319 P P 03 04 45.0 +0.8
GKP **Gorka Klasztor** 88.56 323 *e*P P 03 04 44.7 +0.4
GKP *e* pP 03 05 03.8 +2.0
GKP *e*SKS 03 15 10.5
GKP *e*S S 03 15 28.0 +2.5
GKP LMZ 03 42 45.0
comp=Z,1µm,27.5s
FG5 **Orsara di Pugl** 88.69 311 P P 03 04 46.6 +1.5
comp=Z,130nm,0.9s,mb6.3
FG5 **Orsara di Pugl** 88.69 311 P P 03 04 46.6 +1.5
FG5 pmax pmax
comp=Z,130nm,0.9s,mb6.3
SLNA **Salina** 88.80 309 P P 03 04 45.4 -0.3
comp=Z,50nm,0.6s,mb6.0
DPC **Dobruska-Polom** 88.81 320⇑ *i*P P 03 04 46.6 +1.1
DPC *e*x x 03 05 06.5
DPC *e*S S 03 15 29.7 +1.8
DPC AMS AMS 03 51 10.0
comp=Z,2µm,26.2s
FG2 **Serracapriola** 88.81 312 P P 03 04 46.3 +0.6
comp=Z,556nm,1.0s,mb6.8
WDD **Wield Dalam** 88.83 306 PFAKE 03 05 00.0 +14
WDD LR LR
comp=Z,1µm,22.0s
CSSN **Cassano Irpino** 88.84 311 P P 03 04 46.3 +0.5
comp=Z,116nm,1.0s,mb6.2
CONA **Conrad Observa** 88.87 318⇑ *i*P P 03 04 46.2 +0.3
comp=Z,35nm,1.2s,mb5.6,SNR=11
CSNA **Conrad Observa** 88.87 318⇑ *i*P P 03 04 46.1 +0.3
comp=Z,30nm,1.1s,mb5.5
KSP **Ksiaz** 88.87 321 *e*P P 03 04 47.0 +1.3
KSP *e* pP 03 05 06.3 +3.0
KSP *e*S S 03 15 29.5 +1.0
KSP LMZ 03 51 31.4
comp=Z,3µm,23.6s
KSP **Ksiaz** 88.87 321⇑ *i*P P 03 04 46.8 +1.0
KSP *e* pP 03 05 06.4 +3.0
KSP *e*S S 03 15 28.0 -0.5
KSP LR LR
comp=Z,3µm,23.6s
KSP **Ksiaz** 88.87 321⇑ *i*P P 03 04 46.8 +1.0
KSP *e* pP 03 05 06.4 +3.0
KSP *e*S S 03 15 28.0 -0.5
MRB1 **Monte Rocchett** 88.90 311 P P 03 04 46.7 +0.6
UPC **Upice** 89.02 320⇑ *i*P P 03 04 47.5 +1.0
UPC *e*x x 03 05 07.3
PSB1 **Pescosannita** 89.03 311 P P 03 04 47.2 +0.5
ARSA **Arzberg** 89.03 317⇑ *i*PcP PcP 03 04 47.3 -0.7
comp=Z,94nm,1.2s,SNR=31
BOJS **Bojanci** 89.06 315 *e*P P 03 04 47.4 +0.6
BOJS *e*SKSac SKSac 03 15 10.8 -0.5
TREC **Trest** 89.24 319⇑ *i*P P 03 04 48.1 +0.6
TREC *e* pP 03 05 08.0 +2.9
TREC **Trest** 89.24 319⇑ *i*P P 03 04 48.1 +0.6
TREC *e*x x 03 15 08.0
TREC *e*SKS 03 15 40.5
PERS **Pernice** 89.25 317 *e*P P 03 04 48.2 +0.5
PERS *e*SKSac S 03 15 32.6 +0.4
PERS *e* 03 16 01.8
SOKA **Soboth** 89.32 317⇑ *i*PcP PcP 03 04 48.8 -0.6
comp=Z,126nm,1.2s
CSLB **Castelbuono** 89.36 308 P P 03 04 47.8 -0.6
comp=Z,54nm,0.9s,mb5.9
SGG **Gregorio Mates** 89.36 311 P P 03 04 48.1 -0.2
GIB **Gibilmanna** 89.39 308 P P 03 04 47.6 -0.9
MIDA **Miranda** 89.48 312 P P 03 04 49.1 +0.3
RNI2 **Rionero Sannit** 89.56 312 P P 03 04 49.8 +0.6
LJU **Ljubljana** 89.61 316 *e*P P 03 04 50.1 +0.8
LJU *e* 03 15 36.1
OBKA **Obir** 89.63 316⇑ *i*PcP PcP 03 04 50.3 -0.5
comp=Z,0.1nm,0.1s,SNR=18
SDI **San Donato** 89.81 312 P P 03 04 50.3 -0.1
comp=Z,44nm,0.9s,mb5.8
SDI **San Donato** 89.81 312 P P 03 04 50.3 -0.1
SDI pmax pmax
comp=Z,44nm,0.9s,mb5.8
TRO **Tromso** 89.91 340 *e*P P 03 04 50.1 -0.1
TRO AMb AMB 03 04 56.1
comp=Z,246nm,3.4s
PRU **Pruhonice** 89.91 320⇑ *i*P P 03 04 51.3 +0.6
PRU *e*x x 03 05 11.3
PRU *e*SKS 03 15 39.5
PRU AMS AMS 03 51 50.0
comp=Z,1µm,12.7s
MOA **Molln** 89.93 318⇑ *i*P P 03 04 51.0 +0.2
comp=Z,40nm,1.1s,mb5.7,SNR=12
PVCC **Panska Ves** 89.94 320⇑ *i*P P 03 04 51.8 +1.0
PVCC *e*x x 03 05 10.9
PVCC AMS AMS 03 51 50.0
comp=Z,2µm,22.7s
VOY **Vojsko** 90.05 316 *e*P P 03 04 51.7 +0.3
VOY *e* 03 04 56.5
VOY *e* 03 05 18.6
VOY *e* 03 05 39.2
BSD **Bornholm Skovb** 90.10 325⇑ *i*P P 03 04 51.5 +0.1
comp=Z,88nm,1.0s,mb6.0
BSD *i* pP 03 05 08.9 -0.1
BSD **Bornholm Skovb** 90.10 325⇑ *i*P P 03 04 51.5 +0.1
BSD *i* pP 03 05 08.9 -0.1
BSD pmax pmax
comp=Z,88nm,1.0s,mb6.0
BSD MLR MLR
comp=Z,1µm,21.0s
BSD **Bornholm Skovb** 90.10 325⇑ *i*P P 03 04 51.5 +0.1
comp=Z,88nm,1.0s,mb6.0
BSD *i* pP 03 05 08.9 -0.1
BSD
comp=Z,1µm,21.0s
TRI **Trieste** 90.12 316⇑ *i*P P 03 04 51.4 -0.4
comp=Z,65nm,1.1s,mb5.9
TRI LR LR
comp=Z,1µm,20.0s
TRI **Trieste** 90.12 316⇑ *i*P P 03 04 51.4 -0.3
TRI pmax pmax
comp=Z,65nm,1.1s,mb5.9
TRI MLR MLR
comp=Z,1µm,20.0s
PTQR **Pietraquaria** 90.14 312 P P 03 04 52.3 +0.4
comp=Z,834nm,1.8s,mb6.8
AQU **L'Aquila** 90.16 312⇑ *i*P P 03 04 52.3 +0.3
comp=Z,144nm,0.9s,mb6.3
AQU LR LR
comp=Z,1µm,22.0s
AQU **L'Aquila** 90.16 312⇑ *i*P P 03 04 52.3 +0.3
AQU pmax pmax
comp=Z,144nm,0.9s,mb6.3
AQU MLR MLR
comp=Z,1µm,22.0s
AQU **L'Aquila** 90.16 312⇑ *i*P P 03 04 52.7 +0.7
CADS **Cadrg** 90.17 316 *i* P P 03 04 52.1 +0.2
MYKA **Terra Mystica** 90.27 316⇑ *i*PcP PcP 03 04 53.0 -0.6
comp=Z,103nm,1.7s
BRG **Berggiesshubel** 90.36 321⇑ *i*P P 03 04 53.6 +0.9
comp=Z,119nm,1.5s,mb6.0
BRG *i* pP pP 03 05 13.3 +3.0
BRG *i* PP PP 03 08 28.1 +0.5
BRG S S 03 15 43.0 +0.7
BRG PS PS 03 16 59.0 +1.9
BRG *e* 03 21 57.6
BRG *e* 03 23 18.2
BRG LR LR
comp=Z,1µm,19.6s
BRG **Berggiesshubel** 90.36 321⇑ *i*P P 03 04 53.6 +0.9
BRG *i**PP pP 03 05 13.3 +3.0
BRG *i* 03 08 28.1
BRG S S 03 15 43.0 +0.7
BRG PS PS 03 16 59.0 +1.9
BRG *e* 03 21 57.6
BRG pmax pmax
comp=Z,119nm,1.5s,mb6.0
BRG pmax pmax
comp=Z,70nm,1.2s,mb5.9
BRG pmax pmax
comp=N,56nm,1.4s
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
BRG pmax pmax
comp=Z,18nm,1.1s,mb5.3
BRG pmax pmax
comp=Z,19nm,1.8s,mb5.1
BRG MLR MLR
comp=N,807nm,19.6s
BRG MLR MLR
comp=E,975nm,19.2s
BRG MLR MLR
comp=Z,1µm,19.6s
BRG smax
comp=N,2.0nm,0.9s
BRG **Berggiesshubel** 90.36 321 *e*P P 03 04 53.3 +0.6
comp=Z,200nm,1.5s,mb6.2
BRG *e*pP pP 03 05 13.2 +2.9
BRG **Berggiesshubel** 90.36 321⇑ *i*P P 03 04 53.6 +0.9
comp=Z,199nm,1.5s,mb6.2
BRG *i* pP pP 03 05 13.3 +3.0
comp=Z,117nm,1.2s
BRG *i* sP sP 03 05 22.5 +5.4
comp=Z,94nm,1.4s
BRG *i* PP PP 03 08 28.1 +0.5
comp=Z,13nm,0.9s
BRG S S 03 15 43.0 +0.7
BRG PS PS 03 16 59.0 +1.9
BRG *e* 03 21 57.6
comp=Z,30nm,1.1s
BRG *e* 03 23 18.2
comp=Z,31nm,1.8s
BRG
comp=N,1µm,19.6s
BRG
comp=E,2µm,19.2s
BRG
comp=Z,2µm,19.6s
FIAM **Fiamignano** 90.36 312 P P 03 04 53.2 +0.2
CING **Cingoli** 90.37 313 P P 03 04 53.6 +0.6
GEC2 **GERESS Array S** 90.38 319⇑ *i*P P 03 04 53.4 +0.5
GEC2 **GERESS Array S** 90.38 319 *e*P P 03 04 53.4 +0.5
GEC2 *e**PP pP 03 05 13.3 +2.9
GEC2 pmax pmax
comp=Z,233nm,1.5s,mb6.3
GEC2 **GERESS Array S** 90.38 319 *e*P P 03 04 53.4 +0.5
comp=Z,233nm,1.5s,mb6.3
GEC2 *e*pP pP 03 05 13.3 +2.9
GERES **GERESS Array B** 90.38 319 P P 03 04 53.5 +0.6
comp=Z,29nm,0.8s,mb5.6,baz=98,slow=4.0,SNR=138
GERES sP sP 03 05 13.1 -4.2
comp=Z,32nm,1.0s,baz=99,slow=4.2,SNR=7.4
GERES PP PP 03 08 29.7 +1.9
comp=Z,3.5nm,1.0s,baz=92,slow=6.1,SNR=4.0
GERES **GERESS Array B** 90.38 319 P P 03 04 53.5 +0.6
GERES *SP sP 03 05 13.1 -4.2
GERES 03 08 29.7
GERES pmax pmax
comp=Z,29nm,0.8s
GERES pmax pmax
comp=Z,32nm,1.0s
GERES pmax pmax
comp=Z,4.0nm,1.0s
NRCA **Norcia** 90.40 313 P P 03 04 53.4 +0.3
comp=Z,82nm,1.3s,mb5.9
PTCC **Patocco-Chiusa** 90.45 316 P P 03 04 53.5 +0.2
comp=Z,126nm,1.0s,mb6.2
KHC **Kasperske Hory** 90.48 319⇑ *i*P P 03 04 53.8 +0.5
KHC *e*pP pP 03 05 10.0 -0.9
KHC *e*S S 03 15 41.8 -1.7
KHC AMS AMS 03 54 40.0
comp=Z,2µm,19.1s
KBA **Koelnbreinsper** 90.50 317⇑ *i*P P 03 04 53.5 +0.1
comp=Z,50nm,1.1s,mb5.8,SNR=11
RUE **Ruedersdorf** 90.57 322 *e*P P 03 04 53.7 0.0
comp=Z,306nm,1.2s,mb6.5
FSSB **Fossombrone** 90.70 314 P P 03 04 55.4 +0.9
RJOB **Jochberg** 90.91 318 *e*P P 03 04 55.0 -0.4
comp=Z,76nm,1.5s,mb5.8
WET **Wettzell** 90.94 319 *e*P P 03 04 55.9 +0.5
WET *e**PP pP 03 05 15.8 +2.8
WET *e* 03 08 32.8
WET pmax pmax
comp=Z,112nm,1.1s,mb6.1
WET **Wettzell** 90.94 319 *e*P P 03 04 55.9 +0.5
comp=Z,112nm,1.1s,mb6.1
WET *e*pP pP 03 05 15.8 +2.8
WET *e*PP PP 03 08 32.8 +0.6
CLL **Collm** 90.98 321⇑ *i*P P 03 04 55.8 +0.2
comp=Z,133nm,1.5s,mb6.0
CLL *e* 03 05 02.0
CLL *i* pP 03 05 15.2 +2.0
CLL *i* SKS 03 15 20.4
CLL *e*S S 03 15 46.0 -2.0
CLL LR LR
comp=Z,2µm,20.7s
CLL **Collm** 90.98 321⇑ *i*P P 03 04 55.8 +0.2
CLL *i* pP 03 05 15.2 +2.0
CLL *i* 03 15 20.4
CLL *e*S S 03 15 46.0 -2.0
CLL pmax pmax
comp=Z,133nm,1.5s,mb6.0
CLL MLR MLR
comp=Z,2µm,20.7s
CLL **Collm** 90.98 321 *e*P P 03 04 55.6 0.0
comp=Z,133nm,1.5s,mb6.0
CLL *e*pP pP 03 05 15.7 +2.5
CLL **Collm** 90.98 321⇑ *i*P P 03 04 55.8 +0.2
comp=Z,133nm,1.5s,mb6.0
CLL *i* (sP) sP 03 05 15.2 -4.8
CLL *e*x x 03 05 25.0
CLL *e*PP PP 03 08 32.0 -0.5
CLL *i* SKSac SKSac 03 15 20.4 -1.8
CLL *e*S S 03 15 46.0 -2.0
comp=N,1µm,29.3s
CLL *e*(SP) 03 16 45.0
CLL *e*PS PS 03 16 57.0 -7.0
CLL *e*(SS) 03 22 18.0
CLL *e*(SSS) 03 26 00.0
CLL *e*SSSS 03 28 47.0
ABTA **Abfaltersbach** 91.05 317⇑ *i*P P 03 04 55.9 -0.2
comp=N,40nm,1.1s,mb5.7,SNR=13
MOR8 **Moi Rana** 91.21 336 *e*P P 03 04 55.7 -0.6
comp=N,204nm,1.3s,mb6.3
MOR8 **Moi Rana** 91.21 336 *e*P P 03 04 55.7 -0.6
MOR8 AMb AMB 03 04 58.2
comp=Z,204nm,1.3s,mb6.3
MOR8 *e*pP pP 03 05 11.6 -2.3
SEST **Monte Rota** 91.25 317 P P 03 04 56.9 -0.1
TANN **Tannenbergstha** 91.27 320 *e*P P 03 04 57.4 +0.4
comp=Z,96nm,1.6s,mb5.9
TANN *e*pP pP 03 05 17.0 +2.4
SFI **Santa Sofia** 91.38 314 P P 03 04 58.9 +1.3
ROTZ **Rotzenmuhle** 91.41 320 *e*P P 03 04 58.5 +0.9
comp=Z,132nm,1.5s,mb6.0
ROTZ *e*pP pP 03 05 18.3 +3.1
ROTZ *e*PP PP 03 08 36.3 +0.4
MANZ **Manzenberg** 91.48 320 *e*P P 03 04 58.8 +0.8
comp=Z,160nm,1.3s,mb6.2
MANZ *e*pP pP 03 05 18.5 +2.9
MANZ *e*PP PP 03 08 39.4 +2.9
CTI **Castel Tesino** 91.61 316 P P 03 04 59.5 +0.8
SNAA **Sanae** 91.66 198 *e*P P 03 04 56.9 -1.5
SNAA *e* pP 03 05 11.0 -5.0
SNAA *e* 03 05 23.4
SNAA **Sanae** 91.66 198 *e*P P 03 04 57.0 -1.3
comp=Z,29nm,1.3s,mb5.4
WTTA **Wattenberg** 91.67 317⇑ *i*P P 03 04 58.9 -0.1
comp=Z,69nm,0.9s,mb6.0,SNR=30
SPITS **Spitsbergen Ar** 91.68 348 P P 03 04 57.4 -0.9
comp=Z,72nm,0.9s,mb6.0,baz=59,slow=9.3,SNR=21
SPITS **Spitsbergen Ar** 91.68 348 P P 03 04 57.4 -0.9
SPITS pmax pmax
comp=Z,72nm,0.9s
SPB4 **Spitsbergen Ar** 91.68 348 *e*P P 03 04 57.1 -1.2
WATA **Walderalm** 91.72 317⇑ *i*P P 03 04 58.8 -0.3
comp=Z,22nm,0.7s,mb5.6,SNR=15
MOX **Moxa** 91.82 320 *e*P P 03 05 00.0 +0.5
comp=Z,165nm,1.8s,mb6.1
MOX *e* 03 08 30.2
MOX
comp=Z,2µm,22.0s
MOX **Moxa** 91.82 320 *e*P P 03 05 00.0 +0.5
MOX pmax pmax
comp=Z,165nm,1.8s,mb6.1
MOX MLR MLR
comp=Z,2µm,22.0s
MOX **Moxa** 91.82 320 *e*P P 03 04 59.9 +0.4
comp=Z,159nm,1.7s,mb6.1
MOX *e*pP pP 03 05 19.4 +2.3
FUR **Furstenfeldbru** 91.95 318 *e*P P 03 04 59.9 -0.3
FUR *e**PP pP 03 05 20.3 +2.5
FUR pmax pmax
comp=Z,140nm,1.6s,mb6.0
FUR **Furstenfeldbru** 91.95 318 *e*P P 03 04 59.9 -0.3
comp=Z,140nm,1.6s,mb6.0
FUR *e*pP pP 03 05 20.3 +2.5
SQTA **Sankt Quirin** 91.96 317⇑ *i*PcP PcP 03 05 00.4 -0.7
comp=Z,35nm,0.7s
MOTA **Moosalm** 92.04 317⇑ *i*P P 03 05 00.5 -0.1
comp=Z,42nm,0.8s,mb5.8,SNR=39
GRF **Grafenberg Arr** 92.04 319 *e*P P 03 05 01.2 +0.6
GRF *e**PP pP 03 05 21.2 +3.0
GRF *e* 03 08 41.9
GRF *e*S S 03 16 00.6 +2.9
GRF *e*SS SS 03 22 17.7 +10
GRF pmax pmax
comp=Z,176nm,1.5s,mb6.2
GRF **Grafenberg Arr** 92.04 319 *e*P P 03 05 01.2 +0.6
comp=Z,176nm,1.5s,mb6.2
GRF *e*pP pP 03 05 21.2 +3.0
GRF *e*PP PP 03 08 41.9 +1.0
GRF *e*S S 03 16 00.6 +2.9
GRF *e*SS SS 03 22 17.7 +10
RETA **Reutte** 92.28 317⇑ *i*PcP PcP 03 05 01.9 -0.6
comp=Z,55nm,0.8s,SNR=49
FETA **Feichten** 92.28 317⇑ *i*PcP PcP 03 05 02.3 -0.2
comp=Z,49nm,1.0s,SNR=36
NIKO **Nikolski** 92.32 37 *e*P P 03 05 00.5 -1.2
comp=Z,505nm,1.1s,mb6.8
NB2 **NORSAR Subarra** 92.39 331 P P 03 05 01.3 -0.6
comp=Z,56nm,0.9s,mb5.9,baz=95,slow=5.3
NOA **NORSAR Array B** 92.39 331 P P 03 05 01.6 -0.4
comp=Z,52nm,1.0s,mb5.8,baz=92,slow=4.7,SNR=52
NOA PP PP 03 08 43.9 +0.5
comp=Z,16nm,0.9s,baz=91,slow=7.6,SNR=6.5
NOA LR LR 03 51 08.9
comp=Z,2µm,20.9s,baz=100,slow=38
NOA **NORSAR Array B** 92.39 331 P P 03 05 01.6 -0.3
NOA 03 08 43.9
NOA pmax pmax
comp=Z,52nm,1.0s
NOA pmax pmax
comp=Z,16nm,0.9s
VLC **Villacollemand** 92.44 314 PFAKE 03 05 10.0 +7.4
VLC LR LR
comp=Z,1µm,19.0s
NAO01 **NORSAR Array S** 92.55 331 *e*P P 03 05 02.4 -0.2
comp=Z,52nm,1.0s,mb5.9
KBS **Kingsbay** 92.61 349⇑ *e*P P 03 05 02.1 -0.5
KBS LR LR
comp=Z,3µm,20.0s
CLZ **Clausthal** 92.64 322 *e*P P 03 05 03.6 +0.3
CLZ *e**PP pP 03 05 23.4 +2.5
CLZ pmax pmax
comp=Z,81nm,1.2s,mb6.0
CLZ **Clausthal** 92.64 322 *e*P P 03 05 03.6 +0.3
comp=Z,81nm,1.2s,mb6.0
CLZ *e*pP pP 03 05 23.4 +2.5
BSEG **Bad Segeberg** 92.72 324 *e*P P 03 05 03.8 +0.2
BSEG *e**PP pP 03 05 24.1 +2.9
BSEG pmax pmax
comp=Z,73nm,1.0s,mb6.1
BSEG **Bad Segeberg** 92.72 324 *e*P P 03 05 03.8 +0.2
comp=Z,73nm,1.0s,mb6.1
BSEG *e*pP pP 03 05 24.1 +2.9
UBBA **Unterbreizbach** 92.85 321 *e*P P 03 05 04.4 +0.1
comp=Z,77nm,1.6s,mb5.9
DAVA **Damuels** 92.87 317⇑ *i*PcP PcP 03 05 05.1 0.0
comp=Z,85nm,1.0s,SNR=21
KEST **Kesra** 93.03 305 P P 03 05 07.0 +1.5
comp=Z,21nm,1.1s,mb5.5,baz=78,slow=1.4,SNR=21
KEST PP PP 03 08 46.2 -3.0
comp=Z,4.3nm,1.0s,baz=84,slow=3.1,SNR=3.8
KEST LR LR 03 47 51.1

comp=Z,469nm,19.2s,baz=173,slow=36
VSL Villasalto 93.09 309 PFAKE 03 05 20.0 +14
VSL LR LR
comp=Z,669nm,21.0s
KONO Kongsberg 93.18 329 *e*P **P 03 05 05.5 -0.1**
comp=Z,52nm,0.8s,mb6.0
KONO Kongsberg 93.18 329 *e*P **P 03 05 05.5 -0.1**
KONO pmax pmax
comp=Z,52nm,0.8s,mb6.0
TUE Stuetta 93.22 316 *e*P **P 03 05 05.9 -0.2**
comp=Z,37nm,1.1s,mb5.7
TUE LR LR
comp=Z,1μm,22.0s
VNA2 Neumayer--Watz 93.28 198 *e*P **P 03 05 07.6 +1.7**
VNA2 *e* 03 05 14.9
VNA2 *e* pP 03 05 22.7 -0.8
VNA2 *e* 03 05 34.2
VNA2 *e* 03 22 11.9
VNA2 *e* 03 22 27.5
STU Stuttgart 93.35 319 *e*P **P 03 05 06.5 -0.1**
comp=Z,50nm,1.3s,mb5.8
STU Stuttgart 93.35 319 *e*P **P 03 05 06.5 -0.1**
STU pmax pmax
comp=Z,50nm,1.3s,mb5.8
STU Stuttgart 93.35 319 *e*P **P 03 05 06.6 0.0**
comp=Z,100nm,1.6s,mb6.0
STU *e*PP PP 03 08 49.1 -2.1
MUD Monsted U'grnd 93.40 326 *i* P **P 03 05 07.4 +0.7**
MUD pmax pmax
comp=Z,22nm,1.0s,mb5.5
MUD MLR MLR
comp=Z,2μm,18.0s
MUD Monsted U'grnd 93.40 326 *i* P **P 03 05 07.4 +0.7**
comp=Z,22nm,1.0s,mb5.5
MUD
comp=Z,2μm,18.0s
TOD Tromm 93.61 319 *e*P **P 03 05 07.9 +0.1**
SPAK Spaichingen-Ko 93.62 318 *e*P **P 03 05 08.1 +0.2**
VNA1 Neumayer--Stat 93.64 198 *e*P **P 03 05 10.3 +2.8**
VNA1 *e* pP 03 05 25.2 +0.1
TNS Taunus Mts 93.84 320 *e*P **P 03 05 09.1 +0.2**
TNS *e**PP pP 03 05 29.4 +2.9
TNS pmax pmax
comp=Z,75nm,1.1s,mb6.0
TNS Taunus Mts 93.84 320 *e*P **P 03 05 09.1 +0.2**
comp=Z,75nm,1.1s,mb6.0
TNS *e*pP pP 03 05 29.4 +2.9
VNA3 Neumayer Olymp 93.87 198 *e*P **P 03 05 08.2 -0.4**
VNA3 *e* pP 03 05 24.8 -1.4
VNA3 *e* 03 05 36.2
VNA3 *e* 03 22 10.7
VNA3 *e* 03 22 25.7
BFO Black Forest 93.92 318 *e*P **P 03 05 09.1 -0.2**
comp=Z,14nm,0.8s,mb5.4
BFO LR LR
comp=Z,1μm,19.0s
BFO Black Forest 93.92 318 *e*P **P 03 05 09.1 -0.2**
BFO pmax pmax
comp=Z,13nm,0.8s,mb5.4
BFO MLR MLR
comp=Z,1μm,19.0s
BFO Black Forest 93.92 318 *e*P **P 03 05 08.9 -0.4**
comp=Z,60nm,1.6s,mb5.8
BFO *e*pP pP 03 05 29.2 +2.3
FELD Feldberg im Sc 94.14 318 *e*P **P 03 05 10.0 -0.3**
IBBN Ibbenburen 94.26 322 *e*P **P 03 05 10.7 0.0**
comp=Z,107nm,1.4s,mb6.1
LANF Langenberg 94.27 319 *e*P **P 03 05 11.3 +0.5**
STR Strasbourg 94.30 318 *e*P **P 03 05 12.4 +1.4**
LIBD Limburg 94.41 318 *e*P **P 03 05 11.8 +0.3**
ABH Alteburg 94.42 320 *e*P **P 03 05 12.0 +0.5**
BBS Basel-Blauen 94.48 317 *e*P **P 03 05 11.3 -0.6**
AUTN L'Aution 94.57 314 *e*P **P 03 05 12.6 +0.2**
BUG Bochum--Univer 94.57 321 *e*P **P 03 05 11.8 -0.4**
comp=Z,38nm,1.1s,mb5.7
BUG *e*pP pP 03 05 32.1 +2.3
CDF Champ du Feu 94.62 318⇑ *i*P **P 03 05 12.2 -0.3**
comp=Z,21nm,0.9s,mb5.3
CDF Champ du Feu 94.62 318⇑ *i*P **P 03 05 12.2 -0.3**
comp=Z,11nm,0.9s,mb5.3
CDF Champ du Feu 94.62 318⇑ *i*P **P 03 05 12.2 -0.3**
CDF pmax pmax
comp=Z,11nm,0.9s,mb5.3
ECH Echery 94.71 318 *e*P **P 03 05 12.6 -0.3**
ECH Echery 94.71 318 *e*P **P 03 05 12.4 -0.5**
MOF Molkenrain 94.73 318 *e*P **P 03 05 12.6 -0.4**
HINF Hinteralfeld 94.92 318⇑ *i*P **P 03 05 13.4 -0.5**
LOMF Lomont 94.95 317 *e*P **P 03 05 13.7 -0.3**
LPG La Plagne 95.03 315⇑ *i*P **P 03 05 14.5 +0.1**
comp=Z,36nm,0.8s,mb5.6
LPG La Plagne 95.03 315⇑ *i*P **P 03 05 14.5 +0.1**
comp=Z,18nm,0.8s,mb5.5
LPG La Plagne 95.03 315⇑ *i*P **P 03 05 14.5 +0.1**
LPG pmax pmax
comp=Z,18nm,0.8s,mb5.5
MBDF Montbardon 95.03 314⇑ *i*P **P 03 05 13.9 -0.6**
comp=Z,26nm,1.0s,mb5.3
MBDF Montbardon 95.03 314⇑ *i*P **P 03 05 13.9 -0.6**
comp=Z,13nm,1.0s,mb5.3
MBDF Montbardon 95.03 314⇑ *i*P **P 03 05 13.9 -0.6**
MBDF pmax pmax
comp=Z,13nm,1.0s,mb5.3
LPL La Plagne 95.05 315⇑ *i*P **P 03 05 14.5 0.0**
comp=Z,43nm,0.9s,mb5.6
LPL La Plagne 95.05 315⇑ *i*P **P 03 05 14.5 0.0**
comp=Z,21nm,0.9s,mb5.6
LPL La Plagne 95.05 315⇑ *i*P **P 03 05 14.5 0.0**
LPL pmax pmax
comp=Z,21nm,0.9s,mb5.6
BNI Bardonecchia 95.09 315 *e*P **P 03 05 15.1 +0.4**
comp=Z,15nm,0.9s,mb5.4
BNI LR LR
comp=Z,817nm,19.0s
BNI Bardonecchia 95.09 315 *e*P **P 03 05 15.1 +0.4**
BNI pmax pmax
comp=Z,15nm,0.9s,mb5.4
BNI MLR MLR
comp=Z,817nm,19.0s
FRF La Foret Royal 95.14 313⇑ *i*P **P 03 05 14.9 -0.1**
comp=Z,32nm,1.0s,mb5.4
FRF La Foret Royal 95.14 313⇑ *i*P **P 03 05 14.9 -0.1**
comp=Z,16nm,1.0s,mb5.4
FRF La Foret Royal 95.14 313⇑ *i*P **P 03 05 14.9 -0.1**
FRF pmax pmax
comp=Z,16nm,1.0s,mb5.4
HAU Haudompre 95.25 318⇑ *i*P **P 03 05 15.0 -0.4**
comp=Z,99nm,1.2s,mb5.8
HAU *e*MLR MLR
comp=Z,2μm,23.0s
HAU Haudompre 95.25 318⇑ *i*P **P 03 05 15.0 -0.4**
comp=Z,50nm,1.2s,mb5.8
HAU LR LR
comp=Z,2μm,23.0s
HAU Haudompre 95.25 318⇑ *i*P **P 03 05 15.0 -0.4**
HAU pmax pmax
comp=Z,50nm,1.2s,mb5.8
HAU MLR MLR
comp=Z,2μm,23.0s
WLF Walferdange 95.33 319 P **P 03 05 15.7 -0.1**
comp=Z,29nm,1.5s,mb5.5
MEM Membach 95.39 320 P **P 03 05 15.8 -0.1**
comp=Z,12nm,1.3s,mb5.2
CABF La Chapelle 95.47 316⇑ *i*P **P 03 05 16.5 +0.1**
comp=Z,40nm,1.0s,mb5.5
CABF La Chapelle 95.47 316⇑ *i*P **P 03 05 16.5 +0.1**
comp=Z,20nm,1.0s,mb5.5
CABF La Chapelle 95.47 316⇑ *i*P **P 03 05 16.5 +0.1**
CABF pmax pmax
comp=Z,20nm,1.0s,mb5.5
THEF They Montfort 95.49 318 *e*P **P 03 05 16.3 -0.2**
ORIF Oris-en-Rattie 95.66 315⇑ *i*P **P 03 05 17.3 0.0**
comp=Z,24nm,0.9s,mb5.3
ORIF *e*MLR MLR
comp=Z,2μm,22.5s
ORIF Oris-en-Rattie 95.66 315⇑ *i*P **P 03 05 17.3 0.0**
comp=Z,12nm,0.9s,mb5.3
ORIF Oris-en-Rattie 95.66 315⇑ *i*P **P 03 05 17.3 0.0**
ORIF pmax pmax
comp=Z,12nm,0.9s,mb5.3
BCLA Clavier 95.85 320 P **P 03 05 17.8 -0.2**
SMRF Simiane la Rot 95.91 314⇑ *i*P **P 03 05 18.7 +0.2**
comp=Z,89nm,1.4s,mb5.7
SMRF Simiane la Rot 95.91 314⇑ *i*P **P 03 05 18.7 +0.2**
comp=Z,89nm,1.4s,mb6.0
MEZF Maizieres J'vi 96.10 318⇑ *i*P **P 03 05 19.1 -0.1**
comp=Z,26nm,0.8s,mb5.4
MEZF Maizieres J'vi 96.10 318⇑ *i*P **P 03 05 19.1 -0.1**
comp=Z,26nm,0.8s,mb5.7
GIVF Givet 96.17 320⇑ *i*P **P 03 05 19.4 -0.1**
TAM Tamanrasset 96.19 292 *e*P **P 03 05 20.6 +0.4**
DOU Dourbes 96.32 320 P **P 03 05 20.2 0.0**
comp=Z,22nm,2.8s,mb5.1
BAIF Baives 96.57 320⇑ *i*P **P 03 05 21.4 +0.1**
comp=Z,63nm,1.1s,mb5.7
BAIF Baives 96.57 320⇑ *i*P **P 03 05 21.4 +0.1**
comp=Z,32nm,1.1s,mb5.7
BAIF Baives 96.57 320⇑ *i*P **P 03 05 21.4 +0.1**
BAIF pmax pmax
comp=Z,32nm,1.1s,mb5.7
LOR Lormes 96.97 317⇑ *i*P **P 03 05 22.9 -0.3**
comp=Z,60nm,1.1s,mb5.6
LOR *e*MLR MLR
comp=Z,1μm,21.5s
LOR Lormes 96.97 317⇑ *i*P **P 03 05 22.9 -0.3**
comp=Z,30nm,1.1s,mb5.6
LOR LR LR
comp=Z,1μm,21.5s
LOR Lormes 96.97 317⇑ *i*P **P 03 05 22.9 -0.3**
LOR pmax pmax
comp=Z,30nm,1.1s,mb5.6
LOR MLR MLR
comp=Z,1μm,21.5s
SMF Signal de Mont 97.02 316⇑ *i*P **P 03 05 23.0 -0.4**
comp=Z,45nm,1.1s,mb5.5
SMF Signal de Mont 97.02 316⇑ *i*P **P 03 05 23.0 -0.4**
comp=Z,22nm,1.1s,mb5.5
SMF Signal de Mont 97.02 316⇑ *i*P **P 03 05 23.0 -0.4**
SMF pmax pmax
comp=Z,22nm,1.1s,mb5.5
LASF Ste Croix 97.14 314 *e*P **P 03 05 23.9 -0.2**
SSF Saint Saulge 97.22 317⇑ *i*P **P 03 05 24.2 -0.1**
AVF Avril sur Loir 97.34 317⇑ *i*P **P 03 05 24.5 -0.4**
comp=Z,50nm,1.3s,mb5.5
AVF Avril sur Loir 97.34 317⇑ *i*P **P 03 05 24.5 -0.4**
comp=Z,25nm,1.3s,mb5.5
AVF Avril sur Loir 97.34 317⇑ *i*P **P 03 05 24.5 -0.4**
AVF pmax pmax
comp=Z,25nm,1.3s,mb5.5
LBL Lubilhac 97.51 315 *e*P **P 03 05 26.3 +0.6**
AGO Saint Agoulin 97.54 316 *e*P **P 03 05 25.8 0.0**
BGF Bois d'Agland 97.71 316⇑ *i*P **P 03 05 26.6 +0.1**
HYF Humbligny 97.80 317⇑ *i*P **P 03 05 27.2 +0.3**
TCF Toulx Ste Croi 98.17 316⇑ *i*P **P 03 05 28.8 +0.2**
CAF Calviac 98.37 315 *e*P **P 03 05 29.8 +0.2**
RJF Les Rejaudoux 98.73 315⇑ *i*P **P 03 05 31.6 +0.5**
comp=Z,29nm,1.2s,mb5.4
RJF *e*MLR MLR
comp=Z,1μm,18.0s
RJF Les Rejaudoux 98.73 315⇑ *i*P **P 03 05 31.6 +0.5**
comp=Z,14nm,1.2s,mb5.4
RJF LR LR
comp=Z,1μm,18.0s
RJF Les Rejaudoux 98.73 315⇑ *i*P **P 03 05 31.6 +0.5**
RJF pmax pmax
comp=Z,14nm,1.2s,mb5.4
RJF MLR MLR
comp=Z,1μm,18.0s
LFF La Frestale 99.31 315⇑ *i*P **P 03 05 32.8 -0.9**
DAG Danmarks Havn 99.33 348⇓ *i*P **P 03 05 31.5 -1.7**
DAG pmax pmax
comp=Z,12nm,0.6s,mb5.6
DAG Danmarks Havn 99.33 348⇓ *i*P **P 03 05 31.5 -1.7**
comp=Z,12nm,0.6s,mb5.6
DAG *e* 03 08 02.0
LDF La Druitiere 99.52 319⇑ *i*P Pdif 03 05 34.5 0.0
comp=Z,63nm,1.4s
LDF La Druitiere 99.52 319⇑ *i*P Pdif 03 05 34.5 0.0
comp=Z,31nm,1.4s
LDF La Druitiere 99.52 319⇑ *i*P Pdif 03 05 34.5 0.0
LDF pmax pmax
comp=Z,31nm,1.4s,mb5.5
FLN La Foliniere 99.74 319⇑ *i*P Pdif 03 05 36.0 +0.6
comp=Z,41nm,1.0s
FLN *e*MLR MLR
comp=Z,689nm,21.0s
FLN La Foliniere 99.74 319⇑ *i*P Pdif 03 05 36.0 +0.6
comp=Z,21nm,1.0s
FLN LR LR
comp=Z,690nm,21.0s
FLN La Foliniere 99.74 319⇑ *i*P Pdif 03 05 36.0 +0.6
FLN pmax pmax
comp=Z,21nm,1.0s,mb5.5
FLN MLR MLR
comp=Z,690nm,21.0s
TOA0 Torodi Ar. Sit 99.75 283 *e*Pdif Pdif 03 05 36.9 +1.5
TORD Torodi Ar. Bea 99.75 283 P Pdif 03 05 35.7 +0.2
comp=Z,2.7nm,0.9s,baz=85,slow=4.9,SNR=12
TORD PP PP 03 09 52.6 +11
comp=Z,2.8nm,1.0s,baz=67,slow=6.5,SNR=4.6
TORD PKiKP PKiKP 03 10 05.1 +0.2
comp=Z,2.5nm,0.8s,baz=66,slow=1.7,SNR=6.2
TORD PKKPbc PKKPbc 03 21 55.8 -1.2
comp=Z,1.0nm,0.5s,baz=268,slow=2.6,SNR=14
TORD LR LR 03 46 53.9
comp=Z,1μm,21.6s,baz=95,slow=33
TORD Torodi Ar. Bea 99.75 283 P Pdif 03 05 35.7 +0.2
TORD PP PP 03 09 52.6 +11
MFF Saint Martin d 99.76 317 *e*P Pdif 03 05 35.9 +0.4
comp=Z,34nm,1.3s
MFF Saint Martin d 99.76 317 *e*P Pdif 03 05 35.9 +0.4
comp=Z,17nm,1.3s
MFF Saint Martin d 99.76 317 *e*P Pdif 03 05 35.9 +0.4
MFF pmax pmax
comp=Z,17nm,1.3s,mb5.3
COLD Coldfoot 99.82 22⇑ *i*P Pdif 03 05 35.1 -0.7
comp=Z,45nm,1.4s
GRR Gorron 100.03 319 *e*P Pdif 03 05 36.5 -0.2
comp=Z,100nm,1.5s
GRR Gorron 100.03 319 *e*P Pdif 03 05 36.5 -0.2
comp=Z,50nm,1.5s
GRR Gorron 100.03 319 *e*P Pdif 03 05 36.5 -0.2
GRR pmax pmax
comp=Z,50nm,1.5s
BPAW Bear Paw Mtn. 100.36 25 *e*Pdif Pdif 03 05 37.1 -1.0
comp=Z,72nm,1.3s
KDAK Kodiak Island 101.10 32 PFAKE 03 05 50.0 +8.5
KDAK LR LR
comp=Z,2μm,20.0s
SGMF Saint Gilles 101.17 319 *e*P Pdif 03 05 41.7 -0.1
comp=Z,73nm,1.4s
SGMF Saint Gilles 101.17 319 *e*P Pdif 03 05 41.7 -0.1
comp=Z,37nm,1.4s
SGMF Saint Gilles 101.17 319 *e*P Pdif 03 05 41.7 -0.1
SGMF pmax pmax
comp=Z,37nm,1.4s
MCK McKinley 101.33 25 *e*Pdif Pdif 03 05 40.8 -1.7
comp=Z,25nm,0.9s
MCK McKinley 101.33 25 *e*P Pdif 03 05 40.8 -1.7
MCK pmax pmax
comp=Z,25nm,0.9s
COLA College 101.43 24 *e*Pdif Pdif 03 05 41.7 -1.3
comp=Z,4.4nm,1.0s
COLA LR LR
comp=Z,1μm,20.0s
COLA College 101.43 24 *e*P Pdif 03 05 41.7 -1.3
COLA pmax pmax
comp=Z,4.0nm,1.0s
COLA MLR MLR
comp=Z,1μm,20.0s
PMR Palmer 101.85 27 PFAKE 03 06 00.0 +15
PMR LR LR
comp=Z,2μm,20.0s
ESDC Sonseca Array 103.36 310 Pdiff Pdif 03 05 52.4 +0.9
comp=Z,0.8nm,0.7s,baz=76,slow=4.2,SNR=3.8
ESDC PP PP 03 10 06.8 -1.3
comp=Z,6.8nm,1.0s,baz=71,slow=6.8,SNR=8.0
ESDC PKKPbc PKKPbc 03 21 47.0 -0.3
comp=Z,4.1nm,1.2s,baz=290,slow=3.0,SNR=5.1
ESLA Sonseca Array 103.36 310 PFAKE 03 06 00.0 +8.5
ESLA LR LR
comp=Z,4μm,20.0s
PAB San Pablo 103.67 310 PFAKE 03 06 00.0 +7.1
PAB LR LR
comp=Z,822nm,20.0s
EGAK Eagle 104.14 23 PFAKE 03 06 10.0 +15
EGAK LR LR
comp=Z,3μm,20.0s
INK Inuvik 105.14 18 *e*Pdif Pdif 03 05 58.4 -1.1
comp=Z,464nm,1.1s
INK Inuvik 105.14 18 *e*P Pdif 03 05 58.4 -1.0
INK pmax pmax
comp=Z,465nm,1.1s
SHEL Horse Pasture 105.31 253 PFAKE 03 10 30.0 +15
SHEL LR LR
comp=Z,4μm,19.0s
SFS San Fernando 105.55 307 PFAKE 03 10 30.0 +15
SFS LR LR
comp=Z,2μm,20.0s
MTE Manteigas 105.97 311 PFAKE 03 10 30.0 +14
MTE LR LR
comp=Z,717nm,20.0s
SUMG Summit 106.02 348 *e*Pdif Pdif 03 06 03.3 -0.1
comp=Z,50nm,2.2s
SUMG *e*PKP PKiKP 03 10 15.1 +0.3
DBIC Dimbokro 106.11 276 Pdiff Pdif 03 06 09.3 +5.5
comp=Z,5.0nm,1.1s,baz=124,slow=7.3,SNR=3.4
DBIC PP PP 03 10 28.4 -0.9
comp=Z,1.6nm,0.6s,baz=90,slow=8.1,SNR=2.4
DBIC Dimbokro 106.11 276 Pdif Pdif 03 06 09.3 +5.5
DBIC PP PP 03 10 28.4 -0.9
DBIC LR LR
comp=Z,2μm,22.0s
DBIC Dimbokro 106.11 276 P Pdif 03 06 09.3 +5.5
DBIC 03 10 28.4
DBIC pmax pmax
comp=Z,5.0nm,1.1s
DBIC pmax pmax
comp=Z,2.0nm,0.6s
RTC Rabat Centre 106.42 304 PFAKE 03 10 30.0 +13
RTC LR LR
comp=Z,882nm,19.0s
TRIS Tristan da Cun 106.69 230 PFAKE 03 10 30.0 +13
TRIS LR LR
comp=Z,2μm,19.0s
PPT Papeete 107.53 109 *e*PP PP 03 10 29.1 -10
comp=Z,257nm,26.8s
PPT Papeete 107.53 109 *e*PS PS 03 20 00.4 -2.5
comp=Z,748nm,25.0s
PPT Papeete 107.53 109 *e*LR LR 03 41 46.2
comp=Z,1μm,23.8s
PPT Papeete 107.53 109 *e*PP PP 03 10 29.1 -10
PPT *e*PS PS 03 20 00.4 -2.5
RES Resolute Bay 107.63 4 *e*PKP PKiKP 03 10 18.4 +0.7
SIT Sitka 110.10 29 PFAKE 03 10 30.0 +7.2
SIT LR LR
comp=Z,2μm,21.0s
WRAK Wrangell Islan 111.84 29 PFAKE 03 10 40.0 +14
WRAK LR LR
comp=Z,2μm,20.0s
SFJD Kangerlussuaq 113.02 348 PFAKE 03 10 40.0 +12
SFJD LR LR
comp=Z,2μm,19.0s
ASCN Ascension 114.69 260 PFAKE 03 10 40.0 +7.2
ASCN LR LR
comp=Z,3μm,20.0s
YKA Yellowknife Ar 114.87 17 PKP PKiKP 03 10 30.6 -1.1
comp=Z,7.1nm,0.9s,baz=322,slow=0.1,SNR=8.1
YKA PP PP 03 11 24.2 -6.3
comp=Z,4.4nm,0.8s,baz=331,slow=7.5,SNR=4.9
YKA Yellowknife Ar 114.87 17 PKP PKiKP 03 10 30.6 -1.1
YKA PP PP 03 11 24.2 -6.3
YKA Yellowknife Ar 114.87 17 PKIKP PKiKP 03 10 30.6 -1.1
YKA pmax pmax
comp=Z,7.0nm,1.0s
YKA pmax pmax
comp=Z,4.0nm,0.8s
RKT Rikitea 119.64 119 *e*PS PS 03 21 50.1 -5.3
comp=Z,865nm,28.0s
RKT Rikitea 119.64 119 *e*LR LR 03 47 24.4
comp=Z,1μm,28.0s
NLWA Neilton Lookou 121.12 34 PFAKE 03 11 00.0 +16
NLWA LR LR
comp=Z,1μm,20.0s
JCW Jim Creek 121.72 32 *e*PKPdf PKPdf 03 10 45.3 0.0
RPW Rockport 121.78 32 *e*PKPdf PKPdf 03 10 44.9 -0.6
EDM Edmonton 122.35 24 *e*PKPdf PKPdf 03 10 45.3 -1.1
EDM *e*SKPdf SKPdf 03 14 17.5 +0.8
LON Longmire 122.64 34 *e*PKPdf PKPdf 03 10 46.8 -0.3
TDL Tradedollar La 122.65 34 P PKPdf 03 10 47.2 0.0
EFI East Falkland 122.84 195 PFAKE 03 11 00.0 +13
EFI LR LR
comp=Z,3μm,20.0s
ETW Entiat 122.93 32 *e*PKPdf PKPdf 03 10 47.1 -0.6
FCC Fort Churchill 123.00 9 *e*PKPdf PKPdf 03 10 47.0 -0.4
COR Corvallis 123.02 37 PFAKE 03 11 00.0 +12
COR LR LR
comp=Z,1μm,21.0s
TBM Table Mountain 123.05 33 P PKPdf 03 10 47.6 -0.3
WTV Waterville 123.07 32 P PKPdf 03 10 47.1 -0.8
EBG Ellensburg 123.23 33 P PKPdf 03 10 48.2 -0.1
OD2 Odessa Site #2 123.92 32 P PKPdf 03 10 49.0 -0.5
IRO Indian Ridge 123.97 37 P PKPdf 03 10 49.6 -0.2
RSW Rattlesnake Hi 124.07 33 *e*PKPdf PKPdf 03 10 49.7 -0.2
HAWA Hanford 124.11 33 *e*PKPdf PKPdf 03 10 49.6 -0.3
HAWA LR LR
comp=Z,2μm,19.0s
NEW Newport 124.16 30 *e*PKPdf PKPdf 03 10 49.8 -0.2
NEW *e*PP PP 03 12 32.8 -1.8
NEW LR LR
comp=Z,2μm,19.0s
HUMO Hull Mountain 124.31 38 *e*PKPdf PKPdf 03 10 50.6 +0.1
HUMO *e*SKPdf SKPdf 03 14 22.9 +2.2
HUMO LR LR
comp=Z,2μm,22.0s
VIPM Ingram Point 124.64 35 P PKPdf 03 10 51.4 +0.3
BUOR Burton Butte 124.94 38 P PKPdf 03 10 51.9 +0.2
YBH Yreka Blue Hor 124.94 39 *e*PKPdf PKPdf 03 10 51.3 -0.5
YBH *e*PP PP 03 12 36.7 -3.5
YBH LR LR
comp=Z,1μm,19.0s
FFC Flin Flon 125.00 16 *e*PKPdf PKPdf 03 10 50.6 -0.8
FFC LR LR
comp=Z,4μm,22.0s
LNOR Lincton Mounta 125.11 33 *e*PKPdf PKPdf 03 10 51.0 -0.9
WALA Waterton Lakes 125.15 27 *e*PKPdf PKPdf 03 10 51.4 -0.5
WALA *e*PP PP 03 12 36.1 -5.1
KIPM Iron Peak 125.45 42 *e*PKPdf PKPdf 03 10 53.1 +0.3
KIPM *e*PP PP 03 12 42.9 -0.8
BSMT Bassoo Peak 125.59 29 P PKPdf 03 10 52.5 -0.3
WDC Whiskeytown Da 125.67 40 *e*PKPdf PKPdf 03 10 53.0 -0.2
WDC *e*PP PP 03 12 42.5 -2.6
WDC LR LR
comp=Z,1μm,20.0s
HOPS Hopland 126.14 42 *e*PKPdf PKPdf 03 10 54.2 +0.1
HOPS LR LR
comp=Z,2μm,20.0s
LBCM Butte Creek Ri 126.29 39 P PKPdf 03 10 54.2 -0.1
BMO Blue Mountains 126.29 33 *e*PKPdf PKPdf 03 10 53.3 -0.9
BMO *e*PP PP 03 12 45.2 -3.8
BMO LR LR
comp=Z,935nm,22.0s
MOD Modoc 126.34 38 *e*PKPdf PKPdf 03 10 54.7 +0.3
MOD *e*PP PP 03 12 49.2 -0.3
MOD LR LR
comp=Z,1μm,21.0s
NSHM Saint Helena R 126.69 42 *e*PKPdf PKPdf 03 10 55.6 +0.4
MCCM Marconi Confer 126.70 43 PFAKE 03 11 10.0 +15
MCCM LR LR
comp=Z,1μm,22.0s
CHMT Chamberlain Mo 126.99 29 *e*PKPdf PKPdf 03 10 54.9 -0.6
CHMT *e*PP PP 03 12 52.6 -0.8
OHCM Honcut 127.02 41 *e*PKPdf PKPdf 03 10 55.8 0.0
OHCM *e*PP PP 03 12 50.5 -3.6
WVOR Wild Horse Val 127.03 36 *e*PKPdf PKPdf 03 10 55.8 +0.1
WVOR LR LR
comp=Z,1μm,20.0s
SCHQ Schefferville 127.25 351 PKP PKPdf 03 10 55.0 -0.7
comp=Z,24nm,0.8s,baz=20,slow=3.8,SNR=12
SCHQ PP PP 03 12 53.7 -1.0
comp=Z,33nm,1.1s,baz=25,slow=8.0,SNR=4.0
SCHQ Schefferville 127.25 351 PKP PKPdf 03 10 55.0 -0.7
SCHQ PP PP 03 12 53.7 -1.0
SCHQ LR LR
comp=Z,2μm,20.0s
EGMT Eagleton 127.78 26 *e*PKPdf PKPdf 03 10 56.8 -0.2
EGMT *e*PP PP 03 12 57.3 -1.3
EGMT LR LR
comp=Z,2μm,19.0s
HRY Holter Researc 127.81 28 *e*PKPdf PKPdf 03 10 56.5 -0.6
HRY *e*PP PP 03 12 58.7 -0.1
HRY *e* 03 14 10.9
SAO San Andreas Ge 128.38 44 *e*PKPdf PKPdf 03 10 58.8 +0.4
SAO LR LR
comp=Z,792nm,20.0s
DLMT Dillon 128.41 30 *e*PKPdf PKPdf 03 10 58.3 0.0
DLMT *e*PP PP 03 12 59.8 -3.1

CMB	**Columbia Colle**	**128.44**	**42**	*e*PKPdf	PKPdf	03 10 57.8	-0.7		
CMB				*e*PP	PP	03 12 58.7	-4.8		
CMB				LR	LR				
	comp=Z,2μm,22.0s								
MCMT	**McKenzie Canyo**	**128.66**	**31**	*e*PKPdf	PKPdf	03 10 58.5	-0.3		
MCMT				*e*PP	PP	03 13 00.0	-4.5		
BOZ	**Bozeman (W)**	**128.68**	**29**	*e*PKPdf	PKPdf	03 10 58.8	+0.1		
BOZ				LR	LR				
	comp=Z,1μm,20.0s								
HLID	**Hailey**	**128.71**	**33**	*e*PKPdf	PKPdf	03 10 58.8	0.0		
HLID				*e*PP	PP	03 13 04.0	-0.9		
HLID				*e*SKP		03 14 14.8			
HLID				LR	LR				
	comp=Z,2μm,21.0s								
BMN	**Battle Mountai**	**129.09**	**38**	*e*PKPdf	PKPdf	03 10 59.7	0.0		
BMN				*e*		03 11 15.5			
BMN				*e*PP	PP	03 13 06.8	-0.8		
BMN				*e*SKP		03 14 16.4			
BMN				LR	LR				
	comp=Z,1μm,19.0s								
BMN	**Battle Mountai**	**129.09**	**38**	*e*PKIKP	PKPdf	03 10 59.7	0.0		
BMN				*e*		03 11 15.5			
BMN				*e*		03 13 06.8			
BMN				MLR	MLR				
	comp=Z,1μm,19.0s								
QLMT	**Earthquake Lak**	**129.37**	**30**	*e*PKPdf	PKPdf	03 11 00.3	+0.2		
GCMT	**Greycliff**	**129.50**	**28**	*e*PKPdf	PKPdf	03 11 00.4	+0.1		
GCMT				*e*		03 14 17.3			
NVAR	**Mina Array Bea**	**129.58**	**40**	PKhKP		03 10 48.8			
	comp=Z,0.5nm,0.7s,baz=259,slow=5.6,SNR=3.7								
NVAR				PKP	PKPdf	03 11 00.9	+0.2		
	comp=Z,11nm,0.7s,baz=248,slow=2.9,SNR=17								
NVAR				pPKP	pPKPdf	03 11 14.9	-4.0		
	comp=Z,6.2nm,0.8s,baz=318,slow=2.0,SNR=10								
NVAR				PP	PP	03 13 11.2	+0.3		
	comp=Z,7.1nm,0.9s,baz=289,slow=5.6,SNR=5.8								
NVAR				SKPbc		03 14 18.8			
	comp=Z,24nm,0.9s,baz=274,slow=4.6,SNR=14								
NVAR				SKP		03 14 30.9			
	comp=Z,7.5nm,0.8s,baz=279,slow=4.4,SNR=4.6								
NVAR				PKKP		03 21 17.3			
	comp=Z,0.5nm,0.6s,baz=151,slow=3.4,SNR=3.6								
NVAR				SKKPbc		03 24 08.0			
	comp=Z,0.5nm,0.9s,baz=130,slow=4.0,SNR=3.5								
DGMT	**Dagmar**	**129.65**	**22**	*e*PKPdf	PKPdf	03 11 00.1	-0.4		
DGMT				*e*PP	PP	03 13 05.6	-5.1		
DGMT				*e*		03 14 17.5			
DGMT				LR	LR				
	comp=Z,1μm,21.0s								
YMR	**Madison River**	**129.71**	**29**	*e*PKPdf	PKPdf	03 11 01.2	+0.5		
YMR				*e*		03 14 18.8			
YMR				LR	LR				
	comp=Z,2μm,21.0s								
PTRM	**Twissleman Ran**	**129.80**	**44**	*e*PKPdf	PKPdf	03 11 02.2	+1.0		
PTRM				*e*		03 14 19.6			
YNR	**Norris Junctio**	**129.82**	**29**	*e*PKPdf	PKPdf	03 11 01.8	+0.8		
YNR				*e*PP	PP	03 13 10.9	-1.1		
YNR				*e*		03 14 19.5			
YFT	**Old Faithful**	**129.94**	**30**	*e*PKPdf	PKPdf	03 11 03.1	+1.9		
YFT				*e*SKPbc		03 14 21.3			
MTUM	**Tungsten Hills**	**130.02**	**42**	*e*PKPdf	PKPdf	03 11 02.6	+1.0		
MTUM				*e*		03 14 19.9			
LKWY	**Lake**	**130.06**	**29**	PFAKE		03 11 10.0	+8.6		
LKWY				LR	LR				
	comp=Z,3μm,19.0s								
ELK	**Elko**	**130.08**	**36**	*e*PKPdf	PKPdf	03 11 01.9	+0.3		
ELK				*e*		03 14 20.4			
ELK				LR	LR				
	comp=Z,1μm,21.0s								
RLMT	**Red Lodge**	**130.19**	**28**	*e*PKPdf	PKPdf	03 10 59.6	-2.0		
RLMT				*e*PP	PP	03 13 10.2	-4.2		
RLMT				*e*SKP		03 14 20.3			
RLMT				LR	LR				
	comp=Z,1μm,20.0s								
IMW	**Indian Meadow**	**130.28**	**30**	*e*PKPdf	PKPdf	03 11 02.4	+0.6		
IMW				*e*		03 14 21.1			
LAO	**LASA Array**	**130.32**	**24**	*e*PKPdf	PKPdf	03 11 00.6	-1.2		
LAO				*e*		03 14 20.3			
LAO				LR	LR				
	comp=Z,2μm,20.0s								
DCID1	**Drake Creek**	**130.38**	**31**	*e*PKPdf	PKPdf	03 11 02.6	+0.5		
DCID1				*e*		03 14 21.1			
TPH	**Tonopah**	**130.48**	**40**	PFAKE		03 11 10.0	+7.6		
TPH				LR	LR				
	comp=Z,1μm,21.0s								
RRI2	**Red Ridge**	**130.48**	**31**	*e*PKPdf	PKPdf	03 11 00.5	-1.8		
RRI2				*e*PP	PP	03 13 16.9	+0.5		
RRI2				*e*SKP		03 14 21.9			
MOOW	**Moose Ponds**	**130.49**	**30**	*e*PKPdf	PKPdf	03 11 01.8	-0.5		
MOOW				*e*PP	PP	03 13 15.8	-0.6		
MOOW				*e*		03 14 21.8			
TPAW	**Teton Pass**	**130.57**	**31**	*e*PKPdf	PKPdf	03 11 02.9	+0.5		
TPAW				*e*PP	PP	03 13 21.7	+4.8		
TPAW				*e*SKP		03 14 22.4			
ULM	**Lac du Bonnet**	**130.64**	**14**	PKP	PKPdf	03 11 01.7	-0.6		
	comp=Z,31nm,0.7s,baz=351,slow=2.9,SNR=22								
ULM				PP	PP	03 13 10.3	-6.6		
	comp=Z,15nm,0.9s,baz=354,slow=6.3,SNR=3.8								
ULM				SKPbc	SKPbc	03 14 19.9	-1.0		
	comp=Z,47nm,1.1s,baz=332,slow=4.6,SNR=9.6								
ULM				SKP		03 14 31.1			
	comp=Z,16nm,1.0s,baz=354,slow=0.5,SNR=4.4								
ULM	**Lac du Bonnet**	**130.64**	**14**	*e*PKPdf	PKPdf	03 11 01.3	-1.0		
ULM				*e*PP	PP	03 13 07.9	-9.0		
ULM				*e*		03 14 20.2			
ULM				LR	LR				
	comp=Z,3μm,19.0s								
LOHW	**Long Hollow**	**130.66**	**30**	*e*PKPdf	PKPdf	03 11 02.2	-0.3		
LOHW				*e*PP	PP	03 13 15.7	-1.8		
LOHW				*e*		03 14 22.2			
SNOW	**Snow King Moun**	**130.69**	**30**	*e*PKPdf	PKPdf	03 11 03.5	+0.9		
SNOW				*e*PP	PP	03 13 21.0	+3.3		
SNOW				*e*SKPbc	SKPbc	03 14 22.7	+1.5		
REDW	**Red Top Meadow**	**130.71**	**31**	*e*PKPdf	PKPdf	03 11 02.8	+0.1		
REDW				*e*PP	PP	03 13 19.7	+1.8		
REDW				*e*SKP		03 14 22.6			
HVU	**Hansel Valley**	**130.80**	**33**	*e*PKPdf	PKPdf	03 11 03.0	+0.1		
HVU				*e*		03 14 22.9			
AHID	**Auburn Hatcher**	**131.01**	**31**	PFAKE		03 11 10.0	+6.7		
AHID				LR	LR				
	comp=Z,2μm,19.0s								
BGU	**Big Grassy Mou**	**131.23**	**34**	*e*PKPdf	PKPdf	03 11 03.3	-0.5		
BGU				*e*SKPbc	SKPbc	03 14 24.4	+1.0		
DAC	**Darwin (Calif)**	**131.26**	**42**	PFAKE		03 11 20.0	+16		
DAC				LR	LR				
	comp=Z,885nm,22.0s								
SPUT	**South Promonto**	**131.30**	**34**	*e*PKPdf	PKPdf	03 11 03.3	-0.6		
SPUT				*e*SKP		03 14 24.8			
SNCC	**San Nicolas Is**	**131.51**	**47**	PFAKE		03 11 20.0	+15		
SNCC				LR	LR				
	comp=Z,1μm,22.0s								
HWUT	**Hardware Ranch**	**131.58**	**33**	*e*PKPpre		03 11 00.2			
HWUT				*e*PKPdf	PKPdf	03 11 04.7	+0.3		
HWUT				*e*PP	PP	03 13 24.1	+0.5		
HWUT				*e*SKP		03 14 25.5			
HWUT				LR	LR				
	comp=Z,2μm,21.0s								
TPNV	**Topopah Spring**	**131.77**	**41**	*e*PKPpre		03 10 55.3			
TPNV				*e*PKPdf	PKPdf	03 11 05.4	+0.5		
TPNV				*e*PP	PP	03 13 12.0	-13		
TPNV				*e*SKP		03 14 26.9			
TPNV				LR	LR				
	comp=Z,935nm,21.0s								
TPNV	**Topopah Spring**	**131.77**	**41**	*e*PKHKP		03 10 55.3			
TPNV				*e*		03 11 05.4			
TPNV				MLR	MLR				
	comp=Z,935nm,21.0s								
BW06	**Boulder Array**	**131.80**	**30**	*e*PKPdf	PKPdf	03 11 03.8	-1.0		
BW06				*e*PP	PP	03 13 24.6	-0.2		
BW06				LR	LR				
	comp=Z,1μm,21.0s								
PDAR	**Pinedale Array**	**131.80**	**30**	PKhKP		03 10 56.2			
	comp=Z,1.4nm,0.8s,baz=56,slow=1.3,SNR=7.5								
PDAR				PKP	PKPdf	03 11 04.0	-0.8		
	comp=Z,6.5nm,0.8s,baz=76,slow=0.7,SNR=29								
PDAR				pPKP	pPKPdf	03 11 18.9	-4.1		
	comp=Z,3.4nm,0.7s,baz=22,slow=1.0,SNR=4.0								
PDAR				PP	PP	03 13 25.2	+0.4		
	comp=Z,5.8nm,0.9s,baz=320,slow=4.0,SNR=5.6								
PDAR				SKPbc	SKPbc	03 14 24.8	-0.6		
	comp=Z,86nm,1.2s,baz=333,slow=1.7,SNR=23								
PDAR				SKP		03 14 34.6			
	comp=Z,20nm,0.9s,baz=289,slow=0.5,SNR=7.5								
PDAR				SKKPbc		03 23 55.5			
	comp=Z,0.4nm,0.9s,baz=162,slow=3.8,SNR=4.0								
DUG	**Dugway**	**131.84**	**35**	*e*PKPdf	PKPdf	03 11 05.2	+0.2		
DUG				*e*PP	PP	03 13 16.8	-8.6		
DUG				*e*SKPbc	SKPbc	03 14 26.9	+1.2		
DUG				LR	LR				
	comp=Z,1μm,20.0s								
NOQ	**North Oquirrh**	**131.93**	**34**	*e*PKPdf	PKPdf	03 11 05.5	+0.4		
NOQ				*e*		03 11 20.8			
NOQ				*e*SKPbc	SKPbc	03 14 27.0	+1.1		
NOQ				*e*SKPdf	SKPdf	03 14 38.7	+3.6		
MWC	**Mount Wilson**	**132.06**	**45**	*e*PKPdf	PKPdf	03 11 06.0	+0.5		
MWC				*e*		03 11 21.6			
MWC				*e*PP	PP	03 13 24.8	-2.4		
MWC				*e*SKPbc	SKPbc	03 14 27.7	+1.1		
MWC				LR	LR				
	comp=Z,1μm,20.0s								
MWC	**Mount Wilson**	**132.06**	**45**	*e*PKIKP	PKPdf	03 11 06.0	+0.5		
MWC				*e*		03 11 21.6			
MWC				*e*		03 13 24.8			
MWC				MLR	MLR				
	comp=Z,1μm,20.0s								
JLU	**Jordanelle**	**132.34**	**34**	*e*PKPdf	PKPdf	03 11 05.8	0.0		
JLU				*e*		03 11 21.4			
JLU				*e*PP	PP	03 13 27.4	-1.0		
JLU				*e*SKPbc	SKPbc	03 14 28.7	+1.4		
JLU				*e*SKPdf	SKPdf	03 14 38.6	+2.8		
GSC	**Goldstone**	**132.34**	**43**	*e*PKPdf	PKPdf	03 11 06.5	+0.5		
GSC				*e*SKP		03 14 28.6			
GSC				LR	LR				
	comp=Z,875nm,20.0s								
NLU	**North Lily Min**	**132.42**	**35**	*e*PKPdf	PKPdf	03 11 03.3	-2.7		
NLU				*e*SKP		03 14 25.7			
AGMN	**Agassiz Refuge**	**132.45**	**15**	*e*PKPdf	PKPdf	03 11 04.7	-1.1		
AGMN				*e*PP	PP	03 13 24.8	-3.8		
AGMN				*e*SKPbc	SKPbc	03 14 26.6	-0.9		
AGMN				*e*SKPdf	SKPdf	03 14 36.5	+0.6		
AGMN				LR	LR				
	comp=Z,2μm,22.0s								
DAU	**Daniels Canyon**	**132.57**	**34**	*e*PKPdf	PKPdf	03 11 05.9	-0.4		
DAU				*e*SKPbc	SKPbc	03 14 29.1	+1.0		
MPU	**Maple Canyon**	**132.63**	**34**	*e*PKPdf	PKPdf	03 11 06.4	0.0		
MPU				*e*		03 11 21.7			
MPU				*e*PP	PP	03 13 29.4	-0.9		
MPU				*e*SKPbc	SKPbc	03 14 29.4	+1.0		
MPU				LR	LR				
	comp=Z,1μm,21.0s								
ARUT	**Antelope Range**	**133.03**	**38**	*e*PKPdf	PKPdf	03 11 07.2	0.0		
ARUT				*e*		03 11 23.1			
ARUT				*e*SKPbc	SKPbc	03 14 30.6	+0.8		
ARUT	**Antelope Range**	**133.03**	**38**	*e*PKIKP	PKPdf	03 11 07.2	0.0		
ARUT				*e*		03 11 23.2			
CCUT	**Cedar City**	**133.23**	**38**	*e*PKPdf	PKPdf	03 11 07.5	-0.1		
CCUT				*e*		03 11 24.2			
CCUT				*e*PP	PP	03 13 30.4	-3.9		
CCUT				*e*SKPbc	SKPbc	03 14 32.1	+1.6		
RSSD	**Black Hills**	**133.30**	**25**	*e*PKPpre		03 10 58.6			
RSSD				*e*PKPdf	PKPdf	03 11 07.6	+0.1		
RSSD				*e*PP	PP	03 13 33.5	-0.8		
RSSD				*e*SKP		03 14 31.5			
RSSD				LR	LR				
	comp=Z,2μm,21.0s								
RSSD	**Black Hills**	**133.30**	**25**	*e*PKHKP		03 10 58.7			
RSSD				*e*		03 11 07.6			
RSSD				*e*		03 13 33.5			
RSSD				MLR	MLR				
	comp=Z,2μm,21.0s								
MVU	**Marysvale**	**133.31**	**36**	PFAKE		03 11 20.0	+12		
MVU				LR	LR				
	comp=Z,1μm,21.0s								
MSU	**Marysvale**	**133.32**	**36**	*e*PKPdf	PKPdf	03 11 08.2	+0.4		
MSU				*e*SKP		03 14 32.6			
PFO	**Pinyon Flat Ob**	**133.51**	**44**	*e*PKPdf	PKPdf	03 11 07.3	-1.0		
PFO				*e*		03 11 23.6			
PFO				*e*PP	PP	03 13 35.2	-1.2		
PFO				*e*SKPbc	SKPbc	03 14 32.9	+1.3		
PFO				LR	LR				
	comp=Z,864nm,20.0s								
PFO	**Pinyon Flat Ob**	**133.51**	**44**	*e*PKIKP	PKPdf	03 11 07.3	-1.0		
PFO				*e*		03 11 23.6			
PFO				*e*		03 13 35.2			
PFO				MLR	MLR				
	comp=Z,864nm,20.0s								
EYMN	**Ely**	**133.79**	**12**	PFAKE		03 11 20.0	+12		
EYMN				LR	LR				
	comp=Z,2μm,22.0s								
SRU	**San Rafael**	**133.88**	**34**	*e*PKPdf	PKPdf	03 11 08.6	-0.2		
SRU				*e*PP	PP	03 13 34.8	-3.5		
SRU				*e*SKPbc	SKPbc	03 14 33.6	+1.0		
SRU	**San Rafael**	**133.88**	**34**	*e*PKIKP	PKPdf	03 11 08.6	-0.2		
SRU				*e*		03 13 34.8			
PHWY	**Pilot Hill**	**134.91**	**28**	*e*PKPpre		03 11 02.2			
PHWY				*e*PKPdf	PKPdf	03 11 09.5	-1.2		
PHWY				*e*PP	PP	03 13 42.7	-1.9		
PHWY				*e*		03 14 36.2			
GLA	**Glamis**	**134.96**	**44**	*e*PKPdf	PKPdf	03 11 11.3	+0.3		
GLA				*e*		03 11 25.4			
GLA				*e*SKPbc	SKPbc	03 14 38.2	+1.9		
GLA				LR	LR				
	comp=Z,745nm,19.0s								
GLA	**Glamis**	**134.96**	**44**	*e*PKIKP	PKPdf	03 11 11.3	+0.3		
GLA				*e*		03 11 25.4			
GLA				MLR	MLR				
	comp=Z,745nm,19.0s								
PV10	**Paradox Valley**	**135.22**	**34**	*e*PKPdf	PKPdf	03 11 12.0	+0.7		
PV10				*e*PP	PP	03 13 43.2	-3.6		
PV10				*e*SKPbc	SKPbc	03 14 38.9	+1.9		
PV01	**Paradox Valley**	**135.65**	**34**	*e*PKPdf	PKPdf	03 11 12.0	-0.1		
PV01				*e*SKP		03 14 39.8			
WUAZ	**Wupatki**	**135.76**	**39**	PFAKE		03 11 20.0	+7.6		
WUAZ				LR	LR				
	comp=Z,911nm,20.0s								
SMCO	**Snowmass**	**135.76**	**32**	*e*PKPpre		03 10 59.1			
SMCO				*e*PKPdf	PKPdf	03 11 12.3	0.0		
SMCO				*e*PP	PP	03 13 51.3	+1.2		
SMCO				*e*SKP		03 14 40.3			
PLCA	**Paso Flores**	**135.95**	**189**	PKhKP		03 11 07.9			
	comp=Z,2.9nm,0.9s,baz=194,slow=4.2,SNR=4.5								
PLCA				PKP	PKPdf	03 11 14.3	+1.7		
	comp=Z,6.1nm,0.9s,baz=162,slow=5.0,SNR=6.1								
PLCA				SKPbc	SKPbc	03 14 40.6	+1.4		
	comp=Z,6.2nm,1.0s,baz=164,slow=3.4,SNR=4.3								
PLCA	**Paso Flores**	**135.95**	**189**	PKP		03 11 07.9			
PLCA				*e*PKPdf	PKPdf	03 11 14.3	+1.6		
PLCA				*e*SKPbc	SKPbc	03 14 40.2	+1.0		
PLCA				LR	LR				
	comp=Z,2μm,21.0s								
PLCA	**Paso Flores**	**135.95**	**189**	PKIKP		03 11 07.9			
PLCA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
PLCA				pmax	pmax				
	comp=Z,6.0nm,0.9s								
PLCA				pmax	pmax				
	comp=N,6.0nm,1.0s								
ISCO	**Idaho Springs**	**135.99**	**30**	*e*PKPpre		03 11 06.5			
ISCO				*e*PKPdf	PKPdf	03 11 12.7	0.0		
ISCO				*e*		03 11 28.8			
ISCO				*e*PP	PP	03 13 50.9	-0.6		
ISCO				*e*SKPbc	SKPbc	03 14 40.0	+0.6		
ISCO				LR	LR				
	comp=Z,2μm,20.0s								
ISCO	**Idaho Springs**	**135.99**	**30**	*e*PKIKP		03 11 06.6			
ISCO				*e*		03 11 28.8			
ISCO				*e*		03 13 50.9			
ISCO				MLR	MLR				
	comp=Z,2μm,20.0s								
RCBR	**Riachuelo**	**136.15**	**259**	PFAKE		03 11 30.0	+16		
RCBR				LR	LR				
	comp=Z,2μm,20.0s								
MVCO	**Mesa Verde**	**136.34**	**35**	*e*PKPdf	PKPdf	03 11 13.8	+0.3		
MVCO				*e*SKPbc	SKPbc	03 14 41.8	+1.3		
MVCO				LR	LR				
	comp=Z,2μm,22.0s								
ECSD	**EROS,Sioux Fal**	**136.38**	**19**	*e*PKPpre		03 11 02.0			
ECSD				*e*PKPdf	PKPdf	03 11 12.6	-0.7		
ECSD				*e*PP	PP	03 13 45.5	-8.1		
ECSD				*e*SKP		03 14 40.7			
ECSD				LR	LR				
	comp=Z,3μm,22.0s								
CAM4	**Nova Friburgo**	**136.52**	**233**	*e*P	PKPdf	03 11 23.5	+9.3		
CAM4				*i*		03 11 30.1			
CAM4				*i*		03 11 37.4			
CAM4				*i*		03 11 40.7			
CAM4				*i*		03 11 47.0			
OGNE	**Ogallala**	**136.75**	**26**	PFAKE		03 11 30.0	+16		
OGNE				LR	LR				
	comp=Z,2μm,20.0s								
PKME	**Peaks-Kenny Pk**	**136.92**	**350**	PFAKE		03 11 30.0	+16		
PKME				LR	LR				
	comp=Z,2μm,20.0s								
SDCO	**Great Sand Dun**	**137.60**	**32**	*e*PKPpre		03 11 05.9			
SDCO				*e*PKPdf	PKPdf	03 11 15.3	-0.4		
SDCO				*e*PP	PP	03 14 03.8	+2.2		
SDCO				*e*SKPbc	SKPbc	03 14 45.4	+1.1		
SDCO				LR	LR				
	comp=Z,1μm,21.0s								
GLMI	**Grayling**	**137.91**	**6**	PFAKE		03 11 30.0	+14		
GLMI				LR	LR				
	comp=Z,3μm,21.0s								
TUC	**Tucson**	**138.15**	**42**	*e*PKPpre		03 11 10.1			
TUC				*e*PKPdf	PKPdf	03 11 16.0	-1.0		
TUC				*e*PP	PP	03 13 56.6	-8.9		
TUC				*e*SKPbc	SKPbc	03 14 47.8	+1.8		
TUC				LR	LR				
	comp=Z,843nm,22.0s								
LBNH	**Lisbon**	**138.32**	**352**	PFAKE		03 11 30.0	+13		
LBNH				LR	LR				
	comp=Z,2μm,21.0s								
NCB	**Newcomb**	**138.84**	**355**	*e*PKPdf	PKPdf	03 11 17.6	-0.2		
NCB				*e*PP	PP	03 14 09.2	+0.5		
NCB				*e*SKPbc	SKPbc	03 14 47.4	-0.1		
NCB				*e*SKPab		03 14 58.5			
NCB				LR	LR				
	comp=Z,3μm,22.0s								
JFWS	**Jewell Farm**	**138.86**	**13**	*e*PKPdf	PKPdf	03 11 15.7	-2.2		
JFWS				*e*SKP		03 14 47.6			
JFWS				LR	LR				
	comp=Z,2μm,21.0s								
SCIA	**State Center**	**139.07**	**16**	*e*PKPdf	PKPdf	03 11 17.6	-0.8		
SCIA				*e*PP	PP	03 14 08.2	-2.1		
SCIA				*e*SKP		03 14 48.5			
SCIA				*e*SKPab		03 14 58.4			
SCIA				LR	LR				
	comp=Z,1μm,20.0s								
LAZ	**Ladron**	**139.09**	**37**	*e*PKPdf	PKPdf	03 11 18.6	-0.1		
LAZ				*e*PP	PP	03 14 10.9	-0.1		
ANMO	**Albuquerque**	**139.10**	**35**	*e*PKPpre		03 11 11.9			
ANMO				*e*PKPdf	PKPdf	03 11 18.9	+0.3		
ANMO				*e*SKP		03 14 50.8			
ANMO				LR	LR				
	comp=Z,2μm,21.0s								
ANMO	**Albuquerque**	**139.10**	**35**	*e*PKHKP		03 11 11.9			
ANMO				*e*		03 11 18.9			
ANMO				MLR	MLR				
	comp=Z,2μm,21.0s								
LENM	**Lemitar**	**139.35**	**37**	*e*PKPdf	PKPdf	03 11 19.3	+0.2		
LENM				*e*SKP		03 14 50.9			
LENM				*e*SKPab		03 15 01.1			
LPM	**Los Pinos Moun**	**139.45**	**36**	*e*PKPdf	PKPdf	03 11 18.6	-0.7		
LPM				*e*		03 11 34.7			
LPM				*e*SKP		03 14 51.0			
CBKS	**Cedar Bluff**	**139.50**	**25**	*e*PKPpre		03 11 11.4			
CBKS				*e*PKPdf	PKPdf	03 11 19.0	-0.2		
CBKS				LR	LR				
	comp=Z,3μm,22.0s								
BNM	**Barren Site**	**139.57**	**36**	*e*PKPdf	PKPdf	03 11 19.0	-0.5		
BNM				*e*SKPdf	SKPdf	03 14 51.4	+2.3		
WES	**Weston**	**140.05**	**351**	PFAKE		03 11 30.0	+10		
WES				LR	LR				
	comp=Z,1μm,20.0s								
QUA2	**Belchertown**	**140.31**	**352**	*e*PKPpre		03 11 14.2			
QUA2				*e*PKPdf	PKPdf	03 11 20.4	-0.2		
QUA2				*e*PP	PP	03 14 15.1	-2.6		
KSU1	**Kansas State U**	**140.50**	**22**	PFAKE		03 11 30.0	+9.0		
KSU1				LR	LR				
	comp=Z,3μm,22.0s								
AAM	**Ann Arbor**	**140.50**	**5**	PFAKE		03 11 30.0	+9.1		
AAM				LR	LR				
	comp=Z,3μm,21.0s								
BINY	**Binghamton**	**140.74**	**357**	*e*PKPpre		03 11 16.7			
BINY				*e*PKPdf	PKPdf	03 11 20.8	-0.6		
BINY				*e*PP	PP	03 14 19.4	-1.0		
BINY				LR	LR				
	comp=Z,3μm,22.0s								
ERPA	**Erie**	**140.90**	**1**	PFAKE		03 11 30.0	+8.3		
ERPA				LR	LR				
	comp=Z,2μm,22.0s								
HDIL	**Hopedale**	**141.32**	**13**	*e*PKPpre		03 11 14.6			
HDIL				*e*PKPdf	PKPdf	03 11 19.6	-2.9		
HDIL				*e*PP	PP	03 14 20.4	-3.6		
HDIL				*e*SKPdf	SKPdf	03 14 54.6	+2.6		
HDIL				LR	LR				
	comp=Z,2μm,20.0s								
PAL	**Palisades**	**141.75**	**354**	*e*PKPdf	PKPdf	03 11 22.9	-0.3		
AMTX	**Amarillo**	**141.77**	**31**	*e*PKPpre		03 11 18.5			
AMTX				*e*PKPdf	PKPdf	03 11 23.0	-0.5		
AMTX				*e*PP	PP	03 14 29.2	+1.9		
AMTX				LR	LR				
	comp=Z,1μm,21.0s								
LUPA	**Lehigh Univers**	**142.29**	**356**	*e*PKPpre		03 11 17.8			
LUPA				*e*PKPdf	PKPdf	03 11 23.9	-0.3		
LUPA				*e*PP	PP	03 14 24.5	-5.2		
LUPA				*e*SKP		03 14 57.3			
SSPA

comp=Z,80nm,0.6s,baz=247,slow=1.3,SNR=11
TXAR SKPbc SKPbc 03 15 03.4 +0.5
comp=Z,22nm,0.9s,baz=317,slow=2.0,SNR=5.9
TXAR Lajitas Array 144.72 39 PKIKP PKPdf 03 11 28.1 -0.7
TXAR 03 11 42.8
TXAR pmax pmax
comp=Z,76nm,0.6s
TXAR pmax pmax
comp=Z,80nm,0.6s
TXAR pmax pmax
comp=N,22nm,0.9s
CBN Corbin 144.79 358 ePKPdf PKPdf 03 11 26.4 -2.2
CBN ePP PP 03 14 43.7 -1.1
CBN LR LR
comp=Z,2μm,22.0s
PARMO Parma 144.91 15 ePKPdf PKPdf 03 11 27.2 -1.7
PARMO ePP PP 03 14 41.6 -4.0
PVMO Portageville 145.16 15 ePKPbc PKPbc 03 11 27.9 -1.1
GLAT Glass 145.41 15 ePKPbc PKPbc 03 11 29.1 -0.7
GNAR Gosnell 145.50 16 ePKPbc PKPbc 03 11 29.3 -0.8
GNAR eSKPdf SKPdf 03 15 04.8 +5.8
MIAR Mount Ida 145.66 22 ePKPbc PKPbc 03 11 29.7 -0.9
MIAR eSKPdf SKPdf 03 15 05.4 +6.1
MIAR LR LR
comp=Z,2μm,20.0s
HBAR Harrisburg 145.70 17 ePKPbc PKPbc 03 11 30.1 -0.7
HALT Halls 145.73 15 ePKPdf PKPdf 03 11 29.5 -0.9
ELN Prospectdale 145.75 3 ePKPbc PKPbc 03 11 29.0 -1.8
ELN ePP PP 03 14 44.0 -6.5
BLA Blacksburg 145.78 2 ePKPbc PKPbc 03 11 29.4 -1.4
BLA ePP PP 03 14 43.1 -7.6
BLA LR LR
comp=Z,2μm,21.0s
UALR University of 145.88 20 ePKPbc PKPbc 03 11 30.5 -0.8
UALR ePP PP 03 14 49.6 -1.9
UALR eSKPbc SKPbc 03 15 06.0 +0.5
WVT Waverly 145.89 13 ePKPbc PKPbc 03 11 30.2 -1.1
WVT ePP PP 03 14 48.7 -2.7
WVT eSKPdf SKPdf 03 15 05.8 +6.1
WVT LR LR
comp=Z,2μm,21.0s
WVT Waverly 145.89 13 ePKP2 PKPab 03 11 30.2 -1.5
WVT e 03 14 48.7
WVT MLR MLR
comp=Z,2μm,21.0s
JCT Junction City 146.18 34 ePKPbc PKPbc 03 11 31.0 -1.3
JCT e 03 11 46.2
JCT eSKPbc SKPbc 03 15 07.2 +1.0
JCT LR LR
comp=Z,2μm,22.0s
TZTN Tazewell 146.21 7 ePKPbc PKPbc 03 11 31.0 -1.2
TZTN e 03 11 46.5
TZTN eSKPbc SKPbc 03 15 06.6 +0.5
TZTN LR LR
comp=Z,2μm,21.0s
TLL Tololo Astrono 146.25 193 eP PKPdf 03 11 32.8 +1.4
MET Memphis--Engin 146.31 16 ePKPbc PKPbc 03 11 31.5 -1.0
MET e 03 11 46.7
OXF Oxford 147.03 16 ePKPdf PKPdf 03 11 31.7 -0.9
OXF ePKPbc PKPbc 03 11 33.8 -0.9
OXF LR LR
comp=Z,2μm,22.0s
TKL Tuckaleechee C 147.06 7 ePKPdf PKPdf 03 11 32.2 -0.4
TKL ePKPbc PKPbc 03 11 34.1 -0.6
TKL e 03 11 49.2
SWET Sewanee 147.15 11 ePKPdf PKPdf 03 11 31.7 -1.1
SWET ePKPbc PKPbc 03 11 33.7 -1.2
CPCT Cooper Cave 147.16 8 ePKPdf PKPdf 03 11 32.1 -0.7
CPCT ePKPbc PKPbc 03 11 34.0 -1.0
LCO Las Campanas 147.34 193 ePKPbc PKPbc 03 11 34.3 -1.4
LCO ePKPab PKPab 03 11 37.2 -0.3
LCO LR LR
comp=Z,1μm,20.0s
NATX Nacogdoches 147.66 26 ePKPdf PKPdf 03 11 33.6 -0.2
NATX ePKPbc PKPbc 03 11 36.6 +0.1
NATX ePKPab PKPab 03 11 39.0 +0.2
NATX eSKP 03 15 03.1
NATX LR LR
comp=Z,2μm,19.0s
BBSR BB Station 147.73 337 ePKPdf PKPdf 03 11 33.6 -0.2
BBSR ePKPbc PKPbc 03 11 36.8 +0.2
BBSR LR LR
comp=Z,1μm,21.0s
CNNC Cliffs of the 147.76 358 ePKPdf PKPdf 03 11 34.0 +0.2
CNNC ePKPbc PKPbc 03 11 36.2 -0.5
CNNC e 03 11 52.5
CNNC LR LR
comp=Z,2μm,20.0s
HKT Hockley 148.66 29 ePKPdf PKPdf 03 11 35.6 +0.2
HKT ePKPbc PKPbc 03 11 39.6 +0.4
HKT LR LR
comp=Z,2μm,19.0s
JSC Jenkinsville 148.66 4 ePKPdf PKPdf 03 11 35.7 +0.4
JSC ePKPbc PKPbc 03 11 38.4 -0.6
VBMS Vicksburg 148.83 19 ePKPdf PKPdf 03 11 35.3 -0.3
VBMS ePKPbc PKPbc 03 11 39.5 0.0
VBMS ePKPab PKPab 03 11 43.7 +0.3
VBMS LR LR
comp=Z,2μm,19.0s
LRAL Lakeview Retre 149.04 13 ePKPdf PKPdf 03 11 35.4 -0.5
LRAL eSKPbc PKPbc 03 11 39.2 -0.8
LRAL eSKPdf SKPdf 03 15 07.0 +2.4
LRAL LR LR
comp=Z,2μm,19.0s
GOGA Godfrey 149.31 7 ePKPdf PKPdf 03 11 36.4 0.0
GOGA ePKPbc PKPbc 03 11 40.1 -0.6
GOGA ePKPab PKPab 03 11 44.5 -0.8
GOGA LR LR
comp=Z,2μm,21.0s
KVTX Kingsville 149.49 35 ePKPbc PKPbc 03 11 39.1 -2.3
KVTX ePKPab PKPab 03 11 43.2 -3.1
KVTX LR LR
comp=Z,2μm,19.0s
COW Cow Castle Cre 149.59 3 ePKPbc PKPbc 03 11 40.9 -0.5
NHSC New Hope 149.88 2 ePKPbc PKPbc 03 11 41.5 -0.7
NHSC LR LR
comp=Z,2μm,22.0s
BRAL Brewton 150.97 14 ePKPdf PKPdf 03 11 39.5 +0.5
BRAL ePKPbc PKPbc 03 11 44.4 -0.3
BRAL LR LR
comp=Z,2μm,19.0s
LVC Limon Verde 152.86 201 ePKPdf PKPdf 03 11 43.0 +0.9
LVC ePKPbc PKPbc 03 11 49.9 +0.6
LVC LR LR
comp=Z,1μm,20.0s
DWPF Disney 154.77 5 ePKPbc PKPbc 03 11 53.5 +0.2
DWPF ePKPab PKPab 03 12 07.5 -0.8
DWPF LR LR
comp=Z,2μm,20.0s
LPAZ La Paz 158.18 209 PKP PKPdf 03 11 50.4 +1.0
comp=Z,8.8nm,0.9s,baz=248,slow=3.2,SNR=26
LPAZ pPKP pPKPdf 03 12 05.8 -1.9
comp=Z,26nm,1.1s,baz=78,slow=0.2,SNR=12
LPAZ La Paz 158.18 209 ePKPdf PKPdf 03 11 50.4 +1.1
LPAZ LR LR
comp=Z,2μm,21.0s
BBGH Gun Hill 158.27 299 PFAKE 03 12 00.0 +10
BBGH LR LR
comp=Z,3μm,20.0s
SJG San Juan 160.32 321 PFAKE 03 12 00.0 +8.2
SJG LR LR
comp=Z,1μm,21.0s
GRGR Grenville 160.54 299 PFAKE 03 12 00.0 +7.8
GRGR LR LR
comp=Z,1μm,21.0s
SDDR Presa de Saban 162.30 335 PFAKE 03 12 00.0 +6.1
SDDR LR LR
comp=Z,2μm,21.0s
NNA Nana 165.11 188 ePKPdf PKPdf 03 11 57.2 +0.6
NNA LR LR
comp=Z,1μm,22.0s
TGUH Tegucigalpa,Un 166.16 36 PFAKE 03 12 10.0 +13
TGUH LR LR
comp=Z,2μm,21.0s
PAYG Puerto Ayora 168.14 107 PFAKE 03 12 10.0 +11
PAYG LR LR
comp=Z,1μm,20.0s
SDV Santo Domingo 169.78 306 ePKPdf PKPdf 03 11 58.8 -1.2
SDV ePKPab PKPab 03 13 13.4 -1.0
SDV ePP PP 03 17 05.8 +1.8
SDV LR LR
comp=Z,1μm,21.0s
BCIP Isla Barro Col 173.67 8 ePKPdf PKPdf 03 12 01.0 -0.8
BCIP LR LR
comp=Z,1μm,20.0s
ROSC El Rosal 174.98 293 PKP PKPdf 03 12 02.3 0.0
comp=Z,14nm,0.9s,baz=141,slow=8.4,SNR=17
ROSC pPKP pPKPdf 03 12 19.1 -1.6
comp=Z,15nm,0.8s,baz=122,slow=6.9,SNR=5.2
ROSC PP PP 03 17 32.0 +1.9
comp=Z,7.4nm,0.8s,baz=22,slow=5.4,SNR=5.0
ROSC El Rosal 174.98 293 ePKPdf PKPdf 03 12 01.9 -0.4
OTAV Otavalo 177.35 191 ePKPdf PKPdf 03 12 02.7 -0.1
OTAV LR LR
comp=Z,2μm,21.0s

*ISCJB **25** 03:10:17.5±0.2,5035N±001×575E±002,h5km±2km, Error ellipse: s-maj=2.7km s-min=1.8km az=31.9*
*LDG **25** 03:10:20.4±0.1,5045N×587E,h13km,Md3.7/6,Ml3.7/42, Error ellipse: s-maj=1.6km s-min=1.3km az=10.0*
*NEIC **25** 03:10:20.4,5045N×587E,h13km,ML3.7(LDG), ML3.1(STR),After LDG.*
*UCC **25** 03:10:20.6±0.4,5045N×585E,h17km,ML3.1*
*CSEM **25** 03:10:20.2±0.1,5044N×585E,h12km,ML3.8/41,Error ellipse: s-maj=1.1km s-min=0.7km az=132.0*
*BNS **25** 03:10:21.6±1.3,5046N×592E,h13km±7km,ML3.2*
*BGR **25** 03:10:22.0±0.8,5050N×598E,h10km,ML3.1,Error ellipse: s-maj=14.5km s-min=7.8km az=107.0*
*STR **25** 03:10:23.4±0.3,5029N×606E,h10km,Ml3.1,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 25 03:10:19.3±0.2,5040N±001×581E±002,h14km±1km,n153, σ1°24/355,15C-4D,Belgium

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MEM	**Membach**	**0.24**	**31**	**⇑P**		**Pg**		**03 10 25.1**	**+0.5**
MEM				S		**Sg**		**03 10 28.1**	**0.0**
MEM	**Membach**	**0.24**	**31**	P		**Pg**		**03 10 25.0**	**+0.5**
BCLA	**Clavier**	**0.33**	**274**	**⇑P**		**Pg**		**03 10 27.8**	**+1.9**
BCLA				S		**Sg**		**03 10 32.7**	**+2.3**
comp=N,354nm,0.2s									
BCLA	**Clavier**	**0.33**	**274**	P		**Pg**		**03 10 27.7**	**+1.8**
HGN	**Heimansgroeve**	**0.37**	**12**	**⇑*i*Pg**		**Pg**		**03 10 27.1**	**+0.3**
comp=N,1μm,0.1s									
HGN				*e*Sg		**Sg**		**03 10 31.5**	**-0.4**
HGN	**Heimansgroeve**	**0.37**	**12**	**⇑*i*Pg**		**Pg**		**03 10 27.1**	**+0.3**
comp=N,1μm,0.1s,baz=200									
HGN				*e*Sg		**Sg**		**03 10 31.5**	**-0.4**
DREG	**Dreilaegerbach**	**0.38**	**45**	**⇑*i*Pg**		**Pg**		**03 10 27.2**	**+0.3**
DREG				*e*Sg		**Sg**		**03 10 31.6**	**-0.4**
comp=N,462nm,0.1s									
KLL	**Kalltalsperre**	**0.41**	**52**	**⇑*i*Pg**		**Pg**		**03 10 27.7**	**+0.3**
KLL				*i* Sg		**Sg**		**03 10 32.5**	**-0.3**
comp=N,1μm,0.2s									
HILG	**Hillesheim**	**0.57**	**101**	**⇑*e*Pg**		**Pg**		**03 10 31.6**	**+1.3**
HILG				*e*Sg		**Sg**		**03 10 38.6**	**+0.7**
comp=N,359nm,0.2s									
STB	**Steinbach**	**0.69**	**73**	*e*Pg		**Pg**		**03 10 32.8**	**+0.2**
STB				*i* Sg		**Sg**		**03 10 41.3**	**-0.3**
comp=N,512nm,0.3s									
GIVF	**Givet**	**0.70**	**245**	*e*Pn		**Pn**		**03 10 35.1**	**+0.4**
SNR=1.0									
GIVF				*e*Sg		**Sg**		**03 10 44.5**	**+2.4**
SNR=1.0									
GIVF	**Givet**	**0.70**	**245**	*e*Pg		**Pg**		**03 10 34.7**	**+1.8**
GIVF				*e*Pn		**Pn**		**03 10 35.1**	**+0.4**
GIVF				*e*Sg		**Sg**		**03 10 44.5**	**+2.4**
GIVF	**Givet**	**0.70**	**245**	*e*Pn		**Pn**		**03 10 35.1**	**+0.4**
SNR=1.0									
GIVF				*e*Sg		**Sg**		**03 10 44.5**	**+2.4**
SNR=1.0									
BA05	**Sindorf**	**0.75**	**46**	**⇑*e*Pg**		**Pg**		**03 10 34.5**	**+0.6**
BD01	**Bergheim Laure**	**0.77**	**43**	**⇑*e*Pg**		**Pg**		**03 10 34.6**	**+0.4**
WLF	**Walferdange**	**0.77**	**163**	**⇓P**		**Pg**		**03 10 36.5**	**+2.3**
WLF				S		**Sg**		**03 10 46.5**	**+2.3**
WLF	**Walferdange**	**0.77**	**163**	P		**Pg**		**03 10 36.4**	**+2.3**
BD07	**Roetschberg**	**0.77**	**45**	**⇑*e*Pg**		**Pg**		**03 10 34.8**	**+0.5**
RODG	**Roetgen-Dahlhe**	**0.78**	**17**	**⇑*e*Pg**		**Pg**		**03 10 34.4**	**0.0**
RODG				*i* Sg		**Sg**		**03 10 44.2**	**-0.6**
comp=N,3μm,0.2s									
BD09	**Hochneukirch**	**0.81**	**31**	*e*Pg		**Pg**		**03 10 35.0**	**0.0**
DOU	**Dourbes**	**0.84**	**249**	**⇑P**		**Pg**		**03 10 36.9**	**+1.5**
DOU				S		**Sg**		**03 10 48.3**	**+1.9**
comp=N,353nm,0.2s									
SNF	**Seneffe**	**0.98**	**277**	**⇓P**		**Pb**		**03 10 38.8**	**+0.8**
BGG	**Burgeitz**	**1.00**	**101**	**⇓*e*Pg**		**Pg**		**03 10 38.8**	**+0.3**
BGG				*i* Sg		**Sg**		**03 10 50.7**	**-0.8**
comp=N,211nm,0.1s									
UCC	**Uccle**	**1.01**	**294**	**⇓P**		**Pb**		**03 10 39.2**	**+0.7**
UCC				S		**Sb**		**03 10 51.6**	**+0.1**
comp=E,372nm,0.2s									
UCC	**Uccle**	**1.01**	**294**	P		**Pb**		**03 10 39.1**	**+0.7**
BNS	**Bensberg**	**1.04**	**56**	**⇑*e*Pg**		**Pg**		**03 10 38.6**	**-0.6**
BNS				*e*Sg		**Sg**		**03 10 51.8**	**-0.9**
comp=E,1μm,0.3s									
RUP	**Ruppelstein**	**1.07**	**130**	Pg		**Pg**		**03 10 40.2**	**+0.4**
RUP				Sg		**Sg**		**03 10 52.8**	**-0.9**
BAIF	**Baives**	**1.08**	**252**	*e*Pg		**Pg**		**03 10 41.1**	**+1.0**
SNR=1.0									
BAIF				*e*Sn		**Sn**		**03 10 54.5**	**-0.3**
comp=E,731nm,0.2s,SNR=1.0									
BAIF				*e*S		**Sb**		**03 10 57.1**	**+3.4**
BAIF	**Baives**	**1.08**	**252**	*e*Pn		**Pn**		**03 10 40.3**	**+0.3**
BAIF				*e*Pg		**Pg**		**03 10 41.1**	**+1.0**
BAIF				*e*Sn		**Sn**		**03 10 54.5**	**-0.3**
BAIF				*e*S		**Sb**		**03 10 57.1**	**+3.4**
BAIF	**Baives**	**1.08**	**252**	*e*Pg		**Pg**		**03 10 41.1**	**+1.0**
SNR=1.0									
BAIF				*e*Sn		**Sn**		**03 10 54.5**	**-0.3**
comp=E,365nm,0.2s,SNR=1.0									
BAIF				*e*S		**Sb**		**03 10 57.1**	**+3.4**
HOBG	**Hohbusch**	**1.13**	**58**	**⇑*e*Pg**		**Pg**		**03 10 40.4**	**-0.7**
HOBG				*e*Sg		**Sg**		**03 10 53.0**	**-2.8**
comp=E,952nm,0.6s									
HOBG	**Hohbusch**	**1.13**	**58**	Pg		**Pg**		**03 10 40.3**	**-0.8**
HOBG				Sg		**Sg**		**03 10 53.0**	**-2.8**
comp=E,952nm,0.6s									
LAUG	**Laupendahl**	**1.19**	**37**	**⇑*e*Pg**		**Pg**		**03 10 41.0**	**-1.2**
KOE	**Koeppel**	**1.23**	**88**	*e*Pg		**Pg**		**03 10 41.8**	**-1.1**
KOE				*e*Sg		**Sg**		**03 10 57.6**	**-1.3**
comp=E,166nm,0.2s									
ABH	**Alteburg**	**1.23**	**114**	Pg		**Pg**		**03 10 42.5**	**-0.5**
ABH				Sg		**Sg**		**03 10 57.7**	**-1.3**
BUG	**Bochum--Univer**	**1.39**	**41**	*e*Pn		**Pn**		**03 10 43.5**	**-0.7**
BUG				*e*Sg		**Sg**		**03 11 01.1**	**-3.0**
WTSB	**Winterswijk**	**1.69**	**21**	*e*Pn		**Pn**		**03 10 47.5**	**-0.8**
comp=E,7.7nm,0.1s									
WTSB	**Winterswijk**	**1.69**	**21**	*e*Pg		**Pg**		**03 10 50.6**	**-1.1**
comp=E,42nm,0.2s									
WTSB				*e*Sg		**Sg**		**03 11 11.2**	**-2.4**
WTSB	**Winterswijk**	**1.69**	**21**	*e*Pn		**Pn**		**03 10 47.5**	**-0.7**
comp=E,7.7nm,0.1s									
WTSB	**Winterswijk**	**1.69**	**21**	*e*Pg		**Pg**		**03 10 50.6**	**-1.0**
comp=E,42nm,0.2s									
WTSB				*e*Sg		**Sg**		**03 11 11.2**	**-2.4**
TNS	**Taunus Mts**	**1.70**	**95**	*e*Pn		**Pn**		**03 10 48.6**	**+0.2**
RFYF	**Reffroy**	**1.79**	**187**	*e*Pg		**Pg**		**03 10 54.8**	**+1.3**
baz=12									
RFYF				*e*Sn		**Sn**		**03 11 11.7**	**-0.4**
RFYF				*e*Sg		**Sg**		**03 11 18.5**	**+1.8**
comp=E,328nm,0.2s,baz=9.2									
RFYF	**Reffroy**	**1.79**	**187**	*e*Pn		**Pn**		**03 10 50.9**	**+1.3**
RFYF				*e*Pg		**Pg**		**03 10 54.8**	**+1.3**
RFYF				*e*Sn		**Sn**		**03 11 11.7**	**-0.4**
RFYF				*e*Sg		**Sg**		**03 11 18.5**	**+1.8**
RFYF	**Reffroy**	**1.79**	**187**	*e*Pg		**Pg**		**03 10 54.8**	**+1.3**
RFYF				*e*Sn		**Sn**		**03 11 11.7**	**-0.4**
RFYF				*e*Sg		**Sg**		**03 11 18.5**	**+1.8**
comp=E,164nm,0.2s									
LANF	**Langenberg**	**1.92**	**137**	Pn		**Pn**		**03 10 52.2**	**+0.7**
MEZF	**Maizieres J'vi**	**1.96**	**195**	*e*Pn		**Pn**		**03 10 53.6**	**+1.5**
baz=14,SNR=1.0									
MEZF	**Maizieres J'vi**	**1.96**	**195**	*e*Pg		**Pg**		**03 10 57.7**	**+0.8**
baz=9.5									
MEZF				*e*Sn		**Sn**		**03 11 15.8**	**-0.6**
baz=19									
MEZF				*e*Sg		**Sg**		**03 11 24.7**	**+2.4**
comp=E,111nm,0.2s,baz=16,SNR=1.0									
MEZF	**Maizieres J'vi**	**1.96**	**195**	*e*Pn		**Pn**		**03 10 53.6**	**+1.5**
MEZF				*e*Pg		**Pg**		**03 10 57.7**	**+0.8**
MEZF				*e*Sn		**Sn**		**03 11 15.8**	**-0.6**
MEZF				*e*Sg		**Sg**		**03 11 24.7**	**+2.4**
MEZF	**Maizieres J'vi**	**1.96**	**195**	*e*Pg		**Pg**		**03 10 57.7**	**+0.8**
MEZF				*e*Sn		**Sn**		**03 11 15.8**	**-0.6**
MEZF				*e*Sg		**Sg**		**03 11 24.7**	**+2.4**
comp=E,56nm,0.2s,SNR=1.0									
TOD	**Tromm**	**2.09**	**111**	Pn		**Pn**		**03 10 54.3**	**+0.5**
THEF	**They Montfort**	**2.18**	**177**	Pg		**Pg**		**03 11 02.0**	**+1.0**
THEF				Sg		**Sg**		**03 11 30.8**	**+1.6**
THEF	**They Montfort**	**2.18**	**177**	Pn		**Pn**		**03 10 56.0**	**+1.0**
THEF				Pg		**Pg**		**03 11 02.0**	**+1.0**
THEF				Sg		**Sg**		**03 11 30.8**	**+1.6**
THEF	**They Montfort**	**2.18**	**177**	Pg		**Pg**		**03 11 02.0**	**+1.0**
THEF				Sg		**Sg**		**03 11 30.8**	**+1.6**
CDF	**Champ du Feu**	**2.21**	**154**	*e*Pg		**Pg**		**03 11 02.4**	**+0.8**
CDF				*e*Sn		**Sn**		**03 11 21.4**	**-1.1**
CDF				*e*Sg		**Sg**		**03 11 29.9**	**-0.3**
comp=E,48nm,0.3s									
CDF	**Champ du Feu**	**2.21**	**154**	*e*Pn		**Pn**		**03 10 56.5**	**+1.1**
CDF				*e*Pg		**Pg**		**03 11 02.4**	**+0.8**
CDF				*e*Sn		**Sn**		**03 11 21.4**	**-1.1**
CDF				*e*Sg		**Sg**		**03 11 29.9**	**-0.3**
CDF	**Champ du Feu**	**2.21**	**154**	*e*Pg		**Pg**		**03 11 02.4**	**+0.8**
CDF				*e*Sn		**Sn**		**03 11 21.4**	**-1.1**
CDF				*e*Sg		**Sg**		**03 11 29.9**	**-0.3**
comp=E,24nm,0.3s									
SFTF	**Sexfontaines**	**2.25**	**193**	*e*Pn		**Pn**		**03 10 57.3**	**+1.2**
baz=16									
SFTF	**Sexfontaines**	**2.25**	**193**	*e*Pg		**Pg**		**03 11 02.8**	**+0.4**
baz=7.4									
SFTF				*e*Sn		**Sn**		**03 11 22.9**	**-0.7**
baz=19									
SFTF				*e*Sg		**Sg**		**03 11 33.4**	**+1.8**
comp=E,135nm,0.2s,baz=24									
SFTF	**Sexfontaines**	**2.25**	**193**	*e*Pn		**Pn**		**03 10 57.3**	**+1.2**
SFTF				*e*Pg		**Pg**		**03 11 02.8**	**+0.4**
SFTF				*e*Sn		**Sn**		**03 11 22.9**	**-0.7**
SFTF				*e*Sg		**Sg**		**03 11 33.4**	**+1.8**
SFTF	**Sexfontaines**	**2.25**	**193**	*e*Pg		**Pg**		**03 11 02.8**	**+0.4**
SFTF				*e*Sn		**Sn**		**03 11 22.9**	**-0.7**
SFTF				*e*Sg		**Sg**		**03 11 33.4**	**+1.8**
comp=E,67nm,0.2s									
IBBN	**Ibbenburen**	**2.27**	**32**	*e*Sg		**Sg**		**03 11 30.4**	**-1.7**
ECH	**Echery**	**2.36**	**158**	Pg		**Pg**		**03 11 04.8**	**+0.4**
ECH				Sg		**Sg**		**03 11 35.3**	**+0.3**
ECH	**Echery**	**2.36**	**158**	Pn		**Pn**		**03 10 58.5**	**+1.0**
ECH				Pg		**Pg**		**03 11 04.8**	**+0.4**
ECH				Sg		**Sg**		**03 11 35.3**	**+0.3**
ECH	**Echery**	**2.36**	**158**	Pg		**Pg**		**03 11 04.8**	**+0.4**
ECH				Sg		**Sg**		**03 11 35.3**	**+0.3**
HAU	**Haudompre**	**2.42**	**171**	*e*Pg		**Pg**		**03 11 06.1**	**+0.4**
HAU				*e*Sn		**Sn**		**03 11 26.7**	**-1.1**
comp=E,104nm,0.2s,SNR=1.0									
HAU				*e*Sg		**Sg**		**03 11 37.8**	**+0.8**
comp=E,109nm,0.2s									
HAU	**Haudompre**	**2.42**	**171**	*e*Pn		**Pn**		**03 10 59.7**	**+1.3**
HAU				*e*Pg		**Pg**		**03 11 06.1**	**+0.4**
HAU				*e*Sn		**Sn**		**03 11 26.7**	**-1.1**
HAU				*e*Sg		**Sg**		**03 11 37.8**	**+0.8**
HAU	**Haudompre**	**2.42**	**171**	*e*Pg		**Pg**		**03 11 06.1**	**+0.4**
HAU				*e*Sn		**Sn**		**03 11 26.7**	**-1.1**
comp=E,52nm,0.2s,SNR=1.0									
HAU				*e*Sg		**Sg**		**03 11 37.8**	**+0.8**
comp=E,54nm,0.2s									
BFO	**Black Forest**	**2.65**	**141**	*e*Pn		**Pn**		**03 11 02.2**	**+0.8**
BFO	**Black Forest**	**2.65**	**141**	Pn		**Pn**		**03 11 02.2**	**+0.7**
HINF	**Hinteralfeld**	**2.67**	**165**	*e*Pg		**Pg**		**03 11 10.9**	**+0.4**
HINF				*e*Sn		**Sn**		**03 11 32.1**	**-1.9**
HINF				*e*Sg		**Sg**		**03 11 45.4**	**+0.3**
comp=E,47nm,0.3s									
HINF	**Hinteralfeld**	**2.67**	**165**	*e*Pn		**Pn**		**03 11 02.9**	**+1.1**
HINF				*e*Pg		**Pg**		**03 11 10.9**	**+0.4**
HINF				*e*Sn		**Sn**		**03 11 32.1**	**-1.9**
HINF				*e*Sg		**Sg**		**03 11 45.4**	**+0.3**
HINF	**Hinteralfeld**	**2.67**	**165**	*e*Pg		**Pg**		**03 11 10.9**	**+0.4**
HINF				*e*Sn		**Sn**		**03 11 32.1**	**-1.9**
HINF				*e*Sg		**Sg**		**03 11 45.4**	**+0.3**
comp=E,24nm,0.3s									
MOF	**Molkenrain**	**2.69**	**161**	Pn		**Pn**		**03 11 03.7**	**+1.6**
UBBA	**Unterbreizbach**	**2.70**	**79**	*e*Pn		**Pn**		**03 11 01.5**	**-0.7**
FELD	**Feldberg im Sc**	**2.91**	**149**	Pn		**Pn**		**03 11 05.6**	**+0.6**
SPAK	**Spaichingen-Ko**	**3.01**	**139**	Pn		**Pn**		**03 11 07.2**	**+0.7**
LOMF	**Lomont**	**3.12**	**167**	Pn		**Pn**		**03 11 10.2**	**+2.2**
BBS	**Basel-Blauen**	**3.14**	**158**	Pn		**Pn**		**03 11 10.1**	**+1.8**
CLZ	**Clausthal**	**3.22**	**62**	*e*Pn		**Pn**		**03 11 11.1**	**+1.9**
CLZ				*e*Sg		**Sg**		**03 11 57.6**	**-4.9**
CLZ	**Clausthal**	**3.22**	**62**	Pn		**Pn**		**03 11 11.1**	**+1.8**
CLZ				Sg		**Sg**		**03 11 57.6**	**-4.9**
LOR	**Lormes**	**3.39**	**203**	*e*Pn		**Pn**		**03 11 12.7**	**+1.0**
baz=23,SNR=1.0									
LOR	**Lormes**	**3.39**	**203**	*e*Pg		**Pg**		**03 11 24.0**	**-0.1**
baz=25									
LOR				*e*Sn		**Sn**		**03 11 49.5**	**-2.1**
SNR=1.0									
LOR				*e*Sg		**Sg**		**03 12 08.0**	**0.0**
comp=E,104nm,0.3s,baz=15,SNR=1.0									
LOR	**Lormes**	**3.39**	**203**	*e*Pn		**Pn**		**03 11 12.7**	**+1.0**
LOR				*e*Pg		**Pg**		**03 11 24.0**	**-0.1**
LOR				*e*Sn		**Sn**		**03 11 49.5**	**-2.1**
LOR				*e*Sg		**Sg**		**03 12 08.0**	**0.0**
LOR	**Lormes**	**3.39**	**203**	*e*Pg		**Pg**		**03 11 24.0**	**-0.1**
LOR				*e*Sn		**Sn**		**03 11 49.5**	**-2.1**
SNR=1.0									
LOR				*e*Sg		**Sg**		**03 12 08.0**	**0.0**
comp=E,52nm,0.3s,SNR=1.0									
SSF	**Saint Saulge**	**3.67**	**205**	*e*P		**Pn**		**03 11 17.3**	**+1.7**
SNR=1.0									
SSF	**Saint Saulge**	**3.67**	**205**	*e*Pg		**Pg**		**03 11 29.1**	**-0.5**
SNR=1.0									
SSF				*e*Sn		**Sn**		**03 11 55.0**	**-3.6**
comp=E,88nm,0.4s,SNR=1.0									
SSF				*e*Sg		**Sg**		**03 12 16.8**	**-0.3**
comp=E,106nm,0.5s									
SSF	**Saint Saulge**	**3.67**	**205**	*e*Pn		**Pn**		**03 11 16.6**	**+1.0**
SSF				*e*P				03 11 17.3	
SSF				*e*Pg		**Pg**		**03 11 29.1**	**-0.5**
SSF				*e*Sn		**Sn**		**03 11 55.0**	**-3.6**
SSF				*e*Sg		**Sg**		**03 12 16.8**	**-0.3**
SSF	**Saint Saulge**	**3.67**	**205**	*e*P		**Pn**		**03 11 17.3**	**+1.7**
SNR=1.0									
SSF	**Saint Saulge**	**3.67**	**205**	*e*Pg		**Pg**		**03 11 29.1**	**-0.5**
SNR=1.0									
SSF				*e*Sn		**Sn**		**03 11 55.0**	**-3.6**
comp=E,44nm,0.4s,SNR=1.0									
SSF				*e*Sg		**Sg**		**03 12 16.8**	**-0.3**
comp=E,53nm,0.5s									
MOX	**Moxa**	**3.71**	**84**	*e*Pn		**Pn**		**03 11 16.7**	**+0.6**
MOX				*e*Sg		**Sg**		**03 12 16.3**	**-2.1**
MOX	**Moxa**	**3.71**	**84**	*e*PN		**Pn**		**03 11 16.

SMF				*e*Sg		**Sg**	**03 12 26.1**	**-0.8**
	comp=E,70nm,0.5s,SNR=1.0								
SMF	**Signal de Mont**	**3.98**	**200**	*e*Pn		**Pn**	**03 11 20.4**	**+0.6**
SMF				*e*Pg		**Pg**	**03 11 35.2**	**-0.2**
SMF				*e*Sn		**Sn**	**03 12 03.7**	**-2.4**
SMF				*e*Sg		**Sg**	**03 12 26.1**	**-0.8**
SMF	**Signal de Mont**	**3.98**	**200**	*e*Pg		**Pg**	**03 11 35.2**	**-0.2**
	SNR=1.0								
SMF				*e*Sn		**Sn**	**03 12 03.7**	**-2.4**
SMF				*e*Sg		**Sg**	**03 12 26.1**	**-0.8**
	comp=E,35nm,0.5s,SNR=1.0								
LDF	**La Druitiere**	**4.27**	**247**	*e*Pn		**Pn**	**03 11 24.8**	**+1.1**
	SNR=1.0								
LDF				*e*Sn		**Sn**	**03 12 10.0**	**-3.3**
	comp=E,38nm,0.3s,SNR=1.0								
LDF				*e*Sg		**Sg**	**03 12 35.3**	**-0.9**
	comp=E,38nm,0.3s								
LDF	**La Druitiere**	**4.27**	**247**	*e*Pn		**Pn**	**03 11 24.8**	**+1.1**
	SNR=1.0								
LDF				*e*Sn		**Sn**	**03 12 10.0**	**-3.3**
	comp=E,19nm,0.3s,SNR=1.0								
LDF				*e*Sg		**Sg**	**03 12 35.3**	**-0.9**
	comp=E,19nm,0.3s								
BGF	**Bois d'Agland**	**4.32**	**208**	*e*Pn		**Pn**	**03 11 25.3**	**+0.8**
	SNR=1.0								
BGF				*e*Sn		**Sn**	**03 12 11.8**	**-2.8**
	SNR=1.0								
BGF				*e*Sg		**Sg**	**03 12 37.6**	**-0.3**
	comp=E,138nm,0.4s,SNR=1.0								
BGF	**Bois d'Agland**	**4.32**	**208**	*e*Pn		**Pn**	**03 11 25.3**	**+0.8**
BGF				*e*Pg		**Pg**	**03 11 40.9**	**-1.1**
BGF				*e*Sn		**Sn**	**03 12 11.8**	**-2.8**
BGF				*e*Sg		**Sg**	**03 12 37.6**	**-0.3**
BGF	**Bois d'Agland**	**4.32**	**208**	*e*Pg		**Pg**	**03 11 40.9**	**-1.1**
BGF				*e*Sn		**Sn**	**03 12 11.8**	**-2.8**
	SNR=1.0								
BGF				*e*Sg		**Sg**	**03 12 37.6**	**-0.3**
	comp=E,69nm,0.4s,SNR=1.0								
FLN	**La Foliniere**	**4.41**	**251**	*e*Pg		**Pg**	**03 11 43.9**	**+0.2**
	baz=68,SNR=1.0								
FLN				*e*Sn		**Sn**	**03 12 13.5**	**-3.3**
	baz=76,SNR=1.0								
FLN				*e*Sg		**Sg**	**03 12 38.8**	**-1.9**
	comp=E,53nm,0.3s,baz=72,SNR=1.0								
FLN	**La Foliniere**	**4.41**	**251**	*e*Pn		**Pn**	**03 11 26.2**	**+0.5**
FLN				*e*Pg		**Pg**	**03 11 43.9**	**+0.2**
FLN				*e*Sn		**Sn**	**03 12 13.5**	**-3.3**
FLN				*e*Sg		**Sg**	**03 12 38.8**	**-1.9**
FLN	**La Foliniere**	**4.41**	**251**	*e*Pg		**Pg**	**03 11 43.9**	**+0.2**
	SNR=1.0								
FLN				*e*Sn		**Sn**	**03 12 13.5**	**-3.3**
	SNR=1.0								
FLN				*e*Sg		**Sg**	**03 12 38.8**	**-1.9**
	comp=E,26nm,0.3s,SNR=1.0								
CLL	**Collm**	**4.65**	**76**	*ex*		x	03 11 35.0		
CLL				*e*Pg		**Pg**	**03 11 46.0**	**-2.2**
CLL				*ex*		x	03 12 20.0		
CLL				*e*Sg		**Sg**	**03 12 41.0**	**-7.3**
WET	**Wettzell**	**4.75**	**103**	*e*Pn		**Pn**	**03 11 32.0**	**+1.6**
TCF	**Toulx Ste Croi**	**4.76**	**212**	*e*Pg		**Pg**	**03 11 49.5**	**-0.9**
	SNR=1.0								
TCF				*e*Sn		**Sn**	**03 12 22.6**	**-2.9**
	SNR=1.0								
TCF				*e*Sg		**Sg**	**03 12 51.1**	**-1.0**
	comp=E,16nm,0.3s,SNR=1.0								
TCF	**Toulx Ste Croi**	**4.76**	**212**	*e*Pn		**Pn**	**03 11 31.5**	**+1.0**
TCF				*e*Pg		**Pg**	**03 11 49.5**	**-0.9**
TCF				*e*Sn		**Sn**	**03 12 22.6**	**-2.9**
TCF				*e*Sg		**Sg**	**03 12 51.1**	**-1.0**
TCF	**Toulx Ste Croi**	**4.76**	**212**	*e*Pg		**Pg**	**03 11 49.5**	**-0.9**
	SNR=1.0								
TCF				*e*Sn		**Sn**	**03 12 22.6**	**-2.9**
	SNR=1.0								
TCF				*e*Sg		**Sg**	**03 12 51.1**	**-1.0**
	comp=E,8.1nm,0.3s,SNR=1.0								
GRR	**Gorron**	**4.80**	**248**	*e*Pn		**Pn**	**03 11 31.9**	**+0.9**
	SNR=1.0								
GRR				*e*Sn		**Sn**	**03 12 23.1**	**-3.2**
	SNR=1.0								
GRR				*e*Sg		**Sg**	**03 12 51.1**	**-2.1**
	comp=E,34nm,0.3s,SNR=1.0								
GRR	**Gorron**	**4.80**	**248**	*e*Pn		**Pn**	**03 11 31.9**	**+0.9**
	SNR=1.0								
GRR				*e*Sn		**Sn**	**03 12 23.1**	**-3.2**
	SNR=1.0								
GRR				*e*Sg		**Sg**	**03 12 51.1**	**-2.1**
	comp=E,17nm,0.3s,SNR=1.0								
LPL	**La Plagne**	**4.92**	**172**	*e*Pn		**Pn**	**03 11 34.6**	**+1.8**
LPL				*e*Sg		**Sg**	**03 12 56.5**	**-0.8**
	comp=E,4.1nm,0.4s								
LPL	**La Plagne**	**4.92**	**172**	*e*Pn		**Pn**	**03 11 34.6**	**+1.8**
LPL				*e*Sg		**Sg**	**03 12 56.5**	**-0.8**
	comp=E,2.0nm,0.4s								
LPG	**La Plagne**	**4.95**	**172**	*e*Pn		**Pn**	**03 11 35.1**	**+2.0**
	SNR=1.0								
LPG				*e*Sg		**Sg**	**03 12 56.5**	**-1.4**
	comp=E,5.1nm,0.4s								
LPG	**La Plagne**	**4.95**	**172**	*e*Pn		**Pn**	**03 11 35.1**	**+2.0**
	SNR=1.0								
LPG				*e*Sg		**Sg**	**03 12 56.5**	**-1.4**
	comp=E,2.5nm,0.4s								
KHC	**Kasperske Hory**	**5.19**	**101**	*e*PN		**Pn**	**03 11 38.0**	**+1.6**
KHC				*ex*		x	03 11 53.0		
KHC				*ex*		x	03 12 22.5		
KHC				*e*SN		**Sn**	**03 12 34.0**	**-2.1**
BRG	**Berggiesshubel**	**5.20**	**82**	SG		**Sg**	**03 13 01.4**	**-4.6**
	comp=E,3.0nm,0.9s								
GEC2	**GERESS Array S**	**5.36**	**104**	*e*Pn		**Pn**	**03 11 41.2**	**+2.5**
ORIF	**Oris-en-Rattie**	**5.48**	**179**	*e*Pg		**Pg**	**03 12 03.0**	**-1.2**
	SNR=1.0								
ORIF				*e*Sg		**Sg**	**03 13 14.5**	**-0.7**
	comp=E,9.8nm,0.4s								
ORIF	**Oris-en-Rattie**	**5.48**	**179**	*e*Pn		**Pn**	**03 11 40.6**	**+0.1**
ORIF				*e*Pg		**Pg**	**03 12 03.0**	**-1.2**
ORIF				*e*Sg		**Sg**	**03 13 14.5**	**-0.7**
ORIF	**Oris-en-Rattie**	**5.48**	**179**	*e*Pg		**Pg**	**03 12 03.0**	**-1.2**
	SNR=1.0								
ORIF				*e*Sg		**Sg**	**03 13 14.5**	**-0.7**
	comp=E,4.9nm,0.4s								
MFF	**Saint Martin d**	**5.49**	**228**	*e*Pn		**Pn**	**03 11 41.1**	**+0.6**
	SNR=1.0								
MFF				*e*Sn		**Sn**	**03 12 40.1**	**-3.2**
	SNR=1.0								
MFF				*e*Sg		**Sg**	**03 13 14.1**	**-1.1**
	comp=E,24nm,0.5s,SNR=1.0								
MFF	**Saint Martin d**	**5.49**	**228**	*e*Pn		**Pn**	**03 11 41.1**	**+0.6**
	SNR=1.0								
MFF				*e*Sn		**Sn**	**03 12 40.1**	**-3.2**
	SNR=1.0								
MFF				*e*Sg		**Sg**	**03 13 14.1**	**-1.1**
	comp=E,12nm,0.5s,SNR=1.0								
VIVF	**Saint-Julien-l**	**5.60**	**188**	*e*Pn		**Pn**	**03 11 41.9**	**-0.1**
	SNR=1.0								
VIVF				*e*Sn		**Sn**	**03 12 42.7**	**-3.4**
	SNR=1.0								
VIVF				*e*Sg		**Sg**	**03 13 16.2**	**-2.7**
	comp=E,11nm,0.4s,SNR=1.0								
VIVF	**Saint-Julien-l**	**5.60**	**188**	*e*Pn		**Pn**	**03 11 41.9**	**-0.1**
	SNR=1.0								
VIVF				*e*Sn		**Sn**	**03 12 42.7**	**-3.4**
	SNR=1.0								
VIVF				*e*Sg		**Sg**	**03 13 16.2**	**-2.7**
	comp=E,5.4nm,0.4s,SNR=1.0								
MBDF	**Montbardon**	**5.71**	**173**	*e*Pn		**Pn**	**03 11 43.7**	**+0.1**
MBDF				*e*Sg		**Sg**	**03 13 21.6**	**-0.9**
	comp=E,4.0nm,0.5s								
RJF	**Les Rejaudoux**	**5.86**	**211**	*e*Pn		**Pn**	**03 11 45.9**	**+0.3**
	SNR=1.0								
RJF				*e*Sn		**Sn**	**03 12 48.8**	**-3.7**
RJF				*e*Sg		**Sg**	**03 13 25.5**	**-1.7**
	comp=E,14nm,0.3s								
RJF	**Les Rejaudoux**	**5.86**	**211**	*e*Pn		**Pn**	**03 11 45.9**	**+0.3**
	SNR=1.0								
RJF				*e*Sn		**Sn**	**03 12 48.8**	**-3.7**
RJF				*e*Sg		**Sg**	**03 13 25.5**	**-1.7**
	comp=E,7.2nm,0.3s								
SGMF	**Saint Gilles**	**5.88**	**252**	*e*Pn		**Pn**	**03 11 46.4**	**+0.6**
	SNR=1.0								
SGMF				*e*Sn		**Sn**	**03 12 48.4**	**-4.5**
SGMF				*e*Sg		**Sg**	**03 13 25.8**	**-1.9**
	comp=E,22nm,0.5s								
SGMF	**Saint Gilles**	**5.88**	**252**	*e*Pn		**Pn**	**03 11 46.4**	**+0.6**
	SNR=1.0								
SGMF				*e*Sn		**Sn**	**03 12 48.4**	**-4.5**
SGMF				*e*Sg		**Sg**	**03 13 25.8**	**-1.9**
	comp=E,11nm,0.5s								

CAF	**Calviac**	**6.03**	**206**	*e*Pn		**Pn**	**03 11 48.5**	**+0.5**
	SNR=1.0								
CAF				*e*Sn		**Sn**	**03 12 52.3**	**-4.5**
	SNR=1.0								
CAF				*e*Sg		**Sg**	**03 13 30.3**	**-2.4**
	comp=E,16nm,0.4s,SNR=1.0								
CAF	**Calviac**	**6.03**	**206**	*e*Pn		**Pn**	**03 11 48.5**	**+0.5**
	SNR=1.0								
CAF				*e*Sn		**Sn**	**03 12 52.3**	**-4.5**
	SNR=1.0								
CAF				*e*Sg		**Sg**	**03 13 30.3**	**-2.4**
	comp=E,7.8nm,0.4s,SNR=1.0								
ROSF	**Rostrenen**	**6.28**	**254**	*e*Pn		**Pn**	**03 11 51.7**	**+0.3**
	SNR=1.0								
ROSF				*e*Sn		**Sn**	**03 12 57.1**	**-5.8**
	comp=E,7.8nm,0.3s,SNR=1.0								
ROSF				*e*Sg		**Sg**	**03 13 38.6**	**-2.1**
	comp=E,12nm,0.3s								
ROSF	**Rostrenen**	**6.28**	**254**	*e*Pn		**Pn**	**03 11 51.7**	**+0.3**
	SNR=1.0								
ROSF				*e*Sn		**Sn**	**03 12 57.1**	**-5.8**
	comp=E,3.9nm,0.3s,SNR=1.0								
ROSF				*e*Sg		**Sg**	**03 13 38.6**	**-2.1**
	comp=E,5.9nm,0.3s								
QUIF	**Quistinic**	**6.39**	**251**	*e*Pn		**Pn**	**03 11 54.1**	**+1.2**
	SNR=1.0								
QUIF				*e*Sn		**Sn**	**03 13 00.8**	**-4.8**
QUIF				*e*Sg		**Sg**	**03 13 42.0**	**-2.2**
	comp=E,6.4nm,0.3s								
QUIF	**Quistinic**	**6.39**	**251**	*e*Pn		**Pn**	**03 11 54.1**	**+1.2**
	SNR=1.0								
QUIF				*e*Sn		**Sn**	**03 13 00.8**	**-4.8**
QUIF				*e*Sg		**Sg**	**03 13 42.0**	**-2.2**
	comp=E,3.2nm,0.3s								
SMRF	**Simiane la Rot**	**6.43**	**182**	*e*Pn		**Pn**	**03 11 53.9**	**+0.5**
LFF	**La Frestale**	**6.45**	**214**	*e*Pn		**Pn**	**03 11 53.9**	**+0.3**
	SNR=1.0								
LFF				*e*Sn		**Sn**	**03 13 01.7**	**-5.2**
	comp=E,11nm,0.4s,SNR=1.0								
LFF				*e*Sg		**Sg**	**03 13 43.7**	**-2.3**
	comp=E,35nm,0.6s								
LFF	**La Frestale**	**6.45**	**214**	*e*Pn		**Pn**	**03 11 53.9**	**+0.3**
	SNR=1.0								
LFF				*e*Sn		**Sn**	**03 13 01.7**	**-5.2**
	comp=E,5.5nm,0.4s,SNR=1.0								
LFF				*e*Sg		**Sg**	**03 13 43.7**	**-2.3**
	comp=E,18nm,0.6s								
LASF	**Ste Croix**	**6.46**	**193**	*e*Pn		**Pn**	**03 11 54.1**	**+0.2**
LASF				*e*Sg		**Sg**	**03 13 45.0**	**-1.6**
	comp=E,5.9nm,0.5s								
LASF	**Ste Croix**	**6.46**	**193**	*e*Pn		**Pn**	**03 11 54.1**	**+0.2**
LASF				*e*Sg		**Sg**	**03 13 45.0**	**-1.6**
	comp=E,3.0nm,0.5s								
FRF	**La Foret Royal**	**6.87**	**175**	*e*Pn		**Pn**	**03 12 00.4**	**+1.0**
FRF				*e*Sn		**Sn**	**03 13 12.6**	**-4.7**
LMR	**La Mourre**	**7.08**	**176**	*e*Pn		**Pn**	**03 12 02.9**	**+0.5**
MTLF	**Montolieu**	**7.48**	**201**	*e*Pn		**Pn**	**03 12 08.3**	**+0.5**
MTLF				*e*Sg		Sn	03 14 16.7	+44
	comp=E,3.1nm,0.3s								
MTLF	**Montolieu**	**7.48**	**201**	*e*Pn		**Pn**	**03 12 08.3**	**+0.5**
MTLF				*e*Sg		Sn	03 14 16.7	+44
	comp=E,1.5nm,0.3s								
EPF	**Esparros**	**8.27**	**209**	*e*Pn		**Pn**	**03 12 17.8**	**-0.9**
	SNR=1.0								
EPF				*e*Sn		**Sn**	**03 13 46.2**	**-5.7**
	comp=E,2.6nm,0.4s,SNR=1.0								
EPF				*e*Sg		Sn	03 14 41.6	+50
	comp=E,2.4nm,0.4s								
ETSF	**Etsaut**	**8.69**	**213**	*e*Pn		**Pn**	**03 12 23.8**	**-0.6**
ETSF				*e*Sn		**Sn**	**03 13 55.3**	**-6.7**
SJPF	**Ste Jean**	**8.74**	**216**	*e*Pn		**Pn**	**03 12 24.8**	**-0.3**
SJPF				*e*Sn		**Sn**	**03 13 57.5**	**-5.8**
	comp=E,2.1nm,0.3s								

*ISCJB **25** 03:18:01.7±0.3, 4758N±002×1384E±002, h10km, Error ellipse: s-maj=2.3km s-min=1.9km az=151.7*
*VIE **25** 03:18:02.6±0.2, 4752N×1384E, h3km±4km, mb2.0/12, ML2.6/20, Error ellipse: s-maj=2.5km s-min=1.3km az=168.0*
*CSEM **25** 03:18:03.2±0.1, 4754N×1384E, h2km, ML3.1/13, Error ellipse: s-maj=1.2km s-min=0.9km az=163.0*
*IPEC **25** 03:18:03.6±0.1, 4754N×1384E, h8km±1km, ML1.7/1, Error ellipse: s-maj=0.7km s-min=0.6km az=112.0*
*PRU **25** 03:18:03.9, 4760N×1390E, h0km*
*BGR **25** 03:18:04.1±0.3, 4755N×1384E, h10km, ML2.3, Error ellipse: s-maj=5.6km s-min=4.4km az=122.0*

ISC 25 03:18:02.7±0.3, 4757N±001×1387E±002, h3km±4km, n45, σ0⁰90/85, 26C-11D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MOA	**Molln**	**0.39**	**43**	*e*Pg		**Pg**	**03 18 12.1**	**+1.9**
MOA				*e*Sg		**Sg**	**03 18 18.8**	**+3.5**
MOA	**Molln**	**0.39**	**43**	⇓*i*Pg		**Pg**	**03 18 11.5**	**+1.4**
	12nm,0.1s,SNR=71							
MOA				⇑*i*Sg		**Sg**	**03 18 18.8**	**+3.6**
	65nm,0.1s							
MOA	**Molln**	**0.39**	**43**	Pg		**Pg**	**03 18 11.5**	**+1.3**
	12nm,0.1s,SNR=71							
MOA				*e*Sg		**Sg**	**03 18 18.3**	**+3.1**
BGLD	**Berchtesgaden**	**0.59**	**279**	⇓*e*Pg		**Pg**	**03 18 14.2**	**+0.2**
BGLD				⇓*e*Sg		**Sg**	**03 18 22.2**	**+0.6**
KBA	**Koelnbreinsper**	**0.61**	**216**	*e*Pg		**Pg**	**03 18 13.9**	**-0.4**
KBA				*e*Sg		**Sg**	**03 18 22.3**	**+0.1**
KBA	**Koelnbreinsper**	**0.61**	**216**	⇓*e*Pg		**Pg**	**03 18 13.9**	**-0.5**
	9.2nm,0.2s,SNR=6.8							
KBA				⇓*i*Sg		**Sg**	**03 18 22.0**	**-0.2**
	11nm,0.1s							
RJOB	**Jochberg**	**0.75**	**283**	⇑*i*Pg		**Pg**	**03 18 17.6**	**+0.6**
RJOB				⇑*i*Sg		**Sg**	**03 18 28.1**	**+1.4**
MYKA	**Terra Mystica**	**0.95**	**190**	⇑*i*Pg		**Pg**	**03 18 20.7**	**-0.3**
	1.1nm,0.1s							
MYKA				⇓*i*Sg		**Sg**	**03 18 32.8**	**-0.5**
	20nm,0.3s							
OBKA	**Obir**	**1.16**	**156**	⇑*e*Pg		**Pg**	**03 18 25.1**	**+0.2**
	14nm,0.3s,SNR=15							
OBKA				⇑*e*Sg		**Sg**	**03 18 39.9**	**0.0**
	14nm,0.2s							
OBKA	**Obir**	**1.16**	**156**	*e*Pg		**Pg**	**03 18 25.0**	**+0.1**
OBKA				Sg		**Sg**	**03 18 39.9**	**0.0**
	14nm,0.2s							
ARSA	**Arzberg**	**1.17**	**105**	*e*Pg		**Pg**	**03 18 24.5**	**-0.6**
ARSA				*e*Sg		**Sn**	**03 18 43.2**	**+0.9**
ARSA	**Arzberg**	**1.17**	**105**	⇓*e*Pg		**Pn**	**03 18 25.9**	**0.0**
	5.1nm,0.3s							
ARSA				⇑*e*Sg		**Sn**	**03 18 42.1**	**-0.1**
	9.6nm,0.2s							
ARSA	**Arzberg**	**1.17**	**105**	Pg		**Pn**	**03 18 25.9**	**0.0**
	5.1nm,0.3s							
ARSA				*e*Sg		**Sn**	**03 18 41.7**	**-0.5**
SOKA	**Soboth**	**1.19**	**138**	⇓*e*Pg		**Pg**	**03 18 25.6**	**0.0**
	6.4nm,0.2s							
SOKA				⇑*e*Sg		**Sg**	**03 18 40.6**	**-0.4**
	7.7nm,0.2s							
ABTA	**Abfaltersbach**	**1.24**	**229**	⇑*i*Pg		**Pn**	**03 18 26.1**	**-0.8**
	0.9nm,0.1s							
ABTA				⇑*e*Sg		**Sn**	**03 18 42.4**	**-1.6**
	3.6nm,0.2s							
GEC2	**GERESS Array S**	**1.28**	**355**	*e*Pg		**Pg**	**03 18 28.0**	**+0.7**
GEC2				*e*Sg		**Sg**	**03 18 45.6**	**+1.6**
GEC2	**GERESS Array S**	**1.28**	**355**	Pg		**Pg**	**03 18 28.0**	**+0.7**
GEC2				*e*Sg		**Sg**	**03 18 44.8**	**+0.9**
CSNA	**Conrad Observa**	**1.39**	**74**	⇑*i*Pg		**Pg**	**03 18 29.8**	**+0.4**
	1.4nm,0.1s							
CSNA				⇓*i*Sg		**Sg**	**03 18 49.3**	**+2.0**
	29nm,0.1s							
CONA	**Conrad Observa**	**1.39**	**74**	⇑*i*Pg		**Pg**	**03 18 29.8**	**+0.4**
	1.1nm,0.1s,SNR=21							
CONA				⇑*i*Sg		**Sg**	**03 18 48.9**	**+1.5**
	12nm,0.1s							
VOY	**Vojsko**	**1.54**	**179**	*e*Pn		**Pn**	**03 18 32.8**	**+0.6**
VOY				*e*Sn		**Sg**	**03 18 53.0**	**+0.9**
WTTA	**Wattenberg**	**1.55**	**259**	*e*Pn		**Pg**	**03 18 32.6**	**+0.3**
WTTA				*e*Sg		**Sg**	**03 18 53.8**	**+1.4**
WTTA	**Wattenberg**	**1.55**	**259**	⇑*e*Pg		**Pg**	**03 18 32.7**	**+0.3**
	3.7nm,0.1s,SNR=14							
WTTA				⇑*i*Sg		**Sg**	**03 18 53.8**	**+1.4**
	8.9nm,0.3s							
SCE	**Schlegeis**	**1.56**	**251**	⇑*i*Pn		**Pn**	**03 18 32.0**	**+0.7**
WATA	**Walderalm**	**1.57**	**262**	⇑*i*Pg		**Pg**	**03 18 32.8**	**0.0**
	1.6nm,0.1s							
WATA				⇑*i*Sg		**Sg**	**03 18 54.9**	**+1.7**
	5.5nm,0.2s							

WATA	**Walderalm**	**1.57**	**262**	Pg		**Pg**	**03 18 32.8**	**-0.1**
	1.6nm,0.1s							
WATA				*e*Sg		**Sg**	**03 18 53.4**	**+0.1**
KHC	**Kasperske Hory**	**1.57**	**353**	*e*PG		**Pg**	**03 18 32.2**	**-0.7**
KHC				*e*SG		**Sg**	**03 18 53.5**	**+0.2**
	comp=Z,36nm,0.2s							
WET	**Wettzell**	**1.71**	**338**	*e*Pn		**Pn**	**03 18 34.7**	**+1.3**
WET				*e*Sg		**Sg**	**03 18 58.0**	**+0.4**
WET	**Wettzell**	**1.71**	**338**	*e*Pn		**Pn**	**03 18 34.6**	**+1.3**
WET				Sg		**Sg**	**03 18 58.0**	**+0.4**
SQTA	**Sankt Quirin**	**1.84**	**260**	⇓*e*Pg		**Pg**	**03 18 37.4**	**-0.6**
SQTA				⇑*i*Sg		**Sg**	**03 19 03.0**	**+1.1**
MOTA	**Moosalm**	**1.89**	**264**	⇑*i*Pg		**Pg**	**03 18 38.2**	**-0.8**
	comp=Z,1.0nm,0.1s							
MOTA				⇑*e*Sg		**Sg**	**03 19 03.5**	**+0.1**
	comp=Z,3.8nm,0.1s,SNR=6.3							
TREC	**Trest**	**2.04**	**31**	*e*Pn		**Pn**	**03 18 38.1**	**+0.3**
TREC				Sg		**Sg**	**03 19 08.1**	**0.0**
	comp=Z,11nm,0.2s							
TREC	**Trest**	**2.04**	**31**	*e*PN		**Pn**	**03 18 38.2**	**+0.4**
TREC				*e*SG		**Sg**	**03 19 08.1**	**0.0**
	comp=Z,11nm,0.2s							
RETA	**Reutte**	**2.11**	**269**	⇓*e*Pg		**Pg**	**03 18 42.1**	**-1.0**
	comp=Z,1.5nm,0.2s							
RETA				⇑*i*Sg		**Sg**	**03 19 10.2**	**-0.2**
	comp=Z,12nm,0.2s							
FETA	**Feichten**	**2.21**	**257**	⇑*e*Pg		**Pg**	**03 18 43.8**	**-1.2**
FETA				⇑*i*Sg		**Sg**	**03 19 12.4**	**-1.2**
	comp=Z,0.9nm,0.2s							
KRUC	**Moravsky**	**2.25**	**48**	*e*Pn		**Pn**	**03 18 40.7**	**-0.1**
KRUC				*e*Sg		**Sg**	**03 19 14.4**	**-0.6**
	comp=Z,3.7nm,0.1s							
ZST	**Bratislava**	**2.26**	**73**	*e*SG		**Sg**	**03 19 14.3**	**-1.1**
MODS	**Modra-Piesok**	**2.43**	**69**	*e*SG		**Sg**	**03 19 18.7**	**-1.9**
PRU	**Pruhonice**	**2.46**	**10**	*e*PN		**Pn**	**03 18 44.0**	**+0.3**
PRU				*e*PG		**Pg**	**03 18 47.7**	**-2.2**
PRU				*e*SG		**Sg**	**03 19 21.5**	**-0.3**
	comp=Z,14nm,0.4s							
VRAC	**Vranov**	**2.51**	**45**	*e*Pn		**Pn**	**03 18 45.1**	**+0.7**
DAVA	**Damuels**	**2.72**	**266**	⇑*e*Pg		**Pg**	**03 18 53.1**	**-1.8**
	comp=Z,1.3nm,0.2s							
DAVA				⇑*e*Sg		**Sg**	**03 19 30.5**	**+0.4**
	comp=Z,5.7nm,0.2s							
TANN	**Tannenbergstha**	**3.00**	**342**	*e*Sg		**Sg**	**03 19 38.2**	**-0.7**
PVCC	**Panska Ves**	**3.00**	**9**	*e*SG		**Sg**	**03 19 38.1**	**-0.9**
	comp=Z,18nm,0.2s							
DPC	**Dobruska-Polom**	**3.22**	**29**	*e*PN		**Pn**	**03 18 53.8**	**-0.3**
DPC				*e*SG		**Sg**	**03 19 45.5**	**-0.6**
MOX	**Moxa**	**3.42**	**335**	*e*PN		**Pn**	**03 18 56.6**	**-0.2**
MOX				*e*SG		**Sg**	**03 19 51.7**	**-0.7**
CLL	**Collm**	**3.79**	**352**	*e*Pn		**Pn**	**03 19 03.0**	**+1.2**
CLL				*e*Sg		**Sg**	**03 20 03.0**	**-1.2**
	comp=Z,14nm,0.7s							

*ISCJB **25** 04:07:15.4±1.1, 192S±02×1776W±0.1, h559km±15km, mb3.9/13, Error ellipse: s-maj=28.9km s-min=10.8km az=157.0*
*IDC **25** 04:07:16.9±1.6, 1877S×17779W, h559km±19km, mb3.4/8, mb1 3.7/9, mb1mx3.4/19, mbtmp3.4/9, Error ellipse: s-maj=45.9km s-min=11.3km az=153.0*
*NEIC **25** 04:07:16.8±1.2, 1902S×17762W, h562km±13km, mb4.1/5, Error ellipse: s-maj=31.5km s-min=9.9km az=158.0*

ISC 25 04:07:15.8±1.1, 192S±02×1775W±01, h551km±15km, n25, σ0⁰90/24, mb3.9/13, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.61**	**47**	P		**P**	**04 09 10.4**	**+0.6**
	6.4nm,0.3s,baz=7.8,slow=3.2,SNR=6.6							
AFI				S		**S**	**04 10 42.0**	**-1.1**
	1.3nm,0.3s,baz=201,slow=18,SNR=3.3							
ARMA	**Armidale**	**30.05**	**242**	*e*P		**P**	**04 12 41.6**	**+1.0**
CTA	**Charters Tower**	**34.08**	**262**	*e*P		**P**	**04 13 15.4**	**+0.4**
	3.7nm,1.1s,mb3.8							
CTAO	**Charters Tower**	**34.08**	**262**	*e*P		**P**	**04 13 15.2**	**+0.3**
	2.4nm,0.4s,mb4.1							
PMG	**Port Moresby**	**35.49**	**281**	*e*P

KULA	Kula-Manisa	2.66	316	*e*PN		Pn	04 17 00.1	-0.6
MLSB	Milas	2.69	285	*e*PN		Pn	04 17 01.0	+0.1
GDZ	Gediz	2.75	334	⇓*i*P		Pn	04 17 01.9	+0.1
EREN	Erenkoy	2.77	112	*e*PN		Pn	04 17 03.1	+1.0
EREN				*e*SN		Sn	04 17 35.3	+0.6
DAT	Datca	2.77	273	*e*PN		Pn	04 17 03.3	+1.2
DAT				*e*SN		Sn	04 17 35.4	+0.6
MERS	Mersin	2.82	84	*e*PN		Pn	04 17 04.2	+1.5
ESKT	Eskisehir	2.89	357	*e*PN		Pn	04 17 02.9	-0.8
ESKT	Eskisehir	2.89	357	⇓*i*P		Pn	04 17 03.2	-0.5
SEYT	Eskypehyr	2.89	357	*i* P		Pn	04 17 03.2	-0.5
BDRM	Kayabasi	2.91	280	⇑*i*P		Pn	04 17 04.6	+0.6
DEMI	Demirci	3.03	324	⇑*i*P		Pn	04 17 05.7	+0.1
GULE	Gulek	3.07	77	*i* P		Px	04 16 45.8	
GCAM	G?zelcaml?	3.21	291	*i* P		Pn	04 17 08.2	+0.1
NIG	Nigde	3.21	61	*e*PN		Pn	04 17 08.3	+0.2
BORA	Eskisehir	3.28	352	*i* P		Pn	04 17 08.7	-0.3
KARA	Karaisali	3.29	78	*e*PN		Pn	04 17 09.9	+0.9
KARP	Karpathos	3.31	252	*e*P		Pn	04 17 11.0	+1.6
AKHS	Akhisar	3.40	312	*i* P		Pn	04 17 10.2	-0.4
AKS	Akhisar	3.40	312	*e*PN		Pn	04 17 10.1	-0.4
KAMT	Kaman	3.46	37	*e*PN		Pn	04 17 11.3	-0.1
KDAG	Bornova	3.48	302	⇑*i*P		Pn	04 17 11.6	0.0
SMG	Samos	3.52	289	*e*P		Pn	04 17 12.0	-0.1
LOD	Lodumlu	3.53	22	*e*PN		Pn	04 17 11.5	-0.8
CAVI	Cavuskoy	3.69	346	*e*PN		Pn	04 17 15.1	+0.6
AVNT	Avonos	3.72	54	*i* P		Pn	04 17 15.0	+0.1
CEYT	Ceyhan	3.81	83	*e*PN		Pn	04 17 16.1	+0.1
ULDT	Uludag	3.81	338	⇓*i*P		Pn	04 17 16.2	+0.1
GULT	Gulveren	3.82	354	*e*PN		Pn	04 17 15.7	-0.6
BALB	Balikesir	3.90	321	*e*PN		Pn	04 17 17.7	+0.4
URLA	Izmir	3.93	297	*i* P		Pn	04 17 17.6	-0.1
KOZT	Kozan	3.93	76	*e*PN		Pn	04 17 18.5	+0.7
CDAG	Cicekdag	3.99	40	⇓*i*P		Pn	04 17 19.9	+1.4
HTY	Hatay	4.15	95	*e*PN		Pn	04 17 20.9	+0.1
HTY				*e*SN		Sn	04 18 07.1	-1.1
ZKR	Zakros	4.19	250	P		Pn	04 17 22.5	+1.3
ZKR				S		Sn	04 18 08.7	-0.3
COBT	Iskenderun	4.21	90	*i* P		Pn	04 17 22.3	+0.8
ELDT	Eldivan	4.29	25	*i* P		Pn	04 17 22.1	-0.6
ELDT	Eldivan	4.29	25	*i* P		Pn	04 17 22.0	-0.6
CHOS	Chios island	4.33	295	P		Pn	04 17 23.7	+0.6
CHOS				S		Sn	04 18 10.6	-1.8
ANDN	Andirin	4.36	76	*i* P		Pn	04 17 23.4	-0.1
BNN	Bunyan	4.42	58	*e*PN		Pn	04 17 24.7	+0.4
APE	Apeiranthos	4.43	277	P		Pn	04 17 25.0	+0.5
APE				S		Sn	04 18 13.4	-1.5
APE	Apeiranthos	4.43	277	*e*P		Pn	04 17 25.0	+0.5
BNT	Bandirma	4.45	328	*e*PN		Pn	04 17 25.3	+0.5
THR1	Thera Island	4.49	268	P		Pn	04 17 26.0	+0.6
YOZ	Yozgat	4.53	47	*e*PN		Pn	04 17 25.8	0.0
THR3	Thira Island,	4.54	269	P		Pn	04 17 26.4	+0.4
THR6	Thira Island,	4.54	268	P		Pn	04 17 26.7	+0.6
PRK	Paraskevi	4.58	306	P		Pn	04 17 26.8	+0.3
THR5	Thira Island,	4.58	269	P		Pn	04 17 27.2	+0.7
NPS	Neapolis	4.60	254	*e*P		Pn	04 17 27.2	+0.4
HWQ	Hawqa	4.65	119	*e*Pn		Pn	04 17 27.6	+0.1
BHL	Bhannes	4.66	124	*e*Pn		Pn	04 17 26.9	-0.7
LAST	Lasithi	4.74	254	P		Pn	04 17 29.6	+0.9
LAST				S		Sn	04 18 21.1	-1.3
KMRS	Kahramanmaras	4.78	78	*e*PN		Pn	04 17 29.1	-0.1
SAFT	Safranbolu	4.79	15	*e*PN		Pn	04 17 28.3	-1.0
GAZ	Gaziantep	4.99	82	*e*PN		Pn	04 17 31.9	-0.1
TOS	Tosya	4.99	27	*e*PN		Pn	04 17 31.4	-0.7
RCY	Rachaya	5.03	127	*e*Pn		Pn	04 17 33.1	+0.5
BALT	Daday	5.23	20	*i* P		Pn	04 17 34.9	-0.5
HRSH	Kfar Ka'horesh	5.25	137	⇓P		Pn	04 17 46.5	+11
GZT	Gaziantep	5.28	80	⇓*i*P		Pn	04 17 36.3	+0.2
SIVA	Sivas	5.30	254	P		Pn	04 17 37.8	+1.4
SIVA				S		Sn	04 18 34.6	-1.5
LIA	Limnos Island	5.64	307	P		Pn	04 17 41.8	+0.8
VAM	Vamos	5.67	260	*e*P		Pn	04 17 43.0	+1.7
AKCD	Akcadag	5.73	71	*i* P		Pn	04 17 43.2	+0.9
RSH		6.08	158	P		Pn	04 17 46.5	-0.5
AMAG	Maghara	6.24	162	⇓P		Pn	04 17 48.6	-0.6
AANS		6.33	177	⇓P		Pn	04 17 49.0	-1.4
HMAT	Matruh	6.41	212	P		Pn	04 17 51.6	0.0
HMAT				S		Sn	04 18 55.9	-7.4
KOT	Kottamia	6.71	174	⇑P		Pn	04 17 54.9	-0.8
KOT				S		Sn	04 19 02.9	-7.7
HHAG	Hagoal	6.71	172	⇓P		Pn	04 17 55.2	-0.5
SQR		6.73	179	P		Pn	04 17 54.9	-1.0
HMYD	Mayadein	6.81	182	⇓P		Pn	04 17 56.2	-0.9
AYT	Al 'Ayyat	6.90	179	⇓P		Pn	04 17 57.9	-0.3
SUZ		6.93	267	⇓*e*P		Pn	04 17 58.1	-0.5
HSAF	As Saff	7.00	176	⇓P		Pn	04 17 58.9	-0.7
SLUM		7.04	225	⇓P		Pn	04 17 59.7	-0.4
GLL	Jalalah	7.05	175	⇓P		Pn	04 17 59.4	-0.8
HNKL	Nakhl	7.12	159	⇑P		Pn	04 18 00.5	-0.7
HNKL				S		Sn	04 19 13.2	-7.4
HNKL	Nakhl	7.12	159	P		Pn	04 18 00.4	-0.8
ZNM		7.39	167	⇓P		Pn	04 18 04.4	-0.5
ZAF		7.43	170	⇓P		Pn	04 18 04.8	-0.7
HKAT	Jabal Katrina	8.46	162	⇓P		Pn	04 18 19.3	-0.1
TR2		8.53	164	⇓P		Pn	04 18 19.4	-0.9
SWA2		8.72	214	⇑P		Pn	04 18 22.2	-0.8
TR1		8.94	163	⇓P		Pn	04 18 26.0	0.0
SHRM		9.10	162	⇓P		Pn	04 18 28.3	+0.2
HFRF	Wahat Farafira	9.73	194	⇓P		Pn	04 18 36.5	-0.2
AKRG	Al Kharijah	11.10	182	⇓P		Pn	04 18 55.6	+0.3

*ISCJB **25** 04:28:03.3±1.1, 3365N±004×3505E±008, h10km, Error ellipse: s-maj=10.2km s-min=4.2km az=27.2*
*CSEM **25** 04:28:03.7, 3356N×3500E, h3km, ML2.9, After GRAL*
*GRAL **25** 04:28:03.7±0.3, 3356N×3500E, h4km±1.4km, MD2.9*
*GII **25** 04:28:03.0±0.7, 3361N×3516E, h1km±2km, ML2.5/5*

ISC 25 04:28:02.9±1.4**, 3367N**±004×**3499E**±008**, h2**km±7km**, n18,** σ0§**84**/26**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATL	Matirih	0.34	123	*e*P	Pg	04 28 08.8	-0.5
BHL	Bhannes	0.60	67	*e*P	Pg	04 28 15.2	+0.8
BHL				*e*S	Sg	04 28 23.7	+1.6
HNTI	Hanita	0.61	165	Pg	Pg	04 28 14.8	+0.3
HNTI				Sg	Sg	04 28 24.3	+1.8
RCY	Rachaya	0.72	105	*e*P	Pg	04 28 16.2	-0.4
RCY				*e*S	Sg	04 28 25.6	-0.3
KSDI	Kefar Szold	0.74	130	Pg	Pg	04 28 16.1	-0.9
MMA0	Mount Meron ar	0.74	152	Pg	Pg	04 28 16.4	-0.7
HRI	Mount Hermon	0.74	123	Pg	Pg	04 28 16.4	-0.7
MMA3	Mount Meron ar	0.74	152	Pg	Pg	04 28 16.5	-0.6
MMA3				Sg	Sg	04 28 28.1	+1.3
MMA2	Mount Meron ar	0.74	152	Pg	Pg	04 28 16.5	-0.7
MMB1	Mount Meron ar	0.74	152	Pg	Pg	04 28 16.5	-0.7
MMC4	Mount Meron ar	0.76	152	Pg	Pg	04 28 16.6	-0.7
KSHT	Keshet	0.97	135	Pg	Pg	04 28 20.9	-0.6
HWQ	Hawqa	1.00	53	*e*P	Pg	04 28 22.7	+0.7
OFRI	'Ofer	1.05	180	Pg	Pg	04 28 23.3	+0.3
OFRI				Sg	Sg	04 28 38.4	+1.9
MMLI	Mount Malkishu	1.28	163	Pg	Pg	04 28 26.5	-1.0
MMLI				Sg	Sg	04 28 43.8	-0.3
SLTI	Sal'it	1.43	178	Pn	Pn	04 28 29.9	+0.1
SLTI				Sn	Sn	04 28 49.9	+0.8
HMDT	Nahal Hemdat	1.49	162	Pn	Pn	04 28 30.0	-0.5
HMDT				Sn	Sn	04 28 50.1	-0.4
DSI	Dead Sea	2.12	171	Pn	Pn	04 28 39.2	-0.1

*NEIC **25** 04:38:15.3±0.5, 4996N×15767E, h10km, mb4.3/1, Error ellipse: s-maj=14.2km s-min=10.6km az=127.0*
*ISCJB **25** 04:38:17.8±1.3, 4995N±008×1578E±01, h40km±10km, mb3.8/13, Error ellipse: s-maj=16.5km s-min=9.7km az=41.5*
*KRSC **25** 04:38:17.1±1.7, 5001N×15781E, h41km±40km, ML4.3*
*IDC **25** 04:38:18.8±0.8, 4999N×15770E, h34km±5km, mb3.6/13, mb1 3.9/14, mb1mx3.7/23, mbtmp3.6/14, ML3.6/1, Error ellipse: s-maj=20.6km s-min=17.4km az=121.0*
*MOS **25** 04:38:18.9±1.1, 5005N×15756E, h50km, mb4.1/9, Error ellipse: s-maj=19.5km s-min=8.5km az=87.5*

ISC 25 04:38:19.3±2.5**, 4997N**±006×**1577E**±01**, h35**km±17km**, h36**km±1.0km**:pP-P, n49,** σ1§**02**/54**, mb3.8**/13**, 4C-3D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.23	306	⇑*i*PN	Pn	04 38 39.2	-0.8
SKR				*e*S	Sn	04 38 50.0	-5.3
SKR				pmax	pmax		
	comp=N,450nm,0.5s						
SKR				pmax	pmax		
	comp=E,310nm,0.5s						
SKR				pmax	pmax		
	comp=Z,770nm,0.5s						
SKR				smax			
	comp=E,6µm,0.5s						
SKR				smax			
	comp=N,8µm,2.0s						
SKR				smax			
	comp=E,9µm,2.0s						
SKR				smax			
	comp=Z,2µm,2.0s						
MIPR	Malaya Ipel'ka	2.38	346	P	Pn	04 38 55.1	-0.7
RUS	Russkaya	2.52	12	P	Pn	04 38 57.5	-0.2
RUS				*i* S	Sn	04 39 26.8	-0.4
PET	Petropavlovsk	3.12	11	*e*Pn	Pn	04 39 06.2	+0.2
PET				*e*Sn	Sn	04 39 43.9	+1.9
PET	Petropavlovsk	3.12	11	*e*PN	Pn	04 39 08.5	+2.6
PET				*e*S	Sn	04 39 45.8	+3.9
PET				smax			
	comp=E,412nm,0.6s						
PET				smax			
	comp=N,297nm,0.6s						
PEA0B	Petropavlovsk-	3.15	0	*e*Pn	Pn	04 39 10.0	+3.7
PETK	Petropavlovsk-	3.15	0	Pn	Pn	04 39 08.2	+1.9
	comp=N,5.3nm,0.3s,baz=153,slow=14,SNR=44						
PETK				Sn	Sn	04 39 48.8	+6.3
	comp=N,4.2nm,0.3s,baz=183,slow=19,SNR=5.6						
NLC	Nalytchevo	3.37	17	P	Pn	04 39 08.4	-1.0
SPN	Mys Shipunski	3.46	24	P	Pn	04 39 09.8	-0.8
SPN				*i* S	Sn	04 39 48.2	-2.1
KII	Karymskiy	4.22	14	P	Pn	04 39 22.7	+1.7
ASAJ	Asahikawa	11.83	246	Pn	Pn	04 41 13.1	+7.8
	comp=N,0.6nm,0.3s,baz=87,slow=17,SNR=5.2						
ASAJ	Asahikawa	11.83	246	PN	Pn	04 41 13.1	+7.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	Erimo	12.84	237	*i* PN	Pn	04 41 29.6	+10
MJAR	Matsushiro Arr	19.44	234	P	Pn	04 42 43.3	-0.7
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=5.4						
YAK	Yakutsk	19.58	319	*i* P	Pn	04 42 41.9	-3.5
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
KSRS	Korea Array	24.70	251	P	P	04 43 38.0	+1.1
	comp=Z,0.7nm,0.4s,mb3.5,baz=58,slow=9.2,SNR=4.3						
KSRS	Korea Array	24.70	251	P	P	04 43 38.0	+1.1
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
TIXI	Tiksi	25.38	339	*i* P	P	04 43 43.2	+0.4
KURK	Kurchatov	48.14	303	P	P	04 46 54.8	-0.6
	comp=Z,1.4nm,0.9s,mb4.0,baz=63,slow=7.7,SNR=6.8						
KURK	Kurchatov	48.14	303	*e*P	P	04 46 54.7	-0.8
	comp=Z,1.5nm,0.5s,mb4.3						
KURK	Kurchatov	48.14	303	*e*P	P	04 46 54.7	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MK31	Makanchi Array	48.19	297	*e*P	P	04 46 55.1	-0.8
MKAR	Makanchi Array	48.19	297	P	P	04 46 55.1	-0.8
	comp=Z,1.5nm,0.9s,mb4.0,baz=52,slow=9.3,SNR=4.0						
MKAR	Makanchi Array	48.19	297	P	P	04 46 55.1	-0.8
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	55.79	342	P	P	04 47 51.7	-0.4
	comp=Z,4.5nm,1.0s,mb4.5,baz=37,slow=9.1,SNR=3.8						
ARCES	ARCESS Array B	55.79	342	P	P	04 47 51.7	-0.4
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	Chiang Mai Arr	56.05	258	pP	pP	04 48 05.6	+0.3
	comp=Z,1.5nm,0.4s,baz=31,slow=7.2,SNR=1.5						
NVAR	Mina Array Bea	58.30	67	P	P	04 48 11.2	+0.9
	comp=Z,0.3nm,0.7s,mb3.5,baz=294,slow=6.8,SNR=2.5						
PDAR	Pinedale Array	60.42	58	P	P	04 48 23.7	-1.3
	comp=Z,0.7nm,0.8s,mb3.8,baz=311,slow=3.2,SNR=5.7						
NOA	NORSAR Array B	66.11	343	P	P	04 49 01.7	-0.5
	comp=Z,1.2nm,0.9s,mb3.9,baz=31,slow=8.3,SNR=2.9						
NOA	NORSAR Array B	66.11	343	P	P	04 49 01.7	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	70.50	328	P	P	04 49 29.3	-0.6
	comp=Z,0.3nm,0.3s,mb3.8,baz=30,slow=6.5,SNR=2.9						
WRA	Warramunga Arr	72.61	203	P	P	04 49 42.3	-0.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=20,slow=6.3,SNR=5.6						
WRA				pP	pP	04 49 52.5	-1.2
	comp=Z,0.7nm,0.6s,baz=17,slow=5.9,SNR=4.1						
WRA	Warramunga Arr	72.61	203	P	P	04 49 42.3	-0.5
WRA				*PP	pP	04 49 52.5	-1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	73.31	64	P	P	04 49 47.1	-0.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=302,slow=5.2,SNR=5.4						
TXAR	Lajitas Array	73.31	64	P	P	04 49 47.1	0.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BUR08	Bucovina Ar. S	74.48	329	*e*P	P	04 49 53.6	0.0
BURAR	Bucovina Array	74.50	329	⇑*i*P	P	04 49 54.4	+0.6
TRPA	Tarpa	74.92	331	⇓*i*P	P	04 49 57.0	+0.8
MLR	Muntele Rosu	76.09	327	⇑*i*P	P	04 50 04.8	+1.8
ASAR	Alice Springs	76.28	202	P	P	04 50 04.2	0.0
	comp=Z,0.3nm,0.5s,mb3.4,baz=17,slow=4.6,SNR=4.7						
ASAR				pP	pP	04 50 15.2	+0.2
	comp=Z,0.3nm,0.5s,baz=14,slow=5.0,SNR=2.6						
ASAR	Alice Springs	76.28	202	*e*P	P	04 50 04.4	+0.3
VOIR		76.45	328	⇓*i*P	P	04 50 06.4	+1.4
GERES	GERESS Array B	76.81	336	P	P	04 50 06.6	-0.4
	comp=Z,0.8nm,0.7s,mb3.8,baz=27,slow=4.5,SNR=5.9						
GERES				pP	pP	04 50 17.8	-0.1
	comp=Z,0.6nm,0.6s,baz=35,slow=5.6,SNR=3.9						
GERES	GERESS Array B	76.81	336	P	P	04 50 06.6	-0.4
GERES				*PP	pP	04 50 17.8	-0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GZR	Gura Zlata	77.26	329	⇓*i*P	P	04 50 09.7	+0.1
BZS	Buzias	77.44	330	⇑*i*P	P	04 50 00.2	-10
BRTR	Keskin Array B	78.04	319	P	P	04 50 14.4	+0.4
	comp=Z,1.1nm,0.9s,mb3.8,baz=80,slow=4.2,SNR=7.2						
BRTR				pP	pP	04 50 24.8	-0.2
	comp=Z,0.6nm,0.6s,baz=38,slow=4.4,SNR=3.6						
BRTR	Keskin Array B	78.04	319	P	P	04 50 14.4	+0.4
BRTR				*PP	pP	04 50 24.8	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

MAN 25 05:24:14, 901N×12602E, h39km, mb3.8, ML2.5, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.39	264	*e*P	Pn	05 24 24.6	+1.3
BUTP				*e*S	Sn	05 24 33.7	+3.9
SCPH	Surigao	0.93	326	*e*P	Pn	05 24 32.1	+1.6
BUKP	Musuan	1.47	220	*e*P	Pn	05 24 39.6	+1.6
BUKP				*e*S	Sn	05 25 03.1	+7.1

*IDC **25** 05:30:10.1±0.8, 253N×12668E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/18, mbtmp4.0/8, Error ellipse: s-maj=89.7km s-min=15.5km az=69.0*
*ISCJB **25** 05:30:13.0±0.7, 26N±02×1267E±04, h33km, mb4.1/10, Error ellipse: s-maj=61.8km s-min=11.2km az=162.3*
*NEIC **25** 05:30:12.0±1.2, 231N×12627E, h10km, mb4.5/1, Error ellipse: s-maj=164.0km s-min=9.1km az=66.0*

ISC 25 05:30:15.1±0.7**, 26N**±01×**1269E**±04**, h35**km**, n17,** σ0§**51**/15**, mb4.1**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	16.16	160	*e*P	Px	05 33 50.8	
	3.7nm,0.5s						
WRAB	Tennant Creek	23.54	162	*e*P	P	05 35 22.1	-0.3
	6.2nm,0.4s,mb4.4						
WRA	Warramunga Arr	23.54	162	P	P	05 35 21.9	-0.6
	5.4nm,0.5s,mb4.3,baz=343,slow=11,SNR=79						
WB2	Warramunga Arr	23.55	162	*e*P	P	05 35 22.1	-0.4
WB2	Warramunga Arr	23.55	162	*e*P	P	05 35 22.2	-0.3
ASAR	Alice Springs	26.96	166	P	P	05 35 54.1	+0.6
	0.9nm,0.4s,mb3.6,baz=350,slow=7.6,SNR=18						
ASAR				PcP	PcP	05 39 15.9	+0.9
	0.5nm,0.6s,baz=351,slow=2.6,SNR=6.0						
ASAR	Alice Springs	26.96	166	P	P	05 35 54.1	+0.5
ASAR				PcP	PcP	05 39 15.9	+0.9
FORT	Forrest	33.19	178	*e*P	P	05 36 49.0	+0.4
	10nm,0.7s,mb4.9						
KSRS	Korea Array	34.72	1	P	P	05 37 01.8	0.0
	0.7nm,0.4s,mb3.9,baz=173,slow=10,SNR=3.0						
STKA	Stephens Creek	37.00	159	*e*P	P	05 37 21.9	+0.5
	1.8nm,0.6s,mb4.1						
STKA	Stephens Creek	37.00	159	P	P	05 37 21.9	+0.5
	2.9nm,0.7s,mb4.2,baz=335,slow=7.2,SNR=10.0						
STKA	Stephens Creek	37.00	159	P	P	05 37 21.9	+0.5
MKAR	Makanchi Array	58.59	326	P	P	05 40 08.1	-0.4
	1.3nm,0.6s,mb4.2,baz=123,slow=8.6,SNR=14						
ZALV	Zalesovo Beam	61.69	333	P	P	05 40 30.5	+1.0
	0.5nm,0.4s,mb4.0,baz=138,slow=6.7,SNR=2.7						
KURK	Kurchatov	62.80	328	P	P	05 40 36.4	-0.6
	1.8nm,0.5s,mb4.4,baz=127,slow=6.2,SNR=12						
VNDA	Vanda	82.27	173	P	P	05 42 32.4	-0.1
	0.9nm,1.0s,mb3.7,baz=310,slow=7.3,SNR=4.7						
TORD	Torodi Ar. Bea	123.44	287	PKP	PKPdf	05 49 10.0	+0.3
	0.4nm,0.8s,baz=80,slow=1.8,SNR=2.6						

*ATH **25** 05:57:45.7, 37.16N×2880E, h5km, MD3.9/6*
*ISCJB **25** 05:57:46.0±0.6, 37.14N±002×2888E±002, h5km±4km, Error ellipse: s-maj=3.6km s-min=2.7km az=148.2*
*ISK **25** 05:57:46.2, 3720N×2890E, h4km, MD3.6, ML3.5*
*CSEM **25** 05:57:46.2±0.1, 3720N×2889E, h5km, ML3.2, Error ellipse: s-maj=1.4km s-min=1.1km az=157.0*
*NEIC **25** 05:57:47.0, 3722N×2886E, h8km, MD3.9(ATH), ML3.5(ISK), After ISK.*
*DDA **25** 05:57:47.9, 37.19N×2900E, h23km, Md3.4, Ml3.2*
*THE **25** 05:57:50.0, 37.19N×2885E, h12km±6km, Error ellipse: s-maj=6.7km s-min=1.5km az=326.0*
*HLW **25** 05:57:55.6, 3649N×2912E, h23km, Mb3.9*

ISC 25 05:57:46.4±0.5**, 3710N**±002×**2892E**±002**, h4**km±4km**, n93,** σ1§**09**/121**, 13C-15D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	Turunc	0.34	228	⇑*i*P	Pg	05 57 58.0	+5.0
TURN				*i* S	Sg	05 58 07.4	+10
YER	Yerkesik	0.51	274	PG	Pg	05 57 56.3	+0.2
GOLH	Golhisar	0.53	75	⇑*i*P	Pg	05 57 56.7	+0.1
GOLH				*i* S	Sg	05 58 05.6	+2.1
DENT	Denizli	0.66	8	PG	Pg	05 57 57.9	-1.1
DENT				*e*SG	Sg	05 58 05.6	-1.9
DENT	Denizli	0.66	8	Pg	Pg	05 57 59.0	0.0
MLSB	Milas	0.93	282	*e*PG	Pg	05 58 04.2	-0.1
MLSB				*e*SG	Sg	05 58 17.1	+0.8
MLSB	Milas	0.93	282	Pg	Pg	05 58 04.4	+0.1
AKAS	Kas	1.03	147	⇑*i*P	Pg	05 58 06.6	+0.6
AKAS				*i* S	Sg	05 58 25.1	+5.7
ARG	Arkhangelos	1.09	216	*e*PB	Pb	05 58 06.3	-1.5
KSL	Kastellorizon	1.09	150	*e*PB	Pb	05 58 08.0	+0.2
BDRM	Kayabasi	1.18	269	⇑*i*P	Pg	05 58 08.1	-0.9
BDRM				*i* S	Sg	05 58 25.5	+1.1
KHL	Karahalli	1.31	21	*e*PN	Pn	05 58 10.4	-1.0
KHL				*e*SN	Sn	05 58 28.1	-1.2
KHAL	Karahalli	1.34	20	⇑*i*P	Pn	05 58 10.5	-1.3
KHAL				*i* S	Sg	05 58 30.2	+0.6
BCK	Bucak	1.38	74	*e*PN	Pn	05 58 12.6	+0.2
KULA	Kula-Manisa	1.42	352	*e*PN	Pn	05 58 12.2	-0.8
KULA				*e*SN	Sn	05 58 31.4	-0.8
ISP	Isparta	1.47	59	P	Pn	05 58 13.9	+0.4
ISP				S	Sb	05 58 34.7	+1.6
ISP	Isparta	1.47	59	P	Pn	05 58 14.6	+1.1
GCAM	G?zelcaml?	1.47	294	*i* P	Pn	05 58 12.6	-1.0
GCAM				*i* S	Sb	05 58 34.3	+1.1
SMG	Samos	1.77	291	*e*PB	Pb	05 58 16.8	-2.5
SHUT	Suhut-Afyon	1.94	41	*e*PN	Pn	05 58 20.4	+0.3
SHUT				*e*SN	Sn	05 58 45.0	+0.1
DEMI	Demirci	1.94	355	*i* P	Pn	05 58 19.3	-0.8
DEMI				*e*S	Sn	05 58 48.6	+3.7
AKHS	Akhisar	1.98	334	*i* P	Pn	05 58 19.3	-1.3
AKHS				*e*S	Sn	05 58 44.8	-0.9
AKS	Akhisar	1.98	334	*e*PN	Pn	05 58 19.7

ASUT		**9.93**	**166**	∥P	**Pn**	**06 00 08.8**	**-1.1**
HFRF	**Wahat Farafira**	**9.94**	**183**	∥*e*P	**Pn**	**06 00 08.7**	**-1.3**
HFRF	**Wahat Farafira**	**9.94**	**183**	∥*e*P	**Pn**	**06 00 08.7**	**-1.3**
HFRF	**Wahat Farafira**	**9.94**	**183**	P	**Pn**	**06 00 08.6**	**-1.3**

IDC 25 06:00:03.3±2.2, 662S×12895E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=163.8km s-min=31.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.24**	**159**	Pn	Pn	06 03 25.6	-0.8
	0.2nm,0.3s,baz=341,slow=13,SNR=11						
WRA				Sn	Sn	06 05 54.9	-10
	0.3nm,0.3s,baz=326,slow=24,SNR=6.1						
ASAR	**Alice Springs**	**17.61**	**165**	P	Pn	06 04 10.9	+0.7
	0.2nm,0.3s,baz=342,slow=10,SNR=14						
MKAR	**Makanchi Array**	**67.34**	**327**	P	P	06 11 00.3	+0.1
	0.5nm,0.5s,baz=119,slow=8.2,SNR=6.8						

IDC 25 06:00:59.1±3.8, 5.26S×146.83E, h223km±35km, mb3.4/2, mb1 3.7/3, mb1mx3.2/15, mbtmp3.4/3, Error ellipse: s-maj=72.8km s-min=29.5km az=136.0

NEIC 25 06:00:34.6±3.2, 357S×146.87E, h90km±27km, mb4.5/4, Error ellipse: s-maj=37.3km s-min=28.9km az=105.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.80**	**177**	*e*Pn	Pn	06 01 58.2	0.0
	50nm,0.3s						
PMG				*e*S	Sn	06 02 42.0	-21
KAKA	**Kakadu**	**16.91**	**237**	*e*P	Pn	06 04 18.0	-7.9
	48nm,0.6s						
WRAB	**Tennant Creek**	**20.34**	**216**	*e*P	P	06 05 04.0	+0.2
	6.8nm,0.6s						
WRA	**Warramunga Arr**	**20.35**	**216**	P	P	06 05 04.0	0.0
	1.5nm,0.3s,baz=37,slow=11,SNR=42						
WRA				S	S	06 08 26.3	-21
	baz=45,slow=21,SNR=3.4						
ASAR	**Alice Springs**	**23.58**	**211**	P	P	06 05 37.1	-0.1
	3.8nm,0.6s,baz=49,slow=8.1,SNR=41						
ASAR				S	S	06 09 25.2	-20
	0.4nm,0.7s,baz=28,slow=15,SNR=3.8						
VNDA	**Vanda**	**74.33**	**177**	P	P	06 12 01.9	+0.1
	0.6nm,0.5s,baz=333,slow=5.7,SNR=8.4						
TORD	**Torodi Ar. Bea**	**144.30**	**288**	PKP	PKPdf	06 20 09.8	+8.5
	0.3nm,0.8s,baz=82,slow=3.6,SNR=2.4						

NEIC 25 06:02:10.6, 3734N×2349E, h30km, ML2.9(ATH), After ATH.
ATH 25 06:02:10.6, 3734N×2349E, h30km±1km, MD3.2/8, ML2.9
ISCJB 25 06:02:11.7±0.6, 3737N±003×2345E±006, h20km±9km, Error ellipse: s-maj=8.0km s-min=4.2km az=19.3
THE 25 06:02:11.1, 3739N×2349E, h7km±1km, Error ellipse: s-maj=1.7km s-min=0.9km az=316.0
CSEM 25 06:02:11.3±0.1, 3735N×2350E, h20km, ML2.9, Error ellipse: s-maj=2.4km s-min=1.4km az=107.0

ISC 25 06:02:11.2±0.6, 3736N±003×2346E±006, h13km±4km, n16, σ0§79/25, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DID	**Didima**	**0.23**	**310**	P	**Pg**	**06 02 15.5**	**-0.7**
DID				S	**Sg**	**06 02 19.0**	**-0.5**
NAIG	**Nisos Aigina**	**0.40**	**4**	*e*PB	**Pg**	**06 02 19.5**	**+0.3**
ATH	**Athens Observa**	**0.65**	**18**	*e*PN	**Pg**	**06 02 24.2**	**+0.4**
ATH				*e*SN	**Sg**	**06 02 34.2**	**+1.8**
VLI	**Veliai**	**0.76**	**213**	*e*PN	**Pg**	**06 02 25.5**	**-0.4**
VLI				*e*SN	**Sg**	**06 02 36.5**	**+0.6**
PTL	**Penteli**	**0.76**	**25**	*e*PN	**Pg**	**06 02 25.4**	**-0.6**
PTL				*e*SN	**Sg**	**06 02 37.2**	**+1.2**
LTK	**Loutraki**	**0.77**	**330**	P	**Pg**	**06 02 25.0**	**-1.1**
LTK				S	**Sg**	**06 02 36.7**	**+0.5**
KYTH	**Kithira**	**1.13**	**198**	*e*PN	**Pg**	**06 02 32.2**	**-0.7**
KYTH				*e*SN	**Sg**	**06 02 48.0**	**+0.5**
ITM	**Ithomi**	**1.23**	**262**	*e*PN	**Pn**	**06 02 33.9**	**-0.1**
LKR	**Lokris**	**1.34**	**345**	P	**Pn**	**06 02 34.9**	**-0.6**
LKR				S	**Sb**	**06 02 52.9**	**-0.3**
LKR	**Lokris**	**1.34**	**345**	*e*Pb	**Pb**	**06 02 35.0**	**-1.1**
LKR				S	**Sb**	**06 02 52.9**	**-0.3**
PYL	**PYLOS**	**1.45**	**252**	P	**Pn**	**06 02 37.4**	**+0.5**
PYL				S	**Sn**	**06 02 57.6**	**+1.9**
APE	**Apeiranthos**	**1.68**	**99**	P	**Pn**	**06 02 39.5**	**-0.7**
APE	**Apeiranthos**	**1.68**	**99**	*e*PN	**Pn**	**06 02 39.5**	**-0.7**
AOS	**Alonnisos**	**1.84**	**10**	P	**Pn**	**06 02 41.9**	**-0.5**
AGG	**Agios Georgios**	**1.88**	**332**	P	**Pn**	**06 02 43.4**	**+0.4**
XOR	**Xorichti**	**2.02**	**354**	P	**Pn**	**06 02 44.4**	**-0.4**

KRSC 25 06:25:52.6±1.7, 4985N×15845E, h5km±5km, ML4.2
MOS 25 06:25:55.2±1.6, 4990N×15780E, h33km, mb4.2/2, Error ellipse: s-maj=28.1km s-min=9.7km az=85.6
ISCJB 25 06:25:56.7±1.6, 4995N±0.10×1578E±0.1, h44km±13km, mb3.7/6, Error ellipse: s-maj=18.3km s-min=9.5km az=149.7
IDC 25 06:25:58.3±4.5, 4996N×15744E, h45km±41km, mb3.4/6, mb1 3.7/7, mb1mx3.4/25, mbtmp3.4/7, ML3.4/1, Error ellipse: s-maj=34.9km s-min=27.9km az=165.0

ISC 25 06:25:59.0±1.6, 500N±01×1577E±01, h49km±14km, n26, σ1§23/31, mb3.7/6, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.23**	**305**	⇑*i*PN	**Pn**	**06 26 18.0**	**-1.7**
SKR				*i* S	**Sn**	**06 26 35.6**	**+0.5**
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=E,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,310nm,0.5s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=E,2μm,0.5s						
SKR				smax			
	comp=Z,820nm,0.5s						
SKR				smax			
	comp=N,3μm,2.0s						
SKR				smax			
	comp=E,4μm,2.0s						
MIPR	**Malaya Ipel'ka**	**2.36**	**346**	P	**Pn**	**06 26 37.3**	**+2.1**
RUS	**Russkaya**	**2.50**	**12**	P	**Pn**	**06 26 34.9**	**-2.2**
RUS				*i* S	**Sn**	**06 27 05.6**	**-0.7**
GRL	**Gorelyy**	**2.58**	**5**	P	**Pn**	**06 26 39.1**	**+0.9**
PET	**Petropavlovsk**	**3.10**	**11**	*e*PN	**Pn**	**06 26 45.4**	**+0.1**
PET				*e*S	**Sn**	**06 27 21.0**	**0.0**
PET				smax			
	comp=E,188nm,0.6s						
PET				smax			
	comp=N,199nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PETK	**Petropavlovsk-**	**3.12**	**0**	P	**Pn**	**06 26 45.7**	**0.0**
	comp=Z,4.3nm,0.3s,baz=161,slow=16,SNR=28						
PETK				S	**Sn**	**06 27 28.4**	**+6.7**
	comp=Z,2.0nm,0.3s,baz=126,slow=12,SNR=2.7						
NLC	**Nalytchevo**	**3.35**	**17**	P	**Pn**	**06 26 47.1**	**-1.6**
SPN	**Mys Shipunski**	**3.44**	**24**	P	**Pn**	**06 26 47.8**	**-2.1**
SPN				*i* S	**Sn**	**06 27 27.7**	**-1.6**
KMNR	**Kamenistaya**	**5.98**	**14**	P	**Pn**	**06 27 25.9**	**+1.1**
KPT	**Kopyto**	**6.18**	**13**	P	**Pn**	**06 27 28.4**	**+0.9**
BZMR	**Bezymyannaya**	**6.19**	**15**	P	**Pn**	**06 27 28.6**	**+0.9**
BZWR	**Bezymyannyi-We**	**6.22**	**15**	P	**Pn**	**06 27 29.1**	**+1.0**
KOZ	**Kozyrevsk**	**6.22**	**11**	P	**Pn**	**06 27 29.6**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**6.23**	**16**	P	**Pn**	**06 27 29.1**	**+0.9**
KOZR	**Kozyr**	**6.23**	**11**	PN	**Pn**	**06 27 29.6**	**+1.4**
KRSR	**Krestovskiy**	**6.47**	**14**	P	**Pn**	**06 27 31.6**	**+0.1**
KBTR	**Krutoberegovo**	**6.95**	**24**	P	**Pn**	**06 27 36.2**	**-1.9**
KURK	**Kurchatov**	**48.14**	**303**	P	**P**	**06 34 31.9**	**-1.8**
	comp=Z,0.6nm,0.3s,mb4.1,baz=71,slow=4.0,SNR=2.5						
KURK	**Kurchatov**	**48.14**	**303**	P	**P**	**06 34 31.9**	**-1.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
MK31	**Makanchi Array**	**48.19**	**297**	P	**P**	**06 34 37.9**	**+3.7**
MK31				pmax	pmax		
	comp=N,7.0nm,0.3s						
BVAR	**Borovoye Array**	**51.17**	**309**	P	**P**	**06 34 55.9**	**-0.8**
	comp=N,0.4nm,0.6s,mb3.5,baz=91,slow=5.8,SNR=2.5						
PDAR	**Pinedale Array**	**60.40**	**58**	P	**P**	**06 36 03.8**	**+0.8**
	comp=N,0.6nm,1.0s,mb3.6,baz=318,slow=3.6,SNR=3.9						
WRA	**Warramunga Arr**	**72.63**	**203**	P	**P**	**06 37 20.5**	**-0.6**
	comp=N,0.3nm,0.6s,mb3.4,baz=4.4,slow=5.5,SNR=4.3						
WRA				pP	pP	06 37 31.3	-3.8
	comp=N,0.6nm,0.7s,baz=17,slow=6.0,SNR=5.4						
TXAR	**Lajitas Array**	**73.29**	**64**	P	**P**	**06 37 25.9**	**+0.7**
	comp=N,0.8nm,0.7s,mb3.7,baz=296,slow=4.5,SNR=6.3						
TXAR	**Lajitas Array**	**73.29**	**64**	P	**P**	**06 37 25.9**	**+0.8**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**76.79**	**336**	P	**P**	**06 37 45.8**	**+0.8**
	comp=Z,0.4nm,0.6s,mb3.5,baz=32,slow=5.8,SNR=3.1						

CSEM 25 06:44:06.3±0.1, 4054N×2133E, h5km, ML3.7/8, Error ellipse: s-maj=1.6km s-min=1.4km az=10.0
SOF 25 06:44:06.9, 4056N×2142E, h10km, MD2.8
THE 25 06:44:07.2, 4053N×2124E, h13km±1km, ML3.7/8, Error ellipse: s-maj=2.2km s-min=0.6km az=299.0
ATH 25 06:44:07.0, 4053N×2129E, h21km±5km, MD3.3/6
SKO 25 06:44:07.8, 4051N×2127E, h4km, M2.6, ML3.1
PDG 25 06:44:07.4±0.5, 4048N×2138E, h1km±2km, ML3.3/10, Error ellipse: s-maj=1.3km s-min=1.7km az=0.0
NEIC 25 06:44:07.4, 4048N×2138E, h1km, MD3.3(ATH), ML3.3(PDG), ML3.7(THE), ML3.1(SKO), After PDG.
ISCJB 25 06:44:07.6±0.2, 4052N±002×2132E±002, h10km, Error ellipse: s-maj=2.3km s-min=2.1km az=15.7
TIR 25 06:44:08.4±3.5, 4063N×2121E, h23km±26km, ML3.3

ISC 25 06:44:07.7±0.3, 4051N±002×2134E±002, h6km±3km, n70, σ1§24/123, 3C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.27**	**5**	P	**Pg**	**06 44 13.3**	**+0.3**
FNA				S	**Sg**	**06 44 17.5**	**+0.9**
KZN	**Kozani**	**0.39**	**122**	*e*PB	**Pg**	**06 44 16.0**	**+0.8**
KZN				*e*SB	**Sg**	**06 44 23.0**	**+2.7**
KBN	**Korca**	**0.44**	**285**	*e*PG	**Pg**	**06 44 14.6**	**-1.6**
KBN				*i* SG	**Sg**	**06 44 21.3**	**-0.6**
BIA	**Bitola**	**0.51**	**358**	P	**Pg**	**06 44 16.1**	**-1.4**
BIA				S	**Sg**	**06 44 24.3**	**+0.2**
BIA	**Bitola**	**0.51**	**358**	P	**Pg**	**06 44 16.1**	**-1.4**
BIA				*e*Sg	**Sg**	**06 44 24.2**	**+0.1**
BIA				eLg		06 44 24.9	
	1μm,0.4s						
BIA	**Bitola**	**0.51**	**358**	*e*Pg	**Pg**	**06 44 16.5**	**-1.0**
BIA				*e*Sg	**Sg**	**06 44 24.3**	**+0.2**
BIA				eLg		06 44 24.9	
	comp=E,1μm,0.4s						
BIA				eLg		06 44 25.3	
	comp=N,568nm,0.1s						
OHR	**Ohrid**	**0.73**	**325**	P	**Pg**	**06 44 19.3**	**-2.4**
OHR				S	**Sg**	**06 44 30.5**	**-0.6**
OHR	**Ohrid**	**0.73**	**325**	*e*Pg	**Pg**	**06 44 19.8**	**-1.9**
OHR				S	**Sg**	**06 44 30.5**	**-0.6**
OHR				*e*Sg	**Sg**	**06 44 30.7**	**-0.4**
OHR				eLg		06 44 30.9	
	comp=N,682nm,0.5s						
OHR	**Ohrid**	**0.73**	**325**	*e*Pg	**Pg**	**06 44 19.8**	**-1.9**
OHR				*e*Sg	**Sg**	**06 44 30.7**	**-0.4**
OHR				eLg		06 44 30.9	
	comp=N,682nm,0.5s						
OHR				eLg		06 44 31.2	
	comp=E,2μm,0.5s						
GRG	**Griva**	**0.92**	**61**	P	**Pg**	**06 44 25.4**	**0.0**
GRG				S	**Sg**	**06 44 40.2**	**+2.9**
JAN	**Janina**	**0.94**	**204**	*e*PB	**Pg**	**06 44 24.1**	**-1.6**
LIT	**Litokhoron**	**0.97**	**115**	P	**Pg**	**06 44 26.3**	**0.0**
LIT				S	**Sg**	**06 44 42.3**	**+3.4**
THL	**Klokotos Trika**	**1.08**	**151**	P	**Pg**	**06 44 27.2**	**-1.2**
THL				S	**Sg**	**06 44 43.5**	**+1.1**
THL	**Klokotos Trika**	**1.08**	**151**	*e*Pn	**Pg**	**06 44 27.7**	**-0.7**
THL				S	**Sg**	**06 44 43.5**	**+1.1**
THL				*e*Sn	**Sn**	**06 44 44.6**	**-0.1**
SRN	**Sarande**	**1.21**	**239**	*e*PG	**Pg**	**06 44 31.9**	**+1.0**
SRN				*i* SG	**Sg**	**06 44 48.7**	**+2.1**
VAY	**Valandovo**	**1.23**	**49**	P	**Pg**	**06 44 30.0**	**-1.4**
VAY				S	**Sg**	**06 44 47.6**	**+0.3**
VAY	**Valandovo**	**1.23**	**49**	*e*Pg	**Pg**	**06 44 30.2**	**-1.2**
VAY				S	**Sg**	**06 44 47.6**	**+0.3**
VAY				*e*Sg	**Sg**	**06 44 48.1**	**+0.8**
VAY				eLg		06 44 51.6	
	comp=E,214nm,0.6s						
VAY	**Valandovo**	**1.23**	**49**	*e*Pg	**Pg**	**06 44 30.2**	**-1.1**
VAY				*e*Sg	**Sg**	**06 44 48.1**	**+0.8**
VAY				eLg		06 44 51.6	
	comp=N,231nm,0.9s						
VAY				eLg		06 44 51.7	
	comp=E,214nm,0.6s						
THE	**Thessaloniki**	**1.24**	**84**	P	**Pg**	**06 44 30.5**	**-1.0**
THE				S	**Sg**	**06 44 48.2**	**+0.6**
IGT	**Igoumenitsa**	**1.25**	**219**	P	**Pg**	**06 44 30.8**	**-0.9**
IGT				S	**Sg**	**06 44 49.3**	**+1.4**
STIP	**Stip**	**1.34**	**28**	P	**Pn**	**06 44 32.2**	**-0.8**
STIP	**Stip**	**1.34**	**28**	*e*Pn	**Pn**	**06 44 32.0**	**-1.0**
STIP	**Stip**	**1.34**	**28**	P	**Pn**	**06 44 32.2**	**-0.8**
STIP				*e*Sg	**Sg**	**06 44 51.4**	**+0.6**
STIP				eLg		06 44 54.7	
	comp=E,13nm,0.2s						
STIP	**Stip**	**1.34**	**28**	*e*Pn	**Pn**	**06 44 32.1**	**-0.9**
STIP				*e*Sg	**Sg**	**06 44 51.4**	**+0.6**
STIP				eLg		06 44 54.1	
	comp=N,40nm,0.5s						
STIP				eLg		06 44 54.8	
	comp=E,13nm,0.2s						
HORT	**Hortiatis**	**1.34**	**86**	P	**Pn**	**06 44 31.9**	**-1.1**
HORT				S	**Sb**	**06 44 50.6**	**-0.1**
KNT	**Kendrikon**	**1.35**	**61**	P	**Pn**	**06 44 31.9**	**-1.2**
PHP	**Peshkopia**	**1.35**	**330**	*e*PG	**Pg**	**06 44 32.4**	**-1.3**
TIR	**Tirane**	**1.40**	**307**	P	**Pn**	**06 44 32.5**	**-1.3**
TIR	**Tirane**	**1.40**	**307**	*e*Pn	**Pn**	**06 44 32.2**	**-1.5**
TIR	**Tirane**	**1.40**	**307**	*e*PG	**Pn**	**06 44 32.3**	**-1.5**
TIR	**Tirane**	**1.40**	**307**	P	**Pn**	**06 44 32.5**	**-1.3**
KEK	**Kerkira**	**1.43**	**236**	*e*PN	**Pn**	**06 44 34.2**	**0.0**
SKO	**Skopje**	**1.46**	**3**	*e*Pn	**Pn**	**06 44 34.3**	**-0.3**
SKO				*e*Pg	**Sg**	**06 44 54.5**	**-0.2**
SKO				*e*Sg	**Sg**	**06 44 54.7**	**0.0**
SKO				eLg		06 44 55.1	
	comp=E,132nm,0.8s						
SKO				eLg		06 44 56.1	
	comp=N,135nm,0.4s						
SKO	**Skopje**	**1.46**	**3**	*i* P	**Pn**	**06 44 33.6**	**-1.0**
SKO				*i* S	**Sn**	**06 44 53.0**	**-1.1**
SOH	**Sokhos**	**1.56**	**78**	P	**Pn**	**06 44 35.5**	**-0.5**
SOH				S	**Sn**	**06 44 57.2**	**+0.6**
PLG	**Polygyros**	**1.61**	**94**	P	**Pn**	**06 44 36.3**	**-0.4**
PLG				S	**Sn**	**06 44 57.7**	**-0.1**
PLG	**Polygyros**	**1.61**	**94**	*e*Pn	**Pn**	**06 44 36.5**	**-0.2**
PLG				S	**Sn**	**06 44 57.7**	**-0.1**
AGG	**Agios Georgios**	**1.67**	**153**	P	**Pn**	**06 44 36.9**	**-0.7**
AGG				S	**Sn**	**06 44 59.0**	**-0.3**
XOR	**Xorichti**	**1.83**	**128**	P	**Pn**	**06 44 39.0**	**-0.7**
PUK	**Puka**	**1.88**	**325**	*e*PN	**Pn**	**06 44 41.4**	**+1.0**
NEO	**Neokhori**	**1.88**	**129**	*e*PN	**Pn**	**06 44 40.7**	**+0.2**
PAIG	**Paliouri**	**1.88**	**107**	P	**Pn**	**06 44 39.3**	**-1.2**
KKB	**Krupnik**	**1.88**	**44**	*i* P	**Pn**	**06 44 40.1**	**-0.4**
KKB				*i* S	**Sn**	**06 45 04.2**	**-0.4**
MMB	**Musomiste**	**2.10**	**58**	*i* P	**Pn**	**06 44 42.6**	**-0.8**
MMB				*i* S	**Sn**	**06 45 09.3**	**-0.6**
ULC	**Ulcinj**	**2.14**	**313**	⇑*i*Pn	**Pn**	**06 44 45.3**	**+1.3**
ULC				*e*Sn	**Sn**	**06 45 16.4**	**+5.5**
LKR	**Lokris**	**2.26**	**145**	*e*PN	**Pn**	**06 44 45.1**	**-0.5**
PVY	**Plav**	**2.32**	**334**	∥*i*Pn	**Pn**	**06 44 48.7**	**+2.2**
PVY				*e*Sn	**Sg**	**06 45 20.5**	**-1.7**
PVY	**Plav**	**2.32**	**334**	*i* PG	**Pn**	**06 44 48.7**	**+2.2**
PVY				*i* SG	**Sg**	**06 45 20.5**	**-1.7**
PDG	**Podgorica**	**2.47**	**321**	∥*i*Pn	**Pn**	**06 44 49.8**	**+1.2**
PDG				*e*Sn	**Sn**	**06 45 23.8**	**+4.7**
TTG	**Podgorica**	**2.47**	**321**	∥*i*Pn	**Pn**	**06 44 49.8**	**+1.2**
TTG				*e*Sn	**Sn**	**06 45 23.8**	**+4.7**
VTS	**Vitosha**	**2.50**	**33**	*e*P	**Pn**	**06 44 51.5**	**+2.5**
BUM	**Brajici-Budva**	**2.56**	**315**	∥*i*Pn	**Pn**	**06 44 52.0**	**+2.2**
BUM				*e*Sn	**Sn**	**06 45 25.4**	**+4.1**
BUM	**Brajici-Budva**	**2.56**	**315**	*i* PG	**Pn**	**06 44 52.0**	**+2.2**
BUM				*i* SG	**Sn**	**06 45 25.4**	**+4.1**
BEY	**Berane**	**2.59**	**336**	*i* PG	**Pn**	**06 44 52.7**	**+2.5**
BEY				*i* SG	**Sg**	**06 45 27.2**	**-3.8**
BEY	**Berane**	**2.59**	**336**	∥*i*Pn	**Pn**	**06 44 52.7**	**+2.5**
BEY				*e*Sn	**Sg**	**06 45 27.2**	**-3.8**
IVA	**Berane**	**2.59**	**336**	∥*i*Pn	**Pn**	**06 44 52.7**	**+2.5**
IVA				*e*Sn	**Sg**	**06 45 27.2**	**-3.8**
RZN	**Rozhen**	**2.81**	**64**	*i* S	**Sn**	**06 45 26.6**	**-0.7**
HCY	**Herceg Novi**	**2.88**	**313**	⇑*i*Pn	**Pn**	**06 44 56.2**	**+2.0**
HCY				*e*Sn	**Sn**	**06 45 33.7**	**+4.6**
HCY	**Herceg Novi**	**2.88**	**313**	*i* PG	**Pn**	**06 44 56.2**	**+2.0**
HCY				*i* SG	**Sn**	**06 45 33.7**	**+4.6**
NKY	**Niksic**	**2.89**	**323**	∥*i*Pn	**Pn**	**06 44 56.0**	**+1.7**
NKY				*e*Sn	**Sn**	**06 45 34.2**	**+4.8**
NKY	**Niksic**	**2.89**	**323**	*i* PG	**Pn**	**06 44 56.0**	**+1.7**
NKY				*i* SG	**Sn**	**06 45 34.2**	**+4.8**
PLE	**Pljevlja**	**3.17**	**333**	*e*Pn	**Pn**	**06 45 00.4**	**+2.3**
PLE				*e*Sn	**Sn**	**06 45 40.8**	**+4.6**
BRY	**Bratogost**	**3.17**	**320**	∥*i*Pn	**Pn**	**06 45 00.4**	**+2.2**
BRY				*e*Sn	**Sn**	**06 45 40.3**	**+3.9**
UPM	**Unac-Piva**	**3.24**	**327**	⇑*i*Pn	**Pn**	**06 45 01.1**	**+1.9**
UPM				*e*Sn	**Sn**	**06 45 43.0**	**+4.9**
FGMS	**Monte Sant'Ang**	**4.24**	**288**	Pn	**Pn**	**06 45 10.8**	**-2.1**
FGMS				Sn	**Sn**	**06 45 56.1**	**-6.6**
CUC	**Castrocucco**	**4.26**	**265**	*e*Pn	**Pn**	**06 45 12.5**	**-0.7**
CUC	**Castrocucco**	**4.26**	**265**	*e*Pn	**Pn**	**06 45 12.5**	**-0.7**
MGR	**Morigerati**	**4.44**	**267**	Pn	**Pn**	**06 45 15.5**	**-0.1**
MGR				Sn	**Sn**	**06 46 05.8**	**-1.8**
SGO	**Sicignano**	**4.60**	**273**	Pn	**Pn**	**06 45 16.6**	**-1.2**
SDI	**San Donato**	**5.81**	**284**	Pn	**Pn**	**06 45 34.2**	**-0.3**
	comp=N,5.6nm,0.3s						

IDC 25 06:53:00.2±3.2, 131N×9727E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.7/6, Error ellipse: s-maj=133.1km s-min=26.9km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.04**	**122**	P	P	07 00 53.8	-0.1
	0.3nm,0.5s,baz=301,slow=9.1,SNR=6.1						
SONM	**Songino Array**	**47.01**	**8**	P	P	07 01 33.3	+0.1
	0.6nm,0.6s,baz=197,slow=8.8,SNR=4.5						
MKAR	**Makanchi Array**	**47.15**	**346**	P	P	07 01 34.8	+0.5
	0.7nm,0.7s,baz=160,slow=9.5,SNR=6.8						
KURK	**Kurchatov**	**51.70**	**345**	P	P	07 02 08.7	-0.2
	0.3nm,0.4s,baz=162,slow=6.8,SNR=4.5						
ZALV	**Zalesovo Beam**	**53.46**	**351**	P	P	07 02 21.8	-0.2
	1.3nm,0.4s,baz=188,slow=9.9,SNR=4.6						
BVAR	**Borovoye Array**	**56.17**	**341**	P	P	07 02 40.9	-0.7
	0.7nm,0.7s,baz=161,slow=10,SNR=4.4						

MAN 25 07:02:13, 771N×12192E, h6km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.65**	**83**	*e*P	Pg	07 02 25.4	-0.1
IPIL				*e*S	Sg	07 02 32.6	-1.4
ZMPH	**Zamboanga City**	**0.77**	**169**	⇑*i*P	Pg	07 02 29.7	+1.9
PAGZ	**Pagadian**	**1.46**	**85**	*e*P	Pn	07 02 39.8	-0.1
PAGZ				*e*S	Sn	07 02 57.9	-1.4
SNPH	**Sibulan**	**2.08**	**39**	*e*P	Pn	07 02 50.0	+1.6
TBP	**Tagbilaran**	**2.75**	**44**	*e*P	Pn	07 02 58.9	+1.2
GUIM	**Jordan**	**2.97**	**13**	*e*P	Pn	07 02 58.5	-2.2
GUIM				*e*S	Sn	07 03 33.5	-3.1
BUKP	**Musuan**	**3.12**	**87**	*e*P	Pn	07 03 05.9	+3.1
BUKP				*e*S	Sn	07 03 48.6	+8.2
CUYO	**Cuyo Island**	**3.24**	**344**	*e*P	Pn	07 03 06.3	+1.9
OTRP	**Odiongan**	**4.62**	**1**	*e*P	Pn	07 03 24.4	+1.0

MAN 25 07:07:46, 741N×12229E, h1km, mb3.7, ML2.4, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.47**	**36**	*e*P	Pg	07 07 56.2	+1.1
IPIL				*e*S	Sg	07 08 03.4	+2.3
ZMPH	**Zamboanga City**	**0.50**	**206**	⇑*i*P	Pg	07 08 00.5	+4.8
PAGZ	**Pagadian**	**1.17**	**68**	*e*P	Pg	07 08 09.8	+1.3
PAGZ				*e*S	Sg	07 08 27.8	+4.2
SNPH	**Sibulan**	**2.14**	**26**	*e*P	Pn	07 08 21.0	-1.9
OTRP	**Odiongan**	**4.93**	**357**	*e*P	Pn	07 08 54.4	-6.9

ISCJB 25 07:08:31.8±0.8, 80S±0.1×1356W±005, h10km, mb3.9/4, MS3.6/4, Error ellipse: s-maj=16.3km s-min=7.1km az=177.6
IDC 25 07:08:32.5±1.5, 794S×1363W, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.7/20, mbtmp4.0/4, MS3.6/5, Ms1 3.6/5, ms1mx3.4/25, Error ellipse: s-maj=47.7km s-min=17.0km az=149.0
NEIC 25 07:08:33.8±0.8, 795S×1362W, h10km, mb3.9/1, Error ellipse: s-maj=18.5km s-min=12.3km az=166.0

ISC 25 07:08:33.9±0.8, 80S±01×1360W±005, h10km, n12, σ1§13/10, mb3.9/4, MS3.6/4, Ascension Island region

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

TWE	**Neicheng**	**0.57**	**312**	⇓*i*P		**Pg**	07 38 42.2	**+0.1**
	baz=320							
TWE				*i* S		**Sg**	07 38 49.0	**-0.4**
	baz=320							
HWA	**Hwalien**	**0.60**	**233**	*e*P		**Pg**	07 38 42.8	**0.0**
	baz=228							
TWB1	**Santiao Chiao**	**0.68**	**349**	P		**Pg**	07 38 45.2	**+1.0**
	baz=352							
NNS	**Nan Shan**	**0.70**	**278**	⇓*i*P		**Pg**	07 38 44.1	**-0.5**
	baz=286							
NNS				S		**Sg**	07 38 51.7	**-1.9**
	baz=286							
YHNB	**Yeheng**	**0.76**	**296**	*e*Pn		**Pg**	07 38 45.2	**-0.6**
NSK	**Sanguang**	**0.78**	**296**	⇓*i*P		**Pg**	07 38 45.7	**-0.5**
	baz=299							
NSK				S		**Sg**	07 38 54.3	**-2.0**
	baz=299							
NWF	**Wu-fen Shan**	**0.79**	**337**	⇓*i*P		**Pg**	07 38 47.3	**+0.8**
	baz=344							
NWF				*i* S		**Sg**	07 38 57.3	**+0.6**
	baz=344							
TWA	**Mucha**	**0.81**	**322**	⇓*i*P		**Pg**	07 38 47.0	**+0.2**
	baz=319							
TWA				*e*S		**Sg**	07 38 56.9	**-0.3**
	baz=319							
WHF	**Hehuan Shan**	**0.81**	**256**	⇑*i*P		**Pg**	07 38 46.3	**-0.5**
	baz=261							
WHF				*e*S		**Sg**	07 38 56.0	**-1.3**
	baz=261							
YOJ	**Yonaguni jima**	**0.81**	**81**	P		**Pg**	07 38 48.9	**+2.0**
YOJ				S		**Sg**	07 39 01.0	**+3.6**
YOJ	**Yonaguni jima**	**0.81**	**81**	P		**Pg**	07 38 48.7	**+1.8**
	baz=74							
ESL	**Shilin**	**0.82**	**231**	*e*P		**Pg**	07 38 47.0	**-0.1**
	baz=224							
ESL				*e*S		**Sg**	07 38 59.3	**+1.6**
	baz=224							
TATO	**Taipei**	**0.86**	**317**	*e*Pn		**Pg**	07 38 47.5	**-0.3**
TWT	**Tachien**	**0.87**	**265**	*e*P		**Pg**	07 38 48.0	**+0.1**
	baz=269							
TWT				*e*S		**Sg**	07 38 58.5	**-0.8**
	baz=269							
TAP1	**Taipei**	**0.89**	**322**	⇑P		**Pg**	07 38 48.4	**+0.2**
	baz=320							
TAP1				S		**Sg**	07 39 00.0	**+0.2**
	baz=320							
TWS1	**Kuangyinshan**	**0.99**	**320**	P		**Pg**	07 38 50.9	**+0.6**
	baz=318							
TWS1				S		**Sg**	07 39 03.5	**+0.2**
	baz=318							
TWY	**Chenhua**	**1.05**	**333**	P		**Pg**	07 38 52.0	**+0.7**
	baz=338							
TWY				*e*S		**Sg**	07 39 04.9	**-0.1**
	baz=338							
NCU	**National Centr**	**1.06**	**306**	P		**Pg**	07 38 51.7	**+0.1**
	baz=318							
NCU				*e*S		**Sg**	07 39 06.9	**+1.5**
	baz=318							
NSTT	**Nanjuang**	**1.07**	**286**	*e*P		**Pg**	07 38 51.2	**-0.5**
	baz=287							
NSTT				*e*S		**Sg**	07 39 05.5	**0.0**
	baz=287							
EHY	**Hungye**	**1.11**	**222**	P		**Pg**	07 38 51.5	**-1.0**
	baz=215							
HSN	**Hsinchu**	**1.15**	**294**	*e*P		**Pg**	07 38 53.2	**-0.1**
	baz=298							
HSN				*e*S		**Sg**	07 39 07.7	**-0.5**
	baz=298							
SMLT	**Sun Moon Lake**	**1.21**	**248**	*e*P		**Pg**	07 38 53.0	**-1.4**
	baz=235							
TWQ1	**Liyutan**	**1.24**	**271**	*e*P		**Pg**	07 38 54.8	**-0.1**
	baz=276							
TWQ1				*e*S		**Sg**	07 39 12.2	**+1.3**
	baz=276							
TYC	**Yuchr**	**1.24**	**250**	P		**Pg**	07 38 54.3	**-0.7**
	baz=238							
TWF1	**Yuli**	**1.24**	**218**	*e*P		**Pg**	07 38 53.3	**-1.8**
	baz=227							
NSY	**Sanyi**	**1.25**	**274**	*e*P		**Pg**	07 38 55.4	**+0.2**
	baz=279							
NSY				*e*S		**Sg**	07 39 13.4	**+2.0**
	baz=279							
PCYT	**Pengchaiyu**	**1.28**	**358**	*e*P		**Pg**	07 38 54.9	**-1.0**
	baz=4.0							
TCU	**Taichung**	**1.34**	**262**	*e*P		**Pn**	07 38 56.9	**+0.1**
	baz=261							
YUS	**Yu-Shan**	**1.37**	**232**	*e*P		**Pn**	07 38 56.8	**-0.5**
	baz=227							
WNT	**Mingjian**	**1.40**	**251**	*e*P		**Pn**	07 38 57.1	**-0.6**
	baz=245							
WNT				*e*S		**Sg**	07 39 17.1	**+0.9**
	baz=245							
IRIF	**Iriomote-Funau**	**1.46**	**90**	P		**Pn**	07 38 58.3	**-0.2**
IRIF				S		**Sb**	07 39 17.4	**-0.7**
ALS	**Alishan**	**1.47**	**236**	*e*P		**Pn**	07 38 58.4	**-0.2**
	baz=232							
CHN5	**Tsauling**	**1.52**	**241**	*e*P		**Pn**	07 38 59.0	**-0.4**
	baz=238							
CHN5				*e*S		**Sg**	07 39 21.6	**+1.5**
	baz=238							
ELDTW	**Lidau**	**1.53**	**222**	*e*P		**Pn**	07 38 56.8	**-2.7**
	baz=217							
HATJ	**Hateruma jima**	**1.56**	**100**	P		**Pn**	07 39 01.2	**+1.3**
HATJ				*e*S		**Sn**	07 39 21.1	**+0.5**
WGK	**Gukeng**	**1.57**	**246**	*e*P		**Pn**	07 39 00.9	**+0.8**
	baz=243							
CHN2	**Minshiung**	**1.71**	**242**	*e*P		**Pn**	07 39 02.7	**+0.7**
	baz=240							
CHN2				*e*S		**Sg**	07 39 27.5	**+1.1**
	baz=240							
CHN4	**Tsaushan**	**1.72**	**235**	*e*P		**Pn**	07 39 02.8	**+0.7**
	baz=232							
CHN4				*e*S		**Sg**	07 39 27.1	**+0.7**
	baz=232							
STYT	**Tauyuan**	**1.72**	**227**	*e*P		**Pn**	07 39 02.2	**+0.1**
	baz=210							
JKRS	**Kuro-shima**	**1.72**	**93**	P		**Pn**	07 39 02.0	**-0.1**
JKRS				*e*S		**Sn**	07 39 24.8	**+0.2**
WTP	**Ta-pu**	**1.76**	**232**	*e*P		**Pn**	07 39 02.9	**+0.2**
	baz=212							
CHY	**Chiayi**	**1.77**	**242**	*e*P		**Pn**	07 39 01.5	**-1.3**
	baz=240							
TWG	**Pinlang**	**1.80**	**213**	*e*P		**Pn**	07 39 01.1	**-2.1**
	baz=194							
JIJ	**Ishigaki jima**	**1.84**	**89**	P		**Pn**	07 39 03.7	**0.0**
JIJ				S		**Sn**	07 39 26.7	**-0.8**
TWK	**Hsinying**	**1.84**	**235**	*e*P		**Pn**	07 39 03.9	**0.0**
	baz=217							
TWK				*e*S		**Sn**	07 39 28.4	**+0.7**
	baz=217							
CHN1	**Nanshi**	**1.86**	**232**	P		**Pn**	07 39 04.8	**+0.7**
	baz=229							
CHN1				S		**Sn**	07 39 29.8	**+1.7**
	baz=229							
SGST	**Jiashian**	**1.89**	**229**	*e*P		**Pn**	07 39 04.6	**+0.1**
	baz=214							
SGST				*e*S		**Sn**	07 39 29.5	**+0.6**
	baz=214							
CHN8	**Yiju**	**2.02**	**241**	*e*P		**Pn**	07 39 04.8	**-1.3**
	baz=238							
ECL	**Taimali**	**2.04**	**212**	*e*P		**Pn**	07 39 06.5	**-0.1**
	baz=196							
SSD	**Sandimen**	**2.10**	**221**	*e*P		**Pn**	07 39 08.2	**+0.9**
	baz=198							
JTJ	**Tarama**	**2.36**	**82**	P		**Pn**	07 39 09.0	**-2.0**
JTJ				*e*S		**Sn**	07 39 37.4	**-3.1**
SCZT	**Fangliau**	**2.40**	**216**	*e*P		**Pn**	07 39 12.8	**+1.4**
	baz=197							
KNM	**Kinmen**	**3.37**	**272**	*e*P		**Pn**	07 39 24.5	**-0.3**
	baz=273							
QIZ	**Qiongzhong**	**12.58**	**248**	*e*Pn		**Pn**	07 41 32.2	**+1.0**

GUC 25 07:38:57.7±0.8, 2283S×7048W, h33km±4km, ML3.5, 2C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MECH	**Mejillones**	**0.28**	**174**	⇑*i*P		Pb	07 39 04.3	**-0.8**
MECH				*i* S		Sb	07 39 10.1	**-0.1**
MECH				AML	AML		07 39 10.8	
	comp=E,10μm,0.5s							
CEN1	**Los Morros**	**0.62**	**155**	⇓*i*P		Pn	07 39 11.2	**+1.1**
CEN1				*i* S		Sb	07 39 22.2	**+3.6**
CEN1				AML	AML		07 39 24.0	
	comp=E,1μm,0.3s							
TOCH	**Tocopilla**	**0.77**	**19**	⇓*i*P		Pn	07 39 11.7	**-0.6**
TOCH				*i* S		Sn	07 39 22.4	**-0.5**
TOCH				AML	AML		07 39 24.0	
	comp=E,5μm,0.3s							
PECH	**Pedro de Valdi**	**0.78**	**73**	⇓*i*P		Pn	07 39 12.4	**0.0**
PECH				*i* S		Sn	07 39 23.4	**+0.5**
PECH				AML	AML		07 39 25.2	
	comp=N,10μm,0.2s							
ANCH	**Antofagasta**	**0.85**	**176**	⇑*i*P		Pn	07 39 13.5	**+0.1**
ANCH				*i* S		Sn	07 39 24.4	**-0.4**
MACH	**Maria Elena**	**0.92**	**47**	⇓*i*P		Pn	07 39 14.5	**+0.3**
MACH				*i* S		Sn	07 39 27.6	**+1.2**
LVC	**Limon Verde**	**1.46**	**82**	⇓*i*P		Pn	07 39 23.4	**+1.6**
LVC				*i* S		Sn	07 39 42.7	**+2.9**
LVC				AML	AML		07 39 47.1	
	comp=N,789nm,0.4s							
CPN1	**Cerro Paranal**	**1.79**	**178**	*e*P		Pn	07 39 26.2	**-0.2**

BJI ***25*** *07:54:39.4, 483S×10151E, h26km, mB5.0, mb4.6*
IDC ***25*** *07:54:42.2±1.6, 4.16S×10101E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/21, mbtmp4.2/10, Error ellipse: s-maj=55.4km s-min=17.5km az=54.0*
ISCJB ***25*** *07:54:44.3±1.1, 43S±02×1009E±02, h33km, mb4.3/17, Error ellipse: s-maj=33.9km s-min=9.9km az=141.3*
NEIC ***25*** *07:54:46.9±1.0, 4.23S×10088E, h35km, mb4.3/3, Error ellipse: s-maj=35.4km s-min=10.1km az=51.0*
ISC 25 07:54:48.8±6.0, 42S±02×1010E±03, h50km±51km, h17km±5.7km:pP-P, n26, σ0°70/22, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KAPI	**Kappang**	**18.70**	**93**	*e*P		**Pn**	**07 59 04.1**	**0.0**
	51nm,1.3s							
KAPI				*e*pP		pP	07 59 14.3	-0.4
CMAR	**Chiang Mai Arr**	**22.59**	**355**	P		**P**	**07 59 44.9**	**-0.2**
	6.7nm,0.9s,mb4.0,baz=182,slow=8.4,SNR=29							
CHTO	**Chiang Mai**	**22.94**	**355**	*e*P		**P**	**07 59 48.8**	**-0.1**
	5.3nm,1.0s,mb3.9							
MDRS	**Chennai**	**26.81**	**310**	*ex*		x	08 01 19.2	
MDRS				*ex*		x	08 06 29.2	
MDRS				*ex*		x	08 11 01.2	
WRA	**Warramunga Arr**	**36.05**	**119**	P		**P**	**08 01 45.3**	**-0.5**
	3.5nm,0.8s,mb4.3,baz=300,slow=9.0,SNR=12							
WRAB	**Tennant Creek**	**36.06**	**119**	*e*P		**P**	**08 01 45.3**	**-0.5**
	5.1nm,0.8s,mb4.5							
WB2	**Warramunga Arr**	**36.06**	**119**	*e*P		**P**	**08 01 45.8**	**0.0**
ASAR	**Alice Springs**	**37.18**	**125**	P		**P**	**08 01 55.5**	**+0.1**
	1.3nm,0.8s,mb3.8,baz=299,slow=7.6,SNR=16							
XAN	**Xi'an**	**38.74**	**11**	P		**P**	**08 02 08.3**	**0.0**
XAN				AP		pP	08 02 14.5	-7.0
XAN				AMB	AMB			
	comp=Z,9.0nm,0.9s,mb4.5							
XAN				AMB	AMB			
	comp=Z,121nm,5.0s							
LZH	**Lanzhou**	**40.15**	**4**	*e*P		**P**	**08 02 20.0**	**+0.1**
LZH				AP		pP	08 02 28.0	-5.2
LZH				XP		sP	08 02 32.0	-7.0
LZH				AMB	AMB			
	comp=Z,21nm,1.2s,mb4.7							
LZH				AMB	AMB			
	comp=Z,87nm,4.4s							
GTA	**Gaotai**	**43.39**	**359**	*e*P		**P**	**08 02 47.5**	**+1.1**
GTA				AP		pP	08 02 52.0	-7.7
GTA				XP		sP	08 02 55.0	-11
GTA				AMB	AMB			
	comp=Z,5.0nm,1.1s,mb4.2							
CTA	**Charters Tower**	**46.79**	**114**	P		**P**	**08 03 16.8**	**+3.1**
	comp=Z,4.1nm,0.8s,mb4.4,baz=266,slow=12,SNR=3.7							
STKA	**Stephens Creek**	**46.97**	**131**	P		**P**	**08 03 19.8**	**+4.8**
	comp=Z,2.8nm,0.9s,mb4.2,baz=323,slow=9.1,SNR=3.2							
KSRS	**Korea Array**	**48.41**	**29**	P		**P**	**08 03 26.0**	**+0.1**
	comp=Z,3.0nm,0.9s,mb4.3,baz=218,slow=7.6,SNR=9.6							
SONM	**Songino Array**	**52.01**	**5**	P		**P**	**08 03 54.1**	**+1.0**
	comp=Z,6.7nm,1.0s,mb4.5,baz=182,slow=8.7,SNR=32							
MJAR	**Matsushiro Arr**	**53.36**	**37**	P		**P**	**08 04 02.0**	**-1.2**
	comp=Z,1.8nm,0.9s,mb4.0,baz=220,slow=8.8,SNR=7.1							
MK31	**Makanchi Array**	**53.39**	**344**	*e*P		**P**	**08 04 03.5**	**+0.3**
MKAR	**Makanchi Array**	**53.39**	**344**	P		**P**	**08 04 03.8**	**+0.5**
	comp=Z,5.8nm,0.9s,mb4.5,baz=149,slow=8.6,SNR=21							
KURK	**Kurchatov**	**57.97**	**343**	P		**P**	**08 04 35.5**	**-0.6**
	comp=Z,4.7nm,0.9s,mb4.5,baz=170,slow=5.6,SNR=15							
KURK	**Kurchatov**	**57.97**	**343**	P		**P**	**08 04 35.5**	**-0.6**
ZAA0	**Zalesovo Array**	**59.48**	**349**	*e*P		**P**	**08 04 46.3**	**-0.2**
ZALV	**Zalesovo Beam**	**59.48**	**349**	P		**P**	**08 04 46.3**	**-0.2**
	comp=Z,7.4nm,0.9s,mb4.7,baz=163,slow=5.6,SNR=20							
BVAR	**Borovoye Array**	**62.56**	**340**	P		**P**	**08 05 06.5**	**-0.9**
	comp=Z,0.8nm,0.6s,mb4.0,baz=111,slow=7.9,SNR=4.8							
EGMT	**Eagleton**	**128.98**	**26**	*e*PKPdf		PKPdf	08 13 49.9	-1.2
TXAR	**Lajitas Array**	**145.76**	**40**	PKPbc		PKPbc	08 14 24.8	+1.7
	comp=Z,3.8nm,1.0s,baz=290,slow=3.6,SNR=19							
JCT	**Junction City**	**147.29**	**35**	*e*PKPbc		PKPbc	08 14 28.0	+0.5

ISCJB ***25*** *07:57:27.7±0.5, 24.35N±002×122.09E±002, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.3km az=168.2*
JMA ***25*** *07:57:28.4±0.1, 24.52N×121.99E, h50km, M2.9*
TAP ***25*** *07:57:29.1, 24.38N×121.98E, h17km, ML3.4, C*
ISC 25 07:57:28.3±0.5, 2435N±002×12207E±002, h9km±5km, n34, σ0°75/53, 2C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EHP	**Heping Village**	**0.31**	**263**	P		**Pg**	**07 57 34.2**	**-0.2**
	baz=259							
EHP				*e*S		**Sg**	07 57 38.8	**+0.3**
	baz=259							
ENA	**Nanau**	**0.31**	**285**	⇑*i*P		**Pg**	**07 57 34.5**	**0.0**
	baz=289							
ENA				*e*S		**Sg**	07 57 38.3	**-0.4**
	baz=289							
TWC	**Suao**	**0.33**	**322**	⇓*i*P		**Pg**	07 57 35.1	**+0.3**
	baz=333							
TWC				*i* S		**Sg**	07 57 38.9	**-0.4**
	baz=333							
ILA	**Ilan**	**0.51**	**325**	*i* P		**Pg**	07 57 38.7	**+0.4**
	baz=322							
ILA				*e*S		**Sg**	07 57 45.3	**+0.3**
	baz=322							
TWD	**Chiawan**	**0.51**	**239**	*e*P		**Pg**	07 57 38.1	**-0.1**
	baz=234							
TWE	**Neicheng**	**0.53**	**315**	⇓*i*P		**Pg**	07 57 38.6	**+0.1**
	baz=320							
TWE				*i* S		**Sg**	07 57 44.9	**-0.5**
	baz=320							
HWA	**Hwalien**	**0.56**	**229**	*e*P		**Pg**	07 57 39.0	**-0.2**
	baz=235							
NNS	**Nan Shan**	**0.65**	**278**	⇑*i*P		**Pg**	07 57 40.5	**-0.2**
	baz=285							
NNS				S		**Sg**	07 57 48.1	**-1.2**
	baz=285							
TWB1	**Santiao Chiao**	**0.66**	**353**	P		**Pg**	07 57 41.5	**+0.3**
	baz=353							
TWB1				*e*S		**Sg**	07 57 49.5	**-0.2**
	baz=353							
NSK	**Sanguang**	**0.73**	**297**	*i* P		**Pg**	07 57 42.0	**-0.4**
	baz=298							
NSK				*e*S		**Sg**	07 57 50.7	**-1.2**
	baz=298							
WHF	**Hehuan Shan**	**0.77**	**255**	P		**Pg**	07 57 42.6	**-0.5**
	baz=260							
WHF				*e*S		**Sg**	07 57 52.9	**-0.1**
	baz=260							
NWF	**Wu-fen Shan**	**0.77**	**340**	*i* P		**Pg**	07 57 43.8	**+0.7**
	baz=337							
NWF				*i* S		**Sg**	07 57 53.9	**+0.8**
	baz=337							
TWA	**Mucha**	**0.77**	**325**	*e*P		**Pg**	07 57 43.4	**+0.2**
	baz=319							
TWA				*e*S		**Sg**	07 57 52.6	**-0.7**
	baz=319							
ESL	**Shilin**	**0.79**	**228**	*e*P		**Pg**	07 57 43.7	**+0.1**
	baz=222							
TWT	**Tachien**	**0.82**	**264**	*e*P		**Pg**	07 57 44.0	**-0.2**
	baz=261							
YOJ	**Yonaguni jima**	**0.86**	**82**	P		**Pg**	07 57 45.4	**+0.5**
YOJ				*e*S		**Sg**	07 57 57.7	**+1.6**
TWS1	**Kuangyinshan**	**0.96**	**322**	P		**Pg**	07 57 47.3	**+0.6**
	baz=318							
TWS1				*e*S		**Sg**	07 58 00.2	**+1.0**
	baz=318							
NSTT	**Nanjuang**	**1.02**	**286**	*e*P		**Pg**	07 57 47.8	**-0.1**
	baz=287							
NSTT				*e*S		**Sg**	07 58 00.1	**-1.0**
	baz=287							
TWY	**Chenhua**	**1.02**	**335**	*e*P		**Pg**	07 57 48.4	**+0.5**
	baz=339							
TWY				*e*S		**Sg**	07 58 00.9	**-0.3**
	baz=339							
EHY	**Hungye**	**1.08**	**220**	*e*P		**Pg**	07 57 48.8	**-0.4**
	baz=215							
SMLT	**Sun Moon Lake**	**1.17**	**247**	*e*P		**Pb**	07 57 50.0	**-0.6**
	baz=235							
TWQ1	**Liyutan**	**1.19**	**270**	*e*P		**Pb**	07 57 51.3	**+0.3**
	baz=276							
TWQ1				*e*S		**Sb**	07 58 07.5	**+1.0**
	baz=276							
TYC	**Yuchr**	**1.20**	**249**	*e*P		**Pb**	07 57 51.1	**-0.1**
	baz=246							
TWF1	**Yuli**	**1.22**	**216**	*e*P		**Pn**	07 57 50.5	**-1.1**
	baz=226							
YUS	**Yu-Shan**	**1.34**	**230**	*e*P		**Pn**	07 57 52.8	**-0.4**
	baz=227							
ALS	**Alishan**	**1.43**	**235**	*e*P		**Pn**	07 57 55.8	**+1.3**
	baz=232							
CHN5	**Tsauling**	**1.48**	**240**	*e*P		**Pn**	07 57 56.9	**+1.8**
	baz=238							
ELDTW	**Lidau**	**1.51**	**220**	*e*P		**Pn**	07 57 55.9	**+0.4**
	baz=203							
IRIF	**Iriomote-Funau**	**1.51**	**90**	P		**Pn**	07 57 54.6	**-1.0**
IRIF				*e*S		**Sn**	07 58 14.3	**-1.1**
CHN4	**Tsaushan**	**1.68**	**234**	*e*P		**Pn**	07 57 59.5	**+1.6**
	baz=232							
WTP	**Ta-pu**	**1.73**	**231**	*e*P		**Pn**	07 58 01.7	**+3.1**
	baz=228							
JKRS	**Kuro-shima**	**1.77**	**93**	P		**Pn**	07 57 58.7	**-0.4**
JKRS				*e*S		**Sn**	07 58 21.3	**-0.5**
CHN1	**Nanshi**	**1.83**	**231**	*e*P		**Pn**	07 58 00.7	**+0.7**
	baz=228							
JIJ	**Ishigaki jima**	**1.89**	**89**	P		**Pn**	07 58 00.3	**-0.5**
JIJ				*e*S		**Sn**	07 58 23.4	**-1.3**

GUC 25 08:20:56.1±0.8, 2285S×6883W, h89km±5km, ML3.6, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**0.25**	**341**	*e*P		Pn	08 21 09.6	**+0.4**
LVC				*i* S		Sn	08 21 20.2	**+1.3**
LVC				AML	AML		08 21 22.3	
	comp=E,2μm,0.2s							
SPCH	**San Pedro de A**	**0.58**	**96**	⇑*i*P		Pn	08 21 12.2	**+0.7**
SPCH				*i* S		Sn	08 21 24.9	**+2.0**
SPCH				AML	AML		08 21 25.4	
	comp=E,9μm,0.4s							
PECH	**Pedro de Valdi**	**0.82**	**287**	⇑*i*P		Pn	08 21 14.3	**+0.5**
PECH				*i* S		Sn	08 21 28.3	**+1.3**
PECH				AML	AML		08 21 32.8	
	comp=E,2μm,0.6s							
MACH	**Maria Elena**	**1.08**	**307**	⇓*i*P		Pn	08 21 17.8	**+1.1**
MACH				*i* S		Sn	08 21 34.1	**+2.0**
CEN1	**Los Morros**	**1.38**	**247**	⇓*i*P		Pn	08 21 22.9	**+2.6**
CEN1				*i* S		Sn	08 21 44.1	**+5.6**
CEN1				AML	AML		08 21 48.0	
	comp=N,875nm,0.4s							
TOCH	**Tocopilla**	**1.48**	**300**	*e*P		Pn	08 21 22.2	**+0.7**
TOCH				*i* S		Sn	08 21 41.2	**+0.4**
TOCH				AML	AML		08 21 46.2	
	comp=N,1μm,0.7s							
MECH	**Mejillones**	**1.52**	**260**	*e*P		Pn	08 21 22.5	**+0.5**
MECH				AML	AML		08 21 49.2	
	comp=N,2μm,0.3s							
ANCH	**Antofagasta**	**1.68**	**240**	*e*P		Pn	08 21 26.4	**+2.4**
ANCH				*i* S		Sn	08 21 48.2	**+2.9**
CPN1	**Cerro Paranal**	**2.29**	**219**	⇑*i*P		Pn	08 21 32.4	**+0.4**

KRSC ***25*** *08:26:12.8±0.7, 5542N×161.03E, h163km±33km, ML4.1*
ISCJB ***25*** *08:26:13.6±0.4, 5541N±004×161.0E±0.1, h160km±3km, mb3.4/5, Error ellipse: s-maj=10.4km s-min=5.0km az=20.3*
MOS ***25*** *08:26:13.7±0.9, 5539N×161.14E, h162km, mb3.7/2, Error ellipse: s-maj=50.8km s-min=11.8km az=69.1*
IDC ***25*** *08:26:15.8±2.2, 55.12N×161.29E, h162km±17km, mb3.3/5, mb1 3.6/6, mb1mx3.2/24, mbtmp3.4/6, Error ellipse: s-maj=132.7km s-min=17.6km az=142.0*
ISC 25 08:26:14.6±0.4, 5541N±003×1610E±01, h157km±3km, n32, σ0°84/51, mb3.4/5, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TUMR	**Tumrok**	**0.52**	**256**	*e*P		**Pn**	**08 26 37.2**	**+0.4**
TUMR				*i* S		**Sn**	**08 26 55.2**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**0.56**	**340**	*e*P		**Pn**	**08 26 36.9**	**-0.1**
BZGR				*i* S		**Sn**	**08 26 54.7**	**+0.5**
KMNR	**Kamenistaya**	**0.57**	**308**	*e*P		**Pn**	**08 26 37.3**	**+0.3**
KMNR				*i* S		**Sn**	**08 26 55.6**	**+1.4**
BZMR	**Bezymyannaya**	**0.61**	**330**	*e*P		**Pn**	**08 26 37.3**	**+0.1**
BZMR				*i* S		**Sn**	**08 26 55.7**	**+1.0**
ZLN	**Zelenaya**	**0.62**	**348**	*e*P		**Pn**	**08 26 37.8**	**+0.5**
BZWR	**Bezymyannyi-We**	**0.63**	**332**	*e*P		**Pn**	**08 26 37.4**	**0.0**
BZWR				*i* S		**Sn**	**08 26 55.4**	**+0.5**
KIRR	**Kirishev**	**0.67**	**325**	*e*P		**Pn**	**08 26 37.2**	**-0.4**
KPT	**Kopyto**	**0.72**	**321**	*e*P		**Pn**	**08 26 37.6**	**-0.3**
CIRR	**Tsirk**	**0.72**	**347**	*e*P		**Pn**	**08 26 38.2**	**+0.3**
CIRR				*i* S		**Sn**	**08 26 56.4**	**+0.5**
KRSR	**Krestovskiy**	**0.85**	**342**	*e*P		**Pn**	**08 26 38.2**	**-0.6**
KRSR				*i* S		**Sn**	**08 26 56.7**	**-0.7**
KOZR	**Kozyr**	**0.92**	**316**	PN		**Pn**	**08 26 38.9**	**-0.4**
KOZR				S		**Sn**	**08 26 58.3**	**0.0**
KOZ	**Kozyrevsk**	**0.92**	**315**	*e*P		**Pn**	**08 26 38.9**	**-0.4**
KOZ				*i* S		**Sn**	**08 26 58.3**	**-0.1**
KLY	**Klyuchi**	**0.93**	**347**	*e*P		**Pn**	**08 26 38.9**	**-0.5**
KLY				*i* S		**Sn**	**08 26 58.1**	**-0.4**
MKZ	**Mys K

1.0nm,0.3s,baz=330,slow=20,SNR=6.4
AFI Afiamalu 13.38 24 P Pn 08 38 45.1 -0.1
7.2nm,0.3s,baz=231,slow=6.5,SNR=11
AFI S Sn 08 41 00.9 -12
1.2nm,0.3s,baz=153,slow=18,SNR=2.3
CTA Charters Tower 34.04 273 P P 08 42 14.5 +1.4
2.4nm,0.6s,baz=114,slow=10.0,SNR=5.0
ASAR Alice Springs 44.15 262 P P 08 43 36.8 -0.5
1.6nm,0.4s,baz=100,slow=8.4,SNR=46
WB2 Warramunga Arr 44.76 268 *eP* P 08 43 41.2 -1.0
WRA Warramunga Arr 44.77 268 P P 08 43 41.4 -0.8
1.8nm,0.5s,baz=105,slow=7.5,SNR=18
KAKA Kakadu 49.03 276 *eP* Px 08 44 01.8
6.8nm,0.3s
MAW Mawson 76.33 200 P P 08 47 16.4 +0.5
1.9nm,0.7s,baz=78,slow=9.3,SNR=3.2
NOA NORSAR Array B 144.83 353 PKP PKPdf 08 55 02.8 0.0
1.7nm,0.7s,baz=21,slow=3.8,SNR=4.2
AKASG Malin Array Be 148.36 327 PKPbc PKPbc 08 55 12.2 -0.3
0.9nm,0.4s,baz=45,slow=4.2,SNR=5.9
BRTR Keskin Array B 151.02 305 PKPbc PKPbc 08 55 18.3 -1.2
0.3nm,0.4s,baz=60,slow=3.8,SNR=2.9
BRTR PKPab PKPab 08 55 28.4 +1.1
0.6nm,0.6s,baz=88,slow=3.3,SNR=3.4
TORD Torodi Ar. Bea 166.84 175 PKP PKPdf 08 55 30.8 -1.9
0.2nm,0.6s,baz=163,slow=1.5,SNR=2.2

IDC 25 08:38:40.5±6.2, 1033S×16138E, h85km±40km, mb3.5/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.5/5, Error ellipse: s-maj=58.4km s-min=28.1km az=101.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.67**	**302**	P	Pn	08 39 07.6	-0.6
	119nm,0.3s,baz=123,slow=2.4,SNR=31						
HNR				S	Sn	08 39 29.3	+0.2
	287nm,0.3s,baz=195,slow=5.6,SNR=7.8						
CTA	**Charters Tower**	**17.51**	**235**	P	Pn	08 42 40.0	+0.7
	0.2nm,0.3s,baz=57,slow=13,SNR=6.1						
WRA	**Warramunga Arr**	**27.76**	**247**	P	P	08 44 21.4	0.0
	0.9nm,0.6s,baz=74,slow=9.2,SNR=9.5						
ASAR	**Alice Springs**	**29.36**	**240**	P	P	08 44 35.3	-0.3
	0.4nm,0.6s,baz=59,slow=11,SNR=3.7						
SONM	**Songino Array**	**75.59**	**325**	P	P	08 50 16.8	+0.8
	0.8nm,0.5s,baz=137,slow=6.8,SNR=6.7						
MKAR	**Makanchi Array**	**90.08**	**318**	P	P	08 51 30.4	-0.5
	0.2nm,0.5s,baz=92,slow=5.1,SNR=3.5						

IDC 25 08:47:08.0±3.9, 6533S×17811E, h0km, mb4.1/3, mb1 4.4/4, mb1mx4.0/11, mbtmp4.2/4, ML3.6/1, MS4.3/15, Ms1 4.3/15, ms1mx4.2/22, Error ellipse: s-maj=138.6km s-min=25.1km az=69.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.21**	**195**	Pn	Pn	08 50 16.4	+0.1
	0.3nm,0.3s,baz=27,slow=17,SNR=48						
VNDA				LR	LR	08 54 18.1	
	comp=Z,2μm,20.1s,baz=49,slow=33						
RPZ	**Rata Peaks**	**22.01**	**346**	LR	LR	08 58 40.5	
	comp=Z,1μm,19.3s,baz=164,slow=32						
QSPA	**South Pole Qui**	**24.76**	**180**	P	P	08 52 30.0	-0.6
	5.7nm,0.8s,baz=35,slow=5.7,SNR=14						
QSPA				LR	LR	09 01 25.2	
	comp=Z,1μm,18.1s,baz=229,slow=35						
URZ	**Urewera**	**27.11**	**358**	LR	LR	09 01 38.9	
	comp=Z,1μm,19.2s,baz=159,slow=32						
RAO	**Raoul Island**	**36.18**	**6**	LR	LR	09 04 09.4	
	comp=Z,361nm,21.5s,baz=132,slow=28						
MAW	**Mawson**	**39.67**	**213**	LR	LR	09 11 07.5	
	comp=Z,2μm,19.6s,baz=141,slow=36						
CTA	**Charters Tower**	**49.84**	**320**	LR	LR	09 15 07.8	
	comp=Z,167nm,19.6s,baz=122,slow=34						
ASAR	**Alice Springs**	**50.35**	**304**	P	P	08 56 06.3	0.0
	1.5nm,0.7s,baz=156,slow=7.6,SNR=19						
RKT	**Rikitea**	**51.80**	**59**	*e*LR	LR	09 10 45.2	
	313nm,30.8s						
RKT	**Rikitea**	**51.80**	**59**	*e*T		09 51 11.3	
	5.4nm,0.2s						
PPT	**Papeete**	**52.36**	**40**	*e*S	S	09 03 47.9	0.0
	154nm,27.5s						
PPT				*e*LQ		09 08 31.9	
	546nm,23.2s						
PPT				*e*LR	LR	09 10 51.0	
	815nm,28.2s,baz=193						
PPT	**Papeete**	**52.36**	**40**	*e*T		09 51 57.9	
	4.4nm,0.3s						
PPT	**Papeete**	**52.36**	**40**	LR	LR	09 12 27.8	
	comp=Z,241nm,19.0s,baz=94,slow=29						
TIAR	**Tiarei**	**52.43**	**40**	*e*T		09 52 03.5	
	100nm,0.3s						
WB2	**Warramunga Arr**	**53.63**	**306**	*e*P	P	08 56 30.3	-0.6
WRA	**Warramunga Arr**	**53.64**	**306**	P	P	08 56 30.1	-0.8
	1.4nm,0.7s,baz=155,slow=6.5,SNR=12						
WRA				LR	LR	09 16 25.9	
	comp=Z,201nm,18.4s,baz=160,slow=33						
VAH	**Vaihoa**	**55.12**	**41**	*e*T		09 55 23.8	
	45nm,0.2s						
HNR	**Honiara**	**57.23**	**339**	LR	LR	09 17 46.1	
	comp=Z,245nm,18.1s,baz=155,slow=32						
BATI	**Baumata**	**66.42**	**299**	LR	LR	09 23 26.1	
	comp=Z,268nm,18.9s,baz=226,slow=33						
KAPI	**Kappang**	**72.65**	**297**	LR	LR	09 27 51.0	
	comp=Z,159nm,20.0s,baz=306,slow=34						
BOSA	**Boshof**	**84.03**	**204**	LR	LR	09 38 28.5	
	comp=Z,178nm,18.4s,baz=168,slow=37						
LPAZ	**La Paz**	**84.80**	**118**	LR	LR	09 27 28.9	
	comp=Z,77nm,22.0s,baz=36,slow=28						
NNA	**Nana**	**85.37**	**109**	LR	LR	09 30 46.5	
	comp=Z,23nm,19.0s,baz=311,slow=31						
DIB	**Dawson Inlet,**	**124.11**	**33**	T		11 22 02.4	
VIB	**Van Inlet**	**124.14**	**33**	T		11 22 04.8	
BRTR	**Keskin Array B**	**147.27**	**236**	PKPbc	PKPbc	09 06 53.8	+1.5
	3.8nm,0.8s,baz=147,slow=4.4,SNR=7.6						

IDC 25 09:05:49.6±1.2, 1410N×12084E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/20, mbtmp3.9/5, MS3.2/1, Ms1 3.2/1, ms1mx2.8/26, Error ellipse: s-maj=59.0km s-min=21.1km az=62.0
NEIC 25 09:05:50.9±0.7, 1408N×12091E, h10km, mb4.6/1, Error ellipse: s-maj=18.7km s-min=9.9km az=64.0
MAN 25 09:05:51, 1375N×11983E, h7km, mb4.2, ML3.1, MS2.8
ISCJB 25 09:05:52.1±2.4, 1369N±009×1198E±0.1, h21km±17km, mb4.1/5, Error ellipse: s-maj=24.6km s-min=13.5km az=18.2

ISC 25 09:05:52.6±2.6, 1370N±009×1199E±01, h15km±16km, n16, σ0§84/15, mb4.1/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.39**	**85**	*e*P	**Pg**	**09 06 00.2**	**-0.2**
LUBP				*e*S	**Sg**	**09 06 05.5**	**-0.2**
TGY	**Tagaytay City**	**1.13**	**69**‖	*e*P	**Pb**	**09 06 14.4**	**+0.5**
POLP	**Polillo Island**	**2.27**	**63**	*e*P	**Pn**	**09 06 29.9**	**+0.3**
ENPP	**El Nido**	**2.51**	**190**	*e*P	**Pn**	**09 06 33.7**	**+0.8**
GQP	**Guinayangan**	**2.53**	**85**	*e*S	**Sn**	**09 07 11.9**	**+8.1**
BALP	**Baler**	**2.63**	**39**	*e*P	**Pn**	**09 06 35.1**	**+0.5**
KKM	**Kota Kinabalu**	**8.40**	**206**	Pn	Px	09 08 04.2	
DAV	**Davao City (W)**	**8.67**	**139**	Pn	**Pn**	**09 07 50.9**	**-6.7**
CMAR	**Chiang Mai Arr**	**20.63**	**286**	P	**P**	**09 10 39.9**	**+8.1**
	1.2nm,0.3s,baz=94,slow=8.4,SNR=5.1						
GUMO	**Guam**	**24.31**	**87**	LR	LR	09 17 59.7	
	comp=Z,64nm,21.0s,baz=64,slow=31						
SONM	**Songino Array**	**35.83**	**344**	P	**P**	**09 12 49.5**	**-2.0**
	0.2nm,0.3s,mb3.5,baz=170,slow=8.8,SNR=2.7						
WRA	**Warramunga Arr**	**36.34**	**157**	P	**P**	**09 12 55.3**	**-0.9**
	2.3nm,0.5s,mb4.3,baz=336,slow=9.5,SNR=42						
ASAR	**Alice Springs**	**39.60**	**160**	P	**P**	**09 13 23.5**	**-0.1**
	1.3nm,0.6s,mb3.9,baz=340,slow=7.1,SNR=27						
KURK	**Kurchatov**	**49.73**	**327**	*e*P	**P**	**09 14 45.7**	**+1.4**
	5.2nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**78.79**	**339**	P	**P**	**09 17 54.2**	**-0.3**
	5.3nm,1.1s,mb4.4,baz=64,slow=10,SNR=2.8						
ARCES	**ARCESS Array B**	**78.79**	**339**	P	**P**	**09 17 54.2**	**-0.3**

IDC 25 09:06:52.3±0.6, 1395N×12021E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.2/23, mbtmp4.2/16, MS3.3/1, Ms1 3.3/1, ms1mx2.8/27, Error ellipse: s-maj=35.8km s-min=12.8km az=67.0
NEIC 25 09:06:53.6±0.4, 1396N×12023E, h10km, mb4.7/2, Error ellipse: s-maj=21.5km s-min=7.5km az=63.0
ISCJB 25 09:06:56.9±1.1, 1384N±005×1200E±0.1, h47km±11km, mb4.3/19, Error ellipse: s-maj=17.1km s-min=7.8km az=168.0
MAN 25 09:06:56, 1380N×11973E, h35km, mb4.5, ML3.4, MS3.2

ISC 25 09:06:58.0±1.0, 1384N±005×1200E±01, h40km±11km, n31, σ0§86/32, mb4.3/19, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	**1.73**	**142**	*e*P	**Pn**	**09 07 30.7**	**+5.2**
SJMP				*e*S	**Sn**	**09 07 45.9**	**-0.5**
BUSP	**Coron**	**1.83**	**175**	*e*P	**Pn**	**09 07 26.1**	**-0.9**
BUSP				*e*S	**Sn**	**09 07 47.8**	**-1.2**
PCPH	**Palayan**	**1.99**	**31**‖	*e*P	**Pn**	**09 07 29.7**	**+0.5**
GQP	**Guinayangan**	**2.34**	**88**	*e*P	**Pn**	**09 07 38.8**	**+4.9**
OTRP	**Odiongan**	**2.42**	**127**	*e*P	**Pn**	**09 07 37.3**	**+2.1**
CUYO	**Cuyo Island**	**3.12**	**162**	*e*P	**Pn**	**09 07 44.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**20.77**	**286**	P	**P**	**09 11 36.8**	**+1.1**
	1.2nm,0.3s,baz=92,slow=8.7,SNR=6.2						
BATI	**Baumata**	**24.16**	**171**	P	**P**	**09 12 12.1**	**+1.5**
	27nm,0.5s,mb5.0,baz=337,slow=3.1,SNR=6.5						
KSRS	**Korea Array**	**24.55**	**15**	P	**P**	**09 12 12.5**	**-1.4**
	2.3nm,0.8s,mb3.8,baz=202,slow=11,SNR=8.0						
KSRS				LR	LR	09 23 03.0	
	comp=Z,68nm,18.6s,baz=200,slow=40						
SONM	**Songino Array**	**35.75**	**344**	P	**P**	**09 13 52.8**	**-0.1**
	1.3nm,0.6s,mb4.0,baz=164,slow=9.0,SNR=4.7						
SONM				PcP	PcP	09 16 20.2	-0.1
	0.4nm,0.7s,baz=174,slow=3.3,SNR=3.9						
WRAB	**Tennant Creek**	**36.39**	**157**	*e*P	**P**	**09 13 58.8**	**+0.1**
	9.5nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**36.40**	**157**	P	**P**	**09 13 58.5**	**-0.2**
	8.7nm,0.5s,mb4.9,baz=336,slow=9.5,SNR=52						
WB2	**Warramunga Arr**	**36.40**	**157**	*e*P	**P**	**09 13 58.5**	**-0.3**
WB2	**Warramunga Arr**	**36.40**	**157**	*e*P	**P**	**09 13 58.9**	**+0.1**
ASAR	**Alice Springs**	**39.66**	**160**	P	**P**	**09 14 26.7**	**+0.5**
	4.8nm,0.6s,mb4.4,baz=341,slow=7.3,SNR=40						
FORT	**Forrest**	**45.02**	**170**	*e*P	**P**	**09 15 10.4**	**+0.6**
	19nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**45.54**	**324**	P	**P**	**09 15 14.2**	**+0.5**
	0.7nm,0.8s,mb3.7,baz=130,slow=9.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**48.64**	**333**	P	**P**	**09 15 36.5**	**-1.2**
	1.1nm,0.4s,mb4.2,baz=122,slow=7.3,SNR=5.2						
KURK	**Kurchatov**	**49.72**	**327**	P	**P**	**09 15 46.5**	**+0.4**
	1.8nm,0.7s,mb4.2,baz=131,slow=7.8,SNR=5.9						
STKA	**Stephens Creek**	**49.93**	**156**	*e*P	**P**	**09 15 48.1**	**+0.2**
	1.6nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**49.93**	**156**	P	**P**	**09 15 48.2**	**+0.3**
	1.9nm,0.5s,mb4.4,baz=325,slow=7.0,SNR=7.8						
BVAR	**Borovoye Array**	**55.30**	**326**	P	**P**	**09 16 27.8**	**+0.4**
	0.7nm,0.5s,mb4.0,baz=120,slow=10,SNR=3.2						
TIXI	**Tiksi**	**58.03**	**3**	*e*P	**P**	**09 16 45.5**	**-1.0**
	4.4nm,0.7s,mb4.6						
AKTK	**Aktyubinsk**	**61.70**	**320**	P	**P**	**09 17 12.2**	**+0.1**
AKTO	**Aktyubinsk**	**61.70**	**320**	P	**P**	**09 17 12.2**	**+0.1**
	2.0nm,0.9s,mb4.3,baz=67,slow=8.0,SNR=5.7						
BRTR	**Keskin Array B**	**78.56**	**308**	P	**P**	**09 18 56.4**	**+0.9**
	0.5nm,0.8s,mb3.5,baz=83,slow=3.8,SNR=2.6						
ARCES	**ARCESS Array B**	**78.73**	**339**	P	**P**	**09 18 55.7**	**-0.2**
	5.1nm,1.0s,mb4.4,baz=66,slow=7.0,SNR=5.9						
NOA	**NORSAR Array B**	**86.84**	**333**	P	**P**	**09 19 35.8**	**-2.4**
	0.7nm,0.6s,mb4.1,baz=61,slow=7.2,SNR=2.5						
YKA	**Yellowknife Ar**	**92.89**	**22**	P	**P**	**09 20 06.4**	**0.0**
	0.5nm,0.4s,mb4.3,baz=305,slow=4.5,SNR=4.3						
VNDA	**Vanda**	**94.27**	**172**	P	**P**	**09 20 12.4**	**0.0**
	0.5nm,0.7s,mb4.1,baz=321,slow=4.7,SNR=3.6						
PLCA	**Paso Flores**	**151.65**	**163**	PKPbc	PKPbc	09 26 48.9	+0.6
	1.5nm,0.8s,baz=225,slow=4.3,SNR=3.7						

IDC 25 09:38:33.3±1.4, 1427N×9246W, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.9/22, mbtmp3.8/7, Error ellipse: s-maj=79.9km s-min=20.6km az=48.0
ISCJB 25 09:38:36.7±0.7, 1413N±005×9298W±004, h33km, mb4.0/9, Error ellipse: s-maj=7.9km s-min=4.4km az=24.4
NEIC 25 09:38:38.0±1.3, 1407N×9296W, h18km±62km, MD4.3
CASC 25 09:38:38.5±2.2, 1594N×9199W, h20km±50km, MD4.8, mb4.5(NEIC)

ISC 25 09:38:38.4±0.7, 1415N±005×9290W±004, h35km, n37, σ1§22/44, mb4.0/9, 2C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.97**	**39**	*i* P	**Pn**	**09 38 54.4**	**-1.2**
THIG				*i* S	**Sn**	**09 39 07.5**	**-0.6**
PCIG		**1.57**	**349**	*i* P	**Pn**	**09 39 02.0**	**-1.8**
PCIG				*i* S	**Sn**	**09 39 21.2**	**-1.8**
FG6		**2.00**	**78**‖	*e*P	**Pn**	**09 39 09.8**	**+0.1**
FUG	**Fuego 3**	**2.02**	**81**‖	*e*P	**Pn**	**09 39 09.3**	**-0.7**
IXG	**Ixpaco**	**2.38**	**89**	*e*P	**Pn**	**09 39 15.0**	**+0.1**
TGIG		**2.62**	**355**	*i* P	**Pn**	**09 39 19.4**	**+1.1**
TGIG				*i* S	**Sn**	**09 39 50.2**	**+1.4**
RBDL	**Robledal**	**3.12**	**90**	*e*P	x	09 39 25.1	
RTR	**El Retiro**	**3.17**	**94**	*e*P	x	09 39 25.4	
SNJE	**San Jose**	**3.21**	**95**	*e*P	x	09 39 25.6	
CMIG	**Matias Romero**	**3.49**	**327**	Pn	**Pn**	**09 39 30.1**	**-0.2**
	11nm,0.3s,baz=137,slow=13,SNR=107						
CMIG				Sn	**Sn**	**09 40 10.1**	**-0.2**
	21nm,0.3s,baz=104,slow=19,SNR=7.9						
CMIG	**Matias Romero**	**3.49**	**327**	*i* P	**Pn**	**09 39 29.7**	**-0.5**
CMIG				Pn	**Pn**	**09 39 30.1**	**-0.2**
CMIG				*i* S	**Sn**	**09 40 09.8**	**-0.5**
CMIG				Sn	**Sn**	**09 40 10.1**	**-0.2**
CMIG	**Matias Romero**	**3.49**	**327**	*i* P	**Pn**	**09 39 29.7**	**-0.5**
CMIG				*i* S	**Sn**	**09 40 09.8**	**-0.5**
LFRS	**El Faro**	**3.77**	**98**	*e*P	x	09 39 33.2	
LFRS				*e*S	x	09 40 18.8	
LBRS	**Las Brisas**	**3.77**	**96**	*e*P	x	09 39 33.5	
TUIG	**Tuzandepetl**	**4.12**	**339**	*e*P	**Pn**	**09 39 39.2**	**+0.2**
TUIG				*i* S	**Sn**	**09 40 26.2**	**+0.2**
OXX	**Oaxaca**	**4.69**	**309**	*e*P	**Pn**	**09 39 50.4**	**+3.6**
OXX				*i* S	**Sn**	**09 40 39.8**	**-0.2**
VHO	**Vista Hermosa**	**4.69**	**309**	*i* P	**Pn**	**09 39 46.5**	**-0.2**
VHO				*i* S	**Sn**	**09 40 40.3**	**+0.3**
TGUH	**Tegucigalpa,Un**	**5.46**	**90**	Pn	**Pn**	**09 40 03.5**	**+6.1**
	50nm,0.8s						
PNIG	**Pinotepa**	**5.51**	**294**	*i* P	**Pn**	**09 39 56.4**	**-1.6**
PNIG				*i* S	**Sn**	**09 40 59.2**	**-1.0**
UTMO	**Huajuapan**	**5.96**	**308**	*i* P	**Pn**	**09 40 04.2**	**-0.1**
UTMO				*i* S	**Sn**	**09 41 10.3**	**-1.0**
PPM	**Popocatepetl**	**7.34**	**312**	*e*P	**Pn**	**09 40 19.4**	**-3.8**
PPM				*i* S	**Sn**	**09 41 45.1**	**-0.3**
TXAR	**Lajitas Array**	**18.09**	**328**	P	**Pn**	**09 42 51.5**	**+4.4**
	0.1nm,0.3s,baz=151,slow=13,SNR=13						
TXAR	**Lajitas Array**	**18.09**	**328**	P	**Pn**	**09 42 51.5**	**+4.4**
AMTX	**Amarillo**	**22.11**	**341**	*e*P	**P**	**09 43 32.0**	**+1.2**
	5.6nm,0.5s,mb4.2						
ANMO	**Albuquerque**	**24.05**	**332**	P	**P**	**09 43 51.5**	**+1.2**
	0.6nm,0.6s,mb3.2,baz=158,slow=12,SNR=5.7						
ANMO	**Albuquerque**	**24.05**	**332**	P	**P**	**09 43 51.5**	**+1.1**
PDAR	**Pinedale Array**	**31.92**	**336**	P	**P**	**09 45 01.8**	**+1.1**
	0.5nm,0.8s,mb3.4,baz=134,slow=10,SNR=3.5						
REDW	**Red Top Meadow**	**32.94**	**336**	*e*P	**P**	**09 45 11.8**	**+2.3**
	6.4nm,0.9s,mb4.5						
SNOW	**Snow King Moun**	**32.98**	**336**	*e*P	**P**	**09 45 12.3**	**+2.4**
	11nm,1.0s,mb4.7						
NVAR	**Mina Array Bea**	**33.00**	**322**	P	**P**	**09 45 13.4**	**+3.2**
	1.8nm,0.7s,mb4.1,baz=134,slow=8.9,SNR=19						
NVAR				pP	pP	09 45 21.7	+1.3
	4.2nm,0.8s,baz=137,slow=8.9,SNR=22						
NVAR	**Mina Array Bea**	**33.00**	**322**	P	**P**	**09 45 13.4**	**+3.2**
NVAR				pP	pP	09 45 21.7	+1.3
MCMT	**McKenzie Canyo**	**34.96**	**335**	*e*P	**P**	**09 45 30.2**	**+3.1**
SIV	**San Ignacio**	**43.44**	**132**	P	**P**	**09 46 37.4**	**-0.8**
	0.8nm,0.6s,mb3.6,baz=294,slow=10,SNR=6.3						
YKA	**Yellowknife Ar**	**50.68**	**347**	P	**P**	**09 47 34.4**	**+0.3**
	3.4nm,0.8s,mb4.3,baz=148,slow=7.0,SNR=8.8						
TORD	**Torodi Ar. Bea**	**91.19**	**76**	P	**P**	**09 51 38.5**	**-2.2**
	0.3nm,0.7s,mb3.7,baz=292,slow=7.6,SNR=1.7						
WRA	**Warramunga Arr**	**134.58**	**256**	PKP	PKPdf	09 57 53.6	-0.3
	0.2nm,0.7s,baz=89,slow=3.0,SNR=4.5						
CMAR	**Chiang Mai Arr**	**145.56**	**340**	PKPbc	PKPbc	09 58 11.9	-2.1
	1.2nm,0.3s,baz=348,slow=3.2,SNR=7.4						

BJI 25 10:07:53.5, 500S×10220E, h35km, mB5.1, mb4.9, Ms4.6, Msz4.4
NEIC 25 10:07:54.5±0.5, 505S×10221E, h35km, mb4.9/17, Error ellipse: s-maj=14.1km s-min=6.3km az=41.0

MOS 25 10:07:54.8±0.8, 4.97S×10237E, h51km, mb4.9/26, Error ellipse: s-maj=15.0km s-min=7.8km az=101.6
ISCJB 25 10:07:54.2±1.0, 5.12S±006×10217E±006, h46km±7km, mb4.8/59, MS4.1/18, Error ellipse: s-maj=13.3km s-min=6.1km az=43.4
DJA 25 10:07:55.0±0.0, 5.22S×10187E, h30km, mB6.0/4, Mjma4.2/11, MLv5.0/11, Mw(mB)5.6/4, Mwp4.1/4
IDC 25 10:07:57.5±3.2, 4.93S×10239E, h54km±27km, mb4.4/17, mb1 4.5/18, mb1mx4.4/23, mbtmp4.4/18, ML4.1/1, MS3.8/7, Ms1 3.9/7, ms1mx3.6/27, Error ellipse: s-maj=26.3km s-min=9.9km az=42.0

ISC 25 10:07:57.1±0.9, 508S±006×10224E±006, h55km±7km, h33km±2.0km: pP-P, n127, σ1§11/133, mb4.8/59, MS4.1/18, 5C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.46**	**14**	P	**Pn**	**10 08 18.6**	**-2.6**
KLI	**Kotabumi**	**2.61**	**85**	P	**Pn**	**10 08 37.7**	**+0.8**
BLSI	**Bandar Lampung**	**3.00**	**96**	P	**Pn**	**10 08 44.1**	**+1.9**
PDSI	**Padang**	**4.51**	**337**	P	**Pn**	**10 09 00.2**	**-2.7**
DBJI	**Dramaga**	**4.71**	**108**	P	**Pn**	**10 09 09.5**	**+3.8**
	297nm,0.9s,1.7nm						
CBJI	**Citeko**	**4.77**	**106**	P	**Pn**	**10 09 12.8**	**+6.3**
	1μm,0.8s,3.8nm						
PPBI	**Pangkal Pinang**	**4.85**	**53**	P	Px	10 09 18.6	
	131nm,0.5s,9μm0.9nm						
PPI	**Padang Panjang**	**4.95**	**338**	P	**Pn**	**10 09 07.0**	**-2.0**
DSRI	**Dabo**	**5.13**	**27**	P	**Pn**	**10 09 11.9**	**+0.4**
	160nm,0.8s,5μm0.5nm						
LEM	**Lembang**	**5.62**	**108**	P	**Pn**	**10 09 20.5**	**+2.4**
	203nm,1.1s,0.8nm						
XMIS	**Christmas Isla**	**6.34**	**148**	*e*Pn	**Pn**	**10 09 20.1**	**-7.9**
XMIS				*e*Sn	**Sn**	**10 10 28.1**	**-11**
MYKOM	**Kota Tinggi**	**7.01**	**13**	P	**Pn**	**10 09 38.6**	**+1.4**
IPM	**Ipoh**	**9.57**	**353**	P	**Pn**	**10 10 15.9**	**+3.5**
	17nm,0.9s						
KAPI	**Kappang**	**17.44**	**91**	P	**Pn**	**10 11 56.1**	**-0.6**
	0.7nm,0.3s,baz=163,slow=20,SNR=4.8						
KAPI	**Kappang**	**17.44**	**91**	*e*P	**Pn**	**10 11 56.3**	**-0.4**
	3.6nm,0.4s						
KKM	**Kota Kinabalu**	**17.80**	**52**	*e*Pn	**Pn**	**10 12 01.4**	**+0.3**
BATI	**Baumata**	**21.82**	**105**	P	**P**	**10 12 44.4**	**-0.6**
	46nm,0.4s,mb5.3,baz=297,slow=2.9,SNR=9.9						
BATI				S	**S**	**10 16 40.8**	**-2.7**
	19nm,0.5s,baz=307,slow=20,SNR=4.3						
CM31	**Chiang Mai Arr**	**23.61**	**352**	*e*P	**P**	**10 13 01.6**	**-1.7**
	19nm,0.9s,mb4.5						
CMAR	**Chiang Mai Arr**	**23.61**	**352**	P	**P**	**10 13 01.4**	**-2.0**
	20nm,0.9s,mb4.5,baz=185,slow=8.2,SNR=25						
CMAR				LR	LR	10 22 34.6	
	comp=Z,173nm,18.6s,MS3.5,baz=174,slow=37						
CMAR	**Chiang Mai Arr**	**23.61**	**352**	P	**P**	**10 13 01.4**	**-1.9**
CMAR				pmax	pmax		
	comp=Z,20nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,173nm,18.6s						
CHTO	**Chiang Mai**	**23.96**	**352**	*e*P	**P**	**10 13 05.8**	**-0.7**
	comp=Z,9.0nm,0.8s,mb4.2						
CHTO	**Chiang Mai**	**23.96**	**352**	*e*P	**P**	**10 13 05.8**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
DAV	**Davao City (W)**	**26.23**	**63**	LR	LR	10 27 08.8	
	comp=Z,176nm,18.0s,MS3.6,baz=231,slow=44						
KMI	**Kunming**	**30.03**	**1**	P	**P**	**10 14 06.0**	**+5.1**
KMI				AP	pP	10 14 15.0	+0.2
KMI				S	**S**	**10 19 02.3**	**+6.9**
KMI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.6						
KMI				AMB	AMB		
	comp=Z,348nm,5.1s						
KMI				LR	LR		
	comp=N,298nm,13.1s,MS4.2						
KMI				LR	LR		
	comp=E,220nm,11.9s,MS4.2						
KMI				LR	LR		
	comp=Z,194nm,16.6s,MS3.8						
KAKA	**Kakadu**	**30.75**	**106**	*e*P	Px	10 13 50.9	
	comp=Z,5.8nm,0.6s						
NWAO	**Narrogin (SRO)**	**31.04**	**155**	LR	LR	10 24 57.1	
	comp=Z,294nm,18.6s,MS4.0,baz=156,slow=33						
GYA	**Guiyang**	**31.64**	**8**	P	**P**	**10 14 18.0**	**+2.8**
GYA				AP	pP	10 14 27.5	-1.6
GYA				XP	sP	10 14 29.5	-6.0
GYA				PP	PP	10 15 21.5	-6.1
GYA				PCP	PcP	10 17 07.0	+0.6
GYA				S	**S**	**10 19 21.8**	**+1.2**
GYA				XS	sS	10 19 38.0	-6.1
GYA				SS	SS	10 21

comp=Z,16nm,0.3s,mb5.3
WHN Wuhan 37.27 17 P **P** **10 15 04.3 +0.5**
KOLN Koldanda 37.29 332 *e*P **P** **10 15 05.5 +1.5**
comp=Z,19nm,0.6s,mb5.1
DANN Dangsing 37.71 333 *e*P **P** **10 15 08.5 +1.0**
comp=Z,47nm,0.4s,mb5.6
PYUN Piuthan 37.85 332 *e*P **P** **10 15 10.1 +1.3**
comp=Z,22nm,0.5s,mb5.1
XAN Xi'an 39.42 9 P **P** **10 15 20.5 -1.3**
XAN AP pP 10 15 30.3 -5.6
XAN PP PP 10 17 01.3 +8.1
XAN AMB AMB
comp=Z,14nm,0.5s,mb5.0
XAN AMB AMB
comp=Z,126nm,5.1s
XAN LR LR
comp=N,218nm,15.2s,MS4.3
XAN LR LR
comp=E,234nm,15.4s,MS4.3
XAN LR LR
comp=Z,396nm,14.0s,MS4.4
NJ2 Nanjing 40.17 22 *e*P **P** **10 15 30.0 +1.9**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
LZH Lanzhou 40.98 2 *e*P **P** **10 15 35.0 +0.3**
LZH AP pP 10 15 44.8 -4.1
LZH XP sP 10 15 49.0 -6.3
LZH *e*PP PP 10 17 14.5 +4.4
LZH *e*S **S** **10 21 48.0 +5.1**
LZH XS sS 10 22 04.0 -2.9
LZH AMB AMB
comp=Z,39nm,1.4s,mb4.8
LZH AMB AMB
comp=Z,157nm,4.9s
LZH LR LR
comp=E,563nm,13.5s
LZH LR LR
comp=Z,784nm,17.3s,MS4.6
COEN Coen 41.26 105 *e*P **P** **10 15 36.7 -0.6**
comp=Z,2.8nm,0.5s,mb4.2
GTA Gaotai 44.33 357 *e*P **P** **10 16 01.5 -0.3**
GTA AP pP 10 16 10.5 -5.6
GTA XP sP 10 16 15.3 -7.2
GTA PP PP 10 17 46.5 +0.4
GTA S **S** **10 22 36.0 +4.0**
GTA XS sS 10 22 50.5 -5.7
GTA SS SS 10 25 44.0 -8.4
GTA AMB AMB
comp=Z,8.0nm,1.3s,mb4.3
GTA AMB AMB
comp=Z,194nm,7.2s
GTA LR LR
comp=N,260nm,18.6s,MS4.4
GTA LR LR
comp=E,246nm,15.3s,MS4.4
GTA LR LR
comp=Z,265nm,19.2s,MS4.2
CTA Charters Tower 45.30 113 *e*P **P** **10 16 10.0 +0.1**
comp=Z,6.0nm,0.8s,mb4.5
CTA Charters Tower 45.30 113 P **P** **10 16 10.3 +0.4**
comp=Z,5.4nm,0.7s,mb4.5,baz=280,slow=9.5,SNR=6.2
CTA Charters Tower 45.30 113 P **P** **10 16 10.3 +0.4**
CTA Charters Tower 45.30 113 P **P** **10 16 10.3 +0.4**
CTA pmax pmax
comp=Z,5.0nm,0.7s
STKA Stephens Creek 45.45 131 *e*P **P** **10 16 11.6 +0.7**
comp=Z,7.7nm,0.6s,mb4.7
STKA Stephens Creek 45.45 131 P **P** **10 16 11.8 +0.9**
comp=Z,4.2nm,0.4s,mb4.6,baz=306,slow=6.4,SNR=14
STKA Stephens Creek 45.45 131 *e*P **P** **10 16 11.8 +0.9**
comp=Z,1.6nm,0.6s,mb4.0
HHC Hu-ho-hao-te 46.50 10 *e*P **P** **10 16 21.8 +2.9**
HHC AP pP 10 16 32.5 -0.9
HHC XP sP 10 16 35.0 -4.7
HHC PCP PcP 10 17 54.5 +1.8
HHC S **S** **10 23 09.8 +6.5**
HHC SCS ScS 10 26 11.8 +2.7
HHC AMB AMB
comp=Z,24nm,0.5s,mb5.4
HHC AMB AMB
comp=Z,149nm,4.5s
HHC LR LR
comp=N,250nm,20.2s,MS4.3
HHC LR LR
comp=E,252nm,19.0s,MS4.3
HHC LR LR
comp=Z,165nm,20.2s,MS4.0
KSRS Korea Array 48.61 27 P **P** **10 16 35.1 -0.3**
comp=Z,4.1nm,0.6s,mb4.7,baz=226,slow=7.1,SNR=24
KSRS PcP PcP 10 18 00.4 +0.1
comp=Z,1.2nm,0.8s,baz=213,slow=5.0,SNR=2.7
KSRS Korea Array 48.61 27 P **P** **10 16 35.1 -0.3**
KSRS 10 18 00.4
KSRS pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KSRS pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
WMQ Urumqi 50.42 346 P **P** **10 16 50.0 +1.0**
WMQ AP pP 10 17 00.0 -3.6
WMQ XP sP 10 17 04.0 -5.9
WMQ PP PP 10 18 47.0 +1.8
WMQ S **S** **10 24 01.0 +2.5**
WMQ SCS ScS 10 26 35.0 -0.2
WMQ SS SS 10 27 32.0 -1.1
WMQ AMB AMB
comp=Z,51nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,105nm,4.0s
WMQ LR LR
comp=N,125nm,16.0s,MS4.1
WMQ LR LR
comp=E,108nm,16.0s,MS4.1
WMQ LR LR
comp=Z,98nm,15.0s,MS3.9
SONM Songino Array 52.82 4 P **P** **10 17 07.3 +0.5**
comp=Z,29nm,0.7s,mb5.3,baz=184,slow=9.3,SNR=160
SONM PcP PcP 10 18 16.0 +0.4
comp=Z,1.7nm,0.4s,baz=190,slow=4.1,SNR=3.5
SONM Songino Array 52.82 4 P **P** **10 17 07.3 +0.4**
SONM 10 18 16.0
SONM pmax pmax
comp=Z,29nm,0.7s
SONM pmax pmax
comp=Z,2.0nm,0.4s
ULN Ulaanbaatar 52.89 4 *e*P **P** **10 17 07.9 +0.5**
comp=Z,20nm,1.0s,mb5.0
ULN Ulaanbaatar 52.89 4 *e*P **P** **10 17 07.9 +0.5**
ULN pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 Changchun 52.97 21 *e*P **P** **10 17 11.8 +3.7**
CN2 *e*XP sP 10 17 25.5 -3.5
CN2 *e*S **S** **10 24 40.0 +6.4**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
MAJO Matsushiro 53.33 36 *e*P **P** **10 17 08.7 -2.2**
comp=Z,109nm,2.8s,mb5.3
MAJO Matsushiro 53.33 36 *e*P **P** **10 17 08.7 -2.2**
MAJO pmax pmax
comp=Z,109nm,2.8s,mb5.3
MAT Matsushiro 53.33 36 P **P** **10 17 08.7 -2.2**
MJAR Matsushiro Arr 53.34 36 P **P** **10 17 09.1 -1.8**
MJAR PcP PcP 10 18 18.5 +0.7
comp=Z,3.9nm,0.6s,mb4.5,baz=216,slow=7.3,SNR=23
comp=Z,0.9nm,0.6s,baz=207,slow=3.8,SNR=3.7
MJAR Matsushiro Arr 53.34 36 P **P** **10 17 09.1 -1.8**
MJAR 10 18 18.5
MJAR pmax pmax
comp=Z,4.0nm,0.6s
MJAR pmax pmax
comp=Z,1.0nm,0.6s
TKM2 Tokmak 2 53.54 336 *e*P **P** **10 17 12.0 -0.3**
comp=Z,7.4nm,0.4s,mb5.0
TKM2 Tokmak 2 53.54 336 *e*P **P** **10 17 12.0 -0.3**
TKM2 pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
EKS2 Erkin-Say 54.09 334 *e*P **P** **10 17 16.4 +0.2**
comp=Z,8.2nm,0.8s,mb4.7
MK31 Makanchi Array 54.59 343 *e*P **P** **10 17 19.3 -0.6**
MKAR Makanchi Array 54.59 343 P **P** **10 17 19.2 -0.6**
comp=Z,7.9nm,0.5s,mb5.0,baz=149,slow=9.2,SNR=126
MKAR Makanchi Array 54.59 343 P **P** **10 17 19.2 -0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.5s
MDJ Mudanjiang 55.23 24 P **P** **10 17 24.5 0.0**
MDJ AMB AMB
comp=Z,8.0nm,0.8s,mb4.8
MDJ AMB AMB
comp=Z,99nm,4.3s
ZAK Zakamensk 55.25 1 *e*P **P** **10 17 24.2 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TLY Talaya 56.55 1 *e*P **P** **10 17 34.7 +0.8**
comp=Z,7.8nm,0.7s,mb4.8
TLY Talaya 56.55 1⇑ *e*P **P** **10 17 34.5 +0.7**
TLY pmax pmax
comp=Z,13nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,100nm,19.0s,MS3.9
KURK Kurchatov 59.18 343 *e*P **P** **10 17 51.5 -0.8**
comp=Z,11nm,0.8s,mb4.9
KURK Kurchatov 59.18 343 *e*P **P** **10 17 51.5 -0.8**
KURK pmax pmax
comp=Z,11nm,0.8s,mb4.9
KLR Kul'dur 59.88 22 *e*P **P** **10 17 51.8 -5.3**
ZAA0 Zalesovo Array 60.60 348 *e*P **P** **10 18 01.0 -1.0**
ZALV Zalesovo Beam 60.60 348 P **P** **10 18 01.1 -0.9**
comp=Z,10nm,0.4s,mb5.3,baz=163,slow=5.4,SNR=52
ZALV PcP PcP 10 18 44.8 -1.1
comp=Z,1.7nm,0.5s,baz=159,slow=4.5,SNR=1.4
ZALV LR LR 10 46 37.4
comp=Z,106nm,18.0s,MS4.0,baz=73,slow=38
ZALV Zalesovo Beam 60.60 348 P **P** **10 18 01.1 -0.9**
ZALV 10 18 44.8
ZALV pmax pmax
comp=Z,10.0nm,0.4s,mb5.3
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
ZALV MLR MLR
comp=Z,106nm,18.0s,MS4.0
ASAJ Asahikawa 60.94 32 P **P** **10 18 04.1 -0.3**
comp=Z,8.9nm,0.8s,mb4.9,baz=280,slow=12,SNR=4.6
ASAJ LR LR 10 42 47.1
comp=Z,53nm,20.9s,MS3.7,baz=339,slow=34
YSS Yuzh-Sakhalins 62.95 30 *e*P **P** **10 18 17.0 -0.9**
comp=Z,20nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 62.95 30 *e*P **P** **10 18 16.2 -1.8**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
BOD Bodaibo 63.41 7 *e*P **P** **10 18 20.2 -0.5**
BOD pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
BRVK Borovoye 63.90 339 *e*P **P** **10 18 23.4 -0.7**
comp=Z,4.8nm,0.6s,mb4.7
BRVK Borovoye 63.90 339 *e*P **P** **10 18 23.4 -0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
YAK Yakutsk 70.17 13 *e*P **P** **10 19 02.1 -1.6**
comp=Z,38nm,0.6s,mb5.5
YAK Yakutsk 70.17 13 *c i*P **P** **10 19 01.9 -1.8**
YAK pmax pmax
comp=Z,35nm,0.7s,mb5.4
YAK MLR MLR
comp=Z,100nm,26.0s,MS4.0
SVE Sverdlovsk 70.37 337⇑ *e*P **P** **10 19 05.1 +0.1**
SVE pmax pmax
comp=Z,19nm,1.1s,mb4.9
ARU Arti 70.91 336 *e*P **P** **10 19 08.0 -0.3**
comp=Z,20nm,1.3s,mb4.9
ARU Arti 70.91 336 *c i*P **P** **10 19 07.6 -0.7**
ARU *e*S S 10 28 21.1 +1.6
ARU *e*SS SS 10 32 54.2 +0.8
ARU pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
KIV Kislovodsk 72.32 319 *e*P **P** **10 19 17.3 +0.2**
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
PETK Petropavlovsk- 74.31 31 P **P** **10 19 27.7 -0.9**
comp=Z,6.1nm,1.0s,mb4.5,baz=275,slow=19,SNR=4.9
PETK Petropavlovsk- 74.31 31 P **P** **10 19 27.7 -0.9**
PETK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BRTR Keskin Array B 77.04 313 P **P** **10 19 43.9 -0.6**
comp=Z,1.9nm,0.8s,mb4.1,baz=130,slow=6.8,SNR=9.1
BRTR Keskin Array B 77.04 313 P **P** **10 19 43.9 -0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
SEY Seymchan 77.65 21⇑ *e*P **P** **10 19 47.8 +0.4**
TIXI Tiksi 78.54 8 *e*P **P** **10 19 50.4 -1.8**
comp=Z,3.6nm,0.7s,mb4.4
TIXI Tiksi 78.54 8⇓ *e*P **P** **10 19 50.6 -1.6**
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
TIXI MLR MLR
comp=Z,100nm,14.0s,MS4.3
VNDA Vanda 78.73 169 LR LR 10 49 59.5
comp=Z,119nm,18.1s,MS4.3,baz=324,slow=32
OBN Obninsk 80.58 328 *e*P **P** **10 20 02.7 -0.9**
OBN pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AKASG Malin Array Be 83.28 322 P **P** **10 20 17.7 -0.1**
comp=Z,1.2nm,0.6s,mb4.1,baz=86,slow=4.9,SNR=6.1
AKASG Malin Array Be 83.28 322 P **P** **10 20 17.7 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
VRI Vrinceioaia 83.62 317⇓ *i*P **P** **10 20 20.3 +0.6**
MLR Muntele Rosu 84.06 317⇓ *i*P **P** **10 20 22.8 +0.8**
BURAR Bucovina Array 85.04 319⇓ *i*P **P** **10 20 28.2 +1.3**
JOF Joensuu 85.94 334 *ep* **P** **10 20 30.6 -0.4**
KAF Kangasniemi 87.93 333 *ep* **P** **10 20 39.7 -1.0**
ARCES ARCESS Array B 90.11 340 P **P** **10 20 50.7 -0.1**
comp=Z,6.4nm,1.0s,mb4.9,baz=72,slow=5.8,SNR=3.2
ARCES ARCESS Array B 90.11 340 P **P** **10 20 50.7 -0.1**
ARCES pmax pmax
comp=Z,6.0nm,1.0s
GERES GERESS Array B 92.83 319 P **P** **10 21 04.3 +0.5**
comp=Z,0.8nm,0.8s,mb4.2,baz=106,slow=9.8,SNR=3.0
GERES GERESS Array B 92.83 319 P **P** **10 21 04.3 +0.5**
GERES pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 145.61 42 PKPbc PKPbc 10 27 31.1 +0.8
comp=Z,15nm,0.8s,baz=287,slow=1.2,SNR=160

*NEIC **25** 10:08:15.5±0.5,27.18S×177.08W,h10km, Error ellipse: s-maj=13.8km s-min=9.0km az=122.0*
*ISCJB **25** 10:08:17.4±0.5,27.24S±0.06×177.05W±0.10,h33km, mb4.2/15,MS3.6/3, Error ellipse: s-maj=13.6km s-min=7.2km az=24.1*
*IDC **25** 10:08:20.0±2.6,27.30S×177.07W,h43km±23km,mb4.0/15, mb1 4.2/17,mb1mx4.2/20,mbtmp4.1/17,ML4.1/1,MS3.4/5, Ms1 3.4/5,ms1mx3.2/21,Error ellipse: s-maj=18.3km s-min=17.2km az=84.0*
ISC 25 10:08:19.3±0.5, 27.27S±0.06×177.02W±0.10, h35km, n37, σ1§02/31, mb4.2/15, MS3.6/3.1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.13**	**202**	P		**Pn**	**10 08 52.7**	**+0.4**
	773nm,0.3s,baz=89,slow=6.1,SNR=14							
RAO				S		**Sn**	**10 09 17.4**	**-0.1**
	1um,0.3s,baz=112,slow=23,SNR=12							
RAO	**Raoul Island**	**2.13**	**202**	P		**Pn**	**10 08 52.7**	**+0.4**
RAO				*e*Pn		**Pn**	**10 08 53.5**	**+1.2**
RAO				S		**Sn**	**10 09 17.4**	**-0.1**
URZ	**Urewera**	**12.02**	**203**	P		**Pn**	**10 11 07.3**	**-0.7**
	1.1nm,0.3s,baz=24,slow=8.1,SNR=3.1							
URZ				S		**Sn**	**10 13 11.0**	**-10**
	2.2nm,0.3s,baz=121,slow=22,SNR=9.7							
AFI	**Afiamalu**	**14.17**	**21**	P		**Pn**	**10 11 34.4**	**-3.1**
	1.0nm,0.3s,baz=9.0,slow=16,SNR=2.7							
AFI				S		**Sn**	**10 14 01.7**	**-12**
	1.4nm,0.3s,baz=49,slow=23,SNR=2.9							
AFI				LR		LR	10 15 49.8	
	comp=Z,151nm,21.2s,baz=197,slow=32							
AFI	**Afiamalu**	**14.17**	**21**	P		**Pn**	**10 11 34.4**	**-3.1**
AFI				Pn		**Pn**	**10 11 35.1**	**-2.4**
AFI				S		**Sn**	**10 14 01.7**	**-12**
AFI				LR		LR	10 15 49.8	
RAR	**Rarotonga**	**16.84**	**73**	P		**Pn**	**10 12 11.8**	**-0.5**
	1.5nm,0.3s,baz=120,slow=9.2,SNR=3.3							
RAR				LR		LR	10 17 27.5	
	comp=Z,33nm,19.0s,baz=269,slow=32							
PPT	**Papeete**	**27.09**	**75**	*e*LR		LR	10 20 35.1	
	217nm,27.2s							
PPT	**Papeete**	**27.09**	**75**	LR		LR	10 22 30.7	
	comp=Z,160nm,18.1s,MS3.6,baz=258,slow=31							
HNR	**Honiara**	**28.06**	**305**	LR		LR	10 22 55.6	
	comp=Z,125nm,21.2s,MS3.5,baz=218,slow=31							
CTA Charters Tower 34.29 274 P **P** **10 15 02.1 -0.3**
5.9nm,0.6s,mb4.7,baz=106,slow=12,SNR=8.7
CTA LR LR 10 27 12.5
comp=Z,115nm,18.4s,MS3.6,baz=55,slow=33
STKA Stephens Creek 36.13 253 P **P** **10 15 19.0 +0.9**
1.2nm,0.5s,mb4.0,baz=109,slow=12,SNR=4.0
STKA Stephens Creek 36.13 253 P **P** **10 15 19.0 +0.9**
ASAR Alice Springs 44.23 263 P **P** **10 16 24.1 -1.2**
1.7nm,0.6s,mb3.9,baz=105,slow=7.5,SNR=6.0
WRA Warramunga Arr 44.94 269 P **P** **10 16 29.6 -1.5**
5.0nm,0.7s,mb4.5,baz=106,slow=7.9,SNR=13
VNDA Vanda 51.28 186 P **P** **10 17 20.0 +0.7**
1.0nm,0.8s,mb3.8,baz=353,slow=7.3,SNR=8.8
QSPA South Pole Qui 62.83 180 P **P** **10 18 42.4 +1.5**
0.9nm,0.3s,mb4.4,baz=25,slow=0.9,SNR=6.4
MAW Mawson 75.53 200 P **P** **10 19 59.0 -0.7**
2.5nm,0.6s,mb4.3,baz=128,slow=7.3,SNR=6.4
MJAR Matsushiro Arr 76.19 324 P **P** **10 20 04.5 +0.7**
0.7nm,0.5s,mb3.9,baz=162,slow=8.4,SNR=6.8
MJAR Matsushiro Arr 76.19 324 P **P** **10 20 04.5 +0.6**
ASAJ Asahikawa 80.08 332 P **P** **10 20 26.3 +1.1**
10nm,1.0s,mb4.7,baz=281,slow=24,SNR=3.2
SYO Syowa Base 80.35 193⇑ *e*P **P** **10 20 23.4 -3.0**
KSRS Korea Array 82.54 319 P **P** **10 20 39.5 +1.0**
0.9nm,0.6s,mb4.0,baz=127,slow=5.9,SNR=5.9
PETK Petropavlovsk- 83.01 345 P **P** **10 20 41.1 +0.7**
2.9nm,0.8s,mb4.3,baz=103,slow=8.0,SNR=3.2
PLCA Paso Flores 84.00 133 P **P** **10 20 45.6 -0.6**
2.6nm,0.9s,mb4.3,baz=240,slow=6.0,SNR=5.3
NVAR Mina Array Bea 85.36 42 P **P** **10 20 53.6 +0.8**
1.5nm,0.8s,mb4.2,baz=223,slow=8.5,SNR=11
TXAR Lajitas Array 89.97 57 P **P** **10 21 15.6 +0.4**
0.4nm,0.8s,mb3.8,baz=214,slow=6.0,SNR=4.8
PDAR Pinedale Array 93.27 43 P **P** **10 21 30.2 0.0**
0.9nm,0.9s,mb4.2,baz=191,slow=1.5,SNR=5.2
MKAR Makanchi Array 116.39 311 PKP PKPdf 10 26 57.1 -1.9
1.1nm,0.8s,baz=64,slow=2.8,SNR=5.7
KURK Kurchatov 119.48 315 PKP PKPdf 10 27 02.6 -2.2
1.4nm,0.8s,baz=93,slow=1.7,SNR=6.7
BVAR Borovoye Array 124.73 317 PKP PKPdf 10 27 13.5 -1.3
0.7nm,0.5s,baz=104,slow=4.7,SNR=4.8
ARCES ARCESS Array B 135.71 349 PKP PKPdf 10 27 33.7 -1.4
2.5nm,0.9s,baz=11,slow=2.5,SNR=5.0
NB2 NORSAR Subarra145.78 353 PKP PKPdf 10 27 52.6 -0.9
comp=Z,1.9nm,0.6s,baz=11,slow=3.0
NOA NORSAR Array B 145.78 353 PKPbc PKPbc 10 27 52.9 -1.1
comp=Z,3.4nm,0.7s,baz=16,slow=4.6,SNR=7.8
AKASG Malin Array Be 149.25 327 PKPbc PKPbc 10 28 02.4 -1.5
comp=Z,4.2nm,0.7s,baz=41,slow=3.1,SNR=16
AKASG PKPab PKPab 10 28 07.0 -1.5
comp=Z,2.5nm,0.6s,baz=41,slow=3.4,SNR=9.8
ASF Jabal al Asfar 150.22 288 PKPbc PKPbc 10 28 06.7 -0.2
comp=Z,3.9nm,0.7s,baz=7.8,slow=3.4,SNR=6.2
BRTR Keskin Array B 151.72 304 PKPbc PKPbc 10 28 08.8 -1.3
comp=Z,1.9nm,0.7s,baz=127,slow=3.3,SNR=9.5
TORD Torodi Ar. Bea 165.90 175 PKPab PKPab 10 29 19.4 -1.3
comp=Z,0.9nm,0.7s,baz=170,slow=5.1,SNR=5.8

*ISK **25** 10:08:58.6,37.33N×28.37E,h10km,MD2.5*
*ISCJB **25** 10:09:00.9±0.7,37.26N±0.05×28.27E±0.05,h10km, Error ellipse: s-maj=8.2km s-min=3.9km az=30.6*
*CSEM **25** 10:09:00.1±0.3,37.07N×28.17E,h12km,MD2.9, Error ellipse: s-maj=12.4km s-min=5.5km az=16.0*
*DDA **25** 10:09:01.1,37.22N×28.19E,h7km±5km,Md2.9*
ISC 25 10:09:01.6±0.7, 37.25N±0.05×28.26E±0.05, h10km, n9, σ1§01/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YER	**Yerkesik**	**0.12**	**170**	PG		**Pg**	**10 09 03.4**	**-1.1**
YER				*e*SG		**Sg**	**10 09 06.7**	**+0.3**
MLSB	**Milas**	**0.39**	**277**	*e*PG		**Pg**	**10 09 08.1**	**-1.1**
MLSB				*e*SG		**Sg**	**10 09 15.5**	**+1.2**
TURN	**Turunc**	**0.47**	**143**	*i*P		**Pg**	**10 09 09.8**	**-0.9**
TURN				*i*S		**Sg**	**10 09 17.7**	**+0.9**
BDRM	**Kayabasi**	**0.67**	**254**	*i*P		**Pg**	**10 09 12.7**	**-2.0**
BDRM				*i*S		**Sg**	**10 09 25.0**	**+1.5**
DAT	**Datca**	**0.75**	**227**	*e*PG		**Pg**	**10 09 15.8**	**-0.3**
GCAM	**G?zelcaml?**	**0.93**	**299**	*i*P		**Pg**	**10 09 18.5**	**-1.0**
GCAM				*i*S		**Sg**	**10 09 31.8**	**+0.2**
GOLH	**Golhisar**	**1.04**	**90**	*i*P		**Pg**	**10 09 22.0**	**+0.3**
GOLH				*i*S		**Sg**	**10 09 44.0**	**+8.8**
KDAG	**Bornova**	**1.39**	**326**	*i*P		**Pn**	**10 09 28.3**	**+1.1**
AKAS	**Kas**	**1.48**	**133**	*i*P		**Pg**	**10 09 30.8**	**+0.7**
AKAS				*i*S		**Sg**	**10 09 58.5**	**+9.2**

*IDC **25** 10:16:38.5±3.9,6531S×17859E,h0km,mb3.9/3, mb1 4.0/4,mb1mx3.9/11,mbtmp3.8/4,ML3.2/1,MS4.0/10, Ms1 4.0/10,ms1mx3.9/15,Error ellipse: s-maj=139.7km s-min=27.0km az=69.0*
*NEIC **25** 10:16:41.0±2.7,6539S×178.11E,h10km,Error ellipse: s-maj=78.9km s-min=14.2km az=77.0*
*ISCJB **25** 10:16:41.3±3.2,6555S±02×177E±,h10km,mb3.9/3, MS4.0/9,Error ellipse: s-maj=93.9km s-min=15.1km az=166.7*
ISC 25 10:16:41.5±3.0, 6545S±02×178E±, h10km, n19, σ0§64/8, mb3.9/3, MS4.0/9, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SBA	**Scott Base**	**12.95**	**191**	*e*Pn		**Pn**	**10 19 44.2**	**-1.0**
VNDA	**Vanda**	**13.11**	**195**	Pn		**Pn**	**10 19 48.0**	**+0.6**
	0.1nm,0.3s,baz=58,slow=16,SNR=3.8							
VNDA				LR		LR	10 23 49.7	
	comp=Z,243nm,21.8s,baz=89,slow=32							
VNDA	**Vanda**	**13.11**	**195**	Pn		**Pn**	**10 19 48.0**	**+0.6**
VNDA				LR		LR	10 23 49.7	
VNDA	**Vanda**	**13.11**	**195**	*e*P		**Pn**	**10 19 48.4**	**+1.0**
RPZ	**Rata Peaks**	**22.07**	**347**	LR		LR	10 28 11.2	
	comp=Z,360nm,20.0s,MS3.8,baz=199,slow=31							
QSPA	**South Pole Qui**	**24.68**	**180**	P		**P**	**10 22 02.1**	**+0.3**
	0.8nm,0.4s,mb3.6,baz=39,slow=5.2,SNR=4.4							
QSPA				LR		LR	10 30 47.4	
	comp=Z,363nm,18.9s,MS3.9,baz=232,slow=34							
QSPA	**South Pole Qui**	**24.68**	**180**	P		**P**	**10 22 02.1**	**+0.3**
QSPA				LR		LR	10 30 47.4	
URZ	**Urewera**	**27.19**	**359**	LR		LR	10 30 47.9	
	comp=Z,258nm,20.9s,MS3.8,baz=120,slow=31							
MAW	**Mawson**	**39.56**	**213**	LR		LR	10 40 17.0	
	comp=Z,251nm,18.1s,MS4.1,baz=95,slow=36							
ASAR	**Alice Springs**	**50.32**	**304**	P		**P**	**10 25 38.5**	**+0.4**
	1.4nm,0.7s,mb4.1,baz=158,slow=7.2,SNR=23							
RKT	**Rikitea**	**51.91**	**59**	*e*T			11 20 44.9	
	1.3nm,0.2s							
PPT	**Papeete**	**52.47**	**40**	*e*LR		LR	10 40 34.3	
	113nm,25.0s							
PPT	**Papeete**	**52.47**	**40**	LR		LR	10 45 10.8	
	comp=Z,143nm,18.2s,MS4.0,baz=97,slow=33							
WRA	**Warramunga Arr**	**53.62**	**306**	P		**P**	**10 26 02.2**	**-0.5**
	1.8nm,0.8s,mb4.1,baz=161,slow=6.5,SNR=14							
WRA				LR		LR	10 45 39.1	
	comp=Z,105nm,18.8s,MS3.9,baz=200,slow=32							
VAH	**Vaihoa**	**55.22**	**42**	*e*T			11 24 55.7	
	10nm,0.3s							
PLCA	**Paso Flores**	**61.73**	**127**	LR		LR	10 47 49.9	
	comp=Z,96nm,20.4s,MS4.0,baz=42,slow=30							
TSUM	**Tsumeb**	**94.34**	**199**	LR		LR	11 10 38.1	
	comp=Z,134nm,18.1s,MS4.5,baz=324,slow=34							
LSZ	**Lusaka**	**96.38**	**209**	LR		LR	11 15 08.1	
	comp=Z,73nm,18.6s,MS4.2,baz=223,slow=36							
BRTR	**Keskin Array B**	**147.16**	**236**	PKPbc		PKPbc	10 36 22.1	-1.6
	0.8nm,0.8s,baz=147,slow=3.4,SNR=4.2							

*NEIC **25** 10:41:39.6, 1629N×9794W, h13km±6km, MD4.0(MEX), After MEX.*
MEX 25 10:41:39.6±1.0, 1629N×9794W, h13km±6km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PNIG	**Pinotepa**	**0.20**	**298**	*i*P		Pg	10 41 43.2	-0.9
PNIG				*i*S		Sg	10 41 47.3	+0.1
VHO	**Vista Hermosa**	**1.39**	**56**	*i*P		Pn	10 42 00.8	-4.0
VHO				*i*S		Sn	10 42 17.4	-5.6
OXX	**Oaxaca**	**1.40**	**56**	*i*P		Pn	10 42 02.0	-2.9
OXX				*i*S		Sn	10 42 19.0	-4.3
UTMO	**Huajuapan**	**1.53**	**5**	*i*P		Pn	10 42 03.6	-3.1
UTMO				*i*S		Sn	10 42 21.9	-4.7
ACX	**Acapulco**	**1.98**	**287**	*i*P		Pn	10 42 08.8	-4.1
ACX				*i*S		Sn	10 42 33.0	-4.6
TPIG	**Tehuac#an**	**2.18**	**15**	*e*P		Pn	10 42 12.6	-3.1

TPIG				*i* S		Sn	10 42 38.0	-4.6
CAIG	**El Cayaco**	**2.35**	**289**	*e*P		Pn	10 42 15.2	-2.8
CAIG				*i* S		Sn	10 42 43.3	-3.6
PLIG	**Platanillo**	**2.57**	**325**	*e*P		Pn	10 42 17.6	-3.4
PLIG				*i* S		Sn	10 42 47.8	-4.2
YAIG	**Yautepec**	**2.77**	**337**	*e*P		Pn	10 42 21.7	-2.1
YAIG				*i* S		Sn	10 42 53.5	-3.7
PPM	**Popocatepetl**	**2.83**	**347**	*e*P		Pn	10 42 21.8	-2.8
PPM				*i* S		Sn	10 42 58.2	-0.4
PPM	**Popocatepetl**	**2.83**	**347**	*e*P		Pn	10 42 21.6	-3.0
PPM				*e*P			10 42 21.8	
PPM				*i* S		Sn	10 42 55.8	-2.9
PPM				*i* S		Sn	10 42 58.2	-0.4
CMIG	**Matias Romero**	**3.03**	**74**	*i* P		Pn	10 42 22.9	-4.5
CMIG				*i* S		Sn	10 42 59.9	-3.7
MZVM		**3.13**	**337**	*e*P		Pn	10 42 29.2	+0.5
MZVM				*i* S		Sn	10 43 03.0	-3.0
UNM	**Universidad Na**	**3.24**	**339**	*e*P		Pn	10 42 28.6	-1.6
UNM				*i* S		Sn	10 43 02.5	-6.2
PBVM	**Pinon**	**3.31**	**341**	*e*P		Pn	10 42 29.2	-2.1
PBVM				*i* S		Sn	10 43 10.3	-0.3
IIO	**Organos**	**3.36**	**347**	*e*P		Pn	10 42 29.9	-2.0
IIO				*i* S		Sn	10 43 04.7	-7.0
PTVM	**Pico Tres Padr**	**3.47**	**341**	*e*P		Pn	10 42 38.6	+5.3
PTVM				*i* S		Sn	10 43 17.3	+3.0
ZIIG	**Zihuatanejo**	**3.62**	**292**	*e*P		Pn	10 42 33.3	-2.1
ZIIG				*i* S		Sn	10 43 14.8	-3.2
MOIG	**Morelia**	**4.57**	**318**	*i* S		Sn	10 43 38.5	-3.0

CASC 25 11:03:54.1±1.9, 1406N×9163W, h24km±13km, MD4.1, 4C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.85**	**63**⇑	*e*P	Pb	11 04 10.3	+0.1
FG6		**0.87**	**55**⇓	*e*P	Pb	11 04 10.8	+0.1
FG6				*e*S	Sb	11 04 23.1	+1.2
PCG	**Pacaya**	**1.04**	**71**	*e*P	Pn	11 04 13.4	+0.3
PCG				*e*S	Sb	11 04 27.8	+1.1
IXG	**Ixpaco**	**1.14**	**84**⇑	*e*P	Pn	11 04 15.2	+0.7
IXG				*e*S	Sn	11 04 32.5	+3.1
RBDL	**Robledal**	**1.88**	**88**	*e*P	x	11 04 24.5	
RTR	**El Retiro**	**1.93**	**95**⇑	*e*P	x	11 04 25.7	
SNJE	**San Jose**	**1.97**	**95**	*e*P	x	11 04 25.8	
SNJE				*e*S	x	11 04 49.8	
LFRS	**El Faro**	**2.53**	**100**⇑	*e*P	x	11 04 34.1	
LFRS				*e*S	x	11 05 04.2	

*ISCJB **25** 11:13:08.3±0.6, 2276S×7054W±006, h36km±7km, mb3.9/6, Error ellipse: s-maj=8.8km s-min=4.5km az=14.7*
*NEIC **25** 11:13:08.9, 2278S×7044W, h32km, ML4.1(GUC), After GUC.*
*IDC **25** 11:13:08.8±0.8, 2282S×7039W, h26km±5km, mb3.8/6, mb1 4.0/8, mb1mx3.9/18, mbtmp3.9/8, ML3.9/1, MS3.0/4, Ms1 3.0/4, ms1mx2.9/26, Error ellipse: s-maj=22.2km s-min=12.2km az=175.0*
*GUC **25** 11:13:08.8±1.0, 2277S×7046W, h33km±3km, ML4.1*
ISC 25 11:13:08.4±0.7, 2276S±003×7051W±005, h22km±5km, n34, σ0.97/41, mb3.9/6, 7C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.35**	**171**⇑	*i*P	**Pb**	**11 13 16.2**	**+0.2**
MECH				*i* S	**Sb**	**11 13 22.2**	**+1.0**
MECH				AML	AML	11 13 23.2	
	comp=N,22μm,0.5s						
CEN1	**Los Morros**	**0.69**	**156**⇑	*i*P	**Pb**	**11 13 23.4**	**+1.7**
CEN1				*i* S	**Sb**	**11 13 34.5**	**+3.6**
CEN1				AML	AML	11 13 37.8	
	comp=E,4μm,0.5s						
TOCH	**Tocopilla**	**0.72**	**23**⇑	*i*P	**Pb**	**11 13 22.1**	**-0.1**
TOCH				*i* S	**Sb**	**11 13 31.8**	**+0.2**
TOCH				AML	AML	11 13 34.2	
	comp=E,26μm,0.4s						
PECH	**Pedro de Valdi**	**0.79**	**79**⇑	*i*P	**Pb**	**11 13 22.7**	**-0.7**
PECH				*i* S	**Sb**	**11 13 32.8**	**-0.8**
PECH				AML	AML	11 13 33.9	
	comp=N,41μm,0.3s						
PB06	**Plate Boundary**	**0.86**	**87**⇓	*i*P	**Pb**	**11 13 24.1**	**-0.6**
PB06				*i* S	**Sb**	**11 13 35.5**	**-0.4**
MACH	**Maria Elena**	**0.89**	**51**⇓	*i*P	**Pb**	**11 13 24.8**	**-0.3**
MACH				*i* S	**Sb**	**11 13 36.8**	**+0.3**
ANCH	**Antofagasta**	**0.93**	**174**⇑	*i*P	**Pb**	**11 13 24.6**	**-1.2**
ANCH				*i* S	**Sb**	**11 13 37.5**	**-0.2**
PB04	**Plate Boundary**	**1.06**	**63**	*e*P	**Pn**	**11 13 19.3**	**-8.6**
PB04				*i* S	**Sb**	**11 13 27.0**	**-15**
PB04				AML	AML	11 13 27.9	
	comp=E,19μm,0.5s						
PB07	**Plate Boundary**	**1.18**	**29**⇓	*i*P	**Pn**	**11 13 29.5**	**+0.1**
PB07				*i* S	**Sb**	**11 13 44.8**	**0.0**
LVC	**Limon Verde**	**1.48**	**85**	Pg	**Pn**	**11 13 34.3**	**+0.6**
	comp=E,466nm,0.3s,baz=270,slow=9.0,SNR=1415						
LVC				Lg		11 13 53.6	
	comp=E,1μm,0.3s,baz=90,slow=7.7,SNR=29						
LVC	**Limon Verde**	**1.48**	**85**⇑	*i*P	**Pn**	**11 13 34.1**	**+0.4**
LVC				*i* S	**Sn**	**11 13 53.0**	**+0.7**
LVC				AML	AML	11 13 56.0	
	comp=E,5μm,0.4s						
CPN1	**Cerro Paranal**	**1.86**	**177**	*e*P	**Pn**	**11 13 38.2**	**-0.7**
PB01	**Plate Boundary**	**1.95**	**29**⇓	*i*P	**Pn**	**11 13 41.3**	**+1.2**
PB01				*i* S	**Sn**	**11 14 05.7**	**+1.8**
ARE	**Arequipa**	**6.33**	**351**	*e*P	**Pn**	**11 14 39.0**	**-1.4**
ARE				*e*S	**Sn**	**11 15 51.0**	**-1.0**
LPAZ	**La Paz**	**6.81**	**20**	Pn	**Pn**	**11 14 50.7**	**+3.7**
	comp=E,1.9nm,0.3s,baz=227,slow=8.0,SNR=31						
LPAZ				LR	LR	11 17 42.3	
	comp=E,170nm,21.0s,baz=318,slow=40						
CFAA	**Coronel Fontan**	**9.04**	**168**	Pn	**Pn**	**11 15 16.2**	**-1.3**
	comp=E,0.0nm,0.3s,baz=343,slow=14,SNR=4.3						
CFAA				Sn	**Sn**	**11 17 13.5**	**+15**
	comp=E,0.1nm,0.3s,baz=65,slow=23,SNR=8.0						
CFAA				LR	LR	11 19 04.9	
	comp=E,32nm,18.4s,baz=306,slow=40						
CFAA	**Coronel Fontan**	**9.04**	**168**	Pn	**Pn**	**11 15 16.2**	**-1.3**
CFAA				Sn	**Sn**	**11 17 13.5**	**+15**
CFAA				LR	LR	11 19 04.9	
SIV	**San Ignacio**	**11.16**	**55**	Pn	**Pn**	**11 15 46.0**	**-0.6**
ATAH	**Atahualpa**	**17.41**	**333**	LR	LR	11 23 17.6	
	comp=E,64nm,18.3s,baz=221,slow=35						
PLCA	**Paso Flores**	**17.92**	**180**	P	**Pn**	**11 17 16.9**	**+0.8**
	comp=E,0.1nm,0.3s,baz=342,slow=8.8,SNR=4.3						
PLCA				sP	sP	11 17 25.6	-0.1
	comp=E,0.1nm,0.3s,baz=343,slow=15,SNR=3.1						
PLCA	**Paso Flores**	**17.92**	**180**	P	**Pn**	**11 17 16.9**	**+0.8**
PLCA				sP	sP	11 17 25.6	-0.1
BDFB	**Brasilia**	**22.37**	**76**	P	**P**	**11 18 05.9**	**+0.8**
	comp=E,1.2nm,0.6s,mb3.5,baz=215,slow=22,SNR=3.6						
BDFB				LR	LR	11 27 40.8	
	comp=E,54nm,19.6s,baz=122,slow=39						
TXAR	**Lajitas Array**	**60.84**	**327**	P	**P**	**11 23 19.7**	**+0.7**
	comp=E,0.6nm,0.6s,mb3.9,baz=150,slow=10,SNR=10						
DBIC	**Dimbokro**	**70.51**	**74**	P	**P**	**11 24 20.9**	**-1.0**
	comp=E,2.0nm,0.5s,mb4.3,baz=265,slow=13,SNR=4.2						
PDAR	**Pinedale Array**	**74.47**	**331**	P	**P**	**11 24 45.5**	**+0.7**
	comp=E,0.3nm,0.5s,mb3.5,baz=130,slow=6.0,SNR=4.7						
NVAR	**Mina Array Bea**	**75.58**	**323**	P	**P**	**11 24 53.0**	**+1.7**
	comp=E,0.7nm,0.8s,mb3.6,baz=145,slow=7.0,SNR=4.6						
SYO	**Syowa Base**	**75.85**	**160**	*e*P	**P**	**11 24 51.0**	**-1.5**
TORD	**Torodi Ar. Bea**	**79.17**	**71**	P	**P**	**11 25 10.7**	**-1.2**
	comp=E,4.3nm,0.5s,mb4.7,baz=255,slow=5.3,SNR=69						
TORD				pP	pP	11 25 19.9	+0.7
	comp=E,1.5nm,0.4s,baz=253,slow=5.0,SNR=7.5						
ASAR	**Alice Springs**	**128.11**	**209**	PKP	PKPdf	11 32 12.8	-0.6
	comp=E,0.6nm,0.6s,baz=130,slow=1.7,SNR=7.2						
WRA	**Warramunga Arr**	**131.12**	**212**	PKP	PKPdf	11 32 19.0	-0.3
	comp=E,0.7nm,0.6s,baz=156,slow=1.8,SNR=6.9						
ZALV	**Zalesovo Beam**	**143.71**	**25**	PKP	PKPdf	11 32 39.8	-1.5
	comp=E,1.5nm,0.6s,baz=292,slow=2.4,SNR=5.4						
MKAR	**Makanchi Array**	**147.51**	**36**	PKP	PKPdf	11 32 48.3	+0.3
	comp=E,2.2nm,0.7s,baz=338,slow=1.6,SNR=13						
MKAR				PKPbc	PKPbc	11 32 50.1	-0.5
	comp=E,2.3nm,0.7s,baz=298,slow=2.6,SNR=13						
MKAR				pPKPbc	pPKPbc	11 32 58.8	+0.6
	comp=E,2.1nm,0.8s,baz=316,slow=3.3,SNR=6.5						
MJAR	**Matsushiro Arr**	**151.64**	**305**	PKPbc	PKPbc	11 33 01.0	-0.2
	comp=E,0.8nm,0.7s,baz=116,slow=1.2,SNR=5.4						
MJAR				PKPab	PKPab	11 33 09.2	-0.7
	comp=E,0.5nm,0.5s,baz=69,slow=3.3,SNR=2.7						
SONM	**Songino Array**	**154.85**	**5**	PKPbc	PKPbc	11 33 07.6	-0.2
	comp=E,0.4nm,0.6s,baz=241,slow=2.1,SNR=3.4						

IDC 25 11:25:15.7±3.9, 480S×15328E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/16, mbtmp3.6/5, Error ellipse: s-maj=110.4km s-min=30.2km az=106.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**22.03**	**248**	*e*P	Px	11 29 57.1	
	7.4nm,0.4s						
WB2	**Warramunga Arr**	**23.79**	**229**	*e*P	P	11 30 30.5	+0.2
WRA	**Warramunga Arr**	**23.80**	**229**	P	P	11 30 30.7	+0.3
	0.9nm,0.5s,baz=53,slow=9.8,SNR=18						
ASAR	**Alice Springs**	**26.47**	**223**	P	P	11 30 54.4	-0.3
	0.4nm,0.4s,baz=55,slow=9.1,SNR=6.2						
CMAR	**Chiang Mai Arr**	**58.31**	**295**	P	P	11 35 13.1	+0.3
	0.6nm,0.7s,baz=116,slow=6.1,SNR=3.4						
MKAR	**Makanchi Array**	**80.64**	**319**	P	P	11 37 30.9	+0.4
	0.5nm,0.6s,baz=90,slow=5.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**81.42**	**326**	P	P	11 37 33.8	-0.5
	0.4nm,0.3s,baz=67,slow=8.5,SNR=2.4						

*MOS **25** 11:26:12.7±0.8, 2574S×17822E, h651km, mb4.6/17, Error ellipse: s-maj=11.3km s-min=10.3km az=164.3*
*ISCJB **25** 11:26:13.2±0.4, 2589S±003×17822E±004, h664km±6km, mb4.9/75, Error ellipse: s-maj=5.7km s-min=5.1km az=20.8*
*BJI **25** 11:26:14.6, 2509S×17839E, h658km, mB4.8, mb4.9*
*NEIC **25** 11:26:14.0±0.6, 2584S×17827E, h656km±7km, mb4.8/25, Error ellipse: s-maj=6.2km s-min=5.5km az=100.0*
*IDC **25** 11:26:14.0±0.5, 2580S×17821E, h656km±5km, mb4.2/28, mb1 4.3/31, mb1mx4.3/31, mbtmp4.3/31, Error ellipse: s-maj=7.9km s-min=7.0km az=10.0*
*DJA **25** 11:26:19.2±0.0, 2636S×177.14E, h650km, mB5.9/12, Mw(mB)5.5/12, Mwp5.2/11*
ISC 25 11:26:14.4±0.5, 2586S±003×17827E±004, h661km±6km, h661km±4.0km: pP-P, n290, σ1901/245, mb4.9/74, 11C-14D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.78**	**136**	P	**P**	**11 27 49.7**	**+0.2**
	316nm,0.3s,baz=72,slow=23,SNR=14						
RAO				S	**S**	**11 29 07.8**	**+0.5**
	167nm,0.3s,baz=264,slow=23,SNR=3.1						
RAO	**Raoul Island**	**4.78**	**136**	*e*P	**P**	**11 27 49.6**	**+0.1**
RAO				*e*S	**S**	**11 29 07.7**	**+0.4**
RAO	**Raoul Island**	**4.78**	**136**	P	**P**	**11 27 49.7**	**+0.2**
RAO				S	**S**	**11 29 07.8**	**+0.5**
RAO				pmax	pmax		
	comp=Z,317nm,0.3s						
RAO				smax			
	comp=N,167nm,0.3s						
KUZ	**Kuaotunu**	**11.07**	**191**	P	**P**	**11 28 45.5**	**+1.6**
LASL	**Noumea**	**11.31**	**286**	*e*P	**P**	**11 28 47.9**	**+1.5**
NORM	**Noumea**	**11.36**	**286**	*e*P	**P**	**11 28 48.2**	**+1.3**
DZM	**Mont Dzumac**	**11.45**	**287**	*e*P	**P**	**11 28 48.2**	**+0.5**
DZM	**Mont Dzumac**	**11.45**	**287**	*e*P	**P**	**11 28 48.5**	**+0.8**
NOUC	**Port Laguerre**	**11.56**	**286**	*e*P	**P**	**11 28 49.7**	**+0.9**
TGRZ	**Tauranga**	**11.96**	**188**	*e*P	**P**	**11 28 54.2**	**+2.1**
TOZ	**Tahuroa Road**	**12.06**	**191**	P	**P**	**11 28 55.1**	**+2.0**
PUZ	**Puketiti**	**12.18**	**180**	P	**P**	**11 28 51.6**	**-2.5**
URZ	**Urewera**	**12.40**	**184**	P	**P**	**11 28 54.4**	**-1.8**
	comp=N,27nm,0.3s,baz=9.5,slow=3.6,SNR=119						
URZ				S	**S**	**11 31 05.6**	**-2.8**
	comp=N,3.2nm,0.3s,baz=192,slow=18,SNR=8.2						
URZ				ScP	ScP	11 36 08.7	-1.2
	comp=N,1.2nm,0.3s,baz=54,slow=18,SNR=5.4						
URZ	**Urewera**	**12.40**	**184**	P	**P**	**11 28 54.1**	**-2.1**
MWZ	**Matawai**	**12.46**	**183**	P	**P**	**11 28 54.8**	**-1.9**
HIZ	**Hauiti**	**12.94**	**192**	P	**P**	**11 29 03.0**	**+1.8**
KNZ	**Kokohu**	**13.13**	**182**	P	**P**	**11 29 02.2**	**-0.7**
BKZ	**Black Stump Fm**	**13.35**	**186**	P	**P**	**11 29 03.0**	**-2.0**
TUVZ	**Tukino**	**13.55**	**189**	P	**P**	**11 29 07.0**	**+0.2**
WNVZ	**Wahianoa**	**13.62**	**189**	P	**P**	**11 29 07.4**	**0.0**
MOVZ	**Moawhango**	**13.67**	**188**	P	**P**	**11 29 06.9**	**-1.0**
WAZ	**Wanganui**	**14.13**	**190**	P	**P**	**11 29 12.7**	**+0.6**
TSZ	**Takapari Road**	**14.29**	**187**	P	**P**	**11 29 11.6**	**-2.0**
BFZ	**Birch Farm**	**14.88**	**186**	P	**P**	**11 29 17.6**	**-1.3**
MRZ	**Mangatainoka R**	**14.93**	**188**	P	**P**	**11 29 18.1**	**-1.3**
AFI	**Afiamalu**	**15.12**	**40**	P	**P**	**11 29 20.1**	**-1.4**
	comp=N,7.5nm,0.3s,baz=72,slow=4.7,SNR=14						
AFI				S	**S**	**11 31 50.9**	**-3.0**
	comp=N,8.2nm,0.3s,baz=207,slow=22,SNR=5.7						
AFI				ScP	ScP	11 36 15.1	+0.1
	comp=N,1.2nm,0.3s,baz=270,slow=2.7,SNR=8.3						
AFI	**Afiamalu**	**15.12**	**40**	*e*P	**P**	**11 29 19.6**	**-2.0**
	comp=N,87nm,0.9s						
AFI	**Afiamalu**	**15.12**	**40**	P	**P**	**11 29 20.1**	**-1.5**
AFI				S	**S**	**11 31 50.9**	**-3.0**
AFI				pmax	pmax		
	comp=Z,8.0nm,0.3s						
AFI				smax			
	comp=N,8.0nm,0.3s						
AFI				pmax	pmax		
	comp=N,1.0nm,0.3s						
KIW	**Kapiti Island**	**15.22**	**190**	P	**P**	**11 29 22.0**	**-0.1**
MTW	**Mount Morrison**	**15.43**	**188**	P	**P**	**11 29 23.3**	**-0.7**
CAW	**Cannon Point**	**15.44**	**189**	P	**P**	**11 29 23.5**	**-0.6**
MRW	**Makara Radio**	**15.61**	**190**	P	**P**	**11 29 26.0**	**+0.4**
WEL	**Wellington**	**15.66**	**190**	P	**P**	**11 29 26.5**	**+0.5**
TCW	**Tory Channel**	**15.67**	**191**	P	**P**	**11 29 26.1**	**0.0**
QRZ	**Quartz Range**	**15.67**	**196**	P	**P**	**11 29 27.5**	**+1.3**
SNZO	**South Karori**	**15.69**	**190**	P	**P**	**11 29 26.3**	**-0.1**
MSWZ	**Moikau Station**	**15.71**	**188**	P	**P**	**11 29 26.6**	**0.0**
BHW	**Baring Head**	**15.76**	**189**	P	**P**	**11 29 26.7**	**-0.3**
NNZ	**Nelson**	**15.85**	**194**	P	**P**	**11 29 27.7**	**-0.1**
BSWZ	**Blackbirch Sta**	**16.23**	**192**	*e*P	**P**	**11 29 31.5**	**+0.3**
THZ	**Tophouse**	**16.47**	**194**	P	**P**	**11 29 33.4**	**-0.1**
DSZ	**Denniston Nort**	**16.72**	**197**	P	**P**	**11 29 36.6**	**+0.8**
KHZ	**Kahutara**	**16.97**	**192**	P	**P**	**11 29 37.1**	**-0.9**
FUNA	**Funafuti**	**17.26**	**3**	*e*P	**P**	**11 29 40.4**	**-0.7**
	comp=N,143nm,0.9s						
LTZ	**Lake Taylor**	**17.58**	**195**	P	**P**	**11 29 42.5**	**-1.1**
WVZ	**Waitaha Valley**	**18.25**	**198**	P	**P**	**11 29 49.1**	**-0.5**
CRLZ	**Canterbury Las**	**18.27**	**193**	P	**P**	**11 29 48.6**	**-1.1**
MQZ	**McQueen's Vall**	**18.38**	**193**	P	**P**	**11 29 50.0**	**-0.8**
RPZ	**Rata Peaks**	**18.76**	**196**	P	**P**	**11 29 54.4**	**+0.2**
	comp=N,6.8nm,0.3s,baz=35,slow=2.4,SNR=23						
RPZ				S	**S**	**11 32 50.4**	**-1.1**
	comp=N,1.0nm,0.3s,baz=41,slow=23,SNR=3.5						
RPZ				ScP	ScP	11 36 21.4	-0.6
	comp=N,2.0nm,0.3s,baz=324,slow=4.0,SNR=8.2						
RPZ	**Rata Peaks**	**18.76**	**196**	P	**P**	**11 29 53.6**	**-0.6**
FOZ	**Fox Glacier**	**19.00**	**199**	P	**P**	**11 29 55.4**	**-0.9**
JCZ	**Jackson Bay**	**19.75**	**201**	P	**P**	**11 30 03.4**	**+0.3**
ODZ	**Otahua Downs**	**20.11**	**196**	P	**P**	**11 30 05.4**	**-0.9**
WKZ	**Wanaka**	**20.35**	**199**	P	**P**	**11 30 07.8**	**-0.6**
EAZ	**Earnscleugh**	**20.63**	**198**	P	**P**	**11 30 10.9**	**-0.1**
RAR	**Rarotonga**	**20.65**	**82**	P	**P**	**11 30 10.7**	**-0.8**
	comp=N,38nm,0.8s,baz=219,slow=9.0,SNR=5.8						
RAR	**Rarotonga**	**20.65**	**82**	P	**P**	**11 30 10.7**	**-0.8**
RAR				pmax	pmax		
	comp=Z,38nm,0.8s						
MLZ	**Mavora Lakes**	**21.07**	**200**	P	**P**	**11 30 15.8**	**+0.9**
TUZ	**Tuapeka**	**21.21**	**197**	P	**P**	**11 30 16.4**	**+0.3**
WHZ	**Wether Hill Ro**	**21.63**	**200**	P	**P**	**11 30 20.2**	**+0.3**
HNR	**Honiara**	**23.86**	**310**	P	**P**	**11 30 38.5**	**-1.5**
	comp=Z,151nm,0.7s,mb5.6,baz=165,slow=1.5,SNR=7.5						
HNR	**Honiara**	**23.86**	**310**	*e*P	**P**	**11 30 38.3**	**-1.7**
	comp=Z,123nm,0.8s,mb5.4						
HNR	**Honiara**	**23.86**	**310**	P	**P**	**11 30 38.5**	**-1.5**
HNR				pmax	pmax		
	comp=Z,151nm,0.7s,mb5.5						
ARMA	**Armidale**	**23.90**	**253**	*i*P	**P**	**11 30 42.1**	**+1.9**
EIDS	**Eidsvold**	**24.50**	**265**	*e*P	**P**	**11 30 46.6**	**+1.1**
	comp=Z,247nm,0.8s,mb5.8						
CNB	**Canberra Magne**	**26.53**	**242**	*i*P	**P**	**11 31 04.9**	**+1.8**
CNB				*e*S	**S**	**11 34 58.2**	**+4.4**
CNB				*e*SCP	ScP	11 36 44.4	+1.4
CAN	**Canberra**	**26.82**	**242**	*e*P	**P**	**11 31 07.2**	**+1.5**
CTA	**Charters Tower**	**29.98**	**274**	*i*P	**P**	**11 31 33.8**	**+0.7**
	comp=Z,195nm,0.4s,mb6.0						
CTA				*e*SCP	ScP	11 36 56.5	+2.3
CTA	**Charters Tower**	**29.98**	**274**	P	**P**	**11 31 34.0**	**+0.9**
	comp=Z,249nm,0.4s,mb6.1,baz=98,slow=11,SNR=601						
CTA				ScP	ScP	11 36 56.6	+2.5
	comp=Z,22nm,0.9s,baz=192,slow=2.8,SNR=8.4						
CTA	**Charters Tower**	**29.98**	**274**	P	**P**	**11 31 34.0**	**+0.9**
CTA				pmax	pmax		
	comp=Z,249nm,0.4s						
CTA				pmax	pmax		
	comp=N,22nm,0.9s						
CTAO	**Charters Tower**	**29.98**	**274**	*e*P	**P**	**11 31 33.6**	**+0.6**
	comp=N,260nm,0.8s,mb5.8						
CTAO	**Charters Tower**	**29.98**	**274**	*e*P	**P**	**11 31 33.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,260nm,0.8s,mb5.8						
CTAO	**Charters Tower**	**29.98**	**274**	P	**P**	**11 31 33.5**	**+0.4**
	comp=Z,523nm,0.8s,comp=Z,4μm,mb6.1						
TOO	**Toolangi**	**30.08**	**239**⇓	*i*P	**P**	**11 31 35.0**	**+1.3**
TOO				*e*S	**S**	**11 35 49.1**	**+0.6**
TOO				*e*SCP	ScP	11 36 53.9	-0.3
TAU	**Tasmania Unive**	**30.45**	**228**	P	**P**	**11 31 38.1**	**+1.3**
	comp=Z,365nm,0.7s,mb6.0,SNR=11						
TAU	**Tasmania Unive**	**30.45**	**228**	*e*P	**P**	**11 31 38.4**	**+1.7**
	comp=Z,39nm,0.7s,mb5.0						
TAU	**Tasmania Unive**	**30.45**	**228**	*e*P	**P**	**11 31 38.4**	**+1.6**
TAU				pmax	pmax		
	comp=Z,39nm,0.7s,mb5.0						
PPT	**Papeete**	**30.93**	**81**	P	**P**	**11 31 42.9**	**+1.8**
	comp=Z,31nm,0.6s,mb5.0,baz=268,slow=22,SNR=4.9						
PPT	**Papeete**	**30.93**	**81**	P	**P**	**11 31 42.9**	**+1.7**
PPT				pmax	pmax		
	comp=Z,31nm,0.6s						
STKA	**Stephens Creek**	**32.56**	**251**	*i*P	**P**	**11 31 55.1**	**+0.4**
	comp=Z,58nm,0.5s,mb5.4						
STKA				*e*S	**S**	**11 36 25.9**	**-0.4**
STKA				*e*SCS	ScS	11 41 05.2	+0.7
STKA	**Stephens Creek**	**32.56**	**251**	P	**P**	**11 31 55.6**	**+0.9**
	comp=Z,83nm,0.6s,mb5.5,baz=94,slow=9.8,SNR=192						
STKA				S	**S**	**11 36 26.3**	**0.0**
	comp=Z,4.9nm,0.8s,baz=220,slow=23,SNR=3.6						
STKA	**Stephens Creek**	**32.56**	**251**	*e*P	**P**	**11 31 55.6**	**+0.8**
	comp=Z,18nm,0.6s,mb4.8						
COEN	**Coen**	**34.94**	**283**	*e*P	**P**	**11 32 15.3**	**+0.6**
	comp=Z,123nm,0.7s,mb5.5						
COEN	**Coen**	**34.94**	**283**	P	**P**	**11 32 15.1**	**+0.4**
	comp=Z,118nm,1.1s,comp=Z,919nm,mb5.3						
ASAR	**Alice Springs**	**40.20**	**263**	P	**P**	**11 32 57.0**	**0.0**
	comp=Z,98nm,0.5s,mb5.5,baz=93,slow=7.0,SNR=2117						
ASAR				ScP	ScP	11 37 32.5	+0.9
	comp=Z,5.4nm,0.8s,baz=104,slow=4.3,SNR=6.0						
ASAR				S	**S**	**11 38 18.3**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=94,slow=15,SNR=7.8						
ASAR				P3KPbc		12 02 26.9	
	comp=Z,0.2nm,0.5s,baz=290,slow=4.9,SNR=5.9						
ASAR	**Alice Springs**	**40.20**	**263**	P	**P**	**11 32 57.0**	**0.0**
ASAR				ScP	ScP	11 37 32.5	+0.9
ASAR				S	**S**	**11 38 18.3**	**-0.9**
ASAR				*e*		12 02 26.9	
ASAR	**Alice Springs**	**40.20**	**263**	P	**P**	**11 32 57.0**	**0.0**
ASAR				S	**S**	**11 38 18.3**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,98nm,0.5s						
ASAR				pmax	pmax		
	comp=N,5.0nm,0.8s						
ASAR				smax			
	comp=N,5.0nm,0.7s						
WB2	**Warramunga Arr**	**40.74**	**269**⇓	*i*P	**P**	**11 33 01.0**	**-0.2**
WB2				*e*SCP	ScP	11 37 35.0	+1.2
WB2				*e*S	**S**	**11 38 24.6**	**-2.4**
WRAB	**Tennant Creek**	**40.74**	**269**	P	**P**	**11 33 00.0**	**-1.3**
	comp=N,1μm,0.4s,SNR=73						
WRAB	**Tennant Creek**	**40.74**	**269**	*e*P	**P**	**11 33 00.8**	**-0.5**
	comp=N,201nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**40.74**	**269**	*e*P	**P**	**11 33 00.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,201nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**40.74**	**269**	P	**P**	**11 33 00.1**	**-1.2**
	comp=Z,243nm,0.9s,comp=Z,3μm,mb5.6						
WRA	**Warramunga Arr**	**40.75**	**269**	P	**P**	**11 33 00.9**	**-0.5**
	comp=Z,109nm,0.4s,mb5.7,baz=104,slow=7.

RPN	**Rapa Nui**	**63.92**	**109**	P		**P**	**11 35 45.9**	**+0.5**	
RPN				pmax		pmax			
	comp=Z,53nm,0.8s,mb4.8								
SMKI	**Samarinda**	**63.94**	**283**	P		**P**	**11 35 47.1**	**+1.5**	
	comp=Z,158nm,1.1s,mb5.2								
QSPA	**South Pole Qui**	**64.23**	**180**	P		**P**	**11 35 47.7**	**+1.3**	
	comp=Z,110nm,0.7s,mb5.2,baz=17,slow=1.2,SNR=580								
QSPA				S		**S**	**11 43 36.3**	**+2.3**	
	comp=Z,1.8nm,1.1s,baz=306,slow=2.0,SNR=7.6								
QSPA	**South Pole Qui**	**64.23**	**180**	P		**P**	**11 35 47.7**	**+1.3**	
QSPA				S		**S**	**11 43 36.3**	**+2.3**	
BBKI	**Banjar Baru**	**64.64**	**279**	P		**P**	**11 35 50.7**	**+0.7**	
	comp=Z,114nm,1.3s,mb5.0								
KRKI	**Karangkates**	**64.75**	**273**	P		**P**	**11 35 53.1**	**+2.4**	
SJI	**Sawahan**	**65.54**	**273**	P		**P**	**11 35 55.4**	**-0.3**	
MYLDM	**Lahad Datu**	**65.61**	**289**	P		**P**	**11 35 59.5**	**+3.4**	
PLKI	**Palangkaraya**	**65.99**	**280**	P		**P**	**11 35 58.5**	**0.0**	
	comp=Z,394nm,1.0s,mb5.7								
STKI	**Sintang**	**69.23**	**281**	P		**P**	**11 36 18.2**	**+0.2**	
	comp=Z,145nm,0.9s,mb5.3								
LEM	**Lembang**	**69.65**	**272**	P		**P**	**11 36 20.6**	**0.0**	
	comp=Z,239nm,0.8s,comp=Z,4µm,mb5.7								
SBUM	**Sibu**	**69.69**	**283**	P		**P**	**11 36 20.6**	**-0.2**	
XMIS	**Christmas Isla**	**69.93**	**268**	*e*P		**P**	**11 36 21.8**	**-0.3**	
CBJI	**Citeko**	**70.52**	**272**	P		**P**	**11 36 24.1**	**-1.5**	
	comp=Z,323nm,0.9s,mb5.8								
DBJI	**Dramaga**	**70.55**	**272**	P		**P**	**11 36 25.1**	**-0.7**	
	comp=Z,206nm,1.0s,mb5.5								
KSM	**Kuching**	**70.92**	**281**	*e*P		**P**	**11 36 27.8**	**-0.2**	
KSM	**Kuching**	**70.92**	**281**	P		**P**	**11 36 27.8**	**-0.2**	
	comp=Z,114nm,1.0s,mb5.3								
JOD2	**Odawara 2**	**71.20**	**327**	P		**P**	**11 36 27.5**	**-1.6**	
TPI	**Tanjungpandan**	**71.37**	**276**	P		**P**	**11 36 30.4**	**-0.2**	
	comp=Z,58nm,1.2s,mb4.9								
JWZ	**Kozaga**	**71.58**	**323**	P		**P**	**11 36 29.7**	**-1.6**	
JRY	**Ryogami san**	**71.89**	**327**	P		**P**	**11 36 31.9**	**-1.1**	
MJAR	**Matsushiro Arr**	**72.65**	**327**	P		**P**	**11 36 36.2**	**-1.1**	
	comp=Z,6.5nm,0.6s,mb4.3,baz=159,slow=5.2,SNR=38								
MJAR				pP		pP	11 38 49.0	-0.5	
	comp=Z,3.0nm,1.0s,baz=153,slow=5.6,SNR=5.3								
MJAR				PKPKP			12 04 07.0		
	comp=Z,0.3nm,0.4s,baz=330,slow=3.2,SNR=4.5								
MJAR	**Matsushiro Arr**	**72.65**	**327**	P		**P**	**11 36 36.3**	**-1.1**	
MJAR				*PP		pP	11 38 49.0	-0.5	
MJAR				pmax		pmax			
	comp=Z,7.0nm,0.6s								
MJAR				pmax		pmax			
	comp=Z,3.0nm,1.0s								
MAJO	**Matsushiro**	**72.65**	**327**	*e*P		**P**	**11 36 36.1**	**-1.3**	
	comp=Z,11nm,0.7s,mb4.4								
MAJO	**Matsushiro**	**72.65**	**327**	*e*P		**P**	**11 36 36.1**	**-1.3**	
MAJO				pmax		pmax			
	comp=Z,11nm,0.7s,mb4.4								
MAT	**Matsushiro**	**72.65**	**327**	P		**P**	**11 36 36.0**	**-1.4**	
MAT	**Matsushiro**	**72.65**	**327**	P		**P**	**11 36 36.3**	**-1.1**	
PPBI	**Pangkal Pinang**	**72.99**	**276**	P		**P**	**11 36 40.0**	**+0.1**	
	comp=Z,65nm,1.1s,comp=Z,2µm,mb5.0								
JWT	**Wachi**	**73.09**	**324**	P		**P**	**11 36 39.1**	**-0.8**	
JAD	**Aida**	**73.48**	**323**	P		**P**	**11 36 41.4**	**-0.7**	
JNU	**Nakatsue**	**73.98**	**320**	P		**P**	**11 36 43.9**	**-1.1**	
JHS	**Saijyo**	**74.10**	**323**	P		**P**	**11 36 45.9**	**+0.3**	
DSRI	**Dabo**	**75.13**	**277**	P		**P**	**11 36 51.8**	**-0.1**	
	comp=Z,48nm,1.0s,mb5.0								
MAW	**Mawson**	**75.37**	**201**	⇑ *i*P		**P**	**11 36 52.6**	**+0.4**	
	comp=Z,11nm,0.5s,mb4.6								
MAW	**Mawson**	**75.37**	**201**	P		**P**	**11 36 52.4**	**+0.3**	
	comp=Z,13nm,0.5s,mb4.7,baz=127,slow=6.4,SNR=36								
MAW	**Mawson**	**75.37**	**201**	*e*P		**P**	**11 36 52.8**	**+0.7**	
	comp=Z,4.9nm,1.1s,mb4.0								
MAW	**Mawson**	**75.37**	**201**	*e*P		**P**	**11 36 52.8**	**+0.6**	
MAW				pmax		pmax			
	comp=Z,5.0nm,1.1s								
KSRS	**Korea Array**	**78.76**	**321**	P		**P**	**11 37 10.8**	**-0.1**	
	comp=Z,7.5nm,0.7s,mb4.3,baz=138,slow=5.8,SNR=27								
KSRS	**Korea Array**	**78.76**	**321**	P		**P**	**11 37 10.8**	**-0.1**	
KSRS				pmax		pmax			
	comp=Z,8.0nm,0.7s,mb4.4								
KS15	**Wonju Array Si**	**78.77**	**321**	*e*P		**P**	**11 37 09.9**	**-1.1**	
YSS	**Yuzh-Sakhalins**	**79.26**	**336**	⇓ *e*P		**P**	**11 37 13.8**	**+0.6**	
YSS				pmax		pmax			
	comp=Z,11nm,0.5s,mb4.6								
PETK	**Petropavlovsk-**	**80.65**	**348**	P		**P**	**11 37 20.4**	**+0.1**	
	comp=Z,4.0nm,0.7s,mb4.0,baz=129,slow=6.2,SNR=9.8								
PETK				pP		pP	11 39 35.4	-1.2	
	comp=Z,1.8nm,0.5s,baz=24,slow=2.4,SNR=2.7								
PETK	**Petropavlovsk-**	**80.65**	**348**	P		**P**	**11 37 20.4**	**+0.1**	
PETK				pP		pP	11 39 35.4	-1.2	
PETK	**Petropavlovsk-**	**80.65**	**348**	P		**P**	**11 37 20.4**	**+0.1**	
PETK				*PP		pP	11 39 35.4	-1.2	
PETK				pmax		pmax			
	comp=Z,4.0nm,0.7s,mb4.0								
PETK				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb3.8								
SYO	**Syowa Base**	**80.74**	**194**	⇓ *i*P		**P**	**11 37 18.6**	**-2.1**	
NJ2	**Nanjing**	**80.78**	**312**	*e*P		**P**	**11 37 21.3**	**-0.2**	
NJ2				AMB		AMB			
	comp=Z,80nm,1.2s,mb5.0								
USHA	**Ushuaia**	**81.51**	**148**	P		**P**	**11 37 26.0**	**+1.1**	
	comp=Z,10nm,0.8s,mb4.4,baz=198,slow=6.4,SNR=5.1								
SNAA	**Sanae**	**82.73**	**180**	*e*P		**P**	**11 37 26.0**	**-4.7**	
SNAA				*e*			11 37 30.1		
SNAA	**Sanae**	**82.73**	**180**	*e*P		**P**	**11 37 26.2**	**-4.5**	
	comp=Z,30nm,0.6s,mb5.0								
SNAA	**Sanae**	**82.73**	**180**	*c i*P		**P**	**11 37 26.3**	**-4.4**	
SNAA				pmax		pmax			
	comp=Z,44nm,1.0s								
WHN	**Wuhan**	**82.97**	**309**	⇑P		**P**	**11 37 32.5**	**-0.1**	
VNA3	**Neumayer Olymp**	**83.00**	**177**	*e*P		**P**	**11 37 31.4**	**-0.7**	
VNA3				*e*			11 37 35.2		
MDJ	**Mudanjiang**	**83.03**	**327**	P		**P**	**11 37 32.5**	**0.0**	
MDJ				AP		pP	11 39 46.8	-3.1	
MDJ				XP		sP	11 40 53.3	-2.4	
MDJ				S		S	11 46 59.0	0.0	
MDJ				AMB		AMB			
	comp=Z,15nm,1.1s,mb4.4								
MDJ				AMB		AMB			
	comp=Z,110nm,4.8s								
VNA2	**Neumayer--Watz**	**83.40**	**178**	*e*P		**P**	**11 37 33.8**	**-0.2**	
	baz=191,slow=5.5								
VNA2				*e*			11 37 36.8		
HABR	**Khabarovsk**	**83.50**	**333**	*e*P		**P**	**11 37 35.2**	**+0.5**	
HABR				*e**PP		pP	11 39 50.4	-2.0	
HABR				*e*SP			11 40 55.5		
HABR				*e*			11 41 01.3		
HABR				*e*PPP			11 42 59.6		
HABR				*e*S		S	11 46 56.6	-6.7	
HABR				*e*SS		SS	11 52 58.9	+7.6	
HABR				*e*SSS			11 56 34.9		
VNA1	**Neumayer--Stat**	**83.65**	**178**	*e*P		**P**	**11 37 34.8**	**-0.5**	
VNA1				*e*			11 37 38.2		
CN2	**Changchun**	**84.55**	**325**	*e*P		**P**	**11 37 40.0**	**0.0**	
CN2				*e*S		S	11 47 13.3	-0.3	
CN2				AMB		AMB			
	comp=Z,40nm,1.0s,mb5.0								
CN2				AMB		AMB			
	comp=Z,200nm,3.0s								
KLR	**Kul'dur**	**85.48**	**332**	*e*P		**P**	**11 37 41.2**	**-3.1**	
KLR				pmax		pmax			
	comp=Z,42nm,1.8s,mb4.8								
PFO	**Pinyon Flat Ob**	**85.67**	**49**	P		**P**	**11 37 45.8**	**+0.2**	
	comp=Z,3.4nm,0.9s,mb4.0,baz=301,slow=1.5,SNR=4.4								
PFO	**Pinyon Flat Ob**	**85.67**	**49**	P		**P**	**11 37 45.8**	**+0.2**	
PFO				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb3.9								
CMB	**Columbia Colle**	**85.70**	**44**	*e*P		**P**	**11 37 45.6**	**0.0**	
	comp=Z,5.1nm,0.8s,mb4.2								
CMB	**Columbia Colle**	**85.70**	**44**	*e*P		**P**	**11 37 45.6**	**0.0**	
CMB				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.2								
GYA	**Guiyang**	**86.41**	**302**	P		**P**	**11 37 49.5**	**+0.3**	
GYA				AP		pP	11 40 09.0	+0.8	
GYA				XP		sP	11 41 13.5	-0.1	
GYA				PP		PP	11 41 28.5	+4.4	
GYA				SKS			11 47 12.3		
GYA				S		S	11 47 29.0	-3.0	
GYA				XS		sS	11 51 37.5	-1.9	
GYA				SS		SS	11 53 35.5	+1.4	
GYA				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.5								
GYA				AMB		AMB			
	comp=Z,90nm,5.1s								
GLA	**Glamis**	**86.48**	**51**	*e*P		**P**	**11 37 49.7**	**+0.3**	
	comp=Z,7.7nm,0.8s,mb4.4								
GLA	**Glamis**	**86.48**	**51**	*e*P		**P**	**11 37 49.7**	**+0.3**	
GLA				pmax		pmax			
	comp=Z,8.0nm,0.8s,mb4.4								
WAKR	**Walker**	**86.58**	**44**	*e*P		**P**	**11 37 50.1**	**+0.4**	
YBH	**Yreka Blue Hor**	**86.59**	**40**	P		**P**	**11 37 50.5**	**+0.8**	
	comp=Z,4.2nm,0.8s,mb4.2,baz=108,slow=0.7,SNR=15								
YBH	**Yreka Blue Hor**	**86.59**	**40**	P		**P**	**11 37 50.5**	**+0.8**	
YBH	**Yreka Blue Hor**	**86.59**	**40**	P		**P**	**11 37 50.5**	**+0.8**	
YBH				pmax		pmax			
	comp=Z,4.0nm,0.8s								
HUMO	**Hull Mountain**	**87.01**	**39**	*e*P		**P**	**11 37 52.9**	**+1.2**	
	comp=Z,2.2nm,0.5s,mb4.0								
NVAR	**Mina Array Bea**	**87.25**	**45**	P		**P**	**11 37 53.0**	**+0.1**	
	comp=Z,3.2nm,0.8s,mb4.0,baz=222,slow=7.6,SNR=20								
NVAR				pP		pP	11 40 16.7	+4.4	
	comp=Z,1.1nm,0.9s,baz=215,slow=8.0,SNR=3.8								
PAHR	**Pah Rah Range**	**87.33**	**43**	*e*P		**P**	**11 37 53.8**	**+0.5**	
	comp=Z,8.7nm,1.0s,mb4.3								
BJI	**Beijing**	**87.38**	**317**	P		**P**	**11 37 53.5**	**+0.1**	
BJI				AMB		AMB			
	comp=Z,21nm,0.8s,mb4.8								
LDFC	**Landfair**	**87.42**	**49**	*e*P		**P**	**11 37 54.9**	**+1.1**	
	comp=Z,12nm,1.0s,mb4.5								
TPNV	**Topopah Spring**	**87.72**	**47**	*e*P		**P**	**11 37 55.7**	**+0.6**	
	comp=Z,3.1nm,1.0s,mb3.9								
TPNV	**Topopah Spring**	**87.72**	**47**	*e*P		**P**	**11 37 55.7**	**+0.6**	
TPNV				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb3.9								
PLCA	**Paso Flores**	**88.02**	**135**	P		**P**	**11 37 57.4**	**+0.8**	
	comp=Z,8.1nm,0.8s,mb4.4,baz=229,slow=4.8,SNR=25								
PLCA	**Paso Flores**	**88.02**	**135**	P		**P**	**11 37 57.4**	**+0.8**	
PLCA				pmax		pmax			
	comp=Z,8.0nm,0.8s								
MOD	**Modoc**	**88.11**	**41**	*e*P		**P**	**11 37 57.1**	**+0.3**	
	comp=Z,9.2nm,0.7s,mb4.5								
EFI	**East Falkland**	**88.37**	**149**	*e*P		**P**	**11 37 58.9**	**+0.9**	
	comp=Z,24nm,0.5s,mb5.1								
EFI	**East Falkland**	**88.37**	**149**	*e*P		**P**	**11 37 58.9**	**+0.9**	
EFI				pmax		pmax			
	comp=Z,24nm,0.5s,mb5.1								
XAN	**Xi'an**	**88.73**	**309**	P		**P**	**11 37 59.8**	**-0.1**	
XAN				AMB		AMB			
	comp=Z,18nm,0.9s,mb4.8								
XAN				AMB		AMB			
	comp=Z,91nm,5.6s								
CMAR	**Chiang Mai Arr**	**88.74**	**291**	P		**P**	**11 38 01.1**	**+0.8**	
	comp=Z,3.3nm,0.6s,mb4.3,baz=143,slow=3.5,SNR=30								
CMAR				pP		pP	11 40 20.2	0.0	
	comp=Z,0.3nm,0.3s,baz=9.7,slow=12,SNR=1.2								
CMAR				PP		PP	11 41 41.9	-0.6	
	comp=Z,2.8nm,0.9s,baz=131,slow=6.1,SNR=8.5								
CMAR				PKKPbc		PKKPbc	11 55 35.9	+0.2	
	comp=Z,0.7nm,0.5s,baz=292,slow=5.2,SNR=4.5								
CMAR	**Chiang Mai Arr**	**88.74**	**291**	P		**P**	**11 38 01.1**	**+0.8**	
CMAR				*PP		pP	11 40 20.2	+0.1	
CMAR							11 41 41.9		
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.6s								
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.5s								
KMI	**Kunming**	**88.80**	**299**	P		**P**	**11 38 01.8**	**+1.4**	
KMI				AP		pP	11 40 20.5	+0.2	
KMI				S		S	11 47 53.5	-0.6	
KMI				AMB		AMB			
	comp=Z,20nm,0.8s,mb4.9								
CHTO	**Chiang Mai**	**88.91**	**291**	*e*P		**P**	**11 38 02.2**	**+1.1**	
	comp=Z,16nm,1.0s,mb4.7								
CHTO	**Chiang Mai**	**88.91**	**291**	*e*P		**P**	**11 38 02.2**	**+1.1**	
CHTO				pmax		pmax			
	comp=Z,16nm,1.0s,mb4.7								
HHC	**Hu-ho-hao-te**	**90.70**	**316**	*e*P		**P**	**11 38 09.5**	**+0.6**	
HHC				AP		pP	11 40 30.8	+1.6	
HHC				XP		sP	11 41 35.0	+0.9	
HHC				PP		PP	11 42 02.5	+5.1	
HHC				SKS			11 47 40.3		
HHC				S		S	11 48 10.0	-0.4	
HHC				XS		sS	11 52 19.8	-1.5	
HHC				AMB		AMB			
	comp=Z,100nm,4.6s								
CD2	**Chengdu**	**90.85**	**304**	*e*P		**P**	**11 38 10.3**	**+0.5**	
CD2				AP		pP	11 40 31.8	+1.6	
CD2				XP		sP	11 41 36.0	+0.9	
CD2				SKS			11 47 40.0		
CD2				S		S	11 48 11.5	-0.6	
CD2				XS		sS	11 52 22.0	-1.1	
CD2				SS		SS	11 54 40.8	+3.4	
CD2				AMB		AMB			
	comp=Z,30nm,0.8s,mb5.2								
CD2				AMB		AMB			
	comp=Z,80nm,5.8s								
MSU	**Marysvale**	**91.27**	**47**	*e*P		**P**	**11 38 12.5**	**+1.0**	
RPW	**Rockport**	**91.47**	**35**	*e*P		**P**	**11 38 12.0**	**-0.2**	
SRU	**San Rafael**	**92.68**	**48**	*e*P		**P**	**11 38 18.4**	**+0.4**	
TXAR	**Lajitas Array**	**92.79**	**59**	P		**P**	**11 38 19.1**	**+0.4**	
	comp=Z,1.7nm,0.8s,mb4.2,baz=214,slow=6.8,SNR=20								
TXAR	**Lajitas Array**	**92.79**	**59**	P		**P**	**11 38 19.2**	**+0.5**	
TXAR				pmax		pmax			
	comp=Z,2.0nm,0.8s								
LZH	**Lanzhou**	**93.35**	**309**	⇑P		**P**	**11 38 23.5**	**+2.4**	
LZH				AP		pP	11 40 43.0	+1.2	
LZH				XP		sP	11 41 46.3	-0.2	
LZH				PP		PP	11 42 23.0	+5.1	
LZH				SKS			11 47 56.5		
LZH				S		S	11 48 34.8	+1.2	
LZH				AMB		AMB			
	comp=Z,25nm,1.5s,mb5.0								
LZH				AMB		AMB			
	comp=Z,143nm,8.7s								
ANMO	**Albuquerque**	**93.40**	**53**	⇑ *e*P		**P**	**11 38 21.5**	**+0.2**	
ANMO				pmax		pmax			
	comp=Z,1.0nm,0.7s								
PDAR	**Pinedale Array**	**95.19**	**45**	P		**P**	**11 38 28.6**	**-0.6**	
	comp=Z,0.6nm,0.6s,mb3.9,baz=218,slow=2.8,SNR=7.3								
PDAR				pP		pP	11 40 52.8	+2.7	
	comp=Z,0.6nm,1.0s,baz=232,slow=4.9,SNR=3.5								
ULN	**Ulaanbaatar**	**97.20**	**320**	*i* P		Pdif	11 38 39.2	+0.8	
SONM	**Songino Array**	**97.57**	**320**	P		Pdif	11 38 40.5	+0.5	
	comp=Z,0.3nm,0.5s,baz=127,slow=3.5,SNR=3.6								
SONM				pP		pP	11 40 58.4	-2.5	
	comp=Z,0.3nm,0.3s,baz=106,slow=4.7,SNR=2.7								
SONM				PKKPbc		PKKPbc	11 55 13.8	-0.1	
	comp=Z,0.6nm,0.8s,baz=264,slow=3.2,SNR=4.3								
SONM	**Songino Array**	**97.57**	**320**	P		Pdif	11 38 40.5	+0.5	
SONM				*PP		pP	11 40 58.4	-2.6	
SONM				pmax		pmax			
	comp=Z,1.0nm,0.9s								
GTA	**Gaotai**	**97.73**	**310**	*e*P		Pdif	11 38 41.0	+0.3	
GTA				XP		sP	11 42 05.3	-1.3	
GTA				PP		PP	11 42 57.8	+6.8	
GTA				XS		sS	11 53 23.3	-2.1	
GTA				AMB		AMB			
	comp=Z,4.0nm,1.3s,mb4.5								
GTA				AMB		AMB			
	comp=Z,170nm,9.0s								
WMQ	**Urumqi**	**107.81**	**311**	*e*PDIF		Pdif	11 39 25.0	-0.5	
WMQ				PP		PP	11 44 07.0	+2.4	
WMQ				SS		SS	11 58 28.0	-1.5	
WMQ				PP		PP			
	comp=Z,68nm,8.0s								
POO	**Poona**	**110.48**	**281**	*ex*		x	11 43 32.0		
MKAR	**Makanchi Array**	**112.31**	**312**	SKP		SKPdf	11 46 10.5	-0.6	
	comp=Z,1.0nm,0.5s,baz=149,slow=0.8,SNR=6.1								
MKAR				PKKPbc		PKKPbc	11 54 28.9	-0.9	
	comp=Z,0.9nm,0.6s,baz=278,slow=3.6,SNR=4.5								
ZALV	**Zalesovo Beam**	**112.45**	**320**	SKP		SKPdf	11 46 11.0	-0.1	
	comp=Z,0.5nm,0.5s,baz=135,slow=0.8,SNR=5.4								
ZALV				PKKPbc		PKKPbc	11 54 28.5	-0.9	
	comp=Z,0.7nm,0.6s,baz=183,slow=2.7,SNR=3.7								
KURK	**Kurchatov**	**115.52**	**316**	SKP		SKPdf	11 46 17.3	+0.2	
	comp=Z,3.7nm,0.7s,baz=107,slow=1.9,SNR=14								
KURK				PKKPbc		PKKPbc	11 54 18.0	-1.1	
	comp=Z,1.0nm,0.7s,baz=286,slow=3.9,SNR=5.7								
KURK				PKKPab		PKKPab	11 54 25.2	+0.5	
	comp=Z,1.3nm,0.6s,baz=278,slow=5.2,SNR=5.9								
KURK				PKKP		PKKPbc	11 54 37.8	+19	
	comp=Z,1.4nm,0.7s,baz=134,slow=6.3,SNR=5.0								
BDFB	**Brasilia**	**118.93**	**127**	PKP		PKPdf	11 43 49.8	-0.8	
	comp=Z,1.2nm,0.4s,baz=282,slow=25,SNR=4.4								
BDFB				PKKPab		PKKPab	11 54 12.6	-0.3	
	comp=Z,0.7nm,0.5s,baz=137,slow=17,SNR=3.8								
BDFB	**Brasilia**	**118.93**	**127**	PKIKP		PKPdf	11 43 49.8	-0.8	
BDFB							11 54 12.6		
BDFB				pmax		pmax			
	comp=Z,1.0nm,0.4s								
BDFB				pmax		pmax			
	comp=Z,1.0nm,0.5s								
BOSA	**Boshof**	**119.95**	**207**	PKP		PKPdf	11 43 51.7	-0.5	
	comp=Z,1.2nm,0.7s,baz=290,slow=2.1,SNR=4.2								
BOSA	**Boshof**	**119.95**	**207**	PKIKP		PKPdf	11 43 51.7	-0.6	
BOSA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
BVAR	**Borovoye Array**	**120.85**	**318**	PKP		PKPdf	11 43 52.1	-0.9	
	comp=Z,1.3nm,0.4s,baz=94,slow=2.0,SNR=5.5								
BVAR				SKP			11 46 27.5		
	comp=Z,2.9nm,0.6s,baz=108,slow=3.3,SNR=8.8								
BVAR	**Borovoye Array**	**120.85**	**318**	PKIKP		PKPdf	11 43 52.1	-1.0	
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
BVAR				pmax		pmax			
	comp=N,3.0nm,0.6s								
ARU	**Arti**	**127.50**	**323**	*i* PKIKP		PKPdf	11 44 04.2	-1.5	
ARU							11 46 14.5		
AKTK	**Aktyubinsk**	**128.59**	**315**	PKP		PKPdf	11 44 07.6	-0.4	
AKTK				SKPbc			11 46 28.6		
AKTK				SKP			11 46 41.1		
AKTO	**Aktyubinsk**	**128.59**	**315**	PKP		PKPdf	11 44 07.6	-0.4	
	comp=N,1.2nm,0.5s,baz=112,slow=3.7,SNR=4.6								
AKTO				SKPbc			11 46 28.6		
	comp=N,2.6nm,0.6s,baz=78,slow=6.8,SNR=8.0								
AKTO				SKP			11 46 41.1		
	comp=N,2.2nm,0.7s,baz=80,slow=5.5,SNR=4.8								
AKTO	**Aktyubinsk**	**128.59**	**315**	PKIKP		PKPdf	11 44 07.6	-0.4	
AKTO							11 46 28.6		
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.5s								
AKTO				pmax		pmax			
	comp=N,3.0nm,0.6s								
AKTO				pmax		pmax			
	comp=N,2.0nm,0.7s								
KEV	**Kevo**	**132.97**	**347**	*e*pkp		PKPdf	11 44 15.5	-0.2	
ARCES	**ARCESS Array B**	**133.46**	**347**	PKhKP			11 44 09.4		
	comp=N,0.9nm,0.3s,baz=66,slow=1.1,SNR=5.8								
ARCES				PKP		PKPdf	11 44 17.0	+0.4	
	comp=N,0.8nm,0.3s,baz=58,slow=2.5,SNR=16								
ARCES				SKPbc		SKPbc	11 46 45.5	+0.6	
	comp=N,3.8nm,0.6s,baz=33,slow=3.6,SNR=3.1								
ARCES	**ARCESS Array B**	**133.46**	**347**	PKP		PKPdf	11 44 17.0	+0.4	
ARCES				SKPbc		SKPbc	11 46 45.5	+0.6	
JOF	**Joensuu**	**137.00**	**339**	*e*pkp		PKPdf	11 44 23.1	-0.3	
	comp=N,1.4nm,0.5s								
KAF	**Kangasniemi**	**139.18**	**340**	*e*pkp			11 44 17.5		
	comp=N,1.4nm,0.4s								
KAF	**Kangasniemi**	**139.18**	**340**	*e*PKHKP			11 44 17.5		
KAF				pmax		pmax			
	comp=Z,1.0nm,0.4s								
NB2	**NORSAR Subarra**	**143.74**	**349**	PKP		PKPdf	11 44 34.1	-1.4	
	comp=Z,5.6nm,0.7s,baz=22,slow=4.0								
NOA	**NORSAR Array B**	**143.74**	**349**	PKP		PKPdf	11 44 34.2	-1.3	
	comp=Z,4.7nm,0.7s,baz=21,slow=2.8,SNR=10								
NOA	**NORSAR Array B**	**143.74**	**349**	PKP		PKPdf	11 44 34.2	-1.3	
NOA	**NORSAR Array B**	**143.74**	**349**	PKIKP		PKPdf	11 44 34.2	-1.3	
NOA				pmax		pmax			
	comp=Z,5.0nm,0.7s								
AKASG	**Malin Array Be**	**145.70**	**325**	PKPbc		PKPbc	11 44 39.9	-1.2	
	comp=Z,2.4nm,0.4s,baz=44,slow=3.9,SNR=30								
AKASG				SKPbc		SKPbc	11 47 18.5	+0.3	
	comp=Z,9.0nm,0.9s,baz=48,slow=3.0,SNR=9.4								
AKASG	**Malin Array Be**	**145.70**	**325**	PKIKP		PKPdf	11 44 39.9	+0.7	
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.4s								
AKASG				pmax		pmax			
	comp=N,9.0nm,0.9s								
BRTR	**Keskin Array B**	**147.43**	**304**	PKPbc		PKPbc	11 44 45.7	-0.4

ms1mx2.9/31, Error ellipse: s-maj=29.4km s-min=13.4km az=107.0

ISC 25 11:43:42.9±2.7, 03S±01×1229E±01, h77km±28km, n21, σ1§02/20, mb4.1/13, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.65**	**214**	P	**Pn**	**11 45 05.2**	**+0.9**
	9.4nm,0.3s,baz=32,slow=7.2,SNR=43						
KAPI				S	**Sn**	**11 46 05.2**	**-2.7**
	9.8nm,0.3s,baz=282,slow=20,SNR=7.5						
BATI	**Baumata**	**9.86**	**176**	LR	LR	11 50 23.1	
	comp=Z,151nm,19.4s,baz=49,slow=41						
WRA	**Warramunga Arr**	**22.48**	**151**	P	**P**	**11 48 37.8**	**+1.8**
	0.5nm,0.4s,mb3.2,baz=331,slow=10,SNR=5.2						
CMAR	**Chiang Mai Arr**	**30.06**	**310**	P	**P**	**11 49 46.8**	**+1.8**
	0.4nm,0.3s,mb3.5,baz=127,slow=6.2,SNR=4.7						
CMAR				LR	LR	12 02 05.3	
	comp=Z,33nm,19.2s,baz=170,slow=36						
KSRS	**Korea Array**	**37.86**	**6**	LR	LR	12 07 19.5	
	comp=Z,21nm,19.0s,baz=340,slow=37						
MAT	**Matsushiro**	**39.32**	**20**	P	**P**	**11 51 03.4**	**-1.1**
MJAR	**Matsushiro Arr**	**39.32**	**20**	P	**P**	**11 51 03.4**	**-1.1**
	3.3nm,0.8s,mb4.2,baz=199,slow=9.1,SNR=14						
MJAR				sP	sP	11 51 36.7	+4.7
	1.0nm,0.7s,baz=190,slow=8.8,SNR=3.1						
TAPN	**Taplejung**	**43.60**	**312**	*e*P	**P**	**11 51 40.2**	**+0.5**
RAMN	**Ramite**	**44.22**	**311**	*e*P	**P**	**11 51 45.7**	**+1.0**
JIRN	**Jiri**	**44.91**	**311**	*e*P	**P**	**11 51 50.2**	**+0.1**
GUN	**Gumba**	**45.27**	**311**	*e*P	**P**	**11 51 53.1**	**+0.1**
	7.7nm,0.4s,mb4.8						
GKN	**Gorkha**	**46.26**	**311**	*e*P	**P**	**11 52 00.8**	**0.0**
KOLN	**Koldanda**	**46.93**	**310**	*e*P	**P**	**11 52 06.0**	**-0.1**
	15nm,0.9s,mb4.7						
DANN	**Dangsing**	**47.10**	**311**	*e*P	**P**	**11 52 07.4**	**0.0**
	20nm,0.9s,mb4.9						
PYUN	**Piuthan**	**47.56**	**310**	*e*P	**P**	**11 52 10.7**	**-0.3**
	12nm,0.8s,mb4.8						
SONM	**Songino Array**	**50.07**	**346**	P	**P**	**11 52 30.4**	**+0.6**
	2.1nm,1.0s,mb4.0,baz=157,slow=8.1,SNR=9.2						
SONM				pP	pP	11 52 52.9	+3.9
	1.0nm,0.8s,baz=170,slow=8.6,SNR=3.5						
MKAR	**Makanchi Array**	**58.84**	**328**	P	**P**	**11 53 33.2**	**-0.3**
	0.5nm,0.3s,mb4.0,baz=133,slow=7.5,SNR=7.3						
MKAR				sP	sP	11 54 07.6	+5.8
	1.6nm,0.8s,baz=133,slow=7.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**62.57**	**336**	P	**P**	**11 53 57.5**	**-1.1**
	0.9nm,0.6s,mb3.9,baz=147,slow=8.8,SNR=5.7						
KURK	**Kurchatov**	**63.21**	**330**	P	**P**	**11 54 01.5**	**-1.5**
	2.6nm,1.0s,mb4.1,baz=130,slow=5.9,SNR=8.5						
BVAR	**Borovoye Array**	**68.71**	**329**	P	**P**	**11 54 39.4**	**+1.2**
	0.6nm,0.7s,mb3.6,baz=142,slow=7.5,SNR=3.6						
VNDA	**Vanda**	**79.95**	**172**	P	**P**	**11 55 42.5**	**-0.6**
	1.0nm,0.8s,mb3.7,baz=314,slow=6.5,SNR=4.8						
VNDA				sP	sP	11 56 16.3	+4.1
	1.2nm,0.7s,baz=304,slow=4.5,SNR=3.7						

ISK 25 11:44:44.4, 34.04N×34.50E, h15km, MD3.4
CSEM 25 11:44:45.4±0.2, 34.03N×34.56E, h25km, ML3.3, Error ellipse: s-maj=6.7km s-min=2.4km az=46.0
ISCJB 25 11:44:46.7±1.6, 33.95N±0.002×34.46E±0.005, h33km±16km, Error ellipse: s-maj=7.4km s-min=3.4km az=159.2
GRAL 25 11:44:46.3±0.8, 34.02N×34.52E, h21km±10km, MD3.3
GII 25 11:44:47.2±1.0, 33.96N×34.40E, h32km±2km, ML3.1/5, Mw2.4/4

ISC 25 11:44:45.6±1.0, 3395N±003×3451E±006, h27km±8km, n28, σ0§45/40, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BEYL	**Beyrouth**	**0.82**	**95**	*e*P	**Pb**	**11 45 01.1**	**-0.2**
BEYL				*e*S	**Sb**	**11 45 11.5**	**-0.6**
MATL	**Matirih**	**0.83**	**124**	*e*P	**Pb**	**11 45 01.3**	**0.0**
BHL	**Bhannes**	**0.95**	**92**	*e*P	**Pn**	**11 45 02.5**	**-0.7**
HNTI	**Hanita**	**1.03**	**147**	Pg	**Pn**	**11 45 04.2**	**-0.1**
HNTI				Sg	**Sn**	**11 45 18.0**	**+0.2**
RCY	**Rachaya**	**1.19**	**113**	*e*P	**Pn**	**11 45 07.1**	**+0.6**
MMC6	**Mount Meron ar**	**1.19**	**141**	Pg	**Pn**	**11 45 06.5**	**0.0**
MMA0B	**Mount Meron ar**	**1.20**	**141**	Pg	**Pn**	**11 45 06.6**	**0.0**
MMA0B				Sg	**Sn**	**11 45 22.4**	**+0.4**
KSDI	**Kefar Szold**	**1.23**	**128**	Pn	**Pn**	**11 45 07.2**	**+0.3**
HRI	**Mount Hermon**	**1.23**	**123**	Pn	**Pn**	**11 45 07.2**	**+0.2**
HWQ	**Hawqa**	**1.24**	**74**	*e*P	**Pn**	**11 45 07.5**	**+0.3**
HWQ				*e*S	**Sn**	**11 45 22.6**	**-0.4**
BLGI	**Bet Lehem HaGe**	**1.34**	**155**	Pn	**Pn**	**11 45 08.9**	**+0.3**
OFRI	**'Ofer**	**1.39**	**163**	Pn	**Pn**	**11 45 08.9**	**-0.3**
KSHT	**Keshet**	**1.46**	**131**	Pn	**Pn**	**11 45 11.0**	**+0.8**
LFK	**Lefkose**	**1.55**	**329**	*e*PN	**Pn**	**11 45 11.4**	**0.0**
LFK				*e*SN	**Sn**	**11 45 30.8**	**+0.1**
EREN	**Erenkoy**	**1.60**	**350**	*e*PN	**Pn**	**11 45 11.6**	**-0.5**
MMLI	**Mount Malkishu**	**1.69**	**153**	Pn	**Pn**	**11 45 13.7**	**+0.3**
MMLI				Sn	**Sn**	**11 45 34.6**	**+0.4**
SLTI	**Sal'it**	**1.76**	**165**	Pn	**Pn**	**11 45 13.8**	**-0.6**
SLTI				Sn	**Sn**	**11 45 34.6**	**-1.3**
LEF	**Lefka**	**1.77**	**312**	*e*PN	**Pn**	**11 45 14.4**	**-0.1**
HMDT	**Nahal Hemdat**	**1.90**	**153**	Pn	**Pn**	**11 45 17.0**	**+0.8**
HMDT				Sn	**Sn**	**11 45 39.4**	**+0.2**
IKL	**Isikli**	**2.38**	**344**	*e*PN	**Pn**	**11 45 22.8**	**-0.1**
DSI	**Dead Sea**	**2.49**	**163**	Pn	**Pn**	**11 45 25.0**	**+0.7**
DSI				Sn	**Sn**	**11 45 53.6**	**-0.2**
YTIR	**Yattir**	**2.63**	**169**	Sn	**Sn**	**11 45 57.4**	**0.0**
MZDA	**Masada**	**2.73**	**164**	Pn	**Pn**	**11 45 27.5**	**-0.2**
MZDA				Sn	**Sn**	**11 45 59.5**	**-0.3**
MERS	**Mersin**	**2.91**	**0**	*e*PN	**Pn**	**11 45 30.3**	**+0.1**
MERS				*e*SN	**Sn**	**11 46 03.9**	**-0.4**
KARA	**Karaisali**	**3.33**	**8**	*e*PN	**Pn**	**11 45 36.4**	**+0.5**
HDMB	**Hadim**	**3.43**	**332**	*e*PN	**Pn**	**11 45 37.8**	**+0.5**
HDMB				*e*SN	**Sn**	**11 46 16.7**	**-0.3**
PRNI	**Paran**	**3.61**	**173**	Pn	**Pn**	**11 45 40.1**	**+0.2**
EIL	**Elat**	**4.29**	**175**	Sn	**Sn**	**11 46 37.3**	**-0.9**

ISCJB 25 11:44:59.4±4.0, 74S±02×1277E±0.1, h76km±38km, mb3.8/6, Error ellipse: s-maj=28.4km s-min=14.4km az=22.7
IDC 25 11:45:12.0±8.6, 774S×12729E, h177km±85km, mb3.3/4, mb1 3.6/6, mb1mx3.4/16, mbtmp3.5/6, Error ellipse: s-maj=90.6km s-min=19.0km az=51.0

ISC 25 11:45:01.7±3.2, 74S±02×1278E±01, h80km±31km, n12, σ0§62/12, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.92**	**235**	P	**Pn**	**11 46 17.9**	**+4.7**
	19nm,0.3s,baz=134,slow=3.3,SNR=22						
BATI				S	**Sn**	**11 47 08.8**	**0.0**
	34nm,0.3s,baz=138,slow=5.4,SNR=15						
KAKA	**Kakadu**	**7.00**	**139**	*e*P	Px	11 46 32.7	
	31nm,0.5s						
KAKA				*e*S	Sx	11 47 45.5	
WRA	**Warramunga Arr**	**14.00**	**154**	P	**Pn**	**11 48 16.0**	**-0.4**
	0.9nm,0.3s,baz=323,slow=14,SNR=25						
WRA				S	Sx	11 50 42.3	
	1.8nm,0.3s,baz=334,slow=22,SNR=12						
WB2	**Warramunga Arr**	**14.01**	**154**	*e*P	**Pn**	**11 48 15.8**	**-0.7**
WB2				*e*S	Sx	11 50 39.8	
ASAR	**Alice Springs**	**17.21**	**161**	P	**Pn**	**11 48 58.3**	**+1.3**
	2.4nm,0.3s,baz=340,slow=12,SNR=112						
ASAR				S	Sx	11 51 59.5	
	0.8nm,0.3s,baz=317,slow=17,SNR=7.6						
FORT	**Forrest**	**23.26**	**179**	*e*P	**P**	**11 50 01.8**	**-0.4**
	11nm,0.8s,mb4.2						
KLBR	**Kellerberrin**	**25.82**	**200**	*e*P	**P**	**11 50 25.1**	**-0.4**
	22nm,1.3s,mb4.4						
STKA	**Stephens Creek**	**27.55**	**154**	*e*P	**P**	**11 50 41.7**	**+0.6**
	1.4nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**27.55**	**154**	P	**P**	**11 50 41.9**	**+0.7**
	1.4nm,0.4s,mb3.9,baz=336,slow=11,SNR=8.8						
MKAR	**Makanchi Array**	**67.36**	**328**	P	**P**	**11 55 48.4**	**+0.1**
	0.3nm,0.6s,mb3.3,baz=111,slow=7.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**70.98**	**335**	P	**P**	**11 56 10.0**	**-0.6**
	0.3nm,0.3s,mb3.5,baz=114,slow=4.7,SNR=2.4						
KURK	**Kurchatov**	**71.72**	**330**	P	**P**	**11 56 15.5**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=135,slow=5.3,SNR=4.0						

ISCJB 25 11:47:31.1±1.5, 39.21N±0.06×21.38E±0.07, h1km±11km, Error ellipse: s-maj=10.5km s-min=7.8km az=39.7
CSEM 25 11:47:31.9±0.3, 39.21N×21.46E, h10km, ML3.1/3, Error ellipse: s-maj=7.3km s-min=3.5km az=30.0
NEIC 25 11:47:32.9, 39.25N×21.44E, h10km, MD3.0(ATH), After ATH.
ATH 25 11:47:32.9, 39.25N×21.44E, h10km, MD3.0/3
THE 25 11:47:33.1, 39.26N×21.47E, h5km±1km, ML3.1/3, Error ellipse: s-maj=1.6km s-min=0.7km az=67.0

ISC 25 11:47:32.0±1.3, 3923N±005×2139E±007, h8km±8km, n21, σ0§64/36, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.45**	**134**	*e*PB	**Pg**	**11 47 41.5**	**+0.7**
THL	**Klokotos Trika**	**0.58**	**55**	P	**Pg**	**11 47 42.9**	**-0.4**
THL				S	**Sg**	**11 47 51.0**	**+0.1**
THL	**Klokotos Trika**	**0.58**	**55**	*e*Pb	**Pb**	**11 47 43.3**	**-1.2**
JAN	**Janina**	**0.60**	**315**	*e*PB	**Pb**	**11 47 44.4**	**-0.4**
AGG	**Agios Georgios**	**0.76**	**106**	P	**Pg**	**11 47 46.4**	**-0.2**
AGG				S	**Sg**	**11 47 57.2**	**+0.7**
LIT	**Litokhoron**	**1.21**	**44**	P	**Pb**	**11 47 54.4**	**-0.8**
LIT				S	**Sg**	**11 48 11.3**	**+0.3**
XOR	**Xorichti**	**1.40**	**84**	P	**Pn**	**11 47 57.4**	**-0.5**
XOR				S	**Sb**	**11 48 16.4**	**-0.1**
FNA	**Florina**	**1.55**	**359**	P	**Pn**	**11 48 00.2**	**+0.2**
FNA				S	**Sn**	**11 48 21.6**	**+1.3**
GRG	**Griva**	**1.89**	**24**	P	**Pn**	**11 48 04.8**	**+0.2**

ISCJB 25 11:50:02.7±0.6, 24.35N±003×122.08E±002, h9km±4km, Error ellipse: s-maj=4.2km s-min=3.5km az=174.2
JMA 25 11:50:03.5±0.1, 24.81N×122.09E, h43km, M2.7
TAP 25 11:50:04.0, 24.39N×121.96E, h14km, ML3.3, D

ISC 25 11:50:03.0±0.5, 2435N±003×12208E±002, h12km±4km, n37, σ0§69/51, 5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.31**	**263**	*e*P	**Pg**	**11 50 09.3**	**0.0**
	baz=247						
ENA	**Nanau**	**0.32**	**285**	⇓*i*P	**Pg**	**11 50 09.2**	**-0.2**
	baz=280						
ENA				*i* S	**Sg**	**11 50 13.2**	**-0.5**
	baz=280						
TWC	**Suao**	**0.33**	**321**	⇓*i*P	**Pg**	**11 50 09.8**	**+0.1**
	baz=335						
TWC				*i* S	**Sg**	**11 50 13.9**	**-0.3**
	baz=335						
ILA	**Ilan**	**0.51**	**324**	*e*P	**Pg**	**11 50 13.7**	**+0.7**
	baz=333						
TWD	**Chiawan**	**0.51**	**239**	*e*P	**Pg**	**11 50 12.9**	**-0.2**
	baz=226						
TWE	**Neicheng**	**0.53**	**315**	⇓*i*P	**Pg**	**11 50 13.3**	**0.0**
	baz=321						
TWE				*i* S	**Sg**	**11 50 20.0**	**-0.3**
	baz=321						
NNS	**Nan Shan**	**0.65**	**278**	⇓*i*P	**Pg**	**11 50 15.2**	**-0.4**
	baz=275						
NNS				S	**Sg**	**11 50 22.9**	**-1.3**
	baz=275						
TWB1	**Santiao Chiao**	**0.66**	**353**	*e*P	**Pg**	**11 50 16.5**	**+0.6**
	baz=2.0						
NSK	**Sanguang**	**0.73**	**297**	⇓*i*P	**Pg**	**11 50 16.8**	**-0.4**
	baz=297						
NSK				*i* S	**Sg**	**11 50 25.6**	**-1.2**
	baz=297						
NWF	**Wu-fen Shan**	**0.77**	**340**	*e*P	**Pg**	**11 50 18.5**	**+0.6**
	baz=346						
NWF				*e*S	**Sg**	**11 50 28.1**	**+0.1**
	baz=346						
WHF	**Hehuan Shan**	**0.77**	**255**	*i* P	**Pg**	**11 50 17.5**	**-0.4**
	baz=248						
WHF				*e*S	**Sg**	**11 50 26.8**	**-1.2**
	baz=248						
TWA	**Mucha**	**0.77**	**325**	*e*P	**Pg**	**11 50 18.1**	**+0.1**
	baz=329						
TWA				*e*S	**Sg**	**11 50 27.7**	**-0.4**
	baz=329						
ESL	**Shilin**	**0.79**	**228**	*e*P	**Pg**	**11 50 18.4**	**0.0**
	baz=219						
TWT	**Tachien**	**0.83**	**264**	*e*P	**Pg**	**11 50 18.9**	**-0.1**
	baz=259						
TAP1	**Taipei**	**0.85**	**324**	*e*P	**Pg**	**11 50 20.3**	**+0.8**
	baz=328						
YOJ	**Yonaguni jima**	**0.86**	**82**	P	**Pg**	**11 50 20.0**	**+0.4**
YOJ				*e*S	**Sg**	**11 50 31.9**	**+1.1**
TWS1	**Kuangyinshan**	**0.96**	**321**	*e*P	**Pg**	**11 50 22.1**	**+0.6**
	baz=325						
TWS1				*e*S	**Sg**	**11 50 34.5**	**+0.5**
	baz=325						
NSTT	**Nanjuang**	**1.02**	**286**	*e*P	**Pb**	**11 50 22.2**	**-0.4**
	baz=285						
TWY	**Chenhua**	**1.02**	**335**	*e*P	**Pb**	**11 50 23.0**	**+0.4**
	baz=339						
EHY	**Hungye**	**1.09**	**220**	*e*P	**Pb**	**11 50 24.1**	**+0.4**
	baz=213						
SMLT	**Sun Moon Lake**	**1.17**	**247**	*e*P	**Pb**	**11 50 24.8**	**-0.3**
	baz=242						
TWQ1	**Liyutan**	**1.19**	**270**	*e*P	**Pn**	**11 50 25.7**	**+0.3**
	baz=267						
TYC	**Yuchr**	**1.20**	**249**	*e*P	**Pn**	**11 50 25.6**	**+0.1**
	baz=244						
TYC				*e*S	**Sb**	**11 50 41.1**	**0.0**
	baz=244						
NSY	**Sanyi**	**1.20**	**273**	*e*P	**Pn**	**11 50 26.3**	**+0.7**
	baz=271						
TWF1	**Yuli**	**1.22**	**216**	*e*P	**Pn**	**11 50 25.4**	**-0.5**
	baz=210						
YUS	**Yu-Shan**	**1.34**	**230**	*e*P	**Pn**	**11 50 27.3**	**-0.2**
	baz=225						
ALS	**Alishan**	**1.43**	**235**	*e*P	**Pn**	**11 50 29.7**	**+0.9**
	baz=230						
CHN5	**Tsauling**	**1.48**	**240**	*e*P	**Pn**	**11 50 30.0**	**+0.5**
	baz=235						
IRIF	**Iriomote-Funau**	**1.51**	**90**	P	**Pn**	**11 50 29.4**	**-0.4**
IRIF				*e*S	**Sn**	**11 50 48.4**	**-1.0**
ELDTW	**Lidau**	**1.51**	**220**	*e*P	**Pn**	**11 50 30.0**	**+0.1**
	baz=215						
CHN4	**Tsaushan**	**1.68**	**234**	*e*P	**Pn**	**11 50 33.1**	**+0.9**
	baz=230						
STYT	**Tauyuan**	**1.69**	**226**	*e*P	**Pn**	**11 50 33.0**	**+0.6**
	baz=221						
WTP	**Ta-pu**	**1.73**	**231**	*e*P	**Pn**	**11 50 33.9**	**+1.0**
	baz=227						
JKRS	**Kuro-shima**	**1.77**	**93**	P	**Pn**	**11 50 33.7**	**+0.3**
JKRS				*e*S	**Sn**	**11 50 55.7**	**-0.1**
CHN1	**Nanshi**	**1.83**	**231**	*e*P	**Pn**	**11 50 35.6**	**+1.3**
	baz=227						
JIJ	**Ishigaki jima**	**1.88**	**89**	P	**Pn**	**11 50 34.4**	**-0.6**
JIJ				*e*S	**Sn**	**11 50 57.1**	**-1.6**
JTJ	**Tarama**	**2.41**	**83**	*e*S	**Sn**	**11 51 08.9**	**-2.8**

CSEM 25 12:33:22.7±0.1, 37.53N×35.58E, h8km, MD3.3, Error ellipse: s-maj=1.3km s-min=1.2km az=11.0
ISK 25 12:33:22.9, 37.52N×35.57E, h9km, MD3.3, ML3.4
ISCJB 25 12:33:23.4±0.4, 37.51N±0.03×35.57E±0.03, h7km±4km, Error ellipse: s-maj=4.3km s-min=3.4km az=1.6
DDA 25 12:33:23.6, 37.53N×35.61E, h10km±4km, Md3.5

ISC 25 12:33:24.0±0.4, 3750N±003×3558E±003, h8km±4km, n34, σ0§82/48, 3C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.20**	**95**	PG	**Pg**	**12 33 28.2**	**+0.2**
KOZT				*e*SG	**Sg**	**12 33 31.5**	**+0.8**
KARA	**Karaisali**	**0.48**	**241**	PG	**Pg**	**12 33 33.0**	**-0.3**
KARA				*e*SG	**Sg**	**12 33 39.8**	**+0.3**
CEYT	**Ceyhan**	**0.51**	**164**	*e*PG	**Pg**	**12 33 33.8**	**+0.1**
CEYT				*e*SG	**Sg**	**12 33 41.6**	**+1.3**
ANDN	**Andirin**	**0.62**	**82**	⇑*i*P	**Pg**	**12 33 35.7**	**-0.2**
ANDN				*i* S	**Sg**	**12 33 44.5**	**+0.6**
NIG	**Nigde**	**0.98**	**309**	*e*PG	**Pg**	**12 33 42.0**	**-0.9**
NIG				*e*SG	**Sg**	**12 33 55.5**	**-0.1**
MERS	**Mersin**	**1.05**	**234**	*e*PG	**Pg**	**12 33 43.1**	**-1.0**
KMRS	**Kahramanmaras**	**1.05**	**89**	*e*PG	**Pg**	**12 33 42.9**	**-1.3**
KMRS				*e*SG	**Sg**	**12 33 58.6**	**+0.8**
COBT	**Iskenderun**	**1.12**	**151**	⇑*i*P	**Pg**	**12 33 45.0**	**-0.4**
COBT				*i* S	**Sg**	**12 33 59.0**	**-0.9**
BSTP	**Nigde**	**1.25**	**292**	*e*P	**Pn**	**12 33 48.9**	**+1.1**
BSTP				*e*S	**Sb**	**12 34 06.8**	**+2.8**
GAZ	**Gaziantep**	**1.34**	**103**	*e*PN	**Pn**	**12 33 47.9**	**-1.2**
PINB	**Pinarbasi**	**1.35**	**29**	⇓*i*P	**Pn**	**12 33 47.9**	**-1.2**
PINB				*i* S	**Sb**	**12 34 09.0**	**+2.1**
PINB	**Pinarbasi**	**1.35**	**29**	*i* S	**Sb**	**12 34 09.0**	**+2.1**
BNN	**Bunyan**	**1.37**	**9**	*e*PN	**Pn**	**12 33 48.5**	**-0.9**
BNN				*e*SN	**Sn**	**12 34 07.1**	**-0.7**
AVNT	**Avonos**	**1.40**	**336**	⇓*i*P	**Pn**	**12 33 49.2**	**-0.7**
AVNT				*i* S	**Sb**	**12 34 09.5**	**+1.0**
HTY	**Hatay**	**1.45**	**162**	*e*PN	**Pn**	**12 33 50.0**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.47**	**36**	*e*PN	**Pn**	**12 33 44.6**	**-6.3**
SARI				*e*SN	**Sn**	**12 34 00.2**	**-10**
IKL	**Isikli**	**1.97**	**231**	*e*PN	**Pn**	**12 33 58.1**	**+0.4**
AKCD	**Akcadag**	**2.02**	**66**	⇑*i*P	**Pn**	**12 33 58.4**	**0.0**
AKCD				*i* S	**Sn**	**12 34 24.5**	**+0.7**
AKCD	**Akcadag**	**2.02**	**66**	*i* P	**Pn**	**12 33 58.3**	**-0.1**
AKCD				*i* S	**Sn**	**12 34 24.5**	**+0.7**
YOZ	**Yozgat**	**2.15**	**355**	*e*PN	**Pn**	**12 33 59.5**	**-0.6**
EREN	**Erenkoy**	**2.27**	**210**	*e*PN	**Pn**	**12 34 02.0**	**+0.2**
DARE	**Darende-Malaty**	**2.28**	**50**	*e*PN	**Pn**	**12 33 55.4**	**-6.5**
KAMT	**Kaman**	**2.38**	**322**	*e*PN	**Pn**	**12 34 02.5**	**-0.8**
HDMB	**Hadim**	**2.52**	**259**	*e*PN	**Pn**	**12 34 05.7**	**+0.3**
URFA	**Urfa**	**2.58**	**90**	*e*PN	**Pn**	**12 34 06.0**	**-0.1**
KONT	**Konya--Tatoy**	**2.59**	**281**	*e*PN	**Pn**	**12 34 06.1**	**-0.1**
LADK	**Ladik-KONYA**	**2.64**	**286**	*e*PN	**Pn**	**12 34 06.9**	**0.0**
SVSK	**Karacayir**	**2.66**	**24**	*e*PN	**Pn**	**12 34 06.9**	**-0.2**
LFK	**Lefkose**	**2.76**	**217**	*e*PN	**Pn**	**12 34 09.0**	**+0.4**
LEF	**Lefka**	**3.21**	**223**	*e*PN	**Pn**	**12 34 15.7**	**+0.9**
ANTO	**Ankara**	**3.22**	**318**	*e*PN	**Pn**	**12 34 15.3**	**+0.4**
KIZT	**Kizilcal**	**3.22**	**296**	*e*PN	**Pn**	**12 34 14.4**	**-0.6**
PTK	**Pertek**	**3.31**	**64**	*e*PN	**Pn**	**12 34 16.4**	**+0.2**
EZC	**Erzincan**	**4.01**	**55**	*e*PN	**Pn**	**12 34 21.8**	**-3.9**

JMA 25 12:38:10.6, 3666N×13823E, h8km±1km, M0.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.12**	**189**	P	Pg	12 38 13.4	+0.2
MAT				S	Sg	12 38 15.2	+0.1
MAT	**Matsushiro**	**0.12**	**189**	P	Pg	12 38 13.4	+0.2
MAT				S	Sg	12 38 15.5	+0.4
JNG	**Nsakai**	**0.27**	**203**	P	Pg	12 38 16.2	+0.2
JNG				S	Sg	12 38 20.2	+0.5

ISCJB 25 13:17:03.9±0.6, 37.66N±004×21.37E±005, h10km, Error ellipse: s-maj=6.8km s-min=4.5km az=135.3
CSEM 25 13:17:03.0±0.2, 37.64N×21.29E, h12km, ML3.0/1, Error ellipse: s-maj=5.6km s-min=3.1km az=58.0
ATH 25 13:17:03.4, 37.69N×21.38E, h18km±4km, MD3.3/4
NEIC 25 13:17:03.4, 37.69N×21.38E, h18km, MD3.3(ATH), After ATH.
THE 25 13:17:04.3, 37.67N×21.41E, h0km±4km, ML3.0/1, Error ellipse: s-maj=4.3km s-min=1.3km az=230.0

ISC 25 13:17:04.2±0.6, 3767N±004×2141E±007, h5km±7km, n31, σ1§25/48, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.39**	**7**	*e*PB	**Pg**	**13 17 10.8**	**-1.0**
RLS				*e*SB	**Sg**	**13 17 17.0**	**+0.1**
ITM	**Ithomi**	**0.64**	**140**	*e*PN	**Pg**	**13 17 16.5**	**0.0**
KFL	**Anninata**	**0.66**	**312**	P	**Pg**	**13 17 16.1**	**-0.8**
KFL				S	**Sg**	**13 17 27.4**	**+2.0**
PYL	**PYLOS**	**0.82**	**161**	P	**Pg**	**13 17 19.3**	**-0.6**
PYL				S	**Sg**	**13 17 33.1**	**+2.6**
VLS	**Valsamata**	**0.82**	**308**	P	**Pg**	**13 17 18.7**	**-1.3**
VLS				S	**Sg**	**13 17 32.2**	**+1.6**
VLS	**Valsamata**	**0.82**	**308**	*e*Pn	**Pn**	**13 17 18.9**	**-3.5**
VLS				S	**Sg**	**13 17 32.2**	**+1.6**
EVR	**Evrytania**	**1.28**	**14**	*e*PN	**Pn**	**13 17 27.5**	**-1.3**
LTK	**Loutraki**	**1.28**	**74**	P	**Pn**	**13 17 27.0**	**-1.8**
DID	**Didima**	**1.46**	**96**	P	**Pn**	**13 17 30.4**	**-0.8**
DID				S	**Sn**	**13 17 52.0**	**+1.2**
AGG	**Agios Georgios**	**1.53**	**28**	P	**Pn**	**13 17 31.7**	**-0.5**
AGG				S	**Sn**	**13 17 54.6**	**+2.1**
LKR	**Lokris**	**1.59**	**52**	P	**Pn**	**13 17 33.0**	**0.0**
THL	**Klokotos Trika**	**1.95**	**14**	P	**Pn**	**13 17 38.7**	**+0.7**
XOR	**Xorichti**	**2.20**	**39**	P	**Pn**	**13 17 42.0**	**+0.6**

ISCJB 25 13:20:00.1±0.6, 31.55S±0.02×71.79W±0.08, h49km±5km, mb4.1/11, MS3.4/4, Error ellipse: s-maj=11.3km s-min=3.8km az=0.1
IDC 25 13:20:00.8±0.7, 31.40S×71.87W, h42km±5km, mb3.9/8, mb1 4.0/11, mb1mx4.0/17, mbtmp3.9/11, ML4.1/3, MS3.6/6, Ms1 3.5/6, ms1mx3.1/24, Error ellipse: s-maj=18.7km s-min=11.8km az=9.0
NEIC 25 13:20:01.0, 31.54S×71.46W, h41km, mb4.6/2, MD4.4(GUC), After GUC.
NEIC Felt [III] at Petorca and [II] at Illapel, Santiago, Valparaiso and Vina del Mar.
GUC 25 13:20:01.0±0.7, 31.54S×71.46W, h41km±2km, MD4.4, ML4.5

ISC 25 13:20:01.7±0.6, 3154S±002×717W±01, h46km±5km, h44km±1.0km: pP-P, n56, σ0§93/61, mb4.1/11, MS3.4/4, 2C-4D, Near coast of central Chile

| Code | Station Name | Δ° | AZ° | Phase | ID |

LPAZ	**La Paz**	**15.52**	**13**	Pn		**Pn**	**13 23 38.2**	**+0.7**
SIV	**San Ignacio**	**18.25**	**34**	P		**Pn**	**13 24 10.8**	**-0.7**
	comp=N,0.3nm,0.3s,baz=229,slow=12,SNR=18							
NNA	**Nana**	**20.04**	**345**	P		**P**	**13 24 34.0**	**+3.1**
	comp=N,1.1nm,0.3s,baz=228,slow=11,SNR=2.3							
NNA				LR		LR	13 30 30.2	
	comp=N,111nm,21.5s,MS3.2,baz=138,slow=32							
USHA	**Ushuaia**	**23.39**	**175**	P		**P**	**13 25 06.8**	**+0.6**
	comp=N,14nm,1.0s,mb4.3,baz=180,slow=20,SNR=3.3							
USHA				LR		LR	13 34 41.4	
	comp=N,361nm,18.4s,MS3.9,baz=348,slow=37							
ATAH	**Atahualpa**	**25.21**	**344**	LR		LR	13 33 20.0	
	comp=N,86nm,21.2s,MS3.2,baz=360,slow=32							
BDFB	**Brasilia**	**26.75**	**59**	P		**P**	**13 25 35.1**	**-2.0**
	comp=N,1.8nm,0.8s,mb3.6,baz=192,slow=15,SNR=6.7							
BDFB				LR		LR	13 37 07.4	
	comp=N,119nm,19.3s,MS3.5,baz=280,slow=38							
VNA3	**Neumayer Olymp**	**51.52**	**159**	*e*		**P**	**13 29 02.6**	**+0.3**
VNA3				*e*			13 29 06.5	
VNA3				*e*		pP	13 29 13.6	-1.5
VNA2	**Neumayer--Watz**	**52.16**	**158**	*e*		**P**	**13 29 07.7**	**+0.7**
	baz=291,slow=9.0							
VNA2				*e*			13 29 10.9	
VNA2				*e*		pP	13 29 19.7	-0.2
SNAA	**Sanae**	**53.74**	**159**	*e*		**P**	**13 29 14.7**	**-4.0**
SNAA				*e*			13 29 19.0	
SNAA				*e*		pP	13 29 26.4	-5.2
SNAA	**Sanae**	**53.74**	**159**	*e*P		**P**	**13 29 14.8**	**-3.9**
	comp=N,9.9nm,1.0s,mb4.7							
SNAA				*e*pP		pP	13 29 26.8	-4.9
VNDA	**Vanda**	**66.57**	**191**	P		**P**	**13 30 48.2**	**+1.8**
	comp=N,0.4nm,0.6s,mb3.6,baz=96,slow=4.5,SNR=3.6							
TXAR	**Lajitas Array**	**67.76**	**330**	P		**P**	**13 30 54.0**	**-0.5**
	comp=N,0.4nm,0.8s,mb3.5,baz=160,slow=6.9,SNR=3.8							
DBIC	**Dimbokro**	**74.10**	**72**	P		**P**	**13 31 32.7**	**-0.7**
	comp=N,4.9nm,0.6s,mb4.6,baz=222,slow=6.3,SNR=8.3							
DBIC	**Dimbokro**	**74.10**	**72**	*e*P		**P**	**13 31 32.4**	**-1.0**
DBIC				*e*pP		pP	13 31 45.6	-1.2
MAW	**Mawson**	**75.44**	**164**	P		**P**	**13 31 39.8**	**-0.5**
	comp=N,4.6nm,0.8s,mb4.4,baz=225,slow=11,SNR=4.6							
TSUM	**Tsumeb**	**79.58**	**106**	*e*P		**P**	**13 32 03.7**	**-0.5**
	comp=N,4.7nm,1.1s,mb4.3							
BOSA	**Boshof**	**80.93**	**118**	P		**P**	**13 32 11.2**	**-0.2**
	comp=N,3.9nm,0.8s,mb4.4,baz=314,slow=2.5,SNR=5.3							
PDAR	**Pinedale Array**	**81.72**	**333**	pP		pP	13 32 29.1	+0.5
	comp=N,0.2nm,0.5s,baz=163,slow=5.6,SNR=3.1							
NVAR	**Mina Array Bea**	**82.06**	**325**	P		**P**	**13 32 13.9**	**-2.9**
	comp=N,0.2nm,0.6s,mb3.2,baz=123,slow=3.3,SNR=2.3							
TOA0	**Torodi Ar. Sit**	**83.08**	**70**	*e*P		**P**	**13 32 22.0**	**-0.7**
TOA0				*e*pP		pP	13 32 34.3	-2.1
TORD	**Torodi Ar. Bea**	**83.08**	**70**	P		**P**	**13 32 22.6**	**-0.2**
	comp=N,5.2nm,0.9s,mb4.6,baz=256,slow=4.7,SNR=21							
TORD				pP		pP	13 32 35.0	-1.3
	comp=N,1.4nm,0.8s,baz=275,slow=5.0,SNR=3.9							
LSZ	**Lusaka**	**90.27**	**108**	P		**P**	**13 32 57.9**	**-0.1**
WRA	**Warramunga Arr**	**123.05**	**209**	PKP	PKPdf		13 38 53.6	0.0
	comp=N,0.8nm,0.2s,baz=152,slow=2.0,SNR=83							
BRVK	**Borovoye**	**145.17**	**41**	*e*PKP	PKPdf		13 39 33.7	+0.2
KURK	**Kurchatov**	**150.84**	**40**	*e*PKPbc	PKPbc		13 39 48.5	-0.1
AAK	**Ala-Archa**	**151.00**	**58**	*e*PKPbc	PKPbc		13 39 50.4	+1.2
ZAA0	**Zalesovo Array**	**151.97**	**30**	*e*PKPbc	PKPbc		13 39 50.8	-0.3
ZALV	**Zalesovo Beam**	**151.97**	**30**	PKPbc	PKPbc		13 39 51.5	+0.5
	comp=N,8.9nm,0.6s,baz=298,slow=3.2,SNR=39							
ZALV				pPKPbc	pPKPbc		13 40 04.1	-1.2
	comp=N,9.6nm,0.7s,baz=296,slow=3.0,SNR=18							
ZALV	**Zalesovo Beam**	**151.97**	**30**	PKPbc	PKPbc		13 39 51.5	+0.5
ZALV				pPKPbc	pPKPbc		13 40 04.1	-1.2
MKAR	**Makanchi Array**	**154.86**	**45**	PKPbc	PKPbc		13 39 57.6	0.0
	comp=N,1.3nm,0.9s,baz=294,slow=6.1,SNR=4.3							
MKAR				pPKPbc	pPKPbc		13 40 10.4	-1.5
	comp=N,1.7nm,0.8s,baz=311,slow=5.6,SNR=5.7							
MKAR				PKPab	PKPab		13 40 12.9	-0.1
	comp=N,1.7nm,0.8s,baz=311,slow=4.8,SNR=6.0							
MKAR				pPKPab	pPKPab		13 40 25.2	-1.7
	comp=N,2.4nm,1.0s,baz=316,slow=5.1,SNR=4.8							
MKAR	**Makanchi Array**	**154.86**	**45**	PKPbc	PKPbc		13 39 57.6	0.0
MKAR				pPKPbc	pPKPbc		13 40 10.3	-1.5
MKAR				PKPab	PKPab		13 40 12.9	-0.1
MKAR				pPKPab	pPKPab		13 40 25.2	-1.7
CMAR	**Chiang Mai Arr**	**164.45**	**145**	PKP	PKPdf		13 40 01.8	+1.0
	comp=N,0.3nm,0.3s,baz=251,slow=4.0,SNR=4.1							
CMAR				PKPab	PKPab		13 40 56.2	+0.9
	comp=N,0.2nm,0.3s,baz=224,slow=5.0,SNR=3.1							

*BJI **25** 13:42:02.5, 180S×9950E, h26km, mb4.4*
*MOS **25** 13:42:04.6±0.8, 171S×9959E, h33km, mb4.6/14, Error ellipse: s-maj=20.4km s-min=10.5km az=97.3*
*DJA **25** 13:42:05, 185S×9937E, h10km, MLv4.3/2*
*NEIC **25** 13:42:06.5±3.2, 182S×9952E, h37km±26km, mb4.6/3, Error ellipse: s-maj=25.2km s-min=6.2km az=55.0*
*ISCJB **25** 13:42:06.5±2.0, 189S±0.10×9944E±0.10, h60km±14km, mb4.6/27, Error ellipse: s-maj=21.3km s-min=8.4km az=135.9*
*IDC **25** 13:42:08.6±7.8, 179S×9952E, h52km±65km, mb4.0/12, mb1 4.2/12, mb1mx4.0/20, mbtmp4.1/12, MS3.7/1, Ms1 3.9/1, ms1mx3.1/35, Error ellipse: s-maj=50.2km s-min=14.7km az=60.0*

ISC 25 13:42:07.5±1.9, 193S±009×9945E±009, h51km±14km, n68, o0$79/65, mb4.6/27, 1C-8D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDSI	**Padang**	**1.43**	**45**	P		**Pn**	**13 42 29.8**	**-1.2**
PDSI	**Padang**	**1.43**	**45**	S		**Sn**	**13 42 49.2**	**+0.7**
PPI	**Padang Panjang**	**1.74**	**33**	P		**Pn**	**13 42 34.4**	**-0.8**
PPI	**Padang Panjang**	**1.74**	**33**	S		**Sn**	**13 42 58.1**	**+1.9**
KGM	**Kluang**	**5.50**	**45**	⇓P		**Pn**	**13 43 28.2**	**+1.4**
FRIM	**Kepong**	**5.57**	**23**	⇓P		**Pn**	**13 43 28.0**	**+0.2**
MYKOM	**Kota Tinggi**	**5.74**	**50**	⇓P		**Pn**	**13 43 28.2**	**-1.9**
IPM	**Ipoh**	**6.55**	**14**	⇓P		**Pn**	**13 43 41.1**	**-0.2**
SDKM	**Sandakan**	**19.25**	**67**	⇑P		**Pn**	**13 46 29.4**	**+0.2**
TSM	**Tawau**	**19.41**	**71**	⇓P		**Pn**	**13 46 30.6**	**-0.6**
CM31	**Chiang Mai Arr**	**20.26**	**359**	*e*P		**P**	**13 46 37.1**	**-1.7**
CMAR	**Chiang Mai Arr**	**20.26**	**359**	P		**P**	**13 46 38.1**	**-0.7**
	3.8nm,0.6s,baz=187,slow=10,SNR=40							
CMAR				LR		LR	13 55 10.5	
	comp=Z,192nm,18.8s,baz=190,slow=39							
CMAR	**Chiang Mai Arr**	**20.26**	**359**	P		**P**	**13 46 38.1**	**-0.7**
CMAR				pmax	pmax			
	comp=Z,4.0nm,0.6s							
CMAR				MLR	MLR			
	comp=Z,192nm,18.8s							
KAPI	**Kappang**	**20.49**	**99**	*e*P		**P**	**13 46 43.6**	**+2.2**
	comp=Z,4.5nm,0.6s,baz=277,slow=15,SNR=5.2							
KAPI	**Kappang**	**20.49**	**99**	*e*P		**P**	**13 46 41.6**	**+0.2**
ODAN	**Odare**	**30.89**	**339**	*e*P		**P**	**13 48 19.9**	**+0.6**
TAPN	**Taplejung**	**31.23**	**340**	*e*P		**P**	**13 48 22.8**	**+0.5**
	comp=Z,20nm,0.8s,mb5.0							
RAMN	**Ramite**	**31.27**	**338**	*e*P		**P**	**13 48 23.6**	**+1.0**
	comp=Z,15nm,0.7s,mb4.9							
JIRN	**Jiri**	**32.07**	**337**	*e*P		**P**	**13 48 30.3**	**+0.7**
	comp=Z,24nm,0.7s,mb5.1							
GUN	**Gumba**	**32.41**	**337**	*e*P		**P**	**13 48 33.2**	**+0.6**
	comp=Z,23nm,0.6s,mb5.2							
DMN	**Daman**	**32.45**	**336**	*e*P		**P**	**13 48 33.5**	**+0.5**
KKN	**Kakani**	**32.54**	**336**	*e*P		**P**	**13 48 33.7**	**-0.1**
GKN	**Gorkha**	**32.99**	**335**	*e*P		**P**	**13 48 37.8**	**+0.1**
	comp=Z,3.7nm,0.3s,mb4.7							
KOLN	**Koldanda**	**33.23**	**334**	*e*P		**P**	**13 48 40.1**	**+0.3**
	comp=Z,21nm,0.7s,mb5.2							
DANN	**Dangsing**	**33.67**	**335**	*e*P		**P**	**13 48 43.3**	**-0.3**
	comp=Z,5.3nm,0.5s,mb4.7							
PYUN	**Piuthan**	**33.79**	**333**	*e*P		**P**	**13 48 44.8**	**+0.1**
	comp=Z,8.0nm,0.8s,mb4.7							
WRA	**Warramunga Arr**	**38.50**	**120**	P		**P**	**13 49 25.0**	**-0.1**
	comp=Z,5.6nm,0.8s,mb4.3,baz=299,slow=9.4,SNR=25							
WRA	**Warramunga Arr**	**38.50**	**120**	P		**P**	**13 49 25.0**	**-0.1**
WRA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
WRAB	**Tennant Creek**	**38.51**	**120**	*e*P		**P**	**13 49 25.3**	**+0.1**
	comp=Z,6.0nm,0.7s,mb4.4							
WRAB	**Tennant Creek**	**38.51**	**120**	*e*P		**P**	**13 49 25.3**	**+0.2**
WRAB				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.4							
WB2	**Warramunga Arr**	**38.51**	**120**	*e*P		**P**	**13 49 23.8**	**-1.4**
ASAR	**Alice Springs**	**39.74**	**126**	P		**P**	**13 49 36.1**	**+0.7**
	comp=Z,2.1nm,0.7s,mb4.0,baz=302,slow=7.8,SNR=22							
ASAR				PcP	PcP		13 51 42.3	+1.1
	comp=Z,0.5nm,0.7s,baz=309,slow=3.2,SNR=3.7							
ASAR	**Alice Springs**	**39.74**	**126**	P		**P**	**13 49 36.1**	**+0.7**
ASAR							13 51 42.3	
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
GTA	**Gaotai**	**41.14**	**0**	*e*P		**P**	**13 49 46.5**	**-0.2**
GTA				AP	pP		13 49 50.5	-10
GTA				XP	sP		13 49 54.0	-12
GTA				AMB	AMB			
	comp=Z,7.0nm,1.0s,mb4.2							
KSRS	**Korea Array**	**47.24**	**31**	P		**P**	**13 50 34.8**	**-0.8**
	comp=Z,1.8nm,0.9s,mb4.0,baz=220,slow=10,SNR=6.0							
KSRS	**Korea Array**	**47.24**	**31**	P		**P**	**13 50 34.8**	**-0.7**
KSRS				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0							
STKA	**Stephens Creek**	**49.60**	**131**	*e*P		**P**	**13 50 55.4**	**+1.5**
	comp=Z,3.3nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**49.60**	**131**	P		**P**	**13 50 55.8**	**+1.9**
	comp=Z,2.2nm,0.6s,mb4.4,baz=332,slow=11,SNR=6.0							
STKA	**Stephens Creek**	**49.60**	**131**	*e*P		**P**	**13 50 55.0**	**+1.1**
AAK	**Ala-Archa**	**49.75**	**336**	*e*P		**P**	**13 50 55.6**	**+0.9**
SONM	**Songino Array**	**49.93**	**6**	P		**P**	**13 50 56.7**	**+0.7**
	comp=Z,9.3nm,0.8s,mb4.9,baz=188,slow=8.7,SNR=73							
SONM				PcP	PcP		13 52 16.6	+0.9
	comp=Z,1.6nm,0.8s,baz=198,slow=4.7,SNR=3.7							
SONM	**Songino Array**	**49.93**	**6**	P		**P**	**13 50 56.7**	**+0.7**
SONM							13 52 16.6	
SONM				pmax	pmax			
	comp=Z,9.0nm,0.8s							
SONM				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ULN	**Ulaanbaatar**	**50.03**	**7**	*e*P		**P**	**13 50 57.0**	**+0.2**
	comp=Z,7.1nm,0.8s,mb4.8							
ULN	**Ulaanbaatar**	**50.03**	**7**	*e*P		**P**	**13 50 57.0**	**+0.2**
ULN				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.7							
EKS2	**Erkin-Say**	**50.07**	**335**	*e*P		**P**	**13 50 57.5**	**+0.3**
	comp=Z,5.0nm,0.8s,mb4.6							
MK31	**Makanchi Array**	**50.81**	**345**	*e*P		**P**	**13 51 02.4**	**-0.3**
MKAR	**Makanchi Array**	**50.81**	**345**	P		**P**	**13 51 02.9**	**+0.1**
	comp=Z,5.0nm,0.8s,mb4.5,baz=157,slow=8.7,SNR=34							
MKAR	**Makanchi Array**	**50.81**	**345**	P		**P**	**13 51 02.9**	**+0.2**
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ZAK	**Zakamensk**	**52.21**	**3**	*e*P		**P**	**13 51 08.0**	**-5.1**
ZAK				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
MJAR	**Matsushiro Arr**	**52.56**	**39**	P		**P**	**13 51 15.4**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=119,slow=23,SNR=6.1							
MJAR	**Matsushiro Arr**	**52.56**	**39**	P		**P**	**13 51 15.4**	**-0.6**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KURK	**Kurchatov**	**55.39**	**344**	⇓*e*P		**P**	**13 51 36.4**	**+0.1**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.7							
ARMA	**Armidale**	**56.89**	**125**	*e*P		**P**	**13 51 47.6**	**+0.1**
ZAA0	**Zalesovo Array**	**57.00**	**350**	*e*P		**P**	**13 51 47.5**	**-0.3**
ZALV	**Zalesovo Beam**	**57.00**	**350**	P		**P**	**13 51 47.5**	**-0.2**
	comp=Z,11nm,0.7s,mb5.0,baz=176,slow=5.9,SNR=54							
ZALV	**Zalesovo Beam**	**57.00**	**350**	P		**P**	**13 51 47.6**	**-0.1**
ZALV				pmax	pmax			
	comp=Z,11nm,0.7s,mb5.0							
NVS	**Novosibirsk**	**58.14**	**349**	*i* P		**P**	**13 51 53.9**	**-1.9**
BOD	**Bodaibo**	**60.69**	**9**	*e*P		**P**	**13 52 13.4**	**+0.1**
BOD				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.8							
YSS	**Yuzh-Sakhalins**	**61.71**	**32**	*i* P		**P**	**13 52 20.5**	**+0.1**
YAK	**Yakutsk**	**67.81**	**15**	⇓*e*P		**P**	**13 52 59.2**	**-0.6**
YAK				pmax	pmax			
	comp=Z,16nm,0.8s,mb5.1							
PETK	**Petropavlovsk-**	**73.11**	**32**	P		**P**	**13 53 32.4**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.1,baz=210,slow=4.1,SNR=5.2							
PETK	**Petropavlovsk-**	**73.11**	**32**	P		**P**	**13 53 32.4**	**0.0**
PETK				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
TIXI	**Tiksi**	**75.87**	**9**	⇓*e*P		**P**	**13 53 47.1**	**-0.9**
TIXI				pmax	pmax			
	comp=Z,4.0nm,1.3s,mb4.2							
ARCES	**ARCESS Array B**	**86.22**	**340**	P		**P**	**13 54 43.2**	**+0.1**
	comp=Z,4.0nm,1.0s,mb4.6,baz=108,slow=5.8,SNR=3.6							
ARCES	**ARCESS Array B**	**86.22**	**340**	P		**P**	**13 54 43.2**	**+0.1**
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.0s							
TXAR	**Lajitas Array**	**144.97**	**37**	PKP	PKPdf		14 01 40.3	+0.5
	comp=Z,5.9nm,0.8s,baz=277,slow=1.5,SNR=89							
TXAR	**Lajitas Array**	**144.97**	**37**	PKIKP	PKPdf		14 01 40.3	+0.5
TXAR				pmax	pmax			
	comp=Z,6.0nm,0.8s							
JCT	**Junction City**	**146.24**	**31**	*e*PKP	PKPdf		14 01 42.9	+1.0

*SZGRF **25** 13:53:30.9, 2727N×7054E, h33km, mb4.9, India-Pakistan border region*
*IDC **25** 13:53:42.2±0.4, 2957N×6961E, h0km, mb4.8/30, mb1 4.9/31, mb1mx4.9/33, mbtmp4.8/31, ML4.9/1, MS4.4/32, Ms1 4.4/32, ms1mx4.4/34, Error ellipse: s-maj=9.0km s-min=8.4km az=122.0*
*MOS **25** 13:53:43.5±0.9, 2969N×6953E, h21km, mb5.2/111, MS4.4/28, Error ellipse: s-maj=5.9km s-min=3.3km az=128.2*
*ISCJB **25** 13:53:45.0±0.1, 2961N±003×6957E±002, h35km, mb5.0/211, MS4.5/63, Error ellipse: s-maj=3.7km s-min=2.1km az=9.2*
*DJA **25** 13:53:45, 2961N×6946E, h10km, mb5.1/9*
*NEIC **25** 13:53:47.4±0.2, 2965N×6952E, h35km, mb5.1/115, MS4.4/3, Error ellipse: s-maj=4.5km s-min=2.9km az=182.0*
*GCMT **25** 13:53:47.4±0.2, 2953N×6972E, h12km, MW5.1/86, Moment Tensor Solution. s46,c58; s86,c152; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.49±.10; Mθθ=3.44±.10; Mφφ=1.05±.10; Mrθ=2.73±.33; Mrφ=-2.28±.08; Mθφ=0.78±.32; Best double couple: M=5.45600×10^16 NP1:φ=230.00000°, δ30.00000°, λ75.00000°. NP2: φ=67.00000°, δ61.00000°, λ98.00000°. Principal axes: T 5.3400, Plg73.0000°, Azm358.0000°; N 0.2320, Plg7.0000°, Azm243.0000°; P -5.5710, Plg15.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **25** 13:53:52.0, 30.1IN×70.15E, h40km, mB5.3, mb5.0, Ms5.0, Msz4.6*

ISC 25 13:53:47.3±0.1, 2964N±002×6957E±002, h37km, h37km±1.7km:pP-P, n588, σ1§04/612, mb5.0/211, MS4.5/63, 124C-31D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SBDP	**Sheikh Budin**	**2.85**	**22**	⇓P		**Pn**	**13 54 30.9**	**+0.6**
SARP	**Sargodha**	**3.50**	**49**	⇓P		**Pn**	**13 54 39.1**	**-0.1**
CEP	**Cherat**	**4.62**	**25**	⇓P		**Pn**	**13 54 55.4**	**+0.8**
KBL	**Kabul**	**4.90**	**355**	⇑*e*P		**Pn**	**13 54 59.6**	**+1.2**
KBL					Sn	**Sn**	**13 55 51.8**	**-2.2**
CHCP	**Chirah Chowk**	**5.09**	**37**	⇓P		**Pn**	**13 55 01.7**	**+0.6**
AJM	**Ajmer**	**5.48**	**124**	*e*P		**Pn**	**13 55 06.1**	**-0.3**
AJM				*e*S		**Sn**	**13 56 02.0**	**-6.2**
AJM				AML	AML		13 56 46.6	
	comp=N,2μm,0.4s							
AJM				AML	AML		13 56 47.0	
	comp=E,2μm,0.4s							
JMU	**Jammu**	**5.50**	**55**	*e*P		**Pn**	**13 55 07.5**	**+0.8**
JMU				*e*x	x		13 56 08.0	
KHET	**Khetri**	**5.69**	**104**	*e*P		**Pn**	**13 55 10.1**	**+0.8**
KHET				*e*S		**Sn**	**13 56 06.9**	**-6.4**
KHET				AML	AML		13 57 04.6	
	comp=E,914nm,0.6s							
KHET				AML	AML		13 57 04.8	
	comp=N,1μm,0.8s							
THN	**Thein Dam**	**5.96**	**61**	*e*P		**Pn**	**13 55 12.5**	**-0.5**
THN				*e*x	x		13 56 09.9	
RTK	**Rohtak**	**6.00**	**94**	*e*P		**Pn**	**13 55 12.9**	**-0.7**
BHK	**Bhakra**	**6.16**	**72**	*e*P		**Pn**	**13 55 15.6**	**-0.2**
BHK				*e*x	x		13 57 02.2	
BHJ	**Bhuj**	**6.36**	**179**	*e*P		**Pn**	**13 55 18.1**	**-0.5**
BHJ				*e*S		**Sn**	**13 56 22.2**	**-7.8**
SDNR	**Sundarnagar**	**6.64**	**72**	*e*P		**Pn**	**13 55 22.6**	**+0.2**
SDNR				*e*S		**Sn**	**13 56 32.6**	**-4.2**
AYAN	**Aya Nagar**	**6.71**	**98**	*e*P		**Pn**	**13 55 22.3**	**-1.1**
SMLA	**Simla**	**6.72**	**75**	*i* P		**Pn**	**13 55 24.1**	**+0.5**
SMLA				*e*x	x		13 56 29.1	
SMLA				*e*x	x		13 57 16.8	
	comp=N,4μm,0.4s							
SMLA				*e*x	x		13 57 28.0	
	comp=E,4μm,0.4s							
SONA	**Sohna**	**6.73**	**100**	*e*P		**Pn**	**13 55 23.5**	**-0.1**
SONA				*e*S		**Sn**	**13 56 31.8**	**-7.1**
SONA				AML	AML		13 57 37.5	
	comp=N,1μm,0.7s							
SONA				AML	AML		13 57 41.8	
	comp=E,1μm,0.4s							
NDI	**New Delhi**	**6.75**	**96**	*e*P		**Pn**	**13 55 21.0**	**-2.9**
NDI				*e*x	x		13 56 52.0	
DDI	**Dehra Dun**	**7.39**	**83**	*e*P		**Pn**	**13 55 31.7**	**-0.9**
DDI				*e*x	x		13 57 43.0	
KLP	**Kalpa**	**7.71**	**74**	*e*P		**Pn**	**13 55 37.0**	**-0.1**
KLP				*e*S		**Sn**	**13 56 56.4**	**-6.8**
KLP				AML	AML		13 58 10.3	
	comp=E,9μm,0.6s							
KLP				AML	AML		13 58 10.6	
	comp=N,9μm,0.9s							
AGRA	**Agra**	**7.75**	**106**	*e*P		**Pn**	**13 55 35.3**	**-2.4**
AGRA				*e*x	x		13 57 45.4	
AGRA				AML	AML		13 58 09.2	
	comp=N,2μm,0.9s							
AGRA				AML	AML		13 58 11.4	
	comp=E,2μm,0.7s							
BHV	**Bhavnagar**	**8.19**	**163**	*e*P		**Pn**	**13 55 42.0**	**-1.7**
JOSI	**Joshimath**	**8.70**	**82**	*e*P		**Pn**	**13 55 50.4**	**-0.2**
JOSI				*e*S		**Sn**	**13 57 18.1**	**-9.3**
JOSI				AML	AML		13 58 10.1	
	comp=E,2μm,0.8s							
JOSI				AML	AML		13 58 11.8	
	comp=N,4μm,0.8s							
PTH	**Pithoragarh**	**9.27**	**88**	*ex*		**Pn**	**13 56 02.0**	**+3.6**
PTH				*ex*	x		13 57 41.0	
LGTI	**Lohaghat**	**9.30**	**89**	*e*P		**Pn**	**13 55 56.5**	**-2.3**
LGTI				*ex*	x		13 58 36.1	
BOM	**Bombay**	**11.10**	**164**	*e*P		**Pn**	**13 56 22.3**	**-1.2**
BOM				*ex*	x		13 58 36.0	
AKL	**Akola**	**11.16**	**141**	*e*P		**Pn**	**13 56 21.0**	**-3.4**
AKL				*ex*	x		13 58 23.6	
KSH	**Kashi**	**11.17**	**26**	P		**Pn**	**13 56 24.0**	**-0.4**
KSH				eAP			13 56 31.3	
KSH				*e*XP			13 56 36.0	
KSH				S		**Sn**	**13 58 25.3**	**-2.6**
KSH				XS			13 58 36.0	
KSH				AMB	AMB			
	comp=Z,63nm,0.4s							
KSH				AMB	AMB			
	comp=Z,2μm,2.9s							
KSH				LR	LR			
	comp=N,27μm,6.4s							
KSH				LR	LR			
	comp=E,21μm,6.7s							
ALBI	**Allahabad**	**11.69**	**109**	*ex*		**Pn**	**13 56 26.0**	**-5.6**
POO	**Poona**	**11.73**	**160**	*e*P		**Pn**	**13 56 28.7**	**-3.5**
POO				*ex*	x		13 59 10.9	
WBK	**Wadi Bani Khal**	**11.82**	**236**	⇑P		**Pn**	**13 56 29.7**	**-3.7**
	SNR=9.4							
PYUN	**Piuthan**	**11.86**	**94**	*e*P		**Pn**	**13 56 31.3**	**-2.6**
NGP	**Nagpur**	**12.03**	**132**	*ex*		**Pn**	**13 56 31.4**	**-4.9**
NGP				*ex*	x		13 58 41.4	
SMDO	**Samad**	**12.23**	**240**	P		**Pn**	**13 56 35.5**	**-3.5**
	SNR=13							
KOLN	**Koldanda**	**12.46**	**95**	*e*P		**Pn**	**13 56 39.9**	**-2.1**
	comp=E,322nm,0.8s							
DANN	**Dangsing**	**12.49**	**92**	*e*P		**Pn**	**13 56 40.1**	**-2.4**
	comp=E,501nm,0.7s							
JMDO	**Jabal Madar**	**12.60**	**238**	P		**Pn**	**13 56 40.6**	**-3.4**
	SNR=10							
AML	**Almayashu**	**12.90**	**14**	⇑*e*P		**Pn**	**13 56 45.8**	**-2.3**
	comp=E,209nm,0.6s							
AML	**Almayashu**	**12.90**	**14**	P		**Pn**	**13 56 45.7**	**-2.3**
	SNR=362							
KAD	**Karad**	**12.98**	**160**	*e*P		**Pn**	**13 56 45.7**	**-3.6**
KAD				*ex*	x		13 59 40.4	
BSY	**Bisya**	**13.05**	**241**	⇑P		**Pn**	**13 56 47.1**	**-3.2**
	SNR=8.8							
UCH	**Uchtor**	**13.18**	**16**	*e*P		**Pn**	**13 56 49.7**	**-2.1**
	comp=E,24nm,0.6s							
UCH	**Uchtor**	**13.18**	**16**	P		**Pn**	**13 56 50.0**	**-1.8**
	SNR=8.

baz=273
RDF AMb AMB 13 58 10.4
comp=Z,100nm,1.0s,baz=273
MIB Mutribah 19.31 276 *e*P **Pn 13 58 07.2 -3.3**
baz=276
MIB AMb AMB 13 58 09.8
comp=Z,160nm,0.7s,baz=276
NAY Al-Naaiem 19.45 274 *e*P **Pn 13 58 08.5 -3.7**
baz=274
NAY AMb AMB 13 58 14.9
comp=Z,63nm,0.9s,baz=274
MK31 Makanchi Array 19.78 27 *e*P **Pn 13 58 14.1 -1.9**
MK31 Makanchi Array 19.78 27 *i* P **Pn 13 58 14.1 -1.8**
MK31 pmax pmax
comp=Z,29nm,0.6s
MKAR Makanchi Array 19.78 27 P **Pn 13 58 14.2 -1.8**
comp=Z,3.2nm,0.3s,baz=210,slow=11,SNR=136
MKAR S **S 14 01 58.6 +3.6**
comp=Z,0.0nm,0.3s,baz=229,slow=30,SNR=2.3
MKAR LR LR 14 06 11.5
comp=Z,593nm,20.5s,baz=222,slow=38
MKAR Makanchi Array 19.78 27 P **Pn 13 58 14.2 -1.7**
MKAR S **S 14 01 58.6 +3.6**
MKAR pmax pmax
comp=Z,3.0nm,0.3s
MKAR MLR MLR
comp=Z,593nm,20.5s
SHL Shillong 20.18 96 *e*P **P 13 58 17.9 -0.9**
SHL *e*S **S 14 02 02.8 -0.5**
WMQ Urumqi 20.22 41 *e*P **P 13 58 20.0 +1.0**
WMQ XP sP 13 58 33.0 -0.1
WMQ PP 13 58 40.0
WMQ S **S 14 01 58.0 -5.8**
WMQ AMB AMB
comp=Z,98nm,0.8s
WMQ AMB AMB
comp=Z,156nm,3.0s
WMQ LR LR
comp=N,3μm,5.0s
WMQ LR LR
comp=E,1μm,5.0s
WMQ LR LR
comp=Z,1μm,6.0s
AB31 Akbulak array 20.92 342 P **P 13 58 25.9 -0.6**
AB31 pmax pmax
comp=Z,42nm,1.0s
MAK Makhachkala 22.12 313 *e*P **P 13 58 37.9 -1.6**
MAK *e*PPP 13 59 13.1
MAK *e*S **S 14 02 39.0 -2.2**
MAK *e*SSS 14 03 23.5
MAK pmax pmax
comp=Z,108nm,0.7s,mb5.4
KURK Kurchatov 22.12 15 P **P 13 58 38.5 -0.9**
comp=Z,783nm,0.8s,mb6.2,SNR=18
KURK Kurchatov 22.12 15 ⇓P **P 13 58 40.4 +0.9**
SNR=30
KURK Kurchatov 22.12 15 P **P 13 58 37.6 -1.8**
comp=Z,106nm,0.8s,mb5.3,baz=208,slow=9.7,SNR=161
KURK S **S 14 02 41.4 +0.3**
comp=Z,0.6nm,0.2s,baz=41,slow=11,SNR=2.0
KURK LR LR 14 08 30.6
comp=Z,996nm,18.1s,MS4.3,baz=205,slow=40
KURK Kurchatov 22.12 15 *e*P **P 13 58 38.6 -0.8**
comp=Z,116nm,0.9s,mb5.3
KURK Kurchatov 22.12 15 P **P 13 58 37.6 -1.8**
KURK S **S 14 02 41.4 +0.3**
KURK pmax pmax
comp=Z,106nm,0.8s,mb5.3
KURK smax
comp=N,1.0nm,0.2s
KURK MLR MLR
comp=Z,996nm,18.1s,MS4.3
TRD Trivandrum 22.14 160⇑ *e*x x 13 58 45.0
TRD *e*x **S 14 02 51.0 +9.1**
IMP Imphal 22.18 97 *e*P **P 13 58 43.0 +2.7**
IMP *e*x x 14 03 10.0
AKTK Aktyubinsk 22.52 340 P **P 13 58 43.0 -0.7**
AKTK S **S 14 02 57.2 +8.4**
AKTK LR LR 14 08 50.8
AKTO Aktyubinsk 22.52 340 P **P 13 58 43.0 -0.7**
comp=Z,18nm,1.0s,mb4.4,baz=170,slow=9.3,SNR=25
AKTO S **S 14 02 57.2 +8.4**
comp=Z,6.6nm,1.1s,baz=115,slow=17,SNR=2.0
AKTO LR LR 14 08 50.8
comp=Z,2μm,18.9s,MS4.6,baz=146,slow=40
DGRG David-gareji 22.86 308 P **P 13 58 47.6 +0.1**
BVAR Borovoye Array 23.37 1 P **P 13 58 52.1 -0.5**
comp=Z,31nm,0.7s,mb4.8,baz=170,slow=9.8,SNR=203
BVAR S **S 14 03 09.8 +7.4**
comp=Z,1.1nm,0.7s,baz=242,slow=44,SNR=2.6
BVAR LR LR 14 08 19.7
comp=Z,665nm,18.7s,MS4.1,baz=184,slow=37
BRVK Borovoye 23.40 1 P **P 13 58 52.7 -0.2**
comp=Z,382nm,0.7s,mb5.9,SNR=63
BRVK Borovoye 23.40 1 ⇓P **P 13 58 53.5 +0.6**
SNR=32
BRVK Borovoye 23.40 1 *e*P **P 13 58 52.4 -0.5**
comp=Z,128nm,1.3s,mb5.2
BRVK Borovoye 23.40 1 *e*P **P 13 58 52.4 -0.5**
BRVK pmax pmax
comp=Z,129nm,1.3s,mb5.2
TBLG Delisi 23.41 308 P **P 13 58 52.6 -0.6**
TBLG Delisi 23.41 308 P **P 13 58 52.6 -0.6**
GOR Gori 23.95 308 P **P 13 58 59.3 +1.3**
ONI Oni 24.63 309 P **P 13 59 07.1 +2.9**
ONI Oni 24.63 309 P **P 13 59 07.1 +2.9**
KIV Kislovodsk 25.70 311 P **P 13 59 15.6 +1.7**
comp=Z,186nm,0.7s,mb5.7,SNR=6.2
KIV Kislovodsk 25.70 311 ⇑P **P 13 59 13.7 -0.2**
SNR=13
KIV Kislovodsk 25.70 311 *e*P **P 13 59 14.2 +0.3**
comp=Z,55nm,1.2s,mb5.0
KIV Kislovodsk 25.70 311 *e*P **P 13 59 14.5 +0.6**
KIV *e* 14 02 44.6
KIV *e*S **S 14 03 40.9 +0.9**
KIV pmax pmax
comp=Z,39nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,326nm,14.0s,MS4.0
GTA Gaotai 26.65 60 *e*P **P 13 59 24.5 +2.0**
GTA AP pP 13 59 32.5 -0.3
GTA XP sP 13 59 36.3 -1.0
GTA PCP PcP 14 02 53.0 +7.2
GTA SCS ScS 14 10 17.0 +3.5
GTA AMB AMB
comp=Z,19nm,1.0s,mb4.6
GTA AMB AMB
comp=Z,276nm,7.2s
GTA LR LR
comp=N,2μm,19.5s,MS4.7
GTA LR LR
comp=E,692nm,15.0s,MS4.7
GTA LR LR
comp=Z,973nm,12.6s,MS4.5
ZAA0 Zalesovo Array 26.70 20 *e*P **P 13 59 22.0 -0.8**
ZALV Zalesovo Beam 26.70 20 P **P 13 59 22.6 -0.2**
comp=Z,6.8nm,0.4s,mb4.5,baz=223,slow=10,SNR=34
ZALV S **S 14 04 05.0 +9.4**
comp=Z,1.6nm,0.8s,baz=131,slow=4.5,SNR=2.0
NVS Novosibirsk 27.04 17 *i* P **P 13 59 24.6 -1.3**
NVS pmax pmax
comp=Z,19nm,1.2s,mb4.5
NVS pmax pmax
comp=N,31nm,1.7s
NVS pmax pmax
comp=E,9.0nm,1.7s
LBOS 27.42 240⇓ *e*P **P 13 59 31.2 +1.5**
SOC Sochi 27.54 309 *e*P **P 13 59 28.8 -1.7**
SOC *e**SP sP 13 59 42.1 -3.1
SOC *e* 14 00 17.9
SOC *e*S **S 14 04 04.9 -4.2**
SOC *e**SS sS 14 04 17.5 -8.8
SOC *e*SS 14 05 21.2
SOC pmax pmax
comp=Z,12nm,1.0s,mb4.5
SOC MLR MLR
comp=Z,162nm,10.0s,MS3.9
ARU Arti 27.89 347 P **P 13 59 34.8 +1.4**
comp=Z,163nm,0.6s,mb5.8,SNR=7.1
ARU Arti 27.89 347 *e*P **P 13 59 33.8 +0.3**
comp=Z,38nm,1.2s,mb4.9
ARU Arti 27.89 347*c* *i*P **P 13 59 33.6 +0.2**
ARU *e* 14 00 18.0
ARU *e*S **S 14 04 15.2 +0.9**
ARU pmax pmax
comp=Z,36nm,1.2s,mb4.9

SVE Sverdlovsk 27.89 349⇑ *e*P **P 13 59 34.2 +0.7**
SVE *e*S **S 14 04 16.7 +2.3**
SVE pmax pmax
comp=Z,22nm,1.2s,mb4.7
SVE MLR MLR
comp=Z,2μm,12.0s,MS4.9
ASF Jabal al Asfar 28.09 284 P **P 13 59 36.7 +1.1**
comp=Z,2.3nm,0.5s,mb4.0,baz=295,slow=3.9,SNR=3.1
ASF LR LR 14 13 34.9
comp=Z,393nm,19.0s,MS4.0,baz=138,slow=42
ASF Jabal al Asfar 28.09 284 P **P 13 59 36.7 +1.1**
ASF LR LR 14 13 34.9
ASF Jabal al Asfar 28.09 284 P **P 13 59 36.7 +1.1**
ASF pmax pmax
comp=Z,2.0nm,0.5s
ASF MLR MLR
comp=Z,393nm,19.0s
CHG Chiang Mai 28.79 105 ⇓P **P 13 59 42.9 +1.0**
comp=Z,68nm,0.8s,mb5.4
CHTO Chiang Mai 28.79 105 P **P 13 59 43.3 +1.4**
SNR=15
CHTO Chiang Mai 28.79 105 *e*P **P 13 59 42.4 +0.5**
comp=Z,55nm,0.9s,mb5.3
CHTO Chiang Mai 28.79 105 *e*P **P 13 59 42.4 +0.5**
CHTO pmax pmax
comp=Z,55nm,0.9s,mb5.3
CMAR Chiang Mai Arr 28.96 106 P **P 13 59 44.0 +0.6**
comp=Z,19nm,0.7s,mb5.0,baz=295,slow=9.7,SNR=100
CMAR S **S 14 04 36.3 +4.4**
comp=Z,0.5nm,0.3s,baz=284,slow=13,SNR=1.8
CMAR LR LR 14 12 37.9
comp=Z,454nm,19.2s,MS4.1,baz=299,slow=39
CMAR Chiang Mai Arr 28.96 106 P **P 13 59 44.1 +0.7**
CMAR S **S 14 04 36.3 +4.4**
CMAR pmax pmax
comp=Z,19nm,0.7s
CMAR smax
comp=N,1.0nm,0.3s
CMAR MLR MLR
comp=Z,454nm,19.2s
MMAI Mount Meron Ar 29.31 285 P **P 13 59 47.6 +1.2**
comp=Z,5.6nm,0.7s,mb4.4,baz=95,slow=9.5,SNR=5.2
MMAI PcP PcP 14 02 54.0 +1.6
comp=Z,0.9nm,0.4s,baz=83,slow=6.9,SNR=3.7
MMAI S **S 14 04 46.9 +10**
comp=Z,0.6nm,0.3s,baz=287,slow=32,SNR=1.9
MMAI LR LR 14 13 37.9
comp=Z,820nm,18.8s,MS4.4,baz=75,slow=41
LZH Lanzhou 29.39 68 *e*P **P 13 59 52.0 +4.9**
LZH AP pP 14 00 01.5 +4.1
LZH XP sP 14 00 05.8 +4.0
LZH *e*S **S 14 04 42.0 +3.5**
LZH XS sS 14 04 57.5 +1.9
LZH AMB AMB
comp=Z,29nm,1.1s,mb4.9
LZH AMB AMB
comp=Z,156nm,4.6s
LZH LR LR
comp=N,2μm,13.9s
LZH LR LR
comp=Z,2μm,16.8s,MS4.8
CD2 Chengdu 29.48 79 P **P 13 59 49.3 +1.3**
CD2 AP pP 13 59 58.5 +0.2
CD2 XP sP 14 00 03.0 +0.3
CD2 PP PP 14 00 45.0 -10
CD2 PCP PcP 14 02 54.8 +1.9
CD2 S **S 14 04 39.5 -0.5**
CD2 XS sS 14 04 55.3 -1.9
CD2 SCS ScS 14 10 25.8 -0.8
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,470nm,4.8s
CD2 LR LR
comp=N,4μm,15.6s,MS5.2
CD2 LR LR
comp=E,1μm,14.4s,MS5.2
CD2 LR LR
comp=Z,990nm,10.8s,MS4.7
BDT Bhumibol Dam 29.59 108 P **P 13 59 56.5 +7.4**
KMI Kunming 29.73 91 P **P 13 59 51.8 +1.6**
KMI AP pP 14 00 02.3 +1.7
KMI XP sP 14 00 05.5 +0.5
KMI PP PP 14 00 49.5 -8.2
KMI PCP PcP 14 02 55.0 +1.4
KMI S **S 14 04 45.5 +1.5**
KMI XS sS 14 05 01.3 +0.1
KMI AMB AMB
comp=Z,41nm,0.8s,mb5.2
KMI AMB AMB
comp=Z,284nm,3.1s
KMI LR LR
comp=N,2μm,12.7s,MS5.0
KMI LR LR
comp=E,803nm,10.9s,MS5.0
KMI LR LR
comp=Z,687nm,23.3s
EIL Elat 30.02 279 P **P 13 59 52.6 -0.1**
comp=Z,14nm,1.0s,mb4.6,baz=61,slow=5.6,SNR=4.8
EIL LR LR 14 14 04.7
comp=Z,665nm,19.4s,MS4.3,baz=273,slow=41
NANT Nan 30.28 104 P **P 13 59 54.0 -1.1**
KRAR Krasnoyarsk 31.11 25⇑ *e*P **P 14 00 03.7 +1.7**
KRAR MLR MLR
comp=Z,600nm,10.0s,MS4.6
SOKR Solikamsk 31.16 347 *e*P **P 14 00 03.9 +1.5**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,1μm,21.0s,MS4.5
ANTO Ankara 31.70 299 ⇓P **P 14 00 06.9 -0.6**
SNR=7.7
ANTO Ankara 31.70 299 *e*P **P 14 00 07.9 +0.5**
comp=Z,31nm,1.0s,mb5.1
ANTO Ankara 31.70 299 *e*P **P 14 00 07.9 +0.5**
ANTO pmax pmax
comp=Z,31nm,1.0s,mb5.1
ANTO Ankara 31.70 299⇑ *i*P **P 14 00 08.2 +0.8**
ZAK Zakamensk 32.69 41 *e*P **P 14 00 17.3 +1.4**
ZAK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GYA Guiyang 32.80 86⇑ *i*P **P 14 00 18.3 +1.1**
GYA AP pP 14 00 28.0 +0.4
GYA XP sP 14 00 32.0 0.0
GYA PP PP 14 01 27.8 -3.9
GYA PCP PcP 14 03 04.0 +2.2
GYA S **S 14 05 31.0 -1.0**
GYA XS sS 14 05 46.8 -2.3
GYA SCP ScP 14 06 44.3 +1.3
GYA SS sS 14 07 28.5 -25
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,210nm,6.0s
GYA LR LR
comp=N,900nm,14.2s,MS4.8
GYA LR LR
comp=E,870nm,13.5s,MS4.8
GYA LR LR
comp=Z,1μm,14.0s,MS4.7
ISP Isparta 33.31 295*c* *i*P **P 14 00 21.6 +0.1**
TLY Talaya 33.48 39 *e*P **P 14 00 25.2 +2.3**
TLY *e*S **S 14 05 48.8 +6.8**
TLY pmax pmax
comp=Z,12nm,1.1s,mb4.7
TLY MLR MLR
comp=Z,550nm,14.0s,MS4.4
XAN Xi'an 33.57 72 P **P 14 00 23.8 -0.1**
XAN AP pP 14 00 32.8 -1.5
XAN XP sP 14 00 37.8 -0.9
XAN AMB AMB
comp=Z,6.0nm,1.1s,mb4.4
XAN AMB AMB
comp=Z,133nm,4.5s
XAN LR LR
comp=N,381nm,15.2s
XAN LR LR
comp=E,661nm,20.9s
XAN LR LR
comp=Z,1μm,24.7s
SONM Songino Array 33.58 47 P **P 14 00 26.0 +2.3**
comp=Z,16nm,0.8s,mb5.0,baz=247,slow=8.4,SNR=113
SONM LR LR 14 17 01.4
comp=Z,1μm,18.4s,MS4.7,baz=87,slow=42
SONM Songino Array 33.58 47 P **P 14 00 26.0 +2.3**

SONM pmax pmax
comp=Z,16nm,0.9s
SONM MLR MLR
comp=Z,1μm,18.4s
ULN Ulaanbaatar 34.01 47⇑ P **P 14 00 28.9 +1.4**
SNR=6.7
ULN Ulaanbaatar 34.01 47 *e*P **P 14 00 29.4 +1.9**
comp=Z,12nm,0.9s,mb4.8
ULN Ulaanbaatar 34.01 47 *e*P **P 14 00 29.4 +1.9**
ULN pmax pmax
comp=Z,12nm,0.9s,mb4.8
ULN Ulaanbaatar 34.01 47 P **P 14 00 29.3 +1.8**
comp=Z,19nm,0.9s,mb5.0
BSI Banda Aceh 34.15 130 P **P 14 00 30.5 +1.4**
comp=Z,17nm,1.1s,mb4.9
BTO Baotou 34.57 61 *e*P **P 14 00 34.8 +2.3**
BTO AMB AMB
comp=Z,21nm,0.8s,mb5.1
OBN Obninsk 34.69 327 *e*P **P 14 00 33.0 -0.3**
comp=Z,125nm,1.5s,mb5.6
OBN Obninsk 34.69 327 *e*P **P 14 00 32.9 -0.4**
OBN *i* 14 01 49.8
OBN pmax pmax
comp=Z,48nm,1.1s,mb5.3
OBN MLR MLR
comp=Z,2μm,19.0s,MS4.9
TLCR 35.49 307 ⇓P **P 14 00 40.6 +0.3**
TLCR 35.49 307 ⇓ *i*P **P 14 00 40.6 +0.3**
TIRR Tirgusor 35.63 306 *e*P **P 14 00 41.3 -0.3**
comp=Z,14nm,0.9s,mb4.9
TIRR Tirgusor 35.63 306 *e*P **P 14 00 41.3 -0.2**
TIRR pmax pmax
comp=Z,14nm,0.9s,mb4.9
TIRR Tirgusor 35.63 306⇑ *i*P **P 14 00 41.6 +0.1**
HHC Hu-ho-hao-te 35.76 60 *e*P **P 14 00 44.0 +1.3**
HHC AP pP 14 00 54.8 +1.6
HHC XP sP 14 00 58.3 +0.7
HHC PP PP 14 02 05.0 +0.7
HHC PCP PcP 14 03 11.5 +1.5
HHC S **S 14 06 18.3 +0.9**
HHC XS sS 14 06 33.5 -1.2
HHC SCS ScS 14 10 57.8 -0.5
HHC AMB AMB
comp=Z,20nm,0.4s,mb5.4
HHC AMB AMB
comp=Z,152nm,3.9s
HHC LR LR
comp=N,544nm,14.3s,MS4.7
HHC LR LR
comp=E,689nm,11.9s,MS4.7
HHC LR LR
comp=Z,807nm,14.3s,MS4.6
KIS Kishinev 35.89 310 *e*P **P 14 00 44.0 +0.2**
KIS Kishinev 35.89 310 *e*UNK **P 14 00 44.0 +0.2**
PRK Paraskevi 36.68 297 P **P 14 00 50.6 0.0**
AKASG Malin Array Be 36.71 316 P **P 14 00 50.3 -0.4**
comp=Z,23nm,0.8s,mb5.0,baz=103,slow=6.9,SNR=60
AKASG PP PP 14 02 16.0 +1.4
comp=Z,8.0nm,1.0s,baz=108,slow=11,SNR=4.3
AKASG PcP PcP 14 03 12.9 +0.3
comp=Z,3.2nm,0.7s,baz=97,slow=2.9,SNR=7.7
AKASG LR LR 14 18 27.1
comp=Z,627nm,21.5s,MS4.4,baz=115,slow=40
AKASG Malin Array Be 36.71 316 P **P 14 00 50.3 -0.4**
AKASG 14 02 16.0
AKASG 14 03 13.0
AKASG pmax pmax
comp=Z,23nm,0.8s
AKASG pmax pmax
comp=Z,8.0nm,1.0s
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG MLR MLR
comp=Z,627nm,21.5s
AKBB Malin Array Si 36.71 316 *e*P **P 14 00 50.4 -0.3**
KIEV Kiev 36.72 316 *e*P **P 14 00 50.2 -0.5**
comp=Z,24nm,0.8s,mb5.1
KIEV Kiev 36.72 316 *e*P **P 14 00 50.2 -0.5**
KIEV pmax pmax
comp=Z,24nm,0.8s,mb5.1
CHOS Chios island 36.83 295 P **P 14 00 51.9 0.0**
ALN Alexandroupoli 36.93 300 P **P 14 00 53.1 +0.4**
VRI Vrincioaia 37.06 308 ⇓P **P 14 00 54.6 +0.9**
VRI Vrincioaia 37.06 308 ⇓ *i*P **P 14 00 54.6 +0.9**
KLMR Klimovskoe 37.06 336 *e*P **P 14 00 52.2 -1.4**
KLMR pmax pmax
comp=Z,41nm,1.2s,mb5.1
PLOR Plostina 37.11 308⇓ *i*P **P 14 00 55.5 +1.3**
APE Apeiranthos 37.26 293*c* *i*P **P 14 00 55.5 -0.1**
APE pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
APE MLR MLR
comp=Z,400nm,14.0s,MS4.4
APE Apeiranthos 37.26 293⇓ *i*P **P 14 00 55.4 -0.2**
THR1 Thera Island 37.35 292 P **P 14 00 55.8 -0.5**
MLR Muntele Rosu 37.53 307⇑ P **P 14 00 59.1 +1.4**
MLR Muntele Rosu 37.53 307⇑ *i*P **P 14 00 59.1 +1.4**
QIZ Qiongzhong 38.01 97 P **P 14 01 03.5 +1.4**
QIZ PP PP 14 02 30.5 +1.1
QIZ S **S 14 06 55.0 +2.9**
QIZ XS sS 14 07 09.3 -0.2
QIZ LR LR
comp=N,790nm,19.1s,MS4.7
QIZ LR LR
comp=E,692nm,18.7s,MS4.7
QIZ LR LR
comp=Z,448nm,20.6s,MS4.3
VOIR 38.15 307 ⇓P **P 14 01 03.5 +0.5**
VOIR 38.15 307 ⇓ *i*P **P 14 01 03.5 +0.6**
BURAR Bucovina Array 38.42 310 ⇓ *i*P **P 14 01 05.6 +0.4**
BUR08 Bucovina Ar. S 38.44 310 *e*P **P 14 01 05.4 +0.1**
WHN Wuhan 38.56 77 ⇓P **P 14 01 08.3 +1.7**
WHN LR LR
comp=N,3μm,13.1s,MS5.4
WHN LR LR
comp=E,2μm,14.8s,MS5.4
WHN LR LR
comp=Z,2μm,15.1s,MS4.9
PAIG Paliouri 38.69 298 P **P 14 01 08.2 +0.6**
MNK Minsk 38.87 322 *e*P **P 14 01 06.0 -2.8**
IPM Ipoh 38.87 124 P **P 14 01 11.6 +2.3**
comp=Z,22nm,1.6s,mb4.7
PLG Polygyros 38.88 299 P **P 14 01 09.7 +0.5**
SOH Sokhos 38.96 299 P **P 14 01 10.3 +0.5**
XOR Xorichti 39.07 297 P **P 14 01 10.9 +0.2**
VTS Vitosha 39.16 302⇑ P **P 14 01 11.7 +0.3**
VTS Vitosha 39.16 302⇑ *i*P **P 14 01 11.7 +0.3**
BJT Baijiatuau 39.23 62 *e*P **P 14 01 14.0 +1.9**
BJI Beijing 39.24 62 P **P 14 01 14.0 +1.8**
BJI S **S 14 07 11.0 +0.8**
BJI XS sS 14 07 26.3 -1.3
BJI AMB AMB
comp=Z,42nm,0.9s,mb5.2
BJI LR LR
comp=N,1μm,19.9s
BJI LR LR
comp=E,592nm,10.8s
BJI LR LR
comp=Z,435nm,18.0s,MS4.3
LTK Loutraki 39.27 295 P **P 14 01 11.2 -1.2**
VAY Valandovo 39.57 300 *e*P **P 14 01 14.7 -0.2**
LIT Litokhoron 39.61 298 P **P 14 01 15.1 -0.2**
LVV L'vov 39.66 314 *e*P **P 14 01 17.0 +1.5**
DRGR 39.96 309 ⇓P **P 14 01 18.6 +0.5**
DRGR 39.96 309 ⇓ *i*P **P 14 01 18.6 +0.6**
THL Klokotos Trika 39.98 297 P **P 14 01 17.2 -1.1**
TIA Tai'an 40.13 68 *e*P **P 14 01 21.0 +1.4**
TIA AMB AMB
comp=Z,19nm,1.4s,mb4.6
PYL PYLOS 40.30 293 P **P 14 01 19.3 -1.7**
SKO Skopje 40.44 301 *e*P **P 14 01 22.7 +0.6**
KWP Kalwaria 40.46 313 P **P 14 01 22.2 0.0**
comp=Z,15nm,0.5s,mb5.0
KWP Kalwaria 40.46 313 P **P 14 01 22.2 0.0**
KWP pmax pmax
comp=Z,15nm,0.5s,mb5.0
FNA Florina 40.46 299 P **P 14 01 22.5 +0.2**
BIA Bitola 40.50 300 *e*P **P 14 01 21.8 -0.9**
UZH Uzhgorod 40.53 311⇑ *i*P **P 14 01 23.5 +0.7**
UZH *e* pP 14 01 34.6 +1.2
BZS Buzias 40.56 307 ⇓P **P 14 01 23.7 +0.6**
BZS Buzias 40.56 307 ⇓ *i*P **P 14 01 23.6 +0.5**
KOLS Kolonicke sedl 40.60 312 *e*P **P 14 01 23.8 +0.4**
KOLS *e* pP 14 01 35.8 +1.9

KOLS pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
KOLS Kolonicke sedl 40.60 312 *eP* **P 14 01 23.8 +0.4**
KOLS *epP* pP 14 01 35.8 +1.9
KFL Anninata 40.98 295 P **P 14 01 25.5 -1.2**
VSU Vasula 41.05 327⇓ *eP* **P 14 01 25.9 -1.0**
VSU pmax pmax
comp=Z,34nm,0.6s,mb5.2
CRVS Cervenica-Dubn 41.12 312 *eP* **P 14 01 28.2 +0.5**
CRVS *e* pP 14 01 40.7 +2.5
CRVS pmax pmax
comp=Z,19nm,1.2s,mb4.6
CRVS Cervenica-Dubn 41.12 312 *eP* **P 14 01 28.2 +0.5**
CRVS *epP* pP 14 01 40.7 +2.5
IGT Igoumenitsa 41.28 297 P **P 14 01 28.1 -1.0**
STHS Stebnicka Huta 41.35 312 *eP* **P 14 01 37.4 +7.9**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
STHS Stebnicka Huta 41.35 312 *eP* **P 14 01 37.3 +7.8**
JOF Joensuu 41.38 335 *ep* **P 14 01 27.9 -1.6**
comp=Z,16nm,0.6s,mb4.8
JOF Joensuu 41.38 335 *eP* **P 14 01 27.9 -1.6**
JOF pmax pmax
comp=Z,16nm,0.6s,mb4.8
BOD Bodaibo 41.55 34 *eP* **P 14 01 31.0 0.0**
BOD pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
NIE Niedzica 41.95 312 *eP* **P 14 01 35.7 +1.3**
PPI Padang Panjang 41.96 130 P **P 14 01 36.8 +1.9**
comp=Z,17nm,1.2s,mb4.5
PSZ Piszkesteto 42.01 310 *eP* **P 14 01 35.6 +0.7**
comp=Z,27nm,0.8s,mb4.9
PSZ Piszkesteto 42.01 310 *eP* **P 14 01 35.6 +0.7**
PSZ pmax pmax
comp=Z,27nm,0.8s,mb4.9
PSZ Piszkesteto 42.01 310⇑ *eP* **P 14 01 35.9 +1.0**
PSZ Piszkesteto 42.01 310⇓ *iP* **P 14 01 35.7 +0.8**
NJ2 Nanjing 42.09 74 *eP* **P 14 01 37.8 +2.0**
NJ2 AP pP 14 01 46.8 +0.4
NJ2 XP sP 14 01 50.3 -0.4
NJ2 PP PP 14 03 15.0 +1.5
NJ2 S **S 14 07 54.5 +1.7**
NJ2 XS sS 14 08 09.5 -0.8
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,602nm,5.2s
NJ2 LR LR
comp=N,300nm,17.1s,MS4.5
NJ2 LR LR
comp=E,360nm,14.0s,MS4.5
PDSI Padang 42.34 130 P **P 14 01 39.5 +1.5**
comp=E,50nm,0.9s,mb5.1
OJC Ojcow 42.42 313 *eP* **P 14 01 38.6 +0.4**
HIA Hailar 42.52 48 *eP* **P 14 01 40.7 +1.6**
comp=E,20nm,1.0s,mb4.8
HIA Hailar 42.52 48 *eP* **P 14 01 40.7 +1.7**
HIA pmax pmax
comp=Z,20nm,1.0s
MYKOM Kota Tinggi 42.75 124 P **P 14 01 43.0 +1.6**
VYHS Vyhne 42.78 311 *eP* **P 14 01 41.3 +0.1**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
KAF Kangasniemi 42.92 332 *ep* **P 14 01 40.9 -1.2**
comp=Z,29nm,0.6s,mb5.2,baz=118,slow=8.1
KAF Kangasniemi 42.92 332 *eP* **P 14 01 40.9 -1.2**
KAF pmax pmax
comp=Z,29nm,0.6s,mb5.2
KOLL Kolacno 43.08 311 *eP* **P 14 01 43.6 0.0**
OKC Ostrava-Krasne 43.41 313 *eP* **P 14 01 46.7 +0.5**
MODS Modra-Piesok 43.80 310 *eP* **P 14 01 50.0 +0.6**
MODS *e* pP 14 02 00.3 +0.2
MODS pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MODS Modra-Piesok 43.80 310 *eP* **P 14 01 50.0 +0.6**
MODS *epP* pP 14 02 00.3 +0.2
ZST Bratislava 43.90 310 *eP* **P 14 01 49.6 -0.6**
ZST *e* pP 14 02 01.2 +0.3
ZST pmax pmax
comp=Z,12nm,0.7s,mb4.7
ZST Bratislava 43.90 310 *eP* **P 14 01 49.6 -0.6**
ZST *epP* pP 14 02 01.2 +0.3
TIP Timpagrande 44.06 297 *eP* **P 14 01 51.7 0.0**
comp=Z,24nm,0.9s,mb4.9
SOP Sopron 44.22 309⇓ *eP* **P 14 01 53.3 +0.5**
KOGS Kog 44.35 308 *i P* **P 14 01 54.1 +0.2**
DPC Dobruska-Polom 44.64 313 *eP* **P 14 01 56.8 +0.7**
CONA Conrad Observa 44.71 310⇑ *iP* **P 14 01 56.8 +0.1**
comp=Z,4.0nm,0.8s,mb4.3
CSNA Conrad Observa 44.71 310⇑ *iP* **P 14 01 56.8 +0.1**
comp=Z,2.7nm,0.6s,mb4.2
CUC Castrocucco 44.73 298 *eP* **P 14 01 57.2 +0.2**
comp=Z,156nm,0.8s,mb5.9
RGNG Rignano Grg 44.81 301 P **P 14 01 57.4 -0.2**
CEL Celeste 44.82 296 *eP* **P 14 01 57.9 +0.2**
comp=Z,21nm,0.8s,mb5.0
UPC Upice 44.86 313 *eP* **P 14 01 58.9 +1.1**
ARSA Arzberg 44.90 309⇑ *iP* **P 14 01 58.6 +0.4**
comp=Z,16nm,0.7s,mb5.0,SNR=17
MRLC Muro Lucano 44.93 299 P **P 14 01 59.2 +0.6**
comp=Z,34nm,1.2s,mb5.0
MTTG Motta San Giov 45.00 296 P **P 14 02 00.5 +1.3**
BOJS Bojanci 45.02 306 *eP* **P 14 01 59.3 +0.1**
SGO Sicignano 45.08 299 P **P 14 02 00.6 +0.8**
comp=Z,25nm,0.9s,mb5.0
SGO Sicignano 45.08 299 P **P 14 02 00.6 +0.8**
SGO pmax pmax
comp=Z,25nm,0.9s,mb5.0
SOKA Soboth 45.20 308⇑ *iP* **P 14 02 01.0 +0.3**
comp=Z,8.8nm,0.9s,mb4.6
OBKA Obir 45.53 308⇑ *iP* **P 14 02 03.8 +0.5**
comp=Z,14nm,1.2s,mb4.8
LJU Ljubljana 45.53 307 *i P* **P 14 02 03.6 +0.3**
PRU Pruhonice 45.74 312 *eP* **P 14 02 05.0 +0.1**
PRU *e* 14 32 21.8
PRU LR LR
comp=Z,10µm,18.0s,MS5.8
PVCC Panska Ves 45.77 313 *eP* **P 14 02 06.1 +1.0**
MOA Molln 45.78 309⇑ *iP* **P 14 02 05.3 +0.1**
comp=Z,20nm,0.6s,mb5.2,SNR=31
KSI Kapahiang 45.78 131 P **P 14 02 06.2 +0.6**
comp=Z,82nm,1.1s,mb5.6
CADS Cadrg 46.09 307 *i P* **P 14 02 07.5 -0.2**
CN2 Changchun 46.13 56 *eP* **P 14 02 08.8 +0.8**
CN2 *eAP* pP 14 02 18.5 -0.2
CN2 *eS* **S 14 08 50.8 -0.6**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,680nm,19.0s,MS4.8
CN2 LR LR
comp=E,910nm,19.0s,MS4.8
CN2 LR LR
comp=Z,670nm,19.0s,MS4.6
MYKA Terra Mystica 46.16 308⇑ *iP* **P 14 02 08.2 0.0**
comp=Z,8.6nm,0.9s,mb4.7
BRG Berggiesshubel 46.20 314 *i P* **P 14 02 09.2 +0.7**
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BRG Berggiesshubel 46.20 314 *eP* **P 14 02 09.1 +0.6**
comp=Z,11nm,0.9s,mb4.8
BRG Berggiesshubel 46.20 314 *i P* **P 14 02 09.2 +0.7**
comp=Z,11nm,0.9s,mb4.8
GEC2 GERESS Array S 46.20 311 *eP* **P 14 02 08.6 +0.1**
GEC2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GEC2 GERESS Array S 46.20 311 *eP* **P 14 02 08.6 +0.1**
comp=Z,8.0nm,0.8s,mb4.7
GERES GERESS Array B 46.20 311 P **P 14 02 08.4 -0.1**
comp=Z,4.4nm,0.6s,mb4.6,baz=94,slow=7.5,SNR=27
GERES GERESS Array B 46.20 311 P **P 14 02 08.5 0.0**
GERES pmax pmax
comp=Z,4.0nm,0.6s
KHC Kasperske Hory 46.30 311 *eP* **P 14 02 08.7 -0.6**
KBA Koelnbreinsper 46.37 308⇑ *iP* **P 14 02 10.2 +0.3**
comp=Z,12nm,0.6s,mb5.0
AQU L'Aquila 46.41 302 *eP* **P 14 02 09.9 -0.3**
comp=Z,22nm,1.0s,mb5.0
AQU L'Aquila 46.41 302 *eP* **P 14 02 09.9 -0.3**
AQU pmax pmax
comp=Z,22nm,1.0s,mb5.0
AQU L'Aquila 46.41 302⇑ *iP* **P 14 02 10.6 +0.4**
PTQR Pietraquaria 46.43 301 P **P 14 02 11.1 +0.7**
comp=Z,52nm,0.6s,mb5.6
NRCA Norcia 46.59 302 P **P 14 02 12.0 +0.3**
comp=Z,10nm,0.7s,mb4.9
SNTG Esanatoglia 46.70 303 P **P 14 02 12.9 +0.4**
comp=Z,16nm,0.6s,mb5.1
RJOB Jochberg 46.76 309 *eP* **P 14 02 12.5 -0.4**
comp=Z,27nm,1.6s,mb4.9
KEV Kevo 46.80 341 *ep* **P 14 02 13.1 +0.2**
comp=Z,7.2nm,0.7s,mb4.7
KEV Kevo 46.80 341 *eP* **P 14 02 13.1 +0.2**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
CLL Collm 46.84 314 *eP* **P 14 02 13.3 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
ASS Assisi 46.92 303 P **P 14 02 15.6 +1.4**
comp=Z,18nm,0.6s,mb5.2
ASS Assisi 46.92 303 P **P 14 02 15.6 +1.4**
ASS pmax pmax
comp=Z,18nm,0.6s,mb5.2
ABTA Abfaltersbach 46.94 308⇑ *iP* **P 14 02 14.0 -0.3**
comp=Z,6.4nm,0.6s,mb4.7
MURB Monte Urbino 47.00 303 P **P 14 02 16.3 +1.4**
comp=Z,42nm,0.8s,mb5.4
ARCES ARCESS Array B 47.11 340 P **P 14 02 15.8 +0.6**
comp=Z,7.5nm,0.5s,mb4.8,baz=132,slow=8.2,SNR=53
ARCES PcP PcP 14 03 47.9 +1.3
comp=Z,6.7nm,0.7s,baz=90,slow=5.4,SNR=3.5
ARCES LR LR 14 24 24.9
comp=Z,1µm,18.4s,MS4.9,baz=122,slow=39
ARCES ARCESS Array B 47.11 340 P **P 14 02 15.9 +0.6**
ARCES 14 03 47.9
ARCES pmax pmax
comp=Z,8.0nm,0.5s
ARCES pmax pmax
comp=Z,7.0nm,0.7s
ARCES MLR MLR
comp=Z,1µm,18.4s
TANN Tannenbergstha 47.11 313 *eP* **P 14 02 15.9 +0.3**
comp=Z,7.0nm,0.9s,mb4.6
ROTZ Rotzenmuhle 47.23 312 *eP* **P 14 02 17.1 +0.5**
comp=Z,6.0nm,0.9s,mb4.5
MANZ Manzenberg 47.31 312 *eP* **P 14 02 17.9 +0.8**
comp=Z,18nm,1.1s,mb4.9
CTI Castel Tesino 47.54 307 P **P 14 02 18.9 -0.1**
comp=Z,9.1nm,0.6s,mb5.0
CTI Castel Tesino 47.54 307 P **P 14 02 18.9 -0.1**
CTI pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
WTTA Wattenberg 47.54 309⇑ *iP* **P 14 02 18.3 -0.7**
comp=Z,11nm,0.6s,mb5.1,SNR=13
WATA Walderalm 47.58 309⇑ *iP* **P 14 02 18.3 -1.0**
comp=Z,6.3nm,0.4s,mb5.0,SNR=10
MOX Moxa 47.66 313 *eP* **P 14 02 20.3 +0.4**
MOX Moxa 47.66 313 *eP* **P 14 02 20.5 +0.6**
comp=Z,11nm,0.9s,mb4.9
VMG Vicchio 47.68 304 P **P 14 02 21.7 +1.6**
comp=Z,48nm,0.8s,mb5.6
FUR Furstenfeldbru 47.79 310 *eP* **P 14 02 20.6 -0.3**
FUR pmax pmax
comp=Z,21nm,1.1s,mb5.1
FUR Furstenfeldbru 47.79 310 *eP* **P 14 02 20.6 -0.3**
comp=Z,21nm,1.1s,mb5.1
SEI Scarperia 47.81 304 P **P 14 02 23.3 +2.2**
comp=Z,87nm,0.7s,mb5.9
SQTA Sankt Quirin 47.83 308⇑ *iP* **P 14 02 20.3 -1.0**
comp=Z,6.0nm,0.5s,mb4.9
GRF Grafenberg Arr 47.87 312 *eP* **P 14 02 22.3 +0.8**
GRF pmax pmax
comp=Z,24nm,0.8s,mb5.3
GRF Grafenberg Arr 47.87 312 *eP* **P 14 02 22.3 +0.8**
GRF pmax pmax
comp=Z,24nm,0.8s,mb5.3
GRF Grafenberg Arr 47.87 312 *eP* **P 14 02 22.3 +0.8**
comp=Z,24nm,0.8s,mb5.3
MOTA Moosalm 47.90 309⇑ *iP* **P 14 02 20.7 -1.1**
comp=Z,11nm,0.6s,mb5.1,SNR=13
RETA Reute 48.14 309⇑ *iP* **P 14 02 22.6 -1.0**
comp=Z,8.9nm,0.8s,mb4.9
FETA Feichten 48.16 308⇑ *iP* **P 14 02 23.0 -0.8**
comp=Z,16nm,0.8s,mb5.1,SNR=14
PII Pisa 48.43 304 P **P 14 02 25.0 -0.9**
MAIM Mastiano 48.44 304 P **P 14 02 25.3 -0.7**
CLZ Clausthal 48.51 315 *eP* **P 14 02 25.9 -0.5**
CLZ pmax pmax
comp=Z,21nm,1.5s,mb5.0
CLZ Clausthal 48.51 315 *eP* **P 14 02 25.9 -0.5**
comp=Z,21nm,1.5s,mb5.0
KS15 Wonju Array Si 48.56 65 *eP* **P 14 02 28.1 +1.0**
KSRS Korea Array 48.59 65 P **P 14 02 27.7 +0.5**
comp=Z,18nm,0.9s,mb5.1,baz=267,slow=7.1,SNR=44
KSRS LR LR 14 26 38.3
comp=Z,295nm,18.4s,MS4.3,baz=281,slow=41
KSRS Korea Array 48.59 65 P **P 14 02 27.7 +0.5**
KSRS pmax pmax
comp=Z,18nm,0.9s,mb5.1
KSRS MLR MLR
comp=Z,295nm,18.4s,MS4.3
BSEG Bad Segeberg 48.70 317 *eP* **P 14 02 28.1 +0.3**
BSEG pmax pmax
comp=Z,25nm,1.0s,mb5.2
BSEG Bad Segeberg 48.70 317 *eP* **P 14 02 28.1 +0.3**
comp=Z,25nm,1.0s,mb5.2
DAVA Damuels 48.74 309⇑ *iP* **P 14 02 27.7 -0.6**
comp=Z,17nm,0.6s,mb5.3,SNR=15
MDJ Mudanjiang 49.07 55 P **P 14 02 31.3 +0.5**
MDJ AP pP 14 02 40.5 -1.1
MDJ PCP PcP 14 03 55.8 +1.7
MDJ PP PP 14 04 19.5 -5.0
MDJ S **S 14 09 34.8 +1.7**
MDJ AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,62nm,3.4s
MDJ LR LR
comp=N,367nm,12.0s,MS4.8
MDJ LR LR
comp=E,454nm,13.3s,MS4.8
MDJ LR LR
comp=Z,563nm,15.1s,MS4.7
TUE Stuetta 49.12 307 *eP* **P 14 02 30.7 -0.5**
comp=Z,6.6nm,0.7s,mb4.8
STU Stuttgart 49.18 311 *eP* **P 14 02 31.4 -0.2**
comp=Z,14nm,0.9s,mb5.0
NB2 NORSAR Subarra 49.30 327 P **P 14 02 31.1 -1.2**
comp=Z,18nm,0.8s,mb5.1,baz=104,slow=7.9
NOA NORSAR Array B 49.30 327 P **P 14 02 31.7 -0.6**
comp=Z,14nm,0.8s,mb5.1,baz=104,slow=7.7,SNR=29
NOA LR LR 14 27 20.0
comp=Z,1µm,18.5s,MS4.9,baz=95,slow=41
NOA NORSAR Array B 49.30 327 P **P 14 02 31.7 -0.6**
NOA LR LR 14 27 20.0
NOA NORSAR Array B 49.30 327 P **P 14 02 31.7 -0.6**
NOA pmax pmax
comp=Z,14nm,0.8s
NOA MLR MLR
comp=Z,1µm,18.5s
TOD Tromm 49.44 312 *eP* **P 14 02 33.9 +0.4**
VSL Villasalto 49.72 298 *eP* **P 14 02 35.7 -0.2**
comp=Z,48nm,0.8s,mb5.6
BFO Black Forest 49.76 310 *eP* **P 14 02 35.2 -0.8**
BFO pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BFO Black Forest 49.76 310 *eP* **P 14 02 35.2 -0.8**
comp=Z,5.0nm,0.7s,mb4.7
YAK Yakutsk 50.32 32 *eP* **P 14 02 39.8 -0.3**
comp=Z,42nm,0.8s,mb5.5
YAK Yakutsk 50.32 32⇓ *eP* **P 14 02 39.4 -0.7**
YAK pmax pmax
comp=Z,43nm,0.8s,mb5.5
YAK MLR MLR
comp=Z,700nm,19.0s,MS4.7
KLR Kul'dur 50.36 49 *eP* **P 14 02 37.3 -3.3**
KEST Kesra 50.37 294 P **P 14 02 42.4 +1.5**
comp=Z,12nm,0.8s,mb5.0,baz=331,slow=1.5,SNR=25
KEST LR LR 14 28 28.6
comp=Z,88nm,19.4s,MS3.8,baz=214,slow=41
CDF Champ du Feu 50.46 310⇑ *iP* **P 14 02 40.5 -0.8**
comp=Z,5.9nm,0.7s,mb4.4
CDF Champ du Feu 50.46 310⇑ *iP* **P 14 02 40.5 -0.8**
comp=Z,3.0nm,0.7s,mb4.4
CDF Champ du Feu 50.46 310⇑ *iP* **P 14 02 40.5 -0.8**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
RUP Ruppelstein 50.57 312 *eP* **P 14 02 42.5 +0.4**
LUCF Luceram 50.71 304 *eP* **P 14 02 42.8 -0.5**
HINF Hinteralfeld 50.77 309⇑ *iP* **P 14 02 42.8 -0.9**
comp=Z,13nm,0.7s,mb4.7
HINF Hinteralfeld 50.77 309⇑ *iP* **P 14 02 42.8 -0.9**
comp=Z,6.5nm,0.7s,mb4.7
HINF Hinteralfeld 50.77 309⇑ *iP* **P 14 02 42.8 -0.9**
HINF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LPG La Plagne 50.99 306⇑ *iP* **P 14 02 45.1 -0.3**
comp=Z,24nm,0.9s,mb4.8
LPG La Plagne 50.99 306⇑ *iP* **P 14 02 45.1 -0.3**
comp=Z,12nm,0.9s,mb4.8
LPG La Plagne 50.99 306⇑ *iP* **P 14 02 45.1 -0.3**
LPG pmax pmax
comp=Z,12nm,0.9s,mb4.8
LPL La Plagne 51.00 306⇑ *iP* **P 14 02 45.1 -0.4**
comp=Z,21nm,0.8s,mb4.8
LPL La Plagne 51.00 306⇑ *iP* **P 14 02 45.1 -0.4**
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 51.00 306⇑ *iP* **P 14 02 45.1 -0.4**
LPL pmax pmax
comp=Z,11nm,0.8s,mb4.8
MBDF Montbardon 51.04 305⇑ *iP* **P 14 02 44.9 -0.9**
comp=Z,26nm,0.9s,mb4.9
MBDF Montbardon 51.04 305⇑ *iP* **P 14 02 44.9 -0.9**
comp=Z,13nm,0.9s,mb4.9
MBDF Montbardon 51.04 305⇑ *iP* **P 14 02 44.9 -0.9**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb4.9
RSL Roselend 51.06 307 *eP* **P 14 02 45.2 -0.7**
BNI Bardonecchia 51.08 306 *eP* **P 14 02 45.2 -0.8**
comp=Z,14nm,1.0s,mb4.9
BNI Bardonecchia 51.08 306 *eP* **P 14 02 45.2 -0.8**
BNI pmax pmax
comp=Z,14nm,1.0s,mb4.8
HAU Haudompre 51.10 310⇑ *iP* **P 14 02 45.7 -0.5**
comp=Z,22nm,0.9s,mb4.8
HAU *e*MLR MLR
comp=Z,324nm,18.2s,MS4.1
HAU Haudompre 51.10 310⇑ *iP* **P 14 02 45.7 -0.5**
comp=Z,11nm,0.9s,mb4.8
HAU LR LR
comp=Z,320nm,18.3s,MS4.4
HAU Haudompre 51.10 310⇑ *iP* **P 14 02 45.7 -0.5**
HAU pmax pmax
comp=Z,11nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,320nm,18.3s,MS4.4
WLF Walferdange 51.16 312 P **P 14 02 47.5 +1.0**
comp=Z,20nm,1.9s,mb4.7
MEM Membach 51.23 313 P **P 14 02 47.6 +0.5**
comp=Z,12nm,2.2s,mb4.5
FRF La Foret Royal 51.25 304 *eP* **P 14 02 46.3 -1.1**
JOW Kunigami 51.32 78 P **P 14 02 48.6 +0.5**
comp=Z,30nm,0.8s,mb5.3,baz=246,slow=2.9,SNR=4.9
JOW LR LR 14 26 49.5
comp=Z,422nm,18.2s,MS4.5,baz=157,slow=39
CABF La Chapelle 51.36 308⇑ *iP* **P 14 02 48.2 0.0**
comp=Z,52nm,0.9s,mb5.1
CABF La Chapelle 51.36 308⇑ *iP* **P 14 02 48.2 0.0**
comp=Z,26nm,0.9s,mb5.2
CABF La Chapelle 51.36 308⇑ *iP* **P 14 02 48.2 0.0**
CABF pmax pmax
comp=Z,26nm,0.9s,mb5.2
ORIF Oris-en-Rattie 51.66 306⇑ *iP* **P 14 02 49.4 -1.0**
comp=Z,9.8nm,0.8s,mb4.5
ORIF *e*MLR MLR
comp=Z,391nm,17.8s,MS4.2
ORIF Oris-en-Rattie 51.66 306⇑ *iP* **P 14 02 49.4 -1.0**
comp=Z,4.9nm,0.8s,mb4.5
ORIF Oris-en-Rattie 51.66 306⇑ *iP* **P 14 02 49.4 -1.0**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MEZF Maizieres J'vi 51.94 310⇑ *iP* **P 14 02 52.4 0.0**
comp=Z,23nm,0.8s,mb4.9
MEZF Maizieres J'vi 51.94 310⇑ *iP* **P 14 02 52.4 0.0**
comp=Z,23nm,0.8s,mb5.2
GIVF Givet 52.00 312 *eP* **P 14 02 53.4 +0.5**
comp=Z,32nm,1.0s,mb4.9
GIVF Givet 52.00 312 *eP* **P 14 02 53.4 +0.5**
comp=Z,16nm,1.0s,mb4.9
GIVF Givet 52.00 312 *eP* **P 14 02 53.4 +0.5**
GIVF pmax pmax
comp=Z,16nm,1.0s,mb4.9
DOU Dourbes 52.15 312 P **P 14 02 54.5 +0.6**
UCC Uccle 52.27 313 P **P 14 02 55.4 +0.6**
BAIF Baives 52.40 312⇑ *iP* **P 14 02 56.4 +0.6**
comp=Z,25nm,0.8s,mb4.9
BAIF Baives 52.40 312⇑ *iP* **P 14 02 56.4 +0.6**
comp=Z,13nm,0.8s,mb4.9
BAIF Baives 52.40 312⇑ *iP* **P 14 02 56.4 +0.6**
BAIF pmax pmax
comp=Z,13nm,0.8s,mb4.9
VIVF Saint-Julien-l 52.52 306⇑ *iP* **P 14 02 56.3 -0.5**
comp=Z,65nm,1.2s,mb5.1
VIVF Saint-Julien-l 52.52 306⇑ *iP* **P 14 02 56.3 -0.5**
comp=Z,32nm,1.2s,mb5.1
VIVF Saint-Julien-l 52.52 306⇑ *iP* **P 14 02 56.3 -0.5**
VIVF pmax pmax
comp=Z,33nm,1.2s,mb5.1
SSB Saint Sauveur 52.56 306 *eP* **P 14 02 56.5 -0.6**
OPO Ambohidratompo 52.57 207 P **P 14 02 58.3 +1.0**
comp=Z,2.5nm,0.9s,mb4.2,baz=7.6,slow=5.9,SNR=3.5
HABR Khabarovsk 52.57 50 *eP* **P 14 02 55.8 -1.3**
HABR *e**PP pP 14 03 05.4 -2.6
HABR *e* 14 04 05.8
HABR *e* 14 04 54.8
HABR *eS* **S 14 10 20.5 -1.0**
HABR *e* 14 10 37.7
HABR *e* 14 12 42.1
HABR *e*SS SS 14 14 00.3 +0.6
TIXI Tiksi 52.59 20 *eP* **P 14 02 56.7 -0.2**
comp=Z,20nm,0.8s,mb5.1
TIXI Tiksi 52.59 20⇓ *eP* **P 14 02 56.0 -0.9**
TIXI pmax pmax
comp=Z,29nm,1.2s,mb5.1
TIXI MLR MLR
comp=Z,500nm,21.0s,MS4.5
LOR Lormes 52.83 309⇑ *iP* **P 14 02 58.3 -0.8**
comp=Z,16nm,0.9s,mb4.7
LOR *e*MLR MLR
comp=Z,298nm,18.5s,MS4.1
LOR Lormes 52.83 309⇑ *iP* **P 14 02 58.3 -0.8**
comp=Z,7.8nm,0.9s,mb4.6
LOR LR LR
comp=Z,300nm,18.5s,MS4.4
LOR Lormes 52.83 309⇑ *iP* **P 14 02 58.3 -0.8**
LOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LOR MLR MLR
comp=Z,300nm,18.5s,MS4.4
SMF Signal de Mont 52.90 308⇑ *iP* **P 14 02 59.2 -0.4**
comp=Z,55nm,0.9s,mb5.2
SMF Signal de Mont 52.90 308⇑ *iP* **P 14 02 59.2 -0.4**
comp=Z,27nm,0.9s,mb5.2
SMF Signal de Mont 52.90 308⇑ *iP* **P 14 02 59.2 -0.4**
SMF pmax pmax
comp=Z,27nm,0.9s,mb5.2
SSF Saint Saulge 53.09 309⇑ *iP* **P 14 03 00.6 -0.4**
comp=Z,36nm,0.8s,mb5.0
SSF Saint Saulge 53.09 309⇑ *iP* **P 14 03 00.6 -0.4**
comp=Z,18nm,0.8s,mb5.0
SSF Saint Saulge 53.09 309⇑ *iP* **P 14 03 00.6 -0.4**
SSF pmax pmax
comp=Z,18nm,0.8s,mb5.0
PLDF La Plantade 53.13 307 *eP* **P 14 03 01.1 -0.2**
LASF Ste Croix 53.19 305 *eP* **P 14 03 01.5 -0.3**
comp=Z,40nm,1.1s,mb5.0
AVF Avril sur Loir 53.22 308⇑ *iP* **P 14 03 01.4 -0.5**
comp=Z,16nm,0.8s,mb4.7
AVF Avril sur Loir 53.22 308⇑ *iP* **P 14 03 01.4 -0.5**
comp=Z,7.8nm,0.8s,mb4.7
AVF Avril sur Loir 53.22 308⇑ *iP* **P 14 03 01.4 -0.5**
AVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
AGO Saint Agoulin 53.46 307 *eP* **P 14 03 03.6 -0.1**
LBL Lubilhac 53.47 306 *eP* **P 14 03 03.9 +0.1**
PYM Petit Puy Mans 53.58 307 *eP* **P 14 03 04.5 -0.1**
BGF Bois d'Agland 53.59 308⇑ *iP* **P 14 03 04.3 -0.4**
comp=Z,15nm,0.7s,mb4.7
BGF Bois d'Agland 53.59 308⇑ *iP* **P 14 03 04.3 -0.4**
comp=Z,7.3nm,0.7s,mb4.7
BGF Bois d'Agland 53.59 308⇑ *iP* **P 14 03 04.3 -0.4**
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
HYF Humbligny 53.66 309⇑ *iP* **P 14 03 05.3 +0.2**
SPB4 Spitsbergen Ar 53.92 348 *eP* **P 14 03 08.3 +1.7**
FRNF Fournols 53.93 307 *eP* **P 14 03 07.7 +0.5**
TCF Toulx Ste Croi 54.06 308⇑ *iP* **P 14 03 08.1 0.0**

comp=Z,34nm,1.0s,mb4.9
TCF Toulx Ste Croi 54.06 308⇑ *iP* **P 14 03 08.1 0.0**
comp=Z,17nm,1.0s,mb4.9
TCF Toulx Ste Croi 54.06 308⇑ *iP* **P 14 03 08.1 0.0**
TCF pmax pmax
comp=Z,17nm,1.0s,mb4.9
CAF Calviac 54.34 306⇑ *iP* **P 14 03 10.2 0.0**
comp=Z,41nm,0.9s,mb5.1
CAF Calviac 54.34 306⇑ *iP* **P 14 03 10.2 0.0**
comp=Z,21nm,0.9s,mb5.1
CAF Calviac 54.34 306⇑ *iP* **P 14 03 10.2 0.0**
CAF pmax pmax
comp=Z,21nm,0.9s,mb5.1
MTLF Montolieu 54.48 304⇑ *iP* **P 14 03 10.8 -0.4**
comp=Z,33nm,0.9s,mb5.0
MTLF Montolieu 54.48 304⇑ *iP* **P 14 03 10.8 -0.4**
comp=Z,17nm,0.9s,mb5.0
MTLF Montolieu 54.48 304⇑ *iP* **P 14 03 10.8 -0.4**
MTLF pmax pmax
comp=Z,17nm,0.9s,mb5.0
RJF Les Rejaudoux 54.67 307⇑ *iP* **P 14 03 12.6 0.0**
comp=Z,25nm,0.9s,mb4.9
RJF *e*MLR MLR
comp=Z,318nm,18.5s,MS4.1
RJF Les Rejaudoux 54.67 307⇑ *iP* **P 14 03 12.6 0.0**
comp=Z,12nm,0.9s,mb4.9
RJF LR LR
comp=Z,320nm,18.5s,MS4.4
RJF Les Rejaudoux 54.67 307⇑ *iP* **P 14 03 12.6 0.0**
RJF pmax pmax
comp=Z,13nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,320nm,18.5s,MS4.4
KBS Kingsbay 55.05 349 *eP* **P 14 03 15.9 +1.1**
comp=Z,30nm,0.9s,mb5.3
KBS Kingsbay 55.05 349 *eP* **P 14 03 15.9 +1.1**
KBS pmax pmax
comp=Z,30nm,0.9s,mb5.3
EMIR Miracle 55.22 303 P **P 14 03 18.0 +1.4**
comp=Z,188nm,2.3s,mb5.7
LFF La Frestale 55.27 306⇑ *iP* **P 14 03 16.8 -0.1**
comp=Z,54nm,1.0s,mb5.2
LFF La Frestale 55.27 306⇑ *iP* **P 14 03 16.8 -0.1**
comp=Z,27nm,1.0s,mb5.2
LFF La Frestale 55.27 306⇑ *iP* **P 14 03 16.8 -0.1**
LFF pmax pmax
comp=Z,27nm,1.0s,mb5.2
LDF La Druitiere 55.35 311⇑ *iP* **P 14 03 16.8 -0.6**
comp=Z,28nm,0.8s,mb5.1
LDF La Druitiere 55.35 311⇑ *iP* **P 14 03 16.8 -0.6**
comp=Z,14nm,0.8s,mb5.0
LDF La Druitiere 55.35 311⇑ *iP* **P 14 03 16.8 -0.6**
LDF pmax pmax
comp=Z,14nm,0.8s,mb5.0
FLN La Foliniere 55.57 311⇑ *iP* **P 14 03 18.4 -0.6**
comp=Z,65nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,306nm,17.8s,MS4.1
FLN La Foliniere 55.57 311⇑ *iP* **P 14 03 18.4 -0.6**
comp=Z,33nm,1.1s,mb5.3
FLN LR LR
comp=Z,310nm,17.8s,MS4.4
FLN La Foliniere 55.57 311⇑ *iP* **P 14 03 18.4 -0.6**
FLN pmax pmax
comp=Z,33nm,1.1s,mb5.3
FLN MLR MLR
comp=Z,310nm,17.8s,MS4.4
MFF Saint Martin d 55.63 308⇑ *iP* **P 14 03 18.9 -0.6**
comp=Z,30nm,0.9s,mb5.0
MFF Saint Martin d 55.63 308⇑ *iP* **P 14 03 18.9 -0.6**
comp=Z,15nm,0.9s,mb5.0
MFF Saint Martin d 55.63 308⇑ *iP* **P 14 03 18.9 -0.6**
MFF pmax pmax
comp=Z,15nm,0.9s,mb5.0
GRR Gorron 55.86 311⇑ *iP* **P 14 03 20.6 -0.5**
comp=Z,14nm,0.6s,mb4.8
GRR Gorron 55.86 311⇑ *iP* **P 14 03 20.6 -0.5**
comp=Z,6.9nm,0.6s,mb4.9
GRR Gorron 55.86 311⇑ *iP* **P 14 03 20.6 -0.5**
GRR pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
EPF Esparros 55.88 304 *eP* **P 14 03 19.8 -1.5**
comp=Z,17nm,0.9s,mb4.8
EPF Esparros 55.88 304 *eP* **P 14 03 19.8 -1.5**
comp=Z,8.4nm,0.9s,mb4.8
EPF Esparros 55.88 304 *eP* **P 14 03 19.8 -1.5**
EPF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
EBIE Bielsa 56.09 304 P **P 14 03 23.2 +0.4**
comp=Z,41nm,1.3s,mb5.3
ETSF Etsaut 56.55 304⇑ *iP* **P 14 03 25.9 -0.2**
comp=Z,40nm,1.0s,mb5.1
ETSF Etsaut 56.55 304⇑ *iP* **P 14 03 25.9 -0.2**
comp=Z,20nm,1.0s,mb5.1
ETSF Etsaut 56.55 304⇑ *iP* **P 14 03 25.9 -0.2**
ETSF pmax pmax
comp=Z,20nm,1.0s,mb5.1
ESAC San Caprasio 56.72 303 P **P 14 03 27.0 -0.4**
comp=Z,34nm,0.7s,mb5.5
MAJO Matsushiro 56.83 64 *eP* **P 14 03 28.3 +0.1**
comp=Z,12nm,1.1s,mb4.8
MAJO Matsushiro 56.83 64 *eP* **P 14 03 28.3 +0.1**
MAJO pmax pmax
comp=Z,12nm,1.1s,mb4.8
MAT Matsushiro 56.83 64 P **P 14 03 28.4 +0.2**
MJAR Matsushiro Arr 56.83 64 P **P 14 03 29.0 +0.8**
comp=Z,6.6nm,1.0s,mb4.6,baz=288,slow=9.9,SNR=17
MJAR LR LR 14 31 47.4
comp=Z,169nm,18.7s,MS4.2,baz=290,slow=40
MJAR Matsushiro Arr 56.83 64 P **P 14 03 29.0 +0.8**
MJAR pmax pmax
comp=Z,7.0nm,1.0s
MJAR MLR MLR
comp=Z,169nm,18.7s
SJPF Ste Jean 56.99 304 *eP* **P 14 03 29.0 -0.2**
comp=Z,32nm,1.0s,mb5.0
SJPF Ste Jean 56.99 304 *eP* **P 14 03 29.0 -0.2**
comp=Z,16nm,1.0s,mb5.0
SJPF Ste Jean 56.99 304 *eP* **P 14 03 29.0 -0.2**
SJPF pmax pmax
comp=Z,16nm,1.0s,mb5.0
SGMF Saint Gilles 57.00 311⇑ *iP* **P 14 03 29.2 0.0**
comp=Z,63nm,0.9s,mb5.3
SGMF Saint Gilles 57.00 311⇑ *iP* **P 14 03 29.2 0.0**
comp=Z,32nm,0.9s,mb5.3
SGMF Saint Gilles 57.00 311⇑ *iP* **P 14 03 29.2 0.0**
SGMF pmax pmax
comp=Z,31nm,0.9s,mb5.3
DAV Davao City (W) 57.09 101 LR LR 14 26 58.7
comp=Z,286nm,19.9s,MS4.4,baz=265,slow=35
EALK Alkurruntz 57.17 305 P **P 14 03 31.4 +0.9**
comp=Z,9.3nm,0.9s,mb4.8
ELIZ Elizondo 57.20 305 P **P 14 03 30.5 -0.1**
comp=Z,7.4nm,1.0s,mb4.7
ELIZ Elizondo 57.20 305 P **P 14 03 30.5 -0.2**
ELIZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TAM Tamanrasset 57.24 279 *eP* **P 14 03 31.2 -0.1**
QUIF Quistinic 57.46 310⇑ *iP* **P 14 03 32.8 +0.4**
comp=Z,36nm,0.8s,mb5.1
QUIF Quistinic 57.46 310⇑ *iP* **P 14 03 32.8 +0.4**
comp=Z,18nm,0.8s,mb5.2
QUIF Quistinic 57.46 310⇑ *iP* **P 14 03 32.8 +0.4**
QUIF pmax pmax
comp=Z,18nm,0.8s,mb5.2
ROSF Rostrenen 57.46 311 *eP* **P 14 03 32.0 -0.5**
comp=Z,52nm,0.8s,mb5.3
ROSF Rostrenen 57.46 311 *eP* **P 14 03 32.0 -0.5**
comp=Z,26nm,0.8s,mb5.3
ROSF Rostrenen 57.46 311 *eP* **P 14 03 32.0 -0.5**
ROSF pmax pmax
comp=Z,26nm,0.8s,mb5.3
ECHE Chera 57.56 300 P **P 14 03 34.1 +0.8**
comp=Z,20nm,0.8s,mb5.2
ECHE Chera 57.56 300 P **P 14 03 34.1 +0.8**
ECHE pmax pmax
comp=Z,20nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 57.92 51 *eP* **P 14 03 35.0 -0.8**
YSS Yuzh-Sakhalins 57.92 51⇑ *eP* **P 14 03 35.0 -0.7**
YSS *e* pP 14 03 44.9 -1.8
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,500nm,17.0s,MS4.7
YSS MLR MLR
comp=E,500nm,16.0s
ECRI Cripan 58.02 304 P **P 14 03 36.9 +0.4**
comp=E,5.7nm,0.7s,mb4.7
ECRI Cripan 58.02 304 P **P 14 03 36.9 +0.4**
ECRI pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ETOB Tobarra 58.22 299 P **P 14 03 38.7 +0.8**
comp=Z,17nm,0.7s,mb5.2
ELAN Lanestosa 58.55 305 P **P 14 03 40.8 +0.7**
comp=Z,17nm,0.8s,mb5.1
EVIA Vianos 58.95 300 P **P 14 03 43.4 +0.4**
comp=Z,19nm,0.6s,mb5.3
EVIA Vianos 58.95 300 P **P 14 03 43.4 +0.4**
EVIA pmax pmax
comp=Z,19nm,0.6s,mb5.3
JHJ Hachijo jima 2 59.01 67 LR LR 14 30 39.2
comp=Z,187nm,20.1s,MS4.2,baz=282,slow=38
KAPI Kappang 59.16 117 LR LR 14 33 09.8
comp=Z,180nm,20.5s,MS4.2,baz=316,slow=40
EHUE Huescar 59.23 299 P **P 14 03 44.8 -0.2**
comp=Z,20nm,0.9s,mb5.2
EHUE Huescar 59.23 299 P **P 14 03 44.8 -0.2**
EHUE pmax pmax
comp=Z,20nm,0.9s,mb5.2
EQES Quesada 59.60 299 P **P 14 03 47.7 +0.1**
comp=Z,18nm,0.8s,mb5.2
GUD Guadarrama 59.68 302 P **P 14 03 47.6 -0.4**
comp=Z,18nm,0.8s,mb5.2
GUD Guadarrama 59.68 302 P **P 14 03 47.6 -0.4**
GUD pmax pmax
comp=Z,18nm,0.8s,mb5.2
EBER Berja 59.70 298 P **P 14 03 48.8 +0.6**
comp=Z,35nm,0.7s,mb5.5
ESDC Sonseca Array 59.78 301 P **P 14 03 48.3 -0.4**
comp=Z,12nm,0.7s,mb5.0,baz=64,slow=7.3,SNR=68
ESDC LR LR 14 34 37.2
comp=Z,169nm,19.5s,MS4.2,baz=315,slow=41
ESDC Sonseca Array 59.78 301 P **P 14 03 48.3 -0.4**
comp=Z,10nm,0.6s,mb5.0
EARI Arriondas 59.80 305 P **P 14 03 48.6 -0.1**
comp=Z,16nm,0.7s,mb5.2
LSZ Lusaka 59.90 228 P **P 14 03 50.5 +0.8**
comp=Z,5.5nm,0.8s,mb4.6,baz=46,slow=6.6,SNR=13
LSZ Lusaka 59.90 228 *eP* **P 14 03 50.5 +0.7**
LSZ Lusaka 59.90 228 P **P 14 03 50.5 +0.8**
LSZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
EBAN Banos Encina 60.05 299 P **P 14 03 50.6 0.0**
comp=Z,13nm,0.6s,mb5.1
EBAN Banos Encina 60.05 299 P **P 14 03 50.6 0.0**
EBAN pmax pmax
comp=Z,13nm,0.6s,mb5.1
PAB San Pablo 60.10 301 *eP* **P 14 03 50.4 -0.6**
comp=Z,21nm,0.8s,mb5.2
PAB San Pablo 60.10 301 *eP* **P 14 03 50.4 -0.5**
PAB pmax pmax
comp=Z,21nm,0.8s,mb5.2
ECOG Cogollos-Vega 60.12 298 P **P 14 03 50.4 -0.7**
comp=Z,8.5nm,0.7s,mb4.9
ECOG Cogollos-Vega 60.12 298 P **P 14 03 50.4 -0.7**
ECOG pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
EGUA Guajares 60.24 298 P **P 14 03 51.9 -0.1**
comp=Z,125nm,0.8s,mb6.0
EGUA Guajares 60.24 298 P **P 14 03 51.9 -0.1**
EGUA pmax pmax
comp=Z,125nm,0.8s,mb6.0
ERON Agron 60.38 298 P **P 14 03 51.9 -1.0**
comp=Z,13nm,0.6s,mb5.2
ELUQ Luque 60.58 299 P **P 14 03 53.1 -1.1**
comp=Z,7.2nm,1.3s,mb4.6
ELUQ Luque 60.58 299 P **P 14 03 53.1 -1.1**
ELUQ pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
EADA Adamuz 60.64 300 P **P 14 03 55.2 +0.5**
comp=Z,12nm,0.8s,mb5.1
SEY Seymchan 60.83 31⇓ *eP* **P 14 03 55.8 +0.3**
DAG Danmarks Havn 60.98 345⇓ *iP* **P 14 03 57.2 +0.8**
DAG pmax pmax
comp=Z,28nm,0.4s,mb5.8
DAG Danmarks Havn 60.98 345⇓ *iP* **P 14 03 57.2 +0.8**
comp=Z,28nm,0.4s,mb5.7
EPLA Plasencia 61.25 302 P **P 14 03 58.8 +0.1**
comp=Z,39nm,0.8s,mb5.6
EPLA Plasencia 61.25 302 P **P 14 03 58.8 +0.1**
EPLA pmax pmax
comp=Z,39nm,0.8s,mb5.6
ERUA La Rua 61.40 305 P **P 14 03 59.0 -0.7**
comp=Z,8.9nm,0.8s,mb5.0
ERUA La Rua 61.40 305 P **P 14 03 59.0 -0.7**
ERUA pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ESPR Espera 61.99 298 P **P 14 04 03.5 -0.3**
comp=Z,12nm,0.8s,mb5.1
ELOB Lobios 62.20 304 P **P 14 04 05.5 +0.4**
comp=Z,21nm,0.8s,mb5.3
MTE Manteigas 62.23 303 *eP* **P 14 04 04.5 -0.8**
comp=Z,22nm,0.8s,mb5.3
STS Santiago 62.27 306 P **P 14 04 05.5 0.0**
comp=Z,42nm,1.3s,mb5.4
STS Santiago 62.27 306 P **P 14 04 05.6 0.0**
STS pmax pmax
comp=Z,42nm,1.3s,mb5.4
EBAD Badajoz 62.31 301 P **P 14 04 05.4 -0.6**
comp=Z,13nm,0.7s,mb5.2
EMIN Mina Concepcio 62.34 300 P **P 14 04 05.7 -0.5**
comp=Z,10nm,0.7s,mb5.1
EVO Evora 63.12 301⇑ *iP* **P 14 04 11.8 +0.4**
comp=Z,36nm,0.9s,mb5.2
EVO *e*MLR MLR
comp=Z,167nm,20.0s,MS3.9
TOA0 Torodi Ar. Est 64.50 271 *eP* **P 14 04 19.8 -1.0**
TORD Torodi Ar. Bea 64.50 271 P **P 14 04 19.9 -0.8**
comp=Z,6.1nm,0.8s,mb4.7,baz=54,slow=5.6,SNR=40
TORD LR LR 14 35 39.4
comp=Z,457nm,18.9s,MS4.7,baz=345,slow=39
BILL Bilibino 65.31 24 *eP* **P 14 04 25.9 +0.7**
comp=Z,15nm,0.9s,mb5.0
BILL Bilibino 65.31 24 *eP* **P 14 04 25.6 +0.5**
BILL *e*S S 14 12 59.6 -6.4
BILL pmax pmax
comp=Z,18nm,1.1s,mb5.0
BILL MLR MLR
comp=Z,300nm,18.0s,MS4.5
BATI Baumata 65.42 119 P **P 14 04 25.9 -0.8**
comp=Z,13nm,0.7s,mb5.1,baz=348,slow=1.8,SNR=4.0
BATI LR LR 14 36 00.3
comp=Z,1µm,22.0s,MS5.0,baz=57,slow=39
PETK Petropavlovsk- 65.81 41 P **P 14 04 28.3 -0.4**
comp=Z,5.4nm,0.9s,mb4.6,baz=232,slow=1.7,SNR=2.9
PETK LR LR 14 36 11.5
comp=Z,338nm,20.0s,MS4.5,baz=282,slow=39
SUMG Summit 67.17 342 *eP* **P 14 04 38.3 +1.3**
LBTB Lobatse 68.81 223 *eP* **P 14 04 48.7 +0.8**
comp=Z,16nm,1.0s,mb4.9
LBTB Lobatse 68.81 223 *eP* **P 14 04 48.7 +0.8**
LBTB pmax pmax
comp=Z,16nm,1.0s,mb4.9
TSUM Tsumeb 69.77 233 *eP* **P 14 04 55.0 +1.0**
BOSA Boshof 71.75 220 P **P 14 05 06.0 +0.2**
comp=Z,10nm,0.7s,mb4.9,baz=39,slow=7.3,SNR=22
BOSA LR LR 14 36 00.3
comp=Z,270nm,18.0s,MS4.6,baz=42,slow=35
BOSA Boshof 71.75 220 *eP* **P 14 05 05.9 0.0**
comp=Z,10nm,0.8s,mb4.8
DBIC Dimbokro 73.21 268 P **P 14 05 14.7 -0.3**
comp=Z,5.3nm,0.8s,mb4.5,baz=52,slow=7.1,SNR=6.6
DBIC LR LR 14 42 03.5
comp=Z,315nm,18.8s,MS4.6,baz=38,slow=40
DBIC Dimbokro 73.21 268 P **P 14 05 14.7 -0.3**
DBIC LR LR 14 42 03.5
DBIC Dimbokro 73.21 268 P **P 14 05 14.7 -0.3**
DBIC pmax pmax
comp=Z,5.0nm,0.9s
DBIC MLR MLR
comp=Z,315nm,18.8s
KIC Kosan Boka 73.26 268 *eP* **P 14 05 15.0 -0.2**
comp=Z,32nm,0.8s,mb5.3
TIC Toumodi 73.36 268 *eP* **P 14 05 15.5 -0.4**
comp=Z,36nm,0.7s,mb5.4
LIC Lamto 73.57 268 *eP* **P 14 05 15.1 -2.0**
comp=Z,19nm,0.9s,mb4.7
LIC *e*MLR MLR
comp=Z,434nm,17.2s,MS4.5
LIC Lamto 73.57 268 *eP* **P 14 05 16.6 -0.5**
comp=Z,28nm,0.9s,mb5.2
LIC Lamto 73.57 268 *eP* **P 14 05 15.1 -2.0**
comp=Z,9.4nm,0.9s,mb4.7
LIC LR LR
comp=Z,220nm,17.3s,MS4.5
KAKA Kakadu 73.75 115 *eP* Px 14 05 03.3
comp=Z,16nm,0.6s
NWAO Narrogin (SRO) 76.89 140 LR LR 14 34 45.6
comp=Z,267nm,20.6s,MS4.5,baz=326,slow=32
COLD Coldfoot 78.89 15 *eP* **P 14 05 47.3 +0.9**
comp=Z,46nm,0.9s,mb5.4
WRA Warramunga Arr 79.50 120 P **P 14 05 50.5 +0.1**
comp=Z,9.8nm,0.8s,mb4.8,baz=320,slow=5.1,SNR=59
WRA PKKPbc PKKPbc 14 24 39.3 +0.3
comp=Z,0.5nm,0.5s,baz=125,slow=2.1,SNR=14
WRA Warramunga Arr 79.50 120 P **P 14 05 50.5 +0.1**
WRA pmax pmax
comp=Z,10.0nm,0.8s
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRAB Tennant Creek 79.50 120 P **P 14 05 50.0 -0.4**
comp=Z,137nm,1.0s,mb5.8,SNR=8.1
WRAB Tennant Creek 79.50 120 *eP* **P 14 05 50.2 -0.3**
comp=Z,28nm,1.1s,mb5.1
WRAB Tennant Creek 79.50 120 *eP* **P 14 05 50.2 -0.2**
WRAB pmax pmax
comp=Z,28nm,1.1s,mb5.1
WB2 Warramunga Arr 79.50 120 *eP* **P 14 05 50.4 -0.1**
INK Inuvik 80.85 8 *eP* **P 14 05 57.9 +0.9**
CHUM Lake Minchumin 81.12 17 *eP* **P 14 05 59.2 +0.8**
comp=Z,23nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 81.28 17 *eP* **P 14 05 59.6 +0.2**
comp=Z,17nm,0.7s,mb5.1
COLA College 81.39 15 *eP* **P 14 05 59.6 -0.2**
comp=Z,36nm,0.8s,mb5.4
COLA College 81.39 15 *eP* **P 14 05 59.6 -0.3**
COLA pmax pmax
comp=Z,36nm,0.8s,mb5.3
ASAR Alice Springs 81.41 123 P **P 14 06 00.6 0.0**
comp=Z,4.8nm,0.5s,mb4.7,baz=309,slow=5.3,SNR=49
ASAR PKKPbc PKKPbc 14 24 33.9 -1.0
comp=Z,0.4nm,0.8s,baz=157,slow=3.6,SNR=4.8
TRF Thorofare Moun 81.99 17 *eP* **P 14 06 03.2 +0.1**
comp=Z,13nm,0.8s,mb4.9
MCK McKinley 82.09 16 *eP* **P 14 06 03.7 +0.1**
comp=Z,27nm,0.9s,mb5.2
MCK McKinley 82.09 16 *eP* **P 14 06 03.7 +0.1**
MCK pmax pmax
comp=Z,27nm,0.9s,mb5.2
EGAK Eagle 82.88 13 *eP* **P 14 06 08.1 +0.4**
comp=Z,20nm,1.0s,mb5.1
KDAK Kodiak Island 86.00 21 P **P 14 06 24.0 +0.4**
comp=Z,408nm,0.7s,SNR=8.0
SCHQ Schefferville 87.91 336 LR LR 14 45 54.9
comp=Z,554nm,19.8s,MS5.0,baz=41,slow=36
YKA Yellowknife Ar 88.13 2 P **P 14 06 34.8 +0.9**
comp=Z,15nm,0.6s,mb5.4,baz=348,slow=4.9,SNR=63
YKA LR LR 14 49 51.7
comp=Z,127nm,20.6s,MS4.3,baz=20,slow=38
YKA Yellowknife Ar 88.13 2 P **P 14 06 34.8 +0.9**
YKA LR LR 14 49 51.7
YKA Yellowknife Ar 88.13 2 P **P 14 06 34.8 +1.0**
YKA pmax pmax
comp=Z,15nm,0.6s
YKA MLR MLR
comp=Z,127nm,20.6s
CTA Charters Tower 88.83 114 LR LR 14 45 02.3
comp=Z,140nm,21.6s,MS4.3,baz=77,slow=35
DLBC Dease Lake 90.74 10 *eP* **P 14 06 47.5 +1.4**
STKA Stephens Creek 91.72 126 P **P 14 06 50.5 -0.6**
comp=Z,2.4nm,0.7s,mb4.6,baz=170,slow=6.1,SNR=3.9
STKA LR LR 14 48 16.5
comp=Z,291nm,21.8s,MS4.7,baz=115,slow=36
MAW Mawson 97.08 183 P **P 14 07 16.1 +1.4**
comp=Z,7.1nm,1.0s,mb5.0,baz=239,slow=3.1,SNR=3.6
MAW LR LR 14 44 06.1
comp=Z,233nm,18.3s,MS4.7,baz=8.9,slow=31
ULM Lac du Bonnet 99.42 351 LR LR 14 54 48.1
comp=Z,268nm,18.9s,MS4.8,baz=241,slow=37
PDAR Pinedale Array 107.94 359 PP PP 14 12 33.0 +1.1
comp=Z,0.9nm,0.9s,baz=48,slow=2.4,SNR=4.3
NVAR Mina Array Bea 111.88 7 PKiKP PKiKP 14 12 20.5 +1.9
comp=Z,0.6nm,0.7s,baz=274,slow=1.0,SNR=4.7
VNA2 Neumayer--Watz 113.59 200 *e*PKiKP PKiKP 14 12 21.1 +0.5
baz=9.6,slow=4.3
VNA2 *e* 14 12 29.6
VNA2 *e* 14 12 36.0
VNA3 Neumayer Olymp 114.40 200 *e*PKiKP PKiKP 14 12 23.0 +0.8
VNA3 *e* 14 12 31.6
TXAR Lajitas Array 121.00 353 PKP PKPdf 14 12 37.4 +1.1
comp=Z,1.2nm,0.9s,baz=206,slow=1.4,SNR=13
TXAR PP PP 14 14 13.9 +10
comp=Z,0.5nm,0.9s,baz=73,slow=4.3,SNR=3.5
TXAR Lajitas Array 121.00 353 PKIKP PKPdf 14 12 37.4 +1.1
TXAR 14 14 13.9
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.9s
LPAZ La Paz 139.07 279 PKP PKPdf 14 13 11.8 +1.1
comp=Z,0.6nm,0.4s,baz=81,slow=1.3,SNR=4.9
LPAZ La Paz 139.07 279 PKIKP PKPdf 14 13 11.8 +1.1
LPAZ pmax pmax
comp=Z,1.0nm,0.4s
PLCA Paso Flores 145.85 240 PKPbc PKPbc 14 13 23.4 +0.8
comp=Z,7.4nm,0.9s,baz=124,slow=4.7,SNR=14

IDC ***25*** *14:11:18.5±2.9, 1485N×10544W, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.8/17, mbtmp3.6/4, MS3.8/2, Ms1 3.7/2, ms1mx3.1/20, Error ellipse: s-maj=122.6km s-min=27.1km az=62.0*
NEIC ***25*** *14:11:20.8±1.6, 1483N×10530W, h10km, mb4.0/2, Error ellipse: s-maj=54.9km s-min=18.6km az=66.0*
ISCJB ***25*** *14:11:24.2±1.8, 151N×02×1049W×04, h33km, mb3.7/3, Error ellipse: s-maj=64.3km s-min=18.3km az=155.2*

ISC 25 14:11:25.9±1.7, 150N±02×1050W±04, h35km, n11, σ1=17/8, mb3.7/3, Off coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	ISC
TXAR	**Lajitas Array**	**14.28**	**5**	Pn	**Pn**	**14 14 45.8**	**+0.1**
	0.0nm,0.3s,baz=190,slow=14,SNR=12						
TXAR				LR	LR	14 19 49.0	
	comp=Z,166nm,19.9s,baz=350,slow=35						
ANMO	**Albuquerque**	**19.87**	**357**	P	**Pn**	**14 15 54.1**	**-1.7**
	8.6nm,1.4s						
WUAZ	**Wupatki**	**21.18**	**346**	*eP*	**P**	**14 16 09.3**	**+1.1**
	6.5nm,0.9s,mb4.0						
ARUT	**Antelope Range**	**23.86**	**343**	P	**P**	**14 16 36.3**	**+0.3**
DAU	**Daniels Canyon**	**25.86**	**349**	P	**P**	**14 16 55.6**	**+1.4**
NVAR	**Mina Array Bea**	**26.09**	**336**	P	**P**	**14 16 53.6**	**-2.7**
	0.1nm,0.3s,baz=166,slow=12,SNR=2.3						
PDAR	**Pinedale Array**	**27.91**	**353**	P	**P**	**14 17 12.9**	**+0.4**
	0.7nm,0.9s,mb3.3,baz=144,slow=6.4,SNR=4.0						
LPAZ	**La Paz**	**47.91**	**129**	P	**P**	**14 20 00.9**	**-0.1**
	1.1nm,0.8s,mb3.9,baz=325,slow=6.6,SNR=6.8						
RKT	**Rikitea**	**47.93**	**218**	*eT*		15 11 33.2	
	2.1nm,0.3s						
PPT	**Papeete**	**54.59**	**235**	*e*LR	LR	14 36 26.9	
	157nm,28.2s						
PPT	**Papeete**	**54.59**	**235**	LR	LR	14 38 30.3	
	comp=Z,157nm,19.1s,baz=94,slow=30						

GUC 25 14:23:29.9±0.7, 2224S×7004W, h47km±1km, ML3.6, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOCH	**Tocopilla**	**0.21**	**314**	*eP*	Pn	14 23 37.9	0.0
TOCH				*i* S	Sn	14 23 43.5	0.0
TOCH				AML	AML	14 23 43.9	
	comp=N,23µm,0.1s						
PECH	**Pedro de Valdi**	**0.49**	**136**	*eP*	Pn	14 23 41.5	+0.6
PECH				*i* S	Sn	14 23 49.8	+1.1
PECH				AML	AML	14 23 51.2	
	comp=E,5µm,0.4s						
MECH	**Mejillones**	**0.94**	**203⇓**	*iP*	Pn	14 23 47.4	+0.7
MECH				*i* S	Sn	14 24 00.8	+1.7
MECH				AML	AML	14 24 02.1	
	comp=N,1µm,0.3s						
LVC	**Limon Verde**	**1.11**	**110**	*eP*	Pn	14 23 50.6	+1.5
LVC				*i* S	Sn	14 24 05.6	+2.3
LVC				AML	AML	14 24 06.6	
	comp=E,8µm,0.2s						
CEN1	**Los Morros**	**1.16**	**187**	*eP*	Pn	14 23 53.4	+3.7
CEN1				*i* S	Sn	14 24 11.1	+6.7
CEN1				AML	AML	14 24 13.1	
	comp=E,471nm,0.5s						

ANCH	**Antofagasta**	**1.48**	**193**	⇓*i*P		Pn	14 23 54.7	+0.7
ANCH				*i* S		Sn	14 24 13.4	+1.2

IDC ***25*** *14:50:10.6±2.2, 4.37S×102.37E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/18, mbtmp3.7/7, Error ellipse: s-maj=104.7km s-min=18.1km az=59.0*
ISCJB ***25*** *14:50:14.7±0.8, 4.16S×009×10278E±008, h33km, mb3.8/8, Error ellipse: s-maj=13.7km s-min=10.8km az=29.2*
NEIC ***25*** *14:50:15.4±2.0, 4.39S×102.36E, h35km, Error ellipse: s-maj=89.9km s-min=13.7km az=57.0*
DJA ***25*** *14:50:17, 4.23S×102.44E, h10km, MLv4.3/4*
ISC 25 14:50:17.0±0.8, 4.15S±009×10283E±008, h35km, n16, σ1§42/15, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	**Kapahiang**	**0.55**	**335**	P		**Pn**	**14 50 24.8**	**-3.6**
KSI	**Kapahiang**	**0.55**	**335**	S		**Sn**	**14 50 38.5**	**+2.1**
KLI	**Kotabumi**	**2.14**	**109**	P		**Pn**	**14 50 57.1**	**+6.8**
PMBI	**Palembang**	**2.29**	**58**	P		**Sn**	**14 51 19.3**	**0.0**
PDSI	**Padang**	**3.99**	**324**	P		**Pn**	**14 51 17.8**	**+2.0**
CMAR	**Chiang Mai Arr**	**22.79**	**350**	P		**P**	**14 55 16.3**	**-0.4**
	0.7nm,0.8s,mb3.1,baz=185,slow=8.3,SNR=4.4							
WRA	**Warramunga Arr**	**34.48**	**120**	P		**P**	**14 57 01.3**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=301,slow=9.1,SNR=9.6							
ASAR	**Alice Springs**	**35.71**	**126**	P		**P**	**14 57 13.1**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=296,slow=7.7,SNR=9.9							
ASAR				PcP		PcP	14 59 40.7	+0.4
	0.5nm,0.6s,baz=294,slow=3.1,SNR=4.8							
STKA	**Stephens Creek**	**45.62**	**132**	*e*P		**P**	**14 58 35.6**	**+1.4**
	2.3nm,0.5s,mb4.4							
STKA	**Stephens Creek**	**45.62**	**132**	P		**P**	**14 58 35.5**	**+1.3**
	1.4nm,0.6s,mb4.1,baz=304,slow=7.8,SNR=10.0							
STKA				PcP		PcP	15 00 13.0	+0.8
	1.5nm,0.5s,baz=342,slow=6.4,SNR=3.6							
SONM	**Songino Array**	**51.86**	**3**	P		**P**	**14 59 24.1**	**+2.3**
	0.3nm,0.5s,mb3.5,baz=187,slow=8.7,SNR=3.4							
SONM	**Songino Array**	**51.86**	**3**	P		**P**	**14 59 24.1**	**+2.3**
MKAR	**Makanchi Array**	**53.88**	**343**	P		**P**	**14 59 35.1**	**-1.6**
	0.4nm,0.6s,mb3.5,baz=142,slow=8.8,SNR=3.3							
ZALV	**Zalesovo Beam**	**59.82**	**348**	P		**P**	**15 00 17.6**	**-1.1**
	0.6nm,0.4s,mb4.0,baz=144,slow=5.4,SNR=3.3							
BRVK	**Borovoye**	**63.25**	**339**	*e*P		**P**	**15 00 40.5**	**-1.3**
	2.0nm,0.6s,mb4.4							
TXAR	**Lajitas Array**	**144.54**	**42**	PKPbc		PKPdf	15 09 49.2	-1.3
	0.1nm,0.6s,baz=316,slow=1.7,SNR=4.2							

IDC ***25*** *14:50:33.5±1.4, 3783N×2136E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.4/41, Error ellipse: s-maj=37.0km s-min=26.3km az=122.0*
ISCJB ***25*** *14:50:34.7±0.9, 3778N±004×2126E±004, h3km±7km, mb3.8/6, Error ellipse: s-maj=6.6km s-min=5.6km az=12.4*
CSEM ***25*** *14:50:34.7±0.1, 3773N×2112E, h12km, ML3.1, Error ellipse: s-maj=3.4km s-min=2.3km az=46.0*
NEIC ***25*** *14:50:35.6, 3780N×2132E, h8km, ML3.1(ATH), After ATH.*
THE ***25*** *14:50:35.6, 3775N×2126E, h0km±5km, ML3.8/1, Error ellipse: s-maj=5.6km s-min=1.5km az=234.0*
ATH ***25*** *14:50:35.6, 3780N×2132E, h8km±4km, MD3.3/6, ML3.1*
ISC 25 14:50:35.4±0.6, 3779N±003×2124E±004, h7km±4km, n36, σ1§28/42, mb3.8/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.33**	**34**	*e*PG		**Pg**	**14 50 40.9**	**-0.8**
RLS				*e*SG		**Sg**	**14 50 46.0**	**-0.1**
KFL	**Anninata**	**0.48**	**312**	P		**Pg**	**14 50 45.3**	**+0.7**
VLS	**Valsamata**	**0.64**	**308**	P		**Pg**	**14 50 47.9**	**+0.2**
VLS				S		**Sg**	**14 50 58.9**	**+2.8**
VLS	**Valsamata**	**0.64**	**308**	*e*PB		**Pg**	**14 50 48.2**	**+0.5**
VLS				*e*SB		**Sg**	**14 50 59.5**	**+3.4**
VLS	**Valsamata**	**0.64**	**308**	*e*Pb		**Pg**	**14 50 48.2**	**+0.5**
VLS				S		**Sg**	**14 50 58.9**	**+2.8**
ITM	**Ithomi**	**0.82**	**138**	*e*PB		**Pb**	**14 50 50.6**	**-1.3**
PYL	**PYLOS**	**0.98**	**155**	P		**Pg**	**14 50 53.0**	**-1.1**
PYL				S		**Sg**	**14 51 07.8**	**+1.0**
EVR	**Evrytania**	**1.22**	**22**	*e*PG		**Pg**	**14 50 57.8**	**-0.9**
LTK	**Loutraki**	**1.39**	**80**	P		**Pn**	**14 50 59.1**	**-2.1**
AGG	**Agios Georgios**	**1.50**	**35**	P		**Pn**	**14 51 02.2**	**-0.6**
AGG				S		**Sg**	**14 51 24.4**	**+0.7**
DID	**Didima**	**1.61**	**99**	P		**Pn**	**14 51 04.0**	**-0.2**
LKR	**Lokris**	**1.64**	**58**	P		**Pn**	**14 51 05.0**	**+0.4**
LKR				S		**Sg**	**14 51 28.9**	**+1.0**
LKR	**Lokris**	**1.64**	**58**	P		**Pg**	**14 51 07.8**	**+1.1**
THL	**Klokotos Trika**	**1.88**	**19**	P		**Pg**	**14 51 09.7**	**-1.6**
IGT	**Igoumenitsa**	**1.88**	**338**	P		**Pn**	**14 51 09.2**	**+1.2**
ATH	**Athens Observa**	**1.97**	**84**	*e*PN		**Pn**	**14 51 10.5**	**+1.3**
PTL	**Penteli**	**2.10**	**82**	*e*PN		**Pn**	**14 51 11.9**	**+1.0**
NEO	**Neokhori**	**2.17**	**45**	P		**Pg**	**14 51 15.5**	**-1.6**
XOR	**Xorichti**	**2.20**	**44**	P		**Pn**	**14 51 13.0**	**+0.7**
LIT	**Litokhoron**	**2.51**	**23**	P		**Pn**	**14 51 19.0**	**+2.4**
FNA	**Florina**	**3.00**	**2**	P		**Pn**	**14 51 24.4**	**+1.1**
BIA	**Bitola**	**3.23**	**1**	*e*Pn		**Pg**	**14 51 36.5**	**-0.7**
OHR	**Ohrid**	**3.34**	**354**	*e*Pn		**Pg**	**14 51 37.3**	**-2.0**
VAY	**Valandovo**	**3.68**	**16**	*e*Pn		**Pn**	**14 51 38.6**	**+5.9**
LIA	**Limnos Island**	**3.73**	**54**	P		**Pn**	**14 51 36.4**	**+3.0**
TIP	**Timpagrande**	**3.78**	**293**	P		**Pn**	**14 51 41.4**	**+7.4**
CHOS	**Chios island**	**3.85**	**80**	P		**Pn**	**14 51 36.1**	**+1.1**
SMG	**Samos**	**4.44**	**89**	P		**Pn**	**14 51 45.3**	**+2.2**
CUC	**Castrocucco**	**4.77**	**299**	P		**Pn**	**14 51 55.7**	**+8.1**
VAE	**Valguarnera**	**5.43**	**269**	LR		LR	14 54 31.9	
	comp=Z,140nm,18.2s,baz=129,slow=43							
HFS	**Hagfors**	**22.88**	**350**	P		**P**	**14 55 38.3**	**-0.9**
	5.0nm,0.9s,mb4.0,baz=156,slow=11,SNR=6.9							
NOA	**NORSAR Array B**	**24.11**	**348**	P		**P**	**14 55 50.8**	**-0.7**
	1.1nm,0.8s,mb3.3,baz=156,slow=12,SNR=2.8							
TORD	**Torodi Ar. Bea**	**30.09**	**221**	P		**P**	**14 56 45.6**	**0.0**
	0.4nm,0.7s,mb3.3,baz=31,slow=9.4,SNR=4.3							
ARCES	**ARCESS Array B**	**31.89**	**3**	P		**P**	**14 56 59.1**	**-1.8**
	5.0nm,1.0s,mb4.3,baz=186,slow=9.8,SNR=6.3							
MKAR	**Makanchi Array**	**45.03**	**58**	P		**P**	**14 58 49.9**	**-1.6**
	0.6nm,0.6s,mb3.6,baz=277,slow=7.3,SNR=11							
ZALV	**Zalesovo Beam**	**45.53**	**48**	P		**P**	**14 58 53.6**	**-1.8**
	2.3nm,0.5s,mb4.4,baz=272,slow=8.6,SNR=11							

IDC 25 14:51:38.8±3.5, 383S×10291E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.5/18, mbtmp3.4/6, Error ellipse: s-maj=148.7km s-min=19.0km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.49**	**350**	P		P	14 56 41.1	+1.2
	0.2nm,0.5s,baz=181,slow=8.4,SNR=3.2							
WRA	**Warramunga Arr**	**34.57**	**120**	P		P	14 58 29.2	-0.2
	0.3nm,0.6s,baz=302,slow=8.8,SNR=4.4							
ASAR	**Alice Springs**	**35.84**	**126**	P		P	14 58 40.4	0.0
	0.3nm,0.5s,baz=297,slow=7.4,SNR=7.4							
STKA	**Stephens Creek**	**45.77**	**132**	P		P	15 00 02.8	+0.5
	0.9nm,0.5s,baz=338,slow=5.4,SNR=3.8							
SONM	**Songino Array**	**51.54**	**3**	P		P	15 00 46.0	-0.3
	0.4nm,0.8s,baz=186,slow=10,SNR=2.1							
MKAR	**Makanchi Array**	**53.60**	**343**	P		P	15 01 01.3	-0.4
	0.4nm,0.6s,baz=149,slow=8.8,SNR=4.3							

IDC 25 14:52:48.1±10.0, 626S×1057W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.8/3, MS3.6/5, Ms1 3.7/5, ms1mx3.4/27, Error ellipse: s-maj=441.9km s-min=115.2km az=138.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBIC	**Dimbokro**	**14.05**	**24**	LR		LR	15 00 03.2	
	comp=Z,208nm,22.0s,baz=154,slow=31							
TORD	**Torodi Ar. Bea**	**22.81**	**32**	P		P	14 57 52.8	0.0
	2.8nm,0.8s,baz=220,slow=11,SNR=11							
TORD				LR		LR	15 05 25.5	
	comp=Z,123nm,19.9s,baz=325,slow=33							
MDT	**Midelt**	**39.27**	**8**	LR		LR	15 15 14.0	
	comp=Z,74nm,21.0s,baz=159,slow=34							
KEST	**Kesra**	**45.77**	**23**	LR		LR	15 20 25.1	
	comp=Z,53nm,19.1s,baz=304,slow=36							
GERES	**GERESS Array B**	**58.84**	**19**	P		P	15 02 48.8	+0.3
	0.9nm,0.7s,baz=211,slow=7.2,SNR=3.9							
AKASG	**Malin Array Be**	**66.29**	**26**	P		P	15 03 38.0	-0.1
	0.4nm,0.5s,baz=229,slow=7.4,SNR=3.5							
NOA	**NORSAR Array B**	**69.22**	**11**	LR		LR	15 33 55.0	
	comp=Z,157nm,20.8s,baz=175,slow=36							

ISCJB ***25*** *16:02:16.0±0.1, 834S×002×11837E±002, h32km, mb6.1/168, MS6.3/260, Error ellipse: s-maj=3.2km s-min=2.5km az=150.7*
NEIC ***25*** *16:02:15.8±0.1, 829S×11837E, h20km, mb6.3/86, ME6.0, MS6.3/208, MW6.4, Error ellipse: s-maj=5.2km s-min=3.7km az=51.0 Broadband fault plane solution: P waves. NP1:ϕs260.00000°, δ55.00000°, λ90.00000°. NP2:ϕs80.00000°, δ35.00000°, λ90.00000°. Principal axes: T Plg80.0000°, Azm170.0000°; N Plg0.0000°, Azm0.0000°; P Plg10.0000°, Azm350.0000°; Moment Tensor Solution. s43 Moment tensor: Scale 10¹⁸ Nm; Mrr2.15; Mθθ-3.94; Mϕϕ 1.79; Mrθ-2.55; Mθr-0.79; Mϕr-0.40; Best double couple: M₀4.30000×10¹⁸ NP1:ϕs86.00000°, δ25.00000°, λ96.00000°. NP2:ϕs260.00000°, δ65.00000°, λ87.00000°. Principal axes: T 3.0900, Plg69.0000°, Azm164.0000°; N 1.8900, Plg2.0000°, Azm261.0000°; P -4.9800, Plg19.0000°, Azm352.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Three people killed, hundreds injured and hundreds of houses destroyed [V] in the Bima-Dompu-Raba area. Felt [IV] at Sumbawabesar and [III] at Taliwang. Also felt [IV] at Mataram, Lombok and [III] at Denpasar, Bali and at Labuhanbajo, Flores. Felt at Kuta and Ubud, Bali.
IDC ***25*** *16:02:16.9±1.6, 822S×11830E, h26km±9km, mb5.5/33, mb1 5.5/35, mb1mx5.5/36, mbtmp5.5/35, ML5.7/2, MS6.2/31, Ms1 6.2/31, ms1mx6.2/35 Error ellipse: s-maj=12.9km s-min=8.9km az=71.0*
GCMT ***25*** *16:02:17.9±0.1, 821S×118.47E, h26km, MW6.5/114, Moment Tensor Solution. s113, c275; s114, c470; Duration: 4s1 Moment tensor: Scale 10¹⁸Nm; Mrr4.03±.03; Mθθ-4.51±.03; Mϕϕ 0.48±.03; Mrθ-4.08±.07; Mθϕ-0.89±.02; Mϕr-1.34±.07; Best double couple: M₀6.11500×10¹⁸ NP1:ϕs88.00000°, δ23.00000°, λ103.00000°. NP2:ϕs254.00000°, δ67.00000°, λ84.00000°. Principal axes: T 5.8260, Plg67.0000°, Azm154.0000°; N 0.5800, Plg5.0000°, Azm256.0000°; P -6.4030, Plg22.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***25*** *16:02:17.6, 830S×11830E, h35km, mB6.8, mb6.0, Ms6.5, Msz6.4*
MOS ***25*** *16:02:18.1±1.3, 813S×11835E, h45km, mb6.2/67, MS6.2/95, Error ellipse: s-maj=7.6km s-min=4.8km az=111.7*
DJA ***25*** *16:02:20, 847S×11840E, h43km, MW6.7/47*
ISC 25 16:02:18.3±0.1, 835S±002×11834E±002, h36km, h36km±1.3km:pP-P, n1365, σ1§39/641, mb6.1/168, MS6.3/260, 256C-194D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.70**	**270**	P		**Pn**	**16 02 59.5**	**+0.2**
DNP	**Denpasar**	**3.11**	**264**	P		**Pn**	**16 03 07.1**	**+2.2**
DNP	**Denpasar**	**3.11**	**264**	P		**Pn**	**16 03 07.2**	**+2.3**
KAPI	**Kappang**	**3.60**	**23**	Pn		**Pn**	**16 03 09.2**	**-2.5**
	648nm,0.3s,baz=200,slow=7.6,SNR=835							
KAPI				Sn		**Sn**	**16 03 49.1**	**-3.9**
	baz=90,slow=15							
KAPI				LR		LR	16 04 49.6	
	comp=Z,206μm,19.8s,baz=18,slow=44							
KAPI	**Kappang**	**3.60**	**23**	⇓*e*Pn		**Pn**	**16 03 09.3**	**-2.3**
KAPI	**Kappang**	**3.60**	**23**	P		**Pn**	**16 03 08.5**	**-3.2**
NBBI	**Negara**	**3.68**	**269**	P		**Pn**	**16 03 13.9**	**+1.2**
NBBI	**Negara**	**3.68**	**269**	P		**Pn**	**16 03 14.0**	**+1.3**
KMMI	**Kalianget**	**4.52**	**286**	P		**Pn**	**16 03 27.4**	**+3.1**
KMMI	**Kalianget**	**4.52**	**286**	P		**Pn**	**16 03 27.6**	**+3.3**
BATI	**Baumata**	**5.57**	**110**	Pn		**Pn**	**16 03 40.5**	**+1.8**
	257nm,0.3s,baz=262,slow=1.3,SNR=376							
BATI				Sn		**Sn**	**16 04 47.6**	**+6.0**
	baz=107,slow=19,SNR=2.4							
BATI				LR		LR	16 06 08.1	
	comp=Z,622μm,21.4s,baz=339,slow=41							
BATI	**Baumata**	**5.57**	**110**	P		**Pn**	**16 03 40.7**	**+1.9**
	3μm,0.8s,26nm							
KRKI	**Karangkates**	**5.83**	**271**	P		**Pn**	**16 03 46.9**	**+4.6**
BBKI	**Banjar Baru**	**5.97**	**324**	P		**Pn**	**16 03 44.6**	**+0.3**
	5μm,1.1s,144nm							
KDI	**Kendari**	**6.10**	**45**	P		**Pn**	**16 03 45.5**	**-0.5**
	1μm,1.1s,12nm							
SJI	**Sawahan**	**6.54**	**275**	P		**Pn**	**16 03 54.2**	**+2.2**
PLKI	**Palangkaraya**	**7.49**	**324**	P		**Pn**	**16 04 05.2**	**0.0**
	3μm,1.0s,30nm							
PCI	**Palu**	**7.55**	**11**	P		**Pn**	**16 04 06.6**	**+0.7**
	2μm,1.5s,12nm							
BJII	**Banjamegara**	**8.61**	**276**	P		**Pn**	**16 04 24.5**	**+4.0**
CLJI	**Cilicap**	**9.25**	**273**	P		Px	16 04 41.2	
JCJI	**Jatiwangi**	**10.15**	**280**	P		**Pn**	**16 04 46.4**	**+4.7**
	2μm,1.2s							
LEM	**Lembang**	**10.73**	**277**	P		**Pn**	**16 04 54.0**	**+4.4**
	2μm,1.5s							
STKI	**Sintang**	**10.80**	**320**	P		**Pn**	**16 04 51.7**	**+1.1**
	914nm,1.1s							
AAI	**Ambon**	**10.84**	**65**	P		**Pn**	**16 04 54.9**	**+3.8**
	1μm,1.5s							
CBJI	**Citeko**	**11.55**	**279**	P		**Pn**	**16 05 02.4**	**+1.5**
	4μm,1.3s							
DBJI	**Dramaga**	**11.63**	**278**	P		**Pn**	**16 05 04.7**	**+2.8**
	3μm,2.0s							
MNI	**Manado**	**11.69**	**34**	P		**Pn**	**16 05 10.1**	**+7.3**
	2μm,1.9s							
LBMI	**Labuha**	**11.92**	**50**	P		**Pn**	**16 05 08.1**	**+2.2**
	1μm,1.2s							
TPI	**Tanjungpandan**	**11.99**	**297**	P		**Pn**	**16 05 12.0**	**+5.1**
	829nm,1.6s							
SBJI	**Serang**	**12.31**	**280**	P		**Pn**	**16 05 16.5**	**+5.3**
	2μm,1.4s							
SBUM	**Sibu**	**12.34**	**330**	⇑P		**Pn**	**16 05 15.9**	**+4.2**
BTM	**Bintulu**	**12.62**	**335**	⇑P		**Pn**	**16 05 20.7**	**+5.3**
KSM	**Kuching**	**12.62**	**320**	⇓*e*P		**Pn**	**16 05 16.7**	**+1.2**
	645nm,1.3s							
KSM	**Kuching**	**12.62**	**320**	⇓P		**Pn**	**16 05 19.8**	**+4.3**
KSM	**Kuching**	**12.62**	**320**	P		**Pn**	**16 05 18.9**	**+3.4**
	636nm,1.3s							
XMIS	**Christmas Isla**	**12.69**	**259**	*e*P		**Pn**	**16 05 12.2**	**-4.2**
XMIS				*e*S		**Sn**	**16 07 27.1**	**-10**
XMIS	**Christmas Isla**	**12.69**	**259**	P		**Pn**	**16 05 17.5**	**+1.1**
	518nm,0.9s,0.0nm							
MBWA	**Marble Bar**	**12.80**	**174**	⇑P		**Pn**	**16 05 18.3**	**+0.4**
	SNR=46							
MBWA	**Marble Bar**	**12.80**	**174**	*e*Pn		**Pn**	**16 05 16.6**	**-1.4**
MBWA	**Marble Bar**	**12.80**	**174**	P		**Pn**	**16 05 17.2**	**-0.7**
	1μm,0.8s							
MYLDM	**Lahad Datu**	**13.44**	**1**	P		**Pn**	**16 05 30.1**	**+3.4**
PPBI	**Pangkal Pinang**	**13.61**	**296**	P		**Pn**	**16 05 32.2**	**+3.2**
	489nm,2.0s							
KLI	**Kotabumi**	**13.83**	**284**	P		**Pn**	**16 05 37.0**	**+5.0**
	1μm,1.7s							
SDKM	**Sandakan**	**13.95**	**355**	⇓P		**Pn**	**16 05 37.4**	**+3.8**
KKM	**Kota Kinabalu**	**14.46**	**352**	⇓*e*P		**Pn**	**16 05 41.3**	**+0.8**
	3μm,1.7s							
KKM	**Kota Kinabalu**	**14.46**	**352**	⇑P		**Pn**	**16 05 44.4**	**+3.9**
KKM	**Kota Kinabalu**	**14.46**	**352**	P		**Pn**	**16 05 45.7**	**+5.2**
	1μm,1.9s							
KAKA	**Kakadu**	**14.52**	**109**	*e*P		Px	16 05 22.4	
	1μm,0.6s							
KAKA				eS		Sx	16 07 58.6	
KDM	**Kudat**	**15.24**	**354**	⇓P		**Pn**	**16 05 55.2**	**+4.2**
GSPH	**General Santos**	**15.79**	**25**	⇑*e*P		**Pn**	**16 06 00.5**	**+2.4**
KSI	**Kapahiang**	**16.34**	**286**	P		**Pn**	**16 06 08.0**	**+2.9**
	2μm,1.8s							
CTBH	**Cotabato--PC H**	**16.55**	**21**	⇓*e*P		**Pn**	**16 06 09.6**	**+1.7**
IPIL	**Ipil**	**16.58**	**15**	*e*P		**Pn**	**16 06 09.9**	**+1.7**
PAGZ	**Pagadian**	**16.86**	**17**	*e*P		**Pn**	**16 06 13.6**	**+1.8**
DMPH	**Davao City--Mi**	**16.92**	**25**	⇑*e*P		Px	16 06 24.2	
DAV	**Davao City (W)**	**16.94**	**25**	P		**Pn**	**16 06 14.5**	**+1.8**
	SNR=134							
DAV	**Davao City (W)**	**16.94**	**25**	Pn		**Pn**	**16 06 13.1**	**+0.4**
	20nm,0.3s,baz=163,slow=5.6,SNR=15							
DAV				LR		LR	16 13 06.3	
	comp=Z,88μm,20.8s,baz=203,slow=39							
DAV	**Davao City (W)**	**16.94**	**25**	*e*P		**Pn**	**16 06 13.2**	**+0.6**
	3μm,1.3s							
DAV	**Davao City (W)**	**16.94**	**25**	⇓*e*P		**Pn**	**16 06 12.4**	**-0.3**
DAV	**Davao City (W)**	**16.94**	**25**	P		**Pn**	**16 06 17.5**	**+4.8**
	2μm,2.6s							
BATP	**Bataraza**	**17.04**	**358**	*e*P		**Pn**	**16 06 14.8**	**+0.7**
MATI	**Mati**	**17.13**	**28**	*e*P		**Pn**	**16 06 15.9**	**+0.8**
BUKP	**Musuan**	**17.46**	**23**	*e*P		**Pn**	**16 06 21.1**	**+1.9**
RGRI	**Rengat**	**17.82**	**296**	P		**Pn**	**16 06 29.0**	**+5.4**
	2μm,2.0s							
PPR	**Puerto Princes**	**18.01**	**1**	⇓*e*P		**Pn**	**16 06 25.9**	**-0.2**
KGM	**Kluang**	**18.17**	**304**	⇑P		**Pn**	**16 06 31.2**	**+3.2**
BIPH	**Bislig**	**18.27**	**26**	⇑*e*P		**Pn**	**16 06 24.2**	**-5.0**
BUTP	**Butuan**	**18.67**	**23**	*e*P		**Pn**	**16 06 35.7**	**+1.7**
TBP	**Tagbilaran**	**18.75**	**17**	*e*P		**Pn**	**16 06 34.7**	**-0.3**
CUYO	**Cuyo Island**	**19.26**	**8**	*e*P		**Pn**	**16 06 42.1**	**+0.9**
PDSI	**Padang**	**19.28**	**292**	P		**Pn**	**16 06 40.9**	**-0.5**
	875nm,2.3s							
WRA	**Warramunga Arr**	**19.30**	**128**	P		**Pn**	**16 06 39.2**	**-2.5**
	23nm,0.3s,baz=301,slow=12,SNR=264							
WRA				S		**S**	**16 10 06.6**	**-11**
	5.3nm,0.3s,baz=308,slow=23,SNR=5.9							
WRA				LR		LR	16 14 56.3	
	comp=Z,120μm,19.7s,baz=310,slow=39							
WRA				PKiKP		PKiKP	16 18 51.6	-0.8
	1.0nm,0.3s,baz=289,slow=1.1,SNR=15							
WRA	**Warramunga Arr**	**19.30**	**128**	P		**Pn**	**16 06 39.2**	**-2.5**
WRA				S		**S**	**16 10 06.6**	**-11**
WRA				LR		LR	16 14 56.3	
WRA	**Warramunga Arr**	**19.30**	**128**	P		**Pn**	**16 06 39.2**	**-2.4**
WRA				S		**S**	**16 10 06.6**	**-11**
WRA				pmax		pmax		
	comp=Z,23nm,0.3s							
WRA				smax				
	comp=N,5.0nm,0.3s							
WRA				MLR		MLR		
	comp=Z,120μm,19.7s							
WRA				pmax		pmax		
	comp=Z,1.0nm,0.3s							
WRAB	**Tennant Creek**	**19.31**	**128**	P		**Pn**	**16 06 39.0**	**-2.7**
	comp=Z,4μm,0.7s							
WRAB	**Tennant Creek**	**19.31**	**128**	⇑*e*P		**Pn**	**16 06 39.6**	**-2.0**
	comp=Z,1μm,1.3s							
WRAB	**Tennant Creek**	**19.31**	**128**	⇑*e*P		**Pn**	**16 06 39.7**	**-2.0**
WRAB				pmax		pmax		
	comp=Z,1μm,1.3s							
WRAB	**Tennant Creek**	**19.31**	**128**	P		**Pn**	**16 06 39.2**	**-2.5**
	comp=Z,1μm,1.4s							
WB2	**Warramunga Arr**	**19.31**	**128**	*e*P		**Pn**	**16 06 39.3**	**-2.5**
WB2				*e*S		**S**	**16 10 06.9**	**-10**
GUIM	**Jordan**	**19.32**	**13**	*e*P		**Pn**	**16 06 41.1**	**-0.8**
SCPH	**Surigao**	**19.37**	**22**	*e*P		**Pn**	**16 06 42.2**	**-0.2**
LLP	**Lapu-Lapu**	**19.37**	**17**	*e*P		**Pn**	**16 06 41.1**	**-1.4**
ENPP	**El Nido**	**19.46**	**3**	*e*P		**Pn**	**16 06 43.7**	**+0.1**
MSLP	**Maasin**	**19.48**	**20**	*e*P		**Pn**	**16 06 46.8**	**+3.0**
OCLP	**Ormoc**	**20.26**	**18**	*e*P		**P**	**16 06 59.8**	**+9.0**
RCP	**Roxas**	**20.26**	**13**	⇓*e*P		**P**	**16 06 51.3**	**+0.5**
KALP	**Kalibo**	**20.29**	**11**	⇓*e*P		**P**	**16 06 53.1**	**+1.9**
BUSP	**Coron**	**20.31**	**5**	*e*P		**P**	**16 06 53.0**	**+1.7**
PLP	**Palo**	**20.48**	**19**	*e*P		**P**	**16 06 58.5**	**+5.2**
SJMP	**San Jose**	**20.86**	**8**	*e*P		**P**	**16 06 58.4**	**+1.0**
OTRP	**Odiongan**	**20.90**	**10**	*e*P		**P**	**16 06 59.1**	**+1.3**
MMPH	**Masbate**	**21.23**	**14**	*e*P		**P**	**16 07 09.9**	**+8.5**
ASAR	**Alice Springs**	**21.31**	**137**	P		**P**	**16 07 02.6**	**+0.4**
	comp=Z,564nm,0.8s,mb5.9,baz=327,slow=11,SNR=450							
ASAR				S		**S**		**16 11 01.1 +4.0**
	comp=Z,219nm,0.9s,baz=316,slow=24,SNR=8.1							
ASAR				PKiKP		PKiKP	16 18 52.0	-1.2
	comp=Z,8.7nm,1.0s,baz=347,slow=1.1,SNR=5.7							
ASAR				P3KPbc			16 41 00.1	
	comp=Z,0.9nm,1.0s,baz=182,slow=8.8,SNR=4.1							
ASAR				P3KP			16 41 47.6	
	comp=Z,1.4nm,1.0s,baz=174,slow=2.4,SNR=4.4							
ASAR	**Alice Springs**	**21.31**	**137**	P		**P**	**16 07 02.6**	**+0.4**
ASAR				S		**S**		**16 11 01.1 +4.0**
ASAR				pmax		pmax		
	comp=Z,564nm,0.8s							
ASAR				smax				
	comp=N,219nm,0.9s							
ASAR				pmax		pmax		
	comp=Z,9.0nm,1.0s							
ASAR				pmax		pmax		
	comp=Z,1.0nm,1.0s							
ASAR				pmax		pmax		
	comp=Z,1.0n

PMG Port Moresby 28.49 94 PFAKE 16 08 20.0 +9.4
PMG LR LR
comp=Z,55μm,20.0s,MS6.2
KKTK Khon Kaen 28.94 328 P Px 16 08 49.0
comp=Z,1μm,0.5s
CTA Charters Tower 29.41 116⇑ *i*P **P 16 08 18.4 -0.3**
comp=Z,137nm,1.1s,mb5.6
CTA *e*S **S 16 13 07.8 -2.7**
CTA Charters Tower 29.41 116 P **P 16 08 18.6 -0.1**
comp=Z,150nm,1.0s,mb5.7,baz=290,slow=11,SNR=77
CTA S **S 16 13 16.2 +5.8**
comp=Z,45nm,0.9s,baz=282,slow=20,SNR=2.6
CTA LR LR 16 21 57.4
comp=Z,162μm,18.5s,MS6.7,baz=292,slow=40
CTA Charters Tower 29.41 116 P **P 16 08 18.6 -0.1**
CTA S **S 16 13 16.3 +5.8**
CTA pmax pmax
comp=Z,151nm,1.0s
CTA smax
comp=N,45nm,1.0s
CTA MLR MLR
comp=Z,162μm,18.5s
CTAO Charters Tower 29.41 116 *e*P **P 16 08 18.5 -0.2**
comp=Z,304nm,1.1s,mb5.9
CTAO LR LR
comp=Z,157μm,19.0s,MS6.7
CTAO Charters Tower 29.41 116 *e*P **P 16 08 18.5 -0.2**
CTAO pmax pmax
comp=Z,304nm,1.1s,mb5.9
CTAO MLR MLR
comp=Z,157μm,19.0s,MS6.7
CTAO Charters Tower 29.41 116 P **P 16 08 18.6 -0.1**
comp=Z,341nm,1.3s,comp=Z,8μm,mb5.9
NST Nakhon Sawan 29.91 323⇓P **P 16 08 25.2 +2.1**
comp=Z,160nm,1.0s,mb5.7
HKC Hong Kong Obse 30.74 352 P **P 16 08 30.0 -0.3**
GZH Guangzhou 31.62 351 P **P 16 08 42.0 +3.9**
GZH S **S 16 13 50.5 +5.6**
GZH LR LR
comp=N,17μm,13.9s,MS6.2
GZH LR LR
comp=E,32μm,14.5s,MS6.2
GZH LR LR
comp=Z,42μm,14.2s,MS6.3
BDT Bhumibol Dam 31.81 323 P **P 16 08 43.0 +3.2**
comp=Z,116nm,0.9s,mb5.7
STKA Stephens Creek 31.86 140 *e*P **P 16 08 40.5 +0.3**
comp=Z,160nm,0.5s,mb6.1
STKA *e*S **S 16 13 57.7 +9.1**
STKA Stephens Creek 31.86 140 P **P 16 08 40.6 +0.5**
comp=Z,193nm,0.6s,mb6.1,baz=310,slow=9.1,SNR=232
STKA PcP PcP 16 11 30.7 +0.2
comp=Z,48nm,0.5s,baz=328,slow=4.5,SNR=5.4
STKA S **S 16 13 56.0 +7.3**
comp=Z,46nm,1.1s,baz=294,slow=20,SNR=2.1
STKA ScP ScP 16 15 11.8 +0.5
comp=Z,182nm,1.2s,baz=267,slow=7.1,SNR=5.8
STKA LR LR 16 22 16.1
comp=Z,75μm,21.7s,MS6.3,baz=308,slow=38
STKA Stephens Creek 31.86 140 *e*P **P 16 08 40.7 +0.5**
comp=Z,55nm,0.9s,mb5.4
NANT Nan 32.10 327⇑P **P 16 08 45.0 +2.7**
comp=Z,1μm,1.0s,mb6.7
PBA Port Blair 32.30 308 *ex* x 16 09 21.1
PBA *ex* x 16 16 31.3
NACB Ninganchiao 32.48 6 P **P 16 08 45.3 -0.3**
comp=Z,559nm,1.8s,mb6.1
CM31 Chiang Mai Arr 32.80 324 PFAKE 16 09 00.0 +12
CM31 LR LR
comp=Z,96μm,22.0s,MS6.5
CMAR Chiang Mai Arr 32.80 324 P **P 16 08 50.2 +1.8**
comp=Z,38nm,0.9s,mb5.3,baz=147,slow=5.7,SNR=91
CMAR PcP PcP 16 11 33.5 +0.3
comp=Z,19nm,0.9s,baz=169,slow=5.3,SNR=5.1
CMAR S **S 16 14 07.8 +4.4**
comp=Z,1.5nm,1.0s,baz=171,slow=19,SNR=2.5
CMAR ScP ScP 16 15 17.8 +3.1
comp=Z,6.4nm,0.9s,baz=178,slow=3.0,SNR=5.4
CMAR LR LR 16 23 25.4
comp=Z,78μm,21.2s,MS6.4,baz=356,slow=39
CMAR P3KPbc 16 40 10.3
comp=Z,1.4nm,1.0s,baz=310,slow=5.1,SNR=7.8
CMAR Chiang Mai Arr 32.80 324 P **P 16 08 50.2 +1.8**
CMAR PcP PcP 16 11 33.5 +0.3
CMAR S **S 16 14 07.8 +4.4**
CMAR ScP ScP 16 15 17.8 +3.1
CMAR LR LR 16 23 25.4
CMAR *e* 16 40 10.3
CMAR Chiang Mai Arr 32.80 324 P **P 16 08 50.3 +1.8**
CMAR 16 11 33.6
CMAR S **S 16 14 07.8 +4.4**
CMAR pmax pmax
comp=Z,38nm,0.9s
CMAR pmax pmax
comp=Z,19nm,0.9s
CMAR smax
comp=N,2.0nm,1.0s
CMAR pmax pmax
comp=N,6.0nm,0.9s
CMAR MLR MLR
comp=Z,78μm,21.2s
CMAR pmax pmax
comp=Z,1.0nm,1.0s
YHNB Yeheng 32.95 5 *e*P **P 16 08 51.2 +1.5**
comp=Z,918nm,1.8s,mb6.4
YHNB LR LR
comp=Z,21μm,21.0s,MS5.8
CHTO Chiang Mai 33.08 325 P **P 16 08 52.8 +1.9**
SNR=100
CHTO Chiang Mai 33.08 325 PFAKE 16 09 00.0 +9.1
CHTO LR LR
comp=Z,78μm,21.0s,MS6.4
CHTO Chiang Mai 33.08 325 P **P 16 08 52.2 +1.3**
CHTO pmax pmax
comp=Z,230nm,1.2s,mb6.0
QZH Quanzhou 33.09 0 *i* P **P 16 08 51.5 +0.6**
QZH S **S 16 14 04.0 -3.8**
QZH AMB AMB
comp=Z,1μm,1.6s,mb6.6
QZH AMB AMB
comp=Z,12μm,5.5s
QZH LR LR
comp=N,43μm,16.2s,MS6.4
QZH LR LR
comp=E,32μm,14.2s,MS6.4
QZH LR LR
comp=Z,65μm,17.9s,MS6.4
TATO Taipei 33.27 5 PFAKE 16 09 00.0 +7.5
TATO LR LR
comp=Z,17μm,22.0s,MS5.7
GUMO Guam 34.19 51 P **P 16 09 00.2 -0.4**
comp=Z,203nm,1.0s,mb6.0,baz=217,slow=19,SNR=2.9
GUMO LR LR 16 23 43.7
comp=Z,8μm,19.8s,MS5.5,baz=224,slow=38
GUMO Guam 34.19 51 P **P 16 09 00.2 -0.5**
GUMO pmax pmax
comp=Z,203nm,1.0s,mb6.0
GUMO MLR MLR
comp=Z,8μm,19.8s,MS5.5
EIDS Eidsvold 35.47 123 *e*P **P 16 09 11.1 -0.5**
comp=Z,76nm,1.0s,mb5.6
JOW Kunigami 36.28 15 P **P 16 09 18.5 0.0**
comp=Z,80nm,0.9s,mb5.7,baz=155,slow=8.0,SNR=7.6
JOW S **S 16 14 52.9 -4.0**
comp=Z,17nm,0.9s,baz=310,slow=9.3,SNR=1.8
JOW LR LR 16 23 19.5
comp=Z,37μm,21.2s,MS6.1,baz=198,slow=35
GYA Guiyang 36.41 342⇑ *i*P **P 16 09 20.3 +0.7**
GYA AP pP 16 09 31.8 +1.9
GYA XP sP 16 09 38.5 +4.4
GYA PP PP 16 10 47.3 +4.3
GYA PCP PcP 16 11 44.0 +0.5
GYA S **S 16 14 58.8 -0.1**
GYA SCP ScP 16 15 26.8 -0.7
GYA PCS PcS 16 15 32.5 +1.1
GYA SS SS 16 17 27.3 -12
GYA AMB AMB
comp=Z,430nm,1.0s,mb6.3
GYA AMB AMB
comp=Z,6μm,8.1s
GYA LR LR
comp=N,31μm,18.5s,MS6.3
GYA LR LR
comp=E,39μm,17.7s,MS6.3
GYA LR LR
comp=Z,25μm,19.2s,MS6.0

KMI Kunming 36.58 336⇑P **P 16 09 25.0 +4.0**
KMI AP pP 16 09 32.0 +0.7
KMI XP sP 16 09 36.8 +1.2
KMI PP PP 16 10 50.3 +5.5
KMI PCP PcP 16 11 47.0 +3.0
KMI S **S 16 15 06.0 +4.5**
KMI XS sS 16 15 20.5 +2.0
KMI SCS ScS 16 19 32.3 -2.5
KMI AMB AMB
comp=Z,146nm,0.9s,mb5.8
KMI AMB AMB
comp=Z,13μm,5.4s
KMI LR LR
comp=N,52μm,11.4s,MS6.7
KMI LR LR
comp=E,57μm,15.3s,MS6.7
KMI LR LR
comp=Z,77μm,11.4s,MS6.7
KMI Kunming 36.58 336⇑P **P 16 09 24.9 +3.9**
comp=Z,146nm,0.9s,mb5.8
KMI pP pP 16 09 32.0 +0.7
KMI sP sP 16 09 36.7 +1.1
KMI PP PP 16 10 50.3 +5.5
KMI PPP 16 11 10.2
KMI PcP PcP 16 11 46.9 +2.9
KMI S **S 16 15 05.9 +4.4**
KMI sS sS 16 15 20.6 +2.1
KMI SS SS 16 17 35.3 -7.1
KMI SSS 16 18 03.4
KMI ScS ScS 16 19 32.2 -2.6
KMI LR LR
comp=Z,77μm,11.4s,MS6.7
TOO Toolangi 38.07 144⇑ *i*P **P 16 09 35.4 +1.8**
TOO *e*PP PP 16 11 00.3 -0.8
TOO *e*S **S 16 15 24.2 +0.2**
ARMA Armidale 38.08 130 *e*P **P 16 09 35.4 +1.6**
ARMA *e*S **S 16 15 19.7 -4.6**
CAN Canberra 38.82 138 *e*P **P 16 09 40.9 +0.9**
comp=Z,233nm,1.1s,mb5.8
WHN Wuhan 38.86 355 P **P 16 09 41.5 +1.2**
WHN AP pP 16 09 49.0 -1.6
WHN LR LR
comp=N,62μm,14.5s,MS6.7
WHN LR LR
comp=E,22μm,11.2s,MS6.7
WHN LR LR
comp=Z,94μm,16.6s
CNB Canberra Magne 39.06 138 *i*P **P 16 09 42.9 +1.0**
CNB *e*PP PP 16 11 11.8 -0.1
CNB *e*S **S 16 15 38.2 -0.7**
SSE Sheshan 39.32 4 P **P 16 09 47.0 +2.9**
SSE AP pP 16 09 54.5 +0.1
SSE PP PP 16 11 17.8 +3.0
SSE S **S 16 15 44.5 +1.7**
SSE AMB AMB
comp=Z,404nm,1.8s,mb5.8
SSE AMB AMB
comp=Z,6μm,5.5s
SSE LR LR
comp=N,16μm,14.6s,MS6.0
SSE LR LR
comp=E,10μm,15.0s,MS6.0
SSE LR LR
comp=Z,18μm,14.4s,MS6.0
SSE Sheshan 39.32 4 P **P 16 09 46.9 +2.8**
comp=Z,404nm,1.8s,mb5.8
SSE pP pP 16 09 54.6 +0.2
SSE PP PP 16 11 17.8 +3.0
SSE S **S 16 15 44.4 +1.6**
SSE LR LR
comp=Z,18μm,14.4s,MS6.0
NJ2 Nanjing 40.18 1 *e*P **P 16 09 53.0 +1.8**
NJ2 AP pP 16 10 02.5 +0.9
NJ2 XP sP 16 10 07.3 +1.5
NJ2 PP PP 16 11 30.0 +5.8
NJ2 S **S 16 15 59.5 +3.8**
NJ2 XS sS 16 16 15.0 +2.2
NJ2 AMB AMB
comp=Z,130nm,0.8s,mb5.7
NJ2 AMB AMB
comp=Z,5μm,7.0s
NJ2 LR LR
comp=N,10μm,16.4s,MS6.0
NJ2 LR LR
comp=E,14μm,14.0s,MS6.0
NJ2 LR LR
comp=Z,59μm,13.0s,MS6.6
IMP Imphal 40.63 325 *e*P **P 16 09 56.0 +0.9**
IMP *ex* x 16 15 42.0
HNR Honiara 41.11 95 *e*P **P 16 09 57.1 -2.2**
comp=Z,998nm,1.3s,mb6.3
HNR LR LR
comp=Z,36μm,20.0s,MS6.2
HNR Honiara 41.11 95 *e*P **P 16 09 57.1 -2.1**
HNR pmax pmax
comp=Z,998nm,1.3s,mb6.3
HNR MLR MLR
comp=Z,36μm,20.0s,MS6.2
CD2 Chengdu 41.47 341⇓ *i*P **P 16 10 03.3 +1.4**
CD2 AP pP 16 10 13.0 +0.8
CD2 XP sP 16 10 17.0 +0.5
CD2 PP PP 16 11 43.0 +4.8
CD2 PCP PcP 16 12 00.5 +1.2
CD2 PCS PcS 16 15 50.5 -0.1
CD2 S **S 16 16 17.0 +2.1**
CD2 XS sS 16 16 33.5 +1.5
CD2 SS SS 16 19 17.5 -2.9
CD2 SCS ScS 16 20 01.8 -1.3
CD2 AMB AMB
comp=Z,1μm,1.0s,mb6.4
CD2 AMB AMB
comp=Z,16μm,6.0s
CD2 LR LR
comp=N,33μm,18.4s,MS6.5
CD2 LR LR
comp=E,51μm,15.6s,MS6.5
CD2 LR LR
comp=Z,48μm,12.8s,MS6.6
MOO Moorlands 42.39 148 *e*P **P 16 10 11.4 +2.1**
MOO *e*PP PP 16 11 55.9 +7.9
MOO *e*S **S 16 16 39.4 +11**
SHL Shillong 42.42 323⇑ *i*P **P 16 10 09.0 -0.7**
SHL AMb AMB 16 10 18.6
comp=Z,667nm,1.9s,mb5.9
SHL *e*S **S 16 16 31.0 +1.8**
CAL Calcutta 42.50 317 *e*P **P 16 10 09.9 -0.5**
CAL *ex* x 16 16 42.9
TAU Tasmania Unive 42.79 148 P **P 16 10 14.1 +1.6**
comp=Z,836nm,1.2s,mb6.3,SNR=9.4
TAU Tasmania Unive 42.79 148 *e*P **P 16 10 14.1 +1.5**
comp=Z,330nm,1.4s,mb5.9
TAU LR LR
comp=Z,77μm,19.0s,MS6.6
TAU Tasmania Unive 42.79 148 *e*P **P 16 10 14.1 +1.6**
TAU pmax pmax
comp=Z,330nm,1.4s,mb5.9
TAU MLR MLR
comp=Z,77μm,19.0s,MS6.6
XAN Xi'an 43.09 349 P **P 16 10 15.0 -0.1**
XAN AP pP 16 10 24.8 -0.7
XAN XP sP 16 10 29.0 -0.7
XAN S **S 16 16 35.3 -3.5**
XAN XS sS 16 16 51.3 -4.7
XAN SS SS 16 19 44.3 -8.1
XAN AMB AMB
comp=Z,48nm,1.5s,mb5.0
XAN AMB AMB
comp=Z,8μm,8.1s
XAN LR LR
comp=N,13μm,19.9s,MS6.3
XAN LR LR
comp=E,33μm,18.2s,MS6.3
XAN LR LR
comp=Z,62μm,19.9s,MS6.5
VIS Vishakhapatnam 43.21 307 *i* P **P 16 10 15.4 -0.9**
VIS *ex* x 16 10 37.8
comp=Z,363nm,1.3s
VIS *i* S **S 16 16 43.0 +2.0**
TIA Tai'an 44.34 359 P **P 16 10 25.5 +0.5**
TIA S **S 16 16 53.0 -3.9**
TIA AMB AMB
comp=Z,940nm,5.0s
TIA LR LR
comp=E,7μm,14.0s

TRD Trivandrum 44.50 291⇓ *e*P **P 16 10 35.0 +8.2**
TRD *e*S **S 16 17 08.0 +8.0**
KOD Kodaikanal 44.68 294 *e*P **P 16 10 26.9 -1.2**
BOK Bokaro 45.01 316 *e*P **P 16 10 29.3 -1.3**
LSA Lhasa 46.00 326 P **P 16 10 40.0 +1.7**
LSA XP sP 16 10 59.5 +6.4
LSA PP PP 16 12 23.0 -3.7
LSA S **S 16 17 21.0 -0.1**
LSA SCS ScS 16 20 32.0 +0.4
LSA AMB AMB
comp=Z,140nm,1.0s,mb5.8
LSA AMB AMB
comp=Z,4μm,7.0s
LSA LR LR
comp=N,18μm,21.0s,MS6.2
LSA LR LR
comp=E,17μm,16.0s,MS6.2
LSA LR LR
comp=Z,29μm,22.0s
LSA Lhasa 46.00 326 *e*P **P 16 10 40.0 +1.7**
comp=Z,2μm,1.5s,mb6.8
LSA LR LR
comp=Z,33μm,20.0s,MS6.3
LSA Lhasa 46.00 326 *e*P **P 16 10 40.0 +1.7**
LSA pmax pmax
comp=Z,2μm,1.5s,mb6.8
LSA MLR MLR
comp=Z,33μm,20.0s,MS6.3
JHJ Hachijo jima 2 46.02 25 P **P 16 10 37.5 -0.9**
comp=Z,88nm,0.8s,mb5.8,baz=151,slow=8.5,SNR=4.1
JHJ S **S 16 17 17.2 -4.1**
comp=Z,41nm,0.9s,baz=11,slow=16,SNR=1.6
ODAN Odare 46.11 320 *e*P **P 16 10 42.2 +2.9**
comp=Z,4μm,1.6s,mb7.1
INCN Inchon 46.25 9⇓P **P 16 10 42.8 +2.6**
SNR=7.7
INCN Inchon 46.25 9 *e*P **P 16 10 41.1 +1.0**
comp=Z,244nm,1.5s,mb5.9
INCN LR LR
comp=Z,12μm,19.0s,MS5.9
TAPN Taplejung 46.26 321 *e*P **P 16 10 41.4 +1.0**
comp=Z,926nm,0.9s,mb6.7
LZH Lanzhou 46.26 344⇑P **P 16 10 42.3 +2.0**
LZH AP pP 16 10 52.0 +1.2
LZH XP sP 16 10 56.3 +1.3
LZH PCP PcP 16 12 17.5 +2.1
LZH PP PP 16 12 31.3 +1.9
LZH S **S 16 17 27.0 +2.3**
LZH XS sS 16 17 43.5 +1.5
LZH SS SS 16 20 45.5 -5.2
LZH AMB AMB
comp=Z,657nm,1.3s,mb6.4
LZH AMB AMB
comp=Z,5μm,4.5s
LZH LR LR
comp=E,26μm,14.1s
LZH LR LR
comp=Z,40μm,16.3s,MS6.5
LZH Lanzhou 46.26 344⇑P **P 16 10 42.3 +2.0**
comp=Z,657nm,1.3s,mb6.4
LZH pP pP 16 10 52.0 +1.2
LZH sP sP 16 10 56.2 +1.2
LZH PcP PcP 16 12 17.5 +2.1
LZH PP PP 16 12 31.2 +1.8
LZH S **S 16 17 27.0 +2.3**
LZH sS sS 16 17 43.5 +1.5
LZH SS SS 16 20 45.4 -5.3
LZH LR LR
comp=Z,40μm,16.3s,MS6.5
KSRS Korea Array 46.44 11 P **P 16 10 41.7 0.0**
comp=Z,179nm,1.0s,mb6.0,baz=188,slow=8.3,SNR=83
KSRS S **S 16 17 27.4 +0.2**
comp=Z,1.1nm,1.0s,baz=246,slow=21,SNR=3.2
KSRS LR LR 16 31 08.6
comp=Z,19μm,20.3s,MS6.0,baz=190,slow=37
KSRS Korea Array 46.44 11 P **P 16 10 41.7 0.0**
KSRS S **S 16 17 27.5 +0.2**
KSRS pmax pmax
comp=Z,179nm,1.0s,mb6.0
KSRS smax
comp=N,1.0nm,1.0s
KSRS MLR MLR
comp=Z,19μm,20.3s,MS6.0
RAMN Ramite 46.67 320 *e*P **P 16 10 46.9 +3.2**
comp=Z,3μm,1.4s,mb7.1
HYB Hyderabad 46.92 303 *e*P **P 16 10 43.5 -2.3**
comp=Z,135nm,1.0s,mb5.8
HYB *e*S **S 16 17 30.0 -4.7**
HYB *e* 16 33 20.0
HYB Hyderabad 46.92 303 *e*P **P 16 10 43.5 -2.3**
HYB *e*S **S 16 17 30.0 -4.7**
HYB pmax pmax
comp=Z,135nm,1.0s,mb5.8
HYB Hyderabad 46.92 303 *i* P **P 16 10 44.5 -1.3**
comp=Z,135nm,1.0s,mb5.8
HYB *e* pP 16 10 54.0 -2.3
HYB *e*PcP PcP 16 12 22.5 +4.3
HYB *e*PP PP 16 12 40.0 +3.4
HYB *e*S **S 16 17 30.0 -4.7**
HYB LR LR 16 33 20.0
comp=Z,58nm,20.0s
DL2 Dalian 47.11 4 P **P 16 10 47.0 +0.1**
DL2 SCP ScP 16 16 08.8 -0.9
DL2 S **S 16 17 38.0 +1.2**
DL2 SS SS 16 20 59.3 -5.2
DL2 AMB AMB
comp=Z,100nm,1.0s,mb5.7
DL2 AMB AMB
comp=Z,5μm,7.4s
DL2 LR LR
comp=N,15μm,16.0s
DL2 LR LR
comp=Z,17μm,16.7s,MS6.1
JIRN Jiri 47.43 320 *e*P **P 16 10 51.9 +2.3**
comp=Z,5μm,1.6s,mb7.2
GUN Gumba 47.80 320 *e*P **P 16 10 54.9 +2.4**
comp=Z,3μm,1.3s,mb7.2
PKI Pulchoki 47.87 319 *e*P **P 16 10 55.6 +2.6**
comp=Z,3μm,1.5s,mb7.0
PKIN Phulchoki 47.88 319 *e*P **P 16 10 55.6 +2.5**
comp=Z,2μm,1.6s,mb6.9
NOUC Port Laguerre 48.05 112 *e*P **P 16 10 54.2 -0.4**
DMN Daman 48.09 319 *e*P **P 16 10 57.7 +3.0**
comp=Z,932nm,0.9s,mb6.8
KKN Kakani 48.10 320 *e*P **P 16 10 57.7 +2.9**
comp=Z,4μm,1.7s,mb7.2
MNGI Mangalore 48.12 296 *i* P **P 16 10 54.8 -0.4**
MNGI *i* S **S 16 17 53.2 +1.2**
BJT Baijiatuau 48.17 358 *e*P **P 16 10 55.9 +0.8**
comp=Z,464nm,1.1s,mb6.4
BJT LR LR
comp=Z,26μm,21.0s,MS6.2
BJT Baijiatuau 48.17 358 *e*P **P 16 10 55.9 +0.8**
BJT pmax pmax
comp=Z,464nm,1.1s
BJT MLR MLR
comp=Z,26μm,21.0s
DZM Mont Dzumac 48.18 112 *e*P **P 16 10 55.6 0.0**
DZM Mont Dzumac 48.18 112 *e*P **P 16 10 55.6 0.0**
comp=Z,135nm,0.9s,mb6.0
BJI Beijing 48.19 358 P **P 16 10 56.3 +1.1**
BJI XP sP 16 11 10.8 +0.8
BJI PP PP 16 12 49.3 +1.4
BJI S **S 16 17 52.5 +0.4**
BJI AMB AMB
comp=Z,171nm,0.7s,mb6.2
BJI AMB AMB
comp=Z,13μm,6.6s
BJI LR LR
comp=N,22μm,15.2s,MS6.5
BJI LR LR
comp=E,32μm,14.7s,MS6.5
BJI LR LR
comp=Z,26μm,15.9s,MS6.3
BJI Beijing 48.19 358 P **P 16 10 56.2 +1.0**
comp=Z,171nm,0.7s,mb6.2
BJI sP sP 16 11 10.7 +0.7
BJI PP PP 16 12 49.3 +1.4
BJI S **S 16 17 52.5 +0.4**
BJI SS SS 16 21 31.7 +10
BJI LR LR
comp=Z,20μm,21.9s,MS6.0
MAJO Matsushiro 48.40 21 *e*P **P 16 10 55.7 -1.3**
comp=Z,935nm,1.8s,mb6.5
MAJO LR LR

comp=Z,21µm,22.0s,MS6.1
MAJO Matsushiro 48.40 21 *e*P **P** **16 10 55.7 -1.3**
MAJO pmax pmax
comp=Z,935nm,1.8s,mb6.5
MAJO MLR MLR
comp=Z,21µm,22.0s,MS6.1
MAT Matsushiro 48.40 21 P **P** **16 10 55.3 -1.7**
MAT S **S** **16 17 53.0 -2.2**
MJAR Matsushiro Arr 48.40 21 P **P** **16 10 55.3 -1.7**
comp=Z,34nm,1.1s,mb5.3,baz=195,slow=7.6,SNR=57
MJAR S **S** **16 17 51.9 -3.3**
comp=Z,0.9nm,0.8s,baz=61,slow=15,SNR=2.4
MJAR LR LR 16 30 08.5
comp=Z,12µm,20.2s,MS5.9,baz=205,slow=35
MJAR Matsushiro Arr 48.40 21 P **P** **16 10 55.3 -1.7**
MJAR S **S** **16 17 51.9 -3.3**
MJAR pmax pmax
comp=Z,34nm,1.1s
MJAR smax
comp=N,1.0nm,0.8s
MJAR MLR MLR
comp=Z,12µm,20.2s
NGP Nagpur 48.46 308⇑ *i*P **P** **16 10 53.4 -4.3**
NGP *ex* x 16 11 11.8
comp=Z,504nm,1.3s
NGP *e*S **S** **16 17 53.2 -3.3**
GKN Gorkha 48.66 319 *e*P **P** **16 11 00.5 +1.4**
comp=Z,3µm,1.5s,mb7.1
ALBI Allahabad 48.83 314 *e*P **P** **16 11 00.0 -0.4**
KOLN Koldanda 49.18 318 *e*P **P** **16 11 05.1 +2.0**
comp=Z,668nm,0.8s,mb6.7
BTO Baotou 49.31 352 *e*P **P** **16 11 03.3 -0.6**
HHC Hu-ho-hao-te 49.35 353 *e*P **P** **16 11 04.3 +0.1**
HHC AP pP 16 11 14.3 -0.4
HHC XP sP 16 11 18.0 -0.9
HHC PCP PcP 16 12 24.5 -1.9
HHC PP PP 16 13 00.3 +1.7
HHC S **S** **16 18 09.5 +1.1**
HHC XS sS 16 18 26.0 +0.2
HHC SCS ScS 16 20 51.3 -2.0
HHC SS SS 16 21 37.5 -3.2
HHC AMB AMB
comp=Z,58nm,0.9s,mb5.6
HHC AMB AMB
comp=Z,11µm,6.8s
HHC LR LR
comp=N,26µm,11.9s,MS6.6
HHC LR LR
comp=E,26µm,11.9s,MS6.6
HHC LR LR
comp=Z,21µm,14.3s,MS6.3
DANN Dangsing 49.46 319 *e*P **P** **16 11 06.3 +1.0**
comp=Z,1µm,0.8s,mb7.0
AKL Akola 49.83 306 *e*P **P** **16 11 08.4 +0.2**
GOA Goa 50.06 298⇑ *i*P **P** **16 11 09.2 -0.8**
GOA *i* x x 16 18 13.4
GTA Gaotai 50.53 341 P **P** **16 11 14.8 +1.6**
GTA AP pP 16 11 23.8 0.0
GTA XP sP 16 11 28.8 +0.8
GTA PP PP 16 13 12.5 +3.2
GTA S **S** **16 18 26.5 +1.6**
GTA XS sS 16 18 43.5 +1.1
GTA SCS ScS 16 21 01.0 -0.4
GTA SS SS 16 22 00.3 +0.7
GTA AMB AMB
comp=Z,90nm,1.4s,mb5.5
GTA AMB AMB
comp=Z,5µm,6.6s
GTA LR LR
comp=N,18µm,24.3s,MS6.3
GTA LR LR
comp=E,33µm,22.8s,MS6.3
GTA LR LR
comp=Z,22µm,23.4s,MS6.1
KAD Karad 50.54 300 *e*P **P** **16 11 12.1 -1.5**
POO Poona 51.38 302 *e*P **P** **16 11 19.6 -0.3**
POO *e*SS SS 16 22 13.0 -0.6
CN2 Changchun 52.30 7 ⇓P **P** **16 11 25.0 -1.4**
CN2 *e*AP pP 16 11 35.0 -2.0
CN2 *e*XP sP 16 11 39.0 -2.2
CN2 PCP PcP 16 12 35.8 -1.4
CN2 *e*S **S** **16 18 47.0 -2.2**
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
CN2 AMB AMB
comp=Z,8µm,10.0s
CN2 LR LR
comp=N,9µm,19.0s,MS6.0
CN2 LR LR
comp=E,12µm,19.0s,MS6.0
CN2 LR LR
comp=Z,10µm,22.0s,MS5.8
LGTI Lohaghat 52.51 317 *e*P **P** **16 11 28.5 +0.4**
LGTI *ex* x 16 13 36.1
PTH Pithoragarh 52.59 317 *e*P **P** **16 11 28.7 -0.1**
PTH *ex* x 16 13 41.0
MDJ Mudanjiang 53.69 10 P **P** **16 11 36.5 -0.1**
MDJ AP pP 16 11 48.5 +1.3
MDJ XP sP 16 11 53.3 +1.9
MDJ PCP PcP 16 12 42.5 0.0
MDJ PP PP 16 13 43.3 +5.5
MDJ SCP ScP 16 16 37.0 -0.8
MDJ PCS PcS 16 16 40.8 -0.6
MDJ S **S** **16 19 09.3 +1.2**
MDJ XS sS 16 19 27.3 +1.6
MDJ SS SS 16 22 47.8 -1.6
MDJ AMB AMB
comp=Z,198nm,0.9s,mb6.0
MDJ AMB AMB
comp=Z,7µm,6.6s
MDJ LR LR
comp=N,10µm,18.9s,MS6.0
MDJ LR LR
comp=E,8µm,19.2s,MS6.0
MDJ LR LR
comp=Z,14µm,19.7s,MS6.0
MDJ Mudanjiang 53.69 10 *e*P **P** **16 11 36.8 +0.2**
comp=Z,3µm,1.9s,mb6.8
MDJ LR LR
comp=Z,14µm,22.0s,MS6.0
NDI New Delhi 54.12 315 *e*P **P** **16 11 41.0 +1.0**
DDI Dehra Dun 54.53 317 *e*P **P** **16 11 41.6 -1.4**
DDI *ex* x 16 19 51.0
AJM Ajmer 54.74 311 *e*P **P** **16 11 44.8 +0.2**
ERM Erimo 55.03 22 *e*P **P** **16 11 46.9 +0.5**
comp=Z,55nm,0.9s,mb5.6
ERM LR LR
comp=Z,18µm,21.0s,MS6.1
ERM Erimo 55.03 22 *e*P **P** **16 11 46.9 +0.5**
ERM pmax pmax
comp=Z,55nm,0.9s,mb5.6
ERM MLR MLR
comp=Z,18µm,21.0s,MS6.1
TARA Tarawa 55.26 83 PFAKE 16 12 00.0 +11
TARA LR LR
comp=Z,17µm,19.0s,MS6.1
SMLA Simla 55.63 317 *i* P **P** **16 11 50.2 -0.7**
SMLA *ex* x 16 12 03.0
comp=Z,371nm,0.7s
SMLA *i* x x 16 19 32.0
DCZ Deep Cove 55.88 140 P **P** **16 11 54.4 +1.9**
SDNR Sundarnagar 55.99 317 *e*P **P** **16 11 55.0 +1.5**
MSZ Milford Sound 56.03 139 P **P** **16 11 55.0 +1.4**
MCQ Macquarie Isla 56.27 153 *e*P **P** **16 11 57.3 +2.2**
comp=Z,17µm,1.6s
MCQ Macquarie Isla 56.27 153 P **P** **16 11 57.7 +2.6**
BHK Bhakra 56.31 317 *ex* x 16 12 04.6
JCZ Jackson Bay 56.33 138 P **P** **16 11 57.2 +1.5**
MLZ Mavora Lakes 56.47 140 P **P** **16 11 57.4 +0.7**
WHZ Wether Hill Ro 56.56 140 P **P** **16 11 58.1 +0.8**
ASAJ Asahikawa 56.65 21 LR LR 16 36 50.7
comp=Z,15µm,20.7s,MS6.1,baz=200,slow=37
WKZ Wanaka 56.80 139 P **P** **16 12 00.2 +1.1**
ULN Ulaanbaatar 56.86 351⇑P **P** **16 12 00.8 +1.5**
SNR=324
ULN Ulaanbaatar 56.86 351 *e*P **P** **16 11 59.7 +0.4**
comp=Z,572nm,1.2s,mb6.5
ULN LR LR
comp=Z,17µm,19.0s,MS6.2
ULN Ulaanbaatar 56.86 351 *e*P **P** **16 11 59.7 +0.4**
ULN pmax pmax
comp=Z,572nm,1.2s,mb6.5
ULN MLR MLR
comp=Z,17µm,19.0s,MS6.2
ULN Ulaanbaatar 56.86 351 P **P** **16 11 59.7 +0.4**
comp=Z,685nm,1.6s,mb6.4
SONM Songino Array 56.93 350 P **P** **16 12 00.3 +0.4**
comp=Z,240nm,1.0s,mb6.2,baz=166,slow=7.7,SNR=232
SONM LR LR 16 40 57.7
comp=Z,19µm,18.2s,MS6.2,baz=191,slow=41
SONM PKPPKP 16 41 52.1
comp=Z,2.0nm,0.9s,baz=293,slow=1.4,SNR=5.9
SONM Songino Array 56.93 350 P **P** **16 12 00.3 +0.5**
SONM pmax pmax
comp=Z,240nm,1.0s
SONM MLR MLR
comp=Z,19µm,18.2s
SONM pmax pmax
comp=Z,2.0nm,0.9s
BHJ Bhuj 57.03 305 *e*P **P** **16 12 00.8 -0.2**
EAZ Earnscleugh 57.15 139 P **P** **16 12 02.2 +0.6**
EAZ pP PcP 16 12 56.3 +0.3
PAF Port-aux-Franc 57.24 215 P **P** **16 12 07.3 +5.2**
WVZ Waitaha Valley 57.27 136 P **P** **16 12 02.0 -0.5**
DLH Dalhousie 57.30 317 *e*P **P** **16 12 00.0 -2.8**
HIA Hailar 57.39 1 *e*P **P** **16 12 02.6 -0.4**
comp=Z,411nm,1.6s,mb6.2
HIA LR LR
comp=Z,18µm,19.0s,MS6.2
HIA Hailar 57.39 1 *e*P **P** **16 12 02.6 -0.4**
HIA pmax pmax
comp=Z,411nm,1.6s
HIA MLR MLR
comp=Z,18µm,19.0s
THN Thein Dam 57.40 317 *e*P **P** **16 12 00.3 -3.2**
DSZ Denniston Nort 57.55 135 P **P** **16 12 05.6 +1.1**
DSZ pP PcP 16 12 57.6 0.0
TUZ Tuapeka 57.65 140 P **P** **16 12 06.6 +1.5**
RPZ Rata Peaks 57.72 137 P **P** **16 12 06.2 +0.6**
comp=Z,409nm,0.9s,mb6.4,baz=298,slow=1.3,SNR=64
RPZ Rata Peaks 57.72 137 P **P** **16 12 06.0 +0.4**
QRZ Quartz Range 57.77 133 P **P** **16 12 07.7 +1.7**
YUK Yuzh-Kuril'sk 57.79 23 *e*P **P** **16 12 04.2 -1.8**
YUK *e* 16 13 04.6
YUK *e* 16 14 09.5
YUK *e*PS 16 19 51.8
YUK *e* 16 21 41.6
YUK pmax pmax
comp=Z,13µm,6.4s
YUK pmax pmax
comp=N,7µm,7.3s
YUK pmax pmax
comp=E,2µm,2.0s
YUK smax
comp=N,4µm,5.0s
YUK smax
comp=E,11µm,15.0s
CASY Casey 58.09 184⇑ *i*P **P** **16 12 08.2 +0.4**
CASY *e* 16 20 06.7
CASY Casey 58.09 184 *e*P **P** **16 12 08.2 +0.5**
comp=E,110nm,1.0s,mb5.8
CASY LR LR
comp=Z,54µm,20.0s,MS6.7
LTZ Lake Taylor 58.23 136 P **P** **16 12 08.9 -0.3**
HABR Khabarovsk 58.47 13 *i* P **P** **16 12 11.1 +0.5**
HABR *e*SP 16 12 23.3
HABR *e* 16 14 17.6
HABR *e*S **S** **16 20 12.4 +1.0**
HABR *e*PS 16 20 21.4
HABR *e* 16 20 27.1
HABR *e* 16 21 55.6
HABR *e*SS SS 16 24 01.9 -2.6
HABR pmax pmax
comp=Z,481nm,1.1s,mb6.4
HABR pmax pmax
comp=Z,5µm,6.5s
HABR MLR MLR
comp=Z,13µm,20.0s,MS6.0
KLR Kul'dur 58.53 10⇓ *i*P **P** **16 12 06.4 -4.7**
KLR *e*S **S** **16 20 07.5 -4.7**
KLR *e* 16 24 00.0
KLR pmax pmax
comp=Z,360nm,1.8s,mb6.1
KLR pmax pmax
comp=N,4µm,12.0s
KLR pmax pmax
comp=Z,9µm,12.0s
WMQ Urumqi 58.89 334 P **P** **16 12 14.5 +0.8**
WMQ AP pP 16 12 24.5 +0.1
WMQ XP sP 16 12 28.5 -0.1
WMQ PP PP 16 14 26.5 +2.2
WMQ S **S** **16 20 16.5 -0.6**
WMQ SCS ScS 16 21 58.5 -2.4
WMQ SS SS 16 24 11.5 +0.1
WMQ AMB AMB
comp=Z,154nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,5µm,5.0s
WMQ LR LR
comp=N,18µm,18.0s,MS6.4
WMQ LR LR
comp=E,18µm,18.0s,MS6.4
WMQ LR LR
comp=Z,18µm,19.0s,MS6.2
KHZ Kahutara 58.99 135 P **P** **16 12 14.4 -0.1**
YSS Yuzh-Sakhalins 59.20 19 *e*P **P** **16 12 15.2 -0.5**
comp=Z,152nm,1.0s,mb6.0
YSS LR LR
comp=Z,3µm,20.0s,MS5.5
YSS Yuzh-Sakhalins 59.20 19α*e*P **P** **16 12 14.0 -1.7**
YSS *e**SP sP 16 12 27.0 -3.6
YSS *e*S **S** **16 20 19.0 -1.9**
YSS *e*SS SS 16 24 20.0 +4.0
YSS pmax pmax
comp=Z,210nm,1.2s,mb6.0
YSS pmax pmax
comp=N,70nm,1.1s
YSS pmax pmax
comp=Z,5µm,10.0s
YSS pmax pmax
comp=N,3µm,8.0s
YSS pmax pmax
comp=E,2µm,8.0s
YSS smax
comp=N,3µm,12.0s
YSS smax
comp=E,6µm,14.0s
YSS MLR MLR
comp=Z,6µm,18.0s,MS5.8
YSS MLR MLR
comp=N,7µm,19.0s,MS5.9
YSS MLR MLR
comp=E,6µm,18.0s,MS5.9
SNZO South Karori 59.48 133 *e*P **P** **16 12 17.0 -0.9**
comp=E,356nm,1.1s,mb6.3
SNZO LR LR
comp=Z,28µm,20.0s,MS6.4
MRZ Mangatainoka R 59.94 132 P **P** **16 12 20.0 -1.1**
ZAK Zakamensk 59.94 349⇑ *i*P **P** **16 12 21.3 +0.5**
ZAK *e* 16 20 33.4
ZAK pmax pmax
comp=Z,251nm,1.3s,mb6.1
TSZ Takapari Road 60.05 132 P **P** **16 12 21.8 -0.1**
DRV Dumont d'Urvil 60.09 170 P **P** **16 12 26.0 +4.4**
DRV S S **16 20 49.0 +17**
DRV SS SS 16 24 44.0 +15
DRV L 16 27 00.0
DRV R 16 32 00.0
FUNA Funafuti 60.14 95 PFAKE 16 12 30.0 +7.1
FUNA LR LR
comp=Z,20µm,19.0s,MS6.3
BKZ Black Stump Fm 60.22 130 P **P** **16 12 22.6 -0.5**
CIT Chita 60.27 357 *e*P **P** **16 12 22.8 -0.2**
CIT *e* pP 16 12 32.6 -1.2
CIT *e* 16 12 42.4
CIT *e* 16 14 39.7
CIT *e*S **S** **16 20 34.4 -0.2**
CIT pmax pmax
comp=Z,2µm,1.9s,mb6.8
URZ Urewera 60.47 129 P **P** **16 12 24.7 -0.1**
comp=Z,48nm,0.5s,mb5.8,baz=303,slow=4.0,SNR=29
MIR Mirnyy 60.65 191⇓ *i*P **P** **16 12 26.0 +0.6**
MIR *i* 16 13 12.0
MIR *i*S **S** **16 20 40.0 +0.9**
MIR *i*PS 16 21 00.0
MIR pmax pmax
comp=Z,600nm,1.4s,mb6.5
MIR pmax pmax
comp=N,4µm,10.0s
MWZ Matawai 60.81 129 P **P** **16 12 26.4 -0.7**
TLY Talaya 61.12 350 P **P** **16 12 29.2 +0.4**
comp=N,2µm,1.6s,mb7.0,SNR=33
TLY Talaya 61.12 350⇑P **P** **16 12 30.4 +1.6**
SNR=136
TLY Talaya 61.12 350 *e*P **P** **16 12 29.4 +0.6**
comp=N,875nm,1.4s,mb6.7
TLY LR LR
comp=Z,16µm,22.0s,MS6.1
TLY Talaya 61.12 350*c* *i*P **P** **16 12 28.6 -0.2**
TLY *e* 16 13 15.3
TLY *e*PPP 16 16 19.6
TLY *e*S **S** **16 20 42.2 -3.2**
TLY *e* 16 22 15.6
TLY *e*SS SS 16 24 41.5 -4.5
TLY pmax pmax
comp=Z,586nm,1.2s,mb6.6
RER Riviere de l'E 61.51 251 *e*P **P** **16 12 33.8 +1.6**
comp=Z,485nm,1.0s,mb6.6
IRK Irkutsk 61.55 350⇓ *i*P **P** **16 12 32.1 +0.4**
IRK *e* 16 13 18.4
IRK *e*S **S** **16 20 55.2 +4.3**
IRK pmax pmax
comp=Z,1µm,2.1s,mb6.7
MOY Mondy 61.62 348 *e*P **P** **16 12 32.5 +0.3**
MOY pmax pmax
comp=Z,172nm,2.2s,mb5.8
KSH Kashi 61.70 324 *e*P **P** **16 12 34.0 +1.0**
KSH *e*AP pP 16 12 44.5 +0.7
KSH *e*XP sP 16 12 48.3 +0.3
KSH *e*PCP PcP 16 13 15.8 +1.7
KSH *e*PP PP 16 14 51.3 +2.1
KSH *e*SCP ScP 16 17 13.3 -0.1
KSH *e*PCS PcS 16 17 17.3 +0.2
KSH *e*S **S** **16 20 51.3 -2.0**
KSH *e*XS sS 16 21 07.8 -3.3
KSH *e*SCS ScS 16 22 19.0 -3.0
KSH *e*SS SS 16 24 53.0 -2.6
KSH AMB AMB
comp=Z,248nm,1.1s,mb6.2
KSH AMB AMB
comp=Z,13µm,3.2s
KSH LR LR
comp=N,49µm,13.8s,MS6.9
KSH LR LR
comp=E,24µm,11.3s,MS6.9
KSH LR LR
comp=Z,28µm,11.4s,MS6.7
MSEY Mahe Island 62.51 269 P **P** **16 12 39.6 +0.6**
comp=Z,772nm,1.2s,mb6.7,SNR=8.1
MSEY Mahe Island 62.51 269 P **P** **16 12 39.9 +1.0**
SNR=6.5
MSEY Mahe Island 62.51 269 *e*P **P** **16 12 38.3 -0.6**
comp=Z,289nm,1.4s,mb6.2
MSEY LR LR
comp=Z,21µm,20.0s,MS6.3
RAO Raoul Island 63.08 118 PFAKE 16 12 50.0 +7.5
RAO LR LR
comp=Z,48µm,21.0s,MS6.6
KBL Kabul 63.17 315 *e*P **P** **16 12 40.5 -2.5**
comp=Z,97nm,0.8s,mb6.0
KBL Kabul 63.17 315 P **P** **16 12 41.0 -2.0**
KBL pmax pmax
comp=Z,97nm,0.9s,mb5.9
MK31 Makanchi Array 63.59 333 *e*P **P** **16 12 44.6 -0.8**
MK31 Makanchi Array 63.59 333 *i* P **P** **16 12 44.8 -0.6**
MK31 pmax pmax
comp=Z,980nm,1.6s,mb6.6
MKAR Makanchi Array 63.59 333 P **P** **16 12 44.9 -0.5**
comp=Z,67nm,0.8s,mb5.7,baz=160,slow=4.2,SNR=112
MKAR S **S** **16 21 15.3 -1.4**
comp=Z,1.8nm,0.9s,baz=82,slow=10,SNR=2.5
MKAR PKP2bc 16 41 42.7
comp=Z,10nm,1.3s,baz=350,slow=6.2,SNR=4.5
MKAR LR LR 16 44 32.5
comp=Z,14µm,18.9s,MS6.2,baz=168,slow=40
MKAR Makanchi Array 63.59 333 P **P** **16 12 44.9 -0.5**
MKAR S **S** **16 21 15.3 -1.4**
MKAR ⇑*e* 16 41 42.7
MKAR LR LR 16 44 32.5
MKAR Makanchi Array 63.59 333 P **P** **16 12 44.9 -0.5**
MKAR S **S** **16 21 15.4 -1.3**
MKAR pmax pmax
comp=Z,67nm,0.8s
MKAR smax
comp=N,2.0nm,1.0s
MKAR pmax pmax
comp=Z,10.0nm,1.3s
MKAR MLR MLR
comp=Z,14µm,18.9s
AAA Alma-Ata 63.66 327 *i* P **P** **16 12 44.7 -1.3**
AAA Alma-Ata 63.66 327 *e*P **P** **16 12 45.1 -0.9**
AAA *e*S **S** **16 21 18.7 +0.9**
AAA pmax pmax
comp=Z,9µm,8.8s
AAA smax
comp=E,18µm,12.9s
AAA MLR MLR
comp=Z,19µm,19.0s,MS6.3
TKM2 Tokmak 2 64.16 326 *e*P **P** **16 12 48.4 -0.9**
comp=Z,619nm,1.5s,mb6.4
TKM2 LR LR
comp=Z,17µm,20.0s,MS6.2
TKM2 Tokmak 2 64.16 326 *e*P **P** **16 12 48.4 -0.8**
TKM2 pmax pmax
comp=Z,619nm,1.5s,mb6.4
TKM2 MLR MLR
comp=Z,17µm,20.0s,MS6.2
TKM2 Tokmak 2 64.16 326 P **P** **16 12 48.6 -0.6**
SNR=32
UCH Uchtor 64.30 325 PFAKE 16 13 00.0 +10
UCH LR LR
comp=Z,12µm,20.0s,MS6.1
UCH Uchtor 64.30 325 P **P** **16 12 53.0 +2.8**
SNR=6.1
KBK Karagaybulak 64.34 326 P **P** **16 12 50.1 -0.3**
SNR=57
AAK Ala-Archa 64.58 326 P **P** **16 12 51.4 -0.6**
comp=Z,1µm,1.2s,mb6.8,SNR=34
AAK Ala-Archa 64.58 326 P **P** **16 12 51.5 -0.5**
SNR=33
FRU Bishkek 64.64 326 *e*P **P** **16 12 52.0 -0.4**
FRU *e* pP 16 13 02.0 -1.3
FRU *e* 16 15 20.0
FRU *e* 16 21 30.0
FRU pmax pmax
comp=Z,1µm,1.8s,mb6.5
CHMS Chumysh 64.67 326 P **P** **16 12 53.0 +0.4**
SNR=11
AML Almayashu 64.70 325 *e*P **P** **16 12 52.4 -0.5**
comp=Z,1µm,1.7s,mb6.7
AML LR LR
comp=Z,19µm,19.0s,MS6.3
AML Almayashu 64.70 325 P **P** **16 12 52.8 -0.1**
SNR=72
USP Ospenovka 64.99 326 P **P** **16 12 53.7 -1.0**
SNR=57
NRGR Nerungri 64.99 4 *i* P **P** **16 12 55.3 +0.9**
NRGR S **S** **16 21 27.7 -6.0**
NRGR smax
comp=N,98nm,1.0s
EKS2 Erkin-Say 65.00 325 *e*P **P** **16 12 54.1 -0.7**
comp=N,1µm,1.8s,mb6.6
EKS2 LR LR
comp=Z,24µm,22.0s,MS6.3
EKS2 Erkin-Say 65.00 325 P **P** **16 12 54.4 -0.4**
SNR=60
CLNS Chul'man 65.18 4*c* *i*P **P** **16 12 55.7 +0.1**
CLNS *e* 16 13 23.9
CLNS *e* 16 22 10.5
CLNS *e*SSS 16 28 40.0
CLNS pmax pmax
comp=Z,152nm,0.8s,mb6.1
CLNS pmax pmax
comp=N,92nm,0.7s
CLNS pmax pmax
comp=E,76nm,0.9s
CLNS pmax pmax
comp=Z,100nm,1.8s,mb5.5
CLNS pmax pmax
comp=N,66nm,1.1s
CLNS pmax pmax
comp=E,35nm,1.6s
WBK Wadi Bani Khal 65.75 299⇑P **P** **16 13 00.7 +0.7**
SNR=13
BOD Bodaibo 66.04 357 *e*P **P** **16 12 59.7 -1.4**

BOD pmax pmax
comp=Z,456nm,2.2s,mb6.1
JMDO Jabal Madar 66.41 299 ⇓P **P 16 13 05.1 +0.8**
SNR=14
SMDO Samad 66.70 299 ⇑P **P 16 13 06.7 +0.6**
SNR=18
BIDO Bidbid 66.80 300 P **P 16 13 07.7 +1.0**
SNR=17
KK31 Karatay Array 67.15 324 *i* P **P 16 13 07.3 -1.3**
KK31 pmax pmax
comp=Z,175nm,1.3s,mb5.9
SKR Severo-Kuril's 67.28 25 *e*P **P 16 13 09.0 -0.2**
SKR *e* 16 13 34.0
SKR *e*PPP 16 17 20.0
SKR *e*S S 16 22 03.0 +1.2
SKR *e*PS 16 22 32.0
SKR *e*SS SS 16 26 18.0 -4.2
SKR *e*SSS 16 29 20.0
SKR pmax pmax
comp=Z,7μm,10.0s
SKR pmax pmax
comp=Z,450nm,1.0s,mb6.5
SKR smax
comp=E,16μm,14.0s
SKR smax
comp=N,6μm,10.0s
SKR MLR MLR
comp=N,8μm,20.0s,MS6.1
SKR MLR MLR
comp=E,7μm,20.0s,MS6.1
SKR MLR MLR
comp=Z,9μm,20.0s,MS6.0
BSY Bisya 67.33 299 P **P 16 13 10.8 +0.7**
SNR=17
HOQ Hoqain 67.52 300 P **P 16 13 12.1 +0.8**
SNR=18
KRAR Krasnoyarsk 67.52 345 ⇓*e*P **P 16 13 10.6 0.0**
KRAR pmax pmax
comp=Z,270nm,1.9s,mb6.0
KRAR MLR MLR
comp=Z,22μm,21.0s,MS6.4
KURK Kurchatov 68.13 334 ⇓P **P 16 13 16.1 +1.5**
SNR=114
KURK Kurchatov 68.13 334 P **P 16 13 13.3 -1.2**
comp=Z,62nm,0.9s,mb5.7,baz=149,slow=5.5,SNR=89
KURK S S 16 22 08.6 -3.4
comp=Z,0.7nm,0.9s,baz=94,slow=6.6,SNR=2.4
KURK PKP2bc 16 41 33.9
comp=Z,9.7nm,1.2s,baz=320,slow=3.0,SNR=9.6
KURK LR LR 16 46 32.5
comp=Z,26μm,19.7s,MS6.5,baz=130,slow=39
KURK Kurchatov 68.13 334 *e*P **P 16 13 13.6 -1.0**
comp=Z,1μm,1.5s,mb6.7
KURK LR LR
comp=Z,33μm,19.0s,MS6.6
KURK Kurchatov 68.13 334 P **P 16 13 13.4 -1.2**
KURK S S 16 22 08.6 -3.4
KURK pmax pmax
comp=Z,62nm,0.9s,mb5.6
KURK smax
comp=N,1.0nm,1.0s
KURK pmax pmax
comp=Z,10.0nm,1.2s
KURK MLR MLR
comp=Z,26μm,19.7s,MS6.5
ZAA0 Zalesovo Array 68.21 339 *e*P **P 16 13 13.3 -1.7**
ZAA0 *e* pP 16 13 23.9 -2.0
ZALV Zalesovo Beam 68.21 339 P **P 16 13 13.5 -1.5**
comp=Z,88nm,0.8s,mb5.9,baz=142,slow=4.0,SNR=81
ZALV PKP2bc 16 41 30.3
comp=Z,11nm,1.1s,baz=318,slow=2.0,SNR=3.6
ZALV Zalesovo Beam 68.21 339 P **P 16 13 13.5 -1.5**
ZALV ⇑*e* 16 41 30.3
ZALV Zalesovo Beam 68.21 339 P **P 16 13 13.5 -1.5**
ZALV pmax pmax
comp=Z,89nm,0.8s,mb5.8
ZALV pmax pmax
comp=Z,11nm,1.1s,mb4.8
AFI Afiamalu 68.60 102 P **P 16 13 18.3 0.0**
comp=Z,119nm,1.1s,mb5.8,baz=260,slow=3.3,SNR=11
AFI Afiamalu 68.60 102 *e*P **P 16 13 17.9 -0.3**
AFI comp=Z,152nm,1.1s,mb5.8 LR LR
comp=Z,10μm,20.0s,MS6.1
AFI Afiamalu 68.60 102 *e*P **P 16 13 17.9 -0.4**
AFI pmax pmax
comp=Z,152nm,1.1s,mb5.8
AFI MLR MLR
comp=Z,10μm,20.0s,MS6.1
HATD Hatta, Dubai 68.96 301 ⇑P **P 16 13 20.9 +0.6**
SNR=28
ABTO Aybut 69.14 292 P **P 16 13 22.7 +1.1**
SNR=5.6
NVS Novosibirsk 69.48 339 *i* P **P 16 13 20.2 -2.7**
NVS *i* 16 16 04.2
NVS *e*S S 16 22 25.3 -2.5
NVS pmax pmax
comp=N,776nm,1.8s
NVS pmax pmax
comp=Z,801nm,1.8s,mb6.3
NVS pmax pmax
comp=E,304nm,1.6s
NVS pmax pmax
comp=N,180nm,1.6s
NVS pmax pmax
comp=E,68nm,1.6s
NVS pmax pmax
comp=Z,130nm,1.6s,mb5.6
NVS smax
comp=N,156nm,2.5s
NVS smax
comp=E,301nm,3.5s
ABPO Ambohimpanom 69.52 253 *e*P **P 16 13 24.6 +0.6**
comp=E,236nm,1.4s,mb5.9
ABPO LR LR
comp=Z,8μm,20.0s,MS6.0
OPO Ambohidratompo 69.58 253 P **P 16 13 25.1 +0.8**
comp=Z,55nm,0.8s,mb5.5,baz=88,slow=4.0,SNR=43
MAW Mawson 69.62 200 *e*P **P 16 13 25.2 +1.6**
comp=Z,65nm,0.8s,mb5.6
MAW *e*S S 16 22 31.4 +2.2
MAW Mawson 69.62 200 P **P 16 13 25.2 +1.6**
comp=Z,88nm,1.1s,mb5.6,baz=51,slow=8.0,SNR=34
MAW LR LR 16 37 56.4
comp=Z,28μm,21.8s,MS6.5,baz=59,slow=31
MAW PKP2bc 16 41 30.5
comp=Z,16nm,1.1s,baz=136,slow=4.5,SNR=6.4
MAW Mawson 69.62 200 *e*P **P 16 13 25.1 +1.5**
comp=Z,44nm,1.1s,mb5.3
MAW LR LR
comp=Z,41μm,20.0s,MS6.7
MAW Mawson 69.62 200 P **P 16 13 25.2 +1.6**
MAW pmax pmax
comp=Z,88nm,1.1s
MAW MLR MLR
comp=Z,28μm,21.8s
MAW pmax pmax
comp=Z,16nm,1.2s
PEA0B Petropavlovsk- 69.75 24 *e*P **P 16 13 24.6 0.0**
PETK Petropavlovsk- 69.75 24 P **P 16 13 24.4 -0.2**
comp=Z,77nm,0.9s,mb5.6,baz=221,slow=3.0,SNR=30
PETK LR LR 16 44 28.6
comp=Z,5μm,19.5s,MS5.8,baz=332,slow=36
PET Petropavlovsk 70.08 25 *e*P **P 16 13 26.4 -0.2**
comp=Z,510nm,1.5s,mb6.2
PET LR LR
comp=Z,6μm,19.0s,MS5.8
PET Petropavlovsk 70.08 25 *e*P **P 16 13 25.6 -1.0**
PET *e* 16 13 47.8
PET *e* 16 16 04.1
PET *i* S S 16 22 34.5 -0.4
PET *e* 16 23 20.5
PET *e*SS SS 16 26 58.2 -7.1
PET pmax pmax
comp=Z,4μm,5.2s
PET pmax pmax
comp=Z,5μm,11.9s
PET pmax pmax
comp=Z,251nm,1.4s,mb6.0
PET pmax pmax
comp=Z,2μm,9.2s
PET pmax pmax
comp=Z,3μm,9.4s
PET smax
comp=E,12μm,9.9s
PET smax
comp=N,6μm,7.9s
PET smax
comp=E,19μm,19.0s
PET MLR MLR
comp=Z,6μm,16.0s,MS5.9
PET MLR MLR
comp=Z,6μm,19.0s
YAK Yakutsk 70.72 6 *e*P **P 16 13 29.2 -1.2**
comp=Z,554nm,0.9s,mb6.5
YAK LR LR
comp=Z,11μm,20.0s,MS6.1
YAK Yakutsk 70.72 6*c i*P **P 16 13 29.4 -1.0**
YAK *e* 16 13 46.7
YAK *e**PP pP 16 13 54.1 +13
YAK *e*PPP 16 17 53.0
YAK *i* S S 16 22 39.2 -2.9
YAK *e**SS sS 16 23 19.2 +19
YAK *e* 16 23 25.4
YAK *e*SS SS 16 27 08.3 -6.6
YAK pmax pmax
comp=Z,336nm,1.1s,mb6.2
YAK pmax pmax
comp=N,168nm,1.2s
YAK pmax pmax
comp=E,30nm,1.1s
YAK pmax pmax
comp=Z,645nm,3.1s
YAK pmax pmax
comp=N,239nm,2.0s
YAK pmax pmax
comp=E,62nm,1.2s
YAK smax
comp=N,3μm,5.0s
YAK smax
comp=E,3μm,5.3s
MIDW Midway 71.89 57 PFAKE 16 13 50.0 +12
MIDW LR LR
comp=Z,10μm,20.0s,MS6.1
ABKT Ailbek 72.52 314 P **P 16 13 42.7 +0.9**
comp=Z,684nm,1.1s,mb6.5,SNR=9.0
VAN Vannovskaya 72.54 314 *e*P **P 16 13 40.5 -1.4**
VAN *e*S S 16 22 59.9 -4.1
VNDA Vanda 72.72 171 P **P 16 13 43.6 +1.3**
comp=Z,22nm,0.5s,mb5.4,baz=315,slow=5.5,SNR=113
VNDA LR LR 16 43 51.8
comp=Z,39μm,20.5s,MS6.7,baz=333,slow=34
VNDA Vanda 72.72 171 *e*P **P 16 13 43.4 +1.1**
comp=Z,135nm,1.2s,mb5.8
VNDA LR LR
comp=Z,37μm,20.0s,MS6.7
VNDA Vanda 72.72 171 *e*P **P 16 13 43.4 +1.1**
VNDA pmax pmax
comp=Z,135nm,1.2s
VNDA MLR MLR
comp=Z,37μm,20.0s
VOSK Vostochnaya 72.95 332 P **P 16 13 42.4 -1.6**
VOSK pmax pmax
comp=Z,58nm,1.0s,mb5.5
BVA0 Borovoye Array 73.42 332 *i* P **P 16 13 45.5 -1.2**
BVA0 pmax pmax
comp=Z,28nm,1.0s,mb5.2
BVAR Borovoye Array 73.42 332 P **P 16 13 45.5 -1.3**
comp=Z,42nm,0.8s,mb5.4,baz=136,slow=6.4,SNR=104
BVAR PKP2bc 16 41 19.7
comp=Z,1.8nm,0.9s,baz=8.7,slow=2.0,SNR=5.2
BVAR LR LR 16 50 05.8
comp=Z,24μm,18.0s,MS6.5,baz=138,slow=39
BVAR Borovoye Array 73.42 332 P **P 16 13 45.5 -1.3**
BVAR ⇑*e* 16 41 19.7
BVAR LR LR 16 50 05.8
BVAR Borovoye Array 73.42 332 P **P 16 13 45.5 -1.2**
BVAR pmax pmax
comp=Z,42nm,0.8s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR MLR MLR
comp=Z,24μm,18.0s
BRVK Borovoye 73.49 332 P **P 16 13 46.1 -1.0**
comp=Z,1μm,1.5s,mb6.5,SNR=61
BRVK Borovoye 73.49 332 ⇓P **P 16 13 48.6 +1.5**
SNR=48
BRVK Borovoye 73.49 332 *e*P **P 16 13 45.7 -1.4**
comp=Z,1μm,1.8s,mb6.5
BRVK LR LR
comp=Z,15μm,22.0s,MS6.2
BRVK Borovoye 73.49 332 *e*P **P 16 13 45.7 -1.4**
BRVK pmax pmax
comp=Z,1μm,1.8s,mb6.5
BRVK MLR MLR
comp=Z,15μm,22.0s,MS6.2
SBA Scott Base 73.73 170 *e*P **P 16 13 50.2 +2.0**
comp=Z,786nm,1.8s,mb6.3
SBA LR LR
comp=Z,11μm,19.0s,MS6.2
SBA Scott Base 73.73 170 *e*P **P 16 13 50.2 +2.0**
SBA pmax pmax
comp=Z,786nm,1.8s,mb6.3
SBA MLR MLR
comp=Z,11μm,19.0s,MS6.2
SEY Seymchan 75.71 15 ⇑*e*P **P 16 13 58.9 -0.9**
LBOS 75.81 287 *e*P **P 16 13 57.5 -3.9**
AB31 Akbulak array 76.66 325 P **P 16 14 03.7 -1.8**
AB31 pmax pmax
comp=Z,217nm,1.3s,mb5.9
SMY Shemya 77.05 31 *e*P **P 16 14 06.9 -0.7**
comp=Z,583nm,1.3s,mb6.3
SMY LR LR
comp=Z,6μm,21.0s,MS5.9
SMY Shemya 77.05 31 *e*P **P 16 14 06.9 -0.7**
SMY pmax pmax
comp=Z,584nm,1.3s,mb6.3
SMY MLR MLR
comp=Z,6μm,21.0s,MS5.9
QRN Al-Qurain 77.16 302 *e*P **P 16 14 07.2 -1.6**
baz=302
QRN AMb AMb 16 14 30.2
comp=Z,325nm,1.4s,mb6.1,baz=302
KBD Kabd 77.48 302 *e*P **P 16 14 08.5 -2.1**
baz=302
KBD AMb AMb 16 14 31.3
comp=Z,128nm,1.4s,mb5.7,baz=302
RDF Al-Radifah 77.53 302 *e*P **P 16 14 09.1 -1.7**
baz=302
RDF AMb AMb 16 14 31.5
comp=Z,271nm,1.3s,mb6.0,baz=302
UMR Umm Al-Rimmam 77.57 303 *e*P **P 16 14 09.3 -1.7**
baz=303
UMR AMb AMb 16 14 32.4
comp=Z,179nm,1.4s,mb5.8,baz=303
NAY Al-Naaiem 77.88 302 *e*P **P 16 14 10.8 -1.9**
baz=302
NAY AMb AMb 16 14 26.7
comp=Z,59nm,1.5s,mb5.3,baz=302
MIB Mutribah 77.95 303 *e*P **P 16 14 11.4 -1.8**
baz=303
MIB AMb AMb 16 14 33.0
comp=Z,123nm,1.6s,mb5.6,baz=303
SYO Syowa Base 78.22 201 ⇓*i*P **P 16 14 13.6 -0.3**
SYO Syowa Base 78.22 201 ⇑*r*pP pP 16 14 26.7 +1.7
AKTK Aktyubinsk 78.32 325 P **P 16 14 13.3 -1.4**
AKTK LR LR 16 54 09.5
AKTO Aktyubinsk 78.32 325 P **P 16 14 13.3 -1.4**
comp=Z,71nm,1.0s,mb5.5,baz=111,slow=5.9,SNR=54
AKTO LR LR 16 54 09.5
comp=Z,15μm,18.1s,MS6.4,baz=24,slow=40
AKTO Aktyubinsk 78.32 325 P **P 16 14 13.4 -1.4**
AKTO pmax pmax
comp=Z,71nm,1.0s,mb5.5
AKTO MLR MLR
comp=Z,15μm,18.1s,MS6.4
RAR Rarotonga 79.50 110 P **P 16 14 22.0 +0.1**
comp=Z,58nm,1.0s,mb5.5,baz=256,slow=7.4,SNR=3.0
RAR LR LR 16 48 13.7
comp=Z,7μm,20.8s,MS6.0,baz=251,slow=35
RAR Rarotonga 79.50 110 *e*P **P 16 14 22.0 0.0**
comp=Z,141nm,1.1s,mb5.8
RAR LR LR
comp=Z,9μm,20.0s,MS6.1
RAR Rarotonga 79.50 110 P **P 16 14 22.0 0.0**
RAR pmax pmax
comp=Z,58nm,1.0s
RAR MLR MLR
comp=Z,7μm,20.8s
TIXI Tiksi 80.14 3 *e*P **P 16 14 22.1 -2.2**
comp=Z,1μm,1.9s,mb6.6
TIXI LR LR
comp=Z,11μm,19.0s,MS6.2
TIXI Tiksi 80.14 3 *i* P **P 16 14 22.3 -1.9**
TIXI pmax pmax
comp=Z,132nm,0.8s,mb5.9
SVE Sverdlovsk 80.20 332 ⇓*e*P **P 16 14 23.3 -1.6**
SVE *e* 16 17 21.4
SVE *e*S S 16 24 22.2 -5.1
SVE *e*SS SS 16 29 35.7 -3.2
SVE *e*SSS 16 33 01.9
SVE pmax pmax
comp=Z,181nm,1.4s,mb5.8
SVE MLR MLR
comp=Z,23μm,19.0s,MS6.5
ARU Arti 80.98 331 P **P 16 14 27.3 -1.8**
comp=Z,341nm,1.5s,mb6.1,SNR=17
ARU Arti 80.98 331 *e*P **P 16 14 26.1 -3.0**
comp=Z,148nm,1.4s,mb5.7
ARU LR LR
comp=Z,22μm,21.0s,MS6.5
ARU Arti 80.98 331*c i*P **P 16 14 26.2 -2.9**
ARU *e* 16 17 39.7
ARU *e*S S 16 24 33.6 -1.8
ARU *e*SS SS 16 29 51.4 +0.9
ARU pmax pmax
comp=Z,77nm,1.2s,mb5.5
ARU pmax pmax
comp=Z,1μm,6.8s
ARU smax
comp=N,1μm,8.5s
ARU MLR MLR
comp=Z,22μm,21.0s,MS6.5
QSPA South Pole Qui 81.64 180 P **P 16 14 33.5 +1.3**
comp=Z,113nm,1.1s,mb5.7,baz=326,slow=2.2,SNR=93
QSPA South Pole Qui 81.64 180 *e*P **P 16 14 32.6 +0.4**
comp=Z,1μm,2.0s,mb6.5
QSPA LR LR
comp=Z,28μm,20.0s,MS6.6
MAK Makhachkala 81.92 316*c i*P **P 16 14 31.2 -3.2**
MAK *i* 16 17 44.6
MAK *i* S S 16 24 45.9 +0.1
MAK *e*SSS 16 33 20.8
MAK pmax pmax
comp=Z,199nm,1.2s,mb5.9
DGRG David-gareji 82.95 314 P **P 16 14 42.0 +2.2**
HAKT HAKKARI 83.06 309 *i* P **P 16 14 42.7 +2.3**
MSL Mosul 83.20 308 *ex* x 16 14 40.0
MSL *ex* x 16 24 57.0
SOKR Solikamsk 83.35 333*d i*P **P 16 14 41.1 -0.3**
SOKR SS SS 16 30 19.6 -6.0
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,24μm,22.0s,MS6.5
BILL Bilibino 83.36 16 *e*P **P 16 14 40.6 -0.7**
comp=Z,418nm,2.0s,mb6.1
BILL LR LR
comp=Z,7μm,21.0s,MS6.0
BILL Bilibino 83.36 16*c i*P **P 16 14 40.0 -1.3**
BILL *e* 16 14 54.0
BILL *i* S S 16 25 01.4 +2.0
BILL pmax pmax
comp=Z,34nm,1.3s,mb5.2
BILL MLR MLR
comp=Z,4μm,16.0s,MS5.9
MTA Mtatsminda 83.44 314 P **P 16 14 41.0 -1.2**
TBLG Delisi 83.49 314 P **P 16 14 43.8 +1.3**
VANB Van 83.58 310 *e*P **P 16 14 35.9 -7.2**
DYDN Diyadin 83.62 311 *i* P **P 16 14 43.0 -0.3**
GOR Gori 84.01 314 *i* P **P 16 14 45.9 +0.7**
AGRB Hanur-Agry 84.15 311 *e*P **P 16 14 45.3 -0.7**
TUTA Tutak 84.24 311 *i* P **P 16 14 45.7 -0.7**
KARS Kars 84.36 312 *e*P **P 16 14 45.5 -1.5**
XMAS Kiritimati 84.58 87 PFAKE 16 15 00.0 +11
XMAS LR LR
comp=Z,8μm,20.0s,MS6.1
ONI Oni 84.65 314 P **P 16 14 41.8 -6.7**
BEST Besiri 85.01 309 *i* P **P 16 14 49.3 -1.0**
MARD Mardin 85.25 309 *i* P **P 16 14 49.4 -2.2**
DAGI Agillar 85.34 312 *i* P **P 16 14 51.1 -0.9**
BNGL BINGOL 85.37 310 *i* P **P 16 14 51.8 -0.3**
DDEM Demirkent 85.42 312 *i* P **P 16 14 43.8 -8.6**
EZM Erzurum 85.45 311 *e*P **P 16 14 51.8 -0.7**
DBAD Bademkaya 85.49 312 *i* P **P 16 14 51.9 -0.8**
KIV Kislovodsk 85.57 315 P **P 16 14 52.3 -0.7**
comp=Z,162nm,0.9s,mb6.3,SNR=6.0
KIV Kislovodsk 85.57 315 ⇑P **P 16 14 53.9 +0.9**
SNR=18
KIV Kislovodsk 85.57 315 *e*P **P 16 14 50.7 -2.3**
comp=Z,185nm,1.6s,mb6.1
KIV LR LR
comp=Z,12μm,19.0s,MS6.3
KIV Kislovodsk 85.57 315 *e*P **P 16 14 52.3 -0.7**
KIV *e* 16 18 07.5
KIV *e* 16 25 13.7
KIV *e*SS SS 16 31 01.9 +2.9
KIV *e*SSS 16 34 29.3
KIV pmax pmax
comp=Z,25nm,1.1s,mb5.4
KIV MLR MLR
comp=Z,10μm,19.0s,MS6.2
DBOC Borcka 85.59 313 *i* P **P 16 14 52.0 -1.2**
BCA Borcka 85.65 313 *e*P **P 16 14 46.6 -6.9**
DIYA Diyarbakir 85.90 309 *i* P **P 16 14 54.4 -0.4**
PZAR Pazar-Rize 86.11 312 *e*P **P 16 14 54.3 -1.5**
KOPT Kop Dagi 86.12 311 *i* P **P 16 14 55.2 -0.7**
EZC Erzincan 86.56 311 *e*P **P 16 14 59.2 +1.1**
PTK Pertek 86.68 310 *e*P **P 16 14 55.3 -3.4**
URFA Urfa 86.79 308 *e*P **P 16 14 58.9 -0.4**
ELZG Elazig 86.90 309 *i* P **P 16 14 59.2 -0.5**
KIP Kipapa 87.16 68 PFAKE 16 15 10.0 +8.7
KIP LR LR
comp=Z,7μm,19.0s,MS6.1
ASF Jabal al Asfar 87.22 303 P **P 16 15 01.6 +0.2**
comp=Z,35nm,1.1s,mb5.5,baz=7.7,slow=4.2,SNR=8.1
ASF LR LR 16 56 15.9
comp=Z,15μm,20.0s,MS6.4,baz=320,slow=37
ASF Jabal al Asfar 87.22 303 P **P 16 15 01.6 +0.2**
ASF pmax pmax
comp=Z,35nm,1.1s
ASF MLR MLR
comp=Z,15μm,20.0s
KEMA Kemaliye 87.45 310 *i* P **P 16 15 01.6 -0.8**
NVL N'lazarevskaya 87.54 199*c i*P **P 16 15 04.0 +1.8**
NVL *e**PP pP 16 15 15.5 +2.1
NVL *e*S SKSac 16 25 29.2 +2.1
NVL pmax pmax
comp=Z,243nm,1.8s,mb6.1
MBAR Mbarara 87.54 270 P **P 16 15 03.1 -0.3**
comp=Z,448nm,0.9s,mb6.7,SNR=47
MBAR Mbarara 87.54 270*c i*P **P 16 15 02.6 -0.8**
SOC Sochi 87.55 315*c i*P **P 16 14 59.8 -2.9**
SOC *e**SP sP 16 15 14.3 -3.7
SOC *e* 16 18 32.1
SOC *e*S SKSac 16 25 24.4 -3.6
SOC *e**SS sS 16 25 40.3 -20
SOC *e*SSS 16 34 51.5
SOC pmax pmax
comp=Z,17nm,0.8s,mb5.3
SOC pmax pmax
comp=Z,2μm,8.9s
MAIT Maitri 87.56 199 *e*P **P 16 15 03.3 +1.0**
MAIT *e*E pP 16 15 14.6 +1.0
MAIT *e*S SKSac 16 25 24.4 -2.8
AKCD Akcadag 87.67 309 *i* P **P 16 15 02.5 -0.9**
LSZ Lusaka 87.98 255 ⇑P **P 16 15 05.1 -0.3**
SNR=55
LSZ Lusaka 87.98 255 *e*P **P 16 15 05.3 -0.1**
comp=Z,230nm,1.1s,mb6.3
LSZ LR LR
comp=Z,12μm,19.0s,MS6.3
LSZ Lusaka 87.98 255 *e*P **P 16 15 05.3 -0.1**
LSZ pmax pmax
comp=Z,229nm,1.1s,mb6.3
LSZ MLR MLR
comp=Z,12μm,19.0s,MS6.3
GAZ Gaziantep 87.99 308 *e*P **P 16 15 03.5 -1.5**
VRHR Novokhopersk 88.20 322 *e*P **P 16 15 04.9 -0.7**
VRHR *e**SP sP 16 15 23.0 +2.1
VRHR *e* 16 18 38.2
VRHR *e* 16 25 27.9
VRHR *e*S S 16 25 44.7 -2.9
VRHR *e*SP 16 26 46.4
VRHR *e*SS SS 16 31 29.0 -8.2
VRHR pmax pmax
comp=Z,190nm,1.3s,mb6.2
VRHR pmax pmax

comp=N,40nm,1.0s
VRHR pmax pmax
comp=E,130nm,1.4s
VRHR pmax pmax
comp=Z,1µm,7.3s
VRHR pmax pmax
comp=N,650nm,8.6s
VRHR pmax pmax
comp=E,790nm,7.6s
VRHR smax
comp=N,3µm,15.5s
VRHR smax
comp=Z,6µm,22.4s
VRHR smax
comp=E,12µm,21.3s
VRHR MLR MLR
comp=Z,12µm,21.0s,MS6.3
VRHR MLR MLR
comp=N,6µm,16.0s
VRHR MLR MLR
comp=E,7µm,24.0s
KMRS Kahramanmaras 88.30 308 *e*P **P** **16 15 01.1 -5.3**
EIL Elat 88.39 300 P **P** **16 15 06.3 -0.8**
comp=E,45nm,1.0s,mb5.6,baz=111,slow=4.8,SNR=2.4
EIL LR LR 16 57 15.9
comp=E,34µm,18.5s,MS6.8,baz=106,slow=37
HWQ Hawqa 88.42 305 *e*P **P** **16 15 05.1 -2.0**
BHL Bhannes 88.58 304 *e*P **P** **16 15 06.3 -1.6**
MMAI Mount Meron Ar 88.62 303 P **P** **16 15 07.7 -0.4**
comp=E,47nm,1.0s,mb5.8,baz=91,slow=7.2,SNR=12
MMAI LR LR 17 00 07.0
comp=E,17µm,18.1s,MS6.5,baz=110,slow=39
SARI SarD1z-Kayseri 88.69 309 *e*P **P** **16 15 07.8 -0.4**
SVSK Karacayir 88.72 310 *e*P **P** **16 15 02.9 -5.4**
BOSA Boshof 88.74 241 P **P** **16 15 09.1 +0.3**
comp=E,38nm,0.9s,mb5.7,baz=100,slow=5.1,SNR=21
BOSA LR LR 16 49 04.9
comp=E,12µm,21.1s,MS6.3,baz=106,slow=32
BOSA Boshof 88.74 241 *e*P **P** **16 15 09.4 +0.6**
comp=E,129nm,1.4s,mb6.1
BOSA LR LR
comp=Z,12µm,21.0s,MS6.3
BOSA Boshof 88.74 241 P **P** **16 15 09.1 +0.3**
BOSA pmax pmax
comp=Z,38nm,0.9s,mb5.7
BOSA MLR MLR
comp=Z,12µm,21.1s,MS6.3
ANDN Andirin 88.75 308 *i* P **P** **16 15 02.7 -5.9**
PINB Pinarbasi 88.92 309 *i* P **P** **16 15 08.2 -1.2**
LBTB Lobatse 88.98 245 *e*P **P** **16 15 11.4 +1.4**
comp=Z,111nm,1.1s,mb6.1
LBTB LR LR
comp=Z,9µm,22.0s,MS6.2
LBTB Lobatse 88.98 245 *e*P **P** **16 15 11.4 +1.4**
LBTB pmax pmax
comp=Z,111nm,1.1s,mb6.1
LBTB MLR MLR
comp=Z,9µm,22.0s,MS6.2
CEYT Ceyhan 89.10 307 *e*P **P** **16 15 08.8 -1.4**
KOZT Kozan 89.13 308 *e*P **P** **16 15 08.2 -2.2**
POHA Pohakuloa 89.17 70 PFAKE 16 15 20.0 +9.0
POHA LR LR
comp=Z,8µm,20.0s,MS6.1
BNN Bunyan 89.38 309 *e*P **P** **16 15 10.1 -1.5**
ANN Anapa 89.42 315 *e*P **P** **16 15 07.7 -3.9**
ANN Anapa 89.42 315*d* *i*P **P** **16 15 08.2 -3.4**
ANN *i* *PP pP 16 15 19.4 -3.4
ANN *i* 16 18 43.7
ANN *i* S SKSac 16 25 35.2 -4.0
ANN *e*SS SS 16 31 48.0 -7.3
ANN *e*SSS 16 35 25.6
ANN pmax pmax
comp=Z,162nm,1.8s,mb6.0
ANN pmax pmax
comp=N,415nm,9.3s
ANN pmax pmax
comp=Z,2µm,9.3s
ANN pmax pmax
comp=E,338nm,4.6s
ANN MLR MLR
comp=Z,14µm,20.0s,MS6.4
PPT Papeete 89.49 108 *e*PP PP 16 18 33.6 -11
comp=Z,2µm,25.2s
PPT *e*S S 16 26 00.8 -0.3
comp=Z,17µm,27.2s
PPT *e*SS SS 16 31 52.8 -4.4
comp=Z,9µm,26.2s
PPT *e*LQ 16 40 05.0
comp=Z,50µm,42.2s
PPT *e*LR LR 16 43 41.6
comp=Z,17µm,26.5s
PPT Papeete 89.49 108 *e*P **P** **16 15 14.1 +1.6**
comp=Z,177nm,1.5s,mb6.2
PPT *e*PP PP 16 18 33.6 -11
PPT *e*S S 16 26 00.8 -0.3
PPT *e*SS SS 16 31 52.8 -4.4
PPT *e*LQ 16 40 05.0
PPT Papeete 89.49 108 *e*P **P** **16 15 14.1 +1.6**
PPT *e*S S 16 26 00.8 -0.3
PPT *e*SS SS 16 31 52.8 -4.4
PPT pmax pmax
comp=Z,177nm,1.5s
VORD Divnogorie 89.59 322 *e*P **P** **16 15 10.4 -1.8**
VORD *e**SP sP 16 15 29.2 +1.7
VORD *e* 16 25 36.3
VORD *e*S S 16 25 53.0 -7.7
VORD pmax pmax
comp=Z,40nm,1.0s,mb5.7
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,30nm,0.9s
VORD smax
comp=E,9µm,21.1s
VORD smax
comp=Z,4µm,24.6s
VORD smax
comp=N,3µm,17.2s
VORD MLR MLR
comp=Z,5µm,22.0s,MS5.9
VORD MLR MLR
comp=N,5µm,20.0s,MS6.2
VORD MLR MLR
comp=E,6µm,20.0s,MS6.2
KVT Kavak 89.66 311 *e*P **P** **16 15 09.0 -3.7**
KARA Karaisali 89.69 308 *e*P **P** **16 15 05.0 -8.0**
TIAR Tiarei 89.71 108 *e*P **P** **16 15 14.9 +1.4**
comp=E,3µm,1.6s,mb7.3
VSR Storozhevoye 89.73 322 *e*P **P** **16 15 11.0 -1.8**
VSR *e**SP sP 16 15 29.8 +1.7
VSR *e* 16 18 47.2
VSR *e* 16 25 38.1
VSR *e*S S 16 25 55.4 -6.5
VSR *e*SP SP 16 26 59.0 -8.2
VSR *e*SS SS 16 31 56.6 -2.8
VSR pmax pmax
comp=N,8.0nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s,mb5.4
VSR pmax pmax
comp=E,30nm,1.4s
VSR pmax pmax
comp=Z,370nm,6.4s
VSR pmax pmax
comp=N,120nm,5.0s
VSR pmax pmax
comp=E,300nm,6.4s
VSR smax
comp=E,5µm,21.5s
VSR smax
comp=Z,970nm,18.7s
VSR smax
comp=N,2µm,17.2s
VOR Voronezh 89.83 322 P **P** **16 15 11.0 -2.3**
VOR pmax pmax
comp=Z,480nm,2.0s,mb6.5
MERS Mersin 90.04 307 *e*P **P** **16 15 11.7 -2.9**
EREN Erenkoy 90.08 306 *e*P **P** **16 15 14.3 -0.6**
AVNT Avonos 90.13 309 *i* P **P** **16 15 13.0 -2.0**
DIKM Dikmen 90.35 312 *e*P **P** **16 15 11.0 -5.0**
LFK Lefkose 90.55 305 *e*P **P** **16 15 13.1 -4.0**
IKL Isikli 90.59 306 *e*P **P** **16 15 12.6 -4.6**
CDAG Cicekdag 90.65 310 *i* P **P** **16 15 16.6 -0.8**
MEH Mehetia 90.86 108 *e*P **P** **16 15 20.9 +2.0**
comp=Z,3µm,1.2s
LEF Lefka 91.05 305 *e*P **P** **16 15 14.2 -5.2**

BRTR Keskin Array B 91.22 310 P **P** **16 15 17.9 -2.1**
comp=Z,4.6nm,0.8s,baz=130,slow=4.7,SNR=25
BRTR PP PP 16 19 07.4 +10
comp=Z,21nm,1.2s,baz=112,slow=5.5,SNR=5.1
BRTR PKKPbc PKKPbc 16 32 45.3 +1.5
comp=Z,0.9nm,0.9s,baz=27,slow=0.3,SNR=3.9
BRTR PKPPKP 16 40 50.5
comp=Z,0.5nm,0.7s,baz=332,slow=4.9,SNR=3.6
BRTR LR LR 17 05 22.6
comp=Z,9µm,19.2s,MS6.2,baz=104,slow=42
BRTR Keskin Array B 91.22 310 P **P** **16 15 18.0 -2.1**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR pmax pmax
comp=Z,21nm,1.2s
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR MLR MLR
comp=Z,9µm,19.2s
BR131 Keskin Array S 91.22 310 PFAKE 16 15 30.0 +10
BR131 LR LR
comp=Z,7µm,19.0s,MS6.1
BZK Bozkurt 91.33 312 *e*P **P** **16 15 17.4 -3.1**
CANT Cankiri 91.39 311 *e*P **P** **16 15 13.4 -7.4**
ILGA Ilgaz 91.39 311 *i* P **P** **16 15 18.7 -2.1**
SNAA Sanae 91.44 196 *e*P **P** **16 15 18.0 -2.5**
SNAA *e* 16 15 21.4
SNAA *e* pP 16 15 28.6 -3.2
SNAA *e* pP 16 15 31.2 -0.6
SNAA *e* 16 15 36.3
SNAA Sanae 91.44 196 *e*P **P** **16 15 18.0 -2.5**
comp=Z,198nm,1.4s,mb6.2
SNAA Sanae 91.44 196 *e*P **P** **16 15 18.0 -2.5**
SNAA pmax pmax
comp=Z,198nm,1.4s
PMOR Pomariorio Ree 91.47 105 *e*P **P** **16 15 24.3 +2.5**
comp=Z,544nm,1.2s,mb6.8
ELDT Eldivan 91.51 311 *i* P **P** **16 15 21.3 -0.1**
MOS Moscow 91.64 326 *e*P **P** **16 15 17.7 -3.9**
MOS Moscow 91.64 326 *e*P **P** **16 15 18.0 -3.6**
MOS *e* pP 16 15 28.5 -4.4
MOS *e* 16 18 56.3
MOS *e* 16 25 47.3
MOS *e*S S 16 26 18.0 -1.3
MOS *e*PS PS 16 27 32.7 -0.4
MOS *e*SS SS 16 32 24.9 -1.9
MOS *e*SSS 16 36 05.5
MOS pmax pmax
comp=Z,68nm,1.2s,mb5.8
MOS MLR MLR
comp=E,23µm,22.0s
MOS MLR MLR
comp=Z,21µm,19.0s,MS6.6
HDMB Hadim 91.67 307 *e*P **P** **16 15 17.2 -4.9**
VAH Vaihoa 91.69 106 *e*P **P** **16 15 25.1 +2.3**
comp=Z,410nm,1.3s,mb6.6
SDPT Sand Point 91.83 34 *e*P **P** **16 15 21.2 -1.3**
comp=Z,114nm,1.0s,mb6.2
KLMR Klimovskoe 91.83 331 *e*P **P** **16 15 17.9 -4.5**
KLMR pmax pmax
comp=Z,83nm,1.3s,mb5.9
SUR Sutherland 91.88 237 *e*P **P** **16 15 25.9 +2.5**
comp=Z,66nm,1.2s,mb5.8
SUR LR LR
comp=Z,14µm,19.0s,MS6.4
ANTO Ankara 91.89 310 *e*P **P** **16 15 16.6 -6.6**
ANTO Ankara 91.89 310 PFAKE 16 15 30.0 +6.8
ANTO LR LR
comp=Z,9µm,22.0s,MS6.2
KONT Konya--Tatoy 91.92 308 *e*P **P** **16 15 18.2 -5.2**
LADK Ladik-KONYA 91.95 308 *e*P **P** **16 15 17.9 -5.7**
OBN Obninsk 92.10 325 *e*P **P** **16 15 22.0 -1.8**
comp=Z,232nm,1.5s,mb6.3
OBN LR LR
comp=Z,13µm,19.0s,MS6.4
OBN Obninsk 92.10 325 *e*P **P** **16 15 21.9 -1.9**
OBN *i* pP 16 15 32.5 -2.5
OBN *i* 16 15 40.5
OBN *i*S SKSac 16 25 52.5 -1.6
OBN *i*SS SS 16 32 31.0 -2.4
OBN pmax pmax
comp=Z,124nm,1.8s,mb5.9
KDHN Kadinhani 92.20 308 *i* P **P** **16 15 19.6 -5.0**
KIZT Kizilcal 92.43 309 *e*P **P** **16 15 21.0 -4.7**
VNA2 Neumayer--Watz 93.08 196 *e*P **P** **16 15 29.7 +1.6**
baz=123,slow=4.0
VNA2 *e* 16 15 33.1
VNA2 *e* pP 16 15 40.3 +1.0
VNA2 *e* pP 16 15 42.8 +3.5
VNA2 *e* 16 15 48.1
BOLV Bolvadin 93.13 308 *i* P **P** **16 15 27.0 -2.0**
ISP Isparta 93.35 308 *e*P **P** **16 15 24.0 -5.9**
ISP Isparta 93.35 308 PFAKE 16 15 40.0 +10
ISP LR LR
comp=Z,10µm,20.0s,MS6.3
VNA3 Neumayer Olymp 93.47 195 *e*P **P** **16 15 31.3 +1.4**
VNA3 *e* 16 15 34.5
VNA3 *e* pP 16 15 41.8 +0.7
VNA3 *e* pP 16 15 44.7 +3.5
VNA3 *e* 16 15 49.8
VNA1 Neumayer--Stat 93.47 196 *e*P **P** **16 15 31.7 +1.8**
VNA1 *e* 16 15 34.8
VNA1 *e* pP 16 15 42.3 +1.1
VNA1 *e* pP 16 15 45.0 +3.8
VNA1 *e* 16 15 50.0
BORA Eskisehir 93.67 310 *i* P **P** **16 15 27.9 -3.5**
AKAS Kas 93.85 306 *i* P **P** **16 15 27.7 -4.7**
GOLH Golhisar 94.02 307 *i* P **P** **16 15 26.4 -6.6**
CAVI Cavuskoy 94.18 310 *e*P **P** **16 15 26.6 -7.2**
KHAL Karahalli 94.22 308 *i* P **P** **16 15 24.3 -10**
GDZ Gediz 94.31 309 *i* P **P** **16 15 30.8 -3.6**
SILT Sile 94.45 311 *e*P **P** **16 15 32.1 -2.9**
GEMT Gemlik 94.70 310 *e*P **P** **16 15 30.2 -5.9**
TURN Turunc 94.73 306 *i* P **P** **16 15 33.7 -2.6**
DEMI Demirci 94.90 309 *i* P **P** **16 15 34.0 -3.1**
LVZ Lovozero 95.30 338 PFAKE 16 15 50.0 +12
LVZ LR LR
comp=Z,19µm,19.0s,MS6.6
DAT Datca 95.53 306 *e*P **P** **16 15 36.4 -3.6**
AKHS Akhisar 95.58 308 *i* P **P** **16 15 38.0 -2.1**
KIS Kishinev 95.71 317 *e*P **P** **16 15 39.0 -1.6**
KIS *e* 16 19 36.0
KIS *e* 16 26 11.0
KIS *e*S S 16 26 51.0 -4.5
KIS *e*PS PS 16 28 12.0 -6.4
KIS *e*PPS 16 28 48.0
KIS pmax pmax
comp=Z,2µm,12.0s
KIS Kishinev 95.71 317 *e*P **P** **16 15 39.0 -1.6**
comp=Z,2µm,12.0s
KIS Kishinev 95.71 317 *e*PP PP 16 19 36.0 +3.5
KIS *e*SKS 16 26 11.0
KIS *e*SKKS SKKSac 16 26 25.0 -13
KIS *e*S S 16 26 51.0 -4.5
KIS Kishinev 95.71 317 *e*PS PS 16 28 12.0 -6.4
TIRR Tirgusor 95.73 314 ⇑P **P** **16 15 38.9 -1.8**
TIRR Tirgusor 95.73 314 ⇑*i*P **P** **16 15 38.9 -1.8**
AKASG Malin Array Be 95.83 320 P **P** **16 15 38.2 -2.8**
comp=Z,1.4nm,0.5s,baz=79,slow=4.7,SNR=17
AKASG PP PP 16 19 41.2 +7.9
comp=Z,11nm,1.0s,baz=75,slow=5.7,SNR=4.6
AKASG PKKPbc PKKPbc 16 32 30.8 -1.4
comp=Z,1.3nm,0.5s,baz=281,slow=3.2,SNR=6.8
AKASG PKPPKP 16 40 43.5
comp=Z,0.2nm,0.3s,baz=267,slow=2.9,SNR=4.5
AKASG LR LR 17 04 51.4
comp=Z,14µm,21.4s,MS6.4,baz=100,slow=39
AKASG Malin Array Be 95.83 320 P **P** **16 15 38.2 -2.8**
AKASG PP PP 16 19 41.2 +7.9
AKASG PKKPbc PKKPbc 16 32 30.8 -1.4
AKASG P'P' 16 40 43.5
AKASG LR LR 17 04 51.4
AKASG Malin Array Be 95.83 320 P **P** **16 15 38.2 -2.8**
AKASG 16 19 41.2
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,11nm,1.0s
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG MLR MLR
comp=Z,14µm,21.4s

KIEV Kiev 95.84 320 P **P** **16 15 39.0 -2.0**
comp=Z,53nm,1.6s,mb5.7
KIEV LR LR
comp=Z,13µm,21.0s,MS6.4
KIEV Kiev 95.84 320 P **P** **16 15 39.0 -2.1**
KIEV pmax pmax
comp=Z,53nm,1.6s,mb5.7
KIEV MLR MLR
comp=Z,13µm,21.0s,MS6.4
GCAM G?zelcami? 95.91 307 *i* P **P** **16 15 39.8 -2.0**
JOF Joensuu 96.02 333 *e*p **P** **16 15 34.9 -6.7**
PUL Pulkovo 96.15 329 *i* P **P** **16 15 42.4 +0.1**
KDAK Kodiak Island 96.51 33 LR LR 16 59 15.7
comp=Z,6µm,21.3s,MS6.0,baz=344,slow=36
KDAK Kodiak Island 96.51 33 PFAKE 16 15 50.0 +6.1
KDAK LR LR
comp=Z,6µm,20.0s,MS6.0
BOZC Bozcaada 97.03 309 *i* P **P** **16 15 42.5 -4.2**
VRI Vrincioaia 97.05 315 ⇑P **P** **16 15 46.2 -0.5**
VRI Vrincioaia 97.05 315 ⇑*i*P **P** **16 15 46.2 -0.4**
PLOR Plostina 97.10 315 ⇓*i*P **P** **16 15 45.5 -1.4**
CHUM Lake Minchumin 97.15 26 *e*P **P** **16 15 45.7 -1.0**
comp=Z,59nm,1.2s,mb5.9
TSUM Tsumeb 97.31 249 *e*P **P** **16 15 48.4 -0.1**
comp=Z,50nm,1.3s,mb5.8
TSUM LR LR
comp=Z,9µm,20.0s,MS6.2
MLR Muntele Rosu 97.56 315 P **P** **16 15 47.0 -2.0**
comp=Z,17nm,1.2s,mb5.4,baz=52,slow=5.5,SNR=8.0
MLR PP PP 16 19 50.9 +4.0
comp=Z,21nm,1.1s,baz=79,slow=3.2,SNR=3.7
MLR Muntele Rosu 97.56 315 ⇑P **P** **16 15 47.5 -1.5**
MLR Muntele Rosu 97.56 315 P **P** **16 15 47.0 -2.0**
MLR 16 19 50.9
MLR pmax pmax
comp=Z,17nm,1.2s
MLR pmax pmax
comp=Z,21nm,1.1s
MLR Muntele Rosu 97.56 315 ⇑*i*P **P** **16 15 47.5 -1.5**
IDI Anoyia 97.56 305 P **P** **16 15 47.3 -1.9**
comp=Z,8.5nm,0.8s,mb5.3,baz=75,slow=6.6,SNR=11
IDI PKKPbc PKKPbc 16 32 26.7 -0.1
comp=Z,6.4nm,0.8s,baz=232,slow=3.7,SNR=7.8
IDI PKPPKP 16 40 43.5
comp=Z,4.5nm,1.2s,baz=274,slow=5.5,SNR=4.3
IDI LR LR 17 04 51.4
comp=Z,4µm,21.3s,MS5.9,baz=86,slow=38
KTH Kantishna Hill 97.75 27 *e*P **P** **16 15 49.5 +0.2**
comp=Z,36nm,1.2s,mb5.8
VSU Vasula 97.89 328 *i* P **P** **16 15 50.3 +0.1**
VSU pmax pmax
comp=Z,58nm,1.1s,mb6.0
BURAR Bucovina Array 98.20 317 ⇑P **P** **16 15 50.4 -1.4**
BURAR Bucovina Array 98.20 317 ⇑*i*P **P** **16 15 50.4 -1.4**
COLD Coldfoot 98.21 23 *e*P **P** **16 15 51.4 0.0**
comp=Z,37nm,1.0s,mb5.9
BUR08 Bucovina Ar. S 98.22 317 *e*P **P** **16 15 50.1 -1.7**
KEV Kevo 98.24 339 PFAKE 16 16 00.0 +8.5
KEV LR LR
comp=Z,12µm,20.0s,MS6.4
KAF Kangasniemi 98.27 332 *e*p **P** **16 15 50.4 -1.4**
comp=Z,7.4nm,1.0s,mb5.2
PMR Palmer 98.49 29 PFAKE 16 16 00.0 +7.2
PMR LR LR
comp=Z,4µm,20.0s,MS5.9
MCK McKinley 98.64 27 *e*P **P** **16 15 50.9 -2.5**
comp=Z,66nm,1.3s,mb6.0
MCK McKinley 98.64 27 P **P** **16 15 52.3 -1.1**
MCK pmax pmax
comp=Z,66nm,1.2s,mb6.0
ARCES ARCESS Array B 98.76 339 P **P** **16 15 51.6 -2.2**
comp=Z,13nm,1.1s,mb5.4,baz=79,slow=4.7,SNR=6.1
ARCES PKKPbc PKKPbc 16 32 24.2 -0.5
comp=Z,4.1nm,0.9s,baz=277,slow=4.3,SNR=6.9
ARCES LR LR 17 07 09.0
comp=Z,21µm,21.4s,MS6.6,baz=114,slow=40
ARCES ARCESS Array B 98.76 339 P **P** **16 15 51.6 -2.2**
ARCES pmax pmax
comp=Z,13nm,1.1s
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES MLR MLR
comp=Z,21µm,21.4s
LVV L'vov 99.09 319 *e*P **P** **16 15 53.6 -2.1**
LVV *e*PPP 16 22 08.2
LVV *e* 16 26 23.2
LVV *e*PS PS 16 28 52.4 -2.7
LVV *e*SS SS 16 34 07.2 -5.7
LVV *e*SSS 16 38 05.2
LVV MLR MLR
comp=Z,4µm,22.0s,MS5.8
LVV MLR MLR
comp=N,3µm,21.0s,MS5.9
LVV MLR MLR
comp=E,3µm,22.0s,MS5.9
COLA College 99.12 26 P **P** **16 15 55.4 -0.1**
comp=E,164nm,2.4s,mb6.1
COLA LR LR
comp=Z,4µm,20.0s,MS6.0
COLA College 99.12 26 P **P** **16 15 55.4 -0.1**
COLA pmax pmax
comp=Z,164nm,2.4s,mb6.1
COLA MLR MLR
comp=Z,4µm,20.0s,MS6.0
KTK1 Kautokeino 99.57 339 *i* SKSac 16 26 32.7 -0.2
SUW Suwalki 99.73 323 *e*P Pdif 16 15 58.0 -0.5
SUW *e*PP PP 16 20 10.8 +7.7
SUW LMZ 17 04 05.9
comp=Z,12µm,23.2s
SUW Suwalki 99.73 323 *e*P Pdif 16 15 58.0 -0.5
SUW *e*PP PP 16 20 10.8 +7.7
VAY Valandovo 99.78 310 *e*P Pdif 16 15 57.3 -1.4
VAY *e*PP PP 16 19 58.8 -5.1
DRGR 99.88 316 ⇓P Pdif 16 15 59.4 +0.3
DRGR 99.88 316 ⇓*i*P Pdif 16 15 59.4 +0.2
KWP Kalwaria 99.95 319 *e*P Pdif 16 15 58.6 -0.9
KWP *e*PP PP 16 20 05.4 +0.5
KWP LMZ 17 03 52.7
comp=Z,12µm,24.4s
TAOE Nuku Hiva Isla 99.97 101 *e*PP PP 16 19 56.4 -10
comp=Z,5µm,25.1s
TAOE *e*Sdif Sdif 16 27 30.2 -1.3
comp=Z,38µm,25.3s
TAOE Nuku Hiva Isla 99.97 101 *e*PS PS 16 29 08.0 +2.2
comp=Z,13µm,27.3s
TAOE *e*SS SS 16 34 26.6 -0.2
comp=Z,14µm,26.8s
TAOE Nuku Hiva Isla 99.97 101 *e*LR LR 16 48 51.2
comp=Z,41µm,23.2s
UZH Uzhgorod 100.20 318 ⇓*i*P Pdif 16 16 01.7 +1.1
UZH *i* 16 20 13.3
UZH *e* 16 22 10.0
UZH *i* 16 26 30.0
UZH *e*S Sdif 16 27 31.5 -1.9
UZH *i* 16 29 00.0
UZH *i* 16 34 20.0
UZH MLR MLR
comp=N,4µm,18.0s,MS6.3
UZH MLR MLR
comp=E,8µm,18.0s,MS6.3
UZH MLR MLR
comp=Z,4µm,18.0s,MS6.0
KOLS Kolonicke sedl 100.22 318 *e*P Pdif 16 16 00.3 -0.4
KOLS *e* 16 20 14.3
KOLS *e*SS SS 16 34 28.4 -0.2
KOLS MLR MLR
comp=Z,5µm,25.4s,MS5.9
KOLS Kolonicke sedl 100.22 318 PDIF Pdif 16 16 00.3 -0.4
KOLS *e*PP PP 16 20 14.3 +7.3
KOLS *e*SS SS 16 34 28.4 -0.2
BJO Bjornoya 100.44 344 *e*PP PP 16 20 07.6 -0.3
BJO *e*SKS 16 26 35.6
BJO *e*SS SS 16 34 30.3 -0.2
BJO AMS AMS 17 12 24.2
comp=Z,11µm,18.2s,MS6.4
BZS Buzias 100.61 315 ⇑P Pdif 16 16 00.3 -2.1
BZS Buzias 100.61 315 ⇑*i*P Pdif 16 16 00.3 -2.1
SKO Skopje 100.65 311 *e*P Pdif 16 16 00.7 -1.9
CRVS Cervenica-Dubn 100.75 318 *e*P Pdif 16 16 06.1 +3.0
CRVS *e* 16 20 18.3
CRVS *e*SS SS 16 34 35.8 -0.3
CRVS Cervenica-Dubn 100.75 318 PDIF Pdif 16 16 06.1 +3.0
CRVS *e*PP PP 16 20 18.3 +7.3
CRVS *e* 16 32 42.7
CRVS *e*SS SS 16 34 35.8 -0.3

STHS Stebnicka Huta 100.90 319 eP Pdif 16 16 02.8 -0.9
STHS Stebnicka Huta 100.90 319 PDIF Pdif 16 16 02.8 -0.9
TRO Tromso 101.06 339 eSKS SKSac 16 26 39.3 -0.9
TRO e 16 30 10.2
TRO eSS SS 16 34 38.8 -0.4
TRO AMS AMS 17 08 19.1
comp=Z,20µm,20.0s,MS6.6
OHR Ohrid 101.11 310 eP Pdif 16 16 04.4 -0.2
OHR ePP PP 16 20 11.2 -2.8
KBS Kingsbay 101.28 349 eP Pdif 16 16 04.7 -0.7
KBS LR LR
comp=Z,10µm,19.0s,MS6.3
KBS Kingsbay 101.28 349 ePP PP 16 20 13.1 -1.1
KBS eSKS 16 26 38.6
KBS eSS SS 16 34 44.2 +2.3
KBS AMS AMS 17 13 23.7
comp=Z,14µm,16.2s,MS6.5
PSZ Piszkesteto 101.80 317 PFAKE 16 16 20.0 +12
PSZ LR LR
comp=Z,7µm,19.0s,MS6.2
PSZ Piszkesteto 101.80 317 eP PP 16 20 33.1 +14
TIR Tirane 101.81 310 PFAKE 16 16 20.0 +12
TIR LR LR
comp=Z,12µm,20.0s,MS6.4
OJC Ojcow 101.83 320 ePdiff Pdif 16 16 09.1 +1.3
OJC ePP PP 16 20 21.4 +2.3
OJC ePKiKP PKiKP 16 20 30.8 -0.1
OJC eSKSac SKSac 16 26 47.6 +2.9
OJC ePS PS 16 29 24.5 +0.2
OJC eSS SS 16 34 49.6 -1.3
OJC L 17 08 18.7
comp=Z,16nm,20.8s
OJC Ojcow 101.83 320 ePdif Pdif 16 16 09.1 +1.3
OJC ePP PP 16 20 21.4 +2.3
OJC Ojcow 101.83 320 eP Pdif 16 16 09.1 +1.3
OJC e 16 20 21.4
OJC e 16 26 47.6
OJC ePS PS 16 29 24.5 +0.2
OJC eSS SS 16 34 49.6 -1.3
OJC MLR MLR
comp=Z,16µm,20.8s,MS6.5
RKT Rikitea 101.85 116 eP PP 16 20 17.4 -2.4
comp=Z,2µm,25.8s
RKT eSKSac SKSac 16 26 47.5 +1.5
comp=Z,3µm,26.2s
RKT Rikitea 101.85 116 ePS PS 16 29 24.7 -0.7
comp=Z,6µm,28.0s
RKT eSS SS 16 34 58.6 +6.4
comp=Z,6µm,29.5s
RKT Rikitea 101.85 116 eLQ 16 45 18.6
comp=Z,15µm,36.5s
RKT eLR LR 16 49 36.9
comp=Z,15µm,24.0s
EGAK Eagle 101.99 26 ePdif Pdif 16 16 07.6 -0.9
comp=Z,28nm,1.3s
EGAK LR LR
comp=Z,6µm,19.0s,MS6.1
BUD Budapest 102.39 317⇓ eP PP 16 20 30.7 +7.3
VYHS Vyhne 102.50 318 eP Pdif 16 16 09.9 -0.9
VYHS e 16 20 26.8
VYHS eSS SS 16 34 54.1 -6.1
VYHS Vyhne 102.50 318 PDIF Pdif 16 16 09.9 -0.9
VYHS ePP PP 16 20 26.8 +2.7
VYHS e 16 32 01.2
VYHS e 16 32 34.2
VYHS eSS SS 16 34 54.1 -6.1
OKC Ostrava-Krasne 102.90 319 ePP PP 16 20 32.1 +5.0
OKC eSKS 16 26 53.9
OKC ePS PS 16 29 34.6 -1.1
OKC ePKKP PKKPbc 16 32 11.9 -0.2
OKC ex x 16 32 32.9
OKC ex x 16 34 47.6
OKC AMS AMS 17 09 10.0
comp=Z,10µm,19.5s
MODS Modra-Piesok 103.54 318 eP Pdif 16 16 13.5 -2.0
MODS e 16 20 29.4
MODS eSS SS 16 35 09.5 -5.1
MODS Modra-Piesok 103.54 318 PDIF Pdif 16 16 13.5 -2.0
MODS ePP PP 16 20 29.4 -2.5
MODS e 16 32 10.4
MODS e 16 32 28.0
MODS eSS SS 16 35 09.5 -5.1
ZST Bratislava 103.66 318 ePP PP 16 20 37.6 +4.7
ZST e 16 32 08.2
ZST e 16 32 27.3
ZST eSS SS 16 35 16.1 -0.2
VRAC Vranov 103.94 319 PP PP 16 20 35.1 +0.2
comp=Z,4.2nm,0.6s,baz=74,slow=7.4,SNR=3.3
KSP Ksiaz 104.03 320 ePdif Pdif 16 16 18.0 +0.3
KSP eSKS 16 26 55.0
KSP eSP SP 16 29 42.5 -0.1
KSP eSS SS 16 35 14.0 -7.2
KSP LR LR
comp=Z,29µm,20.3s,MS6.8
DPC Dobruska-Polom 104.05 320 ePP PP 16 20 38.4 +2.7
DPC eSKS 16 26 56.3
DPC ePS PS 16 29 43.1 -4.6
DPC ex x 16 32 27.8
DPC eSS SS 16 35 19.0 -2.5
DPC AMS AMS 17 09 20.0
comp=Z,13µm,21.2s
SOP Sopron 104.06 317⇑ ePP PP 16 20 39.0 +3.2
TIP Timpagrande 104.19 308 PFAKE 16 16 30.0 +12
TIP LR LR
comp=Z,6µm,20.0s,MS6.1
UPC Upice 104.24 320 ePP PP 16 20 39.7 +2.6
UPC ex x 16 32 27.0
INK Inuvik 104.39 21 ePdif Pdif 16 16 18.5 -0.7
comp=Z,637nm,1.2s
INK Inuvik 104.39 21 eP Pdif 16 16 18.5 -0.7
INK pmax pmax
comp=Z,637nm,1.2s
BSD Bornholm Skovb 104.48 325⇓ iP PKiKP 16 20 43.2 +7.6
comp=Z,44nm,1.0s
BSD i 16 26 55.6
BSD
comp=Z,13µm,20.0s
HFS Hagfors 104.48 330 Pdiff Pdif 16 16 16.6 -3.0
comp=Z,7.3nm,0.9s,baz=149,slow=3.1,SNR=3.9
HFS PKKPbc PKKPbc 16 32 05.5 -2.2
comp=Z,5.3nm,0.9s,baz=318,slow=2.0,SNR=5.1
HFS Hagfors 104.48 330 P Pdif 16 16 16.6 -3.1
HFS pmax pmax
comp=Z,7.0nm,0.9s
HFS pmax pmax
comp=Z,5.0nm,0.9s
CONA Conrad Observa 104.51 317⇑ epPKiKP PP 16 20 46.3 +7.1
comp=Z,34nm,1.2s
CONA Conrad Observa 104.51 317⇑ iPKKPbc PKKPbc 16 32 07.4 +0.2
comp=Z,10nm,1.3s
CSNA Conrad Observa 104.51 317⇑ epPKiKP PP 16 20 44.3 +5.1
comp=Z,31nm,1.2s
CSNA Conrad Observa 104.51 317⇑ iPKKPbc PKKPbc 16 32 07.4 +0.2
comp=Z,10nm,1.3s
NSS Namsos 104.52 335 ePP PP 16 20 37.3 -1.4
NSS AMS AMS 17 08 35.7
comp=Z,17µm,18.4s,MS6.6
TREC Trest 104.66 319 ePP PP 16 20 44.5 +4.2
TREC eSKS 16 26 59.4
TREC eSP SP 16 29 44.3 -4.9
TREC ePKKP PKKPbc 16 32 07.3 +0.5
TREC ex x 16 32 25.1
TREC AMS AMS 17 10 00.0
comp=Z,13µm,21.1s
ARSA Arzberg 104.78 317⇓ ipPKiKP PP 16 20 43.8 +2.5
comp=Z,10nm,1.6s
ARSA Arzberg 104.78 317⇑ iPKKPbc PKKPbc 16 32 05.4 -1.0
ARSA ⇑iPKKPab PKKPab 16 32 24.3 +1.5
comp=Z,20nm,1.4s
CEL Celeste 104.88 307 PFAKE 16 16 30.0 +8.6
CEL LR LR
comp=Z,7µm,22.0s,MS6.2
CUC Castrocucco 104.90 309 PFAKE 16 16 30.0 +8.5
CUC LR LR
comp=Z,11µm,21.0s,MS6.4
BOJS Bojanci 105.08 315 ePP PP 16 20 39.6 -3.9
PERS Pernice 105.10 316 ePP PP 16 20 38.1 -5.5
PERS eSKSac SKSac 16 26 57.1 -2.9
PERS e 16 44 56.6
PVCC Panska Ves 105.15 320 ePP PP 16 20 48.8 +5.0
PVCC eSKS SKSac 16 27 01.4 +1.3
PVCC ePKKP PKKPab 16 32 23.0 +2.0
PVCC ex x 16 34 59.8
PVCC AMS AMS 17 10 50.0
comp=Z,10µm,20.9s
SOKA Soboth 105.16 316⇑ epPKiKP PP 16 20 46.0 +2.0
comp=Z,54nm,1.3s
PRU Pruhonice 105.22 319 ePP PP 16 20 49.3 +4.9
PRU eSKS SKSac 16 27 00.7 +0.3
PRU ePS PS 16 29 55.3 -4.7
PRU ePKKP PKKPab 16 32 21.8 +1.0
PRU eSS SS 16 35 39.8 +2.3
PRU AMS AMS 17 11 00.0
comp=Z,10µm,18.0s
OBKA Obir 105.50 316⇑ ePKiKP PKiKP 16 20 38.7 +1.0
comp=Z,44nm,1.3s
BRG Berggiesshubel 105.52 320 ePdif Pdif 16 16 24.3 0.0
comp=Z,7.3nm,1.5s
BRG PP PP 16 20 48.0 +1.5
BRG SKS SKSac 16 26 58.0 -3.7
BRG Sdif Sdif 16 28 26.0 +8.2
BRG PS PS 16 30 08.0 +5.0
BRG ePKKP PKKPbc 16 32 03.8 -0.5
BRG e 16 32 21.2
BRG SS SS 16 35 48.0 +6.5
BRG ePP' 16 40 16.6
BRG LR LR
comp=Z,7µm,19.2s,MS6.2
BRG Berggiesshubel 105.52 320 eP Pdif 16 16 24.3 +0.1
BRG 16 20 48.0
BRG 16 26 58.0
BRG PS PS 16 30 08.0 +5.0
BRG SS SS 16 35 48.0 +6.5
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG pmax pmax
comp=Z,19nm,1.5s
BRG pmax pmax
comp=Z,23nm,2.4s
BRG MLR MLR
comp=N,3µm,19.3s,MS6.2
BRG MLR MLR
comp=E,6µm,18.8s,MS6.2
BRG MLR MLR
comp=Z,7µm,19.2s,MS6.2
BRG Berggiesshubel 105.52 320 ePDIF Pdif 16 16 24.3 0.0
comp=Z,12nm,1.5s
BRG PP PP 16 20 48.0 +1.5
BRG SKS SKSac 16 26 58.0 -3.7
BRG SDIF Sdif 16 28 26.0 +8.2
BRG PS PS 16 30 08.0 +5.0
BRG ePKKP PKKPbc 16 32 03.8 -0.5
comp=Z,9.2nm,1.1s
BRG e 16 32 21.2
comp=Z,32nm,1.5s
BRG SS SS 16 35 48.0 +6.5
BRG ePKPPKP 16 40 16.6
comp=Z,39nm,2.4s
BRG
comp=N,6µm,19.3s
BRG
comp=E,10µm,18.8s
BRG
comp=Z,12µm,19.2s
CIGN Sant'Elia a Pi 105.53 311 P PKiKP 16 20 45.8 +7.8
NB2 NORSAR Subarra 105.54 331 PP PP 16 20 49.6 +3.3
comp=Z,556nm,2.5s,baz=79,slow=7.4
NB2 NORSAR Subarra 105.54 331 PP PP 16 20 49.6 +3.3
baz=79,slow=7.4
NOA NORSAR Array B 105.54 331 PP PKiKP 16 20 36.2 -1.2
comp=Z,3.7nm,0.9s,baz=66,slow=7.9,SNR=3.6
LJU Ljubljana 105.55 315 ePdiff Pdif 16 16 22.6 -1.8
LJU ePP PP 16 20 43.1 -3.9
LJU eSKSac SKSac 16 27 00.6 -1.5
LJU e 16 29 51.3
LJU e 16 30 09.0
LJU eSS SS 16 35 39.0 -3.2
LJU e 16 45 06.4
LJU Ljubljana 105.55 315 eP Pdif 16 16 22.6 -1.8
LJU e 16 20 43.1
LJU e 16 27 00.6
LJU e 16 29 51.3
LJU eSS SS 16 35 39.0 -3.2
MOA Molln 105.59 317 ⇑PKKPbc PKKPbc 16 32 04.0 +0.1
comp=Z,9.6nm,1.6s
MOA ⇑iPKKPab PKKPab 16 32 21.8 +2.6
comp=Z,45nm,1.4s
NAO01 NORSAR Array S 105.73 331 PFAKE 16 20 50.0 +12
NAO01 LR LR
comp=Z,13µm,20.0s,MS6.5
COP Copenhagen 105.81 326 iP PP 16 20 56.7 +8.2
comp=Z,46nm,1.0s
COP iS SKSac 16 27 05.6 +2.8
COP i 16 29 58.2
COP i 16 29 59.0
COP e 16 30 56.8
COP
comp=Z,7µm,21.0s
SIT Sitka 105.84 33 PFAKE 16 20 50.0 +12
SIT LR LR
comp=Z,5µm,22.0s,MS6.0
GERES GERESS Array B 105.87 318 PKiKP PKiKP 16 20 37.6 -0.7
comp=Z,2.5nm,0.9s,baz=94,slow=5.4,SNR=4.4
GERES PP PP 16 20 51.6 +2.3
comp=Z,3.6nm,0.9s,baz=111,slow=3.0,SNR=5.2
GERES PKKPbc PKKPbc 16 32 01.5 -1.5
comp=Z,1.1nm,0.6s,baz=191,slow=2.7,SNR=7.8
GERES PKKP PKKPbc 16 32 12.9 +10
comp=Z,3.3nm,1.1s,baz=256,slow=2.2,SNR=5.4
KHC Kasperske Hory 105.93 319 ex x 16 19 09.0
KHC ePP PP 16 20 47.9 -1.7
KHC eSKS SKSac 16 27 03.8 +0.2
KHC eSP SP 16 29 55.8 -6.6
KHC ePKKP PKKPbc 16 32 02.4 -0.5
KHC ex x 16 32 12.6
KHC eSS SS 16 35 48.3 +1.1
KHC AMS AMS 17 10 40.0
comp=Z,14µm,21.0s
SKDS Skadanscina 105.94 315 ePP PP 16 20 47.6 -2.2
VOY Vojsko 105.99 315 ePP PP 16 20 39.5 -11
VOY e 16 20 51.7
VOY e 16 21 00.6
WDD Wield Dalam 106.03 305 PFAKE 16 20 50.0 +11
WDD LR LR
comp=Z,5µm,20.0s,MS6.1
CLL Collm 106.06 321 ePdif Pdif 16 16 29.0 +2.4
comp=Z,28nm,1.6s
CLL i PP PP 16 20 48.8 -1.7
CLL eSKS SKSac 16 27 04.0 -0.1
CLL eSdif Sdif 16 28 15.0 -7.3
CLL ePKKP PKKPbc 16 32 03.0 +0.4
CLL LR LR
comp=Z,12µm,20.4s,MS6.4
CLL Collm 106.06 321 eP Pdif 16 16 29.0 +2.4
CLL i 16 20 48.8
CLL e 16 27 04.0
CLL eS Sdif 16 28 15.0 -7.3
CLL pmax pmax
comp=Z,28nm,1.6s
CLL MLR MLR
comp=Z,12µm,20.4s,MS6.4
CLL Collm 106.06 321 ePdif Pdif 16 16 29.0 +2.4
CLL i PP PP 16 20 48.8 -1.7
CLL i pPP 16 20 54.1
CLL i (sPP) 16 21 01.9
CLL e(PPP) 16 23 15.0
CLL ePPPP 16 24 45.0
CLL eSKSac SKSac 16 27 04.0 -0.1
CLL eSKKSac SKKSac 16 27 55.0 +2.8
CLL e(Sdif) 16 28 15.0
CLL ePS PS 16 30 14.0 +5.4
CLL ePPS 16 31 05.0
CLL epPKKPdf 16 32 03.0
comp=Z,28nm,1.6s
CLL eSS SS 16 35 45.0 -3.8
CLL ex x 16 36 34.0
CLL e(ScSScS) 16 40 48.0
CLL ex x 16 44 06.0
CLL ex x 16 45 30.0
CLL LmH 17 09 00.0
comp=N,8µm,19.7s
CLL LmH 17 09 00.0
comp=E,7µm,21.7s
CLL LmV 17 10 00.0
comp=Z,12µm,20.4s
CADS Cadrg 106.08 316 ePdiff Pdif 16 16 25.6 -1.1
CADS ePP PP 16 20 47.9 -3.0
CADS eSKSac SKSac 16 27 02.4 -2.1
CADS eSS SS 16 35 46.0 -3.5
TRI Trieste 106.11 315 PFAKE 16 20 50.0 +11
TRI LR LR
comp=Z,6µm,19.0s,MS6.2
MYKA Terra Mystica 106.11 316⇑ ePKKPbc PKKPbc 16 31 55.6 -6.7
comp=Z,3.0nm,0.5s
MYKA ⇑iPKKPab PKKPab 16 32 16.1 -0.8
comp=Z,28nm,1.6s
WET Wettzell 106.38 319 ePP PP 16 20 57.5 +4.5
TANN Tannenbergstha 106.50 320 ePP PP 16 20 57.3 +3.5
KONO Kongsberg 106.60 330 PFAKE 16 20 50.0 +11
KONO LR LR
comp=Z,11µm,20.0s,MS6.4
KONO Kongsberg 106.60 330 e SP 16 30 04.9 -3.8
KONO eSS SS 16 35 56.7 +1.0
AQU L'Aquila 106.61 312 PFAKE 16 20 50.0 +10
AQU LR LR
comp=Z,12µm,20.0s,MS6.4
ROTZ Rotzenmuhle 106.75 319 ePP PP 16 20 58.8 +3.2
MANZ Manzenberg 106.78 320 ePP PP 16 20 58.8 +2.9
ABTA Abfaltersbach 106.88 316⇑ iPKKPbc PKKPbc 16 32 00.4 +0.5
comp=Z,5.7nm,0.9s
ABTA ⇑iPKKPab PKKPab 16 32 13.9 +0.4
comp=Z,28nm,1.6s
MOX Moxa 107.01 320 ePP PP 16 20 59.0 +1.5
comp=Z,195nm,2.3s
MOX
comp=Z,7µm,20.0s
MOX Moxa 107.01 320 ePP PP 16 21 00.7 +3.2
PMSA Palmer Station 107.06 179 PFAKE 16 20 50.0 +10
PMSA LR LR
comp=Z,19µm,20.0s,MS6.6
GRF Grafenberg Arr 107.39 319 eP Pdif 16 16 34.0 +1.4
GRF e 16 21 01.8
GRF ePPP 16 23 20.7
GRF e 16 27 10.2
GRF eSP SP 16 30 19.4 +2.0
GRF eSS SS 16 36 09.6 +2.6
GRF MLR MLR
comp=Z,8µm,21.6s,MS6.2
GRF Grafenberg Arr 107.39 319 eP Pdif 16 16 34.0 +1.4
GRF e 16 21 01.8
GRF ePPP 16 23 20.7
GRF e 16 27 10.2
GRF eSP SP 16 30 19.4 +2.0
GRF eSS SS 16 36 09.6 +2.6
GRF MLR MLR
comp=Z,8µm,21.6s,MS6.2
GRF Grafenberg Arr 107.39 319 ePdiff Pdif 16 16 34.0 +1.4
GRF ePP PP 16 21 01.8 +1.5
GRF ePPP 16 23 20.7
GRF eSKSac SKSac 16 27 10.2 +0.2
GRF eSP SP 16 30 19.4 +2.0
GRF ePKKPdf PKKPdf 16 32 10.5 -1.1
GRF eSS SS 16 36 09.6 +2.6
GRF eL 17 10 34.6
comp=Z,8µm,21.6s
WTTA Wattenberg 107.42 317⇑ iPKiKP PKiKP 16 20 41.4 +0.1
comp=Z,30nm,1.9s
WATA Walderalm 107.45 317⇓ ePKiKP PKiKP 16 20 41.2 -0.2
comp=Z,13nm,1.1s
MUD Monsted U'grnd 107.48 327 i P PP 16 21 12.0 +11
MUD i 16 30 21.1
MUD
comp=Z,12µm,20.0s
WRAK Wrangell Islan 107.57 33 PFAKE 16 20 50.0 +8.7
WRAK LR LR
comp=Z,3µm,19.0s,MS5.9
CLZ Clausthal 107.61 322 ePP PP 16 21 05.1 +3.2
SQTA Sankt Quirin 107.71 317⇓ iPKiKP PKiKP 16 20 42.4 +0.5
comp=Z,7.5nm,1.1s
MOTA Moosalm 107.77 317⇑ iPKKPab PKKPab 16 32 11.0 +1.5
comp=Z,14nm,1.0s
UBBA Unterbreizbach 108.00 321 ePP PP 16 21 05.7 +0.9
FETA Feichten 108.06 317⇓ ePKiKP PKiKP 16 20 40.7 -1.8
comp=Z,12nm,1.3s
FETA Feichten 108.06 317⇑ ePKKPbc PKKPbc 16 31 49.2 -7.0
FETA ⇑iPKKPdf PKKPdf 16 32 06.7 -3.6
DLBC Dease Lake 108.34 31 PKKPbc PKKPbc 16 31 55.8 +0.1
comp=Z,8.8nm,0.9s,baz=293,slow=1.0,SNR=8.4
BER Bergen 108.50 331 i PKKPbc 16 31 36.9 -18
DAVA Damuels 108.60 317 ⇑PKiKP PKiKP 16 20 38.6 -4.9
comp=Z,19nm,1.8s
VLC Villacollemand 108.64 314 PFAKE 16 20 50.0 +6.3
VLC LR LR
comp=Z,13µm,21.0s,MS6.5
DAVOX Davos/Dischmat 108.67 317 PKKPbc PKKPbc 16 31 54.0 -0.2
comp=Z,2.8nm,0.5s,baz=316,slow=8.1,SNR=10
TUE Stuetta 109.08 316 PFAKE 16 20 50.0 +5.6
TUE LR LR
comp=Z,13µm,19.0s,MS6.5
JMIC Jan Mayen 109.32 344 ePP PP 16 21 16.2 +2.5
JMIC AMS AMS 17 13 05.7
comp=Z,11µm,20.0s,MS6.4
BFO Black Forest 109.48 318 PFAKE 16 20 50.0 +4.9
BFO LR LR
comp=Z,10µm,21.0s,MS6.4
LANF Langenberg 109.71 319 eP PP 16 21 18.7 +1.5
VSL Villasalto 109.89 309 PFAKE 16 21 00.0 +14
VSL LR LR
comp=Z,5µm,21.0s,MS6.0
KEST Kesra 110.24 305 PP PP 16 21 30.1 +8.6
comp=Z,5.1nm,1.0s,baz=251,slow=4.1,SNR=4.7
ECH Echery 110.27 318 eP PP 16 21 19.5 -1.8
MOF Molkenrain 110.35 318 eP PP 16 21 20.2 -1.7
HAU Haudompre 110.84 318 ePKiKP PKiKP 16 20 46.3 -1.4
HAU eMLR MLR
comp=Z,11µm,20.0s,MS6.1
HAU Haudompre 110.84 318 ePKiKP PKiKP 16 20 46.3 -1.4
HAU MLR MLR
comp=Z,11µm,20.0s,MS6.4
OG01 Vacheresse 110.92 316 eP PP 16 21 27.4 +1.3
LPG La Plagne 111.02 316 ePKiKP PKiKP 16 20 47.5 -0.6
comp=Z,23nm,1.2s
LPL La Plagne 111.03 316 ePKiKP PKiKP 16 20 46.7 -1.4
comp=Z,24nm,1.2s
THEF They Montfort 111.03 319 eP PP 16 21 19.5 -7.3
RES Resolute Bay 111.04 9 ePKiKP PKiKP 16 20 47.0 -0.3
RSL Roselend 111.07 316 eP PP 16 21 25.9 -1.3
MBDF Montbardon 111.13 315 ePKiKP PKiKP 16 20 46.7 -1.6
BNI Bardonecchia 111.14 315 PFAKE 16 21 00.0 +12
BNI LR LR
comp=Z,11µm,19.0s,MS6.5
CABF La Chapelle 111.27 317 ePKiKP PKiKP 16 20 47.2 -1.4
comp=Z,96nm,1.5s
GIVF Givet 111.39 321 ePKiKP PKiKP 16 20 47.4 -1.3
comp=Z,55nm,1.2s
ORIF Oris-en-Rattie 111.72 315 ePKiKP PKiKP 16 20 48.2 -1.3
comp=Z,19nm,1.0s
ORIF eMLR MLR
comp=Z,18µm,20.5s,MS6.3
BAIF Baives 111.78 321 ePKiKP PKiKP 16 20 48.0 -1.4
comp=Z,71nm,1.6s
OG05 Jujurieux 111.81 316 eP PP 16 21 28.9 -3.6
SMRF Simiane la Rot 112.10 314 ePKiKP PKiKP 16 20 48.4 -1.8
comp=Z,101nm,1.5s
VIVF Saint-Julien-l 112.58 315 ePKiKP PKiKP 16 20 50.0 -1.1
LOR Lormes 112.64 318 ePKiKP PKiKP 16 20 49.9 -1.2
LOR eMLR MLR
comp=Z,9µm,22.2s,MS6.0
LOR Lormes 112.64 318 ePKiKP PKiKP 16 20 49.9 -1.2
LOR MLR MLR
comp=Z,9µm,22.3s,MS6.3
SMF Signal de Mont 112.78 317 ePKiKP PKiKP 16 20 50.1 -1.3
SSF Saint Saulge 112.92 318 ePKiKP PKiKP 16 20 50.8 -0.9
comp=Z,54nm,1.2s
AVF Avril sur Loir 113.08 317 ePKiKP PKiKP 16 20 50.8 -1.2
comp=Z,45nm,1.5s
LASF Ste Croix 113.30 314 ePKiKP PKiKP 16 20 51.8 -0.7
comp=Z,112nm,1.6s
BGF Bois d'Agland 113.47 317 ePKiKP PKiKP 16 20 51.7 -1.0
comp=Z,34nm,0.9s
YKA Yellowknife Ar 113.87 24 PKiKP PKiKP 16 20 52.9 -0.1
comp=Z,4.5nm,0.4s,baz=306,slow=2.0,SNR=34
YKA PKKPbc PKKPbc 16 31 32.2 -5.4
comp=Z,7.4nm,1.1s,baz=114,slow=3.7,SNR=5.5
YKA Yellowknife Ar 113.87 24 i PKiKP PKiKP 16 20 52.9 -0.1
YKA pmax pmax
comp=Z,5.0nm,0.4s
YKA pmax pmax
comp=Z,7.0nm,1.1s
TCF Toulx Ste Croi 113.96 317 ePKiKP PKiKP 16 20 52.4 -1.3

comp=Z,60nm,1.5s
TAM Tamanrasset 114.18 291 PKiKP PKiKP 16 20 55.0 +0.1
CAF Calviac 114.38 316 *e*PKiKP PKiKP 16 20 53.1 -1.4
comp=Z,49nm,1.4s
EKA Eskdalemuir Ar 114.44 328 PKKPbc PKKPbc 16 31 35.0 -0.5
comp=Z,4.5nm,0.8s,baz=252,slow=3.4,SNR=6.3
ESK Eskdalemuir 114.48 328 PFAKE 16 21 00.0 +5.6
ESK LR LR
comp=Z,13μm,20.0s,MS6.5
RJF Les Rejaudoux 114.67 316 *e*PKIKP PKiKP 16 20 54.4 -0.7
comp=Z,58nm,1.3s
RJF *e*MLR MLR
comp=Z,10μm,22.0s,MS6.1
RJF Les Rejaudoux 114.67 316 *e*PKIKP PKiKP 16 20 54.4 -0.7
RJF MLR MLR
comp=Z,10μm,22.0s,MS6.4
NLWA Neilton Lookou 114.80 41 PFAKE 16 21 10.0 +15
NLWA LR LR
comp=Z,3μm,20.0s,MS5.9
TRIS Tristan da Cun 115.41 222 PFAKE 16 21 10.0 +13
TRIS LR LR
comp=Z,11μm,20.0s,MS6.5
MFF Saint Martin d 115.46 318 *e*PKIKP PKPdf 16 20 55.3 -1.3
comp=Z,41nm,1.2s
B05A Bryant 115.70 40 ⇓P PKiKP 16 20 56.8 -0.1
baz=116,SNR=12
JCW Jim Creek 115.83 40 *e*PKPdf PKPdf 16 20 57.5 +0.3
H03A Soap Creek Ran 115.89 44 ⇑P PKPdf 16 20 57.0 -0.5
baz=116
COR Corvallis 115.90 44 PFAKE 16 21 10.0 +13
COR LR LR
comp=Z,6μm,22.0s,MS6.2
J02A Umpqua 116.01 46 ⇑P PKPdf 16 20 57.2 -0.6
baz=116
B06A Marblemount 116.01 40 ⇓P PKPdf 16 20 56.8 -0.7
baz=116
RPW Rockport 116.01 40 *e*PKPdf PKPdf 16 20 57.4 -0.2
ERK Elk Rock 116.10 42 P PKPdf 16 20 58.8 +1.0
C05A Tolt Reservoir 116.13 41 ⇓P PKPdf 16 20 57.5 -0.3
baz=116
F04A Amboy 116.15 43 ⇓P PKPdf 16 20 57.8 -0.1
baz=116
TDL Tradedollar La 116.17 42 P PKPdf 16 20 58.1 +0.1
LON Longmire 116.33 42 *e*PKPdf PKPdf 16 20 57.7 -0.5
E05A Randle 116.41 42 ⇓P PKPdf 16 20 57.5 -0.9
baz=116,SNR=7.6
KTRM Thompson Ridge 116.49 47 P PKPdf 16 20 59.9 +1.2
A07A Ashnola River, 116.53 39 ⇓P PKPdf 16 20 58.1 -0.4
baz=116,SNR=8.6
HUMO Hull Mountain 116.63 46 *e*PKPdf PKPdf 16 20 58.9 -0.1
HUMO LR LR
comp=Z,6μm,22.0s,MS6.2
H04A Detroit Lake 116.65 44 ⇓P PKPdf 16 20 58.6 -0.3
baz=117
D06A Cle Elum 116.83 41 ⇑P PKPdf 16 20 58.3 -0.9
baz=117,SNR=5.8
KIPM Iron Peak 116.87 50 PKPdf PKPdf 16 20 60.0 +0.4
B07A Winthrop 116.89 39 ⇓P PKPdf 16 20 58.7 -0.5
baz=117,SNR=6.7
BORG Borgarnes 117.00 342 PFAKE 16 21 10.0 +11
BORG LR LR
comp=Z,13μm,21.0s,MS6.5
YBH Yreka Blue Hor 117.02 47 PKP PKPdf 16 21 00.2 +0.5
comp=Z,14nm,1.2s,baz=136,slow=4.0,SNR=6.4
YBH Yreka Blue Hor 117.02 47 PKIKP PKPdf 16 21 00.2 +0.5
YBH pmax pmax
comp=Z,14nm,1.2s
ETW Entiat 117.03 40 *e*PKPdf PKPdf 16 20 59.3 -0.3
G05A Wamic 117.09 43 ⇓P PKPdf 16 20 59.3 -0.4
baz=117
C07A Waterville 117.17 40 ⇑P PKPdf 16 20 58.9 -0.9
baz=117
BUOR Burton Butte 117.22 47 P PKPdf 16 21 00.8 +0.7
A08A Turner Farm, O 117.25 39 ⇓P PKPdf 16 20 59.2 -0.7
baz=117,SNR=7.7
F06A Goldendale 117.30 43 ⇑P PKPdf 16 20 59.5 -0.6
baz=117,SNR=7.2
H05A Madras 117.31 44 ⇓P PKPdf 16 20 59.3 -0.9
baz=117
HOPS Hopland 117.35 50 PFAKE 16 21 10.0 +10
HOPS LR LR
comp=Z,6μm,21.0s,MS6.2
D07A Quincy 117.39 41 ⇓P PKPdf 16 20 59.5 -0.8
baz=117,SNR=5.6
LHEM Herd Peak 117.40 47 P PKPdf 16 21 00.5 0.0
WDC Whiskeytown Da 117.41 49 PFAKE 16 21 10.0 +9.5
WDC LR LR
comp=Z,4μm,20.0s,MS6.0
B08A Colville Reser 117.42 39 ⇑P PKPdf 16 20 59.7 -0.6
baz=117,SNR=7.0
I05A Bend 117.42 44 ⇓P PKPdf 16 21 00.4 -0.1
baz=117
HOG Hogback Mounta 117.62 47 P PKPdf 16 21 01.0 +0.2
E07A Sunnyside 117.67 41 ⇑P PKPdf 16 21 00.7 -0.1
baz=118,SNR=5.3
A09A Danville 117.67 39 ⇑P PKPdf 16 21 01.3 +0.6
baz=118,SNR=6.5
MCCM Marconi Confer 117.67 51 PFAKE 16 21 10.0 +8.9
MCCM LR LR
comp=Z,6μm,20.0s,MS6.2
TOA0 Torodi Ar. Sit 117.70 280 *e*PKPdf PKPdf 16 20 59.5 -2.2
TORD Torodi Ar. Bea 117.70 280 PKP PKPdf 16 21 00.8 -0.9
comp=Z,15nm,0.8s,baz=64,slow=1.7,SNR=21
TORD PKKPbc PKKPbc 16 31 23.6 +0.6
comp=Z,2.7nm,0.8s,baz=282,slow=5.1,SNR=4.6
TORD PKPPKP 16 40 03.0
comp=Z,0.6nm,0.3s,baz=116,slow=5.5,SNR=13
VIPM Ingram Point 117.77 44 P PKPdf 16 21 01.4 +0.3
C08A Higginbotham F 117.79 40 ⇑P PKPdf 16 21 00.5 -0.5
baz=118
NSHM Saint Helena R 117.81 51 *e*PKPdf PKPdf 16 21 01.5 +0.1
F07A Phinny Hill Vi 117.83 42 ⇑P PKPdf 16 21 01.2 +0.1
baz=118,SNR=6.0
RSW Rattlesnake Hi 117.89 42 *e*PKPdf PKPdf 16 21 01.8 +0.6
H06A Lindquist Farm 117.90 44 P PKPdf 16 21 01.4 0.0
baz=118,SNR=14
HAWA Hanford 117.93 42 *e*PKPdf PKPdf 16 21 01.6 +0.3
HAWA LR LR
comp=Z,4μm,21.0s,MS6.0
K05A Summer Lake 118.07 46 ⇓P PKPdf 16 21 01.1 -0.6
baz=118
D08A Wollman Farm, 118.11 41 ⇑P PKPdf 16 21 01.2 -0.5
baz=118,SNR=9.4
B09A Rice 118.14 39 ⇓P PKPdf 16 21 01.0 -0.7
baz=118,SNR=13
OD2 Odessa Site #2 118.14 40 *e*PKPdf PKPdf 16 21 01.7 0.0
G07A Ruggs Ranch, H 118.19 43 ⇓P PKPdf 16 21 01.7 -0.2
baz=118
E08A Dider Farm, El 118.21 41 ⇑P PKPdf 16 21 01.0 -0.8
baz=118,SNR=15
I06A Prineville 118.21 44 ⇑P PKPdf 16 21 01.4 -0.5
baz=118
C09A Chrisman Ranch 118.28 40 ⇓P PKPdf 16 21 01.6 -0.3
baz=118
A10A Northport 118.30 38 ⇑P PKPdf 16 21 01.9 0.0
baz=118
J06A Christmas Vall 118.45 45 ⇑P PKPdf 16 21 01.8 -0.6
baz=118,SNR=20
H07A Lands Inn, Kim 118.47 44 ⇑P PKPdf 16 21 02.2 -0.2
baz=118
OHCM Honcut 118.48 50 *e*PKPdf PKPdf 16 21 02.3 -0.3
D09A Jones Farm, Ri 118.51 41 ⇑P PKPdf 16 21 01.7 -0.7
baz=118,SNR=8.7
O04C Chester 118.55 49 ⇓P PKPdf 16 21 01.6 -1.1
baz=118
F08A Pendleton 118.62 42 ⇓P PKPdf 16 21 02.4 -0.3
baz=118,SNR=8.0
G08A Pilot Rock 118.66 43 ⇓P PKPdf 16 21 01.7 -1.1
baz=119,SNR=16
I07A Izee 118.66 44 ⇑P PKPdf 16 21 03.5 +0.7
baz=119,SNR=10
MOD Modoc 118.72 47 *e*PKPdf PKPdf 16 21 02.8 -0.1
MOD LR LR
comp=Z,5μm,20.0s,MS6.2
E09A Wood Farm, Sta 118.80 41 ⇑P PKPdf 16 21 02.6 -0.4
baz=119,SNR=8.6
NEW Newport 118.83 39 *e*PKPdf PKPdf 16 21 01.9 -1.1
NEW LR LR
comp=Z,5μm,19.0s,MS6.2
LNOR Lincton Mounta 118.92 42 *e*P PKPdf 16 21 03.1 -0.2
EDM Edmonton 118.96 33 *e*PKPdf PKPdf 16 21 01.6 -1.5
J07A Hines 119.00 45 ⇓P PKPdf 16 21 03.5 0.0
baz=119,SNR=6.7
A11A Hall Mountain, 119.04 38 ⇓P PKPdf 16 21 03.1 -0.2
baz=119
SAO San Andreas Ge 119.07 53 PFAKE 16 21 10.0 +6.2
SAO LR LR
comp=Z,5μm,21.0s,MS6.1
H08A Prairie City 119.10 43 P PKPdf 16 21 04.0 +0.3
baz=119,SNR=9.5
D10A Wagner Farm, O 119.17 40 ⇓P PKPdf 16 21 03.3 -0.4
baz=119,SNR=12
LAVA Lava Cap Winer 119.18 50 ⇓P PKPdf 16 21 02.9 -1.1
baz=119
BEKR Beckwourth 119.20 49 ⇓P PKPdf 16 21 03.4 -0.6
baz=119
F09A S2 Ranch, Elgi 119.22 42 ⇓P PKPdf 16 21 03.0 -0.8
baz=119,SNR=8.0
B11A Sandpoint 119.24 39 ⇓P PKPdf 16 21 03.5 -0.3
baz=119
K07A Rock Creek Ran 119.25 46 ⇓P PKPdf 16 21 03.7 -0.3
baz=119,SNR=16
I08A Drewsey 119.36 44 ⇑P PKPdf 16 21 04.0 -0.2
baz=119,SNR=9.5
N06A Buffalo Meadow 119.36 48 ⇓P PKPdf 16 21 03.4 -0.8
baz=119
L07A Adell 119.37 46 ⇑P PKPdf 16 21 04.7 +0.4
baz=119,SNR=16
V03C Hunter Liggett 119.39 53 ⇑P PKPdf 16 21 02.5 -1.9
baz=119
G09A Cove 119.45 42 ⇓P PKPdf 16 21 03.6 -0.7
baz=119,SNR=20
E10A Myers Farm, Un 119.48 41 ⇓P PKPdf 16 21 03.0 -1.3
baz=119,SNR=11
A12A Yaak River Ran 119.48 38 ⇓P PKPdf 16 21 03.4 -0.8
baz=119
O06A Flanigan 119.52 48 ⇑P PKPdf 16 21 04.7 +0.2
baz=120
C11A Tepee Creek (N 119.53 39 ⇓P PKPdf 16 21 04.1 -0.3
baz=119
F10A Beach Ranch, E 119.58 41 ⇑P PKPdf 16 21 03.1 -1.4
baz=120,SNR=12
P06A Stead Airport, 119.59 49 ⇓P PKPdf 16 21 04.4 -0.3
baz=120
J08A Circle Bar Ran 119.59 45 ⇑P PKPdf 16 21 04.1 -0.5
baz=120
SHEL Horse Pasture 119.60 246 PFAKE 16 21 20.0 +15
SHEL LR LR
comp=Z,11μm,20.0s,MS6.5
CMB Columbia Colle 119.62 51 *e*PKPdf PKPdf 16 21 03.8 -1.1
CMB LR LR
comp=Z,7μm,20.0s,MS6.3
M07A Soldier Meadow 119.67 47 ⇑P PKPdf 16 21 03.9 -1.0
baz=120,SNR=18
B12A Libby 119.70 38 ⇑P PKPdf 16 21 04.3 -0.3
baz=120
H09A Durkee 119.73 43 ⇓P PKPdf 16 21 04.6 -0.2
baz=120,SNR=8.8
WVOR Wild Horse Val 119.75 46 *e*PKPdf PKPdf 16 21 04.4 -0.5
WVOR LR LR
comp=Z,4μm,19.0s,MS6.1
K08A Mann Creek Ran 119.77 45 ⇑P PKPdf 16 21 05.1 +0.1
baz=120,SNR=15
D11A Klaveano Farm, 119.77 40 P PKPdf 16 21 04.2 -0.7
baz=120,SNR=11
WCN Washoe City 119.79 49 ⇑P PKPdf 16 21 04.1 -1.0
baz=120
S05C Merced 119.82 52 ⇑P PKPdf 16 21 04.3 -0.9
baz=120
G10A Bishop Farm, J 119.89 42 ⇑P PKPdf 16 21 04.7 -0.4
baz=120,SNR=7.6
I09A Lost Marbles R 119.90 44 ⇑P PKPdf 16 21 04.4 -0.8
baz=120
BMO Blue Mountains 119.91 43 *e*PKPdf PKPdf 16 21 04.0 -1.2
BMO LR LR
comp=Z,4μm,20.0s,MS6.0
PAHR Pah Rah Range 119.97 49 *e*PKPdf PKPdf 16 21 04.6 -0.8
N07B Gerlach 119.98 48 ⇓P PKPdf 16 21 05.1 -0.3
baz=120,SNR=35
ESDC Sonseca Array 119.99 311 PKP PKPdf 16 21 05.8 +0.3
comp=Z,2.6nm,0.7s,baz=23,slow=2.3,SNR=11
ESDC PKKPbc PKKPbc 16 31 16.6 +1.3
comp=Z,1.7nm,0.8s,baz=263,slow=4.2,SNR=5.6
ESLA Sonseca Array 119.99 311 PFAKE 16 21 20.0 +14
ESLA LR LR
comp=Z,33μm,22.0s,MS6.9
L08A Fields 120.03 46 ⇑P PKPdf 16 21 04.8 -0.7
baz=120,SNR=44
C12B Naegeli Ranch, 120.07 39 ⇑P PKPdf 16 21 04.0 -1.4
baz=120
J09A Fry Pan Ranch, 120.09 44 ⇓P PKPdf 16 21 04.6 -0.9
baz=120,SNR=26
E11A Bogner Ranch, 120.11 41 ⇑P PKPdf 16 21 04.4 -1.1
baz=120,SNR=15
EFI East Falkland 120.14 183 PFAKE 16 21 20.0 +15
EFI LR LR
comp=Z,15μm,22.0s,MS6.6
R06C Coleville 120.22 50 ⇓P PKPdf 16 21 04.6 -1.4
baz=120
O07A Toulon 120.22 48 ⇑P PKPdf 16 21 05.1 -0.8
baz=120,SNR=23
M08A Happy Creek Ra 120.22 47 ⇑P PKPdf 16 21 04.7 -1.2
baz=120,SNR=23
A13A Flathead Natio 120.23 37 ⇓P PKPdf 16 21 04.7 -1.0
baz=120
PTRM Twissleman Ran 120.28 54 *e*PKPdf PKPdf 16 21 06.7 +0.5
PAB San Pablo 120.31 311 *e*PKPdf PKPdf 16 21 06.7 +0.6
PAB LR LR
comp=Z,5μm,21.0s,MS6.2
K09A Rome 120.32 45 ⇑P PKPdf 16 21 05.4 -0.6
baz=120,SNR=15
H10A Noah's Angus R 120.37 43 ⇑P PKPdf 16 21 05.4 -0.7
baz=120
T06C Millerton Lake 120.38 52 ⇓P PKPdf 16 21 06.0 -0.3
baz=120
D12A Red Ives Fores 120.40 40 ⇓P PKPdf 16 21 04.3 -1.7
baz=120
G11A Walters Elk Ra 120.41 42 ⇑P PKPdf 16 21 05.5 -0.6
baz=120,SNR=15
B13A Whitefish 120.42 38 ⇓P PKPdf 16 21 05.5 -0.5
baz=120
BSMT Bassoo Peak 120.44 39 P PKPdf 16 21 05.4 -0.7
SMMC Simmler 120.52 54 ⇓P PKPdf 16 21 06.4 -0.3
baz=120
L09A Wilkinson Ranc 120.57 46 ⇓P PKPdf 16 21 07.2 +0.6
baz=120,SNR=9.3
N08A GE Springer Mi 120.59 47 ⇑P PKPdf 16 21 06.3 -0.4
baz=120,SNR=14
C13A Hot Springs 120.64 39 ⇓P PKPdf 16 21 05.3 -1.2
baz=120
O08A Rochester Mine 120.72 48 ⇓P PKPdf 16 21 07.0 +0.1
baz=121,SNR=29
J10A Berg Farm, Mel 120.75 44 ⇑P PKPdf 16 21 06.3 -0.6
baz=121
PKM Peak Mountain 120.75 54 ⇓P PKPdf 16 21 06.5 -0.7
baz=121
A14A Double T Ranch 120.81 37 ⇑P PKPdf 16 21 05.4 -1.4
baz=121
H11A Donnelly 120.83 42 ⇓P PKPdf 16 21 06.6 -0.3
baz=121,SNR=26
K10A MacKenzie Ranc 120.89 45 ⇑P PKPdf 16 21 06.9 -0.2
baz=121,SNR=19
M09A Marrel Ranch, 120.90 46 ⇓P PKPdf 16 21 07.2 0.0
baz=121,SNR=8.9
D13A Huson 120.94 39 ⇑P PKPdf 16 21 05.4 -1.7
baz=121
F12A Elk City 120.95 41 ⇓P PKPdf 16 21 06.2 -1.0
baz=121,SNR=11
SFJD Kangerlussuaq 120.96 355 PFAKE 16 21 20.0 +13
SFJD LR LR
comp=Z,10μm,21.0s,MS6.4
N09A Rock Creek Ran 121.02 47 ⇑P PKPdf 16 21 08.0 +0.5
baz=121,SNR=5.7
NVAR Mina Array Bea 121.11 50 PKP PKPdf 16 21 07.9 +0.2
comp=Z,9.8nm,0.7s,baz=256,slow=1.9,SNR=56
NVAR PKKPbc PKKPbc 16 31 12.4 +1.4
comp=Z,6.3nm,0.8s,baz=141,slow=4.6,SNR=9.5
NVAR SKKPbc 16 34 48.7
comp=Z,1.3nm,0.8s,baz=138,slow=4.1,SNR=4.1
C14A Swan Lake 121.11 38 ⇑P PKPdf 16 21 06.4 -1.0
baz=121
G12A Big Creek, Yel 121.13 42 ⇑P PKPdf 16 21 06.4 -1.1
baz=121
VES Vestal, Richgr 121.13 53 ⇓P PKPdf 16 21 06.7 -1.2
baz=121
I11A Placerville 121.14 43 ⇓P PKPdf 16 21 06.1 -1.5
baz=121,SNR=8.4
B14A Marquette Ranc 121.16 38 ⇓P PKPdf 16 21 05.8 -1.6
baz=121
MTUM Tungsten Hills 121.18 51 *e*P PKPdf 16 21 08.0 +0.2
A15A Johnson Ranch, 121.21 37 ⇑P PKPdf 16 21 06.4 -1.2
baz=121,SNR=5.4
Q08A Gabbs 121.28 49 ⇑P PKPdf 16 21 07.8 -0.2
baz=121,SNR=32
SNCC San Nicolas Is 121.32 56 PFAKE 16 21 20.0 +12
SNCC LR LR
comp=Z,6μm,22.0s,MS6.2
BMN Battle Mountai 121.36 47 *e*PKPdf PKPdf 16 21 08.5 +0.4
BMN LR LR
comp=Z,4μm,21.0s,MS6.1
E13A Victor 121.37 40 ⇑P PKPdf 16 21 06.6 -1.3
baz=121
L10A Juniper Basin 121.39 45 ⇓P PKPdf 16 21 08.3 +0.2
baz=121,SNR=24
MFID Camas Ranch 121.40 44 ⇓P PKPdf 16 21 07.9 -0.2
baz=121,SNR=19
O09A Fish Creek Ran 121.46 48 ⇓P PKPdf 16 21 07.8 -0.5
baz=121,SNR=5.1
K11A Parker Ranch, 121.47 45 ⇓P PKPdf 16 21 07.9 -0.3
baz=121
ARVC Arvin 121.50 54 ⇓P PKPdf 16 21 07.9 -0.7
baz=121
TIN Tinemaha 121.52 52 ⇑P PKPdf 16 21 08.5 0.0
baz=122
M10A I.L. Ranch, Tu 121.52 46 ⇑P PKPdf 16 21 07.4 -1.0
baz=121
F13A Darby 121.53 41 P PKPdf 16 21 07.3 -1.0
baz=121,SNR=7.0
D14A Greenough 121.54 39 ⇑P PKPdf 16 21 07.2 -1.1
baz=122
B15A Bradely Ranch, 121.61 37 ⇑P PKPdf 16 21 07.1 -1.2
baz=122,SNR=18
H12A Diamond D Ranc 121.65 42 ⇑P PKPdf 16 21 08.1 -0.4
baz=122,SNR=23
P09A Austin 121.68 48 ⇓P PKPdf 16 21 09.2 +0.4
baz=122
OSI Osito Adit 121.69 54 *e*PKPdf PKPdf 16 21 08.6 -0.4
OSI Osito Adit 121.69 54 ⇑P PKPdf 16 21 07.8 -1.1
baz=122
I12A Atlanta 121.74 43 ⇓P PKPdf 16 21 08.7 -0.1
baz=122,SNR=32
CHMT Chamberlain Mo 121.77 39 *e*PKPdf PKPdf 16 21 08.2 -0.5
CWC Cottonwood Cre 121.78 52 ⇑P PKPdf 16 21 08.5 -0.6
baz=122,SNR=23
N10A Dunphy 121.79 47 ⇑P PKPdf 16 21 09.0 +0.1
baz=122
C15A Salmond Ranch, 121.81 38 ⇑P PKPdf 16 21 08.0 -0.7
baz=122,SNR=16
E14A Clinton 121.82 40 ⇑P PKPdf 16 21 08.8 0.0
baz=122
G13A Cobalt 121.86 41 ⇓P PKPdf 16 21 08.0 -0.9
baz=122,SNR=5.9
L11A Cat Creek Ranc 121.87 45 ⇑P PKPdf 16 21 09.0 -0.1
baz=122
A16A West Butte Ran 121.90 36 ⇓P PKPdf 16 21 07.2 -1.7
baz=122,SNR=6.2
RPN Rapa Nui 121.90 129 PFAKE 16 21 20.0 +10
RPN LR LR
comp=Z,14μm,21.0s,MS6.6
O10A Cortez Mining, 121.93 47 ⇓P PKPdf 16 21 08.4 -0.8
baz=122,SNR=8.0
J12A Stokes Ranch, 121.95 44 ⇓P PKPdf 16 21 09.2 +0.1
baz=122,SNR=26
TPH Tonopah 122.03 50 *e*PKPdf PKPdf 16 21 09.5 0.0
TPH LR LR
comp=Z,6μm,19.0s,MS6.2
H13A Challis 122.05 42 ⇑P PKPdf 16 21 09.4 +0.1
baz=122,SNR=31
B16A M & M Farms, S 122.07 37 ⇓P PKPdf 16 21 08.5 -0.7
baz=122,SNR=8.8
MDT Midelt 122.08 303 PKKPbc PKKPbc 16 31 09.2 +2.0
comp=Z,4.9nm,1.0s,baz=334,slow=3.3,SNR=4.5
M11A Holland Ranch, 122.08 46 ⇓P PKPdf 16 21 09.0 -0.4
baz=122
DECC Green Verdugo 122.09 55 ⇓P PKPdf 16 21 09.0 -0.7
baz=122
R09A Tonopah 122.09 50 ⇑P PKPdf 16 21 09.7 +0.1
baz=122,SNR=13
S09A Goldfield 122.12 51 ⇑P PKPdf 16 21 09.3 -0.3
baz=122,SNR=54
F14A Wisdom 122.14 40 ⇑P PKPdf 16 21 07.9 -1.6
baz=122
P10A Eureka 122.16 48 ⇓P PKPdf 16 21 09.6 0.0
baz=122,SNR=8.1
D15A Lincoln 122.17 39 P PKPdf 16 21 09.3 -0.2
baz=122,SNR=11
GRAC Grapevine Rang 122.20 51 ⇓P PKPdf 16 21 10.3 +0.5
baz=122,SNR=6.7
DAC Darwin (Calif) 122.20 52 PFAKE 16 21 20.0 +10
DAC LR LR
comp=Z,5μm,22.0s,MS6.1
EDW2 Edwards Air Fo 122.22 54 P PKPdf 16 21 10.3 +0.4
baz=122,SNR=42
K12A Draper Farm, C 122.30 44 ⇑P PKPdf 16 21 09.9 0.0
baz=122,SNR=12
G14A Jackson 122.31 41 ⇑P PKPdf 16 21 10.0 +0.2
baz=122
HLID Hailey 122.31 43 *e*PKPdf PKPdf 16 21 09.8 -0.1
HLID LR LR
comp=Z,6μm,22.0s,MS6.2
HLID Hailey 122.31 43 ⇑P PKPdf 16 21 09.1 -0.8
baz=122,SNR=50
MWC Mount Wilson 122.32 55 *e*PKPdf PKPdf 16 21 10.0 -0.1
MWC LR LR
comp=Z,7μm,19.0s,MS6.3
C16A Fuhringer Ranc 122.32 38 ⇑P PKPdf 16 21 08.5 -1.2
baz=122,SNR=8.8
LRMC Laurel Mountai 122.32 53 ⇑P PKPdf 16 21 10.7 +0.5
baz=122,SNR=25
MPMC Manual Prospec 122.34 53 ⇓P PKPdf 16 21 10.0 -0.1
baz=122,SNR=50
E15A Deer Lodge 122.36 40 ⇑P PKPdf 16 21 09.4 -0.4
baz=122
I13A Wildhorse Cree 122.38 43 ⇓P PKPdf 16 21 09.1 -0.8
baz=122,SNR=36
L12A House Creek Ra 122.39 45 ⇑P PKPdf 16 21 09.9 -0.1
baz=122
MTE Manteigas 122.42 313 PFAKE 16 21 20.0 +10
MTE LR LR
comp=Z,9μm,21.0s,MS6.4
A17A Triple J Farms 122.42 36 ⇓P PKPdf 16 21 09.5 -0.4
baz=122,SNR=18
Q10A Clear Creek Ra 122.44 49 ⇑P PKPdf 16 21 10.4 +0.1
baz=122,SNR=18
SFS San Fernando 122.53 308 PFAKE 16 21 20.0 +10
SFS LR LR
comp=Z,14μm,19.0s,MS6.6
J13A Cove Ranch, Pi 122.53 43 ⇑P PKPdf 16 21 10.5 +0.3
baz=122,SNR=40
S10A Tonopah Range, 122.54 50 ⇑P PKPdf 16 21 10.2 -0.2
baz=122,SNR=44
O11A Cowboy Ranch, 122.59 47 ⇓P PKPdf 16 21 09.7 -0.8
baz=122,SNR=34
H14A Leadore 122.61 42 ⇑P PKPdf 16 21 10.6 +0.2
baz=122
BFSC Mount Baldy St 122.64 55 ⇑P PKPdf 16 21 10.2 -0.6
baz=123,SNR=6.6
R10A Warm Springs 122.66 50 ⇑P PKPdf 16 21 10.7 +0.1
baz=123,SNR=7.7
B17A L&G Farms, Che 122.67 37 ⇓P PKPdf 16 21 09.4 -1.0
baz=123,SNR=9.5
F15A Butte 122.69 40 ⇓P PKPdf 16 21 10.3 -0.2
baz=123,SNR=12
P11A Circle Ranch, 122.70 48 ⇓P PKPdf 16 21 10.9 +0.2
baz=123,SNR=6.8
ELK Elko 122.70 47 PKP PKPdf 16 21 10.6 -0.1
comp=Z,24nm,1.1s,baz=272,slow=1.6,SNR=35
ELK PP PP 16 22 45.0 -3.4
comp=Z,9.3nm,1.0s,baz=322,slow=3.6,SNR=3.4
ELK Elko 122.70 47 *e*PKPdf PKPdf 16 21 11.1 +0.4
ELK LR LR
comp=Z,7μm,22.0s,MS6.2
ELK Elko 122.70 47 PKIKP PKPdf 16 21 10.6 -0.1
ELK 16 22 45.0
ELK pmax pmax
comp=Z,24nm,1.1s
ELK pmax pmax
comp=Z,9.0nm,1.0s
M12A Wells 122.71 46 ⇓P PKPdf 16 21 11.0 +0.3
baz=123
FURC Furnace Creek, 122.73 52 ⇓P PKPdf 16 21 11.4 +0.5
baz=123,SNR=8.5
HRY Holter Researc 122.74 39 *e*PKPdf PKPdf 16 21 10.7 +0.2
D16A Dana Ranch, Ca 122.78 38 ⇓P PKPdf 16 21 10.2 -0.4
baz=123,SNR=17
N12A Clover Valley, 122.81 46 ⇑P PKPdf 16 21 10.7 -0.1
baz=123
DLMT Dillon 122.82 41 *e*PKPdf PKPdf 16 21 11.1 +0.3
I14A Mackay 122.82 42 ⇑P PKPdf 16 21 10.6 -0.3
baz=123,SNR=18
K13A Stover Farm, H 122.86 44 ⇑P PKPdf 16 21 10.6 -0.3
baz=123,SNR=17

MCMT McKenzie Canyo 122.87 41 ePKPdf PKPdf 16 21 10.6 -0.3
E16A East Helena 122.92 39 ⇓P PKPdf 16 21 10.4 -0.5
baz=123,SNR=7.0
G15A Dillon 122.97 41 ⇑P PKPdf 16 21 09.6 -1.5
baz=123,SNR=14
Q11A Duckwater 122.99 49 ⇑P PKPdf 16 21 10.6 -0.7
baz=123,SNR=37
C17A Wharram Farm, 122.99 38 ⇑P PKPdf 16 21 09.3 -1.8
baz=123,SNR=28
J14A Carey 123.00 43 ⇑P PKPdf 16 21 10.6 -0.5
baz=123,SNR=24
GSC Goldstone 123.07 53 ⇑P PKPdf 16 21 11.7 +0.1
baz=123,SNR=25
GSC Goldstone 123.07 53 ePKIKP PKPdf 16 21 11.5 -0.1
GSC MLR MLR
comp=Z,7μm,22.0s,MS6.3
TPNV Topopah Spring 123.08 51 ⇓P PKPdf 16 21 11.9 +0.3
baz=123,SNR=22
TPNV Topopah Spring 123.08 51 ePKIKP PKPdf 16 21 11.3 -0.2
H15A Lima 123.09 41 ⇑P PKPdf 16 21 10.9 -0.4
baz=123,SNR=23
MURC Murrieta 123.15 55 ⇓P PKPdf 16 21 11.5 -0.3
baz=123,SNR=8.1
U10A Ash Meadows, A 123.16 52 ⇓P PKPdf 16 21 12.0 +0.3
baz=123,SNR=26
L13A Double Diamond 123.16 45 ⇓P PKPdf 16 21 12.3 +0.8
baz=123,SNR=22
R11A Troy Canyon, C 123.19 49 ⇑P PKPdf 16 21 11.1 -0.6
baz=123,SNR=68
O12A Currie 123.21 47 ⇓P PKPdf 16 21 10.5 -1.2
baz=123
B18A Beardsley Farm 123.22 36 ⇓P PKPdf 16 21 10.9 -0.5
baz=123,SNR=18
D17A Six Diamond Ra 123.25 38 ⇓P PKPdf 16 21 10.6 -1.0
baz=123,SNR=11
M13A Montello 123.26 46 ⇑P PKPdf 16 21 11.3 -0.5
baz=123,SNR=30
F16A Kennard Place, 123.27 40 ⇓P PKPdf 16 21 10.5 -1.1
baz=123,SNR=24
S11A Rachel 123.27 50 ⇓P PKPdf 16 21 11.2 -0.6
baz=123,SNR=9.9
BOZ Bozeman (W) 123.32 40 ⇑P PKPdf 16 21 11.4 -0.4
baz=123,SNR=30
BOZ Bozeman (W) 123.32 40 ePKIKP PKPdf 16 21 11.2 -0.5
BOZ MLR MLR
comp=Z,3μm,21.0s,MS6.0
SHOC Shoshone 123.33 52 ⇑P PKPdf 16 21 12.0 -0.1
baz=123,SNR=11
EVO Evora 123.33 311 ePKIKP PKPdf 16 21 11.1 -0.9
comp=Z,79nm,1.3s
EVO eMLR MLR
comp=Z,7μm,20.5s,MS6.0
P12A McGill 123.35 48 ⇑P PKPdf 16 21 12.0 0.0
baz=123
G16A Moss Hill, Enn 123.39 41 ⇑P PKPdf 16 21 11.9 +0.1
baz=123,SNR=22
EGMT Eagleton 123.41 37 ePKPdf PKPdf 16 21 11.3 -0.5
EGMT LR LR
comp=Z,4μm,22.0s,MS6.1
EGMT Eagleton 123.41 37 P PKPdf 16 21 11.7 -0.1
baz=123,SNR=25
E17A Martinsdale 123.45 39 ⇑P PKPdf 16 21 11.7 -0.3
baz=123,SNR=7.3
K14A Jones Ranch, D 123.53 44 ⇑P PKPdf 16 21 12.2 0.0
baz=123,SNR=32
Q12A Willow Creek R 123.54 48 ⇓P PKPdf 16 21 11.9 -0.4
baz=124
KIC Kosan Boka 123.55 272 ePKIKP PKPdf 16 21 12.5 -0.6
comp=Z,193nm,1.0s
RTC Rabat Centre 123.65 305 PFAKE 16 21 20.0 +7.3
RTC LR LR
comp=Z,4μm,19.0s,MS6.1
L14A Malta 123.67 45 ⇓P PKPdf 16 21 12.4 -0.1
baz=124,SNR=20
DBIC Dimbokro 123.69 272 PKP PKPdf 16 21 12.5 -0.9
comp=Z,34nm,0.8s,baz=92,slow=1.6,SNR=11
DBIC Dimbokro 123.69 272 ePKPdf PKPdf 16 21 11.9 -1.4
DBIC LR LR
comp=Z,6μm,22.0s,MS6.2
DBIC Dimbokro 123.69 272 PKIKP PKPdf 16 21 12.5 -0.9
DBIC pmax pmax
comp=Z,34nm,0.9s
J15A Blackfoot 123.71 43 ⇑P PKPdf 16 21 12.9 +0.4
baz=124,SNR=30
FFC Flin Flon 123.73 27 ePKPdf PKPdf 16 21 10.8 -1.4
FFC LR LR
comp=Z,5μm,20.0s,MS6.2
TUQ Turquoise Moun 123.73 53 ⇓P PKPdf 16 21 12.5 -0.4
baz=124,SNR=23
PFO Pinyon Flat Ob 123.75 55 PKP PKPdf 16 21 13.0 +0.1
comp=Z,31nm,1.0s,baz=240,slow=0.4,SNR=22
PFO PKKPbc PKKPbc 16 31 05.2 +4.5
comp=Z,5.2nm,1.1s,baz=101,slow=5.0,SNR=4.5
PFO Pinyon Flat Ob 123.75 55 ePKPdf PKPdf 16 21 12.5 -0.5
PFO LR LR
comp=Z,5μm,20.0s,MS6.2
PFO Pinyon Flat Ob 123.75 55 ⇓P PKPdf 16 21 11.8 -1.1
baz=124,SNR=25
PFO Pinyon Flat Ob 123.75 55 PKIKP PKPdf 16 21 13.0 +0.1
PFO pmax pmax
comp=Z,31nm,1.0s
PFO pmax pmax
comp=Z,5.0nm,1.1s
D18A Linhart Farms, 123.77 38 ⇓P PKPdf 16 21 11.0 -1.5
baz=124,SNR=8.1
M14A Sheep Mountain 123.79 45 ⇑P PKPdf 16 21 12.7 -0.1
baz=124,SNR=30
QLMT Earthquake Lak 123.79 41 ePKPdf PKPdf 16 21 13.3 +0.7
O13A Hicks Ranch, I 123.81 47 ⇓P PKPdf 16 21 13.0 +0.2
baz=124
LIC Lamto 123.82 272 ePKIKP PKPdf 16 21 12.6 -1.0
comp=Z,91nm,1.0s
LIC eMLR MLR
comp=Z,13μm,21.5s,MS6.3
LIC Lamto 123.82 272 ePKIKP PKPdf 16 21 12.9 -0.7
comp=Z,124nm,1.0s
LIC Lamto 123.82 272 ePKPdf PKPdf 16 21 12.6 -1.0
LIC LR LR
comp=Z,7μm,21.5s,MS6.3
F17A Fitzpatrick Pl 123.82 39 ⇑P PKPdf 16 21 12.9 +0.2
baz=124,SNR=22
TIC Toumodi 123.85 272 ePKIKP PKPdf 16 21 13.0 -0.7
comp=Z,196nm,0.9s
U11A Corn Creek 123.89 52 ⇑P PKPdf 16 21 13.0 -0.1
baz=124,SNR=5.9
K15A Arbon 123.92 44 ⇑P PKPdf 16 21 13.2 +0.3
baz=124,SNR=46
R12A Pony Springs, 123.92 49 ⇑P PKPdf 16 21 13.3 +0.2
baz=124,SNR=17
MONP Monument Peak 123.95 56 ⇓P PKPdf 16 21 13.5 +0.2
baz=124,SNR=18
FCC Fort Churchill 123.95 20 ePKPdf PKPdf 16 21 12.1 -0.4
S12A Delamar Landin 123.96 50 ⇓P PKPdf 16 21 12.4 -0.8
baz=124,SNR=40
H16A Russell Place, 123.96 41 ⇓P PKPdf 16 21 13.7 +0.7
baz=124,SNR=14
E18A Harlowton 123.99 38 ⇓P PKPdf 16 21 12.9 -0.1
baz=124,SNR=7.8
P13A Bates Ranch, G 124.01 48 ⇑P PKPdf 16 21 12.6 -0.7
baz=124,SNR=37
V11A Goodsprings 124.01 52 ⇑P PKPdf 16 21 12.7 -0.7
baz=124,SNR=20
G17A Pierce Place, 124.03 40 ⇓P PKPdf 16 21 12.4 -0.7
baz=124
HVU Hansel Valley 124.08 45 ePKPdf PKPdf 16 21 13.6 +0.3
GMRC Granite Mounta 124.11 54 ⇓P PKPdf 16 21 13.5 -0.1
baz=124,SNR=34
N14A Grayback Hills 124.13 46 ⇑P PKPdf 16 21 13.7 +0.2
baz=124,SNR=32
I16A Newdale 124.15 42 ⇓P PKPdf 16 21 13.5 +0.2
baz=124,SNR=17
YMR Madison River 124.16 41 ePKPdf PKPdf 16 21 13.9 +0.5
YMR LR LR
comp=Z,4μm,20.0s,MS6.1
Q13A Wheeler Ranch, 124.16 48 ⇓P PKPdf 16 21 13.7 +0.2
baz=124,SNR=9.0
BGU Big Grassy Mou 124.22 46 ePKPdf PKPdf 16 21 13.3 -0.3
DVTC Desert V Tower 124.26 56 ⇓P PKPdf 16 21 14.5 +0.6
baz=124,SNR=13
L15A Malad City 124.27 44 ⇑P PKPdf 16 21 13.3 -0.4
baz=124,SNR=26
J16A Bone 124.31 43 ⇑P PKPdf 16 21 13.2 -0.5
baz=124,SNR=9.4
T12A Moapa 124.32 51 ⇑P PKPdf 16 21 14.2 +0.3
baz=124,SNR=5.5
YNR Norris Junctio 124.33 41 ePKPdf PKPdf 16 21 15.0 +1.3
YFT Old Faithful 124.34 41 ePKPdf PKPdf 16 21 15.1 +1.4

F18A Big Timber 124.41 39 ⇑P PKPdf 16 21 13.2 -0.6
baz=124,SNR=23
M15A Larsen Ranch, 124.43 45 ⇑P PKPdf 16 21 14.2 +0.2
baz=124,SNR=7.2
SWSC Sam W. Stewart 124.45 56 ⇓P PKPdf 16 21 13.8 -0.5
baz=124,SNR=11
R13A O'Grain Ranch, 124.45 49 ⇑P PKPdf 16 21 14.0 -0.1
baz=124,SNR=13
DCID1 Drake Creek 124.46 42 ePKPdf PKPdf 16 21 14.0 +0.1
LDFC Landfair 124.47 53 ePKPdf PKPdf 16 21 14.5 +0.2
RRI2 Red Ridge 124.47 42 ePKPdf PKPdf 16 21 14.3 +0.4
SPUT South Promonto 124.49 45 ePKPdf PKPdf 16 21 14.4 +0.3
V12A Nelson 124.50 52 ⇑P PKPdf 16 21 14.0 -0.2
baz=124,SNR=69
GCMT Greycliff 124.50 39 ePKPdf PKPdf 16 21 14.0 0.0
K16A Soda Springs 124.50 43 ⇓P PKPdf 16 21 14.0 -0.1
baz=124,SNR=10
IMW Indian Meadow 124.50 42 ePKPdf PKPdf 16 21 13.9 -0.2
H17A Grant Village 124.53 41 ⇑P PKPdf 16 21 14.9 +0.8
baz=124,SNR=7.0
U12A Valley of Fire 124.54 51 ⇑P PKPdf 16 21 14.5 +0.1
baz=124,SNR=27
LKWY Lake 124.57 41 PFAKE 16 21 20.0 +5.9
LKWY LR LR
comp=Z,7μm,22.0s,MS6.3
N15A Stansbury Isla 124.59 46 ⇑P PKPdf 16 21 15.4 +1.1
baz=124,SNR=5.1
W12A Cal Nev Ari 124.60 53 ⇓P PKPdf 16 21 14.5 0.0
baz=124,SNR=6.8
DUG Dugway 124.63 46 ⇑P PKPdf 16 21 14.1 -0.3
baz=124,SNR=40
DUG Dugway 124.63 46 ePKIKP PKPdf 16 21 14.8 +0.4
DUG MLR MLR
comp=Z,6μm,22.0s,MS6.2
P14A Drum Mountains 124.65 47 ⇑P PKPdf 16 21 14.4 -0.1
baz=125,SNR=37
TPAW Teton Pass 124.66 42 ePKPdf PKPdf 16 21 14.1 -0.2
IRM Iron Mountain 124.67 54 ⇑P PKPdf 16 21 15.0 +0.3
baz=125,SNR=19
MOOW Moose Ponds 124.69 42 ePKPdf PKPdf 16 21 14.0 -0.4
Q14A Seven Lake (B 124.70 48 ⇑P PKPdf 16 21 14.8 +0.2
baz=125,SNR=20
S13A Holt Ranch, En 124.72 50 ⇑P PKPdf 16 21 14.3 -0.3
baz=125,SNR=43
I17A Pilgram Creek 124.73 42 ⇑P PKPdf 16 21 14.5 0.0
baz=125,SNR=11
G18A Lazy EL Ranch, 124.77 40 ⇑P PKPdf 16 21 14.9 +0.4
baz=125
REDW Red Top Meadow 124.78 42 ePKPdf PKPdf 16 21 14.6 0.0
SNOW Snow King Moun 124.80 42 ePKPdf PKPdf 16 21 14.9 +0.3
LOHW Long Hollow 124.84 42 ePKPdf PKPdf 16 21 15.0 +0.3
T13A Saint George 124.85 50 ⇑P PKPdf 16 21 13.7 -1.2
baz=125,SNR=26
AHID Auburn Hatcher 124.85 43 ePKPdf PKPdf 16 21 15.2 +0.4
AHID LR LR
comp=Z,5μm,20.0s,MS6.2
J17A Brown Place, J 124.87 42 ⇓P PKPdf 16 21 13.3 -1.5
baz=125,SNR=19
L16A Fish Haven 124.92 44 ⇑P PKPdf 16 21 14.8 -0.2
baz=125,SNR=18
NOQ North Oquirrh 124.96 46 ePKPdf PKPdf 16 21 15.1 +0.1
ARUT Antelope Range 124.97 49 ePKPdf PKPdf 16 21 15.1 0.0
K17A Gardner Place, 124.98 43 ⇓P PKPdf 16 21 14.6 -0.4
baz=125,SNR=8.9
U13A Pakoon Wash 124.99 51 ⇑P PKPdf 16 21 14.2 -1.0
baz=125,SNR=18
HWUT Hardware Ranch 124.99 44 ePKPdf PKPdf 16 21 14.7 -0.4
HWUT LR LR
comp=Z,4μm,20.0s,MS6.1
RLMT Red Lodge 125.05 40 ePKPdf PKPdf 16 21 14.3 -0.8
RLMT LR LR
comp=Z,5μm,20.0s,MS6.1
RLMT Red Lodge 125.05 40 ⇑P PKPdf 16 21 13.4 -1.6
baz=125,SNR=7.6
M16A Huntsville 125.06 45 ⇑P PKPdf 16 21 13.9 -1.2
baz=125
CCUT Cedar City 125.10 50 ePKPdf PKPdf 16 21 15.9 +0.5
V13A Grand Canyon W 125.14 52 ⇓P PKPdf 16 21 15.4 -0.1
baz=125,SNR=31
S14A Cedar City 125.18 49 ⇓P PKPdf 16 21 15.3 -0.3
baz=125,SNR=24
GLA Glamis 125.21 55 ⇓P PKPdf 16 21 15.4 -0.3
baz=125,SNR=6.4
GLA Glamis 125.21 55 ePKIKP PKPdf 16 21 16.4 +0.7
GLA MLR MLR
comp=Z,6μm,19.0s,MS6.2
P15A Leamington 125.23 47 ⇓P PKPdf 16 21 15.1 -0.5
baz=125,SNR=26
NLU North Lily Min 125.24 46 ePKPdf PKPdf 16 21 12.0 -3.6
Y12C Blythe 125.28 54 ⇑P PKPdf 16 21 16.4 +0.6
baz=125,SNR=7.9
I18A Diamond G Ranc 125.32 41 ⇓P PKPdf 16 21 15.5 -0.1
baz=125
N16A Rees Ranch, Co 125.35 45 ⇓P PKPdf 16 21 14.9 -0.9
baz=125,SNR=7.5
Q15A Fillmore 125.36 48 ⇓P PKPdf 16 21 16.0 +0.2
baz=125,SNR=12
J18A Kendall Valley 125.39 42 ⇓P PKPdf 16 21 15.4 -0.4
baz=125,SNR=18
W13A Hualapai Mount 125.43 53 ⇑P PKPdf 16 21 16.4 +0.3
baz=125,SNR=24
PDMCI Parker Dam,Lak 125.44 54 ⇑P PKPdf 16 21 16.1 0.0
baz=125,SNR=8.0
JLU Jordanelle 125.45 46 ePKPdf PKPdf 16 21 14.7 -1.2
T14A Hurricane 125.47 50 ⇓P PKPdf 16 21 17.1 +1.0
baz=125,SNR=47
MPU Maple Canyon 125.54 46 ePKPdf PKPdf 16 21 16.3 +0.2
MPU LR LR
comp=Z,6μm,21.0s,MS6.2
O16A Springville 125.56 46 ⇓P PKPdf 16 21 16.8 +0.6
baz=126,SNR=6.1
U14A Mt Trumbull 125.59 51 ⇑P PKPdf 16 21 17.0 +0.7
baz=126,SNR=40
X13A Yucca 125.61 53 ⇑P PKPdf 16 21 16.3 -0.2
baz=126,SNR=34
K18A Toltan Ranch, 125.62 43 ⇓P PKPdf 16 21 15.6 -0.6
baz=126,SNR=23
MVU Marysvale 125.65 48 PFAKE 16 21 30.0 +14
MVU LR LR
comp=Z,5μm,21.0s,MS6.2
DAU Daniels Canyon 125.66 46 ePKPdf PKPdf 16 21 17.1 +0.7
M17A Scullys Gap (B 125.66 44 ⇑P PKPdf 16 21 15.8 -0.5
baz=126,SNR=28
P16A Fountain Green 125.66 47 ⇑P PKPdf 16 21 17.1 +0.7
baz=126
MSU Marysvale 125.67 48 ePKPdf PKPdf 16 21 16.9 +0.4
N17A Moffit Pass 125.75 45 ⇓P PKPdf 16 21 17.1 +0.6
baz=126,SNR=24
S15A Panguitch 125.81 49 ⇑P PKPdf 16 21 17.2 +0.4
baz=126,SNR=23
Y13A Salome 125.82 54 ⇓P PKPdf 16 21 16.7 -0.2
baz=126,SNR=6.9
V14A Boquillas Ranc 125.88 52 ⇑P PKPdf 16 21 17.1 +0.1
baz=126,SNR=66
BW06 Boulder Array 125.89 42 PFAKE 16 21 30.0 +13
BW06 LR LR
comp=Z,6μm,21.0s,MS6.2
BW06 Boulder Array 125.89 42 ⇑P PKPdf 16 21 16.2 -0.6
baz=126,SNR=23
PDAR Pinedale Array 125.89 42 PKP PKPdf 16 21 16.1 -0.6
comp=Z,26nm,1.3s,baz=232,slow=1.7,SNR=34
PDAR PKKPbc 16 30 53.8
comp=Z,1.1nm,0.5s,baz=113,slow=6.0,SNR=14
PDAR SKKPbc 16 34 36.2
comp=Z,6.9nm,1.2s,baz=143,slow=5.2,SNR=7.0
L18A Fontenelle, Gr 125.92 44 ⇓P PKPdf 16 21 16.3 -0.5
baz=126,SNR=36
T15A Red Dirt Ranch 126.01 50 ⇓P PKPdf 16 21 16.9 -0.2
baz=126,SNR=21
W14A Seligman 126.02 52 ⇓P PKPdf 16 21 17.8 +0.6
baz=126,SNR=34
M18A Lyman 126.09 44 ⇓P PKPdf 16 21 17.4 +0.2
baz=126,SNR=17
O17A Robinson Place 126.11 46 ⇑P PKPdf 16 21 17.3 +0.1
baz=126,SNR=40
LAO LASA Array 126.16 37 ePKPdf PKPdf 16 21 16.3 -0.8
LAO LR LR
comp=Z,5μm,20.0s,MS6.2
R16A Teasdale 126.26 48 ⇑P PKPdf 16 21 17.6 0.0
baz=126,SNR=18
Q16A Castle Valley 126.27 47 ⇓P PKPdf 16 21 18.0 +0.5
baz=126,SNR=16
U15A North Rim 126.27 51 ⇓P PKPdf 16 21 17.5 -0.2
baz=126,SNR=53
L19A Farson 126.30 43 P PKPdf 16 21 17.7 +0.2
baz=126,SNR=16
K19A Absolon Red Bu 126.34 42 ⇓P PKPdf 16 21 17.2 -0.4
baz=126
DGMT Dagmar 126.37 34 PFAKE 16 21 30.0 +13
DGMT LR LR
comp=Z,4μm,20.0s,MS6.1
S16A Weppner Ranch, 126.37 49 ⇑P PKPdf 16 21 17.5 -0.3
baz=126,SNR=56
P17A Butcher Ranch, 126.38 47 ⇑P PKPdf 16 21 17.3 -0.5
baz=126,SNR=20
X14A Yava 126.39 53 ⇑P PKPdf 16 21 17.5 -0.4
baz=126
Y14A Wickenburg 126.45 54 ⇓P PKPdf 16 21 17.9 -0.2
baz=126
N18A Larsen Ranch, 126.55 44 ⇑P PKPdf 16 21 17.8 -0.2
baz=126
V15A Kaibab Nationa 126.55 51 ⇑P PKPdf 16 21 17.7 -0.5
baz=126,SNR=60
O18A Roosevelt 126.60 45 ⇑P PKPdf 16 21 18.0 -0.2
baz=126,SNR=22
Z14A Wintersburg 126.65 54 ⇓P PKPdf 16 21 18.4 -0.1
baz=127
SRU San Rafael 126.67 47 ⇑P PKPdf 16 21 17.8 -0.5
baz=127,SNR=25
SRU San Rafael 126.67 47 ePKIKP PKPdf 16 21 17.7 -0.6
P18A Preston Nutter 126.67 46 ⇓P PKPdf 16 21 18.0 -0.3
baz=127,SNR=23
T16A Glen Canyon Da 126.69 50 ⇓P PKPdf 16 21 18.5 0.0
baz=127,SNR=9.9
M19A Rock Springs 126.69 44 ⇑P PKPdf 16 21 17.2 -1.1
baz=127
K20A Yellowstone Ra 126.74 42 ⇑P PKPdf 16 21 17.9 -0.5
baz=127
R17A Hanksville Air 126.78 48 ⇑P PKPdf 16 21 18.2 -0.3
baz=127,SNR=35
X15A Humboldt 126.90 53 ⇑P PKPdf 16 21 18.9 0.0
baz=127
N19A John Jarvie Ra 126.93 44 ⇑P PKPdf 16 21 17.6 -1.2
baz=127
Q18A Rafter H Ranch 126.95 47 ⇑P PKPdf 16 21 17.8 -1.1
baz=127,SNR=28
Y15A Casa Rosa Ranc 126.98 54 ⇓P PKPdf 16 21 18.4 -0.7
baz=127
S17A Black Ridge (B 126.99 49 ⇑P PKPdf 16 21 18.5 -0.5
baz=127,SNR=20
L20A Wamsutter 127.03 43 ⇑P PKPdf 16 21 18.7 -0.2
baz=127
T17A Navajo Res., N 127.21 49 ⇑P PKPdf 16 21 19.2 -0.2
baz=127,SNR=65
U16A Tuba City 127.25 51 ⇓P PKPdf 16 21 19.5 -0.1
baz=127,SNR=53
WUAZ Wupatki 127.26 51 ePKPdf PKPdf 16 21 19.6 0.0
WUAZ LR LR
comp=Z,5μm,20.0s,MS6.2
WUAZ Wupatki 127.26 51 ⇓P PKPdf 16 21 19.6 0.0
baz=127,SNR=43
W16A Flagstaff 127.27 52 ⇑P PKPdf 16 21 19.9 +0.3
baz=127,SNR=18
M20A Sweetwater, Wa 127.36 43 ⇓P PKPdf 16 21 19.6 0.0
baz=127
R18A Canyonlands Na 127.39 48 ⇑P PKPdf 16 21 19.2 -0.5
baz=127,SNR=32
115A Sonoran Desert 127.41 55 ⇑P PKPdf 16 21 21.0 +1.0
baz=127
U17A Shonto 127.45 50 ⇑P PKPdf 16 21 21.0 +1.1
baz=127,SNR=31
X16A Lo Mia Camp, P 127.55 53 ⇓P PKPdf 16 21 20.4 +0.2
baz=128,SNR=45
P19A Cripple Cowboy 127.57 46 ⇑P PKPdf 16 21 19.0 -1.0
baz=128
S18A Hurst Farm, Bl 127.57 48 ⇑P PKPdf 16 21 20.1 -0.1
baz=128,SNR=42
Q19A Hogan Spring (127.63 47 ⇓P PKPdf 16 21 19.8 -0.4
baz=128
Y16A Circle Bar Ran 127.68 53 ⇑P PKPdf 16 21 19.3 -1.1
baz=128,SNR=9.4
L21A Rawlins 127.70 42 ⇓P PKPdf 16 21 19.4 -0.8
baz=128
T18A Mexican Hat 127.86 49 ⇑P PKPdf 16 21 20.9 +0.3
baz=128,SNR=52
116A Eloy 127.88 55 ⇓P PKPdf 16 21 20.4 -0.4
baz=128
Z16A Peralta Trail, 127.88 54 ⇑P PKPdf 16 21 20.2 -0.6
baz=128
R19A Curley Farm, L 127.89 47 ⇓P PKPdf 16 21 20.9 +0.2
baz=128,SNR=9.5
W17A Winslow 127.91 52 ⇑P PKPdf 16 21 20.5 -0.3
baz=128,SNR=8.0
RWWY Rawlins 127.93 43 ePKPdf PKPdf 16 21 19.8 -0.9
PV10 Paradox Valley 128.02 47 ePKPdf PKPdf 16 21 19.9 -1.0
U18A Rough Rock, Ch 128.11 50 ⇓P PKPdf 16 21 20.2 -1.0
baz=128,SNR=23
S19A Harvey Farm, M 128.18 48 P PKPdf 16 21 21.2 0.0
baz=128,SNR=13
216A Three Points, 128.23 56 ⇓P PKPdf 16 21 22.3 +0.7
baz=128,SNR=13
Y17A Roosevelt 128.24 53 ⇑P PKPdf 16 21 21.2 -0.3
baz=128,SNR=17
V18A Ganado 128.31 51 ⇑P PKPdf 16 21 21.1 -0.5
baz=128,SNR=30
PV01 Paradox Valley 128.45 47 ePKPdf PKPdf 16 21 22.2 +0.4
T19A Beclabito 128.60 49 ⇓P PKPdf 16 21 22.3 +0.2
baz=128,SNR=13
117A Oracle 128.66 55 ⇓P PKPdf 16 21 22.3 -0.1
baz=129,SNR=15
W18A Petrified Fore 128.66 51 ⇑P PKPdf 16 21 23.3 +1.0
baz=129,SNR=12
X18A Snowflake 128.69 52 ⇓P PKPdf 16 21 21.8 -0.5
baz=129,SNR=14
TUC Tucson 128.69 55 ePKPdf PKPdf 16 21 22.2 -0.2
TUC LR LR
comp=Z,5μm,20.0s,MS6.2
RSSD Black Hills 128.80 39 ePKPdf PKPdf 16 21 21.2 -1.1
RSSD LR LR
comp=Z,6μm,20.0s,MS6.2
217A Green Valley 128.82 56 ⇓P PKPdf 16 21 22.1 -0.6
baz=129,SNR=19
MVCO Mesa Verde 128.85 48 ePKPdf PKPdf 16 21 22.0 -0.6
MVCO LR LR
comp=Z,5μm,20.0s,MS6.2
MVCO Mesa Verde 128.85 48 ⇓P PKPdf 16 21 22.1 -0.4
baz=129
Y18A Canyon Day Jun 128.86 53 ⇑P PKPdf 16 21 22.2 -0.4
baz=129,SNR=15
W19A Sanders 128.93 51 ⇓P PKPdf 16 21 22.2 -0.6
baz=129,SNR=8.7
V19A Window Rock 128.99 50 ⇓P PKPdf 16 21 22.3 -0.6
baz=129,SNR=13
SMCO Snowmass 129.18 45 ePKPdf PKPdf 16 21 24.2 +1.0
X19A St. Johns 129.23 52 ⇓P PKPdf 16 21 23.3 -0.1
baz=129,SNR=24
118A Homack Ranch, 129.26 54 ⇑P PKPdf 16 21 23.2 -0.3
baz=129,SNR=14
PHWY Pilot Hill 129.28 42 ePKPdf PKPdf 16 21 23.2 0.0
218A Dragoon 129.39 55 ⇓P PKPdf 16 21 21.7 -2.0
baz=129,SNR=9.6
Y19A Nutrioso 129.41 53 ⇑P PKPdf 16 21 22.6 -1.2
baz=129,SNR=22
ULM Lac du Bonnet 129.49 28 PKP PKPdf 16 21 21.6 -1.8
comp=Z,6.4nm,0.5s,baz=336,slow=4.2,SNR=6.3
ULM Lac du Bonnet 129.49 28 PKP PKPdf 16 21 21.6 -1.8
ULM LR LR
comp=Z,7μm,21.0s,MS6.3
318A Bisbee 129.59 56 ⇓P PKPdf 16 21 23.3 -0.8
baz=130,SNR=17
Z19A T-Link Ranch, 129.62 53 ⇑P PKPdf 16 21 24.1 -0.1
baz=130,SNR=5.4
119A Ashpeak Ranch, 129.75 54 ⇓P PKPdf 16 21 22.8 -1.6
baz=130,SNR=11
ISCO Idaho Springs 129.85 44 ePKPdf PKPdf 16 21 24.8 +0.4
ISCO LR LR
comp=Z,4μm,20.0s,MS6.1
219A White Tail Can 130.02 55 ⇑P PKPdf 16 21 23.1 -1.8
baz=130,SNR=16
ASCN Ascension 130.16 252 PFAKE 16 21 40.0 +14
ASCN LR LR
comp=Z,9μm,22.0s,MS6.4
319A Douglas 130.19 56 ⇓P PKPdf 16 21 24.8 -0.5
baz=130,SNR=18
PLCA Paso Flores 130.48 171 PKP PKPdf 16 21 26.9 +1.3
comp=Z,96nm,1.3s,baz=195,slow=2.8,SNR=19
PLCA SKPbc SKPbc 16 24 49.1 +2.6
comp=Z,27nm,1.1s,baz=186,slow=6.6,SNR=4.9
PLCA Paso Flores 130.48 171 ePKPdf PKPdf 16 21 26.6 +0.9
PLCA LR LR
comp=Z,13μm,20.0s,MS6.6
PLCA Paso Flores 130.48 171 PKIKP PKPdf 16 21 26.9 +1.3
PLCA pmax pmax
comp=Z,96nm,1.3s
PLCA pmax pmax

comp=N,27nm,1.1s
SDCO Great Sand Dun 130.83 47 *e*PKPdf PKPdf 16 21 25.8 -0.5
SDCO LR LR
comp=Z,5μm,20.0s,MS6.2
AGMN Agassiz Refuge 130.84 30 PFAKE 16 21 40.0 +14
AGMN LR LR
comp=Z,6μm,22.0s,MS6.2
LAZ Ladron 130.91 51 *e*PKPdf PKPdf 16 21 27.3 +0.8
LPIG La Paz 131.00 65 PKP PKPdf 16 21 27.9 +0.9
comp=Z,12nm,0.3s,baz=118,slow=4.3,SNR=4.2
LPIG SKPbc SKPbc 16 24 48.6 -0.3
comp=Z,12nm,0.3s,baz=99,slow=1.9,SNR=8.5
LENM Lemitar 131.12 51 *e*PKPdf PKPdf 16 21 27.3 +0.3
ANMO Albuquerque 131.23 50 PKP PKPdf 16 21 27.3 +0.1
comp=Z,5.2nm,0.8s,baz=221,slow=1.6,SNR=18
ANMO SKPbc SKPbc 16 24 49.6 +0.2
comp=Z,56nm,1.1s,baz=282,slow=3.2,SNR=19
ANMO Albuquerque 131.23 50 *e*PKPdf PKPdf 16 21 27.0 -0.2
ANMO LR LR
comp=Z,5μm,20.0s,MS6.2
ANMO Albuquerque 131.23 50 PKIKP PKPdf 16 21 27.3 +0.1
ANMO pmax pmax
comp=Z,5.0nm,0.8s
ANMO pmax pmax
comp=N,56nm,1.1s
LPM Los Pinos Moun 131.34 51 *e*PKPdf PKPdf 16 21 27.6 +0.3
BNM Barren Site 131.40 51 *e*PKPdf PKPdf 16 21 27.1 -0.3
OGNE Ogallala 131.71 41 *e*PKPdf PKPdf 16 21 27.5 -0.4
OGNE LR LR
comp=Z,4μm,19.0s,MS6.2
EYMN Ely 133.15 27 PFAKE 16 21 40.0 +10
EYMN LR LR
comp=Z,6μm,20.0s,MS6.3
ECSD EROS,Sioux Fal 133.42 35 PKPdf PKPdf 16 21 30.9 -0.1
ECSD LR LR
comp=Z,6μm,20.0s,MS6.3
SCHQ Schefferville 133.46 4 PKP PKPdf 16 21 30.6 -0.1
comp=Z,16nm,0.8s,baz=319,slow=1.5,SNR=8.2
SCHQ Schefferville 133.46 4 PKP PKPdf 16 21 30.6 -0.1
SCHQ LR LR
comp=Z,18μm,22.0s,MS6.7
CBKS Cedar Bluff 134.32 42 *e*PKPpre 16 21 20.8
CBKS LR LR
comp=Z,6μm,22.0s,MS6.2
AMTX Amarillo 134.84 48 PKPdf PKPdf 16 21 34.3 +0.3
AMTX LR LR
comp=Z,6μm,21.0s,MS6.3
TXAR Lajitas Array 135.43 56 PKhKP 16 21 24.1
comp=Z,1.9nm,0.7s,baz=258,slow=2.9,SNR=16
TXAR PKP PKPdf 16 21 34.9 -0.3
comp=Z,1.1nm,0.5s,baz=141,slow=26,SNR=15
TXAR SKPbc SKPbc 16 25 02.9 -1.0
comp=Z,24nm,1.2s,baz=305,slow=2.6,SNR=10
TXAR Lajitas Array 135.43 56 PKP 16 21 24.1
TXAR PKP PKPdf 16 21 34.9 -0.3
TXAR SKPbc SKPbc 16 25 02.9 -1.0
TXAR Lajitas Array 135.43 56 PKHKP 16 21 24.1
TXAR 16 21 34.9
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR pmax pmax
comp=N,24nm,1.3s
COWI Conover 135.60 27 *e*PKPdf PKPdf 16 21 34.4 -0.7
COWI LR LR
comp=Z,6μm,22.0s,MS6.3
KSU1 Kansas State U 136.20 40 *e*PKPdf PKPdf 16 21 35.9 -0.5
KSU1 LR LR
comp=Z,7μm,22.0s,MS6.3
SCIA State Center 136.51 35 PFAKE 16 21 50.0 +13
SCIA LR LR
comp=Z,5μm,20.0s,MS6.2
LPA La Plata 136.83 184 *ce*PKP PKPdf 16 21 35.0 -2.7
LPA *e*PP PP 16 24 17.0 -2.1
WMOK Wichita Mounta 137.03 47 *e*PKPdf PKPdf 16 21 29.1 -9.0
WMOK LR LR
comp=Z,5μm,19.0s,MS6.3
JFWS Jewell Farm 137.41 31 *e*PKPdf PKPdf 16 21 37.8 -0.7
JFWS LR LR
comp=Z,7μm,22.0s,MS6.4
JCT Junction City 138.13 53 *e*PKPpre 16 21 31.5
JCT *e*PKPdf PKPdf 16 21 40.4 +0.2
JCT LR LR
comp=Z,7μm,21.0s,MS6.4
ZAIG Zacatecas 138.23 65 *e*P PKPdf 16 21 38.5 -2.1
SFJM Santa Fe 138.28 69 *e*P PKPdf 16 21 44.4 +3.6
GLMI Grayling 138.57 25 PFAKE 16 21 50.0 +9.4
GLMI LR LR
comp=Z,7μm,20.0s,MS6.4
HDIL Hopedale 139.59 33 *e*PKPdf PKPdf 16 21 42.2 -0.3
HDIL LR LR
comp=Z,7μm,19.0s,MS6.4
CFAA Coronel Fontan 139.78 171 PKhKP 16 21 35.3
comp=Z,3.9nm,0.5s,baz=184,slow=3.4,SNR=34
CFAA PKP PKPdf 16 21 44.3 +1.1
comp=Z,5.4nm,0.5s,baz=203,slow=3.3,SNR=18
CFAA PP PP 16 24 40.3 +2.9
comp=Z,3.3nm,1.3s,baz=168,slow=7.5,SNR=4.5
CCM Cathedral Cave 140.17 37 *e*PKPpre 16 21 36.5
CCM *e*PKPdf PKPdf 16 21 43.5 -0.2
CCM LR LR
comp=Z,7μm,19.0s,MS6.4
ZIIG Zihuatanejo 140.21 73 *i* P PKPdf 16 21 35.2 -9.1
FVM French Village 140.70 37 *e*PKPpre 16 21 38.1
FVM *e*PKPdf PKPdf 16 21 44.1 -0.6
TLL Tololo Astrono 140.71 167‖ *e*P PKPdf 16 21 38.4 -6.5
MIAR Mount Ida 140.79 44 *e*PKPdf PKPdf 16 21 38.6 -6.3
MIAR *e*PKPdf PKPdf 16 21 44.0 -0.9
MIAR LR LR
comp=Z,7μm,20.0s,MS6.4
KVTX Kingsville 140.82 56 PFAKE 16 21 50.0 +4.8
KVTX LR LR
comp=Z,5μm,21.0s,MS6.2
AAM Ann Arbor 141.03 26 *e*PKPdf PKPdf 16 21 44.5 -0.7
AAM LR LR
comp=Z,6μm,20.0s,MS6.3
CAIG El Cayaco 141.43 73 *i* P PKPdf 16 21 38.1 -8.4
HKT Hockley 141.47 51 PKPpre 16 21 42.5
HKT LR LR
comp=Z,7μm,19.0s,MS6.5
UALR University of 141.49 42 *e*PKPdf PKPdf 16 21 46.2 0.0
NATX Nacogdoches 141.49 48 *e*PKPdf PKPdf 16 21 46.9 +0.7
NATX LR LR
comp=Z,6μm,19.0s,MS6.4
OLIL Olney 141.53 34 *e*PKPpre 16 21 40.4
OLIL *e*PKPdf PKPdf 16 21 45.8 -0.3
SIUC Southern Illin 141.59 36 *e*PKPpre 16 21 41.0
SIUC *e*PKPdf PKPdf 16 21 45.9 -0.4
LCO Las Campanas 141.85 167 *e*PKPpre 16 21 42.9
LCO LR LR
comp=Z,18μm,22.0s,MS6.8
PARMO Parma 141.97 38 *e*PKPpre 16 21 41.6
BLO Bloomington 142.06 32 *e*PKPpre 16 21 41.9
PTVM Pico Tres Padr 142.07 69 *e*P PKPdf 16 21 43.1 -4.5
PBVM Pinon 142.13 69 *e*P PKPdf 16 21 48.5 +0.8
GNAR Gosnell 142.26 39 *e*PKPdf PKPdf 16 21 47.2 -0.3
USIN University of 142.31 35 *e*PKPpre 16 21 44.0
IIO Organos 142.43 69 *e*P PKPdf 16 21 45.2 -3.0
GLAT Glass 142.51 38 *e*PKPdf PKPdf 16 21 47.7 -0.3
PPM Popocatepetl 142.62 70 *e*P PKPdf 16 21 44.9 -3.8
PKME Peaks-Kenny Pk 142.64 9 *e*PKPdf PKPdf 16 21 44.6 -3.3
PKME LR LR
comp=Z,6μm,20.0s,MS6.4
ERPA Erie 142.68 23 PFAKE 16 22 00.0 +12
ERPA LR LR
comp=Z,10μm,22.0s,MS6.5
NCB Newcomb 142.87 15 *e*PKPpre 16 21 45.8
NCB LR LR
comp=Z,6μm,22.0s,MS6.3
WCI Wyandotte Cave 142.88 33 *e*PKPpre 16 21 43.4
WCI LR LR
comp=Z,5μm,20.0s,MS6.3
ACSO Alum Creek Sta 142.99 28 *e*PKPpre 16 21 45.1
ACSO LR LR
comp=Z,8μm,22.0s,MS6.4
LBNH Lisbon 143.15 12 PFAKE 16 22 00.0 +11
LBNH LR LR
comp=Z,8μm,21.0s,MS6.5
WVT Waverly 143.49 37 *e*PKPdf PKPdf 16 21 43.8 -5.9
WVT LR LR
comp=Z,7μm,19.0s,MS6.4
PNIG Pinotepa 143.55 74 *i* P 16 21 38.0
ACCN Adirondack Com 143.56 15 *e*PKPpre 16 21 47.3
OXF Oxford 143.57 40 *e*PKPpre 16 21 45.5
OXF LR LR
comp=Z,6μm,19.0s,MS6.4
HNH Hanover 143.58 13 *e*PKPdf PKPdf 16 21 48.1 -1.5
FFD Franklin Falls 143.94 12 *e*PKPdf PKPdf 16 21 48.1 -2.1
BINY Binghamton 144.00 18 *e*PKPdf PKPdf 16 21 48.9 -1.4
BINY LR LR
comp=Z,6μm,20.0s,MS6.4
CAM4 Nova Friburgo 144.20 211 *e*P PKPdf 16 21 49.0 -2.4
CAM4 *i* 16 21 52.2
CAM4 *i* 16 21 56.1
CAM4 *i* 16 22 02.9
CAM4 *i* 16 22 07.6
VBMS Vicksburg 144.21 44 *e*PKPpre 16 21 48.7
VBMS LR LR
comp=Z,6μm,19.0s,MS6.4
CAM3 Guarapari 144.40 215 *e*P PKPdf 16 21 49.7 -2.1
CAM3 *i* 16 21 51.2
CAM3 *i* 16 21 54.6
CAM3 *i* 16 21 57.9
CAM3 *i* 16 22 07.9
CAM3 *i* 16 22 26.6
LVIG Laguna Verde 144.52 68 *i* P PKPdf 16 21 48.0 -4.0
SSPA Standing Stone 144.75 22 *e*PKPdf PKPdf 16 21 49.8 -2.0
SSPA LR LR
comp=Z,9μm,21.0s,MS6.5
VHO Vista Hermosa 144.76 72 *i* P PKPdf 16 21 49.9 -2.5
MCWV Mont Chateau 144.83 25 *e*PKPdf PKPdf 16 21 49.7 -2.3
MCWV LR LR
comp=Z,11μm,20.0s,MS6.6
QUA2 Belchertown 144.92 14 *e*PKPdf PKPdf 16 21 49.7 -2.2
WES Weston 145.05 13 *e*PKP PKPdf 16 21 50.5 -1.7
WES LR LR
comp=Z,5μm,19.0s,MS6.3
SWET Sewanee 145.23 36 *e*PKP PKPdf 16 21 50.1 -2.6
BRYW Bryant College 145.45 13 *e*PKP PKPdf 16 21 52.1 -0.8
HUIG Huatulco 145.56 74 *i* P PKPdf 16 21 52.2 -1.6
TZTN Tazewell 145.59 32 *e*PKP PKPdf 16 21 52.1 -1.2
TZTN LR LR
comp=Z,11μm,20.0s,MS6.6
LUPA Lehigh Univers 145.65 19 *e*PKP PKPdf 16 21 51.7 -1.6
PAL Palisades 145.71 17 *e*PKPdf PKPdf 16 21 52.3 -1.1
BRNJ Basking Ridge 145.82 18 *e*PKPdf PKPdf 16 21 53.9 +0.4
MVL Millersville 145.86 20 *e*PKPdf PKPdf 16 21 52.4 -1.3
CPCT Cooper Cave 145.87 34 *e*PKP PKPdf 16 21 52.2 -1.7
CPNY Central Park 145.89 17 *e*PKPdf PKPdf 16 21 53.2 -0.5
LRAL Lakeview Retre 146.06 40 *e*PKPdf PKPdf 16 21 53.1 -1.1
LRAL LR LR
comp=Z,8μm,20.0s,MS6.5
TKL Tuckaleechee C 146.13 33 *e*PKPdf PKPdf 16 21 53.5 -0.8
SDMD Soldier's Deli 146.21 21 *e*PKPdf PKPdf 16 21 54.1 -0.2
ELN Prospectdale 146.44 28 *e*PKPbc PKPbc 16 21 55.5 -0.6
CMIG Matias Romero 146.50 72 *i* P PKPdf 16 21 54.9 -0.5
BLA Blacksburg 146.61 28 *e*PKPdf PKPdf 16 21 54.2 -0.8
BLA LR LR
comp=Z,12μm,21.0s,MS6.7
TUIG Tuzandepetl 146.74 70 *i* P PKPdf 16 21 56.6 +0.9
CBN Corbin 147.07 23 *e*PKPbc PKPbc 16 21 56.2 -1.6
CBN LR LR
comp=Z,7μm,19.0s,MS6.5
BRAL Brewton 147.30 43 *e*PKPdf PKPdf 16 21 56.6 +0.2
BRAL LR LR
comp=Z,10μm,22.0s,MS6.6
CEN1 Los Morros 147.37 165 *e*P PKPdf 16 21 57.5 +0.7
GOGA Godfrey 147.95 36 *e*PKPdf PKPdf 16 21 56.8 -0.6
GOGA LR LR
comp=Z,11μm,21.0s,MS6.6
LVC Limon Verde 148.42 167 PKPbc PKPbc 16 21 59.9 -2.0
comp=Z,67nm,0.5s,baz=269,slow=0.3,SNR=40
LVC Limon Verde 148.42 167 *e*PKPdf PKPbc 16 22 00.1 -1.9
LVC LR LR
comp=Z,12μm,20.0s,MS6.7
JSC Jenkinsville 148.52 32 *e*PKPdf PKPdf 16 21 57.8 -0.5
CNNC Cliffs of the 149.39 27 *e*PKPdf PKPdf 16 22 00.0 +0.4
CNNC LR LR
comp=Z,8μm,20.0s,MS6.5
NHSC New Hope 150.00 32 PKPdf PKPdf 16 22 00.3 -0.4
NHSC LR LR
comp=Z,10μm,21.0s,MS6.6
PAYG Puerto Ayora 150.10 106 *e*PKPdf PKPdf 16 22 00.8 -0.6
PAYG LR LR
comp=Z,6μm,20.0s,MS6.4
RCBR Riachuelo 150.70 242 *e*PKPdf PKPdf 16 22 02.9 +0.6
RCBR *e*PKPbc PKPbc 16 22 08.6 +0.7
RCBR LR LR
comp=Z,10μm,20.0s,MS6.6
BDFB Brasilia 152.59 210 PKP PKPdf 16 22 04.8 -0.3
comp=Z,24nm,1.1s,baz=23,slow=5.3,SNR=21
BDFB PKPbc PKPbc 16 22 13.1 +1.0
comp=Z,41nm,0.9s,baz=80,slow=5.3,SNR=26
BDFB Brasilia 152.59 210 PKP PKPdf 16 22 04.8 -0.3
BDFB PKPbc PKPbc 16 22 13.1 +1.0
BDFB LR LR
comp=Z,5μm,20.0s,MS6.3
BDFB Brasilia 152.59 210 PKIKP PKPdf 16 22 04.8 -0.3
BDFB 16 22 13.1
BDFB pmax pmax
comp=Z,24nm,1.1s
BDFB pmax pmax
comp=Z,41nm,1.0s
DWPF Disney 152.90 41 PFAKE 16 22 10.0 +4.7
DWPF LR LR
comp=Z,6μm,19.0s,MS6.5
ARE Arequipa 153.50 158 *e*P PKPdf 16 22 08.0 +1.6
TGUH Tegucigalpa,Un 154.26 75 *e*PKPdf PKPdf 16 22 08.0 +0.5
TGUH LR LR
comp=Z,5μm,21.0s,MS6.3
LPAZ La Paz 154.70 165 PKP PKPdf 16 22 09.6 +1.5
comp=Z,61nm,1.2s,baz=44,slow=0.7,SNR=58
LPAZ PKPab PKPab 16 22 30.1 -1.1
comp=Z,28nm,0.5s,baz=193,slow=2.5,SNR=11
LPAZ La Paz 154.70 165 *e*PKIKP PKPdf 16 22 09.5 +1.4
LPAZ MLR MLR
comp=Z,7μm,20.0s
NNA Nana 154.78 143 PKP PKPdf 16 22 08.2 -0.1
comp=Z,42nm,0.9s,baz=253,slow=4.4,SNR=2.2
NNA Nana 154.78 143 *e*PKPdf PKPdf 16 22 07.0 -1.3
NNA LR LR
comp=Z,12μm,21.0s,MS6.7
SIV San Ignacio 155.81 181 PKP PKPdf 16 22 09.8 +0.2
comp=Z,58nm,1.0s,baz=197,slow=1.7,SNR=62
SIV PKPab PKPab 16 22 38.1 +2.1
comp=Z,25nm,1.0s,baz=162,slow=2.4,SNR=6.6
BBSR BB Station 155.94 6 PFAKE 16 22 20.0 +11
BBSR LR LR
comp=Z,5μm,20.0s,MS6.4
OTAV Otavalo 161.43 115 *e*PKPdf PKPdf 16 22 17.0 +0.5
OTAV LR LR
comp=Z,8μm,22.0s
BCIP Isla Barro Col 162.02 86 *e*PKPdf PKPdf 16 22 15.9 -1.1
BCIP LR LR
comp=Z,9μm,20.0s
SDDR Presa de Saban 165.90 40 PFAKE 16 22 30.0 +10
SDDR LR LR
comp=Z,9μm,21.0s
ROSC El Rosal 166.95 105 PKP PKPdf 16 22 21.8 +0.4
comp=Z,27nm,0.9s,baz=70,slow=2.2,SNR=31
ROSC PKPab PKPab 16 23 26.4 +1.3
comp=Z,14nm,0.5s,baz=96,slow=20,SNR=2.7
ROSC El Rosal 166.95 105 *e*PKPdf PKPdf 16 22 21.5 +0.1
SJG San Juan 169.36 24 *e*PKPdf PKPdf 16 22 21.4 -1.5
SJG LR LR
comp=Z,11μm,20.0s
SDV Santo Domingo 171.12 86 *e*PKPdf PKPdf 16 22 22.6 -1.5
SDV LR LR
comp=Z,4μm,20.0s
FDF Fort de France 173.64 356 *e*PKPdf PKPdf 16 22 25.2 +0.2
FDF Fort de France 173.64 356 *e*P PKPdf 16 22 25.1 0.0
BIM Bigot 173.85 355 *e*P PKPdf 16 22 25.2 +0.1
BBGH Gun Hill 174.81 337 PFAKE 16 22 40.0 +15
BBGH LR LR
comp=Z,13μm,20.0s
GRGR Grenville 176.24 360 PKPdf PKPdf 16 22 22.6 -3.2
GRGR LR LR
comp=Z,8μm,20.0s

*ISCJB **25** 16:28:55.1±1.8,37.16N×008.207E±0.1,h10km, Error ellipse: s-maj=17.6km s-min=5.6km az=141.7*
*THE **25** 16:28:56.8,3725N×2079E,h0km±11km,ML2.8/1, Error ellipse: s-maj=19.0km s-min=1.2km az=235.0*
*CSEM **25** 16:28:56.9±0.3,3731N×2087E,h8km,MD2.9, Error ellipse: s-maj=8.2km s-min=3.4km az=48.0*

*ATH **25** 16:28:57.5,37.31N×2091E,h33km,MD2.9/3*
ISC 25 16:28:58.9±1.9,3727N±008×208E±01,h35km±13km,n12,
σ1s03/20,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**117**	P		**Pn**	**16 29 13.3**	**-0.5**
PYL				S		**Sn**	**16 29 25.0**	**+0.4**
KFL	**Anninata**	**0.84**	**357**	P		**Pn**	**16 29 13.1**	**-1.2**
KFL				S		**Sn**	**16 29 25.2**	**-0.2**
ITM	**Ithomi**	**0.87**	**95**	*e*PN		**Pn**	**16 29 13.4**	**-1.2**
ITM				*e*SN		**Sn**	**16 29 25.7**	**-0.4**
VLS	**Valsamata**	**0.93**	**348**	P		**Pn**	**16 29 15.0**	**-0.5**
VLS				S		**Sn**	**16 29 28.3**	**+0.7**
VLS	**Valsamata**	**0.93**	**348**	*e*PN		**Pn**	**16 29 15.1**	**-0.4**
VLS				*e*SB		**Sb**	**16 29 28.5**	**-0.3**
VLS	**Valsamata**	**0.93**	**348**	*e*Pn		**Pn**	**16 29 15.1**	**-0.4**
VLS				S		**Sn**	**16 29 28.3**	**+0.7**
RLS	**Riolos of Patr**	**0.93**	**32**	*e*PN		**Pn**	**16 29 13.9**	**-1.6**
RLS				*e*SN		**Sn**	**16 29 26.4**	**-1.3**
LTK	**Loutraki**	**1.85**	**65**	P		**Pn**	**16 29 28.9**	**+0.8**
AGG	**Agios Georgios**	**2.11**	**33**	P		**Pn**	**16 29 34.0**	**+2.3**
AGG				S		**Sn**	**16 30 02.5**	**+5.8**
LKR	**Lokris**	**2.19**	**50**	P		**Pn**	**16 29 34.0**	**+1.1**
THL	**Klokotos Trika**	**2.47**	**22**	P		**Pn**	**16 29 37.8**	**+1.1**
XOR	**Xorichti**	**2.79**	**41**	P		**Pn**	**16 29 42.2**	**+1.1**

*NEIC **25** 16:39:37.5±0.6,8.16S×11854E,h35km,mb3.5/2, Error ellipse: s-maj=21.9km s-min=9.0km az=61.0*
*ISCJB **25** 16:39:38.7±2.4,807S±010×1186E±01,h68km±21km, mb3.6/7, Error ellipse: s-maj=27.6km s-min=7.9km az=147.2*
*IDC **25** 16:39:39.9±4.9,806S×11860E,h56km±45km,mb3.4/7, mb1 3.7/10,mb1mx3.5/19,mbtmp3.5/10,ML3.8/3,MS4.4/2, Ms1 4.4/2,ms1mx4.3/17, Error ellipse: s-maj=47.3km s-min=10.6km az=67.0*
ISC 25 16:39:40.6±3.7,81S±01×1188E±03,h65km±35km,n18,
σ1s06/20,mb3.6/7,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.19**	**18**	P		**Pn**	**16 40 27.5**	**-0.9**
	9.8nm,0.3s,baz=206,slow=5.7,SNR=33							
KAPI				S		**Sn**	**16 41 05.6**	**+0.4**
	20nm,0.3s,baz=197,slow=19,SNR=15							
KAPI				LR	LR	16 42 25.7		
	comp=Z,3μm,18.4s,baz=313,slow=51							
KAPI	**Kappang**	**3.19**	**18**	*e*Pn		**Pn**	**16 40 27.3**	**-1.1**
KAPI				S		**Sn**	**16 41 05.6**	**+0.4**
BATI	**Baumata**	**5.26**	**114**	P		**Pn**	**16 40 59.8**	**+3.1**
	4.4nm,0.3s,baz=328,slow=3.8,SNR=10							
BATI				S		**Sn**	**16 42 02.5**	**+6.5**
	baz=348,slow=19,SNR=1.6							
BATI				LR	LR	16 43 33.6		
	comp=Z,7μm,20.6s,baz=128,slow=43							
KAKA	**Kakadu**	**14.20**	**110**	*e*P		Px	16 42 44.0	
	6.7nm,0.8s							
WRA	**Warramunga Arr**	**19.13**	**130**	P		**Pn**	**16 43 58.4**	**-1.7**
	0.3nm,0.3s,baz=302,slow=12,SNR=34							
WRA				S		**Sn**	**16 47 29.2**	**-4.9**
	0.1nm,0.3s,baz=305,slow=26,SNR=4.0							
WRAB	**Tennant Creek**	**19.14**	**130**	*e*P		**Pn**	**16 43 59.5**	**-0.5**
	1.7nm,0.5s							
WB2	**Warramunga Arr**	**19.14**	**130**	*e*P		**Pn**	**16 43 58.9**	**-1.3**
ASAR	**Alice Springs**	**21.22**	**139**	P		**P**	**16 44 22.0**	**+0.8**
	2.1nm,0.6s,mb3.7,baz=310,slow=9.5,SNR=23							
ASAR				PcP		PcP	16 48 25.3	+0.9
	0.4nm,0.4s,baz=313,slow=1.5,SNR=9.5							
STKA	**Stephens Creek**	**31.80**	**141**	*e*P		**P**	**16 45 59.8**	**+0.8**
	2.2nm,1.3s,mb3.7							
STKA	**Stephens Creek**	**31.80**	**141**	P		**P**	**16 46 00.1**	**+1.0**
	2.1nm,0.4s,mb4.2,baz=324,slow=8.7,SNR=13							
CMAR	**Chiang Mai Arr**	**32.84**	**324**	P		**P**	**16 46 08.6**	**+0.3**
	0.2nm,0.6s,mb3.1,baz=155,slow=7.2,SNR=3.3							
SONM	**Songino Array**	**56.74**	**350**	P		**P**	**16 49 19.3**	**+1.7**
	0.4nm,0.7s,mb3.5,baz=165,slow=6.0,SNR=3.5							
MKAR	**Makanchi Array**	**63.54**	**333**	P		**P**	**16 50 04.0**	**-0.2**
	0.3nm,0.5s,mb3.3,baz=148,slow=6.2,SNR=5.2							
ZAA0	**Zalesovo Array**	**68.11**	**339**	*e*P		**P**	**16 50 33.0**	**-0.4**
ZALV	**Zalesovo Beam**	**68.11**	**339**	P		**P**	**16 50 32.3**	**-1.1**
	0.8nm,0.5s,mb3.8,baz=148,slow=5.3,SNR=5.6							
VNDA	**Vanda**	**72.93**	**171**	P		**P**	**16 51 02.9**	**+0.4**
	0.4nm,0.5s,mb3.5,baz=321,slow=7.2,SNR=4.7							
VNDA	**Vanda**	**72.93**	**171**	*e*P		**P**	**16 51 02.9**	**+0.4**
	0.3nm,0.4s,mb3.5							
TORD	**Torodi Ar. Bea**	**118.09**	**281**	PKP		PKPdf	16 58 20.4	-0.8
	0.2nm,0.5s,baz=132,slow=2.6,SNR=2.4							

*ATH **25** 16:46:02.8,3886N×2725E,h21km±5km,MD3.2/3*
*DDA **25** 16:46:03.3,3884N×2714E,h27km±1km,Md3.3*
*ISK **25** 16:46:03.5,3884N×2713E,h12km,MD3.3*
*CSEM **25** 16:46:03.8±0.1,3883N×2714E,h15km,MD3.3, Error ellipse: s-maj=1.3km s-min=1.0km az=97.0*
*ISCJB **25** 16:46:03.8±0.6,3886N±002×2712E±003,h7km±4km, Error ellipse: s-maj=3.8km s-min=3.1km az=4.9*
*THE **25** 16:46:04.5,3884N×2713E,h3km±2km,ML3.3/1, Error ellipse: s-maj=2.8km s-min=0.7km az=227.0*
ISC 25 16:46:04.5±0.4,3884N±002×2713E±003,h13km±3km,n42,
σ0s78/73,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.46**	**188**	PG		**Pg**	**16 46 13.1**	**-0.5**
BLCB				SG		**Sg**	**16 46 20.0**	**+0.3**
BLCB	**Balcova**	**0.46**	**188**	P		**Pg**	**16 46 13.4**	**-0.2**
BLCB				S		**Sg**	**16 46 20.0**	**+0.3**
BLCB	**Balcova**	**0.46**	**188**	*i* Pg		**Pg**	**16 46 13.1**	**-0.5**
BLCB				*i* Sg		**Sg**	**16 46 20.0**	**+0.3**
AKS	**Akhisar**	**0.54**	**86**	*e*PG		**Pg**	**16 46 14.5**	**-0.6**
AKS				SG		**Sg**	**16 46 22.5**	**+0.3**
AKHS	**Akhisar**	**0.54**	**86**	*i* P		**Pg**	**16 46 14.3**	**-0.7**
AKHS				*i* S		**Sg**	**16 46 22.4**	**+0.1**
PRK	**Paraskevi**	**0.78**	**302**	P		**Pg**	**16 46 19.3**	**-0.3**
PRK				S		**Sg**	**16 46 30.8**	**+1.0**
PRK	**Paraskevi**	**0.78**	**302**	*e*PN		**Pb**	**16 46 19.0**	**-0.9**
PRK				*e*SN		**Sn**	**16 46 31.5**	**-1.2**
PRK	**Paraskevi**	**0.78**	**302**	*e*Pb		**Pb**	**16 46 19.0**	**-0.9**
PRK				S		**Sg**	**16 46 30.0**	**+1.0**
CHOS	**Chios island**	**0.95**	**242**	P		**Pg**	**16 46 22.6**	**-0.3**
CHOS				S		**Sg**	**16 46 36.8**	**+1.4**
BALB	**Balikesir**	**0.99**	**36**	*e*PG		**Pg**	**16 46 23.0**	**-0.6**
BALB				SG		**Sg**	**16 46 37.2**	**+0.6**
GCAM	**G?zelcaml?**	**1.14**	**176**	*i* P		**Pb**	**16 46 25.4**	**-0.7**
GCAM				*i* S		**Sb**	**16 46 41.2**	**+0.4**
SMG	**Samos**	**1.15**	**191**	*e*PN		**Pn**	**16 46 25.8**	**-0.5**
SMG				*e*SN		**Sn**	**16 46 42.0**	**+0.1**
EZN	**Ezine**	**1.16**	**328**	*e*PN		**Pn**	**16 46 26.1**	**-0.4**
KULA	**Kula-Manisa**	**1.25**	**105**	*e*PN		**Pn**	**16 46 27.0**	**-0.6**
BOZC	**Bozcaada**	**1.30**	**321**	*i* P		**Pn**	**16 46 28.1**	**-0.3**
BOZC				*i* S		**Sb**	**16 46 45.2**	**-0.2**
DST	**Dursunbey**	**1.40**	**56**	*e*PN		**Pn**	**16 46 29.5**	**-0.2**
DST				*e*SN		**Sn**	**16 46 48.1**	**+0.1**
LPK	**Lapseki**	**1.56**	**350**	*e*PN		**Pn**	**16 46 31.8**	**-0.1**
EDC	**Edincik**	**1.61**	**21**	*e*PN		**Pn**	**16 46 32.3**	**-0.3**
MLSB	**Milas**	**1.63**	**161**	*e*PN		**Pn**	**16 46 32.8**	**-0.1**
MLSB				*e*SN		**Sn**	**16 46 53.9**	**+0.3**
BNT	**Bandirma**	**1.63**	**22**	*e*PN		**Pn**	**16 46 32.8**	**-0.2**
BNT				*e*SN		**Sn**	**16 46 54.4**	**+0.5**
KCT	**Karacabey**	**1.71**	**33**	*e*PN		**Pn**	**16 46 33.7**	**-0.3**
KCT				*e*SN		**Sn**	**16 46 55.8**	**0.0**
BDRM	**Kayabasi**	**1.79**	**172**	*i* P		**Pn**	**16 46 37.9**	**+2.8**
BDRM				*i* S		**Sn**	**16 47 01.7**	**+4.0**
LIA	**Limnos Island**	**1.84**	**306**	P		**Pn**	**16 46 36.3**	**+0.5**
LIA	**Limnos Island**	**1.84**	**306**	*e*PN		**Pn**	**16 46 36.4**	**+0.6**
GDZ	**Gediz**	**1.85**	**82**	*i* P		**Pn**	**16 46 37.9**	**+1.9**
GDZ				*i* S		**Sn**	**16 47 02.9**	**+3.6**
KHAL	**Karahalli**	**1.91**	**103**	*i* P		**Pn**	**16 46 36.6**	**-0.2**
KHAL				*i* S		**Sn**	**16 47 04.9**	**+4.2**
YER	**Yerkesik**	**1.93**	**151**	*e*PN		**Pn**	**16 46 37.0**	**-0.1**
ENEZ	**Enez**	**2.04**	**339**	*e*PN		**Pn**	**16 46 39.1**	**+0.6**
ENEZ				*e*SN		**Sn**	**16 47 03.7**	**-0.1**
DAT	**Datca**	**2.14**	**170**	*e*PN		**Pn**	**16 46 39.1**	**-0.8**
ALN	**Alexandroupoli**	**2.22**	**338**	P		**Pn**	**16 46 41.2**	**+0.2**
ALN				S		**Sn**	**16 47 08.9**	**+0.7**
GEMT	**Gemlik**	**2.25**	**44**	*e*PN		**Pn**	**16 46 41.6**	**+0.2**
TURN	**Turunc**	**2.29**	**149**	*i* P		**Pn**	**16 46 39.1**	**-2.8**
TURN				*i* S		**Sn**	**16 47 18.7**	**+8.8**

*IDC **25** 16:52:37.8±0.6, 830S×11822E, h0km, mb4.3/11, mb1 4.4/13, mb1mx4.3/20, mbtmp4.4/13, ML4.7/2, Error ellipse: s-maj=27.8km s-min=13.4km az=67.0*

*ISCJB **25** 16:52:40.5±1.0, 822S±004×11865E±005, h26km±7km, mb4.7/28, Error ellipse: s-maj=7.7km s-min=6.5km az=154.6*

*NEIC **25** 16:52:40.1±4.9, 824S×118.46E, h14km±31km, mb4.4/4, Error ellipse: s-maj=15.8km s-min=7.5km az=73.0*

NEIC Felt [II] at Bima and Raba.

*BJI **25** 16:52:41.4, 8.13S×11882E, h12km, mB5.2, mb4.7*

*DJA **25** 16:52:47.9±0.0, 851S×11870E, h10km, mb4.7/10, mB6.3/1, Mjma4.4/8, MLv4.9/8, Mw(mB)6.0/1*

ISC 25 16:52:39.5±2.0, 823S±004×11864E±004, h6km±13km, n21, σ1§07/66, mb4.7/28, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	3.00	267	P		P	Pn	16 53 25.3	-2.3
KHKI	Kahang-Kahang	3.00	267	P		P	Pn	16 53 26.0	-1.6
KAPI	Kappang	3.38	19	Pn		P	Pn	16 53 32.9	+0.1
	37nm,0.3s,baz=196,slow=7.7,SNR=146								
KAPI				Sn		Sn	Sn	16 54 11.1	-2.1
	80nm,0.3s,baz=177,slow=22,SNR=19								
KAPI	Kappang	3.38	19	*e*Pn		P	Pn	16 53 32.8	0.0
KAPI				Sn		Sn	Sn	16 54 11.1	-2.1
DNP	Denpasar	3.42	262	P		P	Pb	16 53 41.3	+0.7
DNP	Denpasar	3.42	262	P		P	Pb	16 53 40.7	+0.1
	1μm,0.6s								
IGBI	Denpasar	3.50	260	P		P	Pn	16 53 34.4	-0.2
	2μm,0.7s								
NBBI	Negara	3.98	268	P		P	Pb	16 53 51.0	+0.9
NBBI	Negara	3.98	268	P		P	Pb	16 53 50.7	+0.6
	392nm,0.8s,2.6nm8μm								
KMMI	Kalianget	4.78	284	P		P	Pn	16 53 58.8	+6.8
KMMI	Kalianget	4.78	284	P		P	Pn	16 53 56.3	+4.2
	139nm,0.9s,0.6nm								
BATI	Baumata	5.34	112	Pn		P	Pn	16 54 05.0	+5.2
	42nm,0.3s,baz=268,slow=1.9,SNR=30								
BATI				Sn		S	Sn	16 55 12.5	+11
	1.4nm,0.3s,baz=60,slow=20,SNR=2.1								
BATI	Baumata	5.34	112	P		P	Pn	16 54 05.6	+5.9
	86nm,0.5s,0.4nm								
KDI	Kendari	5.80	43	P		P	Pb	16 54 20.1	-1.0
	25nm,0.9s,0.1nm								
BBKI	Banjar Baru	6.05	321	P		P	Pn	16 54 16.6	+7.0
	112nm,0.9s,1.0nm								
KRKI	Karangkates	6.12	270	P		P	Pb	16 54 18.6	-8.1
SJI	Sawahan	6.82	274	P		P	Pn	16 54 24.8	+4.6
LEM	Lembang	11.02	277	P		P	Px	16 55 32.2	
	49nm,1.2s,9μm								
LBMI	Labuha	11.61	50	P		P	Px	16 55 47.4	
DBJI	Dramaga	11.91	277	P		P	Px	16 55 42.5	
	67nm,1.5s								
MBWA	Marble Bar	12.90	175	*e*Pn		P	Pn	16 55 43.0	-0.5
	9.6nm,0.5s								
MYLDM	Lahad Datu	13.32	359	P		P	Px	16 56 11.6	
KAKA	Kakadu	14.28	109	*e*P		P	Px	16 55 47.6	
	21nm,0.4s								
WRA	Warramunga Arr	19.15	129	P		P	Pn	16 57 03.4	-1.1
	1.1nm,0.3s,baz=302,slow=12,SNR=107								
WRA				S		S	Sn	17 00 39.5	0.0
	0.1nm,0.3s,baz=300,slow=22,SNR=4.7								
WRAB	Tennant Creek	19.15	129	*e*P		P	Pn	16 57 05.1	+0.5
	8.8nm,0.6s								
WRAB	Tennant Creek	19.15	129	P		P	Pn	16 57 06.8	+2.3
WB2	Warramunga Arr	19.16	129	*e*P		P	Pn	16 57 04.3	-0.3
PPI	Padang Panjang	19.75	292	P		P	Px	16 57 28.7	
ASAR	Alice Springs	21.20	138	P		P	Pn	16 57 27.4	+1.4
	16nm,0.6s,mb4.5,baz=310,slow=9.3,SNR=149								
ASAR				PcP		PcP	PcP	17 01 31.2	-0.4
	1.3nm,0.4s,baz=309,slow=1.4,SNR=6.3								
IPM	Ipoh	21.63	305	P		P	Px	16 57 40.5	
	25nm,1.8s								
KLBR	Kellerberrin	23.26	182	*e*P		P	Pn	16 57 46.6	-1.3
	51nm,1.3s,mb4.8								
MUN	Mundaring	23.74	185	*e*P		P	Px	16 58 09.4	
FORT	Forrest	24.10	160	*e*P		P	Pn	16 57 55.1	-0.9
	22nm,0.8s,mb4.6								
NWAO	Narrogin (SRO)	24.61	183	P		P	Pn	16 57 59.9	-0.7
	16nm,0.9s,mb4.5,baz=344,slow=6.6,SNR=12								
NWAO	Narrogin (SRO)	24.61	183	*e*P		P	Pn	16 58 00.3	-0.4
COEN	Coen	24.73	105	*e*P		P	Pn	16 58 02.8	+0.9
	22nm,0.8s,mb4.7								
COEN	Coen	24.73	105	P		P	Pn	16 58 06.1	+4.2
	14nm,1.1s,mb4.4								
CTAO	Charters Tower	29.20	117	P		P	Pn	16 58 42.9	+0.8
STKA	Stephens Creek	31.77	141	*e*P		P	Pn	16 59 05.5	+0.8
	7.3nm,0.4s,mb4.9								
STKA	Stephens Creek	31.77	141	P		P	Pn	16 59 05.9	+1.2
	9.0nm,0.4s,mb4.9,baz=317,slow=8.4,SNR=49								
STKA				PcP		PcP	PcP	17 01 54.9	-1.3
	3.2nm,0.6s,baz=332,slow=6.2,SNR=2.8								
STKA	Stephens Creek	31.77	141	*e*P		P	Pn	16 59 05.5	+0.8
STKA				PcP		PcP	PcP	17 01 54.9	-1.3
CMAR	Chiang Mai Arr	32.88	324	P		P	Pn	16 59 13.9	-0.6
	0.6nm,0.4s,mb3.9,baz=152,slow=6.9,SNR=3.5								
ODAN	Odare	46.20	320	*e*P		P	Pn	17 01 06.4	+0.9
	38nm,1.0s,mb5.3								
LZH	Lanzhou	46.22	343	*e*P		P	Pn	17 01 12.5	+7.0
LZH					AP	pP		17 01 16.8	+9.4
LZH					XP	sP		17 01 19.0	+11
LZH					AMB	AMB			
	comp=Z,25nm,1.5s,mb4.9								
LZH					AMB	AMB			
	comp=Z,123nm,5.0s								
KSRS	Korea Array	46.26	10	P		P	Pn	17 01 07.0	+1.2
	comp=Z,3.9nm,0.8s,mb4.4,baz=190,slow=8.7,SNR=6.1								
TAPN	Taplejung	46.35	321	*e*P		P	Pn	17 01 07.1	+0.5
	comp=Z,74nm,1.0s,mb5.5								
RAMN	Ramite	46.77	319	*e*P		P	Pn	17 01 11.5	+1.6
	comp=Z,37nm,1.0s,mb5.3								
JIRN	Jiri	47.52	320	*e*P		P	Pn	17 01 16.1	+0.3
	comp=Z,40nm,0.9s								
GUN	Gumba	47.90	320	*e*P		P	Pn	17 01 18.1	-0.6
	comp=Z,46nm,0.8s								
PKI	Pulchoki	47.97	319	*e*P		P	Pn	17 01 19.3	0.0
PKI	Pulchoki	47.97	319	*e*P		P	Pn	17 01 19.9	+0.6
PKIN	Phulchoki	47.98	319	*e*P		P	Pn	17 01 19.9	+0.6
	comp=Z,13nm,0.8s,mb5.0								
DMN	Daman	48.19	319	*e*P		P	Pn	17 01 21.9	+0.9
	comp=Z,28nm,0.8s,mb5.3								
KKN	Kakani	48.20	319	*e*P		P	Pn	17 01 20.7	-0.3
	comp=Z,20nm,0.9s,mb5.2								
GKN	Gorkha	48.76	319	*e*P		P	Pn	17 01 24.7	-0.7
	comp=Z,26nm,1.0s,mb5.2								
HHC	Hu-ho-hao-te	49.26	353	*e*P		P	Pn	17 01 31.5	+2.5
HHC					AMB	AMB			
	comp=Z,16nm,0.8s,mb5.1								
HHC					AMB	AMB			
	comp=Z,1μm,4.0s								
KOLN	Koldanda	49.29	318	*e*P		P	Pn	17 01 30.2	+0.8
	comp=Z,11nm,0.7s,mb5.0								
DANN	Dangsing	49.56	319	*e*P		P	Pn	17 01 31.2	-0.3
	comp=Z,43nm,0.7s								
PYUN	Piuthan	49.91	318	*e*P		P	Pn	17 01 33.7	-0.5
	comp=Z,9.0nm,0.6s,mb5.0								
GTA	Gaotai	50.51	341	*e*P		P	Pn	17 01 41.5	+3.0
GTA					AP	pP		17 01 45.5	+5.1
GTA					XP	sP		17 01 49.0	+7.8
GTA					AMB	AMB			
	comp=Z,4.0nm,1.2s,mb4.2								
ULN	Ulaanbaatar	56.78	351	P		P	Pn	17 02 25.1	+0.8
	comp=Z,4.7nm,1.0s,mb4.5								
SONM	Songino Array	56.86	350	P		P	Pn	17 02 25.6	+0.8
	comp=Z,0.7nm,0.5s,mb3.9,baz=173,slow=8.1,SNR=5.6								
MK31	Makanchi Array	63.61	333	*e*P		P	Pn	17 03 09.9	-1.3
MKAR	Makanchi Array	63.61	333	P		P	Pn	17 03 09.9	-1.3
	comp=Z,1.3nm,0.6s,mb4.2,baz=153,slow=6.5,SNR=18								
ZALV	Zalesovo Beam	68.19	339	P		P	Pn	17 03 38.4	-2.2
	comp=Z,2.8nm,0.5s,mb4.6,baz=141,slow=5.1,SNR=18								
PETK	Petropavlovsk-	69.51	24	P		P	Pn	17 03 49.2	+0.4
	comp=Z,4.2nm,0.8s,mb4.4,baz=239,slow=7.8,SNR=3.7								
VNDA	Vanda	72.80	171	P		P	Pn	17 04 07.5	-1.0
	comp=Z,1.1nm,0.4s,mb4.1,baz=306,slow=6.6,SNR=17								
VNDA	Vanda	72.80	171	P		P	Pn	17 04 07.5	-1.0
BVAR	Borovoye Array	73.45	332	P		P	Pn	17 04 10.8	-1.8
	comp=Z,0.6nm,0.7s,mb3.6,baz=142,slow=7.3,SNR=4.2								
QSPA	South Pole Qui	81.76	180	*e*P		P	Pn	17 04 59.0	+0.3
	comp=Z,2.7nm,1.0s,mb4.1								
TORD	Torodi Ar. Bea	117.97	281	PKP		PKPdf	PKPdf	17 11 25.6	-2.6
	comp=Z,0.4nm,0.6s,baz=82,slow=1.4,SNR=4.4								

*ISCJB **25** 16:54:57.3±2.0, 8.12S±006×1186E±02, h51km±19km, mb3.9/7, Error ellipse: s-maj=25.5km s-min=8.9km az=166.3*

*IDC **25** 16:54:59.0±4.5, 8.10S×11864E, h46km±42km, mb3.7/8, mb1 3.9/11, mb1mx3.8/19, mbtmp3.8/11, ML3.9/3, Error ellipse: s-maj=51.9km s-min=12.8km az=70.0*

*NEIC **25** 16:54:59.0±1.4, 8.10S×11866E, h49km±14km, mb3.8/2, Error ellipse: s-maj=20.9km s-min=8.2km az=70.0*

ISC 25 16:54:59.2±1.6, 812S±006×1187E±01, h49km±16km, n20, σ0§80/21, mb3.9/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.26	19	P		P	Pn	16 55 47.2	-0.7
	20nm,0.3s,baz=157,slow=18,SNR=7.7								
KAPI				S		Sn	Sn	16 56 25.4	0.0
	56nm,0.3s,baz=179,slow=21,SNR=8.0								
KAPI	Kappang	3.26	19	*e*Pn		P	Pn	16 55 47.2	-0.7
KAPI				*e*Sn		S	Sn	16 56 25.5	+0.1
BATI	Baumata	5.34	113	P		P	Pn	16 56 17.8	+1.4
	2.2nm,0.3s,baz=345,slow=16,SNR=2.8								
MBWA	Marble Bar	13.01	176	*e*Pn		P	Pn	16 58 01.5	+0.1
WRA	Warramunga Arr	19.19	129	P		P	Pn	16 59 18.8	-1.5
	0.5nm,0.3s,baz=302,slow=12,SNR=5.5								
WRAB	Tennant Creek	19.19	129	*e*P		P	Pn	16 59 19.6	-0.8
	4.3nm,0.6s								
ASAR	Alice Springs	21.26	138	P		P	Pn	16 59 41.8	+0.3
	6.1nm,0.6s,mb4.1,baz=317,slow=9.3,SNR=6.5								
STKA	Stephens Creek	31.83	141	P		P	Pn	17 01 20.1	+0.6
	4.0nm,0.4s,baz=312,slow=8.0,SNR=5.7								
STKA				PcP		PcP	PcP	17 04 09.5	-0.2
	1.7nm,0.6s,baz=297,slow=4.5,SNR=3.3								
STKA	Stephens Creek	31.83	141	*e*P		P	Pn	17 01 19.7	+0.2
STKA				PcP		PcP	PcP	17 04 09.5	-0.2
CMAR	Chiang Mai Arr	32.81	324	P		P	Pn	17 01 28.6	+0.4
	0.4nm,0.5s,mb3.6,baz=157,slow=7.0,SNR=3.1								
KSRS	Korea Array	46.15	10	P		P	Pn	17 03 19.5	+0.6
	1.5nm,0.9s,mb3.9,baz=185,slow=9.7,SNR=2.7								
SONM	Songino Array	56.76	350	P		P	Pn	17 04 39.5	+1.4
	0.4nm,0.5s,mb3.7,baz=170,slow=7.7,SNR=3.5								
MK31	Makanchi Array	63.53	333	*e*P		P	Pn	17 05 24.0	-0.5
MKAR	Makanchi Array	63.53	333	P		P	Pn	17 05 24.3	-0.2
	0.7nm,0.6s,mb3.9,baz=147,slow=7.0,SNR=4.4								
MKAR	Makanchi Array	63.53	333	P		P	Pn	17 05 24.3	-0.2
ZALV	Zalesovo Beam	68.11	339	P		P	Pn	17 05 52.7	-1.1
	1.0nm,0.5s,mb4.1,baz=141,slow=5.3,SNR=4.4								
ZALV	Zalesovo Beam	68.11	339	P		P	Pn	17 05 52.7	-1.1
VNDA	Vanda	72.91	171	P		P	Pn	17 06 23.1	+0.3
	0.5nm,0.5s,mb3.7,baz=319,slow=7.9,SNR=6.9								
VNDA	Vanda	72.91	171	*e*P		P	Pn	17 06 23.2	+0.4
	0.5nm,0.4s,mb3.8								
TORD	Torodi Ar. Bea	117.99	281	PKP		PKPdf	PKPdf	17 13 40.0	-1.6
	0.4nm,0.7s,baz=113,slow=2.3,SNR=3.6								

*IDC **25** 17:14:57.2±0.5, 821S×11845E, h0km, mb4.5/15, mb1 4.6/17, mb1mx4.5/21, mbtmp4.5/17, ML4.6/2, Error ellipse: s-maj=21.4km s-min=12.4km az=75.0*

*ISCJB **25** 17:14:58.2±2.0, 822S±004×11857E±006, h16km±14km, mb4.9/47, MS4.6/2, Error ellipse: s-maj=10.1km s-min=5.6km az=151.8*

*BJI **25** 17:14:59.6, 8.13S×11861E, h13km, mB5.4, mb4.7, Ms5.0, Msz4.9*

*MOS **25** 17:15:00.7±1.1, 822S×11859E, h39km, mb4.7/20, Error ellipse: s-maj=18.1km s-min=8.6km az=114.3*

*NEIC **25** 17:15:02.2±0.3, 823S×11853E, h35km, mb4.9/12, Error ellipse: s-maj=12.7km s-min=6.9km az=65.0*

*DJA **25** 17:15:06, 855S×11855E, h20km, MLv5.0/9*

ISC 25 17:15:00.5±2.5, 826S±004×11856E±006, h19km±15km, h22km±3.4km; pP-P, n122, σ1§13/110, mb4.9/47, MS4.6/2, 1C-2D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	2.92	268	P		P	Pn	17 15 44.9	-1.1
KHKI	Kahang-Kahang	2.92	268	P		P	Pn	17 15 44.9	-1.1
DNP	Denpasar	3.34	263	P		P	Px	17 16 00.2	
DNP	Denpasar	3.34	263	P		P	Px	17 16 00.4	
KAPI	Kappang	3.44	20	Pn		P	Pn	17 15 51.9	-1.2
	83nm,0.3s,baz=198,slow=7.7,SNR=157								
KAPI				Sn		Sn	Sn	17 16 28.7	-4.6
	60nm,0.3s,baz=306,slow=23,SNR=3.9								
KAPI	Kappang	3.44	20	Pn		P	Pn	17 15 51.9	-1.2
KAPI				Sn		Sn	Sn	17 16 28.7	-4.6
KAPI	Kappang	3.44	20	P		P	Pn	17 15 51.8	-1.3
KAPI	Kappang	3.44	20	P		P	Pn	17 15 52.1	-1.0
NBBI	Negara	3.90	268	P		P	Pn	17 16 05.7	+6.3
NBBI	Negara	3.90	268	P		P	Pn	17 16 05.4	+6.0
KMMI	Kalianget	4.71	285	P		P	Px	17 16 20.1	
BATI	Baumata	5.39	111	Pn		P	Pn	17 16 24.2	+4.3
	36nm,0.3s,baz=324,slow=3.4,SNR=19								
BATI	Baumata	5.39	111	P		P	Pn	17 16 24.6	+4.6
	157nm,0.7s,0.6nm								
BATI	Baumata	5.39	111	P		P	Pn	17 16 24.5	+4.5
	182nm,0.8s								
KDI	Kendari	5.88	44	P		P	Px	17 16 36.2	
	63nm,0.9s,4μm0.2nm								
KDI	Kendari	5.88	44	P		P	Px	17 16 36.0	
	63nm,0.9s								
BBKI	Banjar Baru	6.04	322	P		P	Pn	17 16 29.0	+0.2
BBKI	Banjar Baru	6.04	322	P		P	Pn	17 16 28.9	+0.1
KRKI	Karangkates	6.05	271	P		P	Px	17 16 37.5	
KRKI	Karangkates	6.05	271	P		P	Px	17 16 37.8	
SJI	Sawahan	6.75	274	P		P	Pn	17 16 43.0	+4.4
MBWA	Marble Bar	12.87	175	*e*Pn		P	Pn	17 18 01.5	-1.0
	15nm,0.6s								
MBWA				*e*Sn		S	Sn	17 20 18.6	-6.8
KAKA	Kakadu	14.34	109	*e*P		P	Px	17 18 07.3	
	48nm,0.6s								
KAKA	Kakadu	14.34	109	*e*Pn		P	Px	17 18 06.8	
KAKA				*e*Sn		S	Sx	17 20 36.6	
WRA	Warramunga Arr	19.19	129	P		P	Pn	17 19 23.1	-1.1
	1.8nm,0.3s,baz=302,slow=13,SNR=140								
WRA				S		S	Sn	17 22 58.1	-0.9
	0.3nm,0.3s,baz=303,slow=24,SNR=6.7								
WRA				PKiKP		PKiKP	PKiKP	17 31 34.2	-2.8
	0.0nm,0.3s,baz=304,slow=1.1,SNR=7.1								
WRAB	Tennant Creek	19.19	129	*e*P		P	Pn	17 19 23.4	-0.9
	21nm,0.8s								
WRAB	Tennant Creek	19.19	129	*i* P		P	Pn	17 19 23.7	-0.6
WB2	Warramunga Arr	19.20	129	*e*P		P	Pn	17 19 23.6	-0.7
ASAR	Alice Springs	21.23	138	P		P	Pn	17 19 46.4	+0.9
	39nm,0.8s,mb4.8,baz=312,slow=9.7,SNR=223								
ASAR				PcP		PcP	PcP	17 23 50.2	-0.2
	2.6nm,0.5s,baz=325,slow=1.8,SNR=9.0								
ASAR				PKiKP		PKiKP	PKiKP	17 31 35.5	-2.4
	0.3nm,0.7s,baz=43,slow=1.8,SNR=4.8								
ASAR	Alice Springs	21.23	138	P		P	Pn	17 19 46.4	+0.9
ASAR				PcP		PcP	PcP	17 23 50.2	-0.2
ASAR	Alice Springs	21.23	138	P		P	Pn	17 19 46.4	+1.0
ASAR								17 23 50.3	
ASAR				pmax		pmax			
	comp=Z,39nm,0.8s								
ASAR				pmax		pmax			
	comp=Z,3.0nm,0.5s								
KULM	Kulim	22.37	306	*e*P		P	Pn	17 19 55.7	-2.0
KLBR	Kellerberrin	23.22	182	*e*P		P	Pn	17 20 06.6	0.0
	comp=Z,73nm,1.4s,mb4.9								
MUN	Mundaring	23.70	185	*e*P		P	Pn	17 20 10.8	-0.5
FORT	Forrest	24.10	160	*e*P		P	Pn	17 20 14.8	-0.2
	comp=Z,22nm,0.6s,mb4.8								
NWAO	Narrogin (SRO)	24.57	183	P		P	Pn	17 20 19.0	-0.3
	comp=Z,9.7nm,0.6s,mb4.5,baz=358,slow=9.2,SNR=13								
NWAO	Narrogin (SRO)	24.57	183	P		P	Pn	17 20 19.0	-0.3
NWAO	Narrogin (SRO)	24.57	183	P		P	Pn	17 20 19.0	-0.3
NWAO				pmax		pmax			
	comp=Z,10.0nm,0.6s								
COEN	Coen	24.80	105	*e*P		P	Pn	17 20 21.7	+0.2
	comp=Z,60nm,0.8s,mb5.2								
QIZ	Qiongzhong	28.45	342	*e*P		P	Pn	17 20 53.7	-0.7
	comp=Z,126nm,1.7s,mb5.3								
CTA	Charters Tower	29.25	117	P		P	Pn	17 21 02.6	+1.0
	comp=Z,4.9nm,0.4s,mb4.6,baz=276,slow=7.7,SNR=6.1								
CTA	Charters Tower	29.25	117	P		P	Pn	17 21 02.6	+1.0
CTA				pmax		pmax			
	comp=Z,5.0nm,0.4s								
STKA	Stephens Creek	31.79	141	*e*P		P	Pn	17 21 24.8	+0.9
	comp=Z,13nm,0.4s,mb5.1								
STKA	Stephens Creek	31.79	141	P		P	Pn	17 21 24.2	+0.3
	comp=Z,16nm,0.4s,mb5.2,baz=316,slow=8.6,SNR=2.8								
STKA				PcP		PcP	PcP	17 24 14.5	-0.5
	comp=Z,3.8nm,0.5s,baz=317,slow=6.8,SNR=4.8								
STKA	Stephens Creek	31.79	141	*e*P		P	Pn	17 21 24.1	+0.2
	comp=Z,5.3nm,0.8s,mb4.4								
STKA				*e*PcP		PcP	PcP	17 24 14.5	-0.5
CM31	Chiang Mai Arr	32.86	324	*e*P		P	Pn	17 21 34.0	+0.7
	comp=Z,4.4nm,0.8s,mb4.4								
CMAR	Chiang Mai Arr	32.86	324	P		P	Pn	17 21 33.9	+0.6
	comp=Z,3.1nm,0.8s,mb4.3,baz=154,slow=6.5,SNR=13								
CMAR	Chiang Mai Arr	32.86	324	P		P	Pn	17 21 33.9	+0.6
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
CHTO	Chiang Mai	33.14	324	*e*P		P	Pn	17 21 36.5	+0.7
	comp=Z,7.4nm,1.0s,mb4.6								
CHTO	Chiang Mai	33.14	324	*e*P		P	Pn	17 21 36.5	+0.7
CHTO				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.5								
KMI	Kunming	36.59	336	P		P	Pn	17 22 08.3	+2.8
KMI				AP		pP		17 22 14.0	+2.7
KMI				AMB		AMB			
	comp=Z,12nm,1.1s,mb4.6								
ARMA	Armidale	37.96	130	*e*P		P	Pn	17 22 19.9	+2.7
TOO	Toolangi	38.02	144	*e*P		P	Pn	17 22 19.3	+1.8
WHN	Wuhan	38.79	354	↑P		P	Pn	17 22 25.3	+1.2
CNB	Canberra Magne	38.98	138	*e*P		P	Pn	17 22 27.3	+1.7
SHL	Shillong	42.48	323	*e*P		P	Pn	17 22 58.0	+3.3
XAN	Xi'an	43.05	348	P		P	Pn	17 22 58.5	-0.6
XAN				AP		pP		17 23 05.8	+0.8
XAN				AMB		AMB			
	comp=Z,5.0nm,1.1s,mb4.2								
XAN				AMB		AMB			
	comp=Z,216nm,8.3s								
LSA	Lhasa	46.05	326	P		P	Pn	17 23 25.3	+2.1
LSA	Lhasa	46.05	326	*e*P		P	Pn	17 23 24.2	+1.0
	comp=Z,89nm,1.8s,mb5.4								
LSA	Lhasa	46.05	326	*e*P		P	Pn	17 23 24.2	+1.0
LSA				pmax		pmax			
	comp=Z,89nm,1.8s,mb5.4								
ODAN	Odare	46.18	320	*e*P		P	Pn	17 23 25.0	+0.7
	comp=Z,69nm,0.9s,mb5.6								
LZH	Lanzhou	46.24	343	*e*P		P	Pn	17 23 26.0	+1.5
LZH				AP		pP		17 23 30.8	+0.4
LZH				XP		sP		17 23 33.3	+0.6
LZH				AMB		AMB			
	comp=Z,21nm,1.3s,mb4.9								
LZH				AMB		AMB			
	comp=Z,104nm,5.2s								
LZH				LR		LR			
	comp=N,197nm,12.7s								
LZH				LR		LR			
	comp=Z,279nm,16.8s,MS4.3								
KSRS	Korea Array	46.31	10	P		P	Pn	17 23 25.4	+0.2
	comp=Z,5.5nm,0.9s,mb4.5,baz=191,slow=8.8,SNR=15								
KSRS	Korea Array	46.31	10	P		P	Pn	17 23 25.4	+0.3
KSRS				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.5								
TAPN	Taplejung	46.33	321	*e*P		P	Pn	17 23 26.4	+1.0
	comp=Z,179nm,1.2s,mb5.9								
RAMN	Ramite	46.75	320	*e*P		P	Pn	17 23 29.7	+1.0
	comp=Z,63nm,1.0s,mb5.5								
JIRN	Jiri	47.50	320	*e*P		P	Pn	17 23 35.5	+0.9
	comp=Z,64nm,0.8s,mb5.7								
GUN	Gumba	47.87	320	*e*P		P	Pn	17 23 38.3	+0.8
	comp=Z,84nm,0.7s,mb5.9								
PKI	Pulchoki	47.94	319	*e*P		P	Pn	17 23 39.0	+1.0
	comp=Z,39nm,0.8s,mb5.5								
DMN	Daman	48.16	319	*e*P		P	Pn	17 23 40.1	+0.3
	comp=Z,50nm,0.8s,mb5.6								
KKN	Kakani	48.17	319	*e*P		P	Pn	17 23 39.9	+0.1
	comp=Z,56nm,1.0s,mb5.5								
MAT	Matsushiro	48.24	21	P		P	Pn	17 23 44.1	+3.9
MJAR	Matsushiro Arr	48.24	21	P		P	Pn	17 23 39.1	-1.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=194,slow=7.2,SNR=4.2								
GKN	Gorkha	48.74	319	*e*P		P	Pn	17 23 43.9	-0.3
	comp=Z,39nm,0.8s,mb5.5								
KOLN	Koldanda	49.26	318	*e*P		P	Pn

	comp=Z,1.2nm,0.6s,mb4.0								
TIXI	**Tiksi**	**80.04**	**3**	*e*P		**P**	**17 27 06.7**	**-1.6**
TIXI				pmax		pmax			
	comp=Z,1.0nm,0.6s,mb3.9								
MBAR	**Mbarara**	**87.76**	**270**⇓	*e*P		**P**	**17 27 47.4**	**-1.7**
BOSA	**Boshof**	**88.98**	**241**	P		**P**	**17 27 53.2**	**-1.3**
	comp=Z,2.3nm,0.7s,mb4.6,baz=163,slow=5.1,SNR=3.6								
BOSA	**Boshof**	**88.98**	**241**	P		**P**	**17 27 53.3**	**-1.2**
BOSA				pmax		pmax			
	comp=Z,2.0nm,0.7s,mb4.6								
SNAA	**Sanae**	**91.59**	**196**	*e*P		**P**	**17 28 02.7**	**-3.1**
SNAA				*e*			17 28 12.0		
SNAA	**Sanae**	**91.59**	**196**	*i* P		**P**	**17 28 02.4**	**-3.4**
VNA2	**Neumayer--Watz**	**93.22**	**195**	*e*P		**P**	**17 28 14.8**	**+1.4**
VNA2				*e*			17 28 24.3		
TORD	**Torodi Ar. Bea**	**117.90**	**280**	PKP		PKPdf	17 33 44.8	-2.1
	comp=Z,0.7nm,0.7s,baz=78,slow=1.3,SNR=7.3								
NVAR	**Mina Array Bea**	**120.88**	**50**	PKP		PKPdf	17 33 52.1	+0.1
	comp=Z,0.4nm,0.7s,baz=232,slow=1.0,SNR=2.6								
PAL	**Palisades**	**145.56**	**17**	*e*PKPdf		PKPdf	17 34 34.4	-3.5
BDFB	**Brasilia**	**152.78**	**209**	PKPbc		PKPbc	17 34 56.9	-0.3
	comp=Z,1.0nm,0.6s,baz=7,0,slow=22,SNR=3.1								
BDFB	**Brasilia**	**152.78**	**209**	PKIKP		PKPbc	17 34 56.9	-0.3
BDFB				pmax		pmax			
	comp=Z,1.0nm,0.6s								
LPAZ	**La Paz**	**154.72**	**165**	PKPbc		PKPbc	17 35 03.6	+2.2
	comp=Z,0.9nm,0.5s,baz=180,slow=1.0,SNR=4.3								
LPAZ	**La Paz**	**154.72**	**165**	PKIKP		PKPbc	17 35 03.7	+2.3
LPAZ				pmax		pmax			
	comp=Z,1.0nm,0.5s								

PRE 25 17:30:16.1±0.8, 2135S×3368E, h5km, ML4.8, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POGA	**Pongola**	**6.28**	**197**	*e*P	Pn	17 31 49.8	+0.3
POGA				*e*S	Sn	17 32 57.8	-3.8
POGA				AML	AML	17 33 48.4	
	comp=Z,50nm,0.5s						
SLR	**Silverton**	**6.60**	**228**	*e*P	Pn	17 31 55.0	+1.2
SLR				*e*S	Sn	17 33 06.9	-2.6
SLR				AML	AML	17 33 49.4	
	comp=Z,111nm,0.6s						
ERPM	**east rand prop**	**6.97**	**225**	*e*P	Pn	17 32 00.5	+1.7
ERPM				*e*S	Sn	17 33 16.1	-2.4
ERPM				AML	AML	17 33 58.5	
	comp=Z,79nm,0.7s						
KSR	**Koster**	**7.67**	**233**	*e*P	Pn	17 32 09.4	+1.0
KSR				*e*S	Sn	17 33 32.9	-2.9
KSR				AML	AML	17 34 19.6	
	comp=Z,106nm,0.4s						
PRYS	**Parys**	**8.01**	**225**	*e*P	Pn	17 32 13.8	+0.7
PRYS				*e*S	Sn	17 33 40.8	-3.4
PRYS				AML	AML	17 34 31.2	
	comp=Z,43nm,0.5s						
LBTB	**Lobatse**	**8.28**	**242**	*e*P	Pn	17 32 18.6	+1.7
LBTB				*e*S	Sn	17 33 46.9	-4.1
LBTB				AML	AML	17 34 33.1	
	comp=Z,52nm,0.8s						
SWZ	**Schweizer**	**9.58**	**231**	*e*P	Pn	17 32 35.8	+1.2
SWZ				*e*S	Sn	17 34 17.9	-4.8
SWZ				AML	AML	17 34 32.2	
	comp=Z,33nm,0.7s						
BOSA	**Boshof**	**10.52**	**225**	*e*P	Pn	17 32 48.7	+1.1
BOSA				*e*S	Sn	17 34 40.6	-5.2
BOSA				AML	AML	17 35 47.5	
	comp=Z,22nm,0.6s						
PKA	**Prieska**	**12.88**	**228**	*e*P	Pn	17 33 21.2	+1.4
PKA				*e*S	Sn	17 35 36.5	-7.0
PKA				AML	AML	17 37 16.3	
	comp=Z,20nm,0.7s						
UPI	**Upington**	**13.26**	**236**	*e*P	Pn	17 33 26.8	+1.7
UPI				*e*S	Sn	17 35 46.4	-6.7
UPI				AML	AML	17 37 11.1	
	comp=Z,20nm,0.6s						

*IDC **25** 17:32:10.9±9.7, 1462N×9173W, h0km, mb4.0/4, mb1 4.4/5, mb1mx3.9/20, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=201.0km s-min=98.6km az=11.0*
*ISCJB **25** 17:32:12.8±1.3, 1427N±005×9287W±004, h11km±8km, mb4.2/5, Error ellipse: s-maj=8.7km s-min=6.1km az=25.8*
*NEIC **25** 17:32:14.2, 1413N×9281W, h10km, mb4.5/2, MD4.4(MEX), After MEX.*
*MEX **25** 17:32:14.2±1.6, 1414N×9281W, h10km±47km, MD4.5*
*CASC **25** 17:32:19.9±1.3, 1414N×9224W, h0km±217km, MD4.5, mb4.5(NEIC)*

ISC 25 17:32:14.7±1.4, 1429N±005×9280W±004, h17km±8km, n34, σ1°32/40, mb4.2/5, 4C-1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.80**	**40**	*i* P	**Pg**	**17 32 28.7**	**-1.8**
THIG				*i* S	**Sg**	**17 32 41.8**	**+0.7**
PCIG		**1.47**	**344**	*i* P	**Pn**	**17 32 38.7**	**-1.7**
PCIG				*i* S	**Sn**	**17 32 57.3**	**-1.9**
FG6		**1.87**	**81**⇑	*e*P	**Pn**	**17 32 46.2**	**+0.2**
FUG	**Fuego 3**	**1.90**	**85**⇓	*e*P	**Pn**	**17 32 45.8**	**-0.5**
PCG	**Pacaya**	**2.12**	**87**	*e*P	**Pn**	**17 32 49.2**	**+0.1**
IXG	**Ixpaco**	**2.27**	**92**⇑	*e*P	**Pn**	**17 32 51.2**	**-0.3**
NBG	**Las Nubes**	**2.39**	**82**⇑	*e*P	**Pn**	**17 32 55.0**	**+1.9**
TGIG		**2.50**	**353**	*i* P	**Pn**	**17 32 55.1**	**+0.5**
TGIG				*i* S	**Sn**	**17 33 25.5**	**+0.8**
RBDL	**Robledal**	**3.02**	**93**	*e*P	x	17 33 01.8	
RTR	**El Retiro**	**3.08**	**97**	*e*P	x	17 33 02.0	
SBLS	**San Blas**	**3.11**	**98**	*e*P	x	17 33 02.9	
SNJE	**San Jose**	**3.12**	**97**	*e*P	x	17 33 02.7	
CMIG	**Matias Romero**	**3.44**	**324**	*i* P	**Pn**	**17 33 07.5**	**0.0**
CMIG				*i* S	**Sn**	**17 33 46.4**	**-1.5**
BOQS	**Boqueron**	**3.46**	**99**	*e*P	x	17 33 07.2	
HUIG	**Huatulco**	**3.52**	**295**	*i* S	**Sn**	**17 33 49.4**	**-0.6**
LBRS	**Las Brisas**	**3.68**	**98**	*e*P	x	17 33 10.8	
LFRS	**El Faro**	**3.68**	**100**	*e*P	x	17 33 10.2	
TUIG	**Tuzandepetl**	**4.04**	**337**	*e*P	**Pn**	**17 33 16.1**	**+0.3**
TUIG				*i* S	**Sn**	**17 34 04.1**	**+1.3**
OXX	**Oaxaca**	**4.70**	**307**	*e*P	**Pn**	**17 33 24.7**	**-0.1**
OXX				*i* S	**Sn**	**17 34 19.5**	**+0.6**
VHO	**Vista Hermosa**	**4.70**	**307**	*i* P	**Pn**	**17 33 24.6**	**-0.2**
VHO				*i* S	**Sn**	**17 34 19.5**	**+0.6**
TGUH	**Tegucigalpa,Un** 22nm,0.7s	**5.36**	**92**	*e*Pn	**Pn**	**17 33 39.1**	**+5.2**
PNIG	**Pinotepa**	**5.55**	**293**	*i* P	**Pn**	**17 33 36.1**	**-0.5**
PNIG				*i* S	**Sn**	**17 34 38.4**	**-1.7**
UTMO	**Huajuapan**	**5.97**	**307**	*i* P	**Pn**	**17 33 38.6**	**-3.7**
UTMO				*i* S	**Sn**	**17 34 51.9**	**+1.7**
TPIG	**Tehuac#an**	**6.01**	**314**	*e*P	**Pn**	**17 33 41.8**	**-1.0**
TPIG				*i* S	**Sn**	**17 34 50.3**	**-1.0**
CAIG	**El Cayaco**	**7.70**	**292**	*i* P	**Pn**	**17 34 08.9**	**+2.8**
CAIG				*i* S	**Sn**	**17 35 33.0**	**0.0**
IIO	**Organos**	**7.75**	**314**	*e*P	**Pn**	**17 34 09.0**	**+2.3**
IIO				*i* S	**Sn**	**17 35 30.8**	**-3.3**
MZVM		**7.86**	**309**	*e*P	**Pn**	**17 34 08.8**	**+0.5**
MZVM				*i* S	**Sn**	**17 35 41.1**	**+4.3**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=147,slow=13,SNR=16	**18.04**	**328**	P	**Pn**	**17 36 27.1**	**+2.5**
SDV	**Santo Domingo** 2.2nm,0.5s,mb3.8	**22.36**	**101**	*e*P	**P**	**17 37 09.7**	**-2.3**
RWWY	**Rawlins** 16nm,0.5s,mb5.0	**30.03**	**338**	*e*P	**P**	**17 38 26.4**	**+3.6**
PDAR	**Pinedale Array** 0.7nm,0.9s,baz=140,slow=9.4,SNR=4.5	**31.85**	**336**	P	**P**	**17 38 38.5**	**-0.2**
NVAR	**Mina Array Bea** 1.6nm,0.6s,mb4.1,baz=130,slow=8.4,SNR=9.0	**32.97**	**322**	P	**P**	**17 38 50.7**	**+2.1**
YKA	**Yellowknife Ar** 2.3nm,0.7s,mb4.2,baz=133,slow=8.7,SNR=11	**50.57**	**347**	P	**P**	**17 41 10.0**	**-2.1**
DLBC	**Dease Lake** 1.2nm,0.6s,mb4.0,baz=167,slow=9.2,SNR=4.1	**52.08**	**336**	P	**P**	**17 41 24.3**	**+0.8**

*IDC **25** 17:39:38.8±2.2, 2281N×9227E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/23, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=56.8km s-min=31.6km az=43.0*
*ISCJB **25** 17:39:39.4±6.0, 228N±02×923E±03, h20km±42km, mb3.6/6, Error ellipse: s-maj=57.4km s-min=12.7km az=146.9*
*NEIC **25** 17:39:43.6±0.8, 2279N×9233E, h35km, mb3.7/1, Error ellipse: s-maj=26.1km s-min=6.3km az=50.0*

ISC 25 17:39:43.8±2.4, 228N±02×923E±03, h35km±20km, n14, σ0°43/14, mb3.6/6, 1C, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.97**	**352**	*e*Pn	**Pn**	**17 41 23.9**	**+0.6**
	4.1nm,0.3s						
CHTO	**Chiang Mai** 3.5nm,0.9s	**7.35**	**121**	*e*Pn	**Pn**	**17 41 28.4**	**-0.2**
CM31	**Chiang Mai Arr** 1.4nm,0.4s	**7.55**	**124**	Pn	**Pn**	**17 41 31.4**	**+0.1**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=301,slow=13,SNR=13	**7.55**	**124**	Pn	**Pn**	**17 41 31.1**	**-0.3**
MK31	**Makanchi Array**	**25.29**	**344**	*e*P	**P**	**17 45 05.8**	**-0.9**
MKAR	**Makanchi Array** 1.2nm,0.6s,mb3.6,baz=164,slow=7.7,SNR=10	**25.29**	**344**	P	**P**	**17 45 06.4**	**-0.4**
SONM	**Songino Array** 0.6nm,0.8s,mb3.2,baz=185,slow=12,SNR=4.8	**27.42**	**21**	P	**P**	**17 45 26.1**	**+0.2**
KURK	**Kurchatov** 1.2nm,0.5s,mb3.9,baz=152,slow=9.4,SNR=5.2	**29.86**	**342**	P	**P**	**17 45 47.0**	**-0.6**
KURK	**Kurchatov** 1.0nm,0.8s,mb3.6	**29.86**	**342**	P	**P**	**17 45 47.7**	**0.0**
TSM	**Tawau**	**30.80**	**123**	⇑P	**P**	**17 45 56.9**	**+0.6**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,mb3.7,baz=176,slow=8.8,SNR=3.8	**31.63**	**352**	P	**P**	**17 46 03.2**	**0.0**
GERES	**GERESS Array B** 0.1nm,0.3s,mb3.3,baz=63,slow=7.1,SNR=3.7	**65.83**	**315**	P	**P**	**17 50 25.6**	**+0.1**
NOA	**NORSAR Array B** 1.9nm,0.9s,mb4.1,baz=130,slow=5.0,SNR=3.2	**66.06**	**328**	P	**P**	**17 50 27.3**	**+0.5**
NOA	**NORSAR Array B**	**66.06**	**328**	P	**P**	**17 50 27.3**	**+0.5**

*SZGRF **25** 17:41:32.6, 409S×10072E, h44km, mb5.8, Southwest of Sumatera, Indonesia*
*IDC **25** 17:41:32.6±0.3, 2.13S×100.49E, h0km, mb5.5/29, mb1 5.6/30, mb1mx5.6/30, mbtmp5.5/30, ML5.6/1, MS5.4/29, Ms1 5.5/29, ms1mx5.4/41, Error ellipse: s-maj=15.0km s-min=8.4km az=60.0*
*BJI **25** 17:41:33.5, 2.52S×100.33E, h32km, mB5.6, mb5.5, Ms5.8, Msz5.6*
*MOS **25** 17:41:36.8±1.1, 2.11S×100.47E, h33km, mb6.0/100, MS5.5/43, Error ellipse: s-maj=8.4km s-min=3.8km az=119.5*
*ISCJB **25** 17:41:37.4±0.1, 2.27S±002×100.35E±002, h41km, mb5.7/227, MS5.7/140, Error ellipse: s-maj=3.2km s-min=2.3km az=27.2*
*NEIC **25** 17:41:38.0±0.1, 2.24S×100.41E, h35km, mb5.7/86, MS5.7/84, MW6.0, Error ellipse: s-maj=4.9km s-min=3.6km az=213.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s116.00000°, δ54.00000°, λ-125.00000°. NP2: ϕ_s346.00000°, δ48.00000°, λ-52.00000°. Principal axes: T 1.4000, Plg3.0000°, Azm230.0000°; N -0.5100, Plg27.0000°, Azm138.0000°; P -0.8900, Plg62.0000°, Azm326.0000°;*
NEIC Felt [IV] at Ipuh, Mukomuko, Padang and Painan; [III] at Kepahiang and Padangpanjang, Sumatra.
*GCMT **25** 17:41:38.0±0.1, 2.37S×100.17E, h35km, MW5.9/94, Moment Tensor Solution. s92, c168; s94, c234; Duration: 29.1 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.78±.01; $M_{\theta\theta}$0.32±.01; $M_{\phi\phi}$0.45±.01; $M_{r\theta}$-0.18±.01; $M_{\theta\phi}$-0.40±.01; $M_{r\phi}$-0.24±.01; Best double couple: $M_0$0.83400×10^{18} NP1:ϕ_s122.00000°, δ45.00000°, λ-117.00000°. NP2:ϕ_s338.00000°, δ50.00000°, λ-65.00000°. Principal axes: T 0.7910, Plg3.0000°, Azm51.0000°; N 0.0860, Plg19.0000°, Azm142.0000°; P -0.8780, Plg71.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=40s.*
*DJA **25** 17:41:38.7±0.0, 2.42S×100.07E, h49km, mB6.2/33, Mjma5.8/15, MLv6.3/15, Mw(mB)5.9/33, Mwp5.7/39*

ISC 25 17:41:39.3±0.1, 227S±002×10033E±002, h43km, h43km±.9km:pP-P, n909, σ1°06/792, mb5.7/226, MS5.7/140, 48C-60D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.36**	**5**	P	**Pn**	**17 42 01.9**	**+0.1**
PPI	**Padang Panjang**	**1.80**	**2**	P	**Pn**	**17 42 09.0**	**+1.0**
KSI	**Kapahiang**	**2.64**	**121**	P	**Pn**	**17 42 19.5**	**0.0**
RGRI	**Rengat**	**2.77**	**46**	P	**Pn**	**17 42 22.9**	**+1.7**
JMBI	**JAMBI**	**3.37**	**79**	P	**Pn**	**17 42 30.2**	**+0.7**
TRSI	**Tarutung**	**4.48**	**342**	P	**Pn**	**17 42 45.6**	**+0.8**
GSI	**Gunungsitoli**	**4.49**	**322**	P	**Pn**	**17 42 43.9**	**-1.1**
KLI	**Kotabumi** 2μm,0.8s,34nm	**5.20**	**120**	P	**Pn**	**17 42 55.9**	**+1.3**
KGM	**Kluang**	**5.20**	**35**	⇑P	**Pn**	**17 42 56.5**	**+1.9**
MYKOM	**Kota Tinggi**	**5.35**	**41**	⇑P	**Pn**	**17 42 58.6**	**+1.9**
MYKOM	**Kota Tinggi**	**5.35**	**41**	P	**Pn**	**17 42 58.0**	**+1.3**
FRIM	**Kepong**	**5.62**	**13**	⇑P	**Pn**	**17 43 03.1**	**+2.6**
PPBI	**Pangkal Pinang** 221nm,1.1s,4.2nm	**5.80**	**89**	P	**Pn**	**17 43 04.2**	**+1.3**
IPM	**Ipoh** 1μm,0.9s,5.0nm	**6.74**	**6**	P	**Pn**	**17 43 18.4**	**+2.6**
SBJI	**Serang** 2μm,1.0s,7.5nm	**6.93**	**124**	P	**Pn**	**17 43 21.4**	**+3.0**
TPI	**Tanjungpandan** 203nm,0.8s,8μm3.3nm	**7.33**	**94**	P	**Pn**	**17 43 25.4**	**+1.5**
KULM	**Kulim**	**7.52**	**2**	*e*Pn	**Pn**	**17 43 24.0**	**-2.5**
KULM	**Kulim**	**7.52**	**2**	⇑P	**Pn**	**17 43 27.4**	**+0.9**
KULM	**Kulim**	**7.52**	**2**	⇓P	**Pn**	**17 43 28.2**	**+1.7**
DBJI	**Dramaga** 1μm,1.3s,11nm	**7.68**	**124**	P	**Pn**	**17 43 29.3**	**+0.5**
CBJI	**Citeko** 3μm,0.8s,17nm	**7.70**	**123**	P	**Pn**	**17 43 32.0**	**+3.1**
KTGM	**Kuala Trenggan**	**8.05**	**20**	⇑P	**Pn**	**17 43 37.1**	**+3.3**
LEM	**Lembang** 792nm,1.1s	**8.56**	**122**	P	**Pn**	**17 43 41.9**	**+1.2**
BSI	**Banda Aceh** 468nm,1.0s,6μm	**9.21**	**327**	P	**Pn**	**17 43 47.9**	**-1.8**
XMIS	**Christmas Isla**	**9.72**	**147**	*e*P	**Pn**	**17 43 48.9**	**-7.8**
XMIS				*e*S	**Sn**	**17 45 26.8**	**-18**
XMIS	**Christmas Isla**	**9.72**	**147**	*e*Pn	**Pn**	**17 43 49.3**	**-7.4**
XMIS	**Christmas Isla** 0.0nm,0.8s,0.0nm	**9.72**	**147**	P	**Pn**	**17 43 49.9**	**-6.8**
COCO	**West Island** SNR=5.4	**10.45**	**199**	⇓P	**Pn**	**17 44 09.4**	**+2.8**
COCO	**West Island**	**10.45**	**199**	*e*Pn	**Pn**	**17 44 02.3**	**-4.3**
COCO	**West Island** 327nm,0.9s,3μm	**10.45**	**199**	P	**Pn**	**17 44 05.7**	**-0.9**
BJII	**Banjamegara**	**10.61**	**119**	P	**Pn**	**17 44 09.7**	**+0.8**
KSM	**Kuching**	**10.64**	**70**	*e*Pn	**Pn**	**17 44 08.2**	**-1.1**
KSM				*e*Sn	**Sn**	**17 46 06.8**	**-0.5**
KSM	**Kuching**	**10.64**	**70**	⇓P	**Pn**	**17 44 14.0**	**+4.6**
SMRI	**Semarang** 1μm,1.0s	**11.13**	**116**	P	**Pn**	**17 44 16.9**	**+0.8**
STKI	**Sintang** 196nm,0.8s,5μm	**11.38**	**78**	P	**Pn**	**17 44 24.6**	**+5.1**
UGM	**Wanagama** 661nm,0.8s	**11.59**	**119**	P	**Pn**	**17 44 21.2**	**-1.1**
SJI	**Sawahan**	**12.62**	**116**	P	**Pn**	**17 44 35.3**	**-1.0**
SBUM	**Sibu**	**12.78**	**69**	⇑P	**Pn**	**17 44 42.9**	**+4.4**
SBUM	**Sibu**	**12.78**	**69**	P	**Pn**	**17 44 43.1**	**+4.6**
KRKI	**Karangkates**	**13.41**	**116**	P	**Pn**	**17 44 47.4**	**+0.2**
PLKI	**Palangkaraya** 583nm,0.9s,8μm	**13.60**	**90**	P	**Pn**	**17 44 55.1**	**+5.3**
KMMI	**Kalianget** 465nm,1.3s,7μm	**14.39**	**110**	P	**Pn**	**17 45 01.1**	**+0.5**
BBKI	**Banjar Baru** 553nm,0.9s	**14.54**	**95**	P	**Pn**	**17 45 05.9**	**+3.3**
NNT	**Nongplab**	**14.78**	**358**	P	**Pn**	**17 45 10.9**	**+5.3**
NBBI	**Negara** 395nm,0.6s	**15.46**	**114**	P	**Pn**	**17 45 15.9**	**+1.3**
IGBI	**Denpasar** 349nm,0.7s,9μm	**16.11**	**114**	P	**Pn**	**17 45 22.6**	**-0.3**
KHKI	**Kahang-Kahang**	**16.36**	**112**	P	**Pn**	**17 45 26.4**	**+0.2**
NST	**Nakhon Sawan**	**17.83**	**359**	P	**Pn**	**17 45 43.0**	**-1.4**
KKM	**Kota Kinabalu**	**17.88**	**62**	*e*P	**Pn**	**17 45 45.8**	**+0.8**
KKM	**Kota Kinabalu**	**17.88**	**62**	⇓P	**Pn**	**17 45 48.0**	**+2.9**
KKM	**Kota Kinabalu** 183nm,1.6s,6μm	**17.88**	**62**	P	**Pn**	**17 45 47.7**	**+2.6**
UBT	**Ubonrachathani** 347nm,0.6s	**18.01**	**15**	⇑P	**Pn**	**17 45 47.0**	**+0.4**
SDKM	**Sandakan**	**18.59**	**65**	⇓P	**Pn**	**17 45 55.1**	**+1.5**
KKTK	**Khon Kaen**	**18.65**	**7**	P	**Px**	17 45 44.0	
KDM	**Kudat**	**18.83**	**61**	⇓P	**Pn**	**17 45 58.9**	**+2.4**
BDT	**Bhumibol Dam** 51nm,1.0s	**19.43**	**356**	P	**Pn**	**17 46 02.5**	**-1.3**
PCI	**Palu** 533nm,1.1s,10μm	**19.54**	**86**	P	**Pn**	**17 46 05.2**	**0.0**
KAPI	**Kappang**	**19.57**	**99**	P	**Pn**	**17 46 04.9**	**-0.5**
	SNR=47						
KAPI	**Kappang** 17nm,0.3s,baz=296,slow=6.6,SNR=71	**19.57**	**99**	P	**Pn**	**17 46 02.8**	**-2.7**
KAPI				LR	LR	17 54 28.6	
	comp=Z,20μm,18.8s,baz=268,slow=40						
KAPI	**Kappang**	**19.57**	**99**	*e*Pn	**Pn**	**17 46 03.2**	**-2.2**
KAPI	**Kappang** 219nm,0.9s,3μm	**19.57**	**99**	P	**Pn**	**17 46 03.2**	**-2.3**
MYLDM	**Lahad Datu**	**19.60**	**68**	⇑P	**Pn**	**17 46 08.1**	**+2.3**
MYLDM	**Lahad Datu**	**19.60**	**68**	P	**Pn**	**17 46 07.4**	**+1.6**
BATP	**Bataraza**	**20.59**	**58**	*e*P	**P**	**17 46 15.8**	**+0.8**
CM31	**Chiang Mai Arr** 394nm,1.1s	**20.64**	**356**	*e*P	**P**	**17 46 14.4**	**-1.0**
CMAR	**Chiang Mai Arr** 49nm,0.6s,baz=186,slow=11,SNR=106	**20.64**	**356**	P	**P**	**17 46 13.4**	**-2.0**
CMAR				PcP	PcP	17 50 25.6	+0.7
	10nm,0.9s,baz=212,slow=3.3,SNR=4.9						
CMAR				LR	LR	17 54 34.8	
	comp=Z,14μm,18.6s,MS5.4,baz=180,slow=38						
CMAR				P3KPbc		18 20 26.0	
	0.7nm,0.9s,baz=329,slow=6.8,SNR=6.2						
CMAR	**Chiang Mai Arr**	**20.64**	**356**	P	**P**	**17 46 13.4**	**-2.0**
CMAR				PcP	PcP	17 50 25.6	+0.7
CMAR				LR	LR	17 54 34.8	
CMAR	**Chiang Mai Arr**	**20.64**	**356**	P	**P**	**17 46 13.5**	**-1.9**
CMAR						17 50 25.6	
CMAR				pmax	pmax		
	comp=Z,49nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,11nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,14μm,18.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NANT	**Nan** comp=Z,2μm,1.0s	**20.94**	**1**	⇓P	**P**	**17 46 15.0**	**-3.6**
CHG	**Chiang Mai** 2.146nm,0.9s	**21.00**	**356**	⇓P	**P**	**17 46 17.3**	**-1.9**
CHTO	**Chiang Mai** SNR=25	**21.00**	**356**	P	**P**	**17 46 18.3**	**-0.9**
CHTO	**Chiang Mai** comp=Z,121nm,0.9s	**21.00**	**356**	*e*Pn	**P**	**17 46 17.2**	**-2.0**
CHTO				LR	LR		
	comp=Z,14μm,20.0s,MS5.3						
CHTO	**Chiang Mai** comp=Z,155nm,1.0s,comp=Z,2μm	**21.00**	**356**	P	**P**	**17 46 17.5**	**-1.7**
KDI	**Kendari** comp=Z,172nm,1.0s,comp=Z,4μm,mb5.4	**22.32**	**95**	P	**P**	**17 46 34.4**	**+0.9**
QIZ	**Qiongzhong**	**23.14**	**23**	P	**P**	**17 46 41.0**	**-1.1**
QIZ				AP		17 46 49.5	
QIZ				XP	sP	17 46 53.5	-4.6
QIZ				S	**S**	**17 50 48.0**	**-2.5**
QIZ				XS	sS	17 51 05.0	-4.5
QIZ				AMB	AMB		
	comp=Z,38nm,1.1s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,1μm,9.9s						
QIZ				LR	LR		
	comp=N,8μm,23.1s,MS5.3						
QIZ				LR	LR		
	comp=E,7μm,19.2s,MS5.3						
QIZ				LR	LR		
	comp=Z,10μm,23.8s,MS5.2						
QIZ	**Qiongzhong** comp=Z,98nm,0.9s,mb5.2	**23.14**	**23**	*e*P	**P**	**17 46 38.8**	**-3.3**
ENPP	**El Nido**	**23.24**	**54**	*e*P	**P**	**17 46 43.9**	**+0.7**
BUSP	**Coron**	**24.31**	**54**	*e*P	**P**	**17 46 53.6**	**+0.5**
IPIL	**Ipil**	**24.33**	**66**⇓	*i*P	**P**	**17 46 53.6**	**+0.3**
CUYO	**Cuyo Island**	**24.36**	**57**	*e*P	**P**	**17 46 53.9**	**+0.3**
BATI	**Baumata** comp=Z,76nm,0.4s,mb5.5,baz=283,slow=2.3,SNR=28	**24.48**	**110**	P	**P**	**17 46 51.3**	**-3.4**
BATI				S	**S**	**17 51 07.0**	**-5.4**
	comp=Z,55nm,0.6s,baz=150,slow=22,SNR=5.7						
BATI	**Baumata** comp=Z,156nm,0.8s,comp=Z,2μm,mb5.5	**24.48**	**110**	P	**P**	**17 46 50.7**	**-4.0**
MNI	**Manado** comp=Z,1μm,0.9s,mb6.4	**24.78**	**82**	P	**P**	**17 47 00.4**	**+3.0**
MDRS	**Chennai**	**25.09**	**308**	*ex*	x	17 46 49.1	
PAGZ	**Pagadian**	**25.09**	**66**	*e*P	**P**	**17 46 59.9**	**-0.4**
LUBP	**Lubang**	**25.35**	**51**	*e*P	**P**	**17 47 01.2**	**-1.4**
GUIM	**Jordan**	**25.59**	**60**	*e*P	**P**	**17 47 04.7**	**-0.1**
CTBH	**Cotabato--PC H**	**25.66**	**68**⇓	*e*P	**P**	**17 47 05.8**	**+0.4**
CTBH				*e*S	sP	17 47 29.3	+7.2
KALP	**Kalibo**	**25.90**	**57**⇓	*e*P	**P**	**17 47 05.2**	**-2.4**
KOD	**Kodaikanal**	**25.93**	**299**	*e*P	**P**	**17 47 09.9**	**+2.0**
KOD				AMb	AMB	17 47 14.4	
	comp=Z,132nm,2.0s,mb5.1						
VIS	**Vishakhapatnam**	**25.99**	**321**	*e*P	**P**	**17 47 08.2**	**-0.1**
VIS				AMb	AMB	17 47 14.3	
	comp=Z,206nm,1.1s,mb5.6						
VIS				*e*S	**S**	**17 51 38.5**	**+2.2**
OTRP	**Odiongan**	**25.99**	**55**	*e*P	**P**	**17 47 07.7**	**-0.7**
RCP	**Roxas**	**26.18**	**58**⇓	*e*P	**P**	**17 47 11.3**	**+1.2**
TBP	**Tagbilaran**	**26.28**	**63**	*e*P	**P**	**17 47 10.7**	**-0.3**
BWNR	**Bhubaneshwar**	**26.57**	**328**	*e*P	**P**	**17 47 11.2**	**-2.3**
BWNR				*ex*	x	17 51 32.1	
MBWA	**Marble Bar** comp=Z,89nm,0.8s,mb5.3	**26.64**	**136**	*e*P	**P**	**17 47 13.3**	**-0.9**
MBWA				LR	LR		
	comp=Z,18μm,22.0s,MS5.6						
LLP	**Lapu-Lapu**	**26.64**	**62**	*e*P	**P**	**17 47 13.4**	**-0.9**
BUKP

GYA AMB AMB
comp=Z,140nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,570nm,5.1s
GYA LR LR
comp=N,9µm,20.0s,MS5.7
GYA LR LR
comp=E,14µm,18.0s,MS5.7
GYA LR LR
comp=Z,11µm,20.0s,MS5.5
BOK Bokaro 29.48 332 *e*P **P 17 47 40.1 +0.7**
BOK AMb AMB 17 47 45.5
comp=Z,262nm,0.5s,mb6.2
MNGI Mangalore 29.49 301 *e*P **P 17 47 39.6 -0.1**
NGP Nagpur 31.24 319 *e*P **P 17 47 54.5 -0.6**
NGP *ex* x 17 47 56.8
comp=Z,118nm,1.6s
NGP *ex* x 17 53 03.9
ODAN Odare 31.54 338 *e*P **P 17 47 58.5 +0.8**
comp=Z,680nm,0.8s,mb6.5
GOA Goa 31.61 305 *e*P **P 17 47 59.7 +1.3**
GOA AMb AMB 17 48 02.2
comp=Z,102nm,1.4s,mb5.5
TAPN Taplejung 31.86 338 *e*P **P 17 48 01.4 +0.9**
comp=Z,746nm,1.0s,mb6.5
RAMN Ramite 31.93 336 *e*P **P 17 48 02.5 +1.4**
comp=Z,485nm,0.8s,mb6.4
AKL Akola 32.30 316 *e*P **P 17 48 03.4 -1.0**
KAD Karad 32.30 308 *e*P **P 17 48 04.7 +0.2**
KAD AMb AMB 17 48 07.9
comp=Z,187nm,1.0s,mb5.9
QZH Quanzhou 32.34 32 P **P 17 48 03.3 -1.4**
QZH S **S 17 53 09.0 -6.8**
QZH AMB AMB
comp=Z,130nm,0.8s,mb5.8
QZH LR LR
comp=N,17µm,16.6s,MS5.9
QZH LR LR
comp=E,10µm,16.7s,MS5.9
QZH LR LR
comp=Z,24µm,17.1s,MS6.0
JIRN Jiri 32.72 336 *e*P **P 17 48 09.1 +1.1**
comp=Z,1µm,0.8s,mb6.8
ALBI Allahabad 32.77 328 *e*P **P 17 48 07.0 -1.5**
PKI Pulchoki 32.97 335 *e*P **P 17 48 11.0 +0.8**
comp=Z,348nm,1.1s,mb6.2
PKI Pulchoki 32.97 335 *e*P **P 17 48 11.1 +0.9**
PKIN Phulchoki 32.98 335 *e*P **P 17 48 11.1 +0.8**
comp=Z,104nm,0.5s,mb6.0
LSA Lhasa 32.98 345 P **P 17 48 10.8 +0.5**
LSA XP sP 17 48 26.8 -0.2
LSA AMB AMB
comp=Z,370nm,1.0s,mb6.3
LSA AMB AMB
comp=Z,2µm,3.0s
LSA LR LR
comp=N,3µm,25.0s,MS5.1
LSA LR LR
comp=E,3µm,23.0s,MS5.1
LSA LR LR
comp=Z,7µm,28.0s,MS5.2
LSA Lhasa 32.98 345 *e*P **P 17 48 10.8 +0.5**
comp=Z,231nm,0.4s,mb6.5
LSA Lhasa 32.98 345 *e*P **P 17 48 10.8 +0.5**
LSA pmax pmax
comp=Z,231nm,0.4s,mb6.5
GUN Gumba 33.07 336 *e*P **P 17 48 12.0 +0.9**
comp=Z,941nm,0.5s,mb6.9
MUN Mundaring 33.12 155 *e*P **P 17 48 11.7 +0.2**
MUN *e*S **S 17 53 27.1 -0.8**
DMN Daman 33.13 335 *e*P **P 17 48 12.5 +0.9**
comp=Z,777nm,1.3s,mb6.5
CD2 Chengdu 33.16 5 P **P 17 48 10.3 -1.5**
CD2 AP pP 17 48 20.0 -3.4
CD2 XP sP 17 48 23.8 -4.7
CD2 PP PP 17 49 22.5 -4.9
CD2 PCP PcP 17 50 51.5 -2.6
CD2 S **S 17 53 28.3 -0.1**
CD2 XS sS 17 53 44.3 -3.6
CD2 PCS PcS 17 54 36.3 -3.4
CD2 SS SS 17 55 32.0 -21
CD2 AMB AMB
comp=Z,80nm,1.1s,mb5.6
CD2 AMB AMB
comp=Z,210nm,5.8s
CD2 LR LR
comp=N,16µm,18.0s
CD2 LR LR
comp=E,10µm,12.0s
CD2 LR LR
comp=Z,19µm,15.6s,MS5.9
KKN Kakani 33.21 335 *e*P **P 17 48 12.8 +0.5**
comp=Z,1µm,1.1s,mb6.7
POO Poona 33.26 310 *e*P **P 17 48 13.1 +0.2**
POO AMb AMB 17 48 16.1
comp=Z,187nm,0.9s,mb6.0
KAKA Kakadu 33.43 110 *e*P Px 17 47 56.2
comp=Z,36nm,0.6s
NACB Ninganchiao 33.44 37 *e*Pn **P 17 48 14.9 +0.6**
comp=Z,89nm,0.8s,mb5.8
KLBR Kellerberrin 33.48 152 *e*P **P 17 48 14.5 -0.1**
comp=Z,45nm,0.9s,mb5.4
GKN Gorkha 33.67 334 *e*P **P 17 48 16.9 +0.6**
comp=Z,891nm,1.1s,mb6.6
YHNB Yeheng 33.68 36 *e*P **P 17 48 16.4 -0.1**
comp=Z,61nm,0.9s,mb5.5
KOLN Koldanda 33.93 333 *e*P **P 17 48 19.8 +1.2**
DANN Dangsing 34.36 334 *e*P **P 17 48 23.5 +1.2**
comp=Z,444nm,0.6s,mb6.5
NWAO Narrogin (SRO) 34.37 154 P **P 17 48 22.5 +0.1**
comp=Z,47nm,0.8s,mb5.5,baz=329,slow=7.4,SNR=20
NWAO Narrogin (SRO) 34.37 154 *e*P **P 17 48 22.4 0.0**
comp=Z,386nm,2.0s,mb6.0
NWAO Narrogin (SRO) 34.37 154 *e*P **P 17 48 22.4 0.0**
NWAO pmax pmax
comp=Z,390nm,2.0s
PYUN Piuthan 34.49 332 *e*P **P 17 48 24.5 +1.1**
WHN Wuhan 35.26 21 ⇓P **P 17 48 30.0 -0.1**
WHN AP pP 17 48 43.5 +1.8
WHN S **S 17 54 02.8 +1.8**
WHN LR LR
comp=N,34µm,16.4s,MS6.2
WHN LR LR
comp=E,15µm,17.0s,MS6.2
WHN LR LR
comp=Z,44µm,17.5s,MS6.3
LGTI Lohaghat 36.94 330 *e*P **P 17 48 45.5 +1.1**
LGTI *e*S **S 17 54 28.5 +1.8**
XAN Xi'an 37.01 12 P **P 17 48 42.5 -2.4**
XAN AP pP 17 48 52.3 -4.4
XAN XP sP 17 48 56.3 -5.5
XAN PP PP 17 50 06.5 -3.5
XAN S **S 17 54 21.5 -6.1**
XAN AMB AMB
comp=Z,48nm,0.6s,mb5.5
XAN AMB AMB
comp=Z,212nm,8.3s
XAN LR LR
comp=N,5µm,20.0s,MS5.6
XAN LR LR
comp=E,7µm,16.3s,MS5.6
XAN LR LR
comp=Z,21µm,18.2s,MS6.0
PTH Pithoragarh 37.04 330 *e*P **P 17 48 46.3 +1.1**
PTH *ex* x 17 51 06.5
WRA Warramunga Arr 37.57 120 P **P 17 48 47.5 -2.4**
comp=Z,188nm,0.8s,mb5.9,baz=299,slow=9.0,SNR=444
WRA S **S 17 54 30.8 -5.8**
comp=Z,27nm,1.2s,baz=292,slow=16,SNR=6.7
WRA LR LR 18 06 11.6
comp=Z,5µm,21.2s,MS5.3,baz=310,slow=39
WRA P3KPbc 18 19 09.7
comp=Z,1.3nm,0.8s,baz=113,slow=4.5,SNR=11
WRA Warramunga Arr 37.57 120 P **P 17 48 47.5 -2.4**
WRA S **S 17 54 30.8 -5.8**
WRA LR LR 18 06 11.6
WRA *e* 18 19 09.7
WRA Warramunga Arr 37.57 120 P **P 17 48 47.5 -2.4**
WRA S **S 17 54 30.8 -5.8**
WRA pmax pmax
comp=Z,188nm,0.8s
WRA smax
comp=N,27nm,1.2s
WRA MLR MLR
comp=Z,5µm,21.2s
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRAB Tennant Creek 37.58 120 *e*P **P 17 48 48.0 -2.0**
comp=Z,263nm,0.9s,mb6.0
WRAB Tennant Creek 37.58 120 *e*P **P 17 48 48.0 -2.0**
WRAB pmax pmax
comp=Z,260nm,0.9s,mb6.0
WB2 Warramunga Arr 37.58 120 *e*P **P 17 48 47.6 -2.4**
WB2 *e*S **S 17 54 28.7 -8.0**
AJM Ajmer 37.85 321 *e*P **P 17 48 51.5 -0.7**
AJM AMb AMB 17 48 59.0
comp=Z,126nm,1.6s,mb5.4
NDI New Delhi 37.94 326 *e*P **P 17 48 53.0 +0.1**
LZH Lanzhou 38.30 5 ⇑P **P 17 48 55.3 -0.5**
LZH AP pP 17 49 05.0 -2.6
LZH XP sP 17 49 09.0 -3.6
LZH PP PP 17 50 27.3 +3.2
LZH PCP PcP 17 51 09.5 +0.3
LZH S **S 17 54 48.0 +0.9**
LZH SCP ScP 17 54 52.3 -1.5
LZH PCS PcS 17 54 56.0 -2.3
LZH XS sS 17 55 04.3 -2.4
LZH SS SS 17 57 29.5 -7.5
LZH SCS ScS 17 59 01.5 -2.2
LZH AMB AMB
comp=Z,252nm,1.4s,mb5.8
LZH AMB AMB
comp=Z,697nm,6.0s
LZH LR LR
comp=N,16µm,16.0s
LZH LR LR
comp=Z,17µm,18.5s,MS5.9
NJ2 Nanjing 38.39 26 *e*P **P 17 48 56.5 -0.2**
NJ2 AP pP 17 49 07.3 -1.1
NJ2 XP sP 17 49 11.0 -2.5
NJ2 PP PP 17 50 25.5 +0.3
NJ2 S **S 17 54 45.0 -3.7**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
NJ2 AMB AMB
comp=Z,670nm,8.4s
NJ2 LR LR
comp=N,520nm,19.4s
NJ2 LR LR
comp=E,2µm,12.0s
NJ2 LR LR
comp=Z,2µm,24.9s
FORT Forrest 38.62 140 *e*P **P 17 48 59.4 +0.8**
comp=Z,83nm,0.6s,mb5.6
FORT Forrest 38.62 140 *e*P **P 17 48 59.0 +0.4**
comp=Z,147nm,0.8s,mb5.8
SSE Sheshan 38.67 29 P **P 17 48 59.3 +0.3**
SSE S **S 17 54 52.3 -0.5**
SSE XS sS 17 55 07.0 -5.5
SSE AMB AMB
comp=Z,36nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,655nm,7.7s
SSE LR LR
comp=N,8µm,19.6s,MS5.6
SSE LR LR
comp=E,6µm,19.9s,MS5.6
SSE LR LR
comp=Z,8µm,23.2s,MS5.5
DDI Dehra Dun 38.76 328 *e*P **P 17 48 59.9 +0.1**
DDI *ex* x 17 55 01.0
ASAR Alice Springs 38.83 126 P **P 17 48 59.0 -1.5**
comp=Z,96nm,0.7s,mb5.7,baz=298,slow=7.1,SNR=504
ASAR S **S 17 54 51.6 -3.8**
comp=Z,17nm,0.7s,baz=300,slow=17,SNR=13
ASAR P3KPbc 18 19 03.8
comp=Z,0.5nm,0.8s,baz=112,slow=3.7,SNR=5.0
ASAR Alice Springs 38.83 126 P **P 17 48 59.0 -1.5**
ASAR S **S 17 54 51.6 -3.8**
ASAR *e* 18 19 03.8
ASAR Alice Springs 38.83 126 P **P 17 48 59.0 -1.5**
ASAR S **S 17 54 51.7 -3.8**
ASAR pmax pmax
comp=Z,96nm,0.7s
ASAR smax
comp=N,17nm,0.7s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
BHJ Bhuj 39.20 312 *e*P **P 17 49 03.6 +0.1**
BHJ AMb AMB 17 49 07.6
comp=Z,212nm,1.3s,mb5.7
JOW Kunigami 39.55 41 P **P 17 49 07.0 +0.5**
comp=Z,28nm,0.5s,mb5.2,baz=240,slow=7.3,SNR=9.5
JOW LR LR 18 05 19.2
comp=Z,3µm,20.6s,MS5.1,baz=207,slow=36
SMLA Simla 39.87 328 *i* P **P 17 49 09.5 +0.6**
SMLA *ex* x 17 49 13.9
comp=Z,546nm,0.4s
SMLA ⇓*ix* x 17 55 09.2
BHK Bhakra 40.49 328 *e*P **P 17 49 15.2 +1.1**
GTA Gaotai 41.48 359 P **P 17 49 21.8 -0.4**
GTA AP pP 17 49 30.8 -3.2
GTA XP sP 17 49 35.5 -3.6
GTA PP PP 17 51 02.5 +3.8
GTA PCP PcP 17 51 22.0 +2.7
GTA SCP ScP 17 55 06.5 +0.4
GTA S **S 17 55 35.8 +1.2**
GTA XS sS 17 55 55.5 +1.1
GTA SS SS 17 58 37.3 -3.2
GTA SCS ScS 17 59 19.5 -2.8
GTA AMB AMB
comp=Z,35nm,1.6s,mb4.7
GTA AMB AMB
comp=Z,623nm,8.4s
GTA LR LR
comp=N,9µm,15.9s,MS5.8
GTA LR LR
comp=E,5µm,18.0s,MS5.8
GTA LR LR
comp=Z,10µm,16.2s,MS5.8
DLH Dalhousie 41.60 328 *e*P **P 17 49 22.0 -1.3**
DLH *ex* x 17 49 43.0
THN Thein Dam 41.65 328 *e*P **P 17 49 21.9 -1.8**
THN *e*S **S 17 55 40.3 +2.9**
BTO Baotou 43.58 11 *e*P **P 17 49 38.5 -0.7**
COEN Coen 43.88 108 *e*P **P 17 49 39.4 -2.7**
comp=Z,16nm,0.8s,mb4.8
HHC Hu-ho-hao-te 44.12 12 *e*P **P 17 49 44.8 +1.2**
HHC AP pP 17 49 55.3 -0.2
HHC XP sP 17 49 59.0 -1.5
HHC PP PP 17 51 30.5 +3.4
HHC PCS PcS 17 55 20.0 -1.2
HHC S **S 17 56 14.8 +1.4**
HHC XS sS 17 56 35.0 +1.7
HHC SCS ScS 17 59 38.0 -0.7
HHC AMB AMB
comp=Z,67nm,1.5s,mb5.2
HHC AMB AMB
comp=Z,834nm,5.2s
HHC LR LR
comp=N,10µm,17.8s,MS5.8
HHC LR LR
comp=E,8µm,21.4s,MS5.8
HHC LR LR
comp=Z,10µm,21.4s,MS5.7
BJT Baijiatuau 44.52 17 *e*P **P 17 49 46.9 +0.2**
comp=Z,119nm,0.8s,mb5.8
BJT Baijiatuau 44.52 17 *e*P **P 17 49 46.9 +0.2**
BJT pmax pmax
comp=Z,119nm,0.8s
BJI Beijing 44.54 17 P **P 17 49 47.5 +0.6**
BJI XP sP 17 49 59.8 -4.1
BJI S **S 17 56 18.5 -1.0**
BJI XS sS 17 56 37.8 -1.6
BJI AMB AMB
comp=Z,109nm,1.2s,mb5.6
BJI AMB AMB
comp=Z,1.0nm,2.6s
BJI LR LR
comp=N,14µm,15.4s,MS6.0
BJI LR LR
comp=E,7µm,15.7s,MS6.0
BJI LR LR
comp=Z,10µm,17.1s,MS5.8
DL2 Dalian 45.43 23 P **P 17 49 55.0 +1.0**
DL2 S **S 17 56 33.0 +0.5**
DL2 AMB AMB
comp=Z,40nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,460nm,3.1s
DL2 LR LR
comp=N,3µm,14.5s
DL2 LR LR
comp=Z,3µm,14.5s,MS5.4
INCN Inchon 46.47 29 *e*P **P 17 50 01.7 -0.5**
INCN LR LR
comp=Z,6µm,19.0s,MS5.5
GUMO Guam 46.89 69 LR LR 18 09 14.7
comp=Z,2µm,21.9s,MS5.1,baz=121,slow=36
GUMO Guam 46.89 69 PFAKE 17 50 20.0 +14
GUMO LR LR
comp=Z,3µm,21.0s,MS5.3
KBL Kabul 46.95 324 *e*P **P 17 50 04.9 -1.2**
comp=Z,67nm,0.8s,mb5.6
KBL Kabul 46.95 324 *e*P **P 17 50 04.9 -1.1**
KBL pmax pmax
comp=Z,67nm,0.8s,mb5.6
KS15 Wonju Array Si 47.05 30 *e*P **P 17 50 06.7 -0.1**
KSRS Korea Array 47.08 30 P **P 17 50 06.0 -1.0**
comp=Z,44nm,0.7s,mb5.5,baz=227,slow=7.6,SNR=88
KSRS LR LR 18 10 27.6
comp=Z,4µm,19.8s,MS5.4,baz=232,slow=37
KSRS Korea Array 47.08 30 P **P 17 50 06.0 -1.0**
KSRS pmax pmax
comp=Z,44nm,0.7s,mb5.5
KSRS MLR MLR
comp=Z,4µm,19.8s,MS5.4
KSH Kashi 47.22 334 P **P 17 50 09.0 +0.9**
KSH *e*AP pP 17 50 19.0 -1.1
KSH *e*XP sP 17 50 22.8 -2.3
KSH *e*PCP PcP 17 51 40.8 +1.8
KSH *e*PP PP 17 51 59.5 +0.1
KSH *e*SCP ScP 17 55 30.5 +0.8
KSH *e*PCS PcS 17 55 34.3 +0.2
KSH *e*S **S 17 56 58.5 +0.4**
KSH *e*XS sS 17 57 14.3 -3.8
KSH *e*SS SS 18 00 19.3 -6.7
KSH AMB AMB
comp=Z,235nm,0.9s,mb6.1
KSH LR LR
comp=N,2µm,5.6s
KSH LR LR
comp=E,4µm,4.3s
KSH LR LR
comp=Z,2µm,7.0s
WMQ Urumqi 47.27 348 P **P 17 50 09.0 +0.7**
WMQ AP pP 17 50 19.0 -1.4
WMQ XP sP 17 50 23.0 -2.4
WMQ PP PP 17 51 59.0 -0.8
WMQ S **S 17 56 59.0 +0.4**
WMQ SCS ScS 17 59 57.0 -1.8
WMQ SS SS 18 00 19.0 -7.6
WMQ AMB AMB
comp=Z,285nm,1.0s,mb6.2
WMQ AMB AMB
comp=Z,2µm,4.0s
WMQ LR LR
comp=N,3µm,16.0s,MS5.5
WMQ LR LR
comp=E,3µm,17.0s,MS5.5
WMQ LR LR
comp=Z,4µm,18.0s,MS5.4
WBK Wadi Bani Khal 47.31 304 P **P 17 50 10.5 +1.4**
SNR=26
JMDO Jabal Madar 47.93 303 P **P 17 50 14.4 +0.5**
SNR=16
CTA Charters Tower 48.18 115 *e*P **P 17 50 14.3 -1.6**
comp=Z,50nm,0.9s,mb5.5
CTAO Charters Tower 48.18 115 *e*P **P 17 50 14.6 -1.3**
comp=Z,79nm,0.9s,mb5.8
CTAO LR LR
comp=Z,6µm,20.0s,MS5.6
CTAO Charters Tower 48.18 115 *e*P **P 17 50 14.6 -1.3**
CTAO pmax pmax
comp=Z,79nm,0.9s,mb5.7
CTAO MLR MLR
comp=Z,6µm,20.0s,MS5.6
SMDO Samad 48.27 304 P **P 17 50 17.7 +1.2**
SNR=34
BIDO Bidbid 48.41 304 P **P 17 50 18.7 +1.1**
SNR=25
STKA Stephens Creek 48.72 132 *e*P **P 17 50 19.0 -0.9**
comp=Z,73nm,0.8s,mb5.8
STKA Stephens Creek 48.72 132 P **P 17 50 19.1 -0.8**
comp=Z,96nm,0.7s,mb5.9,baz=306,slow=7.2,SNR=139
STKA S **S 17 57 20.5 +0.8**
comp=Z,7.1nm,0.7s,baz=140,slow=16,SNR=5.3
STKA LR LR 18 11 37.4
comp=Z,9µm,21.4s,MS5.7,baz=302,slow=37
STKA Stephens Creek 48.72 132 *e*P **P 17 50 18.6 -1.3**
BSY Bisya 48.85 303 P **P 17 50 22.4 +1.4**
SNR=29
HOQ Hoqain 49.11 304 P **P 17 50 23.9 +1.0**
SNR=17
RBK Rabkut 49.53 295 P **P 17 50 27.7 +1.5**
SNR=29
ARQ Araqi 49.66 303 P **P 17 50 28.7 +1.5**
SNR=12
AAA Alma-Ata 49.98 338 *e*P **P 17 50 28.0 -1.2**
AAA Alma-Ata 49.98 338 *e*P **P 17 50 27.5 -1.7**
AAA *e*S **S 17 57 36.0 -0.9**
AAA pmax pmax
comp=Z,3µm,4.8s
AAA smax
comp=E,6µm,8.5s
AAA MLR MLR
comp=Z,3µm,23.0s,MS5.2
WHFO Wadi Hawf 50.05 296 P **P 17 50 31.1 +0.9**
SNR=22
UCH Uchtor 50.08 335 *e*P **P 17 50 31.3 +1.3**
comp=Z,88nm,1.0s,mb5.7
UCH Uchtor 50.08 335 P **P 17 50 31.7 +1.7**
SNR=29
SONM Songino Array 50.18 5 P **P 17 50 30.5 -0.1**
comp=Z,36nm,0.5s,mb5.6,baz=189,slow=8.2,SNR=147
SONM Songino Array 50.18 5 P **P 17 50 30.5 -0.1**
SONM pmax pmax
comp=Z,36nm,0.5s
TKM2 Tokmak 2 50.21 336 *e*P **P 17 50 31.1 +0.1**
comp=Z,612nm,1.1s,mb6.5
TKM2 Tokmak 2 50.21 336 P **P 17 50 31.3 +0.3**
TKM2 pmax pmax
comp=Z,610nm,1.1s,mb6.5
TKM2 Tokmak 2 50.21 336 P **P 17 50 31.8 +0.8**
SNR=56
KBK Karagaybulak 50.25 336 P **P 17 50 32.0 +0.7**
SNR=134
ULN Ulaanbaatar 50.27 6 ⇑P **P 17 50 32.8 +1.4**
SNR=42
ULN Ulaanbaatar 50.27 6⇓*e*P **P 17 50 30.5 -0.9**
ULN Ulaanbaatar 50.27 6 P **P 17 50 30.9 -0.5**
ULN pmax pmax
comp=Z,180nm,1.3s,mb5.9
ABTO Aybut 50.30 295 P **P 17 50 33.0 +0.9**
SNR=24
AML Almayashu 50.35 334 *e*P **P 17 50 32.4 +0.3**
comp=Z,12nm,0.4s,mb5.3
AML LR LR
comp=Z,3µm,21.0s,MS5.2
AML Almayashu 50.35 334 P **P 17 50 32.9 +0.8**
SNR=15
AAK Ala-Archa 50.42 335 *e*P **P 17 50 32.4 -0.1**
comp=Z,218nm,1.1s,mb6.1
AAK *e*S **S 17 57 49.2 +6.2**
AAK Ala-Archa 50.42 335 *e*P **P 17 50 32.4 -0.2**
AAK *e*S **S 17 57 49.3 +6.2**
AAK pmax pmax
comp=Z,218nm,1.1s,mb6.1
AAK Ala-Archa 50.42 335 P **P 17 50 34.1 +1.5**
SNR=50
FRU Bishkek 50.54 336 ⇓*i*P **P 17 50 34.0 +0.6**
FRU *i* pP 17 50 43.0 -2.6
FRU *e* 17 57 46.0
FRU pmax pmax
comp=Z,660nm,2.0s,mb6.2
HATD Hatta, Dubai 50.62 305 P **P 17 50 35.9 +1.5**
SNR=22
CHMS Chumysh 50.62 336 P **P 17 50 33.6 -0.5**
SNR=67
EKS2 Erkin-Say 50.75 335 *e*P **P 17 50 35.5 +0.4**
comp=Z,52nm,1.9s,mb5.1
EKS2 LR LR
comp=Z,4µm,22.0s,MS5.4
EKS2 Erkin-Say 50.75 335 P **P 17 50 35.6 +0.6**
SNR=211
USP Ospenovka 50.94 336 P **P 17 50 36.5 0.0**
SNR=215

CN2	**Changchun**	**51.10**	**23**	*e*P	**P**	**17 50 36.5**	**-1.2**
CN2				*e*XP	sP	17 50 50.3	-4.5
CN2				*e*S	**S**	**17 57 51.3**	**-1.1**
CN2				SS	SS	18 01 24.5	-3.8
CN2				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.6						
CN2				AMB	AMB		
	comp=Z,800nm,10.0s						
CN2				LR	LR		
	comp=N,3μm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,2μm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,4μm,20.0s,MS5.5						
MK31	**Makanchi Array**	**51.38**	**344**	*e*P	**P**	**17 50 38.7**	**-1.0**
MK31	**Makanchi Array**	**51.38**	**344**	*i* P	**P**	**17 50 39.1**	**-0.6**
MK31				pmax	pmax		
	comp=Z,141nm,0.7s,mb6.0						
MKAR	**Makanchi Array**	**51.38**	**344**	P	**P**	**17 50 39.3**	**-0.4**
	comp=Z,31nm,0.3s,mb5.7,baz=153,slow=7.4,SNR=234						
MKAR				LR	LR	18 16 44.0	
	comp=Z,3μm,21.6s,MS5.3,baz=159,slow=41						
MKAR	**Makanchi Array**	**51.38**	**344**	P	**P**	**17 50 39.3**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,31nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,4μm,21.6s						
MAT	**Matsushiro**	**52.27**	**39**	P	**P**	**17 50 45.1**	**-1.5**
MAT				S	**S**	**17 58 04.0**	**-4.9**
MAJO	**Matsushiro**	**52.28**	**39**	*e*P	**P**	**17 50 44.2**	**-2.4**
	comp=Z,24nm,0.8s,mb5.2						
MAJO				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
MAJO	**Matsushiro**	**52.28**	**39**	*e*P	**P**	**17 50 44.2**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.3						
MJAR	**Matsushiro Arr**	**52.28**	**39**	P	**P**	**17 50 45.0**	**-1.7**
	comp=Z,22nm,0.8s,mb5.1,baz=235,slow=7.7,SNR=42						
MJAR				LR	LR	18 14 20.0	
	comp=Z,3μm,19.1s,MS5.3,baz=230,slow=38						
MJAR	**Matsushiro Arr**	**52.28**	**39**	P	**P**	**17 50 45.0**	**-1.6**
MJAR				pmax	pmax		
	comp=Z,22nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,3μm,19.1s						
ZAK	**Zakamensk**	**52.51**	**2**	*e*P	**P**	**17 50 48.3**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
KK31	**Karatay Array**	**52.54**	**333**	*i* P	**P**	**17 50 47.9**	**-0.6**
KK31				pmax	pmax		
	comp=Z,174nm,1.2s,mb5.9						
MDJ	**Mudanjiang**	**53.48**	**26**	P	**P**	**17 50 55.8**	**+0.4**
MDJ				AP	pP	17 51 03.8	-3.8
MDJ				XP	sP	17 51 07.5	-5.0
MDJ				PP	PP	17 52 56.3	0.0
MDJ				S	**S**	**17 58 22.0**	**-3.1**
MDJ				XS	sS	17 58 44.0	-1.4
MDJ				AMB	AMB		
	comp=Z,55nm,0.8s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,713nm,10.0s						
MDJ				LR	LR		
	comp=N,6μm,16.0s,MS5.9						
MDJ				LR	LR		
	comp=E,6μm,17.6s,MS5.9						
MDJ				LR	LR		
	comp=E,7μm,18.4s,MS5.8						
MDJ	**Mudanjiang**	**53.48**	**26**	*e*P	**P**	**17 50 54.9**	**-0.5**
	comp=Z,90nm,1.0s,mb5.7						
MOY	**Mondy**	**53.74**	**1**	*e*P	**P**	**17 50 57.2**	**+0.1**
MOY				pmax	pmax		
	comp=Z,14nm,2.2s,mb4.5						
TLY	**Talaya**	**53.82**	**3**	P	**P**	**17 50 59.0**	**+1.3**
	SNR=17						
TLY	**Talaya**	**53.82**	**3**	*i* P	**P**	**17 50 58.4**	**+0.7**
TLY	**Talaya**	**53.82**	**3**	*d* iP	**P**	**17 50 57.4**	**-0.3**
TLY				*e*	pP	17 51 11.7	+1.8
TLY				*e*		17 52 02.0	
TLY				*e*		17 52 55.4	
TLY				*e*S	**S**	**17 58 30.2**	**+0.8**
TLY				*e*		18 00 35.8	
TLY				*e*SSS		18 04 02.4	
TLY				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.6						
TLY				MLR	MLR		
	comp=Z,9μm,16.0s,MS5.9						
EIDS	**Eidsvold**	**53.93**	**120**	*e*P	**P**	**17 50 57.4**	**-1.6**
	comp=Z,52nm,0.6s,mb5.6						
EIDS				*e*PP	PP	17 52 56.7	-4.0
HIA	**Hailar**	**54.01**	**16**	*e*P	**P**	**17 50 58.3**	**-0.8**
	comp=Z,47nm,1.0s,mb5.4						
HIA	**Hailar**	**54.01**	**16**	*e*P	**P**	**17 50 58.3**	**-0.8**
HIA				pmax	pmax		
	comp=Z,47nm,1.0s						
TOO	**Toolangi**	**54.29**	**136**⇑	*i*P	**P**	**17 51 03.0**	**+1.6**
IRK	**Irkutsk**	**54.41**	**3**⇑	*i*P	**P**	**17 51 02.7**	**+0.7**
IRK				*e*	pP	17 51 12.3	-1.9
IRK				*e*		17 51 21.2	
IRK				*e*S	**S**	**17 58 39.8**	**+2.5**
IRK				pmax	pmax		
	comp=Z,177nm,1.8s,mb5.7						
ABPO	**Ambohimpanom**	**54.53**	**248**	*e*P	**P**	**17 51 04.5**	**+1.1**
	comp=Z,24nm,1.0s,mb5.2						
ABPO				LR	LR		
	comp=Z,13μm,20.0s,MS6.0						
CIT	**Chita**	**55.24**	**10**	*e*P	**P**	**17 51 09.1**	**+1.1**
CIT				*e*		17 58 51.2	
CIT				pmax	pmax		
	comp=Z,440nm,2.5s,mb6.0						
CAN	**Canberra**	**55.78**	**132**	*e*P	**P**	**17 51 11.7**	**-0.6**
ABKT	**Ailbek**	**55.87**	**320**	P	**P**	**17 51 13.5**	**+0.7**
	comp=Z,816nm,0.9s,mb6.8,SNR=32						
VAN	**Vannovskaya**	**55.88**	**320**⇓	*i*P	**P**	**17 51 13.2**	**+0.3**
VAN				*e*S	**S**	**17 58 56.0**	**-1.5**
KURK	**Kurchatov**	**55.96**	**344**	⇑P	**P**	**17 51 14.3**	**+1.1**
	SNR=69						
KURK	**Kurchatov**	**55.96**	**344**	P	**P**	**17 51 09.9**	**-3.3**
	comp=Z,20nm,0.5s,mb5.4,baz=163,slow=6.7,SNR=7.1						
KURK				S	**S**	**17 58 58.6**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=237,slow=13,SNR=5.3						
KURK	**Kurchatov**	**55.96**	**344**	*e*P	**P**	**17 51 12.2**	**-1.0**
	comp=Z,366nm,0.8s,mb6.5						
KURK	**Kurchatov**	**55.96**	**344**	P	**P**	**17 51 09.9**	**-3.3**
KURK				S	**S**	**17 58 58.6**	**+0.5**
KURK				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.4						
KURK				smax			
	comp=N,4,0nm,1.0s						
ARMA	**Armidale**	**55.98**	**126**	*e*P	**P**	**17 51 13.7**	**0.0**
CNB	**Canberra Magne**	**56.05**	**132**	*e*P	**P**	**17 51 14.3**	**+0.1**
LBOS		**56.90**	**288**	*e*P	**P**	**17 51 22.0**	**+1.5**
LBOS				AMb	AMB	17 51 22.9	
	comp=Z,149nm,0.9s,mb6.0						
ZAA0	**Zalesovo Array**	**57.49**	**349**	*e*P	**P**	**17 51 22.7**	**-1.3**
ZALV	**Zalesovo Beam**	**57.49**	**349**	P	**P**	**17 51 22.7**	**-1.3**
	comp=Z,130nm,0.9s,mb6.0,baz=188,slow=6.0,SNR=134						
ZALV				S	**S**	**17 59 18.6**	**+0.4**
	comp=Z,6.1nm,0.8s,baz=151,slow=13,SNR=9.0						
ZALV				LR	LR	18 19 47.5	
	comp=Z,2μm,19.1s,MS5.2,baz=157,slow=40						
ZALV				PKPPKP		18 21 09.6	
	comp=Z,0.6nm,0.5s,baz=316,slow=4.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**57.49**	**349**	P	**P**	**17 51 22.7**	**-1.3**
ZALV				S	**S**	**17 59 18.7**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,130nm,0.9s,mb6.0						
ZALV				smax			
	comp=N,6.0nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,2μm,19.1s,MS5.2						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MOO	**Moorlands**	**57.84**	**140**	*e*P	**P**	**17 51 28.6**	**+1.9**
TRBA	**At Turbah**	**57.85**	**287**	*e*P	**P**	**17 51 28.6**	**+1.4**
DHBB	**Dhamar BB**	**57.86**	**289**	*e*P	**P**	**17 51 28.8**	**+1.5**
KLR	**Kul'dur**	**58.04**	**24**	*e*P	**P**	**17 51 23.3**	**-4.6**
KLR				*e*S	**S**	**17 59 21.8**	**-3.8**
KRAR	**Krasnoyarsk**	**58.41**	**355**⇓	*e*P	**P**	**17 51 30.1**	**-0.3**
KRAR				pmax	pmax		
	comp=Z,355nm,1.1s,mb6.3						
KRAR				MLR	MLR		
	comp=Z,4μm,15.0s,MS5.7						
NVS	**Novosibirsk**	**58.64**	**349**	*i* P	**P**	**17 51 30.4**	**-1.6**
NVS				*i* S	**S**	**17 59 23.6**	**-10**
NVS				pmax	pmax		
	comp=N,167nm,1.9s						
NVS				pmax	pmax		
	comp=Z,172nm,1.9s,mb5.8						
NVS				pmax	pmax		
	comp=E,45nm,1.3s						
NVS				smax			
	comp=N,143nm,1.9s						
NVS				smax			
	comp=E,123nm,2.6s						
ERM	**Erimo**	**58.67**	**36**	*i* P	**P**	**17 51 32.4**	**-0.1**
ERM				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
HABR	**Khabarovsk**	**58.86**	**26**	*e*P	**P**	**17 51 29.3**	**-4.3**
HABR				*e*		17 53 40.5	
HABR				*e*S	**S**	**17 59 32.0**	**-4.2**
HABR				*e*PS		17 59 49.0	
HABR				*e*		17 59 55.9	
HABR				*e*		18 01 15.9	
HABR				*e*SS	SS	18 03 28.6	-1.8
QRN	**Al-Qurain**	**58.91**	**306**	*e*P	**P**	**17 51 33.8**	**-0.6**
	baz=305						
QRN				AMb	AMB	17 51 37.6	
	comp=Z,365nm,0.6s,mb6.6,baz=305						
KBD	**Kabd**	**59.26**	**306**	*e*P	**P**	**17 51 36.5**	**-0.4**
	baz=306						
KBD				AMb	AMB	17 51 38.4	
	comp=Z,210nm,1.4s,mb6.0,baz=306						
RDF	**Al-Radifah**	**59.28**	**306**	*e*P	**P**	**17 51 36.3**	**-0.6**
	baz=306						
RDF				AMb	AMB	17 51 40.3	
	comp=Z,335nm,0.7s,mb6.5,baz=306						
UMR	**Umm Al-Rimmam**	**59.38**	**306**	*e*P	**P**	**17 51 37.2**	**-0.5**
	baz=306						
UMR				AMb	AMB	17 51 41.5	
	comp=Z,348nm,0.7s,mb6.5,baz=306						
NAY	**Al-Naaiem**	**59.65**	**306**	*e*P	**P**	**17 51 38.7**	**-0.8**
	baz=306						
NAY				AMb	AMB	17 51 42.6	
	comp=Z,175nm,0.6s,mb6.3,baz=306						
HNR	**Honiara**	**59.66**	**100**	*e*P	**P**	**17 51 38.9**	**-1.0**
	comp=Z,108nm,0.9s,mb5.9						
HNR				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MIB	**Mutribah**	**59.78**	**307**	*e*P	**P**	**17 51 39.8**	**-0.6**
	baz=306						
MIB				AMb	AMB	17 51 42.7	
	comp=Z,440nm,1.1s,mb6.4,baz=306						
VOSK	**Vostochnaya**	**60.10**	**340**	P	**P**	**17 51 40.8**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.6						
BVA0	**Borovoye Array**	**60.55**	**340**	*i* P	**P**	**17 51 43.7**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
BVAR	**Borovoye Array**	**60.55**	**340**	P	**P**	**17 51 43.7**	**-1.5**
	comp=Z,79nm,0.5s,mb6.1,baz=143,slow=9.2,SNR=151						
BVAR				S	**S**	**17 59 59.8**	**+1.9**
	comp=Z,3.0nm,0.9s,baz=157,slow=12,SNR=4.4						
BVAR	**Borovoye Array**	**60.55**	**340**	P	**P**	**17 51 43.7**	**-1.5**
BVAR				S	**S**	**17 59 59.8**	**+1.9**
BVAR				pmax	pmax		
	comp=Z,79nm,0.5s						
BVAR				smax			
	comp=N,3.0nm,0.9s						
BRVK	**Borovoye**	**60.61**	**340**	⇑P	**P**	**17 51 47.0**	**+1.4**
	SNR=30						
BRVK	**Borovoye**	**60.61**	**340**⇓	*e*P	**P**	**17 51 44.2**	**-1.4**
BRVK				LR	LR		
	comp=Z,4μm,22.0s,MS5.5						
BRVK	**Borovoye**	**60.61**	**340**	P	**P**	**17 51 44.1**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,140nm,0.8s,mb6.1						
BOD	**Bodaibo**	**60.90**	**8**	*e*P	**P**	**17 51 46.0**	**-1.5**
BOD				*e*		18 00 02.6	
BOD				pmax	pmax		
	comp=Z,200nm,1.1s,mb6.2						
YSS	**Yuzh-Sakhalins**	**61.53**	**32**⇑	*e*P	**P**	**17 51 51.5**	**-0.5**
YSS	**Yuzh-Sakhalins**	**61.53**	**32**⇓	*e*P	**P**	**17 51 51.0**	**-1.0**
YSS				*e*		17 52 08.5	
YSS				*e*S	**S**	**18 00 12.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.9						
NRGR	**Nerungri**	**61.98**	**15**	*e*P	**P**	**17 51 55.0**	**+0.2**
AB31	**Akbulak array**	**62.03**	**331**	P	**P**	**17 51 53.9**	**-1.4**
AB31				pmax	pmax		
	comp=Z,230nm,0.8s,mb6.4						
CLNS	**Chul'man**	**62.19**	**15**⇓	*i*P	**P**	**17 51 56.3**	**+0.1**
CLNS	**Chul'man**	**62.19**	**15**	*d* iP	**P**	**17 51 56.2**	**0.0**
CLNS				*e*	pP	17 52 08.0	-0.6
CLNS				pmax	pmax		
	comp=Z,109nm,1.1s,mb5.9						
CLNS				pmax	pmax		
	comp=N,54nm,1.1s						
CLNS				pmax	pmax		
	comp=E,42nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.4						
CLNS				pmax	pmax		
	comp=N,36nm,1.6s						
CLNS				pmax	pmax		
	comp=E,22nm,1.4s						
CLNS				MLR	MLR		
	comp=N,4μm,18.0s,MS5.8						
CLNS				MLR	MLR		
	comp=Z,7μm,18.0s,MS5.8						
CLNS				MLR	MLR		
	comp=E,4μm,18.0s,MS5.8						
AKTK	**Aktyubinsk**	**63.75**	**331**	P	**P**	**17 52 05.8**	**-0.9**
AKTO	**Aktyubinsk**	**63.75**	**331**	P	**P**	**17 52 05.8**	**-0.9**
	comp=E,86nm,1.0s,mb5.7,baz=128,slow=6.9,SNR=53						
AKTO	**Aktyubinsk**	**63.75**	**331**	P	**P**	**17 52 05.8**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.7						
CASY	**Casey**	**64.29**	**175**	*e*P	**P**	**17 52 09.8**	**-0.2**
CASY	**Casey**	**64.29**	**175**	*e*P	**P**	**17 52 10.0**	**0.0**
	comp=Z,151nm,1.5s,mb5.8						
CASY				*e*PP	PP	17 54 33.4	+1.6
CASY				LR	LR		
	comp=Z,5μm,20.0s,MS5.7						
HAKT	**HAKKARI**	**65.61**	**313**	*i* P	**P**	**17 52 22.1**	**+2.9**
DGRG	**David-gareji**	**66.09**	**318**	P	**P**	**17 52 22.7**	**+0.6**
DYDN	**Diyadin**	**66.43**	**315**	*i* P	**P**	**17 52 25.4**	**+1.0**
MTA	**Mtatsminda**	**66.59**	**318**	P	**P**	**17 52 25.1**	**-0.2**
TBLG	**Delisi**	**66.64**	**318**	P	**P**	**17 52 26.3**	**+0.7**
TUTA	**Tutak**	**66.99**	**315**	*i* P	**P**	**17 52 28.4**	**+0.5**
DZM	**Mont Dzumac**	**67.04**	**113**	*e*P	**P**	**17 52 27.1**	**-1.5**
SVE	**Sverdlovsk**	**67.06**	**338**⇑	*e*P	**P**	**17 52 27.2**	**-0.8**
SVE				*e*		17 54 58.8	
SVE				*e*S	S	18 01 22.0	+3.4
SVE				*e*		18 02 26.1	
SVE				*e*SS	SS	18 05 39.4	+1.2
SVE				pmax	pmax		
	comp=Z,271nm,1.0s,mb6.2						
SVE				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.6						
BEST	**Besiri**	**67.52**	**313**	*i* P	**P**	**17 52 31.0**	**-0.3**
ARU	**Arti**	**67.59**	**336**⇑	*e*P	**P**	**17 52 30.7**	**-0.6**
ARU				LR	LR		
	comp=Z,3μm,22.0s,MS5.5						
ARU	**Arti**	**67.59**	**336**	*d* iP	**P**	**17 52 30.6**	**-0.7**
ARU				*e*		17 54 58.3	
ARU				*e*S	S	18 01 25.1	+0.2
ARU				*e*SS	SS	18 05 52.1	+5.7
ARU				pmax	pmax		
	comp=Z,170nm,1.2s,mb6.0						
ARU				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.5						
MARD	**Mardin**	**67.67**	**312**	*i* P	**P**	**17 52 32.2**	**-0.1**
ONI	**Oni**	**67.87**	**318**	P	**P**	**17 52 33.5**	**+0.1**
HOMI	**Horasan**	**67.89**	**315**	*i* P	**P**	**17 52 34.0**	**+0.5**
YAK	**Yakutsk**	**67.92**	**14**⇓	*e*P	**P**	**17 52 31.3**	**-2.0**
YAK	**Yakutsk**	**67.92**	**14**	*e*P	**P**	**17 52 31.2**	**-2.1**
YAK				*e**PP	pP	17 52 44.7	-1.2
YAK				*e*		17 52 55.7	
YAK				*e*		17 55 03.1	
YAK				*e*PPP		17 56 47.0	
YAK				*e*S	S	18 01 23.5	-5.2
YAK				*e**SS	sS	18 02 05.3	+16
YAK				*e*		18 02 23.5	
YAK				*e*SS	SS	18 05 50.7	-0.6
YAK				pmax	pmax		
	comp=Z,392nm,0.9s,mb6.4						
YAK				pmax	pmax		
	comp=N,130nm,1.1s						
YAK				pmax	pmax		
	comp=E,104nm,1.3s						
YAK				pmax	pmax		
	comp=Z,99nm,2.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,42nm,1.5s						
YAK				pmax	pmax		
	comp=E,39nm,1.4s						
YAK				smax			
	comp=E,122nm,1.9s						
YAK				smax			
	comp=N,230nm,2.5s						
BNGL	**BINGOL**	**68.00**	**314**	*i* P	**P**	**17 52 34.8**	**+0.4**
DAGI	**Agillar**	**68.29**	**316**	*i* P	**P**	**17 52 35.3**	**-0.8**
DDEM	**Demirkent**	**68.33**	**316**	*i* P	**P**	**17 52 36.3**	**0.0**
DIYA	**Diyarbakir**	**68.38**	**312**	*i* P	**P**	**17 52 36.7**	**0.0**
DBAD	**Bademkaya**	**68.42**	**316**	*i* P	**P**	**17 52 36.7**	**-0.2**
DBOC	**Borcka**	**68.57**	**316**	*i* P	**P**	**17 52 38.1**	**+0.3**
KOPT	**Kop Dagi**	**68.88**	**315**	*i* P	**P**	**17 52 40.7**	**+1.0**
KIV	**Kislovodsk**	**68.96**	**319**	⇑P	**P**	**17 52 41.7**	**+1.5**
	SNR=68						
KIV	**Kislovodsk**	**68.96**	**319**	*e*P	**P**	**17 52 39.5**	**-0.7**
	comp=N,127nm,0.9s,mb5.8						
KIV				LR	LR		
	comp=Z,2μm,22.0s,MS5.3						
KIV	**Kislovodsk**	**68.96**	**319**	*d* iP	**P**	**17 52 40.3**	**+0.1**
KIV				*e*PPP		17 56 54.0	
KIV				*e*S	S	18 01 42.7	+0.9
KIV				*e*SS	SS	18 06 10.3	+2.1
KIV				pmax	pmax		
	comp=Z,139nm,1.0s,mb5.8						
KIV				pmax	pmax		
	comp=Z,409nm,5.1s						
KIV				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.3						
ASF	**Jabal al Asfar**	**69.02**	**306**	P	**P**	**17 52 41.5**	**+0.7**
	comp=Z,66nm,1.0s,mb5.5,baz=335,slow=2.1,SNR=50						
ASF	**Jabal al Asfar**	**69.02**	**306**	P	**P**	**17 52 41.5**	**+0.7**
ASF				pmax	pmax		
	comp=Z,66nm,1.0s						
ELZG	**Elazig**	**69.42**	**313**	*i* P	**P**	**17 52 44.1**	**+0.9**
MBAR	**Mbarara**	**69.59**	**270**	*i* P	**P**	**17 52 43.7**	**-1.0**
MBAR	**Mbarara**	**69.59**	**270**	*d* iP	**P**	**17 52 43.6**	**-1.1**
EIL	**Elat**	**69.95**	**303**	P	**P**	**17 52 47.0**	**+0.4**
	comp=Z,81nm,0.7s,mb5.8,baz=115,slow=3.6,SNR=6.8						
EIL	**Elat**	**69.95**	**303**	P	**P**	**17 52 47.0**	**+0.4**
DRV	**Dumont d'Urvil**	**69.97**	**164**	S	S	18 02 13.0	+20
DRV				L		18 11 00.0	
DRV				R		18 14 00.0	
KEMA	**Kemaliye**	**70.05**	**313**	*i* P	**P**	**17 52 47.8**	**+0.8**
MAW	**Mawson**	**70.11**	**194**	*e*P	**P**	**17 52 47.9**	**+1.1**
	comp=Z,50nm,0.8s,mb5.5						
MAW	**Mawson**	**70.11**	**194**	P	**P**	**17 52 47.9**	**+1.1**
	comp=Z,66nm,0.8s,mb5.6,baz=35,slow=6.4,SNR=25						
MAW				LR	LR	18 16 52.9	
	comp=Z,8μm,21.8s,MS5.9,baz=336,slow=30						
MAW	**Mawson**	**70.11**	**194**	*e*P	**P**	**17 52 47.2**	**+0.4**
	comp=Z,14nm,0.8s,mb4.9						
MAW				LR	LR		
	comp=Z,14μm,22.0s,MS6.2						
MAW	**Mawson**	**70.11**	**194**	P	**P**	**17 52 47.9**	**+1.1**
MAW				pmax	pmax		
	comp=Z,66nm,0.9s						
MAW				MLR	MLR		
	comp=Z,8μm,21.8s						
AKCD	**Akcadag**	**70.13**	**312**	*i* P	**P**	**17 52 48.2**	**+0.6**
RCY	**Rachaya**	**70.26**	**307**	*e*P	**P**	**17 52 49.7**	**+1.3**
HWQ	**Hawqa**	**70.39**	**308**	*e*P	**P**	**17 52 49.7**	**+0.5**
SOKR	**Solikamsk**	**70.44**	**338**	*d* iP	**P**	**17 52 48.0**	**-1.0**
SOKR				pmax	pmax		
	comp=Z,220nm,1.1s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.5						
MMAI	**Mount Meron Ar**	**70.46**	**306**	LR	LR	18 24 52.9	
	comp=Z,6μm,19.1s,MS5.8,baz=105,slow=37						
BHL	**Bhannes**	**70.51**	**307**	*e*P	**P**	**17 52 51.0**	**+1.0**
SOC	**Sochi**	**70.78**	**318**	*i* P	**P**	**17 52 51.8**	**+0.4**
SOC	**Sochi**	**70.78**	**318**	*d* iP	**P**	**17 52 48.2**	**-3.2**
SOC				*e**PP	pP	17 53 02.5	-1.5
SOC				*e*		17 53 09.0	
SOC				*e*		17 55 22.9	
SOC				*e*PPP		17 57 12.6	
SOC				*e*S	S	18 01 58.8	-4.3
SOC				*e**SS	sS	18 02 24.8	+0.7
SOC				*e*		18 02 47.9	
SOC				*e*SS	SS	18 06 43.4	+7.3
SOC				pmax	pmax		
	comp=Z,95nm,0.7s,mb5.8						
SOC				pmax	pmax		
	comp=Z,614nm,6.1s						
SOC				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.2						
SKR	**Severo-Kuril's**	**70.91**	**34**	*e*P	**P**	**17 52 51.5**	**-0.5**
SKR				*e*		17 52 57.5	
SKR				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
ANDN	**Andirin**	**71.08**	**311**	*i* P	**P**	**17 52 51.0**	**-2.3**
PINB	**Pinarbasi**	**71.38**	**312**	*i* P	**P**	**17 52 55.5**	**+0.4**
LSZ	**Lusaka**	**72.18**	**255**	P	**P**	**17 53 02.0**	**+1.6**
	SNR=8.1						
LSZ	**Lusaka**	**72.18**	**255**	*e*P	**P**	**17 53 00.8**	**+0.4**
	comp=Z,45nm,1.1s,mb5.3						
LSZ				LR	LR		
	comp=Z,5μm,20.0s,MS5.8						
AVNT	**Avonos**	**72.56**	**312**	*i* P	**P**	**17 53 01.7**	**-0.6**
CSS	**Prodhromos**	**72.65**	**308**	*e*P	**P**	**17 53 02.6**	**-0.2**
	comp=Z,226nm,1.1s,mb6.0						
CSS				LR	LR		
	comp=Z,5μm,19.0s,MS5.8						
VRHR	**Novokhopersk**	**72.74**	**326**	*e*P	**P**	**17 53 02.2**	**-0.8**
VRHR				pmax	pmax		
	comp=Z,200nm,0.6s,mb6.2						
VRHR				pmax	pmax		
	comp=N,50nm,0.5s						
VRHR				pmax	pmax		
	comp=E,130nm,0.9s						
ANN	**Anapa**	**72.75**	**318**	*e*P	**P**	**17 52 58.9**	**-4.3**
ANN				*e**PP	pP	17 53 12.0	-3.9
ANN				*e*		17 55 40.9	
ANN				*e*PPP		17 57 24.9	
ANN				*e*S	S	18 02 20.6	-5.3
ANN				pmax	pmax		
	comp=Z,74nm,1.4s,mb5.4						
ANN				pmax	pmax		
	comp=Z,556nm,6.0s						
ANN				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3						
PEA0B	**Petropavlovsk-**	**72.93**	**32**	*e*P	**P**	**17 53 01.9**	**-2.2**
PETK	**Petropavlovsk-**	**72.93**	**32**	P	**P**	**17 53 02.4**	**-1.7**
	comp=Z,29nm,0.7s,mb5.3,baz=41,slow=2.0,SNR=41						
PETK				LR	LR	18 27 19.0	
	comp=Z,2μm,20.1s,MS5.3,baz=262,slow=38						
CDAG	**Cicekdag**	**73.18**	**313**	*i* P	**P**	**17 53 06.9**	**+1.1**
PET	**Petropavlovsk**	**73.40**	**32**	*e*P	**P**	**17 53 05.3**	**-1.6**
	comp=Z,71nm,0.

VORD pmax pmax
comp=Z,80nm,0.8s,mb5.7
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,40nm,0.9s
ILGA Ilgaz 74.09 314 *i* P **P 17 53 10.4 -0.7**
VSR Storozhevoye 74.19 325 *d* iP **P 17 53 10.5 -1.0**
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.6
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,70nm,0.8s
VOR Voronezh 74.38 326⇑ *i* P **P 17 53 12.0 -0.6**
VOR pmax pmax
comp=Z,400nm,2.0s,mb6.0
ANTO Ankara 74.41 312 P **P 17 53 13.7 +0.6**
SNR=20
ANTO Ankara 74.41 312 P **P 17 53 12.9 -0.2**
ANTO pmax pmax
comp=Z,130nm,1.1s,mb5.8
ANTO Ankara 74.41 312⇑ *i* P **P 17 53 13.2 +0.1**
KDHN Kadinhani 74.55 311 *i* P **P 17 53 12.5 -1.4**
RPZ Rata Peaks 74.56 135 LR LR 18 24 03.1
comp=Z,5µm,20.9s,MS5.8,baz=297,slow=34
LBTB Lobatse 75.21 245 *e* P **P 17 53 17.7 -0.3**
comp=Z,62nm,1.1s,mb5.5
LBTB LR LR
comp=Z,11µm,20.0s,MS6.2
LBTB Lobatse 75.21 245 *e* P **P 17 53 17.7 -0.4**
LBTB pmax pmax
comp=Z,62nm,1.1s,mb5.5
LBTB MLR MLR
comp=Z,11µm,20.0s,MS6.2
BOLV Bolvadin 75.48 311 *i* P **P 17 53 18.6 -0.7**
ISP Isparta 75.59 310 P **P 17 53 18.5 -1.5**
ISP Isparta 75.59 310 *e* P **P 17 53 16.6 -3.4**
comp=Z,78nm,1.1s,mb5.5
ISP LR LR
comp=Z,2µm,19.0s,MS5.5
ISP Isparta 75.59 310 *e* P **P 17 53 16.6 -3.4**
ISP pmax pmax
comp=Z,78nm,1.1s,mb5.5
ISP MLR MLR
comp=Z,2µm,19.0s,MS5.5
SEY Seymchan 75.75 22⇓ *e* P **P 17 53 19.2 -1.1**
BOSA Boshof 75.82 241 P **P 17 53 21.6 +0.2**
comp=Z,54nm,0.8s,mb5.5,baz=90,slow=6.6,SNR=82
BOSA LR LR 18 23 00.8
comp=Z,9µm,18.6s,MS6.1,baz=359,slow=33
BOSA Boshof 75.82 241 P **P 17 53 21.7 +0.2**
BOSA pmax pmax
comp=Z,54nm,0.8s,mb5.5
BOSA MLR MLR
comp=Z,9µm,18.6s,MS6.1
AKAS Kas 75.91 308 *i* P **P 17 53 18.6 -3.2**
TIXI Tiksi 76.07 9⇓ *e* P **P 17 53 19.3 -2.7**
TIXI pmax pmax
comp=Z,137nm,1.7s,mb5.6
TIXI MLR MLR
comp=Z,9µm,19.0s,MS6.1
BORA Eskisehir 76.15 312 *i* P **P 17 53 22.2 -0.9**
GOLH Golhisar 76.18 309 *i* P **P 17 53 22.1 -1.2**
KHAL Karahalli 76.50 310 *i* P **P 17 53 23.9 -1.2**
GDZ Gediz 76.68 311 *i* P **P 17 53 24.5 -1.6**
TURN Turunc 76.84 309 *i* P **P 17 53 28.4 +1.3**
MOS Moscow 76.90 329 *e* P **P 17 53 23.6 -3.4**
MOS *e* pP 17 53 36.9 -2.8
MOS *e*S S 18 03 08.6 -3.0
MOS *e* 18 03 28.0
MOS pmax pmax
comp=Z,270nm,1.3s,mb6.0
MOS MLR MLR
comp=Z,4µm,20.0s,MS5.8
MOS MLR MLR
comp=E,4µm,20.0s
ARG Arkhangelos 77.07 308 *e* P **P 17 53 28.4 0.0**
OBN Obninsk 77.20 328 *e* P **P 17 53 28.3 -0.3**
OBN *i* 17 53 37.4
OBN *i* pP 17 53 42.9 +1.5
OBN *i* 17 56 23.2
OBN *e*S S 18 03 13.7 -1.2
OBN pmax pmax
comp=Z,295nm,1.6s,mb6.0
DEMI Demirci 77.25 311 *i* P **P 17 53 28.7 -0.6**
KARP Karpathos 77.69 307 *e* P **P 17 53 31.3 -0.6**
SYO Syowa Base 77.72 199⇑ *e* P **P 17 53 30.0 -1.3**
SYO Syowa Base 77.72 199⇓ *i* P **P 17 53 33.5 +2.2**
SYO Syowa Base 77.72 199⇓ *i* P pP 17 53 48.8 +4.7
BDRM Kayabasi 77.79 309 *i* P **P 17 53 31.2 -1.1**
AKHS Akhisar 77.89 310 *i* P **P 17 53 32.3 -0.7**
GCAM G?zelcaml? 78.08 309 *i* P **P 17 53 34.2 +0.2**
KLMR Klimovskoe 78.22 334 *e* P **P 17 53 32.9 -1.3**
KLMR *e* 17 56 29.8
KLMR pmax pmax
comp=Z,255nm,1.2s,mb6.0
URZ Urewera 78.22 128 LR LR 18 26 58.5
comp=Z,3µm,21.0s,MS5.7,baz=291,slow=35
BLCB Balcova 78.38 310 P **P 17 53 35.1 -0.5**
SMG Samos 78.39 309 *e* P **P 17 53 35.8 +0.1**
FUNA Funafuti 78.66 98 *e* P **P 17 53 34.1 -3.6**
comp=Z,118nm,0.4s,mb6.2
FUNA LR LR
comp=Z,8µm,20.0s,MS6.1
TLCR 78.69 317⇑ P **P 17 53 37.9 +0.8**
TLCR 78.69 317⇑ *i* P **P 17 53 37.9 +0.8**
TIRR Tirgusor 78.78 316 P **P 17 53 37.7 0.0**
TIRR Tirgusor 78.78 316⇑ *i* P **P 17 53 37.6 -0.1**
NPS Neapolis 78.88 306 *e* P **P 17 53 38.0 -0.4**
CHOS Chios island 79.14 310 P **P 17 53 39.3 -0.5**
PRK Paraskevi 79.15 311 P **P 17 53 39.4 -0.4**
KIS Kishinev 79.15 319 P **P 17 53 40.5 +0.8**
KIS Kishinev 79.15 319⇑ *i* P **P 17 53 40.0 +0.3**
KIS *e* pP 17 53 52.0 -0.5
KIS pmax pmax
comp=Z,460nm,2.5s,mb6.0
KIS MLR MLR
comp=Z,2µm,20.0s,MS5.4
KIS MLR MLR
comp=Z,2µm,20.0s
KIS Kishinev 79.15 319 *i* P **P 17 53 40.0 +0.3**
comp=Z,500nm,2.5s,mb6.0
KIS *e*L 18 24 40.0
KIS LRM 18 32 36.0
comp=Z,2µm,20.0s
HARR Harsova 79.17 316 P **P 17 53 39.9 +0.1**
HARR Harsova 79.17 316⇑ *i* P **P 17 53 39.8 0.0**
PRD Provadia 79.19 315 *i* P **P 17 53 40.1 +0.2**
THR1 Thera Island 79.21 308 P **P 17 53 39.6 -0.6**
THR6 Thira Island, 79.25 307 P **P 17 53 39.7 -0.8**
THR3 Thira Island, 79.26 308 P **P 17 53 40.0 -0.5**
THR4 Thira Island, 79.28 308 P **P 17 53 40.1 -0.5**
APE Apeiranthos 79.28 308 P **P 17 53 38.9 -1.7**
APE Apeiranthos 79.28 308 *e* P **P 17 53 40.1 -0.5**
APE Apeiranthos 79.28 308⇓ *i* P **P 17 53 39.4 -1.2**
IDI Anoyia 79.46 306 LR LR 18 30 15.9
comp=Z,2µm,21.5s,MS5.4,baz=74,slow=37
JMB Yambol 79.61 314 P **P 17 53 42.3 +0.1**
ALN Alexandroupoli 79.66 312 P **P 17 53 41.4 -1.2**
AKASG Malin Array Be 79.90 322 P **P 17 53 42.9 -0.8**
comp=Z,8.7nm,0.6s,mb4.9,baz=88,slow=4.9,SNR=51
AKASG PP PP 17 56 42.5 -3.1
comp=Z,7.2nm,0.8s,baz=91,slow=6.4,SNR=6.1
AKASG LR LR 18 32 45.9
comp=Z,2µm,21.5s,MS5.4,baz=125,slow=38
AKASG Malin Array Be 79.90 322 P **P 17 53 42.9 -0.7**
AKASG 17 56 42.6
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG pmax pmax
comp=Z,7.0nm,0.9s
AKASG MLR MLR
comp=Z,2µm,21.5s
AKBB Malin Array Si 79.90 322 *e* P **P 17 53 42.3 -1.4**
KIEV Kiev 79.91 322 *e* P **P 17 53 42.3 -1.4**
comp=Z,54nm,1.1s,mb5.4
KIEV *e* PP PP 17 56 44.3 -1.4
KIEV LR LR
comp=Z,3µm,19.0s,MS5.7
KIEV Kiev 79.91 322 *e* P **P 17 53 42.3 -1.4**
KIEV *e* 17 56 44.3
KIEV pmax pmax
comp=Z,55nm,1.1s,mb5.4
KIEV MLR MLR
comp=Z,3µm,19.0s,MS5.7
SUR Sutherland 79.94 238 *e* P **P 17 53 45.0 +0.7**
comp=Z,81nm,0.9s,mb5.7
VAM Vamos 80.04 306 *e* P **P 17 53 45.5 +0.7**
LIA Limnos Island 80.10 311 P **P 17 53 44.5 -0.5**
SZH Strazhica 80.25 314 *i* P **P 17 53 44.9 -0.8**
VRI Vrincioaia 80.27 317⇓ *i* P **P 17 53 46.5 +0.7**
PLOR Plostina 80.32 317⇑ *i* P **P 17 53 45.9 -0.1**
MLR Muntele Rosu 80.72 317 LR LR 18 31 59.2
comp=Z,2µm,20.0s,MS5.5,baz=246,slow=38
MLR Muntele Rosu 80.72 317 P **P 17 53 48.8 +0.6**
MLR Muntele Rosu 80.72 317⇑ *i* P **P 17 53 48.8 +0.6**
PLD Plovdiv 80.89 313 P **P 17 53 48.7 -0.5**
PLD Plovdiv 80.89 313 *i* P **P 17 53 42.8 -6.4**
OUR Ouranopolis 81.09 311 P **P 17 53 49.9 -0.4**
KYTH Kithira 81.12 307 *e* P **P 17 53 50.0 -0.5**
DID Didima 81.16 308 P **P 17 53 47.9 -2.8**
PAIG Paliouri 81.24 311 P **P 17 53 50.7 -0.4**
VLI Veliai 81.27 308 *e* P **P 17 53 47.5 -3.8**
VOIR 81.33 316 P **P 17 53 51.3 -0.1**
VOIR 81.33 316⇑ *i* P **P 17 53 51.3 -0.1**
PGB Panagyurishte 81.37 313 *i* P **P 17 53 51.5 -0.2**
LTK Loutraki 81.46 309 P **P 17 53 50.3 -2.0**
PLG Polygyros 81.50 311 P **P 17 53 51.5 -1.0**
PLG Polygyros 81.50 311 *e* P **P 17 53 52.5 0.0**
MMB Musomiste 81.51 312 *i* P **P 17 53 51.7 -0.8**
XOR Xorichti 81.52 310 P **P 17 53 52.2 -0.4**
LKR Lokris 81.54 309 P **P 17 53 51.1 -1.6**
SOH Sokhos 81.65 312 P **P 17 53 52.1 -1.1**
BURAR Bucovina Array 81.68 319⇑ P **P 17 53 54.1 +0.9**
BURAR Bucovina Array 81.68 319⇑ *i* P **P 17 53 54.1 +0.9**
RAO Raoul Island 81.70 119 LR LR 18 31 30.5
comp=Z,2µm,18.1s,MS5.4,baz=91,slow=37
BUR08 Bucovina Ar. S 81.70 319 *e* P **P 17 53 53.5 +0.2**
MNK Minsk 81.76 326 *e* P **P 17 53 51.0 -2.5**
HORT Hortiatis 81.80 311 P **P 17 53 52.9 -1.1**
VNDA Vanda 81.83 169 P **P 17 53 53.3 -0.2**
comp=Z,25nm,1.1s,mb5.1,baz=293,slow=5.8,SNR=34
VNDA PKKPbc PKKPbc 18 12 24.2 -3.6
comp=Z,1.3nm,0.9s,baz=166,slow=1.1,SNR=9.0
VNDA LR LR 18 29 24.9
comp=Z,1µm,18.4s,MS5.3,baz=306,slow=35
THE Thessaloniki 81.91 311 P **P 17 53 53.0 -1.6**
PUL Pulkovo 82.02 331⇑ *e* P **P 17 53 55.6 +0.9**
KKB Krupnik 82.03 313 *i* P **P 17 53 54.2 -1.0**
KNT Kendrikon 82.05 312 P **P 17 53 54.5 -0.8**
VTS Vitosha 82.07 313 P **P 17 53 55.6 +0.2**
VTS Vitosha 82.07 313 *i* P **P 17 53 56.0 +0.6**
VTS Vitosha 82.07 313⇑ *i* P **P 17 53 55.3 -0.1**
AGG Agios Georgios 82.12 310 P **P 17 53 52.8 -2.9**
ITM Ithomi 82.14 308 *e* P **P 17 53 54.5 -1.4**
LIT Litokhoron 82.17 311 P **P 17 53 55.1 -0.9**
VAY Valandovo 82.32 312 P **P 17 53 55.0 -1.7**
VAY Valandovo 82.32 312 *i* P **P 17 53 55.2 -1.5**
GRG Griva 82.38 312 P **P 17 53 55.8 -1.3**
TSUM Tsumeb 82.41 251 *e* P **P 17 53 57.6 -0.1**
comp=Z,38nm,0.8s,mb5.4
THL Klokotos Trika 82.45 310 P **P 17 53 55.6 -1.8**
EVR Evrytania 82.50 310 *e* P **P 17 53 57.0 -0.8**
JOF Joensuu 82.60 334 *ep* P **P 17 53 56.6 -1.1**
comp=Z,56nm,0.7s,mb5.7
JOF Joensuu 82.60 334 *e* P **P 17 53 56.6 -1.1**
JOF pmax pmax
comp=Z,56nm,0.7s,mb5.7
STIP Stip 82.67 312 *i* P **P 17 53 57.4 -1.1**
BMR Baia Mare 82.83 318 P **P 17 54 00.8 +1.5**
BMR Baia Mare 82.83 318⇓ *i* P **P 17 54 00.5 +1.2**
GZR Gura Zlata 82.89 316⇑ P **P 17 54 00.2 +0.6**
GZR Gura Zlata 82.89 316⇑ *i* P **P 17 54 00.2 +0.6**
LVV L'vov 82.92 321 *e* P **P 17 53 59.0 -0.6**
LVV *e* pP 17 54 12.4 -0.1
LVV *e* PPP 17 59 01.6
LVV *e* PS 18 05 39.4
LVV MLR MLR
comp=Z,1µm,21.0s,MS5.3
LVV MLR MLR
comp=N,500nm,20.0s,MS5.0
LVV MLR MLR
comp=E,500nm,20.0s,MS5.0
SBA Scott Base 82.93 169 *e* P **P 17 53 59.8 +0.5**
comp=E,45nm,0.8s,mb5.5
SBA Scott Base 82.93 169 P **P 17 53 59.8 +0.6**
SBA pmax pmax
comp=Z,45nm,0.9s,mb5.5
FNA Florina 83.12 311 P **P 17 53 59.5 -1.4**
LVZ Lovozero 83.15 340⇑ *e* P **P 17 53 59.7 -0.8**
DRGR 83.19 317 P **P 17 54 01.6 +0.5**
DRGR 83.19 317⇓ *i* P **P 17 54 02.6 +1.5**
BIA Bitola 83.20 312 *i* P **P 17 54 00.0 -1.3**
SKO Skopje 83.26 313 P **P 17 54 00.8 -0.8**
SKO Skopje 83.26 313 *i* P **P 17 54 01.1 -0.5**
BILL Bilibino 83.29 20⇑ *e* P **P 17 54 00.2 -1.0**
BILL LR LR
comp=Z,5µm,21.0s,MS5.9
BILL Bilibino 83.29 20 *e* P **P 17 54 00.1 -1.1**
BILL pmax pmax
comp=Z,29nm,1.1s,mb5.2
VLS Valsamata 83.34 309 P **P 17 54 01.7 -0.4**
VLS Valsamata 83.34 309 *e* P **P 17 54 00.5 -1.6**
VSU Vasula 83.41 329 *i* P **P 17 54 00.1 -1.9**
APA Apatity 83.46 339⇓ *i* P **P 17 54 02.1 0.0**
APA *e*S S 18 04 21.0 +0.9
APA pmax pmax
comp=Z,130nm,1.0s,mb5.9
APA MLR MLR
comp=Z,4µm,22.0s,MS5.8
KWP Kalwaria 83.72 320 *e* P **P 17 54 04.3 +0.6**
KWP Kalwaria 83.72 320 *e* P **P 17 54 04.4 +0.6**
KWP Kalwaria 83.72 320 P **P 17 54 03.7 -0.1**
KWP pmax pmax
comp=Z,93nm,1.0s,mb5.9
KWP Kalwaria 83.72 320⇓ *i* P **P 17 54 04.2 +0.4**
IGT Igoumenitsa 83.73 310 P **P 17 54 03.3 -0.8**
BZS Buzias 83.73 316 P **P 17 54 04.0 +0.1**
BZS Buzias 83.73 316⇓ *i* P **P 17 54 04.1 +0.2**
UZH Uzhgorod 83.80 319⇓ *i* P **P 17 54 04.8 +0.6**
UZH *e* pP 17 54 14.4 -2.7
UZH *e* 17 57 14.0
UZH *e*S S 18 04 22.0 -2.3
UZH *e* 18 05 10.0
UZH *e* 18 09 46.0
KOLS Kolonicke sedl 83.87 320 *i* P **P 17 54 06.1 +1.5**
KOLS *e* pP 17 54 18.5 +1.0
KOLS pmax pmax
comp=Z,113nm,1.2s,mb5.9
KOLS Kolonicke sedl 83.87 320 *i* P **P 17 54 06.1 +1.5**
KOLS *ep*P pP 17 54 18.5 +1.0
KEK Kerkira 84.16 310 *e* P **P 17 54 05.0 -1.3**
SUW Suwalki 84.30 325 *e* P **P 17 54 06.6 0.0**
CRVS Cervenica-Dubn 84.39 319 *i* P **P 17 54 08.0 +0.8**
CRVS *e* pP 17 54 21.8 +1.7
CRVS pmax pmax
comp=Z,44nm,1.1s,mb5.5
CRVS Cervenica-Dubn 84.39 319 *i* P **P 17 54 08.0 +0.8**
CRVS *ep*P pP 17 54 21.8 +1.7
CRVS *e*PP PP 17 57 09.4 -13
KAF Kangasniemi 84.57 333 *ep* P **P 17 54 07.0 -0.8**
comp=Z,96nm,0.9s,mb5.9
KAF Kangasniemi 84.57 333 *e* P **P 17 54 07.0 -0.8**
KAF pmax pmax
comp=Z,96nm,0.9s,mb5.9
STHS Stebnicka Huta 84.62 320 *i* P **P 17 54 09.5 +1.1**
STHS *e* pP 17 54 22.3 +1.0
STHS pmax pmax
comp=Z,40nm,1.1s,mb5.5
STHS Stebnicka Huta 84.62 320 *i* P **P 17 54 09.5 +1.1**
STHS *ep*P pP 17 54 22.3 +1.0
NIE Niedzica 85.22 320⇑ *e* P **P 17 54 12.8 +1.4**
NIE *es*P sP 17 54 24.9 -4.2
PSZ Piszkesteto 85.27 318 P **P 17 54 12.4 +0.8**
PSZ Piszkesteto 85.27 318⇓ *e* P **P 17 54 12.1 +0.5**
PSZ Piszkesteto 85.27 318⇓ *i* P **P 17 54 12.3 +0.7**
OJC Ojcow 85.67 321 *e* P **P 17 54 14.0 +0.4**
OJC *e*PcP PcP 17 54 17.4 +0.9
OJC *es*P sP 17 54 25.9 -5.5
PKSM Moragy 85.87 316 P **P 17 54 15.6 +0.9**
VYHS Vyhne 86.05 319 *i* P **P 17 54 16.1 +0.6**
VYHS *e* pP 17 54 28.3 -0.1
VYHS pmax pmax
comp=Z,30nm,1.5s,mb5.3
VYHS Vyhne 86.05 319 *i* P **P 17 54 16.0 +0.5**
VYHS *ep*P pP 17 54 28.3 -0.1
KOLL Kolacno 86.34 319 *e* P **P 17 54 17.5 +0.5**
KOLL *ep*P pP 17 54 29.9 0.0
KEV Kevo 86.39 340 *e* P **P 17 54 15.9 -0.9**
comp=Z,36nm,0.7s,mb5.7
KEV LR LR
comp=Z,2µm,19.0s,MS5.6
TIP Timpagrande 86.44 309 *e* P **P 17 54 18.0 +0.3**
comp=Z,54nm,1.1s,mb5.7
OKC Ostrava-Krasne 86.67 320 *e* P **P 17 54 19.1 +0.5**
OKC *ep*P pP 17 54 31.9 +0.4
OKC *e*S S 18 05 03.1 +10
OKC Ostrava-Krasne 86.67 320 *e* P **P 17 54 19.1 +0.5**
OKC *e**PP pP 17 54 31.9 +0.4
OKC MLR MLR
comp=Z,2µm,18.9s,MS5.5
OKC Ostrava-Krasne 86.67 320 *e* P **P 17 54 19.1 +0.5**
OKC *ep*P pP 17 54 31.9 +0.4
OKC *e*S S 18 05 03.1 +10
OKC AMS AMS 18 30 50.0
comp=Z,2µm,18.9s
ARCES ARCESS Array B 86.84 340 P **P 17 54 18.7 -0.2**
comp=Z,36nm,0.5s,mb5.8,baz=96,slow=6.8,SNR=124
ARCES LR LR 18 39 09.3
comp=Z,3µm,20.3s,MS5.7,baz=109,slow=40
ARE0 ARCESS Array S 86.84 340 *e* P **P 17 54 18.1 -0.9**
SMOL Smolenice 86.98 319 *e* P **P 17 54 21.6 +1.5**
CEL Celeste 87.02 308 *e* P **P 17 54 21.1 +0.6**
comp=Z,130nm,1.3s,mb6.0
CEL LR LR
comp=Z,2µm,20.0s,MS5.5
MODS Modra-Piesok 87.06 318 *i* P **P 17 54 21.5 +1.0**
MODS *e* pP 17 54 34.2 +0.8
MODS pmax pmax
comp=Z,23nm,1.2s,mb5.3
MODS Modra-Piesok 87.06 318 *i* P **P 17 54 21.5 +1.0**
MODS *ep*P pP 17 54 34.1 +0.7
ZST Bratislava 87.16 318 *e* P **P 17 54 21.5 +0.5**
ZST *e* pP 17 54 34.1 +0.2
ZST pmax pmax
comp=Z,82nm,1.4s,mb5.8
ZST Bratislava 87.16 318 *e* P **P 17 54 21.5 +0.5**
ZST *ep*P pP 17 54 34.1 +0.2
CUC Castrocucco 87.24 310 *e* P **P 17 54 19.9 -1.6**
comp=Z,32nm,0.8s,mb5.6
CUC *e*PP PP 17 57 41.0 -5.0
CUC LR LR
comp=Z,4µm,21.0s,MS5.8
FGMS Monte Sant'Ang 87.29 312 P **P 17 54 22.1 +0.3**
comp=Z,47nm,0.7s,mb5.8
NVL N'lazarevskaya 87.38 199 *e* P **P 17 54 23.0 +1.4**
NVL S S 18 04 47.9 -11
NVL pmax pmax
comp=Z,75nm,1.9s,mb5.6
MAIT Maitri 87.41 199 *e* P **P 17 54 23.4 +1.7**
AFI Afiamalu 87.42 104 LR LR 18 32 30.5
comp=Z,945nm,20.4s,MS5.2,baz=287,slow=35
MGR Morigerati 87.45 310 P **P 17 54 22.1 -0.5**
KTK1 Kautokeino 87.50 339 *e* P **P 17 54 22.0 -0.1**
KOGS Kog 87.55 316 *e* P **P 17 54 23.3 +0.4**
KOGS *ep*P pP 17 54 36.4 +0.6
SSY Sortino 87.58 307 P **P 17 54 23.8 +0.6**
VRAC Vranov 87.62 319 P **P 17 54 24.4 +1.3**
VRAC Vranov 87.62 319⇓ *i* P **P 17 54 24.4 +1.3**
GKP Gorka Klasztor 87.67 323 *e* P **P 17 54 23.8 +0.5**
QSPA South Pole Qui 87.69 180 *e* P **P 17 54 22.7 -0.2**
comp=Z,24nm,0.6s,mb5.6
FG5 Orsara di Pugl 87.77 311 P **P 17 54 25.5 +1.4**
comp=Z,899nm,2.7s,mb6.5
FG5 pmax pmax
comp=Z,899nm,2.7s,mb6.5
FG5 Orsara di Pugl 87.77 311 P **P 17 54 25.5 +1.4**
DPC Dobruska-Polom 87.90 320 *e* P **P 17 54 25.4 +0.9**
DPC *ep*P pP 17 54 38.1 +0.7
DPC AMS AMS 18 32 10.0
comp=Z,2µm,22.6s
CONA Conrad Observa 87.96 318⇓ *i* P **P 17 54 25.1 +0.3**
comp=Z,24nm,1.0s,mb5.4,SNR=7.3
CSNA Conrad Observa 87.96 318⇓ *i* P **P 17 54 25.1 +0.3**
comp=Z,16nm,1.1s,mb5.2
KSP Ksiaz 87.97 321 *e* P **P 17 54 26.0 +1.2**
KSP Ksiaz 87.97 321⇑ *e* P **P 17 54 26.1 +1.3**
KSP *e**PP pP 17 54 38.1 +0.3
UPC Upice 88.12 321 *e* P **P 17 54 26.7 +1.2**
UPC *ep*P pP 17 54 39.1 +0.6
ARSA Arzberg 88.12 317⇓ *e*PcP PcP 17 54 26.3 -1.0
comp=Z,49nm,1.3s,SNR=16
BOJS Bojanci 88.15 315 *e* P **P 17 54 26.2 +0.4**
TREC Trest 88.34 319 *e* P **P 17 54 27.4 +0.8**
TREC *ep*P pP 17 54 39.8 +0.3
TREC AMS AMS 18 31 30.0
comp=Z,2µm,21.1s
PERS Pernice 88.34 317 *e* P **P 17 54 27.4 +0.8**
SOKA Soboth 88.40 317⇓ *i* PcP PcP 17 54 27.7 -0.9
comp=Z,59nm,1.2s
CSLB Castelbuono 88.44 308 P **P 17 54 25.1 -2.2**
comp=Z,74nm,1.0s,mb5.9
MIDA Miranda 88.56 312 P **P 17 54 28.0 +0.2**
LJU Ljubljana 88.70 316 *e* P **P 17 54 29.2 +0.8**
LJU *ep*P pP 17 54 42.2 +0.9
OBKA Obir 88.72 316⇓ *i* PcP PcP 17 54 29.3 -0.7
comp=Z,43nm,1.2s,SNR=13
PRU Pruhonice 89.01 320 *e* P **P 17 54 30.4 +0.7**
PRU *ep*P pP 17 54 43.1 +0.4
PRU *e*S S 18 05 11.3 -3.6
PRU AMS AMS 18 21 00.0
comp=Z,2µm,19.4s
SKDS Skadanscina 89.02 315 *e* P **P 17 54 29.6 -0.3**
MOA Molln 89.02 318⇓ *e* P **P 17 54 30.1 +0.3**
comp=Z,30nm,1.4s,mb5.4,SNR=5.5
PVCC Panska Ves 89.04 320 *e* P **P 17 54 30.9 +1.1**
PVCC *ep*P pP 17 54 43.2 +0.4
PVCC AMS AMS 18 31 00.0
comp=Z,3µm,19.2s
TRO Tromso 89.12 340 *e* P **P 17 54 29.7 -0.1**
TRO AMb AMB 17 54 41.7
comp=Z,109nm,1.6s,mb5.9
VOY Vojsko 89.14 316 *e* P **P 17 54 30.7 +0.3**
VOY *e* pP 17 54 43.5 +0.1
VOY *e* 17 55 02.7
VOY *e* 17 55 25.8
TRI Trieste 89.21 316 *e* P **P 17 54 29.4 -1.3**
comp=Z,19nm,0.7s,mb5.5
TRI Trieste 89.21 316 *e* P **P 17 54 29.4 -1.4**
TRI pmax pmax
comp=Z,19nm,0.7s,mb5.5
AQU L'Aquila 89.24 312 P **P 17 54 31.7 +0.7**
AQU LR LR
comp=Z,2µm,19.0s,MS5.6
AQU L'Aquila 89.24 312⇑ *i* P **P 17 54 32.1 +1.1**
MYKA Terra Mystica 89.36 317⇓ *i* PcP PcP 17 54 31.9 -0.9
comp=Z,28nm,1.1s
CING Cingoli 89.46 313 P **P 17 54 32.8 +0.8**
BRG Berggiesshubel 89.46 321 *i* P **P 17 54 32.6 +0.8**
comp=Z,46nm,1.3s,mb5.6
BRG *i* pP 17 54 45.2 +0.4
BRG *e*PP PP 17 58 20.9 +18
BRG *e*P'P' 18 20 20.9
BRG LR LR
comp=Z,1µm,18.9s,MS5.3
BRG Berggiesshubel 89.46 321 *i* P **P 17 54 32.6 +0.8**
BRG *i* pP 17 54 45.2 +0.4
BRG pmax pmax
comp=Z,46nm,1.3s,mb5.7
BRG pmax pmax
comp=Z,69nm,1.4s,mb5.8
BRG pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
BRG pmax pmax
comp=Z,33nm,2.2s,mb5.3
BRG MLR MLR
comp=N,532nm,18.5s,MS5.3
BRG MLR MLR
comp=E,842nm,19.2s,MS5.3
BRG MLR MLR
comp=Z,1µm,18.9s,MS5.3
BRG Berggiesshubel 89.46 321 *e* P **P 17 54 32.6 +0.8**
comp=Z,77nm,1.3s,mb5.9
BRG *ep*P pP 17 54 45.3 +0.5
BRG Berggiesshubel 89.46 321 *i* P **P 17 54 32.6 +0.8**
comp=Z,76nm,1.3s,mb5.9
BRG *i* pP 17 54 45.2 +0.4
comp=Z,115nm,1.4s
BRG *e*PP PP 17 58 20.9 +18

comp=Z,15nm,1.2s
BRG ePKPPKP 18 20 20.9
comp=Z,55nm,2.2s
BRG
comp=N,888nm,18.5s
BRG
comp=E,1µm,19.2s
BRG
comp=Z,2µm,18.9s
GEC2 GERESS Array S 89.47 319 eP **P** **17 54 32.3 +0.4**
GEC2 GERESS Array S 89.47 319 eP **P** **17 54 32.6 +0.7**
GEC2 e*PP pP 17 54 45.1 +0.2
GEC2 pmax pmax
comp=Z,120nm,1.4s,mb6.0
GEC2 GERESS Array S 89.47 319 eP **P** **17 54 32.6 +0.7**
comp=Z,120nm,1.4s,mb6.0
GEC2 epP pP 17 54 45.1 +0.2
GERES GERESS Array B 89.47 319 P **P** **17 54 32.4 +0.5**
comp=Z,10nm,0.7s,mb5.3,baz=96,slow=4.0,SNR=71
GERES PP PP 17 57 57.5 -6.1
comp=Z,2.2nm,0.9s,baz=76,slow=8.2,SNR=3.5
CERT Cerreto 89.53 312 P **P** **17 54 32.1 -0.2**
PTCC Patocco-Chiusa 89.54 316 P **P** **17 54 31.7 -0.6**
comp=Z,41nm,0.8s,mb5.8
KHC Kasperske Hory 89.57 319 eP **P** **17 54 32.8 +0.4**
KHC e*PP pP 17 54 44.6 -0.7
KHC eS S 18 05 22.6 +2.4
KHC MLR MLR
comp=Z,2µm,19.2s,MS5.6
KHC Kasperske Hory 89.57 319 eP **P** **17 54 32.8 +0.4**
KHC epP pP 17 54 44.6 -0.7
KHC ex x 17 54 59.5
KHC eS S 18 05 22.6 +2.4
KHC AMS AMS 18 29 40.0
comp=Z,2µm,19.2s
KBA Koelnbreinsper 89.59 317 ||i PcP PcP 17 54 33.8 0.0
comp=Z,22nm,0.8s
GMNA Gemona 89.61 316 P **P** **17 54 33.3 +0.7**
comp=Z,277nm,0.8s,mb6.6
RUE Ruedersdorf 89.68 322 eP **P** **17 54 32.1 -0.6**
comp=Z,226nm,1.2s,mb6.4
MTCE Montecelio 89.71 312 P **P** **17 54 32.8 -0.4**
ASS Assisi 89.83 313 P **P** **17 54 34.1 +0.3**
comp=Z,44nm,0.9s,mb5.8
ASS Assisi 89.83 313 P **P** **17 54 34.1 +0.3**
ASS pmax pmax
comp=Z,44nm,0.9s,mb5.8
RJOB Jochberg 90.00 318 eP **P** **17 54 34.2 -0.2**
comp=Z,57nm,1.7s,mb5.6
RJOB ePP PP 17 58 12.5 +4.7
WET Wettzell 90.03 319 eP **P** **17 54 35.2 +0.7**
WET e*PP pP 17 54 47.8 +0.3
WET pmax pmax
comp=Z,76nm,1.3s,mb5.9
WET Wettzell 90.03 319 eP **P** **17 54 35.2 +0.7**
comp=Z,76nm,1.3s,mb5.9
WET epP pP 17 54 47.8 +0.3
CLL Collm 90.08 321 i P **P** **17 54 35.1 +0.4**
comp=Z,58nm,1.4s,mb5.7
CLL i pP pP 17 54 47.8 +0.1
CLL LR LR
comp=Z,1µm,21.3s,MS5.4
CLL Collm 90.08 321 i P **P** **17 54 35.1 +0.4**
CLL i*PP pP 17 54 47.8 +0.1
CLL pmax pmax
comp=Z,58nm,1.4s,mb5.7
CLL MLR MLR
comp=Z,1µm,21.3s,MS5.4
CLL Collm 90.08 321 eP **P** **17 54 35.0 +0.3**
comp=Z,57nm,1.4s,mb5.7
CLL Collm 90.08 321 i P **P** **17 54 35.1 +0.4**
comp=Z,58nm,1.4s,mb5.7
CLL Lm 17 19 00.0
comp=N,900nm,21.2s
CLL Lm 17 19 00.0
comp=E,1µm,21.9s
CLL Lm 17 19 00.0
comp=Z,2µm,21.8s
CLL LmV 17 41 00.0
comp=Z,1µm,21.3s
CLL i (pP) pP 17 54 47.8 +0.1
comp=Z,69nm,1.4s
CLL ex x 17 55 16.0
ABTA Abfaltersbach 90.14 317 ||eP **P** **17 54 35.1 0.0**
comp=Z,29nm,1.1s,mb5.5,SNR=13
BADI Badiali 90.16 313 P **P** **17 54 35.6 +0.4**
HFS Hagfors 90.27 330 P **P** **17 54 35.4 0.0**
comp=Z,15nm,0.7s,mb5.5,baz=190,slow=6.0,SNR=35
HFS PP PP 17 58 01.4 -8.2
comp=Z,6.7nm,0.8s,baz=105,slow=15,SNR=2.2
TANN Tannenbergstha 90.37 320 eP **P** **17 54 36.7 +0.6**
comp=Z,52nm,1.5s,mb5.6
MOR8 Moi Rana 90.39 336 eP **P** **17 54 35.4 -0.5**
ROTZ Rotzenmuhle 90.50 320 eP **P** **17 54 37.8 +1.1**
comp=Z,56nm,1.3s,mb5.7
ROTZ epP pP 17 54 50.4 +0.7
MANZ Manzenberg 90.58 320 eP **P** **17 54 38.2 +1.2**
comp=Z,79nm,1.3s,mb5.9
MANZ epP pP 17 54 50.6 +0.6
VMG Vicchio 90.69 314 P **P** **17 54 40.3 +2.6**
comp=Z,46nm,0.8s,mb5.9
CTI Castel Tesino 90.70 316 P **P** **17 54 37.9 +0.2**
comp=Z,120nm,0.9s,mb6.2
CTI Castel Tesino 90.70 316 P **P** **17 54 37.9 +0.2**
CTI pmax pmax
comp=Z,120nm,0.9s,mb6.2
WTTA Wattenberg 90.76 317 ||i PcP PcP 17 54 38.0 -1.0
comp=Z,39nm,0.7s,SNR=22
WATA Walderalm 90.81 317 ||i P **P** **17 54 38.0 -0.2**
comp=Z,65nm,1.3s,mb5.8,SNR=17
MOX Moxa 90.92 320 eP **P** **17 54 39.2 +0.6**
comp=Z,79nm,1.8s,mb5.7
MOX e pP 17 54 52.2 +0.6
MOX Moxa 90.92 320 eP **P** **17 54 39.2 +0.6**
MOX e pP 17 54 52.2 +0.6
MOX pmax pmax
comp=Z,79nm,1.8s,mb5.7
MOX Moxa 90.92 320 eP **P** **17 54 39.3 +0.7**
comp=Z,78nm,1.7s,mb5.8
MOX epP pP 17 54 52.5 +0.9
SPITS Spitsbergen Ar 90.96 348 P **P** **17 54 37.0 -1.3**
comp=Z,15nm,0.5s,mb5.5,baz=336,slow=4.3,SNR=22
SPB4 Spitsberger Ar 90.97 348 eP **P** **17 54 34.6 -3.8**
FNVD Fontana Vidola 91.00 314 P **P** **17 54 40.3 +1.2**
FUR Furstenfeldbru 91.04 318 eP **P** **17 54 39.3 0.0**
FUR pmax pmax
comp=Z,273nm,2.6s,mb6.1
FUR Furstenfeldbru 91.04 318 eP **P** **17 54 39.3 0.0**
comp=Z,273nm,2.6s,mb6.1
SQTA Sankt Quirin 91.05 317 ||i P **P** **17 54 39.2 -0.1**
comp=Z,32nm,0.6s,mb5.8
MOTA Moosalm 91.13 317 ||i PcP PcP 17 54 39.7 -0.9
comp=Z,50nm,0.9s,SNR=31
GRF Grafenberg Arr 91.14 319 eP **P** **17 54 40.6 +0.9**
GRF e*PP pP 17 54 53.4 +0.8
GRF pmax pmax
comp=Z,68nm,1.3s,mb5.8
GRF Grafenberg Arr 91.14 319 eP **P** **17 54 40.6 +0.9**
GRF e*PP pP 17 54 53.4 +0.8
GRF pmax pmax
comp=Z,68nm,1.3s,mb5.8
GRF Grafenberg Arr 91.14 319 eP **P** **17 54 40.6 +0.9**
comp=Z,68nm,1.3s,mb5.8
GRF epP pP 17 54 53.4 +0.8
NSS Namsos 91.33 334 eP **P** **17 54 39.5 -0.7**
NSS AMb AMB 17 54 42.7
comp=Z,606nm,4.7s
RETA Reutte 91.36 317 ||i P **P** **17 54 40.1 -0.6**
comp=Z,34nm,0.9s,mb5.7,SNR=31
FETA Feichten 91.37 317 ||i PcP PcP 17 54 41.4 -0.4
comp=Z,32nm,1.0s,SNR=26
GSCL Gusciola 91.39 314 P **P** **17 54 42.4 +1.4**
comp=Z,41nm,0.9s,mb5.8
PII Pisa 91.41 314 P **P** **17 54 40.4 -0.7**
comp=Z,26nm,1.0s,mb5.5
PII Pisa 91.41 314 P **P** **17 54 40.4 -0.7**
PII pmax pmax
comp=Z,26nm,1.0s,mb5.5
MABI Malga Bissina 91.49 316 P **P** **17 54 41.9 +0.5**
ERBM Eremo 91.52 314 P **P** **17 54 43.4 +1.9**
NB2 NORSAR Subarra 91.54 331 P **P** **17 54 40.8 -0.5**
comp=Z,37nm,1.0s,mb5.7,baz=94,slow=4.8
NOA NORSAR Array B 91.54 331 P **P** **17 54 41.1 -0.2**
comp=Z,11nm,0.8s,mb5.2,baz=93,slow=4.7,SNR=24
NOA LR LR 18 40 01.7
comp=Z,2µm,20.0s,MS5.6,baz=100,slow=38
BRMO Bormio 91.60 316 P **P** **17 54 42.7 +0.8**
CLZ Clausthal 91.74 322 eP **P** **17 54 43.1 +0.7**
CLZ e*PP pP 17 54 56.7 +1.3
CLZ pmax pmax
comp=Z,54nm,1.3s,mb5.7
CLZ Clausthal 91.74 322 eP **P** **17 54 43.1 +0.7**
comp=Z,54nm,1.3s,mb5.7
CLZ epP pP 17 54 56.7 +1.3
OSL Oslo 91.75 330 i P **P** **17 54 45.1 +2.8**
BSEG Bad Segeberg 91.83 324 eP **P** **17 54 43.4 +0.6**
BSEG e*PP pP 17 54 57.6 +1.9
BSEG pmax pmax
comp=Z,150nm,1.9s,mb6.0
BSEG Bad Segeberg 91.83 324 eP **P** **17 54 43.4 +0.6**
comp=Z,150nm,1.9s,mb6.0
BSEG epP pP 17 54 57.6 +1.9
KBS Kingsbay 91.90 349 PFAKE 17 54 50.0 +7.3
KBS LR LR
comp=Z,3µm,19.0s,MS5.8
UBBA Unterbreizbach 91.95 321 eP **P** **17 54 43.9 +0.5**
comp=Z,127nm,2.4s,mb5.8
DAVA Damuels 91.96 317 ||i PcP PcP 17 54 43.5 -0.8
comp=Z,78nm,1.2s,SNR=37
SNAA Sanae 91.99 198 eP **P** **17 54 41.0 -2.2**
SNAA e 17 54 43.1
SNAA e pP 17 54 53.5 -2.7
SNAA Sanae 91.99 198 eP **P** **17 54 39.2 -4.0**
comp=Z,23nm,1.4s,mb5.3
SNAA Sanae 91.99 198 eP **P** **17 54 39.2 -4.0**
SNAA pmax pmax
comp=Z,23nm,1.4s
KEST Kesra 92.11 306 P **P** **17 54 46.3 +1.8**
comp=Z,26nm,0.9s,mb5.5,baz=358,slow=0.4,SNR=10
KEST LR LR 18 37 03.1
comp=Z,1µm,19.3s,MS5.5,baz=144,slow=36
TUE Stuetta 92.31 316 eP **P** **17 54 44.9 -0.3**
comp=Z,16nm,0.8s,mb5.4
KONO Kongsberg 92.31 329 eP **P** **17 54 45.2 +0.4**
comp=Z,46nm,0.9s,mb5.8
KONO Kongsberg 92.31 329 eP **P** **17 54 45.2 +0.3**
KONO pmax pmax
comp=Z,46nm,0.9s,mb5.8
STU Stuttgart 92.44 319 eP **P** **17 54 45.8 +0.1**
comp=Z,29nm,1.0s,mb5.6
STU Stuttgart 92.44 319 P **P** **17 54 46.2 +0.5**
STU e pP 17 54 59.4 +0.7
STU pmax pmax
comp=Z,29nm,1.0s,mb5.6
STU Stuttgart 92.44 319 eP **P** **17 54 46.0 +0.3**
comp=Z,40nm,1.2s,mb5.6
TOD Tromm 92.71 319 eP **P** **17 54 47.7 +0.8**
SPAK Spaichingen-Ko 92.71 318 eP **P** **17 54 47.7 +0.7**
TNS Taunus Mts 92.94 320 eP **P** **17 54 48.6 +0.6**
TNS e*PP pP 17 55 02.0 +1.0
TNS pmax pmax
comp=Z,41nm,1.1s,mb5.8
TNS Taunus Mts 92.94 320 eP **P** **17 54 48.6 +0.6**
comp=Z,41nm,1.1s,mb5.8
TNS epP pP 17 55 02.0 +1.0
BFO Black Forest 93.02 318 eP **P** **17 54 47.9 -0.5**
comp=Z,11nm,0.8s,mb5.3
BFO LR LR
comp=Z,2µm,19.0s,MS5.5
BFO Black Forest 93.02 318 eP **P** **17 54 47.9 -0.5**
BFO pmax pmax
comp=Z,11nm,0.8s,mb5.3
BFO MLR MLR
comp=Z,2µm,19.0s,MS5.5
BFO Black Forest 93.02 318 eP **P** **17 54 48.3 -0.1**
comp=Z,24nm,1.2s,mb5.5
FIN Finale Ligure 93.09 314 P **P** **17 54 49.9 +1.1**
FELD Feldberg im Sc 93.23 318 eP **P** **17 54 49.9 +0.5**
IBBN Ibbenburen 93.36 322 eP **P** **17 54 50.3 +0.4**
comp=Z,39nm,1.4s,mb5.6
IBBN epP pP 17 55 04.5 +1.6
LANF Langenberg 93.36 319 eP **P** **17 54 51.2 +1.2**
ABH Alteburg 93.52 320 eP **P** **17 54 51.4 +0.7**
BBS Basel-Blauen 93.57 317 eP **P** **17 54 51.0 0.0**
VNA2 Neumayer--Watz 93.60 198 eP **P** **17 54 53.1 +2.5**
baz=69,slow=3.4
VNA2 e 17 54 54.8
VNA2 e 17 55 02.0
BUG Bochum--Univer 93.67 321 eP **P** **17 54 51.6 +0.3**
comp=Z,44nm,1.4s,mb5.7
CDF Champ du Feu 93.72 318 eP **P** **17 54 50.8 -0.8**
comp=Z,39nm,1.2s,mb5.4
CDF Champ du Feu 93.72 318 eP **P** **17 54 50.8 -0.8**
comp=Z,20nm,1.2s,mb5.4
CDF Champ du Feu 93.72 318 eP **P** **17 54 50.8 -0.8**
CDF pmax pmax
comp=Z,20nm,1.2s,mb5.4
TOUF Mont Tournerai 93.79 314 eP **P** **17 54 51.9 -0.1**
ECH Echery 93.80 318 eP **P** **17 54 52.5 +0.5**
BLS5 Blasjo 93.92 329 eP **P** **17 54 53.6 +1.3**
BLS5 AMb AMB 17 54 59.9
comp=Z,50nm,3.8s
VNA1 Neumayer--Stat 93.96 198 eP **P** **17 54 56.5 +4.2**
VNA1 e 17 55 04.5
HINF Hinteralfeld 94.01 318 eP **P** **17 54 54.1 +1.1**
LOMF Lomont 94.04 317 eP **P** **17 54 53.6 +0.5**
MBDF Montbardon 94.12 314 eP **P** **17 54 52.3 -1.3**
comp=Z,20nm,0.9s,mb5.3
MBDF Montbardon 94.12 314 eP **P** **17 54 52.3 -1.3**
comp=Z,10nm,0.9s,mb5.2
MBDF Montbardon 94.12 314 eP **P** **17 54 52.3 -1.3**
MBDF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
LPG La Plagne 94.12 315 eP **P** **17 54 50.2 -3.3**
comp=Z,36nm,0.7s,mb5.6
LPG La Plagne 94.12 315 eP **P** **17 54 50.2 -3.3**
comp=Z,18nm,0.7s,mb5.6
LPG La Plagne 94.12 315 eP **P** **17 54 50.2 -3.3**
LPG pmax pmax
comp=Z,18nm,0.7s,mb5.6
LPL La Plagne 94.13 315 eP **P** **17 54 49.5 -4.1**
comp=Z,33nm,0.7s,mb5.6
LPL La Plagne 94.13 315 eP **P** **17 54 49.5 -4.1**
comp=Z,16nm,0.7s,mb5.6
LPL La Plagne 94.13 315 eP **P** **17 54 49.5 -4.1**
LPL pmax pmax
comp=Z,16nm,0.7s,mb5.6
BNI Bardonecchia 94.18 315 eP **P** **17 54 52.1 -1.7**
comp=Z,11nm,0.8s,mb5.3
BNI LR LR
comp=Z,3µm,21.0s,MS5.8
BNI Bardonecchia 94.18 315 eP **P** **17 54 52.1 -1.7**
BNI pmax pmax
comp=Z,11nm,0.8s,mb5.3
BNI MLR MLR
comp=Z,3µm,21.0s,MS5.8
FRF La Foret Royal 94.23 313 eP **P** **17 54 53.4 -0.7**
comp=Z,135nm,1.6s,mb5.8
FRF La Foret Royal 94.23 313 eP **P** **17 54 53.4 -0.7**
comp=Z,67nm,1.6s,mb5.8
FRF La Foret Royal 94.23 313 eP **P** **17 54 53.4 -0.7**
FRF pmax pmax
comp=Z,67nm,1.6s,mb5.8
LMR La Mourre 94.33 313 eP **P** **17 54 53.8 -0.8**
comp=Z,15nm,0.9s,mb5.2
LMR La Mourre 94.33 313 eP **P** **17 54 53.8 -0.8**
comp=Z,7.7nm,0.9s,mb5.1
LMR La Mourre 94.33 313 eP **P** **17 54 53.8 -0.8**
LMR pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
HAU Haudompre 94.35 318 eP **P** **17 54 53.3 -1.2**
comp=Z,61nm,1.1s,mb5.6
HAU eMLR MLR
comp=Z,1µm,20.5s,MS5.1
HAU Haudompre 94.35 318 eP **P** **17 54 53.3 -1.2**
comp=Z,30nm,1.1s,mb5.6
HAU LR LR
comp=Z,1µm,20.5s,MS5.4
HAU Haudompre 94.35 318 eP **P** **17 54 53.3 -1.2**
HAU pmax pmax
comp=Z,30nm,1.1s,mb5.6
HAU MLR MLR
comp=Z,1µm,20.5s,MS5.4
WLF Walferdange 94.43 319 P **P** **17 54 56.3 +1.5**
comp=Z,14nm,1.2s,mb5.3
WLF XP sP 17 55 08.0 -4.6
MEM Membach 94.49 320 P **P** **17 54 55.9 +0.8**
MEM AP pP 17 55 04.7 -3.5
CABF La Chapelle 94.56 316 eP **P** **17 54 55.2 -0.3**
THEF They Montfort 94.58 318 eP **P** **17 54 56.0 +0.4**
ORIF Oris-en-Rattie 94.75 315 eP **P** **17 54 55.9 -0.5**
comp=Z,38nm,1.0s,mb5.5
ORIF eMLR MLR
comp=Z,2µm,22.5s,MS5.3
ORIF Oris-en-Rattie 94.75 315 eP **P** **17 54 55.9 -0.5**
comp=Z,19nm,1.0s,mb5.5
ORIF Oris-en-Rattie 94.75 315 eP **P** **17 54 55.9 -0.5**
ORIF pmax pmax
comp=Z,19nm,1.0s,mb5.5
BCLA Clavier 94.95 320 P **P** **17 54 58.7 +1.5**
comp=Z,18nm,1.6s,mb5.2
SMRF Simiane la Rot 94.99 314 eP **P** **17 54 57.5 -0.1**
MEZF Maizieres J'vi 95.19 318 eP **P** **17 54 57.8 -0.6**
comp=Z,82nm,1.4s,mb5.7
MEZF Maizieres J'vi 95.19 318 eP **P** **17 54 57.8 -0.6**
comp=Z,82nm,1.4s,mb6.0
GIVF Givet 95.27 320 eP **P** **17 54 58.4 -0.3**
TAM Tamanrasset 95.31 293 eP **P** **17 55 00.6 +1.2**
DOU Dourbes 95.42 320 P **P** **17 55 00.4 +1.0**
comp=Z,19nm,2.0s,mb5.2
DOU XP sP 17 55 13.2 -4.0
UCC Uccle 95.53 321 P **P** **17 54 59.9 0.0**
comp=Z,50nm,2.5s,mb5.5
BAIF Baives 95.67 320 eP **P** **17 54 59.7 -0.8**
comp=Z,37nm,1.1s,mb5.4
BAIF Baives 95.67 320 eP **P** **17 54 59.7 -0.8**
comp=Z,19nm,1.1s,mb5.4
BAIF Baives 95.67 320 eP **P** **17 54 59.7 -0.8**
BAIF pmax pmax
comp=Z,19nm,1.1s,mb5.4
SSB Saint Sauveur 95.68 315 eP **P** **17 55 01.0 +0.3**
LOR Lormes 96.06 317 eP **P** **17 55 01.5 -0.9**
comp=Z,133nm,1.7s,mb5.8
LOR eMLR MLR
comp=Z,2µm,20.0s,MS5.2
LOR Lormes 96.06 317 eP **P** **17 55 01.5 -0.9**
comp=Z,67nm,1.7s,mb5.8
LOR LR LR
comp=Z,2µm,20.0s,MS5.5
LOR Lormes 96.06 317 eP **P** **17 55 01.5 -0.9**
LOR pmax pmax
comp=Z,67nm,1.7s,mb5.8
LOR MLR MLR
comp=Z,2µm,20.0s,MS5.5
SMF Signal de Mont 96.11 316 eP **P** **17 55 01.7 -0.9**
comp=Z,46nm,1.2s,mb5.5
SMF Signal de Mont 96.11 316 eP **P** **17 55 01.7 -0.9**
comp=Z,23nm,1.2s,mb5.5
SMF Signal de Mont 96.11 316 eP **P** **17 55 01.7 -0.9**
SMF pmax pmax
comp=Z,23nm,1.2s,mb5.5
LASF Ste Croix 96.23 314 eP **P** **17 55 02.7 -0.5**
SSF Saint Saulge 96.31 317 eP **P** **17 55 02.8 -0.7**
comp=Z,21nm,1.1s,mb5.2
SSF Saint Saulge 96.31 317 eP **P** **17 55 02.8 -0.7**
comp=Z,10nm,1.1s,mb5.2
SSF Saint Saulge 96.31 317 eP **P** **17 55 02.8 -0.7**
SSF pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
AVF Avril sur Loir 96.43 317 eP **P** **17 55 03.1 -1.0**
comp=Z,45nm,1.1s,mb5.5
AVF Avril sur Loir 96.43 317 eP **P** **17 55 03.1 -1.0**
comp=Z,23nm,1.1s,mb5.5
AVF Avril sur Loir 96.43 317 eP **P** **17 55 03.1 -1.0**
AVF pmax pmax
comp=Z,23nm,1.1s,mb5.5
BGF Bois d'Agland 96.79 316 eP **P** **17 55 05.3 -0.4**
HYF Humbligny 96.89 317 eP **P** **17 55 07.4 +1.3**
MENF Mencas 96.95 321 eP **P** **17 55 09.0 +2.7**
TCF Toulx Ste Croi 97.25 316 eP **P** **17 55 07.3 -0.5**
comp=Z,120nm,1.8s,mb5.7
TCF Toulx Ste Croi 97.25 316 eP **P** **17 55 07.3 -0.5**
comp=Z,60nm,1.8s,mb5.7
TCF Toulx Ste Croi 97.25 316 eP **P** **17 55 07.3 -0.5**
TCF pmax pmax
comp=Z,60nm,1.8s,mb5.7
MTLF Montolieu 97.46 313 eP **P** **17 55 08.0 -0.8**
comp=Z,28nm,1.1s,mb5.3
MTLF Montolieu 97.46 313 eP **P** **17 55 08.0 -0.8**
comp=Z,14nm,1.1s,mb5.3
MTLF Montolieu 97.46 313 eP **P** **17 55 08.0 -0.8**
MTLF pmax pmax
comp=Z,14nm,1.1s,mb5.3
RAR Rarotonga 98.40 112 LR LR 18 41 53.4
comp=Z,1µm,19.8s,MS5.5,baz=58,slow=37
DAG Danmarks Havn 98.62 348 ||eP **P** **17 55 11.6 -1.7**
comp=Z,6.8nm,0.4s,mb5.5
DAG Danmarks Havn 98.62 348 ||eP **P** **17 55 11.6 -1.7**
DAG pmax pmax
comp=Z,7.0nm,0.4s,mb5.5
DAG Danmarks Havn 98.62 348 ||i P **P** **17 55 11.6 -1.7**
comp=Z,6.8nm,0.4s,mb5.5
TORD Torodi Ar. Bea 98.92 283 P **P** **17 55 15.6 -0.4**
comp=Z,4.5nm,1.0s,mb5.0,baz=83,slow=5.0,SNR=16
TORD PP PP 17 59 17.1 -1.2
comp=Z,1.0nm,1.0s,baz=105,slow=3.1,SNR=3.6
TORD PKiKP PKiKP 17 59 46.6 -0.3
comp=Z,4.0nm,1.0s,baz=100,slow=2.1,SNR=5.2
TORD PKKPbc PKKPbc 18 11 42.1 -0.6
comp=Z,0.6nm,0.5s,baz=300,slow=3.1,SNR=4.9
TORD LR LR 18 39 11.4
comp=Z,3µm,20.0s,MS5.7,baz=90,slow=35
TORD Torodi Ar. Bea 98.92 283 P **P** **17 55 15.6 -0.4**
TORD PP PP 17 59 17.1 -1.2
CHUM Lake Minchumin 99.62 25 eP Pdif 17 55 18.1 -0.1
comp=Z,15nm,1.0s
KDAK Kodiak Island 100.98 31 PFAKE 17 55 30.0 +5.8
KDAK LR LR
comp=Z,3µm,21.0s,MS5.8
COLA College 101.19 24 PFAKE 17 55 40.0 +15
COLA LR LR
comp=Z,2µm,20.0s,MS5.7
ESDC Sonseca Array 102.44 310 P Pdif 17 55 31.9 +1.2
comp=Z,0.4nm,0.6s,baz=14,slow=5.8,SNR=2.9
ESDC PP PP 17 59 29.4 -15
comp=Z,1.2nm,0.9s,baz=60,slow=6.4,SNR=4.4
ESDC PKKPbc PKKPbc 18 11 32.5 -0.8
comp=Z,0.3nm,0.6s,baz=52,slow=8.3,SNR=3.0
ESLA Sonseca Array 102.44 310 PFAKE 17 55 40.0 +9.3
ESLA LR LR
comp=Z,11µm,22.0s,MS6.3
DBIC Dimbokro 105.34 276 PKiKP PKiKP 17 59 58.5 -0.1
comp=Z,1.7nm,0.6s,baz=118,slow=8.4,SNR=2.5
DBIC Dimbokro 105.34 276 PKPdf PKiKP 17 59 58.5 -0.1
DBIC LR LR
comp=Z,3µm,20.0s,MS5.8
PPT Papeete 108.40 109 eLR LR 18 32 12.4
comp=Z,4µm,24.8s
ASCN Ascension 114.08 260 PFAKE 18 00 30.0 +15
ASCN LR LR
comp=Z,4µm,20.0s,MS6.0
YKA Yellowknife Ar 114.53 17 PKP PKiKP 18 00 14.2 -0.3
comp=Z,3.2nm,1.1s,baz=332,slow=1.1,SNR=5.1
YKA PP PP 18 01 09.1 -2.0
comp=Z,2.9nm,0.8s,baz=336,slow=7.8,SNR=3.5
RKT Rikitea 120.55 118 eLR LR 18 37 19.0
comp=Z,2µm,25.5s
JCW Jim Creek 121.61 32 ePKPdf PKPdf 18 00 27.5 -1.1
EDM Edmonton 122.10 23 ePKPdf PKPdf 18 00 28.2 -1.1
GSM Grass Mountain 122.28 33 P PKPdf 18 00 30.4 +0.5
LON Longmire 122.55 33 ePKPdf PKPdf 18 00 31.1 +0.7
ETW Entiat 122.81 32 ePKPdf PKPdf 18 00 29.7 -1.2
COR Corvallis 122.98 36 PFAKE 18 00 40.0 +8.7
COR LR LR
comp=Z,1µm,20.0s,MS5.5
EFI East Falkland 123.21 196 PFAKE 18 00 40.0 +8.5
EFI LR LR
comp=Z,3µm,19.0s,MS6.0
OD2 Odessa Site #2 123.79 31 ePKPdf PKPdf 18 00 31.2 -1.5
RSW Rattlesnake Hi 123.97 32 ePKPdf PKPdf 18 00 32.9 -0.2
HAWA Hanford 124.00 32 ePKPdf PKPdf 18 00 33.0 -0.2
H2OWA Water 124.06 32 P PKPdf 18 00 33.4 +0.1
HUMO Hull Mountain 124.30 38 ePKPdf PKPdf 18 00 33.3 -0.6
HUMO LR LR
comp=Z,1µm,20.0s,MS5.6
VIPM Ingram Point 124.58 35 P PKPdf 18 00 35.6 +1.3
FFC Flin Flon 124.63 16 ePKPdf PKPdf 18 00 31.9 -2.2
FFC LR LR
comp=Z,3µm,21.0s,MS6.0
LNOR Lincton Mounta 125.00 32 ePKPdf PKPdf 18 00 34.5 -0.6
BSMT Bassoo Peak 125.42 28 P PKPdf 18 00 35.5 -0.3
HOPS Hopland 126.19 42 PFAKE 18 00 50.0 +12
HOPS LR LR
comp=Z,2µm,21.0s,MS5.7
BMO Blue Mountains 126.19 33 PFAKE 18 00 50.0 +13
BMO LR LR
comp=Z,1µm,20.0s,MS5.5
MOD Modoc 126.32 37 ePKPdf PKPdf 18 00 38.1 +0.3

SCHQ	**Schefferville**	**126.57**	**351**	PKP	PKPdf	18 00 37.2	-0.7	
	comp=Z,18nm,0.9s,baz=72,slow=3.9,SNR=7.7							
SCHQ	**Schefferville**	**126.57**	**351**	PKP	PKPdf	18 00 37.2	-0.7	
NSHM	**Saint Helena R**	**126.74**	**42**	*e*PKPdf	PKPdf	18 00 38.4	-0.3	
CHMT	**Chamberlain Mo**	**126.82**	**28**	*e*PKPdf	PKPdf	18 00 37.8	-0.8	
WVOR	**Wild Horse Val**	**126.98**	**36**	*e*PKPdf	PKPdf	18 00 39.1	+0.1	
OHCM	**Honcut**	**127.04**	**40**	*e*PKPdf	PKPdf	18 00 39.1	-0.1	
EGMT	**Eagleton**	**127.56**	**25**	*e*PKPdf	PKPdf	18 00 39.6	-0.4	
HRY	**Holter Researc**	**127.64**	**28**	*e*PKPdf	PKPdf	18 00 40.0	-0.1	
DLMT	**Dillon**	**128.26**	**29**	*e*PKPdf	PKPdf	18 00 41.7	+0.3	
CMB	**Columbia Colle**	**128.47**	**41**	PFAKE		18 00 50.0	+8.0	
CMB				LR	LR			
	comp=Z,972nm,20.0s,MS5.5							
BOZ	**Bozeman (W)**	**128.52**	**28**	*e*PKPdf	PKPdf	18 00 41.2	-0.6	
BOZ				*e*PP	PP	18 02 47.1	+0.5	
BOZ				*e*SKPdf	SKPdf	18 04 16.3	+2.3	
BOZ				LR	LR			
	comp=Z,2µm,19.0s,MS5.8							
BOZ	**Bozeman (W)**	**128.52**	**28**	*e*PKIKP	PKPdf	18 00 41.2	-0.6	
BOZ				*e*		18 02 47.1		
BOZ				MLR	MLR			
	comp=Z,2µm,19.0s,MS5.8							
MCMT	**McKenzie Canyo**	**128.52**	**30**	*e*PKPdf	PKPdf	18 00 41.8	-0.1	
HLID	**Hailey**	**128.60**	**32**	*e*PKPdf	PKPdf	18 00 41.9	-0.2	
BMN	**Battle Mountai**	**129.06**	**37**	PFAKE		18 00 50.0	+7.0	
BMN				LR	LR			
	comp=Z,1µm,22.0s,MS5.6							
QLMT	**Earthquake Lak**	**129.21**	**29**	*e*PKPdf	PKPdf	18 00 43.7	+0.5	
GCMT	**Greycliff**	**129.32**	**27**	*e*PKPdf	PKPdf	18 00 43.8	+0.4	
GCMT				*e*PP	PP	18 02 50.1	-1.7	
NVAR	**Mina Array Bea**	**129.60**	**40**	PKP	PKPdf	18 00 44.7	+0.6	
	comp=Z,4.2nm,0.6s,baz=249,slow=2.0,SNR=12							
NVAR				SKP		18 04 17.3		
	comp=Z,3.1nm,0.8s,baz=268,slow=4.5,SNR=4.8							
ELK	**Elko**	**130.03**	**35**	PFAKE		18 01 00.0	+15	
ELK				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
MTUM	**Tungsten Hills**	**130.05**	**41**	*e*PKPdf	PKPdf	18 00 45.7	+0.6	
ULM	**Lac du Bonnet**	**130.25**	**14**	PKP	PKPdf	18 00 44.0	-1.0	
	comp=Z,7.6nm,0.4s,baz=340,slow=2.0,SNR=8.0							
RRI2	**Red Ridge**	**130.35**	**30**	*e*PKPdf	PKPdf	18 00 46.5	+1.1	
LOHW	**Long Hollow**	**130.51**	**29**	*e*PKPdf	PKPdf	18 00 46.2	+0.5	
LOHW				*e*PP	PP	18 02 55.2	-4.5	
SNOW	**Snow King Moun**	**130.55**	**30**	*e*PKPdf	PKPdf	18 00 46.5	+0.7	
HVU	**Hansel Valley**	**130.70**	**33**	*e*PKPdf	PKPdf	18 00 46.6	+0.5	
AHID	**Auburn Hatcher**	**130.88**	**31**	PFAKE		18 01 00.0	+14	
AHID				LR	LR			
	comp=Z,2µm,19.0s,MS5.9							
BGU	**Big Grassy Mou**	**131.15**	**34**	*e*PKPdf	PKPdf	18 00 46.0	-1.0	
DAC	**Darwin (Calif)**	**131.31**	**41**	PFAKE		18 01 00.0	+13	
DAC				LR	LR			
	comp=Z,1µm,22.0s,MS5.6							
HWUT	**Hardware Ranch**	**131.47**	**32**	*e*PKPdf	PKPdf	18 00 47.8	+0.2	
HWUT				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
BW06	**Boulder Array**	**131.65**	**29**	PFAKE		18 01 00.0	+12	
BW06				LR	LR			
	comp=Z,2µm,20.0s,MS5.7							
PDAR	**Pinedale Array**	**131.65**	**29**	PKP	PKPdf	18 00 47.6	-0.2	
	comp=Z,1.4nm,0.6s,baz=85,slow=2.0,SNR=9.3							
PDAR				SKPbc	SKPbc	18 04 10.6	+0.4	
	comp=Z,2.7nm,0.8s,baz=228,slow=1.1,SNR=3.7							
DUG	**Dugway**	**131.77**	**34**	*e*PKPdf	PKPdf	18 00 48.8	+0.6	
AGMN	**Agassiz Refuge**	**132.07**	**15**	PFAKE		18 01 00.0	+11	
AGMN				LR	LR			
	comp=Z,2µm,21.0s,MS5.8							
GSC	**Goldstone**	**132.39**	**42**	PFAKE		18 01 00.0	+10	
GSC				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
DAU	**Daniels Canyon**	**132.48**	**33**	*e*PKPdf	PKPdf	18 00 46.8	-2.7	
RSSD	**Black Hills**	**133.07**	**24**	*e*PKPdf	PKPdf	18 00 50.2	-0.3	
EYMN	**Ely**	**133.37**	**11**	PFAKE		18 01 00.0	+9.0	
EYMN				LR	LR			
	comp=Z,3µm,21.0s,MS6.0							
PFO	**Pinyon Flat Ob**	**133.59**	**44**	PKP	PKPdf	18 00 52.6	+0.7	
	comp=Z,5.1nm,0.8s,baz=274,slow=1.8							
RWWY	**Rawlins**	**133.60**	**29**	*e*PKPdf	PKPdf	18 00 51.1	-0.5	
GLA	**Glamis**	**135.03**	**43**	PFAKE		18 01 10.0	+15	
GLA				LR	LR			
	comp=Z,885nm,20.0s,MS5.5							
ECSD	**EROS,Sioux Fal**	**136.05**	**18**	*e*PKPdf	PKPdf	18 00 51.8	-4.3	
ECSD				LR	LR			
	comp=Z,2µm,21.0s,MS5.9							
PLCA	**Paso Flores**	**136.40**	**190**	PKP	PKPdf	18 00 58.4	+1.5	
	comp=Z,5.2nm,1.0s,baz=182,slow=3.9,SNR=6.6							
GLMI	**Grayling**	**137.40**	**5**	PFAKE		18 01 10.0	+11	
GLMI				LR	LR			
	comp=Z,3µm,21.0s,MS6.0							
SDCO	**Great Sand Dun**	**137.47**	**31**	*e*PKPdf	PKPdf	18 00 58.4	-0.5	
SADO	**Sadowa**	**137.68**	**359**	PKP	PKPdf	18 00 58.9	-0.2	
	comp=Z,11nm,0.8s,baz=352,slow=2.2,SNR=7.0							
JFWS	**Jewell Farm**	**138.44**	**12**	*e*PKPdf	PKPdf	18 01 01.5	+1.0	
ANMO	**Albuquerque**	**139.04**	**34**	PFAKE		18 01 10.0	+8.1	
ANMO				LR	LR			
	comp=Z,1µm,19.0s,MS5.8							
CBKS	**Cedar Bluff**	**139.27**	**24**	PFAKE		18 01 10.0	+7.8	
CBKS				LR	LR			
	comp=Z,2µm,22.0s,MS5.8							
LENM	**Lemitar**	**139.31**	**36**	*e*PKPdf	PKPdf	18 01 04.4	+2.0	
BINY	**Binghamton**	**140.11**	**356**	*e*PKPdf	PKPdf	18 01 03.6	0.0	
BINY				LR	LR			
	comp=Z,2µm,19.0s,MS5.9							
KSU1	**Kansas State U**	**140.22**	**21**	*e*PKPdf	PKPdf	18 01 03.2	-0.7	
KSU1				LR	LR			
	comp=Z,2µm,22.0s,MS5.8							
ERPA	**Erie**	**140.33**	**0**	PFAKE		18 01 20.0	+16	
ERPA				LR	LR			
	comp=Z,2µm,22.0s,MS5.9							
HDIL	**Hopedale**	**140.91**	**12**	*e*PKPdf	PKPdf	18 01 04.8	-0.3	
HDIL				LR	LR			
	comp=Z,3µm,22.0s,MS5.9							
AMTX	**Amarillo**	**141.63**	**30**	PFAKE		18 01 20.0	+13	
AMTX				LR	LR			
	comp=Z,2µm,20.0s,MS5.8							
SSPA	**Standing Stone**	**141.78**	**358**	*e*PKPdf	PKPdf	18 01 01.0	-5.7	
ACSO	**Alum Creek Sta**	**142.09**	**4**	*e*PKPdf	PKPdf	18 01 01.2	-6.1	
ACSO				LR	LR			
	comp=Z,3µm,22.0s,MS6.0							
MVL	**Millersville**	**142.33**	**356**	*e*PKPdf	PKPdf	18 01 02.3	-5.4	
BLO	**Bloomington**	**142.74**	**9**	*e*PKPdf	PKPdf	18 01 03.0	-5.4	
CCM	**Cathedral Cave**	**142.84**	**15**	*e*PKPdf	PKPdf	18 01 02.7	-6.0	
CCM				LR	LR			
	comp=Z,3µm,22.0s,MS6.0							
OLIL	**Olney**	**142.90**	**11**	*e*PKPdf	PKPdf	18 01 05.1	-3.6	
SDMD	**Soldier's Deli**	**142.94**	**356**	*e*PKPdf	PKPdf	18 01 08.4	-0.4	
FVM	**French Village**	**143.11**	**14**	*e*PKPdf	PKPdf	18 01 03.1	-6.0	
WMOK	**Wichita Mounta**	**143.12**	**27**	*e*PKPdf	PKPdf	18 01 04.7	-4.6	
WMOK				*e*PP	PP	18 04 18.2	-0.2	
SIUC	**Southern Illin**	**143.65**	**13**	*e*PKPdf	PKPdf	18 01 08.0	-2.1	
WCU	**Wyandotte Cave**	**143.70**	**9**	*e*PKPdf	PKPdf	18 01 05.6	-4.5	
BDFB	**Brasilia**	**143.99**	**239**	PKP	PKPdf	18 01 09.2	-2.0	
	comp=Z,6.4nm,0.4s,baz=116,slow=4.9,SNR=25							
CBN	**Corbin**	**144.18**	**357**	*e*PKPbc	PKPdf	18 01 11.4	+0.4	
CBN				LR	LR			
	comp=Z,2µm,21.0s,MS5.8							
PARMO	**Parma**	**144.53**	**14**	*e*PKPdf	PKPdf	18 01 10.0	-1.7	
TXAR	**Lajitas Array**	**144.71**	**38**	PKP	PKPdf	18 01 10.6	-1.6	
	comp=Z,59nm,0.7s,baz=226,slow=0.9,SNR=273							
GLAT	**Glass**	**145.02**	**14**	*e*PKPbc	PKPbc	18 01 11.4	-0.4	
GNAR	**Gosnell**	**145.13**	**15**	*e*PKPbc	PKPbc	18 01 11.4	-0.8	
ELN	**Prospectdale**	**145.20**	**2**	*e*PKPdf	PKPdf	18 01 10.4	-2.4	
BLA	**Blacksburg**	**145.22**	**1**	*e*PKPbc	PKPbc	18 01 11.5	-1.0	
BLA				LR	LR			
	comp=Z,3µm,20.0s,MS6.0							
HBAR	**Harrisburg**	**145.35**	**16**	*e*PKPbc	PKPbc	18 01 12.3	-0.6	
HALT	**Halls**	**145.35**	**14**	*e*PKPbc	PKPbc	18 01 11.9	-1.1	
MIAR	**Mount Ida**	**145.37**	**20**	*e*PKPbc	PKPbc	18 01 11.9	-1.1	
WVT	**Waverly**	**145.47**	**12**	*e*PKPdf	PKPdf	18 01 11.6	-1.7	
UALR	**University of**	**145.57**	**19**	*e*PKPbc	PKPbc	18 01 11.9	-1.8	
TZTN	**Tazewell**	**145.71**	**6**	*e*PKPbc	PKPbc	18 01 12.1	-1.9	
JCT	**Junction City**	**146.08**	**32**	*e*PKPdf	PKPdf	18 01 14.4	-0.1	
TKL	**Tuckaleechee C**	**146.56**	**6**	PKPbc	PKPbc	18 01 15.2	-1.5	
	comp=Z,38nm,0.9s,baz=134,slow=5.1,SNR=59							
TKL	**Tuckaleechee C**	**146.56**	**6**	*e*PKPdf	PKPdf	18 01 14.7	-0.5	
TKL	**Tuckaleechee C**	**146.56**	**6**	PKP2	PKPab	18 01 15.2	-2.5	
TKL				pmax	pmax			
	comp=Z,38nm,0.9s							
OXF	**Oxford**	**146.66**	**15**	*e*PKPdf	PKPdf	18 01 15.8	+0.4	
CPCT	**Cooper Cave**	**146.68**	**7**	*e*PKPdf	PKPdf	18 01 14.9	-0.4	
SWET	**Sewanee**	**146.71**	**9**	*e*PKPdf	PKPdf	18 01 15.2	-0.2	
BBSR	**BB Station**	**146.91**	**336**	*e*PKPdf	PKPdf	18 01 15.2	-0.6	
BBSR				LR	LR			
	comp=Z,1µm,21.0s,MS5.7							
CNNC	**Cliffs of the**	**147.16**	**357**	*e*PKPdf	PKPdf	18 01 16.2	0.0	
NATX	**Nacogdoches**	**147.44**	**24**	*e*PKPbc	PKPbc	18 01 18.6	-0.7	
LCO	**Las Campanas**	**147.73**	**195**	*e*PKPdf	PKPdf	18 01 19.9	+2.5	
JSC	**Jenkinsville**	**148.12**	**2**	*e*PKPdf	PKPdf	18 01 17.8	0.0	
HKT	**Hockley**	**148.48**	**28**	*e*PKPdf	PKPdf	18 01 18.8	+0.2	
HKT				LR	LR			
	comp=Z,2µm,22.0s,MS5.9							
VBMS	**Vicksburg**	**148.51**	**18**	*e*PKPdf	PKPdf	18 01 19.4	+0.8	
LRAL	**Lakeview Retre**	**148.63**	**12**	*e*PKPbc	PKPbc	18 01 20.3	-2.1	
GOGA	**Godfrey**	**148.82**	**6**	*e*PKPbc	PKPbc	18 01 21.6	-1.2	
GOGA				LR	LR			
	comp=Z,3µm,20.0s,MS6.0							
NHSC	**New Hope**	**149.32**	**1**	*e*PKPdf	PKPdf	18 01 20.6	+0.8	
KVTX	**Kingsville**	**149.41**	**33**	*e*PKPbc	PKPbc	18 01 24.1	-0.5	
KVTX				LR	LR			
	comp=Z,2µm,21.0s,MS5.9							
CJM	**Chamela**	**149.85**	**54**	*i* P	PKPdf	18 01 25.8	+4.8	
ZAIG	**Zacatecas**	**149.85**	**46**	*i* P	PKPdf	18 01 24.6	+3.6	
BRAL	**Brewton**	**150.57**	**13**	PFAKE		18 01 30.0	+8.2	
BRAL				LR	LR			
	comp=Z,3µm,21.0s,MS6.1							
LVC	**Limon Verde**	**153.13**	**202**	*e*PKPbc	PKPbc	18 01 35.2	+1.9	
LVC				LR	LR			
	comp=Z,2µm,20.0s,MS5.9							
ZIIG	**Zihuatanejo**	**153.73**	**53**	*i* P	PKPdf	18 01 30.2	+3.4	
DWPF	**Disney**	**154.25**	**4**	PFAKE		18 01 40.0	+13	
DWPF				LR	LR			
	comp=Z,4µm,20.0s,MS6.2							
CAIG	**El Cayaco**	**154.99**	**53**	*e*P	PKPdf	18 01 28.3	-0.3	
PNIG	**Pinotepa**	**157.04**	**51**	*e*P	PKPdf	18 01 31.2	-0.1	
BBGH	**Gun Hill**	**157.36**	**300**	PFAKE		18 01 40.0	+8.2	
BBGH				LR	LR			
	comp=Z,3µm,21.0s,MS6.1							
LPAZ	**La Paz**	**158.32**	**211**	PKP	PKPdf	18 01 34.0	+1.0	
	comp=Z,9.3nm,1.0s,baz=73,slow=2.2,SNR=19							
LPAZ				PKPab		18 02 08.4	+1.3	
	comp=Z,8.2nm,0.8s,baz=45,slow=13,SNR=6.8							
CMIG	**Matias Romero**	**159.01**	**44**	PKP	PKPdf	18 01 33.9	+0.1	
	comp=Z,6.0nm,1.2s,baz=2.7,slow=3.0,SNR=5.1							
CMIG				PKPab	PKPab	18 02 10.2	+0.1	
	comp=Z,10nm,1.0s,baz=321,slow=3.5,SNR=9.2							
GRGR	**Grenville**	**159.64**	**300**	PFAKE		18 01 50.0	+15	
GRGR				LR	LR			
	comp=Z,2µm,22.0s,MS5.9							
NNA	**Nana**	**165.56**	**191**	PKP	PKPdf	18 01 40.0	-0.4	
	comp=Z,2.7nm,0.3s,baz=253,slow=8.6,SNR=3.6							
NNA	**Nana**	**165.56**	**191**	PKP	PKPdf	18 01 40.0	-0.4	
SDV	**Santo Domingo**	**168.87**	**307**	PKP	PKPdf	18 01 41.4	-1.5	
	comp=Z,4.1nm,0.8s,baz=120,slow=7.6,SNR=5.8							
SDV				PKPab	PKPab	18 02 53.8	+0.2	
	comp=Z,7.1nm,0.8s,baz=226,slow=0.1,SNR=5.2							
ATAH	**Atahualpa**	**170.70**	**188**	PKP	PKPdf	18 01 45.0	+1.0	
	comp=Z,6.6nm,1.1s,baz=308,slow=15,SNR=6.1							
BCIP	**Isla Barro Col**	**173.15**	**1**	PFAKE		18 02 00.0	+15	
BCIP				LR	LR			
	comp=Z,2µm,21.0s							
ROSC	**El Rosal**	**174.09**	**296**	PKP	PKPdf	18 01 46.3	+0.9	
	comp=Z,3.9nm,0.3s,baz=104,slow=12,SNR=6.5							
OTAV	**Otavalo**	**177.64**	**211**	*e*PKPdf	PKPdf	18 01 46.3	0.0	

CRAAG ***25*** *17:51:01.7, 3641N×554E, Ml4.1*
MDD ***25*** *17:51:01.2±0.3, 3668N×541E, h0km, mb4.4/12, Error ellipse: s-maj=5.6km s-min=3.4km az=42.0, PRIMO*
NEIC ***25*** *17:51:01.1±0.3, 3672N×548E, h10km, mb4.4/1, ML3.9(ALG), Error ellipse: s-maj=4.5km s-min=3.3km az=205.0*
CSEM ***25*** *17:51:01.1±0.1, 3652N×545E, h15km, ML3.8/11, Error ellipse: s-maj=1.9km s-min=1.5km az=35.0*
ISCJB ***25*** *17:51:01.7±0.4, 3699N±003×533E±003, h10km, Error ellipse: s-maj=4.3km s-min=3.4km az=161.9*
LDG ***25*** *17:51:02.0±0.1, 3663N×557E, h10km, Ml3.7/14, Error ellipse: s-maj=2.3km s-min=1.7km az=30.0*

ISC 25 17:51:02.2±0.4, 3684N±003×539E±003, h10km, n116, σ1°34/161, 3D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
DFRA	**Djebel Bou Aff**	**0.48**	**127**	P	**Pg**	**17 51 09.0**	**-2.7**
SET	**Setif**	**0.63**	**179**	P	**Pg**	**17 51 09.0**	**-5.5**
CASM	**Ain Smara**	**1.05**	**123**	P	**Pg**	**17 51 18.5**	**-4.0**
CTEI	**Djebel Teioual**	**1.12**	**133**	P	**Pg**	**17 51 19.5**	**-4.3**
CKFL	**Kef-Lekhel**	**1.15**	**112**	P	**Pn**	**17 51 22.5**	**-1.9**
CAEH	**'Ain El Ouahch**	**1.17**	**92**	P	**Pb**	**17 51 23.0**	**-1.5**
ABMS	**Boumerdes**	**1.54**	**267**	P	**Pn**	**17 51 27.3**	**-2.4**
CMAH	**Djebel Manchou**	**1.64**	**97**	P	**Pn**	**17 51 24.0**	**-7.1**
ABSA	**Djebel Ababsia**	**1.77**	**108**	P	**Pn**	**17 51 25.2**	**-7.7**
CABS	**Djebel Ababsia**	**1.77**	**108**	P	**Pn**	**17 51 25.2**	**-7.7**
EMHD	**Djebel Mahouad**	**2.06**	**253**	P	**Pn**	**17 51 37.2**	**+0.3**
EBNR	**Beni Rached**	**3.16**	**261**	P	**Pg**	**17 52 07.5**	**+4.8**
ECHA	**Ech Chlef**	**3.32**	**259**	P	**Pg**	**17 52 11.0**	**+5.3**
ECHF	**Ech Chlef**	**3.33**	**259**	P	**Pg**	**17 52 11.0**	**+4.9**
ETOS	**Mallorca**	**3.56**	**326**	Pn	**Pn**	**17 51 58.8**	**+1.3**
	SNR=11						
ETOS				Sn	**Sn**	**17 52 39.9**	**+0.3**
	36nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.56**	**326**	Pn	**Pn**	**17 51 58.8**	**+1.3**
	SNR=11						
ETOS				Sn	**Sn**	**17 52 39.9**	**+0.2**
	36nm,0.3s,SNR=7.9						
EANR	**'Ain N'Sour**	**3.57**	**257**	P	**Pg**	**17 52 14.5**	**+3.8**
ETRT	**Tiaret**	**3.61**	**248**	P	**Pn**	**17 51 58.0**	**-0.2**
EIBI	**Ibiza**	**3.88**	**306**	Pn	**Pn**	**17 52 01.8**	**0.0**
	14nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**17 52 46.9**	**-0.5**
	46nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.88**	**306**	Pn	**Pn**	**17 52 01.8**	**-0.1**
	14nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**17 52 46.9**	**-0.5**
	46nm,0.3s,SNR=7.9						
CART	**Cartagena**	**5.16**	**280**	*e*Pn	**Pn**	**17 52 17.5**	**-1.9**
	64nm,0.9s						
CART	**Cartagena**	**5.16**	**280**	*e*Pn	**Pn**	**17 52 17.5**	**-1.9**
	64nm,0.9s						
EMUR	**La Murta**	**5.38**	**283**	Pn	**Pn**	**17 52 22.1**	**-0.4**
	8.5nm,0.4s,SNR=10						
EMUR				Sn	**Sn**	**17 53 22.0**	**-2.5**
	20nm,0.7s,SNR=7.9						
EMUR	**La Murta**	**5.38**	**283**	Pn	**Pn**	**17 52 22.1**	**-0.4**
	8.5nm,0.4s,SNR=10						
EMUR				Sn	**Sn**	**17 53 22.0**	**-2.4**
	20nm,0.7s,SNR=7.9						
EPOB	**Poblet**	**5.62**	**325**	Pn	**Pn**	**17 52 26.4**	**+0.6**
	2.0nm,0.2s,SNR=16						
EPOB	**Poblet**	**5.62**	**325**	Pn	**Pn**	**17 52 26.4**	**+0.6**
	2.0nm,0.2s,SNR=16						
EPOB				Sn	**Sn**	**17 53 27.7**	**-2.7**
	7.4nm,0.2s,SNR=6.9						
ERTA	**Horta de San J**	**5.70**	**318**	Pn	**Pn**	**17 52 27.5**	**+0.6**
	0.5nm,0.2s,SNR=7.9						
ERTA				Sn	**Sn**	**17 53 30.1**	**-2.3**
	8.4nm,0.5s,SNR=7.9						
ERTA	**Horta de San J**	**5.70**	**318**	Pn	**Pn**	**17 52 27.5**	**+0.6**
	0.5nm,0.2s,SNR=7.9						
ERTA				Sn	**Sn**	**17 53 30.1**	**-2.3**
	8.4nm,0.5s,SNR=7.9						
ECHE	**Chera**	**5.71**	**301**	Pn	**Pn**	**17 52 28.1**	**+1.0**
	7.9nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**5.79**	**309**	Pn	**Pn**	**17 52 29.3**	**+1.2**
	2.8nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**17 53 32.8**	**-1.7**
	10.0nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.79**	**309**	Pn	**Pn**	**17 52 29.3**	**+1.2**
	2.8nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**17 53 32.8**	**-1.7**
	10.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.79**	**290**	Pn	**Pn**	**17 52 29.4**	**+1.3**
	1.1nm,0.2s,SNR=23						
ETOB				Sn	**Sn**	**17 53 32.4**	**-2.2**
	8.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.79**	**290**	Pn	**Pn**	**17 52 29.4**	**+1.3**
	1.1nm,0.2s,SNR=23						
ETOB				Sn	**Sn**	**17 53 32.4**	**-2.2**
	8.0nm,0.3s,SNR=7.9						
EMIR	**Miracle**	**5.89**	**331**	Pn	**Pn**	**17 52 31.4**	**+1.9**
	24nm,0.2s,SNR=59						
EMIR				Sn	**Sn**	**17 53 36.4**	**-0.6**
	15nm,0.3s,SNR=7.0						
EMIR	**Miracle**	**5.89**	**331**	Pn	**Pn**	**17 52 31.4**	**+1.9**
	24nm,0.2s,SNR=59						
EMIR				Sn	**Sn**	**17 53 36.4**	**-0.6**
	15nm,0.3s,SNR=7.0						
EJON	**La Jonquera**	**5.93**	**342**	Pn	**Pn**	**17 52 30.9**	**+0.9**
	1.6nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**17 53 37.5**	**-0.5**
	6.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**5.93**	**342**	Pn	**Pn**	**17 52 30.9**	**+0.9**
	1.6nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**17 53 37.5**	**-0.5**
	6.3nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.44**	**281**	Pn	**Pn**	**17 52 38.4**	**+1.4**
	0.7nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**17 53 50.3**	**-0.3**
	2.0nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**6.51**	**288**	Pn	**Pn**	**17 52 38.1**	**+0.1**
	3.3nm,0.4s,SNR=7.9						
EVIA				Sn	**Sn**	**17 53 50.2**	**-2.1**
	0.5nm,0.1s,SNR=7.9						
LMR	**La Mourre**	**6.55**	**7**	*e*Pn	**Pn**	**17 52 39.1**	**+0.6**
LMR				*e*Sn	**Sn**	**17 53 50.9**	**-2.3**
	14nm,0.4s						
LMR	**La Mourre**	**6.55**	**7**	*e*Pn	**Pn**	**17 52 39.1**	**+0.6**
LMR				*e*Sn	**Sn**	**17 53 50.9**	**-2.3**
	7.1nm,0.4s						
EBER	**Berja**	**6.64**	**273**	Pn	**Pn**	**17 52 39.7**	**-0.1**
	2.4nm,0.3s,SNR=7.1						
EBER				Sn	**Sn**	**17 53 52.3**	**-3.2**
	SNR=7.9						
EBER	**Berja**	**6.64**	**273**	Pn	**Pn**	**17 52 39.7**	**-0.1**
	2.4nm,0.3s,SNR=7.1						
EBER				Sn	**Sn**	**17 53 52.3**	**-3.2**
	1.8nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**6.67**	**319**	Pn	**Pn**	**17 52 41.6**	**+1.4**
ESAC				Sn	**Sn**	**17 53 55.1**	**-1.1**
ESAC	**San Caprasio**	**6.67**	**319**	Pn	**Pn**	**17 52 41.6**	**+1.4**
	3.6nm,0.1s,SNR=7.9						
ESAC				Sn	**Sn**	**17 53 55.1**	**-1.1**
	SNR=7.9						
ESAC	**San Caprasio**	**6.67**	**319**	Pn	**Pn**	**17 52 41.6**	**+1.4**
	3.6nm,0.1s,SNR=7.9						
ESAC				Sn	**Sn**	**17 53 55.1**	**-1.1**
	37nm,0.3s,SNR=7.9						
FRF	**La Foret Royal**	**6.79**	**8**	*e*Pn	**Pn**	**17 52 42.3**	**+0.5**
FRF				*e*Sn	**Sn**	**17 53 56.9**	**-2.2**
	11nm,0.3s						
FRF	**La Foret Royal**	**6.79**	**8**	*e*Pn	**Pn**	**17 52 42.3**	**+0.5**
FRF				*e*Sn	**Sn**	**17 53 56.9**	**-2.2**
	5.7nm,0.3s						
EQES	**Quesada**	**6.81**	**281**	Pn	**Pn**	**17 52 43.6**	**+1.4**
	4.4nm,0.3s,SNR=12						
EQES	**Quesada**	**6.81**	**281**	Pn	**Pn**	**17 52 43.6**	**+1.5**
	4.4nm,0.3s,SNR=12						
EQES				Sn	**Sn**	**17 53 59.5**	**-0.3**
	5.1nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	**6.94**	**340**	*e*Pn	**Pn**	**17 52 44.1**	**+0.2**
MTLF				*e*Sn	**Sn**	**17 54 01.7**	**-1.1**
	26nm,0.5s						
MTLF	**Montolieu**	**6.94**	**340**	*e*Pn	**Pn**	**17 52 44.1**	**+0.2**
MTLF				*e*S

SSF	**Saint Saulge**	**10.31**	**353**	*e*Pn	**Pn**	**17 53 30.2**	**+0.1**
LOR	**Lormes**	**10.49**	**354**	*e*Pn	**Pn**	**17 53 32.6**	**+0.1**
MFF	**Saint Martin d**	**10.60**	**339**	*e*Pn	**Pn**	**17 53 34.7**	**+0.7**
HYF	**Humbligny**	**10.62**	**350**	*e*Pn	**Pn**	**17 53 34.5**	**+0.1**
HINF	**Hinteralfeld**	**11.03**	**5**	*e*Pn	**Pn**	**17 53 39.7**	**-0.2**
HAU	**Haudompre**	**11.19**	**3**	*e*Pn	**Pn**	**17 53 41.9**	**-0.2**
CDF	**Champ du Feu**	**11.65**	**6**	*e*Pn	**Pn**	**17 53 48.4**	**0.0**
MEZF	**Maizieres J'vi**	**11.66**	**359**	*e*Pn	**Pn**	**17 53 48.7**	**+0.1**
ZAVS	**Zavodnje**	**11.99**	**34**	‖ *i*P	**Pn**	**17 53 57.8**	**+4.8**
KFL	**Anninata**	**12.30**	**79**	P	**Pn**	**17 54 01.3**	**+3.9**
GRR	**Gorron**	**12.42**	**340**	*e*Pn	**Pn**	**17 53 59.4**	**+0.4**
LDF	**La Druitiere**	**12.43**	**343**	*e*Pn	**Pn**	**17 53 59.5**	**+0.5**
FLN	**La Foliniere**	**12.67**	**342**	*e*Pn	**Pn**	**17 54 02.6**	**+0.2**
OHR	**Ohrid**	**12.72**	**66**	*i* P	**Pn**	**17 54 01.6**	**-1.6**
QUIF	**Quistinic**	**12.74**	**333**	*e*Pn	**Pn**	**17 54 03.7**	**+0.4**
SGMF	**Saint Gilles**	**12.82**	**335**	*e*Pn	**Pn**	**17 54 04.7**	**+0.3**
SJES	**Sjenica**	**12.88**	**56**	‖ *i*P	**Pn**	**17 54 08.1**	**+2.9**
ROSF	**Rostrenen**	**13.14**	**334**	*e*Pn	**Pn**	**17 54 09.1**	**+0.4**
RHK3	**Tenkes**	**13.22**	**43**	‖ *e*P	**Pn**	**17 54 15.8**	**+6.0**
BAIF	**Baives**	**13.25**	**357**	*e*Pn	**Pn**	**17 54 10.1**	**-0.1**
GIVF	**Givet**	**13.27**	**358**	*e*Pn	**Pn**	**17 54 10.4**	**-0.1**

MOS 25 18:14:07.7±0.3, 4289N×4517E, h57km, mb3.6/1, Error ellipse: s-maj=47.8km s-min=16.0km az=22.2, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.32**	**305**	*e*P	Pn	18 14 19.4	+1.8
SNJR				*e*S	Sn	18 14 34.6	+10
VLKR	**Vladikavkaz**	**0.39**	**294**	*e*P	Pn	18 14 20.2	+1.9
VLKR				*e*S	Sn	18 14 35.8	+10
LACR	**Lac**	**0.64**	**265**	*e*P	Pn	18 14 22.5	+1.5
LACR				*i* S	Sn	18 14 39.8	+9.0
ARNR	**Ardon**	**0.72**	**295**	*e*P	Pn	18 14 23.5	+1.6
ARNR				*e*S	Sn	18 14 41.5	+9.1
KMSR	**Komsomolskaya**	**0.80**	**307**	*e*P	Pn	18 14 24.0	+1.0
KMSR				*e*S	Sn	18 14 42.5	+8.3
KORR	**Kora**	**0.83**	**284**	*e*P	Pn	18 14 25.3	+1.9
KORR				*e*S	Sn	18 14 45.2	+10
ZEI	**Tsey**	**0.94**	**263**	*e*P	Pn	18 14 25.7	+0.9
ZEI				*e*S	Sn	18 14 45.5	+8.1
LSNR	**Lesken**	**1.06**	**292**	*e*P	Pn	18 14 27.2	+0.8
LSNR				*e*S	Sn	18 14 48.3	+8.0
DIGR	**Digorskoe uzhe**	**1.17**	**271**	*e*P	Pn	18 14 28.5	+0.7
DIGR				*e*S	Sn	18 14 50.3	+7.6

*IDC **25** 18:19:45.2±0.7, 235S×10030E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.3/24, mbtmp4.3/17, ML4.7/1, MS4.4/1, Ms1 4.4/1, ms1mx3.7/34, Error ellipse: s-maj=24.8km s-min=14.5km az=50.0*

*BJI **25** 18:19:47.2, 240S×10030E, h35km, mb4.5*

*MOS **25** 18:19:48.6±1.1, 228S×10042E, h33km, mb4.6/18, Error ellipse: s-maj=17.0km s-min=9.5km az=111.4*

*NEIC **25** 18:19:50.3±0.4, 241S×10032E, h35km, mb4.7/6, Error ellipse: s-maj=13.4km s-min=7.3km az=51.0*

*ISCJB **25** 18:19:52.2±1.5, 233S±009×10046E±008, h68km±11km, mb4.4/32, Error ellipse: s-maj=18.3km s-min=8.4km az=44.1*

*DJA **25** 18:19:56.5±0.0, 175S×10002E, h105km, mb4.7/1, mB5.1/1, Mw(mB)5.0/1*

ISC 25 18:19:53.1±1.5, 237S±009×10046E±009, h59km±11km, n76, σ1§08/73, mb4.5/32, 4C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.45**	**0**	P	**Pn**	**18 20 15.5**	**-1.5**
PDSI	**Padang**	**1.45**	**0**	S	**Sn**	**18 20 33.6**	**-1.4**
PPI	**Padang Panjang**	**1.90**	**358**	P	**Pn**	**18 20 22.3**	**-0.9**
PPI	**Padang Panjang**	**1.90**	**358**	S	**Sn**	**18 20 39.9**	**-6.1**
KGM	**Kluang**	**5.21**	**33**	⇑P	**Pn**	**18 21 09.6**	**+1.1**
MYKOM	**Kota Tinggi**	**5.34**	**39**	‖P	**Pn**	**18 21 11.6**	**+1.3**
FRIM	**Kepong**	**5.69**	**12**	⇑P	**Pn**	**18 21 16.0**	**+0.9**
IPM	**Ipoh**	**6.82**	**5**	⇑P	**Pn**	**18 21 32.8**	**+2.2**
KULM	**Kulim**	**7.61**	**1**	*e*Pn	**Pn**	**18 21 40.6**	**-0.7**
KULM	**Kulim**	**7.61**	**1**	‖P	**Pn**	**18 21 43.8**	**+2.4**
KAPI	**Kappang**	**19.43**	**98**	P	**Pn**	**18 24 15.5**	**-1.0**
	2.1nm,0.3s,baz=254,slow=6.9,SNR=7.8						
CM31	**Chiang Mai Arr**	**20.75**	**356**	*e*P	**P**	**18 24 27.9**	**-1.2**
	1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**20.75**	**356**	P	**P**	**18 24 27.6**	**-1.5**
	2.9nm,0.6s,baz=187,slow=10,SNR=30						
CMAR	**Chiang Mai Arr**	**20.75**	**356**	P	**P**	**18 24 27.6**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PALK	**Pallekele**	**21.92**	**296**	*e*P	**P**	**18 24 38.9**	**-2.8**
	comp=Z,1.9nm,0.6s,mb3.7						
PALK	**Pallekele**	**21.92**	**296**	*e*P	**P**	**18 24 38.9**	**-2.8**
PALK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
BATI	**Baumata**	**24.32**	**110**	P	**P**	**18 25 03.8**	**-1.7**
	comp=Z,9.2nm,0.6s,mb4.4,baz=140,slow=9.9,SNR=7.1						
BATI				LR	LR	18 36 48.1	
	comp=Z,873nm,20.6s,baz=12,slow=42						
ODAN	**Odare**	**31.68**	**337**	*e*P	**P**	**18 26 11.8**	**+0.7**
	comp=Z,11nm,0.7s,mb4.6						
TAPN	**Taplejung**	**32.00**	**338**	*e*P	**P**	**18 26 14.9**	**+1.0**
	comp=Z,6.9nm,0.4s,mb4.8						
RAMN	**Ramite**	**32.07**	**336**	*e*P	**P**	**18 26 15.1**	**+0.6**
JIRN	**Jiri**	**32.86**	**336**	*e*P	**P**	**18 26 22.8**	**+1.3**
	comp=Z,21nm,0.7s,mb5.2						
LSA	**Lhasa**	**33.11**	**345**	*e*P	**P**	**18 26 24.5**	**+1.0**
	comp=Z,6.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**33.11**	**345**	*e*P	**P**	**18 26 24.5**	**+0.9**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
GUN	**Gumba**	**33.21**	**336**	*e*P	**P**	**18 26 25.4**	**+0.9**
	comp=Z,18nm,0.4s,mb5.3						
KKN	**Kakani**	**33.35**	**335**	*e*P	**P**	**18 26 26.2**	**+0.5**
GKN	**Gorkha**	**33.81**	**344**	*e*P	**P**	**18 26 30.3**	**+0.6**
	comp=Z,5.8nm,0.3s,mb4.9						
DANN	**Dangsing**	**34.50**	**333**	*e*P	**P**	**18 26 37.2**	**+1.5**
	comp=Z,8.7nm,0.5s,mb5.0						
WRA	**Warramunga Arr**	**37.41**	**120**	P	**P**	**18 27 00.9**	**+0.2**
	comp=Z,5.0nm,0.4s,mb4.7,baz=298,slow=10,SNR=102						
WRA	**Warramunga Arr**	**37.41**	**120**	P	**P**	**18 27 00.9**	**+0.2**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
WRAB	**Tennant Creek**	**37.42**	**120**	*e*P	**P**	**18 27 00.4**	**-0.3**
	comp=Z,11nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**37.42**	**120**	*e*P	**P**	**18 27 00.4**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
WB2	**Warramunga Arr**	**37.42**	**120**	*e*P	**P**	**18 27 00.7**	**-0.1**
WB2				*e*		18 28 40.7	
NJ2	**Nanjing**	**38.42**	**26**	*e*P	**P**	**18 27 08.0**	**-1.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**38.66**	**126**	P	**P**	**18 27 12.2**	**+0.9**
	comp=Z,4.4nm,0.5s,mb4.5,baz=303,slow=7.7,SNR=199						
ASAR				PcP	PcP	18 29 23.1	+0.6
	comp=Z,0.9nm,0.5s,baz=311,slow=2.1,SNR=4.5						
ASAR	**Alice Springs**	**38.66**	**126**	P	**P**	**18 27 12.2**	**+0.9**
ASAR						18 29 23.1	
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	**Korea Array**	**47.10**	**30**	P	**P**	**18 28 18.6**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=225,slow=8.0,SNR=6.0						
KSRS	**Korea Array**	**47.10**	**30**	P	**P**	**18 28 18.7**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**48.56**	**132**	P	**P**	**18 28 32.2**	**+1.5**
	comp=Z,5.9nm,0.7s,mb4.7,baz=299,slow=7.2,SNR=6.7						
STKA	**Stephens Creek**	**48.56**	**132**	*e*P	**P**	**18 28 31.4**	**+0.7**
	comp=Z,1.0nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**48.56**	**132**	*e*	**P**	**18 28 32.4**	**+1.7**
SONM	**Songino Array**	**50.26**	**5**	P	**P**	**18 28 43.7**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=188,slow=9.2,SNR=14						
SONM				PcP	PcP	18 30 02.1	+0.5
	comp=Z,0.4nm,0.4s,baz=192,slow=5.1,SNR=3.4						
SONM	**Songino Array**	**50.26**	**5**	P	**P**	**18 28 43.7**	**+0.4**
SONM						18 30 02.1	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TKM2	**Tokmak 2**	**50.35**	**336**	*e*P	**P**	**18 28 45.1**	**+1.0**
	comp=Z,4.4nm,0.4s,mb4.8						
TKM2	**Tokmak 2**	**50.35**	**336**	*e*P	**P**	**18 28 45.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
EKS2	**Erkin-Say**	**50.89**	**335**	*e*P	**P**	**18 28 48.9**	**+0.7**
	comp=Z,4.5nm,0.6s,mb4.6						
MK31	**Makanchi Array**	**51.50**	**344**	*e*P	**P**	**18 28 52.8**	**+0.1**
MKAR	**Makanchi Array**	**51.50**	**344**	P	**P**	**18 28 52.6**	**-0.1**
	comp=Z,1.2nm,0.3s,mb4.3,baz=158,slow=9.1,SNR=57						
MKAR	**Makanchi Array**	**51.50**	**344**	P	**P**	**18 28 52.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**52.27**	**39**	P	**P**	**18 28 58.3**	**-0.3**
	comp=Z,1.3nm,0.9s,mb3.9,baz=207,slow=7.6,SNR=3.8						
MJAR	**Matsushiro Arr**	**52.27**	**39**	P	**P**	**18 28 58.3**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**56.09**	**343**	*i* P	**P**	**18 29 26.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
ZAAO	**Zalesovo Array**	**57.61**	**349**	*e*P	**P**	**18 29 35.7**	**-1.2**
ZALV	**Zalesovo Beam**	**57.61**	**349**	P	**P**	**18 29 36.5**	**-0.4**
	comp=Z,1.1nm,0.2s,mb4.4,baz=174,slow=7.2,SNR=8.1						
ZALV	**Zalesovo Beam**	**57.61**	**349**	P	**P**	**18 29 36.5**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ASAJ	**Asahikawa**	**59.65**	**34**	P	**P**	**18 29 52.1**	**+0.8**
	comp=Z,14nm,1.1s,mb4.9,baz=242,slow=33,SNR=4.1						
ASAJ	**Asahikawa**	**59.65**	**34**	P	**P**	**18 29 52.1**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,14nm,1.1s						
AKTK	**Aktyubinsk**	**63.90**	**331**	P	**P**	**18 30 17.9**	**-1.8**
AKTO	**Aktyubinsk**	**63.90**	**331**	P	**P**	**18 30 17.9**	**-1.8**
	comp=Z,0.6nm,0.3s,mb4.1,baz=134,slow=8.0,SNR=4.1						
AKTO	**Aktyubinsk**	**63.90**	**331**	P	**P**	**18 30 17.9**	**-1.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARU	**Arti**	**67.73**	**336**	*e*P	**P**	**18 30 43.2**	**-1.0**
ARU				*e*S	S	18 39 36.1	-1.1
ARU				SS	SS	18 43 55.4	-4.1
YAK	**Yakutsk**	**67.98**	**14**	*i* P	**P**	**18 30 44.9**	**-0.7**
YAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KIV	**Kislovodsk**	**69.12**	**319**	*e*P	**P**	**18 30 53.9**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BRTR	**Keskin Array B**	**73.91**	**312**	P	**P**	**18 31 20.5**	**-1.6**
	comp=Z,0.9nm,0.8s,mb3.8,baz=124,slow=7.2,SNR=7.1						
BRTR	**Keskin Array B**	**73.91**	**312**	P	**P**	**18 31 20.5**	**-1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOSA	**Boshof**	**75.89**	**241**	P	**P**	**18 31 33.4**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.2,baz=158,slow=5.4,SNR=4.0						
BOSA	**Boshof**	**75.89**	**241**	P	**P**	**18 31 33.4**	**-0.4**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TIXI	**Tiksi**	**76.14**	**9**	⇑ *e*P	**P**	**18 31 33.0**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MLR	**Muntele Rosu**	**80.88**	**317**	P	**P**	**18 32 01.5**	**+0.6**
	comp=Z,1.6nm,0.8s,mb4.0,baz=193,slow=23,SNR=3.3						
MLR	**Muntele Rosu**	**80.88**	**317**	P	**P**	**18 32 01.5**	**+0.6**
MLR	**Muntele Rosu**	**80.88**	**317**	P	**P**	**18 32 01.5**	**+0.6**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**86.97**	**340**	P	**P**	**18 32 32.2**	**+0.7**
	comp=Z,1.4nm,0.4s,mb4.6,baz=100,slow=5.6,SNR=28						
ARCES	**ARCESS Array B**	**86.97**	**340**	P	**P**	**18 32 32.2**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	**GERESS Array B**	**89.63**	**319**	P	**P**	**18 32 45.8**	**+1.3**
	comp=Z,0.4nm,0.6s,mb4.0,baz=139,slow=6.1,SNR=2.4						
TXAR	**Lajitas Array**	**144.71**	**38**	PKP	PKPdf	18 39 24.4	+0.5
	comp=Z,5.0nm,0.6s,baz=212,slow=1.2,SNR=74						
TXAR	**Lajitas Array**	**144.71**	**38**	PKIKP	PKPdf	18 39 24.4	+0.5
TXAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JCT	**Junction City**	**146.09**	**32**	*e*PKPbc	PKPbc	18 39 27.3	+0.1

*SZGRF **25** 18:20:09.1, 2035S×17693W, h33km, Fiji Islands region*

*ISCJB **25** 18:21:11.6±0.9, 178S±02×178.1W±0.1, h529km±15km, mb3.9/12, Error ellipse: s-maj=33.8km s-min=11.1km az=143.5*

*IDC **25** 18:21:11.9±1.4, 1820S×17784W, h536km±16km, mb3.5/10, mb1 3.8/11, mb1mx3.5/19, mbtmp3.5/11, Error ellipse: s-maj=23.3km s-min=10.4km az=144.0*

*NEIC **25** 18:21:11.5±1.1, 1822S×17785W, h532km±13km, mb4.2/3, Error ellipse: s-maj=22.8km s-min=11.7km az=144.0*

ISC 25 18:21:12.1±0.9, 179S±02×1780W±02, h524km±14km, n67, σ0§59/23, mb3.9/12, 2C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.17**	**57**	P	**P**	**18 23 01.5**	**+0.7**
	13nm,0.3s,baz=96,slow=2.5,SNR=16						
AFI				S	**S**	**18 24 29.2**	**-0.7**
	3.0nm,0.3s,baz=204,slow=22,SNR=4.2						
URZ	**Urewera**	**20.75**	**191**	P	**P**	**18 25 11.0**	**-5.1**
	5.0nm,0.3s,baz=345,slow=5.3,SNR=7.4						
ARMA	**Armidale**	**30.30**	**240**	*e*P	**P**	**18 26 41.3**	**+0.7**
CNB	**Canberra Magne**	**33.76**	**233**	*e*P	**P**	**18 27 10.2**	**+0.1**
CTA	**Charters Tower**	**33.84**	**260**	*e*P	**P**	**18 27 11.5**	**+0.5**
	5.0nm,0.5s,mb4.3						
TOO	**Toolangi**	**37.49**	**231**	*e*P	**P**	**18 27 41.0**	**-0.1**
STKA	**Stephens Creek**	**38.99**	**241**	*e*P	**P**	**18 27 53.6**	**+0.3**
	5.0nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.99**	**241**	P	**P**	**18 27 53.5**	**+0.1**
	9.5nm,0.7s,mb4.4,baz=90,slow=9.8,SNR=19						
STKA	**Stephens Creek**	**38.99**	**241**	*e*P	**P**	**18 27 53.2**	**-0.2**
	1.8nm,0.7s,mb3.7						
WB2	**Warramunga Arr**	**45.02**	**259**	*e*P	**P**	**18 28 40.3**	**-0.8**
WRAB	**Tennant Creek**	**45.02**	**259**	*e*P	**P**	**18 28 40.1**	**-0.9**
	3.0nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**45.03**	**259**	P	**P**	**18 28 40.8**	**-0.3**
	3.1nm,0.7s,mb4.0,baz=96,slow=7.5,SNR=20						
ASAR	**Alice Springs**	**45.18**	**254**	P	**P**	**18 28 42.1**	**-0.1**
	13nm,0.6s,mb4.6,baz=86,slow=8.8,SNR=72						
ASAR				PcP	PcP	18 30 10.2	-1.3
	0.9nm,0.5s,baz=103,slow=3.7,SNR=4.4						
ASAR				S	**S**	**18 34 40.6**	**-3.2**
	1.7nm,0.9s,baz=89,slow=14,SNR=12						
MJAR	**Matsushiro Arr**	**68.13**	**323**	P	**P**	**18 31 19.9**	**+0.2**
	1.7nm,0.5s,mb3.8,baz=152,slow=5.7,SNR=11						
MAJO	**Matsushiro**	**68.13**	**323**	*e*P	**P**	**18 31 20.0**	**+0.2**
	7.9nm,1.0s,mb4.2						
MAT	**Matsushiro**	**68.13**	**323**	P	**P**	**18 31 20.0**	**+0.2**
PETK	**Petropavlovsk-**	**73.76**	**345**	P	**P**	**18 31 52.0**	**-0.4**
	2.3nm,0.7s,mb3.8,baz=108,slow=9.2,SNR=6.6						
NVAR	**Mina Array Bea**	**79.13**	**44**	P	**P**	**18 32 22.4**	**0.0**
	1.7nm,0.7s,mb3.5,baz=225,slow=8.6,SNR=14						
TXAR	**Lajitas Array**	**85.65**	**57**	P	**P**	**18 32 55.5**	**-0.1**
	2.0nm,0.8s,mb3.8,baz=217,slow=5.4,SNR=24						
PDAR	**Pinedale Array**	**87.06**	**43**	P	**P**	**18 33 01.8**	**-0.1**
	0.9nm,0.7s,mb3.5,baz=214,slow=3.1,SNR=9.1						
CMAR	**Chiang Mai Arr**	**89.25**	**290**	P	**P**	**18 33 14.0**	**+1.3**
	0.9nm,0.9s,mb3.6,baz=128,slow=2.4,SNR=6.6						
MKAR	**Makanchi Array**	**109.41**	**314**	PKiKP	PKiKP	18 38 40.6	-2.2
	0.4nm,0.5s,baz=107,slow=0.4,SNR=10						
BVAR	**Borovoye Array**	**117.08**	**321**	PKP	PKPdf	18 38 55.4	-1.9
	0.6nm,0.4s,baz=285,slow=1.2,SNR=4.0						
ARCES	**ARCESS Array B**	**126.37**	**350**	PKP	PKPdf	18 39 13.2	-1.4
	3.0nm,0.8s,baz=336,slow=2.7,SNR=7.1						
KWP	**Kalwaria**	**144.21**	**337**	⇑ *i*P	PKPdf	18 39 47.1	-1.0
BUR08	**Bucovina Ar. S**	**144.77**	**333**	*e*PKPbc	PKPdf	18 39 49.5	+0.3
BURAR	**Bucovina Array**	**144.78**	**332**	‖ *i*P	PKPdf	18 39 50.2	+1.0
STHS	**Stebnicka Huta**	**144.92**	**338**	*e*PKP	PKPdf	18 39 49.5	+0.1
KOLS	**Kolonicke sedl**	**144.95**	**337**	*e*PKP	PKPdf	18 39 48.1	-1.3
BRTR	**Keskin Array B**	**145.05**	**315**	PKPbc	PKPbc	18 39 50.0	-0.7
	3.3nm,0.8s,baz=137,slow=4.8,SNR=15						
CLZ	**Clausthal**	**145.48**	**351**	*e*PKPbc	PKPbc	18 39 51.2	-0.3
CLL	**Collm**	**145.53**	**348**	*e*PKPbc	PKPbc	18 39 51.1	-0.6
CLL	**Collm**	**145.53**	**348**	‖ *i*PKPbc	PKPbc	18 39 50.7	-1.0
	comp=Z,14nm,1.1s						
UPC	**Upice**	**145.58**	**344**	*e*PKP	PKPdf	18 39 51.5	+1.0
OKC	**Ostrava-Krasne**	**145.58**	**341**	*e*PKP	PKPab	18 39 53.6	+0.3
DPC	**Dobruska-Polom**	**145.64**	**344**	*e*PKP	PKPdf	18 39 51.6	+1.0
BRG	**Berggiesshubel**	**145.74**	**347**	*e*PKPbc	PKPbc	18 39 52.0	-0.3
BRG	**Berggiesshubel**	**145.74**	**347**	*i* P	PKPdf	18 39 51.4	+0.7
	comp=Z,16nm,1.4s						
MLR	**Muntele Rosu**	**146.02**	**329**	PKPbc	PKPbc	18 39 52.4	-0.8
	comp=Z,2.3nm,0.6s,baz=263,slow=22,SNR=6.2						
MLR	**Muntele Rosu**	**146.02**	**329**	‖ *i*P	PKPbc	18 39 53.8	+0.5
PRU	**Pruhonice**	**146.43**	**345**	*e*PKP	PKPbc	18 39 53.9	-0.3
MOX	**Moxa**	**146.43**	**349**	*e*PKPbc	PKPbc	18 39 53.9	-0.3
TANN	**Tannenbergstha**	**146.49**	**348**	*e*PKPbc	PKPbc	18 39 53.9	-0.5
VOIR		**146.49**	**330**	⇑ *i*P	PKPbc	18 39 54.6	0.0
VYHS	**Vyhne**	**146.54**	**340**	*e*PKP	PKPdf	18 39 53.7	+1.6
KOLL	**Kolacno**	**146.61**	**340**	*e*PKP	PKPbc	18 39 54.2	-0.6
MANZ	**Manzenberg**	**146.97**	**348**	*e*PKPbc	PKPbc	18 39 55.3	-0.4
ROTZ	**Rotzenmuhle**	**147.16**	**348**	*e*PKPbc	PKPbc	18 39 55.8	-0.4
TNS	**Taunus Mts**	**147.33**	**352**	*e*PKPbc	PKPbc	18 39 56.2	-0.4
GRF	**Grafenberg Arr**	**147.42**	**349**	*e*PKPbc	PKPbc	18 39 56.1	-0.8
KHC	**Kasperske Hory**	**147.46**	**346**	*e*PKP	PKPbc	18 39 56.6	-0.4
GEC2	**GERESS Array S**	**147.69**	**345**	*e*PKPbc	PKPbc	18 39 57.2	-0.4
GERES	**GERESS Array B**	**147.69**	**345**	PKPbc	PKPbc	18 39 57.0	-0.6
	comp=Z,3.2nm,0.7s,baz=25,slow=3.2,SNR=13						
GIVF	**Givet**	**147.78**	**357**	*e*PKP1	PKPbc	18 39 56.6	-1.2
	comp=Z,7.2nm,0.5s						
BAIF	**Baives**	**147.86**	**357**	*e*PKP1	PKPbc	18 39 57.0	-1.0
	comp=Z,2.7nm,0.5s						
FLN	**La Foliniere**	**149.14**	**3**	*e*PKP1	PKPbc	18 39 59.6	-1.6
BFO	**Black Forest**	**149.20**	**352**	*e*PKPbc	PKPbc	18 40 00.6	-0.8
CDF	**Champ du Feu**	**149.25**	**353**	*e*PKP1	PKPbc	18 40 00.3	-1.2
	comp=Z,12nm,0.9s						
LDF	**La Druitiere**	**149.32**	**3**	*e*PKP1	PKPbc	18 39 59.7	-2.0
GRR	**Gorron**	**149.49**	**4**	*e*PKP1	PKPbc	18 40 00.6	-1.5
	comp=Z,5.6nm,0.5s						
HAU	**Haudompre**	**149.75**	**354**	*e*PKP1	PKPbc	18 40 01.3	-1.4
	comp=Z,5.5nm,0.7s						
HINF	**Hinteralfeld**	**149.89**	**353**	*e*PKP1	PKPbc	18 40 01.5	-1.5
	comp=Z,5.1nm,0.8s						
DAVOX	**Davos/Dischmat**	**150.46**	**349**	PKPbc	PKPbc	18 40 03.7	-0.7
	comp=Z,6.5nm,0.6s,baz=310,slow=1.4,SNR=14						
LOR	**Lormes**	**150.66**	**357**	*e*PKP1	PKPbc	18 40 03.6	-1.3
	comp=Z,10nm,0.9s						
SSF	**Saint Saulge**	**150.88**	**358**	*e*PKP1	PKPbc	18 40 04.0	-1.4
	comp=Z,22nm,1.1s						
BGF	**Bois d'Agland**	**151.40**	**359**	*e*PKP1	PKPbc	18 40 05.1	-1.5
TCF	**Toulx Ste Croi**	**151.68**	**360**	*e*PKP1	PKPbc	18 40 05.3	-1.9
	comp=Z,12nm,1.0s						

*IDC **25** 18:25:17.3±1.2, 3540N×2947E, h0km, mb3.7/3, mb1 3.7/10, mb1mx3.6/27, mbtmp3.6/10, ML3.5/7, Error ellipse: s-maj=23.7km s-min=18.8km az=35.0*

*CSEM **25** 18:25:19.6±0.1, 3544N×2960E, h40km, MD3.6, Error ellipse: s-maj=2.3km s-min=1.5km az=70.0*

*ISCJB **25** 18:25:19.3±0.3, 3543N±003×2950E±004, h33km, mb3.5/3, Error ellipse: s-maj=5.1km s-min=3.5km az=142.2*

*NEIC **25** 18:25:21.4±0.6, 3541N×2948E, h35km, Error ellipse: s-maj=10.2km s-min=7.4km az=194.0*

*DDA **25** 18:25:22.6, 3581N×2900E, h10km±1km, Md3.6*

*HLW **25** 18:25:24.9, 3516N×2963E, h33km, Mb3.5*

ISC 25 18:25:21.3±0.3, 3547N±003×2949E±003, h35km, n43, σ1§25/60, mb3.5/3, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.77**	**7**	*i* P	**Pn**	**18 25 35.3**	**-0.2**
AKAS				*i* S	**Sn

JOGS				*e*S		**Sn**	18 30 42.0	+0.6
JMJ	**Miyako jima 2**	**2.37**	**267**	P		**Pn**	18 30 17.0	+1.1
JMJ				*e*S		**Sn**	18 30 43.6	-0.2
JTJ	**Tarama**	**2.92**	**264**	P		**Pn**	18 30 23.5	-0.1
JTJ				*e*S		**Sn**	18 30 56.5	-0.9
JTK	**Tokunoshima**	**2.96**	**18**	P		**Pn**	18 30 23.2	-0.8
JTK				*e*S		**Sn**	18 30 57.5	-0.8
JMZ	**Minamidaito 2**	**3.12**	**74**	P		**Pn**	18 30 22.4	-4.0
JMZ				*e*S		**Sn**	18 30 56.4	-6.1
JIJ	**Ishigaki jima**	**3.47**	**261**	P		**Pn**	18 30 30.9	-0.2
JIJ				*e*S		**Sn**	18 31 08.6	-2.3
JKRS	**Kuro-shima**	**3.61**	**259**	P		**Pn**	18 30 32.9	-0.2
JKRS				*e*S		**Sn**	18 31 13.4	-1.1
JAM	**Amami Oshima**	**3.75**	**24**	P		**Pn**	18 30 34.7	-0.3
JAM				*e*S		**Sn**	18 31 13.8	-4.1
IRIF	**Iriomote-Funau**	**3.84**	**261**	*e*S		**Sn**	18 31 20.7	+0.5
MKAR	**Makanchi Array**	**42.15**	**313**	P		**P**	18 37 29.6	+1.0
	0.2nm,0.5s,mb3.0,baz=91,slow=9.9,SNR=4.2							
WRA	**Warramunga Arr**	**45.09**	**171**	P		**P**	18 37 52.5	0.0
	0.4nm,0.5s,mb3.5,baz=349,slow=8.9,SNR=14							
ASAR	**Alice Springs**	**48.70**	**173**	P		**P**	18 38 22.2	+1.6
	0.3nm,0.5s,mb3.6,baz=360,slow=15,SNR=9.1							

TAP 25 18:31:29.2, 2279N×12106E, h6km, ML3.6, 9C-3D, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWG	**Pinlang**	**0.04**	**26**	⇑ *i*	P	Pg	18 31 31.0	+0.5
	baz=24							
TWG				*i*	S	Sg	18 31 32.0	+0.5
	baz=24							
TTN	**Taitung**	**0.09**	**112**	*i*	P	Pg	18 31 32.4	+1.1
	baz=112							
TTN					S	Sg	18 31 34.8	+2.1
	baz=112							
ECL	**Taimali**	**0.21**	**206**	⇓ *i*	P	Pg	18 31 33.9	+0.4
	baz=208							
SSD	**Sandimen**	**0.39**	**264**	⇓ *i*	P	Pg	18 31 37.5	+0.7
	baz=264							
SSD					S	Sg	18 31 42.4	+0.4
	baz=264							
ELDTW	**Lidau**	**0.40**	**355**	⇑ *i*	P	Pg	18 31 37.6	+0.6
	baz=353							
ELDTW				*i*	S	Sg	18 31 43.3	+1.0
	baz=353							
CHKT	**Chengkung**	**0.42**	**43**	P		Pg	18 31 38.4	+1.0
	baz=40							
CHKT				*e*S		Sg	18 31 45.7	+2.8
	baz=40							
EAST	**Anshuo**	**0.45**	**205**	*e*P		Pg	18 31 37.3	-0.5
	baz=206							
TAW	**Tawu**	**0.45**	**199**	P		Pg	18 31 38.4	+0.5
	baz=202							
TAW				*e*S		Sg	18 31 45.0	+1.1
	baz=202							
STYT	**Tauyuan**	**0.46**	**324**	⇑ *i*	P	Pg	18 31 39.2	+1.0
	baz=323							
STYT					S	Sg	18 31 45.7	+1.4
	baz=323							
SGLT	**Jiouru**	**0.52**	**263**	*e*P		Pg	18 31 41.3	+2.0
	baz=263							
SGST	**Jiashian**	**0.52**	**304**	⇑ P		Pg	18 31 40.9	+1.5
	baz=304							
SGST				*e*S		Sg	18 31 49.3	+3.1
	baz=304							
SCZT	**Fangliau**	**0.58**	**224**	⇑ *i*	P	Pg	18 31 41.1	+0.8
	baz=233							
SCZT					S	Sg	18 31 48.5	+0.7
	baz=233							
TWM1	**Shoushan**	**0.58**	**274**	*e*P		Pg	18 31 42.7	+2.2
	baz=273							
TWF1	**Yuli**	**0.60**	**22**	P		Pg	18 31 40.5	-0.4
	baz=7.0							
TWF1					S	Sg	18 31 50.0	+1.2
	baz=7.0							
WTP	**Ta-pu**	**0.61**	**318**	⇑ *i*	P	Pg	18 31 42.7	+1.7
	baz=325							
WTP					S	Sg	18 31 52.3	+3.3
	baz=325							
CHN1	**Nanshi**	**0.63**	**309**	P		Pg	18 31 43.4	+2.1
	baz=309							
CHN1					S	Sg	18 31 54.0	+4.6
	baz=309							
CHN4	**Tsaushan**	**0.70**	**323**	*e*P		Pg	18 31 44.5	+1.7
	baz=331							
CHN4				*e*S		Sg	18 31 55.2	+3.3
	baz=331							
YUS	**Yu-Shan**	**0.70**	**352**	⇑ *i*	P	Pg	18 31 43.5	+0.7
	baz=1.0							
YUS				*e*S		Sg	18 31 53.0	+1.0
	baz=1.0							
TWK	**Hsinying**	**0.71**	**312**	⇓ *i*	P	Pg	18 31 45.0	+2.2
	baz=312							
TWK					S	Sg	18 31 56.1	+4.1
	baz=312							
KAU	**Kaohsiung**	**0.72**	**253**	*e*P		Pg	18 31 46.8	+3.6
	baz=252							
ALS	**Alishan**	**0.76**	**342**	⇑ P		Pg	18 31 44.6	+0.9
	baz=341							
EHY	**Hungye**	**0.76**	**19**	*e*P		Pg	18 31 43.8	0.0
	baz=7.0							
EHY				*e*S		Sg	18 31 54.1	+0.5
	baz=7.0							
TWP	**Hsiaoliuchiu**	**0.78**	**236**	*e*P		Pg	18 31 48.5	+4.4
	baz=226							
HEN	**Hengchun**	**0.83**	**201**	*e*P		Pg	18 31 45.3	+0.1
	baz=190							
TWK1	**Hengchun**	**0.87**	**195**	*e*P		Pg	18 31 45.4	-0.6
	baz=196							
LAY	**Lan-yu**	**0.88**	**148**	*e*P		Pg	18 31 46.1	+0.1
	baz=150							
CHN5	**Tsauling**	**0.88**	**337**	⇑ P		Pg	18 31 47.2	+1.1
	baz=335							
CHN5				*e*S		Sg	18 32 00.8	+3.3
	baz=335							
SCLT	**Jiali**	**0.88**	**296**	*e*P		Pg	18 31 49.0	+2.8
	baz=296							
SCLT				*e*S		Sg	18 32 03.8	+6.1
	baz=296							
TSEB	**Hengchuen, Pin**	**0.90**	**189**	*e*P		Pg	18 31 47.8	+1.3
	baz=179							
CHN2	**Minshiung**	**0.91**	**324**	*e*P		Pg	18 31 48.8	+2.0
	baz=323							
CHN2				*e*S		Sg	18 32 02.5	+3.8
	baz=323							
CHY	**Chiayi**	**0.92**	**321**	*e*P		Pg	18 31 48.8	+1.9
	baz=320							
CHN8	**Yiju**	**0.95**	**306**	*e*P		Pg	18 31 50.5	+3.0
	baz=305							
CHN8				*e*S		Sg	18 32 05.3	+5.3
	baz=305							
WGK	**Gukeng**	**1.00**	**333**	P		Pg	18 31 50.4	+2.0
	baz=332							
WGK				*e*S		Sg	18 32 05.4	+3.9
	baz=332							
ESL	**Shilin**	**1.08**	**19**	*e*P		Pg	18 31 49.5	-0.5
	baz=36							
SMLT	**Sun Moon Lake**	**1.10**	**353**	*e*P		Pg	18 31 50.8	+0.4
	baz=359							
SMLT				*e*S		Sg	18 32 08.2	+3.6
	baz=359							
TYC	**Yuchr**	**1.13**	**351**	P		Pg	18 31 51.4	+0.6
	baz=2.0							
TYC				*e*S		Sg	18 32 09.2	+3.7
	baz=2.0							
WNT	**Mingjian**	**1.14**	**343**	P		Pg	18 31 52.9	+1.8
	baz=341							
WNT					S	Sg	18 32 09.3	+3.5
	baz=341							
WSF	**Szhu**	**1.14**	**318**	*e*P		Pg	18 31 51.6	+0.5
	baz=317							
WSF				*e*S		Sg	18 32 09.4	+3.4
	baz=317							
WHF	**Hehuan Shan**	**1.36**	**8**	*e*P		Pn	18 31 54.0	-0.8
	baz=18							
TWD	**Chiawan**	**1.38**	**21**	*e*P		Pn	18 31 52.5	-2.4
	baz=37							
TCU	**Taichung**	**1.40**	**346**	*e*P		Pn	18 31 56.4	+1.2
	baz=344							
TCU				*e*S		Sb	18 32 17.1	+3.3
	baz=344							
TWT	**Tachien**	**1.46**	**4**	*e*P		Pn	18 31 57.4	+1.3
	baz=12							
TWQ1	**Liyutan**	**1.57**	**351**	*e*P		Pn	18 31 59.2	+1.6
	baz=349							
TWQ1				*e*S		Sn	18 32 22.3	+3.9
	baz=349							
NSY	**Sanyi**	**1.64**	**351**	*e*P		Pn	18 32 00.8	+2.2
	baz=349							
NSY				*e*S		Sn	18 32 25.3	+5.2
	baz=349							
NNS	**Nan Shan**	**1.67**	**10**	*e*P		Pn	18 32 00.3	+1.3
	baz=6.0							
NNS				*e*S		Sn	18 32 24.5	+3.8
	baz=6.0							
NSTT	**Nanjuang**	**1.83**	**358**	*e*P		Pn	18 32 03.5	+2.2
	baz=358							
NSTT				*e*S		Sn	18 32 28.9	+4.1
	baz=358							
NSK	**Sanguang**	**1.90**	**8**	*e*P		Pn	18 32 04.4	+2.2
	baz=6.0							
NSK				*e*S		Sn	18 32 30.9	+4.6
	baz=6.0							
TWC	**Suao**	**1.95**	**22**	*e*P		Pn	18 32 03.6	+0.7
	baz=37							
TWE	**Neicheng**	**2.00**	**16**	*e*P		Pn	18 32 04.5	+0.9
	baz=34							
TWA	**Mucha**	**2.23**	**12**	*e*P		Pn	18 32 09.9	+3.1
	baz=34							
TWS1	**Kuangyinshan**	**2.33**	**8**	*e*P		Pn	18 32 11.5	+3.5
	baz=354							
NWF	**Wu-fen Shan**	**2.37**	**16**	*e*P		Pn	18 32 09.8	+1.3
	baz=34							

*ISCJB **25** 18:52:47.1±0.3, 4335N±002×105W±003, h10km, Error ellipse: s-maj=2.9km s-min=2.2km az=19.1*
*MDD **25** 18:52:49.7±0.3, 4323N×1.10W, h11km, mbLg1.5/15, Error ellipse: s-maj=3.3km s-min=2.0km az=157.0, PRIMO*
*LDG **25** 18:52:49.5±0.1, 43.17N×104W, h15km, Md2.3/2, Ml2.1/13, Error ellipse: s-maj=2.2km s-min=2.0km az=44.0*
*STR **25** 18:52:50.4±0.6, 43.15N×109W, h5km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 25 18:52:48.5±0.3, 4331N±002×107W±003, h10km, n59, σ1§22/95, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ORDF	**Ordiarp**	**0.14**	**135**	Pg		**Pg**	**18 52 53.4**	**+1.8**
ORDF				Sg		**Sg**	**18 52 56.1**	**+2.4**
OSSF	**Osses**	**0.15**	**250**	Pg		**Pg**	**18 52 54.0**	**+2.1**
OSSF				Sg		**Sg**	**18 52 56.8**	**+2.6**
SJPF	**Ste Jean**	**0.23**	**211**	*e*Pg		**Pg**	**18 52 53.3**	**+0.1**
SJPF				*e*Sg		**Sg**	**18 52 55.6**	**-0.7**
	14nm,0.1s							
SJPF	**Ste Jean**	**0.23**	**211**	Pg		**Pg**	**18 52 53.3**	**+0.1**
SJPF				Lg			18 52 55.6	
	7.1nm,0.1s							
LARF	**Larrau**	**0.28**	**168**	Pg		**Pg**	**18 52 53.4**	**-0.6**
LARF				Sg		**Sg**	**18 52 56.1**	**-1.7**
ATE	**Arette**	**0.35**	**130**	Pg		**Pg**	**18 52 55.5**	**+0.1**
ATE				Sg		**Sg**	**18 52 59.5**	**-0.5**
ATE	**Arette**	**0.35**	**130**	P		**Pg**	**18 52 55.6**	**+0.2**
ATE				S		**Sg**	**18 52 59.5**	**-0.5**
ELIZ	**Elizondo**	**0.37**	**247**	Pg		**Pg**	**18 52 56.6**	**+0.8**
	0.9nm,0.1s,SNR=7.9							
ELIZ				Lg			18 53 00.4	
	7.2nm,0.2s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.45**	**203**	Pg		**Pg**	**18 52 56.2**	**-1.1**
	0.1nm,0.1s,SNR=7.9							
EORO				Lg			18 53 01.0	
	17nm,0.2s,SNR=7.9							
IUSE	**Utxeti**	**0.51**	**224**	Pg		**Pg**	**18 52 57.6**	**-0.7**
	0.4nm,0.1s,SNR=7.9							
IUSE				Lg			18 53 03.5	
	4.6nm,0.1s,SNR=7.9							
IZUN	**Zunzarren**	**0.53**	**213**	Lg			18 53 04.1	
	4.6nm,0.2s,SNR=7.9							
IPRE	**Itoiz**	**0.55**	**203**	Pg		**Pg**	**18 52 58.3**	**-0.8**
	0.2nm,0.2s,SNR=7.9							
IPRE				Lg			18 53 04.1	
	7.0nm,0.2s,SNR=7.9							
ETSF	**Etsaut**	**0.55**	**138**	*e*Pg		**Pg**	**18 52 58.3**	**-0.9**
ETSF				*e*Sg		**Sg**	**18 53 04.3**	**-2.2**
	21nm,0.3s							
ETSF	**Etsaut**	**0.55**	**138**	Pg		**Pg**	**18 52 58.3**	**-0.9**
ETSF				Lg			18 53 04.3	
	10nm,0.3s							
IUNC	**Unciti**	**0.64**	**210**	Pg		**Pg**	**18 53 00.1**	**-0.7**
	0.5nm,0.1s,SNR=7.9							
IUNC				Lg			18 53 07.5	
	2.6nm,0.1s,SNR=7.9							
EARA	**Aranguren**	**0.66**	**215**	Pg		**Pg**	**18 53 01.0**	**-0.1**
	0.5nm,0.2s,SNR=7.9							
EARA				Lg			18 53 08.4	
	4.3nm,0.1s,SNR=7.9							
VIEF	**Viey**	**0.90**	**118**	P		**Pg**	**18 53 09.1**	**+3.2**
VIEF				S		**Sg**	**18 53 19.9**	**+2.2**
EPF	**Esparros**	**1.06**	**105**	*e*Pg		**Pg**	**18 53 09.0**	**0.0**
EPF				*e*Sg		**Sg**	**18 53 22.8**	**0.0**
	6.8nm,0.2s							
EPF	**Esparros**	**1.06**	**105**	Pg		**Pg**	**18 53 09.0**	**0.0**
EPF				Lg			18 53 22.8	
	3.4nm,0.2s							
EBIE	**Bielsa**	**1.08**	**125**	Pg		**Pg**	**18 53 09.2**	**-0.1**
	0.9nm,0.2s,SNR=7.9							
EBIE				Lg			18 53 24.5	
	2.6nm,0.2s,SNR=7.9							
ESAC	**San Caprasio**	**1.65**	**164**	Pn		**Pn**	**18 53 17.4**	**-0.1**
	2.7nm,0.1s,SNR=7.9							
ESAC				Pg		**Pg**	**18 53 21.5**	**+1.4**
	9.5nm,0.1s,SNR=7.9							
ESAC				Lg			18 53 40.1	
	35nm,0.2s,SNR=7.9							
ELAN	**Lanestosa**	**1.73**	**268**	Pg		**Pn**	**18 53 20.1**	**+1.5**
	0.1nm,0.2s,SNR=7.9							
ELAN				Lg			18 53 44.5	
	1.0nm,0.1s,SNR=7.9							
LFF	**La Frestale**	**2.09**	**38**	*e*Pn		**Pn**	**18 53 23.8**	**+0.3**
LFF	**La Frestale**	**2.09**	**38**	*e*Pg		**Pg**	**18 53 28.7**	**+0.2**
LFF				*e*Sg		**Sg**	**18 53 57.9**	**+2.4**
	4.8nm,0.4s							
LFF	**La Frestale**	**2.09**	**38**	*e*Sg		**Sg**	**18 54 01.6**	**+6.1**
	2.1nm,0.3s							
LFF	**La Frestale**	**2.09**	**38**	Pn		**Pn**	**18 53 23.8**	**+0.3**
LFF				Pg		**Pg**	**18 53 28.7**	**+0.2**
LFF				Lg			18 53 57.9	
	2.4nm,0.4s							
MTLF	**Montolieu**	**2.40**	**88**	*e*Pn		**Pn**	**18 53 26.9**	**-0.8**
MTLF	**Montolieu**	**2.40**	**88**	*e*Pg		**Pg**	**18 53 33.5**	**-0.9**
MTLF				*e*Sg		**Sg**	**18 54 05.1**	**-0.3**
	1.4nm,0.3s							
MTLF	**Montolieu**	**2.40**	**88**	*e*Sg		**Sg**	**18 54 08.9**	**+3.5**
	1.0nm,0.2s							
MTLF	**Montolieu**	**2.40**	**88**	Pn		**Pn**	**18 53 26.9**	**-0.8**
MTLF				Pg		**Pg**	**18 53 33.5**	**-0.9**
MTLF				Lg			18 54 05.1	
	0.7nm,0.3s							
EPOB	**Poblet**	**2.52**	**140**	Pg		**Pg**	**18 53 37.1**	**+0.4**
	0.3nm,0.1s,SNR=7.9							
EPOB				Lg			18 54 09.2	
	1.4nm,0.1s,SNR=7.9							
ERTA	**Horta de San J**	**2.57**	**156**	Pg		**Pg**	**18 53 39.1**	**+1.4**
	0.4nm,0.1s,SNR=7.9							
ERTA				Lg			18 54 08.8	
	1.4nm,0.2s,SNR=7.9							
ETOR	**Torete**	**2.59**	**197**	Pn		**Pn**	**18 53 29.4**	**-1.0**
	1.8nm,0.1s,SNR=7.9							
ETOR				Sn		**Sn**	**18 54 01.0**	**-1.0**
	5.8nm,0.2s,SNR=7.9							
ETOR				Lg			18 54 10.4	
	0.9nm,0.3s,SNR=7.9							
RJF	**Les Rejaudoux**	**2.72**	**42**	*e*Pn		**Pn**	**18 53 31.7**	**-0.5**
RJF	**Les Rejaudoux**	**2.72**	**42**	*e*Pg		**Pg**	**18 53 40.3**	**-0.4**
RJF				*e*Sn		**Sn**	**18 54 03.3**	**-1.9**
	1.4nm,0.3s							
RJF	**Les Rejaudoux**	**2.72**	**42**	*e*Sn		**Sn**	**18 54 07.0**	**+1.8**
	0.5nm,0.2s							
RJF	**Les Rejaudoux**	**2.72**	**42**	Pn		**Pn**	**18 53 31.7**	**-0.5**
RJF				Pg		**Pg**	**18 53 40.3**	**-0.4**
RJF				Sn		**Sn**	**18 54 07.0**	**+1.8**
	0.2nm,0.2s							
CAF	**Calviac**	**2.77**	**53**	*e*Pn		**Pn**	**18 53 32.5**	**-0.4**
CAF	**Calviac**	**2.77**	**53**	*e*Pg		**Pg**	**18 53 41.0**	**-0.6**
CAF				*e*Sn		**Sn**	**18 54 04.2**	**-2.3**
	0.6nm,0.2s							
CAF	**Calviac**	**2.77**	**53**	*e*Sn		**Sn**	**18 54 08.0**	**+1.5**
	0.8nm,0.3s							
CAF	**Calviac**	**2.77**	**53**	Pn		**Pn**	**18 53 32.5**	**-0.4**
CAF				Pg		**Pg**	**18 53 41.0**	**-0.6**
CAF				Sn		**Sn**	**18 54 08.0**	**+1.5**
	0.4nm,0.3s							
EARI	**Arriondas**	**3.02**	**271**	Pg		**Pn**	**18 53 39.9**	**+3.5**
	SNR=7.9							
EARI				Sn		**Sn**	**18 54 13.3**	**+0.6**
	0.1nm,0.1s,SNR=7.9							
MFF	**Saint Martin d**	**3.36**	**11**	*e*Pn		**Pn**	**18 53 41.5**	**+0.5**
MFF				*e*Sn		**Sn**	**18 54 19.4**	**-1.4**
	0.3nm,0.2s							
MFF	**Saint Martin d**	**3.36**	**11**	*e*Sg		**Sg**	**18 54 42.0**	**+5.7**
	0.9nm,0.3s							
MFF	**Saint Martin d**	**3.36**	**11**	Pn		**Pn**	**18 53 41.5**	**+0.5**
MFF				Sn		**Sn**	**18 54 19.4**	**-1.4**
	0.2nm,0.2s							
MFF				Lg		**Sg**	**18 54 42.0**	**+5.7**
	0.4nm,0.3s							
LASF	**Ste Croix**	**3.65**	**76**	*e*Sg		**Sg**	**18 54 49.7**	**+4.0**
	0.4nm,0.2s							
LASF	**Ste Croix**	**3.65**	**76**	Lg		**Sg**	**18 54 49.7**	**+4.0**
	0.2nm,0.2s							
TCF	**Toulx Ste Croi**	**3.78**	**37**	*e*Pn		**Pn**	**18 53 46.0**	**-0.8**
TCF				*e*Sn		**Sn**	**18 54 28.5**	**-2.8**
TCF				*e*Sg		**Sg**	**18 54 50.8**	**+0.9**
	0.4nm,0.2s							
TCF	**Toulx Ste Croi**	**3.78**	**37**	Pn		**Pn**	**18 53 46.0**	**-0.8**
TCF				Sn		**Sn**	**18 54 28.5**	**-2.8**
TCF				Lg			18 54 50.8	
	0.2nm,0.2s							
BGF	**Bois d'Agland**	**4.27**	**39**	*e*Pn		**Pn**	**18 53 52.6**	**-0.9**
BGF				*e*Sg		**Sg**	**18 55 07.0**	**+1.3**
	3.4nm,0.5s							
BGF	**Bois d'Agland**	**4.27**	**39**	Pn		**Pn**	**18 53 52.6**	**-0.9**
BGF				Lg			18 55 07.0	
	1.7nm,0.5s							
QUIF	**Quistinic**	**4.84**	**343**	*e*Pn		**Pn**	**18 54 02.7**	**+1.4**
QUIF				*e*Sn		**Sn**	**18 54 56.0**	**-1.3**
	1.0nm,0.3s							
QUIF	**Quistinic**	**4.84**	**343**	Pn		**Pn**	**18 54 02.7**	**+1.4**
QUIF				Sn		**Sn**	**18 54 56.0**	**-1.3**
	0.5nm,0.3s							
SGMF	**Saint Gilles**	**5.05**	**349**	*e*Pn		**Pn**	**18 54 05.4**	**+1.1**
SGMF				*e*Sn		**Sn**	**18 55 00.8**	**-1.9**
	0.5nm,0.3s							
SGMF	**Saint Gilles**	**5.05**	**349**	Pn		**Pn**	**18 54 05.4**	**+1.1**
SGMF				Sn		**Sn**	**18 55 00.8**	**-1.9**
	0.2nm,0.3s							
GRR	**Gorron**	**5.08**	**2**	*e*Pn		**Pn**	**18 54 04.5**	**-0.1**
GRR				*e*Sn		**Sn**	**18 55 02.0**	**-1.3**
	1.1nm,0.3s							
GRR	**Gorron**	**5.08**	**2**	Pn		**Pn**	**18 54 04.5**	**-0.1**
GRR				Sn		**Sn**	**18 55 02.0**	**-1.3**
	0.6nm,0.3s							
ROSF	**Rostrenen**	**5.26**	**344**	*e*Pn		**Pn**	**18 54 08.1**	**+1.0**
ROSF				*e*Sn		**Sn**	**18 55 06.4**	**-1.3**
	0.5nm,0.3s							
ROSF	**Rostrenen**	**5.26**	**344**	Pn		**Pn**	**18 54 08.1**	**+1.0**
ROSF				Sn		**Sn**	**18 55 06.4**	**-1.3**
	0.2nm,0.3s							

LDG 25 18:52:53.0±0.1, 4318N×107W, h15km, Md2.4/2, Ml2.0/7, Error ellipse: s-maj=3.1km s-min=2.4km az=154.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJPF	**Ste Jean**	**0.13**	**240**	*e*Pg		Pg	18 52 57.0	+0.3
SJPF				*e*Sg		Sg	18 52 59.5	+0.4
	57nm,0.2s							
ETSF	**Etsaut**	**0.47**	**127**	*e*Pg		Pg	18 53 02.0	-0.3
ETSF				*e*Sg		Sg	18 53 08.1	-0.4
	74nm,0.3s							
REYF	**Montagne du Re**	**0.51**	**102**	Pg		Pg	18 53 03.3	+0.3
REYF	**Montagne du Re**	**0.51**	**102**	P		Pg	18 53 03.1	+0.1
REYF				S		Sg	18 53 10.2	+0.4
EPF	**Esparros**	**1.04**	**98**	*e*Pg		Pg	18 53 12.8	-0.3
EPF	**Esparros**	**1.04**	**98**	*e*P		Pb	18 53 14.4	+1.7
EPF				*e*Sg		Sg	18 53 26.5	-0.2
	6.8nm,0.2s							

DJA 25 18:53:38, 139S×9948E, h10km, MLv3.5/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDSI	**Padang**	**1.09**	**64**	P		Pb	18 53 55.9	-3.1
PDSI	**Padang**	**1.09**	**64**	S		Sg	18 54 14.3	+1.1
PPI	**Padang Panjang**	**1.30**	**45**	P		Pn	18 54 03.1	+0.8

*ISCJB **25** 19:07:02.2±0.4, 4378N±003×105.19W±005, h0km, Error ellipse: s-maj=5.1km s-min=4.7km az=153.5*
*NEIC **25** 19:07:04.0±0.5, 4378N×105.18W, h0km, ML3.2, Error ellipse: s-maj=6.4km s-min=5.6km az=65.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **25** 19:07:03.1±1.6, 4377N×10542W, h0km, mb4.2/1, mb1 4.0/5, mb1mx3.6/24, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=52.9km s-min=8.7km az=151.0*

ISC 25 19:07:04.0±0.4, 4378N±004×10518W±005, h0km, n53, σ0§89/55, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.89**	**67**	*e*Pn		**Pn**	**19 07 22.6**	**-1.2**
PHWY	**Pilot Hill**	**2.49**	**185**	*e*Pn		**Pn**	**19 07 45.7**	**0.0**
RWWY	**Rawlins**	**2.57**	**216**	*e*Pn		**Pn**	**19 07 46.9**	**0.0**
LAO	**LASA Array**	**3.00**	**346**	*e*Pn		**Pn**	**19 07 52.7**	**0.0**
RLMT	**Red Lodge**	**3.22**	**296**	*e*Pn		**Pn**	**19 07 55.5**	**-0.2**
BW06	**Boulder Array**	**3.36**	**254**	*e*Pn		**Pn**	**19 07 57.1**	**-0.5**
PDAR	**Pinedale Array**	**3.36**	**254**	Pn		**Pn**	**19 07 57.2**	**-0.4**
	6.4nm,0.3s,baz=72,slow=16,SNR=67							
PDAR				Sn		**Sn**	**19 08 38.1**	**0.0**
	17nm,0.3s,baz=80,slow=33,SNR=6.6							
PDAR				Lg			19 08 42.5	
	22nm,0.3s,baz=75,slow=35,SNR=9.6							
PDAR	**Pinedale Array**	**3.36**	**254**	Pn		**Pn**	**19 07 57.2**	**-0.4**
PDAR				Sn		**Sn**	**19 08 38.1**	**0.0**
PDAR				Lg			19 08 42.5	
OGNE	**Ogallala**	**3.67**	**140**	*e*Pn		**Pn**	**19 08 02.1**	**+0.2**
GCMT	**Greycliff**	**3.77**	**304**	*e*Pn		**Pn**	**19 08 03.6**	**+0.2**
LOHW	**Long Holl

ARUT	**Antelope Range**	**8.66**	**229**	*e*Pn		**Pn**	**19 09 10.3**	**-0.2**
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn		**Pn**	**19 09 15.2**	**-0.8**
	1.5nm,0.3s,baz=242,slow=7.4,SNR=6.2							
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn		**Pn**	**19 09 15.2**	**-0.8**
NVAR	**Mina Array Bea**	**11.25**	**246**	Pn		**Pn**	**19 09 47.1**	**+1.1**
	0.2nm,0.3s,baz=62,slow=13,SNR=4.0							
NVAR	**Mina Array Bea**	**11.25**	**246**	Pn		**Pn**	**19 09 47.1**	**+1.1**
ARCES	**ARCESS Array B**	**61.35**	**18**	P		**P**	**19 17 19.8**	**-1.2**
	3.4nm,1.1s,baz=332,slow=7.4,SNR=2.1							

ISCJB ***25*** *19:11:37.9±0.4, 8.16S×004×11889E±005, h10km, mb4.1/8, Error ellipse: s-maj=7.3km s-min=5.8km az=147.0*
IDC ***25*** *19:11:39.6±5.4, 8.21S×11839E, h25km±36km, mb4.0/8, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, ML4.2/2, Error ellipse: s-maj=31.2km s-min=13.8km az=60.0*
NEIC ***25*** *19:11:41.0±0.6, 8.24S×11852E, h35km, mb4.4/2, Error ellipse: s-maj=20.4km s-min=9.2km az=71.0*
DJA ***25*** *19:11:42, 8.16S×11870E, h20km, MLv4.6/9*
ISC 25 19:11:39.0±1.9**, 812S**±005×**11892E**±006**, h1**km±13km**, n53,** σ**1°27/52, mb4.3/8, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BMNI	**Bima**	**0.48**	**208**	P		**Pg**	**19 11 48.0**	**-0.1**
BMNI	**Bima**	**0.48**	**208**	P		**Pg**	**19 11 47.7**	**-0.4**
KAPI	**Kappang**	**3.19**	**15**	Pn		**Pn**	**19 12 31.4**	**+1.1**
	30nm,0.3s,baz=191,slow=6.8,SNR=168							
KAPI				Sn		**Sn**	**19 13 09.0**	**0.0**
	63nm,0.3s,baz=24,slow=22,SNR=22							
KAPI	**Kappang**	**3.19**	**15**	Pn		**Pn**	**19 12 31.4**	**+1.1**
KAPI				Sn		**Sn**	**19 13 09.0**	**0.0**
KAPI	**Kappang**	**3.19**	**15**	P		**Pn**	**19 12 32.2**	**+1.9**
KAPI	**Kappang**	**3.19**	**15**	P		**Pn**	**19 12 31.1**	**+0.8**
KHKI	**Kahang-Kahang**	**3.29**	**265**	P		**Pn**	**19 12 33.2**	**+1.5**
KHKI	**Kahang-Kahang**	**3.29**	**265**	P		**Pn**	**19 12 28.2**	**-3.5**
DNP	**Denpasar**	**3.71**	**261**	P		**Pn**	**19 12 41.8**	**+4.3**
DNP	**Denpasar**	**3.71**	**261**	P		**Pn**	**19 12 39.9**	**+2.4**
IGBI	**Denpasar**	**3.80**	**259**	P		**Pn**	**19 12 40.6**	**+1.9**
IGBI	**Denpasar**	**3.80**	**259**	P		**Pn**	**19 12 35.9**	**-2.8**
NBBI	**Negara**	**4.27**	**266**	P		**Pn**	**19 12 49.8**	**+4.7**
NBBI	**Negara**	**4.27**	**266**	P		**Pn**	**19 12 48.8**	**+3.7**
BATI	**Baumata**	**5.12**	**114**	Pn		**Pn**	**19 13 03.2**	**+6.3**
	16nm,0.3s,baz=317,slow=1.2,SNR=38							
BATI				Sn		**Sn**	**19 14 10.3**	**+14**
	4.0nm,0.3s,baz=36,slow=23,SNR=2.0							
BATI	**Baumata**	**5.12**	**114**	P		**Pn**	**19 13 05.5**	**+8.6**
	58nm,0.6s,796nm0.2nm							
BATI	**Baumata**	**5.12**	**114**	P		**Pn**	**19 13 04.3**	**+7.4**
	57nm,0.6s,799nm0.2nm							
BBKI	**Banjar Baru**	**6.15**	**318**	P		**Pn**	**19 13 14.4**	**+3.3**
BBKI	**Banjar Baru**	**6.15**	**318**	P		**Pn**	**19 13 10.8**	**-0.3**
KRKI	**Karangkates**	**6.41**	**269**	P		**Pn**	**19 13 21.6**	**+7.1**
KRKI	**Karangkates**	**6.41**	**269**	P		**Pn**	**19 13 14.7**	**+0.2**
SJI	**Sawahan**	**7.10**	**273**	P		**Pn**	**19 13 26.9**	**+2.8**
SJI	**Sawahan**	**7.10**	**273**	P		**Pn**	**19 13 23.3**	**-0.8**
PLKI	**Palangkaraya**	**7.67**	**319**	P		Px	19 14 10.3	
TNG	**Tangerang**	**12.33**	**278**	P		**Pn**	**19 14 36.1**	**+0.2**
	654nm,0.5s							
MBWA	**Marble Bar**	**12.99**	**177**	*e*Pn		**Pn**	**19 14 40.7**	**-4.1**
MBWA				*e*Sn		**Sn**	**19 16 59.1**	**-11**
KAKA	**Kakadu**	**14.05**	**110**	*e*P		Px	19 14 46.3	
	18nm,0.6s							
KAKA				*e*S		Sx	19 17 26.4	
KAKA	**Kakadu**	**14.05**	**110**	*e*Pn		Px	19 14 45.5	
KAKA				*e*Sn		Sx	19 17 26.0	
KAKA	**Kakadu**	**14.05**	**110**	P		**Pn**	**19 14 53.0**	**-6.4**
KAKA	**Kakadu**	**14.05**	**110**	P		**Pn**	**19 14 50.4**	**-9.0**
KKM	**Kota Kinabalu**	**14.32**	**349**	*e*Pn		**Pn**	**19 15 02.4**	**-0.7**
DAV	**Davao City (W)**	**16.48**	**24**	P		Px	19 16 16.6	
WRA	**Warramunga Arr**	**19.00**	**130**	P		**Pn**	**19 16 02.0**	**-0.9**
	0.6nm,0.3s,baz=302,slow=12,SNR=53							
WRAB	**Tennant Creek**	**19.00**	**130**	*e*Pn		**Pn**	**19 16 02.9**	**-0.1**
	5.9nm,0.6s							
WRAB	**Tennant Creek**	**19.00**	**130**	P		**Pn**	**19 16 04.4**	**+1.5**
WB2	**Warramunga Arr**	**19.01**	**130**	*e*P		**Pn**	**19 16 02.5**	**-0.5**
WB2				*e*S		**Sn**	**19 19 29.8**	**-6.8**
ASAR	**Alice Springs**	**21.10**	**139**	P		**P**	**19 16 25.5**	**+0.4**
	10nm,0.8s,mb4.2,baz=315,slow=10,SNR=72							
ASAR				S		**S**	**19 20 22.4**	**+1.6**
	1.3nm,0.8s,baz=316,slow=25,SNR=4.3							
ASAR				PcP		PcP	19 20 29.2	-2.6
	0.7nm,0.5s,baz=304,slow=1.7,SNR=7.9							
NWAO	**Narrogin (SRO)**	**24.74**	**183**	P		**P**	**19 16 58.0**	**-4.0**
	7.3nm,0.9s,mb4.4,baz=5.7,slow=10,SNR=3.6							
CTA	**Charters Tower**	**29.00**	**117**	P		**P**	**19 17 41.2**	**+0.6**
	4.6nm,0.8s,mb4.3,baz=249,slow=5.7,SNR=3.6							
CTA	**Charters Tower**	**29.00**	**117**	P		**P**	**19 17 41.2**	**+0.6**
STKA	**Stephens Creek**	**31.68**	**141**	*e*P		**P**	**19 18 03.7**	**-0.4**
	4.1nm,0.4s,mb4.7							
STKA	**Stephens Creek**	**31.68**	**141**	P		**P**	**19 18 03.9**	**-0.2**
	5.8nm,0.5s,mb4.8,baz=308,slow=7.2,SNR=22							
STKA				PcP		PcP	19 20 53.2	-3.0
	0.7nm,0.5s,baz=322,slow=23,SNR=3.6							
STKA	**Stephens Creek**	**31.68**	**141**	*e*P		**P**	**19 18 03.4**	**-0.8**
	1.9nm,0.8s,mb4.1							
CMAR	**Chiang Mai Arr**	**32.95**	**323**	P		**P**	**19 18 14.1**	**-1.3**
	0.5nm,0.8s,baz=158,slow=7.6,SNR=2.6							
ARMA	**Armidale**	**37.78**	**130**	*e*P		**P**	**19 18 58.8**	**+1.9**
KSRS	**Korea Array**	**46.11**	**10**	P		**P**	**19 20 04.2**	**-0.6**
	1.6nm,0.9s,mb4.0,baz=186,slow=9.7,SNR=3.0							
KURK	**Kurchatov**	**68.18**	**334**	P		**P**	**19 22 35.5**	**-5.3**
	0.7nm,0.6s,mb4.1,baz=145,slow=5.4,SNR=4.4							
ZALV	**Zalesovo Beam**	**68.19**	**339**	P		**P**	**19 22 36.8**	**-4.1**
	1.6nm,0.5s,mb4.5,baz=150,slow=6.2,SNR=6.8							
VNDA	**Vanda**	**72.86**	**171**	P		**P**	**19 23 06.7**	**-2.4**
	0.6nm,0.5s,mb4.0,baz=309,slow=6.7,SNR=11							
VNDA	**Vanda**	**72.86**	**171**	P		**P**	**19 23 06.7**	**-2.4**
TORD	**Torodi Ar. Bea**	**118.23**	**281**	PKP		PKPdf	19 30 23.3	-5.7
	0.4nm,0.8s,baz=48,slow=1.4,SNR=5.2							
CMIG	**Matias Romero**	**145.87**	**72**	PKPbc		PKPbc	19 31 19.5	-1.6
	0.5nm,0.4s,baz=248,slow=5.0,SNR=6.0							
CMIG	**Matias Romero**	**145.87**	**72**	PKPbc		PKPbc	19 31 19.5	-1.6

IDC ***25*** *19:53:03.0±0.3, 8.21S×11827E, h0km, mb5.4/22, mb1 5.5/24, mb1mx5.5/24, mbtmp5.4/24, MS6.3/28, Ms1 6.3/28, ms1mx6.2/24, Error ellipse: s-maj=16.9km s-min=10.6km az=79.0*
NEIC ***25*** *19:53:05.5±0.1, 8.22S×11847E, h18km, mb6.1/64, ME6.1, MS6.2/136, MW6.4, Error ellipse: s-maj=6.8km s-min=4.6km az=55.0 Broadband fault plane solution: P waves. NP1:φ=260.00000°, δ55.00000°, λ90.00000°. NP2:φ=80.00000°, δ35.00000°, λ90.00000°. Principal axes: T Plg80.0000°, Azm170.0000°; N Plg0.0000°, Azm0.0000°; P Plg10.0000°, Azm350.0000°; Moment Tensor Solution. s60 Moment tensor: Scale 10^18 Nm; Mrr2.42; Mθθ-3.54; Mφφ 1.12; Mrθ-2.53; Mθφ-2.18; Mφr-0.30; Best double couple: M=4.60000×10^18 NP1:φ=41.00000°, δ33.00000°, λ49.00000°. NP2:φ=267.00000°, δ66.00000°, λ113.00000°. Principal axes: T 3.4700, Plg61.0000°, Azm212.0000°; N 1.7300, Plg20.0000°, Azm77.0000°; P -5.2000, Plg18.0000°, Azm340.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] at Bima and Dompu and [IV] at Sumbawabesar. Also felt [IV] at Mataram, Lombok. Felt [III] at Denpasar, Kuta and Ubud, Bali and at Lubuhanbajo, Flores.
ISCJB ***25*** *19:53:06.0±0.1, 8.21S×002×11852E±002, h30km, mb5.9/154, MS6.2/197 Error ellipse: s-maj=3.2km s-min=2.7km az=149.3*
MOS ***25*** *19:53:06.8±1.2, 8.09S×11838E, h33km, mb6.1/49, MS6.1/55, Error ellipse: s-maj=9.7km s-min=5.3km az=109.4*
BJI ***25*** *19:53:07.9, 8.20S×11850E, h35km, mB6.6, mb5.9, Ms6.4, Msz6.2*
GCMT ***25*** *19:53:08.0±0.1, 8.20S×11853E, h20km, MW6.5/116, Moment Tensor Solution. s114,c274; s116,c474; Duration: 4s1 Moment tensor: Scale 10^18Nm; Mrr4.43±.03; Mθθ-4.75±.03; Mφφ0.32±.03; Mrθ-3.83±.07; Mθθ-0.86±.02; Mθr-1.16±.06; Best double couple: M=6.14600×10^18 NP1:φ=87.00000°, δ25.00000°, λ100.00000°. NP2:φ=255.00000°, δ65.00000°, λ85.00000°. Principal axes: T 5.9340, Plg69.0000°, Azm156.0000°; N 0.4250, Plg4.0000°, Azm257.0000°; P -6.3580, Plg20.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
DJA ***25*** *19:53:09, 832S×11856E, h33km, Mw6.7/51*
ISC 25 19:53:08.3±0.1**, 823S**±002×**11853E**±002**, h32**km**,**
h32km±1.2km**:pP-P, n789,** σ**1°36/510, mb5.9/154, MS6.2/197,**
75C-30D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.89**	**267**	P		**Pn**	**19 53 51.5**	**-0.6**
DNP	**Denpasar**	**3.31**	**262**	P		**Pn**	**19 53 59.7**	**+1.8**
KAPI	**Kappang**	**3.42**	**21**	Pn		**Pn**	**19 53 57.0**	**-2.4**
	259nm,0.3s,baz=213,slow=9.1,SNR=580							
KAPI				Sn		**Sn**	**19 54 36.5**	**-2.3**
KAPI				LR		LR	19 55 43.8	
	comp=Z,335μm,18.9s,baz=207,slow=46							
KAPI	**Kappang**	**3.42**	**21**	*e*Pn		**Pn**	**19 53 57.0**	**-2.3**
NBBI	**Negara**	**3.87**	**268**	P		**Pn**	**19 54 05.9**	**+0.3**
KMMI	**Kalianget**	**4.67**	**284**	P		**Pn**	**19 54 18.1**	**+1.5**
BATI	**Baumata**	**5.44**	**112**	Pn		**Pn**	**19 54 29.2**	**+2.0**
	115nm,0.3s,baz=325,slow=1.6,SNR=105							
BATI				Sn		**Sn**	**19 55 41.3**	**+13**
	411nm,0.3s,baz=19,slow=21,SNR=6.0							
BATI				LR		LR	19 56 56.5	
	comp=Z,772μm,20.6s,baz=338,slow=41							
BATI	**Baumata**	**5.44**	**112**	P		**Pn**	**19 54 29.2**	**+2.0**
	3μm,0.5s,31nm							
KDI	**Kendari**	**5.88**	**44**	P		**Pn**	**19 54 33.7**	**+0.5**
	684nm,1.0s,5.7nm							
BBKI	**Banjar Baru**	**5.99**	**322**	P		**Pn**	**19 54 34.1**	**-0.6**
	8μm,1.1s,51nm							
KRKI	**Karangkates**	**6.01**	**270**	P		**Pn**	**19 54 37.5**	**+2.4**
BWJI	**Bawean**	**6.28**	**292**	P		**Pn**	**19 54 38.9**	**+0.1**
SJI	**Sawahan**	**6.71**	**274**	P		**Pn**	**19 54 45.7**	**+1.0**
PCI	**Palu**	**7.39**	**10**	P		**Pn**	**19 54 55.2**	**+1.2**
	2μm,1.1s,7.4nm							
PLKI	**Palangkaraya**	**7.50**	**322**	P		**Pn**	**19 54 54.6**	**-1.0**
	3μm,0.9s,22nm							
BJII	**Banjamegara**	**8.78**	**275**	P		**Pn**	**19 55 17.5**	**+4.4**
JCJI	**Jatiwangi**	**10.32**	**279**	P		**Pn**	**19 55 39.0**	**+4.8**
	2μm,1.7s							
AAI	**Ambon**	**10.62**	**65**	P		**Pn**	**19 55 43.6**	**+5.3**
	992nm,1.2s							
STKI	**Sintang**	**10.82**	**319**	P		**Pn**	**19 55 40.9**	**-0.3**
	598nm,1.0s							
LEM	**Lembang**	**10.90**	**277**	P		**Pn**	**19 55 45.0**	**+2.8**
	2μm,0.9s							
LBMI	**Labuha**	**11.70**	**50**	P		**Pn**	**19 55 56.4**	**+3.3**
	2μm,1.8s							
CBJI	**Citeko**	**11.72**	**278**	P		**Pn**	**19 55 55.5**	**+2.1**
	7μm,1.0s							
DBJI	**Dramaga**	**11.80**	**277**	P		**Pn**	**19 55 56.6**	**+2.1**
	3μm,2.3s							
TNG	**Tangerang**	**11.96**	**279**	P		**Pn**	**19 56 03.9**	**+7.2**
	4μm,1.7s							
TPI	**Tanjungpandan**	**12.11**	**296**	P		**Pn**	**19 56 00.2**	**+1.5**
	934nm,1.5s							
SBUM	**Sibu**	**12.33**	**329**	P		**Pn**	**19 56 02.6**	**+0.9**
SBJI	**Serang**	**12.48**	**279**	P		**Pn**	**19 56 06.3**	**+2.5**
	2μm,1.6s							
BTM	**Bintulu**	**12.58**	**334**	⇓P		**Pn**	**19 56 08.6**	**+3.4**
KSM	**Kuching**	**12.65**	**319**	*e*Pn		**Pn**	**19 56 03.0**	**-3.1**
	854nm,1.1s							
KSM	**Kuching**	**12.65**	**319**	P		**Pn**	**19 56 07.7**	**+1.6**
	476nm,1.6s							
XMIS	**Christmas Isla**	**12.90**	**259**	*e*Pn		**Pn**	**19 56 05.1**	**-4.4**
XMIS	**Christmas Isla**	**12.90**	**259**	P		**Pn**	**19 56 06.7**	**-2.8**
	827nm,1.4s							
MBWA	**Marble Bar**	**12.91**	**175**	P		**Pn**	**19 56 08.4**	**-1.3**
	SNR=50							
MBWA	**Marble Bar**	**12.91**	**175**	*e*Pn		**Pn**	**19 56 08.4**	**-1.2**
MBWA	**Marble Bar**	**12.91**	**175**	P		**Pn**	**19 56 08.3**	**-1.3**
	1μm,1.4s							
MYLDM	**Lahad Datu**	**13.32**	**360**	⇓P		**Pn**	**19 56 19.5**	**+4.3**
MYLDM	**Lahad Datu**	**13.32**	**360**	P		**Pn**	**19 56 19.0**	**+3.8**
PPBI	**Pangkal Pinang**	**13.73**	**295**	P		**Pn**	**19 56 22.3**	**+1.5**
	656nm,1.6s							
SDKM	**Sandakan**	**13.84**	**354**	⇑P		**Pn**	**19 56 25.4**	**+3.0**
KLI	**Kotabumi**	**13.98**	**283**	P		**Pn**	**19 56 27.9**	**+3.5**
	949nm,0.8s							
KKM	**Kota Kinabalu**	**14.36**	**351**	*e*Pn		**Pn**	**19 56 31.2**	**+1.7**
	565nm,1.1s							
KKM	**Kota Kinabalu**	**14.36**	**351**	⇓P		**Pn**	**19 56 32.7**	**+3.2**
KKM	**Kota Kinabalu**	**14.36**	**351**	P		**Pn**	**19 56 36.9**	**+7.4**
	631nm,1.3s							
KAKA	**Kakadu**	**14.39**	**109**	*e*P		Px	19 56 12.2	
	875nm,0.6s							
KAKA				*e*S		Sx	19 58 50.4	
KDM	**Kudat**	**15.13**	**354**	⇑P		**Pn**	**19 56 43.2**	**+3.3**
CTBH	**Cotabato--PC H**	**16.37**	**21**	⇓*e*P		**Pn**	**19 56 57.1**	**+1.3**
IPIL	**Ipil**	**16.41**	**14**	*e*P		**Pn**	**19 56 58.1**	**+1.7**
KSI	**Kapahiang**	**16.48**	**285**	P		**Pn**	**19 56 58.7**	**+1.4**
	3μm,2.2s							
KCP	**Kidapawan**	**16.49**	**24**	⇑*e*P		**Pn**	**19 57 01.4**	**+4.0**
PAGZ	**Pagadian**	**16.68**	**17**	*e*P		**Pn**	**19 57 02.0**	**+2.1**
DAV	**Davao City (W)**	**16.74**	**25**	⇓P		**Pn**	**19 57 01.5**	**+0.9**
	SNR=34							
DAV	**Davao City (W)**	**16.74**	**25**	Pn		**Pn**	**19 57 02.8**	**+2.2**
	6.3nm,0.3s,baz=229,slow=12,SNR=15							
DAV				LR		LR	20 04 37.7	
	comp=Z,57μm,19.1s,baz=20,slow=41							
DAV	**Davao City (W)**	**16.74**	**25**	*e*Pn		**Pn**	**19 57 04.2**	**+3.6**
	3μm,1.6s							
DAV	**Davao City (W)**	**16.74**	**25**	⇓*e*P		**Pn**	**19 56 60.0**	**-0.6**
BATP	**Bataraza**	**16.93**	**358**	*e*P		**Pn**	**19 57 03.6**	**+0.7**
MATI	**Mati**	**16.93**	**27**	*e*P		**Pn**	**19 57 04.6**	**+1.7**
BUKP	**Musuan**	**17.27**	**22**	*e*P		**Pn**	**19 57 09.2**	**+2.0**
MYKOM	**Kota Tinggi**	**17.70**	**304**	⇓P		**Pn**	**19 57 14.3**	**+1.8**
MYKOM	**Kota Tinggi**	**17.70**	**304**	P		**Pn**	**19 57 13.8**	**+1.3**
PPR	**Puerto Princes**	**17.88**	**1**	⇑*i*P		**Pn**	**19 57 17.1**	**+2.3**
KGM	**Kluang**	**18.26**	**303**	⇓P		**Pn**	**19 57 21.7**	**+2.3**
TBP	**Tagbilaran**	**18.57**	**17**	*e*P		**Pn**	**19 57 23.9**	**+0.7**
CUYO	**Cuyo Island**	**19.11**	**7**	*e*P		**Pn**	**19 57 30.3**	**+0.6**
GUIM	**Jordan**	**19.16**	**12**	*e*P		**Pn**	**19 57 30.8**	**+0.5**
SCPH	**Surigao**	**19.18**	**21**	*e*P		**Pn**	**19 57 29.0**	**-1.6**
LLP	**Lapu-Lapu**	**19.20**	**16**	*e*P		**Pn**	**19 57 30.6**	**-0.2**
WRA	**Warramunga Arr**	**19.24**	**129**	P		**Pn**	**19 57 28.7**	**-2.4**
	16nm,0.3s,baz=304,slow=13,SNR=127							
WRA				S		**Sn**	**20 01 00.4**	**-5.6**
	4.3nm,0.3s,baz=308,slow=22,SNR=5.0							
WRA				LR		LR	20 05 36.4	
	comp=Z,95μm,19.8s,baz=315,slow=39							
WRA				PKiKP		PKiKP	20 09 42.7	-0.2
	0.5nm,0.3s,baz=296,slow=1.2,SNR=6.2							
WRA	**Warramunga Arr**	**19.24**	**129**	P		**Pn**	**19 57 28.7**	**-2.4**
WRA				S		**Sn**	**20 01 00.4**	**-5.6**
WRA				LR		LR	20 05 36.4	
WRA	**Warramunga Arr**	**19.24**	**129**	P		**Pn**	**19 57 28.7**	**-2.5**
WRA				S		**Sn**	**20 01 00.4**	**-5.6**
WRAB	**Tennant Creek**	**19.24**	**129**	*e*P		**Pn**	**19 57 29.1**	**-2.1**
	882nm,0.9s							
WRAB	**Tennant Creek**	**19.24**	**129**	*e*P		**Pn**	**19 57 29.1**	**-2.1**
WRAB				pmax		pmax		
	comp=Z,880nm,0.9s							
WRAB	**Tennant Creek**	**19.24**	**129**	P		**Pn**	**19 57 28.8**	**-2.4**
	comp=Z,1μm,1.7s							
WB2	**Warramunga Arr**	**19.25**	**129**	*e*P		**Pn**	**19 57 28.6**	**-2.7**
WB2				*e*S		**Sn**	**20 00 54.4**	**-12**
MSLP	**Maasin**	**19.30**	**19**	*e*P		**Pn**	**19 57 31.2**	**-0.7**
ENPP	**El Nido**	**19.32**	**3**	*e*P		**Pn**	**19 57 31.7**	**-0.5**
PDSI	**Padang**	**19.41**	**291**	P		**Pn**	**19 57 32.1**	**-1.2**
	comp=Z,837nm,1.4s							
PPI	**Padang Panjang**	**19.64**	**292**	P		**Pn**	**19 57 34.8**	**-1.3**
	comp=Z,862nm,1.9s							
OCLP	**Ormoc**	**20.08**	**18**	*e*P		**P**	**19 57 39.8**	**+0.5**
RCP	**Roxas**	**20.10**	**12**	⇑*e*P		**P**	**19 57 40.4**	**+1.0**
KALP	**Kalibo**	**20.13**	**11**	⇓*e*P		**P**	**19 57 41.7**	**+1.8**
BUSP	**Coron**	**20.16**	**5**	*e*P		**P**	**19 57 40.5**	**+0.3**
PLP	**Palo**	**20.30**	**19**	*e*P		**P**	**19 57 44.9**	**+3.2**
FRIM	**Kepong**	**20.34**	**303**	⇑P		**P**	**19 57 44.4**	**+2.2**
KTGM	**Kuala Trenggan**	**20.42**	**311**	⇑P		**P**	**19 57 45.1**	**+2.1**
SJMP	**San Jose**	**20.71**	**7**	*e*P		**P**	**19 57 45.8**	**-0.4**
OTRP	**Odiongan**	**20.75**	**10**	*e*P		**P**	**19 57 46.4**	**-0.1**
MMPH	**Masbate**	**21.07**	**14**	*e*P		pP	19 58 03.2	+4.8
ASAR	**Alice Springs**	**21.28**	**138**	P		**P**	**19 57 52.1**	**-0.1**
	comp=Z,500nm,0.8s,mb5.9,baz=313,slow=10,SNR=334							
ASAR				S		**S**	**20 01 50.1**	**+3.0**
	comp=Z,170nm,1.1s,baz=315,slow=22,SNR=5.0							
ASAR				P3KP			20 32 27.9	
	comp=Z,1.6nm,1.0s,baz=118,slow=2.1,SNR=4.5							
ASAR	**Alice Springs**	**21.28**	**138**	P		**P**	**19 57 52.1**	**-0.1**
ASAR				S		**S**	**20 01 50.1**	**+3.0**
CNP	**Catarman**	**21.48**	**17**	*e*P		**P**	**19 57 54.5**	**+0.1**
IPM	**Ipoh**	**21.54**	**305**	⇑P		**P**	**19 57 57.3**	**+2.2**
IPM	**Ipoh**	**21.54**	**305**	P		**P**	**19 57 56.8**	**+1.7**
	comp=Z,1μm,1.6s,mb6.1							

MMPI	**Merauke**	**21.63**	**92**	P		**P**	**19 57 56.3**	**+0.2**
	comp=Z,3μm,1.2s,mb6.5							
COCO	**West Island**	**21.70**	**258**	P		**P**	**19 57 57.7**	**+0.8**
	SNR=27							
COCO	**West Island**	**21.70**	**258**	*e*P		**P**	**19 57 57.7**	**+0.8**
	comp=Z,5μm,1.8s,mb6.7							
COCO				LR		LR		
	comp=Z,60μm,22.0s,MS6.0							
COCO	**West Island**	**21.70**	**258**	P		**P**	**19 57 58.1**	**+1.2**
	comp=Z,972nm,2.3s,mb5.8							
LUBP	**Lubang**	**21.88**	**4**	*e*P		**P**	**19 57 58.7**	**0.0**
TRSI	**Tarutung**	**22.01**	**297**	P		pP	19 58 10.1	+1.4
	comp=Z,2μm,1.2s							
KULM	**Kulim**	**22.32**	**306**	⇓P		**P**	**19 58 04.4**	**+1.0**
PVCP	**Virac**	**22.39**	**14**	⇓*e*P		**P**	**19 58 04.0**	**0.0**
PVCP	**Virac**	**22.39**	**14**	*e*P		**P**	**19 58 04.0**	**-0.1**
JAY	**Jayapura**	**22.79**	**77**	P		**P**	**19 58 09.0**	**+0.5**
	comp=Z,308nm,2.0s,comp=Z,8μm,mb5.4							
KLBR	**Kellerberrin**	**23.26**	**182**	⇑*i*P		**P**	**19 58 12.5**	**-0.7**
	comp=Z,1μm,1.0s,mb6.3							
KLBR				*e*S		**S**	**20 02 22.3**	**-0.9**
PCPH	**Palayan**	**23.77**	**6**	*e*P		**P**	**19 58 22.0**	**+3.8**
SCZP	**Santa Cruz**	**23.89**	**3**	*e*P		**P**	**19 58 18.4**	**-0.9**
BALP	**Baler**	**24.00**	**7**	*e*P		**P**	**19 58 19.4**	**-0.9**
FORT	**Forrest**	**24.14**	**160**	⇑*i*P		**P**	**19 58 21.5**	**0.0**
	comp=Z,987nm,0.8s,mb6.3							
FORT				*e*S		**S**	**20 02 30.8**	**-6.7**
FORT	**Forrest**	**24.14**	**160**	*e*P		**P**	**19 58 21.6**	**+0.1**
	comp=Z,1μm,0.7s,mb6.4							
NWAO	**Narrogin (SRO)**	**24.61**	**183**	P		**P**	**19 58 26.3**	**+0.6**
	SNR=44							
NWAO	**Narrogin (SRO)**	**24.61**	**183**	P		**P**	**19 58 25.4**	**-0.3**
	comp=Z,153nm,0.7s,mb5.6,baz=358,slow=10,SNR=60							
NWAO				S		**S**	**20 02 50.0**	**+5.0**
	comp=Z,115nm,0.7s,baz=109,slow=21,SNR=2.0							
NWAO				LR		LR	20 08 14.1	
	comp=Z,118μm,20.0s,MS6.4,baz=171,slow=37							
NWAO	**Narrogin (SRO)**	**24.61**	**183**	*e*P		**P**	**19 58 25.9**	**+0.2**
	comp=Z,788nm,1.0s,mb6.2							
NWAO				LR		LR		
	comp=Z,97μm,20.0s,MS6.3							
NWAO	**Narrogin (SRO)**	**24.61**	**183**	P		**P**	**19 58 25.5**	**-0.2**
NWAO				S		**S**	**20 02 50.0**	**+5.0**
NWAO				pmax		pmax		
	comp=Z,153nm,0.7s							
NWAO				smax				
	comp=N,115nm,0.7s							
NWAO				MLR		MLR		
	comp=Z,118μm,20.0s							
COEN	**Coen**	**24.84**	**105**	*e*P		**P**	**19 58 26.7**	**-1.3**
	comp=Z,2μm,1.3s,mb6.6							
COEN	**Coen**	**24.84**	**105**	P		**P**	**19 58 27.1**	**-0.9**
	comp=Z,757nm,1.3s,mb6.1							
CAUP	**Cauayan**	**25.22**	**7**	*e*P		**P**	**19 58 31.4**	**0.0**
PKT	**Phuket**	**25.95**	**308**	P		Px	19 58 59.0	
BSI	**Banda Aceh**	**26.88**	**300**	P		**P**	**19 58 47.2**	**+0.7**
	comp=Z,332nm,1.5s,comp=Z,8μm,mb5.6							
UBT	**Ubonrachathani**	**26.89**	**330**	⇑P		**P**	**19 58 44.

comp=Z,71nm,1.0s,mb5.5
JOW Kunigami 36.11 15 P **P** **20 00 08.0 +0.5**
comp=Z,59nm,0.9s,mb5.5,baz=186,slow=8.5,SNR=4.9
JOW S **S** **20 05 38.5 -6.5**
comp=Z,17nm,0.7s,baz=113,slow=28,SNR=2.0
JOW LR LR 20 14 06.5
comp=Z,31µm,21.4s,MS6.0,baz=197,slow=35
GYA Guiyang 36.35 342 ⇓*i*P **P** **20 00 09.3 -0.2**
GYA AP pP 20 00 19.3 +0.5
GYA XP sP 20 00 23.3 +0.7
GYA PP PP 20 01 32.8 +0.1
GYA PCP PcP 20 02 34.8 +1.0
GYA S **S** **20 05 47.8 -0.9**
GYA XS sS 20 06 02.8 -1.2
GYA SCP ScP 20 06 17.3 -0.9
GYA PCS PcS 20 06 21.3 -0.3
GYA SS SS 20 08 15.5 -13
GYA AMB AMB
comp=Z,310nm,1.0s,mb6.2
GYA AMB AMB
comp=Z,7µm,9.5s
GYA LR LR
comp=N,30µm,19.1s,MS6.3
GYA LR LR
comp=E,34µm,19.4s,MS6.3
GYA LR LR
comp=Z,31µm,20.1s,MS6.1
KMI Kunming 36.54 336 ⇓P **P** **20 00 13.5 +2.3**
KMI AP pP 20 00 23.3 +2.8
KMI XP sP 20 00 27.5 +3.2
KMI PP PP 20 01 38.8 +4.0
KMI PCP PcP 20 02 34.5 +0.1
KMI S **S** **20 05 53.8 +2.1**
KMI XS sS 20 06 10.8 +3.8
KMI PCS PcS 20 06 22.0 -0.4
KMI SS SS 20 08 21.0 -11
KMI SCS ScS 20 10 21.3 -4.2
KMI AMB AMB
comp=Z,188nm,1.5s,mb5.7
KMI AMB AMB
comp=Z,8µm,5.6s
KMI LR LR
comp=N,39µm,13.3s,MS6.6
KMI LR LR
comp=E,49µm,11.9s,MS6.6
KMI LR LR
comp=Z,57µm,13.3s,MS6.5
KMI Kunming 36.54 336 ⇓P **P** **20 00 13.5 +2.3**
comp=Z,188nm,1.5s,mb5.7
KMI pP pP 20 00 23.3 +2.8
KMI sP sP 20 00 27.5 +3.2
KMI PP PP 20 01 38.7 +3.9
KMI PPP 20 01 55.2
KMI PcP PcP 20 02 34.4 0.0
KMI S **S** **20 05 53.8 +2.1**
KMI sS sS 20 06 10.8 +3.8
KMI PcS PcS 20 06 21.9 -0.5
KMI SS SS 20 08 21.0 -11
KMI SSS 20 08 52.5
KMI ScS ScS 20 10 21.3 -4.2
KMI LR LR
comp=Z,57µm,13.3s,MS6.5
ARMA Armidale 38.01 130 ⇑*i*P **P** **20 00 25.3 +1.6**
ARMA *e*S **S** **20 06 18.3 +4.2**
TOO Toolangi 38.07 144 ⇑*i*P **P** **20 00 25.7 +1.7**
TOO *e*S **S** **20 06 15.6 +0.9**
WHN Wuhan 38.75 354 P **P** **20 00 30.5 +0.7**
WHN PP PP 20 02 08.0 +9.0
WHN AMB AMB
comp=Z,526nm,1.5s,mb6.0
WHN AMB AMB
comp=Z,14µm,7.7s
WHN LR LR
comp=N,36µm,12.6s,MS6.7
WHN LR LR
comp=E,56µm,13.3s,MS6.7
WHN LR LR
comp=Z,67µm,16.9s,MS6.5
CAN Canberra 38.79 139 ⇑*i*P **P** **20 00 31.1 +1.0**
comp=Z,229nm,1.0s,mb5.9
CAN *e*PP PP 20 01 59.7 +0.4
CAN Canberra 38.79 139 ⇑*i*P **P** **20 00 31.1 +1.0**
CAN *e* 20 01 59.7
CAN pmax pmax
comp=Z,229nm,1.0s,mb5.9
CNB Canberra Magne 39.02 138 ⇑*i*P **P** **20 00 32.7 +0.6**
CNB *e*S **S** **20 06 29.6 +0.3**
SSE Sheshan 39.18 4 P **P** **20 00 33.5 +0.1**
SSE AP pP 20 00 41.5 -1.2
SSE XP sP 20 00 45.0 -1.5
SSE PP PP 20 02 04.5 +0.8
SSE S **S** **20 06 31.3 -0.2**
SSE AMB AMB
comp=Z,41nm,2.1s,mb4.8
SSE AMB AMB
comp=Z,5µm,6.9s
SSE LR LR
comp=N,13µm,20.4s,MS5.8
SSE LR LR
comp=E,8µm,20.4s,MS5.8
SSE LR LR
comp=Z,14µm,34.2s
SSE Sheshan 39.18 4 P **P** **20 00 33.5 +0.1**
comp=Z,41nm,2.1s,mb4.8
SSE pP pP 20 00 41.6 -1.1
SSE sP sP 20 00 45.1 -1.4
SSE PP PP 20 02 04.4 +0.7
SSE S **S** **20 06 31.3 -0.2**
SSE LR LR
comp=Z,14µm,34.2s,MS5.6
NJ2 Nanjing 40.05 0 *e*P **P** **20 00 41.8 +1.2**
NJ2 AP pP 20 00 49.8 -0.2
NJ2 XP sP 20 00 53.8 0.0
NJ2 PP PP 20 02 18.0 +4.8
NJ2 S **S** **20 06 43.5 -1.1**
NJ2 XS sS 20 06 56.5 -3.5
NJ2 SS SS 20 09 36.0 -6.8
NJ2 SCS ScS 20 10 40.5 -4.9
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
NJ2 AMB AMB
comp=Z,4µm,5.1s
NJ2 LR LR
comp=N,8µm,14.4s,MS6.0
NJ2 LR LR
comp=E,14µm,14.2s,MS6.0
NJ2 LR LR
comp=Z,43µm,14.2s,MS6.4
IMP Imphal 40.63 324 *e*P **P** **20 00 46.0 +0.4**
IMP *ex* x 20 06 38.0
HNR Honiara 40.93 95 *e*P **P** **20 00 47.0 -1.3**
comp=Z,947nm,0.9s,mb6.4
HNR LR LR
comp=Z,30µm,20.0s,MS6.2
HNR Honiara 40.93 95 *e*P **P** **20 00 47.0 -1.2**
HNR pmax pmax
comp=Z,947nm,0.9s,mb6.4
HNR MLR MLR
comp=Z,30µm,20.0s,MS6.2
CD2 Chengdu 41.41 341 ⇓*i*P **P** **20 00 52.5 +0.7**
CD2 AP pP 20 01 02.3 +1.1
CD2 XP sP 20 01 06.8 +1.8
CD2 PP PP 20 02 32.3 +4.4
CD2 PCP PcP 20 02 49.8 +0.2
CD2 PCS PcS 20 06 40.0 -0.9
CD2 S **S** **20 07 06.3 +1.5**
CD2 XS sS 20 07 22.5 +2.2
CD2 AMB AMB
comp=Z,690nm,1.6s,mb6.0
CD2 AMB AMB
comp=Z,860nm,6.0s
CD2 LR LR
comp=N,23µm,16.8s,MS6.5
CD2 LR LR
comp=E,43µm,16.8s,MS6.5
CD2 LR LR
comp=Z,24µm,15.6s,MS6.2
SHL Shillong 42.43 323 ⇓*i*P **P** **20 01 00.5 +0.2**
SHL AMb AMB 20 01 06.5
comp=Z,903nm,3.7s
SHL *i* S **S** **20 07 23.0 +2.9**
CAL Calcutta 42.54 317 *e*P **P** **20 01 03.5 +2.3**
CAL *e*S **S** **20 07 27.4 +5.6**
TAU Tasmania Unive 42.80 149 *e*P **P** **20 01 03.5 +0.5**
comp=Z,799nm,1.8s,mb6.2
TAU Tasmania Unive 42.80 149 P **P** **20 01 04.6 +1.5**
TAU pmax pmax
comp=Z,800nm,1.8s,mb6.2
BWNR Bhubaneshwar 42.89 312 *ex* x 20 01 07.2
BWNR *ex* **S** **20 07 24.2 -2.8**
XAN Xi'an 43.01 348 P **P** **20 01 04.0 -0.8**
XAN AP pP 20 01 13.8 -0.4
XAN XP sP 20 01 17.8 -0.2
XAN PP PP 20 02 45.5 +0.3
XAN S **S** **20 07 23.5 -4.9**
XAN AMB AMB
comp=Z,60nm,1.5s,mb5.1
XAN AMB AMB
comp=Z,6µm,13.3s
XAN LR LR
comp=N,10µm,14.9s,MS6.3
XAN LR LR
comp=E,29µm,18.1s,MS6.3
XAN LR LR
comp=Z,43µm,22.7s,MS6.3
VIS Vishakhapatnam 43.28 307 *e*P **P** **20 01 04.8 -2.5**
VIS AMb AMB 20 01 23.0
comp=Z,303nm,1.5s,mb5.8
VIS *i* x x 20 07 36.4
TIA Tai'an 44.22 358 *e*P **P** **20 01 14.0 -0.5**
TRD Trivandrum 44.63 291 *ex* **S** **20 07 55.0 +2.3**
KOD Kodaikanal 44.80 293 *e*P **P** **20 01 14.4 -5.2**
BOK Bokaro 45.05 316 *e*P **P** **20 01 19.7 -1.7**
BOK *ex* x 20 07 54.4
JHJ Hachijo jima 2 45.82 25 S **S** **20 08 04.2 -5.1**
comp=Z,91nm,0.8s,baz=58,slow=16,SNR=2.5
LSA Lhasa 45.99 326 P **P** **20 01 30.5 +1.7**
LSA S **S** **20 08 13.8 +1.9**
LSA AMB AMB
comp=Z,230nm,1.0s,mb6.1
LSA AMB AMB
comp=Z,7µm,10.0s
LSA LR LR
comp=N,14µm,24.0s,MS6.1
LSA LR LR
comp=E,18µm,19.0s,MS6.1
LSA LR LR
comp=Z,29µm,19.0s,MS6.2
LSA Lhasa 45.99 326 ⇑*i*P **P** **20 01 30.9 +2.1**
comp=Z,2µm,1.6s,mb6.7
LSA *e*S **S** **20 08 13.1 +1.2**
LSA LR LR
comp=Z,31µm,19.0s,MS6.3
LSA Lhasa 45.99 326 ⇑*i*P **P** **20 01 30.9 +2.1**
LSA *e*S **S** **20 08 13.1 +1.2**
LSA pmax pmax
comp=Z,2µm,1.6s,mb6.7
LSA MLR MLR
comp=Z,31µm,19.0s,MS6.3
TIY Taiyuan 46.05 353 P **P** **20 01 33.8 +4.7**
TIY AP pP 20 01 43.5 +5.0
TIY PP PP 20 03 20.0 +2.5
TIY S **S** **20 08 13.8 +1.3**
TIY SCS ScS 20 11 24.8 +2.3
TIY SS SS 20 11 30.5 -7.5
TIY AMB AMB
comp=Z,5µm,6.4s
TIY LR LR
comp=N,18µm,14.9s,MS6.3
TIY LR LR
comp=E,11µm,11.6s,MS6.3
TIY LR LR
comp=Z,9µm,14.9s,MS5.9
INCN Inchon 46.10 9 *e*P **P** **20 01 29.8 +0.4**
comp=Z,45nm,0.8s,mb5.5
INCN LR LR
comp=Z,12µm,19.0s,MS5.8
ODAN Odare 46.13 320 *e*P **P** **20 01 30.1 +0.2**
comp=Z,2µm,1.3s,mb6.8
LZH Lanzhou 46.19 343 ⇑P **P** **20 01 31.5 +1.3**
LZH XP sP 20 01 42.5 -1.0
LZH PCP PcP 20 03 07.3 +1.6
LZH PP PP 20 03 20.5 +1.5
LZH S **S** **20 08 16.8 +2.3**
LZH XS sS 20 08 32.8 +2.7
LZH SS SS 20 11 34.5 -5.8
LZH AMB AMB
comp=Z,2µm,1.5s,mb6.7
LZH AMB AMB
comp=Z,10µm,9.0s
LZH LR LR
comp=E,24µm,14.0s
LZH LR LR
comp=Z,31µm,17.3s,MS6.3
LZH Lanzhou 46.19 343 ⇑P **P** **20 01 31.6 +1.4**
comp=Z,1.5nm,1.5s
LZH sP sP 20 01 42.6 -0.9
LZH PcP PcP 20 03 07.2 +1.5
LZH PP PP 20 03 20.5 +1.5
LZH S **S** **20 08 16.7 +2.2**
LZH sS sS 20 08 32.7 +2.6
LZH SS SS 20 11 34.4 -5.9
LZH LR LR
comp=Z,31µm,17.3s,MS6.3
TAPN Taplejung 46.28 321 *e*P **P** **20 01 31.7 +0.7**
comp=Z,4µm,1.5s,mb7.1
KSRS Korea Array 46.28 10 P **P** **20 01 31.1 +0.2**
comp=Z,63nm,0.9s,mb5.5,baz=190,slow=7.9,SNR=51
KSRS S **S** **20 08 17.1 +1.3**
comp=Z,1.4nm,0.8s,baz=71,slow=38,SNR=2.7
KSRS LR LR 20 21 55.8
comp=Z,15µm,19.8s,MS6.0,baz=193,slow=37
KSRS PKPPKP 20 33 03.0
comp=Z,1.6nm,0.9s,baz=340,slow=3.7,SNR=4.1
KSRS Korea Array 46.28 10 P **P** **20 01 31.1 +0.2**
KSRS S **S** **20 08 17.1 +1.3**
KSRS pmax pmax
comp=Z,63nm,1.0s,mb5.5
KSRS smax
comp=N,1.0nm,0.8s
KSRS MLR MLR
comp=Z,15µm,19.8s,MS6.0
KSRS pmax pmax
comp=Z,2.0nm,0.9s
RAMN Ramite 46.70 320 *e*P **P** **20 01 34.6 +0.2**
comp=Z,2µm,1.2s,mb6.8
DL2 Dalian 46.98 3 P **P** **20 01 35.8 -0.5**
DL2 PP PP 20 03 30.8 +3.5
DL2 S **S** **20 08 25.3 -0.4**
DL2 AMB AMB
comp=Z,50nm,0.8s,mb5.5
DL2 AMB AMB
comp=Z,3µm,7.6s
DL2 LR LR
comp=N,11µm,16.5s
DL2 LR LR
comp=Z,11nm,17.1s,MS5.9
HYB Hyderabad 47.00 303 *e*P **P** **20 01 34.0 -2.9**
comp=Z,190nm,1.0s,mb6.0
HYB *e*S **S** **20 08 20.0 -6.7**
HYB *e* 20 23 12.0
HYB Hyderabad 47.00 303 *e*P **P** **20 01 34.0 -2.9**
HYB *e*S **S** **20 08 20.0 -6.7**
HYB pmax pmax
comp=Z,190nm,1.0s,mb6.0
HYB Hyderabad 47.00 303 *i* P **P** **20 01 35.0 -1.9**
comp=Z,190nm,1.0s,mb6.0
HYB *e* pP 20 01 44.5 -1.9
HYB *e*PP PP 20 03 36.0 +8.1
HYB *e*S **S** **20 08 20.0 -6.7**
HYB LR LR 20 23 12.0
comp=Z,41nm,20.0s
JIRN Jiri 47.45 320 *e*P **P** **20 01 40.3 +0.1**
comp=Z,1µm,1.0s,mb6.8
GUN Gumba 47.82 320 *e*P **P** **20 01 43.3 +0.2**
comp=Z,4µm,1.4s,mb7.2
PKI Pulchoki 47.89 319 *e*P **P** **20 01 44.2 +0.5**
comp=Z,544nm,1.0s,mb6.5
PKI Pulchoki 47.89 319 *e*P **P** **20 01 44.2 +0.5**
PKI pmax pmax
comp=Z,544nm,1.0s,mb6.5
NOUC Port Laguerre 47.93 112 *e*P **P** **20 01 44.1 +0.1**
BJT Baijiatuao 48.05 358 *e*P **P** **20 01 44.4 -0.2**
comp=Z,185nm,0.6s,mb6.3
BJT LR LR
comp=Z,21µm,19.0s,MS6.1
BJT Baijiatuao 48.05 358 *e*P **P** **20 01 44.4 -0.2**
BJT pmax pmax
comp=Z,185nm,0.6s
BJT MLR MLR
comp=Z,21µm,19.0s
DZM Mont Dzumac 48.05 112 *e*P **P** **20 01 45.4 +0.3**
comp=Z,424nm,1.4s,mb6.3
BJI Beijing 48.07 358 P **P** **20 01 44.3 -0.5**
BJI XP sP 20 01 59.0 +0.9
BJI S **S** **20 08 38.5 -2.7**
BJI XS sS 20 08 59.5 +2.6
BJI AMB AMB
comp=Z,136nm,0.9s,mb6.0
BJI AMB AMB
comp=Z,8µm,7.0s
BJI LR LR
comp=N,19µm,16.1s,MS6.4
BJI LR LR
comp=E,21µm,14.8s,MS6.4
BJI LR LR
comp=Z,15µm,26.2s
BJI Beijing 48.07 358 P **P** **20 01 44.3 -0.5**
comp=Z,136nm,0.9s,mb6.0
BJI sP sP 20 01 59.0 +0.9
BJI PP PP 20 03 44.0 +6.7
BJI S **S** **20 08 38.6 -2.6**
BJI sS sS 20 08 59.5 +2.6
BJI SS SS 20 12 26.8 +16
BJI LR LR
comp=Z,15µm,26.2s,MS5.8
DMN Daman 48.12 319 *e*P **P** **20 01 45.4 0.0**
comp=Z,1µm,1.0s,mb6.8
KKN Kakani 48.12 319 *e*P **P** **20 01 45.2 -0.3**
comp=Z,902nm,1.1s,mb6.7
KKN Kakani 48.12 319 *e*P **P** **20 01 45.2 -0.3**
KKN pmax pmax
comp=Z,902nm,1.1s,mb6.7
MAJO Matsushiro 48.22 21 *e*P **P** **20 01 44.6 -1.4**
comp=Z,516nm,1.5s,mb6.3
MAJO LR LR
comp=Z,12µm,20.0s,MS5.9
MAJO Matsushiro 48.22 21 *e*P **P** **20 01 44.6 -1.4**
MAJO pmax pmax
comp=Z,516nm,1.5s,mb6.3
MAJO MLR MLR
comp=Z,12µm,20.0s,MS5.9
MAT Matsushiro 48.22 21 P **P** **20 01 44.7 -1.3**
MAT S **S** **20 08 42.0 -1.4**
MJAR Matsushiro Arr 48.22 21 P **P** **20 01 45.8 -0.2**
comp=Z,16nm,1.0s,mb5.0,baz=204,slow=4.8,SNR=22
MJAR LR LR 20 20 00.2
comp=Z,10µm,21.0s,MS5.8,baz=200,slow=34
MNGI Mangalore 48.24 295 *i* P **P** **20 01 38.3 -8.2**
MNGI *i* S **S** **20 08 39.6 -4.8**
NGP Nagpur 48.53 308 *e*P **P** **20 01 45.4 -3.3**
NGP *ex* x 20 02 02.9
comp=Z,575nm,1.6s
NGP *ex* x 20 08 41.4
GKN Gorkha 48.69 319 *e*P **P** **20 01 49.5 -0.3**
comp=Z,993nm,1.0s,mb6.8
ALBI Allahabad 48.87 314 *e*P **P** **20 01 50.5 -0.7**
KOLN Koldanda 49.21 318 *e*P **P** **20 01 53.4 -0.4**
comp=Z,745nm,1.0s,mb6.7
BTO Baotou 49.22 351 *e*P **P** **20 01 52.5 -1.1**
BTO AMB AMB
comp=Z,29nm,1.9s,mb5.0
HHC Hu-ho-hao-te 49.25 353 *e*P **P** **20 01 54.8 +1.0**
HHC AP pP 20 02 05.0 +1.6
HHC XP sP 20 02 09.5 +2.3
HHC PCP PcP 20 03 16.3 -0.2
HHC PP PP 20 03 49.5 +1.5
HHC PCS PcS 20 07 11.8 -1.1
HHC S **S** **20 08 57.5 -0.3**
HHC XS sS 20 09 15.5 +2.0
HHC SCS ScS 20 11 40.5 -3.0
HHC SS SS 20 12 25.8 -4.0
HHC AMB AMB
comp=Z,51nm,1.7s,mb5.3
HHC AMB AMB
comp=Z,7µm,7.5s
HHC LR LR
comp=N,13µm,22.6s,MS6.1
HHC LR LR
comp=E,21µm,22.6s,MS6.1
HHC LR LR
comp=Z,15µm,21.4s,MS6.0
DANN Dangsing 49.49 319 *e*P **P** **20 01 55.8 -0.1**
comp=Z,1µm,0.9s,mb7.0
PYUN Piuthan 49.83 318 *e*P **P** **20 01 57.6 -1.0**
AKL Akola 49.91 306 *e*P **P** **20 01 57.9 -1.4**
AKL AMb AMB 20 02 14.5
comp=Z,272nm,1.5s,mb6.1
SNY Shenyang 50.02 5 P **P** **20 01 58.5 -1.2**
SNY S **S** **20 09 03.5 -5.1**
SNY AMB AMB
comp=Z,6µm,9.3s
SNY LR LR
comp=N,9µm,16.5s
SNY LR LR
comp=Z,14µm,17.1s,MS6.0
GOA Goa 50.16 298 ⇑*i*P **P** **20 01 56.9 -4.4**
GOA *ex* x 20 09 04.0
GTA Gaotai 50.47 341 P **P** **20 02 04.5 +1.3**
GTA AP pP 20 02 14.0 +1.3
GTA XP sP 20 02 17.8 +1.3
GTA PP PP 20 04 00.8 +1.6
GTA SCP ScP 20 07 16.0 +1.1
GTA S **S** **20 09 15.3 +0.4**
GTA XS sS 20 09 32.5 +1.8
GTA SCS ScS 20 11 50.3 -1.6
GTA SS SS 20 12 49.8 +0.4
GTA AMB AMB
comp=Z,23nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,10µm,8.1s
GTA LR LR
comp=N,16µm,22.8s,MS6.3
GTA LR LR
comp=E,29µm,22.5s,MS6.3
GTA LR LR
comp=Z,18µm,25.8s,MS6.0
KAD Karad 50.64 300 *e*P **P** **20 02 02.2 -2.6**
POO Poona 51.47 301 *e*PCP PcP 20 03 25.5 +0.3
CN2 Changchun 52.16 6 *e*P **P** **20 02 16.0 +0.3**
CN2 *e*XP sP 20 02 30.0 +0.9
CN2 PCP PcP 20 03 27.5 +0.3
CN2 PP PP 20 04 15.3 +0.9
CN2 *e*S **S** **20 09 37.0 -1.0**
CN2 SS SS 20 13 12.8 -3.2
CN2 AMB AMB
comp=Z,40nm,1.4s,mb5.2
CN2 AMB AMB
comp=Z,5µm,11.0s
CN2 LR LR
comp=N,6µm,21.0s,MS5.8
CN2 LR LR
comp=E,6µm,21.0s,MS5.8
CN2 LR LR
comp=Z,7µm,21.0s,MS5.7
LGTI Lohaghat 52.54 317 *e*P **P** **20 02 19.1 +0.2**
LGTI *ex* x 20 04 34.5
PTH Pithoragarh 52.62 317 *e*P **P** **20 02 19.0 -0.5**
MDJ Mudanjiang 53.54 10 P **P** **20 02 26.3 +0.4**
MDJ AP pP 20 02 35.8 +0.3
MDJ XP sP 20 02 39.0 -0.3
MDJ PP PP 20 04 30.0 +3.1
MDJ SCP ScP 20 07 27.5 -0.6
MDJ PCS PcS 20 07 31.5 +0.2
MDJ S **S** **20 09 55.5 -1.3**
MDJ SS SS 20 13 40.5 +2.8
MDJ AMB AMB
comp=Z,151nm,0.8s,mb6.0
MDJ AMB AMB
comp=Z,5µm,7.7s
MDJ LR LR
comp=N,7µm,21.6s,MS5.9
MDJ LR LR
comp=E,6µm,18.2s,MS5.9
MDJ LR LR
comp=Z,10µm,21.1s,MS5.8
MDJ Mudanjiang 53.54 10 *e*P **P** **20 02 25.7 -0.2**
comp=Z,360nm,1.0s,mb6.3
MDJ LR LR
comp=Z,10µm,22.0s,MS5.8
BHV Bhavnagar 54.38 304 *ex* x 20 02 38.0
DDI Dehra Dun 54.57 316 *e*P **P** **20 02 30.8 -2.9**
DDI *e*S **S** **20 10 11.0 -0.3**
AJM Ajmer 54.80 311 *e*P **P** **20 02 33.5 -2.0**

AJM AMb AMB 20 02 50.5
comp=Z,368nm,1.5s,mb6.2
ERM Erimo 54.85 22 PFAKE 20 02 40.0 +4.5
ERM LR LR
comp=Z,11μm,22.0s,MS5.9
SMLA Simla 55.67 317 *e*P **P** **20 02 39.6 -2.0**
SMLA AMb AMB 20 02 53.8
comp=Z,495nm,1.5s,mb6.3
SDNR Sundarnagar 56.03 317 *e*P **P** **20 02 44.1 -0.1**
MCQ Macquarie Isla 56.29 153 *e*P **P** **20 02 47.5 +1.8**
MCQ *e*S S 20 10 55.5 +22
MCQ Macquarie Isla 56.29 153 *e*P **P** **20 02 46.4 +0.6**
comp=Z,6μm,1.1s
MCQ Macquarie Isla 56.29 153 P **P** **20 02 47.4 +1.7**
BHK Bhakra 56.35 316 *ex* x 20 02 53.0
ASAJ Asahikawa 56.47 21 P **P** **20 02 48.5 +1.4**
comp=Z,66nm,0.8s,mb5.7,baz=224,slow=11,SNR=17
ASAJ Asahikawa 56.47 21 P **P** **20 02 48.5 +1.4**
ASAJ pmax pmax
comp=Z,66nm,0.8s
ULN Ulaanbaatar 56.76 351 P **P** **20 02 50.3 +1.2**
SNR=210
ULN Ulaanbaatar 56.76 351⇓ *e*P **P** **20 02 48.5 -0.6**
ULN Ulaanbaatar 56.76 351 P **P** **20 02 49.5 +0.4**
ULN pmax pmax
comp=Z,1μm,1.8s,mb6.6
ULN Ulaanbaatar 56.76 351 P **P** **20 02 49.5 +0.4**
comp=Z,328nm,2.0s,comp=Z,8μm,mb6.0
SONM Songino Array 56.84 350 P **P** **20 02 50.1 +0.5**
comp=Z,33nm,0.9s,mb5.4,baz=168,slow=7.2,SNR=92
SONM S **S** **20 10 37.6 -3.3**
comp=Z,3.0nm,1.2s,baz=30,slow=24,SNR=2.6
SONM PKPPKP 20 32 40.2
comp=Z,1.3nm,0.9s,baz=276,slow=2.8,SNR=3.6
SONM Songino Array 56.84 350 P **P** **20 02 50.1 +0.5**
SONM S **S** **20 10 37.6 -3.3**
BHJ Bhuj 57.11 304 *e*P **P** **20 02 51.2 -0.9**
HIA Hailar 57.26 1 *e*P **P** **20 02 53.3 +0.7**
comp=Z,127nm,1.3s,mb5.8
HIA LR LR
comp=Z,15μm,19.0s,MS6.1
HIA Hailar 57.26 1 *e*P **P** **20 02 53.3 +0.7**
HIA pmax pmax
comp=Z,127nm,1.3s
HIA MLR MLR
comp=Z,15μm,19.0s
DLH Dalhousie 57.33 317 *ex* x 20 03 00.0
THN Thein Dam 57.44 317 *e*P **P** **20 02 52.7 -1.5**
YUK Yuzh-Kuril'sk 57.60 23⇑ *i*P **P** **20 02 55.0 -0.1**
YUK *e* 20 03 54.3
YUK *e* 20 04 59.0
YUK *e*S **S** **20 10 48.0 -3.1**
YUK *e* 20 11 10.0
YUK *e* 20 12 42.4
YUK pmax pmax
comp=Z,8μm,6.5s
YUK pmax pmax
comp=N,5μm,8.0s
YUK smax
comp=N,5μm,8.0s
YUK smax
comp=E,11μm,18.0s
YUK MLR MLR
comp=E,6μm,20.0s
YUK MLR MLR
comp=E,5μm,25.0s
YUK MLR MLR
comp=Z,7μm,21.0s,MS5.8
CASY Casey 58.23 184⇑ *i*P **P** **20 02 58.7 -0.5**
CASY *e*S **S** **20 11 03.0 +4.3**
CASY Casey 58.23 184 *e*P **P** **20 02 58.6 -0.6**
comp=Z,74nm,0.8s,mb5.8
CASY LR LR
comp=Z,54μm,20.0s,MS6.7
HABR Khabarovsk 58.30 13⇑ *i*P **P** **20 03 00.4 +0.5**
HABR *e*SP 20 03 06.6
HABR *e* 20 03 49.0
HABR *e* 20 05 06.5
HABR *e*S **S** **20 11 01.8 +1.7**
HABR *e* 20 11 09.4
HABR *e* 20 12 46.3
HABR pmax pmax
comp=Z,323nm,1.8s,mb6.0
HABR pmax pmax
comp=Z,2μm,2.8s,mb6.6
HABR MLR MLR
comp=Z,8μm,17.3s,MS5.9
KLR Kul'dur 58.38 10 *e*P **P** **20 02 56.0 -4.4**
KLR pmax pmax
comp=Z,440nm,2.0s,mb6.1
WMQ Urumqi 58.86 334 P **P** **20 03 04.0 +0.1**
WMQ AP pP 20 03 14.0 +0.4
WMQ XP sP 20 03 18.0 +0.6
WMQ PP PP 20 05 16.0 +1.6
WMQ S **S** **20 11 06.0 -1.5**
WMQ SCS ScS 20 12 47.0 -4.5
WMQ SS SS 20 15 01.0 -0.6
WMQ AMB AMB
comp=Z,254nm,1.0s,mb6.2
WMQ AMB AMB
comp=Z,4μm,5.0s
WMQ LR LR
comp=N,18μm,16.0s,MS6.5
WMQ LR LR
comp=E,22μm,18.0s,MS6.5
WMQ LR LR
comp=Z,17μm,16.0s,MS6.2
YSS Yuzh-Sakhalins 59.02 19⇑ *e*P **P** **20 03 06.2 +1.3**
YSS Yuzh-Sakhalins 59.02 19 *oe*P **P** **20 03 04.0 -0.9**
YSS *e* 20 03 10.0
YSS *e* 20 05 18.0
YSS *e*PPP 20 06 44.0
YSS *e*S **S** **20 11 04.0 -5.4**
YSS *e*SS SS 20 14 56.0 -8.0
YSS pmax pmax
comp=Z,370nm,2.0s,mb6.1
YSS smax
comp=N,2μm,6.0s
YSS MLR MLR
comp=N,7μm,18.0s,MS5.9
YSS MLR MLR
comp=E,5μm,18.0s,MS5.9
YSS MLR MLR
comp=Z,5μm,18.0s,MS5.7
SNZO South Karori 59.43 133 *e*P **P** **20 03 06.2 -1.9**
comp=Z,265nm,1.0s,mb6.2
ZAK Zakamensk 59.85 349⇑ *i*P **P** **20 03 11.0 +0.4**
ZAK pmax pmax
comp=Z,134nm,1.6s,mb5.7
FUNA Funafuti 59.97 95 PFAKE 20 03 20.0 +7.8
FUNA LR LR
comp=Z,17μm,20.0s,MS6.2
CIT Chita 60.16 356 *e*P **P** **20 03 13.8 +1.1**
CIT *e* 20 04 01.4
CIT *e* 20 05 31.0
CIT *e* 20 06 51.4
CIT *e*S **S** **20 11 27.8 +3.8**
CIT *e* 20 12 58.8
CIT pmax pmax
comp=Z,1μm,1.9s,mb6.6
DRV Dumont d'Urvil 60.18 170 P pP 20 03 23.0 +0.6
DRV S **S** **20 11 33.0 +9.0**
DRV SS SS 20 15 39.0 +18
DRV L 20 18 00.0
DRV R 20 23 00.0
URZ Urewera 60.41 129 LR LR 20 29 19.9
comp=Z,44μm,20.5s,MS6.6,baz=260,slow=36
MIR Mirnyy 60.81 191⇑ *i*P **P** **20 03 18.0 +1.0**
MIR *i*S **S** **20 11 32.0 0.0**
MIR *i*PS 20 11 54.0
MIR pmax pmax
comp=Z,1μm,1.8s,mb6.6
MIR pmax pmax
comp=N,5μm,10.0s
TLY Talaya 61.03 349 P **P** **20 03 20.4 +1.8**
SNR=84
TLY Talaya 61.03 349⇑ *i*P **P** **20 03 19.4 +0.8**
TLY Talaya 61.03 349 *c i*P **P** **20 03 19.1 +0.5**
TLY *e* 20 04 06.3
TLY *e* 20 05 35.1
TLY *e*PPP 20 06 57.0
TLY *e*S **S** **20 11 32.5 -2.6**
TLY *e* 20 13 01.4
TLY *e*SS SS 20 15 36.8 +1.4
TLY pmax pmax
comp=Z,303nm,1.2s,mb6.3
IRK Irkutsk 61.46 350⇓ *i*P **P** **20 03 22.1 +0.6**
IRK *e* 20 04 05.6
IRK *e*S **S** **20 11 44.1 +3.6**
IRK pmax pmax
comp=Z,574nm,2.1s,mb6.3
MOY Mondy 61.53 348 *e*P **P** **20 03 22.8 +0.7**
MOY pmax pmax
comp=Z,88nm,2.3s,mb5.5
KSH Kashi 61.71 324 *e*P **P** **20 03 24.0 +0.5**
KSH *e*AP pP 20 03 34.3 +1.0
KSH *e*XP sP 20 03 38.0 +1.0
KSH *e*PCP PcP 20 04 05.5 +0.8
KSH *e*PP PP 20 05 41.5 +1.8
KSH *e*SCP ScP 20 08 03.5 -0.8
KSH *e*PCS PcS 20 08 07.3 -0.3
KSH *e*S **S** **20 11 40.5 -3.7**
KSH *e*XS sS 20 11 57.8 -2.5
KSH *e*SCS ScS 20 13 09.3 -3.7
KSH *e*SS SS 20 15 43.5 -3.0
KSH AMB AMB
comp=Z,429nm,1.4s,mb6.4
KSH AMB AMB
comp=Z,9μm,4.2s
KSH LR LR
comp=N,8μm,8.5s
KSH LR LR
comp=E,18μm,10.8s
KSH LR LR
comp=Z,19μm,15.0s,MS6.4
RER Riviere de l'E 61.73 250 *e*P **P** **20 03 24.8 +0.7**
MSEY Mahe Island 62.70 269 P **P** **20 03 31.0 +0.2**
SNR=7.0
MSEY Mahe Island 62.70 269 *e*P **P** **20 03 29.6 -1.1**
comp=Z,262nm,1.5s,mb6.1
MSEY LR LR
comp=Z,23μm,20.0s,MS6.3
RAO Raoul Island 62.98 119 LR LR 20 31 32.0
comp=Z,52μm,18.6s,MS6.7,baz=220,slow=36
KBL Kabul 63.22 315 *e*P **P** **20 03 31.8 -1.9**
comp=Z,102nm,0.9s,mb6.0
KBL Kabul 63.22 315 *e*P **P** **20 03 31.8 -1.9**
KBL pmax pmax
comp=Z,102nm,0.9s,mb6.0
MK31 Makanchi Array 63.56 333 *e*P **P** **20 03 35.1 -0.6**
MK31 Makanchi Array 63.56 333 P **P** **20 03 35.2 -0.5**
MK31 pmax pmax
comp=Z,551nm,1.6s,mb6.3
MKAR Makanchi Array 63.56 333 P **P** **20 03 35.0 -0.7**
comp=Z,14nm,0.5s,mb5.2,baz=147,slow=5.9,SNR=150
MKAR S **S** **20 12 02.2 -5.0**
comp=Z,2.8nm,1.0s,baz=94,slow=4.3,SNR=2.5
MKAR PKPPKP 20 32 25.9
comp=Z,1.4nm,0.9s,baz=305,slow=2.5,SNR=3.5
MKAR LR LR 20 36 03.5
comp=Z,10μm,20.0s,MS6.0,baz=167,slow=41
MKAR Makanchi Array 63.56 333 P **P** **20 03 35.0 -0.7**
MKAR S **S** **20 12 02.2 -5.0**
MKAR P'P' 20 32 25.9
MKAR LR LR 20 36 03.5
MKAR Makanchi Array 63.56 333 P **P** **20 03 35.0 -0.7**
MKAR S **S** **20 12 02.2 -5.0**
AAA Alma-Ata 63.66 327 *e*P **P** **20 03 35.6 -0.8**
AAA *e*S **S** **20 12 08.4 -0.2**
AAA pmax pmax
comp=Z,7μm,9.1s
AAA smax
comp=E,18μm,14.1s
AAA MLR MLR
comp=Z,13μm,17.0s,MS6.2
TKM2 Tokmak 2 64.15 326 *e*P **P** **20 03 38.9 -0.8**
comp=Z,125nm,1.2s,mb5.8
TKM2 Tokmak 2 64.15 326 P **P** **20 03 39.0 -0.7**
TKM2 pmax pmax
comp=Z,130nm,1.2s,mb5.8
TKM2 Tokmak 2 64.15 326 P **P** **20 03 38.5 -1.3**
SNR=19
UCH Uchtor 64.31 325 P pP 20 03 51.0 +0.5
SNR=6.4
KBK Karagaybulak 64.34 326 P **P** **20 03 40.4 -0.6**
SNR=20
AAK Ala-Archa 64.58 325 PFAKE 20 03 50.0 +7.5
AAK LR LR
comp=Z,19μm,21.0s,MS6.3
AAK Ala-Archa 64.58 325 P **P** **20 03 41.8 -0.7**
SNR=17
FRU Bishkek 64.64 326⇑ *i*P **P** **20 03 42.0 -0.9**
FRU *e* 20 12 22.0
FRU pmax pmax
comp=Z,240nm,2.0s,mb5.9
AML Almayashu 64.71 325 PFAKE 20 03 50.0 +6.6
AML LR LR
comp=Z,17μm,22.0s,MS6.2
AML Almayashu 64.71 325 P **P** **20 03 42.9 -0.5**
SNR=23
NRGR Nerungri 64.85 4 *i*P **P** **20 03 45.5 +1.5**
NRGR S **S** **20 12 23.0 +0.2**
NRGR smax
comp=E,53nm,0.6s
USP Ospenovka 64.99 326 P **P** **20 03 43.9 -1.2**
SNR=20
EKS2 Erkin-Say 65.00 325 *e*P **P** **20 03 44.8 -0.5**
comp=E,216nm,1.3s,mb6.0
EKS2 LR LR
comp=Z,21μm,22.0s,MS6.3
EKS2 Erkin-Say 65.00 325 P **P** **20 03 44.9 -0.3**
SNR=16
CLNS Chul'man 65.04 4 *c i*P **P** **20 03 45.8 +0.6**
CLNS *e**PP pP 20 03 55.9 +0.9
CLNS *e* 20 04 14.2
CLNS *e*S S 20 12 22.2 -3.0
CLNS *e* 20 13 36.8
CLNS *e*SSS 20 19 21.2
CLNS pmax pmax
comp=Z,588nm,2.1s,mb6.2
CLNS pmax pmax
comp=N,329nm,1.9s
CLNS pmax pmax
comp=E,83nm,1.0s
CLNS pmax pmax
comp=Z,127nm,2.1s,mb5.6
CLNS pmax pmax
comp=N,27nm,0.9s
CLNS pmax pmax
comp=E,29nm,0.9s
CLNS smax
comp=N,5μm,12.5s
CLNS smax
comp=E,6μm,13.5s
CLNS MLR MLR
comp=Z,6μm,16.0s,MS5.8
CLNS MLR MLR
comp=N,5μm,19.0s,MS5.8
CLNS MLR MLR
comp=E,3μm,17.0s,MS5.8
WBK Wadi Bani Khal 65.85 299⇑ P **P** **20 03 52.9 +1.8**
SNR=15
BOD Bodaibo 65.92 357 *e*P **P** **20 03 49.9 -1.0**
BOD *e* 20 12 37.7
BOD pmax pmax
comp=Z,348nm,2.1s,mb6.0
JMDO Jabal Madar 66.52 299⇑ P **P** **20 03 56.5 +1.1**
SNR=15
SMDO Samad 66.80 299 P **P** **20 03 57.6 +0.3**
SNR=18
BIDO Bidbid 66.90 300⇓ P **P** **20 03 58.4 +0.5**
SNR=32
SKR Severo-Kuril's 67.09 25 *e*P **P** **20 03 57.5 -1.0**
SKR *e* pP 20 04 06.0 -2.3
SKR *e*S S 20 12 52.0 +1.7
SKR *e* 20 13 07.0
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.2
SKR pmax pmax
comp=Z,6μm,8.0s
SKR smax
comp=N,5μm,14.0s
SKR smax
comp=E,19μm,14.0s
KK31 Karatay Array 67.16 324 P **P** **20 03 57.2 -1.9**
KK31 pmax pmax
comp=Z,66nm,1.2s,mb5.5
KRAR Krasnoyarsk 67.45 345 *c i*P **P** **20 04 00.2 -0.5**
KRAR pmax pmax
comp=Z,119nm,1.6s,mb5.7
KRAR MLR MLR
comp=Z,11μm,14.0s,MS6.2
HOQ Hoqain 67.62 300⇑ P **P** **20 04 03.6 +1.2**
SNR=24
KURK Kurchatov 68.10 334⇓ P **P** **20 04 06.0 +1.2**
SNR=134
KURK Kurchatov 68.10 334 P **P** **20 04 03.5 -1.3**
comp=Z,11nm,0.6s,mb5.1,baz=138,slow=5.6,SNR=75
KURK PKPPKP 20 32 25.4
comp=Z,3.9nm,1.0s,baz=308,slow=3.5,SNR=11
KURK LR LR 20 37 11.4
comp=Z,16μm,20.6s,MS6.2,baz=155,slow=39
KURK Kurchatov 68.10 334⇑ *i*P **P** **20 04 03.8 -1.1**
KURK pmax pmax
comp=Z,101nm,1.3s,mb5.7
KURK MLR MLR
comp=Z,27μm,22.0s,MS6.4
ZAA0 Zalesovo Array 68.16 339 *e*P **P** **20 04 03.4 -1.8**
ZALV Zalesovo Beam 68.16 339 P **P** **20 04 03.9 -1.3**
comp=Z,33nm,0.6s,mb5.6,baz=143,slow=5.0,SNR=112
ZALV S S 20 12 57.5 -5.4
comp=Z,1.3nm,0.8s,baz=238,slow=2.8,SNR=2.4
ZALV PKPPKP 20 32 20.4
comp=Z,2.0nm,0.8s,baz=302,slow=3.3,SNR=7.3
ZALV Zalesovo Beam 68.16 339 P **P** **20 04 03.9 -1.3**
ZALV S S 20 12 57.6 -5.4
AFI Afiamalu 68.44 102 *e*P **P** **20 04 07.4 -0.4**
comp=Z,69nm,1.1s,mb5.6
AFI LR LR
comp=Z,8μm,19.0s,MS6.0
AFI Afiamalu 68.44 102 *e*P **P** **20 04 07.4 -0.4**
AFI pmax pmax
comp=Z,69nm,1.1s,mb5.6
AFI MLR MLR
comp=Z,8μm,19.0s,MS6.0
HATD Hatta, Dubai 69.06 300⇑ P **P** **20 04 12.9 +1.5**
SNR=14
NVS Novosibirsk 69.43 339 *i*P **P** **20 04 10.6 -2.5**
NVS *i*S S 20 13 13.1 -4.9
NVS *i* 20 14 02.0
NVS pmax pmax
comp=Z,319nm,1.4s,mb6.1
NVS pmax pmax
comp=N,429nm,2.2s
NVS pmax pmax
comp=E,412nm,2.4s
NVS smax
comp=N,33nm,1.9s
NVS smax
comp=E,101nm,1.9s
PEA0B Petropavlovsk- 69.56 24 *e*P **P** **20 04 13.9 0.0**
PETK Petropavlovsk- 69.56 24 P **P** **20 04 14.2 +0.3**
comp=E,27nm,0.7s,mb5.3,baz=187,slow=2.8,SNR=21
PETK LR LR 20 35 26.2
comp=E,5μm,20.1s,MS5.8,baz=226,slow=36
ABPO Ambohimpanom 69.74 253 *e*P **P** **20 04 15.2 -0.6**
comp=E,126nm,1.1s,mb5.8
ABPO LR LR
comp=Z,10μm,19.0s,MS6.1
MAW Mawson 69.80 200⇑ *i*P **P** **20 04 16.4 +1.2**
comp=Z,98nm,0.8s,mb5.8
MAW *e*S S 20 13 15.7 -6.5
MAW Mawson 69.80 200 P **P** **20 04 15.4 +0.2**
comp=Z,47nm,0.9s,mb5.4,baz=65,slow=7.8,SNR=30
MAW S S 20 13 15.5 -6.7
comp=Z,2.4nm,0.9s,baz=16,slow=23,SNR=1.6
MAW LR LR 20 33 03.5
comp=Z,25μm,18.7s,MS6.5,baz=57,slow=34
MAW Mawson 69.80 200 P **P** **20 04 15.4 +0.2**
MAW S S 20 13 15.5 -6.7
PET Petropavlovsk 69.88 24 *e*P **P** **20 04 13.3 -2.7**
comp=Z,428nm,1.4s,mb6.2
PET Petropavlovsk 69.88 24 *e*P **P** **20 04 15.3 -0.6**
PET *e* 20 04 37.7
PET *i*S S 20 13 22.6 -0.9
PET *e* 20 14 11.7
PET *e*SS SS 20 17 48.8 -4.3
PET pmax pmax
comp=Z,4μm,5.9s
PET pmax pmax
comp=Z,4μm,13.8s
PET pmax pmax
comp=Z,218nm,1.2s,mb6.0
PET smax
comp=E,12μm,10.6s
PET smax
comp=E,20μm,18.1s
PET MLR MLR
comp=Z,5μm,19.0s,MS5.8
PET MLR MLR
comp=Z,4μm,15.0s
YAK Yakutsk 70.58 6⇑ *i*P **P** **20 04 18.9 -1.1**
YAK Yakutsk 70.58 6 *c i*P **P** **20 04 19.1 -0.9**
YAK *e* 20 04 38.8
YAK *e* 20 06 56.7
YAK *e*PPP 20 08 39.3
YAK *e*S S 20 13 26.1 -5.1
YAK *e**SS sS 20 14 05.5 +18
YAK *e* 20 14 15.2
YAK *e*SS SS 20 17 58.1 -5.3
YAK pmax pmax
comp=Z,365nm,1.1s,mb6.2
YAK pmax pmax
comp=N,119nm,1.0s
YAK pmax pmax
comp=E,19nm,0.9s
YAK pmax pmax
comp=Z,630nm,2.8s,mb6.0
YAK pmax pmax
comp=N,339nm,3.0s
YAK pmax pmax
comp=E,178nm,2.8s
YAK smax
comp=E,3μm,4.4s
YAK smax
comp=N,7μm,5.4s
MIDW Midway 71.66 57 PFAKE 20 04 40.0 +13
MIDW LR LR
comp=Z,8μm,21.0s,MS5.9
ABKT Ailbek 72.57 314 P **P** **20 04 31.6 -0.9**
comp=Z,246nm,1.1s,mb6.0,SNR=7.7
VNDA Vanda 72.82 171 P **P** **20 04 33.7 +0.3**
comp=Z,33nm,0.5s,mb5.5,baz=314,slow=5.3,SNR=105
VNDA S S 20 13 53.7 -3.2
comp=Z,2.2nm,1.2s,baz=290,slow=22,SNR=1.6
VNDA PKPPKP 20 32 20.4
comp=Z,1.7nm,1.2s,baz=130,slow=6.7,SNR=4.6
VNDA LR LR 20 34 32.7
comp=Z,40μm,20.1s,MS6.7,baz=331,slow=34
VNDA Vanda 72.82 171 P **P** **20 04 33.7 +0.3**
VNDA S S 20 13 53.7 -3.2
VNDA P'P' 20 32 20.4
VNDA LR LR 20 34 32.7
VNDA Vanda 72.82 171 P **P** **20 04 33.7 +0.3**
VNDA S S 20 13 53.7 -3.2
VOSK Vostochnaya 72.93 332 P **P** **20 04 32.1 -2.2**
VOSK pmax pmax
comp=Z,75nm,1.5s,mb5.4
BVA0 Borovoye Array 73.40 332 *i*P **P** **20 04 35.7 -1.4**
BVA0 pmax pmax
comp=Z,34nm,1.4s,mb5.1
BVAR Borovoye Array 73.40 332 P **P** **20 04 35.5 -1.5**
comp=Z,7.3nm,0.7s,mb4.8,baz=135,slow=7.3,SNR=55
BVAR LR LR 20 41 12.6
comp=Z,16μm,19.1s,MS6.3,baz=138,slow=39
BRVK Borovoye 73.47 332⇓ P **P** **20 04 38.4 +0.9**
SNR=54
BRVK Borovoye 73.47 332⇑ *i*P **P** **20 04 36.0 -1.5**
BRVK LR LR
comp=Z,15μm,19.0s,MS6.3
SBA Scott Base 73.83 171 *e*P **P** **20 04 40.9 +1.6**
comp=Z,131nm,1.0s,mb5.8
SBA Scott Base 73.83 171 P **P** **20 04 41.3 +2.0**
SBA pmax pmax
comp=Z,130nm,1.0s,mb5.8
SEY Seymchan 75.54 15⇑ *i*P **P** **20 04 49.7 +0.4**
AB31 Akbulak array 76.66 325 P **P** **20 04 54.0 -2.0**
AB31 pmax pmax
comp=Z,438nm,1.7s,mb6.1
SMY Shemya 76.85 31 *e*P **P** **20 04 59.8 +2.9**
comp=Z,265nm,1.1s,mb6.1
SMY Shemya 76.85 31 *e*P **P** **20 04 59.8 +2.8**
SMY pmax pmax
comp=Z,260nm,1.1s,mb6.1
RDF Al-Radifah 77.62 302 *e*P **P** **20 04 59.9 -2.0**

baz=302
RDF AMb AMB 20 05 20.5
comp=Z,220nm,1.3s,mb5.9,baz=302
UMR Umm Al-Rimmam 77.66 303 *e*P **P 20 04 59.6 -2.5**
baz=303
UMR AMb AMB 20 05 20.3
comp=Z,173nm,1.3s,mb5.8,baz=303
NAY Al-Naaiem 77.97 302 *e*P **P 20 05 01.5 -2.3**
baz=302
NAY AMb AMB 20 05 21.7
comp=Z,90nm,1.3s,mb5.5,baz=302
MIB Mutribah 78.04 303 *e*P **P 20 05 01.9 -2.3**
baz=303
MIB AMb AMB 20 05 13.1
comp=Z,102nm,0.9s,mb5.8,baz=303
AKTO Aktyubinsk 78.33 325 S S 20 14 54.9 -3.6
comp=Z,0.8nm,1.0s,baz=249,slow=21,SNR=5.9
AKTO LR LR 20 44 58.9
comp=Z,12μm,19.3s,MS6.2,baz=5.5,slow=40
AKTO Aktyubinsk 78.33 325 P **P 20 05 03.2 -2.1**
AKTO pmax pmax
comp=Z,39nm,1.4s,mb5.1
SYO Syowa Base 78.40 201⇓ *i*P **P 20 05 04.8 -0.6**
SYO Syowa Base 78.40 201⇓ *i*P **P 20 05 11.2 +5.8**
RAR Rarotonga 79.37 110 LR LR 20 38 18.2
comp=Z,11μm,18.5s,MS6.2,baz=255,slow=34
TIXI Tiksi 80.00 3⇓ *e*P **P 20 05 10.8 -3.2**
TIXI Tiksi 80.00 3⇓ *e*P **P 20 05 10.7 -3.3**
TIXI pmax pmax
comp=Z,121nm,1.5s,mb5.6
TIXI MLR MLR
comp=Z,8μm,20.0s,MS6.0
SVE Sverdlovsk 80.18 332⇓ *e*P **P 20 05 12.9 -2.4**
SVE *e* 20 08 24.8
SVE *e*S S 20 15 14.2 -3.7
SVE *e*SS SS 20 20 22.1 -7.2
SVE *e*SSS 20 23 49.3
SVE pmax pmax
comp=Z,215nm,1.8s,mb5.8
SVE MLR MLR
comp=Z,17μm,21.0s,MS6.4
ARU Arti 80.96 331 *e*P **P 20 05 16.0 -3.5**
comp=Z,309nm,1.8s,mb5.9
ARU LR LR
comp=Z,22μm,20.0s,MS6.5
ARU Arti 80.96 331*c* *i*P **P 20 05 17.0 -2.5**
ARU *e*S S 20 15 25.3 -0.8
ARU *e*SSS 20 24 04.8
ARU pmax pmax
comp=Z,65nm,1.7s,mb5.3
ARU pmax pmax
comp=Z,3μm,12.9s
ARU smax
comp=N,3μm,18.5s
ADK Adak 81.39 35 PFAKE 20 05 30.0 +8.2
ADK LR LR
comp=Z,7μm,22.0s,MS6.0
QSPA South Pole Qui 81.76 180 *e*P **P 20 05 23.9 +0.5**
comp=Z,234nm,1.2s,mb6.0
MAK Makhachkala 81.96 315*c* *i*P **P 20 05 23.4 -1.7**
MAK *e*PPP 20 10 20.6
MAK *i*S S 20 15 32.3 -4.8
MAK *e*SS SS 20 20 52.7 -3.8
MAK *e*SSS 20 24 17.0
MAK pmax pmax
comp=Z,303nm,2.0s,mb5.9
MAK MLR MLR
comp=Z,12μm,20.0s,MS6.2
DGRG David-gareji 83.00 314 P **P 20 05 30.0 -0.5**
HAKT HAKKÂRI 83.12 309 *i*P **P 20 05 25.6 -5.7**
BILL Bilibino 83.18 16⇑ *i*P **P 20 05 29.5 -1.4**
BILL LR LR
comp=Z,6μm,19.0s,MS6.0
BILL Bilibino 83.18 16*c* *i*P **P 20 05 29.4 -1.5**
BILL *e* 20 08 46.4
BILL *i*S S 20 15 50.1 +1.6
BILL pmax pmax
comp=Z,44nm,2.4s,mb5.1
SOKR Solikamsk 83.32 333 *e*P **P 20 05 34.5 +2.7**
SOKR SS SS 20 21 19.0 +3.1
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.5
MTA Mtatsminda 83.48 314 P **P 20 05 31.7 -1.3**
TBLG Delisi 83.53 314 P **P 20 05 32.1 -1.2**
DYDN Diyadin 83.68 311 *i*P **P 20 05 29.5 -4.6**
GOR Gori 84.06 314 *i*P **P 20 05 35.1 -0.9**
TUTA Tutak 84.29 311 *i*P **P 20 05 30.4 -6.8**
ONI Oni 84.69 314 P **P 20 05 38.4 -0.8**
BEST Besiri 85.08 309 *i*P **P 20 05 37.3 -3.9**
HOMI Horasan 85.14 311 *i*P **P 20 05 36.3 -5.2**
MARD Mardin 85.31 309 *i*P **P 20 05 35.3 -7.1**
BNGL BINGOL 85.43 310 *i*P **P 20 05 39.2 -3.7**
DDEM Demirkent 85.47 312 *i*P **P 20 05 33.4 -10**
DBAD Bademkaya 85.54 312 *i*P **P 20 05 35.3 -8.1**
KIV Kislovodsk 85.61 315⇓ *i*P **P 20 05 44.3 +0.5**
SNR=23
KIV Kislovodsk 85.61 315*c* *i*P **P 20 05 41.9 -1.8**
KIV *e* 20 09 05.9
KIV *e*PPP 20 10 53.4
KIV *e* 20 16 03.9
KIV *e*SS SS 20 21 49.0 -1.4
KIV *e*SSS 20 25 09.5
KIV pmax pmax
comp=Z,35nm,1.2s,mb5.5
DIYA Diyarbakir 85.97 309 *i*P **P 20 05 41.1 -4.5**
KIP Kipapa 86.94 68 PFAKE 20 06 00.0 +9.2
KIP LR LR
comp=Z,8μm,19.0s,MS6.1
ELZG Elazig 86.97 309 *i*P **P 20 05 45.0 -5.5**
ASF Jabal al Asfar 87.31 303 LR LR 20 47 06.1
comp=Z,15μm,19.8s,MS6.4,baz=333,slow=37
SOC Sochi 87.59 314*c* *i*P **P 20 05 50.6 -2.9**
SOC *e**SP sP 20 05 58.9 -8.3
SOC *e* 20 09 14.8
SOC *e*PPP 20 11 10.8
SOC *e*S SKSac 20 16 16.7 -2.5
SOC *e**SS sS 20 16 30.0 -20
SOC *e*SS SS 20 22 17.4 -2.1
SOC *e*SSS 20 25 49.8
SOC pmax pmax
comp=Z,31nm,1.3s,mb5.4
SOC pmax pmax
comp=Z,821nm,6.9s
NVL N'lazarevskaya 87.72 199*c* *i*P **P 20 05 55.6 +2.1**
NVL *e* 20 09 23.7
NVL *e*S SKSac 20 16 19.0 0.0
NVL pmax pmax
comp=Z,449nm,1.7s,mb6.4
NVL MLR MLR
comp=N,4μm,19.0s,MS6.3
NVL MLR MLR
comp=E,12μm,19.0s,MS6.3
NVL MLR MLR
comp=Z,19μm,19.0s,MS6.5
MBAR Mbarara 87.72 270⇑ *i*P **P 20 05 53.3 -1.5**
MBAR LR LR
comp=Z,483nm,20.0s,MS4.9
AKCD Akcadag 87.74 309 *i*P **P 20 05 46.0 -8.3**
MAIT Maitri 87.74 199⇑ *i*P **P 20 05 54.3 +0.6**
MAIT *e*S SKSac 20 16 17.7 -1.5
LSZ Lusaka 88.19 255 P **P 20 05 56.6 -0.3**
SNR=54
LSZ Lusaka 88.19 255 *e*P **P 20 05 56.4 -0.6**
comp=Z,199nm,1.2s,mb6.2
LSZ LR LR
comp=Z,12μm,19.0s,MS6.3
LSZ Lusaka 88.19 255 *e*P **P 20 05 56.4 -0.5**
LSZ pmax pmax
comp=Z,199nm,1.2s,mb6.2
LSZ MLR MLR
comp=Z,12μm,19.0s,MS6.3
VRHR Novokhopersk 88.22 322 *e*P **P 20 05 52.9 -3.3**
VRHR *e**PP pP 20 05 58.2 -8.2
VRHR *e* 20 16 14.3
VRHR *e*S S 20 16 34.9 -3.7
VRHR *e*SP 20 17 34.0
VRHR pmax pmax
comp=Z,130nm,1.8s,mb5.9
VRHR pmax pmax
comp=N,30nm,1.4s
VRHR pmax pmax
comp=E,40nm,1.4s
VRHR smax
comp=N,3μm,9.1s
VRHR smax
comp=Z,1μm,5.3s
VRHR smax
comp=E,2μm,5.9s
VRHR MLR MLR
comp=Z,7μm,19.0s,MS6.1
VRHR MLR MLR
comp=N,13μm,21.0s,MS6.3
VRHR MLR MLR
comp=E,8μm,25.0s,MS6.3
EIL Elat 88.49 300 LR LR 20 48 06.5
comp=E,28μm,18.1s,MS6.7,baz=107,slow=37
HWQ Hawqa 88.50 305 *e*P **P 20 05 56.4 -1.6**
BHL Bhannes 88.67 304 *e*P **P 20 05 57.1 -1.6**
MMAI Mount Meron Ar 88.71 303 LR LR 20 46 56.2
comp=E,17μm,21.2s,MS6.4,baz=110,slow=36
ANDN Andirin 88.81 308 *i*P **P 20 05 51.8 -7.5**
BOSA Boshof 88.97 241 P **P 20 05 59.6 -0.7**
comp=E,23nm,1.0s,mb5.5,baz=100,slow=4.8,SNR=20
BOSA LR LR 20 39 57.6
comp=E,12μm,21.5s,MS6.3,baz=106,slow=32
PINB Pinarbasi 88.98 309 *i*P **P 20 05 50.9 -9.3**
LBTB Lobatse 89.20 245 *e*P **P 20 06 01.3 -0.3**
comp=E,97nm,1.0s,mb6.1
LBTB *e*PP PP 20 09 30.3 -1.9
LBTB LR LR
comp=Z,8μm,19.0s,MS6.2
LBTB Lobatse 89.20 245 *e*P **P 20 06 01.3 -0.3**
LBTB *e* 20 09 30.3
LBTB pmax pmax
comp=Z,97nm,1.0s,mb6.1
LBTB MLR MLR
comp=Z,8μm,19.0s,MS6.2
PPT Papeete 89.35 108 *e*P **P 20 06 04.3 +2.0**
comp=Z,193nm,1.5s,mb6.2
PPT Papeete 89.35 108 *e*PP PP 20 09 24.6 -8.9
comp=Z,2μm,24.8s
PPT *e*S S 20 16 46.8 -3.9
comp=Z,19μm,27.5s
PPT *e*SS SS 20 22 42.7 -3.2
comp=Z,10μm,26.0s
PPT Papeete 89.35 108 *e*LR LR 20 34 12.0
comp=Z,16μm,25.5s
PPT Papeete 89.35 108 P **P 20 06 04.4 +2.1**
comp=Z,48nm,0.9s,mb5.8,baz=236,slow=7.2,SNR=4.7
ANN Anapa 89.47 315 *e*P **P 20 05 58.3 -4.0**
ANN Anapa 89.47 315*c* *i*P **P 20 05 58.2 -4.1**
ANN *i**PP pP 20 06 04.7 -7.7
ANN *i*S SKSac 20 16 26.5 -3.8
ANN *e*SS SS 20 22 39.9 -6.8
ANN pmax pmax
comp=N,56nm,1.5s
ANN pmax pmax
comp=Z,80nm,1.5s,mb5.8
ANN pmax pmax
comp=E,22nm,0.8s
ANN pmax pmax
comp=N,258nm,6.4s
ANN pmax pmax
comp=E,188nm,6.4s
ANN pmax pmax
comp=Z,1μm,6.4s
ANN MLR MLR
comp=N,14μm,26.0s,MS6.4
ANN MLR MLR
comp=E,14μm,26.0s,MS6.4
ANN MLR MLR
comp=Z,13μm,26.0s,MS6.2
TIAR Tiarei 89.57 108 *e*P **P 20 06 05.3 +1.9**
comp=Z,1μm,1.4s,mb7.1
VORD Divnogorie 89.61 322 *e*P **P 20 06 00.6 -2.2**
VORD *e**PP pP 20 06 06.0 -6.9
VORD *e* 20 09 33.6
VORD *e* 20 16 22.1
VORD *e*S S 20 16 47.2 -4.5
VORD *e*SP SP 20 17 50.8 -6.0
VORD *e*SS SS 20 22 49.1 +0.7
VORD pmax pmax
comp=Z,50nm,1.9s,mb5.5
VORD pmax pmax
comp=N,60nm,3.0s
VORD pmax pmax
comp=E,60nm,2.7s
VORD pmax pmax
comp=Z,3μm,8.8s
VORD pmax pmax
comp=N,630nm,4.1s
VORD pmax pmax
comp=E,1μm,6.3s
VORD smax
comp=N,7μm,18.8s
VORD smax
comp=Z,6μm,16.5s
VORD smax
comp=E,7μm,11.1s
VSR Storozhevoye 89.75 322 *e*P **P 20 06 00.8 -2.6**
VSR *e* 20 09 33.0
VSR *e* 20 16 22.4
VSR *e*S S 20 16 49.4 -3.6
VSR *e*SP SP 20 17 49.6 -8.7
VSR *e*SS SS 20 22 48.0 -2.4
VSR pmax pmax
comp=Z,20nm,2.1s,mb5.1
VSR pmax pmax
comp=N,10.0nm,2.2s
VSR pmax pmax
comp=E,10.0nm,1.5s
VSR pmax pmax
comp=Z,460nm,6.6s
VSR pmax pmax
comp=N,230nm,4.8s
VSR pmax pmax
comp=E,520nm,8.5s
VSR smax
comp=E,3μm,7.9s
VSR smax
comp=Z,470nm,6.4s
VSR smax
comp=N,1μm,10.5s
VOR Voronezh 89.84 322 *e*P **P 20 06 01.0 -2.9**
VOR pmax pmax
comp=Z,160nm,2.0s,mb6.0
GULE Gulek 89.99 308 *i*P Px 20 05 32.4
AVNT Avonos 90.19 309 *i*P **P 20 05 58.6 -7.2**
MEH Mehetia 90.73 108 *e*P **P 20 06 10.1 +1.3**
comp=Z,3μm,1.3s
CSS Prodhromos 90.74 305 *e*P **P 20 06 09.3 +0.8**
comp=Z,48nm,1.1s,mb5.7
CSS LR LR
comp=Z,21μm,21.0s,MS6.5
BR131 Keskin Array S 91.29 310 PFAKE 20 06 20.0 +9.1
BR131 LR LR
comp=Z,7μm,19.0s,MS6.1
BRTR Keskin Array B 91.29 310 P **P 20 06 08.7 -2.2**
comp=Z,1.2nm,0.8s,baz=74,slow=10,SNR=8.3
BRTR PP PP 20 09 47.9 -0.6
comp=Z,2.8nm,0.9s,baz=127,slow=9.4,SNR=2.4
BRTR PKKPbc PKKPbc 20 23 35.9 +1.7
comp=Z,0.6nm,0.8s,baz=165,slow=6.0,SNR=2.3
BRTR LR LR 20 56 22.9
comp=Z,9μm,19.5s,MS6.2,baz=102,slow=42
BRTR Keskin Array B 91.29 310 P **P 20 06 08.7 -2.2**
BRTR 20 09 47.9
PMOR Pomariorio Ree 91.33 105 *e*P **P 20 06 13.4 +1.8**
comp=Z,349nm,1.2s,mb6.6
VAH Vaihoa 91.55 106 *e*P **P 20 06 14.3 +1.7**
comp=Z,267nm,1.3s,mb6.4
SNAA Sanae 91.61 196 *e*P **P 20 06 09.1 -2.7**
SNAA *e* 20 06 10.9
SNAA *e* 20 06 13.7
SNAA *e* 20 06 23.6
SNAA Sanae 91.61 196 *e*P **P 20 06 07.5 -4.3**
comp=Z,172nm,1.4s,mb6.2
SNAA Sanae 91.61 196 *e*P **P 20 06 07.5 -4.3**
SNAA pmax pmax
comp=Z,170nm,1.3s
MOS Moscow 91.64 326 *e*P **P 20 06 08.8 -3.3**
MOS *e* 20 06 26.3
MOS *e* 20 09 54.2
MOS *e* 20 16 33.1
MOS *e*S S 20 17 05.5 -4.7
MOS *i*PS PS 20 18 24.8 +1.3
MOS *i*SS SS 20 23 10.7 -6.9
MOS pmax pmax
comp=Z,72nm,1.8s,mb5.7
KLMR Klimovskoe 91.81 331 P **P 20 06 08.9 -3.9**
KLMR pmax pmax
comp=Z,72nm,1.4s,mb5.8
SIM Simferopol' 91.81 315 *e*P **P 20 06 16.0 +2.8**
SIM pmax pmax
comp=Z,34nm,0.6s,mb5.8
ANTO Ankara 91.95 310 PFAKE 20 06 20.0 +6.0
ANTO LR LR
comp=Z,10μm,22.0s,MS6.2
SUR Sutherland 92.10 237 *e*P **P 20 06 15.7 +0.8**
comp=Z,100nm,1.1s,mb6.1
OBN Obninsk 92.11 325 *e*P **P 20 06 12.5 -1.8**
OBN *i* 20 06 19.6
OBN *i*S SKSac 20 16 41.0 -4.0
OBN *i*PS PS 20 18 21.5 -7.2
OBN *i*SS SS 20 23 23.4 -0.9
OBN pmax pmax
comp=Z,47nm,1.5s,mb5.6
OBN MLR MLR
comp=Z,12μm,23.0s,MS6.3
VNA2 Neumayer--Watz 93.25 195 *e*P **P 20 06 20.8 +1.4**
VNA2 *e* 20 06 22.8
VNA2 *e* 20 06 27.2
VNA2 *e* 20 06 35.2
ISP Isparta 93.42 308 P **P 20 06 21.0 +0.2**
comp=Z,23nm,1.2s,mb5.5
ISP LR LR
comp=Z,11μm,20.0s,MS6.3
ISP Isparta 93.42 308 P **P 20 06 21.0 +0.2**
ISP pmax pmax
comp=Z,23nm,1.2s,mb5.5
ISP MLR MLR
comp=Z,11μm,20.0s,MS6.3
VNA3 Neumayer Olymp 93.64 195 *e*P **P 20 06 22.0 +0.8**
VNA3 *e* 20 06 23.9
VNA3 *e* 20 06 28.5
VNA3 *e* 20 06 36.4
VNA1 Neumayer--Stat 93.65 196 *e*P **P 20 06 22.6 +1.4**
VNA1 *e* 20 06 24.4
VNA1 *e* 20 06 28.9
VNA1 *e* 20 06 37.0
LVZ Lovozero 95.25 338 PFAKE 20 06 40.0 +11
LVZ LR LR
comp=Z,18μm,19.0s,MS6.6
KIS Kishinev 95.75 317 *e*P **P 20 06 28.0 -3.2**
KIS *e* pP 20 06 39.0 -2.4
KIS *e* 20 10 24.0
KIS *e* 20 16 58.6
KIS *e*S S 20 17 40.0 -6.7
KIS *e*PS PS 20 19 00.0 -9.2
KIS *e*PPS 20 19 40.0
KIS pmax pmax
comp=Z,1μm,14.0s
KIS Kishinev 95.75 317 *e*P **P 20 06 28.0 -3.2**
comp=Z,1μm,14.0s
KIS Kishinev 95.75 317 *e*PP PP 20 10 24.0 +0.8
KIS *e*SKS 20 16 58.0
KIS *e*SKKS SKKSac 20 17 26.0 -3.3
KIS *e*S S 20 17 40.0 -6.7
KIS Kishinev 95.75 317 *e*PS PS 20 19 00.0 -9.2
AKASG Malin Array Be 95.86 320 P **P 20 06 28.8 -2.8**
comp=Z,3.2nm,0.8s,mb4.8,baz=74,slow=5.2,SNR=7.8
AKASG PP PP 20 10 24.9 +0.9
comp=Z,11nm,1.1s,baz=79,slow=7.1,SNR=5.3
AKASG PKKPbc PKKPbc 20 23 20.1 -2.5
comp=Z,1.9nm,0.6s,baz=275,slow=3.2,SNR=6.4
AKASG LR LR 20 55 40.6
comp=Z,11μm,21.6s,MS6.3,baz=100,slow=39
AKASG Malin Array Be 95.86 320 P **P 20 06 28.8 -2.8**
AKASG PP PP 20 10 24.9 +0.9
AKASG PKKPbc PKKPbc 20 23 20.1 -2.5
AKASG LR LR 20 55 40.6
AKASG Malin Array Be 95.86 320 P **P 20 06 28.8 -2.8**
AKASG 20 10 24.9
KIEV Kiev 95.86 320 *e*P **P 20 06 30.9 -0.8**
comp=Z,15nm,1.1s,mb5.3
KIEV LR LR
comp=Z,11μm,22.0s,MS6.3
JOF Joensuu 95.99 333 *e*p **P 20 06 34.1 +2.2**
comp=Z,3.9nm,0.8s,mb4.9
JOF Joensuu 95.99 333 *e*P **P 20 06 34.1 +2.2**
JOF pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
KDAK Kodiak Island 96.30 33 PFAKE 20 06 40.0 +6.5
KDAK LR LR
comp=Z,6μm,21.0s,MS6.1
MNK Minsk 97.03 324 *e*P **P 20 06 34.0 -2.9**
MNK *e* 20 10 28.0
MNK *e* 20 17 12.0
MNK *e*S S 20 17 52.0 -5.4
MNK *e*PS PS 20 19 26.0 +3.1
MNK *e*SS SS 20 24 30.0 -4.4
VRI Vrincioaia 97.09 315⇑ *e*P **P 20 06 40.3 +2.9**
VRI Vrincioaia 97.09 315⇑ *i*P **P 20 06 40.3 +3.0**
PLOR Plostina 97.14 315⇑ *i*P **P 20 06 42.7 +5.1**
TSUM Tsumeb 97.53 249 *e*P **P 20 06 39.9 -0.1**
comp=Z,102nm,1.8s,mb6.1
TSUM *e*PP PP 20 10 35.2 -2.4
MLR Muntele Rosu 97.61 315 P **P 20 06 36.9 -2.8**
comp=Z,6.9nm,1.2s,mb5.0,baz=188,slow=4.6,SNR=6.0
MLR PP PP 20 10 38.0 +0.4
comp=Z,4.4nm,0.5s,baz=166,slow=5.7,SNR=4.4
MLR Muntele Rosu 97.61 315⇑ *i*P **P 20 06 44.1 +4.4**
IDI Anoyia 97.65 305 PKKPbc PKKPbc 20 23 18.4 +1.3
baz=261,slow=8.9
SLKM Skilak Lake 97.71 30 *e*P **P 20 06 38.8 -1.0**
COLD Coldfoot 98.02 23 *e*P **P 20 06 41.0 -0.1**
comp=Z,34nm,1.1s,mb5.8
KEV Kevo 98.19 339 PFAKE 20 06 50.0 +8.3
KEV LR LR
comp=Z,12μm,21.0s,MS6.3
VOIR 98.23 315⇑ *e*P **P 20 06 48.1 +5.6**
VOIR 98.23 315⇑ *i*P **P 20 06 48.1 +5.6**
BURAR Bucovina Array 98.24 317⇑ *e*P **P 20 06 47.0 +4.5**
BURAR Bucovina Array 98.24 317⇑ *i*P **P 20 06 47.0 +4.5**
KAF Kangasniemi 98.25 332 *e*p **P 20 06 45.9 +3.7**
comp=Z,5.5nm,0.8s,mb5.1
KAF Kangasniemi 98.25 332 *e*P **P 20 06 45.9 +3.7**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb5.2
BUR08 Bucovina Ar. S 98.25 317 *e*P **P 20 06 41.8 -0.7**
PMR Palmer 98.29 29 PFAKE 20 06 50.0 +7.6
PMR LR LR
comp=Z,4μm,21.0s,MS5.9
ARCES ARCESS Array B 98.71 339 P **P 20 06 42.0 -2.1**
comp=Z,2.2nm,0.7s,mb4.8,baz=134,slow=2.6,SNR=6.6
ARCES PP PP 20 10 44.3 -1.0
comp=Z,8.9nm,0.9s,baz=68,slow=8.0,SNR=4.1
ARCES PKiKP PKiKP 20 11 15.5 +0.2
comp=Z,5.3nm,0.9s,baz=134,slow=2.6,SNR=4.1
ARCES PKKPbc PKKPbc 20 23 13.7 -1.6
comp=Z,1.6nm,0.8s,baz=256,slow=3.6,SNR=6.3
ARCES LR LR 20 58 43.7
comp=Z,18μm,21.5s,MS6.5,baz=116,slow=40
ARCES ARCESS Array B 98.71 339 P **P 20 06 42.0 -2.1**
ARCES 20 10 44.3
COLA College 98.93 26 PFAKE 20 06 50.0 +4.8
COLA LR LR
comp=Z,3μm,20.0s,MS5.8
LVV L'vov 99.12 319 *e*P **P 20 06 49.0 +2.6**
LVV *e* 20 10 53.4
LVV *i* 20 17 15.2
LVV *e*S S 20 18 15.4 0.0
LVV *e*PS PS 20 19 39.8 -5.9
LVV MLR MLR
comp=N,2μm,21.0s,MS5.8
LVV MLR MLR
comp=Z,2μm,21.0s,MS5.7
LVV MLR MLR
comp=E,2μm,20.0s,MS5.8
TAOE Nuku Hiva Isla 99.81 100 *e*PP PP 20 10 45.8 -9.4
comp=E,6μm,25.1s
TAOE *e*S S 20 18 17.5 -5.2
comp=E,41μm,25.3s
TAOE *e*SS SS 20 25 10.6 -4.7
comp=E,19μm,28.6s
TAOE Nuku Hiva Isla 99.81 100 *e*LR LR 20 39 17.7
comp=E,30μm,22.4s
KWP Kalwaria 99.98 319 PFAKE 20 07 00.0 +10
KWP LR LR
comp=Z,8μm,19.0s,MS6.3
KWP Kalwaria 99.98 319 P Pdif 20 06 56.6 +6.5
KWP pmax pmax
comp=Z,20nm,1.1s,mb5.5
UZH Uzhgorod 100.23 318 *e*P Pdif 20 06 49.0 -2.3

UZH *e* 20 11 00.0
UZH *e* 20 17 25.0
UZH *eS* Sdif 20 18 15.0 -10
UZH *e* 20 19 48.0
KOLS Kolonicke sedl 100.25 318 *eP* Pdif 20 06 57.0 +5.7
KOLS pmax pmax
comp=Z,35nm,1.7s
KOLS Kolonicke sedl 100.25 318 PDIF Pdif 20 06 57.0 +5.7
KOLS *eP* PP 20 10 59.1 +1.4
BJO Bjornoya 100.37 344 *e* Pdif 20 06 56.6 +4.7
BJO *eP* PP 20 10 56.6 -1.3
BJO *eSKS* 20 17 26.6
BJO *eSS* SS 20 25 18.6 -1.6
BJO AMS AMS 21 02 27.5
comp=Z,10µm,20.4s,MS6.3
BZS Buzias 100.65 315 ||P Pdif 20 06 56.8 +3.6
BZS Buzias 100.65 315 ||*i*P Pdif 20 06 56.8 +3.7
CRVS Cervenica-Dubn 100.78 318 *eP* PP 20 10 58.4 -3.3
STHS Stebnicka Huta 100.93 319 *eP* Pdif 20 06 57.8 +3.5
STHS pmax pmax
comp=Z,14nm,1.4s
STHS Stebnicka Huta 100.93 319 PDIF Pdif 20 06 57.8 +3.5
STHS *eP* PP 20 11 02.2 -0.6
STHS *eSP* SP 20 20 08.4 +7.7
TRO Tromso 101.01 339 *eSKS* 20 17 28.8
TRO *eSS* SS 20 25 27.7 -1.5
TRO AMS AMS 20 59 08.0
comp=Z,17µm,21.9s,MS6.5
KBS Kingsbay 101.19 349 PFAKE 20 07 00.0 +4.5
KBS LR LR
comp=Z,11µm,19.0s,MS6.4
KBS Kingsbay 101.19 349 *eP* PP 20 11 03.8 -0.2
KBS *eSKS* 20 17 27.4
KBS *eSS* SS 20 25 34.2 +2.7
KBS AMS AMS 20 59 42.0
comp=Z,9µm,18.6s,MS6.3
RKT Rikitea 101.73 116 *eP* PP 20 11 07.5 -1.9
comp=Z,2µm,25.5s
RKT *eSKSac* SKSac 20 17 35.8 -0.6
comp=Z,3µm,27.0s
RKT Rikitea 101.73 116 *eP* PS PS 20 20 13.2 -1.4
comp=Z,7µm,27.8s
RKT *eSS* SS 20 25 35.0 -6.4
comp=Z,7µm,29.5s
RKT Rikitea 101.73 116 *eLQ* 20 35 46.8
comp=Z,14µm,40.5s
RKT *eLR* LR 20 40 05.7
comp=Z,17µm,24.8s
EGAK Eagle 101.79 26 PFAKE 20 07 10.0 +12
EGAK LR LR
comp=Z,4µm,21.0s,MS5.9
PSZ Piszkesteto 101.83 317 *ePdif* Pdif 20 06 59.5 +1.2
comp=Z,30nm,1.6s
PSZ Piszkesteto 101.83 317 *eP* Pdif 20 06 59.6 +1.2
PSZ pmax pmax
comp=Z,30nm,1.6s
PSZ Piszkesteto 101.83 317 *ePP* PP 20 11 20.4 +11
OJC Ojcow 101.85 320 *ePdiff* Pdif 20 07 06.1 +7.6
OJC *ePP* PP 20 11 10.6 +0.9
OJC Ojcow 101.85 320 *eP* Pdif 20 07 06.0 +7.5
OJC *e* 20 11 10.6
BUD Budapest 102.43 317 *ePP* PP 20 11 27.7 +14
VYHS Vyhne 102.53 318 *eP* Pdif 20 07 05.4 +3.9
VYHS *e* 20 11 11.5
VYHS *eSP* SP 20 20 17.3 -0.4
VYHS MLR MLR
comp=Z,5µm,24.9s,MS5.9
VYHS Vyhne 102.53 318 PDIF Pdif 20 07 05.4 +3.9
VYHS *ePP* PP 20 11 11.5 -3.3
VYHS *eSP* SP 20 20 17.3 -0.4
KOLL Kolacno 102.81 318 *ePP* PP 20 11 23.3 +6.3
OKC Ostrava-Krasne 102.93 319 *ePP* PP 20 11 20.7 +2.9
OKC *eSKS* 20 17 39.0
OKC *ex* x 20 20 05.0
OKC *ex* x 20 25 26.0
OKC AMS AMS 20 57 20.0
comp=Z,6µm,25.9s
MODS Modra-Piesok 103.57 318 *eP* Pdif 20 07 12.0 +5.9
MODS *e* 20 11 29.6
MODS *eSP* SP 20 20 27.6 -1.1
MODS Modra-Piesok 103.57 318 PDIF Pdif 20 07 12.0 +5.9
MODS *ePP* PP 20 11 29.6 +7.0
MODS *eSP* SP 20 20 27.6 -1.1
ZST Bratislava 103.70 318 *eP* Pdif 20 07 11.7 +5.0
ZST *eSP* SP 20 20 29.9 -0.2
ZST Bratislava 103.70 318 PDIF Pdif 20 07 11.7 +5.0
ZST *ePP* PP 20 11 33.0 +9.4
ZST *eSP* SP 20 20 29.9 -0.2
VRAC Vranov 103.97 319 PP PP 20 11 25.6 0.0
comp=Z,8.9nm,1.1s,baz=73,slow=8.3,SNR=3.2
DPC Dobruska-Polom 104.08 320 *ePP* PP 20 11 24.6 -1.7
DPC *eSKS* 20 17 45.2
DPC *eSP* SP 20 20 31.7 -2.2
DPC *ex* x 20 25 49.2
DPC AMS AMS 20 55 10.0
comp=Z,12µm,32.6s
SOP Sopron 104.09 317 *ePP* PP 20 11 24.5 -2.0
UPC Upice 104.26 320 *ePP* PP 20 11 24.8 -2.9
KOGS Kog 104.37 316 *ePP* PP 20 11 24.0 -4.6
KOGS *e* 20 13 51.1
KOGS *eSKSac* SKSac 20 17 46.6 -1.0
KOGS *e* 20 20 35.7
KOGS *e* 20 21 49.5
KOGS *e* 20 35 20.5
CONA Conrad Observa 104.55 317⇑*i*PP PP 20 11 27.5 -2.4
comp=Z,70nm,1.6s
CSNA Conrad Observa 104.55 317⇑*i*PP PP 20 11 27.7 -2.2
comp=Z,62nm,1.6s
TREC Trest 104.69 319 *ePP* PP 20 11 33.0 +2.1
TREC *eSKS* 20 17 46.1
TREC *eSP* SP 20 20 37.5 -2.9
TREC *eSS* SS 20 26 15.2 -6.0
TREC AMS AMS 21 00 40.0
comp=Z,9µm,21.0s
ARSA Arzberg 104.82 317⇑*i*PP PP 20 11 31.6 -0.4
comp=Z,34nm,1.4s
CEL Celeste 104.95 307 PFAKE 20 07 20.0 +7.8
CEL LR LR
comp=Z,6µm,20.0s,MS6.1
CUC Castrocucco 104.97 309 PFAKE 20 07 20.0 +7.7
CUC LR LR
comp=Z,8µm,20.0s,MS6.3
BOJS Bojanci 105.12 315 *ePP* PP 20 11 31.2 -3.0
BOJS *eSKSac* SKSac 20 17 48.3 -2.8
BOJS *e* 20 20 53.1
BOJS *eSS* SS 20 26 23.7 -3.6
BOJS *e* 20 35 34.6
PERS Pernice 105.14 316 *ePP* PP 20 11 27.1 -7.2
PERS *e* 20 13 56.7
PERS *eSKSac* SKSac 20 17 47.4 -3.7
PERS *e* 20 20 43.5
PERS *eSS* SS 20 26 23.0 -4.5
PVCC Panska Ves 105.18 320 *ePP* PP 20 11 35.2 +0.7
PVCC *eSKS* SKSac 20 17 47.3 -3.8
PVCC *eSP* SP 20 20 44.2 -1.2
PVCC *ex* x 20 26 04.3
PVCC AMS AMS 20 56 40.0
comp=Z,9µm,22.7s
SOKA Soboth 105.19 316⇑*i*PP PP 20 11 34.4 -0.4
comp=Z,50nm,1.4s
PRU Pruhonice 105.25 320 *ePP* PP 20 11 30.7 -4.3
PRU *eSKS* SKSac 20 17 47.5 -3.9
PRU *eSP* SP 20 20 45.6 -0.5
PRU *eSS* SS 20 26 19.9 -8.8
PRU AMS AMS 21 01 30.0
comp=Z,10µm,18.3s
NB2 NORSAR Subarra105.52 331 PP PP 20 11 39.5 +2.9
comp=Z,133nm,2.0s,baz=79,slow=7.4
NB2 NORSAR Subarra105.52 331 PP PP 20 11 39.5 +2.9
baz=79,slow=7.4
NOA NORSAR Array B105.52 331 PP PP 20 11 38.5 +1.9
comp=Z,2.6nm,0.8s,baz=66,slow=7.7,SNR=3.6
BRG Berggiesshubel 105.54 320 Pdif Pdif 20 07 19.0 +4.2
comp=Z,14nm,1.7s
BRG PP PP 20 11 00.7 -36
BRG *i* 20 11 34.9
BRG PP PP 20 11 42.0 +4.9
BRG SKS SKSac 20 17 54.0 +1.3
BRG SDIF Sdif 20 19 09.0 +0.2
BRG SP SP 20 20 41.0 -8.1
BRG SS SS 20 26 16.0 -17
BRG
comp=N,6µm,21.8s
BRG
comp=E,8µm,20.1s
BRG
comp=Z,10µm,19.7s
OBKA Obir 105.54 316⇑*i*PP PP 20 11 36.9 -0.4
comp=Z,30nm,1.2s
MOA Molln 105.62 317⇑*i*PP PP 20 11 35.7 -2.2
comp=Z,37nm,1.5s
NAO01 NORSAR Array S 105.71 331 PFAKE 20 11 40.0 +12
NAO01 LR LR
comp=Z,16µm,20.0s,MS6.6
COP Copenhagen 105.81 326 *i* P PP 20 11 49.1 +10
COP *i* SP 20 20 51.1 -0.6
COP
comp=Z,5µm,21.0s
GEC2 GERESS Array S 105.90 318 *ePKPdf* PKiKP 20 11 27.0 -2.0
GERES GERESS Array B 105.90 318 PKiKP PKiKP 20 11 27.7 -1.2
comp=Z,2.1nm,0.9s,baz=76,slow=5.6,SNR=4.2
GERES PKKPbc PKKPbc 20 22 55.8 +2.3
comp=Z,2.0nm,0.9s,baz=151,slow=2.2,SNR=4.7
KHC Kasperske Hory 105.95 319 *ePP* PP 20 11 36.3 -4.0
KHC *eSKS* SKSac 20 17 46.2 -8.5
KHC *ePS* PS 20 20 57.0 -1.0
KHC *ePKKP* PKKPbc 20 22 52.5 -0.9
KHC *ex* x 20 22 57.0
KHC *eSKKP* 20 26 24.0
KHC AMS AMS 21 01 10.0
comp=Z,10µm,20.7s
CLL Collm 106.08 321 *es*Pdif 20 07 25.0
CLL *i* PP PP 20 11 38.0 -3.1
CLL *es*PP 20 11 48.0
CLL *ex* x 20 11 55.0
CLL *eSKSac* SKSac 20 17 56.0 +0.9
CLL *eSKKSac* SKKSac 20 18 44.0 +0.7
CLL *eSdif* Sdif 20 19 15.0 +1.7
CLL *ePS* PS 20 20 53.0 -6.2
CLL *ePPS* 20 21 55.0
CLL *eSS* SS 20 26 36.0 -3.9
CLL *ex* x 20 27 24.0
CLL *ex* x 20 31 48.0
CLL *e*(SSSS) 20 33 42.0
CLL *ex* x 20 34 54.0
CLL *ex* x 20 36 24.0
CLL LmV 21 02 00.0
comp=Z,7µm,22.0s
KONO Kongsberg 106.59 330 PFAKE 20 11 40.0 +10
KONO LR LR
comp=Z,10µm,21.0s,MS6.3
KONO Kongsberg 106.59 330 *eSKS* SKSac 20 17 55.5 -1.5
KONO *eSS* SS 20 26 45.2 -1.1
KONO AMS AMS 21 04 03.3
comp=Z,8µm,18.5s,MS6.3
AQU L'Aquila 106.67 312 PFAKE 20 11 40.0 +9.4
AQU LR LR
comp=Z,11µm,21.0s,MS6.4
MOX Moxa 107.03 320 *ePP* PP 20 11 42.2 -5.9
comp=Z,33nm,1.5s
MOX
comp=Z,6µm,19.0s
GRF Grafenberg Arr 107.42 319 *ePdiff* Pdif 20 07 25.3 +2.1
GRF *ePP* PP 20 11 43.7 -7.3
GRF *eSKSac* SKSac 20 18 00.1 -0.9
GRF *eSS* SS 20 26 59.0 +0.8
GRF *eL* 21 05 15.0
comp=Z,7µm,20.2s
MUD Monsted U'grnd 107.48 327 *i* P PP 20 12 02.9 +12
MUD *i* S SKSac 20 18 05.3 +4.3
MUD *e* 20 21 06.1
MUD
comp=Z,8µm,22.0s
DAG Danmarks Havn 107.79 351 *eP* PKiKP 20 11 33.0 +1.3
DAG LR LR
comp=Z,12µm,23.0s,MS6.4
DAG Danmarks Havn 107.79 351 *i* P PKiKP 20 11 33.0 +1.3
DAG
comp=Z,12µm,23.0s
BER Bergen 108.48 331 *eSKS* SKSac 20 18 02.9 -2.3
BER *eSS* SS 20 27 11.9 +0.1
BER AMS AMS 21 05 43.2
comp=Z,9µm,18.2s,MS6.4
DAVOX Davos/Dischmat 108.71 317 PP PP 20 12 02.6 +2.1
comp=Z,3.8nm,0.6s,baz=89,slow=12,SNR=4.4
DAVOX PKKPbc PKKPbc 20 22 44.5 -0.2
comp=Z,1.8nm,0.5s,baz=324,slow=12,SNR=6.7
BFO Black Forest 109.51 318 PFAKE 20 11 50.0 +14
BFO LR LR
comp=Z,6µm,19.0s,MS6.2
HAU Haudompre 110.87 318 *ePKIKP* PKiKP 20 11 36.7 -1.6
HAU *eMLR* MLR
comp=Z,8µm,19.5s,MS6.0
HAU Haudompre 110.87 318 *ePKIKP* PKiKP 20 11 36.7 -1.6
HAU MLR MLR
comp=Z,8µm,19.5s,MS6.3
BNI Bardonecchia 111.18 315 PFAKE 20 11 50.0 +11
BNI LR LR
comp=Z,10µm,22.0s,MS6.3
CABF La Chapelle 111.31 317 *ePKIKP* PKiKP 20 11 37.9 -1.2
comp=Z,40nm,1.4s
GIVF Givet 111.41 321 *ePKIKP* PKiKP 20 11 37.8 -1.4
ORIF Oris-en-Rattie 111.77 315 *ePKIKP* PKiKP 20 11 38.4 -1.7
ORIF *eMLR* MLR
comp=Z,12µm,21.2s,MS6.2
BAIF Baives 111.80 321 *ePKIKP* PKiKP 20 11 38.3 -1.7
SMRF Simiane la Rot 112.15 314 *ePKIKP* PKiKP 20 11 38.7 -2.1
comp=Z,107nm,1.6s
LOR Lormes 112.67 318 *ePKIKP* PKiKP 20 11 39.9 -1.8
comp=Z,33nm,1.5s
LOR *eMLR* MLR
comp=Z,8µm,23.0s,MS6.0
LOR Lormes 112.67 318 *ePKIKP* PKiKP 20 11 39.9 -1.8
LOR MLR MLR
comp=Z,8µm,23.0s,MS6.3
SMF Signal de Mont 112.82 317 *ePKIKP* PKiKP 20 11 40.2 -1.8
SSF Saint Saulge 112.95 318 *ePKIKP* PKiKP 20 11 41.1 -1.2
AVF Avril sur Loir 113.11 317 *ePKIKP* PKiKP 20 11 40.6 -2.0
BGF Bois d'Agland 113.51 317 *ePKIKP* PKiKP 20 11 42.2 -1.1
YKA Yellowknife Ar 113.68 24 PKiKP PKiKP 20 11 41.6 -1.6
comp=Z,3.6nm,0.7s,baz=307,slow=1.9,SNR=10.0
YKA PP PP 20 12 38.1 +2.5
comp=Z,4.6nm,0.8s,baz=315,slow=2.2,SNR=4.1
YKA PKKPbc PKKPbc 20 22 24.1 -4.7
comp=Z,1.6nm,0.8s,baz=110,slow=3.8,SNR=4.5
YKA Yellowknife Ar 113.68 24 PKPdf PKiKP 20 11 41.6 -1.6
YKA PP PP 20 12 38.1 +2.5
YKA PKKPbc PKKPbc 20 22 24.1 -4.7
YKA Yellowknife Ar 113.68 24 PKIKP PKiKP 20 11 41.6 -1.6
YKA 20 12 38.1
TCF Toulx Ste Croi 114.00 317 *ePKIKP* PKiKP 20 11 42.8 -1.5
comp=Z,42nm,1.6s
TAM Tamanrasset 114.31 291 *ePKPdf* PKiKP 20 11 48.8 +3.2
EKA Eskdalemuir Ar 114.44 328 PKP PKiKP 20 11 45.9 +1.0
comp=Z,2.4nm,1.0s,baz=15,slow=3.2,SNR=3.5
EKA PKKPbc PKKPbc 20 22 25.2 -0.7
comp=Z,2.9nm,0.9s,baz=246,slow=3.4,SNR=5.6
ESK Eskdalemuir 114.47 328 PFAKE 20 11 50.0 +5.1
ESK LR LR
comp=Z,11µm,22.0s,MS6.4
NLWA Neilton Lookou 114.58 41 PFAKE 20 11 50.0 +4.6
NLWA LR LR
comp=Z,3µm,19.0s,MS5.9
RJF Les Rejaudoux 114.70 316 *ePKIKP* PKiKP 20 11 44.6 -1.1
comp=Z,39nm,1.5s
RJF *eMLR* MLR
comp=Z,8µm,22.5s,MS6.0
RJF Les Rejaudoux 114.70 316 *ePKIKP* PKiKP 20 11 44.6 -1.1
RJF MLR MLR
comp=Z,8µm,22.5s,MS6.3
MFF Saint Martin d 115.49 318 *ePKIKP* PKPdf 20 11 45.7 -1.4
JCW Jim Creek 115.61 40 *ePKPdf* PKPdf 20 11 48.8 +1.5
COR Corvallis 115.68 44 PFAKE 20 12 00.0 +12
COR LR LR
comp=Z,5µm,21.0s,MS6.1
LON Longmire 116.11 42 *ePKPdf* PKPdf 20 11 48.0 -0.3
HUMO Hull Mountain 116.41 46 *ePKPdf* PKPdf 20 11 49.1 +0.1
HUMO LR LR
comp=Z,6µm,22.0s,MS6.1
YBH Yreka Blue Hor 116.79 47 *ePKPdf* PKPdf 20 11 47.2 -2.6
BORG Borgarnes 116.93 342 PFAKE 20 12 00.0 +11
BORG LR LR
comp=Z,8µm,20.0s,MS6.3
HOPS Hopland 117.13 50 PFAKE 20 12 00.0 +9.5
HOPS LR LR
comp=Z,6µm,22.0s,MS6.2
WDC Whiskeytown Da 117.18 49 *ePKPdf* PKPdf 20 11 49.8 -0.8
MCCM Marconi Confer 117.45 51 PFAKE 20 12 00.0 +8.8
MCCM LR LR
comp=Z,5µm,20.0s,MS6.1
NSHM Saint Helena R 117.58 51 *ePKPdf* PKPdf 20 11 52.4 +1.0
HAWA Hanford 117.71 42 *ePKPdf* PKPdf 20 11 51.7 +0.3
HAWA LR LR
comp=Z,4µm,22.0s,MS6.0
TOA0 Torodi Ar. Sit 117.86 281 *ePKPdf* PKPdf 20 11 50.8 -1.8
TORD Torodi Ar. Bea 117.86 281 PKP PKPdf 20 11 51.4 -1.2
comp=Z,10nm,0.6s,baz=50,slow=1.7,SNR=39
TORD PKKPbc PKKPbc 20 22 14.3 +1.4
comp=Z,1.6nm,0.7s,baz=309,slow=3.5,SNR=5.0
TORD Torodi Ar. Bea 117.86 281 PKP PKPdf 20 11 51.4 -1.2
TORD PKKPbc PKKPbc 20 22 14.3 +1.4
OHCM Honcut 118.26 50 *ePKPdf* PKPdf 20 11 51.7 -1.0
MOD Modoc 118.49 47 *ePKPdf* PKPdf 20 11 51.5 -1.6
MOD LR LR
comp=Z,6µm,22.0s,MS6.2
NEW Newport 118.62 39 *ePKPdf* PKPdf 20 11 50.7 -2.4
NEW LR LR
comp=Z,5µm,22.0s,MS6.1
LNOR Lincton Mounta 118.70 42 *ePKPdf* PKPdf 20 11 54.9 +1.5
EDM Edmonton 118.75 33 *ePKPdf* PKPdf 20 11 51.5 -1.7
CMB Columbia Colle 119.39 51 *ePKPdf* PKPdf 20 11 49.0 -5.9
CMB LR LR
comp=Z,6µm,20.0s,MS6.2
WVOR Wild Horse Val 119.53 46 *ePKPdf* PKPdf 20 11 54.4 -0.7
BMO Blue Mountains 119.69 43 *ePKPdf* PKPdf 20 11 52.7 -2.6
BMO LR LR
comp=Z,5µm,20.0s,MS6.1
PAHR Pah Rah Range 119.74 49 *ePKPdf* PKPdf 20 11 51.9 -3.6
ESDC Sonseca Array 120.05 311 PKP PKPdf 20 11 55.8 -0.4
comp=Z,0.3nm,0.4s,baz=28,slow=2.9,SNR=3.7
ESLA Sonseca Array 120.05 311 PFAKE 20 12 10.0 +14
ESLA LR LR
comp=Z,30µm,21.0s,MS6.9
WALA Waterton Lakes 120.26 37 *ePKPdf* PKPdf 20 11 57.6 +1.4
EFI East Falkland 120.27 182 PFAKE 20 12 10.0 +14
EFI LR LR
comp=Z,14µm,21.0s,MS6.6
PAB San Pablo 120.37 311 PFAKE 20 12 10.0 +13
PAB LR LR
comp=Z,6µm,21.0s,MS6.2
SFJD Kangerlussuaq 120.85 355 *i* P PKPdf 20 12 12.1 +15
comp=Z,19nm,0.8s
NVAR Mina Array Bea 120.89 50 PKP PKPdf 20 11 58.4 +0.6
comp=Z,4.2nm,0.6s,baz=252,slow=2.5,SNR=13
NVAR PKKPbc PKKPbc 20 22 01.9 -0.5
comp=Z,3.2nm,0.7s,baz=131,slow=4.0,SNR=10.0
NVAR SKKP 20 26 11.0
comp=Z,3.9nm,1.1s,baz=127,slow=5.8,SNR=3.7
NVAR Mina Array Bea 120.89 50 PKP PKPdf 20 11 58.4 +0.6
NVAR PKKPbc PKKPbc 20 22 01.9 -0.5
NVAR SKKP 20 26 11.0
MTUM Tungsten Hills 120.96 51 *ePKPdf* PKPdf 20 11 59.1 +1.2
BMN Battle Mountai 121.14 47 PFAKE 20 12 10.0 +12
BMN LR LR
comp=Z,4µm,22.0s,MS6.1
MSO Missoula 121.16 40 *ePKPdf* PKPdf 20 11 57.0 -1.0
MSO LR LR
comp=Z,3µm,20.0s,MS5.9
CHMT Chamberlain Mo 121.56 39 *ePKPdf* PKPdf 20 11 59.8 +1.0
TPH Tonopah 121.80 50 *ePKPdf* PKPdf 20 12 00.3 +0.7
DAC Darwin (Calif) 121.98 52 PFAKE 20 12 10.0 +10
DAC LR LR
comp=Z,5µm,20.0s,MS6.2
HLID Hailey 122.09 43 *ePKPdf* PKPdf 20 12 00.2 +0.3
HLID LR LR
comp=Z,5µm,21.0s,MS6.1
MWC Mount Wilson 122.09 55 *ePKPdf* PKPdf 20 11 59.1 -1.1
MWC LR LR
comp=Z,6µm,19.0s,MS6.3
MTE Manteigas 122.47 313 PFAKE 20 12 10.0 +9.2
MTE LR LR
comp=Z,7µm,21.0s,MS6.3
ELK Elko 122.48 47 *ePKPdf* PKPdf 20 12 00.3 -0.4
ELK LR LR
comp=Z,5µm,21.0s,MS6.2
DLMT Dillon 122.60 41 *ePKPdf* PKPdf 20 12 00.0 -0.8
MCMT McKenzie Canyo 122.65 41 *ePKPdf* PKPdf 20 12 01.1 +0.1
GSC Goldstone 122.84 53 *ePKPdf* PKPdf 20 12 00.7 -1.0
GSC LR LR
comp=Z,5µm,20.0s,MS6.2
TPNV Topopah Spring 122.85 51 *ePKPdf* PKPdf 20 12 01.4 -0.2
BOZ Bozeman (W) 123.11 40 *ePKPdf* PKPdf 20 12 00.2 -1.6
BOZ *ePP* PP 20 13 40.6 -0.7
BOZ *eSKPdf* SKPdf 20 15 27.5 -7.6
BOZ LR LR
comp=Z,3µm,19.0s,MS6.0
BOZ Bozeman (W) 123.11 40 *ePKIKP* PKPdf 20 12 00.2 -1.6
BOZ *e* 20 13 40.6
BOZ MLR MLR
comp=Z,3µm,19.0s,MS6.0
EGMT Eagleton 123.20 37 *ePKPdf* PKPdf 20 12 01.3 -0.6
EGMT LR LR
comp=Z,4µm,22.0s,MS6.1
EVO Evora 123.39 311 *ePKIKP* PKPdf 20 12 02.3 -0.3
comp=Z,101nm,1.5s
EVO *eMLR* MLR
comp=Z,6µm,22.5s,MS5.9
PFO Pinyon Flat Ob 123.53 55 *ePKPdf* PKPdf 20 12 02.8 -0.3
PFO LR LR
comp=Z,7µm,19.0s,MS6.3
FFC Flin Flon 123.53 27 *ePKPdf* PKPdf 20 12 00.7 -1.7
FFC LR LR
comp=Z,5µm,20.0s,MS6.2
KIC Kosan Boka 123.73 272 *ePKIKP* PKPdf 20 12 03.0 -1.0
comp=Z,465nm,1.6s
HVU Hansel Valley 123.86 45 *ePKPdf* PKPdf 20 12 03.4 0.0
DBIC Dimbokro 123.88 273 PKP PKPdf 20 12 03.0 -1.2
comp=Z,24nm,0.9s,baz=36,slow=0.9,SNR=17
DBIC Dimbokro 123.88 273 PKIKP PKPdf 20 12 03.1 -1.1
DBIC MLR MLR
comp=Z,7µm,19.0s
YMR Madison River 123.94 41 *ePKPdf* PKPdf 20 12 03.9 +0.4
BGU Big Grassy Mou 123.99 46 *ePKPdf* PKPdf 20 12 03.4 -0.3
LIC Lamto 124.00 272 *ePKIKP* PKPdf 20 12 02.8 -1.7
comp=Z,68nm,0.9s
LIC *eMLR* MLR
comp=Z,12µm,19.2s,MS6.3
LIC Lamto 124.00 272 *ePKIKP* PKPdf 20 12 03.5 -1.0
comp=Z,203nm,1.6s
LIC Lamto 124.00 272 *ePKPdf* PKPdf 20 12 02.8 -1.7
LIC LR LR
comp=Z,6µm,19.3s,MS6.3
TIC Toumodi 124.04 272 *ePKIKP* PKPdf 20 12 02.9 -1.6
comp=Z,164nm,1.0s
YNR Norris Junctio 124.11 41 *ePKPdf* PKPdf 20 12 02.5 -1.2
YFT Old Faithful 124.12 41 *ePKPdf* PKPdf 20 12 05.9 +2.1
LDFC Landfair 124.24 53 *ePKPdf* PKPdf 20 12 04.1 -0.2
DCID1 Drake Creek 124.24 42 *ePKPdf* PKPdf 20 12 03.3 -0.7
RRI2 Red Ridge 124.25 42 *ePKPdf* PKPdf 20 12 03.8 -0.3
SPUT South Promonto 124.26 45 *ePKPdf* PKPdf 20 12 01.6 -2.6
GCMT Greycliff 124.28 39 *ePKPdf* PKPdf 20 12 03.6 -0.5
IMW Indian Meadow 124.28 42 *ePKPdf* PKPdf 20 12 04.1 -0.1
LKWY Lake 124.35 41 PFAKE 20 12 10.0 +5.8
LKWY LR LR

comp=Z,6µm,19.0s,MS6.2
DUG Dugway 124.41 46 *e*PKPdf PKPdf 20 12 04.0 -0.5
DUG LR LR
comp=Z,5µm,19.0s,MS6.2
TPAW Teton Pass 124.44 42 *e*PKPdf PKPdf 20 12 04.3 -0.2
MOOW Moose Ponds 124.47 42 *e*PKPdf PKPdf 20 12 03.4 -1.1
REDW Red Top Meadow 124.56 42 *e*PKPdf PKPdf 20 12 04.5 -0.1
SNOW Snow King Moun 124.58 42 *e*PKPdf PKPdf 20 12 04.1 -0.7
LOHW Long Hollow 124.62 42 *e*PKPdf PKPdf 20 12 04.3 -0.5
AHID Auburn Hatcher 124.64 43 PFAKE 20 12 10.0 +5.2
AHID LR LR
comp=Z,4µm,20.0s,MS6.1
NOQ North Oquirrh 124.74 46 *e*PKPdf PKPdf 20 12 05.4 +0.3
HWUT Hardware Ranch 124.77 44 *e*PKPdf PKPdf 20 12 03.9 -1.2
HWUT LR LR
comp=Z,5µm,21.0s,MS6.1
RLMT Red Lodge 124.83 40 *e*PKPdf PKPdf 20 12 05.1 -0.1
CCUT Cedar City 124.88 50 *e*PKPdf PKPdf 20 12 05.3 -0.1
GLA Glamis 124.98 55 *e*PKPdf PKPdf 20 12 04.6 -1.2
GLA LR LR
comp=Z,6µm,20.0s,MS6.2
NLU North Lily Min 125.02 46 *e*PKPdf PKPdf 20 12 03.8 -1.9
JLU Jordanelle 125.23 46 *e*PKPdf PKPdf 20 12 03.0 -3.0
JLU *e*PP PP 20 13 54.6 -1.2
MPU Maple Canyon 125.31 46 *e*PKPdf PKPdf 20 12 04.6 -1.6
MPU LR LR
comp=Z,5µm,20.0s,MS6.2
MVU Marysvale 125.42 48 PFAKE 20 12 20.0 +14
MVU LR LR
comp=Z,5µm,21.0s,MS6.2
DAU Daniels Canyon 125.44 46 *e*PKPdf PKPdf 20 12 04.6 -1.9
MSU Marysvale 125.45 48 *e*PKPdf PKPdf 20 12 07.0 +0.5
BW06 Boulder Array 125.67 42 PFAKE 20 12 20.0 +13
BW06 LR LR
comp=Z,5µm,21.0s,MS6.2
PDAR Pinedale Array 125.67 42 PKP PKPdf 20 12 06.5 -0.4
comp=Z,1.3nm,0.5s,baz=168,slow=0.7,SNR=12
PDAR PKKPbc 20 21 43.4
comp=Z,1.0nm,0.7s,baz=130,slow=6.7,SNR=6.4
PDAR SKKPbc 20 25 28.9
comp=Z,1.6nm,0.9s,baz=129,slow=4.7,SNR=4.0
LAO LASA Array 125.95 37 *e*PKPdf PKPdf 20 12 07.2 0.0
LAO LR LR
comp=Z,5µm,21.0s,MS6.2
DGMT Dagmar 126.16 34 *e*PKPdf PKPdf 20 12 07.3 -0.3
DGMT LR LR
comp=Z,4µm,20.0s,MS6.1
SRU San Rafael 126.44 47 *e*PKPdf PKPdf 20 12 08.1 -0.4
WUAZ Wupatki 127.04 51 *e*PKPdf PKPdf 20 12 09.6 -0.1
RWWY Rawlins 127.71 43 *e*PKPdf PKPdf 20 12 09.1 -1.7
PV10 Paradox Valley 127.80 47 *e*PKPdf PKPdf 20 12 11.1 0.0
PV01 Paradox Valley 128.23 47 *e*PKPdf PKPdf 20 12 11.8 -0.1
TUC Tucson 128.47 55 *e*PKPdf PKPdf 20 12 11.8 -0.7
RSSD Black Hills 128.59 39 *e*PKPdf PKPdf 20 12 11.1 -1.3
MVCO Mesa Verde 128.63 48 *e*PKPdf PKPdf 20 12 12.8 +0.1
MVCO LR LR
comp=Z,4µm,20.0s,MS6.1
SMCO Snowmass 128.95 45 *e*PKPdf PKPdf 20 12 11.8 -1.4
SMCO *e*SKPdf SKPdf 20 15 31.8 -15
PHWY Pilot Hill 129.06 42 *e*PKPdf PKPdf 20 12 07.6 -5.8
ULM Lac du Bonnet 129.29 28 PKP PKPdf 20 12 13.9 +0.4
comp=Z,4.5nm,0.6s,baz=282,slow=3.1,SNR=4.1
ULM SKPbc 20 15 32.5
comp=Z,8.4nm,0.9s,baz=317,slow=8.8,SNR=4.0
ISCO Idaho Springs 129.63 44 *e*PKPdf PKPdf 20 12 15.3 +0.8
ISCO LR LR
comp=Z,5µm,22.0s,MS6.2
ASCN Ascension 130.38 252 PFAKE 20 12 30.0 +13
ASCN LR LR
comp=Z,8µm,22.0s,MS6.4
PLCA Paso Flores 130.57 171 PKP PKPdf 20 12 16.2 -0.1
comp=Z,30nm,1.2s,baz=238,slow=1.6,SNR=14
PLCA SKPbc SKPbc 20 15 40.1 +2.4
comp=Z,50nm,1.3s,baz=164,slow=4.0,SNR=13
SDCO Great Sand Dun 130.60 47 *e*PKPdf PKPdf 20 12 16.6 +0.2
AGMN Agassiz Refuge 130.64 30 PFAKE 20 12 30.0 +14
AGMN LR LR
comp=Z,5µm,20.0s,MS6.2
LAZ Ladron 130.69 51 *e*PKPdf PKPdf 20 12 16.5 -0.1
LENM Lemitar 130.90 51 *e*PKPdf PKPdf 20 12 17.6 +0.5
ANMO Albuquerque 131.01 50 *e*PKPdf PKPdf 20 12 14.9 -2.4
ANMO *e*SKPbc SKPbc 20 15 39.6 +0.1
ANMO LR LR
comp=Z,5µm,20.0s,MS6.2
LPM Los Pinos Moun 131.11 51 *e*PKPdf PKPdf 20 12 17.9 +0.5
BNM Barren Site 131.17 51 *e*PKPdf PKPdf 20 12 17.1 -0.5
OGNE Ogallala 131.49 41 PFAKE 20 12 30.0 +12
OGNE LR LR
comp=Z,5µm,19.0s,MS6.3
EYMN Ely 132.96 27 PFAKE 20 12 30.0 +9.5
EYMN LR LR
comp=Z,6µm,22.0s,MS6.3
ECSD EROS,Sioux Fal 133.21 35 *e*PKPdf PKPdf 20 12 19.0 -2.2
ECSD *e*SKPbc SKPbc 20 15 46.3 -0.7
ECSD LR LR
comp=Z,6µm,19.0s,MS6.3
SCHQ Schefferville 133.32 4 PKP PKPdf 20 12 21.8 +0.8
comp=Z,6.7nm,0.8s,baz=332,slow=7.1,SNR=6.4
SCHQ SKPbc SKPbc 20 15 52.5 +5.5
comp=Z,22nm,1.0s,baz=36,slow=6.8,SNR=4.3
SCHQ Schefferville 133.32 4 PKP PKPdf 20 12 21.8 +0.8
SCHQ SKPbc SKPbc 20 15 52.5 +5.5
CBKS Cedar Bluff 134.10 42 PFAKE 20 12 30.0 +7.0
CBKS LR LR
comp=Z,5µm,21.0s,MS6.2
AMTX Amarillo 134.62 48 *e*PKPdf PKPdf 20 12 23.2 -0.9
AMTX LR LR
comp=Z,7µm,19.0s,MS6.4
TXAR Lajitas Array 135.21 56 PKhKP 20 12 14.3
comp=Z,1.3nm,0.7s,baz=241,slow=3.4,SNR=9.6
TXAR PKP PKPdf 20 12 27.6 +2.2
comp=Z,3.7nm,0.8s,baz=318,slow=1.2,SNR=11
TXAR SKPbc SKPbc 20 15 55.0 +1.0
comp=Z,7.3nm,1.1s,baz=253,slow=2.1,SNR=4.1
TXAR SKKPbc 20 24 51.1
comp=Z,1.9nm,0.9s,baz=142,slow=4.3,SNR=5.1
TXAR Lajitas Array 135.21 56 PKP PKPdf 20 12 27.6 +2.2
TXAR SKPbc SKPbc 20 15 55.0 +1.0
TXAR SKKPbc 20 24 51.1
COWI Conover 135.41 27 PFAKE 20 12 30.0 +4.8
COWI LR LR
comp=Z,6µm,20.0s,MS6.3
KSU1 Kansas State U 135.98 40 *e*PKPdf PKPdf 20 12 26.9 +0.4
KSU1 LR LR
comp=Z,5µm,20.0s,MS6.3
WMOK Wichita Mounta 136.81 47 *e*PKPdf PKPdf 20 12 18.6 -10
WMOK *e*SKPbc SKPbc 20 15 44.7 -14
LPA La Plata 136.97 184 *ce*PKP PKPdf 20 12 27.0 -1.5
LPA *e*PP PP 20 15 11.0 +0.6
LPA *e*SKP 20 15 57.0
LPA *e*SKP 20 16 05.0
LPA *e*PKS 20 16 11.0
LPA *e*SKKS 20 28 36.0
LPA
comp=Z,27µm,21.0s
LPA La Plata 136.97 184⇑ *e*PKIKP PKPdf 20 12 27.0 -1.5
LPA *e* 20 15 11.0
LPA MLR MLR
comp=Z,27µm,21.0s,MS7.0
JFWS Jewell Farm 137.21 31 *e*PKPdf PKPdf 20 12 29.7 +1.1
JFWS LR LR
comp=Z,8µm,22.0s,MS6.4
JCT Junction City 137.91 53 *e*PKPdf PKPdf 20 12 25.4 -4.9
JCT LR LR
comp=Z,6µm,20.0s,MS6.4
ZAIG Zacatecas 138.01 65 *i* P PKPdf 20 12 31.4 +0.7
GLMI Grayling 138.38 25 PFAKE 20 12 40.0 +9.3
GLMI LR LR
comp=Z,6µm,20.0s,MS6.3
HDIL Hopedale 139.38 33 *e*PKPdf PKPdf 20 12 32.4 -0.3
CFAA Coronel Fontan 139.87 171 SKPbc SKPbc 20 16 09.6 +1.9
comp=Z,2.1nm,1.0s,baz=195,slow=4.0,SNR=7.1
CCM Cathedral Cave 139.95 38 *e*PKPdf PKPdf 20 12 25.0 -8.8
CCM LR LR
comp=Z,7µm,21.0s,MS6.4
FVM French Village 140.49 37 *e*PKPdf PKPdf 20 12 25.2 -10
MIAR Mount Ida 140.57 44 *e*PKPdf PKPdf 20 12 29.3 -5.7
MIAR LR LR
comp=Z,6µm,19.0s,MS6.4
KVTX Kingsville 140.59 56 PFAKE 20 12 40.0 +4.7
KVTX LR LR
comp=Z,6µm,20.0s,MS6.3
TLL Tololo Astrono 140.79 167 *e*P PKPdf 20 12 29.0 -6.6
AAM Ann Arbor 140.83 26 *e*PKPdf PKPdf 20 12 34.5 -0.8
AAM LR LR
comp=Z,6µm,21.0s,MS6.3
HKT Hockley 141.24 51 *e*PKPdf PKPdf 20 12 32.0 -4.4
HKT LR LR
comp=Z,7µm,20.0s,MS6.4
UALR University of 141.27 42 *e*PKPdf PKPdf 20 12 36.9 +0.6
NATX Nacogdoches 141.27 48 *e*PKPdf PKPdf 20 12 34.0 -2.4
NATX LR LR
comp=Z,6µm,19.0s,MS6.3
OLIL Olney 141.32 34 *e*PKPdf PKPdf 20 12 36.3 0.0
SIUC Southern Illin 141.38 36 *e*PKPdf PKPdf 20 12 33.2 -3.3
BLO Bloomington 141.86 32 *e*PKPdf PKPdf 20 12 31.5 -5.8
PBVM Pinon 141.91 69 *e*P PKPdf 20 12 37.8 0.0
LCO Las Campanas 141.93 167 *e*PKPdf PKPdf 20 12 33.8 -3.9
LCO LR LR
comp=Z,15µm,22.0s,MS6.7
LCO Las Campanas 141.93 167 *e*P PKPdf 20 12 31.9 -5.8
LONY Lake Ozonia 142.00 15 *e*PKPdf PKPdf 20 12 36.0 -1.3
LONY LR LR
comp=Z,5µm,21.0s,MS6.3
GNAR Gosnell 142.05 39 *e*PKPdf PKPdf 20 12 38.9 +1.2
USIN University of 142.10 35 *e*PKPdf PKPdf 20 12 35.5 -2.2
IIO Organos 142.21 69 *e*P PKPdf 20 12 37.8 -0.6
PKME Peaks-Kenny Pk 142.48 9 *e*PKPdf PKPdf 20 12 35.1 -3.1
ERPA Erie 142.50 23 PFAKE 20 12 50.0 +12
ERPA LR LR
comp=Z,9µm,22.0s,MS6.5
WCI Wyandotte Cave 142.67 33 *e*PKPdf PKPdf 20 12 32.7 -6.0
NCB Newcomb 142.69 15 *e*PKPdf PKPdf 20 12 34.6 -3.9
NCB LR LR
comp=Z,7µm,21.0s,MS6.4
ACSO Alum Creek Sta 142.79 28 *e*PKPdf PKPdf 20 12 36.7 -2.2
ACSO LR LR
comp=Z,7µm,21.0s,MS6.4
LBNH Lisbon 142.99 13 PFAKE 20 12 50.0 +11
LBNH LR LR
comp=Z,7µm,22.0s,MS6.4
WVT Waverly 143.27 37 *e*PKPdf PKPdf 20 12 35.1 -4.7
OXF Oxford 143.35 40 *e*PKPdf PKPdf 20 12 36.4 -3.6
OXF LR LR
comp=Z,6µm,20.0s,MS6.3
ACCN Adirondack Com 143.39 15 *e*PKPdf PKPdf 20 12 39.8 0.0
HNH Hanover 143.42 13 *e*PKPdf PKPdf 20 12 36.1 -3.7
BINY Binghamton 143.82 18 *e*PKPdf PKPdf 20 12 36.7 -3.9
BINY LR LR
comp=Z,8µm,22.0s,MS6.4
VBMS Vicksburg 143.99 44 *e*PKPdf PKPdf 20 12 38.5 -2.7
CAM4 Nova Friburgo 144.40 211 *e*P PKPdf 20 12 36.4 -5.9
CAM4 *i* 20 12 40.1
CAM4 *i* 20 12 46.0
CAM4 *i* 20 12 57.8
CAM4 *i* 20 13 01.3
CAM4 *i* 20 13 11.3
CAM4 *i* 20 13 21.3
CAM4 *i* 20 14 13.3
CAM4 *i* 20 14 29.6
SSPA Standing Stone 144.57 22 *e*PKPdf PKPdf 20 12 37.7 -4.3
CAM3 Guarapari 144.62 215⇑ *i*P PKPdf 20 12 41.9 -0.7
CAM3 *i* 20 12 44.6
CAM3 *i* 20 12 46.4
CAM3 *i* 20 12 48.6
CAM3 *i* 20 12 51.0
CAM3 *i* 20 13 02.1
MCWV Mont Chateau 144.64 25 *e*PKPdf PKPdf 20 12 39.3 -2.8
MCWV LR LR
comp=Z,9µm,21.0s,MS6.5
QUA2 Belchertown 144.75 14 *e*PKPdf PKPdf 20 12 39.1 -3.1
WES Weston 144.89 13 *e*PKPdf PKPdf 20 12 39.8 -2.7
SWET Sewanee 145.02 36 *e*PKPdf PKPdf 20 12 40.1 -2.8
BRYW Bryant College 145.28 13 *e*PKPdf PKPdf 20 12 40.9 -2.3
HUIG Huatulco 145.34 74 *i* P PKPbc 20 12 42.8 -1.0
TZTN Tazewell 145.38 32 *e*PKPdf PKPdf 20 12 41.6 -1.8
LUPA Lehigh Univers 145.47 19 *e*PKPdf PKPdf 20 12 41.8 -1.7
PAL Palisades 145.53 17 *e*PKPdf PKPdf 20 12 42.4 -1.2
BRNJ Basking Ridge 145.64 18 *e*PKPdf PKPdf 20 12 43.3 -0.5
CPCT Cooper Cave 145.66 35 *e*PKPdf PKPdf 20 12 42.3 -1.7
MVL Millersville 145.68 20 *e*PKPdf PKPdf 20 12 42.5 -1.3
CPNY Central Park 145.72 17 *e*PKPdf PKPdf 20 12 42.7 -1.3
LRAL Lakeview Retre 145.84 40 *e*PKPdf PKPdf 20 12 42.9 -1.5
LRAL LR LR
comp=Z,7µm,20.0s,MS6.4
TKL Tuckaleechee C 145.92 33 *e*PKPdf PKPdf 20 12 43.0 -1.4
SDMD Soldier's Deli 146.03 22 *e*PKPdf PKPdf 20 12 43.4 -1.1
ELN Prospectdale 146.24 28 *e*PKPdf PKPdf 20 12 44.7 -0.2
CMIG Matias Romero 146.28 72 *i* P PKPbc 20 12 45.8 -0.9
comp=Z,81nm,1.0s,baz=285,slow=3.7,SNR=5.0
CMIG Matias Romero 146.28 72 *i* P PKPdf 20 12 43.6 -1.9
BLA Blacksburg 146.41 28 *e*PKPdf PKPdf 20 12 45.6 +0.4
BLA LR LR
comp=Z,10µm,22.0s,MS6.6
TUIG Tuzandepetl 146.52 70 *i* P PKPdf 20 12 46.1 +0.1
CBN Corbin 146.88 23 *e*PKPbc PKPbc 20 12 47.6 -0.2
CBN LR LR
comp=Z,8µm,19.0s,MS6.5
BRAL Brewton 147.08 43 *e*PKPbc PKPbc 20 12 48.2 -0.4
BRAL LR LR
comp=Z,7µm,20.0s,MS6.5
CEN1 Los Morros 147.44 165 *e*P PKPdf 20 12 48.3 +0.9
GOGA Godfrey 147.74 36 *e*PKPdf PKPdf 20 12 47.9 +0.3
GOGA LR LR
comp=Z,9µm,21.0s,MS6.5
JSC Jenkinsville 148.31 32 *e*PKPbc PKPbc 20 12 51.1 -0.8
LVC Limon Verde 148.50 167 PKPbc PKPbc 20 12 50.7 -2.0
baz=89,slow=1.0
LVC Limon Verde 148.50 167 PKPbc PKPbc 20 12 50.7 -2.0
LVC LR LR
comp=Z,12µm,20.0s,MS6.7
LVC Limon Verde 148.50 167⇑ *i*P PKPbc 20 12 51.0 -1.7
CNNC Cliffs of the 149.19 27 *e*PKPdf PKPdf 20 12 50.4 +0.5
CNNC LR LR
comp=Z,10µm,22.0s,MS6.5
COW Cow Castle Cre 149.30 33 *e*PKPbc PKPbc 20 12 54.3 -0.1
NHSC New Hope 149.79 32 PFAKE 20 13 00.0 +9.1
NHSC LR LR
comp=Z,9µm,20.0s,MS6.6
PB01 Plate Boundary 149.87 165⇑ *i*P PKPdf 20 12 52.1 +0.7
PAYG Puerto Ayora 149.95 106 *e*PKPbc PKPbc 20 12 53.6 -3.0
RCBR Riachuelo 150.93 242 *e*PKPdf PKPdf 20 12 54.0 +0.8
DWPF Disney 152.68 41 PFAKE 20 13 00.0 +4.5
DWPF LR LR
comp=Z,7µm,20.0s,MS6.5
BDFB Brasilia 152.80 209 PKP PKPdf 20 12 56.0 0.0
comp=Z,5.3nm,0.8s,baz=180,slow=0.0
BDFB PKPbc PKPbc 20 13 03.7 +0.7
baz=188,slow=6.8
ARE Arequipa 153.54 158 *e*P PKPdf 20 12 58.0 +1.0
NNA Nana 154.77 143 PKP PKPdf 20 12 59.1 +0.3
comp=Z,25nm,0.9s,baz=250,slow=3.2,SNR=8.8
NNA Nana 154.77 143 PKP PKPdf 20 12 59.1 +0.3
NNA LR LR
comp=Z,12µm,22.0s,MS6.7
BBSR BB Station 155.79 7 PFAKE 20 13 10.0 +10
BBSR LR LR
comp=Z,5µm,20.0s,MS6.3
SIV San Ignacio 155.94 181 PKP PKPdf 20 13 00.4 +0.1
comp=Z,15nm,0.9s,baz=212,slow=1.8,SNR=16
SIV PKPab PKPab 20 13 28.3 +1.3
comp=Z,56nm,1.1s,baz=189,slow=3.3,SNR=10
ATAH Atahualpa 157.34 131 PKP PKPdf 20 13 02.8 +0.6
comp=Z,22nm,1.0s,baz=180,slow=8.5,SNR=25
OTAV Otavalo 161.31 114 *e*PKPdf PKPdf 20 13 07.0 +0.1
OTAV LR LR
comp=Z,10µm,22.0s
BCIP Isla Barro Col 161.82 86 PFAKE 20 13 20.0 +13
BCIP LR LR
comp=Z,10µm,20.0s
SDDR Presa de Saban 165.68 41 *e*PKPdf PKPdf 20 13 09.5 -1.2
ROSC El Rosal 166.80 104 PKP PKPdf 20 13 11.8 0.0
comp=Z,5.7nm,0.6s,baz=76,slow=4.8,SNR=33
ROSC PKPab PKPab 20 14 17.6 +2.6
comp=Z,11nm,0.9s,baz=105,slow=20,SNR=2.3
MTP Monte Pirata 169.42 22 *e*PKPdf PKPdf 20 13 12.6 -0.8
MTP *e*PKPab PKPab 20 14 26.0 0.0
SDV Santo Domingo 170.92 85 PKP PKPdf 20 13 12.9 -1.6
comp=Z,20nm,1.1s,baz=107,slow=1.2,SNR=27
SDV PKPab PKPab 20 14 32.9 -0.3
comp=Z,11nm,0.9s,baz=254,slow=4.6,SNR=2.2
FDF Fort de France 173.53 357 *e*PKPdf PKPdf 20 13 15.4 -0.1
BBGH Gun Hill 174.76 339 PFAKE 20 13 30.0 +14
BBGH LR LR
comp=Z,12µm,20.0s
GRGR Grenville 176.11 3 PFAKE 20 13 30.0 +14
GRGR LR LR
comp=Z,8µm,20.0s

IDC 25 20:05:43.8±4.3, 247S×10003E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/20, mbtmp3.4/3, Error ellipse: s-maj=156.1km s-min=67.8km az=66.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.82**	**357**	P	P	20 10 26.3	-0.8
	0.8nm,0.7s,baz=187,slow=10,SNR=5.4						
SONM	**Songino Array**	**50.41**	**6**	P	P	20 14 43.3	+0.4
	1.0nm,1.1s,baz=198,slow=9.0,SNR=2.3						
MKAR	**Makanchi Array**	**51.48**	**344**	P	P	20 14 51.4	+0.3
	0.4nm,0.5s,baz=153,slow=8.2,SNR=5.2						
TXAR	**Lajitas Array**	**145.06**	**38**	PKPbc	PKPbc	20 25 22.5	-0.8
	3.8nm,1.1s,baz=190,slow=0.7,SNR=4.0						

IDC 25 20:10:10.0±2.2, 797S×11867E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/17, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=201.7km s-min=25.8km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.29**	**130**	P	Pn	20 14 36.3	-1.2
	0.2nm,0.3s,baz=302,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**21.38**	**139**	P	P	20 14 59.6	+0.4
	1.3nm,0.5s,baz=316,slow=9.3,SNR=7.5						
STKA	**Stephens Creek**	**31.95**	**141**	P	P	20 16 37.8	0.0
	13nm,1.3s,baz=317,slow=9.7,SNR=4.0						
MKAR	**Makanchi Array**	**63.40**	**333**	P	P	20 20 41.3	0.0
	0.4nm,0.8s,baz=154,slow=6.0,SNR=4.4						

IDC ***25*** *20:28:19.1±0.5, 1655S×17255W, h0km, mb4.5/17, mb1 4.7/17, mb1mx4.7/20, mbtmp4.5/17, MS5.0/3, Ms1 5.0/3, ms1mx4.5/39, Error ellipse: s-maj=21.4km s-min=13.0km az=111.0*
BJI ***25*** *20:28:21.7, 1651S×17241W, h35km, mB5.1, mb5.0, Ms5.7, Msz5.3*
ISCJB ***25*** *20:28:23.5±0.2, 1648S±006×17279W±005, h35km, mb4.9/60, MS5.3/13, Error ellipse: s-maj=10.3km s-min=5.0km az=144.0*
NEIC ***25*** *20:28:25.4±0.3, 1633S×17287W, h35km, mb5.1/20, Error ellipse: s-maj=15.7km s-min=7.3km az=139.0*
SZGRF ***25*** *20:28:25.6, 1681S×17633W, h33km, Fiji Islands region*
MOS ***25*** *20:28:28.5±1.7, 1515S×17297W, h33km, mb5.2/12, MS5.8/7, Error ellipse: s-maj=17.7km s-min=8.9km az=58.9*

ISC 25 20:28:25.6±0.2, 1645S±006×17279W±005, h37km, h37km±1.0km:pP-P, n300, σ1§25/181, mb4.9/60, MS5.3/13, 26C-14D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.71**	**21**	Pn	**Pn**	**20 28 58.2**	**-8.5**
	79nm,0.3s,baz=96,slow=1.5,SNR=79						
AFI				Sn	**Sn**	**20 29 28.3**	**-10**
	260nm,0.3s,baz=26,slow=23,SNR=23						
AFI				LR	LR	20 29 36.5	
	comp=Z,9µm,20.1s,baz=213,slow=28						
AFI	**Afiamalu**	**2.71**	**21**	*e*Pn	**Pn**	**20 28 58.5**	**-8.2**
AFI				*e*Sn	**Sn**	**20 29 25.6**	**-13**
RAR	**Rarotonga**	**13.20**	**113**	Pn	**Pn**	**20 31 20.5**	**-10**
	3.8nm,0.3s,baz=276,slow=9.8,SNR=5.3						
RAR				Sn	**Sn**	**20 33 38.8**	**-17**
	0.8nm,0.3s,baz=309,slow=19,SNR=2.1						
RAR	**Rarotonga**	**13.20**	**113**	*e*Pn	**Pn**	**20 31 20.7**	**-10**
DZM	**Mont Dzumac**	**20.37**	**251**	*e*P	**P**	**20 32 58.2**	**-1.0**
URZ	**Urewera**	**23.47**	**200**	P	**P**	**20 33 30.6**	**-1.3**
	22nm,0.5s,mb4.9,baz=8.3,slow=7.1,SNR=22						
URZ				S	**S**	**20 37 44.4**	**+1.7**
	15nm,0.8s,baz=284,slow=19,SNR=6.0						
HNR	**Honiara**	**27.45**	**281**	LR	LR	20 44 09.3	
	comp=Z,7µm,18.3s,MS5.3,baz=174,slow=34						
RPZ	**Rata Peaks**	**30.44**	**203**	P	**P**	**20 34 37.0**	**+2.4**
	13nm,0.5s,mb4.9,baz=31,slow=4.7,SNR=12						
ARMA	**Armidale**	**35.31**	**240**	*e*P	**P**	**20 35 15.4**	**-1.9**
CNB	**Canberra Magne**	**38.58**	**234**	*e*P	**P**	**20 35 43.8**	**-1.2**
CTA	**Charters Tower**	**38.99**	**258**	*e*P	**P**	**20 35 48.5**	**-0.1**
	8.2nm,1.6s,mb4.2						
CTA	**Charters Tower**	**38.99**	**258**	P	**P**	**20 35 46.4**	**-2.2**
	2.8nm,0.7s,mb4.1,baz=93,slow=13,SNR=4.3						
CTAO	**Charters Tower**	**38.99**	**258**	*e*P	**P**	**20 35 45.0**	**-3.7**
	7.5nm,0.9s,mb4.4						
CTAO	**Charters Tower**	**38.99**	**258**	*e*P	**P**	**20 35 45.0**	**-3.6**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
TOO	**Toolangi**	**42.26**	**232**	*e*P	**P**	**20 36 14.2**	**-1.3**
STKA	**Stephens Creek**	**44.03**	**241**	*e*P	**P**	**20 36 28.0**	**-1.8**
	comp=Z,11nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**44.03**	**241**	P	**P**	**20 36 27.5**	**-2.3**
	comp=Z,6.4nm,0.7s,mb4.5,baz=81,slow=8.1,SNR=16						
STKA	**Stephens Creek**	**44.03**	**241**	*e*P	**P**	**20 36 28.2**	**-1.6**
	comp=Z,8.4nm,1.2s,mb4.3						
WB2	**Warramunga Arr**	**50.17**	**258**	*e*P	**P**	**20 37 15.6**	**-2.3**
WRAB	**Tennant Creek**	**50.17**	**258**	*e*P	**P**	**20 37 14.8**	**-3.1**
	comp=Z,6.2nm,0.7s,mb4.8						
WRAB	**Tennant Creek**	**50.17**	**258**	*e*P	**P**	**20 37 14.8**	**-3.1**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**50.17**	**258**	P	**P**	**20 37 19.6**	**+1.7**
	comp=Z,22nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**50.18**	**258**	P	**P**	**20 37 14.7**	**-3.3**
	comp=Z,2.2nm,0.4s,mb4.5,baz=96,slow=6.9,SNR=27						
ASAR	**Alice Springs**	**50.35**	**253**	P	**P**	**20 37 16.9**	**-2.3**
	comp=Z,22nm,0.5s,mb5.4,baz=88,slow=8.4,SNR=181						
KAKA	**Kakadu**	**53.01**	**266**	*e*P	Px	20 37 23.6	
	comp=Z,12nm,0.9s						
KAKA	**Kakadu**	**53.01**	**266**	P	**P**	**20 37 35.1**	**-4.1**
	comp=Z,25nm,0.8s,mb5.2						
AAI	**Ambon**	**59.27**	**276**	P	**P**	**20 38 24.1**	**+0.1**
	comp=Z,43nm,1.4s,mb5.3						
LBMI	**Labuha**	**60.85**	**279**	P	**P**	**20 38 35.2**	**+0.4**
	comp=Z,80nm,1.5s,mb5.6						
BATI	**Baumata**	**61.94**	**267**	P	**P**	**20 38 43.3**	**+1.1**
	comp=Z,22nm,1.0s,mb5.2,baz=146,slow=2.3						
SBA	**Scott Base**	**62.25**	**185**	*e*P	**P**	**20 38 44.2**	**+1.0**
	comp=Z,28nm,1.0s,mb5.3						
VNDA	**Vanda**	**62.39**	**186**	P	**P**	**20 38 43.3**	**-0.9**
	comp=Z,2.9nm,0.9s,mb4.4,baz=359,slow=6.9,SNR=14						
MBWA	**Marble Bar**	**63.63**	**254**	*e*P	**P**	**20 38 51.7**	**-1.6**
	comp=Z,14nm,0.9s,mb5.0						
KLBR	**Kellerberrin**	**64.27**	**243**	*e*P	**P**	**20 38 57.4**	**0.0**
	comp=Z,66nm,1.5s,mb5.4						
KDI	**Kendari**	**64.53**	**273**	P	**P**	**20 39 01.9**	**+2.6**
	comp=Z,18nm,1.7s,mb4.8						
NWAO	**Narrogin (SRO)**	**64.62**	**241**	LR	LR	21 04 18.1	
	comp=Z,2µm,19.6s,MS5.2,baz=8.6,slow=33						
NWAO	**Narrogin (SRO)**	**64.62**	**241**	*e*P	**P**	**20 38 59.0**	**-0.6**
	comp=Z,6.4nm,0.8s,mb4.7						
NWAO	**Narrogin (SRO)**	**64.62**	**241**	*e*P	**P**	**20 38 59.0**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MUN	**Mundaring**	**65.55**	**242**	*e*P	**P**	**20 39 06.6**	**+0.9**
PCI	**Palu**	**68.06**	**276**	P	**P**	**20 39 24.3**	**+2.3**
	comp=Z,84nm,1.4s,mb5.6						
CASY	**Casey**	**69.70**	**205**	*e*P	**P**	**20 39 32.4**	**+1.1**
	comp=Z,17nm,1.0s,mb4.9						
MJAR	**Matsushiro Arr**	**70.11**	**320**	P	**P**	**20 39 33.6**	**-0.6**
	comp=Z,0.6nm,0.3s,mb4.0,baz=153,slow=5.6,SNR=5.9						
MAT	**Matsushiro**	**70.12**	**320**	P	**P**	**20 39 33.8**	**-0.4**
SAO	**San Andreas Ge**	**71.73**	**41**	*e*P	**P**	**20 39 43.1**	**-0.9**
NSHM	**Saint Helena R**	**72.10**	**39**	*e*P	**P**	**20 39 41.5**	**-4.7**
BBKI	**Banjar Baru**	**72.12**	**272**	P	**P**	**20 39 53.0**	**+6.1**
	comp=Z,55nm,1.6s,mb5.2						
MWC	**Mount Wilson**	**72.45**	**45**	*e*P	**P**	**20 39 47.7**	**-0.7**
	comp=Z,208nm,3.0s						
MWC	**Mount Wilson**	**72.45**	**45**	*e*P	**P**	**20 39 47.7**	**-0.7**
MWC				pmax	pmax		
	comp=Z,208nm,3.0s						
CMB	**Columbia Colle**	**73.17**	**41**	*e*P	**P**	**20 39 52.1**	**-0.5**
PFO	**Pinyon Flat Ob**	**73.22**	**47**	P	**P**	**20 39 50.7**	**-2.3**
	comp=Z,2.9nm,1.0s,mb4.2,baz=29,slow=5.2,SNR=1.6						
PFO	**Pinyon Flat Ob**	**73.22**	**47**	*e*P	**P**	**20 39 54.8**	**+1.9**
OHCM	**Honcut**	**73.29**	**39**	*e*P	**P**	**20 39 54.3**	**+1.0**
WDC	**Whiskeytown Da**	**73.45**	**38**	*e*P	**P**	**20 39 57.0**	**+2.8**
QSPA	**South Pole Qui**	**73.60**	**180**	*e*P	**P**	**20 39 54.7**

MTUM **Tungsten Hills** 73.92 42 *e*P P P 20 39 57.1 0.0
SJI **Sawahan** 73.94 267 P P 20 40 01.7 +4.1
WAKR **Walker** 74.05 41 *e*P P 20 39 57.6 -0.1
GLA **Glamis** 74.06 48 *e*P P 20 39 58.2 +0.3
YBH **Yreka Blue Hor** 74.09 37 P P 20 39 57.1 -0.8
comp=Z,3.5nm,0.8s,mb4.3,baz=105,slow=4.9,SNR=5.0
YBH **Yreka Blue Hor** 74.09 37 *e*P P 20 39 56.3 -1.6
HUMO **Hull Mountain** 74.51 36 *e*P P 20 40 02.5 +2.2
YSS **Yuzh-Sakhalins** 74.68 330 *e*P P 20 40 00.4 -0.8
comp=Z,7.0nm,0.6s,mb4.8
YSS **Yuzh-Sakhalins** 74.68 330 *i*P P 20 40 01.0 -0.2
YSS pmax pmax
comp=Z,76nm,1.9s,mb5.3
NVAR **Mina Array Bea** 74.72 42 P P 20 39 59.8 -1.8
comp=Z,4.4nm,0.8s,mb4.5,baz=228,slow=9.7,SNR=18
PAHR **Pah Rah Range** 74.80 40 *e*P P 20 40 01.1 -1.0
LDFC **Landfair** 74.95 46 *e*P P 20 40 01.8 -1.2
TPH **Tonopah** 75.21 42 *e*P P 20 40 04.4 -0.1
TPNV **Topopah Spring** 75.21 44 *e*P P 20 40 04.2 -0.2
MOD **Modoc** 75.59 38 *e*P P 20 40 06.3 -0.3
SHPR **Sheep Range** 75.69 45 *e*P P 20 40 07.2 -0.1
KDAK **Kodiak Island** 75.84 11 P P 20 40 07.7 +0.1
comp=Z,27nm,1.0s,mb5.1,baz=116,slow=16,SNR=3.1
STKI **Sintang** 76.34 274 P P 20 40 13.0 +1.5
comp=Z,35nm,1.0s,mb5.3
BMN **Battle Mountai** 76.57 40 *e*P P 20 40 11.7 -0.5
TUC **Tucson** 76.61 50 *e*P P 20 40 12.0 -0.6
WVOR **Wild Horse Val** 76.89 38 *e*P P 20 40 12.9 -1.0
comp=Z,31nm,1.5s,mb5.0
WVOR **Wild Horse Val** 76.89 38 *e*P P 20 40 12.9 -1.1
WVOR pmax pmax
comp=Z,31nm,1.5s,mb5.0
BMW **Boistfort Moun** 76.90 33 *e*P P 20 40 11.6 -2.3
HOOD **Mount Hood Mea** 76.98 34 *e*P P 20 40 14.8 +0.5
KSRS **Korea Array** 77.31 315 P P 20 40 15.6 -0.8
comp=Z,5.7nm,1.1s,mb4.4,baz=118,slow=5.9,SNR=8.2
WUAZ **Wupatki** 77.78 47 *e*P P 20 40 10.5 -8.6
comp=Z,4.0nm,1.0s,mb4.3
KSM **Kuching** 77.86 275 *e*P P 20 40 20.0 0.0
ELK **Elko** 77.99 41 *e*P P 20 40 19.0 -1.1
comp=Z,50nm,1.7s,mb5.2
ELK **Elko** 77.99 41 *e*P P 20 40 19.0 -1.1
ELK pmax pmax
comp=Z,50nm,1.7s
LEM **Lembang** 78.14 266 P P 20 40 22.6 +1.0
comp=Z,72nm,1.2s,mb5.5
PGC **Sidney** 78.23 31 *e*P P 20 40 19.9 -1.4
JCW **Jim Creek** 78.69 32 *e*P P 20 40 19.9 -4.0
MSU **Marysvale** 78.77 44 *e*P P 20 40 24.7 +0.3
RSW **Rattlesnake Hi** 78.78 34 *e*P P 20 40 23.0 -1.3
HAWA **Hanford** 78.81 34 *e*P P 20 40 26.6 +2.1
CBJI **Citeko** 78.99 267 P P 20 40 29.7 +3.4
comp=Z,157nm,1.2s,mb5.8
DBJI **Dramaga** 79.05 266 P P 20 40 30.9 +4.3
comp=Z,73nm,2.0s,mb5.3
BMO **Blue Mountains** 79.11 37 *e*P P 20 40 25.5 -0.7
ETW **Entiat** 79.14 33 *e*P P 20 40 25.3 -1.0
DUG **Dugway** 79.24 42 *e*P P 20 40 27.6 +0.6
NLU **North Lily Min** 79.59 43 *e*P P 20 40 30.1 +1.1
OD2 **Odessa Site #2** 79.87 34 *e*P P 20 40 29.2 -1.1
MPU **Maple Canyon** 79.91 43 *e*P P 20 40 35.2 +4.5
NOQ **North Oquirrh** 79.93 42 *e*P P 20 40 33.3 +2.5
comp=Z,9.0nm,0.7s,mb4.8
SPUT **South Promonto** 80.06 42 *e*P P 20 40 36.8 +5.3
HLID **Hailey** 80.07 39 *e*P P 20 40 31.0 -0.4
HVU **Hansel Valley** 80.11 41 *e*P P 20 40 27.6 -4.1
comp=Z,36nm,1.5s,mb5.1
HVU **Hansel Valley** 80.11 41 *e*P P 20 40 27.6 -4.1
HVU pmax pmax
comp=Z,36nm,1.5s,mb5.1
SRU **San Rafael** 80.18 44 *e*P P 20 40 32.0 -0.2
LAZ **Ladron** 80.28 50 *e*P P 20 40 35.2 +2.4
JLU **Jordanelle** 80.33 43 *e*P P 20 40 32.4 -0.5
DAU **Daniels Canyon** 80.36 43 *e*P P 20 40 38.8 +5.7
BNM **Barren Site** 80.55 50 *e*P P 20 40 35.0 +0.8
LPM **Los Pinos Moun** 80.62 50 *e*P P 20 40 35.9 +1.3
TXAR **Lajitas Array** 80.72 56 P P 20 40 33.5 -1.8
comp=Z,1.5nm,0.7s,mb4.0,baz=218,slow=5.7,SNR=6.2
HWUT **Hardware Ranch** 80.78 42 *e*P P 20 40 34.5 -0.8
PV10 **Paradox Valley** 80.82 46 *e*P P 20 40 34.3 -1.3
PV01 **Paradox Valley** 81.03 46 *e*P P 20 40 35.7 -1.0
ANMO **Albuquerque** 81.03 50 *e*P P 20 40 38.8 +2.0
ANMO **Albuquerque** 81.03 50⇓*e*P P 20 40 38.9 +2.1
ANMO pmax pmax
comp=Z,20nm,1.4s
NEW **Newport** 81.25 34 *e*P P 20 40 41.1 +3.5
NJ2 **Nanjing** 81.26 307 *e*P P 20 40 37.5 -0.6
NJ2 AMB AMB
comp=Z,120nm,1.2s,mb5.7
GDL2 **Guadalupe Moun** 81.39 53 *e*P P 20 40 41.1 +2.3
MCMT **McKenzie Canyo** 81.71 38 *e*P P 20 40 39.8 -0.3
KLR **Kul'dur** 81.71 327 *e*P P 20 40 35.7 -4.4
RRI2 **Red Ridge** 81.85 40 *e*P P 20 40 41.3 +0.3
MCK **McKinley** 82.05 10 *e*P P 20 40 41.2 -0.3
DLMT **Dillon** 82.15 38 *e*P P 20 40 42.2 -0.3
REDW **Red Top Meadow** 82.15 41 *e*P P 20 40 42.1 -0.4
TPAW **Teton Pass** 82.15 40 *e*P P 20 40 43.0 +0.4
MSO **Missoula** 82.18 36 *e*P P 20 40 44.3 +1.7
SNOW **Snow King Moun** 82.26 40 *e*P P 20 40 45.5 +2.4
CN2 **Changchun** 82.26 320 *e*P P 20 40 44.0 +0.9
CN2 *e*XP sP 20 40 58.3 -0.6
CN2 *e*S S 20 50 54.5 -1.5
CN2 AMB AMB
comp=Z,10.0nm,1.4s,mb4.5
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,19.0s,MS5.3
CN2 LR LR
comp=E,630nm,19.0s,MS5.3
CN2 LR LR
comp=Z,1μm,19.0s,MS5.2
BSMT **Bassoo Peak** 82.28 35 *e*P P 20 40 42.3 -0.8
IMW **Indian Meadow** 82.37 40 *e*P P 20 40 43.7 0.0
MOOW **Moose Ponds** 82.42 40 *e*P P 20 40 44.0 +0.1
LOHW **Long Hollow** 82.43 40 *e*P P 20 40 44.2 +0.2
LRM **Limekiln Ridge** 82.48 38 *e*P P 20 40 49.0 +4.8
QLMT **Earthquake Lak** 82.56 39 *e*P P 20 40 47.1 +2.5
CHMT **Chamberlain Mo** 82.62 37 *e*P P 20 40 46.4 +1.5
BW06 **Boulder Array** 82.66 42 *e*P P 20 40 44.4 -0.8
PDAR **Pinedale Array** 82.66 42 P P 20 40 43.9 -1.3
comp=Z,3.5nm,0.7s,mb4.5,baz=199,slow=2.8,SNR=24
YMR **Madison River** 82.76 39 *e*P P 20 40 45.1 -0.6
comp=Z,95nm,1.8s,mb5.5
BOZ **Bozeman (W)** 82.88 38 *e*P P 20 40 45.4 -0.9
YNR **Norris Junctio** 82.96 39 *e*P P 20 40 54.8 +8.1
SDCO **Great Sand Dun** 82.99 47 *e*P P 20 40 46.7 -0.3
COLA **College** 83.28 10 *e*P P 20 40 45.7 -2.3
comp=Z,38nm,1.1s,mb5.3
COLA **College** 83.28 10 *e*P P 20 40 45.7 -2.2
COLA pmax pmax
comp=Z,38nm,1.1s,mb5.3
HRY **Holter Researc** 83.33 37 *e*P P 20 40 48.0 -0.5
WALA **Waterton Lakes** 83.44 35 *e*P P 20 40 50.7 +1.6
RWWY **Rawlins** 83.65 43 *e*P P 20 40 51.9 +1.5
ISCO **Idaho Springs** 83.84 46 *e*P P 20 40 51.1 -0.3
RLMT **Red Lodge** 84.03 40 *e*P P 20 40 52.1 0.0
GCMT **Greycliff** 84.12 39 *e*P P 20 40 51.8 -0.8
AMTX **Amarillo** 84.54 51 *e*P P 20 40 56.3 +1.2
BILL **Bilibino** 85.62 352 *e*P P 20 40 59.4 -0.3
comp=Z,24nm,1.2s,mb5.3
BILL **Bilibino** 85.62 352 *i*P P 20 40 58.8 -0.9
BILL *i* pP 20 41 10.5 -0.8
BILL pmax pmax
comp=Z,10.0nm,1.5s,mb4.8
EDM **Edmonton** 86.08 31 *e*P P 20 41 01.1 -1.1
BJI **Beijing** 86.61 313 P P 20 41 06.0 +0.8
BJI AMB AMB
comp=Z,31nm,2.0s,mb5.2
RSSD **Black Hills** 86.84 42 *e*P P 20 41 14.5 +8.3
MAW **Mawson** 86.98 198 P P 20 41 06.5 -0.1
comp=Z,3.7nm,1.0s,mb4.6,baz=108,slow=9.6,SNR=3.2
PLCA **Paso Flores** 88.38 132 P P 20 41 13.5 -0.3
comp=Z,5.6nm,1.2s,mb4.7,baz=326,slow=4.9,SNR=4.1
GYA **Guiyang** 89.05 298⇑*i*P P 20 41 19.0 +1.8
GYA AP pP 20 41 29.5 +0.7
GYA XP sP 20 41 33.5 +0.5
GYA PP PP 20 44 49.0 +1.3
GYA SKS 20 51 44.0
GYA S S 20 52 03.5 +0.1
GYA XS sS 20 52 21.5 -1.2
GYA SS SS 20 58 02.0 +4.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,80nm,6.5s
GYA LR LR
comp=N,380nm,19.2s,MS4.9
GYA LR LR
comp=E,220nm,18.7s,MS4.9
GYA LR LR
comp=Z,350nm,19.6s,MS4.8
INK **Inuvik** 89.15 14 *e*P P 20 41 17.9 +1.2
XAN **Xi'an** 89.72 306 P P 20 41 21.0 +0.8
XAN AP pP 20 41 33.0 +1.2
XAN AMB AMB
comp=Z,11nm,1.5s,mb5.0
XAN AMB AMB
comp=Z,10μm,14.9s
HHC **Hu-ho-hao-te** 90.17 313 *e*P P 20 41 22.0 -0.1
HHC AP pP 20 41 32.8 -0.9
HHC XP sP 20 41 36.3 -1.6
HHC PP PP 20 44 57.3 +1.0
HHC SKS 20 51 47.5
HHC S S 20 52 10.3 -2.9
HHC XS sS 20 52 29.0 -3.5
HHC AMB AMB
comp=Z,17nm,1.0s,mb5.3
HHC LR LR
comp=N,2μm,19.0s,MS5.6
HHC LR LR
comp=E,1μm,19.0s,MS5.6
HHC LR LR
comp=Z,2μm,22.6s,MS5.5
YKA **Yellowknife Ar** 90.83 23 P P 20 41 25.7 +1.1
comp=Z,3.3nm,1.0s,mb4.6,baz=182,slow=34,SNR=4.5
NST **Nakhon Sawan** 91.63 286 P P 20 41 32.0 +2.6
SYO **Syowa Base** 91.68 191⇑*e*X P 20 41 26.2 -2.5
SNAA **Sanae** 91.83 177 *e*P P 20 41 26.1 -3.2
SNAA *e* pP 20 41 38.6 -2.4
SNAA *e* 20 41 44.7
SNAA **Sanae** 91.83 177 *e*P P 20 41 24.5 -4.9
comp=Z,5.3nm,1.1s,mb4.8
KMI **Kunming** 92.00 295 P P 20 41 31.5 +0.5
KMI AP pP 20 41 41.5 -1.1
KMI XP sP 20 41 45.8 -1.1
KMI PP PP 20 45 11.5 +0.3
KMI S S 20 52 25.8 -4.8
KMI SS SS 20 58 37.3 -3.2
KMI AMB AMB
comp=Z,15nm,1.6s,mb5.1
KMI LR LR
comp=N,1μm,15.4s,MS5.6
KMI LR LR
comp=E,1μm,14.9s,MS5.6
KMI LR LR
comp=Z,2μm,13.7s,MS5.7
VNA2 **Neumayer--Watz** 92.26 175 *e*P P 20 41 32.7 +1.4
VNA2 *e* pP 20 41 44.2 +1.2
VNA2 *e* 20 41 49.3
VNA1 **Neumayer--Stat** 92.46 175 *e*P P 20 41 34.8 +2.5
VNA1 *e* pP 20 41 46.4 +2.5
VNA1 *e* 20 41 50.1
CD2 **Chengdu** 92.85 301 *e*P P 20 41 34.3 -0.5
CD2 AP pP 20 41 44.8 -1.6
CD2 XP sP 20 41 49.0 -1.6
CD2 PP PP 20 45 18.5 +0.7
CD2 SKS 20 52 03.5
CD2 XS sS 20 52 51.5 -5.9
CD2 SS SS 20 58 49.8 -2.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,40nm,4.8s
CD2 LR LR
comp=N,180nm,14.8s,MS4.8
CD2 LR LR
comp=E,210nm,16.2s,MS4.8
CD2 LR LR
comp=Z,150nm,14.2s,MS4.6
CM31 **Chiang Mai Arr** 93.50 288 *e*P P 20 41 35.5 -2.6
comp=Z,3.8nm,0.8s,mb4.9
CMAR **Chiang Mai Arr** 93.50 288 P P 20 41 39.4 +1.3
comp=Z,4.3nm,0.9s,mb4.9,baz=97,slow=2.5,SNR=26
CHG **Chiang Mai** 93.59 288 ⇑P P 20 41 39.7 +1.2
comp=Z,14nm,1.1s,mb5.3
CHTO **Chiang Mai** 93.59 288 *e*P P 20 41 39.3 +0.8
comp=Z,21nm,1.4s,mb5.4
CHTO **Chiang Mai** 93.59 288 *e*P P 20 41 39.3 +0.8
CHTO pmax pmax
comp=Z,21nm,1.4s,mb5.4
LZH **Lanzhou** 94.31 306 *e*P P 20 41 42.0 +0.6
LZH AP pP 20 41 52.3 -0.7
LZH XP sP 20 41 56.3 -1.0
LZH PP PP 20 45 32.5 +3.4
LZH SKS 20 52 13.0
LZH *e*S S 20 52 48.5 -2.1
LZH XS sS 20 53 06.3 -3.7
LZH *e*SS SS 20 59 15.5 +2.4
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,93nm,8.3s
LZH LR LR
comp=N,295nm,16.7s
LZH LR LR
comp=Z,437nm,19.0s,MS4.9
ULN **Ulaanbaatar** 95.60 318 *i*P P 20 41 47.0 0.0
SONM **Songino Array** 96.01 318 P P 20 41 50.9 +2.0
comp=Z,0.2nm,0.5s,mb3.8,baz=130,slow=5.8,SNR=2.7
GTA **Gaotai** 98.29 309 *e*P P 20 42 00.5 +1.1
GTA AP pP 20 42 11.3 +0.3
GTA XP sP 20 42 14.8 -0.4
GTA PP PP 20 46 05.0 +5.3
GTA SKS 20 52 34.8
GTA S S 20 53 21.0 -3.7
GTA XS sS 20 53 38.8 -5.4
GTA SS SS 21 00 09.3 +0.1
GTA AMB AMB
comp=Z,6.0nm,1.9s,mb4.8
GTA LR LR
comp=N,926nm,17.4s,MS5.4
GTA LR LR
comp=E,602nm,17.4s,MS5.4
GTA LR LR
comp=Z,1μm,21.9s,MS5.3
WMQ **Urumqi** 108.00 311 *e*PDIF Pdif 20 42 42.0 -0.4
WMQ PP PP 20 47 14.0 +1.8
WMQ SS SS 21 02 19.0 -3.8
WMQ PP PP
comp=Z,59nm,8.0s
WMQ LR LR
comp=N,958nm,20.0s,MS5.4
WMQ LR LR
comp=E,578nm,20.0s,MS5.4
WMQ LR LR
comp=Z,995nm,22.0s,MS5.3
MKAR **Makanchi Array** 111.98 314 PKiKP PKiKP 20 46 56.1 -0.7
comp=Z,0.7nm,0.7s,baz=356,slow=0.5,SNR=5.8
KURK **Kurchatov** 114.31 319 PKP PKiKP 20 47 00.8 -0.4
comp=Z,0.4nm,0.4s,baz=99,slow=2.0,SNR=3.0
BVAR **Borovoye Array** 119.07 322 PKP PKPdf 20 47 08.3 -2.0
comp=Z,0.7nm,0.6s,baz=343,slow=1.5,SNR=5.9
ARCES **ARCESS Array B** 125.73 352 PKP PKPdf 20 47 22.3 -0.3
comp=Z,1.6nm,0.9s,baz=339,slow=3.1,SNR=3.2
LVV **L'vov** 144.04 341 *i* PKHKP 20 47 42.4
KWP **Kalwaria** 144.60 343 *e*PKP PKPdf 20 47 56.5 -1.6
KWP **Kalwaria** 144.60 343 *e*PKPdf PKPdf 20 47 56.1 -2.0
KWP **Kalwaria** 144.60 343⇓*i*P PKPdf 20 47 56.1 -2.0
OJC **Ojcow** 144.82 346 *e*PKP PKPdf 20 47 57.0 -1.5
CLL **Collm** 144.92 354 *e*PKP PKPdf 20 48 02.0 +3.4
CLL *e* 20 48 08.0
CLL **Collm** 144.92 354 *e*PKIKP PKPdf 20 48 02.0 +3.4
CLL *e* 20 48 08.0
CLL MLR MLR
comp=Z,2μm,18.4s,MS5.9
CLL **Collm** 144.92 354 *e*PKPdf PKPdf 20 47 59.0 +0.4
CLL LmV 20 19 00.0
comp=Z,2μm,18.4s
CLL *e*PKiKP PKiKP 20 48 02.0 -0.4
CLL *e*pPKPdf pPKPdf 20 48 08.0 -2.6
comp=Z,10.0nm,1.0s
STHS **Stebnicka Huta** 145.20 344 *e*PKP PKPdf 20 47 58.7 -0.5
BRG **Berggiesshubel** 145.24 353 *e*PKIKP PKPdf 20 48 00.1 +0.9
BRG pmax pmax
comp=Z,28nm,2.0s
BRG **Berggiesshubel** 145.24 353 *e*P PKPbc 20 48 00.1 +1.2
comp=Z,47nm,2.0s
UPC **Upice** 145.30 350 *e*PKP PKPdf 20 47 58.9 -0.4
KOLS **Kolonicke sedl** 145.35 342 *e*PKP PKPdf 20 48 02.4 +3.0
DPC **Dobruska-Polom** 145.40 350 *e*PKP PKPdf 20 47 59.7 +0.2
DPC AMS AMS 22 11 00.0
comp=Z,2μm,18.0s
NIE **Niedzica** 145.44 345 *e*PKP PKPdf 20 47 59.6 0.0
PVCC **Panska Ves** 145.50 352 *e*PKP PKPdf 20 47 59.0 -0.6
PVCC AMS AMS 22 10 40.0
comp=Z,2μm,19.8s
BUR08 **Bucovina Ar. S** 145.54 338 *e*PKP PKPdf 20 47 59.8 0.0
OKC **Ostrava-Krasne** 145.54 347 *e*PKP PKPdf 20 48 00.0 +0.3
OKC AMS AMS 22 11 50.0
comp=Z,2μm,19.8s
BURAR **Bucovina Array** 145.56 338 ⇑P PKPdf 20 48 00.8 +0.9
BURAR **Bucovina Array** 145.56 338⇑*i*P PKPdf 20 48 00.8 +1.0
CRVS **Cervenica-Dubn** 145.61 343 *e*PKP PKPdf 20 47 59.6 -0.3
UZH **Uzhgorod** 145.62 342⇓*i*PKIKP PKPdf 20 47 59.6 -0.3
UZH *e* 20 48 05.4
UZH *e* 20 48 12.2
MOX **Moxa** 145.71 355 *e*PKP PKPdf 20 48 00.8 +0.8
comp=Z,39nm,1.7s
TANN **Tannenbergstha** 145.86 354 *e*PKPbc PKPbc 20 48 00.4 -0.5
MEM **Membach** 145.92 1 PKP PKPdf 20 48 00.0 -0.3
MEM E 20 48 07.3
TRPA **Tarpa** 145.99 342⇓*i*P PKPab 20 48 02.6 +0.7
PRU **Pruhonice** 146.03 352 *e*PKP PKPdf 20 48 01.1 +0.5
PRU AMS AMS 22 11 50.0
comp=Z,2μm,20.9s
TLCR 146.09 332 ⇓P PKPdf 20 48 01.8 +1.0
TLCR 146.09 332⇓*i*P PKPdf 20 48 01.8 +1.0
TNS **Taunus Mts** 146.30 359 *e*PKPbc PKPbc 20 48 02.8 +0.6
MANZ **Manzenberg** 146.32 354 *e*PKPbc PKPbc 20 48 01.8 -0.4
GIVF **Givet** 146.38 3 *e*PKP1 PKPbc 20 48 02.2 -0.2
BAIF **Baives** 146.39 3 *e*PKP1 PKPbc 20 48 01.7 -0.8
comp=Z,89nm,1.4s
ROTZ **Rotzenmuhle** 146.53 354 *e*PKPbc PKPbc 20 48 02.4 -0.5
TREC **Trest** 146.56 350 AMS AMS 22 12 40.0
comp=Z,2μm,19.7s
VYHS **Vyhne** 146.66 346 *e*PKP PKPdf 20 48 02.4 +0.7
KOLL **Kolacno** 146.68 346 *e*PKIKP PKPab 20 48 05.1 +0.6
KOLL **Kolacno** 146.68 346 *e*PKP PKPab 20 48 05.0 +0.5
KOLL *e* 20 48 22.8
GRF **Grafenberg Arr** 146.69 355 *e*PKPbc PKPbc 20 48 03.6 +0.3
WLF **Walferdange** 146.87 1 E PKPab 20 48 06.4 +1.2
PSZ **Piszkesteto** 146.93 344 *e*PKPdf PKPdf 20 48 02.9 +0.8
PSZ **Piszkesteto** 146.93 344⇓*e*PKP PKPab 20 48 04.5 -1.0
PSZ **Piszkesteto** 146.93 344⇑*i*P PKPab 20 48 04.0 -1.5
SMOL **Smolenice** 146.95 348 *e*PKP PKPab 20 48 07.5 +2.0
SMOL *e* 20 48 17.7
KHC **Kasperske Hory** 147.00 352 *e*PKP PKPab 20 48 04.3 -1.4
KHC *e* 20 48 16.5
KHC **Kasperske Hory** 147.00 352 *e*PKP PKPab 20 48 04.3 -1.4
KHC *e*pPKP pPKPdf 20 48 16.5 +2.3
KHC AMS AMS 22 12 10.0
comp=Z,2μm,19.3s
ROSF **Rostrenen** 147.06 13 *e*PKP1 PKPdf 20 48 03.1 +0.7
comp=Z,81nm,1.4s
MLR **Muntele Rosu** 147.06 335 ⇑P PKPab 20 48 04.5 -1.6
MLR **Muntele Rosu** 147.06 335⇑*i*P PKPab 20 48 04.5 -1.6
MODS **Modra-Piesok** 147.11 348 *e*PKP2 PKPab 20 48 05.1 -1.1
MODS MLR MLR
comp=Z,1μm,20.6s,MS5.7
MODS **Modra-Piesok** 147.11 348 *e*PKP PKPab 20 48 05.0 -1.2
DRGR 147.12 340 ⇑P PKPdf 20 48 03.6 +1.1
DRGR 147.12 340⇑*i*P PKPdf 20 48 03.7 +1.2
FLN **La Foliniere** 147.17 9 *e*PKP1 PKPbc 20 48 03.3 -1.4
GEC2 **GERESS Array S** 147.26 352 *e*PKPbc PKPbc 20 48 04.3 -0.7
GERES **GERESS Array B** 147.26 352 PKPbc PKPbc 20 48 04.8 -0.2
comp=Z,4.3nm,1.1s,baz=6.5,slow=4.7,SNR=6.4
SGMF **Saint Gilles** 147.29 12 *e*PKP1 PKPbc 20 48 04.0 -1.1
comp=Z,133nm,1.4s
ZST **Bratislava** 147.32 348 *e*PKP2 PKPab 20 48 05.4 -1.6
ZST MLR MLR
comp=Z,500nm,19.3s,MS5.3
ZST **Bratislava** 147.32 348 *e*PKP PKPab 20 48 05.4 -1.6
ZST *e* 20 48 18.4
BR131 **Keskin Array S** 147.34 320 *e*PKPbc PKPbc 20 48 05.4 -0.2
BRTR **Keskin Array B** 147.34 320 PKPbc PKPbc 20 48 05.5 0.0
comp=Z,5.9nm,0.8s,baz=123,slow=2.6,SNR=23
LDF **La Druitiere** 147.39 9 *e*PKP1 PKPbc 20 48 04.0 -1.4
comp=Z,191nm,1.8s
VOIR 147.46 336 ⇑P PKPdf 20 48 04.4 +1.3
VOIR 147.46 336⇑*i*P PKPdf 20 48 04.4 +1.3
GRR **Gorron** 147.47 10 *e*PKP1 PKPbc 20 48 04.6 -1.0
comp=Z,77nm,1.3s
BUD **Budapest** 147.55 345⇓*e*PKP PKPab 20 48 08.3 +0.3
ANTO **Ankara** 147.76 321 ⇑P PKPab 20 48 06.6 -2.5
ANTO **Ankara** 147.76 321⇑*i*P PKPab 20 48 06.6 -2.5
CONA **Conrad Observa** 147.81 349⇑*i*PKPbc PKPbc 20 48 06.4 -0.2
comp=Z,26nm,1.4s
CSNA **Conrad Observa** 147.81 349⇑*i*PKPbc PKPbc 20 48 06.4 -0.1
comp=Z,35nm,2.0s
SOP **Sopron** 147.92 348⇓*e*PKP PKPab 20 48 07.5 -1.9
MEZF **Maizieres J'vi** 147.99 3 *e*PKP1 PKPbc 20 48 06.9 -0.1
comp=Z,54nm,1.3s
CDF **Champ du Feu** 148.13 360 *e*PKP1 PKPbc 20 48 07.4 0.0
comp=Z,55nm,1.2s
MOA **Molln** 148.16 351⇓*i*PKiKP PKiKP 20 48 08.5 -0.7
comp=Z,29nm,2.1s
BFO **Black Forest** 148.20 359 *e*PKPdf PKPdf 20 48 03.5 -0.7
BFO **Black Forest** 148.20 359 *e*PKPbc PKPbc 20 48 08.2 +0.7
GZR **Gura Zlata** 148.33 339 ⇓P PKPab 20 48 06.8 -4.3
GZR **Gura Zlata** 148.33 339⇓*i*P PKPab 20 48 06.8 -4.3
BZS **Buzias** 148.52 340⇓*i*P PKPab 20 48 08.0 -3.9
HAU **Haudompre** 148.53 1 *e*PKP1 PKPbc 20 48 08.2 -0.2
comp=Z,23nm,1.0s
ARSA **Arzberg** 148.53 349⇑*e*PKPbc PKPbc 20 48 08.1 -0.4
comp=Z,8.7nm,1.1s
HINF **Hinteralfeld** 148.72 0 *e*PKP1 PKPbc 20 48 08.6 -0.3
PKSM **Moragy** 148.83 345 ⇑P PKPab 20 48 09.2 -3.9
PKSM **Moragy** 148.83 345⇑*i*P PKPab 20 48 09.2 -3.9
ASF **Jabal al Asfar** 148.88 306 PKPbc PKPbc 20 48 10.1 +0.2
comp=Z,3.6nm,0.9s,baz=353,slow=4.9,SNR=6.3
RETA **Reutte** 148.92 355⇑*i*PKPbc PKPbc 20 48 08.8 -0.6
comp=Z,13nm,1.6s
HYF **Humbligny** 149.04 6 *e*PKP1 PKPbc 20 48 09.6 -0.1
KBA **Koelnbreinsper** 149.04 352⇑*i*PKiKP PKiKP 20 48 10.5 -0.5
comp=Z,23nm,1.6s
WTTA **Wattenberg** 149.06 354⇓*i*PKiKP PKiKP 20 48 10.8 -0.2
LOR **Lormes** 149.15 4 *e*PKP1 PKPbc 20 48 09.7 -0.3
comp=Z,74nm,1.4s
SOKA **Soboth** 149.17 349⇑*i*PKiKP PKiKP 20 48 10.4 -0.9
comp=Z,25nm,1.6s
DAVA **Damuels** 149.18 356⇑*i*PKiKP PKiKP 20 48 11.2 -0.1
comp=Z,32nm,1.6s
MFF **Saint Martin d** 149.32 10 *e*PKP1 PKPbc 20 48 09.9 -0.6
comp=Z,170nm,1.7s
SSF **Saint Saulge** 149.33 5 *e*PKP1 PKPbc 20 48 10.2 -0.3
comp=Z,65nm,1.3s
FETA **Feichten** 149.38 355⇑*i*PKiKP PKiKP 20 48 11.2 -0.5
comp=Z,24nm,1.2s
MYKA **Terra Mystica** 149.44 351⇑*i*PKiKP PKiKP 20 48 11.3 -0.6
comp=Z,26nm,1.7s
ABTA **Abfaltersbach** 149.47 353⇑*i*PKiKP PKiKP 20 48 11.1 -0.9
comp=Z,15nm,1.1s
AVF **Avril sur Loir** 149.58 5 *e*PKP1 PKPbc 20 48 10.6 -0.5
comp=Z,74nm,1.7s
MMAI **Mount Meron Ar** 149.68 308 PKPbc PKPbc 20 48 13.7 +1.9
comp=Z,12nm,1.0s,baz=35,slow=7.9,SNR=4.2
BGF **Bois d'Agland** 149.77 6 *e*PKP1 PKPbc 20 48 11.0 -0.6
comp=Z,157nm,1.8s
SMF **Signal de Mont** 149.77 5 *e*PKP1 PKPbc 20 48 10.8 -0.8
comp=Z,48nm,1.4s
CABF **La Chapelle** 149.92 2 *e*PKP1 PKPbc 20 48 11.9 0.0
comp=Z,102nm,1.4s
TCF **Toulx Ste Croi** 149.96 7 *e*PKP1 PKPbc 20 48 11.3 -0.8
TUE **Stuetta** 150.02 357 *e*PKPdf PKPdf 20 48 08.0 +0.8
RJF **Les Rejaudoux** 150.84 8 *e*PKP1 PKPbc 20 48 13.4 -0.8
LPL **La Plagne** 151.02 1 *e*PKP1 PKPbc 20 48 15.7 +1.1
LPG **La Plagne** 151.04 1 *e*PKP1 PKPbc 20 48 15.8 +1.1
comp=Z,47nm,1.4s
LFF **La Frestale** 151.09 10 *e*PKP1 PKPbc 20 48 14.0 -0.8
SSB **Saint Sauveur** 151.18 4 *e*PKPbc PKPbc 20 48 16.6 +1.6
EIL **Elat** 151.37 302 PKPbc PKPbc 20 48 16.1 +0.1
comp=Z,6.2nm,0.9s,baz=108,slow=6.4,SNR=4.1
BNI **Bardonecchia** 151.49 1 *e*PKPbc PKPbc 20 48 16.2 +0.5
ESDC **Sonseca Array** 154.90 21 PKPab PKPab 20 48 38.4 -0.2
comp=Z,1.4nm,0.9s,baz=321,slow=3.8,SNR=5.0
IDI **Anoyia** 155.48 323 PKPab PKPab 20 48 42.5 +1.3
comp=Z,2.4nm,0.7s,baz=343,slow=10.0,SNR=4.0
TORD **Torodi Ar. Bea** 173.74 121 PKP PKPdf 20 48 31.5 -0.5
comp=Z,1.8nm,1.3s,baz=332,slow=2.1,SNR=2.6
TORD PKPab PKPab 20 50 00.0 -2.0
comp=Z,7.5nm,1.0s,baz=254,slow=2.3,SNR=9.5

TORD	**Torodi Ar. Bea**	**173.74**	**121**	PKP	PKPdf	20 48 31.5	-0.5
TORD				PKPab	PKPab	20 50 00.0	-2.0

*ISCJB **25** 20:33:32.1±0.2, 46805N±0010×1364E±001, h13km±2km, Error ellipse: s-maj=1.7km s-min=1.5km az=158.3*
*LJU **25** 20:33:33.5, 4674N×1367E, h16km, ML2.9*
*VIE **25** 20:33:33.3±0.2, 4674N×1364E, h15km±3km, mb2.8/10, ML3.5/11, Error ellipse: s-maj=1.9km s-min=1.4km az=9.0 5 km NNW of Feistritz a.d. Drau felt 4-5 EMS98 at Paternion / CARINTHIA*
*LDG **25** 20:33:34.3±0.1, 4669N×1366E, h10km, Ml3.0/19, Error ellipse: s-maj=1.7km s-min=1.3km az=8.0*
*CSEM **25** 20:33:34.4±0.0, 4671N×1367E, h12km, ML3.5/24, Error ellipse: s-maj=1.0km s-min=0.8km az=24.0*
*IPEC **25** 20:33:34.8±0.1, 4673N×1365E, h15km±1km, ML2.7/1, Error ellipse: s-maj=1.0km s-min=0.6km az=32.0*
*PRU **25** 20:33:35.4, 4678N×1373E, h0km*
*ROM **25** 20:33:36.7±0.7, 4666N×1340E, h4km, Md3.1/11, Ml3.1/6, Error ellipse: s-maj=8.7km s-min=3.1km az=109.0*
*BGR **25** 20:33:37.0±0.5, 4680N×1368E, h10km, ML3.2, Error ellipse: s-maj=6.7km s-min=4.4km az=175.0, felt*
*NEIC **25** 20:33:36.7, 4666N×1340E, h4km, ML3.1(ROM), ML3.0(LDG), ML2.9(LJU), After ROM.*
NEIC Felt at Villach. Felt [III] at Kranjska Gora and Slovenski Javornik, Slovenia.

ISC 25 20:33:33.8±0.1, 46756N±0009×1365E±001, h8km±2km, n188, σ1$16/332, 43C-34D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYKA	**Terra Mystica**	**0.13**	**182**	⇑*i*	Pg	**20 33 37.3**	**+0.7**
	2μm,0.1s						
MYKA				⇓*i*	Sg	**20 33 39.2**	**+0.7**
	2μm,0.1s						
LSR	**Lussari**	**0.29**	**197**	⇓*i*	Pg	**20 33 40.2**	**+0.6**
LSR				*i*	Sg	**20 33 44.2**	**+0.7**
KBA	**Koelnbreinsper**	**0.38**	**327**	*e*	Pg	**20 33 42.3**	**+1.0**
KBA				*e*	Sg	**20 33 47.8**	**+1.5**
KBA	**Koelnbreinsper**	**0.38**	**327**	⇑*i*	Pg	**20 33 42.5**	**+1.2**
	51nm,0.1s,SNR=160						
KBA				⇑*i*	Sg	**20 33 47.9**	**+1.5**
	439nm,0.1s						
KBA	**Koelnbreinsper**	**0.38**	**327**	Pg	Pg	**20 33 42.4**	**+1.1**
	51nm,0.1s,SNR=160						
KBA				Sg	Sg	**20 33 47.9**	**+1.5**
	439nm,0.1s						
PLRO	**Paularo**	**0.40**	**239**	⇑*i*	Pg	**20 33 42.1**	**+0.5**
PLRO				*i*	Sg	**20 33 47.1**	**+0.2**
PTCC	**Patocco-Chiusa**	**0.41**	**210**	⇓*i*	Pg	**20 33 42.0**	**+0.3**
PTCC				Sg	Sg	**20 33 47.3**	**+0.3**
GORS	**Gorjuse**	**0.50**	**151**	⇓*i*	Pg	**20 33 43.7**	**+0.2**
GORS				*e*	Sg	**20 33 50.3**	**+0.3**
GORS	**Gorjuse**	**0.50**	**151**	⇓*i*	Pg	**20 33 43.7**	**+0.2**
GORS				*e*	Sg	**20 33 50.3**	**+0.3**
GORS							
	comp=Z,776nm,0.1s						
GORS	**Gorjuse**	**0.50**	**151**	Pg	Pg	**20 33 43.7**	**+0.2**
GORS				*e*	Sg	**20 33 50.3**	**+0.3**
	comp=Z,776nm,0.1s						
ZOU	**Zoufplan**	**0.51**	**247**	⇑*i*	Pg	**20 33 43.9**	**+0.3**
ZOU				*i*	Sg	**20 33 50.4**	**+0.1**
ROBS	**Robic**	**0.52**	**191**	⇓*i*	Pg	**20 33 44.0**	**+0.1**
ROBS				*i*	Sg	**20 33 50.9**	**+0.2**
ROBS	**Robic**	**0.52**	**191**	⇓*i*	Pg	**20 33 44.0**	**+0.1**
ROBS				*i*	Sg	**20 33 50.9**	**+0.2**
ROBS							
	comp=Z,187nm,0.2s						
ROBS	**Robic**	**0.52**	**191**	⇓*i*	Pg	**20 33 44.0**	**+0.1**
ROBS				*i*	Sg	**20 33 50.9**	**+0.2**
	comp=Z,187nm,0.2s						
CADS	**Cadrg**	**0.53**	**173**	⇓*i*	Pg	**20 33 44.1**	**0.0**
CADS				*i*	Sg	**20 33 51.3**	**+0.2**
CADS	**Cadrg**	**0.53**	**173**	⇓*i*	Pg	**20 33 44.1**	**0.0**
CADS				*i*	Sg	**20 33 51.3**	**+0.2**
CADS							
	comp=Z,419nm,0.1s						
CADS	**Cadrg**	**0.53**	**173**	⇓*i*	Pg	**20 33 44.1**	**0.0**
CADS				*i*	Sg	**20 33 51.3**	**+0.3**
	comp=Z,419nm,0.1s						
GMNA	**Gemona**	**0.56**	**211**	⇓*i*	Pg	**20 33 45.3**	**+0.7**
GMNA				Sg	Sg	**20 33 53.6**	**+1.7**
BOO	**Bordano**	**0.58**	**221**	⇓*i*	Pg	**20 33 45.1**	**+0.2**
BOO				*i*	Sg	**20 33 53.1**	**+0.6**
DRE	**Drenchia**	**0.58**	**180**	⇓*i*	Pg	**20 33 45.0**	**-0.1**
DRE				*i*	Sg	**20 33 53.2**	**+0.5**
BAD	**Bernadia**	**0.59**	**208**	⇓*i*	Pg	**20 33 45.2**	**0.0**
BAD				*i*	Sg	**20 33 53.8**	**+0.9**
FVI	**Forni Avoltri**	**0.62**	**255**	⇑*i*	Pg	**20 33 45.6**	**-0.1**
	comp=Z,895nm,0.2s						
BUA	**Buia**	**0.65**	**214**	⇓*i*	Pg	**20 33 46.3**	**0.0**
BUA				*i*	Sg	**20 33 55.5**	**+0.8**
OBKA	**Obir**	**0.67**	**111**	⇓*e*	Pg	**20 33 46.9**	**+0.2**
	comp=Z,113nm,0.1s,SNR=406						
OBKA				⇑*i*	Sg	**20 33 56.6**	**+1.3**
	comp=Z,218nm,0.1s						
OBKA	**Obir**	**0.67**	**111**	Pg	Pg	**20 33 46.8**	**+0.1**
	comp=Z,113nm,0.1s,SNR=406						
OBKA				*e*	Sg	**20 33 55.6**	**+0.2**
MPRI	**Monte Prat**	**0.69**	**222**	⇑*i*	Pg	**20 33 47.0**	**0.0**
MPRI				*i*	Sg	**20 33 56.3**	**+0.3**
MOZS	**Mozjanca**	**0.72**	**130**	⇑*i*	Pg	**20 33 47.7**	**+0.1**
MOZS				*i*	Sg	**20 33 58.0**	**+1.0**
CSMI	**Casera Mimoias**	**0.73**	**251**	⇑*i*	Pg	**20 33 47.4**	**-0.4**
CSMI				*i*	Sg	**20 33 57.2**	**-0.1**
VOJS	**Vojsko**	**0.74**	**167**	*i*	Pg	**20 33 47.7**	**-0.4**
VOY	**Vojsko**	**0.74**	**167**	*e*	Sg	**20 33 58.5**	**+0.7**
ABTA	**Abfaltersbach**	**0.78**	**270**	⇑*e*	Pg	**20 33 48.3**	**-0.5**
	comp=Z,1.3nm,0.1s,SNR=353						
ABTA				⇑*e*	Sg	**20 33 59.3**	**+0.3**
	comp=Z,176nm,0.1s						
JAVS	**Javornik**	**0.91**	**161**	*i*	Pg	**20 33 50.9**	**-0.4**
JAVS				*i*	Sg	**20 34 04.2**	**+1.1**
JAVS	**Javornik**	**0.91**	**161**	*i*	Pg	**20 33 50.9**	**-0.4**
JAVS				*i*	Sg	**20 34 04.2**	**+1.1**
JAVS							
	comp=Z,206nm,0.3s						
JAVS	**Javornik**	**0.91**	**161**	*i*	Pg	**20 33 50.9**	**-0.4**
JAVS				*i*	Sg	**20 34 04.2**	**+1.1**
	comp=Z,206nm,0.3s						
TLI	**Talmassons**	**0.92**	**205**	⇓*i*	Pg	**20 33 51.4**	**0.0**
LJU	**Ljubljana**	**0.94**	**139**	⇑*i*	Pg	**20 33 51.8**	**0.0**
LJU							
	comp=Z,171nm,0.1s						
LJU	**Ljubljana**	**0.94**	**139**	*e*	Pg	**20 33 51.7**	**-0.1**
MLNI	**Malnisio**	**0.94**	**230**	⇓*i*	Pg	**20 33 51.6**	**-0.3**
MLNI				*i*	Sg	**20 34 05.2**	**+1.1**
SOKA	**Soboth**	**0.96**	**94**	⇑*i*	Pg	**20 33 52.0**	**-0.2**
	comp=Z,68nm,0.2s						
SOKA				⇓*e*	Sg	**20 34 04.7**	**+0.2**
	comp=Z,146nm,0.3s						
SOKA	**Soboth**	**0.96**	**94**	Pg	Pg	**20 33 52.0**	**-0.2**
	comp=Z,68nm,0.2s						
SOKA				Sg	Sg	**20 34 04.7**	**+0.1**
	comp=Z,146nm,0.3s						
VNDS	**Vrh nad Dolski**	**0.98**	**132**	*i*	Pg	**20 33 52.5**	**-0.2**
SEST	**Monte Rota**	**0.98**	**270**	Pg	Pg	**20 33 52.6**	**-0.1**
	comp=Z,659nm,0.6s						
BGLD	**Berchtesgaden**	**1.00**	**334**	⇓*i*	Pg	**20 33 53.2**	**+0.3**
BGLD				⇓*i*	Sg	**20 34 07.0**	**+1.1**
ZAVS	**Zavodnje**	**1.00**	**108**	⇑*i*	Pg	**20 33 52.7**	**-0.3**
PERS	**Pernice**	**1.02**	**96**	⇑*i*	Pg	**20 33 52.9**	**-0.4**
PERS				*e*	Sg	**20 34 06.4**	**-0.1**
PERS	**Pernice**	**1.02**	**96**	⇑*i*	Pg	**20 33 52.9**	**-0.4**
PERS				*e*	Sg	**20 34 06.4**	**-0.1**
PERS							
	comp=Z,198nm,0.1s						
PERS	**Pernice**	**1.02**	**96**	⇑*i*	Pg	**20 33 52.9**	**-0.4**
PERS				*e*	Sg	**20 34 06.4**	**-0.1**
	comp=Z,198nm,0.1s						
BISS	**Bistriski jare**	**1.02**	**96**	⇑*i*	Pg	**20 33 53.0**	**-0.4**
BISS				*e*	Sg	**20 34 07.1**	**+0.4**
BISS	**Bistriski jare**	**1.02**	**96**	⇑*i*	Pg	**20 33 53.0**	**-0.4**
BISS				*e*	Sg	**20 34 07.1**	**+0.4**
BISS							
	comp=Z,306nm,0.1s						
BISS	**Bistriski jare**	**1.02**	**96**	⇑*i*	Pg	**20 33 53.0**	**-0.4**
BISS				*e*	Sg	**20 34 07.1**	**+0.4**
	comp=Z,306nm,0.1s						
CSO	**Casso**	**1.03**	**243**	⇑*e*	Pg	**20 33 53.0**	**-0.7**
CSO				*e*	Sg	**20 34 07.2**	**+0.2**
AFL	**Alpe Faloria**	**1.04**	**258**	⇑*i*	Pg	**20 33 53.5**	**-0.2**
TRI	**Trieste**	**1.05**	**176**	*e*	Pg	**20 33 52.9**	**-1.0**
TRI				*e*	Sg	**20 34 08.6**	**+1.0**
TRI	**Trieste**	**1.05**	**176**	*e*	Pg	**20 33 52.9**	**-1.1**
TRI				*e*	Sg	**20 34 08.6**	**+1.0**
CAE	**Caneva**	**1.12**	**229**	⇑*i*	Pg	**20 33 55.2**	**-0.2**
CAE				*i*	Sg	**20 34 10.7**	**+0.7**
RJOB	**Jochberg**	**1.14**	**330**	⇓*i*	Pg	**20 33 55.6**	**-0.1**
CEY	**Cerknica**	**1.15**	**152**	*e*	Pg	**20 33 55.0**	**-1.0**
CEY				*i*	Sg	**20 34 11.2**	**+0.4**
CEY	**Cerknica**	**1.15**	**152**	*e*	Pg	**20 33 55.0**	**-1.0**
CEY				*i*	Sg	**20 34 11.2**	**+0.4**
CEY							
	comp=Z,389nm,0.3s						
CEY	**Cerknica**	**1.15**	**152**	*e*	Pg	**20 33 55.0**	**-0.9**
CEY				*i*	Sg	**20 34 11.2**	**+0.4**
	comp=Z,389nm,0.3s						
PDKS	**Podkum**	**1.16**	**126**	*i*	Pg	**20 33 55.8**	**-0.3**
MOA	**Molln**	**1.17**	**21**	*e*	Pn	**20 33 57.6**	**+1.1**
MOA				*e*	Sg	**20 34 15.1**	**+3.6**
MOA	**Molln**	**1.17**	**21**	⇑*e*	Pg	**20 33 57.1**	**+0.8**
	comp=Z,0.7nm,0.1s,SNR=118						
MOA				⇓*i*	Sg	**20 34 14.5**	**+3.0**
	comp=Z,150nm,0.3s						
MOA	**Molln**	**1.17**	**21**	*e*	Pg	**20 33 57.9**	**+1.6**
MOA				Sg	Sg	**20 34 14.5**	**+3.0**
	comp=Z,150nm,0.3s						
SKDS	**Skadanscina**	**1.24**	**168**	*e*	Sg	**20 34 14.2**	**+0.6**
VISS	**Visnje**	**1.26**	**139**	*i*	Pg	**20 33 57.7**	**-0.3**
VISS							
	comp=Z,123nm,0.2s						
VISS	**Visnje**	**1.26**	**139**	*i*	Pg	**20 33 57.7**	**-0.3**
	comp=Z,123nm,0.2s						
FAU	**Forcella Aurin**	**1.27**	**246**	⇑*i*	Pg	**20 33 57.6**	**-0.5**
GROS	**Grobnik**	**1.31**	**102**	*i*	Pg	**20 33 58.0**	**-0.9**
GROS	**Grobnik**	**1.31**	**102**	*e*	Pg	**20 33 58.0**	**-1.0**
GROS				*i*	Pg	**20 33 58.0**	**-0.9**
GROS							
	comp=Z,41nm,0.1s						
VARN	**Col Varnada, M**	**1.31**	**235**	⇓*i*	Pg	**20 33 58.4**	**-0.6**
VARN				*i*	Sg	**20 34 17.5**	**+1.5**
SCE	**Schlegeis**	**1.36**	**283**	⇑*i*	Pg	**20 33 58.9**	**-1.0**
ARSA	**Arzberg**	**1.38**	**68**	*e*	Pn	**20 33 59.6**	**+0.3**
ARSA				*e*	Sg	**20 34 18.5**	**+0.5**
ARSA	**Arzberg**	**1.38**	**68**	⇑*i*	Pg	**20 33 59.7**	**-0.5**
	comp=Z,24nm,0.2s,SNR=29						
ARSA				⇑*i*	Sg	**20 34 18.5**	**+0.5**
	comp=Z,62nm,0.3s						
ARSA	**Arzberg**	**1.38**	**68**	Pg	Pg	**20 33 59.7**	**-0.5**
	comp=Z,24nm,0.2s,SNR=29						
ARSA				*e*	Sg	**20 34 18.1**	**+0.1**
DOBS	**Dobrina**	**1.40**	**115**	*i*	Pg	**20 33 59.9**	**-0.7**
LEGS	**Legarje**	**1.41**	**124**	⇑*i*	Pg	**20 34 00.3**	**-0.6**
LEGS	**Legarje**	**1.41**	**124**	⇑*i*	Pg	**20 34 00.3**	**-0.5**
	comp=Z,140nm,0.3s						
MTLO	**Montello**	**1.43**	**229**	⇓*i*	Pg	**20 34 00.8**	**-0.4**
WTTA	**Wattenberg**	**1.47**	**291**	*e*	Pn	**20 34 01.4**	**+0.9**
WTTA	**Wattenberg**	**1.47**	**291**	⇑*e*	Pg	**20 34 01.3**	**-0.6**
	comp=Z,44nm,0.1s,SNR=149						
WTTA				⇑*i*	Sn	**20 34 20.2**	**+0.4**
	comp=Z,88nm,0.3s						
WTTA	**Wattenberg**	**1.47**	**291**	Pn	Pn	**20 34 01.4**	**+0.9**
WTTA				*e*	Sg	**20 34 20.2**	**-0.8**
WATA	**Walderalm**	**1.53**	**293**	⇓*i*	Pg	**20 34 02.5**	**-0.6**
	comp=Z,20nm,0.1s,SNR=23						
WATA				⇓*e*	Sg	**20 34 24.6**	**+1.6**
	comp=Z,55nm,0.1s						
WATA	**Walderalm**	**1.53**	**293**	Pn	Pn	**20 34 02.5**	**+1.1**
	comp=Z,20nm,0.1s,SNR=23						
WATA				Sg	Sg	**20 34 24.6**	**+1.6**
	comp=Z,55nm,0.1s						
CGRP	**Cima Grappa**	**1.55**	**236**	⇓*i*	Pg	**20 34 03.0**	**-0.5**
CGRP				*i*	Sg	**20 34 24.1**	**+0.4**
CTI	**Castel Tesino**	**1.55**	**244**	Pg	Pg	**20 34 02.7**	**-0.9**
	comp=Z,101nm,0.2s						
CRES	**Cresnjev**	**1.56**	**126**	*i*	Pg	**20 34 02.1**	**-1.6**
CRES	**Cresnjev**	**1.56**	**126**	*i*	Pg	**20 34 02.1**	**-1.6**
CRES				*e*	Sg	**20 34 24.1**	**+0.1**
GCIS	**Gornji Cirnik**	**1.64**	**122**	*e*	Pn	**20 34 02.9**	**+0.1**
BOJS	**Bojanci**	**1.68**	**138**	*e*	Pn	**20 34 03.6**	**+0.3**
BOJS				*i*	Sn	**20 34 25.6**	**+0.6**
BOJS	**Bojanci**	**1.68**	**138**	*e*	Pn	**20 34 03.6**	**+0.3**
BOJS				*i*	Sn	**20 34 25.6**	**+0.6**
BOJS							
	comp=Z,68nm,0.3s						
BOJS	**Bojanci**	**1.68**	**138**	*e*	Pg	**20 34 03.7**	**-2.2**
BOJS				*i*	Sg	**20 34 25.6**	**+0.6**
	comp=Z,68nm,0.3s						
APPI	**Appiano**	**1.69**	**261**	⇑*i*	Pg	**20 34 05.0**	**-1.2**
	comp=Z,277nm,0.4s						
SQTA	**Sankt Quirin**	**1.73**	**286**	⇑*e*	Pg	**20 34 05.9**	**-1.1**
SQTA				⇓*e*	Sg	**20 34 30.5**	**+1.0**
KOGS	**Kog**	**1.82**	**99**	*e*	Pn	**20 34 05.3**	**0.0**
MOTA	**Moosalm**	**1.84**	**290**	⇓*e*	Pg	**20 34 07.6**	**-1.4**
	comp=Z,5.5nm,0.1s,SNR=66						
MOTA				⇓*e*	Sg	**20 34 34.5**	**+1.7**
	comp=Z,44nm,0.3s						
CSNA	**Conrad Observa**	**1.91**	**51**	⇑*i*	Pn	**20 34 08.6**	**+2.0**
	comp=Z,2.2nm,0.1s						
CSNA				⇑*i*	Sg	**20 34 34.0**	**-1.1**
	comp=Z,24nm,0.2s						
CONA	**Conrad Observa**	**1.91**	**51**	⇓*i*	Pn	**20 34 08.7**	**+2.1**
	comp=Z,2.4nm,0.2s,SNR=34						
CONA				⇑*i*	Sg	**20 34 34.8**	**-0.3**
FETA	**Feichten**	**2.02**	**279**	*i*	Pn	**20 34 10.7**	**+2.6**
	SNR=68						
FETA				⇑*e*	Sg	**20 34 37.7**	**-1.0**
	comp=Z,12nm,0.3s						
GEC2	**GERESS Array S**	**2.09**	**1**	*e*	Pn	**20 34 11.1**	**+2.0**
GEC2				*e*	Sg	**20 34 41.9**	**+0.9**
GEC2	**GERESS Array S**	**2.09**	**1**	*e*	Pn	**20 34 11.0**	**+1.9**
GEC2				*e*	Sn	**20 34 42.0**	**+1.0**
GEC2	**GERESS Array S**	**2.09**	**1**	*e*	Pn	**20 34 11.0**	**+1.9**
GEC2				*e*	Sg	**20 34 41.9**	**+1.0**
RETA	**Reutte**	**2.10**	**291**	⇑*e*	Pg	**20 34 13.2**	**-0.8**
	comp=Z,3.5nm,0.1s,SNR=51						
RETA				⇑*e*	Sg	**20 34 41.6**	**+0.3**
	comp=Z,104nm,0.4s						
BRMO	**Bormio**	**2.27**	**264**	Pg	Pn	**20 34 14.3**	**+2.7**
	comp=Z,42nm,0.4s						
MABI	**Malga Bissina**	**2.28**	**253**	Pg	Pn	**20 34 13.6**	**+1.9**
	comp=Z,66nm,0.6s						
MAGA	**Magasa**	**2.31**	**246**	Pg	Pn	**20 34 14.1**	**+2.0**
	comp=Z,271nm,0.4s						
NVLJ	**Novalja**	**2.35**	**158**	*e*	Pn	**20 34 16.1**	**+3.5**
NVLJ				Sn	Sg	**20 34 46.3**	**-3.1**
KHC	**Kasperske Hory**	**2.38**	**359**	*e*	PN	**20 34 14.9**	**+1.9**
KHC				*e*	PG	**20 34 19.5**	**+0.2**
KHC				*e*	SG	**20 34 51.1**	**+1.0**
	comp=Z,32nm,0.2s						
WET	**Wettzell**	**2.44**	**348**	*e*	Pn	**20 34 15.6**	**+1.7**
WET	**Wettzell**	**2.44**	**348**	*e*	Pn	**20 34 15.5**	**+1.6**
SALO	**Salr**	**2.45**	**243**	Pg	Pn	**20 34 16.4**	**+2.4**
DAVA	**Damuels**	**2.63**	**283**	*e*	Pn	**20 34 19.5**	**+3.0**
DAVA				*e*	Sg	**20 35 01.0**	**+2.7**
DAVA	**Damuels**	**2.63**	**283**	⇓*i*	Pn	**20 34 19.5**	**+3.0**
	comp=Z,1.8nm,0.3s,SNR=13						
DAVA				⇑*i*	Pg	**20 34 23.3**	**-0.9**
	comp=Z,25nm,0.2s						
DAVA				⇑*e*	Sg	**20 34 59.5**	**+1.2**
	comp=Z,99nm,0.3s						
ZST	**Bratislava**	**2.75**	**57**	*e*	PN	**20 34 18.6**	**+0.5**
ZST				*e*	PG	**20 34 26.1**	**-0.4**
ZST				*e*	SG	**20 35 01.7**	**-0.4**
MODS	**Modra-Piesok**	**2.94**	**55**	*e*	PN	**20 34 22.7**	**+1.9**
MODS				*e*	PG	**20 34 28.9**	**-1.3**
MODS				*e*	SG	**20 35 05.2**	**-3.1**
KRUC	**Moravsky**	**2.96**	**38**	*e*	Pn	**20 34 21.6**	**+0.6**
KRUC				*e*	Sn	**20 34 56.4**	**-0.2**
KRUC				*e*	Sg	**20 35 06.8**	**-1.9**
	comp=Z,24nm,0.5s						
TUE	**Stuetta**	**2.98**	**266**	*e*	Pn	**20 34 27.1**	**-3.7**
SMOL	**Smolenice**	**3.10**	**54**	*e*	PG	**20 34 31.6**	**-1.6**
SMOL				*e*	SG	**20 35 12.9**	**-0.5**
FSSB	**Fossombrone**	**3.12**	**192**	Pg	Pn	**20 34 26.1**	**+2.8**
	comp=Z,11nm,0.4s						
ROTZ	**Rotzenmuhle**	**3.16**	**343**	*e*	Pn	**20 34 25.0**	**+1.2**
VRAC	**Vranov**	**3.23**	**37**	*e*	Pn	**20 34 25.4**	**+0.7**
PRU	**Pruhonice**	**3.29**	**10**	*e*	PN	**20 34 26.8**	**+1.3**
PRU				*e*	PG	**20 34 35.6**	**-1.2**
PRU				*e*	SG	**20 35 20.1**	**+0.7**
	comp=Z,31nm,0.7s						
GRA1	**Grafenberg Arr**	**3.36**	**332**	Pg	Pg	**20 34 38.8**	**+0.7**
GRF	**Grafenberg Arr**	**3.36**	**332**	*e*	Pg	**20 34 38.8**	**+0.7**
MANZ	**Manzenberg**	**3.39**	**343**	*e*	Pn	**20 34 28.2**	**+1.2**
MANZ				*e*	Sg	**20 35 22.0**	**-0.7**
VAI	**Varese**	**3.50**	**257**	Pg	Pn	**20 34 31.3**	**+2.9**
	comp=Z,12nm,0.5s						
WERN	**Wernitzgruen**	**3.63**	**347**	*e*	Pn	**20 34 32.2**	**+1.9**
GUNZ	**Gunzen**	**3.71**	**347**	*e*	Pn	**20 34 33.5**	**+2.2**
TANN	**Tannenbergstha**	**3.75**	**348**	*e*	Pn	**20 34 33.6**	**+1.8**
WERD	**Werda**	**3.80**	**347**	*e*	Pn	**20 34 34.3**	**+1.7**
PVCC	**Panska Ves**	**3.82**	**9**	*e*	PN	**20 34 34.0**	**+1.1**
PVCC				*e*	PG	**20 34 44.5**	**-2.5**
PVCC				*e*	SG	**20 35 37.2**	**+0.7**
	comp=Z,36nm,0.6s						
VYHS	**Vyhne**	**3.92**	**62**	*e*	PN	**20 34 34.2**	**+0.1**
VYHS				*e*	PG	**20 34 47.4**	**-1.4**
VYHS				*e*	SG	**20 35 40.5**	**+1.0**
BFO	**Black Forest**	**3.93**	**296**	*e*	Pn	**20 34 37.2**	**+2.8**
BFO				*e*	Sg	**20 35 41.2**	**+1.2**
BFO	**Black Forest**	**3.93**	**296**	*e*	Pn	**20 34 37.2**	**+2.8**
BFO				*e*	Sg	**20 35 41.2**	**+1.2**
DPC	**Dobruska-Polom**	**4.01**	**25**	*e*	PN	**20 34 35.8**	**+0.3**
DPC				*e*	PG	**20 34 48.5**	**-2.1**
DPC				*e*	SG	**20 35 42.1**	**-0.4**
	comp=Z,24nm,0.5s						
MOX	**Moxa**	**4.12**	**342**	*e*	Pn	**20 34 38.1**	**+1.2**
MOX	**Moxa**	**4.12**	**342**	*e*	PN	**20 34 38.2**	**+1.3**
MOX				*e*	SN	**20 35 25.1**	**-0.1**
MOX				*e*	SG	**20 35 46.5**	**+0.5**
MOX	**Moxa**	**4.12**	**342**	Pn	Pn	**20 34 38.1**	**+1.2**
MOX				*e*	Sn	**20 35 25.1**	**-0.1**
BRG	**Berggiesshubel**	**4.12**	**3**	Pn	Pn	**20 34 39.7**	**+2.7**
BRG				Pg	Pg	**20 34 51.4**	**-1.4**
BRG				*i*		20 35 28.4	
BRG				*i*		20 35 33.2	
BRG					Sg	**20 35 44.4**	**-1.8**
BRG	**Berggiesshubel**	**4.12**	**3**	Pg	Pg	**20 34 51.4**	**-1.4**
BRG					Sg	**20 35 44.4**	**-1.8**
BRG	**Berggiesshubel**	**4.12**	**3**	Pn	Pn	**20 34 39.7**	**+2.7**
BRG					PG	**20 34 51.4**	**-1.4**
BRG				*i*		20 35 28.4	
BRG				*i*		20 35 33.2	
BRG	**Berggiesshubel**	**4.12**	**3**	SG	Sg	**20 35 44.4**	**-1.8**
	comp=Z,15nm,0.8s						
OKC	**Ostrava-Krasne**	**4.30**	**43**	*e*	SG	**20 35 51.8**	**-0.1**
	comp=Z,169nm,2.4s						
CLL	**Collm**	**4.58**	**355**	*e*	Pn	**20 34 44.6**	**+1.4**
CLL				*e*	Pg	**20 35 01.0**	**-0.4**
CLL				*e*	Sg	**20 36 01.0**	**+0.4**
CLL	**Collm**	**4.58**	**355**	*i*	Pn	**20 34 45.0**	**+1.8**
CLL				*e*	Pg	**20 35 01.0**	**-0.4**
CLL				*e*	Sg	**20 36 01.0**	**+0.4**
	comp=Z,20nm,0.6s						
CDF	**Champ du Feu**	**4.62**	**293**	*e*	Pg	**20 35 00.3**	**-1.9**
CDF				*e*	Sn	**20 35 33.3**	**-4.3**
	comp=Z,37nm,0.8s						
CDF	**Champ du Feu**	**4.62**	**293**	*e*	Pn	**20 34 43.1**	**-0.7**
CDF				*e*	Pg	**20 35 00.3**	**-1.9**
CDF				*e*	Sn	**20 35 33.3**	**-4.3**
CDF	**Champ du Feu**	**4.62**	**293**	*e*	Pg	**20 35 00.3**	**-1.9**
CDF				*e*	Sn	**20 35 33.3**	**-4.3**
	comp=Z,19nm,0.8s						
HINF	**Hinteralfeld**	**4.75**	**285**	*e*	Pn	**20 34 45.3**	**-0.2**
	SNR=1.0						
HINF				*e*	Sn	**20 35 36.0**	**-4.7**
	comp=Z,9.8nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.75**	**285**	*e*	Pn	**20 34 45.3**	**-0.2**
	SNR=1.0						
HINF				*e*	Sn	**20 35 36.0**	**-4.7**
	comp=Z,4.9nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**4.96**	**258**	*e*	Pn	**20 34 46.9**	**-1.6**
LPG				*e*	Sn	**20 35 39.9**	**-6.0**
	comp=Z,2.7nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**4.96**	**258**	*e*	Pn	**20 34 46.9**	**-1.6**
LPG				*e*	Sn	**20 35 39.9**	**-6.0**
	comp=Z,1.4nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**4.96**	**258**	*e*	Pn	**20 34 47.1**	**-1.5**
	SNR=1.0						
LPL				*e*	Sn	**20 35 39.9**	**-6.2**
	comp=Z,2.1nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**4.96**	**258**	*e*	Pn	**20 34 47.1**	**-1.5**
	SNR=1.0						
LPL				*e*	Sn	**20 35 39.9**	**-6.2**
	comp=Z,1.0nm,0.5s,SNR=1.0						
HAU	**Haudompre**	**5.11**	**287**	*e*	Pn	**20 34 50.2**	**-0.4**
	SNR=1.0						
HAU				*e*	Sn	**20 35 44.7**	**-5.1**
	comp=Z,28nm,0.

MFF	**Saint Martin d**	**9.49**	**274**	*e*Pn	**Pn**	**20 35 48.8**	**-1.8**
GRR	**Gorron**	**9.94**	**285**	*e*Pn	**Pn**	**20 35 55.4**	**-1.4**
SGMF	**Saint Gilles**	**11.07**	**284**	*e*Pn	**Pn**	**20 36 10.7**	**-1.5**

*IDC **25** 20:38:24.4±0.8, 1123N×13981E, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.2/23, mbtmp4.2/14, Error ellipse: s-maj=30.1km s-min=14.8km az=82.0*
*ISCJB **25** 20:38:28.7±2.6, 1114N∆007×13970E±0.10, h41km±27km, mb4.5/27, Error ellipse: s-maj=15.9km s-min=11.7km az=6.1*
*NEIC **25** 20:38:29.8±0.4, 1116N×13970E, h35km, mb4.3/5, Error ellipse: s-maj=12.3km s-min=9.3km az=83.0*
ISC 25 20:38:31.9±2.2, 1115N∆007×1398E±01, h54km±24km, n34, σ0§96/34, mb4.5/27, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.54**	**64**	Pn	**Pn**	**20 39 51.2**	**-0.7**
	14nm,0.3s,baz=33,slow=8.7,SNR=5.6						
GUMO				Sn	**Sn**	**20 40 57.2**	**+2.8**
	13nm,0.3s,baz=119,slow=18,SNR=2.3						
MAJO	**Matsushiro**	**25.32**	**357**	P	**P**	**20 43 51.8**	**-1.8**
	14nm,1.3s,mb4.3						
BATI	**Baumata**	**26.58**	**218**	P	**P**	**20 44 05.4**	**+0.2**
	23nm,0.7s,mb4.8,baz=44,slow=1.7,SNR=9.8						
KSRS	**Korea Array**	**28.27**	**340**	P	**P**	**20 44 18.1**	**-2.1**
	1.5nm,0.8s,mb3.6,baz=170,slow=8.9,SNR=4.3						
WRAB	**Tennant Creek**	**31.34**	**190**	*e*P	**P**	**20 44 46.6**	**-0.8**
	3.1nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**31.36**	**190**	P	**P**	**20 44 46.6**	**-0.9**
	2.2nm,0.6s,mb4.2,baz=4.1,slow=9.6,SNR=29						
ASAR	**Alice Springs**	**35.07**	**189**	P	**P**	**20 45 20.4**	**+0.5**
	1.9nm,0.4s,mb4.4,baz=19,slow=12,SNR=45						
CMAR	**Chiang Mai Arr**	**40.06**	**285**	P	**P**	**20 46 03.1**	**+0.9**
	6.0nm,0.8s,mb4.4,baz=88,slow=6.9,SNR=43						
STKA	**Stephens Creek**	**42.82**	**178**	P	**P**	**20 46 23.9**	**-0.6**
	3.0nm,0.9s,mb4.0,baz=12,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**42.82**	**178**	P	**P**	**20 46 23.9**	**-0.6**
ULN	**Ulaanbaatar**	**45.73**	**329**	*e*P	**P**	**20 46 47.6**	**-0.1**
	1.8nm,0.7s,mb4.1						
SONM	**Songino Array**	**46.04**	**329**	P	**P**	**20 46 49.2**	**-0.9**
	1.2nm,0.8s,mb3.9,baz=149,slow=6.4,SNR=5.8						
SONM				PcP	PcP	20 48 25.9	0.0
	0.4nm,0.7s,baz=147,slow=3.4,SNR=2.4						
LSA	**Lhasa**	**48.76**	**300**	*e*P	**P**	**20 47 11.0**	**-0.6**
	2.4nm,0.7s,mb4.3						
TAPN	**Taplejung**	**51.35**	**296**	*e*P	**P**	**20 47 31.7**	**+0.4**
	19nm,1.1s,mb4.9						
ODAN	**Odare**	**51.57**	**295**	*e*P	**P**	**20 47 33.6**	**+0.7**
	13nm,0.9s,mb4.9						
JIRN	**Jiri**	**52.73**	**296**	*e*P	**P**	**20 47 42.6**	**+1.1**
	8.2nm,0.5s,mb4.9						
GUN	**Gumba**	**53.03**	**297**	*e*P	**P**	**20 47 44.8**	**+1.0**
	17nm,0.7s,mb5.1						
DMN	**Daman**	**53.68**	**296**	*e*P	**P**	**20 47 49.2**	**+0.7**
	25nm,1.2s,mb5.0						
GKN	**Gorkha**	**54.13**	**296**	*e*P	**P**	**20 47 52.0**	**+0.2**
	24nm,1.3s,mb5.0						
DANN	**Dangsing**	**54.94**	**297**	*e*P	**P**	**20 47 58.1**	**+0.4**
	25nm,1.3s,mb5.1						
KOLN	**Koldanda**	**55.02**	**296**	*e*P	**P**	**20 47 58.8**	**+0.5**
PYUN	**Piuthan**	**55.59**	**296**	*e*P	**P**	**20 48 02.3**	**-0.1**
	12nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**59.86**	**318**	P	**P**	**20 48 31.7**	**-0.3**
	0.9nm,0.6s,mb4.0,baz=104,slow=8.2,SNR=9.9						
MKAR	**Makanchi Array**	**59.86**	**318**	P	**P**	**20 48 31.7**	**-0.3**
ZALV	**Zalesovo Beam**	**60.78**	**326**	P	**P**	**20 48 37.1**	**-1.1**
	1.6nm,0.6s,mb4.4,baz=104,slow=7.4,SNR=7.3						
KURK	**Kurchatov**	**63.29**	**321**	P	**P**	**20 48 55.4**	**+0.3**
	2.3nm,0.6s,mb4.5,baz=111,slow=6.5,SNR=11						
AML	**Almayashu**	**64.88**	**311**	*e*P	**P**	**20 49 06.9**	**+1.3**
	4.0nm,1.2s,mb4.3						
BVAR	**Borovoye Array**	**68.78**	**323**	P	**P**	**20 49 30.4**	**+0.1**
	4.6nm,0.6s,mb4.6,baz=106,slow=8.2,SNR=30						
YKA	**Yellowknife Ar**	**87.28**	**27**	P	**P**	**20 51 12.5**	**0.0**
	0.7nm,0.5s,mb4.2,baz=291,slow=4.8,SNR=4.8						
YKA	**Yellowknife Ar**	**87.28**	**27**	P	**P**	**20 51 12.5**	**-0.1**
ARCES	**ARCESS Array B**	**87.82**	**341**	P	**P**	**20 51 13.5**	**-1.5**
	1.5nm,0.6s,mb4.4,baz=72,slow=7.8,SNR=4.1						
ARCES	**ARCESS Array B**	**87.82**	**341**	P	**P**	**20 51 13.5**	**-1.5**
NVAR	**Mina Array Bea**	**92.32**	**50**	P	**P**	**20 51 38.3**	**+1.7**
	0.3nm,0.5s,mb3.9,baz=285,slow=4.3,SNR=4.5						
CFAA	**Coronel Fontan**	**147.09**	**132**	PKPbc	PKPbc	20 58 10.3	+0.9
	0.1nm,0.4s,baz=292,slow=2.2,SNR=3.6						

*ISCJB **25** 20:59:05.4±1.1, 8.11S±006×11868E±008, h29km±10km, mb3.8/8, Error ellipse: s-maj=13.2km s-min=8.8km az=154.0*
*NEIC **25** 20:59:08.6±0.7, 805S×11877E, h35km, mb3.8/1, Error ellipse: s-maj=25.8km s-min=9.3km az=60.0*
*DJA **25** 20:59:08, 8.11S×11882E, h10km, MLv4.3/6*
*IDC **25** 20:59:13.6±4.8, 790S×11904E, h83km±45km, mb3.5/8, mb1 3.7/11, mb1mx3.6/20, mbtmp3.5/11, ML4.0/3, Error ellipse: s-maj=63.6km s-min=11.3km az=67.0*
ISC 25 20:59:05.2±1.8, 809S±007×11872E±008, h13km±13km, n24, σ1§12/23, mb3.8/8, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.45**	**183**	P	**Pg**	**20 59 13.8**	**-0.3**
KHKI	**Kahang-Kahang**	**3.09**	**265**	P	**Pn**	**20 59 59.2**	**+5.4**
KAPI	**Kappang**	**3.22**	**19**	P	**Pn**	**20 59 56.6**	**+1.0**
	10.0nm,0.3s,baz=224,slow=5.3,SNR=20						
KAPI				S	**Sn**	**21 00 33.8**	**-0.2**
	49nm,0.3s,baz=171,slow=23,SNR=14						
KAPI	**Kappang**	**3.22**	**19**	P	**Pn**	**20 59 56.7**	**+1.1**
DNP	**Denpasar**	**3.52**	**260**	P	**Pb**	**21 00 08.7**	**+1.3**
BATI	**Baumata**	**5.32**	**114**	P	**Pn**	**21 00 27.9**	**+3.4**
	6.8nm,0.3s,baz=285,slow=5.5,SNR=8.0						
BATI	**Baumata**	**5.32**	**114**	P	**Pn**	**21 00 28.7**	**+4.2**
	23nm,0.7s,0.1nm						
BBKI	**Banjar Baru**	**6.00**	**320**	P	Px	21 01 02.7	
KRKI	**Karangkates**	**6.20**	**269**	P	**Pb**	**21 00 50.5**	**-2.7**
KAKA	**Kakadu**	**14.26**	**110**	*e*P	Px	21 02 13.3	
	5.0nm,0.4s						
WRA	**Warramunga Arr**	**19.18**	**130**	P	**Pn**	**21 03 29.4**	**-0.3**
	0.7nm,0.3s,baz=302,slow=12,SNR=32						
WRAB	**Tennant Creek**	**19.18**	**129**	*e*P	**Pn**	**21 03 29.1**	**-0.6**
	3.0nm,0.5s						
WB2	**Warramunga Arr**	**19.19**	**130**	*e*P	**Pn**	**21 03 29.5**	**-0.3**
WB2	**Warramunga Arr**	**19.19**	**130**	*e*P	**Pn**	**21 03 29.0**	**-0.8**
ASAR	**Alice Springs**	**21.26**	**138**	P	**P**	**21 03 52.1**	**+0.7**
	4.0nm,0.7s,mb3.8,baz=314,slow=8.1,SNR=27						
STKA	**Stephens Creek**	**31.83**	**141**	*e*P	**P**	**21 05 30.9**	**+1.0**
	2.2nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**21 05 30.5**	**+0.6**
	4.2nm,0.6s,mb4.4,baz=315,slow=8.8,SNR=12						
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**21 05 30.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**32.81**	**324**	P	**P**	**21 05 41.4**	**+2.8**
	0.3nm,0.7s,mb3.4,baz=160,slow=7.3,SNR=4.1						
SONM	**Songino Array**	**56.74**	**350**	P	**P**	**21 08 48.6**	**-0.1**
	0.3nm,0.6s,mb3.5,baz=172,slow=9.7,SNR=3.0						
MKAR	**Makanchi Array**	**63.52**	**333**	P	**P**	**21 09 34.4**	**-0.9**
	0.4nm,0.7s,mb3.6,baz=154,slow=6.5,SNR=6.0						
KURK	**Kurchatov**	**68.06**	**334**	P	**P**	**21 10 03.4**	**-1.0**
	0.5nm,0.7s,mb3.7,baz=141,slow=5.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**68.09**	**339**	P	**P**	**21 10 03.1**	**-1.5**
	1.2nm,0.7s,mb4.0,baz=116,slow=3.4,SNR=5.6						
VNDA	**Vanda**	**72.92**	**171**	P	**P**	**21 10 34.5**	**+0.7**
	0.4nm,0.4s,mb3.7,baz=291,slow=8.0,SNR=6.7						

*IDC **25** 20:59:09.6±2.0, 2971N×6964E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=39.8km s-min=29.0km az=33.0*
*NEIC **25** 20:59:11.2±1.1, 2974N×6964E, h10km, mb3.9/1, Error ellipse: s-maj=17.2km s-min=15.3km az=73.0*
*ISCJB **25** 20:59:12.7±1.5, 298N∆02×697E±02, h33km, mb3.6/4, Error ellipse: s-maj=23.7km s-min=21.5km az=157.0*
ISC 25 20:59:15.2±4.4, 298N∆02×697E±02, h38km±38km, n9, σ0§54/9, mb3.6/4, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**12.69**	**14**	*e*Pn	**Pn**	**21 02 12.9**	**-0.1**
	4.8nm,0.5s						
AAK	**Ala-Archa**	**13.34**	**15**	*e*Pn	**Pn**	**21 02 22.2**	**+0.3**
	2.0nm,0.7s						
MK31	**Makanchi Array**	**19.55**	**27**	*e*P	**Pn**	**21 03 40.8**	**-0.2**
MKAR	**Makanchi Array**	**19.55**	**27**	P	**Pn**	**21 03 40.1**	**-0.9**
	0.1nm,0.3s,baz=211,slow=11,SNR=5.4						
KURK	**Kurchatov**	**21.91**	**15**	P	**P**	**21 04 04.4**	**-0.5**
	3.9nm,0.7s,mb3.9,baz=208,slow=9.5,SNR=20						
KURK	**Kurchatov**	**21.91**	**15**	*e*P	**P**	**21 04 05.7**	**+0.8**
	4.1nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**23.18**	**1**	P	**P**	**21 04 19.3**	**+0.9**
	1.0nm,0.7s,mb3.4,baz=166,slow=10.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**28.88**	**106**	P	**P**	**21 05 10.7**	**+0.2**
	0.6nm,0.8s,mb3.4,baz=290,slow=9.5,SNR=5.7						
BRTR	**Keskin Array B**	**31.07**	**298**	P	**P**	**21 05 29.3**	**-0.3**
	0.8nm,0.7s,mb3.6,baz=111,slow=8.5,SNR=5.9						

IDC 25 21:03:25.8±8.0, 798S×11856E, h57km±63km, mb3.6/2, mb1 3.8/5, mb1mx3.4/19, mbtmp3.7/5, ML3.8/3, MS3.9/1, Ms1 3.9/1, ms1mx3.5/32, Error ellipse: s-maj=102.1km s-min=23.4km az=83.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.17**	**22**	P	Pn	21 04 12.8	-0.5
	4.5nm,0.3s,baz=185,slow=12,SNR=7.7						
KAPI				S	Sn	21 04 50.6	+0.6
	16nm,0.3s,baz=156,slow=23,SNR=11						
KAPI				LR	LR	21 05 30.1	
	comp=Z,2μm,18.9s,baz=51,slow=39						
BATI	**Baumata**	**5.50**	**114**	P	Pn	21 04 45.7	+0.5
	3.9nm,0.3s,baz=280,slow=16,SNR=4.6						
WRA	**Warramunga Arr**	**19.36**	**130**	P	Pn	21 07 46.2	-2.3
	0.4nm,0.3s,baz=303,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.44**	**138**	P	P	21 08 09.6	+0.2
	1.7nm,0.5s,baz=317,slow=9.0,SNR=14						
STKA	**Stephens Creek**	**32.01**	**141**	P	P	21 09 47.2	+0.3
	1.0nm,0.3s,baz=318,slow=11,SNR=4.5						

IDC 25 21:04:15.4±8.3, 057N×9700E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/22, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=174.4km s-min=103.9km az=138.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.88**	**6**	P	Pn	21 08 25.1	-0.5
	0.0nm,0.3s,baz=198,slow=11,SNR=5.9						
SONM	**Songino Array**	**47.78**	**9**	P	P	21 12 54.5	+0.1
	0.3nm,0.7s,baz=179,slow=7.6,SNR=3.1						
MKAR	**Makanchi Array**	**47.80**	**346**	P	P	21 12 54.2	-0.3
	0.2nm,0.5s,baz=152,slow=8.2,SNR=3.6						
KURK	**Kurchatov**	**52.34**	**345**	P	P	21 13 28.7	-0.2
	0.2nm,0.4s,baz=160,slow=7.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**54.14**	**351**	P	P	21 13 42.2	+0.1
	0.7nm,0.4s,baz=170,slow=7.5,SNR=4.3						

*KRSC **25** 21:06:41.2±0.8, 5039N×15734E, h5km±5km, ML4.8*
*MOS **25** 21:06:42.5±0.9, 5065N×15629E, h100km, mb3.8/6, Error ellipse: s-maj=17.4km s-min=8.2km az=74.2*
*ISCJB **25** 21:06:45.7±0.8, 5074N∆008×1565E±01, h130km±7km, mb3.5/15, Error ellipse: s-maj=14.4km s-min=9.1km az=140.6*
*NEIC **25** 21:06:47.9±0.8, 5079N×15638E, h130km±7km, mb3.9/4, Error ellipse: s-maj=11.8km s-min=7.5km az=137.0*
*IDC **25** 21:06:48.9±3.4, 5088N×15638E, h138km±23km, mb3.3/12, mb1 3.6/13, mb1mx3.4/26, mbtmp3.3/13, MS3.6/1, Ms1 3.6/1, ms1mx3.1/31, Error ellipse: s-maj=42.8km s-min=19.0km az=171.0*
ISC 25 21:06:46.9±0.8, 5074N∆008×1566E±01, h124km±7km, n58, σ1§09/67, mb3.6/15, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.28**	**259**	*e*PN	**Pn**	**21 06 56.2**	**-7.9**
SKR				*e*S	**Sn**	**21 07 08.4**	**-8.7**
SKR				pmax	pmax		
	comp=N,2μm,0.4s						
SKR				pmax	pmax		
	comp=E,2μm,0.4s						
SKR				pmax	pmax		
	comp=Z,4μm,0.4s						
SKR				pmax	pmax		
	comp=Z,6μm,1.5s						
SKR				smax			
	comp=N,5μm,0.5s						
SKR				smax			
	comp=E,78nm,0.5s						
SKR				smax			
	comp=N,15μm,1.0s						
MIPR	**Malaya Ipel'ka**	**1.55**	**5**	P	**Pn**	**21 07 16.2**	**+1.2**
MIPR				*i* S	**Sn**	**21 07 41.2**	**+4.7**
RUS	**Russkaya**	**2.10**	**35**	*e*P	**Pn**	**21 07 19.6**	**-2.0**
RUS				*i* S	**Sn**	**21 07 48.3**	**0.0**
PEA0B	**Petropavlovsk-**	**2.48**	**16**	*e*Pn	**Pn**	**21 07 27.7**	**+1.3**
PEA0B				*e*Sn	**Sn**	**21 07 57.7**	**+0.8**
PETK	**Petropavlovsk-**	**2.48**	**16**	P	**Pn**	**21 07 27.8**	**+1.3**
	comp=N,26nm,0.3s,baz=168,slow=13,SNR=1448						
PETK				LR	LR	21 08 26.1	
	comp=N,1μm,18.0s,baz=37,slow=41						
PET	**Petropavlovsk**	**2.64**	**29**	*e*Pn	**Pn**	**21 07 28.3**	**-0.2**
PET				*e*Sn	**Sn**	**21 08 01.9**	**+1.4**
PET	**Petropavlovsk**	**2.64**	**29**	*i*Pn	**Pn**	**21 07 28.4**	**-0.1**
PET				*e*S	**Sn**	**21 08 03.7**	**+3.2**
PET				pmax	pmax		
	comp=Z,219nm,0.5s						
PET				smax			
	comp=N,526nm,0.5s						
PET				smax			
	comp=E,436nm,0.4s						
NLC	**Nalytchevo**	**2.99**	**34**	*e*P	**Pn**	**21 07 31.2**	**-1.9**
NLC				*i* S	**Sn**	**21 08 08.3**	**-0.4**
SPN	**Mys Shipunski**	**3.20**	**41**	*e*P	**Pn**	**21 07 34.2**	**-1.6**
SPN				*i* S	**Sn**	**21 08 12.8**	**-0.8**
MKZ	**Mys Kozlova**	**4.96**	**37**	*e*P	**Pn**	**21 07 57.3**	**-1.9**
MKZ				*i* S	**Sn**	**21 08 52.4**	**-3.1**
KMNR	**Kamenistaya**	**5.50**	**22**	P	**Pn**	**21 08 07.8**	**+1.4**
KPT	**Kopyto**	**5.68**	**21**	P	**Pn**	**21 08 09.8**	**+0.9**
BZMR	**Bezymyannaya**	**5.72**	**23**	P	**Pn**	**21 08 10.1**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**5.78**	**24**	P	**Pn**	**21 08 09.7**	**-0.5**
KRSR	**Krestovskiy**	**5.99**	**22**	P	**Pn**	**21 08 13.8**	**+0.7**
KBTR	**Krutoberegovo**	**6.64**	**32**	P	**Pn**	**21 08 20.7**	**-1.1**
BILL	**Bilibino**	**18.01**	**12**	*e*P	**P**	**21 10 49.0**	**+1.4**
BILL	**Bilibino**	**18.01**	**12**	*e*P	**P**	**21 10 49.0**	**+1.4**
MDJ	**Mudanjiang**	**19.09**	**262**	*e*P	**P**	**21 11 00.4**	**+0.7**
MAJO	**Matsushiro**	**19.35**	**230**	P	**P**	**21 11 04.1**	**+1.5**
TIXI	**Tiksi**	**24.41**	**339**	P	**P**	**21 11 54.9**	**+1.6**
	comp=E,3.0nm,0.6s,mb3.8						
TIXI	**Tiksi**	**24.41**	**339**	*i*P	**P**	**21 11 53.5**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
INCN	**Inchon**	**25.04**	**250**	P	**P**	**21 11 58.9**	**-0.4**
BJT	**Baijiatuan**	**29.97**	**265**	*e*P	**P**	**21 12 41.1**	**-2.2**
COLA	**College**	**31.63**	**42**	P	**P**	**21 12 57.6**	**0.0**
INK	**Inuvik**	**37.08**	**35**	*e*P	**P**	**21 13 46.2**	**+1.8**
YHNB	**Yeheng**	**37.53**	**239**	P	**P**	**21 13 48.2**	**-0.6**
	comp=Z,331nm,2.0s						
YKA	**Yellowknife Ar**	**46.39**	**40**	P	**P**	**21 15 01.7**	**+1.5**
	comp=Z,1.2nm,0.6s,mb3.8,baz=297,slow=7.3,SNR=3.1						
YKA	**Yellowknife Ar**	**46.39**	**40**	P	**P**	**21 15 01.7**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**47.12**	**302**	P	**P**	**21 15 06.5**	**+0.4**
	comp=Z,0.6nm,0.8s,mb3.4,baz=64,slow=7.7,SNR=4.1						
KURK	**Kurchatov**	**47.12**	**302**	*e*P	**P**	**21 15 04.3**	**-1.8**
	comp=Z,0.9nm,0.3s,mb4.0						
KURK	**Kurchatov**	**47.12**	**302**	P	**P**	**21 15 06.5**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
MKAR	**Makanchi Array**	**47.20**	**296**	P	**P**	**21 15 06.0**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=56,slow=6.6,SNR=8.1						
BVAR	**Borovoye Array**	**50.13**	**308**	P	**P**	**21 15 28.0**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=39,slow=5.5,SNR=3.9						
BRVK	**Borovoye**	**50.16**	**308**	P	**P**	**21 15 28.2**	**-1.1**
TKM2	**Tokmak 2**	**53.32**	**295**	P	**P**	**21 15 52.4**	**-0.5**
ARU	**Arti**	**53.63**	**317**	P	**P**	**21 15 54.2**	**-0.8**
ARU	**Arti**	**53.63**	**317**	P	**P**	**21 15 54.2**	**-0.8**
EKS2	**Erkin-Say**	**54.53**	**296**	*e*P	**P**	**21 16 02.0**	**+0.4**
	comp=Z,1.1nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**54.83**	**341**	P	**P**	**21 16 02.5**	**-0.9**
	comp=Z,3.2nm,0.8s,mb4.4,baz=38,slow=8.0,SNR=3.4						
AML	**Almayashu**	**54.91**	**296**	P	**P**	**21 16 04.4**	**0.0**
CHTO	**Chiang Mai**	**55.25**	**257**	*e*P	**P**	**21 16 07.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**55.52**	**256**	P	**P**	**21 16 08.9**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.3,baz=38,slow=5.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**55.52**	**256**	*e*P	**P**	**21 16 12.3**	**+3.2**
PDAR	**Pinedale Array**	**60.62**	**57**	P	**P**	**21 16 45.6**	**+1.3**
	comp=Z,0.2nm,0.7s,mb3.3,baz=321,slow=2.6,SNR=3.6						

KBL	**Kabul**	**62.70**	**292**	*e*P	**P**	**21 16 58.0**	**-0.4**
	comp=Z,1.0nm,0.4s,mb4.1						
KBL	**Kabul**	**62.70**	**292**	*e*P	**P**	**21 16 58.0**	**-0.4**
KBL				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
NOA	**NORSAR Array B**	**65.16**	**342**	P	**P**	**21 17 12.5**	**-1.5**
	comp=Z,0.9nm,0.7s,mb3.7,baz=25,slow=6.4,SNR=2.9						
NOA	**NORSAR Array B**	**65.16**	**342**	P	**P**	**21 17 12.5**	**-1.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CTAO	**Charters Tower**	**71.09**	**190**	P	**P**	**21 17 51.3**	**-0.1**
WRAB	**Tennant Creek**	**73.03**	**202**	*e*P	**P**	**21 18 03.4**	**+0.4**
TXAR	**Lajitas Array**	**73.62**	**64**	P	**P**	**21 18 06.3**	**-0.3**
	comp=Z,0.3nm,0.7s,mb3.1,baz=282,slow=5.9,SNR=4.0						
GERES	**GERESS Array B**	**75.81**	**336**	P	**P**	**21 18 17.9**	**-1.0**
	comp=Z,0.2nm,0.4s,mb3.2,baz=39,slow=5.0,SNR=3.6						
BRTR	**Keskin Array B**	**76.98**	**318**	P	**P**	**21 18 26.6**	**+1.0**
	comp=Z,0.7nm,0.9s,mb3.4,baz=32,slow=4.9,SNR=4.0						
BRTR	**Keskin Array B**	**76.98**	**318**	P	**P**	**21 18 26.7**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MBWA	**Marble Bar**	**78.59**	**215**	P	**P**	**21 18 35.0**	**+0.4**
MMAI	**Mount Meron Ar**	**81.80**	**313**	P	**P**	**21 18 52.2**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.0,baz=57,slow=9.1,SNR=4.2						
STKA	**Stephens Creek**	**83.31**	**193**	P	**P**	**21 19 00.2**	**+0.9**

JMA 25 21:07:29.2±0.2, 4344N×14748E, h26km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.27**	**267**	P	Pn	21 07 51.5	+0.3
NEM2				*e*S	Sn	21 08 08.4	+1.0
JRA	**Rausu**	**1.78**	**287**	P	Pn	21 07 59.1	+0.8
JRA				*e*S	Sn	21 08 21.1	+1.1
JNK	**Nakash**	**2.01**	**275**	P	Pn	21 08 02.0	+0.5
JAK	**Akkeshi**	**2.08**	**259**	P	Pn	21 08 03.2	+0.8
JTKR	**Abashiri--Toko**	**2.64**	**283**	P	Pn	21 08 11.7	+1.6
JAR	**Ashorobuto**	**2.71**	**268**	P	Pn	21 08 12.4	+1.4
JAR				*e*S	Sn	21 08 43.7	+0.8
JOB	**Onbets**	**2.72**	**260**	P	Pn	21 08 12.4	+1.2
JCH	**Churui**	**3.13**	**256**	P	Pn	21 08 17.9	+1.1
JCH				*e*S	Sn	21 08 54.5	+1.2
JFR	**Furan**	**3.58**	**267**	P	Pn	21 08 25.3	+2.4
JNBK	**Urakawa-nobuka**	**3.66**	**253**	P	Pn	21 08 25.4	+1.3

*ISCJB **25** 21:18:02.5±0.2, 2997S∆003×17907W±005, h254km, mb4.8/66, Error ellipse: s-maj=6.3km s-min=3.4km az=23.5*
*BJI **25** 21:18:02.4, 2936S×17851W, h258km, mB5.1, mb4.7*
*NEIC **25** 21:18:03.1±0.6, 3012S×17898W, h254km±6km, mb4.9/29, Error ellipse: s-maj=9.1km s-min=5.8km az=131.0*
*MOS **25** 21:18:03.4±0.9, 2951S×179.13W, h252km, mb4.9/24, Error ellipse: s-maj=12.5km s-min=11.3km az=55.3*
*IDC **25** 21:18:03.1±0.5, 2952S×17905W, h243km±4km, mb4.3/20, mb1 4.4/21, mb1mx4.4/22, mbtmp4.3/21, Error ellipse: s-maj=10.4km s-min=9.8km az=156.0*
ISC 25 21:18:03.6±0.2, 3008S∆003×17902W±005, h256km, h256km±6km: pP-P, n452, σ1§18/190, mb4.8/66, 84C-10D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.26**	**50**	P	**Pn**	**21 18 39.3**	**-1.6**
	1μm,0.3s,baz=124,slow=4.7,SNR=31						
RAO				S	**S**	**21 19 04.1**	**-6.2**
	1μm,0.3s,baz=73,slow=22,SNR=7.8						
MXZ	**Matakaoa Point**	**7.79**	**196**	*e*P	**Pn**	**21 19 54.8**	**+0.6**
MXZ				S	**S**	**21 21 24.8**	**+1.5**
PUZ	**Puketiti**	**8.29**	**195**	*e*P	**Pn**	**21 19 59.9**	**-0.5**
PUZ				S	**S**	**21 21 34.1**	**-0.7**
MWZ	**Matawai**	**8.72**	**198**	*e*P	**Pn**	**21 20 04.9**	**-1.0**
URZ	**Urewera**	**8.77**	**200**	P	**Pn**	**21 20 08.0**	**+1.5**
	2.7nm,0.3s,baz=275,slow=6.6,SNR=20						
URZ				S	**S**	**

comp=Z,4.3nm,0.9s,baz=115,slow=4.0,SNR=9.7
ASAR S **S** **21 31 30.9 -2.1**
comp=Z,0.9nm,0.9s,baz=103,slow=16,SNR=5.4
ASAR PKiKP PKiKP 21 34 24.9 -0.8
comp=Z,0.4nm,0.5s,baz=84,slow=1.7,SNR=5.6
ASAR Alice Springs 42.25 267 P **P** **21 25 32.6 +0.5**
ASAR 21 27 21.7
ASAR S **S** **21 31 31.0 -2.0**
ASAR pmax pmax
comp=Z,7.0nm,0.6s
ASAR pmax pmax
comp=Z,4.0nm,0.5s
ASAR pmax pmax
comp=N,4.0nm,0.9s
ASAR smax
comp=N,1.0nm,0.9s
WB2 Warramunga Arr 43.20 272 *e*P **P** **21 25 39.7 0.0**
WB2 *e*S **S** **21 31 44.9 -2.0**
WRAB Tennant Creek 43.20 272 *e*P **P** **21 25 40.2 +0.4**
comp=N,26nm,0.7s,mb4.6
WRAB Tennant Creek 43.20 272 *e*P **P** **21 25 40.2 +0.4**
WRAB pmax pmax
comp=Z,26nm,0.7s,mb4.6
WRAB Tennant Creek 43.20 272 P **P** **21 25 40.2 +0.4**
comp=Z,54nm,1.2s,mb4.7
WRA Warramunga Arr 43.20 272 P **P** **21 25 39.9 +0.1**
comp=Z,28nm,0.6s,mb4.6,baz=110,slow=7.7,SNR=129
WRA PcP PcP 21 27 24.4 +0.2
comp=Z,6.3nm,0.7s,baz=111,slow=3.1,SNR=12
WRA ScP ScP 21 30 51.2 +0.5
comp=Z,3.3nm,0.9s,baz=110,slow=4.1,SNR=8.9
WRA S **S** **21 31 44.9 -2.2**
comp=Z,4.8nm,0.9s,baz=108,slow=14,SNR=11
WRA PKiKP PKiKP 21 34 25.8 -0.9
comp=Z,0.7nm,0.5s,baz=116,slow=0.5,SNR=11
WRA Warramunga Arr 43.20 272 P **P** **21 25 39.9 0.0**
WRA PcP PcP 21 27 24.4 +0.2
WRA ScP ScP 21 30 51.2 +0.5
WRA S **S** **21 31 44.9 -2.2**
WRA Warramunga Arr 43.20 272 P **P** **21 25 39.9 +0.1**
WRA 21 27 24.4
WRA S **S** **21 31 44.9 -2.1**
WRA pmax pmax
comp=Z,28nm,0.6s
WRA pmax pmax
comp=Z,6.0nm,0.7s
WRA pmax pmax
comp=N,3.0nm,0.9s
WRA smax
comp=N,5.0nm,1.0s
WRA pmax pmax
comp=Z,1.0nm,0.5s
FORT Forrest 45.28 255 *e*P **P** **21 25 56.3 +0.2**
comp=Z,26nm,0.6s,mb4.6
FORT Forrest 45.28 255 *e*P **P** **21 25 56.4 +0.3**
comp=Z,4.4nm,0.8s,mb3.7
KAKA Kakadu 48.01 280 *e*P Px 21 26 03.5
comp=Z,7.5nm,0.6s
KAKA *e* 21 26 17.2
KAKA *e* 21 27 26.6
SBA Scott Base 48.29 184 *e*P **P** **21 26 25.8 +7.1**
comp=Z,14nm,0.8s,mb4.3
SBA Scott Base 48.29 184 *e*P **P** **21 26 25.8 +7.1**
SBA pmax pmax
comp=Z,14nm,0.8s,mb4.3
VNDA Vanda 48.33 185 P **P** **21 26 23.4 +4.5**
comp=Z,1.3nm,0.7s,baz=1.2,slow=5.4,SNR=7.9
VNDA PcP PcP 21 27 44.8 +3.5
comp=Z,3.5nm,0.9s,baz=310,slow=4.2,SNR=4.5
VNDA ScP ScP 21 31 13.8 +2.7
comp=Z,4.0nm,0.8s,baz=350,slow=4.5,SNR=4.8
VNDA Vanda 48.33 185 P **P** **21 26 23.4 +4.5**
VNDA PcP PcP 21 27 44.8 +3.5
VNDA ScP ScP 21 31 13.8 +2.7
VNDA Vanda 48.33 185 P **P** **21 26 23.4 +4.5**
VNDA 21 27 44.8
VNDA pmax pmax
comp=Z,1.0nm,0.7s
VNDA pmax pmax
comp=Z,4.0nm,0.9s
VNDA pmax pmax
comp=N,4.0nm,0.8s
KLBR Kellerberrin 53.62 251 *e*P **P** **21 26 59.4 +0.5**
MUN Mundaring 54.78 250 *e*P **P** **21 27 08.5 +1.3**
BATI Baumata 56.73 278 P **P** **21 27 22.2 +0.9**
comp=N,9.6nm,0.5s,mb4.5,baz=204,slow=3.1,SNR=3.5
QSPA South Pole Qui 60.03 180 P **P** **21 27 48.5 +5.5**
comp=N,51nm,0.9s,mb5.1,baz=30,slow=1.8,SNR=98
QSPA S **S** **21 35 45.7 +11**
comp=N,5.6nm,0.9s,baz=183,slow=15,SNR=12
QSPA South Pole Qui 60.03 180 *e*P **P** **21 27 48.5 +5.6**
comp=N,50nm,0.8s,mb5.1
MNI Manado 61.95 290 P **P** **21 28 03.7 +6.9**
comp=N,2μm,2.8s
BBKI Banjar Baru 67.67 279 P **P** **21 28 39.5 +5.8**
comp=N,42nm,1.1s,mb5.1
PBKI Pangkalan Bun 70.78 278 P **P** **21 28 54.5 +1.8**
comp=N,113nm,1.2s,mb5.4
LEM Lembang 72.22 272 P **P** **21 29 02.2 +0.9**
comp=N,64nm,1.1s,comp=N,5μm,mb5.1
MAW Mawson 72.30 201 P **P** **21 29 03.6 +2.7**
comp=N,47nm,0.8s,mb4.2,baz=135,slow=11,SNR=5.2
MAW Mawson 72.30 201 P **P** **21 29 03.6 +2.8**
MAW pmax pmax
comp=Z,5.0nm,0.8s
STKI Sintang 72.37 281 P **P** **21 29 02.9 +0.7**
comp=Z,49nm,1.2s,mb5.0
SBUM Sibu 72.99 283 P **P** **21 29 06.7 +0.9**
DBJI Dramaga 73.11 272 P **P** **21 29 06.7 +0.2**
comp=Z,90nm,1.1s,mb5.3
KSM Kuching 74.10 281 P **P** **21 29 13.8 +1.6**
comp=Z,28nm,1.2s,mb4.8
PPBI Pangkal Pinang 75.81 276 P **P** **21 29 22.3 +0.3**
comp=Z,28nm,1.1s,mb4.8
SYO Syowa Base 77.23 193⇑ *e*X **P** **21 29 29.9 +0.9**
SYO Syowa Base 77.23 193⇓ *e*P PcP 21 29 41.0 +2.4
MJAR Matsushiro Arr 77.48 326 P **P** **21 29 28.8 -1.9**
comp=Z,8.1nm,1.1s,mb4.3,baz=168,slow=5.5,SNR=12
MJAR Matsushiro Arr 77.48 326 P **P** **21 29 28.8 -1.9**
MJAR pmax pmax
comp=Z,8.0nm,1.2s
MAJO Matsushiro 77.48 326 *e*P **P** **21 29 29.0 -1.7**
comp=Z,20nm,1.2s,mb4.7
MAJO Matsushiro 77.48 326 *e*P **P** **21 29 29.0 -1.8**
MAJO pmax pmax
comp=Z,20nm,1.2s,mb4.7
MAT Matsushiro 77.48 326 P **P** **21 29 28.4 -2.4**
KSI Kapahiang 78.13 273 P **P** **21 29 34.4 -0.6**
comp=Z,98nm,0.9s,mb5.5
SNAA Sanae 78.50 179 *e*P **P** **21 29 35.1 -0.8**
SNAA *e* 21 29 37.9
SNAA *e* 21 29 45.9
SNAA *e* pP 21 30 35.7 -0.5
SNAA Sanae 78.50 179 *e*P **P** **21 29 35.0 -1.0**
comp=Z,29nm,1.1s,mb4.9
SNAA *e*pP pP 21 30 35.3 -0.9
SNAA Sanae 78.50 179 *e*P **P** **21 29 35.0 -0.9**
SNAA *e**PP pP 21 30 35.3 -0.9
SNAA pmax pmax
comp=Z,29nm,1.1s
VNA3 Neumayer Olymp 78.68 177 *e*P **P** **21 29 40.1 +3.2**
VNA3 *e* 21 29 42.8
VNA3 *e* 21 29 49.2
VNA3 *e* pP 21 30 40.2 +3.0
VNA2 Neumayer--Watz 79.11 177 *e*P **P** **21 29 43.1 +3.9**
baz=191,slow=5.6
VNA2 *e* 21 29 45.6
VNA2 *e* 21 29 52.1
VNA2 *e* pP 21 30 42.7 +3.1
VNA1 Neumayer--Stat 79.34 177 *e*P **P** **21 29 44.6 +4.1**
VNA1 *e* 21 29 47.0
VNA1 *e* pP 21 30 45.5 +4.6
MYKOM Kota Tinggi 79.78 278 P **P** **21 29 44.2 +0.3**
PDSI Padang 81.34 274 P **P** **21 29 51.1 -1.0**
comp=Z,61nm,1.0s,mb5.3
ADK Adak 81.63 1 *e*P **P** **21 29 50.8 -1.9**
comp=Z,142nm,0.9s,mb5.7
ADK Adak 81.63 1 *e*P **P** **21 29 50.8 -1.8**
ADK pmax pmax
comp=Z,142nm,0.9s,mb5.7
PLCA Paso Flores 83.37 133 P **P** **21 30 05.7 +3.5**
comp=Z,4.5nm,0.8s,mb4.4,baz=216,slow=4.6,SNR=8.4
PLCA Paso Flores 83.37 133 P **P** **21 30 05.7 +3.5**
PLCA pmax pmax
comp=Z,5.0nm,0.8s
KSRS Korea Array 83.53 320 P **P** **21 30 01.9 -1.0**
comp=Z,6.2nm,1.0s,mb4.4,baz=144,slow=5.6,SNR=14
KSRS Korea Array 83.53 320 P **P** **21 30 01.9 -0.9**
KSRS pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
IPM Ipoh 83.57 279 P **P** **21 30 03.3 -0.3**
comp=Z,72nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 84.08 335 *e*P **P** **21 30 05.5 +0.2**
comp=Z,104nm,1.2s,mb5.5
YSS Yuzh-Sakhalins 84.08 335⇑ *e*P **P** **21 30 05.3 0.0**
YSS pmax pmax
comp=Z,136nm,1.6s,mb5.5
PETK Petropavlovsk- 85.28 346 P **P** **21 30 09.9 -1.2**
comp=Z,68nm,0.7s,mb5.6,baz=105,slow=8.2,SNR=105
PETK Petropavlovsk- 85.28 346 P **P** **21 30 10.0 -1.2**
PETK pmax pmax
comp=Z,68nm,0.7s,mb5.6
NJ2 Nanjing 85.37 311 *e*P **P** **21 30 12.5 +0.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
PTRM Twissleman Ran 85.63 44 *e*P **P** **21 30 12.6 -0.7**
SAO San Andreas Ge 85.63 43 *e*P **P** **21 30 13.7 +0.4**
NSHM Saint Helena R 86.16 41 *e*P **P** **21 30 15.8 0.0**
SDPT Sand Point 86.56 10 *e*P **P** **21 30 16.3 -1.0**
PFO Pinyon Flat Ob 86.64 48 P **P** **21 30 18.8 +0.5**
comp=Z,8.8nm,0.9s,mb4.6,baz=244,slow=2.6,SNR=13
PFO Pinyon Flat Ob 86.64 48 P **P** **21 30 18.8 +0.5**
PFO pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
CMB Columbia Colle 87.11 42 *e*P **P** **21 30 20.3 -0.1**
comp=Z,12nm,0.8s,mb4.8
CMB Columbia Colle 87.11 42 *e*P **P** **21 30 20.3 -0.1**
CMB pmax pmax
comp=Z,12nm,0.8s,mb4.8
GLA Glamis 87.35 49 *e*P **P** **21 30 22.0 +0.3**
comp=Z,26nm,0.9s,mb5.0
GLA Glamis 87.35 49 *e*P **P** **21 30 22.0 +0.3**
GLA pmax pmax
comp=Z,25nm,0.9s,mb5.0
OHCM Honcut 87.36 41 *e*P **P** **21 30 21.1 -0.5**
WHN Wuhan 87.45 308 P **P** **21 30 22.3 +0.1**
GSC Goldstone 87.50 46 *e*P **P** **21 30 22.4 +0.1**
comp=Z,24nm,0.9s,mb5.0
GSC Goldstone 87.50 46 *e*P **P** **21 30 22.5 +0.2**
GSC pmax pmax
comp=Z,24nm,0.9s,mb5.0
WDC Whiskeytown Da 87.62 39 *e*P **P** **21 30 22.6 -0.2**
comp=Z,9.4nm,0.9s,mb4.6
WDC Whiskeytown Da 87.62 39 *e*P **P** **21 30 22.6 -0.2**
WDC pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
MTUM Tungsten Hills 87.74 44 *e*P **P** **21 30 24.0 +0.6**
MDJ Mudanjiang 87.86 326 P **P** **21 30 24.0 +0.2**
MDJ AMB AMB
comp=Z,21nm,1.1s,mb4.9
MDJ AMB AMB
comp=Z,90nm,4.0s
WAKR Walker 87.98 43 *e*P **P** **21 30 25.1 +0.5**
YBH Yreka Blue Hor 88.32 39 P **P** **21 30 25.9 -0.2**
comp=Z,8.0nm,0.9s,mb4.5,baz=184,slow=4.3,SNR=11
YBH Yreka Blue Hor 88.32 39 P **P** **21 30 25.9 -0.2**
YBH pmax pmax
comp=Z,8.0nm,0.9s
HABR Khabarovsk 88.34 331 *e*P **P** **21 30 23.9 -2.0**
HABR *e* 21 33 53.8
HABR *e*PPP 21 35 49.6
HABR *e*S SKSac 21 40 27.2 -2.4
HABR *e* 21 40 50.6
HABR *e*PS SP 21 41 51.9 -1.6
HABR *e*SS SS 21 46 40.2 -5.4
HABR *e*SSS 21 50 15.8
LDFC Landfair 88.43 47 *e*P **P** **21 30 28.1 +1.4**
NVAR Mina Array Bea 88.60 43 P **P** **21 30 27.6 +0.2**
comp=Z,12nm,0.8s,mb4.8,baz=222,slow=8.8,SNR=76
HUMO Hull Mountain 88.80 38 *e*P **P** **21 30 28.9 +0.6**
comp=Z,32nm,1.5s,mb4.9
PAHR Pah Rah Range 88.81 42 *e*P **P** **21 30 28.5 +0.1**
comp=Z,8.8nm,1.0s,mb4.6
TPNV Topopah Spring 88.89 45 *e*P **P** **21 30 29.5 +0.6**
comp=Z,10.0nm,0.8s,mb4.7
TPNV Topopah Spring 88.89 45 *e*P **P** **21 30 29.5 +0.6**
TPNV pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
BSI Banda Aceh 89.00 277 P **P** **21 30 29.5 -0.4**
TPH Tonopah 89.02 44 *e*P **P** **21 30 29.5 +0.1**
comp=Z,20nm,0.9s,mb5.0
TPH Tonopah 89.02 44 *e*P **P** **21 30 29.5 +0.1**
TPH pmax pmax
comp=Z,20nm,0.9s,mb5.0
SHPR Sheep Range 89.29 46 *e*P **P** **21 30 31.4 +0.7**
CN2 Changchun 89.36 323 *e*P **P** **21 30 30.0 -0.8**
CN2 *e*S S 21 40 54.0 -4.2
CN2 AMB AMB
comp=Z,50nm,1.0s,mb5.3
CN2 AMB AMB
comp=Z,500nm,10.0s
TUC Tucson 89.60 52 *e*P **P** **21 30 33.6 +1.3**
comp=Z,21nm,0.9s,mb5.0
TUC Tucson 89.60 52 *e*P **P** **21 30 33.6 +1.3**
TUC pmax pmax
comp=Z,21nm,0.9s,mb5.0
MOD Modoc 89.76 40 *e*P **P** **21 30 32.4 -0.3**
comp=Z,19nm,1.3s,mb4.8
KLR Kul'dur 90.32 330 *e*P **P** **21 30 30.8 -4.3**
KLR pmax pmax
comp=Z,78nm,1.6s,mb5.3
BMN Battle Mountai 90.54 42 *e*P **P** **21 30 36.7 +0.3**
comp=Z,26nm,1.4s,mb4.9
BMN Battle Mountai 90.54 42 *e*P **P** **21 30 36.7 +0.3**
BMN pmax pmax
comp=Z,26nm,1.4s,mb4.9
GYA Guiyang 90.63 300 P **P** **21 30 37.3 +0.1**
GYA AP pP 21 31 39.0 -0.1
GYA XP sP 21 32 05.3 -0.5
GYA PP PP 21 34 20.3 +3.7
GYA SKS 21 40 43.8
GYA S S 21 41 10.8 +0.2
GYA XS sS 21 42 59.3 -0.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
GYA AMB AMB
comp=Z,60nm,7.2s
WVOR Wild Horse Val 91.03 40 *e*P **P** **21 30 38.3 -0.3**
comp=Z,26nm,1.6s,mb4.8
WVOR Wild Horse Val 91.03 40 *e*P **P** **21 30 38.3 -0.4**
WVOR pmax pmax
comp=Z,26nm,1.6s,mb4.8
WUAZ Wupatki 91.11 49 *e*P **P** **21 30 40.1 +0.9**
comp=Z,10nm,0.8s,mb4.7
ARUT Antelope Range 91.16 46 *e*P **P** **21 30 39.9 +0.5**
BJI Beijing 92.08 316 P **P** **21 30 43.5 -0.1**
BJI AMB AMB
comp=Z,20nm,1.2s,mb4.9
MSU Marysvale 92.39 46 *e*P **P** **21 30 46.2 +1.1**
CMAR Chiang Mai Arr 92.46 290 P **P** **21 30 47.1 +1.3**
comp=Z,4.0nm,0.9s,mb4.3,baz=142,slow=3.9,SNR=29
CMAR Chiang Mai Arr 92.46 290 P **P** **21 30 47.2 +1.4**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
CHTO Chiang Mai 92.64 290 *e*P **P** **21 30 47.2 +0.5**
comp=Z,6.3nm,0.9s,mb4.5
CHTO Chiang Mai 92.64 290 *e*P **P** **21 30 47.2 +0.5**
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KMI Kunming 92.89 297⇑ P **P** **21 30 49.0 +1.3**
KMI AP pP 21 31 51.0 +1.3
KMI PP PP 21 34 37.5 +3.2
KMI S S 21 41 30.3 -0.6
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.7
KMI LR LR
comp=N,625nm,18.0s
KMI LR LR
comp=E,703nm,13.8s
KMI LR LR
comp=Z,731nm,17.8s
TXAR Lajitas Array 92.96 58 P **P** **21 30 48.4 +0.5**
comp=Z,1.6nm,0.8s,mb4.0,baz=212,slow=7.9,SNR=14
TXAR Lajitas Array 92.96 58 P **P** **21 30 48.4 +0.5**
TXAR pmax pmax
comp=Z,2.0nm,0.8s
BMO Blue Mountains 93.34 39 *e*P **P** **21 30 48.7 -0.5**
comp=Z,32nm,2.1s,mb4.9
CMIG Matias Romero 93.49 72 P **P** **21 30 51.3 +0.7**
comp=Z,0.7nm,0.7s,mb3.7,baz=12,slow=0.6,SNR=4.3
HVU Hansel Valley 94.00 43 *e*P **P** **21 30 52.6 +0.2**
comp=Z,11nm,0.8s,mb5.0
HVU Hansel Valley 94.00 43 *e*P **P** **21 30 52.6 +0.2**
HVU pmax pmax
comp=Z,11nm,0.8s,mb4.9
ANMO Albuquerque 94.07 52 P **P** **21 30 52.4 -0.5**
comp=Z,0.7nm,0.5s,mb4.0,baz=199,slow=4.0,SNR=3.9
ANMO Albuquerque 94.07 52 P **P** **21 30 52.4 -0.4**
ANMO pmax pmax
comp=Z,1.0nm,0.5s
JLU Jordanelle 94.09 45 *e*P **P** **21 30 54.0 +1.2**
HLID Hailey 94.14 41 *e*P **P** **21 30 52.8 -0.2**
comp=Z,5.0nm,0.9s,mb4.5
CD2 Chengdu 95.17 303 *e*P **P** **21 30 58.5 +0.5**
CD2 AP pP 21 32 00.5 +0.4
CD2 XP sP 21 32 26.8 0.0
CD2 PP PP 21 34 53.3 +1.4
CD2 SKS 21 41 07.8
CD2 S S 21 41 47.0 -3.5
CD2 XS sS 21 43 36.5 -4.1
CD2 SS SS 21 48 22.8 -1.3
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.0
CD2 AMB AMB
comp=Z,30nm,5.8s
HHC Hu-ho-hao-te 95.38 314 *e*P **P** **21 30 58.8 +0.1**
HHC AP pP 21 32 01.3 +0.5
HHC XP sP 21 32 27.5 +0.1
HHC PP PP 21 34 53.8 +0.5
HHC SKS 21 41 07.5
HHC S S 21 41 47.5 -4.3
HHC XS sS 21 43 39.8 -2.1
HHC AMB AMB
comp=Z,12nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,977nm,7.6s
HHC LR LR
comp=N,505nm,21.4s
HHC LR LR
comp=E,708nm,19.0s
HHC LR LR
comp=Z,696nm,20.2s
SEY Seymchan 95.47 347⇑ *e*P **P** **21 30 56.6 -1.9**
MCMT McKenzie Canyo 95.80 41 *e*P **P** **21 31 00.8 +0.3**
PDAR Pinedale Array 96.51 44 P **P** **21 31 03.0 -0.7**
comp=Z,1.3nm,0.8s,mb4.2,baz=201,slow=3.9,SNR=8.7
COLA College 97.71 13⇑ *e*P **P** **21 31 06.7 -1.9**
LZH Lanzhou 97.82 307 P **P** **21 31 10.0 +0.1**
LZH AP pP 21 32 12.0 -0.1
LZH XP sP 21 32 38.5 -0.2
LZH PP PP 21 35 13.8 +1.6
LZH SKS 21 41 21.5
LZH *e*S S 21 42 09.0 -3.9
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,152nm,9.3s
BILL Bilibino 98.43 354 *e*P **P** **21 31 09.4 -2.4**
BILL pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
YAK Yakutsk 100.62 338⇓ *e*P Pdif 21 31 20.6 -1.7
YAK pmax pmax
comp=Z,18nm,1.4s
ULN Ulaanbaatar 101.95 319 *i* P Pdif 21 31 29.4 +1.2
SONM Songino Array 102.31 318 P Pdif 21 31 28.8 -1.1
comp=Z,0.3nm,0.9s,baz=38,slow=7.3,SNR=2.7
SONM PKiKP PKiKP 21 35 49.7 -0.1
comp=Z,0.2nm,0.5s,baz=50,slow=1.9,SNR=5.1
SONM PKKPbc PKKPbc 21 47 32.7 +1.0
comp=Z,0.6nm,0.8s,baz=283,slow=2.6,SNR=4.5
SONM Songino Array 102.31 318 P Pdif 21 31 28.8 -1.0
SONM *i* 21 35 49.7
SONM pmax pmax
comp=Z,1.0nm,0.8s
ODAN Odare 105.82 292 *e*P PKiKP 21 35 57.8 +0.8
comp=Z,6.2nm,0.7s
RAMN Ramite 106.49 292 *e*P PKiKP 21 35 58.7 +0.5
JIRN Jiri 107.13 292 *e*P PKiKP 21 35 59.5 +0.1
TIXI Tiksi 107.72 345 *e*PKiKP PKiKP 21 35 57.7 -1.5
KKN Kakani 107.91 292 *e*P PKiKP 21 36 00.7 -0.2
GKN Gorkha 108.52 292 *e*P PKiKP 21 36 02.0 0.0
DANN Dangsing 109.37 292 *e*P PKiKP 21 36 03.4 -0.2
comp=Z,7.4nm,0.7s
PYUN Piuthan 109.88 292 *e*P PKiKP 21 36 04.1 -0.5
comp=Z,9.4nm,1.0s
KRAR Krasnoyarsk 113.36 322⇓ *i* PKIKP PKiKP 21 36 10.4 +0.1
MK31 Makanchi Array 116.89 310 *e*PKPdf PKPdf 21 36 16.8 -0.6
MKAR Makanchi Array 116.89 310 PKP PKPdf 21 36 16.4 -1.0
comp=Z,3.9nm,0.7s,baz=226,slow=2.3,SNR=26
MKAR PKKPbc PKKPbc 21 46 46.5 +1.9
comp=Z,0.8nm,0.5s,baz=266,slow=3.3,SNR=9.2
MKAR Makanchi Array 116.89 310 PKIKP PKPdf 21 36 16.4 -0.9
MKAR 21 46 46.5
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.5s
BOSA Boshof 117.20 204 PKP PKPdf 21 36 20.5 +1.8
comp=Z,3.6nm,0.7s,baz=106,slow=4.7,SNR=12
BOSA Boshof 117.20 204 PKP PKPdf 21 36 20.5 +1.8
BOSA Boshof 117.20 204 PKIKP PKPdf 21 36 20.5 +1.8
BOSA pmax pmax
comp=Z,4.0nm,0.7s
ZAA0 Zalesovo Array 117.21 319 *e*PKPdf PKPdf 21 36 16.3 -1.4
ZALV Zalesovo Beam 117.21 319 PKP PKPdf 21 36 16.5 -1.2
comp=Z,3.6nm,0.7s,baz=146,slow=1.2,SNR=22
ZALV Zalesovo Beam 117.21 319 PKIKP PKPdf 21 36 16.5 -1.2
ZALV pmax pmax
comp=Z,4.0nm,0.7s
NVS Novosibirsk 118.32 319 *i* PKIKP PKPdf 21 36 17.4 -2.4
KURK Kurchatov 120.19 314 *e*PKPdf PKPdf 21 36 22.3 -1.2
TKM2 Tokmak 2 120.48 305 *e*PKPdf PKPdf 21 36 23.8 -0.6
TKM2 Tokmak 2 120.48 305 P PKPdf 21 36 24.0 -0.4
SNR=11
KBK Karagaybulak 120.88 304 P PKPdf 21 36 25.4 +0.2
SNR=12
CHMS Chumysh 121.10 305 P PKPdf 21 36 25.3 -0.3
SNR=11
AAK Ala-Archa 121.20 304 P PKPdf 21 36 26.1 +0.3
SNR=6.9
USP Ospenovka 121.35 305 P PKPdf 21 36 25.6 -0.5
SNR=16
AML Almayashu 121.66 303 *e*PKPdf PKPdf 21 36 27.1 +0.4
AML Almayashu 121.66 303 P PKPdf 21 36 27.0 +0.3
SNR=30
EKS2 Erkin-Say 121.72 304 P PKPdf 21 36 27.2 +0.4
SNR=16
KBL Kabul 123.28 294 *e*PKPdf PKPdf 21 36 30.4 +0.3
BRVK Borovoye 125.63 316 *e*PKPdf PKPdf 21 36 33.3 -0.6
SCHQ Schefferville 126.59 42 PKP PKPdf 21 36 35.0 -0.7
comp=Z,8.6nm,1.0s,baz=174,slow=10,SNR=3.3
SPITS Spitsbergen Ar 131.32 356 PKP PKPdf 21 36 43.5 -0.6
comp=Z,18nm,0.8s,baz=355,slow=2.3,SNR=15
SPITS Spitsbergen Ar 131.32 356 PKIKP PKPdf 21 36 43.5 -0.6
SPITS pmax pmax
comp=Z,18nm,0.8s
ARU Arti 132.28 321 *i* PKIKP PKPdf 21 36 45.6 -0.9
ARU SS SS 21 56 24.9 -5.1
KEV Kevo 137.61 347 *e*pkp PKPdf 21 36 55.0 -1.1
ARCES ARCESS Array B 138.09 347 PKhKP 21 36 47.0
comp=Z,12nm,1.0s,baz=8.3,slow=1.5,SNR=34
ARCES PKP PKPdf 21 36 55.3 -1.6
comp=Z,14nm,0.6s,baz=347,slow=0.4,SNR=12
ARCES ARCESS Array B 138.09 347 PKP 21 36 47.0
ARCES PKP PKPdf 21 36 55.3 -1.6
ARCES ARCESS Array B 138.09 347 PKHKP 21 36 47.0
ARCES 21 36 55.3
ARCES pmax pmax
comp=Z,12nm,1.0s
ARCES pmax pmax
comp=Z,14nm,0.6s
KLMR Klimovskoe 140.06 332 *e*PKIKP PKPdf 21 36 56.1 -4.7
JOF Joensuu 141.79 338 *e*pkp PKPdf 21 36 56.4 -7.4
comp=Z,20nm,0.7s
VRHR Novokhopersk 143.30 317 *e*PKHKP 21 37 02.9
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.7s
MOS Moscow 143.57 325 *e*PKHKP 21 37 03.6
MOS pmax pmax
comp=Z,96nm,1.2s
KAF Kangasniemi 143.95 340 *e*pkp PKPdf 21 37 02.0 -5.6
comp=Z,27nm,0.7s

DYDN Diyadin 143.97 297 *i* P PKPdf 21 37 06.8 -1.6
HAKT HAKKARI 143.97 294 *i* P PKPdf 21 37 10.7 +2.2
KIV Kislovodsk 144.32 305 *e*PKPdf PKPdf 21 37 07.8 -1.1
KIV Kislovodsk 144.32 305 *e*PKIKP PKPdf 21 37 07.6 -1.3
KIV pmax pmax
comp=Z,37nm,1.1s
OBN Obninsk 144.40 325⇓ *i*PKIKP PKPdf 21 37 06.9 -1.7
OBN pmax pmax
comp=Z,171nm,1.7s
VSR Storozhevoye 144.71 318 *e*PKIKP PKPdf 21 37 07.9 -1.4
VSR pmax pmax
comp=Z,20nm,0.7s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.8s
VORD Divnogorie 144.72 317 *e*PKIKP PKPdf 21 37 08.0 -1.3
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=Z,50nm,0.8s
VORD pmax pmax
comp=E,70nm,0.7s
DAGI Agillar 145.23 300 *i* P PKPdf 21 37 09.9 -0.7
HOMI Horasan 145.32 298 *i* P PKPdf 21 37 11.0 +0.2
DDEM Demirkent 145.37 299 *i* P PKPdf 21 37 09.9 -0.9
DBOC Borcka 145.39 300 *i* P PKPdf 21 37 09.0 -1.8
DBAD Bademkaya 145.40 300 *i* P PKPdf 21 37 11.0 +0.1
ERZM Erzurum 145.74 298 *i* P PKPdf 21 37 12.6 +1.2
BEST Besiri 145.90 294 *i* P PKPdf 21 37 12.1 +0.3
BNGL BINGOL 145.97 296 *i* P PKPdf 21 37 12.9 +1.0
SOC Sochi 146.50 305 *e*PKIKP PKPdf 21 37 13.0 +0.4
SOC *e* 21 40 40.8
SOC *e*PPP 21 43 57.3
SOC pmax pmax
comp=Z,79nm,0.9s
SOC pmax pmax
comp=Z,28nm,0.9s
VSU Vasula 146.57 336⇑ *i*PKIKP PKPdf 21 37 12.7 +0.5
ANN Anapa 147.84 307 *i* PKP2 PKPbc 21 37 17.2 -0.9
ANN *e* 21 40 44.2
ANN *e*PPP 21 44 00.0
ANN *e*SS SS 21 59 32.1 +0.2
ANN pmax pmax
comp=Z,123nm,0.9s
KEMA Kemaliye 148.01 297 *i* P PKPbc 21 37 18.4 -0.3
NB2 NORSAR Subarra148.30 351 PKP PKPbc 21 37 17.6 -1.2
comp=Z,66nm,0.8s,baz=14,slow=2.8
NB2 NORSAR Subarra148.30 351 PKP PKPbc 21 37 17.6 -1.2
baz=14,slow=2.8
NOA NORSAR Array B148.30 351 PKPbc PKPbc 21 37 17.6 -1.1
comp=Z,54nm,0.8s,baz=16,slow=4.3,SNR=67
NOA NORSAR Array B148.30 351 PKIKP PKPbc 21 37 17.7 -1.1
NOA pmax pmax
comp=Z,54nm,0.8s
AKCD Akcadag 148.53 295 *i* P PKPbc 21 37 20.1 0.0
NA001 NORSAR Array S 148.53 351 *e*PKPbc PKPbc 21 37 18.8 -0.5
HFS Hagfors 148.75 348 PKP PKPdf 21 37 15.4 -0.4
comp=Z,38nm,0.8s,baz=222,slow=1.9,SNR=72
HFS PKPbc PKPbc 21 37 18.8 -1.1
comp=Z,69nm,0.7s,baz=60,slow=5.0,SNR=101
HFS Hagfors 148.75 348 PKIKP PKPdf 21 37 15.4 -0.4
HFS pmax pmax
comp=Z,39nm,0.8s
HFS pmax pmax
comp=Z,69nm,0.7s
MNK Minsk 148.88 329 *e*PKIKP PKPdf 21 37 18.0 +1.8
PINB Pinarbasi 149.68 296 *i* P PKPbc 21 37 22.6 -0.4
ANDN Andirin 149.82 294 *i* P PKPbc 21 37 21.7 -1.6
KONO Kongsberg 149.86 351 *d* iPKHKP PKPbc 21 37 21.2 -1.5
SIM Simferopol' 150.06 309 *e*PKP2 PKPbc 21 37 24.0 +0.4
AKASG Malin Array Be 150.51 322 PKP PKPdf 21 37 17.6 -1.3
comp=Z,5.8nm,1.0s,baz=55,slow=1.3,SNR=10.0
AKASG PKPbc PKPbc 21 37 23.7 -0.8
comp=Z,74nm,0.8s,baz=46,slow=2.9,SNR=124
AKASG Malin Array Be 150.51 322 PKIKP PKPdf 21 37 17.6 -1.3
AKASG pmax pmax
comp=Z,6.0nm,1.0s
AKASG pmax pmax
comp=Z,74nm,0.8s
AKBB Malin Array Si 150.51 322 *e*PKPbc PKPbc 21 37 23.7 -0.8
KIEV Kiev 150.52 322 *e*PKPbc PKPbc 21 37 23.5 -1.0
GULE Gulek 151.08 293 *i* P Px 21 37 04.6
CDAG Cicekdag 151.13 298 *i* P PKPbc 21 37 26.4 +0.1
SUW Suwalki 151.19 332 *e*PKP PKPbc 21 37 25.8 -0.2
SUW *e* 21 37 33.9
ILGA Ilgaz 151.36 301 *i* P PKPbc 21 37 26.1 -0.7
BALT Daday 151.50 303 *i* P PKPbc 21 37 25.3 -1.8
BR131 Keskin Array S 151.67 299 *e*PKPdf PKPdf 21 37 20.6 -0.4
BR131 *e*PKPbc PKPbc 21 37 27.3 -0.2
BRTR Keskin Array B 151.67 299 PKP PKPdf 21 37 20.4 -0.6
comp=Z,2.1nm,1.0s,baz=130,slow=3.8,SNR=6.7
BRTR PKPbc PKPbc 21 37 27.6 +0.1
comp=Z,20nm,0.9s,baz=126,slow=3.2,SNR=50
BRTR Keskin Array B 151.67 299 PKIKP PKPdf 21 37 20.4 -0.6
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR pmax pmax
comp=Z,20nm,0.9s
ANTO Ankara 152.29 299⇑ P PKPdf 21 37 22.7 +0.8
ANTO Ankara 152.29 299⇑ *i*P PKPdf 21 37 22.7 +0.8
CSS Prodhromos 152.36 289 *e*PKPbc PKPbc 21 37 29.0 -0.3
TLCR 153.46 312⇑ P PKPbc 21 37 31.3 0.0
TLCR 153.46 312⇑ *i*P PKPbc 21 37 31.3 0.0
LVV L'vov 153.71 325 *i* PKP2 PKPab 21 37 43.8 -1.8
GKP Gorka Klasztor 153.96 337 *e*PKP PKPbc 21 37 31.7 -0.4
GKP *e* 21 37 45.9
HARR Harsova 154.24 312⇑ P PKPbc 21 37 33.5 +0.6
HARR Harsova 154.24 312⇑ *i*P PKPbc 21 37 33.5 +0.5
BUR08 Bucovina Ar. S 154.41 320 *e*PKPbc PKPbc 21 37 33.4 +0.1
BURAR Bucovina Array 154.42 320⇓ P PKPbc 21 37 33.6 +0.3
BURAR Bucovina Array 154.42 320⇓ *i*P PKPbc 21 37 33.6 +0.3
KWP Kalwaria 154.48 326 *e*PKP PKPbc 21 37 33.7 +0.4
KWP *e* PKPab 21 37 48.6 -0.3
KWP Kalwaria 154.48 326⇑ *i*P PKPdf 21 37 26.9 +2.2
EKA Eskdalemuir Ar 154.59 6 PKPbc PKPbc 21 37 32.5 -0.9
comp=Z,2.1nm,0.6s,baz=336,slow=2.4,SNR=10
EKA PKPab PKPab 21 37 47.2 -1.9
comp=Z,6.1nm,0.9s,baz=338,slow=3.0,SNR=5.4
EKA Eskdalemuir Ar 154.59 6 PKIKP PKPbc 21 37 32.5 -0.9
EKA 21 37 47.3
EKA pmax pmax
comp=Z,2.0nm,0.6s
EKA pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 155.12 315⇑ *i*P PKPdf 21 37 34.7 +9.0
KOLS Kolonicke sedl 155.16 325 *e*PKIKP PKPdf 21 37 35.6 +10
KOLS *e* PKPab 21 37 51.0 -0.8
KOLS Kolonicke sedl 155.16 325 *e*PKP PKPab 21 37 51.0 -0.8
KOLS Kolonicke sedl 155.16 325 *e* PKPdf 21 37 35.6 +10
BSEG Bad Segeberg 155.22 347 *e*PKPab PKPab 21 37 50.5 -1.4
STHS Stebnicka Huta 155.32 327 *e*PKP PKPab 21 37 51.6 -0.9
UZH Uzhgorod 155.35 325⇓ *i*PKIKP PKPdf 21 37 29.6 +3.7
UZH *i* 21 37 51.6
OJC Ojcow 155.40 330 *e*PKPdf PKPdf 21 37 26.1 +0.1
OJC *e*PKPbc PKPdf 21 37 34.6 +8.6
OJC *e*PKPab PKPab 21 37 51.2 -1.6
TRPA Tarpa 155.55 324⇓ *i*P PKPdf 21 37 35.3 +9.1
CRVS Cervenica-Dubn 155.57 326 *e*PKP PKPab 21 37 53.1 -0.5
LIC Lamto 155.61 165⇑ *i*PKP2 PKPab 21 37 57.7 +3.1
comp=Z,24nm,0.7s
LIC Lamto 155.61 165 *e*PKIKP PKPdf 21 37 28.1 +0.7
comp=Z,75nm,1.9s
NIE Niedzica 155.75 328 *e*PKPab PKPab 21 37 53.8 -0.6
KIC Kosan Boka 155.80 166 *e*PKIKP PKPdf 21 37 28.1 +0.4
comp=Z,92nm,1.1s
TIC Toumodi 156.02 165 *e*PKIKP PKPdf 21 37 28.9 +1.0
comp=Z,88nm,1.2s
DBIC Dimbokro 156.08 166 PKP PKPdf 21 37 29.6 +1.5
comp=Z,11nm,1.0s,baz=183,slow=2.0,SNR=7.7
DBIC PKPab PKPab 21 37 59.2 +2.6
comp=Z,9.5nm,0.8s,baz=194,slow=2.9,SNR=7.2
DBIC Dimbokro 156.08 166 PKP PKPdf 21 37 29.6 +1.5
DBIC PKPab PKPab 21 37 59.2 +2.6
DBIC Dimbokro 156.08 166 PKIKP PKPdf 21 37 29.6 +1.6
DBIC pmax pmax
comp=Z,11nm,1.0s
DBIC pmax pmax
comp=Z,10.0nm,0.8s
DRGR 156.29 321⇑ P PKPdf 21 37 37.3 +10
DRGR 156.29 321⇑ *i*P PKPdf 21 37 37.3 +10
KSP Ksiaz 156.30 335 *e*PKP PKPdf 21 37 37.6 +10
KSP *e* PKPab 21 37 55.8 -0.8

KSP Ksiaz 156.30 335 *e*PKPdf PKPdf 21 37 27.7 +0.6
KSP *e*PKPab PKPab 21 37 55.5 -1.2
OKC Ostrava-Krasne 156.38 332 *e*PKPAB PKPab 21 37 56.5 -0.6
UPC Upice 156.68 335 *e*PKPAB PKPab 21 37 57.6 -0.7
DPC Dobruska-Polom 156.69 335 *e*PKPAB PKPab 21 37 58.0 -0.4
CLL Collm 156.98 340 *e*PKPdif PKPdf 21 37 38.0 +10
comp=Z,12nm,0.9s
CLL *ex* x 21 37 48.0
CLL *i* PKPab PKPab 21 37 58.3 -1.2
comp=Z,44nm,0.8s
CLL *e*PP PP 21 41 36.0 -2.7
comp=Z,29nm,1.8s
PSZ Piszkesteto 157.01 326 *e*P PKPab 21 37 56.3 -3.5
comp=Z,39nm,1.3s
BRG Berggiesshubel 157.07 339 *e*PKPab PKPab 21 37 58.9 -1.1
BRG Berggiesshubel 157.07 339 *e*PKP PKPdf 21 37 27.9 -0.2
comp=Z,11nm,1.2s
BRG *e* 21 37 38.8
comp=Z,7.3nm,1.0s
BRG *e* 21 37 59.0
comp=Z,40nm,0.9s
BRG PP PP 21 41 40.7 +1.5
comp=Z,2.8nm,1.1s
VYHS Vyhne 157.10 328 *e*PKP PKPab 21 37 59.2 -1.0
PVCC Panska Ves 157.17 337 *e*PKPAB PKPab 21 37 59.8 -0.6
CLZ Clausthal 157.17 345 *e*PKPab PKPab 21 37 59.1 -1.2
KOLL Kolacno 157.23 329 *e*PKP PKPab 21 38 00.0 -0.7
IBBN Ibbenburen 157.23 349 *e*PKPab PKPab 21 37 59.3 -1.3
VRAC Vranov 157.43 333 PKPab PKPab 21 38 01.1 -0.5
comp=Z,14nm,1.0s,baz=38,slow=5.0,SNR=10
BZS Buzias 157.60 320⇑ P PKPdf 21 37 28.4 -0.5
BZS Buzias 157.60 320⇑ *i*P PKPdf 21 37 28.4 -0.6
PRU Pruhonice 157.63 337 *e*PKPAB PKPab 21 38 01.4 -1.0
SMOL Smolenice 157.70 330 *e*PKP PKPab 21 38 02.4 -0.4
TREC Trest 157.87 334 *e*PKPAB PKPab 21 38 02.6 -0.9
MODS Modra-Piesok 157.88 330 *e*PKP PKPab 21 38 03.0 -0.5
TANN Tannenbergstha 157.93 340 *e*PKPab PKPab 21 38 02.8 -0.9
MOX Moxa 157.96 342 *e*PKP PKPab 21 38 02.6 -1.2
comp=Z,51nm,1.5s
ZST Bratislava 158.09 330 *e*PKP PKPab 21 38 04.1 -0.4
MANZ Manzenberg 158.41 340 *e*PKPab PKPab 21 38 04.7 -1.1
ROTZ Rotzenmuhle 158.58 340 *e*PKPab PKPab 21 38 05.9 -0.6
KHC Kasperske Hory 158.69 337 *e*PKPDF PKPdf 21 37 29.5 -0.7
KHC *e*PKPAB PKPab 21 38 06.3 -0.8
PKSM Moragy 158.81 324⇑ *i*P PKPdf 21 37 29.7 -0.7
CONA Conrad Observa 158.82 331⇑ *i*PKPab PKPab 21 38 07.3 -0.3
comp=Z,18nm,1.0s
CSNA Conrad Observa 158.82 331⇑ *i*PKPab PKPab 21 38 07.3 -0.4
comp=Z,16nm,1.0s
GEC2 GERESS Array S 158.89 336 *e*PKPab PKPab 21 38 06.8 -1.1
GERES GERESS Array B 158.89 336 PKP PKPdf 21 37 29.8 -0.6
comp=Z,1.9nm,0.8s,baz=48,slow=2.0,SNR=9.6
GERES PKPab PKPab 21 38 06.9 -1.0
comp=Z,5.8nm,0.8s,baz=32,slow=4.8,SNR=16
GERES GERESS Array B 158.89 336 PKIKP PKPdf 21 37 29.8 -0.6
GERES 21 38 06.9
GERES pmax pmax
comp=Z,2.0nm,0.8s
GERES pmax pmax
comp=Z,6.0nm,0.8s
WET Wettzell 158.92 338 *e*PKPab PKPab 21 38 07.3 -0.7
GRF Grafenberg Arr 158.93 341 *e*PKPab PKPab 21 38 07.2 -0.9
TNS Taunus Mts 159.11 346 *e*PKPab PKPab 21 38 07.5 -1.3
MEM Membach 159.15 351 PKPab PKPab 21 38 07.3 -1.7
UCC Uccle 159.15 354 PKPab PKPab 21 38 07.6 -1.4
BCLA Clavier 159.42 352 PKPab PKPab 21 38 08.8 -1.4
ARSA Arzberg 159.49 331⇑ *i*PKPab PKPab 21 38 09.7 -0.9
comp=Z,10nm,1.1s
MOA Molln 159.52 334⇑ *i*PKPab PKPab 21 38 09.9 -0.8
comp=Z,26nm,1.3s
ABH Alteburg 159.61 348 *e*P PKPab 21 38 09.4 -1.6
TOD Tromm 159.61 345 *e*P PKPab 21 38 09.6 -1.4
GIVF Givet 159.79 353⇑ *i*PKP2 PKPab 21 38 09.8 -2.0
comp=Z,36nm,1.0s
GIVF Givet 159.79 353⇑ *i*PKPab PKPab 21 38 09.8 -2.0
comp=Z,18nm,1.0s
DOU Dourbes 159.82 353 PKPab PKPab 21 38 10.0 -1.9
RUP Ruppelstein 159.87 348 *e*P PKPab 21 38 10.2 -1.9
BAIF Baives 159.89 354⇑ *i*PKP2 PKPab 21 38 10.6 -1.6
comp=Z,56nm,1.0s
BAIF Baives 159.89 354⇑ *i*PKPab PKPab 21 38 10.6 -1.6
comp=Z,28nm,1.0s
KTD Kalmit 160.04 346 *e*P PKPab 21 38 11.5 -1.4
WLF Walferdange 160.05 350 PKPab PKPab 21 38 12.2 -0.7
SOKA Soboth 160.15 331⇑ *i*PKPab PKPab 21 38 12.4 -1.1
comp=Z,20nm,1.2s
RJOB Jochberg 160.16 336 *e*PKPab PKPab 21 38 13.0 -0.5
FUR Furstenfeldbru 160.28 339 *e*PKPab PKPab 21 38 13.4 -0.6
STU Stuttgart 160.31 344 *e*P PKPab 21 38 04.6 -9.4
comp=Z,35nm,0.9s
STU Stuttgart 160.31 344 *e*PKPab PKPab 21 38 12.8 -1.3
OBKA Obir 160.49 331⇓ *i*PKPab PKPab 21 38 10.8 -4.2
comp=Z,7.0nm,1.1s
MYKA Terra Mystica 160.76 333⇑ *i*PKPab PKPab 21 38 14.4 -1.8
comp=Z,9.1nm,0.8s
WATA Walderalm 160.92 338⇑ *i*PKPab PKPab 21 38 15.9 -1.0
comp=Z,6.8nm,0.6s
BFO Black Forest 160.92 345 *e*P PKPab 21 38 08.2 -8.5
comp=Z,36nm,1.3s
BFO Black Forest 160.92 345 *e*PKPab PKPab 21 38 15.0 -1.8
WTTA Wattenberg 160.96 337⇑ *i*PKPab PKPab 21 38 15.6 -1.4
comp=Z,26nm,1.1s
RETA Reute 161.05 339⇑ *i*PKPab PKPab 21 38 16.6 -0.8
comp=Z,42nm,1.0s
CDF Champ du Feu 161.07 347⇑ *i*PKP2 PKPab 21 38 15.7 -1.7
comp=Z,53nm,1.2s
CDF Champ du Feu 161.07 347⇑ *i*PKPab PKPab 21 38 15.7 -1.7
comp=Z,26nm,1.2s
MOTA Moosalm 161.07 338⇑ *i*PKPab PKPab 21 38 16.6 -0.8
comp=Z,27nm,0.9s,SNR=12
ABTA Abfaltersbach 161.10 335⇑ *i*PKPab PKPab 21 38 15.8 -1.8
comp=Z,22nm,1.1s,SNR=8.2
SQTA Sankt Quirin 161.14 338⇑ *i*PKPab PKPab 21 38 17.0 -0.8
comp=Z,20nm,0.9s
ECH Echery 161.28 347 *e*P PKPab 21 38 16.5 -1.8
FLN La Foliniere 161.31 3⇑ *i*PKP2 PKPab 21 38 17.1 -1.3
comp=Z,45nm,1.1s
FLN La Foliniere 161.31 3⇑ *i*PKPab PKPab 21 38 17.1 -1.3
comp=Z,22nm,1.1s
MEZF Maizieres J'vi 161.34 352⇑ *i*PKP2 PKPab 21 38 17.0 -1.6
comp=Z,56nm,1.1s
MEZF Maizieres J'vi 161.34 352⇑ *i*PKPab PKPab 21 38 17.0 -1.6
comp=Z,95nm,1.1s
FELD Feldberg im Sc 161.42 345 *e*P PKPab 21 38 17.6 -1.4
FETA Feichten 161.47 339⇑ *i*PKPab PKPab 21 38 18.4 -0.8
comp=Z,27nm,1.0s,SNR=13
ROSF Rostrenen 161.48 9 *e*PKP2 PKPab 21 38 17.5 -1.7
comp=Z,282nm,1.8s
ROSF Rostrenen 161.48 9 *e*PKPab PKPab 21 38 17.5 -1.7
comp=Z,141nm,1.8s
DAVA Damuels 161.49 341⇑ *i*PKPab PKPab 21 38 18.6 -0.7
comp=Z,36nm,0.8s,SNR=9.7
LDF La Druitiere 161.49 2 *e*PKP2 PKPab 21 38 18.1 -1.1
HAU Haudompre 161.63 349⇑ *i*PKP2 PKPab 21 38 18.1 -1.8
comp=Z,55nm,1.0s
HAU Haudompre 161.63 349⇑ *i*PKPab PKPab 21 38 18.1 -1.8
comp=Z,28nm,1.0s
SGMF Saint Gilles 161.65 8⇑ *i*PKP2 PKPab 21 38 18.3 -1.6
comp=Z,92nm,0.9s
SGMF Saint Gilles 161.65 8⇑ *i*PKPab PKPab 21 38 18.3 -1.6
comp=Z,46nm,0.9s
GRR Gorron 161.66 4 *e*PKP2 PKPab 21 38 18.7 -1.3
HINF Hinteralfeld 161.72 347⇑ *i*PKP2 PKPab 21 38 18.3 -2.0
comp=Z,16nm,0.9s
HINF Hinteralfeld 161.72 347⇑ *i*PKPab PKPab 21 38 18.3 -2.0
comp=Z,8.3nm,0.9s
QUIF Quistinic 161.90 9 *e*PKP2 PKPab 21 38 19.3 -1.8
comp=Z,28nm,0.9s
QUIF Quistinic 161.90 9 *e*PKPab PKPab 21 38 19.3 -1.8
comp=Z,14nm,0.9s
DAVOX Davos/Dischmat 161.95 340 PKP PKPdf 21 37 33.6 -0.2
comp=Z,2.9nm,0.8s,baz=326,slow=12,SNR=4.2
DAVOX PKPab PKPab 21 38 20.7 -0.6
comp=Z,27nm,0.7s,baz=357,slow=2.9,SNR=32
LOMF Lomont 162.17 347 *e*P PKPab 21 38 21.1 -1.2
TUE Stuetta 162.38 341 *e*P PKPab 21 38 21.6 -1.7
comp=Z,27nm,1.0s
LOR Lormes 162.69 353⇑ *i*PKP2 PKPab 21 38 22.7 -1.8
comp=Z,70nm,1.3s
LOR Lormes 162.69 353⇑ *i*PKPab PKPab 21 38 22.7 -1.8
comp=Z,35nm,1.3s
HYF Humbligny 162.79 356 *e*PKP2 PKPab 21 38 23.4 -1.5
SSF Saint Saulge 162.93 354⇑ *i*PKP2 PKPab 21 38 23.9 -1.7
comp=Z,80nm,0.8s
SSF Saint Saulge 162.93 354⇑ *i*PKPab PKPab 21 38 23.9 -1.7
comp=Z,40nm,0.8s

CABF La Chapelle 163.02 348⇑ *i*PKP2 PKPab 21 38 24.6 -1.4
comp=Z,33nm,1.0s
CABF La Chapelle 163.02 348⇑ *i*PKPab PKPab 21 38 24.6 -1.4
comp=Z,17nm,1.0s
VAI Varese 163.10 341 PKP PKPab 21 38 24.8 -1.6
TOA0 Torodi Ar. Sit 163.14 182 *e*PKPbc PKPdf 21 37 36.5 +0.6
TORD Torodi Ar. Bea 163.14 182 PKP PKPdf 21 37 36.9 +0.9
comp=Z,7.1nm,1.0s,baz=300,slow=1.2,SNR=26
TORD PKPab PKPab 21 38 29.6 +2.3
comp=Z,15nm,0.9s,baz=174,slow=3.7,SNR=36
AVF Avril sur Loir 163.21 354⇑ *i*PKP2 PKPab 21 38 24.9 -1.9
comp=Z,88nm,1.2s
AVF Avril sur Loir 163.21 354⇑ *i*PKPab PKPab 21 38 24.9 -1.9
comp=Z,44nm,1.2s
SMF Signal de Mont 163.31 353⇑ *i*PKP2 PKPab 21 38 25.5 -1.8
comp=Z,147nm,1.0s
SMF Signal de Mont 163.31 353⇑ *i*PKPab PKPab 21 38 25.5 -1.8
comp=Z,79nm,1.0s
MFF Saint Martin d 163.48 3⇑ *i*PKP2 PKPab 21 38 26.0 -2.0
comp=Z,33nm,1.0s
MFF Saint Martin d 163.48 3⇑ *i*PKPab PKPab 21 38 26.0 -2.0
comp=Z,17nm,1.0s
BGF Bois d'Agland 163.48 355⇑ *i*PKP2 PKPab 21 38 26.2 -1.8
comp=Z,73nm,1.2s
BGF Bois d'Agland 163.48 355⇑ *i*PKPab PKPab 21 38 26.2 -1.8
comp=Z,36nm,1.2s
TCF Toulx Ste Croi 163.79 357 *e*PKP2 PKPab 21 38 27.4 -2.0
comp=Z,43nm,1.2s
TCF Toulx Ste Croi 163.79 357 *e*PKPab PKPab 21 38 27.4 -2.0
comp=Z,21nm,1.2s
VMG Vicchio 163.80 332 PKP PKPab 21 38 29.9 +0.3
GSCL Gusciola 163.85 335 PKP PKPab 21 38 29.2 -0.6
LPL La Plagne 163.94 345⇑ *i*PKP2 PKPab 21 38 29.4 -0.7
comp=Z,55nm,1.1s
LPL La Plagne 163.94 345⇑ *i*PKPab PKPab 21 38 29.4 -0.7
comp=Z,28nm,1.1s
LPG La Plagne 163.95 345⇑ *i*PKP2 PKPab 21 38 29.6 -0.5
comp=Z,65nm,1.1s
LPG La Plagne 163.95 345⇑ *i*PKPab PKPab 21 38 29.6 -0.5
comp=Z,32nm,1.1s
AGO Saint Agoulin 163.96 355 *e*P PKPab 21 38 28.7 -1.4
PLDF La Plantade 164.00 353 *e*P PKPab 21 38 29.2 -1.1
PYM Petit Puy Mans 164.27 355 *e*P PKPab 21 38 30.1 -1.4
BNI Bardonecchia 164.39 345 *e*P PKPab 21 38 29.1 -3.0
comp=Z,38nm,1.4s
SSB Saint Sauveur 164.57 351 *e*P PKPab 21 38 30.8 -2.1
MBDF Montbardon 164.68 344⇑ *i*PKP2 PKPab 21 38 32.1 -1.3
comp=Z,31nm,0.9s
MBDF Montbardon 164.68 344⇑ *i*PKPab PKPab 21 38 32.1 -1.3
comp=Z,15nm,0.9s
ORIF Oris-en-Rattie 164.69 347⇑ *i*PKP2 PKPab 21 38 32.4 -1.0
comp=Z,44nm,1.0s
ORIF Oris-en-Rattie 164.69 347⇑ *i*PKPab PKPab 21 38 32.4 -1.0
comp=Z,22nm,1.0s
LBL Lubilhac 164.77 354 *e*P PKPab 21 38 32.5 -1.2
RJF Les Rejaudoux 164.79 359⇑ *i*PKP2 PKPab 21 38 31.8 -2.0
comp=Z,26nm,1.2s
RJF Les Rejaudoux 164.79 359⇑ *i*PKPab PKPab 21 38 31.8 -2.0
comp=Z,17nm,1.2s
VIVF Saint-Julien-l 164.96 350⇑ *i*PKP2 PKPab 21 38 33.3 -1.3
comp=Z,72nm,1.3s
VIVF Saint-Julien-l 164.96 350⇑ *i*PKPab PKPab 21 38 33.3 -1.3
comp=Z,36nm,1.3s
CAF Calviac 165.15 357 *e*PKP2 PKPab 21 38 33.6 -1.8
comp=Z,62nm,1.5s
CAF Calviac 165.15 357 *e*PKPab PKPab 21 38 33.6 -1.8
comp=Z,31nm,1.5s
LFF La Frestale 165.16 1⇑ *i*PKP2 PKPab 21 38 33.5 -2.0
comp=Z,56nm,1.2s
LFF La Frestale 165.16 1⇑ *i*PKPab PKPab 21 38 33.5 -2.0
comp=Z,28nm,1.2s
SAOF Saorge 165.17 341 *e*P PKPab 21 38 33.8 -1.7
TOUF Mont Tournerai 165.23 342 *e*P PKPab 21 38 34.7 -1.1
MVIF Mont Vial 165.36 342 *e*P PKPab 21 38 35.1 -1.3
REVF Revere 165.45 341 *e*P PKPab 21 38 35.1 -1.7
SMRF Simiane la Rot 165.66 347⇑ *i*PKP2 PKPab 21 38 36.8 -0.9
comp=Z,77nm,1.3s
SMRF Simiane la Rot 165.66 347⇑ *i*PKPab PKPab 21 38 36.8 -0.9
comp=Z,77nm,1.3s
FRF La Foret Royal 165.81 343⇑ *i*PKP2 PKPab 21 38 36.7 -1.7
comp=Z,96nm,1.2s
FRF La Foret Royal 165.81 343⇑ *i*PKPab PKPab 21 38 36.7 -1.7
comp=Z,48nm,1.2s
LMR La Mourre 166.05 343⇑ *i*PKP2 PKPab 21 38 38.0 -1.5
comp=Z,100nm,1.1s
LMR La Mourre 166.05 343⇑ *i*PKPab PKPab 21 38 38.0 -1.5
comp=Z,50nm,1.1s
EVO Evora 168.76 39 *e*PKIKP PKPdf 21 37 40.4 +0.7
comp=Z,49nm,1.2s
ESDC Sonseca Array 169.60 22 PKP PKPdf 21 37 41.3 +1.1
comp=Z,4.9nm,0.9s,baz=341,slow=2.8,SNR=19
ESDC PKPab PKPab 21 38 53.5 -1.7
comp=Z,3.9nm,1.1s,baz=327,slow=5.7,SNR=7.8
KEST Kesra 170.99 311 PKP PKPdf 21 37 41.6 +0.5
comp=Z,3.0nm,1.0s,baz=335,slow=2.6,SNR=4.2
TAM Tamanrasset 171.68 210 *e*PKPdf PKPdf 21 37 43.3 +1.4

MOS ***25*** *21:36:31.9*E *1.1, 55.04*N *× 160.57*E*, h110*km*, mb3.9/12, Error ellipse: s-maj=15.9km s-min=7.3km az=76.4*
KRSC ***25*** *21:36:31.8*E *0.9, 54.92*N *× 160.84*E*, h110*km *± 39*km*, ML4.3*
ISCJB ***25*** *21:36:32.4*E *0.3, 54.94*N *± 002* × *160.72*E *± 007, h114*km *± 2*km*, mb4.0/23, Error ellipse: s-maj=7.2km s-min=3.3km az=20.8*
IDC ***25*** *21:36:33.8*E *2.6, 55.20*N *× 160.31*E*, h109*km *± 26*km*, mb3.6/14, mb1 3.8/15, mb1mx3.7/27, mbtmp3.6/15, Error ellipse: s-maj=23.5km s-min=13.2km az=175.0*
NEIC ***25*** *21:36:34.1*E *0.7, 55.10*N *× 160.36*E*, h115*km *± 7*km*, mb4.4/4, Error ellipse: s-maj=9.0km s-min=6.0km az=162.0*
ISC 25 21:36:33.4E **0.3, 5495**N **± 002 × 16068**E **± 008, h110**km **± 2**km**, n91, σ 1**$ **14**/111**, mb4.0**/23**, 1C-1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.45**	**317**	*e*P		**Pn**	**21 36 50.0**	**+0.1**
TUMR				*i* S		**Sn**	**21 37 02.8**	**+0.4**
MKZ	**Mys Kozlova**	**0.73**	**123**	*e*P		**Pn**	**21 36 50.1**	**-1.9**
MKZ				*i* S		**Sn**	**21 37 03.1**	**-2.9**
KMNR	**Kamenistaya**	**0.84**	**343**	*e*P		**Pn**	**21 36 53.1**	**+0.1**
KMNR				*i* S		**Sn**	**21 37 08.3**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**0.99**	**1**	*e*P		**Pn**	**21 36 54.1**	**-0.4**
BZGR				*i* S		**Sn**	**21 37 10.5**	**+0.1**
BZMR	**Bezymyannaya**	**0.99**	**354**	*e*P		**Pn**	**21 36 54.3**	**-0.2**
BZWR	**Bezymyannyi-We**	**1.02**	**354**	*e*P		**Pn**	**21 36 54.7**	**-0.1**
KIRR	**Kirishev**	**1.02**	**349**	*e*P		**Pn**	**21 36 54.7**	**-0.1**
KIRR				*i* S		**Sn**	**21 37 11.4**	**+0.5**
KPT	**Kopyto**	**1.05**	**346**	*e*P		**Pn**	**21 36 54.9**	**-0.2**
ZLN	**Zelenaya**	**1.07**	**4**	*e*P		**Pn**	**21 36 55.4**	**+0.1**
ZLN				*i* S		**Sn**	**21 37 12.2**	**+0.4**
CIRR	**Tsirk**	**1.17**	**2**	*e*P		**Pn**	**21 36 56.4**	**+0.1**
CIRR				*i* S		**Sn**	**21 37 14.7**	**+1.0**
KII	**Karymskiy**	**1.17**	**218**	*e*P		**Pn**	**21 36 56.7**	**+0.3**
KII				*i* S		**Sn**	**21 37 15.0**	**+1.3**
KRSR	**Krestovskiy**	**1.27**	**357**	*e*P		**Pn**	**21 36 57.0**	**-0.5**
KRSR				*i* S		**Sn**	**21 37 15.7**	**0.0**
KLY	**Klyuchi**	**1.36**	**359**	*e*P		**Pn**	**21 36 58.6**	**0.0**
KLY				*i* S		**Sn**	**21 37 18.4**	**+0.7**
SRDR	**Sredinnyy**	**1.47**	**339**	*e*P		**Pn**	**21 36 59.8**	**0.0**
SRDR				*i* S		**Sn**	**21 37 20.1**	**+0.2**
SRKR	**Sorokina**	**1.73**	**9**	*e*P		**Pn**	**21 37 03.4**	**+0.5**
KBTR	**Krutoberegovo**	**1.75**	**43**	*e*P		**Pn**	**21 37 02.2**	**-1.0**
KBTR				*i* S		**Sn**	**21 37 24.5**	**-1.4**
SPN	**Mys Shipunski**	**1.90**	**192**	*e*P		**Pn**	**21 37 03.8**	**-1.3**
SPN				*i* S		**Sn**	**21 37 26.9**	**-2.4**
NLC	**Nalytchevo**	**1.95**	**204**	*e*P		**Pn**	**21 37 05.8**	**0.0**
NLC				*i* S		**Sn**	**21 37 30.2**	**-0.2**
AVH	**Avacha**	**2.04**	**215**	*e*P		**Pn**	**21 37 08.1**	**+1.2**
PET	**Petropavlovsk**	**2.27**	**213**	*e*Pn		**Pn**	**21 37 10.5**	**+0.6**
PET				*e*Sn		**Sn**	**21 37 40.5**	**+2.7**
PET	**Petropavlovsk**	**2.27**	**213**	*e*PN		**Pn**	**21 37 10.4**	**+0.5**
PET				*e*S		**Sn**	**21 37 39.4**	**+1.6**
PET	comp=Z,138nm,1.1s			pmax	pmax			
PET	comp=E,900n

RUS *i* S **Sn** 21 37 50.1 -0.8
GRL Gorelyy 2.86 214 P **Pn** 21 37 18.9 +1.4
SKR Severo-Kuril's 5.09 215 *e*PN **Pn** 21 37 47.0 -0.4
SKR *e* 21 38 50.6
BILL Bilibino 13.39 9 *e*P **Pn** 21 39 43.7 +5.1
comp=E,9.4nm,0.3s
BILL Bilibino 13.39 9 *e*PN **Pn** 21 39 43.7 +5.0
BILL pmax pmax
comp=Z,9.0nm,0.3s
YSS Yuzh-Sakhalins 13.82 242 *e*Pn **Pn** 21 39 35.8 -8.6
YSS Yuzh-Sakhalins 13.82 242 Pn **Pn** 21 39 43.4 -1.0
ASAJ Asahikawa 15.93 235 P **Pn** 21 40 14.3 +3.3
comp=Z,0.6nm,0.3s,baz=104,slow=34,SNR=4.1
ASAJ S **S** 21 43 01.9 -12
comp=Z,0.3nm,0.3s,baz=17,slow=19,SNR=4.8
ASAJ Asahikawa 15.93 235 P **Pn** 21 40 14.4 +3.4
ASAJ S **S** 21 43 01.9 -12
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ERM Erimo 17.33 229 *i* P **Pn** 21 40 29.3 +1.2
YAK Yakutsk 17.54 306 *e*P **Pn** 21 40 29.1 -1.4
comp=Z,41nm,0.6s
YAK Yakutsk 17.54 306↑ *e*P **Pn** 21 40 30.6 0.0
YAK pmax pmax
comp=Z,35nm,0.6s
TIXI Tiksi 21.55 333 *e*P **P** 21 41 12.7 -0.7
comp=Z,3.4nm,0.6s,mb3.9
TIXI Tiksi 21.55 333↓ *e*P **P** 21 41 12.9 -0.5
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb3.6
MDJ Mudanjiang 22.40 255 *e*P **P** 21 41 21.4 -1.1
comp=Z,3.3nm,0.4s,mb4.0
MDJ Mudanjiang 22.40 255 P **P** 21 41 21.4 -1.2
MAJO Matsushiro 24.00 229 P **P** 21 41 37.4 -0.2
MAJO Matsushiro 24.00 229 P **P** 21 41 38.6 +0.9
MJAR Matsushiro Arr 24.00 229 P **P** 21 41 38.9 +1.2
comp=Z,0.7nm,0.4s,mb3.3,baz=3.6,slow=13,SNR=5.6
MJAR Matsushiro Arr 24.00 229 P **P** 21 41 38.9 +1.3
MJAR pmax pmax
comp=Z,1.0nm,0.4s
PPLA Purkeypile 25.06 52 *e*P **P** 21 41 48.2 +1.2
HIA Hailar 25.49 274 P **P** 21 41 51.7 +0.7
HIA Hailar 25.49 274 P **P** 21 41 50.0 -1.1
MCK McKinley 26.47 50 *e*P **P** 21 42 00.2 +0.6
KS15 Wonju Array Si 28.30 245 *e*P **P** 21 42 14.7 -1.6
INK Inuvik 32.20 40 *e*P **P** 21 42 50.7 +0.4
TLY Talaya 33.42 288 *e*P **P** 21 43 04.2 +3.1
comp=Z,3.2nm,0.7s,mb4.3
ULN Ulaanbaatar 33.46 280 P **P** 21 43 04.3 +2.8
ULN Ulaanbaatar 33.46 280 *e*P **P** 21 42 59.5 -2.0
SONM Songino Array 33.85 281 P **P** 21 43 04.9 0.0
comp=Z,0.4nm,0.5s,mb3.5,baz=66,slow=7.7,SNR=6.4
SONM PcP PcP 21 45 41.2 +0.1
comp=Z,0.8nm,0.6s,baz=45,slow=1.0,SNR=7.0
SONM Songino Array 33.85 281 *e*P **P** 21 43 06.4 +1.5
YKA Yellowknife Ar 41.57 44 P **P** 21 44 09.7 +0.1
comp=Z,1.1nm,0.7s,mb3.7,baz=300,slow=8.1,SNR=3.9
YKA Yellowknife Ar 41.57 44 P **P** 21 44 09.7 +0.1
YKA pmax pmax
comp=Z,1.0nm,0.7s
ENH Enshi 43.74 257 *e*P **P** 21 44 29.0 +1.4
comp=Z,0.8nm,0.6s,mb3.6
KURK Kurchatov 47.06 301 P **P** 21 44 51.7 -1.7
comp=Z,2.0nm,0.5s,mb4.1,baz=57,slow=8.1,SNR=18
KURK PcP PcP 21 46 22.4 -1.1
comp=Z,0.3nm,0.6s,baz=52,slow=3.4,SNR=3.9
KURK Kurchatov 47.06 301 *e*P **P** 21 44 57.3 +3.8
KURK Kurchatov 47.06 301 *e*P **P** 21 44 52.0 -1.5
comp=Z,3.1nm,0.6s,mb4.2
KURK PcP PcP 21 46 22.4 -1.1
KURK Kurchatov 47.06 301 *e*P **P** 21 44 52.0 -1.4
KURK 21 46 22.5
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
MKAR Makanchi Array 47.68 294 P **P** 21 44 55.5 -2.7
comp=Z,0.7nm,0.5s,mb3.8,baz=59,slow=7.0,SNR=11
MKAR Makanchi Array 47.68 294 *e*P **P** 21 44 58.2 -0.1
MKAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 49.52 307 P **P** 21 45 10.0 -2.3
comp=Z,0.5nm,0.4s,mb3.8,baz=54,slow=7.4,SNR=3.5
BVAR Borovoye Array 49.52 307 P **P** 21 45 10.0 -2.2
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 49.54 308 *e*P **P** 21 45 17.8 +5.3
comp=Z,0.8nm,0.4s,mb4.0
BRVK Borovoye 49.54 308 P **P** 21 45 10.8 -1.6
YBH Yreka Blue Hor 50.08 72 P **P** 21 45 18.4 +1.6
comp=Z,1.8nm,0.7s,mb4.1,baz=350,slow=3.7,SNR=5.3
YBH Yreka Blue Hor 50.08 72 P **P** 21 45 18.4 +1.7
YBH pmax pmax
comp=Z,2.0nm,0.7s
ARU Arti 52.27 317 *e*P **P** 21 45 38.3 +5.5
comp=Z,2.0nm,0.8s,mb4.2
TKM2 Tokmak 2 53.80 295 P **P** 21 45 48.9 +4.7
LSA Lhasa 54.68 273 *e*P **P** 21 45 54.7 +4.0
comp=Z,1.3nm,0.4s,mb4.3
NVAR Mina Array Bea 54.81 72 P **P** 21 45 53.4 +1.8
comp=Z,1.5nm,0.7s,mb4.6,baz=301,slow=7.4,SNR=29
NVAR Mina Array Bea 54.81 72 P **P** 21 45 53.4 +1.8
UCH Uchtor 54.86 295 P **P** 21 45 57.3 +5.4
EKS2 Erkin-Say 54.93 296 *e*P **P** 21 45 50.7 -1.7
AML Almayashu 55.35 295 *e*P **P** 21 45 53.9 -1.6
JOF Joensuu 56.02 335 *e*p **P** 21 45 57.9 -2.0
comp=Z,0.5nm,0.3s,mb4.0
JOF Joensuu 56.02 335 *e*P **P** 21 45 57.9 -2.0
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
PDAR Pinedale Array 56.33 62 P **P** 21 46 03.7 +1.3
comp=Z,1.2nm,0.7s,mb4.0,baz=340,slow=2.2,SNR=4.5
KAF Kangasniemi 57.91 337 *e*p **P** 21 46 11.8 -1.4
CHTO Chiang Mai 58.63 258 *e*P **P** 21 46 21.3 +2.5
comp=Z,15nm,2.1s,mb4.7
NOA NORSAR Array B 61.85 344 P **P** 21 46 38.8 -1.4
comp=Z,0.9nm,0.6s,mb4.0,baz=18,slow=6.7,SNR=2.4
NOA NORSAR Array B 61.85 344 P **P** 21 46 38.8 -1.4
NOA pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 69.61 68 P **P** 21 47 31.6 +1.2
comp=Z,1.8nm,0.5s,mb4.1,baz=301,slow=4.3,SNR=23
TXAR Lajitas Array 69.61 68 P **P** 21 47 31.6 +1.2
TXAR pmax pmax
comp=Z,2.0nm,0.5s
GERES GERESS Array B 72.92 338 P **P** 21 47 49.8 -0.3
comp=Z,0.3nm,0.5s,mb3.4,baz=27,slow=11,SNR=2.3
WRAB Tennant Creek 77.90 205 P **P** 21 48 18.4 -0.4
ASAR Alice Springs 81.60 205 P **P** 21 48 39.5 +0.9
comp=Z,0.6nm,0.8s,mb3.5,baz=13,slow=4.0,SNR=4.6
ASAR Alice Springs 81.60 205 P **P** 21 48 39.6 +1.0
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 84.83 348 P **P** 21 48 55.4 +0.1
comp=Z,1.3nm,0.6s,mb4.1,baz=360,slow=4.6,SNR=10

IDC 25 21:38:19.0±1.1, 1996N×4575W, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/22, mbtmp4.0/5, Error ellipse: s-maj=39.8km s-min=24.6km az=166.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**26.45**	**249**	P		P		21 43 58.5	+0.6
	2.7nm,0.7s,baz=49,slow=9.3,SNR=4.0								
TORD	**Torodi Ar. Bea**	**45.86**	**91**	P		P		21 46 42.9	-0.5
	1.4nm,0.8s,baz=296,slow=8.3,SNR=6.7								
PDAR	**Pinedale Array**	**57.63**	**309**	P		P		21 48 11.0	-0.1
	1.3nm,0.8s,baz=116,slow=8.1,SNR=7.2								
PLCA	**Paso Flores**	**64.64**	**201**	P		P		21 48 58.6	+0.1
	1.0nm,0.7s,baz=9.8,slow=3.7,SNR=3.3								
BRTR	**Keskin Array B**	**69.54**	**54**	P		P		21 49 30.6	+0.7
	1.2nm,0.7s,baz=274,slow=5.0,SNR=7.5								

IDC 25 21:38:46.0±17.0, 1728S×6885W, h173km±83km, mb3.5/2, mb1 3.5/3, mb1mx3.1/19, mbtmp3.3/3, Error ellipse: s-maj=357.9km s-min=49.8km az=20.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIV	**San Ignacio**	**7.57**	**81**	P		P	Pn	21 40 33.6	0.0
	0.4nm,0.3s,baz=268,slow=12,SNR=4.1								
TORD	**Torodi Ar. Bea**	**75.92**	**71**	P		P		21 50 14.2	+0.1
	0.3nm,0.5s,baz=256,slow=5.4,SNR=17								
YKA	**Yellowknife Ar**	**87.24**	**341**	P		P		21 51 12.5	+0.2
	1.4nm,0.8s,baz=133,slow=4.9,SNR=4.2								
SONM	**Songino Array**	**149.28**	**6**	PKPbc		PKPbc		21 58 13.6	-0.5
	0.1nm,0.3s,baz=296,slow=1.7,SNR=5.1								

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*ISCJB **25** 21:40:18.4±4.8, 80S±02×1188E±04, h80km±40km, mb3.9/3, Error ellipse: s-maj=69.0km s-min=14.2km az=159.9*
*IDC **25** 21:40:19.6±7.0, 7.94S×118.78E, h68km±62km, mb3.8/3, mb1 3.9/6, mb1mx3.5/19, mbtmp3.8/6, ML4.0/3, Error ellipse: s-maj=83.6km s-min=14.4km az=71.0*
ISC 25 21:40:19.4±5.1, 80S±02×1188E±04, h69km±44km, n8, σ1§21/9, mb3.9/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.08**	**18**	P		P	**Pn**	**21 41 04.8**	**-1.0**
	7.6nm,0.3s,baz=173,slow=6.0,SNR=7.3								
KAPI				S			**Sn**	**21 41 41.9**	**+0.3**
	22nm,0.3s,baz=176,slow=20,SNR=11								
BATI	**Baumata**	**5.29**	**115**	P		P	**Pn**	**21 41 38.2**	**+2.3**
	8.0nm,0.3s,baz=298,slow=7.2,SNR=6.6								
WRA	**Warramunga Arr**	**19.19**	**130**	P		P	**Pn**	**21 44 37.5**	**-1.8**
	0.5nm,0.3s,baz=302,slow=12,SNR=18								
WB2	**Warramunga Arr**	**19.20**	**130**	*e*P		P	**Pn**	**21 44 38.0**	**-1.3**
ASAR	**Alice Springs**	**21.29**	**139**	P		P	**P**	**21 45 00.8**	**+0.5**
	2.5nm,0.5s,mb3.8,baz=317,slow=9.5,SNR=20								
STKA	**Stephens Creek**	**31.87**	**141**	*e*P		**P**	**P**	**21 46 39.3**	**+1.2**
	1.4nm,0.4s,mb4.0								
STKA	**Stephens Creek**	**31.87**	**141**	P		P	**P**	**21 46 38.9**	**+0.8**
	2.3nm,0.5s,mb4.2,baz=310,slow=12,SNR=7.6								
ZALV	**Zalesovo Beam**	**68.02**	**339**	P		P	**P**	**21 51 11.6**	**+0.5**
	1.0nm,0.5s,mb3.9,baz=135,slow=6.9,SNR=2.6								

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*MOS **25** 21:42:06.5±0.9, 3791N×14157E, h73km, mb4.7/21, Error ellipse: s-maj=10.2km s-min=7.1km az=109.5*
*BJI **25** 21:42:08.3, 38.11N×141.71E, h103km, mB5.1, mb4.5*
*ISCJB **25** 21:42:09.3±0.5, 3794N±003×14157E±005, h97km±2km, mb4.4/42, Error ellipse: s-maj=7.7km s-min=4.8km az=28.9*
*IDC **25** 21:42:10.1±0.7, 3792N×14147E, h87km±6km, mb3.9/15, mb1 4.0/19, mb1mx4.0/26, mbtmp3.9/19, MS3.6/3, Ms1 3.6/3, ms1mx3.3/38, Error ellipse: s-maj=15.3km s-min=9.8km az=100.0*
*JMA **25** 21:42:10.5±0.1, 3794N×14157E, h86km±1km, M4.2*
JMA Felt III J1.
*NEIC **25** 21:42:10.7±0.7, 3794N×14146E, h92km±6km, mb4.6/14, Error ellipse: s-maj=6.6km s-min=4.8km az=125.0*
NEIC Recorded [3 JMA] in Fukushima, [2 JMA] in Miyagi and [1 JMA] in Iwate and Yamagata Prefectures.
ISC 25 21:42:10.3±0.5, 3794N±003×14158E±005, h89km±2km, h91km±4.1km; pP-P, n111, σ0§76/131, mb4.4/42, 2C-12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.54**	**341**	P	↓	P	**Pn**	**21 42 25.4**	**+0.1**
JIO				S			**Sn**	**21 42 36.1**	**-0.3**
JMM	**Marumori**	**0.62**	**263**	P	↓	P	**Pn**	**21 42 25.9**	**-0.1**
JMM				S	*e*		**Sn**	**21 42 37.3**	**-0.4**
JFK	**Kawauchi**	**0.80**	**224**	P	↓	P	**Pn**	**21 42 27.6**	**-0.1**
JFK				S	*e*		**Sn**	**21 42 40.2**	**-0.5**
JOU	**Okura**	**0.84**	**301**	P	↓	P	**Pn**	**21 42 28.1**	**0.0**
JOU				S	*e*		**Sn**	**21 42 41.7**	**+0.3**
JMK	**Ichinoseki**	**1.05**	**345**	P	↓	P	**Pn**	**21 42 30.5**	**+0.1**
JMK				S			**Sn**	**21 42 44.9**	**-0.7**
JFT	**Otama**	**1.07**	**247**	P	↓	P	**Pn**	**21 42 31.0**	**+0.3**
JFT				S			**Sn**	**21 42 46.0**	**0.0**
JYS	**Shirataka**	**1.23**	**284**	P	↓	P	**Pn**	**21 42 33.0**	**+0.5**
JYS				S			**Sn**	**21 42 50.4**	**+1.1**
JYK	**Kaneyama**	**1.37**	**316**	P	↓	P	**Pn**	**21 42 34.6**	**+0.3**
JYK				S			**Sn**	**21 42 52.9**	**+0.5**
JOM	**Ohasama**	**1.55**	**352**	P	↓	P	**Pn**	**21 42 36.6**	**+0.1**
JOM				S			**Sn**	**21 42 56.3**	**-0.1**
JFY	**Yanaizu**	**1.58**	**251**	P	↓	P	**Pn**	**21 42 37.4**	**+0.5**
JFY				S			**Sn**	**21 42 57.3**	**+0.1**
JYA	**Atsumi**	**1.60**	**295**	P	↓	P	**Pn**	**21 42 37.7**	**+0.4**
JYA				S			**Sn**	**21 42 58.6**	**+0.8**
JNS	**Sasagawa**	**1.79**	**267**	P	↓	P	**Pn**	**21 42 40.2**	**+0.5**
JNS				S			**Sn**	**21 43 00.5**	**-1.6**
MJAR	**Matsushiro Arr**	**3.03**	**244**	P		P	**Pn**	**21 42 55.4**	**-0.7**
	16nm,0.3s,baz=53,slow=11,SNR=138								
MJAR				S			**Sn**	**21 43 20.5**	**-11**
	23nm,0.3s,baz=79,slow=16,SNR=19								
MJAR	**Matsushiro Arr**	**3.03**	**244**	P		P	**Pn**	**21 42 55.4**	**-0.7**
MJAR				S			**Sn**	**21 43 20.5**	**-11**
MJAR				pmax		pmax			
	comp=Z,17nm,0.3s								
MJAR				smax					
	comp=N,23nm,0.3s								
MAJO	**Matsushiro**	**3.03**	**244**	*e*Pn		Pn	**Pn**	**21 42 57.2**	**+1.1**
MAJO				*e*Sn			**Sn**	**21 43 20.4**	**-11**
MAT	**Matsushiro**	**3.03**	**244**	P		Pn	**Pn**	**21 42 57.4**	**+1.3**
MAT				S			**Sn**	**21 43 34.8**	**+3.3**
JHJ	**Hachijo jima 2**	**5.03**	**197**	P		P	**Pn**	**21 43 23.1**	**-0.2**
	comp=N,22nm,0.3s,baz=38,slow=20,SNR=13								
JHJ				S			**Sn**	**21 44 16.1**	**-4.0**
	comp=N,74nm,0.3s,baz=54,slow=23,SNR=9.2								
JHJ				LR				21 44 45.3	
	comp=N,268nm,21.1s,baz=292,slow=31								
ASAJ	**Asahikawa**	**6.22**	**7**	P		P	**Pn**	**21 43 37.6**	**-1.7**
	comp=N,5.3nm,0.3s,baz=225,slow=13,SNR=22								
ASAJ				S			**Sn**	**21 44 45.5**	**-3.5**
	comp=N,2.7nm,0.3s,baz=269,slow=28,SNR=5.7								
ASAJ				LR			LR	21 46 29.7	
	comp=N,583nm,20.3s,baz=152,slow=42								
ASAJ	**Asahikawa**	**6.22**	**7**	P		P	**Pn**	**21 43 37.7**	**-1.7**
ASAJ				S			**Sn**	**21 44 45.5**	**-3.4**
ASAJ				pmax		pmax			
	comp=Z,5.0nm,0.3s								
ASAJ				smax					
	comp=N,3.0nm,0.3s								
ASAJ				MLR		MLR			
	comp=Z,583nm,20.3s								
YSS	**Yuzh-Sakhalins**	**9.05**	**5**	*e*P		Pn	**Pn**	**21 44 17.0**	**-0.9**
KSRS	**Korea Array**	**10.83**	**272**	P		Pn	**Pn**	**21 44 42.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=90,slow=13,SNR=14								
KSRS				LR			LR	21 48 40.3	
	comp=Z,835nm,18.8s,baz=184,slow=36								
PET	**Petropavlovsk**	**19.18**	**33**	*e*P		P	**Pn**	**21 46 27.8**	**-0.6**
HIA	**Hailar**	**19.37**	**313**	*e*P		Pn	**Pn**	**21 46 27.1**	**-3.6**
	comp=Z,3.2nm,0.6s								
HIA	**Hailar**	**19.37**	**313**	*e*P		Pn	**Pn**	**21 46 27.1**	**-3.6**
HIA				pmax		pmax			
	comp=Z,3.0nm,0.6s								
BJT	**Baijiatuao**	**19.85**	**284**	*e*P		Pn	**Pn**	**21 46 32.8**	**-3.5**
	comp=Z,14nm,0.5s								
BJT	**Baijiatuao**	**19.85**	**284**	*e*P		Pn	**Pn**	**21 46 32.8**	**-3.5**
BJT				pmax		pmax			
	comp=Z,14nm,0.5s								
TATO	**Taipei**	**21.41**	**239**	*e*P		P	**P**	**21 46 49.4**	**-1.5**
NACB	**Ninganchiao**	**21.88**	**237**	P		P	**P**	**21 46 54.8**	**-1.1**
CLNS	**Chul'man**	**21.91**	**335**	*e*P		P	**P**	**21 46 57.4**	**+1.5**
CLNS				pmax		pmax			
	comp=Z,11nm,0.8s,mb4.2								
CLNS				pmax		pmax			
	comp=N,8.0nm,0.8s								
HHC	**Hu-ho-hao-te**	**23.32**	**287**	*e*P		P	**P**	**21 47 09.0**	**-1.4**
HHC				AP				21 47 29.5	
HHC				PP				21 47 45.3	
HHC				*e*S			**S**	**21 51 09.3**	**-6.8**
HHC				XS		sS		21 51 44.0	-6.0
HHC				SS				21 52 03.0	
HHC				AMB		AMB			
	comp=Z,12nm,0.8s,mb4.3								
HHC				AMB		AMB			
	comp=Z,318nm,9.5s								
HHC				LR		LR			
	comp=N,455nm,14.3s								
HHC				LR		LR			
	comp=E,601nm,15.1s								
HHC				LR		LR			
	comp=Z,631nm,15.9s								
YAK	**Yakutsk**	**25.22**	**347**	*e*P		P	**P**	**21 47 26.6**	**-0.7**
	comp=Z,25nm,0.6s,mb4.8								
YAK	**Yakutsk**	**25.22**	**347**↑	*e*P		P	**P**	**21 47 26.7**	**-0.6**
YAK				pmax		pmax			
	comp=Z,22nm,0.6s,mb4.8								
XAN	**Xi'an**	**26.63**	**272**	P		P	**P**	**21 47 39.3**	**-1.1**
XAN				AMB		AMB			
	comp=Z,4.0nm,0.6s,mb4.1								
XAN				AMB		AMB			
	comp=Z,346nm,12.1s								
BOD	**Bodaibo**	**26.84**	**327**	*e*P		P	**P**	**21 47 41.5**	**-0.5**
BOD				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.2								
ULN	**Ulaanbaatar**	**26.96**	**303**	*e*P		P	**P**	**21 47 43.0**	**-0.3**
	comp=Z,9.2nm,0.7s,mb4.4								
ULN	**Ulaanbaatar**	**26.96**	**303**	*e*P		P	**P**	**21 47 43.0**	**-0.3**
ULN				pmax		pmax			
	comp=Z,9.0nm,0.7s,mb4.4								
SONM	**Songino Array**	**27.40**	**302**	P		P	**P**	**21 47 47.5**	**+0.4**
	comp=Z,15nm,0.7s,mb4.6,baz=97,slow=8.7,SNR=108								
SONM	**Songino Array**	**27.40**	**302**	P		P	**P**	**21 47 47.5**	**+0.3**
SONM				pmax		pmax			
	comp=Z,15nm,0.7s								
ZAK	**Zakamensk**	**29.82**	**307**	*e*P		P	**P**	**21 48 08.9**	**+0.3**
ZAK				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.2								
GTA	**Gaotai**	**32.43**	**286**	*e*P		P	**P**	**21 48 32.0**	**+0.3**
GTA				AMB		AMB			
	comp=Z,4.0nm,1.0s,mb4.1								
BILL	**Bilibino**	**33.12**	**17**	P		P	**P**	**21 48 37.7**	**+0.3**
BILL	**Bilibino**	**33.12**	**17**	P		P	**P**	**21 48 37.7**	**+0.3**
ZAA0	**Zalesovo Array**	**41.41**	**312**	*e*P		P	**P**	**21 49 47.1**	**-0.5**
ZALV	**Zalesovo Beam**	**41.41**	**312**	P		P	**P**	**21 49 47.6**	**+0.1**
	comp=Z,4.1nm,0.5s,mb4.5,baz=91,slow=7.6,SNR=21								
ZALV	**Zalesovo Beam**	**41.41**	**312**	P		P	**P**	**21 49 47.6**	**+0.1**
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.5s,mb4.5								
CHTO	**Chiang Mai**	**41.65**	**255**	*e*P		P	**P**	**21 49 49.1**	**-0.8**
	comp=Z,1.3nm,0.5s,mb3.9								
CHTO	**Chiang Mai**	**41.65**	**255**	*e*P		P	**P**	**21 49 49.1**	**-0.8**
CHTO				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb3.8								
CMAR	**Chiang Mai Arr**	**41.86**	**254**	P		P	**P**	**21 49 51.6**	**-0.1**
	comp=Z,0.9nm,0.9s,mb3.5,baz=69,slow=5.1,SNR=3.9								
CMAR	**Chiang Mai Arr**	**41.86**	**254**	P		P	**P**	**21 49 51.6**	**-0.1**
CMAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
LSA	**Lhasa**	**42.26**	**274**	*e*P		P	**P**	**21 49 54.5**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.1								
LSA	**Lhasa**	**42.26**	**274**	*e*P		P	**P**	**21 49 54.5**	**-0.4**
LSA				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.1								
NVS	**Novosibirsk**	**42.31**	**313**	*i* P		P	**P**	**21 49 54.1**	**-0.8**
MK31	**Makanchi Array**	**43.75**	**301**	*e*P		P	**P**	**21 50 06.8**	**+0.1**
MKAR	**Makanchi Array**	**43.75**	**301**	P		P	**P**	**21 50 06.6**	**-0.1**
	comp=Z,6.2nm,0.6s,mb4.5,baz=84,slow=9.9,SNR=35								
MKAR	**Makanchi Array**	**43.75**	**301**	P		P	**P**	**21 50 06.6**	**-0.1**
MKAR				pmax		pmax			
	comp=Z,6.0nm,0.6s								
KURK	**Kurchatov**	**45.48**	**307**	P		P	**P**	**21 50 20.6**	**+0.3**
	comp=Z,34nm,0.6s,mb5.3,baz=83,slow=8.7,SNR=116								
KURK	**Kurchatov**	**45.48**	**307**	*e*P		P	**P**	**21 50 19.9**	**-0.4**
	comp=Z,27nm,0.4s,mb5.3								
KURK	**Kurchatov**	**45.48**	**307**	P		P	**P**	**21 50 20.6**	**+0.3**
KURK				pmax		pmax			
	comp=Z,34nm,0.6s,mb5.2								
TAPN	**Taplejung**	**46.01**	**273**	*e*P		P	**P**	**21 50 25.6**	**+0.8**
	comp=Z,7.5nm,0.6s,mb4.6								
ODAN	**Odare**	**46.49**	**273**	*e*P		P	**P**	**21 50 28.9**	**+0.3**
	comp=Z,5.1nm,0.4s,mb4.7								
JIRN	**Jiri**	**47.07**	**274**	*e*P		P	**P**	**21 50 33.8**	**+0.7**
	comp=Z,7.1nm,0.3s,mb4.8								
RAMN	**Ramite**	**47.08**	**273**	*e*P		P	**P**	**21 50 33.2**	**+0.1**
	comp=Z,27nm,0.9s,mb5.0								
GUN	**Gumba**	**47.20**	**275**	*e*P		P	**P**	**21 50 34.5**	**+0.4**
	comp=Z,21nm,0.4s,mb5.2								
KKN	**Kakani**	**47.73**	**275**	*e*P		P	**P**	**21 50 38.4**	**+0.2**
	comp=Z,21nm,0.6s,mb5.1								
PMR	**Palmer**	**47.82**	**37**	*e*P		P	**P**	**21 50 38.8**	**+0.4**
DMN	**Daman**	**47.95**	**275**	*e*P		P	**P**	**21 50 40.0**	**+0.1**
GKN	**Gorkha**	**48.14**	**276**	*e*P		P	**P**	**21 50 41.4**	**0.0**
	comp=Z,25nm,0.8s,mb5.1								
COLA	**College**	**48.25**	**33**	P		P	**P**	**21 50 42.2**	**+0.5**
DANN	**Dangsing**	**48.67**	**277**	*e*P		P	**P**	**21 50 46.0**	**+0.6**
	comp=Z,82nm,0.6s								
KOLN	**Koldanda**	**49.06**	**276**	*e*P		P	**P**	**21 50 48.9**	**+0.5**
TKM2	**Tokmak 2**	**49.32**	**298**	*e*P		P	**P**	**21 50 52.0**	**0.0**
	comp=Z,10nm,0.5s,mb5.0								
TKM2	**Tokmak 2**	**49.32**	**298**	*e*P		P	**P**	**21 50 52.0**	**0.0**
TKM2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.0								
PYUN	**Piuthan**	**49.39**	**277**	*e*P		P	**P**	**21 50 51.1**	**+0.2**
	comp=Z,16nm,0.5s,mb5.2								
BVAR	**Borovoye Array**	**50.06**	**312**	P		P	**P**	**21 50 55.6**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.3,baz=74,slow=8.9,SNR=12								
BVAR	**Borovoye Array**	**50.06**	**312**	P		P	**P**	**21 50 55.6**	**-0.1**
BVAR				pmax		pmax			
	comp=Z,2.0nm,0.5s								
BRVK	**Borovoye**	**50.12**	**312**	*e*P		P	**P**	**21 50 55.4**	**-0.7**
EKS2	**Erkin-Say**	**50.67**	**298**	*e*P		P	**P**	**21 51 00.7**	**+0.2**
	comp=Z,3.5nm,0.6s,mb4.6								
AML	**Almayashu**	**50.90**	**297**	*e*P		P	**P**	**21 51 03.1**	**+1.0**
	comp=Z,12nm,0.8s,mb5.0								
INK	**Inuvik**	**53.52**	**27**	*e*P		P	**P**	**21 51 22.5**	**+1.3**
ARU	**Arti**	**55.77**	**318**	*e*P		P	**P**	**21 51 37.5**	**-0.1**
	comp=Z,8.8nm,0.8s,mb4.8								
ARU	**Arti**	**55.77**	**318**↑	*e*P		P	**P**	**21 51 37.4**	**-0.2**
ARU				pmax		pmax			
	comp=Z,13nm,0.9s,mb5.0								
KBL	**Kabul**	**57.22**	**291**	*e*P		P	**P**	**21 51 47.7**	**-0.5**
	comp=Z,5.6nm,0.8s,mb4.7								
KBL	**Kabul**	**57.22**	**291**	*e*P		P	**P**	**21 51 47.7**	**-0.5**
KBL				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.7								
CTAO	**Charters Tower**	**57.88**	**175**	*e*P		P	**P**	**21 51 52.8**	**-0.1**
WRAB	**Tennant Creek**	**57.96**	**188**	*e*P		P

comp=Z,0.4nm,0.5s,baz=270,slow=1.5,SNR=3.5
BRTR Keskin Array B 78.35 311 P P 21 53 59.9 -0.9
comp=Z,0.4nm,0.5s,mb3.4,baz=120,slow=5.7,SNR=3.6
PV10 Paradox Valley 80.08 49 eP P 21 54 11.9 +1.7
GERES GERESS Array B 82.01 328 P P 21 54 19.7 -0.6
comp=Z,0.4nm,0.5s,mb3.5,baz=46,slow=7.0,SNR=3.6
TXAR Lajitas Array 89.47 52 P P 21 54 58.4 +0.9
comp=Z,0.8nm,0.6s,mb3.9,baz=302,slow=3.9,SNR=7.9
TXAR Lajitas Array 89.47 52 P pmax pmax
TXAR
comp=Z,1.0nm,0.6s

*IDC **25** 21:44:48.6±0.6,821S×11855E,h0km,mb4.2/10, mb1 4.3/13,mb1mx4.2/20,mbtmp4.2/13,ML4.2/3,MS4.2/1, Ms1 4.2/1,ms1mx3.7/30,Error ellipse: s-maj=28.7km s-min=10.9km az=59.0*
*ISCJB **25** 21:44:51.4±0.8,820S±004×11864E±005,h33km±7km, mb4.5/23,Error ellipse: s-maj=9.5km s-min=5.4km az=154.1*
*BJI **25** 21:44:52.5,820S×11860E,h35km,mB5.1,mb4.5*
*NEIC **25** 21:44:53.6±0.8,819S×11860E,h35km±7km,mb4.5/8, Error ellipse: s-maj=8.7km s-min=4.7km az=67.0*
*DJA **25** 21:44:55.4±0.0,817S×11884E,h20km,mB5.3/1, Mjma4.1/11,MLv4.7/11,Mw(mB)5.2/1,Mwp4.4/5*
ISC 25 21:44:52.3±1.1,821S±004×11867E±006,h24km±8km,n71, σ0§94/69,mb4.5/23,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.33**	**176**	P	**Pb**	**21 44 59.1**	**-0.7**
KHKI	**Kahang-Kahang**	**3.04**	**267**	P	**Pn**	**21 45 44.2**	**+5.3**
KAPI	**Kappang**	**3.35**	**19**	Pn	**Pn**	**21 45 43.1**	**-0.1**
	65nm,0.3s,baz=192,slow=7.6,SNR=41						
KAPI				Sn	**Sn**	**21 46 21.0**	**-1.2**
	182nm,0.3s,baz=22,slow=23,SNR=21						
DNP	**Denpasar**	**3.46**	**262**	P	**Pn**	**21 45 52.4**	**+7.7**
NBBI	**Negara**	**4.01**	**267**	P	**Pn**	**21 45 59.9**	**+7.6**
KMMI	**Kalianget**	**4.80**	**284**	P	**Pn**	**21 46 09.7**	**+6.5**
BATI	**Baumata**	**5.31**	**112**	Pn	**Pn**	**21 46 11.7**	**+1.5**
	2.3nm,0.3s,baz=238,slow=3.5,SNR=2.2						
BATI				Sn	**Sn**	**21 47 22.1**	**+11**
	8.5nm,0.3s,baz=248,slow=5.5,SNR=2.1						
BATI				LR	LR	21 48 46.4	
	comp=Z,2μm,18.3s,baz=193,slow=44						
BATI	**Baumata**	**5.31**	**112**	P	**Pn**	**21 46 14.7**	**+4.5**
	47nm,0.7s,0.2nm						
KDI	**Kendari**	**5.76**	**43**	P	**Pn**	**21 46 19.1**	**+2.7**
	26nm,0.8s,0.1nm						
BBKI	**Banjar Baru**	**6.06**	**321**	P	**Pn**	**21 46 21.6**	**+1.1**
	90nm,1.1s,2μm0.7nm						
KRKI	**Karangkates**	**6.16**	**270**	P	**Pn**	**21 46 29.8**	**+8.0**
KSM	**Kuching**	**12.73**	**319**	ePn	**Pn**	**21 47 51.6**	**-0.3**
MBWA	**Marble Bar**	**12.92**	**176**	ePn	**Pn**	**21 47 55.0**	**+0.5**
MBWA				Sn	**Sn**	**21 50 09.9**	**-7.7**
KAKA	**Kakadu**	**14.26**	**109**	eP	Px	21 47 57.8	
	17nm,0.6s						
KKM	**Kota Kinabalu**	**14.37**	**350**	eP	**Pn**	**21 48 14.0**	**-0.3**
WRA	**Warramunga Arr**	**19.14**	**129**	P	**Pn**	**21 49 14.0**	**-0.9**
	0.7nm,0.3s,baz=303,slow=12,SNR=20						
WRAB	**Tennant Creek**	**19.14**	**129**	eP	**Pn**	**21 49 14.4**	**-0.5**
	10nm,0.8s						
WRAB				S	**Sn**	**21 52 44.6**	**-4.3**
WB2	**Warramunga Arr**	**19.15**	**129**	eP	**Pn**	**21 49 14.4**	**-0.6**
ASAR	**Alice Springs**	**21.20**	**138**	P	**Pn**	**21 49 37.2**	**+0.9**
	8.5nm,0.5s,mb4.3,baz=313,slow=9.7,SNR=48						
ASAR				S	**S**	**21 53 35.2**	**+4.2**
	3.1nm,1.1s,baz=323,slow=24,SNR=5.2						
COCO	**West Island**	**21.85**	**258**	eP	**P**	**21 49 41.8**	**-1.6**
MUN	**Mundaring**	**23.77**	**185**	eP	sP	21 50 22.5	+9.3
NWAO	**Narrogin (SRO)**	**24.64**	**183**	eP	**P**	**21 50 12.2**	**+1.1**
COEN	**Coen**	**24.70**	**106**	eP	**P**	**21 50 12.2**	**+0.4**
	20nm,0.6s,mb4.8						
QIZ	**Qiongzhong**	**28.43**	**342**	P	**P**	**21 50 45.0**	**-0.4**
STKA	**Stephens Creek**	**31.77**	**141**	eP	**P**	**21 51 15.9**	**+1.1**
	6.4nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**31.77**	**141**	P	**P**	**21 51 15.0**	**+0.2**
	7.7nm,0.7s,mb4.7,baz=314,slow=9.9,SNR=16						
STKA	**Stephens Creek**	**31.77**	**141**	eP	**P**	**21 51 16.3**	**+1.4**
	1.0nm,0.7s,mb3.8						
NACB	**Ninganchiao**	**32.31**	**5**	eP	**P**	**21 51 19.6**	**0.0**
YHNB	**Yeheng**	**32.78**	**5**	eP	**P**	**21 51 23.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**32.88**	**324**	P	**P**	**21 51 25.0**	**+0.3**
	1.1nm,0.7s,mb3.9,baz=158,slow=7.0,SNR=4.3						
CHTO	**Chiang Mai**	**33.16**	**324**	eP	**P**	**21 51 26.7**	**-0.4**
KMI	**Kunming**	**36.58**	**335**	P	**P**	**21 52 00.0**	**+3.4**
KMI				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.3						
HNR	**Honiara**	**40.79**	**95**	P	**P**	**21 52 32.6**	**+0.4**
LSA	**Lhasa**	**46.06**	**326**	eP	**P**	**21 53 14.6**	**+0.2**
	comp=Z,9.9nm,1.1s,mb4.7						
ODAN	**Odare**	**46.21**	**320**	eP	**P**	**21 53 16.7**	**+1.1**
	comp=Z,11nm,0.7s,mb4.9						
LZH	**Lanzhou**	**46.21**	**343**	eP	**P**	**21 53 12.0**	**-3.5**
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.2s						
KSRS	**Korea Array**	**46.24**	**10**	P	**P**	**21 53 15.3**	**-0.3**
	comp=Z,1.6nm,0.7s,mb4.0,baz=195,slow=8.6,SNR=4.0						
TAPN	**Taplejung**	**46.35**	**321**	eP	**P**	**21 53 18.2**	**+1.5**
	comp=Z,20nm,1.0s,mb5.0						
JIRN	**Jiri**	**47.53**	**320**	eP	**P**	**21 53 27.2**	**+1.2**
	comp=Z,13nm,0.7s,mb5.1						
GUN	**Gumba**	**47.90**	**320**	eP	**P**	**21 53 30.0**	**+1.2**
	comp=Z,54nm,1.2s,mb5.5						
BJT	**Baijiatuau**	**48.03**	**357**	eP	**P**	**21 53 28.7**	**-0.9**
GKN	**Gorkha**	**48.77**	**319**	eP	**P**	**21 53 35.8**	**+0.3**
	comp=Z,12nm,0.8s,mb5.0						
KOLN	**Koldanda**	**49.29**	**318**	eP	**P**	**21 53 40.3**	**+0.7**
DANN	**Dangsing**	**49.57**	**318**	eP	**P**	**21 53 42.0**	**+0.3**
	comp=Z,16nm,0.6s,mb5.2						
PYUN	**Piuthan**	**49.92**	**318**	eP	**P**	**21 53 44.3**	**0.0**
	comp=Z,7.5nm,0.6s,mb4.9						
ULN	**Ulaanbaatar**	**56.77**	**351**	eP	**P**	**21 54 35.4**	**+1.1**
	comp=Z,7.4nm,1.3s,mb4.6						
SONM	**Songino Array**	**56.84**	**350**	P	**P**	**21 54 35.8**	**+1.0**
	comp=Z,0.9nm,0.5s,mb4.1,baz=167,slow=7.9,SNR=9.6						
CASY	**Casey**	**58.26**	**184**	eP	**P**	**21 54 44.4**	**-0.2**
TLY	**Talaya**	**61.03**	**349**	P	**P**	**21 55 03.9**	**0.0**
KBL	**Kabul**	**63.30**	**315**	eP	**P**	**21 55 18.1**	**-1.4**
MK31	**Makanchi Array**	**63.61**	**333**	eP	**P**	**21 55 21.1**	**-0.1**
MKAR	**Makanchi Array**	**63.61**	**333**	P	**P**	**21 55 21.2**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.3,baz=155,slow=7.5,SNR=18						
MKAR	**Makanchi Array**	**63.61**	**333**	P	**P**	**21 55 21.2**	**0.0**
TKM2	**Tokmak 2**	**64.22**	**326**	eP	**P**	**21 55 24.6**	**-0.7**
KURK	**Kurchatov**	**68.14**	**334**	eP	**P**	**21 55 49.5**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=270,slow=12,SNR=13						
KURK	**Kurchatov**	**68.14**	**334**	eP	**P**	**21 55 49.3**	**-1.0**
	comp=Z,1.4nm,0.5s,mb4.2						
ZALV	**Zalesovo Beam**	**68.19**	**339**	P	**P**	**21 55 49.6**	**-0.9**
	comp=Z,1.5nm,0.5s,mb4.3,baz=147,slow=5.3,SNR=11						
MAW	**Mawson**	**69.87**	**200**	P	**P**	**21 56 00.5**	**-0.3**
	comp=Z,3.0nm,0.7s,mb4.3,baz=340,slow=14,SNR=4.7						
MAW	**Mawson**	**69.87**	**200**	eP	**P**	**21 56 01.2**	**+0.3**
	comp=Z,0.9nm,0.9s,mb3.7						
VNDA	**Vanda**	**72.82**	**171**	P	**P**	**21 56 19.7**	**+1.2**
	comp=Z,0.7nm,0.4s,mb3.9,baz=316,slow=7.2,SNR=15						
BRVK	**Borovoye**	**73.52**	**332**	P	**P**	**21 56 22.6**	**-0.3**
SBA	**Scott Base**	**73.82**	**171**	P	**P**	**21 56 23.6**	**-0.8**
KIV	**Kislovodsk**	**85.69**	**315**	P	**P**	**21 57 29.1**	**-0.2**
LSZ	**Lusaka**	**88.33**	**255**	eP	**P**	**21 57 42.4**	**-0.5**
SNAA	**Sanae**	**91.67**	**196**	eP	**P**	**21 57 54.5**	**-2.7**
	comp=Z,2.7nm,1.1s,mb4.5						
PMR	**Palmer**	**98.20**	**29**	P	**P**	**21 58 25.7**	**-1.5**
TOA0	**Torodi Ar. Sit**	**118.00**	**281**	ePKPdf	PKPdf	22 03 36.9	-1.2
TORD	**Torodi Ar. Bea**	**118.00**	**281**	PKP	PKPdf	22 03 36.7	-1.4
	comp=Z,0.6nm,0.5s,baz=50,slow=1.4,SNR=17						
NVAR	**Mina Array Bea**	**120.76**	**50**	PKP	PKPdf	22 03 43.6	+0.8
	comp=Z,0.3nm,0.5s,baz=168,slow=0.8,SNR=3.1						
DBIC	**Dimbokro**	**124.02**	**273**	PKP	PKPdf	22 03 49.7	-0.1
	comp=Z,0.8nm,0.5s,baz=334,slow=13,SNR=3.7						
DBIC	**Dimbokro**	**124.02**	**273**	PKP	PKPdf	22 03 49.7	-0.1

*MOS **25** 21:46:25.5±1.5,4321N×4557E,h26km,mb3.9/1,Error ellipse: s-maj=22.5km s-min=10.6km az=179.3*
*TIF **25** 21:46:26.5,4333N×4555E,h13km±2km*
ISC 25 21:46:26.5±1.2,4339N±004×4559E±007,h13km±4km,n16, σ1§20/32,8C,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.65**	**241**	⇑iPG	**Pg**	**21 46 38.3**	**-0.8**
SNJR				*i* S	**Sg**	**21 46 47.7**	**+0.1**
VLKR	**Vladikavkaz**	**0.75**	**243**	*e*PG	**Pg**	**21 46 40.2**	**-0.7**
VLKR				*e*S	**Sg**	**21 46 50.7**	**0.0**
BTKR	**Batakoyurt**	**0.76**	**269**	⇑iPG	**Pg**	**21 46 41.3**	**+0.1**
BTKR				*i* S	**Sg**	**21 46 52.9**	**+1.7**
KMSR	**Komsomolskaya**	**0.94**	**270**	⇑iPG	**Pg**	**21 46 45.2**	**+0.5**
KMSR				*i* S	**Sg**	**21 46 59.0**	**+2.0**
ARNR	**Ardon**	**0.97**	**259**	*e*PG	**Pg**	**21 46 44.9**	**-0.4**
ARNR				*i* S	**Sg**	**21 46 58.6**	**+0.6**
PRTR	**Priterechnaya**	**1.02**	**292**	⇑iPG	**Pg**	**21 46 45.4**	**-0.7**
PRTR				*i* S	**Sb**	**21 47 01.4**	**+2.2**
LACR	**Lac**	**1.10**	**240**	⇑iPG	**Pg**	**21 46 45.6**	**-2.0**
LACR				*e*S	**Sb**	**21 47 00.4**	**-1.2**
KORR	**Kora**	**1.15**	**255**	⇑iPG	**Pg**	**21 46 47.5**	**-1.1**
KORR				*i* S	**Sb**	**21 47 03.2**	**+0.2**
LSNR	**Lesken**	**1.30**	**266**	*e*PG	**Pn**	**21 46 49.5**	**-0.8**
LSNR				*i* S	**Sb**	**21 47 07.6**	**+0.3**
ZEI	**Tsey**	**1.38**	**244**	⇑iPG	**Pn**	**21 46 49.7**	**-1.8**
ZEI				*i* S	**Sn**	**21 47 07.7**	**-1.9**
DIGR	**Digorskoe uzhe**	**1.55**	**252**	⇑iPG	**Pn**	**21 46 52.1**	**-1.6**
DIGR				*i* S	**Sn**	**21 47 11.9**	**-1.8**
ONI	**Oni**	**1.76**	**244**	P	**Pn**	**21 46 56.6**	**-0.1**
ONI				S	**Sn**	**21 47 19.7**	**+0.7**
TBLG	**Delisi**	**1.77**	**201**	P	**Pn**	**21 46 58.2**	**+1.4**
TBLG				S	**Sg**	**21 47 23.0**	**-0.4**
GOR	**Gori**	**1.77**	**218**	P	**Pn**	**21 46 57.2**	**+0.3**
GOR				S	**Sn**	**21 47 21.6**	**+2.3**
MTA	**Mtatsminda**	**1.79**	**199**	P	**Pn**	**21 46 58.1**	**+1.0**
MTA				S	**Sg**	**21 47 23.5**	**-0.5**
DGRG	**David-gareji**	**1.94**	**185**	P	**Pn**	**21 47 01.5**	**+2.4**
DGRG				S	**Sg**	**21 47 29.9**	**+1.1**

*THE **25** 21:46:32.8,3929N×2020E,h0km±4km,ML3.7/4,Error ellipse: s-maj=6.6km s-min=1.1km az=269.0*
*NEIC **25** 21:46:33.6,3931N×2027E,h4km,MD3.4(ATH), ML3.7(THE),After ATH.*
*ISCJB **25** 21:46:33.7±0.5,3933N±002×2021E±004,h10km,Error ellipse: s-maj=4.8km s-min=3.2km az=170.0*
*CSEM **25** 21:46:33.2±0.2,3930N×2027E,h0km±1km,ML3.7/4,Error ellipse: s-maj=3.8km s-min=2.5km az=36.0*
*ATH **25** 21:46:33.6,3931N×2027E,h4km,MD3.4/9*
*SKO **25** 21:46:35.4,3931N×2041E,h0km*
ISC 25 21:46:34.1±0.5,3931N±002×2022E±004,h10km,n32, σ1§19/48,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.24**	**22**	P	**Pg**	**21 46 37.5**	**-1.5**
IGT				S	**Sg**	**21 46 41.5**	**-0.8**
KEK	**Kerkira**	**0.51**	**321**	ePG	**Pg**	**21 46 43.9**	**-0.2**
KEK				*e*SG	**Sg**	**21 46 51.7**	**+0.8**
JAN	**Janina**	**0.60**	**55**	ePG	**Pg**	**21 46 43.7**	**-2.0**
JAN				*e*SG	**Sg**	**21 46 51.8**	**-1.8**
VLS	**Valsamata**	**1.17**	**165**	P	**Pb**	**21 46 53.4**	**-3.0**
VLS				S	**Sb**	**21 47 11.2**	**-0.4**
VLS	**Valsamata**	**1.17**	**165**	eP	**Pg**	**21 46 55.2**	**-1.3**
VLS				S	**Sb**	**21 47 11.2**	**-0.4**
VLS				eSb	**Sb**	**21 47 12.2**	**+0.6**
KFL	**Anninata**	**1.28**	**159**	P	**Pn**	**21 46 57.3**	**-0.7**
KFL				S	**Sb**	**21 47 15.1**	**+0.3**
EVR	**Evrytania**	**1.30**	**107**	ePN	**Pn**	**21 46 58.1**	**-0.2**
EVR				*e*SB	**Sb**	**21 47 15.2**	**-0.1**
THL	**Klokotos Trika**	**1.42**	**79**	P	**Pn**	**21 46 58.6**	**-1.3**
THL				S	**Sn**	**21 47 20.5**	**+1.9**
KZN	**Kozani**	**1.56**	**50**	ePB	**Pb**	**21 47 02.9**	**-0.1**
RLS	**Riolos of Patr**	**1.59**	**142**	ePN	**Pn**	**21 47 02.3**	**+0.1**
AGG	**Agios Georgios**	**1.67**	**99**	P	**Pn**	**21 47 02.5**	**-0.8**
AGG				S	**Sn**	**21 47 25.1**	**+0.3**
FNA	**Florina**	**1.72**	**31**	P	**Pn**	**21 47 04.6**	**+0.6**
FNA				S	**Sn**	**21 47 28.1**	**+2.0**
OHR	**Ohrid**	**1.85**	**14**	ePn	**Pg**	**21 47 08.5**	**-1.1**
OHR				*e*Sg	**Sg**	**21 47 32.0**	**-1.6**
OHR	**Ohrid**	**1.85**	**14**	ePn	**Pg**	**21 47 08.6**	**-1.1**
OHR				*e*Sg	**Sg**	**21 47 32.0**	**-1.6**
BIA	**Bitola**	**1.91**	**26**	ePn	**Pn**	**21 47 08.2**	**+1.6**
BIA				*e*Sg	**Sg**	**21 47 35.1**	**-0.2**
BIA	**Bitola**	**1.91**	**26**	ePn	**Pn**	**21 47 08.3**	**+1.7**
BIA				*e*Sg	**Sg**	**21 47 35.1**	**-0.2**
LIT	**Litokhoron**	**1.92**	**65**	P	**Pn**	**21 47 06.6**	**-0.2**
LIT				S	**Sn**	**21 47 32.9**	**+1.8**
LKR	**Lokris**	**2.27**	**106**	ePN	**Pn**	**21 47 13.8**	**+2.2**
XOR	**Xorichti**	**2.31**	**88**	P	**Pn**	**21 47 12.9**	**+0.8**
NEO	**Neokhori**	**2.33**	**89**	ePB	**Pn**	**21 47 13.9**	**+1.4**
VAY	**Valandovo**	**2.70**	**41**	ePn	**Pn**	**21 47 20.5**	**+3.0**
VAY	**Valandovo**	**2.70**	**41**	ePn	**Pn**	**21 47 20.6**	**+3.1**
PLG	**Polygyros**	**2.70**	**66**	P	**Pn**	**21 47 16.9**	**-0.7**
PLG	**Polygyros**	**2.70**	**66**	ePN	**Pn**	**21 47 19.3**	**+1.7**
PLG	**Polygyros**	**2.70**	**66**	P	**Pn**	**21 47 16.9**	**-0.7**
PLG	**Polygyros**	**2.70**	**66**	ePn	**Pn**	**21 47 19.3**	**+1.7**
PAIG	**Paliouri**	**2.75**	**76**	P	**Pn**	**21 47 17.2**	**-0.9**
KNT	**Kendrikon**	**2.76**	**47**	P	**Pn**	**21 47 18.9**	**+0.5**
STIP	**Stip**	**2.81**	**32**	ePn	**Pn**	**21 47 19.7**	**+0.6**
STIP	**Stip**	**2.81**	**32**	ePn	**Pn**	**21 47 19.8**	**+0.7**
OUR	**Ouranopolis**	**3.08**	**69**	P	**Pn**	**21 47 22.2**	**+0.5**
SG1	**Sgolgore (BA)**	**3.11**	**300**	ePn	**Pn**	**21 47 23.9**	**+0.7**

*LDG **25** 21:54:38.4±0.4,1503S×16758E,h130km,Mb4.4/2,Error ellipse: s-maj=64.2km s-min=8.7km az=91.0*
*ISCJB **25** 21:54:42.4±1.4,1558S±007×1679E±0.1,h198km±15km, mb4.1/18,Error ellipse: s-maj=16.9km s-min=11.2km az=20.7*
*IDC **25** 21:54:42.4±3.6,1561S×16783E,h180km±30km,mb3.8/11, mb1 3.9/11,mb1mx3.8/18,mbtmp3.8/11,Error ellipse: s-maj=25.9km s-min=17.0km az=79.0*
*NEIC **25** 21:54:43.2±1.1,1558S×16791E,h191km±11km,mb4.6/7, Error ellipse: s-maj=10.5km s-min=8.6km az=111.0*
ISC 25 21:54:42.9±1.4,1558S±007×16789E±010,h187km±14km, n50,σ0§69/27,mb4.2/18,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.60**	**192**	ePn	**Pn**	**21 56 18.9**	**+1.0**
DZM				*e*Sn	**Sn**	**21 57 32.8**	**+0.2**
FUNA	**Funafuti**	**13.09**	**59**	Pn	**Pn**	**21 57 41.5**	**-0.6**
PMG	**Port Moresby**	**21.14**	**284**	P	**P**	**21 59 13.4**	**-0.1**
URZ	**Urewera**	**24.02**	**162**	P	**P**	**21 59 40.7**	**+0.2**
	7.0nm,0.5s,mb4.5,baz=9.3,slow=14,SNR=4.3						
STKA	**Stephens Creek**	**28.91**	**231**	P	**P**	**22 00 24.7**	**+0.2**
	2.6nm,0.9s,mb4.0,baz=32,slow=9.5,SNR=2.9						
WRAB	**Tennant Creek**	**32.20**	**257**	eP	**P**	**22 00 52.5**	**-1.1**
	0.7nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**32.21**	**257**	P	**P**	**22 00 52.4**	**-1.3**
	0.6nm,0.7s,mb3.5,baz=84,slow=7.7,SNR=8.9						
TAU	**Tasmania Unive**	**32.44**	**209**	eP	**P**	**22 00 54.9**	**-0.4**
	24nm,0.9s,mb4.9						
ASAR	**Alice Springs**	**32.94**	**250**	P	**P**	**22 00 59.5**	**-0.5**
	1.1nm,0.4s,mb3.9,baz=75,slow=9.3,SNR=18						
ASAR				ScP	ScP	22 07 06.5	+0.1
	0.7nm,0.8s,baz=90,slow=4.6,SNR=4.2						
FITZ	**Fitzroy Crossi**	**40.45**	**260**	P	**P**	**22 02 03.3**	**-0.2**
MJAR	**Matsushiro Arr**	**58.93**	**332**	P	**P**	**22 04 22.3**	**-0.2**
	4.8nm,0.7s,mb4.4,baz=170,slow=8.6,SNR=12						
MAJO	**Matsushiro**	**58.93**	**332**	eP	**P**	**22 04 22.0**	**-0.5**
	6.1nm,0.6s,mb4.6						
MAT	**Matsushiro**	**58.93**	**332**	P	**P**	**22 04 22.2**	**-0.3**
KSM	**Kuching**	**59.36**	**281**	P	**P**	**22 04 27.4**	**+1.4**
VNDA	**Vanda**	**62.03**	**181**	P	**P**	**22 04 43.2**	**+0.2**
	0.7nm,0.7s,mb3.6,baz=14,slow=6.0,SNR=5.6						
KSRS	**Korea Array**	**64.77**	**326**	P	**P**	**22 05 01.6**	**+0.2**
	1.6nm,0.8s,mb3.9,baz=142,slow=6.3,SNR=4.3						
MDJ	**Mudanjiang**	**69.31**	**332**	eP	**P**	**22 05 30.2**	**+0.3**
	8.3nm,0.6s,mb4.6						
BJT	**Baijiatuau**	**73.29**	**321**	eP	**P**	**22 05 54.8**	**+0.9**
	11nm,0.3s,mb5.0						
QSPA	**South Pole Qui**	**74.46**	**180**	P	**P**	**22 05 59.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**75.84**	**294**	P	**P**	**22 06 10.3**	**+1.3**
	1.3nm,0.6s,mb3.7,baz=136,slow=4.5,SNR=11						
HIA	**Hailar**	**77.31**	**330**	eP	**P**	**22 06 16.0**	**-0.6**
	2.6nm,0.3s,mb4.3						
MAW	**Mawson**	**81.33**	**202**	P	**P**	**22 06 38.0**	**-0.1**
ULN	**Ulaanbaatar**	**83.17**	**324**	eP	**P**	**22 06 48.5**	**+0.5**
	8.5nm,0.8s,mb4.5						
SONM	**Songino Array**	**83.53**	**323**	P	**P**	**22 06 50.6**	**+0.8**
	1.7nm,0.5s,mb4.1,baz=158,slow=9.0,SNR=26						
MKAR	**Makanchi Array**	**98.22**	**316**	P	**P**	**22 07 59.3**	**+0.6**
	0.3nm,0.4s,mb4.0,baz=85,slow=5.4,SNR=5.1						
ZALV	**Zalesovo Beam**	**98.42**	**324**	P	**P**	**22 07 58.4**	**-1.1**
	0.4nm,0.5s,mb4.1,baz=126,slow=3.9,SNR=3.6						

PLCA	**Paso Flores**	**102.11**	**139**	Pdif	Pdif	22 08 16.8	+0.8
ARCES	**ARCESS Array B**	**121.22**	**345**	PKP	PKPdf	22 13 12.7	-0.2
	2.6nm,0.9s,baz=66,slow=1.7,SNR=12						
CDF	**Champ du Feu**	**143.58**	**338**	*e*PKP1	PKPdf	22 13 53.6	-1.8
	3.7nm,0.7s						
HINF	**Hinteralfeld**	**144.24**	**338**	*e*PKP1	PKPdf	22 13 55.4	-1.1
	2.4nm,0.5s						
HAU	**Haudompre**	**144.25**	**339**	*e*PKP1	PKPdf	22 13 55.7	-0.8
	8.9nm,0.8s						
MEZF	**Maizieres J'vi**	**144.26**	**340**	*e*PKP1	PKPdf	22 13 55.5	-1.0
CABF	**La Chapelle**	**145.53**	**338**	*e*PKP1	PKPbc	22 13 59.9	+0.6
	44nm,1.3s						
LOR	**Lormes**	**145.73**	**341**	*e*PKP1	PKPbc	22 14 00.7	+0.8
	18nm,1.0s						
GRR	**Gorron**	**145.99**	**347**	*e*PKP1	PKPbc	22 14 01.9	+1.3
	17nm,0.9s						
SSF	**Saint Saulge**	**146.03**	**341**	*e*PKP1	PKPbc	22 14 01.0	+0.2
	17nm,1.0s						
LPL	**La Plagne**	**146.21**	**336**	*e*PKP1	PKPbc	22 14 02.0	+0.7
	9.4nm,0.8s						
LPG	**La Plagne**	**146.21**	**336**	*e*PKP1	PKPbc	22 14 02.1	+0.7
	7.5nm,0.7s						
SMF	**Signal de Mont**	**146.29**	**340**	*e*PKP1	PKPbc	22 14 01.4	-0.1
BGF	**Bois d'Agland**	**146.68**	**341**	*e*PKP1	PKPbc	22 14 03.3	+0.6
	20nm,0.9s						
ORIF	**Oris-en-Rattie**	**147.04**	**336**	*e*PKP1	PKPbc	22 14 04.0	+0.3
	5.5nm,0.6s						
TCF	**Toulx Ste Croi**	**147.12**	**342**	*e*PKP1	PKPbc	22 14 03.6	-0.3
MFF	**Saint Martin d**	**147.49**	**345**	*e*PKP1	PKPbc	22 14 05.4	+0.5
	38nm,1.2s						
FRF	**La Foret Royal**	**147.85**	**334**	*e*PKP1	PKPbc	22 14 05.7	-0.3
SMRF	**Simiane la Rot**	**147.94**	**336**	*e*PKP1	PKPbc	22 14 06.6	+0.4
LMR	**La Mourre**	**148.09**	**334**	*e*PKP1	PKPbc	22 14 06.3	-0.3
	43nm,1.1s						
LASF	**Ste Croix**	**148.52**	**338**	*e*PKP1	PKPbc	22 14 07.5	-0.2
	62nm,1.3s						
KEST	**Kesra**	**152.24**	**320**	PKPbc	PKPbc	22 14 17.3	+0.5
	1.6nm,0.6s,baz=61,slow=1.1,SNR=10						
TOA0	**Torodi Ar. Sit**	**166.41**	**262**	ePKPdf	PKPdf	22 14 27.1	+0.4
TORD	**Torodi Ar. Bea**	**166.41**	**262**	PKP	PKPdf	22 14 25.4	-1.4
	0.4nm,0.9s,baz=275,slow=1.8,SNR=5.1						
TORD				PKPab	PKPab	22 15 28.8	-0.7
	0.5nm,0.8s,baz=65,slow=4.3,SNR=4.9						

*NIED **25** 21:57:00,3520N×14130E,h26km,Mw4.3 Best double couple: M₀2.98000×10¹⁵ NP1:φs146.00000°,δ79.00000°, λ-145.00000°. NP2:φs49.00000°,δ55.00000°, λ-13.00000°.*
*JMA **25** 21:57:24.5±0.1,3522N×14127E,h31km±2km,M3.6*
*MOS **25** 21:57:24.6±1.1,3518N×14127E,h33km,mb4.5/18,Error ellipse: s-maj=13.9km s-min=8.6km az=121.9*
*ISCJB **25** 21:57:24.4±0.7,3518N±003×14126E±004,h32km±4km, mb4.3/33,Error ellipse: s-maj=6.0km s-min=4.6km az=14.2*
*NEIC **25** 21:57:27.7±1.1,3518N×141.11E,h42km±9km,mb4.5/8, MW4.3(NIED),Error ellipse: s-maj=8.3km s-min=6.0km az=118.0*
*IDC **25** 21:57:27.7±3.1,3521N×14109E,h39km±27km,mb3.9/16, mb1 4.1/18,mb1mx4.1/24,mbtmp3.9/18,ML3.9/2,MS3.3/3, Ms1 3.3/3,ms1mx3.1/38,Error ellipse: s-maj=19.8km s-min=14.0km az=84.0*
**ISC 25 21:57:25.4±0.8,3519N±003×14120E±005,h24

JIRN	**Jiri**	**47.04**	**277**	*e*P		**P**	**22 05 55.3**	**+0.3**
	comp=Z,9.4nm,0.4s,mb5.1							
GUN	**Gumba**	**47.19**	**277**	*e*P		**P**	**22 05 56.8**	**+0.6**
KKN	**Kakani**	**47.73**	**277**	*e*P		**P**	**22 06 01.0**	**+0.6**
DMN	**Daman**	**47.94**	**277**	*e*P		**P**	**22 06 01.6**	**-0.4**
GKN	**Gorkha**	**48.16**	**278**	*e*P		**P**	**22 06 04.1**	**+0.4**
	comp=Z,3.5nm,0.4s,mb4.8							
DANN	**Dangsing**	**48.74**	**279**	*e*P		**P**	**22 06 08.3**	**+0.1**
	comp=Z,14nm,0.5s,mb5.2							
PYUN	**Piuthan**	**49.46**	**279**	*e*P		**P**	**22 06 14.2**	**+0.5**
	comp=Z,7.5nm,0.4s,mb5.1							
MCK	**McKinley**	**50.27**	**33**	P		P	**22 06 19.6**	**+0.3**
TKM2	**Tokmak 2**	**50.38**	**300**	*e*P		**P**	**22 06 20.7**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.4							
TKM2	**Tokmak 2**	**50.38**	**300**	*e*P		**P**	**22 06 20.7**	**+0.3**
TKM2				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3							
EKS2	**Erkin-Say**	**51.74**	**300**	*e*P		**P**	**22 06 30.1**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.1							
AML	**Almayashu**	**51.94**	**299**	*e*P		**P**	**22 06 33.5**	**+1.3**
	comp=Z,4.2nm,0.7s,mb4.5							
FITZ	**Fitzroy Crossi**	**55.02**	**198**	*e*P		**P**	**22 06 54.0**	**-0.9**
CTAO	**Charters Tower**	**55.18**	**174**	*e*P		**P**	**22 06 55.9**	**-0.1**
	comp=Z,7.8nm,1.0s,mb4.7							
CTAO	**Charters Tower**	**55.18**	**174**	*e*P		**P**	**22 06 55.9**	**-0.1**
CTAO				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7							
WRAB	**Tennant Creek**	**55.20**	**188**	*e*P		**P**	**22 06 55.7**	**-0.5**
	comp=Z,7.0nm,0.9s,mb4.7							
WRAB	**Tennant Creek**	**55.20**	**188**	*e*P		**P**	**22 06 55.7**	**-0.5**
WRAB				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.7							
WB2	**Warramunga Arr**	**55.21**	**188**	*e*P		**P**	**22 06 55.6**	**-0.7**
WRA	**Warramunga Arr**	**55.21**	**188**	P		**P**	**22 06 55.7**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.7,baz=4.5,slow=7.5,SNR=60							
WRA	**Warramunga Arr**	**55.21**	**188**	P		**P**	**22 06 55.7**	**-0.6**
WRA				pmax	pmax			
	comp=Z,5.0nm,0.6s							
INK	**Inuvik**	**56.11**	**27**	*e*P		**P**	**22 07 02.3**	**+0.1**
	comp=Z,46nm,0.8s							
ARU	**Arti**	**57.64**	**319**	*e*P		**P**	**22 07 12.8**	**-0.4**
	comp=Z,3.5nm,0.7s,mb4.5							
ARU	**Arti**	**57.64**	**319**	*e*P		**P**	**22 07 12.8**	**-0.4**
ARU				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6							
KBL	**Kabul**	**57.93**	**292**	*e*P		**P**	**22 07 15.7**	**0.0**
ASAR	**Alice Springs**	**58.94**	**188**	P		**P**	**22 07 24.3**	**+1.7**
	comp=Z,2.1nm,0.6s,mb4.3,baz=16,slow=9.9,SNR=22							
ASAR	**Alice Springs**	**58.94**	**188**	P		**P**	**22 07 24.3**	**+1.7**
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
MBWA	**Marble Bar**	**59.63**	**203**	*e*P		**P**	**22 07 26.1**	**-1.4**
ARCES	**ARCESS Array B**	**65.66**	**340**	P		**P**	**22 08 06.7**	**-0.4**
	comp=Z,3.9nm,0.9s,mb4.4,baz=3.4,slow=6.1,SNR=3.5							
ARCES	**ARCESS Array B**	**65.66**	**340**	P		**P**	**22 08 06.7**	**-0.4**
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.9s							
STKA	**Stephens Creek**	**66.71**	**180**	P		**P**	**22 08 14.2**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=355,slow=16,SNR=3.4							
STKA	**Stephens Creek**	**66.71**	**180**	*e*P		**P**	**22 08 14.6**	**+0.3**
JOF	**Joensuu**	**67.51**	**332**	*e*p		**P**	**22 08 17.9**	**-1.1**
	comp=Z,1.1nm,0.4s,mb4.2							
JOF	**Joensuu**	**67.51**	**332**	*e*P		**P**	**22 08 17.9**	**-1.1**
JOF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.2							
KAF	**Kangasniemi**	**69.87**	**333**	*e*p		**P**	**22 08 29.6**	**-4.1**
KIV	**Kislovodsk**	**71.99**	**311**	*e*P		**P**	**22 08 47.3**	**+0.4**
KIV	**Kislovodsk**	**71.99**	**311**	*e*P		**P**	**22 08 47.3**	**+0.4**
AKASG	**Malin Array Be**	**75.65**	**323**	P		**P**	**22 09 07.7**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.8,baz=46,slow=6.1,SNR=6.5							
NOA	**NORSAR Array B**	**75.82**	**337**	P		**P**	**22 09 07.3**	**-1.8**
	comp=Z,1.0nm,0.7s,mb3.8,baz=219,slow=12,SNR=2.5							
NOA	**NORSAR Array B**	**75.82**	**337**	P		**P**	**22 09 07.3**	**-1.7**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**76.23**	**53**	P		**P**	**22 09 13.1**	**+1.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=289,slow=5.7,SNR=11							
PDAR	**Pinedale Array**	**79.08**	**45**	P		**P**	**22 09 28.4**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.2,baz=279,slow=1.7,SNR=20							
DAU	**Daniels Canyon**	**79.52**	**48**	*e*P		**P**	**22 09 31.4**	**+1.3**
BRTR	**Keskin Array B**	**79.95**	**312**	P		**P**	**22 09 33.7**	**+1.3**
	comp=Z,0.9nm,0.9s,mb3.7,baz=108,slow=3.2,SNR=5.2							
BRTR	**Keskin Array B**	**79.95**	**312**	P		**P**	**22 09 33.7**	**+1.3**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
PV10	**Paradox Valley**	**82.12**	**48**	*e*P		**P**	**22 09 45.8**	**+1.8**
GERES	**GERESS Array B**	**84.19**	**328**	P		**P**	**22 09 53.8**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.9,baz=31,slow=3.1,SNR=3.6							
GERES	**GERESS Array B**	**84.19**	**328**	P		**P**	**22 09 53.8**	**-0.7**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TXAR	**Lajitas Array**	**91.38**	**52**	P		**P**	**22 10 30.9**	**+1.4**
	comp=Z,1.1nm,0.9s,mb4.2,baz=303,slow=3.1,SNR=6.1							
TXAR	**Lajitas Array**	**91.38**	**52**	P		**P**	**22 10 30.9**	**+1.4**
TXAR	**Lajitas Array**	**91.38**	**52**	P		**P**	**22 10 30.9**	**+1.4**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							

GUC 25 22:05:47.2±0.8, 2149S×6903W, h132km±5km, ML3.8, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.98**	**224**	⇑*i*P	Pn	22 06 10.5	+0.4
MACH				*i*S	Sn	22 06 28.9	+1.4
LVC	**Limon Verde**	**1.12**	**175**	⇑*i*P	Pn	22 06 12.4	+0.9
LVC				*i*S	Sn	22 06 31.8	+1.8
LVC				AML	AML	22 06 35.6	
	comp=N,1μm,0.4s						
TOCH	**Tocopilla**	**1.25**	**241**	⇓*i*P	Pn	22 06 12.9	+0.3
TOCH				*i*S	Sn	22 06 33.0	+0.9
PECH	**Pedro de Valdi**	**1.26**	**208**	*e*P	Pn	22 06 13.9	+1.1
PECH				*i*S	Sn	22 06 34.0	+1.7
PECH				AML	AML	22 06 36.9	
	comp=E,3μm,0.2s						
CEN1	**Los Morros**	**2.18**	**210**	⇑*i*P	Pn	22 06 27.5	+4.0
CEN1				*i*S	Sn	22 06 57.7	+6.3
CEN1				AML	AML	22 07 02.0	
	comp=E,325nm,0.7s						
ANCH	**Antofagasta**	**2.53**	**210**	⇓*i*P	Pn	22 06 28.9	+1.1
ANCH				*i*S	Sn	22 07 00.2	+1.0
CPN1	**Cerro Paranal**	**3.37**	**202**	*e*P	Pn	22 06 39.5	+0.8

GUC 25 22:18:03.8±0.9, 2124S×6907W, h144km±7km, ML3.6, 5C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.15**	**214**	⇑*i*P	Pn	22 18 29.5	+0.2
MACH				*i*S	Sn	22 18 50.1	+1.3
TOCH	**Tocopilla**	**1.35**	**231**	⇑*i*P	Pn	22 18 31.7	+0.4
TOCH				*i*S	Sn	22 18 52.8	+0.5
TOCH				AML	AML	22 18 57.4	
	comp=N,1μm,0.3s						
LVC	**Limon Verde**	**1.37**	**174**	⇑*i*P	Pn	22 18 32.4	+0.9
LVC				*i*S	Sn	22 18 54.6	+1.8
LVC				AML	AML	22 18 57.1	
	comp=N,485nm,0.6s						
PECH	**Pedro de Valdi**	**1.46**	**203**	⇑*i*P	Pn	22 18 33.2	+0.8
PECH				*i*S	Sn	22 18 56.1	+1.7
PECH				AML	AML	22 18 59.2	
	comp=E,1μm,0.2s						
CEN1	**Los Morros**	**2.38**	**206**	*e*P	Pn	22 18 47.5	+4.4
CEN1				*i*S	Sn	22 19 19.5	+6.1
CEN1				AML	AML	22 19 24.5	
	comp=N,95nm,0.9s						
ANCH	**Antofagasta**	**2.73**	**207**	⇑*i*P	Pn	22 18 48.8	+1.3
ANCH				*i*S	Sn	22 19 22.4	+1.3
ANCH				AML	AML	22 19 27.2	
	comp=N,387nm,0.1s						

*IDC **25** 22:26:21.3±0.8, 37.19N×77.14E, h0km, mb3.8/8, mb1 3.9/13, mb1mx3.8/26, mbtmp3.8/13, ML3.7/4, Error ellipse: s-maj=20.5km s-min=14.9km az=67.0*
*MOS **25** 22:26:24.7±1.1, 3729N×7721E, h33km, mb4.0/8, Error ellipse: s-maj=13.8km s-min=7.3km az=97.4*
*ISCJB **25** 22:26:25.1±0.6, 3736N±002×7738E±006, h38km±9km, mb3.8/11, Error ellipse: s-maj=7.8km s-min=3.5km az=166.1*
*NNC **25** 22:26:26.6±5.3, 3756N×7741E, h14km±22km, mb3.9, mpv4.0, Error ellipse: s-maj=35.4km s-min=27.9km az=163.0*
*NEIC **25** 22:26:27.9±0.8, 37.33N×77.19E, h48km±8km, mb3.9/2, Error ellipse: s-maj=9.0km s-min=7.5km az=216.0*
*BJI **25** 22:26:31.3, 3777N×7786E, h19km, mB4.4, mb4.4, ML3.9*

ISC 25 22:26:25.2±1.0, 3738N±002×7730E±005, h18km±6km, n77, σ1°42/94, mb3.8/11, 9C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.37**	**334**	*e*P	**Pg**	**22 27 08.3**	**-2.4**
KSH				S	**Sg**	**22 27 40.5**	**-0.9**
KSH				Smax			
	comp=N,477nm,0.5s						
KSH				Smax			
	comp=E,108nm,0.4s						
DLH	**Dalhousie**	**4.95**	**193**	*e*P	**Pn**	**22 27 40.0**	**+1.4**
DLH				*e*S	**Sn**	**22 28 37.0**	**+1.6**
THN	**Thein Dam**	**5.11**	**195**	*e*P	**Pn**	**22 27 41.5**	**+0.8**
THN				*e*S	**Sn**	**22 28 39.9**	**+0.7**
AML	**Almayashu**	**5.50**	**331**	*e*Pn	**Pn**	**22 27 48.3**	**+2.2**
TKM2	**Tokmak 2**	**5.68**	**347**	⇑Pg	**Pg**	**22 28 06.8**	**-7.1**
	comp=E,18nm,0.8s						
TKM2				⇑Lg		22 29 24.8	
	comp=E,52nm,0.7s						
TKM2	**Tokmak 2**	**5.68**	**347**	*e*Pn	**Pn**	**22 27 50.4**	**+1.8**
	comp=E,23nm,0.7s						
TKM2				*e*Sn	**Sn**	**22 28 53.2**	**-0.2**
TKM2	**Tokmak 2**	**5.68**	**347**	*e*P	**Pn**	**22 27 50.4**	**+1.8**
TKM2				*e*		22 28 53.2	
TKM2				pmax	pmax		
	comp=Z,23nm,0.7s						
FRU	**Bishkek**	**5.82**	**340**	*e*P	**Pg**	**22 28 10.0**	**-6.5**
FRU				pmax	pmax		
	comp=Z,40nm,1.2s						
KNDC	**Almaty**	**5.83**	**358**	⇑Pg	**Pg**	**22 28 08.0**	**-8.8**
	comp=Z,27nm,0.8s						
KNDC				⇓Lg		22 29 28.1	
	comp=Z,94nm,0.6s						
SDNR	**Sundarnagar**	**5.87**	**183**	*e*P	**Pn**	**22 27 54.5**	**+3.2**
SDNR				*e*S	**Sn**	**22 28 58.9**	**+0.7**
KLP	**Kalpa**	**5.89**	**172**	*e*P	**Pn**	**22 27 54.7**	**+3.2**
KLP				*e*S	**Sn**	**22 29 00.3**	**+1.9**
KLP				AML	AML	22 29 10.4	
	comp=N,90nm,0.6s						
KLP				AML	AML	22 29 14.6	
	comp=E,158nm,0.6s						
EKS2	**Erkin-Say**	**5.92**	**334**	*e*Pn	**Pn**	**22 27 54.7**	**+2.8**
	comp=E,14nm,0.6s						
SMLA	**Simla**	**6.24**	**181**	⇑*i*P	**Pn**	**22 27 57.8**	**+1.5**
SMLA				*e*S	**Sn**	**22 29 05.7**	**-1.4**
SMLA				*ex*	x	22 29 10.6	
	comp=N,1μm,0.4s						
SMLA				*ex*	x	22 29 11.7	
	comp=E,1μm,0.3s						
JOSI	**Joshimath**	**7.06**	**164**	*e*P	**Pn**	**22 28 09.3**	**+1.7**
JOSI				*e*S	**Sn**	**22 29 26.2**	**-1.2**
JOSI				AML	AML	22 29 43.6	
	comp=E,79nm,0.5s						
JOSI				AML	AML	22 29 45.2	
	comp=N,93nm,0.5s						
DDI	**Dehra Dun**	**7.07**	**175**	*e*P	**Pn**	**22 28 09.0**	**+1.3**
DDI				*ex*	x	22 29 32.0	
KBL	**Kabul**	**7.27**	**250**	*e*Pn	**Pn**	**22 28 10.4**	**0.0**
	comp=N,11nm,0.6s						
KBL				*e*Sn	**Sn**	**22 29 30.0**	**-2.5**
KBL	**Kabul**	**7.27**	**250**	*e*P	**Pn**	**22 28 10.4**	**0.0**
KBL				*e*		22 29 30.0	
KBL				pmax	pmax		
	comp=Z,11nm,0.6s						
KK31	**Karatay Array**	**7.72**	**320**	⇓Pn	**Pn**	**22 28 16.0**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=130,slow=13						
KK31				⇑Sn	**Sn**	**22 29 43.3**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=170,slow=30						
LGTI	**Lohaghat**	**8.29**	**162**	*e*P	**Pn**	**22 28 27.0**	**+2.6**
LGTI				*e*S	**Sn**	**22 29 55.1**	**-2.4**
KHET	**Khetri**	**9.37**	**188**	*ex*	x	22 28 38.1	
KHET				*e*S	**Sn**	**22 30 16.8**	**-7.3**
KHET				AML	AML	22 30 26.7	
	comp=N,33nm,0.5s						
KHET				AML	AML	22 30 26.9	
	comp=E,29nm,0.4s						
MK31	**Makanchi Array**	**10.11**	**20**	⇑Pn	**Pn**	**22 28 49.7**	**+0.4**
	comp=E,1.1nm,0.3s,baz=199,slow=13,SNR=87						
MK31				⇓Sn	**Sn**	**22 30 40.8**	**-1.4**
	comp=E,3.4nm,0.6s,baz=199,slow=22						
MK31	**Makanchi Array**	**10.11**	**20**	*e*Pn	**Pn**	**22 28 49.9**	**+0.6**
MK31				*e*Sn	**Sn**	**22 30 40.6**	**-1.5**
MKAR	**Makanchi Array**	**10.11**	**20**	Pn	**Pn**	**22 28 50.8**	**+1.5**
	comp=E,0.9nm,0.3s,baz=183,slow=12,SNR=66						
MKAR	**Makanchi Array**	**10.11**	**20**	P	**Pn**	**22 28 50.8**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**10.19**	**48**	*e*P	**Pn**	**22 28 56.0**	**+5.6**
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s						
PYUN	**Piuthan**	**10.42**	**151**	*e*P	**Pn**	**22 28 52.5**	**-1.2**
	comp=Z,42nm,0.5s						
DANN	**Dangsing**	**10.52**	**147**	*e*P	**Pn**	**22 28 54.1**	**-0.9**
	comp=Z,19nm,0.4s						
KOLN	**Koldanda**	**10.96**	**149**	*e*P	**Pn**	**22 28 59.9**	**-1.1**
	comp=Z,17nm,0.6s						
GKN	**Gorkha**	**11.21**	**144**	*e*P	**Pn**	**22 29 03.7**	**-0.7**
	comp=Z,12nm,0.3s						
KKN	**Kakani**	**11.69**	**143**	*e*P	**Pn**	**22 29 10.2**	**-0.8**
	comp=Z,11nm,0.5s						
DMN	**Daman**	**11.76**	**144**	*e*P	**Pn**	**22 29 10.6**	**-1.4**
	comp=Z,6.2nm,0.4s						
GUN	**Gumba**	**11.89**	**140**	*e*P	**Pn**	**22 29 14.3**	**+0.5**
	comp=Z,9.4nm,0.4s						
PKI	**Pulchoki**	**11.94**	**143**	*e*P	**Pn**	**22 29 13.9**	**-0.5**
JIRN	**Jiri**	**12.25**	**140**	*e*P	**Pn**	**22 29 18.0**	**-0.7**
	comp=Z,14nm,0.4s						
RAMN	**Ramite**	**13.04**	**140**	*e*P	**Pn**	**22 29 27.1**	**-2.4**
TAPN	**Taplejung**	**13.31**	**136**	*e*P	**Pn**	**22 29 31.4**	**-1.8**
	comp=Z,5.1nm,0.4s						
KURK	**Kurchatov**	**13.36**	**4**	Pn	**Pn**	**22 29 32.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=8.0						
KURK				Sn	**Sn**	**22 32 01.0**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=198,slow=15,SNR=3.0						
KURK				Lg		22 33 30.6	
	comp=Z,0.1nm,0.3s,baz=195,slow=32,SNR=4.2						
KURK	**Kurchatov**	**13.36**	**4**	*e*Pn	**Pn**	**22 29 35.5**	**+1.8**
KURK				*e*Sn	**Sn**	**22 31 56.0**	**-5.8**
KURK				Sn	**Sn**	**22 32 01.0**	**-0.8**
ODAN	**Odare**	**13.52**	**138**	*e*P	**Pn**	**22 29 33.2**	**-2.9**
	comp=Z,8.7nm,0.5s						
LSA	**Lhasa**	**13.85**	**120**	*e*Pn	**Pn**	**22 29 42.8**	**+2.2**
	comp=Z,152nm,2.4s						
LSA	**Lhasa**	**13.85**	**120**	*e*P	**Pn**	**22 29 42.8**	**+2.2**
LSA				pmax	pmax		
	comp=Z,152nm,2.4s						
VOSK	**Vostochnaya**	**15.97**	**346**	⇓P	**Pn**	**22 30 08.3**	**-0.4**
	comp=Z,2.2nm,0.6s						
BVA0	**Borovoye Array**	**16.37**	**345**	⇑P	**Pn**	**22 30 17.7**	**+3.8**
	comp=Z,1.4nm,0.9s,baz=146,slow=9.8,SNR=31						
BVAR	**Borovoye Array**	**16.37**	**345**	Pn	**Pn**	**22 30 12.4**	**-1.5**
	baz=150,slow=10,SNR=2.0						
BVAR				Lg		22 35 05.1	
	comp=Z,0.1nm,0.3s,baz=124,slow=23,SNR=3.2						
BRVK	**Borovoye**	**16.42**	**345**	*e*Pn	**Pn**	**22 30 16.2**	**+1.7**
	comp=Z,7.7nm,0.7s						
BRVK				*e*Sn	**Sn**	**22 33 16.6**	**+0.4**
BRVK	**Borovoye**	**16.42**	**345**	*e*P	**Pn**	**22 30 16.2**	**+1.7**
BRVK				*e*		22 33 16.6	
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AB09	**Akbulak array**	**17.30**	**319**	⇑P	**Pn**	**22 30 27.3**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=123,slow=12						
ZALV	**Zalesovo Beam**	**17.36**	**15**	P	**Pn**	**22 30 28.0**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=208,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**17.36**	**15**	P	**Pn**	**22 30 28.0**	**+1.7**
ZALV	**Zalesovo Beam**	**17.36**	**15**	P	**Pn**	**22 30 28.0**	**+1.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GTA	**Gaotai**	**17.76**	**77**	*e*P	**Pn**	**22 30 35.0**	**+3.6**
GTA				AP	pP	22 30 39.3	+2.1
GTA				XP	sP	22 30 43.0	+3.4
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s						
NVS	**Novosibirsk**	**17.93**	**11**	*e*P	**Pn**	**22 30 33.1**	**-0.2**
AKTK	**Aktyubinsk**	**18.98**	**320**	P	**Pn**	**22 30 46.0**	**-0.2**
AKTO	**Aktyubinsk**	**18.98**	**320**	⇑P	**Pn**	**22 30 47.0**	**+0.8**
	comp=Z,1.0nm,1.4s						
AKTO	**Aktyubinsk**	**18.98**	**320**	P	**Pn**	**22 30 46.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=103,slow=14,SNR=3.8						
LZH	**Lanzhou**	**21.30**	**85**	*e*P	**P**	**22 31 13.0**	**+2.3**
LZH				AP		22 31 17.3	
LZH				XP	sP	22 31 20.0	+1.8
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.2						
LZH				AMB	AMB		
	comp=Z,93nm,5.0s						
SONM	**Songino Array**	**23.70**	**55**	P	**P**	**22 31 37.1**	**+1.3**
	comp=Z,1.1nm,0.7s,mb3.4,baz=254,slow=11,SNR=11						
SONM	**Songino Array**	**23.70**	**55**	P	**P**	**22 31 37.1**	**+1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	**Ulaanbaatar**	**24.13**	**55**	*e*P	**P**	**22 31 40.6**	**+0.8**
	comp=Z,1.9nm,0.8s,mb3.6						
ULN	**Ulaanbaatar**	**24.13**	**55**	*e*P	**P**	**22 31 40.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
CMAR	**Chiang Mai Arr**	**26.74**	**129**	P	**P**	**22 32 04.0**	**+0.2**
	comp=Z,2.5nm,0.7s,mb3.8,baz=305,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**26.74**	**129**	P	**P**	**22 32 04.0**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN	**Obninsk**	**32.69**	**316**	*e*P	**P**	**22 32 53.9**	**-2.2**
BR131	**Keskin Array S**	**33.98**	**288**	*e*P	**P**	**22 33 05.3**	**-2.2**
BRTR	**Keskin Array B**	**33.98**	**288**	P	**P**	**22 33 07.0**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.9,baz=108,slow=8.2,SNR=5.9						
BRTR	**Keskin Array B**	**33.98**	**288**	P	**P**	**22 33 07.1**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**37.74**	**327**	*e*p	**P**	**22 33 39.2**	**-0.3**
	comp=Z,1.4nm,0.5s,mb4.0						
JOF	**Joensuu**	**37.74**	**327**	*e*P	**P**	**22 33 39.2**	**-0.3**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**42.34**	**336**	P	**P**	**22 34 17.7**	**+0.1**
	comp=Z,2.3nm,0.7s,mb3.9,baz=105,slow=9.0,SNR=8.9						
ARCES	**ARCESS Array B**	**42.34**	**336**	P	**P**	**22 34 17.7**	**+0.1**
ARCES	**ARCESS Array B**	**42.34**	**336**	P	**P**	**22 34 17.7**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TORD	**Toroći Ar. Bea**	**70.76**	**272**	P	**P**	**22 37 38.2**	**-2.3**
	comp=Z,0.8nm,0.5s,mb3.9,baz=44,slow=5.2,SNR=22						
WRA	**Warramunga Arr**	**78.30**	**126**	P	**P**	**22 38 23.0**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=4.8,SNR=5.2						
YKA	**Yellowknife Ar**	**80.01**	**6**	P	**P**	**22 38 32.3**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=345,slow=5.2,SNR=4.2						
YKA	**Yellowknife Ar**	**80.01**	**6**	P	**P**	**22 38 32.3**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**80.75**	**129**	P	**P**	**22 38 36.0**	**-1.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=312,slow=6.4,SNR=4.2						
ASAR	**Alice Springs**	**80.75**	**129**	P	**P**	**22 38 36.0**	**-1.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*ISCJB **25** 22:40:49.6±0.9, 258S±007×999E±02, h10km, mb4.0/7, Error ellipse: s-maj=25.2km s-min=9.3km az=171.8*
*IDC **25** 22:40:51.1±2.1, 235S×10030E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/20, mbtmp3.9/8, Error ellipse: s-maj=94.4km s-min=17.3km az=57.0*
*DJA **25** 22:40:58.2±0.0, 223S×10028E, h10km, MLv4.2/4*

ISC 25 22:40:52.6±5.4, 252S±008×1001E±02, h14km±34km, n14, σ0°71/13, mb4.0/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.64**	**14**	P	**Pn**	**22 41 20.7**	**-0.3**
PPI	**Padang Panjang**	**2.07**	**9**	P	**Pn**	**22 41 28.0**	**+1.1**
PPI	**Padang Panjang**	**2.07**	**9**	S	**Sn**	**22 41 52.6**	**+0.1**
KSI	**Kapahiang**	**2.76**	**114**	P	**Pn**	**22 41 42.4**	**+6.0**
CMAR	**Chiang Mai Arr**	**20.87**	**357**	P	**P**	**22 45 33.0**	**-1.3**
	1.1nm,0.5s,baz=186,slow=9.7,SNR=9.1						
WRA	**Warramunga Arr**	**37.67**	**120**	P	**P**	**22 48 06.6**	**-1.1**
	2.0nm,0.5s,mb4.1,baz=302,slow=9.0,SNR=19						
WB2	**Warramunga Arr**	**37.68**	**120**	*e*P	**P**	**22 48 07.4**	**-0.4**
ASAR	**Alice Springs**	**38.89**	**126**	P	**P**	**22 48 18.2**	**+0.3**
	1.1nm,0.5s,mb3.9,baz=300,slow=7.7,SNR=27						
STKA	**Stephens Creek**	**48.76**	**131**	P	**P**	**22 49 38.1**	**+1.0**
	1.4nm,0.5s,mb4.2,baz=300,slow=14,SNR=2.4						
SONM	**Songino Array**	**50.45**	**6**	P	**P**	**22 49 50.0**	**+0.3**
	0.6nm,0.6s,mb3.8,baz=190,slow=8.4,SNR=7.8						
MKAR	**Makanchi Array**	**51.54**	**344**	P	**P**

TOO	**Toolangi**	**42.31**	**232**	*e*P		**P**	**22 58 22.2**	**-1.8**
COEN	**Coen**	**42.65**	**267**	*e*P		**P**	**22 58 24.4**	**-2.5**
	22nm,1.0s,mb4.8							
COEN				*e*PcP		PcP	23 00 19.1	+0.4
COEN	**Coen**	**42.65**	**267**	P		**P**	**22 58 27.3**	**+0.3**
	15nm,1.1s,mb4.6							
STKA	**Stephens Creek**	**44.11**	**241**	*e*P		**P**	**22 58 36.3**	**-2.2**
	25nm,0.9s,mb4.9							
STKA	**Stephens Creek**	**44.11**	**241**	P		**P**	**22 58 36.0**	**-2.5**
	14nm,0.9s,mb4.7,baz=76,slow=9.1,SNR=14							
STKA	**Stephens Creek**	**44.11**	**241**	*e*P		**P**	**22 58 36.2**	**-2.4**
	7.6nm,0.9s,mb4.4							
WB2	**Warramunga Arr**	**50.30**	**258**	*e*P		**P**	**22 59 23.5**	**-3.4**
WRAB	**Tennant Creek**	**50.30**	**258**	*e*P		**P**	**22 59 23.5**	**-3.5**
	16nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**50.30**	**258**	*e*P		**P**	**22 59 23.5**	**-3.5**
WRAB				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**50.30**	**258**	P		**P**	**22 59 24.9**	**-2.0**
	comp=Z,14nm,1.0s,mb4.9							
WRA	**Warramunga Arr**	**50.31**	**258**	P		**P**	**22 59 23.2**	**-3.8**
	comp=Z,5.0nm,0.8s,mb4.6,baz=95,slow=7.3,SNR=26							
WRA				LR		LR	23 16 50.7	
	comp=Z,728nm,21.8s,MS4.7,baz=115,slow=32							
ASAR	**Alice Springs**	**50.46**	**253**	P		**P**	**22 59 25.8**	**-2.4**
	comp=Z,24nm,0.6s,mb5.4,baz=88,slow=8.4,SNR=360							
ASAR				S		**S**	**23 06 34.5**	**-5.3**
	comp=Z,0.9nm,1.0s,baz=78,slow=18,SNR=4.5							
SWI	**Sorong**	**57.39**	**280**	P		**P**	**23 00 17.8**	**-1.1**
	comp=Z,318nm,1.0s,comp=Z,2µm,mb6.3							
AAI	**Ambon**	**59.43**	**276**	P		**P**	**23 00 33.6**	**+0.4**
	comp=Z,61nm,1.3s,mb5.5							
LBMI	**Labuha**	**61.02**	**279**	P		**P**	**23 00 43.8**	**-0.3**
	comp=Z,142nm,1.2s,comp=Z,1µm,mb6.0							
SBA	**Scott Base**	**62.15**	**185**	*e*P		**P**	**23 00 52.8**	**+2.2**
	comp=Z,28nm,1.0s,mb5.3							
SBA	**Scott Base**	**62.15**	**185**	*e*P		**P**	**23 00 52.8**	**+2.2**
SBA				pmax		pmax		
	comp=Z,28nm,1.0s,mb5.3							
VNDA	**Vanda**	**62.30**	**186**	P		**P**	**23 00 52.1**	**+0.5**
	comp=Z,9.4nm,1.2s,mb4.8,baz=14,slow=7.4,SNR=12							
VNDA	**Vanda**	**62.30**	**186**	*e*P		**P**	**23 00 52.2**	**+0.6**
VNDA				*e*PcP		PcP	23 01 30.2	-0.9
KLBR	**Kellerberrin**	**64.35**	**243**	*e*P		**P**	**23 01 05.0**	**-1.0**
	comp=Z,13nm,0.8s,mb5.0							
KDI	**Kendari**	**64.69**	**273**	P		**P**	**23 01 10.4**	**+1.9**
	comp=Z,23nm,1.6s,comp=Z,1µm,mb5.0							
DAV	**Davao City (W)**	**65.46**	**286**	LR		LR	23 28 47.1	
	comp=Z,466nm,19.2s,MS4.7,baz=324,slow=35							
MUN	**Mundaring**	**65.63**	**242**	*e*P		**P**	**23 01 13.8**	**-0.6**
PCI	**Palu**	**68.23**	**276**	P		**P**	**23 01 32.9**	**+1.7**
	comp=Z,120nm,1.3s,comp=Z,1µm,mb5.8							
KHKI	**Kahang-Kahang**	**70.25**	**267**	P		S	23 10 51.0	-2.6
KHKI	**Kahang-Kahang**	**70.25**	**267**	S		sS	23 11 09.0	-2.4
MJAR	**Matsushiro Arr**	**70.30**	**320**	P		**P**	**23 01 43.0**	**-0.5**
	comp=Z,5.4nm,0.9s,mb4.5,baz=155,slow=5.9,SNR=10							
MJAR				LR		LR	23 26 04.3	
	comp=Z,250nm,19.9s,MS4.5,baz=120,slow=30							
MAT	**Matsushiro**	**70.31**	**320**	P		**P**	**23 01 42.6**	**-0.9**
DNP	**Denpasar**	**70.55**	**266**	P		S	23 10 55.7	-1.4
DNP	**Denpasar**	**70.55**	**266**	S		sS	23 11 14.5	-0.4
SAO	**San Andreas Ge**	**71.71**	**41**	*e*P		**P**	**23 01 52.4**	**+0.4**
BBKI	**Banjar Baru**	**72.28**	**272**	P		**P**	**23 01 57.7**	**+1.8**
	comp=Z,58nm,1.7s,mb5.2							
MWC	**Mount Wilson**	**72.43**	**45**	*e*P		**P**	**23 01 56.5**	**+0.1**
ASAJ	**Asahikawa**	**72.92**	**328**	LR		LR	23 31 05.0	
	comp=Z,192nm,20.4s,MS4.4,baz=357,slow=33							
LPIG	**La Paz**	**73.03**	**58**	LR		LR	23 29 48.1	
	comp=Z,294nm,18.1s,MS4.6,baz=304,slow=32							
CMB	**Columbia Colle**	**73.16**	**41**	*e*P		**P**	**23 02 00.4**	**-0.2**
PFO	**Pinyon Flat Ob**	**73.18**	**46**	LR		LR	23 30 05.5	
	comp=Z,512nm,18.2s,MS4.8,baz=167,slow=32							
PFO	**Pinyon Flat Ob**	**73.18**	**46**	*e*P		**P**	**23 02 00.5**	**-0.4**
	comp=Z,11nm,1.1s,mb4.7							
PFO	**Pinyon Flat Ob**	**73.18**	**46**	*e*P		**P**	**23 02 00.5**	**-0.4**
PFO				pmax		pmax		
	comp=Z,11nm,1.1s,mb4.7							
OHCM	**Honcut**	**73.28**	**39**	*e*P		**P**	**23 02 01.2**	**-0.1**
WDC	**Whiskeytown Da**	**73.44**	**38**	*e*P		**P**	**23 02 02.2**	**0.0**
QSPA	**South Pole Qui**	**73.48**	**180**	LR		LR	23 31 24.6	
	comp=Z,366nm,20.0s,MS4.7,baz=60,slow=33							
GSC	**Goldstone**	**73.89**	**45**	*e*P		**P**	**23 02 04.8**	**-0.2**
MTUM	**Tungsten Hills**	**73.91**	**42**	*e*P		**P**	**23 02 05.5**	**+0.4**
PETK	**Petropavlovsk-**	**73.96**	**342**	P		**P**	**23 02 04.8**	**-0.2**
	comp=Z,16nm,0.9s,mb4.9,baz=134,slow=6.4,SNR=6.9							
GLA	**Glamis**	**74.02**	**48**	*e*P		**P**	**23 02 06.7**	**+0.9**
WAKR	**Walker**	**74.03**	**41**	*e*P		**P**	**23 02 06.1**	**+0.3**
YBH	**Yreka Blue Hor**	**74.09**	**37**	LR		LR	23 30 29.2	
	comp=Z,522nm,18.4s,MS4.9,baz=239,slow=32							
YBH	**Yreka Blue Hor**	**74.09**	**37**	*e*P		**P**	**23 02 06.5**	**+0.5**
HUMO	**Hull Mountain**	**74.51**	**36**	*e*P		**P**	**23 02 08.6**	**+0.1**
NVAR	**Mina Array Bea**	**74.70**	**41**	P		**P**	**23 02 09.7**	**+0.1**
	comp=Z,8.9nm,0.8s,mb4.8,baz=228,slow=8.6,SNR=45							
PAHR	**Pah Rah Range**	**74.73**	**40**	*e*P		**P**	**23 02 10.3**	**+0.2**
YSS	**Yuzh-Sakhalins**	**74.86**	**330**	*e*P		**P**	**23 02 10.0**	**-0.3**
YSS				pmax		pmax		
	comp=Z,40nm,1.0s,mb5.3							
TPNV	**Topopah Spring**	**75.19**	**44**	*e*P		**P**	**23 02 12.6**	**+0.1**
TPH	**Tonopah**	**75.19**	**42**	*e*P		**P**	**23 02 12.6**	**+0.1**
MOD	**Modoc**	**75.59**	**38**	*e*P		**P**	**23 02 14.7**	**+0.1**
SHPR	**Sheep Range**	**75.66**	**45**	*e*P		**P**	**23 02 15.5**	**+0.3**
SBUM	**Sibu**	**76.49**	**277**	P		**P**	**23 02 23.7**	**+3.2**
STKI	**Sintang**	**76.50**	**274**	P		**P**	**23 02 21.3**	**+0.8**
BMN	**Battle Mountai**	**76.56**	**40**	*e*P		**P**	**23 02 20.0**	**-0.2**
	comp=Z,17nm,1.2s,mb4.8							
BMN	**Battle Mountai**	**76.56**	**40**	*e*P		**P**	**23 02 20.0**	**-0.2**
BMN				pmax		pmax		
	comp=Z,17nm,1.2s,mb4.8							
TUC	**Tucson**	**76.56**	**50**	*e*P		**P**	**23 02 20.7**	**+0.3**
WVOR	**Wild Horse Val**	**76.89**	**38**	*e*P		**P**	**23 02 21.8**	**-0.2**
	comp=Z,30nm,1.4s,mb5.0							
WVOR				*e*		pP	23 02 32.7	-0.3
WVOR	**Wild Horse Val**	**76.89**	**38**	*e*P		**P**	**23 02 21.8**	**-0.2**
WVOR				*e*		pP	23 02 32.7	-0.3
WVOR				pmax		pmax		
	comp=Z,30nm,1.4s,mb5.0							
HOOD	**Mount Hood Mea**	**76.99**	**34**	*e*P		**P**	**23 02 23.0**	**+0.5**
NLWA	**Neilton Lookou**	**77.20**	**32**	*e*P		**P**	**23 02 24.0**	**+0.4**
CCUT	**Cedar City**	**77.44**	**41**	*e*P		**P**	**23 02 25.3**	**0.0**
KSRS	**Korea Array**	**77.51**	**315**	P		**P**	**23 02 26.7**	**+1.1**
	comp=Z,12nm,1.1s,mb4.8,baz=125,slow=6.3,SNR=21							
KSRS				LR		LR	23 30 24.9	
	comp=Z,262nm,21.0s,MS4.5,baz=107,slow=31							
ARUT	**Antelope Range**	**77.51**	**44**	*e*P		**P**	**23 02 25.3**	**-0.3**
WUAZ	**Wupatki**	**77.74**	**47**	*e*P		**P**	**23 02 28.0**	**+1.0**
ELK	**Elko**	**77.97**	**41**	*e*P		**P**	**23 02 27.9**	**-0.3**
	comp=Z,12nm,1.1s,mb4.8							
ELK	**Elko**	**77.97**	**41**	*e*P		**P**	**23 02 27.9**	**-0.2**
ELK				pmax		pmax		
	comp=Z,13nm,1.1s							
KSM	**Kuching**	**78.03**	**275**	*e*P		**P**	**23 02 29.9**	**+0.8**
KSM				*e*PcP		PcP	23 02 37.5	-1.2
KSM	**Kuching**	**78.03**	**275**	P		**P**	**23 02 29.6**	**+0.5**
	comp=Z,68nm,1.3s,comp=Z,1µm,mb5.4							
PGC	**Sidney**	**78.25**	**31**	*e*P		**P**	**23 02 29.4**	**-0.1**
LEM	**Lembang**	**78.29**	**266**	P		**P**	**23 02 32.5**	**+1.9**
	comp=Z,77nm,1.3s,comp=Z,4µm,mb5.5							
JCW	**Jim Creek**	**78.71**	**32**	*e*P		**P**	**23 02 31.5**	**-0.6**
MSU	**Marysvale**	**78.74**	**44**	*e*P		**P**	**23 02 33.3**	**+0.9**
RSW	**Rattlesnake Hi**	**78.78**	**34**	*e*P		**P**	**23 02 32.7**	**+0.2**
RPW	**Rockport**	**79.09**	**32**	*e*P		**P**	**23 02 33.2**	**-0.9**
BMO	**Blue Mountains**	**79.11**	**37**	*e*P		**P**	**23 02 33.9**	**-0.5**
ETW	**Entiat**	**79.15**	**33**	*e*P		**P**	**23 02 34.1**	**-0.4**
ETW				*e*PcP		PcP	23 02 41.1	+0.4
LNOR	**Lincton Mounta**	**79.18**	**35**	*e*P		**P**	**23 02 34.1**	**-0.6**
LNOR				*e*PcP		PcP	23 02 42.5	-0.4
LNOR				*e*PP		PP	23 05 34.8	+0.1
DUG	**Dugway**	**79.22**	**42**	*e*P		**P**	**23 02 34.1**	**-0.9**
	comp=Z,12nm,1.1s,mb4.7							
DUG	**Dugway**	**79.22**	**42**	*e*P		**P**	**23 02 34.1**	**-0.9**
DUG				pmax		pmax		
	comp=Z,12nm,1.1s,mb4.7							
TPI	**Tanjungpandan**	**79.36**	**270**	P		**P**	**23 02 39.2**	**+2.7**
	comp=Z,23nm,1.8s,mb4.8							
NLU	**North Lily Min**	**79.57**	**43**	*e*P		**P**	**23 02 35.2**	**-1.7**
HABR	**Khabarovsk**	**79.71**	**328**	*e*P		**P**	**23 02 36.5**	**-1.0**
HABR				*e*			23 02 43.1	
HABR				*e**PP		pP	23 02 46.2	-2.3
HABR				*e*SP			23 02 50.2	
HABR				*e*			23 05 36.7	
HABR				*e*PPP			23 07 25.9	
HABR				*e*S		S	23 12 37.5	0.0
HABR				*e*PS			23 12 50.3	
OD2	**Odessa Site #2**	**79.88**	**34**	*e*P		**P**	**23 02 38.0**	**-0.4**
SPUT	**South Promonto**	**80.05**	**42**	*e*P		**P**	**23 02 39.9**	**+0.4**
HLID	**Hailey**	**80.06**	**39**	*e*P		**P**	**23 02 39.5**	**-0.1**
	comp=Z,17nm,1.0s,mb4.9							
HLID				PcP		PcP	23 02 46.7	-0.2
HVU	**Hansel Valley**	**80.09**	**41**	*e*P		**P**	**23 02 39.6**	**-0.1**
SRU	**San Rafael**	**80.16**	**44**	*e*P		**P**	**23 02 40.3**	**+0.2**
JLU	**Jordanelle**	**80.31**	**43**	*e*P		**P**	**23 02 41.0**	**+0.1**
DAU	**Daniels Canyon**	**80.34**	**43**	*e*P		**P**	**23 02 42.0**	**+0.9**
MDJ	**Mudanjiang**	**80.40**	**322**	P		**P**	**23 02 41.5**	**+0.2**
MDJ				AMB		AMB		
	comp=Z,18nm,1.7s,mb4.7							
MDJ				AMB		AMB		
	comp=Z,371nm,8.8s							
BNM	**Barren Site**	**80.50**	**50**	*e*P		**P**	**23 02 42.0**	**-0.1**
BNM				*e*PcP		PcP	23 02 50.9	+2.0
LPM	**Los Pinos Moun**	**80.57**	**50**	*e*P		**P**	**23 02 42.6**	**+0.1**
TXAR	**Lajitas Array**	**80.65**	**56**	P		**P**	**23 02 43.8**	**+0.7**
	comp=Z,2.5nm,0.9s,mb4.2,baz=221,slow=7.4,SNR=14							
HWUT	**Hardware Ranch**	**80.77**	**42**	*e*P		**P**	**23 02 43.0**	**-0.4**
	comp=Z,15nm,1.5s,mb4.7							
HWUT				*e*PP		PP	23 05 48.3	+0.3
PV10	**Paradox Valley**	**80.79**	**45**	*e*P		**P**	**23 02 43.0**	**-0.6**
ANMO	**Albuquerque**	**80.99**	**50**	*e*P		**P**	**23 02 44.8**	**+0.1**
PV01	**Paradox Valley**	**81.00**	**46**	*e*P		**P**	**23 02 44.7**	**0.0**
NEW	**Newport**	**81.26**	**34**	*e*P		**P**	**23 02 44.8**	**-1.0**
GDL2	**Guadalupe Moun**	**81.33**	**53**	*e*P		**P**	**23 02 47.0**	**+0.5**
NJ2	**Nanjing**	**81.45**	**307**	*e*P		**P**	**23 02 47.8**	**+0.5**
NJ2				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
TRF	**Thorofare Moun**	**81.64**	**10**	*e*P		**P**	**23 02 47.3**	**-0.1**
	comp=Z,22nm,0.9s,mb5.1							
MCMT	**McKenzie Canyo**	**81.70**	**38**	*e*P		**P**	**23 02 48.2**	**0.0**
CHUM	**Lake Minchumin**	**81.73**	**9**	P		**P**	**23 02 46.9**	**-1.1**
	comp=Z,13nm,0.9s,mb4.8							
RRI2	**Red Ridge**	**81.84**	**40**	*e*P		**P**	**23 02 49.1**	**+0.1**
KLR	**Kul'dur**	**81.90**	**327**	*e*P		**P**	**23 02 44.0**	**-5.2**
MCK	**McKinley**	**82.13**	**10**	*e*P		**P**	**23 02 49.2**	**-0.8**
REDW	**Red Top Meadow**	**82.14**	**40**	*e*P		**P**	**23 02 50.5**	**0.0**
TPAW	**Teton Pass**	**82.14**	**40**	*e*P		**P**	**23 02 50.7**	**+0.1**
DLMT	**Dillon**	**82.14**	**38**	*e*P		**P**	**23 02 50.5**	**-0.1**
MSO	**Missoula**	**82.18**	**36**	*e*P		**P**	**23 02 49.2**	**-1.5**
	comp=Z,7.9nm,1.1s,mb4.6							
SNOW	**Snow King Moun**	**82.25**	**40**	*e*P		**P**	**23 02 51.3**	**+0.2**
BSMT	**Bassoo Peak**	**82.28**	**35**	*e*P		**P**	**23 02 49.7**	**-1.5**
IMW	**Indian Meadow**	**82.36**	**40**	*e*P		**P**	**23 02 51.6**	**-0.1**
MOOW	**Moose Ponds**	**82.40**	**40**	*e*P		**P**	**23 02 52.5**	**+0.6**
LOHW	**Long Hollow**	**82.42**	**40**	*e*P		**P**	**23 02 52.0**	**-0.1**
CN2	**Changchun**	**82.45**	**320**	*e*P		**P**	**23 02 52.5**	**+0.3**
CN2				*e*XP		sP	23 03 06.8	-0.4
CN2				*e*S		S	23 13 03.8	-2.4
CN2				AMB		AMB		
	comp=Z,10.0nm,1.2s,mb4.6							
CN2				AMB		AMB		
	comp=Z,200nm,5.0s							
LRM	**Limekiln Ridge**	**82.48**	**38**	*e*P		**P**	**23 02 52.0**	**-0.3**
QLMT	**Earthquake Lak**	**82.56**	**39**	*e*P		**P**	**23 02 53.4**	**+0.6**
SMCO	**Snowmass**	**82.59**	**46**	*e*P		**P**	**23 02 53.4**	**+0.3**
CHMT	**Chamberlain Mo**	**82.62**	**37**	*e*P		**P**	**23 02 52.0**	**-1.0**
BW06	**Boulder Array**	**82.64**	**41**	*e*P		**P**	**23 02 52.6**	**-0.6**
PDAR	**Pinedale Array**	**82.64**	**41**	P		**P**	**23 02 52.5**	**-0.7**
	comp=Z,5.4nm,0.8s,mb4.7,baz=209,slow=3.3,SNR=38							
PDAR				LR		LR	23 35 16.3	
	comp=Z,278nm,19.4s,MS4.6,baz=253,slow=32							
YFT	**Old Faithful**	**82.72**	**40**	*e*P		**P**	**23 02 56.3**	**+2.7**
YMR	**Madison River**	**82.75**	**39**	*e*P		**P**	**23 02 53.7**	**0.0**
	comp=Z,34nm,1.1s,mb5.3							
BOZ	**Bozeman (W)**	**82.87**	**38**	*e*P		**P**	**23 02 53.6**	**-0.7**
	comp=Z,14nm,1.1s,mb4.9							
BOZ	**Bozeman (W)**	**82.87**	**38**	*e*P		**P**	**23 02 53.6**	**-0.7**
BOZ				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.9							
YNR	**Norris Junctio**	**82.95**	**39**	*e*P		**P**	**23 02 57.3**	**+2.5**
SDCO	**Great Sand Dun**	**82.95**	**47**	*e*P		**P**	**23 02 54.9**	**-0.1**
HRY	**Holter Researc**	**83.32**	**37**	*e*P		**P**	**23 02 56.4**	**-0.3**
COLA	**College**	**83.37**	**10**	*e*P		**P**	**23 02 55.3**	**-1.1**
	comp=Z,25nm,0.8s,mb5.3							
COLA	**College**	**83.37**	**10**	*e*P		**P**	**23 02 55.3**	**-1.2**
COLA				pmax		pmax		
	comp=Z,25nm,0.8s,mb5.3							
WALA	**Waterton Lakes**	**83.45**	**34**	*e*P		**P**	**23 02 57.1**	**-0.2**
CMIG	**Matias Romero**	**83.58**	**70**	P		**P**	**23 02 59.6**	**+1.0**
	comp=Z,2.2nm,0.8s,mb4.3,baz=239,slow=5.8,SNR=4.8							
CMIG				LR		LR	23 34 40.9	
	comp=Z,274nm,18.3s,MS4.7,baz=278,slow=32							
ISCO	**Idaho Springs**	**83.81**	**46**	*e*P		**P**	**23 02 59.2**	**-0.1**
	comp=Z,6.6nm,0.9s,mb4.8							
ISCO	**Idaho Springs**	**83.81**	**46**	*e*P		**P**	**23 02 59.2**	**-0.1**
ISCO				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.8							
SEY	**Seymchan**	**83.83**	**345**	*i* P		**P**	**23 02 57.8**	**-1.1**
KSI	**Kapahiang**	**83.97**	**268**	P		**P**	**23 03 00.5**	**-0.3**
	comp=Z,85nm,0.9s,mb5.8							
RLMT	**Red Lodge**	**84.02**	**40**	*e*P		**P**	**23 02 59.9**	**-0.4**
GCMT	**Greycliff**	**84.12**	**39**	*e*P		**P**	**23 03 00.6**	**-0.2**
GCMT				*e*PcP		PcP	23 03 04.7	+0.1
WHN	**Wuhan**	**84.36**	**304**	P		**P**	**23 03 02.5**	**+0.2**
PHWY	**Pilot Hill**	**84.61**	**44**	*e*P		**P**	**23 03 03.0**	**-0.3**
EGMT	**Eagleton**	**85.21**	**37**	*e*P		**P**	**23 03 05.4**	**-0.8**
	comp=Z,7.3nm,0.9s,mb4.8							
EGMT				*e*PcP		PcP	23 03 09.4	+0.1
BILL	**Bilibino**	**85.76**	**352**	*e*P		**P**	**23 03 07.8**	**-0.7**
	comp=Z,30nm,1.3s,mb5.4							
BILL				*e*		pP	23 03 18.9	-0.6
BILL	**Bilibino**	**85.76**	**352**	*e*P		**P**	**23 03 07.3**	**-1.2**
BILL				*i*			23 03 25.7	
BILL				pmax		pmax		
	comp=Z,16nm,1.0s,mb5.2							
EDM	**Edmonton**	**86.09**	**31**	*e*P		**P**	**23 03 09.5**	**-1.0**
BJT	**Baijiatuau**	**86.80**	**313**	*e*P		**P**	**23 03 14.8**	**+0.5**
	comp=Z,24nm,1.0s,mb5.4							
BJT	**Baijiatuau**	**86.80**	**313**	*e*P		**P**	**23 03 14.8**	**+0.5**
BJT				pmax		pmax		
	comp=Z,24nm,1.0s							
BJI	**Beijing**	**86.81**	**313**	P		**P**	**23 03 14.8**	**+0.5**
BJI				AMB		AMB		
	comp=Z,37nm,1.3s,mb5.5							
BJI				AMB		AMB		
	comp=Z,800nm,10.1s							
MAW	**Mawson**	**86.92**	**198**	P		**P**	**23 03 14.7**	**+0.2**
	comp=Z,15nm,1.2s,mb5.1,baz=91,slow=3.7,SNR=6.3							
MAW				LR		LR	23 41 25.0	
	comp=Z,734nm,18.5s,MS5.1,baz=102,slow=35							
MAW	**Mawson**	**86.92**	**198**	*e*P		**P**	**23 03 14.9**	**+0.5**
	comp=Z,2.6nm,1.1s,mb4.4							
MAW				*e*		pP	23 03 24.9	-0.6
MAW				LR		LR	23 41 25.0	
MAW	**Mawson**	**86.92**	**198**	*e*P		**P**	**23 03 14.9**	**+0.5**
MAW				*e*		pP	23 03 24.9	-0.6
MAW				pmax		pmax		
	comp=Z,3.0nm,1.1s							
PPI	**Padang Panjang**	**86.97**	**270**	P		**P**	**23 03 16.8**	**+1.1**
	comp=Z,37nm,1.1s,comp=Z,2µm,mb5.5							
IPM	**Ipoh**	**87.77**	**275**	P		**P**	**23 03 20.5**	**+0.9**
	comp=Z,49nm,1.4s,mb5.5							
PLCA	**Paso Flores**	**88.18**	**132**	P		**P**	**23 03 21.2**	**+0.1**
	comp=Z,4.1nm,1.0s,mb4.6,baz=230,slow=5.1,SNR=4.5							
PLCA				LR		LR	23 35 39.8	
	comp=Z,306nm,19.7s,MS4.7,baz=255,slow=31							
PLCA	**Paso Flores**	**88.18**	**132**	P		**P**	**23 03 21.2**	**+0.1**
PLCA				LR		LR	23 35 39.8	
HIA	**Hailar**	**88.57**	**323**	*e*P		**P**	**23 03 22.5**	**0.0**
HIA				*e*PP		PP	23 06 50.8	-0.6
GYA	**Guiyang**	**89.24**	**298**	⇑*i*P		**P**	**23 03 27.5**	**+1.3**
GYA				AP		pP	23 03 38.5	+1.2
GYA				XP		sP	23 03 41.8	+0.5
GYA				PP		PP	23 07 01.5	+4.2
GYA				SKS			23 13 53.0	
GYA				S		S	23 14 13.0	-0.5
GYA				XS		sS	23 14 31.0	-0.9
GYA				AMB		AMB		
	comp=Z,20nm,1.0s,mb5.4							
GYA				AMB		AMB		
	comp=Z,120nm,6.0s							
GYA				LR		LR		
	comp=N,480nm,18.7s,MS5.1							
GYA				LR		LR		
	comp=E,400nm,17.6s,MS5.1							
GYA				LR		LR		
	comp=Z,580nm,18.2s,MS5.0							
XAN	**Xi'an**	**89.91**	**306**	P		**P**	**23 03 29.5**	**+0.3**
XAN				AP		pP	23 03 40.5	+0.2
XAN				AMB		AMB		
	comp=Z,16nm,1.5s,mb5.1							
HHC	**Hu-ho-hao-te**	**90.36**	**313**	*e*P		**P**	**23 03 32.0**	**+0.9**
HHC				AP		pP	23 03 43.3	+1.1
HHC				XP		sP	23 03 46.8	+0.6
HHC				PP		PP	23 07 09.0	+3.1
HHC				SKS			23 13 58.0	
HHC				S		S	23 14 20.5	-2.8
HHC				XS		sS	23 14 38.5	-3.2
HHC				AMB		AMB		
	comp=Z,25nm,1.4s,mb5.3							
HHC				AMB		AMB		
	comp=Z,253nm,6.2s							
HHC				LR		LR		
	comp=N,232nm,21.4s,MS4.9							
HHC				LR		LR		
	comp=E,379nm,19.0s,MS4.9							
HHC				LR		LR		
	comp=Z,255nm,17.8s,MS4.7							
YKA	**Yellowknife Ar**	**90.87**	**23**	P		**P**	**23 03 32.1**	**-0.8**
	comp=Z,6.6nm,1.1s,mb4.9,baz=233,slow=4.5,SNR=7.0							
SYO	**Syowa Base**	**91.60**	**191**	⇓*eX*		**P**	**23 03 34.0**	**-2.4**
VNA3	**Neumayer Olymp**	**91.63**	**175**	*e*P		**P**	**23 03 38.8**	**+2.3**
VNA3				*e*			23 03 43.3	
SNAA	**Sanae**	**91.70**	**177**	*e*P		**P**	**23 03 33.3**	**-3.6**
SNAA				*e*			23 03 37.5	
SNAA	**Sanae**	**91.70**	**177**	*e*P		**P**	**23 03 33.5**	**-3.3**
	comp=Z,8.2nm,1.1s,mb5.0							
NST	**Nakhon Sawan**	**91.81**	**286**	P		**P**	**23 03 40.1**	**+1.7**
VNA2	**Neumayer--Watz**	**92.13**	**175**	*e*P		**P**	**23 03 39.9**	**+1.0**
VNA2				*e*			23 03 42.0	
VNA2				*e*			23 03 45.3	
NANT	**Nan**	**92.18**	**289**	⇑P		**P**	**23 03 39.0**	**-1.0**
	comp=Z,231nm,0.8s							
KMI	**Kunming**	**92.19**	**295**	⇑P		**P**	**23 03 41.8**	**+1.8**
KMI				AP		pP	23 03 51.8	+0.7
KMI				XP		sP	23 03 56.5	+1.4
KMI				PP		PP	23 07 21.8	+1.0
KMI				S		S	23 14 37.5	-3.1
KMI				XS		sS	23 14 55.8	-3.3
KMI				AMB		AMB		
	comp=Z,24nm,1.2s,mb5.4							
KMI				AMB		AMB		
	comp=Z,280nm,5.2s							
KMI				LR		LR		
	comp=N,355nm,14.6s,MS5.0							
KMI				LR		LR		
	comp=E,232nm,17.0s,MS5.0							
KMI				LR		LR		
	comp=Z,250nm,13.4s,MS4.8							
VNA1	**Neumayer--Stat**	**92.33**	**175**	*e*P		**P**	**23 03 42.9**	**+3.1**
CD2	**Chengdu**	**93.05**	**301**	P		**P**	**23 03 43.5**	**-0.3**
CD2				AP		pP	23 03 54.0	-0.9
CD2				XP		sP	23 03 59.0	+0.1
CD2				PP		PP	23 07 28.5	+1.1
CD2				SKS			23 14 13.0	
CD2	

PRU	**Pruhonice**	**146.16**	**352**	*e*PKP	PKPdf	23 10 08.8	-0.1
PRU				*ep*PKP	pPKPdf	23 10 27.8	+7.4
BCLA	**Clavier**	**146.19**	**2**	PKP	PKPdf	23 10 08.4	-0.6
TLCR		**146.27**	**332**	⇑*i*P	PKPdf	23 10 09.8	+0.6
TLCR		**146.27**	**332**	⇑*i*P	PKPdf	23 10 09.9	+0.6
TNS	**Taunus Mts**	**146.42**	**359**	*e*PKPbc	PKPbc	23 10 10.2	-0.5
MANZ	**Manzenberg**	**146.45**	**354**	*e*PKPbc	PKPbc	23 10 10.5	-0.3
MANZ				*ep*PKPbc	pPKPbc	23 10 28.6	+6.5
GIVF	**Givet**	**146.49**	**3**	*e*PKP1	PKPbc	23 10 10.4	-0.5
	comp=Z,128nm,1.5s						
VRAC	**Vranov**	**146.50**	**349**	⇓P	PKPab	23 10 11.8	-0.1
VRAC	**Vranov**	**146.50**	**349**	⇓*i*P	PKPab	23 10 11.8	-0.1
BAIF	**Baives**	**146.50**	**4**	*e*PKP1	PKPbc	23 10 10.5	-0.4
	comp=Z,59nm,1.2s						
VRI	**Vrincioaia**	**146.61**	**335**	⇓P	PKPdf	23 10 11.6	+1.8
VRI	**Vrincioaia**	**146.61**	**335**	⇓*i*P	PKPdf	23 10 11.6	+1.8
ROTZ	**Rotzenmuhle**	**146.66**	**354**	*e*PKPbc	PKPbc	23 10 11.6	+0.2
ROTZ				*ep*PKPbc	pPKPbc	23 10 29.5	+6.8
VYHS	**Vyhne**	**146.81**	**346**	*e*PKP2	PKPab	23 10 11.6	-1.5
VYHS	**Vyhne**	**146.81**	**346**	*e*PKP	PKPdf	23 10 11.5	+1.4
GRF	**Grafenberg Arr**	**146.82**	**355**	*e*PKPbc	PKPbc	23 10 12.0	+0.2
KOLL	**Kolacno**	**146.82**	**347**	*e*PKP	PKPbc	23 10 12.1	+0.2
KOLL				*e*		23 10 28.3	
WLF	**Walferdange**	**146.98**	**1**	PKP	PKPbc	23 10 12.1	-0.2
HARR	**Harsova**	**147.05**	**333**	⇑P	PKPab	23 10 13.5	-0.7
HARR	**Harsova**	**147.05**	**333**	⇑*i*P	PKPab	23 10 13.5	-0.7
PSZ	**Piszkesteto**	**147.08**	**344**	⇑P	PKPbc	23 10 12.6	0.0
PSZ	**Piszkesteto**	**147.08**	**344**	⇓*e*PKP	PKPbc	23 10 12.9	+0.2
PSZ	**Piszkesteto**	**147.08**	**344**	⇑*i*P	PKPbc	23 10 12.6	-0.1
SMOL	**Smolenice**	**147.09**	**348**	*e*PKP	PKPab	23 10 14.7	+0.5
SMOL				*e*		23 10 30.0	
KHC	**Kasperske Hory**	**147.13**	**352**	*e*PKP	PKPdf	23 10 12.1	+1.5
KHC				*ep*PKP	pPKPdf	23 10 27.0	+5.0
MLR	**Muntele Rosu**	**147.23**	**336**	⇑P	PKPdf	23 10 12.4	+1.6
MLR	**Muntele Rosu**	**147.23**	**336**	⇑*i*P	PKPdf	23 10 12.4	+1.5
FLN	**La Foliniere**	**147.26**	**10**	*e*PKP1	PKPbc	23 10 11.9	-1.2
	comp=Z,92nm,1.3s						
FLN				*e*MLR	MLR		
	comp=Z,238nm,18.5s,MS4.7						
FLN	**La Foliniere**	**147.26**	**10**	*e*PKIKP	PKPdf	23 10 11.9	+1.1
FLN				MLR	MLR		
	comp=Z,240nm,18.5s,MS5.0						
MODS	**Modra-Piesok**	**147.26**	**348**	*e*PKP	PKPbc	23 10 12.9	-0.2
MODS				*e*		23 10 31.5	
SGMF	**Saint Gilles**	**147.37**	**12**	*e*PKP1	PKPbc	23 10 12.2	-1.2
	comp=Z,141nm,1.4s						
GEC2	**GERESS Array S**	**147.40**	**352**	*e*PKPbc	PKPbc	23 10 13.4	-0.1
GERES	**GERESS Array B**	**147.40**	**352**	PKPbc	PKPbc	23 10 12.5	-1.0
	comp=Z,2.5nm,0.8s,baz=11,slow=2.7,SNR=12						
ZST	**Bratislava**	**147.46**	**348**	*e*PKP	PKPbc	23 10 15.2	+1.5
ZST				*e*		23 10 32.2	
LDF	**La Druitiere**	**147.48**	**9**	*e*PKP1	PKPbc	23 10 12.5	-1.2
BR131	**Keskin Array S**	**147.53**	**321**	*e*PKPdf	PKPbc	23 10 13.8	-0.3
BRTR	**Keskin Array B**	**147.53**	**321**	PKPbc	PKPbc	23 10 13.9	-0.2
	comp=Z,13nm,1.0s,baz=120,slow=1.7,SNR=36						
GRR	**Gorron**	**147.56**	**10**	*e*PKP1	PKPbc	23 10 13.1	-0.9
	comp=Z,46nm,1.1s						
VOIR		**147.63**	**336**	⇓P	PKPbc	23 10 14.6	+0.3
VOIR		**147.63**	**336**	⇓*i*P	PKPbc	23 10 14.6	+0.4
STU	**Stuttgart**	**147.85**	**358**	*e*PKPbc	PKPbc	23 10 14.4	-0.3
ANTO	**Ankara**	**147.95**	**321**	⇓P	PKPbc	23 10 15.7	+0.4
ANTO	**Ankara**	**147.95**	**321**	⇓*i*P	PKPbc	23 10 15.7	+0.4
CONA	**Conrad Observa**	**147.96**	**349**	⇑*i*PKPbc	PKPbc	23 10 15.1	0.0
	comp=Z,39nm,1.6s						
CSNA	**Conrad Observa**	**147.96**	**349**	⇑*i*PKPbc	PKPbc	23 10 14.6	-0.4
	comp=Z,35nm,1.6s						
SOP	**Sopron**	**148.06**	**348**	⇓*e*PKP	PKPbc	23 10 15.5	+0.2
MEZF	**Maizieres J'vi**	**148.10**	**3**	*e*PKP1	PKPbc	23 10 15.1	-0.3
	comp=Z,48nm,1.2s						
CDF	**Champ du Feu**	**148.25**	**0**	*e*PKP1	PKPbc	23 10 15.2	-0.6
	comp=Z,61nm,1.3s						
MOA	**Molln**	**148.29**	**351**	⇑*i*PKiKP	PKiKP	23 10 16.5	-1.1
	comp=Z,19nm,1.2s						
BFO	**Black Forest**	**148.32**	**359**	*e*PKPdf	PKPdf	23 10 11.3	-1.3
BFO	**Black Forest**	**148.32**	**359**	*e*PKPbc	PKPbc	23 10 15.4	-0.6
BFO				*ep*PKPbc	pPKPbc	23 10 34.8	+7.5
RJOB	**Jochberg**	**148.60**	**353**	*e*PKPbc	PKPbc	23 10 16.3	-0.4
HAU	**Haudompre**	**148.64**	**1**	*e*PKP1	PKPbc	23 10 16.3	-0.5
	comp=Z,41nm,1.0s						
HAU				*e*MLR	MLR		
	comp=Z,164nm,17.8s,MS4.6						
HAU	**Haudompre**	**148.64**	**1**	*e*PKIKP	PKPbc	23 10 16.3	-0.5
HAU				MLR	MLR		
	comp=Z,160nm,17.8s,MS4.9						
ARSA	**Arzberg**	**148.67**	**349**	⇑*i*PKiKP	PKiKP	23 10 17.5	-0.9
	comp=Z,23nm,1.9s						
BZS	**Buzias**	**148.68**	**341**	⇑P	PKPbc	23 10 16.3	-0.7
BZS	**Buzias**	**148.68**	**341**	⇑*i*P	PKPbc	23 10 16.3	-0.7
HINF	**Hinteralfeld**	**148.84**	**1**	*e*PKP1	PKPbc	23 10 16.7	-0.6
PKSM	**Moragy**	**148.99**	**345**	⇑P	PKPdf	23 10 12.4	-1.3
PKSM	**Moragy**	**148.99**	**345**	⇑*i*P	PKPdf	23 10 12.4	-1.3
RETA	**Reutte**	**149.04**	**356**	⇑*i*PKiKP	PKiKP	23 10 18.3	-0.8
	comp=Z,21nm,1.3s						
WATA	**Walderalm**	**149.12**	**354**	⇑*i*PKPbc	PKPbc	23 10 17.3	-0.8
	comp=Z,5.9nm,0.9s						
MOTA	**Moosalm**	**149.16**	**355**	⇑*i*PKPbc	PKPbc	23 10 17.4	-0.8
	comp=Z,5.2nm,1.0s						
WTTA	**Wattenberg**	**149.19**	**354**	⇑*i*PKiKP	PKiKP	23 10 19.0	-0.5
	comp=Z,42nm,1.6s						
LOR	**Lormes**	**149.25**	**5**	*e*PKP1	PKPbc	23 10 18.0	-0.4
	comp=Z,32nm,1.2s						
LOR				*e*MLR	MLR		
	comp=Z,321nm,18.2s,MS4.8						
LOR	**Lormes**	**149.25**	**5**	*e*PKIKP	PKPbc	23 10 18.0	-0.4
LOR				MLR	MLR		
	comp=Z,320nm,18.3s,MS5.2						
SQTA	**Sankt Quirin**	**149.27**	**355**	⇑*i*PKiKP	PKiKP	23 10 18.7	-0.9
	comp=Z,7.3nm,0.8s						
DAVA	**Damuels**	**149.30**	**357**	⇑*i*PKiKP	PKiKP	23 10 19.2	-0.5
	comp=Z,17nm,1.4s						
KOGS	**Kog**	**149.31**	**348**	*e*PKPbc	PKPbc	23 10 17.7	-0.9
SOKA	**Soboth**	**149.31**	**350**	⇑*i*PKiKP	PKiKP	23 10 18.8	-1.0
	comp=Z,26nm,1.2s						
MFF	**Saint Martin d**	**149.41**	**10**	*e*PKP1	PKPbc	23 10 18.0	-0.8
	comp=Z,164nm,1.6s						
SSF	**Saint Saulge**	**149.43**	**5**	*e*PKP1	PKPbc	23 10 18.5	-0.3
	comp=Z,84nm,1.5s						
FETA	**Feichten**	**149.51**	**355**	⇑*i*PKPab	PKPab	23 10 21.7	-2.3
	comp=Z,27nm,1.3s						
OBKA	**Obir**	**149.56**	**350**	⇑*i*PKPbc	PKPdf	23 10 16.3	+1.7
	comp=Z,19nm,1.6s						
ABTA	**Abfaltersbach**	**149.61**	**353**	⇑*i*PKPbc	PKPbc	23 10 18.3	-1.0
	comp=Z,25nm,1.2s						
AVF	**Avril sur Loir**	**149.68**	**5**	*e*PKP1	PKPbc	23 10 18.6	-0.9
	comp=Z,102nm,1.6s						
BGF	**Bois d'Agland**	**149.86**	**6**	*e*PKP1	PKPbc	23 10 19.3	-0.6
	comp=Z,31nm,1.0s						
SMF	**Signal de Mont**	**149.87**	**5**	*e*PKP1	PKPbc	23 10 19.3	-0.6
	comp=Z,134nm,1.7s						
LJU	**Ljubljana**	**150.01**	**350**	*e*PKPbc	PKPbc	23 10 19.5	-0.8
CABF	**La Chapelle**	**150.03**	**2**	*e*PKP1	PKPbc	23 10 20.5	+0.2
	comp=Z,130nm,1.5s						
TCF	**Toulx Ste Croi**	**150.06**	**7**	*e*PKP1	PKPbc	23 10 19.7	-0.7
	comp=Z,118nm,1.8s						
TUE	**Stuetta**	**150.14**	**357**	*e*PKPdf	PKPdf	23 10 16.6	+1.1
TUE				*e*PKPbc	PKPbc	23 10 20.0	-0.6
BOJS	**Bojanci**	**150.41**	**349**	*e*PKPbc	PKPbc	23 10 20.8	-0.5
BOJS				*e*		23 10 39.3	
CSS	**Prodhromos**	**150.44**	**313**	*e*PKPdf	PKPdf	23 10 18.5	+0.1
RJF	**Les Rejaudoux**	**150.94**	**9**	*e*PKP1	PKPbc	23 10 21.7	-0.8
RJF				*e*MLR	MLR		
	comp=Z,332nm,19.0s,MS4.9						
RJF	**Les Rejaudoux**	**150.94**	**9**	*e*PKHKP	PKPbc	23 10 21.7	-0.8
RJF				MLR	MLR		
	comp=Z,330nm,19.0s,MS5.2						
LPL	**La Plagne**	**151.14**	**1**	*e*PKP1	PKPbc	23 10 23.4	+0.4
LPG	**La Plagne**	**151.16**	**1**	*e*PKP1	PKPbc	23 10 23.5	+0.5
	comp=Z,71nm,1.5s						
LFF	**La Frestale**	**151.17**	**10**	*e*PKP1	PKPbc	23 10 22.3	-0.8
BNI	**Bardonecchia**	**151.60**	**1**	*e*PKPdf	PKPdf	23 10 18.1	+0.3
ORIF	**Oris-en-Rattie**	**151.71**	**2**	*e*PKP1	PKPbc	23 10 24.2	-0.1
	comp=Z,27nm,1.1s						
ORIF				*e*MLR	MLR		
	comp=Z,274nm,17.5s,MS4.8						
STIP	**Stip**	**151.90**	**336**	*e*PKP	PKPbc	23 10 23.6	-1.3
SKO	**Skopje**	**151.95**	**337**	*e*PKP	PKPbc	23 10 24.8	-0.2
VAY	**Valandovo**	**152.07**	**335**	*e*PKP	PKPbc	23 10 22.5	-2.8
ESDC	**Sonseca Array**	**154.95**	**21**	PKPbc	PKPbc	23 10 33.3	+1.7
	comp=Z,0.5nm,0.7s,baz=95,slow=17,SNR=3.3						
ESDC				PKPab	PKPab	23 10 46.4	-0.5
	comp=Z,1.2nm,0.8s,baz=289,slow=3.3,SNR=4.6						
DBIC	**Dimbokro**	**164.51**	**128**	PKPab	PKPab	23 11 30.1	+0.8
	comp=Z,7.6nm,1.1s,baz=252,slow=6.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**173.54**	**121**	PKP	PKPdf	23 10 38.6	-1.5
	comp=Z,1.7nm,1.0s,baz=283,slow=1.3,SNR=4.7						
TORD				PKPab	PKPab	23 12 07.9	-1.3
	comp=Z,6.5nm,1.1s,baz=259,slow=3.0,SNR=14						

TRN 25 22:56:34.1, 1500N×6048W, h28km, MD3.7, M2.6(FDF), **2C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.60**	**222**	⇑*e*P	Pb	22 56 48.1	+1.9
MVM				⇑*e*S	Sb	22 56 58.2	+3.9
FDF	**Fort de France**	**0.70**	**248**	*e*P	Pb	22 56 49.4	+1.5
FDF				*e*S	Sb	22 57 00.7	+3.5
BIM	**Bigot**	**0.75**	**230**	*e*P	Pb	22 56 50.2	+1.6
BIM				*e*S	Sb	22 57 02.5	+4.0
SLW	**Petit Monier**	**1.07**	**204**	*e*P	Pn	22 56 54.4	+1.1
SLW				*e*S	Sn	22 57 09.3	+2.0
SLB	**Belfond**	**1.29**	**205**	*e*P	Pn	22 56 58.5	+2.2
SLB				*e*S	Sn	22 57 15.4	+2.8
SCG	**Saint Claude**	**1.54**	**312**	*e*P	Sn	22 57 16.6	-2.2

MOS ***25*** *23:04:32.9±1.3, 4287N×4434E, h7km, mb3.8/1, Error ellipse: s-maj=11.8km s-min=8.7km az=113.8*
TIF ***25*** *23:04:33.5, 4296N×4426E, h12km±4km*
ISC 25 23:04:34.9±0.4, 4292N±002×4430E±003, h3km±6km, n17, σ0§90/32, 7C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LACR	**Lac**	**0.10**	**181**	⇑*i*PG	**Pg**	**23 04 36.0**	**-0.8**
KORR	**Kora**	**0.23**	**314**	⇑*i*PG	**Pg**	**23 04 38.2**	**-1.2**
ARNR	**Ardon**	**0.27**	**357**	⇑*i*PG	**Pg**	**23 04 39.1**	**-0.9**
ARNR				*e*S	**Sg**	**23 04 43.8**	**+0.3**
VLKR	**Vladikavkaz**	**0.30**	**66**	*e*PG	**Pg**	**23 04 40.3**	**-0.4**
VLKR				*e*S	**Sg**	**23 04 45.8**	**+1.1**
ZEI	**Tsey**	**0.33**	**243**	⇑*i*PG	**Pg**	**23 04 40.5**	**-0.7**
ZEI				*i* S	**Sg**	**23 04 46.1**	**+0.6**
SNJR	**Sundja**	**0.40**	**69**	*e*PG	**Pg**	**23 04 42.5**	**-0.1**
SNJR				*e*S	**Sg**	**23 04 49.1**	**+1.2**
LSNR	**Lesken**	**0.50**	**315**	⇑*i*PG	**Pg**	**23 04 43.8**	**-0.6**
LSNR				*e*S	**Sg**	**23 04 51.5**	**+0.7**
DIGR	**Digorskoe uzhe**	**0.53**	**268**	⇑*i*PG	**Pg**	**23 04 44.3**	**-0.7**
DIGR				*i* S	**Sg**	**23 04 52.5**	**+0.7**
ONI	**Oni**	**0.71**	**241**	P	**Pg**	**23 04 47.7**	**-0.8**
ONI				S	**Sg**	**23 04 58.9**	**+1.2**
GOR	**Gori**	**0.95**	**189**	P	**Pg**	**23 04 53.1**	**+0.1**
GOR				S	**Sg**	**23 05 08.3**	**+3.0**
KUBR	**Kubataba**	**1.09**	**324**	⇑*i*PG	**Pn**	**23 04 56.3**	**-0.7**
KUBR				*i* S	**Sn**	**23 05 13.8**	**+1.2**
TBLG	**Delisi**	**1.24**	**165**	P	**Pn**	**23 04 58.7**	**-0.9**
TBLG				S	**Sn**	**23 05 16.6**	**+0.4**
MTA	**Mtatsminda**	**1.28**	**163**	P	**Pn**	**23 04 58.7**	**-1.0**
MTA				S	**Sn**	**23 05 21.4**	**+4.0**
SHAR	**Shatzhatmas**	**1.44**	**305**	⇓*i*PG	**Pg**	**23 05 01.3**	**-1.2**
SHAR				*i* S	**Sg**	**23 05 22.4**	**+1.2**
BEYR	**Belyy Ugol+**	**1.53**	**316**	⇑*i*PG	**Pg**	**23 05 03.1**	**-1.1**
BEYR				*i* S	**Sg**	**23 05 24.9**	**+0.8**
KIV	**Kislovodsk**	**1.56**	**312**	⇑*i*PG	**Pg**	**23 05 03.9**	**-0.9**
KIV				*i* S	**Sg**	**23 05 25.7**	**+0.7**
DGRG	**David-gareji**	**1.68**	**151**	P	**Pg**	**23 05 06.7**	**-0.2**
DGRG				S	**Sg**	**23 05 29.2**	**+0.5**

BJI ***25*** *23:12:10.5, 2840N×7662E, h9km, mB4.9, mb4.6, Ms4.4, Msz4.2*
NEIC ***25*** *23:12:17.0±0.3, 2856N×7706E, h10km, mb4.7/18, Error ellipse: s-maj=7.0km s-min=3.6km az=206.0*
NEIC Some buildings slightly damaged at Badaun, Meerut, Noida and Rewari. Felt [IV] at Delhi, Faridabad, Gurgaon, Nangloi Jat and New Delhi; [III] at Noida. Also felt at Alipur, Alwar, Bahadurgarh, Bulandshahr, Charkhi Dadri, Chhatarpur, Deoli, Ghaziabad, Govardhan, Hisar, Jaipur, Jhunjhunun, Jind, Kaman, Khekra, Mathura, Panipat, Pilani, Rohtak, Sikar, Sonipat and Tigri.
ISCJB ***25*** *23:12:18.8±0.2, 2851N±002×7714E±002, h39km±2km, mb4.4/49, MS4.2/4, Error ellipse: s-maj=3.3km s-min=2.9km az=40.2*
IDC ***25*** *23:12:19.6±0.7, 2837N×7702E, h32km±4km, mb4.0/17, mb1 4.2/17, mb1mx4.1/25, mbtmp4.0/17, Error ellipse: s-maj=16.5km s-min=13.3km az=41.0*
NDI ***25*** *23:12:19.0±8.0, 2855N×77.1E, h10km, ML4.6, mb4.7(NEIC)*
MOS ***25*** *23:12:19.8±1.2, 2858N×77.16E, h46km, mb4.6/27, Error ellipse: s-maj=8.8km s-min=6.1km az=115.9*
ISC 25 23:12:20.5±0.3, 2855N±002×7713E±002, h34km±2km, h33km±2.1km:pP-P, n205, σ1§17/240, mb4.4/49, MS4.2/4, 26C-12D, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYAN	**Aya Nagar**	**0.06**	**185**	*e*P	**Pb**	**23 12 26.2**	**0.0**
AYAN				*e*S	**Sb**	**23 12 29.2**	**-0.8**
NDI	**New Delhi**	**0.16**	**28**	*e*P	**Pb**	**23 12 26.9**	**+0.1**
NDI				*e*S	**Sb**	**23 12 29.6**	**-1.5**
SONA	**Sohna**	**0.30**	**188**	⇓*i*P	**Pb**	**23 12 29.3**	**+1.0**
SONA				*e*S	**Sb**	**23 12 34.3**	**+0.7**
SONA				AML	AML	23 12 35.0	
	comp=N,18μm,0.2s						
SONA				AML	AML	23 12 35.0	
	comp=E,38μm,0.4s						
ASOR	**Ausora**	**0.60**	**69**	⇑*i*P	**Pn**	**23 12 32.7**	**0.0**
ASOR				*e*S	**Sb**	**23 12 41.2**	**+0.1**
RTK	**Rohtak**	**0.80**	**308**	⇑*i*P	**Pn**	**23 12 35.1**	**-0.2**
KHET	**Khetri**	**1.26**	**248**	⇓*i*P	**Pn**	**23 12 43.4**	**+1.7**
KHET				*e*S	**Sn**	**23 12 59.0**	**+1.5**
KHET				AML	AML	23 13 02.3	
	comp=E,15μm,0.4s						
KHET				AML	AML	23 13 03.1	
	comp=N,10μm,0.4s						
AGRA	**Agra**	**1.49**	**151**	⇑*i*P	**Pn**	**23 12 46.7**	**+1.8**
AGRA				*e*S	**Sn**	**23 13 06.6**	**+3.4**
AGRA				AML	AML	23 13 10.8	
	comp=N,7μm,0.2s						
AGRA				AML	AML	23 13 10.9	
	comp=E,16μm,0.4s						
KALG	**Kalgarh**	**1.71**	**56**	*i* P	**Pn**	**23 12 42.3**	**-5.7**
KALG				*e*S	**Sn**	**23 13 04.9**	**-3.7**
DDI	**Dehra Dun**	**1.94**	**24**	⇓*i*P	**Pn**	**23 12 51.0**	**-0.2**
DDI				*e*S	**Sn**	**23 13 17.1**	**+2.7**
SMLA	**Simla**	**2.58**	**1**	⇓*i*P	**Pn**	**23 13 01.2**	**+1.4**
SMLA				*e*S	**Sn**	**23 13 30.4**	**+0.5**
SMLA				*ex*	x	23 13 34.0	
	comp=E,14μm,0.3s						
SMLA				*ex*	x	23 13 36.0	
	comp=N,13μm,0.3s						
LGTI	**Lohaghat**	**2.87**	**71**	*e*P	**Pn**	**23 13 04.3**	**+0.4**
LGTI				*ex*	x	23 13 40.5	
PTH	**Pithoragarh**	**2.88**	**69**	*e*P	**Pn**	**23 13 05.8**	**+1.8**
PTH				*ex*	x	23 13 51.2	
JOSI	**Joshimath**	**2.91**	**46**	⇓*i*P	**Pn**	**23 13 06.7**	**+2.3**
JOSI				*e*S	**Sn**	**23 13 39.6**	**+1.3**
BHK	**Bhakra**	**2.93**	**348**	*ex*	**Pn**	**23 13 03.4**	**-1.3**
BHK				*ex*	x	23 13 45.1	
SDNR	**Sundarnagar**	**2.95**	**357**	*e*P	**Pn**	**23 13 07.1**	**+2.1**
SDNR				*ex*	x	23 13 42.5	
AJM	**Ajmer**	**3.02**	**228**	*e*P	**Pn**	**23 13 08.3**	**+2.4**
AJM				*e*S	**Sn**	**23 13 41.8**	**+0.8**
AJM				AML	AML	23 13 58.4	
	comp=E,3μm,0.5s						
AJM				AML	AML	23 13 58.6	
	comp=N,3μm,0.3s						
KLP	**Kalpa**	**3.13**	**18**	⇓*i*P	**Pn**	**23 13 09.7**	**+2.3**
KLP				*e*S	**Sn**	**23 13 45.7**	**+2.0**
KLP				AML	AML	23 14 03.8	
	comp=E,6μm,0.8s						
KLP				AML	AML	23 14 03.9	
	comp=N,4μm,0.8s						
THN	**Thein Dam**	**4.06**	**343**	*e*P	**Pn**	**23 13 20.9**	**+0.6**
THN				*ex*	x	23 14 11.3	
DLH	**Dalhousie**	**4.11**	**346**	*e*P	**Pn**	**23 13 22.0**	**+1.1**
DLH				*ex*	x	23 14 22.0	
JMU	**Jammu**	**4.58**	**336**	*ex*	x	23 13 36.5	
JMU				*e*S	**Sn**	**23 14 20.0**	**+0.6**
SARP	**Sargodha**	**5.12**	**312**	P	**Pn**	**23 13 34.2**	**-0.6**
PYUN	**Piuthan**	**5.18**	**94**	*e*Pn	**Pn**	**23 13 37.2**	**+1.5**
ALBI	**Allahabad**	**5.27**	**127**	*ex*	x	23 13 35.0	
ALBI				*ex*	x	23 14 48.0	
BHPL	**Bhopal**	**5.29**	**177**	⇑*i*P	**Pn**	**23 13 37.4**	**+0.3**
BHPL				*e*S	**Sn**	**23 14 34.1**	**-2.8**
BHPL				AML	AML	23 15 10.3	
	comp=N,669nm,0.5s						
BHPL				AML	AML	23 15 10.9	
	comp=E,1μm,0.3s						
KOLN	**Koldanda**	**5.76**	**96**	*e*Pn	**Pn**	**23 13 45.2**	**+1.6**
KOLN				*e*Sn	**Sn**	**23 14 49.2**	**+0.6**
	comp=E,790nm,0.7s						
DANN	**Dangsing**	**5.84**	**90**	*e*Pn	**Pn**	**23 13 46.6**	**+1.9**
CHCP	**Chirah Chowk**	**6.08**	**328**	P	**Pn**	**23 13 48.4**	**+0.4**
THW	**Thamme Wali**	**6.28**	**314**	P	**Pn**	**23 13 50.5**	**-0.3**
SBDP	**Sheikh Budin**	**6.62**	**306**	P	**Pn**	**23 13 55.8**	**+0.4**
GKN	**Gorkha**	**6.64**	**93**	*e*Pn	**Pn**	**23 13 56.0**	**+0.3**
GKN				*e*Sn	**Sn**	**23 15 09.6**	**-0.6**
	comp=E,534nm,0.3s						
CEP	**Cherat**	**6.91**	**321**	P	**Pn**	**23 13 59.2**	**-0.1**
CEP				S	**Sn**	**23 15 14.0**	**-2.7**
DMN	**Daman**	**7.11**	**96**	*e*Pn	**Pn**	**23 14 03.1**	**+1.0**
KKN	**Kakani**	**7.23**	**94**	*e*Pn	**Pn**	**23 14 04.4**	**+0.6**
KKN				*e*Sn	**Sn**	**23 15 23.7**	**-1.1**
	comp=E,317nm,0.5s						
PKI	**Pulchoki**	**7.38**	**96**	*e*Pn	**Pn**	**23 14 06.5**	**+0.7**
NGP	**Nagpur**	**7.57**	**166**	*e*P	**Pn**	**23 14 07.2**	**-1.2**
NGP				*e*S	**Sn**	**23 15 25.7**	**-7.3**
GUN	**Gumba**	**7.74**	**93**	*e*Pn	**Pn**	**23 14 11.3**	**+0.5**
AKL	**Akola**	**7.81**	**181**	*e*P	**Pn**	**23 14 11.8**	**0.0**
AKL				*e*S	**Sn**	**23 15 35.3**	**-3.7**
JIRN	**Jiri**	**8.05**	**94**	*e*Pn	**Pn**	**23 14 15.3**	**+0.3**
JIRN				*e*Sn	**Sn**	**23 15 43.7**	**-1.2**
	comp=E,192nm,0.3s						
BHV	**Bhavnagar**	**8.13**	**215**	*ex*	x	23 14 21.0	
RAMN	**Ramite**	**8.54**	**99**	*e*Pn	**Pn**	**23 14 21.8**	**+0.1**
RAMN				*e*Sn	**Sn**	**23 15 55.6**	**-1.3**
	comp=E,496nm,0.4s						
BHJ	**Bhuj**	**8.55**	**234**	*e*P	**Pn**	**23 14 21.3**	**-0.6**
KBL	**Kabul**	**9.13**	**313**	*e*Pn	**Pn**	**23 14 29.1**	**-0.7**
	comp=E,25nm,0.3s						
KBL				*e*Sn	**Sn**	**23 16 07.8**	**-3.5**
KBL	**Kabul**	**9.13**	**313**	*e*P	**Pn**	**23 14 29.2**	**-0.6**
KBL				*e*		23 16 07.8	
KBL				pmax	pmax		
	comp=Z,25nm,0.3s						
BOK	**Bokaro**	**9.17**	**119**	*e*P	**Pn**	**23 14 30.4**	**-0.1**
BOK				*e*S	**Sn**	**23 16 06.4**	**-6.2**
ODAN	**Odare**	**9.24**	**98**	*e*Pn	**Pn**	**23 14 32.0**	**+0.5**
ODAN				*e*Sn	**Sn**	**23 16 12.2**	**-2.1**
	comp=Z,270nm,0.5s						
TAPN	**Taplejung**	**9.43**	**95**	*e*Pn	**Pn**	**23 14 34.5**	**+0.5**
TAPN				*e*Sn	**Sn**	**23 16 17.7**	**-1.1**
	comp=Z,235nm,0.5s						
LATR	**Latur**	**10.10**	**183**	*e*P	**Pn**	**23 14 42.0**	**-1.1**
BOM	**Bombay**	**10.39**	**203**	*e*P	**Pn**	**23 14 41.4**	**-5.7**
BOM				*e*S	**Sn**	**23 16 28.8**	**-14**
POO	**Poona**	**10.41**	**197**	*e*P	**Pn**	**23 14 46.9**	**-0.6**
POO				*e*S	**Sn**	**23 16 35.7**	**-7.4**
KSH	**Kashi**	**10.99**	**355**	P	**Pn**	**23 14 56.5**	**+1.3**
KSH				*e*AP		23 14 59.5	
KSH				*e*XP		23 15 02.3	
KSH				*e*S	**Sn**	**23 17 00.0**	**+3.1**
KSH				*e*XS		23 17 03.3	
KSH				*e*SS		23 17 12

CHTO Chiang Mai 22.17 111 *e*P **P 23 17 14.3 +0.6**
CHTO pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
KURK Kurchatov 22.17 3 P **P 23 17 12.0 -1.4**
comp=Z,27nm,0.8s,mb4.7,baz=192,slow=10.0,SNR=34
KURK pP 23 17 23.6
comp=Z,15nm,0.6s,baz=194,slow=10.0,SNR=12
KURK Kurchatov 22.17 3 *e*P **P 23 17 12.9 -0.5**
comp=Z,40nm,0.8s,mb4.9
KURK Kurchatov 22.17 3 P **P 23 17 12.0 -1.4**
KURK *PP 23 17 23.6
KURK pmax pmax
comp=Z,27nm,0.8s,mb4.7
KURK pmax pmax
comp=Z,15nm,0.6s,mb4.6
CM31 Chiang Mai Arr 22.35 112 *e*P **P 23 17 15.5 0.0**
CMAR Chiang Mai Arr 22.35 112 P **P 23 17 15.8 +0.3**
comp=Z,18nm,0.8s,mb4.5,baz=294,slow=9.8,SNR=78
CMAR Chiang Mai Arr 22.35 112 P **P 23 17 15.9 +0.3**
CMAR pmax pmax
comp=Z,19nm,0.8s
KMI Kunming 23.09 93 P **P 23 17 23.8 +0.4**
KMI AMB AMB
comp=Z,12nm,1.0s,mb4.3
CD2 Chengdu 23.22 78⇑ *i*P **P 23 17 25.0 +0.2**
CD2 AP 23 17 29.3
CD2 XP sP 23 17 32.5 -5.6
CD2 PP 23 17 54.8
CD2 S **S 23 21 31.0 -3.3**
CD2 AMB AMB
comp=Z,40nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,60nm,3.8s
CD2 LR LR
comp=N,350nm,9.6s
CD2 LR LR
comp=E,230nm,10.8s
CD2 LR LR
comp=Z,370nm,9.6s
LZH Lanzhou 23.74 65 *e*P **P 23 17 30.0 +0.3**
LZH AP 23 17 32.8
LZH XP sP 23 17 34.8 -8.7
LZH PP 23 18 02.3
LZH *e*S **S 23 21 41.3 -1.4**
LZH AMB AMB
comp=Z,29nm,1.2s,mb4.6
LZH AMB AMB
comp=Z,123nm,4.5s
LZH LR LR
comp=N,674nm,11.7s
LZH LR LR
comp=Z,997nm,14.0s,MS4.4
AB31 Akbulak array 24.52 332 P **P 23 17 37.0 +0.3**
AB31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
BVA0 Borovoye Array 24.96 350 P **P 23 17 41.8 +1.2**
BVA0 pmax pmax
comp=Z,2.0nm,1.0s,mb3.6
BVAR Borovoye Array 24.96 350 P **P 23 17 41.3 +0.7**
comp=Z,3.0nm,0.5s,mb4.1,baz=169,slow=9.1,SNR=24
BVAR Borovoye Array 24.96 350 P **P 23 17 41.3 +0.7**
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 25.01 350 *e*P **P 23 17 41.0 0.0**
comp=Z,12nm,0.8s,mb4.5
BRVK Borovoye 25.01 350 *e*P **P 23 17 41.0 0.0**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb4.5
HVS Khovu-Aksy 25.78 24⇓ *e*P **P 23 17 50.2 +2.1**
HVS pmax pmax
comp=Z,67nm,1.0s,mb5.1
ZAA0 Zalesovo Array 26.00 10 *e*P **P 23 17 50.0 -0.1**
ZALV Zalesovo Beam 26.00 10 P **P 23 17 50.4 +0.3**
comp=Z,8.8nm,0.6s,mb4.5,baz=206,slow=9.1,SNR=48
ZALV pP pP 23 18 01.5 +1.8
comp=Z,8.9nm,0.5s,baz=202,slow=10,SNR=12
ZALV Zalesovo Beam 26.00 10 P **P 23 17 50.4 +0.3**
ZALV pP pP 23 18 01.5 +1.8
ZALV Zalesovo Beam 26.00 10 P **P 23 17 50.4 +0.4**
ZALV *PP pP 23 18 01.5 +1.8
ZALV pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
ZALV pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
MIB Mutribah 26.02 280 *e*P **P 23 17 60.0 +10**
MIB AMb AMB 23 18 04.9
comp=Z,45nm,1.1s,mb4.9
NAY Al-Naaiem 26.15 279 *e*P **P 23 18 00.7 +9.0**
NAY AMb AMB 23 18 07.1
comp=Z,17nm,1.5s,mb4.3
AKTK Aktyubinsk 26.23 332 P **P 23 17 52.0 -0.1**
AKTO Aktyubinsk 26.23 332 P **P 23 17 52.0 -0.1**
comp=Z,3.9nm,0.6s,mb4.2,baz=137,slow=9.4,SNR=23
AKTO Aktyubinsk 26.23 332 P **P 23 17 52.0 -0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
GYA Guiyang 26.25 88 P **P 23 17 52.3 -0.3**
GYA PP 23 18 32.3
GYA S **S 23 22 21.0 -1.9**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
GYA AMB AMB
comp=Z,60nm,5.2s
GYA LR LR
comp=N,540nm,10.1s,MS4.4
GYA LR LR
comp=E,350nm,11.2s,MS4.4
GYA LR LR
comp=Z,620nm,10.8s,MS4.4
NVS Novosibirsk 26.65 8 *e*P **P 23 17 55.0 -0.9**
NVS *e*S **S 23 22 17.8 -11**
NVS pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS pmax pmax
comp=E,2.0nm,0.7s
NVS smax
comp=N,21nm,2.2s
NVS smax
comp=E,5.0nm,1.7s
XAN Xi'an 27.64 71 P **P 23 18 05.3 +0.2**
XAN AMB AMB
comp=Z,11nm,0.7s,mb4.6
XAN AMB AMB
comp=Z,375nm,12.6s
ZAK Zakamensk 29.45 35 *e*P **P 23 18 21.7 +0.8**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
SONM Songino Array 29.73 42 P **P 23 18 25.4 +2.0**
comp=Z,0.7nm,0.5s,mb3.7,baz=238,slow=9.2,SNR=10
SONM Songino Array 29.73 42 P **P 23 18 25.4 +2.0**
SONM pmax pmax
comp=Z,1.0nm,0.5s
ULN Ulaanbaatar 30.13 42 P **P 23 18 24.8 -2.2**
HHC Hu-ho-hao-te 30.66 57 *e*P **P 23 18 31.5 -0.3**
HHC XP sP 23 18 37.3 -8.3
HHC PP PP 23 19 32.0 -9.2
HHC PCP PcP 23 21 32.0 +2.7
HHC S **S 23 23 32.0 0.0**
HHC SCS ScS 23 29 05.0 -0.8
HHC AMB AMB
comp=Z,9.0nm,0.5s,mb4.9
HHC AMB AMB
comp=Z,146nm,4.5s
HHC LR LR
comp=N,295nm,17.8s,MS4.1
HHC LR LR
comp=E,210nm,17.8s,MS4.1
HHC LR LR
comp=Z,266nm,17.8s,MS3.9
SNG Songkhla 30.72 129 P **P 23 18 27.0 -5.5**
ARU Arti 30.84 340 *e*P **P 23 18 31.8 -1.4**
comp=Z,25nm,1.7s,mb4.8
ARU Arti 30.84 340 *e*P **P 23 18 31.8 -1.4**
ARU pmax pmax
comp=Z,25nm,1.7s,mb4.8
KIV Kislovodsk 31.48 309 *e*P **P 23 18 39.0 -0.1**
comp=Z,5.0nm,0.7s,mb4.5
KIV Kislovodsk 31.48 309 *e*P **P 23 18 33.4 -5.6**
KIV pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
WHN Wuhan 32.35 77⇓ *i*P **P 23 18 44.0 -2.8**
BJT Baijiatuau 33.98 60 *e*P **P 23 19 01.9 +1.1**
NJ2 Nanjing 36.03 74 *e*P **P 23 19 19.3 +0.6**
NJ2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
BR131 Keskin Array S 37.36 299 *e*P **P 23 19 30.7 +0.8**
comp=Z,4.9nm,0.6s,mb4.5
BRTR Keskin Array B 37.36 299 P **P 23 19 30.6 +0.7**
comp=Z,1.0nm,0.6s,mb3.8,baz=125,slow=9.1,SNR=8.9
BRTR pP pP 23 19 39.2 -0.6
comp=Z,5.2nm,0.6s,baz=118,slow=9.2,SNR=30
BRTR Keskin Array B 37.36 299 P **P 23 19 30.6 +0.7**
BRTR *PP pP 23 19 39.2 -0.6
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR pmax pmax
comp=Z,5.0nm,0.6s
OBN Obninsk 39.37 324 *e*P **P 23 19 46.5 0.0**
comp=Z,10nm,0.5s,mb4.8
CN2 Changchun 41.28 55 *e*P **P 23 20 02.8 +0.3**
TIRR Tirgusor 41.63 306 P **P 23 20 04.8 -0.6**
AKASG Malin Array Be 42.11 315 P **P 23 20 08.8 -0.4**
comp=Z,1.5nm,0.5s,mb3.9,baz=90,slow=5.9,SNR=6.7
AKASG pP pP 23 20 18.0 -1.2
comp=Z,2.5nm,0.6s,baz=85,slow=6.8,SNR=6.4
AKASG Malin Array Be 42.11 315 P **P 23 20 08.8 -0.4**
AKASG pP pP 23 20 18.0 -1.2
AKASG Malin Array Be 42.11 315 P **P 23 20 08.8 -0.4**
AKASG *PP pP 23 20 18.0 -1.2
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG pmax pmax
comp=Z,3.0nm,0.6s
PLOR Plostina 43.01 308⇑ *i*P **P 23 20 18.1 +1.5**
KSRS Korea Array 43.08 65 P **P 23 20 17.3 0.0**
comp=Z,1.2nm,0.3s,mb4.0,baz=280,slow=9.6,SNR=5.0
KSRS Korea Array 43.08 65 P **P 23 20 17.3 0.0**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
MLR Muntele Rosu 43.47 307⇓⇓ *i*P **P 23 20 22.4 +2.1**
VOIR 44.09 307⇑⇑ P **P 23 20 32.3 +6.9**
VOIR 44.09 307⇑ *i*P **P 23 20 32.3 +7.0**
BURAR Bucovina Array 44.18 310⇑⇑ P **P 23 20 33.2 +7.3**
BURAR Bucovina Array 44.18 310⇑ *i*P **P 23 20 33.3 +7.3**
BUR08 Bucovina Ar. S 44.19 310 *e*P **P 23 20 25.6 -0.5**
IDI Bunoyia 44.43 292 pP pP 23 20 37.5 -0.7
comp=Z,4.3nm,0.6s,baz=42,slow=12,SNR=6.2
JOF Joensuu 45.31 333 *ep* **P 23 20 34.3 -0.5**
comp=Z,4.7nm,0.7s,mb4.4
JOF Joensuu 45.31 333 *e*P **P 23 20 34.3 -0.5**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VTS Vitosha 45.32 303⇑⇑ P pP 23 20 45.3 +0.1
VTS Vitosha 45.32 303⇑ *i*P pP 23 20 45.3 +0.1
DRGR 45.81 309⇑⇑ P pP 23 20 48.9 -0.1
DRGR 45.81 309⇑ *i*P pP 23 20 48.8 -0.2
KWP Kalwaria 46.06 313 *e*P **P 23 20 40.9 0.0**
KWP Kalwaria 46.06 313⇑ *i*P pP 23 20 50.3 -0.6
BZS Buzias 46.51 307⇓⇓ P pP 23 20 53.8 -0.8
BZS Buzias 46.51 307⇓ *i*P pP 23 20 53.8 -0.8
KAF Kangasniemi 47.09 330 *ep* **P 23 20 47.8 -1.0**
comp=Z,3.1nm,0.7s,mb4.3
KAF Kangasniemi 47.09 330 *e*P **P 23 20 47.8 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
PSZ Piszkesteto 47.78 310 *e*P **P 23 20 54.2 -0.1**
comp=Z,3.2nm,0.6s,mb4.5
PSZ Piszkesteto 47.78 310 *e*P **P 23 20 54.2 -0.2**
PSZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KEV Kevo 50.06 340 *ep* **P 23 21 11.4 -0.1**
comp=Z,4.1nm,0.5s,mb4.7
KEV Kevo 50.06 340 *e*P **P 23 21 11.4 -0.1**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
TIP Timpagrande 50.42 299 *e*P **P 23 21 15.2 +0.4**
ARCES ARCESS Array B 50.42 339 P **P 23 21 14.9 +0.7**
comp=Z,5.9nm,0.6s,mb4.8,baz=113,slow=7.8,SNR=16
ARCES pP pP 23 21 24.2 -0.2
comp=Z,3.3nm,0.4s,baz=116,slow=7.9,SNR=4.5
ARCES ARCESS Array B 50.42 339 P **P 23 21 15.0 +0.7**
ARCES *PP pP 23 21 24.3 -0.1
ARCES pmax pmax
comp=Z,6.0nm,0.6s
ARCES pmax pmax
comp=Z,3.0nm,0.4s
ARE0 ARCESS Array S 50.42 339 *e*P **P 23 21 15.0 +0.7**
MAJO Matsushiro 51.35 64 *e*P **P 23 21 21.6 -0.3**
TIXI Tiksi 51.43 19 *i* P **P 23 21 22.5 +0.7**
RUE Ruedersdorf 51.87 316 P **P 23 21 25.9 +0.5**
GERES GERESS Array B 51.92 311 P **P 23 21 25.7 -0.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=90,slow=6.7,SNR=4.0
GERES pP pP 23 21 35.5 -0.4
comp=Z,1.4nm,0.9s,baz=99,slow=8.6,SNR=4.0
GERES GERESS Array B 51.92 311 P **P 23 21 25.7 -0.1**
GERES *PP pP 23 21 35.5 -0.4
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=Z,1.0nm,0.9s
NB2 NORSAR Subarra 53.84 327 P **P 23 21 39.0 -0.8**
comp=Z,5.5nm,0.7s,mb4.5,baz=100,slow=6.9
NOA NORSAR Array B 53.84 327 P **P 23 21 39.2 -0.6**
comp=Z,1.5nm,0.6s,mb4.1,baz=99,slow=7.0,SNR=5.7
NOA pP pP 23 21 48.4 -1.7
comp=Z,2.7nm,0.7s,baz=98,slow=7.0,SNR=4.5
NOA NORSAR Array B 53.84 327 P **P 23 21 39.2 -0.6**
NOA *PP pP 23 21 48.4 -1.6
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA pmax pmax
comp=Z,3.0nm,0.7s
VSL Villasalto 56.02 300 *e*P **P 23 21 55.8 -0.1**
comp=Z,58nm,1.2s,mb5.5
KEST Kesra 56.84 296 pP pP 23 22 11.4 -0.7
comp=Z,4.2nm,1.1s,baz=77,slow=5.1,SNR=3.5
LPG La Plagne 56.93 308⇑ *i*P **P 23 22 02.7 +0.4**
comp=Z,20nm,0.9s,mb4.8
LPG La Plagne 56.93 308⇑ *i*P **P 23 22 02.7 +0.4**
comp=Z,9.9nm,0.9s,mb4.8
LPG La Plagne 56.93 308⇑ *i*P **P 23 22 02.7 +0.4**
LPG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LPL La Plagne 56.94 308⇑ *i*P **P 23 22 02.8 +0.4**
comp=Z,17nm,0.5s,mb5.0
LPL La Plagne 56.94 308⇑ *i*P **P 23 22 02.8 +0.4**
comp=Z,8.4nm,0.5s,mb5.0
LPL La Plagne 56.94 308⇑ *i*P **P 23 22 02.8 +0.4**
LPL pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
MBDF Montbardon 57.03 307⇑ *i*P **P 23 22 04.5 +1.5**
ORIF Oris-en-Rattie 57.63 307⇑ *i*P **P 23 22 08.1 +0.9**
SSF Saint Saulge 58.90 310⇑ *i*P **P 23 22 16.1 0.0**
comp=Z,12nm,0.8s,mb4.6
SSF Saint Saulge 58.90 310⇑ *i*P **P 23 22 16.1 0.0**
comp=Z,5.8nm,0.8s,mb4.7
SSF Saint Saulge 58.90 310⇑ *i*P **P 23 22 16.1 0.0**
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TCF Toulx Ste Croi 59.92 309 *e*P **P 23 22 23.4 +0.3**
comp=Z,29nm,1.3s,mb4.8
TCF Toulx Ste Croi 59.92 309 *e*P **P 23 22 23.4 +0.3**
comp=Z,14nm,1.3s,mb4.8
TCF Toulx Ste Croi 59.92 309 *e*P **P 23 22 23.4 +0.3**
TCF pmax pmax
comp=Z,14nm,1.3s,mb4.8
ESK Eskdalemuir 61.68 320 P **P 23 22 35.3 +0.3**
MBWA Marble Bar 64.28 135 P **P 23 22 52.4 -0.2**
CART Cartagena 64.38 300 P **P 23 22 52.9 -0.3**
TOA0 Torodi Ar. Sit 71.16 275 *e*P **P 23 23 35.7 -0.6**
TORD Torodi Ar. Bea 71.16 275 P **P 23 23 36.2 -0.1**
comp=Z,0.3nm,0.5s,mb3.5,baz=63,slow=4.8,SNR=6.2
TORD pP pP 23 23 44.5 -2.3
comp=Z,1.4nm,0.6s,baz=60,slow=5.1,SNR=8.5
NWAO Narrogin (SRO) 72.01 145 *e*P **P 23 23 42.5 +1.5**
comp=Z,23nm,1.4s,mb4.9
NWAO Narrogin (SRO) 72.01 145 *e*P **P 23 23 42.5 +1.6**
NWAO pmax pmax
comp=Z,23nm,1.4s
LBTB Lobatse 72.75 228 *e*P **P 23 23 45.2 -0.3**
comp=Z,2.3nm,0.6s,mb4.3
LBTB Lobatse 72.75 228 *e*P **P 23 23 45.2 -0.3**
LBTB pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
WRA Warramunga Arr 73.31 124 P **P 23 23 48.6 -0.3**
comp=Z,2.6nm,0.6s,mb4.3,baz=317,slow=5.6,SNR=20
WRA Warramunga Arr 73.31 124 P **P 23 23 48.6 -0.3**
WRA pmax pmax
comp=Z,3.0nm,0.6s
WRAB Tennant Creek 73.32 124 *e*P **P 23 23 48.4 -0.6**
comp=Z,6.0nm,1.0s,mb4.5
WRAB Tennant Creek 73.32 124 *e*P **P 23 23 48.4 -0.5**
WRAB pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ASAR Alice Springs 75.39 128 P **P 23 23 59.8 -1.1**
comp=Z,1.6nm,0.7s,mb4.1,baz=309,slow=5.6,SNR=17
ASAR Alice Springs 75.39 128 P **P 23 23 59.8 -1.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
BOSA Boshof 75.46 226 P **P 23 23 58.7 -2.5**
comp=Z,3.4nm,0.9s,mb4.3,baz=74,slow=10,SNR=3.9
BOSA Boshof 75.46 226 *e*P **P 23 23 58.7 -2.5**
BOSA Boshof 75.46 226 P **P 23 23 58.7 -2.5**
BOSA pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
YKA Yellowknife Ar 88.79 5 P **P 23 25 10.1 -0.5**
comp=Z,0.7nm,0.5s,mb4.2,baz=344,slow=5.1,SNR=5.0
YKA Yellowknife Ar 88.79 5 P **P 23 25 10.1 -0.5**
YKA pmax pmax
comp=Z,1.0nm,0.5s

ISCJB ***25*** *23:25:18.6*±*0.6, 3768N*±*002*×*2677E*±*003, h4*^{km}*±4*^{km}*, Error ellipse: s-maj=3.5km s-min=3.2km az=167.6*
ATH ***25*** *23:25:18.4, 3766N*×*2681E, h15*^{km}*, MD3.3/6, ML3.4*
DDA ***25*** *23:25:18.4, 3769N*×*2674E, h2*^{km}*±2*^{km}*, Md3.1*
CSEM ***25*** *23:25:18.5*±*0.1, 3765N*×*2678E, h8*^{km}*, ML3.4, Error ellipse: s-maj=1.6km s-min=1.5km az=103.0*
ISK ***25*** *23:25:18.6, 3770N*×*2687E, h5*^{km}*, MD3.0*
THE ***25*** *23:25:19.2, 3773N*×*2674E, h0*^{km}*±2*^{km}*, Error ellipse: s-maj=3.5km s-min=1.3km az=112.0*
NEIC ***25*** *23:25:19.5, 3770N*×*2687E, h5*^{km}*, MD3.3(ATH), MD3.1(ISK), After ISK.*

ISC 25 23:25:19.4±0.4**, 3767N**±002×**2675E**±003**, h7**^{km}±3^{km}**, n50,**
σ0^{s}**76**/82**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.07**	**61**	*e*PB		**Pg 23 25 21.6**	**+0.3**
SMG				*e*SB		**Sg 23 25 23.1**	**+0.5**
GCAM	**G?zelcaml?**	**0.38**	**86**	*i* P		**Pg 23 25 26.4**	**-0.4**
GCAM				*i* S		**Sg 23 25 32.1**	**+0.3**
BLCB	**Balcova**	**0.75**	**18**	P		**Pg 23 25 33.1**	**-0.7**
BLCB				S		**Sg 23 25 43.0**	**-0.5**
BLCB	**Balcova**	**0.75**	**18**	P		**Pg 23 25 33.1**	**-0.7**
BLCB				S		**Sg 23 25 43.0**	**-0.5**
BLCB	**Balcova**	**0.75**	**18**	*e*Pg		**Pg 23 25 33.2**	**-0.6**
BLCB				*e*Sg		**Sg 23 25 43.2**	**-0.3**
BDRM	**Kayabasi**	**0.82**	**138**	*i* P		**Pg 23 25 35.0**	**-0.1**
BDRM				*i* S		**Sg 23 25 47.1**	**+1.4**
MLSB	**Milas**	**0.90**	**115**	*e*PG		**Pg 23 25 35.6**	**-0.9**
MLSB				*e*SG		**Sg 23 25 48.1**	**-0.1**
MLSB	**Milas**	**0.90**	**115**	Pg		**Pg 23 25 36.0**	**-0.6**
MLSB				Sg		**Sg 23 25 48.0**	**-0.2**
CHOS	**Chios island**	**0.90**	**322**	P		**Pg 23 25 36.2**	**-0.5**
CHOS				S		**Sg 23 25 49.3**	**+0.9**
APE	**Apeiranthos**	**1.15**	**239**	P		**Pg 23 25 40.2**	**-1.2**
APE				S		**Sg 23 25 57.4**	**+1.2**
APE	**Apeiranthos**	**1.15**	**239**	*e*PN		**Pn 23 25 40.8**	**-1.0**
APE				*e*SN		**Sn 23 25 57.6**	**-0.1**
DAT	**Datca**	**1.15**	**145**	*e*PN		**Pn 23 25 41.0**	**-0.8**
DAT				*e*SN		**Sn 23 25 57.4**	**-0.3**
YER	**Yerkesik**	**1.33**	**113**	*e*PN		**Pn 23 25 43.8**	**-0.6**
YER				*e*SN		**Sn 23 26 02.2**	**-0.1**
YER	**Yerkesik**	**1.33**	**113**	Pn		**Pn 23 25 44.2**	**-0.1**
YER				Sg		**Sg 23 26 02.2**	**+0.1**
AKHS	**Akhisar**	**1.47**	**34**	*i* P		**Pn 23 25 45.8**	**-0.4**
AKHS				*i* S		**Sn 23 26 05.2**	**-0.4**
AKS	**Akhisar**	**1.47**	**34**	*e*PN		**Pn 23 25 46.3**	**+0.2**
AKS	**Akhisar**	**1.47**	**34**	Pn		**Pn 23 25 45.9**	**-0.3**
AKS	**Akhisar**	**1.47**	**34**	Pn		**Pn 23 25 45.9**	**-0.3**
PRK	**Paraskevi**	**1.62**	**347**	P		**Pn 23 25 47.5**	**-0.8**
PRK				S		**Sn 23 26 08.4**	**-0.9**
PRK	**Paraskevi**	**1.62**	**347**	*e*Pn		**Pn 23 25 49.0**	**+0.7**
PRK				S		**Sn 23 26 08.4**	**-0.9**
PRK				*e*Sn		**Sn 23 26 11.1**	**+1.8**
THR1	**Thera Island**	**1.66**	**219**	P		**Pn 23 25 48.2**	**-0.7**
THR1				S		**Sn 23 26 13.4**	**+3.0**
THR6	**Thira Island,**	**1.70**	**220**	P		**Pn 23 25 50.5**	**+1.0**
KULA	**Kula-Manisa**	**1.72**	**60**	*e*PN		**Pn 23 25 49.8**	**+0.1**
DENT	**Denizli**	**1.81**	**87**	*e*PN		**Pn 23 25 50.3**	**-0.6**
DENT	**Denizli**	**1.81**	**87**	Pn		**Pn 23 25 50.6**	**-0.2**
DENT	**Denizli**	**1.81**	**87**	Pn		**Pn 23 25 50.7**	**-0.2**
ARG	**Arkhangelos**	**1.82**	**142**	*e*PN		**Pn 23 25 50.7**	**-0.4**
ARG				*e*SN		**Sn 23 26 14.8**	**+0.4**
KARP	**Karpathos**	**2.15**	**171**	*e*PB		**Pb 23 25 55.1**	**-3.4**
BALB	**Balikesir**	**2.15**	**24**	*e*PN		**Pn 23 25 56.3**	**+0.7**
BALB				*e*SN		**Sn 23 26 23.8**	**+1.2**
BALB	**Balikesir**	**2.15**	**24**	Pn		**Pn 23 25 56.9**	**+1.3**
PTL	**Penteli**	**2.32**	**280**	*e*PN		**Pn 23 25 57.6**	**-0.3**
ATH	**Athens Observa**	**2.42**	**278**	*e*PN		**Pn 23 25 59.6**	**+0.2**
DST	**Dursunbey**	**2.42**	**37**	*e*PN		**Pn 23 25 59.9**	**+0.5**
DST				*e*SN		**Sn 23 26 30.0**	**+0.8**
DST	**Dursunbey**	**2.42**	**37**	Pn		**Pn 23 26 00.1**	**+0.8**
NPS	**Neapolis**	**2.58**	**201**	*e*PN		**Pn 23 26 01.8**	**+0.4**
DID	**Didima**	**2.80**	**268**	P		**Pn 23 26 03.8**	**-0.7**

IDC ***25*** *23:31:31.2*±*1.6, 661S*×*1294E, h0*^{km}*, mb4.0/2, mb1 4.5/4, mb1mx3.9/15, mbtmp4.3/4, ML4.5/2, MS4.1/1, Ms1 4.1/1, ms1mx3.2/25, Error ellipse: s-maj=105.1km s-min=24.7km az=66.0*
ISCJB ***25*** *23:31:33.3*±*0.8, 650S*±*010*×*1299E*±*02, h33*^{km}*, mb4.1/3, Error ellipse: s-maj=23.8km s-min=11.2km az=157.4*
NEIC ***25*** *23:31:35.4*±*0.6, 649S*×*1298E, h35*^{km}*, mb3.8/3, Error ellipse: s-maj=18.3km s-min=8.9km az=67.0*

ISC 25 23:31:35.5±0.8**, 650S**±010×**1299E**±02**, h35**^{km}**, n15,**
σ0^{s}**62**/17**, mb4.1**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.68**	**158**	*e*P		Px 23 33 02.4	
KAKA	498nm,0.6s			*e*S		Sx 23 34 10.0	
WRAB	**Tennant Creek**	**14.05**	**162**	*e*Pn		**Pn 23 34 52.0**	**-0.1**
WRAB	9.6nm,0.4s			*e*Sn		**Sn 23 37 16.7**	**-10**
WRA	**Warramunga Arr**	**14.05**	**162**	Pn		**Pn 23 34 51.2**	**-1.0**
WRA	2.4nm,0.3s,baz=339,slow=13,SNR=48			Sn		**Sn 23 37 19.3**	**-7.7**
WB2	**Warramunga Ar**	**14.06**	**162**	*e*P		**Pn 23 34 51.7**	**-0.6**
WB2				*e*S		**Sn 23 37 17.8**	**-9.3**
ASAR	**Alice Springs**	**17.51**	**168**	P		**Pn 23 35 37.4**	**+0.5**
ASAR	1.6nm,0.3s,baz=344,slow=9.9,SNR=106			S		**Sn 23 38 41.8**	**-16**
MBWA	**Marble Bar**	**17.56**	**213**	*e*Pn		**Pn 23 35 38.4**	**+0.8**
CTAO	**Charters Tower**	**20.88**	**132**	P		**P 23 36 15.3**	**+0.5**
STKA	**Stephens Creek**	**27.53**	**158**	P		**P 23 37 20.4**	**+1.5**
STKA	**Stephens Creek**	**27.53**	**158**	P		**P 23 37 19.6**	**+0.6**
NWAO	**Narrogin (SRO)**	**28.79**	**202**	*e*P		**P 23 37 29.6**	**-0.7**
CBIJ	**Chichi jima**	**35.47**	**19**	LR	LR	23 50 23.2	
TAU	**Tasmania Unive**	**39.41**	**160**	*e*P		**P 23 39 01.8**	**-0.1**
MKAR	**Makanchi Array**	**67.73**	**327**	P		**P 23 42 29.6**	**+0.3**
KURK	**Kurchatov**	**72.02**	**329**	P		**P 23 42 55.0**	**-0.7**
ARU	**Arti**	**85.20**	**328**	*e*P		**P 23 44 08.2**	**+0.1**

ISCJB ***26*** *00:03:05.3*±*0.4, 542N*±*0.1*×*1695 3W*±*0.09, h260*^{km}*±5*^{km}*, mb3.5/7, Error ellipse: s-maj=19.3km s-min=6.7km az=164.4*
NEIC ***26*** *00:03:05.9*±*0.5, 5451N*×*1695 6W, h245*^{km}*±7*^{km}*, Error ellipse: s-maj=15.6km s-min=8.4km az=174.0*
IDC ***26*** *00:03:14.1*±*11.0, 5426N*×*1694 2W, h336*^{km}*±111*^{km}*, mb3.3/7, mb1 3.6/7, mb1mx3.2/25, mbtmp3.3/7, Error ellipse: s-maj=53.0km s-min=19.7km az=35.0*

ISC 26 00:03:06.2±0.5**, 542N**±01×**16952W**±009**, h254**^{km}±5^{km}**, n24,**
σ0^{s}**74**/25**, mb3.6**/7**, 1D, Fox Islands**

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

OKFG	**Magazine Ridge**	**1.23**	**128**	P		**Pn**	**00 03 43.5**	**+0.4**
NIKO	**Nikolski**	**1.27**	**162**	*j* P	*n*	**Pn**	**00 03 43.4**	**+0.1**
NIKO				*eS*		**S**	**00 04 12.1**	**-0.5**
UNV	**Unalaska Valle**	**1.81**	**99**	P		**Pn**	**00 03 47.7**	**+0.4**
UNV				S		**S**	**00 04 19.9**	**+0.1**
AKLV	**Akutan Long Va**	**2.10**	**89**	P		**Pn**	**00 03 50.9**	**+1.1**
AKUT	**Akutan**	**2.21**	**90**	P		**Pn**	**00 03 49.9**	**-0.9**
ADK	**Adak**	**4.90**	**245**	*e* Pn		**Pn**	**00 04 21.7**	**+0.9**
ADK				*eSn*		**S**	**00 05 19.3**	**-1.0**
SDPT	**Sand Point**	**5.37**	**74**	*e* P		**Pn**	**00 04 25.1**	**-1.4**
CHGN	**Chignik**	**6.70**	**67**	*e* P		**Pn**	**00 04 42.2**	**-0.8**
AMKA	**Amchitka**	**7.34**	**252**	*e* Pn		**Pn**	**00 04 51.3**	**+0.2**
AMKA				*eSn*		**S**	**00 06 10.8**	**-4.5**
GAMB	**Gambell**	**9.69**	**354**	P		**Pn**	**00 05 13.3**	**-7.2**
SVW2	**Sparrevohn**	**10.18**	**41**	*e* Pn		**Pn**	**00 05 27.8**	**+1.1**
FX1	**Attu Island--F**	**10.39**	**270**	P		**Pn**	**00 05 30.4**	**+1.0**
ILB	**Eielson Array**	**15.54**	**38**	*e* P		Px	00 07 22.3	
INK	**Inuvik**	**21.91**	**36**	*e* P		**P**	**00 07 37.9**	**-0.6**
YBH	**Yreka Blue Hor**	**33.11**	**93**	P		**P**	**00 09 19.3**	**+1.1**
	1.7nm,0.8s,mb3.6,baz=278,slow=7.1,SNR=3.6							
NVAR	**Mina Array Bea**	**37.82**	**93**	P		**P**	**00 09 59.1**	**+0.8**
	1.7nm,0.7s,mb3.7,baz=299,slow=7.8,SNR=16							
NVAR				PcP		PcP	00 12 08.5	-0.4
	0.3nm,0.5s,baz=274,slow=1.4,SNR=3.6							
PDAR	**Pinedale Array**	**40.18**	**81**	P		**P**	**00 10 17.6**	**-0.1**
	2.1nm,0.8s,mb3.6,baz=313,slow=3.5,SNR=18							
PV10	**Paradox Valley**	**43.30**	**86**	*e* P		**P**	**00 10 42.9**	**0.0**
	64nm,0.8s							
PV10				*e* PcP		PcP	00 12 26.6	-0.2
SONM	**Songino Array**	**50.31**	**299**	pP		pP	00 12 38.7	+7.3
	1.0nm,0.8s,baz=50,slow=6.6,SNR=5.4							
TXAR	**Lajitas Array**	**52.83**	**90**	P		**P**	**00 11 55.4**	**-0.3**
	2.2nm,0.7s,mb3.7,baz=300,slow=5.1,SNR=27							
ARCES	**ARCESS Array B**	**56.11**	**354**	P		**P**	**00 12 17.7**	**-0.9**
	4.2nm,0.9s,mb4.0,baz=12,slow=5.8,SNR=2.5							
BVAR	**Borovoye Array**	**62.18**	**324**	P		**P**	**00 13 00.3**	**0.0**
	0.6nm,0.6s,mb3.4,baz=53,slow=6.6,SNR=7.4							
BVAR				pP		pP	00 14 04.0	+6.7
	0.6nm,0.7s,baz=60,slow=8.5,SNR=4.0							
ASAR	**Alice Springs**	**91.49**	**230**	P		**P**	**00 15 42.7**	**-0.8**
	0.3nm,0.7s,mb3.3,baz=26,slow=9.2,SNR=3.7							
QSPA	**South Pole Qui**	**143.95**	**180**	PKP		PKPdf	00 22 07.0	-2.3
	4.2nm,0.6s,baz=293,slow=1.2,SNR=9.7							

IDC 26 00:10:08.4±1.7, 198N×12596E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/17, mbtmp3.8/4, Error ellipse: s-maj=172.9km s-min=21.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.28**	**160**	P		P	00 15 17.4	-0.6
	1.9nm,0.4s,baz=338,slow=11,SNR=14							
ASAR	**Alice Springs**	**26.63**	**164**	P		P	00 15 49.5	+0.7
	0.4nm,0.4s,baz=345,slow=7.2,SNR=5.1							
MKAR	**Makanchi Array**	**58.56**	**326**	P		P	00 20 06.8	-0.1
	0.5nm,0.4s,baz=122,slow=7.8,SNR=12							
KURK	**Kurchatov**	**62.81**	**328**	P		P	00 20 36.0	+0.2
	0.8nm,0.5s,baz=129,slow=6.2,SNR=5.0							

*ISCJB **26** 00:10:08.7±0.6, 3544S×1049W±0.1, h10km, mb4.3/17, MS4.4/14, Error ellipse: s-maj=17.0km s-min=14.0km az=4.6*

*IDC **26** 00:10:09.0±0.6, 3548S×10491W, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.4/20, mbtmp4.3/14, MS4.4/15, Ms1 4.4/15, ms1mx4.2/25, Error ellipse: s-maj=19.9km s-min=16.7km az=102.0*

*NEIC **26** 00:10:10.2±0.4, 3545S×10497W, h10km, mb4.8/2, Error ellipse: s-maj=14.4km s-min=13.2km az=96.0*

*GCMT **26** 00:10:10.2±0.2, 3546S×10479W, h16km±1km, MW5.2/86, Moment Tensor Solution. s37,c48; s86,c135; Duration: 1s0 Moment tensor: Scale 10^16^Nm; Mrr=0.94±.25; Mθθ=2.10±.20; Mφφ3.04±.22; Mrθ-1.11±.62; Mθφ-7.04±..19; Mφr-3.59±..69; Best double couple: M0.8.42000×10^16^ NP1:ϕs8.00000°,δ84.00000°,λ-27.00000°. Principal axes: T 8.5600, Plg14.0000°, Azm58.0000°; N -0.2770, Plg62.0000°, Azm177.0000°; P -8.2800, Plg23.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 00:10:10.8±0.6, 3544S±010×1049W±01, h10km, n39, σ0s99/20, mb4.3/17, MS4.4/14, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RPN	**Rapa Nui**	**9.11**	**334**	LR		LR	00 14 56.5	
	comp=Z,3μm,20.2s,baz=329,slow=32							
PLCA	**Paso Flores**	**27.43**	**111**	P		**P**	**00 15 58.0**	**+1.4**
	4.6nm,0.9s,mb4.0,baz=300,slow=8.5,SNR=5.2							
PLCA				LR		LR	00 23 49.8	
	comp=Z,391nm,18.2s,MS4.0,baz=280,slow=30							
PLCA	**Paso Flores**	**27.43**	**111**	*e* P		**P**	**00 15 58.0**	**+1.4**
PLCA				LR		LR	00 23 49.9	
RKT	**Rikitea**	**28.85**	**287**	*e* LR		LR	00 22 42.5	
	304nm,37.0s							
RKT	**Rikitea**	**28.85**	**287**	*e* T			00 45 52.1	
	1.2nm,0.2s							
CFAA	**Coronel Fontan**	**30.68**	**93**	P		**P**	**00 16 25.0**	**-0.6**
	0.9nm,0.9s,mb3.6,baz=240,slow=8.0,SNR=9.4							
CFAA				PcP		PcP	00 19 23.9	+0.4
	0.2nm,0.4s,baz=196,slow=16,SNR=12							
CFAA	**Coronel Fontan**	**30.68**	**93**	P		**P**	**00 16 25.0**	**-0.6**
CFAA				PcP		PcP	00 19 23.9	+0.4
USHA	**Ushuaia**	**31.70**	**139**	LR		LR	00 26 14.9	
	comp=Z,2μm,19.3s,MS4.7,baz=296,slow=30							
LVC	**Limon Verde**	**33.77**	**78**	P		**P**	**00 16 52.3**	**-0.5**
	5.0nm,0.9s,mb4.4,baz=270,slow=7.5,SNR=5.9							
LVC				LR		LR	00 27 00.0	
	comp=Z,977nm,18.1s,MS4.6,baz=270,slow=30							
LVC	**Limon Verde**	**33.77**	**78**	*e* P		**P**	**00 16 53.8**	**+1.0**
LVC				LR		LR	00 27 00.0	
NNA	**Nana**	**34.48**	**54**	LR		LR	00 27 25.7	
	comp=Z,2μm,20.2s,MS4.9,baz=156,slow=30							
ATAH	**Atahualpa**	**37.31**	**47**	P		**P**	**00 17 23.5**	**+0.2**
	12nm,1.1s,mb4.7,baz=219,slow=7.1,SNR=9.5							
ATAH				LR		LR	00 27 46.2	
	comp=Z,318nm,20.8s,MS4.1,baz=222,slow=28							
VAH	**Vaihoa**	**43.14**	**287**	*e* T			01 03 42.3	
	16nm,0.2s							
OTAV	**Otavalo**	**43.21**	**41**	*e* P		**P**	**00 18 12.8**	**+0.6**
	15nm,1.1s,mb4.6							
PPT	**Papeete**	**43.36**	**282**	*e* LQ			00 28 10.5	
	2μm,28.8s							
SIV	**San Ignacio**	**43.55**	**75**	P		**P**	**00 18 14.1**	**-0.9**
	7.3nm,1.0s,mb4.4,baz=243,slow=11,SNR=20							
ROSC	**El Rosal**	**49.30**	**42**	P		**P**	**00 19 01.7**	**+1.6**
	18nm,0.8s,mb5.1,baz=262,slow=16,SNR=15							
ROSC				LR		LR	00 35 54.7	
	comp=Z,691nm,21.0s,MS4.6,baz=208,slow=31							
BDFB	**Brasilia**	**54.23**	**84**	P		**P**	**00 19 36.2**	**-0.8**
	3.0nm,1.1s,mb4.2,baz=288,slow=15,SNR=5.2							
BDFB				LR		LR	00 41 28.3	
	comp=Z,241nm,18.5s,MS4.3,baz=36,slow=35							
SDV	**Santo Domingo**	**54.66**	**43**	*e* P		**P**	**00 19 38.0**	**-2.0**
	16nm,0.8s,mb5.1							
QSPA	**South Pole Qui**	**54.77**	**180**	P		**P**	**00 19 40.5**	**+0.5**
	2.4nm,0.6s,mb4.4,baz=134,slow=1.9,SNR=8.7							
VNDA	**Vanda**	**56.41**	**195**	P		**P**	**00 19 50.9**	**-1.0**
	0.4nm,0.5s,mb3.7,baz=102,slow=9.3,SNR=2.2							
VNDA				LR		LR	00 39 59.0	
	comp=Z,286nm,18.1s,MS4.4,baz=95,slow=32							
AFI	**Afiamalu**	**63.31**	**272**	LR		LR	00 43 22.7	
	comp=Z,93nm,18.2s,MS4.0,baz=124,slow=32							
TXAR	**Lajitas Array**	**64.43**	**1**	P		**P**	**00 20 47.1**	**0.0**
	0.6nm,0.7s,mb3.7,baz=180,slow=7.8,SNR=7.1							
TXAR				LR		LR	00 43 46.0	
	comp=Z,155nm,18.3s,MS4.2,baz=175,slow=31							
LDFC	**Landfair**	**70.80**	**351**	*e* P		**P**	**00 21 25.4**	**-1.8**
	11nm,1.0s,mb4.7							
NVAR	**Mina Array Bea**	**74.54**	**349**	P		**P**	**00 21 50.1**	**+0.7**
	3.7nm,0.9s,mb4.3,baz=185,slow=7.7,SNR=16							
MAW	**Mawson**	**76.86**	**175**	P		**P**	**00 22 02.8**	**+0.3**
	5.3nm,1.3s,mb4.3,baz=137,slow=18,SNR=2.4							
MAW				LR		LR	00 53 28.1	
	comp=Z,136nm,18.4s,MS4.3,baz=184,slow=34							
PDAR	**Pinedale Array**	**77.94**	**356**	P		**P**	**00 22 08.9**	**+0.2**
	2.0nm,0.8s,mb4.1,baz=158,slow=4.8,SNR=14							
YBH	**Yreka Blue Hor**	**78.51**	**346**	P		**P**	**00 22 12.9**	**+1.0**
	1.9nm,0.8s,mb4.1,baz=152,slow=11,SNR=3.6							
YBH				LR		LR	00 48 56.6	
	comp=Z,202nm,20.3s,MS4.4,baz=171,slow=30							
STKA	**Stephens Creek**	**88.50**	**231**	LR		LR	00 54 22.5	
	comp=Z,432nm,20.2s,MS4.9,baz=300,slow=30							
CTA	**Charters Tower**	**92.92**	**243**	LR		LR	00 59 27.7	
	comp=Z,289nm,18.2s,MS4.8,baz=53,slow=32							
IDI	**Anoyia**	**139.41**	**75**	PKP		PKPdf	00 29 36.8	-1.5
	3.1nm,1.1s,baz=258,slow=18,SNR=2.8							
AKASG	**Malin Array Be**	**143.80**	**51**	PKP		PKPdf	00 29 45.1	-0.5
	1.2nm,0.7s,baz=294,slow=2.6,SNR=4.7							
BRTR	**Keskin Array B**	**147.07**	**70**	PKPbc		PKPbc	00 29 52.4	-1.3
	2.7nm,0.9s,baz=232,slow=6.0,SNR=11							
CMAR	**Chiang Mai Arr**	**152.96**	**238**	PKPbc		PKPbc	00 30 07.2	-1.5
	1.0nm,0.4s,baz=349,slow=1.5,SNR=4.7							
SONM	**Songino Array**	**153.73**	**308**	PKP		PKPdf	00 30 01.7	0.0
	0.7nm,0.8s,baz=84,slow=4.6,SNR=3.9							
ZALV	**Zalesovo Beam**	**160.28**	**343**	PKP		PKPdf	00 30 07.4	-2.5
	1.6nm,0.8s,baz=225,slow=0.4,SNR=8.4							
AKTK	**Aktyubinsk**	**160.54**	**34**	PKP		PKPdf	00 30 10.6	+0.4
AKTO	**Aktyubinsk**	**160.54**	**34**	PKP		PKPdf	00 30 10.6	+0.4
	1.9nm,0.8s,baz=233,slow=0.0,SNR=6.4							
MKAR	**Makanchi Array**	**167.44**	**337**	PKP		PKPdf	00 30 16.2	-0.4
	0.9nm,0.8s,baz=76,slow=1.8,SNR=2.6							

*NEIC **26** 00:23:47.7, 5091N×17930W, h5km, mb4.8/104, ML4.9(PMR), ML4.7(AEIC), After AEIC.*

*ISCJB **26** 00:23:51.2±0.2, 5117N±005×17932W±002, h47km, mb4.8/178, MS4.2/21, Error ellipse: s-maj=6.8km s-min=2.0km az=7.1*

*MOS **26** 00:23:51.0±0.8, 5118N×17931W, h46km, mb5.0/75, Error ellipse: s-maj=8.7km s-min=5.0km az=98.9*

*SZGRF **26** 00:23:52.6, 5125N×17844W, h33km, mb4.9, Andreanof Islands, Aleutian Islands, United States*

*BJI **26** 00:23:52.9, 5182N×17999W, h35km, mB5.2, mb4.9, Ms4.9, Msz4.3*

*IDC **26** 00:23:53.7±4.1, 5117N×17931W, h59km±36km, mb4.2/24, mb1 4.3/25, mb1mx4.3/28, mbtmp4.2/25, ML4.3/1, MS4.1/10, Ms1 4.1/10, ms1mx3.7/39, Error ellipse: s-maj=17.8km s-min=10.7km az=169.0*

ISC 26 00:23:53.2±0.2, 5123N±004×17932W±002, h49km, h49km±2.4km: pP-P, n654, σ0s63/650, mb4.8/178, MS4.2/21, 159C-144D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AMKA	**Amchitka**	**0.88**	**281**	*e* Pg		**Pn**	**00 24 06.4**	**-2.9**
AMKA				*e*Sg		**Sn**	**00 24 19.6**	**-1.4**
ADK	**Adak**	**1.77**	**67**	P		**Pn**	**00 24 20.4**	**-1.0**
ADK				S		**Sn**	**00 24 45.9**	**+3.2**
SMY	**Shemya**	**4.34**	**293**	P		**Pn**	**00 24 56.6**	**+0.1**
FX1	**Attu Island--F**	**4.93**	**293**	P		**Pn**	**00 25 05.0**	**+0.4**
NIKO	**Nikolski**	**6.68**	**71**	*e* Pn		**Pn**	**00 25 28.5**	**-0.1**
OKFG	**Magazine Ridge**	**7.33**	**68**	P		**Pn**	**00 25 37.7**	**+0.2**
SPIA	**Saint Paul Isl**	**7.99**	**38**	P		**Pn**	**00 25 48.9**	**+2.4**
UNV	**Unalaska Valle**	**8.24**	**66**	*e* Pn		**Pn**	**00 25 50.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**14.22**	**287**	*e* Pn		**Pn**	**00 27 12.3**	**+0.7**
PETK	**Petropavlovsk-**	**14.22**	**287**	P		**Pn**	**00 27 12.6**	**+1.1**
	1.4nm,0.3s,baz=90,slow=17,SNR=10							
PETK				S		**Sn**	**00 29 47.4**	**-0.2**
	0.1nm,0.3s,baz=84,slow=29,SNR=2.9							
PETK				LR		LR	00 32 28.7	
	comp=Z,328nm,20.6s,baz=91,slow=36							
OHAK	**Old Harbor**	**16.30**	**58**	*e* Pn		**Pn**	**00 27 36.6**	**-1.8**
SVW2	**Sparrevohn**	**16.41**	**44**	*e* P		**Pn**	**00 27 42.6**	**+2.8**
BILL	**Bilibino**	**18.28**	**343**	*e* P		**Pn**	**00 28 04.4**	**+1.6**
	118nm,1.4s							
BILL	**Bilibino**	**18.28**	**343**	↑ *e* P		**Pn**	**00 28 03.9**	**+1.1**
BILL				*e*S		**S**	**00 31 27.8**	**-0.9**
BILL				pmax		pmax		
	comp=Z,34nm,1.4s							
BILL				MLR		MLR		
	comp=Z,300nm,19.0s							
PPLA	**Purkeypile**	**18.64**	**41**	*e* P		**Pn**	**00 28 05.8**	**-1.5**
	comp=Z,50nm,0.8s							
SEW	**Seward**	**18.89**	**50**	*e* P		**Pn**	**00 28 08.8**	**-1.5**
	comp=Z,88nm,1.6s							
RC01	**Rabbit Creek A**	**19.04**	**47**	*e* P		**Pn**	**00 28 12.4**	**+0.4**
	comp=Z,21nm,1.0s							
SEY	**Seymchan**	**19.14**	**319**	*i* P		**Pn**	**00 28 14.3**	**+1.0**
KTH	**Kantishna Hill**	**19.45**	**40**	*e* P		**Pn**	**00 28 16.3**	**-0.6**
	comp=Z,53nm,0.8s							
MCK	**McKinley**	**20.33**	**40**	*e* P		**P**	**00 28 24.5**	**-0.4**
	comp=Z,31nm,1.0s							
MCK	**McKinley**	**20.33**	**40**	*e* P		**P**	**00 28 24.5**	**-0.4**
MCK				pmax		pmax		
	comp=Z,31nm,1.0s							
COLA	**College**	**21.23**	**38**	*e* P		**P**	**00 28 34.9**	**+0.3**
	comp=Z,12nm,0.9s,mb4.2							
COLA	**College**	**21.23**	**38**	*e* P		**P**	**00 28 34.9**	**+0.3**
COLA				pmax		pmax		
	comp=Z,12nm,0.9s,mb4.2							
COLD	**Coldfoot**	**21.55**	**31**	*e* P		**P**	**00 28 38.6**	**+0.5**
	comp=Z,17nm,1.0s,mb4.4							
COLD				*e*pP			00 28 48.3	
MENT	**Mentasta**	**22.29**	**45**	*e* P		**P**	**00 28 47.4**	**+1.5**
EGAK	**Eagle**	**23.88**	**41**	*e* P		**P**	**00 29 01.1**	**-0.7**
	comp=Z,46nm,1.0s,mb4.9							
YSS	**Yuzh-Sakhalins**	**25.01**	**275**	↓ *e* P		**P**	**00 29 13.6**	**+1.3**
YSS				pmax		pmax		
	comp=Z,20nm,0.6s,mb4.8							
YSS				MLR		MLR		
	comp=Z,100nm,19.0s,MS3.3							
ASAJ	**Asahikawa**	**26.38**	**269**	P		**P**	**00 29 25.1**	**+0.5**
	comp=Z,13nm,0.7s,mb4.5,baz=5.0,slow=10,SNR=4.0							
ASAJ				LR		LR	00 41 00.6	
	comp=Z,148nm,18.9s,MS3.5,baz=142,slow=39							
ASAJ	**Asahikawa**	**26.38**	**269**	P		**P**	**00 29 25.2**	**+0.5**
ASAJ				pmax		pmax		
	comp=Z,13nm,0.7s							
ASAJ				MLR		MLR		
	comp=Z,148nm,18.9s							
INK	**Inuvik**	**27.77**	**35**	*e* P		**P**	**00 29 36.3**	**-0.7**
	comp=Z,362nm,1.0s,mb6.0							
DLBC	**Dease Lake**	**28.71**	**56**	P		**P**	**00 29 45.5**	**+0.1**
	comp=Z,1.5nm,0.8s,mb3.8,baz=270,slow=8.1,SNR=3.0							
YAK	**Yakutsk**	**29.27**	**311**	*i* P		**P**	**00 29 52.0**	**+1.7**
YAK				MLR		MLR		
	comp=Z,100nm,14.0s,MS3.6							
KLR	**Kul'dur**	**30.91**	**286**	*e* P		**P**	**00 30 00.0**	**-4.9**
KLR				*e*		pP	00 30 14.3	-3.3
MJAR	**Matsushiro Arr**	**33.44**	**261**	P		**P**	**00 30 26.5**	**-0.7**
	comp=Z,1.0nm,0.6s,mb4.0,baz=45,slow=8.2,SNR=3.5							
MJAR				LR		LR	00 42 35.3	
	comp=Z,96nm,19.0s,MS3.5,baz=35,slow=34							
MJAR	**Matsushiro Arr**	**33.44**	**261**	P		**P**	**00 30 26.5**	**-0.7**
MJAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MJAR				MLR		MLR		
	comp=Z,96nm,19.0s							
MDJ	**Mudanjiang**	**34.28**	**279**	P		**P**	**00 30 32.8**	**-1.6**
MDJ				AMB		AMB		
	comp=Z,8.0nm,0.9s,mb4.7							
MDJ				AMB		AMB		
	comp=Z,156nm,3.5s							
YKW3	**Yellowknife Ar**	**35.55**	**46**	*e* P		**P**	**00 30 44.6**	**-0.6**
YKA	**Yellowknife Ar**	**35.57**	**46**	P		**P**	**00 30 44.7**	**-0.6**
	comp=Z,7.5nm,0.7s,mb4.7,baz=282,slow=7.7,SNR=37							
YKA	**Yellowknife Ar**	**35.57**	**46**	P		**P**	**00 30 44.7**	**-0.6**
YKA	**Yellowknife Ar**	**35.57**	**46**	P		**P**	**00 30 44.7**	**-0.7**
YKA				pmax		pmax		
	comp=Z,8.0nm,0.7s							
NLWA	**Neilton Lookou**	**35.63**	**74**	*e* P		**P**	**00 30 47.0**	**+1.0**
	comp=Z,12nm,0.9s,mb4.8							
NLWA	**Neilton Lookou**	**35.63**	**74**	↓ P		**P**	**00 30 47.0**	**+0.9**
	baz=36							
A05A	**Maple Falls**	**35.98**	**71**	↓ P		**P**	**00 30 49.5**	**+0.5**
	baz=36							
C04A	**Brinnon**	**36.02**	**73**	↑ P		**P**	**00 30 49.8**	**+0.4**
	baz=36							
E03A	**Lebam**	**36.21**	**75**	↓ P		**P**	**00 30 52.1**	**+1.1**
	baz=36							
A06A	**Chilliwack**	**36.29**	**70**	↑ P		**P**	**00 30 52.4**	**+0.7**
	baz=36							
B05A	**Bryant**	**36.30**	**72**	↑ P		**P**	**00 30 52.6**	**+0.9**
	baz=36							
JCW	**Jim Creek**	**36.43**	**72**	*e* P		**P**	**00 30 54.0**	**+1.1**
B06A	**Marblemount**	**36.55**	**71**	↑ P		**P**	**00 30 54.3**	**+0.5**
	baz=36							
E04A	**Onalaska**	**36.70**	**74**	↓ P		**P**	**00 30 55.7**	**+0.6**
	baz=37							
C05A	**Tolt Reservoir**	**36.80**	**72**	↓ P		**P**	**00 30 56.3**	**+0.3**
	baz=37							
D05A	**Enumclaw**	**36.86**	**73**	↓ P		**P**	**00 30 56.8**	**+0.3**
	baz=37							
A07A	**Ashnola River,**	**36.96**	**70**	↑ P		**P**	**00 30 57.4**	**+0.1**
	baz=37,SNR=11							
LON	**Longmire**	**37.17**	**74**	*e* P		**P**	**00 30 59.9**	**+0.7**
	comp=Z,5.6nm,0.7s,mb4.5							
LON				*e*pP		pP	00 31 11.8	-0.3
LON	**Longmire**	**37.17**	**74**	*e* P		**P**	**00 30 59.9**	**+0.7**
LON				*e**PP		pP	00 31 11.8	-0.2
LON				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.5							
F04A	**Amboy**	**37.20**	**75**	↓ P		**P**	**00 30 59.6**	**+0.2**
	baz=37							
CN2	**Changchun**	**37.26**	**281**	*e* P		**P**	**00 30 57.5**	**-2.4**
CN2				*e*S		**S**	**00 36 40.0**	**-3.5**
CN2				AMB		AMB		
	comp=Z,10.0nm,1.5s,mb4.4							
CN2				LR		LR		
	comp=N,300nm,19.0s,MS4.3							
CN2				LR		LR		
	comp=E,300nm,19.0s,MS4.3							
CN2				LR		LR		
	comp=Z,300nm,21.0s,MS4.1							
E05A	**Randle**	**37.29**	**74**	↓ P		**P**	**00 31 00.9**	**+0.7**
	baz=37							
H03A	**Soap Creek Ran**	**37.30**	**78**	↑ P		**P**	**00 31 01.2**	**+1.0**
	baz=37							
B07A	**Winthrop**	**37.38**	**70**	↑ P		**P**	**00 31 00.9**	**0.0**
	baz=37,SNR=5.2							
G04A	**Mulino**	**37.52**	**76**	↓ P		**P**	**00 31 02.9**	**+0.7**
	baz=37							
D06A	**Cle Elum**	**37.54**	**73**	↓ P		**P**	**00 31 02.6**	**+0.2**
	baz=37							
ETW	**Entiat**	**37.66**	**72**	*e* P		**P**	**00 31 03.8**	**+0.6**
	comp=Z,11nm,0.8s,mb4.6							
A08A	**Turner Farm, O**	**37.66**	**69**	↑ P		**P**	**00 31 03.2**	**-0.1**
	baz=38,SNR=6.5							
E06A	**Yakima**	**37.77**	**74**	↑ P		**P**	**00 31 04.5**	**+0.3**
	baz=38							
C07A	**Waterville**	**37.77**	**71**	↑ P		**P**	**00 31 04.2**	**0.0**
	baz=38							
BOD	**Bodaibo**	**37.81**	**307**	*e* P		**P**	**00 31 03.2**	**-1.2**
BOD				pmax		pmax		
	comp=Z,34nm,0.7s,mb5.2							
B08A	**Colville Reser**	**37.90**	**70**	↑ P		**P**	**00 31 05.5**	**+0.2**
	baz=38,SNR=8.3							
H04A	**Detroit Lake**	**37.97**	**77**	↓ P		**P**	**00 31 06.4**	**+0.5**
	baz=38							
HOOD	**Mount Hood Mea**	**37.97**	**76**	*e* P		**P**	**00 31 06.4**	**+0.5**
	comp=Z,12nm,0.8s,mb4.7							
A09A	**Danville**	**38.05**	**69**	↓ P		**P**	**00 31 06.5**	**-0.1**
	baz=38,SNR=6.6							
D07A	**Quincy**	**38.06**	**72**	↓ P		**P**	**00 31 06.8**	**+0.1**
	baz=38,SNR=5.2							
G05A	**Wamic**	**38.22**	**76**	↑ P		**P**	**00 31 08.2**	**+0.2**
	baz=38							
F06A	**Goldendale**	**38.28**	**75**	↓ P		**P**	**00 31 08.9**	**+0.4**
	baz=38							
C08A	**Higginbotham F**	**38.34**	**71**	↓ P		**P**	**00 31 08.9**	**-0.1**
	baz=38							
E07A	**Sunnyside**	**38.44**	**73**	↓ P		**P**	**00 31 10.4**	**+0.5**
	baz=38							
B09A	**Rice**	**38.56**	**69**	↓ P		**P**	**00 31 10.9**	**0.0**
	baz=38,SNR=6.5							
H05A	**Madras**	**38.58**	**76**	↓ P		**P**	**00 31 11.6**	**+0.6**
	baz=38							
HUMO	**Hull Mountain**	**38.59**	**80**	*e* P		**P**	**00 31 12.7**	**+1.5**
	comp=Z,41nm,1.9s,mb4.8							
G06A	**Carlson Farm,**	**38.63**	**75**	↓ P		**P**	**00 31 11.7**	**+0.2**
	baz=38							
A10A	**Northport**	**38.65**	**68**	↑ P		**P**	**00 31 11.6**	**0.0**
	baz=38							
RSW	**Rattlesnake Hi**	**38.68**	**73**	*e* P		**P**	**00 31 12.6**	**+0.6**
	comp=Z,18nm,0.8s,mb4.8							
HAWA	**Hanford**	**38.72**	**73**	*e* P		**P**	**00 31 12.4**	**+0.2**
	comp=Z,25nm,1.4s,mb4.8							
HAWA				*e*pP		pP	00 31 25.0	-0.2
OD2	**Odessa Site #2**	**38.72**	**71**	*e* P		**P**	**00 31 12.3**	**+0.1**
	comp=Z,8.2nm,0.8s,mb4.5							
F07A	**Phinny Hill Vi**	**38.73**	**74**	↑ P		**P**	**00 31 12.7**	**+0.4**
	baz=39							
D08A	**Wollman Farm,**	**38.76**	**

comp=Z,21nm,1.1s,mb4.7
H09A **Durkee** 40.73 74 ⇑P P 00 31 28.8 -0.1
baz=41
B13A **Whitefish** 40.74 68 ⇑P P 00 31 28.6 -0.4
baz=41
BSMT **Bassoo Peak** 40.81 68 eP P 00 31 29.8 +0.2
K07A **Rock Creek Ran** 40.84 78 ⇑P P 00 31 30.3 +0.5
baz=41
BMO **Blue Mountains** 40.85 74 eP P 00 31 30.2 +0.3
comp=Z,5.3nm,0.9s,mb4.2
D12A **Red Ives Fores** 40.88 70 ⇑P P 00 31 29.9 -0.2
baz=41
J08A **Circle Bar Ran** 40.94 76 ⇓P P 00 31 31.1 +0.4
baz=41
C13A **Hot Springs** 41.02 69 ⇓P P 00 31 31.2 -0.1
baz=41,SNR=6.9
O04C **Chester** 41.04 82 ⇑P P 00 31 31.9 +0.3
baz=41
A14A **Double T Ranch** 41.05 66 ⇑P P 00 31 31.1 -0.4
baz=41,SNR=7.9
E12A **Beaver Dam Sad** 41.08 71 ⇑P P 00 31 31.3 -0.5
baz=41,SNR=8.3
L07A **Adell** 41.15 79 ⇓P P 00 31 33.1 +0.6
baz=41
G11A **Walters Elk Ra** 41.19 73 ⇓P P 00 31 32.4 -0.3
baz=41
K08A **Mann Creek Ran** 41.28 77 ⇓P P 00 31 33.4 -0.1
baz=41
H10A **Noah's Angus R** 41.33 74 ⇓P P 00 31 33.6 -0.3
baz=41
WVOR **Wild Horse Val** 41.35 78 eP P 00 31 35.1 +1.0
comp=Z,7.5nm,0.8s,mb4.4
WVOR **Wild Horse Val** 41.35 78 eP P 00 31 35.1 +1.0
WVOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
D13A **Huson** 41.39 69 ⇑P P 00 31 33.9 -0.4
baz=41
J09A **Fry Pan Ranch,** 41.39 76 ⇓P P 00 31 34.5 +0.2
baz=41
B14A **Marquette Ranc** 41.44 67 ⇑P P 00 31 34.3 -0.4
baz=41,SNR=10.0
A15A **Johnson Ranch,** 41.45 66 ⇓P P 00 31 34.2 -0.6
baz=41
C14A **Swan Lake** 41.46 68 ⇓P P 00 31 34.8 -0.2
baz=41
N06A **Buffalo Meadow** 41.57 81 ⇓P P 00 31 36.0 +0.2
baz=41
F12A **Elk City** 41.60 71 ⇑P P 00 31 35.9 -0.2
baz=42,SNR=11
M07A **Soldier Meadow** 41.61 79 ⇑P P 00 31 36.5 +0.3
baz=42
L08A **Fields** 41.67 78 ⇓P P 00 31 37.0 +0.3
baz=42
H11A **Donnelly** 41.71 73 ⇑P P 00 31 36.8 -0.2
baz=42
BEKR **Beckwourth** 41.76 82 ⇓P P 00 31 37.9 +0.5
baz=42
K09A **Rome** 41.76 77 ⇓P P 00 31 37.1 -0.3
baz=42
MSO **Missoula** 41.83 69 eP P 00 31 37.5 -0.4
comp=Z,5.5nm,0.8s,mb4.2
B15A **Bradely Ranch,** 41.88 67 ⇓P P 00 31 37.7 -0.6
baz=42,SNR=9.2
E13A **Victor** 41.88 70 ⇓P P 00 31 38.0 -0.4
baz=42
O06A **Flanigan** 41.91 81 ⇑P P 00 31 38.4 -0.3
baz=42
D14A **Greenough** 41.95 69 ⇓P P 00 31 38.3 -0.6
baz=42,SNR=17
M08A **Happy Creek Ra** 42.07 79 ⇑P P 00 31 40.2 +0.2
baz=42
N07B **Gerlach** 42.09 80 ⇑P P 00 31 40.4 +0.3
baz=42
A16A **West Butte Ran** 42.11 65 ⇑P P 00 31 39.4 -0.8
baz=42
C15A **Salmond Ranch,** 42.12 67 ⇓P P 00 31 40.1 -0.2
baz=42,SNR=24
F13A **Darby** 42.14 71 ⇑P P 00 31 40.1 -0.3
baz=42,SNR=7.2
CHMT **Chamberlain Mo** 42.19 69 eP P 00 31 40.5 -0.4
comp=Z,1.9nm,1.0s,mb3.7
K10A **MacKenzie Ranc** 42.24 76 ⇓P P 00 31 41.3 -0.1
baz=42
E14A **Clinton** 42.30 70 ⇑P P 00 31 41.6 -0.3
baz=42
B16A **M & M Farms, S** 42.32 66 ⇓P P 00 31 41.1 -0.8
baz=42
H12A **Diamond D Ranc** 42.49 73 ⇓P P 00 31 42.5 -0.8
baz=42
O07A **Toulon** 42.50 81 ⇑P P 00 31 43.7 +0.2
baz=42
MFID **Camas Ranch** 42.52 75 ⇓P P 00 31 43.4 -0.3
baz=42
D15A **Lincoln** 42.55 68 ⇓P P 00 31 43.0 -0.8
baz=42,SNR=8.0
G13A **Cobalt** 42.57 72 ⇑P P 00 31 43.8 -0.2
baz=42,SNR=5.5
N08A **GE Springer Mi** 42.60 79 ⇓P P 00 31 44.2 -0.1
baz=42
C16A **Fuhringer Ranc** 42.61 67 ⇑P P 00 31 43.8 -0.4
baz=42,SNR=12
A17A **Triple J Farms** 42.63 65 ⇑P P 00 31 43.5 -0.9
baz=42,SNR=9.5
F14A **Wisdom** 42.70 70 ⇓P P 00 31 44.5 -0.5
baz=42
I12A **Atlanta** 42.73 74 ⇓P P 00 31 45.2 -0.2
baz=43,SNR=15
K11A **Parker Ranch,** 42.76 76 ⇓P P 00 31 45.0 -0.5
baz=43
E15A **Deer Lodge** 42.80 69 ⇓P P 00 31 45.1 -0.8
baz=43,SNR=6.6
H13A **Challis** 42.84 72 ⇑P P 00 31 45.7 -0.4
baz=43
L10A **Juniper Basin** 42.88 77 ⇓P P 00 31 46.2 -0.3
baz=43
B17A **L&G Farms, Che** 42.90 66 ⇓P P 00 31 46.0 -0.6
baz=43,SNR=10
G14A **Jackson** 42.95 71 ⇑P P 00 31 46.8 -0.2
baz=43
J12A **Stokes Ranch,** 43.06 75 ⇓P P 00 31 47.9 0.0
baz=43
D16A **Dana Ranch, Ca** 43.12 68 ⇓P P 00 31 47.7 -0.7
baz=43
HRY **Holter Researc** 43.12 68 eP P 00 31 48.4 -0.1
comp=Z,5.7nm,0.8s,mb4.3
M10A **I.L. Ranch, Tu** 43.16 77 ⇑P P 00 31 48.7 -0.1
baz=43
C17A **Wharram Farm,** 43.26 67 ⇑P P 00 31 48.7 -0.8
baz=43,SNR=10
L11A **Cat Creek Ranc** 43.27 76 ⇓P P 00 31 49.7 0.0
baz=43,SNR=11
I13A **Wildhorse Cree** 43.28 73 ⇑P P 00 31 49.6 -0.2
baz=43,SNR=23
HLID **Hailey** 43.30 74 eP P 00 31 50.2 +0.3
comp=Z,10nm,0.9s,mb4.5
HLID **Hailey** 43.30 74 ⇓P P 00 31 49.8 0.0
baz=43,SNR=21
E16A **East Helena** 43.31 69 ⇓P P 00 31 49.7 -0.3
baz=43
H14A **Leadore** 43.34 72 ⇓P P 00 31 50.0 -0.2
baz=43,SNR=5.6
B18A **Beardsley Farm** 43.44 65 ⇓P P 00 31 50.3 -0.6
baz=43,SNR=6.9
K12A **Draper Farm, C** 43.52 75 ⇑P P 00 31 51.9 +0.3
baz=43,SNR=10
J13A **Cove Ranch, Pi** 43.53 74 ⇓P P 00 31 51.5 -0.3
baz=43,SNR=21
MCMT **McKenzie Canyo** 43.54 71 eP P 00 31 51.9 +0.1
comp=Z,3.3nm,0.6s,mb4.2
O09A **Fish Creek Ran** 43.55 80 ⇑P P 00 31 51.9 0.0
baz=43
D17A **Six Diamond Ra** 43.56 67 ⇓P P 00 31 51.6 -0.3
baz=43
G15A **Dillon** 43.57 71 ⇓P P 00 31 51.5 -0.5
baz=43,SNR=7.0
EGMT **Eagleton** 43.64 66 eP P 00 31 52.1 -0.4
comp=Z,20nm,0.9s,mb4.8
EGMT **Eagleton** 43.64 66 ⇓P P 00 31 52.2 -0.3
baz=44,SNR=11
M11A **Holland Ranch,** 43.67 77 ⇑P P 00 31 53.2 +0.3
baz=44
I14A **Mackay** 43.67 73 ⇑P P 00 31 52.8 -0.1
baz=44
L12A **House Creek Ra** 43.73 76 ⇓P P 00 31 53.7 +0.3
baz=44
F16A **Kennard Place,** 43.74 69 ⇑P P 00 31 53.0 -0.4
baz=44
H15A **Lima** 43.77 71 ⇑P P 00 31 53.7 0.0
baz=44
BOZ **Bozeman (W)** 43.81 70 eP P 00 31 53.8 -0.2
comp=Z,7.1nm,0.7s,mb4.5
BOZ **Bozeman (W)** 43.81 70 ⇓P P 00 31 53.7 -0.3
baz=44,SNR=12
BOZ **Bozeman (W)** 43.81 70 eP P 00 31 53.8 -0.2
BOZ pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
E17A **Martinsdale** 43.83 68 ⇑P P 00 31 54.1 0.0
baz=44,SNR=6.6
Q08A **Gabbs** 43.87 82 ⇓P P 00 31 54.3 -0.2
baz=44
T06C **Millerton Lake** 43.89 85 ⇑P P 00 31 54.2 -0.6
baz=44
NVAR **Mina Array Bea** 43.90 82 P P 00 31 55.3 +0.5
comp=Z,1.9nm,0.8s,mb3.9,baz=293,slow=8.6,SNR=7.8
G16A **Moss Hill, Enn** 43.94 70 ⇑P P 00 31 54.8 -0.2
baz=44,SNR=8.2
J14A **Carey** 43.97 73 ⇓P P 00 31 55.3 0.0
baz=44
D18A **Linhart Farms,** 44.05 67 ⇓P P 00 31 55.4 -0.5
baz=44,SNR=8.2
M12A **Wells** 44.21 77 ⇓P P 00 31 57.4 +0.2
baz=44
F17A **Fitzpatrick Pl** 44.24 69 ⇓P P 00 31 57.3 -0.2
baz=44
E18A **Harlowton** 44.32 68 ⇑P P 00 31 58.1 +0.1
baz=44,SNR=14
QLMT **Earthquake Lak** 44.38 70 eP P 00 31 58.7 +0.1
comp=Z,2.2nm,0.7s,mb4.0
MTUM **Tungsten Hills** 44.39 84 eP P 00 31 59.1 +0.3
L13A **Double Diamond** 44.42 75 ⇓P P 00 31 58.9 0.0
baz=44
N12A **Clover Valley,** 44.47 77 ⇑P P 00 31 59.5 +0.2
baz=44
O11A **Cowboy Ranch,** 44.51 79 ⇓P P 00 32 00.3 +0.6
baz=44
G17A **Pierce Place,** 44.52 70 ⇑P P 00 31 59.4 -0.3
baz=44
H16A **Russell Place,** 44.56 71 ⇑P P 00 31 59.7 -0.2
baz=44,SNR=9.1
J15A **Blackfoot** 44.58 73 ⇑P P 00 32 00.5 +0.3
baz=44
K14A **Jones Ranch, D** 44.62 74 ⇓P P 00 32 00.2 -0.3
baz=44
M13A **Montello** 44.70 76 ⇓P P 00 32 01.1 -0.1
baz=45
R09A **Tonopah** 44.78 82 ⇓P P 00 32 01.4 -0.4
baz=45
F18A **Big Timber** 44.80 68 ⇑P P 00 32 01.3 -0.5
baz=45
Q10A **Clear Creek Ra** 44.84 81 ⇓P P 00 32 02.1 -0.2
baz=45
L14A **Malta** 44.88 75 ⇓P P 00 32 03.0 +0.5
baz=45,SNR=7.2
I16A **Newdale** 44.88 72 ⇑P P 00 32 02.4 -0.1
baz=45,SNR=8.9
GCMT **Greycliff** 44.89 68 eP P 00 32 02.8 +0.2
comp=Z,3.2nm,0.7s,mb4.3
K15A **Arbon** 44.93 74 ⇑P P 00 32 03.0 +0.1
baz=45,SNR=13
YFT **Old Faithful** 44.94 71 eP P 00 32 04.7 +1.7
comp=Z,12nm,0.8s,mb4.8
O12A **Currie** 44.99 78 ⇑P P 00 32 03.7 +0.2
baz=45,SNR=13
S09A **Goldfield** 45.00 82 ⇑P P 00 32 03.8 +0.2
baz=45
VES **Vestal, Richgr** 45.02 86 ⇓P P 00 32 03.8 +0.1
baz=45
M14A **Sheep Mountain** 45.12 76 ⇓P P 00 32 04.6 +0.1
baz=45
H17A **Grant Village** 45.13 71 ⇓P P 00 32 04.9 +0.4
baz=45
J16A **Bone** 45.15 72 ⇓P P 00 32 04.6 -0.1
baz=45
IMW **Indian Meadow** 45.19 71 eP P 00 32 05.6 +0.6
comp=Z,4.8nm,0.8s,mb4.4
G18A **Lazy EL Ranch,** 45.21 69 ⇑P P 00 32 04.7 -0.4
baz=45
CWC **Cottonwood Cre** 45.27 84 ⇑P P 00 32 05.6 -0.1
baz=45
S10A **Tonopah Range,** 45.27 82 ⇓P P 00 32 05.8 +0.1
baz=45
RRI2 **Red Ridge** 45.28 72 eP P 00 32 06.5 +0.8
comp=Z,132nm,2.8s,mb5.3
Q11A **Duckwater** 45.29 80 ⇓P P 00 32 06.0 +0.1
baz=45
HVU **Hansel Valley** 45.31 75 eP P 00 32 06.2 +0.2
comp=Z,6.9nm,0.8s,mb4.5
HVU **Hansel Valley** 45.31 75 eP P 00 32 06.2 +0.2
HVU pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
GRAC **Grapevine Rang** 45.36 83 ⇓P P 00 32 06.5 0.0
baz=45
I17A **Pilgram Creek** 45.40 71 ⇓P P 00 32 06.8 +0.1
baz=45
L15A **Malad City** 45.41 74 ⇑P P 00 32 06.8 0.0
baz=45
K16A **Soda Springs** 45.41 73 ⇑P P 00 32 07.0 +0.2
baz=45,SNR=12
TPAW **Ten Pass** 45.42 72 eP P 00 32 08.0 +1.2
comp=Z,4.2nm,0.7s,mb4.4
RLMT **Red Lodge** 45.49 69 eP P 00 32 07.6 +0.2
comp=Z,13nm,0.8s,mb4.8
RLMT **Red Lodge** 45.49 69 ⇓P P 00 32 07.0 -0.4
baz=45,SNR=14
REDW **Red Top Meadow** 45.55 72 eP P 00 32 08.9 +1.1
comp=Z,18nm,1.8s,mb4.7
LOHW **Long Hollow** 45.55 71 eP P 00 32 08.7 +0.8
comp=Z,3.2nm,0.8s,mb4.3
N14A **Grayback Hills** 45.60 76 ⇑P P 00 32 08.5 +0.2
baz=46,SNR=9.4
R11A **Troy Canyon, C** 45.63 81 ⇓P P 00 32 08.5 -0.1
baz=46
BGU **Big Grassy Mou** 45.65 76 eP P 00 32 10.5 +1.8
comp=Z,6.0nm,1.0s,mb4.5
Q12A **Willow Creek R** 45.68 79 ⇓P P 00 32 08.9 0.0
baz=46
M15A **Larsen Ranch,** 45.69 75 ⇑P P 00 32 09.0 0.0
baz=46
TLY **Talaya** 45.87 302 eP P 00 32 11.1 +0.8
TLY **Talaya** 45.87 302 eP P 00 32 10.4 +0.1
TLY e 00 34 00.4
TLY pmax pmax
comp=Z,18nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,182nm,19.0s,MS4.0
MPMC **Manual Prospec** 45.88 84 ⇓P P 00 32 10.2 -0.3
baz=46
P13A **Bates Ranch, G** 45.93 78 ⇑P P 00 32 10.9 0.0
baz=46
I18A **Diamond G Ranc** 45.97 71 ⇑P P 00 32 11.1 -0.1
baz=46
L16A **Fish Haven** 45.98 74 ⇓P P 00 32 11.1 -0.2
baz=46
N15A **Stansbury Isla** 45.98 76 ⇓P P 00 32 11.6 +0.3
baz=46,SNR=8.1
FURC **Furnace Creek,** 46.01 83 ⇑P P 00 32 11.3 -0.2
baz=46
ULN **Ulaanbaatar** 46.04 296 eP P 00 32 12.2 +0.5
comp=Z,9.5nm,0.8s,mb4.8
ULN **Ulaanbaatar** 46.04 296 eP P 00 32 12.2 +0.6
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TPNV **Topopah Spring** 46.09 82 eP P 00 32 12.0 -0.2
comp=Z,3.7nm,0.9s,mb4.3
TPNV **Topopah Spring** 46.09 82 ⇓P P 00 32 11.9 -0.3
baz=46
TPNV **Topopah Spring** 46.09 82 eP P 00 32 12.0 -0.2
TPNV pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
J18A **Kendall Valley** 46.13 72 ⇓P P 00 32 12.5 0.0
baz=46,SNR=7.8
DUG **Dugway** 46.22 77 ⇑P P 00 32 13.1 -0.1
baz=46,SNR=9.0
DUG **Dugway** 46.22 77 eP P 00 32 13.9 +0.7
M16A **Huntsville** 46.27 75 ⇓P P 00 32 13.5 -0.1
baz=46,SNR=10
LAO **LASA Array** 46.38 65 eP P 00 32 14.7 +0.3
comp=Z,27nm,1.0s,mb5.1
SONM **Songino Array** 46.42 296 P P 00 32 15.2 +0.5
comp=Z,6.9nm,0.7s,mb4.7,baz=58,slow=9.4,SNR=25
SONM PcP PcP 00 33 48.2 -0.4
comp=Z,2.5nm,0.7s,baz=63,slow=2.8,SNR=4.5
SONM LR LR 00 53 28.6
comp=Z,295nm,18.4s,MS4.3,baz=62,slow=38
SONM **Songino Array** 46.42 296 P P 00 32 15.2 +0.5
SONM 00 33 48.2
SONM pmax pmax
comp=Z,7.0nm,0.7s
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM MLR MLR
comp=Z,295nm,18.4s
P14A **Drum Mountains** 46.43 77 ⇑P P 00 32 14.5 -0.3
baz=46,SNR=9.1
K18A **Toltan Ranch,** 46.45 72 ⇑P P 00 32 14.7 -0.3
baz=46,SNR=9.8
T11A **Corn Creek, Al** 46.55 81 ⇓P P 00 32 15.4 -0.4
baz=46
S12A **Delamar Landin** 46.55 81 ⇑P P 00 32 15.8 0.0
baz=46
BW06 **Boulder Array** 46.67 72 eP P 00 32 16.7 0.0
BW06 **Boulder Array** 46.67 72 ⇑P P 00 32 16.6 -0.1
baz=46,SNR=19
PDAR **Pinedale Array** 46.67 72 P P 00 32 16.6 -0.1
comp=Z,11nm,0.7s,mb4.9,baz=308,slow=4.0,SNR=61
PDAR LR LR 00 49 55.8
comp=Z,149nm,19.0s,MS4.0,baz=1.9,slow=34
Q14A **Sevier Lake (B** 46.67 78 ⇓P P 00 32 16.7 0.0
baz=46,SNR=14
ZAK **Zakamensk** 46.75 301 ⇓P P 00 32 17.2 0.0
ZAK pmax pmax
comp=Z,19nm,1.2s,mb4.9
M17A **Scullys Gap (B** 46.76 74 ⇑P P 00 32 17.3 -0.2
baz=47
GSC **Goldstone** 46.79 85 eP P 00 32 17.3 -0.4
comp=Z,4.4nm,0.7s,mb4.5
GSC **Goldstone** 46.79 85 eP P 00 32 17.3 -0.4
GSC pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
JLU **Jordanelle** 46.81 75 eP P 00 32 20.4 +2.6
L18A **Fontenelle, Gr** 46.88 73 ⇓P P 00 32 18.1 -0.2
baz=47
N17A **Moffit Pass** 46.98 75 ⇓P P 00 32 18.7 -0.4
baz=47
DAU **Daniels Canyon** 47.04 75 eP P 00 32 21.1 +1.5
comp=Z,11nm,1.2s,mb4.7
DAU **Daniels Canyon** 47.04 75 eP P 00 32 21.1 +1.5
DAU pmax pmax
comp=Z,11nm,1.2s,mb4.7
K19A **Absolon Red Bu** 47.06 71 ⇓P P 00 32 19.1 -0.6
baz=47,SNR=15
L19A **Farson** 47.18 72 ⇓P P 00 32 20.6 -0.1
baz=47
V11A **Goodsprings** 47.30 83 ⇓P P 00 32 21.6 -0.1
baz=47
HHC **Hu-ho-hao-te** 47.42 286 eP P 00 32 23.0 +0.5
HHC AP pP 00 32 36.5 +0.8
HHC PCP PcP 00 33 55.0 +2.7
HHC PP PP 00 34 14.0 +0.2
HHC S S 00 39 12.5 -0.6
HHC SCS ScS 00 42 09.8 -1.9
HHC SS SS 00 42 31.3 -9.4
HHC AMB AMB
comp=Z,12nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,284nm,6.4s
HHC LR LR
comp=N,235nm,17.8s,MS4.4
HHC LR LR
comp=E,281nm,17.8s,MS4.4
HHC LR LR
comp=Z,182nm,20.2s,MS4.0
K20A **Yellowstone Ra** 47.46 71 ⇑P P 00 32 22.2 -0.6
baz=47
MSU **Marysvale** 47.64 78 eP P 00 32 25.3 +1.0
comp=Z,3.2nm,1.0s,mb4.3
MSU **Marysvale** 47.64 78 eP P 00 32 25.3 +1.0
MSU pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
N18A **Larsen Ranch,** 47.66 74 ⇓P P 00 32 23.9 -0.5
baz=48
U13A **Pakoon Wash** 47.85 81 ⇑P P 00 32 25.8 -0.2
baz=48
O18A **Roosevelt** 47.89 75 ⇓P P 00 32 25.8 -0.4
baz=48
LDFC **Landfair** 47.99 84 eP P 00 32 27.3 +0.2
comp=Z,7.7nm,1.6s,mb4.5
Q16A **Castle Valley** 48.01 77 ⇓P P 00 32 27.3 +0.2
baz=48
V13A **Grand Canyon W** 48.20 82 ⇑P P 00 32 28.5 -0.1
baz=48
M20A **Sweetwater, Wa** 48.24 72 ⇑P P 00 32 28.5 -0.4
baz=48
U14A **Mt Tumbull** 48.34 81 ⇑P P 00 32 29.5 -0.2
baz=48
L21A **Rawlins** 48.45 71 ⇓P P 00 32 30.0 -0.5
baz=48,SNR=6.8
T15A **Red Dirt Ranch** 48.45 80 ⇑P P 00 32 30.4 -0.1
baz=48
NJ2 **Nanjing** 48.49 272 eP P 00 32 32.5 +1.6
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.6
S16A **Weppner Ranch,** 48.49 78 ⇑P P 00 32 30.7 -0.1
baz=48
Q18A **Rafter H Ranch** 48.53 76 ⇑P P 00 32 30.9 -0.2
baz=48
IRM **Iron Mountain** 48.56 85 ⇑P P 00 32 31.6 +0.1
baz=48
W13A **Hualapai Mount** 48.74 83 ⇑P P 00 32 32.6 -0.2
baz=49
U15A **North Rim** 48.88 80 ⇓P P 00 32 33.7 -0.2
baz=49,SNR=11
V14A **Boquillas Ranc** 48.88 82 ⇓P P 00 32 33.5 -0.4
baz=49
P19A **Cripple Cowboy** 48.90 75 ⇓P P 00 32 33.6 -0.4
baz=49,SNR=16
S17A **Black Ridge (B** 49.03 78 ⇑P P 00 32 34.8 -0.3
baz=49
R18A **Canyonlands Na** 49.12 77 ⇓P P 00 32 35.4 -0.3
baz=49
RSSD **Black Hills** 49.12 67 eP P 00 32 35.1 -0.5
comp=Z,3.0nm,0.6s,mb4.5
RSSD **Black Hills** 49.12 67 eP P 00 32 35.1 -0.5
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
Q19A **Hogan Spring (** 49.15 76 ⇓P P 00 32 35.4 -0.5
baz=49
V15A **Kaibab Nationa** 49.34 81 ⇑P P 00 32 37.0 -0.4
baz=49,SNR=7.2
T17A **Navajo Res., N** 49.44 79 ⇑P P 00 32 37.7 -0.4
baz=49
S18A **Hurst Farm, Bl** 49.49 77 ⇑P P 00 32 38.1 -0.4
baz=49,SNR=13
GLA **Glamis** 49.50 85 eP P 00 32 38.1 -0.5
comp=Z,4.4nm,1.0s,mb4.4
GLA **Glamis** 49.50 85 ⇑P P 00 32 38.1 -0.5
baz=49
GLA **Glamis** 49.50 85 eP P 00 32 38.1 -0.5
GLA pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
R19A **Curley Farm, L** 49.56 76 ⇓P P 00 32 39.0 -0.1
baz=49
PV10 **Paradox Valley** 49.65 76 eP P 00 32 40.4 +0.7
comp=Z,357nm,0.8s
X14A **Yava** 49.77 83 ⇑P P 00 32 40.6 -0.1
baz=50
T18A **Mexican Hat** 49.92 78 ⇓P P 00 32 41.3 -0.5
baz=50,SNR=5.5
S19A **Harvey Farm, M** 49.99 77 ⇑P P 00 32 41.7 -0.5
baz=50,SNR=12
WUAZ **Wupatki** 50.03 81 eP P 00 32 42.3 -0.4
comp=Z,6.5nm,1.5s,mb4.4
WUAZ **Wupatki** 50.03 81 ⇓P P 00 32 42.4 -0.3
baz=50
ULM **Lac du Bonnet** 50.04 56 LR LR 00 53 50.3
comp=Z,206nm,21.3s,MS4.1,baz=268,slow=36
PV01 **Paradox Valley** 50.09 76 eP P 00 32 43.1 +0.1
comp=Z,646nm,0.6s
X15A **Humboldt** 50.17 82 ⇑P P 00 32 43.6 -0.1
baz=50
W16A **Flagstaff** 50.21 81 ⇑P P 00 32 44.2 +0.2
baz=50
U18A **Rough Rock, Ch** 50.38 79 ⇑P P 00 32 45.4 +0.1
baz=50
SMCO **Snowmass** 50.40 74 eP P 00 32 46.6 +1.2
Y15A **Casa Rosa Ranc** 50.46 83 ⇓P P 00 32 45.8 -0.1
baz=50
SPITS **Spitsbergen Ar** 50.51 356 P P 00 32 45.2 -0.4
comp=Z,9.1nm,0.4s,mb5.0,baz=43,slow=8.8,SNR=44
SPITS **Spitsbergen Ar** 50.51 356 P P 00 32 45.2 -0.4
SPITS **Spitsbergen Ar** 50.51 356 P P 00 32 45.2 -0.5
SPITS pmax pmax
comp=Z,9.0nm,0.4s

T19A Beclabito 50.64 78 ⇓P P **00 32 46.7 -0.5**
baz=50,SNR=12
X16A Lo Mia Camp, P 50.71 82 ⇓P P **00 32 47.7 -0.1**
baz=51
MVCO Mesa Verde 50.72 77 *e*P P **00 32 51.1 +3.3**
comp=Z,6.3nm,0.7s,mb4.7
Y16A Circle Bar Ran 51.04 82 ⇓P P **00 32 50.3 0.0**
baz=51
HVS Khovu-Aksy 51.34 306*d i*P P **00 32 52.5 +0.2**
HVS pmax pmax
comp=Z,339nm,1.9s,mb6.0
115A Sonoran Desert 51.36 84 ⇑P P **00 32 52.5 -0.2**
baz=51
Y17A Roosevelt 51.56 82 ⇑P P **00 32 53.9 -0.2**
baz=51
Y18A Canyon Day Jun 52.01 81 ⇓P P **00 32 57.9 +0.4**
baz=52
117A Oracle 52.38 83 ⇓P P **00 33 00.2 -0.1**
baz=52
118A Homack Ranch, 52.81 82 ⇑P P **00 33 03.1 -0.3**
baz=53
119A Ashpeak Ranch, 53.14 82 ⇑P P **00 33 05.7 -0.2**
baz=53
218A Dragoon 53.21 83 ⇓P P **00 33 06.1 -0.3**
baz=53
LAZ Ladron 53.39 79 *e*P P **00 33 08.0 +0.3**
comp=Z,2.0nm,0.8s,mb4.1
LAZ *e*PP PP 00 35 09.4 +1.3
ECSD EROS,Sioux Fal 53.59 63 *e*P P **00 33 07.7 -1.3**
318A Bisbee 53.61 83 ⇓P P **00 33 09.1 -0.3**
baz=54
ZAA0 Zalesovo Array 53.90 313 *e*P P **00 33 10.6 -0.5**
ZALV Zalesovo Beam 53.90 313 P P **00 33 10.5 -0.6**
comp=Z,1.4nm,0.4s,mb4.3,baz=45,slow=7.1,SNR=8.7
ZALV PcP PcP 00 34 16.9 +0.9
comp=Z,3.2nm,0.7s,baz=34,slow=3.9,SNR=6.6
ZALV Zalesovo Beam 53.90 313 P P **00 33 10.5 -0.6**
ZALV 00 34 16.9
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
NVS Novosibirsk 54.05 315 *e*P P **00 33 10.6 -1.6**
CBKS Cedar Bluff 54.96 70 *e*P P **00 33 18.6 -0.4**
comp=Z,14nm,0.8s,mb5.0
CBKS Cedar Bluff 54.96 70 *e*P P **00 33 18.7 -0.3**
CBKS pmax pmax
comp=Z,14nm,0.8s,mb5.0
LZH Lanzhou 55.11 286 *e*P P **00 33 20.5 +0.3**
LZH AP pP 00 33 33.5 -0.2
LZH XP sP 00 33 38.5 -0.8
LZH *e*PP PP 00 35 25.3 +1.7
LZH *e*S **S** **00 40 56.0 -3.3**
LZH XS sS 00 41 18.3 -3.5
LZH *e*SS SS 00 44 41.5 -1.7
LZH AMB AMB
comp=Z,19nm,1.4s,mb4.9
LZH AMB AMB
comp=Z,121nm,6.7s
LZH LR LR
comp=N,585nm,14.7s
LZH LR LR
comp=Z,812nm,17.8s,MS4.8
GTA Gaotai 55.32 292 ⇑P P **00 33 22.0 +0.3**
GTA AP pP 00 33 35.0 -0.1
GTA XP sP 00 33 40.5 -0.2
GTA S **S** **00 41 02.8 +0.8**
GTA AMB AMB
comp=Z,13nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,136nm,4.2s
GTA LR LR
comp=N,209nm,16.2s,MS4.5
GTA LR LR
comp=E,276nm,16.2s,MS4.5
GTA LR LR
comp=Z,207nm,15.0s,MS4.3
ARCES ARCESS Array B 58.19 350 P P **00 33 40.4 -1.2**
comp=Z,5.0nm,0.6s,mb4.7,baz=24,slow=6.8,SNR=16
ARCES ARCESS Array B 58.19 350 P P **00 33 40.4 -1.1**
ARCES pmax pmax
comp=Z,5.0nm,0.6s
WMOK Wichita Mounta 58.25 73 *e*P P **00 33 42.0 -0.5**
comp=Z,3.1nm,0.7s,mb4.5
WMOK Wichita Mounta 58.25 73 *e*P P **00 33 42.0 -0.5**
WMOK pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
LVZ Lovozero 58.51 346⇓ *e*P P **00 33 42.2 -1.6**
LVZ pmax pmax
comp=Z,56nm,1.4s,mb5.4
CD2 Chengdu 58.69 281 *e*P P **00 33 45.5 -0.1**
CD2 AP pP 00 33 58.3 -0.9
CD2 XP sP 00 34 03.5 -1.2
CD2 PP PP 00 35 56.5 +1.0
CD2 S **S** **00 41 43.3 -3.2**
CD2 XS sS 00 42 05.3 -3.9
CD2 SS SS 00 45 37.5 -2.1
CD2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
CD2 AMB AMB
comp=Z,80nm,4.8s
CD2 LR LR
comp=N,300nm,13.2s,MS4.8
CD2 LR LR
comp=E,320nm,12.0s,MS4.8
CD2 LR LR
comp=Z,180nm,12.6s,MS4.4
KURK Kurchatov 58.89 313 *e*P P **00 33 46.2 -0.5**
comp=Z,20nm,0.6s,mb5.3
KURK *e*PcP PcP 00 34 36.4 +0.9
KURK Kurchatov 58.89 313 *e*P P **00 33 46.2 -0.5**
KURK *e* 00 34 36.4
KURK pmax pmax
comp=Z,21nm,0.6s,mb5.3
TXAR Lajitas Array 59.00 81 P P **00 33 46.8 -1.0**
comp=Z,1.8nm,0.8s,mb4.2,baz=308,slow=5.0,SNR=22
TXAR Lajitas Array 59.00 81 P P **00 33 46.8 -1.0**
TXAR pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 59.15 303 P P **00 33 49.0 +0.4**
WMQ XP sP 00 34 07.0 -0.8
WMQ PP PP 00 36 01.0 +1.7
WMQ S **S** **00 41 51.0 -1.2**
WMQ SCS ScS 00 43 31.0 -3.1
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,75nm,5.0s
WMQ LR LR
comp=N,215nm,18.0s,MS4.4
WMQ LR LR
comp=E,158nm,18.0s,MS4.4
WMQ LR LR
comp=Z,195nm,18.0s,MS4.3
MK31 Makanchi Array 59.87 308 *e*P P **00 33 53.2 -0.3**
MKAR Makanchi Array 59.87 308 P P **00 33 53.0 -0.5**
comp=Z,11nm,0.5s,mb5.1,baz=50,slow=6.0,SNR=88
MKAR Makanchi Array 59.87 308 P P **00 33 53.0 -0.5**
MKAR pmax pmax
comp=Z,11nm,0.5s
GYA Guiyang 60.01 276 P P **00 33 54.8 0.0**
GYA AP pP 00 34 09.8 +1.4
GYA PP PP 00 36 10.5 +3.2
GYA SCP ScP 00 38 36.8 -0.3
GYA PCS PcS 00 38 42.0 -0.9
GYA S **S** **00 42 01.3 -2.5**
GYA XS sS 00 42 22.5 -4.1
GYA SCS ScS 00 43 36.0 -5.1
GYA SS SS 00 45 58.3 -2.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,100nm,5.4s
GYA LR LR
comp=N,380nm,19.3s,MS4.6
GYA LR LR
comp=E,120nm,18.2s,MS4.6
GYA LR LR
comp=Z,400nm,17.9s,MS4.6
SCHQ Schefferville 60.33 38 P P **00 33 55.5 -1.0**
comp=Z,5.0nm,0.6s,mb4.7,baz=359,slow=6.7,SNR=7.7
BRVK Borovoye 60.81 320 *e*P P **00 33 59.1 -0.7**
comp=Z,12nm,1.0s,mb5.0
BRVK *e*PcP PcP 00 34 43.5 +0.3
BRVK Borovoye 60.81 320 *e*P P **00 33 59.1 -0.8**
BRVK *e* 00 34 43.5
BRVK pmax pmax
comp=Z,12nm,1.0s,mb5.0
USIN University of 62.48 63 *e*P P **00 34 10.6 -0.7**
comp=Z,14nm,0.6s,mb5.3
ARU Arti 62.56 328*d i*P P **00 34 11.1 -0.5**
ARU *e* 00 36 28.1
ARU *e*S **S** **00 42 35.7 +0.4**
ARU *e*SS SS 00 46 39.7 +0.7
ARU pmax pmax
comp=Z,15nm,1.5s,mb4.9
WCI Wyandotte Cave 63.06 62 *e*P P **00 34 14.6 -0.6**
comp=Z,11nm,0.8s,mb5.0
WCI Wyandotte Cave 63.06 62 *e*P P **00 34 14.6 -0.6**
WCI pmax pmax
comp=Z,11nm,0.8s,mb5.0
KMI Kunming 63.42 278 P P **00 34 17.8 0.0**
KMI AMB AMB
comp=Z,11nm,0.8s,mb5.0
JOF Joensuu 63.66 345 *e*p P **00 34 17.8 -0.9**
comp=Z,3.1nm,0.4s,mb4.7
JOF Joensuu 63.66 345 *e*P P **00 34 17.8 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KAF Kangasniemi 65.19 347 *e*p P **00 34 27.5 -1.2**
comp=Z,3.0nm,0.3s,mb4.8,baz=15,slow=5.9
KAF Kangasniemi 65.19 347 *e*P P **00 34 27.5 -1.2**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
SWET Sewanee 65.42 64 *e*P P **00 34 29.9 -0.7**
TKM2 Tokmak 2 65.96 309 *e*P P **00 34 34.6 +0.6**
comp=Z,18nm,1.1s,mb5.0
TKM2 Tokmak 2 65.96 309 *e*P P **00 34 34.6 +0.6**
TKM2 pmax pmax
comp=Z,18nm,1.1s,mb5.0
TKM2 Tokmak 2 65.96 309 P P **00 34 35.2 +1.2**
SNR=11
EKS2 Ospenovka 66.23 310 P P **00 34 36.2 +0.4**
SNR=12
USP Ospenovka 66.23 310 P P **00 34 36.2 +0.4**
SNR=12
CHMS Chumysh 66.31 310 P P **00 34 37.5 +1.2**
SNR=5.6
KBK Karagaybulak 66.47 309 P P **00 34 38.6 +1.3**
SNR=14
AAK Ala-Archa 66.71 310 P P **00 34 39.6 +0.7**
SNR=11
EKS2 Erkin-Say 67.04 310 *e*P P **00 34 41.7 +0.8**
comp=Z,16nm,0.7s,mb5.2
EKS2 pP pP 00 34 51.8 -2.9
EKS2 Erkin-Say 67.04 310 P P **00 34 41.8 +0.8**
SNR=23
LSA Lhasa 67.18 289 P P **00 34 43.5 +1.5**
LSA Lhasa 67.18 289 *e*P P **00 34 43.4 +1.3**
comp=Z,7.5nm,0.7s,mb4.8
LSA Lhasa 67.18 289 *e*P P **00 34 43.4 +1.4**
LSA pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
AML Almayashu 67.48 310 P P **00 34 45.8 +2.1**
SNR=15
NB2 NORSAR Subarra 67.77 354 P P **00 34 44.7 -0.5**
comp=Z,2.0nm,0.5s,mb4.4,baz=6.8,slow=6.5
NOA NORSAR Array B 67.77 354 P P **00 34 44.8 -0.4**
comp=Z,3.7nm,0.6s,mb4.6,baz=7.3,slow=6.3,SNR=11
NOA LR LR 01 07 35.2
comp=Z,214nm,18.3s,MS4.4,baz=245,slow=39
NOA NORSAR Array B 67.77 354 P P **00 34 44.8 -0.4**
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA MLR MLR
comp=Z,214nm,18.3s
AB31 Akbulak array 67.86 323 P P **00 34 45.3 -0.7**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KK31 Karatay Array 68.25 312 *i* P P **00 34 48.5 0.0**
KK31 pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KSH Kashi 68.33 306 *e*P P **00 34 51.0 +1.9**
KSH *e*AP pP 00 35 04.0 +1.1
KSH *e*XP sP 00 35 09.3 +0.8
KSH *e*PCP PcP 00 35 17.3 +2.9
KSH *e*PP PP 00 37 23.3 +3.5
KSH *e*SCP 00 39 16.0
KSH *e*PCS 00 39 21.3
KSH *e*S S 00 43 45.3 -1.0
KSH *e*XS sS 00 44 06.0 -3.5
KSH *e*SS SS 00 48 07.5 -1.9
KSH AMB AMB
comp=Z,1μm,5.4s
KSH LR LR
comp=N,449nm,4.2s
KSH LR LR
comp=E,486nm,4.2s
KSH LR LR
comp=Z,547nm,5.5s
SHL Shillong 69.78 286 *e*P P **00 35 00.0 +1.7**
OBN Obninsk 69.90 339⇑ *e*P P **00 34 57.7 -0.8**
OBN *e**PP pP 00 35 15.5 +3.1
OBN *e* 00 37 29.3
OBN *e*S S 00 44 00.0 -4.3
OBN pmax pmax
comp=Z,33nm,0.9s,mb5.3
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
CMAR Chiang Mai Arr 70.70 276 P P **00 35 03.1 -0.9**
comp=Z,1.6nm,0.3s,mb4.4,baz=24,slow=7.0,SNR=11
CMAR Chiang Mai Arr 70.70 276 P P **00 35 03.1 -0.9**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
TAPN Taplejung 70.95 290 *e*P P **00 35 05.9 +0.5**
comp=Z,34nm,0.7s,mb5.4
ODAN Odare 71.51 290 *e*P P **00 35 09.0 +0.2**
comp=Z,18nm,0.7s,mb5.2
GUN Gumba 71.61 292 *e*P P **00 35 10.2 +0.8**
comp=Z,96nm,0.5s,mb6.0
JIRN Jiri 71.62 291 *e*P P **00 35 10.3 +0.9**
comp=Z,58nm,0.6s,mb5.7
RAMN Ramite 71.91 290 *e*P P **00 35 11.5 +0.3**
comp=Z,52nm,0.5s,mb5.7
KKN Kakani 72.05 292 *e*P P **00 35 12.5 +0.5**
comp=Z,37nm,0.6s,mb5.5
KKN Kakani 72.05 292 *e*P P **00 35 12.5 +0.5**
KKN pmax pmax
comp=Z,37nm,0.6s,mb5.5
PKI Pulchoki 72.14 292 *e*P P **00 35 12.8 +0.2**
comp=Z,28nm,0.6s,mb5.4
PKI Pulchoki 72.14 292 *e*P P **00 35 12.8 +0.2**
PKI pmax pmax
comp=Z,28nm,0.6s,mb5.4
GKN Gorkha 72.27 293 *e*P P **00 35 13.5 +0.2**
comp=Z,23nm,0.5s,mb5.4
DMN Daman 72.29 292 *e*P P **00 35 14.0 +0.5**
comp=Z,14nm,0.6s,mb5.1
DANN Dangsing 72.51 293 *e*P P **00 35 15.3 +0.5**
comp=Z,47nm,0.7s,mb5.5
KOLN Koldanda 73.04 293 *e*P P **00 35 18.0 +0.1**
comp=Z,22nm,0.9s,mb5.1
PYUN Piuthan 73.14 294 *e*P P **00 35 18.7 +0.2**
comp=Z,17nm,0.7s,mb5.1
KLP Kalpa 73.20 299 *e*P P **00 35 19.5 +0.7**
JOSI Joshimath 73.22 298 *e*P P **00 35 19.0 0.0**
PPT Papeete 73.29 150 LR LR 00 59 59.0
comp=Z,146nm,19.5s,MS4.3,baz=75,slow=30
SMLA Simla 74.10 300 *e*P P **00 35 24.0 -0.1**
DMUB Kingscourt 75.05 5 *e*P P **00 35 29.1 -0.1**
AKASG Malin Array Be 75.59 342 P P **00 35 31.8 -0.6**
comp=Z,23nm,0.4s,mb5.5,baz=20,slow=6.6,SNR=106
AKASG Malin Array Be 75.59 342 P P **00 35 31.8 -0.6**
AKASG pmax pmax
comp=Z,23nm,0.4s
KIEV Kiev 75.60 342 *e*P P **00 35 31.9 -0.6**
comp=Z,38nm,0.5s,mb5.6
KIEV Kiev 75.60 342 *e*P P **00 35 31.9 -0.5**
KIEV pmax pmax
comp=Z,38nm,0.5s,mb5.6
KBL Kabul 75.67 308 *e*P P **00 35 33.0 -0.1**
comp=Z,33nm,0.8s,mb5.3
KBL Kabul 75.67 308 *e*P P **00 35 33.0 -0.1**
KBL pmax pmax
comp=Z,33nm,0.8s,mb5.3
DLF Lyons Farm 75.68 4 *e*P P **00 35 31.7 -1.1**
AYAN Aya Nagar 76.16 298 *e*P P **00 35 34.3 -1.7**
AYAN AMb AMB 00 35 37.6
comp=Z,5.7nm,0.1s,mb5.3
AGRA Agra 76.68 297 *e*P P **00 35 38.1 -0.8**
AGRA AMb AMB 00 35 44.2
comp=Z,51nm,0.2s,mb6.1
KUDL Kundal 76.78 298 *e*P P **00 35 38.9 -0.6**
KHET Khetri 77.21 299 *e*P P **00 35 41.6 -0.3**
KHET AMb AMB 00 35 43.5
comp=Z,8.0nm,1.2s,mb4.5
CLL Collm 77.31 352 *i* P P **00 35 41.4 -0.7**
CLL pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
CLL Collm 77.31 352 *e*P P **00 35 41.4 -0.7**
comp=Z,8.0nm,0.7s,mb4.8
CLL Collm 77.31 352 *i* P P **00 35 41.4 -0.7**
comp=Z,8.0nm,0.7s,mb4.8
LVV L'vov 77.38 345 *e*P P **00 35 42.1 -0.4**
OJC Ojcow 77.63 348 *e*P P **00 35 44.1 +0.2**
BRG Berggiesshubel 77.66 351 *i* P P **00 35 43.6 -0.4**
BRG pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BRG Berggiesshubel 77.66 351 *e*P P **00 35 43.4 -0.6**
comp=Z,6.0nm,0.6s,mb4.7
BRG Berggiesshubel 77.66 351 *i* P P **00 35 43.5 -0.5**
comp=Z,6.3nm,0.7s,mb4.7
FBE Freiberg 77.66 352 *e*P P **00 35 44.4 +0.3**
comp=Z,11nm,1.0s,mb4.7
KWP Kalwaria 77.78 346 *e*P P **00 35 45.2 +0.4**
comp=Z,50nm,0.4s,mb5.8
KWP Kalwaria 77.78 346 *e*P P **00 35 45.2 +0.5**
KWP pmax pmax
comp=Z,50nm,0.4s,mb5.8
KWP Kalwaria 77.78 346⇑ *i*P P **00 35 45.1 +0.4**
UPC Upice 77.81 350 *e*P P **00 35 44.8 -0.1**
DPC Dobruska-Polom 77.93 350 *e*P P **00 35 45.5 -0.1**
PVCC Panska Ves 77.94 351 *e*P P **00 35 45.6 0.0**
MOX Moxa 78.08 353 *e*P P **00 35 46.0 -0.4**
comp=Z,11nm,1.1s,mb4.8
STHS Stebnicka Huta 78.21 346 *e*P P **00 35 47.8 +0.7**
STHS pmax pmax
comp=Z,11nm,0.7s,mb4.9
OKC Ostrava-Krasne 78.22 349 *e*P P **00 35 46.9 -0.3**
UCC Uccle 78.31 358 P P **00 35 47.9 +0.3**
WERN Wernitzgruen 78.38 352 *e*P P **00 35 48.1 +0.1**
comp=Z,13nm,0.9s,mb4.9
MEM Membach 78.44 357 P P **00 35 48.3 -0.1**
comp=Z,7.5nm,1.0s,mb4.6
KIV Kislovodsk 78.44 330 *e*P P **00 35 48.4 -0.1**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KIV MLR MLR
comp=Z,126nm,19.0s,MS4.3
PRU Puhonice 78.47 351 *e*P P **00 35 48.5 -0.1**
KOLS Kolonicke sedl 78.53 346 *i* P P **00 35 49.0 +0.1**
KOLS pmax pmax
comp=Z,14nm,0.8s,mb4.9
BCLA Clavier 78.66 357 P P **00 35 49.5 -0.1**
CRVS Cervenica-Dubn 78.68 346 *i* P P **00 35 49.9 +0.2**
CRVS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
UZH Uzhgorod 78.81 346⇑ *i*P P **00 35 50.5 0.0**
UZH *e* pP 00 36 02.0 -2.6
GIVF Givet 78.99 357 *e*P P **00 35 51.2 -0.2**
comp=Z,36nm,1.1s,mb4.9
GIVF Givet 78.99 357 *e*P P **00 35 51.2 -0.2**
comp=Z,18nm,1.1s,mb4.9
GIVF Givet 78.99 357 *e*P P **00 35 51.2 -0.2**
GIVF pmax pmax
comp=Z,18nm,1.1s,mb4.9
DOU Dourbes 79.00 357 P P **00 35 51.5 0.0**
comp=Z,10nm,1.5s,mb4.5
BAIF Baives 79.05 358⇑ *i*P P **00 35 51.8 +0.1**
comp=Z,39nm,0.9s,mb5.0
BAIF Baives 79.05 358⇑ *i*P P **00 35 51.8 +0.1**
comp=Z,19nm,0.9s,mb5.0
BAIF Baives 79.05 358⇑ *i*P P **00 35 51.8 +0.1**
BAIF pmax pmax
comp=Z,19nm,0.9s,mb5.0
GRF Grafenberg Arr 79.06 353 *e*P P **00 35 52.1 +0.3**
GRF pmax pmax
comp=Z,16nm,0.7s,mb5.1
GRF Grafenberg Arr 79.06 353 *e*P P **00 35 52.1 +0.3**
GRF pmax pmax
comp=Z,16nm,0.7s,mb5.1
GRF Grafenberg Arr 79.06 353 *e*P P **00 35 52.1 +0.3**
comp=Z,16nm,0.7s,mb5.1
TREC Trest 79.06 350 *e*P P **00 35 51.7 -0.1**
TRPA Tarpa 79.26 345⇑ *i*P P **00 35 53.4 +0.5**
BUR08 Bucovina Ar. S 79.28 343 *e*P P **00 35 53.5 +0.5**
BURAR Bucovina Array 79.31 343⇑ *i*P P **00 35 53.6 +0.4**
WLF Walferdange 79.38 356 P P **00 35 54.1 +0.6**
KHC Kasperske Hory 79.42 351 *e*P P **00 35 53.7 -0.1**
KOLL Kolacno 79.42 348 *e*P P **00 35 54.3 +0.5**
KOLL *e*pP pP 00 35 59.2 -8.7
VYHS Vyhne 79.45 348 *i* P P **00 35 54.1 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BMR Baia Mare 79.55 345⇑ *i*P P **00 35 53.1 -1.4**
BMR Baia Mare 79.55 345⇑ *i*P P **00 35 53.1 -1.4**
GEC2 GERESS Array S 79.69 351 *e*P P **00 35 55.1 -0.1**
GEC2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GEC2 GERESS Array S 79.69 351 *e*P P **00 35 55.1 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
GERES GERESS Array B 79.69 351 P P **00 35 55.2 0.0**
comp=Z,3.6nm,0.6s,mb4.5,baz=22,slow=6.1,SNR=20
GERES GERESS Array B 79.69 351 P P **00 35 55.2 0.0**
GERES pmax pmax
comp=Z,4.0nm,0.6s
MODS Modra-Piesok 79.77 349 *e*P P **00 35 56.3 +0.6**
MODS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
PSZ Piszkesteto 79.87 347 *e*P P **00 35 57.0 +0.7**
comp=Z,12nm,1.0s,mb4.8
PSZ Piszkesteto 79.87 347 *e*P P **00 35 57.0 +0.8**
PSZ pmax pmax
comp=Z,12nm,1.0s,mb4.8
PSZ Piszkesteto 79.87 347⇓ *i*P P **00 35 56.8 +0.6**
ZST Bratislava 79.96 349 *e*P P **00 35 57.6 +0.9**
ZST pmax pmax
comp=Z,12nm,0.9s,mb4.8
CONA Conrad Observa 80.37 350⇑ *i*P P **00 35 59.4 +0.5**
comp=Z,6.8nm,0.6s,mb4.7,SNR=9.1
CSNA Conrad Observa 80.37 350⇑ *i*P P **00 35 59.4 +0.5**
comp=Z,5.9nm,0.6s,mb4.7
FLN La Foliniere 80.39 1 *e*P P **00 35 58.5 -0.5**
comp=Z,27nm,0.9s,mb4.9
FLN La Foliniere 80.39 1 *e*P P **00 35 58.5 -0.5**
comp=Z,13nm,0.9s,mb4.9
FLN La Foliniere 80.39 1 *e*P P **00 35 58.5 -0.5**
FLN pmax pmax
comp=Z,13nm,0.9s,mb4.9
DRGR 80.54 345⇑ *i*P P **00 35 59.9 +0.1**
DRGR 80.54 345⇑ *i*P P **00 35 59.9 +0.1**
LDF La Druitiere 80.56 1⇑ *i*P P **00 35 59.4 -0.5**
comp=Z,20nm,0.6s,mb5.0
LDF La Druitiere 80.56 1⇑ *i*P P **00 35 59.4 -0.5**
comp=Z,10nm,0.6s,mb4.9
LDF La Druitiere 80.56 1⇑ *i*P P **00 35 59.4 -0.5**
LDF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CDF Champ du Feu 80.58 356 *e*P P **00 35 59.8 -0.3**
comp=Z,9.5nm,0.8s,mb4.5
CDF Champ du Feu 80.58 356 *e*P P **00 35 59.8 -0.3**
comp=Z,4.8nm,0.8s,mb4.5
CDF Champ du Feu 80.58 356 *e*P P **00 35 59.8 -0.3**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MEZF Maizieres J'vi 80.58 357 *e*P P **00 36 00.0 -0.1**
comp=Z,38nm,1.1s,mb5.0
MEZF Maizieres J'vi 80.58 357 *e*P P **00 36 00.0 -0.1**
comp=Z,38nm,1.1s,mb5.2
PLOR Plostina 80.74 342⇑ *i*P P **00 36 01.1 +0.2**
GRR Gorron 80.76 1 *e*P P **00 36 00.7 -0.3**
comp=Z,42nm,0.9s,mb5.1
GRR Gorron 80.76 1 *e*P P **00 36 00.7 -0.3**
comp=Z,21nm,0.9s,mb5.1
GRR Gorron 80.76 1 *e*P P **00 36 00.7 -0.3**
GRR pmax pmax
comp=Z,21nm,0.9s,mb5.1
NGP Nagpur 80.76 292 *ex* x 00 35 58.7
ROSF Rostrenen 80.76 3 *e*P P **00 36 00.8 -0.2**
comp=Z,5.8nm,0.6s,mb4.4
ROSF Rostrenen 80.76 3 *e*P P **00 36 00.8 -0.2**
comp=Z,2.9nm,0.6s,mb4.4
ROSF Rostrenen 80.76 3 *e*P P **00 36 00.8 -0.2**
ROSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SGMF Saint Gilles 80.86 2 *e*P P **00 36 01.4 -0.2**
comp=Z,29nm,0.6s,mb5.1
SGMF Saint Gilles 80.86 2 *e*P P **00 36 01.4 -0.2**
comp=Z,15nm,0.6s,mb5.1

SGMF	**Saint Gilles**	**80.86**	**2**	*eP*	**P**	**00 36 01.4**	**-0.2**
SGMF				pmax	pmax			
	comp=Z,15nm,0.6s,mb5.1							
TLCR		**80.93 340**	⇓	P	**P**	**00 36 02.0**	**0.0**
TLCR		**80.93 340**	⇓	*iP*	**P**	**00 36 02.0**	**0.0**
HAU	**Haudompre**	**81.03 356**		*eP*	**P**	**00 36 02.2**	**-0.3**
	comp=Z,19nm,1.0s,mb4.7							
HAU	**Haudompre**	**81.03 356**		*eP*	**P**	**00 36 02.2**	**-0.3**
	comp=Z,9.5nm,1.0s,mb4.7							
HAU	**Haudompre**	**81.03 356**		*eP*	**P**	**00 36 02.2**	**-0.3**
HAU				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
ARSA	**Arzberg**	**81.08 350**	⇑	*iP*	**P**	**00 36 03.3**	**+0.6**
	comp=Z,5.7nm,0.7s,mb4.6,SNR=5,1							
HINF	**Hinteralfeld**	**81.20 356**	⇑	*iP*	**P**	**00 36 02.8**	**-0.5**
MLR	**Muntele Rosu**	**81.22 342**	⇓	P	**P**	**00 36 05.3**	**+1.8**
MLR	**Muntele Rosu**	**81.22 342**	⇓	*iP*	**P**	**00 36 05.3**	**+1.8**
RETA	**Reutte**	**81.29 353**	⇑	*iP*	**P**	**00 36 03.7**	**-0.1**
	comp=Z,3.4nm,0.9s,mb4.3							
WATA	**Walderalm**	**81.37 353**	⇑	*iP*	**P**	**00 36 04.5**	**+0.2**
	comp=Z,7.5nm,0.7s,mb4.7							
MOTA	**Moosalm**	**81.40 353**	⇑	*iP*	**P**	**00 36 04.5**	**0.0**
	comp=Z,3.0nm,0.6s,mb4.4							
VOIR		**81.44 343**	⇓	P	**P**	**00 36 05.8**	**+1.1**
VOIR		**81.44 343**	⇓	*iP*	**P**	**00 36 05.8**	**+1.1**
WTTA	**Wattenberg**	**81.44 352**	⇑	*iP*	**P**	**00 36 05.2**	**+0.5**
	comp=Z,14nm,0.7s,mb5.0							
KBA	**Koelnbreinsper**	**81.47 351**	⇑	*iP*	**P**	**00 36 05.6**	**+0.8**
	comp=Z,40nm,0.7s,mb5.5							
SQTA	**Sankt Quirin**	**81.52 353**	⇑	*iP*	**P**	**00 36 05.3**	**+0.2**
	comp=Z,6.6nm,0.6s,mb4.7							
HARR	**Harsova**	**81.59 341**	⇑	P	**P**	**00 36 05.8**	**+0.3**
HARR	**Harsova**	**81.59 341**	⇑	*iP*	**P**	**00 36 05.8**	**+0.3**
WRA	**Warramunga Arr**	**81.68 223**		P	**P**	**00 36 03.4**	**-2.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=33,slow=6.0,SNR=8.7							
WRA	**Warramunga Arr**	**81.68 223**		P	**P**	**00 36 03.4**	**-2.7**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
SOKA	**Soboth**	**81.70 350**	⇑	*iP*	**P**	**00 36 06.3**	**+0.3**
	comp=Z,22nm,1.1s,mb5.0							
PKSM	**Moragy**	**81.71 348**	⇑	P	**P**	**00 36 05.5**	**-0.6**
PKSM	**Moragy**	**81.71 348**	⇑	*iP*	**P**	**00 36 05.5**	**-0.6**
FETA	**Feichten**	**81.75 353**	⇑	*iP*	**P**	**00 36 06.7**	**+0.3**
	comp=Z,13nm,1.1s,mb4.8							
LOR	**Lormes**	**81.85 358**		*eP*	**P**	**00 36 06.5**	**-0.3**
	comp=Z,16nm,0.9s,mb4.6							
LOR	**Lormes**	**81.85 358**		*eP*	**P**	**00 36 06.5**	**-0.3**
	comp=Z,8.1nm,0.9s,mb4.7							
LOR	**Lormes**	**81.85 358**		*eP*	**P**	**00 36 06.5**	**-0.3**
LOR				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
BZS	**Buzias**	**81.86 345**	⇑	P	**P**	**00 36 06.8**	**-0.1**
BZS	**Buzias**	**81.86 345**	⇑	*iP*	**P**	**00 36 06.8**	**-0.1**
HYF	**Humbligny**	**81.87 359**		*eP*	**P**	**00 36 07.1**	**+0.2**
ABTA	**Abfaltersbach**	**81.88 352**	⇑	*iP*	**P**	**00 36 06.9**	**-0.1**
	comp=Z,12nm,1.1s,mb4.7,SNR=8.7							
GZR	**Gura Zlata**	**81.88 344**	⇑	P	**P**	**00 36 07.1**	**+0.1**
GZR	**Gura Zlata**	**81.88 344**	⇑	*iP*	**P**	**00 36 07.1**	**+0.1**
OBKA	**Obir**	**81.92 350**	⇑	*iP*	**P**	**00 36 07.3**	**+0.1**
	comp=Z,14nm,0.7s,mb5.0,SNR=12							
SSF	**Saint Saulge**	**82.06 358**	⇑	*iP*	**P**	**00 36 07.7**	**-0.2**
	comp=Z,5.8nm,0.6s,mb4.4							
SSF	**Saint Saulge**	**82.06 358**	⇑	*iP*	**P**	**00 36 07.7**	**-0.2**
	comp=Z,2.9nm,0.6s,mb4.4							
SSF	**Saint Saulge**	**82.06 358**	⇑	*iP*	**P**	**00 36 07.7**	**-0.2**
SSF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
AKL	**Akola**	**82.29 293**		*ex*	x	00 36 48.0		
AKL				AMb	AMB	00 36 55.9		
	comp=Z,14nm,1.9s,mb4.6							
AVF	**Avril sur Loir**	**82.34 358**		*eP*	**P**	**00 36 09.1**	**-0.3**
	comp=Z,17nm,1.0s,mb4.7							
AVF	**Avril sur Loir**	**82.34 358**		*eP*	**P**	**00 36 09.1**	**-0.3**
	comp=Z,8.6nm,1.0s,mb4.6							
AVF	**Avril sur Loir**	**82.34 358**		*eP*	**P**	**00 36 09.1**	**-0.3**
AVF				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7							
TUE	**Stuetta**	**82.40 354**		*eP*	**P**	**00 36 10.5**	**+0.8**
	comp=Z,4.2nm,0.6s,mb4.5							
CABF	**La Chapelle**	**82.43 356**		*eP*	**P**	**00 36 10.0**	**+0.1**
	comp=Z,6.7nm,0.7s,mb4.4							
CABF	**La Chapelle**	**82.43 356**		*eP*	**P**	**00 36 10.0**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.4							
CABF	**La Chapelle**	**82.43 356**		*eP*	**P**	**00 36 10.0**	**+0.1**
CABF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
SMF	**Signal de Mont**	**82.47 358**		*eP*	**P**	**00 36 09.8**	**-0.3**
	comp=Z,26nm,0.9s,mb4.8							
SMF	**Signal de Mont**	**82.47 358**		*eP*	**P**	**00 36 09.8**	**-0.3**
	comp=Z,13nm,0.9s,mb4.8							
SMF	**Signal de Mont**	**82.47 358**		*eP*	**P**	**00 36 09.8**	**-0.3**
SMF				pmax	pmax			
	comp=Z,13nm,0.9s,mb4.9							
MFF	**Saint Martin d**	**82.55**	**1**	*eP*	**P**	**00 36 10.3**	**-0.2**
	comp=Z,40nm,1.1s,mb5.1							
MFF	**Saint Martin d**	**82.55**	**1**	*eP*	**P**	**00 36 10.3**	**-0.2**
	comp=Z,20nm,1.1s,mb5.1							
MFF	**Saint Martin d**	**82.55**	**1**	*eP*	**P**	**00 36 10.3**	**-0.2**
MFF				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.1							
BGF	**Bois d'Agland**	**82.58 358**		*eP*	**P**	**00 36 10.4**	**-0.2**
	comp=Z,8.9nm,0.7s,mb4.6							
BGF	**Bois d'Agland**	**82.58 358**		*eP*	**P**	**00 36 10.4**	**-0.2**
	comp=Z,4.4nm,0.7s,mb4.6							
BGF	**Bois d'Agland**	**82.58 358**		*eP*	**P**	**00 36 10.4**	**-0.2**
BGF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6							
TCF	**Toulx Ste Croi**	**82.86 359**		*eP*	**P**	**00 36 12.7**	**+0.6**
	comp=Z,15nm,0.9s,mb4.7							
TCF	**Toulx Ste Croi**	**82.86 359**		*eP*	**P**	**00 36 12.7**	**+0.6**
	comp=Z,7.3nm,0.9s,mb4.7							
TCF	**Toulx Ste Croi**	**82.86 359**		*eP*	**P**	**00 36 12.7**	**+0.6**
TCF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.7							
LPL	**La Plagne**	**83.50 356**		*eP*	**P**	**00 36 16.3**	**+0.9**
LPG	**La Plagne**	**83.52 356**		*eP*	**P**	**00 36 16.6**	**+1.1**
RJF	**Les Rejaudoux**	**83.85 359**		*eP*	**P**	**00 36 16.7**	**-0.5**
HYB	**Hyderabad**	**83.96 290**		*eP*	**P**	**00 36 17.5**	**-0.7**
ORIF	**Oris-en-Rattie**	**84.13 356**		*eP*	**P**	**00 36 19.3**	**+0.6**
	comp=Z,5.8nm,0.6s,mb4.6							
ORIF	**Oris-en-Rattie**	**84.13 356**		*eP*	**P**	**00 36 19.3**	**+0.6**
	comp=Z,2.9nm,0.6s,mb4.6							
ORIF	**Oris-en-Rattie**	**84.13 356**		*eP*	**P**	**00 36 19.3**	**+0.6**
ORIF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.6							
LFF	**La Frestale**	**84.22 360**		*eP*	**P**	**00 36 19.0**	**-0.1**
	comp=Z,18nm,0.9s,mb4.9							
LFF	**La Frestale**	**84.22 360**		*eP*	**P**	**00 36 19.0**	**-0.1**
	comp=Z,9.1nm,0.9s,mb4.9							
LFF	**La Frestale**	**84.22 360**		*eP*	**P**	**00 36 19.0**	**-0.1**
LFF				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.9							
CAF	**Calviac**	**84.22 359**		*eP*	**P**	**00 36 19.2**	**+0.1**
	comp=Z,25nm,1.2s,mb4.9							
CAF	**Calviac**	**84.22 359**		*eP*	**P**	**00 36 19.2**	**+0.1**
	comp=Z,12nm,1.2s,mb4.9							
CAF	**Calviac**	**84.22 359**		*eP*	**P**	**00 36 19.2**	**+0.1**
CAF				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.9							
VIVF	**Saint-Julien-l**	**84.24 357**		*eP*	**P**	**00 36 19.4**	**+0.2**
MBDF	**Montbardon**	**84.28 356**		*eP*	**P**	**00 36 20.0**	**+0.6**
	comp=Z,22nm,0.9s,mb5.0							
MBDF	**Montbardon**	**84.28 356**		*eP*	**P**	**00 36 20.0**	**+0.6**
	comp=Z,11nm,0.9s,mb5.0							
MBDF	**Montbardon**	**84.28 356**		*eP*	**P**	**00 36 20.0**	**+0.6**
MBDF				pmax	pmax			
	comp=Z,11nm,0.9s,mb5.0							
BR131	**Keskin Array S**	**84.95 335**		*eP*	**P**	**00 36 23.0**	**+0.1**
	comp=Z,5.4nm,0.8s,mb4.7							
BRTR	**Keskin Array B**	**84.95 335**		P	**P**	**00 36 22.9**	**+0.1**
	comp=Z,5.8nm,0.7s,mb4.8,baz=56,slow=2.9,SNR=37							
BRTR	**Keskin Array B**	**84.95 335**		P	**P**	**00 36 23.0**	**+0.1**
BRTR				pmax	pmax			
	comp=Z,6.0nm,0.7s							
SMRF	**Simiane la Rot**	**85.08 356**		*eP*	**P**	**00 36 24.2**	**+0.7**
ASAR	**Alice Springs**	**85.15 222**		P	**P**	**00 36 22.5**	**-1.4**
	comp=Z,1.3nm,1.0s,mb4.0,baz=32,slow=4.4,SNR=7.2							
ASAR	**Alice Springs**	**85.15 222**		P	**P**	**00 36 22.5**	**-1.4**
ASAR				pmax	pmax			
	comp=Z,1.0nm,1.0s							
FRF	**La Foret Royal**	**85.45 356**		*eP*	**P**	**00 36 25.2**	**-0.1**
	comp=Z,13nm,0.8s,mb4.8							
FRF	**La Foret Royal**	**85.45 356**		*eP*	**P**	**00 36 25.2**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.8							
FRF	**La Foret Royal**	**85.45 356**		*eP*	**P**	**00 36 25.2**	**-0.1**
FRF				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.8							
LMR	**La Mourre**	**85.69 356**		*eP*	**P**	**00 36 26.4**	**-0.1**
SJPF	**Ste Jean**	**86.03**	**1**	*eP*	**P**	**00 36 28.6**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**86.03**	**1**	*eP*	**P**	**00 36 28.6**	**+0.4**
	comp=Z,6.3nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**86.03**	**1**	*eP*	**P**	**00 36 28.6**	**+0.4**
SJPF				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.9							
ETSF	**Etsaut**	**86.25**	**1**	*eP*	**P**	**00 36 29.7**	**+0.4**
	comp=Z,17nm,0.9s,mb5.0							
ETSF	**Etsaut**	**86.25**	**1**	*eP*	**P**	**00 36 29.7**	**+0.4**
	comp=Z,8.3nm,0.9s,mb5.0							
ETSF	**Etsaut**	**86.25**	**1**	*eP*	**P**	**00 36 29.7**	**+0.4**
ETSF				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0							
ESDC	**Sonseca Array**	**89.39**	**4**	P	**P**	**00 36 43.8**	**-0.5**
	comp=Z,0.6nm,0.5s,mb4.2,baz=14,slow=5.0,SNR=6.0							
ESDC				LR	LR	01 14 11.4		
	comp=Z,268nm,20.1s,MS4.7,baz=225,slow=34							
STKA	**Stephens Creek**	**89.62 212**		P	**P**	**00 36 45.1**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.7,baz=9.9,slow=10.0,SNR=4.0							
KEST	**Kesra**	**93.08 353**		P	**P**	**00 37 01.1**	**-0.4**
	comp=Z,2.5nm,1.1s,mb4.6,baz=352,slow=7.1,SNR=2.9							
KEST				LR	LR	01 16 33.1		
	comp=Z,120nm,21.3s,MS4.3,baz=188,slow=34							
TORD	**Torodi Ar. Bea**	**115.89 359**		PKP	PKPdf	00 42 29.0	-1.6	
	comp=Z,0.2nm,0.4s,baz=353,slow=2.3,SNR=5.6							
DBIC	**Dimbokro**	**122.14**	**6**	PKP	PKPdf	00 42 41.5	-1.2	
	comp=Z,1.1nm,0.5s,baz=129,slow=1.2,SNR=3.9							
DBIC	**Dimbokro**	**122.14**	**6**	PKP	PKPdf	00 42 41.5	-1.2	
DBIC	**Dimbokro**	**122.14**	**6**	PKIKP	PKPdf	00 42 41.5	-1.1	
DBIC				pmax	pmax			
	comp=Z,1.0nm,0.5s							
TSUM	**Tsumeb**	**145.37 331**		PKPbc	PKPbc	00 43 25.5	+0.1	
	comp=Z,18nm,0.9s,baz=354,slow=5.2,SNR=28							
TSUM	**Tsumeb**	**145.37 331**		*e*PKPbc	PKPbc	00 43 25.5	0.0	
MAW	**Mawson**	**146.16 217**		PKPbc	PKPbc	00 43 24.9	-1.6	
	comp=Z,2.1nm,0.6s,baz=80,slow=4.4,SNR=4.8							
MAW	**Mawson**	**146.16 217**		PKP2	PKPab	00 43 24.9	-2.4	
MAW				pmax	pmax			
	comp=Z,2.0nm,0.6s							
LBTB	**Lobatse**	**147.61 314**		*e*PKPbc	PKPbc	00 43 32.1	+0.1	
BOSA	**Boshof**	**150.84 311**		PKPbc	PKPbc	00 43 39.9	0.0	
	comp=Z,2.7nm,0.5s,baz=145,slow=3.2,SNR=14							
BOSA	**Boshof**	**150.84 311**		*e*PKPbc	PKPbc	00 43 40.0	+0.1	
BOSA	**Boshof**	**150.84 311**		PKIKP	PKPbc	00 43 39.9	0.0	
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.5s							

IDC ***26*** *00:32:59.1±2.0, 51.28N×179.31W, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/25, mbtmp4.0/11, Error ellipse: s-maj=58.6km s-min=20.3km az=9.0*
ISCJB ***26*** *00:33:04.0±2.0, 51.1N±0.3×179.35W±0.08, h56km±9km, mb4.0/11, Error ellipse: s-maj=46.1km s-min=8.2km az=176.6*
NEIC ***26*** *00:33:05.0±1.4, 51.18N×179.30W, h44km±8km, ML3.4(AEIC), Error ellipse: s-maj=35.8km s-min=8.2km az=181.0*

ISC 26 00:33:05.1±2.0, 511N±0.3×17934W±0.08, h48km±10km, n17, σ0=9.74/19, mb4.0/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.91**	**289**	*e*Pg	**Pn**	**00 33 19.7**	**-1.7**
AMKA				*e*Sg	**Sn**	**00 33 33.9**	**+0.5**
ADK	**Adak**	**1.84**	**63**	*e*Pn	**Pn**	**00 33 33.3**	**-0.8**
ADK				*e*Sn	**Sn**	**00 33 57.1**	**+0.9**
SMY	**Shemya**	**4.38**	**295**	*e*Pn	**Pn**	**00 34 09.6**	**+0.6**
FX1	**Attu Island--F**	**4.97**	**294**	P	**Pn**	**00 34 17.6**	**+0.5**
YKA	**Yellowknife Ar**	**35.68**	**46**	P	**P**	**00 39 57.6**	**-0.6**
	0.9nm,0.6s,mb3.9,baz=282,slow=7.5,SNR=5.6						
SONM	**Songino Array**	**46.48**	**297**	P	**P**	**00 41 27.9**	**+0.9**
	0.8nm,0.8s,mb3.7,baz=48,slow=9.7,SNR=4.7						
PDAR	**Pinedale Array**	**46.72**	**72**	P	**P**	**00 41 29.9**	**+0.9**
	0.8nm,0.6s,mb3.8,baz=302,slow=3.5,SNR=8.5						
SPITS	**Spitsbergen Ar**	**50.64**	**356**	P	**P**	**00 41 57.7**	**-0.9**
	4.1nm,0.8s,mb4.4,baz=43,slow=8.8,SNR=7.9						
ARCES	**ARCESS Array B**	**58.32**	**350**	P	**P**	**00 42 53.6**	**-0.8**
	3.0nm,0.9s,mb4.3,baz=26,slow=7.2,SNR=4.8						
KURK	**Kurchatov**	**58.98**	**313**	P	**P**	**00 42 59.7**	**+0.5**
	2.3nm,0.5s,mb4.5,baz=44,slow=6.4,SNR=10						
KURK	**Kurchatov**	**58.98**	**313**	P	**P**	**00 42 59.7**	**+0.5**
TXAR	**Lajitas Array**	**59.03**	**81**	P	**P**	**00 42 59.8**	**-0.2**
	0.2nm,0.7s,mb3.3,baz=324,slow=5.6,SNR=2.9						
MKAR	**Makanchi Array**	**59.95**	**308**	P	**P**	**00 43 05.8**	**-0.2**
	1.0nm,0.5s,mb4.1,baz=50,slow=5.7,SNR=18						
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**00 44 44.7**	**-0.4**
	2.6nm,0.3s,mb4.6,baz=20,slow=6.8,SNR=14						
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**00 44 44.7**	**-0.4**
GERES	**GERESS Array B**	**79.82**	**351**	P	**P**	**00 45 08.1**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=27,slow=5.5,SNR=2.3						
BRTR	**Keskin Array B**	**85.07**	**335**	P	**P**	**00 45 35.9**	**+0.5**
	0.8nm,0.8s,mb3.9,baz=42,slow=2.3,SNR=5.4						

IDC ***26*** *00:43:55.8±1.9, 31.70N×137.60E, h296km±38km, mb2.8/3, mb1 2.9/6, mb1mx2.7/24, mbtmp2.8/6, Error ellipse: s-maj=60.8km s-min=20.9km az=59.0*
ISCJB ***26*** *00:43:56.8±0.7, 32.15N±0.009×138.8E±0.1, h370km±11km, mb2.9/3, Error ellipse: s-maj=20.9km s-min=13.7km az=158.6*
NEIC ***26*** *00:43:56.1, 32.00N×138.58E, h362km, MG3.4(JMA), After JMA.*
JMA ***26*** *00:43:56.1±0.4, 32.00N×138.58E, h362km, M3.4*

ISC 26 00:43:58.1±0.7, 3222N±009×1389E±01, h365km±10km, n21, σ0=80/31, mb2.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.19**	**41**	P	**Pn**	**00 44 45.9**	**-0.2**
	25nm,0.3s,baz=75,slow=18,SNR=6.3						
JHJ				S	**S**	**00 45 20.6**	**-4.2**
	16nm,0.3s,baz=73,slow=19,SNR=4.7						
JHJ2	**Mitsune**	**1.20**	**42**	P	**Pn**	**00 44 46.5**	**+0.3**
HMMJ	**Hamamatsu 2**	**2.80**	**340**	P	**Pn**	**00 44 56.5**	**-0.2**
JIE	**Ise**	**2.82**	**321**	P	**Pn**	**00 44 55.5**	**-1.4**
BSO3	**Boso 3**	**2.92**	**28**	P	**Pn**	**00 44 57.9**	**+0.1**
BSO3				*e*S	**S**	**00 45 45.6**	**-0.4**
BSO1	**Boso 1**	**3.01**	**36**	P	**Pn**	**00 44 58.7**	**+0.2**
BSO1				*e*S	**S**	**00 45 48.3**	**+1.0**
JOD2	**Odawara 2**	**3.04**	**4**	P	**Pn**	**00 44 59.3**	**+0.4**
JOD2				*e*S	**S**	**00 45 47.8**	**-0.1**
JNY	**Yasuok**	**3.24**	**345**	P	**Pn**	**00 45 01.0**	**+0.4**
JYN	**Shimob**	**3.28**	**356**	P	**Pn**	**00 45 01.8**	**+0.8**
JAO	**Obara**	**3.32**	**337**	P	**Pn**	**00 45 01.3**	**-0.1**
JHU	**Hanno**	**3.64**	**5**	P	**Pn**	**00 45 04.6**	**+0.2**
JHU				*e*S	**S**	**00 45 56.1**	**-1.8**
JRY	**Ryogami san**	**3.79**	**1**	P	**Pn**	**00 45 06.6**	**+0.8**
JRY				*e*S	**S**	**00 46 00.7**	**+0.2**
JAG	**Ashikaga**	**4.23**	**7**	P	**Pn**	**00 45 10.0**	**-0.2**
JAG				*e*S	**S**	**00 46 05.8**	**-2.6**
MJAR	**Matsushiro Arr**	**4.35**	**353**	P	**Pn**	**00 45 11.7**	**+0.3**
	1.7nm,0.3s,baz=168,slow=12,SNR=10.0						
MJAR				S	**S**	**00 46 11.1**	**+0.4**
	0.3nm,0.3s,baz=193,slow=16,SNR=2.8						
MAJO	**Matsushiro**	**4.35**	**353**	*e*Pn	**Pn**	**00 45 11.9**	**+0.5**
MAT	**Matsushiro**	**4.35**	**353**	P	**Pn**	**00 45 11.7**	**+0.3**
MAT				*e*S	**S**	**00 46 12.0**	**+1.3**
JHO	**Hitachi**	**4.61**	**17**	P	**Pn**	**00 45 14.6**	**+0.5**
JHO				*e*S	**S**	**00 46 14.5**	**-1.1**
KSRS	**Korea Array**	**10.39**	**303**	P	**Pn**	**00 46 11.7**	**-8.9**
	0.1nm,0.3s,baz=125,slow=14,SNR=3.2						
MKAR	**Makanchi Array**	**45.06**	**306**	P	**P**	**00 51 38.8**	**-0.2**
	0.6nm,0.8s,mb2.8,baz=89,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**52.04**	**185**	P	**P**	**00 52 30.7**	**-1.2**
	0.5nm,0.5s,mb3.1,baz=0.9,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**55.77**	**185**	P	**P**	**00 52 59.0**	**+0.5**
	0.2nm,0.5s,mb2.8,baz=11,slow=13,SNR=4.9						

ISK ***26*** *01:02:27.2, 34.98N×27.85E, h4km, MD3.5, ML3.5*
DDA ***26*** *01:02:30.4, 35.01N×27.66E, h22km, Md3.8*
IDC ***26*** *01:02:32.4±1.3, 35.54N×27.60E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.7/24, mbtmp3.7/9, ML3.3/3, Error ellipse: s-maj=29.2km s-min=18.9km az=147.0*
ISCJB ***26*** *01:02:33.3±0.8, 35.22N±0.002×27.90E±0.003, h31km±7km, mb3.9/12, Error ellipse: s-maj=4.3km s-min=2.7km az=42.5*
HLW ***26*** *01:02:33.8, 3547N×2799E, h21km, Mb3.4*
CSEM ***26*** *01:02:33.9±0.1, 3527N×2798E, h30km, mb4.1/4, Error ellipse: s-maj=1.7km s-min=1.2km az=51.0*
GII ***26*** *01:02:35.9±1.8, 3515N×2782E, h32km±4km, ML3.1/3*
NEIC ***26*** *01:02:36.0, 3547N×2787E, h10km, mb3.9/11, ML4.1(ATH), After ATH.*
THE ***26*** *01:02:37.0, 3541N×2776E, h7km±32km, Error ellipse: s-maj=32.4km s-min=3.0km az=143.0*
ATH ***26*** *01:02:37.5, 3571N×2760E, h10km, MD3.8/5, ML4.1*

ISC 26 01:02:33.9±1.0, 3526N±002×2786E±003, h16km±7km, n133, σ1=9.10/160, mb3.9/12, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.64**	**297**	*e*PB	**Pb**	**01 02 45.0**	**-1.7**
ARG	**Arkhangelos**	**0.98**	**13**	*e*PB	**Pb**	**01 02 50.3**	**-2.1**
DAT	**Datca**	**1.48**	**351**	*e*PN	**Pn**	**01 02 59.5**	**-0.4**
DAT				*e*SN	**Sn**	**01 03 22.7**	**+3.8**
TURN	**Turunc**	**1.72**	**20**	*i* P	**Pn**	**01 03 00.2**	**-2.9**
TURN				*i* S	**Sn**	**01 03 25.9**	**+1.2**
AKAS	**Kas**	**1.72**	**55**	*i* P	**Pn**	**01 03 03.6**	**+0.4**
AKAS				*i* S	**Sn**	**01 03 26.2**	**+1.4**
BDRM	**Kayabasi**	**1.83**	**350**	*i* P	**Pn**	**01 03 03.7**	**-1.0**
BDRM				*i* S	**Sn**	**01 03 35.9**	**+8.4**
NPS	**Neapolis**	**1.84**	**271**	*e*PG	**Pg**	**01 03 08.8**	**-0.5**
YER	**Yerkesik**	**1.90**	**10**	*e*PN	**Pn**	**01 03 05.4**	**-0.2**
YER				*e*SN	**Sn**	**01 03 33.3**	**+4.1**
MLSB	**Milas**	**2.03**	**358**	*e*PN	**Pn**	**01 03 07.6**	**+0.1**
MLSB				*e*SN	**Sn**	**01 03 36.7**	**+4.3**
THR1	**Thera Island**	**2.25**	**300**	P	**Pn**	**01 03 11.1**	**+0.8**
THR6	**Thira Island,**	**2.28**	**299**	P	**Pn**	**01 03 11.5**	**+0.6**
THR3	**Thira Island,**	**2.31**	**301**	P	**Pn**	**01 03 11.7**	**+0.5**
THR4	**Thira Island,**	**2.33**	**302**	P	**Pn**	**01 03 12.0**	**+0.5**
GOLH	**Golhisar**	**2.40**	**34**	*i* P	**Pn**	**01 03 13.3**	**+0.7**
GOLH				*i* S	**Sn**	**01 03 46.2**	**+4.6**
IDI	**Anoyia**	**2.43**	**272**	Pn	**Pn**	**01 03 14.9**	**+2.0**
	2.7nm,0.3s,baz=91,slow=13,SNR=32						
IDI					Sn	**Sn**	**01 03 48.0**	**+5.7**
	5.0nm,0.3s,baz=173,slow=20,SNR=4.6						
IDI	**Anoyia**	**2.43**	**272**	*e*Pn	**Pn**	**01 03 16.6**	**+3.7**
IDI					Sn	**Sn**	**01 03 48.0**	**+5.7**
IDI	**Anoyia**	**2.43**	**272**	*e*Pn	**Pn**	**01 03 16.6**	**+3.7**
SMG	**Samos**	**2.58**	**342**	*e*PN	**Pn**	**01 03 14.4**	**-0.5**
APE	**Apeiranthos**	**2.61**	**314**	*e*PN	**Pn**	**01 03 15.2**	**-0.2**
DENT	**Denizli**	**2.66**	**20**	*e*PN	**Pn**	**01 03 16.2**	**+0.1**
DENT				*e*SN	**Sn**	**01 03 51.8**	**+3.8**
BCK	**Bucak**	**3.11**	**44**	*e*PN	**Pn**	**01 03 21.8**	**-0.4**
BCK				*e*SN	**Sn**	**01 04 01.3**	**+2.3**
BLCB	**Balcova**	**3.19**	**348**	*e*PN	**Pn**	**01 03 23.5**	**+0.2**
BLCB				*e*SN	**Sn**	**01 04 04.8**	**+3.8**
BLCB	**Balcova**	**3.19**	**348**	P	**Pn**	**01 03 23.8**	**+0.5**
BLCB	**Balcova**	**3.19**	**348**	*e*PN

CDF	**Champ du Feu**	**20.12**	**317**	*e*P	**P**	**01 07 06.4**	**-0.5**
	2.0nm,0.6s						
SMF	**Signal de Mont**	**21.32**	**310**	*e*P	**P**	**01 07 18.5**	**-1.5**
	3.5nm,0.5s,mb3.6						
SMF	**Signal de Mont**	**21.32**	**310**	*e*P	**P**	**01 07 18.5**	**-1.5**
	1.8nm,0.5s,mb3.7						
LOR	**Lormes**	**21.57**	**311**	*e*P	**P**	**01 07 21.3**	**-1.3**
AVF	**Avril sur Loir**	**21.69**	**310**	*e*P	**P**	**01 07 23.4**	**-0.5**
SSF	**Saint Saulge**	**21.70**	**310**	*e*P	**P**	**01 07 22.6**	**-1.4**
	9.8nm,0.8s,mb4.0						
SSF	**Saint Saulge**	**21.70**	**310**	*e*P	**P**	**01 07 22.6**	**-1.4**
	4.9nm,0.8s,mb4.0						
CAF	**Calviac**	**21.89**	**304**	*e*P	**P**	**01 07 25.8**	**-0.2**
	11nm,0.9s,mb4.0						
CAF	**Calviac**	**21.89**	**304**	*e*P	**P**	**01 07 25.8**	**-0.2**
	5.4nm,0.9s,mb4.0						
BGF	**Bois d'Agland**	**21.92**	**309**	*e*P	**P**	**01 07 27.9**	**+1.5**
	9.2nm,0.7s,mb4.0						
BGF	**Bois d'Agland**	**21.92**	**309**	*e*P	**P**	**01 07 27.9**	**+1.5**
	4.6nm,0.7s,mb4.0						
RJF	**Les Rejaudoux**	**22.37**	**305**	*e*P	**P**	**01 07 30.5**	**-0.7**
ETSF	**Etsaut**	**23.27**	**298**	*e*P	**P**	**01 07 39.0**	**-1.7**
	40nm,1.5s,mb4.3						
ETSF	**Etsaut**	**23.27**	**298**	*e*P	**P**	**01 07 39.0**	**-1.7**
	20nm,1.5s,mb4.3						
FLN	**La Foliniere**	**24.84**	**312**	*e*P	**P**	**01 07 53.5**	**-1.8**
GRR	**Gorron**	**24.93**	**311**	*e*P	**P**	**01 07 55.4**	**-0.7**
	7.4nm,0.7s,mb4.0						
GRR	**Gorron**	**24.93**	**311**	*e*P	**P**	**01 07 55.4**	**-0.7**
	3.7nm,0.7s,mb4.0						
ESDC	**Sonseca Array**	**25.57**	**289**	P	**P**	**01 08 00.8**	**-1.2**
	1.3nm,0.6s,mb3.6,baz=80,slow=9.5,SNR=14						
HFS	**Hagfors**	**26.53**	**344**	P	**P**	**01 08 07.5**	**-3.0**
	2.0nm,0.8s,mb3.7,baz=170,slow=9.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**32.29**	**234**	P	**P**	**01 09 02.8**	**+0.7**
	0.8nm,0.5s,mb3.8,baz=32,slow=9.1,SNR=24						
ARCES	**ARCESS Array B**	**34.35**	**359**	P	**P**	**01 09 17.4**	**-2.1**
	2.1nm,0.8s,mb4.1,baz=173,slow=8.4,SNR=6.5						
ARCES	**ARCESS Array B**	**34.35**	**359**	P	**P**	**01 09 17.4**	**-2.1**
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**01 10 24.6**	**+1.4**
	0.5nm,0.6s,mb3.3,baz=265,slow=9.0,SNR=8.1						
SONM	**Songino Array**	**57.70**	**51**	P	**P**	**01 12 24.7**	**+1.2**
	0.4nm,0.6s,mb3.6,baz=281,slow=8.1,SNR=3.6						

*NEIC **26** 01:07:29.2, 1873N×9934W, h2km, MD3.8(MEX), After MEX.*

MEX 26 01:07:29.4±1.4, 1874N×9935W, h5km±6km, MD3.8, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAIG	**Yautepec**	**0.30**	**65**	*i* P	Pg	01 07 34.1	-1.1
YAIG				*i* S	Sg	01 07 39.6	+0.5
PLIG	**Platanillo**	**0.37**	**203**	*i* P	Pg	01 07 35.1	-1.4
PLIG				*i* S	Sg	01 07 42.1	+0.7
MZVM		**0.47**	**14**	*i* P	Pg	01 07 37.7	-0.7
MZVM				*i* S	Sg	01 07 45.2	+0.7
UNM	**Universidad Na**	**0.61**	**15**	*i* P	Pg	01 07 40.3	-0.9
UNM				*i* S	Sg	01 07 48.6	-0.6
PBVM	**Pinon**	**0.75**	**20**	*i* P	Pg	01 07 42.4	-1.3
PBVM				*i* S	Sg	01 07 52.2	-1.3
PPM	**Popocatepetl**	**0.76**	**64**	*i* P	Pg	01 07 44.0	0.0
PPM				*i* S	Sg	01 07 53.7	-0.2
PPM	**Popocatepetl**	**0.76**	**64**	*i* P	Pg	01 07 43.4	-0.7
PPM				*i* P		01 07 44.0	
PPM				*i* S	Sg	01 07 53.7	-0.2
PPM				*i* S	Sg	01 07 53.7	-0.2
PTVM	**Pico Tres Padr**	**0.88**	**15**	*i* P	Pg	01 07 44.9	-1.5
PTVM				*i* S	Sg	01 07 56.1	-1.7
IIO	**Organos**	**1.04**	**35**	*i* P	Pg	01 07 47.9	-1.4
IIO				*i* S	Sg	01 08 01.0	-1.8
DEIG	**Demacu**	**1.59**	**11**	*e*P	Pn	01 07 55.9	-2.3
DEIG				*i* S	Sn	01 08 15.1	-3.9
UTMO	**Huajuapan**	**1.72**	**121**	*e*P	Pn	01 07 57.7	-2.3
UTMO				*i* S	Sn	01 08 17.8	-4.7
CAIG	**El Cayaco**	**1.89**	**208**	*i* P	Pn	01 08 00.7	-1.7
CAIG				*i* S	Sn	01 08 21.8	-4.8
TPIG	**Tehuac#an**	**1.91**	**99**	*e*P	Pn	01 08 04.2	+1.6
ACX	**Acapulco**	**1.94**	**196**	*i* P	Pn	01 08 00.1	-2.9
ACX				*i* S	Sn	01 08 22.4	-5.3
MOIG	**Morelia**	**1.98**	**299**	*i* P	Pn	01 08 03.8	+0.3
MOIG				*i* S	Sn	01 08 24.5	-4.2
ZIIG	**Zihuatanejo**	**2.30**	**241**	*i* P	Pn	01 08 05.7	-2.3
ZIIG				*i* S	Sn	01 08 31.7	-5.1
PNIG	**Pinotepa**	**2.60**	**153**	*i* P	Pn	01 08 14.5	+2.3
PNIG				*i* S	Sn	01 08 43.4	-0.9
VHO	**Vista Hermosa**	**2.99**	**123**	*e*P	Pn	01 08 14.3	-3.1
VHO				*i* S	Sn	01 08 46.3	-7.4
OXX	**Oaxaca**	**2.99**	**123**	*e*P	Pn	01 08 21.4	+3.9
OXX				*i* S	Sn	01 08 49.3	-4.5
SFJM	**Santa Fe**	**3.89**	**297**	*e*P	Pn	01 08 32.7	+2.8
SFJM				*i* S	Sn	01 09 16.2	+0.2
HUIG	**Huatulco**	**4.28**	**133**	*e*P	Pn	01 08 43.8	+8.6
HUIG				*i* S	Sn	01 09 22.6	-3.0
CMIG	**Matias Romero**	**4.55**	**110**	*e*P	Pn	01 08 41.4	+2.4
CMIG				*i* S	Sn	01 09 29.2	-3.2
TGIG		**6.25**	**107**	*e*P	Pn	01 09 08.7	+7.4
TGIG				*i* S	Sn	01 10 12.2	-1.9

MAN 26 01:18:46, 1357N×12096E, h10km, mb4.5, ML3.3, MS3.2, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.07**	**184**	*e*P	Pg	01 18 49.0	+0.8
TGY	**Tagaytay City**	**0.53**	**358**	*e*P	Pg	01 18 58.2	+1.8
LUBP	**Lubang**	**0.71**	**284**	*e*P	Pg	01 19 01.2	+1.4
LUBP				*e*S	Sg	01 19 14.1	+5.0
SJMP	**San Jose**	**1.11**	**172**	*e*P	Pb	01 19 07.8	+0.5
SJMP				*e*S	Sg	01 19 25.0	+3.2
GQP	**Guinayangan**	**1.48**	**77**	*e*P	Pn	01 19 13.6	+0.8
GQP				*e*S	Sn	01 19 34.1	+1.9
POLP	**Polilio Island**	**1.50**	**39**	*e*P	Pn	01 19 13.4	+0.5
POLP				*e*S	Sn	01 19 33.1	+0.6
OTRP	**Odiongan**	**1.58**	**139**	*e*P	Pn	01 19 13.8	-0.3
OTRP				*e*S	Sn	01 19 29.4	-5.3
BUSP	**Coron**	**1.72**	**206**	*e*P	Pn	01 19 17.2	+1.1
BUSP				*e*S	Sn	01 19 39.3	+1.2
BALP	**Baler**	**2.24**	**15**	*e*P	Pn	01 19 24.1	+0.9

*CSEM **26** 01:31:50.6±0.1, 4009N×4298E, h2km, ML3.3, Error ellipse: s-maj=2.4km s-min=1.8km az=83.0*
*DDA **26** 01:31:50.8, 4012N×4313E, h18km±3km, Md3.3*
*NSSP **26** 01:31:50.8, 4013N×4315E, h10km, ML3.3*
*ISK **26** 01:31:51.6, 4010N×4297E, h6km, MD3.4*
*ISCJB **26** 01:31:53.3±0.4, 4005N±003×4301E±004, h17km±6km, Error ellipse: s-maj=5.3km s-min=4.1km az=19.3*

ISC 26 01:31:52.9±0.4, 4006N±002×4301E±004, h9km±5km, n31, σ1§22/47, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGRB	**Hanur-Agry**	**0.48**	**181**	*e*PG	**Pg**	**01 32 01.4**	**-0.9**
AGRB				*e*SG	**Sg**	**01 32 10.0**	**+1.4**
KARS	**Kars**	**0.56**	**7**	*e*PG	**Pg**	**01 32 02.1**	**-1.5**
KARS				*e*SG	**Sg**	**01 32 10.2**	**-0.7**
TUTA	**Tutak**	**0.67**	**193**	*i* P	**Pg**	**01 32 04.8**	**-1.1**
TUTA				*i* S	**Sg**	**01 32 15.9**	**+1.3**
TUTA	**Tutak**	**0.67**	**193**	*i* P	**Pg**	**01 32 04.8**	**-1.1**
TUTA				*i* S	**Sg**	**01 32 15.9**	**+1.2**
DYDN	**Diyadin**	**0.74**	**134**	*i* P	**Pg**	**01 32 04.9**	**-2.1**
DYDN				*i* S	**Sg**	**01 32 16.5**	**-0.1**
HOMI	**Horasan**	**0.85**	**269**	*i* P	**Pg**	**01 32 06.7**	**-2.4**
HOMI				*i* S	**Sg**	**01 32 22.8**	**+2.7**
HARI	**Harich**	**0.94**	**54**	P	**Pg**	**01 32 10.5**	**-0.3**
GYMZ	**Gyumri**	**0.98**	**40**	P	**Pg**	**01 32 13.1**	**+1.4**
GYMZ				S	**Sg**	**01 32 26.7**	**+2.3**
HNAZ	**Hnaberd**	**1.04**	**56**	P	**Pg**	**01 32 13.2**	**+0.4**
KAMZ	**Kamo**	**1.05**	**43**	P	**Pg**	**01 32 12.5**	**-0.5**
TSOZ	**Tsokhamarg**	**1.10**	**36**	P	**Pg**	**01 32 14.7**	**+0.6**
DDEM	**Demirkent**	**1.27**	**311**	*i* P	**Pn**	**01 32 14.5**	**-2.2**
DDEM				*i* S	**Sb**	**01 32 34.6**	**+1.3**
EZM	**Erzurum**	**1.27**	**264**	*e*PN	**Pn**	**01 32 16.0**	**-0.7**
DAGI	**Agillar**	**1.31**	**321**	*i* P	**Pn**	**01 32 15.5**	**-1.8**
DAGI				*i* S	**Sb**	**01 32 35.3**	**+0.7**
DBAD	**Bademkaya**	**1.38**	**314**	*i* P	**Pn**	**01 32 16.6**	**-1.7**
DBAD				*i* S	**Sb**	**01 32 38.4**	**+1.8**
STE	**Stepanavan**	**1.40**	**47**	P	**Pn**	**01 32 17.0**	**-1.5**
VANB	**Van**	**1.49**	**168**	*e*PN	**Pn**	**01 32 20.3**	**+0.5**
DBOC	**Borcka**	**1.64**	**322**	*i* P	**Pn**	**01 32 20.6**	**-1.2**
DBOC				*i* S	**Sn**	**01 32 43.8**	**+0.7**
DBOC	**Borcka**	**1.64**	**322**	*i* P	**Pn**	**01 32 20.6**	**-1.2**
DBOC				*i* S	**Sn**	**01 32 43.8**	**+0.8**
VANT	**Van**	**1.64**	**169**	*e*PN	**Pn**	**01 32 22.3**	**+0.5**
BCA	**Borcka**	**1.74**	**323**	*e*PN	**Pn**	**01 32 22.5**	**-0.7**
BCA				*e*SN	**Sn**	**01 32 45.0**	**-0.4**
BNGL	**BINGOL**	**1.81**	**233**	*i* P	**Pn**	**01 32 25.2**	**+1.0**
BNGL				*i* S	**Sn**	**01 32 52.4**	**+5.1**
KOPT	**Kop Dagi**	**1.93**	**270**	*i* P	**Pn**	**01 32 27.1**	**+1.3**
KOPT				*i* S	**Sn**	**01 32 59.5**	**+9.3**
PZAR	**Pazar-Rize**	**1.96**	**306**	*e*PN	**Pn**	**01 32 25.6**	**-0.6**
PZAR				*e*SN	**Sn**	**01 32 50.2**	**-0.6**
GOR	**Gori**	**2.10**	**23**	P	**Pn**	**01 32 29.4**	**+1.3**
TBLG	**Delisi**	**2.12**	**38**	P	**Pn**	**01 32 28.5**	**+0.1**
DGRG	**David-gareji**	**2.27**	**52**	P	**Pn**	**01 32 32.0**	**+1.5**
EZC	**Erzincan**	**2.48**	**264**	*e*PN	**Pn**	**01 32 38.4**	**+5.0**
ONI	**Oni**	**2.54**	**7**	P	**Pn**	**01 32 35.3**	**+1.1**
GUMT	**Gumushane**	**2.73**	**280**	*e*PN	**Pn**	**01 32 36.7**	**-0.1**
PTK	**Pertek**	**3.03**	**249**	*e*PN	**Pn**	**01 32 40.5**	**-0.5**

*NEIC **26** 01:32:27.1±0.7, 332S×10095E, h35km, mb4.4/1, Error ellipse: s-maj=31.9km s-min=6.8km az=54.0*
*IDC **26** 01:32:28.6±1.4, 327S×10098E, h46km±7km, mb3.9/10, mb1 4.0/10, mb1mx3.8/22, mbtmp3.9/10, Error ellipse: s-maj=61.0km s-min=14.3km az=53.0*
*ISCJB **26** 01:32:30.6±1.6, 31S±01×1012E±01, h79km±11km, mb4.2/11, Error ellipse: s-maj=29.5km s-min=8.7km az=140.8*
*DJA **26** 01:32:31.4±0.0, 308S×101.14E, h64km, MLv4.1/3*

ISC 26 01:32:30.9±1.8, 32S±01×1011E±02, h64km±13km, n26, σ0§56/25, mb4.2/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.53**	**109**	P	**Pn**	**01 32 57.4**	**+1.2**
PDSI	**Padang**	**2.32**	**343**	P	**Pn**	**01 33 05.8**	**-1.1**
PDSI	**Padang**	**2.32**	**343**	S	**Sn**	**01 33 34.7**	**+0.3**
PPI	**Padang Panjang**	**2.77**	**344**	P	**Pn**	**01 33 13.1**	**+0.1**
DSRI	**Dabo**	**4.34**	**52**	P	**Pn**	**01 33 33.7**	**-0.7**
MYKOM	**Kota Tinggi**	**5.60**	**29**	P	**Pn**	**01 33 51.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.58**	**354**	P	**P**	**01 37 16.1**	**+0.7**
	1.5nm,0.5s,mb3.7,baz=186,slow=9.5,SNR=4.8						
WRA	**Warramunga Arr**	**36.43**	**120**	P	**P**	**01 39 29.1**	**-0.6**
	1.8nm,0.4s,mb4.3,baz=303,slow=9.0,SNR=34						
WRAB	**Tennant Creek**	**36.44**	**120**	*e*P	**P**	**01 39 29.9**	**+0.1**
	9.6nm,1.9s,mb4.4						
WB2	**Warramunga Arr**	**36.44**	**120**	*e*P	**P**	**01 39 28.9**	**-0.9**
WB2	**Warramunga Arr**	**36.44**	**120**	*e*P	**P**	**01 39 29.5**	**-0.3**
ASAR	**Alice Springs**	**37.66**	**126**	P	**P**	**01 39 40.2**	**+0.1**
	0.9nm,0.5s,mb3.8,baz=300,slow=8.5,SNR=11						
STKA	**Stephens Creek**	**47.54**	**132**	P	**P**	**01 41 00.2**	**+0.1**
	1.6nm,0.8s,mb4.1,baz=330,slow=22,SNR=3.9						
STKA	**Stephens Creek**	**47.54**	**132**	*e*P	**P**	**01 40 59.8**	**-0.3**
	2.6nm,2.0s,mb3.9						
SONM	**Songino Array**	**50.98**	**5**	P	**P**	**01 41 26.8**	**+0.7**
	0.9nm,0.4s,mb4.0,baz=185,slow=9.7,SNR=12						
MK31	**Makanchi Array**	**52.44**	**344**	*e*P	**P**	**01 41 37.4**	**+0.5**
MKAR	**Makanchi Array**	**52.44**	**344**	P	**P**	**01 41 37.3**	**+0.4**
	3.7nm,0.6s,mb4.5,baz=159,slow=9.1,SNR=35						
MKAR				pP	pP	01 41 49.9	-3.7
	0.9nm,0.6s,baz=148,slow=8.4,SNR=3.1						
MKAR	**Makanchi Array**	**52.44**	**344**	P	**P**	**01 41 37.3**	**+0.4**
MKAR				pP	pP	01 41 49.9	-3.7
KURK	**Kurchatov**	**57.03**	**343**	P	**P**	**01 42 09.8**	**-0.3**
	1.7nm,0.5s,mb4.3,baz=137,slow=12,SNR=18						
KURK	**Kurchatov**	**57.03**	**343**	P	**P**	**01 42 09.8**	**-0.3**
ZAA0	**Zalesovo Array**	**58.50**	**349**	*e*P	**P**	**01 42 20.5**	**+0.2**
ZALV	**Zalesovo Beam**	**58.50**	**349**	P	**P**	**01 42 20.1**	**-0.2**
	6.4nm,0.5s,mb4.9,baz=163,slow=5.7,SNR=43						
BVAR	**Borovoye Array**	**61.65**	**339**	P	**P**	**01 42 41.4**	**-0.5**
	1.5nm,0.6s,mb4.3,baz=142,slow=8.5,SNR=12						
BVAR				pP	pP	01 42 55.4	-3.5
	0.5nm,0.5s,baz=134,slow=7.6,SNR=3.2						
BRTR	**Keskin Array B**	**74.93**	**312**	P	**P**	**01 44 05.2**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=146,slow=5.6,SNR=3.7						
BRTR	**Keskin Array B**	**74.93**	**312**	P	**P**	**01 44 05.2**	**-0.1**
TXAR	**Lajitas Array**	**144.89**	**40**	PKPbc	PKPdf	01 52 01.3	-0.1
	0.9nm,0.7s,baz=277,slow=1.2,SNR=13						
TXAR				pPKPbc		01 52 14.4	
	0.4nm,0.5s,baz=197,slow=0.2,SNR=3.9						

*DDA **26** 01:34:09.2, 3722N×3506E, h7km±11km, Md2.9*
*ISCJB **26** 01:34:15.6±0.6, 3754N±004×3555E±004, h5km±6km, Error ellipse: s-maj=6.4km s-min=5.4km az=21.0*
*CSEM **26** 01:34:15.4, 3754N×3555E, h7km, MD2.9, After ISK*
*ISK **26** 01:34:15.4, 3754N×3555E, h7km, MD2.9*

ISC 26 01:34:16.1±0.6, 3753N±004×3556E±004, h7km±6km, n11, σ0§48/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.22**	**104**	*e*PG	**Pg**	**01 34 20.3**	**-0.2**
KOZT				*e*SG	**Sg**	**01 34 24.1**	**+0.7**
KARA	**Karaisali**	**0.49**	**236**	*e*PG	**Pg**	**01 34 24.9**	**-0.6**
KARA				*e*SG	**Sg**	**01 34 32.5**	**+0.6**
CEYT	**Ceyhan**	**0.54**	**164**	*e*PG	**Pg**	**01 34 26.6**	**0.0**
GULE	**Gulek**	**0.67**	**248**	*i* P	Px	01 34 06.9	
GULE				*i* S	Sx	01 34 17.6	
NIG	**Nigde**	**0.95**	**308**	*e*PG	**Pg**	**01 34 34.0**	**-0.3**
NIG				*e*SG	**Sg**	**01 34 47.3**	**+0.7**
MERS	**Mersin**	**1.06**	**232**	*e*PG	**Pg**	**01 34 36.0**	**-0.5**
KMRS	**Kahramanmaras**	**1.06**	**91**	*e*PG	**Pg**	**01 34 36.2**	**-0.3**
BNN	**Bunyan**	**1.33**	**10**	*e*PN	**Pn**	**01 34 40.9**	**-0.3**
BNN				*e*SN	**Sn**	**01 34 59.5**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.45**	**38**	*e*PN	**Pn**	**01 34 36.8**	**-6.1**
HTY	**Hatay**	**1.48**	**162**	*e*PN	**Pn**	**01 34 42.6**	**-0.7**
HTY				*e*SN	**Sn**	**01 35 03.6**	**+0.6**
IKL	**Isikli**	**1.98**	**230**	*e*PN	**Pn**	**01 34 50.2**	**+0.1**

*ISCJB **26** 01:36:36.7±0.4, 3398N±006×13747E±005, h340km±2km, mb3.3/11, Error ellipse: s-maj=9.1km s-min=6.2km az=163.6*
*IDC **26** 01:36:36.7±0.9, 3391N×13738E, h325km±9km, mb3.2/11, mb1 3.4/14, mb1mx3.2/27, mbtmp3.2/14, Error ellipse: s-maj=19.6km s-min=12.2km az=65.0*
*JMA **26** 01:36:36.6±0.2, 3396N×13744E, h344km±2km, M3.5*
*NEIC **26** 01:36:37.1±0.8, 3385N×13729E, h329km±10km, MG3.5(JMA), Error ellipse: s-maj=25.0km s-min=13.3km az=63.0*

ISC 26 01:36:37.7±0.4, 3399N±006×13748E±005, h334km±2km, n44, σ0§94/62, mb3.3/11, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	**Tokai 1**	**0.24**	**158**	*e*S	**S**	**01 37 54.4**	**+1.1**
TK03	**Tokai 3**	**0.44**	**66**	S	**S**	**01 37 56.4**	**+2.8**
TK04	**Tokai 4**	**0.51**	**40**	P	**Pn**	**01 37 21.2**	**+1.2**
TK04				S	**S**	**01 37 56.6**	**+2.7**
JIE	**Ise**	**0.76**	**302**	P	**Pn**	**01 37 21.2**	**+0.5**
JIE				*e*S	**S**	**01 37 54.7**	**-0.4**
JKN2	**Miekihoku**	**1.03**	**284**	P	**Pn**	**01 37 21.8**	**+0.1**
JKN2				*e*S	**S**	**01 37 55.6**	**-1.4**
JAO	**Obara**	**1.29**	**352**	P	**Pn**	**01 37 23.7**	**+0.8**
JAO				*e*S	**S**	**01 38 00.2**	**+1.1**
JNY	**Yasuok**	**1.40**	**13**	P	**Pn**	**01 37 24.3**	**+0.8**
JNY				*e*S	**S**	**01 38 01.1**	**+0.9**
JEG	**Eigenji**	**1.46**	**322**	P	**Pn**	**01 37 24.5**	**+0.7**
JWZ	**Kozaga**	**1.54**	**253**	P	**Pn**	**01 37 24.0**	**-0.4**
JWZ				*e*S	**S**	**01 38 00.1**	**-1.7**
JWY	**Kouya**	**1.58**	**279**	P	**Pn**	**01 37 24.8**	**+0.2**
JGM	**Miyama**	**1.82**	**340**	P	**Pn**	**01 37 26.6**	**+0.5**
JGM				*e*S	**S**	**01 38 04.9**	**0.0**
JOD2	**Odawara 2**	**1.84**	**46**	P	**Pn**	**01 37 26.9**	**+0.7**
JHJ	**Hachijo jima 2**	**2.11**	**114**	P	**Pn**	**01 37 28.1**	**-0.2**
	30nm,0.3s,baz=241,slow=18,SNR=8.0						
JHJ2	**Mitsune**	**2.14**	**113**	P	**Pn**	**01 37 29.4**	**+0.9**
JWT	**Wachi**	**2.15**	**308**	P	**Pn**	**01 37 28.5**	**+0.1**
JWT				*e*S	**S**	**01 38 07.7**	**-1.4**
JRY	**Ryogami san**	**2.34**	**30**	P	**Pn**	**01 37 31.0**	**+1.1**
JRY				S	**S**	**01 38 12.7**	**+0.9**
JHU	**Hanno**	**2.38**	**38**	P	**Pn**	**01 37 30.7**	**+0.5**
JHU				S	**S**	**01 38 11.3**	**-1.1**
JKG	**Kaga**	**2.47**	**338**	P	**Pn**	**01 37 31.4**	**+0.4**
JAI	**Aioi**	**2.53**	**266**	P	**Pn**	**01 37 31.1**	**-0.5**
BSO4	**Boso 4**	**2.56**	**66**	P	**Pn**	**01 37 31.9**	**+0.1**
BSO4				*e*S	**S**	**01 38 15.3**	**0.0**
MJAR	**Matsushiro Arr**	**2.62**	**13**	P	**Pn**	**01 37 32.6**	**+0.4**
	2.5nm,0.3s,baz=182,slow=9.3,SNR=12						
MJAR				S	**S**	**01 38 15.0**	**-1.1**
	0.8nm,0.3s,baz=191,slow=16,SNR=7.4						
MAJO	**Matsushiro**	**2.62**	**13**	*e*Pn	**Pn**	**01 37 33.1**	**+0.8**
MAJO				*e*Sn	**S**	**01 38 15.8**	**-0.3**
MAT	**Matsushiro**	**2.62**	**13**	P	**Pn**	**01 37 32.9**	**+0.7**
MAT				S	**S**	**01 38 15.4**	**-0.7**
BSO3	**Boso 3**	**2.63**	**71**	P	**Pn**	**01 37 31.9**	**-0.5**
BSO3				S	**S**	**01 38 15.6**	**-0.8**
JAG	**Ashikaga**	**2.92**	**33**	P	**Pn**	**01 37 34.4**	**-0.5**
JAG				S	**S**	**01 38 18.6**	**-2.3**
BSO1	**Boso 1**	**2.97**	**76**	P	**Pn**	**01 37 34.1**	**-1.4**
BSO1				*e*S	**S**	**01 38 20.2**	**-1.7**
JYT	**Yasato**	**3.15**	**44**	P	**Pn**	**01 37 36.3**	**-0.8**
JYT				*e*S	**S**	**01 38 20.8**	**-4.1**
JHO	**Hitachi**	**3.64**	**43**	P	**Pn**	**01 37 41.1**	**-0.8**
JHS	**Saijyo**	**3.74**	**287**	P	**Pn**	**01 37 42.9**	**-0.1**
JTO	**Tosashimizu**	**4.07**	**255**	P	**Pn**	**01 37 45.6**	**-0.8**
KSRS	**Korea Array**	**8.51**	**297**	P	**Pn**	**01 38 37.9**	**+0.4**
	0.4nm,0.3s,baz=108,slow=12,SNR=13						
SONM	**Songino Array**	**27.05**	**310**	P	**P**	**01 41 49.7**	**-0.5**
	0.7nm,0.4s,mb3.3,baz=124,slow=10,SNR=7.8						
MKAR	**Makanchi Array**	**43.10**	**304**	P	**P**	**01 44 05.7**	**0.0**
	1.7nm,0.5s,mb3.4,baz=85,slow=9.7,SNR=18						
MKAR	**Makanchi Array**	**43.10**	**304**	P	**P**	**01 44 05.7**	**0.0**
KURK	**Kurchatov**	**45.36**	**310**	P	**P**	**01 44 23.4**	**0.0**
	1.1nm,0.5s,mb3.3,baz=89,slow=6.6,SNR=10						
BVAR	**Borovoye Array**	**50.30**	**314**	P	**P**	**01 45 01.2**	**+0.2**
	0.3nm,0.4s,mb2.9,baz=100,slow=7.3,SNR=4.9						
WRA	**Warramunga Arr**	**53.71**	**184**	P	**P**	**01 45 25.2**	**-1.0**
	0.8nm,0.3s,mb3.5,baz=0.2,slow=7.6,SNR=22						
ASAR	**Alice Springs**	**57.44**	**184**	P	**P**	**01 45 51.3**	**-1.1**
	0.4nm,0.6s,mb3.0,baz=0.0,slow=5.6,SNR=6.5						
YKA	**Yellowknife Ar**	**68.03**	**28**	P	**P**	**01 47 01.6**	**+0.3**
	1.1nm,0.8s,mb3.6,baz=301,slow=6.0,SNR=3.0						
AKASG	**Malin Array Be**	**74.70**	**321**	P	**P**	**01 47 40.1**	**-0.9**
	0.4nm,0.3s,mb3.6,baz=50,slow=5.3,SNR=4.0						
NVAR	**Mina Array Bea**	**79.39**	**51**	P	**P**	**01 48 08.9**	**+1.6**
	0.3nm,0.5s,mb3.3,baz=311,slow=4.2,SNR=3.4						
GERES	**GERESS Array B**	**83.54**	**326**	P	**P**	**01 48 28.5**	**-0.1**
	0.3nm,0.7s,mb3.3,baz=36,slow=12,SNR=2.6						
TXAR	**Lajitas Array**	**94.53**	**50**	P	**P**	**01 49 22.4**	**+1.5**
	0.2nm,0.5s,mb3.4,baz=291,slow=2.8,SNR=6.5						
TXAR	**Lajitas Array**	**94.53**	**50**	P	**P**	**01 49 22.4**	**+1.5**

*IDC **26** 01:46:14.5±1.3, 801S×11873E, h0km, mb3.9/5, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, ML3.8/2, MS3.4/6, Ms1 3.4/6, ms1mx3.2/30, Error ellipse: s-maj=48.0km s-min=17.9km az=65.0*
*ISCJB **26** 01:46:15.7±1.3, 804S±005×11886E±005, h12km±9km, mb4.0/6, MS3.5/4, Error ellipse: s-maj=9.1km s-min=7.4km az=9.9*
*NEIC **26** 01:46:19.6±0.7, 809S×11863E, h35km, mb4.1/2, Error ellipse: s-maj=20.6km s-min=8.9km az=70.0*
*DJA **26** 01:46:19, 818S×11897E, h20km, MLv4.3/5*

ISC 26 01:46:16.9±1.3, 801S±005×11889E±004, h9km±9km, n32, σ1§29/32, mb4.0/6, MS3.5/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.56**	**201**	P	**Pg**	**01 46 26.8**	**-1.0**
BMNI	**Bima**	**0.56**	**201**	S	**Sg**	**01 46 37.0**	**+

ASH					S		Sn	01 55 05.4	+27
AML	**Almayashu**	**11.55**	**50**	*e*Pn		**Pn**		**01 55 39.4**	**-0.3**
AML	**Almayashu**	**11.55**	**50**	*e*Pn		**Pn**		**01 55 39.3**	**-0.4**
EKS2	**Erkin-Say**	**11.89**	**48**	*e*Pn		**Pn**		**01 55 45.0**	**+0.6**
	3.2nm,0.6s								
EKS2	**Erkin-Say**	**11.89**	**48**	*e*Pn		**Pn**		**01 55 45.0**	**+0.6**
	3.2nm,0.6s								
AAK	**Ala-Archa**	**12.32**	**49**	*e*Pn		**Pn**		**01 55 49.8**	**-0.5**
	3.7nm,0.6s								
AAK	**Ala-Archa**	**12.32**	**49**	*e*P		**Pn**		**01 55 49.8**	**-0.4**
AAK					pmax	pmax			
	comp=Z,4.0nm,0.6s								
AAK	**Ala-Archa**	**12.32**	**49**	*e*Pn		**Pn**		**01 55 49.8**	**-0.4**
	comp=Z,3.7nm,0.6s								
AKTK	**Aktyubinsk**	**15.42**	**351**		Pn	**Pn**		**01 56 30.6**	**-1.5**
AKTK					Sn	**Sn**		**01 59 21.2**	**-0.6**
AKTK	**Aktyubinsk**	**15.42**	**351**		Pn	**Pn**		**01 56 30.6**	**-1.6**
AKTK					Sn	**Sn**		**01 59 21.2**	**-0.6**
AKTO	**Aktyubinsk**	**15.42**	**351**		Pn	**Pn**		**01 56 30.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=175,slow=7.4,SNR=6.5								
AKTO					Sn	**Sn**		**01 59 21.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=245,slow=18,SNR=4.4								
BVAR	**Borovoye Array**	**18.78**	**16**	P		**Pn**		**01 57 14.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=186,slow=10,SNR=26								
BVAR	**Borovoye Array**	**18.78**	**16**	P		**Pn**		**01 57 14.6**	**+0.5**
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BRVK	**Borovoye**	**18.79**	**16**	*e*P		**Pn**		**01 57 16.6**	**+2.4**
	comp=Z,3.4nm,0.8s								
BRVK	**Borovoye**	**18.79**	**16**	*e*P		**Pn**		**01 57 16.6**	**+2.4**
BRVK					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BRVK	**Borovoye**	**18.79**	**16**	*e*P		**Pn**		**01 57 16.6**	**+2.4**
	comp=Z,3.4nm,0.8s								
MKAR	**Makanchi Array**	**19.22**	**47**	P		**Pn**		**01 57 20.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=231,slow=10.0,SNR=5.6								
PYUN	**Piuthan**	**19.37**	**106**	*e*P		**Pn**		**01 57 20.1**	**-1.3**
	comp=Z,7.4nm,0.6s								
KURK	**Kurchatov**	**19.68**	**33**	P		**Pn**		**01 57 23.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=223,slow=11,SNR=9.1								
DANN	**Dangsing**	**19.87**	**104**	*e*P		**Pn**		**01 57 26.3**	**-1.0**
	comp=Z,10nm,0.5s								
KOLN	**Koldanda**	**20.00**	**106**	*e*P		**Pn**		**01 57 26.8**	**-2.1**
GKN	**Gorkha**	**20.72**	**104**	*e*P		**P**		**01 57 34.7**	**-0.1**
	comp=Z,26nm,0.5s								
DMN	**Daman**	**21.26**	**105**	*e*P		**P**		**01 57 40.5**	**-0.2**
	comp=Z,9.7nm,0.3s,mb4.6								
ARU	**Arti**	**21.30**	**355**	*e*P		**P**		**01 57 43.1**	**+2.4**
	comp=Z,10nm,0.8s,mb4.2								
ARU	**Arti**	**21.30**	**355**	*e*P		**P**		**01 57 43.1**	**+2.3**
ARU					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.2								
ARU	**Arti**	**21.30**	**355**	*e*P		**P**		**01 57 43.1**	**+2.3**
	comp=Z,10nm,0.8s,mb4.2								
KKN	**Kakani**	**21.32**	**104**	*e*P		**P**		**01 57 41.5**	**+0.2**
PKI	**Pulchoki**	**21.52**	**104**	*e*P		**P**		**01 57 43.4**	**0.0**
	comp=Z,18nm,0.6s,mb4.7								
PKI	**Pulchoki**	**21.52**	**104**	*e*P		**P**		**01 57 43.4**	**0.0**
PKI					pmax	pmax			
	comp=Z,18nm,0.6s,mb4.7								
GUN	**Gumba**	**21.75**	**103**	*e*P		**P**		**01 57 46.9**	**+1.1**
	comp=Z,17nm,0.7s,mb4.6								
JIRN	**Jiri**	**22.10**	**103**	*e*P		**P**		**01 57 49.8**	**+0.2**
BRTR	**Keskin Array B**	**22.75**	**290**	P		**P**		**01 57 56.6**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.0,baz=95,slow=11,SNR=2.9								
ODAN	**Odare**	**23.41**	**104**	*e*P		**P**		**01 58 04.1**	**+0.6**
TAPN	**Taplejung**	**23.45**	**102**	*e*P		**P**		**01 58 04.6**	**+0.8**
ZALV	**Zalesovo Beam**	**24.67**	**34**	P		**P**		**01 58 16.9**	**+2.2**
	comp=Z,2.6nm,0.6s,mb3.9,baz=238,slow=9.2,SNR=9.5								
ZALV	**Zalesovo Beam**	**24.67**	**34**	P		**P**		**01 58 16.9**	**+2.2**
ZALV	**Zalesovo Beam**	**24.67**	**34**	P		**P**		**01 58 16.9**	**+2.2**
ZALV					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.0								
AKASG	**Malin Array Be**	**28.11**	**313**	P		**P**		**01 58 46.9**	**+1.1**
	comp=Z,0.7nm,0.4s,mb3.6,baz=36,slow=13,SNR=4.7								
AKASG	**Malin Array Be**	**28.11**	**313**	P		**P**		**01 58 46.9**	**+1.1**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**36.86**	**107**	P		**P**		**02 00 02.9**	**+0.4**
	comp=Z,1.1nm,0.3s,mb4.2,baz=300,slow=6.7,SNR=4.7								
CMAR	**Chiang Mai Arr**	**36.86**	**107**	P		**P**		**02 00 02.9**	**+0.4**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
TORD	**Torodi Ar. Bea**	**58.18**	**264**	P		**P**		**02 02 47.0**	**-1.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=55,slow=5.9,SNR=9.5								

*IDC **26** 01:56:53.9±1.1,855×11809E,h0km,mb4.0/7,mb1 4.2/9, mb1mx4.0/19,mbtmp4.1/9,ML4.4/2,MS3.6/5,Ms1 3.6/5, ms1mx3.2/29,Error ellipse: s-maj=55.6km s-min=16.7km az=53.0*

*DJA **26** 01:56:58,824S×11898E,h10km,MLv4.6/10*

*ISCJB **26** 01:56:59.1±0.8,823S±005×11891E±006,h36km±11km, mb4.1/8,MS3.6/4, Error ellipse: s-maj=9.7km s-min=8.0km az=7.0*

*NEIC **26** 01:56:59.7±0.6,822S×11859E,h35km,mb4.2/2, Error ellipse: s-maj=17.8km s-min=8.1km az=66.0*

ISC 26 01:57:01.6±0.7,819S±005×11892E±005,h41km±10km, n37,σ1°39/35,mb4.1/8,MS3.6/4,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.41**	**214**	P	**Pn**	**01 57 05.8**	**-5.5**
KAPI	**Kappang**	**3.26**	**15**	Pn	**Pn**	**01 57 49.6**	**-0.7**
	65nm,0.3s,baz=191,slow=7.4,SNR=104						
KAPI				Sn	**Sn**	**01 58 27.2**	**-0.7**
	133nm,0.3s,baz=201,slow=22,SNR=27						
KAPI				LR	LR	01 59 24.9	
	comp=Z,350nm,20.8s,baz=207,slow=39						
KAPI	**Kappang**	**3.26**	**15**	*e*Pn	**Pn**	**01 57 49.6**	**-0.7**
KAPI				Sn	**Sn**	**01 58 27.2**	**-0.7**
KAPI				*e*Sn	**Sn**	**01 58 28.1**	**+0.2**
KHKI	**Kahang-Kahang**	**3.29**	**267**	P	**Pn**	**01 57 49.9**	**-0.7**
DNP	**Denpasar**	**3.71**	**262**	P	**Pn**	**01 57 59.0**	**+2.6**
IGBI	**Denpasar**	**3.79**	**260**	P	**Pn**	**01 57 54.8**	**-2.7**
NBBI	**Negara**	**4.26**	**267**	P	**Pn**	**01 58 03.8**	**-0.3**
KMMI	**Kalianget**	**5.04**	**283**	P	**Pn**	**01 58 16.6**	**+1.8**
BATI	**Baumata**	**5.09**	**114**	Pn	**Pn**	**01 58 20.4**	**+4.9**
	13nm,0.3s,baz=305,slow=3.7,SNR=10.0						
BATI	**Baumata**	**5.09**	**114**	P	**Pn**	**01 58 22.2**	**+6.8**
KDI	**Kendari**	**5.59**	**41**	P	**Pn**	**01 58 19.1**	**-3.2**
BBKI	**Banjar Baru**	**6.21**	**319**	P	**Pn**	**01 58 34.3**	**+3.4**
	50nm,0.9s,0.4nm						
KRKI	**Karangkates**	**6.41**	**270**	P	**Pn**	**01 58 33.7**	**+0.2**
SJI	**Sawahan**	**7.10**	**273**	P	**Pn**	**01 58 43.7**	**+0.6**
PCI	**Palu**	**7.30**	**7**	P	**Pn**	**01 58 47.0**	**+1.2**
MBWA	**Marble Bar**	**12.91**	**177**	*e*Pn	**Pn**	**02 00 01.1**	**-1.5**
MBWA				*e*Sn	**Sn**	**02 02 15.9**	**-9.1**
KAKA	**Kakadu**	**14.03**	**110**	*e*P	Px	02 00 03.0	
	21nm,0.7s						
KAKA	**Kakadu**	**14.03**	**110**	*e*Pn	Px	02 00 03.3	
KAKA	**Kakadu**	**14.03**	**110**	P	Px	02 00 04.5	
WRA	**Warramunga Arr**	**18.95**	**130**	P	**Pn**	**02 01 19.9**	**-0.5**
	0.9nm,0.3s,baz=303,slow=12,SNR=45						
WRAB	**Tennant Creek**	**18.95**	**130**	*e*P	**Pn**	**02 01 20.5**	**+0.1**
	8.4nm,0.8s						
WRAB				*e*Sn	**Sn**	**02 04 52.0**	**+0.1**
WRAB	**Tennant Creek**	**18.95**	**130**	P	**Pn**	**02 01 20.1**	**-0.3**
WB2	**Warramunga Arr**	**18.96**	**130**	*e*P	**Pn**	**02 01 20.1**	**-0.4**
WB2	**Warramunga Arr**	**18.96**	**130**	*e*P	**Pn**	**02 01 20.6**	**+0.1**
ASAR	**Alice Springs**	**21.04**	**139**	P	**P**	**02 01 43.4**	**+1.2**
	3.5nm,0.4s,mb4.1,baz=314,slow=10,SNR=30						
COEN	**Coen**	**24.47**	**106**	*e*P	**P**	**02 02 19.1**	**+2.1**
	22nm,0.8s,mb4.6						
CTA	**Charters Tower**	**28.96**	**117**	LR	LR	02 14 11.6	
	comp=Z,88nm,18.4s,MS3.4,baz=52,slow=35						
STKA	**Stephens Creek**	**31.62**	**141**	*e*P	**P**	**02 03 21.0**	**+0.2**
	3.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**31.62**	**141**	P	**P**	**02 03 21.4**	**+0.6**
	4.2nm,0.7s,mb4.4,baz=308,slow=15,SNR=8.7						
STKA				LR	LR	02 17 46.7	
	comp=Z,105nm,18.5s,MS3.5,baz=25,slow=39						
CMAR	**Chiang Mai Arr**	**33.02**	**323**	LR	LR	02 20 12.2	
	comp=Z,25nm,18.7s,MS3.0,baz=195,slow=43						
KSRS	**Korea Array**	**46.18**	**10**	P	**P**	**02 05 24.2**	**+1.8**
	0.9nm,0.6s,mb3.9,baz=195,slow=7.9,SNR=4.0						
SONM	**Songino Array**	**56.88**	**350**	P	**P**	**02 06 42.9**	**+0.7**
	2.2nm,1.0s,mb4.2,baz=168,slow=6.8,SNR=11						
MKAR	**Makanchi Array**	**63.71**	**333**	P	**P**	**02 07 26.4**	**-2.5**
	0.8nm,0.6s,mb3.9,baz=144,slow=7.4,SNR=5.6						
AFI	**Afiamalu**	**68.06**	**102**	LR	LR	02 35 57.6	
	comp=Z,396nm,20.8s,MS4.6,baz=204,slow=34						
ZALV	**Zalesovo Beam**	**68.27**	**339**	P	**P**	**02 07 56.6**	**-1.4**
	1.2nm,0.6s,mb4.1,baz=151,slow=5.7,SNR=6.6						
BVAR	**Borovoye Array**	**73.55**	**332**	P	**P**	**02 08 27.9**	**-2.2**
	0.3nm,0.4s,mb3.5,baz=133,slow=6.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**118.24**	**281**	PKP	PKPdf	02 15 42.9	-2.6
	0.3nm,0.6s,baz=80,slow=1.0,SNR=4.8						

*ISK **26** 02:13:13.8,3753N×3556E,h13km,MD2.9*

*CSEM **26** 02:13:13.8,3753N×3556E,h13km,MD2.9, After ISK*

*ISCJB **26** 02:13:14.3±0.5,3752N±004×3555E±004,h8km±7km, Error ellipse: s-maj=6.6km s-min=5.2km az=14.2*

*DDA **26** 02:13:14.1,3755N×3558E,h7km±1km*

ISC 26 02:13:14.7±0.5,3751N±004×3556E±004,h11km±6km,n11, σ0°70/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.21**	**98**	*e*PG	**Pg**	**02 13 18.8**	**-0.5**
KOZT				*e*SG	**Sg**	**02 13 22.5**	**+0.2**
KARA	**Karaisali**	**0.47**	**238**	*e*PG	**Pg**	**02 13 23.8**	**-0.2**
KARA				*e*SG	**Sg**	**02 13 30.8**	**+0.5**
CEYT	**Ceyhan**	**0.52**	**163**	*e*PG	**Pg**	**02 13 25.1**	**+0.2**
CEYT				*e*SG	**Sg**	**02 13 32.9**	**+1.0**
NIG	**Nigde**	**0.96**	**309**	*e*PG	**Pg**	**02 13 32.6**	**-0.6**
NIG				*e*SG	**Sg**	**02 13 45.9**	**+0.2**
MERS	**Mersin**	**1.05**	**233**	*e*PG	**Pg**	**02 13 34.6**	**-0.3**
KMRS	**Kahramanmaras**	**1.07**	**90**	*e*PG	**Pg**	**02 13 34.8**	**-0.5**
PINB	**Pinarbasi**	**1.34**	**30**	*i* P	**Pn**	**02 13 38.6**	**-0.8**
PINB				*i* S	**Sb**	**02 13 59.0**	**+1.9**
BNN	**Bunyan**	**1.36**	**9**	*e*PN	**Pn**	**02 13 38.8**	**-0.9**
BNN				*e*SN	**Sn**	**02 13 57.2**	**-0.4**
AVNT	**Avonos**	**1.38**	**337**	*i* P	**Pn**	**02 13 40.0**	**+0.1**
AVNT				*i* S	**Sn**	**02 13 59.1**	**+0.9**
HTY	**Hatay**	**1.46**	**161**	*e*PN	**Pn**	**02 13 40.5**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.47**	**37**	*e*PN	**Pn**	**02 13 35.6**	**-5.6**

*IDC **26** 02:23:50.4±0.6,3179S×17808W,h0km,mb4.6/14, mb1 4.7/17,mb1mx4.7/19,mbtmp4.6/17,ML4.6/2,MS4.1/1, Ms1 4.1/1,ms1mx3.4/19,Error ellipse: s-maj=19.2km s-min=15.2km az=99.0*

*ISCJB **26** 02:23:54.1±0.2,3210S±005×178.15W±006,h32km, mb4.8/30,MS4.7/5, Error ellipse: s-maj=9.6km s-min=4.6km az=43.3*

*MOS **26** 02:23:54.5±1.2,3179S×178.15W,h30km,mb5.2/7, Error ellipse: s-maj=15.7km s-min=12.9km az=76.5*

*BJI **26** 02:23:55.7,3210S×178.10W,h35km,mB5.4,mb5.1,Ms5.2, Msz4.9*

*NEIC **26** 02:23:55.8±0.3,3206S×178.10W,h35km,mb5.0/11, Error ellipse: s-maj=13.5km s-min=8.4km az=144.0*

ISC 26 02:23:56.2±0.2,3204S±005×17812W±006,h34km, h34km±1.0km:pP-P,n284,σ0°62/233,mb4.8/30,MS4.7/5, 87C-74D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.78**	**4**	Pn	**Pn**	**02 24 32.1**	**-6.2**
	275nm,0.3s,baz=77,slow=23,SNR=9.7						
RAO				Sn	**Sn**	**02 25 06.3**	**-4.3**
	440nm,0.3s,baz=157,slow=20,SNR=4.9						
RAO	**Raoul Island**	**2.78**	**4**	*e*Pn	**Pn**	**02 24 34.1**	**-4.2**
RAO				Sn	**Sn**	**02 25 06.3**	**-4.3**
PUZ	**Puketiti**	**6.71**	**205**	*e*P	**Pn**	**02 25 27.3**	**-5.0**
PUZ				S	**Sn**	**02 26 45.4**	**-2.2**
URZ	**Urewera**	**7.33**	**211**	Pn	**Pn**	**02 25 40.3**	**-0.6**
	3.5nm,0.3s,baz=121,slow=1.8,SNR=8.3						
URZ				Sn	**Sn**	**02 27 02.9**	**0.0**
	20nm,0.3s,baz=176,slow=21,SNR=16						
RPZ	**Rata Peaks**	**14.44**	**213**	Pn	**Pn**	**02 27 13.7**	**-4.4**
	1.1nm,0.3s,baz=157,slow=7.0,SNR=4.0						
RPZ				Sn	**Sn**	**02 29 46.6**	**-10**
	1.8nm,0.3s,baz=307,slow=20,SNR=6.8						
RPZ	**Rata Peaks**	**14.44**	**213**	Pn	**Pn**	**02 27 13.7**	**-4.4**
RPZ				Sn	**Sn**	**02 29 46.6**	**-10**
AFI	**Afiamalu**	**18.95**	**19**	P	**Pn**	**02 28 08.8**	**-6.6**
	2.0nm,0.3s,baz=320,slow=6.7,SNR=4.7						
AFI	**Afiamalu**	**18.95**	**19**	*e*P	**Pn**	**02 28 11.3**	**-4.0**
	178nm,1.4s						
AFI	**Afiamalu**	**18.95**	**19**	*e*P	**Pn**	**02 28 11.3**	**-4.1**
AFI				pmax	pmax		
	comp=Z,178nm,1.4s						
ARMA	**Armidale**	**25.88**	**266**	*e*P	**P**	**02 29 29.3**	**+4.4**
EIDS	**Eidsvold**	**27.76**	**276**	*e*P	**P**	**02 29 42.9**	**+1.1**
	comp=Z,9.8nm,1.0s,mb4.4						
PPT	**Papeete**	**29.53**	**68**	*e*LR	LR	02 37 19.9	
	comp=Z,553nm,27.2s						
PPT	**Papeete**	**29.53**	**68**	LR	LR	02 38 00.5	
	comp=Z,393nm,21.7s,MS4.0,baz=253,slow=29						
CTA	**Charters Tower**	**33.99**	**282**	*i* P	**P**	**02 30 38.4**	**+1.6**
	comp=Z,22nm,1.0s,mb5.0						
CTA	**Charters Tower**	**33.99**	**282**	P	**P**	**02 30 36.8**	**0.0**
	comp=Z,33nm,1.0s,mb5.2,baz=108,slow=10,SNR=18						
CTAO	**Charters Tower**	**33.99**	**282**	*e*P	**P**	**02 30 38.5**	**+1.7**
	comp=Z,44nm,1.1s,mb5.3						
CTAO	**Charters Tower**	**33.99**	**282**	*e*P	**P**	**02 30 38.5**	**+1.7**
CTAO				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.3						
STKA	**Stephens Creek**	**34.04**	**259**	*e*P	**P**	**02 30 38.2**	**+1.1**
	comp=Z,8.4nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**34.04**	**259**	P	**P**	**02 30 36.1**	**-1.0**
	comp=Z,8.6nm,0.9s,mb4.7,baz=84,slow=9.1,SNR=9.3						
STKA	**Stephens Creek**	**34.04**	**259**	*e*P	**P**	**02 30 38.0**	**+0.9**
RKT	**Rikitea**	**39.05**	**88**	*e*LR	LR	02 42 03.9	
	comp=Z,581nm,27.0s						
PMG	**Port Moresby**	**39.24**	**297**	*e*P	**P**	**02 31 22.5**	**+0.9**
	comp=Z,17nm,1.1s,mb4.7						
PMG	**Port Moresby**	**39.24**	**297**	*e*P	**P**	**02 31 22.5**	**+1.0**
PMG				pmax	pmax		
	comp=Z,17nm,1.1s						
TAOE	**Nuku Hiva Isla**	**42.07**	**65**	*e*LR	LR	02 43 20.7	
	comp=Z,632nm,25.7s						
ASAR	**Alice Springs**	**42.94**	**269**	P	**P**	**02 31 51.8**	**-0.2**
	comp=Z,10nm,0.9s,mb4.5,baz=116,slow=7.9,SNR=54						
WB2	**Warramunga Arr**	**44.07**	**274**	*i* P	**P**	**02 32 00.5**	**-0.6**
WRAB	**Tennant Creek**	**44.08**	**274**	P	**P**	**02 32 00.0**	**-1.1**
	comp=Z,210nm,1.0s,mb5.8,SNR=16						
WRAB	**Tennant Creek**	**44.08**	**274**	*e*P	**P**	**02 31 59.8**	**-1.4**
	comp=Z,31nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**44.08**	**274**	*e*P	**P**	**02 31 59.8**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**44.08**	**274**	P	**P**	**02 32 00.5**	**-0.7**
	comp=Z,21nm,1.0s,mb4.8,baz=113,slow=7.7,SNR=50						
FORT	**Forrest**	**45.55**	**257**	*e*P	**P**	**02 32 11.3**	**-1.5**
	comp=Z,23nm,0.6s,mb5.3						
FORT	**Forrest**	**45.55**	**257**	*e*P	**P**	**02 32 11.9**	**-0.9**
	comp=Z,22nm,0.7s,mb5.2						
VNDA	**Vanda**	**46.46**	**186**	P	**P**	**02 32 21.6**	**+2.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=6.5,slow=4.1,SNR=5.1						
KAKA	**Kakadu**	**49.13**	**281**	*e*P	Px	02 32 23.8	
	comp=Z,17nm,1.0s						
CASY	**Casey**	**53.65**	**208**	*e*P	**P**	**02 33 14.4**	**+0.4**
QSPA	**South Pole Qui**	**58.08**	**180**	P	**P**	**02 33 46.8**	**+1.3**
	comp=Z,7.8nm,0.9s,mb4.7,baz=350,slow=2.1,SNR=14						
MAW	**Mawson**	**70.75**	**201**	P	**P**	**02 35 09.6**	**+1.2**
	comp=Z,5.9nm,1.0s,mb4.5,baz=70,slow=5.0,SNR=3.9						
SDKM	**Sandakan**	**71.95**	**289**	*i*P	**P**	**02 35 18.5**	**+2.0**
KKM	**Kota Kinabalu**	**72.97**	**289**	*i*P	**P**	**02 35 30.7**	**+8.0**
SYO	**Syowa Base**	**75.50**	**193**	*i*eP	**P**	**02 35 35.5**	**-1.0**
SYO	**Syowa Base**	**75.50**	**193**	*i*eP	**P**	**02 35 40.7**	**+4.2**
SNAA	**Sanae**	**76.53**	**178**	*e*P	**P**	**02 35 39.1**	**-3.2**
SNAA				*e*	pP	02 35 48.7	-4.3
SNAA				*e*		02 35 55.5	
SNAA				*e*		02 35 59.8	
SNAA	**Sanae**	**76.53**	**178**	*e*P	**P**	**02 35 37.8**	**-4.5**
	comp=Z,30nm,1.3s,mb5.1						
SNAA	**Sanae**	**76.53**	**178**	*e*P	**P**	**02 35 37.8**	**-4.5**
SNAA				pmax	pmax		
	comp=Z,30nm,1.3s						
VNA3	**Neumayer Olymp**	**76.69**	**176**	*e*P	**P**	**02 35 43.9**	**+0.7**
VNA3				*e*	pP	02 35 53.6	-0.2
VNA3				*e*		02 36 01.3	
VNA3				*e*		02 36 05.6	
VNA2	**Neumayer--Watz**	**77.12**	**177**	*e*P	**P**	**02 35 47.1**	**+1.4**
VNA2				*e*	pP	02 35 56.8	+0.5
VNA2				*e*		02 36 04.2	
VNA2				*e*		02 36 08.8	
MAIT	**Maitri**	**77.24**	**183**	*e*P	**P**	**02 35 45.0**	**-1.3**
VNA1	**Neumayer--Stat**	**77.35**	**177**	*e*P	**P**	**02 35 48.0**	**+1.0**
VNA1				*e*	pP	02 35 58.4	+0.8
VNA1				*e*		02 36 07.1	
MJAR	**Matsushiro Arr**	**79.53**	**326**	P	**P**	**02 35 57.4**	**-1.9**
	comp=Z,0.6nm,0.3s,mb4.0,baz=193,slow=5.0,SNR=3.4						
PLCA	**Paso Flores**	**81.47**	**133**	P	**P**	**02 36 09.8**	**-0.2**
	comp=Z,6.3nm,1.1s,mb4.5,baz=229,slow=5.1,SNR=6.0						
PLCA	**Paso Flores**	**81.47**	**133**	*e*P	**P**	**02 36 09.7**	**-0.2**
	comp=Z,10nm,1.3s,mb4.6						
PLCA	**Paso Flores**	**81.47**	**133**	*e*P	**P**	**02 36 09.7**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KSRS	**Korea Array**	**85.52**	**320**	P	**P**	**02 36 29.9**	**-0.6**
	comp=Z,0.5nm,0.3s,mb4.2,baz=67,slow=26,SNR=4.1						
U04C	**Hernandez Rese**	**86.65**	**43**	⇑P	**P**	**02 36 36.2**	**+0.1**
	baz=89						
MURC	**Murrieta**	**86.92**	**47**	⇓P	**P**	**02 36 38.2**	**+0.7**
	baz=89						
ARVC	**Arvin**	**86.95**	**45**	⇑P	**P**	**02 36 38.1**	**+0.4**
	baz=89						
DVTC	**Desert V Tower**	**86.98**	**48**	⇑P	**P**	**02 36 38.3**	**+0.5**
	baz=89						
BFSC	**Mount Baldy St**	**87.06**	**46**	⇓P	**P**	**02 36 37.8**	**-0.4**
	baz=89						
NJ2	**Nanjing**	**87.23**	**311**	*e*P	**P**	**02 36 44.0**	**+4.9**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.6						
VES	**Vestal, Richgr**	**87.29**	**44**	⇑P	**P**	**02 36 39.6**	**+0.3**
	baz=90						
EDW2	**Edwards Air Fo**	**87.29**	**46**	⇓P	**P**	**02 36 39.9**	**+0.6**
	baz=89						
PETK	**Petropavlovsk-**	**87.36**	**346**	P	**P**	**02 36 38.5**	**-0.7**
	comp=Z,5.5nm,1.0s,mb4.7,baz=104,slow=6.3,SNR=3.8						
PFO	**Pinyon Flat Ob**	**87.39**	**47**	⇓P	**P**	**02 36 39.9**	**+0.1**
	baz=89						
S05C	**Merced**	**87.60**	**42**	⇓P	**P**	**02 36 41.1**	**+0.3**
	baz=90						
T06C	**Millerton Lake**	**87.72**	**43**	⇑P	**P**	**02 36 41.0**	**-0.3**
	baz=90,SNR=7.0						
LRMC	**Laurel Mountai**	**87.88**	**45**	⇓P	**P**	**02 36 42.4**	**+0.3**
	baz=90,SNR=5.6						
CMB	**Columbia Colle**	**88.04**	**42**	*e*P	**P**	**02 36 42.5**	**-0.3**
	comp=Z,0.5nm,1.4s,mb3.5						
GLA	**Glamis**	**88.05**	**49**	⇑P	**P**	**02 36 42.6**	**-0.4**
	baz=90						
GLA	**Glamis**	**88.05**	**49**	*e*P	**P**	**02 36 42.8**	**-0.2**
HEC	**Hector,Ludlow**	**88.27**	**46**	⇓P	**P**	**02 36 43.9**	**-0.1**
	baz=90,SNR=6.7						
CWC	**Cottonwood Cre**	**88.29**	**44**	⇑P	**P**	**02 36 44.2**	**+0.2**
	baz=90						
GSC	**Goldstone**	**88.29**	**46**	⇓P	**P**	**02 36 44.0**	**-0.1**
	baz=90,SNR=7.5						
GSC	**Goldstone**	**88.29**	**46**	*e*P	**P**	**02 36 44.6**	**+0.5**
MPMC	**Manual Prospec**	**88.39**	**45**	⇓P	**P**	**02 36 44.4**	**-0.1**
	baz=90,SNR=7.1						
113A	**Mohawk Valley,**	**88.55**	**49**	⇑P	**P**	**02 36 45.3**	**-0.1**
	baz=90						
IRM	**Iron Mountain**	**88.57**	**48**	⇓P	**P**	**02 36 45.4**	**0.0**
	baz=91,SNR=13						
MTUM	**Tungsten Hills**	**88.62**	**43**	*e*P	**P**	**02 36 46.3**	**+0.7**
214A	**Organ Pipe Nat**	**88.65**	**51**	⇓P	**P**	**02 36 45.6**	**-0.3**
	baz=90						
GMRC	**Granite Mounta**	**88.65**	**47**	⇑P	**P**	**02 36 46.2**	**+0.4**
	baz=91,SNR=5.9						
MLAC	**Mammoth Lakes**	**88.65**	**43**	⇓P	**P**	**02 36 46.5**	**+0.7**
	baz=91						
Y12C	**Blythe**	**88.69**	**48**	⇑P	**P**

	baz=93								
Q10A	**Clear Creek Ra**	**90.88**	**43**	⇑P		**P**	**02 36 56.1**	**0.0**	
	baz=93								
118A	**Homack Ranch,**	**90.95**	**52**	⇓P		**P**	**02 36 56.9**	**+0.3**	
	baz=93,SNR=7.6								
S12A	**Delamar Landin**	**91.00**	**45**	⇓P		**P**	**02 36 57.4**	**+0.7**	
	baz=93								
Y17A	**Roosevelt**	**91.03**	**50**	⇓P		**P**	**02 36 56.6**	**-0.4**	
	baz=93,SNR=6.9								
M07A	**Soldier Meadow**	**91.03**	**40**	⇓P		**P**	**02 36 57.3**	**+0.6**	
	baz=93								
K05A	**Summer Lake**	**91.04**	**38**	⇑P		**P**	**02 36 57.5**	**+0.8**	
	baz=94								
219A	**White Tail Can**	**91.04**	**52**	⇓P		**P**	**02 36 56.7**	**-0.3**	
	baz=93								
W15A	**Williams**	**91.04**	**48**	⇑P		**P**	**02 36 57.5**	**+0.5**	
	baz=93								
R11A	**Troy Canyon, C**	**91.04**	**44**	⇑P		**P**	**02 36 57.4**	**+0.5**	
	baz=93								
X16A	**Lo Mia Camp, P**	**91.09**	**49**	⇑P		**P**	**02 36 57.1**	**-0.1**	
	baz=93,SNR=11								
T13A	**Saint George**	**91.19**	**46**	⇓P		**P**	**02 36 57.3**	**-0.3**	
	baz=93								
H03A	**Soap Creek Ran**	**91.19**	**36**	⇑P		**P**	**02 36 58.6**	**+1.2**	
	baz=94								
N08A	**GE Springer Mi**	**91.19**	**41**	⇑P		**P**	**02 36 57.5**	**-0.1**	
	baz=94								
U14A	**Mt Trumbull**	**91.25**	**47**	⇓P		**P**	**02 36 57.8**	**-0.1**	
	baz=93,SNR=6.5								
O09A	**Fish Creek Ran**	**91.31**	**42**	⇑P		**P**	**02 36 58.1**	**0.0**	
	baz=94								
Q11A	**Duckwater**	**91.33**	**44**	⇑P		**P**	**02 36 57.8**	**-0.4**	
	baz=94								
L07A	**Adell**	**91.38**	**40**	⇓P		**P**	**02 36 58.6**	**+0.3**	
	baz=94								
CN2	**Changchun**	**91.38**	**323**	*e*P		**P**	**02 36 57.8**	**-0.5**	
CN2				*e*XP		sP	02 37 12.3	-0.7	
CN2				AMB		AMB			
	comp=Z,20nm,1.2s,mb5.3								
W16A	**Flagstaff**	**91.46**	**49**	⇑P		**P**	**02 36 59.4**	**+0.5**	
	baz=93								
119A	**Ashpeak Ranch,**	**91.48**	**52**	⇓P		**P**	**02 36 58.9**	**-0.2**	
	baz=93								
V15A	**Kaibab Nationa**	**91.50**	**48**	⇑P		**P**	**02 36 59.7**	**+0.6**	
	baz=94,SNR=5.3								
M08A	**Happy Creek Ra**	**91.51**	**41**	⇓P		**P**	**02 36 59.5**	**+0.6**	
	baz=94								
S13A	**Holt Ranch, En**	**91.58**	**46**	⇑P		**P**	**02 36 59.8**	**+0.4**	
	baz=94,SNR=5.6								
Y18A	**Canyon Day Jun**	**91.61**	**51**	⇑P		**P**	**02 36 59.9**	**+0.3**	
	baz=93,SNR=8.3								
O10A	**Cortez Mining,**	**91.79**	**42**	⇓P		**P**	**02 37 00.6**	**+0.3**	
	baz=94								
U15A	**North Rim**	**91.81**	**47**	⇑P		**P**	**02 37 00.7**	**+0.2**	
	baz=94,SNR=6.2								
WUAZ	**Wupatki**	**91.82**	**49**	*e*P		**P**	**02 37 00.4**	**-0.1**	
WUAZ	**Wupatki**	**91.82**	**49**	⇑P		**P**	**02 37 00.9**	**+0.3**	
	baz=94								
R13A	**O'Grain Ranch,**	**91.90**	**45**	⇓P		**P**	**02 37 01.4**	**+0.5**	
	baz=94								
Q12A	**Willow Creek R**	**91.94**	**44**	⇓P		**P**	**02 37 01.5**	**+0.4**	
	baz=94								
M09A	**Marrel Ranch,**	**92.01**	**41**	⇓P		**P**	**02 37 01.8**	**+0.5**	
	baz=94								
L08A	**Fields**	**92.03**	**40**	⇑P		**P**	**02 37 01.7**	**+0.4**	
	baz=94								
X18A	**Snowflake**	**92.13**	**50**	⇓P		**P**	**02 37 02.4**	**+0.4**	
	baz=94								
T15A	**Red Dirt Ranch**	**92.13**	**47**	⇑P		**P**	**02 37 02.0**	**+0.1**	
	baz=94								
O11A	**Cowboy Ranch,**	**92.17**	**43**	⇓P		**P**	**02 37 01.8**	**-0.3**	
	baz=94								
Y19A	**Nutrioso**	**92.23**	**51**	⇓P		**P**	**02 37 02.5**	**-0.1**	
	baz=94,SNR=6.3								
I06A	**Prineville**	**92.24**	**38**	⇑P		**P**	**02 37 02.4**	**+0.1**	
	baz=95								
GYA	**Guiyang**	**92.27**	**300**	*e*P		**P**	**02 37 05.8**	**+2.9**	
GYA				AP		pP	02 37 15.5	+1.8	
GYA				XP		sP	02 37 22.5	+4.9	
GYA				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb5.1								
GYA				AMB		AMB			
	comp=Z,120nm,5.2s								
GYA				LR		LR			
	comp=N,580nm,19.3s,MS5.1								
GYA				LR		LR			
	comp=E,420nm,18.2s,MS5.1								
GYA				LR		LR			
	comp=Z,500nm,17.9s,MS5.0								
E03A	**Lebam**	**92.41**	**34**	⇓P		**P**	**02 37 04.5**	**+1.5**	
	baz=95								
P13A	**Bates Ranch, G**	**92.69**	**44**	⇓P		**P**	**02 37 03.6**	**-0.9**	
	baz=95								
I07A	**Izee**	**92.70**	**38**	⇑P		**P**	**02 37 04.1**	**-0.3**	
	baz=95								
K09A	**Rome**	**92.72**	**40**	⇑P		**P**	**02 37 04.7**	**+0.1**	
	baz=95								
H06A	**Lindquist Farm**	**92.73**	**37**	⇑P		**P**	**02 37 04.6**	**+0.1**	
	baz=95								
J08A	**Circle Bar Ran**	**92.76**	**39**	⇑P		**P**	**02 37 04.1**	**-0.5**	
	baz=95								
Q14A	**Sevier Lake (B**	**92.83**	**45**	⇑P		**P**	**02 37 04.8**	**-0.3**	
	baz=95								
V18A	**Ganado**	**92.86**	**49**	⇓P		**P**	**02 37 04.9**	**-0.5**	
	baz=95								
G06A	**Carlson Farm,**	**92.92**	**37**	⇑P		**P**	**02 37 04.7**	**-0.7**	
	baz=95								
U17A	**Shonto**	**92.94**	**48**	⇑P		**P**	**02 37 05.1**	**-0.6**	
	baz=95								
M11A	**Holland Ranch,**	**92.95**	**42**	⇓P		**P**	**02 37 05.0**	**-0.6**	
	baz=95								
L10A	**Juniper Basin**	**92.99**	**41**	⇓P		**P**	**02 37 05.7**	**-0.1**	
	baz=95								
N12A	**Clover Valley,**	**93.00**	**43**	⇓P		**P**	**02 37 05.5**	**-0.4**	
	baz=95								
H07A	**Lands Inn, Kim**	**93.02**	**38**	⇑P		**P**	**02 37 05.7**	**-0.1**	
	baz=96								
S16A	**Weppner Ranch,**	**93.06**	**47**	⇑P		**P**	**02 37 06.4**	**+0.2**	
	baz=95								
T17A	**Navajo Res., N**	**93.10**	**48**	⇑P		**P**	**02 37 05.7**	**-0.8**	
	baz=95								
F06A	**Goldendale**	**93.22**	**36**	⇑P		**P**	**02 37 07.0**	**+0.2**	
	baz=96								
K10A	**MacKenzie Ranc**	**93.23**	**40**	⇑P		**P**	**02 37 06.9**	**0.0**	
	baz=96								
U18A	**Rough Rock, Ch**	**93.34**	**49**	⇑P		**P**	**02 37 07.3**	**-0.3**	
	baz=95								
TXAR	**Lajitas Array**	**93.35**	**57**	P		**P**	**02 37 07.2**	**-0.6**	
	comp=Z,1.0nm,1.0s,mb4.2,baz=202,slow=6.5,SNR=6.3								
G07A	**Ruggs Ranch, H**	**93.44**	**37**	⇓P		**P**	**02 37 08.0**	**+0.2**	
	baz=96								
L11A	**Cat Creek Ranc**	**93.45**	**41**	⇓P		**P**	**02 37 07.6**	**-0.4**	
	baz=96								
S17A	**Black Ridge (B**	**93.50**	**47**	⇑P		**P**	**02 37 07.9**	**-0.4**	
	baz=96								
K11A	**Parker Ranch,**	**93.69**	**41**	⇑P		**P**	**02 37 08.2**	**-0.9**	
	baz=96								
T18A	**Mexican Hat**	**93.77**	**48**	⇑P		**P**	**02 37 09.5**	**-0.1**	
	baz=96								
P15A	**Leamington**	**93.80**	**45**	⇓P		**P**	**02 37 09.6**	**0.0**	
	baz=96								
G08A	**Pilot Rock**	**93.82**	**37**	⇓P		**P**	**02 37 09.0**	**-0.5**	
	baz=96								
M13A	**Montello**	**93.83**	**43**	⇓P		**P**	**02 37 09.0**	**-0.7**	
	baz=96								
CMAR	**Chiang Mai Arr**	**93.84**	**289**	P		**P**	**02 37 09.2**	**-1.1**	
	comp=Z,1.5nm,0.3s,mb4.8,baz=120,slow=6.5,SNR=2.8								
R17A	**Hanksville Air**	**94.04**	**47**	⇑P		**P**	**02 37 10.3**	**-0.4**	
	baz=96								
M14A	**Sheep Mountain**	**94.39**	**43**	⇑P		**P**	**02 37 11.9**	**-0.4**	
	baz=97								
KMI	**Kunming**	**94.46**	**297**	P		**P**	**02 37 16.0**	**+3.0**	
KMI				AMB		AMB			
	comp=Z,7.0nm,0.9s,mb5.1								
R18A	**Canyonlands Na**	**94.52**	**47**	⇑P		**P**	**02 37 12.5**	**-0.5**	
	baz=96								
J12A	**Stokes Ranch,**	**94.52**	**41**	⇓P		**P**	**02 37 12.3**	**-0.6**	
	baz=97								
K13A	**Stover Farm, H**	**94.70**	**42**	⇑P		**P**	**02 37 12.8**	**-0.9**	
	baz=97								
G10A	**Bishop Farm, J**	**94.78**	**38**	⇑P		**P**	**02 37 13.5**	**-0.4**	
	baz=97								
L14A	**Malta**	**94.79**	**43**	⇓P		**P**	**02 37 13.9**	**-0.2**	
	baz=97								
Q18A	**Rafter H Ranch**	**94.81**	**46**	⇑P		**P**	**02 37 13.7**	**-0.6**	
	baz=97								
I12A	**Atlanta**	**94.86**	**40**	⇑P		**P**	**02 37 14.3**	**-0.1**	
	baz=97								
M15A	**Larsen Ranch,**	**94.89**	**43**	⇓P		**P**	**02 37 14.5**	**-0.1**	
	baz=97								
H11A	**Donnelly**	**94.97**	**39**	⇓P		**P**	**02 37 14.7**	**-0.2**	
	baz=97								
HLID	**Hailey**	**95.11**	**41**	⇓P		**P**	**02 37 15.3**	**-0.2**	
	baz=97								
O17A	**Robinson Place**	**95.11**	**45**	⇓P		**P**	**02 37 15.3**	**-0.3**	
	baz=97								
J13A	**Cove Ranch, Pi**	**95.13**	**41**	⇓P		**P**	**02 37 15.0**	**-0.7**	
	baz=97								
F10A	**Beach Ranch, E**	**95.17**	**38**	⇑P		**P**	**02 37 15.3**	**-0.4**	
	baz=98								
L15A	**Malad City**	**95.27**	**43**	⇓P		**P**	**02 37 15.9**	**-0.4**	
	baz=98								
G11A	**Walters Elk Ra**	**95.30**	**39**	⇓P		**P**	**02 37 16.2**	**-0.1**	
	baz=98								
J14A	**Carey**	**95.45**	**41**	⇑P		**P**	**02 37 16.6**	**-0.5**	
	baz=98								
H12A	**Diamond D Ranc**	**95.50**	**40**	⇓P		**P**	**02 37 17.1**	**-0.2**	
	baz=98								
N17A	**Moffit Pass**	**95.52**	**45**	⇓P		**P**	**02 37 16.8**	**-0.6**	
	baz=98								
H13A	**Challis**	**95.84**	**40**	⇑P		**P**	**02 37 18.3**	**-0.5**	
	baz=98								
F12A	**Elk City**	**96.07**	**39**	⇓P		**P**	**02 37 19.0**	**-0.8**	
	baz=98								
J15A	**Blackfoot**	**96.11**	**42**	⇓P		**P**	**02 37 19.0**	**-1.1**	
	baz=98								
H14A	**Leadore**	**96.36**	**41**	⇓P		**P**	**02 37 21.0**	**-0.2**	
	baz=99								
J16A	**Bone**	**96.50**	**42**	⇓P		**P**	**02 37 21.5**	**-0.4**	
	baz=99								
F13A	**Darby**	**96.58**	**39**	⇓P		**P**	**02 37 21.7**	**-0.5**	
	baz=99								
CD2	**Chengdu**	**96.87**	**302**	*e*P		**P**	**02 37 25.0**	**+1.2**	
CD2				AP		pP	02 37 35.8	+1.1	
CD2				XP		sP	02 37 39.8	+1.3	
CD2				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb5.3								
CD2				AMB		AMB			
	comp=Z,30nm,8.2s								
CD2				LR		LR			
	comp=N,180nm,16.2s								
CD2				LR		LR			
	comp=Z,200nm,15.8s,MS4.7								
I16A	**Newdale**	**96.95**	**42**	⇑P		**P**	**02 37 23.7**	**-0.1**	
	baz=99								
HHC	**Hu-ho-hao-te**	**97.29**	**314**	*e*P		**P**	**02 37 30.8**	**+5.3**	
HHC				AP		pP	02 37 40.8	+4.5	
HHC				XP		sP	02 37 44.3	+4.1	
HHC				AMB		AMB			
	comp=Z,14nm,0.5s,mb5.7								
HHC				LR		LR			
	comp=N,291nm,16.6s,MS5.1								
HHC				LR		LR			
	comp=E,398nm,15.5s,MS5.1								
HHC				LR		LR			
	comp=Z,266nm,14.3s,MS4.9								
BOZ	**Bozeman (W)**	**97.96**	**41**	⇑P		**P**	**02 37 28.0**	**-0.4**	
	baz=100								
LZH	**Lanzhou**	**99.61**	**307**	*e*P		Pdif	02 37 41.3	+5.2	
LZH				AP		pP	02 37 51.8	+4.9	
LZH				XP		sP	02 37 55.8	+5.1	
LZH				AMB		AMB			
	comp=Z,17nm,1.5s,mb5.2								
LZH				AMB		AMB			
	comp=Z,87nm,8.9s								
LZH				LR		LR			
	comp=E,276nm,18.0s								
LZH				LR		LR			
	comp=Z,395nm,19.5s,MS4.9								
WMQ	**Urumqi**	**114.15**	**308**	*e*PKP		PKiKP	02 42 27.0	-4.7	
KURK	**Kurchatov**	**122.09**	**313**	*e*PKPdf		PKPdf	02 42 46.2	-0.5	
ARCES	**ARCESS Array B**	**140.16**	**347**	PKhKP			02 43 19.1		
	comp=Z,4.6nm,0.9s,baz=34,slow=1.8,SNR=6.3								
JOF	**Joensuu**	**143.89**	**338**	*e*p		PKPdf	02 43 24.7	-2.4	
	comp=Z,0.8nm,0.4s								
JOF	**Joensuu**	**143.89**	**338**	*e*PKIKP		PKPdf	02 43 24.7	-2.4	
JOF				pmax		pmax			
	comp=Z,1.0nm,0.4s								
VRHR	**Novokhopersk**	**145.24**	**315**	*e*PKIKP		PKPdf	02 43 28.6	-1.2	
VRHR				pmax		pmax			
	comp=Z,20nm,0.9s								
VRHR				pmax		pmax			
	comp=N,10.0nm,0.8s								
VRHR				pmax		pmax			
	comp=E,20nm,0.8s								
KIV	**Kislovodsk**	**146.04**	**302**	*e*PKPbc		PKPbc	02 43 32.2	-0.1	
KIV	**Kislovodsk**	**146.04**	**302**	*e*PKP2		PKPdf	02 43 31.7	+0.3	
KIV				pmax		pmax			
	comp=Z,20nm,1.2s								
KAF	**Kangasniemi**	**146.05**	**340**	*e*p		PKPdf	02 43 30.3	-0.5	
	comp=Z,2.0nm,0.4s								
KAF	**Kangasniemi**	**146.05**	**340**	*e*PKP2		PKPdf	02 43 30.3	-0.5	
KAF				pmax		pmax			
	comp=Z,2.0nm,0.4s								
OBN	**Obninsk**	**146.44**	**324**	*e*PKPbc		PKPbc	02 43 32.6	-0.4	
VSR	**Storozhevoye**	**146.66**	**316**	*e*PKP2		PKPdf	02 43 32.8	+0.6	
VSR				pmax		pmax			
	comp=Z,20nm,1.1s								
VSR				pmax		pmax			
	comp=N,5.0nm,0.9s								
VSR				pmax		pmax			
	comp=E,30nm,1.1s								
VORD	**Divnogorie**	**146.67**	**316**	*e*PKP2		PKPdf	02 43 33.1	+0.9	
VORD				pmax		pmax			
	comp=Z,60nm,1.0s								
VORD				pmax		pmax			
	comp=N,90nm,0.8s								
VORD				pmax		pmax			
	comp=E,200nm,0.8s								
NB2	**NORSAR Subarra**	**150.35**	**351**	PKP		PKPbc	02 43 41.9	-1.2	
	comp=Z,2.3nm,0.9s,baz=22,slow=2.7								
NOA	**NORSAR Array B**	**150.35**	**351**	PKPbc		PKPbc	02 43 42.0	-1.2	
	comp=Z,3.2nm,0.8s,baz=15,slow=4.1,SNR=5.7								
AKASG	**Malin Array Be**	**152.52**	**321**	PKPbc		PKPbc	02 43 47.8	-0.6	
	comp=Z,1.3nm,0.6s,baz=48,slow=2.0,SNR=12								
KIEV	**Kiev**	**152.53**	**321**	*e*PKPdf		PKPdf	02 43 37.7	-3.8	
BR131	**Keskin Array S**	**153.25**	**296**	*e*PKPab		PKPab	02 44 02.2	-0.2	
BRTR	**Keskin Array B**	**153.25**	**296**	PKPbc		PKPbc	02 43 49.9	-0.6	
	comp=Z,1.9nm,0.8s,baz=144,slow=2.7,SNR=14								
ANTO	**Ankara**	**153.88**	**296**	*e*PKPab		PKPab	02 44 01.0	-4.1	
KWP	**Kalwaria**	**156.52**	**325**	*e*P		PKPab	02 44 15.3	-0.7	
KOLS	**Kolonicke sedl**	**157.19**	**324**	*e*PKP		PKPab	02 44 18.4	-0.5	
STHS	**Stebnicka Huta**	**157.38**	**326**	*e*PKP		PKPab	02 44 19.3	-0.4	
CRVS	**Cervenica-Dubn**	**157.62**	**324**	*e*PKP		PKPab	02 44 19.8	-0.9	
OKC	**Ostrava-Krasne**	**158.47**	**330**	*e*PKPab		PKPab	02 44 23.7	-0.7	
UPC	**Upice**	**158.77**	**334**	*e*PKPab		PKPab	02 44 24.7	-1.0	
DPC	**Dobruska-Polom**	**158.79**	**334**	*e*PKPab		PKPab	02 44 25.3	-0.4	
CLL	**Collm**	**159.07**	**340**	*e*PKPab		PKPab	02 44 25.5	-1.4	
CLL	**Collm**	**159.07**	**340**	*i* PKPab		PKPab	02 44 25.1	-1.8	
	comp=Z,16nm,1.3s								
CLL				*i* pPKPab		pPKPab	02 44 37.2	-0.6	
	comp=Z,11nm,1.1s								
VYHS	**Vyhne**	**159.16**	**327**	*e*PKP		PKPab	02 44 26.4	-1.0	
BRG	**Berggiesshubel**	**159.17**	**338**	*e*PKPab		PKPab	02 44 26.6	-0.8	
BRG	**Berggiesshubel**	**159.17**	**338**	*e*P		PKPab	02 44 25.6	-1.8	
	comp=Z,23nm,1.6s								
PVCC	**Panska Ves**	**159.26**	**337**	*e*PKPab		PKPab	02 44 26.9	-0.9	
KOLL	**Kolacno**	**159.29**	**328**	*e*PKP		PKPab	02 44 27.0	-1.0	
FBE	**Freiberg**	**159.31**	**339**	*e*PKPab		PKPab	02 44 27.1	-0.9	
PRU	**Pruhonice**	**159.73**	**336**	*e*PKPab		PKPab	02 44 29.9	+0.1	
MODS	**Modra-Piesok**	**159.95**	**329**	*e*PKP		PKPab	02 44 30.1	-0.7	
TREC	**Trest**	**159.96**	**333**	*e*PKPab		PKPab	02 44 30.1	-0.8	
TANN	**Tannenbergstha**	**160.03**	**340**	*e*PKPab		PKPab	02 44 30.7	-0.4	
WERD	**Werda**	**160.04**	**340**	*e*PKPab		PKPab	02 44 30.1	-1.0	
GUNZ	**Gunzen**	**160.11**	**340**	*e*PKPab		PKPab	02 44 31.1	-0.3	
WERN	**Wernitzgruen**	**160.16**	**340**	*e*PKPab		PKPab	02 44 31.0	-0.7	
MANZ	**Manzenberg**	**160.51**	**340**	*e*PKPab		PKPab	02 44 32.7	-0.5	
ROTZ	**Rotzenmuhle**	**160.68**	**339**	*e*PKPab		PKPab	02 44 33.1	-0.8	
KHC	**Kasperske Hory**	**160.79**	**336**	*e*PKPab		PKPab	02 44 33.2	-1.3	
GERES	**GERESS Array B**	**160.99**	**335**	PKPab		PKPab	02 44 33.0	-2.4	
	comp=Z,0.3nm,0.3s,baz=99,slow=8.2,SNR=4.9								
GRF	**Grafenberg Arr**	**161.03**	**341**	*e*PKPab		PKPab	02 44 34.5	-1.0	
GRF				*e*L			03 37 49.3		
	comp=Z,273nm,21.4s								
TORD	**Torodi Ar. Bea**	**161.20**	**179**	PKP		PKPdf	02 43 51.7	-2.0	
	comp=Z,1.6nm,1.2s,baz=243,slow=0.4,SNR=2.9								
TORD				PKPab		PKPab	02 44 37.6	+0.6	
	comp=Z,4.3nm,1.0s,baz=177,slow=2.9,SNR=10								
FUR	**Furstenfeldbru**	**162.38**	**339**	*e*PKPab		PKPab	02 44 41.3	-0.1	
BOJS	**Bojanci**	**163.02**	**326**	*i* P		PKPab	02 44 42.5	-1.8	
JAVS	**Javornik**	**163.26**	**329**	*i* P		PKPab	02 44 44.1	-1.2	

NEIC ***26*** *02:25:08.4,3500N×25.19E,h16km,MD3.3(ATH),After ATH.*
ATH ***26*** *02:25:08.4,3500N×25.19E,h16km±6km,MD3.3/3*
CSEM ***26*** *02:25:09.2±0.3,3492N×2537E,h8km,MD3.3,Error ellipse: s-maj=6.6km s-min=3.8km az=2.0*
THE ***26*** *02:25:10.2,3489N×2535E,h7km±22km,Error ellipse: s-maj=30.2km s-min=2.0km az=182.0*

ISC 26 02:25:09.6±2.0,3495N×008×2526E×008,h4km±9km,n10, σ0s70/15,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.43**	**42**	*e*PB	**Pg**	**02 25 16.9**	**-0.9**
NPS				*e*SB	**Sg**	**02 25 23.0**	**-0.4**
IDI	**Anoyia**	**0.46**	**318**	*e*Pg	**Pg**	**02 25 19.6**	**+1.2**
IDI	**Anoyia**	**0.46**	**318**	*e*Pg	**Pg**	**02 25 19.6**	**+1.2**
THR6	**Thira Island,**	**1.41**	**4**	P	**Pn**	**02 25 35.3**	**-0.7**
THR6				S	**Sg**	**02 25 55.7**	**+0.7**
THR1	**Thera Island**	**1.43**	**6**	P	**Pn**	**02 25 35.3**	**-1.0**
THR1				S	**Sg**	**02 25 55.7**	**+0.1**
THR3	**Thira Island,**	**1.47**	**4**	P	**Pn**	**02 25 36.2**	**-0.5**
THR3				S	**Sb**	**02 25 56.2**	**-0.1**
THR4	**Thira Island,**	**1.52**	**4**	P	**Pn**	**02 25 37.3**	**-0.1**
KARP	**Karpathos**	**1.67**	**68**	*e*PN	**Pn**	**02 25 39.3**	**-0.2**
KARP				*e*SN	**Sn**	**02 26 02.5**	**+1.2**
APE	**Apeiranthos**	**2.13**	**6**	P	**Pn**	**02 25 45.9**	**0.0**
ARG	**Arkhangelos**	**2.66**	**61**	*e*PB	**Pn**	**02 25 53.9**	**+0.8**

JMA 26 02:30:21.6±0.5,4398N×14803E,h0km,M3.8,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.77**	**250**	P	Pn	02 30 53.6	+0.2
NEM2				*e*S	Sn	02 31 17.0	+0.4
JRA	**Rausu**	**2.10**	**270**	P	Pn	02 30 58.6	+0.6
JRA				*e*S	Sn	02 31 26.1	+1.3
JNK	**Nakash**	**2.43**	**262**	P	Pn	02 31 03.3	+0.8
JAK	**Akkeshi**	**2.62**	**249**	P	Pn	02 31 06.0	+0.9

IDC ***26*** *02:31:56.0±2.1,823S×11854E,h20km±12km,mb5.0/17, mb1 5.1/20,mb1mx5.0/24,mbtmp5.1/20,ML5.4/3,MS4.7/18, Ms1 4.7/18,ms1mx4.7/20,Error ellipse: s-maj=17.9km s-min=9.5km az=66.0*
ISCJB ***26*** *02:31:56.3±0.2,821S±002×11873E±003,h32km, mb5.4/88,MS4.8/78,Error ellipse: s-maj=4.3km s-min=3.2km az=152.3*
MOS ***26*** *02:31:56.1±1.3,8.16S×11865E,h33km,mb5.4/38, MS4.7/21,Error ellipse: s-maj=13.3km s-min=6.7km az=113.7*
BJI ***26*** *02:31:57.6,820S×11860E,h32km,mB5.4,mb5.2,Ms5.0, Msz4.8*
GCMT ***26*** *02:31:57.7±0.1,8.19S×11867E,h21km,MW5.4/90, Moment Tensor Solution. s73,c125; s90,c179; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr1.02±.03; Mθθ-1.31±.02; Mφφ0.29±.03; Mrθ-0.81±.04; Mθφ-0.16±.02; Mφr-0.27±.05; Best double couple: M0 1.45500×10^17 NP1:χθ,s97.00000°,δ28.00000°, λ110.00000°. NP2:χθ,s255.00000°,δ63.00000°,λ80.00000°. Principal axes: T 1.3170, Plg70.0000°, Azm143.0000°; N 0.2770, Plg9.0000°, Azm259.0000°; P -1.5930, Plg18.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***26*** *02:31:57.7±0.2,825S×11861E,mb5.5/43,MS4.8/53 Error ellipse: s-maj=7.8km s-min=4.7km az=57.0*
NEIC Felt [III] at Bima and Sumbawa Besar.
DJA ***26*** *02:31:59.4±0.0,838S×11867E,h9km,mB5.9/26, Mjma5.2/12,MLv5.8/13,Mw(mB)5.5/26,Mwp5.0/24*

ISC 26 02:31:58.5±0.2,823S±002×11880E±003,h34km, h34km±1.2km:pP-P,n304,σ1s33/261,mb5.4/88,MS4.8/78, 31C-8D,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.33**	**198**	P	**Pb**	**02 32 03.3**	**-3.4**
KHKI	**Kahang-Kahang**	**3.16**	**267**	P	**Pn**	**02 32 48.1**	**+2.3**
KAPI	**Kappang**	**3.33**	**17**	Pn	**Pn**	**02 32 47.8**	**-0.4**
	13μm,0.6s						
KAPI	**Kappang**	**3.33**	**17**	Pn	**Pn**	**02 32 46.9**	**-1.2**
	276nm,0.3s,baz=202,slow=6.5,SNR=1091						
KAPI				Sn	**Sn**	**02 33 24.8**	**-1.8**
	581nm,0.3s,baz=140,slow=23,SNR=16						
KAPI				LR	LR	02 34 23.4	
	comp=Z,17μm,20.2s,baz=199,slow=43						
KAPI	**Kappang**	**3.33**	**17**	*e*Pn	**Pn**	**02 32 47.0**	**-1.2**
KAPI	**Kappang**	**3.33**	**17**	P	**Pn**	**02 32 46.5**	**-1.7**
DNP	**Denpasar**	**3.58**	**263**

48nm,0.3s,baz=279,slow=8.6,SNR=1.8
DAV LR LR 02 43 07.3
comp=Z,2μm,18.6s,baz=16,slow=40
DAV Davao City (W) 16.63 24 *e*P **Pn 02 35 50.8 +1.6**
114nm,0.4s
KSI Kapahiang 16.74 285 P **Pn 02 35 52.6 +2.0**
207nm,1.5s,7μm
MYKOM Kota Tinggi 17.92 303 ⇓P **Pn 02 36 07.1 +1.9**
MYKOM Kota Tinggi 17.92 303 P **Pn 02 36 10.8 +5.6**
KGM Kluang 18.49 303 ⇑P **Pn 02 36 14.7 +2.5**
TBP Tagbilaran 18.50 16 *e*P **Pn 02 36 13.9 +1.6**
WRAB Tennant Creek 19.03 129 P **Pn 02 36 18.0 -0.6**
649nm,1.3s,SNR=68
WRAB Tennant Creek 19.03 129 *e*P **Pn 02 36 17.7 -0.9**
213nm,1.3s
WRAB *e*Sn **Sn 02 39 48.8 -2.2**
WRAB Tennant Creek 19.03 129 *e*P **Pn 02 36 17.7 -0.9**
WRAB *e* 02 39 48.8
WRAB pmax pmax
comp=Z,213nm,1.3s
WRAB Tennant Creek 19.03 129 P **Pn 02 36 17.6 -1.0**
comp=Z,172nm,1.6s,comp=Z,4μm
WB2 Warramunga Arr 19.04 129⇑*i*P **Pn 02 36 17.4 -1.3**
FRIM Kepong 20.57 303 ⇓P **P 02 36 38.4 +3.8**
KTGM Kuala Trenggan 20.62 310 ⇑P **P 02 36 39.5 +4.4**
ASAR Alice Springs 21.10 138 P **P 02 36 40.8 +0.6**
comp=Z,26nm,0.3s,mb5.0,baz=316,slow=10,SNR=145
ASAR S **S 02 40 39.8 +6.5**
comp=Z,27nm,0.9s,baz=311,slow=20,SNR=7.3
ASAR ScP ScP 02 44 20.1 -0.3
comp=Z,10nm,1.1s,baz=333,slow=1.7,SNR=5.1
ASAR Alice Springs 21.10 138 P **P 02 36 40.8 +0.6**
ASAR S **S 02 40 39.8 +6.5**
ASAR pmax pmax
comp=Z,26nm,0.3s
ASAR smax
comp=N,27nm,0.9s
ASAR pmax pmax
comp=N,10.0nm,1.1s
IPM Ipoh 21.76 305 ⇑P **P 02 36 51.1 +3.7**
IPM Ipoh 21.76 305 P **P 02 36 48.4 +1.0**
comp=N,112nm,1.7s,comp=N,2μm,mb5.0
COCO West Island 21.97 258 PFAKE
COCO LR LR 02 37 00.0 +10
comp=Z,1μm,20.0s,MS4.3
KULM Kulim 22.54 306 ⇑P **P 02 36 58.6 +3.0**
GSI Gunungsitoli 23.18 293 P **P 02 37 03.6 +1.1**
comp=Z,93nm,1.3s,mb5.1
KLBR Kellerberrin 23.27 182 *e*P **P 02 37 02.9 -0.3**
comp=Z,137nm,1.0s,mb5.3
KLBR *e*S **S 02 41 14.8 +1.8**
SNG Songkhla 23.72 310 P **P 02 37 07.0 -0.7**
comp=Z,220nm,0.9s,mb5.6
MUN Mundaring 23.75 185 *e*P **P 02 37 06.2 -1.6**
MUN *e*S **S 02 41 25.6 +4.7**
FORT Forrest 24.05 160 *e*P **P 02 37 10.3 -0.2**
comp=Z,105nm,1.2s,mb5.1
FORT *e*S **S 02 41 37.9 +12**
FORT Forrest 24.05 160 *e*P **P 02 37 10.9 +0.4**
comp=Z,194nm,0.8s,mb5.6
COEN Coen 24.58 106 *e*P **P 02 37 15.5 -0.1**
comp=Z,284nm,1.0s,mb5.8
COEN *e*pP 02 37 24.9
COEN *e*S **S 02 41 42.4 +7.9**
NWAO Narrogin (SRO) 24.62 183 P **P 02 37 13.9 -1.8**
comp=Z,22nm,0.5s,mb4.9,baz=2.7,slow=11,SNR=11
NWAO LR LR 02 47 01.6
comp=Z,2μm,19.1s,MS4.7,baz=173,slow=37
NWAO Narrogin (SRO) 24.62 183 *e*P **P 02 37 15.2 -0.6**
comp=Z,302nm,1.6s,mb5.6
NWAO LR LR
comp=Z,2μm,20.0s,MS4.6
NWAO Narrogin (SRO) 24.62 183 P **P 02 37 13.9 -1.8**
NWAO pmax pmax
comp=Z,22nm,0.5s
NWAO MLR MLR
comp=Z,2μm,19.1s
PMG Port Moresby 28.05 95 P **P 02 37 47.5 +0.6**
PMG LR LR
comp=Z,1μm,19.0s,MS4.5
PMG Port Moresby 28.05 95⇑*i*P **P 02 37 48.5 +1.6**
QIZ Qiongzhong 28.48 342 P **P 02 37 51.0 +0.3**
QIZ S **S 02 42 36.0 -0.2**
QIZ XS sS 02 42 53.3 +0.9
QIZ LR LR
comp=E,1μm,14.6s
QIZ LR LR
comp=Z,1μm,25.1s
QIZ Qiongzhong 28.48 342 PFAKE 02 38 00.0 +9.3
QIZ LR LR
comp=Z,1μm,20.0s,MS4.5
CTA Charters Tower 29.06 117⇑*i*P **P 02 37 56.7 +0.8**
comp=Z,32nm,1.5s,mb4.8
CTA Charters Tower 29.06 117 P **P 02 37 56.8 +0.9**
comp=Z,36nm,1.1s,mb5.0,baz=293,slow=11,SNR=16
CTA LR LR 02 51 21.0
comp=Z,5μm,18.5s,MS5.2,baz=292,slow=40
CTA Charters Tower 29.06 117 P **P 02 37 56.8 +0.9**
CTA pmax pmax
comp=Z,36nm,1.2s
CTA MLR MLR
comp=Z,5μm,18.5s
CTAO Charters Tower 29.06 117 *e*P **P 02 37 56.8 +0.9**
comp=Z,138nm,1.5s,mb5.5
CTAO *e*pP pP 02 38 06.1 +0.4
CTAO LR LR
comp=Z,4μm,20.0s,MS5.0
CTAO Charters Tower 29.06 117 *e*P **P 02 37 56.8 +0.9**
CTAO *e**PP pP 02 38 06.1 +0.4
CTAO pmax pmax
comp=Z,138nm,1.5s,mb5.5
CTAO MLR MLR
comp=Z,4μm,20.0s,MS5.0
NST Nakhon Sawan 30.09 322 P **P 02 38 06.0 +1.0**
STKA Stephens Creek 31.67 141⇑*i*P **P 02 38 19.4 +0.6**
comp=Z,40nm,0.9s,mb5.2
STKA Stephens Creek 31.67 141 P **P 02 38 19.4 +0.6**
comp=Z,39nm,0.7s,mb5.3,baz=313,slow=8.6,SNR=60
STKA LR LR 02 51 39.7
comp=Z,2μm,21.5s,MS4.7,baz=47,slow=37
STKA Stephens Creek 31.67 141 *e*P **P 02 38 19.4 +0.5**
comp=Z,10nm,0.8s,mb4.7
BDT Bhumibol Dam 31.99 322 P **P 02 38 23.5 +1.8**
NANT Nan 32.25 327⇑P **P 02 38 29.0 +5.1**
comp=Z,150nm,0.8s,mb5.9
YHNB Yeheng 32.79 4 PFAKE 02 38 40.0 +11
YHNB LR LR
comp=Z,1μm,19.0s,MS4.5
CM31 Chiang Mai Arr 32.97 324 PFAKE 02 38 40.0 +10
CM31 LR LR
comp=Z,2μm,19.0s,MS4.9
CMAR Chiang Mai Arr 32.97 324 P **P 02 38 29.5 -0.8**
comp=Z,4.7nm,0.3s,mb4.8,baz=145,slow=6.9,SNR=32
CMAR LR LR 02 52 53.4
comp=Z,1μm,21.5s,MS4.5,baz=266,slow=38
CMAR Chiang Mai Arr 32.97 324 P **P 02 38 29.5 -0.8**
CMAR pmax pmax
comp=Z,5.0nm,0.3s
CMAR MLR MLR
comp=Z,1μm,21.5s
CHG Chiang Mai 33.25 324⇑P **P 02 38 33.4 +0.7**
comp=Z,26nm,1.0s,mb5.1
CHTO Chiang Mai 33.25 324 *e*P **P 02 38 33.0 +0.3**
comp=Z,69nm,1.6s,mb5.3
CHTO LR LR
comp=Z,2μm,19.0s,MS4.8
CHTO Chiang Mai 33.25 324 *e*P **P 02 38 33.0 +0.3**
CHTO pmax pmax
comp=Z,69nm,1.6s,mb5.3
CHTO MLR MLR
comp=Z,2μm,19.0s,MS4.8
GYA Guiyang 36.44 342⇓*i*P **P 02 38 59.5 -0.6**
GYA AP pP 02 39 07.5 -2.5
GYA XP sP 02 39 11.8 -2.3
GYA PP PP 02 40 19.8 -3.7
GYA PCP PcP 02 41 25.5 +1.6
GYA S **S 02 44 32.3 -7.4**
GYA SCP ScP 02 45 07.8 -0.3
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,550nm,7.5s
GYA LR LR
comp=N,2μm,13.0s,MS5.1
GYA LR LR
comp=E,1μm,12.6s,MS5.1
GYA LR LR
comp=Z,2μm,13.8s,MS5.0
KMI Kunming 36.65 335 P **P 02 39 04.5 +2.5**
KMI AP pP 02 39 14.3 +2.4
KMI XP sP 02 39 18.3 +2.3
KMI PP PP 02 40 30.0 +4.0
KMI S **S 02 44 44.8 +1.7**
KMI XS sS 02 45 00.5 +1.1
KMI SS SS 02 47 13.8 -11
KMI SCS ScS 02 49 14.5 -1.3
KMI AMB AMB
comp=Z,58nm,1.1s,mb5.3
KMI LR LR
comp=N,1μm,12.0s,MS5.1
KMI LR LR
comp=E,2μm,13.4s,MS5.1
KMI LR LR
comp=Z,2μm,12.4s,MS5.0
ARMA Armidale 37.81 130⇑*i*P **P 02 39 14.0 +2.2**
TOO Toolangi 37.91 144⇑*i*P **P 02 39 14.5 +1.9**
CAN Canberra 38.61 139 *e*P **P 02 39 20.0 +1.5**
comp=Z,137nm,1.6s,mb5.4
WHN Wuhan 38.78 354 P **P 02 39 21.3 +1.4**
WHN S **S 02 45 21.5 +6.3**
WHN AMB AMB
comp=Z,168nm,1.4s,mb5.6
WHN LR LR
comp=N,2μm,18.4s,MS5.0
WHN LR LR
comp=E,860nm,13.8s,MS5.0
WHN LR LR
comp=Z,2μm,12.3s,MS5.1
CNB Canberra Magne 38.85 138⇑*i*P **P 02 39 21.7 +1.2**
SSE Sheshan 39.16 3 P **P 02 39 23.8 +0.7**
SSE S **S 02 45 25.3 +4.3**
SSE AMB AMB
comp=Z,31nm,0.6s,mb5.2
SSE AMB AMB
comp=Z,204nm,4.5s
SSE LR LR
comp=N,385nm,30.7s,MS4.1
SSE LR LR
comp=E,211nm,30.7s,MS4.1
SSE LR LR
comp=Z,467nm,32.2s,MS4.1
NJ2 Nanjing 40.05 0 *e*P **P 02 39 31.5 +1.0**
NJ2 AP pP 02 39 42.0 +1.5
NJ2 XP sP 02 39 44.8 +0.3
NJ2 PP PP 02 41 08.5 +5.4
NJ2 S **S 02 45 33.0 -1.2**
NJ2 XS sS 02 45 49.5 -1.2
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 AMB AMB
comp=Z,240nm,4.2s
NJ2 LR LR
comp=N,160nm,14.8s,MS4.4
NJ2 LR LR
comp=E,320nm,13.6s,MS4.4
NJ2 LR LR
comp=Z,310nm,13.6s,MS4.3
HNR Honiara 40.66 95 PFAKE 02 39 50.0 +14
HNR LR LR
comp=Z,822nm,19.0s,MS4.6
CD2 Chengdu 41.50 340⇑*i*P **P 02 39 42.5 0.0**
CD2 AP pP 02 39 52.5 0.0
CD2 XP sP 02 39 56.5 0.0
CD2 PP PP 02 41 22.5 +3.7
CD2 PCP PcP 02 41 40.0 +0.3
CD2 PCS PcS 02 45 30.3 -0.8
CD2 S **S 02 45 56.5 +0.6**
CD2 XS sS 02 46 12.5 +0.1
CD2 SS SS 02 48 57.0 -4.4
CD2 SCS ScS 02 49 40.5 -3.3
CD2 AMB AMB
comp=Z,150nm,1.6s,mb5.4
CD2 AMB AMB
comp=Z,350nm,9.6s
CD2 LR LR
comp=N,760nm,21.6s,MS4.7
CD2 LR LR
comp=E,730nm,18.0s,MS4.7
CD2 LR LR
comp=Z,680nm,15.6s,MS4.6
MOO Moorlands 42.26 148 *e*P **P 02 39 50.2 +1.6**
SHL Shillong 42.59 323⇑*i*P **P 02 39 50.5 -1.0**
SHL *e*x x 02 46 13.0
TAU Tasmania Unive 42.66 149 *e*P **P 02 39 53.9 +2.0**
comp=Z,94nm,1.4s,mb5.3
TAU LR LR
comp=Z,2μm,19.0s,MS5.1
TAU Tasmania Unive 42.66 149 *e*P **P 02 39 53.9 +2.1**
TAU pmax pmax
comp=Z,94nm,1.4s,mb5.3
TAU MLR MLR
comp=Z,2μm,19.0s,MS5.1
XAN Xi'an 43.06 348 P **P 02 39 55.0 -0.2**
XAN AP pP 02 40 06.0 +0.8
XAN XP sP 02 40 10.5 +1.2
XAN PP PP 02 41 37.0 +1.3
XAN PCP PcP 02 41 45.0 +0.1
XAN SCP ScP 02 45 32.0 -1.7
XAN PCS PcS 02 45 36.0 -1.3
XAN S **S 02 46 17.3 -1.6**
XAN SS SS 02 49 24.0 -8.2
XAN SCS ScS 02 49 50.8 -2.5
XAN AMB AMB
comp=Z,40nm,1.7s,mb4.9
XAN AMB AMB
comp=Z,298nm,6.5s
XAN LR LR
comp=N,341nm,22.3s,MS4.3
XAN LR LR
comp=E,194nm,19.3s,MS4.3
XAN LR LR
comp=Z,1μm,21.2s,MS4.8
INCN Inchon 46.06 9 PFAKE 02 40 30.0 +11
INCN LR LR
comp=Z,453nm,20.0s,MS4.4
LSA Lhasa 46.15 326 P **P 02 40 21.0 +1.1**
LSA AP pP 02 40 26.0 -4.0
LSA XP sP 02 40 31.8 -2.2
LSA PP PP 02 42 08.3 -0.3
LSA S **S 02 47 01.3 -2.5**
LSA XS sS 02 47 20.8 +0.4
LSA AMB AMB
comp=Z,60nm,1.4s,mb5.3
LSA LR LR
comp=N,320nm,17.5s,MS4.7
LSA LR LR
comp=E,630nm,17.5s,MS4.7
LSA LR LR
comp=Z,640nm,16.8s,MS4.6
LSA Lhasa 46.15 326 *e*P **P 02 40 21.1 +1.2**
comp=Z,225nm,1.5s,mb5.9
LSA LR LR
comp=Z,906nm,21.0s,MS4.7
LSA Lhasa 46.15 326 *e*P **P 02 40 21.1 +1.2**
LSA pmax pmax
comp=Z,225nm,1.5s,mb5.9
LSA MLR MLR
comp=Z,906nm,21.0s,MS4.7
KS15 Wonju Array Si 46.22 10 *e*P **P 02 40 23.5 +3.2**
KSRS Korea Array 46.24 10 P **P 02 40 21.9 +1.5**
comp=Z,22nm,1.0s,mb5.0,baz=187,slow=7.6,SNR=40
KSRS LR LR 03 00 33.3
comp=Z,469nm,20.4s,MS4.4,baz=190,slow=37
KSRS Korea Array 46.24 10 P **P 02 40 21.9 +1.5**
KSRS pmax pmax
comp=Z,22nm,1.0s,mb5.0
KSRS MLR MLR
comp=Z,469nm,20.4s,MS4.4
LZH Lanzhou 46.27 343⇑P **P 02 40 21.0 +0.3**
LZH AP pP 02 40 30.8 0.0
LZH XP sP 02 40 34.8 -0.1
LZH PP PP 02 42 09.5 -0.3
LZH *e*S **S 02 47 06.0 +0.7**
LZH XS sS 02 47 22.0 0.0
LZH SS SS 02 50 24.0 -7.3
LZH AMB AMB
comp=Z,93nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,439nm,6.3s
LZH LR LR
comp=N,1μm,17.5s
LZH LR LR
comp=Z,2μm,18.6s,MS5.0
ODAN Odare 46.30 320 *e*P **P 02 40 20.8 -0.4**
comp=Z,164nm,1.0s,mb5.9
TAPN Taplejung 46.45 321 *e*P **P 02 40 21.7 -0.6**
comp=Z,157nm,0.9s,mb6.0
RAMN Ramite 46.87 319 *e*P **P 02 40 25.7 +0.1**
HYB Hyderabad 47.23 303 *e*P **P 02 40 29.0 +0.5**
JIRN Jiri 47.63 320 *e*P **P 02 40 30.5 -1.0**
comp=Z,162nm,0.9s,mb6.1
DZM Mont Dzumac 47.80 112 *e*P **P 02 40 34.8 +1.8**
comp=Z,70nm,1.3s,mb5.5
GUN Gumba 48.00 320 *e*P **P 02 40 33.6 -0.7**
comp=Z,260nm,1.0s,mb6.2
BJT Baijiatuau 48.06 357 *e*P **P 02 40 35.0 +0.4**
comp=Z,45nm,0.6s,mb5.7
BJT LR LR
comp=Z,629nm,19.0s,MS4.6
BJT Baijiatuau 48.06 357 *e*P **P 02 40 35.0 +0.4**
BJT pmax pmax
comp=Z,45nm,0.6s
BJT MLR MLR
comp=Z,629nm,19.0s
PKI Pulchoki 48.07 319 *e*P **P 02 40 33.5 -1.4**
BJI Beijing 48.08 357 P **P 02 40 35.0 +0.2**
BJI XP sP 02 40 49.3 +0.3
BJI S **S 02 47 31.5 +0.5**
BJI XS sS 02 47 50.8 +3.0
BJI LR LR
comp=N,747nm,16.2s,MS4.8
BJI LR LR
comp=E,588nm,17.7s,MS4.8
BJI LR LR
comp=Z,454nm,18.8s,MS4.5
MJAR Matsushiro Arr 48.12 21 P **P 02 40 34.0 -1.1**
comp=Z,16nm,1.1s,mb5.0,baz=194,slow=8.0,SNR=22
MJAR LR LR 02 58 47.9
comp=Z,417nm,21.4s,MS4.4,baz=205,slow=33
MAJO Matsushiro 48.12 21 *e*P **P 02 40 35.2 0.0**
comp=Z,51nm,1.2s,mb5.4
MAJO LR LR
comp=Z,529nm,20.0s,MS4.5
MAJO Matsushiro 48.12 21 *e*P **P 02 40 35.2 +0.1**
MAJO pmax pmax
comp=Z,51nm,1.2s,mb5.4
MAJO MLR MLR
comp=Z,529nm,20.0s,MS4.5
MAT Matsushiro 48.12 21 P **P 02 40 34.9 -0.2**
MAT S **S 02 47 35.0 +3.3**
DMN Daman 48.29 319 *e*P **P 02 40 35.6 -1.0**
comp=Z,103nm,0.9s,mb5.9
KKN Kakani 48.30 319 *e*P **P 02 40 35.6 -1.1**
comp=Z,154nm,1.1s,mb5.9
KKN Kakani 48.30 319 *e*P **P 02 40 35.6 -1.1**
KKN pmax pmax
comp=Z,154nm,1.1s,mb6.0
GKN Gorkha 48.86 319 *e*P **P 02 40 39.6 -1.4**
comp=Z,82nm,0.8s,mb5.8
BTO Baotou 49.26 351 *e*P **P 02 40 44.5 +0.7**
HHC Hu-ho-hao-te 49.28 353 *e*P **P 02 40 45.3 +1.3**
HHC XP sP 02 40 54.5 -3.7
HHC AP pP 02 40 55.8 +1.6
HHC PCP PcP 02 42 07.3 +0.8
HHC PP PP 02 42 40.5 +2.2
HHC S **S 02 47 48.5 +0.6**
HHC SCS ScS 02 50 31.5 -1.9
HHC SS SS 02 51 20.3 +0.3
HHC AMB AMB
comp=Z,19nm,1.2s,mb5.0
HHC LR LR
comp=N,372nm,23.8s,MS4.5
HHC LR LR
comp=E,448nm,22.6s,MS4.5
HHC LR LR
comp=Z,357nm,25.0s,MS4.3
KOLN Koldanda 49.39 318 *e*P **P 02 40 43.0 -2.1**
comp=Z,120nm,0.9s,mb5.9
DANN Dangsing 49.67 318 *e*P **P 02 40 45.3 -1.9**
comp=Z,191nm,0.8s,mb6.2
SNY Shenyang 50.00 5 ⇓P **P 02 40 49.8 +0.4**
SNY AP pP 02 41 00.3 +0.7
SNY XP sP 02 41 04.0 +0.3
SNY S **S 02 47 59.5 +1.6**
SNY AMB AMB
comp=Z,27nm,1.6s,mb5.0
SNY AMB AMB
comp=Z,301nm,3.5s
SNY LR LR
comp=N,695nm,15.5s,MS4.8
SNY LR LR
comp=E,355nm,19.7s,MS4.8
SNY LR LR
comp=Z,514nm,12.8s
PYUN Piuthan 50.02 318 *e*P **P 02 40 47.5 -2.3**
comp=Z,57nm,0.8s,mb5.6
GTA Gaotai 50.56 341⇑P **P 02 40 54.8 +1.1**
GTA AP pP 02 41 05.5 +1.6
GTA XP sP 02 41 09.3 +1.3
GTA S **S 02 48 09.3 +3.5**
GTA XS sS 02 48 26.0 +3.4
GTA SS SS 02 51 33.5 -7.0
GTA AMB AMB
comp=Z,23nm,1.2s,mb5.0
GTA AMB AMB
comp=Z,157nm,5.4s
GTA LR LR
comp=N,532nm,20.4s,MS4.8
GTA LR LR
comp=E,903nm,20.4s,MS4.8
GTA LR LR
comp=Z,662nm,19.2s,MS4.7
CN2 Changchun 52.13 6 *e*P **P 02 41 05.5 +0.1**
CN2 *e*AP pP 02 41 15.5 -0.1
CN2 *e*PP PP 02 43 02.5 -1.6
CN2 *e*S **S 02 48 27.8 +0.5**
CN2 *e*SS SS 02 52 04.3 -0.9
CN2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
CN2 LR LR
comp=N,500nm,21.0s,MS4.6
CN2 LR LR
comp=E,400nm,21.0s,MS4.6
CN2 LR LR
comp=Z,500nm,23.0s,MS4.5
MDJ Mudanjiang 53.49 10 P **P 02 41 16.3 +0.9**
MDJ AP pP 02 41 25.3 -0.4
MDJ XP sP 02 41 29.3 -0.4
MDJ PP PP 02 43 17.3 +0.9
MDJ SCP ScP 02 46 17.8 +0.3
MDJ PCS PcS 02 46 21.5 +0.6
MDJ S **S 02 48 50.3 +4.4**
MDJ XS sS 02 49 04.0 +1.2
MDJ SS SS 02 52 30.0 +3.3
MDJ AMB AMB
comp=Z,37nm,1.1s,mb5.2
MDJ AMB AMB
comp=Z,202nm,3.6s
MDJ LR LR
comp=N,252nm,24.1s,MS4.2
MDJ LR LR
comp=E,122nm,27.3s,MS4.2
MDJ LR LR
comp=Z,300nm,22.5s,MS4.3
MDJ Mudanjiang 53.49 10 *e*P **P 02 41 16.2 +0.7**
comp=Z,34nm,0.7s,mb5.4
MDJ LR LR
comp=Z,540nm,22.0s,MS4.6
NDI New Delhi 54.36 314 *e*P **P 02 41 17.0 -5.1**
ERM Erimo 54.75 22 PFAKE 02 41 40.0 +15
ERM LR LR
comp=Z,533nm,19.0s,MS4.6
ULN Ulaanbaatar 56.81 351 *e*P **P 02 41 39.6 +0.3**
comp=Z,56nm,1.4s,mb5.4
ULN LR LR
comp=Z,449nm,21.0s,MS4.5
ULN Ulaanbaatar 56.81 351 *e*P **P 02 41 39.6 +0.3**
ULN pmax pmax
comp=Z,56nm,1.4s,mb5.4
ULN MLR MLR
comp=Z,449nm,21.0s,MS4.5
SONM Songino Array 56.89 350 P **P 02 41 40.1 +0.2**
comp=Z,20nm,0.9s,mb5.1,baz=169,slow=6.5,SNR=88
SONM LR LR 03 09 16.3
comp=Z,476nm,18.1s,MS4.6,baz=319,slow=39
SONM PKP2bc 03 11 35.2
comp=Z,0.8nm,0.9s,baz=132,slow=2.2,SNR=5.2

SONM Songino Array 56.89 350 P **P** 02 41 40.1 +0.2
SONM LR LR 03 09 16.3
SONM ⇑*e* 03 11 35.2
HIA Hailar 57.25 1 PFAKE 02 41 50.0 +7.6
HIA LR LR
comp=Z,575nm,20.0s,MS4.7
RPZ Rata Peaks 57.51 137 P **P** **02 41 43.2 -1.2**
comp=Z,56nm,1.0s,mb5.6,baz=358,slow=3.2,SNR=13
THN Thein Dam 57.62 317 *ex* x 02 41 40.4
CASY Casey 58.24 184 *eP* **P** **02 41 46.7 -2.5**
CASY Casey 58.24 184 PFAKE 02 42 00.0 +11
CASY LR LR
comp=Z,1μm,21.0s,MS5.0
KLR Kul'dur 58.33 10 *eP* **P** **02 41 45.1 -4.9**
KLR *eS* **S** **02 49 44.0 -6.1**
KLR *e* 02 53 35.5
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.6
WMQ Urumqi 58.98 334 P **P** **02 41 54.0 -0.6**
WMQ AP pP 02 42 04.0 -1.0
WMQ XP sP 02 42 08.0 -1.0
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,513nm,18.0s,MS4.9
WMQ LR LR
comp=E,607nm,18.0s,MS4.9
WMQ LR LR
comp=Z,485nm,18.0s,MS4.7
SNZO South Karori 59.24 133 PFAKE 02 42 10.0 +13
SNZO LR LR
comp=Z,1μm,19.0s,MS5.1
FUNA Funafuti 59.70 95 PFAKE 02 42 10.0 +10
FUNA LR LR
comp=Z,9μm,19.0s,MS5.9
ZAK Zakamensk 59.91 349 *i* P **P** **02 42 00.1 -0.8**
ZAK pmax pmax
comp=Z,17nm,1.9s,mb4.8
NIL Nilore 60.01 317 PFAKE 02 42 10.0 +8.0
NIL LR LR
comp=Z,76nm,22.0s,MS3.8
DRV Dumont d'Urvil 60.13 170 P **P** **02 42 02.0 -0.3**
DRV S **S** **02 50 21.0 +8.0**
DRV SS SS 02 54 19.0 +8.7
DRV R 03 02 00.0
URZ Urewera 60.20 129 P **P** **02 42 03.3 0.0**
comp=Z,9.4nm,0.4s,mb5.2,baz=230,slow=7.5,SNR=9.3
TLY Talaya 61.08 349 P **P** **02 42 09.1 +0.2**
comp=Z,140nm,0.7s,mb6.2,SNR=5.3
TLY Talaya 61.08 349 *eP* **P** **02 42 09.8 +0.9**
comp=Z,46nm,1.6s,mb5.4
TLY LR LR
comp=Z,434nm,21.0s,MS4.6
TLY Talaya 61.08 349 *eP* **P** **02 42 09.0 +0.1**
TLY *eS* **S** **02 50 30.5 +5.1**
TLY pmax pmax
comp=Z,21nm,0.9s,mb5.3
IRK Irkutsk 61.50 350 *eP* **P** **02 42 11.5 -0.2**
IRK pmax pmax
comp=Z,59nm,1.9s,mb5.4
MOY Mondy 61.59 347 *eP* **P** **02 42 13.0 +0.7**
MOY pmax pmax
comp=Z,11nm,2.0s,mb4.6
KSH Kashi 61.87 323 *eP* **P** **02 42 14.0 -0.5**
KSH *eAP* pP 02 42 24.5 -0.4
KSH *eXP* sP 02 42 28.3 -0.6
KSH *ePCP* PcP 02 42 55.5 +0.3
KSH *ePP* PP 02 44 31.3 +0.3
KSH *eSCP* ScP 02 46 53.5 -1.1
KSH *ePCS* PcS 02 46 57.5 -0.7
KSH *eS* **S** **02 50 31.5 -4.4**
KSH *eXS* sS 02 50 50.0 -3.1
KSH *eSCS* ScS 02 51 59.3 -4.5
KSH *eSS* SS 02 54 33.0 -5.7
KSH AMB AMB
comp=Z,71nm,0.6s,mb6.0
KSH AMB AMB
comp=Z,1μm,4.5s
KSH LR LR
comp=N,2μm,6.8s
KSH LR LR
comp=E,1μm,5.2s
KSH LR LR
comp=Z,1μm,5.9s
MSEY Mahe Island 62.97 269 PFAKE 02 42 30.0 +7.6
MSEY LR LR
comp=Z,528nm,20.0s,MS4.7
HVS Khovu-Aksy 62.97 343*c i*P **P** **02 42 21.2 -0.4**
HVS pmax pmax
comp=Z,81nm,1.2s,mb5.7
HVS MLR MLR
comp=Z,1μm,15.0s,MS5.2
KBL Kabul 63.41 315 *eP* **P** **02 42 21.5 -3.3**
comp=Z,17nm,0.7s,mb5.3
KBL Kabul 63.41 315 *eP* **P** **02 42 21.5 -3.3**
KBL pmax pmax
comp=Z,17nm,0.7s,mb5.3
MK31 Makanchi Array 63.68 333 *eP* **P** **02 42 25.7 -0.7**
MKAR Makanchi Array 63.68 333 P **P** **02 42 25.3 -1.1**
comp=Z,9.0nm,0.8s,mb4.9,baz=145,slow=7.4,SNR=48
MKAR LR LR 03 11 17.6
comp=Z,364nm,21.1s,MS4.5,baz=164,slow=37
MKAR Makanchi Array 63.68 333 P **P** **02 42 25.3 -1.1**
MKAR LR LR 03 11 17.6
MKAR Makanchi Array 63.68 333 P **P** **02 42 25.3 -1.1**
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MKAR MLR MLR
comp=Z,364nm,21.2s
TKM2 Tokmak 2 64.30 326 *eP* **P** **02 42 28.8 -1.8**
comp=Z,30nm,1.4s,mb5.1
TKM2 LR LR
comp=Z,541nm,22.0s,MS4.7
TKM2 Tokmak 2 64.30 326 *eP* **P** **02 42 28.8 -1.8**
TKM2 pmax pmax
comp=Z,30nm,1.4s,mb5.1
TKM2 MLR MLR
comp=Z,541nm,22.0s,MS4.7
TKM2 Tokmak 2 64.30 326 P **P** **02 42 28.6 -2.0**
SNR=6.7
UCH Uchtor 64.46 325 PFAKE 02 42 40.0 +8.4
UCH LR LR
comp=Z,379nm,20.0s,MS4.6
KBK Karagaybulak 64.49 326 P **P** **02 42 31.1 -0.7**
SNR=8.3
AAK Ala-Archa 64.73 325 P **P** **02 42 32.7 -0.7**
comp=Z,73nm,1.1s,mb5.6,SNR=7.9
AAK Ala-Archa 64.73 325 *eP* **P** **02 42 32.0 -1.3**
comp=Z,39nm,1.4s,mb5.2
AAK LR LR
comp=Z,546nm,20.0s,MS4.7
AAK Ala-Archa 64.73 325 *eP* **P** **02 42 32.0 -1.4**
AAK pmax pmax
comp=Z,39nm,1.4s,mb5.2
AAK MLR MLR
comp=Z,546nm,20.0s,MS4.7
AAK Ala-Archa 64.73 325 P **P** **02 42 32.1 -1.3**
SNR=7.6
FRU Bishkek 64.79 325 *eP* **P** **02 42 32.0 -1.8**
FRU pmax pmax
comp=Z,70nm,2.4s,mb5.3
AML Almayashu 64.87 324 *eP* **P** **02 42 33.4 -0.9**
comp=Z,30nm,1.1s,mb5.2
AML Almayashu 64.87 324 P **P** **02 42 33.0 -1.2**
SNR=18
CLNS Chul'man 65.03 4 *eP* **P** **02 42 34.6 -0.4**
CLNS *e**PP pP 02 42 45.4 -0.1
CLNS *e* 02 43 03.7
CLNS *e* 02 44 55.9
CLNS *eS* S 02 51 15.3 +0.7
CLNS *e**SS sS 02 51 53.0 +21
CLNS pmax pmax
comp=Z,33nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,12nm,1.2s
CLNS pmax pmax
comp=N,20nm,1.1s
CLNS pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS smax
comp=E,178nm,14.8s
CLNS smax
comp=N,121nm,11.6s
USP Ospenovka 65.14 326 P **P** **02 42 33.4 -2.6**
SNR=9.9
EKS2 Erkin-Say 65.16 325 *eP* **P** **02 42 34.7 -1.4**
comp=N,17nm,0.9s,mb5.1
EKS2 LR LR
comp=Z,724nm,21.0s,MS4.8
EKS2 Erkin-Say 65.16 325 P **P** **02 42 34.8 -1.3**
SNR=11
BOD Bodaibo 65.93 357 *eP* **P** **02 42 39.9 -0.9**
BOD pmax pmax
comp=Z,49nm,1.3s,mb5.4
KURK Kurchatov 68.22 334 PFAKE 02 43 10.0 +15
KURK LR LR
comp=Z,749nm,19.0s,MS4.9
KURK Kurchatov 68.22 334⇓ *eP* **P** **02 42 54.1 -1.4**
KURK pmax pmax
comp=Z,39nm,1.6s,mb5.2
KURK MLR MLR
comp=Z,200nm,6.0s
ZAA0 Zalesovo Array 68.25 339 *eP* **P** **02 42 53.3 -2.3**
ZAA0 *ePP* PP 02 45 26.5 -0.1
ZALV Zalesovo Beam 68.25 339 P **P** **02 42 53.9 -1.8**
comp=Z,6.3nm,0.7s,mb4.7,baz=144,slow=5.3,SNR=35
ZALV PKPPKP
comp=Z,1.4nm,0.8s,baz=318,slow=2.0,SNR=6.7
ZALV Zalesovo Beam 68.25 339 P **P** **02 42 53.9 -1.8**
ZALV P'P' 03 11 12.1
PETK Petropavlovsk- 69.45 24 P **P** **02 43 03.9 +0.7**
comp=Z,22nm,0.9s,mb5.1,baz=196,slow=5.2,SNR=13
PETK LR LR 03 12 26.0
comp=Z,165nm,18.7s,MS4.3,baz=324,slow=35
NVS Novosibirsk 69.52 339 *i* P **P** **02 43 00.8 -2.7**
NVS *eS* S 02 52 05.0 -3.8
NVS pmax pmax
comp=N,30nm,1.4s
NVS pmax pmax
comp=Z,31nm,1.4s,mb5.0
NVS pmax pmax
comp=E,26nm,1.6s
NVS smax
comp=N,21nm,2.0s
NVS smax
comp=E,39nm,2.0s
PET Petropavlovsk 69.77 24 *eP* **P** **02 43 08.9 +3.8**
PET *eS* S 02 52 15.5 +3.7
PET *ePS* 02 52 43.3
PET *eSS* SS 02 56 46.0 +4.9
PET pmax pmax
comp=Z,300nm,6.1s
MAW Mawson 69.89 200⇑ *iP* **P** **02 43 05.8 +0.1**
comp=Z,29nm,1.0s,mb5.2
MAW Mawson 69.89 200 P **P** **02 43 05.9 +0.2**
comp=Z,38nm,1.0s,mb5.3,baz=65,slow=7.7,SNR=26
MAW LR LR 03 07 47.1
comp=Z,771nm,20.1s,MS5.0,baz=69,slow=31
MAW Mawson 69.89 200 *eP* **P** **02 43 05.9 +0.3**
comp=Z,12nm,1.1s,mb4.7
MAW LR LR
comp=Z,1μm,20.0s,MS5.1
ABPO Ambohimpanom 70.00 253 *eP* **P** **02 43 05.6 -1.6**
comp=Z,32nm,1.5s,mb5.0
YAK Yakutsk 70.55 5 *eP* **P** **02 43 09.0 -0.7**
comp=Z,90nm,1.2s,mb5.6
YAK LR LR
comp=Z,353nm,19.0s,MS4.6
YAK Yakutsk 70.55 5⇓ *eP* **P** **02 43 08.6 -1.1**
YAK pmax pmax
comp=Z,61nm,0.8s,mb5.6
YAK MLR MLR
comp=Z,400nm,29.0s,MS4.5
VNDA Vanda 72.78 171 P **P** **02 43 23.4 +0.5**
comp=Z,23nm,1.2s,mb5.0,baz=311,slow=5.4,SNR=32
VNDA LR LR 03 12 48.4
comp=Z,717nm,21.1s,MS4.9,baz=324,slow=34
VNDA Vanda 72.78 171 *eP* **P** **02 43 23.6 +0.6**
comp=Z,35nm,1.3s,mb5.1
BRVK Borovoye 73.59 332 *eP* **P** **02 43 26.2 -1.9**
comp=Z,31nm,1.5s,mb5.0
BRVK LR LR
comp=Z,734nm,20.0s,MS5.0
BRVK Borovoye 73.59 332 *eP* **P** **02 43 26.2 -1.9**
BRVK pmax pmax
comp=Z,31nm,1.5s,mb5.0
BRVK MLR MLR
comp=Z,734nm,20.0s,MS5.0
SBA Scott Base 73.78 171 *eP* **P** **02 43 30.4 +1.5**
comp=Z,31nm,1.5s,mb5.0
SBA LR LR
comp=Z,427nm,20.0s,MS4.7
SBA Scott Base 73.78 171 *eP* **P** **02 43 30.4 +1.5**
SBA pmax pmax
comp=Z,31nm,1.5s,mb5.0
SBA MLR MLR
comp=Z,427nm,20.0s,MS4.7
SEY Seymchan 75.47 15⇑ *eP* **P** **02 43 38.2 -0.6**
SYO Syowa Base 78.50 201⇓ *eP* **P** **02 43 54.2 -1.6**
TIXI Tiksi 79.99 3 *eP* **P** **02 44 02.0 -1.7**
comp=Z,42nm,1.6s,mb5.1
TIXI LR LR
comp=Z,375nm,21.0s,MS4.7
TIXI Tiksi 79.99 3⇑ *eP* **P** **02 44 02.1 -1.7**
TIXI pmax pmax
comp=Z,24nm,1.1s,mb5.0
TIXI MLR MLR
comp=Z,600nm,30.0s,MS4.8
SVE Sverdlovsk 80.31 332 *eP* **P** **02 44 03.7 -2.1**
SVE pmax pmax
comp=Z,28nm,1.5s,mb5.0
ARU Arti 81.09 331 PFAKE 02 44 20.0 +10
ARU LR LR
comp=Z,515nm,19.0s,MS4.9
ARU Arti 81.09 331*c i*P **P** **02 44 06.7 -3.3**
ARU *e* 02 47 10.6
ARU *eS* S 02 54 15.2 -1.9
ARU *eSS* SS 02 59 29.0 -3.6
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.6
QSPA South Pole Qui 81.76 180 P **P** **02 44 13.3 0.0**
comp=Z,35nm,1.1s,mb5.2,baz=324,slow=2.2,SNR=39
QSPA South Pole Qui 81.76 180 P **P** **02 44 13.3 0.0**
KIV Kislovodsk 85.80 315 PFAKE 02 44 40.0 +5.5
KIV LR LR
comp=Z,444nm,22.0s,MS4.8
GOF Gofitskoye 85.86 316 *eP* **P** **02 44 26.5 -8.3**
GOF pmax pmax
comp=Z,90nm,1.3s,mb5.8
NVL N'lazarevskaya 87.80 198 *eP* **P** **02 44 45.2 +1.4**
NVL pmax pmax
comp=Z,65nm,1.6s,mb5.6
MAIT Maitri 87.83 198 *eP* **P** **02 44 43.6 -0.3**
MBAR Mbarara 87.99 270 P **P** **02 44 43.9 -2.0**
comp=Z,38nm,0.6s,mb5.8,SNR=7.6
MBAR Mbarara 87.99 270*c i*P **P** **02 44 43.0 -2.9**
LSZ Lusaka 88.45 255 *eP* **P** **02 44 46.4 -1.6**
comp=Z,72nm,1.4s,mb5.7
LSZ LR LR
comp=Z,337nm,20.0s,MS4.8
LSZ Lusaka 88.45 255 *eP* **P** **02 44 46.4 -1.6**
LSZ pmax pmax
comp=Z,72nm,1.4s,mb5.7
LSZ MLR MLR
comp=Z,337nm,20.0s,MS4.8
PPT Papeete 89.09 108 *eLR* LR 03 13 28.4
comp=Z,358nm,25.2s
BOSA Boshof 89.20 241 P **P** **02 44 49.7 -1.6**
comp=Z,13nm,1.1s,mb5.2,baz=119,slow=5.8,SNR=6.5
BOSA LR LR 03 18 46.9
comp=Z,294nm,20.6s,MS4.7,baz=108,slow=32
BOSA Boshof 89.20 241 P **P** **02 44 49.7 -1.6**
BOSA LR LR 03 18 46.9
LBTB Lobatse 89.45 245 *eP* **P** **02 44 51.6 -1.0**
comp=Z,44nm,1.6s,mb5.5
LBTB Lobatse 89.45 245 *eP* **P** **02 44 51.6 -0.9**
LBTB pmax pmax
comp=Z,44nm,1.6s,mb5.5
MEH Mehetia 90.47 108 *eP* **P** **02 44 59.1 +1.7**
comp=Z,2μm,1.4s
PMOR Pomariorio Ree 91.07 105 *eP* **P** **02 45 02.2 +1.9**
comp=Z,197nm,1.3s,mb6.3
BR131 Keskin Array S 91.49 310 PFAKE 02 45 10.0 +8.3
BR131 LR LR
comp=Z,316nm,20.0s,MS4.8
BRTR Keskin Array B 91.49 310 LR LR 03 29 11.1
comp=Z,264nm,21.6s,MS4.6,baz=104,slow=38
SNAA Sanae 91.69 196 *eP* **P** **02 44 58.3 -3.7**
SNAA *e* 02 45 13.1
SNAA Sanae 91.69 196 *eP* **P** **02 44 58.4 -3.6**
comp=Z,33nm,1.1s,mb5.6
SNAA Sanae 91.69 196⇑ *eP* **P** **02 44 58.4 -3.6**
SNAA pmax pmax
comp=Z,40nm,1.2s
ANTO Ankara 92.16 310 PFAKE 02 45 10.0 +5.2
ANTO LR LR
comp=Z,336nm,22.0s,MS4.8
VNA2 Neumayer--Watz 93.32 195 *eP* **P** **02 45 10.1 +0.6**
baz=110,slow=4.7
VNA2 *e* pP 02 45 19.5 -0.9
VNA2 *e* 02 45 25.3
ISP Isparta 93.64 308 PFAKE 02 45 20.0 +8.4
ISP LR LR
comp=Z,259nm,20.0s,MS4.7
VNA3 Neumayer Olymp 93.71 195 *eP* **P** **02 45 11.4 +0.1**
VNA3 *e* pP 02 45 20.0 -2.2
VNA3 *e* 02 45 26.4
VNA1 Neumayer--Stat 93.72 195 *eP* **P** **02 45 11.8 +0.4**
VNA1 *e* pP 02 45 19.8 -2.4
VNA1 *e* pP 02 45 24.9 +2.7
APA Apatity 95.78 337 *eP* **P** **02 45 11.0 -10**
APA pmax pmax
comp=Z,18nm,0.7s,mb5.6
AKASG Malin Array Be 96.03 320 LR LR 03 34 30.2
comp=Z,310nm,21.0s,MS4.8,baz=80,slow=39
TSUM Tsumeb 97.78 249 PFAKE 02 45 40.0 +9.0
TSUM LR LR
comp=Z,443nm,19.0s,MS5.0
ARCES ARCESS Array B 98.80 339 LR LR 03 37 45.9
comp=Z,575nm,19.9s,MS5.1,baz=111,slow=40
RKT Rikitea 101.49 116 *eLR* LR 03 19 15.1
comp=Z,360nm,25.0s
CEL Celeste 105.17 307 PFAKE 02 50 30.0 +12
CEL LR LR
comp=Z,251nm,19.0s,MS4.8
CUC Castrocucco 105.18 309 PFAKE 02 50 30.0 +12
CUC LR LR
comp=Z,410nm,20.0s,MS5.0
AQU L'Aquila 106.87 312 PFAKE 02 50 30.0 +9.2
AQU LR LR
comp=Z,454nm,21.0s,MS5.0
VLC Villacollemand 108.89 314 PFAKE 02 50 40.0 +16
VLC LR LR
comp=Z,445nm,19.0s,MS5.0
TUE Stuetta 109.30 316 PFAKE 02 50 40.0 +15
TUE LR LR
comp=Z,341nm,19.0s,MS4.9
BNI Bardonecchia 111.37 315 PFAKE 02 50 40.0 +11
BNI LR LR
comp=Z,415nm,21.0s,MS5.0
TOA0 Torodi Ar. Sit 118.13 280 *ePKPdf* PKPdf 02 50 41.7 -1.3
TORD Torodi Ar. Bea 118.13 280 PKP PKPdf 02 50 40.7 -2.2
comp=Z,1.0nm,0.4s,baz=19,slow=2.3,SNR=33
NVAR Mina Array Bea 120.68 50 PKP PKPdf 02 50 47.3 +0.1
comp=Z,1.1nm,0.7s,baz=254,slow=1.9,SNR=11
NVAR PKKPab PKKPab 03 00 52.9 -0.2
comp=Z,1.8nm,0.9s,baz=132,slow=5.2,SNR=13
HLID Hailey 121.91 43 *ePKPdf* PKPdf 02 50 49.6 +0.1
HLID LR LR
comp=Z,154nm,19.0s,MS4.7
KIC Kosan Boka 124.00 272 *ePKP1* PKPdf 02 50 52.0 -2.3
comp=Z,197nm,1.8s
DBIC Dimbokro 124.14 272 PKP PKPdf 02 50 53.2 -1.4
comp=Z,1.9nm,0.3s,baz=72,slow=4.2,SNR=9.5
DBIC Dimbokro 124.14 272 PKIKP PKPdf 02 50 53.2 -1.4
DBIC pmax pmax
comp=Z,2.0nm,0.3s
LIC Lamto 124.27 272 *ePKP1* PKPdf 02 50 53.0 -1.8
comp=Z,46nm,1.3s
TIC Toumodi 124.30 272 *ePKP1* PKPdf 02 50 52.6 -2.3
comp=Z,11nm,0.3s
PDAR Pinedale Array 125.49 43 PKP PKPdf 02 50 55.4 -0.9
comp=Z,1.1nm,1.0s,baz=276,slow=2.8,SNR=6.0
LAO LASA Array 125.79 37 *ePKPdf* PKPdf 02 50 56.7 -0.1
LAO LR LR
comp=Z,647nm,21.0s,MS5.3
WUAZ Wupatki 126.83 52 *ePKPdf* PKPdf 02 50 59.4 +0.3
PV10 Paradox Valley 127.60 47 *ePKPdf* PKPdf 02 51 00.6 +0.1
PV01 Paradox Valley 128.03 47 *ePKPdf* PKPdf 02 51 02.0 +0.7
PLCA Paso Flores 130.53 171 PKP PKPdf 02 51 06.7 +0.6
comp=Z,2.9nm,0.9s,baz=178,slow=1.3,SNR=4.0
PLCA SKPbc SKPbc 02 54 28.1 +1.0
comp=Z,20nm,1.2s,baz=176,slow=3.9,SNR=12
PLCA Paso Flores 130.53 171 PKIKP PKPdf 02 51 06.7 +0.6
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA pmax pmax
comp=N,20nm,1.2s
TXAR Lajitas Array 134.98 56 PKP PKPdf 02 51 15.8 +1.1
comp=N,0.3nm,0.7s,baz=308,slow=2,SNR=3.2
TXAR SKPbc SKPbc 02 54 42.6 -0.3
comp=N,1.6nm,1.1s,baz=252,slow=2.5,SNR=4.1
LCO Las Campanas 141.86 166 PFAKE 02 51 40.0 +13
LCO LR LR
comp=Z,392nm,20.0s,MS5.2
SSPA Standing Stone 144.47 22 *ePKPdf* PKPdf 02 51 28.8 -2.9
MCWV Mont Chateau 144.53 25 *ePKPdf* PKPdf 02 51 29.9 -1.9
CAM4 Nova Friburgo 144.54 211⇑ *iP* PKPdf 02 51 31.2 -1.1
CAM4 *i* 02 51 37.0
CAM4 *i* 02 51 46.6
CAM4 *i* 02 51 50.5
CAM3 Guarapari 144.77 215 *eP* PKPdf 02 51 29.9 -2.8
CAM3 *i* 02 51 33.6
CAM3 *i* 02 51 39.7
CAM3 *i* 02 51 44.2
CAM3 *i* 02 51 47.3
SWET Sewanee 144.86 37 *ePKPab* PKPdf 02 51 30.8 -1.7
TZTN Tazewell 145.24 32 *ePKPbc* PKPbc 02 51 32.7 -0.1
PAL Palisades 145.46 17 *ePKPbc* PKPbc 02 51 32.1 -1.2
MVL Millersville 145.59 21 *ePKPbc* PKPbc 02 51 32.5 -1.3
LRAL Lakeview Retre 145.66 40 *ePKPbc* PKPbc 02 51 33.9 -0.3
TKL Tuckaleechee C 145.78 34 *ePKPbc* PKPbc 02 51 33.2 -1.3
ELN Prospectdale 146.12 29 *ePKPbc* PKPbc 02 51 35.3 -0.2
JSC Jenkinsville 148.17 33 PKPbc PKPbc 02 51 41.3 -0.1
LVC Limon Verde 148.44 166 *ePKPbc* PKPbc 02 51 43.8 +1.4
LVC LR LR
comp=Z,433nm,22.0s,MS5.2
RCBR Riachuelo 151.16 242 *ePKPbc* PKPbc 02 51 48.9 -0.5
RCBR LR LR
comp=Z,309nm,19.0s,MS5.1
BDFB Brasilia 152.93 209 PKP PKPdf 02 51 44.8 -1.2
comp=Z,6.5nm,1.0s,baz=129,slow=8.3,SNR=13
BDFB Brasilia 152.93 209 PKIKP PKPdf 02 51 44.8 -1.2
BDFB pmax pmax
comp=Z,7.0nm,1.0s
OTAV Otavalo 161.07 114 *ePKPdf* PKPdf 02 51 57.3 +0.8
OTAV LR LR
comp=Z,298nm,22.0s
ROSC El Rosal 166.54 104 *ePKPdf* PKPdf 02 52 01.4 0.0
SDV Santo Domingo 170.65 85 *ePKPdf* PKPdf 02 52 03.0 -1.1
SDV LR LR
comp=Z,196nm,20.0s

CASC 26 02:40:07.0±1.7, 938N×8410W, h46km±13km, MD4.1, ML3.4,7C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.08**	**302**	⇓*i*	*iP*	Pn	02 40 14.7	+0.4
BUS	**Buena Vista**	**0.38**	**63**		*eP*	Pn	02 40 17.0	+0.4
LAJ	**Bijagual**	**0.48**	**357**	⇓*e*		Pn	02 40 19.1	+1.3
LAJ				⇓*i*	*iP*		02 40 19.1	
URSC	**Urasca**	**0.55**	**35**	⇓*i*	*iP*	Pn	02 40 18.4	-0.2
SJS	**Escuela Geolog**	**0.56**	**4**	⇑	*eP*	Pn	02 40 18.5	-0.3
PRS1	**Puriscal**	**0.63**	**341**	⇑	*iP*	Pn	02 40 18.7	-1.1
CGA2	**Cerro Gallo 2**	**0.73**	**330**	⇑	*eP*	Pn	02 40 20.8	-0.2
BAR1		**0.79**	**100**	⇓	*eP*	Pn	02 40 21.9	+0.1
JCR	**Jicaral**	**1.10**	**295**	⇑	*eP*	Pn	02 40 25.5	-0.5
ACR	**Cerro Adams**	**1.17**	**128**		*eP*	Pn	02 40 26.7	-0.2
LIO	**Limon**	**1.22**	**59**	⇓	*eP*	Pn	02 40 27.5	-0.1
FORC	**Fortuna**	**1.22**	**333**	⇓	*eP*	Pn	02 40 28.1	+0.4
FORC				⇑	*eP*		02 40 28.3	
FORC					*eS*	Sn	02 40 44.9	+1.9
CUI	**Cuipilapa**	**1.66**	**320**	⇑	*eP*	Pn	02 40 33.7	0.0
CUI					*eS*	Sn	02 40 54.1	+0.3
VCR	**Vista de Mar**	**1.68**	**296**		*eP*	Pn	02 40 33.8	-0.2
LIM1	**Limonal**	**1.74**	**319**	⇓	*eP*	Pn	02 40 34.8	+0.1
LIM1					*eS*	Sn	02 40 55.5	-0.1

MIRN	**Miramar**	**3.98**	**320**	*e*P	Pn	02 41 06.6 +1.1
CHI2		**11.30**	**114**	*e*P		02 41 11.9
LAPE	**La Pedrera**	**12.52**	**97**	*e*P		02 40 36.6
LAPE				*e*S		02 40 59.4

NEIC ***26*** *02:58:41.4, 1661N×10105W, h15km, MD3.9(MEX), After MEX.*

MEX 26 02:58:41.4±0.5, 1661N×10105W, h15km±24km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.87**	**60**	*i* P		Pb	02 58 55.2	-2.9
CAIG				*i* S		Sb	02 59 05.8	-3.9
ZIIG	**Zihuatanejo**	**1.06**	**338**	*i* P		Pb	02 58 58.1	-3.5
ZIIG				*i* S		Sb	02 59 10.9	-4.3
ACX	**Acapulco**	**1.12**	**77**	*i* P		Pb	02 58 59.0	-3.4
ACX				*i* S		Sb	02 59 12.7	-4.1
PLIG	**Platanillo**	**2.31**	**40**	*e*P		Pn	02 59 16.6	-2.3
PLIG				*i* S		Sn	02 59 44.5	-2.5
MZVM		**3.10**	**34**	*i* P		Pn	02 59 26.6	-3.1
MZVM				*i* S		Sn	03 00 02.7	-3.8
UTMO	**Huajuapan**	**3.33**	**68**	*e*P		Pn	02 59 31.2	-1.8
UTMO				*i* S		Sn	03 00 09.5	-2.8
IIO	**Organos**	**3.70**	**36**	*e*P		Pn	02 59 36.0	-2.0
IIO				*i* S		Sn	03 00 21.4	0.0

ISCJB ***26*** *03:11:51.7±0.9, 3517N±005×140.11E±004, h50km±7km, Error ellipse: s-maj=8.4km s-min=5.9km az=15.2*
JMA ***26*** *03:11:52.1±0.2, 3522N×140.14E, h42km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs=277.00000°, δ50.00000°, λ-51.00000°. NP2:φs=45.00000°, δ54.00000°, λ-127.00000°. Principal axes: T Plg2.0000°, Azm160.0000°; N Plg29.0000°, Azm69.0000°; P Plg61.0000°, Azm254.0000°;*
JMA Felt I J1.

ISC 26 03:11:52.0±0.9, 3516N±005×14011E±005, h48km±8km, n11, σ0§83/22, 4C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KTR	**Katsuura**	**0.17**	**96**	P		**Pn**	**03 11 59.0**	**-0.9**
KTR				S		**Sn**	**03 12 03.8**	**-1.7**
TATJ	**Tateyama 2**	**0.23**	**234**	⇓P		**Pn**	**03 12 00.6**	**+0.3**
TATJ				S		**Sn**	**03 12 07.5**	**+1.4**
BSO4	**Boso 4**	**0.25**	**133**	P		**Pn**	**03 12 00.7**	**+0.2**
BSO4				S		**Sn**	**03 12 07.6**	**+1.0**
JCN	**Nagara**	**0.26**	**16**	⇑P		**Pn**	**03 12 00.1**	**-0.5**
JCN				S		**Sn**	**03 12 06.4**	**-0.3**
BSO3	**Boso 3**	**0.49**	**138**	⇑P		**Pn**	**03 12 03.0**	**+1.0**
BSO3				S		**Sn**	**03 12 12.7**	**+1.9**
JIM2	**Oshima 3**	**0.71**	**232**	⇑P		**Pn**	**03 12 05.8**	**-0.1**
JIM2				S		**Sn**	**03 12 15.2**	**-0.7**
JOD2	**Odawara 2**	**0.84**	**277**	⇑P		**Pn**	**03 12 07.5**	**-0.1**
JOD2				S		**Sn**	**03 12 18.1**	**-0.8**
BSO1	**Boso 1**	**0.88**	**125**	P		**Pn**	**03 12 07.4**	**-0.6**
BSO1				S		**Sn**	**03 12 19.3**	**-0.4**
KTJJ	**Kamata 2**	**0.89**	**255**	⇓P		**Pn**	**03 12 08.1**	**-0.1**
KTJJ				S		**Sn**	**03 12 19.5**	**-0.6**
JIZS	**Izushimoda**	**1.11**	**247**	⇓P		**Pn**	**03 12 10.9**	**-0.2**
JIZS				S		**Sn**	**03 12 25.1**	**-0.2**
MAT	**Matsushiro**	**2.07**	**312**	P		**Pn**	**03 12 25.3**	**+1.0**
MAT				S		**Sn**	**03 12 50.3**	**+1.4**

IDC 26 03:23:19.4±1.1, 5537S×13022W, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.8/14, mbtmp3.6/5, MS4.0/5, Ms1 4.0/5, ms1mx3.6/18, Error ellipse: s-maj=39.5km s-min=26.2km az=133.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**32.00**	**202**	P		P	03 29 47.0	+0.3
VNDA	0.2nm,0.5s,baz=217,slow=20,SNR=2.2			LR		LR	03 40 54.9	
RKT	**Rikitea**	**32.40**	**352**	*e*LR		LR	03 37 54.7	
RKT	comp=Z,82nm,18.2s,baz=80,slow=33 **Rikitea**	**32.40**	**352**	*e*T			04 02 27.4	
QSPA	620nm,28.0s,baz=169 **South Pole Qui**	**34.81**	**180**	P		P	03 30 12.3	+1.2
RPZ	7.0nm,0.2s **Rata Peaks**	**38.71**	**262**	LR		LR	03 41 22.2	
PPT	comp=Z,213nm,20.1s,baz=120,slow=28 **Papeete**	**40.52**	**331**	*e*LR		LR	03 41 35.2	
PPT	707nm,25.2s,baz=176 **Papeete**	**40.52**	**331**	LR		LR	03 43 37.5	
VAH	comp=Z,492nm,18.7s,baz=230,slow=30 **Vaihoa**	**42.25**	**335**	*e*T			04 14 41.9	
CFAA	18nm,0.3s **Coronel Fontan**	**48.93**	**88**	P		P	03 32 05.8	-1.2
MAW	0.1nm,0.3s,baz=236,slow=11,SNR=10 **Mawson**	**56.96**	**186**	LR		LR	03 55 03.4	
STKA	comp=Z,956nm,19.9s,baz=326,slow=33 **Stephens Creek**	**63.46**	**252**	LR		LR	03 57 19.5	
ASAR	comp=Z,198nm,18.4s,baz=205,slow=32 **Alice Springs**	**74.09**	**252**	P		P	03 34 56.2	-1.0
TXAR	1.2nm,1.0s,baz=141,slow=6.4,SNR=6.4 **Lajitas Array**	**87.38**	**23**	P		P	03 36 09.7	+1.8
SONM	0.7nm,1.0s,baz=193,slow=7.4,SNR=6.1 **Songino Array**	**144.92**	**282**	PKP		PKPdf	03 42 56.8	-0.5
	1.5nm,0.9s,baz=135,slow=2.0,SNR=6.2							

NEIC ***26*** *03:56:32.0, 5614N×15182W, h10km, ML3.5(AEIC), After AEIC.*
IDC ***26*** *03:56:34.0±8.2, 5677N×15174W, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/23, mbtmp4.0/8, Error ellipse: s-maj=219.9km s-min=42.4km az=178.0*

ISC 26 03:56:35.8±5.9, 564N±02×1518W±02, h23km±35km, n18, σ0§89/19, mb4.0/8, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.18**	**316**	*e*Pn		**Pn**	**03 56 57.4**	**+0.5**
OHAK				S		**Sn**	**03 57 12.4**	**+0.3**
SEW	**Seward**	**3.93**	**17**	P		**Pn**	**03 57 34.4**	**-0.2**
SLKM	**Skilak Lake**	**4.22**	**11**	*e*Pn		**Pn**	**03 57 39.7**	**+1.1**
RC01	**Rabbit Creek A**	**4.84**	**12**	*e*Pn		**Pn**	**03 57 48.3**	**+1.2**
SVW2	**Sparrevohn**	**5.12**	**339**	P		**Pn**	**03 57 49.8**	**-1.2**
EYAK	**Cordova Ski Ar**	**5.25**	**35**	P		**Pn**	**03 57 52.9**	**+0.2**
PMR	**Palmer**	**5.40**	**14**	P		**Pn**	**03 57 54.3**	**-0.5**
SKT	**Skwentna**	**5.62**	**1**	P		**Pn**	**03 57 56.8**	**-0.9**
SML	**Sawmill**	**5.73**	**17**	P		**Pn**	**03 57 58.9**	**-0.4**
SONM	**Songino Array**	**57.50**	**309**	P		**P**	**04 06 23.6**	**+1.0**
	2.8nm,0.8s,mb4.4,baz=45,slow=7.3,SNR=14							
ZALV	**Zalesovo Beam**	**60.70**	**326**	P		**P**	**04 06 45.1**	**+0.4**
	2.5nm,0.8s,mb4.4,baz=33,slow=6.2,SNR=10							
BVAR	**Borovoye Array**	**65.59**	**334**	P		**P**	**04 07 15.9**	**-1.2**
	2.9nm,0.8s,mb4.4,baz=31,slow=6.9,SNR=11							
MKAR	**Makanchi Array**	**67.69**	**323**	P		**P**	**04 07 30.3**	**-0.3**
	0.7nm,0.6s,mb3.9,baz=37,slow=6.2,SNR=4.5							
AKTK	**Aktyubinsk**	**70.72**	**340**	P		**P**	**04 07 48.4**	**-0.9**
AKTO	**Aktyubinsk**	**70.72**	**340**	P		**P**	**04 07 48.4**	**-0.9**
	1.1nm,0.8s,mb3.9,baz=50,slow=5.8,SNR=5.4							
GERES	**GERESS Array B**	**74.45**	**10**	P		**P**	**04 08 13.1**	**+1.5**
	0.4nm,0.6s,mb3.5,baz=353,slow=7.3,SNR=2.6							
ESDC	**Sonseca Array**	**80.50**	**25**	P		**P**	**04 08 44.6**	**-1.0**
	0.7nm,0.7s,mb3.7,baz=343,slow=4.9,SNR=5.2							
BRTR	**Keskin Array B**	**84.15**	**356**	P		**P**	**04 09 06.0**	**+1.3**
	0.5nm,0.7s,mb3.7,baz=2.2,slow=5.3,SNR=3.7							

ISCJB ***26*** *03:56:47.6±0.6, 2952N±006×6976E±005, h10km, mb3.9/17, Error ellipse: s-maj=10.2km s-min=4.0km az=27.6*
IDC ***26*** *03:56:48.3±0.9, 2953N×6955E, h0km, mb3.9/16, mb1 4.0/17, mb1mx4.0/27, mbtmp3.9/17, ML3.6/1, Error ellipse: s-maj=22.2km s-min=15.6km az=6.0*
NEIC ***26*** *03:56:53.6±0.7, 2959N×6956E, h35km, mb4.1/1, Error ellipse: s-maj=13.5km s-min=11.7km az=159.0*

ISC 26 03:56:49.9±0.5, 2961N±007×6965E±005, h10km, n38, σ1§02/43, mb3.9/17, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**4.94**	**354**	*e*Pn		**Pn**	**03 58 07.8**	**+3.6**
AJM	**Ajmer**	**5.40**	**124**	*i* x		**Pg**	**03 58 31.0**	**-2.4**
AJM				*i* S		**Sg**	**03 59 44.0**	**+0.6**
KHET	**Khetri**	**5.61**	**104**	*ex*		**Pn**	**03 58 17.7**	**+4.3**
KHET				*e*S		**Sg**	**03 59 51.1**	**+1.0**
THN	**Thein Dam**	**5.92**	**60**	*ex*		**Pb**	**03 58 29.1**	**-4.0**
KUDL	**Kundal**	**6.17**	**102**	*ex*		**Pg**	**03 58 47.5**	**-0.6**
KUDL				*e*S		**Sg**	**04 00 03.3**	**-4.8**
SONA	**Sohna**	**6.65**	**100**	*ex*		**Pg**	**03 58 57.8**	**+0.5**
SONA				*e*S		**Sg**	**04 00 14.8**	**-8.7**
SMLA	**Simla**	**6.67**	**75**	*e*P		**Pg**	**03 59 02.3**	**+4.7**
SMLA				*i* x		x	03 59 45.7	
SMLA				*e*S		**Sg**	**04 00 19.3**	**-4.6**
SMLA				*ex*		x	04 00 26.4	
	comp=E,144nm,0.4s							
SMLA				*ex*		x	04 00 28.2	
	comp=N,172nm,0.4s							
NDI	**New Delhi**	**6.68**	**96**	*ex*		x	03 58 29.0	
NDI				*ex*		**Sg**	**04 00 24.0**	**-0.4**
KLP	**Kalpa**	**7.66**	**73**	*e*P		**Pg**	**03 59 14.7**	**-1.8**
KLP				*e*S		**Sb**	**04 00 40.6**	**+6.5**
KLP					AML	AML	04 01 13.5	
	comp=N,118nm,0.7s							
KLP					AML	AML	04 01 13.6	
	comp=E,94nm,0.8s							
KLP	**Kalpa**	**7.66**	**73**	*ex*		**Pb**	**03 58 56.8**	**-6.0**
JOSI	**Joshimath**	**8.63**	**81**	*e*P		Px	03 59 28.6	
JOSI				*e*S		Sx	04 01 04.1	
PYUN	**Piuthan**	**11.79**	**94**	*e*P		**Pn**	**03 59 38.3**	**+0.2**
KOLN	**Koldanda**	**12.38**	**95**	*e*P		**Pn**	**03 59 46.2**	**-0.1**
	comp=E,18nm,1.0s							
DANN	**Dangsing**	**12.42**	**92**	*e*P		**Pn**	**03 59 45.1**	**-1.6**
	comp=E,19nm,0.7s							
AAK	**Ala-Archa**	**13.57**	**15**	*e*Pn		**Pn**	**04 00 02.2**	**-0.1**
	comp=E,5.4nm,0.8s							
GUN	**Gumba**	**14.34**	**93**	*e*P		**Pn**	**04 00 13.1**	**+0.2**
JIRN	**Jiri**	**14.65**	**94**	*e*P		**Pn**	**04 00 19.0**	**+1.7**
MK31	**Makanchi Array**	**19.78**	**26**	*e*P		**Pn**	**04 01 21.5**	**-0.1**
MKAR	**Makanchi Array**	**19.78**	**26**	P		**Pn**	**04 01 21.1**	**-0.4**
	comp=E,0.2nm,0.3s,baz=208,slow=12,SNR=9.2							
KURK	**Kurchatov**	**22.13**	**15**	P		**P**	**04 01 44.5**	**-0.9**
	comp=E,10nm,0.7s,mb4.4,baz=208,slow=9.6,SNR=11							
KURK	**Kurchatov**	**22.13**	**15**	*e*P		**P**	**04 01 46.1**	**+0.7**
AKTK	**Aktyubinsk**	**22.57**	**340**	P		**P**	**04 01 49.2**	**-0.9**
AKTO	**Aktyubinsk**	**22.57**	**340**	P		**P**	**04 01 49.2**	**-0.9**
	comp=E,2.5nm,0.7s,mb3.8,baz=159,slow=11,SNR=4.9							
BVAR	**Borovoye Array**	**23.40**	**1**	P		**P**	**04 01 59.2**	**+0.3**
	comp=E,2.9nm,0.7s,mb3.8,baz=171,slow=10,SNR=16							
BRVK	**Borovoye**	**23.43**	**1**	*e*P		**P**	**04 01 59.7**	**+0.5**
	comp=E,4.1nm,0.9s,mb3.9							
ZALV	**Zalesovo Beam**	**26.70**	**20**	P		**P**	**04 02 29.5**	**+0.4**
	comp=E,0.5nm,0.4s,mb3.4,baz=207,slow=8.1,SNR=2.6							
CMAR	**Chiang Mai Arr**	**28.88**	**106**	P		**P**	**04 02 50.5**	**+1.5**
	comp=E,2.3nm,0.4s,mb4.2,baz=298,slow=10,SNR=8.6							
BRTR	**Keskin Array B**	**31.11**	**299**	P		**P**	**04 03 09.5**	**+1.0**
	comp=E,1.8nm,0.7s,mb4.0,baz=107,slow=9.1,SNR=15							
SONM	**Songino Array**	**33.55**	**47**	P		**P**	**04 03 32.2**	**+2.5**
	comp=E,1.4nm,0.9s,mb3.9,baz=232,slow=11,SNR=7.5							
AKASG	**Malin Array Be**	**36.78**	**316**	P		**P**	**04 03 57.4**	**-0.2**
	comp=E,1.1nm,0.6s,mb3.9,baz=104,slow=6.7,SNR=5.4							
IDI	**Anoyia**	**37.95**	**290**	P		**P**	**04 04 08.6**	**+0.9**
	comp=E,2.5nm,0.8s,mb4.0,baz=20,slow=11,SNR=3.3							
GERES	**GERESS Array B**	**46.28**	**311**	P		**P**	**04 05 15.4**	**0.0**
	comp=E,0.6nm,0.7s,mb3.7,baz=111,slow=2.2,SNR=3.6							
ARCES	**ARCESS Array B**	**47.16**	**340**	P		**P**	**04 05 22.6**	**+0.5**
	comp=E,2.5nm,0.8s,mb4.2,baz=345,slow=8.8,SNR=4.0							
KSRS	**Korea Array**	**48.54**	**65**	P		**P**	**04 05 33.6**	**+0.4**
	comp=E,1.9nm,0.7s,mb4.2,baz=274,slow=7.3,SNR=5.3							
ESDC	**Sonseca Array**	**59.85**	**301**	P		**P**	**04 06 54.8**	**-1.0**
	comp=E,1.1nm,0.8s,mb3.9,baz=61,slow=7.7,SNR=4.2							
TORD	**Torodi Ar. Bea**	**64.57**	**271**	P		**P**	**04 07 25.9**	**-1.7**
	comp=E,0.7nm,0.9s,mb3.7,baz=63,slow=5.9,SNR=3.2							
ASAR	**Alice Springs**	**81.34**	**123**	P		**P**	**04 09 06.2**	**-0.7**
	comp=E,0.6nm,0.9s,mb3.5,baz=282,slow=4.1,SNR=5.8							
YKA	**Yellowknife Ar**	**88.15**	**2**	P		**P**	**04 09 41.3**	**+0.7**
	comp=E,1.6nm,0.7s,mb4.4,baz=345,slow=5.0,SNR=5.3							

ISCJB ***26*** *03:59:41.7±0.7, 2357S±006×6816W±007, h139km±7km, mb4.3/2, Error ellipse: s-maj=11.6km s-min=8.3km az=33.9*
NEIC ***26*** *03:59:43.7, 2362S×6832W, h119km, MG4.3(GUC), After GUC.*
GUC ***26*** *03:59:43.7±0.9, 2362S×6832W, h119km±6km, ML4.3*
IDC ***26*** *03:59:46.3±1.2, 2303S×6795W, h131km±13km, mb3.9/3, mb1 3.6/5, mb1mx3.3/18, mbtmp3.7/5, Error ellipse: s-maj=31.3km s-min=27.0km az=149.0*

ISC 26 03:59:42.6±0.7, 2359S±005×6817W±007, h135km±7km, n20, σ1§08/32, mb4.3/2, 3C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.68**	**357**	⇓*i* P		**Pn**	**04 00 03.9**	**+0.5**
SPCH				*i* S		**Sn**	**04 00 19.3**	**+0.1**
SPCH	**San Pedro de A**	**0.68**	**357**	⇓*i* P		**Pn**	**04 00 03.9**	**+0.5**
SPCH				*i* S		**Sn**	**04 00 19.3**	**+0.1**
SPCH					AML	AML	04 00 20.2	
	comp=N,10μm,0.6s							
LVC	**Limon Verde**	**1.19**	**325**	P		**Pn**	**04 00 08.5**	**+0.6**
	comp=N,235nm,0.3s,baz=90,slow=4.4,SNR=1380							
LVC				S		**Sn**	**04 00 27.3**	**+0.3**
	comp=N,467nm,0.3s,baz=270,slow=20,SNR=96							
LVC	**Limon Verde**	**1.19**	**325**	*e*Pn		**Pn**	**04 00 08.5**	**+0.6**
LVC				*e*Sn		**Sn**	**04 00 27.3**	**+0.3**
LVC	**Limon Verde**	**1.19**	**325**	⇑*i* P		**Pn**	**04 00 08.5**	**+0.6**
LVC				*i* S		**Sn**	**04 00 26.8**	**-0.2**
PECH	**Pedro de Valdi**	**1.71**	**305**	⇑*i* P		**Pn**	**04 00 13.8**	**+0.3**
PECH				*i* S		**Sn**	**04 00 36.3**	**-0.6**
PECH					AML	AML	04 00 37.8	
	comp=N,4μm,0.3s							
CEN1	**Los Morros**	**1.88**	**276**	⇓*i* P		**Pn**	**04 00 16.9**	**+1.4**
CEN1				*i* S		**Sn**	**04 00 41.8**	**+1.3**
CEN1					AML	AML	04 00 43.7	
MACH	**Maria Elena**	**2.02**	**313**	⇓*i* P		**Pn**	**04 00 17.7**	**+0.5**
MACH				*i* S		**Sn**	**04 00 42.9**	**-0.7**
ANCH	**Antofagasta**	**2.06**	**267**	⇑*i* P		**Pn**	**04 00 19.9**	**+2.3**
ANCH				*e*S		**Sn**	**04 00 44.5**	**+0.1**
CPN1	**Cerro Paranal**	**2.29**	**243**	⇓*i* P		**Pn**	**04 00 20.6**	**+0.2**
CPN1				*i* S		**Sn**	**04 00 48.5**	**-1.0**
CPN1					AML	AML	04 00 56.7	
	comp=N,1μm,0.4s							
TOCH	**Tocopilla**	**2.40**	**308**	⇓*i* P		**Pn**	**04 00 21.7**	**-0.1**
TOCH				*i* S		**Sn**	**04 00 50.3**	**-1.5**
TOCH					AML	AML	04 00 50.8	
	comp=N,1μm,0.1s							
PB01	**Plate Boundary**	**2.82**	**334**	⇓*i* P		**Pn**	**04 00 27.2**	**+0.1**
PB01				*i* S		**Sn**	**04 01 00.8**	**-0.5**
PB01					AML	AML	04 01 02.1	
	comp=E,1μm,0.3s							
LCO	**Las Campanas**	**5.86**	**202**	*e*Pn		**Pn**	**04 01 05.3**	**-1.9**
	comp=E,25nm,0.3s							
LCO				*e*Sn		**Sn**	**04 02 10.1**	**-3.2**
SIV	**San Ignacio**	**10.08**	**43**	P		**Pn**	**04 02 01.7**	**-2.4**
	comp=E,2.8nm,0.3s,baz=267,slow=15,SNR=71							
PLCA	**Paso Flores**	**17.21**	**186**	P		**Pn**	**04 03 45.3**	**+11**
	comp=E,0.1nm,0.3s,baz=228,slow=16,SNR=4.8							
BDFB	**Brasilia**	**20.55**	**71**	P		**P**	**04 04 10.8**	**+0.1**
	comp=E,2.5nm,0.6s,baz=224,slow=18,SNR=9.6							
ROSC	**El Rosal**	**28.91**	**347**	P		**P**	**04 05 28.5**	**-0.5**
	comp=E,3.5nm,0.3s,mb4.5,baz=90,slow=19,SNR=2.8							
TORD	**Torodi Ar. Bea**	**77.42**	**70**	P		**P**	**04 11 25.0**	**+1.7**
	comp=E,1.8nm,0.5s,mb4.2,baz=256,slow=5.6,SNR=25							
TORD	**Torodi Ar. Bea**	**77.42**	**70**	P		**P**	**04 11 25.0**	**+1.7**
MKAR	**Makanchi Array**	**146.88**	**38**	PKPbc		PKPbc	04 19 11.9	+2.9
	comp=E,0.9nm,0.7s,baz=316,slow=3.3,SNR=5.0							

ISCJB ***26*** *04:04:36.0±0.8, 823S±005×11887E±006, h34km±10km, mb4.2/10, Error ellipse: s-maj=9.8km s-min=7.8km az=164.1*
NEIC ***26*** *04:04:37.5±0.8, 820S×11857E, mb4.5/2, Error ellipse: s-maj=25.1km s-min=11.3km az=67.0*
DJA ***26*** *04:04:38, 832S×11879E, h20km, MLv4.4/9*
BJI ***26*** *04:04:40.5, 820S×11860E, h50km, mB4.9, mb4.6*
IDC ***26*** *04:04:41.4±0.8, 547S×12283E, h52km±6km, mb3.6/7, mb1 3.6/8, mb1mx3.5/19, mbtmp3.5/8, MS3.3/3, Ms1 3.3/3, ms1mx3.0/25, Error ellipse: s-maj=19.8km s-min=11.3km az=17.0*

ISC 26 04:04:38.2±0.8, 820S±005×11886E±006, h37km±10km, h52km±2.3km:pP-P, n41, σ1§28/43, mb4.2/10, Sumbawa region

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

BMNI	**Bima**	**0.38**	**205**	P		**Pn**	**04 04 42.7**	**-4.5**
BMNI	**Bima**	**0.38**	**205**	P		**Pn**	**04 04 43.2**	**-4.0**
KHKI	**Kahang-Kahang**	**3.22**	**267**	P		**Pn**	**04 05 27.3**	**+1.1**
KHKI	**Kahang-Kahang**	**3.22**	**267**	P		**Pn**	**04 05 27.3**	**+1.1**
KAPI	**Kappang**	**3.29**	**16**	P		**Pn**	**04 05 26.7**	**-0.5**
	46nm,0.3s,baz=192,slow=7.5,SNR=155							
KAPI				S		**Sn**	**04 06 04.3**	**-0.8**
	105nm,0.3s,baz=102,slow=23,SNR=25							
KAPI				LR		LR	04 07 01.9	
	comp=Z,364nm,21.1s,baz=196,slow=45							
KAPI	**Kappang**	**3.29**	**16**	*e*Pn		**Pn**	**04 05 26.8**	**-0.4**
KAPI				*e*Sn		**Sn**	**04 06 05.1**	**0.0**
KAPI				LR		LR	04 07 01.9	
KAPI	**Kappang**	**3.29**	**16**	P		**Pn**	**04 05 26.0**	**-1.2**
KAPI	**Kappang**	**3.29**	**16**	P		**Pn**	**04 05 26.8**	**-0.4**
DNP	**Denpasar**	**3.64**	**262**	P		**Pn**	**04 05 40.6**	**+8.6**
IGBI	**Denpasar**	**3.72**	**260**	P		**Pn**	**04 05 31.0**	**-2.2**
IGBI	**Denpasar**	**3.72**	**260**	P		**Pn**	**04 05 33.0**	**-0.2**
NBBI	**Negara**	**4.20**	**267**	P		**Pn**	**04 05 40.7**	**+1.0**
NBBI	**Negara**	**4.20**	**267**	P		**Pn**	**04 05 41.0**	**+1.3**
KMMI	**Kalianget**	**4.98**	**283**	P		**Pn**	**04 05 53.8**	**+3.3**
KMMI	**Kalianget**	**4.98**	**283**	P		**Pn**	**04 05 50.1**	**-0.4**
BATI	**Baumata**	**5.15**	**113**	LR		LR	04 08 19.7	
	comp=Z,481nm,19.6s,baz=44,slow=46							
BATI	**Baumata**	**5.15**	**113**	P		**Pn**	**04 05 59.9**	**+7.1**
	40nm,0.5s,759nm							
BATI	**Baumata**	**5.15**	**113**	P		**Pn**	**04 05 58.6**	**+5.8**
	40nm,0.5s,748nm0.2nm							
KDI	**Kendari**	**5.63**	**42**	P		**Pn**	**04 06 11.1**	**+12**
	18nm,0.8s,5μm							
KDI	**Kendari**	**5.63**	**42**	P		**Pn**	**04 06 01.1**	**+1.6**
	16nm,1.0s,4μm0.1nm							
BBKI	**Banjar Baru**	**6.17**	**319**	P		**Pn**	**04 06 13.0**	**+6.1**
MBWA	**Marble Bar**	**12.91**	**176**	*e*Pn		**Pn**	**04 07 37.4**	**-1.9**
MBWA				*e*Sn		**Sn**	**04 09 48.6**	**-13**
KAKA	**Kakadu**	**14.09**	**110**	*e*P		Px	04 07 40.5	
	11nm,0.5s							
WRA	**Warramunga Arr**	**19.00**	**130**	P		**Pn**	**04 08 52.0**	**-5.7**
	0.4nm,0.3s,baz=301,slow=13,SNR=5.9							
WRA				LR		LR	04 17 19.7	
	comp=Z,80nm,18.0s,baz=275,slow=42							
WRAB	**Tennant Creek**	**19.00**	**129**	*e*P		**Pn**	**04 08 57.2**	**-0.6**
	9.5nm,0.8s							
WB2	**Warramunga Arr**	**19.01**	**130**	*e*P		**Pn**	**04 08 57.7**	**-0.2**
WB2				*e*			04 10 19.8	
WB2				*e*S		**S**	**04 12 24.4**	**-6.5**
WB2	**Warramunga Arr**	**19.01**	**130**	*e*P		**Pn**	**04 08 58.0**	**+0.1**
ASAR	**Alice Springs**	**21.08**	**139**	P		**P**	**04 09 20.2**	**+0.8**
	3.5nm,0.4s,mb4.0,baz=310,slow=8.4,SNR=32							
COEN	**Coen**	**24.53**	**106**	*e*P		**P**	**04 09 55.5**	**+0.9**
	27nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**31.66**	**141**	*e*P		**P**	**04 10 59.4**	**+1.3**
	4.3nm,0.7s,mb4.4							
STKA	**Stephens Creek**	**31.66**	**141**	P		**P**	**04 10 58.8**	**+0.7**
	5.2nm,0.7s,mb4.5,baz=310,slow=10,SNR=8.8							
LZH	**Lanzhou**	**46.26**	**343**	*e*P		**P**	**04 13 04.5**	**+4.5**
LZH					AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8							
LZH					AMB	AMB		
	comp=Z,72nm,4.0s							
GTA	**Gaotai**	**50.55**	**341**	*e*P		**P**	**04 13 36.3**	**+3.3**
GTA					AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.1							
SONM	**Songino Array**	**56.87**	**350**	pP		**P**	**04 14 20.3**	**+1.2**
	comp=Z,1.6nm,0.9s,mb4.1,baz=166,slow=7.5,SNR=7.5							
MK31	**Makanchi Array**	**63.68**	**333**	*e*P		**P**	**04 15 03.5**	**-2.2**
MK31				*e*			04 15 19.0	
MKAR	**Makanchi Array**	**63.68**	**333**	P		**P**	**04 15 04.3**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.9,baz=134,slow=6.7,SNR=7.1							
MKAR				pP		pP	04 15 19.4	+2.4
	comp=Z,4.0nm,0.5s,baz=121,slow=8.0,SNR=21							
MKAR	**Makanchi Array**	**63.68**	**333**	P		**P**	**04 15 04.3**	**-1.4**
MKAR				pP		pP	04 15 19.4	+2.4
KURK	**Kurchatov**	**68.22**	**334**	P		**P**	**04 15 33.2**	**-1.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=144,slow=5.7,SNR=4.2							
KURK				pP		pP	04 15 47.0	+0.9
	comp=Z,7.2nm,0.5s,baz=128,slow=6.2,SNR=37							
KURK	**Kurchatov**	**68.22**	**334**	P		**P**	**04 15 33.2**

KAPI Sn **Sn** **04 29 58.7 -0.4**
96nm,0.3s,baz=102,slow=23,SNR=21
KAPI LR LR 04 30 56.3
comp=Z,752nm,20.9s,baz=199,slow=44
KAPI Kappang 3.26 16 Pn **Pn** **04 29 21.2 +0.6**
KAPI Sn **Sn** **04 29 58.7 -0.4**
KAPI LR LR 04 30 56.3
KAPI Kappang 3.26 16 P **Pn** **04 29 20.8 +0.2**
DNP Denpasar 3.62 262 P **Pn** **04 29 32.4 +6.9**
IGBI Denpasar 3.70 260 P **Pn** **04 29 26.1 -0.6**
NBBI Negara 4.17 267 P **Pn** **04 29 34.9 +1.7**
KMMI Kaliangget 4.94 283 P **Pn** **04 29 49.2 +5.4**
BATI Baumata 5.19 113 Pn **Pn** **04 29 49.4 +2.2**
20nm,0.3s,baz=302,slow=5.3,SNR=9.2
BATI LR LR 04 32 14.8
comp=Z,908nm,19.8s,baz=341,slow=42
BATI Baumata 5.19 113 P **Pn** **04 29 52.5 +5.3**
60nm,0.7s,1μm0.3nm
KDI Kendari 5.63 42 P **Pn** **04 30 02.0 +8.8**
37nm,0.8s,2μm0.1nm
BBKI Banjar Baru 6.13 319 P **Pn** **04 30 00.4 +0.3**
74nm,0.8s,0.7nm
KRKI Karangkates 6.31 270 P **Pn** **04 30 06.4 +3.8**
SJI Sawahan 7.01 273 P **Pn** **04 30 15.9 +3.7**
MBWA Marble Bar 12.95 176 *e*Pn **Pn** **04 31 33.0 -0.7**
10nm,0.7s
MBWA *e*Sn **Sn** **04 33 48.0 -10**
KAKA Kakadu 14.13 110 *e*P Px 04 31 35.1
66nm,1.3s
KAKA *e*S Sx 04 34 16.3
KAKA Kakadu 14.13 110 *e*Pn Px 04 31 35.3
KAKA *e*Sn Sx 04 34 16.8
SWI Sorong 14.35 60 P pP 04 32 03.2 -0.9
41nm,0.9s
WRA Warramunga Arr 19.05 130 Pn **Pn** **04 32 52.1 -0.5**
1.3nm,0.3s,baz=301,slow=13,SNR=25
WRA LR LR 04 41 05.4
comp=Z,77nm,18.4s,baz=315,slow=39
WRAB Tennant Creek 19.05 130 *e*P **Pn** **04 32 52.4 -0.2**
17nm,1.0s
WB2 Warramunga Arr 19.05 130 *e*P **Pn** **04 32 52.1 -0.6**
ASAR Alice Springs 21.13 139 P **P** **04 33 15.3 +0.9**
5.0nm,0.3s,mb4.3,baz=311,slow=9.1,SNR=36
ASAR S **S** **04 37 14.9 +5.7**
3.9nm,0.9s,baz=306,slow=23,SNR=8.3
COEN Coen 24.57 106 *e*Pn **P** **04 33 50.5 +0.9**
46nm,0.8s,mb5.1
NWAO Narrogin (SRO) 24.69 183 LR LR 04 43 27.4
comp=Z,114nm,19.1s,MS3.4,baz=32,slow=37
CTA Charters Tower 29.06 117 P **P** **04 34 30.3 +0.2**
3.3nm,0.8s,mb4.1,baz=285,slow=12,SNR=3.4
CTA LR LR 04 48 38.2
comp=Z,197nm,18.4s,MS3.8,baz=55,slow=41
CTA Charters Tower 29.06 117 P **P** **04 34 30.3 +0.2**
CTA LR LR 04 48 38.2
STKA Stephens Creek 31.70 141 *e*P **P** **04 34 53.9 +0.6**
5.7nm,0.7s,mb4.5
STKA Stephens Creek 31.70 141 P **P** **04 34 54.0 +0.8**
5.9nm,0.6s,mb4.6,baz=297,slow=10,SNR=11
STKA LR LR 04 50 36.7
comp=Z,97nm,18.4s,MS3.5,baz=24,slow=42
STKA Stephens Creek 31.70 141 P **P** **04 34 54.0 +0.8**
STKA LR LR 04 50 36.7
CMAR Chiang Mai Arr 32.93 324 P **P** **04 35 04.2 +0.1**
1.3nm,0.3s,mb4.3,baz=159,slow=6.8,SNR=4.8
CMAR LR LR 04 49 46.5
comp=Z,159nm,18.4s,MS3.8,baz=249,slow=39
JOW Kunigami 35.97 14 LR LR 04 52 16.5
comp=Z,97nm,19.8s,MS3.6,baz=43,slow=40
LSA Lhasa 46.11 326 P **P** **04 36 54.5 +0.7**
KSRS Korea Array 46.17 10 P **P** **04 36 53.8 -0.3**
2.2nm,0.8s,mb4.2,baz=187,slow=8.8,SNR=5.9
KSRS LR LR 04 56 54.4
comp=Z,38nm,18.4s,MS3.4,baz=355,slow=37
ODAN Odare 46.27 320 *e*P **P** **04 36 55.9 +0.7**
TAPN Taplejung 46.42 321 *e*P **P** **04 36 56.7 +0.4**
JIRN Jiri 47.60 320 *e*P **P** **04 37 05.7 +0.2**
GUN Gumba 47.97 320 *e*P **P** **04 37 08.6 +0.2**
25nm,0.8s,mb5.3
DMN Daman 48.26 319 *e*P **P** **04 37 10.6 -0.1**
GKN Gorkha 48.84 319 *e*P **P** **04 37 14.6 -0.5**
KOLN Koldanda 49.37 318 *e*P **P** **04 37 18.6 -0.5**
11nm,0.9s,mb4.9
DANN Dangsing 49.64 318 *e*P **P** **04 37 20.7 -0.5**
20nm,0.7s
PYUN Piuthan 49.99 318 *e*P **P** **04 37 23.3 -0.6**
5.4nm,0.6s,mb4.8
SONM Songino Array 56.83 350 P **P** **04 38 14.1 +0.4**
2.2nm,0.9s,mb4.2,baz=166,slow=6.5,SNR=14
SONM Songino Array 56.83 350 P **P** **04 38 14.1 +0.4**
MKAR Makanchi Array 63.64 333 P **P** **04 38 59.9 -0.6**
1.0nm,0.5s,mb4.1,baz=161,slow=7.3,SNR=11
KURK Kurchatov 68.17 334 P **P** **04 39 27.8 -1.8**
1.1nm,0.7s,mb4.0,baz=146,slow=5.6,SNR=7.2
ZALV Zalesovo Beam 68.20 339 P **P** **04 39 27.8 -1.9**
0.5nm,0.3s,mb4.0,baz=145,slow=5.4,SNR=4.0
PETK Petropavlovsk- 69.38 24 P **P** **04 39 38.0 +1.0**
2.4nm,0.8s,mb4.2,baz=251,slow=4.4,SNR=3.5
VNDA Vanda 72.84 171 LR LR 05 08 59.8
comp=Z,51nm,19.5s,MS3.8,baz=137,slow=33
QSPA South Pole Qui 81.83 180 P **P** **04 40 47.1 -0.9**
3.3nm,1.0s,mb4.2,baz=278,slow=5.1,SNR=4.9
QSPA South Pole Qui 81.83 180 P **P** **04 40 47.1 -0.9**
TORD Torodi Ar. Bea 118.14 281 PKP PKPdf 04 47 15.3 -2.3
0.3nm,0.6s,baz=38,slow=2.0,SNR=7.5

*ISCJB **26** 04:34:50.7±1.4,3482N±008×2543E±009,h10km, Error ellipse: s-maj=11.9km s-min=9.2km az=143.0*
*CSEM **26** 04:34:50.9±0.3,3482N×2544E,h12km,MD3.6, Error ellipse: s-maj=6.3km s-min=3.6km az=176.0*
*THE **26** 04:34:52.9,3490N×2560E,h5km±16km, Error ellipse: s-maj=23.0km s-min=1.3km az=160.0*
*NEIC **26** 04:34:53.7,3515N×2529E,h24km,MD3.6(ATH), After ATH.*
*ATH **26** 04:34:53.7,3515N×2529E,h24km±3km,MD3.6/5*
ISC 26 04:34:50.9±1.5,3485N±008×2542E±008,h1km±7km,n34, σ1§11/47**,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.44**	**21**	*e*PB		**Pg**		**04 35 00.2**	**+0.8**
NPS				*e*SB		**Sg**		**04 35 04.7**	**-0.4**
IDI	**Anoyia**	**0.62**	**315**	*e*Pg		**Pg**		**04 35 02.9**	**+0.2**
IDI	**Anoyia**	**0.62**	**315**	*e*Pg		**Pg**		**04 35 02.9**	**+0.2**
VAM	**Vamos**	**1.14**	**299**	*e*PN		**Pn**		**04 35 12.0**	**-2.1**
THR6	**Thira Island,**	**1.50**	**359**	P		**Pn**		**04 35 18.6**	**-0.4**
THR1	**Thera Island**	**1.52**	**1**	P		**Pn**		**04 35 18.7**	**-0.5**
THR1				S		**Sn**		**04 35 39.0**	**-0.6**
THR3	**Thira Island,**	**1.56**	**359**	P		**Pn**		**04 35 19.2**	**-0.6**
THR5	**Thira Island,**	**1.56**	**358**	P		**Pn**		**04 35 19.5**	**-0.4**
THR5				S		**Sn**		**04 35 39.8**	**-1.0**
KARP	**Karpathos**	**1.59**	**64**	*e*PN		**Pn**		**04 35 22.3**	**+2.1**
THR4	**Thira Island,**	**1.61**	**359**	P		**Pn**		**04 35 20.1**	**-0.4**
APE	**Apeiranthos**	**2.22**	**2**	*e*PN		**Pn**		**04 35 28.0**	**-0.8**
APE	**Apeiranthos**	**2.22**	**2**	P		**Pn**		**04 35 28.2**	**-0.6**
VLI	**Veliai**	**2.75**	**313**	*e*PN		**Pn**		**04 35 34.0**	**-2.1**
DID	**Didima**	**3.19**	**327**	P		**Pn**		**04 35 42.7**	**+0.6**
DID				S		**Sn**		**04 36 22.4**	**+1.6**
LTK	**Loutraki**	**3.73**	**329**	P		**Pn**		**04 35 50.5**	**+0.8**
LTK				S		**Sn**		**04 36 35.7**	**+1.4**
AGG	**Agios Georgios**	**4.84**	**330**	P		**Pn**		**04 36 06.5**	**+1.6**

*IDC **26** 04:46:13.0±0.7,828S×11836E,h0km,mb4.2/10, mb1 4.3/12,mb1mx4.2/19,mbtmp4.2/12,ML4.4/2,MS3.5/4, Ms1 3.5/4,ms1mx3.1/27, Error ellipse: s-maj=31.7km s-min=11.7km az=61.0*
*ISCJB **26** 04:46:17.3±0.7,821S±004×11873E±005,h38km±7km, mb4.2/13,MS3.4/3, Error ellipse: s-maj=8.4km s-min=6.2km az=138.8*
*NEIC **26** 04:46:18.6±0.3,823S×11864E,h35km,mb4.2/3, Error ellipse: s-maj=14.1km s-min=6.3km az=56.0*
*DJA **26** 04:46:19,830S×11874E,h20km,MLv4.6/8*
ISC 26 04:46:17.2±1.3,821S±005×11879E±005,h22km±10km, n49,σ1§20/48**,mb4.2**/13**,MS3.4**/3**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.35**	**197**	P		**Pb**		**04 46 23.4**	**-1.4**
KHKI	**Kahang-Kahang**	**3.15**	**267**	P		**Pn**		**04 47 02.0**	**-3.6**
KAPI	**Kappang**	**3.31**	**17**	Pn		**Pn**		**04 47 07.8**	**+0.1**
	55nm,0.3s,baz=199,slow=7.6,SNR=110								
KAPI				Sn		**Sn**		**04 47 45.4**	**-1.0**
	115nm,0.3s,baz=26,slow=23,SNR=20								
KAPI	**Kappang**	**3.31**	**17**	*e*Pn		**Pn**		**04 47 07.9**	**+0.2**
KAPI				*e*Sn		**Sn**		**04 47 46.5**	**+0.1**
KAPI	**Kappang**	**3.31**	**17**	P		**Pn**		**04 47 07.5**	**-0.2**
DNP	**Denpasar**	**3.57**	**262**	P		**Pn**		**04 47 14.6**	**+3.3**
IGBI	**Denpasar**	**3.66**	**260**	P		**Pn**		**04 47 11.3**	**-1.2**
NBBI	**Negara**	**4.13**	**267**	P		**Pn**		**04 47 20.6**	**+1.6**
BATI	**Baumata**	**5.20**	**113**	Pn		**Pn**		**04 47 40.5**	**+6.7**
	17nm,0.3s,baz=289,slow=5.2,SNR=8.4								
BATI				LR		LR		04 50 10.7	
	comp=Z,452nm,18.4s,baz=314,slow=43								
BATI	**Baumata**	**5.20**	**113**	P		**Pn**		**04 47 39.5**	**+5.7**
	55nm,0.6s,0.2nm								
KDI	**Kendari**	**5.68**	**42**	P		**Pn**		**04 47 44.2**	**+3.8**
	24nm,0.7s,4μm0.1nm								
BBKI	**Banjar Baru**	**6.14**	**320**	P		**Pn**		**04 47 51.9**	**+5.3**
	60nm,0.9s								
KRKI	**Karangkates**	**6.28**	**270**	P		**Pn**		**04 47 52.9**	**+4.4**
SJI	**Sawahan**	**6.97**	**273**	P		**Pn**		**04 48 01.1**	**+3.0**
BJII	**Banjamegara**	**9.04**	**275**	P		**Pn**		**04 48 29.2**	**+2.7**
MBWA	**Marble Bar**	**12.91**	**176**	*e*Pn		**Pn**		**04 49 19.4**	**0.0**
	9.1nm,0.6s								
MBWA				*e*PcP		PcP		04 54 54.5	+0.9
KAKA	**Kakadu**	**14.15**	**110**	*e*P		Px		04 49 21.9	
	17nm,0.5s								
KAKA				*e*S		Sx		04 52 00.4	
WRA	**Warramunga Arr**	**19.04**	**129**	Pn		**Pn**		**04 50 38.9**	**0.0**
	1.0nm,0.3s,baz=302,slow=12,SNR=42								
WRAB	**Tennant Creek**	**19.05**	**129**	*e*P		**Pn**		**04 50 39.3**	**+0.4**
	7.3nm,0.6s								
WRAB				*e*S		**Sn**		**04 54 10.3**	**-1.5**
WB2	**Warramunga Arr**	**19.05**	**129**	*e*P		**Pn**		**04 50 38.7**	**-0.2**
WB2				*e*S		**Sn**		**04 54 07.0**	**-4.9**
WB2	**Warramunga Arr**	**19.05**	**129**	*e*P		**Pn**		**04 50 39.1**	**+0.2**
ASAR	**Alice Springs**	**21.12**	**138**	P		**P**		**04 51 02.3**	**+1.8**
	9.6nm,0.6s,mb4.3,baz=311,slow=9.0,SNR=40								
ASAR				S		**S**		**04 55 01.2**	**+6.6**
	2.4nm,0.8s,baz=316,slow=22,SNR=7.5								
COEN	**Coen**	**24.59**	**106**	*e*P		**P**		**04 51 37.1**	**+1.1**
	27nm,0.8s,mb4.8								
NWAO	**Narrogin (SRO)**	**24.64**	**183**	LR		LR		04 59 46.4	
	comp=Z,73nm,19.6s,MS3.2,baz=171,slow=33								
STKA	**Stephens Creek**	**31.69**	**141**	*e*P		**P**		**04 52 40.5**	**+1.2**
	5.9nm,0.7s,mb4.5								
STKA	**Stephens Creek**	**31.69**	**141**	P		**P**		**04 52 40.6**	**+1.3**
	8.5nm,0.7s,mb4.7,baz=305,slow=7.5,SNR=14								
STKA				LR		LR		05 06 10.3	
	comp=Z,82nm,19.0s,MS3.4,baz=28,slow=38								
STKA	**Stephens Creek**	**31.69**	**141**	*e*P		**P**		**04 52 40.9**	**+1.6**
	1.8nm,0.8s,mb4.0								
KSRS	**Korea Array**	**46.22**	**10**	P		**P**		**04 54 41.0**	**+0.4**
	0.7nm,0.4s,mb3.9,baz=39,slow=28,SNR=3.3								
KSRS				PcP		PcP		04 56 15.8	-0.4
	1.1nm,0.5s,baz=191,slow=4.1,SNR=4.2								
TAPN	**Taplejung**	**46.43**	**321**	*e*P		**P**		**04 54 43.0**	**+0.5**
	9.5nm,0.7s,mb4.8								
JIRN	**Jiri**	**47.61**	**320**	*e*P		**P**		**04 54 51.7**	**0.0**
	12nm,0.6s								
GUN	**Gumba**	**47.98**	**320**	*e*P		**P**		**04 54 54.3**	**-0.3**
	14nm,0.7s								
DMN	**Daman**	**48.27**	**319**	*e*P		**P**		**04 54 56.5**	**-0.3**
GKN	**Gorkha**	**48.84**	**319**	*e*P		**P**		**04 55 00.8**	**-0.4**
KOLN	**Koldanda**	**49.37**	**318**	*e*P		**P**		**04 55 04.8**	**-0.5**
DANN	**Dangsing**	**49.65**	**318**	*e*P		**P**		**04 55 06.9**	**-0.5**
	15nm,0.6s								
PYUN	**Piuthan**	**50.00**	**318**	*e*P		**P**		**04 55 09.4**	**-0.6**
	4.7nm,0.5s,mb4.8								
SONM	**Songino Array**	**56.87**	**350**	P		**P**		**04 56 01.0**	**+0.9**
	0.9nm,0.5s,mb4.0,baz=167,slow=7.6,SNR=7.2								
MKAR	**Makanchi Array**	**63.66**	**333**	P		**P**		**04 56 45.9**	**-0.8**
	1.7nm,0.5s,mb4.3,baz=156,slow=7.6,SNR=18								
ZALV	**Zalesovo Beam**	**68.23**	**339**	P		**P**		**04 57 14.0**	**-1.9**
	1.2nm,0.5s,mb4.2,baz=154,slow=6.2,SNR=6.5								
ZALV	**Zalesovo Beam**	**68.23**	**339**	P		**P**		**04 57 14.0**	**-1.9**
PETK	**Petropavlovsk-**	**69.43**	**24**	P		**P**		**04 57 24.4**	**+1.0**
	1.9nm,0.7s,mb4.2,baz=177,slow=2.9,SNR=3.4								
PETK	**Petropavlovsk-**	**69.43**	**24**	P		**P**		**04 57 24.4**	**+1.0**
VNDA	**Vanda**	**72.80**	**171**	P		**P**		**04 57 44.1**	**+0.6**
	0.6nm,0.4s,mb3.8,baz=329,slow=7.6,SNR=8.1								
QSPA	**South Pole Qui**	**81.78**	**180**	P		**P**		**04 58 32.2**	**-1.6**
	0.5nm,0.3s,mb4.0,baz=280,slow=8.0,SNR=4.1								
ASF	**Jaul al Asfar**	**87.52**	**303**	LR		LR		05 39 24.8	
	comp=Z,27nm,18.2s,MS3.7,baz=92,slow=37								
BRTR	**Keskin Array B**	**91.48**	**310**	P		**P**		**04 59 19.5**	**-2.6**
	0.2nm,0.5s,mb3.7,baz=304,slow=2.8,SNR=3.8								
TORD	**Torodi Ar. Bea**	**118.12**	**281**	PKP		PKPdf		05 05 01.0	-2.5
	0.6nm,0.6s,baz=64,slow=2.1,SNR=11								
NVAR	**Mina Array Bea**	**120.67**	**50**	PKP		PKPdf		05 05 07.5	-0.3
	0.3nm,0.5s,baz=263,slow=4.5,SNR=2.9								
CMIG	**Matias Romero**	**146.02**	**72**	PKPbc		PKPbc		05 05 56.6	+0.3
	2.9nm,0.7s,baz=323,slow=3.2,SNR=6.0								

*ISCJB **26** 05:05:51.5±0.5,2437N±002×122.11E±002,h3km±3km, Error ellipse: s-maj=3.6km s-min=2.9km az=154.8*
*JMA **26** 05:05:52.6±0.1,2471N×12207E,h45km,M2.9*
*TAP **26** 05:05:52.7,2438N×12198E,h19km,ML3.5,C*
ISC 26 05:05:52.1±0.5,2438N±002×12210E±002,h8km±4km,n36, σ0§92/62**,5D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.33**	**316**	⇓*i*P		**Pg**		**05 05 58.8**	**+0.3**
	baz=338								
TWC				*i* S		**Sg**		**05 06 02.7**	**-0.1**
	baz=338								
ENA	**Nanau**	**0.33**	**279**	⇓*i*P		**Pg**		**05 05 58.2**	**-0.4**
	baz=288								
ENA				*i* S		**Sg**		**05 06 02.0**	**-0.9**
	baz=288								
EHP	**Heping Village**	**0.33**	**259**	*e*P		**Pg**		**05 05 58.1**	**-0.5**
	baz=258								
EHP				*e*S		**Sg**		**05 06 02.6**	**-0.5**
	baz=258								
ILA	**Ilan**	**0.50**	**321**	*i* P		**Pg**		**05 06 02.2**	**+0.4**
	baz=326								
ILA				*e*S		**Sg**		**05 06 09.3**	**+0.8**
	baz=326								
TWE	**Neicheng**	**0.52**	**311**	⇓*i*P		**Pg**		**05 06 02.2**	**0.0**
	baz=321								
TWE				*i* S		**Sg**		**05 06 09.2**	**+0.2**
	baz=321								
TWD	**Chiawan**	**0.54**	**237**	*e*P		**Pg**		**05 06 01.8**	**-0.8**
	baz=233								
TWD				*e*S		**Sg**		**05 06 12.1**	**+2.4**
	baz=233								
ENTT	**Nioudou**	**0.55**	**299**	⇓*i*P		**Pg**		**05 06 02.5**	**-0.3**
	baz=305								
ENTT				S		**Sg**		**05 06 08.8**	**-1.2**
	baz=305								
HWA	**Hwalien**	**0.60**	**229**	*e*P		**Pg**		**05 06 04.4**	**+0.8**
	baz=226								
TWB1	**Santiao Chiao**	**0.64**	**351**	P		**Pg**		**05 06 05.1**	**+0.7**
	baz=354								
TWB1				S		**Sg**		**05 06 13.9**	**+1.1**
	baz=354								
NNS	**Nan Shan**	**0.66**	**276**	*i* P		**Pg**		**05 06 04.0**	**-1.0**
	baz=282								
NNS				*i* S		**Sg**		**05 06 11.7**	**-1.9**
	baz=282								
NSK	**Sanguang**	**0.74**	**294**	⇓*i*P		**Pg**		**05 06 05.7**	**-0.6**
	baz=298								
NSK				S		**Sg**		**05 06 14.1**	**-1.9**
	baz=298								
NWF	**Wu-fen Shan**	**0.75**	**337**	*i* P		**Pg**		**05 06 07.4**	**+0.8**
	baz=338								
NWF				S		**Sg**		**05 06 17.2**	**+0.8**
	baz=338								
TWA	**Mucha**	**0.76**	**322**	P		**Pg**		**05 06 07.1**	**+0.3**
	baz=319								
TWA				*e*S		**Sg**		**05 06 16.6**	**-0.1**
	baz=319								
WHF	**Hehuan Shan**	**0.79**	**253**	*i* P		**Pg**		**05 06 06.5**	**-0.9**
	baz=257								
WHF				S		**Sg**		**05 06 16.5**	**-1.2**
	baz=257								
ESL	**Shilin**	**0.82**	**228**	*e*P		**Pg**		**05 06 08.1**	**+0.1**
	baz=233								
ESL				*e*S		**Sg**		**05 06 20.1**	**+1.4**
	baz=233								
YOJ	**Yonaguni jima**	**0.84**	**84**	P		**Pg**		**05 06 08.9**	**+0.7**
YOJ				S		**Sg**		**05 06 20.8**	**+1.7**
TWT	**Tachien**	**0.85**	**262**	P		**Pg**		**05 06 08.7**	**+0.2**
	baz=265								
TWT				*e*S		**Sg**		**05 06 19.9**	**+0.4**
	baz=265								
TWS1	**Kuangyinshan**	**0.95**	**320**	*e*P		**Pg**		**05 06 11.0**	**+0.6**
	baz=318								
TWS1				*e*S		**Sg**		**05 06 23.3**	**+0.5**
	baz=318								
TWY	**Chenhua**	**1.00**	**333**	*e*P		**Pg**		**05 06 12.1**	**+0.7**
	baz=342								
TWY				*e*S		**Sg**		**05 06 24.8**	**+0.3**
	baz=342								
NSTT	**Nanjuang**	**1.03**	**285**	*e*P		**Pg**		**05 06 11.2**	**-0.8**
	baz=290								
SMLT	**Sun Moon Lake**	**1.20**	**246**	*e*P		**Pb**		**05 06 14.2**	**-0.9**
	baz=244								
TWQ1	**Liyutan**	**1.21**	**269**	*e*P		**Pb**		**05 06 15.2**	**0.0**
	baz=275								
TWQ1				*e*S		**Sb**		**05 06 31.6**	**+0.5**
	baz=275								
NSY	**Sanyi**	**1.22**	**272**	*e*P		**Pb**		**05 06 15.2**	**-0.2**
	baz=280								
TYC	**Yuchr**	**1.23**	**248**	P		**Pb**		**05 06 14.6**	**-1.0**
	baz=246								
TWF1	**Yuli**	**1.25**	**216**	*e*P		**Pn**		**05 06 14.7**	**-1.2**
	baz=225								
YUS	**Yu-Shan**	**1.37**	**230**	*e*P		**Pn**		**05 06 17.9**	**+0.4**
	baz=226								
ALS	**Alishan**	**1.46**	**234**	*e*P		**Pn**		**05 06 19.2**	**+0.5**
	baz=231								
IRIF	**Iriomote-Funau**	**1.49**	**91**	P		**Pn**		**05 06 18.3**	**-0.9**
IRIF				S		**Sn**		**05 06 37.3**	**-1.5**
CHN5	**Tsauling**	**1.51**	**239**	*e*P		**Pn**		**05 06 19.5**	**0.0**
	baz=237								
CHN4	**Tsaushan**	**1.71**	**234**	*e*P		**Pn**		**05 06 22.8**	**+0.6**
	baz=229								
CHN4				*e*S		**Sn**		**05 06 47.1**	**+2.8**
	baz=229								
STYT	**Tauyuan**	**1.72**	**226**	*e*P		**Pn**		**05 06 21.9**	**-0.5**
	baz=209								
STYT				*e*S		**Sn**		**05 06 45.8**	**+1.2**
	baz=209								
JKRS	**Kuro-shima**	**1.75**	**94**	P		**Pn**		**05 06 22.6**	**-0.1**
JKRS				S		**Sn**		**05 06 44.8**	**-0.4**
WTP	**Ta-pu**	**1.76**	**231**	*e*P		**Pn**		**05 06 23.1**	**+0.1**
	baz=225								
WTP				*e*S		**Sn**		**05 06 47.6**	**+2.1**
	baz=225								
CHN1	**Nanshi**	**1.86**	**231**	*e*P		**Pn**		**05 06 24.1**	**-0.2**
	baz=225								
CHN1				*e*S		**Sn**		**05 06 48.9**	**+0.9**
	baz=225								
JIJ	**Ishigaki jima**	**1.86**	**90**	P		**Pn**		**05 06 24.0**	**-0.3**
JIJ				S		**Sn**		**05 06 46.0**	**-2.1**
SGST	**Jiashian**	**1.89**	**227**	*e*P		**Pn**		**05 06 24.6**	**-0.1**
	baz=223								

*IDC **26** 05:28:52.9±1.7,808S×11861E,h0km,mb3.6/3,mb1 3.7/5, mb1mx3.6/18,mbtmp3.6/5,ML3.6/2, Error ellipse: s-maj=50.3km s-min=21.7km az=71.0*
*ISCJB **26** 05:28:55.2±7.7,812S±008×1186E±03,h31km±57km, mb3.6/3, Error ellipse: s-maj=43.0km s-min=13.4km az=177.4*
ISC 26 05:28:55.3±7.7,809S±009×1187E±02,h15km±51km,n5, σ0§83/6**,mb3.6**/3**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.24**	**19**	Pn		**Pn**		**05 29 45.9**	**+0.2**
	6.9nm,0.3s,baz=214,slow=9.4,SNR=26								
KAPI				Sn		**Sn**		**05 30 24.0**	**0.0**
	12nm,0.3s,baz=171,slow=20,SNR=12								
WRA	**Warramunga Arr**	**19.21**	**129**	Pn		**Pn**		**05 33 19.0**	**-0.9**
	0.2nm,0.3s,baz=302,slow=12,SNR=4.7								
ASAR	**Alice Springs**	**21.29**	**138**	P		**P**		**05 33 42.1**	**+0.6**
	1.7nm,0.5s,mb4.3,baz=156,slow=7.6,SNR=18								
STKA	**Stephens Creek**	**31.86**	**141**	P		**P**		**05 35 20.2**	**+0.3**
	1.1nm,0.4s,mb4.0,baz=320,slow=7.9,SNR=4.8								
MKAR	**Makanchi Array**	**63.50**	**333**	P		**P**		**05 39 24.6**	**-0.3**
	0.3nm,0.4s,mb3.6,baz=156,slow=8.3,SNR=5.3								

IDC 26 05:49:18.6±1.7,1636S×17708W,h0km,mb3.9/5, mb1 4.3/5,mb1mx3.9/17,mbtmp3.9/5,Error ellipse: s-maj=151.9km s-min=23.5km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.49**	**240**	P		P	P	05 57 00.1	+0.7
	1.7nm,0.8s,baz=96,slow=6.5,SNR=3.5								
WRA	**Warramunga Arr**	**46.18**	**258**	P		P	P	05 57 45.5	0.0
	0.5nm,0.3s,baz=95,slow=7.5,SNR=14								
ASAR	**Alice Springs**	**46.45**	**253**	P		P	P	05 57 47.0	-0.6
	3.8nm,0.5s,baz=87,slow=8.0,SNR=61								
NVAR	**Mina Array Bea**	**77.43**	**43**	P		P	P	06 01 16.3	+0.4
	0.3nm,0.7s,baz=224,slow=7.6,SNR=3.8								
TXAR	**Lajitas Array**	**84.09**	**57**	P		P	P	06 01 51.9	+0.1
	0.5nm,0.8s,baz=220,slow=6.4,SNR=6.8								

*ISCJB **26** 06:14:54.4±0.2,2250S±003×7004W±005,h28km, mb4.9/77,MS4.1/10, Error ellipse: s-maj=6.7km s-min=4.1km az=0.0*
*MOS **26** 06:14:55.4±1.4,2242S×7004W,h33km,mb5.2/29, Error ellipse: s-maj=16.7km s-min=8.1km az=110.2*
*NEIC **26** 06:14:56.2,2253S×7031W,h35km,mb5.0/63, ML5.0(GUC), After GUC.*
*IDC **26** 06:14:56.5±2.1,2258S×7018W,h34km±15km,mb4.4/18, mb1 4.5/22,mb1mx4.5/25,mbtmp4.4/22,ML4.1/3,MS4.0/14, Ms1 4.0/14,ms1mx3.9/22, Error ellipse: s-maj=19.5km s-min=13.1km az=43.0*
*GCMT **26** 06:14:56.2±0.3,2256S×7052W,h37km±1km,MW5.1/49, Moment Tensor Solution. s28,c34; s49,c64; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.12±.25; $M_{\theta\theta}$-0.43±.17; $M_{\phi\phi}$-2.70±.21; $M_{r\theta}$0.62±.17; $M_{r\phi}$-1.12±.10; $M_{\theta\phi}$-3.49±.23; Best double couple: M_o4.71700×10^{16}

comp=E,147nm,0.5s
LCO eSn Sn 06 17 58.4 +16
CFAA Coronel Fontan 9.18 170 Pn Pn 06 17 05.3 -1.7
comp=E,0.2nm,0.3s,baz=348,slow=13,SNR=38
CFAA Sn Sn 06 18 57.9 +8.4
comp=E,0.7nm,0.3s,baz=263,slow=18,SNR=3.6
CFAA LR LR 06 21 07.9
comp=E,256nm,18.9s,baz=337,slow=41
SIV San Ignacio 10.75 54 Pn Pn 06 17 29.4 +0.9
comp=E,10nm,0.3s,baz=247,slow=14,SNR=107
NNA Nana 12.29 328 Pn Pn 06 17 47.7 -2.0
comp=E,2.2nm,0.3s,baz=146,slow=13,SNR=5.9
NNA Sn Sn 06 19 59.6 -6.3
comp=E,2.9nm,0.3s,baz=227,slow=20,SNR=4.4
NNA LR LR 06 21 59.6
comp=E,714nm,21.8s,baz=149,slow=34
NNA Nana 12.29 328 ePn Pn 06 17 48.1 -1.6
ATAH Atahualpa 17.38 331 P Pn 06 18 56.1 -1.0
comp=E,0.2nm,0.3s,baz=167,slow=9.1,SNR=7.6
ATAH LR LR 06 25 01.9
comp=E,399nm,21.9s,baz=49,slow=35
PLCA Paso Flores 18.14 181 P Pn 06 19 04.2 -2.0
comp=E,0.2nm,0.3s,baz=3.7,slow=13,SNR=12
PLCA LR LR 06 26 30.8
comp=E,701nm,18.2s,baz=3.3,slow=38
PLCA Paso Flores 18.14 181 eP Pn 06 19 05.2 -1.1
comp=E,25nm,1.0s
PLCA Paso Flores 18.14 181 eP Pn 06 19 05.2 -1.0
PLCA pmax pmax
comp=Z,25nm,1.0s
BDFB Brasilia 21.98 76 P P 06 19 47.9 -0.5
comp=Z,22nm,1.2s,mb4.5,baz=230,slow=17,SNR=14
BDFB LR LR 06 29 46.1
comp=Z,490nm,20.4s,MS3.9,baz=74,slow=40
BDFB Brasilia 21.98 76 eP P 06 19 46.2 -2.1
comp=Z,6.5nm,0.5s,mb4.3
BDFB Brasilia 21.98 76 eP P 06 19 46.2 -2.1
BDFB pmax pmax
comp=Z,6.0nm,0.5s
OTAV Otavalo 24.05 339 eP P 06 20 10.3 +1.0
comp=Z,5.8nm,0.8s,mb4.1
ROSC El Rosal 27.54 351 LR LR 06 32 19.4
comp=Z,396nm,18.8s,MS4.0,baz=18,slow=38
SDV Santo Domingo 31.23 359 eP P 06 21 11.2 -2.5
comp=Z,7.3nm,0.9s,mb4.5
PCRV Puerto La Cruz 32.96 10 P P 06 21 27.8 -1.0
comp=Z,11nm,1.1s,mb4.7,baz=180,slow=3.0,SNR=4.6
RCBR Riachuelo 36.97 69 eP P 06 22 03.8 +0.3
comp=Z,100nm,1.2s,mb5.5
CBYP Canovanas 40.77 6 eP P 06 22 32.4 -2.8
comp=Z,68nm,1.2s,mb5.2
CPCT Cooper Cave 59.26 346 eP P 06 24 53.5 -1.8
RKT Rikitea 59.30 256 eS S 06 33 06.3 +3.6
comp=Z,196nm,33.5s
RKT eLR LR 06 42 37.0
comp=Z,814nm,26.5s
SWET Sewanee 59.36 345 eP P 06 24 54.3 -1.7
VNA3 Neumayer Olymp 59.46 161 eP P 06 24 56.6 +0.3
VNA3 e 06 25 09.5
VNA1 Neumayer--Stat 59.69 160 eP P 06 24 58.4 +0.5
VNA1 e 06 25 10.8
VNA2 Neumayer--Watz 60.05 160 eP P 06 25 00.9 +0.5
baz=280,slow=6.6
VNA2 e 06 25 13.9
LPIG La Paz 60.61 317 LR LR 06 48 25.8
comp=Z,84nm,20.5s,MS3.9,baz=198,slow=33
WVT Waverly 60.71 344 eP P 06 25 02.7 -2.5
comp=Z,16nm,0.8s,mb5.2
WVT epP pP 06 25 14.5 +0.2
WVT Waverly 60.71 344 eP P 06 25 02.7 -2.5
WVT e*PP pP 06 25 14.5 +0.2
WVT pmax pmax
comp=Z,16nm,0.8s,mb5.2
UALR University of 60.78 339 eP P 06 25 05.2 -0.5
comp=Z,216nm,3.0s
TXAR Lajitas Array 60.85 326 P P 06 25 05.5 -0.8
comp=Z,1.9nm,0.6s,mb4.4,baz=150,slow=8.0,SNR=28
TXAR LR LR 06 48 08.6
comp=Z,102nm,20.4s,MS4.0,baz=0.0,slow=33
MIAR Mount Ida 60.99 338 eP P 06 25 05.9 -1.2
comp=Z,13nm,0.8s,mb5.1
MIAR epP pP 06 25 14.9 -1.4
MIAR esP sP 06 25 17.9 -1.7
MIAR Mount Ida 60.99 338 eP P 06 25 05.9 -1.2
MIAR e*PP pP 06 25 14.9 -1.3
MIAR e*SP sP 06 25 18.0 -1.7
MIAR pmax pmax
comp=Z,13nm,0.8s,mb5.1
SNAA Sanae 61.67 161 eP P 06 25 07.1 -4.3
SNAA e 06 25 18.4
SNAA Sanae 61.67 161 eP P 06 25 07.2 -4.2
comp=Z,11nm,0.9s,mb5.0
SNAA epP pP 06 25 16.6 -3.9
SNAA Sanae 61.67 161 eP P 06 25 07.2 -4.2
SNAA e*PP pP 06 25 16.6 -3.9
SNAA pmax pmax
comp=Z,11nm,0.9s
WCI Wyandotte Cave 62.33 346 eP P 06 25 13.6 -2.5
comp=Z,12nm,0.7s,mb5.1
WCI Wyandotte Cave 62.33 346 eP P 06 25 13.6 -2.5
WCI pmax pmax
comp=Z,12nm,0.7s,mb5.1
MVL Millersville 62.48 355 eP P 06 25 15.9 -1.2
comp=Z,17nm,1.0s,mb5.1
MVL esP sP 06 25 29.1 -0.6
SIUC Southern Illin 62.57 343 eP P 06 25 16.6 -1.1
comp=Z,30nm,1.1s,mb5.3
FVM French Village 63.15 342 eP P 06 25 20.1 -1.5
comp=Z,24nm,0.7s,mb5.4
FVM e 06 25 31.6
FVM French Village 63.15 342 eP P 06 25 20.1 -1.5
FVM e 06 25 31.6
FVM pmax pmax
comp=Z,23nm,0.7s,mb5.4
CCM Cathedral Cave 63.46 341 eP P 06 25 21.6 -2.0
comp=Z,12nm,0.8s,mb5.1
CCM epP pP 06 25 32.1 -0.6
CCM Cathedral Cave 63.46 341 eP P 06 25 21.6 -2.0
CCM e*PP pP 06 25 32.1 -0.7
CCM pmax pmax
comp=Z,12nm,0.8s,mb5.1
GDL2 Guadalupe Moun 63.52 328 eP P 06 25 25.0 +0.9
ACSO Alum Creek Sta 63.59 349 eP P 06 25 23.5 -1.0
comp=Z,21nm,0.9s,mb5.2
ACSO esP sP 06 25 35.4 -1.6
AMTX Amarillo 64.49 332 eP P 06 25 32.2 +1.7
comp=Z,103nm,2.7s,mb5.4
AMTX epP pP 06 25 38.7 -0.9
BNM Barren Site 66.21 327 eP P 06 25 42.1 +0.4
BNM epP pP 06 25 51.3 +0.5
LPM Los Pinos Moun 66.34 327 eP P 06 25 43.6 +1.1
LPM epP pP 06 25 52.1 +0.5
LPM esP sP 06 25 54.2 -0.9
LAZ Ladron 66.67 327 eP P 06 25 45.7 +1.1
LAZ epP pP 06 25 53.4 -0.4
ANMO Albuquerque 66.77 328 P P 06 25 45.1 -0.1
comp=Z,5.0nm,0.7s,mb4.6,baz=138,slow=7.0,SNR=31
ANMO Albuquerque 66.77 328 eP P 06 25 45.5 +0.2
comp=Z,5.5nm,0.8s,mb4.6
ANMO Albuquerque 66.77 328 eP P 06 25 45.5 +0.3
ANMO pmax pmax
comp=Z,5.0nm,0.8s
TUC Tucson 66.97 323 eP P 06 25 47.7 +1.1
comp=Z,20nm,1.6s,mb4.9
TUC epP pP 06 25 55.3 -0.5
TUC Tucson 66.97 323 eP P 06 25 47.7 +1.1
TUC e*PP pP 06 25 55.3 -0.5
TUC pmax pmax
comp=Z,20nm,1.6s,mb4.9
CBKS Cedar Bluff 67.04 335 eP P 06 25 46.4 -0.5
comp=Z,24nm,0.9s,mb5.2
CBKS Cedar Bluff 67.04 335 eP P 06 25 46.4 -0.5
CBKS pmax pmax
comp=Z,24nm,0.9s,mb5.2
SCIA State Center 67.59 342 eP P 06 25 48.9 -1.3
comp=Z,91nm,1.9s,mb5.5
SDCO Great Sand Dun 68.58 330 eP P 06 25 56.7 +0.1
comp=Z,13nm,0.9s,mb4.9
SDCO epP pP 06 26 05.3 -0.4
MVCO Mesa Verde 69.56 328 eP P 06 26 03.1 +0.4
comp=Z,11nm,0.8s,mb4.8
WUAZ Wupatki 69.72 325 eP P 06 26 05.6 +1.9
comp=Z,20nm,1.0s,mb5.0
WUAZ epP pP 06 26 12.8 -0.1
WUAZ esP sP 06 26 16.0 -0.3
LIC Lamto 69.76 74 eP P 06 26 04.1 -0.4
comp=Z,17nm,0.9s,mb4.7
LIC Lamto 69.76 74 eP P 06 26 03.5 -1.0
comp=Z,81nm,1.9s,mb5.3
LIC Lamto 69.76 74 eP P 06 26 04.1 -0.4
comp=Z,8.4nm,0.9s,mb4.7
TIC Toumodi 69.95 74 eP P 06 26 04.0 -1.7
KIC Kosan Boka 70.08 74 eP P 06 26 05.7 -0.7
DBIC Dimbokro 70.11 74 P P 06 26 06.0 -0.6
comp=Z,25nm,1.0s,mb5.1,baz=216,slow=6.5,SNR=18
DBIC LR LR 06 55 13.3
comp=Z,222nm,20.2s,MS4.4,baz=207,slow=34
DBIC Dimbokro 70.11 74 eP P 06 26 05.7 -0.9
comp=Z,28nm,1.0s,mb5.1
DBIC Dimbokro 70.11 74 eP P 06 26 05.7 -0.9
DBIC pmax pmax
comp=Z,28nm,1.0s
ECSD EROS,Sioux Fal 70.29 340 eP P 06 26 05.4 -1.6
comp=Z,16nm,1.1s,mb4.9
ECSD esP sP 06 26 18.5 -1.2
ISCO Idaho Springs 70.31 332 eP P 06 26 07.3 +0.1
comp=Z,4.2nm,0.8s,mb4.4
ISCO Idaho Springs 70.31 332 eP P 06 26 07.3 +0.1
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PV01 Paradox Valley 70.33 329 eP P 06 26 07.9 +0.5
PV01 epP pP 06 26 17.3 +0.7
SMCO Snowmass 70.41 330 eP P 06 26 08.5 +0.7
comp=Z,8.8nm,0.8s,mb4.7
PV10 Paradox Valley 70.74 328 eP P 06 26 10.5 +0.6
PV10 epP pP 06 26 18.6 -0.5
PFO Pinyon Flat Ob 71.17 320 P P 06 26 13.3 +0.7
comp=Z,3.4nm,0.8s,mb4.3,baz=119,slow=3.3,SNR=5.5
PFO Pinyon Flat Ob 71.17 320 eP P 06 26 13.7 +1.1
comp=Z,11nm,1.1s,mb4.7
PFO epP pP 06 26 21.5 -0.3
PFO esP sP 06 26 24.2 -1.0
PFO Pinyon Flat Ob 71.17 320 eP P 06 26 13.7 +1.1
PFO e*SP sP 06 26 24.2 -1.1
PFO pmax pmax
comp=Z,11nm,1.1s,mb4.7
LDFC Landfair 71.44 322 eP P 06 26 16.4 +2.2
LDFC epP pP 06 26 24.6 +1.2
SRU San Rafael 72.04 328 eP P 06 26 18.1 +0.3
comp=Z,14nm,0.7s,mb5.0
SRU esP sP 06 26 29.8 -0.6
SRU San Rafael 72.04 328 eP P 06 26 18.1 +0.4
SRU e*SP sP 06 26 29.8 -0.6
SRU pmax pmax
comp=Z,14nm,0.7s,mb5.0
CCUT Cedar City 72.30 325 eP P 06 26 20.5 +1.2
CCUT epP pP 06 26 30.2 +1.7
MSU Marysvale 72.41 327 eP P 06 26 20.8 +0.9
MSU epP pP 06 26 29.9 +0.7
SHPR Sheep Range 72.50 323 eP P 06 26 21.3 +0.8
SHPR epP pP 06 26 30.3 +0.5
SHPR esP sP 06 26 32.6 -0.6
ARUT Antelope Range 72.52 325 eP P 06 26 21.8 +1.2
ARUT epP pP 06 26 30.8 +0.9
GSC Goldstone 72.57 321 eP P 06 26 22.3 +1.4
comp=Z,24nm,1.9s,mb4.8
GSC epP pP 06 26 30.3 +0.1
GSC Goldstone 72.57 321 eP P 06 26 22.3 +1.3
GSC e*PP pP 06 26 30.3 +0.1
GSC pmax pmax
comp=Z,24nm,1.9s,mb4.8
RSSD Black Hills 73.25 335 eP P 06 26 24.6 -0.2
comp=Z,12nm,0.5s,mb5.1
RSSD Black Hills 73.25 335 eP P 06 26 24.6 -0.2
RSSD pmax pmax
comp=Z,12nm,0.5s,mb5.1
MPU Maple Canyon 73.28 328 eP P 06 26 26.6 +1.5
comp=Z,19nm,1.1s,mb4.9
MPU esP sP 06 26 36.9 -0.9
DAU Daniels Canyon 73.41 328 eP P 06 26 27.3 +1.5
TPNV Topopah Spring 73.43 323 eP P 06 26 27.3 +1.3
comp=Z,14nm,1.0s,mb4.9
TPNV epP pP 06 26 36.3 +1.0
TPNV esP sP 06 26 38.5 -0.2
TPNV Topopah Spring 73.43 323 eP P 06 26 27.3 +1.3
TPNV e*PP pP 06 26 36.3 +1.0
TPNV e*SP sP 06 26 38.5 -0.2
TPNV pmax pmax
comp=Z,14nm,1.0s,mb4.8
NLU North Lily Min 73.45 328 eP P 06 26 25.7 -0.4
NLU epP pP 06 26 35.0 -0.4
JLU Jordanelle 73.64 328 eP P 06 26 28.1 +0.9
PPT Papeete 73.99 257 eS S 06 36 01.5 +0.8
comp=Z,134nm,26.8s
PPT Papeete 73.99 257 eLR LR 06 49 25.3
comp=Z,419nm,24.8s,baz=119
PPT Papeete 73.99 257 LR LR 06 49 54.2
comp=Z,69nm,19.1s,MS4.0,baz=82,slow=28
DUG Dugway 74.00 327 eP P 06 26 30.6 +1.3
comp=Z,19nm,1.0s,mb5.0
DUG epP pP 06 26 38.1 -0.5
DUG Dugway 74.00 327 eP P 06 26 30.6 +1.3
DUG e*PP pP 06 26 38.1 -0.5
DUG pmax pmax
comp=Z,19nm,1.0s,mb5.0
AGMN Agassiz Refuge 74.19 342 eP P 06 26 29.2 -1.1
comp=Z,7.2nm,0.7s,mb4.7
BW06 Boulder Array 74.45 331 eP P 06 26 31.5 -0.3
comp=Z,3.5nm,1.0s,mb4.2
BW06 epP pP 06 26 40.3 -0.8
PDAR Pinedale Array 74.45 331 P P 06 26 31.4 -0.5
comp=Z,0.9nm,0.5s,baz=141,slow=6.8,SNR=11
HWUT Hardware Ranch 74.48 329 eP P 06 26 31.8 -0.3
comp=Z,15nm,1.0s,mb4.9
BGU Big Grassy Mou 74.67 328 eP P 06 26 33.4 +0.3
BGU epP pP 06 26 42.2 -0.3
SPUT South Promonto 74.67 328 eP P 06 26 33.4 +0.2
SPUT epP pP 06 26 42.7 +0.3
TPH Tonopah 74.77 323 eP P 06 26 35.2 +1.3
comp=Z,20nm,1.2s,mb4.9
TPH Tonopah 74.77 323 eP P 06 26 35.2 +1.4
TPH pmax pmax
comp=Z,20nm,1.2s,mb4.9
MTUM Tungsten Hills 75.02 322 eP P 06 26 37.1 +1.8
MTUM epP pP 06 26 44.0 -0.6
HVU Hansel Valley 75.19 328 eP P 06 26 37.0 +0.8
comp=Z,8.6nm,0.8s,mb4.7
HVU epP pP 06 26 45.0 -0.4
HVU esP sP 06 26 48.2 -0.6
HVU Hansel Valley 75.19 328 eP P 06 26 37.0 +0.8
HVU e*PP pP 06 26 45.0 -0.5
HVU e*SP sP 06 26 48.3 -0.6
HVU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
REDW Red Top Meadow 75.51 331 eP P 06 26 37.9 0.0
comp=Z,8.0nm,1.0s,mb4.6
SNOW Snow King Moun 75.54 331 eP P 06 26 38.5 +0.4
comp=Z,46nm,0.5s,mb5.7
SNOW epP pP 06 26 47.3 -0.1
NVAR Mina Array Bea 75.62 323 P P 06 26 39.1 +0.3
comp=Z,2.5nm,0.8s,mb4.2,baz=149,slow=6.3,SNR=16
ELK Elko 75.64 326 P P 06 26 39.1 +0.3
comp=Z,3.3nm,0.9s,mb4.3,baz=141,slow=4.0,SNR=13
ELK Elko 75.64 326 eP P 06 26 39.8 +1.0
comp=Z,9.1nm,1.0s,mb4.7
ELK epP pP 06 26 46.7 -1.4
ELK Elko 75.64 326 eP P 06 26 39.8 +1.0
ELK e*PP pP 06 26 46.7 -1.4
ELK pmax pmax
comp=Z,9.0nm,1.0s
TPAW Teton Pass 75.65 331 eP P 06 26 38.7 -0.1
comp=Z,16nm,1.1s,mb4.8
TPAW epP pP 06 26 48.0 -0.1
TPAW esP sP 06 26 51.7 +0.2
RRI2 Red Ridge 75.71 330 eP P 06 26 39.5 +0.4
comp=Z,43nm,0.4s,mb5.7
RRI2 epP pP 06 26 48.2 -0.2
MOOW Moose Ponds 75.76 331 eP P 06 26 39.5 +0.2
comp=Z,6.2nm,1.1s,mb4.5
DCID1 Drake Creek 75.84 331 eP P 06 26 40.7 +0.9
comp=Z,6.3nm,0.6s,mb4.7
SYO Syowa Base 75.93 160 eP P 06 26 38.4 -1.7
IMW Indian Meadow 75.97 331 eP P 06 26 41.0 +0.4
comp=Z,106nm,0.5s,mb6.0
IMW epP pP 06 26 50.0 +0.1
ULM Lac du Bonnet 75.97 343 P P 06 26 39.1 -1.3
comp=Z,3.3nm,0.6s,mb4.5,baz=156,slow=10,SNR=3.6
RLMT Red Lodge 76.20 333 eP P 06 26 42.2 +0.4
comp=Z,975nm,0.6s
RLMT epP pP 06 26 51.4 +0.3
LAO LASA Array 76.24 335 eP P 06 26 42.5 +0.5
comp=Z,502nm,0.6s
LAO epP pP 06 26 48.9 -2.4
WAKR Walker 76.31 322 eP P 06 26 44.2 +1.5
WAKR epP pP 06 26 52.9 +0.9
YFT Old Faithful 76.35 331 eP P 06 26 45.1 +2.4
YFT epP pP 06 26 53.3 +1.3
CMB Columbia Colle 76.53 321 eP P 06 26 46.5 +2.6
comp=Z,15nm,1.5s,mb4.7
CMB Columbia Colle 76.53 321 eP P 06 26 46.5 +2.6
CMB pmax pmax
comp=Z,15nm,1.5s,mb4.7
YMR Madison River 76.58 331 eP P 06 26 45.2 +1.1
comp=Z,7.2nm,0.8s,mb4.7
YMR epP pP 06 26 53.0 -0.3
GCMT Greycliff 76.91 333 eP P 06 26 45.7 -0.2
GCMT epP pP 06 26 55.2 +0.1
QLMT Earthquake Lak 76.91 331 eP P 06 26 47.7 +1.8
DGMT Dagmar 76.98 338 eP P 06 26 46.4 +0.2
comp=Z,215nm,0.6s,mb6.2
DGMT epP pP 06 26 55.2 -0.3
SCHQ Schefferville 77.11 2 P P 06 26 45.5 -1.2
comp=Z,6.6nm,1.0s,mb4.5,baz=30,slow=15,SNR=3.6
PAHR Pah Rah Range 77.12 323 eP P 06 26 48.3 +1.1
comp=Z,16nm,0.9s,mb5.0
HLID Hailey 77.33 329 eP P 06 26 48.5 +0.2
comp=Z,31nm,0.4s,mb5.6
MCMT McKenzie Canyo 77.55 330 eP P 06 26 48.9 -0.6
MCMT epP pP 06 26 59.0 +0.2
BOZ Bozeman (W) 77.64 332 eP P 06 26 50.0 0.0
comp=Z,487nm,0.5s
BOZ epP pP 06 26 59.1 -0.1
BOZ Bozeman (W) 77.64 332 eP P 06 26 50.0 0.0
BOZ e*PP pP 06 26 59.1 -0.2
BOZ pmax pmax
comp=Z,487nm,0.5s
DLMT Dillon 77.85 331 eP P 06 26 52.2 +1.1
comp=Z,148nm,0.6s,mb6.1
DLMT epP pP 06 26 59.9 -0.6
LRM Limekiln Ridge 78.14 331 eP P 06 26 53.2 +0.5
LRM epP pP 06 27 02.5 +0.4
HRY Holter Researc 78.56 332 eP P 06 26 55.5 +0.5
HRY epP pP 06 27 04.4 0.0
EGMT Eagleton 78.72 334 eP P 06 26 55.3 -0.6
comp=Z,676nm,1.1s
EGMT epP pP 06 27 04.7 -0.6
EGMT esP sP 06 27 07.6 -1.0
TOA0 Torodi Ar. Sit 78.77 71 eP P 06 26 56.2 -0.7
TOA0 esP sP 06 27 09.1 -0.6
TORD Torodi Ar. Bea 78.77 71 P P 06 26 56.2 -0.7
comp=Z,29nm,0.8s,mb5.2,baz=254,slow=5.2,SNR=290
TORD LR LR 07 00 41.7
comp=Z,102nm,19.5s,MS4.2,baz=260,slow=35
TORD Torodi Ar. Bea 78.77 71 P P 06 26 56.2 -0.7
TORD LR LR 07 00 41.7
MOD Modoc 79.14 324 eP P 06 26 59.3 +0.9
comp=Z,10nm,1.0s,mb4.7
MOD epP pP 06 27 07.8 +0.1
WDC Whiskeytown Da 79.48 322 eP P 06 26 58.3 -2.0
comp=Z,4.2nm,0.8s,mb4.4
WDC epP pP 06 27 07.7 -1.9
WDC Whiskeytown Da 79.48 322 eP P 06 26 58.3 -1.9
WDC e*PP pP 06 27 07.7 -1.9
WDC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BMO Blue Mountains 79.68 328 eP P 06 27 01.1 -0.1
comp=Z,9.4nm,0.9s,mb4.7
BMO epP pP 06 27 10.0 -0.6
YBH Yreka Blue Hor 80.34 323 P P 06 27 03.3 -1.6
comp=Z,1.1nm,0.5s,mb4.1,baz=1.7,slow=1.8,SNR=5.6
BSMT Bassoo Peak 80.72 331 eP P 06 27 06.6 -0.1
BSMT epP pP 06 27 16.2 +0.1
TSUM Tsumeb 80.82 107 eP P 06 27 08.3 +0.2
comp=Z,21nm,1.0s,mb5.0
WALA Waterton Lakes 81.26 333 eP P 06 27 09.5 -0.1
comp=Z,90nm,0.6s,mb5.9
HAWA Hanford 81.88 328 eP P 06 27 12.7 -0.3
comp=Z,14nm,0.8s,mb4.9
HAWA epP pP 06 27 22.1 -0.2
RSW Rattlesnake Hi 81.91 328 eP P 06 27 13.6 +0.6
RSW epP pP 06 27 22.4 -0.1
OD2 Odessa Site #2 82.19 329 eP P 06 27 14.3 -0.2
OD2 epP pP 06 27 23.4 -0.6
HOOD Mount Hood Mea 82.20 326 eP P 06 27 14.9 +0.3
comp=Z,27nm,1.1s,mb5.1
HOOD epP pP 06 27 23.6 -0.4
ETW Entiat 83.12 328 eP P 06 27 19.1 -0.3
ETW epP pP 06 27 28.4 -0.3
MAW Mawson 83.66 164 P P 06 27 21.4 -0.6
comp=Z,13nm,1.0s,mb5.0,baz=235,slow=5.5,SNR=9.1
BOSA Boshof 83.95 118 P P 06 27 23.5 -0.8
comp=Z,9.3nm,0.8s,mb5.0,baz=210,slow=3.9,SNR=8.6
EVO Evora 84.11 44 eP P 06 27 25.0 +0.3
comp=Z,35nm,1.2s,mb5.1
EDM Edmonton 84.23 336 eP P 06 27 22.8 -2.1
EDM epP pP 06 27 32.5 -1.8
EDM esP sP 06 27 35.5 -2.2
JCW Jim Creek 84.30 328 eP P 06 27 25.0 -0.4
JCW epP pP 06 27 33.4 -1.4
TAM Tamanrasset 86.29 64 eP P 06 27 36.7 +0.7
ESDC Sonseca Array 87.36 45 P P 06 27 40.3 -0.5
comp=Z,0.9nm,0.6s,mb4.2,baz=226,slow=3.9,SNR=4.4
ESDC LR LR 07 08 50.9
comp=Z,68nm,18.0s,MS4.1,baz=210,slow=37
YKA Yellowknife Ar 91.79 341 P P 06 27 59.5 -1.5
comp=Z,3.6nm,0.7s,mb4.8,baz=139,slow=4.5,SNR=13
YKA LR LR 07 13 14.6
comp=Z,78nm,18.4s,MS4.2,baz=105,slow=38
YKA Yellowknife Ar 91.79 341 P P 06 27 59.5 -1.5
YKA LR LR 07 13 14.6
LFF La Frestale 93.04 42 eP P 06 28 06.6 -0.7
KEST Kesra 94.83 53 P P 06 28 15.9 +0.2
comp=Z,2.8nm,1.0s,mb4.6,baz=333,slow=5.2,SNR=3.9
KEST LR LR 07 10 06.9
comp=Z,69nm,18.8s,MS4.2,baz=186,slow=35
AVF Avril sur Loir 95.53 41 eP P 06 28 17.8 -0.8
SSF Saint Saulge 95.74 41 eP P 06 28 19.0 -0.6
comp=Z,20nm,1.2s,mb5.1
SSF Saint Saulge 95.74 41 eP P 06 28 19.0 -0.6
comp=Z,10nm,1.2s,mb5.1
SSF Saint Saulge 95.74 41 eP P 06 28 19.0 -0.6
SSF pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
SMF Signal de Mont 95.76 42 eP P 06 28 18.9 -0.8
comp=Z,23nm,1.1s,mb5.2
SMF Signal de Mont 95.76 42 eP P 06 28 18.9 -0.8
comp=Z,12nm,1.1s,mb5.2
SMF Signal de Mont 95.76 42 eP P 06 28 18.9 -0.8
SMF pmax pmax
comp=Z,12nm,1.1s,mb5.2
KIP Kipapa 96.12 291 *i* P P 06 28 23.0 +1.1
LPL La Plagne 97.08 44 eP P 06 28 26.0 +0.3
comp=Z,6.5nm,0.9s,mb4.8
LPL La Plagne 97.08 44 eP P 06 28 26.0 +0.3
comp=Z,3.3nm,0.9s,mb4.8
LPL La Plagne 97.08 44 eP P 06 28 26.0 +0.3
LPL pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
LPG La Plagne 97.08 44 eP P 06 28 26.0 +0.3
comp=Z,16nm,1.2s,mb5.0
LPG La Plagne 97.08 44 eP P 06 28 26.0 +0.3
comp=Z,7.8nm,1.3s,mb5.0
LPG La Plagne 97.08 44 eP P 06 28 26.0 +0.3
LPG pmax pmax
comp=Z,8.0nm,1.3s,mb5.0
ADK Adak 117.54 318 PKIKP PKPdf 06 33 35.2 -4.1
OBN Obninsk 117.68 38 *i* PKIKP PKPdf 06 33 32.4 -7.0
OBN *e* 06 40 49.3
OBN eSS SS 06 51 05.5 +2.4
OBN pmax pmax
comp=Z,5.0nm,0.5s
KIV Kislovodsk 121.50 51 *i* PKIKP PKPdf 06 33 40.0 -7.1
KIV pmax pmax
comp=Z,8.0nm,1.2s
ASAR Alice Springs 128.47 208 PKP PKPdf 06 34 00.1 -1.1
comp=Z,2.4nm,0.7s,baz=147,slow=2.2,SNR=23
TIXI Tiksi 129.67 352 *i* PKIKP PKPdf 06 33 56.9 -5.1
SEY Seymchan 130.59 336 *i* PKIKP PKPdf 06 34 03.2 -0.7
WRA Warramunga Arr 131.49 211 PKP PKPdf 06 34 06.3 -0.8
comp=Z,1.5nm,0.6s,baz=154,slow=1.9,SNR=25
WRAB Tennant Creek 131.49 211 *i* PKIKP PKPdf 06 34 06.3 -0.7
NVS Novosibirsk 142.09 25 *i* PKIKP PKPdf 06 34 24.8 -0.7
KURK Kurchatov 142.81 33 *i* PKIKP PKPdf 06 34 23.2 -3.7
ZAA0 Zalesovo Array 143.37 25 *e*PKPdf PKPdf 06 34 25.0 -2.8
ZALV Zalesovo Beam 143.37 25 PKhKP 06 34 23.2
comp=Z,11nm,0.8s,baz=336,slow=3.3,SNR=18

EKS2	Erkin-Say	143.94	48	ePKPdf	PKPdf	06 34 27.8	-1.3
EKS2	Erkin-Say	143.94	48	P	PKPdf	06 34 28.0	-1.2
	SNR=5.5						
AML	Almayashu	144.08	48	ePKPdf	PKPdf	06 34 28.5	-0.9
AML	Almayashu	144.08	48	P	PKPdf	06 34 28.6	-0.8
	SNR=13						
AAK	Ala-Archa	144.44	47	ePKPdf	PKPdf	06 34 29.1	-0.9
AAK	Ala-Archa	144.44	47	P	PKPdf	06 34 29.7	-0.3
	SNR=17						
FRU	Bishkek	144.44	47	ePKIKP	PKPdf	06 34 29.0	-1.0
FRU				pmax	pmax		
	comp=Z,50nm,2.2s						
BOD	Bodaibo	144.63	356	ePKIKP	PKPdf	06 34 26.7	-3.2
BOD				pmax	pmax		
	comp=Z,18nm,1.0s						
KBK	Karagaybulak	144.74	47	P	PKPdf	06 34 30.6	+0.1
	SNR=12						
TKM2	Tokmak 2	145.06	46	ePKPdf	PKPdf	06 34 31.0	-0.1
TKM2	Tokmak 2	145.06	46	P	PKPbc	06 34 31.3	+0.7
	SNR=20						
KSH	Kashi	146.63	52	ePKP	PKPdf	06 34 37.5	+3.6
KSH				eAPKP		06 34 48.0	
KSH				eXPKP		06 34 51.5	
KSH				ePKS		06 38 12.0	
KSH				eSKS	SKSdf	06 41 41.0	+0.3
KSH				LR	LR		
	comp=N,662nm,4.6s						
KSH				LR	LR		
	comp=E,858nm,4.7s						
KSH				LR	LR		
	comp=Z,523nm,3.9s						
MK31	Makanchi Array	147.13	36	ePKPdf	PKPdf	06 34 34.0	-0.5
MKAR	Makanchi Array	147.13	36	PKPbc	PKPdf	06 34 34.2	-0.2
	comp=Z,17nm,0.9s,baz=298,slow=2.6,SNR=35						
HYB	Hyderabad	150.16	94	*i* PKP	PKPbc	06 34 44.5	-0.8
TLY	Talaya	150.51	8	ePKIKP	PKPab	06 34 51.7	-0.1
TLY				*e*		06 35 02.0	
TLY				*e*		06 35 07.0	
TLY				pmax	pmax		
	comp=Z,13nm,1.0s						
KAPI	Kappang	150.96	201	ePKPdf	PKPdf	06 34 42.2	+0.5
KAPI				ePKPbc	PKPdc	06 34 46.8	-0.6
ZAK	Zakamensk	151.74	9	ePKIKP	PKPdf	06 34 40.0	-1.7
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MJAR	Matsushiro Arr	151.80	306	PKPbc	PKPbc	06 34 47.4	-1.2
	comp=Z,1.5nm,0.6s,baz=117,slow=1.5,SNR=8.7						
MAT	Matsushiro	151.80	306	ePKP	PKPbc	06 34 48.4	-0.3
WMQ	Urumqi	151.97	36	ePKP	PKPdf	06 34 43.0	+0.7
SONM	Songino Array	154.61	5	PKP	PKPdf	06 34 44.3	-1.7
	comp=Z,1.7nm,0.8s,baz=356,slow=2.0,SNR=11						
SONM				PKPbc	PKPbc	06 34 54.2	-0.2
	comp=Z,2.4nm,0.9s,baz=355,slow=0.7,SNR=4.1						
SONM				PKPab	PKPab	06 35 09.0	-0.1
	comp=Z,2.9nm,0.8s,baz=332,slow=3.9,SNR=9.9						
ULN	Ulaanbaatar	154.63	4	ePKPdf	PKPdf	06 34 46.6	+0.7
ULN				ePKPab	PKPab	06 35 08.6	-0.5
GTA	Gaotai	161.12	25	ePKP	PKPdf	06 34 55.0	+0.8
GTA				APKP		06 35 05.5	
GTA				XPKP		06 35 09.5	
GTA				PKP2	PKPab	06 35 37.5	0.0
GTA				PP	PP	06 39 25.0	+5.2
GTA				PP	PP		
	comp=Z,140nm,4.8s						
GTA				LR	LR		
	comp=N,175nm,13.8s						
GTA				LR	LR		
	comp=E,105nm,15.0s						
GTA				LR	LR		
	comp=Z,134nm,14.1s						
HHC	Hu-ho-hao-te	161.69	356	ePKP	PKPdf	06 34 55.3	+0.5
HHC				APKP		06 35 04.3	
HHC				XPKP		06 35 09.0	
HHC				PKS		06 38 27.8	
HHC				PP	PP	06 39 26.0	+3.5
HHC				LR	LR		
	comp=N,363nm,19.0s						
HHC				LR	LR		
	comp=E,580nm,20.2s						
HHC				LR	LR		
	comp=Z,379nm,21.4s						
NJ2	Nanjing	167.62	322	ePKP	PKPdf	06 35 01.0	+0.7
CMAR	Chiang Mai Arr	168.98	110	PKP	PKPdf	06 35 01.2	-0.3
	comp=Z,1.1nm,0.3s,baz=279,slow=2.0,SNR=4.2						
CMAR				PKPab	PKPab	06 36 12.9	+0.1
	comp=Z,1.4nm,0.3s,baz=260,slow=2.7,SNR=3.9						
KMI	Kunming	172.98	67	PKP	PKPdf	06 35 05.3	+1.8
KMI				PP	PP	06 40 22.8	+0.5
KMI				PP	PP		
	comp=Z,149nm,4.9s						
KMI				LR	LR		
	comp=Z,102nm,24.3s						
GYA	Guiyang	175.13	36	ePKP	PKPdf	06 35 04.5	+0.3
GYA				PKP2	PKPab	06 36 40.5	+0.8
GYA				PKS		06 38 34.8	
GYA				PP	PP	06 40 31.3	-0.2
GYA				PP	PP		
	comp=Z,90nm,6.3s						
GYA				LR	LR		
	comp=N,230nm,23.0s						
GYA				LR	LR		
	comp=E,160nm,22.6s						
GYA				LR	LR		
	comp=Z,220nm,20.8s						

*ISCJB **26** 06:22:28.5±0.2, 49.33N±0.01×669E±0.02, h0km, Error ellipse: s-maj=1.5km s-min=1.4km az=148.0*
*NEIC **26** 06:22:30.0, 49.34N×6.73E, h1km, ML3.5(LDG), ML3.1(SZGRF), ML3.2(STR), After SZGRF.*
*PRU **26** 06:22:30.3, 49.42N×6.80E, h0km*
*STR **26** 06:22:31.0±0.2, 49.36N×6.80E, h1km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **26** 06:22:31.2±0.0, 49.37N×6.83E, h1km, ML3.5/29, Error ellipse: s-maj=0.6km s-min=0.5km az=171.0*
*BNS **26** 06:22:31.3±0.7, 49.37N×6.86E, h1km, ML2.5*
*LEDBW **26** 06:22:31.3±0.2, 49.380N±0.009×6.84E±0.02, h1km, ML2.9, Error ellipse: s-maj=6.0km s-min=4.0km az=106.0*
*BGR **26** 06:22:31.3±0.4, 49.36N×6.86E, h1km, ML3.1/8, Error ellipse: s-maj=5.6km s-min=2.2km az=120.0*
*LDG **26** 06:22:31.3±0.0, 49.36N×6.82E, h1km, Md3.5/3, Ml3.5/33, Error ellipse: s-maj=0.9km s-min=0.7km az=174.0, Suspected Mining induced.*

ISC 26 06:22:29.6±0.1, 49353N±0009×675E±001, h0km, n190, σ1§24/400, 11C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
RUP	Ruppelstein	0.41	30	P*	Pg	06 22 38.3	+0.9
RUP	Ruppelstein	0.41	30	Pg	Pg	06 22 38.1	+0.7
RUP				Sg	Sg	06 22 43.3	+0.7
WLF	Walferdange	0.50	309	P	Pg	06 22 41.7	+2.5
ABH	Alteburg	0.74	44	P*	Pg	06 22 44.1	+0.2
ABH	Alteburg	0.74	44	Pg	Pg	06 22 44.2	+0.3
ABH				Sg	Sg	06 22 53.8	+0.3
LANF	Langenberg	0.79	118	Pg	Pg	06 22 45.2	+0.5
LANF	Langenberg	0.79	118	Pg	Pg	06 22 45.3	+0.6
KTD	Kalmit	0.88	92	P*	Pg	06 22 46.7	+0.3
KTD	Kalmit	0.88	92	Pg	Pg	06 22 47.2	+0.8
KTD				Sg	Sg	06 22 59.5	+1.8
BGG	Burgeitz	0.94	24	ePg	Pg	06 22 47.9	+0.3
HILG	Hillesheim	0.94	357	ePg	Pg	06 22 49.1	+1.5
HILG				eSg	Sg	06 23 01.8	+2.0
	171nm,0.9s						
CDF	Champ du Feu	1.00	159	ePn	Pn	06 22 50.7	-0.2
	SNR=1.0						
CDF				eSg	Sg	06 23 02.7	+0.9
	206nm,0.4s,SNR=1.0						
CDF	Champ du Feu	1.00	159	ePg	Pg	06 22 49.7	+0.9
CDF				ePn	Pn	06 22 50.7	-0.2
CDF				eSg	Sg	06 23 02.7	+0.9
CDF	Champ du Feu	1.00	159	ePn	Pn	06 22 50.7	-0.2
	SNR=1.0						
CDF				eSg	Sg	06 23 02.7	+0.9
	103nm,0.4s,SNR=1.0						
RFYF	Reffroy	1.11	230	ePg	Pg	06 22 53.2	+2.4
	baz=46						
RFYF				eSg	Sg	06 23 08.3	+3.2
ECH	Echery	1.17	166	Pg	Pg	06 22 53.6	+1.6
ECH				Sg	Sg	06 23 09.3	+2.1
ECH	Echery	1.17	166	eP	Pg	06 22 52.9	+0.9
ECH				eS	Sg	06 23 09.1	+2.0
ECH	Echery	1.17	166	Pn	Pn	06 22 53.1	-0.1
THEF	They Montfort	1.23	204	Pg	Pg	06 22 54.8	+1.6
THEF				Sg	Sg	06 23 11.4	+2.2
THEF	They Montfort	1.23	204	Pn	Pn	06 22 54.9	+0.8
STB	Steinbach	1.24	3	ePg	Pn	06 22 53.8	-0.4
STB				eSg	Sg	06 23 10.6	+1.0
	62nm,0.5s						
KOE	Koeppel	1.25	30	ePg	Pn	06 22 53.2	-1.1
KOE				eSg	Sg	06 23 10.0	+0.3
SWS	Schriesheim-Wi	1.28	83	P	Pg	06 22 53.7	-0.5
SWS				Pg	Pg	06 22 54.5	+0.3
SWS				Sn	Sg	06 23 10.3	-0.6
SWS	Schriesheim-Wi	1.28	83	P	Pg	06 22 54.5	+0.3
SWS				S	Sg	06 23 10.3	-0.6
SWS	Schriesheim-Wi	1.28	83	Pg	Pg	06 22 54.5	+0.3
SWS				Sn	Sn	06 23 10.3	-2.4
KLL	Kalltalsperre	1.32	348	ePg	Pn	06 22 55.0	-0.3
LIBD	Limburg	1.33	154	P*	Pb	06 22 56.8	+1.4
MEM	Membach	1.34	340	P	Pg	06 22 55.6	+0.2
DREG	Dreilaegerbach	1.35	346	ePg	Pn	06 22 55.3	-0.4
TOD	Tromm	1.37	79	P	Pg	06 22 54.4	-1.4
TOD				Pg	Pg	06 22 55.7	-0.1
TOD				Sg	Sg	06 23 13.9	+0.4
TOD	Tromm	1.37	79	Pg	Pg	06 22 55.6	-0.2
TOD	Tromm	1.37	79	P	Pg	06 22 55.7	-0.1
TOD	Tromm	1.37	79	Pg	Pg	06 22 55.7	-0.1
TOD				Sg	Sg	06 23 13.9	+0.4
HAU	Haudompre	1.37	191	ePn	Pn	06 22 56.2	+0.2
	SNR=1.0						
HAU				eSn	Sn	06 23 14.1	-0.7
	173nm,0.2s,SNR=1.0						
HAU	Haudompre	1.37	191	ePn	Pn	06 22 56.2	+0.2
	SNR=1.0						
HAU				eSn	Sn	06 23 14.1	-0.7
	87nm,0.2s,SNR=1.0						
MEZF	Maizieres J'vi	1.40	233	ePg	Pg	06 22 58.3	+1.8
	baz=52,SNR=1.0						
MEZF				eSg	Sg	06 23 17.3	+2.6
	108nm,0.3s						
MEZF	Maizieres J'vi	1.40	233	ePg	Pg	06 22 58.3	+1.8
	SNR=1.0						
MEZF				eSg	Sg	06 23 17.3	+2.6
	54nm,0.3s						
TNS	Taunus Mts	1.41	51	P	Pn	06 22 55.2	-1.2
TNS				Sg	Sg	06 23 15.4	+0.6
BCLA	Clavier	1.42	319	P	Pn	06 22 57.3	+0.7
GIVF	Givet	1.46	302	ePn	Pn	06 22 58.2	+1.1
	SNR=1.0						
GIVF				eSn	Sn	06 23 16.6	-0.3
	SNR=1.0						
GIVF				eSg	Sg	06 23 18.7	+2.4
	321nm,0.6s						
GIVF	Givet	1.46	302	ePn	Pn	06 22 58.2	+1.1
	SNR=1.0						
GIVF				eSn	Sn	06 23 16.6	-0.3
	SNR=1.0						
GIVF				eSg	Sg	06 23 18.7	+2.4
	160nm,0.6s						
BFO	Black Forest	1.46	134	P	Pn	06 22 56.8	-0.5
BFO				Pg	Pg	06 22 58.5	+0.8
BFO				Sg	Sg	06 23 17.3	+0.7
BFO	Black Forest	1.46	134	eP	Pn	06 22 56.5	-0.7
BFO				eS	Sg	06 23 15.0	-1.6
BFO	Black Forest	1.46	134	P	Pg	06 22 58.5	+0.8
BFO				S	Sg	06 23 17.3	+0.7
BFO	Black Forest	1.46	134	eP	Pn	06 22 56.5	-0.7
BFO	Black Forest	1.46	134	Pg	Pg	06 22 58.5	+0.8
BFO				eS	Sg	06 23 15.0	-1.6
BFO				Sg	Sg	06 23 17.3	+0.7
HGN	Heimansgroeve	1.51	340	ePn	Pn	06 22 58.3	+0.5
	5.8nm,0.1s						
HGN	Heimansgroeve	1.51	340	ePg	Pg	06 23 00.5	+2.0
	37nm,0.3s						
HGN				eSg	Sg	06 23 17.6	-0.4
HGN	Heimansgroeve	1.51	340	ePg	Pg	06 23 00.5	+2.0
	37nm,0.3s						
HGN				eSg	Sg	06 23 17.6	-0.4
LBG	Lerchenberg	1.52	116	Pg	Pg	06 22 59.1	+0.4
LBG				Sg	Sg	06 23 18.3	0.0
MOF	Molkenrain	1.52	170	P	Pn	06 22 59.0	+1.0
MOF				Pg	Pg	06 23 00.4	+1.6
MOF				Sg	Sg	06 23 20.6	+2.0
MOF	Molkenrain	1.52	170	Px	Px	06 22 59.0	
MOF				S	Sg	06 23 20.6	+2.0
MOF	Molkenrain	1.52	170	P	Pg	06 23 00.4	+1.6
MOF	Molkenrain	1.52	170	Pg	Pg	06 23 00.2	+1.4
MOF				Sg	Sg	06 23 20.3	+1.8
HINF	Hinteralfeld	1.54	177	ePg	Pg	06 22 59.9	+0.8
	SNR=1.0						
HINF				eSg	Sg	06 23 19.9	+0.9
	174nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.54	177	ePg	Pg	06 22 59.9	+0.8
	SNR=1.0						
HINF				eSg	Sg	06 23 19.9	+0.9
	87nm,0.3s,SNR=1.0						
DOU	Dourbes	1.58	299	P	Pn	06 23 00.1	+1.2
DOU	Dourbes	1.58	299	P	Pn	06 23 00.0	+1.1
KIZ	Kirchzarten	1.60	150	P	Pn	06 22 58.7	-0.4
KIZ				Pg	Pg	06 23 00.8	+0.6
KIZ				Sg	Sg	06 23 21.6	+0.6
KIZ	Kirchzarten	1.60	150	P	Pg	06 23 00.8	+0.6
KIZ				S	Sg	06 23 21.6	+0.6
KIZ	Kirchzarten	1.60	150	Pg	Pg	06 23 00.8	+0.6
KIZ				Sg	Sg	06 23 21.6	+0.6
BEBN	Eben Emael	1.60	335	P	Pn	06 23 00.1	+1.0
SFTF	Sexfontaines	1.61	225	ePn	Pn	06 23 00.5	+1.2
	baz=40						
SFTF				eSg	Sg	06 23 23.5	+2.2
	97nm,0.4s						
SFTF	Sexfontaines	1.61	225	ePn	Pn	06 23 00.5	+1.2
SFTF				eSg	Sg	06 23 23.5	+2.2
	48nm,0.4s						
HOBG	Hohbusch	1.68	13	ePg	Pg	06 23 00.9	-0.8
FELD	Feldberg im Sc	1.70	150	P	Pn	06 22 60.0	-0.5
FELD				Pg	Pg	06 23 03.1	+1.0
FELD				Sg	Sg	06 23 25.1	+0.9
FELD	Feldberg im Sc	1.70	150	Pn	Pn	06 22 59.9	-0.5
FELD				Sg	Sg	06 23 24.6	+0.5
FELD	Feldberg im Sc	1.70	150	P	Pg	06 23 03.1	+1.0
STU	Stuttgart	1.71	109	eSn	Sn	06 23 22.1	-1.1
STU	Stuttgart	1.71	109	ePn	Pn	06 22 59.9	-0.8
STU				eSn	Sn	06 23 21.8	-1.5
STU	Stuttgart	1.71	109	ePn	Pn	06 22 59.9	-0.8
STU				eSn	Sn	06 23 21.8	-1.4
BAIF	Baives	1.79	294	ePg	Pg	06 23 05.5	+1.6
BAIF				eSn	Sn	06 23 25.0	-0.2
	SNR=1.0						
BAIF				eSg	Sg	06 23 29.2	+2.0
	169nm,0.7s						
BAIF	Baives	1.79	294	ePn	Pn	06 23 02.2	+0.4
BAIF				ePg	Pg	06 23 05.5	+1.6
BAIF				eSn	Sn	06 23 25.0	-0.2
BAIF				eSg	Sg	06 23 29.2	+2.0
BAIF	Baives	1.79	294	ePg	Pg	06 23 05.5	+1.6
BAIF				eSn	Sn	06 23 25.0	-0.2
	SNR=1.0						
BAIF				eSg	Sg	06 23 29.2	+2.0
	84nm,0.7s						
SPAK	Spaichingen-Ko	1.84	132	Pg	Pg	06 23 05.5	+0.6
SPAK	Spaichingen-Ko	1.84	132	Pg	Pg	06 23 05.1	+0.2
BUCH	Bad Urach	1.94	117	P	Pn	06 23 04.6	+0.7
BUCH				Pg	Pg	06 23 07.3	+0.4
BUCH	Bad Urach	1.94	117	P	Pg	06 23 07.3	+0.4
SNF	Seneffe	1.97	307	P	Pn	06 23 06.7	+2.5
SNF	Seneffe	1.97	307	P	Pn	06 23 06.6	+2.4
LOMF	Lomont	2.00	178	P	Pn	06 23 05.4	+0.7
LOMF				Pg	Pg	06 23 09.2	+1.2
LOMF				Sg	Sg	06 23 36.2	+2.2
LOMF	Lomont	2.00	178	P	Pg	06 23 09.2	+1.2
LOMF	Lomont	2.00	178	Pn	Pn	06 23 05.0	+0.3
GUT	Gutenstein	2.03	128	P	Pn	06 23 05.8	+0.9
GUT				Pg	Pg	06 23 08.8	+0.4
GUT	Gutenstein	2.03	128	Px	Px	06 23 05.8	
GUT	Gutenstein	2.03	128	P	Pg	06 23 08.8	+0.4
UCC	Uccle	2.11	314	P	Pg	06 23 17.2	+7.2
SISB	Singen-Schiene	2.23	138	S*	Sg	06 23 43.5	+2.4
HDH	Heidenheim-Cha	2.41	107	Sg	Sg	06 23 46.5	-0.4
UBBA	Unterbreizbach	2.56	54	eSg	Sg	06 23 51.0	-0.8
	SNR=3.5						
CABF	La Chapelle	2.78	189	ePg	Pg	06 23 23.2	+0.4
	SNR=1.0						
CABF				eSg	Sg	06 23 59.2	+0.4
	80nm,0.6s,SNR=1.0						
CABF	La Chapelle	2.78	189	ePn	Pn	06 23 15.7	+0.4
CABF				ePg	Pg	06 23 23.2	+0.4
CABF				eSg	Sg	06 23 59.2	+0.4
CABF	La Chapelle	2.78	189	ePg	Pg	06 23 23.2	+0.4
	SNR=1.0						
CABF				eSg	Sg	06 23 59.2	+0.4
	40nm,0.6s,SNR=1.0						
UBR	Ueberruh	2.79	126	P	Pn	06 23 16.1	+0.6
UBR	Ueberruh	2.79	126	Px	Px	06 23 16.1	
LOR	Lormes	2.84	224	ePn	Pn	06 23 16.8	+0.7
	baz=52,SNR=1.0						
LOR				eSn	Sn	06 23 50.1	-0.9
	SNR=1.0						
LOR				eSg	Sg	06 24 02.1	+1.3
	78nm,0.4s,SNR=1.0						
LOR	Lormes	2.84	224	ePn	Pn	06 23 16.8	+0.7
	SNR=1.0						
LOR				eSn	Sn	06 23 50.1	-0.9
	SNR=1.0						
LOR				eSg	Sg	06 24 02.1	+1.3
	39nm,0.4s,SNR=1.0						
GRA1	Grafenberg Arr	2.94	82	Sg	Sg	06 24 03.8	-0.1
GRF	Grafenberg Arr	2.94	82	eSg	Sg	06 24 03.8	-0.1
DAVA	Damuels	2.94	133	⇓*i*Pn	Pn	06 23 19.3	+1.7
	4.5nm,0.3s						
DAVA				⇑*i*Sn	Sn	06 23 54.5	+1.0
	15nm,0.4s						
DAVA				⇑*i*Sg	Sg	06 24 07.6	+3.5
	25nm,0.7s						
DAVA	Damuels	2.94	133	Pn	Pn	06 23 19.3	+1.8
	4.5nm,0.3s						
DAVA				Sn	Sn	06 23 54.5	+1.0
	15nm,0.4s						
GTTG	Gvttingen	3.01	42	eSg	Sg	06 24 04.7	-1.6
	SNR=2.3						
SSF	Saint Saulge	3.15	225	ePn	Pn	06 23 20.6	+0.1
	SNR=1.0						
SSF				eSn	Sn	06 23 57.2	-1.6
SSF				eSg	Sg	06 24 11.6	+0.7
	57nm,0.4s						
SSF	Saint Saulge	3.15	225	ePn	Pn	06 23 20.6	+0.1
	SNR=1.0						
SSF				eSn	Sn	06 23 57.2	-1.6
SSF				eSg	Sg	06 24 11.6	+0.7
	28nm,0.4s						
SMF	Signal de Mont	3.34	217	ePg	Pg	06 23 33.9	+0.3
	SNR=1.0						
SMF				eSn	Sn	06 24 01.6	-1.7
	SNR=1.0						
SMF				eSg	Sg	06 24 17.4	+0.6
	39nm,0.4s,SNR=1.0						
SMF	Signal de Mont	3.34	217	ePn	Pn	06 23 22.9	-0.1
SMF				ePg	Pg	06 23 33.9	+0.3
SMF				eSn	Sn	06 24 01.6	-1.7
SMF				eSg	Sg	06 24 17.4	+0.6
SMF	Signal de Mont	3.34	217	ePg	Pg	06 23 33.9	+0.3
	SNR=1.0						
SMF				eSn	Sn	06 24 01.6	-1.7
	SNR=1.0						
SMF				eSg	Sg	06 24 17.4	+0.6
	20nm,0.4s,SNR=1.0						
TUE	Stuetta	3.37	148	ePn	Pn	06 23 25.1	+1.7
TUE	Stuetta	3.37	148	ePn	Pn	06 23 25.1	+1.6
MOX	Moxa	3.40	66	ePg	Pg	06 23 32.4	-2.3
	SNR=2.2						
MOX				eSg	Sg	06 24 17.5	-1.2
MOX	Moxa	3.40	66	ePG	Pg	06 23 32.3	-2.4
MOX				eSG	Sg	06 24 17.5	-1.2
AVF	Avril sur Loir	3.43	223	ePg	Pg	06 23 35.4	+0.1
AVF				eSn	Sn	06 24 03.8	-1.7
	SNR=1.0						
AVF				eSg	Sg	06 24 20.3	+0.6
	40nm,0.6s,SNR=1.0						
AVF	Avril sur Loir	3.43	223	ePn	Pn	06 23 24.4	+0.2
AVF				ePg	Pg	06 23 35.4	+0.1
AVF				eSn	Sn	06 24 03.8	-1.7
AVF				eSg	Sg	06 24 20.3	+0.6
AVF	Avril sur Loir	3.43	223	ePg	Pg	06 23 35.4	+0.1
AVF				eSn	Sn	06 24 03.8	-1.7
	SNR=1.0						
AVF				eSg	Sg	06 24 20.3	+0.6
	20nm,0.6s,SNR=1.0						
HYF	Humbligny	3.44	234	ePn	Pn	06 23 24.8	+0.4
HYF				ePg	Pg	06 23 35.6	0.0
HYF				eSn	Sn	06 24 04.4	-1.5
HYF				eSg	Sg	06 24 21.0	+0.8
MOTA	Moosalm	3.53	123	⇓*i*Pn	Pn	06 23 28.2	+2.5
	5.9nm,0.4s						
FETA	Feichten	3.54	130	⇑*i*Pn	Pn	06 23 27.9	+2.1
	5.8nm,0.4s						
FETA				⇑*i*Sn	Sn	06 24 08.3	0.0
	1.3nm,0.3s						
FETA				⇑*i*Sg	Sg	06 24 26.9	+3.6
	8.2nm,0.9s						
SQTA	Sankt Quirin	3.67	124	⇑*i*Pn	Pn	06 23 29.7	+2.2
	5.1nm,0.2s						
GUNZ	Gunzen	3.75	72	eSg	Sg	06 24 28.2	-1.9
	SNR=3.5						
WERD	Werda	3.76	71	ePn	Pn	06 23 29.0	+0.3
	SNR=1.8						
WERD				ePg	Pg	06 23 40.1	-1.5
	SNR=2.3						
WERD				eSg	Sg	06 24 28.4	-1.9
	SNR=4.9						
WERN	Wernitzgruen	3.77	73	ePn	Pn	06 23 29.8	+0.9
WATA	Walderalm	3.80	120	⇑*i*Pn	Pn	06 23 31.1	+1.7
	4.7nm,0.4s						
BGF	Bois d'Agland	3.83	225	ePg	Pg	06 23 43.0	0.0
BGF				eSn	Sn	06 24 13.6	-1.9
	SNR=1.0						
BGF				eSg	Sg	06 24 33.0	+0.4
	133nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.83	225	ePn	Pn	06 23 29.7	-0.1
BGF				ePg	Pg	06 23 43.0	0.0
BGF				eSn	Sn	06 24 13.6	-1.9
BGF				eSg	Sg	06 24 33.0	+0.4
BGF	Bois d'Agland	3.83	225	ePg	Pg	06 23 43.0	0.0
BGF				eSn	Sn	06 24 13.6	-1.9
	SNR=1.0						
BGF				eSg	Sg	06 24 33.0	+0.4
	67nm,0.4s,SNR=1.0						
LPL	La Plagne	3.84	180	ePg	Pg	06 23 42.9	-0.2
LPL				eSn	Sn	06 24 12.9	-2.8
LPL				eSg	Sg	06 24 32.0	-0.9
	12nm,0.5s						
LPL	La Plagne	3.84	180	ePn	Pn	06 23 29.6	-0.3
LPL				ePg	Pg	06 23 42.9	-0.2
LPL				eSn	Sn	06 24 12.9	-2.8
LPL				eSg	Sg	06 24 32.0	-0.9
LPL	La Plagne	3.84	180	ePg	Pg	06 23 42.9	-0.2
LPL				eSn	Sn	06 24 12.9	-2.8
LPL				eSg	Sg	06 24 32.0	-0.9
	6.2nm,0.5s						
TANN	Tannenbergstha	3.85	72	ePn	Pn	06 23 30.6	+0.6
	SNR=1.4						
TANN				eSg	Sg	06 24 30.6	-2.5
	SNR=3.3

TCF	**Toulx Ste Croi**	**4.33**	**227**	*e*Pg	**Pg**	06 23 52.1	-1.0	
TCF				*e*Sn	**Sn**	06 24 25.5	-2.2	
TCF				*e*Sg	**Sg**	06 24 48.3	-0.3	
	20nm,0.6s,SNR=1.0							
RJOB	**Jochberg**	**4.33**	**110**	*e*Pn	**Pn**	06 23 38.1	+1.4	
PYM	**Petit Puy Mans**	**4.40**	**216**	Pn	**Pn**	06 23 37.5	-0.1	
CLL	**Collm**	**4.46**	**62**	*e*Sg	**Sg**	06 24 49.0	-3.8	
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pg	**Pg**	06 23 54.2	-1.1	
ORIF				*e*Sg	**Sg**	06 24 52.1	-1.2	
	17nm,0.5s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pn	**Pn**	06 23 38.1	-0.5	
ORIF				*e*Pg	**Pg**	06 23 54.2	-1.1	
ORIF				*e*Sg	**Sg**	06 24 52.1	-1.2	
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pg	**Pg**	06 23 54.2	-1.1	
ORIF				*e*Sg	**Sg**	06 24 52.1	-1.2	
	8.6nm,0.5s,SNR=1.0							
KHC	**Kasperske Hory**	**4.48**	**90**	*e*PN	**Pn**	06 23 39.0	+0.3	
KHC				*e*PG	**Pg**	06 23 51.9	-3.6	
KHC				*e*SN	**Sn**	06 24 28.7	-2.8	
KHC				*e*SG	**Sg**	06 24 51.4	-2.1	
	comp=Z,8.0nm,0.7s							
LDF	**La Druitiere**	**4.59**	**263**	*e*Pg	**Pg**	06 23 57.3	-0.2	
	SNR=1.0							
LDF				*e*Sn	**Sn**	06 24 31.9	-2.2	
LDF				*e*Sg	**Sg**	06 24 56.8	-0.1	
	comp=Z,21nm,0.4s							
LDF	**La Druitiere**	**4.59**	**263**	*e*Pn	**Pn**	06 23 40.7	+0.6	
LDF				*e*Pg	**Pg**	06 23 57.3	-0.2	
LDF				*e*Sn	**Sn**	06 24 31.9	-2.2	
LDF				*e*Sg	**Sg**	06 24 56.8	-0.1	
LDF	**La Druitiere**	**4.59**	**263**	*e*Pg	**Pg**	06 23 57.3	-0.2	
	SNR=1.0							
LDF				*e*Sn	**Sn**	06 24 31.9	-2.2	
LDF				*e*Sg	**Sg**	06 24 56.8	-0.1	
	comp=Z,10nm,0.4s							
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn	**Pn**	06 23 40.9	+0.5	
	SNR=30							
GEC2				*e*Sn	**Sn**	06 24 32.9	-1.5	
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn	**Pn**	06 23 40.7	+0.3	
GEC2				*e*Sn	**Sn**	06 24 31.1	-3.3	
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn	**Pn**	06 23 40.7	+0.4	
GEC2				*e*Sn	**Sn**	06 24 31.1	-3.3	
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	**Pn**	06 23 40.2	-0.5	
MBDF				*e*Sg	**Sg**	06 24 56.0	-2.2	
	comp=Z,1.5nm,0.4s							
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	**Pn**	06 23 40.2	-0.5	
MBDF				*e*Sg	**Sg**	06 24 56.0	-2.2	
	comp=Z,0.8nm,0.4s							
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pn	**Pn**	06 23 41.7	-0.2	
VIVF				*e*Sn	**Sn**	06 24 34.1	-3.2	
VIVF				*e*Sg	**Sg**	06 24 59.9	-1.1	
	comp=Z,24nm,0.7s							
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pn	**Pn**	06 23 41.7	-0.2	
VIVF				*e*Sn	**Sn**	06 24 34.1	-3.2	
VIVF				*e*Sg	**Sg**	06 24 59.9	-1.1	
	comp=Z,12nm,0.7s							
LBL	**Lubilhac**	**4.76**	**211**	Pn	**Pn**	06 23 42.8	+0.3	
FLN	**La Foliniere**	**4.79**	**266**	*e*Pn	**Pn**	06 23 43.2	+0.3	
	baz=77,SNR=1.0							
FLN	**La Foliniere**	**4.79**	**266**	*e*Pg	**Pg**	06 24 00.8	-0.5	
	baz=86							
FLN				*e*Sn	**Sn**	06 24 36.2	-2.9	
	SNR=1.0							
FLN				*e*Sg	**Sg**	06 25 03.3	-0.1	
	comp=Z,21nm,0.4s							
FLN	**La Foliniere**	**4.79**	**266**	*e*Pn	**Pn**	06 23 43.2	+0.3	
FLN				*e*Pg	**Pg**	06 24 00.8	-0.5	
FLN				*e*Sn	**Sn**	06 24 36.2	-2.9	
FLN				*e*Sg	**Sg**	06 25 03.3	-0.1	
FLN	**La Foliniere**	**4.79**	**266**	*e*Pg	**Pg**	06 24 00.8	-0.5	
FLN				*e*Sn	**Sn**	06 24 36.2	-2.9	
	SNR=1.0							
FLN				*e*Sg	**Sg**	06 25 03.3	-0.1	
	comp=Z,10nm,0.4s							
BRG	**Berggiesshubel**	**4.88**	**69**	PG	**Pg**	06 23 59.7	-3.3	
BRG				SG	**Sg**	06 25 04.6	-1.5	
	comp=Z,6.0nm,0.6s							
PRU	**Pruhonice**	**5.10**	**80**	*e*SG	**Sg**	06 25 12.0	-1.5	
	comp=Z,49nm,1.8s							
GRR	**Gorron**	**5.11**	**262**	*e*Pg	**Pg**	06 24 07.0	-0.5	
	SNR=1.0							
GRR				*e*Sn	**Sn**	06 24 44.2	-2.8	
	SNR=1.0							
GRR				*e*Sg	**Sg**	06 25 13.1	-0.6	
	comp=Z,37nm,0.9s							
GRR	**Gorron**	**5.11**	**262**	*e*Pn	**Pn**	06 23 47.3	0.0	
GRR				*e*Pg	**Pg**	06 24 07.0	-0.5	
GRR				*e*Sn	**Sn**	06 24 44.2	-2.8	
GRR				*e*Sg	**Sg**	06 25 13.1	-0.6	
GRR	**Gorron**	**5.11**	**262**	*e*Pg	**Pg**	06 24 07.0	-0.5	
	SNR=1.0							
GRR				*e*Sn	**Sn**	06 24 44.2	-2.8	
	SNR=1.0							
GRR				*e*Sg	**Sg**	06 25 13.1	-0.6	
	comp=Z,19nm,0.9s							
MOA	**Molln**	**5.21**	**104**	⇑*i*Pn	**Pn**	06 23 50.0	+1.2	
	comp=Z,6.2nm,0.4s							
MOA				⇑*i*Sn	**Sn**	06 24 49.1	-0.4	
	comp=Z,3.0nm,0.3s							
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pg	**Pg**	06 24 11.6	-1.1	
MFF				*e*Sn	**Sn**	06 24 50.9	-2.8	
MFF				*e*Sg	**Sg**	06 25 21.5	-0.9	
	comp=Z,15nm,0.6s							
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pn	**Pn**	06 23 51.3	+0.2	
MFF				*e*Pg	**Pg**	06 24 11.6	-1.1	
MFF				*e*Sn	**Sn**	06 24 50.9	-2.8	
MFF				*e*Sg	**Sg**	06 25 21.5	-0.9	
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pg	**Pg**	06 24 11.6	-1.1	
MFF				*e*Sn	**Sn**	06 24 50.9	-2.8	
MFF				*e*Sg	**Sg**	06 25 21.5	-0.9	
	comp=Z,7.4nm,0.6s							
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pg	**Pg**	06 24 11.0	-1.8	
RJF				*e*Sn	**Sn**	06 24 50.3	-3.5	
RJF				*e*Sg	**Sg**	06 25 21.6	-1.0	
	comp=Z,19nm,0.7s							
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pn	**Pn**	06 23 51.2	0.0	
RJF				*e*Pg	**Pg**	06 24 11.0	-1.8	
RJF				*e*Sn	**Sn**	06 24 50.3	-3.5	
RJF				*e*Sg	**Sg**	06 25 21.6	-1.0	
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pg	**Pg**	06 24 11.0	-1.8	
RJF				*e*Sn	**Sn**	06 24 50.3	-3.5	
RJF				*e*Sg	**Sg**	06 25 21.6	-1.0	
	comp=Z,9.3nm,0.7s							
CAF	**Calviac**	**5.46**	**218**	*e*Pn	**Pn**	06 23 51.9	-0.2	
	SNR=1.0							
CAF				*e*Sn	**Sn**	06 24 52.3	-3.3	
	SNR=1.0							
CAF				*e*Sg	**Sg**	06 25 23.8	-1.1	
	comp=Z,12nm,0.5s							
CAF	**Calviac**	**5.46**	**218**	*e*Pn	**Pn**	06 23 51.9	-0.2	
	SNR=1.0							
CAF				*e*Sn	**Sn**	06 24 52.3	-3.3	
	SNR=1.0							
CAF				*e*Sg	**Sg**	06 25 23.8	-1.1	
	comp=Z,5.9nm,0.5s							
LASF	**Ste Croix**	**5.64**	**202**	*e*Pn	**Pn**	06 23 54.2	-0.4	
LASF				*e*Sg	**Sg**	06 25 28.9	-1.8	
	comp=Z,22nm,0.7s							
LASF	**Ste Croix**	**5.64**	**202**	*e*Pn	**Pn**	06 23 54.2	-0.4	
LASF				*e*Sg	**Sg**	06 25 28.9	-1.8	
	comp=Z,11nm,0.7s							
LFF	**La Frestale**	**6.02**	**225**	*e*Pn	**Pn**	06 23 59.5	-0.4	
LFF				*e*Sn	**Sn**	06 25 06.0	-3.4	
LFF				*e*Sg	**Sg**	06 25 41.2	-1.7	
	comp=Z,28nm,0.6s,SNR=1.0							
LFF	**La Frestale**	**6.02**	**225**	*e*Pn	**Pn**	06 23 59.5	-0.4	
LFF				*e*Sn	**Sn**	06 25 06.0	-3.4	
LFF				*e*Sg	**Sg**	06 25 41.2	-1.7	
	comp=Z,14nm,0.6s,SNR=1.0							
CONA	**Conrad Observa**	**6.21**	**100**	⇑*i*Pn	**Pn**	06 24 03.4	+1.0	
	comp=Z,1.3nm,0.2s							
CONA				⇑*i*Sn	**Sn**	06 25 12.1	-2.0	
	comp=Z,3.9nm,0.5s							
ARSA	**Arzberg**	**6.22**	**106**	⇓*i*Sn	**Sn**	06 25 13.0	-1.4	
	comp=Z,2.0nm,0.3s							
SGMF	**Saint Gilles**	**6.24**	**263**	*e*Pn	**Pn**	06 24 02.5	-0.4	
	SNR=1.0							
SGMF				*e*Sn	**Sn**	06 25 11.4	-3.5	
SGMF				*e*Sg	**Sg**	06 25 48.5	-1.5	
	comp=Z,9.9nm,0.5s							
SGMF	**Saint Gilles**	**6.24**	**263**	*e*Pn	**Pn**	06 24 02.5	-0.4	
	SNR=1.0							
SGMF				*e*Sn	**Sn**	06 25 11.4	-3.5	
SGMF				*e*Sg	**Sg**	06 25 48.5	-1.5	
	comp=Z,4.9nm,0.5s							

DPC	**Dobruska-Polom**	**6.28**	**77**	*e*SG	**Sg**	06 25 48.5	-2.5	
ROSF	**Rostrenen**	**6.69**	**265**	*e*Pn	**Pn**	06 24 08.9	-0.1	
ROSF				*e*Sn	**Sn**	06 25 22.2	-3.7	
	SNR=1.0							
ROSF				*e*Sg	**Sg**	06 26 02.7	-1.7	
	comp=Z,7.6nm,0.5s							
ROSF	**Rostrenen**	**6.69**	**265**	*e*Pn	**Pn**	06 24 08.9	-0.1	
ROSF				*e*Sn	**Sn**	06 25 22.2	-3.7	
	SNR=1.0							
ROSF				*e*Sg	**Sg**	06 26 02.7	-1.7	
	comp=Z,3.8nm,0.5s							
QUIF	**Quistinic**	**6.72**	**261**	*e*Pn	**Pn**	06 24 10.0	+0.5	
	SNR=1.0							
QUIF				*e*Sn	**Sn**	06 25 21.9	-4.8	
QUIF				*e*Sg	**Sg**	06 26 03.7	-1.7	
	comp=Z,3.0nm,0.3s							
QUIF	**Quistinic**	**6.72**	**261**	*e*Pn	**Pn**	06 24 10.0	+0.5	
	SNR=1.0							
QUIF				*e*Sn	**Sn**	06 25 21.9	-4.8	
QUIF				*e*Sg	**Sg**	06 26 03.7	-1.7	
	comp=Z,1.5nm,0.3s							
MTLF	**Montolieu**	**6.78**	**209**	*e*Pn	**Pn**	06 24 09.6	-0.7	
MTLF				*e*Sg	**Sg**	06 26 04.6	-2.6	
	comp=Z,6.7nm,0.6s							
MTLF	**Montolieu**	**6.78**	**209**	*e*Pn	**Pn**	06 24 09.6	-0.7	
MTLF				*e*Sg	**Sg**	06 26 04.6	-2.6	
	comp=Z,3.3nm,0.6s							

*ISCJB **26** 06:27:32.9±0.2, 4696N±001×10887W±003, h10km, Error ellipse: s-maj=2.6km s-min=1.9km az=153.2*
*NEIC **26** 06:27:32.0, 4692N×10887W, h2km, ML4.1(BUT), After BUT.*
NEIC Felt at Billings, Forestgrove, Grass Range and Shepherd.
*BJI **26** 06:27:32.1, 47.14N×108.31W, h17km, mB4.7, mb4.6, Ms4.8, Msz4.6*
*IDC **26** 06:27:34.2±1.6, 4674N×109.34W, h0km, mb1 3.8/3, mb1mx3.5/23, mbtmp3.4/3, ML3.8/3, Error ellipse: s-maj=77.6km s-min=11.9km az=89.0*

ISC 26 06:27:34.4±0.2, 4697N±001×10893W±002, h10km, n136, σ0898/210, 47C-46D, Montana

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
D18A	**Linhart Farms,**	**0.64**	**291**	P		**Pg**	**06 27 46.5**	**-0.3**
	baz=0.7,SNR=119							
D18A				⇑S		**Sg**	06 27 55.7	+0.5
	baz=0.7							
E18A	**Harlowton**	**0.79**	**240**	P		**Pg**	**06 27 48.5**	**-1.1**
	baz=0.8,SNR=660							
E18A				⇑S		**Sg**	06 27 59.0	-0.9
	baz=0.8							
F18A	**Big Timber**	**1.19**	**207**	⇓P		**Pb**	**06 27 54.5**	**-2.7**
	baz=1.2,SNR=1000							
F18A				⇓S		**Sb**	06 28 10.7	-1.9
	baz=1.2							
EGMT	**Eagleton**	**1.20**	**332**	*e*Pg		**Pg**	**06 27 56.1**	**-1.3**
EGMT				*e*S		**Sb**	06 28 11.1	-1.5
EGMT	**Eagleton**	**1.20**	**332**	P		**Pb**	**06 27 56.0**	**-1.2**
	baz=1.3,SNR=344							
EGMT				⇓S		**Sb**	06 28 12.2	-0.5
	baz=1.3							
D17A	**Six Diamond Ra**	**1.22**	**279**	P		**Pn**	**06 27 56.1**	**-1.3**
	baz=1.3,SNR=1000							
D17A				⇓S		**Sb**	06 28 11.5	-1.8
	baz=1.3							
GCMT	**Greycliff**	**1.28**	**204**	*e*Pn		**Pn**	**06 27 56.1**	**-2.3**
C17A	**Wharram Farm,**	**1.41**	**299**	⇓P		**Pn**	**06 27 59.6**	**-0.6**
	baz=1.5,SNR=770							
C17A				⇓S		**Sn**	06 28 18.2	-0.7
	baz=1.5							
E17A	**Martinsdale**	**1.42**	**250**	⇓P		**Pn**	**06 27 59.8**	**-0.5**
	baz=1.4,SNR=1000							
E17A				⇓S		**Sn**	06 28 17.4	-1.6
	baz=1.4							
B18A	**Beardsley Farm**	**1.54**	**338**	P		**Pn**	**06 28 01.8**	**-0.1**
	baz=1.6,SNR=854							
B18A				⇑S		**Sn**	06 28 22.3	+0.4
	baz=1.6							
F17A	**Fitzpatrick Pl**	**1.60**	**229**	⇑P		**Pn**	**06 28 02.6**	**-0.2**
	baz=1.6,SNR=1000							
F17A				⇓Sb		**Sb**	06 28 23.1	-1.1
	baz=1.6							
G18A	**Lazy EL Ranch,**	**1.71**	**195**	⇑P		**Pn**	**06 28 03.1**	**-1.1**
	baz=1.7,SNR=635							
G18A				⇑S		**Sn**	06 28 24.9	-1.2
	baz=1.7							
D16A	**Dana Ranch, Ca**	**1.79**	**273**	⇓P		**Pn**	**06 28 06.1**	**+0.7**
	baz=1.8,SNR=595							
D16A				⇓Sb		**Sb**	06 28 29.4	-0.4
	baz=1.8							
B17A	**L&G Farms, Che**	**1.83**	**317**	P		**Pn**	**06 28 07.0**	**+1.1**
	baz=1.9,SNR=510							
B17A				⇑Sb		**Sb**	06 28 31.2	+0.3
	baz=1.9							
RLMT	**Red Lodge**	**1.86**	**187**	*e*Pn		**Pn**	**06 28 05.2**	**-1.1**
RLMT				*e*Sn		**Sn**	06 28 29.4	-0.4
RLMT	**Red Lodge**	**1.86**	**187**	⇑P		**Pn**	**06 28 05.1**	**-1.2**
	baz=1.8,SNR=1000							
RLMT				⇓S		**Sn**	06 28 28.6	-1.3
	baz=1.8							
LAO	**LASA Array**	**1.88**	**98**	*e*Pn		**Pn**	**06 28 06.6**	**0.0**
LAO				*e*Sn		**Sn**	06 28 28.8	-1.6
E16A	**East Helena**	**1.94**	**258**	⇓P		**Pn**	**06 28 08.0**	**+0.6**
	baz=2.0,SNR=98							
E16A				⇑Sb		**Sb**	06 28 33.6	-0.4
	baz=2.0							
HRY	**Holter Researc**	**2.01**	**264**	*e*Pn		**Pn**	**06 28 08.6**	**+0.3**
HRY				*e*Sn		**Sn**	06 28 35.7	+2.2
G17A	**Pierce Place,**	**2.07**	**218**	⇓P		**Pn**	**06 28 09.6**	**+0.3**
	baz=2.1,SNR=655							
G17A				⇑Sb		**Sb**	06 28 37.3	-0.6
	baz=2.1							
C16A	**Fuhringer Ranc**	**2.09**	**295**	⇑P		**Pn**	**06 28 10.2**	**+0.7**
	baz=2.1,SNR=358							
C16A				⇑Sb		**Sb**	06 28 38.1	-0.2
	baz=2.1							
F16A	**Kennard Place,**	**2.21**	**239**	⇑P		**Pn**	**06 28 10.6**	**-0.6**
	baz=2.2,SNR=296							
F16A				⇑Sb		**Sb**	06 28 41.2	-0.6
	baz=2.2							
BOZ	**Bozeman (W)**	**2.29**	**236**	*e*Pn		**Pn**	**06 28 12.4**	**+0.1**
BOZ				*e*Pg		**Pg**	06 28 14.9	-3.4
BOZ				*e*Sn		**Sn**	06 28 43.2	+2.8
BOZ	**Bozeman (W)**	**2.29**	**236**	⇓P		**Pn**	**06 28 11.8**	**-0.4**
	baz=2.3,SNR=942							
BOZ				⇑Sb		**Sb**	06 28 43.6	-0.6
	baz=2.3							
A17A	**Triple J Farms**	**2.31**	**330**	P		**Pn**	**06 28 13.4**	**+0.9**
	baz=2.4,SNR=71							
A17A				⇑Sb		**Sb**	06 28 45.2	+0.6
	baz=2.4							
B16A	**M & M Farms, S**	**2.37**	**309**	⇑P		**Pn**	**06 28 13.8**	**+0.5**
	baz=2.4,SNR=191							
B16A				⇓Sb		**Sb**	06 28 45.8	-0.7
	baz=2.4							
D15A	**Lincoln**	**2.46**	**273**	⇓P		**Pn**	**06 28 15.0**	**+0.5**
	baz=2.5,SNR=79							
E15A	**Deer Lodge**	**2.61**	**259**	⇑P		**Pn**	**06 28 16.8**	**+0.2**
	baz=2.6,SNR=36							
LKWY	**Lake**	**2.61**	**204**	*e*Pn		**Pn**	**06 28 17.4**	**+0.7**
C15A	**Salmond Ranch,**	**2.63**	**289**	⇓P		**Pn**	**06 28 17.2**	**+0.4**
	baz=2.7,SNR=72							
C15A				⇑Sb		**Sb**	06 28 53.3	-0.5
	baz=2.7							
G16A	**Moss Hill, Enn**	**2.65**	**230**	⇓P		**Pn**	**06 28 16.6**	**-0.6**
	baz=2.6,SNR=34							
G16A				⇓Sb		**Sb**	06 28 53.8	-0.7
	baz=2.6							
A16A	**West Butte Ran**	**2.67**	**319**	⇑P		**Pn**	**06 28 18.0**	**+0.5**
	baz=2.7,SNR=34							
LRM	**Limekiln Ridge**	**2.69**	**246**	*e*Pn		**Pn**	**06 28 18.1**	**+0.3**
YMR	**Madison River**	**2.70**	**212**	Pn		**Pn**	**06 28 17.6**	**-0.3**
YMR				*e*Pg		**Pg**	06 28 20.7	-5.6
YMR				*e*Sn		**Sn**	06 28 55.8	+5.1
F15A	**Butte**	**2.71**	**247**	⇓P		**Pn**	**06 28 17.7**	**-0.3**
	baz=2.7,SNR=39							
QLMT	**Earthquake Lak**	**2.76**	**220**	*e*Pn		**Pn**	**06 28 18.4**	**-0.3**
QLMT				*e*Sn		**Sn**	06 28 56.2	+4.2
H16A	**Russell Place,**	**2.78**	**216**	⇑P		**Pn**	**06 28 18.5**	**-0.5**
	baz=2.8,SNR=42							
B15A	**Bradely Ranch,**	**2.80**	**300**	⇑P		**Pn**	**06 28 19.7**	**+0.4**
	baz=2.9,SNR=50							
H17A	**Grant Village**	**2.82**	**205**	⇑P		**Pn**	**06 28 20.1**	**+0.6**
	baz=2.8							

CHMT	**Chamberlain Mo**	**2.96**	**271**	*e*Pn		**Pn**	**06 28 21.9**	**+0.5**
CHMT				*e*Pg		**Pg**	06 28 29.7	-1.5
CHMT				*e*Sg		**Sg**	06 29 04.9	-4.6
DLMT	**Dillon**	**3.01**	**239**	*e*Pn		**Pn**	**06 28 21.9**	**-0.2**
DLMT				*e*Pg		**Pg**	06 28 28.8	-3.4
DLMT				*e*S		**Sn**	06 29 04.7	+6.5
G15A	**Dillon**	**3.06**	**235**	⇓P		**Pn**	**06 28 22.3**	**-0.6**
	baz=3.1,SNR=42							
G15A				⇑Sb		**Sb**	06 29 06.0	-0.4
	baz=3.1							
D14A	**Greenough**	**3.13**	**274**	⇓P		**Pn**	**06 28 23.7**	**-0.1**
	baz=3.2,SNR=21							
E14A	**Clinton**	**3.19**	**262**	⇓P		**Pn**	**06 28 24.8**	**+0.2**
	baz=3.2,SNR=32							
B14A	**Marquette Ranc**	**3.25**	**297**	⇑P		**Pn**	**06 28 26.6**	**+1.1**
	baz=3.3							
A15A	**Johnson Ranch,**	**3.25**	**310**	⇑P		**Pn**	**06 28 25.3**	**-0.2**
	baz=3.3,SNR=17							
I17A	**Pilgram Creek**	**3.26**	**201**	⇓P		**Pn**	**06 28 25.8**	**+0.2**
	baz=3.2,SNR=15							
F14A	**Wisdom**	**3.28**	**251**	⇓P		**Pn**	**06 28 25.9**	**0.0**
	baz=3.3,SNR=16							
I18A	**Diamond G Ranc**	**3.33**	**191**	⇑P		**Pn**	**06 28 26.9**	**+0.5**
	baz=3.3,SNR=21							
C14A	**Swan Lake**	**3.37**	**286**	⇑P		**Pn**	**06 28 28.0**	**+0.9**
	baz=3.4							
IMW	**Indian Meadow**	**3.38**	**205**	*e*Pn		**Pn**	**06 28 27.7**	**+0.5**
IMW				*e*Sn		**Sn**	06 29 09.9	+2.5
MSO	**Missoula**	**3.44**	**270**	*e*Pn		**Pn**	**06 28 28.2**	**+0.2**
MSO				*e*Sg		**Sg**	06 29 21.0	-3.8
MOOW	**Moose Ponds**	**3.46**	**202**	*e*Pn		**Pn**	**06 28 28.3**	**-0.1**
MOOW				*e*Sg		**Sg**	06 29 22.5	-3.1
MCMT	**McKenzie Canyo**	**3.47**	**233**	*e*Pn		**Pn**	**06 28 28.5**	**0.0**
MCMT				*e*Pg		**Pg**	06 28 36.6	-4.4
MCMT				*e*Sg		**Sg**	06 29 18.5	-7.4
H15A	**Lima**	**3.50**	**229**	⇑P		**Pn**	**06 28 28.3**	**-0.6**
	baz=3.5							
DGMT	**Dagmar**	**3.53**	**63**	*e*Pn		**Pn**	**06 28 30.0**	**+0.7**
DGMT				*e*Sg		**Sg**	06 29 23.3	-4.5
DGMT	**Dagmar**	**3.53**	**63**	⇓P		**Pn**	**06 28 29.7**	**+0.4**
	baz=3.5							
LOHW	**Long Hollow**	**3.56**	**200**	*e*Pn		**Pn**	**06 28 30.3**	**+0.6**
LOHW				*e*Pg		**Pg**	06 28 36.7	-5.9
I16A	**Newdale**	**3.58**	**211**	⇓P		**Pn**	**06 28 31.6**	**+1.7**
	baz=3.6							
G14A	**Jackson**	**3.59**	**243**	⇓P		**Pn**	**06 28 30.4**	**+0.2**
	baz=3.6							
A14A	**Double T Ranch**	**3.62**	**305**	⇑P		**Pn**	**06 28 31.5**	**+0.9**
	baz=3.7							
E13A	**Victor**	**3.66**	**264**	⇓P		**Pn**	**06 28 31.1**	**0.0**
	baz=3.7,SNR=14							
DCID1	**Drake Creek**	**3.73**	**206**	*e*Pn		**Pn**	**06 28 33.8**	**+1.8**
DCID1				*e*Sg		**Sg**	06 29 28.8	-5.4
SNOW	**Snow King Moun**	**3.73**	**201**	*e*Pn		**Pn**	**06 28 34.0**	**+1.9**
TPAW	**Teton Pass**	**3.76**	**203**	*e*Pn		**Pn**	**06 28 34.5**	**+2.1**
TPAW				*e*Pg		**Pg**	06 28 40.9	-5.5
TPAW				*e*Sg		**Sg**	06 29 29.4	-5.7
D13A	**Huson**	**3.78**	**274**	⇓P		**Pn**	**06 28 32.8**	**0.0**
	baz=3.8,SNR=17							
J18A	**Kendall Valley**	**3.83**	**192**	⇓P		**Pn**	**06 28 34.5**	**+1.0**
	baz=3.8							
REDW	**Red Top Meadow**	**3.85**	**201**	*e*Pn		**Pn**	**06 28 35.0**	**+1.2**
REDW				*e*Pg		**Pg**	06 28 43.8	-4.4
H14A	**Leadore**	**3.89**	**234**	⇑P		**Pn**	**06 28 34.4**	**+0.1**
	baz=3.9,SNR=12							
C13A	**Hot Springs**	**3.90**	**283**	⇓P		**Pn**	**06 28 34.5**	**+0.1**
	baz=3.9							
F13A	**Darby**	**3.92**	**254**	P		**Pn**	**06 28 34.3**	**-0.3**
	baz=3.9,SNR=21							
WALA	**Waterton Lakes**	**3.94**	**304**	*e*Pn		**Pn**	**06 28 35.6**	**+0.6**
WALA				*e*Pg		**Pg**	06 28 45.1	-4.8
WALA				*e*Sn		**Sn**	06 29 22.0	+0.7
WALA				*e*Sg		**Sg**	06 29 35.9	-5.1
RRI2	**Red Ridge**	**4.00**	**206**	*e*Pn		**Pn**	**06 28 37.5**	**+1.8**
RRI2				*e*Sg		**Sg**	06 29 36.7	-6.0
B13A	**Whitefish**	**4.00**	**293**	⇑P		**Pn**	**06 28 37.2**	**+1.5**
	baz=4.0,SNR=18

EDM					*e*Sg	**Sg**	**06 31 04.2**	**-11**
HAWA	**Hanford**	**7.32**	**269**		*e*Pn	**Pn**	**06 29 21.1**	**-0.1**
HAWA					*e*Sg	**Sg**	**06 31 23.2**	**-6.0**
DUG	**Dugway**	**7.33**	**204**	Pn		**Pn**	**06 29 23.7**	**+2.2**
RSW	**Rattlesnake Hi**	**7.36**	**269**	*e*Pn		**Pn**	**06 29 22.0**	**+0.2**
RSW					*e*Sn	**Sn**	**06 30 39.8**	**-5.5**
RSW					*e*Sg	**Sg**	**06 31 30.0**	**-0.5**
ISCO	**Idaho Springs**	**7.56**	**160**	*e*Pn		**Pn**	**06 29 25.5**	**+0.9**
ISCO					*e*Sg	**Sg**	**06 31 30.1**	**-6.9**
ELK	**Elko**	**7.71**	**218**	Pn		**Pn**	**06 29 32.1**	**+5.5**
	0.1nm,0.3s,baz=17,slow=5.7,SNR=4.1							
ELK				Lg			06 31 25.4	
	baz=148,slow=23,SNR=2.2							
SMCO	**Snowmass**	**7.92**	**169**	*e*Pn		**Pn**	**06 29 29.9**	**+0.4**
SRU	**San Rafael**	**7.94**	**189**	*e*Pn		**Pn**	**06 29 29.7**	**-0.1**
PV10	**Paradox Valley**	**8.59**	**181**	*e*Pn		**Pn**	**06 29 39.3**	**+0.6**
LON	**Longmire**	**8.83**	**273**	*e*Pn		**Pn**	**06 29 42.9**	**+0.8**
	2.5nm,0.6s							
PV01	**Paradox Valley**	**8.83**	**178**	Pn		**Pn**	**06 29 40.7**	**-1.4**
FFC	**Flin Flon**	**8.92**	**27**	*e*Pn		**Pn**	**06 29 40.3**	**-2.9**
FFC					*e*Sn	**Sn**	**06 31 20.2**	**-3.5**
AGMN	**Agassiz Refuge**	**8.93**	**77**	*e*Pn		**Pn**	**06 29 44.3**	**+0.9**
AGMN					*e*Sn	**Sn**	**06 31 21.4**	**-2.5**
ULM	**Lac du Bonnet**	**9.25**	**64**	Pn		**Pn**	**06 29 46.3**	**-1.5**
	3.7nm,0.3s,baz=251,slow=12,SNR=14							
ULM				Sn		**Sn**	**06 31 26.0**	**-5.8**
	1.1nm,0.3s,baz=307,slow=20,SNR=2.2							
ULM				Lg			06 32 12.2	
	2.0nm,0.3s,baz=170,slow=18,SNR=3.0							
ECSD	**EROS,Sioux Fal**	**9.26**	**106**	*e*Pn		**Pn**	**06 29 46.1**	**-1.7**
ECSD					*e*Sn	**Sn**	**06 31 25.8**	**-6.1**
MVCO	**Mesa Verde**	**9.76**	**178**	*e*Pn		**Pn**	**06 29 54.8**	**+0.1**
MVCO					*e*Sn	**Sn**	**06 31 45.7**	**+1.4**
YKA	**Yellowknife Ar**	**15.89**	**350**	Pn		**Pn**	**06 31 16.6**	**-1.2**
	0.5nm,0.3s,baz=169,slow=13,SNR=14							
YKA				Sn		**Sn**	**06 34 01.9**	**-12**
	0.2nm,0.3s,baz=154,slow=23,SNR=4.3							
TXAR	**Lajitas Array**	**18.08**	**165**	Pn		**Pn**	**06 31 47.1**	**+1.5**
	0.0nm,0.3s,baz=348,slow=12,SNR=3.8							
HHC	**Hu-ho-hao-te**	**85.43**	**330**	*e*P		**P**	**06 40 12.0**	**0.0**
CD2	**Chengdu**	**97.06**	**332**	*e*P		**P**	**06 41 06.0**	**-0.6**
GYA	**Guiyang**	**100.16**	**328**	P		Pdif	06 41 19.5	-1.0

ISCJB ***26*** *06:44:04.4±0.2, 0.31N×003×9703E×003, h36km, mb5.0/112, MS4.3/29, Error ellipse: s-maj=4.6km s-min=3.6km az=39.8*

MOS ***26*** *06:44:04.2±0.9, 0.34N×9701E, h33km, mb5.3/61, MS4.0/7, Error ellipse: s-maj=10.6km s-min=5.4km az=112.5*

DJA ***26*** *06:44:04.3±0.0, 0.31N×9688E, h30km, mB5.5/4, Mjma4.5/8, MLv5.4/8, Mw(mB)5.3/4, Mwp4.3/9*

IDC ***26*** *06:44:05.9±0.5, 0.29N×9691E, h37km±3km, mb4.5/23, mb1 4.6/24, mb1mx4.6/26, mbtmp4.5/24, ML5.2/1, MS4.1/15, Ms1 4.1/15, ms1mx4.0/27, Error ellipse: s-maj=15.9km s-min=10.9km az=52.0*

BJI ***26*** *06:44:05.5, 0.53N×97.19E, h20km, mB5.1, mb5.1, Ms4.7, Msz4.5*

GCMT ***26*** *06:44:06.1±0.4, 0.29N×9687E, h19km±1km, MW5.0/62, Moment Tensor Solution. s31,c36; s62,c95; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.82±.22; Mθθ1.09±.14; Mφφ1.73±.15; Mrθ0.33±.29; Mrφ-2.75±.10; Mθφ-0.91±.30; Best double couple: M0 3.65000×10^16 NP1:φs125.00000°, δ39.00000°, λ-109.00000°. NP2: φs329.00000°, δ53.00000°, λ-75.00000°. Principal axes: T 4.2910, Plg7.0000°, Azm49.0000°; N -1.2820, Plg12.0000°, Azm140.0000°; P -3.0090, Plg76.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *06:44:06.1±0.2, 027N×9697E, mb5.2/51 Error ellipse: s-maj=7.0km s-min=4.0km az=53.0*

SZGRF ***26*** *06:44:12.9, 155N×96.13E, h33km, mb5.2, Off west coast of northern Sumatera, Indonesia*

ISC 26 06:44:06.5±0.2, 031N±003×9702E±003, h38km, h38km±.8km:pP-P,n292,σ08:95/281,mb5.0/112,MS4.3/29, 22C-13D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.13**	**29**	P	**Pn**	**06 44 24.4**	**-1.5**
TRSI	**Tarutung**	**2.58**	**49**	P	**Pn**	**06 44 44.8**	**-1.0**
PPI	**Padang Panjang**	**3.46**	**103**	P	**Pn**	**06 44 57.6**	**-0.3**
PDSI	**Padang**	**3.65**	**109**	P	**Pn**	**06 44 59.4**	**-1.0**
BSI	**Banda Aceh**	**5.43**	**342**	P	**Pn**	**06 45 21.2**	**-3.8**
	222nm,0.8s,9μm3.0nm						
FRIM	**Kepong**	**5.44**	**58**	⇑P	**Pn**	**06 45 25.2**	**+0.1**
IPM	**Ipoh**	**5.76**	**44**	⇑P	**Pn**	**06 45 29.8**	**+0.3**
IPM	**Ipoh**	**5.76**	**44**	P	**Pn**	**06 45 29.1**	**-0.4**
	405nm,0.9s,3μm1.6nm						
KULM	**Kulim**	**6.13**	**36**	⇑P	**Pn**	**06 45 33.9**	**-0.7**
KGM	**Kluang**	**6.52**	**75**	⇓P	**Pn**	**06 45 40.6**	**+0.6**
KSI	**Kapahiang**	**6.82**	**125**	P	**Pn**	**06 45 43.2**	**-0.8**
	859nm,0.3s,3.4nm						
MYKOM	**Kota Tinggi**	**6.98**	**78**	⇓P	**Pn**	**06 45 46.7**	**+0.4**
MYKOM	**Kota Tinggi**	**6.98**	**78**	P	**Pn**	**06 45 46.1**	**-0.2**
DSRI	**Dabo**	**7.60**	**96**	P	**Pn**	**06 45 56.7**	**+2.0**
SNG	**Songkhla**	**7.71**	**28**	P	**Pn**	**06 45 54.0**	**-2.3**
	720nm,1.0s						
KTGM	**Kuala Trenggan**	**7.88**	**51**	⇓P	**Pn**	**06 45 58.4**	**-0.3**
KLI	**Kotabumi**	**9.36**	**123**	P	**Pn**	**06 46 18.4**	**-0.6**
SBUM	**Sibu**	**15.34**	**82**	⇑P	**Pn**	**06 47 41.8**	**+1.4**
SBUM	**Sibu**	**15.34**	**82**	P	**Pn**	**06 47 40.5**	**+0.1**
NST	**Nakhon Sawan**	**15.57**	**11**	P	**Pn**	**06 47 42.0**	**-1.3**
	108nm,0.7s						
KKTK	**Khon Kaen**	**16.92**	**19**	P	**Pn**	**06 48 02.5**	**+2.0**
	679nm,1.0s						
CM31	**Chiang Mai Arr**	**18.14**	**6**	*e*P	**Pn**	**06 48 15.0**	**-0.4**
	55nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.14**	**6**	P	**Pn**	**06 48 13.9**	**-1.5**
	2.8nm,0.3s,baz=195,slow=12,SNR=86						
CMAR				LR	LR	06 56 17.1	
	comp=Z,546nm,18.0s,baz=175,slow=40						
CMAR	**Chiang Mai Arr**	**18.14**	**6**	P	**Pn**	**06 48 14.0**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,546nm,18.0s						
CHG	**Chiang Mai**	**18.49**	**6**	⇓P	**Pn**	**06 48 18.3**	**-1.5**
	comp=Z,76nm,1.0s						
CHTO	**Chiang Mai**	**18.49**	**6**	*e*P	**Pn**	**06 48 18.2**	**-1.6**
	comp=Z,57nm,0.9s						
CHTO	**Chiang Mai**	**18.49**	**6**	*e*P	**Pn**	**06 48 18.2**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,57nm,0.9s						
CHTO	**Chiang Mai**	**18.49**	**6**	P	**Pn**	**06 48 18.5**	**-1.3**
	comp=Z,92nm,1.0s,comp=Z,1μm						
NANT	**Nan**	**18.73**	**11**	⇑P	**Pn**	**06 48 20.0**	**-2.7**
KKM	**Kota Kinabalu**	**19.99**	**73**	*e*P	**Pn**	**06 48 36.2**	**-1.6**
	comp=Z,178nm,1.4s						
KKM	**Kota Kinabalu**	**19.99**	**73**	⇓P	**Pn**	**06 48 37.5**	**-0.3**
SDKM	**Sandakan**	**20.82**	**75**	⇑P	**P**	**06 48 46.1**	**+1.2**
TRD	**Trivandrum**	**21.58**	**293**	*e*P	**P**	**06 48 51.9**	**-1.3**
TRD				AMb	AMB	06 49 05.9	
	comp=Z,66nm,0.7s,mb5.2						
KOD	**Kodaikanal**	**21.80**	**298**	*e*P	**P**	**06 48 56.4**	**+0.9**
VIS	**Vishakhapatnam**	**21.93**	**323**	*e*P	**P**	**06 48 55.5**	**-1.3**
VIS				AMb	AMB	06 49 11.3	
	comp=Z,128nm,1.1s,mb5.3						
MYLDM	**Lahad Datu**	**21.99**	**77**	P	**P**	**06 48 58.2**	**+0.7**
QIZ	**Qiongzhong**	**22.46**	**33**	P	**P**	**06 49 03.0**	**+0.6**
QIZ				AMB	AMB		
	comp=Z,53nm,1.6s,mb4.7						
QIZ				LR	LR		
	comp=N,610nm,22.0s						
KAPI	**Kappang**	**23.31**	**103**	P	**P**	**06 49 10.3**	**-1.2**
	comp=N,199nm,1.0s,mb5.5,SNR=5.7						
KAPI	**Kappang**	**23.31**	**103**	P	**P**	**06 49 10.3**	**-1.2**
	comp=N,26nm,1.1s,mb4.6,baz=284,slow=9.1,SNR=9.4						
KAPI	**Kappang**	**23.31**	**103**	*e*P	**P**	**06 49 09.9**	**-1.6**
KAPI				*e*		06 49 21.1	
KAPI	**Kappang**	**23.31**	**103**	P	**P**	**06 49 10.8**	**-0.7**
	comp=N,22nm,1.2s,mb4.5						
IMP	**Imphal**	**24.51**	**353**	*e*P	**P**	**06 49 22.0**	**-0.4**
IMP				*ex*	x	06 53 47.0	
HYB	**Hyderabad**	**24.89**	**314**	*e*P	**P**	**06 49 26.0**	**+0.1**
HYB	**Hyderabad**	**24.89**	**314**	*i* P	**P**	**06 49 26.0**	**+0.1**
KMI	**Kunming**	**25.28**	**12**	⇑P	**P**	**06 49 30.5**	**+1.1**
KMI				AP	pP	06 49 40.5	+0.5
KMI				XP	sP	06 49 44.5	0.0
KMI				PP		06 50 09.8	
KMI				S	**S**	**06 53 51.0**	**-1.8**
KMI				XS	sS	06 54 08.3	-2.1
KMI				AMB	AMB		
	comp=Z,98nm,0.9s,mb5.3						
KMI				LR	LR		
	comp=N,1μm,11.7s,MS4.7						
KMI				LR	LR		
	comp=E,1μm,15.3s,MS4.7						
KMI				LR	LR		
	comp=Z,1μm,12.9s,MS4.6						
SHL	**Shillong**	**25.60**	**349**	⇑*i*P	**P**	**06 49 32.5**	**+0.2**
SHL				AMb	AMB	06 49 39.8	
	comp=Z,165nm,1.5s,mb5.3						
SHL				*ex*	x	06 54 05.0	
BOK	**Bokaro**	**25.73**	**336**	*e*P	**P**	**06 49 34.4**	**+0.9**
BOK				AMb	AMB	06 49 39.6	
	comp=Z,78nm,1.2s,mb5.1						
GOA	**Goa**	**27.43**	**304**	*ex*	x	06 48 25.8	
GYA	**Guiyang**	**27.61**	**19**	⇑*i*P	**P**	**06 49 50.5**	**+0.1**
GYA				AP	pP	06 50 00.0	-1.0
GYA				XP	sP	06 50 04.3	-1.3
GYA				PP		06 50 37.0	
GYA				PCP	PcP	06 53 12.0	+4.5
GYA				S	**S**	**06 54 24.0**	**-5.6**
GYA				XS	sS	06 54 39.5	-7.7
GYA				SCP	ScP	06 56 48.5	+3.1
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,220nm,5.1s						
GYA				LR	LR		
	comp=N,2μm,11.6s,MS5.0						
GYA				LR	LR		
	comp=E,1μm,12.0s,MS5.0						
GYA				LR	LR		
	comp=Z,2μm,11.8s,MS4.9						
ODAN	**Odare**	**27.98**	**341**	*e*P	**P**	**06 49 54.8**	**+1.1**
	comp=Z,90nm,0.7s,mb5.5						
RAMN	**Ramite**	**28.32**	**340**	*e*P	**P**	**06 49 58.4**	**+1.6**
	comp=Z,59nm,0.6s,mb5.4						
TAPN	**Taplejung**	**28.34**	**342**	*e*P	**P**	**06 49 58.7**	**+1.8**
	comp=Z,88nm,0.8s,mb5.5						
ALBI	**Allahabad**	**28.88**	**331**	*ex*	x	06 50 09.0	
POO	**Poona**	**29.08**	**310**	*e*P	**P**	**06 50 05.5**	**+1.9**
JIRN	**Jiri**	**29.11**	**340**	*e*P	**P**	**06 50 05.2**	**+1.4**
	comp=Z,100nm,0.9s,mb5.5						
DAV	**Davao City (W)**	**29.26**	**76**	LR	LR	07 02 13.9	
	comp=Z,477nm,20.3s,MS4.1,baz=230,slow=37						
PKI	**Pulchoki**	**29.31**	**339**	*e*P	**P**	**06 50 06.9**	**+1.4**
GUN	**Gumba**	**29.45**	**340**	*e*P	**P**	**06 50 08.0**	**+1.2**
	comp=Z,92nm,0.7s,mb5.6						
DMN	**Daman**	**29.46**	**338**	*e*P	**P**	**06 50 08.6**	**+1.8**
	comp=Z,61nm,0.8s,mb5.4						
KKN	**Kakani**	**29.56**	**339**	*e*P	**P**	**06 50 08.7**	**+1.0**
LSA	**Lhasa**	**29.76**	**350**	P	**P**	**06 50 09.0**	**-0.5**
LSA				LR	LR		
	comp=N,170nm,26.7s,MS3.8						
LSA				LR	LR		
	comp=E,190nm,24.2s,MS3.8						
LSA				LR	LR		
	comp=Z,510nm,21.8s,MS4.1						
LSA	**Lhasa**	**29.76**	**350**	*e*P	**P**	**06 50 10.8**	**+1.3**
	comp=Z,35nm,0.8s,mb5.1						
LSA				*e*	pP	06 50 22.4	+2.3
LSA	**Lhasa**	**29.76**	**350**	*e*P	**P**	**06 50 10.8**	**+1.3**
LSA				*e*	pP	06 50 22.4	+2.3
LSA				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.1						
GKN	**Gorkha**	**29.99**	**338**	*e*P	**P**	**06 50 12.4**	**+0.9**
KOLN	**Koldanda**	**30.19**	**336**	*e*P	**P**	**06 50 14.5**	**+1.2**
	comp=Z,61nm,0.7s,mb5.5						
DANN	**Dangsing**	**30.64**	**337**	*e*P	**P**	**06 50 17.9**	**+0.6**
	comp=Z,74nm,0.8s,mb5.6						
PYUN	**Piuthan**	**30.73**	**335**	*e*P	**P**	**06 50 19.0**	**+0.9**
	comp=Z,56nm,0.8s,mb5.4						
MBWA	**Marble Bar**	**30.78**	**135**	*e*P	**P**	**06 50 19.2**	**+0.6**
	comp=Z,18nm,0.9s,mb4.9						
CD2	**Chengdu**	**31.10**	**11**	⇓*i*P	**P**	**06 50 21.0**	**-0.3**
CD2				AP	pP	06 50 30.5	-1.5
CD2				XP	sP	06 50 34.8	-1.7
CD2				PP	PP	06 51 24.3	-7.8
CD2				PCP	PcP	06 53 15.3	-1.0
CD2				S	**S**	**06 55 23.8**	**-0.5**
CD2				XS	sS	06 55 39.8	-2.2
CD2				PCS	PcS	06 56 58.8	-1.6
CD2				SS	SS	06 57 10.8	-28
CD2				SCS	ScS	07 00 50.8	-2.8
CD2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
CD2				LR	LR		
	comp=N,800nm,15.6s,MS4.8						
CD2				LR	LR		
	comp=E,1μm,20.4s,MS4.8						
CD2				LR	LR		
	comp=Z,730nm,13.2s						
AJM	**Ajmer**	**33.78**	**322**	*e*P	**P**	**06 50 45.5**	**+0.5**
NDI	**New Delhi**	**33.98**	**328**	*e*P	**P**	**06 50 45.0**	**-1.6**
WHN	**Wuhan**	**34.28**	**27**	P	**P**	**06 50 49.5**	**+0.3**
WHN				S	**S**	**06 56 18.3**	**+4.4**
WHN				AMB	AMB		
	comp=Z,84nm,1.0s,mb5.6						
WHN				LR	LR		
	comp=N,1μm,17.4s						
WHN				LR	LR		
	comp=E,1μm,9.8s						
WHN				LR	LR		
	comp=Z,1μm,15.0s,MS4.8						
XAN	**Xi'an**	**35.36**	**17**	P	**P**	**06 50 57.5**	**-1.0**
XAN				AP	pP	06 51 07.3	-1.9
XAN				XP	sP	06 51 11.0	-2.7
XAN				PP	PP	06 52 18.3	-1.0
XAN				PCP	PcP	06 53 29.8	+1.7
XAN				S	**S**	**06 56 26.5**	**-3.9**
XAN				SCP	ScP	06 57 11.3	+0.1
XAN				PCS	PcS	06 57 14.5	-0.7
XAN				SS	SS	06 58 42.8	-23
XAN				SCS	ScS	07 01 13.3	-2.2
XAN				AMB	AMB		
	comp=Z,35nm,1.0s,mb5.2						
XAN				AMB	AMB		
	comp=Z,191nm,10.2s						
XAN				LR	LR		
	comp=N,372nm,18.2s,MS4.5						
XAN				LR	LR		
	comp=E,644nm,16.2s,MS4.5						
XAN				LR	LR		
	comp=Z,742nm,20.8s,MS4.4						
SMLA	**Simla**	**35.97**	**330**	*e*P	**P**	**06 51 03.0**	**-0.7**
LZH	**Lanzhou**	**36.16**	**9**	*e*P	**P**	**06 51 04.3**	**-0.9**
LZH				AP	pP	06 51 14.3	-1.7
LZH				XP	sP	06 51 18.0	-2.5
LZH				*e*PP	PP	06 52 28.5	+0.5
LZH				*e*S	**S**	**06 56 42.0**	**-0.6**
LZH				XS	sS	06 56 58.5	-1.9
LZH				*e*SS	SS	06 59 09.0	-12
LZH				AMB	AMB		
	comp=Z,38nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,107nm,5.2s						
LZH				LR	LR		
	comp=N,592nm,13.1s						
LZH				LR	LR		
	comp=Z,971nm,17.2s,MS4.6						
MUN	**Mundaring**	**36.89**	**152**	*e*P	**P**	**06 51 12.6**	**+1.1**
KLBR	**Kellerberrin**	**37.31**	**150**	*e*P	**P**	**06 51 15.9**	**+0.7**
	comp=Z,35nm,1.1s,mb5.1						
KAKA	**Kakadu**	**37.44**	**112**	*e*P	Px	06 51 00.0	
	comp=Z,5.6nm,0.7s						
THN	**Thein Dam**	**37.75**	**330**	*ex*	**P**	**06 51 26.7**	**+7.8**
NWAO	**Narrogin (SRO)**	**38.16**	**152**	P	**P**	**06 51 22.6**	**+0.3**
	comp=Z,34nm,1.0s,mb5.0,baz=317,slow=8.0,SNR=6.9						
NWAO	**Narrogin (SRO)**	**38.16**	**152**	*e*P	**P**	**06 51 22.8**	**+0.5**
	comp=Z,49nm,1.1s,mb5.2						
NWAO	**Narrogin (SRO)**	**38.16**	**152**	*e*P	**P**	**06 51 22.8**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,49nm,1.1s						
GTA	**Gaotai**	**39.00**	**3**	⇑P	**P**	**06 51 29.3**	**+0.1**
GTA				AP	pP	06 51 39.0	-1.1
GTA				XP	sP	06 51 43.0	-1.6
GTA				S	**S**	**06 57 26.3**	**+0.7**
GTA				XS	sS	06 57 43.5	0.0
GTA				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,173nm,4.7s						
GTA				LR	LR		
	comp=N,268nm,19.2s,MS4.3						
GTA				LR	LR		
	comp=E,404nm,21.3s,MS4.3						
GTA				LR	LR		
	comp=Z,255nm,20.4s,MS4.0						
WRA	**Warramunga Arr**	**41.72**	**121**	P	**P**	**06 51 52.0**	**-0.1**
	comp=Z,38nm,0.9s,mb5.0,baz=299,slow=9.2,SNR=127						
WRA				LR	LR	07 10 08.8	
	comp=Z,182nm,19.2s,MS4.0,baz=330,slow=37						
WRA	**Warramunga Arr**	**41.72**	**121**	P	**P**	**06 51 52.0**	**-0.1**
WRA				pmax	pmax		
	comp=Z,39nm,0.9s						
WRA				MLR	MLR		
	comp=Z,182nm,19.2s						
WRAB	**Tennant Creek**	**41.73**	**121**	P	**P**	**06 51 52.0**	**-0.2**
	comp=Z,332nm,0.8s,mb6.0,SNR=20						
WRAB	**Tennant Creek**	**41.73**	**121**	*e*P	**P**	**06 51 51.9**	**-0.3**
	comp=Z,50nm,0.9s,mb5.2						
WRAB				*e*pP	pP	06 52 03.0	-0.1
WRAB	**Tennant Creek**	**41.73**	**121**	*e*P	**P**	**06 51 51.9**	**-0.3**
WRAB				*e**PP	pP	06 52 03.0	0.0
WRAB				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.1						
WB2	**Warramunga Arr**	**41.73**	**121**	⇓*i*P	**P**	**06 51 51.8**	**-0.4**
WB2				*e*	pP	06 52 03.0	-0.1
HHC	**Hu-ho-hao-te**	**42.46**	**16**	*e*P	**P**	**06 51 59.0**	**+1.2**
HHC				AP	pP	06 52 09.8	+1.1
HHC				XP	sP	06 52 13.3	+0.1
HHC				PP	PP	06 53 41.3	+4.6
HHC				S	**S**	**06 58 19.5**	**+2.4**
HHC				SS	SS	07 01 24.0	-3.5
HHC				SCS	ScS	07 01 55.0	-1.5
HHC				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.6						
HHC				AMB	AMB		
	comp=Z,232nm,6.9s						
HHC				LR	LR		
	comp=N,363nm,22.6s,MS4.5						
HHC				LR	LR		
	comp=E,580nm,20.2s,MS4.5						
HHC				LR	LR		
	comp=Z,379nm,20.2s,MS4.3						
FORT	**Forrest**	**42.72**	**139**	*e*P	**P**	**06 52 01.4**	**+1.4**
	comp=Z,38nm,0.8s,mb5.2						
FORT	**Forrest**	**42.72**	**139**	*e*P	**P**	**06 52 00.9**	**+0.8**
	comp=Z,40nm,0.7s,mb5.3						
FORT				*e*pP	pP	06 52 12.3	+1.3
ASAR	**Alice Springs**	**43.01**	**126**	P	**P**	**06 52 02.9**	**+0.3**
	comp=Z,11nm,0.9s,mb4.6,baz=298,slow=8.1,SNR=60						
ASAR	**Alice Springs**	**43.01**	**126**	P	**P**	**06 52 02.9**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,11nm,0.9s						
BJT	**Baijiatuan**	**43.21**	**22**	*e*P	**P**	**06 52 04.8**	**+0.9**
	comp=Z,46nm,0.8s,mb5.3						
BJT	**Baijiatuan**	**43.21**	**22**	*e*P	**P**	**06 52 04.8**	**+1.0**
BJT				pmax	pmax		
	comp=Z,46nm,0.8s						
BJI	**Beijing**	**43.23**	**22**	P	**P**	**06 52 05.0**	**+1.0**
BJI				S	**S**	**06 58 31.3**	**+2.9**
BJI				AMB	AMB		
	comp=Z,288nm,2.1s,mb5.6						
BJI				LR	LR		
	comp=N,251nm,18.4s,MS4.4						
BJI				LR	LR		
	comp=E,352nm,17.4s,MS4.4						
BJI				LR	LR		
	comp=Z,160nm,25.1s						
WMQ	**Urumqi**	**44.12**	**350**	P	**P**	**06 52 12.0**	**+0.9**
WMQ				AP	pP	06 52 22.0	0.0
WMQ				XP	sP	06 52 26.0	-0.5
WMQ				PP	PP	06 53 56.0	+1.6
WMQ				S	**S**	**06 58 42.0**	**+0.7**
WMQ				XS	sS	06 58 58.0	-1.4
WMQ				SS	SS	07 01 51.0	-8.9
WMQ				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,67nm,4.0s						
WMQ				LR	LR		
	comp=N,169nm,16.0s,MS4.2						
WMQ				LR	LR		
	comp=E,176nm,16.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,184nm,16.0s,MS4.1						
UCH	**Uchtor**	**46.39**	**337**	*e*P	**P**	**06 52 30.6**	**+1.4**
	comp=Z,12nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**46.57**	**338**	*e*P	**P**	**06 52 31.5**	**+0.9**
	comp=Z,56nm,1.3s,mb5.3						
TKM2				*e*pP	pP	06 52 41.4	-0.2
TKM2	**Tokmak 2**	**46.57**	**338**	*e*P	**P**	**06 52 31.5**	**+0.9**
TKM2				*e**PP	pP	06 52 41.4	-0.2
TKM2				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.3						
AML	**Almayashu**	**46.64**	**336**	*e*P	**P**	**06 52 32.1**	**+0.9**
	comp=Z,65nm,1.2s,mb5.4						
AML				*e*pP	pP	06 52 42.2	+0.1
KS15	**Wonju Array Si**	**46.65**	**34**	*e*P	**P**	**06 52 32.0**	**+0.7**
KS15				*e*pP	pP	06 52 41.5	-0.8
KSRS	**Korea Array**	**46.68**	**34**	P	**P**	**06 52 31.1**	**-0.4**
	comp=Z,22nm,0.8s,mb5.2,baz=223,slow=9.0,SNR=34						
KSRS				LR	LR	07 12 20.2	
	comp=Z,153nm,18.8s,MS4.0,baz=217,slow=36						
KSRS	**Korea Array**	**46.68**	**34**	P	**P**	**06 52 31.2**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
KSRS				MLR	MLR		
	comp=Z,153nm,18.8s,MS4.0						
AAK	**Ala-Archa**	**46.74**	**337**	*e*P	**P**	**06 52 33.8**	**+1.8**
	comp=Z,13nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**46.74**	**337**	*e*P	**P**	**06 52 33.8**	**+1.9**
AAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
FRU	**Bishkek**	**46.87**	**337**	*e*P	**P**	**06 52 34.0**	**+1.1**
FRU				pmax	pmax		
	comp=Z,60nm,1.9s,mb5.2						
EKS2	**Erkin-Say**	**47.05**	**337**	*e*P	**P**	**06 52 35.5**	**+1.1**
EKS2				*e*pP	p

CN2 eS S 07 00 06.8 -0.9
CN2 eSS SS 07 03 37.5 -4.0
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,16.0s,MS4.8
CN2 LR LR
comp=E,500nm,16.0s,MS4.8
CN2 LR LR
comp=Z,600nm,18.0s,MS4.7
HVS Khovu-Aksy 50.72 357 *i* P P **06 53 03.7 +1.4**
HVS pmax pmax
comp=Z,35nm,1.3s,mb5.1
PMG Port Moresby 50.83 102 *e*P P **06 53 04.3 +0.4**
comp=Z,20nm,0.9s,mb5.0
PMG Port Moresby 50.83 102 *e*P P **06 53 04.3 +0.4**
PMG pmax pmax
comp=Z,20nm,0.9s
TLY Talaya 51.49 5 *e*P P **06 53 06.8 -1.3**
comp=Z,14nm,0.8s,mb5.0
TLY *e*pP pP 06 53 19.9 +0.7
TLY Talaya 51.49 5 *e*P P **06 53 09.4 +1.3**
TLY *e* 07 00 27.6
TLY pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,268nm,18.0s,MS4.3
CTA Charters Tower 52.27 116 ⇓*i*P P **06 53 14.9 +0.4**
comp=Z,16nm,1.0s,mb4.9
CTA Charters Tower 52.27 116 P P **06 53 14.8 +0.3**
comp=Z,17nm,0.9s,mb5.0,baz=280,slow=8.4,SNR=15
CTA Charters Tower 52.27 116 P P **06 53 14.8 +0.3**
CTA pmax pmax
comp=Z,17nm,0.9s
CTAO Charters Tower 52.27 116 *e*P P **06 53 14.5 0.0**
comp=Z,27nm,1.1s,mb5.1
CTAO *e*pP pP 06 53 26.1 +0.5
CTAO Charters Tower 52.27 116 *e*P P **06 53 14.5 0.0**
CTAO *e**PP pP 06 53 26.1 +0.5
CTAO pmax pmax
comp=Z,27nm,1.1s,mb5.1
OPO Ambohidratompo 52.40 246 P P **06 53 14.8 -0.7**
comp=Z,4.7nm,0.8s,mb4.5,baz=68,slow=7.8,SNR=9.8
MAT Matsushiro 52.47 42 P P **06 53 14.0 -1.7**
MJAR Matsushiro Arr 52.47 42 P P **06 53 14.4 -1.2**
comp=Z,4.1nm,0.7s,mb4.5,baz=226,slow=7.0,SNR=6.8
MJAR LR LR 07 16 15.8
comp=Z,153nm,19.9s,MS4.0,baz=245,slow=37
MJAR Matsushiro Arr 52.47 42 P P **06 53 14.5 -1.2**
MJAR pmax pmax
comp=Z,4.0nm,0.7s
MJAR MLR MLR
comp=Z,153nm,19.9s
HIA Hailar 52.54 19 *e*P P **06 53 15.9 0.0**
comp=Z,14nm,0.8s,mb4.9
HIA *e*pP pP 06 53 27.6 +0.5
HIA Hailar 52.54 19 *e*P P **06 53 15.9 0.0**
HIA *e**PP pP 06 53 27.6 +0.5
HIA pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 52.60 345 P P **06 53 17.7 +1.3**
comp=Z,163nm,0.9s,mb6.0,SNR=9.1
KURK Kurchatov 52.60 345 *e*P P **06 53 16.5 +0.1**
comp=Z,44nm,1.2s,mb5.3
KURK *e*pP pP 06 53 26.3 -1.2
KURK Kurchatov 52.60 345 *e*P P **06 53 16.5 +0.1**
KURK *e**PP pP 06 53 26.3 -1.2
KURK pmax pmax
comp=Z,44nm,1.2s,mb5.3
STKA Stephens Creek 52.90 132 ⇓*i*P P **06 53 19.6 +0.7**
comp=Z,18nm,0.8s,mb5.0
STKA Stephens Creek 52.90 132 P P **06 53 19.8 +0.8**
comp=Z,30nm,0.9s,mb5.2,baz=310,slow=7.8,SNR=17
STKA LR LR 07 18 01.5
comp=Z,228nm,18.4s,MS4.2,baz=213,slow=38
STKA Stephens Creek 52.90 132 *e*P P **06 53 19.8 +0.9**
comp=Z,13nm,1.3s,mb4.7
STKA *e*pP pP 06 53 30.4 +0.3
ZAA0 Zalesovo Array 54.41 351 *e*P P **06 53 29.6 0.0**
ZAA0 *e*pP pP 06 53 40.2 -0.6
ZALV Zalesovo Beam 54.41 351 P P **06 53 29.7 +0.1**
comp=Z,21nm,0.7s,mb5.2,baz=172,slow=7.1,SNR=50
ZALV pP pP 06 53 40.6 -0.2
comp=Z,55nm,0.6s,baz=176,slow=7.4,SNR=35
ZALV LR LR 07 23 10.0
comp=Z,79nm,18.2s,MS3.8,baz=199,slow=43
ZALV Zalesovo Beam 54.41 351 P P **06 53 29.7 +0.1**
ZALV pP pP 06 53 40.6 -0.2
ZALV LR LR 07 23 10.0
ZALV Zalesovo Beam 54.41 351 P P **06 53 29.7 +0.2**
ZALV *e**PP pP 06 53 40.6 -0.1
ZALV pmax pmax
comp=Z,21nm,0.7s,mb5.2
ZALV pmax pmax
comp=Z,55nm,0.6s,mb5.7
NVS Novosibirsk 55.52 350 *e*P P **06 53 37.9 +0.3**
NVS pmax pmax
comp=Z,53nm,1.2s,mb5.5
NVS pmax pmax
comp=N,24nm,0.9s
NVS pmax pmax
comp=E,15nm,0.7s
KRAR Krasnoyarsk 55.63 357 *e*P P **06 53 38.7 +0.3**
KRAR pmax pmax
comp=Z,41nm,0.5s,mb5.7
BVA0 Borovoye Array 57.03 341 *i*P P **06 53 47.4 -1.0**
BVA0 pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
BRVK Borovoye 57.09 341 P pP 06 53 59.6 -0.5
comp=Z,130nm,0.9s,SNR=5.5
BRVK Borovoye 57.09 341 *e*P P **06 53 48.1 -0.7**
comp=Z,48nm,1.4s,mb5.3
BRVK *e*pP pP 06 53 58.1 -2.0
BRVK Borovoye 57.09 341 *e*P P **06 53 48.2 -0.6**
BRVK *e**PP pP 06 53 58.1 -2.0
BRVK pmax pmax
comp=Z,48nm,1.4s,mb5.3
EIDS Eidsvold 58.08 120 *e*P P **06 53 56.7 +0.4**
comp=Z,17nm,0.8s,mb5.1
EIDS *e*pP pP 06 54 09.1 +1.5
HABR Khabarovsk 58.12 29 *e*P P **06 53 53.6 -2.6**
HABR *e**PP pP 06 54 03.7 -3.7
HABR *e*SP 06 54 07.5
HABR *e* 06 54 43.6
HABR *e*S S **07 01 53.4 -1.3**
HABR *e*SS SS 07 05 46.0 -0.7
ERM Erimo 58.67 39 *i*P P **06 53 59.9 -0.3**
BOD Bodaibo 58.91 11 *e*P P **06 54 01.4 -0.1**
BOD pmax pmax
comp=Z,12nm,1.1s,mb4.8
BOD pmax pmax
comp=Z,32nm,1.0s,mb5.3
ARMA Armidale 60.16 126 *e*P P **06 54 12.5 +1.8**
YSS Yuzh-Sakhalins 61.18 34 P P **06 54 18.9 +1.7**
comp=Z,136nm,1.1s,mb6.0
YSS Yuzh-Sakhalins 61.18 34 *e*P P **06 54 18.5 +1.2**
YSS pmax pmax
comp=Z,17nm,0.7s,mb5.3
SVE Sverdlovsk 63.45 339 *e*P P **06 54 41.7 +9.5**
SVE *e* 06 56 50.7
SVE *e*S S 07 03 27.4 +25
SVE pmax pmax
comp=Z,49nm,1.2s,mb5.5
ARU Arti 63.93 337 *e*P P **06 54 34.1 -1.3**
comp=Z,54nm,1.3s,mb5.4
ARU *e*pP pP 06 54 44.8 -2.0
ARU Arti 63.93 337 *d*iP P **06 54 34.7 -0.7**
ARU *e* 06 56 51.7
ARU *e*S S **07 03 08.7 +0.2**
ARU *e*SS SS 07 07 17.2 -0.3
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KIV Kislovodsk 64.86 320 *e*P P **06 54 40.8 -1.0**
KIV pmax pmax
comp=Z,16nm,1.0s,mb5.0
MBAR Mbarara 66.29 269 *e*P P **06 54 51.3 -0.3**
YAK Yakutsk 66.32 16 *e*P P **06 54 51.1 +0.3**
comp=Z,133nm,1.3s,mb5.8
YAK *e*pP pP 06 55 01.7 -0.6
YAK Yakutsk 66.32 16 *e*P P **06 54 50.5 -0.3**
YAK pmax pmax
comp=Z,25nm,0.7s,mb5.3
SOC Sochi 66.66 318 *e*P P **06 54 52.8 -0.6**

SOC *e**PP pP 06 54 59.7 -5.1
SOC *e* 06 55 23.6
SOC *e* 06 57 18.3
SOC *e*PPP 06 58 51.5
SOC *e*S S 07 03 38.5 -3.9
SOC *e* 07 04 43.5
SOC pmax pmax
comp=Z,44nm,1.1s,mb5.4
SOKR Solikamsk 66.84 339 *e*P pP 06 55 05.1 -0.6
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
BR131 Keskin Array S 69.58 313 *e*P P **06 55 10.7 -1.1**
comp=Z,3.9nm,0.6s,mb4.5
BR131 *e*pP pP 06 55 21.6 -1.7
BRTR Keskin Array B 69.58 313 P P **06 55 10.4 -1.4**
comp=Z,6.5nm,0.7s,mb4.7,baz=133,slow=7.2,SNR=36
BRTR pP pP 06 55 21.9 -1.5
comp=Z,5.7nm,0.8s,baz=147,slow=7.1,SNR=12
BRTR Keskin Array B 69.58 313 P P **06 55 10.4 -1.4**
BRTR *PP pP 06 55 21.9 -1.4
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BRTR pmax pmax
comp=Z,6.0nm,0.8s
ISP Isparta 71.41 310 *i*P P **06 55 23.0 0.0**
ISP pmax pmax
comp=Z,24nm,2.3s,mb4.7
MAW Mawson 71.81 193 LR LR 07 20 19.2
comp=Z,187nm,18.0s,MS4.4,baz=161,slow=30
MAW Mawson 71.81 193 *e*P P **06 55 25.6 +0.8**
comp=Z,2.1nm,0.9s,mb4.1
MAW Mawson 71.81 193 *e*P P **06 55 25.6 +0.8**
MAW pmax pmax
comp=Z,2.0nm,0.9s
PETK Petropavlovsk- 72.57 33 P P **06 55 29.7 0.0**
comp=Z,1.8nm,0.8s,mb4.0,baz=236,slow=13,SNR=3.3
PETK LR LR 07 29 08.1
comp=Z,105nm,18.1s,MS4.2,baz=121,slow=37
PETK Petropavlovsk- 72.57 33 P P **06 55 29.7 0.0**
PETK LR LR 07 29 08.2
MOS Moscow 73.00 329 *e*P pP 06 55 42.4 -1.3
OBN Obninsk 73.28 329⇑*e*P P **06 55 33.2 -0.6**
OBN *e* 06 58 20.9
OBN pmax pmax
comp=Z,41nm,1.7s,mb5.1
TIXI Tiksi 74.09 10 *e*P P **06 55 37.5 -0.8**
comp=Z,37nm,0.9s,mb5.3
TIXI *e*pP pP 06 55 48.8 -1.1
TIXI Tiksi 74.09 10⇑*e*P P **06 55 37.7 -0.6**
TIXI pmax pmax
comp=Z,23nm,1.8s,mb4.8
BOSA Boshof 74.18 240 P P **06 55 38.7 -1.0**
comp=Z,5.0nm,1.0s,mb4.4,baz=73,slow=6.6,SNR=5.0
BOSA Boshof 74.18 240 P P **06 55 38.7 -1.0**
BOSA Boshof 74.18 240 P P **06 55 38.7 -1.0**
BOSA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KLMR Klimovskoe 74.47 335 *e*P P **06 55 48.1 +7.4**
KLMR pmax pmax
comp=Z,39nm,1.3s,mb5.2
TIRR Tirgusor 74.64 316⇑P P **06 55 41.1 -0.9**
TIRR Tirgusor 74.64 316⇑*i*P P **06 55 41.1 -0.9**
AKASG Malin Array Be 75.85 323 P P **06 55 47.4 -1.5**
comp=Z,6.5nm,0.6s,mb4.7,baz=91,slow=5.1,SNR=17
AKASG pP pP 06 55 58.6 -1.8
comp=Z,9.0nm,0.5s,baz=89,slow=5.2,SNR=16
AKASG LR LR 07 31 25.3
comp=Z,86nm,19.4s,MS4.1,baz=305,slow=38
AKASG Malin Array Be 75.85 323 P P **06 55 47.4 -1.4**
AKASG *PP pP 06 55 58.6 -1.8
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKASG pmax pmax
comp=Z,9.0nm,0.5s
AKASG MLR MLR
comp=Z,86nm,19.4s
AKBB Malin Array Si 75.85 323 *e*P P **06 55 47.3 -1.5**
AKBB *e*pP pP 06 55 58.6 -1.8
KIEV Kiev 75.86 323 *e*P P **06 55 47.4 -1.5**
comp=Z,15nm,0.7s,mb5.0
KIEV *e*pP pP 06 55 58.7 -1.8
KIEV Kiev 75.86 323 *e*P P **06 55 47.4 -1.5**
KIEV *e**PP pP 06 55 58.7 -1.8
KIEV pmax pmax
comp=Z,15nm,0.7s,mb5.0
VRI Vrincioaia 76.15 317⇑P P **06 55 50.7 +0.1**
VRI Vrincioaia 76.15 317⇑*i*P P **06 55 50.7 +0.1**
MLR Muntele Rosu 76.59 317 ⇓P P **06 55 52.8 -0.3**
MLR Muntele Rosu 76.59 317 ⇓*i*P P **06 55 52.8 -0.3**
RPZ Rata Peaks 78.71 135 P P **06 56 04.9 -0.1**
comp=Z,4.9nm,0.3s,mb4.9,baz=238,slow=13,SNR=4.2
JOF Joensuu 78.87 335 *e*p P **06 56 14.0 +8.5**
comp=Z,4.7nm,0.7s,mb4.5
JOF Joensuu 78.87 335 *e*P P **06 56 14.0 +8.5**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
DRGR 79.06 318⇑P P **06 56 07.0 +0.1**
DRGR 79.06 318⇑*i*P P **06 56 07.0 +0.1**
SYO Syowa Base 79.11 198⇑*e*P P **06 56 05.8 -0.8**
TRPA Tarpa 79.44 319 ⇓*i*P P **06 56 09.3 +0.4**
KOLS Kolonicke sedl 79.78 320 *e*P P **06 56 11.3 +0.6**
KOLS *e* pP 06 56 21.1 -1.3
KOLS pmax pmax
comp=Z,16nm,1.0s,mb4.9
KOLS Kolonicke sedl 79.78 320 *e*P P **06 56 11.3 +0.6**
KOLS *e*pP pP 06 56 21.1 -1.3
APA Apatity 79.89 340⇑*i*P pP 06 56 21.8 -0.8
APA pmax pmax
comp=Z,16nm,1.0s,mb4.9
CRVS Cervenica-Dubn 80.30 320 *e*P P **06 56 15.2 +1.7**
CRVS *e* pP 06 56 25.5 +0.3
CRVS pmax pmax
comp=Z,19nm,1.5s,mb4.8
CRVS Cervenica-Dubn 80.30 320 *e*P P **06 56 15.2 +1.7**
CRVS *e*pP pP 06 56 25.5 +0.3
STHS Stebnicka Huta 80.53 320 *e*P P **06 56 15.0 +0.2**
STHS *e* 06 56 32.6
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
STHS Stebnicka Huta 80.53 320 *e*P P **06 56 15.0 +0.2**
STHS *e*pP pP 06 56 32.6 +6.1
KAF Kangasniemi 80.79 333 *e*p pP 06 56 26.3 -1.3
comp=Z,8.8nm,0.5s
KAF Kangasniemi 80.79 333 *e*P pP 06 56 26.3 -1.3
KAF pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
VYHS Vyhne 81.94 319 *e*P P **06 56 22.4 +0.1**
BILL Bilibino 82.06 21⇑*e*P P **06 56 24.6 +2.1**
BILL *e*S S 07 06 22.9 -11
BILL pmax pmax
comp=Z,13nm,1.9s,mb4.5
MODS Modra-Piesok 82.95 319 *e*P P **06 56 27.7 +0.1**
MODS pmax pmax
comp=Z,18nm,2.0s,mb4.8
ZST Bratislava 83.05 318 *e*P P **06 56 27.2 -0.9**
ZST pmax pmax
comp=Z,11nm,0.9s,mb4.9
ARCES ARCESS Array B 83.31 340 P P **06 56 28.0 -0.9**
comp=Z,4.9nm,0.9s,mb4.5,baz=97,slow=5.1,SNR=9.0
ARCES LR LR 07 36 10.4
comp=Z,270nm,18.3s,MS4.7,baz=110,slow=38
ARCES ARCESS Array B 83.31 340 P P **06 56 28.0 -0.9**
ARCES LR LR 07 36 10.4
ARCES ARCESS Array B 83.31 340 P P **06 56 28.0 -1.0**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES MLR MLR
comp=Z,270nm,18.3s
VNDA Vanda 84.99 169 P P **06 56 36.6 -0.8**
comp=Z,7.8nm,1.1s,mb4.7,baz=300,slow=4.7,SNR=10
VNDA Vanda 84.99 169 P P **06 56 36.7 -0.7**
VNDA pmax pmax
comp=Z,8.0nm,1.1s
GEC2 GERESS Array S 85.36 319 *e*P P **06 56 39.7 -0.1**
GEC2 pmax pmax
comp=Z,56nm,2.2s,mb5.3
GEC2 GERESS Array S 85.36 319 *e*P P **06 56 39.7 -0.1**
comp=Z,56nm,2.2s,mb5.3
GERES GERESS Array B 85.36 319 P P **06 56 39.2 -0.6**
comp=Z,1.0nm,0.9s,mb4.0,baz=83,slow=4.1,SNR=4.1
GERES pP pP 06 56 50.8 -0.8
comp=Z,1.7nm,0.7s,baz=99,slow=4.2,SNR=4.5
GERES GERESS Array B 85.36 319 P P **06 56 39.2 -0.6**
GERES *PP pP 06 56 50.8 -0.8
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES pmax pmax
comp=Z,2.0nm,0.7s
BRG Berggiesshubel 85.38 321 *e*P P **06 56 39.5 -0.4**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BRG Berggiesshubel 85.38 321 *e*P P **06 56 39.6 -0.3**
comp=Z,57nm,2.5s,mb5.3
BRG Berggiesshubel 85.38 321 *e*P P **06 56 39.5 -0.4**
comp=Z,5.8nm,0.9s,mb4.7
KHC Kasperske Hory 85.47 319 *i*P P **06 56 38.7 -1.6**
WET Wettzell 85.93 319 *e*P P **06 56 42.2 -0.4**
WET pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
WET Wettzell 85.93 319 *e*P P **06 56 42.2 -0.4**
comp=Z,10.0nm,1.3s,mb4.9
SBA Scott Base 86.09 169 *e*P P **06 56 43.1 +0.2**
comp=Z,14nm,1.1s,mb5.1
SBA Scott Base 86.09 169 *e*P P **06 56 43.1 +0.2**
SBA pmax pmax
comp=Z,14nm,1.1s,mb5.1
WERN Wernitzgruen 86.33 320 *e*P P **06 56 44.6 0.0**
comp=Z,18nm,1.5s,mb5.1
MANZ Manzenberg 86.48 320 *e*P P **06 56 45.3 0.0**
comp=Z,10.0nm,1.1s,mb5.0
GRF Grafenberg Arr 87.04 320 *e*P P **06 56 48.0 -0.1**
GRF pmax pmax
comp=Z,40nm,1.8s,mb5.3
GRF Grafenberg Arr 87.04 320 *e*P P **06 56 48.0 -0.1**
GRF pmax pmax
comp=Z,40nm,1.8s,mb5.3
GRF Grafenberg Arr 87.04 320 *e*P P **06 56 48.0 -0.1**
comp=Z,40nm,1.8s,mb5.3
NB2 NORSAR Subarra 87.69 331 P P **06 56 50.4 -0.6**
comp=Z,13nm,1.1s,mb5.1,baz=94,slow=4.8
NOA NORSAR Array B 87.69 331 P P **06 56 50.1 -0.8**
comp=Z,5.8nm,1.0s,mb4.8,baz=94,slow=4.8,SNR=5.7
NOA pP pP 06 57 01.7 -1.1
comp=Z,4.7nm,0.8s,baz=95,slow=4.9,SNR=5.6
NOA LR LR 07 40 32.8
comp=Z,166nm,18.5s,MS4.5,baz=240,slow=39
NOA NORSAR Array B 87.69 331 P P **06 56 50.1 -0.8**
NOA pP pP 06 57 01.7 -1.1
NOA LR LR 07 40 32.8
NOA NORSAR Array B 87.69 331 P P **06 56 50.1 -0.9**
NOA *PP pP 06 57 01.7 -1.1
NOA pmax pmax
comp=Z,6.0nm,1.0s
NOA pmax pmax
comp=Z,5.0nm,0.8s
KEST Kesra 87.93 306 P P **06 56 52.8 +0.1**
comp=Z,4.8nm,0.9s,mb4.7,baz=301,slow=4.1,SNR=8.3
KBS Kingsbay 88.75 349 *i*P P **06 56 56.1 +0.4**
KBS pmax pmax
comp=Z,24nm,1.0s,mb5.5
CDF Champ du Feu 89.60 318 *e*P P **06 56 59.4 -0.8**
MBDF Montbardon 89.96 315 *e*P P **06 57 01.5 -0.5**
LPG La Plagne 89.97 315 *e*P P **06 57 01.7 -0.3**
comp=Z,17nm,0.9s,mb5.1
LPG La Plagne 89.97 315 *e*P P **06 57 01.7 -0.3**
comp=Z,8.4nm,0.9s,mb5.1
LPG La Plagne 89.97 315 *e*P P **06 57 01.7 -0.3**
LPG pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LPL La Plagne 89.99 315 *e*P P **06 57 01.8 -0.3**
comp=Z,28nm,1.1s,mb5.2
LPL La Plagne 89.99 315 *e*P P **06 57 01.8 -0.3**
comp=Z,14nm,1.1s,mb5.2
LPL La Plagne 89.99 315 *e*P P **06 57 01.8 -0.3**
LPL pmax pmax
comp=Z,14nm,1.1s,mb5.2
FRF La Foret Royal 90.06 313 *e*P P **06 57 01.8 -0.7**
HAU Haudompre 90.23 318 *e*P P **06 57 02.3 -0.9**
comp=Z,11nm,0.8s,mb4.9
HAU Haudompre 90.23 318 *e*P P **06 57 02.3 -0.9**
comp=Z,5.3nm,0.8s,mb4.9
HAU Haudompre 90.23 318 *e*P P **06 57 02.3 -0.9**
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
CABF La Chapelle 90.42 316 *e*P P **06 57 03.9 -0.2**
comp=Z,10nm,0.7s,mb5.0
CABF La Chapelle 90.42 316 *e*P P **06 57 03.9 -0.2**
comp=Z,5.1nm,0.7s,mb5.0
CABF La Chapelle 90.42 316 *e*P P **06 57 03.9 -0.2**
CABF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
ORIF Oris-en-Rattie 90.60 315 *e*P P **06 57 04.7 -0.3**
ORIF *e*MLR MLR
comp=Z,232nm,18.2s,MS4.3
SMRF Simiane la Rot 90.83 314 *e*P P **06 57 05.3 -0.8**
comp=Z,3.4nm,1.3s,mb5.3
SMRF Simiane la Rot 90.83 314 *e*P P **06 57 05.3 -0.8**
comp=Z,44nm,1.3s,mb5.6
GIVF Givet 91.18 320 *e*P P **06 57 07.2 -0.4**
TAM Tamanrasset 91.27 293 *e*P P **06 57 09.8 +1.2**
comp=Z,3.9nm,0.9s,mb4.7
TAM Tamanrasset 91.27 293 *e*P P **06 57 09.8 +1.2**
TAM pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
VIVF Saint-Julien-l 91.45 315 *e*P P **06 57 08.6 -0.4**
BAIF Baives 91.58 320 *e*P P **06 57 09.3 -0.1**
comp=Z,29nm,1.0s,mb5.3
BAIF Baives 91.58 320 *e*P P **06 57 09.3 -0.1**
comp=Z,14nm,1.0s,mb5.3
BAIF Baives 91.58 320 *e*P P **06 57 09.3 -0.1**
BAIF pmax pmax
comp=Z,14nm,1.0s,mb5.2
LOR Lormes 91.93 317 *e*P P **06 57 10.6 -0.5**
comp=Z,33nm,1.2s,mb5.2
LOR *e*MLR MLR
comp=Z,285nm,17.5s,MS4.5
LOR Lormes 91.93 317 *e*P P **06 57 10.6 -0.5**
comp=Z,16nm,1.2s,mb5.2
LOR LR LR
comp=Z,280nm,17.5s,MS4.8
LOR Lormes 91.93 317 *e*P P **06 57 10.6 -0.5**
LOR pmax pmax
comp=Z,16nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,280nm,17.5s,MS4.8
SMF Signal de Mont 91.97 317 *e*P P **06 57 10.6 -0.7**
comp=Z,17nm,0.9s,mb5.1
SMF Signal de Mont 91.97 317 *e*P P **06 57 10.6 -0.7**
comp=Z,8.4nm,0.9s,mb5.1
SMF Signal de Mont 91.97 317 *e*P P **06 57 10.6 -0.7**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
SSF Saint Saulge 92.18 317 *e*P P **06 57 11.9 -0.4**
AVF Avril sur Loir 92.30 317 *e*P P **06 57 12.2 -0.6**
comp=Z,6.6nm,0.9s,mb4.7
AVF Avril sur Loir 92.30 317 *e*P P **06 57 12.2 -0.6**
comp=Z,3.3nm,0.9s,mb4.7
AVF Avril sur Loir 92.30 317 *e*P P **06 57 12.2 -0.6**
AVF pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
TORD Torodi Ar. Bea 95.12 283 P P **06 57 25.6 -0.8**
comp=Z,1.1nm,0.7s,mb4.4,baz=92,slow=4.4,SNR=7.0
MOD Modoc 126.16 34 *e*PKPdf PKPdf 07 03 05.6 +0.4
MOD *ep*PKPdf pPKPdf 07 03 17.1 -0.3
DLMT Dillon 127.53 26 *e*PKPdf PKPdf 07 03 08.5 +0.8
DLMT *ep*PKPdf pPKPdf 07 03 19.1 -0.8
NVAR Mina Array Bea 129.60 36 PKP PKPdf 07 03 13.0 +1.1
comp=Z,1.9nm,0.8s,baz=318,slow=2.0,SNR=6.7
NVAR pPKP pPKPdf 07 03 24.3 +0.2
comp=Z,2.6nm,0.9s,baz=295,slow=1.6,SNR=2.3
PDAR Pinedale Array 130.92 26 PKP PKPdf 07 03 13.6 -0.7
comp=Z,0.5nm,0.8s,baz=168,slow=2.2,SNR=4.5
MSU Marysvale 132.96 32 *e*PKPdf PKPdf 07 03 20.4 +2.2
MSU *ep*PKPdf pPKPdf 07 03 31.3 +0.9
PV10 Paradox Valley 134.65 29 *e*PKPdf PKPdf 07 03 21.1 -0.4
PV10 *ep*PKPdf pPKPdf 07 03 34.5 +0.9
TXAR Lajitas Array 144.51 32 PKP PKPdf 07 03 38.5 -1.1
comp=Z,4.3nm,0.8s,baz=262,slow=1.5,SNR=46
TXAR pPKP pPKPdf 07 03 50.4 -1.4
comp=Z,5.2nm,0.6s,baz=201,slow=0.8,SNR=18
TXAR Lajitas Array 144.51 32 PKIKP PKPdf 07 03 38.5 -1.1
TXAR 07 03 50.4
TXAR pmax pmax
comp=Z,4.0nm,0.8s
TXAR pmax pmax
comp=Z,5.0nm,0.6s
JCT Junction City 145.45 26 *e*PKPdf PKPdf 07 03 40.8 -0.3
JCT *ep*PKPdf pPKPdf 07 03 52.7 -0.7
JSC Jenkinsville 145.56 357 *e*PKPdf PKPdf 07 03 40.5 -0.8
JSC *e*PKPdf pPKPdf 07 03 52.0 -1.5
GOGA Godfrey 146.46 1 *e*PKPbc PKPbc 07 03 43.7 -0.5

GOGA ePKPdf pPKPdf 07 03 55.0 0.0
LRAL Lakeview Retre 146.62 6 ePKPdf PKPdf 07 03 43.4 +0.3

*NEIC **26** 06:58:51.1,2274S×7074W,h30km,mb4.8/57, ML4.7(GUC),After GUC.*
*GUC **26** 06:58:51.1±1.0,2276S×7075W,h30km±9km,ML4.7*
*ISCJB **26** 06:58:52.0±0.6,2279S±003×7062W±004,h32km±4km, mb4.7/64,MS4.5/13,Error ellipse: s-maj=5.9km s-min=5.2km az=2.0*
*MOS **26** 06:58:53.0±1.6,2252S×7054W,h33km,mb4.9/23,Error ellipse: s-maj=21.2km s-min=8.9km az=108.4*
*IDC **26** 06:58:53.7±2.7,2274S×7051W,h32km±19km,mb4.2/10, mb1 4.4/14,mb1mx4.3/19,mbtmp4.3/14,ML4.0/5,MS4.4/15, Ms1 4.4/15,ms1mx4.1/27,Error ellipse: s-maj=19.8km s-min=15.9km az=48.0*
*BJI **26** 06:58:55.1,2270S×7070W,h30km,mB4.8,Ms5.0,Msz4.9*
ISC 26 06:58:53.4±0.6,2277S±003×7054W±004,h28km±4km, h37km±4.1km:pP-P,n463,σ0s58/433,mb4.7/64,MS4.5/13, 157C-141D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.34**	**166**		⇓*i*	*e*P	**Pb**	**06 59 00.2**	**-1.1**
MECH						*e*S	**Sb**	**06 59 06.9**	**+0.2**
MECH						AML	AML	06 59 09.1	
	comp=N,313μm,0.4s								
CEN1	**Los Morros**	**0.69**	**153**		*e*P		**Pb**	**06 59 07.5**	**+0.6**
CEN1						*i* S	**Sb**	**06 59 20.2**	**+4.1**
CEN1						AML	AML	06 59 23.3	
	comp=E,20μm,0.6s								
TOCH	**Tocopilla**	**0.74**	**25**		⇓*i*	P	**Pb**	**06 59 05.8**	**-2.1**
TOCH						*i* S	**Sb**	**06 59 16.9**	**-0.7**
TOCH						AML	AML	06 59 19.4	
	comp=E,47μm,0.3s								
PB06	**Plate Boundary**	**0.90**	**86**		*e*P		**Pn**	**06 59 10.0**	**-0.1**
PB06						*i* S	**Sb**	**06 59 24.9**	**+2.9**
ANCH	**Antofagasta**	**0.91**	**173**		AMP			06 59 32.4	
	comp=N,25μm,0.4s								
MACH	**Maria Elena**	**0.92**	**52**		*e*P		**Pn**	**06 59 09.7**	**-0.8**
MACH						*i* S	**Sb**	**06 59 24.6**	**+1.9**
PB07	**Plate Boundary**	**1.21**	**30**		*e*P		**Pn**	**06 59 13.4**	**-1.0**
PB07						*i* S	**Sn**	**06 59 31.0**	**+1.3**
LVC	**Limon Verde**	**1.51**	**84**		Pg		**Pn**	**06 59 20.4**	**+1.8**
	comp=N,1μm,0.3s,baz=270,slow=12,SNR=2102								
LVC					Lg			06 59 43.0	
	comp=N,431nm,0.3s,baz=90,slow=4.0,SNR=8.7								
LVC	**Limon Verde**	**1.51**	**84**	⇑	*e*Pn		**Pn**	**06 59 20.1**	**+1.5**
LVC						*e*Sn	**Sn**	**06 59 43.0**	**+5.6**
LVC	**Limon Verde**	**1.51**	**84**	⇑	*i*P		**Pn**	**06 59 20.6**	**+2.0**
LVC						*i* S	**Sn**	**06 59 43.0**	**+5.6**
CPN1	**Cerro Paranal**	**1.85**	**176**		AML		AML	06 59 55.2	
	comp=E,26μm,0.7s								
PB01	**Plate Boundary**	**1.98**	**30**		AML		AML	06 59 58.6	
	comp=E,8μm,0.3s								
LCO	**Las Campanas**	**6.21**	**181**		*e*Pn		**Pn**	**07 00 21.7**	**-1.6**
	comp=E,140nm,0.8s								
LCO						*e*Sn	**Sn**	**07 01 28.8**	**-4.5**
LCO						*e*PcP	PcP	07 07 26.3	+3.8
ARE	**Arequipa**	**6.34**	**352**	⇑	*i*P		**Pn**	**07 00 21.1**	**-4.0**
ARE						*e*S	**Sn**	**07 01 25.0**	**-12**
CFAA	**Coronel Fontan**	**9.03**	**167**		Pn		**Pn**	**07 01 01.4**	**-0.5**
	comp=E,0.2nm,0.3s,baz=335,slow=12,SNR=17								
CFAA					Sn		**Sn**	**07 02 52.0**	**+9.3**
	comp=E,0.1nm,0.3s,baz=310,slow=12,SNR=3.1								
CFAA	**Coronel Fontan**	**9.03**	**167**		Pn		**Pn**	**07 01 01.4**	**-0.5**
CFAA					Sn		**Sn**	**07 02 52.0**	**+9.3**
SIV	**San Ignacio**	**11.19**	**55**		Pn		**Pn**	**07 01 31.4**	**-0.2**
	comp=E,2.2nm,0.3s,baz=243,slow=13,SNR=111								
NNA	**Nana**	**12.29**	**330**		Pn		**Pn**	**07 01 48.2**	**+1.5**
	comp=E,0.8nm,0.3s,baz=149,slow=18,SNR=2.8								
NNA					LR		LR	07 05 47.2	
	comp=E,1μm,21.6s,baz=145,slow=34								
NNA	**Nana**	**12.29**	**330**		*e*Pn		**Pn**	**07 01 47.8**	**+1.1**
NNA						*e*Sn	**Sn**	**07 04 00.5**	**-2.3**
LPA	**La Plata**	**16.36**	**140**		*d*eP		**Pn**	**07 02 37.0**	**-4.1**
LPA	**La Plata**	**16.36**	**140**		*e*P		**Pn**	**07 02 37.0**	**-4.1**
ATAH	**Atahualpa**	**17.41**	**333**		P		**Pn**	**07 02 54.3**	**-0.1**
	comp=E,0.3nm,0.3s,baz=165,slow=8.7,SNR=8.5								
ATAH					LR		LR	07 08 59.6	
	comp=E,661nm,18.2s,baz=164,slow=35								
PLCA	**Paso Flores**	**17.91**	**180**		P		**Pn**	**07 03 01.3**	**+1.0**
	comp=E,0.2nm,0.3s,baz=350,slow=13,SNR=7.0								
PLCA					LR		LR	07 09 41.3	
	comp=E,787nm,20.9s,baz=0.2,slow=36								
PLCA	**Paso Flores**	**17.91**	**180**		*e*P		**Pn**	**07 03 01.6**	**+1.3**
	comp=E,23nm,1.2s								
PLCA						*e*PcP	PcP	07 07 35.2	-0.4
PLCA	**Paso Flores**	**17.91**	**180**		*e*P		**Pn**	**07 03 01.6**	**+1.3**
PLCA					pmax		pmax		
	comp=Z,23nm,1.2s								
BDFB	**Brasilia**	**22.41**	**76**		P		**P**	**07 03 48.1**	**-1.7**
	comp=Z,5.5nm,0.6s,mb4.2,baz=250,slow=18,SNR=26								
BDFB					LR		LR	07 13 55.4	
	comp=Z,1μm,18.8s,MS4.4,baz=89,slow=40								
BDFB	**Brasilia**	**22.41**	**76**		*e*P		**P**	**07 03 50.0**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.2								
BDFB	**Brasilia**	**22.41**	**76**		P		**P**	**07 03 48.1**	**-1.7**
BDFB					pmax		pmax		
	comp=Z,6.0nm,0.6s								
BDFB					MLR		MLR		
	comp=Z,1μm,18.8s								
OTAV	**Otavalo**	**24.13**	**340**		*e*P		**P**	**07 04 08.7**	**+1.6**
	comp=Z,5.6nm,0.9s,mb4.0								
ROSC	**El Rosal**	**27.71**	**352**		LR		LR	07 16 20.3	
	comp=Z,550nm,22.0s,MS4.1,baz=24,slow=38								
EFI	**East Falkland**	**30.42**	**165**		*i* P		**P**	**07 05 01.8**	**-1.4**
RCBR	**Riachuelo**	**37.41**	**69**		*e*P		**P**	**07 06 04.6**	**+0.3**
	comp=Z,18nm,0.7s,mb5.0								
RKT	**Rikitea**	**58.87**	**256**		*e*LR		LR	07 26 28.5	
	comp=Z,961nm,24.8s								
VNA3	**Neumayer Olymp**	**59.37**	**161**		*e*P		**P**	**07 08 53.0**	**+0.3**
VNA3						*e*	pP	07 09 01.1	-0.3
VNA3						*e*		07 09 03.6	
SWET	**Sewanee**	**59.49**	**345**		*e*P		**P**	**07 08 53.0**	**-0.9**
VNA1	**Neumayer--Stat**	**59.60**	**160**		*e*P		**P**	**07 08 55.1**	**+0.8**
OXF	**Oxford**	**59.72**	**342**		*e*P		**P**	**07 08 52.1**	**-3.4**
	comp=Z,27nm,0.9s,mb5.3								
OXF	**Oxford**	**59.72**	**342**		*e*P		**P**	**07 08 52.1**	**-3.4**
OXF					pmax		pmax		
	comp=Z,27nm,0.9s,mb5.3								
JCT	**Junction City**	**59.94**	**331**		*e*P		**P**	**07 08 56.0**	**-1.1**
	comp=Z,12nm,0.9s,mb4.9								
JCT	**Junction City**	**59.94**	**331**		*e*P		**P**	**07 08 56.0**	**-1.1**
JCT					pmax		pmax		
	comp=Z,12nm,0.9s,mb4.9								
VNA2	**Neumayer--Watz**	**59.96**	**160**		*e*P		**P**	**07 08 57.6**	**+0.8**
	baz=283,slow=8.3								
VNA2						*e*	pP	07 09 05.2	-0.3
VNA2						*e*		07 09 08.5	
WVT	**Waverly**	**60.82**	**344**		*e*P		**P**	**07 09 00.7**	**-2.3**
	comp=Z,240nm,3.0s								
WVT	**Waverly**	**60.82**	**344**		*e*P		**P**	**07 09 00.7**	**-2.3**
WVT					pmax		pmax		
	comp=Z,240nm,3.0s								
TXAR	**Lajitas Array**	**60.83**	**327**		P		**P**	**07 09 02.3**	**-0.9**
	comp=Z,2.9nm,0.9s,mb4.4,baz=146,slow=9.2,SNR=17								
TXAR					LR		LR	07 31 54.5	
	comp=Z,262nm,19.6s,MS4.4,baz=50,slow=33								
MIAR	**Mount Ida**	**61.06**	**338**		*e*P		**P**	**07 09 03.3**	**-1.3**
	comp=Z,11nm,0.9s,mb5.0								
MIAR	**Mount Ida**	**61.06**	**338**		*e*P		**P**	**07 09 03.3**	**-1.4**
MIAR					pmax		pmax		
	comp=Z,11nm,0.9s,mb5.0								
SNAA	**Sanae**	**61.58**	**161**		*e*P		**P**	**07 09 03.8**	**-4.0**
SNAA						*e*	pP	07 09 12.0	-4.6
SNAA	**Sanae**	**61.58**	**161**		*e*P		**P**	**07 09 04.2**	**-3.6**
	comp=Z,8.6nm,0.9s,mb4.9								
SNAA	**Sanae**	**61.58**	**161**		*d*iP		**P**	**07 09 04.3**	**-3.5**
SNAA					pmax		pmax		
	comp=Z,9.0nm,1.0s								
SIUC	**Southern Illin**	**62.68**	**343**		*e*P		**P**	**07 09 13.8**	**-1.7**
	comp=Z,30nm,1.1s,mb5.3								
FVM	**French Village**	**63.26**	**342**		*e*P		**P**	**07 09 17.7**	**-1.6**
	comp=Z,23nm,1.2s,mb5.2								
FVM	**French Village**	**63.26**	**342**		*e*P		**P**	**07 09 17.7**	**-1.6**
FVM					pmax		pmax		
	comp=Z,23nm,1.2s,mb5.2								
GDL2	**Guadalupe Moun**	**63.52**	**328**		*e*P		**P**	**07 09 21.1**	**0.0**
CCM	**Cathedral Cave**	**63.56**	**342**		*e*P		**P**	**07 09 19.5**	**-1.8**
	comp=Z,173nm,3.0s								
CCM	**Cathedral Cave**	**63.56**	**342**		*e*P		**P**	**07 09 19.5**	**-1.8**
CCM					pmax		pmax		
	comp=Z,173nm,3.0s								
ACSO	**Alum Creek Sta**	**63.74**	**349**		*e*P		**P**	**07 09 21.2**	**-1.3**
	comp=Z,25nm,1.3s,mb5.1								
BBTS	**Babate**	**64.65**	**60**		LR		LR	07 36 05.5	
	comp=Z,490nm,19.8s,MS4.7,baz=37,slow=34								
319A	**Douglas**	**65.40**	**324**		⇓P		**P**	**07 09 33.6**	**+0.1**
	baz=66,SNR=5.6								
318A	**Bisbee**	**65.83**	**323**		⇑P		**P**	**07 09 36.4**	**+0.1**
	baz=66,SNR=12								
219A	**White Tail Can**	**65.86**	**324**		⇑P		**P**	**07 09 36.4**	**-0.1**
	baz=66								
BNM	**Barren Site**	**66.20**	**328**		*e*P		**P**	**07 09 38.5**	**-0.1**
	comp=Z,8.3nm,1.2s,mb4.6								
BNM						*e*pP	pP	07 09 52.6	+5.1
218A	**Dragoon**	**66.27**	**324**		⇓P		**P**	**07 09 39.2**	**+0.1**
	baz=66,SNR=8.8								
LPM	**Los Pinos Moun**	**66.33**	**328**		*e*P		**P**	**07 09 39.8**	**+0.4**
119A	**Ashpeak Ranch,**	**66.48**	**325**		⇑P		**P**	**07 09 40.6**	**+0.2**
	baz=67								
217A	**Green Valley**	**66.54**	**323**		⇓P		**P**	**07 09 40.7**	**-0.2**
	baz=67,SNR=7.7								
LAZ	**Ladron**	**66.66**	**328**		*e*P		**P**	**07 09 42.0**	**+0.4**
	comp=Z,6.4nm,1.3s,mb4.5								
LAZ						*e*pP	pP	07 09 56.2	+5.8
118A	**Homack Ranch,**	**66.74**	**324**		⇓P		**P**	**07 09 42.1**	**0.0**
	baz=67,SNR=5.6								
ANMO	**Albuquerque**	**66.76**	**328**		*e*P		**P**	**07 09 42.4**	**+0.2**
	comp=Z,7.6nm,1.1s,mb4.6								
ANMO	**Albuquerque**	**66.76**	**328**		*e*P		**P**	**07 09 42.4**	**+0.2**
ANMO					pmax		pmax		
	comp=Z,8.0nm,1.1s								
Z19A	**T-Link Ranch,**	**66.87**	**325**		⇓P		**P**	**07 09 43.2**	**+0.3**
	baz=67								
216A	**Three Points,**	**67.07**	**323**		⇓P		**P**	**07 09 44.2**	**-0.1**
	baz=67								
117A	**Oracle**	**67.11**	**324**		⇑P		**P**	**07 09 44.0**	**-0.4**
	baz=67,SNR=11								
Y19A	**Nutrioso**	**67.38**	**326**		⇑P		**P**	**07 09 47.2**	**+1.1**
	baz=68,SNR=21								
116A	**Eloy**	**67.63**	**323**		⇑P		**P**	**07 09 47.9**	**+0.2**
	baz=68								
Y18A	**Canyon Day Jun**	**67.65**	**325**		⇑P		**P**	**07 09 48.1**	**+0.3**
	baz=68,SNR=5.8								
X19A	**St. Johns**	**67.77**	**326**		⇑P		**P**	**07 09 48.8**	**+0.2**
	baz=68								
214A	**Organ Pipe Nat**	**67.80**	**322**		⇓P		**P**	**07 09 49.0**	**+0.1**
	baz=68,SNR=7.4								
Y17A	**Roosevelt**	**68.02**	**324**		⇓P		**P**	**07 09 50.6**	**+0.4**
	baz=68,SNR=15								
115A	**Sonoran Desert**	**68.02**	**323**		⇓P		**P**	**07 09 50.5**	**+0.3**
	baz=68								
Z16A	**Peralta Trail,**	**68.06**	**324**		⇑P		**P**	**07 09 50.7**	**+0.2**
	baz=68,SNR=6.9								
X18A	**Snowflake**	**68.19**	**326**		⇑P		**P**	**07 09 51.7**	**+0.4**
	baz=68								
W19A	**Saleders**	**68.35**	**326**		⇓P		**P**	**07 09 52.7**	**+0.5**
	baz=69								
Z15A	**Gila River Ind**	**68.43**	**323**		⇑P		**P**	**07 09 53.2**	**+0.5**
	baz=69								
Y16A	**Circle Bar Ran**	**68.50**	**324**		⇑P		**P**	**07 09 53.4**	**+0.3**
	baz=69,SNR=5.6								
W18A	**Petrified Fore**	**68.53**	**326**		⇓P		**P**	**07 09 53.6**	**+0.2**
	baz=69								
SDCO	**Great Sand Dun**	**68.59**	**331**		*e*P		**P**	**07 09 54.0**	**+0.3**
	comp=Z,16nm,1.2s,mb4.8								
V19A	**Window Rock**	**68.65**	**327**		⇓P		**P**	**07 09 54.3**	**+0.3**
	baz=69,SNR=11								
X16A	**Lo Mia Camp, P**	**68.89**	**325**		⇓P		**P**	**07 09 56.1**	**+0.5**
	baz=69,SNR=6.8								
113A	**Mohawk Valley,**	**68.94**	**322**		⇑P		**P**	**07 09 56.2**	**+0.3**
	baz=69								
W17A	**Winslow**	**69.01**	**325**		⇓P		**P**	**07 09 56.6**	**+0.3**
	baz=69								
Y15A	**Casa Rosa Ranc**	**69.02**	**324**		⇓P		**P**	**07 09 56.4**	**0.0**
	baz=69,SNR=6.4								
V18A	**Ganado**	**69.09**	**326**		⇓P		**P**	**07 09 57.1**	**+0.2**
	baz=69								
112A	**Yuma**	**69.24**	**321**		⇑P		**P**	**07 09 58.2**	**+0.4**
	baz=70								
X15A	**Humboldt**	**69.37**	**324**		⇑P		**P**	**07 09 59.0**	**+0.4**
	baz=70,SNR=8.4								
Y14A	**Wickenburg**	**69.38**	**323**		⇑P		**P**	**07 09 59.0**	**+0.3**
	baz=70								
W16A	**Flagstaff**	**69.45**	**325**		⇓P		**P**	**07 09 59.5**	**+0.4**
	baz=70,SNR=6.0								
T19A	**Beclabito**	**69.52**	**328**		⇑P		**P**	**07 09 59.8**	**+0.4**
	baz=70								
MVCO	**Mesa Verde**	**69.56**	**328**		*e*P		**P**	**07 10 00.1**	**+0.4**
	comp=Z,9.5nm,1.1s,mb4.6								
MVCO	**Mesa Verde**	**69.56**	**328**		⇑P		**P**	**07 09 59.6**	**-0.1**
	baz=70,SNR=5.6								
U18A	**Rough Rock, Ch**	**69.61**	**327**		⇓P		**P**	**07 10 00.3**	**+0.3**
	baz=70,SNR=7.6								
WUAZ	**Wupatki**	**69.69**	**325**		*e*P		**P**	**07 10 00.9**	**+0.3**
	comp=Z,13nm,1.0s,mb4.8								
WUAZ	**Wupatki**	**69.69**	**325**		⇑P		**P**	**07 10 01.0**	**+0.4**
	baz=70,SNR=8.1								
X14A	**Yava**	**69.71**	**324**		⇑P		**P**	**07 10 00.9**	**+0.2**
	baz=70								
Y13A	**Salome**	**69.75**	**323**		⇓P		**P**	**07 10 01.0**	**0.0**
	baz=70,SNR=5.2								
GLA	**Glamis**	**69.76**	**321**		⇓P		**P**	**07 10 01.3**	**+0.2**
	baz=70								
W15A	**Williams**	**69.91**	**325**		⇓P		**P**	**07 10 02.5**	**+0.6**
	baz=70								
U16A	**Tuba City**	**70.04**	**326**		⇓P		**P**	**07 10 03.1**	**+0.5**
	baz=70,SNR=6.3								
Y12C	**Blythe**	**70.09**	**322**		⇑P		**P**	**07 10 03.2**	**+0.1**
	baz=70								
U17A	**Shonto**	**70.15**	**327**		⇑P		**P**	**07 10 04.0**	**+0.6**
	baz=70								
T18A	**Mexican Hat**	**70.17**	**327**		⇓P		**P**	**07 10 03.5**	**0.0**
	baz=70,SNR=12								
LIC	**Lamto**	**70.19**	**74**		*e*P		**P**	**07 10 02.6**	**-1.5**
	comp=Z,81nm,2.2s,mb5.3								
DVTC	**Desert V Tower**	**70.22**	**320**		⇑P		**P**	**07 10 04.0**	**+0.2**
	baz=70								
SWSC	**Sam W. Stewart**	**70.24**	**321**		⇑P		**P**	**07 10 04.4**	**+0.5**
	baz=70								
PDMCI	**Parker Dam,Lak**	**70.28**	**323**		⇓P		**P**	**07 10 04.4**	**+0.2**
	baz=70								
S19A	**Harvey Farm, M**	**70.29**	**328**		⇑P		**P**	**07 10 04.3**	**+0.1**
	baz=71,SNR=13								
X13A	**Yucca**	**70.32**	**323**		⇓P		**P**	**07 10 04.8**	**+0.3**
	baz=71,SNR=7.3								
PV01	**Paradox Valley**	**70.33**	**329**		*e*P		**P**	**07 10 03.0**	**-1.4**
	comp=Z,1μm,1.3s								
ISCO	**Idaho Springs**	**70.33**	**332**		*e*P		**P**	**07 10 04.7**	**+0.4**
	comp=Z,61nm,2.5s,mb5.1								
ISCO	**Idaho Springs**	**70.33**	**332**		*e*P		**P**	**07 10 04.7**	**+0.3**
ISCO					pmax		pmax		
	comp=Z,61nm,2.5s,mb5.1								
V15A	**Kaibab Nationa**	**70.34**	**325**		⇓P		**P**	**07 10 05.4**	**+0.9**
	baz=71,SNR=6.9								
W14A	**Seligman**	**70.37**	**324**		⇑P		**P**	**07 10 05.2**	**+0.5**
	baz=71								
ECSD	**EROS,Sioux Fal**	**70.38**	**340**		*e*P		**P**	**07 10 03.1**	**-1.4**
	comp=Z,137nm,2.7s,mb5.4								
TIC	**Tonopah**	**70.39**	**74**		*e*P		**P**	**07 10 05.2**	**-0.1**
	comp=Z,176nm,1.8s,mb5.7								
SMCO	**Snowmass**	**70.43**	**331**		*e*P		**P**	**07 10 05.7**	**+0.8**
	comp=Z,11nm,1.1s,mb4.7								
KIC	**Kosan Boka**	**70.50**	**74**		*e*P		**P**	**07 10 05.8**	**-0.3**
	comp=Z,30nm,0.7s,mb5.3								
T17A	**Navajo Res., N**	**70.53**	**327**		⇑P		**P**	**07 10 06.3**	**+0.6**
	baz=71,SNR=11								
DBIC	**Dimbokro**	**70.54**	**74**		P		**P**	**07 10 05.6**	**-0.7**
	comp=Z,5.3nm,0.6s,mb4.6,baz=240,slow=6.0,SNR=9.4								
DBIC					LR		LR	07 39 01.5	
	comp=Z,328nm,19.6s,MS4.6,baz=200,slow=34								
DBIC	**Dimbokro**	**70.54**	**74**		*e*P		**P**	**07 10 06.1**	**-0.2**
	comp=Z,5.7nm,0.7s,mb4.6								
MONP	**Monument Peak**	**70.57**	**320**		⇓P		**P**	**07 10 06.7**	**+0.7**
	baz=71								
S18A	**Hurst Farm, Bl**	**70.67**	**328**		⇑P		**P**	**07 10 07.1**	**+0.7**
	baz=71,SNR=21								
V14A	**Boquillas Ranc**	**70.70**	**324**		⇓P		**P**	**07 10 07.5**	**+0.8**
	baz=71,SNR=10								
W13A	**Hualapai Mount**	**70.73**	**323**		⇑P		**P**	**07 10 07.4**	**+0.5**
	baz=71								
PV10	**Paradox Valley**	**70.74**	**329**		*e*P		**P**	**07 10 06.3**	**-0.6**
	comp=Z,96nm,1.0s,mb5.7								
IRM	**Iron Mountain**	**70.75**	**322**		⇑P		**P**	**07 10 07.2**	**+0.1**
	baz=71,SNR=9.6								
R19A	**Curley Farm, L**	**70.78**	**329**		⇓P		**P**	**07 10 06.9**	**-0.3**
	baz=71,SNR=7.3								
U15A	**North Rim**	**70.86**	**325**		⇓P		**P**	**07 10 08.4**	**+0.7**
	baz=71,SNR=7.7								
T16A	**Glen Canyon Da**	**70.88**	**326**		⇓P		**P**	**07 10 08.4**	**+0.6**
	baz=71								
S17A	**Black Ridge (B**	**71.03**	**327**		⇓P		**P**	**07 10 09.2**	**+0.5**
	baz=71								
PFO	**Pinyon Flat Ob**	**71.10**	**321**		*e*P		**P**	**07 10 09.9**	**+0.7**
	comp=Z,7.0nm,1.2s,mb4.5								
PFO	**Pinyon Flat Ob**	**71.10**	**321**		⇑P		**P**	**07 10 09.1**	**-0.1**
	baz=71,SNR=5.7								
PFO	**Pinyon Flat Ob**	**71.10**	**321**		*e*P		**P**	**07 10 09.9**	**+0.7**
PFO					pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.5								
R18A	**Canyonlands Na**	**71.16**	**328**		⇑P		**P**	**07 10 09.0**	**-0.4**
	baz=71,SNR=5.5								
Q19A	**Hogan Spring (**	**71.31**	**329**		⇑P		**P**	**07 10 10.1**	**-0.3**
	baz=72,SNR=5.1								
U14A	**Mt Trumbull**	**71.33**	**325**		⇓P		**P**	**07 10 10.9**	**+0.4**
	baz=72,SNR=15								
V13A	**Grand Canyon W**	**71.34**	**324**		⇑P		**P**	**07 10 11.1**	**+0.5**
	baz=72,SNR=8.4								
T15A	**Red Dirt Ranch**	**71.36**	**326**		⇓P		**P**	**07 10 11.1**	**+0.4**
	baz=72								
LDFC	**Landfair**	**71.39**	**323**		*e*P		**P**	**07 10 12.0**	**+1.1**
GMRC	**Granite Mounta**	**71.48**	**322**		⇑P		**P**	**07 10 11.9**	**+0.4**
	baz=72,SNR=5.7								
S16A	**Weppner Ranch,**	**71.49**	**327**		⇑P		**P**	**07 10 11.7**	**+0.2**
	baz=72								
R17A	**Hanksville Air**	**71.59**	**328**		⇓P		**P**	**07 10 11.8**	**-0.2**
	baz=72,SNR=12								
P19A	**Cripple Cowboy**	**71.71**	**330**		⇓P		**P**	**07 10 13.3**	**+0.5**
	baz=72,SNR=11								
V12A	**Nelson**	**71.72**	**323**		⇓P		**P**	**07 10 12.9**	**-0.1**
	baz=72,SNR=8.3								
U13A	**Pakoon Wash**	**71.75**	**324**		⇓P		**P**	**07 10 13.5**	**+0.5**
	baz=72								
T14A	**Hurricane**	**71.76**	**325**		⇑P		**P**	**07 10 13.8**	**+0.7**
	baz=72								
BBRC	**Big Bear Sol-O**	**71.84**	**321**		⇓P		**P**	**07 10 13.9**	**+0.2**
	baz=72								
Q18A	**Rafter H Ranch**	**71.84**	**329**		⇓P		**P**	**07 10 13.9**	**+0.3**
	baz=72								
S15A	**Panguitch**	**71.85**	**326**		⇓P		**P**	**07 10 13.8**	**+0.2**
	baz=72								
R16A	**Teasdale**	**71.87**	**327**		⇑P		**P**	**07 10 14.4**	**+0.6**
	baz=72								
HEC	**Hector,Ludlow**	**71.90**	**322**		⇓P		**P**	**07 10 14.4**	**+0.4**
	baz=72								
SRU	**San Rafael**	**72.04**	**328**		*e*P		**P**	**07 10 15.1**	**+0.4**
	comp=Z,5.9nm,1.0s,mb4.5								
SRU	**San Rafael**	**72.04**	**328**		⇑P		**P**	**07 10 14.9**	**+0.2**
	baz=72,SNR=5.0								
SRU	**San Rafael**	**72.04**	**328**		*e*P		**P**	**07 10 15.1**	**+0.4**
SRU					pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5								
TUQ	**Turquoise Moun**	**72.11**	**322**		⇑P		**P**	**07 10 15.4**	**+0.2**
	baz=72,SNR=5.1								
V11A	**Goodsprings**	**72.12**	**323**		⇓P		**P**	**07 10 15.3**	**-0.1**
	baz=72								
T13A	**Saint George**	**72.16**	**325**		⇑P		**P**	**07 10 16.0**	**+0.5**
	baz=72								
Q16A	**Castle Valley**	**72.20**	**328**		⇑P		**P**	**07 10 16.1**	**+0.4**
	baz=72,SNR=5.0								
R15A	**Junction**	**72.21**	**327**		⇑P		**P**	**07 10 16.3**	**+0.5**
	baz=72								
BFSC	**Mount Baldy St**	**72.25**	**320**		⇓P		**P**	**07 10 16.6**	**+0.4**
	baz=72								
P18A	**Preston Nutter**	**72.31**	**329**		⇑P		**P**	**07 10 16.5**	**+0.2**
	baz=73,SNR=8.1								
MSU	**Marysvale**	**72.39**	**327**		*e*P		**P**	**07 10 17.

DUG **Dugway** 74.00 328 ⇓P P 07 10 26.3 0.0
baz=74,SNR=9.2
DUG **Dugway** 74.00 328 eP P 07 10 26.4 +0.1
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
L18A **Fontenelle, Gr** 74.02 330 ⇑P P 07 10 25.9 -0.5
baz=74,SNR=9.4
P13A **Bates Ranch, G** 74.04 326 ⇑P P 07 10 26.7 +0.1
baz=74,SNR=5.9
R11A **Troy Canyon, C** 74.04 325 ⇑P P 07 10 26.7 +0.1
baz=74
GRAC **Grapevine Rang** 74.04 323 ⇓P P 07 10 27.0 +0.4
baz=74
CWC **Cottonwood Cre** 74.05 322 ⇓P P 07 10 27.2 +0.5
baz=74
Q12A **Willow Creek R** 74.15 326 ⇓P P 07 10 27.4 +0.2
baz=74
K19A **Absolon Red Bu** 74.21 332 ⇑P P 07 10 27.3 -0.2
baz=74
VES **Vestal, Richgr** 74.21 321 ⇓P P 07 10 27.7 +0.1
baz=74
S10A **Tonopah Range,** 74.28 324 ⇑P P 07 10 27.7 -0.3
baz=74
M16A **Huntsville** 74.28 329 ⇑P P 07 10 28.1 +0.2
baz=74
R10A **Warm Springs** 74.38 324 ⇓P P 07 10 28.9 +0.3
baz=75,SNR=6.5
N15A **Stansbury Isla** 74.38 328 ⇑P P 07 10 28.6 0.0
baz=75
Q11A **Duckwater** 74.44 325 ⇑P P 07 10 29.1 +0.1
baz=75,SNR=5.4
PDAR **Pinedale Array** 74.47 331 P P 07 10 28.3 -0.7
comp=Z,0.9nm,1.1s,baz=168,slow=10,SNR=5.0
PDAR LR LR 07 42 21.2
comp=Z,72nm,18.8s,MS4.0,baz=234,slow=35
HWUT **Hardware Ranch** 74.48 329 eP P 07 10 29.0 -0.1
comp=Z,7.4nm,1.0s,mb4.6
S09A **Goldfield** 74.48 323 ⇓P P 07 10 29.5 +0.3
baz=75
O13A **Hicks Ranch, I** 74.53 327 ⇓P P 07 10 29.5 +0.1
baz=75
K18A **Toltan Ranch,** 74.59 331 ⇑P P 07 10 29.9 +0.3
baz=75,SNR=7.2
SPUT **South Promonto** 74.67 329 eP P 07 10 30.4 +0.2
N14A **Grayback Hills** 74.68 328 ⇑P P 07 10 30.1 -0.1
baz=75,SNR=5.7
L16A **Fish Haven** 74.73 330 ⇑P P 07 10 30.5 0.0
baz=75
R09A **Tonopah** 74.77 324 ⇓P P 07 10 30.5 -0.3
baz=75
M15A **Larsen Ranch,** 74.79 329 ⇓P P 07 10 30.5 -0.3
baz=75,SNR=7.5
Q10A **Clear Creek Ra** 74.82 324 ⇓P P 07 10 31.0 -0.1
baz=75
O12A **Currie** 75.02 326 ⇑P P 07 10 32.6 +0.3
baz=75
J18A **Kendall Valley** 75.03 331 ⇓P P 07 10 31.9 -0.3
baz=75,SNR=8.3
K17A **Gardner Place,** 75.07 330 ⇑P P 07 10 31.7 -0.8
baz=75,SNR=6.2
L15A **Malad City** 75.17 329 ⇑P P 07 10 32.5 -0.6
baz=75,SNR=7.1
M14A **Sheep Mountain** 75.25 328 ⇑P P 07 10 33.0 -0.6
baz=76,SNR=7.4
I18A **Diamond G Ranc** 75.33 332 ⇑P P 07 10 33.7 -0.2
baz=76,SNR=5.9
VNDA **Vanda** 75.34 190 P P 07 10 33.8 +0.2
comp=Z,1.9nm,0.8s,mb4.1,baz=23,slow=0.1,SNR=3.8
VNDA **Vanda** 75.34 190 P P 07 10 33.8 +0.1
VNDA pmax pmax
comp=Z,2.0nm,0.8s
K16A **Soda Springs** 75.44 330 ⇑P P 07 10 35.0 +0.3
baz=76,SNR=8.7
J17A **Brown Place, J** 75.46 331 ⇑P P 07 10 35.1 +0.4
baz=76
REDW **Red Top Meadow** 75.52 331 eP P 07 10 35.2 +0.2
comp=Z,9.1nm,1.1s,mb4.6
SNOW **Snow King Moun** 75.56 331 eP P 07 10 35.5 +0.2
comp=Z,82nm,2.5s,mb5.2
U04C **Hernandez Rese** 75.57 320 ⇑P P 07 10 35.8 +0.3
baz=76
NVAR **Mina Array Bea** 75.58 323 P P 07 10 35.4 -0.1
comp=Z,2.2nm,1.0s,mb4.0,baz=140,slow=6.0,SNR=10
L14A **Malta** 75.61 329 ⇑P P 07 10 35.2 -0.3
baz=76,SNR=7.8
LOHW **Long Hollow** 75.61 331 eP P 07 10 35.7 +0.2
comp=Z,128nm,3.0s
ELK **Elko** 75.63 327 LR LR 07 41 41.6
comp=Z,178nm,18.8s,MS4.4,baz=117,slow=34
ELK **Elko** 75.63 327 eP P 07 10 35.6 -0.1
comp=Z,2.5nm,0.5s,mb4.4
ELK **Elko** 75.63 327 eP P 07 10 35.6 -0.1
ELK pmax pmax
comp=Z,3.0nm,0.5s
TPAW **Teton Pass** 75.67 331 eP P 07 10 36.3 +0.4
comp=Z,7.2nm,1.1s,mb4.5
Q08A **Gabbs** 75.68 324 ⇑P P 07 10 35.4 -0.7
baz=76
RRI2 **Red Ridge** 75.72 331 eP P 07 10 36.5 +0.3
comp=Z,15nm,1.2s,mb4.8
K15A **Arbon** 75.77 329 ⇑P P 07 10 36.2 -0.3
baz=76
MOOW **Moose Ponds** 75.78 331 eP P 07 10 36.5 0.0
comp=Z,16nm,1.9s,mb4.6
J16A **Bone** 75.80 330 ⇓P P 07 10 36.6 0.0
baz=76
I17A **Pilgram Creek** 75.84 331 ⇓P P 07 10 37.5 +0.6
baz=76
SYO **Syowa Base** 75.84 160⇑ eP P 07 10 29.7 -7.0
SYO **Syowa Base** 75.84 160⇑ eP P 07 10 34.6 -2.1
M12A **Wells** 75.96 327 ⇑P P 07 10 37.2 -0.4
baz=76
K14A **Jones Ranch, D** 75.97 329 ⇓P P 07 10 37.4 -0.2
baz=76
S05C **Merced** 75.97 321 ⇓P P 07 10 37.9 +0.1
baz=76
IMW **Indian Meadow** 75.98 331 eP P 07 10 38.1 +0.4
comp=Z,5.3nm,1.0s,mb4.4
L13A **Double Diamond** 75.99 328 ⇓P P 07 10 37.9 +0.1
baz=76,SNR=6.1
I16A **Newdale** 76.21 331 ⇑P P 07 10 39.2 +0.2
baz=76
RLMT **Red Lodge** 76.23 333 ⇓P P 07 10 39.5 +0.4
baz=76
N10A **Dunphy** 76.26 326 ⇓P P 07 10 39.2 -0.1
baz=76
J15A **Blackfoot** 76.27 330 ⇑P P 07 10 39.7 +0.3
baz=76
R06C **Coleville** 76.28 323 ⇓P P 07 10 39.2 -0.4
baz=76
LAO **LASA Array** 76.29 336 eP P 07 10 38.8 -0.6
comp=Z,165nm,2.6s,mb5.5
P08A **Dixie Valley** 76.36 324 ⇓P P 07 10 40.1 +0.2
baz=77
M11A **Holland Ranch,** 76.42 327 ⇓P P 07 10 40.3 +0.1
baz=77
K13A **Stover Farm, H** 76.48 328 ⇓P P 07 10 40.8 +0.3
baz=77
G18A **Lazy EL Ranch,** 76.51 333 ⇑P P 07 10 41.1 +0.4
baz=77
L12A **House Creek Ra** 76.56 328 ⇑P P 07 10 40.7 -0.3
baz=77
J14A **Carey** 76.72 329 ⇑P P 07 10 42.2 +0.3
baz=77
H16A **Russell Place,** 76.75 331 ⇑P P 07 10 42.4 +0.4
baz=77
I15A **Monteview** 76.76 330 ⇑P P 07 10 42.7 +0.6
baz=77
O08A **Rochester Mine** 76.82 325 ⇑P P 07 10 43.0 +0.5
baz=77
K12A **Draper Farm, C** 76.87 328 ⇑P P 07 10 43.0 +0.2
baz=77,SNR=5.9
GCMT **Greycliff** 76.94 333 eP P 07 10 42.4 -0.6
comp=Z,10nm,1.5s,mb4.5
L11A **Cat Creek Ranc** 76.94 327 ⇑P P 07 10 43.4 +0.2
baz=77
WCN **Washoe City** 77.00 323 ⇓P P 07 10 43.7 +0.1
baz=77
G17A **Pierce Place,** 77.02 332 ⇓P P 07 10 43.7 +0.2
baz=77
F18A **Big Timber** 77.05 333 ⇑P P 07 10 43.5 -0.2
baz=77,SNR=6.6
PAHR **Pah Rah Range** 77.07 323 eP P 07 10 44.7 +0.8
comp=Z,16nm,1.2s,mb4.8
J13A **Cove Ranch, Pi** 77.09 329 ⇓P P 07 10 44.2 +0.3
baz=77
O07A **Toulon** 77.12 324 ⇓P P 07 10 44.0 -0.2
baz=77
I14A **Mackay** 77.15 330 ⇓P P 07 10 44.5 +0.2
baz=77
N08A **GE Springer Mi** 77.16 325 ⇓P P 07 10 44.3 -0.1
baz=77
LAVA **Lava Cap Winer** 77.17 322 ⇑P P 07 10 44.3 -0.3
baz=77
L10A **Juniper Basin** 77.23 327 ⇓P P 07 10 44.7 -0.1
baz=78,SNR=6.6
M09A **Marrel Ranch,** 77.26 326 ⇓P P 07 10 45.0 0.0
baz=78
H15A **Lima** 77.31 331 ⇑P P 07 10 45.8 +0.6
baz=78
HLID **Hailey** 77.33 329 eP P 07 10 46.0 +0.7
comp=Z,7.4nm,1.0s,mb4.6
HLID **Hailey** 77.33 329 ⇓P P 07 10 45.8 +0.5
baz=78,SNR=10
G16A **Moss Hill, Enn** 77.41 331 ⇑P P 07 10 45.7 0.0
baz=78
J12A **Stokes Ranch,** 77.42 328 ⇓P P 07 10 46.2 +0.4
baz=78
F17A **Fitzpatrick Pl** 77.45 333 ⇓P P 07 10 45.8 -0.1
baz=78
I13A **Wildhorse Cree** 77.45 329 ⇓P P 07 10 46.4 +0.4
baz=78,SNR=5.4
K11A **Parker Ranch,** 77.53 327 ⇓P P 07 10 46.2 -0.2
baz=78
MCMT **McKenzie Canyo** 77.57 331 eP P 07 10 47.1 +0.5
comp=Z,2.2nm,1.1s,mb4.0
N07B **Gerlach** 77.61 324 ⇑P P 07 10 46.7 -0.2
baz=78,SNR=6.9
H14A **Leadore** 77.64 330 ⇑P P 07 10 47.2 +0.2
baz=78
BOZ **Bozeman (W)** 77.66 332 eP P 07 10 47.5 +0.4
comp=Z,56nm,2.9s,mb5.0
BOZ **Bozeman (W)** 77.66 332 ⇑P P 07 10 46.9 -0.2
baz=78
BOZ **Bozeman (W)** 77.66 332 eP P 07 10 47.5 +0.4
BOZ pmax pmax
comp=Z,56nm,2.9s,mb5.0
E18A **Harlowton** 77.66 333 ⇑P P 07 10 47.3 +0.2
baz=78
G15A **Dillon** 77.67 331 ⇑P P 07 10 47.2 +0.1
baz=78,SNR=5.4
BEKR **Beckwourth** 77.72 323 ⇓P P 07 10 47.7 +0.1
baz=78
F16A **Kennard Place,** 77.77 332 ⇓P P 07 10 48.1 +0.4
baz=78
L09A **Wilkinson Ranc** 77.80 326 ⇑P P 07 10 48.0 0.0
baz=78
I12A **Atlanta** 77.85 329 ⇓P P 07 10 48.2 0.0
baz=78
DLMT **Dillon** 77.87 331 eP P 07 10 48.7 +0.5
comp=Z,8.4nm,1.1s,mb4.6
MFID **Camas Ranch** 77.90 328 ⇑P P 07 10 48.6 +0.1
baz=78
K10A **MacKenzie Ranc** 77.95 327 ⇑P P 07 10 48.6 -0.2
baz=78
E17A **Martinsdale** 77.97 333 ⇑P P 07 10 49.0 +0.2
baz=78
H13A **Challis** 78.01 330 ⇑P P 07 10 49.5 +0.4
baz=78,SNR=10.0
N06A **Buffalo Meadow** 78.05 324 ⇑P P 07 10 49.3 -0.1
baz=78,SNR=6.6
D18A **Linart Farms,** 78.12 334 ⇑P P 07 10 49.4 -0.2
baz=78
M07A **Soldier Meadow** 78.14 325 ⇓P P 07 10 49.3 -0.5
baz=78
F15A **Butte** 78.19 331 ⇑P P 07 10 50.3 +0.2
baz=78
L08A **Fields** 78.28 326 ⇑P P 07 10 50.5 -0.1
baz=78
H12A **Diamond D Ranc** 78.28 329 ⇓P P 07 10 50.5 -0.1
baz=78
K09A **Rome** 78.32 326 ⇑P P 07 10 50.6 -0.2
baz=79
I11A **Placerville** 78.33 328 ⇓P P 07 10 50.9 0.0
baz=79
E16A **East Helena** 78.38 332 ⇑P P 07 10 51.1 0.0
baz=79
G13A **Cobalt** 78.40 330 ⇑P P 07 10 51.8 +0.5
baz=79,SNR=19
O04C **Chester** 78.44 323 ⇑P P 07 10 51.3 -0.3
baz=79,SNR=5.1
D17A **Six Diamond Ra** 78.45 333 ⇑P P 07 10 51.5 0.0
baz=79,SNR=8.2
F14A **Wisdom** 78.56 331 ⇓P P 07 10 52.3 +0.2
baz=79
L07A **Adell** 78.68 325 ⇓P P 07 10 52.7 -0.2
baz=79
E15A **Deer Lodge** 78.71 332 ⇑P P 07 10 53.0 +0.1
baz=79,SNR=6.8
D16A **Dana Ranch, Ca** 78.71 333 ⇑P P 07 10 53.0 +0.1
baz=79,SNR=5.9
EGMT **Eagleton** 78.77 334 eP P 07 10 52.3 -0.9
comp=Z,4.0nm,0.9s,mb4.3
EGMT **Eagleton** 78.77 334 ⇑P P 07 10 53.0 -0.2
baz=79
J09A **Fry Pan Ranch,** 78.81 327 ⇓P P 07 10 53.5 0.0
baz=79
C17A **Wharram Farm,** 78.86 334 ⇓P P 07 10 53.9 +0.2
baz=79
F13A **Darby** 78.98 330 ⇓P P 07 10 54.5 +0.2
baz=79,SNR=14
B18A **Beardsley Farm** 79.07 335 ⇑P P 07 10 54.5 -0.3
baz=79,SNR=5.1
E14A **Clinton** 79.08 331 ⇑P P 07 10 55.0 +0.1
baz=79
K07A **Rock Creek Ran** 79.10 326 ⇑P P 07 10 55.2 +0.1
baz=79
MOD **Modoc** 79.11 325 eP P 07 10 55.9 +0.7
comp=Z,59nm,2.5s,mb5.1
D15A **Lincoln** 79.14 332 ⇑P P 07 10 55.2 0.0
baz=79
TOA0 **Torodi Ar. Sit** 79.20 71 eP P 07 10 55.4 -1.0
TORD **Torodi Ar. Bea** 79.20 71 P P 07 10 55.6 -0.7
comp=Z,12nm,0.7s,mb5.0,baz=252,slow=5.1,SNR=69
TORD LR LR 07 45 39.7
comp=Z,310nm,20.7s,MS4.6,baz=255,slow=35
I09A **Lost Marbles R** 79.25 327 ⇑P P 07 10 55.5 -0.5
baz=80
F12A **Elk City** 79.38 330 ⇑P P 07 10 56.2 -0.4
baz=80
C16A **Fuhringer Ranc** 79.40 333 ⇓P P 07 10 56.3 -0.4
baz=80,SNR=5.2
E13A **Victor** 79.41 331 ⇓P P 07 10 56.8 +0.1
baz=80,SNR=6.3
G11A **Walters Elk Ra** 79.58 329 ⇓P P 07 10 57.7 0.0
baz=80,SNR=13
D14A **Greenough** 79.59 332 ⇓P P 07 10 57.7 0.0
baz=80
J07A **Hines** 79.62 326 ⇓P P 07 10 58.0 +0.1
baz=80
I08A **Drewsey** 79.62 327 ⇑P P 07 10 58.1 +0.1
baz=80,SNR=5.2
BMO **Blue Mountains** 79.68 328 eP P 07 10 58.1 -0.1
comp=Z,8.3nm,1.1s,mb4.6
C15A **Salmond Ranch,** 79.75 333 ⇓P P 07 10 58.8 +0.2
baz=80,SNR=8.4
B16A **M & M Farms, S** 79.87 334 ⇑P P 07 10 59.4 +0.3
baz=80
A17A **Triple J Farms** 79.88 334 ⇓P P 07 10 58.8 -0.4
baz=80,SNR=5.6
G10A **Bishop Farm, J** 79.91 329 ⇑P P 07 10 59.6 +0.1
baz=80,SNR=8.4
J06A **Christmas Vall** 79.97 326 ⇓P P 07 10 58.8 -1.0
baz=80
K05A **Sumner Lake** 79.99 325 ⇓P P 07 10 59.5 -0.5
baz=80
E12A **Beaver Dam Sad** 80.01 330 ⇑P P 07 10 59.5 -0.5
baz=80
D13A **Huson** 80.02 331 ⇓P P 07 10 59.7 -0.3
baz=80,SNR=7.1
B15A **Bradely Ranch,** 80.14 333 ⇓P P 07 10 59.9 -0.8
baz=80,SNR=5.1
G09A **Cove** 80.22 328 ⇑P P 07 11 01.2 +0.1
baz=80,SNR=14
I07A **Izee** 80.22 327 ⇓P P 07 10 00.8 -0.4
baz=80,SNR=6.7
C14A **Swan Lake** 80.23 332 ⇓P P 07 10 00.6 -0.5
baz=80
A16A **West Butte Ran** 80.25 334 ⇓P P 07 10 00.7 -0.5
baz=80,SNR=9.5
E11A **Bogner Ranch,** 80.26 330 ⇑P P 07 10 00.5 -0.9
baz=80
D12A **Red Ives Fores** 80.39 331 ⇓P P 07 11 01.4 -0.6
baz=81
F10A **Beach Ranch, E** 80.46 329 ⇑P P 07 11 01.8 -0.7
baz=81,SNR=5.9
B14A **Marquette Ranc** 80.48 333 ⇓P P 07 11 02.2 -0.3
baz=81
I06A **Prineville** 80.48 326 ⇑P P 07 11 02.6 0.0
baz=81,SNR=5.7
C13A **Hot Springs** 80.52 332 ⇑P P 07 11 02.5 -0.2
baz=81,SNR=7.6
F09A **S2 Ranch, Elgi** 80.59 328 ⇓P P 07 11 02.6 -0.6
baz=81
H07A **Lands Inn, Kim** 80.61 327 ⇓P P 07 11 03.0 -0.3
baz=81
A15A **Johnson Ranch,** 80.73 333 ⇑P P 07 11 03.7 -0.1
baz=81
E10A **Myers Farm, Un** 80.78 329 ⇑P P 07 11 03.8 -0.3
baz=81,SNR=10
G08A **Pilot Rock** 80.81 328 ⇑P P 07 11 03.9 -0.4
baz=81
D11A **Klaveano Farm,** 80.84 330 ⇑P P 07 11 04.2 -0.3
baz=81
C12B **Naegeli Ranch,** 80.94 331 ⇑P P 07 11 04.7 -0.2
baz=81
B13A **Whitefish** 81.00 332 ⇑P P 07 11 05.1 -0.2
baz=81
A14A **Double T Ranch** 81.02 333 ⇓P P 07 11 05.2 -0.2
baz=81
F08A **Pendleton** 81.08 328 ⇑P P 07 11 05.3 -0.5
baz=81
H06A **Lindquist Farm** 81.10 327 ⇑P P 07 11 05.8 0.0
baz=81
TSUM **Tsumeb** 81.12 107 eP P 07 11 07.3 +0.6
comp=Z,4.4nm,0.8s,mb4.4
G07A **Ruggs Ranch, H** 81.14 327 ⇑P P 07 11 06.1 0.0
baz=81,SNR=5.5
D10A **Wagner Farm, O** 81.28 330 ⇓P P 07 11 05.8 -0.9
baz=82,SNR=5.6
WALA **Waterton Lakes** 81.29 333 eP P 07 11 06.3 -0.5
comp=Z,5.6nm,0.9s,mb4.5
E09A **Wood Farm, Sta** 81.29 329 ⇑P P 07 11 06.0 -0.8
baz=82
A13A **Flathead Natio** 81.41 332 ⇑P P 07 11 07.1 -0.3
baz=82
B12A **Libby** 81.56 332 ⇑P P 07 11 08.1 -0.1
baz=82
G06A **Carlson Farm,** 81.60 327 ⇑P P 07 11 08.6 +0.1
baz=82
HAWA **Hanford** 81.87 328 eP P 07 11 10.0 +0.1
comp=Z,8.6nm,1.0s,mb4.6
RSW **Rattlesnake Hi** 81.90 328 eP P 07 11 10.2 +0.1
comp=Z,16nm,1.2s,mb4.8
A12A **Yaak River Ran** 81.94 332 ⇑P P 07 11 10.4 +0.1
baz=82,SNR=5.5
D08A **Wollman Farm,** 82.05 329 ⇑P P 07 11 10.8 -0.1
baz=82
OD2 **Odessa Site #2** 82.19 329 eP P 07 11 11.2 -0.3
comp=Z,21nm,1.1s,mb5.0
OD2 epP pP 07 11 21.8 +1.1
A11A **Hall Mountain,** 82.27 332 ⇓P P 07 11 11.6 -0.4
baz=82,SNR=9.3
C09A **Chrisman Ranch** 82.28 330 ⇑P P 07 11 11.6 -0.4
baz=82,SNR=5.3
H03A **Soap Creek Ran** 82.59 325 ⇑P P 07 11 13.2 -0.5
baz=83
D07A **Quincy** 82.65 329 ⇑P P 07 11 14.0 0.0
baz=83
B09A **Rice** 82.68 330 ⇑P P 07 11 13.5 -0.6
baz=83
C07A **Waterville** 83.05 329 ⇓P P 07 11 15.4 -0.6
baz=83,SNR=5.9
D06A **Cle Elum** 83.08 328 ⇑P P 07 11 16.0 -0.2
baz=83
ETW **Entiat** 83.12 329 eP P 07 11 16.0 -0.4
comp=Z,5.5nm,0.9s,mb4.6
B08A **Colville Reser** 83.18 330 ⇓P P 07 11 16.0 -0.7
baz=83
MAW **Mawson** 83.55 164 P P 07 11 18.8 +0.3
comp=Z,5.8nm,0.9s,mb4.7,baz=167,slow=5.4,SNR=4.8
MAW **Mawson** 83.55 164 eP P 07 11 18.3 -0.1
comp=Z,3.5nm,1.4s,mb4.3
MAW **Mawson** 83.55 164 P P 07 11 18.8 +0.3
MAW pmax pmax
comp=Z,6.0nm,0.9s
A08A **Turner Farm, O** 83.58 330 ⇓P P 07 11 17.6 -1.1
baz=84,SNR=5.9
B07A **Winthrop** 83.62 329 ⇑P P 07 11 18.0 -1.0
baz=84
MDT **Midelt** 83.72 51 LR LR 07 46 52.8
comp=Z,177nm,19.6s,MS4.5,baz=214,slow=34
A07A **Ashnola River,** 84.16 330 ⇓P P 07 11 21.2 -0.5
baz=84,SNR=5.5
BOSA **Boshof** 84.18 118 P P 07 11 21.8 -0.7
comp=Z,3.9nm,0.7s,mb4.7,baz=258,slow=4.3,SNR=8.4
BOSA LR LR 07 46 14.5
comp=Z,338nm,18.1s,MS4.8,baz=244,slow=34
EDM **Edmonton** 84.28 336 eP P 07 11 20.2 -2.0
ESDC **Sonseca Array** 87.80 45 LR LR 07 50 52.4
comp=Z,141nm,18.6s,MS4.4,baz=245,slow=36
YKA **Yellowknife Ar** 91.89 341 P P 07 11 56.6 -1.9
comp=Z,1.1nm,0.7s,mb4.3,baz=142,slow=4.3,SNR=5.9
YKA **Yellowknife Ar** 91.89 341 P P 07 11 56.6 -1.9
YKA pmax pmax
comp=Z,1.0nm,0.7s
OBN **Obninsk** 118.10 38⇑ iPKIKP PKPdf 07 17 35.6 -1.7
OBN ePS PS 07 28 36.6 -2.1
OBN pmax pmax
comp=Z,12nm,1.0s
KIV **Kislovodsk** 121.94 51 i PKIKP PKPdf 07 17 43.8 -1.2
KIV pmax pmax
comp=Z,4.0nm,0.7s
KIV MLR MLR
comp=Z,80nm,19.0s,MS4.4
ASAR **Alice Springs** 128.08 209 PKP PKPdf 07 17 56.0 -1.5
comp=Z,1.7nm,1.0s,baz=152,slow=2.3,SNR=8.5
ASAR **Alice Springs** 128.08 209 PKIKP PKPdf 07 17 56.1 -1.4
ASAR pmax pmax
comp=Z,2.0nm,1.0s
TIXI **Tiksi** 129.85 352 i PKIKP PKPdf 07 18 01.0 +1.6
ARU **Arti** 130.05 34 i PKIKP PKPdf 07 18 01.2 +1.1
ARU 07 20 15.5
ARU SS SS 07 37 37.8 +1.7
WRA **Warramunga Arr** 131.09 212 PKP PKPdf 07 18 03.1 -0.2
comp=Z,1.0nm,0.8s,baz=150,slow=1.6,SNR=12
WRA **Warramunga Arr** 131.09 212 PKIKP PKPdf 07 18 03.1 -0.2
WRA pmax pmax
comp=Z,1.0nm,0.8s
ZAA0 **Zalesovo Array** 143.74 25 ePKPdf PKPdf 07 18 25.3 -0.1
ZALV **Zalesovo Beam** 143.74 25 PKP PKPdf 07 18 25.6 +0.2
comp=Z,0.8nm,0.5s,baz=254,slow=2.5,SNR=5.4
ZALV **Zalesovo Beam** 143.74 25 PKIKP PKPdf 07 18 25.6 +0.2
ZALV pmax pmax
comp=Z,1.0nm,0.5s
AML **Almayashu** 144.52 49 ePKPdf PKPdf 07 18 27.3 +0.1
BOD **Bodaibo** 144.84 356 ePKIKP PKPdf 07 18 24.9 -2.3
BOD pmax pmax
comp=Z,8.0nm,1.0s
AAK **Ala-Archa** 144.88 47 ePKPdf PKPdf 07 18 28.2 +0.4
FRU **Bishkek** 144.88 47 ePKIKP PKPdf 07 18 29.0 +1.2
TKM2 **Tokmak 2** 145.50 46 ePKPdf PKPdf 07 18 30.0 +1.1
MK31 **Makanchi Array** 147.54 36 ePKPbc PKPbc 07 18 34.2 -0.7
MKAR **Makanchi Array** 147.54 36 PKP PKPdf 07 18 32.5 +0.3
comp=Z,2.0nm,0.6s,baz=354,slow=2.9,SNR=16
MKAR PKPbc PKPbc 07 18 35.0 +0.2
comp=Z,2.0nm,0.6s,baz=317,slow=2.6,SNR=16
MKAR **Makanchi Array** 147.54 36 PKP2 PKPdf 07 18 32.5 +0.3
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MJAR **Matsushiro Arr** 151.62 305 PKPbc PKPbc 07 18 44.9 -0.3
comp=Z,2.8nm,0.8s,baz=68,slow=2.0,SNR=6.6
MJAR **Matsushiro Arr** 151.62 305 PKIKP PKPbc 07 18 44.9 -0.4
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MAT **Matsushiro** 151.62 305 PKP PKPbc 07 18 42.9 -2.4
ZAK **Zakamensk** 152.02 8 ePKIKP PKPbc 07 18 50.0 +4.3
ZAK pmax pmax
comp=Z,5.0nm,1.4s
WMQ **Urumqi** 152.38 35 ePKP PKPdf 07 18 39.0 -0.9
SONM **Songino Array** 154.87 5 PKP PKPdf 07 18 44.2 +0.8
comp=Z,0.2nm,0.4s,baz=15,slow=6.0,SNR=2.3
SONM PKPab PKPab 07 19 08.2 +1.0
comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=3.4
HHC **Hu-ho-hao-te** 161.89 355 ePKP PKPdf 07 18 50.3 -1.7
HHC APKP 07 19 01.0
HHC XPKP 07 19 04.8
HHC PKS 07 22 22.0
HHC PP PP 07 23 21.5 +0.9
HHC SKS SKSdf 07 25 50.3 -4.7
HHC SKKS SKKSac 07 30 06.0 -1.8

HHC				SS	SS	07 43 33.5	-3.3	
HHC				PP	PP			
	comp=Z,133nm,10.7s							
HHC				LR	LR			
	comp=N,479nm,22.6s							
HHC				LR	LR			
	comp=E,297nm,22.6s							
HHC				LR	LR			
	comp=Z,540nm,22.6s							
LZH	**Lanzhou**	**165.86**	**19**	*e*PKP	PKPdf	07 18 56.5	+0.7	
LZH				APKP		07 19 07.3		
LZH				XPKP		07 19 11.0		
LZH				LR	LR			
	comp=N,123nm,18.1s							
LZH				LR	LR			
	comp=Z,175nm,20.2s							
NJ2	**Nanjing**	**167.56**	**320**	*e*PKP	PKPdf	07 18 56.5	-0.8	
CD2	**Chengdu**	**170.43**	**31**	*e*PKP	PKPdf	07 18 57.0	-2.1	
CD2				APKP		07 19 07.0		
CD2				XPKP		07 19 12.8		
CD2				PKP2	PKPab	07 20 16.5	+0.8	
CD2				PP	PP	07 24 07.8	+2.5	
CD2				SKS	SKSdf	07 25 55.0	-5.8	
CD2				SKKS	SKKSac	07 30 49.5	-1.6	
CD2				SS	SS	07 45 04.3	-0.3	
CD2				PP	PP			
	comp=Z,80nm,10.2s							
CD2				LR	LR			
	comp=N,160nm,18.8s							
CD2				LR	LR			
	comp=Z,130nm,16.4s							
KMI	**Kunming**	**173.42**	**68**	PKP	PKPdf	07 18 58.3	-2.4	
GYA	**Guiyang**	**175.53**	**34**	*e*PKP	PKPdf	07 18 59.3	-2.0	
GYA				APKP		07 19 10.5		
GYA				XPKP		07 19 17.0		
GYA				PKP2	PKPab	07 20 38.5	0.0	
GYA				PKS		07 22 29.3		
GYA				PP	PP	07 24 31.5	+1.0	
GYA				PP	PP			
	comp=Z,80nm,8.7s							

NEIC ***26*** *07:00:36.9±0.5, 726S×129.35E, h35km, mb4.2/5, Error ellipse: s-maj=20.1km s-min=8.9km az=65.0*
ISCJB ***26*** *07:00:42.4±0.7, 758S±005×129.48E±0.06, h122km±10km, mb4.0/7, Error ellipse: s-maj=9.9km s-min=7.8km az=35.9*
IDC ***26*** *07:00:43.6±4.4, 726S×129.43E, h99km±40km, mb3.8/7, mb1 4.0/8, mb1mx3.8/15, mbtmp3.9/8, Error ellipse: s-maj=44.4km s-min=16.0km az=55.0*
DJA ***26*** *07:00:44, 741S×129.38E, h140km, MLv4.6/5*
ISC 26 07:00:43.5±0.6, 759S±005×12947E±006, h114km±9km, n33, σ0.98/35, mb4.0/7, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**3.78**	**59**	P	**Pn**	**07 01 41.9**	**+1.9**
TLE	**Tual**	**3.78**	**59**	S	**Sn**	**07 02 23.1**	**-0.6**
AAI	**Ambon**	**4.08**	**342**	P	**Pn**	**07 01 43.7**	**-0.4**
AAI	**Ambon**	**4.08**	**342**	P	**Pn**	**07 01 43.7**	**-0.4**
KAKA	**Kakadu**	**5.87**	**150**	⇓*i*P	Px	07 01 55.2	
	450nm,0.3s						
KAKA				*e*S	Sx	07 02 59.5	
KAKA	**Kakadu**	**5.87**	**150**	P	**Pn**	**07 01 55.4**	**-13**
BATI	**Baumata**	**6.30**	**245**	P	**Pn**	**07 02 15.6**	**+1.5**
	21nm,0.3s,baz=121,slow=2.8,SNR=12						
BATI				S	**Sn**	**07 03 23.4**	**-1.3**
	66nm,0.3s,baz=155,slow=19,SNR=14						
BATI	**Baumata**	**6.30**	**245**	P	**Pn**	**07 02 15.5**	**+1.4**
	48nm,0.8s,2μm0.7nm						
BATI	**Baumata**	**6.30**	**245**	S	**Sn**	**07 03 24.1**	**-0.6**
	48nm,0.8s,2μm0.7nm						
SWI	**Sorong**	**6.91**	**15**	P	**Pn**	**07 02 21.9**	**-0.5**
	51nm,0.7s,0.2nm						
WRAB	**Tennant Creek**	**13.15**	**159**	*e*Pn	**Pn**	**07 03 45.2**	**-0.8**
	37nm,0.4s						
WRAB				*e*Sn	**Sn**	**07 06 02.1**	**-8.8**
WRAB	**Tennant Creek**	**13.15**	**159**	P	**Pn**	**07 03 45.2**	**-0.8**
	71nm,0.8s,1μm						
WRA	**Warramunga Arr**	**13.16**	**159**	P	**Pn**	**07 03 45.7**	**-0.4**
	14nm,0.3s,baz=324,slow=14,SNR=163						
WRA				S	**Sn**	**07 06 03.7**	**-7.3**
	5.6nm,0.3s,baz=335,slow=23,SNR=9.4						
WB2	**Warramunga Arr**	**13.16**	**159**	*e*P	**Pn**	**07 03 45.0**	**-1.1**
WB2				*e*S	**Sn**	**07 06 03.7**	**-7.4**
COEN	**Coen**	**14.87**	**116**	*e*P	**Pn**	**07 04 14.8**	**+6.7**
	20nm,0.7s						
COEN				*e*S	**Sn**	**07 06 45.1**	**-7.4**
COEN	**Coen**	**14.87**	**116**	P	**Pn**	**07 04 12.1**	**+4.0**
	16nm,0.9s						
MBWA	**Marble Bar**	**16.45**	**214**	*e*P	**Pn**	**07 04 28.6**	**+0.8**
	15nm,0.8s						
MBWA				*e*S	**S**	**07 07 20.9**	**-14**
ASAR	**Alice Springs**	**16.54**	**166**	P	**Pn**	**07 04 29.7**	**+0.8**
	4.3nm,0.3s,baz=344,slow=14,SNR=60						
ASAR				S	**S**	**07 07 21.9**	**-15**
	0.7nm,0.3s,baz=342,slow=20,SNR=4.2						
CTA	**Charters Tower**	**20.46**	**129**	P	**P**	**07 05 16.1**	**+3.8**
	6.5nm,0.7s,baz=303,slow=12,SNR=7.3						
CTAO	**Charters Tower**	**20.46**	**129**	*e*P	**P**	**07 05 16.7**	**+4.4**
	7.1nm,0.8s						
STKA	**Stephens Creek**	**26.68**	**157**	*e*P	**P**	**07 06 15.6**	**+3.6**
	2.0nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**26.68**	**157**	P	**P**	**07 06 15.9**	**+3.9**
	2.0nm,0.4s,mb4.0,baz=337,slow=10,SNR=6.8						
STKA	**Stephens Creek**	**26.68**	**157**	*e*P	**P**	**07 06 15.9**	**+3.9**
	1.6nm,0.5s,mb3.8						
STKA				*e*	pP	07 06 38.2	+1.5
CMAR	**Chiang Mai Arr**	**39.71**	**311**	P	**P**	**07 08 05.2**	**+0.1**
	2.2nm,0.3s,mb4.4,baz=130,slow=7.4,SNR=5.7						
SONM	**Songino Array**	**58.83**	**342**	P	**P**	**07 10 30.4**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=151,slow=5.5,SNR=4.2						
MKAR	**Makanchi Array**	**68.43**	**327**	P	**P**	**07 11 32.9**	**-0.2**
	0.8nm,0.4s,mb3.9,baz=114,slow=8.6,SNR=23						
ZALV	**Zalesovo Beam**	**71.88**	**334**	P	**P**	**07 11 52.8**	**-1.2**
	1.2nm,0.6s,mb3.9,baz=134,slow=6.3,SNR=5.2						
VNDA	**Vanda**	**71.93**	**173**	P	**P**	**07 11 58.0**	**+3.9**
	1.6nm,0.6s,mb4.0,baz=300,slow=8.6,SNR=7.1						
KURK	**Kurchatov**	**72.74**	**329**	*e*P	**P**	**07 11 59.7**	**+0.5**
	1.2nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**117.67**	**45**	PKP	PKPdf	07 19 18.1	+1.5
	0.1nm,0.3s,baz=113,slow=1.9,SNR=3.9						
TXAR	**Lajitas Array**	**125.67**	**59**	PKP	PKPdf	07 19 34.6	+2.2
	0.5nm,0.7s,baz=163,slow=3.0,SNR=6.8						
TORD	**Torodi Ar. Bea**	**128.41**	**281**	PKP	PKPdf	07 19 39.2	+1.3
	0.5nm,0.6s,baz=36,slow=1.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**128.41**	**281**	PKP	PKPdf	07 19 39.2	+1.3

IDC 26 07:04:16.7±1.4, 2283S×7080W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.8/18, mbtmp3.8/5, Error ellipse: s-maj=36.9km s-min=15.6km az=1.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.76**	**83**	Pg	Pg	07 04 49.4	-1.0
	186nm,0.3s,baz=270,slow=12,SNR=28						
LVC				Lg		07 05 13.0	
	125nm,0.3s,baz=270,slow=14,SNR=4.8						
CFAA	**Coronel Fontan**	**9.03**	**166**	Pn	Pn	07 06 29.2	+0.8
	0.0nm,0.3s,baz=337,slow=15,SNR=3.1						
SIV	**San Ignacio**	**11.42**	**55**	Pn	Pn	07 07 00.9	-0.3
	0.8nm,0.3s,baz=248,slow=13,SNR=12						
BDFB	**Brasilia**	**22.65**	**76**	P	P	07 09 19.7	+0.1
	0.8nm,0.6s,baz=196,slow=24,SNR=3.3						
TXAR	**Lajitas Array**	**60.75**	**327**	P	P	07 14 31.0	+0.7
	0.4nm,0.6s,baz=148,slow=9.8,SNR=6.8						
TORD	**Torodi Ar. Bea**	**79.45**	**71**	P	P	07 16 24.3	-1.2
	1.1nm,0.7s,baz=242,slow=4.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**79.45**	**71**	P	P	07 16 24.3	-1.2
MKAR	**Makanchi Array**	**147.73**	**36**	PKPbc	PKPbc	07 24 03.1	-0.1
	0.3nm,0.4s,baz=319,slow=3.5,SNR=4.4						

NEIC 26 08:01:16.6, 6296N×15278W, h14km, ML3.8(PMR), **ML3.3**(AEIC), **After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPLA	**Purkeypile**	**0.28**	**104**	P	Pg	08 01 22.3	-0.1
PPLA				S	Sg	08 01 26.1	-0.2
CHUM	**Lake Minchumin**	**0.94**	**12**	P	Pb	08 01 35.0	+0.3
CHUM				S	Sb	08 01 47.6	+0.5
KTH	**Kantishna Hill**	**1.03**	**54**	P	Pb	08 01 35.3	-0.8
KTH				S	Sb	08 01 50.0	+0.6
SKT	**Skwentna**	**1.14**	**149**	P	Pb	08 01 37.1	-1.0
SKT				S	Sb	08 01 54.6	+1.8
TRF	**Thorofare Moun**	**1.23**	**65**	P	Pn	08 01 39.1	-0.2
BPAW	**Bear Paw Mtn.**	**1.39**	**34**	P	Pn	08 01 40.7	-0.9
BPAW				S	Sn	08 02 00.6	+0.8
TT01	**Tatalina**	**1.49**	**269**	P	Pn	08 01 42.0	-0.9
MCK	**McKinley**	**1.90**	**64**	P	Pn	08 01 48.2	-0.3
PMR	**Palmer**	**2.19**	**127**	P	Pn	08 01 52.9	+0.3
SVW2	**Sparrevohn**	**2.29**	**216**	P	Pn	08 01 53.2	-0.7
RC01	**Rabbit Creek A**	**2.36**	**141**	P	Pn	08 01 55.7	+0.8
SML	**Sawmill**	**2.37**	**117**	P	Pn	08 01 55.6	+0.6
GCSA	**Galena City Sc**	**2.55**	**316**	P	Pn	08 01 58.9	+1.4
SLKM	**Skilak Lake**	**2.75**	**153**	P	Pn	08 02 01.7	+1.5
COLA	**College**	**2.90**	**46**	P	Pn	08 02 04.2	+1.9
IM3	**Indian Mountai**	**3.06**	**353**	P	Pn	08 02 04.8	+0.4
IL1	**Eielson Array**	**3.17**	**53**	P	Pn	08 02 04.5	-1.6
PAX	**Paxson**	**3.34**	**87**	P	Pn	08 02 09.3	+1.1
COLD	**Coldfoot**	**4.42**	**13**	*e*Pn	Pn	08 02 23.6	+0.5
BCA3	**Beaver Creek A**	**5.01**	**84**	P	Pn	08 02 31.8	+0.6
EGAK	**Eagle**	**5.45**	**65**	*e*Pn	Pn	08 02 40.2	+3.0
	18nm,0.6s						

IDC ***26*** *08:14:53.0±1.8, 822S×118.66E, h22km±10km, mb5.0/19, mb1 5.1/20, mb1mx5.1/22, mbtmp5.1/20, ML5.2/1, MS4.6/19, Ms1 4.6/19, ms1mx4.6/21, Error ellipse: s-maj=15.3km s-min=9.2km az=68.0*
MOS ***26*** *08:14:52.6±1.2, 814S×118.60E, h33km, mb5.5/42, MS4.7/21, Error ellipse: s-maj=12.4km s-min=6.4km az=111.2*
ISCJB ***26*** *08:14:53.3±0.2, 825S±002×118.72E±0.003, h36km, mb5.3/91, MS4.8/109, Error ellipse: s-maj=4.2km s-min=3.3km az=156.9*
BJI ***26*** *08:14:54.5, 820S×118.70E, h35km, mB5.4, mb5.3, Ms5.1, Msz4.8*
NEIC ***26*** *08:14:54.4±0.2, 821S×118.69E, h35km, mb5.5/35, MS4.8/86, Error ellipse: s-maj=7.9km s-min=4.8km az=57.0*
NEIC Felt [II] at Bima. Also felt at Denpasar, Bali.
GCMT ***26*** *08:14:54.4±0.1, 821S×118.60E, h26km, MW5.3/88, Moment Tensor Solution. s70,c105; s88,c168; Duration: 1ŝ1 Moment tensor: Scale 10^17 Nm; Mrr 0.83±.03; Mθθ -1.10±.02; Mϕϕ 0.26±.02; Mrθ -0.72±.04; Mθϕ -0.18±.02; Mϕr -0.36±.05; Best double couple: M0 1.27800×10^17 NP1 ϕs102.00000°, δ29.00000°, λ121.00000°. NP2 ϕs248.00000°, δ66.00000°, λ74.00000°. Principal axes: T 1.1670, Plg66.0000°, Azm130.0000°; N 0.2220, Plg14.0000°, Azm254.0000°; P -1.3890, Plg19.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***26*** *08:14:54.8±0.0, 833S×118.74E, h14km, mB5.8/22, Mjma5.1/14, MLv5.7/14, Mw(mB)5.5/22, Mwp4.9/29*
ISC 26 08:14:55.5±0.2, 828S±002×11872E±003, h38km, h38km±1.8km: pP-P, n373, σ1ŝ36/284, mb5.3/91, MS4.8/109, 32C-11D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.26**	**186**	P	**Pn**	**08 15 00.2**	**-3.0**
KHKI	**Kahang-Kahang**	**3.08**	**268**	P	**Pn**	**08 15 39.4**	**-2.3**
KAPI	**Kappang**	**3.40**	**18**	Pn	**Pn**	**08 15 43.2**	**-2.9**
	11μm,0.9s						
KAPI	**Kappang**	**3.40**	**18**	Pn	**Pn**	**08 15 43.8**	**-2.3**
	239nm,0.3s,baz=199,slow=7.8,SNR=576						
KAPI				Sn	**Sn**	**08 16 22.6**	**-2.6**
	645nm,0.3s,baz=95,slow=24,SNR=19						
KAPI				LR	LR	08 17 20.6	
	comp=Z,16μm,19.6s,baz=201,slow=44						
KAPI	**Kappang**	**3.40**	**18**	*e*Pn	**Pn**	**08 15 43.9**	**-2.2**
KAPI				*e*Sn	**Sn**	**08 16 23.0**	**-2.2**
KAPI	**Kappang**	**3.40**	**18**	P	**Pn**	**08 15 43.4**	**-2.7**
DNP	**Denpasar**	**3.50**	**263**	P	**Pn**	**08 15 51.7**	**+4.3**
IGBI	**Denpasar**	**3.58**	**261**	P	**Pn**	**08 15 48.1**	**-0.4**
NBBI	**Negara**	**4.06**	**268**	P	**Pn**	**08 15 56.0**	**+0.9**
KMMI	**Kalianget**	**4.87**	**284**	P	**Pn**	**08 16 05.3**	**-0.9**
BATI	**Baumata**	**5.24**	**112**	Pn	**Pn**	**08 16 14.2**	**+2.7**
	50nm,0.3s,baz=309,slow=0.7,SNR=28						
BATI				Sn	**Sn**	**08 17 20.7**	**+10**
	132nm,0.3s,baz=94,slow=20,SNR=3.8						
BATI				LR	LR	08 18 35.9	
	comp=Z,16μm,19.8s,baz=329,slow=42						
BATI	**Baumata**	**5.24**	**112**	P	**Pn**	**08 16 15.0**	**+3.6**
	787nm,0.7s,4.4nm						
KDI	**Kendari**	**5.78**	**42**	P	**Pn**	**08 16 22.3**	**+3.5**
	129nm,1.1s,6μm0.8nm						
BBKI	**Banjar Baru**	**6.14**	**321**	P	**Pn**	**08 16 23.0**	**-0.8**
	589nm,1.0s,6.6nm						
KRKI	**Karangkates**	**6.21**	**271**	P	**Pn**	**08 16 27.9**	**+3.3**
SJI	**Sawahan**	**6.91**	**274**	P	**Pn**	**08 16 35.0**	**+0.7**
PCI	**Palu**	**7.41**	**9**	P	**Pn**	**08 16 44.1**	**+2.9**
	268nm,1.1s,4μm1.2nm						
SMKI	**Samarinda**	**7.92**	**349**	P	**Pn**	**08 16 49.1**	**+0.8**
	249nm,1.0s,6μm1.3nm						
UGM	**Wanagama**	**8.12**	**272**	P	**Pn**	**08 16 54.2**	**+3.2**
	321nm,0.9s,5μm						
BJII	**Banjamegara**	**8.98**	**275**	P	**Pn**	**08 17 05.4**	**+2.7**
STKI	**Sintang**	**10.99**	**319**	P	**Pn**	**08 17 30.5**	**+0.2**
	126nm,0.8s						
LEM	**Lembang**	**11.10**	**277**	P	**Pn**	**08 17 32.9**	**+1.1**
	134nm,1.3s						
CBJI	**Citeko**	**11.92**	**278**	P	**Pn**	**08 17 43.0**	**0.0**
	727nm,0.9s						
DBJI	**Dramaga**	**11.99**	**277**	P	**Pn**	**08 17 45.9**	**+1.9**
	226nm,1.1s,4μm						
TPI	**Tanjungpandan**	**12.30**	**296**	P	**Pn**	**08 17 50.6**	**+2.3**
	84nm,1.2s,1μm						
SBUM	**Sibu**	**12.47**	**328**	⇓P	**Pn**	**08 17 52.1**	**+1.5**
SBUM	**Sibu**	**12.47**	**328**	P	**Pn**	**08 17 50.8**	**+0.2**
TSM	**Tawau**	**12.52**	**356**	⇑P	**Pn**	**08 17 52.6**	**+1.4**
BTM	**Bintulu**	**12.71**	**334**	⇓P	**Pn**	**08 17 56.2**	**+2.3**
KSM	**Kuching**	**12.81**	**319**	*e*Pn	**Pn**	**08 17 55.5**	**+0.2**
	100nm,1.1s						
KSM				*e*		08 18 12.0	
KSM	**Kuching**	**12.81**	**319**	⇓P	**Pn**	**08 17 56.3**	**+1.1**
KSM	**Kuching**	**12.81**	**319**	P	**Pn**	**08 17 56.1**	**+0.9**
	96nm,1.2s,1μm						
MBWA	**Marble Bar**	**12.84**	**176**	P	**Pn**	**08 17 54.6**	**-1.0**
	SNR=12						
MBWA	**Marble Bar**	**12.84**	**176**	*e*Pn	**Pn**	**08 17 54.1**	**-1.5**
MBWA	**Marble Bar**	**12.84**	**176**	P	**Pn**	**08 17 54.2**	**-1.4**
	202nm,1.0s						
XMIS	**Christmas Isla**	**13.08**	**259**	Pn	**Pn**	**08 17 59.2**	**+0.4**
XMIS				*e*S	**Sn**	**08 20 13.0**	**-10**
MYLDM	**Lahad Datu**	**13.37**	**359**	P	**Pn**	**08 18 06.9**	**+4.1**
SDKM	**Sandakan**	**13.91**	**354**	⇑P	**Pn**	**08 18 11.7**	**+1.5**
KAKA	**Kakadu**	**14.19**	**109**	*e*P	Px	08 17 54.9	
	285nm,0.6s						
KAKA				*e*S	Sx	08 20 31.4	
KAKA	**Kakadu**	**14.19**	**109**	P	Px	08 17 56.9	
SWI	**Sorong**	**14.50**	**60**	P	**Pn**	**08 18 19.4**	**+1.1**
	430nm,1.1s,5μm						
PAGZ	**Pagadian**	**16.68**	**16**	*e*P	**Pn**	**08 18 53.3**	**+6.8**
KSI	**Kapahiang**	**16.68**	**285**	P	**Pn**	**08 18 48.7**	**+2.1**
	272nm,1.2s						
DAV	**Davao City (W)**	**16.71**	**24**	Pn	**Pn**	**08 18 49.8**	**+2.9**
	86nm,0.3s,baz=58,slow=8.6,SNR=4.2						
DAV				LR	LR	08 26 04.0	
	comp=Z,2μm,18.5s,baz=11,slow=40						
BUKP	**Musuan**	**17.25**	**22**	*e*P	**Pn**	**08 18 56.0**	**+2.3**
MYKOM	**Kota Tinggi**	**17.89**	**303**	⇓P	**Pn**	**08 19 02.3**	**+0.8**
MYKOM	**Kota Tinggi**	**17.89**	**303**	P	**Pn**	**08 19 04.3**	**+2.8**
KGM	**Kluang**	**18.45**	**303**	⇓P	**Pn**	**08 19 09.1**	**+0.7**
TBP	**Tagbilaran**	**18.57**	**16**	⇑*e*P	**Pn**	**08 19 10.9**	**+1.1**
WRAB	**Tennant Creek**	**19.06**	**129**	P	**Pn**	**08 19 14.0**	**-1.7**
	1μm,0.7s,SNR=53						
WRAB	**Tennant Creek**	**19.06**	**129**	*e*P	**Pn**	**08 19 14.2**	**-1.5**
	148nm,0.8s						
WRAB	**Tennant Creek**	**19.06**	**129**	*c i*P	**Pn**	**08 19 14.2**	**-1.5**
WRAB				*i* S	**S**	**08 22 39.2**	**-10**
WRAB	**Tennant Creek**	**19.06**	**129**	P	**Pn**	**08 19 14.6**	**-1.1**
	235nm,0.8s,4μm						
WB2	**Warramunga Arr**	**19.06**	**129**	⇑*i*P	**Pn**	**08 19 14.1**	**-1.7**
WB2				*e*S	**S**	**08 22 36.2**	**-13**
MSLP	**Maasin**	**19.28**	**19**	*e*P	**Pn**	**08 19 19.7**	**+1.3**
PPI	**Padang Panjang**	**19.84**	**292**	P	**Pn**	**08 19 26.4**	**+1.3**
	56nm,1.3s,4μm						
KTGM	**Kuala Trenggan**	**20.60**	**310**	⇑P	**P**	**08 19 32.2**	**+0.7**
SJMP	**San Jose**	**20.74**	**7**	*e*P	**P**	**08 19 34.2**	**+1.2**
OTRP	**Odiongan**	**20.77**	**9**	*e*P	**P**	**08 19 34.5**	**+1.2**
ASAR	**Alice Springs**	**21.11**	**138**	P	**P**	**08 19 37.3**	**+0.3**
	63nm,0.6s,mb5.1,baz=314,slow=10,SNR=379						
ASAR				S	**S**	**08 23 33.3**	**+3.3**
	69nm,1.0s,baz=309,slow=21,SNR=6.7						
ASAR				ScP	ScP	08 27 23.1	+6.7
	14nm,0.7s,baz=337,slow=2.2,SNR=5.5						
ASAR	**Alice Springs**	**21.11**	**138**	P	**P**	**08 19 37.3**	**+0.3**
ASAR				S	**S**	**08 23 33.3**	**+3.3**
ASAR				pmax	pmax		
	comp=Z,63nm,0.6s						
ASAR				smax			
	comp=N,69nm,1.0s						
ASAR				pmax	pmax		
	comp=N,14nm,0.7s						
IPM	**Ipoh**	**21.73**	**305**	⇑P	**P**	**08 19 46.1**	**+2.4**
IPM	**Ipoh**	**21.73**	**305**	P	**P**	**08 19 45.7**	**+2.0**
	comp=N,77nm,1.4s,comp=N,1μm,mb4.9						
COCO	**West Island**	**21.88**	**258**	PFAKE		08 20 00.0	+15
COCO				LR	LR		
	comp=Z,2μm,22.0s,MS4.4						
KULM	**Kulim**	**22.50**	**306**	⇑P	**P**	**08 19 46.1**	**-5.9**
GSI	**Gunungsitoli**	**23.13**	**293**	P	**P**	**08 20 01.6**	**+3.0**
	comp=Z,54nm,1.3s,comp=Z,4μm,mb4.8						
KLBR	**Kellerberrin**	**23.21**	**182**	*e*P	**P**	**08 19 59.2**	**-0.1**
	comp=Z,155nm,0.9s,mb5.4						
KLBR				*e*S	**S**	**08 24 09.5**	**+1.1**
SNG	**Songkhla**	**23.69**	**310**	P	**P**	**08 20 05.0**	**+0.9**
	comp=Z,160nm,0.9s,mb5.5						
MUN	**Mundaring**	**23.70**	**185**	*e*P	**P**	**08 20 03.0**	**-0.9**
MUN				*e*S	**S**	**08 24 24.2**	**+8.0**
FORT	**Forrest**	**24.03**	**160**	*e*P	**P**	**08 20 06.8**	**-0.1**
	comp=Z,94nm,0.7s,mb5.3						
FORT				*e*S	**S**	**08 24 32.1**	**+10**
FORT	**Forrest**	**24.03**	**160**	*e*P	**P**	**08 20 07.1**	**+0.1**
	comp=Z,194nm,0.8s,mb5.6						
NWAO	**Narrogin (SRO)**	**24.57**	**183**	P	**P**	**08 20 12.6**	**+0.8**
	SNR=6.1						
NWAO	**Narrogin (SRO)**	**24.57**	**183**	P	**P**	**08 20 11.7**	**-0.2**
	comp=Z,47nm,0.7s,mb5.1,baz=7.3,slow=8.4,SNR=22						
NWAO				S	**S**	**08 24 42.4**	**+12**
	comp=Z,96nm,0.8s,baz=272,slow=16,SNR=6.3						
NWAO				LR	LR	08 29 58.1	
	comp=Z,2μm,19.7s,MS4.6,baz=173,slow=37						
NWAO	**Narrogin (SRO)**	**24.57**	**183**	*e*P	**P**	**08 20 11.8**	**0.0**
	comp=Z,215nm,1.4s,mb5.5						
NWAO				*e*S	**S**	**08 24 38.9**	**+8.6**
NWAO				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
NWAO	**Narrogin (SRO)**	**24.57**	**183**	*e*P	**P**	**08 20 11.8**	**0.0**
NWAO				*e*S	**S**	**08 24 38.9**	**+8.6**
NWAO				pmax	pmax		
	comp=Z,215nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,2μm,19.0s						
COEN	**Coen**	**24.64**	**105**	*e*P	**P**	**08 20 12.1**	**-0.6**
	comp=Z,404nm,1.0s,mb5.9						
COEN	**Coen**	**24.64**	**105**	P	**P**	**08 20 12.7**	**0.0**
	comp=Z,220nm,1.0s,comp=Z,2μm,mb5.6						
PMG	**Port Moresby**	**28.12**	**94**	*e*P	**P**	**08 20 45.6**	**+1.5**
	comp=Z,18nm,0.8s,mb4.8						
PMG				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
PMG	**Port Moresby**	**28.12**	**94**	*e*P	**P**	**08 20 45.6**	**+1.4**
PMG				pmax	pmax		
	comp=Z,18nm,0.8s						
PMG				MLR	MLR		
	comp=Z,1μm,19.0s						
QIZ	**Qiongzhong**	**28.51**	**342**	P	**P**	**08 20 46.5**	**-1.0**
QIZ				XP	sP	08 20 59.5	-3.3
QIZ				S	**S**	**08 25 31.8**	**-1.0**
QIZ				XS	sS	08 25 49.3	-1.3
QIZ				AMB	AMB		
	comp=Z,43nm,2.2s,mb4.8						
QIZ				LR	LR		
	comp=Z,1μm,28.0s,MS4.3						
QIZ	**Qiongzhong**	**28.51**	**342**	PFAKE		08 21 00.0	+13
QIZ				LR	LR		
	comp=Z,1μm,22.0s,MS4.4						
CTA	**Charters Tower**	**29.11**	**117**	*e*P	**P**	**08 20 53.2**	**+0.3**
	comp=Z,30nm,1.5s,mb4.8						
CTA				*e*S	**S**	**08 25 43.0**	**+0.6**
CTA	**Charters Tower**	**29.11**	**117**	P	**P**	**08 20 53.0**	**+0.2**
	comp=Z,27nm,0.9s,mb5.0,baz=288,slow=11,SNR=23						
CTA				LR	LR	08 34 25.9	
	comp=Z,4μm,18.0s,MS5.1,baz=292,slow=40						
CTA	**Charters Tower**	**29.11**	**117**	P	**P**	**08 20 53.1**	**+0.2**
CTA				pmax	pmax		
	comp=Z,27nm,0.9s						
CTA				MLR	MLR		
	comp=Z,4μm,18.0s						
CTAO	**Charters Tower**	**29.11**	**117**	*e*P	**P**	**08 20 53.2**	**+0.3**
	comp=Z,177nm,1.6s,mb5.5						
CTAO				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
CTAO	**Charters Tower**	**29.11**	**117**	*e*P	**P**	**08 20 53.2**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,177nm,1.6s,mb5.5						
CTAO				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.0						
CTAO	**Charters Tower**	**29.11**	**117**	P	**P**	**08 20 53.3**	**+0.4**

KMI S **S** 08 27 42.0 +2.5
KMI XS sS 08 27 58.5 +1.0
KMI PCS PcS 08 28 09.3 +0.1
KMI SS SS 08 30 09.8 -11
KMI AMB AMB
comp=Z,53nm,0.9s,mb5.4
KMI AMB AMB
comp=Z,216nm,3.6s
KMI LR LR
comp=N,1μm,10.9s,MS5.1
KMI LR LR
comp=E,1μm,12.2s,MS5.1
KMI LR LR
comp=Z,1μm,12.0s,MS4.9
ARMA Armidale 37.83 130⇑ *iP* **P 08 22 10.7 +2.1**
TOO Toolangi 37.91 144⇑ *iP* **P 08 22 11.0 +1.8**
CAN Canberra 38.62 139 *eP* **P 08 22 16.3 +1.1**
comp=Z,109nm,1.5s,mb5.4
CAN LR LR
comp=Z,2μm,21.0s,MS4.9
CAN Canberra 38.62 139 *eP* **P 08 22 16.3 +1.1**
CAN pmax pmax
comp=Z,109nm,1.5s,mb5.4
CAN MLR MLR
comp=Z,2μm,21.0s,MS4.9
WHN Wuhan 38.83 354 P **P 08 22 18.5 +1.6**
WHN S **S** **08 28 17.0 +4.9**
WHN AMB AMB
comp=Z,88nm,1.3s,mb5.3
WHN LR LR
comp=N,2μm,5.1s
WHN LR LR
comp=E,1μm,12.1s
WHN LR LR
comp=Z,2μm,18.4s
CNB Canberra Magne 38.86 138 *eP* **P 08 22 18.3 +1.1**
HNR Honiara 40.74 95 LR LR 08 41 55.3
comp=Z,610nm,18.2s,MS4.5,baz=90,slow=40
HNR Honiara 40.74 95 PFAKE 08 22 40.0 +6.9
HNR LR LR
comp=Z,689nm,21.0s,MS4.5
CD2 Chengdu 41.52 340⇓ *iP* **P 08 22 39.8 +0.6**
CD2 AP pP 08 22 49.5 -0.7
CD2 XP sP 08 22 53.3 -1.4
CD2 PP PP 08 24 19.5 +3.8
CD2 PCP PcP 08 24 37.3 +1.0
CD2 PCS PcS 08 28 27.3 -0.4
CD2 S **S** **08 28 53.3 +0.9**
CD2 XS sS 08 29 09.8 -0.7
CD2 SS SS 08 31 54.0 -4.3
CD2 SCS ScS 08 32 37.8 -2.2
CD2 AMB AMB
comp=Z,130nm,0.8s,mb5.6
CD2 AMB AMB
comp=Z,400nm,6.0s
CD2 LR LR
comp=N,980nm,10.8s,MS5.1
CD2 LR LR
comp=E,1μm,14.4s,MS5.1
CD2 LR LR
comp=Z,930nm,13.2s,MS4.8
MOO Moorlands 42.25 148 *eP* **P 08 22 46.9 +1.8**
SHL Shillong 42.59 323 *eP* **P 08 22 48.0 0.0**
SHL *ex* x 08 29 10.0
TAU Tasmania Unive 42.65 149 *eP* **P 08 22 49.7 +1.4**
comp=Z,46nm,1.0s,mb5.2
TAU LR LR
comp=Z,2μm,20.0s,MS5.0
TAU Tasmania Unive 42.65 149 *eP* **P 08 22 49.7 +1.4**
TAU pmax pmax
comp=Z,46nm,1.0s,mb5.2
TAU MLR MLR
comp=Z,2μm,20.0s,MS5.0
XAN Xi'an 43.10 348 P **P 08 22 58.0 +6.0**
XAN AP pP 08 23 02.0 -1.0
XAN XP sP 08 23 05.5 -2.0
XAN PP PP 08 24 35.5 +2.8
XAN PCP PcP 08 24 41.5 0.0
XAN SCP ScP 08 28 30.0 +0.2
XAN PCS PcS 08 28 33.8 -0.1
XAN S **S** **08 29 14.5 -1.1**
XAN AMB AMB
comp=Z,32nm,1.3s,mb4.9
XAN AMB AMB
comp=Z,366nm,6.6s
XAN LR LR
comp=N,250nm,21.1s,MS4.5
XAN LR LR
comp=E,456nm,17.1s,MS4.5
XAN LR LR
comp=Z,1μm,21.4s,MS4.7
INCN Inchon 46.12 9 PFAKE 08 23 30.0 +14
INCN LR LR
comp=Z,489nm,21.0s,MS4.4
LSA Lhasa 46.15 326 P **P** **08 23 17.5 +1.1**
LSA S **S** **08 29 50.5 -9.5**
LSA LR LR
comp=N,320nm,18.8s,MS4.5
LSA LR LR
comp=E,430nm,23.0s,MS4.5
LSA LR LR
comp=Z,530nm,17.8s
LSA Lhasa 46.15 326 PFAKE 08 23 30.0 +14
LSA LR LR
comp=Z,700nm,19.0s,MS4.6
KS15 Wonju Array Si 46.28 10 *eP* **P** **08 23 19.8 +2.4**
ODAN Odare 46.29 320 *eP* **P** **08 23 17.7 +0.1**
comp=Z,163nm,1.0s,mb5.9
LZH Lanzhou 46.30 343 ⇑P **P** **08 23 17.8 +0.3**
LZH AP pP 08 23 27.8 -0.7
LZH XP sP 08 23 31.5 -1.5
LZH PP PP 08 25 06.5 -0.2
LZH *eS* **S** **08 30 02.3 +0.4**
LZH XS sS 08 30 19.0 -1.2
LZH SS SS 08 33 20.5 -7.5
LZH AMB AMB
comp=Z,108nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,439nm,6.3s
LZH LR LR
comp=N,1μm,15.2s
LZH LR LR
comp=Z,2μm,17.0s,MS5.0
KSRS Korea Array 46.30 10 P **P** **08 23 17.9 +0.5**
comp=Z,33nm,0.9s,mb5.2,baz=189,slow=8.2,SNR=56
KSRS LR LR 08 43 41.0
comp=Z,367nm,19.5s,MS4.3,baz=83,slow=37
KSRS Korea Array 46.30 10 P **P** **08 23 18.0 +0.5**
KSRS pmax pmax
comp=Z,33nm,1.0s,mb5.2
KSRS MLR MLR
comp=Z,367nm,19.5s,MS4.3
TAPN Taplejung 46.44 321 *eP* **P** **08 23 18.7 0.0**
comp=Z,203nm,0.9s,mb6.0
RAMN Ramite 46.86 319 *eP* **P** **08 23 22.4 +0.3**
JIRN Jiri 47.62 320 *eP* **P** **08 23 27.5 -0.4**
comp=Z,171nm,0.8s,mb6.1
GUN Gumba 47.99 320 *eP* **P** **08 23 31.0 +0.2**
comp=Z,221nm,0.9s,mb6.2
PKI Pulchoki 48.06 319 *eP* **P** **08 23 30.9 -0.5**
BJT Baijiatuan 48.11 357 PFAKE 08 23 40.0 +8.5
BJT LR LR
comp=Z,617nm,19.0s,MS4.6
BJI Beijing 48.13 357 P **P** **08 23 32.0 +0.3**
BJI S **S** **08 30 26.3 -1.6**
BJI XS sS 08 30 46.0 -0.3
BJI AMB AMB
comp=Z,419nm,4.7s
BJI LR LR
comp=N,658nm,17.1s,MS4.8
BJI LR LR
comp=E,469nm,16.5s,MS4.8
BJI LR LR
comp=Z,422nm,17.8s,MS4.5
MAJO Matsushiro 48.19 21 *eP* **P** **08 23 32.1 -0.1**
comp=Z,74nm,1.4s,mb5.5
MAJO LR LR
comp=Z,542nm,21.0s,MS4.5
MAJO Matsushiro 48.19 21 *eP* **P** **08 23 32.1 -0.2**
MAJO pmax pmax
comp=Z,74nm,1.4s,mb5.5
MAJO MLR MLR
comp=Z,542nm,21.0s,MS4.5
MAT Matsushiro 48.19 21 P **P** **08 23 31.5 -0.8**
MAT *eS* **S** **08 30 24.0 -4.9**

MJAR Matsushiro Arr 48.19 21 P **P** **08 23 31.6 -0.7**
comp=Z,14nm,1.0s,mb4.9,baz=197,slow=7.8,SNR=24
MJAR LR LR 08 41 34.0
comp=Z,407nm,21.9s,MS4.4,baz=210,slow=33
DMN Daman 48.28 319 *eP* **P** **08 23 32.7 -0.4**
comp=Z,152nm,1.0s,mb6.0
KKN Kakani 48.29 319 *eP* **P** **08 23 33.1 -0.1**
GKN Gorkha 48.85 319 *eP* **P** **08 23 36.9 -0.6**
HHC Hu-ho-hao-te 49.32 353 *eP* **P** **08 23 43.5 +2.7**
HHC AP pP 08 23 53.3 +1.3
HHC XP sP 08 23 57.0 +0.5
HHC PCP PcP 08 25 03.5 +0.4
HHC PP PP 08 25 39.0 +3.8
HHC S **S** **08 30 47.3 +2.6**
HHC XS sS 08 31 06.3 +3.2
HHC SCS ScS 08 33 30.0 +0.3
HHC AMB AMB
comp=Z,13nm,1.2s,mb4.8
HHC AMB AMB
comp=Z,291nm,5.7s
HHC LR LR
comp=N,358nm,16.7s,MS4.7
HHC LR LR
comp=E,529nm,20.2s,MS4.7
HHC LR LR
comp=Z,490nm,20.2s,MS4.5
KOLN Koldanda 49.38 318 *eP* **P** **08 23 40.7 -0.8**
comp=Z,98nm,0.9s,mb5.8
DANN Dangsing 49.66 318 *eP* **P** **08 23 42.7 -0.9**
comp=Z,202nm,0.8s,mb6.2
PYUN Piuthan 50.00 318 *eP* **P** **08 23 45.5 -0.8**
comp=Z,90nm,0.9s,mb5.8
SNY Shenyang 50.06 5 ⇑P **P** **08 23 52.5 +6.1**
SNY S **S** **08 30 53.3 -1.6**
SNY AMB AMB
comp=Z,250nm,7.5s
SNY LR LR
comp=N,290nm,16.9s,MS4.6
SNY LR LR
comp=E,421nm,17.7s,MS4.6
SNY LR LR
comp=Z,430nm,17.5s,MS4.5
GTA Gaotai 50.58 341 ⇑P **P** **08 23 51.5 +1.1**
GTA AP pP 08 24 01.8 +0.2
GTA XP sP 08 24 05.8 -0.3
GTA S **S** **08 31 05.0 +2.7**
GTA XS sS 08 31 21.5 +0.7
GTA SS SS 08 34 38.0 +0.9
GTA AMB AMB
comp=Z,38nm,1.1s,mb5.2
GTA AMB AMB
comp=Z,242nm,5.1s
GTA LR LR
comp=N,383nm,20.4s,MS4.7
GTA LR LR
comp=E,693nm,21.0s,MS4.7
GTA LR LR
comp=Z,579nm,21.6s,MS4.6
CN2 Changchun 52.19 6 *eP* **P** **08 24 02.0 -0.4**
CN2 *eXP* sP 08 24 16.3 -1.8
CN2 *ePP* PP 08 26 01.8 +0.6
CN2 *eS* **S** **08 31 23.8 -0.5**
CN2 *eSS* SS 08 35 00.0 -2.4
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,16.0s,MS4.7
CN2 LR LR
comp=E,300nm,16.0s,MS4.7
CN2 LR LR
comp=Z,400nm,17.0s,MS4.5
MDJ Mudanjiang 53.55 10 P **P** **08 24 12.8 +0.4**
MDJ AP pP 08 24 22.0 -1.7
MDJ XP sP 08 24 25.8 -2.4
MDJ PP PP 08 26 13.5 0.0
MDJ S **S** **08 31 45.8 +2.9**
MDJ XS sS 08 32 00.8 -0.7
MDJ AMB AMB
comp=Z,43nm,1.2s,mb5.2
MDJ AMB AMB
comp=Z,214nm,4.8s
MDJ LR LR
comp=N,230nm,29.9s,MS4.2
MDJ LR LR
comp=E,199nm,28.0s,MS4.2
MDJ LR LR
comp=Z,274nm,28.0s,MS4.2
MDJ Mudanjiang 53.55 10 PFAKE 08 24 20.0 +7.6
MDJ LR LR
comp=Z,351nm,20.0s,MS4.4
NDI New Delhi 54.34 314 *ex* x 08 24 14.0
ERM Erimo 54.82 22 PFAKE 08 24 30.0 +8.3
ERM LR LR
comp=Z,397nm,20.0s,MS4.5
ULN Ulaanbaatar 56.84 351 ⇑P **P** **08 24 35.7 -0.4**
SNR=12
ULN Ulaanbaatar 56.84 351 *eP* **P** **08 24 36.2 +0.1**
comp=Z,34nm,1.0s,mb5.3
ULN LR LR
comp=Z,481nm,19.0s,MS4.6
ULN Ulaanbaatar 56.84 351 *c iP* **P** **08 24 36.2 +0.1**
ULN *i* *PP pP 08 24 49.2 +1.8
SONM Songino Array 56.92 350 P **P** **08 24 36.7 0.0**
comp=Z,35nm,0.9s,mb5.4,baz=168,slow=7.1,SNR=183
SONM ScP ScP 08 29 29.6 +1.1
comp=Z,2.2nm,1.1s,baz=152,slow=1.9,SNR=4.8
SONM LR LR 08 52 22.5
comp=Z,373nm,18.3s,MS4.5,baz=283,slow=40
SONM PKP2bc 08 54 34.9
comp=Z,1.0nm,1.0s,baz=298,slow=3.2,SNR=4.2
SONM Songino Array 56.92 350 P **P** **08 24 36.7 0.0**
SONM ScP ScP 08 29 29.6 +1.1
SONM LR LR 08 52 22.5
SONM ⇑*e* 08 54 34.9
SONM Songino Array 56.92 350 P **P** **08 24 36.7 0.0**
SONM pmax pmax
comp=Z,35nm,0.9s
SONM pmax pmax
comp=N,2.0nm,1.1s
SONM MLR MLR
comp=Z,373nm,18.3s
SONM pmax pmax
comp=Z,1.0nm,1.0s
HIA Hailar 57.30 1 *eP* **P** **08 24 38.0 -1.3**
HIA LR LR
comp=Z,531nm,20.0s,MS4.6
HIA Hailar 57.30 1 *eP* **P** **08 24 38.9 -0.4**
RPZ Rata Peaks 57.52 137 P **P** **08 24 41.4 +0.3**
comp=Z,93nm,1.0s,mb5.8,baz=329,slow=2.4,SNR=24
THN Thein Dam 57.61 317 *ex* x 08 24 38.1
CASY Casey 58.19 184 *eP* **P** **08 24 44.6 -0.7**
CASY Casey 58.19 184 PFAKE 08 25 00.0 +15
CASY LR LR
comp=Z,1μm,21.0s,MS4.9
HABR Khabarovsk 58.31 13 *eP* **P** **08 24 45.2 -1.2**
HABR *e**PP pP 08 24 57.4 -0.4
HABR *e* 08 25 34.2
HABR *e* 08 26 53.0
HABR *eS* **S** **08 32 44.6 -1.4**
HABR *e* 08 33 08.7
HABR *e* 08 34 29.7
KLR Kul'dur 58.39 10 *eP* **P** **08 24 42.5 -4.5**
KLR *eS* **S** **08 32 42.0 -5.1**
KLR *e* 08 36 38.0
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.6
WMQ Urumqi 58.99 334 P **P** **08 24 51.0 -0.2**
WMQ AP pP 08 25 01.0 -1.6
WMQ XP sP 08 25 05.0 -2.0
WMQ PP PP 08 27 03.0 +0.9
WMQ S **S** **08 32 53.0 -2.0**
WMQ SCS ScS 08 34 35.0 -3.2
WMQ SS SS 08 36 49.0 -0.6
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,517nm,18.0s,MS4.9
WMQ LR LR
comp=E,608nm,18.0s,MS4.9
WMQ LR LR
comp=Z,497nm,18.0s,MS4.7

YSS Yuzh-Sakhalins 59.00 19 *eP* **P** **08 24 50.7 -0.5**
YSS Yuzh-Sakhalins 59.00 19 *eP* **P** **08 24 50.6 -0.6**
YSS pmax pmax
comp=Z,108nm,1.7s,mb5.6
SNZO South Karori 59.26 133 PFAKE 08 25 10.0 +17
SNZO LR LR
comp=Z,884nm,20.0s,MS4.9
FUNA Funafuti 59.77 95 PFAKE 08 25 10.0 +13
FUNA LR LR
comp=Z,7μm,20.0s,MS5.8
ZAK Zakamensk 59.94 349⇓ *iP* **P** **08 24 57.0 -0.7**
ZAK pmax pmax
comp=Z,20nm,1.2s,mb5.0
NIL Nilore 59.99 317 PFAKE 08 25 10.0 +12
NIL LR LR
comp=Z,69nm,19.0s,MS3.8
DRV Dumont d'Urvil 60.10 170 P **P** **08 24 58.0 -0.5**
DRV S **S** **08 33 21.0 +12**
DRV SS SS 08 37 06.0 0.0
DRV R 08 45 00.0
URZ Urewera 60.23 129 P **P** **08 24 59.5 -0.5**
comp=Z,13nm,0.5s,mb5.2,baz=77,slow=1.9,SNR=17
TLY Talaya 61.11 349 P **P** **08 25 05.2 -0.4**
comp=Z,188nm,0.9s,mb6.2,SNR=8.1
TLY Talaya 61.11 349 P **P** **08 25 05.9 +0.3**
SNR=6.8
TLY Talaya 61.11 349 *eP* **P** **08 25 06.1 +0.4**
comp=Z,23nm,0.9s,mb5.3
TLY LR LR
comp=Z,342nm,20.0s,MS4.5
TLY Talaya 61.11 349 *eP* **P** **08 25 05.9 +0.3**
TLY *eS* **S** **08 33 18.9 -3.1**
TLY pmax pmax
comp=Z,36nm,1.0s,mb5.5
IRK Irkutsk 61.54 350 *eP* **P** **08 25 05.5 -3.0**
IRK *e* 08 25 51.9
IRK pmax pmax
comp=Z,72nm,1.8s,mb5.5
MOY Mondy 61.62 348 *eP* **P** **08 25 15.5 +6.4**
KSH Kashi 61.86 323 *eP* **P** **08 25 10.8 -0.2**
KSH *e*AP pP 08 25 21.0 -1.4
KSH *e*XP sP 08 25 25.8 -1.0
KSH *e*PCP PcP 08 25 52.0 +0.4
KSH *e*PP PP 08 27 28.5 +0.9
KSH *e*SCP ScP 08 29 49.5 -1.2
KSH *e*PCS PcS 08 29 54.0 -0.6
KSH *e*S **S** **08 33 27.8 -4.2**
KSH *e*SCS ScS 08 34 56.0 -3.9
KSH *e*SS SS 08 37 30.3 -4.6
KSH AMB AMB
comp=Z,101nm,0.4s,mb6.3
KSH LR LR
comp=N,1μm,5.2s
KSH LR LR
comp=E,988nm,5.9s
KSH LR LR
comp=Z,1μm,6.6s
RER Riviere de l'E 61.90 250 *eP* **P** **08 25 11.6 0.0**
comp=Z,1.9nm,1.0s,mb4.2
MSEY Mahe Island 62.89 269 PFAKE 08 25 30.0 +12
MSEY LR LR
comp=Z,435nm,20.0s,MS4.6
HVS Khovu-Aksy 63.00 343 *c iP* **P** **08 25 17.9 -0.4**
HVS *i* *PP pP 08 25 32.3 +2.5
HVS pmax pmax
comp=Z,100nm,1.3s,mb5.8
KBL Kabul 63.39 315 *eP* **P** **08 25 18.4 -2.9**
comp=Z,19nm,0.7s,mb5.3
KBL Kabul 63.39 315 *eP* **P** **08 25 18.4 -2.8**
KBL pmax pmax
comp=Z,19nm,0.7s,mb5.3
MK31 Makanchi Array 63.69 333 *eP* **P** **08 25 22.0 -1.0**
MK31 Makanchi Array 63.69 333 *i* P **P** **08 25 21.4 -1.6**
MK31 pmax pmax
comp=Z,24nm,0.8s,mb5.3
MKAR Makanchi Array 63.69 333 P **P** **08 25 21.9 -1.1**
comp=Z,14nm,0.7s,mb5.1,baz=143,slow=7.5,SNR=121
MKAR PKP2bc 08 54 22.9
comp=Z,1.1nm,1.0s,baz=300,slow=3.4,SNR=4.9
MKAR LR LR 08 57 10.6
comp=Z,361nm,18.3s,MS4.6,baz=162,slow=40
MKAR Makanchi Array 63.69 333 P **P** **08 25 21.9 -1.1**
MKAR ⇑*e* 08 54 22.9
MKAR LR LR 08 57 10.6
MKAR Makanchi Array 63.69 333 P **P** **08 25 21.9 -1.1**
MKAR pmax pmax
comp=Z,14nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR MLR MLR
comp=Z,361nm,18.3s
TKM2 Tokmak 2 64.30 326 *eP* **P** **08 25 25.7 -1.4**
comp=Z,35nm,1.5s,mb5.2
TKM2 *e*pP pP 08 25 39.4 +0.8
TKM2 LR LR
comp=Z,345nm,19.0s,MS4.6
TKM2 Tokmak 2 64.30 326 *eP* **P** **08 25 25.7 -1.4**
TKM2 *e**PP pP 08 25 39.4 +0.8
TKM2 pmax pmax
comp=Z,35nm,1.5s,mb5.2
TKM2 MLR MLR
comp=Z,345nm,19.0s,MS4.6
TKM2 Tokmak 2 64.30 326 P **P** **08 25 25.7 -1.4**
SNR=7.4
UCH Uchtor 64.46 325 PFAKE 08 25 40.0 +12
UCH LR LR
comp=Z,222nm,20.0s,MS4.3
KBK Karagaybulak 64.49 326 P **P** **08 25 27.4 -0.9**
SNR=8.6
AAK Ala-Archa 64.73 325 P **P** **08 25 28.9 -1.0**
comp=Z,117nm,0.8s,mb6.0,SNR=9.7
AAK Ala-Archa 64.73 325 PFAKE 08 25 40.0 +10
AAK LR LR
comp=Z,561nm,20.0s,MS4.8
AAK Ala-Archa 64.73 325 P **P** **08 25 28.9 -1.0**
SNR=11
FRU Bishkek 64.79 326 *eP* **P** **08 25 25.5 -4.8**
FRU pmax pmax
comp=Z,150nm,3.0s
AML Almayashu 64.86 324 *eP* **P** **08 25 29.6 -1.1**
comp=Z,26nm,0.9s,mb5.3
AML Almayashu 64.86 324 P **P** **08 25 29.8 -1.0**
SNR=22
CLNS Chul'man 65.08 4 *eP* **P** **08 25 31.8 -0.1**
CLNS *e**PP pP 08 25 42.2 -1.1
CLNS *e* 08 27 55.8
CLNS *eS* S 08 34 11.2 -0.3
CLNS *e**SS sS 08 34 31.8 +1.3
CLNS pmax pmax
comp=Z,53nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=N,26nm,1.0s
CLNS pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS smax
comp=N,15nm,1.2s
CLNS smax
comp=E,8.0nm,1.2s
USP Ospenovka 65.14 326 P **P** **08 25 30.8 -1.7**
SNR=6.3
EKS2 Erkin-Say 65.15 325 *eP* **P** **08 25 31.4 -1.2**
comp=E,17nm,0.9s,mb5.1
EKS2 LR LR
comp=Z,573nm,20.0s,MS4.8
EKS2 Erkin-Say 65.15 325 P **P** **08 25 31.5 -1.1**
SNR=16
BOD Bodaibo 65.98 357 *eP* **P** **08 25 36.8 -0.8**
BOD pmax pmax
comp=Z,63nm,1.1s,mb5.6
KK31 Karatay Array 67.31 324 *i* P **P** **08 25 43.9 -2.6**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KURK Kurchatov 68.23 334 P **P** **08 25 50.7 -1.4**
comp=Z,145nm,1.0s,mb6.0,SNR=11
KURK Kurchatov 68.23 334 ⇓P **P** **08 25 51.8 -0.3**
SNR=9.5
KURK Kurchatov 68.23 334 *eP* **P** **08 25 50.0 -2.1**
comp=Z,20nm,0.9s,mb5.2
KURK LR LR
comp=Z,493nm,21.0s,MS4.7

KURK **Kurchatov** 68.23 334 *c* iP P 08 25 50.4 -1.7
KURK *i* *PP pP 08 26 03.2 -0.4
KURK pmax pmax
comp=Z,29nm,1.0s,mb5.3
ZAA0 Zalesovo Array 68.27 339 *e*P P 08 25 49.9 -2.4
ZALV Zalesovo Beam 68.27 339 P P 08 25 50.5 -1.7
comp=Z,12nm,0.8s,mb5.0,baz=134,slow=4.3,SNR=47
ZALV PKP2bc 08 54 12.1
comp=Z,1.7nm,0.9s,baz=270,slow=3.9,SNR=5.5
ZALV Zalesovo Beam 68.27 339 P P 08 25 50.5 -1.7
ZALV ⇑*e* 08 54 12.1
ZALV Zalesovo Beam 68.27 339 P P 08 25 50.6 -1.7
ZALV pmax pmax
comp=Z,12nm,0.8s,mb5.0
ZALV pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
PETK Petropavlovsk- 69.53 24 P P 08 26 00.2 +0.1
comp=Z,31nm,0.9s,mb5.2,baz=200,slow=5.0,SNR=30
PETK LR LR 08 53 22.1
comp=Z,132nm,20.8s,MS4.2,baz=96,slow=33
NVS Novosibirsk 69.54 339 *i* P P 08 25 56.7 -3.5
NVS pmax pmax
comp=N,28nm,1.6s
NVS pmax pmax
comp=E,15nm,1.6s
NVS pmax pmax
comp=Z,29nm,1.6s,mb5.0
MAW Mawson 69.82 200 ⇑*i* P P 08 26 02.3 +0.6
comp=Z,26nm,0.9s,mb5.2
MAW Mawson 69.82 200 P P 08 26 02.5 +0.7
comp=Z,42nm,1.0s,mb5.3,baz=66,slow=7.2,SNR=55
MAW LR LR 08 54 57.0
comp=Z,599nm,18.9s,MS4.9,baz=61,slow=34
MAW Mawson 69.82 200 *e*P P 08 26 02.2 +0.5
comp=Z,10nm,1.0s,mb4.7
MAW LR LR
comp=Z,965nm,19.0s,MS5.1
PET Petropavlovsk 69.85 24⇑*e*P P 08 26 01.8 -0.3
PET Petropavlovsk 69.85 24 *e*P P 08 26 00.9 -1.2
PET *e*S S 08 35 08.5 -0.4
PET *e*PS 08 35 36.8
PET *e*SS SS 08 39 37.3 -1.2
PET pmax pmax
comp=Z,300nm,15.5s
PET pmax pmax
comp=Z,68nm,1.2s,mb5.5
PET MLR MLR
comp=Z,300nm,17.0s,MS4.6
OPO Ambohidratompo 69.96 253 P P 08 26 02.8 -0.7
comp=Z,4.0nm,0.7s,mb4.5,baz=82,slow=3.0,SNR=11
YAK Yakutsk 70.61 5 *e*P P 08 26 05.9 -0.6
comp=Z,50nm,0.8s,mb5.5
YAK LR LR
comp=Z,259nm,20.0s,MS4.5
YAK Yakutsk 70.61 5*c* iP P 08 26 05.5 -1.1
YAK pmax pmax
comp=Z,120nm,1.0s,mb5.8
VNDA Vanda 72.74 171 P P 08 26 19.9 +0.7
comp=Z,13nm,1.0s,mb4.8,baz=317,slow=5.8,SNR=37
VNDA LR LR 08 56 16.2
comp=Z,659nm,19.6s,MS4.9,baz=337,slow=34
VNDA Vanda 72.74 171 P P 08 26 19.9 +0.7
VNDA LR LR 08 56 16.2
VOSK Vostochnaya 73.06 332 P P 08 26 18.6 -2.9
VOSK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BVA0 Borovoye Array 73.53 332 *i* P P 08 26 22.1 -2.1
BVA0 pmax pmax
comp=Z,12nm,1.6s,mb4.6
BRVK Borovoye 73.60 332 P P 08 26 23.2 -1.5
comp=Z,84nm,1.1s,mb5.6,SNR=5.1
BRVK Borovoye 73.60 332 ⇑P P 08 26 24.5 -0.1
SNR=6.5
BRVK Borovoye 73.60 332 *e*P P 08 26 23.1 -1.6
comp=Z,29nm,1.3s,mb5.0
BRVK LR LR
comp=Z,543nm,20.0s,MS4.8
BRVK Borovoye 73.60 332 *e*P P 08 26 23.1 -1.6
BRVK pmax pmax
comp=Z,29nm,1.3s,mb5.0
BRVK MLR MLR
comp=Z,543nm,20.0s,MS4.8
SBA Scott Base 73.74 171 *e*P P 08 26 26.8 +1.6
comp=Z,142nm,1.7s,mb5.6
SBA LR LR
comp=Z,387nm,19.0s,MS4.7
SBA Scott Base 73.74 171 *e*P P 08 26 26.8 +1.6
SBA pmax pmax
comp=Z,142nm,1.7s,mb5.6
SBA MLR MLR
comp=Z,387nm,19.0s,MS4.7
SEY Seymchan 75.54 15*d* iP P 08 26 35.8 +0.1
AB31 Akbulak array 76.81 325 P P 08 26 40.4 -2.8
AB31 pmax pmax
comp=Z,34nm,1.2s,mb5.2
SYO Syowa Base 78.42 201⇓*i* P P 08 26 50.4 -1.5
AKTK Aktyubinsk 78.48 325 *i* P P 08 26 49.0 -3.5
AKTO Aktyubinsk 78.48 325 *i* P P 08 26 49.9 -2.6
AKTO pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
TIXI Tiksi 80.04 3 *e*P P 08 26 58.5 -2.1
comp=Z,55nm,1.5s,mb5.3
TIXI LR LR
comp=Z,237nm,19.0s,MS4.6
TIXI Tiksi 80.04 3*c* iP P 08 26 58.5 -2.1
TIXI pmax pmax
comp=Z,27nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,200nm,23.0s,MS4.4
SVE Sverdlovsk 80.32 332 *e*P P 08 26 53.1 -9.3
SVE pmax pmax
comp=Z,17nm,0.9s,mb5.0
ARU Arti 81.10 331⇑*e*P P 08 27 03.9 -2.7
ARU LR LR
comp=Z,408nm,21.0s,MS4.8
ARU Arti 81.10 331*c* iP P 08 27 03.9 -2.7
ARU *e* 08 30 07.2
ARU *e*S S 08 37 09.9 -3.4
ARU SS SS 08 42 26.5 -2.5
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.8
QSPA South Pole Qui 81.71 180 P P 08 27 10.0 +0.5
comp=Z,33nm,1.0s,mb5.2,baz=331,slow=2.2,SNR=31
QSPA South Pole Qui 81.71 180 P P 08 27 10.0 +0.5
QSPA LR LR
comp=Z,647nm,19.0s,MS5.0
BILL Bilibino 83.18 16 *e*P P 08 27 17.5 +0.3
BILL LR LR
comp=Z,271nm,19.0s,MS4.6
BILL Bilibino 83.18 16⇑*e*P P 08 27 17.0 -0.2
BILL *e* 08 30 26.1
BILL *e*S S 08 37 33.7 -0.5
BILL pmax pmax
comp=Z,14nm,2.5s,mb4.5
KIV Kislovodsk 85.78 315 *e*P P 08 27 28.3 -2.6
KIV LR LR
comp=Z,304nm,20.0s,MS4.7
KIV Kislovodsk 85.78 315 *e*P P 08 27 28.2 -2.7
KIV *e* 08 30 48.6
KIV *e* 08 37 48.3
KIV *e*SS SS 08 43 34.1 -4.7
KIV pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
NVL N'lazarevskaya 87.73 199 *e*P P 08 27 41.5 +1.5
NVL pmax pmax
comp=Z,53nm,1.5s,mb5.5
MBAR Mbarara 87.92 270 P P 08 27 40.4 -1.6
comp=Z,48nm,0.9s,mb5.7,SNR=7.5
MBAR Mbarara 87.92 270 PFAKE 08 27 50.0 +8.0
MBAR LR LR
comp=Z,579nm,21.0s,MS5.0
LSZ Lusaka 88.36 255 P P 08 27 43.5 -0.6
SNR=6.9
LSZ Lusaka 88.36 255 *e*P P 08 27 43.1 -0.9
comp=Z,63nm,1.4s,mb5.7
LSZ LR LR
comp=Z,371nm,19.0s,MS4.8
LSZ Lusaka 88.36 255 *e*P P 08 27 43.2 -0.9
LSZ pmax pmax
comp=Z,63nm,1.4s,mb5.7
LSZ MLR MLR
comp=Z,371nm,19.0s,MS4.8
BOSA Boshof 89.11 241 P P 08 27 46.9 -0.5
comp=Z,8.1nm,0.8s,mb5.1,baz=86,slow=5.7,SNR=10
BOSA LR LR 09 04 00.4
comp=Z,266nm,19.6s,MS4.7,baz=113,slow=33

BOSA Boshof 89.11 241 *e*P P 08 27 46.8 -0.6
comp=Z,8.8nm,0.7s,mb5.2
PPT Papeete 89.15 108 *e*LR LR 08 56 14.6
comp=Z,329nm,25.0s
LBTB Lobatse 89.36 245 P P 08 27 48.3 -0.3
comp=Z,24nm,1.1s,mb5.4,baz=148,slow=4.5,SNR=13
LBTB Lobatse 89.36 245 *e*P P 08 27 48.3 -0.4
comp=Z,26nm,1.1s,mb5.5
LBTB LR LR
comp=Z,326nm,19.0s,MS4.8
ANN Anapa 89.64 315 *e*P P 08 27 45.9 -3.5
ANN *e**PP pP 08 28 00.3 -1.0
ANN pmax pmax
comp=Z,94nm,1.4s,mb5.9
CSS Prodhromos 90.93 305 PFAKE 08 28 10.0 +14
CSS LR LR
comp=Z,368nm,21.0s,MS4.8
BR131 Keskin Array S 91.47 310 PFAKE 08 28 10.0 +12
BR131 LR LR
comp=Z,191nm,20.0s,MS4.5
BRTR Keskin Array B 91.47 310 P P 08 27 55.1 -3.0
comp=Z,2.7nm,0.9s,mb4.6,baz=134,slow=7.0,SNR=9.1
BRTR LR LR 09 13 58.5
comp=Z,189nm,18.7s,MS4.6,baz=103,slow=39
SNAA Sanae 91.62 196 *e*P P 08 27 54.9 -3.3
SNAA *e* pP 08 28 05.5 -4.6
SNAA Sanae 91.62 196 *e*P P 08 27 54.8 -3.3
comp=Z,37nm,1.1s,mb5.6
SNAA Sanae 91.62 196*c* iP P 08 27 55.1 -3.1
SNAA pmax pmax
comp=Z,44nm,1.3s
ANTO Ankara 92.13 310 PFAKE 08 28 10.0 +8.9
ANTO LR LR
comp=Z,249nm,21.0s,MS4.6
OBN Obninsk 92.26 325 *e*P P 08 27 59.8 -1.5
OBN LR LR
comp=Z,300nm,21.0s,MS4.7
OBN Obninsk 92.26 325 *e*P P 08 27 58.6 -2.7
OBN *e* 08 31 41.9
OBN *e*S SKSac 08 38 26.6 -4.9
OBN pmax pmax
comp=Z,44nm,2.5s,mb5.3
VNA2 Neumayer--Watz 93.25 195 *e*P P 08 28 06.7 +1.0
baz=128,slow=3.2
VNA2 *e* pP 08 28 17.1 -0.5
ISP Isparta 93.61 308 PFAKE 08 28 20.0 +12
ISP LR LR
comp=Z,207nm,19.0s,MS4.6
VNA3 Neumayer Olymp 93.64 195 *e*P P 08 28 08.1 +0.6
VNA3 *e* pP 08 28 18.0 -1.4
VNA1 Neumayer--Stat 93.65 195 *e*P P 08 28 08.4 +0.9
VNA1 *e* pP 08 28 18.4 -1.1
AKASG Malin Array Be 96.02 320 P P 08 28 14.4 -4.3
comp=Z,0.6nm,0.5s,mb4.3,baz=73,slow=5.5,SNR=5.2
AKASG PP PP 08 32 09.5 -2.2
comp=Z,0.8nm,0.5s,baz=78,slow=7.8,SNR=4.6
AKASG LR LR 09 17 28.3
comp=Z,222nm,19.8s,MS4.6,baz=55,slow=39
AKASG Malin Array Be 96.02 320 P P 08 28 14.4 -4.3
AKASG 08 32 09.5
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,1.0nm,0.5s
TSUM Tsumeb 97.69 249 PFAKE 08 28 40.0 +13
TSUM LR LR
comp=Z,219nm,19.0s,MS4.7
ARCES ARCESS Array B 98.82 339 LR LR 09 20 31.7
comp=Z,461nm,19.8s,MS5.0,baz=337,slow=40
RKT Rikitea 101.54 116 *e*LR LR 09 01 57.4
comp=Z,306nm,24.0s
CEL Celeste 105.14 307 PFAKE 08 33 30.0 +16
CEL LR LR
comp=Z,175nm,19.0s,MS4.6
CUC Castrocucco 105.15 309 PFAKE 08 33 30.0 +16
CUC LR LR
comp=Z,382nm,20.0s,MS4.9
TRI Trieste 106.32 315 PFAKE 08 33 30.0 +14
TRI LR LR
comp=Z,188nm,20.0s,MS4.6
AQU L'Aquila 106.85 312 PFAKE 08 33 30.0 +13
AQU LR LR
comp=Z,346nm,19.0s,MS4.9
VLC Villacollemand 108.87 314 PFAKE 08 33 30.0 +9.1
VLC LR LR
comp=Z,374nm,20.0s,MS5.0
TUE Stuetta 109.28 316 PFAKE 08 33 30.0 +8.4
TUE LR LR
comp=Z,259nm,20.0s,MS4.8
YKA Yellowknife Ar 113.65 24 PKiKP PKiKP 08 33 27.2 -2.2
comp=Z,1.1nm,0.7s,baz=316,slow=2.1,SNR=6.0
YKA Yellowknife Ar 113.65 24 PKPdf PKiKP 08 33 27.2 -2.2
YKA Yellowknife Ar 113.65 24 *i* PKiKP PKiKP 08 33 27.2 -2.2
YKA pmax pmax
comp=Z,1.0nm,0.7s
HUMO Hull Mountain 116.30 46 PFAKE 08 33 50.0 +15
HUMO LR LR
comp=Z,261nm,19.0s,MS4.9
USHA Ushuaia 116.84 175 PKP PKPdf 08 33 34.4 -1.5
comp=Z,22nm,1.0s,baz=14,slow=1.1,SNR=4.0
WDC Whiskeytown Da 117.07 49 PFAKE 08 33 50.0 +13
WDC LR LR
comp=Z,234nm,19.0s,MS4.8
TOA0 Torodi Ar. Sit 118.06 280 *e*PKPdf PKPdf 08 33 37.4 -1.9
TORD Torodi Ar. Bea 118.06 280 PKP PKPdf 08 33 37.5 -1.8
comp=Z,3.8nm,0.7s,baz=70,slow=1.6,SNR=26
TORD PKKPbc PKKPbc 08 43 57.9 -0.7
comp=Z,0.5nm,0.8s,baz=297,slow=3.2,SNR=3.5
CMB Columbia Colle 119.28 51 PFAKE 08 33 50.0 +9.0
CMB LR LR
comp=Z,207nm,19.0s,MS4.8
WVOR Wild Horse Val 119.43 46 *e*PKPdf PKPdf 08 33 40.7 -0.5
WVOR LR LR
comp=Z,187nm,19.0s,MS4.7
BMO Blue Mountains 119.60 43 PFAKE 08 33 50.0 +8.6
BMO LR LR
comp=Z,172nm,22.0s,MS4.6
NVAR Mina Array Bea 120.77 50 PKP PKPdf 08 33 43.9 0.0
comp=Z,2.1nm,0.8s,baz=243,slow=1.6,SNR=19
NVAR PKKPbc PKKPbc 08 43 49.6 +0.5
comp=Z,2.3nm,0.8s,baz=140,slow=4.0,SNR=13
BMN Battle Mountai 121.03 48 PFAKE 08 34 00.0 +16
BMN LR LR
comp=Z,291nm,20.0s,MS4.9
TPH Tonopah 121.69 50 PFAKE 08 34 00.0 +14
TPH LR LR
comp=Z,152nm,20.0s,MS4.6
DAC Darwin (Calif) 121.86 52 PFAKE 08 34 00.0 +14
DAC LR LR
comp=Z,249nm,19.0s,MS4.9
HLID Hailey 122.00 43 *e*PKPdf PKPdf 08 33 46.2 +0.2
ELK Elko 122.37 47 *e*PKPdf PKPdf 08 33 46.8 0.0
ELK LR LR
comp=Z,380nm,19.0s,MS5.1
SFS San Fernando 122.78 308 PFAKE 08 34 00.0 +12
SFS LR LR
comp=Z,775nm,20.0s,MS5.4
BOZ Bozeman (W) 123.02 40 PFAKE 08 34 00.0 +12
BOZ LR LR
comp=Z,279nm,19.0s,MS4.9
PFO Pinyon Flat Ob 123.40 55 *e*PKPdf PKPdf 08 33 48.1 -1.0
YMR Madison River 123.86 41 PFAKE 08 34 00.0 +10
YMR LR LR
comp=Z,1μm,21.0s,MS5.5
KIC Kosan Boka 123.93 272 *e*P PKPdf 08 33 50.0 -0.7
comp=Z,35nm,0.8s
DBIC Dimbokro 124.07 272 PKP PKPdf 08 33 49.9 -1.1
comp=Z,5.5nm,0.7s,baz=43,slow=2.6,SNR=10
DBIC Dimbokro 124.07 272 *e*PKIKP PKPdf 08 33 49.7 -1.2
DBIC MLR MLR
comp=Z,279nm,19.0s
LDFC Landfair 124.12 53 *e*PKPdf PKPdf 08 33 50.3 -0.1
LIC Lamto 124.20 272 *e*P PKPdf 08 33 48.4 -2.8
comp=Z,37nm,1.0s
TIC Toumodi 124.23 272 *e*P PKPdf 08 33 49.4 -1.8
comp=Z,14nm,0.2s
LKWY Lake 124.27 41 PFAKE 08 34 00.0 +10
LKWY LR LR
comp=Z,380nm,20.0s,MS5.1
DUG Dugway 124.30 47 PFAKE 08 34 00.0 +9.4
DUG LR LR
comp=Z,192nm,20.0s,MS4.8
LOHW Long Hollow 124.53 42 *e*PKPdf PKPdf 08 33 50.1 -0.8
AHID Auburn Hatcher 124.54 43 PFAKE 08 34 00.0 +9.0
AHID LR LR
comp=Z,314nm,20.0s,MS5.0

MPU Maple Canyon 125.21 46 PFAKE 08 34 00.0 +7.6
MPU LR LR
comp=Z,969nm,22.0s,MS5.4
MVU Marysvale 125.31 48 PFAKE 08 34 00.0 +7.4
MVU LR LR
comp=Z,292nm,22.0s,MS4.9
MSU Marysvale 125.34 48 *e*PKPdf PKPdf 08 33 52.6 0.0
PDAR Pinedale Array 125.58 43 PKP PKPdf 08 33 51.8 -1.2
comp=Z,0.9nm,0.9s,baz=240,slow=2.9,SNR=6.4
PDAR PKKPbc 08 43 29.1
comp=Z,0.5nm,0.7s,baz=115,slow=6.7,SNR=4.6
PV10 Paradox Valley 127.69 47 *e*PKPdf PKPdf 08 33 57.2 0.0
PV01 Paradox Valley 128.12 47 *e*PKPdf PKPdf 08 33 57.5 -0.5
TUC Tucson 128.34 55 PFAKE 08 34 10.0 +11
TUC LR LR
comp=Z,163nm,19.0s,MS4.7
RSSD Black Hills 128.51 39 *e*PKPdf PKPdf 08 33 56.9 -1.6
MVCO Mesa Verde 128.52 49 PFAKE 08 34 10.0 +11
MVCO LR LR
comp=Z,173nm,19.0s,MS4.8
PLCA Paso Flores 130.49 171 PKP PKPdf 08 34 01.9 -0.6
comp=Z,3.5nm,0.7s,baz=143,slow=9.5,SNR=9.7
PLCA SKPbc SKPbc 08 37 25.4 +2.4
comp=Z,18nm,1.2s,baz=180,slow=5.5,SNR=11
PLCA Paso Flores 130.49 171 PKP PKPdf 08 34 01.9 -0.6
PLCA SKPbc SKPbc 08 37 25.4 +2.4
PLCA LR LR
comp=Z,242nm,19.0s,MS4.9
PLCA Paso Flores 130.49 171 PKIKP PKPdf 08 34 01.9 -0.6
PLCA pmax pmax
comp=Z,4.0nm,0.7s
PLCA pmax pmax
comp=N,18nm,1.2s
ASCN Ascension 130.54 252 PFAKE 08 34 10.0 +6.7
ASCN LR LR
comp=Z,1μm,20.0s,MS5.6
LAZ Ladron 130.57 51 *e*PKPdf PKPdf 08 34 02.8 +0.1
ANMO Albuquerque 130.89 50 *e*PKPdf PKPdf 08 34 02.9 -0.5
ANMO *e*SKPbc SKPbc 08 37 24.1 -0.6
LPM Los Pinos Moun 130.99 51 *e*SKPbc SKPbc 08 37 25.2 0.0
BNM Barren Site 131.05 51 *e*PKPdf PKPdf 08 34 04.6 +0.9
BNM *e*SKPbc SKPbc 08 37 25.7 +0.4
SCHQ Schefferville 133.36 4 PFAKE 08 34 20.0 +13
SCHQ LR LR
comp=Z,2μm,20.0s,MS5.8
CBKS Cedar Bluff 134.01 42 PFAKE 08 34 20.0 +11
CBKS LR LR
comp=Z,298nm,22.0s,MS5.0
TXAR Lajitas Array 135.07 56 PKhKP 08 34 01.2
comp=Z,0.1nm,0.4s,baz=258,slow=3.8,SNR=3.9
TXAR PKP PKPdf 08 34 09.4 -2.0
comp=Z,0.4nm,0.6s,baz=188,slow=1.1,SNR=4.2
TXAR SKPbc SKPbc 08 37 39.0 -0.2
comp=Z,0.6nm,0.8s,baz=270,slow=2.5,SNR=3.9
TXAR Lajitas Array 135.07 56 PKP PKPdf 08 34 09.4 -2.0
TXAR SKPbc SKPbc 08 37 39.0 -0.2
JCT Junction City 137.79 53 *e*PKPdf PKPdf 08 34 15.4 -1.0
JCT *e*SKPbc SKPbc 08 37 46.4 -1.0
JCT LR LR
comp=Z,345nm,21.0s,MS5.1
CFAA Coronel Fontan 139.79 171 PKhKP 08 34 11.4
comp=Z,1.0nm,0.7s,baz=185,slow=4.0,SNR=17
CFAA PKP PKPdf 08 34 17.9 -2.2
comp=Z,1.4nm,0.7s,baz=286,slow=1.4,SNR=13
CFAA SKPbc SKPbc 08 37 53.9 +0.9
comp=Z,0.9nm,1.1s,baz=202,slow=2.6,SNR=4.4
CFAA Coronel Fontan 139.79 171 PKP PKPdf 08 34 17.9 -2.2
CFAA SKPbc SKPbc 08 37 53.9 +0.9
NATX Nacogdoches 141.16 48 PFAKE 08 34 30.0 +7.5
NATX LR LR
comp=Z,632nm,20.0s,MS5.4
LCO Las Campanas 141.83 167 PFAKE 08 34 40.0 +16
LCO LR LR
comp=Z,184nm,19.0s,MS4.9
WVT Waverly 143.20 37 *e*PKPdf PKPdf 08 34 20.5 -5.5
OXF Oxford 143.27 41 PFAKE 08 34 40.0 +14
OXF LR LR
comp=Z,159nm,21.0s,MS4.8
VBMS Vicksburg 143.89 45 *e*PKPdf PKPdf 08 34 25.6 -1.7
CAM4 Nova Friburgo 144.46 211⇑*i* PKPdf 08 34 28.4 -0.2
CAM4 *i* 08 34 31.3
CAM4 *i* 08 34 33.0
CAM4 *i* 08 34 36.9
CAM4 *i* 08 34 42.7
CAM4 *i* 08 34 48.9
CAM4 *i* 08 35 08.6
SSPA Standing Stone 144.54 22 *e*PKPdf PKPdf 08 34 24.9 -3.3
MCWV Mont Chateau 144.61 25 *e*PKPdf PKPdf 08 34 25.6 -2.7
CAM3 Guarapari 144.68 215⇑*i* PKPdf 08 34 28.2 -0.9
CAM3 *i* 08 34 30.3
WES Weston 144.90 13 PFAKE 08 34 40.0 +11
WES LR LR
comp=Z,1μm,20.0s,MS5.6
SWET Sewanee 144.95 36 *e*PKPdf PKPdf 08 34 25.8 -3.3
TZTN Tazewell 145.32 32 *e*PKPdf PKPdf 08 34 28.1 -1.6
PAL Palisades 145.53 17 *e*PKPdf PKPdf 08 34 28.5 -1.4
MVL Millersville 145.66 21 *e*PKPdf PKPdf 08 34 28.3 -1.8
LRAL Lakeview Retre 145.75 40 *e*PKPdf PKPdf 08 34 29.3 -1.2
TKL Tuckaleechee C 145.86 34 *e*PKPdf PKPdf 08 34 29.1 -1.5
ELN Prospectdale 146.20 29 *e*PKPdf PKPdf 08 34 30.9 -0.3
BLA Blacksburg 146.37 28 *e*PKPdf PKPdf 08 34 29.6 -1.9
BRAL Brewton 146.99 43 PFAKE 08 34 40.0 +7.3
BRAL LR LR
comp=Z,668nm,20.0s,MS5.4
GOGA Godfrey 147.66 36 *e*PKPdf PKPdf 08 34 32.9 -0.9
GOGA *e*PKPbc PKPbc 08 34 35.7 -0.8
LVC Limon Verde 148.40 166 PKPbc PKPbc 08 34 39.9 +1.1
comp=Z,30nm,0.8s,baz=270,slow=1.0,SNR=22
LVC Limon Verde 148.40 166 *e*PKPbc PKPbc 08 34 40.0 +1.2
LVC LR LR
comp=Z,380nm,22.0s,MS5.1
RCBR Riachuelo 151.07 242 *e*PKPdf PKPdf 08 34 40.0 +0.2
RCBR *e*PKPbc PKPbc 08 34 45.2 -0.4
RCBR LR LR
comp=Z,207nm,21.0s,MS4.9
BDFB Brasilia 152.84 209 PKP PKPdf 08 34 42.0 -0.3
comp=Z,8.2nm,1.0s,baz=167,slow=3.5,SNR=14
BDFB PKPbc PKPbc 08 34 49.2 -0.3
comp=Z,9.0nm,0.9s,baz=117,slow=4.2,SNR=14
BDFB PKPab PKPab 08 35 01.4 +1.1
comp=Z,10nm,0.9s,baz=78,slow=5.3,SNR=9.5
BDFB Brasilia 152.84 209 PKIKP PKPdf 08 34 42.0 -0.3
BDFB 08 34 49.2
BDFB pmax pmax
comp=Z,8.0nm,1.0s
BDFB pmax pmax
comp=Z,9.0nm,0.9s
BDFB pmax pmax
comp=Z,10.0nm,0.9s
TGUH Tegucigalpa,Un 153.87 75 PFAKE 08 34 50.0 +6.2
TGUH LR LR
comp=Z,187nm,20.0s,MS4.9
NNA Nana 154.61 142 PKPbc PKPbc 08 34 53.3 -0.1
comp=Z,7.9nm,0.8s,baz=211,slow=12,SNR=2.6
NNA Nana 154.61 142 PFAKE 08 35 00.0 +15
NNA LR LR
comp=Z,340nm,19.0s,MS5.2
SIV San Ignacio 155.89 180 PKP PKPdf 08 34 46.5 -0.1
comp=Z,6.2nm,0.9s,baz=166,slow=1.5,SNR=7.9
OTAV Otavalo 161.12 114 *e*PKPdf PKPdf 08 34 53.4 +0.4
OTAV LR LR
comp=Z,264nm,22.0s
BCIP Isla Barro Col 161.63 86 PFAKE 08 35 00.0 +6.5
BCIP LR LR
comp=Z,307nm,20.0s
ROSC El Rosal 166.60 104 PKP PKPdf 08 34 57.3 -0.7
comp=Z,5.6nm,0.4s,baz=107,slow=16,SNR=5.3
ROSC PKPab PKPab 08 36 01.7 +1.2
comp=Z,4.1nm,0.4s,baz=101,slow=21,SNR=4.5
SJG San Juan 169.14 25 PFAKE 08 35 10.0 +10
SJG LR LR
comp=Z,495nm,21.0s
SDV Santo Domingo 170.73 86 PFAKE 08 35 10.0 +9.4
SDV LR LR
comp=Z,231nm,20.0s

*ISCJB **26** 09:10:07.4±0.4, 2205S×003×7008W×005, h53km±3km, mb4.5/16, Error ellipse: s-maj=7.4km s-min=5.0km az=11.5*
*NEIC **26** 09:10:07.5, 2207S×7008W, h45km, mb4.9/3, After GUC.*
NEIC Felt [V] at Tocopilla and [IV] at Antofagasta.
*IDC **26** 09:10:07.7±0.6, 2208S×7001W, h35km±4km, mb4.1/12,*

mb1 4.2/16,mb1mx4.1/22,mbtmp4.1/16,ML3.5/3,MS3.5/2, Ms1 3.4/2,ms1mx3.0/20,Error ellipse: s-maj=15.8km s-min=9.6km az=42.0

GUC ***26*** *09:10:07.9±1.1,2209S×7007W,h45km±2km,ML4.6*

ISC 26 09:10:08.4±0.3,2206S±003×7011W±005,h46km±3km, h45km±.9km:pP-P,n52,σ0§97/57,mb4.5/16,2C-6D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TOCH	**Tocopilla**	**0.09**	**249**	*eP*		**Pn**	**09 10 14.8**	**-0.8**
TOCH				*i* S		**Sn**	**09 10 20.0**	**-0.7**
TOCH				AML		AML	09 10 20.9	
	comp=E,254μm,0.4s							
MACH	**Maria Elena**	**0.35**	**113**	*e*P		**Pn**	**09 10 17.2**	**-0.4**
MACH				*i* S		**Sn**	**09 10 23.8**	**-0.4**
PB07	**Plate Boundary**	**0.39**	**32**	⇓*i*P		**Pn**	**09 10 18.3**	**+0.3**
PB07				*i* S		**Sn**	**09 10 25.0**	**+0.1**
PB06	**Plate Boundary**	**0.81**	**142**	⇓*i*P		**Pn**	**09 10 23.1**	**-0.4**
PB06				*i* S		**Sn**	**09 10 34.2**	**-0.2**
MECH	**Mejillones**	**1.09**	**197**	⇑*i*P		**Pn**	**09 10 27.2**	**0.0**
MECH				*i* S		**Sn**	**09 10 42.1**	**+1.1**
MECH				AML		AML	09 10 47.1	
	comp=N,18μm,0.3s							
PB01	**Plate Boundary**	**1.17**	**30**	⇓*i*P		**Pn**	**09 10 28.9**	**+0.7**
PB01				*i* S		**Sn**	**09 10 45.0**	**+2.0**
LVC	**Limon Verde**	**1.24**	**117**	Pg		**Pn**	**09 10 30.2**	**+1.0**
	baz=270,slow=11							
LVC				Lg			09 10 46.0	
	comp=N,1μm,0.3s,baz=90,slow=19,SNR=50							
LVC	**Limon Verde**	**1.24**	**117**	⇓*e*P		**Pn**	**09 10 29.6**	**+0.4**
LVC				*i* S		**Sn**	**09 10 45.9**	**+1.1**
LVC				AML		AML	09 10 46.9	
	comp=N,8μm,0.5s							
CEN1	**Los Morros**	**1.33**	**184**	*e*P		**Pn**	**09 10 33.0**	**+2.5**
CEN1				*i* S		**Sn**	**09 10 53.0**	**+6.1**
CEN1				AML		AML	09 10 54.5	
	comp=E,8μm,0.6s							
ANCH	**Antofagasta**	**1.64**	**190**	⇓*i*P		**Pn**	**09 10 34.3**	**-0.4**
ANCH				*i* S		**Sn**	**09 10 55.6**	**+1.0**
SPCH	**San Pedro de A**	**1.96**	**116**	P		**Pn**	**09 10 43.0**	**+4.0**
SPCH				S		**Sn**	**09 11 11.4**	**+9.0**
SPCH	**San Pedro de A**	**1.96**	**116**	*e*P		**Pn**	**09 10 43.0**	**+4.0**
SPCH				*i* S		**Sn**	**09 11 11.4**	**+9.0**
SPCH				AML		AML	09 11 16.0	
	comp=E,14μm,0.5s							
CPN1	**Cerro Paranal**	**2.57**	**186**	*e*P		**Pn**	**09 10 46.5**	**-1.0**
CPN1				AML		AML	09 11 34.4	
	comp=E,4μm,0.5s							
ARE	**Arequipa**	**5.72**	**347**	*e*P		**Pn**	**09 11 31.0**	**+0.2**
ARE				*i* S		**Sn**	**09 12 32.6**	**-2.6**
LCO	**Las Campanas**	**6.94**	**184**	*e*Pn		**Pn**	**09 11 47.0**	**-0.5**
	comp=E,52nm,0.4s							
CFAA	**Coronel Fontan**	**9.65**	**170**	Pn		**Pn**	**09 12 23.3**	**-1.3**
	comp=E,0.1nm,0.3s,baz=341,slow=10,SNR=14							
CFAA				Sn		**Sn**	**09 14 21.7**	**+10**
	comp=E,0.5nm,0.3s,baz=220,slow=21,SNR=8.4							
SIV	**San Ignacio**	**10.46**	**56**	Pn		**Pn**	**09 12 35.0**	**-0.8**
	comp=E,.5.1nm,0.3s,baz=245,slow=12,SNR=87							
SIV				Sn		**Sn**	**09 14 31.9**	**+0.2**
	baz=149,slow=22,SNR=3.3							
SIV				LR		LR	09 17 20.9	
	comp=E,427nm,20.8s,baz=256,slow=42							
ATAH	**Atahualpa**	**16.97**	**331**	Pn		**Pn**	**09 14 03.6**	**+1.0**
	comp=E,0.2nm,0.3s,baz=162,slow=19,SNR=1.8							
PLCA	**Paso Flores**	**18.62**	**181**	P		**Pn**	**09 14 23.8**	**+1.1**
	comp=E,0.1nm,0.3s,baz=7.5,slow=13,SNR=3.1							
PLCA	**Paso Flores**	**18.62**	**181**	P		**Pn**	**09 14 23.8**	**+1.1**
BDFB	**Brasilia**	**21.85**	**77**	P		**P**	**09 14 57.6**	**+0.4**
	comp=E,2.6nm,0.6s,mb3.9,baz=259,slow=16,SNR=8.8							
BDFB				LR		LR	09 24 12.4	
	comp=E,86nm,20.9s,baz=34,slow=39							
PCRV	**Puerto La Cruz**	**32.48**	**10**	P		**P**	**09 16 34.4**	**-0.3**
	comp=E,12nm,0.9s,mb4.7,baz=117,slow=11,SNR=2.4							
USHA	**Ushuaia**	**32.75**	**178**	P		**P**	**09 16 35.5**	**-1.1**
	comp=E,11nm,0.9s,mb4.8,baz=326,slow=3.6,SNR=2.6							
TXAR	**Lajitas Array**	**60.46**	**326**	P		**P**	**09 20 14.2**	**+0.6**
	comp=E,0.7nm,0.8s,mb3.8,baz=151,slow=8.2,SNR=8.4							
TXAR				pP		pP	09 20 26.0	-0.5
	comp=E,0.5nm,0.8s,baz=129,slow=9.9,SNR=4.7							
TXAR	**Lajitas Array**	**60.46**	**326**	P		**P**	**09 20 14.2**	**+0.6**
TXAR				pP		pP	09 20 26.0	-0.5
VNA2	**Neumayer--Watz**	**60.50**	**160**	*e*		pP	09 20 26.3	+0.1
	baz=297,slow=7.5							
SNAA	**Sanae**	**62.12**	**161**	*e*		**P**	**09 20 20.4**	**-3.8**
SNAA				*e*		pP	09 20 33.2	-4.0
SNAA	**Sanae**	**62.12**	**161**	*e*P		**P**	**09 20 20.5**	**-3.7**
	comp=E,7.9nm,0.8s,mb4.9							
SNAA				*e*pP		pP	09 20 32.8	-4.5
LIC	**Lamto**	**69.61**	**74**	*e*P		**P**	**09 21 12.4**	**-1.0**
	comp=E,64nm,1.9s,mb5.2							
TIC	**Toumodi**	**69.80**	**74**	*e*P		**P**	**09 21 13.7**	**-0.8**
	comp=E,7.0nm,0.2s,mb5.2							
KIC	**Kosan Boka**	**69.93**	**74**	*e*P		**P**	**09 21 14.5**	**-0.8**
	comp=E,21nm,0.6s,mb5.2							
DBIC	**Dimbokro**	**69.96**	**74**	P		**P**	**09 21 15.1**	**-0.4**
	comp=E,9.7nm,0.8s,mb4.8,baz=235,slow=6.9,SNR=10							
DBIC	**Dimbokro**	**69.96**	**74**	*e*P		**P**	**09 21 14.8**	**-0.7**
	comp=E,11nm,0.8s,mb4.8							
PDAR	**Pinedale Array**	**74.05**	**331**	P		**P**	**09 21 39.9**	**+0.5**
	comp=E,0.3nm,0.6s,mb3.4,baz=143,slow=8.4,SNR=3.8							
PDAR				pP		pP	09 21 52.5	-0.1
	comp=E,0.3nm,0.6s,baz=148,slow=7.0,SNR=2.4							
NVAR	**Mina Array Bea**	**75.25**	**323**	P		**P**	**09 21 48.0**	**+1.6**
	comp=E,0.7nm,0.7s,mb3.7,baz=163,slow=8.2,SNR=5.8							
NVAR				pP		pP	09 22 00.5	+0.7
	comp=E,0.6nm,0.8s,baz=156,slow=11,SNR=4.1							
VNDA	**Vanda**	**76.11**	**190**	P		**P**	**09 21 51.8**	**+1.0**
	comp=E,0.8nm,0.9s,mb3.7,baz=101,slow=5.2,SNR=4.2							
SYO	**Syowa Base**	**76.37**	**160**	⇓*e*P		**P**	**09 21 51.3**	**-1.1**
SYO	**Syowa Base**	**76.37**	**160**	⇓*e*P		pP	09 22 03.8	-2.0
HRY	**Holter Researc**	**78.14**	**332**	*e*P		**P**	**09 22 04.3**	**+1.8**
TOA0	**Torodi Ar. Sit**	**78.59**	**71**	*e*P		**P**	**09 22 04.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.59**	**71**	P		**P**	**09 22 05.0**	**-0.7**
	comp=E,7.4nm,0.5s,mb4.9,baz=254,slow=5.2,SNR=98							
MAW	**Mawson**	**84.11**	**164**	P		**P**	**09 22 33.4**	**-0.7**
	comp=E,2.7nm,0.7s,mb4.5,baz=242,slow=5.3,SNR=7.6							
MAW				pP		pP	09 22 46.8	-0.8
	comp=E,4.0nm,0.9s,baz=147,slow=6.6,SNR=5.5							
BOSA	**Boshof**	**84.17**	**118**	P		**P**	**09 22 35.2**	**+0.1**
	comp=E,7.1nm,0.9s,mb4.8,baz=161,slow=7.3,SNR=6.9							
BOSA	**Boshof**	**84.17**	**118**	*e*P		**P**	**09 22 35.0**	**-0.2**
	comp=E,7.5nm,0.9s,mb4.8							
YKA	**Yellowknife Ar**	**91.35**	**341**	P		**P**	**09 23 08.8**	**+0.1**
	comp=E,1.4nm,0.7s,mb4.4,baz=137,slow=4.7,SNR=8.2							
ASAR	**Alice Springs**	**128.90**	**209**	PKP		PKPdf	09 29 11.2	-0.4
	comp=E,0.8nm,0.7s,baz=126,slow=2.0,SNR=8.7							
ASAR				pPKP		pPKPdf	09 29 24.1	-1.7
	comp=E,0.8nm,0.8s,baz=136,slow=1.7,SNR=4.4							
ZALV	**Zalesovo Beam**	**142.93**	**25**	PKhKP			09 29 33.8	
	comp=E,2.4nm,0.7s,baz=289,slow=4.4,SNR=7.1							
ZALV				PKP		PKPdf	09 29 37.5	+0.9
	comp=E,3.3nm,0.7s,baz=318,slow=2.0,SNR=9.3							
MK31	**Makanchi Array**	**146.74**	**35**	*e*PKPdf		PKPdf	09 29 43.5	0.0
MKAR	**Makanchi Array**	**146.74**	**35**	PKPbc		PKPbc	09 29 43.9	-1.4
	comp=E,4.0nm,0.7s,baz=325,slow=2.2,SNR=28							
MKAR				pPKPbc		pPKPbc	09 29 57.1	-2.1
	comp=E,1.1nm,0.7s,baz=328,slow=4.3,SNR=3.3							
MJAR	**Matsushiro Arr**	**151.53**	**307**	PKPbc		PKPbc	09 29 58.0	+0.3
	comp=E,2.1nm,0.7s,baz=93,slow=2.2,SNR=5.5							
MAT	**Matsushiro**	**151.53**	**307**	P		PKPbc	09 29 58.3	+0.6
SONM	**Songino Array**	**154.13**	**5**	PKPbc		PKPbc	09 30 02.3	-0.8
	comp=E,0.5nm,0.5s,baz=21,slow=1.7,SNR=4.6							
SONM				PKPab		PKPab	09 30 16.7	0.0
	comp=E,0.5nm,0.7s,baz=347,slow=5.9,SNR=3.3							
SONM				pPKPab		pPKPab	09 30 29.9	-0.6
	comp=E,0.9nm,0.8s,baz=18,slow=4.2,SNR=4.3							

DJA 26 09:12:13,847S×11909E,h26km,MLv4.1/5,Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BMNI	**Bima**	**0.40**	**260**	P		Pb	09 12 22.4	+0.8
KHKI	**Kahang-Kahang**	**3.45**	**271**	P		Pn	09 13 06.7	+1.7
KHKI	**Kahang-Kahang**	**3.45**	**271**	S		Sn	09 13 48.2	+3.1
KAPI	**Kappang**	**3.50**	**11**	P		Pn	09 13 05.3	-0.4
IGBI	**Denpasar**	**3.92**	**265**	P		Pn	09 13 11.1	-0.4
IGBI	**Denpasar**	**3.92**	**265**	S		Sn	09 13 57.0	+0.4
BATI	**Baumata**	**4.83**	**111**	P		Pn	09 13 18.9	-5.2

IDC 26 09:55:01.4±4.5,233S×9901E,h0km,mb3.6/5,mb1 3.7/5, mb1mx3.6/20,mbtmp3.6/5,MS3.6/1,Ms1 3.6/1,

ms1mx2.9/26,Error ellipse: s-maj=191.4km s-min=22.5km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
WRA	**Warramunga Arr**	**38.69**	**120**	P		P	10 02 27.6	+0.2
	0.9nm,0.7s,baz=304,slow=8.9,SNR=8.2							
ASAR	**Alice Springs**	**39.87**	**125**	P		P	10 02 36.4	-0.8
	0.5nm,0.8s,baz=301,slow=7.3,SNR=7.8							
SONM	**Songino Array**	**50.37**	**6**	P		P	10 04 00.1	-0.1
	0.4nm,0.7s,baz=187,slow=9.0,SNR=3.6							
SONM				LR		LR	10 28 08.8	
	comp=Z,63nm,19.0s,baz=35,slow=40							
MKAR	**Makanchi Array**	**51.08**	**345**	P		P	10 04 05.6	0.0
	0.2nm,0.4s,baz=144,slow=9.0,SNR=3.6							
ZALV	**Zalesovo Beam**	**57.31**	**350**	P		P	10 04 50.3	-0.7
	0.8nm,0.4s,baz=181,slow=5.9,SNR=5.2							
TXAR	**Lajitas Array**	**145.55**	**37**	PKPbc		PKPbc	10 14 43.0	+0.5
	0.7nm,0.6s,baz=339,slow=2.2,SNR=18							

ISCJB ***26*** *10:05:39.3±0.5,3017S±007×12368E±004,h10km,Error ellipse: s-maj=10.5km s-min=4.7km az=175.7*

IDC ***26*** *10:05:39.7±2.3,3017S×12362E,h0km,mb1 4.0/4, mb1mx3.7/15,mbtmp3.9/4,ML4.0/3,Error ellipse: s-maj=83.0km s-min=17.9km az=151.0*

AUST ***26*** *10:05:43.9,3013S×12372E,h2km,ML3.3*

ISC 26 10:05:41.9±0.5,3015S±006×12370E±004,h10km,n13, σ1§47/24,Western Australia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KMBL	**Kambalda**	**1.98**	**232**	*e*P		**Pn**	**10 06 17.6**	**+2.2**
KMBL				*e*S		**Sn**	**10 06 42.6**	**+2.3**
	2μm,0.3s							
FORT	**Forrest**	**3.81**	**100**	*e*P		**Pn**	**10 06 42.1**	**+1.4**
FORT				*e*S		**Sn**	**10 07 23.8**	**-1.8**
	94nm,0.3s							
KLBR	**Kellerberrin**	**5.31**	**253**	*e*P		**Pn**	**10 07 01.3**	**+0.1**
KLBR				*e*S		**Sn**	**10 07 59.9**	**-2.6**
MEEK	**Meekatharra**	**5.69**	**307**	*e*P		**Pn**	**10 07 09.7**	**+3.2**
MEEK				*e*S		**Sn**	**10 08 12.8**	**+1.0**
	38nm,0.2s							
BLDU	**Ballidu**	**6.06**	**264**	*e*P		**Pn**	**10 07 12.9**	**+1.4**
BLDU				*e*S		**Sn**	**10 08 18.2**	**-2.7**
	2.7nm,0.2s							
NWAO	**Narrogin (SRO)**	**6.17**	**242**	*e*P		**Pn**	**10 07 13.4**	**+0.3**
NWAO				*e*S		**Sn**	**10 08 19.9**	**-3.9**
	42nm,0.4s							
NWAO	**Narrogin (SRO)**	**6.17**	**242**	Pn		**Pn**	**10 07 13.1**	**0.0**
	0.2nm,0.3s,baz=74,slow=13,SNR=3.9							
NWAO				Sn		**Sn**	**10 08 20.7**	**-3.1**
	2.1nm,0.3s,baz=153,slow=16,SNR=3.4							
NWAO				Lg			10 08 51.4	
	9.2nm,0.3s,baz=178,slow=19,SNR=14							
MORW	**Morawa**	**6.76**	**277**	*e*P		**Pn**	**10 07 21.7**	**+0.6**
MORW				*e*S		**Sn**	**10 08 36.4**	**-1.8**
RKGY	**Rocky Gully**	**7.21**	**230**	*e*P		**Pn**	**10 07 27.9**	**+0.5**
RKGY				*e*S		**Sn**	**10 08 43.2**	**-6.2**
	5.7nm,0.2s							
ASAR	**Alice Springs**	**11.16**	**57**	Pn		**Pn**	**10 08 22.4**	**+0.8**
	0.8nm,0.3s,baz=229,slow=11,SNR=38							
ASAR				Sn		**Sn**	**10 10 20.7**	**-5.7**
	0.8nm,0.3s,baz=240,slow=21,SNR=6.4							
ASAR				Lg			10 11 34.4	
	0.7nm,0.3s,baz=232,slow=27,SNR=7.0							
WRA	**Warramunga Arr**	**14.00**	**46**	Pn		**Pn**	**10 08 59.6**	**-0.8**
	1.0nm,0.3s,baz=226,slow=12,SNR=67							
WB2	**Warramunga Arr**	**14.01**	**46**	*e*P		**Pn**	**10 08 59.7**	**-0.8**
STKA	**Stephens Creek**	**15.44**	**101**	Pn		**Pn**	**10 09 19.3**	**-0.5**
	0.4nm,0.3s,baz=278,slow=12,SNR=3.3							
STKA				Sn		**Sn**	**10 11 58.1**	**-13**
	0.5nm,0.3s,baz=344,slow=15,SNR=3.0							

ISCJB ***26*** *10:12:01.8±0.5,688N±006×7303W±006,h161km±7km, mb3.5/4,Error ellipse: s-maj=12.1km s-min=6.0km az=135.9*

FUNV ***26*** *10:12:02.1,675N×73.16W,h159km,MW3.7*

IDC ***26*** *10:12:02.5±0.7,675N×7293W,h160km±9km,mb3.3/4, mb1 3.7/7,mb1mx3.4/21,mbtmp3.5/7,Error ellipse: s-maj=26.3km s-min=7.1km az=133.0*

NEIC ***26*** *10:12:02.8±0.7,671N×7299W,h164km±18km,mb3.9/1, Error ellipse: s-maj=35.9km s-min=9.5km az=140.0*

ISC 26 10:12:02.8±0.5,686N±006×7300W±006,h155km±7km,n23, σ0§88/28,mb3.5/4,11C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ROSC	**El Rosal**	**2.38**	**214**	P		**Pn**	**10 12 43.0**	**+0.1**
	64nm,0.3s,baz=91,slow=23,SNR=41							
ROSC				S		**Sn**	**10 13 14.1**	**+0.4**
	84nm,0.3s,baz=75,slow=22,SNR=17							
VIGV	**El Vigia**	**2.55**	**39**	⇑*i*P		**Pn**	**10 12 45.8**	**+1.0**
VIGV				*e*S		**Sn**	**10 13 17.4**	**0.0**
SOCV	**Socops**	**2.56**	**56**	⇑*e*P		**Pn**	**10 12 45.9**	**+1.0**
SOCV				*e*S		**Sn**	**10 13 17.6**	**+0.2**
SDV	**Santo Domingo**	**3.10**	**49**	P		**Pn**	**10 12 52.8**	**+1.2**
	33nm,0.3s,baz=204,slow=2.1,SNR=217							
SDV				S		**Sn**	**10 13 30.3**	**+0.9**
	45nm,0.3s,baz=270,slow=22,SNR=43							
ELOV	**Elorza**	**3.50**	**87**	⇑*i*P		**Pn**	**10 12 57.4**	**+0.7**
VIRV	**Villa del Rosa**	**3.67**	**9**	⇑*i*P		**Pn**	**10 12 58.2**	**-0.7**
VIRV				*e*S		**Sn**	**10 13 40.6**	**-2.1**
SANV	**Sanarito**	**4.32**	**52**	*e*P		**Pn**	**10 13 07.4**	**0.0**
CURV	**Curarigua**	**4.35**	**44**	⇑*i*P		**Pn**	**10 13 08.1**	**+0.4**
DABV	**Dabajuro**	**4.67**	**30**	*e*P		**Pn**	**10 13 12.2**	**+0.2**
TEPV	**Terepaima**	**4.87**	**50**	⇑*i*P		**Pn**	**10 13 15.0**	**+0.4**
SIQV	**Siquisique**	**4.92**	**40**	⇑*i*P		**Pn**	**10 13 15.2**	**-0.1**
BAUV	**El Baul**	**5.33**	**67**	⇑*i*P		**Pn**	**10 13 19.6**	**-1.1**
BAUV				*e*S		**Sn**	**10 14 18.9**	**-2.7**
TURV	**Turiamo**	**6.23**	**55**	⇑*i*P		**Pn**	**10 13 32.6**	**0.0**
CAOV	**Caicara del Or**	**6.65**	**86**	⇑*i*P		**Pn**	**10 13 36.5**	**-1.6**
CUPV	**Cœpira**	**7.81**	**65**	⇑*i*P		**Pn**	**10 13 53.2**	**-0.5**
OTAV	**Otavalo**	**8.53**	**220**	*e*Pn		**Pn**	**10 14 01.7**	**-1.6**
	2.1nm,0.6s							
PCRV	**Puerto La Cruz**	**8.91**	**68**	P		**Pn**	**10 14 09.0**	**+0.8**
	1.1nm,0.3s,baz=266,slow=22,SNR=6.1							
PCRV				S		**Sn**	**10 15 47.6**	**+0.2**
	0.5nm,0.3s,baz=173,slow=17,SNR=3.1							
TXAR	**Lajitas Array**	**36.53**	**312**	P		**P**	**10 18 53.9**	**+0.4**
	0.3nm,0.4s,mb3.2,baz=126,slow=9.2,SNR=13							
SCHQ	**Schefferville**	**48.10**	**5**	P		**P**	**10 20 26.9**	**+0.4**
	1.1nm,0.5s,mb3.8,baz=218,slow=19,SNR=2.9							
PDAR	**Pinedale Array**	**48.12**	**324**	P		**P**	**10 20 27.3**	**+0.4**
	0.4nm,0.5s,mb3.3,baz=129,slow=9.0,SNR=4.2							
YKA	**Yellowknife Ar**	**63.27**	**340**	P		**P**	**10 22 14.6**	**+0.1**
	0.9nm,0.6s,mb3.8,baz=135,slow=6.7,SNR=7.2							
ASAR	**Alice Springs**	**149.23**	**234**	PKPbc		PKPbc	10 31 32.5	-1.4
	0.6nm,0.5s,baz=114,slow=3.4,SNR=14							
WRA	**Warramunga Arr**	**150.46**	**241**	PKPbc		PKPbc	10 31 35.8	-1.1
	0.6nm,0.4s,baz=108,slow=2.7,SNR=29							

BJI 26 10:35:31.4,2192N×11151E,h23km,mB4.4,mb4.5, ML3.9,Ms3.8,Msz3.9,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LZH	**Lanzhou**	**15.62**	**336**	*e*P		Pn	10 39 15.0	+5.0
LZH				AP		pP	10 39 18.5	-1.9
LZH				XP		sP	10 39 22.0	-1.4
LZH				AMB		AMB		
	comp=Z,21nm,1.1s							
LZH				AMB		AMB		
	comp=Z,88nm,4.3s							
LZH				LR		LR		
	comp=N,256nm,11.2s							
LZH				LR		LR		
	comp=Z,397nm,12.5s							

NEIC ***26*** *10:38:26.6±0.6,265N×12864E,h35km,mb4.1/1,Error ellipse: s-maj=30.3km s-min=11.3km az=74.0*

IDC 26 10:38:41.9±6.4,255N×12862E,h191km±64km,mb3.5/9, mb1 3.7/9,mb1mx3.5/18,mbtmp3.5/9,Error ellipse: s-maj=31.3km s-min=12.5km az=71.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KAKA	**Kakadu**	**15.63**	**166**	*e*P		Px	10 41 58.9	
	1.9nm,0.4s							
WRAB	**Tennant Creek**	**23.04**	**166**	*e*P		P	10 43 30.1	-0.4
	3.9nm,0.6s							
WRA	**Warramunga Arr**	**23.05**	**166**	P		P	10 43 30.0	-0.5
	2.3nm,0.4s,baz=344,slow=11,SNR=85							
WB2	**Warramunga Arr**	**23.05**	**166**	*e*P		P	10 43 30.5	-0.1
ASAR	**Alice Springs**	**26.56**	**169**	P		P	10 44 02.3	0.0
	1.6nm,0.7s,baz=351,slow=7.7,SNR=34							
ASAR				PcP		PcP	10 47 21.7	-0.1
	0.2nm,0.5s,baz=356,slow=2.2,SNR=6.0							
CMAR	**Chiang Mai Ar**	**33.09**	**301**	P		P	10 45 00.7	+0.7
	1.4nm,0.7s,baz=117,slow=7.1,SNR=8.6							
MJAR	**Matsushiro Arr**	**34.96**	**14**	P		P	10 45 15.1	-0.8
	0.5nm,0.3s,baz=200,slow=8.2,SNR=3.2							
STKA	**Stephens Creek**	**36.39**	**161**	*e*P		P	10 45 28.2	+0.2
	2.8nm,0.3s							
STKA	**Stephens Creek**	**36.39**	**161**	P		P	10 45 28.3	+0.3
	4.1nm,0.3s,baz=348,slow=8.2,SNR=35							
PETK	**Petropavlovsk-**	**55.83**	**21**	P		P	10 48 00.1	+0.9
	1.0nm,0.6s,baz=224,slow=4.1,SNR=4.7							
MKAR	**Makanchi Array**	**59.60**	**325**	P		P	10 48 25.8	+0.2
	0.3nm,0.5s,baz=120,slow=8.8,SNR=4.0							
KURK	**Kurchatov**	**63.75**	**327**	P		P	10 48 52.3	-0.9
	1.0nm,0.2s,baz=130,slow=5.7,SNR=3.6							
VNDA	**Vanda**	**82.03**	**173**	P		P	10 50 40.2	0.0
	0.4nm,0.6s,baz=338,slow=5.7,SNR=4.1							

ISCJB ***26*** *10:43:00.1±0.4,4682N±001×12192W±002,h8km±2km, Error ellipse: s-maj=2.4km s-min=2.0km az=174.9*

NEIC ***26*** *10:43:01.0,4680N×12193W,h9km,MD2.5(SEA),After SEA.*

PNSN ***26*** *10:43:01.1,4680N×12192W,h11km,MD2.5,Fault plane solution: NP1:ϕ≈100.00000°,δ45.00000°, NP2: ϕ≈280.00000°,δ45.00000°, Principal axes: T Plg90.0000°, Azm100.0000°; P Plg0.0000°, Azm190.0000°;*

ISC 26 10:43:00.2±0.3,4682N±001×12192W±002,h10km±2km, n45,σ0§83/79,17C-36D,Washington

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LON	**Longmire**	**0.10**	**131**	*e*Pg		**Pg**	**10 43 03.4**	**+0.6**
LON				*e*Sg		**Sg**	**10 43 05.0**	**+0.4**
E05A	**Randle**	**0.28**	**157**	⇓P		**Pg**	**10 43 06.2**	**+0.4**
	baz=0.3,SNR=1000							
E05A				⇓S		**Sg**	**10 43 10.2**	**+0.6**
	baz=0.3							
D05A	**Enumclaw**	**0.38**	**353**	P		**Pg**	**10 43 08.4**	**+0.8**
	baz=0.4,SNR=669							
D05A				⇓S		**Sg**	**10 43 13.9**	**+1.2**
	baz=0.4							
E04A	**Onalaska**	**0.59**	**248**	⇓P		**Pg**	**10 43 12.3**	**+0.5**
	baz=0.6,SNR=6.5							
E04A				⇓S		**Sg**	**10 43 21.2**	**+1.7**
	baz=0.6							
D04A	**Dobbs Creek Ra**	**0.67**	**296**	⇓P		**Pg**	**10 43 13.7**	**+0.5**
	baz=0.7							
D04A				⇑S		**Sg**	**10 43 24.0**	**+1.9**
	baz=0.7							
E06A	**Yakima**	**0.70**	**112**	P		**Pg**	**10 43 13.8**	**+0.1**
	baz=0.7,SNR=268							
E06A				⇓S		**Sg**	**10 43 23.0**	**0.0**
	baz=0.7							
D06A	**Cle Elum**	**0.83**	**62**	⇑P		**Pg**	**10 43 16.3**	**+0.1**
	baz=0.8,SNR=43							
D06A				⇓S		**Sg**	**10 43 27.4**	**+0.4**
	baz=0.8							
C05A	**Tolt Reservoir**	**0.89**	**10**	P		**Pg**	**10 43 17.0**	**-0.4**
	baz=0.9,SNR=62							
C05A				⇑S		**Sg**	**10 43 28.9**	**-0.2**
	baz=0.9							
F04A	**Amboy**	**0.95**	**202**	⇓P		**Pg**	**10 43 17.8**	**-0.7**
	baz=0.9,SNR=41							
F04A				⇓S		**Sg**	**10 43 30.5**	**-0.3**
	baz=0.9							
BMW	**Boistfort Moun**	**0.96**	**250**	*e*Pg		**Pg**	**10 43 18.3**	**-0.4**
BMW				*e*Sg		**Sg**	**10 43 31.6**	**+0.3**
F05A	**White Salmon**	**0.98**	**161**	⇑P		**Pg**	**10 43 18.4**	**-0.8**
	baz=1.

baz=2.3
H03A Soap Creek Ran 2.34 205 ||Sb **Sb 10 44 11.8 +0.3**
baz=2.3
H06A Lindquist Farm 2.36 151 ||Sb **Sb 10 44 12.5 +0.6**
baz=2.3
LNOR Lincton Mounta 2.69 109 *e*Pn **Pn 10 43 46.9 +3.4**
LNOR *e*Sn **Sn 10 44 22.2 +6.1**

ISCJB ***26*** *10:50:15.8±0.5, 3976N±002×3053E±003, h2km±4km, Error ellipse: s-maj=4.0km s-min=3.3km az=152.8*
DDA ***26*** *10:50:15.7, 3976N×3054E, h7km±3km, Md2.9*
CSEM ***26*** *10:50:15.1±0.1, 3976N×3052E, h5km, MD2.9, Error ellipse: s-maj=1.6km s-min=1.1km az=61.0*
ISK ***26*** *10:50:15.4, 3977N×3055E, h4km, MD2.8*
ISC 26 10:50:16.3±0.4, 3976N±002×3053E±003, h5km±3km, n22, σ0§55/37, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BORA	**Eskisehir**	**0.13**	**334**	*i* P		**Pg**	**10 50 18.9**	**-0.1**
BORA				*i* S		**Sg**	**10 50 21.1**	**+0.2**
ESKT	**Eskisehir**	**0.35**	**134**	PG		**Pg**	**10 50 22.6**	**-0.4**
ESKT				*e*SG		**Sg**	**10 50 28.0**	**+0.4**
ESKT	**Eskisehir**	**0.35**	**134**	*i* P		**Pg**	**10 50 22.6**	**-0.5**
ESKT				*i* S		**Sg**	**10 50 27.9**	**+0.3**
SEYT	**Eskypehyr**	**0.35**	**134**	*i* P		**Pg**	**10 50 22.6**	**-0.5**
GPA	**Golpazari**	**0.55**	**342**	*e*PG		**Pg**	**10 50 26.4**	**-0.6**
GULT	**Gulveren**	**0.67**	**359**	*e*PG		**Pg**	**10 50 28.6**	**-0.6**
CAVI	**Cavuskoy**	**0.69**	**310**	*e*PG		**Pg**	**10 50 29.4**	**-0.1**
ALT	**Altintas**	**0.78**	**205**	*e*PG		**Pg**	**10 50 31.0**	**-0.3**
ALT				*e*SG		**Sg**	**10 50 42.1**	**+0.7**
MDU	**Mudurnu**	**0.88**	**37**	*e*PG		**Pg**	**10 50 32.7**	**-0.5**
MDU				*e*SG		**Sg**	**10 50 45.0**	**+0.4**
GDZ	**Gediz**	**1.05**	**231**	*i* P		**Pg**	**10 50 36.4**	**-0.2**
GDZ				*i* S		**Sg**	**10 50 50.7**	**+0.5**
BOLV	**Bolvadin**	**1.09**	**162**	*i* P		**Pg**	**10 50 36.9**	**-0.4**
BOLV				*i* S		**Sg**	**10 50 52.1**	**+0.6**
HENT	**Hendek**	**1.10**	**15**	*i* P		**Pg**	**10 50 36.6**	**-0.8**
HENT				*i* S		**Sg**	**10 50 53.3**	**+1.7**
ULDT	**Uludag**	**1.14**	**290**	*i* P		**Pg**	**10 50 37.8**	**-0.3**
ULDT				*i* S		**Sg**	**10 50 53.4**	**+0.5**
YLV	**Yalova**	**1.20**	**313**	*e*PN		**Pn**	**10 50 39.2**	**-0.4**
YLV				*e*SN		**Sn**	**10 50 56.4**	**+0.1**
SHUT	**Suhut-Afyon**	**1.21**	**179**	*e*PN		**Pn**	**10 50 39.0**	**-0.8**
GEMT	**Gemlik**	**1.23**	**304**	*e*PN		**Pn**	**10 50 40.2**	**+0.1**
GEMT				*e*SN		**Sn**	**10 50 57.2**	**+0.2**
HRT	**Hereke**	**1.25**	**328**	*e*PN		**Pn**	**10 50 39.5**	**-0.9**
KIZT	**Kizilcal**	**1.37**	**130**	*e*PN		**Pn**	**10 50 41.8**	**-0.3**
SGKT	**Sivrigoynuk**	**1.42**	**55**	*i* P		**Pn**	**10 50 41.9**	**-0.9**
SGKT				*i* S		**Sb**	**10 51 02.1**	**+0.4**
ISK	**Istanbul-Kandi**	**1.72**	**320**	*e*PN		**Pn**	**10 50 47.1**	**+0.3**
ISK				*e*SN		**Sn**	**10 51 09.6**	**+0.5**
ANTO	**Ankara**	**1.75**	**86**	*e*PN		**Pn**	**10 50 47.3**	**0.0**
ANTO				*e*SN		**Sn**	**10 51 10.4**	**+0.5**
KDHN	**Kadinhani**	**1.75**	**135**	*i* P		**Pn**	**10 50 47.0**	**-0.3**
KDHN				*i* S		**Sn**	**10 51 10.5**	**+0.6**

ISCJB ***26*** *10:55:25.8±0.7, 580N±007×1264E±0.1, h118km±7km, mb4.0/10, Error ellipse: s-maj=21.4km s-min=10.1km az=161.5*
MAN ***26*** *10:55:26, 589N×126.47E, h10km, mb4.5, ML3.4, MS3.3*
NEIC ***26*** *10:55:27.6±0.9, 569N×126.18E, h114km±9km, mb4.3/1, Error ellipse: s-maj=50.2km s-min=7.5km az=70.0*
IDC ***26*** *10:55:28.1±1.2, 570N×126.18E, h116km±9km, mb3.7/9, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, Error ellipse: s-maj=67.1km s-min=11.4km az=71.0*
ISC 26 10:55:26.9±0.7, 578N±007×1264E±01, h108km±7km, n21, σ0§89/24, mb4.0/10, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MATI	**Mati**	**1.17**	**354**	*e*P		**Pn**	**10 55 48.3**	**-1.5**
MATI				*e*S		**Sn**	**10 56 07.2**	**+0.1**
GSPH	**General Santos**	**1.45**	**282**	||*e*P		**Pn**	**10 55 50.5**	**-2.6**
DAV	**Davao City (W)**	**1.51**	**328**	P		**Pn**	**10 55 54.7**	**+0.9**
65nm,0.3s,baz=14,slow=2.6,SNR=8.3								
DAV				S		**Sn**	**10 56 15.8**	**+1.6**
192nm,0.3s,baz=58,slow=16,SNR=5.6								
KCP	**Kidapawan**	**1.77**	**314**	||*i*P		**Pn**	**10 55 56.7**	**-0.2**
KCP				*e*S		**Sn**	**10 56 19.8**	**-0.1**
BUKP	**Musuan**	**2.46**	**328**	*e*P		**Pn**	**10 56 06.5**	**+0.6**
BUKP				*e*S		**Sn**	**10 56 34.5**	**-1.2**
PAGZ	**Pagadian**	**3.62**	**305**	*e*P		**Pn**	**10 56 22.1**	**+1.0**
BATI	**Baumata**	**16.10**	**190**	P		**Pn**	**10 59 08.6**	**+1.4**
2.8nm,0.3s,baz=59,slow=5.9,SNR=3.0								
WRAB	**Tennant Creek**	**26.72**	**163**	*e*P		**P**	**11 00 56.2**	**-0.2**
18nm,1.9s,mb4.3								
WRA	**Warramunga Arr**	**26.73**	**163**	P		**P**	**11 00 56.1**	**-0.4**
1.2nm,0.4s,mb3.8,baz=343,slow=10.0,SNR=37								
WB2	**Warramunga Arr**	**26.73**	**163**	*e*P		**P**	**11 00 56.1**	**-0.4**
WB2	**Warramunga Arr**	**26.73**	**163**	*e*P		**P**	**11 00 56.6**	**+0.1**
ASAR	**Alice Springs**	**30.17**	**166**	P		**P**	**11 01 26.9**	**0.0**
1.0nm,0.4s,mb3.8,baz=344,slow=7.3,SNR=24								
ASAR				PcP		PcP	11 04 26.6	+0.7
0.7nm,0.5s,baz=354,slow=2.5,SNR=1.1								
NWAO	**Narrogin (SRO)**	**39.46**	**192**	P		**P**	**11 02 46.0**	**-0.6**
5.6nm,0.8s,mb4.4,baz=36,slow=7.9,SNR=4.3								
STKA	**Stephens Creek**	**40.16**	**160**	*e*P		**P**	**11 02 53.1**	**+0.6**
3.4nm,0.9s,mb4.2								
STKA	**Stephens Creek**	**40.16**	**160**	P		**P**	**11 02 52.9**	**+0.4**
3.5nm,0.8s,mb4.2,baz=343,slow=7.7,SNR=5.5								
SONM	**Songino Array**	**45.26**	**341**	P		**P**	**11 03 33.9**	**+0.3**
0.2nm,0.5s,mb3.1,baz=162,slow=12,SNR=3.1								
SONM				PcP		PcP	11 05 12.5	+0.8
0.2nm,0.5s,baz=151,slow=3.3,SNR=3.7								
MKAR	**Makanchi Array**	**55.69**	**325**	P		**P**	**11 04 51.5**	**-0.6**
0.7nm,0.4s,mb4.0,baz=117,slow=8.0,SNR=12								
ZALV	**Zalesovo Beam**	**58.62**	**333**	P		**P**	**11 05 13.5**	**+1.0**
0.5nm,0.4s,mb3.9,baz=118,slow=8.3,SNR=3.0								
KURK	**Kurchatov**	**59.84**	**327**	P		**P**	**11 05 20.3**	**-0.7**
1.5nm,0.4s,mb4.4,baz=125,slow=6.4,SNR=7.3								
BVAR	**Borovoye Array**	**65.43**	**327**	P		**P**	**11 05 58.0**	**-0.1**
0.5nm,0.5s,mb3.6,baz=131,slow=4.0,SNR=3.2								
TORD	**Torodi Ar. Bea**	**121.93**	**289**	PKP		PKPdf	11 14 09.0	-0.7
0.3nm,0.4s,baz=58,slow=1.4,SNR=7.0								

ISCJB ***26*** *11:03:47.4±0.2, 234S±003×100.27E±003, h40km, mb5.1/109, MS4.4/33, Error ellipse: s-maj=5.2km s-min=3.4km az=44.4*
NEIC ***26*** *11:03:48.6±0.2, 226S×100.46E, h35km, mb5.2/31, Error ellipse: s-maj=8.4km s-min=4.5km az=58.0*
NEIC Felt [II] at Painan, Sumatra.
BJI ***26*** *11:03:48.1, 200S×100.58E, h35km, mB5.1, mb4.9, Ms4.8, Ms24.6*
MOS ***26*** *11:03:48.2±1.1, 2.15S×100.50E, h46km, mb5.4/33, MS4.5/4, Error ellipse: s-maj=13.0km s-min=5.8km az=109.4*
GCMT ***26*** *11:03:48.6±0.5, 230S×100.24E, h36km, MW5.0/42, Moment Tensor Solution. s42,c56; s37,c50; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.34±.17; Mθθ=1.44±.13; Mϕϕ=1.90±.18; Mrθ=-0.23±.14; Mθϕ=-1.78±.09; Mϕr=0.24±.18; Best double couple: Mo=3.41800×10^16 NP1:ϕs=319.00000°, δ42.00000°, λ-90.00000°. NP2: ϕs=138.00000°, δ48.00000°, λ-90.00000°. Principal axes: T 3.4810, Plg3.0000°, Azm229.0000°; N -0.1250, Plg0.0000°, Azm139.0000°; P -3.3560, Plg87.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***26*** *11:03:49.7±0.6, 223S×100.50E, h47km±5km, mb4.6/24, mb1 4.6/25, mb1mx4.6/25, mbtmp4.6/25, MS4.2/17, Ms1 4.2/17, ms1mx4.1/22 Error ellipse: s-maj=15.1km s-min=8.8km az=58.0*
DJA ***26*** *11:03:50.9±0.0, 233S×100.23E, h42km, mB5.7/8, Mjma4.8/11, MLv5.3/12, Mw(mB)5.4/8, Mwp4.6/6*
ISC 26 11:03:49.6±0.2, 232S±003×10029E±003, h42km, h42km±2.4km:pP-P, n262, σ1§17/256, mb5.1/109, MS4.4/33, 17C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PDSI	**Padang**	**1.40**	**7**	P		**Pn**	**11 04 11.8**	**-0.9**
PDSI	**Padang**	**1.40**	**7**	P		**Pn**	**11 04 11.9**	**-0.8**
PPI	**Padang Panjang**	**1.85**	**3**	P		**Pn**	**11 04 19.7**	**+0.9**
PPI	**Padang Panjang**	**1.85**	**3**	P		**Pn**	**11 04 19.6**	**+0.8**
KSI	**Kapahiang**	**2.65**	**120**	P		**Pn**	**11 04 30.7**	**+0.8**
KSI	**Kapahiang**	**2.65**	**120**	P		**Pn**	**11 04 36.5**	**+6.6**
RGRI	**Rengat**	**2.82**	**46**	P		**Pn**	**11 04 33.9**	**+1.7**
RGRI	**Rengat**	**2.82**	**46**	P		**Pn**	**11 04 33.1**	**+0.9**
TRSI	**Tarutung**	**4.51**	**343**	P		Px	11 05 07.7	
DSRI	**Dabo**	**4.66**	**67**	P		**Pn**	**11 04 57.5**	**+0.1**
KLI	**Kotabumi**	**5.21**	**119**	P		**Pn**	**11 05 06.8**	**+1.8**
622nm,1.2s,5.4nm								
KGM	**Kluang**	**5.26**	**35**	⇑P		**Pn**	**11 05 07.8**	**+2.1**
MYKOM	**Kota Tinggi**	**5.41**	**41**	⇓P		**Pn**	**11 05 08.8**	**+1.0**
MYKOM	**Kota Tinggi**	**5.41**	**41**	P		**Pn**	**11 05 08.9**	**+1.1**
FRIM	**Kepong**	**5.67**	**14**	⇑P		**Pn**	**11 05 13.4**	**+2.0**
BLSI	**Bandar Lampung**	**5.80**	**122**	P		**Pn**	**11 05 16.9**	**+3.8**
258nm,0.8s,5μm1.3nm								
PPBI	**Pangkal Pinang**	**5.84**	**89**	P		**Pn**	**11 05 17.8**	**+4.1**
IPM	**Ipoh**	**6.79**	**6**	⇓P		**Pn**	**11 05 30.2**	**+3.5**
IPM	**Ipoh**	**6.79**	**6**	P		**Pn**	**11 05 30.0**	**+3.3**
83nm,1.4s,1μm0.4nm								
SBJI	**Serang**	**6.94**	**123**	P		**Pn**	**11 05 29.9**	**+1.1**
271nm,1.2s,8μm1.3nm								
KULM	**Kulim**	**7.56**	**3**	⇓P		**Pn**	**11 05 39.2**	**+1.9**
DBJI	**Dramaga**	**7.69**	**123**	P		**Pn**	**11 05 39.7**	**+0.6**
238nm,1.1s								
CBJI	**Citeko**	**7.70**	**122**	P		**Pn**	**11 05 43.3**	**+4.0**
1μm,1.0s,3.2nm								
KTGM	**Kuala Trenggan**	**8.11**	**20**	⇑P		**Pn**	**11 05 48.8**	**+4.0**
LEM	**Lembang**	**8.56**	**122**	P		**Pn**	**11 05 52.9**	**+1.8**
196nm,1.2s,0.7nm								
BSI	**Banda Aceh**	**9.23**	**327**	P		**Pn**	**11 05 59.3**	**-0.9**
44nm,1.1s								
SNG	**Songkhla**	**9.43**	**2**	P		**Pn**	**11 06 07.0**	**+4.0**
160nm,1.0s								
BJII	**Banjamegara**	**10.62**	**118**	P		**Pn**	**11 06 20.2**	**+0.9**
KSM	**Kuching**	**10.70**	**69**	⇑P		**Pn**	**11 06 26.4**	**+6.1**
STKI	**Sintang**	**11.43**	**78**	P		**Pn**	**11 06 36.4**	**+6.1**
SJI	**Sawahan**	**12.63**	**116**	P		**Pn**	**11 06 45.0**	**-1.8**
SBUM	**Sibu**	**12.83**	**68**	⇓P		**Pn**	**11 06 53.2**	**+3.7**
SBUM	**Sibu**	**12.83**	**68**	P		**Pn**	**11 06 53.3**	**+3.8**
PLKI	**Palangkaraya**	**13.64**	**90**	P		Px	11 07 11.9	
KMMI	**Kalianget**	**14.41**	**110**	P		**Pn**	**11 07 10.8**	**-0.3**
182nm,1.2s								
BBKI	**Banjar Baru**	**14.57**	**95**	P		**Pn**	**11 07 15.9**	**+2.6**
91nm,1.0s								
KHKI	**Kahang-Kahang**	**16.38**	**112**	P		**Pn**	**11 07 38.2**	**+1.5**
SDKM	**Sandakan**	**18.64**	**65**	⇑P		**Pn**	**11 08 05.0**	**+0.5**
TSM	**Tawau**	**18.75**	**70**	⇑P		**Pn**	**11 08 06.2**	**+0.3**
KAPI	**Kappang**	**19.60**	**98**	Pn		**Pn**	**11 08 14.9**	**-1.2**
596nm,0.8s,SNR=11								
KAPI	**Kappang**	**19.60**	**98**	P		**Pn**	**11 08 12.8**	**-3.3**
5.2nm,0.3s,baz=287,slow=8.9,SNR=22								
KAPI					LR	LR	11 17 19.5	
comp=Z,828nm,18.6s,baz=273,slow=42								
KAPI	**Kappang**	**19.60**	**98**	*e*P		**Pn**	**11 08 14.2**	**-1.9**
KAPI	**Kappang**	**19.60**	**98**	P		**Pn**	**11 08 16.7**	**+0.6**
79nm,1.3s,646nm								
MYLDM	**Lahad Datu**	**19.65**	**68**	⇑P		**Pn**	**11 08 14.6**	**-2.2**
MYLDM	**Lahad Datu**	**19.65**	**68**	P		**Pn**	**11 08 21.7**	**+5.0**
CMAR	**Chiang Mai Arr**	**20.68**	**356**	P		**P**	**11 08 23.6**	**-2.5**
13nm,0.7s,baz=186,slow=9.9,SNR=46								
CMAR					PcP	PcP	11 12 36.3	+1.0
2.6nm,0.9s,baz=215,slow=3.5,SNR=7.4								
CMAR					LR	LR	11 16 34.5	
comp=Z,639nm,19.4s,MS4.0,baz=177,slow=37								
CMAR	**Chiang Mai Arr**	**20.68**	**356**	P		**P**	**11 08 23.7**	**-2.5**
CMAR							11 12 36.3	
CHG	**Chiang Mai**	**21.04**	**356**	P		pP	11 08 45.7	+5.4
CHTO	**Chiang Mai**	**21.04**	**356**	*e*P		**P**	**11 08 28.1**	**-1.9**
6.3nm,0.9s,mb4.0								
CHTO	**Chiang Mai**	**21.04**	**356**	*e*P		**P**	**11 08 28.1**	**-1.9**
CHTO					pmax	pmax		
comp=Z,6.0nm,0.9s,mb3.9								
KDI	**Kendari**	**22.35**	**95**	P		**P**	**11 08 45.5**	**+1.3**
comp=Z,66nm,1.4s,mb4.9								
QIZ	**Qiongzhong**	**23.20**	**23**	P		**P**	**11 08 52.3**	**-0.7**
QIZ					S	**S**	**11 12 59.0**	**-2.8**
QIZ					LR	LR		
comp=Z,730nm,13.7s,MS4.3								
BATI	**Baumata**	**24.50**	**110**	P		**P**	**11 09 01.5**	**-3.7**
comp=Z,37nm,0.7s,mb4.9,baz=182,slow=1.0,SNR=6.0								
BATI	**Baumata**	**24.50**	**356**	P		**P**	**11 09 02.3**	**-2.9**
comp=Z,44nm,1.1s,mb4.8								
MDRS	**Chennai**	**25.09**	**308**	*ex*		x	11 11 08.6	
MDRS					AMb	AMB	11 11 10.4	
comp=Z,81nm,0.2s,mb6.0								
TRD	**Trivandrum**	**25.63**	**295**	||*ex*		**P**	**11 09 21.0**	**+5.5**
TRD					*ex*	x	11 13 59.0	
MBWA	**Marble Bar**	**26.63**	**136**	*e*P		**P**	**11 09 24.2**	**-0.3**
comp=Z,24nm,1.2s,mb4.6								
MBWA	**Marble Bar**	**26.63**	**136**	P		**P**	**11 09 27.0**	**+2.5**
comp=Z,27nm,1.4s,mb4.6								
DAV	**Davao City (W)**	**26.90**	**70**	LR		LR	11 20 58.8	
comp=Z,469nm,18.0s,MS4.1,baz=223,slow=39								
LBMI	**Labuha**	**27.25**	**87**	P		**P**	**11 09 30.4**	**+0.3**
comp=Z,114nm,1.2s,comp=Z,1μm,mb5.3								
KMI	**Kunming**	**27.38**	**5**	P		**P**	**11 09 32.5**	**+1.4**
KMI					AP	pP	11 09 42.5	+0.1
KMI					XP	sP	11 09 47.3	-0.1
KMI					PP		11 10 20.3	
KMI					S	**S**	**11 14 10.0**	**+1.6**
KMI					AMB	AMB		
comp=Z,8.0nm,0.9s,mb4.2								
KMI					AMB	AMB		
comp=Z,211nm,4.6s								
KMI					LR	LR		
comp=N,728nm,12.0s,MS4.5								
KMI					LR	LR		
comp=E,454nm,14.4s,MS4.5								
KMI					LR	LR		
comp=Z,789nm,14.6s,MS4.4								
SHL	**Shillong**	**28.89**	**344**	||*i*P		**P**	**11 09 44.5**	**-0.1**
SHL					*e*S	**S**	**11 14 33.5**	**+1.3**
GYA	**Guiyang**	**29.26**	**12**	*e*P		**P**	**11 09 47.3**	**-0.5**
GYA					AP	pP	11 10 00.5	+1.3
GYA					PP	PP	11 10 43.8	-11
GYA					PCP	PcP	11 12 54.8	+0.6
GYA					S	**S**	**11 14 34.0**	**-4.0**
GYA					SCP	ScP	11 16 32.5	-0.2
GYA					AMB	AMB		
comp=Z,20nm,0.8s,mb4.9								
GYA					AMB	AMB		
comp=Z,240nm,4.8s								
GYA					LR	LR		
comp=N,1μm,13.0s,MS4.8								
GYA					LR	LR		
comp=E,1μm,12.8s,MS4.8								
GYA					LR	LR		
comp=Z,2μm,13.2s,MS4.8								
BOK	**Bokaro**	**29.50**	**332**	*e*P		**P**	**11 09 51.6**	**+1.6**
SWI	**Sorong**	**30.99**	**88**	P		**P**	**11 10 02.2**	**-1.1**
comp=Z,102nm,1.2s,mb5.5								
ODAN	**Odare**	**31.57**	**338**	*e*P		**P**	**11 10 09.1**	**+0.9**
comp=Z,63nm,0.9s,mb5.5								
TAPN	**Taplejung**	**31.89**	**338**	*e*P		**P**	**11 10 12.4**	**+1.4**
comp=Z,87nm,1.0s,mb5.5								
RAMN	**Ramite**	**31.95**	**336**	*e*P		**P**	**11 10 12.8**	**+1.2**
comp=Z,44nm,0.9s,mb5.3								
JIRN	**Jiri**	**32.75**	**336**	*e*P		**P**	**11 10 19.9**	**+1.3**
comp=Z,110nm,0.8s,mb5.8								
PKI	**Pulchoki**	**32.99**	**335**	*e*P		**P**	**11 10 21.8**	**+1.1**
LSA	**Lhasa**	**33.01**	**345**	P		**P**	**11 10 20.0**	**-0.9**
LSA					S	**S**	**11 15 31.0**	**-5.7**
LSA					LR	LR		
comp=N,170nm,29.4s,MS3.8								
LSA					LR	LR		
comp=E,180nm,26.5s,MS3.8								
LSA					LR	LR		
comp=Z,310nm,26.5s,MS3.9								
LSA	**Lhasa**	**33.01**	**345**	*e*P		**P**	**11 10 21.7**	**+0.8**
comp=Z,28nm,0.6s,mb5.4								
LSA	**Lhasa**	**33.01**	**345**	*e*P		**P**	**11 10 21.7**	**+0.8**
LSA					pmax	pmax		
comp=Z,28nm,0.6s,mb5.4								
GUN	**Gumba**	**33.10**	**336**	*e*P		**P**	**11 10 22.7**	**+1.1**
comp=Z,59nm,0.4s,mb5.9								
CD2	**Chengdu**	**33.20**	**5**	*e*P		**P**	**11 10 22.3**	**-0.2**
CD2					AP	pP	11 10 32.0	-1.9
CD2					XP	sP	11 10 35.8	-3.1
CD2					PP	PP	11 11 34.8	-3.5
CD2					PCP	PcP	11 13 03.5	-1.1
CD2					S	**S**	**11 15 40.3**	**+0.7**
CD2					XS	sS	11 15 56.0	-2.6
CD2					PCS	PcS	11 16 48.3	-1.9
CD2					SCS	ScS	11 20 43.5	-2.9
CD2					AMB	AMB		
comp=Z,20nm,0.8s,mb5.1								
CD2					AMB	AMB		
comp=Z,100nm,5.2s								
CD2					LR	LR		
comp=N,970nm,14.4s,MS4.7								
CD2					LR	LR		
comp=E,690nm,15.6s,MS4.7								
CD2					LR	LR		
comp=Z,1μm,15.6s,MS4.7								
KKN	**Kakani**	**33.24**	**335**	*e*P		**P**	**11 10 23.5**	**+0.6**
comp=Z,45nm,0.7s,mb5.5								
KKN	**Kakani**	**33.24**	**335**	*e*P		**P**	**11 10 23.5**	**+0.6**
KKN					pmax	pmax		
comp=Z,45nm,0.7s,mb5.5								
POO	**Poona**	**33.26**	**310**	*e*P		**P**	**11 10 22.5**	**-0.7**
GKN	**Gorkha**	**33.70**	**335**	*e*P		**P**	**11 10 27.6**	**+0.7**
KOLN	**Koldanda**	**33.95**	**333**	*e*P		**P**	**11 10 30.1**	**+1.0**
comp=Z,45nm,0.9s,mb5.4								
NWAO	**Narrogin (SRO)**	**34.35**	**154**	P		**P**	**11 10 31.9**	**-0.6**
comp=Z,20nm,0.8s,mb5.1,baz=348,slow=7.0,SNR=7.1								
DANN	**Dangsing**	**34.38**	**334**	*e*P		**P**	**11 10 33.5**	**+0.7**
comp=Z,75nm,1.0s,mb5.6								
PYUN	**Piuthan**	**34.52**	**332**	*e*P		**P**	**11 10 34.8**	**+0.8**
comp=Z,9.3nm,0.3s,mb5.2								
AGRA	**Agra**	**36.43**	**325**	*ex*		x	11 11 57.5	
AGRA					AMb	AMB	11 11 59.4	
comp=Z,54nm,0.3s,mb5.9								
XAN	**Xi'an**	**37.06**	**12**	P		**P**	**11 10 54.0**	**-1.7**
XAN					AP	pP	11 11 03.8	-3.4
XAN					XP	sP	11 11 07.8	-4.4
XAN					PP	PP	11 12 21.0	+0.2
XAN					PCP	PcP	11 13 16.0	+0.2
XAN					S	**S**	**11 16 34.8**	**-4.0**
XAN					SCP	ScP	11 17 00.0	+0.3
XAN					PCS	PcS	11 17 02.3	-1.8
XAN					SS	SS	11 19 04.5	-18
XAN					SCS	ScS	11 21 05.5	-1.7
XAN					AMB	AMB		
comp=Z,20nm,1.2s,mb4.8								
XAN					AMB	AMB		
comp=Z,230nm,6.4s								
XAN					LR	LR		
comp=N,304nm,16.3s,MS4.4								
XAN					LR	LR		
comp=E,418nm,14.6s,MS4.4								
XAN					LR	LR		
comp=Z,951nm,16.8s,MS4.7								
WRA	**Warramunga Arr**	**37.58**	**120**	P		**P**	**11 10 58.7**	**-1.7**
comp=Z,52nm,0.7s,mb5.4,baz=303,slow=8.9,SNR=257								
WRAB	**Tennant Creek**	**37.59**	**120**	P		**P**	**11 10 59.0**	**-1.4**
comp=Z,621nm,0.8s,mb6.4,SNR=59								
WRAB	**Tennant Creek**	**37.59**	**120**	*e*P		**P**	**11 10 58.9**	**-1.5**
comp=Z,65nm,0.7s,mb5.5								
WRAB	**Tennant Creek**	**37.59**	**120**	*e*P		**P**	**11 10 58.9**	**-1.5**
WRAB					pmax	pmax		
comp=Z,65nm,0.7s,mb5.5								
WRAB	**Tennant Creek**	**37.59**	**120**	P		**P**	**11 10 58.7**	**-1.7**
comp=Z,123nm,1.0s,mb5.6								
WB2	**Warramunga Arr**	**37.59**	**120**	||*i*P		**P**	**11 10 58.7**	**-1.7**
WB2					*e*S	**S**	**11 16 40.1**	**-7.2**
SONA	**Sohna**	**37.70**	**325**	*e*P		**P**	**11 10 58.7**	**-2.5**
SONA					AMb	AMB	11 11 02.9	
comp=Z,10.0nm,0.0s								
AYAN	**Aya Nagar**	**37.85**	**326**	*e*P		**P**	**11 11 01.4**	**-1.1**
KUDL	**Kundal**	**37.96**	**325**	*e*P		**P**	**11 11 01.5**	**-1.8**
KUDL					AMb	AMB	11 11 04.8	
comp=Z,11nm,1.7s,mb4.3								
JOSI	**Joshimath**	**38.20**	**330**	*e*P		**P**	**11 11 05.7**	**+0.3**
JOSI					AMb	AMB	11 11 12.9	
comp=Z,153nm,0.7s,mb5.8								
JOSI				*i* x		x	11 11 56.2	
KHET	**Khetri**	**38.30**	**324**	*e*P		**P**	**11 11 05.1**	**-1.2**
LZH	**Lanzhou**	**38.35**	**5**	*e*P		**P**	**11 11 05.5**	**-1.0**
LZH					AP	pP	11 11 15.3	-2.8
LZH					XP	sP	11 11 19.3	-3.8
LZH					PP	PP	11 12 37.5	+2.6
LZH					S	**S**	**11 16 58.0**	**-0.2**
LZH					XS	sS	11 17 14.0	-3.5
LZH					AMB	AMB		
comp=Z,25nm,1.2s,mb4.8								
LZH					AMB	AMB		
comp=Z,163nm,4.5s								
LZH					LR	LR		
comp=N,841nm,15.6s								
LZH					LR	LR		
comp=Z,1μm,17.2s,MS4.8								
ASAR	**Alice Springs**	**38.83**	**126**	P		**P**	**11 11 10.1**	**-0.8**
comp=Z,20nm,0.6s,mb5.1,baz=302,slow=7.8,SNR=268								
ASAR					PcP	PcP	11 13 21.6	+0.1
comp=Z,5.5nm,0

WMQ LR LR
comp=N,102nm,16.0s,MS4.1
WMQ LR LR
comp=E,154nm,16.0s,MS4.1
WMQ LR LR
comp=Z,149nm,16.0s,MS4.0
CTA Charters Tower 48.20 115 *e*P **P 11 12 25.2 -1.2**
comp=Z,21nm,1.0s,mb5.1
CTAO Charters Tower 48.20 115 *e*P **P 11 12 25.3 -1.0**
comp=Z,44nm,1.1s,mb5.4
CTAO Charters Tower 48.20 115 *e*P **P 11 12 25.3 -1.1**
CTAO pmax pmax
comp=Z,44nm,1.1s,mb5.4
CTAO Charters Tower 48.20 115 P **P 11 12 25.5 -0.9**
comp=Z,48nm,1.2s,mb5.4
STKA Stephens Creek 48.72 132⇓ *i*P **P 11 12 30.0 -0.2**
comp=Z,23nm,1.0s,mb5.2
STKA Stephens Creek 48.72 132 P **P 11 12 30.1 -0.1**
comp=Z,29nm,0.8s,mb5.3,baz=307,slow=8.0,SNR=50
STKA LR LR 11 32 51.9
comp=Z,435nm,21.6s,MS4.4,baz=114,slow=36
STKA Stephens Creek 48.72 132 *e*P **P 11 12 30.1 -0.1**
comp=Z,11nm,1.1s,mb4.8
UCH Uchtor 50.10 335 *e*P **P 11 12 42.1 +1.6**
comp=Z,6.4nm,1.0s,mb4.6
SONM Songino Array 50.23 5 P **P 11 12 41.8 +0.4**
comp=Z,11nm,0.8s,mb4.9,baz=190,slow=8.0,SNR=22
TKM2 Tokmak 2 50.24 336 *e*P **P 11 12 42.1 +0.6**
comp=Z,33nm,0.9s,mb5.4
TKM2 Tokmak 2 50.24 336 *e*P **P 11 12 42.1 +0.6**
TKM2 pmax pmax
comp=Z,33nm,0.9s,mb5.4
TKM2 Tokmak 2 50.24 336 P **P 11 12 42.4 +0.9**
SNR=38
KBK Karagaybulak 50.28 336 P **P 11 12 43.3 +1.5**
SNR=14
ULN Ulaanbaatar 50.32 6 *e*P **P 11 12 42.3 +0.3**
comp=Z,34nm,1.5s,mb5.2
ULN Ulaanbaatar 50.32 6 *e*P **P 11 12 42.3 +0.2**
ULN pmax pmax
comp=Z,34nm,1.5s,mb5.2
ULN Ulaanbaatar 50.32 6 P **P 11 12 42.5 +0.4**
comp=Z,19nm,1.5s,mb4.9
AML Almayashu 50.37 334 *e*P **P 11 12 43.2 +0.7**
comp=Z,12nm,0.6s,mb5.1
AML Almayashu 50.37 334 P **P 11 12 43.8 +1.2**
SNR=19
AAK Ala-Archa 50.45 335 P **P 11 12 44.3 +1.2**
comp=Z,48nm,0.8s,mb5.6,SNR=6.2
FRU Bishkek 50.56 336 *e*P **P 11 12 45.0 +1.0**
FRU pmax pmax
comp=Z,60nm,1.9s,mb5.2
CHMS Chumysh 50.64 336 P **P 11 12 45.0 +0.4**
SNR=7.2
EKS2 Erkin-Say 50.77 335 *e*P **P 11 12 46.6 +1.1**
comp=Z,32nm,0.9s,mb5.3
EKS2 Erkin-Say 50.77 335 P **P 11 12 46.8 +1.2**
SNR=18
CN2 Changchun 51.16 23 *e*P **P 11 12 46.8 -1.6**
CN2 *e*XP sP 11 13 00.5 -4.7
CN2 PCP PcP 11 14 02.3 -1.2
CN2 *e*S **S 11 20 01.5 -2.1**
CN2 *e*SS SS 11 23 34.8 -4.7
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,14.0s,MS4.8
CN2 LR LR
comp=E,400nm,14.0s,MS4.8
CN2 LR LR
comp=Z,500nm,16.0s,MS4.6
MK31 Makanchi Array 51.41 344 *e*P **P 11 12 50.2 0.0**
MK31 Makanchi Array 51.41 344 *i* P **P 11 12 49.9 -0.4**
MK31 pmax pmax
comp=Z,2.0nm,0.2s,mb4.7
MKAR Makanchi Array 51.41 344 P **P 11 12 49.8 -0.5**
comp=Z,3.1nm,0.3s,mb4.7,baz=158,slow=8.8,SNR=60
MKAR pP pP 11 13 03.1 +1.0
comp=Z,5.1nm,0.5s,baz=147,slow=8.6,SNR=7.9
MKAR LR LR 11 38 52.4
comp=Z,134nm,20.2s,MS4.0,baz=159,slow=41
MKAR Makanchi Array 51.41 344 P **P 11 12 49.8 -0.5**
MKAR *PP pP 11 13 03.2 +1.0
MAT Matsushiro 52.33 39 P **P 11 12 55.8 -1.6**
MAT *e*S **S 11 20 08.8 -11**
MJAR Matsushiro Arr 52.33 39 P **P 11 12 56.2 -1.2**
comp=Z,3.3nm,0.6s,mb4.4,baz=220,slow=8.0,SNR=9.2
MJAR LR LR 11 36 19.8
comp=Z,134nm,18.6s,MS4.0,baz=235,slow=37
MJAR Matsushiro Arr 52.33 39 P **P 11 12 56.2 -1.2**
MJAR LR LR 11 36 19.8
ZAK Zakamensk 52.55 2 *e*P **P 11 12 58.1 -0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
KK31 Karatay Array 52.57 333 *i* P **P 11 12 58.6 -0.4**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
MDJ Mudanjiang 53.54 26 P **P 11 13 06.8 +0.7**
MDJ AP pP 11 13 16.0 -2.1
MDJ XP sP 11 13 19.8 -3.2
MDJ SCP ScP 11 18 08.5 +1.4
MDJ PCS PcS 11 18 12.3 +0.9
MDJ S **S 11 20 38.5 +2.3**
MDJ XS sS 11 20 54.0 -2.2
MDJ AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
MDJ AMB AMB
comp=Z,126nm,5.8s
MDJ LR LR
comp=N,195nm,14.5s
MDJ LR LR
comp=E,331nm,7.8s
MDJ LR LR
comp=Z,402nm,15.1s,MS4.6
HVS Khovu-Aksy 53.54 355 *e*P **P 11 13 05.1 -0.9**
TLY Talaya 53.87 3 *e*P **P 11 13 08.5 +0.1**
comp=Z,11nm,0.8s,mb4.8
TLY Talaya 53.87 3 *e*P **P 11 13 08.9 +0.5**
TLY pmax pmax
comp=Z,13nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,430nm,16.0s,MS4.6
EIDS Eidsvold 53.95 120 *e*P **P 11 13 07.7 -1.7**
comp=Z,80nm,1.6s,mb5.4
IRK Irkutsk 54.46 3 *e*P **P 11 13 12.4 -0.3**
IRK pmax pmax
comp=Z,48nm,1.7s,mb5.2
ARMA Armidale 55.98 126⇓ *i*P **P 11 13 25.0 +0.9**
KURK Kurchatov 55.99 344 P **P 11 13 23.8 +0.1**
comp=Z,137nm,0.8s,mb6.0,SNR=9.0
KURK Kurchatov 55.99 344 P **P 11 13 22.2 -1.5**
comp=Z,3.0nm,0.3s,mb4.8,baz=164,slow=7.0,SNR=6.6
KURK pP pP 11 13 36.2 +0.5
comp=Z,11nm,0.7s,baz=163,slow=7.0,SNR=2.9
KURK Kurchatov 55.99 344 *e*P **P 11 13 23.2 -0.5**
comp=Z,21nm,0.9s,mb5.2
KURK Kurchatov 55.99 344 *e*P **P 11 13 23.2 -0.5**
KURK pmax pmax
comp=Z,21nm,0.9s,mb5.2
ZAA0 Zalesovo Array 57.53 349 *e*P **P 11 13 34.0 -0.6**
ZALV Zalesovo Beam 57.53 349 P **P 11 13 33.1 -1.5**
comp=Z,4.9nm,0.3s,mb5.0,baz=163,slow=5.6,SNR=45
ZALV pP pP 11 13 46.5 -0.2
comp=Z,6.9nm,0.6s,baz=146,slow=6.9,SNR=8.0
ZALV S **S 11 21 27.4 -1.7**
comp=Z,1.1nm,0.8s,baz=156,slow=15,SNR=6.5
ZALV LR LR 11 40 33.7
comp=Z,135nm,21.5s,MS4.0,baz=342,slow=38
ZALV Zalesovo Beam 57.53 349 P **P 11 13 33.1 -1.5**
ZALV pP pP 11 13 46.5 -0.2
ZALV S **S 11 21 27.4 -1.7**
ZALV LR LR 11 40 33.7
ZALV Zalesovo Beam 57.53 349 P **P 11 13 33.1 -1.5**
ZALV *PP pP 11 13 46.5 -0.2
ZALV S **S 11 21 27.4 -1.7**
KLR Kul'dur 58.10 24 *e*P **P 11 13 34.2 -4.5**
KLR pmax pmax
comp=Z,68nm,1.6s,mb5.4
NVS Novosibirsk 58.68 349 *e*P **P 11 13 39.6 -3.0**
NVS *e*S **S 11 21 37.8 -6.3**
NVS pmax pmax
comp=Z,33nm,2.2s,mb5.0
NVS pmax pmax
comp=N,44nm,2.3s
NVS pmax pmax
comp=E,28nm,2.2s
NVS smax
comp=N,16nm,1.8s
NVS smax
comp=E,10.0nm,1.5s
HABR Khabarovsk 58.91 26 *e*P **P 11 13 41.2 -3.2**
HABR *e**PP pP 11 13 51.1 -5.4
HABR *e* 11 15 50.7
HABR *e*S **S 11 21 45.7 -1.7**
HABR *e*PS 11 21 57.1
HABR *e* 11 22 03.0
HABR *e* 11 23 28.4
HABR *e*SS SS 11 25 39.9 -1.8
RDF Al-Radifah 59.27 306 *e*P **P 11 13 47.5 +0.2**
baz=306
RDF AMb AMB 11 13 55.7
comp=Z,75nm,1.6s,mb5.5,baz=306
UMR Umm Al-Rimmam 59.38 306 *e*P **P 11 13 48.6 +0.6**
baz=306
UMR AMb AMB 11 13 49.3
comp=Z,55nm,0.8s,mb5.6,baz=306
NAY Al-Naaiem 59.64 306 *e*P **P 11 13 49.9 0.0**
baz=306
NAY AMb AMB 11 14 00.4
comp=Z,25nm,1.7s,mb5.0,baz=306
MIB Mutribah 59.78 307 *e*P **P 11 13 51.1 +0.4**
baz=306
MIB AMb AMB 11 13 52.2
comp=Z,66nm,1.2s,mb5.5,baz=306
VOSK Vostochnaya 60.13 340 P **P 11 13 50.4 -2.2**
VOSK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BVA0 Borovoye Array 60.58 340 P **P 11 13 54.5 -1.2**
BVA0 pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
BVAR Borovoye Array 60.58 340 P **P 11 13 54.3 -1.4**
comp=Z,7.2nm,0.6s,mb5.0,baz=147,slow=8.6,SNR=34
BVAR pP pP 11 14 08.5 +0.6
comp=Z,7.2nm,0.7s,baz=142,slow=8.6,SNR=6.8
BRVK Borovoye 60.64 340 *e*P **P 11 13 55.6 -0.6**
comp=Z,23nm,1.4s,mb5.1
BRVK Borovoye 60.64 340 *e*P **P 11 13 55.6 -0.6**
BRVK pmax pmax
comp=Z,23nm,1.4s,mb5.1
BOD Bodaibo 60.95 8 *e*P **P 11 13 57.6 -0.5**
BOD pmax pmax
comp=Z,32nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 61.59 32 *e*P **P 11 14 01.5 -1.2**
YSS pmax pmax
comp=Z,42nm,1.2s,mb5.4
AB31 Akbulak array 62.05 331 P **P 11 14 04.8 -1.0**
AB31 pmax pmax
comp=Z,33nm,1.0s,mb5.4
AKTO Aktyubinsk 63.77 331 *i* P **P 11 14 15.2 -2.0**
AKTO pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
SVE Sverdlovsk 67.08 338⇓ *e*P **P 11 14 38.7 +0.2**
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.5
ARU Arti 67.61 336 *e*P **P 11 14 41.1 -0.7**
comp=Z,23nm,1.0s,mb5.2
ARU Arti 67.61 336 *c i*P **P 11 14 41.0 -0.8**
ARU 11 17 05.6
ARU *e*S S 11 23 33.6 -2.1
ARU SS SS 11 27 51.4 -5.8
ARU pmax pmax
comp=Z,42nm,1.7s,mb5.2
YAK Yakutsk 67.97 14 *e*P **P 11 14 42.5 -1.5**
comp=Z,75nm,1.0s,mb5.7
YAK Yakutsk 67.97 14 *e*P **P 11 14 42.2 -1.8**
YAK pmax pmax
comp=Z,89nm,1.1s,mb5.7
KIV Kislovodsk 68.97 319 *e*P **P 11 14 51.0 +0.4**
comp=Z,43nm,1.2s,mb5.2
KIV Kislovodsk 68.97 319 *d i*P **P 11 14 50.9 +0.3**
KIV pmax pmax
comp=Z,63nm,1.9s,mb5.2
MBAR Mbarara 69.55 270⇑ *i*P **P 11 14 54.3 -0.5**
MAW Mawson 70.05 194 *e*P **P 11 14 58.6 +1.8**
comp=Z,11nm,0.9s,mb4.8
MAW Mawson 70.05 194 P **P 11 14 57.6 +0.7**
comp=Z,15nm,0.9s,mb4.9,baz=35,slow=6.2,SNR=26
MAW LR LR 11 38 50.3
comp=Z,314nm,21.7s,MS4.5,baz=44,slow=30
MAW Mawson 70.05 194 *e*P **P 11 14 58.2 +1.4**
comp=Z,3.6nm,1.0s,mb4.3
MAW Mawson 70.05 194 *e*P **P 11 14 58.3 +1.5**
MAW pmax pmax
comp=Z,4.0nm,1.0s
SOKR Solikamsk 70.46 338 *e*P **P 11 14 59.8 +0.3**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
LSZ Lusaka 72.13 255 *e*P **P 11 15 12.0 +1.6**
comp=Z,14nm,1.5s,mb4.7
LSZ Lusaka 72.13 255 *e*P **P 11 15 12.0 +1.5**
LSZ pmax pmax
comp=Z,14nm,1.5s,mb4.7
VRHR Novokhopersk 72.75 326 *e*P **P 11 15 12.8 -0.6**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.3s
ANN Anapa 72.76 318 *e*P **P 11 15 11.1 -2.5**
ANN pmax pmax
comp=Z,131nm,1.1s,mb5.8
PETK Petropavlovsk- 72.99 32 P **P 11 15 13.8 -1.0**
comp=Z,4.4nm,0.7s,mb4.5,baz=131,slow=2.5,SNR=13
PETK LR LR 11 49 38.3
comp=Z,69nm,20.4s,MS3.9,baz=140,slow=38
BR131 Keskin Array S 73.75 312 *e*P **P 11 15 19.3 -0.2**
BRTR Keskin Array B 73.75 312 P **P 11 15 18.8 -0.8**
comp=Z,5.5nm,0.9s,mb4.5,baz=129,slow=7.4,SNR=23
BRTR pP pP 11 15 33.0 +1.0
comp=Z,5.1nm,0.8s,baz=133,slow=7.3,SNR=11
BRTR LR LR 11 50 29.6
comp=Z,91nm,18.6s,MS4.1,baz=242,slow=38
BRTR Keskin Array B 73.75 312 P **P 11 15 18.8 -0.8**
BRTR *PP pP 11 15 33.1 +1.1
VSR Storozhevoye 74.20 325 *e*P **P 11 15 20.9 -1.0**
VSR pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,20nm,1.1s
BOSA Boshof 75.76 241 P **P 11 15 32.2 +0.7**
comp=E,5.4nm,0.6s,mb4.7,baz=97,slow=6.9,SNR=11
BOSA LR LR 11 45 09.7
comp=E,312nm,19.5s,MS4.6,baz=158,slow=33
SEY Seymchan 75.81 22⇑ *i*P **P 11 15 30.6 -0.4**
TIXI Tiksi 76.12 9 *e*P **P 11 15 30.8 -1.8**
comp=E,84nm,1.8s,mb5.4
TIXI Tiksi 76.12 9⇓ *i*P **P 11 15 30.8 -1.8**
TIXI pmax pmax
comp=Z,41nm,1.7s,mb5.1
TIXI MLR MLR
comp=Z,400nm,22.0s,MS4.7
MOS Moscow 76.92 329 *e*P **P 11 15 35.9 -1.5**
MOS *e* pP 11 15 48.1 -1.8
OBN Obninsk 77.22 328⇓ *e*P **P 11 15 38.7 -0.4**
OBN *e*S SKSac 11 25 44.2 -4.2
OBN *e*SS SS 11 30 21.8 -2.3
OBN pmax pmax
comp=Z,61nm,1.6s,mb5.3
OBN MLR MLR
comp=Z,200nm,23.0s,MS4.4
SYO Syowa Base 77.67 199⇑ *e*P **P 11 15 41.4 0.0**
KLMR Klimovskoe 78.24 334 P **P 11 15 42.7 -2.0**
KLMR pmax pmax
comp=Z,52nm,1.5s,mb5.2
AKASG Malin Array Be 79.91 322 P **P 11 15 53.1 -1.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=74,slow=6.1,SNR=7.2
AKASG LR LR 11 54 19.7
comp=Z,73nm,19.1s,MS4.0,baz=320,slow=38
VRI Vrincioaia 80.28 317⇑ *i*P **P 11 15 57.3 +1.1**
MLR Muntele Rosu 80.73 317⇑ *i*P **P 11 15 59.5 +0.9**
BURAR Bucovina Array 81.69 319⇓ *i*P **P 11 16 05.3 +1.7**
BUR08 Bucovina Ar. S 81.71 319 *e*P **P 11 16 04.1 +0.4**
VNDA Vanda 81.80 169 P **P 11 16 04.2 +0.5**
comp=Z,6.1nm,1.1s,mb4.5,baz=299,slow=4.9,SNR=14
VNDA LR LR 11 47 21.5
comp=Z,78nm,19.3s,MS4.1,baz=313,slow=32
VNDA Vanda 81.80 169 *e*P **P 11 16 04.0 +0.4**
comp=Z,8.0nm,1.2s,mb4.5
VNDA Vanda 81.80 169 *e*P **P 11 16 04.0 +0.3**
VNDA pmax pmax
comp=Z,8.0nm,1.2s
VTS Vitosha 82.08 313⇑ *i*P **P 11 16 06.1 +0.3**
TSUM Tsumeb 82.36 251 *e*P **P 11 16 08.8 +1.0**
comp=Z,6.8nm,0.8s,mb4.6
BILL Bilibino 83.35 20⇑ *e*P **P 11 16 10.2 -1.6**
BILL *e* 11 19 26.9
BILL *e*S S 11 26 21.7 -7.7
BILL *e*SS SS 11 31 59.6 +4.4
BILL pmax pmax
comp=Z,17nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,300nm,23.0s,MS4.6
KOLS Kolonicke sedl 83.88 320 *e*P **P 11 16 16.3 +1.3**
KOLS pmax pmax
comp=Z,26nm,1.3s,mb5.2
CRVS Cervenica-Dubn 84.40 319 *e*P **P 11 16 18.2 +0.6**
STHS Stebnicka Huta 84.63 320 *e*P **P 11 16 19.1 +0.3**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
VYHS Vyhne 86.06 319 *e*P **P 11 16 26.1 +0.2**
VYHS pmax pmax
comp=Z,22nm,2.0s,mb5.0
ARCES ARCESS Array B 86.87 340 P **P 11 16 29.7 +0.3**
comp=Z,7.5nm,0.7s,mb5.0,baz=104,slow=5.0,SNR=36
ARCES LR LR 12 01 19.7
comp=Z,189nm,18.2s,MS4.5,baz=254,slow=40
MODS Modra-Piesok 87.07 318 *e*P **P 11 16 30.1 -0.8**
BRG Berggiesshubel 89.47 321 *e*P **P 11 16 43.2 +1.0**
BRG pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
BRG Berggiesshubel 89.47 321 *e*P **P 11 16 43.0 +0.8**
comp=Z,12nm,1.2s,mb5.1
BRG Berggiesshubel 89.47 321 *e*P **P 11 16 43.2 +1.0**
comp=Z,12nm,1.2s,mb5.1
GEC2 GERESS Array S 89.48 319 *e*P **P 11 16 43.2 +0.9**
GEC2 pmax pmax
comp=Z,19nm,1.4s,mb5.2
GEC2 GERESS Array S 89.48 319 *e*P **P 11 16 43.2 +0.9**
comp=Z,19nm,1.4s,mb5.2
GERES GERESS Array B 89.48 319 P **P 11 16 43.3 +1.0**
comp=Z,2.3nm,0.8s,mb4.6,baz=92,slow=4.0,SNR=12
KHC Kasperske Hory 89.58 319 *e*P **P 11 16 41.9 -0.9**
WET Wettzell 90.04 319 *e*P **P 11 16 45.5 +0.6**
WET pmax pmax
comp=Z,15nm,1.4s,mb5.1
WET Wettzell 90.04 319 *e*P **P 11 16 45.5 +0.6**
comp=Z,15nm,1.4s,mb5.1
CLL Collm 90.09 321 *e*P **P 11 16 45.6 +0.5**
comp=Z,72nm,2.1s,mb5.6
ROTZ Rotzenmuhle 90.51 320 *e*P **P 11 16 47.8 +0.7**
comp=Z,12nm,1.3s,mb5.1
MANZ Manzenberg 90.58 320 *e*P **P 11 16 48.4 +1.0**
comp=Z,17nm,1.2s,mb5.2
GRF Grafenberg Arr 91.15 319 *e*P **P 11 16 50.8 +0.8**
GRF pmax pmax
comp=Z,16nm,1.2s,mb5.2
GRF Grafenberg Arr 91.15 319 *e*P **P 11 16 50.8 +0.8**
GRF pmax pmax
comp=Z,16nm,1.2s,mb5.2
GRF Grafenberg Arr 91.15 319 *e*P **P 11 16 50.8 +0.8**
comp=Z,16nm,1.2s,mb5.2
NOA NORSAR Array B 91.56 331 P **P 11 16 50.5 -1.3**
comp=Z,2.7nm,0.9s,mb4.6,baz=94,slow=4.5,SNR=2.8
NOA LR LR 12 02 10.1
comp=Z,131nm,18.7s,MS4.4,baz=205,slow=38
KEST Kesra 92.11 306 P **P 11 16 55.2 +0.4**
comp=Z,5.0nm,1.0s,mb4.8,baz=337,slow=2.9,SNR=7.3
TNS Taunus Mts 92.95 320 *e*P **P 11 16 58.8 +0.4**
TNS pmax pmax
comp=Z,23nm,1.4s,mb5.4
TNS Taunus Mts 92.95 320 *e*P **P 11 16 58.8 +0.4**
comp=Z,23nm,1.4s,mb5.4
IBBN Ibbenburen 93.37 322 *e*P **P 11 16 59.8 -0.5**
comp=Z,42nm,1.3s,mb5.7
WLF Walferdange 94.44 319 *e*P **P 11 17 04.4 -0.8**
comp=Z,20nm,1.2s,mb5.4
TORD Torodi Ar. Bea 98.89 283 P **P 11 17 25.7 -0.5**
comp=Z,0.4nm,0.8s,mb4.0,baz=115,slow=2.1,SNR=2.7
TORD LR LR 11 59 55.8
comp=Z,129nm,18.5s,MS4.5,baz=155,slow=34
BOZ Bozeman (W) 128.57 28 *e*PKPdf PKPdf 11 22 52.0 -0.3
NVAR Mina Array Bea 129.66 40 PKP PKPdf 11 22 54.5 -0.1
comp=Z,0.7nm,0.8s,baz=240,slow=2.4,SNR=6.1
NVAR Mina Array Bea 129.66 40 PKP PKPdf 11 22 54.5 -0.1
PDAR Pinedale Array 131.71 29 PKP PKPdf 11 22 58.6 +0.2
comp=Z,0.3nm,0.5s,baz=23,slow=1.9,SNR=4.2
JLU Jordanelle 132.30 33 *e*PKPdf PKPdf 11 23 00.3 +0.8
MSU Marysvale 133.33 35 *e*PKPdf PKPdf 11 23 02.4 +0.8
PV10 Paradox Valley 135.19 33 *e*PKPdf PKPdf 11 23 04.9 -0.1
MIV Mineville/With 138.06 353 *e*PKPdf PKPdf 11 23 08.8 -1.4
BDFB Brasilia 143.94 239 PKP PKPdf 11 23 20.3 -1.2
comp=Z,1.2nm,0.5s,baz=67,slow=9.7,SNR=4.8
TXAR Lajitas Array 144.77 38 PKP PKPdf 11 23 21.7 -1.0
comp=Z,18nm,0.6s,baz=276,slow=1.1,SNR=248
ELN Prospectdale 145.24 1 *e*PKPbc PKPbc 11 23 21.5 -1.4
MIAR Mount Ida 145.43 20 *e*PKPbc PKPbc 11 23 22.7 -0.9
WVT Waverly 145.52 12 *e*PKPbc PKPbc 11 23 22.6 -1.3
UALR University of 145.63 19 *e*PKPbc PKPbc 11 23 23.4 -0.8
TZTN Tazewell 145.76 6 *e*PKPdf PKPdf 11 23 23.5 -0.7
JCT Junction City 146.13 32 *e*PKPdf PKPdf 11 23 25.3 +0.3
CPCT Cooper Cave 146.73 7 *e*PKPdf PKPdf 11 23 25.2 -0.6
SWET Sewanee 146.76 9 *e*PKPdf PKPdf 11 23 25.5 -0.4
NATX Nacogdoches 147.50 24 *e*PKPbc PKPbc 11 23 29.3 -0.4
LCO Las Campanas 147.68 195 *e*PKPbc PKPbc 11 23 30.8 +0.5
GOGA Godfrey 148.87 6 *e*PKPbc PKPbc 11 23 32.6 -0.8
LVC Limon Verde 153.08 202 *e*PKPbc PKPbc 11 23 44.4 +0.9
OTAV Otavalo 177.59 211 *e*PKPdf PKPdf 11 23 56.8 +0.1

BYKL ***26*** *11:06:11.8s 0.2,5517N 11144E, h22km 4km*
MOS 26 11:06:11.3 1.1, 5516N 11141E, h19km, mb4.4/1, 3C-7D,
Error ellipse: s-maj=21.1km s-min=9.3km az=69.5, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.32**	**206**	*e*PG	Pg	11 06 19.9	+1.7
YLYR				*i* S	Sg	11 06 25.7	+2.8
YLYR				smax			
	comp=N,9μm,0.3s						
YLYR	**Ulyunkhan**	**0.32**	**206**	*e*Pg	Pg	11 06 19.9	+1.7
YLYR				*e*Sg	Sg	11 06 25.6	+2.7
YLYR				Pmax			
	comp=N,330nm,0.1s						
YLYR				Smax			
	comp=N,9μm,0.1s						
KMO	**Kumora**	**0.74**	**351**⇑	*i*PG	Pg	11 06 25.7	-0.1
KMO				*e*		11 06 33.9	
KMO				pmax	pmax		
	comp=Z,2μm,0.3s						
KMO				smax			
	comp=E,2μm,0.4s						
KMO	**Kumora**	**0.74**	**351**⇑	*i*Pg	Pg	11 06 25.7	-0.1
KMO				*e*Sg	Sg	11 06 35.8	+0.2
KMO				Pmax			
	comp=E,2μm,0.3s						
KMO				Smax			
	comp=E,2μm,0.7s						
YOA	**Uoyan**	**0.99**	**10**⇓	*i*PG	Pg	11 06 30.2	-0.3
YOA				*i*		11 06 44.2	
YOA				pmax	pmax		
	comp=Z,1μm,0.2s						
YOA				smax			
	comp=N,3μm,0.4s						
YOA	**Uoyan**	**0.99**	**10**⇓	*i*Pg	Pg	11 06 30.2	-0.3
YOA				*e*Sg	Sg	11 06 44.3	+0.8
YOA				Pmax			
	comp=N,1μm,0.2s						
YOA				Smax			
	comp=N,3μm,0.4s						
NIZ	**Nizh Angarsk**	**1.23**	**301**	*e*PG	Pg	11 06 34.6	-0.4
NIZ				*e*		11 06 51.6	
NIZ				pmax	pmax		
	comp=Z,98nm,0.2s						
NIZ				smax			
	comp=N,313nm,0.4s						
NIZ	**Nizh Angarsk**	**1.23**	**301**	*e*Pg	Pg	11 06 34.7	-0.3
NIZ				*e*Sg	Sg	11 06 51.8	+0.7
NIZ				Pmax			
	comp=N,35nm,0.3s						
NIZ				Smax			
	comp=N,312nm,0.3s						

UKT	**Uakit**	**1.31**	**75**	*e*PG	Pg	11 06 35.1	-1.5
UKT				*e*		11 06 52.5	
UKT				pmax	pmax		
	comp=E,93nm,0.1s						
UKT				smax			
	comp=N,856nm,0.3s						
UKT	**Uakit**	**1.31**	**75**	⇓*i*Pg	Pg	11 06 35.1	-1.5
	comp=N,18nm,0.4s						
UKT				⇓*i*Pg	Pg	11 06 35.1	-1.5
	comp=N,64nm,0.4s						
UKT				⇓*i*Pg	Pg	11 06 35.1	-1.5
	comp=N,55nm,0.4s						
UKT				*i* Sg	Sg	11 06 52.5	-1.2
UKT				Pmax			
	comp=N,119nm,0.4s						
UKT				Smax			
	comp=N,857nm,0.3s						
SVKR	**Severomuysk**	**1.55**	**51**	*e*PN	Pn	11 06 39.5	+1.7
SVKR				*e*		11 07 00.4	
SVKR				pmax	pmax		
	comp=Z,188nm,0.5s						
SVKR				smax			
	comp=N,3µm,0.6s						
SVKR	**Severomuysk**	**1.55**	**51**	*e*Pg	Pg	11 06 39.8	-1.3
SVKR				*e*Sg	Sg	11 07 00.6	-0.7
SVKR				Pmax			
	comp=N,231nm,0.3s						
SVKR				Smax			
	comp=N,3µm,0.5s						
SYVR	**Suvo**	**1.72**	**209**	*e*PN	Pn	11 06 41.8	+1.7
SYVR				*e*		11 07 07.0	
SYVR				pmax	pmax		
	comp=Z,206nm,0.6s						
SYVR				smax			
	comp=N,765nm,0.6s						
SYVR	**Suvo**	**1.72**	**209**	⇑*i*Pg	Pg	11 06 41.8	-2.5
SYVR				*e*Sg	Sg	11 07 07.1	+0.5
SYVR				Pmax			
	comp=N,151nm,0.3s						
SYVR				Smax			
	comp=N,739nm,0.5s						
MXMB	**Maximikha**	**2.46**	**221**	*e*Pn	Pn	11 06 52.0	+1.6
MXMB				*e*Pg	Pg	11 06 56.0	-2.5
MXMB				*e*Sn	Sn	11 07 23.1	+3.2
MXMB				*e*Sg	Sg	11 07 30.0	-0.4
MXMB				Pmax			
	comp=N,88nm,0.9s						
MXMB				Smax			
	comp=N,505nm,0.8s						
OGRR	**Ongureny**	**2.70**	**237**	*e*PN	Pn	11 06 55.7	+2.1
OGRR				*e*		11 07 00.5	
OGRR				*e*		11 07 35.7	
OGRR				pmax	pmax		
	comp=Z,28nm,0.3s						
OGRR				smax			
	comp=N,192nm,0.3s						
OGRR	**Ongureny**	**2.70**	**237**	*e*Pn	Pn	11 06 55.4	+1.8
OGRR				*e*Pg	Pg	11 07 00.5	-2.5
OGRR				*e*Sn	Sn	11 07 28.9	+3.2
OGRR				*e*Sg	Sg	11 07 36.0	-2.0
OGRR				Pmax			
	comp=N,58nm,0.7s						
OGRR				Smax			
	comp=N,194nm,0.4s						
NLYR	**Nelyaty**	**2.77**	**59**	*e*PN	Pn	11 06 54.9	+0.4
NLYR				*e*		11 07 00.3	
NLYR				*e*		11 07 35.8	
NLYR				pmax	pmax		
	comp=Z,56nm,1.0s						
NLYR				smax			
	comp=E,365nm,1.0s						
NLYR	**Nelyaty**	**2.77**	**59**	⇓*i*Pn	Pn	11 06 55.4	+0.9
NLYR				*e*Pg	Pg	11 07 00.6	-3.7
NLYR				*e*Sg	Sg	11 07 36.5	-3.6
NLYR				Pmax			
	comp=E,48nm,0.4s						
NLYR				Smax			
	comp=E,363nm,1.0s						
BOD	**Bodaibo**	**3.03**	**27**	*e*PN	Pn	11 06 58.5	+0.4
BOD				*e*		11 07 04.0	
BOD				*e*S	Sn	11 07 33.2	-0.6
BOD	**Bodaibo**	**3.03**	**27**	*e*Pn	Pn	11 06 58.8	+0.7
BOD				*e*Pg	Pg	11 07 04.2	-5.1
BOD				*e*Sn	Sn	11 07 34.4	+0.6
BOD				*e*Sg	Sg	11 07 43.1	-5.4
BOD				Pmax			
	comp=E,34nm,0.4s						
BOD				Smax			
	comp=E,233nm,1.0s						
CIT	**Chita**	**3.40**	**157**	*e*Sg	Sg	11 07 57.4	-2.9
CIT				Smax			
	comp=E,326nm,1.0s						
ZRHB	**Zarechye**	**3.63**	**226**	*e*Sg	Sg	11 08 04.7	-3.1
ZRHB				Smax			
	comp=E,224nm,1.0s						
TRTB	**Turuntaevo**	**3.70**	**219**	*e*Pn	Pn	11 07 09.6	+2.3
TRTB				*e*Pg	Pg	11 07 18.6	-3.5
TRTB				*e*Sg	Sg	11 08 07.5	-2.4
TRTB				Pmax			
	comp=E,36nm,1.3s						
TRTB				Smax			
	comp=E,79nm,0.8s						
TRG	**Tyrgan**	**3.84**	**233**	*e*Pn	Pn	11 07 10.7	+1.5
TRG				*e*Pg	Pg	11 07 20.5	-4.2
TRG				*e*Sg	Sg	11 08 10.0	-4.4
TRG				Pmax			
	comp=E,8.0nm,0.4s						
TRG				Smax			
	comp=E,85nm,0.4s						
UUDB	**Ulan-Yde**	**3.99**	**216**	*e*Pn	Pn	11 07 15.5	+4.2
UUDB				*e*Pg	Pg	11 07 23.9	-3.7
UUDB				*e*Sg	Sg	11 08 16.6	-2.6
UUDB				Pmax			
	comp=E,38nm,0.6s						
UUDB				Smax			
	comp=E,104nm,0.5s						
FFNB	**Fofonovo**	**4.17**	**223**	*e*Pn	Pn	11 07 15.7	+1.9
FFNB				*e*Pg	Pg	11 07 26.9	-4.2
FFNB				*e*Sg	Sg	11 08 21.9	-3.2
FFNB				Pmax			
	comp=E,48nm,0.3s						
FFNB				Smax			
	comp=E,173nm,0.3s						
CRS	**Chara**	**4.22**	**63**	*e*Pn	Pn	11 07 15.5	+0.9
CRS				*e*Pg	Pg	11 07 26.0	-6.1
CRS				*e*Sg	Sg	11 08 20.7	-6.1
CRS				Pmax			
	comp=E,48nm,1.8s						
CRS				Smax			
	comp=E,190nm,2.0s						
HRMR	**Khuramsha**	**4.43**	**219**	*e*Pn	Pn	11 07 19.5	+2.1
HRMR				*e*Pg	Pg	11 07 30.4	-5.7
HRMR				*e*Sg	Sg	11 08 29.0	-4.4
HRMR				Pmax			
	comp=E,48nm,0.6s						
HRMR				Smax			
	comp=E,300nm,0.5s						
TUP	**Tupik**	**5.00**	**95**	⇓*i*Pn	Pn	11 07 25.6	+0.4
TUP				*e*		11 07 33.8	
TUP				*e*Sg	Sg	11 08 46.6	-5.1
TUP				max			
	comp=E,7.0nm,0.5s						
TUP				Smax			
	comp=E,66nm,1.0s						
LSTR	**Listvyanka**	**5.13**	**233**	*e*Sg	Sg	11 08 50.3	-5.4
LSTR				Smax			
	comp=E,76nm,1.8s						
KPC	**Khapcheranga**	**5.50**	**173**	*e*Pn	Pn	11 07 32.7	+0.6
KPC				*e*Pg	Pg	11 07 50.5	-6.0
KPC				*e*Sg	Sg	11 09 02.9	-4.8
KPC				Pmax			
	comp=E,7.0nm,0.3s						
KPC				Smax			
	comp=E,32nm,0.6s						
TLY	**Talaya**	**5.80**	**236**	*e*PN	Pn	11 07 36.8	+0.5
TLY				*e*		11 07 54.0	
TLY	**Talaya**	**5.80**	**236**	*e*Sg	Sn	11 09 11.3	+29
TLY				Smax			
	comp=E,41nm,0.5s						
ARS	**Arshan**	**6.26**	**242**	*e*Sg	Sn	11 09 24.3	+31
ARS				Smax			
	comp=E,174nm,0.8s						
ZAK	**Zakamensk**	**6.87**	**229**	*e*Sg	Sn	11 09 46.2	+38
ZAK				Smax			
	comp=E,22nm,2.6s						
MOY	**Mondy**	**7.14**	**245**	*e*Sn	Sn	11 09 15.2	+0.1
MOY				*e*Sg	Sn	11 09 52.7	+38
MOY				Smax			
	comp=E,22nm,1.0s						
ORL	**Orlik**	**7.35**	**254**	*e*PN	Pn	11 07 59.8	+2.4
ORL				*e*S	Sn	11 09 59.7	+40
ORL				smax			
	comp=N,24nm,0.7s						
ORL	**Orlik**	**7.35**	**254**	*e*Pn	Pn	11 07 59.2	+1.8
ORL				*e*Sn	Sn	11 09 19.2	-0.9
ORL				*e*Sg	Sn	11 09 58.7	+39
ORL				max			
	comp=N,5.0nm,0.7s						
ORL				Smax			
	comp=N,52nm,1.7s						

*NEIC **26** 11:24:12.2, 1570N×9653W, h16km, MD3.6(MEX), After MEX.*

MEX 26 11:24:12.2±0.7, 1570N×9653W, h16km±13km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.41**	**80**	*i* P	Pg	11 24 19.3	-1.4
HUIG				*i* S	Sg	11 24 25.1	-1.2
VHO	**Vista Hermosa**	**1.38**	**352**	*i* P	Pn	11 24 33.5	-3.3
VHO				*i* S	Sn	11 24 49.8	-5.0
PNIG	**Pinotepa**	**1.68**	**294**	*e*P	Pn	11 24 37.9	-3.0
PNIG				*i* S	Sn	11 24 55.9	-6.2
CMIG	**Matias Romero**	**2.10**	**49**	*i* P	Pn	11 24 42.6	-4.1
CMIG				*i* S	Sn	11 25 09.4	-3.2
UTMO	**Huajuapan**	**2.45**	**330**	*e*P	Pn	11 24 49.5	-2.0
UTMO				*i* S	Sn	11 25 18.0	-3.0
TPIG	**Tehuac#an**	**2.82**	**344**	*e*P	Pn	11 24 56.6	0.0
TPIG				*i* S	Sn	11 25 27.7	-2.6
PCIG		**3.19**	**89**	*e*P	Pn	11 24 58.8	-2.8
PCIG				*i* S	Sn	11 25 37.3	-2.1
TGIG		**3.45**	**71**	*e*P	Pn	11 25 03.3	-1.9
TGIG				*i* S	Sn	11 25 42.5	-3.2
PPM	**Popocatepetl**	**3.90**	**329**	*e*P	Pn	11 25 15.9	+4.5
PPM				*i* S	Sn	11 25 56.6	-0.4

MAN 26 11:52:44, 1089N×12479E, h8km, mb4.0, ML2.8, MS2.5, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.24**	**312**	*e*P	Pg	11 52 50.1	+1.4
OCLP				*e*S	Sg	11 52 56.1	+4.2
PLP	**Palo**	**0.33**	**35**	⇑*e*P	Pg	11 52 51.3	+0.8
PLP				*i* S	Sg	11 52 56.5	+1.6
MSLP	**Maasin**	**0.76**	**175**	*e*P	Pg	11 52 59.0	+0.4
MSLP				*e*S	Sg	11 53 12.0	+3.5
BESP	**Borongan**	**0.95**	**42**	*e*P	Pg	11 53 02.0	-0.3
LLP	**Lapu-Lapu**	**0.99**	**235**	*e*P	Pg	11 53 03.8	+0.8
LLP				*i* S	Sg	11 53 17.8	+1.9
SCPH	**Surigao**	**1.30**	**148**	*e*P	Pn	11 53 08.8	+0.4
TBP	**Tagbilaran**	**1.50**	**217**	*e*P	Pn	11 53 12.5	+1.2
TBP				*e*S	Sn	11 53 31.9	+0.9
CNP	**Catarman**	**1.61**	**356**	*e*P	Pn	11 53 12.4	-0.4
CNP				*e*S	Sn	11 53 34.8	+1.0
GUIM	**Jordan**	**2.18**	**263**	*e*P	Pn	11 53 18.1	-2.4
GUIM				*e*S	Sn	11 53 39.3	-8.4
PVCP	**Virac**	**2.76**	**347**	*e*P	Pn	11 53 27.5	-1.0

*ISCJB **26** 12:12:15.8±0.7, 2984N×3626E±004, h0km, Error ellipse: s-maj=5.7km s-min=4.6km az=164.1*
*HLW **26** 12:12:15.4, 2991N×3667E, h25km, Mb2.9*
*CSEM **26** 12:12:16.2±0.8, 2981N×3623E, h2km, ML2.9, Error ellipse: s-maj=18.4km s-min=9.1km az=64.0*
*GII **26** 12:12:16.8±1.0, 2990N×3614E, h0km, ML2.4/4, EXPLOSION*
*SGS **26** 12:12:17.0, 3010N×3628E, h26km*

ISC 26 12:12:15.8±0.8, 2983N±003×3630E±005, h0km, n23, σ0§62/33, 1C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.09**	**265**	Pg	**Pg**	**12 12 37.3**	**+0.6**
HRFI	**Mount Harif**	**1.11**	**281**	Pg	**Pg**	**12 12 36.6**	**-0.6**
HRFI				Sg	**Sg**	**12 12 52.7**	**+1.0**
EIL	**Elat**	**1.18**	**263**	Pg	**Pg**	**12 12 38.4**	**-0.1**
EIL				Sg	**Sg**	**12 12 54.9**	**+1.1**
HQLS		**1.20**	**244**	P	**Pg**	**12 12 38.3**	**-0.5**
HQLS		**1.20**	**244**	P	**Pg**	**12 12 38.3**	**-0.5**
HQLS				S	**Sg**	**12 12 54.3**	**-0.1**
MBRI	**Mt Berech**	**1.20**	**269**	Pg	**Pg**	**12 12 38.5**	**-0.4**
MBRI				Sg	**Sg**	**12 12 54.9**	**+0.4**
ZFRI	**Zfri**	**1.21**	**307**	Pg	**Pg**	**12 12 37.8**	**-1.2**
ZFRI				Sg	**Sg**	**12 12 54.1**	**-0.6**
PRNI	**Paran**	**1.24**	**295**	Pg	**Pg**	**12 12 38.4**	**-1.2**
PRNI				Sg	**Sg**	**12 12 55.8**	**+0.2**
JLOS		**1.30**	**213**	P	**Pg**	**12 12 41.1**	**+0.4**
KRMI	**Paran Flat**	**1.40**	**282**	Pg	**Pg**	**12 12 41.4**	**-1.2**
KRMI				Sg	**Sg**	**12 12 59.9**	**-0.8**
HBST	**Basata**	**1.50**	**246**	P	**Pn**	**12 12 44.0**	**+0.1**
RMNI	**Mount Ramon**	**1.54**	**300**	Pn	**Pn**	**12 12 44.3**	**-0.1**
TBKS	**Tabuk**	**1.62**	**172**	P	**Pn**	**12 12 46.0**	**+0.4**
MZDA	**Masada**	**1.68**	**332**	Pn	**Pn**	**12 12 46.3**	**-0.2**
MZDA				Sn	**Sn**	**12 13 09.1**	**+0.3**
BDAS	**Al Bad'**	**1.74**	**217**	P	**Pn**	**12 12 47.5**	**+0.2**
YTIR	**Yattir**	**1.84**	**327**	Pn	**Pn**	**12 12 48.8**	**+0.1**
RTMI	**Retamim**	**1.85**	**312**	Sn	**Sn**	**12 13 13.1**	**+0.2**
DSI	**Dead Sea**	**1.91**	**336**	Pn	**Pn**	**12 12 50.1**	**+0.5**
DSI				Sn	**Sn**	**12 13 15.9**	**+1.5**
RSHS		**2.01**	**221**	P	**Pn**	**12 12 50.5**	**-0.5**
HNKL	**Nakhl**	**2.02**	**273**	P	**Pn**	**12 12 51.1**	**0.0**
HNKL				S	**Sn**	**12 13 17.3**	**+0.3**
TR2		**2.67**	**238**	⇑*e*P	**Pn**	**12 13 00.2**	**+0.1**
AMAG	**Maghara**	**2.79**	**288**	P	**Pn**	**12 13 01.5**	**-0.3**
SUZ		**3.01**	**271**	P	**Pn**	**12 13 05.2**	**+0.4**

GUC 26 12:18:36.5±0.8, 2324S×7074W, h34km±3km, ML3.5, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.30**	**63**	⇓*i*P	Pb	12 18 43.6	-0.8
MECH				AML	AML	12 18 54.4	
	comp=N,6µm,0.2s						
CEN1	**Los Morros**	**0.52**	**107**	⇑*i*P	Pb	12 18 48.8	+1.4
ANCH	**Antofagasta**	**0.53**	**145**	⇓*i*P	Pn	12 18 47.2	-0.5
ANCH				*i* S	Sb	12 18 55.0	-0.4
PECH	**Pedro de Valdi**	**1.17**	**57**	⇑*i*P	Pn	12 19 57.2	+0.7
PECH				*i* S	Sn	12 19 13.1	+1.8
PECH				AML	AML	12 19 16.1	
	comp=E,3µm,0.8s						
TOCH	**Tocopilla**	**1.25**	**24**	*e*P	Pn	12 18 58.5	+1.0
TOCH				AML	AML	12 19 17.1	
	comp=E,2µm,0.2s						
MACH	**Maria Elena**	**1.38**	**41**	*e*P	Pn	12 18 59.9	+0.5
MACH				*i* S	Sn	12 19 18.6	+2.2
CPN1	**Cerro Paranal**	**1.41**	**168**	*e*P	Pn	12 19 00.6	+0.9
CPN1				*i* S	Sn	12 19 19.0	+1.9
CPN1				AML	AML	12 19 25.4	
	comp=E,1µm,0.4s						
LVC	**Limon Verde**	**1.80**	**70**	⇑*i*P	Pn	12 19 07.5	+2.4
LVC				*i* S	Sn	12 19 31.2	+4.5

IGQ 26 12:19:38.4, 028S×7878W, h14km, Mb4.0, Ms3.8, 6C-6D, Error ellipse: s-maj=1.2km s-min=0.4km az=17.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TERV	**Terraza Guagua**	**0.20**	**60**	⇑P	Pg	12 19 43.7	+0.7
PINO	**Pino**	**0.21**	**55**	⇑P	Pg	12 19 43.7	+0.6
GGP	**Refugio Guagua**	**0.21**	**61**	⇑P	Pg	12 19 43.8	+0.7
YANA	**Yana**	**0.26**	**53**	⇓P	Pg	12 19 44.4	+0.4
CAMI	**Rancho Maria**	**0.48**	**145**	⇓P	Pg	12 19 48.9	+0.9
VC1	**Cotopaxi 1**	**0.52**	**134**	⇓P	Pg	12 19 49.4	+0.7
TAMB	**Tambo**	**0.58**	**135**	⇓P	Pg	12 19 50.5	+0.7
QIL2	**Quilotoa**	**0.60**	**193**	⇑P	Pg	12 19 50.6	+0.3
QIL2	**Quilotoa**	**0.60**	**193**	⇑S	Sg	12 19 59.8	+1.6
ANTI	**Antisana**	**0.64**	**105**	P	Pg	12 19 51.1	+0.2
COTA	**Cotacachi**	**0.75**	**36**	⇓P	Pg	12 19 53.7	+0.7
COTA	**Cotacachi**	**0.75**	**36**	⇓S	Sg	12 20 04.2	+1.3
CAYA	**Cayambe**	**0.86**	**66**	⇑P	Pg	12 19 55.5	+0.4
PISA	**Pisayambo**	**0.87**	**153**	P	Pb	12 19 55.5	+0.2
CONE	**Cono NE Rev Vo**	**1.16**	**80**	P	Pn	12 20 01.7	+1.6
CONE	**Cono NE Rev Vo**	**1.16**	**80**	S	Sb	12 20 15.4	+0.4
LAV3	**Lava3-Reventad**	**1.16**	**81**	P	Pn	12 20 02.1	+1.9

*ATH **26** 12:25:33.2, 4066N×2131E, h5km, MD3.1/3*
*SKO **26** 12:25:37.9, 4045N×2152E, h0km*
*CSEM **26** 12:25:39.4±0.3, 4047N×2175E, h10km, MD3.1, Error ellipse: s-maj=10.4km s-min=6.1km az=83.0*
*ISCJB **26** 12:25:40.7±0.9, 4034N±006×218E±01, h10km, Error ellipse: s-maj=11.8km s-min=8.0km az=174.9*

ISC 26 12:25:40.2±1.5, 4036N±010×219E±01, h4km±17km, n7, σ0§96/12, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.09**	**230**	*e*PB	**Pg**	**12 25 42.5**	**+0.5**
KZN				*e*SB	**Sg**	**12 25 50.6**	**+7.4**
THL	**Klokotos Trika**	**0.81**	**171**	*e*PB	**Pb**	**12 25 56.9**	**+0.1**
VAY	**Valandovo**	**1.10**	**29**	*e*Pn	**Pn**	**12 26 01.2**	**-1.3**
VAY				*e*Sn	**Sn**	**12 26 19.0**	**+0.9**
VAY	**Valandovo**	**1.10**	**29**	*e*Pn	**Pn**	**12 26 01.2**	**-1.2**
VAY				*e*Sn	**Sn**	**12 26 19.0**	**+0.9**
KRUS	**Krusevo**	**1.11**	**336**	*e*Pn	**Pn**	**12 26 00.8**	**-1.8**
KRUS				*e*Sn	**Sn**	**12 26 19.3**	**+1.0**
KRUS	**Krusevo**	**1.11**	**336**	*e*Pn	**Pn**	**12 26 00.9**	**-1.7**
KRUS				*e*Sn	**Sn**	**12 26 19.3**	**+1.0**
PLG	**Polygyros**	**1.21**	**89**	*e*PB	**Pb**	**12 26 04.1**	**+0.3**

*MAN **26** 12:58:02, 13.14N×120.26E, h1km, mb4.3, ML3.2, MS3.0*
*ISCJB **26** 12:58:03.2±0.7, 13.12N±003×120.30E±004, h12km±5km, mb3.5/5, Error ellipse: s-maj=7.3km s-min=4.6km az=5.1*
*IDC **26** 12:58:06.7±0.8, 1337N×120.61E, h35km±6km, mb3.4/5, mb1 3.6/5, mb1mx3.4/20, mbtmp3.4/5, MS3.1/2, Ms1 3.1/2, ms1mx2.8/17, Error ellipse: s-maj=41.6km s-min=13.6km az=61.0*

ISC 26 12:58:03.7±0.8, 1314N±003×12023E±005, h6km±6km, h36km±.9km:pP-P, n20, σ1§12/28, mb3.6/5, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.59**	**2**	*e*P	**Pg**	**12 58 13.6**	**-1.5**
LUBP				*e*S	**Sg**	**12 58 21.3**	**-1.5**
BUSP	**Coron**	**1.13**	**181**	*e*P	**Pg**	**12 58 26.0**	**+0.6**
BUSP				*e*S	**Sg**	**12 58 40.5**	**+0.4**
TGY	**Tagaytay City**	**1.18**	**36**	⇓*e*P	**Pg**	**12 58 27.7**	**+1.4**
TGY				*i* S	**Sg**	**12 58 43.9**	**+2.2**
OTRP	**Odiongan**	**1.92**	**114**	*e*P	**Pn**	**12 58 36.0**	**-0.8**
OTRP				*e*S	**Sn**	**12 58 55.6**	**-5.6**
ENPP	**El Nido**	**2.08**	**202**	*e*P	**Pn**	**12 58 39.3**	**+0.2**
ENPP				*e*S	**Sn**	**12 58 59.4**	**-5.9**
POLP	**Polilio Island**	**2.29**	**46**	*e*P	**Pg**	**12 58 43.0**	**-4.7**
AUQP	**San Andres**	**2.39**	**85**	*e*P	**Pg**	**12 58 49.4**	**-0.2**
AUQP				*e*S	**Sg**	**12 59 19.7**	**-0.9**
CUYO	**Cuyo Island**	**2.41**	**161**	*e*P	**Pn**	**12 58 43.1**	**-0.5**
CUYO				*e*S	**Sn**	**12 59 03.4**	**-10**
PCPH	**Palayan**	**2.55**	**19**	⇑*e*P	**Pn**	**12 58 45.5**	**-0.1**
PCPH				*e*S	**Sn**	**12 59 17.7**	**+0.7**
SCZP	**Santa Cruz**	**2.64**	**353**	*e*P	**Pg**	**12 58 48.3**	**-6.0**
BALP	**Baler**	**2.90**	**27**	*e*P	**Pn**	**12 58 50.6**	**+0.2**
BALP				*e*S	**Sn**	**12 59 18.6**	**-6.9**
GUIM	**Jordan**	**3.41**	**137**	*e*P	**Pn**	**12 58 58.0**	**+0.6**
GUIM				*e*S	**Sn**	**12 59 32.9**	**-5.2**
CAUP	**Cauayan**	**4.08**	**22**	*e*P	**Pn**	**12 59 08.9**	**+2.2**
DAV	**Davao City (W)**	**8.01**	**138**	LR	LR	13 04 23.8	
	comp=Z,155nm,18.1s,baz=205,slow=48						
CMAR	**Chiang Mai Arr**	**21.14**	**287**	P	**P**	**13 02 51.5**	**+2.0**
	0.5nm,0.6s,mb3.0,baz=96,slow=8.5,SNR=6.9						
CMAR				pP		13 03 01.3	
	2.0nm,0.8s,baz=101,slow=8.8,SNR=5.8						
KSRS	**Korea Array**	**25.17**	**15**	LR	LR	13 13 28.6	
	comp=Z,33nm,18.6s,baz=220,slow=37						
WRA	**Warramunga Arr**	**35.69**	**157**	P	**P**	**13 05 02.1**	**-1.0**
	1.0nm,0.6s,mb3.9,baz=335,slow=9.5,SNR=11						
WRA				pP	pP	13 05 12.7	+7.8
	1.3nm,0.6s,baz=332,slow=10,SNR=7.0						
SONM	**Songino Array**	**36.46**	**344**	P	**P**	**13 05 07.3**	**-2.1**
	0.8nm,0.6s,mb3.8,baz=164,slow=9.5,SNR=7.8						
SONM				pP	pP	13 05 17.3	+6.1
	1.5nm,0.6s,baz=166,slow=9.6,SNR=7.8						
ASAR	**Alice Springs**	**38.95**	**160**	P	**P**	**13 05 30.2**	**-0.4**
	1.0nm,0.6s,mb3.8,baz=338,slow=7.2,SNR=21						
ASAR				pP	pP	13 05 40.8	+8.2
	1.6nm,0.6s,baz=340,slow=7.4,SNR=9.5						
MKAR	**Makanchi Array**	**46.21**	**324**	P	**P**	**13 06 29.2**	**-0.3**
	0.3nm,0.8s,mb3.3,baz=111,slow=8.2,SNR=2.5						
MKAR				pP	pP	13 06 38.8	+7.4
	0.9nm,0.7s,baz=130,slow=9.4,SNR=6.1						

*TAP **26** 13:32:44.3, 2222N×120.95E, h38km, ML4.1, B*
*ISCJB **26** 13:32:45.1±0.5, 2222N±003×121.03E±003, h35km±8km, Error ellipse: s-maj=4.9km s-min=4.2km az=15.0*
*JMA **26** 13:32:45.7±0.3, 2212N×121.17E, h92km, M3.5*

ISC 26 13:32:45.6±0.3, 2223N±003×12099E±003, h32km±2km, n54, σ0§90/75, 5C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAW	**Tawu**	**0.16**	**326**	⇑*i*P	**Pb**	**13 32 51.5**	**-0.3**
	baz=347						
TAW				*i* S	**Sb**	**13 32 56.5**	**+0.6**
	baz=347						
EAST	**Anshuo**	**0.21**	**319**	*e*P	**Pb**	**13 32 52.0**	**-0.2**
	baz=336						
EAST				S	**Sb**	**13 32 57.6**	**+1.0**
	baz=336						
HEN	**Hengchun**	**0.32**	**227**	S	**Sb**	**13 32 59.4**	**+0.4**
	baz=218						
TWK1	**Hengchun**	**0.33**	**212**	P	**Pb**	**13 32 52.6**	**-1.0**
	baz=205						
TWK1				S	**Sb**	**13 32 59.3**	**+0.2**
	baz=205						
TSEB	**Hengchuen, Pin**	**0.34**	**195**	*i* P	**Pb**	**13 32 53.5**	**-0.2**
	baz=195						
TSEB				S	**Sb**	**13 33 01.0**	**+1.7**
	baz=195						
ECL	**Taimali**	**0.37**	**354**	⇑*i*P	**Pb**	**13 32 53.5**	**-0.8**
	baz=8.0						
ECL				S	**Sb**	**13 33 00.1**	**-0.1**
	baz=8.0						
SCZT	**Fangliau**	**0.38**	**293**	⇓*i*P	**Pb**	**13 32 53.6**	**-0.7**
	baz=303						
SCZT				*i* S	**Sb**	**13 33 00.0**	**-0.2**
	baz=303						
TTN	**Taitung**	**0.54**	**15**	*e*P	**Pb**	**13 32 56.9**	**+0.1**
	baz=18						
LAY	**Lan-yu**	**0.55**	**110**	P	**Pb**	**13 32 55.4**	**-1.6**
	baz=99						
LAY				S	**Sb**	**13 33 04.8**	**+0.1**
	baz=99						
TWG	**Pinlang**	**0.60**	**7**	⇑*i*P	**Pn**	**13 32 56.2**	**-1.6**
	baz=16						
TWG				*e*S	**Sb**	**13 33 05.1**	**-0.9**

ELDTW	**Lidau**	**0.96**	**1**	*e*P		**Pn**	**13 33 03.4**	**+0.6**
	baz=11								
CHN1	**Nanshi**	**1.05**	**336**	*e*P		**Pn**	**13 33 03.2**	**-0.8**
	baz=338								
WTP	**Ta-pu**	**1.07**	**341**	*e*P		**Pn**	**13 33 03.5**	**-0.8**
	baz=343								
TWK	**Hsinying**	**1.14**	**336**	*e*P		**Pn**	**13 33 04.7**	**-0.6**
	baz=338								
TWF1	**Yuli**	**1.16**	**14**	*e*P		**Pn**	**13 33 04.1**	**-1.4**
	baz=22								
CHN4	**Tsaushan**	**1.18**	**342**	*e*P		**Pn**	**13 33 05.7**	**-0.1**
	baz=344								
YUS	**Yu-Shan**	**1.26**	**358**	*e*P		**Pn**	**13 33 07.0**	**+0.1**
	baz=351								
ALS	**Alishan**	**1.29**	**352**	*e*P		**Pn**	**13 33 07.4**	**0.0**
	baz=340								
EHY	**Hungye**	**1.31**	**13**	*e*P		**Pn**	**13 33 07.1**	**-0.5**
	baz=25								
CHY	**Chiayi**	**1.37**	**338**	*e*P		**Pn**	**13 33 06.7**	**-1.7**
	baz=340								
CHN5	**Tsauling**	**1.40**	**348**	*e*P		**Pn**	**13 33 08.5**	**-0.3**
	baz=350								
WGK	**Gukeng**	**1.51**	**345**	*e*P		**Pn**	**13 33 09.8**	**-0.6**
	baz=347								
ESL	**Shilin**	**1.63**	**14**	*e*P		**Pn**	**13 33 12.9**	**+0.9**
	baz=27								
SMLT	**Sun Moon Lake**	**1.65**	**357**	*e*P		**Pn**	**13 33 12.3**	**-0.1**
	baz=345								
WNT	**Mingjian**	**1.67**	**350**	*e*P		**Pn**	**13 33 15.6**	**+3.0**
	baz=339								
WNT				*e*S		**Sn**	**13 33 32.7**	**-0.2**
	baz=339								
TYC	**Yuchr**	**1.68**	**356**	*e*P		**Pn**	**13 33 12.8**	**+0.1**
	baz=343								
TYC				*e*S		**Sn**	**13 33 35.8**	**+2.8**
	baz=343								
WHF	**Hehuan Shan**	**1.93**	**7**	*e*P		**Pn**	**13 33 16.1**	**0.0**
	baz=20								
TWD	**Chiawan**	**1.93**	**17**	*e*P		**Pn**	**13 33 15.2**	**-0.9**
	baz=27								
TCU	**Taichung**	**1.94**	**351**	*e*P		**Pn**	**13 33 15.6**	**-0.6**
	baz=341								
TWT	**Tachien**	**2.02**	**5**	*e*P		**Pn**	**13 33 16.0**	**-1.5**
	baz=5.0								
TWQ1	**Liyutan**	**2.12**	**355**	*e*P		**Pn**	**13 33 19.6**	**+0.8**
	baz=345								
NNS	**Nan Shan**	**2.23**	**9**	*e*P		**Pn**	**13 33 20.8**	**+0.5**
	baz=20								
NSTT	**Nanjuang**	**2.39**	**0**	*e*P		**Pn**	**13 33 26.0**	**+3.5**
	baz=1.0								
ENTT	**Nioudou**	**2.46**	**12**	*e*P		**Pn**	**13 33 24.1**	**+0.7**
	baz=24								
NSK	**Sanguang**	**2.46**	**8**	*e*P		**Pn**	**13 33 24.1**	**+0.6**
	baz=8.0								
TWC	**Suao**	**2.50**	**18**	*e*P		**Pn**	**13 33 24.6**	**+0.7**
	baz=26								
TWE	**Neicheng**	**2.56**	**14**	*e*P		**Pn**	**13 33 25.7**	**+0.9**
	baz=25								
YOJ	**Yonaguni jima**	**2.90**	**39**	P		**Pn**	**13 33 30.4**	**+0.9**
YOJ				*e*S		**Sn**	**13 34 04.8**	**+1.6**
NWF	**Wu-fen Shan**	**2.92**	**14**	*e*P		**Pn**	**13 33 30.6**	**+0.8**
	baz=23								
HATJ	**Hateruma jima**	**3.17**	**54**	P		**Pn**	**13 33 33.4**	**+0.3**
HATJ				*e*S		**Sn**	**13 34 09.4**	**-0.4**
KNM	**Kinmen**	**3.21**	**313**	*e*P		**Pn**	**13 33 31.9**	**-1.8**
	baz=312								
IRIF	**Iriomote-Funau**	**3.28**	**50**	P		**Pn**	**13 33 35.4**	**+0.7**
IRIF				*e*S		**Sn**	**13 34 13.5**	**+0.9**
JKRS	**Kuro-shima**	**3.42**	**54**	P		**Pn**	**13 33 37.2**	**+0.5**
JKRS				*e*S		**Sn**	**13 34 16.2**	**+0.1**
JlJ	**Ishigaki jima**	**3.59**	**53**	P		**Pn**	**13 33 39.0**	**0.0**
JlJ				*e*S		**Sn**	**13 34 19.3**	**-1.1**
JTJ	**Tarama**	**4.17**	**54**	P		**Pn**	**13 33 47.3**	**+0.4**
JTJ				*e*S		**Sn**	**13 34 34.9**	**+0.3**
JMJ	**Miyako jima 2**	**4.71**	**56**	P		**Pn**	**13 33 54.9**	**+0.5**

IDC 26 13:41:57.1±2.9, 1812S×17457W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.8/16, mbtmp3.8/4, Error ellipse: s-maj=221.4km s-min=29.2km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.98**	**33**	Pn	Pn	13 43 06.2	-7.0
	1.8nm,0.3s,baz=221,slow=19,SNR=4.1						
ASAR	**Alice Springs**	**48.25**	**254**	P	P	13 50 39.8	-0.4
	1.3nm,0.8s,baz=89,slow=8.0,SNR=10						
NVAR	**Mina Array Bea**	**77.09**	**42**	P	P	13 53 52.7	+0.3
	0.5nm,0.8s,baz=215,slow=7.3,SNR=3.5						
TXAR	**Lajitas Array**	**83.05**	**56**	P	P	13 54 26.0	+1.1
	0.2nm,0.7s,baz=243,slow=8.0,SNR=4.1						
PDAR	**Pinedale Array**	**85.03**	**42**	P	P	13 54 33.8	-0.9
	0.9nm,0.9s,baz=190,slow=4.1,SNR=6.7						
BRTR	**Keskin Array B**	**147.47**	**317**	PKPbc	PKPbc	14 01 44.0	+0.6
	0.7nm,0.8s,baz=64,slow=3.4,SNR=4.4						

*ISCJB **26** 13:42:17.6±1.5, 22S±02×1005E±03, h52km, mb4.0/10, Error ellipse: s-maj=55.1km s-min=12.9km az=149.3*
*NEIC **26** 13:42:19.9±1.2, 2.14S×10062E, mb4.4/2, Error ellipse: s-maj=55.8km s-min=10.1km az=58.0*
*IDC **26** 13:42:19.3±1.5, 227S×10041E, h52km±6km, mb3.6/9, mb1 3.8/9, mb1mx3.6/20, mbtmp3.6/9, Error ellipse: s-maj=59.5km s-min=12.7km az=58.0*
ISC 26 13:42:19.6±1.5, 22S±02×1005E±03, h54km, h54km±1.3km:pP-P, n13, σ0s62/12, mb4.0/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.61**	**356**	P	**P**	**13 46 53.0**	**-1.4**
	1.4nm,0.6s,baz=188,slow=9.8,SNR=14						
CMAR				pP		13 47 07.2	
	2.2nm,0.8s,baz=187,slow=9.9,SNR=11						
WRA	**Warramunga Arr**	**37.44**	**121**	P	**P**	**13 49 27.9**	**-0.1**
	2.2nm,0.7s,mb4.1,baz=301,slow=9.2,SNR=20						
WRA				pP	pP	13 49 42.4	+0.5
	0.8nm,0.5s,baz=303,slow=8.9,SNR=4.3						
WRAB	**Tennant Creek**	**37.45**	**120**	*e*P	**P**	**13 49 27.4**	**-0.6**
	3.3nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**38.71**	**126**	P	**P**	**13 49 38.8**	**+0.2**
	1.3nm,0.6s,mb3.8,baz=302,slow=8.0,SNR=35						
ASAR				pP	pP	13 49 52.8	+0.2
	1.1nm,0.7s,baz=302,slow=8.1,SNR=5.5						
KSRS	**Korea Array**	**46.95**	**30**	P	**P**	**13 50 45.7**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=214,slow=7.8,SNR=3.2						
STKA	**Stephens Creek**	**48.62**	**132**	P	**P**	**13 50 58.2**	**0.0**
	1.8nm,0.7s,mb4.2,baz=312,slow=14,SNR=4.6						
STKA	**Stephens Creek**	**48.62**	**132**	*e*P	**P**	**13 50 58.4**	**+0.2**
SONM	**Songino Array**	**50.11**	**5**	P	**P**	**13 51 10.3**	**+1.0**
	0.6nm,0.5s,mb3.9,baz=192,slow=9.1,SNR=7.5						
SONM				pP	pP	13 51 23.6	0.0
	0.6nm,0.7s,baz=183,slow=7.1,SNR=3.2						
MKAR	**Makanchi Array**	**51.38**	**344**	P	**P**	**13 51 19.1**	**+0.3**
	0.6nm,0.5s,mb3.8,baz=159,slow=8.9,SNR=9.6						
MKAR				pP	pP	13 51 33.3	0.0
	1.5nm,0.6s,baz=141,slow=7.8,SNR=8.6						
KURK	**Kurchatov**	**55.96**	**343**	*e*P	**P**	**13 51 57.8**	**+5.5**
	2.9nm,0.7s,mb4.4						
KURK				*e*		13 52 05.8	
ZALV	**Zalesovo Beam**	**57.48**	**349**	P	**P**	**13 52 02.8**	**-0.1**
	0.4nm,0.3s,mb3.9,baz=176,slow=6.8,SNR=4.6						
ZALV				pP	pP	13 52 16.4	-1.2
	1.9nm,0.7s,baz=182,slow=5.5,SNR=5.5						
ARCES	**ARCESS Array B**	**86.85**	**340**	P	**P**	**13 54 58.0**	**+0.1**
	2.7nm,0.9s,mb4.5,baz=101,slow=3.8,SNR=4.8						
TXAR	**Lajitas Array**	**144.56**	**38**	PKP	PKPdf	14 01 50.6	-0.2
	1.5nm,0.6s,baz=288,slow=1.0,SNR=26						
TXAR				pPKP	pPKPdf	14 02 05.9	-1.1
	0.4nm,0.6s,baz=190,slow=0.6,SNR=3.7						

*NIED **26** 13:51:00, 37.30N×141.80E, h38km, Mw5.9 Best double couple: M0 7.66000×10^17 NP1:φs24.00000°, δ71.00000°, λ86.00000°. NP2:φs217.00000°, δ20.00000°, λ102.00000°.*
*BJI **26** 13:51:35.4, 37.43N×141.56E, h36km, mB6.0, mb5.6, Ms5.8, Msz5.7*
*ISCJB **26** 13:51:37.8±0.1, 37.33N±0.002×141.64E±0.01, h38km, mb5.7/388, MS5.7/278, Error ellipse: s-maj=2.3km s-min=1.4km az=163.8*
*JMA **26** 13:51:37.5±0.1, 37.30N×141.76E, h44km±3km, M6.0 Broadband fault plane solution: P waves. NP1: φs204.00000°, δ29.00000°, λ102.00000°. NP2: φs10.00000°, δ61.00000°, λ83.00000°. Principal axes: T Plg73.0000°, Azm264.0000°; N Plg6.0000°, Azm13.0000°; P Plg16.0000°, Azm105.0000°;*
JMA Felt IV J1.
*MOS **26** 13:51:37.2±0.8, 37.47N×141.64E, h31km, mb6.0/155, MS5.7/99 Error ellipse: s-maj=6.1km s-min=3.5km az=110.0*
*IDC **26** 13:51:39.4±0.4, 3733N×14163E, h41km±3km, mb5.0/27, mb1 5.1/32, mb1mx5.1/33, mbtmp5.1/32, ML4.7/5, MS5.6/30, Ms1 5.6/30, ms1mx5.5/34, Error ellipse: s-maj=11.0km s-min=9.2km az=103.0*
*GCMT **26** 13:51:39.8±0.1, 37.29N×141.95E, h42km, MW5.9/108, Moment Tensor Solution. s105,c235; s108,c327; Duration: 2s2 Moment tensor: Scale 10^18Nm; Mrr 0.69±.01; Mθθ -0.10±.01; Mφφ -0.59±.01; Mrθ 0.20±.01; Mθφ -0.32±.00; Mrr 0.59±.01; Best double couple: M0 0.95800×10^18 NP1:φs212.00000°, δ25.00000°, λ100.00000°. NP2:φs21.00000°, δ66.00000°, λ86.00000°. Principal axes: T 0.9320, Plg69.0000°, Azm283.0000°; N 0.0520, Plg4.0000°, Azm23.0000°; P -0.9840, Plg20.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **26** 13:51:39.8±0.5, 37.39N×141.59E, h42km±4km, mb5.7/236, MS5.6/209, MW5.8, MW5.9(NIED) Error ellipse: s-maj=3.3km s-min=2.1km az=167.0, Moment Tensor Solution. s90 Moment tensor: Scale 10^17Nm; Mrr 4.11; Mθθ -1.32; Mφφ -2.79; Mrθ 2.21; Mθφ -1.31; Mrφ 5.09; Best double couple: M0 6.80000×10^17 NP1:φs25.00000°, δ73.00000°, λ87.00000°. NP2:φs214.00000°, δ17.00000°, λ99.00000°. Principal axes: T 7.0300, Plg62.0000°, Azm290.0000°; N -0.5800, Plg2.0000°, Azm25.0000°; P -6.4500, Plg27.0000°, Azm116.0000°;*
NEIC Felt [II] at Misawa and Tokyo. Felt at Daigo, Fujimi, Hiratsuka, Kashima, Koriyama, Mito, Niiza, Sagamihara, Sakura, Sendai, Taiwa and Yokohama. Recorded [4 JMA] in Fukushima; [3 JMA] in Iwate, Miyagi, Tochigi and Yamagata; [2 JMA] in Akita, Aomori, Chiba, Ibaraki, Niigata and Saitama; [1 JMA] in Gumma, Kanagawa, Nagano, Shizuoka, Tokyo and Yamanashi Prefectures. Also recorded [1 JMA] in southwestern and south-central Hokkaido.
*SZGRF **26** 13:51:43.4, 38.02N×142.34E, h43km, mb6.0, MS5.7, Near east coast of eastern Honshu, Japan*
*BGS **26** 13:51:43.7±1.8, 37.59N×138.76E, h33km, mb5.8, MS5.9*
*DJA **26** 13:51:46.5±0.0, 37.64N×141.84E, h117km, mB6.2/27, Mw(mB)5.9/27, Mwp5.7/24*
ISC 26 13:51:39.8±0.1, 3737N±002×14160E±001, h40km, h40km±1.1km:pP-P, n1663, σ0s75/1574, mb5.7/388, MS5.7/278, 452C-254D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.58**	**270**	⇓P	**Pn**	**13 51 51.2**	**-0.3**
JFK				S	**Sn**	**13 52 00.7**	**+0.8**
ONAJ	**Iwakimizuishiy**	**0.69**	**248**	⇓P	**Pn**	**13 51 52.3**	**-0.8**
ONAJ				S	**Sn**	**13 52 02.7**	**0.0**
JMM	**Marumori**	**0.81**	**308**	⇓P	**Pn**	**13 51 54.6**	**-0.1**
JMM				S	**Sn**	**13 52 06.5**	**+0.9**
JFT	**Otama**	**1.02**	**279**	⇓P	**Pn**	**13 51 58.3**	**+0.8**
JFT				*e*S	**Sn**	**13 52 12.7**	**+2.1**
JIO	**Ouri**	**1.10**	**350**	⇓P	**Pn**	**13 51 57.9**	**-0.8**
JIO				S	**Sn**	**13 52 12.0**	**-0.7**
JHO	**Hitachi**	**1.12**	**228**	⇓P	**Pn**	**13 51 57.2**	**-1.7**
JHO				S	**Sn**	**13 52 11.7**	**-1.4**
JOU	**Okura**	**1.24**	**324**	⇓P	**Pn**	**13 52 01.0**	**+0.4**
JOU				*e*S	**Sn**	**13 52 18.7**	**+2.6**
JSB	**Shiboa**	**1.40**	**254**	⇓P	**Pn**	**13 52 03.4**	**+0.6**
JYS	**Shirataka**	**1.48**	**305**	⇓P	**Pn**	**13 52 05.0**	**+1.1**
JFY	**Yanaizu**	**1.51**	**272**	⇓P	**Pn**	**13 52 05.1**	**+0.8**
JMK	**Ichinoseki**	**1.61**	**349**	⇓P	**Pn**	**13 52 05.5**	**-0.2**
JMK				*e*S	**Sn**	**13 52 25.3**	**+0.1**
OFUJ	**Ofunato**	**1.71**	**2**	⇓P	**Pn**	**13 52 05.9**	**-1.1**
JYK	**Kaneyama**	**1.83**	**328**	⇓P	**Pn**	**13 52 09.2**	**+0.5**
JNS	**Sasagawa**	**1.87**	**285**	⇓P	**Pn**	**13 52 10.2**	**+1.0**
JYA	**Atsumi**	**1.93**	**310**	⇓P	**Pn**	**13 52 11.2**	**+1.2**
JAG	**Ashikaga**	**1.96**	**242**	⇓P	**Pn**	**13 52 10.2**	**-0.3**
JKT	**Katashina**	**1.98**	**253**	P	**Pn**	**13 52 11.8**	**+1.1**
JHK	**Hiroka**	**2.06**	**267**	⇓P	**Pn**	**13 52 12.9**	**+1.0**
JAW	**Awa shima**	**2.15**	**301**	⇓P	**Pn**	**13 52 14.0**	**+0.9**
JRG	**Rokugo**	**2.16**	**340**	⇓P	**Pn**	**13 52 14.2**	**+0.9**
JIZZ	**Izumozaki**	**2.31**	**275**	P	**Pn**	**13 52 17.3**	**+2.1**
JYW	**Yuwa**	**2.43**	**334**	⇓P	**Pn**	**13 52 18.5**	**+1.6**
JGK	**Kuni**	**2.50**	**252**	P	**Pn**	**13 52 19.6**	**+1.6**
JRY	**Ryogami san**	**2.56**	**239**	P	**Pn**	**13 52 18.3**	**-0.3**
JKZ	**Kuzumaki**	**2.62**	**355**	⇓P	**Pn**	**13 52 19.5**	**-0.1**
JSD	**Sado**	**2.73**	**285**	⇓P	**Pn**	**13 52 21.9**	**+0.8**
JJN	**Nakama**	**2.76**	**266**	⇓P	**Pn**	**13 52 23.0**	**+1.6**
MJAR	**Matsushiro Arr**	**2.84**	**254**	P	**Pn**	**13 52 23.6**	**+1.0**
	115nm,0.3s,baz=76,slow=16,SNR=253						
MJAR				S	**Sn**	**13 53 04.6**	**+9.1**
	368nm,0.3s,baz=64,slow=26,SNR=7.1						
MJAR	**Matsushiro Arr**	**2.84**	**254**	P	**Pn**	**13 52 23.6**	**+1.0**
MJAR				S	**Sn**	**13 53 04.6**	**+9.1**
MJAR				pmax	pmax		
	comp=Z,115nm,0.3s						
MJAR				smax			
	comp=N,368nm,0.3s						
MAJO	**Matsushiro**	**2.84**	**254**	⇓*e*Pn	**Pn**	**13 52 24.0**	**+1.4**
MAT	**Matsushiro**	**2.84**	**254**	P	**Pn**	**13 52 24.0**	**+1.4**
MAT				S	**Sn**	**13 52 55.2**	**-0.3**
JNG	**Nsakai**	**2.97**	**252**	⇓P	**Pn**	**13 52 25.6**	**+1.3**
JIM2	**Oshima 2**	**3.18**	**214**	P	**Pn**	**13 52 26.6**	**-0.6**
JTM	**Tenmabayashi**	**3.44**	**353**	⇑P	**Pn**	**13 52 31.6**	**+0.8**
JTT	**Ttatey**	**3.50**	**259**	⇓P	**Pn**	**13 52 34.3**	**+2.7**
SHZ3	**Shizuoka 3**	**3.58**	**231**	P	**Pn**	**13 52 34.0**	**+1.3**
JNY	**Yasuok**	**3.62**	**238**	⇓P	**Pn**	**13 52 35.3**	**+2.0**
JGN	**Niukaw**	**3.62**	**253**	P	**Pn**	**13 52 35.3**	**+2.0**
JGF	**Kuroka**	**3.85**	**244**	P	**Pn**	**13 52 38.5**	**+2.1**
HMMJ	**Hamamatsu 2**	**4.02**	**233**	P	**Pn**	**13 52 39.9**	**+1.1**
JAO	**Obara**	**4.09**	**240**	⇓P	**Pn**	**13 52 41.5**	**+1.8**
JHJ	**Hachijo jima 2**	**4.49**	**200**	P	**Pn**	**13 52 44.6**	**-0.7**
	comp=N,549nm,0.3s,baz=79,slow=16,SNR=97						
JHJ				S	**Sn**	**13 53 33.4**	**-2.9**
	comp=N,1μm,0.3s,baz=82,slow=22,SNR=9.9						
ERM	**Erimo**	**4.79**	**14**	Pn	**Pn**	**13 52 48.6**	**-0.8**
	comp=N,6μm,0.5s,SNR=17						
ERM	**Erimo**	**4.79**	**14**	*e*Pn	**Pn**	**13 52 47.5**	**-1.9**
ERM	**Erimo**	**4.79**	**14**	*c*iP	**Pn**	**13 52 48.0**	**-1.4**
ASAJ	**Asahikawa**	**6.78**	**6**	P	**Pn**	**13 53 15.6**	**-1.1**
	comp=N,23nm,0.3s,baz=223,slow=14,SNR=74						
ASAJ				S	**Sn**	**13 54 33.6**	**+1.0**
	comp=N,55nm,0.3s,baz=194,slow=19,SNR=7.8						
ASAJ	**Asahikawa**	**6.78**	**6**	P	**Pn**	**13 53 15.6**	**-1.1**
ASAJ				S	**Sn**	**13 54 33.6**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,23nm,0.3s						
ASAJ				smax			
	comp=N,55nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**7.40**	**25**	*e*P	**Pn**	**13 53 21.0**	**-4.2**
YUK	**Yuzh-Kuril'sk**	**7.40**	**25**	*e*P	**Pn**	**13 53 22.5**	**-2.7**
YUK				*i* S	**Sn**	**13 54 40.8**	**-7.0**
YUK				pmax	pmax		
	comp=Z,460nm,0.4s						
YUK				pmax	pmax		
	comp=N,170nm,0.4s						
YUK				pmax	pmax		
	comp=N,8μm,2.0s						
YUK				pmax	pmax		
	comp=E,5μm,2.0s						
YUK				pmax	pmax		
	comp=Z,5μm,2.0s						
YUK				smax			
	comp=N,5μm,0.5s						
YUK				smax			
	comp=E,10μm,0.4s						
YUK				smax			
	comp=N,42μm,1.0s						
YUK				smax			
	comp=E,50μm,1.0s						
YUK				MLR	MLR		
	comp=Z,45μm,16.0s						
YUK				MLR	MLR		
	comp=N,33μm,15.0s						
YUK				MLR	MLR		
	comp=E,22μm,15.0s						
KUR	**Kuril'sk**	**9.16**	**29**	⇑*i*P	**Pn**	**13 53 44.8**	**-4.5**
KUR				pmax	pmax		
	comp=Z,10μm,5.0s						
KUR				pmax	pmax		
	comp=N,430nm,0.8s						
KUR				pmax	pmax		
	comp=E,730nm,0.8s						
KUR				pmax	pmax		
	comp=Z,1μm,0.8s						
YSS	**Yuzh-Sakhalins**	**9.62**	**5**	*e*Pn	**Pn**	**13 53 54.1**	**-1.4**
	comp=Z,661nm,1.0s						
YSS	**Yuzh-Sakhalins**	**9.62**	**5**	⇓*i*P	**Pn**	**13 53 53.3**	**-2.2**
YSS				*i* S	**Sn**	**13 55 39.0**	**-3.2**
YSS				pmax	pmax		
	comp=Z,80nm,1.0s						
YSS				MLR	MLR		
	comp=Z,22μm,17.0s						
YSS				MLR	MLR		
	comp=N,22μm,16.0s						
YSS				MLR	MLR		
	comp=E,31μm,16.0s						
CBIJ	**Chichi jima**	**10.25**	**177**	P	**Pn**	**13 54 00.9**	**-3.4**
	comp=E,61nm,0.3s,baz=344,slow=15,SNR=28						
CBIJ				S	**Sn**	**13 55 48.2**	**-10**
	comp=E,150nm,0.3s,baz=53,slow=20,SNR=8.0						
KSRS	**Korea Array**	**10.88**	**275**	P	**Pn**	**13 54 17.8**	**+4.9**
	comp=E,2.9nm,0.3s,baz=90,slow=13,SNR=136						
KSRS				LR	LR	13 58 12.4	
	comp=E,49μm,19.5s,baz=85,slow=36						
KSRS				PcP	PcP	14 00 11.1	+0.5
	comp=E,0.1nm,0.3s,baz=83,slow=0.4,SNR=5.3						
MDJ	**Mudanjiang**	**11.60**	**312**	P	**Pn**	**13 54 24.8**	**+2.1**
MDJ				S	**Sn**	**13 56 35.3**	**+4.5**
MDJ				SCP	ScP	14 03 42.3	+1.6
MDJ				PCS	PcS	14 03 46.0	+0.9
MDJ				SCS	ScS	14 07 18.0	+1.8
MDJ				AMB	AMB		
	comp=Z,296nm,1.3s						
MDJ				AMB	AMB		
	comp=Z,8μm,9.8s						
MDJ				LR	LR		
	comp=N,17μm,19.6s						
MDJ				LR	LR		
	comp=E,19μm,18.9s						
MDJ				LR	LR		
	comp=Z,38μm,20.3s						
MDJ	**Mudanjiang**	**11.60**	**312**	*e*P	**Pn**	**13 54 21.8**	**-0.9**
	comp=Z,721nm,1.4s						
INCN	**Inchon**	**11.90**	**275**	*e*P	**Pn**	**13 54 26.6**	**-0.2**
	comp=Z,282nm,1.3s						
HABR	**Khabarovsk**	**12.09**	**339**	⇑*e*P	**Pn**	**13 54 23.7**	**-5.6**
HABR				*e*		13 56 37.8	
HABR				pmax	pmax		
	comp=Z,46nm,2.5s						
HABR				MLR	MLR		
	comp=Z,31μm,13.9s						
KLR	**Kul'dur**	**13.84**	**332**	*e*P	**Pn**	**13 54 48.0**	**-5.2**
KLR				*e*		13 57 19.5	
KLR				MLR	MLR		
	comp=Z,93μm,13.0s						
CN2	**Changchun**	**13.85**	**303**	*e*P	**Pn**	**13 54 53.0**	**-0.3**
CN2				*e*PP		13 55 04.5	
CN2				*e*S	**Sn**	**13 57 26.0**	**+0.4**
CN2				*e*SS		13 57 42.5	
CN2				AMB	AMB		
	comp=Z,100nm,1.5s						
CN2				AMB	AMB		
	comp=Z,2μm,6.0s						
CN2				LR	LR		
	comp=N,13μm,18.0s						
CN2				LR	LR		
	comp=E,24μm,18.0s						
CN2				LR	LR		
	comp=Z,26μm,19.0s						
SNY	**Shenyang**	**14.59**	**293**	⇑P	**Pn**	**13 55 04.0**	**+0.6**
SNY				AP	pP	13 55 11.3	-7.7
SNY				XP	sP	13 55 16.3	-7.8
SNY				AMB	AMB		
	comp=Z,120nm,1.5s						
SNY				AMB	AMB		
	comp=Z,2μm,6.4s						
SNY				LR	LR		
	comp=N,24μm,14.2s						
SNY				LR	LR		
	comp=E,41μm,17.2s						
SNY				LR	LR		
	comp=Z,46μm,17.6s						
JOW	**Kunigami**	**15.41**	**231**	P	**Pn**	**13 55 14.1**	**-0.1**
	comp=Z,3.7nm,0.3s,baz=41,slow=15,SNR=4.4						
JOW				LR	LR	14 00 38.2	
	comp=Z,9μm,21.6s,baz=354,slow=35						
DL2	**Dalian**	**15.79**	**282**	⇑*i*P	**Pn**	**13 55 20.3**	**+1.1**
DL2				S	**S**	**13 58 15.3**	**-11**
DL2				AMB	AMB		
	comp=Z,170nm,1.4s						
DL2				AMB	AMB		
	comp=Z,2μm,7.7s						
DL2				LR	LR		
	comp=N,5μm,11.9s						
DL2				LR	LR		
	comp=Z,14μm,19.8s						
SKR	**Severo-Kuril's**	**16.87**	**33**	*e*P	**Pn**	**13 55 34.6**	**+1.9**
SKR				*e*S	**S**	**13 58 31.5**	**-17**
SKR				pmax	pmax		
	comp=Z,160nm,0.9s						
SKR				pmax	pmax		
	comp=N,140nm,0.8s						
SKR				pmax	pmax		
	comp=E,120nm,0.8s						
SKR				pmax	pmax		
	comp=N,3μm,4.0s						
SKR				pmax	pmax		
	comp=E,3μm,4.0s						
SKR				pmax	pmax		
	comp=Z,4μm,4.0s						
SKR				smax			
	comp=N,110nm,0.7s						
SKR				smax			
	comp=E,80nm,0.6s						
SKR				smax			
	comp=N,3μm,6.0s						
SKR				smax			
	comp=E,6μm,6.0s						
SKR				MLR	MLR		
	comp=N,12μm,18.0s						
SKR				MLR	MLR		
	comp=Z,15μm,18.0s						
SKR				MLR	MLR		
	comp=E,9μm,14.0s						
SSE	**Sheshan**	**17.99**	**256**	P	**Pn**	**13 55 45.8**	**-0.9**
SSE				AMB	AMB		
	comp=Z,100nm,1.1s						
SSE				AMB	AMB		
	comp=Z,2μm,6.9s						
SSE				LR	LR		
	comp=N,17μm,18.9s						
SSE				LR	LR		
	comp=E,16μm,18.9s						
SSE				LR	LR		
	comp=Z,23μm,19.3s						
PEA0B	**Petropavlovsk-**	**19.32**	**30**	*e*P	**Pn**	**13 55 60.0**	**-2.6**
PETK	**Petropavlovsk-**	**19.32**	**30**	P	**Pn**	**13 56 00.8**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=208,slow=7.1,SNR=26						
PETK				LR	LR	14 03 17.5	
	comp=Z,7μm,21.0s,baz=221,slow=36						
**PETK

PET Petropavlovsk 19.65 32 eP Pn 13 56 05.2 -1.3
comp=E,9μm,12.0s
PET Petropavlovsk 19.65 32 deP Pn 13 56 06.0 -0.6
comp=E,299nm,1.3s
PET eS S 13 59 38.7 -5.6
PET pmax pmax
comp=Z,1μm,5.7s
PET pmax pmax
comp=Z,3μm,15.0s
PET pmax pmax
comp=Z,233nm,1.3s
PET MLR MLR
comp=Z,13μm,19.0s
PET MLR MLR
comp=Z,12μm,18.0s
HIA Hailar 19.78 314 eP Pn 13 56 03.1 -4.9
comp=Z,203nm,1.3s
HIA Hailar 19.78 314 eP Pn 13 56 03.2 -4.9
HIA pmax pmax
comp=Z,203nm,1.3s
BJI Beijing 20.00 286 P P 13 56 07.5 -1.4
BJI XP sP 13 56 20.5 -3.4
BJI S S 13 59 48.5 -3.0
BJI XS sS 14 00 02.3 -5.2
BJI AMB AMB
comp=Z,123nm,1.7s
BJI LR LR
comp=N,8μm,13.5s,MS5.3
BJI LR LR
comp=E,5μm,12.5s,MS5.3
BJI LR LR
comp=Z,11μm,24.2s
BJT Baijiatuau 20.01 285 eP P 13 56 07.8 -1.1
comp=Z,356nm,0.9s
BJT Baijiatuau 20.01 285 eP P 13 56 07.8 -1.1
BJT pmax pmax
comp=Z,356nm,0.9s
TATO Taipei 21.13 240 PFAKE 13 56 30.0 +8.8
TATO LR LR
comp=Z,6μm,19.0s,MS5.0
YHNB Yeheng 21.41 240 eP P 13 56 22.4 -1.8
comp=Z,111nm,0.8s,mb5.2
YHNB LR LR
comp=Z,9μm,22.0s,MS5.1
NRGR Nerungri 22.35 335 i P P 13 56 33.4 -0.5
CLNS Chul'man 22.44 336 eP P 13 56 33.4 -1.5
CLNS e*PP 13 56 42.4
CLNS e 13 56 56.3
CLNS e 14 00 29.7
CLNS eS S 14 00 32.8 -6.2
CLNS e 14 07 46.2
CLNS pmax pmax
comp=Z,252nm,1.4s,mb5.5
CLNS pmax pmax
comp=N,363nm,1.6s
CLNS pmax pmax
comp=E,85nm,1.4s
CLNS pmax pmax
comp=E,125nm,1.1s
CLNS pmax pmax
comp=Z,197nm,1.2s,mb5.4
CLNS pmax pmax
comp=N,338nm,1.4s
CLNS smax
comp=N,3μm,11.8s
CLNS smax
comp=E,3μm,11.4s
CLNS MLR MLR
comp=E,8μm,16.0s,MS5.6
CLNS MLR MLR
comp=N,15μm,16.0s,MS5.6
CLNS MLR MLR
comp=Z,19μm,16.0s,MS5.6
QZH Quanzhou 23.19 244⇑ iP P 13 56 39.8 -3.3
QZH S S 14 00 44.5 -7.4
QZH AMB AMB
comp=Z,350nm,0.8s,mb5.8
QZH LR LR
comp=N,14μm,17.6s,MS5.7
QZH LR LR
comp=E,15μm,15.1s,MS5.7
QZH LR LR
comp=Z,27μm,22.7s
HHC Hu-ho-hao-te 23.51 288 eP P 13 56 44.3 -1.8
HHC AP 13 56 52.3
HHC XP sP 13 56 54.5 -7.0
HHC PP 13 57 16.0
HHC PCP PcP 14 00 31.0 +0.4
HHC S S 14 00 53.0 -3.8
HHC XS sS 14 01 05.0 -10
HHC SS 14 01 38.8
HHC PCS PcS 14 04 09.3 -0.6
HHC AMB AMB
comp=Z,98nm,1.3s,mb5.1
HHC AMB AMB
comp=Z,2μm,6.8s
HHC LR LR
comp=N,9μm,12.5s,MS5.5
HHC LR LR
comp=E,9μm,14.9s,MS5.5
HHC LR LR
comp=Z,12μm,16.1s,MS5.5
WHN Wuhan 23.56 261 ⇑P P 13 56 45.8 -0.8
WHN AP 13 56 56.0
WHN S S 14 00 54.8 -3.0
WHN AMB AMB
comp=Z,304nm,0.7s,mb5.8
WHN AMB AMB
comp=Z,6μm,7.8s
WHN LR LR
comp=N,20μm,13.5s,MS5.8
WHN LR LR
comp=E,14μm,13.9s,MS5.8
WHN LR LR
comp=Z,43μm,20.8s
GUMO Guam 23.86 172 LR LR 14 06 22.8
comp=Z,4μm,18.9s,MS4.9,baz=29,slow=37
GUMO Guam 23.86 172 PFAKE 13 57 00.0 +11
GUMO LR LR
comp=Z,8μm,22.0s,MS5.1
CIT Chita 24.54 316 eP P 13 56 55.9 +0.5
CIT e 13 57 32.0
CIT e 13 57 47.4
CIT pmax pmax
comp=Z,2μm,1.5s,mb6.3
BTO Baotou 24.69 287 eP P 13 56 55.8 -1.1
YAK Yakutsk 25.78 347 eP P 13 57 05.5 -1.0
comp=Z,742nm,1.0s,mb6.2
YAK LR LR
comp=Z,2μm,20.0s,MS4.7
YAK Yakutsk 25.78 347 c iP P 13 57 05.9 -0.6
YAK e*PP pP 13 57 17.4 0.0
YAK e 13 57 42.1
YAK ePPP 13 57 50.6
YAK eS S 14 01 30.7 -2.0
YAK eSSS 14 02 39.0
YAK pmax pmax
comp=Z,697nm,1.0s,mb6.1
YAK pmax pmax
comp=N,308nm,1.1s
YAK pmax pmax
comp=E,141nm,1.0s
YAK pmax pmax
comp=E,252nm,1.4s
YAK pmax pmax
comp=Z,207nm,0.9s,mb5.7
YAK pmax pmax
comp=N,259nm,1.0s
YAK smax
comp=N,5μm,3.0s
YAK smax
comp=E,4μm,3.3s
YAK MLR MLR
comp=Z,16μm,16.0s,MS5.6
YAK MLR MLR
comp=N,12μm,15.0s,MS5.6
YAK MLR MLR
comp=E,5μm,15.0s,MS5.6
SEY Seymchan 26.43 11⇑ eP P 13 57 12.2 -0.2
XAN Xi'an 26.67 273 P P 13 57 13.8 -1.1
XAN AP pP 13 57 25.5 -0.3
XAN XP sP 13 57 27.8 -2.9
XAN PP 13 57 58.0
XAN PCP PcP 14 00 37.8 0.0
XAN S S 14 01 45.0 -2.4
XAN SS 14 02 56.5
XAN SCP ScP 14 04 14.0 -0.6
XAN PCS PcS 14 04 18.0 -1.1
XAN AMB AMB
comp=Z,90nm,1.0s,mb5.2
XAN AMB AMB
comp=Z,2μm,10.4s
XAN LR LR
comp=N,3μm,17.2s,MS5.3
XAN LR LR
comp=E,7μm,16.2s,MS5.3
XAN LR LR
comp=Z,15μm,18.0s,MS5.6
ABRA Dolores 26.89 229 eP P 13 57 15.2 -1.8
ULN Ulaanbaatar 27.29 304 P P 13 57 21.6 +1.3
SNR=36
ULN Ulaanbaatar 27.29 304 eP P 13 57 19.5 -0.8
comp=Z,86nm,0.9s,mb5.3
ULN LR LR
comp=Z,13μm,19.0s,MS5.5
ULN Ulaanbaatar 27.29 304 P P 13 57 19.8 -0.5
ULN pmax pmax
comp=Z,86nm,1.0s,mb5.2
ULN Ulaanbaatar 27.29 304 P P 13 57 19.2 -1.1
comp=Z,132nm,1.7s,comp=Z,3μm,mb5.2
SMY Shemya 27.33 45 P P 13 57 18.7 -1.9
comp=Z,656nm,1.6s,mb5.9
SMY LR LR
comp=Z,7μm,20.0s,MS5.2
SMY Shemya 27.33 45 P P 13 57 18.7 -1.9
SMY pmax pmax
comp=Z,656nm,1.6s,mb5.9
SMY MLR MLR
comp=Z,7μm,20.0s,MS5.2
BOD Bodaibo 27.33 327 eP P 13 57 19.8 -0.7
BOD pmax pmax
comp=Z,160nm,0.9s,mb5.5
SONM Songino Array 27.73 303 P P 13 57 24.0 -0.2
comp=Z,84nm,0.6s,mb5.5,baz=103,slow=8.1,SNR=374
SONM LR LR 14 08 52.4
comp=Z,13μm,18.3s,MS5.5,baz=167,slow=37
SONM Songino Array 27.73 303 P P 13 57 24.0 -0.2
SONM pmax pmax
comp=Z,84nm,0.6s
SONM MLR MLR
comp=Z,13μm,18.3s
BALP Baler 27.90 225 eP P 13 57 24.8 -1.2
HKC Hong Kong Obse 28.00 245 P P 13 57 30.0 +3.1
GZH Guangzhou 28.13 248 P P 13 57 21.8 -6.2
GZH S S 14 02 04.8 -5.8
GZH LR LR
comp=N,8μm,24.7s,MS5.3
GZH LR LR
comp=E,6μm,24.4s,MS5.3
GZH LR LR
comp=Z,14μm,21.9s,MS5.5
PCPH Palayan 28.32 225⇑ eP P 13 57 28.9 -0.7
PVCP Virac 28.33 218 eP P 13 57 28.2 -1.7
CNP Catarman 29.03 216 eP P 13 57 35.8 -0.3
AUQP San Andres 29.31 220 eP P 13 57 33.0 -5.5
IRK Irkutsk 29.99 312⇑ iP P 13 57 44.0 -0.2
IRK pmax pmax
comp=Z,150nm,1.6s,mb5.5
LZH Lanzhou 30.16 279 ⇑P P 13 57 45.0 -0.9
LZH AP pP 13 57 54.8 -2.2
LZH XP sP 13 57 58.8 -3.0
LZH PP PP 13 58 43.5 -11
LZH S S 14 02 40.3 -2.0
LZH XS sS 14 02 56.3 -4.3
LZH SS SS 14 04 17.3 -34
LZH AMB AMB
comp=Z,393nm,1.5s,mb5.9
LZH AMB AMB
comp=Z,1μm,7.6s
LZH LR LR
comp=N,23μm,17.6s
LZH LR LR
comp=Z,26μm,18.3s,MS5.9
ZAK Zakamensk 30.18 308⇓ iP P 13 57 46.1 +0.1
ZAK pmax pmax
comp=Z,109nm,1.5s,mb5.4
TLY Talaya 30.23 310 P P 13 57 47.1 +0.8
comp=Z,839nm,0.9s,mb6.5,SNR=59
TLY Talaya 30.23 310 P P 13 57 47.4 +1.0
SNR=51
TLY Talaya 30.23 310 eP P 13 57 46.6 +0.3
comp=Z,174nm,1.0s,mb5.7
TLY LR LR
comp=Z,20μm,19.0s,MS5.8
TLY Talaya 30.23 310 eP P 13 57 47.0 +0.7
TLY e 13 59 01.6
TLY eS S 14 02 44.1 +1.1
TLY eSS SS 14 04 38.8 -14
TLY pmax pmax
comp=Z,189nm,1.1s,mb5.7
TLY MLR MLR
comp=Z,17μm,18.0s,MS5.7
LUBP Lubang 30.27 225 eP P 13 57 44.5 -2.5
OCLP Ormoc 30.34 215 eP P 13 57 47.7 +0.1
OTRP Odiongan 30.46 220 eP P 13 57 48.5 -0.2
GYA Guiyang 31.43 260⇑ iP P 13 57 56.5 -0.7
GYA AP pP 13 58 08.0 -0.2
GYA XP sP 13 58 13.5 +0.5
GYA PP PP 13 58 58.8 -10
GYA PCP PcP 14 00 51.5 +1.6
GYA S S 14 02 56.3 -5.9
GYA XS sS 14 03 16.8 -3.8
GYA SCP ScP 14 04 29.5 -0.3
GYA SS SS 14 04 50.3 -27
GYA SCS ScS 14 08 24.8 -2.8
GYA AMB AMB
comp=Z,250nm,1.0s,mb6.0
GYA AMB AMB
comp=Z,930nm,8.9s
GYA LR LR
comp=N,8μm,20.0s,MS5.7
GYA LR LR
comp=E,13μm,20.3s,MS5.7
GYA LR LR
comp=Z,13μm,20.6s,MS5.6
BUSP Coron 31.72 223 eP P 13 57 59.1 -0.7
CD2 Chengdu 31.82 270 P P 13 57 59.8 -0.9
CD2 AP pP 13 58 07.0 -4.7
CD2 XP sP 13 58 10.5 -6.0
CD2 PP PP 13 59 05.3 -7.6
CD2 PCP PcP 14 00 50.5 -0.4
CD2 S S 14 03 07.3 -1.1
CD2 XS sS 14 03 19.5 -7.3
CD2 PCS PcS 14 04 34.0 -1.6
CD2 SS SS 14 04 58.5 -27
CD2 SCS ScS 14 08 28.3 -1.1
CD2 AMB AMB
comp=Z,160nm,1.0s,mb5.8
CD2 AMB AMB
comp=Z,2μm,7.2s
CD2 LR LR
comp=N,11μm,19.2s,MS5.8
CD2 LR LR
comp=E,15μm,15.6s,MS5.8
CD2 LR LR
comp=Z,18μm,13.2s,MS5.9
MOY Mondy 31.84 310 eP P 13 58 01.2 +0.6
ADK Adak 32.55 50 PFAKE 13 58 20.0 +13
ADK LR LR
comp=Z,10μm,22.0s,MS5.5
GTA Gaotai 32.61 287 ⇑P P 13 58 07.0 -0.5
GTA AP pP 13 58 18.0 -0.5
GTA XP sP 13 58 23.8 +0.5
GTA PP PP 13 59 16.5 -5.0
GTA PCP PcP 14 00 53.5 +0.6
GTA S S 14 03 19.8 -0.7
GTA XS sS 14 03 40.5 +1.6
GTA SS SS 14 05 20.5 -21
GTA AMB AMB
comp=Z,14nm,1.1s,mb4.8
GTA AMB AMB
comp=Z,1μm,6.3s
GTA LR LR
comp=N,8μm,18.6s,MS5.6
GTA LR LR
comp=E,9μm,18.6s,MS5.6
GTA LR LR
comp=Z,11μm,19.2s,MS5.6
BUKP Musuan 32.97 211 eP P 13 58 07.8 -3.0
QIZ Qiongzhong 33.20 245 P P 13 58 14.0 +1.2
QIZ XP sP 13 58 30.5 +1.8
QIZ S S 14 03 33.5 +3.5
QIZ XS sS 14 03 50.5 +2.1
QIZ SS SS 14 05 32.8 -21
QIZ AMB AMB
comp=Z,89nm,1.9s,mb5.4
QIZ AMB AMB
comp=Z,2μm,7.1s
QIZ LR LR
comp=N,6μm,17.7s,MS5.5
QIZ LR LR
comp=E,5μm,17.7s,MS5.5
QIZ LR LR
comp=Z,7μm,16.6s,MS5.4
QIZ Qiongzhong 33.20 245 eP P 13 58 14.0 +1.2
comp=Z,95nm,1.2s,mb5.6
QIZ LR LR
comp=Z,6μm,20.0s,MS5.3
MATI Mati 33.35 209 eP P 13 58 13.9 -0.2
DAV Davao City (W) 33.50 210 LR LR 14 09 52.2
comp=Z,7μm,22.0s,MS5.3,baz=62,slow=33
DAV Davao City (W) 33.50 210 PFAKE 13 58 30.0 +15
DAV LR LR
comp=Z,5μm,19.0s,MS5.2
BILL Bilibino 33.66 16 eP P 13 58 15.2 -1.1
comp=Z,156nm,1.2s,mb5.8
BILL LR LR
comp=Z,4μm,19.0s,MS5.2
BILL Bilibino 33.66 16⇑ eP P 13 58 15.3 -1.0
BILL e 13 59 27.2
BILL i S S 14 03 37.6 +1.4
BILL pmax pmax
comp=Z,199nm,1.5s,mb5.8
BILL MLR MLR
comp=Z,5μm,16.0s,MS5.3
PAGZ Pagadian 33.72 214 eP P 13 58 16.2 -1.1
TIXI Tiksi 34.98 353 eP P 13 58 26.5 -1.1
comp=Z,49nm,1.0s,mb5.4
TIXI LR LR
comp=Z,8μm,21.0s,MS5.5
TIXI Tiksi 34.98 353 c iP P 13 58 26.7 -0.9
TIXI pmax pmax
comp=Z,70nm,1.3s,mb5.4
TIXI MLR MLR
comp=Z,11μm,20.0s,MS5.6
KMI Kunming 35.16 261 ⇑P P 13 58 29.5 -0.3
KMI AP pP 13 58 41.3 +0.4
KMI XP sP 13 58 45.8 +0.2
KMI PP PP 13 59 50.0 0.0
KMI S S 14 03 59.5 -0.7
KMI XS sS 14 04 17.5 -1.1
KMI PCS PcS 14 04 47.3 -0.2
KMI SS SS 14 06 16.0 -18
KMI AMB AMB
comp=Z,237nm,1.3s,mb6.0
KMI AMB AMB
comp=Z,1μm,6.0s
KMI LR LR
comp=N,7μm,19.6s,MS5.8
KMI LR LR
comp=E,14μm,16.6s,MS5.8
KMI LR LR
comp=Z,18μm,19.2s,MS5.8
MIDW Midway 35.45 93 PFAKE 13 58 40.0 +7.8
MIDW LR LR
comp=Z,11μm,20.0s,MS5.6
BATP Bataraza 35.68 223 eP P 13 58 34.5 +0.2
HVS Khovu-Aksy 36.31 308 d iP P 13 58 39.8 +0.5
KRAR Krasnoyarsk 37.33 316 c iP P 13 58 48.0 +0.1
MYLDM Lahad Datu 38.36 219 ⇑P P 13 58 57.4 +0.3
MYLDM Lahad Datu 38.36 219 P P 13 58 59.1 +2.0
SDKM Sandakan 38.64 221 ⇑P P 13 58 57.4 -2.0
KKM Kota Kinabalu 38.83 223 PFAKE 13 59 10.0 +9.0
KKM LR LR
comp=Z,3μm,20.0s,MS5.1
KKM Kota Kinabalu 38.83 223 ⇓P P 13 59 01.5 +0.6
MNI Manado 38.94 207 P P 13 59 09.3 +7.4
comp=Z,309nm,1.5s,mb5.8
UBT Ubonrachathani 39.15 246 ⇑P P 13 59 04.9 +1.2
TSM Tawau 39.44 219 ⇑P P 13 59 06.4 +0.3
LBMI Labuha 40.01 202 P P 13 59 10.5 -0.3
comp=Z,118nm,0.9s,comp=Z,2μm,mb5.6
KKTK Khon Kaen 40.07 249 ⇑P P 13 59 11.5 +0.2
comp=Z,741nm,0.6s,mb6.6
NANT Nan 40.18 254 ⇓P P 13 59 10.0 -2.2
comp=Z,925nm,1.0s,mb6.5
WMQ Urumqi 40.83 297⇑ iP P 13 59 18.5 +1.2
WMQ XP sP 13 59 29.5 -3.8
WMQ PP PP 14 00 56.5 +4.8
WMQ S S 14 05 27.5 +2.0
WMQ SS SS 14 08 24.5 -2.9
WMQ AMB AMB
comp=Z,198nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,3μm,4.0s
WMQ LR LR
comp=N,5μm,16.0s,MS5.7
WMQ LR LR
comp=E,7μm,16.0s,MS5.7
WMQ LR LR
comp=Z,8μm,16.0s,MS5.7
CHG Chiang Mai 41.52 256 ⇑P P 13 59 23.3 0.0
comp=Z,46nm,1.1s,mb5.0
CHTO Chiang Mai 41.52 256 ⇑P P 13 59 22.7 -0.5
SNR=15
CHTO Chiang Mai 41.52 256 eP P 13 59 22.8 -0.5
comp=Z,54nm,1.1s,mb5.1
CHTO LR LR
comp=Z,9μm,21.0s,MS5.6
CHTO Chiang Mai 41.52 256 eP P 13 59 22.8 -0.5
CHTO pmax pmax
comp=Z,54nm,1.1s,mb5.1
CHTO MLR MLR
comp=Z,9μm,21.0s,MS5.6
CM31 Chiang Mai Arr 41.73 255 PFAKE 13 59 40.0 +15
CM31 LR LR
comp=Z,1μm,19.0s,MS4.8
CMAR Chiang Mai Arr 41.73 255 P P 13 59 25.0 0.0
comp=Z,18nm,0.8s,mb4.7,baz=46,slow=6.3,SNR=91
CMAR PcP PcP 14 01 21.3 +0.4
comp=Z,5.4nm,0.9s,baz=20,slow=2.1,SNR=6.4
CMAR LR LR 14 18 35.8
comp=Z,7μm,18.1s,MS5.6,baz=62,slow=39
CMAR Chiang Mai Arr 41.73 255 P P 13 59 25.0 0.0
CMAR 14 01 21.3
CMAR pmax pmax
comp=Z,18nm,0.8s
CMAR pmax pmax
comp=Z,5.0nm,0.9s
CMAR MLR MLR
comp=Z,7μm,18.1s
ZAA0 Zalesovo Array 41.80 312 eP P 13 59 24.9 -0.2
ZALV Zalesovo Beam 41.80 312 P P 13 59 25.0 -0.1
comp=Z,65nm,0.7s,mb5.4,baz=91,slow=6.5,SNR=310
ZALV pP pP 13 59 36.0 -0.4
comp=Z,135nm,0.8s,baz=98,slow=5.2,SNR=15
ZALV LR LR 14 17 42.3
comp=Z,10μm,18.5s,MS5.7,baz=85,slow=37
ZALV Zalesovo Beam 41.80 312 P P 13 59 25.0 -0.1
ZALV pP pP 13 59 36.0 -0.4
ZALV LR LR 14 17 42.3
ZALV Zalesovo Beam 41.80 312 P P 13 59 25.0 -0.2
ZALV *PP pP 13 59 36.0 -0.4
ZALV pmax pmax
comp=Z,65nm,0.7s,mb5.4
ZALV pmax pmax
comp=Z,135nm,0.8s,mb5.6
ZALV MLR MLR
comp=Z,10μm,18.5s,MS5.7
IMP Imphal 42.30 267 eP P 13 59 27.0 -2.6
IMP ex x 14 05 55.0
LSA Lhasa 42.33 275 P P 13 59 30.8 +1.0
LSA AP pP 13 59 40.0 -1.1
LSA XP sP 13 59 43.8 -2.0
LSA PP PP 14 01 09.5 +1.3
LSA S S 14 05 48.0 -0.1
LSA XS sS 14 06 06.0 -0.8
LSA LR LR
comp=N,3μm,22.7s
LSA LR LR
comp=E,6μm,30.3s
LSA LR LR
comp=Z,9μm,27.7s,MS5.5
LSA Lhasa 42.33 275 eP P 13 59 31.0 +1.2
comp=Z,124nm,1.0s,mb5.5
LSA LR LR

comp=Z,8µm,22.0s,MS5.6
LSA Lhasa 42.33 275 *e*P **P 13 59 31.0 +1.2**
LSA pmax pmax
comp=Z,124nm,1.0s,mb5.5
LSA MLR MLR
comp=Z,8µm,22.0s,MS5.6
NST Nakhon Sawan 42.50 251 P **P 13 59 31.0 -0.2**
AAI Ambon 42.71 200 P **P 13 59 34.4 +1.5**
comp=Z,207nm,0.9s,comp=Z,2µm,mb5.9
NVS Novosibirsk 42.72 313⇑*i*P **P 13 59 32.0 -0.6**
NVS *e*S **S 14 05 53.6 +0.4**
NVS *e* 14 09 36.4
NVS pmax pmax
comp=N,85nm,1.3s
NVS pmax pmax
comp=Z,310nm,1.3s,mb5.9
NVS pmax pmax
comp=E,406nm,1.6s
NVS smax
comp=N,76nm,2.1s
NVS smax
comp=E,268nm,2.5s
BTM Bintulu 42.91 224⇑P **P 13 59 38.4 +3.8**
PCI Palu 43.08 213 P **P 13 59 35.9 -0.1**
comp=E,130nm,1.4s,comp=E,2µm,mb5.5
SHL Shillong 43.56 269⇑*i*P **P 13 59 40.0 +0.2**
SHL *e*S **S 14 06 08.0 +1.8**
SBUM Sibu 44.01 225⇓P **P 13 59 44.2 +0.7**
SBUM Sibu 44.01 225 P **P 13 59 43.8 +0.4**
MK31 Makanchi Array 44.07 302 *e*P **P 13 59 43.6 0.0**
MK31 Makanchi Array 44.07 302 P **P 13 59 43.8 +0.2**
MKAR Makanchi Array 44.07 302 P **P 13 59 43.8 +0.2**
comp=E,121nm,0.7s,mb5.8,baz=87,slow=9.8,SNR=678
MKAR pP pP 13 59 54.9 0.0
comp=E,99nm,0.8s,baz=77,slow=8.1,SNR=10
MKAR LR LR 14 18 42.5
comp=E,6µm,19.4s,MS5.5,baz=79,slow=37
MKAR Makanchi Array 44.07 302 P **P 13 59 43.8 +0.2**
MKAR *PP pP 13 59 54.9 -0.1
MKAR pmax pmax
comp=Z,121nm,0.7s
MKAR pmax pmax
comp=Z,99nm,0.8s
MKAR MLR MLR
comp=Z,6µm,19.4s
KDI Kendari 44.75 207 P **P 13 59 49.1 -0.2**
comp=Z,65nm,1.3s,comp=Z,2µm,mb5.3
NNT Nongplab 44.76 248 P **P 13 59 50.7 +1.3**
SVW2 Sparrevohn 45.17 38 *e*P **P 13 59 52.2 +0.1**
KURK Kurchatov 45.85 308 P **P 13 59 57.2 -0.5**
comp=Z,3µm,0.9s,mb7.2
KURK Kurchatov 45.85 308 P **P 13 59 57.9 +0.2**
SNR=243
KURK Kurchatov 45.85 308 P **P 13 59 58.1 +0.4**
comp=Z,164nm,0.7s,mb6.1,baz=84,slow=8.2,SNR=287
KURK pP pP 14 00 09.7 +0.6
comp=Z,314nm,0.8s,baz=82,slow=8.1,SNR=16
KURK S **S 14 06 39.0 +0.2**
comp=Z,2.6nm,0.9s,baz=74,slow=11,SNR=3.3
KURK LR LR 14 19 55.5
comp=Z,14µm,20.4s,MS5.9,baz=75,slow=37
KURK Kurchatov 45.85 308 P **P 13 59 58.1 +0.4**
KURK *PP pP 14 00 09.7 +0.6
KURK S **S 14 06 39.0 +0.2**
KURK pmax pmax
comp=Z,164nm,0.7s,mb6.1
KURK pmax pmax
comp=Z,314nm,0.8s,mb6.3
KURK smax
comp=N,3.0nm,0.9s
KURK MLR MLR
comp=Z,14µm,20.4s,MS5.9
KSM Kuching 45.89 226 *e*P **P 13 59 58.8 +0.4**
comp=Z,86nm,0.8s,mb5.7
KSM Kuching 45.89 226 P **P 13 59 59.3 +0.9**
comp=Z,145nm,0.9s,comp=Z,3µm,mb5.9
TARA Tarawa 46.00 134 P **P 14 00 01.2 +1.9**
comp=Z,1µm,2.0s,mb6.5
TARA LR LR
comp=Z,12µm,22.0s,MS5.8
STKI Sintang 46.39 224 P **P 14 00 02.8 +0.5**
comp=Z,134nm,1.1s,mb5.8
KDAK Kodiak Island 46.75 42 P **P 14 00 04.0 -0.7**
comp=Z,672nm,0.8s,mb6.6,SNR=9.3
KDAK Kodiak Island 46.75 42 PFAKE 14 00 20.0 +15
KDAK LR LR
comp=Z,11µm,20.0s,MS5.8
CHUM Lake Minchumin 46.77 34 *e*P **P 14 00 05.3 +0.6**
comp=Z,72nm,1.1s,mb5.5
PPLA Purkeypile 46.81 35 *e*P **P 14 00 05.9 +0.9**
comp=Z,110nm,1.2s,mb5.7
KAPI Kappang 46.83 211 P **P 14 00 04.0 -1.7**
comp=Z,436nm,1.3s,mb6.2,SNR=9.0
KAPI Kappang 46.83 211 P **P 14 00 05.0 -0.7**
SNR=18
KAPI Kappang 46.83 211 P **P 14 00 04.3 -1.4**
comp=Z,39nm,0.9s,mb5.3,baz=27,slow=5.4,SNR=23
KAPI Kappang 46.83 211 *e*P **P 14 00 04.1 -1.6**
comp=Z,262nm,1.3s,mb6.0
KAPI LR LR
comp=Z,2µm,21.0s,MS5.0
KAPI Kappang 46.83 211 P **P 14 00 05.3 -0.4**
comp=Z,63nm,2.1s,comp=Z,1µm,mb5.2
PLKI Palangkaraya 47.01 219 P **P 14 00 07.9 +0.7**
comp=Z,273nm,1.0s,comp=Z,4µm,mb6.2
JIRN Jiri 47.14 275 *e*P **P 14 00 09.1 +1.0**
comp=Z,378nm,1.0s,mb6.3
GUN Gumba 47.27 275 *e*P **P 14 00 10.2 +1.0**
comp=Z,466nm,0.9s,mb6.4
BPAW Bear Paw Mtn. 47.36 33 *e*P **P 14 00 09.7 +0.3**
comp=Z,20nm,0.8s,mb5.1
KTH Kantishna Hill 47.39 34 *e*P **P 14 00 10.0 +0.4**
comp=Z,116nm,1.3s,mb5.7
KTGM Kuala Trenggan 47.40 237⇓P **P 14 00 10.8 +0.6**
BBKI Banjar Baru 47.63 217 P **P 14 00 11.5 -0.5**
comp=Z,212nm,1.1s,comp=Z,4µm,mb6.1
TRF Thorofare Moun 47.67 34 *e*P **P 14 00 11.8 0.0**
comp=Z,43nm,1.1s,mb5.4
COLD Coldfoot 47.79 29 *e*P **P 14 00 12.8 +0.2**
comp=Z,29nm,0.9s,mb5.3
SNG Songkhla 47.80 241 P **P 14 00 14.0 +0.7**
comp=Z,200nm,0.9s,mb6.2
PKI Pulchoki 47.80 275 *e*P **P 14 00 13.6 +0.4**
comp=Z,332nm,1.1s,mb6.3
PKI Pulchoki 47.80 275 *e*P **P 14 00 13.6 +0.4**
PKI pmax pmax
comp=Z,333nm,1.1s,mb6.3
KKN Kakani 47.80 276 *e*P **P 14 00 13.9 +0.6**
comp=Z,289nm,0.7s,mb6.4
KKN Kakani 47.80 276 *e*P **P 14 00 13.9 +0.6**
KKN pmax pmax
comp=Z,289nm,0.7s,mb6.4
CAL Calcutta 47.87 268 *e*P **P 14 00 13.7 -0.1**
CAL *ex* x 14 07 18.8
DMN Daman 48.02 275 *e*P **P 14 00 15.5 +0.5**
comp=Z,203nm,1.0s,mb6.1
GKN Gorkha 48.22 276 *e*P **P 14 00 16.9 +0.4**
comp=Z,566nm,0.9s,mb6.6
PMR Palmer 48.27 37 *e*P **P 14 00 16.1 -0.3**
comp=Z,96nm,1.2s,mb5.7
PMR Palmer 48.27 37 *e*P **P 14 00 16.1 -0.3**
PMR pmax pmax
comp=Z,96nm,1.2s,mb5.7
MCK McKinley 48.27 34 *e*P **P 14 00 15.9 -0.5**
comp=Z,119nm,1.5s,mb5.7
MCK McKinley 48.27 34 P **P 14 00 16.7 +0.3**
MCK pmax pmax
comp=Z,120nm,1.5s,mb5.7
AAA Alma-Ata 48.56 298 *i*P **P 14 00 19.7 +0.8**
AAA Alma-Ata 48.56 298 *i*P **P 14 00 19.6 +0.7**
AAA *i*S **S 14 07 21.6 +4.0**
AAA pmax pmax
comp=Z,3µm,9.2s
AAA smax
comp=E,4µm,15.3s
AAA MLR MLR
comp=Z,24µm,20.0s,MS6.2
COLA College 48.72 32 *e*P **P 14 00 19.8 0.0**
comp=Z,26nm,0.8s,mb5.3
COLA LR LR
comp=Z,3µm,21.0s,MS5.3
COLA College 48.72 32 *e*P **P 14 00 19.8 0.0**
COLA pmax pmax
comp=Z,26nm,0.8s,mb5.3
COLA MLR MLR
comp=Z,3µm,21.0s,MS5.3
DANN Dangsing 48.76 277 *e*P **P 14 00 21.6 +1.0**
comp=Z,935nm,0.8s,mb6.9
KULM Kulim 49.11 240⇑P **P 14 00 24.3 +0.8**
KOLN Koldanda 49.14 276 *e*P **P 14 00 24.2 +0.6**
comp=Z,277nm,0.8s,mb6.3
BOK Bokaro 49.19 271⇑*i*P **P 14 00 24.1 +0.1**
BOK AMb AMB 14 00 26.9
comp=Z,132nm,1.1s,mb5.9
IPM Ipoh 49.44 239⇓P **P 14 00 25.9 -0.1**
IPM Ipoh 49.44 239 P **P 14 00 25.5 -0.5**
comp=Z,110nm,1.3s,comp=Z,2µm,mb5.7
PYUN Piuthan 49.48 277 *e*P **P 14 00 26.9 +0.7**
MYKOM Kota Tinggi 49.58 233⇓P **P 14 00 28.1 +1.1**
TKM2 Tokmak 2 49.60 298 *e*P **P 14 00 27.9 +1.0**
comp=Z,122nm,0.6s,mb6.1
TKM2 LR LR
comp=Z,20µm,20.0s,MS6.1
TKM2 Tokmak 2 49.60 298 P **P 14 00 28.0 +1.1**
SNR=206
HNR Honiara 49.63 156 PFAKE
HNR LR LR 14 00 40.0 +13
comp=Z,8µm,21.0s,MS5.7
KGM Kluang 49.75 234⇓P **P 14 00 29.5 +1.2**
FRIM Kepong 49.95 237⇓P **P 14 00 30.6 +0.8**
KZA Kyzart 50.10 297 P **P 14 00 32.6 +1.9**
SNR=52
KBK Karagaybulak 50.14 298 P **P 14 00 31.9 +0.9**
SNR=121
VOSK Vostochnaya 50.17 312 P **P 14 00 30.3 -0.8**
VOSK pmax pmax
comp=Z,73nm,1.0s,mb5.7
CHMS Chumysh 50.17 299 P **P 14 00 31.6 +0.4**
SNR=13
BATI Baumata 50.23 203 P **P 14 00 30.5 -1.4**
comp=Z,45nm,0.8s,mb5.5,baz=330,slow=8.1,SNR=8.5
BATI S **S 14 07 45.7 +4.4**
comp=Z,7.5nm,0.5s,baz=283,slow=20,SNR=2.8
BATI Baumata 50.23 203 P **P 14 00 33.3 +1.5**
comp=Z,86nm,1.1s,comp=Z,2µm,mb5.7
USP Ospenovka 50.27 299 P **P 14 00 32.3 +0.4**
SNR=63
FRU Bishkek 50.32 298⇑*i*P **P 14 00 32.2 -0.1**
FRU *e* 14 02 29.0
FRU *e*SS SS 14 11 18.0 +2.2
FRU pmax pmax
comp=Z,210nm,1.9s,mb5.8
FRU MLR MLR
comp=Z,13µm,19.0s,MS6.0
KSH Kashi 50.41 294⇑*i*P **P 14 00 35.0 +1.9**
KSH *e*AP pP 14 00 39.5 -5.1
KSH *e*XP sP 14 00 42.0 -7.3
KSH *e*PP PP 14 02 31.0 +2.3
KSH S **S 14 07 44.0 +0.4**
KSH *e*SS SS 14 11 13.8 -3.6
KSH AMB AMB
comp=Z,489nm,0.8s,mb6.6
KSH LR LR
comp=N,6µm,6.2s
KSH LR LR
comp=E,7µm,8.7s
KSH LR LR
comp=Z,7µm,9.6s
BVA0 Borovoye Array 50.46 312 *i*P **P 14 00 33.0 -0.2**
BVA0 pmax pmax
comp=Z,28nm,1.5s,mb5.1
BVAR Borovoye Array 50.46 312 P **P 14 00 33.0 -0.2**
comp=Z,33nm,0.6s,mb5.6,baz=86,slow=8.8,SNR=151
BVAR PcP PcP 14 01 51.7 +0.7
comp=Z,19nm,0.8s,baz=90,slow=4.3,SNR=3.6
BVAR S **S 14 07 48.6 +4.6**
comp=Z,2.6nm,0.9s,baz=72,slow=9.5,SNR=3.1
BVAR LR LR 14 23 10.3
comp=Z,13µm,18.6s,MS6.0,baz=82,slow=37
BVAR Borovoye Array 50.46 312 P **P 14 00 33.0 -0.2**
BVAR 14 01 51.7
BVAR S **S 14 07 48.6 +4.7**
BVAR pmax pmax
comp=Z,33nm,0.6s
BVAR pmax pmax
comp=Z,19nm,0.8s
BVAR smax
comp=N,3.0nm,0.9s
BVAR MLR MLR
comp=Z,13µm,18.6s
AAK Ala-Archa 50.47 298 P **P 14 00 33.5 +0.1**
comp=Z,433nm,1.2s,mb6.4,SNR=35
AAK Ala-Archa 50.47 298 P **P 14 00 33.9 +0.4**
SNR=29
BRVK Borovoye 50.52 312 P **P 14 00 34.2 +0.5**
comp=Z,594nm,1.0s,mb6.5,SNR=33
BRVK Borovoye 50.52 312 P **P 14 00 34.2 +0.5**
SNR=39
BRVK Borovoye 50.52 312 *e*P **P 14 00 33.1 -0.5**
comp=Z,110nm,1.0s,mb5.7
BRVK LR LR
comp=Z,13µm,20.0s,MS5.9
BRVK Borovoye 50.52 312 *e*P **P 14 00 33.1 -0.6**
BRVK pmax pmax
comp=Z,110nm,1.0s,mb5.7
BRVK MLR MLR
comp=Z,13µm,20.0s,MS5.9
KAKA Kakadu 50.55 192 *e*P Px 14 00 18.0
comp=Z,28nm,0.8s
KAKA *ep*P x 14 00 29.1
UCH Uchtor 50.58 298 PFAKE 14 00 50.0 +16
UCH LR LR
comp=Z,11µm,20.0s,MS5.9
UCH Uchtor 50.58 298 P **P 14 00 35.8 +1.4**
SNR=6.5
MENT Mentasta 50.68 35 *e*P **P 14 00 35.7 +1.0**
TPI Tanjungpandan 50.85 226 P **P 14 00 37.0 +0.3**
comp=Z,94nm,1.1s,comp=Z,2µm,mb5.6
EKS2 Erkin-Say 50.96 298 *e*P **P 14 00 37.4 +0.3**
comp=Z,42nm,0.8s,mb5.4
EKS2 LR LR
comp=Z,13µm,20.0s,MS5.9
EKS2 Erkin-Say 50.96 298 P **P 14 00 37.6 +0.4**
SNR=47
PTH Pithoragarh 51.02 280 *e*P **P 14 00 38.3 +0.5**
PTH *ex* x 14 03 28.3
LGTI Lohaghat 51.04 280 *e*P **P 14 00 40.5 +2.5**
COEN Coen 51.07 178 *e*P **P 14 00 37.8 -0.4**
comp=Z,56nm,0.8s,mb5.5
COEN Coen 51.07 178 P **P 14 00 39.0 +0.8**
comp=Z,46nm,1.1s,comp=Z,583nm,mb5.3
KMMI Kalianget 51.18 216 P **P 14 00 39.4 +0.3**
comp=Z,220nm,1.2s,comp=Z,3µm,mb6.0
AML Almayashu 51.19 298 PFAKE 14 00 50.0 +11
AML LR LR
comp=Z,20µm,20.0s,MS6.1
AML Almayashu 51.19 298 P **P 14 00 40.3 +1.4**
SNR=128
PPBI Pangkal Pinang 51.26 228 P **P 14 00 40.3 +0.6**
comp=Z,71nm,1.0s,comp=Z,2µm,mb5.6
EGAK Eagle 51.58 32 *e*P **P 14 00 41.0 -0.4**
comp=Z,108nm,1.4s,mb5.6
EGAK LR LR
comp=Z,3µm,22.0s,MS5.3
KHKI Kahang-Kahang 51.59 214 P **P 14 00 41.7 -0.4**
ALBI Allahabad 51.70 275 *ex* **P 14 00 40.0 -3.0**
RGRI Rengat 52.18 233 P **P 14 00 49.4 +2.8**
comp=Z,237nm,1.2s,mb6.0
SDNR Sundarnagar 52.71 284 *e*P **P 14 00 51.0 +0.6**
SMLA Simla 52.72 284 *i*P **P 14 00 50.4 -0.1**
SMLA *ex* x 14 00 56.1
comp=Z,395nm,0.6s
SMLA *i*x x 14 08 23.9
SJI Sawahan 52.83 218 P **P 14 00 50.4 -1.0**
KRKI Karangkates 52.87 217 P **P 14 00 51.0 -0.6**
DLH Dalhousie 53.05 286 *e*P **P 14 00 52.0 -0.9**
KK31 Karatay Array 53.09 300 *i*P **P 14 00 52.6 -0.4**
KK31 pmax pmax
comp=Z,177nm,1.1s,mb5.9
BHK Bhakra 53.18 284 *ex* x 14 01 01.2
THN Thein Dam 53.28 286 *e*P **P 14 00 52.4 -2.2**
PPI Padang Panjang 53.52 235 P **P 14 00 58.0 +1.5**
comp=Z,50nm,2.8s,comp=Z,2µm,mb5.0
BJII Banjamegara 53.53 221 P **P 14 00 57.0 +0.5**
NDI New Delhi 53.76 281 *e*P **P 14 00 57.0 -1.1**
NDI *ex* x 14 08 42.0
INK Inuvik 54.02 27 *e*P **P 14 00 59.4 0.0**
comp=Z,3µm,1.1s,mb7.1
INK Inuvik 54.02 27 P **P 14 00 59.8 +0.3**
KIP Kipapa 54.10 89 PFAKE 14 01 10.0 +9.3
KIP LR LR
comp=Z,3µm,19.0s,MS5.4
KIP Kipapa 54.10 89 *e*P **P 14 00 59.3 -1.4**
KLI Kotabumi 54.18 227 P **P 14 01 02.6 +1.3**
comp=Z,365nm,1.2s,mb6.2
LEM Lembang 54.22 223 P **P 14 01 01.2 -0.4**
comp=Z,270nm,1.0s,comp=Z,4µm,mb6.1
VIS Vishakhapatnam 54.40 266⇑*i*P **P 14 01 03.4 +0.5**
VIS AMb AMB 14 01 07.7
comp=Z,118nm,1.7s,mb5.5
VIS *i*S **S 14 08 39.4 +0.7**
DBJI Dramaga 54.47 224 P **P 14 01 05.1 +1.7**
comp=Z,92nm,1.7s,comp=Z,3µm,mb5.4
SVE Sverdlovsk 55.00 318⇓*e*P **P 14 01 07.1 +0.4**
SVE *e* 14 03 17.9
SVE *e*S **S 14 08 51.2 +5.5**
SVE pmax pmax
comp=Z,420nm,1.2s,mb6.3
SVE MLR MLR
comp=Z,15µm,19.0s,MS6.1
SKAG Skagway 55.34 38 *e*P **P 14 01 09.9 +0.8**
comp=Z,119nm,1.1s,mb5.8
NGP Nagpur 55.97 272 *e*P **P 14 01 12.3 -1.9**
NGP *ex* x 14 01 14.9
comp=Z,226nm,1.4s
NGP *ex* x 14 09 05.4
SIT Sitka 56.04 41 PFAKE 14 01 30.0 +16
SIT LR LR
comp=Z,4µm,22.0s,MS5.5
SOKR Solikamsk 56.16 322*c i*P **P 14 01 15.1 +0.1**
SOKR S **S 14 09 13.7 +13**
SOKR pmax pmax
comp=Z,190nm,1.1s,mb6.0
SOKR MLR MLR
comp=Z,6µm,22.0s,MS5.7
ARU Arti 56.21 318 P **P 14 01 15.5 +0.1**
comp=Z,2µm,1.4s,mb6.8,SNR=97
ARU Arti 56.21 318 *e*P **P 14 01 14.9 -0.5**
comp=Z,378nm,1.2s,mb6.3
ARU LR LR
comp=Z,11µm,19.0s,MS6.0
ARU Arti 56.21 318*c i*P **P 14 01 15.2 -0.2**
ARU *e* 14 02 10.8
ARU *e* 14 03 17.5
ARU *e*S **S 14 09 05.8 +3.9**
ARU *e*SS SS 14 12 49.0 +0.8
ARU pmax pmax
comp=Z,571nm,1.7s,mb6.3
ARU MLR MLR
comp=Z,12µm,18.0s,MS6.0
AJM Ajmer 56.80 280⇑*i*P **P 14 01 19.7 -0.4**
AJM AMb AMB 14 01 22.2
comp=Z,165nm,1.3s,mb5.9
POHA Pohakuloa 56.95 89 PFAKE 14 01 30.0 +8.8
POHA LR LR
comp=Z,5µm,21.0s,MS5.6
VJD Vijayawada 57.19 266 *ex* x 14 01 38.0
CTA Charters Tower 57.31 175 *e*P **P 14 01 23.8 +0.2**
comp=Z,7.5nm,1.4s,mb4.5
CTA *ep*P pP 14 01 33.8 -1.4
CTA *e*S **S 14 09 14.8 -2.2**
CTAO Charters Tower 57.31 175 *e*P **P 14 01 24.6 +1.0**
comp=Z,53nm,1.4s,mb5.4
CTAO LR LR
comp=Z,1µm,20.0s,MS5.0
CTAO Charters Tower 57.31 175 *e*P **P 14 01 24.6 +1.1**
CTAO pmax pmax
comp=Z,53nm,1.4s,mb5.4
CTAO MLR MLR
comp=Z,1µm,20.0s,MS5.0
WRAB Tennant Creek 57.40 188 P **P 14 01 23.0 -1.2**
comp=Z,368nm,0.9s,mb6.4,SNR=21
WRAB Tennant Creek 57.40 188 *e*P **P 14 01 23.0 -1.2**
comp=Z,56nm,0.9s,mb5.6
WRAB LR LR
comp=Z,4µm,22.0s,MS5.5
WB2 Warramunga Arr 57.41 188 *e*P **P 14 01 22.3 -1.9**
WB2 *ep*P pP 14 01 34.6 -1.3
WB2 *e*S **S 14 09 12.7 -5.6**
KBL Kabul 57.44 291 *e*P **P 14 01 24.1 -0.3**
comp=Z,205nm,1.2s,mb6.0
KBL Kabul 57.44 291 P **P 14 01 24.3 -0.2**
KBL pmax pmax
comp=Z,200nm,1.2s,mb6.0
FUNA Funafuti 57.63 134 PFAKE 14 01 40.0 +14
FUNA LR LR
comp=Z,13µm,21.0s,MS6.0
WRAK Wrangell Islan 57.80 41 PFAKE 14 01 40.0 +13
WRAK LR LR
comp=Z,3µm,21.0s,MS5.3
AKL Akola 57.83 273 *e*P **P 14 01 27.5 +0.1**
AKL AMb AMB 14 01 30.2
comp=Z,212nm,3.2s
AB31 Akbulak array 57.84 310 P **P 14 01 26.5 -0.6**
AB31 pmax pmax
comp=Z,53nm,0.6s,mb5.8
DLBC Dease Lake 58.27 38 P **P 14 01 31.1 +1.2**
comp=Z,26nm,1.0s,mb5.2,baz=291,slow=7.8,SNR=17
DLBC Dease Lake 58.27 38 *e*P **P 14 01 31.1 +1.2**
HYB Hyderabad 58.36 268 *e*P **P 14 01 31.0 -0.2**
comp=Z,100nm,0.5s,mb6.1
HYB *e*S **S 14 09 34.0 +2.8**
HYB Hyderabad 58.36 268 *e*P **P 14 01 31.0 -0.2**
HYB *e*S **S 14 09 34.0 +2.8**
HYB pmax pmax
comp=Z,100nm,0.5s,mb6.1
HYB Hyderabad 58.36 268 *i*P **P 14 01 31.0 -0.2**
comp=Z,100nm,0.5s,mb6.1
HYB *ep*P pP 14 01 42.5 -0.4
HYB *es*P sP 14 01 46.5 -1.0
HYB *e*PcP PcP 14 02 21.5 -0.3
HYB *e*PP PP 14 03 42.0 +1.5
HYB *e*S **S 14 09 30.0 -1.2**
HYB LR LR 14 28 44.0
comp=Z,5.6nm,20.0s
AKTO Aktyubinsk 58.56 312 LR LR 14 28 00.1
comp=Z,8µm,19.4s,MS5.9,baz=87,slow=37
LATR Latur 59.41 271 *e*P **P 14 01 37.3 -1.1**
MDRS Chennai 59.47 263 *ex* x 14 09 54.2
ALE Alert 59.77 4 P **P 14 01 40.0 0.0**
comp=Z,1µm,1.1s,mb6.8,SNR=36
SPITS Spitsbergen Ar 60.23 349 P **P 14 01 43.0 -0.2**
comp=Z,14nm,0.7s,mb5.1,baz=35,slow=7.1,SNR=18
SPITS LR LR 14 30 21.7
comp=Z,4µm,20.6s,MS5.5,baz=330,slow=38
SPITS Spitsbergen Ar 60.23 349 P **P 14 01 43.0 -0.2**
SPITS pmax pmax
comp=Z,14nm,0.7s
SPITS MLR MLR
comp=Z,4µm,20.6s
SPB4 Spitsbergen Ar 60.23 349 *e*P **P 14 01 43.1 -0.1**
KBS Kingsbay 60.35 350 *e*P **P 14 01 44.6 +0.6**
comp=Z,107nm,1.0s,mb5.8
KBS LR LR
comp=Z,3µm,19.0s,MS5.4
KBS Kingsbay 60.35 350 *e*P **P 14 01 44.1 +0.1**
KBS *e* 14 07 02.6
KBS *e*S **S 14 09 56.6 +1.3**
KBS AMS AMS 14 31 01.6
comp=Z,3µm,16.4s,MS5.5
ASAR Alice Springs 61.14 188 P **P 14 01 48.6 -1.3**
comp=Z,9.2nm,0.7s,mb5.0,baz=14,slow=6.2,SNR=115
ASAR pP pP 14 02 01.6 -0.1
comp=Z,30nm,0.7s,baz=13,slow=5.8,SNR=19
ASAR PKP2bc 14 31 13.3
comp=Z,0.7nm,0.8s,baz=168,slow=3.2,SNR=4.4
ASAR Alice Springs 61.14 188 P **P 14 01 48.6 -1.3**
ASAR pP pP 14 02 01.6 -0.1
ASAR ⇑*e* 14 31 13.3
ASAR Alice Springs 61.14 188 P **P 14 01 48.6 -1.3**
ASAR *PP pP 14 02 01.6 -0.1
ASAR pmax pmax
comp=Z,9.0nm,0.7s
ASAR pmax pmax
comp=Z,30nm,0.7s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
POO Poona 61.50 272⇑*i*P **P 14 01 50.0 -2.7**
comp=Z,833nm,2.0s,mb6.5
MBWA Marble Bar 61.75 203 *e*P **P 14 01 52.9 -1.2**
comp=Z,59nm,0.9s,mb5.7
MBWA LR LR
comp=Z,1µm,20.0s,MS5.1
LVZ Lovozero 61.87 336 *e*P **P 14 01 54.3 -0.1**
LVZ pmax pmax
comp=Z,130nm,1.4s,mb5.9
LVZ MLR MLR
comp=Z,9µm,17.0s,MS6.0

KAD Karad 61.90 271 ⇑ *i*P P **14 01 55.1 -0.3**
KAD AMb AMB 14 01 58.9
comp=Z,247nm,1.3s,mb6.2
BJO Bjornoya 62.14 345 *e*P P **14 01 56.8 +0.6**
BJO *e*S S **14 10 19.4 +1.3**
BJO AMS AMS 14 32 39.3
comp=Z,8µm,14.8s,MS6.0
RES Resolute Bay 62.24 15 *e*P P **14 01 56.1 -0.7**
comp=Z,4µm,1.1s
BHJ Bhuj 62.33 279 ⇑ *i*P P **14 01 58.4 +0.2**
BHJ AMb AMB 14 02 01.0
comp=Z,157nm,1.5s,mb5.9
APA Apatity 62.45 336 ⇓ *i*P P **14 01 58.7 +0.4**
APA *i*S S **14 10 22.0 -0.1**
APA *i* 14 11 47.0
APA pmax pmax
comp=Z,111nm,1.1s,mb5.9
APA MLR MLR
comp=Z,10µm,17.0s,MS6.1
EIDS Eidsvold 63.04 170 *e*P P **14 02 02.8 +0.1**
comp=Z,33nm,0.7s,mb5.6
KEV Kevo 63.18 339 *e*p P **14 02 02.3 -0.9**
comp=Z,19nm,0.7s,mb5.3
KEV Kevo 63.18 339 P P **14 02 03.4 +0.2**
KEV pmax pmax
comp=Z,150nm,1.2s,mb6.0
GOA Goa 63.20 269 *e*P P **14 02 04.5 +0.5**
GOA AMb AMB 14 02 07.1
comp=Z,448nm,0.3s,mb7.1
KOD Kodaikanal 63.33 262 *e*P P **14 02 05.0 0.0**
KOD AMb AMB 14 02 08.4
comp=Z,84nm,0.8s,mb5.9
YKA Yellowknife Ar 63.45 30 P P **14 02 04.5 -0.5**
comp=Z,12nm,0.6s,mb5.2,baz=303,slow=6.6,SNR=46
YKA LR LR 14 29 02.2
comp=Z,859nm,20.8s,MS4.9,baz=115,slow=35
YKA Yellowknife Ar 63.45 30 P P **14 02 04.5 -0.5**
YKA pmax pmax
comp=Z,12nm,0.6s
KLMR Klimovskoe 63.56 328 ⇑ *i*P P **14 02 05.4 -0.4**
KLMR *e* 14 04 25.3
KLMR *e*S S **14 10 32.8 -3.3**
KLMR *e*SS SS 14 14 46.6 +3.5
KLMR pmax pmax
comp=Z,233nm,1.3s,mb6.0
DZM Mont Dzumac 63.58 154 *e*P P **14 02 07.5 +1.2**
comp=Z,157nm,1.4s,mb5.8
ARCES ARCESS Array B 63.74 339 P P **14 02 06.9 +0.1**
comp=Z,30nm,0.9s,mb5.3,baz=50,slow=6.8,SNR=65
ARCES *e*P pP 14 02 18.8 +0.1
comp=Z,18nm,0.6s,baz=54,slow=4.4,SNR=6.2
ARCES LR LR 14 34 06.7
comp=Z,6µm,18.1s,MS5.8,baz=44,slow=40
ARCES ARCESS Array B 63.74 339 P P **14 02 06.9 +0.1**
ARCES *PP pP 14 02 18.8 +0.1
ARCES pmax pmax
comp=Z,30nm,0.9s
ARCES pmax pmax
comp=Z,18nm,0.6s
ARCES MLR MLR
comp=Z,6µm,18.1s
ABKT Ailbek 63.80 299 P P **14 02 08.7 +0.9**
comp=Z,487nm,1.1s,mb6.5,SNR=20
VAN Vannovskaya 63.80 299 P P **14 02 06.1 -1.7**
VAN S S **14 10 42.4 +2.4**
MNGI Mangalore 63.85 266 *e*P P **14 02 08.1 -0.3**
MNGI AMb AMB 14 02 11.1
comp=Z,141nm,1.6s,mb5.8
TRD Trivandrum 64.77 261 ⇑ *i*P P **14 02 14.2 -0.2**
TRD AMb AMB 14 02 18.0
comp=Z,68nm,1.4s,mb5.5
COCO West Island 64.77 230 PFAKE 14 02 30.0 +16
COCO LR LR
comp=Z,1µm,21.0s,MS5.0
TRO Tromso 65.45 341 *e*P P **14 02 18.1 +0.1**
TRO *e* 14 02 45.4
TRO *e*S S 14 10 59.9 +0.7
TRO AMS AMS 14 35 53.7
comp=Z,6µm,18.8s,MS5.8
DAG Danmarks Havn 65.46 355 ⇓ *i*P P **14 02 17.4 -0.6**
DAG pmax pmax
comp=Z,82nm,0.7s,mb5.9
DAG Danmarks Havn 65.46 355 ⇓ *i*P P **14 02 17.4 -0.6**
comp=Z,82nm,0.7s,mb5.9
C03A Quillayute Air 65.70 47 ⇓P P **14 02 20.6 +0.6**
baz=66
JOF Joensuu 65.74 332 *e*p P **14 02 18.6 -1.4**
comp=Z,22nm,0.7s,mb5.3
JOF Joensuu 65.74 332 *e*P P **14 02 18.6 -1.4**
JOF pmax pmax
comp=Z,22nm,0.7s,mb5.3
XMAS Kiritimati 65.92 107 PFAKE 14 02 30.0 +8.1
XMAS LR LR
comp=Z,12µm,19.0s,MS6.1
PGC Sidney 66.00 46 P P **14 02 23.4 +1.6**
B04A Port Angeles 66.26 47 ⇓P P **14 02 24.1 +0.5**
baz=66
NLWA Neilton Lookou 66.38 48 *e*P P **14 02 24.9 +0.6**
comp=Z,112nm,1.3s,mb5.7
NLWA LR LR
comp=Z,3µm,20.0s,MS5.4
NLWA Neilton Lookou 66.38 48 ⇓P P **14 02 24.7 +0.3**
baz=66,SNR=6.5
A04A Legoe Bay, Lum 66.39 46 ⇑P P **14 02 24.7 +0.3**
baz=66
D03A Wishkah Elem. 66.58 48 ⇓P P **14 02 25.8 +0.2**
baz=66
A05A Maple Falls 66.61 45 ⇑P P **14 02 25.2 -0.5**
baz=66
C04A Brinnon 66.74 47 ⇓P P **14 02 26.7 +0.1**
baz=66
C04A ⇓S S 14 11 17.5 +1.8
baz=66
A06A Chilliwack 66.90 45 ⇑P P **14 02 26.8 -0.8**
baz=67
B05A Bryant 66.97 46 ⇑P P **14 02 28.1 0.0**
baz=67,SNR=5.9
B05A ⇑S S 14 11 19.1 +0.7
baz=67
E03A Lebam 66.99 48 ⇑P P **14 02 27.9 -0.4**
baz=67
E03A ⇑S S 14 11 20.5 +1.9
baz=67
MOS Moscow 67.07 323 *e*P P **14 02 26.3 -2.3**
MOS *e* 14 02 52.8
MOS *e* 14 04 56.4
MOS *e*S S 14 11 25.0 +5.6
MOS *e*PS 14 12 03.7
MOS *i* 14 12 21.0
MOS *e*SS SS 14 15 46.2 +8.3
MOS pmax pmax
comp=Z,311nm,1.4s,mb6.2
MOS pmax pmax
comp=Z,800nm,1.9s,mb6.4
MOS MLR MLR
comp=Z,5µm,15.0s,MS5.8
JCW Jim Creek 67.10 46 *e*P P **14 02 28.9 -0.1**
D04A Dobbs Creek Ra 67.15 48 ⇑P P **14 02 30.2 +0.9**
baz=67
B06A Marblemount 67.19 46 ⇓P P **14 02 29.4 -0.1**
baz=67
RPW Rockport 67.21 46 *e*P P **14 02 29.3 -0.3**
comp=Z,4.4nm,0.7s,mb4.6
BMW Boistfort Moun 67.22 48 P P **14 02 24.5 -5.2**
AFI Afiamalu 67.23 130 PFAKE 14 02 40.0 +10
AFI LR LR
comp=Z,5µm,22.0s,MS5.7
F03A Seaside 67.30 49 ⇓P P **14 02 29.4 -0.8**
baz=67
E04A Onalaska 67.46 48 ⇓P P **14 02 31.7 +0.5**
baz=67
C05A Tolt Reservoir 67.50 47 ⇑P P **14 02 31.4 -0.1**
baz=67
C05A ⇓S S 14 11 26.6 +1.9
baz=67
A07A Ashnola River, 67.54 45 ⇓P P **14 02 31.2 -0.5**
baz=67,SNR=8.1
VRHR Novokhopersk 67.54 318 *e*P P **14 02 30.8 -0.9**
VRHR *e**SP sP 14 02 42.0 -6.2
VRHR pmax pmax
comp=Z,70nm,0.8s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,70nm,0.7s
VRHR MLR MLR
comp=Z,10µm,17.0s,MS6.1
VRHR MLR MLR
comp=N,5µm,16.0s,MS6.0
VRHR MLR MLR
comp=E,6µm,16.0s,MS6.0
D05A Enumclaw 67.59 47 ⇓P P **14 02 31.6 -0.4**
baz=67
D05A ⇓S S 14 11 28.2 +2.4
baz=67
G03A Yamhill 67.78 49 ⇑P P **14 02 33.2 -0.1**
baz=68
C06A Tall Timber Ra 67.84 46 ⇑P P **14 02 33.9 +0.3**
baz=68
C06A ⇑S S 14 11 30.2 +1.4
baz=68
LON Longmire 67.92 47 *e*P P **14 02 34.4 +0.3**
comp=E,28nm,1.2s,mb5.2
LON Longmire 67.92 47 P P **14 02 34.3 +0.2**
LON pmax pmax
comp=Z,28nm,1.2s,mb5.2
OBN Obninsk 67.92 323 P P **14 02 33.7 -0.3**
comp=Z,731nm,1.5s,mb6.5,SNR=6.4
OBN Obninsk 67.92 323 *e*P P **14 02 33.5 -0.4**
comp=Z,286nm,1.4s,mb6.1
OBN LR LR
comp=Z,6µm,19.0s,MS5.8
OBN Obninsk 67.92 323 ⇑ *e*P P **14 02 33.8 -0.2**
OBN *e* 14 05 02.1
OBN *i*S S 14 11 27.8 -1.7
OBN *i*SS SS 14 15 49.0 -2.0
OBN pmax pmax
comp=Z,235nm,1.5s,mb6.0
OBN MLR MLR
comp=Z,5µm,18.0s,MS5.8
F04A Amboy 67.98 48 ⇓P P **14 02 34.6 +0.1**
baz=68,SNR=7.0
F04A ⇓S S 14 11 32.6 +2.0
baz=68
PUL Pulkovo 67.98 329 *e*P P **14 02 34.7 +0.4**
B07A Winthrop 68.00 45 ⇑P P **14 02 34.7 +0.1**
baz=68,SNR=7.2
B07A ⇓S S 14 11 32.0 +1.3
baz=68
E05A Randle 68.05 48 ⇑P P **14 02 34.8 -0.2**
baz=68,SNR=5.5
NLW Nelson Butte 68.08 46 P P **14 02 35.8 +0.7**
KAF Kangasniemi 68.08 333 *ep* P **14 02 33.4 -1.5**
comp=Z,25nm,0.7s,mb5.3,baz=49,slow=6.0
KAF Kangasniemi 68.08 333 *e*P P **14 02 33.4 -1.5**
KAF pmax pmax
comp=Z,25nm,0.7s,mb5.3
ARMA Armidale 68.08 171 *e*P P **14 02 34.6 -0.5**
ARMA *e*pP pP 14 02 45.9 -1.2
ARMA *e*S S 14 11 31.7 -0.1
H03A Soap Creek Ran 68.11 50 ⇑P P **14 02 36.1 +0.8**
baz=68
I02A Mapleton 68.12 51 ⇓P P **14 02 35.2 -0.2**
baz=68
COR Corvallis 68.15 50 *e*P P **14 02 36.5 +0.9**
comp=Z,79nm,1.0s,mb5.7
COR LR LR
comp=Z,2µm,22.0s,MS5.3
COR Corvallis 68.15 50 *e*P P **14 02 36.5 +0.9**
COR pmax pmax
comp=Z,79nm,1.0s,mb5.7
COR MLR MLR
comp=Z,2µm,22.0s,MS5.3
A08A Turner Farm, O 68.21 44 ⇑P P **14 02 35.9 0.0**
baz=68,SNR=9.2
A08A ⇑S S 14 11 33.8 +0.5
baz=68
D06A Cle Elum 68.25 47 ⇑P P **14 02 36.1 -0.1**
baz=68
G04A Mulino 68.33 49 ⇑P P **14 02 36.9 +0.2**
baz=68
G04A ⇑S S 14 11 35.8 +1.1
baz=68
ETW Entiat 68.33 46 *e*P P **14 02 36.6 -0.1**
comp=Z,142nm,1.3s,mb5.8
K01A Sixes 68.34 52 ⇓P P **14 02 36.9 +0.1**
baz=68
MAK Makhachkala 68.37 308 *i*P P **14 02 34.5 -2.5**
MAK *e* 14 02 58.4
MAK *i* 14 05 11.3
MAK *e*PPP 14 06 53.5
MAK *e*S S 14 11 34.1 -1.2
MAK *e* 14 12 31.8
MAK pmax pmax
comp=Z,276nm,1.6s,mb6.0
MAK MLR MLR
comp=Z,6µm,20.0s,MS5.8
TBM Table Mountain 68.41 47 P P **14 02 37.7 +0.6**
C07A Waterville 68.44 46 ⇓P P **14 02 37.1 -0.3**
baz=68,SNR=10.0
C07A ⇓S S 14 11 35.6 -0.3
baz=68
I03A Eugene 68.48 51 ⇑P P **14 02 38.2 +0.5**
baz=68
B08A Colville Reser 68.50 45 ⇓P P **14 02 37.4 -0.3**
baz=68,SNR=7.6
E06A Yakima 68.51 47 ⇑P P **14 02 38.3 +0.5**
baz=68
E06A ⇓S S 14 11 38.6 +1.7
baz=68
F05A White Salmon 68.58 48 ⇑P P **14 02 38.5 +0.2**
baz=68
F05A ⇓S S 14 11 39.9 +2.2
baz=68
A09A Danville 68.58 44 ⇓P P **14 02 38.1 -0.2**
baz=68,SNR=7.3
J02A Umpqua 68.61 51 ⇓P P **14 02 38.0 -0.5**
baz=68
VLL Laurance Lake 68.67 49 P P **14 02 39.9 +1.1**
D07A Quincy 68.75 46 ⇑P P **14 02 38.7 -0.7**
baz=68
D07A ⇑S S 14 11 41.5 +1.8
baz=68
HOOD Mount Hood Mea 68.76 49 *e*P P **14 02 39.6 +0.2**
comp=Z,208nm,1.4s,mb5.9
H04A Detroit Lake 68.78 50 ⇓P P **14 02 39.4 -0.2**
baz=68,SNR=6.4
H04A ⇑S S 14 11 40.9 +0.8
baz=68
VSR Storozhevoye 68.78 319 *c i*P P **14 02 39.0 -0.4**
VSR *e**SP sP 14 02 50.6 -5.4
VSR *e*S S 14 11 33.2 -6.7
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.3
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,40nm,0.8s
VSR smax
comp=N,270nm,9.5s
VSR smax
comp=Z,80nm,6.3s
VSR smax
comp=E,190nm,7.0s
VSR MLR MLR
comp=Z,3µm,16.0s,MS5.6
VSR MLR MLR
comp=N,2µm,17.0s,MS5.8
VSR MLR MLR
comp=E,4µm,16.0s,MS5.8
VORD Divnogorie 68.85 319 *e*P P **14 02 39.5 -0.4**
VORD *e**SP sP 14 02 51.0 -5.4
VORD *e*S S 14 11 36.8 -4.0
VORD pmax pmax
comp=Z,110nm,1.0s,mb5.7
VORD pmax pmax
comp=N,120nm,0.6s
VORD pmax pmax
comp=E,90nm,0.6s
VORD smax
comp=N,870nm,9.1s
VORD smax
comp=Z,240nm,6.5s
VORD smax
comp=E,270nm,7.1s
VORD MLR MLR
comp=Z,10µm,17.0s,MS6.1
VORD MLR MLR
comp=N,2µm,14.0s,MS6.1
VORD MLR MLR
comp=E,7µm,16.0s,MS6.1
EPH Ephrata 68.89 46 P P **14 02 40.3 +0.2**
STKA Stephens Creek 68.89 180 *e*P P **14 02 39.5 -0.6**
comp=E,10nm,0.8s,mb4.8
STKA *e*pP pP 14 02 51.7 -0.4
STKA *e*S S 14 11 36.7 -4.6
STKA Stephens Creek 68.89 180 P P **14 02 39.8 -0.3**
comp=E,9.1nm,0.7s,mb4.8,baz=340,slow=7.7,SNR=15
STKA pP pP 14 02 51.9 -0.2
comp=E,31nm,0.8s,baz=338,slow=7.5,SNR=16
STKA PKPPKP 14 30 51.5
comp=E,5.5nm,1.1s,baz=162,slow=3.2,SNR=3.2
STKA Stephens Creek 68.89 180 *e*P P **14 02 39.8 -0.3**
comp=E,6.7nm,0.8s,mb4.6
FORT Forrest 68.97 192 *e*P P **14 02 40.3 -0.3**
comp=E,114nm,0.5s,mb6.1
FORT Forrest 68.97 192 *e*P P **14 02 40.1 -0.5**
comp=E,128nm,0.6s,mb6.0
C08A Higginbotham F 68.97 45 ⇑P P **14 02 40.5 -0.1**
baz=69
C08A ⇓S S 14 11 42.0 -0.2
baz=69
K02A Glendale 68.98 52 ⇑P P **14 02 40.9 +0.1**
baz=69,SNR=5.2
EDM Edmonton 68.99 38 *e*P P **14 02 40.1 -0.6**
G05A Wamic 69.00 49 ⇓P P **14 02 41.3 +0.3**
baz=69,SNR=5.6
F06A Goldendale 69.04 48 ⇑P P **14 02 41.4 +0.2**
baz=69
IRO Indian Ridge 69.09 50 P P **14 02 41.9 +0.4**
MOR8 Moi Rana 69.10 340 *e*P P **14 02 40.1 -1.1**
MOR8 Moi Rana 69.10 340 *e*P P **14 02 40.1 -1.1**
MOR8 AMb AMB 14 02 40.4
comp=Z,150nm,1.2s,mb5.8
B09A Rice 69.13 45 ⇑P P **14 02 41.7 +0.1**
baz=69,SNR=9.0
A10A Northport 69.15 44 ⇓P P **14 02 41.6 -0.2**
baz=69,SNR=8.8
E07A Sunnyside 69.16 47 ⇑P P **14 02 42.0 +0.1**
baz=69,SNR=9.9
L02A Cave Junction 69.23 52 ⇑P P **14 02 42.9 +0.5**
baz=69
CROR Criterion Ridg 69.34 49 P P **14 02 43.8 +0.8**
GBL Gable Mountain 69.37 47 P P **14 02 43.8 +0.6**
OD2 Odessa Site #2 69.37 46 *e*P P **14 02 42.7 -0.4**
comp=Z,143nm,1.6s,mb5.7
KRMB Red Mountain 69.37 53 *e*P P **14 02 44.6 +1.3**
comp=Z,190nm,1.9s,mb5.7
H05A Madras 69.38 49 ⇓P P **14 02 43.3 +0.1**
baz=69,SNR=8.5
C09A Chrisman Ranch 69.39 45 ⇑P P **14 02 43.1 -0.2**
baz=69,SNR=8.5
HUMO Hull Mountain 69.40 52 *e*P P **14 02 43.6 +0.1**
comp=Z,144nm,2.0s,mb5.6
HUMO LR LR
comp=Z,2µm,22.0s,MS5.3
RSW Rattlesnake Hi 69.40 47 *e*P P **14 02 43.6 +0.2**
comp=Z,166nm,1.8s,mb5.7
G06A Carlson Farm, 69.41 48 ⇓P P **14 02 43.6 +0.1**
baz=69,SNR=9.4
D08A Wollman Farm, 69.43 46 ⇑P P **14 02 43.1 -0.4**
baz=69,SNR=10
HAWA Hanford 69.44 47 *e*P P **14 02 42.6 -1.0**
comp=Z,179nm,2.0s,mb5.7
HAWA LR LR
comp=Z,1µm,19.0s,MS5.2
WRD Warden 69.44 46 P P **14 02 43.4 -0.2**
F07A Phinny Hill Vi 69.48 48 ⇑P P **14 02 44.1 +0.2**
baz=69,SNR=7.4
VTHM Trough 69.49 48 P P **14 02 44.8 +0.8**
I05A Bend 69.61 50 ⇓P P **14 02 44.9 +0.2**
baz=69
E08A Dider Farm, El 69.66 47 ⇓P P **14 02 45.0 +0.1**
baz=69,SNR=5.3
B10A Chitwood Farm, 69.71 44 ⇓P P **14 02 45.0 -0.2**
baz=70
D09A Jones Farm, Ri 69.78 46 ⇑P P **14 02 45.7 0.0**
baz=70
NEW Newport 69.79 44 *e*P P **14 02 45.4 -0.3**
comp=Z,61nm,1.4s,mb5.3
NEW LR LR
comp=Z,2µm,21.0s,MS5.4
NEW Newport 69.79 44 *e*P P **14 02 45.4 -0.3**
NEW pmax pmax
comp=Z,61nm,1.4s
NEW MLR MLR
comp=Z,2µm,21.0s
A11A Hall Mountain, 69.82 43 ⇓P P **14 02 46.3 +0.5**
baz=70,SNR=22
JMIC Jan Mayen 69.84 350 LR LR 14 36 55.5
comp=Z,1µm,18.2s,MS5.3,baz=17,slow=39
H06A Lindquist Farm 69.86 49 ⇓P P **14 02 46.1 -0.2**
baz=70,SNR=9.8
C10A Spilker Farm, 69.93 45 ⇓P P **14 02 46.5 -0.1**
baz=70
G07A Ruggs Ranch, H 69.97 48 ⇑P P **14 02 46.7 -0.2**
baz=70,SNR=7.3
BUOR Burton Butte 70.02 52 P P **14 02 48.3 +1.1**
YBH Yreka Blue Hor 70.02 52 P P **14 02 48.0 +0.8**
comp=Z,7.3nm,1.0s,mb4.6,baz=307,slow=3.5,SNR=14
YBH pP pP 14 03 00.1 +0.8
comp=Z,20nm,1.0s,baz=280,slow=1.4,SNR=11
YBH Yreka Blue Hor 70.02 52 *e*P P **14 02 47.9 +0.6**
comp=Z,213nm,2.0s,mb5.7
YBH LR LR
comp=Z,2µm,22.0s,MS5.2
YBH Yreka Blue Hor 70.02 52 P P **14 02 48.0 +0.7**
YBH *PP pP 14 03 00.1 +0.9
YBH pmax pmax
comp=Z,20nm,1.0s
B11A Sandpoint 70.11 44 ⇑P P **14 02 47.8 +0.1**
baz=70,SNR=8.1
E09A Wood Farm, Sta 70.18 46 ⇓P P **14 02 48.0 -0.2**
baz=70,SNR=11
F08A Pendleton 70.20 47 ⇑P P **14 02 48.5 +0.2**
baz=70,SNR=11
A12A Yaak River Ran 70.22 43 ⇓P P **14 02 48.6 +0.2**
baz=70,SNR=10
VSU Vasula 70.24 330 ⇑ *i*P P **14 02 48.5 +0.2**
VSU Vasula 70.24 330 *c i*P P **14 02 48.4 +0.1**
VSU pmax pmax
comp=Z,209nm,1.6s,mb5.8
VSU MLR MLR
comp=Z,6µm,15.0s,MS5.9
SUMG Summit 70.35 0 *e*P P **14 02 49.5 +0.7**
comp=Z,52nm,1.1s,mb5.4
I06A Prineville 70.37 49 ⇑P P **14 02 49.6 +0.2**
baz=70,SNR=14
D10A Wagner Farm, O 70.37 45 ⇑P P **14 02 49.1 -0.2**
baz=70,SNR=6.9
G08A Pilot Rock 70.38 48 ⇓P P **14 02 49.3 0.0**
baz=70,SNR=9.1
H07A Lands Inn, Kim 70.40 49 ⇓P P **14 02 49.3 -0.2**
baz=70
LNOR Lincton Mounta 70.45 47 *e*P P **14 02 49.9 +0.1**
comp=Z,32nm,1.3s,mb5.1
LNOR Lincton Mounta 70.45 47 *e*P P **14 02 49.9 +0.1**
LNOR pmax pmax
comp=Z,32nm,1.3s,mb5.1
DGRG David-gareji 70.52 308 P P **14 02 50.3 0.0**
B12A Libby 70.52 44 ⇓P P **14 02 50.1 -0.1**
baz=70
KCPM Cahto Peak 70.56 55 *e*P P **14 02 50.4 -0.2**
comp=Z,63nm,1.5s,mb5.3
KIPM Iron Peak 70.56 54 *e*P P **14 02 49.4 -1.2**
comp=Z,101nm,1.4s,mb5.6
K05A Summer Lake 70.62 51 ⇓P P **14 02 51.5 +0.6**
baz=70,SNR=20
I07A Izee 70.72 49 ⇑P P **14 02 52.0 +0.5**
baz=70,SNR=13
WDC Whiskeytown Da 70.75 53 *e*P P **14 02 51.6 -0.1**
comp=Z,187nm,2.0s,mb5.7
WDC LR LR
comp=Z,1µm,21.0s,MS5.2
WDC Whiskeytown Da 70.75 53 *e*P P **14 02 51.6 -0.1**
WDC pmax pmax
comp=Z,187nm,2.0s,mb5.7
WDC MLR MLR
comp=Z,1µm,21.0s,MS5.2
F09A S2 Ranch, Elgi 70.76 47 ⇓P P **14 02 51.7 0.0**
baz=70,SNR=7.0
TBLG Delisi 70.76 308 *e*P P **14 02 52.0 +0.2**
TBLG Delisi 70.76 308 P P **14 02 52.0 +0.3**
J06A Christmas Vall 70.78 50 ⇓P P **14 02 52.0 +0.1**
baz=71,SNR=14
E10A Myers Farm, Un 70.79 46 ⇑P P **14 02 51.7 -0.1**
baz=70
KIV Kislovodsk 70.80 311 P P **14 02 52.0 0.0**
comp=Z,1µm,1.0s,mb6.7,SNR=19
KIV Kislovodsk 70.80 311 P P **14 02 52.8 +0.8**

SNR=49
KIV Kislovodsk 70.80 311 *e*P P 14 02 52.3 +0.3
comp=Z,267nm,1.1s,mb6.1
KIV LR LR
comp=Z,4µm,19.0s,MS5.7
KIV Kislovodsk 70.80 311 *c i*P P 14 02 52.5 +0.5
KIV *e* 14 03 12.7
KIV *e*S S 14 12 06.8 +2.9
KIV *e*SS SS 14 16 35.9 0.0
KIV pmax pmax
comp=Z,190nm,0.9s,mb6.0
KIV pmax pmax
comp=Z,1µm,6.9s
LASM Arnica Sink 70.81 52 P P 14 02 53.1 +1.0
D11A Klaveano Farm, 70.91 45 ⇓P P 14 02 51.9 -0.7
baz=71,SNR=11
H08A Prairie City 70.97 48 ⇑P P 14 02 53.1 +0.1
baz=71,SNR=14
F10A Beach Ranch, E 71.01 46 ⇓P P 14 02 53.4 +0.2
baz=71,SNR=5.7
WBK Wadi Bani Khal 71.01 284 P P 14 02 54.5 +0.9
SNR=21
C12B Naegeli Ranch, 71.01 44 ⇓P P 14 02 53.1 -0.1
baz=71
GOR Gori 71.02 309 P P 14 02 53.0 -0.3
NSS Namsos 71.02 339 *e*P P 14 02 51.4 -1.5
NSS *e*S S 14 12 05.9 +0.1
NSS AMS AMS 14 37 05.5
comp=Z,6µm,17.4s,MS5.9
G09A Cove 71.08 47 ⇓P P 14 02 53.5 -0.2
baz=71,SNR=13
WALA Waterton Lakes 71.09 42 *e*P P 14 02 53.6 -0.1
comp=Z,74nm,1.3s,mb5.5
ONI Oni 71.10 309 P P 14 02 54.4 +0.6
BIDO Bidbid 71.16 286 P P 14 02 55.5 +1.0
SNR=30
B13A Whitefish 71.19 43 ⇑P P 14 02 54.6 +0.3
baz=71,SNR=16
J07A Hines 71.23 50 ⇑P P 14 02 55.1 +0.5
baz=71,SNR=23
BANOM Banah 71.25 289 P P 14 02 55.6 +0.6
SNR=14
HOPS Hopland 71.27 55 PFAKE 14 03 10.0 +15
HOPS LR LR
comp=Z,3µm,22.0s,MS5.5
E11A Bogner Ranch, 71.37 46 ⇑P P 14 02 54.9 -0.5
baz=71,SNR=8.8
I08A Drewsey 71.38 49 ⇓P P 14 02 55.4 0.0
baz=71,SNR=19
A14A Double T Ranch 71.40 42 ⇓P P 14 02 55.4 -0.2
baz=71,SNR=16
MOD Modoc 71.44 51 *e*P P 14 02 55.9 +0.1
comp=Z,43nm,1.2s,mb5.3
MOD LR LR
comp=Z,2µm,22.0s,MS5.3
G10A Bishop Farm, J 71.45 47 ⇓P P 14 02 56.0 +0.1
baz=71,SNR=20
SMDO Samad 71.47 285 P P 14 02 57.2 +0.8
SNR=40
H09A Durkee 71.49 48 ⇓P P 14 02 56.6 +0.5
baz=71,SNR=6.4
C13A Hot Springs 71.53 44 ⇑P P 14 02 56.6 +0.3
baz=71,SNR=9.6
BMO Blue Mountains 71.59 47 *e*P P 14 02 56.7 -0.1
comp=Z,51nm,1.3s,mb5.3
BMO LR LR
comp=Z,2µm,22.0s,MS5.3
K07A Rock Creek Ran 71.65 50 ⇓P P 14 02 57.5 +0.3
baz=71,SNR=15
E12A Beaver Dam Sad 71.70 45 ⇑P P 14 02 57.6 +0.2
baz=71,SNR=28
J08A Circle Bar Ran 71.74 49 ⇑P P 14 02 57.9 +0.2
baz=72,SNR=14
HOQ Hoqain 71.75 286 P P 14 02 58.3 +0.2
SNR=31
A15A Johnson Ranch, 71.77 42 ⇓P P 14 02 57.7 -0.1
baz=72,SNR=12
JMDO Jabal Madar 71.81 285 P P 14 02 58.6 +0.2
SNR=31
O04C Chester 71.82 53 ⇑P P 14 02 58.6 +0.4
baz=72
I09A Lost Marbles R 71.83 48 ⇑P P 14 02 58.2 0.0
baz=72,SNR=12
NSHM Saint Helena R 71.83 55 *e*P P 14 02 58.6 +0.3
NSHM *e* pP 14 03 07.9 -2.4
B14A Marquette Ranc 71.84 43 ⇓P P 14 02 58.4 +0.2
baz=72,SNR=11
MCCM Marconi Confer 71.86 56 *e*P P 14 02 57.8 -0.8
MCCM LR LR
comp=Z,3µm,22.0s,MS5.5
G11A Walters Elk Ra 71.89 46 ⇑P P 14 02 58.0 -0.5
baz=72,SNR=61
D13A Huson 71.93 44 ⇓P P 14 02 58.2 -0.5
baz=72,SNR=11
L07A Adell 71.97 51 ⇑P P 14 02 59.3 +0.2
baz=72,SNR=21
HATD Hatta, Dubai 71.97 288 P P 14 02 59.8 +0.4
SNR=22
H10A Noah's Angus R 72.07 47 ⇓P P 14 02 59.3 -0.3
baz=72,SNR=31
K08A Mann Creek Ran 72.09 50 ⇓P P 14 03 00.2 +0.5
baz=72,SNR=18
OHCM Honcut 72.11 54 *e*P P 14 02 59.6 -0.4
KLBR Kellerberrin 72.13 201 *e*P P 14 02 59.0 -0.9
comp=Z,21nm,0.7s,mb5.2
Q03C Winters 72.16 55 ⇓P P 14 03 00.1 -0.2
baz=72
WVOR Wild Horse Val 72.17 50 *e*P P 14 03 00.4 +0.2
comp=Z,46nm,1.2s,mb5.3
WVOR LR LR
comp=Z,2µm,22.0s,MS5.4
WVOR Wild Horse Val 72.17 50 *e*P P 14 03 00.4 +0.2
WVOR pmax pmax
comp=Z,46nm,1.2s,mb5.3
WVOR MLR MLR
comp=Z,2µm,22.0s,MS5.4
J09A Fry Pan Ranch, 72.18 49 ⇑P P 14 03 00.5 +0.2
baz=72,SNR=34
B15A Bradely Ranch, 72.25 42 ⇓P P 14 03 00.5 -0.2
baz=72,SNR=30
F12A Elk City 72.26 46 ⇑P P 14 03 00.8 +0.1
baz=72,SNR=29
BSY Bisya 72.30 285 P P 14 03 01.7 +0.3
SNR=36
I10A Payette 72.33 48 ⇑P P 14 03 01.1 0.0
baz=72,SNR=11
MNK Minsk 72.33 326 ⇑*i*P P 14 02 58.0 -3.0
MNK *e*S S 14 12 17.0 -4.1
MNK *e* 14 13 00.0
MNK *e*SS SS 14 17 06.0 +7.3
MNK *e*SSS 14 20 10.0
MNK pmax pmax
comp=Z,490nm,1.5s,mb6.2
MNK pmax pmax
comp=E,380nm,1.5s
MNK pmax pmax
comp=N,510nm,1.5s
MNK MLR MLR
comp=Z,13µm,14.0s,MS6.4
MNK MLR MLR
comp=N,10µm,14.0s,MS6.4
MNK MLR MLR
comp=E,8µm,14.0s,MS6.4
N06A Buffalo Meadow 72.37 52 ⇓P P 14 03 01.5 0.0
baz=72,SNR=15
MSO Missoula 72.38 44 *e*P P 14 03 00.2 -1.2
comp=E,46nm,1.4s,mb5.2
MSO LR LR
comp=Z,1µm,22.0s,MS5.2
A16A West Butte Ran 72.39 41 ⇑P P 14 03 01.0 -0.4
baz=72,SNR=9.4
M07A Soldier Meadow 72.43 51 ⇓P P 14 03 02.2 +0.4
baz=72,SNR=20
H11A Donnelly 72.43 47 ⇑P P 14 03 01.3 -0.5
baz=72,SNR=20
E13A Victor 72.46 45 ⇑P P 14 03 01.5 -0.4
baz=72,SNR=7.0
D14A Greenough 72.47 44 ⇑P P 14 03 01.6 -0.3
baz=72,SNR=18
L08A Fields 72.48 50 ⇓P P 14 03 02.5 +0.3
baz=72,SNR=24
ARQ Araqi 72.49 286 P P 14 03 02.8 +0.3
SNR=38
BEKR Beckwourth 72.54 53 ⇑P P 14 03 02.4 -0.1
baz=72,SNR=21
C15A Salmond Ranch, 72.55 43 ⇑P P 14 03 02.6 +0.2
baz=72,SNR=18
K09A Rome 72.57 49 ⇑P P 14 03 02.9 +0.2
baz=72,SNR=17
DYDN Diyadin 72.64 307 *i* P P 14 03 04.0 +0.9
CAN Canberra 72.65 174 P P 14 03 02.3 -0.6
comp=Z,63nm,1.3s,mb5.4
CAN Canberra 72.65 174 P P 14 03 02.3 -0.6
CAN pmax pmax
comp=Z,63nm,1.3s,mb5.4
B16A M & M Farms, S 72.65 42 ⇑P P 14 03 02.7 -0.3
baz=72,SNR=7.5
CHMT Chamberlain Mo 72.71 44 *e*P P 14 03 02.5 -0.9
comp=Z,24nm,1.5s,mb4.9
O06A Flanigan 72.71 53 ⇑P P 14 03 03.6 +0.1
baz=72,SNR=8.8
J10A Berg Farm, Mel 72.73 48 ⇓P P 14 03 03.5 -0.1
baz=72
F13A Darby 72.77 45 ⇑P P 14 03 03.6 -0.2
baz=72,SNR=16
SOC Sochi 72.79 312 *i* P P 14 03 04.8 +0.9
SOC Sochi 72.79 312 *c i*P P 14 03 02.7 -1.2
SOC *e**SP sP 14 03 13.0 -7.5
SOC *e* 14 03 19.1
SOC *e*PPP 14 07 24.1
SOC *e*S S 14 12 26.7 0.0
SOC *e* 14 13 03.2
SOC *e*SS SS 14 17 05.1 -1.2
SOC pmax pmax
comp=Z,127nm,1.3s,mb5.7
SOC pmax pmax
comp=Z,717nm,5.6s
SOC MLR MLR
comp=Z,4µm,20.0s,MS5.7
A17A Triple J Farms 72.86 41 ⇑P P 14 03 03.9 -0.3
baz=73,SNR=28
BCA Borcka 72.86 309 *e*P P 14 03 02.6 -1.8
E14A Clinton 72.87 44 ⇑P P 14 03 04.0 -0.3
baz=73,SNR=7.5
M08A Happy Creek Ra 72.88 51 ⇓P P 14 03 05.0 +0.5
baz=73,SNR=10
DAGI Agillar 72.89 309 *i* P P 14 03 05.1 +0.5
DBOC Borcka 72.89 309 *i* P P 14 03 05.1 +0.5
N07B Gerlach 72.90 52 ⇑P P 14 03 05.0 +0.4
baz=73,SNR=7.9
I11A Placerville 72.92 48 ⇑P P 14 03 04.8 +0.1
baz=73,SNR=11
P06A Stead Airport, 72.94 53 ⇑P P 14 03 05.1 +0.2
baz=73
L09A Wilkinson Ranc 72.99 50 ⇓P P 14 03 05.7 +0.5
baz=73
C16A Fuhringer Ranc 73.00 42 ⇓P P 14 03 05.0 -0.1
baz=73,SNR=31
D15A Lincoln 73.03 43 ⇓P P 14 03 05.2 -0.1
baz=73
K10A MacKenzie Ranc 73.04 49 ⇓P P 14 03 05.6 +0.2
baz=73,SNR=18
DBAD Bademkaya 73.06 309 ⇑*i*P P 14 03 06.5 +0.9
R04C Big Horse Ranc 73.07 55 ⇓P P 14 03 05.4 -0.3
baz=73
H12A Diamond D Ranc 73.20 47 ⇓P P 14 03 06.1 -0.2
baz=73,SNR=16
B17A L&G Farms, Che 73.20 42 ⇓P P 14 03 06.0 -0.3
baz=73,SNR=22
G13A Cobalt 73.23 46 ⇓P P 14 03 06.1 -0.4
baz=73,SNR=21
WCN Washoe City 73.24 53 ⇑P P 14 03 06.8 +0.1
baz=73,SNR=8.9
PAHR Pah Rah Range 73.25 53 *e*P P 14 03 06.9 +0.2
comp=Z,294nm,1.9s,mb5.9
TUTA Tutak 73.28 307 *i* P P 14 03 08.0 +1.1
MFID Camas Ranch 73.29 48 ⇑P P 14 03 07.1 +0.2
baz=73,SNR=20
F14A Wisdom 73.30 45 ⇑P P 14 03 06.5 -0.4
baz=73
O07A Toulon 73.31 52 ⇓P P 14 03 07.3 +0.2
baz=73,SNR=22
E15A Deer Lodge 73.34 44 ⇑P P 14 03 06.8 -0.3
baz=73,SNR=13
FFC Flin Flon 73.34 33 P P 14 03 06.3 -0.7
comp=Z,394nm,0.9s,mb6.3,SNR=15
FFC Flin Flon 73.34 33 *e*P P 14 03 06.3 -0.7
comp=Z,129nm,1.3s,mb5.7
FFC LR LR
comp=Z,2µm,21.0s,MS5.4
FFC Flin Flon 73.34 33 *e*P P 14 03 06.3 -0.7
FFC pmax pmax
comp=Z,129nm,1.3s,mb5.7
FFC MLR MLR
comp=Z,2µm,21.0s,MS5.4
VANB Van 73.37 306 *e*P P 14 03 07.8 +0.3
TVAN Van 73.39 306 *e*P P 14 03 09.3 +1.7
ANN Anapa 73.41 314 *e*P P 14 03 06.6 -1.0
ANN *e**PP pP 14 03 18.1 -1.5
ANN *e*PPP 14 07 30.6
ANN *e*S S 14 12 35.5 +1.8
ANN pmax pmax
comp=Z,283nm,1.4s,mb6.0
ANN MLR MLR
comp=Z,4µm,20.0s,MS5.7
N08A GE Springer Mi 73.42 51 ⇓P P 14 03 07.6 -0.1
baz=73,SNR=12
M09A Marrel Ranch, 73.47 50 ⇑P P 14 03 08.5 +0.5
baz=73,SNR=7.4
I12A Atlanta 73.48 47 ⇑P P 14 03 08.1 +0.1
baz=73,SNR=55
HOMI Horasan 73.48 308 ⇑*i*P P 14 03 09.2 +1.1
H13A Challis 73.53 46 ⇑P P 14 03 08.5 +0.2
baz=73,SNR=33
NWAO Narrogin (SRO) 73.53 201 *e*P P 14 03 08.5 +0.2
comp=Z,37nm,0.9s,mb5.3
NWAO LR LR
comp=Z,1µm,22.0s,MS5.1
NWAO Narrogin (SRO) 73.53 201 *e*P P 14 03 08.5 +0.3
NWAO pmax pmax
comp=Z,37nm,0.9s
NWAO MLR MLR
comp=Z,1µm,22.0s
K11A Parker Ranch, 73.55 49 ⇑P P 14 03 08.7 +0.3
baz=73,SNR=20
CMB Columbia Colle 73.55 55 *e*P P 14 03 08.4 -0.2
comp=Z,116nm,1.5s,mb5.6
CMB LR LR
comp=Z,3µm,22.0s,MS5.6
CMB Columbia Colle 73.55 55 *e*P P 14 03 08.4 -0.2
CMB pmax pmax
comp=Z,116nm,1.5s,mb5.6
CMB MLR MLR
comp=Z,3µm,22.0s,MS5.6
D16A Dana Ranch, Ca 73.57 43 ⇓P P 14 03 08.7 +0.2
baz=73,SNR=10
SAO San Andreas Ge 73.58 56 PFAKE 14 03 20.0 +11
SAO LR LR
comp=Z,2µm,19.0s,MS5.4
G14A Jackson 73.58 45 ⇑P P 14 03 08.3 -0.2
baz=73
HRY Holter Researc 73.61 43 *e*P P 14 03 08.9 +0.2
comp=Z,34nm,0.9s,mb5.3
C17A Wharram Farm, 73.63 42 ⇓P P 14 03 08.5 -0.3
baz=73,SNR=13
FCC Fort Churchill 73.64 27 *e*P P 14 03 07.9 -0.7
comp=Z,131nm,1.2s,mb5.7
P07A Fallon 73.66 53 ⇓P P 14 03 09.5 +0.4
baz=73
B18A Beardsley Farm 73.68 41 ⇑P P 14 03 08.9 -0.2
baz=73,SNR=45
L10A Juniper Basin 73.69 49 ⇑P P 14 03 09.2 0.0
baz=73,SNR=13
O08A Rochester Mine 73.69 52 ⇓P P 14 03 09.5 +0.2
baz=74,SNR=14
HAKT HAKKARI 73.75 305 ⇑*i*P P 14 03 13.2 +3.5
N09A Rock Creek Ran 73.75 51 ⇓P P 14 03 10.0 +0.3
baz=74
F15A Butte 73.77 44 ⇑P P 14 03 09.5 -0.2
baz=74,SNR=60
DOMB Dombas 73.79 339 *e*P P 14 03 09.5 0.0
MOL Molde 73.80 340 *e*P P 14 03 10.3 +0.8
E16A East Helena 73.80 44 ⇓P P 14 03 10.3 +0.4
baz=74,SNR=17
J12A Stokes Ranch, 73.82 48 ⇓P P 14 03 10.1 +0.1
baz=74,SNR=13
HFS Hafjord 73.85 336 LR LR 14 38 20.5
comp=Z,15µm,19.6s,MS6.3,baz=31,slow=38
R06C Coleville 73.88 54 ⇑P P 14 03 10.6 +0.1
baz=74,SNR=11
ERZM Erzurum 73.90 308 *i* P P 14 03 11.7 +1.1
EZM Erzurum 73.91 308 *e*P P 14 03 11.7 +1.1
EGMT Eagleton 73.92 41 *e*P P 14 03 10.4 -0.1
comp=Z,2µm,0.7s,mb7.2
EGMT LR LR
comp=Z,2µm,20.0s,MS5.4
EGMT Eagleton 73.92 41 ⇓P P 14 03 10.5 -0.1
baz=74,SNR=21
NB2 NORSAR Subarra 73.94 337 P P 14 03 10.4 0.0
comp=Z,207nm,1.2s,mb5.9,baz=37,slow=6.2
NOA NORSAR Array B 73.94 337 P P 14 03 10.2 -0.1
comp=Z,86nm,1.1s,mb5.6,baz=39,slow=5.9,SNR=52
NOA pP pP 14 03 22.6 +0.2
comp=Z,37nm,1.0s,baz=39,slow=5.9,SNR=5.2
NOA LR LR 14 38 13.0
comp=Z,8µm,21.1s,MS6.0,baz=35,slow=38
NOA NORSAR Array B 73.94 337 P P 14 03 10.3 -0.1
NOA *PP pP 14 03 22.6 +0.2
NOA pmax pmax
comp=Z,86nm,1.1s
NOA pmax pmax
comp=Z,37nm,1.0s
NOA MLR MLR
comp=Z,8µm,21.1s
D17A Six Diamond Ra 73.96 43 ⇑P P 14 03 10.6 -0.2
baz=74,SNR=22
M10A I.L. Ranch, Tu 73.97 50 ⇑P P 14 03 11.4 +0.5
baz=74,SNR=16
S05C Merced 73.98 55 ⇓P P 14 03 10.8 -0.2
baz=74,SNR=10
I13A Wildhorse Cree 74.00 47 ⇑P P 14 03 11.4 +0.3
baz=74,SNR=19
DLMT Dillon 74.00 45 *e*P P 14 03 11.3 +0.2
comp=Z,169nm,1.4s,mb5.8
H14A Leadore 74.01 46 ⇑P P 14 03 10.9 -0.2
baz=74,SNR=8.0
HLID Hailey 74.04 47 *e*P P 14 03 11.5 +0.2
comp=Z,33nm,1.0s,mb5.2
HLID LR LR
comp=Z,1µm,20.0s,MS5.2
HLID Hailey 74.04 47 ⇓P P 14 03 11.3 +0.1
baz=74,SNR=23
L11A Cat Creek Ranc 74.07 49 ⇑P P 14 03 11.7 +0.2
baz=74,SNR=27
P08A Dixie Valley 74.08 52 ⇓P P 14 03 12.4 +0.8
baz=74
LCCM Lewis and Clar 74.11 44 P P 14 03 11.8 +0.1
AKASG Malin Array Be 74.13 322 P P 14 03 11.2 -0.5
comp=Z,29nm,0.6s,mb5.4,baz=45,slow=5.9,SNR=170
AKASG pP pP 14 03 23.9 +0.2
comp=Z,41nm,0.5s,baz=45,slow=6.1,SNR=16
AKASG PKPPKP 14 30 52.4
comp=Z,0.5nm,0.3s,baz=212,slow=0.3,SNR=4.4
AKASG LR LR 14 39 02.0
comp=Z,8µm,18.2s,MS6.0,baz=45,slow=38
AKASG Malin Array Be 74.13 322 P P 14 03 11.2 -0.5
AKASG pP pP 14 03 23.9 +0.2
AKASG P'P' 14 30 52.4
AKASG LR LR 14 39 02.0
AKASG Malin Array Be 74.13 322 P P 14 03 11.2 -0.5
AKASG *PP pP 14 03 23.9 +0.2
AKASG pmax pmax
comp=Z,29nm,0.6s
AKASG pmax pmax
comp=Z,41nm,0.5s
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG MLR MLR
comp=Z,8µm,18.2s
AKBB Malin Array Si 74.13 322 *e*P P 14 03 10.9 -0.7
AKBB Malin Array Si 74.13 322 P P 14 03 11.2 -0.5
TATV Tatvan 74.14 306 *i* P P 14 03 12.3 +0.3
KIEV Kiev 74.14 322 *e*P P 14 03 10.0 -1.7
comp=Z,63nm,0.7s,mb5.7
KIEV LR LR
comp=Z,6µm,19.0s,MS5.9
KIEV Kiev 74.14 322 *e*P P 14 03 10.0 -1.7
KIEV pmax pmax
comp=Z,63nm,0.7s,mb5.7
KIEV MLR MLR
comp=Z,6µm,19.0s,MS5.9
V03C Hunter Liggett 74.14 57 ⇑P P 14 03 12.1 +0.1
baz=74
G15A Dillon 74.18 45 ⇑P P 14 03 11.9 -0.2
baz=74,SNR=38
MCMT McKenzie Canyo 74.18 45 *e*P P 14 03 11.6 -0.5
comp=Z,4.8nm,0.9s,mb4.4
BMN Battle Mountai 74.19 51 *e*P P 14 03 12.3 +0.1
comp=Z,72nm,1.4s,mb5.4
BMN LR LR
comp=Z,2µm,20.0s,MS5.3
BMN Battle Mountai 74.19 51 *e*P P 14 03 12.3 +0.1
BMN pmax pmax
comp=Z,72nm,1.4s,mb5.4
BMN MLR MLR
comp=Z,2µm,20.0s,MS5.3
NAO01 NORSAR Array S 74.19 337 *e*P P 14 03 11.6 -0.3
comp=Z,112nm,1.2s,mb5.7
NAO01 LR LR
comp=Z,10µm,20.0s,MS6.1
U04C Hernandez Rese 74.25 56 ⇓P P 14 03 13.0 +0.4
baz=74
KTUT Trabzon 74.27 310 *e*P P 14 03 12.1 -0.6
J13A Cove Ranch, Pi 74.27 47 ⇑P P 14 03 12.7 +0.1
baz=74,SNR=25
F16A Kennard Place, 74.29 44 ⇓P P 14 03 12.9 +0.2
baz=74,SNR=37
E17A Martinsdale 74.29 43 ⇑P P 14 03 13.0 +0.3
baz=74,SNR=23
K12A Draper Farm, C 74.30 48 ⇓P P 14 03 13.0 +0.2
baz=74,SNR=15
O09A Fish Creek Ran 74.36 51 ⇓P P 14 03 13.8 +0.6
baz=74,SNR=12
BOZ Bozeman (W) 74.37 44 *e*P P 14 03 13.0 -0.1
comp=Z,81nm,1.4s,mb5.5
BOZ LR LR
comp=Z,1µm,21.0s,MS5.2
BOZ Bozeman (W) 74.37 44 ⇓P P 14 03 13.2 +0.1
baz=74,SNR=43
BOZ Bozeman (W) 74.37 44 *e*P P 14 03 13.0 -0.2
BOZ pmax pmax
comp=Z,81nm,1.4s,mb5.5
BOZ MLR MLR
comp=Z,1µm,21.0s,MS5.2
I14A Mackay 74.38 46 ⇓P P 14 03 13.8 +0.6
baz=74,SNR=59
D18A Linhart Farms, 74.41 42 ⇑P P 14 03 13.7 +0.3
baz=74,SNR=17
H15A Lima 74.42 46 ⇓P P 14 03 13.8 +0.3
baz=74
N10A Dunphy 74.46 51 ⇑P P 14 03 14.4 +0.6
baz=74
M11A Holland Ranch, 74.48 50 ⇓P P 14 03 14.6 +0.7
baz=74,SNR=15
L12A House Creek Ra 74.52 49 ⇑P P 14 03 15.0 +0.8
baz=74,SNR=18
G16A Moss Hill, Enn 74.53 45 ⇑P P 14 03 14.2 +0.1
baz=74,SNR=20
T06C Millerton Lake 74.58 55 ⇓P P 14 03 14.3 -0.2
baz=74,SNR=5.8
BNGL BINGOL 74.59 307 *i* P P 14 03 15.6 +1.0
TOO Toolangi 74.65 177 *e*P P 14 03 16.7 +2.1
TOO *i* S S 14 12 47.9 +0.5
Q08A Gabbs 74.66 53 ⇑P P 14 03 15.1 +0.1
baz=74,SNR=17
NVAR Mina Array Bea 74.67 53 P P 14 03 15.4 +0.3
comp=Z,11nm,0.8s,mb4.8,baz=284,slow=6.4,SNR=66
NVAR pP pP 14 03 26.3 -0.8
comp=Z,19nm,0.8s,baz=295,slow=4.3,SNR=19
SUW Suwalki 74.69 327 *e*P P 14 03 14.2 -0.7
SUW LMZ 14 39 29.1
comp=Z,8µm,18.7s
U05C Westside ANR, 74.70 56 ⇑P P 14 03 15.6 +0.4
baz=74
J14A Carey 74.70 47 ⇑P P 14 03 16.2 +1.1
baz=74,SNR=36
O10A Cortez Mining, 74.71 51 ⇑P P 14 03 15.9 +0.6
baz=74,SNR=5.4
E18A Harlowton 74.74 43 ⇑P P 14 03 15.6 +0.3
baz=74,SNR=11
F17A Fitzpatrick Pl 74.75 44 ⇓P P 14 03 15.4 +0.1
baz=74,SNR=24
P09A Austin 74.75 52 ⇓P P 14 03 15.6 +0.1
baz=74
GUMT Gumushane 74.75 309 *e*P P 14 03 15.6 +0.1
K13A Stover Farm, H 74.77 48 ⇓P P 14 03 16.0 +0.5
baz=74,SNR=15
MLAC Mammoth Lakes 74.79 54 ⇑P P 14 03 16.4 +0.7
baz=75
MSL Mosul 74.80 304 *ex* x 14 03 16.0
MSL *ex* x 14 12 44.0

R08A **Mina** 74.84 53 ⇓P P 14 03 16.0 0.0
baz=75,SNR=6.3
N11A **Elko Archery C** 74.87 50 ⇓P P 14 03 16.7 +0.5
baz=75
I15A **Monteview** 74.89 46 ⇓P P 14 03 16.7 +0.5
baz=75
ESPY **Espiye-Giresun** 74.94 310 eP P 14 03 15.6 -1.0
OSL **Oslo** 74.95 337 eP P 14 03 17.1 +0.9
EZC **Erzincan** 74.96 309 eP P 14 03 19.1 +2.3
QLMT **Earthquake Lak** 74.98 45 eP P 14 03 16.9 +0.1
comp=Z,59nm,1.4s,mb5.3
M12A **Wells** 75.02 49 ⇓P P 14 03 17.8 +0.8
baz=75,SNR=34
PTRM **Twissleman Ran** 75.03 57 eP P 14 03 17.2 0.0
G17A **Pierce Place,** 75.06 44 ⇓P P 14 03 17.6 +0.4
baz=75,SNR=13
V05C **Boulder Hill,** 75.11 56 ⇑P P 14 03 18.1 +0.4
baz=75
MTUM **Tungsten Hills** 75.13 54 eP P 14 03 18.3 +0.6
P10A **Eureka** 75.13 51 ⇓P P 14 03 18.3 +0.6
baz=75,SNR=7.0
BEST **Besiri** 75.13 306 i P P 14 03 18.3 +0.5
Q09A **Carvers** 75.14 52 ⇑P P 14 03 18.3 +0.5
baz=75
H16A **Russell Place,** 75.16 45 ⇑P P 14 03 18.0 +0.2
baz=75,SNR=24
L13A **Double Diamond** 75.19 48 ⇓P P 14 03 18.7 +0.7
baz=75,SNR=14
GRSN **GIRESUNGRSN** 75.22 310 ⇓iP P 14 03 17.2 -0.9
ELK **Elko** 75.22 50 PFAKE 14 03 30.0 +12
ELK LR LR
comp=Z,2μm,22.0s,MS5.4
F18A **Big Timber** 75.26 43 ⇑P P 14 03 18.4 +0.1
baz=75,SNR=27
N12A **Clover Valley,** 75.28 50 ⇑P P 14 03 19.1 +0.6
baz=75,SNR=13
J15A **Blackfoot** 75.28 46 ⇑P P 14 03 19.2 +0.7
baz=75,SNR=24
RCTC **Rector, Farmer** 75.29 56 ⇓P P 14 03 18.3 -0.4
baz=75
O11A **Cowboy Ranch,** 75.33 51 ⇓P P 14 03 19.3 +0.5
baz=75,SNR=9.9
YMR **Madison River** 75.34 45 eP P 14 03 18.8 0.0
comp=Z,144nm,1.5s,mb5.7
YMR LR LR
comp=Z,2μm,21.0s,MS5.4
GCMT **Greycliff** 75.36 43 eP P 14 03 19.1 +0.2
comp=Z,105nm,1.6s,mb5.5
SMMC **Simmler** 75.37 57 ⇓P P 14 03 19.7 +0.5
baz=75
K14A **Jones Ranch, D** 75.37 47 ⇓P P 14 03 19.6 +0.6
baz=75,SNR=14
YNR **Norris Junctio** 75.47 45 eP P 14 03 21.1 +1.6
comp=Z,68nm,1.4s,mb5.4
TIN **Tinemaha** 75.52 54 ⇓P P 14 03 20.4 +0.4
baz=75
KONO **Kongsberg** 75.53 337 eP P 14 03 19.5 -0.1
KONO e 14 07 44.4
KONO eS S 14 12 57.8 +0.8
KONO eSS SS 14 17 49.4 +2.3
KONO AMS AMS 14 38 19.5
comp=Z,6μm,21.7s,MS5.9
KONO **Kongsberg** 75.53 337 eP P 14 03 19.6 0.0
KONO MLR MLR
comp=Z,8μm,21.0s,MS6.0
I16A **Newdale** 75.53 46 ⇑P P 14 03 20.6 +0.7
baz=75,SNR=15
SFJD **Kangerlussuaq** 75.54 5 i P P 14 03 20.3 +0.8
SFJD pmax pmax
comp=Z,45nm,0.9s,mb5.4
SFJD MLR MLR
comp=Z,2μm,22.0s,MS5.5
SFJD **Kangerlussuaq** 75.54 5 i P P 14 03 20.3 +0.8
comp=Z,45nm,0.9s,mb5.4
SFJD
comp=Z,2μm,22.0s
YFT **Old Faithful** 75.55 45 eP P 14 03 22.0 +2.0
comp=Z,202nm,1.5s,mb5.8
UMR **Umm Al-Rimmam** 75.55 296 eP P 14 03 19.0 -1.3
baz=296
UMR AMb AMB 14 03 22.0
comp=Z,146nm,1.1s,mb5.8,baz=296
R09A **Tonopah** 75.56 53 ⇓P P 14 03 20.3 +0.1
baz=75,SNR=21
TPH **Tonopah** 75.57 53 eP P 14 03 20.3 +0.1
comp=Z,384nm,2.0s,mb6.0
TPH LR LR
comp=Z,2μm,22.0s,MS5.3
TPH **Tonopah** 75.57 53 eP P 14 03 20.3 +0.1
TPH pmax pmax
comp=Z,384nm,2.0s,mb6.0
TPH MLR MLR
comp=Z,2μm,22.0s,MS5.3
P11A **Circle Ranch,** 75.61 51 ⇓P P 14 03 21.0 +0.5
baz=75
Q10A **Clear Creek Ra** 75.64 52 ⇑P P 14 03 20.8 +0.1
baz=75,SNR=14
L14A **Malta** 75.64 48 ⇑P P 14 03 20.9 +0.3
baz=75,SNR=20
K15A **Arbon** 75.66 47 ⇑P P 14 03 21.4 +0.7
baz=75,SNR=20
VES **Vestal, Richgr** 75.67 56 ⇓P P 14 03 20.1 -0.7
baz=76,SNR=8.2
MIB **Mutribah** 75.68 297 eP P 14 03 19.8 -1.2
baz=297
MIB AMb AMB 14 03 23.2
comp=Z,243nm,1.1s,mb6.0,baz=297
G18A **Lazy EL Ranch,** 75.71 44 ⇑P P 14 03 21.0 0.0
baz=75
LKWY **Lake** 75.72 45 eP P 14 03 22.9 +1.9
comp=Z,383nm,2.1s,mb6.0
LKWY LR LR
comp=Z,2μm,20.0s,MS5.3
LKWY **Lake** 75.72 45 eP P 14 03 22.9 +1.9
LKWY pmax pmax
comp=Z,383nm,2.1s,mb6.0
LKWY MLR MLR
comp=Z,2μm,20.0s,MS5.3
H17A **Grant Village** 75.73 45 ⇑P P 14 03 23.1 +2.1
baz=76,SNR=33
PKM **Peak Mountain** 75.73 57 ⇓P P 14 03 21.7 +0.5
baz=76,SNR=5.6
PTK **Pertek** 75.74 308 eP P 14 03 20.6 -0.6
BHD **Baghdad** 75.75 301 i x x 14 03 23.5
BHD ex x 14 03 32.5
BHD ex x 14 13 03.0
S09A **Goldfield** 75.77 53 ⇑P P 14 03 21.8 +0.4
baz=76,SNR=20
MARD **Mardin** 75.79 306 i P P 14 03 21.9 +0.4
O12A **Currie** 75.81 50 ⇑P P 14 03 21.9 +0.3
baz=76,SNR=23
IMW **Indian Meadow** 75.83 45 eP P 14 03 22.4 +0.8
comp=Z,127nm,1.4s,mb5.7
J16A **Bone** 75.83 46 ⇓P P 14 03 22.6 +0.9
baz=76,SNR=21
DIYA **Diyarbakir** 75.85 307 ⇑iP P 14 03 22.6 +0.7
QRN **Al-Qurain** 75.87 295 eP P 14 03 21.0 -1.1
baz=295
QRN AMb AMB 14 03 24.0
comp=Z,402nm,1.1s,mb6.3,baz=295
DCID1 **Drake Creek** 75.88 46 eP P 14 03 22.9 +0.9
comp=Z,88nm,1.1s,mb5.6
M14A **Sheep Mountain** 75.90 48 ⇓P P 14 03 22.6 +0.5
baz=76,SNR=18
RRI2 **Red Ridge** 75.96 46 eP P 14 03 22.8 +0.5
comp=Z,135nm,1.4s,mb5.7
CWC **Cottonwood Cre** 75.98 55 ⇑P P 14 03 22.1 -0.5
baz=76
RLMT **Red Lodge** 76.00 44 eP P 14 03 22.8 +0.2
comp=Z,137nm,1.7s,mb5.6
RLMT LR LR
comp=Z,2μm,20.0s,MS5.4
RLMT **Red Lodge** 76.00 44 ⇓P P 14 03 23.0 +0.4
baz=76,SNR=15
R10A **Warm Springs** 76.02 52 ⇓P P 14 03 23.1 +0.2
baz=76,SNR=5.0
I17A **Pilgram Creek** 76.02 45 ⇓P P 14 03 24.2 +1.4
baz=76,SNR=22
RDF **Al-Radifah** 76.03 296 eP P 14 03 21.6 -1.4
baz=296
RDF AMb AMB 14 03 25.6
comp=Z,417nm,1.0s,mb6.3,baz=296
MOOW **Moose Ponds** 76.03 45 eP P 14 03 23.4 +0.6
comp=Z,255nm,1.9s,mb5.8
S10A **Tonopah Range,** 76.06 53 ⇑P P 14 03 23.0 0.0
baz=76,SNR=23
NAY **Al-Naaiem** 76.06 296 eP P 14 03 22.0 -1.2
baz=296
NAY AMb AMB 14 03 25.4
comp=Z,208nm,1.2s,mb5.9,baz=296
SBC **Santa Barbara** 76.07 57 ⇓P P 14 03 23.3 +0.1
baz=76
KEMA **Kemaliye** 76.07 309 ⇑iP P 14 03 24.0 +0.9
HVU **Hansel Valley** 76.08 48 eP P 14 03 23.1 0.0
comp=Z,41nm,1.0s,mb5.3
HVU **Hansel Valley** 76.08 48 eP P 14 03 23.1 0.0
HVU pmax pmax
comp=Z,41nm,1.0s,mb5.3
TPAW **Teton Pass** 76.08 46 eP P 14 03 23.9 +0.9
comp=Z,101nm,1.3s,mb5.6
Q11A **Duckwater** 76.10 52 ⇑P P 14 03 23.4 +0.1
baz=76,SNR=10
GRAC **Grapevine Rang** 76.11 54 ⇑P P 14 03 23.7 +0.4
baz=76
K16A **Soda Springs** 76.12 46 ⇓P P 14 03 24.2 +0.9
baz=76,SNR=37
L15A **Malad City** 76.17 48 ⇓P P 14 03 23.9 +0.3
baz=76,SNR=13
BER **Bergen** 76.20 339 eP P 14 03 22.8 -0.6
BER eS S 14 13 08.1 +3.8
BER AMS AMS 14 40 00.6
comp=Z,7μm,21.1s,MS5.9
LOHW **Long Hollow** 76.20 45 eP P 14 03 24.4 +0.7
comp=Z,95nm,1.6s,mb5.5
SNOW **Snow King Moun** 76.21 46 eP P 14 03 25.1 +1.3
comp=Z,46nm,1.1s,mb5.3
ODD1 **Odda** 76.21 338 eP P 14 03 23.4 -0.1
ODD1 AMb AMB 14 03 23.7
comp=Z,116nm,1.7s,mb5.5
REDW **Red Top Meadow** 76.22 46 eP P 14 03 24.2 +0.4
comp=Z,71nm,1.3s,mb5.4
ELZG **Elazig** 76.23 308 i P P 14 03 25.0 +1.0
ARVC **Arvin** 76.25 56 ⇓P P 14 03 24.0 -0.2
baz=76
J17A **Brown Place, J** 76.29 46 ⇓P P 14 03 25.1 +0.8
baz=76,SNR=7.1
O13A **Hicks Ranch, I** 76.36 50 ⇑P P 14 03 25.3 +0.6
baz=76,SNR=8.7
BSC **Santa Cruz Isl** 76.38 58 ⇓P P 14 03 24.6 -0.3
baz=76
DAC **Darwin (Calif)** 76.39 55 PFAKE 14 03 40.0 +15
DAC LR LR
comp=Z,2μm,21.0s,MS5.4
N14A **Grayback Hills** 76.40 49 ⇓P P 14 03 25.4 +0.5
baz=76,SNR=16
R11A **Troy Canyon, C** 76.44 52 ⇑P P 14 03 25.4 +0.2
baz=76,SNR=30
AHID **Auburn Hatcher** 76.44 46 eP P 14 03 25.3 +0.2
comp=Z,13nm,0.8s,mb4.9
AHID LR LR
comp=Z,2μm,22.0s,MS5.5
BGU **Big Grassy Mou** 76.45 49 eP P 14 03 25.4 +0.2
comp=Z,25nm,1.1s,mb5.1
M15A **Larsen Ranch,** 76.46 48 ⇓P P 14 03 25.6 +0.3
baz=76,SNR=20
DGMT **Dagmar** 76.48 39 eP P 14 03 25.0 -0.3
comp=Z,106nm,1.2s,mb5.7
DGMT LR LR
comp=Z,2μm,21.0s,MS5.4
DGMT **Dagmar** 76.48 39 ⇓P P 14 03 25.2 -0.1
baz=76,SNR=8.4
Q12A **Willow Creek R** 76.50 51 ⇑P P 14 03 26.0 +0.5
baz=76,SNR=13
K17A **Gardner Place,** 76.56 46 ⇓P P 14 03 26.1 +0.3
baz=76
SPUT **South Promonto** 76.56 48 eP P 14 03 26.1 +0.3
comp=Z,271nm,2.0s,mb5.8
SPUT e pP 14 03 36.1 -1.7
MPMC **Manual Prospec** 76.58 55 ⇓P P 14 03 26.3 +0.3
baz=76
I18A **Diamond G Ranc** 76.59 45 ⇓P P 14 03 26.8 +0.8
baz=76,SNR=7.3
LAO **LASA Array** 76.62 41 eP P 14 03 26.1 0.0
comp=Z,321nm,1.6s,mb6.0
LAO LR LR
comp=Z,2μm,20.0s,MS5.5
OSI **Osito Adit** 76.63 57 eP P 14 03 26.5 +0.1
comp=Z,19nm,0.9s,mb5.0
OSI e pP 14 03 36.0 -2.4
OSI **Osito Adit** 76.63 57 ⇓P P 14 03 26.6 +0.3
baz=76
BLG **Laguna Peak** 76.70 57 ⇓P P 14 03 26.7 0.0
baz=76
L16A **Fish Haven** 76.72 47 ⇑P P 14 03 27.3 +0.6
baz=76,SNR=5.4
KIS **Kishinev** 76.74 320α i P P 14 03 26.0 -0.7
KIS i pP 14 03 38.0 -0.8
KIS eS S 14 13 10.0 -0.7
KIS i 14 13 32.0
KIS ePS 14 14 02.0
KIS pmax pmax
comp=Z,400nm,1.0s,mb6.3
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.0
KIS MLR MLR
comp=N,7μm,16.0s,MS6.2
KIS MLR MLR
comp=Z,10μm,16.0s,MS6.2
KIS MLR MLR
comp=E,7μm,18.0s,MS6.2
KIS MLR MLR
comp=Z,8μm,18.0s
KIS **Kishinev** 76.74 320 ⇑iP P 14 03 26.0 -0.7
comp=Z,400nm,1.0s,mb6.3
KIS **Kishinev** 76.74 320 i PcP PcP 14 03 38.0 +0.1
KIS eS S 14 13 10.0 -0.7
KIS i ScS ScS 14 13 32.0 -7.9
KIS **Kishinev** 76.74 320 ePS 14 14 02.0
KIS eSS SS 14 18 30.0 +24
KIS LRM 14 39 58.0
comp=Z,8μm,18.0s
P13A **Bates Ranch, G** 76.75 50 ⇑P P 14 03 27.3 +0.4
baz=76,SNR=13
FURC **Furnace Creek,** 76.75 54 ⇓P P 14 03 26.9 -0.1
baz=76,SNR=5.6
S11A **Rachel** 76.76 53 ⇑P P 14 03 27.1 +0.1
baz=76,SNR=9.0
N15A **Stansbury Isla** 76.77 49 ⇓P P 14 03 27.4 +0.3
baz=76,SNR=7.8
J18A **Kendall Valley** 76.78 45 ⇑P P 14 03 27.7 +0.7
baz=76,SNR=8.8
LRMC **Laurel Mountai** 76.80 55 ⇑P P 14 03 27.3 0.0
baz=77
TPNV **Topopah Spring** 76.86 54 eP P 14 03 27.2 -0.4
comp=Z,511nm,1.9s,mb6.1
TPNV **Topopah Spring** 76.86 54 ⇓P P 14 03 27.6 0.0
baz=77,SNR=17
TPNV **Topopah Spring** 76.86 54 P P 14 03 27.6 0.0
TPNV pmax pmax
comp=Z,510nm,1.9s,mb6.1
WAR **Warsaw** 76.86 327 eP P 14 03 27.6 +0.4
WAR eS S 14 13 14.4 +2.6
WAR LMZ 14 41 06.5
comp=Z,5μm,18.6s
SNCC **San Nicolas Is** 76.89 58 eP P 14 03 36.4 +8.6
comp=Z,428nm,1.9s,mb6.0
SNCC LR LR
comp=Z,4μm,20.0s,MS5.8
SNCC **San Nicolas Is** 76.89 58 ⇑P P 14 03 28.0 +0.1
baz=77
HWUT **Hardware Ranch** 76.89 47 eP P 14 03 27.9 +0.2
comp=Z,176nm,1.5s,mb5.8
HWUT LR LR
comp=Z,1μm,20.0s,MS5.2
BOYT **Boyabat** 76.93 312 i P P 14 03 29.1 +1.2
EDW2 **Edwards Air Fo** 76.96 56 ⇓P P 14 03 28.1 -0.1
baz=77,SNR=13
AKCD **Akcadag** 77.01 308 ⇑iP P 14 03 29.4 +1.0
DUG **Dugway** 77.02 49 eP P 14 03 28.7 +0.2
comp=Z,45nm,1.0s,mb5.3
DUG LR LR
comp=Z,2μm,21.0s,MS5.3
DUG **Dugway** 77.02 49 ⇑P P 14 03 28.9 +0.5
baz=77,SNR=17
DUG **Dugway** 77.02 49 eP P 14 03 28.7 +0.2
DUG pmax pmax
comp=Z,45nm,1.0s,mb5.3
DUG MLR MLR
comp=Z,2μm,21.0s,MS5.3
M16A **Huntsville** 77.04 48 ⇓P P 14 03 28.7 +0.2
baz=77,SNR=12
Q13A **Wheeler Ranch,** 77.05 51 ⇑P P 14 03 28.7 +0.1
baz=77
R12A **Pony Springs,** 77.06 52 ⇓P P 14 03 29.0 +0.2
baz=77,SNR=23
DECC **Green Verdugo** 77.10 57 ⇑P P 14 03 28.5 -0.5
baz=77
U10A **Ash Meadows, A** 77.12 54 ⇑P P 14 03 29.1 0.0
baz=77,SNR=6.8
K18A **Toltan Ranch,** 77.13 46 ⇓P P 14 03 29.5 +0.4
baz=77,SNR=6.5
NOQ **North Oquirrh** 77.16 49 eP P 14 03 30.2 +1.0
comp=Z,197nm,1.5s,mb5.8
O15A **The Old Anders** 77.18 49 ⇑P P 14 03 29.8 +0.5
baz=77
LVV **L'vov** 77.20 324 i P P 14 03 28.8 -0.4
LVV **L'vov** 77.20 324 ⇑iP P 14 03 28.7 -0.5
LVV e 14 03 45.2
LVV i 14 06 22.0
LVV iS S 14 13 15.6 0.0
LVV pmax pmax
comp=Z,400nm,1.3s,mb6.2
LVV MLR MLR
comp=N,3μm,16.0s,MS6.0
LVV MLR MLR
comp=E,6μm,16.0s,MS6.0
LVV MLR MLR
comp=Z,6μm,16.0s,MS6.0
BSD **Bornholm Skovb** 77.22 332 i P P 14 03 28.1 -1.2
comp=Z,77nm,1.1s,mb5.5
BSD iS S 14 13 15.7 0.0
BSD eS S 14 13 23.0 +7.3
BSD **Bornholm Skovb** 77.22 332 i P P 14 03 28.1 -1.2
BSD iS S 14 13 15.7 0.0
BSD eS S 14 13 23.0 +7.3
BSD pmax pmax
comp=Z,77nm,1.1s,mb5.5
BSD MLR MLR
comp=Z,4μm,18.0s,MS5.8
BSD **Bornholm Skovb** 77.22 332 i P P 14 03 28.1 -1.2
comp=Z,77nm,1.1s,mb5.5
BSD iS S 14 13 15.7 0.0
BSD eS S 14 13 23.0 +7.3
BSD
comp=Z,4μm,18.0s
P14A **Drum Mountains** 77.24 50 ⇑P P 14 03 29.9 +0.2
baz=77,SNR=19
MWC **Mount Wilson** 77.30 57 eP P 14 03 30.3 +0.2
comp=Z,259nm,2.0s,mb5.8
MWC LR LR
comp=Z,6μm,22.0s,MS5.9
MWC **Mount Wilson** 77.30 57 eP P 14 03 30.3 +0.2
MWC pmax pmax
comp=Z,259nm,2.0s,mb5.8
MWC MLR MLR
comp=Z,6μm,22.0s,MS5.9
BW06 **Boulder Array** 77.33 46 PFAKE 14 03 40.0 +10
BW06 LR LR
comp=Z,2μm,22.0s,MS5.5
BW06 **Boulder Array** 77.33 46 ⇓P P 14 03 30.2 +0.1
baz=77,SNR=22
PDAR **Pinedale Array** 77.33 46 P P 14 03 29.9 -0.2
comp=Z,6.5nm,0.7s,mb4.7,baz=274,slow=2.7,SNR=56
PDAR PKKPbc PKKPbc 14 22 33.2 -1.0
comp=Z,0.3nm,0.7s,baz=127,slow=2.7,SNR=3.6
T11A **Corn Creek, Al** 77.34 53 ⇑P P 14 03 30.2 -0.1
baz=77
S12A **Delamar Landin** 77.35 52 ⇑P P 14 03 30.6 +0.2
baz=77,SNR=6.4
N16A **Rees Ranch, Co** 77.42 48 ⇑P P 14 03 31.3 +0.6
baz=77
FMP **Fort Macarthur** 77.45 57 ⇑P P 14 03 30.8 -0.2
baz=77
SHOC **Shoshone** 77.47 54 ⇑P P 14 03 30.9 -0.2
baz=77
GSC **Goldstone** 77.48 55 eP P 14 03 30.6 -0.5
comp=Z,190nm,2.0s,mb5.7
GSC LR LR
comp=Z,2μm,21.0s,MS5.3
GSC **Goldstone** 77.48 55 ⇓P P 14 03 31.1 0.0
baz=77
GSC **Goldstone** 77.48 55 eP P 14 03 30.6 -0.5
GSC pmax pmax
comp=Z,190nm,2.0s,mb5.7
GSC MLR MLR
comp=Z,2μm,21.0s,MS5.3
Q14A **Sevier Lake (B** 77.48 50 ⇓P P 14 03 31.5 +0.5
baz=77,SNR=34
CTKT **Corum** 77.49 312 ⇑iP P 14 03 31.8 +0.7
M17A **Scullys Gap (B** 77.50 47 ⇑P P 14 03 31.2 +0.1
baz=77,SNR=8.9
R13A **O'Grain Ranch,** 77.55 51 ⇓P P 14 03 31.7 +0.2
baz=77,SNR=18
CIS **Catalina Islan** 77.56 58 ⇓P P 14 03 30.9 -0.6
baz=77
BFSC **Mount Baldy St** 77.56 56 ⇑P P 14 03 31.1 -0.5
baz=77
RBK **Rabkut** 77.58 283 P P 14 03 31.6 -0.3
SNR=6.9
L18A **Fontenelle, Gr** 77.59 46 ⇓P P 14 03 31.9 +0.3
baz=77,SNR=19
JLU **Jordanelle** 77.59 48 eP P 14 03 32.0 +0.4
comp=Z,222nm,1.9s,mb5.8
RRX **Edison Barstow** 77.61 56 ⇓P P 14 03 31.8 0.0
baz=77
WHFO **Wadi Hawf** 77.67 283 P P 14 03 31.9 -0.5
SNR=7.8
TOS **Tosya** 77.69 312 eP P 14 03 32.9 +0.8
K19A **Absolon Red Bu** 77.69 45 ⇓P P 14 03 31.5 -0.7
baz=77,SNR=13
COP **Copenhagen** 77.70 333 ⇑iP P 14 03 32.0 +0.1
COP e 14 13 45.0
COP pmax pmax
comp=Z,48nm,1.1s,mb5.3
COP MLR MLR
comp=Z,3μm,20.0s,MS5.6
COP **Copenhagen** 77.70 333 ⇑iP P 14 03 32.0 +0.1
comp=Z,48nm,1.1s,mb5.3
COP i 14 03 51.8
COP e 14 13 45.0
COP
comp=Z,3μm,20.0s
GKP **Gorka Klasztor** 77.70 330 eP P 14 03 31.8 -0.2
GKP epP pP 14 03 36.7 -7.3
GKP eS S 14 13 23.3 +2.4
GKP LMZ 14 40 04.5
comp=Z,7μm,20.9s
SCI **San Clemente I** 77.71 58 ⇑P P 14 03 32.3 -0.1
baz=78
PINB **Pinarbasi** 77.72 309 i P P 14 03 33.9 +1.5
U11A **Corn Creek** 77.73 54 ⇑P P 14 03 33.0 +0.5
baz=78
P15A **Leamington** 77.73 49 ⇑P P 14 03 32.5 +0.1
baz=78,SNR=13
N17A **Moffit Pass** 77.74 48 ⇓P P 14 03 33.0 +0.6
baz=78,SNR=16
BALT **Daday** 77.75 313 ⇑iP P 14 03 33.5 +1.0
O16A **Springville** 77.80 49 ⇑P P 14 03 33.0 +0.2
baz=78,SNR=9.1
GZT **Gaziantep** 77.81 308 ⇑iP P 14 03 33.9 +1.0
DAU **Daniels Canyon** 77.82 48 eP P 14 03 33.2 +0.3
comp=Z,44nm,1.1s,mb5.3
DAU **Daniels Canyon** 77.82 48 eP P 14 03 33.2 +0.3
DAU pmax pmax
comp=Z,44nm,1.1s,mb5.3
MPU **Maple Canyon** 77.84 49 eP P 14 03 33.4 +0.4
comp=Z,105nm,1.4s,mb5.6
MPU LR LR
comp=Z,2μm,22.0s,MS5.3
ILGA **Ilgaz** 77.86 313 ⇑iP P 14 03 34.1 +1.0
L19A **Farson** 77.86 46 ⇑P P 14 03 33.3 +0.2
baz=78,SNR=9.4
M18A **Lyman** 77.88 47 ⇑P P 14 03 32.9 -0.3
baz=78,SNR=8.5
KWP **Kalwaria** 77.95 324 eP P 14 03 33.9 +0.5
comp=Z,700nm,1.4s,mb6.4
KWP epP pP 14 03 41.8 -3.8
KWP ePcP PcP 14 03 47.0 +3.9
KWP LMZ 14 44 32.0
comp=Z,6μm,18.8s
KWP **Kalwaria** 77.95 324 eP P 14 03 33.9 +0.5
KWP epP pP 14 03 41.7 -3.8
KWP ePcP PcP 14 03 47.0 +3.9
KWP **Kalwaria** 77.95 324 eP P 14 03 33.9 +0.5
KWP e*PP pP 14 03 41.7 -3.8
KWP e pP 14 03 47.0 +1.5
KWP pmax pmax
comp=Z,700nm,1.4s,mb6.4
KWP **Kalwaria** 77.95 324 ⇓iP P 14 03 34.0 +0.6
T12A **Moapa** 77.97 53 ⇑P P 14 03 34.2 +0.4

baz=78
TUQ **Turquoise Moun** 77.98 55 ⇑P P 14 03 33.5 -0.4
baz=78,SNR=8.9
S13A **Holt Ranch, En** 77.99 52 ⇓P P 14 03 34.3 +0.4
baz=78,SNR=12
Q15A **Fillmore** 78.03 50 ⇑P P 14 03 34.8 +0.7
baz=78,SNR=6.8
BBRC **Big Bear Sol-O** 78.03 56 ⇓P P 14 03 34.3 +0.1
baz=78
V11A **Goodspring** 78.05 54 ⇓P P 14 03 34.7 +0.4
baz=78
R14A **James Farms, M** 78.07 51 ⇓P P 14 03 34.0 -0.4
baz=78
HEC **Hector,Ludlow** 78.08 55 ⇑P P 14 03 34.2 -0.2
baz=78,SNR=5.6
P16A **Fountain Green** 78.08 49 ⇓P P 14 03 35.0 +0.6
baz=78
K20A **Yellowstone Ra** 78.08 45 ⇓P P 14 03 33.7 -0.7
baz=78,SNR=6.2
ARUT **Antelope Range** 78.12 51 P P 14 03 34.4 -0.3
comp=Z,60nm,1.3s,mb5.4
ARUT **Antelope Range** 78.12 51 P P 14 03 34.4 -0.2
ARUT pmax pmax
comp=Z,60nm,1.3s,mb5.4
BUR08 **Bucovina Ar. S** 78.13 322 *e*P P 14 03 34.6 +0.1
KMRS **Kahramanmaras** 78.14 308 *e*P P 14 03 34.9 +0.2
BURAR **Bucovina Array** 78.14 322 P P 14 03 35.3 +0.8
BURAR **Bucovina Array** 78.14 322 ⇑*i*P P 14 03 34.8 +0.2
MUD **Monsted U'grnd** 78.22 335 *e*P P 14 03 35.6 +0.8
comp=Z,35nm,1.0s,mb5.2
MUD *e* pP 14 03 49.3 +2.4
MUD *e*S S 14 13 26.4 +0.1
MUD *i* 14 13 55.4
MUD **Monsted U'grnd** 78.22 335 *e*P P 14 03 35.6 +0.8
MUD pmax pmax
comp=Z,35nm,1.0s,mb5.2
MUD MLR MLR
comp=Z,9µm,20.0s,MS6.1
MUD **Monsted U'grnd** 78.22 335 *i* P P 14 03 35.6 +0.8
comp=Z,35nm,1.0s,mb5.2
MUD *e* pP 14 03 49.3 +2.4
MUD *e*S S 14 13 26.4 +0.1
MUD *i* 14 13 55.4
MUD
comp=Z,9µm,20.0s
MURC **Murrieta** 78.25 57 ⇓P P 14 03 35.0 -0.4
baz=78
U12A **Valley of Fire** 78.26 53 ⇑P P 14 03 35.7 +0.2
baz=78
O17A **Robinson Place** 78.27 48 ⇓P P 14 03 36.0 +0.6
baz=78,SNR=14
T13A **Saint George** 78.30 52 ⇑P P 14 03 36.4 +0.7
baz=78,SNR=10
S14A **Cedar City** 78.31 51 ⇓P P 14 03 35.9 +0.2
baz=78,SNR=6.2
CCUT **Cedar City** 78.32 52 *e*P P 14 03 35.8 0.0
comp=Z,40nm,1.1s,mb5.3
SAFT **Safranbolu** 78.34 313 *e*P P 14 03 35.9 +0.1
M19A **Rock Springs** 78.36 46 ⇑P P 14 03 35.8 -0.1
baz=78
ABTO **Aybut** 78.37 283 P P 14 03 36.0 -0.2
SNR=9.8
CDAG **Cicekdag** 78.37 311 ⇑*i*P P 14 03 37.4 +1.4
N18A **Larsen Ranch,** 78.40 47 ⇑P P 14 03 36.0 0.0
baz=78,SNR=15
ANDN **Andirin** 78.44 309 ⇑*i*P P 14 03 37.2 +0.8
MVU **Marysvale** 78.44 50 PFAKE 14 03 50.0 +14
MVU LR LR
comp=Z,1µm,20.0s,MS5.3
MSU **Marysvale** 78.45 50 *e*P P 14 03 37.0 +0.6
comp=Z,41nm,1.1s,mb5.3
MSU *e* pP 14 03 46.9 -1.7
MSU **Marysvale** 78.45 50 *e*P P 14 03 37.1 +0.6
MSU *e* pP 14 03 46.9 -1.7
MSU pmax pmax
comp=Z,41nm,1.1s,mb5.3
ODB **Odobesti** 78.46 319 P P 14 03 38.3 +2.0
V12A **Nelson** 78.49 54 ⇑P P 14 03 36.6 -0.1
baz=78,SNR=7.6
L20A **Wamsutter** 78.51 46 ⇑P P 14 03 36.8 +0.2
baz=78
GMRC **Granite Mounta** 78.55 55 ⇑P P 14 03 37.0 0.0
baz=78,SNR=9.4
VRI **Vrincioaia** 78.57 320 P P 14 03 37.4 +0.5
VRI **Vrincioaia** 78.57 320 ⇑*i*P P 14 03 37.6 +0.6
R15A **Junction** 78.58 51 ⇑P P 14 03 38.1 +1.0
baz=78,SNR=7.3
AVNT **Avonos** 78.61 310 *i* P P 14 03 37.4 +0.1
PLOR **Plostina** 78.62 320 ⇑P P 14 03 38.1 +0.9
PLOR **Plostina** 78.62 320 ⇑*i*P P 14 03 38.0 +0.8
TIRR **Tirgusor** 78.63 318 *e*P P 14 03 36.9 -0.4
comp=Z,132nm,1.4s,mb5.7
TIRR **Tirgusor** 78.63 318 P P 14 03 37.4 +0.1
TIRR pmax pmax
comp=Z,130nm,1.3s,mb5.7
TIRR **Tirgusor** 78.63 318 ⇑*i*P P 14 03 37.4 +0.1
U13A **Pakoon Wash** 78.64 53 ⇑P P 14 03 37.9 +0.4
baz=78,SNR=22
KOLS **Kolonicke sedl** 78.64 324 *e*P P 14 03 37.5 +0.2
KOLS pmax pmax
comp=Z,85nm,1.3s,mb5.5
O18A **Roosevelt** 78.65 48 ⇑P P 14 03 38.2 +0.7
baz=78,SNR=5.6
P17A **Butcher Ranch,** 78.72 49 ⇑P P 14 03 38.1 +0.2
baz=78,SNR=14
LDFC **Landfair** 78.72 54 *e*P P 14 03 37.5 -0.5
comp=Z,230nm,1.8s,mb5.8
HARR **Harsova** 78.73 318 P P 14 03 38.5 +0.6
HARR **Harsova** 78.73 318 ⇑*i*P P 14 03 38.4 +0.5
PFO **Pinyon Flat Ob** 78.73 56 P P 14 03 47.1 +9.0
comp=Z,156nm,2.3s,mb5.5,SNR=8.4
PFO **Pinyon Flat Ob** 78.73 56 *e*P P 14 03 37.7 -0.4
comp=Z,32nm,1.7s,mb5.0
PFO LR LR
comp=Z,6µm,22.0s,MS5.9
PFO **Pinyon Flat Ob** 78.73 56 ⇑P P 14 03 37.7 -0.4
baz=78,SNR=5.3
PFO **Pinyon Flat Ob** 78.73 56 *e*P P 14 03 37.7 -0.4
PFO pmax pmax
comp=Z,32nm,1.7s,mb5.0
PFO MLR MLR
comp=Z,6µm,22.0s,MS5.9
N19A **John Jarvie Ra** 78.74 47 ⇓P P 14 03 37.7 -0.3
baz=78,SNR=13
W12A **Cal Nev Ari** 78.74 54 ⇑P P 14 03 38.1 0.0
baz=78
BR131 **Keskin Array S** 78.74 312 *e*P P 14 03 37.9 -0.1
comp=Z,59nm,1.2s,mb5.4
BRTR **Keskin Array B** 78.74 312 P P 14 03 38.2 +0.2
comp=Z,54nm,1.1s,mb5.4,baz=79,slow=3.8,SNR=78
BRTR PP PP 14 06 37.7 +1.7
comp=Z,5.8nm,0.9s,baz=71,slow=8.0,SNR=3.8
BRTR LR LR 14 42 59.9
comp=Z,2µm,18.6s,MS5.5,baz=219,slow=39
BRTR **Keskin Array B** 78.74 312 P P 14 03 38.2 +0.2
BRTR 14 06 37.7
BRTR pmax pmax
comp=Z,54nm,1.1s
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR MLR MLR
comp=Z,2µm,18.6s
STHS **Stebnicka Huta** 78.77 325 *i* P P 14 03 38.5 +0.5
STHS pmax pmax
comp=Z,84nm,1.2s,mb5.5
T14A **Hurricane** 78.80 52 ⇓P P 14 03 38.8 +0.5
baz=79,SNR=6.2
Q16A **Castle Valley** 78.81 49 ⇓P P 14 03 38.9 +0.5
baz=79,SNR=14
UZH **Uzhgorod** 78.84 324 ⇓*i*P P 14 03 38.3 -0.1
UZH *i* 14 06 34.0
UZH *e*S S 14 13 31.3 -2.0
UZH *e* 14 13 42.0
UZH *e* 14 14 36.0
UZH *e* 14 18 45.0
UZH MLR MLR
comp=N,5µm,17.0s,MS6.2
UZH MLR MLR
comp=E,7µm,17.0s,MS6.2
UZH MLR MLR
comp=Z,6µm,17.0s,MS6.0
OJC **Ojcow** 78.85 326 *i* P P 14 03 38.7 +0.3
OJC *e*PcP PcP 14 03 47.7 +0.7
OJC *e*PP PP 14 06 35.1 -1.5
OJC *e*S S 14 13 33.4 +0.1
OJC *e*SS SS 14 18 42.7 +5.2
OJC L 14 41 11.7
comp=Z,6.1nm,19.6s
S15A **Panguitch** 78.86 51 ⇓P P 14 03 39.8 +1.1
baz=79,SNR=8.9
P18A **Preston Nutter** 78.92 48 ⇑P P 14 03 39.3 +0.3
baz=79,SNR=17
M20A **Sweetwater, Wa** 78.93 46 ⇑P P 14 03 39.3 +0.3
baz=79,SNR=8.8
CVD **Cernavoda** 78.93 318 P P 14 03 39.8 +0.9
BMR **Baia Mare** 78.94 323 P P 14 03 40.1 +1.1
V13A **Grand Canyon W** 78.97 53 ⇓P P 14 03 39.6 +0.2
baz=79,SNR=15
R16A **Teasdale** 79.02 50 ⇓P P 14 03 40.7 +1.1
baz=79,SNR=13
CRVS **Cervenica-Dubn** 79.04 324 *i* P P 14 03 39.8 +0.3
CRVS pmax pmax
comp=Z,131nm,1.7s,mb5.6
SRU **San Rafael** 79.08 49 *e*P P 14 03 39.5 -0.4
comp=Z,38nm,0.8s,mb5.4
SRU **San Rafael** 79.08 49 ⇑P P 14 03 40.1 +0.2
baz=79,SNR=29
SRU **San Rafael** 79.08 49 P P 14 03 39.9 0.0
SRU pmax pmax
comp=Z,26nm,0.8s,mb5.2
L21A **Rawlins** 79.08 45 ⇑P P 14 03 39.7 -0.2
baz=79,SNR=23
U14A **Mt Trumbull** 79.13 52 ⇓P P 14 03 40.5 +0.2
baz=79,SNR=17
SGKT **Sivrigoynuk** 79.13 313 *i* P P 14 03 41.2 +1.0
ULM **Lac du Bonnet** 79.14 33 P P 14 03 38.4 -1.6
comp=Z,24nm,0.9s,mb5.1,baz=307,slow=5.9,SNR=14
ULM LR LR 14 35 56.0
comp=Z,2µm,21.1s,MS5.3,baz=327,slow=34
ULM **Lac du Bonnet** 79.14 33 *e*P P 14 03 39.0 -1.0
comp=Z,67nm,1.4s,mb5.4
ULM LR LR
comp=Z,3µm,21.0s,MS5.6
COBT **Iskenderun** 79.15 308 *i* P P 14 03 41.2 +0.9
ANTO **Ankara** 79.15 312 *e*P P 14 03 40.3 +0.1
ANTO **Ankara** 79.15 312 P P 14 03 41.1 +0.8
SNR=15
ANTO **Ankara** 79.15 312 *e*P P 14 03 40.8 +0.5
comp=Z,164nm,1.4s,mb5.8
ANTO LR LR
comp=Z,3µm,19.0s,MS5.6
ANTO **Ankara** 79.15 312 *e*P P 14 03 40.8 +0.5
ANTO pmax pmax
comp=Z,164nm,1.4s,mb5.8
ANTO MLR MLR
comp=Z,3µm,19.0s,MS5.6
ANTO **Ankara** 79.15 312 ⇑*i*P P 14 03 40.7 +0.4
CEYT **Ceyhan** 79.16 308 *e*P P 14 03 41.3 +0.9
NIG **Nigde** 79.18 310 *e*P P 14 03 41.0 +0.6
MONP **Monument Peak** 79.19 57 ⇑P P 14 03 40.5 -0.1
baz=79,SNR=10
NIE **Niedzica** 79.20 325 *e*P P 14 03 41.2 +0.9
MLR **Muntele Rosu** 79.23 320 LR LR 14 42 08.4
comp=Z,9µm,18.2s,MS6.2,baz=46,slow=38
MLR **Muntele Rosu** 79.23 320 P P 14 03 41.2 +0.6
MLR **Muntele Rosu** 79.23 320 ⇑*i*P P 14 03 40.9 +0.3
NEE2 **Needles Airpor** 79.23 54 ⇓P P 14 03 41.2 +0.4
baz=79
IRM **Iron Mountain** 79.26 55 ⇑P P 14 03 41.1 +0.2
baz=79,SNR=12
T15A **Red Dirt Ranch** 79.26 52 ⇑P P 14 03 41.3 +0.4
baz=79,SNR=17
PSN **Preselentsi** 79.27 317 *i* P P 14 03 41.5 +0.7
S16A **Weppner Ranch,** 79.31 51 ⇑P P 14 03 41.5 +0.3
baz=79,SNR=6.4
Q18A **Rafter H Ranch** 79.32 49 ⇓P P 14 03 40.9 -0.3
baz=79,SNR=7.7
RWWY **Rawlins** 79.35 45 *e*P P 14 03 41.0 -0.3
comp=Z,63nm,1.2s,mb5.4
R17A **Hanksville Air** 79.41 50 ⇓P P 14 03 41.9 +0.2
baz=79
KARA **Karaisali** 79.44 309 *e*P P 14 03 41.9 0.0
HTY **Hatay** 79.47 307 *e*P P 14 03 42.8 +0.7
RSSD **Black Hills** 79.48 42 *e*P P 14 03 40.7 -1.3
comp=Z,127nm,1.8s,mb5.5
RSSD LR LR
comp=Z,2µm,21.0s,MS5.4
W13A **Hualapai Mount** 79.50 54 ⇓P P 14 03 42.1 -0.1
baz=79,SNR=6.5
DVTC **Desert V Tower** 79.55 57 ⇑P P 14 03 42.1 -0.5
baz=79,SNR=8.8
SWSC **Sam W. Stewart** 79.58 57 ⇓P P 14 03 42.3 -0.5
baz=79
GULE **Gulek** 79.60 309 ⇑*i*P Px 14 03 22.0
HENT **Hendek** 79.64 314 *e*P P 14 03 43.0 +0.1
RAC **Raciborz** 79.65 327 *e*P P 14 03 43.8 +1.0
RAC MLR MLR
comp=Z,8µm,18.0s,MS6.1
P19A **Cripple Cowboy** 79.67 48 ⇓P P 14 03 43.3 +0.2
baz=79,SNR=27
V14A **Boquillas Ranc** 79.67 53 ⇑P P 14 03 43.5 +0.4
baz=79,SNR=34
RUE **Ruedersdorf** 79.67 331 *e*P P 14 03 42.8 0.0
comp=Z,330nm,1.4s,mb6.1
U15A **North Rim** 79.69 52 ⇓P P 14 03 44.0 +0.7
baz=80,SNR=25
MDU **Mudurnu** 79.69 313 *e*P P 14 03 43.1 -0.1
VOIR 79.72 320 ⇓P P 14 03 43.6 +0.4
VOIR 79.72 320 ⇓*i*P P 14 03 43.7 +0.4
T16A **Glen Canyon Da** 79.83 51 ⇑P P 14 03 43.5 -0.5
baz=80
BSEG **Bad Segeberg** 79.83 333 *e*P P 14 03 43.9 +0.2
BSEG pmax pmax
comp=Z,179nm,1.1s,mb5.9
BSEG **Bad Segeberg** 79.83 333 *e*P P 14 03 43.9 +0.2
comp=Z,179nm,1.1s,mb5.9
PDMCI **Parker Dam,Lak** 79.83 55 ⇓P P 14 03 44.1 0.0
baz=80,SNR=7.4
S17A **Black Ridge (B** 79.85 50 ⇓P P 14 03 43.9 -0.2
baz=80,SNR=23
X13A **Yucca** 79.85 54 ⇑P P 14 03 43.9 -0.2
baz=80,SNR=18
OKC **Ostrava-Krasne** 79.85 327 ⇑*i*P P 14 03 44.2 +0.3
OKC *e*pP pP 14 03 53.6 -2.4
OKC **Ostrava-Krasne** 79.85 327 ⇑*i*P P 14 03 44.2 +0.3
OKC *e*pP pP 14 03 53.6 -2.4
OKC AMS AMS 14 42 10.0
comp=Z,6µm,16.6s
KSP **Ksiaz** 79.90 328 *e*P P 14 03 44.4 +0.3
KSP *e*pP pP 14 03 49.5 -6.7
KSP *e*PcP PcP 14 03 54.7 +3.1
KSP *e*S S 14 13 47.1 +2.7
KSP LMZ 14 42 08.8
comp=Z,12µm,18.5s
KSP **Ksiaz** 79.90 328 ⇑*e*P P 14 03 44.5 +0.4
KSP *e*PcP PcP 14 03 52.3 +0.7
KSP *e*S S 14 13 38.0 -6.4
KSP *e*SS SS 14 18 48.0 -5.2
KSP LR LR
comp=Z,14µm,18.5s,MS6.3
KSP **Ksiaz** 79.90 328 ⇑*e*P P 14 03 44.5 +0.4
KSP *e* 14 03 52.3
KSP *e*S S 14 13 38.0 -6.4
KSP MLR MLR
comp=Z,14µm,18.5s,MS6.3
R18A **Canyonlands Na** 79.92 49 ⇑P P 14 03 44.2 -0.3
baz=80,SNR=16
Y12C **Blythe** 79.92 55 ⇓P P 14 03 44.3 -0.2
baz=80,SNR=7.0
Q19A **Hogan Spring (** 79.93 48 ⇓P P 14 03 44.4 -0.2
baz=80,SNR=38
DRGR 79.94 322 P P 14 03 44.7 +0.3
DRGR 79.94 322 ⇓*i*P P 14 03 44.7 +0.3
W14A **Seligman** 79.94 53 ⇑P P 14 03 44.8 +0.1
baz=80,SNR=21
TAU **Tasmania Unive** 80.07 176 PFAKE 14 04 00.0 +15
TAU LR LR
comp=Z,2µm,20.0s,MS5.5
GULT **Gulveren** 80.12 314 *e*P P 14 03 44.9 -0.6
V15A **Kaibab Nationa** 80.14 52 ⇑P P 14 03 46.1 +0.4
baz=80,SNR=17
GLA **Glamis** 80.15 56 *e*P P 14 03 45.4 -0.4
comp=Z,273nm,1.9s,mb5.9
GLA LR LR
comp=Z,5µm,22.0s,MS5.8
GLA **Glamis** 80.15 56 ⇓P P 14 03 45.6 -0.2
baz=80,SNR=8.7
GLA **Glamis** 80.15 56 *e*P P 14 03 45.4 -0.4
GLA pmax pmax
comp=Z,273nm,1.9s,mb5.9
GLA MLR MLR
comp=Z,5µm,22.0s,MS5.8
RAR **Rarotonga** 80.23 126 PFAKE 14 04 00.0 +14
RAR LR LR
comp=Z,7µm,21.0s,MS6.0
T17A **Navajo Res., N** 80.25 51 ⇑P P 14 03 46.3 0.0
baz=80,SNR=13
DPC **Dobruska-Polom** 80.26 328 ⇑*i*P P 14 03 46.8 +0.8
DPC *e*pP pP 14 03 57.9 -0.3
DPC AMS AMS 14 42 50.0
comp=Z,6µm,19.7s
UPC **Upice** 80.27 328 ⇑*i*P P 14 03 46.8 +0.7
UPC *e*pP pP 14 03 58.5 +0.3
S18A **Hurst Farm, Bl** 80.31 50 ⇑P P 14 03 46.4 -0.2
baz=80,SNR=15
KIZT **Kizilcal** 80.33 312 *e*P P 14 03 46.2 -0.5
Y13A **Salome** 80.33 55 ⇑P P 14 03 46.7 -0.1
baz=80,SNR=8.7
HRT **Hereke** 80.35 314 *e*P P 14 03 46.5 -0.2
R19A **Curley Farm, L** 80.36 49 ⇑P P 14 03 46.9 +0.1
baz=80,SNR=9.5
KLYT **Kilyos** 80.42 315 *e*P P 14 03 47.1 0.0
KDHN **Kadinhani** 80.42 311 ⇑*i*P P 14 03 47.1 -0.1
PV10 **Paradox Valley** 80.44 49 *e*P P 14 03 48.1 +0.8
comp=Z,2µm,0.9s,mb7.1
PSZ **Piszkesteto** 80.47 325 *e*P P 14 03 47.5 +0.3
comp=Z,305nm,1.4s,mb6.0
PSZ LR LR
comp=Z,3µm,19.0s,MS5.7
PSZ **Piszkesteto** 80.47 325 *e*P P 14 03 47.5 +0.2
PSZ pmax pmax
comp=Z,305nm,1.4s,mb6.0
PSZ MLR MLR
comp=Z,3µm,19.0s,MS5.7
PSZ **Piszkesteto** 80.47 325 ⇑*e*P P 14 03 48.1 +0.8
PSZ **Piszkesteto** 80.47 325 ⇓*i*P P 14 03 47.9 +0.6
W15A **Williams** 80.49 53 ⇑P P 14 03 48.1 +0.5
baz=80,SNR=10
BORA **Eskisehir** 80.52 313 ⇑*i*P P 14 03 47.7 0.0
ESKT **Eskisehir** 80.52 313 *e*P P 14 03 46.6 -1.0
ESKT **Eskisehir** 80.52 313 *i* P P 14 03 47.6 0.0
ISK **Istanbul-Kandi** 80.53 315 *e*P P 14 03 46.6 -1.1
X14A **Yava** 80.53 54 ⇑P P 14 03 48.1 +0.2
baz=80,SNR=11
VYHS **Vyhne** 80.54 325 *i* P P 14 03 48.0 +0.4
VYHS pmax pmax
comp=Z,102nm,1.5s,mb5.5
VYHS **Vyhne** 80.54 325 *i* P P 14 03 48.0 +0.4
VYHS *e*PP PP 14 06 51.8 +1.2
ADVT **Abdulvahap** 80.56 314 *e*P P 14 03 47.5 -0.4
AGMN **Agassiz Refuge** 80.58 35 *e*P P 14 03 46.4 -1.4
comp=Z,68nm,1.2s,mb5.5
AGMN LR LR
comp=Z,3µm,20.0s,MS5.6
U17A **Shonto** 80.59 51 ⇑P P 14 03 48.3 +0.2
baz=80,SNR=11
U16A **Tuba City** 80.59 52 ⇑P P 14 03 48.6 +0.5
baz=80,SNR=33
PHWY **Pilot Hill** 80.60 45 *e*P P 14 03 46.5 -1.6
comp=Z,166nm,1.8s,mb5.7
112A **Yuma** 80.63 56 ⇑P P 14 03 48.2 -0.2
baz=80
CAVI **Cavuskoy** 80.66 314 *e*P P 14 03 48.2 -0.2
KOLL **Kolacno** 80.67 326 *i* P P 14 03 49.0 +0.7
YLV **Yalova** 80.68 314 *e*P P 14 03 48.5 0.0
CTYL **Yal??k??y-??at** 80.69 316 *e*P P 14 03 48.0 -0.6
T18A **Mexican Hat** 80.73 50 ⇓P P 14 03 48.3 -0.5
baz=80,SNR=20
HWQ **Hawqa** 80.75 306 *e*P P 14 03 48.1 -0.9
SZH **Strazhica** 80.76 318 *i* P P 14 03 48.1 -0.8
S19A **Harvey Farm, M** 80.79 49 ⇑P P 14 03 48.9 -0.3
baz=80,SNR=20
Y14A **Wickenburg** 80.79 54 ⇑P P 14 03 48.9 -0.4
baz=81,SNR=11
MVH1 **Achvaich** 80.82 342 *e*P P 14 03 48.4 -0.5
WUAZ **Wupatki** 80.84 52 *e*P P 14 03 49.8 +0.3
comp=Z,91nm,1.4s,mb5.5
WUAZ LR LR
comp=Z,2µm,21.0s,MS5.5
WUAZ **Wupatki** 80.84 52 ⇓P P 14 03 49.7 +0.2
baz=81,SNR=16
BRG **Berggiesshubel** 80.84 329 ⇑*i*P P 14 03 49.4 +0.2
comp=Z,66nm,1.2s,mb5.4
BRG PP PP 14 06 53.0 -0.1
BRG S S 14 13 58.0 +3.7
BRG SS SS 14 19 15.0 +7.8
BRG LR LR
comp=Z,6µm,19.4s,MS5.9
BRG **Berggiesshubel** 80.84 329 ⇑*i*P P 14 03 49.4 +0.2
BRG 14 06 53.0
BRG S S 14 13 58.0 +3.7
BRG SS SS 14 19 15.0 +7.8
BRG pmax pmax
comp=Z,66nm,1.2s,mb5.4
BRG MLR MLR
comp=N,3µm,18.7s,MS5.9
BRG MLR MLR
comp=E,3µm,16.5s,MS5.9
BRG MLR MLR
comp=Z,6µm,19.4s,MS5.9
BRG **Berggiesshubel** 80.84 329 *e*P P 14 03 49.3 +0.1
comp=Z,110nm,1.2s,mb5.7
BRG *e*pP pP 14 04 01.7 +0.4
BRG **Berggiesshubel** 80.84 329 ⇑*i*P P 14 03 49.4 +0.2
comp=Z,110nm,1.2s,mb5.7
BRG PP PP 14 06 53.0 -0.1
BRG S S 14 13 58.0 +3.7
BRG SS SS 14 19 15.0 +7.8
BRG
comp=N,6µm,18.7s
BRG
comp=E,5µm,16.5s
BRG
comp=Z,10µm,19.4s
PENC **Penc** 80.85 325 ⇓*e*P P 14 03 50.4 +1.1
PVCC **Panska Ves** 80.85 329 ⇑AMS AMS 14 43 20.0
comp=Z,7µm,16.7s
PV01 **Paradox Valley** 80.88 49 *e*P P 14 03 49.6 0.0
comp=Z,23µm,1.9s
CLL **Collm** 80.88 330 ⇑*i*P P 14 03 49.2 -0.2
comp=Z,209nm,1.3s,mb5.9
CLL *e* 14 04 04.0
CLL *e*S S 14 13 52.0 -2.7
CLL LR LR
comp=Z,6µm,17.9s,MS6.0
CLL **Collm** 80.88 330 ⇑*i*P P 14 03 49.2 -0.2
CLL *e* 14 04 04.0
CLL *e*S S 14 13 52.0 -2.7
CLL pmax pmax
comp=Z,209nm,1.3s,mb5.9
CLL MLR MLR
comp=Z,6µm,17.9s,MS6.0
CLL **Collm** 80.88 330 *e*P P 14 03 49.1 -0.3
comp=Z,209nm,1.3s,mb5.9
CLL **Collm** 80.88 330 ⇑*i*P P 14 03 49.2 -0.2
comp=Z,209nm,1.3s,mb5.9
CLL *e*pP pP 14 04 02.0 +0.5
CLL *e*PP PP 14 06 54.0 +0.6
CLL *e*S S 14 13 52.0 -2.7
CLL *e*PPS 14 15 00.0
CLL *e*(SS) 14 19 36.0
CLL *ex* x 14 23 18.0
MCD **Coleburn Disti** 80.89 342 *e*P P 14 03 48.4 -0.9
GZR **Gura Zlata** 80.90 321 P P 14 03 50.0 +0.4
GZR **Gura Zlata** 80.90 321 ⇓*i*P P 14 03 50.1 +0.5
VRAC **Vranov** 80.92 327 LR LR 14 43 28.7
comp=Z,7µm,19.1s,MS6.0,baz=39,slow=38
VRAC **Vranov** 80.92 327 P P 14 03 50.2 +0.6
VRAC **Vranov** 80.92 327 ⇑*i*P P 14 03 50.3 +0.7
IKL **Isikli** 80.94 309 *e*P P 14 03 48.8 -1.2
X15A **Humboldt** 80.94 53 ⇑P P 14 03 50.3 +0.2
baz=81,SNR=16
JMB **Yambol** 80.95 317 P P 14 03 50.7 +0.8
JMB **Yambol** 80.95 317 *i* P P 14 03 49.9 0.0
BOLV **Bolvadin** 80.99 312 ⇑*i*P P 14 03 50.6 +0.4
W16A **Flagstaff** 81.01 53 ⇑P P 14 03 50.8 +0.5
baz=81,SNR=6.6
113A **Mohawk Valley,** 81.03 56 ⇓P P 14 03 50.3 -0.2
baz=81
EREN **Erenkoy** 81.09 308 *e*P P 14 03 50.1 -0.7
SMCO **Snowmass** 81.14 47 *e*P P 14 03 50.9 -0.1
comp=Z,111nm,1.7s,mb5.5
SMOL **Smolenice** 81.15 326 *e*P P 14 03 52.0 +1.1
BHL **Bhannes** 81.17 306 *e*P P 14 03 49.6 -1.6

Z14A Wintersburg 81.19 55 ⇑P P 14 03 51.6 +0.2
baz=81
BUD Budapest 81.19 325⇑eP P 14 03 51.6 +0.5
U18A Rough Rock, Ch 81.20 51 ⇓P P 14 03 51.7 +0.3
baz=81,SNR=27
HDMB Hadim 81.21 310 eP P 14 03 50.5 -0.9
Y15A Casa Rosa Ranc 81.22 54 ⇓P P 14 03 51.6 +0.1
baz=81,SNR=16
PKSN Nyarlorinc 81.23 324 eP P 14 03 52.4 +1.1
ALT Altintas 81.26 313 eP P 14 03 51.5 -0.2
PRU Pruhonice 81.28 329⇑iP P 14 03 51.6 +0.1
PRU eS S 14 14 00.6 +1.7
PRU MLR MLR
comp=Z,5μm,18.2s,MS5.9
PRU Pruhonice 81.28 329⇑iP P 14 03 51.6 +0.1
PRU eS S 14 14 00.6 +1.7
PRU eXS sS 14 14 20.4 +1.3
PRU AMS AMS 14 42 50.0
comp=Z,5μm,18.2s
MDO Dochfour 81.30 342 eP P 14 03 50.7 -0.8
BZS Buzias 81.31 322 P P 14 03 52.0 +0.2
BZS Buzias 81.31 322⇑iP P 14 03 51.6 -0.2
MODS Modra-Piesok 81.32 326 iP P 14 03 52.8 +1.0
MODS pmax pmax
comp=Z,58nm,1.3s,mb5.3
MODS Modra-Piesok 81.32 326 iP P 14 03 52.8 +1.0
MODS ePP PP 14 06 54.7 -2.4
MODS eS S 14 13 57.6 -1.8
TREC Trest 81.41 328⇑iP P 14 03 52.7 +0.5
TREC epP pP 14 04 05.2 +0.8
TREC AMS AMS 14 43 20.0
comp=Z,5μm,18.1s
T19A Beclabito 81.45 50 ⇓P P 14 03 52.6 0.0
baz=81,SNR=8.0
KAC Achnashellach 81.47 343⇑eP P 14 03 52.7 +0.4
CLZ Clausthal 81.48 332 eP P 14 03 52.8 +0.3
CLZ pmax pmax
comp=Z,312nm,1.4s,mb6.0
CLZ Clausthal 81.48 332 eP P 14 03 52.8 +0.3
comp=Z,312nm,1.4s,mb6.0
X16A Lo Mia Camp, P 81.49 53 ⇑P P 14 03 53.2 +0.2
baz=81,SNR=12
ISCO Idaho Springs 81.51 46 eP P 14 03 53.1 +0.2
comp=Z,148nm,1.9s,mb5.6
ISCO LR LR
comp=Z,2μm,20.0s,MS5.5
ISCO Idaho Springs 81.51 46 eP P 14 03 53.1 +0.1
ISCO pmax pmax
comp=Z,148nm,1.9s,mb5.6
ISCO MLR MLR
comp=Z,2μm,20.0s,MS5.5
MVCO Mesa Verde 81.52 49 eP P 14 03 53.3 +0.2
comp=Z,209nm,1.8s,mb5.8
MVCO LR LR
comp=Z,2μm,21.0s,MS5.5
MVCO Mesa Verde 81.52 49 ⇑P P 14 03 53.1 +0.1
baz=81,SNR=19
W17A Winslow 81.53 52 ⇓P P 14 03 53.8 +0.6
baz=81
ZST Bratislava 81.53 326 eP P 14 03 53.8 +0.9
ZST pmax pmax
comp=Z,151nm,1.7s,mb5.7
ZST Bratislava 81.53 326 eP P 14 03 53.8 +0.9
ZST ePP PP 14 06 54.6 -4.2
ZST eS SKSac 14 14 13.7 +4.4
GDZ Gediz 81.60 313⇑P P 14 03 53.9 +0.4
V18A Ganado 81.61 51 ⇑P P 14 03 53.9 +0.3
baz=81
LFK Lefkose 81.65 308 eP P 14 03 52.1 -1.7
KPL Plockton 81.70 343⇑eP P 14 03 54.0 +0.4
KPL AMb AMB 14 03 56.4
comp=Z,351nm,1.4s,mb6.1
TANN Tannenbergstha 81.79 330 eP P 14 03 54.4 +0.2
comp=Z,74nm,1.4s,mb5.4
TANN epP pP 14 04 06.9 +0.5
Y16A Circle Bar Ran 81.81 54 ⇓P P 14 03 55.0 +0.4
baz=82,SNR=8.8
ISP Isparta 81.82 312 eP P 14 03 52.6 -2.0
ISP Isparta 81.82 312 P P 14 03 54.1 -0.5
ISP LR LR
comp=Z,2μm,19.0s,MS5.5
ISP Isparta 81.82 312c iP P 14 03 54.2 -0.4
ISP pmax pmax
comp=Z,75nm,1.2s,mb5.5
MOX Moxa 81.95 330 eP P 14 03 55.0 0.0
comp=Z,150nm,1.5s,mb5.7
MOX e pP 14 04 07.9 +0.7
MOX
comp=Z,4μm,18.0s
MOX Moxa 81.95 330 eP P 14 03 55.0 0.0
MOX e pP 14 04 07.9 +0.7
MOX pmax pmax
comp=Z,150nm,1.5s,mb5.7
MOX MLR MLR
comp=Z,4μm,18.0s,MS5.8
MOX Moxa 81.95 330 eP P 14 03 55.1 +0.1
comp=Z,119nm,1.4s,mb5.6
MOX epP pP 14 04 07.7 +0.5
CSS Prodhromos 81.98 308 P P 14 03 55.4 -0.1
WIT Witteveen 82.03 334 eP P 14 03 57.2 +1.8
IBBN Ibbenburen 82.06 333 eP P 14 03 55.4 -0.2
comp=Z,217nm,1.0s,mb6.0
URZ Urewera 82.07 153 P P 14 03 54.7 -0.9
comp=Z,9.1nm,0.9s,mb4.7,baz=323,slow=5.1,SNR=3.8
115A Sonoran Desert 82.08 55 ⇓P P 14 03 56.0 0.0
baz=82
KHAL Karahalli 82.08 313⇑iP P 14 03 56.0 +0.1
DEMI Demirci 82.08 314 iP P 14 03 55.8 -0.1
KAR1 Arisaig 82.12 343 eP P 14 03 56.0 +0.2
W18A Petrified Fore 82.12 52 ⇓P P 14 03 56.7 +0.5
baz=82
EBH Black Hill 82.15 341 eP P 14 03 55.5 -0.4
LEF Lefka 82.15 308 eP P 14 03 56.1 -0.3
BALB Balikesir 82.15 314 eP P 14 03 55.7 -0.6
SOP Sopron 82.16 326⇑eP P 14 03 57.1 +0.9
V19A Window Rock 82.16 51 ⇓P P 14 03 57.1 +0.6
baz=82
214A Organ Pipe Nat 82.17 56 ⇑P P 14 03 56.4 -0.1
baz=82,SNR=6.8
PGB Panagyurishte 82.19 319 iP P 14 03 56.0 -0.5
Z16A Peralta Trail, 82.19 54 ⇓P P 14 03 56.7 +0.1
baz=82
ESY Stoneypath 82.21 341⇑eP P 14 03 55.8 -0.4
PLD Plovdiv 82.21 318 P P 14 03 56.8 +0.2
PLD Plovdiv 82.21 318 iP P 14 03 56.0 -0.6
MANZ Manzenberg 82.27 330 eP P 14 03 56.8 +0.1
comp=Z,82nm,1.2s,mb5.5
CONA Conrad Observa 82.28 327⇓iPcP PcP 14 03 57.7 -4.4
comp=Z,226nm,1.6s
CSNA Conrad Observa 82.28 327⇑iP P 14 03 57.7 +0.9
comp=Z,201nm,1.6s,mb5.8
LPK Lapseki 82.29 316 eP P 14 03 54.9 -2.1
PKSM Moragy 82.31 324 P P 14 03 57.0 -0.1
PKSM Moragy 82.31 324⇑iP P 14 03 56.5 -0.5
ALFC Alevga 82.31 309 P P 14 03 56.5 -0.7
comp=Z,0.9nm,0.6s
ALN Alexandroupoli 82.32 316 P P 14 03 56.9 -0.3
Y17A Roosevelt 82.34 53 ⇓P P 14 03 57.3 -0.1
baz=82,SNR=8.9
KHC Kasperske Hory 82.34 329⇑iP P 14 03 57.4 +0.3
KHC e*PP pP 14 04 08.8 -0.5
KHC eS S 14 14 07.3 -2.6
KHC MLR MLR
comp=Z,7μm,17.4s,MS6.1
KHC Kasperske Hory 82.34 329⇑iP P 14 03 57.4 +0.3
KHC epP pP 14 04 08.8 -0.5
KHC eS S 14 14 07.3 -2.6
KHC eXS sS 14 14 34.0 +3.9
KHC AMS AMS 14 45 40.0
comp=Z,7μm,17.4s
W19A Sanders 82.34 51 ⇓P P 14 03 57.7 +0.3
baz=82,SNR=20
X18A Snowflake 82.37 52 ⇑P P 14 03 57.8 +0.2
baz=82
ROTZ Rotzenmuhle 82.40 330 eP P 14 03 58.1 +0.7
comp=Z,213nm,1.4s,mb5.9
ROTZ epP pP 14 04 10.3 +0.7
EAB Aberfoyle 82.41 342 eP P 14 03 56.6 -0.8
RDO Rodhopi 82.43 317 eP P 14 03 58.5 +0.8
UBBA Unterbreizbach 82.44 331 eP P 14 03 57.4 -0.2
comp=Z,65nm,1.3s,mb5.4
UBBA epP pP 14 04 10.2 +0.4
EBL Broad Law 82.45 341⇑eP P 14 03 57.6 0.0
KULA Kula-Manisa 82.46 313 eP P 14 03 57.1 -0.9
XSO Sourhope Farm 82.48 340 eP P 14 03 57.8 0.0

EAU Auchinoon 82.49 341 eP P 14 03 57.7 -0.1
116A Eloy 82.50 55 ⇑P P 14 03 58.0 -0.3
baz=82
GEC2 GERESS Array S 82.51 328 eP P 14 03 57.5 -0.5
comp=Z,18μm,1.2s
GEC2 GERESS Array S 82.51 328 eP P 14 03 57.9 -0.1
GEC2 pmax pmax
comp=Z,67nm,1.1s,mb5.6
GEC2 GERESS Array S 82.51 328 eP P 14 03 57.9 -0.1
comp=Z,67nm,1.1s,mb5.6
GERES GERESS Array B 82.51 328 P P 14 03 57.7 -0.3
comp=Z,21nm,0.8s,mb5.2,baz=49,slow=4.1,SNR=53
GERES pP pP 14 04 10.7 +0.5
comp=Z,9.7nm,0.7s,baz=44,slow=5.9,SNR=6.5
GERES LR LR 14 45 42.2
comp=Z,6μm,18.6s,MS6.0,baz=32,slow=39
GERES GERESS Array B 82.51 328 P P 14 03 57.7 -0.3
GERES *PP pP 14 04 10.7 +0.5
GERES pmax pmax
comp=Z,21nm,0.8s
GERES pmax pmax
comp=Z,10.0nm,0.7s
WET Wettzell 82.62 329 eP P 14 03 58.9 +0.3
WET pmax pmax
comp=Z,104nm,1.2s,mb5.7
WET Wettzell 82.62 329 eP P 14 03 58.9 +0.3
comp=Z,104nm,1.2s,mb5.7
PPCY Paphos 82.64 309⇑P P 14 03 58.6 -0.4
PPCY Paphos 82.64 309⇑iP P 14 03 58.6 -0.4
VTS Vitosha 82.66 319 P P 14 03 59.6 +0.7
VTS Vitosha 82.66 319⇑iP P 14 03 59.5 +0.6
WTSB Winterswijk 82.68 334 eP P 14 03 58.3 -0.5
comp=Z,84nm,1.6s,mb5.5
RHK3 Tenkes 82.73 324⇑eP P 14 03 58.8 -0.4
OGNE Ogallala 82.73 43 eP P 14 03 58.5 -0.8
comp=Z,10nm,0.6s,mb5.0
OGNE e pP 14 04 10.0 -1.5
OGNE LR LR
comp=Z,1μm,20.0s,MS5.3
EYMN Ely 82.78 33 eP P 14 03 58.4 -1.0
comp=Z,108nm,1.3s,mb5.7
EYMN LR LR
comp=Z,2μm,20.0s,MS5.5
GOLH Golhisar 82.79 312⇑iP P 14 03 59.5 -0.2
Y18A Canyon Day Jun 82.80 53 ⇓P P 14 04 00.0 +0.2
baz=83,SNR=11
X19A St. Johns 82.85 52 ⇑P P 14 04 00.1 +0.1
baz=83,SNR=20
GRF Grafenberg Arr 82.86 330 eP P 14 04 00.4 +0.6
GRF e 14 07 16.0
GRF eS S 14 14 18.0 +2.9
GRF pmax pmax
comp=Z,472nm,1.6s,mb6.3
GRF MLR MLR
comp=Z,4μm,19.4s,MS5.7
GRF Grafenberg Arr 82.86 330 eP P 14 04 00.4 +0.6
GRF e 14 07 16.0
GRF eS S 14 14 18.0 +2.9
GRF pmax pmax
comp=Z,472nm,1.6s,mb6.3
GRF MLR MLR
comp=Z,4μm,19.4s,MS5.7
GRF Grafenberg Arr 82.86 330 eP P 14 04 00.4 +0.6
comp=Z,472nm,1.6s,mb6.3
GRF ePP PP 14 07 16.0 +6.4
GRF eS S 14 14 18.0 +2.9
GRF eL 14 45 29.3
comp=Z,4μm,19.4s
ESK Eskdalemuir 82.89 341 eP P 14 04 00.3 +0.4
comp=Z,62nm,1.2s,mb5.5
ESK LR LR
comp=Z,5μm,21.0s,MS5.9
ESK Eskdalemuir 82.89 341 eP P 14 03 59.9 0.0
ESK AMb AMB 14 04 04.0
comp=Z,96nm,1.5s,mb5.6
ESK AMS AMS 14 44 32.8
comp=Z,4μm,20.3s,MS5.8
ESK Eskdalemuir 82.89 341 eP P 14 04 00.3 +0.4
ESK pmax pmax
comp=Z,62nm,1.2s,mb5.5
ESK MLR MLR
comp=Z,5μm,21.0s,MS5.9
EZN Ezine 82.90 315 eP P 14 03 59.6 -0.7
BUG Bochum--Univer 82.94 333 eP P 14 03 59.8 -0.4
comp=Z,61nm,0.9s,mb5.6
ARSA Arzberg 82.95 326⇑iP P 14 04 00.6 +0.3
comp=Z,79nm,1.1s,mb5.7
SDCO Great Sand Dun 82.95 47 eP P 14 04 00.4 -0.2
comp=Z,87nm,1.8s,mb5.5
SDCO LR LR
comp=Z,1μm,20.0s,MS5.3
ECK Cauldkaine Hil 83.00 341 eP P 14 03 59.5 -0.9
216A Three Points, 83.02 55 ⇑P P 14 04 00.8 -0.2
baz=83
MOA Molln 83.04 327⇑iP P 14 04 01.0 +0.3
comp=Z,118nm,1.2s,mb5.8
BOZC Bozcaada 83.05 316 iP P 14 04 00.8 -0.1
MMB Musomiste 83.09 318 iP P 14 04 01.4 +0.2
117A Oracle 83.12 54 ⇑P P 14 04 01.4 -0.1
baz=83,SNR=6.9
Y19A Nutrioso 83.18 52 ⇑P P 14 04 02.2 +0.5
baz=83,SNR=7.8
KOGS Kog 83.23 325 eP P 14 04 01.2 -0.6
KKB Krupnik 83.24 319 iP P 14 04 02.6 +0.7
Z18A Geronimo 83.25 53 ⇑P P 14 04 02.1 -0.1
baz=83
TUC Tucson 83.26 54 eP P 14 04 01.7 -0.6
comp=Z,121nm,1.9s,mb5.6
TUC LR LR
comp=Z,3μm,22.0s,MS5.6
TUC Tucson 83.26 54 eP P 14 04 01.7 -0.5
TUC pmax pmax
comp=Z,121nm,1.9s,mb5.6
TUC MLR MLR
comp=Z,3μm,22.0s,MS5.6
PRK Paraskevi 83.33 315 P P 14 04 02.3 -0.2
PRK Paraskevi 83.33 315 eP P 14 04 04.0 +1.5
KDAG Bornova 83.34 314⇓iP P 14 04 03.0 +0.5
AKAS Kas 83.43 311⇑iP P 14 04 02.0 -1.1
FETY Fethiye 83.48 312 eP P 14 04 02.6 -0.6
BLCB Balcova 83.48 314 eP P 14 04 01.8 -1.5
BLCB Balcova 83.48 314 P P 14 04 03.1 -0.2
BLCB Balcova 83.48 314 P P 14 04 03.1 -0.2
KSL Kastellorizon 83.50 311 eP P 14 04 03.0 -0.4
TNS Taunus Mts 83.50 332 eP P 14 04 03.2 +0.1
TNS pmax pmax
comp=Z,117nm,1.5s,mb5.8
TNS Taunus Mts 83.50 332 eP P 14 04 03.2 +0.1
comp=Z,117nm,1.5s,mb5.8
GROS Grobnik 83.56 326 eP P 14 04 03.3 -0.2
ECSD EROS,Sioux Fal 83.56 38 eP P 14 04 02.6 -1.0
comp=Z,116nm,1.6s,mb5.8
ECSD LR LR
comp=Z,3μm,22.0s,MS5.6
118A Homack Ranch, 83.58 54 ⇓P P 14 04 03.8 0.0
baz=83,SNR=14
217A Green Valley 83.59 55 ⇑P P 14 04 03.9 0.0
baz=83,SNR=12
PERS Pernice 83.60 326 iP P 14 04 03.6 -0.1
PERS i pP 14 04 15.2 -0.7
Z19A T-Link Ranch, 83.60 53 ⇓P P 14 04 04.3 +0.4
baz=83
SOKA Soboth 83.60 326⇑iP P 14 04 03.9 +0.2
comp=Z,281nm,1.4s,mb6.2
TURN Turunc 83.60 312 iP P 14 04 05.7 +1.8
YER Yerkesik 83.61 312 eP P 14 04 04.0 0.0
HPK Haverah Park 83.66 339 eP P 14 04 03.9 0.0
HPK AMb AMB 14 04 05.6
comp=Z,185nm,1.8s,mb5.9
HPK AMS AMS 14 45 11.1
comp=Z,6μm,20.0s,MS6.0
GAL1 Galloway 83.69 341 eP P 14 04 04.2 +0.2
GAL1 AMb AMB 14 04 05.8
comp=Z,131nm,1.3s,mb5.9
GAL1 AMS AMS 14 45 37.6
comp=Z,4μm,19.6s,MS5.8
RJOB Jochberg 83.75 328 eP P 14 04 04.9 +0.5
comp=Z,130nm,1.1s,mb6.0
ZAVS Zavodnje 83.79 326 eP P 14 04 04.3 -0.4
MLSB Milas 83.80 313 eP P 14 04 05.2 +0.3
STIP Stip 83.83 319 eP P 14 04 04.5 -0.5
SOH Sokhos 83.84 318 P P 14 04 04.7 -0.3
KNT Kendrikon 83.84 318 P P 14 04 05.2 +0.2
GCAM G?zelcaml? 83.84 313 iP P 14 04 05.3 +0.2
TOD Tromm 83.87 331 eP P 14 04 04.8 -0.2

VAY Valandovo 83.90 319 P P 14 04 05.0 -0.3
VAY Valandovo 83.90 319 eP P 14 04 04.7 -0.6
119A Ashpeak Ranch, 83.92 53 ⇓P P 14 04 05.6 0.0
baz=84,SNR=12
OBKA Obir 83.95 326⇑iP P 14 04 05.1 -0.3
comp=Z,45nm,0.8s,mb5.6
SNZO South Karori 83.95 156 PFAKE 14 04 20.0 +15
SNZO LR LR
comp=Z,3μm,21.0s,MS5.7
218A Dragoon 83.96 54 ⇑P P 14 04 06.0 +0.2
baz=84
HGN Heimansgroeve 83.98 333 eP P 14 04 04.6 -1.0
comp=Z,99nm,1.2s,mb5.8
HGN Heimansgroeve 83.98 333 eS S 14 14 32.4 +6.0
HGN Heimansgroeve 83.98 333 eSS SS 14 20 47.0 +53
SKO Skopje 84.02 320 P P 14 04 07.2 +1.3
SKO Skopje 84.02 320 eP P 14 04 06.8 +0.9
KBA Koelnbreinsper 84.03 327⇑iP P 14 04 05.9 0.0
comp=Z,69nm,0.9s,mb5.8
FUR Furstenfeldbru 84.04 329 eP P 14 04 06.1 +0.2
FUR pmax pmax
comp=Z,530nm,1.8s,mb6.4
FUR Furstenfeldbru 84.04 329 eP P 14 04 06.1 +0.2
comp=Z,530nm,1.8s,mb6.4
CHOS Chios island 84.05 315 P P 14 04 06.2 +0.1
MEM Membach 84.08 333 P P 14 04 05.8 -0.3
comp=Z,56nm,1.5s,mb5.5
MEM XP sP 14 04 20.2 -2.6
MEM E 14 04 35.3
LHO Holmfirth 84.09 339⇑eP P 14 04 05.3 -0.7
PLG Polygyros 84.10 317 P P 14 04 06.4 0.0
PLG Polygyros 84.10 317 eP P 14 04 05.5 -0.9
ABH Alteburg 84.12 332 eP P 14 04 05.9 -0.4
HORT Hortiatis 84.13 318 P P 14 04 06.2 -0.3
BDRM Kayabasi 84.15 313⇑iP P 14 04 06.6 -0.1
THE Thessaloniki 84.18 318 P P 14 04 06.2 -0.6
LAZ Ladron 84.20 51 eP P 14 04 07.4 +0.4
comp=Z,96nm,1.9s,mb5.6
GRG Griva 84.25 318 P P 14 04 07.0 -0.1
MYKA Terra Mystica 84.25 327⇑iP P 14 04 06.4 -0.6
comp=Z,70nm,1.1s,mb5.7
ANMO Albuquerque 84.25 50 eP P 14 04 07.8 +0.5
comp=Z,90nm,1.4s,mb5.7
ANMO LR LR
comp=Z,1μm,20.0s,MS5.3
ANMO Albuquerque 84.25 50 eP P 14 04 07.8 +0.5
ANMO pmax pmax
comp=Z,90nm,1.4s
ANMO MLR MLR
comp=Z,1μm,20.0s
KBI1 Birley Grange 84.25 339⇑eP P 14 04 06.5 -0.4
PAIG Paliouri 84.29 317 P P 14 04 07.1 -0.3
DAT Datca 84.30 312 eP P 14 04 06.1 -1.4
LJU Ljubljana 84.31 326 iP P 14 04 06.8 -0.5
LJU i pP 14 04 19.0 -0.5
ARG Arkhangelos 84.33 312 eP P 14 04 08.5 +0.9
318A Bisbee 84.34 55 ⇑P P 14 04 07.8 0.0
baz=84,SNR=24
KTD Kalmit 84.38 332 eP P 14 04 07.4 -0.2
STU Stuttgart 84.39 331 eP P 14 04 07.8 +0.1
comp=Z,271nm,1.3s,mb6.2
STU Stuttgart 84.39 331 eP P 14 04 07.8 +0.1
STU pmax pmax
comp=Z,271nm,1.3s,mb6.2
STU Stuttgart 84.39 331 eP P 14 04 07.6 -0.1
comp=Z,210nm,1.1s,mb6.2
BOJS Bojanci 84.40 325 iP P 14 04 07.4 -0.4
BOJS i pP 14 04 19.4 -0.6
219A White Tail Can 84.45 54 ⇓P P 14 04 08.2 -0.1
baz=84,SNR=25
RUP Ruppelstein 84.45 332 eP P 14 04 07.9 0.0
LENM Lemitar 84.46 51 eP P 14 04 08.1 -0.2
comp=Z,9.5nm,1.4s,mb4.7
BCLA Clavier 84.49 334 P P 14 04 07.9 -0.2
comp=Z,65nm,1.3s,mb5.6
UCC Uccle 84.50 334 P P 14 04 07.6 -0.6
PTCC Patocco-Chiusa 84.55 327 P P 14 04 07.3 -1.2
comp=Z,58nm,1.2s,mb5.6
KWE Weaver Farm 84.55 339 eP P 14 04 07.2 -1.2
Y22D IRIS PASSCAL I 84.56 51 ⇑P P 14 04 09.4 +0.6
baz=84
KRUS Krusevo 84.56 319 eP P 14 04 09.0 +0.3
LPM Los Pinos Moun 84.58 51 eP P 14 04 08.8 -0.1
comp=Z,89nm,1.8s,mb5.6
LPM e pP 14 04 19.1 -2.0
VOY Vojsko 84.60 326 eP P 14 04 06.2 -2.6
VOY e 14 04 22.0
WTTA Wattenberg 84.61 328⇑iPcP PcP 14 04 08.8 -3.5
comp=Z,78nm,1.5s
JAVS Javornik 84.64 326 iP P 14 04 08.0 -1.0
JAVS i pP 14 04 19.9 -1.2
CWF Charnwood Fore 84.64 338 eP P 14 04 08.2 -0.7
CWF AMb AMB 14 04 11.1
CWF AMS AMS 14 45 17.5
comp=Z,194nm,1.3s,mb6.1
comp=Z,6μm,21.9s,MS6.0
ABTA Abfaltersbach 84.65 328⇑iP P 14 04 08.0 -1.0
comp=Z,63nm,1.5s,mb5.5
PPT Papeete 84.65 117 eS S 14 14 42.5 +8.6
comp=Z,917nm,24.2s
PPT eSS SS 14 20 22.8 +16
comp=Z,1μm,25.0s
PPT Papeete 84.65 117 eLR LR 14 30 26.3
comp=Z,8μm,24.0s,baz=315
PPT Papeete 84.65 117 LR LR 14 37 43.7
comp=Z,4μm,18.8s,MS5.8,baz=273,slow=33
BNM Barren Site 84.69 51 eP P 14 04 09.5 +0.1
comp=Z,119nm,1.9s,mb5.7
BNM e pP 14 04 19.9 -1.8
GMNA Gemona 84.70 327 P P 14 04 08.5 -0.8
comp=Z,145nm,0.7s,mb6.2
LANF Langenberg 84.76 331 eP P 14 04 09.2 -0.3
SNF Seneffe 84.77 334 P P 14 04 08.9 -0.6
comp=Z,79nm,1.3s,mb5.7
RETA Reutte 84.79 329⇑iPcP PcP 14 04 09.9 -3.2
comp=Z,192nm,1.2s
WLF Walferdange 84.81 333 P P 14 04 10.1 +0.3
comp=Z,101nm,1.5s,mb5.7
WLF AP pP 14 04 20.2 -1.8
WLF Walferdange 84.81 333 eP P 14 04 09.8 +0.1
comp=Z,208nm,1.4s,mb6.1
WLF LR LR
comp=Z,6μm,19.0s,MS6.0
WLF Walferdange 84.81 333 eP P 14 04 09.9 +0.1
WLF pmax pmax
comp=Z,208nm,1.4s,mb6.1
WLF MLR MLR
comp=Z,6μm,19.0s,MS6.0
WLF Walferdange 84.81 333 eP P 14 04 10.2 +0.4
comp=Z,207nm,1.4s,mb6.1
WLF epP pP 14 04 23.0 +1.0
LIT Litokhoron 84.81 318 P P 14 04 09.4 -0.6
319A Douglas 84.84 54 ⇓P P 14 04 10.2 -0.1
baz=85,SNR=9.8
TRI Trieste 84.91 326 PFAKE 14 04 20.0 +10
TRI LR LR
comp=Z,8μm,19.0s,MS6.1
GIVF Givet 84.92 334⇑iP P 14 04 09.6 -0.7
comp=Z,287nm,1.4s,mb5.9
GIVF Givet 84.92 334⇑iP P 14 04 09.6 -0.7
comp=Z,144nm,1.4s,mb5.9
GIVF Givet 84.92 334⇑iP P 14 04 09.6 -0.7
GIVF pmax pmax
comp=Z,144nm,1.4s,mb5.9
SCHQ Schefferville 84.98 16 P P 14 04 09.7 -0.8
comp=Z,40nm,0.8s,mb5.6,baz=3.3,slow=6.7,SNR=20
SCHQ LR LR 14 43 57.4
comp=Z,2μm,21.8s,MS5.5,baz=138,slow=37
OHR Ohrid 84.98 319 eP P 14 04 09.8 -1.0
DOU Dourbes 85.01 334 P P 14 04 10.1 -0.6
comp=Z,48nm,1.5s,mb5.4
DOU AP pP 14 04 22.9 -0.1
RPZ Rata Peaks 85.02 159 pP pP 14 04 22.2 -0.6
comp=Z,17nm,0.9s,baz=351,slow=3.6,SNR=4.7
KZN Kozani 85.05 318 eP P 14 04 10.0 -1.2
SBD1 Bryn Du 85.05 340⇑eP P 14 04 10.6 -0.3
BFO Black Forest 85.09 331 P P 14 04 11.2 0.0
comp=Z,1μm,1.0s,mb6.9,SNR=48
BFO Black Forest 85.09 331 eP P 14 04 10.8 -0.4
comp=Z,340nm,1.3s,mb6.3
BFO LR LR
comp=Z,5μm,19.0s,MS5.9
BFO Black Forest 85.09 331 eP P 14 04 10.8 -0.4
BFO pmax pmax
comp=Z,340nm,1.3s,mb6.3

BFO MLR MLR
comp=Z,5µm,19.0s,MS5.9
BFO Black Forest 85.09 331 *e*P **P 14 04 11.0 -0.2**
comp=Z,247nm,1.1s,mb6.2
SPAK Spaichingen-Ko 85.09 330 *e*P **P 14 04 11.1 -0.1**
DMUB Kingscourt 85.12 342 *e*P **P 14 04 07.9 -3.3**
DMUB Kingscourt 85.12 342⇑*i*P **P 14 04 11.3 +0.1**
BAIF Baives 85.18 334⇑*i*P **P 14 04 10.8 -0.8**
comp=Z,155nm,1.1s,mb5.7
BAIF Baives 85.18 334⇑*i*P **P 14 04 10.8 -0.8**
comp=Z,78nm,1.1s,mb5.8
BAIF Baives 85.18 334⇑*i*P **P 14 04 10.8 -0.8**
BAIF pmax pmax
comp=Z,78nm,1.1s,mb5.8
FETA Feichten 85.18 329⇑*i*PcP PcP 14 04 11.6 -3.2
comp=Z,80nm,1.1s
APE Apeiranthos 85.26 314 *e*P **P 14 04 10.0 -2.3**
APE Apeiranthos 85.26 314⇑*i*P **P 14 04 08.1 -4.2**
HLM1 Long Mynd 85.29 339 *e*P **P 14 04 10.9 -1.2**
DAVA Damuels 85.31 329⇓*i*PcP PcP 14 04 12.3 -3.1
comp=Z,154nm,1.0s
KARP Karpathos 85.36 312 *e*P **P 14 04 13.0 +0.2**
CDF Champ du Feu 85.43 331⇑*i*P **P 14 04 12.3 -0.6**
comp=Z,267nm,1.0s,mb6.0
CDF Champ du Feu 85.43 331⇑*i*P **P 14 04 12.3 -0.6**
comp=Z,134nm,1.0s,mb6.0
CDF Champ du Feu 85.43 331⇑*i*P **P 14 04 12.3 -0.6**
CDF pmax pmax
comp=Z,134nm,1.0s,mb6.0
MENF Mencas 85.45 335 *e*P **P 14 04 12.6 -0.4**
CBKS Cedar Bluff 85.49 43 *e*P **P 14 04 11.4 -2.0**
comp=Z,62nm,1.3s,mb5.6
CBKS LR LR
comp=Z,1µm,19.0s,MS5.4
CBKS Cedar Bluff 85.49 43 *e*P **P 14 04 11.4 -2.0**
CBKS pmax pmax
comp=Z,62nm,1.3s,mb5.6
CBKS MLR MLR
comp=Z,1µm,19.0s,MS5.4
LIBD Limburg 85.52 331 *e*P **P 14 04 13.1 -0.2**
CTI Castel Tesino 85.56 328 P **P 14 04 12.6 -1.0**
LKR Lokris 85.57 316 P **P 14 04 12.2 -1.6**
DLF Lyons Farm 85.57 341 *e*P **P 14 04 10.0 -3.5**
DLF Lyons Farm 85.57 341⇑*i*P **P 14 04 13.4 -0.1**
DSB Dublin 85.58 341 *e*P **P 14 04 13.2 -0.4**
comp=Z,126nm,1.5s,mb5.9
FELD Feldberg im Sc 85.58 331 *e*P **P 14 04 13.3 -0.4**
ECH Echery 85.63 331 *e*P **P 14 04 13.5 -0.4**
ECH Echery 85.63 331 *e*P **P 14 04 13.3 -0.6**
comp=Z,233nm,1.4s,mb6.2
ECH Echery 85.63 331 *e*P **P 14 04 13.3 -0.6**
ECH pmax pmax
comp=Z,233nm,1.4s,mb6.2
DAVOX Davos/Dischmat 85.72 329 LR LR 14 46 13.7
comp=Z,8µm,18.4s,MS6.2,baz=24,slow=38
BRMO Bormio 85.76 329 P **P 14 04 14.7 +0.1**
MCH1 Michaelchurch 85.79 339 *e*P **P 14 04 14.0 -0.6**
MCH1 AMb AMB 14 04 17.1
comp=Z,191nm,1.2s,mb6.2
MCH1 AMS AMS 14 46 14.9
comp=Z,5µm,20.9s,MS5.9
HTR Trewern Hill 85.79 339⇑*e*P **P 14 04 13.4 -1.2**
THR6 Thira Island, 85.83 313 P **P 14 04 15.6 +0.5**
SWN1 Swindon 85.87 338 AMS AMS 14 45 42.6
comp=Z,7µm,22.1s,MS6.0
WOL Wolverton 85.87 338 *e*P **P 14 04 14.7 -0.3**
WOL AMb AMB 14 04 17.0
comp=Z,289nm,1.4s,mb6.3
MOF Molkenrain 85.94 331 *e*P **P 14 04 15.2 -0.2**
JAN Janina 86.01 318 *e*P **P 14 04 16.5 +0.6**
EVR Evrytania 86.03 317 *e*P **P 14 04 14.0 -2.1**
HGH Gray Hill 86.05 339⇑*e*P **P 14 04 15.5 -0.4**
THEF They Montfort 86.06 332 *e*P **P 14 04 15.7 -0.4**
HINF Hinteralfeld 86.08 331⇑*i*P **P 14 04 15.1 -1.0**
comp=Z,196nm,1.5s,mb5.8
HINF Hinteralfeld 86.08 331⇑*i*P **P 14 04 15.1 -1.0**
comp=Z,98nm,1.5s,mb5.8
HINF Hinteralfeld 86.08 331⇑*i*P **P 14 04 15.1 -1.0**
HINF pmax pmax
comp=Z,98nm,1.5s,mb5.8
TAOE Nuku Hiva Isla 86.11 104 *e*S S 14 14 41.2 -7.3
comp=Z,11µm,25.6s
TAOE Nuku Hiva Isla 86.11 104 *e*LR LR 14 31 47.6
comp=Z,33µm,23.9s,baz=319
BBS Basel-Blauen 86.11 331 *e*P **P 14 04 16.0 -0.3**
HAU Haudompre 86.11 332⇑*i*P **P 14 04 15.3 -1.0**
comp=Z,101nm,0.9s,mb5.8
HAU *e*MLR MLR
comp=Z,6µm,22.0s,MS5.6
HAU Haudompre 86.11 332⇑*i*P **P 14 04 15.3 -1.0**
comp=Z,51nm,0.9s,mb5.8
HAU LR LR
comp=Z,6µm,22.0s,MS5.9
HAU Haudompre 86.11 332*i*P **P 14 04 15.3 -1.0**
HAU pmax pmax
comp=Z,51nm,0.9s,mb5.8
HAU MLR MLR
comp=Z,6µm,22.0s,MS5.9
MEZF Maizieres J'vi 86.18 333⇑*i*P **P 14 04 16.3 -0.3**
comp=Z,464nm,1.4s,mb6.2
MEZF Maizieres J'vi 86.18 333⇑*i*P **P 14 04 16.3 -0.3**
comp=Z,464nm,1.4s,mb6.5
TUE Stuetta 86.19 329 *e*P **P 14 04 16.2 -0.5**
comp=Z,152nm,1.4s,mb6.0
TUE LR LR
comp=Z,7µm,19.0s,MS6.1
NPS Neapolis 86.47 313 *e*P **P 14 04 18.5 +0.2**
LOMF Lomont 86.47 331 *e*P **P 14 04 17.6 -0.5**
SCIA State Center 86.59 38 *e*P **P 14 04 18.2 -0.5**
comp=Z,58nm,1.1s,mb5.7
SCIA LR LR
comp=Z,2µm,20.0s,MS5.6
VAI Varese 86.91 329 P **P 14 04 19.4 -0.9**
comp=Z,247nm,1.3s,mb6.3
VAI Varese 86.91 329 P **P 14 04 19.4 -0.9**
VAI pmax pmax
comp=Z,247nm,1.3s,mb6.3
FSSB Fossombrone 86.92 326 P **P 14 04 19.6 -0.8**
comp=Z,461nm,1.9s,mb6.4
KSU1 Kansas State U 86.96 41 *e*P **P 14 04 19.6 -1.0**
comp=Z,29nm,0.8s,mb5.6
KSU1 LR LR
comp=Z,1µm,20.0s,MS5.3
CING Cingoli 86.98 325 P **P 14 04 20.3 -0.3**
VLI Veliai 86.98 315 *e*P **P 14 04 19.5 -1.3**
HTL Hartland 87.10 339 AMS AMS 14 47 17.4
comp=Z,5µm,20.4s,MS5.9
AMTX Amarillo 87.16 47 *e*P **P 14 04 21.5 -0.2**
comp=Z,187nm,1.7s,mb6.0
AMTX LR LR
comp=Z,2µm,20.0s,MS5.5
VAM Vamos 87.19 313 *e*P **P 14 04 21.5 -0.3**
SNTG Esanatoglia 87.19 325 P **P 14 04 21.5 -0.2**
comp=Z,46nm,1.0s,mb5.7
ITM Ithomi 87.21 316 *e*P **P 14 04 20.0 -1.9**
VLS Valsamata 87.22 317 *e*P **P 14 04 21.5 -0.4**
JFWS Jewell Farm 87.22 35 *e*P **P 14 04 20.2 -1.7**
comp=Z,59nm,1.5s,mb5.6
JFWS LR LR
comp=Z,3µm,20.0s,MS5.7
JFWS Jewell Farm 87.22 35 *e*P **P 14 04 20.2 -1.6**
JFWS pmax pmax
comp=Z,59nm,1.5s,mb5.6
JFWS MLR MLR
comp=Z,3µm,20.0s,MS5.7
KYTH Kithira 87.24 315 *e*P **P 14 04 21.0 -1.0**
VMG Vicchio 87.26 326 P **P 14 04 23.0 +1.0**
comp=Z,364nm,1.9s,mb6.3
FNVD Fontana Vidola 87.28 327 P **P 14 04 22.6 +0.5**
BADI Badiali 87.31 326 P **P 14 04 22.6 +0.4**
CABF La Chapelle 87.37 331⇑*i*P **P 14 04 21.8 -0.7**
comp=Z,124nm,1.4s,mb5.7
CABF La Chapelle 87.37 331⇑*i*P **P 14 04 21.8 -0.7**
comp=Z,62nm,1.4s,mb5.7
CABF La Chapelle 87.37 331⇑*i*P **P 14 04 21.8 -0.7**
CABF pmax pmax
comp=Z,62nm,1.4s,mb5.7
GSCL Gusciola 87.37 327 P **P 14 04 22.5 0.0**
comp=Z,140nm,1.5s,mb6.0
MURB Monte Urbino 87.37 325 P **P 14 04 22.3 -0.3**
ERBM Eremo 87.39 327 P **P 14 04 23.1 +0.5**
ORO Oropa 87.43 329 P **P 14 04 21.6 -1.2**
comp=Z,49nm,1.0s,mb5.7
ORO Oropa 87.43 329 P **P 14 04 21.6 -1.2**
ORO pmax pmax
comp=Z,49nm,1.0s,mb5.7

NRCA Norcia 87.44 325 P **P 14 04 22.8 -0.1**
comp=Z,165nm,1.3s,mb6.1
DYA Yadsworthy 87.45 339 P **P 14 04 22.2 -0.6**
DYA AMb AMB 14 04 24.8
comp=Z,140nm,1.4s,mb6.0
DYA AMS AMS 14 47 15.0
comp=Z,5µm,21.5s
DYA Yadsworthy 87.45 339 *e*P **P 14 04 22.2 -0.6**
DYA AMb AMB 14 04 24.8
comp=Z,140nm,1.4s,mb6.0
DYA AMS AMS 14 47 15.0
comp=Z,5µm,21.5s,MS5.9
ASS Assisi 87.47 325 P **P 14 04 22.8 -0.2**
comp=Z,168nm,1.5s,mb6.0
ASS Assisi 87.47 325 P **P 14 04 22.8 -0.2**
ASS pmax pmax
comp=Z,168nm,1.5s,mb6.0
PYL PYLOS 87.52 316 P **P 14 04 20.4 -3.0**
VLC Villacollemand 87.61 327 *e*P **P 14 04 24.4 +0.8**
comp=Z,130nm,1.8s,mb5.9
VLC LR LR
comp=Z,4µm,19.0s,MS5.9
LOR Lormes 87.65 333⇑*i*P **P 14 04 23.0 -0.8**
comp=Z,408nm,1.3s,mb6.2
LOR *e*MLR MLR
comp=Z,5µm,21.5s,MS5.6
LOR Lormes 87.65 333⇑*i*P **P 14 04 23.0 -0.8**
comp=Z,204nm,1.3s,mb6.2
LOR LR LR
comp=Z,5µm,21.5s,MS5.9
LOR Lormes 87.65 333*i*P **P 14 04 23.0 -0.8**
LOR pmax pmax
comp=Z,204nm,1.3s,mb6.2
LOR MLR MLR
comp=Z,5µm,21.5s,MS5.9
AQU L'Aquila 87.68 324 *e*P **P 14 04 23.3 -0.8**
comp=Z,60nm,0.9s,mb5.8
AQU LR LR
comp=Z,6µm,21.0s,MS6.0
AQU L'Aquila 87.68 324 *e*P **P 14 04 23.3 -0.8**
AQU pmax pmax
comp=Z,61nm,0.9s,mb5.8
AQU MLR MLR
comp=Z,6µm,21.0s,MS6.0
AQU L'Aquila 87.68 324⇑*i*P **P 14 04 24.4 +0.3**
MIDA Miranda 87.83 323 P **P 14 04 24.6 -0.2**
RNI2 Rionero Sannit 87.84 323 P **P 14 04 23.9 -0.9**
FLN La Foliniere 87.87 336⇑*i*P **P 14 04 24.0 -0.8**
comp=Z,258nm,1.3s,mb6.0
FLN *e*MLR MLR
comp=Z,9µm,19.8s,MS5.9
FLN La Foliniere 87.87 336⇑*i*P **P 14 04 24.0 -0.8**
comp=Z,129nm,1.3s,mb6.0
FLN LR LR
comp=Z,9µm,19.8s,MS6.2
FLN La Foliniere 87.87 336⇑*i*P **P 14 04 24.0 -0.8**
FLN pmax pmax
comp=Z,129nm,1.3s,mb6.0
FLN MLR MLR
comp=Z,9µm,19.8s,MS6.2
LDF La Druitiere 87.90 336⇑*i*P **P 14 04 24.1 -0.8**
comp=Z,215nm,1.2s,mb6.0
LDF La Druitiere 87.90 336⇑*i*P **P 14 04 24.1 -0.8**
comp=Z,107nm,1.2s,mb6.0
LDF La Druitiere 87.90 336⇑*i*P **P 14 04 24.1 -0.8**
LDF pmax pmax
comp=Z,107nm,1.2s,mb6.0
PTQR Pietraquaria 87.94 324 P **P 14 04 25.0 -0.3**
comp=Z,127nm,0.9s,mb6.2
VVLD Villa Vallelon 87.96 324 P **P 14 04 24.5 -0.9**
SSF Saint Saulge 87.96 333⇑*i*P **P 14 04 24.6 -0.7**
comp=Z,119nm,1.1s,mb5.8
SSF Saint Saulge 87.96 333⇑*i*P **P 14 04 24.6 -0.7**
comp=Z,60nm,1.1s,mb5.7
SSF Saint Saulge 87.96 333⇑*i*P **P 14 04 24.6 -0.7**
SSF pmax pmax
comp=Z,60nm,1.1s,mb5.7
SDI San Donato 87.99 324 P **P 14 04 24.9 -0.6**
comp=Z,28nm,0.7s,mb5.6
SDI San Donato 87.99 324 P **P 14 04 24.9 -0.6**
SDI pmax pmax
comp=Z,29nm,0.7s,mb5.6
LPL La Plagne 88.02 330⇑*i*P **P 14 04 25.1 -0.5**
comp=Z,70nm,1.0s,mb5.5
LPL La Plagne 88.02 330⇑*i*P **P 14 04 25.1 -0.5**
comp=Z,35nm,1.0s,mb5.5
LPL La Plagne 88.02 330⇑*i*P **P 14 04 25.1 -0.5**
LPL pmax pmax
comp=Z,35nm,1.0s,mb5.5
JSA Saint Aubin 88.03 337 *e*P **P 14 04 25.3 -0.2**
JSA AMb AMB 14 04 27.0
comp=Z,138nm,1.4s,mb6.0
LPG La Plagne 88.03 330⇑*i*P **P 14 04 25.3 -0.3**
comp=Z,62nm,0.8s,mb5.6
LPG La Plagne 88.03 330⇑*i*P **P 14 04 25.3 -0.3**
comp=Z,31nm,0.8s,mb5.6
LPG La Plagne 88.03 330*i*P **P 14 04 25.3 -0.3**
LPG pmax pmax
comp=Z,31nm,0.8s,mb5.6
HYF Humbligny 88.09 333⇑*i*P **P 14 04 25.7 -0.2**
GLMI Grayling 88.15 31 PFAKE 14 04 40.0 +14
GLMI LR LR
comp=Z,2µm,20.0s,MS5.5
SGO Sicignano 88.16 322 P **P 14 04 26.1 -0.3**
comp=Z,155nm,1.8s,mb5.9
SGO Sicignano 88.16 322 P **P 14 04 26.1 -0.3**
SGO pmax pmax
comp=Z,155nm,1.8s,mb5.9
SMF Signal de Mont 88.19 332⇑*i*P **P 14 04 25.6 -0.8**
comp=Z,294nm,1.4s,mb6.0
SMF Signal de Mont 88.19 332⇑*i*P **P 14 04 25.6 -0.8**
comp=Z,147nm,1.4s,mb6.0
SMF Signal de Mont 88.19 332*i*P **P 14 04 25.6 -0.8**
SMF pmax pmax
comp=Z,147nm,1.4s,mb6.0
AVF Avril sur Loir 88.24 333⇑*i*P **P 14 04 26.0 -0.6**
comp=Z,392nm,1.3s,mb6.2
AVF Avril sur Loir 88.24 333⇑*i*P **P 14 04 26.0 -0.6**
comp=Z,196nm,1.3s,mb6.2
AVF Avril sur Loir 88.24 333⇑*i*P **P 14 04 26.0 -0.6**
AVF pmax pmax
comp=Z,196nm,1.3s,mb6.2
GRR Gorron 88.32 336⇑*i*P **P 14 04 26.4 -0.5**
comp=Z,201nm,1.1s,mb6.0
GRR Gorron 88.32 336⇑*i*P **P 14 04 26.4 -0.5**
comp=Z,100nm,1.1s,mb6.0
GRR Gorron 88.32 336*i*P **P 14 04 26.4 -0.5**
GRR pmax pmax
comp=Z,100nm,1.1s,mb6.0
CUC Castrocucco 88.34 321 PFAKE 14 04 40.0 +13
CUC LR LR
comp=Z,8µm,19.0s,MS6.2
BNI Bardonecchia 88.43 330 *e*P **P 14 04 26.7 -0.9**
comp=Z,23nm,1.0s,mb5.4
BNI LR LR
comp=Z,5µm,20.0s,MS6.0
BNI Bardonecchia 88.43 330 *e*P **P 14 04 26.7 -0.8**
BNI pmax pmax
comp=Z,23nm,1.0s,mb5.4
BNI MLR MLR
comp=Z,5µm,20.0s,MS6.0
TIP Timpagrande 88.48 320 *e*P **P 14 04 27.5 -0.5**
comp=Z,191nm,1.5s,mb6.1
TIP LR LR
comp=Z,7µm,21.0s,MS6.1
FIN Finale Ligure 88.49 328 P **P 14 04 25.6 -2.3**
BGF Bois d'Agland 88.62 333⇑*i*P **P 14 04 28.0 -0.4**
comp=Z,92nm,1.1s,mb5.7
BGF Bois d'Agland 88.62 333⇑*i*P **P 14 04 28.0 -0.4**
comp=Z,46nm,1.1s,mb5.7
BGF Bois d'Agland 88.62 333*i*P **P 14 04 28.0 -0.4**
BGF pmax pmax
comp=Z,46nm,1.1s,mb5.7
MBDF Montbardon 88.66 330⇑*i*P **P 14 04 27.3 -1.3**
comp=Z,34nm,0.8s,mb5.4
MBDF Montbardon 88.66 330⇑*i*P **P 14 04 27.3 -1.3**
comp=Z,17nm,0.8s,mb5.4
MBDF Montbardon 88.66 330*i*P **P 14 04 27.3 -1.3**
MBDF pmax pmax
comp=Z,17nm,0.8s,mb5.4
PLDF La Plantade 88.84 332 *e*P **P 14 04 29.6 +0.2**
ORIF Oris-en-Rattie 88.85 330*i*P **P 14 04 29.1 -0.4**
ORIF *e*MLR MLR
comp=Z,6µm,21.8s,MS5.7
IMI Imperia 88.87 328 P **P 14 04 28.5 -1.1**
GRI Girifalco 88.93 320 P **P 14 04 30.0 0.0**
comp=Z,224nm,1.4s,mb6.3

GRI Girifalco 88.93 320 P **P 14 04 30.0 0.0**
GRI pmax pmax
comp=Z,224nm,1.4s,mb6.3
WMOK Wichita Mounta 88.94 46 *e*P **P 14 04 29.2 -0.9**
comp=Z,83nm,1.8s,mb5.8
WMOK LR LR
comp=Z,2µm,19.0s,MS5.4
WMOK Wichita Mounta 88.94 46 *e*P **P 14 04 29.2 -0.9**
WMOK pmax pmax
comp=Z,83nm,1.8s,mb5.8
WMOK MLR MLR
comp=Z,2µm,19.0s,MS5.4
SAOF Saorge 88.95 329 *e*P **P 14 04 28.6 -1.4**
AGO Saint Agoulin 88.95 332 *e*P **P 14 04 29.6 -0.4**
SGMF Saint Gilles 88.97 337⇑*i*P **P 14 04 29.6 -0.4**
comp=Z,173nm,1.2s,mb6.0
SGMF Saint Gilles 88.97 337⇑*i*P **P 14 04 29.6 -0.4**
comp=Z,86nm,1.2s,mb6.0
SGMF Saint Gilles 88.97 337⇑*i*P **P 14 04 29.6 -0.4**
SGMF pmax pmax
comp=Z,86nm,1.2s,mb6.0
AUTN L'Aution 88.99 329 *e*P **P 14 04 28.6 -1.6**
TOUF Mont Tournerai 89.05 329 *e*P **P 14 04 28.9 -1.6**
TCF Toulx Ste Croi 89.08 333⇑*i*P **P 14 04 30.3 -0.3**
comp=Z,128nm,1.4s,mb5.8
TCF Toulx Ste Croi 89.08 333⇑*i*P **P 14 04 30.3 -0.3**
comp=Z,64nm,1.4s,mb5.8
TCF Toulx Ste Croi 89.08 333⇑*i*P **P 14 04 30.3 -0.3**
TCF pmax pmax
comp=Z,64nm,1.4s,mb5.8
SBF Sospel 89.10 329⇑*i*P **P 14 04 29.0 -1.7**
comp=Z,121nm,1.1s,mb5.8
SBF Sospel 89.10 329⇑*i*P **P 14 04 29.0 -1.7**
comp=Z,60nm,1.1s,mb5.8
SBF Sospel 89.10 329⇑*i*P **P 14 04 29.0 -1.7**
SBF pmax pmax
comp=Z,60nm,1.1s,mb5.8
ROSF Rostrenen 89.12 337⇑*i*P **P 14 04 30.3 -0.4**
comp=Z,182nm,1.3s,mb6.0
ROSF Rostrenen 89.12 337⇑*i*P **P 14 04 30.3 -0.4**
comp=Z,91nm,1.3s,mb6.0
ROSF Rostrenen 89.12 337⇑*i*P **P 14 04 30.3 -0.4**
ROSF pmax pmax
comp=Z,91nm,1.3s,mb6.0
PYM Petit Puy Mans 89.25 332 *e*P **P 14 04 31.5 +0.1**
VIVF Saint-Julien-l 89.38 331⇑*i*P **P 14 04 31.3 -0.7**
comp=Z,110nm,1.5s,mb5.7
VIVF Saint-Julien-l 89.38 331⇑*i*P **P 14 04 31.3 -0.7**
comp=Z,55nm,1.5s,mb5.7
VIVF Saint-Julien-l 89.38 331⇑*i*P **P 14 04 31.3 -0.7**
VIVF pmax pmax
comp=Z,55nm,1.5s,mb5.7
QUIF Quistinic 89.46 337⇑*i*P **P 14 04 31.7 -0.6**
comp=Z,76nm,1.1s,mb5.7
QUIF Quistinic 89.46 337⇑*i*P **P 14 04 31.7 -0.6**
comp=Z,38nm,1.1s,mb5.6
QUIF Quistinic 89.46 337⇑*i*P **P 14 04 31.7 -0.6**
QUIF pmax pmax
comp=Z,38nm,1.1s,mb5.6
LBL Lubilhac 89.60 332 *e*P **P 14 04 33.1 +0.1**
CEL Celeste 89.62 320 *e*P **P 14 04 32.6 -0.7**
comp=Z,88nm,0.9s,mb6.1
CEL LR LR
comp=Z,6µm,19.0s,MS6.0
MFF Saint Martin d 89.64 335⇑*i*P **P 14 04 32.8 -0.4**
comp=Z,150nm,1.1s,mb5.9
MFF Saint Martin d 89.64 335⇑*i*P **P 14 04 32.8 -0.4**
comp=Z,75nm,1.1s,mb5.9
MFF Saint Martin d 89.64 335⇑*i*P **P 14 04 32.8 -0.4**
MFF pmax pmax
comp=Z,75nm,1.1s,mb5.9
FRF La Foret Royal 89.67 329⇑*i*P **P 14 04 32.0 -1.4**
comp=Z,131nm,1.4s,mb5.8
FRF La Foret Royal 89.67 329⇑*i*P **P 14 04 32.0 -1.4**
comp=Z,66nm,1.4s,mb5.8
FRF La Foret Royal 89.67 329⇑*i*P **P 14 04 32.0 -1.4**
FRF pmax pmax
comp=Z,66nm,1.4s,mb5.8
SOI Samo 89.68 320 P **P 14 04 33.2 -0.4**
MSEY Mahe Island 89.73 264 PFAKE 14 04 50.0 +16
MSEY LR LR
comp=Z,2µm,21.0s,MS5.6
SMRF Simiane la Rot 89.76 330⇑*i*P **P 14 04 33.0 -0.8**
comp=Z,201nm,1.7s,mb5.9
SMRF Simiane la Rot 89.76 330⇑*i*P **P 14 04 33.0 -0.8**
comp=Z,201nm,1.7s,mb6.2
TXAR Lajitas Array 89.80 52 P **P 14 04 33.9 -0.4**
comp=Z,6.0nm,0.7s,mb5.0,baz=300,slow=3.3,SNR=70
TXAR PKKPbc PKKPbc 14 22 07.4 +2.1
comp=Z,0.5nm,0.7s,baz=126,slow=4.6,SNR=5.1
TXAR LR LR 14 38 41.1
comp=Z,2µm,21.7s,MS5.5,baz=180,slow=31
TXAR Lajitas Array 89.80 52 P **P 14 04 33.9 -0.4**
TXAR PKKPbc PKKPbc 14 22 07.4 +2.1
TXAR LR LR 14 38 41.0
LMR La Mourre 89.91 329⇑*i*P **P 14 04 33.3 -1.2**
comp=Z,258nm,1.5s,mb6.0
LMR La Mourre 89.91 329⇑*i*P **P 14 04 33.3 -1.2**
comp=Z,129nm,1.5s,mb6.0
LMR La Mourre 89.91 329*i*P **P 14 04 33.3 -1.2**
LMR pmax pmax
comp=Z,129nm,1.5s,mb6.0
RJF Les Rejaudoux 90.18 333⇑*i*P **P 14 04 35.4 -0.3**
comp=Z,257nm,1.5s,mb6.0
RJF *e*MLR MLR
comp=Z,5µm,18.0s,MS5.7
RJF Les Rejaudoux 90.18 333⇑*i*P **P 14 04 35.4 -0.3**
comp=Z,128nm,1.5s,mb6.0
RJF LR LR
comp=Z,5µm,18.0s,MS6.0
RJF Les Rejaudoux 90.18 333⇑*i*P **P 14 04 35.4 -0.3**
RJF pmax pmax
comp=Z,128nm,1.5s,mb6.0
RJF MLR MLR
comp=Z,5µm,18.0s,MS6.0
CAF Calviac 90.30 333⇑*i*P **P 14 04 36.3 0.0**
comp=Z,219nm,1.5s,mb6.0
CAF Calviac 90.30 333⇑*i*P **P 14 04 36.3 0.0**
comp=Z,110nm,1.5s,mb6.0
CAF Calviac 90.30 333⇑*i*P **P 14 04 36.3 0.0**
CAF pmax pmax
comp=Z,110nm,1.5s,mb6.0
LASF Ste Croix 90.35 331⇑*i*P **P 14 04 36.1 -0.5**
comp=Z,72nm,1.1s,mb5.6
CCM Cathedral Cave 90.51 39 *e*P **P 14 04 36.2 -1.2**
comp=Z,40nm,1.0s,mb5.7
CCM LR LR
comp=Z,2µm,22.0s,MS5.5
CCM Cathedral Cave 90.51 39 *e*P **P 14 04 36.2 -1.2**
CCM pmax pmax
comp=Z,40nm,1.0s,mb5.7
CCM MLR MLR
comp=Z,2µm,22.0s,MS5.5
AAM Ann Arbor 90.62 32 PFAKE 14 04 50.0 +12
AAM LR LR
comp=Z,2µm,19.0s,MS5.5
LFF La Frestale 90.77 333⇑*i*P **P 14 04 38.3 -0.2**
comp=Z,238nm,1.4s,mb6.0
LFF La Frestale 90.77 333⇑*i*P **P 14 04 38.3 -0.2**
comp=Z,119nm,1.4s,mb6.0
LFF La Frestale 90.77 333⇑*i*P **P 14 04 38.3 -0.2**
LFF pmax pmax
comp=Z,119nm,1.4s,mb6.0
FVM French Village 90.97 39 *e*P **P 14 04 38.8 -0.8**
comp=Z,16nm,1.2s,mb5.2
FVM French Village 90.97 39 *e*P **P 14 04 38.8 -0.8**
FVM pmax pmax
comp=Z,16nm,1.2s,mb5.2
JCT Junction City 91.39 49 *e*P **P 14 04 40.9 -0.7**
comp=Z,78nm,1.5s,mb5.8
JCT LR LR
comp=Z,2µm,22.0s,MS5.5
JCT Junction City 91.39 49 *e*P **P 14 04 40.9 -0.7**
JCT pmax pmax
comp=Z,78nm,1.5s,mb5.8
JCT MLR MLR
comp=Z,2µm,22.0s,MS5.5
OLIL Olney 91.52 37 *e*P **P 14 04 41.5 -0.6**
comp=Z,35nm,1.0s,mb5.6
MTLF Montolieu 91.60 332⇑*i*P **P 14 04 42.0 -0.4**
comp=Z,133nm,1.4s,mb5.8
MTLF Montolieu 91.60 332⇑*i*P **P 14 04 42.0 -0.4**
comp=Z,66nm,1.4s,mb5.8
MTLF Montolieu 91.60 332*i*P **P 14 04 42.0 -0.4**
MTLF pmax pmax
comp=Z,66nm,1.4s,mb5.8
VSL Villasalto 91.80 325 PFAKE 14 04 50.0 +6.6

VSL					LR	LR			
	comp=Z,3µm,19.0s,MS5.8								
MIAR	**Mount Ida**	**91.97**	**43**	*eP*	**P**		**14 04 43.6**	**-0.6**	
	comp=Z,63nm,1.3s,mb5.8								
MIAR					LR	LR			
	comp=Z,2µm,20.0s,MS5.5								
MIAR	**Mount Ida**	**91.97**	**43**	*eP*	**P**		**14 04 43.6**	**-0.7**	
MIAR					pmax	pmax			
	comp=Z,63nm,1.3s,mb5.8								
MIAR					MLR	MLR			
	comp=Z,2µm,20.0s,MS5.5								
LONY	**Lake Ozonia**	**92.07**	**25**	PFAKE			14 05 00.0	+15	
LONY					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
WDD	**Wield Dalam**	**92.16**	**320**	PFAKE			14 05 00.0	+15	
WDD					LR	LR			
	comp=Z,4µm,19.0s,MS5.8								
ERPA	**Erie**	**92.27**	**30**	PFAKE			14 05 00.0	+15	
ERPA					LR	LR			
	comp=Z,2µm,19.0s,MS5.6								
MLS	**Moulis**	**92.35**	**332**	*eP*	**P**		**14 04 45.8**	**-0.1**	
UALR	**University of**	**92.46**	**42**	*eP*	**P**		**14 04 46.4**	**-0.1**	
EPF	**Esparros**	**92.57**	**333⇑**	*iP*	**P**		**14 04 46.1**	**-0.8**	
	comp=Z,89nm,1.5s,mb5.7								
EPF	**Esparros**	**92.57**	**333⇑**	*iP*	**P**		**14 04 46.1**	**-0.8**	
	comp=Z,45nm,1.5s,mb5.7								
EPF	**Esparros**	**92.57**	**333⇑**	*iP*	**P**		**14 04 46.1**	**-0.8**	
EPF					pmax	pmax			
	comp=Z,45nm,1.5s,mb5.7								
ACSO	**Alum Creek Sta**	**92.61**	**33**	*eP*	**P**		**14 04 46.1**	**-1.0**	
	comp=Z,26nm,1.0s,mb5.6								
ACSO					LR	LR			
	comp=Z,2µm,21.0s,MS5.4								
RESF	**Ens**	**92.76**	**333**	*eP*	**P**		**14 04 48.2**	**+0.4**	
NCB	**Newcomb**	**92.77**	**25**	PFAKE			14 05 00.0	+12	
NCB					LR	LR			
	comp=Z,2µm,20.0s,MS5.5								
WCI	**Wyandotte Cave**	**92.77**	**36**	PFAKE			14 05 00.0	+12	
WCI					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
ETSF	**Etsaut**	**93.01**	**333⇑**	*iP*	**P**		**14 04 48.9**	**0.0**	
	comp=Z,106nm,1.4s,mb5.8								
ETSF	**Etsaut**	**93.01**	**333⇑**	*iP*	**P**		**14 04 48.9**	**0.0**	
	comp=Z,53nm,1.4s,mb5.8								
ETSF	**Etsaut**	**93.01**	**333⇑**	*iP*	**P**		**14 04 48.9**	**0.0**	
ETSF					pmax	pmax			
	comp=Z,53nm,1.4s,mb5.8								
SJPF	**Ste Jean**	**93.06**	**334**	*eP*	**P**		**14 04 48.0**	**-1.1**	
	comp=Z,52nm,1.2s,mb5.5								
SJPF	**Ste Jean**	**93.06**	**334**	*eP*	**P**		**14 04 48.0**	**-1.1**	
	comp=Z,26nm,1.2s,mb5.5								
SJPF	**Ste Jean**	**93.06**	**334**	*eP*	**P**		**14 04 48.0**	**-1.1**	
SJPF					pmax	pmax			
	comp=Z,26nm,1.2s,mb5.5								
PKME	**Peaks-Kenny Pk**	**93.15**	**21**	PFAKE			14 05 00.0	+11	
PKME					LR	LR			
	comp=Z,2µm,19.0s,MS5.6								
LBNH	**Lisbon**	**93.28**	**23**	PFAKE			14 05 00.0	+10	
LBNH					LR	LR			
	comp=Z,2µm,22.0s,MS5.6								
NATX	**Nacogdoches**	**93.46**	**45**	PFAKE			14 05 00.0	+8.8	
NATX					LR	LR			
	comp=Z,3µm,22.0s,MS5.8								
BINY	**Binghamton**	**93.71**	**27**	PFAKE			14 05 00.0	+7.9	
BINY					LR	LR			
	comp=Z,2µm,19.0s,MS5.6								
WVT	**Waverly**	**93.71**	**38**	PFAKE			14 05 00.0	+7.7	
WVT					LR	LR			
	comp=Z,2µm,22.0s,MS5.5								
HKT	**Hockley**	**94.13**	**47**	*eP*	**P**		**14 04 54.4**	**+0.1**	
	comp=Z,102nm,1.9s,mb5.9								
HKT				*e*	pP		14 05 04.6	-2.0	
HKT					LR	LR			
	comp=Z,1µm,20.0s,MS5.4								
HKT	**Hockley**	**94.13**	**47**	*eP*	**P**		**14 04 54.4**	**+0.1**	
HKT				*e*	pP		14 05 04.6	-2.0	
HKT					pmax	pmax			
	comp=Z,102nm,1.9s,mb5.9								
HKT					MLR	MLR			
	comp=Z,1µm,20.0s,MS5.4								
OXF	**Oxford**	**94.19**	**40**	*eP*	**P**		**14 04 53.8**	**-0.7**	
	comp=Z,38nm,1.1s,mb5.7								
OXF					LR	LR			
	comp=Z,1µm,20.0s,MS5.4								
OXF	**Oxford**	**94.19**	**40**	*eP*	**P**		**14 04 53.8**	**-0.7**	
OXF					pmax	pmax			
	comp=Z,38nm,1.1s,mb5.7								
OXF					MLR	MLR			
	comp=Z,1µm,20.0s,MS5.4								
SSPA	**Standing Stone**	**94.35**	**29**	PFAKE			14 05 10.0	+15	
SSPA					LR	LR			
	comp=Z,2µm,21.0s,MS5.6								
MCWV	**Mont Chateau**	**94.41**	**31**	*eP*	**P**		**14 04 55.2**	**-0.2**	
	comp=Z,21nm,1.0s,mb5.5								
MCWV					LR	LR			
	comp=Z,2µm,20.0s,MS5.6								
KVTX	**Kingsville**	**94.65**	**50**	PFAKE			14 05 10.0	+13	
KVTX					LR	LR			
	comp=Z,1µm,21.0s,MS5.3								
KEST	**Kesra**	**94.85**	**323**	P	**P**		**14 04 56.5**	**-0.9**	
	comp=Z,24nm,1.4s,mb5.5,baz=79,slow=5.2,SNR=7.8			PP	PP				
KEST							14 08 47.5	+1.8	
	comp=Z,5.1nm,1.1s,baz=21,slow=8.6,SNR=3.6								
KEST					LR	LR	14 52 54.2		
	comp=Z,2µm,20.2s,MS5.6,baz=220,slow=39								
WES	**Weston**	**95.14**	**24**	PFAKE			14 05 10.0	+11	
WES					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
VBMS	**Vicksburg**	**95.39**	**42**	PFAKE			14 05 10.0	+10	
VBMS					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
TZTN	**Tazewell**	**95.41**	**35**	PFAKE			14 05 10.0	+10	
TZTN					LR	LR			
	comp=Z,3µm,21.0s,MS5.8								
BLA	**Blacksburg**	**96.23**	**33**	PFAKE			14 05 10.0	+6.2	
BLA					LR	LR			
	comp=Z,2µm,20.0s,MS5.6								
LRAL	**Lakeview Retre**	**96.59**	**39**	PFAKE			14 05 20.0	+15	
LRAL					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
CBN	**Corbin**	**96.65**	**30**	PFAKE			14 05 20.0	+14	
CBN					LR	LR			
	comp=Z,2µm,21.0s,MS5.6								
ESDC	**Sonseca Array**	**97.06**	**334**	P	**P**		**14 05 06.7**	**-0.7**	
	comp=Z,4.0nm,0.7s,mb5.0,baz=29,slow=3.5,SNR=12								
ESDC				PP	PP		14 08 57.2	-5.3	
	comp=Z,3.5nm,0.8s,baz=23,slow=6.1,SNR=4.5								
ESDC					LR	LR	14 53 30.7		
	comp=Z,6µm,20.5s,MS6.1,baz=20,slow=38								
ESLA	**Sonseca Array**	**97.06**	**334**	PFAKE			14 05 20.0	+13	
ESLA					LR	LR			
	comp=Z,41µm,20.0s,MS6.9								
PAB	**San Pablo**	**97.31**	**334**	PFAKE			14 05 20.0	+11	
PAB					LR	LR			
	comp=Z,8µm,20.0s,MS6.2								
MTE	**Manteigas**	**97.60**	**337**	PFAKE			14 05 20.0	+10	
MTE					LR	LR			
	comp=Z,5µm,22.0s,MS5.9								
GOGA	**Godfrey**	**98.02**	**37**	PFAKE			14 05 20.0	+8.1	
GOGA					LR	LR			
	comp=Z,2µm,22.0s,MS5.6								
BRAL	**Brewton**	**98.17**	**41**	PFAKE			14 05 20.0	+7.4	
BRAL					LR	LR			
	comp=Z,2µm,22.0s,MS5.5								
RKT	**Rikitea**	**98.74**	**112**	*e*SKSac	SKSac		14 15 52.7	+2.6	
	comp=Z,1µm,26.4s								
RKT				*e*SP	SP		14 18 04.7	-2.9	
	comp=Z,1µm,31.8s								
RKT				*e*SS	SS		14 23 40.4	+11	
	comp=Z,1µm,30.0s								
RKT	**Rikitea**	**98.74**	**112**	*e*LR	LR		14 37 20.4		
	comp=Z,8µm,23.5s,baz=309								
CNNC	**Cliffs of the**	**98.98**	**32**	PFAKE			14 05 30.0	+14	
CNNC					LR	LR			
	comp=Z,2µm,21.0s,MS5.5								
EVO	**Evora**	**99.45**	**336**	*eP*	**P**		**14 05 18.2**	**0.0**	
	comp=Z,30nm,1.3s,mb5.4								
EVO				*e*MLR	MLR				
	comp=Z,9µm,22.5s,MS5.9								
NHSC	**New Hope**	**99.80**	**35**	PFAKE			14 05 30.0	+10	
NHSC					LR	LR			
	comp=Z,3µm,22.0s,MS5.8								
SFS	**San Fernando**	**100.71**	**334**	PFAKE			14 05 30.0	+6.2	
SFS					LR	LR			
	comp=Z,14µm,20.0s,MS6.5								
RTC	**Rabat Centre**	**103.17**	**333**	PFAKE			14 05 50.0	+15	
RTC					LR	LR			
	comp=Z,3µm,19.0s,MS5.8								
DWPF	**Disney**	**103.37**	**38**	PFAKE			14 05 50.0	+14	
DWPF					LR	LR			
	comp=Z,2µm,22.0s,MS5.5								
DRV	**Dumont d'Urvil**	**103.71**	**181**	Pdif	Pdif		14 05 34.0	-3.1	
DRV	**Dumont d'Urvil**	**103.71**	**181**	PP	PP		14 10 04.0	+10	
DRV				SP	SP		14 19 00.0	+1.3	
DRV				SS	SS		14 24 29.0	-7.8	
DRV				L			14 35 00.0		
DRV				R			14 41 00.0		
ABPO	**Ambohimpanom**	**104.67**	**257**	PFAKE			14 05 50.0	+8.6	
ABPO					LR	LR			
	comp=Z,1µm,22.0s,MS5.4								
CASY	**Casey**	**106.06**	**193**	PFAKE			14 10 10.0	+12	
CASY					LR	LR			
	comp=Z,1µm,22.0s,MS5.4								
BBSR	**BB Station**	**106.41**	**23**	PFAKE			14 10 10.0	+10	
BBSR					LR	LR			
	comp=Z,838nm,22.0s,MS5.2								
MBAR	**Mbarara**	**106.86**	**282**	PFAKE			14 10 10.0	+8.5	
MBAR					LR	LR			
	comp=Z,517nm,20.0s,MS5.1								
TGUH	**Tegucigalpa,Un**	**111.26**	**52**	PFAKE			14 10 20.0	+10	
TGUH					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
VNDA	**Vanda**	**115.29**	**175**	PKP	PKPdf		14 10 14.2	-1.3	
	comp=Z,0.8nm,0.7s,baz=10,slow=4.2,SNR=6.2			pPKP					
VNDA							14 10 28.6		
	comp=Z,0.9nm,0.6s,baz=331,slow=4.0,SNR=3.2								
VNDA				PP	PP		14 11 15.9	-1.5	
	comp=Z,1.3nm,0.9s,baz=360,slow=5.2,SNR=3.9								
VNDA				PKKPab	PKKPab		14 20 51.4	-1.5	
	comp=Z,3.3nm,1.1s,baz=186,slow=4.2,SNR=3.5								
VNDA	**Vanda**	**115.29**	**175**	PKP	PKPdf		14 10 14.2	-1.3	
VNDA				pPKP			14 10 28.6		
VNDA				PP	PP		14 11 15.9	-1.5	
VNDA				PKKPab	PKKPab		14 20 51.4	-1.5	
VNDA				LR	LR				
	comp=Z,996nm,20.0s,MS5.4								
SDDR	**Presa de Saban**	**115.96**	**35**	PFAKE			14 10 30.0	+11	
SDDR					LR	LR			
	comp=Z,2µm,20.0s,MS5.7								
SBA	**Scott Base**	**115.97**	**174**	PFAKE			14 10 30.0	+13	
SBA					LR	LR			
	comp=Z,604nm,20.0s,MS5.2								
TORD	**Torodi Ar. Bea**	**117.20**	**315**	PKP	PKPdf		14 10 19.5	-1.6	
	comp=Z,2.8nm,0.6s,baz=13,slow=2.4,SNR=23								
TORD				PP	PP		14 11 29.4	-1.6	
	comp=Z,20nm,1.2s,baz=28,slow=5.2,SNR=11								
TORD				PKKP	PKKPbc		14 21 02.4	+18	
	comp=Z,1.3nm,0.8s,baz=230,slow=3.4,SNR=4.3								
LSZ	**Lusaka**	**117.63**	**271**	PFAKE			14 10 30.0	+8.2	
LSZ					LR	LR			
	comp=Z,2µm,20.0s,MS5.6								
SJG	**San Juan**	**118.94**	**30**	PFAKE			14 10 40.0	+16	
SJG					LR	LR			
	comp=Z,2µm,21.0s,MS5.7								
BCIP	**Isla Barro Col**	**119.61**	**49**	PFAKE			14 10 40.0	+14	
BCIP					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
MAW	**Mawson**	**119.90**	**206**	PKP	PKPdf		14 10 23.8	-0.8	
	comp=Z,2.5nm,0.7s,baz=72,slow=6.4,SNR=8.7								
MAW	**Mawson**	**119.90**	**206**	PKP	PKPdf		14 10 23.8	-0.8	
MAW					LR	LR			
	comp=Z,2µm,22.0s,MS5.6								
PAYG	**Puerto Ayora**	**119.92**	**65**	PFAKE			14 10 40.0	+14	
PAYG					LR	LR			
	comp=Z,3µm,22.0s,MS5.8								
RPN	**Rapa Nui**	**120.40**	**102**	PFAKE			14 10 40.0	+13	
RPN					LR	LR			
	comp=Z,5µm,20.0s,MS6.2								
LBTB	**Lobatse**	**124.83**	**263**	PFAKE			14 10 50.0	+15	
LBTB					LR	LR			
	comp=Z,2µm,21.0s,MS5.7								
SDV	**Santo Domingo**	**124.97**	**40**	PFAKE			14 10 50.0	+14	
SDV					LR	LR			
	comp=Z,502nm,21.0s,MS5.2								
BBGH	**Gun Hill**	**125.96**	**26**	PFAKE			14 10 50.0	+12	
BBGH					LR	LR			
	comp=Z,3µm,21.0s,MS5.9								
GRGR	**Grenville**	**126.13**	**29**	PFAKE			14 10 50.0	+12	
GRGR					LR	LR			
	comp=Z,1µm,21.0s,MS5.6								
DBIC	**Dimbokro**	**126.15**	**317**	PKP	PKPdf		14 10 37.0	-1.3	
	comp=Z,10nm,0.8s,baz=358,slow=2.4,SNR=9.7								
DBIC				PP	PP		14 12 27.1	-4.7	
	comp=Z,9.5nm,1.0s,baz=6.3,slow=9.3,SNR=3.9								
DBIC	**Dimbokro**	**126.15**	**317**	PKP	PKPdf		14 10 37.0	-1.3	
DBIC				PP	PP		14 12 27.1	-4.7	
DBIC				LR	LR				
	comp=Z,3µm,21.0s,MS5.9								
TIC	**Toumodi**	**126.26**	**317**	*e*PKP1	PKPdf		14 10 37.4	-1.2	
	comp=Z,81nm,1.0s								
KIC	**Kosan Boka**	**126.34**	**317**	*e*PKP1	PKPdf		14 10 37.5	-1.2	
	comp=Z,53nm,0.9s								
LIC	**Lamto**	**126.61**	**317**	*e*PKIKP	PKPdf		14 10 38.2	-1.0	
	comp=Z,29nm,0.9s								
LIC				*e*MLR	MLR				
	comp=Z,4µm,21.8s,MS5.8								
LIC	**Lamto**	**126.61**	**317**	*e*PKP1	PKPdf		14 10 38.1	-1.1	
	comp=Z,43nm,0.9s								
LIC	**Lamto**	**126.61**	**317**	*e*PKPdf	PKPdf		14 10 38.2	-1.0	
LIC					LR	LR			
	comp=Z,2µm,21.8s,MS5.8								
BOSA	**Boshof**	**126.78**	**260**	PKP	PKPdf		14 10 38.8	-0.2	
	comp=Z,9.6nm,0.9s,baz=83,slow=3.8,SNR=9.0								
BOSA	**Boshof**	**126.78**	**260**	PKP	PKPdf		14 10 38.8	-0.2	
BOSA					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
QSPA	**South Pole Qui**	**127.11**	**180**	PKP	PKPdf		14 10 36.9	-1.2	
	comp=Z,16nm,1.2s,baz=333,slow=1.4,SNR=5.4								
QSPA				PP	PP		14 12 45.3	+7.4	
	comp=Z,7.0nm,1.1s,baz=34,slow=3.6,SNR=2.6								
QSPA	**South Pole Qui**	**127.11**	**180**	PKP	PKPdf		14 10 36.9	-1.2	
QSPA				PP	PP		14 12 45.3	+7.4	
QSPA				LR	LR				
	comp=Z,1µm,22.0s,MS5.5								
OTAV	**Otavalo**	**127.40**	**54**	PFAKE			14 10 50.0	+9.3	
OTAV					LR	LR			
	comp=Z,1µm,22.0s,MS5.5								
TSUM	**Tsumeb**	**128.23**	**274**	PFAKE			14 10 50.0	+7.9	
TSUM					LR	LR			
	comp=Z,1µm,20.0s,MS5.7								
SYO	**Syowa Base**	**128.57**	**207⇑**	*e*X			14 10 37.8		
SUR	**Sutherland**	**131.85**	**257**	PFAKE			14 11 00.0	+11	
SUR					LR	LR			
	comp=Z,2µm,19.0s,MS5.8								
NNA	**Nana**	**137.33**	**64**	*e*PKPdf	PKPdf		14 10 59.0	-0.3	
NNA					LR	LR			
	comp=Z,1µm,21.0s,MS5.7								
SNAA	**Sanae**	**141.11**	**197**	*e*PKPdf	PKPdf		14 11 15.3	+11	
SNAA				*e*			14 11 23.1		
SNAA	**Sanae**	**141.11**	**197**	*e*PKPpre			14 10 52.4		
VNA2	**Neumayer--Watz**	**142.68**	**196**	*e*PKPdf	PKPdf		14 11 05.9	-1.4	
	baz=52,slow=1.4								
VNA2				*e*			14 11 18.8		
VNA2				*e*			14 11 27.7		
VNA3	**Neumayer Olymp**	**142.93**	**195**	*e*PKPdf	PKPdf		14 11 06.8	-1.0	
VNA3				*e*			14 11 18.0		
VNA3				*e*			14 11 27.1		
VNA1	**Neumayer--Stat**	**143.08**	**196**	*e*PKPdf	PKPdf		14 11 07.1	-0.9	
VNA1				*e*			14 11 18.7		
VNA1				*e*			14 11 27.2		
ASCN	**Ascension**	**143.48**	**317**	PFAKE			14 11 20.0	+9.5	
ASCN					LR	LR			
	comp=Z,3µm,22.0s,MS6.0								
SHEL	**Horse Pasture**	**144.14**	**298**	PFAKE			14 11 20.0	+8.5	
SHEL					LR	LR			
	comp=Z,2µm,20.0s,MS5.8								
ARE	**Arequipa**	**144.16**	**63**	P	PKPdf		14 11 11.0	-0.6	
RCBR	**Riachuelo**	**148.52**	**355**	PFAKE			14 11 30.0	+11	
RCBR					LR	LR			
	comp=Z,1µm,22.0s,MS5.7								
PMSA	**Palmer Station**	**148.63**	**159**	PFAKE			14 11 30.0	+12	
PMSA					LR	LR			
	comp=Z,1µm,19.0s,MS5.8								
LVC	**Limon Verde**	**149.92**	**69**	PFAKE			14 11 30.0	+9.0	
LVC					LR	LR			
	comp=Z,3µm,22.0s,MS6.0								
LCO	**Las Campanas**	**151.82**	**82**	PFAKE			14 11 40.0	+16	
LCO					LR	LR			
	comp=Z,2µm,20.0s,MS5.8								
PLCA	**Paso Flores**	**154.88**	**108**	PKP	PKPdf		14 11 27.1	-0.7	
	comp=Z,3.7nm,1.1s,baz=225,slow=2.9,SNR=3.3								
PLCA				PKPab	PKPab		14 11 47.9	-4.1	
	comp=Z,3.4nm,0.7s,baz=268,slow=1.4,SNR=4.8								
PLCA				pPKPab	pPKPab		14 12 04.4	0.0	
	comp=Z,7.8nm,0.9s,baz=255,slow=3.9,SNR=6.0								
PLCA	**Paso Flores**	**154.88**	**108**	PKP	PKPdf		14 11 27.1	-0.7	
PLCA				PKPab	PKPab		14 11 47.9	-4.1	
PLCA				pPKPab	pPKPab		14 12 04.4	0.0	
PLCA				LR	LR				
	comp=Z,2µm,20.0s,MS5.9								
BDFB	**Brasilia**	**156.74**	**24**	PKP	PKPdf		14 11 31.6	+0.6	
	comp=Z,3.6nm,1.0s,baz=12,slow=18,SNR=5.4								
BDFB	**Brasilia**	**156.74**	**24**	PKP	PKPdf		14 11 31.6	+0.6	
BDFB					LR	LR			
	comp=Z,1µm,22.0s,MS5.7								
EFI	**East Falkland**	**160.06**	**142**	PFAKE			14 11 40.0	+6.1	
EFI					LR	LR			
	comp=Z,3µm,19.0s								

IDC 26 14:04:43.0±9.0, 056S×1293W, h0km, mb4.1/2, mb1 3.9/4, mb1mx3.7/21, mbtmp3.9/4, ML3.1/1, Error ellipse: s-maj=829.3km s-min=23.1km az=144.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**10.79**	**48**	Pn	Pn	14 07 17.4	-1.5
	0.2nm,0.3s,baz=216,slow=16,SNR=4.6						
DBIC				Sn	Sn	14 09 22.9	+2.4
	0.1nm,0.3s,baz=148,slow=19,SNR=2.2						
TORD	**Torodi Ar. Bea**	**19.89**	**46**	P	Pn	14 09 15.3	-2.5
	0.1nm,0.3s,baz=229,slow=9.6,SNR=9.4						
BDFB	**Brasilia**	**37.72**	**245**	P	P	14 12 00.6	-0.1
	3.7nm,0.8s,baz=336,slow=13,SNR=5.6						
BRTR	**Keskin Array B**	**58.40**	**41**	P	P	14 14 41.5	+1.0
	1.3nm,0.8s,baz=248,slow=6.5,SNR=6.4						

IDC 26 14:11:34.5±1.8, 108N×12561E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, Error ellipse: s-maj=164.4km s-min=25.3km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.57**	**158**	P	P	14 16 37.1	+0.6
	1.8nm,0.3s,baz=335,slow=11,SNR=50						
WB2	**Warramunga Arr**	**22.58**	**158**	*eP*	P	14 16 37.3	+0.7
ASAR	**Alice Springs**	**25.88**	**162**	P	P	14 17 08.9	+0.8
	1.0nm,0.4s,baz=344,slow=7.6,SNR=30						
STKA	**Stephens Creek**	**36.10**	**157**	P	P	14 18 37.0	-1.3
	1.4nm,0.4s,baz=346,slow=10,SNR=6.3						
MKAR	**Makanchi Array**	**59.12**	**327**	P	P	14 21 37.0	+0.2
	0.5nm,0.6s,baz=116,slow=8.2,SNR=3.9						

*NEIC **26** 14:24:25.1, 1754N×10181W, h6km, MD4.0(MEX), After MEX.*

MEX 26 14:24:24.1±0.8, 1750N×10184W, h5km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.37**	**74**	*i* P	Pg	14 24 30.4	-0.9
ZIIG				*i* S	Sg	14 24 37.0	+0.8
CAIG	**El Cayaco**	**1.57**	**107**	*i* P	Pn	14 24 50.5	-2.1
CAIG				*i* S	Sn	14 25 08.4	-5.0
CAIG	**El Cayaco**	**1.57**	**107**	*i* P	Pn	14 24 49.5	-3.2
CAIG				*i* S	Sn	14 25 08.4	-5.0
ACX	**Acapulco**	**1.95**	**109**	*i* P	Pn	14 24 53.9	-3.9
ACX				*i* S	Sn	14 25 17.9	-4.8
MOIG	**Morelia**	**2.25**	**16**	*eP*	Pn	14 24 59.4	-2.6
MOIG				*i* S	Sn	14 25 25.3	-4.9
PLIG	**Platanillo**	**2.40**	**68**	*eP*	Pn	14 25 02.1	-2.0
PLIG				*i* S	Sn	14 25 29.0	-4.8
PLIG	**Platanillo**	**2.40**	**68**	*eP*	Pn	14 25 01.7	-2.4
PLIG				*i* S	Sn	14 25 29.0	-4.8
MZVM		**3.00**	**56**	*i* P	Pn	14 25 10.1	-2.2
MZVM				*i* S	Sn	14 25 43.5	-5.1
SFJM	**Santa Fe**	**3.18**	**339**	*eP*	Pn	14 25 13.5	-1.3
SFJM				*i* S	Sn	14 25 48.9	-4.2
PTVM	**Pico Tres Padr**	**3.32**	**51**	*eP*	Pn	14 25 15.3	-1.5
PTVM				*i* S	Sn	14 25 53.5	-3.1
IIO	**Organos**	**3.62**	**54**	*eP*	Pn	14 25 18.1	-2.7
IIO				*i* S	Sn	14 25 59.4	-4.5
IIO	**Organos**	**3.62**	**54**	*eP*	Pn	14 25 18.1	-2.7
IIO				*i* S	Sn	14 25 59.9	-4.0
PNIG	**Pinotepa**	**3.72**	**107**	*eP*	Pn	14 25 19.9	-2.4
PNIG				*i* S	Sn	14 26 03.4	-3.1
UTMO	**Huajuapan**	**3.86**	**85**	*eP*	Pn	14 25 21.7	-2.5
UTMO				*i* S	Sn	14 26 06.5	-3.5
VHO	**Vista Hermosa**	**4.90**	**94**	*eP*	Pn	14 25 38.2	-0.3
VHO				*i* S	Sn	14 26 36.8	+1.1
CMIG	**Matias Romero**	**6.66**	**92**	*eP*	Pn	14 26 06.6	+4.0
CMIG				*i* S	Sn	14 27 18.1	-0.9

JSN 26 14:27:28.9±1.6, 1951N×7824W, h30km±999km, MD3.7, 5C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCJ	**Malvern**	**1.66**	**162⇑**	*i* P	Pn	14 27 55.4	-0.6
MCJ				⇓*i* S	Sn	14 28 14.3	-2.0
STH	**Stony Hill**	**1.96**	**136⇑**	*

CHG	**Chiang Mai**	**17.66**	**6**	⇑P		**Pn**	**15 07 45.5**	**-0.7**
	17nm,1.1s							
CHTO	**Chiang Mai**	**17.66**	**6**	*e*P		**Pn**	**15 07 42.0**	**-4.2**
	21nm,1.0s							
CHTO	**Chiang Mai**	**17.66**	**6**	*e*P		**Pn**	**15 07 42.0**	**-4.2**
CHTO					pmax	pmax		
	comp=Z,21nm,1.0s							
NANT	**Nan**	**17.91**	**11**	⇓P		**Pn**	**15 07 48.0**	**-1.2**
	comp=Z,375nm,1.0s							
KKM	**Kota Kinabalu**	**19.66**	**75**	*e*P		**Pn**	**15 08 08.5**	**-1.8**
KKM	**Kota Kinabalu**	**19.66**	**75**	⇑P		**Pn**	**15 08 09.6**	**-0.8**
SDKM	**Sandakan**	**20.52**	**77**	⇑P		**P**	**15 08 19.0**	**+0.9**
TSM	**Tawau**	**20.95**	**81**	⇑P		**P**	**15 08 22.7**	**-0.1**
MYLDM	**Lahad Datu**	**21.71**	**79**	⇑P		**P**	**15 08 32.9**	**+2.0**
KAPI	**Kappang**	**23.40**	**105**	P		**P**	**15 08 47.7**	**-1.1**
	comp=Z,6.0nm,0.4s,mb4.4,baz=112,slow=17,SNR=5.0							
KAPI	**Kappang**	**23.40**	**105**	*e*P		**P**	**15 08 47.4**	**-1.3**
	comp=Z,21nm,1.0s,mb4.5							
HYB	**Hyderabad**	**24.41**	**313**	*e*P		**P**	**15 08 59.5**	**+1.6**
HYB	**Hyderabad**	**24.41**	**313**	*i* P		**P**	**15 08 59.5**	**+1.6**
HYB				*e*			15 09 06.0	
KMI	**Kunming**	**24.46**	**12**	⇑P		**P**	**15 08 59.0**	**+0.8**
KMI				AP			15 09 10.5	
KMI				XP		sP	15 09 14.0	-1.1
KMI				PP			15 09 39.0	
KMI				S		**S**	**15 13 18.3**	**+2.7**
KMI				XS		sS	15 13 35.5	+0.5
KMI				SS			15 14 16.8	
KMI				AMB		AMB		
	comp=Z,84nm,1.1s,mb5.1							
KMI				LR		LR		
	comp=N,2μm,12.9s,MS4.8							
KMI				LR		LR		
	comp=E,988nm,11.5s,MS4.8							
KMI				LR		LR		
	comp=Z,1μm,12.5s,MS4.7							
SHL	**Shillong**	**24.82**	**349**	*e*P		**P**	**15 09 00.2**	**-1.3**
GYA	**Guiyang**	**26.80**	**19**	⇑*i*P		**P**	**15 09 18.8**	**-0.6**
GYA				AP		pP	15 09 28.3	-2.8
GYA				XP		sP	15 09 32.5	-3.9
GYA				PP			15 10 05.3	
GYA				PCP		PcP	15 12 40.0	-1.7
GYA				S		**S**	**15 13 51.8**	**-0.9**
GYA				XS		sS	15 14 08.0	-4.3
GYA				SS			15 15 07.3	
GYA				SCP		ScP	15 16 16.8	-1.7
GYA				SCS		ScS	15 20 06.0	-3.3
GYA				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.6							
GYA				AMB		AMB		
	comp=Z,110nm,5.2s							
GYA				LR		LR		
	comp=N,1μm,12.6s,MS4.8							
GYA				LR		LR		
	comp=E,760nm,12.4s,MS4.8							
GYA				LR		LR		
	comp=Z,1μm,13.0s,MS4.7							
ODAN	**Odare**	**27.24**	**341**	*e*P		**P**	**15 09 24.1**	**+0.7**
	comp=Z,112nm,0.7s,mb5.5							
RAMN	**Ramite**	**27.59**	**339**	*e*P		**P**	**15 09 27.9**	**+1.3**
	comp=Z,52nm,0.7s,mb5.3							
TAPN	**Taplejung**	**27.59**	**342**	*e*P		**P**	**15 09 27.7**	**+1.1**
	comp=Z,205nm,1.0s,mb5.7							
JIRN	**Jiri**	**28.39**	**339**	*e*P		**P**	**15 09 34.7**	**+1.1**
	comp=Z,78nm,0.8s,mb5.4							
PKI	**Pulchoki**	**28.59**	**338**	*e*P		**P**	**15 09 36.7**	**+1.2**
BATI	**Baumata**	**28.70**	**114**	P		**P**	**15 09 36.4**	**-0.3**
	comp=Z,12nm,0.6s,mb4.8,baz=256,slow=8.3,SNR=3.9							
GUN	**Gumba**	**28.73**	**339**	*e*P		**P**	**15 09 37.7**	**+1.0**
	comp=Z,91nm,0.7s,mb5.6							
DMN	**Daman**	**28.74**	**337**	*e*P		**P**	**15 09 37.4**	**+0.6**
	comp=Z,50nm,0.9s,mb5.3							
KKN	**Kakani**	**28.84**	**338**	*e*P		**P**	**15 09 38.3**	**+0.6**
	comp=Z,78nm,1.0s,mb5.4							
KKN	**Kakani**	**28.84**	**338**	*e*P		**P**	**15 09 38.3**	**+0.6**
KKN					pmax	pmax		
	comp=Z,78nm,1.0s,mb5.4							
LSA	**Lhasa**	**28.98**	**349**	P		**P**	**15 09 40.5**	**+1.6**
LSA	**Lhasa**	**28.98**	**349**	*e*P		**P**	**15 09 39.3**	**+0.5**
	comp=Z,22nm,0.8s,mb4.9							
LSA	**Lhasa**	**28.98**	**349**	*e*P		**P**	**15 09 39.3**	**+0.4**
LSA					pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9							
GKN	**Gorkha**	**29.28**	**337**	*e*P		**P**	**15 09 42.3**	**+0.8**
KOLN	**Koldanda**	**29.49**	**335**	*e*P		**P**	**15 09 44.4**	**+0.9**
	comp=Z,64nm,0.7s,mb5.5							
DANN	**Dangsing**	**29.94**	**336**	*e*P		**P**	**15 09 48.1**	**+0.7**
	comp=Z,41nm,0.7s,mb5.2							
PYUN	**Piuthan**	**30.04**	**334**	*e*P		**P**	**15 09 49.0**	**+0.7**
CD2	**Chengdu**	**30.28**	**11**	⇑*i*P		**P**	**15 09 52.3**	**+1.9**
CD2				AP		pP	15 10 02.0	-0.1
CD2				PP		PP	15 10 54.0	-5.4
CD2				S		**S**	**15 14 52.3**	**+5.0**
CD2				XS		sS	15 15 08.3	+1.3
CD2				SS		SS	15 16 36.0	-22
CD2				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.8							
CD2				AMB		AMB		
	comp=Z,690nm,4.8s							
CD2				LR		LR		
	comp=N,880nm,14.4s,MS4.8							
CD2				LR		LR		
	comp=E,1μm,14.4s,MS4.8							
CD2				LR		LR		
	comp=Z,1μm,16.8s,MS4.7							
LGTI	**Lohaghat**	**32.44**	**332**	*e*P		**P**	**15 10 10.5**	**+1.1**
WHN	**Wuhan**	**33.51**	**28**	*e*P		**P**	**15 10 18.5**	**-0.2**
XAN	**Xi'an**	**34.55**	**17**	P		**P**	**15 10 26.3**	**-1.4**
XAN				AP		pP	15 10 34.5	-5.1
XAN				XP		sP	15 10 37.5	-7.3
XAN				S		**S**	**15 15 50.0**	**-3.8**
XAN				AMB		AMB		
	comp=Z,19nm,0.6s,mb5.2							
XAN				AMB		AMB		
	comp=Z,171nm,5.0s							
XAN				LR		LR		
	comp=N,489nm,12.1s,MS4.6							
XAN				LR		LR		
	comp=E,556nm,15.8s,MS4.6							
XAN				LR		LR		
	comp=Z,817nm,15.3s,MS4.6							
LZH	**Lanzhou**	**35.34**	**9**	*e*P		**P**	**15 10 34.0**	**-0.5**
LZH				AP		pP	15 10 43.8	-2.5
LZH				XP		sP	15 10 48.0	-3.5
LZH				*e*PP		PP	15 11 55.3	0.0
LZH				*e*S		**S**	**15 16 07.0**	**+1.2**
LZH				XS		sS	15 16 23.3	-2.3
LZH				*e*SS		SS	15 18 27.5	-13
LZH				AMB		AMB		
	comp=Z,26nm,1.3s,mb5.0							
LZH				AMB		AMB		
	comp=Z,142nm,5.8s							
LZH				LR		LR		
	comp=N,940nm,15.0s							
LZH				LR		LR		
	comp=Z,989nm,16.5s,MS4.7							
NJ2	**Nanjing**	**36.96**	**32**	*e*P		**P**	**15 10 51.0**	**+2.6**
NJ2				AMB		AMB		
	comp=Z,60nm,0.9s,mb5.4							
THN	**Thein Dam**	**37.10**	**329**	*e*P		**P**	**15 10 47.4**	**-2.2**
GTA	**Gaotai**	**38.18**	**3**	⇑P		**P**	**15 10 58.5**	**-0.1**
GTA				AP		pP	15 11 09.3	-1.3
GTA				XP		sP	15 11 13.0	-2.8
GTA				S		**S**	**15 16 49.5**	**+0.5**
GTA				XS		sS	15 17 09.5	+0.5
GTA				AMB		AMB		
	comp=Z,34nm,0.9s,mb5.1							
GTA				AMB		AMB		
	comp=Z,244nm,6.3s							
GTA				LR		LR		
	comp=N,479nm,15.0s,MS4.5							
GTA				LR		LR		
	comp=E,432nm,16.2s,MS4.5							
GTA				LR		LR		
	comp=Z,505nm,15.6s,MS4.4							
HHC	**Hu-ho-hao-te**	**41.65**	**17**	*e*P		**P**	**15 11 30.3**	**+2.9**
HHC				AP		pP	15 11 37.8	-1.6
HHC				XP		sP	15 11 41.3	-3.3
HHC				PP		PP	15 13 11.8	+7.5
HHC				PCP		PcP	15 13 24.8	+1.1
HHC				S		**S**	**15 17 47.8**	**+6.9**
HHC				XS		sS	15 17 58.5	-2.5
HHC				AMB		AMB		
	comp=Z,27nm,0.5s,mb5.1							
HHC				AMB		AMB		
	comp=Z,227nm,5.2s							
HHC				LR		LR		
	comp=N,633nm,17.8s,MS4.7							
HHC				LR		LR		
	comp=E,656nm,17.8s,MS4.7							
HHC				LR		LR		
	comp=Z,673nm,14.9s,MS4.6							
WRA	**Warramunga Arr**	**42.05**	**122**	P		**P**	**15 11 31.2**	**+0.2**
	comp=Z,7.7nm,0.6s,mb4.5,baz=302,slow=9.1,SNR=104							
WRAB	**Tennant Creek**	**42.06**	**122**	*e*P		**P**	**15 11 31.0**	**-0.1**
	comp=Z,5.6nm,0.5s,mb4.5							
WRAB	**Tennant Creek**	**42.06**	**122**	*e*P		**P**	**15 11 31.0**	**-0.1**
WRAB					pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5							
WB2	**Warramunga Arr**	**42.06**	**122**	*e*P		**P**	**15 11 31.3**	**+0.2**
BJT	**Baijiatuau**	**42.41**	**22**	*e*P		**P**	**15 11 33.9**	**+0.2**
	comp=Z,35nm,0.6s,mb5.2							
BJT	**Baijiatuau**	**42.41**	**22**	*e*P		**P**	**15 11 33.9**	**+0.3**
BJT					pmax	pmax		
	comp=Z,35nm,0.6s							
BJI	**Beijing**	**42.43**	**22**	P		**P**	**15 11 34.3**	**+0.5**
BJI				AMB		AMB		
	comp=Z,55nm,0.9s,mb5.2							
BJI				LR		LR		
	comp=N,404nm,14.4s,MS4.7							
BJI				LR		LR		
	comp=E,447nm,12.0s,MS4.7							
BJI				LR		LR		
	comp=Z,271nm,23.4s							
WMQ	**Urumqi**	**43.33**	**350**	P		**P**	**15 11 42.0**	**+1.0**
WMQ				AP		pP	15 11 50.0	-3.1
WMQ				PP		PP	15 13 25.0	+2.6
WMQ				S		**S**	**15 18 08.0**	**+2.4**
WMQ				XS		sS	15 18 21.0	-4.8
WMQ				SS		SS	15 21 15.0	-5.6
WMQ				AMB		AMB		
	comp=Z,32nm,1.0s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,87nm,4.0s							
WMQ				LR		LR		
	comp=N,189nm,15.0s,MS4.3							
WMQ				LR		LR		
	comp=E,253nm,15.0s,MS4.3							
WMQ				LR		LR		
	comp=Z,187nm,15.0s,MS4.1							
ASAR	**Alice Springs**	**43.41**	**127**	P		**P**	**15 11 42.6**	**+0.6**
	comp=Z,5.6nm,0.8s,mb4.3,baz=299,slow=7.8,SNR=127							
ASAR				PcP		PcP	15 13 31.2	+1.3
	comp=Z,1.6nm,0.9s,baz=313,slow=1.9,SNR=6.1							
UCH	**Uchtor**	**45.69**	**336**	*e*P		**P**	**15 12 01.4**	**+1.5**
TKM2	**Tokmak 2**	**45.86**	**338**	*e*P		**P**	**15 12 01.8**	**+0.6**
	comp=Z,11nm,0.9s,mb4.8							
TKM2	**Tokmak 2**	**45.86**	**338**	*e*P		**P**	**15 12 01.8**	**+0.6**
TKM2					pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8							
TKM2	**Tokmak 2**	**45.86**	**338**	P		**P**	**15 12 02.1**	**+0.9**
	SNR=13							
KBK	**Karagaybulak**	**45.88**	**337**	P		**P**	**15 12 03.3**	**+1.9**
	SNR=18							
AML	**Almayashu**	**45.94**	**336**	*e*P		**P**	**15 12 03.0**	**+1.1**
	comp=Z,9.7nm,0.8s,mb4.8							
AML	**Almayashu**	**45.94**	**336**	P		**P**	**15 12 03.2**	**+1.4**
	SNR=13							
KSRS	**Korea Array**	**45.94**	**35**	P		**P**	**15 12 01.2**	**-0.8**
	comp=Z,25nm,0.9s,mb5.1,baz=222,slow=9.1,SNR=44							
AAK	**Ala-Archa**	**46.04**	**337**	P		**P**	**15 12 07.8**	**+5.1**
	SNR=5.2							
EKS2	**Erkin-Say**	**46.35**	**336**	*e*P		**P**	**15 12 05.9**	**+0.8**
	comp=Z,10nm,0.8s,mb4.8							
EKS2	**Erkin-Say**	**46.35**	**336**	P		**P**	**15 12 06.2**	**+1.2**
	SNR=16							
USP	**Ospenovka**	**46.57**	**337**	P		**P**	**15 12 07.3**	**+0.5**
	SNR=28							
SONM	**Songino Array**	**47.21**	**8**	P		**P**	**15 12 11.9**	**+0.2**
	comp=Z,14nm,0.7s,mb5.0,baz=188,slow=8.7,SNR=109							
SONM				PcP		PcP	15 13 43.2	+0.6
	comp=Z,2.3nm,0.4s,baz=188,slow=4.0,SNR=10.0							
SONM				LR		LR	15 32 47.1	
	comp=Z,301nm,19.5s,MS4.3,baz=206,slow=37							
SONM	**Songino Array**	**47.21**	**8**	P		**P**	**15 12 11.9**	**+0.2**
SONM							15 13 43.2	
MK31	**Makanchi Array**	**47.29**	**346**	*e*P		**P**	**15 12 12.1**	**-0.3**
MK31	**Makanchi Array**	**47.29**	**346**	*i* P		**P**	**15 12 12.1**	**-0.3**
MK31					pmax	pmax		
	comp=Z,11nm,0.5s,mb5.0							
MKAR	**Makanchi Array**	**47.29**	**346**	P		**P**	**15 12 12.5**	**+0.1**
	comp=Z,13nm,0.6s,mb5.0,baz=159,slow=8.3,SNR=100							
ULN	**Ulaanbaatar**	**47.34**	**9**	*e*P		**P**	**15 12 12.5**	**-0.3**
	comp=Z,9.7nm,0.9s,mb4.7							
ULN	**Ulaanbaatar**	**47.34**	**9**	*e*P		**P**	**15 12 12.5**	**-0.2**
ULN					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
KK31	**Karatay Array**	**48.09**	**334**	*i* P		**P**	**15 12 18.6**	**0.0**
KK31					pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8							
ZAK	**Zakamensk**	**49.35**	**5**	*e*P		**P**	**15 12 24.7**	**-3.5**
ZAK					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
CN2	**Changchun**	**49.40**	**27**	*e*P		**P**	**15 12 27.8**	**-0.9**
CN2				*e*PP		PP	15 14 23.0	-0.1
CN2				*e*S		**S**	**15 19 33.0**	**+0.4**
CN2				AMB		AMB		
	comp=Z,30nm,0.8s,mb5.4							
CN2				AMB		AMB		
	comp=Z,300nm,5.0s							
CN2				LR		LR		
	comp=N,300nm,16.0s,MS4.5							
CN2				LR		LR		
	comp=E,300nm,16.0s,MS4.5							
CN2				LR		LR		
	comp=Z,300nm,17.0s,MS4.4							
HVS	**Khovu-Aksy**	**49.91**	**357**	*e*P		**P**	**15 12 31.0**	**-1.4**
HVS					pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1							
TLY	**Talaya**	**50.67**	**5**	*e*P		**P**	**15 12 38.7**	**+0.5**
	comp=Z,6.8nm,0.7s,mb4.7							
TLY	**Talaya**	**50.67**	**5**	*e*P		**P**	**15 12 38.7**	**+0.5**
TLY					pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8							
TLY				MLR		MLR		
	comp=Z,260nm,16.0s,MS4.3							
MJAR	**Matsushiro Arr**	**51.79**	**42**	P		**P**	**15 12 46.6**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.3,baz=225,slow=5.5,SNR=7.3							
KURK	**Kurchatov**	**51.84**	**345**	*e*P		**P**	**15 12 47.0**	**0.0**
	comp=Z,17nm,1.0s,mb4.9							
KURK	**Kurchatov**	**51.84**	**345**	*e*P		**P**	**15 12 47.0**	**0.0**
KURK					pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9							
MDJ	**Mudanjiang**	**51.96**	**29**	*e*P		**P**	**15 12 47.9**	**-0.1**
	comp=Z,6.2nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**53.36**	**132**	*e*P		**P**	**15 13 00.2**	**+1.6**
	comp=Z,3.9nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**53.36**	**132**	P		**P**	**15 12 60.0**	**+1.4**
	comp=Z,4.7nm,0.6s,mb4.6,baz=311,slow=7.2,SNR=18							
STKA				LR		LR	15 37 41.5	
	comp=Z,262nm,19.7s,MS4.3,baz=116,slow=38							
STKA	**Stephens Creek**	**53.36**	**132**	P		**P**	**15 12 60.0**	**+1.4**
STKA				LR		LR	15 37 41.5	
ZAA0	**Zalesovo Array**	**53.62**	**351**	*e*P		**P**	**15 12 59.9**	**-0.1**
ZALV	**Zalesovo Beam**	**53.62**	**351**	P		**P**	**15 12 59.7**	**-0.3**
	comp=Z,15nm,0.4s,mb5.3,baz=179,slow=5.9,SNR=129							
NVS	**Novosibirsk**	**54.73**	**350**	⇑*i*P		**P**	**15 13 07.0**	**-1.1**
NVS				*e*S		**S**	**15 20 43.8**	**-1.6**
NVS					pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0							
NVS					pmax	pmax		
	comp=N,12nm,1.1s							
NVS					pmax	pmax		
	comp=E,8.0nm,1.2s							
NVS					smax			
	comp=E,18nm,2.1s							
VOSK	**Vostochnaya**	**55.85**	**341**	P		**P**	**15 13 15.1**	**-1.1**
VOSK					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8							
BVA0	**Borovoye Array**	**56.29**	**341**	*i* P		**P**	**15 13 18.5**	**-0.9**
BVA0					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4							
KLR	**Kul'dur**	**56.35**	**27**	*e*P		**P**	**15 13 16.4**	**-3.4**
KLR					pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5							
BRVK	**Borovoye**	**56.36**	**341**	*e*P		**P**	**15 13 19.0**	**-0.9**
	comp=Z,18nm,1.0s,mb5.1							
BRVK	**Borovoye**	**56.36**	**341**	*e*P		**P**	**15 13 19.0**	**-0.8**
BRVK					pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1							
HABR	**Khabarovsk**	**57.35**	**29**	*e*P		**P**	**15 13 24.4**	**-2.6**
HABR				*e**PP		pP	15 13 34.6	-4.9
HABR				*e*			15 14 17.7	
HABR				*e*			15 15 31.9	
HABR				*e*PPP			15 16 49.7	
HABR				S		**S**	**15 21 20.1**	**-0.3**
HABR				*e*PS			15 21 32.2	
HABR				*e*			15 23 11.2	
HABR				*e*SS		SS	15 25 11.2	+0.7
AB31	**Akbulak array**	**57.54**	**332**	P		**P**	**15 13 27.4**	**-0.9**
AB31					pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3							
BOD	**Bodaibo**	**58.09**	**11**	*e*P		**P**	**15 13 32.0**	**0.0**
BOD					pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1							
EIDS	**Eidsvold**	**58.40**	**121**	*e*P		**P**	**15 13 36.1**	**+1.3**
	comp=Z,5.8nm,0.5s,mb4.9							
AKTO	**Aktyubinsk**	**59.26**	**332**	*i* P		**P**	**15 13 38.6**	**-1.7**
AKTO					pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0							
CLNS	**Chul'man**	**59.83**	**17**	*e*P		**P**	**15 13 44.5**	**+0.4**
CLNS					pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2							
CLNS					pmax	pmax		
	comp=E,5.0nm,0.8s							
CLNS					pmax	pmax		
	comp=N,11nm,0.7s							
YSS	**Yuzh-Sakhalins**	**60.44**	**34**	*e*P		**P**	**15 13 47.0**	**-1.5**
YSS					pmax	pmax		
	comp=Z,41nm,1.3s,mb5.3							
SVE	**Sverdlovsk**	**62.73**	**338**	⇓*e*P		**P**	**15 14 03.4**	**-0.3**
SVE					pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2							
ARU	**Arti**	**63.22**	**337**	*e*P		**P**	**15 14 05.3**	**-1.6**
	comp=Z,10nm,1.0s,mb4.9							
ARU	**Arti**	**63.22**	**337**	*c i*P		**P**	**15 14 06.1**	**-0.9**
ARU				*e*			15 14 40.8	
ARU				*e*			15 16 21.7	
ARU				*e*S		**S**	**15 22 36.4**	**+1.1**
ARU				*e*SS		SS	15 26 47.5	+5.2
ARU				pmax		pmax		
	comp=Z,13nm,1.0s,mb5.0							
KIV	**Kislovodsk**	**64.32**	**319**	P		**P**	**15 14 14.2**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0							
KIV	**Kislovodsk**	**64.32**	**319**	*d i*P		**P**	**15 14 14.6**	**+0.1**
KIV					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8							
YAK	**Yakutsk**	**65.51**	**16**	*e*P		**P**	**15 14 20.9**	**-0.9**
	comp=Z,54nm,1.0s,mb5.5							
YAK	**Yakutsk**	**65.51**	**16**	⇑*i*P		**P**	**15 14 21.1**	**-0.7**
YAK					pmax	pmax		
	comp=Z,66nm,1.3s,mb5.5							
SOKR	**Solikamsk**	**66.12**	**339**	*e*P		**P**	**15 14 26.1**	**+0.3**
SOKR					pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0							
MBAR	**Mbarara**	**66.41**	**269**	*e*P		**P**	**15 14 27.1**	**-1.5**
BR131	**Keskin Array S**	**69.11**	**312**	*e*P		**P**	**15 14 44.2**	**-0.9**
	comp=Z,2.2nm,0.8s,mb4.1							
BRTR	**Keskin Array B**	**69.11**	**312**	P		**P**	**15 14 44.1**	**-1.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=138,slow=9.0,SNR=8.5							
PETK	**Petropavlovsk-**	**71.83**	**34**	P		**P**	**15 15 00.0**	**-1.4**
	comp=Z,2.9nm,0.8s,mb4.3,baz=227,slow=0.6,SNR=6.1							
MAW	**Mawson**	**72.63**	**193**	P		**P**	**15 15 05.2**	**-0.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=12,slow=2.8,SNR=4.7							
OBN	**Obninsk**	**72.64**	**328**	⇑*e*P		**P**	**15 15 04.4**	**-1.8**
OBN					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7							
OBN				MLR		MLR		
	comp=Z,300nm,15.0s,MS4.7							
TIXI	**Tiksi**	**73.27**	**10**	*e*P		**P**	**15 15 08.4**	**-1.2**
	comp=Z,5.6nm,0.6s,mb4.7							
TIXI	**Tiksi**	**73.27**	**10**	*c i*P		**P**	**15 15 08.6**	**-1.0**
TIXI					pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9							
SEY	**Seymchan**	**73.85**	**23**	*e*P		**P**	**15 15 11.8**	**-1.4**
AKASG	**Malin Array Be**	**75.27**	**322**	P		**P**	**15 15 20.4**	**-1.3**
	comp=Z,1.7nm,0.5s,mb4.3,baz=91,slow=4.4,SNR=6.9							
BURAR	**Bucovina Array**	**77.03**	**319**	⇑*i*P		**P**	**15 15 32.6**	**+0.8**
BUR08	**Bucovina Ar. S**	**77.05**	**319**	*e*P		**P**	**15 15 32.2**	**+0.4**
DRGR		**78.54**	**318**	⇓*i*P		**P**	**15 15 41.6**	**+1.4**
PKSM	**Moragy**	**81.22**	**316**	⇓*i*P		**P**	**15 15 54.3**	**-0.4**
BILL	**Bilibino**	**81.25**	**21**	⇑*e*P		**P**	**15 15 53.9**	**-0.5**
BILL				*e*			15 18 54.1	
BILL				*e*S		S	15 25 56.9	-4.4
BILL					pmax	pmax		
	comp=Z,22nm,2.5s,mb4.6							
BILL				MLR		MLR		
	comp=Z,200nm,17.0s,MS4.5							
ARCES	**ARCESS Array B**	**82.58**	**340**	P		**P**	**15 16 01.3**	**0.0**
	comp=Z,3.4nm,0.8s,mb4.5,baz=101,slow=5.0,SNR=9.9							
GERES	**GERESS Array B**	**84.82**	**319**	P		**P**	**15 16 13.6**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.3,baz=112,slow=3.6,SNR=10							
CLL	**Collm**	**85.44**	**321**	*e*P		**P**	**15 16 16.0**	**-0.3**
CLL				*e*(pP)		pP	15 16 24.0	-5.5
VNDA	**Vanda**	**85.77**	**169**	P		**P**	**15 16 18.6**	**+1.2**
	comp=Z,0.5nm,0.7s,mb3.8,baz=297,slow=4.9,SNR=3.3							
VNDA	**Vanda**	**85.77**	**169**	*e*P		**P**	**15 16 15.0**	**-2.4**
NB2	**NORSAR Subarra**	**87.03**	**331**	P		**P**	**15 16 23.1**	**-0.8**
	comp=Z,4.7nm,1.0s,mb4.7,baz=94,slow=4.8							
NOA	**NORSAR Array B**	**87.03**	**331**	P		**P**	**15 16 23.1**	**-0.9**
	comp=Z,2.6nm,0.8s,mb4.5,baz=95,slow=4.8,SNR=4.8							
KEST	**Kesra**	**87.55**	**306**	P		**P**	**15 16 28.2**	**+1.2**
	comp=Z,1.7nm,0.9s,mb4.3,baz=83,slow=17,SNR=3.7							
SNAA	**Sanae**	**94.20**	**198**	*e*P		**P**	**15 16 54.4**	**-2.8**
SNAA					pmax	pmax		
	comp=Z,6.0nm,1.7s							
**NV

CHTO					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KKM	**Kota Kinabalu**	**19.55**	**75**	*eP*	**Pn**		**15 22 57.6**	**-0.2**	
KMI	**Kunming**	**24.35**	**12**	⇓P	**P**		**15 23 47.0**	**+1.4**	
KMI				AMB	AMB				
	comp=Z,19nm,1.0s,mb4.5								
SHL	**Shillong**	**24.74**	**348**	*eP*	**P**		**15 23 49.8**	**+0.6**	
ODAN	**Odare**	**27.18**	**341**	*eP*	**P**		**15 24 12.3**	**+1.1**	
	comp=Z,26nm,0.6s,mb4.9								
TAPN	**Taplejung**	**27.53**	**341**	*eP*	**P**		**15 24 15.5**	**+1.2**	
	comp=Z,45nm,0.9s,mb5.1								
RAMN	**Ramite**	**27.53**	**339**	*eP*	**P**		**15 24 15.7**	**+1.3**	
	comp=Z,12nm,0.6s,mb4.7								
JIRN	**Jiri**	**28.33**	**339**	*eP*	**P**		**15 24 22.5**	**+1.0**	
	comp=Z,23nm,0.8s,mb4.9								
GUN	**Gumba**	**28.67**	**339**	*eP*	**P**		**15 24 25.5**	**+1.0**	
	comp=Z,19nm,0.6s,mb5.0								
KKN	**Kakani**	**28.78**	**338**	*eP*	**P**		**15 24 26.0**	**+0.5**	
	comp=Z,16nm,0.9s,mb4.8								
KKN	**Kakani**	**28.78**	**338**	*eP*	**P**		**15 24 26.0**	**+0.5**	
KKN				pmax	pmax				
	comp=Z,16nm,0.9s,mb4.8								
LSA	**Lhasa**	**28.90**	**349**	*eP*	**P**		**15 24 27.0**	**+0.5**	
	comp=Z,3.9nm,0.6s,mb4.3								
LSA	**Lhasa**	**28.90**	**349**	*eP*	**P**		**15 24 27.0**	**+0.5**	
LSA				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.3								
GKN	**Gorkha**	**29.22**	**337**	*eP*	**P**		**15 24 30.0**	**+0.6**	
KOLN	**Koldanda**	**29.44**	**335**	*eP*	**P**		**15 24 32.1**	**+0.7**	
	comp=Z,19nm,0.7s,mb4.9								
DANN	**Dangsing**	**29.88**	**336**	*eP*	**P**		**15 24 35.9**	**+0.6**	
PYUN	**Piuthan**	**29.99**	**334**	*eP*	**P**		**15 24 37.3**	**+1.1**	
	comp=Z,4.6nm,0.5s,mb4.5								
XAN	**Xi'an**	**34.43**	**17**	P	**P**		**15 25 14.5**	**-0.6**	
XAN				AP	pP		15 25 20.5	-8.1	
XAN				AMB	AMB				
	comp=Z,5.0nm,0.6s,mb4.6								
XAN				AMB	AMB				
	comp=Z,211nm,5.7s								
NJ2	**Nanjing**	**36.83**	**31**	*eP*	**P**		**15 25 36.5**	**+0.8**	
NJ2				AMB	AMB				
	comp=Z,70nm,1.0s,mb5.5								
GTA	**Gaotai**	**38.08**	**3**	*eP*	**P**		**15 25 46.5**	**+0.4**	
GTA				AP	pP		15 25 50.3	-9.5	
GTA				XP	sP		15 25 51.5	-14	
GTA				AMB	AMB				
	comp=Z,8.0nm,0.8s,mb4.5								
WRA	**Warramunga Arr**	**42.04**	**122**	P	**P**		**15 26 19.5**	**+0.2**	
	comp=Z,2.4nm,0.6s,mb4.0,baz=302,slow=9.0,SNR=29								
WRA	**Warramunga Arr**	**42.04**	**122**	P	**P**		**15 26 19.5**	**+0.2**	
WRA				pmax	pmax				
	comp=Z,2.0nm,0.6s								
WRAB	**Tennant Creek**	**42.04**	**122**	*eP*	**P**		**15 26 19.5**	**+0.2**	
	comp=Z,2.2nm,0.5s,mb4.0								
WRAB	**Tennant Creek**	**42.04**	**122**	*eP*	**P**		**15 26 19.5**	**+0.2**	
WRAB				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.0								
WB2	**Warramunga Arr**	**42.05**	**122**	*eP*	**P**		**15 26 19.5**	**+0.1**	
ASAR	**Alice Springs**	**43.40**	**127**	P	**P**		**15 26 30.8**	**+0.5**	
	comp=Z,1.8nm,0.8s,mb3.9,baz=297,slow=7.5,SNR=38								
ASAR	**Alice Springs**	**43.40**	**127**	P	**P**		**15 26 30.8**	**+0.5**	
ASAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
KSRS	**Korea Array**	**45.82**	**35**	P	**P**		**15 26 49.1**	**-0.2**	
	comp=Z,5.1nm,0.8s,mb4.5,baz=224,slow=7.8,SNR=10								
KSRS	**Korea Array**	**45.82**	**35**	P	**P**		**15 26 49.2**	**-0.1**	
KSRS				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
SONM	**Songino Array**	**47.10**	**8**	P	**P**		**15 26 59.7**	**+0.5**	
	comp=Z,3.1nm,0.7s,mb4.4,baz=188,slow=9.0,SNR=28								
SONM				PcP	PcP		15 28 30.8	+0.5	
	comp=Z,0.7nm,0.6s,baz=195,slow=4.5,SNR=4.2								
SONM	**Songino Array**	**47.10**	**8**	P	**P**		**15 26 59.7**	**+0.5**	
SONM							15 28 30.8		
SONM				pmax	pmax				
	comp=Z,3.0nm,0.7s								
SONM				pmax	pmax				
	comp=Z,1.0nm,0.6s								
MK31	**Makanchi Array**	**47.22**	**346**	*eP*	**P**		**15 27 00.4**	**+0.2**	
MKAR	**Makanchi Array**	**47.22**	**346**	P	**P**		**15 27 00.1**	**0.0**	
	comp=Z,3.3nm,0.5s,mb4.5,baz=159,slow=8.2,SNR=36								
MKAR	**Makanchi Array**	**47.22**	**346**	P	**P**		**15 27 00.1**	**0.0**	
MKAR				pmax	pmax				
	comp=Z,3.0nm,0.5s								
ULN	**Ulaanbaatar**	**47.23**	**9**	*eP*	**P**		**15 27 00.3**	**+0.1**	
HVS	**Khovu-Aksy**	**49.81**	**357**	*i* P	**P**		**15 27 20.1**	**+0.1**	
TLY	**Talaya**	**50.56**	**5**	*i* P	**P**		**15 27 25.5**	**-0.2**	
TLY				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3								
KURK	**Kurchatov**	**51.77**	**345**	P	**P**		**15 27 34.3**	**-0.4**	
	comp=Z,3.1nm,0.6s,mb4.4,baz=168,slow=6.6,SNR=3.8								
KURK	**Kurchatov**	**51.77**	**345**	*eP*	**P**		**15 27 34.4**	**-0.3**	
KURK	**Kurchatov**	**51.77**	**345**	*i* P	**P**		**15 27 34.8**	**+0.1**	
KURK				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.3								
STKA	**Stephens Creek**	**53.36**	**132**	P	**P**		**15 27 47.7**	**+0.8**	
	comp=Z,1.6nm,0.5s,mb4.2,baz=319,slow=11,SNR=4.8								
STKA	**Stephens Creek**	**53.36**	**132**	*eP*	**P**		**15 27 47.6**	**+0.7**	
ZAA0	**Zalesovo Array**	**53.53**	**351**	*eP*	**P**		**15 27 47.4**	**-0.3**	
ZALV	**Zalesovo Beam**	**53.53**	**351**	P	**P**		**15 27 47.6**	**-0.1**	
	comp=Z,6.9nm,0.5s,mb4.8,baz=180,slow=7.5,SNR=32								
ZALV	**Zalesovo Beam**	**53.53**	**351**	P	**P**		**15 27 47.7**	**0.0**	
ZALV				pmax	pmax				
	comp=Z,7.0nm,0.5s,mb4.8								
NVS	**Novosibirsk**	**54.65**	**350**	*eP*	**P**		**15 27 55.4**	**-0.4**	
BVAR	**Borovoye Array**	**56.23**	**341**	P	**P**		**15 28 06.5**	**-0.7**	
	comp=Z,3.1nm,0.6s,mb4.5,baz=147,slow=8.8,SNR=20								
BVAR	**Borovoye Array**	**56.23**	**341**	P	**P**		**15 28 06.5**	**-0.7**	
BVAR				pmax	pmax				
	comp=Z,3.0nm,0.6s								
BRVK	**Borovoye**	**56.29**	**341**	*eP*	**P**		**15 28 07.0**	**-0.7**	
	comp=Z,2.5nm,0.5s,mb4.5								
BRVK	**Borovoye**	**56.29**	**341**	*eP*	**P**		**15 28 07.0**	**-0.7**	
BRVK				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.6								
AKTK	**Aktyubinsk**	**59.21**	**332**	P	**P**		**15 28 27.3**	**-1.0**	
AKTO	**Aktyubinsk**	**59.21**	**332**	P	**P**		**15 28 27.3**	**-1.0**	
	comp=Z,1.0nm,0.6s,mb4.0,baz=122,slow=16,SNR=6.4								
AKTO	**Aktyubinsk**	**59.21**	**332**	P	**P**		**15 28 27.3**	**-0.9**	
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.0								
ARU	**Arti**	**63.16**	**337**	*d i* P	**P**		**15 28 51.6**	**-3.2**	
ARU				*e*			15 31 08.0		
ARU				*e*S	**S**		**15 37 23.2**	**+1.1**	
ARU				*e*SS	SS		15 41 31.5	+2.5	
ARU				pmax	pmax				
	comp=Z,9.0nm,1.7s,mb4.6								
KIV	**Kislovodsk**	**64.30**	**319**	*eP*	**P**		**15 28 58.1**	**-4.5**	
KIV				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.5								
YAK	**Yakutsk**	**65.39**	**16**	*eP*	**P**		**15 29 08.6**	**-0.7**	
YAK				pmax	pmax				
	comp=Z,15nm,1.0s,mb5.0								
MBAR	**Mbarara**	**66.50**	**269**	*i* P	**P**		**15 29 11.7**	**-5.7**	
BRTR	**Keskin Array B**	**69.10**	**312**	P	**P**		**15 29 32.1**	**-1.2**	
	comp=Z,0.5nm,0.7s,mb3.6,baz=104,slow=10,SNR=2.7								
BRTR	**Keskin Array B**	**69.10**	**312**	P	**P**		**15 29 32.1**	**-1.2**	
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
OBN	**Obninsk**	**72.60**	**328**	⇑*eP*	**P**		**15 29 52.4**	**-1.8**	
OBN				*e*			15 32 31.6		
OBN				*e*S	S		15 39 18.4	+3.4	
OBN				pmax	pmax				
	comp=Z,38nm,2.5s,mb4.9								
TIXI	**Tiksi**	**73.16**	**10**	*eP*	**P**		**15 29 55.2**	**-2.0**	
TIXI				pmax	pmax				
	comp=Z,6.0nm,1.7s,mb4.2								
SEY	**Seymchan**	**73.73**	**23**	*eP*	**P**		**15 30 00.4**	**-0.3**	
AKASG	**Malin Array Be**	**75.24**	**322**	P	**P**		**15 30 08.4**	**-1.4**	
	comp=Z,0.3nm,0.4s,mb3.6,baz=103,slow=4.1,SNR=2.9								
ARCES	**ARCESS Array B**	**82.51**	**340**	P	**P**		**15 30 49.3**	**0.0**	
	comp=Z,9.4nm,1.2s,mb4.7,baz=106,slow=5.7,SNR=3.7								
ARCES	**ARCESS Array B**	**82.51**	**340**	P	**P**		**15 30 49.3**	**+0.1**	
ARCES				pmax	pmax				
	comp=Z,9.0nm,1.2s								
TXAR	**Lajitas Array**	**143.64**	**32**	PKP	PKPdf		15 38 00.4	-1.9	
	comp=Z,0.2nm,0.6s,baz=329,slow=1.6,SNR=3.5								

*IDC **26** 15:28:23.8±1.1, 3500N×6169E, h0km, mb4.2/5, mb1 4.0/9, mb1mx3.7/25, mbtmp4.0/9, ML3.7/4, MS4.6/1, Ms1 4.6/1, ms1mx3.2/37, Error ellipse: s-maj=23.3km s-min=21.3km az=71.0*

*ISCJB **26** 15:28:27.2±3.5, 3527N±005×6174E±009, h31km±25km, mb4.3/13, Error ellipse: s-maj=13.8km s-min=7.0km az=150.2*

*MOS **26** 15:28:28.6±1.6, 3522N×6192E, h33km, mb4.2/5, Error ellipse: s-maj=17.4km s-min=10.0km az=63.1*

*CSEM **26** 15:28:30.0, 3513N×6179E, h35km, mb4.4/8, After NEIC*

*NEIC **26** 15:28:30.0±0.5, 3513N×6179E, h35km, mb4.3/12, Error ellipse: s-maj=9.6km s-min=7.7km az=208.0*

ISC 26 15:28:28.9±3.9, 3525N±006×617E±01, h30km±29km, n50, σ1§09/52, mb4.3/13, Turkmenistan-Afghanistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**11.60**	**50**	*e*Pn	**Pn**	**15 31 12.2**	**-0.1**
	3.2nm,0.6s						
EKS2	**Erkin-Say**	**11.94**	**48**	*e*P	**Pn**	**15 31 17.2**	**+0.2**
	2.2nm,0.6s						
EKS2	**Erkin-Say**	**11.94**	**48**	*e*P	**Pn**	**15 31 17.2**	**+0.2**
	2.2nm,0.6s						
AAK	**Ala-Archa**	**12.37**	**50**	*e*P	**Pn**	**15 31 23.5**	**+0.7**
	3.0nm,0.6s						
AAK	**Ala-Archa**	**12.37**	**50**	*e*P	**Pn**	**15 31 23.5**	**+0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	**Ala-Archa**	**12.37**	**50**	*e*P	**Pn**	**15 31 23.5**	**+0.6**
	comp=Z,3.0nm,0.6s						
TKM2	**Tokmak 2**	**13.21**	**50**	P	**Pn**	**15 31 31.9**	**-2.5**
TKM2	**Tokmak 2**	**13.21**	**50**	P	**Pn**	**15 31 31.9**	**-2.5**
AKTK	**Aktyubinsk**	**15.42**	**351**	Pn	**Pn**	**15 32 03.2**	**-0.9**
AKTK				Sn	**Sn**	**15 34 53.0**	**-0.8**
AKTK	**Aktyubinsk**	**15.42**	**351**	Pn	**Pn**	**15 32 03.2**	**-0.9**
AKTK				Sn	**Sn**	**15 34 53.0**	**-0.8**
AKTO	**Aktyubinsk**	**15.42**	**351**	Pn	**Pn**	**15 32 03.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=171,slow=15,SNR=4.8						
AKTO				Sn	**Sn**	**15 34 53.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=236,slow=20,SNR=3.7						
BVAR	**Borovoye Array**	**18.80**	**16**	P	**Pn**	**15 32 47.7**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=191,slow=10,SNR=16						
BVAR	**Borovoye Array**	**18.80**	**16**	P	**Pn**	**15 32 47.7**	**+1.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.81**	**16**	P	**Pn**	**15 32 48.4**	**+1.9**
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**18.81**	**16**	P	**Pn**	**15 32 48.4**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**18.81**	**16**	P	**Pn**	**15 32 48.4**	**+1.9**
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**19.27**	**47**	P	**Pn**	**15 32 53.1**	**+1.0**
MK31	**Makanchi Array**	**19.27**	**47**	P	**Pn**	**15 32 53.1**	**+1.0**
MKAR	**Makanchi Array**	**19.27**	**47**	P	**Pn**	**15 32 52.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=225,slow=12,SNR=5.4						
PYUN	**Piuthan**	**19.43**	**106**	*e*P	**Pn**	**15 32 52.5**	**-1.6**
	comp=Z,3.8nm,0.5s						
KURK	**Kurchatov**	**19.72**	**33**	P	**Pn**	**15 32 56.5**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=225,slow=11,SNR=4.3						
DANN	**Dangsing**	**19.93**	**104**	*e*P	**Pn**	**15 32 58.9**	**-1.2**
KOLN	**Koldanda**	**20.06**	**106**	*e*P	**P**	**15 32 59.6**	**-0.1**
	comp=Z,6.1nm,0.7s						
GKN	**Gorkha**	**20.78**	**104**	*e*P	**P**	**15 33 07.3**	**-0.2**
	comp=Z,22nm,0.6s						
ASF	**Jabal al Asfar**	**20.87**	**269**	P	**P**	**15 33 11.9**	**+3.4**
	comp=Z,1.1nm,0.3s,baz=3.1,slow=6.8,SNR=6.0						
ASF	**Jabal al Asfar**	**20.87**	**269**	P	**P**	**15 33 11.9**	**+3.5**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	**Arti**	**21.30**	**355**	*e*P	**P**	**15 33 15.8**	**+2.9**
	comp=Z,6.0nm,0.9s,mb3.9						
ARU	**Arti**	**21.30**	**355**	P	**P**	**15 33 15.9**	**+3.1**
ARU	**Arti**	**21.30**	**355**	*e*P	**P**	**15 33 15.8**	**+3.0**
	comp=Z,6.0nm,0.9s,mb3.9						
DMN	**Daman**	**21.32**	**104**	*e*P	**P**	**15 33 13.9**	**+0.5**
	comp=Z,12nm,0.7s,mb4.3						
KKN	**Kakani**	**21.38**	**104**	*e*P	**P**	**15 33 14.5**	**+0.5**
	comp=Z,9.5nm,0.7s,mb4.3						
KKN	**Kakani**	**21.38**	**104**	*e*P	**P**	**15 33 14.5**	**+0.5**
KKN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
PKI	**Pulchoki**	**21.58**	**104**	*e*P	**P**	**15 33 16.1**	**0.0**
	comp=Z,14nm,0.6s,mb4.6						
PKI	**Pulchoki**	**21.58**	**104**	*e*P	**P**	**15 33 16.1**	**0.0**
PKI				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.6						
GUN	**Gumba**	**21.81**	**103**	*e*P	**P**	**15 33 20.5**	**+1.9**
JIRN	**Jiri**	**22.16**	**103**	*e*P	**P**	**15 33 22.5**	**+0.1**
	comp=Z,9.7nm,0.7s,mb4.4						
RAMN	**Ramite**	**22.81**	**104**	*e*P	**P**	**15 33 28.5**	**-0.7**
	comp=Z,14nm,0.7s,mb4.5						
ODAN	**Odare**	**23.47**	**104**	*e*P	**P**	**15 33 36.2**	**0.0**
	comp=Z,29nm,0.8s,mb4.8						
TAPN	**Taplejung**	**23.51**	**102**	*e*P	**P**	**15 33 37.1**	**+0.6**
	comp=Z,5.6nm,0.7s,mb4.1						
ZALV	**Zalesovo Beam**	**24.71**	**34**	P	**P**	**15 33 49.0**	**+1.8**
	comp=Z,2.1nm,0.6s,mb3.8,baz=232,slow=10,SNR=9.0						
ZALV	**Zalesovo Beam**	**24.71**	**34**	P	**P**	**15 33 49.0**	**+1.8**
ZALV	**Zalesovo Beam**	**24.71**	**34**	P	**P**	**15 33 49.0**	**+1.8**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**36.92**	**107**	P	**P**	**15 35 33.0**	**-2.2**
	comp=Z,0.8nm,0.3s,mb4.0,baz=298,slow=8.6,SNR=7.4						
CMAR	**Chiang Mai Arr**	**36.92**	**107**	P	**P**	**15 35 33.0**	**-2.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JMIC	**Jan Mayen**	**50.70**	**337**	LR	LR	15 59 18.5	
	comp=Z,654nm,21.0s,slow=36						
BORG	**Borgarnes**	**55.85**	**329**	P	**P**	**15 38 03.0**	**-0.1**
	comp=Z,15nm,0.6s,mb5.2,baz=80,slow=9.4,SNR=5.0						
TOA0	**Torodi Ar. Sit**	**58.12**	**264**	*e*P	**P**	**15 38 19.6**	**-0.3**
TOA0	**Torodi Ar. Sit**	**58.12**	**264**	*e*P	**P**	**15 38 19.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**58.12**	**264**	P	**P**	**15 38 19.5**	**-0.4**
	comp=Z,2.4nm,1.1s,mb4.2,baz=50,slow=7.3,SNR=8.5						
ASAR	**Alice Springs**	**89.98**	**119**	P	**P**	**15 41 25.5**	**0.0**
	comp=Z,0.2nm,0.7s,mb3.5,baz=309,slow=4.5,SNR=3.5						

*BJI **26** 15:31:27.9, 6497N×2082W, h10km, mB4.9, mb4.6, Ms4.6, Msz4.3*

*CSEM **26** 15:31:27.3±0.0, 6495N×1972W, h8km, mb4.3/7, Error ellipse: s-maj=1.2km s-min=0.8km az=135.0*

*ISCJB **26** 15:31:28.4±0.2, 6496N±001×1975W±004, h10km, mb4.2/36, MS4.1/15, Error ellipse: s-maj=2.6km s-min=1.5km az=39.2*

*REY **26** 15:31:29.2, 6495N×1973W, h2km, ML4.3, ML4.3*

*IDC **26** 15:31:29.7±0.5, 6503N×2002W, h0km, mb4.0/19, mb1 4.2/21, mb1mx4.1/30, mbtmp4.0/21, ML3.6/2, MS4.0/16, Ms1 4.0/16, ms1mx3.7/51, Error ellipse: s-maj=15.8km s-min=6.9km az=160.0*

*NEIC **26** 15:31:31.3±1.9, 6497N×2007W, h10km±12km, mb4.2/11, Error ellipse: s-maj=11.7km s-min=5.8km az=209.0*

*NAO **26** 15:31:35.9, 6496N×1972W, h33km, mb4.2*

*SZGRF **26** 15:31:37.2, 6535N×1955W, h33km, mb4.2, Iceland*

ISC 26 15:31:28.7±0.2, 6494N±002×1975W±004, h10km, (h11km±7km; pP-P), n139, σ1§37/167, mb4.2/36, MS4.1/15, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHVE	**Hveravellir**	**0.10**	**133**	P	**Pg**	**15 31 31.6**	**+0.3**
IGYG	**Gygjarholskot**	**0.69**	**197**	P	**Pg**	**15 31 41.8**	**-0.3**
ISKR	**Skrokkalda**	**0.70**	**123**	P	**Pg**	**15 31 41.8**	**-0.3**
IASB	**sbjarnarst**	**0.70**	**255**	P	**Pg**	**15 31 42.3**	**+0.1**
BORG	**Borgarnes**	**0.70**	**255**	Pg	**Pg**	**15 31 42.2**	**0.0**
	1µm,0.3s,baz=77,slow=13,SNR=2366						
BORG				Lg		15 31 50.8	
	1µm,0.3s,baz=96,slow=19,SNR=33						
BORG	**Borgarnes**	**0.70**	**255**	*e*P	**Pg**	**15 31 42.2**	**-0.1**
IVAT	**Vatnsfell**	**0.84**	**154**	P	**Pg**	**15 31 44.3**	**-0.5**
IHAU	**Haukadalur**	**0.98**	**186**	P	**Pg**	**15 31 46.3**	**-1.2**
IHAU				S	**Sg**	**15 32 00.2**	**-0.1**
IHEI	**Heioarbar**	**0.98**	**222**	P	**Pg**	**15 31 46.3**	**-1.3**
IHEI				S	**Sg**	**15 32 00.4**	**0.0**
ISAU	**Saurbar**	**1.00**	**197**	P	**Pg**	**15 31 46.5**	**-1.4**
ISAU				S	**Sg**	**15 32 00.3**	**-0.5**
IKRO	**Krokur**	**1.03**	**216**	P	**Pg**	**15 31 47.1**	**-1.5**
IKRO				S	**Sg**	**15 32 01.8**	**-0.2**
IKUD	**Kuludalsa**	**1.11**	**237**	P	**Pb**	**15 31 48.5**	**-1.4**
IKUD				S	**Sg**	**15 32 03.8**	**-0.6**
ISVA	**Svartarkot**	**1.12**	**68**	P	**Pb**	**15 31 48.3**	**-1.9**
ISVA				S	**Sb**	**15 32 03.2**	**-1.7**
ISOL	**Solvholt**	**1.14**	**208**	P	**Pb**	**15 31 49.0**	**-1.5**
ISOL				S	**Sb**	**15 32 04.2**	**-1.1**
IHLA	**Hella**	**1.16**	**29**	P	**Pb**	**15 31 48.8**	**-1.9**
IHLA				S	**Sb**	**15 32 03.8**	**-2.0**
IASM	**Asmuli**	**1.17**	**199**	P	**Pb**	**15 31 49.4**	**-1.6**
IASM				S	**Sb**	**15 32 05.4**	**-0.9**
IHRN	**Hraun**	**1.19**	**353**	P	**Pb**	**15 31 49.3**	**-1.9**
IHRN				S	**Sb**	**15 32 04.8**	**-1.8**
ISAN	**Sandskeio**	**1.19**	**222**	P	**Pb**	**15 31 49.8**	**-1.5**
ISAN				S	**Sb**	**15 32 06.5**	**-0.2**
IGRF	**Grimsfjall**	**1.19**	**116**	P	**Pb**	**15 31 50.1**	**-1.3**
IBJA	**Bjarnastaoir**	**1.21**	**215**	P	**Pb**	**15 31 50.1**	**-1.5**
IBJA				S	**Sb**	**15 32 06.0**	**-1.2**
ISIG	**Siglufjorour**	**1.25**	**16**	P	**Pn**	**15 31 50.2**	**-1.9**
ISIG				S	**Sb**	**15 32 06.0**	**-2.3**
IMID	**Miomork**	**1.29**	**183**	P	**Pn**	**15 31 51.7**	**-1.0**
IMID				S	**Sb**	**15 32 09.4**	**-0.2**
IKAS	**Kald??rsel**	**1.30**	**226**	P	**Pn**	**15 31 51.6**	**-1.2**
IKAS				S	**Sb**	**15 32 09.9**	**+0.1**
ISNB	**Snabyli**	**1.30**	**158**	P	**Pn**	**15 31 52.2**	**-0.7**
ISNB				S	**Sb**	**15 32 09.4**	**-0.6**
IGRA	**Granastaoir**	**1.33**	**42**	P	**Pn**	**15 31 52.1**	**-1.2**
IGRA				S	**Sb**	**15 32 08.8**	**-2.1**
IKAL	**Kalfafell**	**1.34**	**137**	P	**Pn**	**15 31 52.5**	**-0.9**
IKAL				S	**Sb**	**15 32 10.1**	**-0.9**
IVOS	**Vogsosar**	**1.39**	**219**	P	**Pn**	**15 31 53.1**	**-0.9**
IVOS				S	**Sb**	**15 32 12.1**	**-0.2**
IREN	**Reynihlio**	**1.39**	**58**	P	**Pn**	**15 31 52.8**	**-1.3**
IREN				S	**Sn**	**15 32 10.6**	**-1.8**
IBRE	**Brettingsstaoi**	**1.41**	**32**	P	**Pn**	**15 31 53.1**	**-1.3**
IBRE				S	**Sn**	**15 32 11.4**	**-1.6**
IESK	**Eystri-Skogar**	**1.43**	**175**	P	**Pn**	**15 31 53.7**	**-0.9**
IESK				S	**Sn**	**15 32 12.7**	**-0.7**
IFLA	**Flatey**	**1.46**	**32**	P	**Pn**	**15 31 54.1**	**-0.9**
IFLA				S	**Sn**	**15 32 12.5**	**-1.6**
IKRI	**Krysuvik**	**1.47**	**225**	P	**Pn**	**15 31 54.4**	**-0.8**
IKRI				S	**Sn**	**15 32 14.6**	**+0.1**
IHVO	**Lagu-Hvolar**	**1.47**	**164**	P	**Pn**	**15 31 54.8**	**-0.4**
IHVO				S	**Sn**	**15 32 14.3**	**-0.2**
IVOG	**Vogar**	**1.51**	**231**	P	**Pn**	**15 31 55.2**	**-0.5**
IVOG				S	**Sn**	**15 32 15.4**	**+0.1**
IVES	**Vestmannaeyjar**	**1.52**	**189**	P	**Pn**	**15 31 55.4**	**-0.5**
IVES				S	**Sn**	**15 32 16.1**	**+0.4**
IHED	**Heoinshofoi**	**1.53**	**40**	P	**Pn**	**15 31 55.0**	**-1.0**
IHED				S	**Sn**	**15 32 15.0**	**-0.9**
IBRU	**Bruarjokull**	**1.56**	**92**	P	**Pn**	**15 31 55.4**	**-1.1**
IBRU				S	**Sn**	**15 32 16.0**	**-0.8**
IGRV	**Grindav??k**	**1.60**	**228**	P	**Pn**	**15 31 56.7**	**-0.3**
IGRV				S	**Sn**	**15 32 18.7**	**+1.0**
INYL	**Nylenda**	**1.62**	**235**	P	**Pn**	**15 31 56.8**	**-0.5**
INYL				S	**Sn**	**15 32 18.9**	**+0.8**
IHVA	**Hvannstoosfjol**	**1.65**	**88**	P	**Pn**	**15 31 56.7**	**-1.0**
IHVA				S	**Sn**	**15 32 19.0**	**+0.1**
IGRS	**Grimsstaoir**	**1.68**	**64**	P	**Pn**	**15 31 57.0**	**-1.0**
IGRS				S	**Sn**	**15 32 19.0**	**-0.5**
IFAG	**Fagurholsmyri**	**1.72**	**127**	P	**Pn**	**15 31 58.3**	**-0.3**
IFAG				S	**Sn**	**15 32 19.8**	**-0.7**
IVSH	**V-Sauoahnukur**	**1.72**	**93**	P	**Pn**	**15 31 58.0**	**-0.6**
IVSH				S	**Sn**	**15 32 20.3**	**-0.3**
IGRI	**Grimsey**	**1.76**	**23**	P	**Pn**	**15 31 58.3**	**-0.9**
IGRI				S	**Sn**	**15 32 20.3**	**-1.3**
IADA	**Aoalbol**	**1.77**	**86**	P	**Pn**	**15 31 58.4**	**-1.0**
IADA				S	**Sn**	**15 32 22.0**	**0.0**
IGIL	**Gilhagi**	**1.82**	**50**	P	**Pn**	**15 31 59.2**	**-0.8**
IGIL				S	**Sn**	**15 32 23.3**	**+0.3**
**IG

BR131	**Keskin Array S**	**39.48**	**103**	*eP*		**P**		**15 39 03.6**	**+4.8**
	comp=Z,2.4nm,0.8s,mb4.0								
BRTR	**Keskin Array B**	**39.48**	**103**	P		**P**		**15 39 02.6**	**+3.7**
	comp=Z,3.3nm,0.7s,mb4.2,baz=336,slow=6.8,SNR=14								
AKTO	**Aktyubinsk**	**41.12**	**72**	LR		LR		15 55 54.9	
	comp=Z,344nm,18.3s,MS4.2,baz=258,slow=36								
BVAR	**Borovoye Array**	**43.91**	**61**	P		**P**		**15 39 38.3**	**+3.3**
	comp=Z,2.4nm,0.9s,mb3.9,baz=317,slow=11,SNR=7.0								
BVAR				LR		LR		15 57 31.0	
	comp=Z,235nm,18.3s,MS4.1,baz=348,slow=36								
MMAI	**Mount Meron Ar**	**45.96**	**106**	P		**P**		**15 39 56.6**	**+5.0**
	comp=Z,2.6nm,0.7s,mb4.3,baz=3.1,slow=7.9,SNR=4.1								
ASF	**Jabal al Asfar**	**47.31**	**105**	P		**P**		**15 40 06.8**	**+4.7**
	comp=Z,1.0nm,0.3s,mb4.2,baz=0.0,slow=4.0,SNR=3.0								
EGMT	**Eagleton**	**47.89**	**295**	*eP*		**P**		**15 40 09.4**	**+3.0**
	comp=Z,12nm,1.2s,mb4.8								
EGMT	**Eagleton**	**47.89**	**295**	*eP*		**P**		**15 40 09.4**	**+3.0**
	comp=Z,12nm,1.2s,mb4.8								
ZALV	**Zalesovo Beam**	**48.20**	**50**	P		**P**		**15 40 12.2**	**+3.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=344,slow=10.0,SNR=3.7								
ZALV				PcP		PcP		15 41 37.2	+1.4
	comp=Z,0.5nm,0.5s,baz=355,slow=3.2,SNR=3.6								
ZALV				LR		LR		16 01 27.7	
	comp=Z,126nm,19.1s,MS3.9,baz=45,slow=37								
SWET	**Sewanee**	**48.69**	**266**	P		**P**		**15 40 16.1**	**+3.4**
SWET	**Sewanee**	**48.69**	**266**	P		**P**		**15 40 16.1**	**+3.4**
KURK	**Kurchatov**	**48.77**	**57**	P		**P**		**15 40 14.9**	**+1.7**
	comp=Z,0.9nm,0.4s,mb4.2,baz=329,slow=6.9,SNR=4.7								
KURK				LR		LR		16 00 59.4	
	comp=Z,230nm,18.7s,MS4.2,baz=335,slow=36								
KURK	**Kurchatov**	**48.77**	**57**	P		**P**		**15 40 14.9**	**+1.7**
HRY	**Holter Researc**	**49.77**	**296**	*eP*		**P**		**15 40 23.8**	**+2.9**
HRY	**Holter Researc**	**49.77**	**296**	*eP*		**P**		**15 40 23.8**	**+2.9**
PDAR	**Pinedale Array**	**52.18**	**291**	P		**P**		**15 40 41.2**	**+2.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=55,slow=5.6,SNR=8.4								
MKAR	**Makanchi Array**	**53.39**	**57**	P		**P**		**15 40 50.4**	**+2.5**
	comp=Z,2.6nm,0.9s,mb4.1,baz=349,slow=5.6,SNR=9.4								
MKAR				LR		LR		16 03 50.5	
	comp=Z,149nm,18.5s,MS4.1,baz=337,slow=36								
TOA0	**Torodi Ar. Sit**	**53.80**	**154**	*eP*		**P**		**15 40 51.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**53.80**	**154**	P		**P**		**15 40 52.7**	**+1.5**
	comp=Z,2.0nm,0.7s,mb4.1,baz=341,slow=6.0,SNR=9.5								
ELK	**Elko**	**56.13**	**294**	LR		LR		16 07 19.6	
	comp=Z,122nm,18.1s,MS4.0,baz=316,slow=38								
WMQ	**Urumqi**	**57.87**	**55**	*eP*		**P**		**15 41 28.0**	**+7.9**
WMQ				SCP		ScP		15 46 20.0	+7.9
WMQ				S		**S**		**15 49 28.0**	**+8.7**
WMQ				SCS		ScS		15 51 15.0	+5.8
WMQ				SS		SS		15 53 20.0	+11
WMQ				AMB		AMB			
	comp=Z,35nm,1.0s,mb5.3								
WMQ				AMB		AMB			
	comp=Z,89nm,5.0s								
WMQ				LR		LR			
	comp=N,159nm,16.0s,MS4.4								
WMQ				LR		LR			
	comp=E,195nm,16.0s,MS4.4								
WMQ				LR		LR			
	comp=Z,214nm,16.0s,MS4.3								
CCUT	**Cedar City**	**58.15**	**291**	*eP*		**P**		**15 41 25.7**	**+3.5**
CCUT	**Cedar City**	**58.15**	**291**	*eP*		**P**		**15 41 25.7**	**+3.5**
NVAR	**Mina Array Bea**	**59.32**	**295**	P		**P**		**15 41 30.5**	**+0.2**
	comp=Z,1.2nm,1.0s,mb3.9,baz=31,slow=3.8,SNR=5.2								
SONM	**Songino Array**	**60.04**	**39**	P		**P**		**15 41 37.3**	**+2.2**
	comp=Z,0.7nm,0.8s,mb3.8,baz=322,slow=7.4,SNR=5.9								
SONM				PcP		PcP		15 42 25.1	+4.1
	comp=Z,0.3nm,0.6s,baz=343,slow=1.5,SNR=4.5								
TXAR	**Lajitas Array**	**61.29**	**278**	PcP		PcP		15 42 28.2	+1.9
	comp=Z,0.3nm,0.6s,baz=45,slow=4.0,SNR=3.7								
TXAR				LR		LR		16 05 26.6	
	comp=Z,176nm,21.8s,MS4.2,baz=335,slow=33								
GTA	**Gaotai**	**65.84**	**48**	*eP*		**P**		**15 42 17.0**	**+3.2**
GTA				AP		pP		15 42 20.8	+3.8
GTA				AMB		AMB			
	comp=Z,3.0nm,1.4s,mb4.1								
HHC	**Hu-ho-hao-te**	**67.90**	**38**	*eP*		**P**		**15 42 31.0**	**+4.1**
HHC				XP		sP		15 42 36.8	+5.4
HHC				PCP		PcP		15 42 57.0	+3.7
HHC				PP		PP		15 45 02.0	+6.0
HHC				PCS				15 47 02.0	
HHC				S		S		15 51 27.3	+2.2
HHC				SCS		ScS		15 52 25.5	+0.1
HHC				AMB		AMB			
	comp=Z,18nm,0.5s,mb5.4								
HHC				AMB		AMB			
	comp=Z,128nm,5.2s								
HHC				LR		LR			
	comp=N,230nm,19.0s,MS4.7								
HHC				LR		LR			
	comp=E,317nm,19.0s,MS4.7								
HHC				LR		LR			
	comp=Z,165nm,20.2s,MS4.2								
CN2	**Changchun**	**68.23**	**26**	*eP*		**P**		**15 42 36.3**	**+7.3**
LZH	**Lanzhou**	**70.14**	**46**	*eP*		**P**		**15 42 43.5**	**+2.6**
LZH				AP		pP		15 42 46.5	+2.3
LZH				*e*PP		PP		15 45 20.8	+5.3
LZH				AMB		AMB			
	comp=Z,15nm,1.5s,mb4.7								
LZH				AMB		AMB			
	comp=Z,89nm,6.4s								
LZH				LR		LR			
	comp=N,187nm,16.5s								
LZH				LR		LR			
	comp=Z,215nm,18.3s,MS4.4								
CD2	**Chengdu**	**74.91**	**48**	*eP*		**P**		**15 43 13.0**	**+3.6**
CD2				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.8								
CD2				AMB		AMB			
	comp=Z,20nm,4.8s								
MAT	**Matsushiro**	**77.38**	**18**	P		**P**		**15 43 28.5**	**+5.1**
MJAR	**Matsushiro Arr**	**77.38**	**18**	P		**P**		**15 43 27.6**	**+4.2**
	comp=Z,2.3nm,0.9s,mb4.1,baz=342,slow=6.5,SNR=3.3								
KMI	**Kunming**	**79.94**	**51**	P		**P**		**15 43 42.5**	**+4.9**
KMI				AP		pP		15 43 45.8	+4.9
KMI				XP		sP		15 43 47.5	+5.4
KMI				PP		PP		15 46 46.0	+7.3
KMI				S		S		15 53 46.5	+5.4
KMI				AMB		AMB			
	comp=Z,4.0nm,0.9s,mb4.3								
KMI				LR		LR			
	comp=Z,107nm,29.7s,MS4.0								
GYA	**Guiyang**	**79.96**	**47**	P		**P**		**15 43 40.5**	**+2.8**
GYA				AMB		AMB			
	comp=Z,10.0nm,0.9s,mb4.8								
CMAR	**Chiang Mai Arr**	**84.80**	**57**	P		**P**		**15 44 06.8**	**+3.8**
	comp=Z,0.5nm,0.3s,mb4.1,baz=328,slow=4.8,SNR=5.8								
CMAR				LR		LR		16 28 19.2	
	comp=Z,49nm,19.9s,MS3.9,baz=190,slow=40								
ASAR	**Alice Springs**	**135.32**	**35**	PKP		PKPdf		15 50 49.5	+1.5
	comp=Z,0.3nm,0.6s,baz=357,slow=2.9,SNR=6.6								
ASAR	**Alice Springs**	**135.32**	**35**	PKIKP		PKPdf		15 50 49.5	+1.4
MAW	**Mawson**	**144.56**	**139**	PKP		PKPdf		15 51 06.0	+2.6
	comp=Z,1.2nm,0.6s,baz=323,slow=5.1,SNR=5.1								
STKA	**Stephens Creek**	**144.96**	**28**	PKP		PKPdf		15 51 06.2	+1.0
	comp=Z,3.2nm,0.8s,baz=355,slow=7.3,SNR=4.8								
STKA	**Stephens Creek**	**144.96**	**28**	PKP		PKPdf		15 51 06.2	+1.0

*CSEM **26** 15:49:32.9±0.1, 3530N×3028E, h30km, MD3.3, Error ellipse: s-maj=6.4km s-min=2.2km az=73.0*
*ISCJB **26** 15:49:33.5±0.4, 3528N±003×3027E±008, h33km, Error ellipse: s-maj=9.7km s-min=4.1km az=162.2*
*HLW **26** 15:49:35.1, 3529N×3025E, h33km, Mb4.0*
*ISK **26** 15:49:38.2, 3569N×3021E, h32km, MD3.3*

ISC 26 15:49:35.3±0.4, 3533N±003×3025E±008, h35km, n39, σ0s72/46, 11C-2D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AKAS	**Kas**	**1.04**	**330**	*e*P	**Pn**	**15 49 53.0**		**-0.4**
AKAS	**Kas**	**1.04**	**330**	*e*P	**Pn**	**15 49 53.0**		**-0.4**
AKAS				*e*S	**Sn**	**15 50 05.6**		**-1.1**
FETY	**Fethiye**	**1.61**	**324**	*e*PN	**Pn**	**15 50 00.9**		**-0.3**
FETY				*e*SN	**Sn**	**15 50 17.0**		**-3.7**
TURN	**Turunc**	**2.04**	**320**	*e*P	**Pn**	**15 50 09.6**		**+2.6**
TURN				*i* S	**Sn**	**15 50 36.2**		**+4.9**
BCK	**Bucak**	**2.14**	**7**	*e*PN	**Pn**	**15 50 07.9**		**-0.6**
YER	**Yerkesik**	**2.40**	**319**	*e*PN	**Pn**	**15 50 12.4**		**+0.4**
HDMB	**Hadim**	**2.43**	**47**	*e*PN	**Pn**	**15 50 13.8**		**+1.3**
DAT	**Datca**	**2.58**	**304**	*e*PN	**Pn**	**15 50 15.6**		**+1.1**
KHL	**Karahalli**	**3.04**	**349**	*e*PN	**Pn**	**15 50 20.7**		**-0.2**
KULA	**Kula-Manisa**	**3.42**	**339**	*e*PN	**Pn**	**15 50 26.4**		**+0.3**
KIZT	**Kizilcal**	**3.77**	**20**	*e*PN	**Pn**	**15 50 30.3**		**-0.6**
HRSH	**Kfar Ka'horesh**	**4.93**	**121**	⇓P	**Pn**	**15 50 51.2**		**+4.4**
HRSH	**Kfar Ka'horesh**	**4.93**	**121**	⇓P	**Pn**	**15 50 51.5**		**+4.7**
HMAT	**Matruh**	**4.98**	**213**	P	**Pn**	**15 50 47.2**		**-0.4**
RSH		**5.24**	**145**	P	**Pn**	**15 50 51.5**		**+0.4**
AMAG	**Maghara**	**5.29**	**151**	⇑P	**Pn**	**15 50 51.7**		**-0.1**
KOT	**Kottamia**	**5.55**	**166**	⇑P	**Pn**	**15 50 55.2**		**-0.1**
KOT	**Kottamia**	**5.55**	**166**	⇑P	**Pn**	**15 50 55.7**		**+0.3**
KOT	**Kottamia**	**5.55**	**166**	P	**Pn**	**15 50 55.7**		**+0.4**
HHAG	**Hagoal**	**5.58**	**163**	⇑P	**Pn**	**15 50 55.8**		**0.0**
HHAG				S	**Sn**	**15 51 54.4**		**-4.4**
HHAG	**Hagoal**	**5.58**	**163**	⇑P	**Pn**	**15 50 56.0**		**+0.2**
HHAG				S	**Sn**	**15 51 54.4**		**-4.4**
HHAG	**Hagoal**	**5.58**	**163**	P	**Pn**	**15 50 56.0**		**+0.2**
HHAG				S	**Sn**	**15 51 54.4**		**-4.4**
HSAF	**As Saff**	**5.80**	**169**	P	**Pn**	**15 50 58.6**		**-0.2**
HSAF	**As Saff**	**5.80**	**169**	P	**Pn**	**15 50 58.5**		**-0.3**
HSAF	**As Saff**	**5.80**	**169**	P	**Pn**	**15 50 58.5**		**-0.3**
GLL	**Jalalah**	**5.87**	**167**	⇑P	**Pn**	**15 50 60.0**		**+0.3**
SUZ		**5.89**	**158**	⇑P	**Pn**	**15 50 59.9**		**-0.1**
HNKL	**Nakhl**	**6.24**	**149**	⇑P	**Pn**	**15 51 04.3**		**-0.5**
HNKL	**Nakhl**	**6.24**	**149**	⇑P	**Pn**	**15 51 04.5**		**-0.3**
HNKL	**Nakhl**	**6.24**	**149**	P	**Pn**	**15 51 04.5**		**-0.3**
AWBH		**7.08**	**190**	P	**Pn**	**15 51 16.1**		**-0.3**
SWA2		**7.30**	**215**	P	**Pn**	**15 51 19.8**		**+0.4**
SWA2				S	**Sn**	**15 52 36.0**		**-5.1**
HKAT	**Jabal Katrina**	**7.49**	**154**	⇑P	**Pn**	**15 51 21.8**		**-0.3**
HKAT	**Jabal Katrina**	**7.49**	**154**	⇑P	**Pn**	**15 51 22.0**		**-0.1**
HKAT	**Jabal Katrina**	**7.49**	**154**	P	**Pn**	**15 51 22.0**		**-0.1**
TR2		**7.53**	**156**	P	**Pn**	**15 51 21.9**		**-0.6**
HFRF	**Wahat Farafira**	**8.32**	**192**	P	**Pn**	**15 51 33.0**		**-0.5**
HFRF	**Wahat Farafira**	**8.32**	**192**	P	**Pn**	**15 51 33.6**		**+0.1**
HFRF	**Wahat Farafira**	**8.32**	**192**	P	**Pn**	**15 51 33.6**		**+0.1**

*ISK **26** 16:12:36.8, 3754N×3555E, h9km, MD3.0*
*CSEM **26** 16:12:36.7±0.1, 3755N×3555E, h10km, MD3.0*
*ISCJB **26** 16:12:37.1±0.6, 3754N±003×3554E±004, h2km±7km, Error ellipse: s-maj=6.1km s-min=4.4km az=38.5*
*DDA **26** 16:12:37.2, 3755N×3563E, h7km±4km, Md3.1*

ISC 26 16:12:37.8±0.6, 3753N±003×3556E±004, h8km±6km, n16, σ0s72/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
KOZT	**Kozan**	**0.22**	**104**	*e*PG	**Pg**	**16 12 42.0**		**-0.2**
KOZT				*e*SG	**Sg**	**16 12 45.7**		**+0.5**
KARA	**Karaisali**	**0.48**	**236**	*e*PG	**Pg**	**16 12 46.7**		**-0.4**
KARA				*e*SG	**Sg**	**16 12 53.8**		**+0.3**
CEYT	**Ceyhan**	**0.54**	**164**	*e*PG	**Pg**	**16 12 48.1**		**-0.2**
CEYT				*e*SG	**Sg**	**16 12 56.3**		**+1.0**
NIG	**Nigde**	**0.94**	**308**	*e*PG	**Pg**	**16 12 55.0**		**-0.9**
NIG				*e*SG	**Sg**	**16 13 08.5**		**+0.3**
KRTS	**Karatas**	**0.97**	**189**	*e*PG	**Pg**	**16 12 56.1**		**-0.2**
MERS	**Mersin**	**1.06**	**232**	*e*PG	**Pg**	**16 12 57.7**		**-0.4**
KMRS	**Kahramanmaras**	**1.07**	**91**	*e*PG	**Pg**	**16 12 58.0**		**-0.3**
COBT	**Iskenderun**	**1.16**	**151**	*e*P	**Pg**	**16 12 58.6**		**-1.3**
COBT				*i* S	**Sg**	**16 13 16.4**		**+1.4**
BNN	**Bunyan**	**1.34**	**10**	*e*PN	**Pn**	**16 13 02.0**		**-0.8**
AVNT	**Avonos**	**1.36**	**336**	*e*P	**Pn**	**16 13 03.5**		**+0.4**
AVNT				*e*S	**Sb**	**16 13 22.8**		**+1.6**
GAZ	**Gaziantep**	**1.37**	**105**	*e*PN	**Pn**	**16 13 02.9**		**-0.3**
SARI	**SarD1z-Kayseri**	**1.46**	**38**	*e*PN	**Pn**	**16 12 58.6**		**-5.8**
HTY	**Hatay**	**1.48**	**161**	*e*PN	**Pn**	**16 13 04.0**		**-0.8**
IKL	**Isikli**	**1.98**	**230**	*e*PN	**Pn**	**16 13 11.7**		**+0.1**
DARE	**Darende-Malaty**	**2.27**	**51**	*e*PN	**Pn**	**16 13 09.4**		**-6.1**
HDMB	**Hadim**	**2.52**	**258**	*e*PN	**Pn**	**16 13 19.2**		**+0.2**

IDC 26 16:42:05.9±10.0, 444S×12913E, h236km±105km, mb3.2/1, mb1 3.4/3, mb1mx3.0/17, mbtmp3.2/3, Error ellipse: s-maj=109.6km s-min=22.9km az=52.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
BATI	**Baumata**	**7.88**	**223**	P	Pn	16 43 57.8		+0.1
WRA	**Warramunga Arr**	**16.22**	**162**	P	P	16 45 40.1		+0.1
	0.9nm,0.3s,baz=342,slow=12,SNR=74							
ASAR	**Alice Springs**	**19.66**	**167**	P	P	16 46 17.2		0.0
	0.8nm,0.3s,baz=343,slow=12,SNR=100							
MKAR	**Makanchi Array**	**65.63**	**327**	P	P	16 52 24.8		+0.1
	0.3nm,0.3s,baz=120,slow=7.3,SNR=7.5							

*ISCJB **26** 16:58:11.9±0.6, 3497N±004×3332E±004, h60km±6km, Error ellipse: s-maj=6.4km s-min=5.5km az=41.0*
*NIC **26** 16:58:11.4±0.3, 35.17N×3328E, h66km, ML3.0, MW2.8*
*ISK **26** 16:58:11.7, 3502N×3323E, h54km, MD2.9*
*NEIC **26** 16:58:11.4, 35.17N×3328E, h66km, MG3.0(NIC), After NIC.*
*CSEM **26** 16:58:11.5±0.2, 3505N×3329E, h54km±1km, Mw2.8, Error ellipse: s-maj=3.5km s-min=2.3km az=155.0*
*GII **26** 16:58:16.0±6.3, 3480N×3368E, h14km±161km, ML2.0/2*

ISC 26 16:58:12.8±0.6, 3499N±004×3331E±004, h56km±6km, n18, σ0s89/31, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CSS	**Prodhromos**	**0.03**	**138**	*e*PG	**Pn**	**16 58 20.4**		**-0.8**
CSS				*e*SG	**Sn**	**16 58 26.8**		**-0.3**
MAMC	**Mammari**	**0.20**	**339**	P	**Pn**	**16 58 20.8**		**-1.0**
MAMC				S	**Sn**	**16 58 28.9**		**+0.7**
LFK	**Lefkose**	**0.35**	**32**	*e*PG	**Pn**	**16 58 22.1**		**-0.8**
LFK				*e*SG	**Sn**	**16 58 30.0**		**-0.1**
LEF	**Lefka**	**0.37**	**292**	*e*PG	**Pn**	**16 58 22.0**		**-1.0**
LEF				*e*SG	**Sn**	**16 58 29.4**		**-1.0**
SZAC	**Souni-Zanaja**	**0.42**	**237**	P	**Pn**	**16 58 24.0**		**+0.5**
SZAC				S	**Sn**	**16 58 34.1**		**+2.8**
PHNC	**Paralimni**	**0.60**	**88**	P	**Pn**	**16 58 25.6**		**+0.1**
	2.8nm,0.3s							
PHNC				S	**Sn**	**16 58 36.8**		**+2.0**
ALFC	**Alevga**	**0.60**	**287**	P	**Pn**	**16 58 24.6**		**-1.0**
	4.3nm,0.1s							
ALFC				S	**Sn**	**16 58 34.9**		**0.0**
PPCY	**Paphos**	**0.80**	**263**	P	**Pn**	**16 58 28.1**		**+0.1**
PPCY				S	**Sn**	**16 58 40.0**		**+0.9**
EREN	**Erenkoy**	**0.89**	**52**	*e*PG	**Pn**	**16 58 29.4**		**+0.1**
EREN				*e*SG	**Sn**	**16 58 41.8**		**+0.5**
IKL	**Isikli**	**1.29**	**14**	*e*PN	**Pn**	**16 58 33.6**		**-0.9**
HDMB	**Hadim**	**2.08**	**342**	*e*PN	**Pn**	**16 58 45.7**		**+0.3**
MERS	**Mersin**	**2.12**	**27**	*e*PN	**Pn**	**16 58 46.2**		**+0.4**
HNTI	**Hanita**	**2.45**	**140**	Sn	**Sn**	**16 59 18.3**		**-0.8**
MMA0	**Mount Meron ar**	**2.63**	**138**	Pn	**Pn**	**16 58 53.2**		**+0.5**
MMA0				Sn	**Sn**	**16 59 22.3**		**-1.1**
KSDI	**Kefar Szold**	**2.65**	**132**	Pn	**Pn**	**16 58 54.0**		**+1.0**
KSDI				Sn	**Sn**	**16 59 22.5**		**-1.4**
KARA	**Karaisali**	**2.68**	**31**	*e*PN	**Pn**	**16 58 53.8**		**+0.4**
MMLI	**Mount Malkishu**	**3.09**	**145**	Pn	**Pn**	**16 59 00.3**		**+1.1**
MMLI				Sn	**Sn**	**16 59 34.2**		**-0.7**
DSI	**Dead Sea**	**3.82**	**152**	Pn	**Pn**	**16 59 10.3**		**+1.2**
DSI				Sn	**Sn**	**16 59 53.0**		**+0.1**

*IDC **26** 17:10:02.8±0.6, 227S×10042E, h0km, mb4.3/20, mb1 4.4/21, mb1mx4.3/28, mbtmp4.3/21, ML4.6/1, Error ellipse: s-maj=22.8km s-min=12.1km az=60.0*
*BJI **26** 17:10:09.7, 220S×10050E, h67km, mb4.8*
*ISCJB **26** 17:10:11.4±1.1, 220S±007×10052E±009, h81km±8km, mb4.4/30, Error ellipse: s-maj=18.4km s-min=6.6km az=144.9*
*NEIC **26** 17:10:11.8±2.8, 222S×10055E, h68km±25km, mb4.8/9, Error ellipse: s-maj=16.8km s-min=5.7km az=54.0*
*DJA **26** 17:10:12.0±0.0, 205S×10043E, h0km, mB5.0/1, Mjma3.8/5, MLv4.6/6, Mw(mB)4.9/1, Mwp3.9/2*

ISC 26 17:10:12.2±1.2, 224S±007×10054E±010, h70km±9km, n58, σ1s04/56, mb4.4/30, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PDSI	**Padang**	**1.32**	**357**	P	**Pn**	**17 10 32.1**		**-2.7**
PDSI	**Padang**	**1.32**	**357**	S	**Sn**	**17 10 49.9**		**-1.8**
PPI	**Padang Panjang**	**1.77**	**355**	P	**Pn**	**17 10 39.0**		**-1.8**
PPI	**Padang Panjang**	**1.77**	**355**	S	**Sn**	**17 11 02.6**		**+0.1**
KSI	**Kapahiang**	**2.49**	**124**	P	**Pn**	**17 10 51.9**		**+1.5**
RGRI	**Rengat**	**2.59**	**44**	P	**Pn**	**17 10 53.9**		**+2.0**
KLI	**Kotabumi**	**5.04**	**121**	P	**Pn**	**17 11 34.1**		**+8.8**
	124nm,0.5s,0.7nm							
MYKOM	**Kota Tinggi**	**5.19**	**40**	P	**Pn**	**17 11 28.5**		**+1.1**
IPM	**Ipoh**	**6.69**	**4**	P	**Pn**	**17 11 50.5**		**+2.7**
	24nm,0.7s							
CBJI	**Citeko**	**7.54**	**124**	P	**Pn**	**17 12 03.9**		**+4.4**
	163nm,1.0s							

KAPI	**Kappang**	**19.37**	**99**	P		**Pn**		**17 14 32.5**	**-1.8**
	2.0nm,0.3s,baz=287,slow=9.5,SNR=4.6								
CMAR	**Chiang Mai Arr**	**20.62**	**356**	P		**P**		**17 14 44.3**	**-1.7**
	3.3nm,0.6s,baz=187,slow=10,SNR=33								
BATI	**Baumata**	**24.30**	**110**	P		**P**		**17 15 21.1**	**-2.1**
	5.1nm,0.3s,mb4.4,baz=163,slow=4.1,SNR=5.9								
ODAN	**Odare**	**31.59**	**337**	*e*P		**P**		**17 16 28.9**	**+0.6**
	9.9nm,0.7s,mb4.7								
TAPN	**Taplejung**	**31.91**	**338**	*e*P		**P**		**17 16 32.0**	**+0.9**
	8.2nm,0.6s,mb4.7								
RAMN	**Ramite**	**31.98**	**336**	*e*P		**P**		**17 16 32.7**	**+1.0**
JIRN	**Jiri**	**32.78**	**336**	*e*P		**P**		**17 16 39.5**	**+0.8**
	20nm,0.6s,mb5.1								
LSA	**Lhasa**	**33.00**	**345**	P		**P**		**17 16 41.5**	**+0.9**
LSA	**Lhasa**	**33.00**	**345**	*e*P		**P**		**17 16 41.9**	**+1.3**
	7.6nm,0.6s,mb4.7								
GUN	**Gumba**	**33.12**	**336**	*e*P		**P**		**17 16 42.5**	**+0.8**
	24nm,0.4s,mb5.3								
KKN	**Kakani**	**33.27**	**335**	*e*P		**P**		**17 16 43.2**	**+0.2**
	7.3nm,0.5s,mb4.8								
GKN	**Gorkha**	**33.73**	**334**	*e*P		**P**		**17 16 47.1**	**+0.1**
	4.0nm,0.3s,mb4.7								
KOLN	**Koldanda**	**34.00**	**333**	*e*P		**P**		**17 16 49.6**	**+0.3**
DANN	**Dangsing**	**34.42**	**333**	*e*P		**P**		**17 16 53.1**	**+0.1**
PYUN	**Piuthan**	**34.56**	**332**	*e*P		**P**		**17 16 54.3**	**+0.1**
WRA	**Warramunga Arr**	**37.41**	**121**	P		**P**		**17 17 18.1**	**-0.6**
	7.3nm,0.4s,mb4.9,baz=299,slow=9.7,SNR=86								
WRAB	**Tennant Creek**	**37.42**	**120**	*e*P		**P**		**17 17 17.7**	**-1.0**
	14nm,0.6s,mb5.1								
WB2	**Warramunga Arr**	**37.42**	**121**	*e*P		**P**		**17 17 18.3**	**-0.5**
ASAR	**Alice Springs**	**38.68**	**126**	P		**P**		**17 17 29.4**	**+0.1**
	6.4nm,0.5s,mb4.7,baz=302,slow=7.5,SNR=129								
ASAR				PcP		PcP		17 19 41.2	+1.0
	1.3nm,0.6s,baz=309,slow=3.0,SNR=7.1								
KSRS	**Korea Array**	**46.95**	**30**	P		**P**		**17 18 36.3**	**+0.3**
	1.7nm,0.6s,mb4.0,baz=226,slow=7.9,SNR=8.1								
WMQ	**Urumqi**	**47.28**	**347**	*e*P		**P**		**17 18 40.0**	**+1.6**
WMQ				AMB		AMB			
	comp=Z,21nm,1.0s,mb4.8								
STKA	**Stephens Creek**	**48.59**	**132**	*e*P		**P**		**17 18 49.5**	**+0.6**
	comp=Z,3.7nm,0.5s,mb4.6								
STKA	**Stephens Creek**	**48.59**	**132**	P		**P**		**17 18 49.5**	**+0.6**
	comp=Z,5.1nm,0.5s,mb4.7,baz=309,slow=6.8,SNR=17								
STKA	**Stephens Creek**	**48.59**	**132**	*e*P		**P**		**17 18 49.3**	**+0.4**
SONM	**Songino Array**	**50.13**	**5**	P		**P**		**17 19 00.9**	**+0.7**
	comp=Z,1.7nm,0.6s,mb4.2,baz=188,slow=9.5,SNR=22								
SONM				PcP		PcP		17 20 18.7	0.0
	comp=Z,0.2nm,0.3s,baz=182,slow=4.3,SNR=5.1								
EKS2	**Erkin-Say**	**50.80**	**335**	*e*P		**P**		**17 19 06.2**	**+0.8**
	comp=Z,8.8nm,0.8s,mb4.8								
MK31	**Makanchi Array**	**51.40**	**344**	*e*P		**P**		**17 19 09.4**	**-0.4**
MKAR	**Makanchi Array**	**51.40**	**344**	P		**P**		**17 19 09.9**	**+0.1**
	comp=Z,1.0nm,0.3s,mb4.3,baz=158,slow=9.0,SNR=43								
KURK	**Kurchatov**	**55.98**	**343**	P		**P**		**17 19 41.9**	**-1.3**
	comp

comp=N,0.4nm,0.3s,baz=188,slow=15,SNR=6.9
MKAR Sn **Sn** **17 21 11.8 -6.9**
comp=N,1.1nm,0.3s,baz=203,slow=28,SNR=6.6
MKAR Makanchi Array 10.11 10 P **Pn** **17 19 25.4 +0.1**
MKAR 17 21 11.8
MKAR smax
comp=N,1.0nm,0.3s
SONM Songino Array 22.40 52 P **P** **17 21 59.6 +1.0**
comp=N,0.8nm,0.9s,mb3.1,baz=243,slow=12,SNR=4.5
SONM Songino Array 22.40 52 P **P** **17 21 59.6 +1.0**
SONM pmax pmax
comp=Z,1.0nm,0.9s
CMAR Chiang Mai Arr 24.87 132 P **P** **17 22 24.2 +1.1**
comp=Z,1.4nm,0.8s,mb3.6,baz=311,slow=10,SNR=16
CMAR LR LR 17 32 37.5
comp=Z,22nm,19.2s,baz=260,slow=38
CMAR Chiang Mai Arr 24.87 132 P **P** **17 22 24.2 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,22nm,19.3s
ENH Enshi 25.52 96 *e*P **P** **17 22 29.3 +0.4**
comp=Z,0.8nm,0.8s,mb3.3
ARCES ARCESS Array B 43.65 336 P **P** **17 25 02.4 -2.1**
comp=Z,3.4nm,0.9s,mb4.0,baz=109,slow=11,SNR=4.1
ARCES ARCESS Array B 43.65 336 P **P** **17 25 02.4 -2.1**
ARCES pmax pmax
comp=Z,3.0nm,1.0s
TORD Torodi Ar. Bea 72.79 274 P **P** **17 28 25.8 -3.3**
comp=Z,0.3nm,0.5s,mb3.5,baz=47,slow=4.8,SNR=4.6
ASAR Alice Springs 78.87 131 P **P** **17 29 02.5 -1.2**
comp=Z,0.2nm,0.8s,mb3.1,baz=323,slow=5.2,SNR=4.8
YKA Yellowknife Ar 80.32 7 P **P** **17 29 09.4 -1.7**
comp=Z,0.9nm,1.1s,mb3.6,baz=154,slow=34,SNR=2.8
YKA Yellowknife Ar 80.32 7 P **P** **17 29 09.4 -1.6**
YKA pmax pmax
comp=Z,1.0nm,1.1s

NEIC 26 17:19:23.4,3783S×17756E,h49km,ML4.1(WEL),**1C-2D, After WEL.,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.42**	**316**	P	Pn	17 19 33.2	-0.5
MWZ	**Matawai**	**0.51**	**183**	⇑P	Pn	17 19 34.2	-0.5
MWZ				S	Sn	17 19 42.5	-0.2
URZ	**Urewera**	**0.56**	**219**	⇓P	Pn	17 19 35.0	-0.3
PUZ	**Puketiti**	**0.60**	**114**	⇓P	Pn	17 19 36.1	+0.3
PUZ				S	Sn	17 19 45.8	+1.0
MXZ	**Matakaoa Point**	**0.65**	**66**	P	Pn	17 19 36.2	-0.2
EDRZ	**Edgecumbe**	**0.71**	**247**	P	Pn	17 19 37.2	0.0
MARZ	**Manawahe**	**0.72**	**257**	P	Pn	17 19 37.0	-0.3
MKRZ	**Makatiti**	**0.92**	**250**	P	Pn	17 19 40.1	+0.1
TAZ	**Tarawera**	**0.92**	**244**	P	Pn	17 19 40.2	+0.2
TGRZ	**Tauranga**	**1.03**	**275**	P	Pn	17 19 41.2	-0.3
KARZ	**Kaharoa**	**1.06**	**259**	P	Pn	17 19 41.8	-0.1
KNZ	**Kokohu**	**1.19**	**176**	P	Pn	17 19 43.1	-0.6
KUZ	**Kuaotunu**	**1.82**	**306**	P	Pn	17 19 51.6	-0.7
NGZ	**Ngauruhoe**	**2.04**	**228**	*e*P	Pn	17 19 55.6	+0.3
MOVZ	**Moawhango**	**2.12**	**221**	P	Pn	17 19 56.0	-0.3
HIZ	**Hauiti**	**2.24**	**251**	P	Pn	17 19 58.8	+0.8
WCZ	**Waipu Caves**	**3.19**	**305**	P	Pn	17 20 11.4	+0.3
BSWZ	**Blackbirch Sta**	**4.81**	**215**	P	Pn	17 20 31.4	-1.8
MQZ	**McQueen's Vall**	**6.95**	**211**	P	Pn	17 20 57.8	-4.8

CSEM ***26*** *17:20:16.0±0.5,3476N×2536E,h5km,MD3.6,Error ellipse: s-maj=12.2km s-min=5.6km az=135.0*
THE ***26*** *17:20:17.8,3461N×2560E,h30km±18km,Error ellipse: s-maj=19.6km s-min=1.5km az=154.0*
NEIC ***26*** *17:20:18.2,3489N×2533E,h11km,MD3.6(ATH),After ATH.*
ATH ***26*** *17:20:18.4,3491N×2533E,h13km±1km,MD3.6/5*
ISC 26 17:20:17.4±1.4,3478N±008×2548E±009,h10km,n14,σ0§99/20,1C,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.49**	**13**	⇑*i*PB	**Pg**	**17 20 26.4**	**-0.6**
NPS				*e*SB	**Sg**	**17 20 32.2**	**-1.4**
VAM	**Vamos**	**1.22**	**301**	*e*PB	**Pn**	**17 20 38.5**	**-2.0**
THR6	**Thira Island,**	**1.57**	**358**	P	**Pn**	**17 20 45.2**	**-0.2**
THR6				S	**Sn**	**17 21 06.7**	**+0.9**
KARP	**Karpathos**	**1.58**	**60**	*e*PB	**Pg**	**17 20 48.9**	**+1.2**
THR1	**Thera Island**	**1.59**	**359**	P	**Pn**	**17 20 44.9**	**-0.7**
THR1				S	**Sn**	**17 21 06.7**	**+0.6**
THR3	**Thira Island,**	**1.63**	**358**	P	**Pn**	**17 20 45.9**	**-0.2**
THR5	**Thira Island,**	**1.64**	**356**	P	**Pn**	**17 20 46.0**	**-0.3**
THR4	**Thira Island,**	**1.68**	**358**	P	**Pn**	**17 20 47.0**	**+0.2**
APE	**Apeiranthos**	**2.28**	**1**	P	**Pn**	**17 20 55.1**	**-0.1**
APE				S	**Sn**	**17 21 23.9**	**+0.6**
APE	**Apeiranthos**	**2.28**	**1**	*e*PN	**Pn**	**17 20 57.0**	**+1.8**
APE	**Apeiranthos**	**2.28**	**1**	*e*Pg	**Pg**	**17 20 59.0**	**-2.2**
APE				S	**Sn**	**17 21 23.9**	**+0.6**
VLI	**Veliai**	**2.83**	**314**	*e*PB	**Pn**	**17 21 03.0**	**+0.3**
DID	**Didima**	**3.27**	**327**	P	**Pn**	**17 21 09.1**	**+0.4**
DID				S	**Sn**	**17 21 49.1**	**+1.4**
LTK	**Loutraki**	**3.82**	**329**	P	**Pn**	**17 21 16.7**	**+0.5**

ISCJB ***26*** *17:27:14.7±0.1,49341N±0010×674E±001,h0km,Error ellipse: s-maj=1.4km s-min=1.3km az=136.7*
NEIC ***26*** *17:27:16.5,4940N×676E,h1km,ML3.9(LDG), ML3.6(SZGRF),ML3.4(STR),After STR.*
STR ***26*** *17:27:16.5±0.2,4940N×676E,h1km,Ml3.6,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
CSEM ***26*** *17:27:16.8±0.0,4936N×684E,h1km,ML3.9/44,Ms3.5, Error ellipse: s-maj=0.8km s-min=0.6km az=146.0*
LEDBW ***26*** *17:27:17.2±0.2,49380N±0009×683E±002,h1km,ML3.5, Error ellipse: s-maj=6.0km s-min=4.0km az=94.0*
PRU ***26*** *17:27:17.0,4942N×682E,h0km*
BNS ***26*** *17:27:17.3±1.6,4938N×693E,h1km,ML3.3*
BGR ***26*** *17:27:17.1±0.2,4938N×684E,h1km,ML3.7/15,Error ellipse: s-maj=3.3km s-min=2.2km az=107.0*
LDG ***26*** *17:27:17.0±0.1,4936N×685E,h2km,Md3.9/3,Ml3.9/41, Error ellipse: s-maj=1.6km s-min=1.2km az=160.0*
VIE ***26*** *17:27:20.5±0.6,4941N×727E,h0km,mb3.3/17,ML3.3/15, Ms3.5/4,Error ellipse: s-maj=6.8km s-min=4.3km az=37.0, Suspected Mining induced.*
ISC 26 17:27:15.7±0.1,49360N±0009×673E±001,h0km,n255,σ1§29/486,40C-16D,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.40**	**32**	⇑*i*P*	**Pg**	**17 27 24.2**	**+0.7**
RUP				S*	**Sg**	**17 27 29.1**	**+0.4**
RUP	**Ruppelstein**	**0.40**	**32**	⇑*i*Pg	**Pg**	**17 27 24.2**	**+0.7**
RUP				Sg	**Sg**	**17 27 29.1**	**+0.4**
RUP	**Ruppelstein**	**0.40**	**32**	Pg	**Pg**	**17 27 24.1**	**+0.6**
RUP				Sg	**Sg**	**17 27 28.8**	**+0.1**
WLF	**Walferdange**	**0.48**	**309**	*e*Pg	**Pg**	**17 27 27.6**	**+2.6**
	SNR=94						
WLF				*e*Sg	**Sg**	**17 27 33.9**	**+2.6**
	SNR=4.9						
WLF	**Walferdange**	**0.48**	**309**	P	**Pg**	**17 27 27.7**	**+2.6**
WLF	**Walferdange**	**0.48**	**309**	*e*P	**Pg**	**17 27 27.4**	**+2.4**
WLF	**Walferdange**	**0.48**	**309**	Pg	**Pg**	**17 27 27.6**	**+2.6**
	SNR=94						
WLF				Sg	**Sg**	**17 27 33.9**	**+2.6**
	SNR=4.9						
ABH	**Alteburg**	**0.74**	**45**	⇑*e*P*	**Pg**	**17 27 29.7**	**-0.3**
ABH	**Alteburg**	**0.74**	**45**	⇑*e*Pg	**Pg**	**17 27 29.7**	**-0.3**
ABH	**Alteburg**	**0.74**	**45**	Pg	**Pg**	**17 27 29.7**	**-0.3**
ABH				Sg	**Sg**	**17 27 40.2**	**+0.5**
LANF	**Langenberg**	**0.80**	**118**	Pg	**Pg**	**17 27 31.2**	**+0.1**
LANF				Sg	**Sg**	**17 27 43.1**	**+1.7**
LANF	**Langenberg**	**0.80**	**118**	⇓*i*Pg	**Pg**	**17 27 31.3**	**+0.3**
KTD	**Kalmit**	**0.89**	**92**	Pg	**Pg**	**17 27 33.5**	**+0.8**
KTD	**Kalmit**	**0.89**	**92**	Px	**Pg**	**17 27 33.5**	**+0.8**
KTD	**Kalmit**	**0.89**	**92**	Pg	**Pg**	**17 27 33.2**	**+0.5**
KTD				Sg	**Sg**	**17 27 44.9**	**+0.7**
BGG	**Burgeitz**	**0.93**	**25**	*e*Pg	**Pg**	**17 27 33.7**	**+0.1**
HILG	**Hillesheim**	**0.93**	**358**	*e*Pg	**Pg**	**17 27 35.1**	**+1.5**
CDF	**Champ du Feu**	**1.01**	**159**	*e*Pn	**Pn**	**17 27 36.5**	**-0.7**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**17 27 47.7**	**-0.6**
	819nm,0.5s,SNR=1.0						
CDF	**Champ du Feu**	**1.01**	**159**	*e*Pg	**Pg**	**17 27 35.7**	**+0.6**
CDF				*e*Pn	**Pn**	**17 27 36.5**	**-0.7**
CDF				*e*Sg	**Sg**	**17 27 47.7**	**-0.6**
CDF	**Champ du Feu**	**1.01**	**159**	*e*Pn	**Pn**	**17 27 36.5**	**-0.7**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**17 27 47.7**	**-0.6**
	409nm,0.5s,SNR=1.0						
STR	**Strasbourg**	**1.03**	**138**	Pg	**Pg**	**17 27 36.2**	**+0.7**
STR				Sg	**Sg**	**17 27 51.2**	**+2.3**
STR	**Strasbourg**	**1.03**	**138**	*e*Pg	**Pg**	**17 27 36.5**	**+1.0**
	SNR=9.1						
RFYF	**Reffroy**	**1.10**	**229**	*e*Pg	**Pg**	**17 27 39.5**	**+2.6**
	baz=44						
RFYF				*e*Sn	**Sn**	**17 27 53.9**	**-0.4**
	916nm,0.3s						
RFYF	**Reffroy**	**1.10**	**229**	*e*Pg	**Pg**	**17 27 39.5**	**+2.6**
RFYF				*e*Sn	**Sn**	**17 27 53.9**	**-0.4**
	458nm,0.3s						
ECH	**Echery**	**1.18**	**166**	Pg	**Pg**	**17 27 38.9**	**+0.6**
ECH				Sg	**Sg**	**17 27 55.4**	**+1.8**
ECH	**Echery**	**1.18**	**166**	*e*P	**Pg**	**17 27 38.8**	**+0.5**
ECH	**Echery**	**1.18**	**166**	⇓*e*Pn	**Pn**	**17 27 39.1**	**-0.4**
ECH	**Echery**	**1.18**	**166**	Pn	**Pn**	**17 27 39.1**	**-0.3**
ECH				Sg	**Sg**	**17 27 55.4**	**+1.8**
THEF	**They Montfort**	**1.24**	**204**	Pg	**Pn**	**17 27 40.5**	**+0.3**
THEF				Sg	**Sg**	**17 27 58.9**	**+3.5**
THEF	**They Montfort**	**1.24**	**204**	⇓*e*Pn	**Pn**	**17 27 40.6**	**+0.4**
STB	**Steinbach**	**1.24**	**3**	*e*Pg	**Pg**	**17 27 39.8**	**+0.3**
STB				*e*Sg	**Sg**	**17 27 55.8**	**+0.3**
	380nm,0.4s						
KOE	**Koeppel**	**1.25**	**31**	*e*Pg	**Pn**	**17 27 39.0**	**-1.4**
SWS	**Schriesheim-Wi**	**1.29**	**84**	Pg	**Pn**	**17 27 39.4**	**-1.6**
SWS				Sg	**Sg**	**17 27 56.6**	**-0.6**
KLL	**Kalltalsperre**	**1.32**	**348**	*e*Pg	**Pn**	**17 27 40.7**	**-0.6**
MEM	**Membach**	**1.33**	**340**	P	**Pg**	**17 27 41.5**	**+0.2**
LIBD	**Limburg**	**1.34**	**154**	⇓*e*P*	**Pb**	**17 27 42.9**	**+1.2**
LIBD	**Limburg**	**1.34**	**154**	⇓*e*P	**Pb**	**17 27 42.9**	**+1.2**
LIBD	**Limburg**	**1.34**	**154**	Pg	**Pg**	**17 27 42.7**	**+1.3**
LIBD				Sg	**Sg**	**17 28 00.6**	**+1.8**
DREG	**Dreilaegerbach**	**1.34**	**346**	*e*Pg	**Pn**	**17 27 41.4**	**-0.3**
DREG				*e*Sg	**Sg**	**17 28 00.2**	**+1.3**
	280nm,0.5s						
TOD	**Tromm**	**1.38**	**79**	⇓*e*Pn	**Pn**	**17 27 40.5**	**-1.6**
TOD	**Tromm**	**1.38**	**79**	Pg	**Pn**	**17 27 40.6**	**-1.5**
TOD				Sg	**Sg**	**17 27 59.7**	**-0.2**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**17 27 43.2**	**+1.1**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**17 28 00.8**	**+0.8**
	305nm,0.2s						
HAU	**Haudompre**	**1.38**	**191**	*e*Pn	**Pn**	**17 27 42.2**	**0.0**
HAU				*e*Pg	**Pg**	**17 27 43.2**	**+1.1**
HAU				*e*Sg	**Sg**	**17 28 00.8**	**+0.8**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg	**Pg**	**17 27 43.2**	**+1.1**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**17 28 00.8**	**+0.8**
	152nm,0.2s						
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pn	**Pn**	**17 27 42.6**	**+0.1**
	baz=49,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pg	**Pg**	**17 27 44.0**	**+1.4**
	SNR=1.0						
MEZF				*e*Sn	**Sn**	**17 28 00.9**	**-0.7**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**17 28 02.8**	**+2.1**
	280nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pn	**Pn**	**17 27 42.6**	**+0.1**
MEZF				*e*Pg	**Pg**	**17 27 44.0**	**+1.4**
MEZF				*e*Sn	**Sn**	**17 28 00.9**	**-0.7**
MEZF				*e*Sg	**Sg**	**17 28 02.8**	**+2.1**
MEZF	**Maizieres J'vi**	**1.40**	**233**	*e*Pg	**Pg**	**17 27 44.0**	**+1.4**
	SNR=1.0						
MEZF				*e*Sn	**Sn**	**17 28 00.9**	**-0.7**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**17 28 02.8**	**+2.1**
	140nm,0.3s,SNR=1.0						
BCLA	**Clavier**	**1.41**	**320**	P	**Pn**	**17 27 43.1**	**+0.6**
TNS	**Taunus Mts**	**1.41**	**52**	⇑*e*P	**Pn**	**17 27 41.1**	**-1.5**
TNS				*e*Sg	**Sg**	**17 28 00.4**	**-0.6**
	SNR=5.7						
TNS	**Taunus Mts**	**1.41**	**52**	⇑*e*Pn	**Pn**	**17 27 41.1**	**-1.5**
GIVF	**Givet**	**1.44**	**302**	*e*Pn	**Pn**	**17 27 44.1**	**+1.0**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**17 28 01.9**	**-0.8**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**17 28 04.8**	**+2.7**
	732nm,0.4s,SNR=1.0						
GIVF	**Givet**	**1.44**	**302**	*e*Pn	**Pn**	**17 27 44.1**	**+1.0**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**17 28 01.9**	**-0.8**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**17 28 04.8**	**+2.7**
	366nm,0.4s,SNR=1.0						
BFO	**Black Forest**	**1.48**	**134**	⇓*e*Pn	**Pn**	**17 27 42.7**	**-0.8**
BFO				Sg	**Sg**	**17 28 02.8**	**-0.3**
BFO	**Black Forest**	**1.48**	**134**	*e*P	**Pn**	**17 27 42.6**	**-0.9**
HGN	**Heimansgroeve**	**1.50**	**340**	*e*Pn	**Pn**	**17 27 44.0**	**+0.2**
	45nm,0.3s						
HGN	**Heimansgroeve**	**1.50**	**340**	*e*Pg	**Pg**	**17 27 45.7**	**+1.3**
	130nm,0.3s						
HGN				*e*Sg	**Sg**	**17 28 03.8**	**0.0**
HGN	**Heimansgroeve**	**1.50**	**340**	*e*Pg	**Pg**	**17 27 45.7**	**+1.2**
	130nm,0.3s						
HGN				*e*Sg	**Sg**	**17 28 03.8**	**0.0**
LBG	**Lerchenberg**	**1.53**	**116**	⇓*e*Pn	**Pn**	**17 27 43.2**	**-1.0**
LBG				⇑*i*Pg	**Pg**	**17 27 45.1**	**+0.2**
LBG	**Lerchenberg**	**1.53**	**116**	⇑P	**Pg**	**17 27 45.1**	**+0.2**
MOF	**Molkenrain**	**1.53**	**170**	Pg	**Pg**	**17 27 46.0**	**+0.9**
MOF				Sg	**Sg**	**17 28 07.1**	**+2.2**
MOF	**Molkenrain**	**1.53**	**170**	Pn	**Pn**	**17 27 43.7**	**-0.6**
MOF				⇑*i*Pg	**Pg**	**17 27 46.3**	**+1.2**
MOF	**Molkenrain**	**1.53**	**170**	⇑*i*P	**Pg**	**17 27 46.3**	**+1.2**
MOF	**Molkenrain**	**1.53**	**170**	Pg	**Pg**	**17 27 46.3**	**+1.2**
MOF				Sg	**Sg**	**17 28 07.1**	**+2.2**
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pg	**Pg**	**17 27 45.7**	**+0.4**
HINF				*e*Sn	**Sn**	**17 28 02.8**	**-2.4**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**17 28 05.8**	**+0.4**
	522nm,0.3s						
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pn	**Pn**	**17 27 44.0**	**-0.5**
HINF				*e*Pg	**Pg**	**17 27 45.7**	**+0.4**
HINF				*e*Sn	**Sn**	**17 28 02.8**	**-2.4**
HINF				*e*Sg	**Sg**	**17 28 05.8**	**+0.4**
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pg	**Pg**	**17 27 45.7**	**+0.4**
HINF				*e*Sn	**Sn**	**17 28 02.8**	**-2.4**
	SNR=1.0						
DOU	**Dourbes**	**1.57**	**299**	P	**Pn**	**17 27 45.8**	**+1.0**
BEBN	**Eben Emael**	**1.59**	**335**	P	**Pn**	**17 27 45.5**	**+0.4**
SFTF	**Sexfontaines**	**1.61**	**225**	*e*Pn	**Pn**	**17 27 45.9**	**+0.6**
	baz=42						
SFTF	**Sexfontaines**	**1.61**	**225**	*e*Pg	**Pg**	**17 27 47.6**	**+1.1**
	baz=50						
SFTF				*e*Sn	**Sn**	**17 28 05.7**	**-1.1**
	baz=41						
SFTF				*e*Sg	**Sg**	**17 28 09.3**	**+1.9**
	248nm,0.3s						
SFTF	**Sexfontaines**	**1.61**	**225**	*e*Pn	**Pn**	**17 27 45.9**	**+0.6**
SFTF				*e*Pg	**Pg**	**17 27 47.6**	**+1.1**
SFTF				*e*Sn	**Sn**	**17 28 05.7**	**-1.1**
SFTF				*e*Sg	**Sg**	**17 28 09.3**	**+1.9**
SFTF	**Sexfontaines**	**1.61**	**225**	*e*Pg	**Pg**	**17 27 47.6**	**+1.1**
SFTF				*e*Sn	**Sn**	**17 28 05.7**	**-1.1**
SFTF				*e*Sg	**Sg**	**17 28 09.3**	**+1.9**
	124nm,0.3s						
KIZ	**Kirchzarten**	**1.61**	**150**	⇓*e*Pn	**Pn**	**17 27 44.8**	**-0.6**
KIZ				⇑*i*Pg	**Pg**	**17 27 47.1**	**+0.6**
KIZ	**Kirchzarten**	**1.61**	**150**	⇑*e*Pn	**Pn**	**17 27 44.8**	**-0.6**
KIZ	**Kirchzarten**	**1.61**	**150**	⇑*i*P	**Pg**	**17 27 47.1**	**+0.6**
BNS	**Bensberg**	**1.63**	**10**	*e*Pg	**Pg**	**17 27 47.0**	**0.0**
HOBG	**Hohbusch**	**1.67**	**13**	*e*Sg	**Sg**	**17 28 06.9**	**-2.5**
	577nm,0.5s						
FELD	**Feldberg im Sc**	**1.71**	**150**	Pn	**Pn**	**17 27 45.9**	**-0.8**
FELD				*e*Pg	**Pg**	**17 27 48.8**	**+0.4**
	SNR=14						
FELD	**Feldberg im Sc**	**1.71**	**150**	Pg	**Pg**	**17 27 48.6**	**+0.2**
FELD				Sg	**Sg**	**17 28 12.3**	**+1.7**
FELD	**Feldberg im Sc**	**1.71**	**150**	Pg	**Pg**	**17 27 48.8**	**+0.4**
	SNR=14						
FELD				Sg	**Sg**	**17 28 12.3**	**+1.7**
STU	**Stuttgart**	**1.72**	**109**	*e*Pn	**Pn**	**17 27 46.3**	**-0.7**
	SNR=2.9						
STU	**Stuttgart**	**1.72**	**109**	*e*P	**Pn**	**17 27 45.9**	**-1.1**
TUBL	**Tuebingen-Lenn**	**1.76**	**117**	Pg	**Pg**	**17 27 50.6**	**+1.2**
BAIF	**Baives**	**1.78**	**294**	*e*Pg	**Pg**	**17 27 51.5**	**+1.7**
BAIF				*e*Sg	**Sg**	**17 28 14.8**	**+1.9**
	203nm,0.3s						
BAIF	**Baives**	**1.78**	**294**	*e*Pn	**Pn**	**17 27 48.1**	**+0.4**
BAIF				*e*Pg	**Pg**	**17 27 51.5**	**+1.7**
BAIF				*e*Sg	**Sg**	**17 28 14.8**	**+1.9**
	102nm,0.3s						
SPAK	**Spaichingen-Ko**	**1.85**	**132**	Pn	**Pn**	**17 27 48.5**	**-0.2**
SPAK				Pg	**Pg**	**17 27 51.5**	**+0.3**
SPAK	**Spaichingen-Ko**	**1.85**	**132**	Pg	**Pg**	**17 27 51.3**	**+0.1**
SPAK				Sg	**Sg**	**17 28 18.8**	**+3.6**
SPAK	**Spaichingen-Ko**	**1.85**	**132**	P	**Pg**	**17 27 51.5**	**+0.3**
BUCH	**Bad Urach**	**1.96**	**117**	⇑*e*P	**Pn**	**17 27 49.7**	**-0.4**
BUCH	**Bad Urach**	**1.96**	**117**	⇑*e*Pn	**Pn**	**17 27 49.7**	**-0.4**
SNF	**Seneffe**	**1.96**	**307**	P	**Pn**	**17 27 51.8**	**+1.6**
SNF	**Seneffe**	**1.96**	**307**	P	**Pn**	**17 27 51.7**	**+1.6**
BBS	**Basel-Blauen**	**1.97**	**164**	P	**Pn**	**17 27 50.3**	**+0.1**
BBS	**Basel-Blauen**	**1.97**	**164**	Pg	**Pg**	**17 27 55.1**	**+1.7**
LOMF	**Lomont**	**2.01**	**178**	Pg	**Pg**	**17 27 54.9**	**+0.6**
LOMF				Sg	**Sg**	**17 28 24.6**	**+4.3**
LOMF	**Lomont**	**2.01**	**178**	P	**Pn**	**17 27 51.0**	**+0.1**
LOMF				*e*Pg	**Pg**	**17 27 55.2**	**+0.9**
	SNR=6.4						
LOMF	**Lomont**	**2.01**	**178**	Pg	**Pg**	**17 27 55.2**	**+0.9**
	SNR=6.4						
GUT	**Gutenstein**	**2.04**	**128**	⇑*e*Pn	**Pn**	**17 27 51.0**	**-0.2**
GUT				⇑*i*Pg	**Pg**	**17 27 54.8**	**0.0**
GUT	**Gutenstein**	**2.04**	**128**	⇑*e*Pn	**Pn**	**17 27 51.0**	**-0.2**
GUT	**Gutenstein**	**2.04**	**128**	⇑*i*P	**Pg**	**17 27 54.8**	**0.0**
UCC	**Uccle**	**2.10**	**314**	P	**Pn**	**17 27 53.6**	**+1.5**
UCC	**Uccle**	**2.10**	**314**	P	**Pn**	**17 27 53.5**	**+1.4**
BUG	**Bochum--Univer**	**2.11**	**9**	*e*Pn	**Pn**	**17 27 53.6**	**+1.3**
BUG				*e*Pg	**Pg**	**17 27 56.0**	**-0.2**
	SNR=2.5						
SISB	**Singen-Schiene**	**2.24**	**138**	Pn	**Pn**	**17 27 55.1**	**+1.1**
HDH	**Heidenheim-Cha**	**2.42**	**107**	Pg	**Pg**	**17 28 01.2**	**-0.8**
HROE	**Hohe Rhon--Fla**	**2.51**	**61**	⇓*i*Pn	**Pn**	**17 27 56.7**	**-1.0**
UBBA	**Unterbreizbach**	**2.56**	**54**	*e*Sg	**Sg**	**17 28 36.3**	**-1.8**
	SNR=3.4						
WTSB	**Winterswijk**	**2.61**	**1**	*e*Pn	**Pn**	**17 27 59.8**	**+0.7**
	26nm,0.3s						
WTSB	**Winterswijk**	**2.61**	**1**	*e*Sn	**Sn**	**17 28 35.5**	**+4.0**
NORI	**Noordlinger Ri**	**2.64**	**103**	⇓*i*Pn	**Pn**	**17 27 58.9**	**-0.6**
CABF	**La Chapelle**	**2.78**	**189**	*e*Pg	**Pg**	**17 28 08.6**	**-0.5**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**17 28 33.0**	**-2.8**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**17 28 45.4**	**+0.3**
	264nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**2.78**	**189**	*e*Pn	**Pn**	**17 28 01.3**	**-0.2**
CABF				*e*Pg	**Pg**	**17 28 08.6**	**-0.5**
CABF				*e*Sn	**Sn**	**17 28 33.0**	**-2.8**
CABF				*e*Sg	**Sg**	**17 28 45.4**	**+0.3**
CABF	**La Chapelle**	**2.78**	**189**	*e*Pg	**Pg**	**17 28 08.6**	**-0.5**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**17 28 33.0**	**-2.8**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**17 28 45.4**	**+0.3**
	132nm,0.6s,SNR=1.0						
UBR	**Ueberruh**	**2.80**	**126**	P	**Pn**	**17 28 02.6**	**+0.8**
LOR	**Lormes**	**2.84**	**224**	*e*Pn	**Pn**	**17 28 01.8**	**-0.4**
	baz=49,SNR=1.0						
LOR				*e*Sn	**Sn**	**17 28 35.8**	**-1.3**
LOR				*e*Sg	**Sg**	**17 28 47.3**	**+0.5**
	198nm,0.5s,SNR=1.0						
LOR	**Lormes**	**2.84**	**224**	*e*Pn	**Pn**	**17 28 01.8**	**-0.4**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**17 28 47.3**	**+0.5**
	99nm,0.5s,SNR=1.0						
GRA1	**Grafenberg Arr**	**2.94**	**82**	Sg	**Sg**	**17 28 48.3**	**-2.0**
GRF	**Grafenberg Arr**	**2.94**	**82**	*e*Sg	**Sg**	**17 28 48.3**	**-2.0**
DAVA	**Damuels**	**2.95**	**133**	⇑*e*Pn	**Pn**	**17 28 05.1**	**+1.3**
	15nm,0.3s,SNR=9.8						
DAVA				⇓*i*Pg	**Pg**	**17 28 14.5**	**+2.2**
	29nm,0.3s						
DAVA				⇑*i*Sg	**Sg**	**17 28 52.0**	**+1.5**
	119nm,0.6s						
GTTG	**Gvttingen**	**3.01**	**42**	*e*Pn	**Pn**	**17 28 03.7**	**-0.9**
	SNR=2.5						
GTTG				*e*Pg	**Pg**	**17 28 12.4**	**-1.0**
	SNR=3.5						
IBBN	**Ibbenburen**	**3.02**	**12**	*e*Pg	**Pg**	**17 28 13.5**	**-0.1**
	SNR=2.6						
IBBN				*e*Sg	**Sg**	**17 28

GUNZ				*e*Pg	**Pg**	**17 28 27.2**	**-0.5**
	SNR=3.4								
GUNZ				*e*Sn	**Sn**	**17 28 57.2**	**-2.6**
WERD	**Werda**	**3.77**	**71**	*e*Pn	**Pn**	**17 28 14.3**	**-0.7**
	SNR=4.4								
WERD				*e*Pg	**Pg**	**17 28 26.1**	**-1.7**
	SNR=4.0								
WERN	**Wernitzgruen**	**3.77**	**74**	*e*Pn	**Pn**	**17 28 14.8**	**-0.3**
BRMO	**Bormio**	**3.79**	**138**	Pn	**Pn**	**17 28 17.6**	**+2.4**
WATA	**Walderalm**	**3.81**	**120**	⇑*i*Pn	**Pn**	**17 28 17.0**	**+1.4**
	12nm,0.4s,SNR=12								
WATA				⇑*i*Sn	**Sn**	**17 28 59.2**	**-1.9**
	6.5nm,0.3s								
WATA				⇓*i*Sg	**Sg**	**17 29 17.1**	**-1.1**
	32nm,0.7s								
ORO	**Oropa**	**3.83**	**167**	Pn	**Pn**	**17 28 17.8**	**+1.9**
BGF	**Bois d'Agland**	**3.83**	**224**	*e*Pn	**Pn**	**17 28 15.8**	**-0.1**
	SNR=1.0								
BGF				*e*Sg	**Sg**	**17 29 19.5**	**+0.8**
	401nm,0.6s								
BGF	**Bois d'Agland**	**3.83**	**224**	*e*Pn	**Pn**	**17 28 15.8**	**-0.1**
	SNR=1.0								
BGF				*e*Sg	**Sg**	**17 29 19.5**	**+0.8**
	201nm,0.6s								
LPL	**La Plagne**	**3.84**	**180**	*e*Pg	**Pg**	**17 28 28.1**	**-1.3**
LPL				*e*Sn	**Sn**	**17 28 58.3**	**-3.6**
	SNR=1.0								
LPL				*e*Sg	**Sg**	**17 29 17.3**	**-1.9**
	30nm,0.5s								
LPL	**La Plagne**	**3.84**	**180**	*e*Pn	**Pn**	**17 28 15.8**	**-0.3**
LPL				*e*Pg	**Pg**	**17 28 28.1**	**-1.3**
LPL				*e*Sn	**Sn**	**17 28 58.3**	**-3.6**
LPL				*e*Sg	**Sg**	**17 29 17.3**	**-1.9**
LPL	**La Plagne**	**3.84**	**180**	*e*Pg	**Pg**	**17 28 28.1**	**-1.3**
LPL				*e*Sn	**Sn**	**17 28 58.3**	**-3.6**
	SNR=1.0								
LPL				*e*Sg	**Sg**	**17 29 17.3**	**-1.9**
	15nm,0.5s								
TANN	**Tannenbergstha**	**3.85**	**72**	*e*Pn	**Pn**	**17 28 16.7**	**+0.5**
	SNR=3.0								
TANN				*e*Pg	**Pg**	**17 28 28.2**	**-1.3**
	SNR=3.6								
TANN				*e*Sg	**Sg**	**17 29 15.8**	**-3.7**
	SNR=6.1								
LPG	**La Plagne**	**3.86**	**180**	*e*Pg	**Pg**	**17 28 29.1**	**-0.7**
	SNR=1.0								
LPG				*e*Sn	**Sn**	**17 28 59.6**	**-2.8**
	SNR=1.0								
LPG				*e*Sg	**Sg**	**17 29 18.3**	**-1.5**
	87nm,0.8s								
LPG	**La Plagne**	**3.86**	**180**	*e*Pn	**Pn**	**17 28 17.3**	**+1.0**
LPG				*e*Pg	**Pg**	**17 28 29.1**	**-0.7**
LPG				*e*Sn	**Sn**	**17 28 59.6**	**-2.8**
LPG				*e*Sg	**Sg**	**17 29 18.3**	**-1.5**
LPG	**La Plagne**	**3.86**	**180**	*e*Pg	**Pg**	**17 28 29.1**	**-0.7**
	SNR=1.0								
LPG				*e*Sn	**Sn**	**17 28 59.6**	**-2.8**
	SNR=1.0								
LPG				*e*Sg	**Sg**	**17 29 18.3**	**-1.5**
	44nm,0.8s								
WTTA	**Wattenberg**	**3.89**	**121**	⇑*i*Pn	**Pn**	**17 28 18.3**	**+1.6**
	4.6nm,0.3s,SNR=10								
TRAV	**Traversella**	**3.91**	**169**	Pn	**Pn**	**17 28 19.0**	**+2.0**
LSD	**Lago del Serru**	**3.91**	**176**	Pn	**Pn**	**17 28 18.4**	**+1.4**
WET	**Wettzell**	**4.03**	**91**	*e*Pn	**Pn**	**17 28 18.7**	**+0.1**
	SNR=21								
AGO	**Saint Agoulin**	**4.11**	**218**	Pn	**Pn**	**17 28 19.1**	**-0.6**
APPI	**Appiano**	**4.18**	**132**	Pn	**Pn**	**17 28 22.9**	**+2.2**
MABI	**Malga Bissina**	**4.18**	**141**	Pn	**Pn**	**17 28 23.1**	**+2.4**
BNI	**Bardonecchia**	**4.31**	**180**	*e*P	**Pn**	**17 28 23.5**	**+1.0**
BNI	**Bardonecchia**	**4.31**	**180**	*e*P	**Pn**	**17 28 23.5**	**+1.0**
TCF	**Toulx Ste Croi**	**4.33**	**226**	*e*Pg	**Pg**	**17 28 38.0**	**-0.6**
	SNR=1.0								
TCF				*e*Sg	**Sg**	**17 29 34.6**	**0.0**
	78nm,0.5s,SNR=1.0								
TCF	**Toulx Ste Croi**	**4.33**	**226**	*e*Pn	**Pn**	**17 28 22.8**	**+0.1**
TCF				*e*Pg	**Pg**	**17 28 38.0**	**-0.6**
TCF				*e*Sg	**Sg**	**17 29 34.6**	**0.0**
TCF	**Toulx Ste Croi**	**4.33**	**226**	*e*Pg	**Pg**	**17 28 38.0**	**-0.6**
	SNR=1.0								
TCF				*e*Sg	**Sg**	**17 29 34.6**	**0.0**
	39nm,0.5s,SNR=1.0								
RJOB	**Jochberg**	**4.34**	**110**	*e*Pn	**Pn**	**17 28 24.2**	**+1.3**
PYM	**Petit Puy Mans**	**4.40**	**216**	Pn	**Pn**	**17 28 21.4**	**-2.3**
CLL	**Collm**	**4.47**	**62**	e(Pn)	**Pn**	**17 28 25.0**	**+0.4**
CLL				*e*Pg	**Pg**	**17 28 43.0**	**+1.7**
CLL				*i* Sg	**Sg**	**17 29 37.2**	**-1.9**
	comp=Z,56nm,0.7s								
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pg	**Pg**	**17 28 40.4**	**-1.2**
	SNR=1.0								
ORIF				*e*Sg	**Sg**	**17 29 38.6**	**-1.0**
	comp=Z,64nm,0.5s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pn	**Pn**	**17 28 23.9**	**-0.9**
ORIF				*e*Pg	**Pg**	**17 28 40.4**	**-1.2**
ORIF				*e*Sg	**Sg**	**17 29 38.6**	**-1.0**
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Pg	**Pg**	**17 28 40.4**	**-1.2**
	SNR=1.0								
ORIF				*e*Sg	**Sg**	**17 29 38.6**	**-1.0**
	comp=Z,32nm,0.5s,SNR=1.0								
KHC	**Kasperske Hory**	**4.49**	**90**	*e*PN	**Pn**	**17 28 25.0**	**0.0**
KHC				*ex*	x	17 28 45.1	
KHC				*e*SN	**Sn**	**17 29 14.3**	**-3.6**
KHC				*e*SG	**Sg**	**17 29 36.9**	**-3.1**
	comp=Z,34nm,0.7s								
LDF	**La Druitiere**	**4.58**	**263**	*e*Pg	**Pg**	**17 28 42.9**	**-0.5**
	SNR=1.0								
LDF				*e*Sg	**Sg**	**17 29 42.3**	**-0.4**
	comp=Z,86nm,0.5s,SNR=1.0								
LDF	**La Druitiere**	**4.58**	**263**	*e*Pn	**Pn**	**17 28 26.4**	**+0.3**
LDF				*e*Pg	**Pg**	**17 28 42.9**	**-0.5**
LDF				*e*Sg	**Sg**	**17 29 42.3**	**-0.4**
LDF	**La Druitiere**	**4.58**	**263**	*e*Pg	**Pg**	**17 28 42.9**	**-0.5**
	SNR=1.0								
LDF				*e*Sg	**Sg**	**17 29 42.3**	**-0.4**
	comp=Z,43nm,0.5s,SNR=1.0								
GEC2	**GERESS Array S**	**4.61**	**94**	*e*Pn	**Pn**	**17 28 26.8**	**+0.2**
	SNR=63								
GEC2				*e*Sn	**Sn**	**17 29 18.4**	**-2.4**
GEC2	**GERESS Array S**	**4.61**	**94**	*e*P	**Pn**	**17 28 26.6**	**0.0**
GEC2	**GERESS Array S**	**4.61**	**94**	*e*P	**Pn**	**17 28 26.6**	**0.0**
GEC2	**GERESS Array S**	**4.61**	**94**	Pn	**Pn**	**17 28 26.8**	**+0.2**
	SNR=63								
GEC2				Sn	**Sn**	**17 29 18.4**	**-2.3**
MBDF	**Montbardon**	**4.63**	**180**	*e*Pg	**Pg**	**17 28 42.5**	**-2.0**
MBDF				*e*Sg	**Sg**	**17 29 41.1**	**-3.5**
	comp=Z,26nm,0.6s,SNR=1.0								
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	**Pn**	**17 28 27.9**	**+1.0**
MBDF				*e*Pg	**Pg**	**17 28 42.5**	**-2.0**
MBDF				*e*Sg	**Sg**	**17 29 41.1**	**-3.5**
MBDF	**Montbardon**	**4.63**	**180**	*e*Pg	**Pg**	**17 28 42.5**	**-2.0**
MBDF				*e*Sg	**Sg**	**17 29 41.1**	**-3.5**
	comp=Z,13nm,0.6s,SNR=1.0								
ABTA	**Abfaltersbach**	**4.68**	**122**	⇑*i*Pn	**Pn**	**17 28 29.6**	**+2.1**
	comp=Z,10nm,0.4s,SNR=16								
ABTA				⇑*i*Sn	**Sn**	**17 29 22.5**	**+0.1**
	comp=Z,8.2nm,0.4s								
ABTA				⇑*i*Sg	**Sg**	**17 29 44.8**	**-1.0**
	comp=Z,24nm,0.7s								
CTI	**Castel Tesino**	**4.69**	**133**	Pn	**Pn**	**17 28 29.8**	**+2.1**
VIVF	**Saint-Julien-I**	**4.72**	**198**	*e*Pg	**Pg**	**17 28 43.9**	**-2.2**
	SNR=1.0								
VIVF				*e*Sg	**Sg**	**17 29 44.1**	**-3.2**
	comp=Z,41nm,0.5s,SNR=1.0								
VIVF	**Saint-Julien-I**	**4.72**	**198**	*e*Pg	**Pg**	**17 28 43.9**	**-2.2**
	SNR=1.0								
VIVF				*e*Sg	**Sg**	**17 29 44.1**	**-3.2**
	comp=Z,20nm,0.5s,SNR=1.0								
LBL	**Lubilhac**	**4.76**	**211**	Pn	**Pn**	**17 28 27.6**	**-1.1**
FLN	**La Foliniere**	**4.78**	**266**	*e*Pn	**Pn**	**17 28 29.4**	**+0.5**
	baz=85,SNR=1.0								
FLN	**La Foliniere**	**4.78**	**266**	*e*Pg	**Pg**	**17 28 47.0**	**-0.3**
	SNR=1.0								
FLN				*e*Sn	**Sn**	**17 29 21.6**	**-3.4**
	SNR=1.0								
FLN				*e*Sg	**Sg**	**17 29 49.1**	**-0.1**
	comp=Z,79nm,0.5s,SNR=1.0								
FLN	**La Foliniere**	**4.78**	**266**	*e*Pn	**Pn**	**17 28 29.4**	**+0.5**
FLN				*e*Pg	**Pg**	**17 28 47.0**	**-0.3**
FLN				*e*Sn	**Sn**	**17 29 21.6**	**-3.4**
FLN				*e*Sg	**Sg**	**17 29 49.1**	**-0.1**
FLN	**La Foliniere**	**4.78**	**266**	*e*Pg	**Pg**	**17 28 47.0**	**-0.3**
	SNR=1.0								
FLN				*e*Sn	**Sn**	**17 29 21.6**	**-3.4**
	SNR=1.0								
FLN				*e*Sg	**Sg**	**17 29 49.1**	**-0.1**

	comp=Z,39nm,0.5s,SNR=1.0								
BRG	**Berggiesshubel**	**4.88**	**69**	PN	**Pn**	**17 28 30.5**	**+0.2**
BRG				PG	**Pg**	**17 28 46.2**	**-3.0**
BRG				SG	**Sg**	**17 29 47.1**	**-5.4**
	comp=Z,26nm,0.8s								
KBA	**Koelnbreinsper**	**4.98**	**115**	⇑*i*Pn	**Pn**	**17 28 32.8**	**+1.2**
	comp=Z,18nm,0.5s								
KBA				⇑*i*Sn	**Sn**	**17 29 28.7**	**-1.1**
	comp=Z,23nm,0.3s								
GRR	**Gorron**	**5.10**	**262**	*e*Pg	**Pg**	**17 28 52.0**	**-1.4**
	SNR=1.0								
GRR				*e*Sn	**Sn**	**17 29 28.6**	**-4.3**
	SNR=1.0								
GRR				*e*Sg	**Sg**	**17 29 57.7**	**-1.8**
	comp=Z,39nm,0.4s,SNR=1.0								
GRR	**Gorron**	**5.10**	**262**	*e*Pn	**Pn**	**17 28 34.1**	**+0.8**
GRR				*e*Pg	**Pg**	**17 28 52.0**	**-1.4**
GRR				*e*Sn	**Sn**	**17 29 28.6**	**-4.3**
GRR				*e*Sg	**Sg**	**17 29 57.7**	**-1.8**
GRR	**Gorron**	**5.10**	**262**	*e*Pg	**Pg**	**17 28 52.0**	**-1.4**
	SNR=1.0								
GRR				*e*Sn	**Sn**	**17 29 28.6**	**-4.3**
	SNR=1.0								
GRR				*e*Sg	**Sg**	**17 29 57.7**	**-1.8**
	comp=Z,20nm,0.4s,SNR=1.0								
PRU	**Pruhonice**	**5.11**	**80**	*e*Pn	**Pn**	**17 28 35.6**	**+2.1**
	comp=Z,46nm,0.9s								
PRU				*e*Sg	**Sg**	**17 29 57.0**	**-2.8**
PRU	**Pruhonice**	**5.11**	**80**	*e*PN	**Pn**	**17 28 35.6**	**+2.1**
PRU				*e*SG	**Sg**	**17 29 57.0**	**-2.8**
	comp=Z,46nm,0.9s								
PVCC	**Panska Ves**	**5.20**	**74**	*e*SG	**Sg**	**17 29 58.1**	**-4.4**
	comp=Z,57nm,0.6s								
MOA	**Molln**	**5.22**	**104**	⇑*i*Pn	**Pn**	**17 28 36.0**	**+1.0**
	comp=Z,18nm,0.5s,SNR=24								
MOA				⇑*i*Sn	**Sn**	**17 29 34.3**	**-1.5**
	comp=Z,9.0nm,0.4s								
MOA				⇑*i*Sg	**Sg**	**17 30 03.6**	**+0.2**
	comp=Z,9.6nm,0.4s								
MOA	**Molln**	**5.22**	**104**	Pn	**Pn**	**17 28 36.0**	**+1.0**
	comp=Z,18nm,0.5s,SNR=24								
MOA				Sg	**Sg**	**17 30 03.6**	**+0.2**
	comp=Z,9.6nm,0.4s								
PTCC	**Patocco-Chiusa**	**5.35**	**121**	Pn	**Pn**	**17 28 39.6**	**+2.9**
	comp=Z,5.7nm,0.3s								
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pn	**Pn**	**17 28 37.6**	**+0.5**
	SNR=1.0								
MFF				*e*Sn	**Sn**	**17 29 34.1**	**-5.6**
	comp=Z,18nm,0.6s,SNR=1.0								
MFF				*e*Sg	**Sg**	**17 30 07.7**	**-0.7**
	comp=Z,47nm,0.6s								
MFF	**Saint Martin d**	**5.38**	**242**	*e*Pn	**Pn**	**17 28 37.6**	**+0.5**
	SNR=1.0								
MFF				*e*Sn	**Sn**	**17 29 34.1**	**-5.6**
	comp=Z,9.2nm,0.6s,SNR=1.0								
MFF				*e*Sg	**Sg**	**17 30 07.7**	**-0.7**
	comp=Z,24nm,0.6s								
MYKA	**Terra Mystica**	**5.38**	**118**	⇓*i*Pn	**Pn**	**17 28 38.9**	**+1.7**
	comp=Z,7.6nm,0.5s								
MYKA				⇓*i*Sg	**Sg**	**17 30 09.0**	**+0.5**
	comp=Z,17nm,0.6s								
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pn	**Pn**	**17 28 37.1**	**-0.2**
RJF				*e*Sg	**Sg**	**17 30 06.7**	**-2.0**
	comp=Z,84nm,0.8s,SNR=1.0								
RJF	**Les Rejaudoux**	**5.39**	**223**	*e*Pn	**Pn**	**17 28 37.1**	**-0.2**
RJF				*e*Sg	**Sg**	**17 30 06.7**	**-2.0**
	comp=Z,42nm,0.8s,SNR=1.0								
SMRF	**Simiane la Rot**	**5.44**	**189**	*e*Sg	**Sg**	**17 30 07.5**	**-3.0**
	comp=Z,13nm,0.5s								
SMRF	**Simiane la Rot**	**5.44**	**189**	*e*Sg	**Sg**	**17 30 07.5**	**-3.0**
	comp=Z,6.3nm,0.5s								
CAF	**Calviac**	**5.46**	**217**	*e*Pn	**Pn**	**17 28 37.9**	**-0.3**
	SNR=1.0								
CAF				*e*Sn	**Sn**	**17 29 37.1**	**-4.6**
	comp=Z,15nm,0.5s,SNR=1.0								
CAF				*e*Sg	**Sg**	**17 30 09.5**	**-1.5**
	comp=Z,40nm,0.5s								
CAF	**Calviac**	**5.46**	**217**	*e*Pn	**Pn**	**17 28 37.9**	**-0.3**
	SNR=1.0								
CAF				*e*Sn	**Sn**	**17 29 37.1**	**-4.6**
	comp=Z,7.7nm,0.5s,SNR=1.0								
CAF				*e*Sg	**Sg**	**17 30 09.5**	**-1.5**
	comp=Z,20nm,0.5s								
LASF	**Ste Croix**	**5.64**	**202**	*e*Sg	**Sg**	**17 30 14.1**	**-2.8**
	comp=Z,44nm,0.6s								
LASF	**Ste Croix**	**5.64**	**202**	*e*Sg	**Sg**	**17 30 14.1**	**-2.8**
	comp=Z,22nm,0.6s								
GORS	**Gorjuse**	**5.76**	**119**	*i* Pn	**Pn**	**17 28 45.4**	**+3.0**
FRF	**La Foret Royal**	**5.80**	**181**	*e*Pg	**Pg**	**17 29 03.5**	**-3.3**
	SNR=1.0								
FRF				*e*Sg	**Sg**	**17 30 18.2**	**-3.8**
	comp=Z,8.7nm,0.5s								
FRF	**La Foret Royal**	**5.80**	**181**	*e*Pn	**Pn**	**17 28 41.7**	**-1.3**
FRF				*e*Pg	**Pg**	**17 29 03.5**	**-3.3**
FRF				*e*Sg	**Sg**	**17 30 18.2**	**-3.8**
FRF	**La Foret Royal**	**5.80**	**181**	*e*Pg	**Pg**	**17 29 03.5**	**-3.3**
	SNR=1.0								
FRF				*e*Sg	**Sg**	**17 30 18.2**	**-3.8**
	comp=Z,4.3nm,0.5s								
OBKA	**Obir**	**5.98**	**116**	⇓*i*Pn	**Pn**	**17 28 46.6**	**+1.2**
	comp=Z,10nm,0.6s								
OBKA				⇑*i*Sn	**Sn**	**17 29 54.0**	**-0.4**
	comp=Z,12nm,0.6s								
LFF	**La Frestale**	**6.02**	**225**	*e*Pn	**Pn**	**17 28 45.8**	**-0.1**
LFF				*e*Sn	**Sn**	**17 29 51.1**	**-4.4**
	SNR=1.0								
LFF				*e*Sg	**Sg**	**17 30 25.8**	**-3.2**
	comp=Z,104nm,0.6s,SNR=1.0								
LFF	**La Frestale**	**6.02**	**225**	*e*Pn	**Pn**	**17 28 45.8**	**-0.1**
LFF				*e*Sn	**Sn**	**17 29 51.1**	**-4.4**
	SNR=1.0								
LFF				*e*Sg	**Sg**	**17 30 25.8**	**-3.2**
	comp=Z,52nm,0.6s,SNR=1.0								
JAVS	**Javornik**	**6.05**	**122**	*i* Pn	**Pn**	**17 28 48.4**	**+2.0**
UPC	**Upice**	**6.10**	**76**	*e*SG	**Sg**	**17 30 26.6**	**-5.0**
SOKA	**Soboth**	**6.18**	**113**	⇓*i*Pn	**Pn**	**17 28 49.3**	**+1.1**
	comp=Z,2.3nm,0.2s								
CSNA	**Conrad Observa**	**6.22**	**100**	⇑*i*Pn	**Pn**	**17 28 49.0**	**+0.3**
	comp=Z,10nm,0.5s								
CSNA				⇑*i*Sn	**Sn**	**17 29 55.4**	**-4.9**
	comp=Z,11nm,0.5s								
CONA	**Conrad Observa**	**6.22**	**100**	⇑*i*Pn	**Pn**	**17 28 49.0**	**+0.3**
	comp=Z,9.7nm,0.4s,SNR=10.0								
CONA				⇑*i*Sn	**Sn**	**17 29 55.5**	**-4.9**
	comp=Z,10.0nm,0.5s								
ARSA	**Arzberg**	**6.23**	**106**	⇑*i*Pn	**Pn**	**17 28 50.1**	**+1.2**
	comp=Z,2.5nm,0.3s								
ARSA				⇑*i*Sn	**Sn**	**17 29 59.1**	**-1.6**
	comp=Z,10.0nm,0.5s								
SGMF	**Saint Gilles**	**6.24**	**263**	*e*Pg	**Pg**	**17 29 13.0**	**-2.1**
	SNR=1.0								
SGMF				*e*Sn	**Sn**	**17 29 55.9**	**-4.9**
SGMF				*e*Sg	**Sg**	**17 30 34.5**	**-1.4**
	comp=Z,57nm,0.6s								
SGMF	**Saint Gilles**	**6.24**	**263**	*e*Pn	**Pn**	**17 28 48.9**	**0.0**
SGMF				*e*Pg	**Pg**	**17 29 13.0**	**-2.1**
SGMF				*e*Sn	**Sn**	**17 29 55.9**	**-4.9**
SGMF				*e*Sg	**Sg**	**17 30 34.5**	**-1.4**
SGMF	**Saint Gilles**	**6.24**	**263**	*e*Pg	**Pg**	**17 29 13.0**	**-2.1**
	SNR=1.0								
SGMF				*e*Sg	**Sg**	**17 30 34.5**	**-1.4**
	comp=Z,29nm,0.6s								
PERS	**Pernice**	**6.25**	**113**	*i* Pn	**Pn**	**17 28 50.9**	**+1.7**
DPC	**Dobruska-Polom**	**6.28**	**77**	*e*SG	**Sg**	**17 30 33.7**	**-3.7**
	comp=Z,143nm,2.7s								
ROSF	**Rostrenen**	**6.68**	**265**	*e*Pn	**Pn**	**17 28 55.0**	**0.0**
ROSF				*e*Sn	**Sn**	**17 30 04.8**	**-7.0**
ROSF				*e*Sg	**Sg**	**17 30 49.1**	**-1.1**
	comp=Z,53nm,0.6s								
ROSF	**Rostrenen**	**6.68**	**265**	*e*Pn	**Pn**	**17 28 55.0**	**0.0**
ROSF				*e*Sg	**Sg**	**17 30 49.1**	**-1.1**
	comp=Z,26nm,0.6s								
QUIF	**Quistinic**	**6.72**	**261**	*e*Pn	**Pn**	**17 28 55.5**	**0.0**
	SNR=1.0								
QUIF				*e*Sn	**Sn**	**17 30 07.1**	**-5.5**
QUIF				*e*Sg	**Sg**	**17 30 50.0**	**-1.3**
	comp=Z,39nm,0.6s								
QUIF	**Quistinic**	**6.72**	**261**	*e*Pn	**Pn**	**17 28 55.5**	**0.0**
	SNR=1.0								
QUIF				*e*Sn	**Sn**	**17 30 07.1**	**-5.5**
QUIF				*e*Sg	**Sg**	**17 30 50.0**	**-1.3**
	comp=Z,20nm,0.6s								
MTLF	**Montolieu**	**6.78**	**209**	*e*Pg	**Pg**	**17 29 23.9**	**-1.7**
	SNR=1.0								
MTLF				*e*Sn	**Sn**	**17 30 09.0**	**-5.3**
	SNR=1.0								
MTLF				*e*Sg	**Sg**	**17 30 50.3**	**-3.1**
	comp=Z,23nm,0.8s								
BOJS	**Bojanci**	**6.95**	**121**	*i* Pn	**Pn**	**17 29 01.3**	**+2.6**
ZST	**Bratislava**	**6.95**	**96**	*e*SG	**Sg**	**17 30 57.2**	**-1.7**
MODS	**Modra-Piesok**	**7.03**	**94**	*e*PN	**Pn**	**17 28 59.6**	**-0.2**
MODS				*e*SG	**Sg**	**17 30 58.3**	**-3.0**
SMOL	**Smolenice**	**7.10**	**93**	*e*SG	**Sg**	**17 31 02.8**	**-0.8**
KOLL	**Kolacno**	**7.72**	**91**	*e*PN	**Pn**	**17 29 07.9**	**-1.4**
KOLL				*e*SG	**Sg**	**17 31 24.8**	**+1.2**
EPF	**Esparros**	**7.73**	**217**	*e*Sn	**Sn**	**17 30 32.8**	**-4.7**
	SNR=1.0								
EPF				*e*Sg	**Sg**	**17 31 20.3**	**-3.4**
	comp=Z,26nm,0.8s								
VYHS	**Vyhne**	**8.02**	**92**	*e*PN	**Pn**	**17 29 14.0**	**+0.6**
VYHS				*e*SG	**Sg**	**17 31 26.6**	**-6.6**
ETSF	**Etsaut**	**8.21**	**221**	*e*Sg	**Sg**	**17 31 35.4**	**-3.7**
	comp=Z,26nm,0.7s								
SJPF	**Ste Jean**	**8.33**	**224**	*e*Sg	**Sg**	**17 31 40.4**	**-2.6**
	comp=Z,18nm,0.6s								
	comp=Z,46nm,0.8s								
MTLF	**Montolieu**	**6.78**	**209**	*e*Pg	**Pg**	**17 29 23.9**	**-1.7**
	SNR=1.0								
MTLF				*e*Sn	**Sn**	**17 30 09.0**	**-5.3**
	SNR=1.0								
MTLF				*e*Sg	**Sg**	**17 30 50.3**	**-3.1**
	comp=Z,23nm,0.8s								
BOJS	**Bojanci**	**6.95**	**121**	*i* Pn	**Pn**	**17 29 01.3**	**+2.6**
ZST	**Bratislava**	**6.95**	**96**	*e*SG	**Sg**	**17 30 57.2**	**-1.7**
MODS	**Modra-Piesok**	**7.03**	**94**	*e*PN	**Pn**	**17 28 59.6**	**-0.2**
MODS				*e*SG	**Sg**	**17 30 58.3**	**-3.0**
SMOL	**Smolenice**	**7.10**	**93**	*e*SG	**Sg**	**17 31 02.8**	**-0.8**
KOLL	**Kolacno**	**7.72**	**91**	*e*PN	**Pn**	**17 29 07.9**	**-1.4**
KOLL				*e*SG	**Sg**	**17 31 24.8**	**+1.2**
EPF	**Esparros**	**7.73**	**217**	*e*Sn	**Sn**	**17 30 32.8**	**-4.7**
	SNR=1.0								
EPF				*e*Sg	**Sg**	**17 31 20.3**	**-3.4**
	comp=Z,26nm,0.8s								
VYHS	**Vyhne**	**8.02**	**92**	*e*PN	**Pn**	**17 29 14.0**	**+0.6**
VYHS				*e*SG	**Sg**	**17 31 26.6**	**-6.6**
ETSF	**Etsaut**	**8.21**	**221**	*e*Sg	**Sg**	**17 31 35.4**	**-3.7**
	comp=Z,26nm,0.7s								
SJPF	**Ste Jean**	**8.33**	**224**	*e*Sg	**Sg**	**17 31 40.4**	**-2.6**
	comp=Z,18nm,0.6s								

MOS ***26*** *17:41:35.6±1.1, 1537N×9285W, h61km, mb5.5/88, MS4.9/7, Error ellipse: s-maj=6.3km s-min=4.0km az=94.3*

CASC ***26*** *17:41:36.3±1.8, 1531N×9352W, h142km±27km, MD5.4, ML5.1, mb5.4(NEIC)*

BJI ***26*** *17:41:38.6, 1530N×9340W, h87km, mB5.6, Ms5.7, Msz5.1*

ISCJB ***26*** *17:41:39.2±0.1, 1546N±002×9298W±002, h86km, mb5.2/248, Error ellipse: s-maj=3.6km s-min=1.7km az=30.3*

IDC ***26*** *17:41:40.1±0.6, 1553N×9274W, h84km±4km, mb4.7/26, mb1 4.9/28, mb1mx4.8/30, mbtmp4.8/28, MS4.8/31, Ms1 4.8/31, ms1mx4.6/40, Error ellipse: s-maj=11.1km s-min=5.4km az=59.0*

GCMT ***26*** *17:41:40.6±0.1, 1537N×9335W, h71km, MW5.7/104, Moment Tensor Solution. s104,c219; s104,c255; Duration: 1ᵍ8 Moment tensor: Scale 10¹⁷Nm; Mrr-2.65±.05; Mθθ1.32±.04; Mϕϕ 1.34±.05; Mrθ 1.91±.03; Mθϕ-1.61±.04; Mϕr-3.19±.04; Best double couple: Mo4.65600×10¹⁷ NP1:ϕs122.00000°, δ20.00000°, λ-113.00000°. NP2:ϕs326.00000°, δ72.00000°, λ-82.00000°. Principal axes: T 4.7410, Plg26.0000°, Azm50.0000°; N -0.1610, Plg8.0000°, Azm144.0000°; P -4.5700, Plg62.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MEX ***26*** *17:41:40.7±1.7, 1528N×9336W, h87km±15km, MD5.6*

NEIC ***26*** *17:41:40.6, 1528N×9336W, h87km, mb5.4/193, MW5.6, MD5.6(MEX), Moment Tensor Solution. s39 Moment tensor: Scale 10¹⁷Nm; Mrr-1.52; Mθθ0.71; Mϕϕ0.81; Mrθ 1.53; Mθϕ-0.25; Mϕr-2.

PLIG *i* S **Sn** **17 44 29.5 -8.3**
CSAN **7.08 116**⇑ *e*P **Pn** **17 43 26.1 +4.2**
MZVM **7.09 303** *e*P **Pn** **17 43 17.1 -4.9**
MZVM *i* S **Sn** **17 44 32.5 -8.6**
APYN **Apoyeque** **7.12 116**⇓ *e*P **Pn** **17 43 26.6 +4.2**
UNM **Universidad Na** **7.13 304** *i* P **Pn** **17 43 20.0 -2.4**
UNM *i* S **Sn** **17 44 30.9 -11**
XAVN **Gruta Xavier** **7.18 116**⇓ *e*P **Pn** **17 43 27.0 +3.8**
PTVM **Pico Tres Padr** **7.22 306** *e*P **Pn** **17 43 21.8 -1.9**
PTVM *i* S **Sn** **17 44 41.1 -3.0**
HUEN **7.23 114**⇑ *e*P **Pn** **17 43 27.5 +3.6**
TICN **Ticuantepe** **7.32 117**⇓ *e*P **Pn** **17 43 29.0 +3.9**
MASN **Masaya** **7.41 117** *e*P **Pn** **17 43 28.6 +2.3**
MASN *e*S **Sn** **17 45 02.0 +13**
DEIG **Demacu** **7.57 310** *e*P **Pn** **17 43 26.7 -1.8**
DEIG *i* S **Sn** **17 44 45.5 -7.3**
ZIIG **Zihuatanejo** **8.49 286** *i* P **Pn** **17 43 36.1 -4.9**
ZIIG *i* S **Sn** **17 45 08.5 -6.7**
LIM1 **Limonal** **8.82 121** *e*P **Pn** **17 43 49.4 +3.8**
VCR **Vista de Mar** **8.85 126** *e*P **Pn** **17 43 50.0 +4.1**
VCR **Vista de Mar** **8.85 126**⇑ *e*P **Pn** **17 43 50.0 +4.1**
CUI **Cuipilapa** **8.92 121**⇑ *e*P **Pn** **17 43 50.6 +3.7**
MOIG **Morelia** **8.95 299** *e*P **Pn** **17 43 45.1 -2.2**
MOIG *i* S **Sn** **17 45 18.0 -8.5**
JCR **Jicaral** **9.42 125**⇑ *e*P **Pn** **17 43 57.9 +4.2**
FORC **Fortuna** **9.43 121**⇓ *e*P **Pn** **17 43 58.0 +4.2**
CGA2 **Cerro Gallo 2** **9.84 122**⇓ *e*P **Pn** **17 44 03.5 +4.0**
PRS1 **Puriscal** **9.99 122** *e*P **Pn** **17 44 06.0 +4.5**
LAJ **Bijagual** **10.21 122**⇓ *e*P **Pn** **17 44 04.9 +0.4**
LCR2 **La Lucha 2** **10.37 122** *e*P **Pn** **17 44 11.3 +4.6**
QCR **Quepos** **10.42 124** *e*P **Pn** **17 44 11.1 +3.7**
QCR **Quepos** **10.42 124**⇑ *e*P **Pn** **17 44 11.1 +3.7**
URSC **Urasca** **10.51 121** *e*P **Pn** **17 44 12.2 +3.6**
URSC *e*S **Sn** **17 46 07.1 +2.7**
URSC **Urasca** **10.51 121** *e*P **Pn** **17 44 12.2 +3.6**
URSC *e*S **Sn** **17 46 14.9 +10**
BUS **Buena Vista** **10.68 122**⇑ *e*P **Pn** **17 44 14.8 +3.9**
SFJM **Santa Fe** **10.87 299** *i* P **Pn** **17 44 10.6 -2.8**
SFJM *i* S **Sn** **17 46 02.5 -11**
LIO **Limon** **11.04 118** *e*P **Pn** **17 44 19.1 +3.3**
BAR1 **11.21 122**⇓ *e*P **Pn** **17 44 21.4 +3.2**
ACR **Cerro Adams** **11.67 124** *e*P **Pn** **17 44 28.9 +4.5**
ACR **Cerro Adams** **11.67 124**⇓ *e*P **Pn** **17 44 27.2 +2.8**
ZAIG **Zacatecas** **11.68 310** *e*P **Pn** **17 44 21.8 -2.7**
ZAIG *i* S **Sn** **17 46 32.8 -0.1**
SOR **Soroa** **11.87 50** *e*P **Pn** **17 44 28.0 +1.0**
baz=245
SOR *e*S **Sn** **17 46 38.0 +0.6**
comp=N,12nm,1.0s
SOR *e*
comp=E,12nm,1.0s
CJM **Chamela** **12.26 291** *i* P **Pn** **17 44 27.5 -4.9**
CJM *i* S **Sn** **17 46 41.8 -5.3**
MGV **Manicaragua** **13.91 60** *e*P **Pn** **17 44 57.0 +2.9**
MGV *e*S **Sn** **17 47 26.5 -0.7**
comp=Z,358nm,2.3s
MGV *e*S Sn
comp=N,612nm,1.9s
BCIP **Isla Barro Col** **14.21 115** *e*P **Pn** **17 44 59.5 +1.5**
comp=N,284nm,1.4s
HKT **Hockley** **14.69 350** *e*P **Pn** **17 45 02.9 -1.2**
comp=N,3µm,2.0s
HKT **Hockley** **14.69 350** *e*P **Pn** **17 45 02.9 -1.2**
HKT pmax pmax
comp=Z,3µm,2.0s
MCJ **Malvern** **14.79 78**⇑ *e*P **Pn** **17 45 10.1 +4.6**
MAIG **Mazatlaan** **14.90 303** *i* P **Pn** **17 45 04.6 -2.2**
MAIG *i* S **Sn** **17 47 33.8 -17**
PCJ **Portland Cotta** **15.27 79**⇑ *e*P **Pn** **17 45 16.1 +4.5**
CCCC **Cccc** **15.47 66** *e*P **Pn** **17 45 22.9 +8.8**
STH **Stony Hill** **15.63 78**⇑ *e*P **Pn** **17 45 18.9 +2.7**
HOJ **Hope** **15.68 78**⇓ *e*P **Pn** **17 45 19.9 +3.1**
GWJ **Greenwich** **15.71 78**⇑ *e*P **Pn** **17 45 19.5 +2.3**
LMGC **Las Mercedes** **15.82 71** *e*P **Pn** **17 45 23.3 +4.7**
PAYG **Puerto Ayora** **16.23 171** P **Pn** **17 45 24.8 +1.2**
comp=Z,58nm,0.8s
JCT **Junction City** **16.25 338** *e*P **Pn** **17 45 22.6 -1.2**
comp=Z,103nm,0.7s
JCT **Junction City** **16.25 338** *e*P **Pn** **17 45 22.6 -1.2**
JCT pmax pmax
comp=Z,100nm,0.7s
NATX **Nacogdoches** **16.32 355** *e*P **Pn** **17 45 24.9 +0.2**
comp=Z,1µm,1.6s
BRAL **Brewton** **16.39 18** *e*P **Pn** **17 45 30.5 +4.9**
comp=Z,2µm,1.4s
DWPF **Disney** **16.49 38** *e*P **Pn** **17 45 30.4 +3.7**
comp=Z,1µm,1.4s
VBMS **Vicksburg** **16.84 7** *e*P **Pn** **17 45 31.6 +0.5**
comp=Z,1µm,1.4s
RCC **Rio Carpintero** **17.00 72** *e*P **Pn** **17 45 36.2 +3.0**
TXAR **Lajitas Array** **17.01 326** P **Pn** **17 45 33.5 +0.2**
comp=Z,2.8nm,0.3s,baz=150,slow=12,SNR=224
TXAR S **S** **17 48 43.5 -3.2**
baz=35,slow=35,SNR=1.5
TXAR PKiKP PKiKP 17 58 08.3 +1.1
comp=Z,0.1nm,0.3s,baz=132,slow=2.6,SNR=6.5
TXAR **Lajitas Array** **17.01 326** PKPdf PKiKP 17 58 08.3 +1.1
TXAR **Lajitas Array** **17.01 326** P **Pn** **17 45 33.5 +0.2**
TXAR S **S** **17 48 43.5 -3.1**
SABC **Sabc** **17.55 71** *e*P **Pn** **17 45 41.9 +1.9**
LRAL **Lakeview Retre** **18.31 16** *e*P **Pn** **17 45 49.2 +0.2**
comp=Z,495nm,1.4s
MASC **Masc** **18.39 72** *e*P **Pn** **17 45 53.1 +3.1**
LPIG **La Paz** **18.49 300** P **Pn** **17 45 48.9 -2.3**
comp=Z,2.5nm,0.3s,baz=3.0,slow=1.1,SNR=43
LPIG S **S** **17 49 19.2 +2.7**
comp=Z,2.8nm,0.3s,baz=3.7,slow=3.1,SNR=2.7
MIAR **Mount Ida** **19.03 358** *e*P **Pn** **17 45 56.1 -1.4**
comp=Z,2µm,1.9s
MIAR **Mount Ida** **19.03 358** *e*P **Pn** **17 45 56.1 -1.4**
MIAR pmax pmax
comp=Z,2µm,1.9s
OXF **Oxford** **19.24 9** *e*P **Pn** **17 45 59.2 -0.9**
comp=Z,439nm,0.9s
OXF **Oxford** **19.24 9** P **Pn** **17 45 59.4 -0.6**
OXF pmax pmax
comp=Z,440nm,0.9s
UALR **University of** **19.25 1** *e*P **Pn** **17 45 58.6 -1.6**
comp=Z,129nm,0.6s
MET **Memphis--Engin** **19.77 7** *e*P **Pn** **17 46 06.6 +0.4**
WMOK **Wichita Mounta** **19.92 346** *e*P **Pn** **17 46 04.5 -3.6**
comp=Z,109nm,0.8s
WMOK **Wichita Mounta** **19.92 346** P **Pn** **17 46 04.7 -3.3**
WMOK pmax pmax
comp=Z,190nm,1.2s
HBAR **Harrisburg** **20.13 5** *e*P **P** **17 46 08.7 +1.0**
GNAR **Gosnell** **20.60 7** *e*P **P** **17 46 13.8 +1.0**
comp=Z,2µm,0.6s
HALT **Halls** **20.63 8** *e*P **P** **17 46 12.8 -0.4**
SWET **Sewanee** **20.66 16** *e*P **P** **17 46 13.0 -0.5**
OTAV **Otavalo** **20.79 135** *e*P **P** **17 46 18.4 +3.3**
comp=Z,220nm,1.5s
AMTX **Amarillo** **20.90 339** *e*P **P** **17 46 15.7 -0.4**
comp=Z,542nm,0.5s
SDDR **Presa de Saban** **20.94 77** *e*P **P** **17 46 19.9 +3.1**
comp=Z,1µm,1.5s
GLAT **Glass** **20.99 8** *e*P **P** **17 46 14.5 -2.5**
COW **Cow Castle Cre** **21.00 30** *e*P **P** **17 46 19.4 +2.2**
NHSC **New Hope** **21.03 31** *e*P **P** **17 46 18.7 +1.1**
comp=Z,2µm,1.5s,mb6.2
ROSC **El Rosal** **21.07 118** P **P** **17 46 21.6 +3.4**
comp=Z,85nm,0.6s,mb5.2,baz=94,slow=4.3,SNR=59
ROSC S **S** **17 50 08.5 +0.5**
comp=Z,7.0nm,0.5s,baz=109,slow=22,SNR=2.5
ROSC **El Rosal** **21.07 118** *e*P **P** **17 46 21.6 +3.4**
WVT **Waverly** **21.09 11** *e*P **P** **17 46 17.2 -1.0**
comp=Z,300nm,1.4s,mb5.4
WVT **Waverly** **21.09 11** P **P** **17 46 17.4 -0.7**
WVT pmax pmax
comp=Z,300nm,1.4s,mb5.4
CPCT **Cooper Cave** **21.29 19** *e*P **P** **17 46 19.7 -0.6**
PARMO **Parma** **21.32 7** *e*P **P** **17 46 20.8 +0.2**
JSC **Jenkinsville** **21.49 27** *e*P **P** **17 46 23.4 +0.9**
JSC **Jenkinsville** **21.49 27** P **P** **17 46 23.6 +1.1**
CHI2 **21.68 118** *e*P Px 17 43 15.3
TKL **Tuckaleechee C** **21.72 20** P **P** **17 46 26.2 +1.3**
comp=Z,26nm,0.9s,mb4.6,baz=192,slow=11,SNR=28
TKL S **S** **17 50 22.2 +2.0**
comp=Z,13nm,0.7s,baz=138,slow=13,SNR=2.1
TKL LR LR 17 56 32.6
comp=Z,3µm,19.6s,baz=209,slow=41
TKL **Tuckaleechee C** **21.72 20** *e*P **P** **17 46 25.3 +0.4**
319A **Douglas** **21.80 320**⇑ P **P** **17 46 25.9 +0.2**
baz=22,SNR=71
319A ⇓S **S** **17 50 24.5 +2.7**
baz=22
219A **White Tail Can** **22.21 321** ⇓P **P** **17 46 30.1 -0.1**
baz=22,SNR=58
219A ⇑S **S** **17 50 31.4 +2.2**
baz=22
318A **Bisbee** **22.29 319** ⇓P **P** **17 46 30.8 -0.2**
baz=22,SNR=66
318A ⇓S **S** **17 50 32.2 +1.7**
baz=22
LAPE **La Pedrera** **22.31 108**⇑ *e*P Px 17 43 46.8
BNM **Barren Site** **22.36 329** *e*P **P** **17 46 32.5 +0.8**
comp=Z,100nm,1.2s,mb5.0
SIUC **Southern Illin** **22.42 8** *e*P **P** **17 46 30.9 -1.4**
comp=Z,808nm,1.3s,mb5.9
Y22D **IRIS PASSCAL I** **22.45 328**⇑ P **P** **17 46 33.4 +0.8**
baz=22
LPM **Los Pinos Moun** **22.49 329** *e*P **P** **17 46 33.5 +0.4**
comp=Z,452nm,1.5s,mb5.6
LENM **Lemitar** **22.55 328** *e*P **P** **17 46 33.9 +0.2**
comp=Z,93nm,1.0s,mb5.1
FVM **French Village** **22.56 5** *e*P **P** **17 46 31.3 -2.4**
comp=Z,86nm,0.9s,mb5.1
FVM **French Village** **22.56 5** P **P** **17 46 31.3 -2.4**
FVM pmax pmax
comp=Z,66nm,1.0s,mb4.9
CCM **Cathedral Cave** **22.57 3** *e*P **P** **17 46 32.2 -1.6**
comp=Z,129nm,0.6s,mb5.4
CCM **Cathedral Cave** **22.57 3** P **P** **17 46 32.5 -1.3**
CCM pmax pmax
comp=Z,130nm,0.6s,mb5.4
TZTN **Tazewell** **22.61 20** *e*P **P** **17 46 33.9 -0.4**
comp=Z,728nm,1.4s,mb5.8
218A **Dragoon** **22.68 319** ⇓P **P** **17 46 35.0 -0.1**
baz=23,SNR=60
218A ⇑S **S** **17 50 38.8 +1.9**
baz=23
SDV **Santo Domingo** **22.71 104** P **P** **17 46 35.4 -0.2**
comp=Z,80nm,0.6s,mb5.2,baz=310,slow=5.2,SNR=49
SDV PcP PcP 17 50 26.8 +1.9
comp=Z,16nm,0.6s,baz=334,slow=1.4,SNR=7.1
SDV LR LR 17 56 26.5
comp=Z,2µm,20.2s,baz=301,slow=39
SDV **Santo Domingo** **22.71 104** *e*P **P** **17 46 34.7 -0.9**
comp=Z,244nm,1.0s,mb5.5
119A **Ashpeak Ranch,** **22.78 322**⇑ P **P** **17 46 36.2 +0.1**
baz=23,SNR=26
119A ⇓S **S** **17 50 42.0 +3.6**
baz=23
LAZ **Ladron** **22.82 328** *e*P **P** **17 46 37.2 +0.7**
comp=Z,224nm,1.6s,mb5.2
USIN **University of** **22.90 11** *e*P **P** **17 46 35.9 -1.4**
comp=Z,480nm,1.3s,mb5.7
ANMO **Albuquerque** **22.92 330** P **P** **17 46 37.5 0.0**
comp=Z,49nm,0.7s,mb5.0,baz=142,slow=12,SNR=38
ANMO pP 17 46 55.4
comp=Z,68nm,0.9s,baz=144,slow=15,SNR=12
ANMO S **S** **17 50 43.7 +3.0**
comp=Z,3.0nm,0.6s,baz=356,slow=20,SNR=2.4
ANMO **Albuquerque** **22.92 330** *e*P **P** **17 46 37.4 -0.1**
comp=Z,105nm,1.0s,mb5.1
ANMO *e*pP 17 46 56.1
ANMO **Albuquerque** **22.92 330** *e*P **P** **17 46 37.4 -0.1**
ANMO *e**PP 17 46 56.1
ANMO pmax pmax
comp=Z,105nm,1.0s
217A **Green Valley** **23.04 318** ⇓P **P** **17 46 38.6 -0.1**
baz=23,SNR=149
217A ⇑S **S** **17 50 44.3 +1.6**
baz=23
118A **Homack Ranch,** **23.09 321**⇑ P **P** **17 46 39.3 +0.2**
baz=23,SNR=90
118A ⇑S **S** **17 50 45.1 +1.6**
baz=23
Z19A **T-Link Ranch,** **23.13 323**⇑ P **P** **17 46 39.5 0.0**
baz=23,SNR=13
Z19A ⇓S **S** **17 50 47.4 +3.2**
baz=23
SLM **Saint Louis** **23.22 5** *e*P **P** **17 46 39.0 -1.2**
comp=Z,275nm,0.6s,mb5.8
SLM *e*pP 17 46 60.0
SLM **Saint Louis** **23.22 5** *e*P **P** **17 46 39.0 -1.2**
SLM *e**PP 17 47 00.0
SLM pmax pmax
comp=Z,275nm,0.6s,mb5.8
TUC **Tucson** **23.37 319** *e*P **P** **17 46 41.0 -0.8**
comp=Z,236nm,1.5s,mb5.3
TUC *e*pP 17 46 59.8
TUC **Tucson** **23.37 319** *e*P **P** **17 46 41.0 -0.7**
TUC *e**PP 17 46 59.8
TUC pmax pmax
comp=Z,236nm,1.5s,mb5.3
WCI **Wyandotte Cave** **23.43 13** *e*P **P** **17 46 41.5 -0.7**
comp=Z,125nm,0.8s,mb5.3
WCI *e*pP 17 47 02.5
WCI **Wyandotte Cave** **23.43 13** *e*P **P** **17 46 41.5 -0.7**
WCI *e**PP 17 47 02.5
WCI pmax pmax
comp=Z,125nm,0.8s,mb5.3
Z18A **Geronimo** **23.44 322**⇑ P **P** **17 46 42.6 +0.3**
baz=23,SNR=6.0
117A **Oracle** **23.52 320** ⇓P **P** **17 46 43.5 +0.4**
baz=23,SNR=54
OLIL **Olney** **23.58 9** *e*P **P** **17 46 42.8 -0.7**
comp=Z,1µm,1.4s,mb6.0
216A **Three Points,** **23.60 318** ⇓P **P** **17 46 44.0 +0.2**
baz=24,SNR=54
Y19A **Nutrioso** **23.61 324** ⇓P **P** **17 46 44.5 +0.6**
baz=24,SNR=35
Y19A ⇑S **S** **17 50 55.7 +3.9**
baz=24
KSU1 **Kansas State U** **23.79 353** *e*P **P** **17 46 44.0 -1.4**
comp=Z,153nm,0.5s,mb5.6
CNNC **Cliffs of the** **23.87 32** *e*P **P** **17 46 48.9 +2.7**
Y18A **Canyon Day Jun** **23.93 323**⇑ P **P** **17 46 47.0 +0.2**
baz=24,SNR=9.1
Y18A ⇓S **S** **17 50 59.9 +2.9**
baz=24
X19A **St. Johns** **23.98 325**⇑ P **P** **17 46 47.7 +0.5**
baz=24,SNR=12
X19A ⇓S **S** **17 51 01.0 +3.2**
baz=24
CBKS **Cedar Bluff** **24.04 347** *e*P **P** **17 46 47.2 -0.5**
comp=Z,180nm,0.6s,mb5.6
CBKS *e*pP 17 47 01.8
CBKS **Cedar Bluff** **24.04 347** *e*P **P** **17 46 47.3 -0.4**
CBKS *e**PP 17 47 01.8
CBKS pmax pmax
comp=Z,180nm,0.6s,mb5.6
116A **Eloy** **24.12 318** ⇓P **P** **17 46 48.0 -0.6**
baz=24,SNR=20
116A ⇓S **S** **17 51 01.6 +1.4**
baz=24
ELN **Prospectdale** **24.23 24** *e*P **P** **17 46 49.4 0.0**
ELN *e*pP 17 47 08.4
BLO **Bloomington** **24.29 12** *e*P **P** **17 46 48.6 -1.4**
comp=Z,162nm,0.8s,mb5.4
BLO *e* 17 47 02.8
BLO **Bloomington** **24.29 12** *e*P **P** **17 46 48.6 -1.4**
BLO *e* 17 47 02.8
BLO pmax pmax
comp=Z,162nm,0.8s,mb5.4
BLA **Blacksburg** **24.35 25** *e*P **P** **17 46 50.1 -0.4**
comp=Z,164nm,1.0s,mb5.3
BLA **Blacksburg** **24.35 25** *e*P **P** **17 46 50.1 -0.4**
BLA pmax pmax
comp=Z,164nm,1.0s,mb5.3
Y17A **Roosevelt** **24.35 321**⇑ P **P** **17 46 50.8 +0.2**
baz=24,SNR=14
Y17A ⇑S **S** **17 51 05.9 +2.1**
baz=24
X18A **Snowflake** **24.42 324** ⇓P **P** **17 46 51.7 +0.5**
baz=24,SNR=15
Z16A **Peralta Trail,** **24.46 320** ⇓P **P** **17 46 51.3 -0.3**
baz=24
214A **Organ Pipe Nat** **24.47 316**⇑ P **P** **17 46 51.1 -0.6**
baz=24,SNR=58
W19A **Sanders** **24.54 326** ⇓P **P** **17 46 53.0 +0.7**
baz=24,SNR=22
115A **Sonoran Desert** **24.55 318** ⇓P **P** **17 46 52.4 -0.1**
baz=24,SNR=41
W18A **Petrified Fore** **24.73 325**⇑ P **P** **17 46 54.6 +0.5**
baz=25
V19A **Window Rock** **24.82 327** ⇓P **P** **17 46 55.8 +0.9**
baz=25
AGPR **Aguadilla, PR** **24.85 79** *e*P **P** **17 46 56.0 +0.7**
comp=Z,1µm,1.6s,mb6.1
SDCO **Great Sand Dun** **24.85 336** *e*P **P** **17 46 55.6 +0.5**
comp=Z,73nm,0.6s,mb5.3
SDCO *e*pP 17 47 14.3
Y16A **Circle Bar Ran** **24.86 321** ⇓P **P** **17 46 55.6 +0.3**
baz=25,SNR=23
Z15A **Gila River Ind** **24.89 319**⇑ P **P** **17 46 55.4 -0.1**
baz=25
X16A **Lo Mia Camp, P** **25.21 322** ⇓P **P** **17 46 58.6 +0.2**
baz=25,SNR=21
W17A **Winslow** **25.25 324** ⇓P **P** **17 46 59.0 +0.3**
baz=25
V18A **Ganado** **25.28 326** ⇓P **P** **17 46 59.6 +0.5**
baz=25,SNR=9.7
Y15A **Casa Rosa Ranc** **25.43 320** ⇓P **P** **17 47 00.6 +0.2**
baz=25,SNR=22
Z14A **Wintersburg** **25.44 318** ⇓P **P** **17 47 00.4 -0.1**
baz=25
113A **Mohawk Valley,** **25.61 316**⇑ P **P** **17 47 01.9 -0.1**
baz=26,SNR=14
T19A **Beclabito** **25.67 329**⇑ P **P** **17 47 03.2 +0.6**
baz=26,SNR=22
MVCO **Mesa Verde** **25.72 330** *e*P **P** **17 47 03.9 +0.9**
comp=Z,116nm,1.0s,mb5.3
MVCO **Mesa Verde** **25.72 330** ⇓P **P** **17 47 03.8 +0.9**
baz=26,SNR=45
W16A **Flagstaff** **25.73 323** ⇓P **P** **17 47 04.1 +1.0**
baz=26,SNR=7.3
X15A **Humboldt** **25.73 321**⇑ P **P** **17 47 03.7 +0.6**
baz=26,SNR=16
SJG **San Juan** **25.74 80** *e*P **P** **17 47 04.2 +0.8**
comp=Z,164nm,0.9s,mb5.5
SJG **San Juan** **25.74 80** *e*P **P** **17 47 04.2 +0.8**
SJG pmax pmax
comp=Z,164nm,0.9s
U18A **Rough Rock, Ch** **25.79 327** ⇓P **P** **17 47 04.4 +0.8**
baz=26,SNR=11
Y14A **Wickenburg** **25.84 319**⇑ P **P** **17 47 04.2 +0.1**
baz=26,SNR=18
WUAZ **Wupatki** **25.94 324** *e*P **P** **17 47 05.8 +0.8**
comp=Z,323nm,1.3s,mb5.6
WUAZ *e*pP pP 17 47 24.5 -0.3
WUAZ **Wupatki** **25.94 324** ⇓P **P** **17 47 04.9 -0.1**
baz=26,SNR=16
112A **Yuma** **26.02 315**⇑ P **P** **17 47 05.4 -0.4**
baz=26
X14A **Yava** **26.12 320**⇑ P **P** **17 47 06.2 -0.4**
baz=26,SNR=19
ACSO **Alum Creek Sta** **26.17 17** *e*P **P** **17 47 05.4 -1.6**
comp=Z,16nm,0.6s,mb4.6
ACSO *e*pP pP 17 47 23.6 -3.2
W15A **Williams** **26.22 322**⇑ P **P** **17 47 08.0 +0.5**
baz=26,SNR=12
U16A **Tuba City** **26.25 325**⇑ P **P** **17 47 08.0 +0.2**
baz=26,SNR=14
Y13A **Salome** **26.29 318**⇑ P **P** **17 47 07.9 -0.3**
baz=26,SNR=17
MTP **Monte Pirata** **26.31 80** *e*P **P** **17 47 07.9 -0.7**
comp=Z,353nm,1.1s,mb5.7
MTP *e*pP pP 17 47 29.1 +0.8
T18A **Mexican Hat** **26.34 328** ⇓P **P** **17 47 08.3 -0.3**
baz=26,SNR=18
U17A **Shonto** **26.34 326**⇑ P **P** **17 47 08.7 +0.1**
baz=26,SNR=10.0
SCIA **State Center** **26.37 359** *e*P **P** **17 47 07.3 -1.4**
comp=Z,248nm,0.6s,mb5.8
S19A **Harvey Farm, M** **26.45 330**⇑ P **P** **17 47 09.9 +0.4**
baz=26,SNR=25
GLA **Glamis** **26.49 315** *e*P **P** **17 47 09.6 -0.4**
comp=Z,266nm,1.4s,mb5.5
GLA *e*pP pP 17 47 29.7 -0.1
GLA **Glamis** **26.49 315**⇑ P **P** **17 47 09.5 -0.5**
baz=26,SNR=22
GLA **Glamis** **26.49 315** *e*P **P** **17 47 09.6 -0.4**
GLA *e**PP pP 17 47 29.7 -0.1
GLA pmax pmax
comp=Z,266nm,1.4s,mb5.5
CBN **Corbin** **26.49 28** *e*P **P** **17 47 11.5 +1.6**
comp=Z,97nm,0.6s,mb5.4
PV01 **Paradox Valley** **26.50 331** *e*P **P** **17 47 10.7 +0.7**
comp=Z,14µm,1.3s
PV01 *e*pP pP 17 47 30.8 +1.0
ATAH **Atahualpa** **26.53 146** P **P** **17 47 14.7 +4.2**
comp=Z,18nm,0.7s,mb4.7,baz=342,slow=8.6,SNR=16
ATAH pP pP 17 47 32.7 +2.3
comp=Z,56nm,1.0s,baz=337,slow=9.5,SNR=9.8
ATAH S **S** **17 51 44.6 +5.9**
comp=Z,2.7nm,0.7s,baz=111,slow=22,SNR=1.7
ATAH LR LR 17 56 44.2
comp=Z,1µm,18.0s,baz=329,slow=34
V15A **Kaibab Nationa** **26.61 323** ⇓P **P** **17 47 11.2 +0.1**
baz=26,SNR=23
OGNE **Ogallala** **26.61 344** *e*P **P** **17 47 10.9 -0.1**
comp=Z,856nm,1.4s,mb6.1
SMCO **Snowmass** **26.67 335** *e*P **P** **17 47 12.4 +0.9**
comp=Z,198nm,1.4s,mb5.6
ISCO **Idaho Springs** **26.69 338** *e*P **P** **17 47 12.2 +0.5**
comp=Z,137nm,1.4s,mb5.3
ISCO **Idaho Springs** **26.69 338** P **P** **17 47 12.5 +0.8**
ISCO pmax pmax
comp=Z,140nm,1.4s,mb5.3
Y12C **Blythe** **26.71 317** ⇓P **P** **17 47 11.6 -0.3**
baz=27,SNR=6.3
T17A **Navajo Res., N** **26.71 327**⇑ P **P** **17 47 12.6 +0.7**
baz=27,SNR=8.0
W14A **Seligman** **26.73 321** ⇓P **P** **17 47 12.8 +0.6**
baz=27,SNR=16
X13A **Yucca** **26.79 319**⇑ P **P** **17 47 12.4 -0.3**
baz=27,SNR=26
PDMCI **Parker Dam,Lak** **26.80 318**⇑ P **P** **17 47 12.5 -0.3**
baz=27,SNR=22
S18A **Hurst Farm, Bl** **26.83 329** ⇓P **P** **17 47 12.8 -0.1**
baz=27,SNR=20
PV10 **Paradox Valley** **26.91 331** *e*P **P** **17 47 14.1 +0.4**
comp=Z,1µm,0.9s,mb6.4
R19A **Wirley Farm, L** **26.94 331**⇑ P **P** **17 47 14.3 +0.3**
baz=27,SNR=9.7
V14A **Boquillas Ranc** **27.03 322**⇑ P **P** **17 47 15.1 +0.2**
baz=27,SNR=34
T16A **Glen Canyon Da** **27.08 326** ⇓P **P** **17 47 15.6 +0.4**
baz=27,SNR=6.2
SWSC **Sam W. Stewart** **27.09 314** ⇓P **P** **17 47 15.0 -0.4**
baz=27,SNR=16
U15A **North Rim** **27.11 324**⇑ P **P** **17 47 16.3 +0.8**
baz=27,SNR=15
DVTC **Desert V Tower** **27.15 313** ⇓P **P** **17 47 16.0 +0.1**
baz=27,SNR=17
W13A **Hualapai Mount** **27.15 320** ⇓P **P** **17 47 15.9 0.0**
baz=27,SNR=15
S17A **Black Ridge (B** **27.19 328** ⇓P **P** **17 47 16.5 +0.2**
baz=27,SNR=10
R18A **Canyonlands Na** **27.32 330** ⇓P **P** **17 47 18.0 +0.6**
baz=27,SNR=14
IRM **Iron Mountain** **27.37 317**⇑ P **P** **17 47 17.6 -0.3**
baz=27,SNR=35
NEE2 **Needles Airpor** **27.40 319** ⇓P **P** **17 47 17.6 -0.6**
baz=27
JFWS **Jewell Farm** **27.47 4** *e*P **P** **17 47 16.9 -1.7**
comp=Z,104nm,0.5s,mb5.6
JFWS *e*pP pP 17 47 37.0 -1.5
JFWS **Jewell Farm** **27.47 4** *e*P **P** **17 47 17.0 -1.6**
JFWS *e**PP pP 17 47 37.0 -1.5
JFWS pmax pmax
comp=Z,104nm,0.5s,mb5.6
Q19A **Hogan Spring (** **27.48 332** ⇓P **P** **17 47 19.0 +0.3**
baz=27,SNR=41
MONP **Monument Peak** **27.50 313** ⇓P **P** **17 47 18.9 -0.1**
baz=27,SNR=19
T15A **Red Dirt Ranch** **27.58 325**⇑ P **P** **17 47 19.9 +0.2**
baz=28,SNR=5.2
U14A **Mt Trumbull** **27.61 323** ⇓P **P** **17 47 20.7 +0.6**
baz=28,SNR=13
S16A **Weppner Ranch,** **27.67 327** ⇓P **P** **17 47 20.6 +0.1**
baz=28
V13A **Grand Canyon W** **27.71 321** ⇓P **P** **17 47 21.2 +0.3**
baz=28,SNR=28
R17A **Hanksville Air** **27.75 329** ⇓P **P** **17 47 22.2 +1.0**
baz=28,SNR=23
W12A **Cal Nev Ari** **27.90 319**⇑ P **P** **17 47 22.5 0.0**
baz=28
P19A **Cripple Cowboy** **27.90 333** ⇓P **P** **17 47 22.1 -0.4**
baz=28,SNR=8.6
LDFC **Landfair** **27.91 319** *e*P **P** **17 47 23.4 +0.7**
comp=Z,155nm,1.3s,mb5.4
PFO **Pinyon Flat Ob** **27.92 315** P **P** **17 47 22.2 -0.6**
comp=Z,198nm,1.6s,mb5.4,SNR=9.4
PFO **Pinyon Flat Ob** **27.92 315** P **P** **17 47 22.9 0.0**
comp=Z,10nm,0.8s,mb4.4,baz=122,slow=7.7,SNR=29
PFO S **S** **17 52 03.8 +3.5**

comp=Z,1.4nm,0.5s,baz=299,slow=20,SNR=1.8
PFO LR LR 17 58 28.8
comp=Z,1µm,21.8s,baz=136,slow=36
PFO Pinyon Flat Ob 27.92 315 *e*P **P 17 47 22.6 -0.3**
comp=Z,168nm,1.8s,mb5.3
PFO Pinyon Flat Ob 27.92 315 ⇑P **P 17 47 22.7 -0.1**
baz=28,SNR=12
PFO Pinyon Flat Ob 27.92 315 P **P 17 47 22.6 -0.2**
PFO pmax pmax
comp=Z,170nm,1.8s,mb5.3
PHWY Pilot Hill 27.96 340 *e*P **P 17 47 23.2 +0.1**
comp=Z,87nm,1.3s,mb5.1
Q18A Rafter H Ranch 28.00 331 ⇓P **P 17 47 23.8 +0.4**
baz=28,SNR=34
T14A Hurricane 28.01 324 ⇓P **P 17 47 23.2 -0.3**
baz=28
R16A Teasdale 28.04 328 ⇓P **P 17 47 24.2 +0.5**
baz=28,SNR=14
PCRV Puerto La Cruz 28.04 97 P **P 17 47 24.0 -0.1**
comp=Z,22nm,0.5s,mb5.0,baz=284,slow=2.3,SNR=14
PCRV LR LR 17 59 59.2
comp=Z,2µm,20.4s,baz=132,slow=39
PCRV Puerto La Cruz 28.04 97 P **P 17 47 24.0 -0.1**
PCRV LR LR 17 59 59.1
S15A Panguitch 28.05 326 ⇓P **P 17 47 23.8 -0.1**
baz=28
U13A Pakoon Wash 28.07 322 ⇓P **P 17 47 24.6 +0.5**
baz=28,SNR=26
GMRC Granite Mounta 28.08 317 ⇑P **P 17 47 24.8 +0.6**
baz=28,SNR=37
V12A Nelson 28.16 320 ⇑P **P 17 47 25.3 +0.5**
baz=28,SNR=26
SRU San Rafael 28.20 330 *e*P **P 17 47 26.5 +1.4**
comp=Z,61nm,1.2s,mb5.0
SRU San Rafael 28.20 330 ⇑P **P 17 47 26.2 +1.0**
baz=28,SNR=13
SRU San Rafael 28.20 330 *e*P **P 17 47 26.5 +1.3**
SRU pmax pmax
comp=Z,61nm,1.2s,mb5.0
SSPA Standing Stone 28.29 25 *e*P **P 17 47 25.5 -0.5**
comp=Z,222nm,1.5s,mb5.5
Q16A Castle Valley 28.36 329 ⇓P **P 17 47 27.6 +1.0**
baz=28
ECSD EROS,Sioux Fal 28.37 354 *e*P **P 17 47 24.8 -1.8**
comp=Z,763nm,1.7s,mb6.0
R15A Junction 28.39 327 ⇑P **P 17 47 27.9 +0.9**
baz=28
MVL Millersville 28.41 27 *e*P **P 17 47 27.5 +0.4**
comp=Z,34nm,1.2s,mb4.8
MVL *e*pP pP 17 47 44.8 -2.3
U12A Valley of Fire 28.43 321 ⇑P **P 17 47 27.5 +0.2**
baz=28,SNR=10
MURC Murrieta 28.43 314 ⇑P **P 17 47 27.3 0.0**
baz=28,SNR=5.9
T13A Saint George 28.45 323 ⇓P **P 17 47 27.7 +0.3**
baz=28,SNR=5.4
P18A Preston Nutter 28.47 331 ⇓P **P 17 47 29.1 +1.5**
baz=28,SNR=23
CCUT Cedar City 28.51 324 *e*P **P 17 47 29.9 +1.9**
comp=Z,34nm,1.2s,mb4.9
CCUT *e*pP pP 17 47 49.4 +1.4
HEC Hector,Ludlow 28.55 317 ⇓P **P 17 47 28.8 +0.4**
baz=28,SNR=21
S14A Cedar City 28.55 325 ⇑P **P 17 47 28.9 +0.5**
baz=28
MSU Marysvale 28.57 327 *e*P **P 17 47 29.8 +1.3**
comp=Z,110nm,1.6s,mb5.2
MSU Marysvale 28.57 327 *e*P **P 17 47 29.8 +1.3**
MSU pmax pmax
comp=Z,110nm,1.6s,mb5.2
P17A Butcher Ranch, 28.58 330 ⇑P **P 17 47 29.5 +0.9**
baz=28,SNR=8.9
V11A Goodsprings 28.59 319 ⇓P **P 17 47 28.7 0.0**
baz=28
BBRC Big Bear Sol-O 28.61 315 ⇓P **P 17 47 29.1 +0.1**
baz=28
TUQ Turquoise Moun 28.65 318 ⇑P **P 17 47 29.2 -0.1**
baz=28,SNR=17
ARUT Antelope Range 28.72 325 *e*P **P 17 47 31.8 +1.9**
comp=Z,86nm,1.4s,mb5.2
ARUT *e*pP pP 17 47 50.1 +0.3
ARUT Antelope Range 28.72 325 *e*P **P 17 47 31.8 +1.9**
ARUT *e**PP pP 17 47 50.2 +0.3
ARUT pmax pmax
comp=Z,86nm,1.4s,mb5.2
T12A Moapa 28.73 322 ⇓P **P 17 47 30.7 +0.7**
baz=29
S13A Holt Ranch, En 28.81 324 ⇑P **P 17 47 31.2 +0.5**
baz=29,SNR=14
R14A James Farms, M 28.86 326 ⇑P **P 17 47 31.4 +0.3**
baz=29
O18A Roosevelt 28.88 332 ⇑P **P 17 47 31.1 -0.1**
baz=29
RWWY Rawlins 28.93 338 *e*P **P 17 47 32.4 +0.8**
comp=Z,184nm,1.2s,mb5.6
U11A Corn Creek 28.94 320 ⇑P **P 17 47 31.9 +0.1**
baz=29
RRX Edison Barstow 29.02 316 ⇑P **P 17 47 32.3 -0.3**
baz=29
N19A John Jarvie Ra 29.03 334 ⇑P **P 17 47 33.1 +0.6**
baz=29
Q15A Fillmore 29.04 328 ⇑P **P 17 47 32.8 +0.2**
baz=29
SCI San Clemente I 29.06 312 ⇑P **P 17 47 32.6 -0.3**
baz=29
BFSC Mount Baldy St 29.10 315 ⇓P **P 17 47 33.3 0.0**
baz=29,SNR=8.0
M20A Sweetwater, Wa 29.13 336 ⇑P **P 17 47 33.9 +0.5**
baz=29,SNR=46
P16A Fountain Green 29.14 329 ⇑P **P 17 47 35.5 +2.0**
baz=29
GSC Goldstone 29.14 317 *e*P **P 17 47 34.3 +0.7**
comp=Z,11nm,0.9s,mb4.5
GSC Goldstone 29.14 317 ⇓P **P 17 47 34.2 +0.5**
baz=29,SNR=10
GSC Goldstone 29.14 317 P **P 17 47 34.5 +0.9**
GSC pmax pmax
comp=Z,11nm,0.9s,mb4.5
O17A Robinson Place 29.15 331 ⇓P **P 17 47 34.1 +0.4**
baz=29,SNR=25
SHOC Shoshone 29.17 319 ⇑P **P 17 47 33.8 -0.1**
baz=29
CIS Catalina Islan 29.18 312 ⇑P **P 17 47 33.5 -0.5**
baz=29,SNR=16
L21A Rawlins 29.22 338 ⇑P **P 17 47 34.9 +0.6**
baz=29,SNR=103
FMP Fort Macarthur 29.26 313 ⇑P **P 17 47 34.6 -0.1**
baz=29
R13A O'Grain Ranch, 29.29 325 ⇓P **P 17 47 35.5 +0.5**
baz=29,SNR=19
N18A Larsen Ranch, 29.31 333 ⇑P **P 17 47 35.3 +0.3**
baz=29,SNR=31
LUPA Lehigh Univers 29.34 28 P **P 17 47 38.1 +2.8**
comp=Z,2.8nm,0.4s,mb4.2
LUPA *e*pP pP 17 47 54.3 -1.0
MWC Mount Wilson 29.37 314 *e*P **P 17 47 36.3 +0.6**
comp=Z,137nm,1.6s,mb5.3
MWC Mount Wilson 29.37 314 *e*P **P 17 47 36.3 +0.6**
MWC pmax pmax
comp=Z,137nm,1.6s,mb5.3
T11A Corn Creek, Al 29.37 322 ⇑P **P 17 47 36.4 +0.7**
baz=29,SNR=10.0
S12A Delamar Landin 29.40 323 ⇓P **P 17 47 36.3 +0.4**
baz=29,SNR=8.8
P15A Leamington 29.41 329 ⇓P **P 17 47 36.3 +0.4**
baz=29
MPU Maple Canyon 29.44 330 *e*P **P 17 47 36.4 +0.2**
comp=Z,9.8nm,0.6s,mb4.6
Q14A Sevier Lake (B 29.50 327 ⇓P **P 17 47 37.4 +0.7**
baz=29,SNR=12
U10A Ash Meadows, A 29.52 319 ⇓P **P 17 47 37.1 +0.1**
baz=29
M19A Rock Springs 29.53 335 ⇓P **P 17 47 37.4 +0.5**
baz=29
DAU Daniels Canyon 29.57 331 *e*P **P 17 47 37.1 -0.2**
comp=Z,20nm,0.7s,mb4.8
DAU Daniels Canyon 29.57 331 *e*P **P 17 47 37.1 -0.2**
DAU pmax pmax
comp=Z,20nm,0.7s,mb4.9
DECC Green Verdugo 29.57 314 ⇓P **P 17 47 37.4 -0.1**
baz=29
NLU North Lily Min 29.61 329 *e*P **P 17 47 36.4 -1.3**
comp=Z,17nm,0.4s,mb5.0
L20A Wamsutter 29.63 336 ⇓P **P 17 47 38.1 +0.3**
baz=30,SNR=21
EDW2 Edwards Air Fo 29.69 315 ⇑P **P 17 47 38.5 0.0**
baz=30,SNR=15
R12A Pony Springs, 29.76 324 ⇑P **P 17 47 39.3 +0.3**
baz=30,SNR=16
N17A Moffit Pass 29.79 332 ⇑P **P 17 47 39.6 +0.3**
baz=30,SNR=25
TPNV Topopah Spring 29.81 320 *e*P **P 17 47 40.0 +0.5**
comp=Z,112nm,1.6s,mb5.2
TPNV Topopah Spring 29.81 320 ⇑P **P 17 47 39.8 +0.3**
baz=30,SNR=31
TPNV Topopah Spring 29.81 320 *e*P **P 17 47 40.0 +0.5**
TPNV pmax pmax
comp=Z,112nm,1.6s,mb5.2
JLU Jordanelle 29.81 331 *e*P **P 17 47 40.5 +1.1**
comp=Z,39nm,1.3s,mb4.9
LRMC Laurel Mountai 29.83 317 ⇓P **P 17 47 39.8 +0.1**
baz=30,SNR=17
P14A Drum Mountains 29.83 328 ⇓P **P 17 47 41.0 +1.3**
baz=30,SNR=16
M18A Lyman 29.85 334 ⇑P **P 17 47 39.9 +0.1**
baz=30,SNR=11
Q13A Wheeler Ranch, 29.87 326 ⇑P **P 17 47 40.5 +0.4**
baz=30,SNR=9.3
FURC Furnace Creek, 29.89 319 ⇓P **P 17 47 39.9 -0.3**
baz=30
SNCC San Nicolas Is 29.90 311 ⇑P **P 17 47 40.0 -0.4**
baz=30
S11A Rachel 29.95 322 ⇑P **P 17 47 41.6 +0.9**
baz=30,SNR=15
BLG Laguna Peak 30.01 313 ⇑P **P 17 47 41.6 +0.2**
baz=30,SNR=5.3
N16A Rees Ranch, Co 30.02 331 ⇓P **P 17 47 42.0 +0.7**
baz=30,SNR=7.5
MPMC Manual Prospec 30.04 318 ⇑P **P 17 47 41.4 -0.2**
baz=30,SNR=37
OSI Osito Adit 30.05 314 ⇑P **P 17 47 41.0 -0.6**
baz=30
O15A The Old Anders 30.05 329 ⇓P **P 17 47 42.4 +0.9**
baz=30
RSSD Black Hills 30.11 344 *e*P **P 17 47 42.4 +0.4**
comp=Z,61nm,0.6s,mb5.4
RSSD Black Hills 30.11 344 P **P 17 47 42.5 +0.5**
RSSD pmax pmax
comp=Z,61nm,0.6s,mb5.4
L19A Farson 30.11 335 ⇑P **P 17 47 42.2 +0.1**
baz=30,SNR=14
M17A Scullys Gap (B 30.14 333 ⇓P **P 17 47 43.0 +0.6**
baz=30,SNR=23
DUG Dugway 30.15 329 *e*P **P 17 47 44.1 +1.6**
comp=Z,40nm,1.5s,mb4.8
DUG Dugway 30.15 329 ⇑P **P 17 47 42.9 +0.4**
baz=30
DUG Dugway 30.15 329 P **P 17 47 44.8 +2.3**
DUG *e* pP 17 48 05.8 +3.2
DUG pmax pmax
comp=Z,62nm,1.5s,mb5.0
NOQ North Oquirrh 30.16 330 *e*P **P 17 47 44.2 +1.6**
K20A Yellowstone Ra 30.18 337 ⇓P **P 17 47 43.0 +0.3**
baz=30,SNR=23
P13A Bates Ranch, G 30.23 326 ⇑P **P 17 47 44.2 +1.1**
baz=30,SNR=13
L18A Fontenelle, Gr 30.24 334 ⇑P **P 17 47 44.4 +1.1**
baz=30,SNR=44
R11A Troy Canyon, C 30.33 323 ⇓P **P 17 47 44.3 +0.3**
baz=30,SNR=29
BSC Santa Cruz Isl 30.36 312 ⇓P **P 17 47 43.6 -0.8**
baz=30,SNR=6.0
Q12A Willow Creek R 30.38 325 ⇑P **P 17 47 45.0 +0.5**
baz=30
BINY Binghamton 30.38 25 *e*P **P 17 47 44.7 +0.2**
comp=Z,17nm,0.5s,mb4.9
ARVC Arvin 30.40 315 ⇑P **P 17 47 44.5 -0.2**
baz=30
M16A Huntsville 30.45 332 ⇓P **P 17 47 45.8 +0.7**
baz=30,SNR=9.6
K19A Absolon Red Bu 30.52 337 ⇑P **P 17 47 45.7 0.0**
baz=30,SNR=41
GRAC Grapevine Rang 30.54 319 ⇓P **P 17 47 46.4 +0.5**
baz=30,SNR=32
N15A Stansbury Isla 30.54 330 ⇑P **P 17 47 45.4 -0.5**
baz=30
S10A Tonopah Range, 30.64 321 ⇑P **P 17 47 47.2 +0.3**
baz=30,SNR=34
SBC Santa Barbara 30.65 313 ⇑P **P 17 47 46.4 -0.5**
baz=30
CWC Cottonwood Cre 30.65 318 ⇓P **P 17 47 46.9 -0.1**
baz=30
HWUT Hardware Ranch 30.66 332 *e*P **P 17 47 47.1 +0.2**
comp=Z,145nm,1.6s,mb5.5
BBSR BB Station 30.67 52 *e*P **P 17 47 48.1 +0.9**
comp=Z,304nm,1.3s,mb5.9
BBSR *e*pP pP 17 48 09.9 +2.7
O13A Hicks Ranch, I 30.70 327 ⇓P **P 17 47 48.4 +1.1**
baz=31
Q11A Duckwater 30.71 324 ⇓P **P 17 47 48.3 +0.9**
baz=31,SNR=21
R10A Warm Springs 30.71 322 ⇓P **P 17 47 48.7 +1.2**
baz=31,SNR=9.2
BW06 Boulder Array 30.75 336 *e*P **P 17 47 47.5 -0.2**
BW06 Boulder Array 30.75 336 ⇓P **P 17 47 48.3 +0.6**
baz=31,SNR=25
PDAR Pinedale Array 30.75 336 P **P 17 47 47.6 -0.1**
comp=Z,16nm,0.9s,mb4.8,baz=134,slow=8.5,SNR=69
PDAR pP pP 17 48 06.9 -0.9
comp=Z,9.8nm,1.1s,baz=123,slow=18,SNR=3.7
PDAR PcP PcP 17 50 43.1 -0.3
comp=Z,3.3nm,0.5s,baz=144,slow=5.0,SNR=7.4
PDAR S **S** **17 52 45.5 +1.1**
comp=Z,0.3nm,0.6s,baz=20,slow=4.7,SNR=2.1
PDAR PKiKP PKiKP 17 58 12.7 -1.4
comp=Z,1.2nm,0.5s,baz=109,slow=2.5,SNR=11
PDAR LR LR 18 03 18.0
comp=Z,1µm,20.5s,baz=151,slow=42
PDAR Pinedale Array 30.75 336 P **P 17 47 47.6 -0.1**
PDAR pP pP 17 48 06.9 -0.9
PDAR PcP PcP 17 50 43.1 -0.3
PDAR S **S** **17 52 45.5 +1.1**
BGU Big Grassy Mou 30.82 329 *e*P **P 17 47 50.3 +1.9**
comp=Z,70nm,1.5s,mb5.2
K18A Toltan Ranch, 30.84 335 ⇓P **P 17 47 49.3 +0.8**
baz=31,SNR=83
N14A Grayback Hills 30.84 329 ⇑P **P 17 47 49.3 +0.7**
baz=31
S09A Goldfield 30.90 321 ⇑P **P 17 47 49.4 +0.3**
baz=31,SNR=20
L16A Fish Haven 30.92 333 ⇓P **P 17 47 49.8 +0.5**
baz=31,SNR=9.5
M15A Larsen Ranch, 30.95 331 ⇓P **P 17 47 50.0 +0.5**
baz=31
PKM Peak Mountain 30.96 314 ⇓P **P 17 47 49.4 -0.2**
baz=31,SNR=18
VES Vestal, Richgr 30.97 316 ⇓P **P 17 47 49.7 -0.1**
baz=31
TIN Tinemaha 31.11 319 ⇓P **P 17 47 51.1 0.0**
baz=31
TPH Tonopah 31.12 321 *e*P **P 17 47 52.1 +1.0**
comp=Z,79nm,1.6s,mb5.2
TPH Tonopah 31.12 321 *e*P **P 17 47 52.1 +1.0**
TPH pmax pmax
comp=Z,79nm,1.6s,mb5.2
Q10A Clear Creek Ra 31.12 323 ⇓P **P 17 47 51.7 +0.6**
baz=31,SNR=30
R09A Tonopah 31.14 321 ⇓P **P 17 47 51.9 +0.7**
baz=31,SNR=25
O12A Currie 31.20 327 ⇓P **P 17 47 52.7 +0.9**
baz=31,SNR=21
P11A Circle Ranch, 31.25 325 ⇑P **P 17 47 52.6 +0.4**
baz=31
K17A Gardner Place, 31.30 334 ⇓P **P 17 47 53.1 +0.6**
baz=31,SNR=34
SMMC Simmler 31.30 314 ⇑P **P 17 47 53.2 +0.5**
baz=31,SNR=7.2
J18A Kendall Valley 31.31 336 ⇑P **P 17 47 53.1 +0.5**
baz=31,SNR=97
RCTC Rector, Farmer 31.34 316 ⇑P **P 17 47 53.4 +0.4**
baz=31
L15A Malad City 31.34 331 ⇑P **P 17 47 53.5 +0.5**
baz=31,SNR=50
HVU Hansel Valley 31.35 331 *e*P **P 17 47 54.1 +1.1**
comp=Z,31nm,1.0s,mb5.0
HVU Hansel Valley 31.35 331 *e*P **P 17 47 54.1 +1.1**
HVU pmax pmax
comp=Z,31nm,1.0s,mb5.0
AHID Auburn Hatcher 31.38 334 *e*P **P 17 47 53.7 +0.4**
comp=Z,291nm,1.5s,mb5.8
M14A Sheep Mountain 31.41 330 ⇓P **P 17 47 54.6 +1.0**
baz=31,SNR=22
SADO Sadowa 31.47 19 P **P 17 47 52.2 -1.7**
comp=Z,6.0nm,0.5s,mb4.6,baz=242,slow=6.5,SNR=8.4
SADO PcP PcP 17 50 44.7 -0.6
comp=Z,7.6nm,0.5s,baz=285,slow=4.0,SNR=4.4
SADO S **S** **17 52 51.7 -3.9**
comp=Z,7.5nm,0.8s,baz=299,slow=23,SNR=2.2
SADO LR LR 18 02 14.2
comp=Z,2µm,21.4s,baz=204,slow=39
SADO Sadowa 31.47 19 P **P 17 47 52.2 -1.7**
SADO PcP PcP 17 50 44.7 -0.6
SADO S **S** **17 52 51.7 -3.9**
SADO LR LR 18 02 14.2
V05C Boulder Hill, 31.54 315 ⇓P **P 17 47 54.9 +0.1**
baz=31
Q09A Carvers 31.59 322 ⇑P **P 17 47 55.9 +0.7**
baz=32
O11A Cowboy Ranch, 31.60 326 ⇓P **P 17 47 56.0 +0.8**
baz=32,SNR=18
I18A Diamond G Ranc 31.64 336 ⇑P **P 17 47 56.1 +0.6**
baz=32,SNR=68
K16A Soda Springs 31.65 333 ⇑P **P 17 47 56.1 +0.4**
baz=32,SNR=23
P10A Eureka 31.69 324 ⇑P **P 17 47 56.7 +0.6**
baz=32,SNR=8.1
J17A Brown Place, J 31.71 335 ⇑P **P 17 47 56.9 +0.7**
baz=32,SNR=78
L14A Malta 31.77 331 ⇓P **P 17 47 57.6 +0.9**
baz=32,SNR=39
REDW Red Top Meadow 31.77 335 *e*P **P 17 47 57.4 +0.7**
comp=Z,605nm,1.3s,mb6.2
N12A Clover Valley, 31.78 327 ⇑P **P 17 47 57.0 +0.2**
baz=32,SNR=10
ELK Elko 31.81 327 *e*P **P 17 47 58.1 +1.1**
comp=Z,53nm,1.5s,mb5.0
ELK Elko 31.81 327 *e*P **P 17 47 58.1 +1.0**
ELK pmax pmax
comp=Z,53nm,1.5s
SNOW Snow King Moun 31.81 335 *e*P **P 17 47 58.1 +1.0**
comp=Z,551nm,1.0s,mb6.2
R08A Mina 31.83 321 ⇓P **P 17 47 57.6 +0.3**
baz=32
MLAC Mammoth Lakes 31.85 319 ⇑P **P 17 47 57.6 +0.2**
baz=32
LOHW Long Hollow 31.88 335 *e*P **P 17 47 58.3 +0.7**
comp=Z,276nm,1.3s,mb5.8
TPAW Teton Pass 31.91 335 *e*P **P 17 47 58.8 +0.8**
comp=Z,292nm,1.1s,mb5.9
U05C Westside ANR, 31.94 316 ⇓P **P 17 47 58.0 -0.3**
baz=32
K15A Arbon 31.95 332 ⇓P **P 17 47 59.0 +0.8**
baz=32,SNR=49
RRI2 Red Ridge 31.95 334 *e*P **P 17 47 58.8 +0.5**
comp=Z,554nm,1.4s,mb6.1
NVAR Mina Array Bea 32.00 321 P **P 17 47 59.7 +0.9**
comp=Z,27nm,0.7s,mb5.1,baz=136,slow=8.5,SNR=179
NVAR pP pP 17 48 17.0 -2.0
comp=Z,43nm,0.9s,baz=140,slow=6.7,SNR=12
NVAR PcP PcP 17 50 46.7 -0.1
comp=Z,3.1nm,0.4s,baz=126,slow=2.8,SNR=6.0
NVAR Mina Array Bea 32.00 321 P **P 17 47 59.7 +0.9**
NVAR pP pP 17 48 17.0 -2.0
NVAR PcP PcP 17 50 46.7 -0.1
J16A Bone 32.02 334 ⇑P **P 17 47 59.4 +0.6**
baz=32,SNR=40
P09A Austin 32.03 323 ⇓P **P 17 47 59.4 +0.4**
baz=32
T06C Millerton Lake 32.04 317 ⇓P **P 17 47 58.5 -0.8**
baz=32,SNR=7.7
MOOW Moose Ponds 32.05 335 *e*P **P 17 47 59.5 +0.4**
comp=Z,301nm,1.6s,mb5.8
Q08A Gabbs 32.05 322 ⇑P **P 17 48 00.3 +1.1**
baz=32,SNR=7.4
DCID1 Drake Creek 32.10 335 *e*P **P 17 48 00.7 +1.1**
comp=Z,289nm,1.3s,mb5.8
I17A Pilgram Creek 32.12 336 ⇑P **P 17 48 01.0 +1.2**
baz=32,SNR=78
N11A Elko Archery C 32.12 326 ⇑P **P 17 48 00.5 +0.7**
baz=32
M12A Wells 32.13 328 ⇑P **P 17 48 00.7 +0.8**
baz=32,SNR=16
K14A Jones Ranch, D 32.13 331 ⇑P **P 17 48 00.8 +0.9**
baz=32,SNR=25
L13A Double Diamond 32.15 330 ⇑P **P 17 48 00.4 +0.4**
baz=32
O10A Cortez Mining, 32.17 325 ⇑P **P 17 48 00.7 +0.4**
baz=32,SNR=9.7
IMW Indian Meadow 32.25 335 *e*P **P 17 48 01.3 +0.5**
comp=Z,140nm,1.1s,mb5.6
U04C Hernandez Rese 32.40 315 ⇓P **P 17 48 02.2 -0.2**
baz=32,SNR=13
EYMN Ely 32.43 2 *e*P **P 17 48 00.0 -2.4**
comp=Z,31nm,0.5s,mb5.3
I16A Newdale 32.45 335 ⇑P **P 17 48 03.4 +0.7**
baz=32,SNR=32
J15A Blackfoot 32.47 333 ⇓P **P 17 48 03.6 +0.8**
baz=32,SNR=48
N10A Dunphy 32.47 325 ⇑P **P 17 48 03.7 +0.8**
baz=32
O09A Fish Creek Ran 32.48 324 ⇑P **P 17 48 04.3 +1.4**
baz=32,SNR=11
H17A Grant Village 32.52 336 ⇑P **P 17 48 04.7 +1.5**
baz=32,SNR=54
V03C Hunter Liggett 32.53 314 ⇓P **P 17 48 03.7 +0.2**
baz=32,SNR=7.9
NCB Newcomb 32.57 25 *e*P **P 17 48 02.1 -1.6**
comp=Z,7.7nm,0.5s,mb4.8
LKWY Lake 32.59 336 *e*P **P 17 48 05.5 +1.7**
comp=Z,36nm,0.6s,mb5.4
LKWY Lake 32.59 336 *e*P **P 17 48 05.6 +1.7**
LKWY pmax pmax
comp=Z,36nm,0.6s,mb5.4
M11A Holland Ranch, 32.59 327 ⇑P **P 17 48 04.1 +0.2**
baz=32,SNR=11
Q07A Schurz 32.63 321 ⇑P **P 17 48 04.8 +0.6**
baz=32
K13A Stover Farm, H 32.64 330 ⇑P **P 17 48 05.3 +1.0**
baz=32,SNR=6.1
S05C Merced 32.65 317 ⇑P **P 17 48 04.1 -0.4**
baz=32
RLMT Red Lodge 32.65 338 *e*P **P 17 48 04.6 +0.2**
comp=Z,53nm,0.6s,mb5.5
RLMT Red Lodge 32.65 338 ⇑P **P 17 48 04.9 +0.5**
baz=32,SNR=91
YFT Old Faithful 32.67 336 *e*P **P 17 48 06.5 +1.9**
comp=Z,278nm,1.4s,mb5.9
BMN Battle Mountai 32.67 324 *e*P **P 17 48 05.9 +1.2**
comp=Z,199nm,2.0s,mb5.6
BMN *e*pP pP 17 48 24.9 +0.1
BMN Battle Mountai 32.67 324 *e*P **P 17 48 05.9 +1.3**
BMN *e**PP pP 17 48 24.9 +0.1
BMN pmax pmax
comp=Z,199nm,2.0s,mb5.6
P08A Dixie Valley 32.67 323 ⇑P **P 17 48 04.6 0.0**
baz=32
R06C Coleville 32.77 320 ⇑P **P 17 48 05.6 0.0**
baz=33,SNR=12
YNR Norris Junctio 32.83 336 *e*P **P 17 48 07.1 +1.2**
comp=Z,114nm,1.2s,mb5.6
AGMN Agassiz Refuge 32.85 356 *e*P **P 17 48 04.3 -1.8**
comp=Z,71nm,0.9s,mb5.5
J14A Carey 32.90 332 ⇑P **P 17 48 07.4 +0.9**
baz=33,SNR=19
YMR Madison River 32.90 336 *e*P **P 17 48 07.8 +1.2**
comp=Z,409nm,1.3s,mb6.1
G18A Lazy EL Ranch, 32.92 338 ⇓P **P 17 48 07.2 +0.5**
baz=33,SNR=129
LONY Lake Ozonia 32.96 24 *e*P **P 17 48 05.2 -1.9**
comp=Z,8.5nm,0.6s,mb4.8
I15A Monteview 32.98 334 ⇓P **P 17 48 08.0 +0.8**
baz=33,SNR=13
K12A Draper Farm, C 33.02 330 ⇓P **P 17 48 08.4 +0.7**
baz=33
MDV Middlebury 33.04 27 *e*P **P 17 48 09.0 +1.2**
comp=Z,2µm,0.4s
H16A Russell Place, 33.04 336 ⇓P **P 17 48 08.4 +0.6**
baz=33,SNR=64
M10A I.L. Ranch, Tu 33.05 326 ⇓P **P 17 48 08.8 +0.9**
baz=33,SNR=17
P07A Fallon 33.06 322 ⇓P **P 17 48 08.2 +0.2**
baz=33
SAO San Andreas Ge 33.07 315 *e*P **P 17 48 08.0 -0.2**
comp=Z,102nm,1.8s,mb5.3
SAO San Andreas Ge 33.07 315 *e*P **P 17 48 08.0 -0.2**
SAO pmax pmax
comp=Z,102nm,1.8s,mb5.3
LAO LASA Array 33.07 343 *e*P **P 17 48 07.4 -0.7**
comp=Z,556nm,1.5s,mb6.2
CMB Columbia Colle 33.08 318 *e*P **P 17 48 07.7 -0.5**
comp=Z,54nm,1.4s,mb5.2
CMB Columbia Colle 33.08 318 *e*P **P 17 48 07.7 -0.5**
CMB pmax pmax
comp=Z,54nm,1.4s,mb5.2

L11A **Cat Creek Ranc** 33.10 328 ⇓P P 17 48 08.9 +0.5
baz=33,SNR=22
O08A **Rochester Mine** 33.11 323 ⇓P P 17 48 08.7 +0.2
baz=33
N09A **Rock Creek Ran** 33.12 325 ⇓P P 17 48 09.1 +0.5
baz=33,SNR=6.9
QLMT **Earthquake Lak** 33.22 336 eP P 17 48 10.6 +1.3
comp=Z,128nm,1.4s,mb5.6
J13A **Cove Ranch, Pi** 33.26 331 ⇓P P 17 48 10.5 +0.9
baz=33,SNR=20
I14A **Mackay** 33.34 333 ⇑P P 17 48 10.9 +0.5
baz=33,SNR=55
G17A **Pierce Place,** 33.36 337 ⇓P P 17 48 11.1 +0.6
baz=33,SNR=41
GCMT **Greycliff** 33.37 338 eP P 17 48 10.8 +0.2
comp=Z,74nm,0.8s,mb5.6
L10A **Juniper Basin** 33.41 327 ⇑P P 17 48 11.8 +0.8
baz=33,SNR=11
N08A **GE Springer Mi** 33.42 324 ⇑P P 17 48 11.6 +0.5
baz=33,SNR=8.5
WCN **Washoe City** 33.43 320 ⇑P P 17 48 11.8 +0.5
baz=33,SNR=5.3
O07A **Toulon** 33.44 322 ⇓P P 17 48 11.9 +0.6
baz=33,SNR=11
PAHR **Pah Rah Range** 33.46 321 eP P 17 48 12.0 +0.5
comp=Z,50nm,1.3s,mb5.2
M09A **Marrel Ranch,** 33.47 325 ⇑P P 17 48 13.0 +1.4
baz=33,SNR=5.8
F18A **Big Timber** 33.48 339 ⇑P P 17 48 11.9 +0.2
baz=33,SNR=93
HLID **Hailey** 33.49 331 eP P 17 48 12.3 +0.6
comp=Z,20nm,0.8s,mb5.0
HLID **Hailey** 33.49 331 ⇓P P 17 48 12.8 +1.1
baz=33,SNR=33
H15A **Lima** 33.54 334 ⇑P P 17 48 13.4 +1.3
baz=33,SNR=89
R04C **Big Horse Ranc** 33.56 318 ⇓P P 17 48 12.9 +0.5
baz=33,SNR=5.4
J12A **Stokes Ranch,** 33.58 330 ⇑P P 17 48 13.3 +0.8
baz=34,SNR=17
I13A **Wildhorse Cree** 33.63 332 ⇑P P 17 48 13.9 +1.0
baz=34,SNR=49
K11A **Parker Ranch,** 33.69 329 ⇑P P 17 48 13.7 +0.3
baz=34
G16A **Moss Hill, Enn** 33.70 336 ⇓P P 17 48 14.3 +0.8
baz=34,SNR=29
P06A **Stead Airport,** 33.75 321 ⇓P P 17 48 14.1 0.0
baz=34
MCMT **McKenzie Canyo** 33.80 334 eP P 17 48 16.0 +1.6
comp=Z,140nm,1.3s,mb5.6
F17A **Fitzpatrick Pl** 33.82 338 ⇑P P 17 48 15.5 +1.0
baz=34,SNR=125
H14A **Leadore** 33.85 333 ⇓P P 17 48 15.9 +1.1
baz=34,SNR=71
N07B **Gerlach** 33.90 323 ⇑P P 17 48 15.5 +0.2
baz=34,SNR=12
G15A **Dillon** 33.92 335 ⇑P P 17 48 16.5 +1.0
baz=34,SNR=82
BOZ **Bozeman (W)** 33.97 336 eP P 17 48 16.2 +0.3
comp=Z,123nm,1.2s,mb5.6
BOZ **Bozeman (W)** 33.97 336 ⇓P P 17 48 16.5 +0.6
baz=34,SNR=84
BOZ **Bozeman (W)** 33.97 336 eP P 17 48 16.2 +0.3
BOZ pmax pmax
comp=Z,123nm,1.2s,mb5.6
L09A **Wilkinson Ranc** 34.00 326 ⇓P P 17 48 16.3 +0.1
baz=34
M08A **Happy Creek Ra** 34.00 325 ⇓P P 17 48 16.8 +0.6
baz=34,SNR=7.7
I12A **Atlanta** 34.01 331 ⇓P P 17 48 17.0 +0.8
baz=34,SNR=37
O06A **Flanigan** 34.01 322 ⇑P P 17 48 16.9 +0.7
baz=34,SNR=24
MFID **Camas Ranch** 34.06 330 ⇓P P 17 48 18.7 +2.0
baz=34,SNR=10
F16A **Kennard Place,** 34.09 336 ⇓P P 17 48 17.4 +0.6
baz=34,SNR=52
K10A **MacKenzie Ranc** 34.12 328 ⇓P P 17 48 17.7 +0.5
baz=34
E18A **Harlowton** 34.12 339 ⇑P P 17 48 17.7 +0.5
baz=34,SNR=64
DLMT **Dillon** 34.12 335 eP P 17 48 18.1 +0.9
comp=Z,292nm,1.3s,mb6.0
BEKR **Beckwourth** 34.15 321 ⇓P P 17 48 17.7 +0.3
baz=34,SNR=22
H13A **Challis** 34.20 332 ⇑P P 17 48 18.4 +0.6
baz=34,SNR=123
DGMT **Dagmar** 34.22 347 eP P 17 48 17.7 -0.3
comp=Z,158nm,0.8s,mb5.9
DGMT **Dagmar** 34.22 347 ⇓P P 17 48 18.2 +0.2
baz=34,SNR=17
E17A **Martinsdale** 34.37 338 ⇓P P 17 48 19.6 +0.3
baz=34,SNR=43
N06A **Buffalo Meadow** 34.38 322 ⇓P P 17 48 19.4 -0.1
baz=34,SNR=40
G14A **Jackson** 34.39 334 ⇑P P 17 48 19.9 +0.4
baz=34,SNR=28
M07A **Soldier Meadow** 34.41 324 ⇑P P 17 48 18.8 -0.9
baz=34
H12A **Diamond D Ranc** 34.46 332 ⇓P P 17 48 20.7 +0.6
baz=34,SNR=87
Q03C **Winters** 34.47 318 ⇑P P 17 48 20.0 -0.3
baz=34
F15A **Butte** 34.48 336 ⇑P P 17 48 20.6 +0.4
baz=34,SNR=118
L08A **Fields** 34.49 326 ⇓P P 17 48 20.8 +0.5
baz=34,SNR=20
I11A **Placerville** 34.49 330 ⇓P P 17 48 20.7 +0.3
baz=34,SNR=61
K09A **Rome** 34.51 327 ⇑P P 17 48 20.9 +0.4
baz=34,SNR=33
OHCM **Honcut** 34.53 319 eP P 17 48 21.3 +0.5
OHCM epP pP 17 48 41.1 0.0
J10A **Berg Farm, Mel** 34.53 329 ⇑P P 17 48 21.4 +0.7
baz=34
G13A **Cobalt** 34.60 333 ⇑P P 17 48 21.8 +0.5
baz=34,SNR=59
D18A **Linhart Farms,** 34.63 340 ⇓P P 17 48 22.3 +0.7
baz=34,SNR=41
E16A **East Helena** 34.73 337 ⇑P P 17 48 23.0 +0.6
baz=35,SNR=127
NSHM **Saint Helena R** 34.79 317 eP P 17 48 23.6 +0.5
ULM **Lac du Bonnet** 34.80 357 P P 17 48 20.9 -2.0
comp=Z,17nm,0.5s,mb5.2,baz=173,slow=9.8,SNR=20
ULM PcP PcP 17 50 54.6 +0.1
comp=Z,22nm,0.4s,baz=190,slow=3.2,SNR=8.1
ULM LR LR 18 06 08.0
comp=Z,787nm,20.6s,baz=178,slow=42
ULM **Lac du Bonnet** 34.80 357 eP P 17 48 20.0 -2.9
comp=Z,54nm,1.0s,mb5.3
F14A **Wisdom** 34.81 335 ⇓P P 17 48 23.5 +0.4
baz=35,SNR=21
WVOR **Wild Horse Val** 34.81 326 eP P 17 48 24.0 +0.8
comp=Z,160nm,1.6s,mb5.6
WVOR **Wild Horse Val** 34.81 326 eP P 17 48 24.0 +0.8
WVOR pmax pmax
comp=Z,160nm,1.6s,mb5.6
O04C **Chester** 34.87 321 ⇓P P 17 48 23.4 -0.2
baz=35
D17A **Six Diamond Ra** 34.90 339 ⇓P P 17 48 23.9 +0.1
baz=35,SNR=142
L07A **Adell** 34.92 325 ⇓P P 17 48 24.2 +0.1
baz=35,SNR=21
K08A **Mann Creek Ran** 34.93 326 ⇑P P 17 48 24.7 +0.5
baz=35,SNR=26
HRY **Holter Researc** 34.94 337 eP P 17 48 24.6 +0.3
comp=Z,67nm,0.6s,mb5.7
J09A **Fry Pan Ranch,** 34.98 328 ⇑P P 17 48 25.2 +0.6
baz=35,SNR=12
E15A **Deer Lodge** 35.01 336 ⇓P P 17 48 25.1 +0.3
baz=35,SNR=45
I10A **Payette** 35.03 329 ⇓P P 17 48 24.3 -0.7
baz=35
D16A **Dana Ranch, Ca** 35.10 338 ⇓P P 17 48 25.9 +0.3
baz=35,SNR=27
H11A **Donnelly** 35.11 331 ⇓P P 17 48 26.1 +0.4
baz=35,SNR=36
F13A **Darby** 35.19 334 ⇑P P 17 48 26.7 +0.2
baz=35,SNR=53
K07A **Rock Creek Ran** 35.32 326 ⇑P P 17 48 27.7 +0.2
baz=35,SNR=26
C17A **Wharram Farm,** 35.34 339 ⇑P P 17 48 28.0 +0.3
baz=35,SNR=106
LBCM **Butte Creek Ri** 35.34 321 P P 17 48 28.1 +0.4
EGMT **Eagleton** 35.34 340 eP P 17 48 27.8 +0.2
comp=Z,497nm,1.2s,mb6.2
EGMT **Eagleton** 35.34 340 ⇓P P 17 48 28.2 +0.6
baz=35,SNR=32

E14A **Clinton** 35.35 335 ⇑P P 17 48 28.1 +0.4
baz=35,SNR=35
J08A **Circle Bar Ran** 35.36 327 ⇓P P 17 48 28.2 +0.4
baz=35,SNR=33
H10A **Noah's Angus R** 35.37 330 ⇓P P 17 48 28.3 +0.3
baz=35,SNR=12
MOD **Modoc** 35.39 324 eP P 17 48 27.5 -0.6
comp=Z,100nm,1.6s,mb5.4
I09A **Lost Marbles R** 35.41 328 ⇑P P 17 48 28.4 0.0
baz=35
D15A **Lincoln** 35.48 337 ⇓P P 17 48 29.1 +0.3
baz=35,SNR=49
F12A **Elk City** 35.57 333 ⇓P P 17 48 30.3 +0.7
baz=36,SNR=147
E13A **Victor** 35.65 334 ⇑P P 17 48 30.6 +0.3
baz=36,SNR=60
CHMT **Chamberlain Mo** 35.66 336 eP P 17 48 30.2 -0.1
comp=Z,64nm,1.2s,mb5.4
B18A **Beardsley Farm** 35.67 341 ⇓P P 17 48 30.5 0.0
baz=36,SNR=94
G11A **Walters Elk Ra** 35.75 331 ⇓P P 17 48 31.5 +0.3
baz=36,SNR=78
I08A **Drewsey** 35.79 328 ⇑P P 17 48 32.0 +0.4
baz=36
J07A **Hines** 35.81 326 ⇑P P 17 48 30.9 -0.9
baz=36
C16A **Fuhringer Ranc** 35.83 338 ⇓P P 17 48 32.3 +0.5
baz=36,SNR=99
BMO **Blue Mountains** 35.84 330 eP P 17 48 31.6 -0.3
comp=Z,46nm,1.4s,mb5.2
MSO **Missoula** 35.86 335 eP P 17 48 32.1 0.0
comp=Z,148nm,1.5s,mb5.7
H09A **Durkee** 35.88 329 ⇑P P 17 48 33.2 +0.9
baz=36
D14A **Greenough** 35.89 336 ⇑P P 17 48 32.0 -0.3
baz=36,SNR=33
WDC **Whiskeytown Da** 35.91 320 eP P 17 48 30.4 -2.3
WDC epP pP 17 48 49.3 -3.7
B17A **L&G Farms, Che** 35.92 340 ⇑P P 17 48 32.5 0.0
baz=36,SNR=34
KCPM **Cahto Peak** 36.07 318 eP P 17 48 35.1 +1.1
comp=Z,256nm,2.3s,mb5.8
KIPM **Iron Peak** 36.07 318 eP P 17 48 34.7 +0.7
comp=Z,47nm,1.1s,mb5.3
G10A **Bishop Farm, J** 36.07 331 ⇑P P 17 48 33.5 -0.4
baz=36,SNR=8.0
C15A **Salmond Ranch,** 36.12 337 ⇓P P 17 48 34.6 +0.3
baz=36,SNR=69
J06A **Christmas Vall** 36.19 325 ⇓P P 17 48 34.2 -0.8
baz=36
E12A **Beaver Dam Sad** 36.22 333 ⇓P P 17 48 34.8 -0.4
baz=36,SNR=45
K05A **Summer Lake** 36.25 324 ⇓P P 17 48 34.3 -1.2
baz=36
H08A **Prairie City** 36.27 328 ⇑P P 17 48 35.3 -0.4
baz=36,SNR=15
D13A **Huson** 36.29 335 ⇑P P 17 48 35.7 0.0
baz=36,SNR=50
B16A **M & M Farms, S** 36.33 339 ⇑P P 17 48 36.1 0.0
baz=36,SNR=27
G09A **Cove** 36.38 330 ⇑P P 17 48 36.1 -0.5
baz=36,SNR=13
I07A **Izee** 36.40 327 ⇑P P 17 48 36.3 -0.4
baz=36,SNR=10
A17A **Triple J Farms** 36.45 340 ⇑P P 17 48 36.8 -0.3
baz=36,SNR=44
B15A **Bradely Ranch,** 36.55 338 ⇑P P 17 48 38.2 +0.2
baz=36,SNR=13
F10A **Beach Ranch, E** 36.63 331 ⇓P P 17 48 38.6 -0.1
baz=36,SNR=63
I06A **Prineville** 36.68 326 ⇑P P 17 48 38.6 -0.5
baz=37
YBH **Yreka Blue Hor** 36.70 321 S S 17 54 17.3 +1.0
comp=Z,0.8nm,0.6s,baz=50,slow=10,SNR=1.6
YBH LR LR 18 04 25.5
comp=Z,1μm,20.5s,baz=146,slow=37
YBH **Yreka Blue Hor** 36.70 321 eP P 17 48 37.5 -1.8
comp=Z,8.3nm,0.6s,mb4.8
YBH **Yreka Blue Hor** 36.70 321 eP P 17 48 37.5 -1.8
YBH pmax pmax
comp=Z,8.0nm,0.6s
A16A **West Butte Ran** 36.75 339 ⇑P P 17 48 39.6 0.0
baz=37,SNR=26
F09A **S2 Ranch, Elgi** 36.75 330 ⇓P P 17 48 39.6 -0.1
baz=37,SNR=7.8
H07A **Lands Inn, Kim** 36.78 328 ⇓P P 17 48 39.5 -0.5
baz=37,SNR=22
C13A **Hot Springs** 36.80 335 ⇑P P 17 48 39.9 -0.2
baz=37,SNR=30
B14A **Marquette Ranc** 36.86 337 ⇑P P 17 48 40.1 -0.4
baz=37,SNR=32
E10A **Myers Farm, Un** 36.96 332 ⇑P P 17 48 40.4 -1.0
baz=37
G08A **Pilot Rock** 36.96 329 ⇑P P 17 48 41.6 +0.1
baz=37,SNR=6.0
D11A **Klaveano Farm,** 37.04 333 ⇑P P 17 48 41.9 -0.3
baz=37,SNR=7.4
A15A **Johnson Ranch,** 37.17 338 ⇑P P 17 48 43.3 +0.1
baz=37,SNR=98
C12B **Naegeli Ranch,** 37.19 335 ⇓P P 17 48 42.8 -0.6
baz=37,SNR=32
F08A **Pendleton** 37.24 330 ⇑P P 17 48 43.5 -0.3
baz=37
H06A **Lindquist Farm** 37.28 327 ⇓P P 17 48 43.3 -0.9
baz=37,SNR=8.8
KRMB **Red Mountain** 37.30 320 eP P 17 48 43.9 -0.5
comp=Z,89nm,1.7s,mb5.4
G07A **Ruggs Ranch, H** 37.30 328 ⇓P P 17 48 43.4 -1.0
baz=37
B13A **Whitefish** 37.32 336 ⇑P P 17 48 43.8 -0.7
baz=37,SNR=42
HUMO **Hull Mountain** 37.37 322 eP P 17 48 43.4 -1.6
comp=Z,10nm,1.2s,mb4.6
I05A **Bend** 37.39 326 ⇓P P 17 48 44.5 -0.7
baz=37
A14A **Double T Ranch** 37.42 338 ⇑P P 17 48 45.0 -0.3
baz=37,SNR=78
E09A **Wood Farm, Sta** 37.46 331 ⇑P P 17 48 45.3 -0.3
baz=37,SNR=13
D10A **Wagner Farm, O** 37.46 332 ⇓P P 17 48 45.3 -0.4
baz=37,SNR=13
L02A **Cave Junction** 37.48 321 ⇓P P 17 48 45.1 -0.9
baz=37
WALA **Waterton Lakes** 37.67 337 eP P 17 48 47.3 -0.1
comp=Z,189nm,1.5s,mb5.7
H05A **Madras** 37.69 326 ⇑P P 17 48 46.9 -0.8
baz=38
G06A **Carlson Farm,** 37.78 328 ⇑P P 17 48 48.0 -0.4
baz=38
K02A **Glendale** 37.78 322 ⇓P P 17 48 48.1 -0.4
baz=38
IRO **Indian Ridge** 37.83 325 P P 17 48 48.9 0.0
B12A **Libby** 37.84 335 ⇑P P 17 48 48.5 -0.4
baz=38,SNR=33
E08A **Dider Farm, El** 37.87 330 ⇓P P 17 48 48.1 -1.1
baz=38
FRIS **Frissel Point** 37.88 325 P P 17 48 50.0 +0.7
D09A **Jones Farm, Ri** 37.94 332 ⇓P P 17 48 49.3 -0.5
baz=38,SNR=15
HAWA **Hanford** 38.03 330 eP P 17 48 49.4 -1.1
comp=Z,6.3nm,0.6s,mb4.6
C10A **Spilker Farm,** 38.06 333 ⇑P P 17 48 50.3 -0.4
baz=38
B11A **Sandpoint** 38.14 335 ⇓P P 17 48 50.5 -0.9
baz=38,SNR=46
G05A **Wamic** 38.14 327 ⇓P P 17 48 51.0 -0.4
baz=38,SNR=5.6
J02A **Umpqua** 38.19 323 ⇓P P 17 48 51.2 -0.6
baz=38,SNR=5.7
F06A **Goldendale** 38.21 328 ⇑P P 17 48 52.0 0.0
baz=38,SNR=11
D08A **Wollman Farm,** 38.22 331 ⇑P P 17 48 52.1 0.0
baz=38,SNR=6.7
H04A **Detroit Lake** 38.23 326 ⇓P P 17 48 52.0 -0.2
baz=38,SNR=10
A12A **Yaak River Ran** 38.24 336 ⇓P P 17 48 52.5 +0.3
baz=38,SNR=28
E07A **Sunnyside** 38.30 330 ⇑P P 17 48 52.8 0.0
baz=38
NEW **Newport** 38.32 334 eP P 17 48 52.2 -0.7
comp=Z,41nm,1.2s,mb5.1
NEW **Newport** 38.32 334 eP P 17 48 52.2 -0.7
NEW pmax pmax
comp=Z,41nm,1.2s
KEBM **Edson Butte** 38.34 322 eP P 17 48 53.6 +0.4
comp=Z,64nm,1.0s,mb5.4
HOOD **Mount Hood Mea** 38.37 327 eP P 17 48 54.1 +0.8
comp=Z,85nm,0.9s,mb5.6

OD2 **Odessa Site #2** 38.37 332 P P 17 48 53.6 +0.3
K01A **Sixes** 38.38 322 ⇑P P 17 48 53.8 +0.2
baz=38
I03A **Eugene** 38.39 324 ⇑P P 17 48 53.4 -0.1
baz=38,SNR=8.5
B10A **Chitwood Farm,** 38.39 334 ⇑P P 17 48 54.0 +0.5
baz=38
C09A **Chrisman Ranch** 38.47 332 ⇑P P 17 48 54.4 +0.2
baz=38
VLL **Laurance Lake** 38.47 327 P P 17 48 56.0 +1.8
A11A **Hall Mountain,** 38.54 335 ⇑P P 17 48 55.5 +0.7
baz=38,SNR=36
F05A **White Salmon** 38.64 328 ⇑P P 17 48 56.2 +0.6
baz=38,SNR=9.5
I02A **Mapleton** 38.72 324 ⇓P P 17 48 56.2 -0.1
baz=39,SNR=5.3
G04A **Mulino** 38.73 326 ⇑P P 17 48 56.3 0.0
baz=39
C08A **Higginbotham F** 38.81 332 ⇑P P 17 48 57.3 +0.3
baz=39,SNR=20
D07A **Quincy** 38.81 330 ⇓P P 17 48 57.0 -0.1
baz=39
E06A **Yakima** 38.85 329 ⇓P P 17 48 57.6 +0.2
baz=39,SNR=12
B09A **Rice** 38.88 333 ⇓P P 17 48 57.9 +0.3
baz=39,SNR=24
EBG **Ellensburg** 38.90 330 P P 17 48 58.5 +0.7
A10A **Northport** 39.06 334 ⇑P P 17 48 58.6 -0.4
baz=39,SNR=7.7
F04A **Amboy** 39.17 327 ⇓P P 17 49 00.0 0.0
baz=39
C07A **Waterville** 39.21 331 ⇓P P 17 49 00.1 -0.2
baz=39,SNR=13
H02A **Toledo** 39.23 324 ⇓P P 17 49 01.0 +0.4
baz=39
D06A **Cle Elum** 39.23 330 ⇑P P 17 49 00.2 -0.4
baz=39
G03A **Yamhill** 39.23 326 ⇓P P 17 49 00.5 -0.1
baz=39,SNR=8.5
E05A **Randle** 39.25 328 ⇓P P 17 49 00.6 -0.1
baz=39
ETW **Entiat** 39.28 331 eP P 17 49 01.4 +0.5
comp=Z,167nm,1.6s,mb5.6
B08A **Colville Reser** 39.36 332 ⇓P P 17 49 01.4 -0.2
baz=39,SNR=6.6
LON **Longmire** 39.41 328 eP P 17 49 01.8 -0.2
comp=Z,14nm,0.7s,mb4.9
LON **Longmire** 39.41 328 eP P 17 49 01.8 -0.2
LON pmax pmax
comp=Z,14nm,0.7s,mb4.9
HEBO **Mount Hebo** 39.43 325 eP P 17 49 03.0 +0.8
A09A **Danville** 39.49 333 ⇓P P 17 49 03.0 +0.3
baz=39,SNR=12
E04A **Onalaska** 39.77 328 ⇑P P 17 49 05.0 0.0
baz=40
A08A **Turner Farm, O** 39.77 333 ⇑P P 17 49 04.3 -0.7
baz=40,SNR=6.3
B07A **Winthrop** 39.79 332 ⇑P P 17 49 05.4 +0.2
baz=40
D05A **Enumclaw** 39.79 329 ⇑P P 17 49 05.0 -0.3
baz=40
FFC **Flin Flon** 39.83 352 P P 17 49 05.4 0.0
comp=Z,385nm,0.6s,mb6.4,SNR=21
FFC **Flin Flon** 39.83 352 eP P 17 49 04.4 -1.0
comp=Z,164nm,1.4s,mb5.7
FFC **Flin Flon** 39.83 352 eP P 17 49 04.4 -1.0
FFC pmax pmax
comp=Z,164nm,1.4s,mb5.7
C05A **Tolt Reservoir** 39.99 330 ⇑P P 17 49 06.8 -0.1
baz=40
E03A **Lebam** 40.17 327 ⇑P P 17 49 08.3 0.0
baz=40
A07A **Ashnola River,** 40.34 332 ⇑P P 17 49 09.9 +0.2
baz=40,SNR=14
RPW **Rockport** 40.44 331 eP P 17 49 09.6 -0.9
comp=Z,5.9nm,0.5s,mb4.7
JCW **Jim Creek** 40.46 330 eP P 17 49 11.4 +0.7
B06A **Marblemount** 40.47 331 ⇓P P 17 49 10.3 -0.5
baz=40
B05A **Bryant** 40.59 330 ⇓P P 17 49 11.4 -0.4
baz=40
C04A **Brinnon** 40.64 329 ⇑P P 17 49 12.2 0.0
baz=40,SNR=7.2
D03A **Wishkah Elem.** 40.65 327 ⇑P P 17 49 12.5 +0.2
baz=40
A06A **Chilliwack** 40.88 331 ⇓P P 17 49 14.5 +0.4
baz=41
NLWA **Neilton Lookou** 40.88 328 eP P 17 49 14.4 +0.2
comp=Z,32nm,1.3s,mb5.0
NLWA **Neilton Lookou** 40.88 328 ⇑P P 17 49 14.5 +0.3
baz=41
EDM **Edmonton** 40.99 341 eP P 17 49 14.3 -0.7
A05A **Maple Falls** 41.09 331 ⇑P P 17 49 16.3 +0.4
baz=41
B04A **Port Angeles** 41.14 329 ⇑P P 17 49 16.1 -0.1
baz=41
A04A **Legoe Bay, Lum** 41.19 330 ⇓P P 17 49 16.7 0.0
baz=41
FCC **Fort Churchill** 43.25 359 eP P 17 49 31.9 -1.3
comp=Z,27nm,0.5s,mb5.2
FCC **Fort Churchill** 43.25 359 eP P 17 49 32.0 -1.3
FCC pmax pmax
comp=Z,27nm,0.5s,mb5.2
SCHQ **Schefferville** 44.19 21 P P 17 49 39.4 -1.4
comp=Z,5.4nm,0.4s,mb4.6,baz=239,slow=6.3,SNR=14
SCHQ PcP PcP 17 51 24.5 +0.3
comp=Z,23nm,0.5s,baz=239,slow=3.5,SNR=14
SCHQ S S 17 56 06.0 -1.5
comp=Z,6.1nm,0.9s,baz=271,slow=16,SNR=1.9
SCHQ LR LR 18 08 57.5
comp=Z,3μm,21.9s,baz=228,slow=37
SCHQ **Schefferville** 44.19 21 P P 17 49 39.4 -1.4
SCHQ PcP PcP 17 51 24.5 +0.3
SCHQ S S 17 56 06.0 -1.5
SCHQ LR LR 18 08 57.5
SIV **San Ignacio** 44.31 133 P P 17 49 42.1 -0.2
comp=Z,65nm,0.8s,mb5.4,baz=308,slow=8.7,SNR=82
SIV pP pP 17 50 02.4 -0.9
comp=Z,11nm,0.5s,baz=322,slow=7.1,SNR=3.5
SIV PcP PcP 17 51 26.0 +0.7
comp=Z,24nm,0.6s,baz=304,slow=4.9,SNR=8.2
SIV S S 17 56 10.0 -0.2
comp=Z,2.7nm,1.0s,baz=345,slow=17,SNR=1.3
LVC **Limon Verde** 44.53 148 P P 17 49 45.0 +1.0
comp=Z,7.7nm,0.6s,mb4.6,baz=270,slow=9.2,SNR=3.2
LVC S S 17 56 14.4 +1.3
comp=Z,1.1nm,0.5s,baz=270,slow=3.1,SNR=1.8
LVC **Limon Verde** 44.53 148 eP P 17 49 45.3 +1.3
comp=Z,14nm,0.6s,mb4.9
RPN **Rapa Nui** 45.22 201 P P 17 49 48.4 -1.0
comp=Z,161nm,1.1s,mb5.7,baz=317,slow=5.0,SNR=7.3
RPN **Rapa Nui** 45.22 201 P P 17 49 48.4 -1.0
LCO **Las Campanas** 49.13 154 eP P 17 50 20.1 +0.3
comp=Z,30nm,0.8s,mb5.3
YKA **Yellowknife Ar** 49.43 347 P P 17 50 20.8 -0.7
comp=Z,66nm,0.5s,mb5.9,baz=153,slow=7.3,SNR=731
YKA pP pP 17 50 41.5 -1.4
comp=Z,29nm,0.7s,baz=152,slow=7.3,SNR=6.2
YKA S S 17 57 20.6 -1.3
comp=Z,0.8nm,1.0s,baz=151,slow=36,SNR=2.3
YKA LR LR 18 14 59.3
comp=Z,175nm,19.6s,baz=120,slow=40
YKA **Yellowknife Ar** 49.43 347 P P 17 50 20.8 -0.7
YKA pP pP 17 50 41.5 -1.4
YKA S S 17 57 20.6 -1.3
YKA LR LR 18 14 59.3
YKA **Yellowknife Ar** 49.43 347 P P 17 50 20.8 -0.8
YKA *PP pP 17 50 41.5 -1.4
YKA S S 17 57 20.6 -1.3
TLL **Tololo Astrono** 50.10 155 eP P 17 50 25.7 -1.4
DLBC **Dease Lake** 50.98 336 P P 17 50 34.9 +1.5
comp=Z,47nm,0.6s,mb5.7,baz=117,slow=4.5,SNR=64
DLBC **Dease Lake** 50.98 336 eP P 17 50 34.8 +1.4
CFAA **Coronel Fontan** 52.43 153 P P 17 50 44.9 +0.4
comp=Z,3.8nm,0.6s,mb4.6,baz=326,slow=7.2,SNR=92
CFAA pP pP 17 51 05.0 -1.1
comp=Z,1.6nm,0.7s,baz=322,slow=5.9,SNR=3.2
CFAA PcP PcP 17 51 53.8 -0.4
comp=Z,1.4nm,0.7s,baz=301,slow=4.3,SNR=2.1
CFAA S S 17 58 03.6 -0.5
comp=Z,0.1nm,0.4s,baz=239,slow=23,SNR=3.5
CFAA **Coronel Fontan** 52.43 153 P P 17 50 44.9 +0.4
CFAA pP pP 17 51 05.0 -1.1
CFAA PcP PcP 17 51 53.8 -0.4
CFAA S S 17 58 03.6 -0.5
FCH **Farellones** 53.09 156 eP P 17 50 50.0 +0.7
BDFB **Brasilia** 54.03 123 S S 17 58 25.1 -1.3

comp=Z,0.6nm,0.4s,baz=151,slow=27,SNR=1.7
BDFB LR LR 18 16 29.7

comp=Z,271nm,21.4s,baz=116,slow=39
RKT Rikitea 56.24 228 *e*S **S 17 58 52.4 -3.2**
comp=Z,1µm,29.5s
RKT *e*LR LR 18 07 44.8

comp=Z,5µm,28.8s,baz=46
INK Inuvik 58.81 344 *e*P **P 17 51 29.5 -0.1**
comp=Z,11µm,1.2s
EGAK Eagle 59.05 338 *e*P **P 17 51 31.9 +0.5**
comp=Z,52nm,1.3s,mb5.4
MENT Mentasta 59.07 336 *e*P **P 17 51 33.6 +2.1**
STCH Steam Cracks 59.23 284 *e*P **P 17 51 31.6 -1.8**
RES Resolute Bay 59.25 359 *e*P **P 17 51 31.6 -1.1**
comp=Z,3µm,1.4s
POHA Pohakuloa 59.57 284 *e*P **P 17 51 30.7 -5.0**
comp=Z,200nm,1.2s,mb6.0
POHA *epP* pP 17 51 54.4 -3.3
PLCA Paso Flores 59.62 160 P **P 17 51 35.0 -0.6**
comp=Z,37nm,0.9s,mb5.4,baz=336,slow=8.3,SNR=38
PLCA S **S 17 59 40.1 +1.0**
comp=Z,1.0nm,0.8s,baz=289,slow=14,SNR=1.8
PLCA LR LR 18 13 41.7

comp=Z,685nm,18.3s,baz=100,slow=32
PLCA Paso Flores 59.62 160 *e*P **P 17 51 34.8 -0.8**
comp=Z,117nm,1.3s,mb5.8
PLCA Paso Flores 59.62 160 *e*P **P 17 51 34.8 -0.8**
PLCA pmax pmax

comp=Z,117nm,1.3s
RCBR Riachuelo 60.28 106 *e*P **P 17 51 40.0 -0.7**
comp=Z,47nm,0.5s,mb5.8
MCK McKinley 61.52 335 *e*P **P 17 51 47.6 -0.6**
comp=Z,65nm,0.9s,mb5.7
MCK McKinley 61.52 335 *e*P **P 17 51 47.6 -0.7**
MCK pmax pmax

comp=Z,65nm,0.9s,mb5.7
COLA College 61.59 337 *e*P **P 17 51 48.3 -0.4**
comp=Z,49nm,0.8s,mb5.6
COLA *epP* pP 17 52 07.9 -2.9
COLA College 61.59 337 *e*P **P 17 51 48.3 -0.4**
COLA *e**PP pP 17 52 07.9 -2.9
COLA pmax pmax

comp=Z,49nm,0.8s,mb5.6
KIP Kipapa 61.69 286 *e*P **P 17 51 48.4 -1.8**
TRF Thorofare Moun 61.96 335 *e*P **P 17 51 51.0 -0.3**
comp=Z,147nm,0.8s,mb6.1
TRF *epP* pP 17 52 12.1 -1.3
CAM4 Nova Friburgo 61.99 126 *e*P **P 17 51 52.6 +0.5**
CAM4 *i* 17 51 54.4
CAM4 *i* 17 51 58.4
CAM4 *i* 17 52 14.5 +0.3
VAH Vaihoa 62.06 243 *e*P **P 17 51 51.3 -1.4**
comp=Z,304nm,1.3s,mb6.2
PMOR Pomariorio Ree 62.19 243 *e*P **P 17 51 52.2 -1.3**
comp=Z,310nm,1.5s,mb6.1
PMOR *epP* pP 17 52 14.6 -1.0

comp=Z,262nm,1.4s
KTH Kantishna Hill 62.27 335 *e*P **P 17 51 52.5 -0.7**
comp=Z,53nm,0.8s,mb5.6
KTH *epP* pP 17 52 13.0 -2.3
BPAW Bear Paw Mtn. 62.50 335 *e*P **P 17 51 54.0 -0.8**
comp=Z,61nm,0.8s,mb5.6
BPAW *epP* pP 17 52 15.5 -1.4
PPLA Purkeypile 62.55 334 *e*P **P 17 51 54.6 -0.5**
comp=Z,238nm,1.6s,mb5.9
PPLA *epP* pP 17 52 15.7 -1.6
CAM3 Guarapari 62.75 123⇑ *e*P **P 17 51 58.1 +0.9**
CAM3 *i* 17 51 59.0
CAM3 *i* 17 52 01.2
CHUM Lake Minchumin 62.97 335 *e*P **P 17 51 57.1 -0.8**
comp=Z,16nm,0.7s,mb5.0
COLD Coldfoot 63.47 339 *e*P **P 17 52 02.3 +1.1**
comp=Z,116nm,1.5s,mb5.6
COLD *epP* pP 17 52 21.5 -1.9
SVW2 Sparrevohn 63.49 331 *e*P **P 17 52 00.5 -0.9**
TIAR Tiarei 64.58 242 *e*P **P 17 52 07.5 -1.8**
comp=Z,1µm,1.1s,mb6.7
TVO Taravao 64.61 241 *e*P **P 17 52 07.9 -1.5**
comp=Z,1µm,1.3s,mb6.6
TVO *epP* pP 17 52 32.0 +0.3

comp=Z,3µm,1.6s
PPT Papeete 64.78 242 *e*S **S 18 00 40.7 -4.2**
comp=Z,1µm,25.5s
PPT Papeete 64.78 242 *e*LR LR 18 11 14.1
comp=Z,4µm,28.8s,baz=58
PPT Papeete 64.78 242 LR LR 18 12 39.6
comp=Z,776nm,20.1s,baz=60,slow=29
XMAS Kiritimati 64.93 265 *e*P **P 17 52 09.7 -2.1**
comp=Z,266nm,1.5s,mb5.8
UNV Unalaska Valle 68.00 322 *e*P **P 17 52 29.9 -0.6**
comp=Z,104nm,1.2s,mb5.5
ALE Alert 78.19 4 P **P 17 52 31.0 -0.4**
comp=Z,356nm,0.7s,mb6.3,SNR=21
BORG Borgarnes 68.30 26 LR LR 18 21 23.2
comp=Z,1µm,18.3s,baz=258,slow=35
BBTS Babate 73.35 79 LR LR 18 20 10.3
comp=Z,725nm,21.1s,baz=107,slow=32
JMIC Jan Mayen 73.68 20 LR LR 18 25 00.9
comp=Z,2µm,20.4s,baz=251,slow=35
EMAZ Mazaricos 75.25 49 P **P 17 53 12.5 -1.8**
comp=Z,22nm,0.5s,mb5.1
DMUB Kingscourt 75.33 38 *e*P **P 17 53 12.4 -2.1**
STS Santiago 75.57 49 P **P 17 53 14.2 -1.9**
comp=Z,11nm,0.5s,mb4.8
STS Santiago 75.57 49 P **P 17 53 14.2 -1.9**
STS pmax pmax

comp=Z,11nm,0.5s,mb4.8
DLF Lyons Farm 75.62 38 *e*P **P 17 53 13.7 -2.5**
ELOB Lobios 76.07 50 P **P 17 53 17.2 -1.8**
comp=Z,5.4nm,0.5s,mb4.5
MDO Dochfour 76.36 34 *e*P **P 17 53 18.6 -1.7**
GAL1 Galloway 76.49 36 *e*P **P 17 53 18.9 -2.2**
GAL1 AMb AMB 17 53 22.0

comp=Z,60nm,1.7s,mb5.0
EVO Evora 76.61 53 *e*P **P 17 53 19.9 -2.2**
comp=Z,24nm,0.6s,mb4.8
EVO *e*MLR MLR

comp=Z,591nm,21.5s
MTE Manteigas 76.68 51 *e*P **P 17 53 20.5 -2.0**
comp=Z,11nm,0.7s,mb4.7
MCD Coleburn Disti 76.93 34 *e*P **P 17 53 22.4 -1.1**
MME1 Meikle Cairn 77.12 34 *e*P **P 17 53 24.5 -0.1**
EGRO El Granado 77.19 54 P **P 17 53 24.1 -1.3**
comp=Z,8.9nm,0.5s,mb4.8
ESK Eskdalemuir 77.29 36 *e*P **P 17 53 24.2 -1.3**
ESK AMb AMB 17 53 25.9

comp=Z,52nm,1.6s,mb5.0
ECK Cauldkaine Hil 77.35 36 *e*P **P 17 53 24.6 -1.4**
ESY Stoneypath 77.53 35 *e*P **P 17 53 25.7 -1.2**
SBD1 Bryn Du 77.63 38 *e*P **P 17 53 25.8 -1.8**
HTR Trewern Hill 77.76 39 *e*P **P 17 53 27.6 -0.7**
KBS Kingsbay 77.77 11 *e*P **P 17 53 29.7 +1.8**
KBS pmax pmax

comp=Z,76nm,1.4s,mb5.2
EMIN Mina Concepcio 77.78 54 P **P 17 53 26.7 -2.0**
comp=Z,2.0nm,0.5s,mb4.1
XSO Sourhope Farm 77.80 36 *e*P **P 17 53 27.4 -1.0**
HLM1 Long Mynd 77.92 39 *e*P **P 17 53 28.6 -0.5**
XAL Allendale 77.92 36 *e*P **P 17 53 27.9 -1.3**
MCH1 Michaelchurch 77.94 39 *e*P **P 17 53 28.2 -1.0**
MCH1 AMb AMB 17 53 30.5

comp=Z,46nm,1.6s,mb5.0
HGH Gray Hill 78.11 40 *e*P **P 17 53 30.2 0.0**
LHO Holmfirth 78.36 38 *e*P **P 17 53 30.0 -1.5**
QUIF Quistinic 78.53 43 *e*P **P 17 53 30.7 -1.9**
comp=Z,22nm,0.7s,mb4.8
QUIF Quistinic 78.53 43 *e*P **P 17 53 30.7 -1.9**
comp=Z,11nm,0.7s,mb4.8
QUIF Quistinic 78.53 43 *e*P **P 17 53 30.7 -1.9**
QUIF pmax pmax

comp=Z,11nm,0.7s,mb4.8
SPITS Spitsbergen Ar 78.85 11 P **P 17 53 33.9 +0.1**
comp=Z,11nm,0.5s,mb4.9,baz=205,slow=4.1,SNR=35
SGMF Saint Gilles 78.87 43 *e*P **P 17 53 31.8 -2.7**
EJIF Jimena Fronter 78.97 55 P **P 17 53 34.9 -0.4**
comp=Z,4.7nm,0.5s,mb4.6
EJIF Jimena Fronter 78.97 55 P **P 17 53 34.9 -0.4**
EJIF pmax pmax

comp=Z,5.0nm,0.5s,mb4.6
GUD Guadarrama 79.18 51 P **P 17 53 35.4 -0.9**
comp=Z,16nm,0.5s,mb5.1
GUD Guadarrama 79.18 51 P **P 17 53 35.4 -0.9**
GUD pmax pmax

comp=Z,16nm,0.5s,mb5.1
EADA Adamuz 79.34 53 P **P 17 53 35.9 -1.4**
comp=Z,5.7nm,0.9s,mb4.4
ESDC Sonseca Array 79.51 52 P **P 17 53 36.1 -2.1**
comp=Z,2.7nm,0.4s,mb4.4,baz=293,slow=4.9,SNR=24
ESDC LR LR 18 23 15.9

comp=Z,396nm,20.4s,baz=265,slow=32
ESDC Sonseca Array 79.51 52 P **P 17 53 36.8 -1.3**
comp=Z,2.8nm,0.4s,mb4.5
BILL Bilibino 79.80 338⇑ *i*P **P 17 53 39.4 +0.3**
BILL Bilibino 79.80 338⇑ *e*P **P 17 53 39.4 +0.3**
BILL *i* *PP pP 17 54 01.2 -0.9
BILL *e* *i* 17 56 41.6
BILL *i* S S 18 03 37.5 +2.7
BILL *e*SS SS 18 08 45.0 +0.2
BILL pmax pmax

comp=Z,48nm,1.1s,mb5.2
GRR Gorron 79.96 43 *e*P **P 17 53 38.6 -1.8**
comp=Z,90nm,1.2s,mb5.2
GRR *epP* pP 17 54 03.8 +0.4
GRR Gorron 79.96 43 *e*P **P 17 53 38.6 -1.8**
comp=Z,45nm,1.2s,mb5.2
GRR *epP* pP 17 54 03.8 +0.4
GRR Gorron 79.96 43 *e*P **P 17 53 38.6 -1.8**
GRR *e**PP pP 17 54 03.8 +0.4
GRR pmax pmax

comp=Z,45nm,1.2s,mb5.2
FLN La Foliniere 80.13 42 *e*P **P 17 53 39.7 -1.6**
comp=Z,22nm,0.6s,mb4.9
FLN *e*MLR MLR

comp=Z,667nm,19.2s
FLN La Foliniere 80.13 42 *e*P **P 17 53 39.7 -1.6**
comp=Z,11nm,0.6s,mb4.9
FLN LR LR

comp=Z,670nm,19.3s
FLN La Foliniere 80.13 42 *e*P **P 17 53 39.7 -1.6**
FLN pmax pmax

comp=Z,11nm,0.6s,mb4.9
FLN MLR MLR

comp=Z,670nm,19.3s
ECOG Cogollos-Vega 80.30 54 P **P 17 53 41.2 -1.2**
comp=Z,11nm,0.6s,mb4.9
ECOG Cogollos-Vega 80.30 54 P **P 17 53 41.2 -1.3**
ECOG pmax pmax

comp=Z,11nm,0.6s,mb4.9
MDT Midelt 80.39 59 LR LR 18 22 49.7
comp=Z,474nm,22.0s,baz=5.3,slow=31
LDF La Druitiere 80.40 42 *e*P **P 17 53 41.0 -1.7**
EQES Quesada 80.58 53 P **P 17 53 43.9 0.0**
comp=Z,9.8nm,1.2s,mb4.5
ETOR Torete 80.71 50 P **P 17 53 43.4 -1.2**
comp=Z,8.7nm,0.5s,mb4.8
ETOR Torete 80.71 50 P **P 17 53 43.4 -1.2**
ETOR pmax pmax

comp=Z,9.0nm,0.5s,mb4.9
MFF Saint Martin d 80.81 44 *e*P **P 17 53 43.3 -1.7**
comp=Z,13nm,0.6s,mb4.6
MFF Saint Martin d 80.81 44 *e*P **P 17 53 43.3 -1.7**
comp=Z,6.3nm,0.6s,mb4.6
MFF Saint Martin d 80.81 44 *e*P **P 17 53 43.3 -1.7**
MFF pmax pmax

comp=Z,6.0nm,0.6s,mb4.6
SJPF Ste Jean 80.82 48 *e*P **P 17 53 43.7 -1.4**
EVIA Vianos 80.83 52 P **P 17 53 44.5 -0.8**
comp=Z,8.9nm,0.6s,mb4.8
EVIA Vianos 80.83 52 P **P 17 53 44.5 -0.8**
EVIA pmax pmax

comp=Z,9.0nm,0.6s,mb4.8
EBER Berja 80.91 54 P **P 17 53 45.3 -0.5**
comp=Z,12nm,0.5s,mb5.0
ETSF Etsaut 81.34 48 *e*P **P 17 53 46.5 -1.4**
comp=Z,9.3nm,0.6s,mb4.5
ETSF Etsaut 81.34 48 *e*P **P 17 53 46.5 -1.4**
comp=Z,4.7nm,0.6s,mb4.5
ETSF Etsaut 81.34 48 *e*P **P 17 53 46.5 -1.4**
ETSF pmax pmax

comp=Z,5.0nm,0.6s,mb4.5
ECHE Chera 81.79 51 P **P 17 53 49.4 -0.9**
comp=Z,4.7nm,0.6s,mb4.5
ECHE Chera 81.79 51 P **P 17 53 49.4 -0.9**
ECHE pmax pmax

comp=Z,5.0nm,0.6s,mb4.5
LFF La Frestale 81.79 46 *e*P **P 17 53 48.6 -1.6**
comp=Z,29nm,0.6s,mb5.0
LFF La Frestale 81.79 46 *e*P **P 17 53 48.6 -1.6**
comp=Z,14nm,0.6s,mb5.0
LFF La Frestale 81.79 46 *e*P **P 17 53 48.6 -1.6**
LFF pmax pmax

comp=Z,14nm,0.6s,mb5.0
EBIE Bielsa 81.89 48 P **P 17 53 49.6 -1.2**
comp=Z,7.7nm,0.9s,mb4.5
EPF Esparros 81.96 48 *e*P **P 17 53 49.6 -1.5**
comp=Z,13nm,0.6s,mb4.7
EPF Esparros 81.96 48 *e*P **P 17 53 49.6 -1.5**
comp=Z,6.3nm,0.6s,mb4.6
EPF Esparros 81.96 48 *e*P **P 17 53 49.6 -1.5**
EPF pmax pmax

comp=Z,6.0nm,0.6s,mb4.6
RJF Les Rejaudoux 82.24 45 *e*P **P 17 53 50.8 -1.8**
RJF *e*MLR MLR

comp=Z,424nm,21.0s
RJF Les Rejaudoux 82.24 45 *e*P **P 17 53 50.8 -1.8**
RJF MLR MLR

comp=Z,420nm,21.0s
TCF Toulx Ste Croi 82.47 44 *e*P **P 17 53 51.8 -1.9**
comp=Z,12nm,0.5s,mb4.7
TCF Toulx Ste Croi 82.47 44 *e*P **P 17 53 51.8 -1.9**
comp=Z,5.8nm,0.5s,mb4.7
TCF Toulx Ste Croi 82.47 44 *e*P **P 17 53 51.8 -1.9**
TCF pmax pmax

comp=Z,6.0nm,0.5s,mb4.7
UCC Uccle 82.69 39 P **P 17 53 55.9 +1.0**
CAF Calviac 82.71 46 *e*P **P 17 53 52.9 -2.1**
comp=Z,8.1nm,0.6s,mb4.4
CAF Calviac 82.71 46 *e*P **P 17 53 52.9 -2.1**
comp=Z,4.1nm,0.6s,mb4.4
CAF Calviac 82.71 46 *e*P **P 17 53 52.9 -2.1**
CAF pmax pmax

comp=Z,4.0nm,0.6s,mb4.4
BAIF Baives 82.80 40 *e*P **P 17 53 54.0 -1.4**
BGF Bois d'Agland 82.83 44 *e*P **P 17 53 53.7 -1.9**
comp=Z,30nm,0.7s,mb4.9
BGF Bois d'Agland 82.83 44 *e*P **P 17 53 53.7 -1.9**
comp=Z,15nm,0.7s,mb4.9
BGF Bois d'Agland 82.83 44 *e*P **P 17 53 53.7 -1.9**
BGF pmax pmax

comp=Z,15nm,0.7s,mb4.9
DOU Dourbes 83.03 40 P **P 17 53 55.3 -1.2**
comp=Z,9.4nm,1.3s,mb4.5
AVF Avril sur Loir 83.10 43 *e*P **P 17 53 54.6 -2.4**
comp=Z,14nm,0.7s,mb4.6
AVF Avril sur Loir 83.10 43 *e*P **P 17 53 54.6 -2.4**
comp=Z,6.9nm,0.7s,mb4.6
AVF Avril sur Loir 83.10 43 *e*P **P 17 53 54.6 -2.4**
AVF pmax pmax

comp=Z,7.0nm,0.7s,mb4.6
SSF Saint Saulge 83.13 43 *e*P **P 17 53 55.1 -2.1**
comp=Z,16nm,0.7s,mb4.7
SSF *epP* pP 17 54 20.2 -0.1
SSF Saint Saulge 83.13 43 *e*P **P 17 53 55.1 -2.1**
comp=Z,7.8nm,0.7s,mb4.7
SSF *epP* pP 17 54 20.2 -0.1
SSF Saint Saulge 83.13 43 *e*P **P 17 53 55.1 -2.1**
SSF *e**PP pP 17 54 20.2 -0.1
SSF pmax pmax

comp=Z,8.0nm,0.7s,mb4.7
PYM Petit Puy Mans 83.14 45 *e*P **P 17 53 57.0 -0.2**
GIVF Givet 83.17 40 *e*P **P 17 53 55.8 -1.5**
MTLF Montolieu 83.21 47 *e*P **P 17 53 55.9 -1.8**
comp=Z,16nm,0.7s,mb4.6
MTLF Montolieu 83.21 47 *e*P **P 17 53 55.9 -1.8**
comp=Z,8.1nm,0.7s,mb4.7
MTLF Montolieu 83.21 47 *e*P **P 17 53 55.9 -1.8**
MTLF pmax pmax

comp=Z,8.0nm,0.7s,mb4.7
NAO01 NORSAR Array S 83.21 29 *e*P **P 17 53 58.8 +1.6**
NOA NORSAR Array B 83.30 28 P **P 17 53 57.5 -0.2**
comp=Z,5.2nm,0.5s,mb4.6,baz=300,slow=4.9,SNR=33
NOA LR LR 18 30 24.0

comp=Z,637nm,19.1s,baz=285,slow=35
LOR Lormes 83.31 43 *e*P **P 17 53 56.3 -1.8**
LOR *e*MLR MLR

comp=Z,327nm,20.2s
LOR Lormes 83.31 43 *e*P **P 17 53 56.3 -1.8**
LOR MLR MLR

comp=Z,330nm,20.3s
BCLA Clavier 83.38 40 P **P 17 53 57.3 -1.1**
comp=Z,13nm,1.3s,mb4.6
SMF Signal de Mont 83.47 44 *e*P **P 17 53 56.6 -2.3**
comp=Z,12nm,0.6s,mb4.6
SMF *epP* pP 17 54 21.7 -0.4
SMF Signal de Mont 83.47 44 *e*P **P 17 53 56.6 -2.3**
comp=Z,6.2nm,0.6s,mb4.6
SMF *epP* pP 17 54 21.7 -0.4
SMF Signal de Mont 83.47 44 *e*P **P 17 53 56.6 -2.3**
SMF *e**PP pP 17 54 21.7 -0.4
SMF pmax pmax

comp=Z,6.0nm,0.6s,mb4.6
MEZF Maizieres J'vi 83.75 42 *e*P **P 17 53 58.7 -1.6**
comp=Z,22nm,0.5s,mb4.9
MEZF Maizieres J'vi 83.75 42 *e*P **P 17 53 58.7 -1.6**
comp=Z,22nm,0.5s,mb5.2
MEM Membach 83.75 39 P **P 17 54 00.9 +0.7**
comp=Z,21nm,1.8s,mb4.7
WLF Walferdange 84.11 40 P **P 17 54 05.2 +3.1**
LASF Ste Croix 84.17 46 *e*P **P 17 54 01.1 -1.4**
VIVF Saint-Julien-l 84.51 45 *e*P **P 17 54 03.0 -1.3**
HAU Haudompre 84.72 42 *e*P **P 17 54 03.6 -1.6**
comp=Z,20nm,0.5s,mb5.0
HAU *e*MLR MLR

comp=Z,395nm,18.0s
HAU Haudompre 84.72 42 *e*P **P 17 54 03.6 -1.6**
comp=Z,9.9nm,0.5s,mb5.0
HAU LR LR

comp=Z,400nm,18.0s
HAU Haudompre 84.72 42 *e*P **P 17 54 03.6 -1.6**
HAU pmax pmax

comp=Z,10.0nm,0.5s,mb5.0
HAU MLR MLR

comp=Z,400nm,18.0s
HFS Hagfors 84.77 29 LR LR 18 30 46.3
comp=Z,1µm,19.1s,baz=276,slow=35
ABH Alteburg 84.91 40 *e*P **P 17 54 05.1 -1.0**
CABF La Chapelle 84.96 43 *e*P **P 17 54 05.2 -1.3**
comp=Z,14nm,0.7s,mb4.7
CABF La Chapelle 84.96 43 *e*P **P 17 54 05.2 -1.3**
comp=Z,7.1nm,0.7s,mb4.7
CABF La Chapelle 84.96 43 *e*P **P 17 54 05.2 -1.3**
CABF pmax pmax

comp=Z,7.0nm,0.7s,mb4.7
ARCES ARCESS Array B 85.04 18 P **P 17 54 06.4 0.0**
comp=Z,16nm,0.4s,mb5.3,baz=285,slow=4.8,SNR=207
ARCES LR LR 18 32 09.6
comp=Z,750nm,19.7s,baz=305,slow=36
HINF Hinteralfeld 85.10 42 *e*P **P 17 54 05.6 -1.5**
comp=Z,15nm,0.7s,mb4.7
HINF Hinteralfeld 85.10 42 *e*P **P 17 54 05.6 -1.5**
comp=Z,7.3nm,0.7s,mb4.7
HINF Hinteralfeld 85.10 42 *e*P **P 17 54 05.6 -1.5**
HINF pmax pmax

comp=Z,7.0nm,0.7s,mb4.7
ECH Echery 85.18 41 *e*P **P 17 54 06.6 -0.9**
CDF Champ du Feu 85.19 41 *e*P **P 17 54 06.3 -1.3**
LOMF Lomont 85.23 42 *e*P **P 17 54 06.8 -1.0**
BSEG Bad Segeberg 85.24 35 *e*P **P 17 54 07.1 -0.6**
BSEG pmax pmax

comp=Z,69nm,1.4s,mb5.4
BSEG Bad Segeberg 85.24 35 *e*P **P 17 54 07.1 -0.6**
comp=Z,69nm,1.4s,mb5.4
MOF Molkenrain 85.27 42 *e*P **P 17 54 06.8 -1.2**
ORIF Oris-en-Rattie 85.32 45 *e*P **P 17 54 08.4 +0.1**
comp=Z,14nm,0.6s,mb4.8
ORIF *e*MLR MLR

comp=Z,469nm,20.8s
ORIF Oris-en-Rattie 85.32 45 *e*P **P 17 54 08.4 +0.1**
comp=Z,6.9nm,0.6s,mb4.8
ORIF Oris-en-Rattie 85.32 45 *e*P **P 17 54 08.4 +0.1**
ORIF pmax pmax

comp=Z,7.0nm,0.6s,mb4.8
LANF Langenberg 85.35 41 *e*P **P 17 54 07.2 -1.2**
TNS Taunus Mts 85.36 39 *e*P **P 17 54 07.4 -1.0**
TNS pmax pmax

comp=Z,72nm,1.4s,mb5.4
TNS Taunus Mts 85.36 39 *e*P **P 17 54 07.4 -1.0**
comp=Z,72nm,1.4s,mb5.4
TNS *es*P sP 17 54 43.1 +2.1
KEV Kevo 85.37 18 *ep* **P 17 54 07.9 -0.1**
comp=Z,3.1nm,0.4s,mb4.6
KEV Kevo 85.37 18 *e*P **P 17 54 07.9 -0.1**
KEV pmax pmax

comp=Z,3.0nm,0.4s,mb4.6
LPL La Plagne 85.72 44 *e*P **P 17 54 09.7 -0.5**
comp=Z,17nm,0.8s,mb4.7
LPL La Plagne 85.72 44 *e*P **P 17 54 09.7 -0.5**
comp=Z,8.4nm,0.8s,mb4.7
LPL La Plagne 85.72 44 *e*P **P 17 54 09.7 -0.5**
LPL pmax pmax

comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 85.73 44 *e*P **P 17 54 10.0 -0.3**
TOD Tromm 85.77 40 *e*P **P 17 54 08.7 -1.7**
FELD Feldberg im Sc 85.82 42 *e*P **P 17 54 09.6 -1.1**
BFO Black Forest 85.89 41 *e*P **P 17 54 09.5 -1.5**
BFO pmax pmax

comp=Z,19nm,1.4s,mb4.8
BFO Black Forest 85.89 41 *e*P **P 17 54 09.5 -1.5**
comp=Z,19nm,1.4s,mb4.8
BFO *es*P sP 17 54 45.7 +2.0
CLZ Clausthal 85.98 37 *e*P **P 17 54 11.0 -0.4**
CLZ pmax pmax

comp=Z,35nm,1.4s,mb5.1
CLZ Clausthal 85.98 37 *e*P **P 17 54 11.0 -0.4**
comp=Z,35nm,1.4s,mb5.1
CLZ *es*P sP 17 54 46.6 +2.5
MBDF Montbardon 85.98 45 *e*P **P 17 54 10.6 -1.0**
comp=Z,17nm,0.7s,mb4.8
MBDF Montbardon 85.98 45 *e*P **P 17 54 10.6 -1.0**
comp=Z,8.5nm,0.7s,mb4.8
MBDF Montbardon 85.98 45 *e*P **P 17 54 10.6 -1.0**
MBDF pmax pmax

comp=Z,9.0nm,0.7s,mb4.8
UBBA Unterbreizbach 86.10 38 *e*P **P 17 54 11.3 -0.7**
comp=Z,39nm,1.6s,mb5.1
LMR La Mourre 86.22 46 *e*P **P 17 54 11.2 -1.6**
TIC Toumodi 86.23 84 *e*P **P 17 54 12.6 -0.8**
comp=Z,115nm,1.0s,mb5.8
SPAK Spaichingen-Ko 86.25 41 *e*P **P 17 54 11.3 -1.5**
FRF La Foret Royal 86.25 46 *e*P **P 17 54 11.4 -1.5**
comp=Z,23nm,0.7s,mb4.9
FRF La Foret Royal 86.25 46 *e*P **P 17 54 11.4 -1.5**
comp=Z,12nm,0.7s,mb4.9
FRF La Foret Royal 86.25 46 *e*P **P 17 54 11.4 -1.5**
FRF pmax pmax

comp=Z,12nm,0.7s,mb4.9
STU Stuttgart 86.29 40 *e*P **P 17 54 12.0 -1.0**
comp=Z,50nm,1.5s,mb5.2
STU *e*S S 18 04 35.2 -6.0
LIC Lamto 86.33 85 *e*P **P 17 54 12.5 -1.4**
comp=Z,70nm,0.9s,mb5.3
LIC *e*MLR MLR

comp=Z,291nm,20.2s
LIC Lamto 86.33 85 *e*P **P 17 54 13.2 -0.7**
comp=Z,100nm,0.9s,mb5.8
LIC Lamto 86.33 85 *e*P **P 17 54 12.5 -1.4**
comp=Z,35nm,0.9s,mb5.3
LIC LR LR

comp=Z,150nm,20.3s
DBIC Dimbokro 86.38 84 P **P 17 54 12.9 -1.2**
comp=Z,15nm,0.8s,mb5.0,baz=260,slow=2.7,SNR=13
DBIC S S 18 04 32.8 -11
comp=Z,2.4nm,0.9s,baz=55,slow=17,SNR=2.4
DBIC LR LR 18 30 15.8
comp=Z,460nm,19.7s,baz=279,slow=34
DBIC Dimbokro 86.38 84 P **P 17 54 12.9 -1.2**
DBIC S S 18 04 32.8 -11
DBIC LR LR 18 30 15.8
DBIC Dimbokro 86.38 84 P **P 17 54 12.9 -1.2**
DBIC S S 18 04 32.8 -11
KIC Kosan Boka 86.57 84 *e*P **P 17 54 14.4 -0.7**
comp=Z,152nm,0.9s,mb5.9
SBF Sospel 86.70 45 *e*P **P 17 54 13.7 -1.4**
SEY Seymchan 87.08 335 *e*P **P 17 54 16.8 +0.2**
MOX Moxa 87.12 38 *e*P **P 17 54 16.8 -0.2**
comp=Z,50nm,1.9s,mb5.1
MOX *e* pP 17 54 42.5 +2.1
MOX

comp=Z,400nm,22.0s
MOX Moxa 87.12 38 *e*P **P 17 54 16.8 -0.2**
MOX *e* pP 17 54 42.5 +2.1
MOX pmax pmax

comp=Z,50nm,1.9s,mb5.1
MOX MLR MLR

comp=Z,400nm,22.0s
MOX Moxa 87.12 38 *e*P **P 17 54 16.2 -0.8**
comp=Z,37nm,1.5s,mb5.1
MOX *epP* pP 17 54 41.7 +1.3

DAVA **Damuels** 87.22 42⇑ *i*P P 17 54 17.0 -0.6
comp=Z,36nm,1.1s,mb5.2
GRF **Grafenberg Arr** 87.22 39 *e*P P 17 54 17.1 -0.4
GRF *e*S S 18 04 38.8 -11
GRF pmax pmax
comp=Z,57nm,1.5s,mb5.3
GRF **Grafenberg Arr** 87.22 39 *e*P P 17 54 17.1 -0.4
GRF *e*S S 18 04 38.8 -11
GRF pmax pmax
comp=Z,57nm,1.5s,mb5.3
GRF **Grafenberg Arr** 87.22 39 *e*P P 17 54 17.1 -0.4
comp=Z,57nm,1.5s,mb5.3
GRF *es*P sP 17 54 52.6 +2.3
GRF *e*S S 18 04 38.8 -11
DAVOX **Davos/Dischmat** 87.39 42 LR LR 18 28 05.7
comp=Z,831nm,21.7s,baz=294,slow=32
MANZ **Manzenberg** 87.66 39 *e*P P 17 54 19.1 -0.5
comp=Z,264nm,3.7s
CLL **Collm** 87.70 37 *i* P P 17 54 20.3 +0.5
comp=Z,47nm,1.7s,mb5.2
CLL *e* 17 54 53.0
CLL *i* 17 55 02.9
CLL *e*SKS 18 04 46.0
CLL S S 18 05 05.0 +10
CLL **Collm** 87.70 37 *i* P P 17 54 20.3 +0.5
CLL *e* 18 04 46.0
CLL pmax pmax
comp=Z,47nm,1.7s,mb5.2
CLL **Collm** 87.70 37 *e*P P 17 54 20.1 +0.3
comp=Z,45nm,1.7s,mb5.2
CLL *e*S S 18 04 50.1 -4.6
CLL **Collm** 87.70 37 *i* P P 17 54 20.3 +0.5
comp=Z,47nm,1.7s,mb5.2
CLL *ep*P pP 17 54 46.0 +2.9
CLL *es*P sP 17 54 53.0 +0.5
CLL *i* x x 17 55 02.9
CLL *ex* x 17 55 49.0
CLL *ep*PP 17 58 08.0
CLL *e*SKSac SKSac 18 04 46.0 +6.0
CLL *e*ScS ScS 18 05 05.0 +3.9
CLL *e*PS 18 06 07.0
CLL *e*SS SS 18 10 48.0 +5.9
CLL *e*(sSS) 18 11 12.0
CLL *e*(SSSS) 18 17 06.0
TANN **Tannenbergstha** 87.71 38 *e*P P 17 54 19.4 -0.4
comp=Z,45nm,1.7s,mb5.2
ROTZ **Rotzenmuhle** 87.80 39 *e*P P 17 54 19.7 -0.6
comp=Z,44nm,1.8s,mb5.2
ROTZ *ep*P pP 17 54 45.3 +1.7
ROTZ *es*P sP 17 54 55.5 +2.5
FETA **Feichten** 87.85 42⇑ *i*P P 17 54 20.1 -0.5
comp=Z,8.5nm,0.7s,mb4.9
PGF **Pioggiola** 88.20 46 *e*P P 17 54 20.8 -1.6
comp=Z,80nm,1.4s,mb5.2
PGF **Pioggiola** 88.20 46 *e*P P 17 54 20.8 -1.6
comp=Z,40nm,1.4s,mb5.2
PGF **Pioggiola** 88.20 46 *e*P P 17 54 20.8 -1.6
PGF pmax pmax
comp=Z,40nm,1.4s,mb5.3
BRG **Berggiesshubel** 88.41 37 *e*P P 17 54 23.7 +0.5
BRG *PP pP 17 54 41.0 -5.6
BRG 18 04 48.0
BRG SP 18 06 17.0
BRG pmax pmax
comp=Z,15nm,1.5s,mb4.8
BRG pmax pmax
comp=N,10.0nm,1.3s
BRG **Berggiesshubel** 88.41 37 *e*P P 17 54 23.2 0.0
comp=Z,71nm,2.2s,mb5.3
BRG *e*S SKSac 18 04 46.8 +2.5
BRG **Berggiesshubel** 88.41 37 *e*P P 17 54 23.7 +0.6
comp=Z,24nm,1.5s,mb5.0
BRG pP pP 17 54 41.0 -5.6
BRG sP sP 17 54 55.8 -0.2
comp=Z,16nm,1.3s
BRG PP PP 17 58 07.0 +15
BRG SKS SKSac 18 04 48.0 +3.7
BRG S S 18 05 12.0 +10
BRG SP 18 06 17.0
WET **Wettzell** 88.43 39 *e*P P 17 54 22.7 -0.6
WET *e*PP pP 17 54 49.0 +2.3
WET pmax pmax
comp=Z,38nm,1.6s,mb5.2
WET **Wettzell** 88.43 39 *e*P P 17 54 22.7 -0.6
comp=Z,38nm,1.6s,mb5.2
WET *ep*P pP 17 54 49.0 +2.3
WET *es*P sP 17 54 58.7 +2.6
PET **Petropavlovsk** 88.47 325 *e*P P 17 54 25.9 +2.5
PET *e*S S 18 05 01.2 -0.8
PET pmax pmax
comp=Z,200nm,16.0s
PET MLR MLR
comp=Z,800nm,19.0s
APA **Apatity** 88.55 18⇓ *i*P P 17 54 24.3 +0.8
APA *e*S S 18 04 42.0 -20
APA pmax pmax
comp=Z,96nm,1.5s,mb5.6
APA MLR MLR
comp=Z,2μm,10.0s
TIXI **Tiksi** 88.67 348⇑ *i*P P 17 54 23.1 -0.9
TIXI pmax pmax
comp=Z,134nm,1.6s,mb5.7
LVZ **Lovozero** 88.71 17 *e*P P 17 54 23.9 -0.3
LVZ pmax pmax
comp=Z,138nm,2.1s,mb5.6
KHC **Kasperske Hory** 88.86 39 *e*P P 17 54 23.4 -1.9
KHC *es*P sP 17 55 00.0 +1.9
KHC AMS AMS 18 30 30.0
comp=Z,1μm,28.0s
RJOB **Jochberg** 88.90 41 *e*P P 17 54 25.1 -0.4
comp=Z,16nm,1.2s,mb4.9
PVCC **Panska Ves** 88.92 38 AMS AMS 18 28 30.0
comp=Z,1μm,19.5s
PETK **Petropavlovsk-** 88.96 325 P P 17 54 25.8 +0.2
comp=Z,2.9nm,0.8s,mb4.3,baz=90,slow=11,SNR=7.5
GEC2 **GERESS Array S** 89.05 39 *e*P P 17 54 26.9 +0.7
GEC2 pmax pmax
comp=Z,109nm,2.8s,mb5.4
GEC2 **GERESS Array S** 89.05 39 *e*P P 17 54 26.9 +0.7
comp=Z,109nm,2.8s,mb5.4
GERES **GERESS Array B** 89.05 39 P P 17 54 25.1 -1.0
comp=Z,1.3nm,0.6s,mb4.2,baz=335,slow=5.0,SNR=10.0
GERES LR LR 18 32 09.7
comp=Z,822nm,21.1s,baz=277,slow=34
ABTA **Abfaltersbach** 89.09 42⇑ *i*P P 17 54 26.8 +0.4
comp=Z,13nm,1.3s,mb4.8
PRU **Pruhonice** 89.11 38 *ex* sP 17 55 17.8 +19
PRU *e*SKS 18 04 48.3
PRU AMS AMS 18 27 00.0
comp=Z,2μm,32.2s
PRU **Pruhonice** 89.11 38 *e* sP 17 55 17.8 +19
KAF **Kangasniemi** 89.30 24 *ep* P 17 54 26.6 -0.5
comp=Z,2.8nm,0.4s,mb4.7
KAF **Kangasniemi** 89.30 24 *e*P P 17 54 26.6 -0.5
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
UPC **Upice** 89.77 37 *e*P P 17 54 29.1 -0.4
UPC *ex* x 17 55 21.4
MOA **Molln** 89.78 40⇑ *i*P P 17 54 29.5 -0.1
comp=Z,16nm,1.4s,mb5.0
TREC **Trest** 89.95 38 AMS AMS 18 27 10.0
comp=Z,2μm,35.8s
DPC **Dobruska-Polom** 90.01 37 *e*P P 17 54 30.4 -0.3
DPC *ex* x 17 55 18.0
DPC *e*SKS 18 04 55.0
DPC AMS AMS 18 29 30.0
comp=Z,1μm,18.5s
JAVS **Javornik** 90.41 42 *i* P P 17 54 32.1 -0.5
KEST **Kesra** 90.72 53 P P 17 54 33.1 -1.2
comp=Z,1.8nm,0.4s,mb4.5,baz=307,slow=1.8,SNR=22
KEST LR LR 18 34 08.9
comp=Z,150nm,19.8s,baz=87,slow=35
CONA **Conrad Observa** 90.73 40⇑ *i*P P 17 54 34.4 +0.4
comp=Z,17nm,1.9s,mb4.8
JOF **Joensuu** 90.74 22 *ep* P 17 54 32.9 -0.9
comp=Z,3.8nm,0.4s,mb4.9
JOF **Joensuu** 90.74 22 *e*P P 17 54 32.9 -0.9
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
TORD **Torodi Ar. Bea** 90.89 76 P P 17 54 33.0 -2.4
comp=Z,2.2nm,0.5s,mb4.6,baz=298,slow=6.1,SNR=21
TORD PKiKP PKiKP 17 59 28.2 -0.6
comp=Z,0.3nm,0.5s,baz=332,slow=2.4,SNR=5.4
TORD PKKPbc PKKPbc 18 11 58.7 -0.7
comp=Z,1.0nm,0.5s,baz=104,slow=2.0,SNR=9.8
TORD LR LR 18 31 56.6
comp=Z,683nm,21.7s,baz=300,slow=33
VISS **Visnje** 90.94 42 *i* P P 17 54 35.6 +0.5
OKC **Ostrava-Krasne** 91.30 37 *e*P P 17 54 37.6 +1.0
OKC *e*SKS 18 05 03.1
BOJS **Bojanci** 91.33 42 *i* P P 17 54 29.7 -7.2
ZST **Bratislava** 91.38 39 *e*P P 17 54 36.0 -1.1
ZST pmax pmax
comp=Z,50nm,1.9s,mb5.3
ZST **Bratislava** 91.38 39 *e*P P 17 54 36.0 -1.1
ZST *e*PP PP 17 58 43.9 +29
MODS **Modra-Piesok** 91.41 39 *e*P P 17 54 37.0 -0.2
MODS pmax pmax
comp=Z,15nm,1.6s,mb4.9
MODS **Modra-Piesok** 91.41 39 *e*P P 17 54 37.0 -0.2
MODS *es*P sP 17 55 11.4 +1.4
MODS *e*PP PP 17 58 47.1 +32
KOLL **Kolacno** 92.00 38 *e*P P 17 54 40.2 +0.3
OJC **Ojcow** 92.08 36 *e*P P 17 54 41.0 +0.8
SUW **Suwalki** 92.10 32 *e*P P 17 54 40.6 +0.4
SUW *ep*P pP 17 55 00.5 -3.2
SUW **Suwalki** 92.10 32 *e*P P 17 54 40.6 +0.3
SUW *e**PP pP 17 55 00.5 -3.2
VYHS **Vyhne** 92.29 38 *e*P P 17 54 41.3 0.0
VYHS pmax pmax
comp=Z,21nm,1.8s,mb5.1
VYHS **Vyhne** 92.29 38 *e*P P 17 54 41.3 0.0
VYHS *es*P sP 17 55 16.3 +2.2
PSZ **Piszkesteto** 93.18 38 *e*P P 17 54 45.9 +0.5
PSZ ⇓*e*P 17 54 47.8
PSZ **Piszkesteto** 93.18 38⇓ *e*P P 17 54 47.8 +2.4
STHS **Stebnicka Huta** 93.28 37 *e*P P 17 54 44.8 -1.0
STHS pmax pmax
comp=Z,7.0nm,1.6s,mb4.7
CRVS **Cervenica-Dubn** 93.65 37 *e*P P 17 54 48.4 +0.9
CRVS *e* pP 17 55 11.8 +0.8
CRVS pmax pmax
comp=Z,23nm,1.6s,mb5.3
CRVS **Cervenica-Dubn** 93.65 37 *e*P P 17 54 48.4 +0.9
CRVS *ep*P pP 17 55 11.8 +0.8
VAE **Valguarnera** 93.90 50 LR LR 18 31 15.3
comp=Z,2μm,22.0s,baz=114,slow=32
KOLS **Kolonicke sedl** 94.11 37 *e*P P 17 54 50.6 +1.0
KOLS pmax pmax
comp=Z,22nm,1.7s,mb5.2
MNK **Minsk** 94.16 30 *e*P P 17 54 48.0 -1.7
MNK *e* 18 05 14.0
MNK *e*S S 18 05 47.0 -6.4
UZH **Uzhgorod** 94.26 37⇑ *i*P P 17 54 50.0 -0.3
UZH *i* 17 55 05.0
KLMR **Klimovskoe** 95.03 21 *e*P P 17 54 50.6 -3.0
KLMR pmax pmax
comp=Z,43nm,1.4s,mb5.7
YAK **Yakutsk** 95.82 341 *e*P P 17 54 57.2 +0.1
YAK pmax pmax
comp=Z,31nm,2.0s,mb5.4
AKASG **Malin Array Be** 97.00 33 P P 17 55 00.9 -1.8
comp=Z,1.7nm,0.5s,mb4.8,baz=293,slow=4.1,SNR=9.0
AKASG PKKPbc PKKPbc 18 11 40.1 -4.5
comp=Z,0.7nm,0.4s,baz=109,slow=2.2,SNR=4.3
AKASG LR LR 18 35 41.5
comp=Z,858nm,21.9s,baz=300,slow=34
OBN **Obninsk** 97.79 27 *e*P P 17 55 06.8 +0.6
OBN **Obninsk** 97.79 27⇓ *e*P P 17 55 06.3 +0.1
OBN *i* S SKSac 18 05 31.0 -4.8
OBN *i* PS PS 18 07 55.8 -2.9
OBN *e*SS SS 18 13 16.0 +10
OBN pmax pmax
comp=Z,75nm,2.1s,mb5.8
MOS **Moscow** 97.83 26 *e*P P 17 55 06.1 -0.3
MLR **Muntele Rosu** 98.00 38 LR LR 18 36 18.8
comp=Z,784nm,21.6s,baz=145,slow=34
HABR **Khabarovsk** 103.43 329 *i* P Pdif 17 55 29.2 -2.2
HABR *i* 17 59 48.4
HABR *e*S SKSac 18 06 01.9 -1.6
HABR *e* 18 07 09.7
HABR *e*SP SP 18 08 45.9 -1.8
HABR *e*PS PS 18 08 56.2 -2.7
HABR *e*SSS 18 18 19.9
BRTR **Keskin Array B** 105.92 40 PKiKP PKiKP 17 59 55.1 +0.3
comp=Z,0.7nm,0.4s,baz=266,slow=2.9,SNR=7.4
BRTR PKKPbc PKKPbc 18 11 15.4 -3.1
comp=Z,1.4nm,0.7s,baz=134,slow=4.0,SNR=7.5
MJAR **Matsushiro Arr** 109.31 318 PKKPbc PKKPbc 18 11 10.6 +2.7
comp=Z,2.8nm,0.8s,baz=238,slow=2.9,SNR=5.3
AKTK **Aktyubinsk** 109.60 19 PKPdf PKiKP 18 00 02.8 +1.4
AKTO **Aktyubinsk** 109.60 19 PKiKP PKiKP 18 00 02.8 +1.4
comp=Z,1.0nm,0.6s,baz=163,slow=3.1,SNR=3.8
BVAR **Borovoye Array** 110.30 11 Pdiff Pdif 17 56 04.7 +2.7
comp=Z,0.5nm,0.5s,baz=17,slow=2.1,SNR=6.1
BVAR PKiKP PKiKP 18 00 02.4 -0.2
comp=Z,2.3nm,0.5s,baz=292,slow=0.8,SNR=17
ZALV **Zalesovo Beam** 110.86 1 Pdiff Pdif 17 56 06.3 +1.9
comp=Z,0.3nm,0.3s,baz=86,slow=2.8,SNR=2.6
ZALV PKiKP PKiKP 18 00 03.1 -0.5
comp=Z,3.8nm,0.4s,baz=259,slow=2.0,SNR=23
ZALV PP PP 18 00 39.3 -2.0
comp=Z,1.5nm,0.5s,baz=347,slow=6.1,SNR=8.8
ZALV PKKPbc PKKPbc 18 11 08.1 +4.6
comp=Z,1.3nm,0.8s,baz=177,slow=3.0,SNR=6.8
ZALV **Zalesovo Beam** 110.86 1 PKiKP PKiKP 18 00 03.1 -0.5
ZALV 18 00 39.3
ZALV 18 11 08.1
KURK **Kurchatov** 113.71 6 PKiKP PKiKP 18 00 08.7 -0.4
comp=Z,6.9nm,0.5s,baz=351,slow=1.9,SNR=34
KURK **Kurchatov** 113.71 6 *i* PKiKP PKiKP 18 00 09.2 0.0
ULN **Ulaanbaatar** 114.50 345 *e*PKP PKiKP 18 00 11.4 +0.6
ULN **Ulaanbaatar** 114.50 345 *i* PKiKP PKiKP 18 00 11.4 +0.6
SONM **Songino Array** 114.69 346 PKP PKiKP 18 00 10.8 -0.3
comp=Z,1.5nm,0.6s,baz=308,slow=0.9,SNR=14
SONM PP PP 18 01 09.3 +0.6
comp=Z,4.7nm,1.1s,baz=10,slow=6.6,SNR=12
SONM PKKPbc PKKPbc 18 10 47.6 -3.0
comp=Z,0.9nm,0.6s,baz=205,slow=3.5,SNR=6.9
SONM PKKPab PKKPab 18 10 53.3 -4.4
comp=Z,1.0nm,0.6s,baz=212,slow=3.8,SNR=8.1
SONM **Songino Array** 114.69 346 PKiKP PKiKP 18 00 10.8 -0.3
SONM 18 01 09.3
SONM 18 10 47.6
KSRS **Korea Array** 114.86 325 PKP PKiKP 18 00 10.3 -1.4
comp=Z,1.3nm,0.5s,baz=350,slow=1.9,SNR=4.6
MKAR **Makanchi Array** 117.90 4 PKP PKPdf 18 00 16.2 -1.2
comp=Z,3.7nm,0.5s,baz=323,slow=2.4,SNR=55
MKAR PP PP 18 01 28.2 -2.7
comp=Z,2.6nm,1.0s,baz=34,slow=5.0,SNR=5.1
MKAR PKKPbc PKKPbc 18 10 35.5 -3.9
comp=Z,1.1nm,0.7s,baz=187,slow=2.7,SNR=9.8
MKAR **Makanchi Array** 117.90 4 PKP PKPdf 18 00 16.2 -1.2
MKAR PP PP 18 01 28.2 -2.7
MKAR PKKPbc PKKPbc 18 10 35.5 -3.9
MKAR **Makanchi Array** 117.90 4 PKiKP PKPdf 18 00 16.2 -1.2
MKAR 18 01 28.3
DRV **Dumont d'Urvil** 118.32 201 PP PP 18 01 33.0 -1.5
DRV SKKS SKKSac 18 08 18.0 -8.4
DRV R 18 37 00.0
BJI **Beijing** 118.52 335 PDIF Pdif 17 56 36.5 -1.9
BJI PP PP 18 01 34.3 -1.4
BJI SS SS 18 17 45.8 +0.2
BJI LR LR
comp=N,409nm,23.9s
BJI LR LR
comp=E,482nm,23.9s
BJI LR LR
comp=Z,436nm,27.4s
USP **Ospenovka** 120.44 11 P PKPdf 18 00 23.3 +1.0
SNR=14
CHMS **Chumysh** 120.75 11 P PKPdf 18 00 24.7 +1.8
SNR=5.6
MIB **Mutribah** 120.90 40 *e*P PKPdf 18 00 23.5 -0.1
baz=41
MIB AMb AMB 18 00 34.2
comp=Z,30nm,1.5s,baz=41
EKS2 **Erkin-Say** 120.90 11 P PKPdf 18 00 24.6 +1.3
SNR=15
TKM2 **Tokmak 2** 120.97 10 P PKPdf 18 00 24.7 +1.3
SNR=8.9
WMQ **Urumqi** 121.02 359 PKP PKPdf 18 00 24.0 +0.5
WMQ PP PP 18 01 58.0 +5.5
WMQ SKS SKSdf 18 07 25.0 -2.8
WMQ SKKS SKKSac 18 08 39.0 -6.2
WMQ comp=Z,95nm,9.0s
WMQ LR LR
comp=N,757nm,20.0s
WMQ LR LR
comp=E,536nm,20.0s
WMQ LR LR
comp=Z,789nm,20.0s
AAK **Ala-Archa** 121.06 11 P PKPdf 18 00 24.5 +0.9
SNR=7.5
KBK **Karagaybulak** 121.12 10 P PKPdf 18 00 24.5 +0.8
SNR=12
NAY **Al-Naaiem** 121.22 41 *e*P PKPdf 18 00 24.0 -0.2
baz=41
NAY AMb AMB 18 00 37.5
comp=Z,19nm,1.8s,baz=41
UMR **Umm Al-Rimmam** 121.31 40 *e*P PKPdf 18 00 24.4 0.0
baz=40
AML **Almayashu** 121.39 12 P PKPdf 18 00 26.6 +2.4
SNR=26
RDF **Al-Radifah** 121.64 41 *e*P PKPdf 18 00 25.0 0.0
baz=41
RDF AMb AMB 18 00 38.3
comp=Z,54nm,1.5s,baz=41
BOSA **Boshof** 121.75 114 PKP PKPdf 18 00 25.0 -0.2
comp=Z,15nm,0.5s,baz=287,slow=2.2,SNR=33
QRN **Al-Qurain** 121.99 41 *e*P PKPdf 18 00 25.5 -0.3
baz=41
QRN AMb AMB 18 00 37.7
comp=Z,69nm,1.7s,baz=41
CTA **Charters Tower** 123.71 256 *e*PKP PKPdf 18 00 27.5 -1.7
comp=Z,3.8nm,0.6s
CTA **Charters Tower** 123.71 256 PKP PKPdf 18 00 27.8 -1.4
comp=Z,5.0nm,0.5s,baz=54,slow=5.1,SNR=13
NJ2 **Nanjing** 123.81 327 *e*PKP PKPdf 18 00 27.8 -1.4
GTA **Gaotai** 124.15 348 PKP PKPdf 18 00 29.8 +0.2
GTA PP PP 18 02 15.3 +1.6
GTA PP PP
comp=Z,185nm,6.3s
GTA LR LR
comp=N,289nm,17.4s
GTA LR LR
comp=E,329nm,19.2s
GTA LR LR
comp=Z,513nm,22.8s
KSH **Kashi** 124.35 10 *e*PKP PKPdf 18 00 32.8 +2.8
KSH *e*PKS 18 04 08.0
KSH *e*SKS SKSdf 18 07 34.0 -0.2
KSH PP PP
comp=Z,733nm,5.0s
KSH LR LR
comp=N,1μm,6.1s
KSH LR LR
comp=E,665nm,5.2s
KSH LR LR
comp=Z,868nm,6.1s
MAW **Mawson** 125.55 169 PKP PKPdf 18 00 30.2 -1.1
comp=Z,4.6nm,0.5s,baz=177,slow=3.0,SNR=23
LZH **Lanzhou** 126.36 343 *e*PKP PKPdf 18 00 34.5 +0.6
LZH PP PP 18 02 33.5 +5.0
LZH SKS SKSdf 18 07 35.0 -3.1
LZH SKKS SKKSac 18 09 14.5 -5.2
LZH SS SS 18 19 23.5 -1.3
LZH PP PP
comp=Z,364nm,6.7s
LZH LR LR
comp=E,456nm,18.0s
LZH LR LR
comp=Z,707nm,20.3s
XAN **Xi'an** 126.58 337 PKP PKPdf 18 00 33.3 -1.1
XAN PKS 18 04 01.5
XAN SKKS SKKSac 18 09 12.8 -8.4
XAN LR LR
comp=N,117nm,27.2s
XAN LR LR
comp=E,154nm,24.2s
XAN LR LR
comp=Z,499nm,23.4s
STKA **Stephens Creek** 127.99 242 *e*PKP PKPdf 18 00 35.6 -1.5
comp=Z,11nm,0.6s
STKA **Stephens Creek** 127.99 242 PKP PKPdf 18 00 35.7 -1.3
comp=Z,15nm,0.6s,baz=91,slow=2.8,SNR=49
STKA **Stephens Creek** 127.99 242 PKP PKPdf 18 00 35.7 -1.3
CD2 **Chengdu** 131.21 341 *e*PKP PKPdf 18 00 43.3 0.0
CD2 XPKP 18 01 16.8
CD2 PP PP 18 03 04.8 +4.5
CD2 PKS 18 04 18.3
CD2 SKS SKSdf 18 07 43.3 -3.9
CD2 SKKS SKKSac 18 09 45.0 -5.1
CD2 SS SS 18 20 22.8 -2.0
CD2 PP PP
comp=Z,560nm,6.8s
CD2 LR LR
comp=N,1μm,18.0s
CD2 LR LR
comp=E,1μm,21.6s
CD2 LR LR
comp=Z,660nm,16.8s
GYA **Guiyang** 134.21 335 PDIF Pdif 17 57 46.3 -1.9
GYA PKP PKPdf 18 00 50.0 +0.9
GYA XPKP 18 01 20.5
GYA PP PP 18 03 23.5 +3.8
GYA PKS 18 04 24.8
GYA SKKS SKKSac 18 10 06.0 -2.6
GYA SS SS 18 21 02.3 +0.8
GYA PP PP
comp=Z,320nm,5.6s
GYA LR LR
comp=N,360nm,23.6s
GYA LR LR
comp=E,210nm,20.9s
GYA LR LR
comp=Z,380nm,21.8s
LGTI **Lohaghat** 134.88 8 *e*P PKPdf 18 00 51.9 +1.6
LSA **Lhasa** 134.95 355 PKP PKPdf 18 00 51.5 +1.1
LSA **Lhasa** 134.95 355 *e*PKIKP PKPdf 18 00 51.7 +1.3
NDI **New Delhi** 135.10 12 *e*P PKPdf 18 00 50.0 -0.7
ASAR **Alice Springs** 135.30 252 PKhKP 18 00 32.9
comp=Z,0.8nm,0.6s,baz=103,slow=3.3,SNR=14
ASAR PKP PKPdf 18 00 49.2 -1.9
comp=Z,4.0nm,0.6s,baz=82,slow=2.6,SNR=26
ASAR PP PP 18 03 21.7 -6.7
comp=Z,2.5nm,1.1s,baz=91,slow=4.6,SNR=6.8
ASAR PKKP 18 10 33.5
comp=Z,0.7nm,0.5s,baz=290,slow=1.6,SNR=16
ASAR **Alice Springs** 135.30 252 PKP PKPdf 18 00 49.2 -1.9
ASAR PP PP 18 03 21.7 -6.7
ASAR PKKP 18 10 33.5
KMI **Kunming** 136.89 339 PKP PKPdf 18 00 53.5 -0.6
KMI XPKP 18 01 25.8
KMI PP PP 18 03 39.5 +3.1
KMI PKS 18 04 28.5
KMI SKKS SKKSac 18 10 21.5 -3.2
KMI SS SS 18 21 33.5 +0.1
KMI PP PP
comp=Z,144nm,5.1s
KMI LR LR
comp=N,362nm,18.1s
KMI LR LR
comp=E,287nm,21.6s
KMI LR LR
comp=Z,463nm,32.3s
BHJ **Bhuj** 137.92 24 *e*P PKPdf 18 00 53.5 -2.6
BHJ *i* PP PP 18 03 45.3 +2.3
BHJ AMS AMS 18 16 41.1
comp=Z,222nm,11.1s
SHL **Shillong** 138.97 353 *e*P PKPdf 18 00 57.0 -0.9
SHL *ex* x 18 04 34.0
QIZ **Qiongzhong** 139.07 326 PKP PKPdf 18 00 56.3 -2.0
QIZ PP PP 18 03 49.5 -1.0
QIZ SS SS 18 21 59.3 -0.8
QIZ LR LR
comp=Z,373nm,35.4s
BOK **Bokaro** 140.98 2 *e*P PKPdf 18 01 01.5 -0.1
BOK *i* x x 18 03 54.0
POO **Poona** 143.81 22 *e*P PKPdf 18 01 04.3 -2.4
CHG **Chiang Mai** 144.01 341 ⇑P PKPdf 18 01 06.1 -1.0
comp=Z,18nm,0.8s
CMAR **Chiang Mai Arr** 144.35 340 PKP PKPdf 18 01 05.2 -2.4
comp=Z,14nm,0.5s,baz=339,slow=3.5,SNR=81
CMAR pPKP pPKPdf 18 01 27.9 -4.3
comp=Z,9.3nm,1.0s,baz=348,slow=4.7,SNR=2.9
KAD **Karad** 145.05 22 *e*P PKPbc 18 01 07.7 -0.7
BDT **Bhumibol Dam** 145.46 340 P PKPdf 18 01 08.5 -1.1
comp=Z,31nm,0.8s
HYB **Hyderabad** 146.28 15 *e*P PKPdf 18 01 10.5 -0.5
HYB **Hyderabad** 146.28 15 *i* PKP PKPdf 18 01 10.5 -0.5
HYB *ep*PKP pPKPdf 18 01 32.0 -3.5
HYB *es*PKP 18 01 48.0

NST	**Nakhon Sawan**	**146.51**	**337**	P		PKPdf	18 01 11.0	-0.4
	comp=Z,586nm,0.7s							
GOA	**Goa**	**146.58**	**24**⇑	*eP*		PKPdf	18 01 12.2	+0.6
VIS	**Vishakhapatnam**	**146.84**	**7**	*ex*		PKPbc	18 01 13.6	-0.2
NWAO	**Narrogin (SRO)**	**147.63**	**232**	*e*PKPdf		PKPdf	18 01 12.8	-0.1
NWAO				*ep*PKPdf		pPKPdf	18 01 38.0	+0.7
KLBR	**Kellerberrin**	**147.77**	**235**	*e*PKP		PKPdf	18 01 13.6	+0.5
	comp=Z,156nm,1.5s							
KLBR				*ep*PKP		pPKPdf	18 01 38.1	+0.5
MUN	**Mundaring**	**148.81**	**233**	*e*PKP		PKPdf	18 01 17.4	+2.6
MUN				*ep*PKP		pPKPdf	18 01 41.5	+2.2
MDRS	**Chennai**	**150.87**	**14**	*ex*		PKPbc	18 01 27.2	+2.9
MDRS				*ex*		x	18 04 55.2	
KOD	**Kodaikanal**	**152.76**	**21**	*ex*		PKPbc	18 01 30.0	+1.4
TRD	**Trivandrum**	**154.17**	**24**	*e*P		PKPdf	18 01 21.4	-2.0

*IDC **26** 17:43:18.2±1.4,35.11N×6159E, h0km, mb3.8/3, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.7/2, MS4.2/1, Ms1 4.2/1, ms1mx2.7/40, Error ellipse: s-maj=26.9km s-min=24.3km az=86.0*

*ISCJB **26** 17:43:20.5±0.9, 3531N±007×617E±0.1, h33km, mb4.1/9, Error ellipse: s-maj=17.2km s-min=6.3km az=150.0*

*NEIC **26** 17:43:22.8±0.7, 3510N×6167E, h35km, mb4.3/9, Error ellipse: s-maj=14.1km s-min=8.6km az=225.0*

ISC 26 17:43:22.6±0.9, 3530N±007×617E±01, h35km, n22, σ0§98/23, mb4.1/9, Turkmenistan-Afghanistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**11.59**	**50**	*e*P		**Pn**	**17 46 05.0**	**-0.4**
	2.2nm,0.6s							
AKTK	**Aktyubinsk**	**15.36**	**351**	Pn		**Pn**	**17 46 55.5**	**-1.0**
AKTK				Sn		**Sn**	**17 49 45.1**	**-0.3**
AKTO	**Aktyubinsk**	**15.36**	**351**	Pn		**Pn**	**17 46 55.5**	**-1.0**
	0.2nm,0.3s,baz=166,slow=13,SNR=3.5							
AKTO				Sn		**Sn**	**17 49 45.1**	**-0.3**
	0.1nm,0.3s,baz=50,slow=23,SNR=4.1							
BVAR	**Borovoye Array**	**18.76**	**17**	P		**Pn**	**17 47 41.4**	**+2.3**
	0.4nm,0.3s,baz=195,slow=10,SNR=11							
MKAR	**Makanchi Array**	**19.26**	**47**	P		**Pn**	**17 47 46.4**	**+1.3**
	0.1nm,0.3s,baz=234,slow=10,SNR=4.1							
PYUN	**Piuthan**	**19.48**	**106**	*e*P		**Pn**	**17 47 46.4**	**-1.5**
KURK	**Kurchatov**	**19.69**	**33**	P		**Pn**	**17 47 50.5**	**+0.3**
	0.1nm,0.3s,baz=225,slow=11,SNR=12							
KURK	**Kurchatov**	**19.69**	**33**	*e*P		**Pn**	**17 47 49.1**	**-1.1**
	1.0nm,0.6s							
KURK				P			17 47 50.5	
DANN	**Dangsing**	**19.98**	**104**	*e*P		**Pn**	**17 47 52.4**	**-1.4**
	5.6nm,0.4s							
KOLN	**Koldanda**	**20.11**	**106**	*e*P		**P**	**17 47 52.7**	**-0.7**
	3.5nm,0.5s							
GKN	**Gorkha**	**20.82**	**104**	*e*P		**P**	**17 48 00.9**	**-0.2**
	14nm,0.5s							
DMN	**Daman**	**21.37**	**105**	*e*P		**P**	**17 48 07.9**	**+0.9**
	7.9nm,0.6s,mb4.2							
KKN	**Kakani**	**21.43**	**104**	*e*P		**P**	**17 48 07.3**	**-0.3**
	7.3nm,0.8s,mb4.1							
PKI	**Pulchoki**	**21.63**	**104**	*e*P		**P**	**17 48 09.9**	**+0.1**
	15nm,0.6s,mb4.6							
GUN	**Gumba**	**21.85**	**103**	*e*P		**P**	**17 48 13.3**	**+1.1**
JIRN	**Jiri**	**22.21**	**103**	*e*P		**P**	**17 48 16.4**	**+0.4**
	7.4nm,0.7s,mb4.2							
RAMN	**Ramite**	**22.85**	**104**	*e*P		**P**	**17 48 22.1**	**-0.7**
	12nm,0.7s,mb4.5							
ODAN	**Odare**	**23.52**	**104**	*e*P		**P**	**17 48 29.8**	**+0.1**
	12nm,0.7s,mb4.5							
ZALV	**Zalesovo Beam**	**24.68**	**34**	P		**P**	**17 48 42.8**	**+2.8**
	0.9nm,0.5s,mb3.6,baz=238,slow=8.8,SNR=5.5							
CMAR	**Chiang Mai Arr**	**36.97**	**107**	P		**P**	**17 50 29.1**	**+0.5**
	0.8nm,0.6s,mb3.7,baz=295,slow=8.5,SNR=9.9							
GERES	**GERESS Array B**	**37.48**	**306**	LR		LR	18 06 50.5	
	comp=Z,366nm,19.8s,baz=161,slow=38							
TORD	**Torodi Ar. Bea**	**58.09**	**264**	P		**P**	**17 53 13.2**	**+0.5**
	1.1nm,1.0s,mb3.8,baz=46,slow=8.3,SNR=4.9							

*ISCJB **26** 17:44:15.5±0.5, 3347N±007×13767E±007, h345km±3km, mb3.6/13, Error ellipse: s-maj=10.9km s-min=8.9km az=164.1*

*IDC **26** 17:44:15.9±0.7, 3342N×13751E, h323km±10km, mb3.2/8, mb1 3.3/11, mb1mx3.2/27, mbtmp3.2/11, Error ellipse: s-maj=21.2km s-min=11.5km az=64.0*

*JMA **26** 17:44:15.3±0.4, 3349N×13764E, h352km±4km, M3.3*

*NEIC **26** 17:44:16.4±0.8, 3342N×13741E, h327km±8km, mb4.0/4, Error ellipse: s-maj=14.5km s-min=13.3km az=193.0*

ISC 26 17:44:16.6±0.5, 3349N±007×13764E±007, h338km±3km, n43, σ0§97/51, mb3.6/13, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TK02	**Tokai 2**	**0.47**	**12**	P		**Pn**	**17 45 00.2**	**+0.8**
TK03	**Tokai 3**	**0.73**	**22**	P		**Pn**	**17 45 01.0**	**+1.0**
TK03				*e*S		**S**	**17 45 37.3**	**+2.5**
TK04	**Tokai 4**	**0.92**	**12**	P		**Pn**	**17 45 01.7**	**+1.0**
JIE	**Ise**	**1.19**	**320**	P		**Pn**	**17 45 02.2**	**+0.4**
JIE				*e*S		**S**	**17 45 37.9**	**-0.1**
JWZ	**Kozaga**	**1.61**	**272**	P		**Pn**	**17 45 03.9**	**-0.3**
JHJ	**Hachijo jima 2**	**1.83**	**101**	P		**Pn**	**17 45 05.4**	**-0.2**
	22nm,0.3s,baz=61,slow=22,SNR=8.9							
JHJ				S		**S**	**17 45 42.8**	**-2.1**
	13nm,0.3s,baz=231,slow=20,SNR=2.9							
JWY	**Kouya**	**1.85**	**294**	P		**Pn**	**17 45 06.1**	**+0.4**
JOD2	**Odawara 2**	**2.14**	**34**	P		**Pn**	**17 45 08.2**	**+0.5**
JOD2				*e*S		**S**	**17 45 51.2**	**+2.5**
JYN	**Shimob**	**2.14**	**20**	P		**Pn**	**17 45 08.6**	**+0.9**
JGM	**Miyama**	**2.34**	**341**	P		**Pn**	**17 45 09.8**	**+0.6**
JWT	**Wachi**	**2.58**	**315**	P		**Pn**	**17 45 11.4**	**+0.2**
JWT				*e*S		**S**	**17 45 54.3**	**-0.8**
JAI	**Aioi**	**2.68**	**277**	P		**Pn**	**17 45 12.0**	**-0.2**
JRY	**Ryogami san**	**2.73**	**22**	P		**Pn**	**17 45 13.1**	**+0.6**
JRY				*e*S		**S**	**17 45 56.0**	**-1.5**
BSO1	**Boso 1**	**3.00**	**66**	P		**Pn**	**17 45 13.1**	**-1.9**
BSO1				*e*S		**S**	**17 45 59.0**	**-3.0**
MJAR	**Matsushiro Arr**	**3.08**	**9**	P		**Pn**	**17 45 15.7**	**-0.1**
	1.8nm,0.3s,baz=183,slow=9.6,SNR=23							
MJAR				S		**S**	**17 46 02.0**	**-1.3**
	1.1nm,0.3s,baz=191,slow=20,SNR=6.5							
MAJO	**Matsushiro**	**3.09**	**8**	*e*P		**Pn**	**17 45 15.8**	**0.0**
MAT	**Matsushiro**	**3.09**	**8**	P		**Pn**	**17 45 15.9**	**+0.2**
MAT				S		**S**	**17 46 01.7**	**-1.6**
JHS	**Saijyo**	**4.04**	**293**	P		**Pn**	**17 45 25.3**	**0.0**
JTO	**Tosashimizu**	**4.11**	**263**	P		**Pn**	**17 45 25.7**	**-0.3**
KSRS	**Korea Array**	**8.86**	**299**	P		**Pn**	**17 46 21.4**	**+0.6**
	1.2nm,0.3s,baz=111,slow=13,SNR=39							
ASAJ	**Asahikawa**	**11.29**	**19**	P		**Pn**	**17 46 51.9**	**+2.0**
	0.4nm,0.3s,baz=216,slow=34,SNR=4.3							
HHC	**Hu-ho-hao-te**	**21.99**	**297**	*e*PKP		PKiKP	18 00 17.8	+3.4
HHC				XPKP			18 00 52.3	
HHC				PP			18 01 43.5	
HHC				PKS			18 03 53.0	
HHC				SKS			18 07 17.8	
HHC				SKKS			18 08 26.5	
HHC				SS			18 17 54.8	
HHC				LR		LR		
	comp=N,510nm,21.4s							
HHC				LR		LR		
	comp=E,336nm,21.4s							
HHC				LR		LR		
	comp=Z,517nm,23.8s							
SONM	**Songino Array**	**27.48**	**311**	P		**P**	**17 49 33.3**	**+0.7**
	comp=Z,1.9nm,0.9s,mb3.3,baz=114,slow=7.5,SNR=10							
CMAR	**Chiang Mai Arr**	**37.63**	**256**	P		**P**	**17 51 00.1**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.1,baz=50,slow=7.7,SNR=11							
ZALV	**Zalesovo Beam**	**42.15**	**315**	P		**P**	**17 51 36.5**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.1,baz=85,slow=8.7,SNR=4.7							
ZALV	**Zalesovo Beam**	**42.15**	**315**	P		**P**	**17 51 36.5**	**-0.2**
TAPN	**Taplejung**	**43.16**	**276**	*e*P		**P**	**17 51 45.0**	**-0.1**
	comp=Z,6.1nm,0.3s,mb4.2							
MKAR	**Makanchi Array**	**43.49**	**305**	P		**P**	**17 51 47.2**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.0,baz=84,slow=10.0,SNR=8.0							
MKAR	**Makanchi Array**	**43.49**	**305**	P		**P**	**17 51 47.2**	**-0.3**
ODAN	**Odare**	**43.60**	**275**	*e*P		**P**	**17 51 48.1**	**-0.5**
	comp=Z,5.0nm,0.3s,mb4.1							
RAMN	**Ramite**	**44.23**	**276**	*e*P		**P**	**17 51 53.0**	**-0.6**
JIRN	**Jiri**	**44.31**	**277**	*e*P		**P**	**17 51 54.4**	**+0.2**
	comp=Z,9.8nm,0.3s,mb4.4							
GUN	**Gumba**	**44.48**	**277**	*e*P		**P**	**17 51 55.4**	**-0.2**
KKN	**Kakani**	**45.02**	**277**	*e*P		**P**	**17 51 59.0**	**-0.8**
GKN	**Gorkha**	**45.48**	**278**	*e*P		**P**	**17 52 02.1**	**-1.2**
KURK	**Kurchatov**	**45.78**	**310**	P		**P**	**17 52 05.3**	**0.0**
	comp=Z,2.1nm,0.5s,mb3.5,baz=91,slow=9.2,SNR=29							
KURK	**Kurchatov**	**45.78**	**310**	*e*P		**P**	**17 52 05.0**	**-0.3**
	comp=Z,1.5nm,0.4s,mb3.5							
KOLN	**Koldanda**	**46.42**	**278**	*e*P		**P**	**17 52 10.7**	**+0.1**
	comp=Z,1.8nm,0.3s,mb3.7							
PYUN	**Piuthan**	**46.81**	**279**	*e*P		**P**	**17 52 13.4**	**-0.2**
	comp=Z,6.2nm,0.5s,mb4.1							
BVAR	**Borovoye Array**	**50.74**	**314**	P		**P**	**17 52 42.8**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.1,baz=107,slow=5.5,SNR=4.5							
ASAR	**Alice Springs**	**56.94**	**184**	P		**P**	**17 53 27.8**	**+0.2**
	comp=Z,0.4nm,0.3s,mb3.2,baz=356,slow=4.1,SNR=31							
NVAR	**Mina Array Bea**	**79.60**	**51**	P		**P**	**17 55 49.5**	**+2.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=291,slow=6.3,SNR=3.9							
NVAR	**Mina Array Bea**	**79.60**	**51**	P		**P**	**17 55 49.5**	**+2.6**

*IDC **26** 18:05:43.5±0.8, 328Sx10027E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/21, mbtmp4.1/9, ML3.9/1, MS3.7/2, Ms1 3.8/2, ms1mx3.4/21, Error ellipse: s-maj=17.6km s-min=5.0km az=129.0*

*BJI **26** 18:05:47.2, 307Sx10030E, h22km, mB5.2, mb4.9, Ms5.1, Msz4.9*

*NEIC **26** 18:05:48.2±0.8, 332Sx10026E, h35km, mb4.7/10, Error ellipse: s-maj=29.4km s-min=8.4km az=47.0*

*ISCJB **26** 18:05:51.8±2.3, 29S±02×1010E±02, h52km±15km, mb4.5/21, MS3.7/2, Error ellipse: s-maj=39.7km s-min=11.3km az=135.7*

ISC 26 18:05:52.2±2.4, 30S±02×1009E±02, h42km±16km, n36, σ1§67/33, mb4.5/21, MS3.7/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDSI	**Padang**	**2.09**	**349**	P		**Pn**	**18 06 23.8**	**-1.0**
	556nm,0.8s							
PPI	**Padang Panjang**	**2.55**	**349**	P		**Pn**	**18 06 30.7**	**-0.3**
	258nm,1.3s							
KAPI	**Kappang**	**18.95**	**97**	P		**Pn**	**18 10 12.1**	**+1.1**
	0.4nm,0.3s,baz=291,slow=12,SNR=5.7							
CMAR	**Chiang Mai Arr**	**21.38**	**355**	P		**P**	**18 10 35.1**	**-1.2**
	3.0nm,0.9s,mb3.6,baz=186,slow=10.0,SNR=27							
CMAR				LR		LR	18 20 54.3	
	comp=Z,172nm,19.9s,MS3.4,baz=190,slow=42							
ODAN	**Odare**	**32.39**	**337**	*e*P		**P**	**18 12 20.2**	**+2.2**
TAPN	**Taplejung**	**32.71**	**338**	*e*P		**P**	**18 12 23.0**	**+2.2**
	22nm,1.1s,mb5.0							
JIRN	**Jiri**	**33.58**	**336**	*e*P		**P**	**18 12 30.9**	**+2.5**
LSA	**Lhasa**	**33.80**	**345**	P		**P**	**18 12 29.5**	**-0.8**
LSA	**Lhasa**	**33.80**	**345**	*e*P		**P**	**18 12 29.7**	**-0.6**
	8.5nm,1.1s,mb4.6							
GUN	**Gumba**	**33.93**	**336**	*e*P		**P**	**18 12 34.0**	**+2.5**
	7.5nm,0.4s,mb5.0							
DMN	**Daman**	**33.99**	**334**	*e*P		**P**	**18 12 35.5**	**+3.5**
KKN	**Kakani**	**34.07**	**335**	*e*P		**P**	**18 12 36.0**	**+3.3**
GKN	**Gorkha**	**34.53**	**334**	*e*P		**P**	**18 12 39.1**	**+2.4**
KOLN	**Koldanda**	**34.80**	**333**	*e*P		**P**	**18 12 42.2**	**+3.2**
	13nm,1.0s,mb4.8							
DANN	**Dangsing**	**35.22**	**333**	*e*P		**P**	**18 12 44.8**	**+2.2**
	9.7nm,0.7s,mb4.8							
PYUN	**Piuthan**	**35.36**	**332**	*e*P		**P**	**18 12 47.1**	**+3.3**
	7.6nm,0.7s,mb4.7							
WRA	**Warramunga Arr**	**36.76**	**120**	P		**P**	**18 12 55.6**	**-0.4**
	1.0nm,0.4s,mb4.0,baz=299,slow=9.9,SNR=18							
WRAB	**Tennant Creek**	**36.77**	**120**	*e*P		**P**	**18 12 56.0**	**0.0**
XAN	**Xi'an**	**37.59**	**11**	P		**P**	**18 13 02.5**	**-0.3**
XAN				AP		pP	18 13 10.8	-3.6
XAN				AMB		AMB		
	comp=Z,15nm,0.8s,mb4.8							
XAN				AMB		AMB		
	comp=Z,218nm,5.2s							
ASAR	**Alice Springs**	**37.99**	**126**	P		**P**	**18 13 06.0**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.1,baz=297,slow=7.8,SNR=25							
KSRS	**Korea Array**	**47.43**	**29**	P		**P**	**18 14 24.7**	**+2.0**
	comp=Z,5.1nm,1.1s,mb4.4,baz=224,slow=7.0,SNR=5.8							
WMQ	**Urumqi**	**48.07**	**347**	*e*P		**P**	**18 14 27.0**	**-0.5**
WMQ				AMB		AMB		
	comp=Z,21nm,1.0s,mb5.1							
SONM	**Songino Array**	**50.83**	**5**	P		**P**	**18 14 49.9**	**+1.4**
	comp=Z,4.9nm,0.8s,mb4.5,baz=188,slow=9.5,SNR=29							
TKM2	**Tokmak 2**	**51.06**	**336**	*e*P		**P**	**18 14 48.3**	**-2.0**
	comp=Z,6.9nm,1.0s,mb4.5							
CN2	**Changchun**	**51.54**	**23**	*e*P		**P**	**18 14 54.5**	**+0.6**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
EKS2	**Erkin-Say**	**51.61**	**335**	*e*P		**P**	**18 14 52.1**	**-2.4**
	comp=Z,4.7nm,0.8s,mb4.5							
MK31	**Makanchi Array**	**52.20**	**344**	*e*P		**P**	**18 14 56.9**	**-1.9**
MKAR	**Makanchi Array**	**52.20**	**344**	P		**P**	**18 14 57.1**	**-1.6**
	comp=Z,2.7nm,0.8s,mb4.2,baz=155,slow=8.8,SNR=20							
MJAR	**Matsushiro Arr**	**52.50**	**38**	LR		LR	18 38 57.4	
	comp=Z,94nm,18.0s,MS3.9,baz=70,slow=38							
KURK	**Kurchatov**	**56.78**	**343**	*e*P		**P**	**18 15 29.6**	**-2.3**
	comp=Z,4.5nm,0.9s,mb4.5							
ZAA0	**Zalesovo Array**	**58.28**	**349**	*e*P		**P**	**18 15 40.5**	**-1.9**
ZALV	**Zalesovo Beam**	**58.28**	**349**	P		**P**	**18 15 40.8**	**-1.7**
	comp=Z,6.3nm,0.8s,mb4.7,baz=174,slow=6.0,SNR=25							
BRTR	**Keskin Array B**	**74.61**	**312**	P		**P**	**18 17 21.7**	**-5.4**
	comp=Z,0.7nm,0.9s,mb3.6,baz=106,slow=7.8,SNR=3.6							
TIXI	**Tiksi**	**76.68**	**9**	*e*P		**P**	**18 17 36.9**	**-1.5**
	comp=Z,3.0nm,0.5s,mb4.5							
TXAR	**Lajitas Array**	**144.93**	**39**	PKPbc		PKPdf	18 25 25.0	-0.5
	comp=Z,2.9nm,0.7s,baz=294,slow=1.0,SNR=26							
TXAR	**Lajitas Array**	**144.93**	**39**	PKPbc		PKPdf	18 25 25.0	-0.5

*LDG **26** 18:34:25.5±0.1, 4284N×1871E, h10km, Ml3.5/3, Error ellipse: s-maj=4.4km s-min=3.3km az=11.0*

*CSEM **26** 18:34:25.9±0.1, 4284N×1867E, h18km, Ms3.5, Error ellipse: s-maj=1.6km s-min=1.1km az=29.0*

*ISCJB **26** 18:34:26.3±0.3, 4288N±002×1861E±002, h23km±3km, Error ellipse: s-maj=3.1km s-min=2.6km az=17.9*

*NEIC **26** 18:34:26.3, 4284N×1867E, h17km, ML2.9(PDG), ML2.7(BUC), After PDG.*

*BEO **26** 18:34:26.1±0.3, 4286N×1854E, h21km±3km, ML3.3/13*

*PDG **26** 18:34:26.3±0.4, 4284N×1867E, h17km, MD3.0/8, ML2.9/5, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*VIE **26** 18:34:31.2±1.1, 4323N×1855E, h0km, mb2.9/4, ML2.8/3, Ms3.5/1, Error ellipse: s-maj=20.7km s-min=8.1km az=73.0*

ISC 26 18:34:26.8±0.3, 4286N±002×1866E±002, h15km±2km, n87, σ1§16/143, 25C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRY	**Bratogost**	**0.09**	**296**	⇑*i*Pg		**Pg**	**18 34 29.9**	**-0.2**
BRY				*e*Sg		**Sg**	**18 34 32.7**	**+0.6**
NKY	**Niksic**	**0.25**	**100**	⇑*i*Pg		**Pg**	**18 34 31.7**	**-0.6**
NKY				*e*Sg		**Sg**	**18 34 36.5**	**+0.4**
TREB	**Trebinje**	**0.27**	**238**	⇓*i*Pg		**Pg**	**18 34 31.8**	**-0.8**
TREB				*e*Sg		**Sg**	**18 34 36.5**	**0.0**
TREB	**Trebinje**	**0.27**	**238**	*e*Pg		**Pg**	**18 34 31.8**	**-0.8**
TREB				*e*Sg		**Sg**	**18 34 36.5**	**0.0**
UPM	**Unac-Piva**	**0.39**	**28**	⇓*i*Pg		**Pg**	**18 34 34.2**	**-0.5**
UPM				*e*Sg		**Sg**	**18 34 41.0**	**+0.9**
HCY	**Herceg Novi**	**0.43**	**196**	⇓*i*Pg		**Pg**	**18 34 33.8**	**-1.6**
HCY				*e*Sg		**Sg**	**18 34 41.4**	**+0.2**
BUM	**Brajici-Budva**	**0.59**	**162**	⇓*i*Pg		**Pg**	**18 34 37.1**	**-1.2**
BUM				*e*Sg		**Sg**	**18 34 46.2**	**+0.1**
PDG	**Podgorica**	**0.62**	**134**	⇓*i*Pg		**Pg**	**18 34 37.2**	**-1.7**
PDG				*e*Sg		**Sg**	**18 34 47.6**	**+0.5**
TTG	**Podgorica**	**0.62**	**134**	⇓*i*Pg		**Pg**	**18 34 37.2**	**-1.7**
TTG				*e*Sg		**Sg**	**18 34 47.6**	**+0.5**
PLE	**Pljevlja**	**0.71**	**49**	⇓*i*Pg		**Pg**	**18 34 40.1**	**-0.7**
PLE				*e*Sg		**Sg**	**18 34 51.7**	**+1.5**
BEY	**Berane**	**0.91**	**89**	⇑*i*Pg		**Pg**	**18 34 43.4**	**-1.1**
IVA	**Berane**	**0.91**	**89**	⇑*i*Pg		**Pg**	**18 34 43.4**	**-1.1**
IVA				*e*Sg		**Sg**	**18 34 57.9**	**+1.5**
ULC	**Ulcinj**	**1.00**	**154**	⇓*i*Pg		**Pg**	**18 34 44.7**	**-1.4**
ULC				*e*Sg		**Sg**	**18 35 00.2**	**+1.1**
PVY	**Plav**	**1.00**	**105**	⇓*i*Pg		**Pg**	**18 34 44.8**	**-1.4**
PVY				*e*Sg		**Sg**	**18 35 00.7**	**+1.3**
SJES	**Sjenica**	**1.04**	**67**	*e*Pg		**Pg**	**18 34 46.1**	**-0.9**
SJES				*e*Sg		**Sg**	**18 35 01.2**	**+0.6**
BBLS	**Lazići**	**1.14**	**28**	*e*Pg		**Pg**	**18 34 47.9**	**-1.0**
BBLS				*e*Sg		**Sg**	**18 35 04.8**	**+1.0**
TIR	**Tirane**	**1.76**	**149**	*e*P		**Pn**	**18 34 58.5**	**+1.8**
TIR	**Tirane**	**1.76**	**149**	*e*Pn		**Pn**	**18 34 56.3**	**-0.4**
TIR				*e*Sg		**Sg**	**18 35 23.5**	**+0.1**
GRUS	**Gruza**	**1.82**	**55**	⇑*i*Pn		**Pn**	**18 34 57.0**	**-0.5**
BLY	**Banja Luka**	**2.17**	**331**	*e*Pn		**Pn**	**18 35 03.6**	**+1.2**
SKO	**Skopje**	**2.24**	**112**	*e*Pn		**Pn**	**18 35 01.9**	**-1.5**
SKO				*e*Sn		**Sn**	**18 35 33.8**	**+3.1**
PE1	**Pezze di Greco**	**2.25**	**205**	*e*Pn		**Pn**	**18 35 01.4**	**-2.1**
FGMS	**Monte Sant'Ang**	**2.31**	**241**	Pn		**Pn**	**18 35 06.7**	**+2.3**
BARS	**Barje**	**2.32**	**90**	⇑*i*Pn		**Pn**	**18 35 05.0**	**+0.5**
BARS				*e*Sn		**Sn**	**18 35 33.2**	**+0.5**
OHR	**Ohrid**	**2.37**	**137**	*e*Pn		**Pn**	**18 35 08.9**	**+3.8**
OHR				*e*Sn		**Sn**	**18 35 39.9**	**+6.1**
KRUS	**Krusevo**	**2.44**	**127**	*e*Pn		**Pn**	**18 35 07.7**	**+1.7**
KRUS	**Krusevo**	**2.44**	**127**	*e*Pn		**Pn**	**18 35 07.8**	**+1.7**
KRUS				*e*Sn		**Sn**	**18 35 41.2**	**+5.7**
FGSL	**Fruska Gora**	**2.44**	**19**	*e*Pn		**Pn**	**18 35 05.3**	**-0.8**
FGSL				*e*Sn		**Sn**	**18 35 34.5**	**-1.2**
FGSL	**Fruska Gora**	**2.44**	**19**	*e*Pn		**Pn**	**18 35 05.5**	**-0.6**
FGSL				*e*Sn		**Sn**	**18 35 34.5**	**-1.2**
RGNG	**Rignano Grg**	**2.57**	**244**	Pn		**Pn**	**18 35 09.3**	**+1.4**
BOLS	**Boljevac**	**2.59**	**67**	*e*Pn		**Pn**	**18 35 07.8**	**-0.4**
STIP	**Stip**	**2.86**	**113**	*e*Pn		**Pn**	**18 35 12.4**	**+0.5**
ZAPS	**Zavoj**	**2.94**	**81**	⇑*i*Pn		**Pn**	**18 35 14.0**	**+1.0**
ZAPS				*e*Sn		**Sn**	**18 35 48.5**	**+0.5**
RHK3	**Tenkes**	**3.04**	**355**	⇑*e*Pn		**Pn**	**18 35 14.2**	**-0.2**
RHK3				*e*Sn		**Sg**	**18 36 10.8**	**+6.3**
VAY	**Valandovo**	**3.29**	**117**	*e*Pn		**Pn**	**18 35 26.4**	**+8.6**
VAY				*e*Sn		**Sg**	**18 36 10.2**	**-2.4**
PKSM	**Moragy**	**3.35**	**360**	⇑P		**Pn**	**18 35 18.0**	**-0.6**
PKSM				S		**Sn**	**18 35 56.4**	**-1.7**
PKSM	**Moragy**	**3.35**	**360**	⇑*e*Pn		**Pn**	**18 35 17.9**	**-0.7**
PKSM				S		**Sn**	**18 35 56.4**	**-1.7**
PKSM	**Moragy**	**3.35**	**360**	⇑*i*P		**Pn**	**18 35 18.0**	**-0.6**
VTS	**Vitosha**	**3.36**	**93**	⇑P		**Pn**	**18 35 19.5**	**+0.8**
VTS				S		**Sn**	**18 35 59.7**	**+1.3**
VTS	**Vitosha**	**3.36**	**93**	⇓*i*Pn		**Pn**	**18 35 19.5**	**+0.7**
VTS				*e*Sn		**Sn**	**18 35 58.1**	**-0.3**
VTS	**Vitosha**	**3.36**	**93**	⇑*i*P		**Pn**	**18 35 19.5**	**+0.7**
VTS	**Vitosha**	**3.36**	**93**	S		**Sn**	**18 35 59.7**	**+1.3**
CSSN	**Cassano Irpino**	**3.37**	**235**	Pn		**Pn**	**18 35 18.2**	**-0.7**
SGO	**Sicignano**	**3.40**	**229**	Pn		**Pn**	**18 35 18.6**	**-0.7**
BZS	**Buzias**	**3.48**	**37**	⇓P		**Pn**	**18 35 20.1**	**-0.2**
BZS				S		**Sn**	**18 36 01.0**	**-0.3**
BZS	**Buzias**	**3.48**	**37**	*e*Pn		**Pn**	**18 35 19.8**	**-0.6**
BZS				S		**Sn**	**18 36 01.0**	**-0.3**
BZS	**Buzias**	**3.48**	**37**	⇓*i*P		**Pn**	**18 35 20.1**	**-0.3**
CRES	**Cresnjev**	**3.75**	**323**	*e*Pn		**Pn**	**18 35 25.2**	**+1.1**
CRES				*e*Sn		**Sn**	**18 36 08.0**	**0.0**
SDI	**San Donato**	**3.78**	**254**	Pn		**Pn**	**18 35 24.2**	**-0.3**
GZR	**Gura Zlata**	**3.90**	**48**	⇓P		**Pn**	**18 35 26.0**	**-0.1**
GZR				S		**Sn**	**18 36 11.2**	**-0.4**
GZR	**Gura Zlata**	**3.90**	**48**	⇓P		**Pn**	**18 35 26.0**	**-0.1**
GZR				S		**Sn**	**18 36 11.2**	**-0.4**
GZR	**G

SKR				pmax	pmax		
	comp=E,80nm,0.5s						
NEM2	**Nemuro 2**	**5.35**	**241**	P	**Pn**	**18 45 59.1**	**-1.3**
NEM2				*e*S	**Sn**	**18 46 58.0**	**-2.7**
JRA	**Rausu**	**5.45**	**248**	P	**Pn**	**18 46 03.4**	**+1.7**
JNK	**Nakash**	**5.88**	**246**	P	**Pn**	**18 46 08.2**	**+0.7**
JNK				*e*S	**Sn**	**18 47 14.2**	**+0.7**
JAK	**Akkeshi**	**6.20**	**242**	P	**Pn**	**18 46 10.6**	**-1.3**
JAK				*e*S	**Sn**	**18 47 19.0**	**-2.4**
JTKR	**Abashiri--Toko**	**6.23**	**252**	P	**Pn**	**18 46 14.0**	**+1.6**
YSS	**Yuzh-Sakhalins**	**6.51**	**280**	*e*PN	**Pn**	**18 46 15.5**	**-0.8**
JMP	**Maruseppu**	**6.58**	**254**	P	**Pn**	**18 46 19.6**	**+2.4**
JAR	**Ashorobuto**	**6.62**	**247**	P	**Pn**	**18 46 18.7**	**+1.0**
JAR				*e*S	**Sn**	**18 47 32.9**	**+1.1**
JOB	**Onbets**	**6.78**	**244**	P	**Pn**	**18 46 19.3**	**-0.6**
JOB				*e*S	**Sn**	**18 47 34.6**	**-1.1**
JKK2	**Kamakawa 2**	**7.04**	**254**	P	**Pn**	**18 46 25.8**	**+2.3**
ASAJ	**Asahikawa**	**7.05**	**256**	P	**Pn**	**18 46 27.0**	**+3.3**
	comp=Z,2.0nm,0.3s,baz=216,slow=26,SNR=9.6						
ASAJ	**Asahikawa**	**7.05**	**256**	PN	**Pn**	**18 46 27.0**	**+3.3**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JCH	**Churui**	**7.23**	**244**	P	**Pn**	**18 46 25.4**	**-0.6**
JCH				*e*S	**Sn**	**18 47 43.4**	**-3.3**
JEM	**Erimo**	**7.69**	**240**	P	**Pn**	**18 46 33.0**	**+0.6**
ERM	**Erimo**	**7.69**	**240**	*e*PN	**Pn**	**18 46 32.9**	**+0.5**
JBT2	**Biratori 2**	**7.77**	**248**	P	**Pn**	**18 46 34.4**	**+0.9**
PETK	**Petropavlovsk-**	**7.81**	**25**	P	**Pn**	**18 46 33.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=122,slow=17,SNR=7.3						
PETK	**Petropavlovsk-**	**7.81**	**25**	P	**Pn**	**18 46 33.0**	**-1.0**
JYM2	**Yakumo 2**	**9.38**	**249**	P	**Pn**	**18 46 56.0**	**+0.4**
JANG	**Nango**	**9.68**	**237**	P	**Pn**	**18 46 55.9**	**-3.7**
JTM	**Tenmabayashi**	**9.68**	**240**	P	**Pn**	**18 46 57.5**	**-2.2**
MJAR	**Matsushiro Arr**	**14.20**	**232**	P	**Pn**	**18 48 08.3**	**+7.0**
	comp=Z,0.5nm,0.3s,baz=28,slow=8.9,SNR=8.6						
MJAR	**Matsushiro Arr**	**14.20**	**232**	P	**Pn**	**18 48 08.4**	**+7.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**19.98**	**253**	P	**Pn**	**18 49 12.1**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=53,slow=11,SNR=6.9						
KSRS	**Korea Array**	**19.98**	**253**	P	**Pn**	**18 49 12.1**	**-1.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YAK	**Yakutsk**	**20.45**	**329**	*e*P	**P**	**18 49 16.4**	**+0.1**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**30.89**	**290**	P	**P**	**18 50 52.8**	**-2.2**
	comp=Z,0.2nm,0.7s,mb3.1,baz=91,slow=9.4,SNR=2.8						
MKAR	**Makanchi Array**	**46.60**	**297**	P	**P**	**18 53 06.1**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=73,slow=6.6,SNR=8.9						
MKAR	**Makanchi Array**	**46.60**	**297**	*e*P	**P**	**18 53 06.1**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSA	**Lhasa**	**49.63**	**273**	*e*P	**P**	**18 53 31.6**	**+1.6**
	comp=Z,1.9nm,0.6s,mb4.3						
LSA	**Lhasa**	**49.63**	**273**	*e*P	**P**	**18 53 31.6**	**+1.6**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CMAR	**Chiang Mai Arr**	**51.58**	**256**	P	**P**	**18 53 45.7**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=38,slow=7.2,SNR=12						
CMAR	**Chiang Mai Arr**	**51.58**	**256**	P	**P**	**18 53 45.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TAPN	**Taplejung**	**53.46**	**273**	*e*P	**P**	**18 53 59.3**	**+0.7**
ODAN	**Odare**	**53.98**	**273**	*e*P	**P**	**18 54 03.2**	**+0.7**
JIRN	**Jiri**	**54.32**	**274**	*e*P	**P**	**18 54 05.5**	**+0.6**
	comp=Z,6.3nm,0.4s,mb4.9						
RAMN	**Ramite**	**54.48**	**273**	*e*P	**P**	**18 54 06.3**	**+0.2**
	comp=Z,5.7nm,0.4s,mb4.8						
KKN	**Kakani**	**54.87**	**275**	*e*P	**P**	**18 54 09.3**	**+0.4**
DMN	**Daman**	**55.10**	**275**	*e*P	**P**	**18 54 11.0**	**+0.4**
GKN	**Gorkha**	**55.18**	**276**	*e*P	**P**	**18 54 11.3**	**+0.2**
	comp=Z,8.3nm,0.6s,mb5.0						
DANN	**Dangsing**	**55.57**	**277**	*e*P	**P**	**18 54 14.7**	**+0.8**
	comp=Z,23nm,0.5s						
KOLN	**Koldanda**	**56.04**	**276**	*e*P	**P**	**18 54 18.2**	**+0.9**
	comp=Z,9.2nm,0.6s,mb5.0						
PYUN	**Piuthan**	**56.26**	**277**	*e*P	**P**	**18 54 19.7**	**+0.9**
	comp=Z,7.4nm,0.5s,mb4.9						
NB2	**NORSAR Subarra**	**58.54**	**341**	P	**P**	**18 55 39.2**	**-1.2**
	comp=Z,1.2nm,0.5s,mb4.1,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.54**	**341**	P	**P**	**18 55 39.3**	**-1.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=26,slow=6.3,SNR=6.6						
NOA	**NORSAR Array B**	**68.54**	**341**	*e*P	**P**	**18 55 39.5**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**71.46**	**198**	P	**P**	**18 55 58.0**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.4,baz=3.2,slow=5.7,SNR=5.9						
ASAR	**Alice Springs**	**71.46**	**198**	*e*P	**P**	**18 55 58.3**	**-0.4**
AKASG	**Malin Array Be**	**71.64**	**326**	P	**P**	**18 55 56.7**	**-2.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=36,slow=5.6,SNR=4.5						
AKASG	**Malin Array Be**	**71.64**	**326**	*e*P	**P**	**18 55 58.3**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**78.34**	**316**	P	**P**	**18 56 38.0**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=94,slow=3.7,SNR=4.4						
BRTR	**Keskin Array B**	**78.34**	**316**	*e*P	**P**	**18 56 38.4**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**78.36**	**60**	P	**P**	**18 56 37.8**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=304,slow=3.8,SNR=8.1						
TXAR	**Lajitas Array**	**78.36**	**60**	*e*P	**P**	**18 56 37.8**	**-0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**78.67**	**333**	P	**P**	**18 56 38.9**	**-1.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=23,slow=7.2,SNR=6.0						
GERES	**GERESS Array B**	**78.67**	**333**	P	**P**	**18 56 38.9**	**-1.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**115.22**	**328**	PKP	PKiKP	19 03 17.7	-2.1
	comp=Z,0.3nm,0.6s,baz=326,slow=2.2,SNR=5.4						

GUC 26 18:51:19.1±0.9, 2187S×6979W, h67km±7km, ML3.5, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.33**	**175**	*e*P	Pn	18 51 30.1	0.0
MACH				*i* S	Sn	18 51 39.0	+0.8
TOCH	**Tocopilla**	**0.44**	**240**	⇑*i*P	Pn	18 51 30.9	-0.2
TOCH				*i* S	Sn	18 51 40.8	+0.9
TOCH				AML	AML	18 51 41.2	
	comp=E,11μm,0.1s						
PECH	**Pedro de Valdi**	**0.73**	**172**	*e*P	Pn	18 51 34.7	+0.5
PECH				*e*S	Sn	18 51 46.8	+1.5
PECH				AML	AML	18 51 48.2	
	comp=E,3μm,0.1s						
PB01	**Plate Boundary**	**0.87**	**19**	⇑*i*P	Pn	18 51 32.3	-3.6
PB01				*i* S	Sn	18 51 42.6	-5.6
PB01				AML	AML	18 51 44.9	
	comp=E,1μm,0.1s						
LVC	**Limon Verde**	**1.10**	**132**	⇓*i*P	Pn	18 51 39.7	+1.0
LVC				*i* S	Sn	18 51 55.6	+2.2
CEN1	**Los Morros**	**1.56**	**194**	*e*P	Pn	18 51 48.2	+3.4

*ISCJB **26** 19:22:11.8±0.8, 3912N×0007×8077E±006, h10km, mb3.4/2, Error ellipse: s-maj=10.2km s-min=6.5km az=157.5*
*IDC **26** 19:22:12.2±2.3, 3899N×8094E, h0km, mb3.3/3, mb1 3.4/7, mb1mx3.3/26, mbtmp3.4/7, ML3.5/3, Error ellipse: s-maj=42.3km s-min=26.0km az=137.0*
*BJI **26** 19:22:16.5, 3912N×8133E, h45km, mb4.5, ML3.8*
*NEIC **26** 19:22:18.0±1.2, 3920N×8080E, h35km, Error ellipse: s-maj=17.2km s-min=12.0km az=148.0*
*NNC **26** 19:22:20.9±2.8, 3978N×8131E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=28.3km s-min=12.5km az=136.0*

ISC 26 19:22:14.3±0.8, 3914N±006×8084E±007, h10km, n20, σ1§18/27, mb3.4/2, 9C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.79**	**277**	*e*P	**Pg**	**19 23 25.0**	**-1.9**
KSH				S	**Sg**	**19 24 16.8**	**+0.8**
KSH				Smax			
	comp=N,54nm,0.6s						
KSH				Smax			
	comp=E,41nm,0.3s						
KNDC	**Almaty**	**5.01**	**326**	⇑Pn	**Pn**	**19 23 33.9**	**+4.4**
	comp=E,9.6nm,0.5s						
KNDC				⇑Lg		19 24 55.7	
	comp=E,153nm,0.8s						
TKM2	**Tokmak 2**	**5.47**	**315**	⇑Pn	**Pn**	**19 23 40.9**	**+5.1**
	comp=E,1.6nm,0.6s						
TKM2				⇓Pg	**Pg**	**19 23 54.0**	**-5.1**
	comp=E,5.5nm,0.4s						
TKM2				⇑Lg		19 25 07.8	
	comp=E,45nm,0.7s						
TKM2	**Tokmak 2**	**5.47**	**315**	*e*P	**Pn**	**19 23 35.7**	**-0.2**
	comp=E,10nm,0.4s						
AML	**Almayashu**	**6.20**	**301**	*e*P	**Pb**	**19 23 57.0**	**-5.3**
WMQ	**Urumqi**	**6.95**	**46**	*e*P	**Pn**	**19 23 56.0**	**-0.2**
WMQ				S	**Sn**	**19 25 10.0**	**-5.3**
WMQ				Smax			
	comp=N,89nm,0.8s						
WMQ				Smax			
	comp=E,95nm,0.8s						
MK31	**Makanchi Array**	**7.72**	**7**	⇑Pn	**Pn**	**19 24 07.6**	**+0.9**
	comp=E,1.5nm,0.4s,baz=185,slow=13,SNR=131						
MK31				⇓Sn	**Sn**	**19 25 32.7**	**-1.4**
	comp=E,3.9nm,0.6s,baz=190,slow=25,SNR=5.3						
MK31	**Makanchi Array**	**7.72**	**7**	*e*P	**Pn**	**19 24 07.4**	**+0.7**
MKAR	**Makanchi Array**	**7.72**	**7**	Pn	**Pn**	**19 24 07.8**	**+1.1**
	comp=E,1.8nm,0.3s,baz=188,slow=14,SNR=42						
MKAR				Sn	**Sn**	**19 25 31.6**	**-2.6**
	comp=E,2.1nm,0.3s,baz=194,slow=25,SNR=7.6						
SMLA	**Simla**	**8.54**	**202**	*i* P	**Pn**	**19 24 17.9**	**-0.1**
SMLA				*i* S	**Sn**	**19 25 51.1**	**-3.3**
SMLA				*i* S	**Sn**	**19 25 51.3**	**-3.1**
SMLA				*ex*	x	19 25 55.2	
	comp=N,140nm,0.4s						
SMLA				*ex*	x	19 25 56.6	
	comp=E,89nm,0.4s						
KK31	**Karatay Array**	**8.74**	**300**	⇓Pn	**Pn**	**19 24 32.1**	**+11**
	comp=E,0.6nm,0.5s,baz=126,slow=15,SNR=6.2						
KK31				⇑Lg		19 26 57.5	
	comp=E,2.5nm,0.6s,baz=51,slow=7.9,SNR=2.7						
KURBB	**Kurchatov Arra**	**11.60**	**353**	⇓Pn	**Pn**	**19 25 01.9**	**+2.2**
	comp=E,1.5nm,2.5s						
KURBB				⇑Lg		19 28 12.3	
	comp=E,2.7nm,0.8s						
KURK	**Kurchatov**	**11.68**	**353**	⇑Pn	**Pn**	**19 25 02.1**	**+1.2**
	comp=E,9.6nm,2.6s						
KURK				⇑Lg		19 28 12.6	
	comp=E,11nm,1.4s						
KURK	**Kurchatov**	**11.68**	**353**	Pn	**Pn**	**19 25 01.4**	**+0.5**
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=4.5						
KURK				Lg		19 28 30.4	
	comp=E,0.1nm,0.3s,baz=229,slow=40,SNR=5.4						
KURK	**Kurchatov**	**11.68**	**353**	Pn	**Pn**	**19 25 01.4**	**+0.5**
KURK				Lg		19 28 30.4	
ZALV	**Zalesovo Beam**	**15.06**	**9**	Pn	**Pn**	**19 25 46.9**	**-0.1**
	comp=E,0.2nm,0.3s,baz=184,slow=16,SNR=3.9						
BVAR	**Borovoye Array**	**15.64**	**336**	Pn	**Pn**	**19 25 54.8**	**+0.3**
	baz=150,slow=12,SNR=2.2						
SONM	**Songino Array**	**20.41**	**56**	P	**P**	**19 26 51.3**	**+0.1**
	comp=E,0.8nm,0.8s,baz=249,slow=10.0,SNR=6.8						
BRTR	**Keskin Array B**	**36.13**	**286**	P	**P**	**19 29 16.1**	**-0.4**
	comp=E,0.4nm,0.7s,mb3.5,baz=64,slow=9.8,SNR=3.0						
TORD	**Torodi Ar. Bea**	**73.45**	**274**	P	**P**	**19 33 48.0**	**+0.8**
	comp=E,0.4nm,0.8s,mb3.4,baz=60,slow=5.0,SNR=3.6						

*CSEM **26** 20:58:02.6, 6493N×1968W, h3km, ML3.5, After REY*

REY 26 20:58:02.6, 6493N×1968W, h3km, ML3.5, ML2.7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHVE	**Hveravellir**	**0.07**	**141**	P	Pg	20 58 04.7	+0.6
IHVE				S	Sg	20 58 06.1	+1.0
ISKR	**Skrokkalda**	**0.67**	**123**	P	Pg	20 58 14.6	-0.7
ISKR				S	Sg	20 58 23.7	-0.2
IGYG	**Gygjarholskot**	**0.69**	**200**	P	Pg	20 58 14.9	-0.9
IGYG				S	Sg	20 58 24.5	-0.2
IASB	**`sbjarnarst**	**0.73**	**256**	P	Pg	20 58 15.8	-0.7
IASB				S	Sg	20 58 25.7	-0.2
IVAT	**Vatnsfell**	**0.81**	**156**	P	Pg	20 58 17.4	-0.7
IVAT				S	Sg	20 58 28.9	+0.3
IHAU	**Haukadalur**	**0.97**	**188**	P	Pg	20 58 19.7	-1.4
IHAU				S	Sg	20 58 32.8	-0.9
IHEI	**Heioarbar**	**0.99**	**223**	P	Pg	20 58 19.9	-1.7
IHEI				S	Sg	20 58 33.8	-0.6
ISAU	**Saurbar**	**0.99**	**199**	P	Pg	20 58 19.8	-1.8
ISAU				S	Sg	20 58 33.1	-1.3
IKRO	**Krokur**	**1.04**	**218**	P	Pg	20 58 20.6	-1.9
IKRO				S	Sg	20 58 34.7	-1.3
ISVA	**Svartarkot**	**1.10**	**67**	P	Pg	20 58 21.6	-2.1
ISVA				S	Sg	20 58 36.3	-1.7
IKUD	**Kuludalsa**	**1.13**	**238**	P	Pg	20 58 22.0	-2.1
IKUD				S	Sg	20 58 37.1	-1.6
ISOL	**Solvholt**	**1.14**	**209**	P	Pg	20 58 22.1	-2.4
ISOL				S	Sg	20 58 37.9	-1.3
IHLA	**Hella**	**1.16**	**27**	P	Pg	20 58 22.1	-2.6
IHLA				S	Sg	20 58 37.5	-2.2
IASM	**Asmuli**	**1.17**	**201**	P	Pg	20 58 22.9	-2.1
IASM				S	Sg	20 58 38.6	-1.5
ISAN	**Sandskeio**	**1.20**	**224**	P	Pg	20 58 23.1	-2.4
ISAN				S	Sg	20 58 39.7	-1.3
IHRN	**Hraun**	**1.20**	**351**	P	Pg	20 58 22.8	-2.8
IHRN				S	Sg	20 58 38.4	-2.8
ISIG	**Siglufjorour**	**1.25**	**14**	P	Pg	20 58 23.8	-2.8
ISIG				S	Sg	20 58 40.1	-2.7
IKAL	**Kalfafell**	**1.31**	**138**	P	Pg	20 58 25.3	-2.3
IKAL				S	Sg	20 58 42.7	-1.8
IKAS	**Kald??rsel**	**1.31**	**227**	P	Pg	20 58 25.1	-2.5
IKAS				S	Sg	20 58 42.0	-1.6
IGRA	**Granastaoir**	**1.33**	**40**	P	Pn	20 58 25.3	-2.6
IGRA				S	Sg	20 58 42.3	-2.9
IREN	**Reynihlio**	**1.37**	**57**	P	Pn	20 58 25.9	-2.6
IREN				S	Sg	20 58 44.0	-2.6
IHED	**Heoinshofoi**	**1.52**	**39**	P	Pn	20 58 28.5	-2.1
IHED				S	Sn	20 58 48.3	-2.5
IBRU	**Bruarjokull**	**1.54**	**92**	P	Pn	20 58 28.4	-2.4
IBRU				S	Sn	20 58 48.9	-2.2
IHVA	**Hvannstoosfjol**	**1.62**	**87**	P	Pn	20 58 29.8	-2.2
IHVA				S	Sn	20 58 51.8	-1.5
IGRS	**Grimsstaoir**	**1.66**	**63**	P	Pn	20 58 30.3	-2.1
IGRS				S	Sn	20 58 52.5	-1.6
IVSH	**V-Sauoahnukur**	**1.69**	**92**	P	Pn	20 58 30.9	-2.0
IVSH				S	Sn	20 58 53.4	-1.6

*IPEC **26** 21:08:55.0±0.2, 5041N×1891E, h4km±1km, ML2.0/2, Error ellipse: s-maj=2.3km s-min=0.9km az=172.0*
*CSEM **26** 21:08:55.1±0.1, 5040N×1888E, h0km, ML2.9/3, Error ellipse: s-maj=4.7km s-min=1.4km az=27.0*
*NEIC **26** 21:08:55.6±0.7, 5032N×1889E, h5km, MG2.6(WAR), Error ellipse: s-maj=15.3km s-min=6.5km az=189.0*

WAR 26 21:08:55.2, 5036N×1893E, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.58**	**104**	*e*Pg	Pg	21 09 06.7	+0.5
OJC				*e*Sg	Sg	21 09 15.0	+1.3
OKC	**Ostrava-Krasne**	**0.72**	**224**	*e*Pg	Pg	21 09 09.1	0.0
OKC				*e*Sg	Sg	21 09 18.9	+0.5
OKC	**Ostrava-Krasne**	**0.72**	**224**	*e*PG	Pg	21 09 08.9	-0.2
OKC				*e*SG	Sg	21 09 17.8	-0.6
	comp=Z,20nm,0.5s						
NIE	**Niedzica**	**1.30**	**136**	*e*Pg	Pg	21 09 20.7	+0.6
NIE				*e*Sg	Sg	21 09 38.4	+1.5
DPC	**Dobruska-Polom**	**1.67**	**271**	*e*PG	Pg	21 09 24.9	-2.2
DPC				*e*SG	Sg	21 09 47.3	-1.4
	comp=Z,14nm,0.5s						
KSP	**Ksiaz**	**1.75**	**287**	*e*Pn	Pn	21 09 26.5	-0.2
KSP				*e*Pg	Pg	21 09 27.9	-0.7
KSP				*e*Sg	Sg	21 09 51.2	0.0
KSP	**Ksiaz**	**1.75**	**287**	*e*Pg	Pg	21 09 27.2	-1.4
KSP				*e*Sg	Sg	21 09 50.7	-0.6
STHS	**Stebnicka Huta**	**1.77**	**121**	*e*PN	Pn	21 09 29.0	+2.0
STHS				*e*SN	Sn	21 09 54.6	+4.3
KOLL	**Kolacno**	**1.82**	**191**	*e*PN	Pn	21 09 29.0	+1.4
KOLL				*e*SN	Sn	21 09 52.2	+0.9
VRAC	**Vranov**	**1.84**	**236**	*e*Pn	Pn	21 09 27.3	-0.7
VRAC				*e*Sg	Sg	21 09 53.1	-1.2
	comp=Z,9.3nm,0.3s						
UPC	**Upice**	**1.87**	**276**	*e*PG	Pg	21 09 28.4	-2.6
VYHS	**Vyhne**	**1.87**	**182**	*e*PN	Pn	21 09 28.2	-0.2
VYHS				*e*SN	Sn	21 09 50.6	-2.0
KRUC	**Moravsky**	**2.10**	**233**	*e*Pn	Pn	21 09 31.2	-0.3
KRUC				*e*Sn	Sn	21 09 59.1	+0.9
	comp=Z,6.3nm,0.4s						
CRVS	**Cervenica-Dubn**	**2.20**	**131**	*e*PN	Pn	21 09 36.2	+3.2
CRVS				*e*SN	Sn	21 10 05.9	+5.0
KOLS	**Kolonicke sedl**	**2.60**	**122**	*e*	Pn	21 09 46.4	+7.9
PRU	**Pruhonice**	**2.84**	**264**	*e*PN	Pn	21 09 40.4	-1.4
PRU				*e*PG	Pg	21 09 45.9	-3.8
PRU				*e*SG	Sg	21 10 23.8	-2.7
BRG	**Berggiesshubel**	**3.21**	**281**	PG	Pg	21 09 56.2	-0.6
BRG				SG	Sg	21 10 37.7	-0.7
	comp=Z,2.8nm,0.5s						
KHC	**Kasperske Hory**	**3.68**	**253**	*e*PN	Pn	21 09 52.6	-0.7
KHC				*e*PG	Pg	21 10 02.5	-3.2
KHC				*e*SG	Sg	21 10 51.3	-2.1
	comp=Z,5.4nm,0.4s						
CLL	**Collm**	**3.87**	**286**	*e*Sg	Sg	21 11 01.0	+1.5

*IDC **26** 21:19:05.3±1.7, 3910N×11064E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, ML3.0/1, Error ellipse: s-maj=47.7km s-min=18.0km az=70.0*
*BJI **26** 21:19:10.9, 3916N×10986E, h47km, mb4.4, ML3.4*
*MOS **26** 21:19:11.7±1.6, 3927N×10995E, h33km, mb4.0/4, Error ellipse: s-maj=16.0km s-min=12.1km az=118.9*
*ISCJB **26** 21:19:12.3±0.4, 3926N±005×10996E±005, h33km, mb4.0/14, Error ellipse: s-maj=7.0km s-min=5.0km az=147.8*
*NEIC **26** 21:19:14.3±1.2, 3924N×11003E, h47km±16km, mb4.3/10, Error ellipse: s-maj=10.2km s-min=9.3km az=51.0*

ISC 26 21:19:13.9±0.4, 3918N±004×10998E±006, h35km, n40, σ1§29/45, mb4.0/14, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.42**	**1**	*e*P	**Pn**	**21 19 34.5**	**-2.7**
HHC	**Hu-ho-hao-te**	**2.06**	**36**	*e*P	**Pn**	**21 19 41.5**	**-4.5**
HHC				S	**Sn**	**21 20 10.3**	**-0.2**
HHC				Smax			
	comp=N,207nm,0.5s						
HHC				Smax			
	comp=E,290nm,0.5s						
BJT	**Baijiatuau**	**4.86**	**78**	*e*Pn	**Pn**	**21 20 25.6**	**+1.2**
BJT				*e*Sn	**Sn**	**21 21 21.4**	**+2.1**
BJI	**Beijing**	**4.86**	**78**	P	**Pn**	**21 20 27.5**	**+3.0**
BJI				Smax			
	comp=N,55nm,1.0s						
BJI				Smax			
	comp=E,41nm,0.9s						
XAN	**Xi'an**	**5.20**	**190**	P	**Pn**	**21 20 25.5**	**-3.7**
XAN				S	**Sn**	**21 21 23.0**	**-4.9**
XAN				Smax			
	comp=N,34nm,1.3s						
XAN				Smax			
	comp=E,36nm,1.4s						
ULN	**Ulaanbaatar**	**8.94**	**347**	*e*Pn	**Pn**	**21 21 19.0**	**-1.4**
ULN				*e*Sn	**Sn**	**21 22 54.8**	**-4.9**
SONM	**Songino Array**	**9.03**	**344**	Pn	**Pn**	**21 21 20.9**	**-0.7**
	comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=24						
SONM				Sn	**Sn**	**21 23 03.7**	**+1.7**
	comp=E,0.1nm,0.3s,baz=170,slow=19,SNR=4.4						
SONM				Lg		21 23 58.0	
	comp=E,0.3nm,0.3s,baz=157,slow=27,SNR=4.4						
SONM	**Songino Array**	**9.03**	**344**	P	**Pn**	**21 21 20.9**	**-0.8**
SONM						21 23 03.7	
YHNB	**Yeheng**	**17.38**	**143**	Pn	**Pn**	**21 23 12.3**	**-1.4**
LSA	**Lhasa**	**18.15**	**244**	*e*Pn	**Pn**	**21 23 24.0**	**+0.9**
	comp=E,5.0nm,0.7s						
LSA	**Lhasa**	**18.15**	**244**	*e*P	**Pn**	**21 23 24.0**	**+0.9**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	**Makanchi Array**	**21.56**	**300**	*e*P	**P**	**21 24 00.2**	**+0.1**
MKAR	**Makanchi Array**	**21.56**	**300**	P	**P**	**21 24 01.3**	**+1.2**
	comp=Z,2.9nm,0.9s,mb3.7,baz=100,slow=12,SNR=24						
MKAR	**Makanchi Array**	**21.56**	**300**	P	**P**	**21 24 01.3**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TAPN	**Taplejung**	**21.98**	**244**	*e*P	**P**	**21 24 06.4**	**+1.6**
	comp=Z,17nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**22.41**	**88**	P	**P**	**21 24 08.8**	**-0.5**
ODAN	**Odare**	**22.51**	**244**	*e*P	**P**	**21 24 10.1**	**-0.3**
ZALV	**Zalesovo Beam**	**22.58**	**319**	P	**P**	**21 24 11.8**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.2,baz=129,slow=12,SNR=3.9						
CMAR	**Chiang Mai Arr**	**22.76**	**208**	P	**P**	**21 24 10.7**	**-2.4**
	comp=Z,4.3nm,0.8s,mb3.9,baz=13,slow=9.5,SNR=36						
CMAR	**Chiang Mai Arr**	**22.76**	**208**	P	**P**	**21 24 10.7**	**-2.4**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JIRN	**Jiri**	**22.87**	**247**	*e*P	**P**	**21 24 15.6**	**+1.4**
	comp=Z,9.3nm,0.6s,mb4.4						
GUN	**Gumba**	**22.95**	**248**	*e*P	**P**	**21 24 16.1**	**+1.1**
RAMN	**Ramite**	**23.00**	**245**	*e*P	**P**	**21 24 14.8**	**-0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.46**	**328**	⇓*eP*	Pn	21 39 55.1	+1.3
TGY				*eS*	Sn	21 40 06.0	+4.3
LUBP	**Lubang**	**0.92**	**272**	*eP*	Pn	21 40 00.6	+0.9
LUBP				*eS*	Sn	21 40 14.2	+2.4
GQP	**Guinayangan**	**1.24**	**81**	*eP*	Pn	21 40 03.7	-0.2
GQP				*eS*	Sn	21 40 21.1	+1.5
POLP	**Polilio Island**	**1.25**	**36**	*eP*	Pn	21 40 04.9	+0.9
POLP				*eS*	Sn	21 40 22.8	+3.0
AUQP	**San Andres**	**1.50**	**105**	*eP*	Pn	21 40 09.8	+2.4
BUSP	**Coron**	**1.95**	**210**	*eP*	Pn	21 40 15.0	+1.3
BALP	**Baler**	**2.05**	**10**	*eP*	Pn	21 40 17.5	+2.4
BALP				*eS*	Sn	21 40 49.2	+10
BUKP	**Musuan**	**6.93**	**146**	*eP*	Pn	21 41 12.5	-10

GUC 26 21:41:46.2±0.9, 2273S×7074W, h26km±11km, ML3.5, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.46**	**144**	⇓*iP*	Pb	21 41 54.9	-0.8
MECH				*i* S	Sb	21 42 01.6	-0.6
MECH				AML	AML	21 42 03.3	
	comp=N,5μm,0.5s						
TOCH	**Tocopilla**	**0.81**	**38**	⇓*iP*	Pb	21 42 00.9	-0.6
TOCH				*i* S	Sb	21 42 11.5	-0.5
TOCH				AML	AML	21 42 13.0	
	comp=N,7μm,0.2s						
CEN1	**Los Morros**	**0.82**	**143**	⇑*iP*	Pb	21 42 01.9	+0.1
CEN1				*i* S	Sb	21 42 15.1	+2.5
PECH	**Pedro de Valdi**	**0.99**	**82**	⇑*iP*	Pn	21 42 03.6	-0.8
PECH				*i* S	Sb	21 42 16.7	-0.6
PECH				AML	AML	21 42 19.1	
	comp=N,5μm,0.3s						
ANCH	**Antofagasta**	**0.99**	**162**	⇓*iP*	Pn	21 42 03.4	-1.0
ANCH				*i* S	Sb	21 42 17.2	-0.3
MACH	**Maria Elena**	**1.05**	**60**	⇓*iP*	Pn	21 42 05.0	-0.3
MACH				*i* S	Sn	21 42 19.5	+0.5
LVC	**Limon Verde**	**1.69**	**86**	⇑*iP*	Pn	21 42 15.3	+1.3
LVC				*eS*	Sn	21 42 38.3	+3.4
CPN1	**Cerro Paranal**	**1.91**	**171**	AML	AML	21 42 48.2	
	comp=E,696nm,0.7s						
PB01	**Plate Boundary**	**2.04**	**35**	AML	AML	21 42 53.8	
	comp=E,456nm,0.6s						

*CASC **26** 21:55:54.9±1.8, 2028N×102±41W, h20km±28km, MD4.3, mb5.7(NEIC)*
*BGS **26** 21:56:00.9±1.8, 1913N×103.70W, h33km, mb5.4*
*SZGRF **26** 21:56:00.9, 1648N×102.82W, h66km, mb5.6, Off coast of Guerrero, Mexico*
*BJI **26** 21:56:07.8, 1870N×101.70W, h53km, mB5.9, mb5.5, Ms5.7, Msz5.4*
*ISCJB **26** 21:56:08.9±0.1, 1873N±002×10159W±002, h68km, mb5.5/270, Error ellipse: s-maj=2.7km s-min=1.5km az=36.0*
*IDC **26** 21:56:10.7±0.3, 1886N×101.59W, h66km±2km, mb5.1/29, mb1 5.1/30, mb1mx5.1/31, mbtmp5.0/30, MS4.9/26, Ms1 4.9/26, ms1mx4.8/29, Error ellipse: s-maj=12.5km s-min=7.6km az=68.0*
*GCMT **26** 21:56:12.8±0.1, 1880N×101.58W, h70km, MW5.8/107, Moment Tensor Solution. s107,c227; s90,c251; Duration: 19 Moment tensor: Scale 10^17 Nm; Mrr=3.99±.06; Mθθ=5.27±.06; Mϕϕ=1.29±.07; Mrθ=3.02±.05; Mθϕ=1.11±.06; Mϕr=0.33±.06; Best double couple: Mo=5.64500×10^17 NP1:ϕs=114.00000°, δ31.00000°, λ=67.00000°. NP2:ϕs=268.00000°, δ62.00000°, λ=103.00000°. Principal axes: T 6.2930, Plg16.0000°, Azm8.0000°; N -1.3050, Plg12.0000°, Azm274.0000°; P -4.9970, Plg70.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MEX **26** 21:56:12.8±0.8, 1865N×101.70W, h54km±17km, MD5.6*
*NEIC **26** 21:56:12.8, 1865N×101.70W, h53km, mb5.7/219, MW5.7, MD5.6(MEX), Moment Tensor Solution. s35 Moment tensor: Scale 10^17 Nm; Mrr=3.22; Mθθ=2.84; Mϕϕ=0.37; Mrθ=3.63; Mθϕ=-0.54; Mϕr=0.32; Best double couple: Mo=4.80000×10^17 NP1:ϕs=269.00000°, δ70.00000°, λ=-98.00000°. NP2:ϕs=111.00000°, δ21.00000°, λ=-70.00000°. Principal axes: T 4.5700, Plg24.0000°, Azm5.0000°; N 0.4000, Plg7.0000°, Azm272.0000°; P -4.9700, Plg64.0000°, Azm167.0000°; After MEX.*
NEIC Felt [V] at Uruapan, [III] at Mexico City and [II] at Patzcuaro. Also felt at Acapulco, Cuernavaca, Guadalajara, Ixtapa, Morelia, Puerto Vallarta, Queretaro, Santa Clara del Cobre, Toluca and Zapopan.
*MOS **26** 21:56:13.9±0.9, 1894N×101.54W, h106km, mb5.6/117, MS5.1/22 Error ellipse: s-maj=5.5km s-min=3.5km az=80.2*

ISC 26 21:56:10.9±0.1, 1876N±002×10156W±001, h70km, h70km±.4km: pP-P, n1257, σ0.98/1279, mb5.5/270, 344C-259D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**0.98**	**21**	*iP*	**Pn**	**21 56 30.5**	**+1.3**
MOIG				*i* S	**Sn**	**21 56 45.4**	**+2.8**
ZIIG	**Zihuatanejo**	**1.15**	**176**	*iP*	**Pn**	**21 56 29.4**	**-1.9**
ZIIG				*i* S	**Sn**	**21 56 43.9**	**-2.6**
ZIIG				*i* S	**Sn**	**21 56 45.2**	**-1.2**
ZIIG	**Zihuatanejo**	**1.15**	**176**	*iP*	**Pn**	**21 56 29.4**	**-1.9**
ZIIG				*i* S	**Sn**	**21 56 43.9**	**-2.6**
MMIG	**Aquila**	**1.76**	**255**	*iP*	**Pn**	**21 56 38.1**	**-1.2**
MMIG				*i* S	**Sn**	**21 56 55.9**	**-5.0**
PLIG	**Platanillo**	**1.98**	**100**	*eP*	**Pn**	**21 56 44.9**	**+2.6**
PLIG				*iP*		21 56 45.3	
PLIG				*eS*	**Sn**	**21 57 01.7**	**-4.5**
PLIG				*i* S	**Sn**	**21 57 09.2**	**+3.0**
PLIG	**Platanillo**	**1.98**	**100**	*eP*	**Pn**	**21 56 44.9**	**+2.6**
PLIG				*i* S	**Sn**	**21 57 09.2**	**+3.0**
CAIG	**El Cayaco**	**2.10**	**144**	*eP*	**Pn**	**21 56 43.5**	**-0.3**
CAIG				*eS*	**Sn**	**21 57 01.9**	**-7.1**
CAIG				*i* S	**Sn**	**21 57 08.8**	**-0.2**
CAIG	**El Cayaco**	**2.10**	**144**	*iP*	**Pn**	**21 56 43.5**	**-0.3**
CAIG				*i* S	**Sn**	**21 57 08.8**	**-0.2**
SFJM	**Santa Fe**	**2.22**	**321**	*iP*	**Pn**	**21 56 45.2**	**-0.2**
SFJM				*iP*		21 56 45.5	
SFJM				*i* S	**Sn**	**21 57 12.5**	**+0.7**
SFJM				*i* S	**Sn**	**21 57 17.0**	**+5.1**
SFJM	**Santa Fe**	**2.22**	**321**	*iP*	**Pn**	**21 56 45.5**	**0.0**
SFJM				*i* S	**Sn**	**21 57 12.5**	**+0.7**
MZVM		**2.24**	**79**	*iP*	**Pn**	**21 56 49.5**	**+3.7**
MZVM				*i* S	**Sn**	**21 57 17.9**	**+5.4**
UNM	**Universidad Na**	**2.32**	**75**	*eP*	**Pn**	**21 56 50.8**	**+4.0**
YAIG	**Yautepec**	**2.36**	**87**	*iP*	**Pn**	**21 56 50.9**	**+3.5**
YAIG				*eP*		21 56 51.1	
YAIG				*eS*	**Sn**	**21 57 24.6**	**+9.3**
YAIG				*i* S	**Sn**	**21 57 26.4**	**+11**
YAIG	**Yautepec**	**2.36**	**87**	*iP*	**Pn**	**21 56 50.5**	**+3.2**
YAIG				*i* S	**Sn**	**21 57 19.8**	**+4.5**
PBVM	**Pinon**	**2.44**	**73**	*iP*	**Pn**	**21 56 51.4**	**+3.0**
PBVM				*i* S	**Sn**	**21 57 21.9**	**+4.8**
ACX	**Acapulco**	**2.44**	**140**	*iP*	**Pn**	**21 56 49.8**	**+1.2**
ACX				*iP*		21 56 49.9	
ACX				*i* S	**Sn**	**21 57 19.8**	**+2.4**
ACX				*i* S	**Sn**	**21 57 21.5**	**+4.1**
ACX	**Acapulco**	**2.44**	**140**	*iP*	**Pn**	**21 56 49.9**	**+1.4**
ACX				*i* S	**Sn**	**21 57 19.8**	**+2.4**
PTVM	**Pico Tres Padr**	**2.45**	**70**	*iP*	**Pn**	**21 56 52.2**	**+3.5**
PTVM				*i* S	**Sn**	**21 57 22.3**	**+4.7**
GDLC		**2.57**	**318**	*iP*	**Pn**	**21 56 48.4**	**-1.8**
GDLC				*i* S	**Sn**	**21 57 19.8**	**-0.7**
PPM	**Popocatepetl**	**2.79**	**83**	*iP*	**Pn**	**21 56 57.8**	**+4.5**
PPM				*iP*		21 56 58.0	
PPM				*i* S	**Sn**	**21 57 25.5**	**-0.3**
PPM				*i* S	**Sn**	**21 57 33.1**	**+7.2**
IIO	**Organos**	**2.80**	**72**	*iP*	**Pn**	**21 56 56.3**	**+2.9**
IIO				*i* S	**Sn**	**21 57 32.0**	**+5.9**
DEIG	**Demacu**	**2.83**	**57**	*iP*	**Pn**	**21 56 56.7**	**+2.9**
DEIG				*i* S	**Sn**	**21 57 32.1**	**+5.4**
CJM	**Chamela**	**3.38**	**283**	*iP*	**Pn**	**21 57 02.0**	**+0.8**
CJM				*eP*		21 57 02.4	
CJM				*i* S	**Sn**	**21 57 41.8**	**+1.6**
CJM	**Chamela**	**3.38**	**283**	*eP*	**Pn**	**21 57 00.3**	**-1.0**
CJM				*i* S	**Sn**	**21 57 38.6**	**-1.6**
ANIG	**Ahuacatlan**	**3.60**	**310**	*iP*	**Pn**	**21 57 04.5**	**+0.2**
ANIG				*i* S	**Sn**	**21 57 44.5**	**-1.2**
UTMO	**Huajuapan**	**3.68**	**104**	*iP*	**Pn**	**21 57 08.3**	**+2.9**
UTMO				*i* S	**Sn**	**21 57 50.5**	**+2.8**
PNIG	**Pinotepa**	**4.03**	**125**	*iP*	**Pn**	**21 57 11.7**	**+1.5**
PNIG				*i* S	**Sn**	**21 58 01.6**	**+5.5**
PNIG	**Pinotepa**	**4.03**	**125**	*iP*	**Pn**	**21 57 11.7**	**+1.5**
PNIG				*i* S	**Sn**	**21 57 57.5**	**+1.3**
VHO	**Vista Hermosa**	**4.89**	**109**	*iP*	**Pn**	**21 57 25.6**	**+3.7**
VHO				*i* S	**Sn**	**21 58 24.7**	**+7.5**
VHO	**Vista Hermosa**	**4.89**	**109**	*iP*	**Pn**	**21 57 25.4**	**+3.6**
VHO				*i* S	**Sn**	**21 58 20.4**	**+3.3**
OXX	**Oaxaca**	**4.89**	**109**	*iP*	**Pn**	**21 57 26.5**	**+4.5**
OXX				*iP*		21 57 27.3	
OXX				*i* S	**Sn**	**21 58 23.6**	**+6.3**
OXX				*i* S	**Sn**	**21 58 33.6**	**+16**
LVIG	**Laguna Verde**	**4.95**	**78**	*iP*	**Pn**	**21 57 22.4**	**-0.3**
LVIG				*i* S	**Sn**	**21 58 30.3**	**+12**
LNIG	**Linares**	**6.41**	**17**	*iP*	**Pn**	**21 57 44.0**	**+1.3**
LNIG				*i* S	**Sn**	**21 58 58.9**	**+4.4**
CMIG	**Matias Romero**	**6.56**	**104**	*P*	**Pn**	**21 57 48.2**	**+3.4**
	40nm,0.3s,baz=280,slow=10,SNR=304						
CMIG				S	**Sn**	**21 59 01.5**	**+3.2**
	116nm,0.3s,baz=267,slow=10,SNR=8.1						
CMIG				Lg		21 59 41.4	
	41nm,0.3s,baz=352,slow=21,SNR=2.7						
CMIG				LR	LR	22 00 54.1	
	comp=Z,6μm,19.5s,baz=257,slow=43						
CMIG	**Matias Romero**	**6.56**	**104**	*iP*	**Pn**	**21 57 48.5**	**+3.7**
CMIG				*i* S	**Sn**	**21 59 02.8**	**+4.5**
CMIG	**Matias Romero**	**6.56**	**104**	*eP*	**Pn**	**21 57 47.8**	**+2.9**
CMIG				*i* S	**Sn**	**21 59 02.8**	**+4.5**
TGIG		**8.27**	**102**	*iP*	**Pn**	**21 58 11.9**	**+3.7**
TGIG				*i* S	**Sn**	**21 59 43.3**	**+3.2**
PCIG		**8.53**	**110**	*iP*	**Pn**	**21 58 15.3**	**+3.7**
PCIG				*i* S	**Sn**	**21 59 49.4**	**+3.1**
H06S		**8.91**	**271**	*iP*	**Pn**	**21 58 16.6**	**-0.3**
HPIG		**8.98**	**336**	*iP*	**Pn**	**21 58 20.6**	**+2.9**
KVTX	**Kingsville**	**9.37**	**20**	⇑*iPn*	**Pn**	**21 58 26.3**	**+3.2**
KVTX				Sn	**Sn**	**22 00 00.5**	**-6.4**
THIG		**9.68**	**112**	*eP*	**Pn**	**21 58 30.8**	**+3.3**
LPIG	**La Paz**	**9.73**	**305**	*P*	**Pn**	**21 58 30.6**	**+2.5**
	9.3nm,0.3s,baz=344,slow=2.5,SNR=36						
LPIG				LR	LR	22 02 10.1	
	comp=Z,6μm,19.2s,baz=127,slow=37						
LPIG	**La Paz**	**9.73**	**305**	*iP*	**Pn**	**21 58 28.9**	**+0.9**
TXAR	**Lajitas Array**	**10.70**	**350**	*P*	**Pn**	**21 58 45.0**	**+3.6**
	2.3nm,0.3s,baz=169,slow=14,SNR=688						
TXAR				Lg		22 02 06.2	
	2.0nm,0.3s,baz=161,slow=32,SNR=7.3						
TXAR				LR	LR	22 03 23.3	
	comp=Z,23μm,18.1s,baz=10.0,slow=41						
TXAR				P3KPbc		22 35 21.0	
	0.0nm,0.3s,baz=240,slow=2.5,SNR=5.0						
TXAR	**Lajitas Array**	**10.70**	**350**	*P*	**Pn**	**21 58 45.0**	**+3.6**
TXAR				Lg		22 02 06.2	
TXAR				LR	LR	22 03 23.3	
FG6		**11.05**	**111**	*eP*	**Pn**	**21 58 52.5**	**+6.4**
FUG	**Fuego 3**	**11.13**	**111**	*eP*	**Pn**	**21 58 53.3**	**+6.1**
IXG	**Ixpaco**	**11.58**	**112**	*eP*	**Pn**	**21 58 59.9**	**+6.6**
JCT	**Junction City**	**11.78**	**7**	⇑*iPn*	**Pn**	**21 58 58.9**	**+2.9**
JCT				*eSn*	**Sn**	**22 01 18.6**	**+13**
JCT	**Junction City**	**11.78**	**7**	*eP*	**Pn**	**21 58 58.9**	**+2.9**
RBDL	**Robledal**	**12.29**	**110**	*eP*	x	21 59 07.6	
HKT	**Hockley**	**12.30**	**24**	⇑*iPn*	**Pn**	**21 59 04.5**	**+1.4**
	1μm,1.8s						
HKT				*eSn*	**Sn**	**22 01 26.0**	**+7.6**
HKT	**Hockley**	**12.30**	**24**	⇑*iP*	**Pn**	**21 59 04.5**	**+1.4**
HKT				*e*		22 01 26.0	
HKT				pmax	pmax		
	comp=Z,1μm,1.8s						
RTR	**El Retiro**	**12.41**	**111**	*eP*	x	21 59 09.1	
SNJE	**San Jose**	**12.46**	**111**	*eP*	x	21 59 10.0	
BOQS	**Boqueron**	**12.80**	**111**	*eP*	x	21 59 13.8	
CGIG		**12.94**	**334**	*iP*	**Pn**	**21 59 13.4**	**+1.6**
LBRS	**Las Brisas**	**13.01**	**111**	*eP*	x	21 59 16.6	
LFRS	**El Faro**	**13.04**	**111**	*eP*	x	21 59 16.7	
HSIG		**13.34**	**322**	*iP*	**Pn**	**21 59 17.3**	**+0.1**
GDL2	**Guadalupe Moun**	**13.62**	**350**	*ePn*	**Pn**	**21 59 24.0**	**+3.1**
NATX	**Nacogdoches**	**14.36**	**24**	⇑*iPn*	**Pn**	**21 59 31.4**	**+0.8**
NATX				*eSn*	**Sn**	**22 02 07.7**	**-0.9**
319A	**Douglas**	**14.37**	**332**	⇓*P*	**Pn**	**21 59 32.7**	**+1.9**
	baz=14,SNR=122						
TGUH	**Tegucigalpa,Un**	**14.48**	**107**	⇓*iPn*	**Pn**	**21 59 35.7**	**+3.5**
TGUH				*eSn*	**Sn**	**22 02 18.1**	**+6.6**
318A	**Bisbee**	**14.75**	**330**	⇓*P*	**Pn**	**21 59 37.4**	**+1.8**
	baz=15,SNR=223						
318A				⇓*S*	**Sn**	**22 02 29.3**	**+11**
	baz=15						
219A	**White Tail Can**	**14.90**	**334**	⇑*P*	**Pn**	**21 59 39.2**	**+1.6**
	baz=15,SNR=732						
218A	**Dragoon**	**15.22**	**331**	⇑*P*	**Pn**	**21 59 43.4**	**+1.7**
	baz=15,SNR=46						
218A				⇑*S*	**S**	**22 02 38.4**	**-3.8**
	baz=15						
217A	**Green Valley**	**15.42**	**329**	⇑*P*	**Pn**	**21 59 45.9**	**+1.7**
	baz=15,SNR=163						
217A				⇑*S*	**S**	**22 02 42.9**	**-3.4**
	baz=15						
119A	**Ashpeak Ranch,**	**15.59**	**335**	⇑*P*	**Pn**	**21 59 48.1**	**+1.7**
	baz=16,SNR=130						
118A	**Homack Ranch,**	**15.76**	**333**	⇓*P*	**Pn**	**21 59 49.8**	**+1.3**
	baz=16,SNR=229						
TUC	**Tucson**	**15.85**	**330**	⇑*iPn*	**Pn**	**21 59 51.1**	**+1.4**
	comp=Z,612nm,1.4s						
TUC				*eSn*	**Sn**	**22 02 47.0**	**+2.6**
TUC	**Tucson**	**15.85**	**330**	*eP*	**Pn**	**21 59 51.1**	**+1.4**
TUC				pmax	pmax		
	comp=Z,610nm,1.4s						
216A	**Three Points,**	**15.92**	**328**	⇓*P*	**Pn**	**21 59 51.8**	**+1.2**
	baz=16,SNR=64						
216A				⇑*S*	**S**	**22 02 54.6**	**-1.9**
	baz=16						
BNM	**Barren Site**	**15.98**	**345**	*ePn*	**Pn**	**21 59 53.9**	**+2.5**
	comp=Z,2μm,0.8s						
BNM				*eSn*	**Sn**	**22 02 46.4**	**-1.4**
Y22D	**IRIS PASSCAL I**	**15.99**	**344**	⇑*P*	**Pn**	**21 59 53.9**	**+2.5**
	baz=16						
Z19A	**T-Link Ranch,**	**16.04**	**336**	⇑*P*	**Pn**	**21 59 54.2**	**+2.1**
	baz=16,SNR=77						
Z19A				⇑*S*	**S**	**22 02 57.8**	**-1.0**
	baz=16						
117A	**Oracle**	**16.04**	**331**	⇓*P*	**Pn**	**21 59 53.8**	**+1.7**
	baz=16,SNR=200						
117A				⇓*S*	**S**	**22 02 58.0**	**-1.0**
	baz=16						
AMTX	**Amarillo**	**16.06**	**360**	⇑*iPn*	**Pn**	**21 59 53.4**	**+1.0**
	comp=Z,1μm,1.0s						
AMTX				*eSn*	**Sn**	**22 02 51.4**	**+1.7**
AMTX				PcP	PcP	22 04 48.3	+3.4
LENM	**Lemitar**	**16.09**	**344**	*ePn*	**Pn**	**21 59 55.0**	**+2.3**
LENM				*e*		22 00 14.1	
WMOK	**Wichita Mounta**	**16.11**	**8**	⇑*iPn*	**Pn**	**21 59 52.5**	**-0.4**
	comp=Z,1μm,1.3s						
WMOK				*eSn*	**Sn**	**22 02 51.7**	**+0.9**
WMOK				*ePcP*	PcP	22 04 45.2	+0.3
WMOK	**Wichita Mounta**	**16.11**	**8**	⇑*iP*	**Pn**	**21 59 52.5**	**-0.4**
WMOK				*e*		22 02 51.7	
WMOK				pmax	pmax		
	comp=Z,1μm,1.3s						
LPM	**Los Pinos Moun**	**16.14**	**345**	*ePn*	**Pn**	**21 59 55.4**	**+2.1**
LPM				*e*		22 00 15.0	
Z18A	**Geronimo**	**16.17**	**334**	⇑*P*	**Pn**	**21 59 55.7**	**+2.0**
	baz=16,SNR=14						
LAZ	**Ladron**	**16.36**	**343**	*ePn*	**Pn**	**21 59 59.0**	**+3.0**
	comp=Z,921nm,1.6s						
LAZ				*e*		22 00 18.0	
116A	**Eloy**	**16.50**	**328**	⇓*P*	**Pn**	**21 59 58.9**	**+1.1**
	baz=16,SNR=60						
214A	**Organ Pipe Nat**	**16.60**	**324**	⇑*P*	**Pn**	**22 00 00.6**	**+1.5**
	baz=17,SNR=79						
214A				⇓*S*	**S**	**22 03 10.0**	**-0.4**
	baz=17						
Y19A	**Nutrioso**	**16.62**	**337**	⇓*P*	**Pn**	**22 00 02.1**	**+2.7**
	baz=17,SNR=86						
Y19A				⇓*S*	**S**	**22 03 10.5**	**-0.3**
	baz=17						
VBMS	**Vicksburg**	**16.68**	**34**	⇑*iPn*	**Pn**	**22 00 01.0**	**+0.8**
VBMS				*e*		22 00 19.4	
VBMS				*eSn*	**Sn**	**22 03 07.4**	**+2.6**
ANMO	**Albuquerque**	**16.71**	**346**	*P*	**Pn**	**22 00 03.2**	**+2.8**
	comp=Z,0.9nm,0.3s,baz=157,slow=14,SNR=110						
ANMO				LR	LR	22 06 59.4	
	comp=Z,17μm,20.4s,baz=170,slow=39						
ANMO	**Albuquerque**	**16.71**	**346**	⇑*iPn*	**Pn**	**22 00 03.1**	**+2.7**
	comp=Z,692nm,1.3s						
ANMO				*e*		22 00 19.9	
ANMO				*eSn*	**Sn**	**22 03 14.1**	**+8.8**
ANMO	**Albuquerque**	**16.71**	**346**	*P*	**Pn**	**22 00 03.2**	**+2.8**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ANMO				MLR	MLR		
	comp=Z,17μm,20.4s						
Y18A	**Canyon Day Jun**	**16.77**	**335**	⇑*P*	**Pn**	**22 00 03.3**	**+2.1**
	baz=17,SNR=64						
Y18A				⇓*S*	**S**	**22 03 13.1**	**-0.7**
	baz=17						
115A	**Sonoran Desert**	**16.87**	**327**	⇑*P*	**Pn**	**22 00 03.8**	**+1.3**
	baz=17,SNR=41						
Z16A	**Peralta Trail,**	**17.00**	**331**	⇑*P*	**Pn**	**22 00 05.5**	**+1.4**
	baz=17,SNR=36						
Z16A				⇑*S*	**S**	**22 03 18.3**	**-0.2**
	baz=17						
Y17A	**Roosevelt**	**17.04**	**333**	⇑*P*	**Pn**	**22 00 06.6**	**+2.1**
	baz=17,SNR=265						
X19A	**St. Johns**	**17.06**	**338**	⇓*P*	**Pn**	**22 00 07.5**	**+2.7**
	baz=17,SNR=35						
MIAR	**Mount Ida**	**17.26**	**23**	⇑*iPn*	**Pn**	**22 00 06.4**	**-0.8**
	comp=Z,356nm,1.0s						
MIAR				*eSn*	**Sn**	**22 03 21.6**	**+3.0**
MIAR	**Mount Ida**	**17.26**	**23**	⇑*iP*	**Pn**	**22 00 06.4**	**-0.8**
MIAR				*e*		22 03 21.6	
MIAR				pmax	pmax		
	comp=Z,356nm,1.0s						
Z15A	**Gila River Ind**	**17.31**	**329**	⇓*P*	**Pn**	**22 00 09.0**	**+1.2**
	baz=17						
X18A	**Snowflake**	**17.39**	**336**	⇓*P*	**Pn**	**22 00 11.2**	**+2.4**
	baz=17,SNR=69						
Y16A	**Circle Bar Ran**	**17.47**	**331**	⇑*P*	**Pn**	**22 00 11.5**	**+1.7**
	baz=18,SNR=99						
VCR	**Vista de Mar**	**17.64**	**117**	*eP*	**Pn**	**22 00 16.1**	**+4.1**
LIM1	**Limonal**	**17.68**	**115**	*eP*	**Pn**	**22 00 15.4**	**+2.9**
W19A	**Sanders**	**17.71**	**338**	⇑*P*	**Pn**	**22 00 14.4**	**+1.7**
	baz=18,SNR=113						
113A	**Mohawk Valley,**	**17.74**	**324**	⇑*P*	**Pn**	**22 00 14.4**	**+1.3**
	baz=18,SNR=54						
Z14A	**Wintersburg**	**17.76**	**327**	⇓*P*	**Pn**	**22 00 14.6**	**+1.2**
	baz=18,SNR=13						
CUI	**Cuipilapa**	**17.77**	**115**	*eP*	**Pn**	**22 00 17.8**	**+4.2**
W18A	**Petrified Fore**	**17.84**	**338**	⇑*P*	**Pn**	**22 00 16.2**	**+1.9**
	baz=18,SNR=23						
X16A	**Lo Mia Camp, P**	**17.91**	**333**	⇑*P*	**Pn**	**22 00 16.4**	**+1.3**
	baz=18,SNR=125						
BRAL	**Brewton**	**17.92**	**44**	⇑*ePn*	**Pn**	**22 00 16.2**	**+0.9**
	comp=Z,2μm,2.0s						
BRAL				*e*		22 00 32.8	
BRAL				*eSn*	**Sn**	**22 03 38.5**	**+3.9**
Y15A	**Casa Rosa Ranc**	**17.93**	**330**	⇑*P*	**Pn**	**22 00 16.5**	**+1.0**
	baz=18,SNR=88						
UALR	**University of**	**17.93**	**25**	⇑*iPn*	**Pn**	**22 00 15.4**	**-0.1**
	comp=Z,2μm,1.6s						
UALR				*e*		22 00 23.8	
UALR				*eSn*	**Sn**	**22 03 31.6**	**-3.3**
112A	**Yuma**	**18.03**	**322**	⇓*P*	**Pn**	**22 00 17.1**	**+0.4**
	baz=18						
V19A	**Window Rock**	**18.14**	**340**	⇓*P*	**Pn**	**22 00 19.2**	**+1.2**
	baz=18,SNR=34						
W17A	**Winslow**	**18.18**	**335**	⇑*P*	**Pn**	**22 00 19.6**	**+1.2**
	baz=18,SNR=57						
JCR	**Jicaral**	**18.22**	**117**	*eP*	**Pn**	**22 00 22.6**	**+3.5**
Y14A	**Wickenburg**	**18.25**	**328**	⇓*P*	**Pn**	**22 00 19.7**	**+0.4**
	baz=18,SNR=88						
FORC	**Fortuna**	**18.29**	**114**	*eP*	**Pn**	**22 00 23.7**	**+3.8**
X15A	**Humboldt**	**18.32**	**331**	⇑*P*	**Pn**	**22 00 20.6**	**+0.4**
	baz=18,SNR=89						
V18A	**Ganado**	**18.44**	**338**	⇓*P*	**Pn**	**22 00 22.9**	**+1.3**
	baz=18,SNR=202						
W16A	**Flagstaff**	**18.52**	**333**	⇑*P*	**Pn**	**22 00 23.8**	**+1.2**
	baz=18,SNR=114						
GLA	**Glamis**	**18.55**	**323**	⇑*ePn*	**Pn**	**22 00 22.9**	**0.0**
	comp=Z,299nm,1.1s						
GLA				*e*		22 00 38.7	
GLA				*eSn*	**Sn**	**22 03 55.8**	**+5.9**
GLA	**Glamis**	**18.55**	**323**	⇓*P*	**Pn**	**22 00 23.0**	**0.0**
	baz=18,SNR=48						
GLA	**Glamis**	**18.55**	**323**	⇑*eP*	**Pn**	**22 00 22.9**	**0.0**
GLA				pmax	pmax		
	comp=Z,299nm,1.1s						
Y13A	**Salome**	**18.57**	**326**	⇓*P*	**Pn**	**22 00 23.1**	**-0.1**
	baz=19,SNR=68						
X14A	**Yava**	**18.62**	**329**	⇑*P*	**Pn**	**22 00 24.1**	**+0.4**
	baz=19,SNR=195						
CGA2	**Cerro Gallo 2**	**18.68**	**115**	*eP*	**Pn**	**22 00 27.8**	**+3.2**
WUAZ	**Wupatki**	**18.82**	**334**	⇑*iPn*	**Pn**	**22 00 27.2**	**+1.0**
	comp=Z,929nm,1.4s						
WUAZ				*eSn*	**Sn**	**22 04 01.1**	**+4.8**
WUAZ				PcP	PcP	22 04 51.8	+2.5
WUAZ	**Wupatki**	**18.82**	**334**	⇑*P*	**P

comp=Z,2µm,20.0s,baz=317,slow=37
PFO Pinyon Flat Ob 19.90 321⇑iP Pn 22 00 37.4 -1.5
comp=Z,812nm,1.3s
PFO e 22 00 56.3
PFO eS **S 22 04 25.1 +8.2**
PFO ePcP PcP 22 04 54.3 +3.0
PFO Pinyon Flat Ob 19.90 321⇓P Pn 22 00 37.8 -1.2
baz=20,SNR=67
PFO Pinyon Flat Ob 19.90 321⇑iP Pn 22 00 37.4 -1.5
PFO pmax pmax
comp=Z,811nm,1.3s
T17A Navajo Res., N 19.90 338⇑P Pn 22 00 38.3 -0.6
baz=20,SNR=206
BELC Belle Mtn. 19.91 323⇑P Pn 22 00 37.8 -1.2
baz=20,SNR=150
LIO Limon 19.92 113 eP Pn 22 00 40.4 +1.0
U15A North Rim 19.98 334⇑P Pn 22 00 39.7 -0.1
baz=20,SNR=189
S19A Harvey Farm, M 20.05 342⇑P P 22 00 39.6 +1.4
baz=20,SNR=573
CBKS Cedar Bluff 20.05 4⇑iP P 22 00 38.4 +0.2
comp=Z,1µm,1.0s
CBKS e 22 00 50.5
CBKS eS **S 22 04 21.8 +2.1**
CBKS ePcP PcP 22 04 53.7 +2.2
CBKS Cedar Bluff 20.05 4⇑iP P 22 00 38.4 +0.2
CBKS pmax pmax
comp=Z,1µm,1.0s
BAR1 20.05 116 eP P 22 00 41.7 +3.2
T16A Glen Canyon Da 20.15 336⇓P P 22 00 41.0 +1.7
baz=20,SNR=57
LDFC Landfair 20.22 326⇑iP P 22 00 42.3 +2.1
LDFC e 22 00 57.1
LDFC eS **S 22 04 30.7 +7.5**
LDFC ePcP PcP 22 04 58.3 +6.5
PV01 Paradox Valley 20.25 344⇑iP P 22 00 41.9 +1.4
comp=Z,4µm,0.7s
PV01 e 22 00 57.1
S18A Hurst Farm, Bl 20.26 340⇑P P 22 00 41.8 +1.3
baz=20,SNR=348
V13A Grand Canyon W 20.26 330⇓P P 22 00 42.2 +1.6
baz=20,SNR=175
W12A Cal Nev Ari 20.27 327⇓P P 22 00 41.7 +1.1
baz=20,SNR=42
GMRC Granite Mounta 20.29 325⇑P P 22 00 41.9 +1.0
baz=20,SNR=161
MURC Murrieta 20.35 320⇓P P 22 00 42.4 +0.9
baz=20,SNR=44
U14A Mt Trumbull 20.36 332⇓P P 22 00 43.0 +1.4
baz=20,SNR=181
PVMO Portageville 20.46 28 eP P 22 00 43.4 +0.7
comp=Z,1µm,1.1s
PVMO e 22 01 00.1
PVMO S **S 22 04 28.6 +0.7**
ACR Cerro Adams 20.47 117 eP P 22 00 46.9 +3.8
S17A Black Ridge (B 20.48 339⇑P P 22 00 44.4 +1.5
baz=20,SNR=303
T15A Red Dirt Ranch 20.53 335⇓P P 22 00 45.0 +1.5
baz=20,SNR=113
V12A Nelson 20.59 328⇓P P 22 00 45.0 +0.8
baz=21,SNR=113
R19A Curley Farm, L 20.59 343⇑P P 22 00 45.0 +0.9
baz=21,SNR=108
PV10 Paradox Valley 20.61 343 eP P 22 00 44.4 +0.1
comp=Z,7µm,1.0s
PV10 e 22 01 01.1
PV10 S **S 22 04 29.9 -0.9**
PV10 ePcP PcP 22 04 54.0 +1.5
BBRC Big Bear Sol-O 20.63 321⇓P P 22 00 45.8 +1.1
baz=21
DWPF Disney 20.65 60 eP P 22 00 47.9 +2.9
comp=Z,613nm,1.4s
DWPF e 22 01 00.6
HEC Hector,Ludlow 20.70 324⇑P P 22 00 46.4 +1.0
baz=21,SNR=167
U13A Pakoon Wash 20.71 331⇑P P 22 00 47.0 +1.6
baz=21,SNR=176
KSU1 Kansas State U 20.72 11⇑eP P 22 00 44.6 -0.9
comp=Z,776nm,0.9s
KSU1 e 22 00 58.4
KSU1 eS **S 22 04 33.0 0.0**
UTMT University of 20.78 30⇑eP P 22 00 45.9 -0.4
comp=Z,2µm,1.1s
UTMT e 22 01 00.3
UTMT eS **S 22 04 35.9 +1.6**
SCI San Clemente I 20.80 316⇓P P 22 00 46.8 +0.3
baz=21,SNR=24
S16A Weppner Ranch, 20.84 337⇓P P 22 00 47.9 +1.2
baz=21,SNR=106
T14A Hurricane 20.86 333⇑P P 22 00 48.3 +1.3
baz=21,SNR=16
R18A Canyonlands Na 20.86 341⇓P P 22 00 47.8 +0.8
baz=21,SNR=402
SMCO Snowmass 20.88 348⇑iP P 22 00 49.2 +1.9
comp=Z,846nm,1.2s
SMCO e 22 01 05.0
SMCO eS **S 22 04 43.1 +6.9**
TUQ Turquoise Moun 20.92 325⇓P P 22 00 49.0 +1.2
baz=21,SNR=376
V11A Goodsprings 20.97 327⇓P P 22 00 49.1 +0.9
baz=21,SNR=59
CIS Catalina Islan 20.98 317⇓P P 22 00 48.4 +0.1
baz=21,SNR=19
U12A Valley of Fire 20.99 330⇑P P 22 00 49.7 +1.2
baz=21,SNR=38
BFSC Mount Baldy St 21.06 320⇓P P 22 00 49.8 +0.5
baz=21,SNR=52
S15A Panguitch 21.09 336⇓P P 22 00 51.0 +1.5
baz=21,SNR=53
FMP Fort Macarthur 21.10 318⇓P P 22 00 49.7 +0.1
baz=21
RRX Edison Barstow 21.12 323⇓P P 22 00 50.4 +0.6
baz=21,SNR=18
WVT Waverly 21.12 32⇑iP P 22 00 48.9 -1.0
comp=Z,764nm,1.6s,mb5.8
WVT e 22 01 04.1
WVT eS **S 22 04 40.5 -0.5**
WVT Waverly 21.12 32 eP P 22 00 48.9 -1.0
WVT pmax pmax
comp=Z,760nm,1.6s,mb5.8
R17A Hanksville Air 21.15 340⇓P P 22 00 50.7 +0.5
baz=21,SNR=223
T13A Saint George 21.18 332⇑P P 22 00 51.5 +1.1
baz=21,SNR=67
Q19A Hogan Spring (21.21 343⇓P P 22 00 51.3 +0.5
baz=21,SNR=13
CCM Cathedral Cave 21.23 23⇑eP P 22 00 50.0 -1.0
comp=Z,352nm,1.2s,mb5.6
CCM e 22 01 06.2
CCM eS **S 22 04 39.9 -3.1**
CCM Cathedral Cave 21.23 23⇑eP P 22 00 50.0 -1.0
CCM eS **S 22 04 39.9 -3.1**
CCM pmax pmax
comp=Z,352nm,1.2s,mb5.6
ISCO Idaho Springs 21.26 351⇑iP P 22 00 52.2 +0.9
comp=Z,576nm,1.1s,mb5.8
ISCO e 22 01 08.9
ISCO eS **S 22 04 36.9 -6.7**
ISCO Idaho Springs 21.26 351⇑iP P 22 00 52.2 +0.9
ISCO eS **S 22 04 36.9 -6.7**
ISCO pmax pmax
comp=Z,576nm,1.1s,mb5.8
MWC Mount Wilson 21.29 320⇑iP P 22 00 52.1 +0.4
comp=Z,160nm,1.0s,mb5.3
MWC e 22 01 06.0
MWC S **S 22 04 44.9 +0.5**
MWC Mount Wilson 21.29 320⇑iP P 22 00 52.1 +0.4
MWC S **S 22 04 44.9 +0.6**
MWC pmax pmax
comp=Z,160nm,1.0s,mb5.3
R16A Teasdale 21.29 338⇓P P 22 00 52.8 +1.2
baz=21,SNR=113
GSC Goldstone 21.31 324⇓iP P 22 00 52.7 +0.8
comp=Z,312nm,1.0s,mb5.6
GSC e 22 01 08.3
GSC eS **S 22 04 43.3 -1.3**
GSC Goldstone 21.31 324⇑P P 22 00 52.6 +0.8
baz=21,SNR=61
GSC Goldstone 21.31 324⇓iP P 22 00 52.7 +0.8
GSC eS **S 22 04 43.3 -1.3**
GSC pmax pmax
comp=Z,312nm,1.0s,mb5.6
T12A Moapa 21.31 330⇑P P 22 00 52.4 +0.5
baz=21,SNR=32
SHPR Sheep Range 21.36 329 eP P 22 00 53.1 +0.8
CCUT Cedar City 21.39 334⇑iP P 22 00 53.9 +1.2
comp=Z,219nm,1.2s,mb5.4
CCUT e 22 01 08.7
CCUT eS **S 22 04 46.9 +0.8**
U11A Corn Creek 21.40 328⇓P P 22 00 53.7 +0.8
baz=21,SNR=8.8
SHOC Shoshone 21.46 326⇓P P 22 00 54.0 +0.5
baz=21,SNR=18
DECC Green Verdugo 21.48 319⇓P P 22 00 54.3 +0.6
baz=22,SNR=12
FVM French Village 21.48 25⇑iP P 22 00 52.7 -1.0
comp=Z,470nm,1.3s,mb5.7
FVM e 22 01 08.4
FVM eS **S 22 04 44.8 -3.1**
FVM French Village 21.48 25⇑iP P 22 00 52.7 -1.0
FVM eS **S 22 04 44.8 -3.1**
FVM pmax pmax
comp=Z,470nm,1.3s,mb5.7
S14A Cedar City 21.48 334⇑P P 22 00 54.8 +1.1
baz=22,SNR=28
R15A Junction 21.52 336⇑P P 22 00 55.4 +1.3
baz=22,SNR=36
Q18A Rafter H Ranch 21.60 342⇑P P 22 00 55.3 +0.4
baz=22,SNR=213
SNCC San Nicolas Is 21.61 315 eP P 22 00 54.7 -0.4
comp=Z,291nm,1.2s,mb5.5
SNCC e 22 01 15.9
SNCC San Nicolas Is 21.61 315⇓P P 22 00 54.8 -0.3
baz=22,SNR=14
ARUT Antelope Range 21.62 334 eP P 22 00 56.3 +1.1
comp=Z,431nm,1.0s,mb5.7
ARUT e 22 01 13.0
ARUT ScP ScP 22 08 22.6 -3.0
ARUT Antelope Range 21.62 334 eP P 22 00 56.3 +1.1
ARUT pmax pmax
comp=Z,431nm,1.0s,mb5.7
S13A Holt Ranch, En 21.62 333⇓P P 22 00 56.1 +0.8
baz=22,SNR=74
EDW2 Edwards Air Fo 21.70 321⇑P P 22 00 55.9 -0.2
baz=22,SNR=96
SRU San Rafael 21.72 341⇑iP P 22 00 56.5 +0.3
comp=Z,658nm,1.1s,mb5.9
SRU e 22 01 13.1
SRU eS **S 22 04 50.4 -2.2**
SRU San Rafael 21.72 341⇑P P 22 00 56.4 +0.2
baz=22,SNR=126
SRU San Rafael 21.72 341⇑iP P 22 00 56.5 +0.3
SRU eS **S 22 04 50.4 -2.2**
SRU pmax pmax
comp=Z,658nm,1.1s,mb5.9
MSU Marysvale 21.75 337 eP P 22 00 57.6 +1.1
MSU e 22 01 14.5
SIUC Southern Illin 21.75 27⇑eP P 22 00 55.8 -0.8
comp=Z,649nm,1.0s,mb5.9
SIUC e 22 01 14.3
Q16A Castle Valley 21.75 339⇑P P 22 00 57.4 +0.8
baz=22,SNR=65
P19A Cripple Cowboy 21.77 344⇓P P 22 00 57.3 +0.5
baz=22,SNR=266
GOGA Godfrey 21.79 44⇓eP P 22 00 56.9 -0.1
comp=Z,407nm,1.4s,mb5.6
GOGA e 22 01 11.6
GOGA eS **S 22 04 51.9 -2.1**
GOGA Godfrey 21.79 44⇓eP P 22 00 56.9 -0.1
GOGA eS **S 22 04 51.9 -2.1**
GOGA pmax pmax
comp=Z,407nm,1.4s,mb5.6
BLG Laguna Peak 21.85 318⇓P P 22 00 57.8 +0.2
baz=22,SNR=21
U10A Ash Meadows, A 21.88 327⇑P P 22 00 58.6 +0.6
baz=22,SNR=47
R14A James Farms, M 21.89 335⇓P P 22 00 58.6 +0.6
baz=22
LRMC Laurel Mountai 21.94 323⇓P P 22 00 59.1 +0.5
baz=22,SNR=98
OSI Osito Adit 21.96 319⇑P P 22 00 59.2 +0.3
baz=22
T11A Corn Creek, Al 21.97 330⇑P P 22 00 59.2 +0.3
baz=22,SNR=174
S12A Delamar Landin 22.09 331⇓P P 22 01 00.9 +0.7
baz=22,SNR=22
P18A Preston Nutter 22.11 342⇑P P 22 01 00.9 +0.5
baz=22,SNR=220
OGNE Ogallala 22.12 359⇑iP P 22 01 00.7 +0.2
comp=Z,3µm,1.4s,mb6.4
OGNE e 22 01 17.5
OGNE ePcP PcP 22 04 52.0 -3.4
SLM Saint Louis 22.12 24⇑eP P 22 00 59.3 -1.2
comp=Z,559nm,1.2s,mb5.8
SLM e 22 01 15.0
SLM ePcP PcP 22 04 55.2 -0.2
SLM Saint Louis 22.12 24⇑eP P 22 00 59.3 -1.2
SLM e 22 04 55.2
SLM pmax pmax
comp=Z,559nm,1.2s,mb5.8
P17A Butcher Ranch, 22.12 341⇑P P 22 01 00.8 +0.3
baz=22,SNR=27
BSC Santa Cruz Isl 22.14 317⇑P P 22 01 01.1 +0.3
baz=22,SNR=23
R13A O'Grain Ranch, 22.17 333⇑P P 22 01 02.0 +1.0
baz=22,SNR=90
FURC Furnace Creek, 22.20 326⇓P P 22 01 01.1 -0.3
baz=22,SNR=22
MPMC Manual Prospec 22.24 324⇓P P 22 01 01.8 0.0
baz=22,SNR=211
TPNV Topopah Spring 22.25 328 eP P 22 01 02.7 +0.9
comp=Z,473nm,1.1s,mb5.7
TPNV e 22 01 17.7
TPNV S **S 22 05 17.1 +15**
TPNV Topopah Spring 22.25 328⇑P P 22 01 02.5 +0.6
baz=22,SNR=258
TPNV Topopah Spring 22.25 328 eP P 22 01 02.7 +0.9
TPNV pmax pmax
comp=Z,470nm,1.1s,mb5.7
Q15A Fillmore 22.25 337⇓P P 22 01 02.1 +0.2
baz=22
PAYG Puerto Ayora 22.26 149⇓eP P 22 01 04.7 +2.5
PAYG e 22 01 24.2
ARVC Arvin 22.37 320⇓P P 22 01 02.8 -0.3
baz=22,SNR=18
SBC Santa Barbara 22.47 318⇓P P 22 01 03.7 -0.6
baz=22
P16A Fountain Green 22.54 339⇓P P 22 01 05.6 +0.7
baz=22,SNR=5.5
S11A Rachel 22.54 329⇓P P 22 01 05.4 +0.5
baz=22,SNR=35
R12A Pony Springs, 22.57 332⇓P P 22 01 06.1 +0.8
baz=23,SNR=69
Q14A Sevier Lake (B 22.58 336⇑P P 22 01 05.9 +0.6
baz=23,SNR=131
O18A Roosevelt 22.64 343⇓P P 22 01 06.5 +0.5
baz=23,SNR=17
USIN University of 22.66 30⇑iP P 22 01 05.5 -0.6
comp=Z,554nm,0.8s,mb5.9
USIN e 22 01 21.3
USIN eS **S 22 05 07.2 -2.0**
PHWY Pilot Hill 22.72 352⇑iP P 22 01 06.8 +0.1
PHWY e 22 01 23.1
PHWY eS **S 22 05 08.6 -1.5**
P15A Leamington 22.72 338⇓P P 22 01 07.0 +0.2
baz=23,SNR=12
O17A Robinson Place 22.78 342⇓P P 22 01 07.6 +0.2
baz=23,SNR=102
PKM Peak Mountain 22.83 318⇓P P 22 01 07.7 -0.3
baz=23,SNR=44
CWC Cottonwood Cre 22.85 324⇓P P 22 01 08.6 +0.4
baz=23,SNR=84
Q13A Wheeler Ranch, 22.85 334⇑P P 22 01 08.5 +0.3
baz=23,SNR=50
GRAC Grapevine Rang 22.87 326⇓P P 22 01 09.0 +0.6
baz=23,SNR=90
MPU Maple Canyon 22.90 340⇑iP P 22 01 09.0 +0.3
comp=Z,487nm,1.4s,mb5.6
MPU e 22 01 22.7
MPU S **S 22 05 13.1 0.0**
MPU eScP ScP 22 08 29.2 +0.4
NLU North Lily Min 22.99 339⇑iP P 22 01 06.3 -3.4
NLU e 22 01 23.2
NLU eS **S 22 05 12.0 -2.6**
VES Vestal, Richgr 23.01 321⇑P P 22 01 10.3 +0.4
baz=23,SNR=61
N19A John Jarvie Ra 23.01 345⇑P P 22 01 09.8 -0.1
baz=23
P14A Drum Mountains 23.02 337⇓P P 22 01 10.3 +0.3
baz=23,SNR=128
O16A Springville 23.03 340⇓P P 22 01 10.1 +0.1
baz=23,SNR=40
R11A Troy Canyon, C 23.03 331⇓P P 22 01 10.6 +0.5
baz=23,SNR=144
TKL Tuckaleechee C 23.03 39 P P 22 01 09.0 -1.2
comp=Z,43nm,0.8s,mb4.8,baz=194,slow=9.5,SNR=23
TKL pP 22 01 25.8
comp=Z,66nm,1.1s,baz=218,slow=12,SNR=12
TKL LR LR 22 12 50.7
comp=Z,1µm,21.1s,baz=230,slow=44
TKL Tuckaleechee C 23.03 39⇑eP P 22 01 08.1 -2.0
TKL pP 22 01 25.8
TKL eS **S 22 05 17.6 +2.2**
TKL LR LR 22 12 50.7
TKL Tuckaleechee C 23.03 39⇑eP P 22 01 08.1 -2.1
TKL *PP 22 01 25.8
OLIL Olney 23.09 28⇑iP P 22 01 09.5 -1.1
comp=Z,2µm,1.7s,mb6.2
OLIL e 22 01 25.4
OLIL PcP PcP 22 04 57.0 -0.5
OLIL eS **S 22 05 15.9 -0.3**
OLIL eScP ScP 22 08 31.6 +2.3
BCIP Isla Barro Col 23.11 111⇓iP P 22 01 12.2 +1.2
comp=Z,736nm,1.4s,mb5.8
BCIP e 22 01 32.3
DAU Daniels Canyon 23.14 341 eP P 22 01 11.3 +0.2
DAU e 22 01 28.8
DAU ePcP PcP 22 04 59.8 +2.3
DAU eScP ScP 22 08 32.9 +3.5
S10A Tonopah Range, 23.18 329⇓P P 22 01 11.9 +0.4
baz=23,SNR=139
SMMC Simmler 23.21 319⇑P P 22 01 12.0 +0.2
baz=23,SNR=92
N18A Larsen Ranch, 23.21 344⇓P P 22 01 11.8 0.0
baz=23
Q12A Willow Creek R 23.26 333⇓P P 22 01 12.6 +0.4
baz=23,SNR=63
P13A Bates Ranch, G 23.27 335⇓P P 22 01 12.9 +0.5
baz=23,SNR=72
R10A Warm Springs 23.32 330⇑P P 22 01 13.4 +0.7
baz=23,SNR=20
S09A Goldfield 23.34 327⇑P P 22 01 13.3 +0.3
baz=23,SNR=104
M20A Sweetwater, Wa 23.36 347⇑P P 22 01 13.1 0.0
baz=23,SNR=66
RWWY Rawlins 23.36 349⇑iP P 22 01 13.5 +0.4
comp=Z,651nm,1.1s,mb5.9
RWWY e 22 01 30.4
RWWY ePcP PcP 22 05 05.3 +7.4
RWWY S **S 22 05 25.6 +5.0**
TIN Tinemaha 23.37 325⇑P P 22 01 13.8 +0.6
baz=23,SNR=46
JLU Jordanelle 23.37 341⇑eP P 22 01 13.2 0.0
JLU e 22 01 29.5
JLU ePcP PcP 22 04 58.4 +0.4
O15A The Old Anders 23.42 339⇑P P 22 01 13.9 +0.3
baz=23,SNR=38
RCTC Rector, Farmer 23.42 322⇓P P 22 01 13.8 +0.1
baz=23,SNR=15
DUG Dugway 23.46 338⇑iP P 22 01 14.3 +0.3
comp=Z,172nm,1.1s,mb5.3
DUG e 22 01 29.2
DUG eS **S 22 05 29.1 +6.8**
DUG Dugway 23.46 338⇑P P 22 01 14.3 +0.3
baz=24,SNR=44
DUG Dugway 23.46 338 eP P 22 01 14.4 +0.3
DUG pmax pmax
comp=Z,170nm,1.1s,mb5.3
Q11A Duckwater 23.46 331⇓P P 22 01 14.5 +0.4
baz=23,SNR=94
N17A Moffit Pass 23.50 342⇓P P 22 01 14.6 +0.3
baz=24,SNR=82
V05C Boulder Hill, 23.51 320⇑P P 22 01 15.2 +0.6
baz=24,SNR=9.2
WCI Wyandotte Cave 23.52 31⇑iP P 22 01 13.1 -1.5
WCI e 22 01 30.1
WCI ePcP PcP 22 04 57.0 -1.3
WCI eS **S 22 05 27.8 +4.4**
WCI eScP ScP 22 08 32.9 +2.4
WCI Wyandotte Cave 23.52 31⇑iP P 22 01 13.1 -1.6
WCI e 22 04 57.0
CTU Camp Tracy 23.55 340 eP P 22 01 14.5 -0.4
comp=Z,245nm,1.2s,mb5.4
CTU e 22 01 32.9
M19A Rock Springs 23.59 346⇓P P 22 01 14.5 -0.6
baz=24,SNR=20
TPH Tonopah 23.61 328⇑iP P 22 01 15.7 +0.2
comp=Z,1µm,2.4s,mb5.8
TPH e 22 01 30.6
TPH ePcP PcP 22 04 51.9 -6.6
TPH eS **S 22 05 29.1 +4.4**
TPH Tonopah 23.61 328⇑iP P 22 01 15.7 +0.3
TPH e 22 04 51.9
TPH pmax pmax
comp=Z,1µm,2.4s,mb5.8
N16A Rees Ranch, Co 23.63 341⇓P P 22 01 15.3 -0.2
baz=24,SNR=14
NOQ North Oquirrh 23.63 340⇑iP P 22 01 15.4 -0.2
NOQ e 22 01 30.8
NOQ ePcP PcP 22 04 54.0 -4.6
NOQ eS **S 22 05 26.2 +1.2**
P12A McGill 23.66 334⇓P P 22 01 15.9 0.0
baz=24,SNR=52
L21A Rawlins 23.66 349⇑P P 22 01 15.6 -0.3
baz=24,SNR=183
R09A Tonopah 23.66 328⇓P P 22 01 16.0 +0.2
baz=24,SNR=86
M18A Lyman 23.74 344⇑P P 22 01 15.8 -0.7
baz=24,SNR=35
TZTN Tazewell 23.77 38⇓eP P 22 01 16.6 -0.3
comp=Z,698nm,1.4s,mb5.8
TZTN e 22 01 32.6
TZTN PcP PcP 22 05 00.1 +1.2
TZTN eS **S 22 05 30.4 +3.0**
MTUM Tungsten Hills 23.77 325⇑eP P 22 01 17.3 +0.4
MTUM e 22 01 33.6
MTUM ePcP PcP 22 04 59.9 +0.9
JSC Jenkinsville 23.78 45 eP P 22 01 16.0 -1.0
JSC ePcP PcP 22 05 00.1 +1.2
Q10A Clear Creek Ra 23.79 330⇑P P 22 01 18.1 +1.0
baz=24,SNR=124
O13A Hicks Ranch, I 23.84 336⇑P P 22 01 17.9 +0.4
baz=24,SNR=28
L20A Wamsutter 23.89 347⇓P P 22 01 17.6 -0.2
baz=24,SNR=163
NHSC New Hope 23.89 49⇑eP P 22 01 16.5 -1.5
comp=Z,352nm,0.9s,mb5.7
NHSC e 22 01 39.5
M17A Scullys Gap (B 23.94 343⇑P P 22 01 17.9 -0.5
baz=24,SNR=221
U05C Westside ANR, 23.96 321⇓P P 22 01 18.7 +0.1
baz=24
N15A Stansbury Isla 23.98 339⇓P P 22 01 18.7 -0.1
baz=24,SNR=39
M16A Huntsville 24.08 341⇑P P 22 01 19.7 0.0
baz=24,SNR=5.7
P11A Circle Ranch, 24.09 332⇑P P 22 01 20.2 +0.4
baz=24,SNR=15
MLAC Mammoth Lakes 24.12 325⇓P P 22 01 20.9 +0.8
baz=24,SNR=25
SCIA State Center 24.14 15⇑eP P 22 01 19.1 -1.2
comp=Z,339nm,0.9s,mb5.7
SCIA e 22 01 35.3
SCIA ePcP PcP 22 04 58.9 -0.7
SCIA eS **S 22 05 35.7 +2.5**
BLO Bloomington 24.16 30⇑eP P 22 01 19.1 -1.3
comp=Z,814nm,1.4s,mb5.9
BLO e 22 01 35.5
BLO ePcP PcP 22 04 59.4 -0.3
BLO eS **S 22 05 37.3 +3.8**
BLO Bloomington 24.16 30⇑eP P 22 01 19.1 -1.3
BLO e 22 04 59.4
BLO pmax pmax
comp=Z,814nm,1.4s,mb5.9
T06C Millerton Lake 24.17 322⇑P P 22 01 19.5 -1.0
baz=24,SNR=46
Q09A Carvers 24.17 329⇑P P 22 01 21.1 +0.5
baz=24,SNR=19
N14A Grayback Hills 24.18 338⇓P P 22 01 20.6 0.0
baz=24,SNR=43
BGU Big Grassy Mou 24.19 338⇑eP P 22 01 20.5 -0.1
comp=Z,394nm,1.5s,mb5.5
BGU e 22 01 36.8
BGU eS **S 22 05 48.4 +14**
L18A Fontenelle, Gr 24.20 344⇓P P 22 01 19.8 -1.0
baz=24,SNR=116
L19A Farson 24.20 346⇑P P 22 01 20.4 -0.4

baz=24,SNR=229
O12A Currie 24.26 335 ⇓P **P** **22 01 21.6 +0.3**
baz=24,SNR=52
R08A Mina 24.27 327 ⇑P **P** **22 01 22.0 +0.6**
baz=24,SNR=62
HWUT Hardware Ranch 24.33 342 ⇑*i*P **P** **22 01 21.8 -0.2**
comp=Z,490nm,1.3s,mb5.7
HWUT *e* 22 01 37.6
HWUT *e*PcP PcP 22 05 01.1 +1.1
HWUT *e*S **S** **22 05 43.7 +7.6**
HWUT *e*ScP ScP 22 08 35.0 +2.4
SPUT South Promonto 24.33 340⇑*e*P **P** **22 01 22.1 +0.1**
SPUT *e* 22 01 38.6
SPUT *e*PcP PcP 22 05 00.9 +0.9
SPUT *e*S **S** **22 05 41.1 +4.9**
SPUT *e*ScP ScP 22 08 34.1 +1.4
U04C Hernandez Rese 24.38 320 ⇓P **P** **22 01 22.4 0.0**
baz=24,SNR=42
NVAR Mina Array Bea 24.43 327 P **P** **22 01 23.9 +1.0**
comp=Z,208nm,0.9s,mb5.5,baz=151,slow=9.6,SNR=647
NVAR pP 22 01 40.6
comp=Z,98nm,0.8s,baz=141,slow=8.3,SNR=6.6
NVAR PcP PcP 22 05 01.6 +1.3
comp=Z,12nm,1.0s,baz=156,slow=4.6,SNR=5.7
NVAR ScP ScP 22 08 33.9 +0.9
comp=Z,11nm,1.1s,baz=138,slow=3.7,SNR=12
NVAR P3KPbc 22 34 36.4
comp=Z,3.2nm,1.0s,baz=303,slow=3.9,SNR=12
NVAR Mina Array Bea 24.43 327 P **P** **22 01 23.9 +1.0**
NVAR pP 22 01 40.6
NVAR PcP PcP 22 05 01.6 +1.3
NVAR ScP ScP 22 08 33.9 +0.9
V03C Hunter Liggett 24.44 319 ⇓P **P** **22 01 23.4 +0.3**
baz=24,SNR=45
P10A Eureka 24.46 331 ⇓P **P** **22 01 24.1 +0.9**
baz=24,SNR=64
M15A Larsen Ranch, 24.47 340 ⇑P **P** **22 01 23.0 -0.2**
baz=24,SNR=41
K20A Yellowstone Ra 24.51 348 ⇑P **P** **22 01 23.0 -0.6**
baz=24,SNR=156
O11A Cowboy Ranch, 24.52 333 ⇓P **P** **22 01 23.7 -0.1**
baz=24,SNR=60
Q08A Gabbs 24.57 328 ⇓P **P** **22 01 24.6 +0.4**
baz=24,SNR=288
L16A Fish Haven 24.66 342 ⇑P **P** **22 01 24.5 -0.5**
baz=25,SNR=16
P09A Austin 24.72 330 ⇑P **P** **22 01 25.7 +0.2**
baz=25
S05C Merced 24.76 322 ⇓P **P** **22 01 25.8 -0.2**
baz=25,SNR=35
K19A Absolon Red Bu 24.77 347 ⇑P **P** **22 01 25.4 -0.6**
baz=25,SNR=142
M14A Sheep Mountain 24.81 339 ⇑P **P** **22 01 26.2 -0.1**
baz=25,SNR=176
ELK Elko 24.86 335 P **P** **22 01 27.0 +0.1**
comp=Z,26nm,1.1s,mb4.5,baz=155,slow=6.5,SNR=38
ELK LR LR 22 11 57.4
comp=Z,6μm,21.7s,baz=159,slow=38
ELK Elko 24.86 335⇑*e*P **P** **22 01 26.2 -0.7**
ELK *e* 22 01 44.8
ELK *e*S **S** **22 05 49.0 +4.2**
ELK LR LR 22 11 57.4
ELK Elko 24.86 335⇑*e*P **P** **22 01 26.2 -0.6**
ELK *e* 22 01 44.8
HVU Hansel Valley 24.86 340⇑*i*P **P** **22 01 26.6 -0.2**
comp=Z,257nm,1.2s,mb5.5
HVU *e* 22 01 42.9
HVU *e*PcP PcP 22 05 03.6 +2.4
HVU *e*S **S** **22 05 41.4 -3.3**
HVU Hansel Valley 24.86 340⇑*i*P **P** **22 01 26.6 -0.2**
HVU *e* 22 05 03.6
HVU *e*S **S** **22 05 41.4 -3.4**
HVU pmax pmax
comp=Z,257nm,1.2s,mb5.5
K18A Toltan Ranch, 24.87 345 ⇑P **P** **22 01 26.6 -0.2**
baz=25,SNR=61
N12A Clover Valley, 24.87 335 ⇓P **P** **22 01 26.8 -0.1**
baz=25,SNR=57
BW06 Boulder Array 24.88 346⇑*i*P **P** **22 01 26.4 -0.5**
comp=Z,487nm,1.1s,mb5.8
BW06 *e* 22 01 43.8
BW06 *e*PcP PcP 22 05 03.5 +2.3
BW06 *e*S **S** **22 05 44.0 -0.9**
BW06 Boulder Array 24.88 346 ⇑P **P** **22 01 26.7 -0.2**
baz=25,SNR=447
PDAR Pinedale Array 24.88 346 P **P** **22 01 26.6 -0.3**
comp=Z,228nm,1.0s,mb5.6,baz=148,slow=8.7,SNR=238
PDAR pP 22 01 43.6
comp=Z,126nm,0.8s,baz=148,slow=8.9,SNR=12
PDAR PcP PcP 22 05 01.8 +0.6
comp=Z,6.3nm,0.8s,baz=141,slow=5.8,SNR=5.4
PDAR ScP ScP 22 08 34.9 +0.7
comp=Z,7.0nm,1.1s,baz=188,slow=2.2,SNR=5.9
PDAR LR LR 22 12 11.2
comp=Z,6μm,21.5s,baz=183,slow=39
L15A Malad City 24.94 341 ⇑P **P** **22 01 27.0 -0.5**
baz=25,SNR=153
M13A Montello 24.98 337 ⇑P **P** **22 01 27.8 -0.1**
baz=25,SNR=67
O10A Cortez Mining, 25.02 332 ⇑P **P** **22 01 28.7 +0.4**
baz=25,SNR=67
SAO San Andreas Ge 25.04 320 *e*P **P** **22 01 27.8 -0.7**
SAO *e* pP 22 01 43.5 -1.5
SAO *e*PcP PcP 22 05 03.8 +2.1
SAO *e*S **S** **22 05 49.0 +1.2**
Q07A Schurz 25.07 327 ⇑P **P** **22 01 29.4 +0.7**
baz=25
WAKR Walker 25.08 325 *e*P **P** **22 01 30.0 +1.1**
R06C Coleville 25.10 325 ⇓P **P** **22 01 29.7 +0.7**
baz=25,SNR=26
N11A Elko Archery C 25.13 334 ⇑P **P** **22 01 29.0 -0.2**
baz=25
K17A Gardner Place, 25.20 344 ⇑P **P** **22 01 29.8 -0.1**
baz=25,SNR=31
O09A Fish Creek Ran 25.23 331 ⇓P **P** **22 01 30.5 +0.3**
baz=25,SNR=75
L14A Malta 25.25 339 ⇑P **P** **22 01 30.2 -0.1**
baz=25,SNR=87
ECSD EROS,Sioux Fal 25.25 8⇑*i*P **P** **22 01 29.0 -1.2**
comp=Z,989nm,1.5s,mb6.0
ECSD *e* pP 22 01 46.1 -0.8
ECSD *e*PcP PcP 22 05 02.0 +0.1
ECSD *e*S **S** **22 05 47.9 -2.9**
AHID Auburn Hatcher 25.26 343⇑*e*P **P** **22 01 29.9 -0.5**
comp=Z,210nm,1.1s,mb5.5
AHID *e* pP 22 01 47.6 +0.6
AHID *e*PcP PcP 22 05 05.6 +3.5
AHID *e*S **S** **22 05 51.4 +0.4**
AHID *e*ScP ScP 22 08 37.4 +2.2
CMB Columbia Colle 25.27 323⇑*i*P **P** **22 01 30.1 -0.4**
comp=Z,79nm,1.1s,mb5.1
CMB *e* pP 22 01 46.4 -0.7
CMB *e*PcP PcP 22 05 04.0 +1.8
CMB S **S** **22 05 50.2 -1.1**
CMB *e*ScP ScP 22 08 37.7 +2.3
CMB Columbia Colle 25.27 323⇑*i*P **P** **22 01 30.1 -0.5**
CMB *e* 22 05 04.0
CMB S **S** **22 05 50.2 -1.1**
CMB pmax pmax
comp=Z,79nm,1.1s,mb5.1
P08A Dixie Valley 25.28 329 ⇓P **P** **22 01 31.3 +0.7**
baz=25,SNR=17
M12A Wells 25.31 336 ⇓P **P** **22 01 30.9 0.0**
baz=25,SNR=74
N10A Dunphy 25.37 333 ⇑P **P** **22 01 31.8 +0.3**
baz=25,SNR=12
RSSD Black Hills 25.37 356⇑*i*P **P** **22 01 31.3 -0.2**
RSSD *e* pP 22 01 48.4 +0.5
RSSD *e*PcP PcP 22 05 02.6 +0.4
RSSD *e*S **S** **22 05 56.3 +3.5**
RSSD *e*ScP ScP 22 08 37.6 +2.1
RSSD Black Hills 25.37 356 *e*P **P** **22 01 31.3 -0.1**
J18A Kendall Valley 25.41 345 ⇑P **P** **22 01 31.5 -0.2**
baz=25,SNR=251
BMN Battle Mountai 25.46 331⇑*i*P **P** **22 01 32.4 +0.2**
comp=Z,733nm,2.1s,mb5.7
BMN *e* pP 22 01 50.1 +1.3
BMN PcP PcP 22 05 01.4 -1.1
BMN *e*S **S** **22 05 52.9 -1.3**
BMN Battle Mountai 25.46 331⇑*i*P **P** **22 01 32.4 +0.2**
BMN 22 05 01.4
BMN *e*S **S** **22 05 52.9 -1.3**
BMN pmax pmax
comp=Z,733nm,2.1s,mb5.7
K16A Soda Springs 25.46 343 ⇑P **P** **22 01 32.2 0.0**
baz=24,SNR=38
L13A Double Diamond 25.54 338 ⇓P **P** **22 01 33.1 +0.2**
baz=26,SNR=26
P07A Fallon 25.56 328 ⇑P **P** **22 01 33.9 +0.7**
baz=26,SNR=6.0
K15A Arbon 25.60 341 ⇓P **P** **22 01 33.7 +0.2**
baz=26,SNR=72
M11A Holland Ranch, 25.67 335 ⇓P **P** **22 01 34.4 +0.3**
baz=26,SNR=74
K14A Jones Ranch, D 25.68 340 ⇓P **P** **22 01 34.1 -0.1**
baz=26,SNR=96
J17A Brown Place, J 25.72 344 ⇓P **P** **22 01 35.0 +0.4**
baz=26,SNR=53
R04C Big Horse Ranc 25.74 323 ⇓P **P** **22 01 35.8 +0.9**
baz=26,SNR=13
REDW Red Top Meadow 25.75 344⇑*i*P **P** **22 01 34.9 +0.1**
comp=Z,392nm,1.1s,mb5.8
REDW *e* pP 22 01 52.1 +0.7
REDW *e*PcP PcP 22 05 04.8 +1.6
O08A Rochester Mine 25.78 330 ⇓P **P** **22 01 35.6 +0.4**
baz=26,SNR=87
I18A Diamond G Ranc 25.82 346 ⇑P **P** **22 01 35.6 +0.2**
baz=26,SNR=150
SNOW Snow King Moun 25.82 345⇑*i*P **P** **22 01 35.9 +0.4**
comp=Z,437nm,1.0s,mb5.8
SNOW *e* pP 22 01 52.3 +0.3
SNOW PcP PcP 22 05 05.0 +1.7
WCN Washoe City 25.83 326 ⇑P **P** **22 01 36.5 +0.8**
baz=26,SNR=26
RRI2 Red Ridge 25.86 344⇑*i*P **P** **22 01 35.9 0.0**
comp=Z,344nm,1.1s,mb5.7
RRI2 *e* pP 22 01 51.7 -0.8
RRI2 *e*PcP PcP 22 05 04.9 +1.5
RRI2 *e*S **S** **22 06 01.1 +0.6**
J16A Bone 25.87 343 ⇑P **P** **22 01 36.4 +0.4**
baz=26,SNR=237
TPAW Teton Pass 25.90 344⇑*i*P **P** **22 01 36.2 +0.1**
comp=Z,549nm,1.3s,mb5.8
TPAW *e* pP 22 01 52.8 +0.1
TPAW *e*PcP PcP 22 05 06.5 +3.0
TPAW S **S** **22 05 58.3 -2.8**
ELN Prospectdale 25.90 40 P **P** **22 01 37.7 +1.4**
ELN *e* pP 22 01 54.3 +1.5
JFWS Jewell Farm 25.91 19⇑*e*P **P** **22 01 34.5 -1.8**
comp=Z,226nm,0.8s,mb5.7
JFWS *e* pP 22 01 49.8 -3.1
JFWS PcP PcP 22 05 01.8 -1.8
JFWS *e*S **S** **22 05 55.8 -5.5**
JFWS Jewell Farm 25.91 19⇑*e*P **P** **22 01 34.5 -1.8**
JFWS 22 05 01.8
JFWS *e*S **S** **22 05 55.8 -5.6**
JFWS pmax pmax
comp=Z,226nm,0.8s,mb5.7
LOHW Long Hollow 25.93 345⇑*i*P **P** **22 01 36.5 0.0**
comp=Z,204nm,0.9s,mb5.6
LOHW *e* pP 22 01 53.2 +0.2
LOHW *e*PcP PcP 22 05 05.0 +1.4
N09A Rock Creek Ran 25.93 331 ⇓P **P** **22 01 36.7 +0.2**
baz=26,SNR=25
PAHR Pah Rah Range 25.94 327⇑*i*P **P** **22 01 37.2 +0.6**
comp=Z,408nm,1.7s,mb5.6
PAHR *e* pP 22 01 51.6 -1.6
PAHR PcP PcP 22 05 05.7 +2.0
PAHR S **S** **22 06 03.4 +1.5**
PAHR *e*ScP ScP 22 08 36.7 -0.5
L12A House Creek Ra 25.97 337 ⇑P **P** **22 01 36.4 -0.5**
baz=26,SNR=8.1
LAVA Lava Cap Winer 25.97 324 ⇓P **P** **22 01 37.0 +0.1**
baz=26,SNR=50
O07A Toulon 26.03 329 ⇑P **P** **22 01 37.8 +0.4**
baz=26,SNR=95
M10A I.L. Ranch, Tu 26.05 334 ⇑P **P** **22 01 38.1 +0.5**
baz=26,SNR=24
DCID1 Drake Creek 26.06 344⇑*i*P **P** **22 01 37.9 +0.3**
DCID1 *e* pP 22 01 53.4 -0.8
DCID1 PcP PcP 22 05 08.4 +4.5
DCID1 S **S** **22 06 04.4 +0.8**
K13A Stover Farm, H 26.08 339 ⇑P **P** **22 01 37.9 0.0**
baz=26,SNR=59
MOOW Moose Ponds 26.09 345⇑*e*P **P** **22 01 37.8 -0.1**
comp=Z,358nm,1.6s,mb5.5
MOOW *e* pP 22 01 53.5 -0.9
MOOW *e*PcP PcP 22 05 05.4 +1.4
MOOW *e*ScP ScP 22 08 40.0 +2.4
BLA Blacksburg 26.09 41 *e*P **P** **22 01 36.4 -1.7**
comp=Z,272nm,1.0s,mb5.6
BLA *e* pP 22 01 55.1 +0.5
BLA *e*S **S** **22 06 17.1 +13**
BLA Blacksburg 26.09 41 *e*P **P** **22 01 36.4 -1.6**
BLA *e* pP 22 01 55.1 +0.5
BLA pmax pmax
comp=Z,272nm,1.0s,mb5.6
N08A GE Springer Mi 26.16 331 ⇑P **P** **22 01 38.8 +0.3**
baz=26,SNR=48
SAC San Andreas 26.16 320 *e*P **P** **22 01 39.1 +0.5**
SAC *e*pP pP 22 01 57.5 +2.2
P06A Stead Airport, 26.18 327 ⇓P **P** **22 01 38.9 +0.1**
baz=26
I17A Pilgram Creek 26.21 345 ⇓P **P** **22 01 39.5 +0.5**
baz=26,SNR=75
J15A Blackfoot 26.23 342 ⇑P **P** **22 01 38.9 -0.2**
baz=26,SNR=101
L11A Cat Creek Ranc 26.27 336 ⇓P **P** **22 01 39.6 +0.1**
baz=26,SNR=68
IMW Indian Meadow 26.28 345⇑*i*P **P** **22 01 39.4 -0.2**
comp=Z,223nm,1.1s,mb5.5
IMW *e* pP 22 01 56.3 +0.1
IMW *e*PcP PcP 22 05 06.8 +2.4
IMW S **S** **22 06 13.4 +6.3**
IMW *e*ScP ScP 22 08 40.9 +2.8
K12A Draper Farm, C 26.36 337 ⇑P **P** **22 01 40.5 +0.2**
baz=26,SNR=32
M09A Marrel Ranch, 26.36 332 ⇑P **P** **22 01 40.8 +0.4**
baz=26,SNR=60
I16A Newdale 26.40 344 ⇑P **P** **22 01 40.6 -0.1**
baz=26,SNR=32
L10A Juniper Basin 26.48 335 ⇓P **P** **22 01 41.5 +0.1**
baz=26,SNR=51
J14A Carey 26.49 340 ⇓P **P** **22 01 41.7 +0.2**
baz=26,SNR=72
O06A Flanigan 26.51 327 ⇑P **P** **22 01 42.4 +0.7**
baz=26,SNR=78
N07B Gerlach 26.55 329 ⇓P **P** **22 01 42.3 +0.2**
baz=26,SNR=82
BEKR Beckwourth 26.56 326 ⇓P **P** **22 01 42.9 +0.7**
baz=26,SNR=111
Q03C Winters 26.61 322 ⇓P **P** **22 01 43.9 +1.2**
baz=27
CNNC Cliffs of the 26.62 47 *e*P **P** **22 01 41.9 -0.9**
CNNC *e* pP 22 02 01.0 +1.6
CNNC *e*PcP PcP 22 05 10.3 +4.9
H17A Grant Village 26.66 345 ⇓P **P** **22 01 43.5 +0.5**
baz=27,SNR=21
ACSO Alum Creek Sta 26.71 33⇓*e*P **P** **22 01 44.0 +0.4**
comp=Z,337nm,1.1s,mb5.8
ACSO *e* pP 22 02 00.1 -0.1
ACSO *e*PcP PcP 22 05 05.2 -0.2
YFT Old Faithful 26.77 345⇑*i*P **P** **22 01 45.1 +1.1**
YFT *e* pP 22 01 59.4 -1.3
YFT PcP PcP 22 05 05.8 +0.3
YFT *e*S **S** **22 06 35.9 +21**
YFT *e*ScP ScP 22 08 42.2 +2.6
J13A Cove Ranch, Pi 26.77 339 ⇑P **P** **22 01 44.0 -0.1**
baz=27,SNR=35
LKWY Lake 26.77 346⇑*e*P **P** **22 01 45.2 +1.1**
comp=Z,178nm,1.3s,mb5.4
LKWY *e* pP 22 02 01.5 +0.8
LKWY *e*S **S** **22 06 25.9 +11**
LKWY Lake 26.77 346⇑*e*P **P** **22 01 45.2 +1.1**
LKWY pmax pmax
comp=Z,178nm,1.3s,mb5.4
I15A Monteview 26.79 342 ⇓P **P** **22 01 44.9 +0.7**
baz=27,SNR=8.7
OHCM Honcut 26.79 324 *e*P **P** **22 01 44.5 +0.2**
M08A Happy Creek Ra 26.80 331 ⇓P **P** **22 01 44.2 -0.1**
baz=27,SNR=21
MCCM Marconi Confer 26.80 321⇑*e*P **P** **22 01 44.3 -0.2**
comp=Z,159nm,1.0s,mb5.5
MCCM *e* pP 22 01 59.2 -1.8
MCCM *e*PcP PcP 22 05 06.7 +1.0
NSHM Saint Helena R 26.89 321 P **P** **22 01 44.9 -0.2**
NSHM *e* pP 22 02 00.3 -1.4
NSHM *e*PcP PcP 22 05 07.6 +1.7
K11A Parker Ranch, 26.90 336 ⇑P **P** **22 01 45.2 +0.1**
baz=27,SNR=37
L09A Wilkinson Ranc 26.94 333 ⇑P **P** **22 01 45.4 -0.2**
baz=27,SNR=9.8
N06A Buffalo Meadow 26.95 328 ⇓P **P** **22 01 46.1 +0.4**
baz=27,SNR=135
J12A Stokes Ranch, 26.96 338 ⇓P **P** **22 01 45.6 -0.2**
baz=27,SNR=140
YNR Norris Junctio 26.98 346⇑*e*P **P** **22 01 46.6 +0.7**
YNR *e* pP 22 02 04.5 +2.0
YNR PcP PcP 22 05 18.9 +13
YNR *e*S **S** **22 06 08.9 -9.3**
HLID Hailey 27.00 339⇑*e*P **P** **22 01 46.0 -0.1**
comp=Z,42nm,1.0s,mb4.9
HLID *e* pP 22 02 02.0 -0.7
HLID *e*PcP PcP 22 05 07.7 +1.6
HLID *e*ScP ScP 22 08 42.6 +2.3
HLID Hailey 27.00 339 ⇓P **P** **22 01 46.0 -0.1**
baz=27,SNR=45
YMR Madison River 27.01 345⇑*e*P **P** **22 01 46.7 +0.6**
comp=Z,450nm,1.6s,mb5.8
YMR *e* pP 22 02 05.2 +2.4
YMR *e*PcP PcP 22 05 01.7 -4.4
YMR S **S** **22 06 26.1 +7.5**
I14A Mackay 27.01 341 ⇓P **P** **22 01 46.6 +0.4**
baz=27,SNR=40
RLMT Red Lodge 27.06 348⇑*e*P **P** **22 01 46.2 -0.4**
comp=Z,347nm,1.5s,mb5.7
RLMT *e* pP 22 02 02.6 -0.6
RLMT PcP PcP 22 05 06.2 0.0
RLMT S **S** **22 06 23.3 +3.9**
RLMT Red Lodge 27.06 348 ⇑P **P** **22 01 46.4 -0.2**
baz=27,SNR=42
H16A Russell Place, 27.11 345 ⇑P **P** **22 01 47.5 +0.4**
baz=27,SNR=80
M07A Soldier Meadow 27.12 330 ⇓P **P** **22 01 47.3 +0.1**
baz=27,SNR=37
I13A Wildhorse Cree 27.21 340 ⇑P **P** **22 01 48.1 +0.1**
baz=27,SNR=66
K10A MacKenzie Ranc 27.23 335 ⇓P **P** **22 01 48.1 -0.1**
baz=27,SNR=30
QLMT Earthquake Lak 27.27 345 *e*P **P** **22 01 49.4 +0.9**
QLMT *e* pP 22 02 06.8 +1.6
QLMT *e*PcP PcP 22 05 09.3 +2.7
QLMT *e* 22 08 44.5
O04C Chester 27.28 326 ⇓P **P** **22 01 49.4 +0.8**
baz=27,SNR=45
G18A Lazy EL Ranch, 27.31 348 ⇓P **P** **22 01 48.4 -0.5**
baz=27,SNR=38
MFID Camas Ranch 27.37 337 ⇑P **P** **22 01 49.2 -0.2**
baz=27,SNR=28
L08A Fields 27.37 332 ⇑P **P** **22 01 49.2 -0.3**
baz=27,SNR=24
H15A Lima 27.40 343 ⇓P **P** **22 01 50.4 +0.7**
baz=27,SNR=66
I12A Atlanta 27.45 338 ⇑P **P** **22 01 49.9 -0.2**
baz=27,SNR=72
HOPS Hopland 27.47 322⇑*i*P **P** **22 01 51.2 +0.9**
comp=Z,146nm,1.3s,mb5.3
HOPS *e* pP 22 02 07.3 +0.3
HOPS *e*PcP PcP 22 05 07.3 0.0
K09A Rome 27.52 334 ⇑P **P** **22 01 50.8 +0.1**
baz=28,SNR=129
G17A Pierce Place, 27.57 346 ⇓P **P** **22 01 52.5 +1.3**
baz=28,SNR=41
H14A Leadore 27.61 342 ⇑P **P** **22 01 52.0 +0.4**
baz=28,SNR=6.7
MCMT McKenzie Canyo 27.65 343 *e*P **P** **22 01 52.6 +0.6**
comp=Z,47nm,1.0s,mb5.0
MCMT *e* pP 22 02 09.1 +0.5
MCMT *e*ScP ScP 22 08 44.6 +2.4
L07A Adell 27.69 331 ⇓P **P** **22 01 52.6 +0.3**
baz=28,SNR=42
WVOR Wild Horse Val 27.70 332⇑*i*P **P** **22 01 52.0 -0.3**
comp=Z,94nm,1.2s,mb5.2
WVOR *e* pP 22 02 08.7 -0.4
WVOR *e*PcP PcP 22 05 18.5 +11
WVOR Wild Horse Val 27.70 332⇑*i*P **P** **22 01 52.0 -0.4**
WVOR pmax pmax
comp=Z,94nm,1.2s,mb5.2
J10A Berg Farm, Mel 27.74 336 ⇑P **P** **22 01 52.4 -0.3**
baz=28
G16A Moss Hill, Enn 27.74 344 ⇑P **P** **22 01 53.5 +0.8**
baz=28,SNR=37
GCMT Greycliff 27.79 348 *e*P **P** **22 01 52.2 -0.8**
comp=Z,82nm,1.2s,mb5.1
GCMT *e* pP 22 02 10.1 +0.3
LBCM Butte Creek Ri 27.79 327 P **P** **22 01 53.5 +0.2**
H13A Challis 27.84 340 ⇓P **P** **22 01 53.8 +0.2**
baz=28,SNR=40
I11A Placerville 27.85 337 ⇑P **P** **22 01 53.5 -0.2**
baz=28,SNR=15
G15A Dillon 27.86 343 ⇑P **P** **22 01 54.5 +0.7**
baz=28,SNR=149
K08A Mann Creek Ran 27.87 333 ⇑P **P** **22 01 54.3 +0.4**
baz=28,SNR=67
F18A Big Timber 27.90 348 ⇑P **P** **22 01 53.9 -0.2**
baz=28,SNR=34
AAM Ann Arbor 27.96 29 *e*P **P** **22 01 54.5 -0.3**
comp=Z,134nm,0.6s,mb5.7
AAM *e* pP 22 02 12.0 +0.6
AAM Ann Arbor 27.96 29 *e*P **P** **22 01 54.5 -0.2**
AAM pmax pmax
comp=Z,134nm,0.6s,mb5.7
H12A Diamond D Ranc 28.02 340 ⇓P **P** **22 01 55.1 -0.1**
baz=28,SNR=55
MCWV Mont Chateau 28.02 37 *e*P **P** **22 01 56.2 +0.9**
MCWV *e*pP pP 22 02 14.1 +2.1
MCWV *e*PP PP 22 03 00.6 +0.9
MOD Modoc 28.05 329⇓*i*P **P** **22 01 55.5 0.0**
MOD *e* pP 22 02 11.2 -1.0
MOD *e*PcP PcP 22 04 57.8 -11
MOD *e*ScP ScP 22 08 45.8 +2.3
J09A Fry Pan Ranch, 28.07 334 ⇓P **P** **22 01 55.9 +0.3**
baz=28,SNR=36
DLMT Dillon 28.07 343⇑*e*P **P** **22 01 56.0 +0.4**
comp=Z,335nm,1.1s,mb5.8
DLMT *e* pP 22 02 12.7 +0.3
BOZ Bozeman (W) 28.09 345⇑*i*P **P** **22 01 55.6 -0.2**
BOZ *e* pP 22 02 13.3 +0.8
BOZ S **S** **22 06 33.8 -1.8**
BOZ Bozeman (W) 28.09 345 ⇑P **P** **22 01 55.8 +0.1**
baz=28,SNR=88
BOZ Bozeman (W) 28.09 345 *e*P **P** **22 01 55.6 -0.2**
F17A Fitzpatrick Pl 28.10 346 ⇑P **P** **22 01 56.1 +0.2**
baz=28,SNR=42
LAO LASA Array 28.12 353⇑*e*P **P** **22 01 55.2 -0.9**
comp=Z,2μm,2.3s,mb6.2
LAO *e* pP 22 02 12.5 -0.3
LAO *e*PcP PcP 22 05 11.9 +3.2
K07A Rock Creek Ran 28.18 332 ⇑P **P** **22 01 56.9 +0.3**
baz=28,SNR=82
G14A Jackson 28.21 342 ⇓P **P** **22 01 57.3 +0.4**
baz=28,SNR=18
F16A Kennard Place, 28.21 345 ⇓P **P** **22 01 57.1 +0.2**
baz=28,SNR=118
KCPM Cahto Peak 28.22 322⇑*e*P **P** **22 01 58.4 +1.3**
comp=Z,88nm,1.1s,mb5.2
KCPM *e* pP 22 02 14.9 +1.1
WDC Whiskeytown Da 28.24 325⇑*e*P **P** **22 01 55.1 -2.2**
WDC *e* pP 22 02 12.0 -1.9
WDC *e*PP PP 22 03 02.2 0.0
WDC *e*PcP PcP 22 05 09.6 +0.5
KIPM Iron Peak 28.25 323 *e*P **P** **22 01 58.1 +0.8**
comp=Z,92nm,1.0s,mb5.3
KIPM *e* pP 22 02 13.9 -0.1
G13A Cobalt 28.30 341 ⇑P **P** **22 01 57.5 -0.2**
baz=28,SNR=108
I10A Payette 28.31 336 ⇑P **P** **22 01 57.4 -0.4**
baz=28
LCCM Lewis and Clar 28.33 345 P **P** **22 01 58.4 +0.4**
J08A Circle Bar Ran 28.37 333 ⇓P **P** **22 01 58.3 -0.1**
baz=28,SNR=63
LRM Limekiln Ridge 28.46 344 *e*P **P** **22 01 59.4 +0.3**
F15A Butte 28.49 344 ⇓P **P** **22 01 59.4 +0.1**
baz=28,SNR=206
H11A Donnelly 28.55 338 ⇓P **P** **22 01 59.7 -0.2**
baz=28,SNR=39
E18A Harlowton 28.58 348 ⇓P **P** **22 01 59.9 -0.2**
baz=29,SNR=24
I09A Lost Marbles R 28.58 335 ⇑P **P** **22 01 59.8 -0.4**
baz=29,SNR=13
CBN Corbin 28.62 42 *e*P **P** **22 02 00.3 -0.3**
CBN *e*pP pP 22 02 17.3 -0.1
CBN *e*PP PP 22 03 05.8 -0.5
CBN *e*PcP PcP 22 05 10.4 +0.3
SDDR Presa de Saban 28.63 85 *e*P **P** **22 02 02.8 +1.9**

comp=Z,134nm,1.2s,mb5.5
SDDR e 22 02 27.2
SDDR eS S 22 06 47.3 +2.6
E17A Martinsdale 28.68 347 ⇑P P **22 02 01.1 +0.1**
baz=29,SNR=42
F14A Wisdom 28.70 343 ⇓P P **22 02 01.2 -0.1**
baz=29,SNR=16
H10A Noah's Angus R 28.72 337 ⇓P P **22 02 00.6 -0.8**
baz=29,SNR=27
J07A Hines 28.75 332 ⇓P P **22 02 01.1 -0.6**
baz=29,SNR=12
I08A Drewsey 28.86 334 ⇑P P **22 02 02.2 -0.6**
baz=29,SNR=8.4
E16A East Helena 28.93 345 ⇓P P **22 02 03.1 -0.2**
baz=29,SNR=110
F13A Darby 28.96 341 ⇓P P **22 02 03.5 -0.1**
baz=29,SNR=234
K05A Summer Lake 28.97 330 ⇓P P **22 02 03.8 +0.2**
baz=29,SNR=26
J06A Christmas Vall 29.03 331 ⇓P P **22 02 03.6 -0.6**
baz=29,SNR=16
E15A Deer Lodge 29.07 344 ⇑P P **22 02 04.2 -0.3**
baz=29,SNR=75
KHMM Horse Mountain 29.10 324 eP P **22 02 05.5 +0.6**
H09A Durkee 29.13 336 ⇓P P **22 02 04.4 -0.7**
baz=29,SNR=40
HRY Holter Researc 29.13 345 eP P **22 02 05.0 -0.1**
HRY e pP 22 02 21.9 +0.1
HRY ePP PP 22 03 02.9 -9.1
HRY eScP ScP 22 08 47.8 +1.0
YBH Yreka Blue Hor 29.14 326 P P **22 02 03.6 -1.7**
comp=Z,21nm,0.9s,mb4.8,baz=127,slow=4.1,SNR=48
YBH ScP ScP 22 08 48.0 +1.0
comp=Z,3.1nm,1.0s,baz=173,slow=7.1,SNR=4.1
YBH LR LR 22 15 39.2
comp=Z,887nm,19.6s,baz=127,slow=40
YBH Yreka Blue Hor 29.14 326 eP P **22 02 03.7 -1.5**
YBH e pP 22 02 23.0 +1.0
YBH ePP PP 22 03 13.6 +1.4
YBH Yreka Blue Hor 29.14 326 P P **22 02 03.6 -1.6**
YBH pmax pmax
comp=Z,21nm,0.9s
YBH pmax pmax
comp=N,3.0nm,1.0s
YBH MLR MLR
comp=Z,887nm,19.7s
BMO Blue Mountains 29.15 337 eP P **22 02 04.2 -1.1**
BMO e pP 22 02 20.4 -1.5
BMO ePcP PcP 22 05 11.7 +0.3
BMO eScP ScP 22 08 48.6 +1.7
D18A Linhart Farms, 29.16 348 ⇑P P **22 02 05.3 +0.1**
baz=29,SNR=34
OTAV Otavalo 29.21 126 ⇓iP P **22 02 09.5 +3.4**
comp=Z,358nm,1.5s,mb5.8
OTAV e 22 02 32.9
OTAV ePcP PcP 22 05 13.9 +1.9
OTAV eS S **22 06 57.1 +3.3**
F12A Elk City 29.22 340 ⇓P P **22 02 05.6 -0.3**
baz=29,SNR=230
ALLY Alegheny Colle 29.22 34 eP P **22 02 06.0 +0.1**
comp=Z,244nm,1.0s,mb5.8
ALLY epP pP 22 02 23.6 +0.9
ALLY ePP PP 22 03 13.6 +0.6
G11A Walters Elk Ra 29.25 339 ⇓P P **22 02 05.7 -0.4**
baz=29,SNR=74
E14A Clinton 29.29 343 ⇓P P **22 02 06.6 +0.2**
baz=29,SNR=66
D17A Six Diamond Ra 29.29 347 ⇑P P **22 02 06.4 -0.1**
baz=29,SNR=103
D16A Dana Ranch, Ca 29.37 346 ⇓P P **22 02 06.8 -0.3**
baz=29,SNR=47
I07A Izee 29.40 333 ⇓P P **22 02 06.7 -0.8**
baz=29,SNR=27
H08A Prairie City 29.41 335 ⇑P P **22 02 06.8 -0.7**
baz=29,SNR=31
G10A Bishop Farm, J 29.46 337 ⇑P P **22 02 07.2 -0.8**
baz=29,SNR=21
E13A Victor 29.51 342 ⇑P P **22 02 08.1 -0.3**
baz=30,SNR=103
GLMI Grayling 29.59 25 eP P **22 02 07.8 -1.3**
comp=Z,219nm,1.0s,mb5.7
GLMI epP pP 22 02 25.4 -0.4
GLMI esP sP 22 02 32.7 -1.4
GLMI ePcP PcP 22 05 13.6 +1.1
I06A Prineville 29.60 332 ⇓P P **22 02 08.8 -0.4**
baz=30,SNR=6.2
D15A Lincoln 29.61 345 ⇑P P **22 02 08.7 -0.6**
baz=30,SNR=68
ERPA Erie 29.64 34 eP P **22 02 09.5 -0.1**
comp=Z,245nm,1.4s,mb5.6
ERPA e pP 22 02 26.1 -0.2
ERPA ePP PP 22 03 17.5 -0.1
ERPA PcP PcP 22 05 16.2 +3.6
KRMB Red Mountain 29.64 325 ⇑iP P **22 02 09.5 -0.1**
comp=Z,192nm,1.4s,mb5.5
KRMB e pP 22 02 26.1 -0.3
SDMD Soldier's Deli 29.67 41 eP P **22 02 11.8 +2.0**
comp=Z,67nm,0.8s,mb5.3
SDMD e pP 22 02 26.6 -0.1
CHMT Chamberlain Mo 29.68 344 eP P **22 02 09.5 -0.4**
CHMT e pP 22 02 25.9 -0.8
CHMT ePP PP 22 03 19.1 +1.0
CHMT ePcP PcP 22 05 16.8 +4.2
CHMT eScP ScP 22 08 51.0 +2.4
G09A Cove 29.69 337 ⇓P P **22 02 08.7 -1.3**
baz=30,SNR=18
DGMT Dagmar 29.72 356 ⇑iP P **22 02 10.0 -0.2**
comp=Z,303nm,0.9s,mb5.9
DGMT e pP 22 02 26.6 -0.4
DGMT ePP PP 22 03 13.3 -5.2
DGMT S S **22 06 55.1 -6.0**
DGMT Dagmar 29.72 356 ⇓P P **22 02 09.9 -0.3**
baz=30,SNR=44
C17A Wharram Farm, 29.77 347 ⇓P P **22 02 10.2 -0.4**
baz=30,SNR=87
MSO Missoula 29.79 343 ⇑eP P **22 02 10.6 -0.3**
MSO e pP 22 02 27.1 -0.6
MSO ePP PP 22 03 18.0 -1.3
MSO ePcP PcP 22 05 11.5 -1.4
MSO S S **22 07 05.4 +3.1**
SSPA Standing Stone 29.80 38 ⇓eP P **22 02 11.8 +0.7**
SSPA e pP 22 02 28.7 +0.9
SSPA eS S **22 07 13.7 +11**
AGMN Agassiz Refuge 29.83 8 ⇑iP P **22 02 09.7 -1.5**
AGMN e pP 22 02 27.1 -0.9
H07A Lands Inn, Kim 29.83 334 ⇓P P **22 02 10.3 -1.1**
baz=30,SNR=43
HUMO Hull Mountain 29.90 327 eP P **22 02 10.8 -1.1**
HUMO ePP PP 22 03 15.1 -5.4
D14A Greenough 29.90 344 ⇑P P **22 02 11.4 -0.4**
baz=30,SNR=102
E12A Beaver Dam Sad 29.91 340 ⇑P P **22 02 11.1 -0.8**
baz=30,SNR=131
L02A Cave Junction 29.91 326 ⇓P P **22 02 11.6 -0.4**
baz=30
EGMT Eagleton 29.95 349 ⇑eP P **22 02 11.7 -0.5**
EGMT e pP 22 02 28.9 -0.1
EGMT ScP ScP 22 08 51.5 +2.1
EGMT Eagleton 29.95 349 ⇓P P **22 02 11.9 -0.3**
baz=30,SNR=20
ROSC El Rosal 29.95 114 P P **22 02 17.5 +4.8**
comp=Z,6.4nm,0.3s,mb4.7,baz=109,slow=20,SNR=28
ROSC LR LR 22 16 03.6
comp=Z,790nm,18.1s,baz=98,slow=40
ROSC El Rosal 29.95 114 ⇓iP P **22 02 17.8 +5.1**
ROSC e pP 22 02 36.6 +7.2
ROSC ePcP PcP 22 05 14.3 +0.3
E11A Bogner Ranch, 30.06 340 ⇓P P **22 02 12.0 -1.3**
baz=30,SNR=63
F10A Beach Ranch, E 30.08 338 ⇑P P **22 02 12.8 -0.7**
baz=30,SNR=68
F09A S2 Ranch, Elgi 30.10 337 ⇓P P **22 02 12.6 -1.1**
baz=30,SNR=18
G08A Pilot Rock 30.16 335 ⇓P P **22 02 13.2 -0.9**
baz=30,SNR=56
D13A Huson 30.18 342 ⇓P P **22 02 13.9 -0.4**
baz=30,SNR=204
I05A Bend 30.24 331 ⇑P P **22 02 14.7 -0.2**
baz=30
EYMN Ely 30.25 13 ⇑eP P **22 02 12.9 -2.0**
comp=Z,144nm,0.9s,mb5.6
EYMN e pP 22 02 29.6 -2.0
EYMN ePP PP 22 03 25.3 +1.0
EYMN ePcP PcP 22 05 14.8 +0.8
EYMN S S **22 07 09.3 -0.2**

H06A Lindquist Farm 30.28 333 ⇑P P **22 02 14.4 -0.8**
baz=30,SNR=20
KBO Bosley Butte 30.29 325 ⇑eP P **22 02 15.9 +0.5**
KBO epP pP 22 02 32.3 +0.2
KBO ePP PP 22 03 24.9 +0.1
K02A Glendale 30.29 327 ⇓P P **22 02 14.4 -0.9**
baz=30,SNR=10
B18A Beardsley Farm 30.31 349 ⇓P P **22 02 15.1 -0.3**
baz=30,SNR=38
C15A Salmond Ranch, 30.32 345 ⇓P P **22 02 15.2 -0.3**
baz=30,SNR=28
MVL Millersville 30.32 40 eP P **22 02 17.1 +1.4**
comp=Z,75nm,1.3s,mb5.2
MVL epP pP 22 02 31.5 -1.0
MVL eS S **22 07 12.3 +1.4**
LNOR Lincton Mounta 30.38 337 eP P **22 02 14.8 -1.3**
comp=Z,8.4nm,1.1s,mb4.3
LNOR epP pP 22 02 31.0 -1.9
LNOR ePcP PcP 22 05 11.5 -3.0
LNOR Lincton Mounta 30.38 337 eP P **22 02 14.8 -1.3**
LNOR e 22 05 11.5
LNOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
B17A L&G Farms, Che 30.40 348 ⇓P P **22 02 16.0 -0.3**
baz=30,SNR=16
WIFE Three Sisters- 30.42 330 P P **22 02 16.5 0.0**
G07A Ruggs Ranch, H 30.43 334 ⇑P P **22 02 16.1 -0.4**
baz=30,SNR=17
E10A Myers Farm, Un 30.48 339 ⇓P P **22 02 15.6 -1.4**
baz=30,SNR=11
F08A Pendleton 30.51 336 ⇑P P **22 02 16.0 -1.2**
baz=30
IRO Indian Ridge 30.58 330 P P **22 02 17.6 -0.3**
H05A Madras 30.60 332 ⇑P P **22 02 17.6 -0.4**
baz=31
B16A M & M Farms, S 30.71 347 ⇑P P **22 02 18.2 -0.8**
baz=31,SNR=44
D11A Klaveano Farm, 30.71 340 ⇑P P **22 02 17.7 -1.3**
baz=31,SNR=12
C13A Hot Springs 30.75 343 ⇑P P **22 02 18.2 -1.1**
baz=31,SNR=25
J02A Umpqua 30.76 328 ⇑P P **22 02 19.1 -0.4**
baz=31
KEBM Edson Butte 30.80 326 ⇑iP P **22 02 20.3 +0.4**
KEBM e pP 22 02 36.0 -0.7
KEBM ePP PP 22 03 29.5 -1.0
KEBM ePcP PcP 22 05 17.9 +2.2
G06A Carlson Farm, 30.80 333 ⇑P P **22 02 19.6 -0.3**
baz=31,SNR=8.3
B15A Bradely Ranch, 30.81 346 ⇓P P **22 02 19.2 -0.7**
baz=31,SNR=70
K01A Sixes 30.83 326 ⇓P P **22 02 20.3 +0.2**
baz=31,SNR=5.8
E09A Wood Farm, Sta 30.87 337 ⇑P P **22 02 18.6 -1.8**
baz=31,SNR=24
BSMT Bassoo Peak 30.96 343 eP P **22 02 20.4 -0.9**
A17A Triple J Farms 31.01 348 ⇑P P **22 02 21.3 -0.3**
baz=31,SNR=53
B14A Marquette Ranc 31.02 345 ⇑P P **22 02 21.2 -0.6**
baz=31,SNR=29
D10A Wagner Farm, O 31.03 339 ⇓P P **22 02 20.6 -1.2**
baz=31,SNR=42
C12B Naegeli Ranch, 31.03 342 ⇑P P **22 02 20.5 -1.3**
baz=31,SNR=19
F07A Phinny Hill Vi 31.04 335 ⇑P P **22 02 21.3 -0.7**
baz=31,SNR=7.2
I03A Eugene 31.05 329 ⇓P P **22 02 21.9 -0.2**
baz=31,SNR=33
H04A Detroit Lake 31.06 331 ⇓P P **22 02 21.5 -0.7**
baz=31,SNR=31
G05A Wamic 31.11 332 ⇑P P **22 02 22.8 +0.3**
baz=31,SNR=10
LAPE La Pedrera 31.19 107 eP Px 22 00 14.1
A16A West Butte Ran 31.19 347 ⇓P P **22 02 22.8 -0.4**
baz=31,SNR=44
RNO Roman Nose 31.24 328 P P **22 02 24.0 +0.3**
LUPA Lehigh Univers 31.28 40 eP P **22 02 22.9 -1.3**
comp=Z,9.7nm,0.7s,mb4.6
LUPA epP pP 22 02 40.3 -0.6
LUPA ePcP PcP 22 05 17.4 +0.4
LUPA eS S **22 07 27.6 +1.8**
F06A Goldendale 31.29 334 ⇓P P **22 02 23.7 -0.4**
baz=31,SNR=22
HAWA Hanford 31.29 336 eP P **22 02 23.2 -0.9**
HAWA e 22 02 46.7
HAWA PP PP 22 03 33.5 -2.4
HOOD Mount Hood Mea 31.32 332 ⇑eP P **22 02 24.0 -0.4**
comp=Z,166nm,1.0s,mb5.7
HOOD epP pP 22 02 41.8 +0.7
RSW Rattlesnake Hi 31.32 336 eP P **22 02 23.5 -0.9**
comp=Z,33nm,1.3s,mb4.9
B13A Whitefish 31.35 343 ⇑P P **22 02 24.3 -0.3**
baz=31,SNR=73
I02A Mapleton 31.35 328 ⇑P P **22 02 24.7 0.0**
baz=31,SNR=9.7
C11A Tepee Creek (N 31.39 341 ⇓P P **22 02 23.9 -1.1**
baz=31,SNR=22
D09A Jones Farm, Ri 31.40 338 ⇑P P **22 02 23.7 -1.3**
baz=31,SNR=18
A15A Johnson Ranch, 31.47 346 ⇓P P **22 02 24.9 -0.8**
baz=32,SNR=60
COR Corvallis 31.52 330 eP P **22 02 25.6 -0.6**
comp=Z,124nm,1.2s,mb5.5
COR epP pP 22 02 39.3 -3.6
COR ePcP PcP 22 05 18.1 +0.5
COR Corvallis 31.52 330 eP P **22 02 25.6 -0.5**
COR e 22 05 18.1
COR pmax pmax
comp=Z,123nm,1.2s,mb5.5
SDV Santo Domingo 31.54 104 P P **22 02 29.1 +2.4**
comp=Z,15nm,0.5s,mb5.0,baz=301,slow=5.5,SNR=21
SDV LR LR 22 16 26.8
comp=Z,2μm,20.8s,baz=310,slow=38
SDV Santo Domingo 31.54 104 ⇓iP P **22 02 28.5 +1.8**
SDV epP pP 22 02 45.8 +2.3
SDV esP sP 22 02 53.0 +1.2
SDV ePP PP 22 03 40.6 +1.5
SDV ePcP PcP 22 05 19.1 +0.9
SDV eS S **22 07 29.5 -0.9**
E07A Sunnyside 31.56 336 ⇑P P **22 02 25.8 -0.7**
baz=32
H03A Soap Creek Ran 31.58 330 ⇓P P **22 02 26.2 -0.5**
baz=32
G04A Mulino 31.60 331 ⇑P P **22 02 26.3 -0.6**
baz=32,SNR=9.1
D08A Wollman Farm, 31.62 337 ⇓P P **22 02 25.8 -1.2**
baz=32,SNR=8.4
A14A Double T Ranch 31.63 345 ⇓P P **22 02 27.0 -0.1**
baz=32,SNR=46
F05A White Salmon 31.67 333 ⇑P P **22 02 27.7 +0.2**
baz=32,SNR=8.7
C10A Spilker Farm, 31.71 340 ⇓P P **22 02 26.9 -0.8**
baz=32
ULM Lac du Bonnet 31.75 7 P P **22 02 26.3 -1.8**
comp=Z,239nm,0.9s,mb5.9,baz=193,slow=9.4,SNR=97
ULM pP pP 22 02 43.2 -1.7
comp=Z,300nm,1.0s,baz=199,slow=9.5,SNR=18
ULM ScP ScP 22 08 57.2 +1.9
comp=Z,36nm,1.2s,baz=213,slow=4.2,SNR=4.8
ULM LR LR 22 16 10.5
comp=Z,6μm,18.7s,baz=196,slow=38
ULM Lac du Bonnet 31.75 7 P P **22 02 26.3 -1.8**
ULM pP pP 22 02 43.2 -1.7
ULM ScP ScP 22 08 57.2 +1.9
ULM LR LR 22 16 10.5
B12A Libby 31.75 342 ⇑P P **22 02 27.6 -0.6**
baz=32,SNR=10
OD2 Odessa Site #2 31.82 338 eP P **22 02 27.7 -1.1**
comp=Z,69nm,1.2s,mb5.3
OD2 epP pP 22 02 44.7 -0.9
OD2 ePP PP 22 03 44.2 +2.4
OD2 ePcP PcP 22 05 19.6 +1.3
OD2 eScP ScP 22 08 57.4 +1.8
BRNJ Basking Ridge 31.82 41 eP P **22 02 28.0 -0.9**
comp=Z,58nm,0.9s,mb5.3
BRNJ epP pP 22 02 47.4 +1.6
BRNJ ePP PP 22 03 42.0 0.0
WALA Waterton Lakes 31.83 345 ⇑eP P **22 02 28.5 -0.3**
comp=Z,507nm,1.8s,mb6.0
WALA epP pP 22 02 45.0 -0.7
WALA ePP PP 22 03 41.1 -0.8
WALA ePcP PcP 22 05 15.6 -2.6
BINY Binghamton 31.89 37 eP P **22 02 28.0 -1.5**
BINY epP pP 22 02 46.6 +0.2
BINY ePcP PcP 22 05 19.4 +0.8

BINY eS S **22 07 33.8 -1.6**
H02A Toledo 31.92 329 ⇑P P **22 02 30.2 +0.5**
baz=32,SNR=5.2
B11A Sandpoint 31.95 341 ⇓P P **22 02 29.2 -0.7**
baz=32,SNR=12
SADO Sadowa 31.97 31 P P **22 02 29.1 -1.1**
comp=Z,26nm,0.5s,mb5.2,baz=241,slow=9.3,SNR=23
SADO pP pP 22 02 46.8 -0.2
comp=Z,40nm,0.6s,baz=245,slow=9.4,SNR=11
E06A Yakima 32.00 334 ⇑P P **22 02 30.4 0.0**
baz=32,SNR=15
C09A Chrisman Ranch 32.02 339 ⇓P P **22 02 29.8 -0.7**
baz=32,SNR=15
NEW Newport 32.04 340 eP P **22 02 29.8 -0.9**
NEW epP pP 22 02 47.7 +0.3
NEW esP sP 22 02 54.9 -0.8
NEW ePP PP 22 03 45.0 +0.8
NEW ePcP PcP 22 05 19.0 +0.2
NEW eScP ScP 22 08 57.9 +1.5
G03A Yamhill 32.05 331 ⇓P P **22 02 30.7 -0.1**
baz=32,SNR=19
B10A Chitwood Farm, 32.10 340 ⇓P P **22 02 30.4 -0.8**
baz=32
D07A Quincy 32.13 336 ⇓P P **22 02 30.9 -0.6**
baz=32,SNR=9.8
F04A Amboy 32.13 332 ⇓P P **22 02 30.9 -0.6**
baz=32,SNR=11
A12A Yaak River Ran 32.19 342 ⇓P P **22 02 31.5 -0.5**
baz=32,SNR=31
HEBO Mount Hebo 32.20 330 ⇑eP P **22 02 32.6 +0.5**
comp=Z,244nm,1.0s,mb5.9
HEBO epP pP 22 02 47.8 -1.1
HEBO esP sP 22 02 54.9 -2.2
C08A Higginbotham F 32.28 338 ⇓P P **22 02 32.6 -0.2**
baz=32,SNR=18
E05A Randle 32.34 334 ⇓P P **22 02 33.3 0.0**
baz=32,SNR=26
TBM Table Mountain 32.35 335 P P **22 02 33.6 +0.2**
A11A Hall Mountain, 32.42 342 ⇓P P **22 02 33.6 -0.3**
baz=32,SNR=15
PAL Palisades 32.42 41 eP P **22 02 32.9 -1.3**
comp=Z,120nm,1.3s,mb5.5
PAL epP pP 22 02 49.5 -1.5
PAL esP sP 22 02 56.3 -2.9
PAL Palisades 32.42 41 eP P **22 02 32.9 -1.2**
PAL pmax pmax
comp=Z,120nm,1.3s,mb5.5
D06A Cle Elum 32.47 335 ⇓P P **22 02 34.3 -0.1**
baz=32,SNR=11
LON Longmire 32.51 334 P P **22 02 34.6 -0.2**
C07A Waterville 32.57 337 ⇓P P **22 02 35.3 -0.1**
baz=33,SNR=45
ETW Entiat 32.60 336 eP P **22 02 35.7 +0.1**
comp=Z,196nm,1.2s,mb5.8
ETW e pP 22 02 51.9 -0.6
ETW ePcP PcP 22 05 21.6 +1.1
F03A Seaside 32.64 331 ⇓P P **22 02 36.1 +0.1**
baz=33
E04A Onalaska 32.77 333 ⇓P P **22 02 36.8 -0.4**
baz=33,SNR=8.8
A10A Northport 32.80 340 ⇑P P **22 02 37.1 -0.2**
baz=33,SNR=24
B08A Colville Reser 32.87 338 ⇓P P **22 02 37.4 -0.5**
baz=33,SNR=42
BMW Boistfort Moun 32.91 332 eP P **22 02 38.5 +0.2**
BMW epP pP 22 02 53.4 -1.7
BMW ePP PP 22 03 54.5 +0.6
BMW ePcP PcP 22 05 22.8 +1.5
D05A Enumclaw 32.93 334 ⇑P P **22 02 38.1 -0.4**
baz=33
AOPR Arecibo Observ 32.97 85 eP P **22 02 40.3 +1.1**
C06A Tall Timber Ra 33.08 336 ⇑P P **22 02 39.8 0.0**
baz=33,SNR=19
E03A Lebam 33.11 332 ⇓P P **22 02 40.3 +0.3**
baz=33,SNR=9.3
A09A Danville 33.13 339 ⇓P P **22 02 39.9 -0.4**
baz=33,SNR=40
C05A Tolt Reservoir 33.21 335 ⇑P P **22 02 40.4 -0.5**
baz=33,SNR=11
B07A Winthrop 33.23 337 ⇑P P **22 02 40.5 -0.6**
baz=33,SNR=13
A08A Turner Farm, O 33.35 339 ⇑P P **22 02 41.6 -0.5**
baz=33,SNR=15
SJG San Juan 33.56 85 ⇓eP P **22 02 45.0 +0.6**
SJG epP pP 22 03 01.9 +0.6
SJG esP sP 22 03 10.6 +1.1
D03A Wishkah Elem. 33.64 332 ⇑P P **22 02 44.6 0.0**
baz=34
JCW Jim Creek 33.71 335 eP P **22 02 44.5 -0.8**
JCW epP pP 22 03 01.2 -0.9
JCW ePP PP 22 04 07.4 +4.7
JCW ePcP PcP 22 05 24.6 +1.1
RPW Rockport 33.75 336 eP P **22 02 45.0 -0.6**
comp=Z,29nm,0.9s,mb5.1
RPW epP pP 22 03 01.7 -0.8
C04A Brinnon 33.76 334 ⇓P P **22 02 44.8 -0.9**
baz=34,SNR=5.6
CPD Cerro la Pandu 33.79 85 eP P **22 02 47.9 +1.5**
B06A Marblemount 33.80 336 ⇑P P **22 02 45.3 -0.7**
baz=34,SNR=10.0
A07A Ashnola River, 33.82 338 ⇓P P **22 02 46.0 -0.2**
baz=34,SNR=14
CBYP Canovanas 33.82 85 eP P **22 02 47.6 +1.0**
B05A Bryant 33.83 335 ⇓P P **22 02 45.2 -1.1**
baz=34,SNR=14
HUMP Col San Antoni 33.84 85 eP P **22 02 46.9 +0.1**
NLWA Neilton Lookou 33.89 332 ⇑eP P **22 02 47.0 +0.2**
NLWA epP pP 22 03 03.4 -0.3
NLWA esP sP 22 03 12.4 +0.4
NLWA Neilton Lookou 33.89 332 ⇑P P **22 02 47.2 +0.4**
baz=34,SNR=12
ACCN Adirondack Com 33.97 38 eP P **22 02 48.8 +1.2**
ACCN epP pP 22 03 05.4 +0.9
ACCN esP sP 22 03 14.6 +1.9
ACCN ePP PP 22 04 06.6 +1.0
NCB Newcomb 34.01 36 eP P **22 02 45.9 -2.1**
NCB e pP 22 03 05.1 +0.3
NCB ePP PP 22 04 07.0 +0.8
NCB ePcP PcP 22 05 25.9 +1.4
QUA2 Belchertown 34.10 40 eP P **22 02 48.6 -0.1**
comp=Z,113nm,1.4s,mb5.5
QUA2 epP pP 22 03 05.8 +0.2
QUA2 ePcP PcP 22 05 25.9 +1.1
MTP Monte Pirata 34.13 85 ⇓eP P **22 02 50.4 +1.1**
MTP pP pP 22 03 07.8 +1.6
LONY Lake Ozonia 34.23 35 eP P **22 02 50.0 +0.2**
LONY epP pP 22 03 06.0 -0.7
LONY ePP PP 22 04 09.0 +0.5
B04A Port Angeles 34.24 334 ⇑P P **22 02 50.0 +0.1**
baz=34,SNR=7.6
A06A Chilliwack 34.27 337 ⇓P P **22 02 49.3 -0.8**
baz=34,SNR=7.0
ATAH Atahualpa 34.30 136 P P **22 02 55.0 +4.3**
comp=Z,105nm,1.1s,mb5.6,baz=323,slow=6.5,SNR=68
ATAH pP pP 22 03 12.6 +4.8
comp=Z,50nm,0.9s,baz=321,slow=7.4,SNR=6.8
ATAH sP sP 22 03 20.6 +4.7
comp=Z,148nm,1.0s,baz=315,slow=7.6,SNR=9.0
ATAH LR LR 22 14 27.6
comp=Z,2μm,18.3s,baz=314,slow=32
BRYW Bryant College 34.41 41 eP P **22 02 51.0 -0.3**
BRYW ePP PP 22 04 13.5 +3.0
A05A Maple Falls 34.42 336 ⇓P P **22 02 50.8 -0.6**
baz=34,SNR=11
A04A Legoe Bay, Lum 34.44 335 ⇑P P **22 02 51.1 -0.5**
baz=34,SNR=6.4
MDV Middlebury 34.62 37 eP P **22 02 53.8 +0.6**
MDV epP pP 22 03 10.2 0.0
MDV ePP PP 22 04 04.0 -8.8
PGC Sidney 34.69 334 eP P **22 02 53.9 +0.2**
PGC epP pP 22 03 09.2 -1.4
PGC ePcP PcP 22 05 26.4 +0.1
HNH Hanover 34.97 38 eP P **22 02 58.2 +2.0**
HNH epP pP 22 03 14.1 +1.0
HNH esP sP 22 03 20.0 -1.3
HNH ePP PP 22 04 18.3 +1.6
FFD Franklin Falls 35.20 39 eP P **22 02 59.0 +0.8**
FFD epP pP 22 03 15.4 +0.2
LBNH Lisbon 35.49 38 eP P **22 03 03.1 +2.4**
comp=Z,144nm,1.9s,mb5.5
LBNH epP pP 22 03 19.8 +2.2
LBNH Lisbon 35.49 38 eP P **22 03 03.1 +2.4**
LBNH pmax pmax
comp=Z,144nm,1.9s,mb5.5
EDM Edmonton 35.60 348 ⇑eP P **22 03 00.5 -1.0**

EDM ep P pP 22 03 17.7 -0.8
EDM es P sP 22 03 25.4 -1.2
EDM ePP PP 22 04 22.8 -0.7
FFC Flin Flon 35.90 360⇑ eP **P 22 03 02.9 -1.2**
comp=Z,357nm,1.3s,mb6.1
FFC ep P pP 22 03 19.8 -1.3
FFC es P sP 22 03 28.2 -1.1
FFC ePP PP 22 04 26.1 -0.7
FFC Flin Flon 35.90 360⇑ eP **P 22 03 02.9 -1.2**
FFC e*SP sP 22 03 28.2 -1.1
FFC e 22 04 26.1
FFC pmax pmax
comp=Z,357nm,1.3s,mb6.1
PCRV Puerto La Cruz 36.69 98 P **P 22 03 12.6 +1.3**
comp=Z,20nm,0.8s,mb5.1,baz=62,slow=3.7,SNR=3.3
PCRV pP pP 22 03 30.3 +2.0
comp=Z,34nm,0.9s,baz=350,slow=5.0,SNR=3.5
PKME Peaks-Kenny Pk 37.61 38 eP **P 22 03 20.8 +2.1**
PKME ep P pP 22 03 37.4 +1.6
PKME ePP PP 22 04 45.3 -0.5
PKME ePcP PcP 22 05 35.2 +0.1
ANWB Willy Bob 37.74 85 eP **P 22 03 19.8 -0.4**
ANWB ep P pP 22 03 37.5 +0.2
ANWB ePP PP 22 04 47.4 -0.2
ANWB ePcP PcP 22 05 37.2 +1.1
GRGR Grenville 38.96 94 eP **P 22 03 32.5 +2.1**
comp=Z,1μm,1.5s,mb6.5
GRGR ep P pP 22 03 49.8 +2.2
GRGR PP PP 22 04 59.4 -1.6
NNA Nana 39.08 140⇓ eP **P 22 03 32.6 +1.2**
comp=Z,458nm,1.8s,mb6.0
NNA ep P pP 22 03 49.2 +0.7
NNA es P sP 22 03 56.5 -0.1
NNA ePP PP 22 05 07.3 +5.0
NNA ePcP PcP 22 05 38.9 -1.2
FCC Fort Churchill 40.32 6 eP **P 22 03 39.6 -1.6**
comp=Z,54nm,0.9s,mb5.4
FCC ep P pP 22 03 57.9 -0.5
FCC es P sP 22 04 05.4 -1.1
FCC ePP PP 22 05 14.4 -0.8
FCC ePcP PcP 22 05 42.5 -0.9
FCC Fort Churchill 40.32 6 eP **P 22 03 39.6 -1.6**
FCC e*SP sP 22 04 05.4 -1.1
FCC e 22 05 14.4
FCC e 22 05 42.5
FCC pmax pmax
comp=Z,54nm,0.9s,mb5.4
CRAG Craig 43.74 334 eP **P 22 04 08.4 -0.6**
CRAG ep P pP 22 04 26.0 -0.5
CRAG es P sP 22 04 32.8 -1.8
YKA Yellowknife Ar 44.63 351 P **P 22 04 14.1 -1.9**
comp=Z,32nm,0.8s,mb5.1,baz=162,slow=7.7,SNR=121
YKA pP pP 22 04 31.2 -2.3
comp=Z,42nm,0.9s,baz=162,slow=7.6,SNR=17
YKA PcP PcP 22 05 57.2 -0.4
comp=Z,12nm,0.9s,baz=161,slow=3.5,SNR=7.6
YKA ScP ScP 22 09 46.2 +2.4
comp=Z,8.0nm,1.1s,baz=159,slow=3.9,SNR=7.0
YKA LR LR 22 24 32.6
comp=Z,1μm,19.6s,baz=145,slow=38
YKA Yellowknife Ar 44.63 351 P **P 22 04 14.2 -1.9**
YKA pP pP 22 04 31.2 -2.3
YKA PcP PcP 22 05 57.2 -0.5
YKA ScP ScP 22 09 46.2 +2.4
YKA LR LR 22 24 32.6
YKA Yellowknife Ar 44.63 351 P **P 22 04 14.1 -1.9**
YKA 22 05 57.2
YKA pmax pmax
comp=Z,32nm,0.9s
YKA pmax pmax
comp=Z,42nm,0.9s
YKA pmax pmax
comp=Z,13nm,0.9s
YKA pmax pmax
comp=N,8.0nm,1.2s
YKA MLR MLR
comp=Z,1μm,19.6s
SCHQ Schefferville 44.66 28 P **P 22 04 15.2 -1.2**
comp=Z,22nm,0.8s,mb5.0,baz=236,slow=7.0,SNR=11
SCHQ pP pP 22 04 33.1 -0.8
comp=Z,57nm,0.9s,baz=229,slow=5.6,SNR=11
SCHQ PcP PcP 22 05 57.1 -0.8
comp=Z,58nm,1.0s,baz=230,slow=3.1,SNR=5.7
SCHQ LR LR 22 24 06.7
comp=Z,2μm,19.0s,baz=249,slow=38
DLBC Dease Lake 44.77 339 P **P 22 04 18.2 +1.0**
comp=Z,94nm,0.8s,mb5.5,baz=154,slow=6.2,SNR=101
DLBC pP pP 22 04 34.9 +0.2
comp=Z,49nm,0.8s,baz=183,slow=7.7,SNR=7.2
DLBC Dease Lake 44.77 339 P **P 22 04 18.2 +1.0**
DLBC pP pP 22 04 34.9 +0.2
ARE Arequipa 45.83 138 eP **P 22 04 29.0 +2.9**
RPN Rapa Nui 46.23 190 P **P 22 04 29.6 +0.5**
comp=Z,168nm,0.9s,mb5.8,baz=340,slow=5.0,SNR=6.6
RPN pP pP 22 04 46.2 -0.4
comp=Z,146nm,1.0s,baz=355,slow=8.8,SNR=4.3
RPN Rapa Nui 46.23 190 P **P 22 04 29.6 +0.5**
RPN pP pP 22 04 46.2 -0.4
TAOE Nuku Hiva Isla 46.92 238 eLR LR 22 17 50.1
comp=Z,13μm,26.9s,baz=48
POHA Pohakuloa 50.78 281 eP **P 22 05 05.1 +0.7**
comp=Z,475nm,1.4s,mb6.3
POHA ep P pP 22 05 21.3 -0.9
POHA ep P pP 22 05 29.5 +7.3
KHU Kahuku 50.94 280 eP **P 22 05 05.6 +0.1**
KHU ep P pP 22 05 22.2 -1.2
KHU es P sP 22 05 29.6 -1.7
KHU ePcP PcP 22 06 20.6 -0.5
KHU ePP PP 22 07 02.5 -0.1
LVC Limon Verde 52.04 141 P **P 22 05 15.7 +2.1**
comp=Z,66nm,1.0s,mb5.6,baz=321,slow=5.5,SNR=74
LVC sP sP 22 05 40.6 +1.2
comp=Z,82nm,1.1s,baz=327,slow=4.6,SNR=7.5
SIV San Ignacio 52.72 128 P **P 22 05 18.9 +0.1**
comp=Z,129nm,1.1s,mb5.9,baz=312,slow=8.1,SNR=203
SIV sP sP 22 05 43.7 -0.9
comp=Z,178nm,1.2s,baz=288,slow=5.8,SNR=6.4
KIP Kipapa 52.85 283 eP **P 22 05 20.9 +1.1**
comp=Z,205nm,1.4s,mb6.0
KIP ep P pP 22 05 36.6 -1.1
KIP ePcP PcP 22 06 28.1 -0.1
KIP ePP PP 22 07 16.6 -3.2
KIP Kipapa 52.85 283 eP **P 22 05 20.9 +1.2**
KIP e 22 06 28.1
KIP e 22 07 16.7
KIP pmax pmax
comp=Z,205nm,1.4s,mb6.0
HON Honolulu 52.85 283 eP **P 22 05 21.0 +1.2**
HON ep P pP 22 05 36.2 -1.5
RKT Rikitea 52.89 219 eP **P 22 05 21.0 +1.1**
comp=Z,485nm,1.4s,mb6.3
RKT Rikitea 52.89 219 eLR LR 22 20 45.2
comp=Z,4μm,28.5s,baz=37
RKT Rikitea 52.89 219 eP **P 22 05 21.0 +1.1**
RKT pmax pmax
comp=Z,485nm,1.4s,mb6.3
EGAK Eagle 53.01 340 eP **P 22 05 19.2 -1.1**
comp=Z,98nm,0.9s,mb5.8
EGAK ep P pP 22 05 36.9 -1.3
EGAK es P sP 22 05 44.1 -2.0
EGAK ePcP PcP 22 06 29.1 +1.1
EGAK ePP PP 22 07 20.4 0.0
INK Inuvik 53.45 346 eP **P 22 05 22.5 -0.9**
comp=Z,7μm,1.0s
INK ep P pP 22 05 40.1 -1.2
INK es P sP 22 05 49.3 +0.1
INK ePcP PcP 22 06 29.1 -0.4
INK PP PP 22 07 23.6 -0.6
OHAK Old Harbor 54.02 328 eP **P 22 05 27.4 -0.3**
OHAK ep P pP 22 05 45.5 -0.2
OHAK es P sP 22 05 51.3 -2.3
OHAK ePcP PcP 22 06 32.2 +0.3
OHAK ePP PP 22 07 27.1 -2.6
SLKM Skilak Lake 54.03 333 eP **P 22 05 27.5 -0.2**
SLKM ep P pP 22 05 44.6 -1.0
SLKM es P sP 22 05 52.3 -1.3
SLKM ePP PP 22 07 34.5 +4.9
PMR Palmer 54.10 334 eP **P 22 05 27.7 -0.5**
comp=Z,84nm,0.9s,mb5.8
PMR ep P pP 22 05 45.3 -0.9
PMR es P sP 22 05 51.6 -2.5
PMR PcP PcP 22 06 31.6 -0.6
PMR Palmer 54.10 334 eP **P 22 05 27.7 -0.5**
PMR e*SP sP 22 05 51.6 -2.5
PMR pmax pmax 22 06 31.6
comp=Z,83nm,0.9s,mb5.8
RC01 Rabbit Creek A 54.10 333 eP **P 22 05 27.9 -0.4**
comp=Z,36nm,0.7s,mb5.5
RC01 ep P pP 22 05 45.2 -0.9
RC01 es P sP 22 05 52.1 -2.1
RC01 PcP PcP 22 06 33.3 +1.2
MCK McKinley 55.13 336 eP **P 22 05 35.5 -0.2**
comp=Z,83nm,0.8s,mb5.8
MCK ep P pP 22 05 54.2 +0.5
MCK es P sP 22 05 59.4 -2.1
MCK ePcP PcP 22 06 36.7 +0.6
MCK ePP PP 22 07 40.2 +0.8
MCK McKinley 55.13 336 eP **P 22 05 35.5 -0.1**
MCK e*SP sP 22 05 59.4 -2.2
MCK e 22 06 36.7
MCK e 22 07 40.2
MCK pmax pmax
comp=Z,83nm,0.8s,mb5.8
COLA College 55.35 338 eP **P 22 05 36.6 -0.6**
comp=Z,75nm,1.0s,mb5.7
COLA ep P pP 22 05 53.1 -2.1
COLA es P sP 22 06 01.3 -1.9
COLA ePcP PcP 22 06 37.1 +0.2
COLA eScP ScP 22 10 29.8 +0.1
COLA College 55.35 338⇑ iP **P 22 05 36.6 -0.6**
TRF Thorofare Moun 55.50 336 eP **P 22 05 38.0 -0.3**
comp=Z,271nm,0.8s,mb6.3
TRF ep P pP 22 05 55.7 -0.6
TRF es P sP 22 06 02.9 -1.3
KTH Kantishna Hill 55.80 336 eP **P 22 05 39.8 -0.7**
comp=Z,236nm,1.4s,mb6.0
KTH ep P pP 22 05 56.9 -1.6
KTH es P sP 22 06 03.8 -2.6
KTH PcP PcP 22 06 39.5 +0.8
PPLA Purkeypile 55.98 335 eP **P 22 05 41.3 -0.4**
comp=Z,303nm,1.4s,mb6.1
PPLA ep P pP 22 05 59.1 -0.8
PPLA es P sP 22 06 06.2 -1.6
LCO Las Campanas 56.06 147 eP **P 22 05 43.8 +1.1**
comp=Z,168nm,1.2s,mb6.0
LCO es P sP 22 06 10.0 +1.3
LCO ePcP PcP 22 06 42.0 +1.8
BPAW Bear Paw Mtn. 56.10 336 eP **P 22 05 41.4 -1.2**
comp=Z,124nm,1.3s,mb5.8
BPAW ep P pP 22 05 59.3 -1.3
BPAW es P sP 22 06 06.7 -1.9
BPAW ePP PP 22 07 47.6 -0.5
CHUM Lake Minchumin 56.50 336 eP **P 22 05 44.5 -0.9**
comp=Z,27nm,0.7s,mb5.4
CHUM ep P pP 22 06 02.0 -1.6
CHUM es P sP 22 06 09.8 -1.7
CHUM ePP PP 22 07 53.3 +1.6
VAH Vaihoa 56.56 236 eP **P 22 05 48.3 +1.8**
comp=Z,344nm,1.3s,mb6.2
VAH ep P pP 22 06 13.9 +9.3
comp=Z,364nm,1.2s
PMOR Pomariorio Ree 56.64 237 eP **P 22 05 49.0 +1.9**
comp=Z,432nm,1.6s,mb6.2
SVW2 Sparrevohn 56.65 332 eP **P 22 05 45.5 -1.0**
SVW2 ep P pP 22 06 03.0 -1.6
SVW2 es P sP 22 06 09.8 -2.8
SVW2 ePcP PcP 22 06 40.1 -1.9
TLL Tololo Astrono 56.95 148⇓ eP **P 22 05 50.5 +1.4**
XMAS Kiritimati 57.15 260 eP **P 22 05 50.9 0.0**
comp=Z,169nm,1.0s,mb6.0
XMAS ep P pP 22 06 08.9 -0.2
XMAS ePP PP 22 07 57.7 -0.9
COLD Coldfoot 57.44 340 eP **P 22 05 52.0 -0.1**
comp=Z,85nm,1.0s,mb5.7
COLD ep P pP 22 06 09.2 -1.0
COLD es P sP 22 06 16.1 -2.0
TIAR Tiarei 59.24 235 eP **P 22 06 06.9 +1.6**
comp=Z,1μm,1.2s,mb6.8
TVO Taravao 59.29 235 eP **P 22 06 07.5 +1.8**
comp=Z,1μm,1.1s,mb6.8
TVO Taravao 59.29 235 eP **P 22 06 07.5 +1.8**
TVO pmax pmax
comp=Z,1μm,1.1s,mb6.8
PPT Papeete 59.42 235 eS **S 22 14 18.3 +7.7**
comp=Z,1μm,25.0s
PPT eLQ 22 21 17.0
comp=Z,2μm,26.5s
PPT eLR LR 22 23 38.6
comp=Z,4μm,26.5s,baz=52
PPT Papeete 59.42 235 LR LR 22 24 31.1
comp=Z,1μm,19.7s,baz=50,slow=29
CLCH Cerro Calan 59.72 150⇓ eP **P 22 06 09.2 +0.9**
FCH Farellones 59.78 150⇓ eP **P 22 06 10.4 +1.7**
LMEL Las Melosas 60.25 150⇓ eP **P 22 06 13.5 +1.6**
UNV Unalaska Valle 60.31 322 eP **P 22 06 11.5 -0.7**
comp=Z,148nm,1.1s,mb5.9
UNV ep P pP 22 06 28.5 -1.9
UNV es P sP 22 06 37.2 -1.1
UNV PcP PcP 22 06 56.8 +0.1
BDFB Brasilia 62.82 119 P **P 22 06 30.7 +1.1**
comp=Z,30nm,1.1s,mb5.1,baz=289,slow=14,SNR=39
BDFB pP pP 22 06 49.0 +1.1
comp=Z,15nm,0.8s,baz=267,slow=13,SNR=7.0
BDFB sP sP 22 06 55.8 0.0
comp=Z,20nm,0.9s,baz=263,slow=18,SNR=6.0
BDFB LR LR 22 34 05.1
comp=Z,455nm,18.6s,baz=149,slow=36
BDFB PKP2bc 22 35 38.6
comp=Z,2.2nm,1.0s,baz=0.0,slow=20,SNR=4.6
BDFB Brasilia 62.82 119 P **P 22 06 30.7 +1.1**
BDFB pP pP 22 06 49.0 +1.1
BDFB sP sP 22 06 55.8 0.0
BDFB LR LR 22 34 05.1
BDFB ⇑e 22 35 38.6
BDFB Brasilia 62.82 119 P **P 22 06 30.7 +1.1**
BDFB *SP sP 22 06 55.8 0.0
BDFB pmax pmax
comp=Z,30nm,1.1s
BDFB pmax pmax
comp=Z,15nm,0.8s
BDFB pmax pmax
comp=Z,20nm,0.9s
BDFB MLR MLR
comp=Z,455nm,18.6s
SUMG Summit 64.28 17 eP **P 22 06 37.8 -0.6**
comp=Z,28nm,1.2s,mb5.0
SUMG ep P pP 22 06 55.6 -1.2
SUMG es P sP 22 07 04.9 +0.2
SUMG ePcP PcP 22 07 16.6 +4.0
ALE Alert 65.59 5 P **P 22 06 45.8 -1.0**
comp=Z,130nm,1.0s,mb5.7,SNR=5.0
PLCA Paso Flores 65.83 155 P **P 22 06 50.0 +1.2**
comp=Z,99nm,1.1s,mb5.5,baz=329,slow=7.8,SNR=59
PLCA sP sP 22 07 15.2 +0.1
comp=Z,68nm,1.0s,baz=333,slow=7.6,SNR=9.6
PLCA LR LR 22 29 29.9
comp=Z,633nm,18.6s,baz=356,slow=30
PLCA Paso Flores 65.83 155 P **P 22 06 50.0 +1.2**
PLCA *SP sP 22 07 15.2 +0.1
PLCA pmax pmax
comp=Z,99nm,1.1s
PLCA pmax pmax
comp=Z,68nm,1.0s
PLCA MLR MLR
comp=Z,633nm,18.6s
ADK Adak 66.32 319 eP **P 22 06 51.0 -1.0**
comp=Z,217nm,0.8s,mb6.0
ADK ep P pP 22 07 09.0 -1.5
ADK Adak 66.32 319 eP **P 22 06 51.0 -0.9**
ADK pmax pmax
comp=Z,217nm,0.8s,mb6.0
LPA La Plata 67.56 142 ceP **P 22 07 00.0 0.0**
LPA esP sP 22 07 23.0 -3.3
LPA eSP 22 16 15.0
LPA
comp=Z,1μm,20.0s
RCBR Riachuelo 69.12 104⇓ eP **P 22 07 12.0 +1.8**
comp=Z,196nm,1.5s,mb5.7
RCBR ep P pP 22 07 29.9 +1.1
RCBR ePP PP 22 09 45.5 +1.7
DAG Danmarks Havn 70.25 14⇓ iP **P 22 07 14.2 -1.8**
DAG pmax pmax
comp=Z,29nm,1.1s,mb5.0
DAG Danmarks Havn 70.25 14⇓ iP **P 22 07 14.2 -1.8**
comp=Z,29nm,1.1s,mb5.0
CAM4 Nova Friburgo 70.67 123 eP **P 22 07 18.7 -0.8**
CAM4 i 22 07 20.2
CAM4 i pP 22 07 39.4 +1.2
CAM4 i 22 07 50.0
CAM4 i 22 08 03.7
CAM3 Guarapari 71.51 120 eP **P 22 07 18.5 -6.1**
CAM3 i 22 07 22.7
CAM3 i 22 07 25.4
CAM3 i pP 22 07 33.0 -10
CAM3 i 22 07 51.3
CAM3 i 22 07 59.4
BILL Bilibino 73.58 337⇑ iP **P 22 07 35.3 -0.8**
BILL Bilibino 73.58 337⇑ eP **P 22 07 35.3 -0.8**
BILL e*PP pP 22 07 54.0 -0.9
BILL e 22 10 24.7
BILL eS S 22 17 01.1 +0.6
BILL pmax pmax
comp=Z,97nm,1.3s,mb5.4
BILL MLR MLR
comp=Z,3μm,19.0s
KBS Kingsbay 76.08 11 eP **P 22 07 50.3 -0.1**
KBS pmax pmax
comp=Z,26nm,1.2s,mb4.8
AFI Afiamalu 76.41 250 P **P 22 07 53.0 -0.3**
comp=Z,38nm,0.9s,mb5.1,baz=43,slow=4.8,SNR=6.1
AFI Afiamalu 76.41 250 P **P 22 07 53.0 -0.3**
AFI pmax pmax
comp=Z,38nm,0.9s,mb5.1
KPL Plockton 77.54 34 eP **P 22 07 58.4 -0.5**
KPL AMb AMB 22 08 00.4
comp=Z,90nm,1.9s,mb5.2
DMUB Kingscourt 77.75 37 eP **P 22 07 58.2 -2.0**
DLF Lyons Farm 78.12 38 eP **P 22 08 00.2 -2.1**
MDO Dochfour 78.19 33 eP **P 22 08 01.0 -1.5**
EAB Aberfoyle 78.55 34 eP **P 22 08 03.2 -1.4**
USHA Ushuaia 78.55 161 P **P 22 08 05.6 +1.3**
comp=Z,60nm,1.2s,mb5.3,baz=279,slow=4.1,SNR=8.5
USHA sP sP 22 08 29.7 -1.4
comp=Z,56nm,1.1s,baz=55,slow=0.7,SNR=5.8
PGBU Glenifferbraes 78.58 35 eP **P 22 08 04.0 -0.7**
PGBU AMb AMB 22 08 05.5
comp=Z,94nm,1.5s,mb5.4
MCD Coleburn Disti 78.72 33 eP **P 22 08 04.5 -1.0**
GAL1 Galloway 78.72 36 eP **P 22 08 05.1 -0.4**
GAL1 AMb AMB 22 08 10.6
comp=Z,61nm,1.7s,mb5.2
MME1 Meikle Cairn 78.95 33 eP **P 22 08 05.3 -1.5**
EBH Black Hill 78.98 34 eP **P 22 08 06.3 -0.6**
EAU Auchinoon 79.13 35 eP **P 22 08 07.5 -0.2**
EDI Edinburgh 79.25 35 eP **P 22 08 07.3 -1.1**
EDI AMb AMB 22 08 10.0
comp=Z,91nm,1.2s,mb5.5
EBL Broad Law 79.37 35 eP **P 22 08 08.6 -0.5**
ESK Eskdalemuir 79.42 35 eP **P 22 08 08.8 -0.6**
comp=Z,30nm,1.0s,mb5.1
ESK ePcP PcP 22 08 18.2 +1.0
ESK epP pP 22 08 26.9 -1.5
ESK Eskdalemuir 79.42 35 eP **P 22 08 07.9 -1.4**
ESK AMb AMB 22 08 10.8
comp=Z,69nm,1.8s,mb5.2
ESK Eskdalemuir 79.42 35 eP **P 22 08 08.8 -0.5**
ESK e 22 08 18.2
ESK pmax pmax
comp=Z,30nm,1.0s,mb5.1
ECK Cauldkaine Hil 79.50 35 eP **P 22 08 08.8 -1.0**
ESY Stoneypath 79.56 34 eP **P 22 08 09.3 -0.7**
STS Santiago 79.62 48 P **P 22 08 10.6 -0.1**
comp=Z,76nm,1.2s,mb5.4
STS Santiago 79.62 48 P **P 22 08 10.6 -0.1**
STS pmax pmax
comp=Z,76nm,1.2s,mb5.4
XAL Allendale 80.10 35 eP **P 22 08 12.3 -0.8**
ELOB Lobios 80.25 49 P **P 22 08 13.9 -0.2**
comp=Z,109nm,1.3s,mb5.5
HTR Trewern Hill 80.38 38 eP **P 22 08 13.7 -0.8**
HLM1 Long Mynd 80.47 38 eP **P 22 08 15.3 +0.3**
EPON Pontenova 80.48 48 P **P 22 08 15.0 -0.3**
comp=Z,146nm,1.4s,mb5.6
SEY Seymchan 80.54 334⇑ iP **P 22 08 15.2 0.0**
MCH1 Michaelchurch 80.56 38 eP **P 22 08 15.3 -0.3**
MCH1 AMb AMB 22 08 22.3
comp=Z,51nm,1.5s,mb5.2
LHO Holmfirth 80.72 37 eP **P 22 08 16.3 -0.1**
ERUA La Rua 80.75 48 P **P 22 08 16.8 0.0**
comp=Z,51nm,1.1s,mb5.3
ERUA La Rua 80.75 48 P **P 22 08 16.8 0.0**
ERUA pmax pmax
comp=Z,51nm,1.1s,mb5.3
HGH Gray Hill 80.79 39 eP **P 22 08 16.0 -0.8**
KWE Weaver Farm 80.90 37 eP **P 22 08 17.6 +0.2**
PET Petropavlovsk 80.94 323 eP **P 22 08 17.8 +0.2**
PET e*SP sP 22 08 41.9 -2.4
PET eS S 22 18 19.1 -1.7
PET eSS SS 22 23 31.1 -4.5
PET pmax pmax
comp=Z,129nm,0.8s,mb5.8
PET pmax pmax
comp=Z,1μm,3.7s
PET pmax pmax
comp=Z,100nm,10.2s
PET pmax pmax
comp=Z,400nm,17.1s
PET smax
comp=N,1μm,6.9s
PET smax
comp=N,1μm,17.9s
PET MLR MLR
comp=Z,1μm,22.0s
MTE Manteigas 81.04 50 eP **P 22 08 18.3 -0.1**
comp=Z,58nm,1.1s,mb5.3
MTE ePcP PcP 22 08 26.2 +1.6
MTE pP pP 22 08 36.2 -1.2
MTE esP sP 22 08 42.7 -2.4
ECAL Calabor 81.17 49 P **P 22 08 19.6 +0.6**
comp=Z,85nm,1.5s,mb5.3
EVO Evora 81.24 52⇑ iP **P 22 08 18.7 -0.8**
comp=Z,146nm,1.3s,mb5.4
EVO eMLR MLR
comp=Z,530nm,21.5s
CWF Charnwood Fore 81.30 37 eP **P 22 08 18.8 -0.7**
CWF AMb AMB 22 08 21.6
comp=Z,79nm,1.4s,mb5.3
PETK Petropavlovsk- 81.46 323 P **P 22 08 20.5 +0.2**
comp=Z,102nm,0.8s,mb5.7,baz=79,slow=9.9,SNR=85
PETK pP pP 22 08 38.9 -0.6
comp=Z,20nm,0.7s,baz=75,slow=13,SNR=3.5
PETK LR LR 22 41 58.1
comp=Z,89nm,18.7s,baz=71,slow=34
ROSF Rostrenen 81.55 42 eP **P 22 08 19.6 -1.3**
comp=Z,127nm,1.5s,mb5.2
ROSF epP pP 22 08 38.2 -1.8
ROSF Rostrenen 81.55 42 eP **P 22 08 19.6 -1.3**
comp=Z,64nm,1.5s,mb5.2
ROSF epP pP 22 08 38.2 -1.8
ROSF Rostrenen 81.55 42 eP **P 22 08 19.6 -1.3**
ROSF pmax pmax
comp=Z,63nm,1.5s,mb5.2
QUIF Quistinic 81.75 42 eP **P 22 08 20.8 -1.2**
comp=Z,136nm,1.5s,mb5.3
QUIF Quistinic 81.75 42 eP **P 22 08 20.8 -1.2**
comp=Z,68nm,1.5s,mb5.3
QUIF Quistinic 81.75 42 eP **P 22 08 20.8 -1.2**
QUIF pmax pmax
comp=Z,68nm,1.5s,mb5.3
WOL Wolverton 81.83 39 eP **P 22 08 21.5 -0.8**
WOL AMb AMB 22 08 24.3
comp=Z,270nm,1.4s,mb5.9
EBAD Badajoz 81.92 52 P **P 22 08 21.2 -1.8**
comp=Z,54nm,1.5s,mb5.2
EGRO El Granado 81.93 53 P **P 22 08 23.8 +0.7**
comp=Z,63nm,1.4s,mb5.2
SGMF Saint Gilles 82.03 42 eP **P 22 08 22.2 -1.2**
comp=Z,142nm,1.4s,mb5.3
SGMF Saint Gilles 82.03 42 eP **P 22 08 22.2 -1.2**
comp=Z,71nm,1.4s,mb5.3
SGMF Saint Gilles 82.03 42 eP **P 22 08 22.2 -1.2**
SGMF pmax pmax
comp=Z,71nm,1.4s,mb5.3
EPLA Plasencia 82.21 50 P **P 22 08 25.1 +0.5**
comp=Z,125nm,1.0s,mb5.7
EPLA Plasencia 82.21 50 P **P 22 08 25.1 +0.5**
EPLA pmax pmax
comp=Z,125nm,1.0s,mb5.7
EMIN Mina Concepcio 82.47 53 P **P 22 08 26.0 0.0**
comp=Z,51nm,1.1s,mb5.3
GRR Gorron 83.05 41 eP **P 22 08 27.7 -1.0**
comp=Z,64nm,1.0s,mb5.1

GRR ePP pP 22 08 47.8 -0.1
GRR Gorron 83.05 41 eP **P 22 08 27.7 -1.0**
comp=Z,32nm,1.0s,mb5.1
GRR ePP pP 22 08 47.8 -0.1
GRR Gorron 83.05 41 eP **P 22 08 27.7 -1.0**
GRR pmax pmax
comp=Z,32nm,1.0s,mb5.1
ELAN Lanestosa 83.09 47 P **P 22 08 27.4 -1.7**
comp=Z,61nm,1.3s,mb5.3
FLN La Foliniere 83.15 41 eP **P 22 08 29.0 -0.2**
comp=Z,87nm,0.9s,mb5.3
FLN eMLR MLR
comp=Z,1μm,21.5s
FLN La Foliniere 83.15 41 eP **P 22 08 29.0 -0.2**
comp=Z,43nm,0.9s,mb5.3
FLN LR LR
comp=Z,1μm,21.5s
FLN La Foliniere 83.15 41 eP **P 22 08 29.0 -0.2**
FLN pmax pmax
comp=Z,43nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,1μm,21.5s
ESPR Espera 83.37 53 P **P 22 08 29.1 -1.6**
comp=Z,62nm,1.2s,mb5.3
GUD Guadarrama 83.43 49 P **P 22 08 30.3 -0.6**
comp=Z,40nm,1.0s,mb5.2
GUD Guadarrama 83.43 49 P **P 22 08 30.3 -0.5**
GUD pmax pmax
comp=Z,40nm,1.0s,mb5.2
LDF La Druitiere 83.44 41 eP **P 22 08 30.1 -0.6**
comp=Z,172nm,1.2s,mb5.5
LDF La Druitiere 83.44 41 eP **P 22 08 30.1 -0.6**
comp=Z,86nm,1.2s,mb5.5
LDF La Druitiere 83.44 41 eP **P 22 08 30.1 -0.6**
LDF pmax pmax
comp=Z,86nm,1.2s,mb5.5
TIXI Tiksi 83.57 346*c i* P **P 22 08 30.0 -1.0**
TIXI pmax pmax
comp=Z,168nm,1.4s,mb5.7
PAB San Pablo 83.64 51 eP **P 22 08 32.3 +0.3**
comp=Z,68nm,1.3s,mb5.3
PAB eP pP 22 08 51.9 +0.7
PAB eS sP 22 08 57.1 -1.6
PAB San Pablo 83.64 51 eP **P 22 08 32.3 +0.3**
PAB e*SP sP 22 08 57.1 -1.7
PAB pmax pmax
comp=Z,68nm,1.3s,mb5.3
EJIF Jimena Fronter 83.80 54 P **P 22 08 32.3 -0.6**
comp=Z,92nm,1.6s,mb5.4
EJIF Jimena Fronter 83.80 54 P **P 22 08 32.3 -0.5**
EJIF pmax pmax
comp=Z,92nm,1.6s,mb5.4
ESDC Sonseca Array 83.88 50 P **P 22 08 33.5 +0.3**
comp=Z,14nm,0.9s,mb4.8,baz=300,slow=5.0,SNR=32
ESDC pP pP 22 08 50.9 -1.4
comp=Z,3.5nm,0.8s,baz=294,slow=4.4,SNR=3.7
ESDC LR LR 22 46 21.8
comp=Z,500nm,20.6s,baz=310,slow=36
ESDC Sonseca Array 83.88 50 P **P 22 08 33.1 -0.1**
comp=Z,23nm,1.4s,mb4.8
EADA Adamuz 83.92 52 P **P 22 08 34.3 +0.9**
comp=Z,9.7nm,1.0s,mb4.6
ECRI Cripan 83.94 47 P **P 22 08 32.8 -0.6**
comp=Z,22nm,0.7s,mb5.1
ECRI Cripan 83.94 47 P **P 22 08 32.8 -0.6**
ECRI pmax pmax
comp=Z,22nm,0.7s,mb5.1
MENF Mencas 84.09 39 eP **P 22 08 34.0 0.0**
MFF Saint Martin d 84.13 43 eP **P 22 08 33.5 -0.8**
comp=Z,286nm,1.4s,mb5.6
MFF Saint Martin d 84.13 43 eP **P 22 08 33.5 -0.8**
comp=Z,143nm,1.4s,mb5.6
MFF Saint Martin d 84.13 43 eP **P 22 08 33.5 -0.8**
MFF pmax pmax
comp=Z,143nm,1.4s,mb5.6
KONO Kongsberg 84.16 28 eP **P 22 08 33.5 -0.7**
NB2 NORSAR Subarra 84.22 27 P **P 22 08 34.4 0.0**
comp=Z,95nm,1.4s,mb5.4,baz=298,slow=4.8
NOA NORSAR Array B 84.22 27 P **P 22 08 34.2 -0.2**
comp=Z,11nm,1.1s,mb4.6,baz=299,slow=4.8,SNR=13
NOA pP pP 22 08 52.8 -0.8
comp=Z,18nm,1.1s,baz=303,slow=5.0,SNR=5.4
NOA LR LR 22 46 56.4
comp=Z,616nm,20.6s,baz=300,slow=36
NOA NORSAR Array B 84.22 27 P **P 22 08 34.2 -0.2**
NOA pmax pmax
comp=Z,11nm,1.1s
NOA pmax pmax
comp=Z,18nm,1.1s
NOA MLR MLR
comp=Z,617nm,20.6s
EMIJ Mijas 84.29 53 P **P 22 08 34.9 -0.5**
comp=Z,85nm,1.6s,mb5.3
ELUQ Luque 84.35 52 P **P 22 08 35.2 -0.4**
comp=Z,20nm,1.3s,mb4.8
ELUQ Luque 84.35 52 P **P 22 08 35.2 -0.4**
ELUQ pmax pmax
comp=Z,20nm,1.3s,mb4.8
ARCES ARCESS Array B 84.36 16 P **P 22 08 34.2 -0.7**
comp=Z,20nm,0.9s,mb4.9,baz=308,slow=5.3,SNR=37
ARCES pP pP 22 08 52.3 -1.9
comp=Z,14nm,0.8s,baz=324,slow=6.0,SNR=5.7
ARCES LR LR 22 46 52.6
comp=Z,1μm,21.5s,baz=312,slow=36
ARCES ARCESS Array B 84.36 16 P **P 22 08 34.3 -0.7**
ARCES pmax pmax
comp=Z,20nm,0.9s
ARCES pmax pmax
comp=Z,14nm,0.8s
ARCES MLR MLR
comp=Z,1μm,21.5s
EBAN Banos Encina 84.51 52 P **P 22 08 36.2 -0.2**
comp=Z,57nm,1.4s,mb5.3
EBAN Banos Encina 84.51 52 P **P 22 08 36.2 -0.2**
EBAN pmax pmax
comp=Z,57nm,1.4s,mb5.3
ELOJ Sierra Loja 84.57 53 P **P 22 08 38.1 +1.4**
comp=Z,117nm,1.5s,mb5.6
ELOJ Sierra Loja 84.57 53 P **P 22 08 38.1 +1.4**
ELOJ pmax pmax
comp=Z,117nm,1.5s,mb5.6
KEV Kevo 84.61 16 *ep* **P 22 08 35.2 -1.0**
comp=Z,34nm,1.2s,mb5.2
KEV Kevo 84.61 16 eP **P 22 08 35.2 -1.0**
KEV pmax pmax
comp=Z,34nm,1.2s,mb5.2
SJPF Ste Jean 84.65 46 eP **P 22 08 36.9 -0.1**
comp=Z,401nm,1.8s,mb5.8
SJPF Ste Jean 84.65 46 eP **P 22 08 36.9 -0.1**
comp=Z,201nm,1.8s,mb5.8
SJPF Ste Jean 84.65 46 eP **P 22 08 36.9 -0.1**
SJPF pmax pmax
comp=Z,201nm,1.8s,mb5.8
LARF Larrau 84.84 46 eP **P 22 08 38.2 +0.2**
ETOR Torete 84.87 49 P **P 22 08 37.8 -0.4**
comp=Z,32nm,1.8s,mb5.0
ETOR Torete 84.87 49 P **P 22 08 37.8 -0.4**
ETOR pmax pmax
comp=Z,32nm,1.8s,mb5.0
ERON Agron 84.88 53 P **P 22 08 39.5 +1.2**
comp=Z,30nm,1.0s,mb5.2
ECOG Cogollos-Vega 84.97 52 P **P 22 08 37.6 -1.1**
comp=Z,61nm,1.1s,mb5.4
ECOG Cogollos-Vega 84.97 52 P **P 22 08 37.6 -1.1**
ECOG pmax pmax
comp=Z,61nm,1.1s,mb5.4
EGUA Guajares 85.12 53 P **P 22 08 38.2 -1.2**
comp=Z,79nm,1.0s,mb5.6
EGUA Guajares 85.12 53 P **P 22 08 38.2 -1.3**
EGUA pmax pmax
comp=Z,79nm,1.0s,mb5.6
EQES Quesada 85.16 52 P **P 22 08 38.5 -1.1**
comp=Z,92nm,1.5s,mb5.5
ETSF Etsaut 85.18 46 eP **P 22 08 39.7 0.0**
comp=Z,203nm,1.3s,mb5.6
ETSF Etsaut 85.18 46 eP **P 22 08 39.7 0.0**
comp=Z,102nm,1.3s,mb5.6
ETSF Etsaut 85.18 46 eP **P 22 08 39.7 0.0**
ETSF pmax pmax
comp=Z,102nm,1.3s,mb5.6
REYF Montagne du Re 85.24 46 eP **P 22 08 39.4 -0.5**
UCC Uccle 85.29 38 P **P 22 08 40.4 +0.3**
UCC AP pP 22 08 58.2 -1.1
EVIA Vianos 85.30 51 P **P 22 08 41.3 +1.0**
comp=Z,38nm,0.7s,mb5.4
EVIA Vianos 85.30 51 P **P 22 08 41.3 +1.0**
EVIA pmax pmax
comp=Z,39nm,0.7s,mb5.5
LFF La Frestale 85.31 44 eP **P 22 08 40.0 -0.3**
comp=Z,496nm,1.4s,mb6.0
LFF La Frestale 85.31 44 eP **P 22 08 40.0 -0.3**
comp=Z,248nm,1.4s,mb6.0
LFF La Frestale 85.31 44 eP **P 22 08 40.0 -0.3**
LFF pmax pmax
comp=Z,248nm,1.4s,mb6.0
SNF Seneffe 85.36 38 P **P 22 08 40.8 +0.4**
comp=Z,43nm,1.8s,mb5.1
BAIF Baives 85.50 38 eP **P 22 08 40.4 -0.7**
comp=Z,163nm,1.3s,mb5.5
BAIF epP pP 22 08 59.4 -0.9
BAIF Baives 85.50 38 eP **P 22 08 40.4 -0.7**
comp=Z,81nm,1.3s,mb5.5
BAIF epP pP 22 08 59.4 -0.9
BAIF Baives 85.50 38 eP **P 22 08 40.4 -0.7**
BAIF pmax pmax
comp=Z,81nm,1.3s,mb5.5
EHUE Huescar 85.51 52 P **P 22 08 40.3 -1.1**
comp=Z,95nm,1.4s,mb5.5
EHUE Huescar 85.51 52 P **P 22 08 40.3 -1.1**
EHUE pmax pmax
comp=Z,95nm,1.4s,mb5.5
VIEF Viey 85.59 46 eP **P 22 08 42.0 +0.3**
EBER Berja 85.61 53 P **P 22 08 41.0 -1.0**
comp=Z,106nm,1.3s,mb5.6
HYF Humbligny 85.65 41 eP **P 22 08 41.1 -0.8**
ESAC San Caprasio 85.67 47 P **P 22 08 40.9 -1.2**
comp=Z,275nm,1.3s,mb6.0
RJF Les Rejaudoux 85.69 44 eP **P 22 08 41.6 -0.5**
comp=Z,355nm,1.3s,mb5.8
RJF epP pP 22 09 00.1 -1.3
RJF eMLR MLR
comp=Z,611nm,21.5s
RJF Les Rejaudoux 85.69 44 eP **P 22 08 41.6 -0.5**
comp=Z,177nm,1.3s,mb5.8
RJF epP pP 22 09 00.1 -1.3
RJF LR LR
comp=Z,610nm,21.5s
RJF Les Rejaudoux 85.69 44 eP **P 22 08 41.6 -0.5**
RJF pmax pmax
comp=Z,177nm,1.3s,mb5.8
RJF MLR MLR
comp=Z,610nm,21.5s
DOU Dourbes 85.71 38 P **P 22 08 42.6 +0.4**
comp=Z,26nm,2.0s,mb4.8
DOU AP pP 22 09 00.9 -0.5
EBIE Bielsa 85.74 46 P **P 22 08 41.5 -1.0**
comp=Z,120nm,1.2s,mb5.7
EPF Esparros 85.75 46 eP **P 22 08 42.2 -0.3**
comp=Z,351nm,1.4s,mb5.8
EPF Esparros 85.75 46 eP **P 22 08 42.2 -0.3**
comp=Z,176nm,1.4s,mb5.8
EPF Esparros 85.75 46 eP **P 22 08 42.2 -0.3**
EPF pmax pmax
comp=Z,176nm,1.4s,mb5.8
TCF Toulx Ste Croi 85.76 42 eP **P 22 08 41.4 -1.1**
comp=Z,285nm,1.4s,mb5.7
TCF epP pP 22 09 00.4 -1.3
TCF Toulx Ste Croi 85.76 42 eP **P 22 08 41.4 -1.1**
comp=Z,142nm,1.4s,mb5.7
TCF epP pP 22 09 00.4 -1.3
TCF Toulx Ste Croi 85.76 42 eP **P 22 08 41.4 -1.1**
TCF pmax pmax
comp=Z,142nm,1.4s,mb5.7
EALB Alboran 85.82 54 P **P 22 08 41.8 -1.2**
comp=Z,72nm,0.5s,mb5.9
RESF Ens 85.83 46 eP **P 22 08 43.3 +0.4**
GIVF Givet 85.84 38 eP **P 22 08 42.2 -0.6**
comp=Z,200nm,1.6s,mb5.5
GIVF Givet 85.84 38 eP **P 22 08 42.2 -0.6**
comp=Z,100nm,1.6s,mb5.5
GIVF Givet 85.84 38 eP **P 22 08 42.2 -0.6**
GIVF pmax pmax
comp=Z,100nm,1.6s,mb5.5
BCLA Clavier 85.99 38 P **P 22 08 42.2 -1.3**
BCLA AP pP 22 08 58.8 -4.0
comp=Z,54nm,2.0s
ETOB Tobarra 86.00 51 P **P 22 08 42.4 -1.4**
comp=Z,128nm,1.7s,mb5.6
BGF Bois d'Agland 86.06 42 eP **P 22 08 42.9 -1.1**
comp=Z,174nm,1.3s,mb5.5
BGF Bois d'Agland 86.06 42 eP **P 22 08 42.9 -1.1**
comp=Z,87nm,1.3s,mb5.5
BGF Bois d'Agland 86.06 42 eP **P 22 08 42.9 -1.1**
BGF pmax pmax
comp=Z,87nm,1.3s,mb5.5
ECHE Chera 86.08 50 P **P 22 08 42.8 -1.4**
comp=Z,32nm,0.8s,mb5.3
ECHE Chera 86.08 50 P **P 22 08 42.8 -1.4**
ECHE pmax pmax
comp=Z,32nm,0.8s,mb5.3
VERF Verneugheol 86.14 43 eP **P 22 08 43.3 -1.1**
EMOS Mosqueruela 86.16 49 P **P 22 08 43.5 -1.1**
comp=Z,185nm,1.2s,mb5.9
CAF Calviac 86.19 44 eP **P 22 08 44.0 -0.6**
comp=Z,156nm,1.5s,mb5.4
CAF Calviac 86.19 44 eP **P 22 08 44.0 -0.6**
comp=Z,78nm,1.5s,mb5.4
CAF Calviac 86.19 44 eP **P 22 08 44.0 -0.6**
CAF pmax pmax
comp=Z,78nm,1.5s,mb5.4
SSF Saint Saulge 86.28 41 eP **P 22 08 43.9 -1.1**
comp=Z,157nm,1.2s,mb5.5
SSF Saint Saulge 86.28 41 eP **P 22 08 43.9 -1.1**
comp=Z,79nm,1.2s,mb5.5
SSF Saint Saulge 86.28 41 eP **P 22 08 43.9 -1.1**
SSF pmax pmax
comp=Z,79nm,1.2s,mb5.5
AVF Avril sur Loir 86.29 42 eP **P 22 08 43.7 -1.4**
comp=Z,99nm,1.2s,mb5.3
AVF epP pP 22 09 02.7 -1.6
AVF Avril sur Loir 86.29 42 eP **P 22 08 43.7 -1.4**
comp=Z,49nm,1.2s,mb5.3
AVF epP pP 22 09 02.7 -1.6
AVF Avril sur Loir 86.29 42 eP **P 22 08 43.7 -1.4**
AVF pmax pmax
comp=Z,49nm,1.2s,mb5.3
MLS Moulis 86.29 46 eP **P 22 08 45.1 -0.1**
MEM Membach 86.32 37 P **P 22 08 45.5 +0.4**
MEM AP pP 22 08 56.2 -8.2
FRNF Fournols 86.34 43 eP **P 22 08 45.0 -0.3**
LOR Lormes 86.42 41 eP **P 22 08 44.8 -0.9**
comp=Z,170nm,1.0s,mb5.6
LOR epP pP 22 09 03.9 -1.0
LOR eMLR MLR
comp=Z,1μm,23.0s
LOR Lormes 86.42 41 eP **P 22 08 44.8 -0.9**
comp=Z,85nm,1.0s,mb5.6
LOR epP pP 22 09 03.9 -1.0
LOR LR LR
comp=Z,1μm,23.0s
LOR Lormes 86.42 41 eP **P 22 08 44.8 -0.9**
LOR pmax pmax
comp=Z,85nm,1.0s,mb5.6
LOR MLR MLR
comp=Z,1μm,23.0s
SALF Salau 86.43 46 eP **P 22 08 43.3 -2.6**
EMUR La Murta 86.51 51 P **P 22 08 46.5 +0.2**
comp=Z,106nm,1.5s,mb5.5
ERTA Horta de San J 86.51 48 P **P 22 08 44.9 -1.4**
comp=Z,126nm,1.4s,mb5.7
IBBN Ibbenburen 86.57 35 eS S 22 19 20.3 +3.0
MEZF Maizieres J'vi 86.64 40 eP **P 22 08 45.0 -1.8**
comp=Z,52nm,0.9s,mb5.2
MEZF Maizieres J'vi 86.64 40 eP **P 22 08 45.0 -1.8**
comp=Z,52nm,0.9s,mb5.5
SMF Signal de Mont 86.66 42 eP **P 22 08 45.4 -1.5**
comp=Z,76nm,1.2s,mb5.2
SMF Signal de Mont 86.66 42 eP **P 22 08 45.4 -1.5**
comp=Z,38nm,1.2s,mb5.2
SMF Signal de Mont 86.66 42 eP **P 22 08 45.4 -1.5**
SMF pmax pmax
comp=Z,38nm,1.2s,mb5.2
BUG Bochum--Univer 86.68 36 eS S 22 19 26.5 +8.0
WLF Walferdange 86.81 38 P **P 22 08 47.9 +0.3**
comp=Z,34nm,1.3s,mb5.1
WLF AP pP 22 09 05.7 -1.1
WLF Walferdange 86.81 38 eP **P 22 08 47.3 -0.2**
comp=Z,43nm,1.0s,mb5.3
WLF epP pP 22 09 05.7 -1.1
WLF eSP sP 22 09 11.9 -2.5
WLF ePP PP 22 12 10.5 0.0
WLF Walferdange 86.81 38 eP **P 22 08 47.3 -0.3**
WLF e*SP sP 22 09 11.9 -2.6
WLF *e* 22 12 10.5
WLF pmax pmax
comp=Z,43nm,1.0s,mb5.3
WLF Walferdange 86.81 38 eP **P 22 08 48.0 +0.4**
comp=Z,57nm,1.1s,mb5.4
WLF epP pP 22 09 05.9 -0.9
WLF eS S 22 19 28.8 +9.0
EPOB Poblet 86.89 47 P **P 22 08 46.2 -2.0**
comp=Z,51nm,1.8s,mb5.2
MTLF Montolieu 86.91 45 eP **P 22 08 47.6 -0.6**
comp=Z,50nm,1.1s,mb5.0
MTLF Montolieu 86.91 45 eP **P 22 08 47.6 -0.6**
comp=Z,25nm,1.1s,mb5.1
MTLF Montolieu 86.91 45 eP **P 22 08 47.6 -0.6**
MTLF pmax pmax
comp=Z,25nm,1.1s,mb5.1
EBEN Beniarda 86.94 50 P **P 22 08 47.2 -1.3**
comp=Z,187nm,1.9s,mb5.7
BSEG Bad Segeberg 87.19 33 eP **P 22 08 49.3 0.0**
BSEG eS S 22 19 22.1 -1.2
BSEG pmax pmax
comp=Z,50nm,1.2s,mb5.3
BSEG Bad Segeberg 87.19 33 eP **P 22 08 49.3 0.0**
comp=Z,50nm,1.2s,mb5.3
BSEG eS S 22 19 22.1 -1.2
RUP Ruppelstein 87.32 38 eP **P 22 08 49.7 -0.3**
ABH Alteburg 87.53 38 eP **P 22 08 50.3 -0.7**
HAU Haudompre 87.64 40 eP **P 22 08 49.7 -1.9**
comp=Z,93nm,1.3s,mb5.4
HAU eMLR MLR
comp=Z,856nm,19.0s
HAU Haudompre 87.64 40 eP **P 22 08 49.7 -1.9**
comp=Z,47nm,1.3s,mb5.4
HAU LR LR
comp=Z,860nm,19.0s
HAU Haudompre 87.64 40 eP **P 22 08 49.7 -1.9**
HAU pmax pmax
comp=Z,47nm,1.3s,mb5.4
HAU MLR MLR
comp=Z,860nm,19.0s
LASF Ste Croix 87.70 44 eP **P 22 08 51.7 -0.3**
comp=Z,119nm,1.1s,mb5.5
RAO Raoul Island 87.72 238 P **P 22 08 51.9 -0.3**
APA Apatity 87.81 16 eP **P 22 08 45.0 -7.0**
APA eS SKSac 22 19 15.0 +1.2
APA pmax pmax
comp=Z,64nm,1.5s,mb5.4
APA MLR MLR
comp=Z,2μm,22.0s
LVZ Lovozero 87.88 15 eP **P 22 08 51.2 -1.1**
LVZ Lovozero 87.88 15 eP **P 22 08 51.1 -1.2**
LVZ pmax pmax
comp=Z,25nm,1.3s,mb5.1
TNS Taunus Mts 87.89 37 eP **P 22 08 52.2 -0.6**
TNS pmax pmax
comp=Z,50nm,1.1s,mb5.5
TNS Taunus Mts 87.89 37 eP **P 22 08 52.2 -0.6**
comp=Z,50nm,1.1s,mb5.5
TNS epP pP 22 09 11.0 -1.1
VIVF Saint-Julien-l 87.92 43 eP **P 22 08 52.6 -0.4**
comp=Z,66nm,1.2s,mb5.2
VIVF Saint-Julien-l 87.92 43 eP **P 22 08 52.6 -0.4**
comp=Z,33nm,1.2s,mb5.2
VIVF Saint-Julien-l 87.92 43 eP **P 22 08 52.6 -0.4**
VIVF pmax pmax
comp=Z,33nm,1.2s,mb5.2
CDF Champ du Feu 88.02 39 eP **P 22 08 51.4 -2.0**
comp=Z,56nm,1.2s,mb5.2
CDF epP pP 22 09 10.9 -1.8
CDF Champ du Feu 88.02 39 eP **P 22 08 51.4 -2.0**
comp=Z,28nm,1.2s,mb5.2
CDF epP pP 22 09 10.9 -1.8
CDF Champ du Feu 88.02 39 eP **P 22 08 51.4 -2.0**
CDF pmax pmax
comp=Z,28nm,1.2s,mb5.2
HINF Hinteralfeld 88.03 40 eP **P 22 08 51.3 -2.1**
comp=Z,55nm,1.3s,mb5.1
HINF Hinteralfeld 88.03 40 eP **P 22 08 51.3 -2.1**
comp=Z,28nm,1.3s,mb5.1
HINF Hinteralfeld 88.03 40 eP **P 22 08 51.3 -2.1**
HINF pmax pmax
comp=Z,28nm,1.3s,mb5.1
ECH Echery 88.04 39 eP **P 22 08 52.3 -1.2**
ECH Echery 88.04 39 eP **P 22 08 53.7 +0.2**
comp=Z,38nm,1.4s,mb5.2
ECH epP pP 22 09 11.2 -1.6
ECH Echery 88.04 39 eP **P 22 08 53.7 +0.2**
ECH pmax pmax
comp=Z,38nm,1.4s,mb5.2
CABF La Chapelle 88.08 41 eP **P 22 08 51.9 -1.8**
comp=Z,30nm,1.0s,mb5.0
CABF La Chapelle 88.08 41 eP **P 22 08 51.9 -1.8**
comp=Z,15nm,1.0s,mb5.0
CABF La Chapelle 88.08 41 eP **P 22 08 51.9 -1.8**
CABF pmax pmax
comp=Z,15nm,1.0s,mb5.0
LANF Langenberg 88.08 38 eP **P 22 08 52.5 -1.2**
MOF Molkenrain 88.18 40 eP **P 22 08 52.1 -2.1**
LOMF Lomont 88.22 40 eP **P 22 08 52.7 -1.6**
CLZ Clausthal 88.22 35 eP **P 22 08 54.2 0.0**
CLZ pmax pmax
comp=Z,74nm,1.0s,mb5.7
CLZ Clausthal 88.22 35 eP **P 22 08 54.2 0.0**
comp=Z,74nm,1.0s,mb5.7
TOD Tromm 88.38 38 eP **P 22 08 54.0 -1.1**
UBBA Unterbreizbach 88.50 36 eP **P 22 08 55.2 -0.4**
comp=Z,44nm,1.6s,mb5.2
UBBA epP pP 22 09 13.3 -1.6
ORIF Oris-en-Rattie 88.67 43 eP **P 22 08 55.6 -0.9**
comp=Z,28nm,0.9s,mb5.0
ORIF eMLR MLR
comp=Z,641nm,23.0s
ORIF Oris-en-Rattie 88.67 43 eP **P 22 08 55.6 -0.9**
comp=Z,14nm,0.9s,mb5.0
ORIF Oris-en-Rattie 88.67 43 eP **P 22 08 55.6 -0.9**
ORIF pmax pmax
comp=Z,14nm,0.9s,mb5.0
BFO Black Forest 88.69 39 eP **P 22 08 55.5 -1.0**
BFO pmax pmax
comp=Z,32nm,1.4s,mb5.2
BFO Black Forest 88.69 39 eP **P 22 08 55.5 -1.0**
comp=Z,32nm,1.4s,mb5.2
FELD Feldberg im Sc 88.69 39 eP **P 22 08 55.7 -0.9**
LPL La Plagne 88.96 42 eP **P 22 08 57.4 -0.5**
comp=Z,31nm,1.1s,mb5.0
LPL La Plagne 88.96 42 eP **P 22 08 57.4 -0.5**
comp=Z,16nm,1.1s,mb5.0
LPL La Plagne 88.96 42 eP **P 22 08 57.4 -0.5**
LPL pmax pmax
comp=Z,16nm,1.1s,mb5.0
LPG La Plagne 88.98 42 eP **P 22 08 57.7 -0.3**
comp=Z,111nm,1.5s,mb5.4
LPG La Plagne 88.98 42 eP **P 22 08 57.7 -0.3**
comp=Z,55nm,1.5s,mb5.4
LPG La Plagne 88.98 42 eP **P 22 08 57.7 -0.3**
LPG pmax pmax
comp=Z,55nm,1.5s,mb5.4
STU Stuttgart 88.99 38 eP **P 22 08 57.7 -0.3**
comp=Z,19nm,0.9s,mb5.1
STU eS S 22 19 47.8 +7.2
BNI Bardonecchia 89.12 42 eP **P 22 08 58.5 -0.2**
comp=Z,49nm,1.6s,mb5.3
BNI epP pP 22 09 17.0 -1.1
BNI epP pP 22 09 27.1 +9.1
BNI Bardonecchia 89.12 42 eP **P 22 08 58.5 -0.2**
BNI e*PP pP 22 09 27.1 +9.1
BNI pmax pmax
comp=Z,49nm,1.6s,mb5.3
MBDF Montbardon 89.33 43 eP **P 22 08 58.8 -0.8**
comp=Z,52nm,1.1s,mb5.2
MBDF Montbardon 89.33 43 eP **P 22 08 58.8 -0.8**
comp=Z,26nm,1.1s,mb5.2
MBDF Montbardon 89.33 43 eP **P 22 08 58.8 -0.8**
MBDF pmax pmax
comp=Z,26nm,1.1s,mb5.2
MOX Moxa 89.48 36 eP **P 22 09 00.1 -0.1**
comp=Z,66nm,1.8s,mb5.4
MOX
comp=Z,500nm,18.0s
MOX Moxa 89.48 36 eP **P 22 09 00.1 -0.1**
MOX pmax pmax
comp=Z,66nm,1.8s,mb5.4
MOX MLR MLR
comp=Z,500nm,18.0s
MOX Moxa 89.48 36 eP **P 22 08 59.6 -0.6**
comp=Z,26nm,1.1s,mb5.2

KAF Kangasniemi 89.51 22 *e*p P **22 08 57.7 -2.4**
comp=Z,35nm,1.1s,mb5.4
KAF Kangasniemi 89.51 22 *e*P P **22 08 57.7 -2.4**
KAF pmax pmax
comp=Z,35nm,1.1s,mb5.4
GRF Grafenberg Arr 89.72 37 *e*P P **22 09 01.1 -0.3**
GRF pmax pmax
comp=Z,57nm,1.3s,mb5.5
GRF Grafenberg Arr 89.72 37 *e*P P **22 09 01.1 -0.3**
GRF pmax pmax
comp=Z,57nm,1.3s,mb5.5
GRF Grafenberg Arr 89.72 37 *e*P P **22 09 01.1 -0.3**
comp=Z,57nm,1.3s,mb5.5
FRF La Foret Royal 89.75 44 *e*P P **22 09 00.5 -1.2**
comp=Z,40nm,1.2s,mb5.1
FRF La Foret Royal 89.75 44 *e*P P **22 09 00.5 -1.2**
comp=Z,20nm,1.2s,mb5.1
FRF La Foret Royal 89.75 44 *e*P P **22 09 00.5 -1.2**
FRF pmax pmax
comp=Z,20nm,1.2s,mb5.1
LMR La Mourre 89.76 44 *e*P P **22 09 00.5 -1.2**
comp=Z,90nm,1.3s,mb5.5
LMR La Mourre 89.76 44 *e*P P **22 09 00.5 -1.2**
comp=Z,45nm,1.3s,mb5.4
LMR La Mourre 89.76 44 *e*P P **22 09 00.5 -1.2**
LMR pmax pmax
comp=Z,45nm,1.3s,mb5.4
YAK Yakutsk 89.88 338⇑ *i*P P **22 09 01.8 0.0**
YAK Yakutsk 89.88 338 *e*P P **22 09 00.4 -1.4**
YAK *e* 22 19 18.5
YAK pmax pmax
comp=Z,158nm,0.9s,mb6.1
YAK pmax pmax
comp=E,39nm,1.2s
YAK pmax pmax
comp=N,28nm,1.2s
YAK pmax pmax
comp=E,95nm,7.8s
YAK pmax pmax
comp=N,682nm,13.4s
YAK MLR MLR
comp=N,771nm,28.0s
CLL Collm 89.91 35⇓ *i*P P **22 09 01.8 -0.4**
comp=N,21nm,1.0s,mb5.2
CLL *e* pP 22 09 19.0 -2.6
CLL *e* 22 09 30.0
CLL *e* 22 09 44.0
CLL *e*SKS 22 19 25.0
CLL S S 22 19 51.0 +2.0
CLL Collm 89.91 35⇓ *i*P P **22 09 01.8 -0.4**
CLL *e* 22 09 30.0
CLL *e* 22 09 44.0
CLL *e* 22 19 25.0
CLL *e*S S 22 19 51.0 +2.0
CLL pmax pmax
comp=Z,21nm,1.0s,mb5.2
CLL Collm 89.91 35 *e*P P **22 09 01.7 -0.5**
comp=Z,20nm,0.9s,mb5.2
CLL *e*S S 22 19 50.0 +1.0
CLL Collm 89.91 35⇓ *i*P P **22 09 01.8 -0.4**
comp=Z,21nm,1.0s,mb5.2
CLL *e*pP pP 22 09 19.0 -2.6
CLL *e*x x 22 09 30.0
CLL *e*x x 22 09 44.0
CLL *e*PP PP 22 12 36.0 +0.8
CLL *e*SKSac SKSac 22 19 25.0 -1.8
CLL *e*(S) S 22 19 51.0 +2.0
CLL *e*SP SP 22 20 59.0 +4.7
CLL *e*SS SS 22 25 48.0 +0.9
CLL *e*sSS 22 26 36.0
CLL *e*(SSSS) 22 33 18.0
CLL LV 22 51 00.0
comp=Z,700nm,18.5s
MVIF Mont Vial 89.94 43 *e*P P **22 09 01.8 -0.7**
TOUF Mont Tournerai 89.95 43 *e*P P **22 09 02.0 -0.5**
TANN Tannenbergstha 90.06 36 *e*P P **22 09 02.7 -0.2**
comp=Z,29nm,1.2s,mb5.3
AUTN L'Aution 90.07 43 *e*P P **22 09 02.2 -0.9**
MANZ Manzenberg 90.08 36 *e*P P **22 09 02.9 -0.1**
comp=Z,21nm,1.2s,mb5.1
DAVA Damuels 90.09 39⇓ *i*PcP PcP 22 09 03.3 -1.0
comp=Z,27nm,0.9s
SBF Sospel 90.13 43 *e*P P **22 09 02.1 -1.3**
comp=Z,71nm,1.2s,mb5.4
SBF Sospel 90.13 43 *e*P P **22 09 02.1 -1.3**
comp=Z,36nm,1.2s,mb5.4
SBF Sospel 90.13 43 *e*P P **22 09 02.1 -1.3**
SBF pmax pmax
comp=Z,35nm,1.2s,mb5.4
REVF Revere 90.14 43 *e*P P **22 09 02.5 -1.0**
TUE Stuetta 90.15 40 *e*P P **22 09 03.4 -0.1**
comp=Z,16nm,1.3s,mb5.0
TUE *e*pP pP 22 09 23.6 +0.7
TUE *e*sP sP 22 09 28.2 -2.2
TUE *e*PP PP 22 12 40.7 +3.4
ROTZ Rotzenmuhle 90.25 36 *e*P P **22 09 03.1 -0.7**
comp=Z,24nm,1.3s,mb5.2
ROTZ *e*pP pP 22 09 21.9 -1.3
BRG Berggiesshubel 90.64 35 *e*P P **22 09 05.1 -0.5**
BRG 22 12 42.0
BRG 22 19 29.0
BRG S S 22 19 55.0 -0.8
BRG PS PS 22 21 04.0 -7.7
BRG SS SS 22 25 52.0 -5.7
BRG *e* 22 26 06.2
BRG pmax pmax
comp=Z,19nm,1.1s,mb5.1
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BRG pmax pmax
comp=Z,11nm,1.8s,mb4.7
BRG Berggiesshubel 90.64 35 *e*P P **22 09 05.3 -0.3**
comp=Z,32nm,1.1s,mb5.4
BRG *e*pP pP 22 09 23.8 -1.2
BRG Berggiesshubel 90.64 35 *e*P P **22 09 05.0 -0.6**
comp=Z,32nm,1.1s,mb5.3
BRG pP pP 22 09 23.6 -1.4
comp=Z,10nm,1.0s
BRG PP PP 22 12 42.0 +1.0
BRG SKS 22 19 29.0
BRG S S 22 19 55.0 -0.8
BRG PS PS 22 21 04.0 -7.7
BRG SS SS 22 25 52.0 -5.7
FETA Feichten 90.73 39⇓ *i*PcP PcP 22 09 06.6 -0.6
comp=Z,15nm,1.1s
WET Wettzell 90.94 37 *e*P P **22 09 06.7 -0.3**
WET pmax pmax
comp=Z,28nm,1.1s,mb5.3
WET Wettzell 90.94 37 *e*P P **22 09 06.7 -0.3**
comp=Z,28nm,1.1s,mb5.3
WET *e*pP pP 22 09 25.0 -1.4
PVCC Panska Ves 91.16 35 *e*P P **22 09 07.9 -0.1**
KHC Kasperske Hory 91.34 36 *e*P P **22 09 08.4 -0.5**
KHC *e*pP pP 22 09 26.7 -1.6
KHC *e*SKS 22 19 36.1
PRU Pruhonice 91.43 35 *e*P P **22 09 08.7 -0.6**
PRU *e*pP pP 22 09 27.0 -1.7
PRU AMS AMS 22 49 10.0
comp=Z,1μm,20.1s
GEC2 GERESS Array S 91.56 37 *e*P P **22 09 09.5 -0.4**
comp=Z,3μm,0.9s
GEC2 *e*pP pP 22 09 27.8 -1.5
GEC2 *e*sP sP 22 09 35.9 -1.0
GEC2 *e*PP PP 22 12 48.2 -0.1
GEC2 GERESS Array S 91.56 37 *e*P P **22 09 09.5 -0.4**
GEC2 *e**SP sP 22 09 35.9 -1.0
GEC2 *e* 22 12 48.2
GEC2 pmax pmax
comp=Z,3μm,0.9s
GEC2 GERESS Array S 91.56 37 *e*P P **22 09 09.6 -0.3**
comp=Z,22nm,1.1s,mb5.3
GEC2 *e*pP pP 22 09 27.8 -1.5
GERES GERESS Array B 91.56 37 P P **22 09 09.7 -0.2**
comp=Z,6.1nm,0.8s,mb4.9,baz=319,slow=3.9,SNR=22
GERES pP pP 22 09 27.5 -1.8
comp=Z,1.3nm,0.7s,baz=316,slow=3.7,SNR=2.7
GERES PP PP 22 13 03.5 +15
comp=Z,0.9nm,0.6s,baz=251,slow=4.1,SNR=4.3
GERES PKKPbc PKKPbc 22 26 29.2 -1.5
comp=Z,0.7nm,0.8s,baz=180,slow=2.0,SNR=6.3
GERES LR LR 22 53 02.1
comp=Z,570nm,18.4s,baz=126,slow=37
GERES GERESS Array B 91.56 37 P P **22 09 09.7 -0.2**
GERES pmax pmax
comp=Z,6.0nm,0.8s
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=Z,1.0nm,0.8s
GERES MLR MLR
comp=Z,570nm,18.4s
PGF Pioggiola 91.75 44 *e*P P **22 09 09.5 -1.5**
comp=Z,140nm,1.6s,mb5.7
PGF Pioggiola 91.75 44 *e*P P **22 09 09.5 -1.5**
comp=Z,70nm,1.6s,mb5.6
PGF Pioggiola 91.75 44 *e*P P **22 09 09.5 -1.5**
PGF pmax pmax
comp=Z,70nm,1.6s,mb5.6
KSP Ksiaz 91.92 34 *e*P P **22 09 10.9 -0.6**
KSP LR LR
comp=Z,6μm,35.2s
ABTA Abfaltersbach 91.93 39⇓ *i*PcP PcP 22 09 11.7 -0.8
comp=Z,23nm,1.1s
UPC Upice 91.95 34 *e*P P **22 09 11.6 -0.1**
VSU Vasula 92.10 24 *e*P P **22 09 10.5 -1.7**
VSU pmax pmax
comp=Z,31nm,1.3s,mb5.4
DPC Dobruska-Polom 92.20 35 *e*P P **22 09 12.5 -0.4**
DPC *ep*P pP 22 09 30.8 -1.5
DPC *e*SKS 22 19 41.9
TREC Trest 92.32 36 *e*P P **22 09 13.2 -0.2**
TREC AMS AMS 22 49 50.0
comp=Z,900nm,18.6s
MOA Molln 92.39 37⇓ *i*PcP PcP 22 09 13.8 -0.7
comp=Z,23nm,1.2s
YSS Yuzh-Sakhalins 92.78 322 *e*P P **22 09 15.7 0.0**
YSS *ep*P pP 22 09 33.4 -1.6
YSS Yuzh-Sakhalins 92.78 322 *e*P P **22 09 15.5 -0.1**
YSS pmax pmax
comp=Z,80nm,0.9s,mb6.0
VRAC Vranov 92.92 35⇑ *i*P P **22 09 15.6 -0.6**
VRAC Vranov 92.92 35⇑ *i*P P **22 09 15.6 -0.6**
OBKA Obir 93.26 38⇓ *i*PcP PcP 22 09 17.6 -0.8
comp=Z,21nm,0.9s
CONA Conrad Observa 93.26 37⇓ *i*PcP PcP 22 09 17.2 -1.2
comp=Z,16nm,0.9s
ARSA Arzberg 93.43 37⇓ *i*PcP PcP 22 09 18.2 -0.9
comp=Z,8.6nm,1.4s
SOKA Soboth 93.45 38⇓ *i*PcP PcP 22 09 18.2 -1.0
comp=Z,23nm,1.2s
OKC Ostrava-Krasne 93.47 34 *e*P P **22 09 18.6 -0.1**
SUW Suwalki 93.48 29 *e*P P **22 09 17.4 -1.3**
ZST Bratislava 93.81 36 *i* P P **22 09 21.0 +0.7**
ZST pmax pmax
comp=Z,29nm,1.1s,mb5.5
SMOL Smolenice 93.82 36 *e*P P **22 09 21.0 +0.6**
TIC Toumodi 94.04 82 *e*P pP 22 09 38.9 -2.6
comp=Z,144nm,1.3s
OJC Ojcow 94.12 33 *e*P P **22 09 20.7 -1.0**
LIC Lamto 94.17 82 *e*P P **22 09 22.1 -0.6**
comp=Z,129nm,1.6s,mb5.7
LIC *e*MLR MLR
comp=Z,368nm,22.2s
LIC Lamto 94.17 82 *e*P pP 22 09 39.7 -2.4
comp=Z,165nm,1.3s
LIC Lamto 94.17 82 *e*P P **22 09 22.1 -0.6**
comp=Z,65nm,1.6s,mb5.7
LIC LR LR
comp=Z,180nm,22.3s
DBIC Dimbokro 94.18 82 P P **22 09 21.3 -1.4**
comp=Z,5.0nm,1.0s,mb4.8,baz=304,slow=5.9,SNR=3.3
DBIC pP pP 22 09 40.8 -1.3
comp=Z,16nm,0.9s,baz=286,slow=3.4,SNR=10
DBIC LR LR 22 49 49.4
comp=Z,266nm,18.5s,baz=278,slow=34
DBIC Dimbokro 94.18 82 P P **22 09 21.3 -1.4**
DBIC pmax pmax
comp=Z,5.0nm,1.0s
DBIC pmax pmax
comp=Z,17nm,0.9s
DBIC MLR MLR
comp=Z,266nm,18.5s
KOLL Kolacno 94.32 35 *e*P P **22 09 22.8 +0.2**
KIC Kosan Boka 94.39 82 *e*P pP 22 09 41.6 -1.5
comp=Z,129nm,1.0s
VYHS Vyhne 94.60 35 *i* P P **22 09 23.8 -0.2**
VYHS pmax pmax
comp=Z,24nm,1.2s,mb5.5
VYHS Vyhne 94.60 35 *i* P P **22 09 23.8 -0.2**
VYHS *ep*P pP 22 09 42.0 -1.4
KLMR Klimovskoe 94.71 18 *e*P P **22 09 21.0 -3.2**
KLMR pmax pmax
comp=Z,46nm,1.4s,mb5.7
ERM Erimo 95.08 317 *e*P P **22 09 26.2 -0.1**
KEST Kesra 95.12 50 P P **22 09 26.6 0.0**
comp=Z,8.5nm,1.0s,mb5.1,baz=219,slow=2.6,SNR=17
KEST LR LR 22 53 41.6
comp=Z,208nm,21.4s,baz=95,slow=36
BUD Budapest 95.28 36⇓ *e*P P **22 09 27.6 +0.5**
BUD Budapest 95.28 36⇓ *e* P **22 09 27.6 +0.5**
STHS Stebnicka Huta 95.35 33 *i* P P **22 09 26.7 -0.6**
STHS pmax pmax
comp=Z,13nm,1.1s,mb5.3
STHS Stebnicka Huta 95.35 33 *i* P P **22 09 26.7 -0.6**
STHS *ep*P pP 22 09 45.8 -0.9
PSZ Piszkesteto 95.51 35⇓ *e*P P **22 09 29.0 +0.9**
PSZ Piszkesteto 95.51 35⇓ *e* P **22 09 29.0 +0.9**
PSZ Piszkesteto 95.51 35⇓ *i*P P **22 09 28.5 +0.4**
CRVS Cervenica-Dubn 95.77 34 *e*P P **22 09 28.8 -0.5**
CRVS pmax pmax
comp=Z,22nm,1.2s,mb5.5
CRVS Cervenica-Dubn 95.77 34 *e*P P **22 09 28.8 -0.5**
CRVS *ep*P pP 22 09 51.9 +3.2
PKSM Moragy 95.80 37⇓ *e*P P **22 09 29.0 -0.5**
PKSM Moragy 95.80 37⇑ *i*P P **22 09 28.3 -1.2**
KOLS Kolonicke sedl 96.18 33 *e*P P **22 09 31.3 +0.2**
KOLS pmax pmax
comp=Z,21nm,1.2s,mb5.4
KOLS Kolonicke sedl 96.18 33 *e*P P **22 09 31.3 +0.2**
KOLS *ep*P pP 22 09 48.7 -1.8
UZH Uzhgorod 96.37 34⇓ *i*P P **22 09 31.0 -1.0**
UZH *i* 22 09 59.0
TRPA Tarpa 96.81 34⇑ *i*P P **22 09 33.6 -0.4**
TAM Tamanrasset 97.69 63 *e*P P **22 09 39.0 +0.5**
comp=Z,25nm,1.5s,mb5.5
TAM *ep*P pP 22 09 57.2 -0.7
TAM Tamanrasset 97.69 63 *e*P P **22 09 39.0 +0.5**
TAM pmax pmax
comp=Z,25nm,1.5s,mb5.5
DRGR 97.72 35 ⇓P P **22 09 37.5 -0.6**
DRGR 97.72 35⇓ *i*P P **22 09 37.5 -0.7**
BZS Buzias 97.83 36⇑ *i*P P **22 09 38.0 -0.7**
TORD Torodi Ar. Bea 98.01 73 P P **22 09 38.7 -1.4**
comp=Z,3.9nm,1.1s,mb4.9,baz=301,slow=5.1,SNR=18
TORD pP pP 22 09 57.3 -2.3
comp=Z,7.9nm,1.0s,baz=291,slow=5.1,SNR=15
TORD PP PP 22 13 57.2 +18
comp=Z,1.8nm,1.1s,baz=295,slow=8.6,SNR=3.6
TORD PKKPbc PKKPbc 22 26 10.3 -2.4
comp=Z,3.5nm,1.1s,baz=93,slow=2.4,SNR=9.5
TORD PKPPKP 22 34 25.6
comp=Z,2.2nm,1.1s,baz=123,slow=1.7,SNR=5.3
BOD Bodaibo 98.19 342 *e*P P **22 09 38.7 -1.3**
BOD pmax pmax
comp=Z,10.0nm,1.4s,mb5.2
OBN Obninsk 98.27 23⇑ *e*P P **22 09 38.3 -2.1**
OBN *e**PP pP 22 10 03.4 +3.5
OBN *i* 22 13 43.3
OBN *i* S SKSac 22 20 10.6 -1.4
OBN *i* PS PS 22 22 25.0 -10
OBN pmax pmax
comp=Z,37nm,1.4s,mb5.7
OBN MLR MLR
comp=Z,2μm,22.0s
AKASG Malin Array Be 98.45 29 P P **22 09 39.4 -1.9**
comp=Z,6.4nm,0.9s,mb5.2,baz=302,slow=3.6,SNR=17
AKASG PKKPbc PKKPbc 22 26 10.5 -2.0
comp=Z,0.6nm,0.4s,baz=95,slow=1.9,SNR=4.9
AKASG LR LR 22 56 35.3
comp=Z,651nm,20.7s,baz=320,slow=37
AKASG Malin Array Be 98.45 29 P P **22 09 39.4 -1.9**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,651nm,20.7s
BURAR Bucovina Array 98.54 33⇑ P P **22 09 39.5 -2.3**
BURAR Bucovina Array 98.54 33⇑ *i*P P **22 09 39.5 -2.3**
MJAR Matsushiro Arr 101.23 315 P Pdif 22 09 53.8 +0.1
comp=Z,2.3nm,0.7s,baz=23,slow=1.9,SNR=6.4
MJAR PP PP 22 14 04.5 +1.2
comp=Z,3.0nm,0.9s,baz=48,slow=6.4,SNR=4.2
MJAR Matsushiro Arr 101.23 315 P Pdif 22 09 53.8 +0.1
MJAR 22 14 04.5
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MAT Matsushiro 101.23 315 *e*PDI Pdif 22 09 56.5 +2.8
MDJ Mudanjiang 101.58 325 P Pdif 22 09 55.3 +0.1
MDJ AMB AMB
comp=Z,6.0nm,0.5s
MDJ AMB AMB
comp=Z,194nm,4.3s
MDJ LR LR
comp=N,696nm,36.7s
MDJ LR LR
comp=E,296nm,36.7s
MDJ LR LR
comp=Z,737nm,30.3s
KSRS Korea Array 107.24 321 PKKP PKKPab 22 26 01.7 -1.1
comp=Z,0.9nm,0.3s,baz=225,slow=4.6,SNR=5.8
ZALV Zalesovo Beam 107.39 356 Pdiff Pdif 22 10 22.4 +1.4
comp=Z,0.6nm,0.4s,baz=356,slow=6.4,SNR=5.8
ZALV PP PP 22 14 41.6 -6.3
comp=Z,3.3nm,0.9s,baz=353,slow=7.5,SNR=5.1
ZALV PKKPbc PKKPbc 22 25 43.5 -2.9
comp=Z,0.5nm,0.5s,baz=197,slow=1.5,SNR=4.7
ZALV PKKP PKKPab 22 25 58.8 -3.8
comp=Z,5.7nm,1.1s,baz=199,slow=4.1,SNR=12
ZALV Zalesovo Beam 107.39 356 P Pdif 22 10 22.5 +1.5
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV pmax pmax
comp=Z,3.0nm,0.9s
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,6.0nm,1.1s
BRTR Keskin Array B 108.36 35 PKiKP PKiKP 22 14 31.5 0.0
comp=Z,1.4nm,0.9s,baz=202,slow=0.9,SNR=5.1
BRTR PP PP 22 14 50.4 -5.4
comp=Z,2.5nm,0.9s,baz=251,slow=0.6,SNR=6.8
BRTR PKKPbc PKKPbc 22 25 42.2 -0.7
comp=Z,3.0nm,1.1s,baz=157,slow=6.5,SNR=8.1
QSPA South Pole Qui 108.67 180 Pdiff Pdif 22 10 30.7 +4.0
comp=Z,0.9nm,0.3s,baz=116,slow=5.3,SNR=4.8
QSPA PKiKP PKiKP 22 14 30.2 -0.6
comp=Z,0.8nm,0.3s,baz=72,slow=3.8,SNR=3.4
QSPA South Pole Qui 108.67 180 Pdif Pdif 22 10 30.7 +4.0
QSPA PKPdf PKiKP 22 14 30.2 -0.6
QSPA *e*PKiKP PKiKP 22 14 32.3 +1.5
QSPA *e*PP PP 22 14 58.5 +0.6
SONM Songino Array 109.13 340 Pdiff Pdif 22 10 33.3 +4.5
comp=Z,0.6nm,0.7s,baz=17,slow=3.2,SNR=5.5
SONM PKiKP PKiKP 22 14 32.0 -0.7
comp=Z,0.9nm,0.9s,baz=358,slow=5.0,SNR=3.9
SONM PP PP 22 15 01.2 +0.3
comp=Z,1.7nm,1.0s,baz=23,slow=4.7,SNR=3.6
SONM PKKPbc PKKPbc 22 25 38.5 -2.2
comp=Z,4.1nm,1.1s,baz=252,slow=2.9,SNR=14
SONM Songino Array 109.13 340 P Pdif 22 10 33.3 +4.5
SONM 22 15 01.2
SONM 22 25 38.5
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM pmax pmax
comp=Z,4.0nm,1.1s
KIV Kislovodsk 109.53 27 *e*P Pdif 22 10 22.2 -8.4
KIV *e* 22 15 05.1
KIV *e* 22 21 02.7
KIV *e*PS PS 22 24 29.7 -3.4
KIV *e*SS SS 22 30 15.0 -5.4
KIV *e*SSS 22 34 30.6
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,393nm,21.0s
SNAA Sanae 110.40 161 *e*Pdif Pdif 22 10 31.7 -2.7
SNAA *e*PKiKP PKiKP 22 14 30.8 -3.5
SNAA *e*PP PP 22 15 06.4 -4.2
SNAA Sanae 110.40 161 *e*P Pdif 22 10 31.7 -2.7
SNAA *i* 22 14 30.8
SNAA *e* 22 15 06.4
BJI Beijing 111.75 330 PDIF Pdif 22 10 41.0 +0.6
BJI PP PP 22 15 21.8 +1.7
BJI SS SS 22 30 53.0 +2.7
BJI LR LR
comp=N,948nm,19.0s
BJI LR LR
comp=E,653nm,17.6s
BJI LR LR
comp=Z,898nm,20.6s
HHC Hu-ho-hao-te 113.19 333 *e*PKP PKiKP 22 14 40.5 -0.1
HHC XPKP 22 15 06.0
HHC PP PP 22 15 34.5 +4.3
HHC PKS 22 18 16.3
HHC SKS SKSdf 22 21 40.8 -6.0
HHC SKKS SKKSac 22 22 17.8 -9.2
HHC SS SS 22 31 08.3 -0.9
HHC LR LR
comp=N,826nm,23.8s
HHC LR LR
comp=E,577nm,23.8s
HHC LR LR
comp=Z,1μm,25.0s
MKAR Makanchi Array 114.67 357 PKP PKiKP 22 14 42.2 -1.0
comp=Z,1.2nm,0.8s,baz=343,slow=2.2,SNR=6.1
MKAR PKKPbc PKKPbc 22 25 20.7 -1.9
comp=Z,5.7nm,1.0s,baz=160,slow=3.9,SNR=24
MKAR Makanchi Array 114.67 357 PKIKP PKiKP 22 14 42.3 -1.0
MKAR 22 25 20.7
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=Z,6.0nm,1.0s
SSE Sheshan 115.64 320 PKP PKPdf 22 14 42.3 -3.3
SSE SS SS 22 31 39.3 -3.0
SSE LR LR
comp=N,204nm,25.9s
SSE LR LR
comp=E,394nm,26.2s
SSE LR LR
comp=Z,375nm,34.6s
NJ2 Nanjing 116.35 322 *e*PKP PKPdf 22 14 46.0 -0.9
WMQ Urumqi 117.16 352 *e*PKP PKPdf 22 14 47.0 -1.2
WMQ PP PP 22 16 03.0 +5.3
WMQ SKS SKSdf 22 21 48.0 -6.2
WMQ SKKS SKKSac 22 22 45.0 -8.5
WMQ SS SS 22 31 59.0 -1.5
WMQ PP PP
comp=Z,86nm,9.0s
WMQ LR LR
comp=N,2μm,20.0s
WMQ LR LR
comp=E,897nm,20.0s
WMQ LR LR
comp=Z,2μm,20.0s
DRV Dumont d'Urvil 118.22 203 PP PP 22 16 13.0 +7.2
DRV SP SP 22 26 13.0 +30
DRV SS SS 22 32 48.0 +32
DRV R 22 51 00.0
TKM2 Tokmak 2 118.58 2 *e*PKPdf PKPdf 22 14 50.9 -0.1
TKM2 *ep*PKPdf pPKPdf 22 15 09.1 -1.9
EKS2 Erkin-Say 118.74 4 *e*PKPdf PKPdf 22 14 51.9 +0.7
EKS2 *ep*PKPdf pPKPdf 22 15 10.8 -0.6
EKS2 *e*PP PP 22 16 14.4 +5.7
GTA Gaotai 118.78 341 PKP PKPdf 22 14 52.0 +0.6
GTA PP PP 22 16 09.0 -0.2
GTA PP PP
comp=Z,405nm,5.7s
GTA LR LR
comp=N,529nm,21.6s
GTA LR LR
comp=E,386nm,19.5s
GTA LR LR
comp=Z,829nm,20.4s
AAK Ala-Archa 118.81 3 *e*PKPdf PKPdf 22 14 52.5 +1.1

AAK				*e*PKPdf	pPKPdf	22 15 10.6	-1.0
AAK				*e*PP	PP	22 16 14.1	+5.0
AML	**Almayashu**	**119.26**	**4**	*e*PKPdf	PKPdf	22 14 53.4	+1.2
AML				*ep*PKPdf	pPKPdf	22 15 11.4	-1.0
AML				*e*PP	PP	22 16 12.8	+0.5
XAN	**Xi'an**	**120.00 331**		PKP	PKPdf	22 14 53.5	-0.4
XAN				SKS	SKSdf	22 21 59.5	-0.6
XAN				LR	LR		
	comp=N,238nm,29.4s						
XAN				LR	LR		
	comp=E,339nm,25.0s						
XAN				LR	LR		
	comp=Z,1μm,30.0s						
WHN	**Wuhan**	**120.03 324**		PKP	PKPdf	22 14 54.8	+0.7
KSH	**Kashi**	**121.99**	**2**	*e*PKP	PKPdf	22 15 02.0	+4.4
KSH				*e*SKS	SKSdf	22 22 03.0	-0.6
KSH				PP	PP		
	comp=Z,996nm,4.7s						
KSH				LR	LR		
	comp=N,2μm,15.2s						
KSH				LR	LR		
	comp=E,1μm,6.7s						
KSH				LR	LR		
	comp=Z,2μm,9.3s						
STKA	**Stephens Creek**	**122.14 244**		*e*PKP	PKPdf	22 14 57.5	-0.5
	comp=Z,19nm,1.0s						
STKA				*ep*PKP	pPKPdf	22 15 17.2	-0.9
STKA	**Stephens Creek**	**122.14 244**		PKP	PKPdf	22 14 57.7	-0.3
	comp=Z,24nm,1.0s,baz=74,slow=0.9,SNR=22						
STKA				pPKP	pPKPdf	22 15 16.5	-1.6
	comp=Z,18nm,0.9s,baz=59,slow=2.9,SNR=5.6						
STKA	**Stephens Creek**	**122.14 244**		PKP	PKPdf	22 14 57.7	-0.3
STKA				*e*PKPdf	PKPdf	22 14 58.1	+0.1
STKA				pPKP	pPKPdf	22 15 16.5	-1.6
STKA				*ep*PKPdf	pPKPdf	22 15 16.9	-1.2
SYO	**Syowa Base**	**124.34 164**			*iP*	PKPdf	22 15 00.0	-1.1
CD2	**Chengdu**	**124.95 333**		*e*PKP	PKPdf	22 15 04.0	+0.5
CD2				PP	PP	22 16 55.3	+4.0
CD2				SKS	SKSdf	22 22 10.8	+1.3
CD2				SKKS	SKKSac	22 23 42.5	-2.2
CD2				SS	SS	22 33 41.3	+0.3
CD2				PP	PP		
	comp=Z,370nm,5.8s						
CD2				LR	LR		
	comp=N,640nm,19.2s						
CD2				LR	LR		
	comp=E,1μm,16.8s						
CD2				LR	LR		
	comp=Z,1μm,19.2s						
KBL	**Kabul**	**126.25**	**10**	*e*PKPdf	PKPdf	22 15 05.6	-0.3
KBL				*ep*PKPdf	pPKPdf	22 15 23.5	-2.5
WRAB	**Tennant Creek**	**127.45 259**		*e*PKPdf	PKPdf	22 15 08.4	0.0
WRAB				*ep*PKPdf	pPKPdf	22 15 27.5	-1.1
WRAB				*e*PP	PP	22 17 08.0	-1.7
WRA	**Warramunga Arr**	**127.46 259**		PKP	PKPdf	22 15 08.3	-0.2
	comp=Z,24nm,1.1s,baz=72,slow=1.3,SNR=32						
WRA				pPKP	pPKPdf	22 15 27.7	-0.9
	comp=Z,15nm,0.9s,baz=78,slow=2.0,SNR=8.4						
WRA	**Warramunga Arr**	**127.46 259**		PKIKP	PKPdf	22 15 08.3	-0.2
WRA				pmax	pmax		
	comp=Z,24nm,1.1s						
WRA				pmax	pmax		
	comp=Z,15nm,0.9s						
KAKA	**Kakadu**	**127.84 268**		*e*PKP	x	22 14 54.1	
	comp=Z,28nm,1.0s						
KAKA				*ep*PKP	x	22 15 13.4	
ASAR	**Alice Springs**	**128.33 254**		PKHKP		22 14 53.6	
	comp=Z,1.1nm,0.9s,baz=98,slow=3.5,SNR=4.9						
ASAR				PKP	PKPdf	22 15 09.7	-0.4
	comp=Z,12nm,0.9s,baz=94,slow=1.9,SNR=39						
ASAR				pPKP	pPKPdf	22 15 28.1	-2.1
	comp=Z,8.9nm,0.9s,baz=101,slow=2.3,SNR=6.7						
ASAR				PKP2bc		22 28 16.9	
	comp=Z,1.8nm,1.0s,baz=286,slow=3.5,SNR=5.1						
ASAR	**Alice Springs**	**128.33 254**		PKP		22 14 53.6	
ASAR				PKP	PKPdf	22 15 09.7	-0.4
ASAR				pPKP	pPKPdf	22 15 28.1	-2.1
ASAR				⇑*e*		22 28 16.9	
ASAR	**Alice Springs**	**128.33 254**		PKHKP		22 14 53.7	
ASAR						22 15 09.7	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,12nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAW	**Mawson**	**130.16 172**		*e*PKP	PKPdf	22 15 13.3	+1.1
	comp=Z,33nm,1.1s						
MAW				*ep*PKP	pPKPdf	22 15 33.1	+0.7
MAW	**Mawson**	**130.16 172**		PKP	PKPdf	22 15 12.8	+0.6
	comp=Z,41nm,1.1s,baz=216,slow=1.7,SNR=32						
MAW	**Mawson**	**130.16 172**		PKIKP	PKPdf	22 15 12.8	+0.6
MAW				pmax	pmax		
	comp=Z,41nm,1.1s						
LSA	**Lhasa**	**130.29 345**		PKP	PKPdf	22 15 16.0	+2.3
LSA	**Lhasa**	**130.29 345**		*e*PKPdf	PKPdf	22 15 15.2	+1.4
LSA				*ep*PKPdf	pPKPdf	22 15 34.0	+0.1
LSA				*es*PKPdf		22 15 40.5	
LSA				*e*PP	PP	22 17 27.3	+1.1
LSA				*e*SKP		22 18 32.4	
LSA	**Lhasa**	**130.29 345**		*e*PKIKP	PKPdf	22 15 15.2	+1.5
LSA				*e*		22 15 40.5	
LSA				*e*		22 17 27.3	
KMI	**Kunming**	**130.38 331**		PKP	PKPdf	22 15 14.5	+0.5
KMI				PP	PP	22 17 32.3	+5.1
KMI				PKS		22 18 49.5	
KMI				SKKS	SKKSac	22 24 13.0	-6.0
KMI				SS	SS	22 34 48.3	-0.4
KMI				PP	PP		
	comp=Z,311nm,5.8s						
KMI				PP	PP		
	comp=Z,228nm,6.2s						
KMI				LR	LR		
	comp=N,701nm,16.5s						
KMI				LR	LR		
	comp=E,530nm,16.7s						
KMI				LR	LR		
	comp=Z,877nm,20.0s						
SMLA	**Simla**	**130.39**	**1**	*e*P	PKPdf	22 15 15.1	+1.2
BOSA	**Boshof**	**130.65 112**		PKP	PKPdf	22 15 14.5	+0.2
	comp=Z,37nm,1.1s,baz=233,slow=2.5,SNR=12						
BOSA	**Boshof**	**130.65 112**		PKP	PKPdf	22 15 14.5	+0.2
BOSA	**Boshof**	**130.65 112**		PKIKP	PKPdf	22 15 14.5	+0.2
BOSA				pmax	pmax		
	comp=Z,37nm,1.1s						
LBTB	**Lobatse**	**130.81 107**		*e*PKPdf	PKPdf	22 15 15.8	+1.1
LBTB				*ep*PKPdf	pPKPdf	22 15 34.0	-0.8
LBTB				*e*PP	PP	22 17 32.7	+1.0
QIZ	**Qiongzhong**	**131.42 319**		PKP	PKPdf	22 15 15.0	-1.1
QIZ				PP	PP	22 17 37.0	+2.7
QIZ				SS	SS	22 35 04.5	+2.4
QIZ				LR	LR		
	comp=Z,774nm,19.1s						
LSZ	**Lusaka**	**131.94**	**94**	*e*PKPdf	PKPdf	22 15 16.8	-0.3
LSZ				*ep*PKPdf	pPKPdf	22 15 36.0	-1.2
LSZ				*e*PP	PP	22 17 39.0	-0.1
LGTI	**Lohaghat**	**132.04 358**		*ex*	x	22 18 40.0	
NDI	**New Delhi**	**132.82**	**1**	*ex*	x	22 18 40.0	
DANN	**Dangsing**	**132.89 354**		*e*P	PKPdf	22 15 19.1	+0.4
	comp=Z,37nm,0.8s						
GUN	**Gumba**	**133.05 351**		*e*P	PKPdf	22 15 20.0	+1.0
GKN	**Gorkha**	**133.13 352**		*e*P	PKPdf	22 15 18.8	-0.4
PYUN	**Piuthan**	**133.21 354**		*e*P	PKPdf	22 15 19.5	+0.2
	comp=Z,30nm,1.0s						
JIRN	**Jiri**	**133.25 351**		*e*P	PKPdf	22 15 20.6	+1.2
KKN	**Kakani**	**133.26 352**		*e*P	PKPdf	22 15 19.2	-0.2
	comp=Z,26nm,1.0s						
TAPN	**Taplejung**	**133.30 349**		*e*P	PKPdf	22 15 19.8	+0.3
	comp=Z,56nm,0.9s						
PKI	**Pulchoki**	**133.46 351**		*e*P	PKPdf	22 15 20.9	+1.1
DMN	**Daman**	**133.46 352**		*e*P	PKPdf	22 15 20.4	+0.6
KOLN	**Koldanda**	**133.48 354**		*e*P	PKPdf	22 15 19.7	-0.1
ODAN	**Odare**	**133.83 349**		*e*P	PKPdf	22 15 20.5	0.0
RAMN	**Ramite**	**133.88 350**		*e*P	PKPdf	22 15 21.4	+0.8
	comp=Z,32nm,0.7s						
SHL	**Shillong**	**134.04 343**		*e*P	PKPdf	22 15 22.5	+1.6
SHL				*ex*	x	22 18 46.0	
IMP	**Imphal**	**134.17 340**		*i* P	PKPdf	22 15 22.0	+0.8
IMP				*i* x	x	22 18 45.0	
NANT	**Nan**	**136.75 328**		P	PKPdf	22 15 24.0	-2.1
BOK	**Bokaro**	**137.09 350**		*e*P	PKPdf	22 15 29.7	+3.1
BHJ	**Bhuj**	**137.37**	**12**	*e*P	PKPdf	22 15 30.2	+3.0
KAPI	**Kappang**	**137.46 283**		*e*PKPdf	PKPdf	22 15 26.6	-0.9
KAPI				*ep*PKPdf	pPKPdf	22 15 45.5	-2.2
CHG	**Chiang Mai**	**137.58 331**		||*P*	PKPdf	22 15 27.4	-0.3
	comp=Z,76nm,1.0s						
CHTO	**Chiang Mai**	**137.58 331**		*e*PKPdf	PKPdf	22 15 26.7	-0.9
CHTO				*ep*PKPdf	pPKPdf	22 15 46.5	-1.2
CHTO				*e*PP	PP	22 18 12.0	-1.0
CMAR	**Chiang Mai Arr**	**137.89 330**		PKhKP		22 15 18.7	
	comp=Z,0.9nm,0.3s,baz=349,slow=2.4,SNR=11						
CMAR				PKP	PKPdf	22 15 28.1	-0.1
	comp=Z,7.4nm,0.9s,baz=350,slow=2.7,SNR=23						
CMAR				pPKP	pPKPdf	22 15 47.0	-1.4
	comp=Z,10nm,0.7s,baz=332,slow=2.3,SNR=6.4						
CMAR				SKPbc	SKPbc	22 18 57.0	+0.8
	comp=Z,9.7nm,1.1s,baz=357,slow=3.1,SNR=7.9						
CMAR	**Chiang Mai Arr**	**137.89 330**		PKHKP		22 15 18.7	
CMAR						22 15 28.1	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR				pmax	pmax		
	comp=N,10.0nm,1.2s						
BDT	**Bhumibol Dam**	**138.91 329**		P	PKPdf	22 15 30.0	-0.1
NGP	**Nagpur**	**140.34 359**		*ex*	x	22 15 32.6	
AKL	**Akola**	**140.76**	**2**	*e*P	PKPdf	22 15 36.9	+3.4
AKL				AMb	AMB	22 15 53.6	
	comp=Z,37nm,1.3s						
MBWA	**Marble Bar**	**141.19 259**		*e*PKPpre		22 15 26.7	
KLBR	**Kellerberrin**	**142.40 242**		*e*PKP	PKPdf	22 15 31.2	-4.8
	comp=Z,40nm,1.2s						
POO	**Poona**	**142.67**	**7**	*ex*	x	22 14 51.3	
KSM	**Kuching**	**142.78 299**		*e*PKPdf	PKPdf	22 15 33.3	-3.9
KSM				*ep*PKPdf	pPKPdf	22 15 55.4	-1.9
MUN	**Mundaring**	**143.61 241**		*e*PKP	PKPdf	22 15 34.9	-3.2
HYB	**Hyderabad**	**144.05 360**		*e*P	PKPdf	22 15 36.0	-3.3
HYB	**Hyderabad**	**144.05 360**		*i* PKP	PKPdf	22 15 36.0	-3.3
HYB				*ep*PKP	pPKPdf	22 15 54.0	-5.5
HYB				*e*		22 16 02.0	
GOA	**Goa**	**145.66**	**8**	*e*P	PKPdf	22 15 45.8	+3.6
KTGM	**Kuala Trenggan**	**145.87 312**		||*P*	PKPdf	22 15 35.2	-7.4
KULM	**Kulim**	**147.60 315**		||*P*	PKPdf	22 15 46.4	+0.9
KULM	**Kulim**	**147.60 315**		⇑*S*		22 16 04.4	
MYKOM	**Kota Tinggi**	**147.73 307**		⇑*P*	PKPdf	22 15 49.4	+3.6
IPM	**Ipoh**	**147.94 314**		||*P*	PKPdf	22 15 42.7	-3.3
KGM	**Kluang**	**147.99 308**		⇑*P*	PKPbc	22 15 48.1	-1.1
MNGI	**Mangalore**	**148.30**	**7**	*e*P	PKPbc	22 15 49.6	-0.4
MDRS	**Chennai**	**148.33 357**		*ex*	x	22 15 30.5	
FRIM	**Kepong**	**148.40 311**		⇑*P*	PKPdf	22 15 43.4	-3.4
ABPO	**Ambohimpanom**	**150.48**	**96**	*e*PKPdf	PKPdf	22 15 50.3	+0.3
ABPO				*e*PKPbc	PKPbc	22 15 56.6	+1.3
ABPO				*e*		22 16 16.1	
KOD	**Kodaikanal**	**151.18**	**2**	*e*P	PKPdf	22 15 52.7	+1.5
XMIS	**Christmas Isla**	**152.45 284**		*e*PKP	PKPbc	22 16 00.3	+0.3
XMIS				*ep*PKP	pPKPdf	22 16 19.3	+6.1
XMIS	**Christmas Isla**	**152.45 284**		*e*PKPdf	PKPdf	22 15 54.2	+1.2
XMIS				*e*PKPbc	PKPbc	22 16 00.1	+0.1
XMIS				*ep*PKP	pPKPdf	22 16 12.6	-0.7
XMIS				*es*PKP		22 16 19.2	
TRD	**Trivandrum**	**152.87**	**3**	*ex*	x	22 15 05.0	
MSEY	**Mahe Island**	**153.57**	**61**	*e*PKPdf	PKPdf	22 15 55.9	+1.2
MSEY				*e*PKPbc	PKPbc	22 16 03.8	+1.3
MSEY				*ep*PKP	pPKPdf	22 16 15.4	+0.5

NEIC ***26*** *22:04:33.9, 1867N×101.74W, h66km, MD4.5(MEX), After MEX.*

MEX 26 22:04:34.1±0.8, 1867N×10172W, h65km±14km, MD4.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.09**	**167**	*i* P	Pn	22 04 51.3	-2.1
ZIIG				*i* S	Sn	22 05 06.8	-1.0
MOIG	**Morelia**	**1.12**	**26**	*i* P	Pn	22 04 52.5	-1.4
MOIG				*i* S	Sn	22 05 07.6	-1.0
MMIG	**Aquila**	**1.59**	**256**	*i* P	Pn	22 04 59.3	-0.9
MMIG				*i* S	Sn	22 05 17.1	-2.7
PLIG	**Platanillo**	**2.12**	**97**	*i* P	Pn	22 05 05.9	-1.3
PLIG				*i* S	Sn	22 05 30.0	-2.5
CAIG	**El Cayaco**	**2.12**	**139**	*i* P	Pn	22 05 05.4	-2.0
CAIG				*i* S	Sn	22 05 31.5	-1.2
SFJM	**Santa Fe**	**2.19**	**326**	*i* P	Pn	22 05 07.9	-0.4
SFJM				*i* S	Sn	22 05 32.3	-2.1
MZVM		**2.41**	**77**	*i* P	Pn	22 05 09.7	-1.4
MZVM				*i* S	Sn	22 05 37.5	-2.1
ACX	**Acapulco**	**2.48**	**136**	*i* P	Pn	22 05 10.5	-1.7
ACX				*i* S	Sn	22 05 37.9	-3.5
UNM	**Universidad Na**	**2.49**	**74**	*e*P	Pn	22 05 12.2	-0.1
UNM				*i* S	Sn	22 05 40.9	-0.6
YAIG	**Yautepec**	**2.52**	**85**	*e*P	Pn	22 05 13.2	+0.5
YAIG				*i* S	Sn	22 05 46.7	+4.5
YAIG	**Yautepec**	**2.52**	**85**	*e*P	Pn	22 05 13.2	+0.5
YAIG				*i* S	Sn	22 05 41.0	-1.2
PTVM	**Pico Tres Padr**	**2.62**	**69**	*e*P	Pn	22 05 12.8	-1.3
PTVM				*i* S	Sn	22 05 43.7	-1.2
PPM	**Popocatepetl**	**2.95**	**82**	*e*P	Pn	22 05 18.4	-0.2
PPM				*e*P		22 05 21.0	
PPM				*i* S	Sn	22 05 51.8	-1.1
PPM				*i* S	Sn	22 05 55.1	+2.2
PPM	**Popocatepetl**	**2.95**	**82**	*e*P	Pn	22 05 18.4	-0.2
PPM				*e*P		22 05 21.0	
PPM				*i* S	Sn	22 05 51.8	-1.1
PPM				*i* S	Sn	22 05 53.9	+1.1
IIO	**Organos**	**2.97**	**72**	*i* P	Pn	22 05 17.8	-1.1
IIO				*i* S	Sn	22 05 50.8	-2.6
DEIG	**Demacu**	**3.00**	**57**	*e*P	Pn	22 05 15.7	-3.6
CJM	**Chamela**	**3.25**	**285**	*i* P	Pn	22 05 22.2	-0.5
CJM				*i* S	Sn	22 05 57.5	-2.7
ANIG	**Ahuacatlan**	**3.55**	**312**	*e*P	Pn	22 05 24.2	-2.5
ANIG				*i* S	Sn	22 06 05.5	-2.0
UTMO	**Huajuapan**	**3.81**	**102**	*e*P	Pn	22 05 30.2	-0.1
UTMO				*i* S	Sn	22 06 13.0	-0.9
PNIG	**Pinotepa**	**4.11**	**123**	*e*P	Pn	22 05 33.6	-0.8
PNIG				*i* S	Sn	22 06 19.8	-1.4
ZAIG	**Zacatecas**	**4.15**	**349**	*i* P	Pn	22 05 33.6	-1.4
ZAIG				*i* S	Sn	22 06 20.3	-2.1
VHO	**Vista Hermosa**	**5.00**	**108**	*e*P	Pn	22 05 47.2	+0.6
VHO				*i* S	Sn	22 06 43.8	+0.6
CMIG	**Matias Romero**	**6.69**	**103**	*e*P	Pn	22 06 05.9	-3.9
CMIG				*i* S	Sn	22 07 23.5	-1.2

NEIC 26 22:35:03.1, 4503S×16751E, h80km, ML4.1(WEL), 1C-2D, After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.46**	**40**	P	Pn	22 35 16.2	-0.3
MSZ				S	Sn	22 35 26.9	+0.5
DCZ	**Deep Cove**	**0.51**	**209**	P	Pn	22 35 16.6	-0.3
DCZ				S	Sn	22 35 26.9	-0.3
MLZ	**Mavora Lakes**	**0.57**	**124**	||*P*	Pn	22 35 17.1	-0.3
MLZ				S	Sn	22 35 27.2	-0.8
WHZ	**Wether Hill Ro**	**0.92**	**161**	P	Pn	22 35 21.1	0.0
WKZ	**Wanaka**	**1.09**	**80**	P	Pn	22 35 23.2	0.0
EAZ	**Earnscleugh**	**1.29**	**100**	P	Pn	22 35 25.4	-0.3
JCZ	**Jackson Bay**	**1.31**	**44**	||*P*	Pn	22 35 25.5	-0.4
TUZ	**Tuapeka**	**1.76**	**123**	P	Pn	22 35 31.4	-0.3
ODZ	**Otahua Downs**	**2.22**	**92**	⇑*P*	Pn	22 35 36.8	-1.1
RPZ	**Rata Peaks**	**2.86**	**64**	P	Pn	22 35 44.1	-2.4

ISCJB ***26*** *23:05:55.3±0.4, 3581N×003.4×140.42E±0.04, h41km±4km, mb4.0/19, Error ellipse: s-maj=6.5km s-min=5.0km az=140.5*

NEIC ***26*** *23:05:57.0±1.6, 3567N×140.26E, h41km±12km, mb4.5/8, MW4.0(NIED), Error ellipse: s-maj=13.5km s-min=11.0km az=120.0*

NEIC Recorded [1 JMA] in Chiba and Ibaraki Prefectures.

JMA ***26*** *23:05:56.1±0.1, 3587N×140.49E, h34km±1km, M3.9 Broadband fault plane solution: P waves. NP1: ϕs225.00000°, δ39.00000°, λ77.00000°. NP2:ϕs61.00000°, δ53.00000°, λ100.00000°. Principal axes: T Plg79.0000°, Azm13.0000°; N Plg8.0000°, Azm235.0000°; P Plg7.0000°, Azm144.0000°;*

JMA Felt I J1.

MOS ***26*** *23:05:56.5±1.2, 3564N×140.20E, h54km, mb4.2/12 Error ellipse: s-maj=22.0km s-min=10.4km az=43.4*

IDC ***26*** *23:05:57.5±2.2, 3571N×140.24E, h43km±20km, mb3.7/11, mb1 3.9/13, mb1mx3.8/24, mbtmp3.8/13, ML4.2/2, Error ellipse: s-maj=25.0km s-min=7.0km az=60.0*

NIED ***26*** *23:06:00, 3590N×140.60E, h47km, Mw4.0 Best double couple: M0 1.13000×10^15 NP1:ϕs66.00000°, δ68.00000°, λ75.00000°. NP2:ϕs281.00000°, δ26.00000°, λ122.00000°.*

ISC 26 23:05:55.9±0.5, 3582N±003×14042E±005, h30km±4km, n59, σ1.906/70, mb4.0/19, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.38**	**108**	P	**Pb**	**23 06 04.1**	**-0.3**
CHOJ				*e*S	**Sb**	**23 06 10.1**	**-0.2**
JCN	**Nagara**	**0.44**	**203**	⇑P	**Pb**	**23 06 07.6**	**+2.3**
JYT	**Yasato**	**0.44**	**336**	||*P*	**Pb**	**23 06 05.6**	**+0.2**
JYT				*e*S	**Sb**	**23 06 12.3**	**+0.3**
JHO	**Hitachi**	**0.80**	**9**	||*P*	**Pn**	**23 06 09.7**	**-1.4**
JHO				*e*S	**Sb**	**23 06 19.6**	**-2.1**
BSO4	**Boso 4**	**0.83**	**184**	P	**Pn**	**23 06 12.4**	**+0.9**
JHU	**Hanno**	**0.92**	**272**	P	**Pn**	**23 06 13.2**	**+0.5**
JHU				*e*S	**Sn**	**23 06 25.7**	**+0.7**
JAG	**Ashikaga**	**0.98**	**308**	P	**Pn**	**23 06 13.3**	**-0.3**
JAG				*e*S	**Sn**	**23 06 25.9**	**-0.6**
BSO3	**Boso 3**	**1.02**	**176**	P	**Pn**	**23 06 14.2**	**+0.1**
MJAR	**Matsushiro Arr**	**1.92**	**293**	P	**Pn**	**23 06 27.4**	**+0.8**
	12nm,0.3s,baz=91,slow=8.2,SNR=66						
MJAR				S	**Sn**	**23 06 47.9**	**-1.8**
	13nm,0.3s,baz=122,slow=16,SNR=10						
MJAR	**Matsushiro Arr**	**1.92**	**293**	P	**Pn**	**23 06 27.4**	**+0.8**
MJAR				S	**Sn**	**23 06 47.9**	**-1.8**
MJAR	**Matsushiro Arr**	**1.92**	**293**	P	**Pn**	**23 06 27.4**	**+0.9**
MJAR				S	**Sn**	**23 06 47.9**	**-1.8**
MJAR				pmax	pmax		
	comp=Z,12nm,0.3s						
MJAR				smax			
	comp=N,13nm,0.3s						
MAJO	**Matsushiro**	**1.93**	**293**	*e*Pn	**Pn**	**23 06 27.4**	**+0.8**
MAJO				Sn	**Sn**	**23 06 49.1**	**-0.6**
MAT	**Matsushiro**	**1.93**	**293**	P	**Pn**	**23 06 28.1**	**+1.5**
MAT				*e*S	**Sn**	**23 06 53.3**	**+3.5**
JHJ	**Hachijo jima 2**	**2.75**	**191**	P	**Pn**	**23 06 37.5**	**-0.4**
	comp=N,47nm,0.3s,baz=67,slow=15,SNR=9.9						
JHJ				S	**Sn**	**23 07 08.0**	**-2.0**
	comp=N,66nm,0.3s,baz=296,slow=22,SNR=8.3						
CBIJ	**Chichi jima**	**8.83**	**170**	P	**Pn**	**23 08 00.2**	**-1.2**
	comp=N,12nm,0.3s,baz=274,slow=22,SNR=5.4						
INCN	**Inchon**	**11.20**	**283**	Pn	**Pn**	**23 08 34.2**	**+0.4**
MDJ	**Mudanjiang**	**12.06**	**320**	Pn	**Pn**	**23 08 44.7**	**-0.9**
BJT	**Baijiatuan**	**19.56**	**290**	*e*P	**Pn**	**23 10 19.0**	**-3.6**
	comp=N,14nm,0.4s						
BJT	**Baijiatuan**	**19.56**	**290**	*e*P	**Pn**	**23 10 19.0**	**-3.6**
BJT				pmax	pmax		
	comp=Z,14nm,0.4s						
NACB	**Ninganchiao**	**19.97**	**240**	P	**Pn**	**23 10 22.5**	**-5.0**
ENH	**Enshi**	**26.44**	**267**	*e*P	**P**	**23 11 29.9**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.2						
YAK	**Yakutsk**	**27.09**	**349**	*e*P	**P**	**23 11 36.7**	**+1.2**
	comp=Z,20nm,0.8s,mb4.7						
YAK	**Yakutsk**	**27.09**	**349**	*e*P	**P**	**23 11 36.7**	**+1.1**
YAK				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**27.40**	**306**	*e*P	**P**	**23 11 39.0**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.5						
ULN	**Ulaanbaatar**	**27.40**	**306**	*e*P	**P**	**23 11 39.0**	**+0.5**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
SONM	**Songino Array**	**27.82**	**306**	P	**P**	**23 11 42.1**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.5,baz=107,slow=8.5,SNR=8.3						
SONM	**Songino Array**	**27.82**	**306**	P	**P**	**23 11 42.1**	**-0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHTO	**Chiang Mai**	**40.22**	**256**	*e*P	**P**	**23 13 27.7**	**-2.1**
	comp=Z,35nm,2.7s,mb4.6						
CHTO	**Chiang Mai**	**40.22**	**256**	*e*P	**P**	**23 13 27.7**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,35nm,2.7s,mb4.6						
LSA	**Lhasa**	**41.53**	**276**	P	**P**	**23 13 39.8**	**-0.8**
ZALV	**Zalesovo Beam**	**42.15**	**313**	P	**P**	**23 13 45.5**	**+0.2**
	comp=Z,1.5nm,0.7s,mb3.7,baz=94,slow=6.4,SNR=8.4						
ZALV	**Zalesovo Beam**	**42.15**	**313**	P	**P**	**23 13 45.5**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
MKAR	**Makanchi Array**	**44.09**	**303**	P	**P**	**23 14 01.1**	**0.0**
	comp=Z,1.5nm,0.9s,mb3.7,baz=93,slow=9.6,SNR=11						
MKAR	**Makanchi Array**	**44.09**	**303**	P	**P**	**23 14 01.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**46.06**	**309**	*e*P	**P**	**23 14 16.5**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.4						
KURK	**Kurchatov**	**46.06**	**309**	*e*P	**P**	**23 14 16.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**49.51**	**299**	*e*P	**P**	**23 14 42.5**	**-1.0**
	comp=Z,1.9nm,0.6s,mb4.3						
TKM2	**Tokmak 2**	**49.51**	**299**	*e*P	**P**	**23

KBL					*e*S		**S**	**23 27 28.1**	**-0.7**
KK31	**Karatay Array**	**6.57**	**355**	⇑Pn			**Pn**	**23 27 39.2**	**-0.7**
	1.1nm,0.3s,baz=175,slow=12								
KK31				⇑Sn			**S**	**23 28 49.3**	**-6.1**
	4.2nm,0.5s,baz=187,slow=23								
AAK	**Ala-Archa**	**6.58**	**21**	*e*Pn			**Pn**	**23 27 40.5**	**+0.5**
	3.7nm,0.6s								
AAK					*e*S		**S**	**23 28 54.7**	**-0.8**
AAK	**Ala-Archa**	**6.58**	**21**	*e*PN			**Pn**	**23 27 40.5**	**+0.5**
AAK					*e*S		**S**	**23 28 54.7**	**-0.8**
AAK					pmax	pmax			
	comp=Z,4.0nm,0.6s								
TKM2	**Tokmak 2**	**7.20**	**26**	⇑Pn			**Pn**	**23 27 48.8**	**+0.8**
	comp=Z,9.3nm,0.7s								
TKM2				⇓Sn			**S**	**23 29 05.1**	**-4.8**
	comp=Z,2.7nm,0.8s								
MK31	**Makanchi Array**	**13.14**	**35**	*e*Pn			**Pn**	**23 29 02.7**	**-1.0**
MKAR	**Makanchi Array**	**13.14**	**35**	P			**Pn**	**23 29 04.7**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=7.8								
KURK	**Kurchatov**	**15.13**	**18**	P			**Pn**	**23 29 26.1**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=3.9								
AB09	**Akbulak array**	**15.15**	**331**	⇓Pn			**Pn**	**23 29 29.4**	**+0.9**
	comp=Z,0.4nm,0.5s								
BRVK	**Borovoye**	**16.52**	**358**	*e*P			**P**	**23 29 43.9**	**+0.2**
	comp=Z,1.2nm,0.6s								
BRVK	**Borovoye**	**16.52**	**358**	*e*P			**P**	**23 29 43.9**	**+0.3**
BRVK					pmax	pmax			
	comp=Z,1.0nm,0.6s								
AKTK	**Aktyubinsk**	**16.84**	**330**	P			**P**	**23 29 47.5**	**+0.3**
AKTO	**Aktyubinsk**	**16.84**	**330**	P			**P**	**23 29 47.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=5.6								
ZALV	**Zalesovo Beam**	**19.79**	**24**	P			**P**	**23 30 19.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=213,slow=12,SNR=5.3								
ZALV	**Zalesovo Beam**	**19.79**	**24**	P			**P**	**23 30 19.6**	**+0.6**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
TIRR	**Tirgusor**	**33.20**	**297**	P			**P**	**23 32 20.6**	**-1.0**
ARCES	**ARCESS Array B**	**41.18**	**338**	P			**P**	**23 33 29.5**	**+1.4**
	comp=Z,3.8nm,0.9s,mb3.8,baz=125,slow=7.9,SNR=4.4								
ARCES	**ARCESS Array B**	**41.18**	**338**	P			**P**	**23 33 29.5**	**+1.3**
ARCES					pmax	pmax			
	comp=Z,4.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P			**P**	**23 36 27.0**	**-1.3**
	comp=Z,0.2nm,0.5s,mb3.0,baz=54,slow=5.7,SNR=4.7								
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P			**P**	**23 36 27.0**	**-1.3**

GUC 26 23:30:18.8±0.6, 2280S×7063W, h33km±3km, ML3.6, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.35**	**151**	⇓*i*P		Pb	23 30 26.7	-0.5
MECH				*i* S		Sb	23 30 33.0	0.0
MECH				AML		AML	23 30 33.7	
	comp=E,12μm,0.2s							
CEN1	**Los Morros**	**0.71**	**146**	⇑*i*P		Pn	23 30 33.7	+1.2
CEN1				*i* S		Sn	23 30 45.0	+2.8
CEN1				AML		AML	23 30 46.0	
	comp=E,896nm,0.3s							
TOCH	**Tocopilla**	**0.81**	**30**	*e*P		Pn	23 30 33.5	-0.3
TOCH				*i* S		Sn	23 30 44.5	-0.1
TOCH				AML		AML	23 30 46.9	
	comp=E,8μm,0.2s							
ANCH	**Antofagasta**	**0.90**	**167**	⇑*i*P		Pn	23 30 34.9	-0.2
ANCH				*i* S		Sn	23 30 46.9	-0.2
PECH	**Pedro de Valdi**	**0.90**	**77**	⇑*i*P		Pn	23 30 35.3	+0.1
PECH				*i* S		Sn	23 30 47.9	+0.8
PECH				AML		AML	23 30 49.7	
	comp=N,5μm,0.2s							
MACH	**Maria Elena**	**1.00**	**54**	⇓*i*P		Pn	23 30 37.0	+0.5
MACH				*i* S		Sn	23 30 50.9	+1.4
LVC	**Limon Verde**	**1.60**	**84**	⇑*i*P		Pn	23 30 46.8	+2.1
LVC				*i* S		Sn	23 31 08.3	+4.1
CPN1	**Cerro Paranal**	**1.83**	**174**	*e*P		Pn	23 30 47.9	0.0

*ISCJB **26** 23:38:39.0±0.7, 558S×0.1×255W×0.2, h10km, mb4.1/9, Error ellipse: s-maj=16.3km s-min=15.4km az=19.9*
*IDC **26** 23:38:41.8±0.9, 5607S×2665W, h0km, mb4.1/5, mb1 4.1/5, mb1mx4.0/15, mbtmp4.1/5, Error ellipse: s-maj=36.0km s-min=22.6km az=60.0*
*NEIC **26** 23:38:44.6±0.6, 5580S×2547W, h35km, mb3.9/6, Error ellipse: s-maj=15.1km s-min=14.0km az=176.0*
ISC 26 23:38:41.1±0.7, 558S±01×255W±02, h10km, n15, σ0↟90/13, mb4.1/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**18.61**	**158**	*e*P		**Pn**	**23 42 57.1**	**-1.3**
	2.2nm,0.7s							
PMSA	**Palmer Station**	**20.80**	**229**	*e*P		**P**	**23 43 23.1**	**+0.9**
	12nm,0.6s							
MAW	**Mawson**	**39.79**	**143**	P		**P**	**23 46 17.0**	**+3.4**
	1.2nm,0.7s,mb3.8,baz=262,slow=7.1,SNR=4.7							
BOSA	**Boshof**	**44.97**	**74**	*e*P		**P**	**23 46 56.5**	**+0.3**
	20nm,1.4s,mb4.8							
LVC	**Limon Verde**	**46.01**	**298**	P		**P**	**23 47 04.1**	**-0.4**
	4.2nm,0.6s,mb4.5,baz=124,slow=5.4,SNR=11							
LVC	**Limon Verde**	**46.01**	**298**	*e*P		**P**	**23 47 04.1**	**-0.4**
	2.9nm,0.4s,mb4.6							
VNDA	**Vanda**	**46.89**	**182**	P		**P**	**23 47 10.7**	**-0.1**
	2.0nm,0.8s,mb4.1,baz=185,slow=5.2,SNR=7.9							
SIV	**San Ignacio**	**48.11**	**311**	P		**P**	**23 47 19.8**	**-1.1**
	0.8nm,0.6s,mb4.0,baz=146,slow=9.0,SNR=3.6							
TSUM	**Tsumeb**	**48.71**	**59**	*e*P		**P**	**23 47 25.2**	**-0.4**
	0.5nm,0.4s,mb3.9							
LSZ	**Lusaka**	**57.38**	**67**	*e*P		**P**	**23 48 30.2**	**+0.7**
	0.5nm,0.5s,mb3.8							
OTAV	**Otavalo**	**70.32**	**302**	P		**P**	**23 49 55.4**	**+0.7**
MBAR	**Mbarara**	**71.17**	**61**	*e*P		**P**	**23 49 53.3**	**-6.7**
	1.4nm,0.7s,mb4.0							
TORD	**Torodi Ar. Bea**	**72.35**	**28**	P		**P**	**23 50 13.2**	**+6.3**
	1.0nm,0.4s,mb4.1,baz=199,slow=6.3,SNR=34							
YKA	**Yellowknife Ar**	**136.62**	**317**	PKP		PKPdf	23 58 02.8	+1.0
	0.2nm,0.4s,baz=133,slow=2.0,SNR=6.1							
SONM	**Songino Array**	**149.75**	**85**	PKPbc		PKPbc	23 58 33.0	+3.0
	0.4nm,0.5s,baz=220,slow=4.1,SNR=6.1							

*CSEM **27** 00:12:34.6±1.6, 3658N×730W, h45km, mb3.8/6, Error ellipse: s-maj=16.5km s-min=6.8km az=39.0, After MDD*
*NEIC **27** 00:12:34.6, 3658N×730W, h45km, MG3.8(MDD), After MDD.*
INMG 27 00:12:32.9±1.2, 3652N×729W, h16km±3km, ML1.8, Error ellipse: s-maj=3.7km s-min=2.1km az=13.0, Strait of Gibraltar
MDD 27 00:12:34.4±1.4, 3657N×734W, h45km±44km, mb3.3/3, 1D, Error ellipse: s-maj=15.2km s-min=8.0km az=15.0, PRIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERIP	**Rio Piedras**	**0.80**	**5**	P		Pn	00 12 48.6	-0.7
	21nm,0.1s,SNR=18							
ERIP				S		Sn	00 12 59.5	-0.6
	56nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**0.96**	**353**	P		Pn	00 12 51.1	-0.4
	10nm,0.1s,SNR=18							
EGRO				S		Sn	00 13 03.1	-1.0
	12nm,0.1s,SNR=16							
EGRO	**El Granado**	**0.96**	**353**	⇓P		Pn	00 12 51.1	-0.4
	10nm,0.1s,SNR=18							
EGRO				S		Sn	00 13 03.1	-1.0
	12nm,0.1s,SNR=16							
ESPR	**Espera**	**1.23**	**76**	P		Pn	00 12 55.1	0.0
	1.6nm,0.1s,SNR=6.4							
ESPR				S		Sn	00 13 08.6	-1.9
	2.1nm,0.1s,SNR=5.5							
ESPR	**Espera**	**1.23**	**76**	P		Pn	00 12 55.1	0.0
	1.6nm,0.1s,SNR=6.4							
ESPR				S		Sn	00 13 08.6	-2.0
	2.1nm,0.1s,SNR=5.5							
MORF	**Marmelete**	**1.28**	**305**	P		Pn	00 12 55.0	-0.8
EMIN	**Mina Concepcio**	**1.31**	**24**	P		Pn	00 12 55.6	-0.5
EMIN				S		Sn	00 13 10.8	-1.7
EMIN	**Mina Concepcio**	**1.31**	**24**	P		Pn	00 12 55.6	-0.6
	0.7nm,0.1s,SNR=10							
EMIN				S		Sn	00 13 10.8	-1.6
	1.7nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**1.31**	**24**	P		Pn	00 12 55.6	-0.5
	0.7nm,0.1s,SNR=10							
EMIN				S		Sn	00 13 11.7	-0.7
	1.7nm,0.2s,SNR=7.9							
EJIF	**Jimena Fronter**	**1.51**	**94**	P		Pn	00 12 58.1	-0.9
	0.7nm,0.2s,SNR=7.9							
EJIF				S		Sn	00 13 14.1	-3.4
	1.8nm,0.4s,SNR=7.9							
EMIJ	**Mijas**	**2.07**	**90**	S		Sn	00 13 28.3	-2.8
	0.5nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**2.19**	**7**	P		Pn	00 13 07.5	-0.8
	0.8nm,0.1s,SNR=7.9							
EBAD				S		Sn	00 13 31.7	-2.5
	1.1nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**2.19**	**7**	P		Pn	00 13 07.5	-0.8
	0.8nm,0.1s,SNR=7.9							
EBAD				S		Sn	00 13 31.7	-2.5
	1.1nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**2.72**	**53**	P		Pn	00 13 07.5	-8.0
	SNR=7.9							
EADA				S		Sn	00 13 44.6	-2.5
	0.2nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**2.72**	**53**	P		Pn	00 13 07.5	-8.0
	SNR=7.9							
EADA				S		Sn	00 13 44.6	-2.5
	0.2nm,0.2s,SNR=7.9							
EQES	**Quesada**	**3.62**	**69**	P		Pn	00 13 28.0	0.0
	0.1nm,0.1s,SNR=7.9							
EQES				S		Sn	00 14 06.7	-2.8
	0.1nm,0.2s,SNR=7.9							
EQES	**Quesada**	**3.62**	**69**	P		Pn	00 13 28.0	+0.1
	0.1nm,0.1s,SNR=7.9							
EQES				S		Sn	00 14 06.7	-2.7
	0.1nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**3.99**	**70**	P		Pn	00 13 34.2	+1.2
EHUE				S		Sn	00 14 14.2	-4.2
EHUE	**Huescar**	**3.99**	**70**	S		Sn	00 14 14.2	-4.2
	0.1nm,0.1s,SNR=7.9							
ETOB	**Tobarra**	**5.04**	**64**	P		Pn	00 13 45.4	-2.1
ETOB				S		Sn	00 14 40.4	-4.0
ETOB	**Tobarra**	**5.04**	**64**	S		Sn	00 14 40.4	-4.0
	0.2nm,0.2s,SNR=7.9							
ETOB	**Tobarra**	**5.04**	**64**	S		Sn	00 14 40.4	-4.0
	0.2nm,0.2s,SNR=7.9							
ELOB	**Lobios**	**5.32**	**354**	P		Pn	00 13 50.3	-0.9
ELOB				S		Sn	00 14 47.4	-3.6
ECAL	**Calabor**	**5.38**	**5**	P		Pn	00 13 50.6	-1.4
ECAL				S		Sn	00 14 47.8	-4.9

*GUC **27** 00:48:37.1±1.6, 2276S×7076W, h23km±16km, ML4.6*
*NEIC **27** 00:48:37.5, 2273S×7071W, h34km, mb4.7/18, ML4.5(GUC), After GUC.*
*ISCJB **27** 00:48:37.6±0.6, 2272S±003×7071W±004, h28km±4km, mb4.7/32, MS4.2/6, Error ellipse: s-maj=5.6km s-min=4.5km az=0.5*
*IDC **27** 00:48:38.7±2.9, 2265S×7057W, h24km±18km, mb4.3/14, mb1 4.5/18, mb1mx4.4/24, mbtmp4.3/18, ML4.2/4, MS3.9/8, Ms1 3.9/8, ms1mx3.6/26, Error ellipse: s-maj=18.7km s-min=13.7km az=45.0*
*MOS **27** 00:48:38.5±1.2, 2260S×7057W, h33km, mb4.7/20, Error ellipse: s-maj=18.5km s-min=7.8km az=108.0*
*BJI **27** 00:48:42.5, 2270S×7070W, h34km, mB5.0, Ms5.5, Msz5.1*
ISC 27 00:48:37.9±0.7, 2273S±002×7066W±003, h17km±4km, n178, σ1↟04/153, mb4.7/32, MS4.2/6, 5C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.42**	**153**	⇓*i*P		**Pg**	**00 48 46.6**	**+0.2**
MECH				*i* S		**Sg**	**00 48 54.0**	**+1.8**
MECH				AML		AML	00 49 01.5	
	comp=N,51μm,0.6s							
TOCH	**Tocopilla**	**0.76**	**34**	⇓*i*P		**Pg**	**00 48 51.9**	**-0.8**
TOCH				*i* S		**Sg**	**00 49 02.9**	**+0.1**
TOCH				AML		AML	00 49 05.5	
	comp=E,44μm,0.7s							
CEN1	**Los Morros**	**0.78**	**147**	⇑*i*P		**Pg**	**00 48 53.7**	**+0.6**
CEN1				*i* S		**Sg**	**00 49 06.5**	**+2.9**
PECH	**Pedro de Valdi**	**0.92**	**82**	⇓*e*P		**Pb**	**00 48 55.1**	**-0.3**
PECH				*i* S		**Sb**	**00 49 08.2**	**+0.9**
ANCH	**Antofagasta**	**0.98**	**167**	⇑*i*P		**Pb**	**00 48 56.0**	**-0.3**
ANCH				*i* S		**Sb**	**00 49 08.8**	**-0.2**
MACH	**Maria Elena**	**0.99**	**58**	*i* P		**Pb**	**00 48 56.4**	**-0.1**
MACH				*i* S		**Sb**	**00 49 10.7**	**+1.4**
PB06	**Plate Boundary**	**1.00**	**89**	*e*P		**Pb**	**00 48 56.5**	**-0.3**
PB06				*i* S		**Sb**	**00 49 10.7**	**+1.0**
PB04	**Plate Boundary**	**1.18**	**67**	*e*P		**Pn**	**00 48 50.3**	**-9.2**
PB04				*i* S		**Sb**	**00 48 59.4**	**-15**
PB04				AML		AML	00 49 05.0	
	comp=N,99μm,0.6s							
PB07	**Plate Boundary**	**1.23**	**36**	⇓*e*P		**Pn**	**00 48 59.7**	**-0.6**
PB07				*i* S		**Sb**	**00 49 17.5**	**+1.3**
LVC	**Limon Verde**	**1.62**	**86**	Pg		**Pg**	**00 49 07.0**	**-2.0**
	comp=N,525nm,0.3s,baz=264,slow=16,SNR=2461							
LVC				Lg			00 49 28.6	
	comp=N,976nm,0.3s,baz=78,slow=4.4,SNR=16							
LVC	**Limon Verde**	**1.62**	**86**	*e*Pn		**Pn**	**00 49 06.7**	**+1.0**
LVC				*e*Sn		**Sn**	**00 49 28.7**	**+2.5**
LVC	**Limon Verde**	**1.62**	**86**	⇑*i*P		**Pn**	**00 49 06.6**	**+1.0**
LVC				*i* S		**Sn**	**00 49 29.1**	**+2.9**
LVC				AML		AML	00 49 34.4	
	comp=N,9μm,0.7s							
PB01	**Plate Boundary**	**2.00**	**33**	*i* P		**Pn**	**00 49 10.8**	**-0.1**
PB01				*i* S		**Sn**	**00 49 38.3**	**+2.8**
PB01				AML		AML	00 49 52.5	
	comp=E,7μm,0.5s							
LCO	**Las Campanas**	**6.26**	**180**	*e*Pn		**Pn**	**00 50 07.7**	**-1.8**
	comp=E,63nm,0.6s							
LCO				Sn		Sn	00 51 42.4	+22
ARE	**Arequipa**	**6.28**	**353**	⇑*i*P		**Pn**	**00 50 08.0**	**-1.8**
ARE				*i* S		**Sn**	**00 51 15.6**	**-5.7**
CFAA	**Coronel Fontan**	**9.10**	**167**	Pn		**Pn**	**00 50 47.2**	**-1.3**
	comp=E,0.1nm,0.3s,baz=350,slow=11,SNR=4.4							
CFAA				Sn		**Sn**	**00 52 43.2**	**+13**
	comp=E,0.1nm,0.3s,baz=257,slow=19,SNR=8.8							
CFAA	**Coronel Fontan**	**9.10**	**167**	Pn		**Pn**	**00 50 47.2**	**-1.3**
CFAA				Sn		**Sn**	**00 52 43.2**	**+13**
SIV	**San Ignacio**	**11.26**	**55**	Pn		**Pn**	**00 51 17.1**	**-1.0**
	comp=E,1.9nm,0.3s,baz=242,slow=12,SNR=161							
SIV				Sn		**Sn**	**00 53 21.7**	**-1.9**
	baz=315,slow=20,SNR=1.8							
NNA	**Nana**	**12.20**	**330**	Pn		**Pn**	**00 51 29.5**	**-1.5**
	comp=E,1.5nm,0.3s,baz=162,slow=19,SNR=2.9							
NNA				Sn		**Sn**	**00 53 38.8**	**-7.9**
	comp=E,2.2nm,0.3s,baz=209,slow=17,SNR=3.1							
NNA				LR		LR	00 55 33.0	
	comp=E,417nm,21.0s,baz=139,slow=34							
ATAH	**Atahualpa**	**17.32**	**333**	P		**Pn**	**00 52 37.4**	**-1.7**
	comp=E,0.6nm,0.3s,baz=150,slow=13,SNR=5.5							
ATAH				LR		LR	00 58 24.1	
	comp=E,269nm,21.8s,baz=16,slow=34							
PLCA	**Paso Flores**	**17.95**	**180**	P		**Pn**	**00 52 47.1**	**+0.5**
	comp=E,0.1nm,0.3s,baz=7.2,slow=15,SNR=4.7							
PLCA				LR		LR	00 59 29.0	
	comp=E,303nm,21.0s,baz=356,slow=36							
PLCA	**Paso Flores**	**17.95**	**180**	*e*Pn		**Pn**	**00 52 45.7**	**-1.0**
	comp=E,42nm,1.4s							
PLCA				LR		LR	00 59 29.0	
BDFB	**Brasilia**	**22.50**	**76**	P		**P**	**00 53 35.1**	**-1.7**
	comp=E,6.2nm,0.6s,mb4.2,baz=248,slow=16,SNR=30							
BDFB				LR		LR	01 03 40.6	
	comp=E,466nm,18.9s,MS3.9,baz=80,slow=40							
BDFB	**Brasilia**	**22.50**	**76**	*e*P		**P**	**00 53 28.6**	**-8.1**
	comp=E,21nm,1.4s,mb4.4							
BDFB				LR		LR	01 03 40.5	
BDFB	**Brasilia**	**22.50**	**76**	P		**P**	**00 53 35.1**	**-1.7**
BDFB				pmax		pmax		
	comp=E,6.0nm,0.6s							
BDFB				MLR		MLR		
	comp=E,466nm,18.9s							
OTAV	**Otavalo**	**24.05**	**341**	*e*pP		pP	00 53 55.8	-1.7
CAM4	**Nova Friburgo**	**25.94**	**95**	⇑*i*P		**P**	**00 54 08.0**	**-1.5**
CAM4				*i*		pP	00 54 11.9	-2.6
CAM4				*i*			00 54 28.7	
ROSC	**El Rosal**	**27.65**	**352**	*e*P		**P**	**00 54 26.2**	**+1.3**
SDV	**Santo Domingo**	**31.42**	**0**	*e*P		**P**	**00 54 59.2**	**+0.9**
	comp=Z,6.2nm,1.3s,mb4.3							
BBGH	**Gun Hill**	**37.27**	**18**	*e*P		**P**	**00 55 47.5**	**-1.5**
	comp=Z,462nm,1.1s							
RCBR	**Riachuelo**	**37.49**	**69**	*e*pP		pP	00 55 51.2	-5.0
TGUH	**Tegucigalpa,Un**	**40.02**	**334**	*e*P		**P**	**00 56 16.9**	**+4.8**
SJG	**San Juan**	**40.83**	**7**	*e*P		**P**	**00 56 18.9**	**+0.2**
	comp=Z,68nm,0.9s,mb5.3							
SJG	**San Juan**	**40.83**	**7**	*e*P		**P**	**00 56 18.9**	**+0.1**
SJG				pmax		pmax		
	comp=Z,68nm,0.9s							
MTP	**Monte Pirata**	**40.88**	**7**	*e*P		**P**	**00 56 19.5**	**+0.3**
CMIG	**Matias Romero**	**46.13**	**327**	P		**P**	**00 57 00.7**	**-0.9**
	comp=Z,6.9nm,0.9s,mb4.6,baz=99,slow=6.0,SNR=4.3							
DWPF	**Disney**	**51.60**	**348**	P		**P**	**00 57 43.7**	**+0.3**
RKT	**Rikitea**	**58.78**	**256**	*e*LR		LR	01 15 51.5	
	comp=Z,460nm,42.2s							
TKL	**Tuckaleechee C**	**59.38**	**348**	P		**P**	**00 58 37.8**	**-1.4**
	comp=Z,5.0nm,0.8s,mb4.6,baz=135,slow=12,SNR=3.6							
TKL	**Tuckaleechee C**	**59.38**	**348**	P		**P**	**00 58 37.8**	**-1.5**
TKL				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.5							
OXF	**Oxford**	**59.65**	**342**	*e*P		**P**	**00 58 41.2**	**+0.1**
JCT	**Junction City**	**59.85**	**331**	*e*P		**P**	**00 58 42.3**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0							
JCT	**Junction City**	**59.85**	**331**	*e*P		**P**	**00 58 42.3**	**-0.3**
JCT				pmax		pmax		
	comp=Z,13nm,0.8s,mb5.0							
VNA2	**Neumayer--Watz**	**60.04**	**160**	*e*P		**P**	**00 58 43.9**	**+0.4**
VNA2				*e*			00 58 53.2	
TXAR	**Lajitas Array**	**60.74**	**327**	P		**P**	**00 58 48.3**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.4,baz=150,slow=11,SNR=16							
TXAR	**Lajitas Array**	**60.74**	**327**	P		**P**	**00 58 48.3**	**-0.4**
TXAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
WVT	**Waverly**	**60.75**	**344**	*e*P		**P**	**00 58 46.5**	**-2.1**
MIAR	**Mount Ida**	**60.98**	**338**	*e*P		**P**	**00 58 49.6**	**-0.6**
SNAA	**Sanae**	**61.66**	**161**	*e*P		**P**	**00 58 50.1**	**-4.4**
SNAA				*e*			00 59 01.3	
SNAA				*e*			00 59 05.6	
SNAA	**Sanae**	**61.66**	**161**	*e*P		**P**	**00 58 50.6**	**-3.9**
	comp=Z,12nm,0.8s,mb5.1							
SNAA	**Sanae**	**61.66**	**161**	*e*P		**P**	**00 58 50.6**	**-3.9**
SNAA				pmax		pmax		
	comp=Z,12nm,0.8s							
WCI	**Wyandotte Cave**	**62.39**	**346**	*e*P		**P**	**00 58 58.1**	**-1.6**
SIUC	**Southern Illin**	**62.60**	**343**	*e*P		**P**	**00 59 00.5**	**-0.7**
	comp=Z,20nm,0.8s,mb5.3							
SIUC				*e*pP		pP	00 59 10.6	+4.1
WMOK	**Wichita Mounta**	**63.08**	**334**	*e*P		**P**	**00 59 04.7**	**+0.3**
FVM	**French Village**	**63.18**	**343**	*e*P		**P**	**00 59 03.9**	**-1.1**
	comp=Z,23nm,1.0s,mb5.3							
FVM	**French Village**	**63.18**	**343**	*e*P		**P**	**00 59 03.9**	**-1.1**
FVM				pmax		pmax		
	comp=Z,23nm,1.0s,mb5.3							
BRNJ	**Basking Ridge**	**63.19**	**357**	*e*P		**P**	**00 59 03.0**	**-2.0**
GDL2	**Guadalupe Moun**	**63.42**	**328**	*e*P		**P**	**00 59 07.3**	**+0.6**
CCM	**Cathedral Cave**	**63.48**	**342**	*e*P		**P**	**00 59 05.4**	**-1.5**
ACSO	**Alum Creek Sta**	**63.68**	**349**	*e*P		**P**	**00 59 08.7**	**+0.5**
BNM	**Barren Site**	**66.11**	**328**	*e*P		**P**	**00 59 24.4**	**+0.3**
	comp=Z,6.3nm,1.1s,mb4.6							
LPM	**Los Pinos Moun**	**66.24**	**328**	*e*P		**P**	**00 59 26.0**	**+0.9**
LAZ	**Ladron**	**66.56**	**328**	*e*P		**P**	**00 59 27.9**	**+0.9**
	comp=Z,4.2nm,1.1s,mb4.4							
ANMO	**Albuquerque**	**66.67**	**328**	P		**P**	**00 59 27.7**	**0.0**
	comp=Z,2.9nm,0.7s,mb4.4,baz=146,slow=6.6,SNR=11							
ANMO	**Albuquerque**	**66.67**	**328**	*e*P		**P**	**00 59 28.6**	**+0.9**
ANMO	**Albuquerque**	**66.67**	**328**	P		**P**	**00 59 27.7**	**-0.1**
ANMO				pmax		pmax		
	comp=Z,3.0nm,0.7s							
TUC	**Tucson**	**66.83**	**324**	*e*P		**P**	**00 59 27.8**	**-1.0**
	comp=Z,5.1nm,1.1s,mb4.5							
TUC	**Tucson**	**66.83**	**324**	*e*P		**P**	**00 59 27.8**	**-1.0**
TUC				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.5							
CBKS	**Cedar Bluff**	**67.01**	**336**	*e*P		**P**	**00 59 29.9**	**+0.1**
JFWS	**Jewell Farm**	**67.76**	**345**	*e*P		**P**	**00 59 33.8**	**-0.8**
SDCO	**Great Sand Dun**	**68.50**	**331**	*e*P		**P**	**00 59 39.9**	**+0.7**
MVCO	**Mesa Verde**	**69.46**	**328**	*e*P		**P**	**00 59 45.4**	**+0.1**
WUAZ	**Wupatki**	**69.59**	**325**	*e*P		**P**	**00 59 47.2**	**+1.1**
GLA	**Glamis**	**69.65**	**321**	*e*P		**P**	**00 59 47.6**	**+1.0**
PV01	**Paradox Valley**	**70.23**	**329**	P		**P**	**00 59 50.5**	**+0.5**
	comp=Z,315nm,0.6s							
ISCO	**Idaho Springs**	**70.24**	**332**	*e*P		**P**	**00 59 50.9**	**+0.9**
LIC	**Lamto**	**70.28**	**74**	*e*P		**P**	**00 59 49.4**	**-1.5**
	comp=Z,55nm,1.3s,mb5.3							
ECSD	**EROS,Sioux Fal**	**70.30**	**340**	*e*P		**P**	**00 59 49.5**	**-0.8**
SMCO	**Sn

	comp=Z,5.0nm,0.9s								
MAW					MLR	MLR			
	comp=Z,84nm,19.6s								
BOSA	**Boshof**	**84.30**	**118**		P	**P**	**01 01 08.4**	**-0.9**	
	comp=Z,5.3nm,0.7s,mb4.8,baz=264,slow=5.0,SNR=12								
BOSA					LR	LR	01 35 40.5		
	comp=Z,107nm,19.3s,MS4.2,baz=57,slow=34								
LBTB	**Lobatse**	**85.97**	**115**		P	**P**	**01 01 15.1**	**-2.7**	
TAM	**Tamanrasset**	**86.82**	**64**	*e*P		**P**	**01 01 21.8**	**-0.1**	
	comp=Z,2.9nm,1.0s,mb4.5								
TAM	**Tamanrasset**	**86.82**	**64**	*e*P		**P**	**01 01 21.8**	**0.0**	
TAM					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.5								
ESDC	**Sonseca Array**	**87.84**	**45**		LR	LR	01 39 58.8		
	comp=Z,58nm,18.5s,MS4.0,baz=255,slow=35								
CASY	**Casey**	**91.27**	**180**		P	**P**	**01 01 42.8**	**+0.7**	
YKA	**Yellowknife Ar**	**91.81**	**341**		P	**P**	**01 01 43.5**	**-0.8**	
	comp=Z,1.4nm,0.7s,mb4.4,baz=136,slow=4.6,SNR=12								
YKA	**Yellowknife Ar**	**91.81**	**341**		P	**P**	**01 01 43.5**	**-0.8**	
YKA	**Yellowknife Ar**	**91.81**	**341**		P	**P**	**01 01 43.5**	**-0.9**	
YKA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
LSZ	**Lusaka**	**92.09**	**107**	*e*P		**P**	**01 01 45.9**	**-1.0**	
DLBC	**Dease Lake**	**94.55**	**333**	*e*P		**P**	**01 01 57.2**	**+0.2**	
SUMG	**Summit**	**97.52**	**9**	P		**P**	**01 02 10.6**	**+0.2**	
SOC	**Sochi**	**119.83**	**52**	*i* PKIKP		PKPdf	01 07 30.9	+3.6	
SOC				*e*			01 08 48.5		
SOC				*e*SS		SS	01 25 38.9	+23	
ASAR	**Alice Springs**	**128.07**	**209**		PKP	PKPdf	01 07 42.9	-0.9	
	comp=Z,0.9nm,0.8s,baz=146,slow=2.5,SNR=7.0								
ASAR	**Alice Springs**	**128.07**	**209**		PKIKP	PKPdf	01 07 42.9	-0.9	
ASAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
WRA	**Warramunga Arr**	**131.07**	**212**		PKP	PKPdf	01 07 49.3	-0.2	
	comp=Z,0.8nm,0.7s,baz=158,slow=1.8,SNR=4.7								
WRA	**Warramunga Arr**	**131.07**	**212**		PKIKP	PKPdf	01 07 49.3	-0.3	
WRA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
NVS	**Novosibirsk**	**142.46**	**25**	*e*PKIKP		PKPdf	01 08 09.8	+0.4	
KURK	**Kurchatov**	**143.24**	**33**	*i* PKIKP		PKPdf	01 08 11.6	+0.6	
ZAA0	**Zalesovo Array**	**143.74**	**25**	*e*PKPdf		PKPdf	01 08 11.7	0.0	
ZALV	**Zalesovo Beam**	**143.74**	**25**	PKP		PKPdf	01 08 09.9	-1.9	
	comp=Z,1.6nm,0.6s,baz=307,slow=3.6,SNR=7.6								
ZALV	**Zalesovo Beam**	**143.74**	**25**	PKIKP		PKPdf	01 08 09.9	-1.8	
ZALV					pmax	pmax			
	comp=Z,2.0nm,0.6s								
EKS2	**Erkin-Say**	**144.43**	**48**	*e*PKPdf		PKPdf	01 08 12.3	-1.0	
BOD	**Bodaibo**	**144.78**	**356**	*e*PKIKP		PKPdf	01 08 11.4	-2.0	
BOD					pmax	pmax			
	comp=Z,10.0nm,0.9s								
AAK	**Ala-Archa**	**144.93**	**47**	*e*PKPdf		PKPdf	01 08 13.8	-0.3	
TKM2	**Tokmak 2**	**145.55**	**46**	*e*PKPdf		PKPdf	01 08 14.6	-0.6	
KSH	**Kashi**	**147.13**	**52**	*e*PKP		PKPdf	01 08 22.0	+4.0	
KSH				*e*PKP2		PKPab	01 08 28.3	+6.5	
KSH				*e*APKP			01 08 33.0		
KSH				*e*XPKP			01 08 36.5		
KSH				*e*PP		PP	01 11 53.5	+8.2	
KSH				*e*PKS			01 11 55.8		
KSH				*e*SKS		SKSdf	01 15 25.3	-0.8	
KSH				*e*SKKS		SKKSac	01 18 37.5	+1.0	
KSH				*e*SS		SS	01 30 47.8	+1.7	
KSH					LR	LR			
	comp=N,560nm,4.9s								
KSH					LR	LR			
	comp=E,562nm,4.3s								
KSH					LR	LR			
	comp=Z,472nm,4.6s								
MK31	**Makanchi Array**	**147.57**	**36**	*e*PKP		PKPdf	01 08 20.1	+1.6	
MKAR	**Makanchi Array**	**147.57**	**36**	PKP		PKPdf	01 08 18.3	-0.2	
	comp=Z,3.6nm,0.6s,baz=337,slow=2.1,SNR=34								
MKAR					PKPbc	PKPbc	01 08 20.8	-0.3	
	comp=Z,3.5nm,0.6s,baz=288,slow=0.9,SNR=34								
MKAR	**Makanchi Array**	**147.57**	**36**		PKP2	PKPdf	01 08 18.3	-0.2	
MKAR					pmax	pmax			
	comp=Z,4.0nm,0.6s								
MKAR					pmax	pmax			
	comp=Z,4.0nm,0.6s								
HYB	**Hyderabad**	**150.64**	**95**	*i* PKP		PKPbc	01 08 29.0	-0.8	
MJAR	**Matsushiro Arr**	**151.51**	**305**		PKPbc	PKPbc	01 08 31.1	-0.2	
	comp=Z,3.3nm,0.8s,baz=45,slow=0.7,SNR=5.7								
MJAR					PKPab	PKPab	01 08 39.1	-0.7	
	comp=Z,2.5nm,0.7s,baz=84,slow=2.4,SNR=5.4								
MJAR	**Matsushiro Arr**	**151.51**	**305**		PKIKP	PKPbc	01 08 31.1	-0.2	
MJAR							01 08 39.1		
MJAR					pmax	pmax			
	comp=Z,3.0nm,0.8s								
MJAR					pmax	pmax			
	comp=Z,3.0nm,0.7s								
ZAK	**Zakamensk**	**151.99**	**8**	*e*PKIKP		PKPbc	01 08 30.5	-1.4	
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
WMQ	**Urumqi**	**152.40**	**35**	*e*PKP		PKPdf	01 08 25.0	-1.2	
WMQ					PP	PP	01 12 18.0	+2.8	
WMQ					SKS	SKSdf	01 15 27.0	-5.8	
WMQ					SKKS	SKKSac	01 19 02.0	-3.3	
WMQ					SS	SS	01 31 42.0	-1.8	
WMQ					PP	PP			
	comp=Z,45nm,10.0s								
WMQ					LR	LR			
	comp=N,64nm,20.0s,MS4.6								
WMQ					LR	LR			
	comp=E,75nm,20.0s,MS4.6								
WMQ					LR	LR			
	comp=Z,56nm,20.0s,MS4.4								
MDJ	**Mudanjiang**	**152.56**	**328**		PKP	PKPbc	01 08 33.8	+0.4	
SONM	**Songino Array**	**154.84**	**5**		PKPbc	PKPbc	01 08 38.3	+0.1	
	comp=Z,0.4nm,0.7s,baz=50,slow=2.3,SNR=3.0								
SONM					PKPab	PKPab	01 08 50.8	-2.5	
	comp=Z,0.8nm,0.8s,baz=311,slow=2.2,SNR=4.3								
SONM	**Songino Array**	**154.84**	**5**		PKIKP	PKPbc	01 08 38.3	+0.1	
SONM							01 08 50.8		
SONM					pmax	pmax			
	comp=Z,1.0nm,0.8s								
GTA	**Gaotai**	**161.50**	**24**	*e*PKP		PKPdf	01 08 36.8	-1.2	
GTA					APKP		01 08 47.5		
GTA					XPKP		01 08 51.0		
BJI	**Beijing**	**161.79**	**343**		PKP	PKPdf	01 08 37.5	-0.7	
BJI					LR	LR			
	comp=N,460nm,24.9s								
BJI					LR	LR			
	comp=E,403nm,25.1s								
BJI					LR	LR			
	comp=Z,44nm,24.9s								
HHC	**Hu-ho-hao-te**	**161.84**	**355**	*e*PKP		PKPdf	01 08 35.8	-2.5	
HHC					APKP		01 08 45.8		
HHC					XPKP		01 08 49.3		
HHC					PKS		01 12 08.0		
HHC					PP	PP	01 13 08.5	+2.0	
HHC					SKS	SKSdf	01 15 36.0	-6.5	
HHC					SKKS	SKKSac	01 19 51.8	-3.2	
HHC					SS	SS	01 33 23.3	-0.2	
HHC					PP	PP			
	comp=Z,150nm,10.7s								
HHC					LR	LR			
	comp=N,321nm,19.0s								
HHC					LR	LR			
	comp=E,356nm,19.0s								
HHC					LR	LR			
	comp=Z,221nm,19.0s								
LZH	**Lanzhou**	**165.86**	**19**	*e*PKP		PKPdf	01 08 40.0	-2.1	
LZH					APKP		01 08 51.0		
LZH					XPKP		01 08 56.0		
NJ2	**Nanjing**	**167.45**	**320**	*e*PKP		PKPdf	01 08 42.3	-1.2	
CD2	**Chengdu**	**170.45**	**30**	*e*PKP		PKPdf	01 08 43.0	-2.4	
CD2					APKP		01 08 53.0		
CD2					XPKP		01 08 57.3		
CD2					PKP2	PKPab	01 10 02.5	+0.5	
CD2					PP	PP	01 13 53.8	+2.2	
CD2					SKS	SKSdf	01 15 41.0	-7.4	
CD2					SKKS	SKKSac	01 20 35.5	-3.2	
CD2					SS	SS	01 34 50.3	-1.8	
CD2					PP	PP			
	comp=Z,180nm,10.2s								
CD2					LR	LR			
	comp=N,160nm,18.4s								
CD2					LR	LR			
	comp=E,210nm,20.2s								
CD2					LR	LR			
	comp=Z,150nm,16.8s								
KMI	**Kunming**	**173.51**	**67**		PKP	PKPdf	01 08 46.3	-0.7	
KMI					APKP		01 08 57.8		
KMI					XPKP		01 09 02.0		
GYA	**Guiyang**	**175.56**	**33**	*e*PKP		PKPdf	01 08 45.8	-1.8	
GYA					APKP		01 08 57.0		
GYA					XPKP		01 09 01.5		
GYA					PKP2	PKPab	01 10 25.3	+0.5	
GYA					PKS		01 12 15.8		
GYA					PP	PP	01 14 18.5	+1.8	
GYA					SKS	SKSdf	01 15 41.8	-8.4	
GYA					SKKS	SKKSac	01 21 01.3	-2.0	
GYA					SS	SS	01 35 40.5	-1.4	
GYA					PP	PP			
	comp=Z,130nm,8.0s								
GYA					LR	LR			
	comp=N,120nm,20.2s								
GYA					LR	LR			
	comp=E,240nm,21.9s								
GYA					LR	LR			
	comp=Z,210nm,20.7s								

*ISCJB **27** 00:50:07.3±0.4, 1789N±003×10164W±002, h49km±6km, mb3.9/6, Error ellipse: s-maj=5.9km s-min=3.5km az=20.1*
*NEIC **27** 00:50:09.6, 1791N×10166W, h37km, MD4.5(MEX), After MEX.*
*MEX **27** 00:50:09.7±0.6, 1791N×10165W, h35km±9km, MD4.5*
*IDC **27** 00:50:14.1±3.1, 1862N×10107W, h63km±10km, mb3.8/5, mb1 4.1/6, mb1mx3.8/20, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.6/29, Error ellipse: s-maj=68.2km s-min=16.0km az=26.0*

ISC 27 00:50:08.5±0.4, 1787N±003×10165W±002, h40km±8km, h66km±3.0km:pP-P, n37, σ1°18/63, mb3.9/6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.31**	**145**	*i* P		**Pn**	**00 50 16.5**	**-0.5**
ZIIG				*i* S		**Sn**	**00 50 22.7**	**-0.1**
CAIG	**El Cayaco**	**1.55**	**121**	*i* P		**Pn**	**00 50 32.5**	**-1.1**
CAIG				*i* S		**Sn**	**00 50 52.5**	**-0.1**
MMIG	**Aquila**	**1.67**	**285**	*i* P		**Pn**	**00 50 34.8**	**-0.4**
MMIG				*i* S		**Sn**	**00 50 54.1**	**-1.3**
ACX	**Acapulco**	**1.93**	**121**	*i* P		**Pn**	**00 50 39.7**	**+0.9**
ACX				*i* S		**Sn**	**00 51 02.2**	**+0.3**
PLIG	**Platanillo**	**2.11**	**75**	*e*P		**Pn**	**00 50 40.5**	**-0.8**
PLIG				*i* S		**Sn**	**00 51 05.0**	**-1.2**
YAIG	**Yautepec**	**2.65**	**68**	*e*P		**Pn**	**00 50 48.1**	**-0.6**
YAIG				*i* S		**Sn**	**00 51 17.1**	**-2.4**
YAIG	**Yautepec**	**2.65**	**68**	*e*P		**Pn**	**00 50 48.1**	**-0.6**
YAIG				*i* S		**Sn**	**00 51 18.5**	**-1.0**
MZVM		**2.65**	**60**	*i* P		**Pn**	**00 50 48.6**	**-0.1**
MZVM				*i* S		**Sn**	**00 51 18.6**	**-1.0**
UNM	**Universidad Na**	**2.76**	**58**	*e*P		**Pn**	**00 50 49.9**	**-0.3**
UNM				*i* S		**Sn**	**00 51 21.7**	**-0.6**
PBVM	**Pinon**	**2.89**	**57**	*i* P		**Pn**	**00 50 51.4**	**-0.7**
PBVM				*i* S		**Sn**	**00 51 25.0**	**-0.6**
SFJM	**Santa Fe**	**2.92**	**333**	*e*P		**Pn**	**00 50 52.3**	**-0.1**
SFJM				*i* S		**Sn**	**00 51 24.2**	**-2.0**
PTVM	**Pico Tres Padr**	**2.96**	**54**	*e*P		**Pn**	**00 50 51.4**	**-1.5**
PTVM				*i* S		**Sn**	**00 51 29.2**	**+2.0**
PPM	**Popocatepetl**	**3.11**	**67**	*e*P		**Pn**	**00 50 58.3**	**+3.2**
PPM				*i* S		**Sn**	**00 51 33.7**	**+2.8**
IIO	**Organos**	**3.26**	**58**	*i* P		**Pn**	**00 50 55.9**	**-1.2**
IIO				*i* S		**Sn**	**00 51 36.6**	**+1.8**
DEIG	**Demacu**	**3.46**	**45**	*i* P		**Pn**	**00 51 00.1**	**+0.2**
DEIG				*i* S		**Sn**	**00 51 38.3**	**-1.4**
CJM	**Chamela**	**3.60**	**297**	*i* P		**Pn**	**00 51 02.1**	**+0.3**
CJM				*i* S		**Sn**	**00 51 39.8**	**-3.3**
CJM	**Chamela**	**3.60**	**297**	*i* P		**Pn**	**00 51 02.1**	**+0.3**
CJM				*i* S		**Sn**	**00 51 41.8**	**-1.3**
UTMO	**Huajuapan**	**3.67**	**90**	*i* P		**Pn**	**00 51 03.0**	**+0.3**
UTMO				*i* S		**Sn**	**00 51 44.4**	**-0.2**
PNIG	**Pinotepa**	**3.67**	**113**	*e*P		**Pn**	**00 51 03.6**	**+0.9**
PNIG				*i* S		**Sn**	**00 51 45.3**	**+0.4**
ANIG	**Ahuacatlan**	**4.17**	**320**	*i* P		**Pn**	**00 51 12.3**	**+2.7**
ANIG				*i* S		**Sn**	**00 51 58.8**	**+1.7**
VHO	**Vista Hermosa**	**4.76**	**99**	*i* P		**Pn**	**00 51 18.6**	**+0.8**
VHO				*i* S		**Sn**	**00 52 11.6**	**-0.1**
OXX	**Oaxaca**	**4.77**	**99**	*e*P		**Pn**	**00 51 19.7**	**+1.9**
OXX				*i* S		**Sn**	**00 52 11.2**	**-0.7**
ZAIG	**Zacatecas**	**4.95**	**350**	*e*P		**Pn**	**00 51 21.8**	**+1.5**
ZAIG				*i* S		**Sn**	**00 52 16.4**	**0.0**
CMIG	**Matias Romero**	**6.50**	**96**	P		**Pn**	**00 51 41.8**	**+0.1**
	2.5nm,0.3s,baz=264,slow=9.6,SNR=35							
CMIG				S		**Sn**	**00 52 50.1**	**-4.6**
	0.2nm,0.3s,baz=7.2,slow=19,SNR=2.0							
CMIG				LR		LR	00 54 17.9	
	comp=Z,139nm,20.1s,baz=203,slow=40							
CMIG	**Matias Romero**	**6.50**	**96**	*e*P		**Pn**	**00 51 42.7**	**+1.0**
CMIG				*i* S		**Sn**	**00 52 55.5**	**+0.8**
LNIG	**Linares**	**7.29**	**16**	*e*P		**Pn**	**00 51 52.2**	**-0.2**
LNIG				*i* S		**Sn**	**00 53 16.8**	**+2.9**
TXAR	**Lajitas Array**	**11.56**	**351**	P		**Pn**	**00 52 52.7**	**+1.7**
	0.0nm,0.3s,baz=166,slow=12,SNR=3.5							
WUAZ	**Wupatki**	**19.59**	**336**	*e*P		**Pn**	**00 54 35.4**	**+0.7**
	2.8nm,0.7s							
SDCO	**Great Sand Dun**	**20.09**	**351**	*e*P		**P**	**00 54 38.4**	**-0.2**
	2.0nm,0.7s							
SDCO				*e*			00 54 53.3	
ARUT	**Antelope Range**	**22.38**	**335**	*e*P		**P**	**00 55 04.5**	**+1.3**
	5.4nm,0.9s,mb4.0							
TKL	**Tuckaleechee C**	**23.78**	**38**	P		**P**	**00 55 12.7**	**-4.7**
	6.6nm,0.6s,mb4.2,baz=199,slow=10,SNR=14							
NVAR	**Mina Array Bea**	**25.13**	**328**	P		**P**	**00 55 30.2**	**+0.5**
	2.8nm,0.7s,mb3.9,baz=150,slow=9.1,SNR=23							
NVAR				pP		pP	00 55 46.3	+5.7
	3.0nm,0.9s,baz=147,slow=10,SNR=7.8							
NVAR	**Mina Array Bea**	**25.13**	**328**	P		**P**	**00 55 30.2**	**+0.5**
NVAR				pP		pP	00 55 46.3	+5.7
PDAR	**Pinedale Array**	**25.71**	**346**	P		**P**	**00 55 34.0**	**-1.0**
	1.0nm,0.7s,mb3.4,baz=146,slow=11,SNR=11							
PDAR				pP		pP	00 55 48.3	+2.3
	2.6nm,0.9s,baz=152,slow=10.0,SNR=12							
ULM	**Lac du Bonnet**	**32.64**	**7**	P		**P**	**00 56 32.6**	**-3.8**
	1.7nm,0.4s,mb4.3,baz=172,slow=8.3,SNR=3.0							
YKA	**Yellowknife Ar**	**45.49**	**352**	P		**P**	**00 58 20.9**	**-2.6**
	0.8nm,0.8s,mb3.6,baz=166,slow=8.0,SNR=4.5							
YKA				pP		pP	00 58 37.1	+2.1
	0.7nm,0.7s,baz=158,slow=7.6,SNR=3.9							
YKA	**Yellowknife Ar**	**45.49**	**352**	P		**P**	**00 58 20.9**	**-2.6**
YKA				pP		pP	00 58 37.1	+2.1

*IDC **27** 01:03:41.7±0.9, 5262N×168.19W, h0km, mb4.0/16, mb1 4.2/16, mb1mx4.1/26, mbtmp4.0/16, Error ellipse: s-maj=31.1km s-min=14.6km az=7.0*
*ISCJB **27** 01:03:46.7±1.3, 5265N±0.1×168.19W±0.07, h46km±9km, mb4.1/23, Error ellipse: s-maj=17.7km s-min=6.4km az=168.2*
*NEIC **27** 01:03:47.6±1.5, 5254N×168.15W, h42km±11km, mb4.1/7, ML3.6(AEIC), Error ellipse: s-maj=17.9km s-min=7.7km az=175.0*

ISC 27 01:03:47.8±1.4, 526N±01×16821W±007, h39km±10km, n51, σ1°12/54, mb4.1/23, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.55**	**315**	P		**Pn**	**01 03 59.2**	**0.0**
NIKO				S		**Sn**	**01 04 06.6**	**-0.6**
UNV	**Unalaska Valle**	**1.63**	**39**	P		**Pn**	**01 04 12.7**	**-1.2**
UNV				S		**Sn**	**01 04 33.5**	**-0.1**
AKGG	**Akutan Green G**	**2.09**	**39**	P		**Pn**	**01 04 21.0**	**+0.7**
AKUT	**Akutan**	**2.13**	**42**	*e*Pn		**Pn**	**01 04 19.5**	**-1.4**
AKUT				*e*Sn		**Sn**	**01 04 46.5**	**+0.5**
SLKM	**Skilak Lake**	**12.67**	**44**	*e*Pn		**Pn**	**01 06 43.9**	**-1.3**
RC01	**Rabbit Creek A**	**13.18**	**42**	*e*Pn		**Pn**	**01 06 50.4**	**-1.7**
PPLA	**Purkeypile**	**13.37**	**33**	*e*Pn		**Pn**	**01 06 57.0**	**+2.3**
	9.1nm,0.7s							
CHUM	**Lake Minchumin**	**14.03**	**30**	*e*Pn		**Pn**	**01 07 05.3**	**+1.7**
	8.0nm,0.5s							
KTH	**Kantishna Hill**	**14.24**	**33**	*e*Pn		**Pn**	**01 07 07.3**	**+0.8**
MCK	**McKinley**	**15.03**	**35**	*e*Pn		**Pn**	**01 07 18.6**	**+1.5**
COLA	**College**	**16.12**	**32**	*e*Pn		**Pn**	**01 07 29.9**	**-1.3**
	9.4nm,0.9s							
COLD	**Coldfoot**	**17.12**	**24**	*e*Pn		**Pn**	**01 07 45.1**	**+1.3**
	6.0nm,0.7s							
EGAK	**Eagle**	**18.43**	**38**	*e*P		**Pn**	**01 08 02.7**	**+2.9**
	6.4nm,0.6s							
PET	**Petropavlovsk**	**19.94**	**285**	P		**Pn**	**01 08 17.1**	**-0.9**
PEA0B	**Petropavlovsk-**	**20.49**	**285**	*e*P		**P**	**01 08 22.2**	**+0.1**
PETK	**Petropavlovsk-**	**20.49**	**285**	P		**P**	**01 08 22.1**	**+0.1**
	5.8nm,0.5s,baz=82,slow=13,SNR=24							
INK	**Inuvik**	**22.78**	**33**	*e*P		**P**	**01 08 43.1**	**-3.3**
	271nm,0.7s							
YKA	**Yellowknife Ar**	**29.57**	**49**	P		**P**	**01 09 48.8**	**+0.4**
	0.7nm,0.6s,mb3.6,baz=275,slow=8.4,SNR=7.0							
YBH	**Yreka Blue Hor**	**32.28**	**91**	P		**P**	**01 10 13.3**	**+0.8**
	0.5nm,0.5s,mb3.6,baz=18,slow=16,SNR=2.0							
NVAR	**Mina Array Bea**	**36.96**	**92**	P		**P**	**01 10 53.2**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=303,slow=8.6,SNR=3.7							
NVAR	**Mina Array Bea**	**36.96**	**92**	P		**P**	**01 10 53.2**	**+0.1**
PDAR	**Pinedale Array**	**39.67**	**80**	P		**P**	**01 11 14.6**	**-1.1**
	0.8nm,0.6s,mb3.6,baz=295,slow=4.5,SNR=8.8							
MAJO	**Matsushiro**	**40.41**	**268**	P		**P**	**01 11 28.0**	**+6.1**
MDJ	**Mudanjiang**	**40.73**	**284**	*e*P		**P**	**01 11 27.8**	**+3.3**
GLA	**Glamis**	**42.63**	**96**	P		**P**	**01 11 42.7**	**+2.5**
KSRS	**Korea Array**	**46.08**	**277**	P		**P**	**01 12 08.2**	**+0.5**
	2.2nm,0.6s,mb4.2,baz=56,slow=8.0,SNR=4.9							
ULN	**Ulaanbaatar**	**51.43**	**301**	P		**P**	**01 12 49.7**	**+1.1**
SONM	**Songino Array**	**51.79**	**301**	P		**P**	**01 12 51.7**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=69,slow=5.2,SNR=7.1							
TXAR	**Lajitas Array**	**52.04**	**90**	P		**P**	**01 12 51.8**	**-1.6**
	0.8nm,0.5s,mb3.9,baz=301,slow=5.6,SNR=17							
KEV	**Kevo**	**57.47**	**354**	*e*p		**P**	**01 13 31.7**	**-0.4**
	0.7nm,0.3s,mb4.2							
ARCES	**ARCESS Array B**	**57.78**	**354**	P		**P**	**01 13 32.8**	**-1.5**
	3.3nm,0.8s,mb4.4,baz=7.6,slow=4.2,SNR=7.4							
JOF	**Joensuu**	**63.82**	**350**	*e*p		**P**	**01 14 14.9**	**-0.5**
	0.9nm,0.3s,mb4.3							
MKAR	**Makanchi Array**	**64.17**	**314**	P		**P**	**01 14 16.8**	**-1.2**
	0.6nm,0.6s,mb3.8,baz=40,slow=5.4,SNR=5.3							
KAF	**Kangasniemi**	**65.07**	**353**	*e*p		**P**	**01 14 22.4**	**-1.2**
	2.0nm,0.4s,mb4.5,baz=6.2,slow=6.1							
NB2	**NORSAR Subarra**	**66.72**	**0**	P		**P**	**01 14 33.5**	**-0.7**
	comp=Z,0.2nm,0.6s,mb3.3,baz=0.3,slow=6.2							
NOA	**NORSAR Array B**	**66.72**	**0**	P		**P**	**01 14 33.8**	**-0.5**
	comp=Z,1.1nm,0.6s,mb4.1,baz=359,slow=6.2,SNR=4.8							
AAK	**Ala-Archa**	**70.84**	**316**	*e*P		**P**	**01 15 00.7**	**+0.5**
	comp=Z,1.6nm,0.8s,mb4.0							
LSA	**Lhasa**	**72.99**	**297**	*e*P		**P**	**01 15 15.3**	**+2.0**
	comp=Z,3.7nm,0.5s,mb4.6							
AKASG	**Malin Array Be**	**76.04**	**349**	P		**P**	**01 15 28.9**	**-1.7**
	comp=Z,1.9nm,0.6s,mb4.2,baz=14,slow=5.6,SNR=5.7							
TAPN	**Taplejung**	**76.70**	**298**	*e*P		**P**	**01 15 34.9**	**+0.2**
	comp=Z,8.0nm,0.7s,mb4.8							
GUN	**Gumba**	**77.24**	**299**	*e*P		**P**	**01 15 38.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**77.26**	**284**	P		**P**	**01 15 38.6**	**+0.6**
	comp=Z,1.1nm,0.3s,mb4.2,baz=28,slow=6.3,SNR=6.6							
JIRN	**Jiri**	**77.27**	**299**	*e*P		**P**	**01 15 38.2**	**+0.2**
PKI	**Pulchoki**	**77.76**	**299**	*e*P		**P**	**01 15 41.0**	**+0.3**
GKN	**Gorkha**	**77.82**	**300**	*e*P		**P**	**01 15 41.3**	**+0.3**
DANN	**Dangsing**	**78.00**	**301**	*e*P		**P**	**01 15 42.6**	**+0.6**
	comp=Z,11nm,0.6s,mb5.0							
KOLN	**Koldanda**	**78.55**	**301**	*e*P		**P**	**01 15 44.8**	**-0.3**
PYUN	**Piuthan**	**78.61**	**301**	*e*P		**P**	**01 15 45.0**	**-0.4**
	comp=Z,7.2nm,0.7s,mb4.7							
BRTR	**Keskin Array B**	**86.12**	**343**	P		**P**	**01 16 25.2**	**+0.8**
	comp=Z,1.7nm,0.8s,mb4.3,baz=22,slow=2.1,SNR=6.1							
ESDC	**Sonseca Array**	**87.10**	**12**	P		**P**	**01 16 28.5**	**-0.7**
	comp=Z,0.4nm,0.4s,mb4.0,baz=346,slow=6.1,SNR=5.2							
ASAR	**Alice Springs**	**91.08**	**231**	P		**P**	**01 16 46.2**	**-1.7**
	comp=Z,0.6nm,0.8s,mb4.0,baz=41,slow=4.2,SNR=5.6							

DJA 27 01:11:34, 959S×11267E, h30km, MLv4.1/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.44**	**351**	P		Pn	01 11 55.2	-2.8
SJI	**Sawahan**	**2.05**	**334**	P		Pn	01 12 04.8	-1.6
NBBI	**Negara**	**2.28**	**58**	P		Pn	01 12 09.0	-0.6
IGBI	**Denpasar**	**2.56**	**73**	P		Pn	01 12 12.8	-0.7
UGM	**Wanagama**	**2.70**	**308**	P		Pn	01 12 16.3	+0.9
KMMI	**Kalianget**	**2.83**	**27**	P		Pn	01 12 22.3	+5.1
KHKI	**Kahang-Kahang**	**3.15**	**67**	P		Pn	01 12 21.6	0.0
BJII	**Banjamegara**	**3.69**	**307**	P		Pn	01

Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO2	**Boso 2**	**2.52**	**6**	S	Sn	01 28 36.0	-1.0
BSO3	**Boso 3**	**2.56**	**2**	P	Pn	01 28 07.9	0.0
BSO3				S	Sn	01 28 37.5	-0.4
JIM2	**Oshima 3**	**2.60**	**342**	P	Pn	01 28 10.1	+1.5
JIM2				*eS*	Sn	01 28 40.0	+0.9
BSO4	**Boso 4**	**2.74**	**359**	*eS*	Sn	01 28 43.2	+0.8
JHU	**Hanno**	**3.72**	**346**	S	Sn	01 29 06.5	+0.1
JIE	**Ise**	**3.78**	**306**	P	Pn	01 28 26.0	+1.5
JWZ	**Kozaga**	**4.16**	**289**	P	Pn	01 28 30.4	+0.6
JAG	**Ashikaga**	**4.25**	**349**	*eS*	Sn	01 29 19.4	+0.1
JHO	**Hitachi**	**4.36**	**2**	P	Pn	01 28 32.7	+0.2
JHO				*eS*	Sn	01 29 21.5	-0.5
JGM	**Miyama**	**4.62**	**319**	P	Pn	01 28 39.0	+2.9

*ISCJB **27** 01:58:33.2±0.4, 504S±006×10047E±007, h33km, mb4.5/23, Error ellipse: s-maj=11.2km s-min=7.4km az=151.1*
*IDC **27** 01:58:34.9±2.7, 440S×10071E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/21, mbtmp4.3/7, MS3.6/1, Ms1 3.5/1, ms1mx2.9/27, Error ellipse: s-maj=98.8km s-min=18.0km az=53.0*
*NEIC **27** 01:58:35.2±0.3, 5.10S×100.43E, h35km, mb4.6/16, Error ellipse: s-maj=10.0km s-min=6.9km az=60.0*
*DJA **27** 01:58:44, 371S×101.16E, h20km, MLv4.1/3*

ISC 27 01:58:35.3±0.4, 505S±006×10046E±007, h35km, n53, σ1§19/48, mb4.5/23, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**2.54**	**57**	P	**Pn**	**01 59 08.8**	**-5.3**
PDSI	**Padang**	**4.11**	**0**	P	**Pn**	**01 59 28.9**	**-6.8**
PDSI	**Padang**	**4.11**	**0**	S	**Sn**	**02 00 04.6**	**-18**
KKM	**Kota Kinabalu**	**19.21**	**55**	P	**Pn**	**02 02 56.8**	**-0.8**
CM31	**Chiang Mai Arr** 29nm,0.6s,mb4.9	**23.41**	**356**	P	**P**	**02 03 39.5**	**-2.0**
CMAR	**Chiang Mai Arr** 3.5nm,0.8s,mb3.9,baz=181,slow=7.8,SNR=17	**23.41**	**356**	P	**P**	**02 03 39.5**	**-2.1**
BATI	**Baumata** 21nm,0.6s,mb4.8,baz=15,slow=1.9,SNR=3.9	**23.55**	**104**	P	**P**	**02 03 46.3**	**+3.4**
CHTO	**Chiang Mai** 3.0nm,0.7s,mb3.8	**23.76**	**356**	*eP*	**P**	**02 03 42.5**	**-2.2**
MBWA	**Marble Bar** 3.2nm,0.7s,mb4.0	**24.62**	**132**	*eP*	**P**	**02 03 52.8**	**+0.2**
QIZ	**Qiongzhong**	**25.65**	**21**	*eP*	**P**	**02 04 02.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**27.81**	**120**	*eP*	**P**	**02 04 22.4**	**+0.9**
NWAO	**Narrogin (SRO)**	**31.84**	**153**	*eP*	**P**	**02 04 57.8**	**+0.7**
ODAN	**Odare** 16nm,0.7s,mb5.0	**34.15**	**339**	*eP*	**P**	**02 05 19.0**	**+1.8**
TAPN	**Taplejung** 27nm,0.9s,mb5.2	**34.49**	**340**	*eP*	**P**	**02 05 21.9**	**+1.8**
RAMN	**Ramite**	**34.52**	**338**	*eP*	**P**	**02 05 22.8**	**+2.3**
JIRN	**Jiri** 24nm,0.9s,mb5.2	**35.32**	**338**	*eP*	**P**	**02 05 29.9**	**+2.6**
NACB	**Ninganchiao**	**35.61**	**34**	*eP*	**P**	**02 05 29.9**	**0.0**
GUN	**Gumba**	**35.66**	**338**	*eP*	**P**	**02 05 32.7**	**+2.4**
LSA	**Lhasa** 3.1nm,0.4s,mb4.6	**35.69**	**346**	*eP*	**P**	**02 05 29.9**	**-0.5**
WRA	**Warramunga Arr** 0.8nm,0.6s,mb3.9,baz=302,slow=8.9,SNR=6.1	**36.13**	**117**	P	**P**	**02 05 39.4**	**+5.0**
ENH	**Enshi**	**36.17**	**13**	*eP*	**P**	**02 05 33.9**	**-0.7**
KOLN	**Koldanda** 9.1nm,0.9s,mb4.7	**36.47**	**334**	*eP*	**P**	**02 05 39.6**	**+2.5**
DANN	**Dangsing** 3.2nm,0.4s,mb4.5	**36.90**	**335**	*eP*	**P**	**02 05 43.1**	**+2.2**
ASAR	**Alice Springs** 0.7nm,0.5s,mb3.8,baz=298,slow=7.9,SNR=8.7	**37.15**	**123**	P	**P**	**02 05 49.1**	**+6.1**
PMG	**Port Moresby** 3.9nm,0.7s,mb4.5	**46.50**	**98**	*eP*	**P**	**02 06 59.4**	**-0.3**
STKA	**Stephens Creek** comp=Z,61nm,19.0s,baz=24,slow=35	**46.82**	**130**	LR	LR	02 26 21.8	
STKA	**Stephens Creek**	**46.82**	**130**	*eP*	**P**	**02 07 01.4**	**-0.5**
CTAO	**Charters Tower**	**46.95**	**113**	*eP*	**P**	**02 07 03.3**	**+0.2**
BJT	**Baijiatuau**	**47.12**	**16**	P	**P**	**02 07 04.1**	**+0.1**
GUMO	**Guam**	**47.81**	**67**	*eP*	**P**	**02 07 10.4**	**+0.6**
KBL	**Kabul** 2.9nm,0.4s,mb4.7	**49.28**	**325**	*eP*	**P**	**02 07 18.7**	**-2.1**
UCH	**Uchtor** 1.5nm,0.5s,mb4.2	**52.65**	**336**	*eP*	**P**	**02 07 45.1**	**-0.9**
TKM2	**Tokmak 2** 1.5nm,0.4s,mb4.3	**52.80**	**337**	*eP*	**P**	**02 07 46.8**	**-0.4**
SONM	**Songino Array** 4.0nm,0.8s,mb4.4,baz=188,slow=9.4,SNR=25	**52.92**	**5**	P	**P**	**02 07 48.0**	**0.0**
AAK	**Ala-Archa**	**52.99**	**336**	P	**P**	**02 07 47.3**	**-1.3**
ULN	**Ulaanbaatar** 3.0nm,0.8s,mb4.3	**53.01**	**6**	*eP*	**P**	**02 07 47.4**	**-1.2**
EKS2	**Erkin-Say** 1.2nm,0.5s,mb4.1	**53.31**	**336**	*eP*	**P**	**02 07 50.4**	**-0.5**
MK31	**Makanchi Array**	**54.07**	**345**	*eP*	**P**	**02 07 57.7**	**+1.3**
MK31				*e*	pP	02 08 05.0	-2.0
MKAR	**Makanchi Array** 4.4nm,0.7s,mb4.5,baz=150,slow=8.2,SNR=28	**54.07**	**345**	P	**P**	**02 07 57.3**	**+0.9**
ZAA0	**Zalesovo Array**	**60.23**	**349**	*eP*	**P**	**02 08 40.1**	**+0.3**
ZAA0				*e*	pP	02 08 47.6	-2.9
ZALV	**Zalesovo Beam** 5.7nm,0.9s,mb4.6,baz=173,slow=6.0,SNR=16	**60.23**	**349**	P	**P**	**02 08 40.0**	**+0.1**
LSZ	**Lusaka**	**71.60**	**256**	*eP*	**P**	**02 09 53.4**	**-0.4**
LBTB	**Lobatse**	**74.17**	**246**	*eP*	**P**	**02 10 08.8**	**-0.1**
BOSA	**Boshof** 20nm,1.4s,mb4.9	**74.61**	**242**	*eP*	**P**	**02 10 10.1**	**-1.3**
MRZ	**Mangatainoka R**	**75.44**	**131**	*eP*	**P**	**02 10 15.3**	**-0.6**
RAO	**Raoul Island**	**80.25**	**119**	P	**P**	**02 10 43.3**	**+0.3**
TSUM	**Tsumeb**	**81.64**	**251**	*eP*	**P**	**02 10 50.4**	**-0.2**
BILL	**Bilibino**	**85.84**	**20**	*eP*	**P**	**02 11 10.6**	**-0.4**
SNAA	**Sanae**	**89.40**	**198**	*eP*	**P**	**02 11 27.6**	**-0.5**
TOA0	**Torodi Ar. Sit**	**99.65**	**282**	*eP*	Pdif	02 12 15.8	+0.5
MCK	**McKinley**	**103.55**	**25**	*eP*	Pdif	02 12 32.9	+0.3
DBIC	**Dimbokro**	**105.75**	**275**	*eP*	PKiKP	PKiKP	02 16 55.7	-0.6
TXAR	**Lajitas Array** 1.4nm,0.8s,baz=245,slow=1.3,SNR=14	**146.77**	**41**	PKPbc	PKPbc	02 18 17.7	+3.3

*ISCJB **27** 02:16:00.7±1.0, 3409N±005×248E±0.1, h33km, Error ellipse: s-maj=16.7km s-min=6.3km az=6.1*
*CSEM **27** 02:16:05.3, 3405N×2510E, h33km, ML3.8, After HLW*
*HLW **27** 02:16:05.3, 3405N×2510E, h33km, Mb3.8*
*ATH **27** 02:16:09.4, 3552N×2475E, h63km*

ISC 27 02:16:02.1±1.2, 3413N±005×247E±02, h35km, n14, σ1§24/17, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAM	**Vamos**	**1.34**	**343**	*eP*	**Pn**	**02 16 22.0**	**-2.2**
NPS	**Neapolis**	**1.38**	**34**	*eP*	**Pn**	**02 16 25.0**	**+0.3**
KARP	**Karpathos**	**2.49**	**55**	*eP*	**Pn**	**02 16 41.2**	**+1.1**
SLUM		**2.67**	**170**	P	**Pn**	**02 16 44.5**	**+2.0**
SLUM				S	**Sn**	02 17 12.5	-1.0
ARG	**Arkhangelos**	**3.52**	**53**	⇓*iP*	**Pn**	**02 16 54.4**	**+0.2**
TURN	**Turunc**	**4.22**	**48**	*i P*	**Pn**	**02 16 59.1**	**-4.7**
AKAS	**Kas**	**4.56**	**61**	*i P*	**Pn**	**02 17 08.1**	**-0.3**
SWA2		**4.91**	**172**	P	**Pn**	**02 17 14.9**	**+1.5**
SWA2				S	**Sn**	**02 18 06.5**	**-2.5**
SWA2		**4.91**	**172**	P	**Pn**	**02 17 14.9**	**+1.3**
SWA2				S	**Sn**	**02 18 06.5**	**-2.5**
GOLH	**Golhisar**	**5.05**	**51**	*i P*	**Pn**	**02 17 14.9**	**-0.3**
AWBH		**6.83**	**147**	P	**Pn**	**02 17 40.5**	**+0.8**
HHAG	**Hagoal**	**7.55**	**121**	P	**Pn**	**02 17 49.0**	**-0.7**
HFRF	**Wahat Farafira**	**7.63**	**155**	P	**Pn**	**02 17 52.0**	**+1.3**
RSH		**8.27**	**110**	P	**Pn**	**02 17 58.2**	**-1.3**

KRSC 27 02:18:59.1±0.8, 5108N×15765E, h99km±101km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.46**	**21**	*eP*	Pn	02 19 28.3	+3.6
RUS				*eS*	Sn	02 19 49.6	+5.5
GRL	**Gorelyy**	**1.50**	**10**	*eP*	Pn	02 19 28.3	+3.1
GRL				*eS*	Sn	02 19 49.5	+4.5
PET	**Petropavlovsk**	**2.04**	**17**	P	Pn	02 19 34.1	+2.0
SDLR	**Sedlovina**	**2.33**	**19**	P	Pn	02 19 39.3	+3.5
SDLR				*i S*	Sn	02 20 07.9	+3.9
NLC	**Nalytchevo**	**2.34**	**26**	*eP*	Pn	02 19 38.8	+2.8
NLC				*eS*	Sn	02 20 08.3	+4.0
SPN	**Mys Shipunski**	**2.50**	**35**	P	Pn	02 19 40.7	+2.7
SPN				*i S*	Sn	02 20 11.3	+3.4
GNL	**Ganaly**	**2.63**	**4**	*eP*	Pn	02 19 41.5	+1.8
MKZ	**Mys Kozlova**	**4.27**	**34**	P	Pn	02 20 04.9	+3.1
TUMR	**Tumrok**	**4.47**	**19**	P	Pn	02 20 08.3	+3.8
KBTR	**Krutoberegovo**	**5.99**	**29**	*eP*	Pn	02 20 27.5	+2.5

*ISCJB **27** 02:23:41.9±1.3, 4563N±005×8427E±006, h2km±8km, mb4.1/5, Error ellipse: s-maj=8.2km s-min=6.9km az=37.9*
*IDC **27** 02:23:44.1±1.6, 4567N×8430E, h0km, mb3.9/3, mb1 3.9/7, mb1mx3.7/26, mbtmp3.9/7, ML3.8/4, Error ellipse: s-maj=24.8km s-min=14.7km az=54.0*
*NNC **27** 02:23:44.2±2.1, 4557N×8428E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=15.8km s-min=10.4km az=95.0*
*MOS **27** 02:23:46.3±1.3, 4563N×8427E, h33km, mb4.6/2, Error ellipse: s-maj=15.3km s-min=10.1km az=120.4*
*BJI **27** 02:23:47.8, 4564N×8417E, h19km, ML3.6*
*NEIC **27** 02:23:48.5±0.5, 4563N×8427E, h35km, mb4.5/2, Error ellipse: s-maj=8.4km s-min=7.1km az=185.0*

ISC 27 02:23:48.7±0.9, 4571N±005×8432E±008, h36km±9km, n38, σ1§01/51, mb4.1/5, 10C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array** 92nm,0.6s,baz=127,slow=17,SNR=3932	**1.77**	**308**	⇑P	**Pn**	**02 24 18.7**	**+1.8**
MK31				⇑S	**Sn**	**02 24 42.0**	**+3.8**
	94nm,0.2s,baz=132,slow=30,SNR=16						
MK31	**Makanchi Array**	**1.77**	**308**	*e*Pn	**Pn**	**02 24 18.6**	**+1.8**
MK31				*e*Sn	**Sn**	**02 24 39.1**	**+0.9**
MKAR	**Makanchi Array** 58nm,0.3s,baz=126,slow=16,SNR=1007	**1.77**	**308**	Pg	**Pn**	**02 24 18.5**	**+1.6**
MKAR				Lg		02 24 42.1	
	193nm,0.3s,baz=125,slow=29,SNR=25						
MKAR	**Makanchi Array**	**1.77**	**308**	PN	**Pn**	**02 24 18.5**	**+1.6**
MKAR						02 24 42.1	
MKAR				pmax	pmax		
	comp=Z,58nm,0.3s						
WMQ	**Urumqi**	**3.06**	**127**	*eP*	**Pn**	**02 24 41.0**	**+6.4**
WMQ				S	**Sn**	**02 25 17.8**	**+7.9**
WMQ				Smax			
	comp=N,148nm,0.5s						
WMQ				Smax			
	comp=E,145nm,0.5s						
KURBB	**Kurchatov Arra**	**6.25**	**324**	⇓Pn	**Pn**	**02 25 19.0**	**+0.6**
	comp=E,1.0nm,0.6s						
KURBB				⇑Sn	**Sn**	**02 26 33.6**	**+5.1**
	comp=E,4.1nm,0.6s						
KURBB				⇓Lg		02 27 05.7	
	comp=E,26nm,0.6s						
KURK	**Kurchatov**	**6.29**	**325**	⇑Pn	**Pn**	**02 25 19.2**	**+0.4**
	comp=E,2.6nm,0.6s						
KURK				⇑Sn	**Sn**	**02 26 30.4**	**+1.0**
	comp=E,11nm,0.5s						
KURK				⇓Lg		02 27 06.1	
	comp=E,110nm,0.8s						
KURK	**Kurchatov**	**6.29**	**325**	Pn	**Pn**	**02 25 19.5**	**+0.7**
	comp=E,0.9nm,0.3s,baz=138,slow=12,SNR=27						
KURK				Sn	**Sn**	**02 26 29.7**	**+0.4**
	comp=E,0.8nm,0.3s,baz=123,slow=27,SNR=3.4						
KURK				Lg		02 27 01.1	
	comp=E,2.3nm,0.3s,baz=147,slow=29,SNR=16						
KURK	**Kurchatov**	**6.29**	**325**	PN	**Pn**	**02 25 19.5**	**+0.7**
KURK						02 27 01.1	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TKM2	**Tokmak 2**	**6.85**	**249**	⇑Pn	**Pn**	**02 25 28.4**	**+1.8**
	comp=Z,0.9nm,0.4s						
TKM2				⇑Lg		02 27 21.9	
	comp=Z,14nm,0.6s						
AAK	**Ala-Archa**	**7.70**	**250**	*e*Pn	**Pn**	**02 25 36.9**	**-1.4**
AAK				*e*Sn	**Sn**	**02 27 04.4**	**+0.1**
ZAA0	**Zalesovo Array**	**8.25**	**2**	*e*Pn	**Pn**	**02 25 46.0**	**+0.2**
ZAA0				*e*Sn	**Sn**	**02 27 16.2**	**-1.4**
ZALV	**Zalesovo Beam**	**8.25**	**2**	Pn	**Pn**	**02 25 46.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=181,slow=13,SNR=7.1						
ZALV				Sn	**Sn**	**02 27 16.0**	**-1.6**
	comp=Z,2.4nm,0.3s,baz=176,slow=27,SNR=8.1						
ZALV				Lg		02 28 06.0	
	comp=Z,0.8nm,0.3s,baz=182,slow=29,SNR=3.2						
ZALV	**Zalesovo Beam**	**8.25**	**2**	Pn	**Pn**	**02 25 46.5**	**+0.8**
ZALV				Sn	**Sn**	**02 27 16.0**	**-1.6**
ZALV				Lg		02 28 06.0	
ZALV	**Zalesovo Beam**	**8.25**	**2**	P	**Pn**	**02 25 46.6**	**+0.9**
ZALV						02 27 16.0	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,2.0nm,0.3s						
KK31	**Karatay Array**	**10.22**	**260**	⇓Pn	**Pn**	**02 26 12.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=60,slow=13,SNR=8.0						
KK31				Lg		02 29 03.8	
	comp=N,2.5nm,0.5s,baz=57,slow=26,SNR=4.2						
VOSK	**Vostochnaya**	**11.18**	**314**	⇓Pn	**Pn**	**02 26 25.2**	**-0.7**
	comp=N,3.7nm,0.8s						
VOSK				⇑Sn	**Sn**	**02 28 34.7**	**+5.2**
	comp=N,4.9nm,0.8s						
VOSK				⇑Lg		02 29 40.5	
	comp=N,8.6nm,0.9s						
BVA0	**Borovoye Array**	**11.65**	**314**	Pn	**Pn**	**02 26 31.7**	**-0.6**
	comp=N,0.2nm,0.4s,baz=124,slow=15,SNR=16						
BVA0				⇓Sn	**Sn**	**02 28 45.0**	**+4.1**
	comp=N,0.4nm,0.6s						
BVA0				⇑Lg		02 29 53.4	
	comp=N,1.4nm,0.8s,baz=131,slow=25,SNR=5.5						
BVAR	**Borovoye Array**	**11.65**	**314**	Pn	**Pn**	**02 26 31.2**	**-1.1**
	comp=N,1.6nm,0.3s,baz=116,slow=13,SNR=15						
BVAR				Sn	**Sn**	**02 28 35.8**	**-5.0**
	comp=N,0.4nm,0.3s,baz=135,slow=20,SNR=3.4						
BVAR				Lg		02 29 52.7	
	comp=N,0.4nm,0.3s,baz=125,slow=24,SNR=4.7						
ULN	**Ulaanbaatar**	**15.71**	**74**	*e*Pn	**Pn**	**02 27 26.9**	**-0.2**
KBL	**Kabul**	**16.12**	**232**	*e*Pn	**Pn**	**02 27 31.2**	**-1.4**
AKTK	**Aktyubinsk**	**18.16**	**295**	P	**Pn**	**02 27 56.0**	**-1.8**
AKTO	**Aktyubinsk**	**18.16**	**295**	P	**Pn**	**02 27 56.0**	**-1.8**
	comp=N,0.1nm,0.3s,baz=105,slow=19,SNR=2.8						
YAK	**Yakutsk**	**30.54**	**41**	*eP*	**P**	**02 29 58.7**	**+0.4**
AKASG	**Malin Array Be**	**36.33**	**298**	P	**P**	**02 30 48.9**	**+0.1**
	comp=N,0.3nm,0.3s,mb3.7,baz=73,slow=8.4,SNR=3.3						
KEV	**Kevo**	**36.81**	**331**	*eP*	**P**	**02 30 52.2**	**-0.5**
BR131	**Keskin Array S**	**37.19**	**279**	*eP*	**P**	**02 30 55.9**	**-0.4**
ARCES	**ARCESS Array B**	**37.30**	**330**	P	**P**	**02 30 58.9**	**+2.1**
	comp=N,3.1nm,0.8s,mb4.2,baz=90,slow=8.1,SNR=4.8						
ARCES	**ARCESS Array B**	**37.30**	**330**	P	**P**	**02 30 58.9**	**+2.1**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KWP	**Kalwaria**	**40.65**	**299**	P	**P**	**02 31 25.2**	**+0.2**
MAJO	**Matsushiro**	**40.93**	**83**	*eP*	**P**	**02 31 28.4**	**+0.9**
STU	**Stuttgart**	**49.15**	**302**	*eP*	**P**	**02 32 33.1**	**+0.5**
WLF	**Walferdange**	**50.53**	**305**	*eP*	**P**	**02 32 43.0**	**-0.1**
	comp=Z,3.6nm,0.6s,mb4.5						
WLF	**Walferdange**	**50.53**	**305**	*eP*	**P**	**02 32 43.1**	**0.0**
WLF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**73.73**	**139**	*eP*	**P**	**02 35 19.0**	**0.0**
MBWA	**Marble Bar**	**73.92**	**146**	*eP*	**P**	**02 35 19.9**	**-0.2**
	comp=Z,3.8nm,0.9s,mb4.3						
TORD	**Torodi Ar. Bea**	**75.59**	**274**	P	**P**	**02 35 30.1**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=32,slow=5.3,SNR=13						
PKME	**Peaks-Kenny Pk**	**86.45**	**342**	*eP*	**P**	**02 36 27.7**	**+0.4**

*NEIC **27** 02:48:16.0, 2322S×11505E, h10km, ML3.7(AUST), After AUST.*

AUST 27 02:48:16.3, 2322S×11505E, h10km, ML3.7, 1C, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIRL	**Giralia**	**0.94**	**307**	*i P*	Pg	02 48 33.4	-1.0
GIRL				*eS*	Sg	02 48 45.0	-1.7
	1μm,0.2s						
MEEK	**Meekatharra**	**4.70**	**137**	*eP*	Pn	02 49 25.1	-2.1
MEEK				*eS*	Sn	02 50 15.9	-5.9
	255nm,0.3s						
MORW	**Morawa**	**5.89**	**171**	*eP*	Pn	02 49 41.8	-1.8
MORW				*eS*	Sn	02 50 42.1	-9.1
BLDU	**Ballidu**	**7.51**	**169**	*eP*	Pn	02 50 04.2	-1.7
BLDU				*eS*	Sn	02 51 21.8	-9.4
	3.7nm,0.3s						
BLDU	**Ballidu**	**7.51**	**169**	*eP*	Pn	02 50 04.2	-1.7
	3.7nm,0.3s						
BLDU				*eS*	Sn	02 51 21.8	-9.4
KLBR	**Kellerberrin**	**8.68**	**165**	*eP*	Pn	02 50 19.2	-2.7
KLBR				*eS*	Sn	02 51 48.9	-11
	10nm,0.2s						
KLBR	**Kellerberrin**	**8.68**	**165**	*eP*	Pn	02 50 19.2	-2.7
KLBR				*eS*	Sn	02 51 48.9	-11
MUN	**Mundaring**	**8.79**	**174**	*eP*	Pn	02 50 21.8	-1.6
MUN				*eS*	Sn	02 51 51.9	-11
NWAO	**Narrogin (SRO)**	**9.86**	**169**	*eP*	Pn	02 50 34.3	-3.8
NWAO				*eS*	Sn	02 52 14.2	-15
	53nm,0.6s						
NWAO	**Narrogin (SRO)**	**9.86**	**169**	*eP*	Pn	02 50 34.3	-3.8
	53nm,0.6s						
NWAO				*eS*	Sn	02 52 14.2	-15
KMBL	**Kambalda**	**10.14**	**145**	*eP*	Pn	02 50 37.7	-4.2
KMBL				*eS*	Sn	02 52 20.8	-15
	35nm,0.2s						
KMBL	**Kambalda**	**10.14**	**145**	*eP*	Pn	02 50 37.7	-4.2
	35nm,0.2s						
KMBL				*eS*	Sn	02 52 20.8	-15
RKGY	**Rocky Gully**	**11.47**	**172**	*eP*	Pn	02 50 56.6	-3.6
RKGY				*eS*	Sn	02 52 54.4	-14
	58nm,1.6s						
RKGY	**Rocky Gully**	**11.47**	**172**	*eP*	Pn	02 50 56.6	-3.6
	58nm,1.6s						
RKGY				*eS*	Sn	02 52 54.4	-14
FORT	**Forrest**	**13.82**	**126**	*eP*	Pn	02 51 25.7	-6.6
FORT				*eS*	Sn	02 53 46.4	-19
	15nm,0.3s						
FORT	**Forrest**	**13.82**	**126**	*eP*	Pn	02 51 25.7	-6.6
	15nm,0.3s						
FORT				*eS*	Sn	02 53 46.4	-19

*IDC **27** 02:52:25.4±3.8, 2773N×11182W, h0km, mb1 3.8/3, mb1mx3.6/20, mbtmp3.3/3, ML3.6/3, Error ellipse: s-maj=48.0km s-min=16.8km az=20.0*
*NEIC **27** 02:52:30.5±1.8, 2811N×11157W, h10km, mb3.6/3, Error ellipse: s-maj=26.4km s-min=8.3km az=205.0*

ISC 27 02:52:29.2±1.3, 280N±01×11168W±008, h10km, n16, σ1§04/19, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**4.38**	**10**	*e*Pn	**Pn**	**02 53 33.8**	**-2.1**
TUC				*e*Sn	**Sn**	**02 54 26.3**	**-0.7**
TXAR	**Lajitas Array** 0.4nm,0.3s,baz=251,slow=12,SNR=37	**7.17**	**77**	Pn	**Pn**	**02 54 14.9**	**+0.8**
TXAR				Sn	**Sn**	**02 55 37.5**	**+1.9**
	baz=253,slow=24,SNR=3.0						
TXAR				Lg		02 56 16.9	
	0.8nm,0.3s,baz=254,slow=30,SNR=12						
WUAZ	**Wupatki** 16nm,1.0s	**7.52**	**2**	*e*Pn	**Pn**	**02 54 18.8**	**-0.1**
WUAZ				*e*Sn	**Sn**	**02 55 47.7**	**+3.5**
ISA	**Isabella**	**9.59**	**325**	Pn	**Pn**	**02 54 47.8**	**+0.4**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=145,slow=14,SNR=2.9	**11.80**	**334**	Pn	**Pn**	**02 55 18.9**	**+1.3**
NVAR	**Mina Array Bea**	**11.80**	**334**	Pn	**Pn**	**02 55 18.9**	**+1.3**
WMOK	**Wichita Mounta**	**12.91**	**55**	*e*Pn	**Pn**	**02 55 31.9**	**-0.9**
HWUT	**Hardware Ranch** 5.5nm,1.1s	**13.60**	**0**	*e*Pn	**Pn**	**02 55 43.3**	**+1.2**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=174,slow=11,SNR=7.3	**14.86**	**6**	Pn	**Pn**	**02 56 05.3**	**+6.0**
PDAR				Lg		03 00 20.4	
	0.1nm,0.3s,baz=179,slow=27,SNR=5.1						
HLID	**Hailey**	**15.71**	**353**	*e*Pn	**Pn**	**02 56 10.0**	**-0.5**
KSU1	**Kansas State U** 4.9nm,0.6s	**16.73**	**45**	*eP*	**Pn**	**02 56 23.2**	**-0.6**
MIAR	**Mount Ida** 0.8nm,0.3s	**16.80**	**63**	*e*Pn	**Pn**	**02 56 23.3**	**-1.3**
NEW	**Newport** 2.7nm,0.9s	**20.69**	**350**	*eP*	**P**	**02 57 09.5**	**+0.2**
BRAL	**Brewton**	**21.63**	**76**	Pn	**P**	**02 57 19.8**	**+0.1**
BRNJ	**Basking Ridge** 15nm,0.4s	**32.92**	**58**	*eP*	**P**	**02 59 03.2**	**-0.6**
DLBC	**Dease Lake**	**33.02**	**342**	*eP*	**P**	**02 59 04.3**	**0.0**

IDC 27 03:21:00.7±2.2, 907S×12230E, h0km, mb4.0/2, mb1 4.0/4, mb1mx3.7/15, mbtmp3.9/4, ML3.1/2, Error ellipse: s-maj=242.5km s-min=28.9km az=55.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=307,slow=15,SNR=6.0	**15.88**	**134**	Pn	Pn	03 24 45.1	-0.7
WRA				Sn	Sn	03 27 27.3	-15
	0.1nm,0.3s,baz=300,slow=20,SNR=3.8						
ASAR	**Alice Springs** 0.0nm,0.3s,baz=324,slow=13,SNR=5.8	**18.27**	**144**	P	Pn	03 25 16.4	+0.6
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=142,slow=6.7,SNR=9.4	**66.05**	**331**	P	P	03 31 49.7	+0.4
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=130,slow=6.0,SNR=3.7	**70.31**	**338**	P	P	03 32 15.5	-0.4

*NEIC **27** 03:34:10.9, 23.12S×70.42W, h39km, mb4.9/46, After GUC.*
NEIC Felt [III] at Sierra Gorda and [II] at Mejillones.
*GUC **27** 03:34:10.6±2.1, 23.12S×70.46W, h38km±7km, ML4.9*
*IDC **27** 03:34:11.9±2.7, 2307S×7030W, h33km±19km, mb4.3/12, mb1 4.4/15, mb1mx4.3/18, mbtmp4.3/15, ML3.5/3, MS3.8/8, Ms1 3.8/8, ms1mx3.6/23, Error ellipse: s-maj=19.7km s-min=15.6km az=62.0*
*ISCJB **27** 03:34:12.5±

comp=E,405nm,21.5s,baz=143,slow=34
PLCA Paso Flores 17.52 181 P **Pn** **03 38 14.7 +0.3**
comp=E,0.1nm,0.3s,baz=6.9,slow=15,SNR=2.5
PLCA LR LR 03 44 58.7
comp=E,811nm,21.9s,baz=350,slow=37
PLCA Paso Flores 17.52 181 *e*Pn **Pn** **03 38 17.0 +2.6**
comp=E,33nm,1.4s
PLCA *ep*Pn 03 38 23.9
ATAH Atahualpa 17.91 333 P **Pn** **03 38 15.4 -3.8**
comp=E,0.5nm,0.3s,baz=174,slow=16,SNR=4.9
BDFB Brasilia 22.19 74 P **P** **03 39 05.9 -0.2**
comp=E,3.9nm,0.8s,mb3.9,baz=249,slow=19,SNR=9.9
BDFB LR LR 03 49 05.8
comp=E,285nm,18.8s,MS3.7,baz=65,slow=40
BDFB Brasilia 22.19 74 *e*P **P** **03 39 06.6 +0.6**
BDFB *ep*P 03 39 14.9
OTAV Otavalo 24.61 340 *e*P **P** **03 39 27.0 -2.9**
comp=E,11nm,1.1s,mb4.3
OTAV *ep*P 03 39 34.6
CAM4 Nova Friburgo 25.47 94 (P) **P** **03 39 38.1 +0.4**
ROSC El Rosal 28.14 351 P **P** **03 40 01.5 -0.2**
comp=E,4.2nm,0.3s,mb4.5,baz=103,slow=16,SNR=3.6
ROSC LR LR 03 53 01.3
comp=E,57nm,18.1s,MS3.2,baz=18,slow=40
ROSC El Rosal 28.14 351 *e*P **P** **03 40 02.1 +0.4**
SDV Santo Domingo 31.85 359 *e*P **P** **03 40 32.8 -1.7**
comp=E,5.3nm,0.8s,mb4.4
RCBR Riachuelo 37.24 68 *e*P **P** **03 41 21.5 +0.2**
comp=E,44nm,1.0s,mb5.2
BBGH Gun Hill 37.55 17 *e*P **P** **03 41 22.9 -0.8**
comp=E,1µm,1.3s
TGUH Tegucigalpa,Un 40.59 334 *e*P **P** **03 41 48.2 -1.0**
comp=E,16nm,0.6s,mb4.8
TGUH *ep*P pP 03 41 57.3 -3.0
CPD Cerro la Pandu 41.16 6 *e*P **P** **03 41 49.1 -4.7**
comp=E,28nm,0.8s,mb4.9
SJG San Juan 41.21 6 *e*P **P** **03 41 51.4 -2.8**
comp=E,70nm,0.7s,mb5.4
CBYP Canovanas 41.39 6 *e*P **P** **03 41 50.9 -4.8**
comp=E,60nm,0.8s,mb5.3
PMSA Palmer Station 41.80 176 *e*P **P** **03 41 59.5 +0.9**
comp=E,42nm,1.2s,mb4.9
BBSR BB Station 55.47 6 *e*P **P** **03 43 42.9 -0.9**
comp=E,50nm,1.3s,mb5.4
VBMS Vicksburg 58.40 340 *e*P **P** **03 44 03.4 -1.3**
RKT Rikitea 59.10 256 *e*LR LR 04 01 57.5
comp=E,344nm,25.8s
OXF Oxford 60.19 342 *e*P **P** **03 44 15.0 -2.0**
comp=E,13nm,0.9s,mb5.0
JCT Junction City 60.44 331 *e*P **P** **03 44 17.2 -1.6**
comp=E,16nm,0.9s,mb5.0
SNAA Sanae 61.11 161 *e*P **P** **03 44 18.7 -4.1**
SNAA *e* pP 03 44 28.5 -6.0
SNAA Sanae 61.11 161 *e*P **P** **03 44 19.5 -3.4**
comp=E,19nm,1.5s,mb5.0
SNAA *ep*P pP 03 44 28.5 -6.0
WVT Waverly 61.28 344 *e*P **P** **03 44 21.6 -2.9**
comp=E,19nm,0.9s,mb5.2
TXAR Lajitas Array 61.34 327 P **P** **03 44 23.4 -1.5**
comp=E,2.6nm,0.7s,mb4.5,baz=148,slow=7.8,SNR=38
TXAR LR LR 04 08 37.4
comp=E,54nm,18.6s,MS3.7,baz=0.0,slow=34
MIAR Mount Ida 61.54 338 *e*P **P** **03 44 24.0 -2.2**
comp=E,14nm,0.8s,mb5.1
SDMD Soldier's Deli 62.55 354 *e*P **P** **03 44 31.5 -1.4**
comp=E,17nm,1.1s,mb5.1
WCI Wyandotte Cave 62.91 346 *e*P **P** **03 44 33.0 -2.3**
comp=E,14nm,0.8s,mb5.1
SIUC Southern Illin 63.14 343 *e*P **P** **03 44 35.4 -1.4**
comp=E,7.4nm,0.6s,mb5.0
WMOK Wichita Mounta 63.66 334 *e*P **P** **03 44 37.9 -2.5**
comp=E,1.2nm,0.8s,mb4.0
FVM French Village 63.73 342 *e*P **P** **03 44 38.1 -2.6**
comp=E,23nm,0.9s,mb5.2
GDL2 Guadalupe Moun 64.02 328 *e*P **P** **03 44 42.4 -0.3**
CCM Cathedral Cave 64.03 342 *e*P **P** **03 44 40.8 -1.9**
comp=E,11nm,0.9s,mb4.9
ACSO Alum Creek Sta 64.18 349 *e*P **P** **03 44 41.2 -2.4**
comp=E,4.6nm,0.4s,mb4.9
319A Douglas 65.90 324 ⇓P **P** **03 44 55.0 0.0**
baz=66
318A Bisbee 66.34 323 ⇓P **P** **03 44 57.9 +0.1**
baz=66
219A White Tail Can 66.37 324 ⇓P **P** **03 44 57.9 -0.1**
baz=66
BNM Barren Site 66.70 328 *e*P **P** **03 44 59.8 -0.3**
comp=E,12nm,1.5s,mb4.7
218A Dragoon 66.78 324 ⇑P **P** **03 45 01.2 +0.6**
baz=67
LPM Los Pinos Moun 66.84 328 *e*P **P** **03 45 01.2 +0.2**
LPM *ep*P pP 03 45 10.7 -1.9
119A Ashpeak Ranch, 66.99 325 ⇑P **P** **03 45 02.7 +0.7**
baz=67
217A Green Valley 67.05 323 ⇓P **P** **03 45 02.3 0.0**
baz=67,SNR=7.3
LAZ Ladron 67.16 327 *e*P **P** **03 45 02.7 -0.3**
comp=E,3.4nm,1.1s,mb4.3
118A Homack Ranch, 67.25 324 ⇑P **P** **03 45 03.7 +0.1**
baz=67
ANMO Albuquerque 67.27 328 *e*P **P** **03 45 03.6 0.0**
comp=E,41nm,1.9s,mb5.1
Z19A T-Link Ranch, 67.37 325 ⇑P **P** **03 45 04.1 -0.2**
baz=67
TUC Tucson 67.44 323 *e*P **P** **03 45 04.5 -0.3**
216A Three Points, 67.58 323 ⇑P **P** **03 45 05.8 +0.1**
baz=68,SNR=5.1
CBKS Cedar Bluff 67.58 335 *e*P **P** **03 45 04.7 -0.8**
comp=E,27nm,0.8s,mb5.3
117A Oracle 67.61 324 ⇓P **P** **03 45 05.8 -0.1**
baz=68,SNR=11
Z18A Geronimo 67.62 324 ⇓P **P** **03 45 06.2 +0.3**
baz=68
Y19A Nutrioso 67.88 326 ⇓P **P** **03 45 08.4 +0.8**
baz=68
116A Eloy 68.14 323 ⇑P **P** **03 45 09.5 +0.4**
baz=68
Y18A Canyon Day Jun 68.16 325 ⇑P **P** **03 45 09.4 +0.2**
baz=68
X19A St. Johns 68.27 326 ⇓P **P** **03 45 10.3 +0.3**
baz=68
214A Organ Pipe Nat 68.31 322 ⇓P **P** **03 45 10.6 +0.3**
baz=68
Y17A Roosevelt 68.52 324 ⇑P **P** **03 45 11.6 0.0**
baz=69
Z16A Peralta Trail, 68.57 324 ⇓P **P** **03 45 12.0 +0.1**
baz=69
X18A Snowflake 68.69 325 ⇓P **P** **03 45 12.9 +0.3**
baz=69
Y16A Circle Bar Ran 69.01 324 ⇓P **P** **03 45 14.9 +0.3**
baz=69,SNR=7.2
SDCO Great Sand Dun 69.09 331 *e*P **P** **03 45 14.5 -0.5**
comp=E,12nm,0.9s,mb4.8
V19A Window Rock 69.15 327 ⇓P **P** **03 45 16.3 +0.9**
baz=69
X16A Lo Mia Camp, P 69.39 324 ⇑P **P** **03 45 17.4 +0.4**
baz=70,SNR=8.4
113A Mohawk Valley, 69.45 322 ⇓P **P** **03 45 17.2 -0.2**
baz=70,SNR=5.6
Y15A Casa Rosa Ranc 69.53 323 ⇑P **P** **03 45 18.0 +0.1**
baz=70
V18A Ganado 69.60 326 ⇓P **P** **03 45 18.7 +0.5**
baz=70
X15A Humboldt 69.88 324 ⇑P **P** **03 45 20.4 +0.4**
baz=70,SNR=8.1
Y14A Wickenburg 69.89 323 ⇑P **P** **03 45 19.9 -0.1**
baz=70
W16A Flagstaff 69.96 325 ⇑P **P** **03 45 21.4 +0.9**
baz=70,SNR=9.9
LIC Lamto 69.98 74 *e*P **P** **03 45 20.4 -0.7**
comp=E,82nm,2.0s,mb5.3
T19A Beclabito 70.02 328 ⇓P **P** **03 45 20.7 -0.1**
baz=70,SNR=6.6
MVCO Mesa Verde 70.06 328 *e*P **P** **03 45 20.8 -0.2**
comp=E,9.7nm,0.8s,mb4.8
MVCO Mesa Verde 70.06 328 ⇑P **P** **03 45 20.9 -0.1**
baz=70
U18A Rough Rock, Ch 70.12 327 ⇑P **P** **03 45 21.8 +0.4**
baz=70
TIC Toumodi 70.18 73 *e*P **P** **03 45 22.1 -0.2**
comp=E,64nm,1.2s,mb5.4
WUAZ Wupatki 70.19 325 *e*P **P** **03 45 22.1 +0.2**
WUAZ Wupatki 70.19 325 ⇑P **P** **03 45 22.3 +0.5**
baz=70
X14A Yava 70.22 323 ⇓P **P** **03 45 22.5 +0.4**
baz=70
Y13A Salome 70.25 322 ⇓P **P** **03 45 22.7 +0.4**
baz=70
KIC Kosan Boka 70.30 74 *e*P **P** **03 45 22.6 -0.4**
comp=E,53nm,0.8s,mb5.5
DBIC Dimbokro 70.33 73 P **P** **03 45 23.2 0.0**
comp=E,10nm,0.7s,mb4.9,baz=224,slow=7.2,SNR=14
DBIC LR LR 04 13 01.1
comp=E,147nm,18.7s,MS4.3,baz=227,slow=33
DBIC Dimbokro 70.33 73 *e*P **P** **03 45 23.2 0.0**
comp=E,10nm,0.7s,mb4.9
W15A Williams 70.41 324 ⇓P **P** **03 45 23.9 +0.7**
baz=70
U16A Tuba City 70.55 326 ⇓P **P** **03 45 24.6 +0.6**
baz=71
Y12C Blythe 70.60 322 ⇑P **P** **03 45 24.5 +0.1**
baz=71
U17A Shonto 70.66 326 ⇓P **P** **03 45 25.2 +0.5**
baz=71,SNR=6.3
T18A Mexican Hat 70.68 327 ⇑P **P** **03 45 24.8 0.0**
baz=71
DVTC Desert V Tower 70.73 320 ⇑P **P** **03 45 25.7 +0.4**
baz=71
SWSC Sam W. Stewart 70.75 320 ⇑P **P** **03 45 25.5 +0.2**
baz=71
PDMCI Parker Dam,Lak 70.78 323 ⇑P **P** **03 45 25.6 0.0**
baz=71
S19A Harvey Farm, M 70.79 328 ⇑P **P** **03 45 25.4 -0.1**
baz=71
ISCO Idaho Springs 70.83 332 *e*P **P** **03 45 25.7 0.0**
comp=E,4.9nm,0.8s,mb4.5
PV01 Paradox Valley 70.83 329 *e*P **P** **03 45 25.4 -0.3**
comp=E,267nm,0.7s
X13A Yucca 70.83 323 ⇓P **P** **03 45 25.7 -0.1**
baz=71
V15A Kaibab Nationa 70.85 325 ⇓P **P** **03 45 26.6 +0.7**
baz=71,SNR=7.4
ECSD EROS,Sioux Fal 70.85 340 *e*P **P** **03 45 24.3 -1.4**
comp=E,11nm,1.0s,mb4.7
W14A Seligman 70.88 324 ⇑P **P** **03 45 26.6 +0.6**
baz=71,SNR=5.6
SMCO Snowmass 70.92 330 *e*P **P** **03 45 26.3 +0.1**
comp=E,8.1nm,0.8s,mb4.7
T17A Navajo Res., N 71.04 327 ⇑P **P** **03 45 27.9 +0.9**
baz=71,SNR=11
BC3 Big Chuckw Mtn 71.06 321 ⇑P **P** **03 45 27.2 0.0**
baz=71
MONP Monument Peak 71.08 320 ⇓P **P** **03 45 27.3 0.0**
baz=71
S18A Hurst Farm, Bl 71.17 328 ⇑P **P** **03 45 28.4 +0.7**
baz=71
V14A Boquillas Ranc 71.20 324 ⇑P **P** **03 45 28.7 +0.7**
baz=71,SNR=8.4
W13A Hualapai Mount 71.23 323 ⇓P **P** **03 45 28.5 +0.3**
baz=71
IRM Iron Mountain 71.25 322 ⇓P **P** **03 45 28.3 0.0**
baz=71
R19A Curley Farm, L 71.28 328 ⇓P **P** **03 45 29.1 +0.7**
baz=71
U15A North Rim 71.37 325 ⇓P **P** **03 45 29.6 +0.6**
baz=71
T16A Glen Canyon Da 71.39 326 ⇑P **P** **03 45 29.7 +0.6**
baz=72
S17A Black Ridge (B 71.53 327 ⇓P **P** **03 45 30.1 +0.1**
baz=72,SNR=6.6
PFO Pinyon Flat Ob 71.61 321 ⇓P **P** **03 45 30.9 +0.4**
baz=72
BELC Belle Mtn. 71.62 321 ⇑P **P** **03 45 31.1 +0.5**
baz=72
R18A Canyonlands Na 71.67 328 ⇓P **P** **03 45 30.7 -0.1**
baz=72
Q19A Hogan Spring (71.81 329 ⇓P **P** **03 45 32.2 +0.6**
baz=72
U14A Mt Trumbull 71.83 325 ⇑P **P** **03 45 32.4 +0.6**
baz=72,SNR=16
V13A Grand Canyon W 71.84 324 ⇓P **P** **03 45 32.2 +0.3**
baz=72
T15A Red Dirt Ranch 71.86 326 ⇑P **P** **03 45 33.3 +1.4**
baz=72
GMRC Granite Mounta 71.99 322 ⇓P **P** **03 45 33.2 +0.4**
baz=72
S16A Weppner Ranch, 72.00 327 ⇓P **P** **03 45 33.0 +0.3**
baz=72
MURC Murrieta 72.04 320 ⇓P **P** **03 45 33.3 +0.2**
baz=72
R17A Hanksville Air 72.09 328 ⇑P **P** **03 45 33.6 +0.3**
baz=72
P19A Cripple Cowboy 72.21 329 ⇑P **P** **03 45 34.5 +0.5**
baz=72
V12A Nelson 72.23 323 ⇑P **P** **03 45 34.4 +0.2**
baz=72
U13A Pakoon Wash 72.25 324 ⇓P **P** **03 45 34.9 +0.6**
baz=72
T14A Hurricane 72.26 325 ⇓P **P** **03 45 34.6 +0.2**
baz=72
Q18A Rafter H Ranch 72.34 328 ⇑P **P** **03 45 35.0 +0.2**
baz=72
R16A Teasdale 72.37 327 ⇓P **P** **03 45 35.4 +0.4**
baz=72
SRU San Rafael 72.54 328 *e*P **P** **03 45 36.0 0.0**
comp=E,13nm,0.8s,mb4.9
SRU San Rafael 72.54 328 ⇓P **P** **03 45 36.4 +0.4**
baz=73
U12A Valley of Fire 72.57 324 ⇓P **P** **03 45 36.4 +0.2**
baz=73
T13A Saint George 72.67 325 ⇑P **P** **03 45 37.3 +0.5**
baz=73
Q16A Castle Valley 72.70 328 ⇓P **P** **03 45 37.6 +0.7**
baz=73
R15A Junction 72.72 326 ⇑P **P** **03 45 37.6 +0.5**
baz=73
BFSC Mount Baldy St 72.76 320 ⇓P **P** **03 45 37.5 +0.1**
baz=73
CCUT Cedar City 72.78 325 *e*P **P** **03 45 37.9 +0.4**
comp=E,36nm,1.4s,mb5.1
P18A Preston Nutter 72.81 329 ⇑P **P** **03 45 38.1 +0.6**
baz=73
S14A Cedar City 72.83 326 ⇑P **P** **03 45 38.3 +0.5**
baz=73
MSU Marysvale 72.90 327 *e*P **P** **03 45 37.9 -0.2**
P17A Butcher Ranch, 72.92 328 ⇑P **P** **03 45 38.6 +0.3**
baz=73
SHPR Sheep Range 72.97 323 *e*P **P** **03 45 39.1 +0.6**
ARUT Antelope Range 73.00 325 *e*P **P** **03 45 38.9 +0.2**
comp=E,13nm,1.2s,mb4.8
GSC Goldstone 73.02 322 ⇑P **P** **03 45 39.2 +0.3**
baz=73
S13A Holt Ranch, En 73.06 325 ⇑P **P** **03 45 40.0 +0.9**
baz=73
O18A Roosevelt 73.20 329 ⇑P **P** **03 45 40.3 +0.5**
baz=73
N19A John Jarvie Ra 73.31 330 ⇓P **P** **03 45 40.6 +0.1**
baz=73
M20A Sweetwater, Wa 73.34 331 ⇑P **P** **03 45 40.5 -0.1**
baz=73
L21A Rawlins 73.36 332 ⇓P **P** **03 45 40.8 +0.1**
baz=74
Q15A Fillmore 73.37 327 ⇑P **P** **03 45 41.4 +0.5**
baz=74
EDW2 Edwards Air Fo 73.41 321 ⇑P **P** **03 45 41.0 -0.2**
baz=74
P16A Fountain Green 73.48 328 ⇓P **P** **03 45 42.2 +0.7**
baz=74
O17A Robinson Place 73.49 329 ⇓P **P** **03 45 42.3 +0.7**
baz=74
T11A Corn Creek, Al 73.54 324 ⇑P **P** **03 45 42.6 +0.7**
baz=74,SNR=8.1
U10A Ash Meadows, A 73.55 323 ⇑P **P** **03 45 43.0 +0.9**
baz=74
R13A O'Grain Ranch, 73.57 325 ⇑P **P** **03 45 43.1 +1.0**
baz=74
N18A Larsen Ranch, 73.60 330 ⇑P **P** **03 45 43.1 +0.9**
baz=74
LRMC Laurel Mountai 73.65 321 ⇓P **P** **03 45 42.5 -0.1**
baz=74
OSI Osito Adit 73.65 320 *e*P **P** **03 45 36.3 -6.3**
comp=E,91nm,0.4s
MPU Maple Canyon 73.78 328 *e*P **P** **03 45 42.9 -0.4**
comp=E,13nm,1.0s,mb4.8
RSSD Black Hills 73.79 335 *e*P **P** **03 45 42.0 -1.2**
comp=E,3.0nm,0.6s,mb4.4
PPT Papeete 73.81 258 *e*LR LR 04 08 40.4
comp=E,237nm,27.0s
Q14A Sevier Lake (B 73.82 326 ⇓P **P** **03 45 44.2 +0.7**
baz=74
L20A Wamsutter 73.82 331 ⇓P **P** **03 45 43.5 0.0**
baz=74
O16A Springville 73.86 328 ⇓P **P** **03 45 44.5 +0.7**
baz=74,SNR=7.3
FURC Furnace Creek, 73.89 322 ⇑P **P** **03 45 44.4 +0.4**
baz=74
TPNV Topopah Spring 73.89 323 *e*P **P** **03 45 44.8 +0.8**
TPNV Topopah Spring 73.89 323 ⇑P **P** **03 45 44.9 +0.9**
baz=74
MPMC Manual Prospec 73.95 322 ⇓P **P** **03 45 44.3 -0.1**
baz=74
R12A Pony Springs, 74.01 325 ⇑P **P** **03 45 45.3 +0.6**
baz=74
N17A Moffit Pass 74.12 329 ⇑P **P** **03 45 45.8 +0.6**
baz=74,SNR=14
M18A Lyman 74.14 330 ⇑P **P** **03 45 45.0 -0.4**
baz=74
JLU Jordanelle 74.14 329 *e*P **P** **03 45 45.3 -0.1**
JLU *ep*P pP 03 45 55.2 -2.1
P14A Drum Mountains 74.17 327 ⇑P **P** **03 45 46.2 +0.7**
baz=74
Q13A Wheeler Ranch, 74.17 326 ⇓P **P** **03 45 46.0 +0.4**
baz=74
ISA Isabella 74.24 321 *e*P **P** **03 45 45.2 -0.9**
K20A Yellowstone Ra 74.35 332 ⇓P **P** **03 45 46.3 -0.2**
baz=74
L19A Farson 74.35 331 ⇓P **P** **03 45 47.0 +0.4**
baz=74,SNR=6.3
N16A Rees Ranch, Co 74.36 329 ⇓P **P** **03 45 47.0 +0.4**
baz=74
O15A The Old Anders 74.39 328 ⇑P **P** **03 45 47.5 +0.7**
baz=74
M17A Scullys Gap (B 74.45 330 ⇓P **P** **03 45 47.3 +0.1**
baz=74
DUG Dugway 74.50 327 *e*P **P** **03 45 47.2 -0.3**
comp=E,9.6nm,1.1s,mb4.6
DUG Dugway 74.50 327 ⇑P **P** **03 45 47.8 +0.3**
baz=75
PKM Peak Mountain 74.50 319 ⇓P **P** **03 45 47.9 +0.3**
baz=75
L18A Fontenelle, Gr 74.52 330 ⇑P **P** **03 45 47.7 +0.1**
baz=75
P13A Bates Ranch, G 74.54 326 ⇓P **P** **03 45 48.2 +0.4**
baz=75,SNR=6.2
R11A Troy Canyon, C 74.55 324 ⇑P **P** **03 45 48.2 +0.4**
baz=75
GRAC Grapevine Rang 74.55 322 ⇓P **P** **03 45 48.0 +0.2**
baz=75
K19A Absolon Red Bu 74.70 332 ⇑P **P** **03 45 48.3 -0.3**
baz=75
AGMN Agassiz Refuge 74.77 343 *e*P **P** **03 45 47.8 -1.0**
comp=E,29nm,1.4s,mb5.0
M16A Huntsville 74.78 329 ⇑P **P** **03 45 49.0 -0.1**
baz=75
S10A Tonopah Range, 74.78 324 ⇑P **P** **03 45 49.5 +0.4**
baz=75
N15A Stansbury Isla 74.89 328 ⇓P **P** **03 45 49.2 -0.5**
baz=75
R10A Warm Springs 74.89 324 ⇓P **P** **03 45 50.8 +1.0**
baz=75
SMMC Simmler 74.89 320 ⇑P **P** **03 45 50.2 +0.4**
baz=75
Q11A Duckwater 74.95 325 ⇑P **P** **03 45 50.6 +0.5**
baz=75,SNR=6.7
BW06 Boulder Array 74.97 331 *e*P **P** **03 45 49.6 -0.5**
BW06 Boulder Array 74.97 331 ⇑P **P** **03 45 49.9 -0.2**
baz=75
PDAR Pinedale Array 74.97 331 P **P** **03 45 49.5 -0.6**
comp=E,1.3nm,0.9s,mb3.9,baz=140,slow=5.8,SNR=7.8
S09A Goldfield 74.99 323 ⇑P **P** **03 45 50.3 0.0**
baz=75
VNDA Vanda 75.02 190 P **P** **03 45 50.4 +0.4**
comp=E,1.4nm,1.0s,mb3.8,baz=85,slow=11,SNR=3.6
O13A Hicks Ranch, I 75.03 327 ⇑P **P** **03 45 51.0 +0.4**
baz=75
K18A Toltan Ranch, 75.08 331 ⇑P **P** **03 45 51.3 +0.5**
baz=75,SNR=10.0
SPUT South Promonto 75.17 328 *e*P **P** **03 45 51.5 +0.1**
N14A Grayback Hills 75.18 328 ⇑P **P** **03 45 51.4 0.0**
baz=75
L16A Fish Haven 75.23 329 ⇑P **P** **03 45 51.8 +0.1**
baz=75
TPH Tonopah 75.24 323 *e*P **P** **03 45 51.2 -0.6**
comp=E,6.2nm,0.9s,mb4.5
R09A Tonopah 75.27 324 ⇓P **P** **03 45 52.0 0.0**
baz=75,SNR=5.8
M15A Larsen Ranch, 75.29 328 ⇑P **P** **03 45 51.7 -0.3**
baz=75
Q10A Clear Creek Ra 75.33 324 ⇓P **P** **03 45 52.9 +0.6**
baz=75
SYO Syowa Base 75.37 159 ⇓*e*P **P** **03 45 50.8 -1.4**
SYO Syowa Base 75.37 159 ⇓*ep*P pP 03 46 01.8 -2.3
P11A Circle Ranch, 75.52 325 ⇑P **P** **03 45 54.1 +0.8**
baz=76
O12A Currie 75.52 326 ⇓P **P** **03 45 53.7 +0.3**
baz=76
J18A Kendall Valley 75.53 331 ⇑P **P** **03 45 53.3 -0.1**
baz=76
K17A Gardner Place, 75.57 330 ⇓P **P** **03 45 53.4 -0.2**
baz=76,SNR=9.1
L15A Malad City 75.67 329 ⇑P **P** **03 45 53.7 -0.5**
baz=76
HVU Hansel Valley 75.69 329 *e*P **P** **03 45 54.6 +0.3**
comp=E,10nm,1.1s,mb4.7
M14A Sheep Mountain 75.75 328 ⇓P **P** **03 45 54.5 -0.1**
baz=76
I18A Diamond G Ranc 75.83 331 ⇑P **P** **03 45 55.1 +0.1**
baz=76
T06C Millerton Lake 75.89 321 ⇓P **P** **03 45 56.5 +0.9**
baz=76
O11A Cowboy Ranch, 75.89 326 ⇑P **P** **03 45 55.7 +0.2**
baz=76
K16A Soda Springs 75.94 330 ⇑P **P** **03 45 56.2 +0.5**
baz=76
P10A Eureka 75.94 325 ⇓P **P** **03 45 56.1 +0.3**
baz=76
J17A Brown Place, J 75.96 331 ⇓P **P** **03 45 56.0 +0.2**
baz=76
REDW Red Top Meadow 76.02 331 *e*P **P** **03 45 56.1 -0.1**
SNOW Snow King Moun 76.06 331 *e*P **P** **03 45 56.5 +0.2**
comp=E,12nm,1.1s,mb4.7
NVAR Mina Array Bea 76.08 323 P **P** **03 45 55.7 -0.9**
comp=E,1.6nm,0.8s,mb4.0,baz=145,slow=5.9,SNR=12
LOHW Long Hollow 76.11 331 *e*P **P** **03 45 56.7 0.0**
comp=E,7.2nm,1.0s,mb4.6
L14A Malta 76.11 328 ⇓P **P** **03 45 56.5 -0.1**
baz=76
N12A Clover Valley, 76.11 327 ⇓P **P** **03 45 56.6 -0.1**
baz=76
ELK Elko 76.13 326 *e*P **P** **03 45 56.9 +0.1**
TPAW Teton Pass 76.17 331 *e*P **P** **03 45 57.0 +0.1**
Q08A Gabbs 76.19 323 ⇓P **P** **03 45 57.3 +0.1**
baz=76
RRI2 Red Ridge 76.22 330 *e*P **P** **03 45 57.5 +0.3**
K15A Arbon 76.27 329 ⇓P **P** **03 45 57.7 +0.1**
baz=76
MOOW Moose Ponds 76.28 331 *e*P **P** **03 45 57.5 -0.1**
J16A Bone 76.30 330 ⇓P **P** **03 45 57.9 +0.2**
baz=76
I17A Pilgram Creek 76.34 331 ⇑P **P** **03 45 58.5 +0.6**
baz=76
DCID1 Drake Creek 76.35 331 *e*P **P** **03 45 58.4 +0.4**
DCID1 *ep*P pP 03 46 08.1 -1.9
M12A Wells 76.47 327 ⇑P **P** **03 45 58.8 +0.1**
baz=76
K14A Jones Ranch, D 76.47 329 ⇓P **P** **03 45 58.4 -0.2**
baz=76
IMW Indian Meadow 76.48 331 *e*P **P** **03 45 59.1 +0.4**
IMW *ep*P pP 03 46 08.5 -2.1
L13A Double Diamond 76.49 328 ⇓P **P** **03 45 59.3 +0.5**
baz=77
ULM Lac du Bonnet 76.55 343 P **P** **03 45 57.1 -1.8**
comp=E,2.8nm,0.6s,mb4.4,baz=153,slow=4.5,SNR=2.8
ULM LR LR 04 20 43.9
comp=E,147nm,20.3s,MS4.3,baz=13,slow=36
I16A Newdale 76.71 331 ⇑P **P** **03 46 00.1 +0.1**
baz=77
O09A Fish Creek Ran 76.72 325 ⇑P **P** **03 46 00.2 0.0**
baz=77
J15A Blackfoot 76.77 330 ⇑P **P** **03 46 00.7 +0.3**
baz=77,SNR=7.3
R06C Coleville 76.79 322 ⇓P **P** **03 46 01.1 +0.5**
baz=77
M11A Holland Ranch, 76.92 327 ⇑P **P** **03 46 01.6 +0.3**
baz=77
CMB Columbia Colle 76.98 321 *e*P **P** **03 46 01.0 -0.7**
G18A Lazy EL Ranch, 77.01 333 ⇑P **P** **03 46 01.7 0.0**
baz=77
L12A House Creek Ra 77.06 327 ⇑P **P** **03 46 02.6 +0.6**
baz=77
J14A Carey 77.22 329 ⇓P **P** **03 46 03.4 +0.5**
baz=77,SNR=5.6
H16A Russell Place, 77.25 331 ⇓P **P** **03 46 03.5 +0.4**
baz=77

I15A	Monteview	77.26	330	⇓P	P	03 46 03.7	+0.5
	baz=77						
O08A	Rochester Mine	77.33	324	⇓P	P	03 46 04.0	+0.4
	baz=77						
K12A	Draper Farm, C	77.37	328	⇓P	P	03 46 04.3	+0.5
	baz=77						
L11A	Cat Creek Ranc	77.44	327	⇑P	P	03 46 04.3	+0.1
	baz=78						
R04C	Big Horse Ranc	77.45	321	⇑P	P	03 46 04.8	+0.4
	baz=78						
DGMT	Dagmar	77.54	338	*e*P	P	03 46 04.6	+0.1
DGMT	Dagmar	77.54	338	⇑P	P	03 46 04.6	+0.1
	baz=78						
F18A	Big Timber	77.54	333	⇓P	P	03 46 04.5	-0.1
	baz=78						
PAHR	Pah Rah Range	77.58	323	*e*P	P	03 46 05.5	+0.4
PAHR				*e*pP	pP	03 46 15.3	-1.7
J13A	Cove Ranch, Pi	77.59	329	⇓P	P	03 46 05.2	+0.3
	baz=78						
O07A	Toulon	77.62	324	⇑P	P	03 46 05.0	-0.2
	baz=78						
I14A	Mackay	77.65	330	⇑P	P	03 46 05.9	+0.5
	baz=78						
N08A	GE Springer Mi	77.66	325	⇑P	P	03 46 05.3	-0.2
	baz=78						
LAVA	Lava Cap Winer	77.68	322	⇓P	P	03 46 05.2	-0.4
	baz=78						
SCHQ	Schefferville	77.72	2	*e*P	P	03 46 01.7	-3.8
L10A	Juniper Basin	77.74	327	⇓P	P	03 46 06.3	+0.5
	baz=78						
M09A	Marrel Ranch,	77.77	326	⇑P	P	03 46 06.2	+0.2
	baz=78						
HLID	Hailey	77.83	329	*e*P	P	03 46 06.9	+0.6
HLID	Hailey	77.83	329	⇓P	P	03 46 06.8	+0.5
	baz=78						
J12A	Stokes Ranch,	77.92	328	⇓P	P	03 46 07.1	+0.3
	baz=78						
F17A	Fitzpatrick Pl	77.94	332	⇑P	P	03 46 07.2	+0.4
	baz=78						
I13A	Wildhorse Cree	77.95	329	⇓P	P	03 46 07.6	+0.6
	baz=78						
MCMT	McKenzie Canyo	78.06	330	*e*P	P	03 46 07.9	+0.3
	comp=E,1.7nm,0.8s,mb4.0						
H14A	Leadore	78.14	330	⇓P	P	03 46 08.3	+0.3
	baz=78						
E18A	Harlowton	78.15	333	⇑P	P	03 46 08.2	+0.1
	baz=78						
BOZ	Bozeman (W)	78.16	332	*e*P	P	03 46 06.9	-1.2
G15A	Dillon	78.16	331	⇓P	P	03 46 07.9	-0.2
	baz=78						
BEKR	Beckwourth	78.23	323	⇑P	P	03 46 08.8	+0.1
	baz=78						
M08A	Happy Creek Ra	78.27	325	⇓P	P	03 46 08.7	-0.1
	baz=78						
L09A	Wilkinson Ranc	78.31	326	⇓P	P	03 46 09.1	+0.1
	baz=78						
I12A	Atlanta	78.35	329	⇓P	P	03 46 09.6	+0.4
	baz=78						
MFID	Camas Ranch	78.40	328	⇓P	P	03 46 09.5	0.0
	baz=78						
E17A	Martinsdale	78.47	333	⇑P	P	03 46 09.8	0.0
	baz=79,SNR=5.9						
H13A	Challis	78.51	330	⇓P	P	03 46 10.5	+0.4
	baz=79,SNR=15						
N06A	Buffalo Meadow	78.56	324	⇓P	P	03 46 10.1	-0.4
	baz=79						
D18A	Linhart Farms,	78.61	334	⇓P	P	03 46 10.6	0.0
	baz=79						
M07A	Soldier Meadow	78.65	325	⇓P	P	03 46 11.1	+0.2
	baz=79						
LRM	Limekiln Ridge	78.66	331	*e*P	P	03 46 11.1	+0.3
F15A	Butte	78.69	331	⇓P	P	03 46 11.3	+0.3
	baz=79,SNR=7.1						
H12A	Diamond D Ranc	78.78	329	⇓P	P	03 46 11.8	+0.3
	baz=79						
L08A	Fields	78.78	326	⇑P	P	03 46 11.4	-0.2
	baz=79						
K09A	Rome	78.83	326	⇓P	P	03 46 11.7	-0.2
	baz=79						
G13A	Cobalt	78.90	330	⇑P	P	03 46 13.0	+0.8
	baz=79						
D17A	Six Diamond Ra	78.94	333	⇑P	P	03 46 12.2	-0.1
	baz=79,SNR=7.8						
O04C	Chester	78.95	323	⇑P	P	03 46 12.4	-0.1
	baz=79						
TOA0	Torodi Ar. Sit	79.02	71	*e*P	P	03 46 13.1	-0.4
TORD	Torodi Ar. Bea	79.02	71	P	P	03 46 13.4	-0.2
	comp=E,18nm,0.8s,mb5.0,baz=257,slow=5.1,SNR=128						
F14A	Wisdom	79.06	331	⇑P	P	03 46 13.5	+0.4
	baz=79						
E15A	Deer Lodge	79.20	332	⇓P	P	03 46 14.0	+0.2
	baz=79						
D16A	Dana Ranch, Ca	79.21	333	⇓P	P	03 46 14.2	+0.4
	baz=79						
J09A	Fry Pan Ranch,	79.31	327	⇑P	P	03 46 14.8	+0.3
	baz=79						
C17A	Wharram Farm,	79.36	333	⇓P	P	03 46 14.2	-0.4
	baz=79						
H11A	Donnelly	79.45	329	⇓P	P	03 46 14.6	-0.6
	baz=80						
F13A	Darby	79.47	330	⇓P	P	03 46 15.5	+0.2
	baz=80,SNR=22						
B18A	Beardsley Farm	79.56	334	⇓P	P	03 46 15.4	-0.3
	baz=80,SNR=7.8						
E14A	Clinton	79.57	331	⇓P	P	03 46 16.0	+0.2
	baz=80,SNR=5.3						
K07A	Rock Creek Ran	79.61	326	⇑P	P	03 46 15.8	-0.3
	baz=80						
D15A	Lincoln	79.63	332	⇓P	P	03 46 16.5	+0.3
	baz=80						
J08A	Circle Bar Ran	79.68	326	⇓P	P	03 46 16.3	-0.2
	baz=80						
H10A	Noah's Angus R	79.72	328	⇓P	P	03 46 16.3	-0.4
	baz=80						
I09A	Lost Marbles R	79.76	327	⇑P	P	03 46 16.5	-0.4
	baz=80						
F12A	Elk City	79.87	330	⇓P	P	03 46 17.3	-0.2
	baz=80						
B17A	L&G Farms, Che	79.89	334	⇑P	P	03 46 16.5	-1.0
	baz=80						
C16A	Fuhringer Ranc	79.90	333	⇓P	P	03 46 17.3	-0.3
	baz=80						
E13A	Victor	79.91	331	⇓P	P	03 46 17.7	+0.1
	baz=80,SNR=7.5						
G11A	Walters Elk Ra	80.08	329	⇓P	P	03 46 19.0	+0.4
	baz=80						
MSO	Missoula	80.09	331	*e*P	P	03 46 19.0	+0.3
D14A	Greenough	80.09	332	⇓P	P	03 46 18.3	-0.3
	baz=80						
J07A	Hines	80.12	326	⇓P	P	03 46 18.8	-0.1
	baz=80						
I08A	Drewsey	80.13	327	⇓P	P	03 46 19.2	+0.3
	baz=80						
BMO	Blue Mountains	80.18	328	*e*P	P	03 46 18.8	-0.4
H09A	Durkee	80.22	328	⇓P	P	03 46 19.0	-0.4
	baz=80						
C15A	Salmond Ranch,	80.24	332	⇓P	P	03 46 19.5	+0.1
	baz=80,SNR=12						
A17A	Triple J Farms	80.37	334	⇓P	P	03 46 19.6	-0.5
	baz=80,SNR=7.7						
G10A	Bishop Farm, J	80.41	328	⇓P	P	03 46 20.9	+0.5
	baz=80						
J06A	Christmas Vall	80.47	325	⇑P	P	03 46 21.1	+0.3
	baz=80						
K05A	Summer Lake	80.50	325	⇓P	P	03 46 21.6	+0.7
	baz=81						
E12A	Beaver Dam Sad	80.51	330	⇓P	P	03 46 20.6	-0.3
	baz=81						
D13A	Huson	80.52	331	⇓P	P	03 46 20.8	-0.2
	baz=81,SNR=7.8						
B15A	Bradeley Ranch,	80.64	333	⇑P	P	03 46 21.0	-0.5
	baz=81						
TSUM	Tsumeb	80.69	107	*e*P	P	03 46 22.8	+0.1
G09A	Cove	80.72	328	⇓P	P	03 46 22.5	+0.5
	baz=81						
I07A	Izee	80.72	326	⇓P	P	03 46 22.1	0.0
	baz=81						
C14A	Swan Lake	80.72	332	⇑P	P	03 46 22.3	+0.3
	baz=81						
A16A	West Butte Ran	80.74	334	⇑P	P	03 46 21.8	-0.2
	baz=81						
E11A	Bogner Ranch,	80.76	330	⇓P	P	03 46 21.7	-0.6
	baz=81						
D12A	Red Ives Fores	80.89	331	⇓P	P	03 46 22.9	-0.1
	baz=81						
F10A	Beach Ranch, E	80.96	329	⇓P	P	03 46 23.2	-0.1
	baz=81						
B14A	Marquette Ranc	80.97	333	⇑P	P	03 46 23.1	-0.3
	baz=81						
I06A	Prineville	80.99	326	⇓P	P	03 46 23.8	+0.3
	baz=81						
C13A	Hot Springs	81.02	331	⇓P	P	03 46 23.4	-0.2
	baz=81						
A15A	Johnson Ranch,	81.23	333	⇓P	P	03 46 23.4	-1.2
	baz=81						
BSMT	Bassoo Peak	81.24	331	*e*P	P	03 46 25.0	+0.2
E10A	Myers Farm, Un	81.28	329	⇓P	P	03 46 24.7	-0.3
	baz=81						
G08A	Pilot Rock	81.31	328	⇑P	P	03 46 24.9	-0.3
	baz=81						
D11A	Klaveano Farm,	81.33	330	⇑P	P	03 46 24.5	-0.8
	baz=81						
C12B	Naegeli Ranch,	81.44	331	⇑P	P	03 46 25.5	-0.3
	baz=82						
B13A	Whitefish	81.50	332	⇑P	P	03 46 25.7	-0.4
	baz=82,SNR=5.2						
A14A	Double T Ranch	81.51	333	⇓P	P	03 46 25.5	-0.6
	baz=82						
F08A	Pendleton	81.58	328	⇓P	P	03 46 26.1	-0.5
	baz=82						
L02A	Cave Junction	81.58	323	⇑P	P	03 46 26.2	-0.5
	baz=82						
H06A	Lindquist Farm	81.60	326	⇓P	P	03 46 26.8	+0.1
	baz=82						
G07A	Ruggs Ranch, H	81.64	327	⇓P	P	03 46 27.2	+0.2
	baz=82						
I05A	Bend	81.69	326	⇓P	P	03 46 27.5	+0.3
	baz=82						
D10A	Wagner Farm, O	81.78	330	⇓P	P	03 46 27.0	-0.6
	baz=82						
WALA	Waterton Lakes	81.78	333	*e*P	P	03 46 27.1	-0.5
	comp=E,44nm,1.7s,mb5.1						
WALA				*e*pP	pP	03 46 36.6	-3.0
E09A	Wood Farm, Sta	81.79	329	⇓P	P	03 46 26.8	-0.9
	baz=82						
A13A	Flathead Natio	81.90	332	⇓P	P	03 46 28.4	+0.2
	baz=82						
B12A	Libby	82.06	331	⇓P	P	03 46 29.1	+0.1
	baz=82						
HAWA	Hanford	82.37	328	*e*P	P	03 46 31.1	+0.4
A12A	Yaak River Ran	82.44	332	⇓P	P	03 46 30.9	-0.2
	baz=82						
NEW	Newport	82.59	331	*e*P	P	03 46 31.1	-0.8
OD2	Odessa Site #2	82.69	329	*e*P	P	03 46 32.0	-0.4
	comp=E,7.4nm,0.7s,mb4.8						
OD2				*e*pP	pP	03 46 41.4	-3.0
A11A	Hall Mountain,	82.77	331	⇑P	P	03 46 32.2	-0.6
	baz=83						
C09A	Chrisman Ranch	82.78	330	⇓P	P	03 46 32.5	-0.3
	baz=83						
F05A	White Salmon	82.97	327	⇑P	P	03 46 34.3	+0.5
	baz=83						
MAW	Mawson	83.08	164	P	P	03 46 35.1	+0.8
	comp=E,5.7nm,0.9s,mb4.6,baz=228,slow=7.0,SNR=7.3						
D07A	Quincy	83.15	328	⇓P	P	03 46 34.9	+0.1
	baz=83						
B09A	Rice	83.18	330	⇓P	P	03 46 34.2	-0.7
	baz=83						
C07A	Waterville	83.55	329	⇓P	P	03 46 36.4	-0.4
	baz=84						
ETW	Entiat	83.62	328	*e*P	P	03 46 36.6	-0.5
BOSA	Boshof	83.71	118	P	P	03 46 39.0	+0.8
	comp=E,5.3nm,0.7s,mb4.8,baz=346,slow=16,SNR=8.2						
A09A	Danville	83.78	330	⇓P	P	03 46 37.1	-0.8
	baz=84						
A08A	Turner Farm, O	84.08	330	⇑P	P	03 46 39.1	-0.3
	baz=84						
B07A	Winthrop	84.12	329	⇑P	P	03 46 38.7	-1.0
	baz=84						
EDM	Edmonton	84.77	336	*e*P	P	03 46 40.9	-2.0
YKA	Yellowknife Ar	92.36	341	P	P	03 47 17.2	-1.6
	comp=E,3.9nm,0.7s,mb4.8,baz=136,slow=4.4,SNR=25						
DLBC	Dease Lake	95.13	333	*e*P	P	03 47 31.3	-0.4
COLA	College	105.65	334	PKiKP	PKiKP	03 52 30.2	-1.3
ASAR	Alice Springs	127.90	208	PKP	PKPdf	03 53 14.7	-0.6
	comp=E,2.0nm,0.8s,baz=140,slow=2.2,SNR=18						
WRA	Warramunga Arr	130.93	211	PKP	PKPdf	03 53 20.8	-0.4
	comp=E,1.2nm,0.6s,baz=151,slow=1.7,SNR=17						
ZAA0	Zalesovo Array	143.95	25	*e*PKPdf	PKPdf	03 53 41.8	-2.2
ZALV	Zalesovo Beam	143.95	25	PKP	PKPdf	03 53 41.5	-2.5
	comp=E,5.4nm,0.7s,baz=283,slow=2.5,SNR=21						
EKS2	Erkin-Say	144.39	48	*e*PKPdf	PKPdf	03 53 44.4	-0.7
EKS2				*ep*PKPdf	pPKPdf	03 53 55.4	-2.3
EKS2	Erkin-Say	144.39	48	P	PKPdf	03 53 44.3	-0.8
	SNR=6.3						
AML	Almayashu	144.52	49	*e*PKPdf	PKPdf	03 53 45.7	+0.3
AML	Almayashu	144.52	49	P	PKPdf	03 53 45.7	+0.4
	SNR=13						
AAK	Ala-Archa	144.89	48	*e*PKPdf	PKPdf	03 53 45.6	-0.4
AAK	Ala-Archa	144.89	48	P	PKPdf	03 53 46.9	+0.9
	SNR=14						
CHMS	Chumysh	144.93	47	P	PKPdf	03 53 46.5	+0.5
	SNR=6.1						
KBK	Karagaybulak	145.19	48	P	PKPbc	03 53 47.8	+1.6
	SNR=8.9						
TKM2	Tokmak 2	145.53	47	*e*PKPdf	PKPdf	03 53 48.2	+1.1
TKM2	Tokmak 2	145.53	47	P	PKPdf	03 53 48.3	+1.2
	SNR=10						
KSH	Kashi	147.05	52	*e*PKP	PKPab	03 53 53.0	-0.4
KSH				*e*APKP		03 54 04.0	
KSH				*e*XPKP		03 54 07.5	
KSH				*e*PKS		03 57 27.3	
KSH				LR	LR		
	comp=Z,969nm,5.0s						
MK31	Makanchi Array	147.66	36	*e*PKPdf	PKPdf	03 53 50.9	+0.4
MK31				*e*PKPbc	PKPbc	03 53 53.5	+0.2
MKAR	Makanchi Array	147.66	36	PKPbc	PKPdf	03 53 50.9	+0.4
	comp=Z,5.3nm,0.7s,baz=320,slow=3.2,SNR=30						
HYB	Hyderabad	150.16	95	*i* PKP	PKPbc	03 54 01.0	+0.5
MJAR	Matsushiro Arr	152.12	305	PKPbc	PKPbc	03 54 04.1	-0.5
	comp=Z,4.4nm,0.8s,baz=94,slow=1.7,SNR=10						
MJAR				PKPab	PKPab	03 54 13.5	-0.7
	comp=Z,2.2nm,0.8s,baz=84,slow=1.5,SNR=5.0						
WMQ	Urumqi	152.49	36	*e*PKP	PKPdf	03 54 00.0	+1.8
SONM	Songino Array	155.23	6	PKP	PKPdf	03 54 02.5	+0.6
	comp=Z,0.6nm,0.8s,baz=274,slow=2.8,SNR=6.4						
SONM				PKPab	PKPab	03 54 25.7	-1.2
	comp=Z,1.3nm,0.9s,baz=303,slow=1.7,SNR=5.4						
GTA	Gaotai	161.71	25	PKP	PKPdf	03 54 10.3	+0.3
GTA				APKP		03 54 21.0	
GTA				XPKP		03 54 24.5	
HHC	Hu-ho-hao-te	162.30	356	*e*PKP	PKPdf	03 54 12.3	+1.7
HHC				XPKP		03 54 26.8	
HHC				PKS		03 57 44.0	
HHC				PP	PP	03 58 42.5	+1.5
HHC				SKS	SKSdf	04 01 12.3	0.0
HHC				SKKS	SKKSac	04 05 25.5	-1.4
HHC				PP	PP		
	comp=Z,183nm,11.9s						
HHC				LR	LR		
	comp=N,305nm,20.2s						
HHC				LR	LR		
	comp=E,314nm,22.6s						
HHC				LR	LR		
	comp=Z,170nm,22.6s						
BJI	Beijing	162.33	344	PKP	PKPdf	03 54 13.8	+3.2
LZH	Lanzhou	166.12	21	*e*PKP	PKPdf	03 54 17.5	+3.3
LZH				APKP		03 54 27.5	
LZH				XPKP		03 54 31.0	
NJ2	Nanjing	168.06	320	*e*PKP	PKPdf	03 54 19.5	+3.8
CD2	Chengdu	170.58	34	*e*PKP	PKPdf	03 54 19.3	+2.0
CD2				APKP		03 54 28.3	
CD2				XPKP		03 54 33.5	
CD2				PKP2	PKPab	03 55 35.0	+0.4
CD2				PP	PP	03 59 25.5	+1.1
CD2				SKS	SKSdf	04 01 17.8	0.0
CD2				SKKS	SKKSac	04 06 07.5	-1.4
CD2				PP	PP		
	comp=Z,90nm,8.4s						
CD2				LR	LR		
	comp=N,160nm,21.0s						
CD2				LR	LR		
	comp=Z,180nm,18.6s						
KMI	Kunming	173.25	72	PKP	PKPdf	03 54 24.0	+5.3
KMI				APKP		03 54 32.5	
KMI				XPKP		03 54 36.5	
KMI				PP	PP	03 59 42.0	+3.1
KMI				SS	SS	04 20 48.5	-3.5
KMI				PP	PP		
	comp=Z,431nm,4.6s						
KMI				LR	LR		
	comp=Z,220nm,19.1s						
GYA	Guiyang	175.64	40	PKP	PKPdf	03 54 21.5	+2.1
GYA				APKP		03 54 32.5	
GYA				XPKP		03 54 39.5	
GYA				PKP2	PKPab	03 55 57.5	+0.3
GYA				PKS		03 57 53.8	
GYA				PP	PP	03 59 50.8	+1.4
GYA				SKKS	SKKSac	04 06 32.0	-1.3
GYA				PP	PP		
	comp=Z,120nm,8.7s						
GYA				LR	LR		
	comp=N,140nm,20.9s						
GYA				LR	LR		
	comp=E,160nm,21.6s						
GYA				LR	LR		
	comp=Z,190nm,20.0s						

BJI 27 03:39:33.9, 2546N×10705E, h17km, ML3.6, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	Guiyang	1.05	341	P	Pb	03 39 53.0	-0.7
GYA				PG	Pg	03 39 54.8	+0.5
GYA				S	Sb	03 40 06.3	-0.9
GYA				SG	Sg	03 40 09.5	+1.3
GYA				Smax			
	comp=N,720nm,0.7s						
GYA				Smax			
	comp=E,600nm,0.7s						

CSEM ***27*** *03:48:36.4±0.1, 3682N×2933E, h2km, MD2.9, Error ellipse: s-maj=3.6km s-min=1.9km az=160.0*
ISCJB ***27*** *03:48:37.4±0.6, 3686N±004×2935E±005, h10km, Error ellipse: s-maj=7.2km s-min=4.7km az=145.1*
DDA ***27*** *03:48:37.2, 3692N×2929E, h7km±3km, Md2.8*
ISK ***27*** *03:48:37.1, 3682N×2932E, h8km, MD2.9*

ISC 27 03:48:37.4±0.7, 3688N±005×2932E±005, h1km±9km, n11, σ0°61/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.31	217	*e*PG	Pg	03 48 42.6	-0.7
FETY				*e*SG	Sg	03 48 47.4	+0.1
GOLH	Golhisar	0.41	29	*i* P	Pg	03 48 43.8	-1.4
GOLH				*i* S	Sg	03 48 51.3	+0.8
AKAS	Kas	0.69	160	*i* P	Pg	03 48 51.5	+0.9
AKAS				*i* S	Sg	03 49 06.7	+7.3
YER	Yerkesik	0.86	287	*e*PG	Pg	03 48 54.4	+0.4
ANTB	Antalya	1.07	89	*e*PG	Pg	03 48 58.0	0.0
BCK	Bucak	1.17	60	*e*PN	Pn	03 49 00.8	-0.1
MLSB	Milas	1.30	289	*e*PN	Pn	03 49 02.1	-0.5
DAT	Datca	1.40	264	*e*PN	Pn	03 49 04.0	-0.1
KHL	Karahalli	1.45	6	*e*PN	Pn	03 49 05.3	+0.6
BDRM	Kayabasi	1.51	278	*i* P	Pn	03 49 05.2	-0.3
BDRM				*i* S	Sb	03 49 26.3	+0.5
HDMB	Hadim	2.54	87	*e*PN	Pn	03 49 19.5	-0.2

HLW ***27*** *03:48:58.3, 3454N×2449E, h33km, Mb3.5*
CSEM ***27*** *03:48:58.7±0.1, 3432N×2420E, h40km, MD3.5, Error ellipse: s-maj=3.9km s-min=2.0km az=77.0*
ISCJB ***27*** *03:48:59.7±1.2, 3428N±005×245E±02, h33km, Error ellipse: s-maj=17.9km s-min=7.0km az=179.1*
ATH ***27*** *03:49:08.0, 3550N×2466E, h42km, MD3.5/4*

ISC 27 03:49:00.7±1.2, 3433N±005×244E±02, h35km, n9, σ0°90/11, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	Vamos	1.09	351	*e*P	Pn	03 49 18.0	-1.5
NPS	Neapolis	1.36	47	*e*P	Pn	03 49 23.9	+0.7
KARP	Karpathos	2.57	61	*e*P	Pn	03 49 41.2	+1.3
SLUM		2.91	166	P	Pn	03 49 44.9	+0.4
SLUM				S	Sn	03 50 18.9	+0.6
ARG	Arkhangelos	3.58	57	*e*P	Pn	03 49 53.8	+0.1
HMAT	Matruh	3.94	144	P	Pn	03 49 59.0	+0.3
HMAT				S	Sn	03 50 42.2	-1.6
SWA2		5.15	170	P	Pn	03 50 15.7	+0.4
HFRF	Wahat Farafira	7.91	154	P	Pn	03 50 53.4	+0.3
AMAG	Maghara	8.30	114	P	Pn	03 50 57.3	-1.2

CSEM ***27*** *03:59:25.4±0.1, 3697N×2927E, h5km, MD2.9, Error ellipse: s-maj=1.9km s-min=1.7km az=136.0*
ISK ***27*** *03:59:25.6, 3697N×2924E, h5km, MD2.9*
ISCJB ***27*** *03:59:26.4±0.7, 3696N±004×2924E±005, h5km±6km, Error ellipse: s-maj=7.0km s-min=5.0km az=43.2*
DDA ***27*** *03:59:26.7, 3698N×2920E, h8km±5km, Md3.1*

ISC 27 03:59:26.8±0.6, 3696N±004×2924E±005, h9km±6km, n17, σ0°73/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.34	201	*e*PG	Pg	03 59 33.1	-0.4
FETY				*e*SG	Sg	03 59 38.4	+0.3
GOLH	Golhisar	0.38	42	*i* P	Pg	03 59 33.9	-0.3
GOLH				*i* S	Sg	03 59 41.0	+1.7
TURN	Turunc	0.52	261	*i* P	Pg	03 59 41.3	+4.5
TURN				*i* S	Sg	03 59 54.0	+10
TURN	Turunc	0.52	261	*i* S	Sg	03 59 54.0	+10
AKAS	Kas	0.78	158	*i* P	Pg	03 59 42.0	+0.2
AKAS				*i* S	Sg	03 59 55.9	+4.0
YER	Yerkesik	0.79	283	*e*PG	Pg	03 59 41.8	-0.1
DENT	Denizli	0.81	348	*e*PG	Pg	03 59 41.1	-1.3
ANTB	Antalya	1.13	92	*e*PN	Pn	03 59 47.9	-1.0
BCK	Bucak	1.19	65	*e*PN	Pn	03 59 48.9	-0.7
MLSB	Milas	1.22	287	*e*PN	Pn	03 59 49.6	-0.4
ISP	Isparta	1.34	48	*e*PN	Pn	03 59 52.1	+0.3
DAT	Datca	1.35	261	*e*PN	Pn	03 59 52.2	+0.3
KHL	Karahalli	1.38	9	*e*PN	Pn	03 59 51.3	-1.0
KHL				*e*SN	Sn	04 00 11.6	+0.9
BDRM	Kayabasi	1.44	275	*i* P	Pn	03 59 53.3	+0.2
BDRM				*i* S	Sn	04 00 13.0	+0.9
KULA	Kula-Manisa	1.62	344	*e*PN	Pn	03 59 55.5	-0.1
SHUT	Suhut-Afyon	1.90	33	*e*PN	Pn	03 59 59.2	-0.2
HDMB	Hadim	2.60	89	*e*PN	Pn	04 00 09.2	+0.2

IDC ***27*** *04:22:22.2±1.6, 1778S×17853W, h550km±18km, mb3.9/9, mb1 4.1/10, mb1mx3.9/18, mbtmp3.9/10, Error ellipse: s-maj=18.7km s-min=11.5km az=134.0*
NEIC ***27*** *04:22:22.4±0.7, 1761S×17865W, h542km±8km, mb4.4/19, Error ellipse: s-maj=10.8km s-min=5.5km az=143.0*
BJI ***27*** *04:22:22.3, 1760S×17860W, h541km, mB4.9, mb4.7*
ISCJB ***27*** *04:22:24.0±0.8, 1763S±008×17881W±006, h568km±10km, mb4.4/32, Error ellipse: s-maj=13.8km s-min=5.4km az=150.3*

ISC 27 04:22:24.1±0.8, 1763S±008×17874W±005, h555km±9km, h553km±4.9km; pP-P, n255, σ0°63/253, mb4.4/32, 91C-100D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.66	62	P	P	04 24 14.2	-4.5
	6.7nm,0.3s,baz=125,slow=9.2,SNR=10						
AFI				S	S	04 25 53.1	+0.5
	0.7nm,0.3s,baz=352,slow=19,SNR=2.0						
FUNA	Funafuti	9.27	347	P	P	04 24 32.5	-

WB2	Warramunga Arr	44.36	259	⇓	*i*P		P	04 29 45.2	-0.6
WRAB	Tennant Creek 22nm,0.6s,mb4.9	44.36	259		*e*P		P	04 29 45.5	-0.3
WRA	Warramunga Arr 15nm,0.5s,mb4.8,baz=93,slow=6.9,SNR=479	44.37	259		P		P	04 29 45.3	-0.6
ASAR	Alice Springs 144nm,0.6s,baz=88,slow=8.2,SNR=1682	44.56	254		P		P	04 29 47.5	+0.3
ASAR	2.9nm,0.6s,baz=106,slow=4.1,SNR=3.9				PcP		PcP	04 31 14.7	-3.7
ASAR	1.7nm,0.7s,baz=98,slow=4.4,SNR=6.7				ScP		ScP	04 34 18.0	+0.1
KAKA	Kakadu 38nm,0.4s	47.27	269	⇓	*i*P		x	04 29 52.8	
GUMO	Guam	47.46	308		P		P	04 30 09.6	+0.3
FORT	Forrest 41nm,0.6s,mb5.0	49.84	244	⇓	*i*P		P	04 30 26.2	-0.6
BATI	Baumata 31nm,0.6s,mb4.7,baz=14,slow=2.3,SNR=3.7	56.21	269		P		P	04 31 11.5	-0.9
MBWA	Marble Bar 49nm,1.4s,mb4.5	57.83	256		*e*P		P	04 31 23.0	-0.4
KLBR	Kellerberrin 19nm,0.7s,mb4.4	58.66	243	⇓	*i*P		P	04 31 28.0	-0.8
NWAO	Narrogin (SRO) 4.4nm,0.5s,mb3.9	59.06	242		*e*P		P	04 31 30.4	-1.0
MUN	Mundaring	59.96	243		*e*P		P	04 31 37.1	-0.4
SBA	Scott Base	60.67	183		P		P	04 31 42.3	+0.9
CASY	Casey	66.25	205		*e*P		P	04 32 16.6	-0.6
MJAR	Matsushiro Arr 7.2nm,0.8s,mb4.2,baz=162,slow=5.9,SNR=6.0	67.50	323		P		P	04 32 24.4	-0.9
KKM	Kota Kinabalu	68.36	284		*e*P		P	04 32 28.9	-2.2
TATO	Taipei	71.98	304		*e*P		P	04 32 50.2	-2.0
PETK	Petropavlovsk- 2.9nm,0.7s,mb3.8,baz=93,slow=7.8,SNR=3.7	73.33	345		P		P	04 32 57.7	-1.6
SMMC	Simmler baz=77	76.62	46	⇓	P		P	04 33 18.2	+0.1
U04C	Hernandez Rese baz=77	76.67	45	⇓	P		P	04 33 19.4	+1.0
S05C	Merced baz=78	77.52	44	⇓	P		P	04 33 23.4	+0.4
NJ2	Nanjing	77.52	310		*e*P		P	04 33 24.5	+1.4
NJ2	comp=Z,20nm,0.5s,mb4.7				AMB		AMB		
VES	Vestal, Richgr baz=78	77.53	46	⇓	P		P	04 33 22.7	-0.5
BFSC	Mount Baldy St baz=78	77.68	48	⇑	P		P	04 33 23.6	-0.3
T06C	Millerton Lake baz=78	77.74	45	⇑	P		P	04 33 23.7	-0.5
EDW2	Edwards Air Fo baz=78	77.78	47	⇑	P		P	04 33 24.3	-0.2
CMB	Columbia Colle comp=Z,5.7nm,0.9s,mb3.9	77.86	43		*e*P		P	04 33 24.2	-0.7
MONP	Monument Peak baz=78	77.88	50	⇑	P		P	04 33 24.7	-0.3
DVTC	Desert V Tower baz=78	78.00	50	⇓	P		P	04 33 25.9	+0.2
LRMC	Laurel Mountai baz=78	78.30	47	⇑	P		P	04 33 27.3	0.0
SWSC	Sam W. Stewart baz=78	78.36	50	⇓	P		P	04 33 27.7	0.0
O04C	Chester baz=79	78.70	41	⇓	P		P	04 33 29.4	+0.2
MTUM	Tungsten Hills	78.70	45		*e*P		P	04 33 29.8	+0.4
R06C	Coleville baz=79	78.74	43	⇓	P		P	04 33 29.5	0.0
BELC	Belle Mtn. baz=79	78.74	49	⇓	P		P	04 33 29.6	0.0
MPMC	Manual Prospec baz=79	78.75	46	⇑	P		P	04 33 29.7	+0.1
BEKR	Beckwourth baz=79	78.90	42	⇑	P		P	04 33 30.2	-0.1
HEC	Hector,Ludlow baz=79	78.92	48	⇑	P		P	04 33 30.5	-0.1
WCN	Washoe City baz=79	78.97	43	⇑	P		P	04 33 31.2	+0.5
GRAC	Grapevine Rang baz=80	79.32	46	⇓	P		P	04 33 32.9	+0.2
FURC	Furnace Creek, baz=80	79.39	46	⇓	P		P	04 33 32.6	-0.4
IRM	Iron Mountain baz=80	79.43	49	⇓	P		P	04 33 33.4	+0.1
NVAR	Mina Array Bea comp=Z,4.4nm,0.8s,mb3.9,baz=223,slow=8.9,SNR=26	79.45	44		P		P	04 33 32.2	-1.1
NVAR	Mina Array Bea	79.45	44		P		P	04 33 32.2	-1.1
Y12C	Blythe baz=80	79.69	50	⇓	P		P	04 33 34.5	-0.1
N06A	Buffalo Meadow baz=80	79.73	41	⇑	P		P	04 33 34.7	0.0
U10A	Ash Meadows, A baz=80	79.73	47	⇑	P		P	04 33 35.2	+0.3
113A	Mohawk Valley, baz=80	79.77	51	⇑	P		P	04 33 35.2	+0.1
LDFC	Landfair comp=Z,18nm,1.1s,mb4.3	79.92	48		*e*P		P	04 33 36.1	+0.3
Q08A	Gabbs baz=80	79.92	44	⇑	P		P	04 33 35.6	-0.1
TPH	Tonopah comp=Z,4.1nm,0.8s,mb3.8	79.98	45		*e*P		P	04 33 35.4	-0.7
O07A	Toulon baz=80	80.01	42	⇑	P		P	04 33 36.0	-0.2
TPNV	Topopah Spring baz=80	80.06	46	⇑	P		P	04 33 36.4	-0.1
V11A	Goodsprings baz=80	80.07	47	⇑	P		P	04 33 36.5	-0.1
MOD	Modoc comp=Z,3.4nm,0.8s,mb3.7	80.08	40		*e*P		P	04 33 36.5	0.0
R09A	Tonopah baz=80	80.17	45	⇑	P		P	04 33 37.0	-0.1
Y13A	Salome baz=80	80.22	50	⇑	P		P	04 33 37.7	+0.3
PDMCI	Parker Dam,Lak baz=80	80.23	49	⇓	P		P	04 33 38.0	+0.5
N07B	Gerlach baz=80	80.29	42	⇓	P		P	04 33 37.5	-0.1
S10A	Tonopah Range, baz=80	80.33	45	⇓	P		P	04 33 38.1	+0.3
V12A	Nelson baz=81	80.42	48	⇓	P		P	04 33 38.3	-0.1
M07A	Soldier Meadow baz=81	80.50	41	⇓	P		P	04 33 38.8	+0.2
O08A	Rochester Mine baz=81	80.55	42	⇓	P		P	04 33 38.9	-0.1
X13A	Yucca baz=81	80.60	49	⇓	P		P	04 33 38.9	-0.5
Z14A	Wintersburg baz=81	80.66	51	⇓	P		P	04 33 40.1	+0.5
R10A	Warm Springs baz=81	80.71	45	⇓	P		P	04 33 40.2	+0.3
L07A	Adell baz=81	80.74	41	⇓	P		P	04 33 40.4	+0.4
N08A	GE Springer Mi baz=81	80.82	42	⇓	P		P	04 33 40.3	0.0
Y14A	Wickenburg baz=81	80.88	50	⇓	P		P	04 33 40.8	0.0
T11A	Corn Creek, Al baz=81	80.92	46	⇑	P		P	04 33 41.3	+0.4
Q10A	Clear Creek Ra baz=81	80.92	44	⇓	P		P	04 33 41.4	+0.4
U12A	Valley of Fire baz=81	80.99	47	⇓	P		P	04 33 41.7	+0.4
M08A	Happy Creek Ra baz=81	81.03	41	⇑	P		P	04 33 42.0	+0.6
V13A	Grand Canyon W baz=81	81.10	48	⇓	P		P	04 33 42.1	+0.2
H05A	Madras baz=81	81.10	38	⇑	P		P	04 33 42.4	+0.7
O09A	Fish Creek Ran baz=81	81.11	43	⇓	P		P	04 33 41.9	0.0
216A	Three Points, baz=81	81.14	52	⇑	P		P	04 33 42.7	+0.5
K07A	Rock Creek Ran baz=81	81.17	40	⇓	P		P	04 33 42.5	+0.3
116A	Eloy baz=81	81.21	52	⇓	P		P	04 33 42.9	+0.4
X14A	Yava baz=81	81.22	50	⇓	P		P	04 33 43.0	+0.4
R11A	Troy Canyon, C baz=81	81.23	45	⇓	P		P	04 33 42.5	0.0
N09A	Rock Creek Ran baz=82	81.25	42	⇑	P		P	04 33 42.8	+0.2
S12A	Delamar Landin baz=82,SNR=9.2	81.36	46	⇑	P		P	04 33 43.2	0.0
U13A	Pakoon Wash baz=82	81.38	48	⇓	P		P	04 33 43.5	+0.1
Y15A	Casa Rosa Ranc baz=82,SNR=8.6	81.38	50	⇓	P		P	04 33 43.5	+0.1
W14A	Seligman baz=82,SNR=7.4	81.43	49	⇑	P		P	04 33 43.9	+0.3
Q11A	Duckwater baz=82	81.43	45	⇓	P		P	04 33 43.7	+0.1
L08A	Fields baz=82	81.45	41	⇑	P		P	04 33 43.5	-0.1
217A	Green Valley baz=82,SNR=6.6	81.52	53	⇓	P		P	04 33 44.5	+0.3
M09A	Marrel Ranch, baz=82	81.60	42	⇓	P		P	04 33 44.7	+0.3
V14A	Boquillas Ranc baz=82	81.62	49	⇓	P		P	04 33 44.9	+0.3
K08A	Mann Creek Ran baz=82	81.66	40	⇑	P		P	04 33 44.7	0.0
H06A	Lindquist Farm baz=82	81.67	38	⇑	P		P	04 33 44.4	-0.3
X15A	Humboldt baz=82,SNR=7.0	81.70	50	⇑	P		P	04 33 45.0	0.0
T13A	Saint George baz=82	81.72	47	⇓	P		P	04 33 45.5	+0.4
Z16A	Peralta Trail, baz=82	81.77	51	⇑	P		P	04 33 45.8	+0.4
L09A	Wilkinson Ranc baz=82	81.79	41	⇓	P		P	04 33 45.4	+0.1
TUC	Tucson	81.79	52		*e*P		P	04 33 45.6	+0.1
I07A	Izee baz=82	81.79	39	⇓	P		P	04 33 45.5	+0.3
RC01	Rabbit Creek A	81.83	14		*e*P		P	04 33 44.0	-1.1
R12A	Pony Springs, baz=82,SNR=7.1	81.88	46	⇓	P		P	04 33 45.9	0.0
117A	Oracle baz=82	81.94	52	⇑	P		P	04 33 46.6	+0.3
U14A	Mt Trumbull baz=82	81.94	48	⇑	P		P	04 33 46.7	+0.5
Y16A	Circle Bar Ran baz=82	81.98	51	⇑	P		P	04 33 46.9	+0.4
318A	Bisbee baz=82	82.00	54	⇑	P		P	04 33 47.0	+0.4
J08A	Circle Bar Ran baz=82	82.01	40	⇑	P		P	04 33 46.3	-0.1
S13A	Holt Ranch, En baz=82	82.03	47	⇓	P		P	04 33 46.5	-0.1
H07A	Lands Inn, Kim baz=82	82.04	38	⇑	P		P	04 33 46.4	-0.1
Q12A	Willow Creek R baz=82	82.09	45	⇓	P		P	04 33 46.5	-0.4
O11A	Cowboy Ranch, baz=82	82.09	44	⇑	P		P	04 33 46.9	0.0
K09A	Rome baz=82	82.12	41	⇑	P		P	04 33 47.1	+0.1
218A	Dragoon baz=82,SNR=7.3	82.20	53	⇑	P		P	04 33 48.0	+0.3
M10A	I.L. Ranch, Tu baz=82	82.24	42	⇓	P		P	04 33 47.9	+0.3
R13A	O'Grain Ranch, baz=82	82.25	46	⇑	P		P	04 33 47.8	+0.1
X16A	Lo Mia Camp, P baz=82,SNR=12	82.25	50	⇑	P		P	04 33 48.4	+0.5
I08A	Drewsey baz=82	82.26	39	⇑	P		P	04 33 47.7	+0.1
T14A	Hurricane baz=82	82.32	47	⇑	P		P	04 33 48.1	0.0
G07A	Ruggs Ranch, H baz=83	82.36	38	⇑	P		P	04 33 48.0	-0.1
Y17A	Roosevelt baz=82	82.36	51	⇓	P		P	04 33 48.7	+0.3
V15A	Kaibab Nationa baz=82,SNR=7.7	82.37	49	⇓	P		P	04 33 48.6	+0.2
W16A	Flagstaff baz=83	82.50	50	⇑	P		P	04 33 49.5	+0.5
319A	Douglas baz=83,SNR=6.5	82.52	54	⇑	P		P	04 33 49.9	+0.6
118A	Homack Ranch, baz=83	82.55	52	⇓	P		P	04 33 49.6	+0.2
L10A	Juniper Basin baz=83	82.57	42	⇓	P		P	04 33 49.2	-0.1
U15A	North Rim baz=83	82.57	48	⇑	P		P	04 33 50.1	+0.6
Q13A	Wheeler Ranch, baz=83	82.59	45	⇑	P		P	04 33 49.7	+0.2
M11A	Holland Ranch, baz=83	82.67	42	⇑	P		P	04 33 50.2	+0.4
K10A	MacKenzie Ranc baz=83	82.69	41	⇓	P		P	04 33 49.7	-0.1
T15A	Red Dirt Ranch baz=83	82.79	48	⇓	P		P	04 33 50.9	+0.4
G08A	Pilot Rock baz=83	82.79	38	⇑	P		P	04 33 50.3	0.0
WUAZ	Wupatki comp=Z,8.6nm,1.1s,mb4.2	82.81	49		*e*P		P	04 33 51.2	+0.6
WUAZ	Wupatki baz=83	82.81	49	⇑	P		P	04 33 51.1	+0.5
P13A	Bates Ranch, G baz=83	82.84	45	⇓	P		P	04 33 50.7	+0.1
N12A	Clover Valley, baz=83	82.86	43	⇓	P		P	04 33 50.7	0.0
Y18A	Canyon Day Jun baz=83	83.00	51	⇑	P		P	04 33 52.3	+0.6
L11A	Cat Creek Ranc baz=83	83.07	42	⇓	P		P	04 33 52.0	+0.2
119A	Ashpeak Ranch, baz=83	83.11	53	⇑	P		P	04 33 52.1	-0.1
Q14A	Sevier Lake (B baz=83	83.11	46	⇓	P		P	04 33 52.2	+0.2
M12A	Wells baz=83	83.23	43	⇑	P		P	04 33 52.7	+0.1
U16A	Tuba City baz=83	83.27	49	⇑	P		P	04 33 53.2	+0.3
BJI	Beijing	83.37	315		P		P	04 33 55.5	+2.2
BJI	comp=Z,101nm,1.2s,mb5.2				AMB		AMB		
T16A	Glen Canyon Da baz=84	83.39	48	⇑	P		P	04 33 53.8	+0.3
X18A	Snowflake baz=84	83.40	51	⇓	P		P	04 33 53.6	0.0
L12A	House Creek Ra baz=84	83.53	42	⇑	P		P	04 33 54.3	+0.3
P14A	Drum Mountains baz=84	83.55	45	⇓	P		P	04 33 54.7	+0.5
Y19A	Nutrioso baz=84	83.67	52	⇓	P		P	04 33 55.3	+0.3
S16A	Weppner Ranch, baz=84	83.67	47	⇑	P		P	04 33 54.8	0.0
MFID	Camas Ranch baz=84	83.67	41	⇑	P		P	04 33 54.7	0.0
M13A	Montello baz=84	83.69	43	⇓	P		P	04 33 54.8	-0.1
H10A	Noah's Angus R baz=84	83.73	39	⇓	P		P	04 33 54.2	-0.7
I11A	Placerville baz=84	83.85	40	⇓	P		P	04 33 55.3	-0.3
K12A	Draper Farm, C baz=84	83.86	42	⇓	P		P	04 33 55.9	+0.3
G10A	Bishop Farm, J baz=84	83.88	39	⇑	P		P	04 33 56.4	+0.7
T17A	Navajo Res., N baz=84	83.90	48	⇑	P		P	04 33 56.4	+0.4
B07A	Winthrop baz=84	83.93	35	⇓	P		P	04 33 56.0	+0.2
V18A	Ganado baz=84	83.94	50	⇓	P		P	04 33 56.2	0.0
MAW	Mawson	84.01	200		P		P	04 33 54.9	-1.1
R16A	Teasdale baz=84	84.01	47	⇑	P		P	04 33 56.9	+0.4
J12A	Stokes Ranch, baz=84	84.05	41	⇓	P		P	04 33 56.6	+0.1
F10A	Beach Ranch, E baz=84	84.18	38	⇓	P		P	04 33 56.3	-0.9
L13A	Double Diamond baz=84	84.19	43	⇑	P		P	04 33 57.3	0.0
H11A	Donnelly baz=84	84.23	40	⇑	P		P	04 33 57.2	-0.2
M14A	Sheep Mountain baz=84	84.29	43	⇓	P		P	04 33 57.8	-0.1
B08A	Colville Reser baz=84	84.30	35	⇓	P		P	04 33 56.8	-0.9
I12A	Atlanta baz=84	84.30	41	⇓	P		P	04 33 57.8	0.0
U18A	Rough Rock, Ch baz=84	84.30	49	⇑	P		P	04 33 57.8	-0.3
MCK	McKinley	84.34	13		*e*P		P	04 33 56.9	-0.6
K13A	Stover Farm, H baz=85	84.38	42	⇑	P		P	04 33 58.1	-0.1
G11A	Walters Elk Ra baz=85	84.44	39	⇑	P		P	04 33 57.8	-0.7
R17A	Hanksville Air baz=85	84.61	47	⇓	P		P	04 33 59.0	-0.5
T18A	Mexican Hat baz=85	84.62	48	⇑	P		P	04 33 59.6	+0.1
GYA	Guiyang	84.62	300		P		P	04 34 02.0	+2.2
GYA					AP		pP	04 36 03.3	+3.6
GYA					XP		sP	04 36 56.8	+1.0
GYA					PP		PP	04 37 31.0	+4.9
GYA					SKS			04 43 30.8	
GYA					S		S	04 43 42.5	+1.1
GYA	comp=Z,10.0nm,1.0s,mb4.3				AMB		AMB		
HLID	Hailey baz=85	84.63	41	⇓	P		P	04 33 59.7	+0.3
A08A	Turner Farm, O baz=85	84.67	35	⇓	P		P	04 33 59.1	-0.4
J13A	Cove Ranch, Pi baz=85	84.70	41	⇓	P		P	04 33 60.0	+0.2
D10A	Wagner Farm, O baz=85	84.74	37	⇑	P		P	04 33 59.3	-0.6
H12A	Diamond D Ranc baz=85	84.86	40	⇑	P		P	04 34 00.4	-0.2
M15A	Larsen Ranch, baz=85	84.86	44	⇓	P		P	04 34 00.2	-0.5
K14A	Jones Ranch, D baz=85	84.92	42	⇑	P		P	04 34 00.7	-0.2
I13A	Wildhorse Cree baz=85	85.00	41	⇓	P		P	04 34 01.5	+0.3
SRU	San Rafael	85.06	46		*e*P		P	04 34 01.6	-0.1
SRU	San Rafael baz=85	85.06	46	⇓	P		P	04 34 01.3	-0.4
J14A	Carey baz=85	85.08	42	⇓	P		P	04 34 02.3	+0.7
R18A	Canyonlands Na baz=85	85.17	47	⇑	P		P	04 34 02.0	-0.2
F12A	Elk City baz=86	85.24	39	⇓	P		P	04 34 01.7	-0.6
H13A	Challis baz=86	85.24	40	⇑	P		P	04 34 02.3	-0.1
D11A	Klaveano Farm, baz=86	85.28	37	⇑	P		P	04 34 02.4	0.0
Q18A	Rafter H Ranch baz=86	85.33	47	⇑	P		P	04 34 02.4	-0.5
K15A	Arbon baz=86	85.40	43	⇑	P		P	04 34 03.1	-0.1
I14A	Mackay baz=86	85.42	41	⇑	P		P	04 34 04.0	+0.7
NEW	Newport comp=Z,2.9nm,0.7s,mb3.9	85.48	36		*e*P		P	04 34 02.2	-1.2
HWUT	Hardware Ranch comp=Z,1.6nm,0.7s,mb3.8	85.52	44		*e*P		P	04 34 02.2	-1.5
R19A	Curley Farm, L baz=86	85.57	48	⇑	P		P	04 34 04.0	-0.1
J15A	Blackfoot baz=86	85.81	42	⇑	P		P	04 34 05.7	+0.5
F13A	Darby baz=86	85.81	39	⇓	P		P	04 34 04.5	-0.5
D12A	Red Ives Fores baz=86	85.85	38	⇑	P		P	04 34 04.9	-0.3
PV01	Paradox Valley	85.99	48		*e*P		P	04 34 05.8	-0.3
I15A	Monteview baz=86	86.06	41	⇓	P		P	04 34 06.7	+0.3
K16A	Soda Springs baz=86	86.08	43	⇓	P		P	04 34 06.9	+0.5
TXAR	Lajitas Array comp=Z,5.1nm,0.8s,mb4.2,baz=216,slow=6.1,SNR=65	86.12	58		P		P	04 34 07.0	0.0
ANMO	Albuquerque comp=Z,3.6nm,1.2s,mb3.9	86.18	52		*e*P		P	04 34 06.5	-0.6
MCMT	McKenzie Canyo comp=Z,1.0nm,0.8s,mb3.5	86.24	41		*e*P		P	04 34 07.5	+0.4
H15A	Lima baz=86	86.26	41	⇓	P		P	04 34 07.6	+0.4
J16A	Bone baz=86	86.27	42	⇑	P		P	04 34 07.6	+0.3
M18A	Lyman baz=87	86.43	45	⇓	P		P	04 34 08.2	+0.1
RRI2	Red Ridge	86.50	42		*e*P		P	04 34 08.5	+0.1
G15A	Dillon baz=87	86.63	40	⇓	P		P	04 34 08.8	-0.1
E14A	Clinton baz=87	86.63	39	⇓	P		P	04 34 08.4	-0.5
I16A	Newdale baz=87	86.64	42	⇓	P		P	04 34 09.5	+0.5
N19A	John Jarvie Ra baz=87	86.79	45	⇑	P		P	04 34 09.2	-0.6
TPAW	Teton Pass	86.80	42		*e*P		P	04 34 09.7	-0.1
HHC	Hu-ho-hao-te	86.85	315		*e*P		P	04 34 09.0	-1.1
HHC					XP		sP	04 37 00.5	-6.3
HHC					PP		PP	04 37 45.8	+2.2
HHC					SKS			04 43 44.5	
HHC					S		S	04 44 02.8	+0.8
HHC					XS		sS	04 47 33.0	-4.1
HHC					SS		SS	04 50 05.8	+4.2
HHC					AMB		AMB		
HHC	comp=Z,48nm,1.4s,mb4.9				AMB		AMB		
SNOW	comp=Z,1µm,4.8s Snow King Moun	86.91	43		*e*P		P	04 34 09.9	-0.5
IMW	Indian Meadow	87.00	42		*e*P		P	04 34 10.5	-0.2
K18A	Toltan Ranch, baz=87	87.00	44	⇓	P		P	04 34 10.8	+0.1
M19A	Rock Springs baz=87	87.07	45	⇑	P		P	04 34 10.8	-0.3
H16A	Russell Place, baz=87	87.18	41	⇓	P		P	04 34 12.2	+0.7
L19A	Farson baz=87	87.21	44	⇓	P		P	04 34 11.4	-0.3
I17A	Pilgram Creek baz=87	87.24	42	⇑	P		P	04 34 12.3	+0.4
J18A	Kendall Valley baz=88	87.27	43	⇓	P		P	04 34 12.0	0.0
A13A	Flathead Natio baz=88	87.36	37	⇑	P		P	04 34 11.6	-0.7
BW06	Boulder Array baz=88	87.37	44	⇑	P		P	04 34 12.0	-0.5
PDAR	Pinedale Array comp=Z,2.4nm,0.7s,mb4.0,baz=218,slow=3.5,SNR=22	87.37	44		P		P	04 34 11.5	-1.0
KMI	Kunming	87.42	297		P		P	04 34 16.0	+2.8
KMI	comp=Z,24nm,1.8s,mb4.5				AMB		AMB		
H17A	Grant Village baz=88	87.46	42	⇓	P		P	04 34 14.1	+1.2
WALA	Waterton Lakes	87.71	37		P		P	04 34 12.9	-1.0
C15A	Salmond Ranch, baz=88	87.83	38	⇑	P		P	04 34 13.9	-0.6
L20A	Wamsutter baz=88	87.84	45	⇑	P		P	04 34 14.5	-0.2
K19A	Absolon Red Bu baz=88	87.87	44	⇑	P		P	04 34 14.2	-0.7
A14A	Double T Ranch baz=88	87.94	37	⇑	P		P	04 34 14.7	-0.3
K20A	Yellowstone Ra baz=88	88.13	44	⇓	P		P	04 34 15.4	-0.7
A15A	Johnson Ranch, baz=89	88.34	37	⇓	P		P	04 34 16.3	-0.6
CD2	Chengdu	88.65	303		*e*P		P	04 34 21.0	+2.2
CD2					AP		pP	04 36 20.3	+0.3
CD2					XP		sP	04 37 13.5	-2.4
CD2					AMB		AMB		
CD2	comp=Z,10.0nm,0.9s,mb4.7				AMB		AMB		
LZH	comp=Z,40nm,8.2s Lanzhou	90.47	308		*e*P		P	04 34 29.5	+2.4
LZH					AP		pP	04 36 32.0	+3.3
LZH					XP		sP	04 37 23.5	-0.9
LZH					AMB		AMB		
LZH	comp=Z,16nm,1.0s,mb4.8				AMB		AMB		
SNAA	comp=Z,67nm,4.3s Sanae	90.88	179		P		P	04 34 27.1	-1.3
INK	Inuvik	91.71	15		*e*P		P	04 34 30.7	-1.3
PLCA	Paso Flores	91.75	134		*e*P		P	04 34 32.3	-0.7
DGMT	Dagmar baz=93	93.19	40	⇑	P		P	04 34 39.0	-0.2
BRTR	Kaskin Array B comp=Z,4.2nm,0.9s,baz=92,slow=1.8,SNR=4.9	144.36	315		PKP		PKPdf	04 40 56.8	-0.8
MMAI	Mount Meron Ar comp=Z,3.4nm,0.5s,baz=67,slow=4.6,SNR=3.7	145.73	303		PKPbc		PKPbc	04 41 00.7	-1.1
GERES	GERESS Array B comp=Z,1.6nm,0.6s,baz=34,slow=4.0,SNR=2.5	147.27	345		PKPbc		PKPbc	04 41 04.5	-0.9

*MAN **27** 04:26:57, 1608N×11965E, h19km, mb6.1, ML5.2, MS6.0*
MAN INTENSITY V - LINGAYEN, PANGASINAN, BAGUIO CITY, SAN FERNANDO, LA UNION, BAGAC, BATAAN; INTENSITY IV - IBA, ZAMBALES, SANTIAGO, ISBELA, MANILA, CALOOCAN CITY; INTENSITY III - PASIG CITY, MAKATI, LAS PINAS, PASAY, BULACAN, TARLAC, ILOCOS SUR, ILOCOS NORTE, SAN FERNANDO, PAMPANGA; INTENSITY II - QUEZON

CITY, TAGUIG, CAVITE, NUEVA, ECIJA.

BJI **27** 04:26:58.5, 16.10N×119.89E, *h*50km, *mB*6.0, *mb*5.5, *Ms*5.7, *Msz*5.6

NEIC **27** 04:26:58.6±0.1, 16.06N×119.84E, *h*35km, *mb*5.9/133, *ME*5.8, *MS*5.6/204, *MW*5.8, Error ellipse: s-maj=3.5km s-min=2.8km az=60.0 Broadband fault plane solution: P waves. NP1:φs180.00000°, δ40.00000°, λ90.00000°. NP2:φs13.00000°, δ51.00000°, λ-82.00000°. Principal axes: T Plg5.0000°, Azm97.0000°; N Plg0.0000°, Azm0.0000°; P Plg82.0000°, Azm327.0000°; Moment Tensor Solution. s65 Moment tensor: Scale 10^{17} Nm; M_{rr}4.60; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-5.63; $M_{r\theta}$-0.20; $M_{\theta\phi}$-0.08; $M_{\phi r}$3.50; Best double couple: M_o6.30000×10^{17} NP1:φs358.00000°, δ62.00000°, λ87.00000°. NP2:φs184.00000°, δ28.00000°, λ95.00000°. Principal axes: T 5.6900, Plg72.0000°, Azm261.0000°; N 1.0300, Plg2.0000°, Azm359.0000°; P -6.7100, Plg17.0000°, Azm90.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC Electricity and communications disrupted at Baguio. Felt [VI PIVS] at Lingayen; [V PIVS] at Bagac, Baguio and San Fernando; [IV PIVS] at Caloocan, Iba, Manila and Santiago; [III PIVS] at Bulacan, Casiguran, Las Pinas, Makati, Pasay, Pasig and Tarlac; [II PIVS] at Cavite, Quezon City and Taguig and on Lubang Island. Felt [V] at Dagupan and [III] at Angeles. Also felt at Baliuag, Cainta, Laoag, Olongapo, Pulilan, Solano, Tagaytay and Vigan.

ISCJB **27** 04:26:59.1±0.1, 16.23N±0.001×119.82E±0.002, *h*45km, *mb*5.8/286, *MS*5.6/259 Error ellipse: s-maj=2.5km s-min=1.8km az=169.3

MOS **27** 04:26:59.2±1.0, 16.13N×119.85E, *h*52km, *mb*6.0/111, *MS*5.7/82, Error ellipse: s-maj=7.6km s-min=3.6km az=120.4

BGS **27** 04:26:59.4±2.1, 16.08N×119.85E, *h*53km, *mb*5.7, *MS*6.0

SZGRF **27** 04:27:00.8, 16.56N×120.12E, *h*44km, *mb*6.0, *MS*5.9, Luzon, Philippine Islands

GCMT **27** 04:27:00.6±0.1, 16.23N×119.79E, *h*43km, *MW*5.9/109, Moment Tensor Solution. s105,c232; s109,c333; Duration: 2≅1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.68±.01; $M_{\theta\theta}$0.06±.01; $M_{\phi\phi}$-0.74±.01; $M_{r\theta}$-0.10±.01; $M_{\theta\phi}$-0.10±.01; $M_{\phi r}$0.45±.01; Best double couple: M_o0.85400×10^{18} NP1:φs199.00000°, δ31.00000°, λ110.00000°. NP2:φs356.00000°, δ61.00000°, λ78.00000°. Principal axes: T 0.8320, Plg71.0000°, Azm239.0000°; N 0.0440, Plg10.0000°, Azm1.0000°; P -0.8750, Plg16.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

IDC **27** 04:27:01.4±1.5, 16.15N×120.05E, *h*60km±12km, *mb*5.3/39, *mb*1 5.3/40, *mb*1*mx*5.3/40, *mbtmp*5.3/40, *MS*5.5/29, *Ms*1 5.5/29, *ms*1*mx*5.4/32 Error ellipse: s-maj=10.8km s-min=7.2km az=75.0

DJA **27** 04:27:10, 16.09N×119.90E, *h*136km, *Mw*6.0/59

ISC 27 04:27:00.8±0.1, **16.23N**±0.001×**119.84E**±0.002, **h47**km, **h47**km±.8km**:pP-P,n1079,**σ1**907**/968,**mb5.8**/286,**MS5.6**/259, **168C-49D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City**	**0.73**	**78**	⇑*iP*	**Pn**	**04 27 14.8**	**+0.1**
PCPH	**Palayan**	**1.38**	**119**	*eP*	**Pn**	**04 27 23.1**	**-0.4**
PCPH				*eS*	**Sn**	**04 27 41.9**	**+1.3**
SIPP	**Brgy, Tapao**	**1.79**	**19**	⇓*iP*	**Pn**	**04 27 30.8**	**+1.6**
SIPP				*eS*	**Sn**	**04 28 01.6**	**+11**
PIP	**Pasuquin**	**2.21**	**19**	⇓*iP*	**Pn**	**04 27 35.9**	**+0.8**
PIP				*eS*	**Sn**	**04 28 06.6**	**+5.4**
TGY	**Tagaytay City**	**2.36**	**153**	⇓*eP*	**Pn**	**04 27 40.1**	**+3.0**
PALP	**Palanan**	**2.61**	**71**	⇓*eP*	**Pn**	**04 27 43.9**	**+3.4**
GQP	**Guinayangan**	**3.42**	**132**	⇓*eP*	**Pn**	**04 27 53.0**	**+1.5**
BUSP	**Coron**	**4.21**	**175**	*eP*	**Pn**	**04 28 01.2**	**-1.3**
BUSP				*eS*	**Sn**	**04 28 45.5**	**-4.9**
OTRP	**Odiongan**	**4.38**	**151**	*eP*	**Pn**	**04 28 06.5**	**+1.6**
PVCP	**Virac**	**4.92**	**122**	*eP*	**Pn**	**04 28 13.4**	**+1.2**
PVCP	**Virac**	**4.92**	**122**	⇓*eP*	**Pn**	**04 28 18.0**	**+5.8**
PVCP				*eS*	**Sn**	**04 29 11.3**	**+3.4**
ENPP	**El Nido**	**5.01**	**185**	*eP*	**Pn**	**04 28 11.5**	**-1.9**
KALP	**Kalibo**	**5.13**	**152**	⇑*eP*	**Pn**	**04 28 15.1**	**0.0**
RCP	**Roxas**	**5.43**	**148**	⇓*eP*	**Pn**	**04 28 20.9**	**+1.8**
CUYO	**Cuyo Island**	**5.47**	**168**	*eP*	**Pn**	**04 28 18.7**	**-1.0**
CNP	**Catarman**	**5.96**	**128**	*eP*	**Pn**	**04 28 28.5**	**+2.1**
GUIM	**Jordan**	**6.18**	**154**	*eP*	**Pn**	**04 28 34.2**	**+4.7**
PPR	**Puerto Princes**	**6.50**	**190**	⇓*iP*	**Pn**	**04 28 32.5**	**-1.5**
PPR				*i* S	**Sn**	**04 29 42.0**	**-4.9**
OCLP	**Ormoc**	**6.92**	**137**	*eP*	**Pn**	**04 28 43.0**	**+3.2**
PLP	**Palo**	**7.09**	**135**	⇓*eP*	**Pn**	**04 28 43.9**	**+2.0**
LLP	**Lapu-Lapu**	**7.12**	**145**	⇑*eP*	**Pn**	**04 28 45.5**	**+3.1**
TBP	**Tagbilaran**	**7.59**	**148**	*eP*	**Pn**	**04 28 52.4**	**+3.6**
BATP	**Bataraza**	**7.65**	**195**	*eP*	**Pn**	**04 28 47.1**	**-2.6**
MSLP	**Maasin**	**7.78**	**141**	*eP*	**Pn**	**04 28 54.7**	**+3.2**
NACB	**Ninganchiao** 729nm,0.9s	**8.07**	**11**	*e*Pn	**Pn**	**04 28 57.4**	**+2.0**
NACB				*e*Sn	**Sn**	**04 30 28.3**	**+2.9**
DCPH	**Dipolog City**	**8.34**	**155**	⇓*eP*	**Pn**	**04 29 00.5**	**+1.4**
SCPH	**Surigao**	**8.44**	**139**	*eP*	**Pn**	**04 29 03.3**	**+2.7**
YHNB	**Yeheng** 531nm,0.6s	**8.52**	**9**	*e*Pn	**Pn**	**04 29 03.9**	**+2.3**
YHNB				*e*Sn	**Sn**	**04 30 39.2**	**+2.9**
QZH	**Quanzhou**	**8.75**	**353**	P	**Pn**	**04 29 06.5**	**+1.8**
QZH				S	**Sn**	**04 30 41.5**	**-0.5**
QZH	comp=N,23μm,12.3s			LR	LR		
QZH	comp=E,26μm,16.2s			LR	LR		
QZH	comp=Z,52μm,26.8s			LR	LR		
TATO	**Taipei**	**8.84**	**10**	*e*Pn	**Pn**	**04 29 08.1**	**+2.2**
TATO				*e*Sn	**Sn**	**04 30 47.5**	**+3.4**
PAGZ	**Pagadian**	**9.02**	**157**	*eP*	**Pn**	**04 29 10.7**	**+2.3**
BUTP	**Butuan**	**9.16**	**141**	*eP*	**Pn**	**04 29 14.6**	**+4.3**
GZH	**Guangzhou**	**9.16**	**319**	P	**Pn**	**04 29 10.8**	**+0.4**
GZH	comp=N,44μm,15.1s			LR	LR		
GZH	comp=E,34μm,20.6s			LR	LR		
ZMPH	**Zamboanga City**	**9.47**	**166**	⇑*eP*	**Pn**	**04 29 14.8**	**+0.2**
KDM	**Kudat**	**9.71**	**198**	⇑P	**Pn**	**04 29 20.3**	**+2.3**
BUKP	**Musuan**	**9.74**	**148**	*eP*	**Pn**	**04 29 22.6**	**+4.3**
QIZ	**Qiongzhong**	**9.93**	**288**	P	**Pn**	**04 29 20.3**	**-0.6**
QIZ				XP		04 29 33.8	
QIZ				S	**Sn**	**04 31 14.3**	**+3.3**
QIZ	comp=Z,41nm,0.6s			AMB	AMB		
QIZ	comp=E,51μm,18.4s			LR	LR		
QIZ	comp=Z,76μm,20.1s			LR	LR		
QIZ	**Qiongzhong** comp=Z,111nm,0.7s	**9.93**	**288**	*e*Pn	**Pn**	**04 29 19.7**	**-1.2**
CTBH	**Cotabato--PC H**	**9.93**	**154**	*eP*	**Pn**	**04 29 23.1**	**+2.1**
BIPH	**Bislig**	**10.22**	**141**	⇑*eP*	**Pn**	**04 29 27.3**	**+2.4**
KCP	**Kidapawan**	**10.50**	**150**	⇓*eP*	**Pn**	**04 29 33.8**	**+5.0**
DAV	**Davao City (W)** comp=Z,44nm,0.3s,baz=89,slow=5.4,SNR=16	**10.69**	**148**	P	**Pn**	**04 29 36.2**	**+4.9**
DAV				S	**Sn**	**04 31 37.8**	**+8.0**
DAV	comp=Z,19nm,0.3s,baz=266,slow=4.9,SNR=1.9			LR	LR	04 35 15.4	
DAV	**Davao City (W)** comp=Z,62μm,18.7s,baz=322,slow=47	**10.69**	**148**	Pn	**Pn**	**04 29 28.0**	**-3.3**
DAV				*e*Sn	**Sn**	**04 31 39.2**	**+9.4**
DAV	**Davao City (W)**	**10.69**	**148**	⇑*eP*	**Pn**	**04 29 31.9**	**+0.6**
DAV	**Davao City (W)** comp=Z,2μm,1.4s	**10.69**	**148**	P	**Pn**	**04 29 39.2**	**+7.8**
KKM	**Kota Kinabalu** comp=Z,83nm,0.6s	**10.73**	**200**	*e*Pn	**Pn**	**04 29 30.4**	**-1.4**
KKM	**Kota Kinabalu**	**10.73**	**200**	⇓P	**Pn**	**04 29 33.9**	**+2.0**
KKM	**Kota Kinabalu** comp=Z,171nm,0.8s,comp=Z,3μm	**10.73**	**200**	P	**Pn**	**04 29 36.6**	**+4.8**
SDKM	**Sandakan**	**10.84**	**194**	⇓P	**Pn**	**04 29 35.4**	**+2.1**
MYLDM	**Lahad Datu**	**11.06**	**187**	⇓P	**Pn**	**04 29 39.5**	**+3.2**
MYLDM	**Lahad Datu**	**11.06**	**187**	P	**Pn**	**04 29 39.1**	**+2.7**
MATI	**Mati**	**11.16**	**145**	*eP*	**Pn**	**04 29 42.5**	**+4.7**
TSM	**Tawau**	**12.02**	**189**	⇓P	**Pn**	**04 29 50.8**	**+1.4**
JOW	**Kunigami** comp=Z,7.6nm,0.3s,baz=235,slow=10,SNR=10	**13.14**	**35**	P	**Pn**	**04 30 06.5**	**+1.7**
JOW				S	**Sn**	**04 32 25.8**	**-3.7**
	comp=Z,1.0nm,0.3s,baz=303,slow=28,SNR=1.6						
JOW				LR	LR	04 35 13.9	
	comp=Z,12μm,19.7s,baz=293,slow=38						
BTM	**Bintulu**	**14.55**	**208**	⇓P	**Pn**	**04 30 24.9**	**+1.0**
SSE	**Sheshan**	**14.85**	**5**	*eP*	**Pn**	**04 30 30.5**	**+2.7**
SSE				XP	sP	04 30 45.5	-4.1
SSE				S	**Sn**	**04 33 15.8**	**+4.7**
SSE				XS	sS	04 33 27.5	-17
SSE				AMB	AMB		
	comp=Z,67nm,1.9s						
SSE				AMB	AMB		
	comp=Z,215nm,5.0s						
SSE				LR	LR		
	comp=N,82μm,20.4s						
SSE				LR	LR		
	comp=Z,12μm,19.5s						
WHN	**Wuhan**	**15.11**	**342**	⇑P	**Pn**	**04 30 34.0**	**+2.8**
WHN				S	**S**	**04 33 19.3**	**-13**
WHN				LR	LR		
	comp=N,41μm,17.0s						
WHN				LR	LR		
	comp=E,35μm,14.0s						
WHN				LR	LR		
	comp=Z,44μm,19.5s						
MNI	**Manado** comp=Z,2μm,1.2s	**15.49**	**161**	P	**Pn**	**04 30 42.0**	**+5.8**
SBUM	**Sibu**	**15.61**	**209**	⇓P	**Pn**	**04 30 39.5**	**+1.8**
SBUM	**Sibu**	**15.61**	**209**	P	**Pn**	**04 30 38.5**	**+0.7**
NJ2	**Nanjing**	**15.78**	**357**	*eP*	**Pn**	**04 30 45.0**	**+5.2**
NJ2				AP	pP	04 30 53.8	-0.1
NJ2				PP		04 30 58.5	
NJ2				XP	sP	04 31 00.3	+0.4
NJ2				AMB	AMB		
	comp=Z,160nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,1μm,4.2s						
NJ2				LR	LR		
	comp=N,5μm,23.4s						
NJ2				LR	LR		
	comp=E,13μm,20.6s						
NJ2				LR	LR		
	comp=Z,13μm,20.6s						
GYA	**Guiyang**	**15.93**	**312**	⇓*i*P	**Pn**	**04 30 43.5**	**+1.7**
GYA				AP	pP	04 30 54.8	-0.9
GYA				XP	sP	04 30 58.3	-3.4
GYA				S	**S**	**04 33 38.0**	**-12**
GYA				XS	sS	04 33 56.5	-11
GYA				AMB	AMB		
	comp=Z,170nm,1.0s						
GYA				AMB	AMB		
	comp=Z,2μm,8.2s						
GYA				LR	LR		
	comp=N,28μm,14.6s						
GYA				LR	LR		
	comp=E,38μm,15.5s						
GYA				LR	LR		
	comp=Z,36μm,15.2s						
KKTK	**Khon Kaen** comp=Z,1μm,0.8s	**16.34**	**273**	⇓P	**Pn**	**04 30 50.0**	**+3.0**
SMKI	**Samarinda** comp=Z,1μm,1.7s	**16.77**	**189**	P	**Pn**	**04 30 54.8**	**+2.4**
PCI	**Palu** comp=Z,464nm,1.0s,comp=Z,7μm	**17.02**	**180**	P	**Pn**	**04 30 57.7**	**+2.1**
KSM	**Kuching** comp=Z,245nm,0.7s	**17.41**	**214**	⇑*i*Pn	**Pn**	**04 31 00.6**	**+0.2**
KSM				*e*S	**S**	**04 34 12.6**	**-7.3**
KSM	**Kuching**	**17.41**	**214**	⇓P	**Pn**	**04 31 02.1**	**+1.7**
KSM	**Kuching** comp=Z,525nm,2.1s	**17.41**	**214**	P	**Pn**	**04 31 01.2**	**+0.8**
STKI	**Sintang** comp=Z,335nm,2.3s,comp=Z,10μm	**18.06**	**208**	P	**Pn**	**04 31 09.5**	**+1.2**
KMI	**Kunming**	**18.27**	**302**	P	**Pn**	**04 31 14.3**	**+3.4**
KMI				AP	pP	04 31 21.8	+0.2
KMI				XP	sP	04 31 26.3	-1.3
KMI				PP		04 31 30.0	
KMI				AMB	AMB		
	comp=Z,114nm,1.9s						
KMI				AMB	AMB		
	comp=Z,4μm,4.9s						
KMI				LR	LR		
	comp=N,14μm,15.0s						
KMI				LR	LR		
	comp=E,25μm,17.3s						
KMI				LR	LR		
	comp=Z,33μm,18.5s						
LBMI	**Labuha** comp=Z,802nm,0.9s,comp=Z,7μm	**18.39**	**155**	P	**Pn**	**04 31 11.7**	**-0.6**
NST	**Nakhon Sawan** comp=Z,283nm,1.4s	**18.96**	**271**	P	**Pn**	**04 31 20.0**	**+0.7**
PLKI	**Palangkaraya** comp=Z,1μm,1.2s	**19.24**	**198**	P	**Pn**	**04 31 22.3**	**-0.3**
KTGM	**Kuala Trenggan**	**19.64**	**238**	⇓P	**Pn**	**04 31 28.8**	**+1.4**
NNT	**Nongplab**	**19.81**	**262**	P	**Pn**	**04 31 31.5**	**+2.2**
BDT	**Bhumibol Dam** comp=Z,131nm,1.1s	**19.98**	**276**	P	**Pn**	**04 31 31.5**	**+0.1**
TIA	**Tai'an**	**20.05**	**354**	⇑P	**P**	**04 31 31.8**	**+1.9**
TIA				AP		04 31 47.3	
TIA				AMB	AMB		
	comp=Z,222nm,1.5s						
TIA				LR	LR		
	comp=E,3μm,10.0s						
CM31	**Chiang Mai Arr**	**20.07**	**279**	⇑*eP*	**P**	**04 31 32.5**	**+2.2**
CM31				*eS*	**S**	**04 35 20.3**	**+6.8**
CM31				LR	LR		
	comp=Z,34μm,19.0s,MS5.7						
CMAR	**Chiang Mai Arr** comp=Z,286nm,0.8s,baz=84,slow=8.6,SNR=148	**20.07**	**279**	P	**P**	**04 31 33.4**	**+3.0**
CMAR				PcP	PcP	04 35 45.1	+0.5
	comp=Z,19nm,0.8s,baz=30,slow=0.6,SNR=11						
CMAR				ScP	ScP	04 39 17.4	+0.3
	comp=Z,3.2nm,0.3s,baz=20,slow=4.6,SNR=4.1						
CMAR				LR	LR	04 39 32.8	
	comp=Z,41μm,19.2s,MS5.8,baz=106,slow=37						
CMAR	**Chiang Mai Arr**	**20.07**	**279**	P	**P**	**04 31 33.4**	**+3.1**
CMAR						04 35 45.2	
CMAR				pmax	pmax		
	comp=Z,286nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
CMAR				pmax	pmax		
	comp=N,3.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,41μm,19.2s						
CHG	**Chiang Mai** comp=Z,192nm,1.2s	**20.09**	**280**	⇑P	**P**	**04 31 32.6**	**+2.0**
CHTO	**Chiang Mai** SNR=73	**20.09**	**280**	P	**P**	**04 31 32.6**	**+2.0**
CHTO	**Chiang Mai** comp=Z,1μm,2.1s	**20.09**	**280**	⇑*iP*	**P**	**04 31 31.7**	**+1.2**
CHTO				*e*S	**S**	**04 35 17.4**	**+3.5**
CHTO				LR	LR		
	comp=Z,35μm,20.0s,MS5.7						
CHTO	**Chiang Mai**	**20.09**	**280**	⇑*iP*	**P**	**04 31 31.7**	**+1.1**
CHTO				*e*S	**S**	**04 35 17.4**	**+3.5**
CHTO				pmax	pmax		
	comp=Z,1μm,2.1s						
CHTO				MLR	MLR		
	comp=Z,35μm,20.0s,MS5.7						
CHTO	**Chiang Mai**	**20.09**	**280**	P	**P**	**04 31 31.3**	**+0.7**
	comp=Z,255nm,1.7s,comp=Z,7μm						
BBKI	**Banjar Baru** comp=Z,2μm,1.1s	**20.18**	**195**	P	**P**	**04 31 31.5**	**0.0**
KDI	**Kendari** comp=Z,790nm,1.1s,comp=Z,5μm	**20.24**	**172**	P	**P**	**04 31 31.7**	**-0.5**
XAN	**Xi'an**	**20.28**	**333**	P	**P**	**04 31 33.8**	**+1.4**
XAN				AP		04 31 44.8	
XAN				XP	sP	04 31 51.3	+1.8
XAN				PP		04 31 56.8	
XAN				S	**S**	**04 35 17.8**	**+0.5**
XAN				PCP	PcP	04 35 40.8	-3.9
XAN				AMB	AMB		
	comp=Z,164nm,2.2s						
XAN				LR	LR		
	comp=N,6μm,15.8s,MS5.3						
XAN				LR	LR		
	comp=E,11μm,16.7s,MS5.3						
XAN				LR	LR		
	comp=Z,26μm,17.2s,MS5.7						
SWI	**Sorong** comp=Z,822nm,1.2s,comp=Z,9μm	**20.38**	**145**	P	**P**	**04 31 32.8**	**-0.9**
CD2	**Chengdu**	**20.72**	**318**	⇑*iP*	**P**	**04 31 38.5**	**+1.2**
CD2				AP		04 31 52.3	
CD2				XP	sP	04 31 59.8	+5.4
CD2				PP		04 32 04.0	
CD2				AMB	AMB		
	comp=Z,460nm,1.3s						
CD2				AMB	AMB		
	comp=Z,10μm,5.9s						
CD2				LR	LR		
	comp=N,36μm,10.8s,MS6.2						
CD2				LR	LR		
	comp=E,39μm,11.8s,MS6.2						
CD2				LR	LR		
	comp=Z,40μm,14.5s,MS5.9						
SNG	**Songkhla** comp=Z,1μm,1.0s	**20.85**	**247**	P	**P**	**04 31 40.0**	**+1.2**
KAPI	**Kappang** SNR=31	**21.11**	**180**	P	**P**	**04 31 40.9**	**-0.6**
KAPI	**Kappang** comp=Z,130nm,0.8s,mb5.3,baz=12,slow=7.1,SNR=54	**21.11**	**180**	P	**P**	**04 31 39.9**	**-1.6**
KAPI				S	**S**	**04 35 35.0**	**+1.1**
	comp=Z,12nm,0.8s,baz=88,slow=21,SNR=3.9						
KAPI				LR	LR	04 40 11.8	
	comp=Z,9μm,19.1s,MS5.2,baz=10,slow=38						
KAPI	**Kappang** comp=Z,340nm,1.2s,mb5.5	**21.11**	**180**	*eP*	**P**	**04 31 40.5**	**-1.0**
KAPI				*e*S	**S**	**04 35 26.4**	**-7.5**
KAPI				LR	LR		
	comp=Z,8μm,20.0s,MS5.1						
KAPI	**Kappang** comp=Z,204nm,1.4s,comp=Z,4μm,mb5.2	**21.11**	**180**	P	**P**	**04 31 40.2**	**-1.3**
MYKOM	**Kota Tinggi**	**21.30**	**229**	⇑P	**P**	**04 31 45.4**	**+1.7**
MYKOM	**Kota Tinggi**	**21.30**	**229**	P	**P**	**04 31 44.5**	**+0.8**
AAI	**Ambon** comp=Z,975nm,1.2s,comp=Z,8μm,mb6.0	**21.44**	**157**	P	**P**	**04 31 46.4**	**+1.3**
AAI	**Ambon** comp=Z,975nm,1.2s,comp=Z,8μm,mb6.0	**21.44**	**157**	P	**P**	**04 31 46.8**	**+1.7**
KGM	**Kluang**	**21.55**	**231**	⇓P	**P**	**04 31 47.8**	**+1.5**
KULM	**Kulim**	**21.74**	**242**	⇓P	**P**	**04 31 50.2**	**+1.8**
IPM	**Ipoh**	**21.86**	**240**	⇓P	**P**	**04 31 50.3**	**+0.7**
IPM	**Ipoh** comp=Z,399nm,1.2s,comp=Z,7μm,mb5.7	**21.86**	**240**	P	**P**	**04 31 49.7**	**+0.1**
INCN	**Inchon** SNR=22	**22.01**	**15**	⇑P	**P**	**04 31 50.9**	**-0.1**
INCN	**Inchon** comp=Z,567nm,1.1s,mb5.9	**22.01**	**15**	⇑*eP*	**P**	**04 31 51.1**	**+0.1**
INCN				*e*		04 32 02.3	
INCN				*e*S	**S**	**04 35 52.3**	**+1.1**
INCN				LR	LR		
	comp=Z,7μm,22.0s,MS5.0						
FRIM	**Kepong**	**22.08**	**236**	⇓P	**P**	**04 31 53.0**	**+1.0**
KS15	**Wonju Array Si**	**22.30**	**17**	*eP*	**P**	**04 31 54.0**	**0.0**
KSRS	**Korea Array** comp=Z,146nm,1.0s,mb5.4,baz=199,slow=10,SNR=59	**22.32**	**17**	P	**P**	**04 31 54.5**	**+0.2**
KSRS				PcP	PcP	04 35 48.9	+0.3
	comp=Z,6.3nm,0.9s,baz=188,slow=2.6,SNR=5.9						
KSRS				LR	LR	04 41 52.6	
	comp=Z,4μm,18.5s,MS4.9,baz=197,slow=40						
KSRS	**Korea Array**	**22.32**	**17**	P	**P**	**04 31 54.5**	**+0.2**
KSRS						04 35 48.9	
KSRS				pmax	pmax		
	comp=Z,146nm,1.0s,mb5.4						
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,4μm,18.5s,MS4.9						
TPI	**Tanjungpandan** comp=Z,571nm,1.5s,comp=Z,8μm,mb5.8	**22.38**	**214**	P	**P**	**04 31 55.0**	**-0.2**
PPBI	**Pangkal Pinang** comp=Z,267nm,1.5s,mb5.4	**22.74**	**218**	P	**P**	**04 31 58.2**	**-0.8**
CBIJ	**Chichi jima** comp=Z,213nm,0.5s,mb5.8,baz=274,slow=5.1,SNR=15	**23.37**	**59**	P	**P**	**04 32 03.0**	**-2.4**
CBIJ				S	**S**	**04 36 07.9**	**-6.9**
	comp=Z,56nm,0.7s,baz=302,slow=23,SNR=3.9						
CBIJ				LR	LR	04 40 11.5	
	comp=Z,7μm,19.2s,MS5.1,baz=247,slow=34						
KMMI	**Kalianget** comp=Z,2μm,1.1s,mb6.4	**23.85**	**195**	P	**P**	**04 32 10.9**	**+1.1**
RGRI	**Rengat** comp=Z,578nm,1.7s,mb5.7	**23.87**	**228**	P	**P**	**04 32 12.8**	**+2.7**
JMBI	**JAMBI** comp=Z,3μm,1.5s,mb6.5	**23.90**	**224**	P	**P**	**04 32 11.5**	**+1.2**
BJT	**Baijiatuao** comp=Z,2μm,1.4s,mb6.3	**23.92**	**353**	⇑*iP*	**P**	**04 32 11.1**	**+0.8**
BJT				*e*		04 32 23.4	
BJT				*e*S	**S**	**04 36 27.6**	**+4.2**
BJT				LR	LR		
	comp=Z,7μm,22.0s,MS5.1						
BJT	**Baijiatuao**	**23.92**	**353**	⇑*iP*	**P**	**04 32 11.1**	**+0.8**
BJT				*e*		04 32 23.4	
BJT				*e*S	**S**	**04 36 27.6**	**+4.2**
BJT				pmax	pmax		
	comp=Z,2μm,1.4s						
BJT				MLR	MLR		
	comp=Z,7μm,22.0s						
BJI	**Beijing**	**23.94**	**353**	P	**P**	**04 32 11.3**	**+0.9**
BJI				AMB	AMB		
	comp=Z,887nm,1.1s,mb6.1						
BJI				AMB	AMB		
	comp=Z,5μm,4.9s						
BJI				LR	LR		
	comp=N,7μm,17.1s,MS5.4						
BJI				LR	LR		
	comp=E,9μm,18.0s,MS5.4						
BJI				LR	LR		
	comp=Z,8μm,23.7s						
GUMO	**Guam** comp=Z,268nm,0.8s,mb5.7,baz=160,slow=4.4,SNR=6.3	**24.32**	**93**	P	**P**	**04 32 13.2**	**-1.0**
GUMO				LR	LR	04 41 32.1	
	comp=Z,8μm,18.8s,MS5.2,baz=220,slow=36						
GUMO	**Guam** comp=Z,565nm,1.1s,mb5.9	**24.32**	**93**	*eP*	**P**	**04 32 13.7**	**-0.5**
GUMO				*e*S	**S**	**04 36 32.6**	**+2.2**
GUMO				LR	LR		
	comp=Z,10μm,20.0s,MS5.3						
GUMO	**Guam**	**24.32**	**93**	P	**P**	**04 32 13.2**	**-1.0**
GUMO				pmax	pmax		
	comp=Z,268nm,0.8s,mb5.7						
GUMO				MLR	MLR		
	comp=Z,8μm,18.8s,MS5.2						
GUMO	**Guam** comp=Z,683nm,1.2s,mb5.9	**24.32**	**93**	P	**P**	**04 32 15.2**	**+1.0**
LZH	**Lanzhou**	**24.37**	**327**	⇑P	**P**	**04 32 16.8**	**+2.3**
LZH				AP		04 32 27.0	
LZH				XP	sP	04 32 32.0	-0.4
LZH				PP		04 32 46.0	
LZH				AMB	AMB		
	comp=Z,486nm,1.2s,mb5.8						
LZH				AMB	AMB		
	comp=Z,2μm,4.0s						
LZH				LR	LR		
	comp=N,33μm,14.9s						
LZH				LR	LR		
	comp=Z,40μm,16.6s,MS6.0						
JHJ	**Hachijo jima 2** comp=Z,1μm,1.0s,mb6.3,baz=192,slow=5.6,SNR=10	**24.65**	**43**	P	**P**	**04 32 17.6**	**+0.6**
JHJ				LR	LR	04 40 21.2	
	comp=Z,9μm,21.5s,MS5.2,baz=139,slow=32						
KHKI	**Kahang-Kahang**	**24.79**	**190**	P	**P**	**04 32 19.0**	**+0.6**
SMRI	**Semarang** comp=Z,717nm,1.8s,mb5.9	**24.93**	**203**	P	**P**	**04 32 21.0**	**+1.3**
TRSI	**Tarutung** comp=Z,759nm,1.2s,comp=Z,8μm,mb6.1	**24.94**	**238**	P	**P**	**04 32 21.7**	**+1.9**
NBBI	**Negara** comp=Z,828nm,1.4s,mb6.1	**24.98**	**192**	P	**P**	**04 32 21.4**	**+1.3**
SJI	**Sawahan**	**25.11**	**199**	P	**P**	**04 32 21.1**	**-0.3**
DNP	**Denpasar** comp=Z,2μm,1.4s,mb6.4	**25.16**	**191**	P	**P**	**04 32 23.6**	**+1.8**
KRKI	**Karangkates**	**25.31**	**197**	P	**P**	**04 32 23.0**	**-0.1**
JCJI	**Jatiwangi** comp=Z,508nm,1.2s,mb5.9

IMP **Imphal** **25.68 294** *e*P **P** **04 32 25.0 -1.5**
IMP *ex* x 04 35 57.0
UGM **Wanagama** **25.70 202** P **P** **04 32 26.6 -0.1**
comp=Z,456nm,1.8s,mb5.7
KRJI **Kerinci** **25.71 227** P **P** **04 32 27.5 +0.7**
comp=Z,795nm,1.2s,mb6.1
SNY **Shenyang** **25.71 6** ⇑P **P** **04 32 26.0 -0.6**
SNY S **S** **04 36 51.0 -1.0**
SNY AMB AMB
comp=Z,124nm,0.8s,mb5.5
SNY AMB AMB
comp=Z,1µm,4.2s
SNY LR LR
comp=N,6µm,19.8s
SNY LR LR
comp=Z,5µm,17.6s,MS5.1
BTO **Baotou** **25.74 343** *e*P **P** **04 32 26.8 0.0**
TNG **Tangerang** **25.80 211** P **P** **04 32 31.1 +3.5**
comp=Z,2µm,1.7s,mb6.4
LEM **Lembang** **25.91 209** P **P** **04 32 29.6 +1.0**
comp=Z,462nm,1.1s,comp=Z,9µm,mb5.9
CBJI **Citeko** **25.92 211** P **P** **04 32 31.2 +2.5**
comp=Z,1µm,1.3s,mb6.3
MAJO **Matsushiro** **25.99 35** *e*P **P** **04 32 29.5 +0.3**
comp=Z,86nm,0.9s,mb5.3
MAJO *e* pP 04 32 39.3 -2.2
MAJO *e*S **S** **04 36 57.4 +0.9**
MAJO LR LR
comp=Z,6µm,22.0s,MS5.1
MAJO **Matsushiro** **25.99 35** *e*P **P** **04 32 29.5 +0.4**
MAJO *e* pP 04 32 39.3 -2.1
MAJO *e*S **S** **04 36 57.4 +0.9**
MAJO pmax pmax
comp=Z,86nm,0.9s,mb5.3
MAJO MLR MLR
comp=Z,6µm,22.0s,MS5.1
MAT **Matsushiro** **25.99 35** P **P** **04 32 28.0 -1.1**
MJAR **Matsushiro Arr** **25.99 35** P **P** **04 32 28.6 -0.6**
comp=Z,12nm,0.6s,mb4.6,baz=225,slow=10,SNR=11
MJAR PcP PcP 04 35 57.4 +0.8
comp=Z,6.1nm,0.8s,baz=202,slow=2.7,SNR=3.9
MJAR LR LR 04 42 00.4
comp=Z,5µm,21.5s,MS5.0,baz=220,slow=35
MJAR **Matsushiro Arr** **25.99 35** P **P** **04 32 28.6 -0.5**
MJAR 04 35 57.4
MJAR pmax pmax
comp=Z,12nm,0.6s
MJAR pmax pmax
comp=Z,6.0nm,0.9s
MJAR MLR MLR
comp=Z,5µm,21.5s
SBJI **Serang** **26.02 212** P **P** **04 32 30.2 +0.6**
comp=Z,2µm,1.3s,mb6.4
DBJI **Dramaga** **26.08 211** P **P** **04 32 30.8 +0.6**
comp=Z,776nm,1.6s,mb6.0
CLJI **Cilicap** **26.09 205** P **P** **04 32 31.2 +0.9**
comp=Z,1µm,1.2s,mb6.4
KSI **Kapahiang** **26.10 222** P **P** **04 32 30.3 0.0**
comp=Z,795nm,0.8s,comp=Z,9µm,mb6.3
BSI **Banda Aceh** **26.32 249** P **P** **04 32 32.0 -0.4**
comp=Z,269nm,2.1s,comp=Z,5µm,mb5.4
GSI **Gunungsitoli** **26.48 238** P **P** **04 32 32.4 -1.4**
comp=Z,206nm,1.7s,comp=Z,4µm,mb5.4
BATI **Baumata** **26.54 172** P **P** **04 32 32.0 -2.2**
comp=Z,564nm,0.8s,mb6.2,baz=9.6,slow=0.6,SNR=23
BATI **Baumata** **26.54 172** P **P** **04 32 32.1 -2.1**
comp=Z,526nm,1.2s,comp=Z,4µm,mb5.9
SHL **Shillong** **27.67 294** ⇑*i*P **P** **04 32 43.0 -1.4**
SHL AMb AMB 04 32 44.4
comp=Z,379nm,2.4s,mb5.6
SHL *i* x x 04 39 40.0
SHL *i* SCS ScS 04 43 29.0 -0.9
CN2 **Changchun** **27.89 9** *e*P **P** **04 32 46.0 -0.2**
CN2 *e*XP sP 04 33 08.0 +3.8
CN2 *e*PP PP 04 33 38.3 -12
CN2 PCP PcP 04 35 58.5 -2.4
CN2 *e*S **S** **04 37 25.8 -0.6**
CN2 *e*SS 04 38 52.5
CN2 AMB AMB
comp=Z,30nm,1.1s,mb4.8
CN2 LR LR
comp=N,4µm,16.0s,MS5.4
CN2 LR LR
comp=E,6µm,16.0s,MS5.4
CN2 LR LR
comp=Z,14µm,17.0s,MS5.6
GTA **Gaotai** **28.97 327** ⇑P **P** **04 32 57.3 +1.5**
GTA AP pP 04 33 13.0 +4.8
GTA XP sP 04 33 20.3 +6.4
GTA PCP PcP 04 36 04.8 +1.1
GTA S **S** **04 37 45.3 +1.8**
GTA XS sS 04 38 11.0 +6.6
GTA AMB AMB
comp=Z,131nm,1.7s,mb5.4
GTA AMB AMB
comp=Z,2µm,4.2s
GTA LR LR
comp=N,17µm,17.7s,MS5.9
GTA LR LR
comp=E,21µm,16.5s,MS5.9
GTA LR LR
comp=Z,31µm,18.3s,MS6.0
MDJ **Mudanjiang** **29.47 14** P **P** **04 33 01.0 +0.8**
MDJ AP pP 04 33 13.0 +0.4
MDJ XP sP 04 33 18.0 -0.2
MDJ PCP PcP 04 36 00.0 -4.9
MDJ S **S** **04 37 53.3 +2.1**
MDJ SCP ScP 04 39 40.0 -2.9
MDJ PCS PcS 04 39 44.0 -3.8
MDJ AMB AMB
comp=Z,39nm,2.0s,mb4.8
MDJ LR LR
comp=N,4µm,25.4s,MS5.2
MDJ LR LR
comp=E,5µm,20.8s,MS5.2
MDJ LR LR
comp=Z,6µm,24.0s,MS5.1
MDJ **Mudanjiang** **29.47 14** ⇑*e*P **P** **04 33 00.3 +0.1**
comp=Z,65nm,0.9s,mb5.4
MDJ *e* pP 04 33 12.3 -0.3
MDJ PcP PcP 04 36 07.1 +2.3
MDJ *e*S **S** **04 37 52.6 +1.4**
MDJ LR LR
comp=Z,4µm,20.0s,MS5.0
LSA **Lhasa** **29.53 302** P **P** **04 33 01.8 +0.9**
LSA S **S** **04 37 51.3 -1.2**
LSA LR LR
comp=N,8µm,21.8s,MS5.5
LSA LR LR
comp=E,11µm,25.5s,MS5.5
LSA LR LR
comp=Z,19µm,23.6s,MS5.7
LSA **Lhasa** **29.53 302** *e*P **P** **04 33 02.8 +1.9**
comp=Z,204nm,1.2s,mb5.7
LSA *e* pP 04 33 16.0 +2.7
LSA *e*PcP PcP 04 36 06.3 +1.0
LSA *e*S **S** **04 38 06.5 +14**
LSA LR LR
comp=Z,22µm,21.0s,MS5.8
LSA **Lhasa** **29.53 302** *e*P **P** **04 33 02.8 +1.9**
LSA *e* pP 04 33 16.0 +2.7
LSA *e* 04 36 06.3
LSA pmax pmax
comp=Z,204nm,1.2s,mb5.7
LSA MLR MLR
comp=Z,22µm,21.0s,MS5.8
XMIS **Christmas Isla** **30.02 209** P **P** **04 33 02.6 -2.7**
comp=Z,0.0nm,2.0s,comp=Z,0.0nm
CAL **Calcutta** **30.34 287** ⇑*i*P **P** **04 33 09.3 +1.2**
CAL *ex* x 04 36 18.7
KAKA **Kakadu** **31.34 156** *e*P Px 04 32 57.9
comp=Z,352nm,0.6s
KAKA *e*S x 04 35 55.0
TAPN **Taplejung** **31.73 296** *e*P **P** **04 33 21.2 +0.8**
comp=Z,442nm,1.2s,mb6.2
ODAN **Odare** **31.90 295** *e*P **P** **04 33 22.7 +0.9**
comp=Z,327nm,0.8s,mb6.2
ERM **Erimo** **32.58 33** PFAKE 04 33 40.0 +12
ERM LR LR
comp=Z,6µm,22.0s,MS5.2
RAMN **Ramite** **32.61 295** *e*P **P** **04 33 29.1 +1.0**
comp=Z,596nm,1.1s,mb6.4
BOK **Bokaro** **32.72 289** ⇑*i*P **P** **04 33 29.9 +0.8**
BOK AMb AMB 04 33 34.3
comp=Z,272nm,1.4s,mb6.0
BOK *e*S **S** **04 38 43.2 +0.7**
HIA **Hailar** **32.95 360** ⇑*e*P **P** **04 33 29.9 -0.8**
comp=Z,65nm,1.1s,mb5.5
HIA *e* pP 04 33 45.5 +2.3
HIA *e*PP PP 04 34 45.6 -0.3
HIA *e*PcP PcP 04 36 14.1 +0.1
HIA *e*S **S** **04 38 41.5 -3.9**
HIA LR LR
comp=Z,7µm,19.0s,MS5.4
HIA **Hailar** **32.95 360** ⇑*e*P **P** **04 33 29.9 -0.8**
HIA *e* pP 04 33 45.5 +2.3
HIA *e* 04 34 45.6
HIA *e* 04 36 14.1
HIA *e*S **S** **04 38 41.6 -3.9**
HIA pmax pmax
comp=Z,65nm,1.1s
HIA MLR MLR
comp=Z,7µm,19.0s
JIRN **Jiri** **33.12 296** *e*P **P** **04 33 33.4 +0.9**
comp=Z,210nm,0.7s,mb6.2
ULN **Ulaanbaatar** **33.26 344** P **P** **04 33 34.9 +1.4**
SNR=36
ULN **Ulaanbaatar** **33.26 344** ⇑*i*P **P** **04 33 34.3 +0.8**
comp=Z,392nm,1.8s,mb6.0
ULN *e* pP 04 33 46.9 +0.9
ULN *e*PcP PcP 04 36 12.5 -2.5
ULN *e*S **S** **04 38 42.5 -7.9**
ULN LR LR
comp=Z,7µm,19.0s,MS5.4
ULN **Ulaanbaatar** **33.26 344** ⇑*i*P **P** **04 33 34.3 +0.8**
ULN *e* pP 04 33 46.9 +0.9
ULN *e* 04 36 12.5
ULN *e*S **S** **04 38 42.5 -7.9**
ULN pmax pmax
comp=Z,391nm,1.8s,mb6.0
ULN MLR MLR
comp=Z,7µm,19.0s,MS5.4
ULN **Ulaanbaatar** **33.26 344** P **P** **04 33 34.3 +0.8**
comp=Z,119nm,1.7s,comp=Z,2µm,mb5.5
SONM **Songino Array** **33.41 343** P **P** **04 33 35.8 +1.0**
comp=Z,45nm,0.5s,mb5.7,baz=165,slow=9.9,SNR=207
SONM PcP PcP 04 36 15.0 -0.4
comp=Z,7.2nm,0.4s,baz=154,slow=3.0,SNR=9.2
SONM ScP ScP 04 39 55.9 -0.2
comp=Z,4.1nm,1.0s,baz=163,slow=11,SNR=4.6
SONM LR LR 04 48 05.5
comp=Z,8µm,19.8s,MS5.4,baz=155,slow=38
SONM **Songino Array** **33.41 343** P **P** **04 33 35.8 +1.0**
SONM 04 36 15.0
SONM pmax pmax
comp=Z,45nm,0.5s
SONM pmax pmax
comp=Z,7.0nm,0.4s
SONM pmax pmax
comp=N,4.0nm,1.0s
SONM MLR MLR
comp=Z,8µm,19.8s
GUN **Gumba** **33.44 296** *e*P **P** **04 33 36.2 +0.9**
comp=Z,439nm,0.8s,mb6.4
PKI **Pulchoki** **33.77 295** *e*P **P** **04 33 38.5 +0.3**
ASAJ **Asahikawa** **33.83 30** P **P** **04 33 38.0 -0.5**
comp=Z,15nm,0.5s,mb5.1,baz=229,slow=12,SNR=10
ASAJ **Asahikawa** **33.83 30** P **P** **04 33 38.0 -0.4**
ASAJ pmax pmax
comp=Z,15nm,0.5s
KKN **Kakani** **33.93 296** *e*P **P** **04 33 40.1 +0.5**
DMN **Daman** **34.05 295** *e*P **P** **04 33 41.0 +0.4**
comp=Z,601nm,1.2s,mb6.4
KLR **Kul'dur** **34.32 14** *e*P **P** **04 33 38.5 -4.1**
KLR *e* pP 04 33 50.5 -4.6
KLR *e*S **S** **04 39 03.0 -3.6**
KLR pmax pmax
comp=Z,470nm,2.0s,mb6.1
KLR MLR MLR
comp=N,4µm,14.0s
KLR MLR MLR
comp=Z,6µm,14.0s,MS5.5
HABR **Khabarovsk** **34.49 18** *e*P pP 04 33 55.6 -1.1
HABR *e* 04 34 59.6
HABR *e*S **S** **04 39 08.8 -0.5**
HABR *e* 04 39 32.3
HABR *e* 04 44 00.9
GKN **Gorkha** **34.53 296** *e*P **P** **04 33 44.8 0.0**
comp=Z,479nm,1.1s,mb6.3
VIS **Vishakhapatnam** **34.92 278** ⇑*i*P **P** **04 33 48.9 +0.6**
VIS *i* S **S** **04 39 16.9 +0.3**
DANN **Dangsing** **35.36 296** *e*P **P** **04 33 52.1 +0.1**
comp=Z,499nm,0.9s,mb6.4
KOLN **Koldanda** **35.38 295** *e*P **P** **04 33 52.3 +0.1**
comp=Z,490nm,1.2s,mb6.3
PYUN **Piuthan** **35.98 296** *e*P **P** **04 33 57.7 +0.5**
YSS **Yuzh-Sakhalins** **36.05 27** *e*P **P** **04 33 58.5 +1.0**
comp=Z,278nm,1.5s,mb6.0
YSS *e*PP PP 04 35 16.7 -3.5
YSS *e*PcP PcP 04 36 35.0 +12
YSS *e*S **S** **04 39 23.2 -10**
YSS LR LR
comp=Z,2µm,20.0s,MS4.8
YSS **Yuzh-Sakhalins** **36.05 27** ⇑*e*P **P** **04 33 58.0 +0.4**
YSS *e**SP sP 04 34 12.0 -3.8
YSS *e*S **S** **04 39 32.0 -1.3**
YSS *e* 04 39 54.0
YSS *e*SSS 04 42 26.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.5
YSS MLR MLR
comp=N,2µm,16.0s,MS5.0
YSS MLR MLR
comp=E,1µm,16.0s,MS5.0
YSS MLR MLR
comp=Z,2µm,16.0s,MS4.9
CIT **Chita** **36.06 353** *e*P **P** **04 33 58.2 +0.6**
CIT *e* pP 04 34 14.5 +4.4
CIT *e* 04 35 16.9
CIT *e* 04 35 49.9
CIT *e* 04 36 17.2
CIT pmax pmax
comp=Z,367nm,2.2s,mb5.9
COCO **West Island** **36.26 220** ⇓P **P** **04 34 00.7 +0.9**
SNR=5.0
COCO **West Island** **36.26 220** *e*P **P** **04 33 58.9 -0.8**
comp=Z,824nm,1.8s,mb6.4
COCO *e* pP 04 34 09.9 -2.4
COCO *e*PP PP 04 35 21.0 -2.0
COCO *e*PcP PcP 04 36 23.8 -0.4
COCO *e*S **S** **04 39 18.6 -19**
COCO LR LR
comp=Z,4µm,19.0s,MS5.2
COCO **West Island** **36.26 220** P **P** **04 34 01.6 +1.9**
comp=Z,129nm,1.3s,comp=Z,3µm,mb5.7
ZAK **Zakamensk** **36.60 342** *e*P **P** **04 34 02.6 +0.4**
ZAK *e* 04 36 23.1
ZAK pmax pmax
comp=Z,56nm,1.4s,mb5.2
PMG **Port Moresby** **37.15 131** ⇑*e*P **P** **04 34 03.6 -3.6**
PMG *e* pP 04 34 18.0 -1.9
PMG *e*PP PP 04 35 33.0 +0.3
PMG *e*S **S** **04 39 39.9 -11**
PMG *e*ScP ScP 04 40 10.6 +0.4
PMG LR LR
comp=Z,3µm,20.0s,MS5.1
PMG **Port Moresby** **37.15 131** ⇑*e*P **P** **04 34 03.6 -3.7**
PMG *e* pP 04 34 18.0 -1.9
PMG *e* 04 35 33.0
PMG *e*S **S** **04 39 39.9 -11**
PMG MLR MLR
comp=Z,3µm,20.0s
PMG **Port Moresby** **37.15 131** P **P** **04 34 04.8 -2.5**
comp=Z,188nm,1.4s,comp=Z,3µm,mb5.7
MBWA **Marble Bar** **37.15 180** ⇑P **P** **04 34 07.0 -0.2**
SNR=27
MBWA **Marble Bar** **37.15 180** ⇑*e*P **P** **04 34 04.1 -3.1**
comp=Z,371nm,1.0s,mb6.2
MBWA *e* pP 04 34 17.8 -2.0
MBWA *e*PP PP 04 35 34.3 +1.6
MBWA *e*PcP PcP 04 36 25.8 -1.0
MBWA *e*S **S** **04 39 45.8 -4.8**
MBWA LR LR
comp=Z,2µm,20.0s,MS5.0
MBWA **Marble Bar** **37.15 180** P **P** **04 34 04.9 -2.3**
comp=Z,548nm,0.9s,comp=Z,4µm,mb6.4
TLY **Talaya** **37.66 343** P **P** **04 34 12.3 +1.2**
SNR=29
TLY **Talaya** **37.66 343** ⇑*i*P **P** **04 34 11.7 +0.6**
comp=Z,782nm,2.5s,mb6.0
TLY *e* pP 04 34 24.1 +0.3
TLY *e*PP PP 04 35 34.7 -3.1
TLY *e*PcP PcP 04 36 28.0 +0.2
TLY *e*S **S** **04 39 54.6 -3.0**
TLY LR LR
comp=Z,6µm,20.0s,MS5.4
TLY **Talaya** **37.66 343** *c i*P **P** **04 34 11.6 +0.5**
TLY *e* 04 35 34.6
TLY *e*PPP 04 35 59.5
TLY *e*S **S** **04 39 59.9 +2.3**
TLY *e*SSS 04 43 12.3
TLY pmax pmax
comp=Z,191nm,2.1s,mb5.5
TLY MLR MLR
comp=Z,6µm,19.0s,MS5.4
COEN **Coen** **37.83 141** *e*P **P** **04 34 08.7 -4.3**
comp=Z,185nm,1.2s,mb5.7
COEN *e* pP 04 34 22.9 -2.7
COEN *e*PP PP 04 35 38.0 -2.2
COEN *e*PcP PcP 04 36 29.5 +0.6
COEN *e*S **S** **04 39 52.1 -8.9**
COEN **Coen** **37.83 141** P **P** **04 34 09.8 -3.2**
comp=Z,81nm,2.0s,comp=Z,1µm,mb5.1
IRK **Irkutsk** **38.00 344** ⇑*i*P **P** **04 34 15.1 +1.1**
IRK *e*S **S** **04 40 04.9 +2.1**
IRK pmax pmax
comp=Z,235nm,2.6s,mb5.5
MDRS **Chennai** **38.40 271** ⇑*i*x x 04 34 07.1
MDRS *ex* x 04 37 39.2
MOY **Mondy** **38.42 341** *e*P **P** **04 34 19.2 +1.6**
MOY pmax pmax
comp=Z,38nm,2.7s,mb4.7
LGTI **Lohaghat** **38.60 297** *e*P **P** **04 34 19.9 +0.4**
LGTI *ex* x 04 36 32.2
PTH **Pithoragarh** **38.65 297** *e*P **P** **04 34 21.7 +1.9**
PTH *ex* x 04 36 33.6
WRAB **Tennant Creek** **38.66 158** ⇑*i*P **P** **04 34 16.6 -3.4**
comp=Z,228nm,0.9s,mb5.9
WRAB *e* pP 04 34 28.6 -4.0
WRAB *e*PcP PcP 04 36 29.4 -2.0
WRAB *e*S **S** **04 39 58.4 -15**
WRAB LR LR
comp=Z,3µm,21.0s,MS5.1
WRAB **Tennant Creek** **38.66 158** ⇑*i*P **P** **04 34 16.6 -3.3**
WRAB *e* pP 04 34 28.6 -4.0
WRAB *e* 04 36 29.4
WRAB pmax pmax
comp=Z,228nm,0.9s,mb5.9
WRAB MLR MLR
comp=Z,3µm,21.0s,MS5.1
WRAB **Tennant Creek** **38.66 158** P **P** **04 34 16.1 -3.8**
comp=Z,334nm,1.1s,comp=Z,2µm,mb6.0
WRA **Warramunga Arr** **38.66 158** P **P** **04 34 16.7 -3.3**
comp=Z,144nm,0.9s,mb5.7,baz=339,slow=9.1,SNR=215
WRA PcP PcP 04 36 32.3 +0.9
comp=Z,13nm,0.7s,baz=340,slow=3.1,SNR=5.7
WRA S **S** **04 40 04.8 -8.7**
comp=Z,13nm,0.9s,baz=346,slow=15,SNR=5.9
WRA **Warramunga Arr** **38.66 158** P **P** **04 34 16.7 -3.3**
WRA 04 36 32.3
WRA S **S** **04 40 04.8 -8.7**
WRA pmax pmax
comp=Z,144nm,0.9s
WRA pmax pmax
comp=Z,13nm,0.7s
WRA smax
comp=N,13nm,1.0s
WB2 **Warramunga Arr** **38.67 158** *e*P **P** **04 34 15.6 -4.4**
WB2 *e*S **S** **04 40 04.4 -9.2**
WMQ **Urumqi** **38.70 322** P **P** **04 34 21.5 +1.4**
WMQ AP pP 04 34 36.5 +3.7
WMQ XP sP 04 34 44.5 +6.2
WMQ PP PP 04 35 56.5 +7.1
WMQ S **S** **04 40 15.5 +1.8**
WMQ XS sS 04 40 41.5 +6.6
WMQ SS SS 04 43 01.5 -4.1
WMQ AMB AMB
comp=Z,65nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,2µm,4.0s
WMQ LR LR
comp=N,14µm,14.0s,MS6.1
WMQ LR LR
comp=E,13µm,14.0s,MS6.1
WMQ LR LR
comp=Z,15µm,14.0s,MS6.0
NGP **Nagpur** **38.87 284** *e*P **P** **04 34 19.9 -1.9**
NGP *e*S **S** **04 40 17.2 +0.3**
HYB **Hyderabad** **39.49 278** *e*P **P** **04 34 26.5 -0.5**
comp=Z,100nm,0.5s,mb5.8
HYB *e*S **S** **04 40 26.0 -0.1**
HYB **Hyderabad** **39.49 278** *e*P **P** **04 34 26.5 -0.5**
HYB *e*S **S** **04 40 26.0 -0.1**
HYB pmax pmax
comp=Z,100nm,0.5s,mb5.8
HYB **Hyderabad** **39.49 278** *i* P **P** **04 34 26.5 -0.5**
comp=Z,100nm,0.5s,mb5.8
HYB *e*S **S** **04 40 26.0 -0.1**
HVS **Khovu-Aksy** **40.62 335** ⇓*i*P **P** **04 34 36.8 +0.9**
DDI **Dehra Dun** **40.63 298** *e*P **P** **04 34 34.5 -1.9**
CLNS **Chul'man** **40.72 4** *e*P **P** **04 34 38.2 +1.6**
CLNS *e* 04 36 08.5
CLNS *e*PPP 04 36 38.2
CLNS *e* 04 36 40.6
CLNS *e*S **S** **04 40 40.0 -3.5**
CLNS *e*SS SS 04 43 42.0 -3.4
CLNS pmax pmax
comp=E,19nm,1.6s
CLNS pmax pmax
comp=Z,51nm,1.6s,mb4.9
CLNS pmax pmax
comp=N,34nm,1.7s
CLNS pmax pmax
comp=N,37nm,1.5s
CLNS pmax pmax
comp=Z,36nm,1.5s,mb4.8
CLNS pmax pmax
comp=E,24nm,1.4s
CLNS smax
comp=N,551nm,13.0s
CLNS smax
comp=E,498nm,12.6s
CLNS MLR MLR
comp=N,2µm,18.0s,MS5.2
CLNS MLR MLR
comp=E,2µm,18.0s,MS5.2
CLNS MLR MLR
comp=Z,3µm,18.0s,MS5.1
AKL **Akola** **40.78 283** *e*P **P** **04 34 38.4 +0.7**
AKL AMb AMB 04 34 41.5
comp=Z,286nm,1.7s,mb5.6
NDI **New Delhi** **41.09 295** *e*P **P** **04 34 38.0 -2.1**
NDI *ex* x 04 40 25.5
LATR **Latur** **41.31 280** *e*P **P** **04 34 41.0 -1.0**
SMLA **Simla** **41.54 299** *i* P **P** **04 34 44.0 +0.2**
SMLA *ex* x 04 34 48.3
comp=Z,150nm,0.5s
SMLA *i* x x 04 40 29.9
KOD **Kodaikanal** **41.62 267** *e*P **P** **04 34 44.1 -0.6**
KOD AMb AMB 04 34 47.7
comp=Z,469nm,1.2s,mb6.0
BOD **Bodaibo** **41.75 355** *e*P **P** **04 34 45.2 +0.1**
BOD pmax pmax
comp=Z,60nm,2.0s,mb4.9
ASAR **Alice Springs** **41.96 161** P **P** **04 34 44.0 -3.3**
comp=Z,86nm,0.6s,mb5.5,baz=338,slow=7.3,SNR=222
ASAR PcP PcP 04 36 40.5 -1.5
comp=Z,30nm,0.8s,baz=344,slow=5.1,SNR=5.3
ASAR ScP ScP 04 40 28.1 -0.5
comp=Z,4.6nm,0.9s,baz=348,slow=7.6,SNR=3.4
ASAR **Alice Springs** **41.96 161** P **P** **04 34 44.0 -3.2**
ASAR 04 36 40.5
ASAR pmax pmax
comp=Z,86nm,0.6s
ASAR pmax pmax
comp=Z,30nm,0.8s
ASAR pmax pmax
comp=N,5.0nm,0.9s
BHK **Bhakra** **42.22 299** *e*P **P** **04 34 49.8 +0.4**
TRD **Trivandrum** **42.52 265** ⇑*i*P **P** **04 34 52.3 +0.3**
TRD AMb AMB 04 34 55.2
comp=Z,292nm,1.6s,mb5.8
DLH **Dalhousie** **42.81 301** *e*P **P** **04 34 52.0 -2.2**
DLH *ex* x 04 35 05.0

THN **Thein Dam** 43.00 300 *e*P **P** **04 34 56.0 +0.3**
AJM **Ajmer** 43.12 292⇑ *i*P **P** **04 34 55.8 -0.9**
AJM *ex* x 04 41 30.8
MK31 Makanchi Array 43.52 323⇑ *i*P **P** **04 35 00.1 +0.4**
MK31 *e* pP 04 35 17.3 +4.8
MK31 *e*PP PP 04 36 41.6 +0.1
MK31 *e*PcP PcP 04 36 47.0 +0.1
MK31 *e*S **S** **04 41 17.1 -8.1**
MKAR Makanchi Array 43.52 323 P **P** **04 35 00.3 +0.6**
comp=Z,23nm,0.7s,mb5.0,baz=123,slow=9.0,SNR=121
MKAR PcP PcP
comp=Z,40nm,0.7s,baz=102,slow=2.8,SNR=7.5
MKAR ScP ScP 04 40 34.5 -0.1
comp=Z,7.6nm,1.0s,baz=134,slow=3.5,SNR=4.8
MKAR LR LR 04 54 35.7
comp=Z,10μm,19.5s,MS5.7,baz=117,slow=38
MKAR Makanchi Array 43.52 323 P **P** **04 35 00.3 +0.6**
MKAR 04 36 47.3
MKAR pmax pmax
comp=Z,23nm,0.7s
MKAR pmax pmax
comp=Z,40nm,0.7s
MKAR pmax pmax
comp=N,8.0nm,1.0s
MKAR MLR MLR
comp=Z,10μm,19.5s
MNGI Mangalore 43.63 272 *i* P **P** **04 35 00.8 -0.1**
MNGI AMb AMB 04 35 04.8
comp=Z,579nm,1.3s,mb6.1
MNGI *i* x x 04 41 48.0
POO Poona 43.87 280⇑ *i*P **P** **04 35 02.8 0.0**
POO AMb AMB 04 35 07.4
comp=Z,317nm,1.5s,mb5.8
GOA Goa 44.20 276⇑ *i*P **P** **04 35 04.4 -1.2**
GOA *i* S **S** **04 41 38.9 +3.0**
CTA Charters Tower 44.45 143 *e*P **P** **04 35 05.4 -2.0**
comp=Z,29nm,1.0s,mb5.0
CTA *e*PCP PcP 04 36 51.0 +0.6
CTA *e*SCP ScP 04 40 40.1 +1.3
CTA *e*S **S** **04 41 34.8 -4.4**
CTA Charters Tower 44.45 143 LR LR 04 54 16.2
comp=Z,4μm,20.3s,MS5.3,baz=332,slow=37
CTA Charters Tower 44.45 143 *e*P **P** **04 35 05.4 -2.0**
CTA *e* 04 36 51.0
CTA *e*S **S** **04 41 34.8 -4.4**
CTA pmax pmax
comp=Z,29nm,1.0s
CTAO Charters Tower 44.45 143⇑ *e*P **P** **04 35 05.3 -2.1**
comp=Z,376nm,1.7s,mb5.8
CTAO *e* pP 04 35 15.7 -4.6
CTAO *e*PcP PcP 04 36 49.9 -0.5
CTAO *e*ScP ScP 04 40 33.5 -5.3
CTAO *e*S **S** **04 41 36.8 -2.5**
CTAO LR LR
comp=Z,4μm,21.0s,MS5.3
CTAO Charters Tower 44.45 143⇑ *e*P **P** **04 35 05.3 -2.1**
CTAO *e* pP 04 35 15.7 -4.5
CTAO *e* 04 36 49.9
CTAO *e*S **S** **04 41 36.8 -2.4**
CTAO pmax pmax
comp=Z,376nm,1.7s,mb5.8
CTAO MLR MLR
comp=Z,4μm,21.0s,MS5.3
CTAO Charters Tower 44.45 143 P **P** **04 35 05.8 -1.6**
comp=Z,146nm,1.8s,comp=Z,2μm,mb5.4
KSH Kashi 44.62 310⇑ *i*P **P** **04 35 11.8 +3.2**
KSH AP pP 04 35 27.8 +6.3
KSH *e*PCP PcP 04 36 52.5 +1.7
KSH PP PP 04 36 58.5 +5.1
KSH *e*SCP ScP 04 40 38.5 -0.8
KSH *e*PCS PcS 04 40 45.0 +0.8
KSH S **S** **04 41 44.3 +2.8**
KSH *e*SS SS 04 44 59.8 -2.9
KSH *e*SCS ScS 04 45 01.0 -1.4
KSH AMB AMB
comp=Z,347nm,1.0s,mb6.1
KSH AMB AMB
comp=Z,6μm,3.6s
KSH LR LR
comp=N,26μm,13.7s
KSH LR LR
comp=E,18μm,9.5s
KSH LR LR
comp=Z,19μm,12.0s,MS6.2
KRAR Krasnoyarsk 44.71 339 *e*P **P** **04 35 10.4 +1.4**
SKR Severo-Kuril's 45.01 32 *e*P **P** **04 35 10.5 -1.0**
SKR *e* pP 04 35 22.5 -1.9
SKR *e* 04 36 52.0
SKR *e* 04 36 59.0
SKR *e*S **S** **04 41 40.0 -6.7**
SKR *e* 04 45 06.0
SKR pmax pmax
comp=Z,150nm,0.5s,mb6.1
SKR pmax pmax
comp=N,120nm,0.8s
SKR pmax pmax
comp=E,80nm,0.5s
SKR pmax pmax
comp=Z,4μm,4.0s
SKR smax
comp=N,6μm,14.0s
SKR smax
comp=E,3μm,8.0s
SKR MLR MLR
comp=N,3μm,20.0s,MS5.6
SKR MLR MLR
comp=E,6μm,20.0s,MS5.6
SKR MLR MLR
comp=Z,2μm,20.0s,MS5.1
AAA Alma-Ata 45.27 316 *i* P **P** **04 35 13.9 +0.2**
AAA *i* S **S** **04 41 56.5 +5.8**
AAA pmax pmax
comp=Z,2μm,2.9s,mb6.5
AAA smax
comp=E,2μm,6.4s
AAA MLR MLR
comp=Z,10μm,13.0s,MS6.0
BHV Bhavnagar 45.30 285 *e*P **P** **04 35 14.5 +0.3**
TKM2 Tokmak 2 46.05 315 PFAKE 04 35 30.0 +10
TKM2 LR LR
comp=Z,13μm,21.0s,MS5.8
YAK Yakutsk 46.28 6⇑ *i*P **P** **04 35 21.3 0.0**
comp=Z,147nm,1.0s,mb5.9
YAK *e*PcP PcP 04 36 55.9 -0.2
YAK *e*PP PP 04 37 12.0 +1.5
YAK *e*ScP ScP 04 41 05.9 +20
YAK *e*S **S** **04 42 07.2 +2.6**
YAK LR LR
comp=Z,3μm,22.0s,MS5.2
YAK Yakutsk 46.28 6 *e*P **P** **04 35 20.4 -0.9**
YAK *e**PP pP 04 35 45.2 +11
YAK *e* 04 36 55.9
YAK *e* 04 37 11.0
YAK *e*PPP 04 37 51.9
YAK *e*S **S** **04 41 59.3 -5.3**
YAK *e* 04 45 08.7
YAK *e*SS SS 04 45 30.9 +0.5
YAK *e*SSS 04 46 31.5
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=Z,36nm,0.8s,mb5.3
YAK pmax pmax
comp=N,30nm,1.2s
YAK pmax pmax
comp=Z,277nm,1.6s,mb5.9
YAK pmax pmax
comp=N,35nm,1.0s
YAK pmax pmax
comp=E,87nm,1.5s
YAK smax
comp=N,1μm,3.9s
YAK smax
comp=E,511nm,3.5s
YAK MLR MLR
comp=N,869nm,15.0s,MS5.2
YAK MLR MLR
comp=Z,2μm,18.0s,MS5.1
YAK MLR MLR
comp=E,2μm,16.0s,MS5.2
ZAA0 Zalesovo Array 46.45 332⇑ *i*P **P** **04 35 22.3 -0.5**
ZAA0 *e* pP 04 35 35.9 +0.2
ZAA0 *e*PcP PcP 04 36 56.2 -0.6
ZAA0 *e*PP PP 04 37 13.9 +1.5
ZAA0 *e*ScP ScP 04 41 06.5 +20
ZAA0 *e*S **S** **04 42 10.1 +2.9**
ZALV Zalesovo Beam 46.45 332 P **P** **04 35 22.4 -0.3**
comp=E,22nm,0.8s,mb5.2,baz=123,slow=5.5,SNR=70
ZALV PcP PcP 04 36 56.1 -0.7
comp=E,21nm,0.5s,baz=122,slow=3.6,SNR=9.2
ZALV LR LR 04 55 47.5
comp=E,5μm,19.3s,MS5.5,baz=136,slow=37
ZALV Zalesovo Beam 46.45 332 P **P** **04 35 22.4 -0.3**
ZALV PcP PcP 04 36 56.1 -0.7
ZALV LR LR 04 55 47.5
ZALV Zalesovo Beam 46.45 332 P **P** **04 35 22.4 -0.4**
ZALV 04 36 56.1
ZALV pmax pmax
comp=Z,22nm,0.8s,mb5.1
ZALV pmax pmax
comp=Z,21nm,0.5s,mb5.3
ZALV MLR MLR
comp=Z,5μm,19.3s,MS5.5
UCH Uchtor 46.56 313 PFAKE 04 35 30.0 +6.1
UCH LR LR
comp=Z,8μm,22.0s,MS5.6
FRU Bishkek 46.70 314⇑ *i*P **P** **04 35 27.0 +2.1**
FRU *i* 04 35 50.0
FRU *e* 04 42 14.0
FRU pmax pmax
comp=Z,300nm,2.1s,mb5.8
FRU MLR MLR
comp=Z,9μm,18.0s,MS5.8
AAK Ala-Archa 46.71 314⇑ *i*P **P** **04 35 26.0 +1.0**
comp=Z,48nm,1.0s,mb5.4
AAK *e* pP 04 35 37.1 -0.9
AAK PcP PcP 04 36 59.5 +1.5
AAK *e*PP PP 04 37 19.2 +3.8
AAK *e*ScP ScP 04 40 47.0 -0.9
AAK *e*S **S** **04 42 16.3 +4.9**
AAK LR LR
comp=Z,18μm,21.0s,MS6.0
AAK Ala-Archa 46.71 314⇑ *i*P **P** **04 35 26.0 +1.0**
AAK *e* pP 04 35 37.1 -0.9
AAK 04 36 59.5
AAK *e* 04 37 19.2
AAK *e*S **S** **04 42 16.3 +4.9**
AAK pmax pmax
comp=Z,48nm,1.0s,mb5.4
AAK MLR MLR
comp=Z,18μm,21.0s,MS6.0
HNR Honiara 47.17 120 LR LR 04 52 37.4
comp=Z,4μm,20.8s,MS5.4,baz=121,slow=33
HNR Honiara 47.17 120 *e*P **P** **04 35 28.4 -0.6**
HNR *e* pP 04 35 40.7 -1.2
HNR *e*S **S** **04 42 18.2 -0.4**
HNR LR LR
comp=Z,6μm,22.0s,MS5.5
EKS2 Erkin-Say 47.22 314 PFAKE 04 35 40.0 +11
EKS2 LR LR
comp=Z,19μm,22.0s,MS6.0
PEA0B Petropavlovsk- 47.24 30 *e*P **P** **04 35 29.6 +0.5**
PEA0B *e* pP 04 35 40.9 -1.1
PEA0B PcP PcP 04 36 50.1 -10
PEA0B *e*S **S** **04 42 07.6 -11**
PETK Petropavlovsk- 47.24 30 P **P** **04 35 29.3 +0.3**
comp=Z,115nm,0.7s,mb5.9,baz=205,slow=4.2,SNR=105
PETK LR LR 04 53 54.9
comp=Z,3μm,21.7s,MS5.1,baz=71,slow=34
PETK Petropavlovsk- 47.24 30 P **P** **04 35 29.3 +0.2**
PETK LR LR 04 53 54.9
FORT Forrest 47.40 170 *e*P **P** **04 35 27.5 -2.9**
comp=Z,134nm,0.8s,mb5.9
FORT *e*PCP PcP 04 37 13.7 +13
BHJ Bhuj 47.57 287⇑ *i*P **P** **04 35 32.7 +0.7**
BHJ *ex* x 04 42 41.9
KLBR Kellerberrin 47.59 182 *e*P **P** **04 35 28.9 -3.0**
comp=Z,276nm,1.0s,mb6.2
KLBR *e*PCP PcP 04 37 01.3 +0.2
KURK Kurchatov 47.64 325 P **P** **04 35 32.8 +0.6**
SNR=94
KURK Kurchatov 47.64 325⇑ *i*P **P** **04 35 32.4 +0.2**
KURK *e* pP 04 35 44.2 -0.9
KURK *e*PcP PcP 04 37 00.1 -1.0
KURK *e*PP PP 04 37 24.1 +0.1
KURK *e*S **S** **04 42 30.9 +6.4**
KURK LR LR
comp=Z,6μm,20.0s,MS5.5
KURK Kurchatov 47.64 325 *e*P **P** **04 35 31.9 -0.3**
KURK pmax pmax
comp=Z,140nm,0.6s,mb6.2
PET Petropavlovsk 47.66 31 *e*P **P** **04 35 32.4 +0.1**
comp=Z,244nm,1.0s,mb6.2
PET *e* pP 04 35 43.5 -1.7
PET *e*PcP PcP 04 36 51.0 -10
PET *e*ScP ScP 04 40 54.0 +2.4
PET *e*S **S** **04 42 22.2 -2.5**
PET LR LR
comp=Z,3μm,22.0s,MS5.2
PET Petropavlovsk 47.66 31 *e*P **P** **04 35 32.8 +0.5**
PET *i* S **S** **04 42 25.6 +1.0**
PET *e*SS SS 04 45 49.6 -3.6
PET pmax pmax
comp=Z,2μm,8.0s
PET pmax pmax
comp=Z,1μm,9.4s
PET pmax pmax
comp=Z,278nm,1.0s,mb6.2
PET smax
comp=N,2μm,7.5s
PET smax
comp=N,3μm,5.9s
NVS Novosibirsk 47.73 332⇑ *i*P **P** **04 35 31.5 -1.3**
NVS *i* *PP pP 04 35 45.4 -0.3
NVS *i* 04 36 58.7
NVS *e*S **S** **04 42 24.2 -1.3**
NVS *e* 04 45 15.9
NVS pmax pmax
comp=Z,310nm,2.1s,mb6.0
NVS pmax pmax
comp=N,157nm,1.7s
NVS pmax pmax
comp=E,193nm,2.0s
NVS smax
comp=N,64nm,2.2s
MUN Mundaring 48.06 184 *e*P **P** **04 35 33.3 -2.2**
MUN *e*PCP PcP 04 37 05.5 +2.7
MUN *e*S **S** **04 42 27.9 -2.7**
KBL Kabul 48.85 302 *e*P **P** **04 35 43.1 +1.3**
comp=N,316nm,1.5s,mb6.1
KBL *e*pP pP 04 35 54.6 -0.2
KBL *e*PcP PcP 04 37 04.6 -1.2
KBL *e*PP PP 04 37 34.1 -1.2
KBL *e*ScP ScP 04 41 12.9 +16
KBL *e*S **S** **04 42 52.9 +11**
KBL Kabul 48.85 302 P **P** **04 35 43.1 +1.3**
KBL pmax pmax
comp=Z,320nm,1.5s,mb6.1
NWAO Narrogin (SRO) 48.94 183⇑ *i*P **P** **04 35 40.0 -2.3**
NWAO *e*PcP PcP 04 36 59.9 -6.1
NWAO *e*S **S** **04 42 39.6 -3.4**
NWAO LR LR
comp=Z,1μm,20.0s,MS5.0
KK31 Karatay Array 49.64 313 *i* P **P** **04 35 46.8 -0.8**
KK31 pmax pmax
comp=Z,185nm,1.3s,mb6.0
EIDS Eidsvold 51.34 143⇑ *e*P **P** **04 35 57.4 -3.2**
EIDS *e* pP 04 36 09.5 -4.2
EIDS PcP PcP 04 37 23.2 +8.2
EIDS *e*PP PP 04 37 59.0 +0.9
EIDS *e*S **S** **04 42 59.2 -17**
SEY Seymchan 51.87 18*c* *i*P **P** **04 36 04.6 +0.5**
STKA Stephens Creek 52.18 156⇑ *i*P **P** **04 36 03.7 -3.1**
comp=Z,80nm,0.6s,mb5.8
STKA *e*SCP ScP 04 41 15.2 +3.9
STKA *e*S **S** **04 43 16.8 -11**
STKA Stephens Creek 52.18 156 P **P** **04 36 03.8 -3.0**
comp=Z,106nm,0.7s,mb5.9,baz=334,slow=7.5,SNR=105
STKA LR LR 05 01 12.4
comp=Z,3μm,20.9s,MS5.3,baz=335,slow=39
DGAR Diego Garcia 52.45 247 PFAKE 04 36 20.0 +11
DGAR LR LR
comp=Z,8μm,20.0s,MS5.8
VOSK Vostochnaya 52.78 325 P **P** **04 36 10.5 -0.5**
VOSK pmax pmax
comp=Z,66nm,1.9s,mb5.2
BVA0 Borovoye Array 53.23 325 *i* P **P** **04 36 13.3 -1.0**
BVA0 pmax pmax
comp=Z,128nm,2.1s,mb5.5
BVAR Borovoye Array 53.23 325 P **P** **04 36 14.4 +0.1**
comp=Z,14nm,0.6s,mb5.1,baz=116,slow=10,SNR=82
BVAR PcP PcP 04 37 22.9 +1.2
comp=Z,24nm,0.7s,baz=120,slow=3.5,SNR=5.6
BVAR Borovoye Array 53.23 325 P **P** **04 36 14.4 +0.1**
BVAR 04 37 22.9
BVAR pmax pmax
comp=Z,15nm,0.6s
BVAR pmax pmax
comp=Z,25nm,0.7s
BRVK Borovoye 53.30 325 P **P** **04 36 15.4 +0.5**
SNR=72
BRVK Borovoye 53.30 325⇑ *i*P **P** **04 36 15.0 +0.1**
BRVK *e* pP 04 36 27.8 -0.2
BRVK PcP PcP 04 37 14.8 -7.2
BRVK *e*PP PP 04 38 22.5 +7.2
BRVK *e*ScP ScP 04 41 28.6 +13
BRVK *e*S **S** **04 43 42.7 -0.3**
BRVK LR LR
comp=Z,9μm,20.0s,MS5.8
BRVK Borovoye 53.30 325⇑ *i*P **P** **04 36 15.0 +0.1**
BRVK *e* pP 04 36 27.8 -0.2
BRVK *e* 04 38 22.5
BRVK *e*S **S** **04 43 42.7 -0.3**
BRVK MLR MLR
comp=Z,9μm,20.0s,MS5.8
ADE Adelaide 53.97 161 P **P** **04 36 17.8 -2.1**
TARA Tarawa 54.31 100 PFAKE 04 36 30.0 +7.2
TARA LR LR
comp=Z,2μm,22.0s,MS5.1
ARMA Armidale 55.56 147 *e*P **P** **04 36 30.1 -1.4**
ARMA *e*PCP sP 04 36 55.1 +4.9
ARMA *e*SCP ScP 04 41 14.2 -12
ARMA *e*S **S** **04 44 08.8 -5.1**
TIXI Tiksi 55.67 3⇑ *i*P **P** **04 36 30.8 -1.0**
TIXI *e* pP 04 36 43.7 -1.3
TIXI *e*PcP PcP 04 37 29.8 -0.9
TIXI *e*ScP ScP 04 41 23.1 -2.8
TIXI *e*S **S** **04 44 11.4 -2.9**
TIXI LR LR
comp=Z,2μm,20.0s,MS5.2
TIXI Tiksi 55.67 3*c* *i*P **P** **04 36 31.1 -0.6**
TIXI pmax pmax
comp=Z,512nm,2.5s,mb6.1
TIXI MLR MLR
comp=Z,2μm,21.0s,MS5.2
SMY Shemya 55.82 37 *e*P **P** **04 36 33.9 +0.7**
comp=Z,298nm,1.4s,mb6.1
SMY *e*PcP PcP 04 37 31.5 -0.1
SMY *e*PP PP 04 38 55.3 +17
SMY *e*ScP ScP 04 41 36.6 +10
SMY *e*S **S** **04 44 11.8 -5.1**
SMY LR LR
comp=Z,2μm,20.0s,MS5.1
SMY Shemya 55.82 37 *e*P **P** **04 36 33.9 +0.8**
SMY *e* 04 37 31.5
SMY *e*S **S** **04 44 11.8 -5.1**
SMY pmax pmax
comp=Z,298nm,1.4s,mb6.1
SMY MLR MLR
comp=Z,2μm,20.0s,MS5.1
WBK Wadi Bani Khal 57.43 287 P **P** **04 36 45.9 +0.7**
SNR=24
ABKT Ailbek 58.00 305 P **P** **04 36 50.0 +1.1**
comp=Z,972nm,1.2s,mb6.7,SNR=48
BIDO Bidbid 58.13 288 P **P** **04 36 50.1 +0.2**
SNR=24
SMDO Samad 58.24 287 P **P** **04 36 51.1 +0.3**
SNR=18
CAN Canberra 58.25 152 *e*P **P** **04 36 48.9 -1.6**
comp=Z,83nm,1.1s,mb5.7
CAN *e*PcP PcP 04 37 39.0 -2.4
CAN *e*PP PP 04 38 57.0 -3.1
CAN *e*S **S** **04 44 49.0 -0.1**
CAN Canberra 58.25 152 *e*P **P** **04 36 48.9 -1.6**
CAN *e* 04 37 39.0
CAN *e* 04 38 57.0
CAN *e*S **S** **04 44 49.0 -0.1**
CAN pmax pmax
comp=Z,83nm,1.1s,mb5.7
JMDO Jabal Madar 58.26 287 P **P** **04 36 50.5 -0.4**
SNR=32
AB31 Akbulak array 58.30 318 P **P** **04 36 50.4 -0.3**
AB31 pmax pmax
comp=Z,168nm,1.3s,mb5.9
CNB Canberra Magne 58.41 152 *e*P **P** **04 36 49.5 -2.1**
CNB *e*S **S** **04 44 46.9 -4.3**
AMKA Amchitka 58.51 39 *e*P **P** **04 36 52.2 +0.1**
AMKA *e* pP 04 37 04.7 -0.7
AMKA *e*PcP PcP 04 37 41.6 -0.6
AMKA *e*PP PP 04 39 02.1 +0.2
TOO Toolangi 58.70 156 *e*P **P** **04 36 51.7 -1.9**
TOO *e*S **S** **04 44 49.2 -5.7**
MIDW Midway 58.78 67 PFAKE 04 37 00.0 +5.5
MIDW LR LR
comp=Z,4μm,20.0s,MS5.5
HOQ Hoqain 58.87 288 P **P** **04 36 54.7 -0.4**
SNR=27
BSY Bisya 59.05 287 P **P** **04 36 56.6 +0.2**
SNR=27
DZM Mont Dzumac 59.44 128 *e*P **P** **04 36 58.8 -0.2**
comp=Z,36nm,1.1s,mb5.3
DZM *e* pP 04 37 10.5 -1.8
DZM *e*PcP PcP 04 37 47.7 +1.3
DZM *e*PP PP 04 39 09.5 -1.3
BILL Bilibino 59.58 18⇑ *e*P **P** **04 36 59.6 +0.3**
comp=Z,103nm,1.0s,mb5.8
BILL *e* pP 04 37 11.6 -1.0
BILL *e*PcP PcP 04 37 45.1 -1.0
BILL *e*PP PP 04 39 12.4 +1.5
BILL *e*ScP ScP 04 41 51.0 +7.8
BILL *e*S **S** **04 45 02.3 -3.3**
BILL LR LR
comp=Z,1μm,21.0s,MS5.1
BILL Bilibino 59.58 18*c* *i*P **P** **04 36 59.1 -0.1**
BILL *i* pP 04 37 11.2 -1.4
BILL *e* 04 39 10.3
BILL *i* S **S** **04 45 05.8 +0.3**
BILL pmax pmax
comp=Z,212nm,1.9s,mb5.8
BILL MLR MLR
comp=Z,2μm,22.0s,MS5.1
BANOM Banah 59.59 291 P **P** **04 37 01.3 +1.2**
SNR=17
ARQ Araqi 59.61 288 P **P** **04 36 59.8 -0.5**
SNR=14
AKTK Aktyubinsk 59.76 319 P **P** **04 37 00.7 -0.1**
AKTK LR LR 05 04 42.7
AKTO Aktyubinsk 59.76 319 P **P** **04 37 00.7 -0.1**
comp=Z,22nm,0.7s,mb5.3,baz=96,slow=6.5,SNR=88
AKTO LR LR 05 04 42.7
comp=Z,17μm,18.8s,MS6.2,baz=107,slow=38
AKTO Aktyubinsk 59.76 319 P **P** **04 37 00.7 -0.1**
AKTO pmax pmax
comp=Z,22nm,0.7s,mb5.3
AKTO MLR MLR
comp=Z,17μm,18.8s,MS6.2
HATD Hatta, Dubai 59.83 290 P **P** **04 37 02.4 +0.7**
SNR=24
SVE Sverdlovsk 59.84 327⇑ *e*P **P** **04 37 01.8 +0.5**
SVE *e* 04 39 18.4
SVE *e*S **S** **04 45 11.9 +2.6**
SVE pmax pmax
comp=Z,303nm,1.2s,mb6.2
SVE MLR MLR
comp=Z,5μm,19.0s,MS5.7
ARU Arti 60.83 326⇑ *e*P **P** **04 37 07.6 -0.4**
ARU *e* pP 04 37 21.8 +0.4
ARU PcP PcP 04 37 50.7 -0.7
ARU *e*PP PP 04 39 24.6 +2.3
ARU *e*ScP ScP 04 41 48.3 -0.7
ARU *e*S **S** **04 45 20.0 -2.0**
ARU LR LR
comp=Z,8μm,20.0s,MS5.8
ARU Arti 60.83 326*c* *i*P **P** **04 37 07.6 -0.4**
ARU *e* 04 37 47.8
ARU *e* 04 39 22.2
ARU *e*S **S** **04 45 24.5 +2.5**
ARU *e* 04 46 48.9
ARU *e*SS SS 04 49 21.7 +0.4
ARU pmax pmax
comp=Z,331nm,2.5s,mb6.0
ARU MLR MLR
comp=Z,8μm,20.0s,MS5.8

ADK	**Adak**	**61.06**	**39**	*e*P		**P**	**04 37 10.9**	**+1.3**
ADK				*e*		pP	04 37 21.3	-1.7
ADK					PcP	PcP	04 37 53.2	+0.8
ADK				*e*PP		PP	04 39 22.9	-1.5
ADK				*e*S		**S**	**04 45 21.4**	**-3.7**
ADK					LR	LR		
	comp=Z,2µm,21.0s,MS5.3							
RBK	**Rabkut**	**62.54**	**282**		P	**P**	**04 37 19.7**	**-0.5**
	SNR=27							
SOKR	**Solikamsk**	**62.57**	**329**	*c* *i*P		**P**	**04 37 19.6**	**-0.1**
SOKR					S	**S**	**04 45 53.8**	**+10**
SOKR					pmax	pmax		
	comp=Z,110nm,0.9s,mb6.0							
SOKR					MLR	MLR		
	comp=Z,14µm,24.0s,MS6.0							
WHFO	**Wadi Hawf**	**62.88**	**282**		P	**P**	**04 37 22.0**	**-0.4**
	SNR=18							
ABTO	**Aybut**	**63.42**	**282**		P	**P**	**04 37 26.3**	**+0.3**
	SNR=18							
FUNA	**Funafuti**	**63.68**	**108**		PFAKE		04 37 40.0	+12
FUNA					LR	LR		
	comp=Z,8µm,19.0s,MS5.9							
TAU	**Tasmania Unive**	**64.04**	**158**		PFAKE		04 37 40.0	+10
TAU					LR	LR		
	comp=Z,2µm,20.0s,MS5.4							
NIKO	**Nikolski**	**65.96**	**39**	*e*P		**P**	**04 37 42.5**	**+0.5**
	comp=Z,651nm,1.0s,mb6.6							
NIKO				*e*PP		PP	04 40 07.6	+0.2
MAK	**Makhachkala**	**66.26**	**310**	*d* *i*P		**P**	**04 37 42.2**	**-1.9**
MAK				*i* *SP		pP	04 37 57.6	0.0
MAK				*i* *SP		sP	04 38 03.4	+0.4
MAK				*e*			04 38 12.3	
MAK				*e*			04 40 07.5	
MAK				*e*S		S	04 46 29.9	-0.1
MAK				*i* *SS		sS	04 46 54.1	+1.5
MAK				*e*			04 47 34.3	
MAK					pmax	pmax		
	comp=Z,542nm,2.2s,mb6.2							
MAK					MLR	MLR		
	comp=Z,6µm,22.0s,MS5.8							
QRN	**Al-Qurain**	**66.76**	**295**	*e*P		**P**	**04 37 47.4**	**-0.2**
	baz=295							
QRN					AMb	AMB	04 37 49.3	
	comp=Z,460nm,0.9s,mb6.5,baz=295							
KBD	**Kabd**	**66.91**	**295**	*e*P		**P**	**04 37 47.7**	**-0.8**
	baz=295							
KBD					AMb	AMB	04 37 50.3	
	comp=Z,268nm,0.9s,mb6.3,baz=295							
MSEY	**Mahe Island**	**66.93**	**258**		P	**P**	**04 37 49.8**	**+0.9**
	SNR=6.3							
MSEY	**Mahe Island**	**66.93**	**258**	⇑ *i*P		**P**	**04 37 48.3**	**-0.6**
	comp=Z,173nm,1.4s,mb5.9							
MSEY				*e*		pP	04 38 01.0	-1.4
MSEY				*e*PP		PP	04 40 20.1	+3.2
MSEY				*e*S		S	04 46 42.3	+3.2
MSEY					LR	LR		
	comp=Z,6µm,21.0s,MS5.8							
RDF	**Al-Radifah**	**67.06**	**295**	*e*P		**P**	**04 37 49.0**	**-0.5**
	baz=295							
RDF					AMb	AMB	04 37 50.8	
	comp=Z,774nm,0.9s,mb6.7,baz=295							
MIB	**Mutribah**	**67.15**	**296**	*e*P		**P**	**04 37 49.3**	**-0.7**
	baz=296							
MIB					AMb	AMB	04 37 51.1	
	comp=Z,526nm,0.9s,mb6.6,baz=296							
NAY	**Al-Naaiem**	**67.29**	**295**	*e*P		**P**	**04 37 50.1**	**-0.8**
	baz=295							
NAY					AMb	AMB	04 37 53.1	
	comp=Z,294nm,0.7s,mb6.4,baz=295							
UNV	**Unalaska Valle**	**67.42**	**38**	*e*P		**P**	**04 37 51.7**	**+0.4**
	comp=Z,137nm,0.9s,mb6.0							
UNV				*e*		pP	04 38 06.8	+2.0
AKUT	**Akutan**	**67.87**	**38**	*e*P		**P**	**04 37 52.2**	**-1.9**
	comp=Z,112nm,1.0s,mb5.8							
AKUT				*e*PP		PP	04 40 25.1	+1.0
AKUT				*e*S		S	04 46 42.9	-6.1
DGRG	**David-gareji**	**67.88**	**309**		P	**P**	**04 37 55.5**	**+1.0**
MUKL	**Al Mukalla**	**67.98**	**279**	⇓ *e*P		**P**	**04 37 55.4**	**-0.1**
MUKL					AMb	AMB	04 37 57.0	
	comp=Z,311nm,1.1s,mb6.2							
MTA	**Mtatsminda**	**68.31**	**309**		P	**P**	**04 37 57.2**	**+0.1**
TBLG	**Delisi**	**68.34**	**309**	*i* P		**P**	**04 37 58.4**	**+1.1**
TBLG	**Delisi**	**68.34**	**309**		P	**P**	**04 37 58.4**	**+1.1**
GOR	**Gori**	**68.80**	**309**		P	**P**	**04 38 00.3**	**+0.1**
ONI	**Oni**	**69.26**	**310**		P	**P**	**04 38 03.7**	**+0.7**
DYDN	**Diyadin**	**69.28**	**307**	⇑ *i*P		**P**	**04 38 04.4**	**+1.2**
HAKT	**HAKKARI**	**69.42**	**304**	⇑ *i*P		**P**	**04 38 08.2**	**+4.1**
TVAN	**Van**	**69.57**	**306**	⇑ *i*P		**P**	**04 38 06.2**	**+1.2**
KIV	**Kislovodsk**	**69.74**	**311**		P	**P**	**04 38 06.5**	**+0.6**
	SNR=39							
KIV	**Kislovodsk**	**69.74**	**311**	*e*P		**P**	**04 38 06.2**	**+0.3**
	comp=Z,294nm,1.0s,mb6.2							
KIV				*e*		pP	04 38 19.4	-0.1
KIV				*e*PP		PP	04 40 41.0	+0.5
KIV				*e*S		S	04 47 17.9	+6.4
KIV					LR	LR		
	comp=Z,5µm,19.0s,MS5.8							
KIV	**Kislovodsk**	**69.74**	**311**	*c* *i*P		**P**	**04 38 06.5**	**+0.6**
KIV				*e*			04 40 40.8	
KIV				*e*PPP			04 42 23.7	
KIV				*e*S		S	04 47 10.7	-0.8
KIV				*e*SS		SS	04 51 43.7	+3.4
KIV					pmax	pmax		
	comp=Z,314nm,1.1s,mb6.2							
KIV					pmax	pmax		
	comp=Z,374nm,5.8s							
KIV					MLR	MLR		
	comp=Z,6µm,20.0s,MS5.8							
TUTA	**Tutak**	**69.96**	**307**	⇑ *i*P		**P**	**04 38 08.3**	**+0.9**
VRHR	**Novokhopersk**	**70.17**	**319**	*e*P		**P**	**04 38 08.2**	**-0.2**
VRHR				*e*PP		pP	04 38 19.5	-2.5
VRHR				*e*S		S	04 47 18.5	+2.2
VRHR					pmax	pmax		
	comp=Z,260nm,1.1s,mb6.1							
VRHR					pmax	pmax		
	comp=N,10.0nm,0.4s							
VRHR					pmax	pmax		
	comp=E,70nm,0.7s							
VRHR					smax			
	comp=N,1µm,11.2s							
VRHR					smax			
	comp=Z,160nm,5.8s							
VRHR					smax			
	comp=E,410nm,8.2s							
VRHR					MLR	MLR		
	comp=N,4µm,16.0s,MS6.0							
VRHR					MLR	MLR		
	comp=Z,5µm,16.0s,MS5.9							
VRHR					MLR	MLR		
	comp=E,5µm,17.0s,MS6.0							
TATV	**Tatvan**	**70.47**	**306**	⇑ *i*P		**P**	**04 38 11.4**	**+0.9**
DAGI	**Agillar**	**70.51**	**308**	⇑ *i*P		**P**	**04 38 09.4**	**-1.3**
HOMI	**Horasan**	**70.60**	**307**	⇑ *i*P		**P**	**04 38 12.2**	**+0.8**
DDEM	**Demirkent**	**70.65**	**308**	⇑ *i*P		**P**	**04 38 12.0**	**+0.4**
DBOC	**Borcka**	**70.67**	**309**	⇑ *i*P		**P**	**04 38 09.1**	**-2.7**
DBAD	**Bademkaya**	**70.68**	**308**	⇑ *i*P		**P**	**04 38 11.8**	**0.0**
ERZM	**Erzurum**	**71.03**	**307**	⇑ *i*P		**P**	**04 38 15.8**	**+1.8**
KLMR	**Klimovskoe**	**71.26**	**329**	⇑ *i*P		**P**	**04 38 14.5**	**-0.4**
KLMR				*e*S		S	04 47 33.3	+4.6
KLMR					pmax	pmax		
	comp=Z,242nm,1.3s,mb6.0							
BNGL	**BINGOL**	**71.29**	**306**	⇑ *i*P		**P**	**04 38 16.6**	**+1.1**
BEST	**Besiri**	**71.31**	**305**	⇑ *i*P		**P**	**04 38 16.1**	**+0.5**
BDHA	**Al Bayda'**	**71.37**	**280**	⇑ *e*P		**P**	**04 38 16.5**	**+0.1**
BDHA					AMb	AMB	04 38 17.7	
	comp=Z,256nm,1.9s,mb5.8							
VORD	**Divnogorie**	**71.64**	**319**	*e*P		**P**	**04 38 17.1**	**-0.3**
VORD				*e*PP		pP	04 38 30.0	-1.0
VORD				*e*S		S	04 47 29.9	-3.5
VORD					pmax	pmax		
	comp=Z,70nm,0.7s,mb5.7							
VORD					pmax	pmax		
	comp=N,20nm,0.4s							
VORD					pmax	pmax		
	comp=E,120nm,1.1s							
VORD					smax			
	comp=N,830nm,4.9s							
VORD					smax			
	comp=Z,260nm,4.2s							
VORD					smax			
	comp=E,510nm,5.4s							
VORD					MLR	MLR		
	comp=Z,4µm,16.0s,MS5.8							
VORD					MLR	MLR		
	comp=N,870nm,15.0s,MS5.8							
VORD					MLR	MLR		
	comp=E,5µm,17.0s,MS5.8							
KOPT	**Kop Dagi**	**71.68**	**307**	⇑ *i*P		**P**	**04 38 18.5**	**+0.6**
LBOS		**71.70**	**280**	⇑ *e*P		**P**	**04 38 18.6**	**+0.2**
LBOS					AMb	AMB	04 38 19.6	
	comp=Z,827nm,1.8s,mb6.4							
VSR	**Storozhevoye**	**71.71**	**319**	*e*P		**P**	**04 38 17.3**	**-0.5**
VSR				*e**PP		pP	04 38 29.9	-1.5
VSR				*e*S		S	04 47 27.5	-6.7
VSR					pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5							
VSR					pmax	pmax		
	comp=N,3.0nm,0.9s							
VSR					pmax	pmax		
	comp=E,80nm,0.9s							
VSR					smax			
	comp=E,260nm,3.9s							
VSR					smax			
	comp=Z,80nm,4.0s							
VSR					smax			
	comp=N,220nm,5.2s							
VSR					MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3							
VSR					MLR	MLR		
	comp=N,320nm,19.0s,MS5.5							
VSR					MLR	MLR		
	comp=E,2µm,16.0s,MS5.5							
MARD	**Mardin**	**71.76**	**304**	⇑ *i*P		**P**	**04 38 18.8**	**+0.4**
SOC	**Sochi**	**71.91**	**311**	*i* P		**P**	**04 38 19.8**	**+0.7**
SOC	**Sochi**	**71.91**	**311**	*c* *i*P		**P**	**04 38 18.9**	**-0.2**
SOC				*e*		pP	04 38 35.2	+2.4
SOC				*e**SP		sP	04 38 37.7	-0.4
SOC				*e*S		S	04 47 40.0	+3.2
SOC				*e**SS		sS	04 47 59.1	-0.5
SOC				*e*			04 48 19.7	
SOC					pmax	pmax		
	comp=Z,84nm,0.6s,mb5.8							
SOC					pmax	pmax		
	comp=Z,387nm,3.8s							
SOC					MLR	MLR		
	comp=Z,4µm,16.0s,MS5.8							
UDYN	**Al 'Udayn**	**72.89**	**280**	⇑ *e*P		**P**	**04 38 25.4**	**-0.1**
TRBA	**At Turbah**	**72.91**	**279**	⇓ *e*P		**P**	**04 38 25.7**	**+0.1**
RER	**Riviere de l'E**	**73.02**	**241**	*e*P		**P**	**04 38 25.9**	**-0.2**
	comp=Z,104nm,0.3s,mb6.2							
RER				*e*		pP	04 38 37.9	-1.9
RER				*e*PP		PP	04 41 12.8	+3.5
RER				*e*S		S	04 47 53.7	+3.7
OBN	**Obninsk**	**73.02**	**323**	⇑ *e*P		**P**	**04 38 24.7**	**-0.8**
	comp=Z,553nm,1.4s,mb6.3							
OBN				*e*		pP	04 38 38.5	-0.7
OBN				*e*PP		PP	04 40 55.1	-13
OBN				*e*S		SKSac	04 48 21.5	-5.8
OBN					LR	LR		
	comp=Z,7µm,20.0s,MS6.0							
OBN	**Obninsk**	**73.02**	**323**	*c* *i*P		**P**	**04 38 24.6**	**-0.9**
OBN				*i*		pP	04 38 35.1	-4.1
OBN				*i*		pP	04 38 38.9	-0.3
OBN				*i*			04 38 49.1	
OBN				*i* S		S	04 47 50.0	+0.9
OBN				*i* SS		SS	04 52 37.1	+7.0
OBN					pmax	pmax		
	comp=Z,365nm,1.7s,mb6.0							
OBN					MLR	MLR		
	comp=Z,6µm,18.0s,MS5.9							
ELZG	**Elazig**	**73.03**	**306**	⇑ *i*P		**P**	**04 38 26.9**	**+1.0**
LVZ	**Lovozero**	**73.29**	**337**	*e*P		**P**	**04 38 23.7**	**-3.2**
LVZ				*e*PP		PP	04 41 13.2	+3.0
LVZ				*e*S		S	04 47 53.2	+1.6
LVZ					LR	LR		
	comp=Z,5µm,20.0s,MS5.8							
LVZ	**Lovozero**	**73.29**	**337**	*e*P		**P**	**04 38 23.7**	**-3.2**
LVZ				*e*			04 41 13.2	
LVZ				*e*S		S	04 47 53.2	+1.6
LVZ					MLR	MLR		
	comp=Z,5µm,20.0s,MS5.8							
SVW2	**Sparrevohn**	**73.33**	**30**	*e*P		**P**	**04 38 28.0**	**+0.8**
ANN	**Anapa**	**73.42**	**313**	*e*P		**P**	**04 38 25.4**	**-2.7**
ANN				*e**PP		pP	04 38 39.9	-1.9
ANN				*e*S		S	04 47 55.3	+1.4
ANN					pmax	pmax		
	comp=Z,143nm,1.0s,mb5.9							
ANN					MLR	MLR		
	comp=N,3µm,17.0s,MS5.8							
ANN					MLR	MLR		
	comp=E,3µm,17.0s,MS5.8							
ANN					MLR	MLR		
	comp=Z,4µm,17.0s,MS5.8							
APA	**Apatity**	**73.78**	**336**	⇑ *i*P		**P**	**04 38 30.6**	**+0.9**
APA				*i*		pP	04 38 42.8	-0.6
APA				*i*			04 41 10.5	
APA				*i* PPP			04 43 05.0	
APA				*i* S		S	04 47 54.0	-3.2
APA				*i*			04 48 48.0	
APA					pmax	pmax		
	comp=Z,136nm,0.8s,mb5.9							
APA					MLR	MLR		
	comp=Z,10µm,18.0s,MS6.2							
KAMRY	**Kamaran Island**	**73.86**	**282**	⇑ *e*P		**P**	**04 38 31.0**	**-0.2**
KAMRY					AMb	AMB	04 38 32.4	
	comp=Z,147nm,1.1s,mb5.8							
AKCD	**Akcadag**	**73.88**	**306**	⇑ *i*P		**P**	**04 38 29.7**	**-1.2**
AFI	**Afiamalu**	**73.90**	**110**		PFAKE		04 38 40.0	+8.6
AFI					LR	LR		
	comp=Z,4µm,22.0s,MS5.6							
GZT	**Gaziantep**	**74.30**	**305**	⇑ *i*P		**P**	**04 38 34.0**	**+0.6**
CHUM	**Lake Minchumin**	**74.63**	**27**	*e*P		**P**	**04 38 35.3**	**+0.5**
	comp=Z,45nm,0.6s,mb5.6							
CHUM				*e*		pP	04 38 47.7	-0.8
PPLA	**Purkeypile**	**74.78**	**28**	*e*P		**P**	**04 38 36.3**	**+0.6**
	comp=Z,178nm,1.2s,mb5.9							
PPLA				*e*		pP	04 38 53.8	+4.4
PPLA				*e*PP		PP	04 41 24.1	+1.0
OHAK	**Old Harbor**	**74.84**	**34**	*e*P		**P**	**04 38 35.4**	**-0.7**
OHAK				*e*		pP	04 38 48.3	-1.5
PINB	**Pinarbasi**	**75.00**	**306**	⇑ *i*P		**P**	**04 38 38.4**	**+0.9**
JOF	**Joensuu**	**75.04**	**332**	*e*p		**P**	**04 38 36.1**	**-1.0**
	comp=Z,19nm,0.3s,mb5.5							
JOF	**Joensuu**	**75.04**	**332**	*e*P		**P**	**04 38 36.1**	**-1.0**
JOF					pmax	pmax		
	comp=Z,19nm,0.3s,mb5.5							
KDAK	**Kodiak Island**	**75.15**	**34**	*e*P		**P**	**04 38 38.5**	**+0.6**
	comp=Z,487nm,1.6s,mb6.2							
KDAK				*e*		pP	04 38 50.3	-1.3
COLD	**Coldfoot**	**75.16**	**24**	*e*P		**P**	**04 38 38.4**	**+0.7**
	comp=Z,483nm,2.1s,mb6.1							
COLD				*e*		pP	04 38 50.9	-0.6
COLD				*e*PP		PP	04 41 22.8	-3.4
BPAW	**Bear Paw Mtn.**	**75.19**	**27**	*e*P		**P**	**04 38 38.4**	**+0.3**
	comp=Z,381nm,1.3s,mb6.2							
BPAW				*e*PcP		PcP	04 38 51.0	-0.3
BPAW				*e*PP		PP	04 41 26.7	+0.2
KTH	**Kantishna Hill**	**75.28**	**28**	*e*P		**P**	**04 38 39.2**	**+0.7**
	comp=Z,94nm,1.0s,mb5.7							
KTH				*e*		pP	04 38 57.2	+5.0
KTH					PP	PP	04 41 26.0	-1.3
COBT	**Iskenderun**	**75.46**	**304**	⇑ *i*P		**P**	**04 38 40.3**	**+0.2**
TRF	**Thorofare Moun**	**75.58**	**28**	*e*P		**P**	**04 38 40.8**	**+0.6**
	comp=Z,127nm,1.1s,mb5.8							
TRF				*e*		pP	04 38 53.9	0.0
TRF				*e*PP		PP	04 41 29.7	-0.1
ASF	**Jabal al Asfar**	**75.69**	**300**		LR	LR	05 18 49.7	
	comp=Z,3µm,19.0s,MS5.6,baz=121,slow=41							
RPZ	**Rata Peaks**	**75.81**	**144**		P	**P**	**04 38 41.6**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0,baz=268,slow=7.3,SNR=5.5							
KEV	**Kevo**	**75.89**	**339**	*e*p		**P**	**04 38 41.3**	**-0.6**
	comp=Z,5.7nm,0.4s,mb4.8							
KEV	**Kevo**	**75.89**	**339**	*e*P		**P**	**04 38 41.3**	**-0.6**
KEV					pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9							
PUL	**Pulkovo**	**75.90**	**329**	*e*P		**P**	**04 38 42.9**	**+0.7**
CTKT	**Corum**	**75.92**	**309**	⇑ *i*P		**P**	**04 38 41.4**	**-1.3**
SLKM	**Skilak Lake**	**76.00**	**31**	*e*P		**P**	**04 38 42.5**	**-0.2**
SLKM				*e*PcP		PcP	04 38 54.0	-0.8
SLKM				*e*			04 39 01.1	
HWQ	**Hawqa**	**76.10**	**302**	*e*P		**P**	**04 38 43.5**	**-0.3**
MCK	**McKinley**	**76.14**	**27**	*e*P		**P**	**04 38 43.4**	**0.0**
	comp=Z,301nm,1.2s,mb6.1							
MCK					pmax	pmax		
	comp=Z,301nm,1.2s,mb6.1							
RC01	**Rabbit Creek A**	**76.16**	**30**	*e*P		**P**	**04 38 43.5**	**-0.1**
	comp=Z,112nm,1.1s,mb5.7							
RC01				*e*PcP		PcP	04 38 54.9	-0.6
RC01				*e*		pP	04 39 01.5	+4.2
AVNT	**Avonos**	**76.18**	**307**	⇑ *i*P		**P**	**04 38 43.9**	**-0.3**
URZ	**Urewera**	**76.25**	**137**	P		**P**	**04 38 44.6**	**+0.1**
	comp=Z,6.2nm,0.7s,mb4.7,baz=314,slow=1.5,SNR=5.4							
RCY	**Rachaya**	**76.34**	**301**	*e*P		**P**	**04 38 46.1**	**+0.9**
PMR	**Palmer**	**76.37**	**29**	*e*P		**P**	**04 38 44.4**	**-0.4**
PMR				*e*PcP		PcP	04 38 56.3	-0.1
PMR				*e*S			04 48 04.4	
PMR					LR	LR		
	comp=Z,2µm,21.0s,MS5.4							
PMR	**Palmer**	**76.37**	**29**	*e*P		**P**	**04 38 44.4**	**-0.4**
PMR				*e*		pP	04 38 56.3	-2.2
PMR					MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4							
BHL	**Bhannes**	**76.40**	**302**	*e*P		**P**	**04 38 45.9**	**+0.3**
CDAG	**Cicekdag**	**76.41**	**308**	⇑ *i*P		**P**	**04 38 46.2**	**+0.7**
COLA	**College**	**76.43**	**26**	*e*P		**P**	**04 38 45.1**	**0.0**
	comp=Z,131nm,1.3s,mb5.7							
COLA				*e*PcP		PcP	04 38 56.2	-0.5
COLA				*e*			04 39 05.2	
COLA				*e*PP		PP	04 41 40.7	+3.8
COLA				*e*S			04 47 55.2	
COLA					LR	LR		
	comp=Z,1µm,22.0s,MS5.2							
ARCES	**ARCESS Array B**	**76.44**	**339**		P	**P**	**04 38 44.8**	**-0.3**
	comp=Z,41nm,0.6s,mb5.5,baz=75,slow=5.3,SNR=73							
ARCES					LR	LR	05 16 13.4	
	comp=Z,5µm,18.6s,MS5.8,baz=91,slow=38							
ARCES	**ARCESS Array B**	**76.44**	**339**		P	**P**	**04 38 44.8**	**-0.3**
ARCES					pmax	pmax		
	comp=Z,41nm,0.6s							
ARCES					MLR	MLR		
	comp=Z,5µm,18.7s							
ARE0	**ARCESS Array S**	**76.44**	**339**	*e*P		**P**	**04 38 45.2**	**+0.1**
ARE0					PcP	PcP	04 38 56.5	-0.1
ARE0				*e*			04 39 03.5	
ARE0				*e*PP		PP	04 41 35.9	-1.0
ARE0				*e*S		S	04 48 34.0	+7.3
SEW	**Seward**	**76.44**	**31**	*e*P		**P**	**04 38 44.9**	**-0.4**
	comp=Z,352nm,1.4s,mb6.1							
SEW				*e*PcP		PcP	04 38 56.4	-0.4
SEW				*e*			04 39 04.0	
SNZO	**South Karori**	**76.47**	**141**		PFAKE		04 38 50.0	+4.4
SNZO					LR	LR		
	comp=Z,2µm,20.0s,MS5.4							
GULE	**Gulek**	**76.50**	**305**	⇑ *i*P		Px	04 38 24.6	
ILGA	**Ilgaz**	**76.66**	**309**	⇑ *i*P		**P**	**04 38 46.0**	**-0.9**
MMAI	**Mount Meron Ar**	**76.77**	**301**		P	**P**	**04 38 48.2**	**+0.5**
	comp=Z,27nm,0.7s,mb5.3,baz=74,slow=8.8,SNR=46							
BALT	**Daday**	**76.82**	**310**	⇑ *i*P		**P**	**04 38 48.1**	**+0.4**
BR131	**Keskin Array S**	**76.95**	**308**		PFAKE		04 39 00.0	+11
BR131					LR	LR		
	comp=Z,2µm,21.0s,MS5.4							
BRTR	**Keskin Array B**	**76.95**	**308**		P	**P**	**04 38 48.0**	**-0.6**
	comp=Z,17nm,0.8s,mb5.0,baz=132,slow=4.8,SNR=58							
BRTR					LR	LR	05 19 43.4	
	comp=Z,2µm,18.5s,MS5.5,baz=244,slow=41							
SPITS	**Spitsbergen Ar**	**76.96**	**348**		P	**P**	**04 38 47.9**	**0.0**
	comp=Z,121nm,0.6s,mb6.0,baz=341,slow=10,SNR=72							
SPITS					LR	LR	05 16 24.7	
	comp=Z,4µm,21.5s,MS5.6,baz=290,slow=38							
SPITS	**Spitsbergen Ar**	**76.96**	**348**		P	**P**	**04 38 47.9**	**0.0**
SPITS					pmax	pmax		
	comp=Z,121nm,0.6s							
SPITS					MLR	MLR		
	comp=Z,4µm,21.5s							
SPB4	**Spitsbergen Ar**	**76.97**	**348**	*e*P		**P**	**04 38 48.6**	**+0.7**
SPB4				*e*		pP	04 39 01.4	-0.3
SPB4					PP	PP	04 41 51.9	+11
SPB4				*e*S		S	04 48 38.6	+6.4
KIP	**Kipapa**	**77.10**	**71**	*e*P		**P**	**04 38 50.3**	**+0.6**
KIP				*e*		pP	04 39 01.6	-1.9
KIP				*e*PP		PP	04 41 42.0	-1.7
KIP				*e*S		S	04 48 35.5	-0.1
KIP					LR	LR		
	comp=Z,4µm,19.0s,MS5.8							
BJO	**Bjornoya**	**77.31**	**344**	*e*P		**P**	**04 38 51.2**	**+1.3**
BJO				*e*S		S	04 48 37.4	+1.4
BJO					AMS	AMS	05 19 29.4	
	comp=Z,3µm,14.4s,MS5.8							
KAF	**Kangasniemi**	**77.45**	**331**	*e*p		**P**	**04 38 49.6**	**-1.3**
	comp=Z,11nm,0.4s,mb5.1,baz=76,slow=5.2							
KAF	**Kangasniemi**	**77.45**	**331**	*e*P		**P**	**04 38 49.6**	**-1.3**
KAF					pmax	pmax		
	comp=Z,11nm,0.4s,mb5.1							
HSP	**Hornsund**	**77.47**	**347**	*e*P		**P**	**04 38 51.1**	**+0.3**
ANTO	**Ankara**	**77.56**	**308**	⇑ P		**P**	**04 38 51.8**	**-0.1**
	SNR=8.4							
ANTO	**Ankara**	**77.56**	**308**	*e*P		**P**	**04 38 52.3**	**+0.3**
	comp=Z,144nm,1.4s,mb5.7							
ANTO				*e*		pP	04 39 02.0	-3.7
ANTO				*e*PP		PP	04 41 45.8	-1.3
ANTO				*e*S		SKSac	04 48 54.9	-6.8
ANTO					LR	LR		
	comp=Z,3µm,22.0s,MS5.5							
ANTO	**Ankara**	**77.56**	**308**	*e*P		**P**	**04 38 52.3**	**+0.4**
ANTO				*e*		pP	04 39 02.0	-3.7
ANTO				*e*			04 41 45.8	
ANTO				*e*S		SKSac	04 48 54.9	-6.8
ANTO					pmax	pmax		
	comp=Z,144nm,1.4s,mb5.7							
ANTO					MLR	MLR		
	comp=Z,3µm,22.0s,MS5.5							
ANTO	**Ankara**	**77.56**	**308**	⇑ *i*P		**P**	**04 38 51.4**	**-0.5**
KBS	**Kingsbay**	**77.56**	**349**	*e*P		**P**	**04 38 51.5**	**+0.2**
	comp=Z,64nm,0.8s,mb5.6							
KBS				*e*		pP	04 39 04.1	-0.9
KBS				*e*PP		PP	04 41 43.9	-2.2
KBS				*e*S		S	04 48 41.7	+3.0
KBS					LR	LR		
	comp=Z,3µm,21.0s,MS5.6							
KBS	**Kingsbay**	**77.56**	**349**	*e*P		**P**	**04 38 51.9**	**+0.6**
KBS				*e*			04 45 48.8	
KBS

comp=Z,6µm,21.0s,MS5.9
KIEV Kiev 78.02 319 *e*P **P** **04 38 53.4 -0.9**
KIEV *e* pP 04 39 04.2 -3.8
KIEV *e* pP 04 39 06.7 -1.3
KIEV *e* 04 41 48.2
KIEV *e*S S 04 48 50.2 +5.7
KIEV pmax pmax
comp=Z,109nm,1.1s,mb5.7
KIEV MLR MLR
comp=Z,6µm,21.0s,MS5.9
CSS Prodhromos 78.09 303 P **P** **04 38 55.3 +0.3**
MNK Minsk 78.11 323 *e*P **P** **04 38 53.0 -1.7**
MNK *e* pP 04 39 08.0 -0.5
MNK *e*S S 04 48 40.0 -5.4
MNK pmax pmax
comp=E,410nm,1.4s
MNK pmax pmax
comp=Z,540nm,1.6s,mb6.2
MNK MLR MLR
comp=Z,17µm,20.0s,MS6.4
MNK MLR MLR
comp=N,8µm,20.0s,MS6.4
MNK MLR MLR
comp=E,15µm,20.0s,MS6.4
KDHN Kadinhani 78.34 307⇑ *i*P **P** **04 38 55.4 -0.9**
SZAC Souni-Zanaja 78.49 303 P **P** **04 38 57.6 +0.4**
ALFC Alevga 78.64 303 P **P** **04 38 58.4 +0.4**
comp=E,2.5nm,0.9s
PAF Port-aux-Franc 78.65 211 *e*P **P** **04 38 57.3 -0.3**
comp=E,1µm,1.8s,mb6.5
PAF *e*PcP PcP 04 39 03.8 -2.5
PAF *e*PP PP 04 41 53.0 -3.3
PAF *e*S SKSac 04 49 15.4 +6.7
PAF Port-aux-Franc 78.65 211 *e*P **P** **04 38 57.3 -0.3**
PAF *e* 04 39 03.8
PAF *e* 04 41 53.0
PAF *e*S SKSac 04 49 15.4 +6.7
PAF pmax pmax
comp=Z,1µm,1.8s,mb6.5
TRO Tromso 78.67 339 *e*P **P** **04 38 57.6 +0.1**
TRO *e* 04 42 13.5
TRO *e*S S 04 48 51.7 +0.9
TRO *e*SS SS 04 54 00.9 +6.0
TRO AMS AMS 05 17 27.4
comp=Z,4µm,14.0s,MS5.9
HENT Hendek 78.80 309⇑ *i*P **P** **04 38 58.1 -0.7**
KIS Kishinev 79.00 316 *e*P **P** **04 38 58.0 -1.8**
KIS *i* 04 39 20.0
KIS *e*S S 04 48 57.0 +1.8
KIS *e* 04 49 12.0
KIS *e*PS 04 49 50.0
KIS MLR MLR
comp=Z,6µm,17.0s,MS6.0
KIS MLR MLR
comp=N,3µm,20.0s
KIS MLR MLR
comp=Z,7µm,20.0s
KIS Kishinev 79.00 316 *i* PcP pP 04 39 20.0 +6.4
KIS Kishinev 79.00 316 *e*PP PP 04 42 10.0 +11
BOLV Bolvadin 79.19 307⇑ *i*P **P** **04 39 00.4 -0.6**
EGAK Eagle 79.25 26 *e*P **P** **04 39 00.9 +0.2**
comp=Z,35nm,0.8s,mb5.3
EGAK *e*PcP PcP 04 39 07.7 -1.2
EGAK *e* pP 04 39 13.8 -0.7
EGAK *e*PP PP 04 42 00.4 -0.1
EGAK *e*S S 04 48 57.3 +0.2
EGAK LR LR
comp=Z,2µm,21.0s,MS5.4
BORA Eskisehir 79.32 308⇑ *i*P **P** **04 39 00.7 -0.9**
TLCR 79.39 314⇑ P **P** **04 39 01.9 0.0**
TLCR 79.39 314⇑ *i*P **P** **04 39 01.9 0.0**
ABPO Ambohimpanom 79.54 247 *e*P **P** **04 39 03.2 +0.1**
comp=Z,228nm,1.7s,mb5.8
ABPO PcP PcP 04 39 11.7 +0.8
ABPO *e* 04 39 21.8
ABPO *e*PP PP 04 42 16.3 +12
ABPO *e*S SKSac 04 49 29.4 +13
ABPO LR LR
comp=Z,3µm,22.0s,MS5.5
ISP Isparta 79.72 306 *e*P **P** **04 39 02.7 -1.1**
comp=Z,234nm,1.4s,mb5.9
ISP *e* pP 04 39 15.5 -2.1
ISP PP PP 04 42 03.1 -2.1
ISP *e*S SKSac 04 49 29.7 +13
ISP LR LR
comp=Z,3µm,20.0s,MS5.7
ISP Isparta 79.72 306*c i*P **P** **04 39 02.7 -1.1**
ISP pmax pmax
comp=Z,165nm,1.2s,mb5.8
ISP Isparta 79.72 306⇑ *i*P **P** **04 39 03.2 -0.6**
POHA Pohakuloa 79.74 72 *e*P **P** **04 39 05.5 +1.1**
comp=Z,244nm,1.2s,mb6.0
POHA PcP PcP 04 39 11.7 -0.3
POHA *e* pP 04 39 18.5 +0.3
POHA PP PP 04 42 12.4 +6.6
POHA *e*S S 04 49 05.6 +1.6
POHA LR LR
comp=Z,3µm,20.0s,MS5.7
KHU Kahuku 79.78 73 *e*P **P** **04 39 05.9 +1.4**
KHU *e*PcP PcP 04 39 11.3 -0.8
KHU *e* pP 04 39 17.1 -1.3
TIRR Tirgusor 79.82 313 *e*P **P** **04 39 03.5 -0.8**
comp=Z,170nm,1.4s,mb5.8
TIRR PcP PcP 04 39 11.3 -0.6
TIRR *e* pP 04 39 16.1 -2.0
TIRR PP PP 04 42 08.0 +2.2
TIRR Tirgusor 79.82 313 *e*P **P** **04 39 03.5 -0.8**
TIRR 04 39 11.3
TIRR *e* pP 04 39 16.1 -2.0
TIRR 04 42 08.0
TIRR pmax pmax
comp=Z,170nm,1.4s,mb5.8
TIRR Tirgusor 79.82 313⇓ *i*P **P** **04 39 04.2 -0.1**
HARR Harsova 80.11 314 P **P** **04 39 06.1 +0.2**
HARR Harsova 80.11 314⇑ *i*P **P** **04 39 06.6 +0.8**
STCH Steam Cracks 80.20 73 *e*P **P** **04 39 08.0 +1.2**
STCH *e* pP 04 39 19.8 -0.9
STCH *e*PP PP 04 42 05.2 -4.4
GDZ Gediz 80.23 308⇑ *i*P **P** **04 39 05.1 -1.5**
ODB Odobesti 80.46 315 P **P** **04 39 09.1 +1.4**
ODB Odobesti 80.46 315⇓ *i*P **P** **04 39 08.4 +0.7**
GOLH Golhisar 80.58 306⇑ *i*P **P** **04 39 04.2 -4.3**
VRI Vrincioaia 80.67 315 P **P** **04 39 09.2 +0.4**
VRI Vrincioaia 80.67 315⇓ *i*P **P** **04 39 10.0 +1.2**
PLOR Plostina 80.72 315⇓ *i*P **P** **04 39 10.1 +1.0**
AKAS Kas 80.78 305⇑ *i*P **P** **04 39 06.4 -3.2**
DEMI Demirci 80.82 308⇑ *i*P **P** **04 39 08.6 -1.1**
SUW Suwalki 80.88 324 *e*P **P** **04 39 09.4 -0.3**
SUW *e*pP pP 04 39 22.6 -1.0
SUW LMZ 05 16 48.3
comp=Z,7µm,20.1s
SUW Suwalki 80.88 324⇑ *e*P **P** **04 39 09.5 -0.3**
SUW *e*pP pP 04 39 22.6 -1.0
INK Inuvik 81.05 21 *e*P **P** **04 39 10.1 -0.3**
comp=Z,2µm,1.0s,mb7.0
INK *e* pP 04 39 28.3 +4.1
BURAR Bucovina Array 81.25 317⇓ *i*P **P** **04 39 12.2 +0.4**
BURAR Bucovina Array 81.25 317⇓ *i*P **P** **04 39 12.3 +0.4**
BUR08 Bucovina Ar. S 81.25 317 *e*P **P** **04 39 11.9 0.0**
BUR08 *e* pP 04 39 25.0 -0.7
BUR08 *e*PP PP 04 42 20.1 +2.5
BUR08 S S 04 49 19.4 +0.6
MLR Muntele Rosu 81.29 315 P **P** **04 39 12.1 0.0**
comp=Z,47nm,0.8s,mb5.4,baz=78,slow=1.6,SNR=26
MLR Muntele Rosu 81.29 315 P **P** **04 39 12.8 +0.7**
MLR Muntele Rosu 81.29 315 P **P** **04 39 12.1 0.0**
MLR pmax pmax
comp=Z,47nm,0.8s
MLR Muntele Rosu 81.29 315⇑ *i*P **P** **04 39 11.1 -1.0**
MOR8 Moi Rana 81.37 337 *e*P **P** **04 39 10.4 -1.7**
MOR8 AMb AMB 04 39 12.0
comp=Z,166nm,3.5s
ALE Alert 81.42 0 P **P** **04 39 13.6 +1.4**
comp=Z,254nm,0.8s,mb6.2,SNR=8.2
LVV L'vov 81.45 319 *i*P **P** **04 39 12.3 -0.6**
LVV *e* pP 04 39 28.3 +1.6
LVV *e*S S 04 49 14.3 -6.5
LVV pmax pmax
comp=Z,300nm,1.8s,mb5.9
STOK Stokkvaagen 81.85 337 *e*P **P** **04 39 13.8 -0.8**
STOK AMb AMB 04 39 14.6
comp=Z,186nm,1.9s,mb5.7
VOIR 81.91 315 P **P** **04 39 15.5 +0.1**
VOIR 81.91 315⇑ *i*P **P** **04 39 15.3 -0.1**
ARG Arkhangelos 81.95 305 *e*P **P** **04 39 16.5 +0.7**
KWP Kalwaria 82.33 319 *e*P **P** **04 39 17.7 +0.1**
KWP *e*pP pP 04 39 31.6 +0.2
KWP LMZ 05 20 22.0
comp=Z,5µm,20.9s
KWP Kalwaria 82.33 319 *e*P **P** **04 39 17.4 -0.1**
KWP *e* pP 04 39 30.9 -0.5
KWP *e* 04 42 25.4
KWP *e*S S 04 49 35.4 +5.6
KWP MLR MLR
comp=Z,5µm,20.0s,MS5.9
KWP Kalwaria 82.33 319⇑ *i*P **P** **04 39 17.8 +0.3**
BMR Baia Mare 82.36 317 P **P** **04 39 19.0 +1.3**
BMR Baia Mare 82.36 317⇑ *i*P **P** **04 39 18.8 +1.1**
XMAS Kiritimati 82.44 90 PFAKE 04 39 30.0 +11
XMAS LR LR
comp=Z,7µm,19.0s,MS6.0
CASY Casey 82.56 184 *e*P **P** **04 39 17.8 -0.3**
KOLS Kolonicke sedl 82.80 319 *e*P **P** **04 39 19.9 -0.1**
KOLS pmax pmax
comp=Z,30nm,1.1s,mb5.2
TRPA Tarpa 82.86 318⇓ *i*P **P** **04 39 20.3 0.0**
KARP Karpathos 82.87 305 *e*P **P** **04 39 20.0 -0.6**
UZH Uzhgorod 82.87 318⇓ *i*P **P** **04 39 20.0 -0.3**
UZH *e* pP 04 39 34.7 +0.5
UZH *i* 04 39 43.0
UZH *e* 04 42 28.0
UZH *e* 04 44 20.0
UZH *i*S S 04 49 29.0 -6.4
UZH *e* 04 55 00.0
NSS Namsos 82.94 336 *e*P **P** **04 39 18.3 -2.1**
NSS *e* 04 41 19.7
NSS *e*S S 04 49 34.5 -1.0
NSS *e*SS SS 04 55 01.0 +2.3
NSS AMS AMS 05 19 34.6
comp=Z,6µm,15.2s,MS6.1
CRAR CRAIOVA 83.06 314 P **P** **04 39 22.4 +1.0**
DRGR 83.12 317 P **P** **04 39 21.9 +0.2**
DRGR 83.12 317⇑ *i*P **P** **04 39 22.0 +0.3**
STHS Stebnicka Huta 83.31 319 *e*P **P** **04 39 22.5 -0.1**
STHS pmax pmax
comp=Z,20nm,1.0s,mb5.1
CRVS Cervenica-Dubn 83.32 319 *e*P **P** **04 39 23.3 +0.6**
CRVS pmax pmax
comp=Z,397nm,2.1s,mb6.1
GZR Gura Zlata 83.47 315 P **P** **04 39 23.8 +0.3**
GZR Gura Zlata 83.47 315⇓ *i*P **P** **04 39 24.4 +0.9**
SKAG Skagway 83.50 30 *e*P **P** **04 39 22.7 -0.6**
SKAG *e*PcP PcP 04 39 28.5 +0.9
SKAG *e*PP PP 04 42 35.1 -0.5
SKAG *e*S S 04 49 46.2 +4.9
APE Apeiranthos 83.75 307⇑ P **P** **04 39 23.5 -1.6**
APE Apeiranthos 83.75 307⇑ *i*P **P** **04 39 23.5 -1.6**
HFS Hagfors 83.87 331 P **P** **04 39 24.2 -1.0**
comp=Z,21nm,0.6s,mb5.5,baz=111,slow=3.3,SNR=82
NIE Niedzica 83.89 320 *e*P **P** **04 39 25.9 +0.3**
VTS Vitosha 83.95 312 P **P** **04 39 26.8 +0.7**
VTS Vitosha 83.95 312⇑ *i*P **P** **04 39 25.6 -0.4**
OJC Ojcow 83.96 320 *i*P **P** **04 39 25.4 -0.5**
OJC *e*pP pP 04 39 40.5 +0.7
OJC *e*sP sP 04 39 50.3 +5.2
OJC *e*PP PP 04 42 38.4 -1.3
OJC *e*S S 04 49 42.0 -4.3
OJC *e*SS SS 04 55 09.5 -5.0
OJC L 05 18 13.5
comp=Z,3.1nm,22.2s
DAG Danmarks Havn 84.00 351⇓ *i*P **P** **04 39 24.1 -1.5**
DAG pmax pmax
comp=Z,90nm,0.8s,mb6.0
DAG Danmarks Havn 84.00 351⇓ *i*P **P** **04 39 24.1 -1.5**
comp=Z,90nm,0.8s,mb6.0
DRV Dumont d'Urvil 84.00 172 P **P** **04 39 24.0 -1.6**
DRV Dumont d'Urvil 84.00 172 PP PP 04 42 41.0 +0.9
DRV S S 04 49 42.0 -3.8
DRV SS SS 04 55 16.0 +0.7
DRV L 05 01 00.0
DRV R 05 07 00.0
THR3 Thira Island, 84.02 306 P **P** **04 39 25.1 -1.4**
THR6 Thira Island, 84.04 306 P **P** **04 39 25.3 -1.3**
NPS Neapolis 84.17 305 *e*P **P** **04 39 26.0 -1.3**
BZS Buzias 84.18 316 P **P** **04 39 27.3 +0.2**
BZS Buzias 84.18 316⇓ *i*P **P** **04 39 26.7 -0.4**
GKP Gorka Klasztor 84.48 324 *e*P **P** **04 39 28.3 -0.2**
GKP LMZ 05 19 14.8
comp=Z,9µm,20.5s
PSZ Piszkesteto 84.61 318⇑ *e*P **P** **04 39 29.1 -0.2**
PSZ Piszkesteto 84.61 318⇑ *i*P **P** **04 39 29.0 -0.3**
NB2 NORSAR Subarra 84.65 332 P **P** **04 39 28.2 -1.0**
comp=Z,432nm,1.7s,mb6.3,baz=66,slow=4.8
NOA NORSAR Array B 84.65 332 P **P** **04 39 28.2 -0.9**
comp=Z,53nm,0.6s,mb5.9,baz=66,slow=4.7,SNR=70
NOA PKKPbc PKKPbc 04 57 39.5 -1.2
comp=Z,1.6nm,0.8s,baz=249,slow=2.3,SNR=3.6
NOA LR LR 05 19 47.7
comp=Z,6µm,20.1s,MS6.0,baz=70,slow=37
NOA NORSAR Array B 84.65 332 P **P** **04 39 28.2 -1.0**
NOA pmax pmax
comp=Z,53nm,0.6s
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA MLR MLR
comp=Z,6µm,20.1s
IDI Anoyia 84.73 305 P **P** **04 39 29.8 -0.4**
comp=Z,13nm,0.4s,mb5.4,baz=87,slow=3.0,SNR=37
VAY Valandovo 84.77 311 P **P** **04 39 28.6 -1.6**
VAY Valandovo 84.77 311 *e*P **P** **04 39 28.8 -1.5**
NAO01 NORSAR Array S 84.88 332 *e*P **P** **04 39 29.3 -1.0**
comp=Z,42nm,0.6s,mb5.8
NAO01 *e* pP 04 39 42.0 -2.2
NAO01 *e*PP PP 04 42 49.8 +3.1
NAO01 *e*S S 04 50 00.4 +5.4
NAO01 LR LR
comp=Z,9µm,20.0s,MS6.1
STIP Stip 84.94 312 *e*P **P** **04 39 30.0 -1.0**
PKSN Nyarlorinc 84.95 317⇓ *e*P **P** **04 39 31.6 +0.6**
RAC Raciborz 84.98 321 *e*P **P** **04 39 30.6 -0.5**
RAC LR LR
comp=Z,4µm,19.0s,MS5.8
PENC Penc 85.05 318⇓ *e*P **P** **04 39 32.3 +0.9**
OKC Ostrava-Krasne 85.09 320 *e*P **P** **04 39 31.5 -0.1**
OKC *e*SKS 04 49 57.8
OKC Ostrava-Krasne 85.09 320 *e*P **P** **04 39 31.5 -0.1**
OKC *e*S S 04 49 57.8 +0.2
OKC AMS AMS 05 20 00.0
comp=Z,3µm,17.7s
VYHS Vyhne 85.10 319 *i*P **P** **04 39 31.6 -0.1**
VYHS pmax pmax
comp=Z,157nm,1.8s,mb5.8
VYHS Vyhne 85.10 319 *i*P **P** **04 39 31.6 -0.1**
VYHS *e*S S 04 49 52.6 -5.2
BSD Bornholm Skovb 85.12 326⇑ *i*P **P** **04 39 31.0 -0.6**
comp=Z,78nm,0.9s,mb5.8
BSD *i* 04 39 53.0
BSD *i*S S 04 50 11.5 +14
BSD Bornholm Skovb 85.12 326⇑ *i*P **P** **04 39 31.0 -0.6**
BSD *i* 04 39 53.0
BSD pmax pmax
comp=Z,78nm,0.9s,mb5.8
BSD Bornholm Skovb 85.12 326⇑ *i*P **P** **04 39 31.0 -0.6**
comp=Z,78nm,0.9s,mb5.8
BSD *i* 04 39 53.0
BSD *i*S S 04 50 11.5 +14
BSD
comp=Z,8µm,20.0s
DOMB Dombas 85.16 334 *e*P **P** **04 39 30.8 -0.9**
DOMB AMb AMB 04 39 32.2
comp=Z,164nm,1.2s,mb6.0
DOMB *e*pP pP 04 39 44.3 -1.3
VAM Vamos 85.24 305 *e*P **P** **04 39 32.5 -0.2**
BUD Budapest 85.31 318⇑ *e*P **P** **04 39 32.7 -0.1**
OSL Oslo 85.32 331 *e*P **P** **04 39 32.0 -0.5**
OSL AMb AMB 04 39 32.9
comp=Z,8µm,1.4s
KOLL Kolacno 85.35 319 *e*P **P** **04 39 33.6 +0.7**
SKO Skopje 85.39 312 *e*P **P** **04 39 33.5 +0.2**
MOL Molde 85.56 335 *e*P **P** **04 39 33.7 0.0**
MOL *e*SKS 04 49 55.8
KRUS Krusevo 85.71 312 *e*P **P** **04 39 34.0 -1.0**
BIA Bitola 85.76 311 *e*P **P** **04 39 33.1 -2.0**
FNA Florina 85.80 311 P **P** **04 39 33.5 -1.8**
VLI Veliai 85.84 307 *e*P **P** **04 39 33.0 -2.7**
KSP Ksiaz 85.87 322 *e*P **P** **04 39 35.8 +0.3**
KSP *e*SKS 04 50 02.1
KSP LMZ 05 20 17.9
comp=Z,10µm,20.3s
KSP Ksiaz 85.87 322⇑ *e*P **P** **04 39 35.1 -0.4**
KSP *e**PP pP 04 39 45.8 -3.6
KSP *e* 04 43 00.5
KSP *e*S S 04 50 00.5 -4.7
KSP MLR MLR
comp=Z,12µm,20.3s,MS6.3
KYTH Kithira 85.89 306 *e*P **P** **04 39 36.0 +0.1**
KONO Kongsberg 85.96 331 *e*P **P** **04 39 34.6 -1.1**
comp=Z,57nm,0.9s,mb5.8
KONO *e* pP 04 39 48.5 -1.2
KONO *e*PP PP 04 42 57.3 +1.7
KONO *e*S S 04 49 58.1 -7.6
KONO LR LR
comp=Z,3µm,19.0s,MS5.8
KONO Kongsberg 85.96 331 *e*P **P** **04 39 37.4 +1.7**
KONO *e*SKS 04 49 56.7
KONO AMS AMS 05 20 24.8
comp=Z,3µm,17.6s,MS5.8
KONO Kongsberg 85.96 331 *e*P **P** **04 39 34.6 -1.1**
KONO *e* pP 04 39 48.5 -1.2
KONO *e* 04 42 57.3
KONO *e*S S 04 49 58.1 -7.7
KONO pmax pmax
comp=Z,57nm,0.9s,mb5.8
KONO MLR MLR
comp=Z,3µm,19.0s,MS5.8
PKSM Moragy 85.97 317⇑ *e*P **P** **04 39 35.8 -0.3**
PKSM Moragy 85.97 317⇑ *i*P **P** **04 39 35.4 -0.7**
SMOL Smolenice 85.98 319 *e*P **P** **04 39 37.2 +1.1**
DPC Dobruska-Polom 86.02 321 *e*P **P** **04 39 36.4 +0.2**
DPC *e*x x 04 39 45.7
DPC *e*S S 04 50 03.2 -3.5
DPC AMS AMS 05 20 20.0
comp=Z,4µm,19.7s
EVR Evrytania 86.04 309 *e*P **P** **04 39 36.0 -0.6**
OHR Ohrid 86.11 312 *e*P **P** **04 39 34.9 -2.0**
UPC Upice 86.15 322 *e*P **P** **04 39 36.9 0.0**
UPC *e*x x 04 39 46.3
JMIC Jan Mayen 86.16 345 *e* PP 04 42 55.4 -1.5
COP Copenhagen 86.21 327 *e*P **P** **04 39 36.1 -0.9**
comp=Z,30nm,0.9s,mb5.5
COP *i*S S 04 50 14.5 +6.2
COP LR LR
comp=Z,3µm,19.0s,MS5.7
COP Copenhagen 86.21 327 *e*P **P** **04 39 36.1 -0.9**
COP *i*S S 04 50 14.5 +6.2
COP pmax pmax
comp=Z,30nm,0.9s,mb5.5
COP MLR MLR
comp=Z,3µm,19.0s,MS5.7
COP Copenhagen 86.21 327 *i*P **P** **04 39 36.1 -0.9**
comp=Z,30nm,0.9s,mb5.5
COP *i*S S 04 50 14.5 +6.2
COP
comp=Z,3µm,19.0s
VRAC Vranov 86.22 320 P **P** **04 39 37.5 +0.2**
comp=Z,59nm,0.9s,mb5.8,baz=79,slow=4.4,SNR=73
VRAC Vranov 86.22 320 P **P** **04 39 38.0 +0.7**
VRAC Vranov 86.22 320 P **P** **04 39 37.5 +0.2**
VRAC pmax pmax
comp=Z,59nm,1.0s
VRAC Vranov 86.22 320⇑ *i*P **P** **04 39 37.4 +0.1**
ZST Bratislava 86.29 319 *e*P **P** **04 39 37.3 -0.3**
ZST pmax pmax
comp=Z,28nm,1.1s,mb5.4
ZST Bratislava 86.29 319 *e*P **P** **04 39 37.3 -0.3**
ZST *e*S S 04 50 07.5 -2.0
RHK3 Tenkes 86.33 317⇓ *e*P **P** **04 39 38.0 +0.1**
DLBC Dease Lake 86.43 30 *e*P **P** **04 39 39.5 +1.4**
DLBC *e* pP 04 39 52.4 +0.3
ITM Ithomi 86.48 308 *e*P **P** **04 39 32.5 -6.3**
RES Resolute Bay 86.68 9 *e*P **P** **04 39 38.6 -0.4**
comp=Z,4µm,0.9s
RES *e* pP 04 39 51.6 -1.4
RES *e*PP PP 04 42 59.0 -2.0
TIR Tirane 86.71 312 *e*P **P** **04 39 39.6 -0.2**
comp=Z,239nm,1.3s,mb6.3
TIR *e* pP 04 39 52.2 -1.6
TIR *e*PP PP 04 42 57.0 -5.2
TIR *e*S S 04 50 21.2 +7.5
TIR LR LR
comp=Z,4µm,20.0s,MS5.8
TIR Tirane 86.71 312 *e*P **P** **04 39 39.6 -0.2**
TIR *e* pP 04 39 52.2 -1.6
TIR *e* 04 42 57.0
TIR *e*S S 04 50 21.2 +7.4
TIR pmax pmax
comp=Z,239nm,1.3s,mb6.3
TIR MLR MLR
comp=Z,4µm,20.0s,MS5.8
RUE Ruedersdorf 86.72 324 *e*P **P** **04 39 39.5 -0.1**
comp=Z,204nm,1.3s,mb6.2
RUE *e* pP 04 39 52.5 -1.2
RUE Ruedersdorf 86.72 324 *e*P **P** **04 39 40.0 +0.4**
comp=Z,321nm,1.5s,mb6.3
RUE *e*pP pP 04 39 52.4 -1.2
TREC Trest 86.90 321 *e*P **P** **04 39 40.7 +0.1**
TREC *e*pP pP 04 39 53.6 -1.0
TREC *e*S S 04 50 13.0 -2.3
TREC AMS AMS 05 23 50.0
comp=Z,4µm,21.0s
PVCC Panska Ves 87.00 322 *e*P **P** **04 39 41.8 +0.8**
PVCC *e*x x 04 39 53.7
PVCC AMS AMS 05 20 50.0
comp=Z,5µm,18.6s
CONA Conrad Observa 87.17 319⇑ *i*PcP PcP 04 39 42.2 -1.8
comp=Z,82nm,1.6s,SNR=15
CSNA Conrad Observa 87.17 319⇓ *i*PcP PcP 04 39 42.3 -1.7
comp=Z,77nm,1.6s
VLS Valsamata 87.18 309 *e*P **P** **04 39 41.0 -1.2**
ODD1 Odda 87.19 332 *e*P **P** **04 39 40.3 -1.5**
ODD1 *e*pP pP 04 39 56.7 +1.0
PRU Pruhonice 87.22 321 *e*P **P** **04 39 41.6 -0.5**
PRU *e*pP pP 04 39 59.7 +3.6
PRU *e*SKS 04 50 09.6
PRU AMS AMS 05 20 50.0
comp=Z,5µm,19.9s
BRG Berggiesshubel 87.24 322 *i*P **P** **04 39 42.4 +0.2**
comp=Z,106nm,1.6s,mb5.8
BRG *i* 04 40 07.1
BRG PP PP 04 43 11.0 +4.8
BRG S S 04 50 17.0 -1.5
BRG PS 04 51 36.0
BRG SS SS 04 56 07.0 +4.4
BRG LR LR
comp=Z,3µm,18.9s,MS5.7
BRG Berggiesshubel 87.24 322 *i*P **P** **04 39 42.4 +0.2**
BRG *i* 04 40 07.1
BRG 04 43 11.0
BRG S S 04 50 17.0 -1.5
BRG SS SS 04 56 07.0 +4.4
BRG pmax pmax
comp=Z,106nm,1.6s,mb5.8
BRG MLR MLR
comp=Z,3µm,18.9s,MS5.7
BRG Berggiesshubel 87.24 322 *e*P **P** **04 39 42.2 0.0**
comp=Z,176nm,1.6s,mb6.0
BRG *e*pP pP 04 39 54.8 -1.4
BRG Berggiesshubel 87.24 322 *i*P **P** **04 39 42.4 +0.2**
comp=Z,177nm,1.6s,mb6.0
BRG *i* 04 40 07.1
comp=Z,109nm,1.7s
BRG PP PP 04 43 11.0 +4.8
BRG S S 04 50 17.0 -1.5
BRG PS 04 51 36.0
BRG SS SS 04 56 07.0 +4.4
BRG
comp=N,3µm,18.9s
BRG
comp=E,2µm,21.3s
BRG
comp=Z,5µm,18.9s
KOGS Kog 87.45 318 *e*P **P** **04 39 42.4 -0.9**
KOGS *e*PP PP 04 43 24.3 +16
BLS5 Blasjo 87.49 332 *e*P **P** **04 39 44.0 +0.8**
BLS5 AMb AMB 04 39 45.6
comp=Z,84nm,2.1s,mb5.6
BLS5 *e*pP pP 04 39 57.5 +0.3
RUND Rundenannen 87.50 333 *e*P **P** **04 39 45.2 +1.9**
RUND AMb AMB 04 39 46.6
comp=Z,112nm,3.4s

BER Bergen 87.53 333 *e*P **P** **04 39 41.9 -1.5**
BER AMb AMB 04 39 42.7
comp=Z,102nm,1.6s,mb5.8
BER *e*SKS 04 50 10.8
BER *e*SS SS 04 56 08.7 +2.4
BER AMS AMS 05 21 31.3
comp=Z,7µm,17.8s,MS6.1
ASK Askoy 87.54 333 *e*P **P** **04 39 41.9 -1.6**
MUD Monsted U'grnd 87.55 329 *i* P **P** **04 39 42.5 -1.1**
comp=Z,29nm,0.9s,mb5.5
MUD *i* pP 04 40 01.0 +3.5
MUD *i* S S 04 50 26.3 +5.0
MUD Monsted U'grnd 87.55 329 *i* P **P** **04 39 42.5 -1.1**
comp=Z,29nm,0.9s,mb5.5
MUD *i* pP 04 40 01.0 +3.5
MUD *i* S S 04 50 26.3 +5.0
MUD
comp=Z,2µm,18.0s
FBE Freiberg 87.57 323 *e*P **P** **04 39 44.0 +0.2**
comp=Z,351nm,1.9s,mb6.3
CLL Collm 87.62 323 *i* P **P** **04 39 43.8 -0.2**
comp=Z,84nm,1.4s,mb5.8
CLL *e*pP pP 04 39 56.0 -2.0
CLL *e*sP sP 04 40 01.0 -2.3
CLL *e*S S 04 50 23.0 +0.8
CLL LR LR
comp=Z,4µm,22.4s,MS5.8
CLL Collm 87.62 323 *i* P **P** **04 39 43.8 -0.2**
CLL *e**SP sP 04 40 01.0 -2.3
CLL *e*S S 04 50 23.0 +0.8
CLL pmax pmax
comp=Z,84nm,1.4s,mb5.8
CLL MLR MLR
comp=Z,4µm,22.4s,MS5.8
CLL Collm 87.62 323 *e*P **P** **04 39 43.8 -0.2**
comp=Z,223nm,2.0s,mb6.0
CLL *e*PP PP 04 43 07.3 -1.9
CLL Collm 87.62 323 *i* P **P** **04 39 43.8 -0.2**
comp=Z,84nm,1.4s,mb5.8
CLL *e*pP pP 04 39 56.0 -2.0
CLL *e*sP sP 04 40 01.0 -2.3
CLL *e*x x 04 40 08.0
CLL *e*PP PP 04 43 09.0 -0.2
CLL *e*sPP 04 43 25.0
CLL *e*x x 04 43 58.0
CLL *i* PPP 04 45 07.4
CLL *e*(PPPP) 04 46 22.0
CLL *e*S S 04 50 23.0 +0.8
CLL *e*pPS 04 51 38.0
CLL *e*PPS 04 51 54.0
CLL *e*SS SS 04 56 15.0 +6.9
CLL *e*x x 04 56 48.0
CLL *e*(SSSS) 05 02 06.0
ARSA Arzberg 87.62 319⇑ *i*P **P** **04 39 43.6 -0.5**
comp=Z,64nm,1.8s,mb5.5,SNR=9.9
EGD Espegrend 87.63 333 *e*P **P** **04 39 42.6 -1.3**
SNART Snartemo 87.65 331 *e*P **P** **04 39 43.1 -0.9**
BSEG Bad Segeberg 88.04 326 *e*P **P** **04 39 46.0 0.0**
BSEG *e**PP pP 04 39 58.8 -1.2
BSEG pmax pmax
comp=Z,54nm,1.0s,mb5.7
BSEG Bad Segeberg 88.04 326 *e*P **P** **04 39 46.0 0.0**
comp=Z,54nm,1.0s,mb5.7
BSEG *e*pP pP 04 39 58.8 -1.2
DOBS Dobrina 88.06 318 *e*P **P** **04 39 45.7 -0.5**
PERS Pernice 88.11 318 *e*P **P** **04 39 46.1 -0.3**
KHC Kasperske Hory 88.13 321 *e*P **P** **04 39 46.3 -0.2**
KHC *e*pP pP 04 40 00.0 -0.5
KHC *e*SKS 04 50 11.3
KHC AMS AMS 05 21 10.0
comp=Z,3µm,21.2s
KMY Karmoy 88.14 332 *e*P **P** **04 39 45.6 -0.7**
KMY AMb AMB 04 39 48.1
comp=Z,122nm,2.0s,mb5.8
SOKA Soboth 88.15 318⇑ *i*PcP PcP 04 39 46.4 -2.0
comp=Z,14nm,0.9s
GEC2 GERESS Array S 88.16 321 *e*P **P** **04 39 46.3 -0.4**
comp=Z,41µm,1.8s
GEC2 *e* pP 04 40 00.3 -0.4
GEC2 *e*PP PP 04 43 13.6 -0.1
GEC2 *e*S sS 04 50 60.0 +9.1
GEC2 GERESS Array S 88.16 321 *e*P **P** **04 39 46.3 -0.3**
GEC2 *e* pP 04 40 00.3 -0.3
GEC2 *e* 04 43 13.6
GEC2 pmax pmax
comp=Z,10µm,1.8s
GEC2 GERESS Array S 88.16 321 *e*P **P** **04 39 46.8 +0.2**
comp=Z,193nm,1.8s,mb6.0
GERES GERESS Array B 88.16 321 P **P** **04 39 45.8 -0.8**
comp=Z,13nm,1.1s,mb5.1,baz=58,slow=5.0,SNR=53
GERES PKKPbc PKKPbc 04 57 31.1 -0.9
comp=Z,1.0nm,0.7s,baz=219,slow=1.7,SNR=7.2
GERES LR LR 05 24 29.4
comp=Z,4µm,18.2s,MS5.9,baz=77,slow=39
MOA Molln 88.19 320⇑ *i*PcP PcP 04 39 47.1 -1.4
comp=Z,71nm,1.1s,SNR=30
TANN Tannenbergstha 88.29 322 *e*P **P** **04 39 46.9 -0.3**
comp=Z,194nm,2.2s,mb6.0
WERD Werda 88.37 322 *e*P **P** **04 39 47.5 -0.1**
comp=Z,120nm,1.8s,mb5.8
WERD *e*PP PP 04 43 13.9 -1.3
GUNZ Gunzen 88.39 322 *e*P **P** **04 39 47.9 +0.2**
comp=Z,181nm,1.9s,mb6.0
WERN Wernitzgruen 88.39 322 *e*P **P** **04 39 48.0 +0.3**
comp=Z,146nm,1.9s,mb5.9
BOJS Bojanci 88.44 317 *e*P **P** **04 39 47.9 -0.1**
OBKA Obir 88.52 318⇑ *i*PcP PcP 04 39 48.3 -1.7
comp=Z,24nm,1.1s,SNR=6.8
WET Wettzell 88.55 321 *e*P **P** **04 39 48.5 +0.1**
WET pmax pmax
comp=Z,350nm,2.5s,mb6.2
WET Wettzell 88.55 321 *e*P **P** **04 39 48.5 +0.1**
comp=Z,350nm,2.5s,mb6.2
MOX Moxa 88.69 323 *e*P **P** **04 39 49.0 -0.1**
comp=Z,94nm,1.8s,mb5.8
MOX *e* 04 40 14.0
MOX
comp=Z,3µm,22.0s
MOX Moxa 88.69 323 *e*P **P** **04 39 49.0 -0.1**
MOX *e* 04 40 14.0
MOX pmax pmax
comp=Z,94nm,1.8s,mb5.8
MOX MLR MLR
comp=Z,3µm,22.0s,MS5.6
MOX Moxa 88.69 323 *e*P **P** **04 39 49.0 -0.1**
comp=Z,63nm,1.4s,mb5.8
MOX *e*PP PP 04 43 18.8 +1.0
LJU Ljubljana 88.71 318 *e*P **P** **04 39 48.8 -0.4**
CLZ Clausthal 88.90 324 *e*P **P** **04 39 50.4 +0.3**
CLZ pmax pmax
comp=Z,66nm,1.2s,mb5.8
CLZ Clausthal 88.90 324 *e*P **P** **04 39 50.4 +0.3**
comp=Z,66nm,1.2s,mb5.8
MYKA Terra Mystica 89.05 319⇑ *i*P **P** **04 39 50.1 -0.8**
comp=Z,14nm,1.0s,mb5.2
KBA Koelnbreinsper 89.07 319⇑ *i*PcP PcP 04 39 51.6 -0.9
comp=Z,26nm,0.7s
VOY Vojsko 89.12 318 *e*P **P** **04 39 50.3 -0.9**
VOY *e* 04 40 16.1
CADS Cadrg 89.15 318 *i* P **P** **04 39 50.5 -0.8**
SKDS Skadanscina 89.23 317 *e*P **P** **04 39 50.6 -1.1**
MBAR Mbarara 89.31 269*c i*P **P** **04 39 52.1 -0.6**
GRF Grafenberg Arr 89.31 322 *e*P **P** **04 39 51.6 -0.4**
GRF *e* 04 43 23.1
GRF *e*S S 04 50 40.5 +2.3
GRF *e*SS SS 04 56 38.9 +6.1
GRF pmax pmax
comp=Z,518nm,2.7s,mb6.4
GRF MLR MLR
comp=Z,4µm,19.2s,MS5.9
GRF Grafenberg Arr 89.31 322 *e*P **P** **04 39 51.6 -0.4**
GRF *e* 04 43 23.1
GRF *e*S S 04 50 40.5 +2.3
GRF *e*SS SS 04 56 38.9 +6.1
GRF pmax pmax
comp=Z,518nm,2.7s,mb6.4
GRF MLR MLR
comp=Z,4µm,19.2s,MS5.9
GRF Grafenberg Arr 89.31 322 *e*P **P** **04 39 51.6 -0.4**
comp=Z,518nm,2.7s,mb6.4
GRF *e*PP PP 04 43 23.1 +0.3
GRF *e*S S 04 50 40.5 +2.3
GRF *e*SS SS 04 56 38.9 +6.1
GRF *e*L 05 22 28.3
comp=Z,4µm,19.2s
PTCC Patocco-Chiusa 89.32 318 P **P** **04 39 51.4 -0.8**
comp=Z,30nm,1.1s,mb5.5
TRI Trieste 89.33 318 *e*P **P** **04 39 51.4 -0.8**
TRI *e* 04 40 10.4
TRI *e*PP PP 04 43 24.2 +1.2
TRI *e*S S 04 50 30.7 -7.8
TRI LR LR
comp=Z,3µm,20.0s,MS5.7
UBBA Unterbreizbach 89.55 323 *e*P **P** **04 39 52.2 -0.9**
comp=Z,82nm,1.6s,mb5.8
UBBA *e*pP pP 04 40 06.0 -1.1
ORI Oriolo Calabro 89.58 312 P **P** **04 39 54.2 +0.7**
TIP Timpagrande 89.67 311 *e*P **P** **04 39 53.9 -0.1**
comp=Z,37nm,0.9s,mb5.7
TIP *e* pP 04 40 11.0 +3.0
TIP PP PP 04 43 28.2 +2.2
TIP *e*S SKSac 04 50 20.0 -0.9
TIP LR LR
comp=Z,1µm,20.0s,MS5.4
PTRP Pietrapertosa 89.70 312 P **P** **04 39 54.4 +0.3**
ABTA Abfaltersbach 89.72 319⇑ *i*P **P** **04 39 53.1 -1.0**
comp=Z,34nm,1.2s,mb5.5,SNR=17
FUR Furstenfeldbru 89.91 321 *e*P **P** **04 39 55.2 +0.3**
FUR pmax pmax
comp=Z,475nm,1.9s,mb6.5
FUR Furstenfeldbru 89.91 321 *e*P **P** **04 39 55.2 +0.3**
comp=Z,475nm,1.9s,mb6.5
WTTA Wattenberg 90.06 320⇑ *i*PcP PcP 04 39 55.2 -1.6
comp=Z,75nm,0.7s,SNR=26
CUC Castrocucco 90.06 312 *e*P **P** **04 39 54.9 -0.9**
comp=Z,41nm,1.1s,mb5.7
CUC *e* pP 04 40 07.4 -2.4
CUC *e*PP PP 04 43 34.2 +5.1
CUC *e*S SKSac 04 50 23.4 +0.3
CUC LR LR
comp=Z,3µm,20.0s,MS5.8
WATA Walderalm 90.07 320⇑ *i*PcP PcP 04 39 55.2 -1.6
comp=Z,30nm,0.7s,SNR=13
IBBN Ibbenburen 90.15 325 *e*P **P** **04 39 56.0 +0.1**
comp=Z,80nm,1.3s,mb5.9
SGO Sicignano 90.22 312 P **P** **04 39 55.8 -0.7**
comp=Z,33nm,1.0s,mb5.6
SGO Sicignano 90.22 312 P **P** **04 39 55.8 -0.7**
SGO pmax pmax
comp=Z,33nm,1.0s,mb5.6
SUMG Summit 90.23 354 *e*P **P** **04 39 56.4 +0.5**
comp=Z,117nm,1.6s,mb6.0
SUMG *e*PP PP 04 43 34.8 +5.4
CSSN Cassano Irpino 90.31 313 P **P** **04 39 55.6 -1.3**
comp=Z,60nm,1.3s,mb5.8
SQTA Sankt Quirin 90.34 320⇑ *i*PcP PcP 04 39 56.3 -1.8
comp=Z,44nm,0.6s
LRW Lerwick 90.42 335 *e*P **P** **04 39 55.5 -1.5**
LRW AMb AMB 04 39 58.2
comp=Z,110nm,1.9s,mb5.9
LRW AMS AMS 05 24 53.5
comp=Z,6µm,17.3s,MS6.1
RETA Reutte 90.51 320⇑ *i*PcP PcP 04 39 57.4 -1.4
comp=Z,28nm,1.2s,SNR=8.6
CTI Castel Tesino 90.55 319 P **P** **04 39 57.3 -0.6**
RNI2 Rionero Sannit 90.60 314 P **P** **04 39 58.9 +0.7**
CEL Celeste 90.63 310 *e*P **P** **04 39 58.7 +0.2**
comp=Z,171nm,1.1s,mb6.3
CEL *e* pP 04 40 12.1 -0.3
CEL *e*PP PP 04 43 28.2 -5.5
CEL *e*S SP 04 51 59.6 +2.0
CEL LR LR
comp=Z,2µm,20.0s,MS5.6
TNS Taunus Mts 90.70 323 *e*P **P** **04 39 58.5 0.0**
TNS pmax pmax
comp=Z,74nm,1.4s,mb5.8
TNS Taunus Mts 90.70 323 *e*P **P** **04 39 58.5 0.0**
comp=Z,74nm,1.4s,mb5.8
FETA Feichten 90.72 320⇑ *i*PcP PcP 04 39 58.7 -1.0
comp=Z,78nm,1.0s,SNR=28
FSSB Fossombrone 90.76 316 P **P** **04 39 59.2 +0.2**
comp=Z,66nm,1.3s,mb5.8
SCLL Scilla 90.77 310 P **P** **04 39 58.9 -0.2**
comp=Z,58nm,1.2s,mb5.8
YKA Yellowknife Ar 90.77 22 P **P** **04 39 58.4 -0.1**
comp=Z,9.3nm,0.6s,mb5.3,baz=311,slow=4.1,SNR=37
YKA PKKPbc PKKPbc 04 57 21.9 -4.0
comp=Z,2.3nm,0.7s,baz=128,slow=2.7,SNR=12
YKA LR LR 05 25 06.4
comp=Z,309nm,19.6s,MS4.8,baz=130,slow=38
YKA Yellowknife Ar 90.77 22 P **P** **04 39 58.4 -0.1**
YKA PKKPbc PKKPbc 04 57 21.9 -4.0
YKA LR LR 05 25 06.4
YKA Yellowknife Ar 90.77 22 P **P** **04 39 58.4 -0.2**
YKA pmax pmax
comp=Z,9.0nm,0.6s
YKA pmax pmax
comp=Z,2.0nm,0.7s
TOD Tromm 90.77 323 *e*P **P** **04 39 59.2 +0.4**
BUG Bochum--Univer 90.81 325 *e*P **P** **04 39 58.7 -0.3**
comp=Z,89nm,1.4s,mb5.9
BUG *e*pP pP 04 40 11.8 -1.2
SNTG Esanatoglia 90.83 316 P **P** **04 39 59.2 -0.1**
comp=Z,39nm,0.7s,mb5.8
WTSB Winterswijk 90.83 325 *e*P **P** **04 39 58.9 -0.2**
comp=Z,95nm,2.0s,mb5.8
SDI San Donato 90.83 314 P **P** **04 39 59.0 -0.3**
comp=Z,53nm,1.2s,mb5.8
SDI San Donato 90.83 314 P **P** **04 39 59.0 -0.3**
SDI pmax pmax
comp=Z,53nm,1.2s,mb5.8
AQU L'Aquila 90.87 315 *e*P **P** **04 39 59.8 +0.4**
comp=Z,65nm,1.1s,mb5.9
AQU *e* pP 04 40 10.9 -2.6
AQU *e*PP PP 04 43 36.4 +1.1
AQU *e*S S 04 50 57.7 +4.8
AQU LR LR
comp=Z,2µm,19.0s,MS5.6
AQU L'Aquila 90.87 315 *e*P **P** **04 39 59.8 +0.3**
AQU *e* pP 04 40 10.9 -2.6
AQU *e* 04 43 36.4
AQU *e*S S 04 50 57.7 +4.8
AQU pmax pmax
comp=Z,84nm,1.1s,mb6.0
AQU MLR MLR
comp=Z,3µm,19.0s,MS5.7
AQU L'Aquila 90.87 315⇓ *i*P **P** **04 39 59.3 -0.2**
MTTG Motta San Giov 90.87 310 P **P** **04 39 59.4 -0.2**
NRCA Norcia 90.88 315 P **P** **04 39 59.9 +0.4**
comp=Z,81nm,1.4s,mb5.9
STU Stuttgart 90.91 322 *e*P **P** **04 39 59.6 +0.1**
comp=Z,99nm,1.3s,mb6.0
PTQR Pietraquaria 91.00 314 P **P** **04 40 00.2 +0.1**
comp=Z,101nm,0.9s,mb6.2
MURB Monte Urbino 91.10 316 P **P** **04 40 01.1 +0.6**
DAVA Damuels 91.14 320⇑ *i*PcP PcP 04 40 00.7 -0.9
comp=Z,69nm,1.4s,SNR=13
BRMO Bormio 91.18 319 P **P** **04 40 01.0 +0.2**
MABI Malga Bissina 91.27 319 P **P** **04 40 00.3 -0.9**
KTD Kalmit 91.32 323 *e*P **P** **04 40 02.0 +0.6**
DAVOX Davos/Dischmat 91.36 320 P **P** **04 40 01.4 -0.3**
comp=Z,45nm,0.8s,mb5.8,baz=68,slow=4.9,SNR=52
ABH Alteburg 91.37 323 *e*P **P** **04 40 02.5 +0.9**
DAVOS Davos 91.38 320 P **P** **04 40 01.4 -0.4**
SPAK Spaichingen-Ko 91.45 321 *e*P **P** **04 40 02.5 +0.5**
VMG Vicchio 91.47 317 P **P** **04 40 03.3 +1.1**
comp=Z,401nm,2.0s,mb6.4
BFO Black Forest 91.62 322 *e*P **P** **04 40 02.6 -0.2**
comp=Z,76nm,1.4s,mb5.8
BFO *e* pP 04 40 15.4 -1.4
BFO *e*PP PP 04 43 41.2 +0.1
BFO *e*S SKSac 04 50 41.1 +9.5
BFO LR LR
comp=Z,5µm,19.0s,MS5.9
BFO Black Forest 91.62 322 *e*P **P** **04 40 02.6 -0.2**
BFO *e* pP 04 40 15.5 -1.3
BFO *e* 04 43 41.2
BFO pmax pmax
comp=Z,76nm,1.4s,mb5.8
BFO MLR MLR
comp=Z,5µm,19.0s,MS5.9
BFO Black Forest 91.62 322 *e*P **P** **04 40 02.5 -0.3**
comp=Z,145nm,1.8s,mb6.0
BFO *e*pP pP 04 40 15.7 -1.1
BFO *e*PP PP 04 43 40.2 -0.9
LANF Langenberg 91.64 322 *e*P **P** **04 40 03.5 +0.6**
FNVD Fontana Vidola 91.66 317 P **P** **04 40 04.0 +0.9**
RUP Ruppelstein 91.74 323 *e*P **P** **04 40 04.2 +0.9**
TUE Stuetta 91.82 320 *e*P **P** **04 40 04.0 +0.2**
comp=Z,104nm,1.3s,mb6.0
TUE *e* pP 04 40 17.8 0.0
TUE *e*PP PP 04 43 39.2 -3.5
TUE *e*S S 04 50 51.1 -10
TUE *e*PKKP PKKPbc 04 57 26.6 +3.8
TUE LR LR
comp=Z,5µm,21.0s,MS5.9
STR Strasbourg 91.84 322 *e*P **P** **04 40 04.6 +0.8**
HGN Heimansgroeve 91.88 324‖ *e*P **P** **04 40 03.0 -0.9**
comp=Z,60nm,2.1s,mb5.6
HGN Heimansgroeve 91.88 324 *e*PP PP 04 43 32.3 -11
MEM Membach 91.91 324 P **P** **04 40 04.3 +0.2**
GSCL Gusciola 91.94 317 P **P** **04 40 05.4 +1.0**
comp=Z,67nm,1.0s,mb5.9
VAE Valguarnera 92.01 310 P **P** **04 40 06.2 +1.3**
comp=Z,14nm,0.3s,mb5.8,baz=46,slow=14,SNR=3.5
FELD Feldberg im Sc 92.02 321 *e*P **P** **04 40 05.1 +0.4**
LIBD Limburg 92.13 322 *e*P **P** **04 40 05.7 +0.5**
VLC Villacollemand 92.15 317 PFAKE 04 40 20.0 +15
VLC LR LR
comp=Z,4µm,22.0s,MS5.8
CDF Champ du Feu 92.21 322 *e*P **P** **04 40 04.8 -0.7**
comp=Z,143nm,1.1s,mb5.9
CDF Champ du Feu 92.21 322 *e*P **P** **04 40 04.8 -0.7**
comp=Z,72nm,1.1s,mb5.9
CDF Champ du Feu 92.21 322 *e*P **P** **04 40 04.8 -0.7**
CDF pmax pmax
comp=Z,72nm,1.1s,mb5.9
PII Pisa 92.24 317 P **P** **04 40 05.2 -0.6**
comp=Z,122nm,1.7s,mb6.0
PII Pisa 92.24 317 P **P** **04 40 05.2 -0.6**
PII pmax pmax
comp=Z,122nm,1.7s,mb6.0
WLF Walferdange 92.28 323 P **P** **04 40 06.6 +0.8**
WLF AP pP 04 40 19.1 -0.8
WLF Walferdange 92.28 323 *e*P **P** **04 40 06.6 +0.8**
comp=Z,51nm,1.2s,mb5.7
WLF *e* pP 04 40 19.0 -0.9
WLF *e*PP PP 04 43 52.7 +6.5
WLF *e*S S 04 51 07.4 +2.1
WLF *e*PKKP PKKPbc 04 57 41.2 +19
WLF LR LR
comp=Z,5µm,22.0s,MS5.9
WLF Walferdange 92.28 323 *e*P **P** **04 40 06.6 +0.8**
WLF *e* pP 04 40 19.0 -0.8
WLF *e* 04 43 52.7
WLF *e*S S 04 51 07.4 +2.1
WLF pmax pmax
comp=Z,51nm,1.2s,mb5.7
WLF MLR MLR
comp=Z,5µm,22.0s,MS5.9
WLF Walferdange 92.28 323 *e*P **P** **04 40 06.3 +0.5**
comp=Z,221nm,1.7s,mb6.2
WLF *e*pP pP 04 40 19.0 -0.8
WLF *e*PP PP 04 43 47.4 +1.2
ECH Echery 92.37 322 *e*P **P** **04 40 06.1 -0.2**
ECH Echery 92.37 322 *e*P **P** **04 40 05.9 -0.4**
comp=Z,39nm,1.4s,mb5.5
ECH *e*PP PP 04 43 43.8 -3.2
ECH *e*S S 04 51 17.5 +11
ECH Echery 92.37 322 *e*P **P** **04 40 05.9 -0.4**
ECH *e* 04 43 43.8
ECH pmax pmax
comp=Z,39nm,1.4s,mb5.5
BCLA Clavier 92.39 324 P **P** **04 40 05.8 -0.6**
VAI Varese 92.45 319 P **P** **04 40 05.8 -0.9**
comp=Z,87nm,1.2s,mb6.0
VAI Varese 92.45 319 P **P** **04 40 05.8 -0.9**
VAI pmax pmax
comp=Z,87nm,1.2s,mb6.0
MOF Molkenrain 92.55 322 *e*P **P** **04 40 07.4 +0.3**
UCC Uccle 92.73 325 P **P** **04 40 07.6 -0.3**
HINF Hinteralfeld 92.73 322 *e*P **P** **04 40 06.9 -1.1**
comp=Z,236nm,1.7s,mb6.0
HINF Hinteralfeld 92.73 322 *e*P **P** **04 40 06.9 -1.1**
comp=Z,118nm,1.7s,mb6.0
HINF Hinteralfeld 92.73 322 *e*P **P** **04 40 06.9 -1.1**
HINF pmax pmax
comp=Z,118nm,1.7s,mb6.0
MCD Coleburn Disti 92.78 333 *e*P **P** **04 40 07.3 -0.7**
MME1 Meikle Cairn 92.82 333 *e*P **P** **04 40 07.1 -1.1**
GIVF Givet 92.82 324 *e*P **P** **04 40 07.6 -0.7**
comp=Z,179nm,1.5s,mb6.0
GIVF Givet 92.82 324 *e*P **P** **04 40 07.6 -0.7**
comp=Z,89nm,1.5s,mb6.0
GIVF Givet 92.82 324 *e*P **P** **04 40 07.6 -0.7**
GIVF pmax pmax
comp=Z,89nm,1.5s,mb6.0
SNF Seneffe 92.92 325 P **P** **04 40 08.8 +0.1**
SNF AP pP 04 40 22.0 -0.8
HAU Haudompre 92.95 322 *e*P **P** **04 40 07.8 -1.2**
comp=Z,82nm,1.3s,mb5.7
HAU *e*MLR MLR
comp=Z,4µm,19.8s,MS5.6
HAU Haudompre 92.95 322 *e*P **P** **04 40 07.8 -1.2**
comp=Z,41nm,1.3s,mb5.7
HAU LR LR
comp=Z,4µm,19.8s,MS5.9
HAU Haudompre 92.95 322 *e*P **P** **04 40 07.8 -1.2**
HAU pmax pmax
comp=Z,41nm,1.3s,mb5.7
HAU MLR MLR
comp=Z,4µm,19.8s,MS5.9
DOU Dourbes 92.95 324 P **P** **04 40 08.9 0.0**
comp=Z,31nm,2.7s,mb5.2
DOU AP pP 04 40 20.4 -2.6
LOMF Lomont 92.97 321 *e*P **P** **04 40 09.2 +0.1**
MVH1 Achvaich 92.98 334 *e*P **P** **04 40 08.1 -0.8**
ORO Oropa 93.05 319 P **P** **04 40 08.8 -0.7**
comp=Z,94nm,1.6s,mb6.0
ORO Oropa 93.05 319 P **P** **04 40 08.8 -0.7**
ORO pmax pmax
comp=Z,94nm,1.6s,mb6.0
THEF They Montfort 93.06 322 *e*P **P** **04 40 09.4 -0.1**
BAIF Baives 93.18 324 *e*P **P** **04 40 09.2 -0.8**
comp=Z,128nm,1.5s,mb5.8
BAIF Baives 93.18 324 *e*P **P** **04 40 09.2 -0.8**
comp=Z,64nm,1.5s,mb5.8
BAIF Baives 93.18 324 *e*P **P** **04 40 09.2 -0.8**
BAIF pmax pmax
comp=Z,64nm,1.5s,mb5.8
MAW Mawson 93.20 199 *e*S SKSac 04 50 41.9 +2.6
MAW Mawson 93.20 199 P **P** **04 40 08.7 -0.8**
comp=Z,32nm,1.1s,mb5.7,baz=41,slow=5.4,SNR=25
MAW LR LR 05 21 17.1
comp=Z,1µm,19.0s,MS5.3,baz=46,slow=35
MAW Mawson 93.20 199 *e*P **P** **04 40 09.0 -0.5**
comp=Z,21nm,1.0s,mb5.5
MAW *e*S SKSac 04 50 41.9 +2.6
MAW Mawson 93.20 199 *e*P **P** **04 40 09.0 -0.5**
MAW *e*S SKSac 04 50 41.9 +2.6
MAW pmax pmax
comp=Z,21nm,1.0s
MDO Dochfour 93.35 333 *e*P **P** **04 40 09.4 -1.1**
MEZF Maizieres J'vi 93.47 323 *e*P **P** **04 40 10.7 -0.7**
OG01 Vacheresse 93.53 320 *e*P **P** **04 40 12.8 +1.1**
FIN Finale Ligure 93.54 318 P **P** **04 40 11.3 -0.5**
XSO Sourhope Farm 93.56 331 *e*P **P** **04 40 10.6 -1.1**
KAC Achnashellach 93.71 334 *e*P **P** **04 40 11.6 -0.7**
PGF Pioggiola 93.75 316 *e*P **P** **04 40 11.9 -0.9**
comp=Z,61nm,0.8s,mb5.8
PGF Pioggiola 93.75 316 *e*P **P** **04 40 11.9 -0.9**
comp=Z,30nm,0.8s,mb5.8
PGF Pioggiola 93.75 316 *e*P **P** **04 40 11.9 -0.9**
PGF pmax pmax
comp=Z,30nm,0.8s,mb5.8
CABF La Chapelle 93.76 321 *e*P **P** **04 40 11.9 -0.8**
EBL Broad Law 93.76 332 *e*P **P** **04 40 11.6 -0.9**
RSL Roselend 93.86 320 *e*P **P** **04 40 12.8 -0.4**
LPG La Plagne 93.87 320 *e*P **P** **04 40 13.0 -0.3**
comp=Z,71nm,0.8s,mb5.8
LPG La Plagne 93.87 320 *e*P **P** **04 40 13.0 -0.3**
comp=Z,35nm,0.8s,mb5.8
LPG La Plagne 93.87 320 *e*P **P** **04 40 13.0 -0.3**
LPG pmax pmax
comp=Z,35nm,0.8s,mb5.8
LPL La Plagne 93.88 320 *e*P **P** **04 40 12.9 -0.4**
comp=Z,56nm,0.6s,mb5.8
LPL La Plagne 93.88 320 *e*P **P** **04 40 12.9 -0.4**
comp=Z,28nm,0.6s,mb5.9
LPL La Plagne 93.88 320 *e*P **P** **04 40 12.9 -0.4**
LPL pmax pmax
comp=Z,28nm,0.6s,mb5.9
EAU Auchinoon 93.90 332 *e*P **P** **04 40 12.5 -0.7**
XAL Allendale 93.91 331 *e*P **P** **04 40 11.1 -2.1**

KPL Plockton 93.96 334 *e*P **P** 04 40 12.1 -1.3
KPL AMb AMB 04 40 14.4
comp=Z,102nm,1.7s,mb6.0

BORG Borgarnes 94.02 344 P **P** **04 40 15.0 +1.5**
comp=Z,3.8nm,0.3s,mb5.3,baz=72,slow=22,SNR=6.7

EKA Eskdalemuir Ar 94.07 331 P **P** **04 40 13.1 -0.9**
comp=Z,7.9nm,0.9s,mb5.1,baz=69,slow=4.4,SNR=14
EKA PKKP PKKPbc 04 57 14.7 -2.6
comp=Z,1.6nm,0.6s,baz=256,slow=2.6,SNR=7.6

EKA Eskdalemuir Ar 94.07 331 P **P** **04 40 13.1 -0.9**
EKA pmax pmax
comp=Z,8.0nm,0.9s
EKA pmax pmax
comp=Z,2.0nm,0.6s

EAB Aberfoyle 94.10 332 *e*P **P** **04 40 12.5 -1.5**
ESK Eskdalemuir 94.11 331 PFAKE 04 40 20.0 +5.9
ESK LR LR
comp=Z,3µm,19.0s,MS5.8

ESK Eskdalemuir 94.11 331 *e*P **P** **04 40 13.8 -0.3**
ESK AMb AMB 04 40 17.9
comp=Z,78nm,1.9s,mb5.8

BNI Bardonecchia 94.13 319 *e*P **P** **04 40 14.1 -0.4**
comp=Z,27nm,1.0s,mb5.6
BNI *e* pP 04 40 29.3 +0.8
BNI *e*PP PP 04 44 01.4 +0.6
BNI *e*S S 04 51 42.0 +20
BNI LR LR
comp=Z,3µm,19.0s,MS5.8

BNI Bardonecchia 94.13 319 *e*P **P** **04 40 14.1 -0.4**
BNI *e* pP 04 40 29.3 +0.8
BNI *e* 04 44 01.4
BNI pmax pmax
comp=Z,27nm,1.0s,mb5.6
BNI MLR MLR
comp=Z,3µm,19.0s,MS5.8

HPK Haverah Park 94.15 330 *e*P **P** **04 40 12.6 -1.7**
HPK AMb AMB 04 40 25.4
comp=Z,90nm,1.9s,mb5.9

ECK Cauldkaine Hil 94.15 331 *e*P **P** **04 40 13.4 -1.0**
SBF Sospel 94.19 318 *e*P **P** **04 40 13.5 -1.3**
comp=Z,43nm,0.7s,mb5.7

SBF Sospel 94.19 318 *e*P **P** **04 40 13.5 -1.3**
comp=Z,22nm,0.7s,mb5.7

SBF Sospel 94.19 318 *e*P **P** **04 40 13.5 -1.3**
SBF pmax pmax
comp=Z,22nm,0.7s,mb5.7

MBDF Montbardon 94.22 319 *e*P **P** **04 40 13.6 -1.3**
comp=Z,9.0nm,0.6s,mb5.1

MBDF Montbardon 94.22 319 *e*P **P** **04 40 13.6 -1.3**
comp=Z,4.5nm,0.6s,mb5.1

MBDF Montbardon 94.22 319 *e*P **P** **04 40 13.6 -1.3**
MBDF pmax pmax
comp=Z,5.0nm,0.6s,mb5.1

TOUF Mont Tournerai 94.24 318 *e*P **P** **04 40 16.3 +1.3**
KAR1 Arisaig 94.30 333 *e*P **P** **04 40 13.8 -1.1**
TFO1 Folkestone 94.31 326 AMS AMS 05 26 56.2
comp=Z,8µm,18.7s,MS6.2

OG05 Jujurieux 94.42 320 *e*P **P** **04 40 15.8 0.0**
LHO Holmfirth 94.50 329 *e*P **P** **04 40 15.3 -0.6**
ORIF Oris-en-Rattie 94.69 319 *e*P **P** **04 40 16.3 -0.7**
comp=Z,61nm,0.9s,mb5.7
ORIF *e*MLR MLR
comp=Z,6µm,21.2s,MS5.7

ORIF Oris-en-Rattie 94.69 319 *e*P **P** **04 40 16.3 -0.7**
comp=Z,30nm,0.9s,mb5.7

ORIF Oris-en-Rattie 94.69 319 *e*P **P** **04 40 16.3 -0.7**
ORIF pmax pmax
comp=Z,31nm,0.9s,mb5.7

LOR Lormes 94.78 322 *e*P **P** **04 40 16.2 -1.2**
LOR *e*MLR MLR
comp=Z,5µm,22.5s,MS5.6

LOR Lormes 94.78 322 *e*P **P** **04 40 16.2 -1.2**
LOR MLR MLR
comp=Z,5µm,22.5s,MS5.9

VSL Villasalto 94.82 313 *e*P **P** **04 40 17.0 -0.7**
comp=Z,52nm,1.4s,mb5.8
VSL *e* 04 40 37.0
VSL *e*PP PP 04 44 16.3 +10
VSL *e*S S 04 51 46.0 +18
VSL LR LR
comp=Z,1µm,21.0s,MS5.4

FRF La Foret Royal 94.84 318 *e*P **P** **04 40 16.5 -1.3**
comp=Z,56nm,1.1s,mb5.6

FRF La Foret Royal 94.84 318 *e*P **P** **04 40 16.5 -1.3**
comp=Z,28nm,1.1s,mb5.6

FRF La Foret Royal 94.84 318 *e*P **P** **04 40 16.5 -1.3**
FRF pmax pmax
comp=Z,28nm,1.1s,mb5.6

NLWA Neilton Lookou 94.89 38 PFAKE 04 40 30.0 +12
NLWA LR LR
comp=Z,2µm,21.0s,MS5.5

LMR La Mourre 95.03 318 *e*P **P** **04 40 17.5 -1.1**
SSF Saint Saulge 95.09 322 *e*P **P** **04 40 17.7 -1.1**
comp=Z,31nm,1.2s,mb5.3

SSF Saint Saulge 95.09 322 *e*P **P** **04 40 17.7 -1.1**
comp=Z,16nm,1.2s,mb5.3

SSF Saint Saulge 95.09 322 *e*P **P** **04 40 17.7 -1.1**
SSF pmax pmax
comp=Z,16nm,1.2s,mb5.3

SMF Signal de Mont 95.10 322 *e*P **P** **04 40 17.7 -1.2**
comp=Z,23nm,0.8s,mb5.3

SMF Signal de Mont 95.10 322 *e*P **P** **04 40 17.7 -1.2**
comp=Z,12nm,0.8s,mb5.4

SMF Signal de Mont 95.10 322 *e*P **P** **04 40 17.7 -1.2**
SMF pmax pmax
comp=Z,12nm,0.8s,mb5.4

AVF Avril sur Loir 95.31 322⇑ *i*P **P** **04 40 18.6 -1.3**
comp=Z,30nm,0.8s,mb5.5

AVF Avril sur Loir 95.31 322⇑ *i*P **P** **04 40 18.6 -1.3**
comp=Z,15nm,0.8s,mb5.5

AVF Avril sur Loir 95.31 322⇑ *i*P **P** **04 40 18.6 -1.3**
AVF pmax pmax
comp=Z,15nm,0.8s,mb5.5

PPT Papeete 95.31 107 *e*S S 04 51 25.0 -8.1
comp=Z,2µm,27.5s

PPT Papeete 95.31 107 *e*LR LR 05 10 33.3
comp=Z,7µm,31.0s

SMRF Simiane la Rot 95.33 319 *e*P **P** **04 40 19.2 -0.8**
VIVF Saint-Julien-l 95.47 320 *e*P **P** **04 40 19.6 -1.0**
comp=Z,63nm,1.1s,mb5.7

VIVF Saint-Julien-l 95.47 320 *e*P **P** **04 40 19.6 -1.0**
comp=Z,32nm,1.1s,mb5.7

VIVF Saint-Julien-l 95.47 320 *e*P **P** **04 40 19.6 -1.0**
VIVF pmax pmax
comp=Z,32nm,1.1s,mb5.7

HYF Humbligny 95.49 323 *e*P **P** **04 40 20.1 -0.6**
PLDF La Plantade 95.57 321 *e*P **P** **04 40 22.2 +1.2**
JCW Jim Creek 95.60 36 *e*P **P** **04 40 22.2 +1.1**
JCW *e* pP 04 40 37.0 +1.8
RPW Rockport 95.70 36 *e*P **P** **04 40 21.9 +0.3**
LSZ Lusaka 95.71 256 P **P** **04 40 22.8 +0.6**
SNR=7.3

LSZ Lusaka 95.71 256 LR LR 05 21 39.7
comp=Z,7µm,18.4s,MS6.2,baz=78,slow=34

LSZ Lusaka 95.71 256 *e*P **P** **04 40 21.7 -0.5**
comp=Z,73nm,1.4s,mb5.9
LSZ *e* pP 04 40 33.6 -2.6
LSZ *e*PP PP 04 43 59.3 -15
LSZ *e*S S 04 51 18.0 -19
LSZ LR LR
comp=Z,7µm,19.0s,MS6.2

LSZ Lusaka 95.71 256 *e*P **P** **04 40 21.7 -0.5**
LSZ *e* pP 04 40 33.6 -2.6
LSZ pmax pmax
comp=Z,73nm,1.4s,mb5.9
LSZ MLR MLR
comp=Z,7µm,19.0s,MS6.2

MCH1 Michaelchurch 95.96 329 *e*P **P** **04 40 21.4 -1.3**
MCH1 AMb AMB 04 40 22.6
comp=Z,46nm,1.4s,mb5.7
MCH1 AMS AMS 05 30 35.8
comp=Z,2µm,19.3s,MS5.7

HTR Trewern Hill 96.05 329 *e*P **P** **04 40 20.9 -2.1**
TCF Toulx Ste Croi 96.25 322 *e*P **P** **04 40 23.3 -0.8**
comp=Z,36nm,1.0s,mb5.5

TCF Toulx Ste Croi 96.25 322 *e*P **P** **04 40 23.3 -0.8**
comp=Z,18nm,1.0s,mb5.5

TCF Toulx Ste Croi 96.25 322 *e*P **P** **04 40 23.3 -0.8**
TCF pmax pmax
comp=Z,18nm,1.0s,mb5.5

LDF La Druitiere 96.36 325 *e*P **P** **04 40 23.3 -1.3**
comp=Z,147nm,1.5s,mb5.9

LDF La Druitiere 96.36 325 *e*P **P** **04 40 23.3 -1.3**
comp=Z,73nm,1.5s,mb5.9

LDF La Druitiere 96.36 325 *e*P **P** **04 40 23.3 -1.3**
LDF pmax pmax
comp=Z,73nm,1.5s,mb5.9

KEST Kesra 96.44 310 P **P** **04 40 24.8 -0.5**
comp=Z,2.4nm,1.1s,mb4.6,baz=270,slow=10,SNR=3.5
KEST LR LR 05 28 26.6
comp=Z,604nm,21.8s,MS5.0,baz=182,slow=38

FLN La Foliniere 96.47 325 *e*P **P** **04 40 23.8 -1.3**
FLN *e*MLR MLR
comp=Z,5µm,21.0s,MS5.7

FLN La Foliniere 96.47 325 *e*P **P** **04 40 23.8 -1.3**
FLN MLR MLR
comp=Z,5µm,21.0s,MS6.0

COR Corvallis 96.65 40 PFAKE 04 40 40.0 +14
COR LR LR
comp=Z,2µm,22.0s,MS5.6

VNDA Vanda 96.65 172 P **P** **04 40 23.9 -1.2**
comp=Z,23nm,1.0s,mb5.5,baz=298,slow=5.6,SNR=36
VNDA PKKP PKKPbc 04 57 09.1 -2.5
comp=Z,2.4nm,0.8s,baz=188,slow=2.9,SNR=7.1
VNDA LR LR 05 25 38.0
comp=Z,1µm,19.5s,MS5.5,baz=332,slow=36

VNDA Vanda 96.65 172 P **P** **04 40 23.9 -1.2**
VNDA PKKP PKKPbc 04 57 09.1 -2.5
VNDA LR LR 05 25 38.0

VNDA Vanda 96.65 172 P **P** **04 40 23.9 -1.2**
VNDA pmax pmax
comp=Z,23nm,1.0s
VNDA pmax pmax
comp=Z,2.0nm,0.8s
VNDA MLR MLR
comp=Z,1µm,19.5s

SFJD Kangerlussuaq 96.72 356 *i*P **P** **04 40 22.3 -3.5**
SFJD *i* 04 40 43.9
SFJD *i* 04 51 33.4
SFJD pmax pmax
comp=Z,22nm,0.9s,mb5.6
SFJD MLR MLR
comp=Z,1µm,20.0s,MS5.3

SFJD Kangerlussuaq 96.72 356 *i*P **P** **04 40 22.3 -3.5**
comp=Z,22nm,0.9s,mb5.6
SFJD *i* 04 40 43.9
SFJD *e*S SKSac 04 51 16.1 +18
SFJD *i* 04 51 33.4
SFJD *i* 04 58 06.2
SFJD
comp=Z,1µm,20.0s

ETW Entiat 96.83 36 *e*P **P** **04 40 27.1 +0.4**
comp=Z,15nm,0.7s,mb5.5

GRR Gorron 96.89 325 *e*P **P** **04 40 25.9 -1.1**
CAF Calviac 97.04 321 *e*P **P** **04 40 27.2 -0.5**
comp=Z,43nm,1.3s,mb5.4

CAF Calviac 97.04 321 *e*P **P** **04 40 27.2 -0.5**
comp=Z,21nm,1.3s,mb5.4

CAF Calviac 97.04 321 *e*P **P** **04 40 27.2 -0.5**
CAF pmax pmax
comp=Z,21nm,1.3s,mb5.4

EDM Edmonton 97.13 29 *e*P **P** **04 40 28.4 +0.4**
RJF Les Rejaudoux 97.18 321 *e*P **P** **04 40 27.9 -0.4**
comp=Z,38nm,1.1s,mb5.5
RJF *e*MLR MLR
comp=Z,3µm,19.8s,MS5.5

RJF Les Rejaudoux 97.18 321 *e*P **P** **04 40 27.9 -0.4**
comp=Z,19nm,1.0s,mb5.5
RJF LR LR
comp=Z,3µm,19.8s,MS5.8

RJF Les Rejaudoux 97.18 321 *e*P **P** **04 40 27.9 -0.4**
RJF pmax pmax
comp=Z,19nm,1.0s,mb5.5
RJF MLR MLR
comp=Z,3µm,19.8s,MS5.8

DYA Yadsworthy 97.35 328 AMS AMS 05 29 29.7
comp=Z,5µm,18.2s,MS6.1

MFF Saint Martin d 97.47 323 *e*P **P** **04 40 28.8 -0.8**
comp=Z,40nm,1.2s,mb5.4

MFF Saint Martin d 97.47 323 *e*P **P** **04 40 28.8 -0.8**
comp=Z,20nm,1.3s,mb5.4

MFF Saint Martin d 97.47 323 *e*P **P** **04 40 28.8 -0.8**
MFF pmax pmax
comp=Z,20nm,1.3s,mb5.4

SBA Scott Base 97.61 171 *e*P **P** **04 40 31.0 +1.5**
SBA *e*PP PP 04 44 30.6 +3.0
SBA *e*S S 04 51 45.6 -4.8
SBA LR LR
comp=Z,1µm,21.0s,MS5.3

HUMO Hull Mountain 97.87 42 PFAKE 04 40 40.0 +8.5
HUMO LR LR
comp=Z,1µm,21.0s,MS5.3

HAWA Hanford 97.95 37 PFAKE 04 40 40.0 +8.2
HAWA LR LR
comp=Z,1µm,21.0s,MS5.4

NEW Newport 98.24 34 PFAKE 04 40 40.0 +6.9
NEW LR LR
comp=Z,855nm,19.0s,MS5.3

YBH Yreka Blue Hor 98.47 42 PFAKE 04 40 40.0 +5.8
YBH LR LR
comp=Z,2µm,22.0s,MS5.6

WDC Whiskeytown Da 99.16 43 PFAKE 04 40 50.0 +13
WDC LR LR
comp=Z,2µm,21.0s,MS5.5

HOPS Hopland 99.60 45 PFAKE 04 40 50.0 +11
HOPS LR LR
comp=Z,3µm,22.0s,MS5.7

MOD Modoc 99.92 41 PFAKE 04 40 50.0 +10
MOD LR LR
comp=Z,834nm,20.0s,MS5.2

BMO Blue Mountains 100.11 37 PFAKE 04 40 50.0 +8.8
BMO LR LR
comp=Z,921nm,22.0s,MS5.2

MCCM Marconi Confer 100.16 45 PFAKE 04 40 50.0 +8.5
MCCM LR LR
comp=Z,1µm,21.0s,MS5.5

LBTB Lobatse 100.44 247 PFAKE 04 40 50.0 +7.2
LBTB LR LR
comp=Z,4µm,21.0s,MS5.9

OHCM Honcut 100.50 44 *e*Pdif Pdif 04 40 43.5 +0.5
WVOR Wild Horse Val 100.67 40 PFAKE 04 40 50.0 +6.3
WVOR LR LR
comp=Z,1µm,22.0s,MS5.3

MSO Missoula 100.83 34 PFAKE 04 40 50.0 +5.6
MSO LR LR
comp=Z,570nm,22.0s,MS5.0

FFC Flin Flon 100.90 23 PFAKE 04 40 50.0 +5.2
FFC LR LR
comp=Z,1µm,22.0s,MS5.4

BOSA Boshof 101.53 243 PFAKE 04 41 00.0 +12
BOSA LR LR
comp=Z,2µm,19.0s,MS5.8

SYO Syowa Base 101.56 201‖ *e*P Pdif 04 40 45.4 -2.3
SAO San Andreas Ge 101.83 46 PFAKE 04 41 00.0 +11
SAO LR LR
comp=Z,1µm,22.0s,MS5.5

CMB Columbia Colle 101.90 44 *e*Pdif Pdif 04 40 49.8 +0.6
comp=Z,9.3nm,1.2s
CMB *e*PP PP 04 45 03.6 +3.0
CMB LR LR
comp=Z,1µm,20.0s,MS5.5

CMB Columbia Colle 101.90 44 *e*P Pdif 04 40 49.8 +0.6
CMB *e* 04 45 03.6
CMB pmax pmax
comp=Z,9.0nm,1.2s
CMB MLR MLR
comp=Z,1µm,20.0s,MS5.5

EGMT Eagleton 102.25 32 PFAKE 04 41 00.0 +9.2
EGMT LR LR
comp=Z,1µm,22.0s,MS5.4

HLID Hailey 102.55 37 PFAKE 04 41 00.0 +7.9
HLID LR LR
comp=Z,974nm,22.0s,MS5.3

BMN Battle Mountai 102.67 41 PFAKE 04 41 00.0 +7.4
BMN LR LR
comp=Z,1µm,22.0s,MS5.4

BOZ Bozeman (W) 102.82 34 PFAKE 04 41 00.0 +6.7
BOZ LR LR
comp=Z,637nm,19.0s,MS5.2

NVAR Mina Array Bea 103.08 43 P Pdif 04 40 55.3 +0.8
comp=Z,1.9nm,0.7s,baz=294,slow=4.6,SNR=15
NVAR PP PP 04 45 09.0 -0.4
comp=Z,1.4nm,0.8s,baz=283,slow=7.0,SNR=3.6
NVAR PKKPbc PKKPbc 04 56 50.7 -1.1
comp=Z,0.7nm,0.7s,baz=125,slow=4.5,SNR=3.9

NVAR Mina Array Bea 103.08 43 P Pdif 04 40 55.3 +0.8
NVAR PP PP 04 45 09.0 -0.4
NVAR PKKPbc PKKPbc 04 56 50.7 -1.1

ESDC Sonseca Array 103.64 319 PP PP 04 45 13.3 -0.3
comp=Z,0.8nm,0.7s,baz=61,slow=7.0,SNR=4.6
ESDC PKKPbc PKKPbc 04 56 48.5 -1.6
comp=Z,2.1nm,0.9s,baz=201,slow=3.3,SNR=5.7

ESLA Sonseca Array 103.64 319 PFAKE 04 41 10.0 +13
ESLA LR LR
comp=Z,10µm,19.0s,MS6.4

ELK Elko 103.72 40 PFAKE 04 41 10.0 +13
ELK LR LR
comp=Z,2µm,21.0s,MS5.5

YMR Madison River 103.80 35 PFAKE 04 41 10.0 +12
YMR LR LR
comp=Z,2µm,21.0s,MS5.6

PAB San Pablo 103.96 319 PFAKE 04 41 10.0 +12
PAB LR LR
comp=Z,2µm,20.0s,MS5.7

TPH Tonopah 103.98 43 PFAKE 04 41 10.0 +12
TPH LR LR
comp=Z,2µm,22.0s,MS5.6

LKWY Lake 104.18 35 PFAKE 04 41 10.0 +11
LKWY LR LR
comp=Z,2µm,22.0s,MS5.5

RLMT Red Lodge 104.42 34 PFAKE 04 41 10.0 +10
RLMT LR LR
comp=Z,1µm,19.0s,MS5.5

DGMT Dagmar 104.61 29 PFAKE 04 41 10.0 +8.7
DGMT LR LR
comp=Z,1µm,21.0s,MS5.5

DAC Darwin (Calif) 104.73 45 PFAKE 04 41 10.0 +8.2
DAC LR LR
comp=Z,1µm,20.0s,MS5.5

AHID Auburn Hatcher 104.94 36 PFAKE 04 45 30.0 +12
AHID LR LR
comp=Z,1µm,22.0s,MS5.4

TAM Tamanrasset 104.96 299 *e*PKP PKiKP 04 45 17.1 -1.3
SNCC San Nicolas Is 104.99 48 PFAKE 04 45 30.0 +12
SNCC LR LR
comp=Z,1µm,20.0s,MS5.5

TPNV Topopah Spring 105.25 44 *e*Pdif Pdif 04 41 04.9 +0.7
comp=Z,8.7nm,1.2s
TPNV LR LR
comp=Z,1µm,22.0s,MS5.4

TPNV Topopah Spring 105.25 44 *e*P Pdif 04 41 04.9 +0.8
TPNV pmax pmax
comp=Z,9.0nm,1.2s
TPNV MLR MLR
comp=Z,1µm,22.0s,MS5.4

HWUT Hardware Ranch 105.41 37 PFAKE 04 45 30.0 +11
HWUT LR LR
comp=Z,1µm,22.0s,MS5.4

MTE Manteigas 105.44 321 PFAKE 04 45 30.0 +11
MTE LR LR
comp=Z,3µm,19.0s,MS5.8

MWC Mount Wilson 105.52 47 PKiKP PKiKP 04 45 18.7 -0.4
MWC *e*PP PP 04 45 28.8 +1.2
MWC LR LR
comp=Z,3µm,22.0s,MS5.8

DUG Dugway 105.54 39 PFAKE 04 45 30.0 +11
DUG LR LR
comp=Z,2µm,22.0s,MS5.5

BW06 Boulder Array 105.81 36 PFAKE 04 45 30.0 +11
BW06 LR LR
comp=Z,1µm,20.0s,MS5.4

PDAR Pinedale Array 105.81 36 Pdiff Pdif 04 41 08.1 +1.5
comp=Z,0.2nm,0.4s,baz=112,slow=4.0,SNR=2.6
PDAR PKiKP PKiKP 04 45 18.9 -0.5
comp=Z,1.0nm,0.9s,baz=318,slow=4.9,SNR=3.0
PDAR PKKPbc PKKPbc 04 56 41.6 -2.1
comp=Z,1.6nm,0.9s,baz=123,slow=5.5,SNR=7.5

SUR Sutherland 106.00 240 PFAKE 04 45 30.0 +10
SUR LR LR
comp=Z,3µm,20.0s,MS5.8

MPU Maple Canyon 106.36 39 PFAKE 04 45 30.0 +9.5
MPU LR LR
comp=Z,2µm,22.0s,MS5.7

TSUM Tsumeb 106.47 254 PFAKE 04 45 30.0 +8.8
TSUM LR LR
comp=Z,4µm,20.0s,MS6.0

ARUT Antelope Range 106.59 42 *e*PKiKP PKiKP 04 45 20.6 -0.5
ARUT *e*PP PP 04 45 35.1 -0.3
ULM Lac du Bonnet 106.73 23 PFAKE 04 45 30.0 +9.1
ULM LR LR
comp=Z,2µm,21.0s,MS5.7

MVU Marysvale 106.94 40 PFAKE 04 45 30.0 +8.4
MVU LR LR
comp=Z,1µm,20.0s,MS5.4

SFS San Fernando 106.94 317 PFAKE 04 45 30.0 +8.3
SFS LR LR
comp=Z,6µm,20.0s,MS6.2

PFO Pinyon Flat Ob 106.97 47 PFAKE 04 45 30.0 +8.2
PFO LR LR
comp=Z,2µm,22.0s,MS5.7

LDFC Landfair 107.07 45 *e*PKiKP PKiKP 04 45 20.6 -1.4
LDFC *e*PP PP 04 45 37.6 -1.5
RSSD Black Hills 107.82 32 PFAKE 04 45 30.0 +6.9
RSSD LR LR
comp=Z,1µm,20.0s,MS5.4

MDT Midelt 107.93 313 PKKPbc PKKPbc 04 56 36.6 -0.2
comp=Z,6.9nm,1.1s,baz=326,slow=3.6,SNR=3.9

AGMN Agassiz Refuge 108.31 24 PFAKE 04 45 30.0 +6.1
AGMN LR LR
comp=Z,1µm,20.0s,MS5.5

GLA Glamis 108.41 46 PFAKE 04 45 30.0 +5.4
GLA LR LR
comp=Z,2µm,22.0s,MS5.6

RTC Rabat Centre 108.81 315 PFAKE 04 45 30.0 +4.7
RTC LR LR
comp=Z,785nm,22.0s,MS5.2

SCHQ Schefferville 109.00 4 PFAKE 04 45 30.0 +5.0
SCHQ LR LR
comp=Z,2µm,22.0s,MS5.7

WUAZ Wupatki 109.29 42 PFAKE 04 45 40.0 +14
WUAZ LR LR
comp=Z,1µm,22.0s,MS5.5

RKT Rikitea 109.88 109 *e*SP SP 04 55 17.4 -6.9
comp=Z,912nm,34.5s

RKT Rikitea 109.88 109 *e*LR LR 05 17 26.6
comp=Z,3µm,32.8s

ISCO Idaho Springs 110.00 36 PFAKE 04 45 40.0 +13
ISCO LR LR
comp=Z,1µm,20.0s,MS5.5

MVCO Mesa Verde 110.03 39 PFAKE 04 45 40.0 +13
MVCO LR LR
comp=Z,951nm,20.0s,MS5.4

EYMN Ely 110.25 22 PFAKE 04 45 40.0 +12
EYMN LR LR
comp=Z,2µm,22.0s,MS5.5

NVL N'lazarevskaya 111.13 200 PKIKP PKiKP 04 45 27.8 -0.6
NVL pmax pmax
comp=Z,11nm,1.0s

OGNE Ogallala 111.14 33 *e*PKiKP PKiKP 04 45 29.6 +0.2
OGNE *e*PP PP 04 46 09.1 +1.0
OGNE LR LR
comp=Z,930nm,21.0s,MS5.3

SDCO Great Sand Dun 111.47 37 PFAKE 04 45 40.0 +10
SDCO LR LR
comp=Z,1µm,22.0s,MS5.5

TUC Tucson 111.61 45 PFAKE 04 45 40.0 +9.4
TUC LR LR
comp=Z,2µm,22.0s,MS5.7

ECSD EROS,Sioux Fal 111.64 28 PFAKE 04 45 40.0 +10
ECSD LR LR
comp=Z,1µm,22.0s,MS5.5

TOA0 Torodi Ar. Sit 112.25 292 *e*PKP PKiKP 04 45 31.0 -1.2
TORD Torodi Ar. Bea 112.25 292 PKiKP PKiKP 04 45 30.8 -1.5
comp=Z,6.3nm,0.7s,baz=41,slow=1.7,SNR=24
TORD PKKPbc PKKPbc 04 56 22.1 -0.3
comp=Z,3.4nm,0.9s,baz=274,slow=2.4,SNR=22

ANMO Albuquerque 112.76 40 *e*PKP PKiKP 04 45 33.3 +0.6
ANMO LR LR
comp=Z,2µm,22.0s,MS5.7

CBKS Cedar Bluff 113.90 33 PFAKE 04 45 40.0 +5.2
CBKS LR LR
comp=Z,1µm,22.0s,MS5.5

SCIA State Center 114.60 27 PFAKE 04 45 50.0 +14
SCIA LR LR
comp=Z,1µm,20.0s,MS5.5

JFWS Jewell Farm 114.98 24 PFAKE 04 45 50.0 +13
JFWS LR LR
comp=Z,1µm,22.0s,MS5.5

KSU1 Kansas State U 115.27 31 PFAKE 04 45 50.0 +13
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.6

GLMI Grayling 115.29 19 PFAKE 04 45 50.0 +13
GLMI LR LR
comp=Z,2µm,21.0s,MS5.6

SNAA Sanae 115.31 197 *e*PKPdf PKPdf 04 45 31.1 -5.3
SNAA *e* 04 45 33.7
SNAA *e* 04 45 37.2

SNAA	**Sanae**	**115.31**	**197**	*e*PKIKP	PKPdf	04 45 31.0	-5.4	
AMTX	**Amarillo**	**115.67**	**37**	PFAKE		04 45 50.0	+12	
AMTX				LR	LR			
	comp=Z,966nm,20.0s,MS5.4							
VNA2	**Neumayer--Watz**	**116.96**	**197**	*e*PKPdf	PKPdf	04 45 39.7	+0.1	
	baz=39,slow=0.9							
VNA2				*e*		04 45 41.8		
VNA2				*e*		04 45 45.9		
VNA1	**Neumayer--Stat**	**117.35**	**197**	*e*PKPdf	PKPdf	04 45 40.3	-0.1	
VNA1				*e*		04 45 42.5		
VNA1				*e*		04 45 46.4		
VNA3	**Neumayer Olymp**	**117.42**	**196**	*e*PKPdf	PKPdf	04 45 40.1	-0.4	
VNA3				*e*		04 45 42.2		
VNA3				*e*		04 45 45.2		
WMOK	**Wichita Mounta**	**117.42**	**35**	*e*PKPdf	PKPdf	04 45 41.1	-0.6	
WMOK				*ep*PKPdf	pPKPdf	04 45 54.0	-2.1	
WMOK				*es*PKPdf		04 45 59.1		
WMOK				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
AAM	**Ann Arbor**	**117.86**	**20**	PFAKE		04 45 50.0	+7.7	
AAM				LR	LR			
	comp=Z,2μm,22.0s,MS5.7							
LONY	**Lake Ozonia**	**118.04**	**12**	PFAKE		04 45 50.0	+7.4	
LONY				LR	LR			
	comp=Z,1μm,22.0s,MS5.5							
TXAR	**Lajitas Array**	**118.23**	**43**	PKP	PKPdf	04 45 42.7	-0.7	
	comp=Z,2.1nm,0.7s,baz=229,slow=0.9,SNR=21							
TXAR				PP	PP	04 46 56.2	-2.4	
	comp=Z,5.4nm,1.1s,baz=309,slow=5.7,SNR=2.7							
TXAR				PKKPbc	PKKPbc	04 56 00.3	-2.0	
	comp=Z,1.3nm,1.2s,baz=132,slow=32,SNR=2.8							
TXAR	**Lajitas Array**	**118.23**	**43**	PKP	PKPdf	04 45 42.7	-0.7	
TXAR				PP	PP	04 46 56.1	-2.4	
TXAR				PKKPbc	PKKPbc	04 56 00.3	-2.0	
TXAR	**Lajitas Array**	**118.23**	**43**	PKIKP	PKPdf	04 45 42.7	-0.7	
TXAR						04 46 56.2		
TXAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
TXAR				pmax	pmax			
	comp=Z,5.0nm,1.1s							
TXAR				pmax	pmax			
	comp=Z,1.0nm,1.2s							
PKME	**Peaks-Kenny Pk**	**118.24**	**7**	*e*PKPdf	PKPdf	04 45 42.5	-0.4	
PKME				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
CCM	**Cathedral Cave**	**118.62**	**28**	PFAKE		04 45 50.0	+6.1	
CCM				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
NCB	**Newcomb**	**118.73**	**12**	PFAKE		04 45 50.0	+6.1	
NCB				LR	LR			
	comp=Z,2μm,21.0s,MS5.6							
LBNH	**Lisbon**	**118.88**	**10**	PFAKE		04 45 50.0	+5.8	
LBNH				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
MDV	**Middlebury**	**118.90**	**11**	*e*PKPdf	PKPdf	04 45 44.0	-0.3	
ERPA	**Erie**	**119.13**	**17**	PFAKE		04 45 50.0	+5.2	
ERPA				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
BLO	**Bloomington**	**119.63**	**23**	*e*PKPdf	PKPdf	04 45 45.3	-0.5	
BLO				*ep*PKPdf	pPKPdf	04 45 57.6	-2.7	
JCT	**Junction City**	**119.90**	**39**	*e*PKPdf	PKPdf	04 45 46.0	-0.5	
JCT				LR	LR			
	comp=Z,764nm,20.0s,MS5.3							
ACSO	**Alum Creek Sta**	**119.95**	**20**	*e*PKPdf	PKPdf	04 45 45.7	-0.6	
ACSO				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
BINY	**Binghamton**	**120.06**	**14**	*e*PKPdf	PKPdf	04 45 46.3	-0.2	
BINY				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
MIAR	**Mount Ida**	**120.34**	**32**	*e*PKPdf	PKPdf	04 45 47.1	-0.2	
MIAR				*ep*PKPdf	pPKPdf	04 46 00.1	-1.7	
MIAR				*es*PKPdf		04 46 05.2		
MIAR				LR	LR			
	comp=Z,2μm,22.0s,MS5.6							
WCI	**Wyandotte Cave**	**120.54**	**24**	*e*PKPdf	PKPdf	04 45 47.2	-0.4	
WCI				*ep*PKPdf	pPKPdf	04 45 59.2	-2.9	
WCI				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
DBIC	**Dimbokro**	**120.74**	**288**	PKP	PKPdf	04 45 47.5	-1.1	
	comp=Z,20nm,0.7s,baz=60,slow=2.4,SNR=22							
DBIC				PP	PP	04 47 13.8	-3.1	
	comp=Z,11nm,0.9s,baz=63,slow=8.2,SNR=4.0							
DBIC	**Dimbokro**	**120.74**	**288**	*e*PKPdf	PKPdf	04 45 47.9	-0.7	
DBIC				LR	LR			
	comp=Z,2μm,22.0s,MS5.6							
DBIC	**Dimbokro**	**120.74**	**288**	PKIKP	PKPdf	04 45 47.5	-1.1	
DBIC						04 47 13.9		
DBIC				pmax	pmax			
	comp=Z,20nm,0.7s							
DBIC				pmax	pmax			
	comp=Z,11nm,0.9s							
KIC	**Kosan Boka**	**120.76**	**288**	*e*PKIKP	PKPdf	04 45 47.8	-0.8	
	comp=Z,127nm,0.7s							
WES	**Weston**	**120.78**	**10**	PFAKE		04 46 00.0	+12	
WES				LR	LR			
	comp=Z,783nm,20.0s,MS5.3							
TIC	**Toumodi**	**120.90**	**288**	*e*PKIKP	PKPdf	04 45 47.9	-1.0	
	comp=Z,140nm,1.0s							
LIC	**Lamto**	**121.07**	**288**	⇑*i*PKIKP	PKPdf	04 45 48.1	-1.1	
	comp=Z,118nm,1.1s							
LIC				*e*MLR	MLR			
	comp=Z,2μm,21.0s,MS5.5							
LIC	**Lamto**	**121.07**	**288**	*e*PKIKP	PKPdf	04 45 48.2	-1.0	
	comp=Z,147nm,1.1s							
LIC	**Lamto**	**121.07**	**288**	⇑*i*PKPdf	PKPdf	04 45 48.1	-1.1	
LIC				LR	LR			
	comp=Z,1μm,21.0s,MS5.5							
SSPA	**Standing Stone**	**121.08**	**16**	*e*PKPdf	PKPdf	04 45 48.1	-0.5	
SSPA				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
MCWV	**Mont Chateau**	**121.45**	**18**	PFAKE		04 46 00.0	+11	
MCWV				LR	LR			
	comp=Z,2μm,20.0s,MS5.7							
WVT	**Waverly**	**121.72**	**26**	*e*PKPdf	PKPdf	04 45 49.2	-0.7	
WVT				*ep*PKPdf	pPKPdf	04 46 02.3	-2.1	
WVT				LR	LR			
	comp=Z,1μm,21.0s,MS5.5							
NATX	**Nacogdoches**	**121.93**	**35**	PFAKE		04 46 00.0	+10	
NATX				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
OXF	**Oxford**	**122.38**	**29**	*e*PKPdf	PKPdf	04 45 50.4	-0.8	
OXF				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
HKT	**Hockley**	**122.64**	**37**	*e*PKPdf	PKPdf	04 45 52.1	+0.2	
HKT				*ep*PKPdf	pPKPdf	04 46 05.7	-0.7	
HKT				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
TZTN	**Tazewell**	**123.05**	**22**	*e*PKPdf	PKPdf	04 45 51.6	-0.9	
TZTN				*ep*PKPdf	pPKPdf	04 46 05.0	-1.9	
TZTN				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
KVTX	**Kingsville**	**123.15**	**40**	PFAKE		04 46 00.0	+7.1	
KVTX				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
CBN	**Corbin**	**123.50**	**16**	PFAKE		04 46 00.0	+6.7	
CBN				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
BLA	**Blacksburg**	**123.52**	**19**	PFAKE		04 46 00.0	+6.7	
BLA				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
VBMS	**Vicksburg**	**123.73**	**31**	PFAKE		04 46 00.0	+6.1	
VBMS				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							
TKL	**Tuckaleechee C**	**123.75**	**23**	*e*PKPdf	PKPdf	04 45 53.4	-0.4	
TKL				*ep*PKPdf	pPKPdf	04 46 06.4	-2.0	
LRAL	**Lakeview Retre**	**124.70**	**27**	*e*PKPdf	PKPdf	04 45 55.4	-0.3	
LRAL				*ep*PKPdf	pPKPdf	04 46 09.4	-0.8	
LRAL				LR	LR			
	comp=Z,2μm,22.0s,MS5.7							
GOGA	**Godfrey**	**125.86**	**24**	*e*PKPdf	PKPdf	04 45 57.9	0.0	
GOGA				*es*PKPdf		04 46 16.9		
GOGA				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
JSC	**Jenkinsville**	**125.90**	**22**	*e*PKPdf	PKPdf	04 45 57.7	-0.3	
CNNC	**Cliffs of the**	**126.12**	**18**	PFAKE		04 46 10.0	+12	
CNNC				LR	LR			
	comp=Z,2μm,22.0s,MS5.6							
BRAL	**Brewton**	**126.38**	**29**	PFAKE		04 46 10.0	+11	
BRAL				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
NHSC	**New Hope**	**127.34**	**21**	PFAKE		04 46 10.0	+9.2	
NHSC				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
SHEL	**Horse Pasture**	**127.86**	**262**	PFAKE		04 46 10.0	+7.9	
SHEL				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
DWPF	**Disney**	**131.35**	**25**	PFAKE		04 46 20.0	+11	
DWPF				LR	LR			
	comp=Z,1μm,22.0s,MS5.5							
PMSA	**Palmer Station**	**131.43**	**178**	PFAKE		04 46 20.0	+13	
PMSA				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
BBSR	**BB Station**	**131.48**	**5**	PFAKE		04 46 20.0	+11	
BBSR				LR	LR			
	comp=Z,881nm,19.0s,MS5.5							
TGUH	**Tegucigalpa,Un**	**139.71**	**43**	PFAKE		04 46 30.0	+5.6	
TGUH				LR	LR			
	comp=Z,823nm,21.0s,MS5.5							
SDDR	**Presa de Saban**	**143.34**	**18**	*e*PKPdf	PKPdf	04 46 27.3	-3.5	
SDDR				LR	LR			
	comp=Z,2μm,22.0s,MS5.7							
EFI	**East Falkland**	**144.60**	**182**	*e*PKPdf	PKPdf	04 46 31.5	-0.5	
EFI				*ep*PKPdf	pPKPdf	04 46 43.8	-2.7	
EFI				LR	LR			
	comp=Z,2μm,22.0s,MS5.8							
AGPR	**Aguadilla, PR**	**144.85**	**12**	*e*PKPbc	PKPdf	04 46 32.4	-1.0	
SJG	**San Juan**	**145.37**	**10**	*e*PKPdf	PKPdf	04 46 34.6	+0.2	
SJG				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
MTP	**Monte Pirata**	**145.48**	**9**	*e*PKPdf	PKPdf	04 46 34.0	-0.5	
PAYG	**Puerto Ayora**	**146.52**	**65**	*e*PKPbc	PKPbc	04 46 38.9	+1.0	
PAYG				*ep*PKPdf	pPKPdf	04 46 50.4	-0.6	
PAYG				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
BCIP	**Isla Barro Col**	**148.12**	**39**	*e*PKPbc	PKPbc	04 46 41.3	-1.0	
BCIP				*e*		04 46 55.8		
BCIP				LR	LR			
	comp=Z,1μm,22.0s,MS5.6							
MDN	**Morne-Daniel**	**148.63**	**2**	*e*	PKPbc	04 46 41.4	-2.2	
DSTT	**Stowe**	**148.71**	**2**	*e*	PKPab	04 46 46.0	-1.3	
DSHT	**Scott's Head**	**148.74**	**2**	*e*	PKPab	04 46 44.5	-2.9	
FDF	**Fort de France**	**149.22**	**2**	*e*PKPdf	PKPdf	04 46 41.4	+0.6	
FDF				*e*PKPbc	PKPbc	04 46 45.2	+0.2	
FDF	**Fort de France**	**149.22**	**2**	*eP*	PKPbc	04 46 44.9	-0.2	
BIM	**Bigot**	**149.44**	**2**	*eP*	PKPbc	04 46 46.0	+0.4	
BBGH	**Gun Hill**	**150.81**	**359**	PFAKE		04 46 50.0	+6.6	
BBGH				LR	LR			
	comp=Z,2μm,20.0s,MS5.9							
GRGR	**Grenville**	**151.78**	**3**	*e*PKPbc	PKPbc	04 46 50.9	-0.3	
GRGR				LR	LR			
	comp=Z,1μm,19.0s,MS5.7							
SDV	**Santo Domingo**	**152.98**	**23**	PKP	PKPdf	04 46 47.1	+0.5	
	comp=Z,12nm,0.8s,baz=317,slow=4.4,SNR=16							
SDV				PKPbc	PKPbc	04 46 53.7	-0.2	
	comp=Z,124nm,0.8s,baz=9.0,slow=1.3,SNR=78							
SDV				PKPab	PKPab	04 47 02.7	-2.4	
	comp=Z,89nm,0.7s,baz=282,slow=5.9,SNR=9.4							
SDV	**Santo Domingo**	**152.98**	**23**	*e*PKPdf	PKPdf	04 46 46.8	+0.1	
SDV				*e*PKPbc	PKPbc	04 46 54.1	+0.2	
SDV				*e*		04 47 02.9		
SDV				LR	LR			
	comp=Z,752nm,22.0s,MS5.5							
PCRV	**Puerto La Cruz**	**153.40**	**10**	PKPbc	PKPbc	04 46 53.2	-1.6	
	comp=Z,46nm,0.8s,baz=217,slow=1.9,SNR=14							
PLCA	**Paso Flores**	**153.97**	**162**	PKP	PKPdf	04 46 48.0	+0.7	
	comp=Z,8.6nm,1.0s,baz=188,slow=6.4,SNR=6.9							
PLCA				PKPbc	PKPbc	04 46 55.6	+0.4	
	comp=Z,34nm,0.9s,baz=192,slow=3.5,SNR=8.5							
PLCA	**Paso Flores**	**153.97**	**162**	*e*PKPdf	PKPdf	04 46 48.1	+0.8	
PLCA				*e*PKPbc	PKPbc	04 46 55.9	+0.6	
PLCA				LR	LR			
	comp=Z,993nm,22.0s,MS5.6							
PLCA	**Paso Flores**	**153.97**	**162**	PKIKP	PKPdf	04 46 48.0	+0.7	
PLCA				pmax	pmax			
	comp=Z,9.0nm,1.0s							
PLCA				pmax	pmax			
	comp=Z,34nm,0.9s							
RCBR	**Riachuelo**	**154.08**	**291**	*e*PKPdf	PKPdf	04 46 48.6	+0.3	
RCBR				*e*PKPbc	PKPbc	04 46 56.8	+0.5	
RCBR				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
ROSC	**El Rosal**	**154.79**	**35**	PKP	PKPdf	04 46 50.2	+0.9	
	comp=Z,3.3nm,0.3s,baz=103,slow=20,SNR=11							
ROSC	**El Rosal**	**154.79**	**35**	*e*PKPdf	PKPdf	04 46 51.0	+1.8	
ROSC				*ep*PKPdf	pPKPdf	04 47 02.8	-1.0	
OTAV	**Otavalo**	**155.64**	**50**	*e*PKPdf	PKPdf	04 46 50.6	+0.2	
OTAV				*ep*PKPdf	pPKPdf	04 47 05.2	+0.2	
OTAV				LR	LR			
	comp=Z,1μm,19.0s,MS5.7							
ATAH	**Atahualpa**	**159.94**	**65**	PKP	PKPdf	04 46 56.9	+1.2	
	comp=Z,12nm,1.0s,baz=315,slow=4.3,SNR=6.7							
ATAH				PKPab	PKPab	04 47 37.4	+2.2	
	comp=Z,113nm,1.1s,baz=275,slow=2.5,SNR=11							
CAM4	**Nova Friburgo**	**162.32**	**247**	⇓*i*P	PKPab	04 47 45.4	0.0	
CAM4				*i*		04 47 47.4		
CAM4				*i*		04 47 49.6		
CAM4				*i*		04 47 54.9		
CAM4				*i*		04 48 17.4		
CFAA	**Coronel Fontan**	**163.02**	**156**	PKPab	PKPab	04 47 46.8	-1.2	
	baz=229,slow=5.5							
NNA	**Nana**	**163.28**	**78**	*e*PKPdf	PKPdf	04 46 57.3	-1.8	
NNA				LR	LR			
	comp=Z,1μm,22.0s							
LCO	**Las Campanas**	**164.00**	**144**	*e*PKPdf	PKPdf	04 46 59.9	+0.5	
LCO				*ep*PKPdf	pPKPdf	04 47 13.8	-0.2	
LCO				LR	LR			
	comp=Z,2μm,20.0s							
BDFB	**Brasilia**	**168.30**	**271**	PKP	PKPdf	04 47 02.4	-0.7	
	comp=Z,6.8nm,1.1s,baz=140,slow=6.1,SNR=11							
BDFB	**Brasilia**	**168.30**	**271**	PKIKP	PKPdf	04 47 02.4	-0.7	
BDFB				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ARE	**Arequipa**	**169.12**	**93**	*eP*	PKPdf	04 47 05.0	+1.4	
LVC	**Limon Verde**	**169.59**	**129**	PKP	PKPdf	04 47 03.7	-0.1	
	comp=Z,16nm,1.2s,baz=178,slow=1.9,SNR=4.5							
LVC				PKPab	PKPab	04 48 13.8	-3.6	
	comp=Z,3.5nm,0.7s,baz=291,slow=11,SNR=7.3							
LVC	**Limon Verde**	**169.59**	**129**	*e*PKPdf	PKPdf	04 47 04.3	+0.5	
LVC				*ep*PKPdf	pPKPdf	04 47 18.1	-0.2	
LVC				LR	LR			
	comp=Z,1μm,22.0s							
SIV	**San Ignacio**	**179.09**	**75**	PKP	PKPdf	04 47 06.8	-0.2	
	comp=Z,18nm,0.9s,baz=142,slow=1.5,SNR=70							
SIV				PKPab		04 48 58.8		
	comp=Z,9.9nm,0.9s,baz=322,slow=3.8,SNR=10							

NEIC ***27*** *04:40:21.6, 1865N×10176W, h34km, MD4.2(MEX), After MEX.*

MEX 27 04:40:21.5±0.6, 1865N×10176W, h34km±22km, MD4.2, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**1.08**	**165**	*i* P	Pn	04 40 38.1	-2.2
ZIIG				*i* S	Sn	04 40 52.0	-2.0
MOIG	**Morelia**	**1.15**	**28**	*i* P	Pn	04 40 39.2	-2.1
MOIG				*i* S	Sn	04 40 54.1	-1.8
MMIG	**Aquila**	**1.55**	**257**	*i* P	Pn	04 40 45.0	-1.6
MMIG				*i* S	Sn	04 41 03.4	-2.1
CAIG	**El Cayaco**	**2.14**	**138**	*i* P	Pn	04 40 52.6	-2.2
CAIG				*i* S	Sn	04 41 16.1	-4.1
CAIG	**El Cayaco**	**2.14**	**138**	*i* P	Pn	04 40 52.6	-2.2
CAIG				*i* S	Sn	04 41 17.6	-2.6
PLIG	**Platanillo**	**2.16**	**97**	*eP*	Pn	04 40 53.6	-1.5
PLIG				*i* S	Sn	04 41 19.7	-1.0
SFJM	**Santa Fe**	**2.19**	**327**	*i* P	Pn	04 40 54.2	-1.2
SFJM				*i* S	Sn	04 41 19.8	-1.6
MZVM		**2.46**	**77**	*i* P	Pn	04 40 58.2	-1.0
MZVM				*i* S	Sn	04 41 26.2	-1.8
ACX	**Acapulco**	**2.50**	**135**	*i* P	Pn	04 40 59.2	-0.5
ACX				*i* S	Sn	04 41 27.7	-1.4
PTVM	**Pico Tres Padr**	**2.67**	**69**	*eP*	Pn	04 41 01.4	-0.7
PTVM				*i* S	Sn	04 41 31.2	-2.2
IIO	**Organos**	**3.02**	**72**	*eP*	Pn	04 41 05.9	-1.1
IIO				*i* S	Sn	04 41 39.9	-2.1
UTMO	**Huajuapan**	**3.85**	**102**	*i* P	Pn	04 41 17.5	-0.8
UTMO				*i* S	Sn	04 41 58.4	-4.1
PNIG	**Pinotepa**	**4.13**	**122**	*eP*	Pn	04 41 21.4	-0.8
PNIG				*i* S	Sn	04 42 06.7	-2.8
VHO	**Vista Hermosa**	**5.04**	**107**	*eP*	Pn	04 41 34.4	-0.4
VHO				*i* S	Sn	04 42 30.8	-1.0

IGQ 27 04:55:50.1, 276S×8016W, h10km±15km, Mb4.0, Ms3.8, 5D, Error ellipse: s-maj=14.9km s-min=6.4km az=132.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**1.97**	**50**	P	Pn	04 56 25.6	+2.0
IGUA	**Igualata**	**1.97**	**50**	S	Sn	04 56 52.2	+3.8
ARRY	**Arrayan**	**2.11**	**54**	⇓P	Pn	04 56 27.2	+1.8
ARRY	**Arrayan**	**2.11**	**54**	⇓S	Sn	04 56 54.2	+2.5
PATA	**Patacocha**	**2.13**	**54**	P	Pn	04 56 28.3	+2.6
ULBA	**Ulba**	**2.18**	**53**	P	Pn	04 56 29.5	+3.1
RUN5	**Runtun**	**2.19**	**52**	P	Pn	04 56 29.8	+3.3
QIL2	**Quilotoa**	**2.25**	**33**	P	Pn	04 56 28.6	+1.1
QIL2	**Quilotoa**	**2.25**	**33**	S	Sn	04 56 56.3	+1.1
PISA	**Pisayambo**	**2.45**	**46**	⇓P	Pn	04 56 33.8	+3.7
CAMI	**Rancho Maria**	**2.65**	**39**	P	Pn	04 56 36.4	+3.5
CAMI	**Rancho Maria**	**2.65**	**39**	S	Sn	04 57 13.2	+8.1
TAMB	**Tambo**	**2.72**	**41**	P	Pn	04 56 37.6	+3.7
TAMB	**Tambo**	**2.72**	**41**	S	Sn	04 57 13.5	+6.6
VC1	**Cotopaxi 1**	**2.74**	**40**	P	Pn	04 56 37.7	+3.6
VC1	**Cotopaxi 1**	**2.74**	**40**	S	Sn	04 57 13.9	+6.6
TERV	**Terraza Guagua**	**3.00**	**31**	P	Pn	04 56 40.4	+2.6
GGP	**Refugio Guagua**	**3.01**	**31**	P	Pn	04 56 40.4	+2.6
GGP	**Refugio Guagua**	**3.01**	**31**	S	Sn	04 57 17.1	+3.1
PINO	**Pino**	**3.01**	**31**	⇓P	Pn	04 56 40.4	+2.5
PINO	**Pino**	**3.01**	**31**	⇓S	Sn	04 57 17.3	+3.2
ANTI	**Antisana**	**3.04**	**41**	P	Pn	04 56 41.2	+2.9
YANA	**Yana**	**3.07**	**31**	P	Pn	04 56 41.1	+2.5
CAYA	**Cayambe**	**3.55**	**38**	P	Pn	04 56 52.0	+6.6
COTA	**Cotacachi**	**3.57**	**31**	P	Pn	04 56 49.1	+3.5

DJA ***27*** *04:57:08, 339S×9892E, h40km, MLv4.9/5*
IDC ***27*** *04:57:22.1±2.6, 2.185S×100.46E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/20, mbtmp4.0/5, Error ellipse: s-maj=119.9km s-min=21.3km az=54.0*
ISCJB ***27*** *04:57:23.6±1.3, 26S±0.1×99.9E±0.2, h33km, mb3.9/5, Error ellipse: s-maj=24.0km s-min=14.9km az=156.2*

ISC 27 04:57:26.0±1.3, 25S±0.1×1001E±0.2, h35km, n10, σ0$71/9, mb4.0/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.46**	**74**	P	**Pn**	**04 57 50.4**	**+0.5**
PDSI	**Padang**	**1.62**	**15**	P	**Pn**	**04 57 51.5**	**-0.7**
PPI	**Padang Panjang**	**2.05**	**10**	P	**Pn**	**04 57 58.8**	**+0.7**
KSI	**Kapahiang**	**2.78**	**114**	P	**Pn**	**04 58 03.3**	**-4.8**
WRA	**Warramunga Arr**	**37.70**	**120**	P	**P**	**05 04 37.9**	**-0.6**
	1.9nm,0.6s,mb4.0,baz=302,slow=9.0,SNR=24						
ASAR	**Alice Springs**	**38.92**	**126**	P	**P**	**05 04 49.0**	**+0.3**
	1.5nm,0.6s,mb3.9,baz=301,slow=7.8,SNR=32						
SONM	**Songino Array**	**50.43**	**6**	P	**P**	**05 06 18.7**	**-1.3**
	0.5nm,0.6s,mb3.7,baz=180,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**51.52**	**344**	P	**P**	**05 06 28.5**	**+0.3**
	0.3nm,0.3s,mb3.7,baz=156,slow=9.0,SNR=7.8						
ARCES	**ARCESS Array B**	**86.95**	**340**	P	**P**	**05 10 07.9**	**+0.8**
	1.9nm,0.7s,mb4.4,baz=90,slow=6.3,SNR=4.9						
TXAR	**Lajitas Array**	**145.06**	**38**	PKP	PKPdf	05 17 00.4	0.0
	0.9nm,0.6s,baz=212,slow=1.4,SNR=19						

IDC ***27*** *05:04:30.6±1.0, 180N×9761E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.1/22, mbtmp4.2/11, ML4.8/1, Error ellipse: s-maj=49.7km s-min=17.4km az=55.0*
NEIC ***27*** *05:04:35.7±0.6, 180N×9775E, h35km, mb4.7/3, Error ellipse: s-maj=24.9km s-min=9.6km az=57.0*
ISCJB ***27*** *05:04:38.4±0.5, 204N±005×9781E±005, h65km±6km, mb4.2/14, Error ellipse: s-maj=10.0km s-min=7.7km az=42.8*
DJA ***27*** *05:04:38, 2.12N×9776E, h23km, MLv4.2/3*

ISC 27 05:04:39.6±0.5, 202N±005×9782E±005, h59km±6km, n36, σ0$73/34, mb4.3/14, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.75**	**199**	P	**Pn**	**05 04 53.3**	**-1.2**
GSI	**Gunungsitoli**	**0.75**	**199**	S	**Sn**	**05 05 06.1**	**+0.8**
TRSI	**Tarutung**	**1.14**	**90**	P	**Pn**	**05 04 58.9**	**-0.5**
TRSI	**Tarutung**	**1.14**	**90**	S	**Sn**	**05 05 14.6**	**+0.4**
PPI	**Padang Panjang**	**3.56**	**134**	P	**Pn**	**05 05 33.6**	**+1.2**
PDSI	**Padang**	**3.93**	**138**	P	**Pn**	**05 05 37.8**	**+0.3**
IPM	**Ipoh**	**4.03**	**53**	P	**Pn**	**05 05 38.4**	**-0.4**
BSI	**Banda Aceh**	**4.28**	**324**	P	**Pn**	**05 05 42.0**	**-0.2**
BSI	**Banda Aceh**	**4.28**	**324**	S	**Sn**	**05 06 29.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**16.38**	**4**	Pn	**Pn**	**05 08 25.3**	**-0.4**
	1.4nm,0.3s,baz=197,slow=11,SNR=11						
ODAN	**Odare**	**26.65**	**339**	*eP*	**P**	**05 10 13.0**	**0.0**
TAPN	**Ta

Port Hadlock, Randle, Redmond, Shelton, Snohomish and Sultan.

*PNSN **27** 06:18:28.9, 4774N×122.92W, h53km, MD4.0, Fault plane solution: NP1:ϕs330.00000°, δ40.00000°, NP2: ϕs198.00000°, δ61.00000°, Principal axes: T Plg11.0000°, Azm268.0000°; P Plg63.0000°, Azm155.0000°; Fault plane solution: NP1:ϕs190.00000°, δ55.00000°, NP2: ϕs10.00000°, δ35.00000°, Principal axes: T Plg10.0000°, Azm280.0000°; P Plg80.0000°, Azm100.0000°;*

ISC 27 06:18:28.7±0.2, 4778N±001×12293W±002, h55km±3km, n221, σ0ᵗ66/260, mb4.1/2, 107C-57D, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C04A	**Brinnon**	**0.07**	**205**	⇑P	**Pn**	**06 18 36.2**	**-0.8**
	baz=0.0,SNR=1000						
C04A				⇑S	**Sn**	**06 18 42.0**	**-1.0**
	baz=0.0						
HDW	**Hoodsport**	**0.15**	**213**	⇓P	**Pn**	**06 18 36.7**	**-0.6**
KINR	**Kitsap County**	**0.20**	**98**	⇓P	**Pn**	**06 18 37.2**	**-0.3**
GNW	**Green Mountain**	**0.23**	**162**	P	**Pn**	**06 18 36.9**	**-0.9**
KITP	**Kitsap County**	**0.23**	**117**	P	**Pn**	**06 18 37.7**	**-0.1**
GMW	**Gold Mountain**	**0.25**	**157**	⇓P	**Pn**	**06 18 37.1**	**-0.8**
KIMR	**Kitsap County**	**0.30**	**158**	⇓P	**Pn**	**06 18 37.6**	**-0.7**
SQM	**Sequim**	**0.31**	**345**	⇓P	**Pn**	**06 18 38.6**	**+0.2**
BABE	**Bainbridge Sch**	**0.32**	**123**	⇑P	**Pn**	**06 18 38.7**	**+0.3**
LAWT	**Lawton Element**	**0.38**	**108**	⇑P	**Pn**	**06 18 39.4**	**+0.4**
QAW	**Queen Anne**	**0.41**	**111**	P	**Pn**	**06 18 40.0**	**+0.6**
BRKS	**Brookside Elem**	**0.43**	**93**	⇑P	**Pn**	**06 18 39.6**	**+0.1**
SEA	**Seattle**	**0.44**	**106**	⇑P	**Pn**	**06 18 40.0**	**+0.4**
NOWS	**NOAA--Sand Poi**	**0.46**	**101**	⇑P	**Pn**	**06 18 40.4**	**+0.5**
BEVT	**Boeing Everett**	**0.47**	**72**	⇑P	**Pn**	**06 18 40.1**	**+0.2**
FINN	**Finn Hill Juni**	**0.47**	**97**	⇑P	**Pn**	**06 18 40.4**	**+0.5**
B04A	**Port Angeles**	**0.48**	**306**	P	**Pn**	**06 18 39.8**	**-0.3**
	baz=0.5,SNR=1000						
B04A				⇑S	**Sn**	**06 18 48.4**	**+0.2**
	baz=0.5						
WISC	**Wilburton Inst**	**0.54**	**108**	P	**Pn**	**06 18 41.2**	**+0.6**
SMW	**South Mountain**	**0.54**	**211**	⇑P	**Pn**	**06 18 40.6**	**-0.1**
LEOT	**Leota Junior H**	**0.55**	**91**	⇑P	**Pn**	**06 18 41.1**	**+0.3**
RHAZ	**Hazelwood Elem**	**0.56**	**115**	⇑P	**Pn**	**06 18 40.8**	**0.0**
EARN	**East Ridge Ele**	**0.60**	**93**	⇑P	**Pn**	**06 18 41.6**	**+0.2**
BLH	**Bald Hill**	**0.61**	**84**	⇑P	**Pn**	**06 18 41.1**	**-0.4**
MEW	**McNeil Island**	**0.61**	**161**	⇑P	**Pn**	**06 18 41.6**	**+0.1**
ALCT	**Alcott Element**	**0.62**	**102**	⇑P	**Pn**	**06 18 41.9**	**+0.3**
STW	**Striped Peak**	**0.62**	**307**	⇑P	**Pn**	**06 18 41.8**	**+0.1**
PNLK	**Pine Lake Midd**	**0.64**	**108**	⇑P	**Pn**	**06 18 42.0**	**+0.1**
TBPA	**Tacoma Substat**	**0.65**	**144**	⇑P	**Pn**	**06 18 41.8**	**-0.1**
D04A	**Dobbs Creek Ra**	**0.67**	**173**	⇑P	**Pn**	**06 18 42.3**	**0.0**
	baz=0.6,SNR=89						
D04A				⇑S	**Sn**	**06 18 52.7**	**+0.5**
	baz=0.6						
VGZ	**Gonzales**	**0.69**	**338**	P	**Pn**	**06 18 42.2**	**-0.3**
VGZ	**Gonzales**	**0.69**	**338**	⇑P	**Pn**	**06 18 42.2**	**-0.3**
VGZ				⇓S	**Sn**	**06 18 52.0**	**-0.6**
ERW	**Mount Erie**	**0.71**	**17**	P	**Pn**	**06 18 43.2**	**+0.5**
MBPA	**Monroe Substat**	**0.71**	**80**	P	**Pn**	**06 18 42.9**	**+0.2**
B05A	**Bryant**	**0.74**	**49**	⇑P	**Pn**	**06 18 43.1**	**0.0**
	baz=0.8,SNR=1000						
B05A				⇑S	**Sn**	**06 18 54.0**	**+0.3**
	baz=0.8						
ATES	**Arlington Traf**	**0.74**	**52**	⇑P	**Pn**	**06 18 43.2**	**0.0**
NLWA	**Neilton Lookou**	**0.74**	**239**	*e*Pn	**Pn**	**06 18 42.6**	**-0.5**
NLWA				*e*Sn	**Sn**	**06 18 53.1**	**-0.7**
NLWA	**Neilton Lookou**	**0.74**	**239**	⇑P	**Pn**	**06 18 42.9**	**-0.3**
	baz=0.7						
NLWA				⇑S	**Sn**	**06 18 53.3**	**-0.5**
	baz=0.7						
OSR	**Olympics--Salm**	**0.75**	**249**	⇑P	**Pn**	**06 18 43.0**	**-0.2**
ELW	**Echo Lake**	**0.77**	**111**	⇑P	**Pn**	**06 18 43.2**	**-0.3**
HTW	**Haystack Looko**	**0.78**	**88**	⇓P	**Pn**	**06 18 43.5**	**-0.2**
JCW	**Jim Creek**	**0.79**	**58**	⇑P	**Pn**	**06 18 43.7**	**0.0**
PCEP	**Pierce County**	**0.80**	**147**	P	**Pn**	**06 18 43.5**	**-0.3**
RAW	**Raver**	**0.81**	**123**	P	**Pn**	**06 18 44.0**	**+0.1**
OBC	**Olympics--Boni**	**0.81**	**289**	⇑P	**Pn**	**06 18 44.1**	**0.0**
CPW	**Capitol Peak**	**0.82**	**190**	P	**Pn**	**06 18 44.1**	**0.0**
RMW	**Rattlesnake Mo**	**0.82**	**112**	⇑P	**Pn**	**06 18 44.0**	**-0.2**
C05A	**Tolt Reservoir**	**0.84**	**95**	P	**Pn**	**06 18 44.1**	**-0.3**
	baz=0.8,SNR=1000						
C05A				⇓S	**Sn**	**06 18 55.9**	**-0.1**
	baz=0.8						
CMW	**Cultus Mountai**	**0.84**	**40**	⇑P	**Pn**	**06 18 44.9**	**+0.5**
OOW	**Octopus West**	**0.85**	**268**	⇑P	**Pn**	**06 18 44.4**	**-0.1**
PCFR	**Pierce County**	**0.86**	**157**	⇓P	**Pn**	**06 18 44.2**	**-0.5**
GHW	**Garrison Hill**	**0.86**	**149**	⇑P	**Pn**	**06 18 44.3**	**-0.4**
D05A	**Enumclaw**	**0.87**	**132**	⇑P	**Pn**	**06 18 44.8**	**0.0**
	baz=0.8,SNR=619						
D05A				⇓S	**Sn**	**06 18 57.0**	**+0.4**
	baz=0.8						
D03A	**Wishkah Elem.**	**0.88**	**221**	⇓P	**Pn**	**06 18 44.8**	**-0.1**
	baz=0.8						
D03A				⇓S	**Sn**	**06 18 56.9**	**+0.1**
	baz=0.8						
MCW	**Mount Constitu**	**0.90**	**4**	⇓P	**Pn**	**06 18 45.7**	**+0.4**
PGC	**Sidney**	**0.94**	**338**	*e*Pn	**Pn**	**06 18 45.5**	**-0.3**
PGC				*e*Sn	**Sn**	**06 18 57.8**	**-0.4**
PGC	**Sidney**	**0.94**	**338**	⇑P	**Pn**	**06 18 45.6**	**-0.1**
PGC				⇑S	**Sn**	**06 18 58.0**	**-0.3**
A04A	**Legoe Bay, Lum**	**0.95**	**9**	P	**Pn**	**06 18 46.3**	**+0.4**
	baz=1.0,SNR=97						
A04A				⇑S	**Sn**	**06 18 59.5**	**+0.9**
	baz=1.0						
GSM	**Grass Mountain**	**0.96**	**126**	⇓P	**Pn**	**06 18 45.8**	**-0.2**
RRHS	**Rochester High**	**0.98**	**184**	P	**Pn**	**06 18 46.4**	**+0.1**
OTR	**Olympics--Tyee**	**1.00**	**288**	⇑P	**Pn**	**06 18 46.4**	**-0.1**
SNB	**Saturna Island**	**1.01**	**351**	P	**Pn**	**06 18 47.0**	**+0.4**
SNB				⇓S	**Sn**	**06 19 00.1**	**+0.2**
SBES	**Silver Beach E**	**1.05**	**19**	P	**Pn**	**06 18 48.3**	**+1.1**
RVC	**Mount Rainier-**	**1.06**	**142**	⇑P	**Pn**	**06 18 47.2**	**-0.1**
ON2	**Olympics--Nort**	**1.07**	**213**	P	**Pn**	**06 18 47.0**	**-0.4**
C03A	**Quillayute Air**	**1.11**	**279**	⇓P	**Pn**	**06 18 47.9**	**-0.2**
	baz=1.1,SNR=117						
C03A				⇑S	**Sn**	**06 19 02.3**	**-0.1**
	baz=1.1						
LCW	**Lucas Creek**	**1.12**	**172**	P	**Pn**	**06 18 48.0**	**-0.1**
RPW	**Rockport**	**1.16**	**54**	⇑P	**Pn**	**06 18 49.1**	**+0.4**
LMW	**Ladd Mountain**	**1.19**	**158**	⇑P	**Pn**	**06 18 49.2**	**+0.1**
E04A	**Onalaska**	**1.19**	**173**	⇓P	**Pn**	**06 18 49.3**	**+0.2**
	baz=1.2,SNR=30						
FMW	**Mount Fremont**	**1.20**	**134**	⇑P	**Pn**	**06 18 49.2**	**0.0**
REMR	**Mount Rainier-**	**1.21**	**142**	⇑P	**Pn**	**06 18 49.3**	**0.0**
B06A	**Marblemount**	**1.22**	**52**	P	**Pn**	**06 18 49.8**	**+0.3**
	baz=1.2,SNR=253						
B06A				⇓S	**Sn**	**06 19 05.4**	**+0.5**
	baz=1.2						
MBW	**Mount Baker**	**1.22**	**34**	⇑P	**Pn**	**06 18 50.1**	**+0.7**
RCS	**Mount Rainier-**	**1.22**	**138**	⇑P	**Pn**	**06 18 49.6**	**+0.1**
GOBB	**Galiano Island**	**1.23**	**342**	⇑P	**Pn**	**06 18 50.0**	**+0.4**
GOBB				⇓S	**Sn**	**06 19 05.3**	**0.0**
RCM	**Mount Rainier-**	**1.25**	**139**	⇑P	**Pn**	**06 18 50.0**	**+0.2**
LON	**Longmire**	**1.28**	**143**	⇑P	**Pn**	**06 18 50.1**	**-0.2**
PFB	**Port Renfrew**	**1.29**	**309**	⇑P	**Pn**	**06 18 49.9**	**-0.5**
PFB				⇑S	**Sn**	**06 19 05.5**	**-1.0**
E03A	**Lebam**	**1.31**	**200**	P	**Pn**	**06 18 50.3**	**-0.3**
	baz=1.3,SNR=129						
E03A				⇑S	**Sn**	**06 19 06.0**	**-1.0**
	baz=1.3						
BMW	**Boistfort Moun**	**1.32**	**189**	⇓P	**Pn**	**06 18 50.6**	**-0.2**
A05A	**Maple Falls**	**1.34**	**24**	⇓P	**Pn**	**06 18 52.0**	**+0.9**
	baz=1.4						
A05A				⇑S	**Sn**	**06 19 08.8**	**+0.9**
	baz=1.4						
VDB	**Vedder Mountai**	**1.36**	**23**	⇑P	**Pn**	**06 18 52.1**	**+0.8**
VDB	**Vedder Mountai**	**1.36**	**23**	P	**Pn**	**06 18 52.2**	**+0.8**
VDB				⇑S	**Sn**	**06 19 09.1**	**+0.7**
C06A	**Tall Timber Ra**	**1.38**	**83**	P	**Pn**	**06 18 52.0**	**+0.4**
	baz=1.4,SNR=397						
C06A				⇑S	**Sn**	**06 19 09.2**	**+0.5**
	baz=1.4						
WRW	**Wenatchee Ridg**	**1.38**	**86**	⇑P	**Pn**	**06 18 52.0**	**+0.4**
KOSW	**Kosmos**	**1.41**	**159**	⇓P	**Pn**	**06 18 52.3**	**+0.3**
WPW	**White Pass**	**1.43**	**138**	⇓P	**Pn**	**06 18 52.9**	**+0.6**
E05A	**Randle**	**1.46**	**146**	P	**Pn**	**06 18 52.7**	**0.0**
	baz=1.4,SNR=317						
E05A				⇑S	**Sn**	**06 19 10.5**	**-0.1**
	baz=1.4						
TDL	**Tradedollar La**	**1.51**	**161**	P	**Pn**	**06 18 53.8**	**+0.4**
GLK	**Glacier Lake**	**1.51**	**143**	P	**Pn**	**06 18 54.1**	**+0.7**
ERK	**Elk Rock**	**1.53**	**165**	P	**Pn**	**06 18 54.1**	**+0.5**
D06A	**Cle Elum**	**1.53**	**112**	⇑P	**Pn**	**06 18 54.1**	**+0.4**
	baz=1.5,SNR=591						
D06A				⇓S	**Sn**	**06 19 13.5**	**+1.0**
	baz=1.5						
TWW	**Teanaway**	**1.54**	**114**	⇑P	**Pn**	**06 18 54.9**	**+1.2**
LTY	**Liberty**	**1.62**	**108**	⇑P	**Pn**	**06 18 55.6**	**+0.8**
FL2	**Flat Top 2**	**1.63**	**166**	⇑P	**Pn**	**06 18 55.6**	**+0.6**
RVW	**Rose Valley**	**1.64**	**175**	P	**Pn**	**06 18 55.3**	**+0.2**
SHW	**Mount Saint He**	**1.66**	**163**	P	**Pn**	**06 18 56.1**	**+0.8**
ESD	**East Dome**	**1.67**	**161**	P	**Pn**	**06 18 56.6**	**+1.1**
HSR	**South Ridge**	**1.69**	**162**	P	**Pn**	**06 18 56.8**	**+1.1**
TBM	**Table Mountain**	**1.69**	**110**	⇑P	**Pn**	**06 18 56.8**	**+0.9**
JLK	**June Lake**	**1.72**	**162**	P	**Pn**	**06 18 57.1**	**+0.9**
NLO	**Nicolai Mounta**	**1.73**	**192**	P	**Pn**	**06 18 56.5**	**+0.2**
LVP	**Lakeview Peak**	**1.75**	**168**	P	**Pn**	**06 18 56.8**	**+0.2**
ETW	**Entiat**	**1.76**	**95**	⇑P	**Pn**	**06 18 57.4**	**+0.6**
NLW	**Nelson Butte**	**1.77**	**79**	⇑P	**Pn**	**06 18 57.2**	**+0.4**
NAC	**Naches**	**1.77**	**125**	P	**Pn**	**06 18 57.7**	**+0.8**
E06A	**Yakima**	**1.82**	**132**	⇑P	**Pn**	**06 18 57.9**	**+0.3**
	baz=1.8,SNR=304						
EBG	**Ellensburg**	**1.83**	**118**	⇑P	**Pn**	**06 18 58.5**	**+0.9**
ASR	**Mount Adams--S**	**1.87**	**150**	P	**Pn**	**06 18 59.0**	**+0.8**
F04A	**Amboy**	**1.88**	**169**	⇑P	**Pn**	**06 18 58.7**	**+0.3**
	baz=1.8,SNR=43						
F04A				⇑S	**Sn**	**06 19 21.2**	**+0.2**
	baz=1.8						
F03A	**Seaside**	**1.90**	**193**	⇑P	**Pn**	**06 18 58.2**	**-0.5**
	baz=1.9,SNR=13						
F03A				⇓S	**Sn**	**06 19 21.3**	**0.0**
	baz=1.9						
C07A	**Waterville**	**1.94**	**92**	⇓P	**Pn**	**06 18 59.3**	**+0.1**
	baz=1.9,SNR=731						
C07A				⇑S	**Sn**	**06 19 22.5**	**+0.1**
	baz=1.9						
B07A	**Winthrop**	**2.00**	**69**	P	**Pn**	**06 19 00.5**	**+0.4**
	baz=2.0,SNR=242						
WTV	**Waterville**	**2.01**	**91**	⇑P	**Pn**	**06 19 00.2**	**0.0**
D07A	**Quincy**	**2.09**	**105**	P	**Pn**	**06 19 01.3**	**+0.1**
	baz=2.1,SNR=69						
A07A	**Ashnola River,**	**2.12**	**52**	⇑P	**Pn**	**06 19 01.8**	**+0.2**
	baz=2.1,SNR=92						
A07A				⇓S	**Sn**	**06 19 27.3**	**+0.5**
	baz=2.1						
DHW2	**Dyer Hill 2**	**2.14**	**83**	⇑P	**Pn**	**06 19 02.1**	**+0.2**
MXC	**Moxie City**	**2.16**	**123**	P	**Pn**	**06 19 02.5**	**+0.2**
KMOR	**Kings Mountain**	**2.18**	**190**	P	**Pn**	**06 19 02.0**	**-0.5**
BVW	**Beverly**	**2.29**	**114**	P	**Pn**	**06 19 04.2**	**+0.3**
EPH	**Ephrata**	**2.30**	**99**	⇑P	**Pn**	**06 19 03.8**	**-0.3**
SAW	**Saint Andrews**	**2.38**	**91**	⇑P	**Pn**	**06 19 04.8**	**-0.4**
E07A	**Sunnyside**	**2.43**	**119**	⇓P	**Pn**	**06 19 05.8**	**0.0**
	baz=2.4,SNR=19						
E07A				⇓S	**Sn**	**06 19 34.4**	**+0.1**
	baz=2.4						
G03A	**Yamhill**	**2.48**	**186**	⇑P	**Pn**	**06 19 06.7**	**+0.2**
	baz=2.4,SNR=12						
B08A	**Colville Reser**	**2.48**	**75**	⇓P	**Pn**	**06 19 06.5**	**0.0**
	baz=2.5,SNR=188						
F06A	**Goldendale**	**2.50**	**143**	⇓P	**Pn**	**06 19 06.9**	**+0.1**
	baz=2.5,SNR=8.4						
WAH2	**Wahluke Slope**	**2.51**	**113**	⇑P	**Pn**	**06 19 07.2**	**+0.2**
GBB	**Gable Butte**	**2.54**	**116**	⇑P	**Pn**	**06 19 07.6**	**+0.2**
G04A	**Mulino**	**2.59**	**173**	⇓P	**Pn**	**06 19 08.4**	**+0.3**
	baz=2.6,SNR=13						
LOCW	**Locke Island**	**2.61**	**113**	⇑P	**Pn**	**06 19 08.2**	**-0.1**
C08A	**Higginbotham F**	**2.62**	**88**	⇑P	**Pn**	**06 19 08.0**	**-0.5**
	baz=2.6,SNR=92						
HEBO	**Mount Hebo**	**2.63**	**193**	Pn	**Pn**	**06 19 11.2**	**+2.6**
GBL	**Gable Mountain**	**2.64**	**115**	⇑P	**Pn**	**06 19 08.9**	**+0.1**
RSW	**Rattlesnake Hi**	**2.67**	**120**	*e*Pn	**Pn**	**06 19 09.1**	**0.0**
RSW				*e*Sn	**Sn**	**06 19 40.3**	**0.0**
PNT	**Penticton**	**2.69**	**54**	P	**Pn**	**06 19 09.8**	**+0.4**
HAWA	**Hanford**	**2.70**	**120**	*e*Pn	**Pn**	**06 19 09.7**	**+0.1**
HAWA				*e*Pg	**Pn**	**06 19 17.2**	**+7.5**
HAWA				*e*Sn	**Sn**	**06 19 37.5**	**-3.6**
A08A	**Turner Farm, O**	**2.71**	**63**	⇑P	**Pn**	**06 19 09.6**	**-0.1**
	baz=2.7,SNR=33						
F07A	**Phinny Hill Vi**	**2.79**	**131**	⇓P	**Pn**	**06 19 10.8**	**0.0**
	baz=2.8,SNR=8.6						
D08A	**Wollman Farm,**	**2.82**	**103**	P	**Pn**	**06 19 10.4**	**-0.7**
	baz=2.8,SNR=23						
OD2	**Odessa Site #2**	**2.88**	**96**	⇑P	**Pn**	**06 19 11.3**	**-0.7**
E08A	**Dider Farm, El**	**2.94**	**115**	⇑P	**Pn**	**06 19 12.4**	**-0.5**
	baz=2.9						
ET3	**Eltopia**	**2.98**	**112**	P	**Pn**	**06 19 12.8**	**-0.6**
A09A	**Danville**	**3.13**	**66**	⇓P	**Pn**	**06 19 15.6**	**+0.1**
	baz=3.1,SNR=30						
H04A	**Detroit Lake**	**3.14**	**170**	⇑P	**Pn**	**06 19 15.6**	**0.0**
	baz=3.1,SNR=39						
H04A				⇑S	**Sn**	**06 19 52.3**	**+0.5**
	baz=3.1						
C09A	**Chrisman Ranch**	**3.14**	**88**	⇑P	**Pn**	**06 19 14.9**	**-0.7**
	baz=3.1,SNR=81						
D09A	**Jones Farm, Ri**	**3.22**	**101**	P	**Pn**	**06 19 15.8**	**-0.9**
	baz=3.2,SNR=50						
B09A	**Rice**	**3.27**	**77**	⇑P	**Pn**	**06 19 17.5**	**+0.2**
	baz=3.3						
G07A	**Ruggs Ranch, H**	**3.37**	**137**	⇑P	**Pn**	**06 19 18.3**	**-0.5**
	baz=3.3,SNR=7.3						
E09A	**Wood Farm, Sta**	**3.50**	**109**	⇑P	**Pn**	**06 19 20.0**	**-0.6**
	baz=3.5						
LNOR	**Lincton Mounta**	**3.71**	**119**	*e*Pn	**Pn**	**06 19 23.3**	**-0.2**
LNOR				*e*Pg	**Pn**	**06 19 32.7**	**+9.2**
A10A	**Northport**	**3.78**	**69**	⇑P	**Pn**	**06 19 24.2**	**-0.1**
	baz=3.8,SNR=70						
C10A	**Spilker Farm,**	**3.79**	**87**	P	**Pn**	**06 19 23.8**	**-0.7**
	baz=3.8,SNR=44						
I03A	**Eugene**	**3.81**	**184**	⇓P	**Pn**	**06 19 25.0**	**+0.1**
	baz=3.8,SNR=13						
B10A	**Chitwood Farm,**	**3.86**	**80**	⇓P	**Pn**	**06 19 25.1**	**-0.4**
	baz=3.9,SNR=14						
D10A	**Wagner Farm, O**	**3.91**	**99**	P	**Pn**	**06 19 25.5**	**-0.6**
	baz=3.9,SNR=15						
NEW	**Newport**	**3.93**	**81**	*e*Pn	**Pn**	**06 19 25.4**	**-1.0**
F09A	**S2 Ranch, Elgi**	**4.02**	**119**	⇓P	**Pn**	**06 19 27.6**	**-0.2**
	baz=4.0						
E10A	**Myers Farm, Un**	**4.18**	**106**	⇑P	**Pn**	**06 19 29.0**	**-0.8**
	baz=4.2,SNR=27						
F10A	**Beach Ranch, E**	**4.31**	**113**	⇓P	**Pn**	**06 19 31.6**	**0.0**
	baz=4.3						
G09A	**Cove**	**4.34**	**123**	⇓P	**Pn**	**06 19 32.0**	**-0.1**
	baz=4.3,SNR=25						
H08A	**Prairie City**	**4.40**	**136**	⇑P	**Pn**	**06 19 33.2**	**+0.2**
	baz=4.4,SNR=11						
J02A	**Umpqua**	**4.44**	**186**	⇓P	**Pn**	**06 19 33.5**	**+0.1**
	baz=4.4,SNR=6.4						
J02A				⇑S	**Sn**	**06 20 22.4**	**-1.3**
	baz=4.4						
B11A	**Sandpoint**	**4.45**	**79**	⇓P	**Pn**	**06 19 32.8**	**-0.7**
	baz=4.4,SNR=17						
A11A	**Hall Mountain,**	**4.53**	**72**	⇑P	**Pn**	**06 19 34.2**	**-0.4**
	baz=4.5,SNR=20						
G10A	**Bishop Farm, J**	**4.72**	**120**	⇑P	**Pn**	**06 19 37.1**	**-0.1**
	baz=4.7,SNR=43						
G10A				⇑S	**Sn**	**06 20 30.2**	**-0.3**
	baz=4.7						
E11A	**Bogner Ranch,**	**4.81**	**105**	⇑P	**Pn**	**06 19 37.4**	**-1.1**
	baz=4.8,SNR=24						
BMO	**Blue Mountains**	**4.87**	**125**	*e*Pn	**Pn**	**06 19 39.1**	**-0.3**
BMO				*e*Pg	**Pn**	**06 19 48.0**	**+8.7**
A12A	**Yaak River Ran**	**4.99**	**74**	⇑P	**Pn**	**06 19 41.0**	**+0.1**
	baz=5.0,SNR=12						
C12B	**Nagell Ranch,**	**5.03**	**88**	P	**Pn**	**06 19 40.6**	**-0.8**
	baz=5.0,SNR=133						
HUMO	**Hull Mountain**	**5.17**	**180**	*e*Pn	**Pn**	**06 19 44.7**	**+1.2**
D12A	**Red Ives Fores**	**5.19**	**95**	⇓P	**Pn**	**06 19 42.6**	**-1.1**
	baz=5.2						
E12A	**Beaver Dam Sad**	**5.21**	**102**	⇓P	**Pn**	**06 19 42.8**	**-1.1**
	baz=5.2,SNR=28						
H10A	**Noah's Angus R**	**5.35**	**124**	⇓P	**Pn**	**06 19 45.2**	**-0.7**
	baz=5.3,SNR=18						
BBB	**Bella Bella**	**5.53**	**325**	Pn	**Pn**	**06 19 49.4**	**+1.0**
	1.1nm,0.3s,baz=341,slow=13,SNR=8.7						
BBB				Sn	**Sn**	**06 20 49.5**	**-1.1**
	1.5nm,0.3s,baz=105,slow=9.7,SNR=7.1						
BBB	**Bella Bella**	**5.53**	**325**	Pn	**Pn**	**06 19 49.4**	**+1.0**
BBB				Sn	**Sn**	**06 20 49.5**	**-1.1**
C13A	**Hot Springs**	**5.64**	**88**	P	**Pn**	**06 19 49.0**	**-0.8**
	baz=5.6,SNR=20						
F12A	**Elk City**	**5.65**	**108**	⇑P	**Pn**	**06 19 49.3**	**-0.7**
	baz=5.6,SNR=27						
H11A	**Donnelly**	**5.70**	**120**	⇑P	**Pn**	**06 19 50.0**	**-0.7**
	baz=5.7,SNR=26						
B13A	**Whitefish**	**5.70**	**81**	⇑P	**Pn**	**06 19 49.9**	**-0.7**
	baz=5.7,SNR=19						
D13A	**Huson**	**5.79**	**94**	⇑P	**Pn**	**06 19 50.7**	**-1.2**
	baz=5.8,SNR=50						
A13A	**Flathead Natio**	**5.79**	**75**	⇓P	**Pn**	**06 19 52.1**	**+0.1**
	baz=5.8						
YBH	**Yreka Blue Hor**	**6.05**	**178**	Pn	**Pn**	**06 19 56.9**	**+1.5**
	0.2nm,0.3s,baz=359,slow=14,SNR=3.4						
MSO	**Missoula**	**6.19**	**96**	*e*Pn	**Pn**	**06 19 55.9**	**-1.5**
	7.2nm,0.4s						
C14A	**Swan Lake**	**6.19**	**87**	⇓P	**Pn**	**06 19 56.2**	**-1.2**
	baz=6.2						
F13A	**Darby**	**6.23**	**105**	⇓P	**Pn**	**06 19 57.2**	**-0.7**
	baz=6.2,SNR=21						
D14A	**Greenough**	**6.43**	**93**	⇓P	**Pn**	**06 19 59.5**	**-1.2**
	baz=6.4,SNR=25						
B14A	**Marquette Ranc**	**6.50**	**81**	⇓P	**Pn**	**06 20 00.9**	**-0.7**
	baz=6.5						
G13A	**Cobalt**	**6.58**	**111**	⇓P	**Pn**	**06 20 02.7**	**-0.1**
	baz=6.5,SNR=39						
E14A	**Clinton**	**6.58**	**98**	⇑P	**Pn**	**06 20 02.4**	**-0.4**
	baz=6.6						
CHMT	**Chamberlain Mo**	**6.63**	**94**	*e*Pn	**Pn**	**06 20 02.6**	**-0.8**
	8.7nm,0.5s						
I12A	**Atlanta**	**6.75**	**123**	⇑P	**Pn**	**06 20 04.7**	**-0.3**
	baz=6.7						
H13A	**Challis**	**6.83**	**115**	⇑P	**Pn**	**06 20 05.8**	**-0.3**
	baz=6.8						
F14A	**Wisdom**	**6.85**	**103**	⇓P	**Pn**	**06 20 06.1**	**-0.3**
	baz=6.8						
C15A	**Salmond Ranch,**	**6.96**	**86**	⇓P	**Pn**	**06 20 07.2**	**-0.6**
	baz=6.9,SNR=47						
B15A	**Bradely Ranch,**	**6.97**	**82**	⇓P	**Pn**	**06 20 07.0**	**-1.1**
	baz=6.9,SNR=18						
D15A	**Lincoln**	**7.10**	**92**	⇓P	**Pn**	**06 20 08.9**	**-1.0**
	baz=7.1,SNR=30						
E15A	**Deer Lodge**	**7.15**	**97**	⇑P	**Pn**	**06 20 09.9**	**-0.7**
	baz=7.1,SNR=5.8						
HLID	**Hailey**	**7.30**	**122**	*e*Pn	**Pn**	**06 20 16.0**	**+3.4**
	4.5nm,0.8s						
F15A	**Butte**	**7.42**	**101**	⇑P	**Pn**	**06 20 13.6**	**-0.6**
	baz=7.4,SNR=7.9						
DLMT	**Dillon**	**7.52**	**105**	*e*Pn	**Pn**	**06 20 14.8**	**-0.8**
	7.7nm,0.7s						
C16A	**Fuhringer Ranc**	**7.54**	**86**	⇓P	**Pn**	**06 20 15.4**	**-0.4**
	baz=7.5						
MCMT	**McKenzie Canyo**	**7.58**	**109**	*e*Pn	**Pn**	**06 20 16.1**	**-0.3**
	2.8nm,0.4s						
I14A	**Mackay**	**7.65**	**117**	⇑P	**Pn**	**06 20 17.4**	**-0.1**
	baz=7.6						
BOZ	**Bozeman (W)**	**8.05**	**101**	⇓P	**Pn**	**06 20 22.8**	**-0.1**
	baz=8.0						
F17A	**Fitzpatrick Pl**	**8.62**	**98**	⇑P	**Pn**	**06 20 30.3**	**-0.3**
	baz=8.6,SNR=9.0						
YMR	**Madison River**	**8.86**	**106**	Pn	**Pn**	**06 20 36.5**	**+2.5**
	6.3nm,0.6s						
ELK	**Elko**	**8.93**	**139**	Pn	**Pn**	**06 20 37.6**	**+2.6**
	0.1nm,0.3s,baz=299,slow=13,SNR=3.4

2.7nm,0.6s,mb4.5,baz=260,slow=9.0,SNR=4.8
STKA Stephens Creek 58.19 113 *e*P **P 07 27 36.8 +0.6**
1.6nm,1.2s,mb3.9
SNAA Sanae 61.06 201 *e*P **P 07 27 52.9 -2.4**
11nm,1.6s,mb4.8
QSPA South Pole Qui 63.65 180 P **P 07 28 13.4 +0.8**
5.6nm,1.0s,mb4.6,baz=279,slow=2.9,SNR=7.7
VNDA Vanda 63.83 166 P **P 07 28 14.3 +0.5**
3.7nm,1.1s,mb4.3,baz=276,slow=9.0,SNR=5.7
VNDA Vanda 63.83 166 P **P 07 28 14.3 +0.5**
CTAO Charters Tower 65.66 101 *e*P **P 07 28 27.2 +0.6**
7.8nm,0.9s,mb4.7
AAK Ala-Archa 68.76 0 *e*P **P 07 28 46.8 +1.2**
7.4nm,1.1s,mb4.5
TKM2 Tokmak 2 69.06 1 *e*P **P 07 28 47.5 0.0**
15nm,1.1s,mb4.8
MK31 Makanchi Array 73.28 6 *e*P **P 07 29 12.4 -0.6**
MKAR Makanchi Array 73.28 6 P **P 07 29 12.0 -1.0**
3.7nm,1.0s,mb4.2,baz=177,slow=6.1,SNR=19
BRTR Keskin Array B 75.98 329 P **P 07 29 29.6 +0.8**
2.7nm,1.0s,mb4.1,baz=114,slow=3.1,SNR=7.1
KURK Kurchatov 76.94 3 P **P 07 29 33.1 -0.9**
2.6nm,1.0s,mb4.1,baz=194,slow=6.3,SNR=7.4
AKTK Aktyubinsk 77.92 349 P **P 07 29 40.0 +0.5**
AKTO Aktyubinsk 77.92 349 P **P 07 29 40.0 +0.5**
2.8nm,1.0s,mb4.1,baz=157,slow=4.6,SNR=5.7
BVAR Borovoye Array 79.23 358 P **P 07 29 47.0 +0.3**
0.5nm,0.4s,mb3.8,baz=131,slow=6.7,SNR=6.1
SONM Songino Array 79.41 21 P **P 07 29 46.5 -1.2**
0.4nm,0.5s,mb3.6,baz=194,slow=5.5,SNR=3.4
ZALV Zalesovo Beam 80.61 6 P **P 07 29 53.1 -1.0**
2.1nm,0.9s,mb4.1,baz=197,slow=4.6,SNR=6.9
ZALV LR LR 08 03 41.7
comp=Z,42nm,19.9s,MS3.8,baz=150,slow=34
TORD Torodi Ar. Bea 80.73 290 P **P 07 29 56.0 +0.3**
2.6nm,1.1s,mb4.1,baz=168,slow=1.2,SNR=7.5
KSRS Korea Array 81.12 40 LR LR 08 04 10.2
comp=Z,66nm,19.1s,MS4.0,baz=82,slow=34
AKASG Malin Array Be 86.54 333 P **P 07 30 24.8 +0.2**
0.2nm,0.3s,mb3.8,baz=120,slow=4.0,SNR=4.3
AKASG Malin Array Be 86.54 333 P **P 07 30 24.8 +0.2**
EDM Edmonton 152.68 10 *e*PKPbc PKPbc 07 37 38.7 +0.5
TXAR Lajitas Array 176.62 328 PKP PKPdf 07 37 51.0 -1.6
0.5nm,1.0s,baz=31,slow=5.4,SNR=4.4

DJA 27 07:21:26.4±0.0, 177S×12841E, h20km, MLv3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.45**	**321**	P		Pn	07 21 50.4	-1.0
MSAI	**Masohi**	**1.65**	**162**	P		Pn	07 21 49.4	-4.8
AAI	**Ambon**	**1.92**	**186**	P		Pn	07 21 58.5	+0.6
AAI	**Ambon**	**1.92**	**186**	S		Sn	07 22 24.6	+3.1
SWI	**Sorong**	**2.99**	**72**	P		Pn	07 22 15.1	+2.4

IDC 27 07:22:24.1±3.9, 305S×10075E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, Error ellipse: s-maj=174.9km s-min=21.1km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.82**	**120**	P		P	07 29 33.9	-0.3
0.5nm,0.4s,baz=303,slow=8.9,SNR=5.1							
ASAR	**Alice Springs**	**38.03**	**126**	P		P	07 29 44.4	0.0
0.3nm,0.7s,baz=306,slow=7.9,SNR=2.7							
SONM	**Songino Array**	**50.92**	**5**	P		P	07 31 27.3	+0.3
0.6nm,0.6s,baz=180,slow=6.8,SNR=3.7							
MKAR	**Makanchi Array**	**52.24**	**344**	P		P	07 31 36.6	-0.3
0.6nm,0.4s,baz=156,slow=8.9,SNR=5.7							
KURK	**Kurchatov**	**56.82**	**343**	P		P	07 32 10.3	+0.2
0.3nm,0.4s,baz=162,slow=7.6,SNR=2.5							
ZALV	**Zalesovo Beam**	**58.34**	**349**	P		P	07 32 20.2	-0.6
1.4nm,0.6s,baz=175,slow=5.4,SNR=7.8							
TXAR	**Lajitas Array**	**145.06**	**39**	PKPbc		PKPbc	07 42 03.4	-0.2
0.3nm,0.7s,baz=250,slow=0.5,SNR=8.1							

IDC 27 07:32:00.3±0.8, 4566N×154.16E, h0km, mb3.8/12, mb1 4.1/14, mb1mx3.9/24, mbtmp3.8/14, MLv3.6/2, Error ellipse: s-maj=23.2km s-min=18.8km az=149.0
ISCJB 27 07:32:04.9±1.9, 456N±0.1×1542E±0.1, h43km±17km, mb3.9/14, Error ellipse: s-maj=22.0km s-min=11.6km az=137.2
MOS 27 07:32:05.6±1.2, 4568N×154.11E, h51km, mb4.0/9, Error ellipse: s-maj=21.8km s-min=12.8km az=70.8
ISC 27 07:32:06.5±1.7, 457N±01×1542E±01, h41km±15km, n29, σ0°90/29, mb3.9/14, 3C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**5.19**	**14**	*e*P	**Pn**	**07 33 21.0**	**-0.5**
SKR				*e*		07 34 12.5	
PETK	**Petropavlovsk-**	**7.80**	**16**	Pn	**Pn**	**07 33 53.8**	**-3.5**
0.7nm,0.3s,baz=182,slow=12,SNR=13							
ERM	**Erimo**	**8.75**	**249**	*i*P	**Pn**	**07 34 13.2**	**+2.8**
MJAR	**Matsushiro Arr**	**15.06**	**238**	Pn	**Pn**	**07 35 36.0**	**-0.5**
0.3nm,0.3s,baz=64,slow=38,SNR=3.3							
YAK	**Yakutsk**	**21.62**	**328**	*i*P	**P**	**07 36 57.7**	**+4.9**
YAK				pmax	pmax		
comp=Z,16nm,0.6s,mb4.6							
BILL	**Bilibino**	**23.30**	**12**	*e*P	**P**	**07 37 11.5**	**+1.0**
BILL				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.0							
SONM	**Songino Array**	**32.39**	**291**	P	**P**	**07 38 32.4**	**+0.3**
comp=Z,0.8nm,0.9s,mb3.6,baz=88,slow=10,SNR=3.3							
SONM	**Songino Array**	**32.39**	**291**	P	**P**	**07 38 32.4**	**+0.3**
SONM				pmax	pmax		
comp=Z,1.0nm,0.9s							
COLA	**College**	**36.55**	**37**	*e*P	**P**	**07 39 08.7**	**+0.9**
MKAR	**Makanchi Array**	**48.09**	**299**	P	**P**	**07 40 41.5**	**-0.4**
comp=Z,0.8nm,0.6s,mb3.9,baz=62,slow=6.4,SNR=7.8							
MKAR	**Makanchi Array**	**48.09**	**299**	P	**P**	**07 40 41.5**	**-0.3**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
KURK	**Kurchatov**	**48.57**	**305**	P	**P**	**07 40 44.6**	**-0.9**
comp=Z,1.4nm,0.9s,mb4.0,baz=69,slow=8.2,SNR=3.6							
KURK	**Kurchatov**	**48.57**	**305**	P	**P**	**07 40 44.6**	**-0.9**
KURK				pmax	pmax		
comp=Z,1.0nm,0.9s,mb3.9							
YKA	**Yellowknife Ar**	**51.36**	**36**	P	**P**	**07 41 07.0**	**+0.5**
comp=Z,1.2nm,0.8s,mb3.9,baz=297,slow=7.1,SNR=3.1							
YKA	**Yellowknife Ar**	**51.36**	**36**	P	**P**	**07 41 07.0**	**+0.5**
YKA				pmax	pmax		
comp=Z,1.0nm,0.9s							
NVAR	**Mina Array Bea**	**62.30**	**62**	P	**P**	**07 42 24.2**	**-0.1**
comp=Z,0.5nm,0.6s,mb3.8,baz=292,slow=7.1,SNR=4.0							
PDAR	**Pinedale Array**	**64.80**	**54**	P	**P**	**07 42 41.4**	**+0.6**
comp=Z,0.7nm,0.9s,mb3.7,baz=252,slow=3.0,SNR=4.8							
WRA	**Warramunga Arr**	**67.73**	**200**	P	**P**	**07 42 59.0**	**-0.6**
comp=Z,0.5nm,0.7s,mb3.6,baz=20,slow=7.2,SNR=5.4							
WRA	**Warramunga Arr**	**67.73**	**200**	P	**P**	**07 42 59.0**	**-0.7**
WRA				pmax	pmax		
comp=Z,1.0nm,0.7s							
NOA	**NORSAR Array B**	**69.49**	**342**	P	**P**	**07 43 09.9**	**-0.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=28,slow=6.5,SNR=2.8							
NOA	**NORSAR Array B**	**69.49**	**342**	P	**P**	**07 43 09.9**	**-0.3**
NOA				pmax	pmax		
comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**71.42**	**200**	P	**P**	**07 43 22.2**	**-0.1**
comp=Z,0.9nm,0.9s,mb3.7,baz=15,slow=5.7,SNR=6.2							
ASAR	**Alice Springs**	**71.42**	**200**	P	**P**	**07 43 22.3**	**0.0**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.9s							
ANMO	**Albuquerque**	**71.78**	**59**	*i*P	**P**	**07 43 24.0**	**-0.6**
AKASG	**Malin Array Be**	**72.85**	**327**	P	**P**	**07 43 29.7**	**-1.0**
comp=Z,4.6nm,0.9s,mb4.4,baz=34,slow=6.9,SNR=4.6							
AKASG	**Malin Array Be**	**72.85**	**327**	P	**P**	**07 43 29.7**	**-1.0**
AKASG				pmax	pmax		
comp=Z,5.0nm,0.9s							
TXAR	**Lajitas Array**	**77.39**	**61**	P	**P**	**07 43 57.0**	**-0.3**
comp=Z,1.0nm,0.8s,mb3.8,baz=300,slow=4.0,SNR=10							
TXAR	**Lajitas Array**	**77.39**	**61**	P	**P**	**07 43 57.0**	**-0.2**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**79.75**	**335**	P	**P**	**07 44 11.3**	**+1.4**
comp=Z,0.2nm,0.3s,mb3.5,baz=14,slow=4.4,SNR=3.5							

ISCJB 27 07:51:05.6±8.2, 461S±007×122W±0.1, h12km±51km, mb4.4/24, MS3.9/19, Error ellipse: s-maj=18.2km s-min=11.6km az=13.0

IDC 27 07:51:05.4±0.7, 459S×1220W, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.2/25, mbtmp4.2/14, ML3.2/1, MS3.9/17, Ms1 3.9/17, ms1mx3.7/27, Error ellipse: s-maj=20.6km s-min=16.3km az=124.0
NEIC 27 07:51:06.8±0.4, 467S×1218W, h10km, mb4.8/12, MS4.1/3, Error ellipse: s-maj=13.9km s-min=8.7km az=107.0
ISC 27 07:51:05.9±7.5, 464S±007×122W±01, h2km±46km, n65, σ0°92/54, mb4.4/24, MS3.9/19, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**13.41**	**33**	Pn	**Pn**	**07 54 18.4**	**+1.0**
0.1nm,0.3s,baz=175,slow=15,SNR=3.6							
DBIC				LR	LR	07 58 29.5	
comp=Z,396nm,20.9s,baz=192,slow=33							
BBTS	**Babate**	**19.66**	**347**	LR	LR	08 01 39.5	
comp=Z,177nm,20.5s,baz=103,slow=32							
TOA0	**Torodi Ar. Sit**	**22.42**	**38**	*e*P	**P**	**07 56 04.4**	**-1.8**
TORD	**Torodi Ar. Bea**	**22.42**	**38**	P	**P**	**07 56 04.5**	**-1.6**
17nm,0.8s,mb4.5,baz=222,slow=11,SNR=52							
TORD				LR	LR	08 03 20.2	
comp=Z,262nm,20.3s,MS3.6,baz=215,slow=33							
TORD	**Torodi Ar. Bea**	**22.42**	**38**	P	**P**	**07 56 04.5**	**-1.7**
BDFB	**Brasilia**	**36.85**	**250**	P	**P**	**07 58 15.5**	**-0.5**
1.0nm,0.6s,mb3.8,baz=28,slow=20,SNR=3.9							
BDFB				LR	LR	08 10 15.1	
comp=Z,68nm,20.3s,MS3.4,baz=9.3,slow=31							
SUR	**Sutherland**	**41.39**	**136**	P	**P**	**07 58 54.6**	**+0.8**
11nm,0.9s,mb4.5,baz=317,slow=12,SNR=5.3							
LBTB	**Lobatse**	**41.54**	**123**	P	**P**	**07 58 55.0**	**-0.1**
9.3nm,1.0s,mb4.4,baz=320,slow=7.1,SNR=4.0							
LBTB	**Lobatse**	**41.54**	**123**	*e*P	**P**	**07 58 56.5**	**+1.4**
21nm,1.3s,mb4.6							
BOSA	**Boshof**	**42.77**	**128**	P	**P**	**07 59 06.3**	**+1.1**
8.1nm,0.8s,mb4.5,baz=316,slow=8.6,SNR=11							
BOSA				LR	LR	08 14 56.5	
comp=Z,138nm,18.9s,MS3.9,baz=300,slow=33							
BOSA	**Boshof**	**42.77**	**128**	*e*P	**P**	**07 59 05.8**	**+0.6**
8.4nm,0.7s,mb4.6							
ESDC	**Sonseca Array**	**44.75**	**9**	P	**P**	**07 59 21.4**	**+0.6**
0.5nm,0.4s,mb3.7,baz=181,slow=9.2,SNR=6.8							
ESDC				LR	LR	08 18 02.1	
comp=Z,102nm,19.2s,MS3.8,baz=175,slow=36							
KEST	**Kesra**	**44.96**	**25**	LR	LR	08 18 46.6	
comp=Z,85nm,19.0s,MS3.7,baz=353,slow=37							
ETSF	**Etsaut**	**48.48**	**11**	*e*P	**P**	**07 59 51.0**	**+0.9**
38nm,1.3s,mb5.0							
ETSF	**Etsaut**	**48.48**	**11**	*e*P	**P**	**07 59 51.0**	**+0.9**
19nm,1.3s,mb5.0							
SJPF	**Ste Jean**	**48.56**	**11**	*e*P	**P**	**07 59 50.5**	**-0.2**
SIV	**San Ignacio**	**49.27**	**253**	P	**P**	**07 59 57.0**	**+0.3**
2.2nm,0.8s,mb4.2,baz=95,slow=9.8,SNR=13							
RJF	**Les Rejaudoux**	**51.21**	**12**	*e*P	**P**	**08 00 10.8**	**0.0**
RJF				*e*MLR	MLR		
comp=Z,128nm,19.4s,MS3.7							
RJF	**Les Rejaudoux**	**51.21**	**12**	*e*P	**P**	**08 00 10.8**	**0.0**
RJF				LR	LR		
comp=Z,130nm,19.4s,MS4.0							
MFF	**Saint Martin d**	**52.13**	**11**	*e*P	**P**	**08 00 18.4**	**+0.8**
comp=Z,16nm,1.0s,mb4.6							
MFF	**Saint Martin d**	**52.13**	**11**	*e*P	**P**	**08 00 18.4**	**+0.8**
comp=Z,8.1nm,1.0s,mb4.6							
TCF	**Toulx Ste Croi**	**52.30**	**13**	*e*P	**P**	**08 00 19.6**	**+0.7**
comp=Z,35nm,1.2s,mb4.9							
TCF	**Toulx Ste Croi**	**52.30**	**13**	*e*P	**P**	**08 00 19.6**	**+0.7**
comp=Z,18nm,1.2s,mb4.9							
LPG	**La Plagne**	**52.70**	**17**	*e*P	**P**	**08 00 23.6**	**+1.7**
comp=Z,33nm,1.3s,mb4.8							
LPG	**La Plagne**	**52.70**	**17**	*e*P	**P**	**08 00 23.6**	**+1.7**
comp=Z,17nm,1.3s,mb4.8							
LPL	**La Plagne**	**52.72**	**17**	*e*P	**P**	**08 00 22.9**	**+0.9**
QUIF	**Quistinic**	**52.94**	**8**	*e*P	**P**	**08 00 24.0**	**+0.4**
comp=Z,83nm,1.5s,mb5.1							
QUIF	**Quistinic**	**52.94**	**8**	*e*P	**P**	**08 00 24.0**	**+0.4**
comp=Z,42nm,1.5s,mb5.1							
AVF	**Avril sur Loir**	**53.03**	**13**	*e*P	**P**	**08 00 23.5**	**-0.8**
SGMF	**Saint Gilles**	**53.35**	**8**	*e*P	**P**	**08 00 27.3**	**+0.7**
CABF	**La Chapelle**	**53.54**	**16**	*e*P	**P**	**08 00 28.5**	**+0.4**
LOR	**Lormes**	**53.60**	**14**	*e*P	**P**	**08 00 27.8**	**-0.7**
LOR				*e*MLR	MLR		
comp=Z,171nm,21.5s,MS3.8							
LOR	**Lormes**	**53.60**	**14**	*e*P	**P**	**08 00 27.8**	**-0.7**
LOR				LR	LR		
comp=Z,170nm,21.5s,MS4.1							
GRR	**Gorron**	**53.74**	**9**	*e*P	**P**	**08 00 26.7**	**-2.8**
comp=Z,62nm,1.3s,mb5.1							
GRR	**Gorron**	**53.74**	**9**	*e*P	**P**	**08 00 26.7**	**-2.8**
comp=Z,31nm,1.3s,mb5.1							
LDF	**La Druitiere**	**54.06**	**10**	*e*P	**P**	**08 00 32.0**	**+0.2**
FLN	**La Foliniere**	**54.16**	**10**	*e*P	**P**	**08 00 32.7**	**+0.1**
comp=Z,46nm,1.2s,mb5.0							
FLN				*e*MLR	MLR		
comp=Z,181nm,18.2s,MS3.9							
FLN	**La Foliniere**	**54.16**	**10**	*e*P	**P**	**08 00 32.7**	**+0.1**
comp=Z,23nm,1.2s,mb5.0							
FLN				LR	LR		
comp=Z,180nm,18.3s,MS4.2							
HAU	**Haudompre**	**54.90**	**15**	*e*P	**P**	**08 00 38.5**	**+0.6**
HAU				*e*MLR	MLR		
comp=Z,109nm,17.8s,MS3.7							
HAU	**Haudompre**	**54.90**	**15**	*e*P	**P**	**08 00 38.5**	**+0.6**
HAU				LR	LR		
comp=Z,110nm,17.8s,MS4.0							
CDF	**Champ du Feu**	**55.52**	**16**	*e*P	**P**	**08 00 42.7**	**+0.3**
comp=Z,16nm,1.1s,mb4.7							
CDF	**Champ du Feu**	**55.52**	**16**	*e*P	**P**	**08 00 42.7**	**+0.3**
comp=Z,7.8nm,1.1s,mb4.7							
BAIF	**Baives**	**56.30**	**13**	*e*P	**P**	**08 00 47.4**	**-0.6**
GIVF	**Givet**	**56.48**	**13**	*e*P	**P**	**08 00 49.1**	**-0.2**
GEC2	**GERESS Array S**	**57.86**	**20**	*e*P	**P**	**08 00 59.1**	**0.0**
GERES	**GERESS Array B**	**57.86**	**20**	P	**P**	**08 00 58.1**	**-1.0**
comp=Z,3.1nm,0.9s,mb4.4,baz=185,slow=6.2,SNR=17							
GERES				LR	LR	08 25 54.2	
comp=Z,114nm,18.6s,MS4.0,baz=95,slow=36							
CFAA	**Coronel Fontan**	**58.87**	**236**	P	**P**	**08 01 05.7**	**-0.9**
comp=Z,0.1nm,0.7s,mb3.0,baz=80,slow=7.2,SNR=3.9							
BRG	**Berggiesshubel**	**59.69**	**19**	*e*P	**P**	**08 01 03.1**	**-8.6**
comp=Z,12nm,1.4s,mb4.7							
CLL	**Collm**	**59.77**	**18**	*e*P	**P**	**08 01 11.0**	**-1.3**
BRTR	**Keskin Array B**	**61.02**	**39**	P	**P**	**08 01 20.9**	**-0.2**
comp=Z,1.1nm,0.7s,mb4.1,baz=201,slow=9.0,SNR=4.6							
AKASG	**Malin Array Be**	**65.59**	**28**	P	**P**	**08 01 49.7**	**-1.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=227,slow=7.2,SNR=8.7							
AKASG	**Malin Array Be**	**65.59**	**28**	P	**P**	**08 01 49.7**	**-1.5**
SNAA	**Sanae**	**67.20**	**177**	*e*P	**P**	**08 01 60.0**	**-1.2**
comp=Z,6.7nm,1.1s,mb4.6							
NOA	**NORSAR Array B**	**67.98**	**12**	P	**P**	**08 02 06.6**	**+0.4**
comp=Z,2.2nm,1.0s,mb4.2,baz=205,slow=6.1,SNR=2.9							
NOA				LR	LR	08 29 33.1	
comp=Z,53nm,20.5s,MS3.8,baz=220,slow=34							
ARCES	**ARCESS Array B**	**78.34**	**13**	LR	LR	08 39 28.6	
comp=Z,78nm,18.1s,MS4.1,baz=347,slow=37							
AKTO	**Aktyubinsk**	**81.14**	**38**	LR	LR	08 41 30.6	
comp=Z,45nm,18.1s,MS3.9,baz=109,slow=37							
QSPA	**South Pole Qui**	**85.45**	**180**	LR	LR	08 34 53.8	
comp=Z,84nm,18.0s,MS4.2,baz=243,slow=31							
BVAR	**Borovoye Array**	**89.22**	**37**	LR	LR	08 49 27.1	
comp=Z,59nm,18.7s,MS4.0,baz=10,slow=39							
ULM	**Lac du Bonnet**	**89.50**	**320**	LR	LR	08 40 37.0	
comp=Z,114nm,18.6s,MS4.3,baz=13,slow=33							
TXAR	**Lajitas Array**	**93.53**	**299**	LR	LR	08 43 18.2	
comp=Z,56nm,21.2s,MS4.0,baz=305,slow=34							
MKAR	**Makanchi Array**	**96.43**	**44**	P	**P**	**08 04 36.3**	**-0.5**
comp=Z,0.5nm,0.9s,mb3.9,baz=263,slow=2.1,SNR=3.5							
VNDA	**Vanda**	**97.88**	**179**	LR	LR	08 41 57.2	
comp=Z,72nm,19.2s,MS4.2,baz=215,slow=31							
PDAR	**Pinedale Array**	**98.54**	**312**	P	**P**	**08 04 48.0**	**+1.6**
comp=Z,0.4nm,1.0s,mb3.9,baz=80,slow=12,SNR=3.3							
PDAR				LR	LR	08 42 50.6	
comp=Z,85nm,21.8s,MS4.2,baz=78,slow=32							
ASAR	**Alice Springs**	**136.59**	**132**	PKP	PKPdf	08 10 28.3	-2.4
comp=Z,0.4nm,0.8s,baz=226,slow=2.4,SNR=2.9							
WRA	**Warramunga Arr**	**139.02**	**128**	PKP	PKPdf	08 10 32.5	-2.7
comp=Z,0.5nm,0.9s,baz=247,slow=3.0,SNR=3.4							

ISCJB 27 08:00:58.5±0.6, 3343N±003×3534E±004, h9km±6km, Error ellipse: s-maj=6.6km s-min=3.9km az=28.5
GII 27 08:00:58.5±1.1, 3334N×3539E, h0km±5km, ML2.2/4
CSEM 27 08:01:00.0, 3342N×3540E, h0km, ML2.9, After GRAL
GRAL 27 08:01:00.0±0.3, 3342N×3540E, h0km±156km, MD2.9
ISC 27 08:00:58.9±0.7, 3345N±003×3535E±004, h9km±8km, n16, σ0°73/28, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATL	**Matirih**	**0.04**	**340**	*e*P	**Pg**	**08 01 01.6**	**+0.9**
KSDI	**Kefar Szold**	**0.36**	**134**	Pg	**Pg**	**08 01 05.2**	**-0.8**
KSDI				Sg	**Sg**	**08 01 11.1**	**+0.3**
HRI	**Mount Hermon**	**0.37**	**119**	Pg	**Pg**	**08 01 05.5**	**-0.6**
HRI				Sg	**Sg**	**08 01 12.1**	**+1.1**
HNTI	**Hanita**	**0.39**	**202**	Pg	**Pg**	**08 01 05.9**	**-0.6**
HNTI				Sg	**Sg**	**08 01 12.1**	**+0.4**
RCY	**Rachaya**	**0.40**	**84**	*e*P	**Pg**	**08 01 06.7**	**0.0**
RCY				*e*S	**Sg**	**08 01 11.4**	**-0.4**
RCY	**Rachaya**	**0.40**	**84**	*e*P	**Pg**	**08 01 06.7**	**+0.1**
RCY				*e*S	**Sg**	**08 01 11.4**	**-0.5**
MMA0B	**Mount Meron ar**	**0.43**	**174**	Pg	**Pg**	**08 01 06.3**	**-1.0**
MMA0B				Sg	**Sg**	**08 01 13.3**	**+0.3**
BHL	**Bhannes**	**0.52**	**29**	*e*P	**Pg**	**08 01 09.5**	**+0.5**
KSHT	**Keshet**	**0.60**	**140**	Pg	**Pg**	**08 01 10.2**	**-0.3**
KSHT				Sg	**Sg**	**08 01 19.4**	**+1.0**
OFRI	**'Ofer**	**0.88**	**200**	Pg	**Pg**	**08 01 15.6**	**-0.2**
OFRI				Sg	**Sg**	**08 01 28.7**	**+1.5**
HWQ	**Hawqa**	**0.97**	**31**	*e*P	**Pg**	**08 01 17.4**	**-0.1**
HWQ				*e*S	**Sg**	**08 01 30.1**	**0.0**
MMLI	**Mount Malkishu**	**1.01**	**176**	Pg	**Pg**	**08 01 17.4**	**-0.8**
MMLI				Sg	**Sg**	**08 01 31.3**	**0.0**
HMDT	**Nahal Hemdat**	**1.20**	**173**	Pg	**Pg**	**08 01 20.5**	**-1.4**
HMDT				Sg	**Sg**	**08 01 37.2**	**-0.3**
SLTI	**Sal'it**	**1.23**	**192**	Pg	**Pg**	**08 01 21.3**	**-1.2**
SLTI				Sg	**Sg**	**08 01 38.8**	**+0.4**
DSI	**Dead Sea**	**1.87**	**179**	Pn	**Pn**	**08 01 31.6**	**+0.5**
MZDA	**Masada**	**2.13**	**180**	Pn	**Pn**	**08 01 35.6**	**+0.9**

CASC 27 08:01:03.1±2.7, 1090N×8698W, h35km±999km, MD4.0, ML2.8, 8C-8D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	**El Crucero**	**1.27**	**32**	*e*P	Pn	08 01 23.6	-0.7
COPN	**Copaltepe**	**1.33**	**16**	*e*P	Pn	08 01 25.3	+0.2
TICN	**Ticuantepe**	**1.34**	**33**	*e*P	Pn	08 01 25.8	+0.4
APON	**Apoyo**	**1.35**	**41**	*e*P	Pn	08 01 25.6	+0.2
CSJN		**1.39**	**23**	*e*P	Pn	08 01 25.5	-0.6
XAVN	**Gruta Xavier**	**1.40**	**27**	*e*P	Pn	08 01 26.2	+0.1
TISN	**Laguna Tiscapa**	**1.42**	**29**	*e*P	Pn	08 01 26.2	-0.1
MGAN	**Managua**	**1.43**	**30**	*e*P	Pn	08 01 26.4	-0.2
MGAN				AML	AML	08 01 45.0	
comp=E,40nm,0.6s							
APYN	**Apoyeque**	**1.46**	**25**	*e*P	Pn	08 01 27.0	-0.1
APYN				*e*S	Sn	08 01 47.2	+2.3
APYN				AML	AML	08 01 48.0	
comp=Z,360nm,0.3s							
CONN	**Concepcion**	**1.48**	**63**	*e*P	Pn	08 01 26.7	-0.6
MIRN	**Miramar**	**1.55**	**10**	*e*P	Pn	08 01 28.6	+0.3
MOMN	**Momotombo**	**1.56**	**16**	*e*P	Pn	08 01 28.9	+0.6
MOMN				*e*S	Sn	08 01 49.9	+2.5
CNGN	**Cerro Negro**	**1.61**	**10**	*e*P	Pn	08 01 29.2	+0.1
HUEN		**1.63**	**29**	*e*P	Pn	08 01 29.2	-0.2
LIM1	**Limonal**	**1.70**	**96**	*e*P	Pn	08 01 29.3	-1.0
2RIO	**Dos Rios de Up**	**1.75**	**102**	*e*P	Pn	08 01 28.9	-2.1
CUI	**Cuipilapa**	**1.78**	**97**	*e*P	Pn	08 01 31.2	-0.2
CRIN	**San Cristobal**	**1.79**	**358**	*e*P	Pn	08 01 32.2	+0.7
JCR	**Jicaral**	**2.11**	**119**	*e*P	Pn	08 01 35.3	-0.6
FORC	**Fortuna**	**2.31**	**100**	*e*P	Pn	08 01 38.4	-0.2
CNCH	**Conchagua**	**2.51**	**341**	*e*P	x	08 01 42.4	
CNCH				*e*S	x	08 02 10.2	
CGA2	**Cerro Gallo 2**	**2.62**	**109**	*e*P	Pn	08 01 44.8	+1.8
PRS1	**Puriscal**	**2.77**	**109**	*e*P	Pn	08 01 47.1	+2.1
BLLM	**Bellamira**	**2.81**	**334**	*e*P	x	08 01 47.6	
LAJ	**Bijagual**	**2.99**	**110**	*e*P	Pn	08 01 44.8	-3.2
TGUH	**Tegucigalpa,Un**	**3.15**	**355**	*e*P	Pn	08 01 51.6	+1.3
URSC	**Urasca**	**3.32**	**108**	*e*P	Pn	08 01 55.4	+2.8
LFRS	**El Faro**	**3.39**	**323**	*e*P	x	08 01 54.5	
LFRS				*e*S	x	08 02 32.0	
BUS	**Buena Vista**	**3.44**	**113**	*e*P	Pn	08 01 53.3	-0.7
LBRS	**Las Brisas**	**3.47**	**325**	*e

IHVO	**Lagu-Hvolar**	**1.31**	**149**	P	Pg	08 34 37.2	-2.4
IHVO				S	Sg	08 34 55.2	-1.3
IGRF	**Grimsfjall**	**1.35**	**99**	P	Pn	08 34 38.5	-1.8
IKAL	**Kalfafell**	**1.35**	**120**	P	Pn	08 34 37.7	-2.6
IKAL				S	Sg	08 34 55.8	-2.3
IHRN	**Hraun**	**1.47**	**3**	P	Pn	08 34 39.1	-2.8
IHRN				S	Sb	08 34 58.5	-3.0
ISVA	**Svartarkot**	**1.48**	**61**	P	Pn	08 34 39.6	-2.5
ISVA				S	Sb	08 34 59.7	-2.2
IHLA	**Hella**	**1.54**	**31**	P	Pn	08 34 40.5	-2.3
IHLA				S	Sn	08 35 00.9	-2.4
ISIG	**Siglufjorour**	**1.60**	**21**	P	Pn	08 34 41.5	-2.2
ISIG				S	Sn	08 35 02.1	-2.8
IGRA	**Granastaoir**	**1.72**	**41**	P	Pn	08 34 43.7	-1.7
IGRA				S	Sn	08 35 06.1	-1.7
IREN	**Reynihlio**	**1.76**	**54**	P	Pn	08 34 44.2	-1.7
IREN				S	Sn	08 35 07.2	-1.6
IFAG	**Fagurholsmyri**	**1.79**	**114**	P	Pn	08 34 44.7	-1.6
IFAG				S	Sn	08 35 07.8	-1.6
IBRE	**Brettingsstaoi**	**1.80**	**33**	P	Pn	08 34 44.7	-1.7
IBRE				S	Sn	08 35 08.7	-0.9
IBRU	**Bruarjokull**	**1.83**	**82**	P	Pn	08 34 45.1	-1.8
IBRU				S	Sn	08 35 09.7	-0.9
IFLA	**Flatey**	**1.84**	**33**	P	Pn	08 34 45.7	-1.3
IFLA				S	Sn	08 35 10.2	-0.6
IHED	**Heoinshofoi**	**1.92**	**40**	P	Pn	08 34 46.3	-1.8
IHED				S	Sn	08 35 11.3	-1.3
IHVA	**Hvannstoosfjol**	**1.94**	**79**	P	Pn	08 34 46.7	-1.6
IHVA				S	Sn	08 35 12.8	-0.3
IVSH	**V-Sauoahnukur**	**1.99**	**83**	P	Pn	08 34 47.7	-1.3
IVSH				S	Sn	08 35 13.6	-0.7
IGRS	**Grimsstaoir**	**2.04**	**59**	P	Pn	08 34 48.4	-1.3
IGRS				S	Sn	08 35 14.8	+0.2
IADA	**Aoalbol**	**2.07**	**78**	P	Pn	08 34 48.9	-1.3
IADA				S	Sn	08 35 16.4	0.0
IGRI	**Grimsey**	**2.13**	**26**	P	Pn	08 34 49.2	-1.8
IGRI				S	Sn	08 35 16.8	-1.1
IGIL	**Gilhagi**	**2.20**	**48**	P	Pn	08 34 50.5	-1.5
IGIL				S	Sn	08 35 18.7	-0.9
IGLU	**Glumsstadir**	**2.27**	**79**	P	Pn	08 34 52.3	-0.6
IGLU				S	Sn	08 35 21.3	-0.1
ILEI	**Leirhofn**	**2.38**	**41**	P	Pn	08 34 53.5	-1.0

NEIC ***27*** *09:00:16.9±4.5, 25.16S×179.70E, h464km±58km, mb3.9/1, Error ellipse: s-maj=48.0km s-min=19.9km az=184.0*
ISCJB ***27*** *09:00:18.4±4.7, 254.5°±02°×179.7E±02, h494km±57km, mb3.8/9, Error ellipse: s-maj=31.5km s-min=22.1km az=38.2*
IDC ***27*** *09:00:19.1±5.4, 25.38S×179.78E, h497km±65km, mb3.5/9, mb1 3.7/10, mb1mx3.4/17, mbtmp3.5/10, Error ellipse: s-maj=40.8km s-min=27.6km az=10.0*

ISC 27 09:00:20.9±4.1, 256S±02°×179.7E±02, h518km±53km, n18, σ0.96/15, mb3.8/9, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**12.82**	**189**	P		**P**	**09 03 08.5**	**+0.7**
	1.8nm,0.3s,baz=355,slow=5.3,SNR=14							
URZ				S		**S**	**09 05 24.4**	**-1.1**
	0.9nm,0.3s,baz=53,slow=22,SNR=20							
CTA	**Charters Tower**	**31.23**	**273**	P		**P**	**09 05 58.5**	**+0.5**
	15nm,0.4s,baz=94,slow=11,SNR=39							
CTA	**Charters Tower**	**31.23**	**273**	P		**P**	**09 05 58.5**	**+0.5**
STKA	**Stephens Creek**	**33.85**	**250**	P		**P**	**09 06 21.8**	**+1.8**
	1.3nm,0.5s,mb3.7,baz=134,slow=4.2,SNR=8.1							
ASAR	**Alice Springs**	**41.50**	**263**	P		**P**	**09 07 23.0**	**+0.3**
	2.2nm,0.4s,mb4.1,baz=94,slow=7.7,SNR=65							
WB2	**Warramunga Arr**	**42.02**	**268**	⇓*iP*		**P**	**09 07 26.3**	**-0.5**
WRAB	**Tennant Creek**	**42.02**	**268**	*eP*		**P**	**09 07 26.1**	**-0.7**
	2.6nm,0.5s,mb4.0							
WRA	**Warramunga Arr**	**42.03**	**268**	P		**P**	**09 07 26.6**	**-0.3**
	2.2nm,0.3s,mb4.1,baz=100,slow=7.0,SNR=92							
KAKA	**Kakadu**	**46.20**	**277**	*eP*		Px	09 07 42.9	
	3.8nm,0.9s							
MJAR	**Matsushiro Arr**	**73.12**	**326**	P		**P**	**09 10 57.0**	**-1.4**
	1.5nm,0.7s,mb3.5,baz=157,slow=6.6,SNR=4.8							
MJAR	**Matsushiro Arr**	**73.12**	**326**	P		**P**	**09 10 57.0**	**-1.4**
KSRS	**Korea Array**	**79.35**	**321**	P		**P**	**09 11 32.6**	**-0.1**
	1.4nm,0.7s,mb3.4,baz=137,slow=6.4,SNR=5.8							
PETK	**Petropavlovsk-**	**80.66**	**347**	P		**P**	**09 11 37.9**	**-1.3**
	4.9nm,1.0s,mb3.9,baz=129,slow=8.0,SNR=6.0							
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P		**P**	**09 12 25.9**	**+1.2**
	1.0nm,0.3s,mb4.2,baz=134,slow=4.1,SNR=4.1							
TXAR	**Lajitas Array**	**91.56**	**58**	P		**P**	**09 12 33.4**	**+1.1**
	0.1nm,0.7s,mb3.0,baz=212,slow=8.5,SNR=2.4							
NB2	**NORSAR Subarra**	**143.69**	**351**	PKP		PKPdf	09 18 53.4	-2.7
	comp=Z,1.0nm,0.5s,baz=16,slow=3.3							
NOA	**NORSAR Array B**	**143.69**	**351**	PKP		PKPdf	09 18 53.6	-2.4
	comp=Z,2.0nm,0.7s,baz=22,slow=3.9,SNR=6.0							
AKASG	**Malin Array Be**	**146.21**	**326**	PKPbc		PKPbc	09 19 02.4	-0.4
	comp=Z,1.1nm,0.5s,baz=41,slow=4.1,SNR=5.3							

BJI ***27*** *09:24:08.5, 1940S×177.70W, h541km, mB5.1, mb5.2*
MOS ***27*** *09:24:08.7±0.9, 19.16S×177.77W, h518km, mb5.3/20, Error ellipse: s-maj=9.3km s-min=7.0km az=60.3*
SZGRF ***27*** *09:24:09.6, 1998S×177.40W, h552km, Fiji Islands region*
ISCJB ***27*** *09:24:11.4±0.1, 1939S±003°×177.71W±003, h553km, mb5.1/111, Error ellipse: s-maj=4.7km s-min=2.7km az=139.8*
BGS ***27*** *09:24:12.5±7.6, 1943S×177.69W, h562km, mb5.2(NEIC)*
NEIC ***27*** *09:24:12.5±0.5, 1943S×177.69W, h562km±5km, mb5.2/63, Error ellipse: s-maj=5.3km s-min=3.3km az=138.0*
GCMT ***27*** *09:24:12.5±0.4, 19.36S×177.65W, h587km±2km, MW5.3/76, Moment Tensor Solution. s76,c102; Duration: 1⇑1 Moment tensor: Scale 10^17 Nm; Mrr=0.88±.04; Mθθ=0.68±.06; Mφφ=0.19±.06; Mrθ=-0.67±.06; Mrφ=0.53±.05; Mθφ=-0.45±.07; Best double couple: Mo=1.25000×10^17 NP1: φs=239.0000°, δ=65.0000°, λ=-88.0000°. NP2: φs=56.0000°, δ=65.0000°, λ=-91.0000°. Principal axes: T 1.3200, Plg=20.0000°, Azm=147.0000°; N -0.1410, Plg=1.0000°, Azm=57.0000°; P -1.1800, Plg=70.0000°, Azm=325.0000°; nsta=1 refers to body waves, cutoff=40s.*
IDC ***27*** *09:24:13.7±0.5, 1935S×177.70W, h567km±4km, mb4.4/19, mb1 4.6/19, mb1mx4.6/21, mbtmp4.4/19 Error ellipse: s-maj=11.2km s-min=8.3km az=140.0*
DJA ***27*** *09:24:20.7±0.0, 1993S×177.80W, h650km, mB5.7/10, Mw(mB)5.4/10, Mwp5.2/10*

ISC 27 09:24:12.6±0.1, 1940S±003×177.68W±003, h555km, h555km±4.5km: pP-P, n1032, σ0.69/692, mb5.1/111, 241C-234D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**7.86**	**47**	P		**P**	**09 26 06.3**	**-2.9**
	82nm,0.3s,baz=72,slow=1.6,SNR=98							
AFI				S		**S**	**09 27 35.8**	**-8.8**
	52nm,0.3s,baz=36,slow=19,SNR=16							
AFI	**Afiamalu**	**7.86**	**47**	⇑*iPn*		**P**	**09 26 06.3**	**-2.9**
	277nm,0.5s							
AFI				*e*Sn		**S**	**09 27 36.9**	**-7.7**
AFI	**Afiamalu**	**7.86**	**47**	⇑*iP*		**P**	**09 26 06.3**	**-2.9**
AFI				*e*			09 27 36.9	
AFI				pmax		pmax		
	comp=Z,277nm,0.5s							
RAO	**Raoul Island**	**9.81**	**181**	P		**P**	**09 26 27.3**	**-1.2**
	comp=Z,188nm,0.3s,baz=270,slow=20,SNR=2.8							
RAO				S		**S**	**09 28 18.7**	**-1.5**
	comp=Z,248nm,0.3s,baz=73,slow=19,SNR=5.8							
FUNA	**Funafuti**	**11.23**	**344**	*eP*		**P**	**09 26 42.5**	**-0.8**
	comp=Z,905nm,1.0s							
DZM	**Mont Dzumac**	**15.09**	**257**	*eP*		**P**	**09 27 22.8**	**-0.2**
DZM	**Mont Dzumac**	**15.09**	**257**	*eP*		**P**	**09 27 23.3**	**+0.4**
	comp=Z,35nm,0.8s							
RAR	**Rarotonga**	**16.89**	**99**	P		**P**	**09 27 38.3**	**-1.8**
	comp=Z,5.4nm,0.3s,baz=247,slow=5.9,SNR=12							
OUZ	**Omahuta**	**17.55**	**204**	P		**P**	**09 27 48.2**	**+2.3**
WCZ	**Waipu Caves**	**17.91**	**201**	⇑P		**P**	**09 27 51.7**	**+2.4**
KUZ	**Kuaotunu**	**18.23**	**197**	P		**P**	**09 27 53.3**	**+1.2**
OTAZ	**Otara**	**18.65**	**199**	P		**P**	**09 27 58.1**	**+2.1**
MKAZ	**Moumakai**	**18.72**	**198**	⇑P		**P**	**09 27 58.2**	**+1.6**
PUZ	**Puketiti**	**18.94**	**190**	P		**P**	**09 27 57.5**	**-1.1**
MWZ	**Matawai**	**19.32**	**191**	P		**P**	**09 28 00.0**	**-2.1**
URZ	**Urewera**	**19.33**	**192**	P		**P**	**09 28 00.3**	**-1.8**
	comp=Z,44nm,0.3s,baz=346,slow=3.5,SNR=113							
URZ				S		**S**	**09 31 04.1**	**-4.4**
	comp=Z,2.3nm,0.3s,baz=204,slow=20,SNR=4.0							
URZ	**Urewera**	**19.33**	**192**	P		**P**	**09 27 59.2**	**-3.0**

HIZ	**Hauiti**	**20.12**	**197**	P		**P**	**09 28 10.9**	**+1.6**
BKZ	**Black Stump Fm**	**20.33**	**193**	P		**P**	**09 28 08.4**	**-2.8**
KIW	**Kapiti Island**	**22.31**	**195**	P		**P**	**09 28 27.1**	**-1.9**
CAW	**Cannon Point**	**22.51**	**194**	P		**P**	**09 28 29.0**	**-1.7**
TARA	**Tarawa**	**22.60**	**335**	*eP*		**P**	**09 28 30.6**	**-1.3**
	comp=Z,72nm,0.8s,mb5.3							
SNZO	**South Karori**	**22.79**	**195**	*eP*		**P**	**09 28 32.6**	**-0.6**
	comp=Z,178nm,0.7s,mb5.8							
QRZ	**Quartz Range**	**22.94**	**199**	P		**P**	**09 28 34.5**	**-0.1**
QRZ				*e*			09 32 04.7	
KHZ	**Kahutara**	**24.12**	**196**	P		**P**	**09 28 43.7**	**-1.4**
LTZ	**Lake Taylor**	**24.81**	**198**	P		**P**	**09 28 49.4**	**-1.8**
RPZ	**Rata Peaks**	**26.02**	**199**	P		**P**	**09 29 01.0**	**-0.9**
	comp=Z,37nm,0.5s,mb5.3,baz=38,slow=1.6,SNR=32							
RPZ	**Rata Peaks**	**26.02**	**199**	*eP*		**P**	**09 29 00.7**	**-1.1**
FOZ	**Fox Glacier**	**26.33**	**201**	P		**P**	**09 29 02.1**	**-2.4**
PAE	**Paea**	**26.69**	**91**	*eP*		**P**	**09 29 07.0**	**-1.1**
	comp=Z,616nm,1.1s,mb6.2							
PAE				*ep*P			09 30 33.5	
	comp=Z,692nm,1.3s							
LBZ	**Lake Benmore**	**26.90**	**199**	P		**P**	**09 29 07.8**	**-1.7**
TIAR	**Tiarei**	**26.92**	**91**	*eP*		**P**	**09 29 09.2**	**-0.9**
	comp=Z,468nm,0.7s,mb6.2							
WKZ	**Wanaka**	**27.67**	**201**	P		**P**	**09 29 14.4**	**-1.9**
MLZ	**Mavora Lakes**	**28.41**	**201**	P		**P**	**09 29 22.6**	**-0.1**
PMOR	**Pomariorio Ree**	**28.77**	**86**	*eP*		**P**	**09 29 25.3**	**-1.0**
	comp=Z,96nm,1.1s,mb5.3							
PMOR				*ep*P			09 30 52.5	
	comp=Z,110nm,1.2s							
VAH	**Vaihoa**	**28.97**	**87**	*eP*		**P**	**09 29 26.7**	**-1.3**
	comp=Z,76nm,0.9s,mb5.3							
WHZ	**Wether Hill Ro**	**28.97**	**201**	P		**P**	**09 29 27.3**	**-0.3**
XMAS	**Kiritimati**	**29.14**	**45**	*eP*		**P**	**09 29 28.6**	**-1.0**
	comp=Z,123nm,0.8s,mb5.6							
EIDS	**Eidsvold**	**29.45**	**253**	*eP*		**P**	**09 29 32.4**	**+0.3**
	comp=Z,38nm,1.0s,mb5.0							
ARMA	**Armidale**	**29.83**	**242**	*eP*		**P**	**09 29 37.0**	**+1.7**
ARMA				*e*SCP		ScP	09 35 13.7	+2.9
CNB	**Canberra Magne**	**33.10**	**235**	*eP*		**P**	**09 30 04.7**	**+1.6**
CNB				*e*SCP		ScP	09 35 20.8	-1.0
CTA	**Charters Tower**	**33.91**	**263**	*eP*		**P**	**09 30 10.7**	**+0.5**
	comp=Z,78nm,0.4s,mb5.6							
CTAO	**Charters Tower**	**33.91**	**263**	*eP*		**P**	**09 30 10.6**	**+0.5**
	comp=Z,38nm,1.0s,mb5.6							
CTAO	**Charters Tower**	**33.91**	**263**	*eP*		**P**	**09 30 10.6**	**+0.4**
CTAO				pmax		pmax		
	comp=Z,220nm,1.0s,mb5.6							
CTAO	**Charters Tower**	**33.91**	**263**	P		**P**	**09 30 10.6**	**+0.4**
	comp=Z,296nm,0.9s,comp=Z,2μm,mb5.8							
TOO	**Toolangi**	**36.79**	**233**	*eP*		**P**	**09 30 35.0**	**+1.2**
COEN	**Coen**	**37.83**	**272**	⇓*iP*		**P**	**09 30 43.3**	**+0.7**
	comp=Z,146nm,0.8s,mb5.6							
COEN	**Coen**	**37.83**	**272**	P		**P**	**09 30 43.0**	**+0.4**
	comp=Z,123nm,0.9s,comp=Z,768nm,mb5.4							
STKA	**Stephens Creek**	**38.55**	**243**	⇓*iP*		**P**	**09 30 49.1**	**+0.9**
	comp=Z,38nm,1.0s,mb4.9							
STKA				*e*SCP		ScP	09 35 44.4	+2.3
STKA				*e*PCS		PcS	09 36 36.8	-0.1
STKA				*e*SCS		ScS	09 39 56.3	+1.6
STKA	**Stephens Creek**	**38.55**	**243**	P		**P**	**09 30 49.3**	**+1.1**
	comp=Z,48nm,1.0s,mb5.0,baz=86,slow=8.7,SNR=56							
STKA				PcP		PcP	09 32 46.7	+0.2
	comp=Z,9.1nm,0.7s,baz=315,slow=2.5,SNR=3.9							
STKA				ScP		ScP	09 35 44.6	+2.5
	comp=Z,8.9nm,0.8s,baz=23,slow=3.2,SNR=8.1							
STKA				PKiKP		PKiKP	09 39 56.8	-2.0
	comp=Z,0.9nm,0.6s,baz=213,slow=23,SNR=6.6							
RKT	**Rikitea**	**39.87**	**103**	*eP*		**P**	**09 30 58.8**	**-0.2**
	comp=Z,107nm,0.9s,mb5.4							
RKT	**Rikitea**	**39.87**	**103**	*eP*		**P**	**09 30 58.8**	**-0.2**
RKT				pmax		pmax		
	comp=Z,107nm,0.9s,mb5.4							
HON	**Honolulu**	**44.82**	**26**	*eP*		**P**	**09 31 37.0**	**-0.7**
KIP	**Kipapa**	**44.90**	**26**	*eP*		**P**	**09 31 37.6**	**-0.7**
	comp=Z,188nm,1.5s,mb5.4							
KIP	**Kipapa**	**44.90**	**26**	*eP*		**P**	**09 31 37.6**	**-0.7**
KIP				pmax		pmax		
	comp=Z,188nm,1.5s,mb5.4							
WB2	**Warramunga Arr**	**45.05**	**261**	⇓*iP*		**P**	**09 31 39.2**	**-0.4**
WB2				*e*PCP		PcP	09 33 08.4	-0.2
WB2				*e*S		**S**	**09 37 33.8**	**-4.7**
WB2				*e*SCS		ScS	09 40 36.2	+0.5
WRAB	**Tennant Creek**	**45.05**	**261**	*eP*		**P**	**09 31 39.1**	**-0.5**
	comp=Z,99nm,1.0s,mb5.3							
WRAB	**Tennant Creek**	**45.05**	**261**	*eP*		**P**	**09 31 39.1**	**-0.5**
WRAB				pmax		pmax		
	comp=Z,99nm,1.0s,mb5.3							
WRAB	**Tennant Creek**	**45.05**	**261**	P		**P**	**09 31 39.0**	**-0.6**
	comp=Z,132nm,1.2s,comp=Z,1μm,mb5.3							
WRA	**Warramunga Arr**	**45.06**	**261**	P		**P**	**09 31 39.4**	**-0.2**
	comp=Z,72nm,0.9s,mb5.2,baz=96,slow=7.7,SNR=314							
WRA				PcP		PcP	09 33 08.5	-0.1
	comp=Z,14nm,0.7s,baz=95,slow=4.2,SNR=12							
WRA				ScP		ScP	09 36 10.6	+2.1
	comp=Z,1.9nm,0.9s,baz=96,slow=4.2,SNR=3.3							
WRA				S		**S**	**09 37 36.6**	**-2.1**
	comp=Z,6.1nm,0.8s,baz=94,slow=13,SNR=13							
WRA	**Warramunga Arr**	**45.06**	**261**	P		**P**	**09 31 39.4**	**-0.3**
WRA							09 33 08.5	
WRA				S		**S**	**09 37 36.6**	**-2.1**
ASAR	**Alice Springs**	**45.07**	**256**	P		**P**	**09 31 39.9**	**+0.2**
	comp=Z,89nm,0.7s,mb5.4,baz=84,slow=8.8,SNR=526							
ASAR				PcP		PcP	09 33 08.4	-0.2
	comp=Z,24nm,0.8s,baz=103,slow=3.8,SNR=14							
ASAR				S		**S**	**09 37 38.9**	**+0.1**
	comp=Z,10nm,0.8s,baz=91,slow=16,SNR=24							
ASAR				PKiKP		PKiKP	09 40 03.0	-1.9
	comp=Z,0.6nm,0.7s,baz=100,slow=1.6,SNR=4.1							
ASAR	**Alice Springs**	**45.07**	**256**	P		**P**	**09 31 39.9**	**+0.2**
ASAR							09 33 08.5	
ASAR				S		**S**	**09 37 38.9**	**+0.1**
KAKA	**Kakadu**	**48.26**	**270**	⇓*iP*		Px	09 31 48.2	
	comp=Z,91nm,1.0s							
GUMO	**Guam**	**49.34**	**309**	P		**P**	**09 32 11.9**	**+0.1**
	comp=Z,159nm,0.7s,mb5.7,baz=169,slow=16,SNR=5.0							
FORT	**Forrest**	**50.01**	**246**	⇓*iP*		**P**	**09 32 15.9**	**-0.7**
	comp=Z,59nm,0.6s,mb5.2							
AAI	**Ambon**	**55.03**	**279**	P		**P**	**09 32 52.2**	**-0.5**
MBWA	**Marble Bar**	**58.39**	**257**	*eP*		**P**	**09 33 15.2**	**-0.5**
	comp=Z,46nm,0.8s,mb4.8							
MBWA	**Marble Bar**	**58.39**	**257**	P		**P**	**09 33 15.2**	**-0.4**
	comp=Z,96nm,1.3s,mb4.9							
KLBR	**Kellerberrin**	**58.80**	**244**	⇓*iP*		**P**	**09 33 17.8**	**-0.4**
	comp=Z,65nm,0.7s,mb5.0							
SBA	**Scott Base**	**58.98**	**184**	*eP*		**P**	**09 33 21.2**	**+2.6**
	comp=Z,75nm,0.9s,mb4.9							
SBA	**Scott Base**	**58.98**	**184**	*eP*		**P**	**09 33 21.2**	**+2.6**
SBA				pmax		pmax		
	comp=Z,75nm,0.9s,mb4.9							
VNDA	**Vanda**	**59.03**	**185**	P		**P**	**09 33 20.6**	**+1.7**
	comp=Z,16nm,0.7s,mb4.3,baz=353,slow=7.6,SNR=88							
NWAO	**Narrogin (SRO)**	**59.13**	**243**	*eP*		**P**	**09 33 20.4**	**0.0**
MUN	**Mundaring**	**60.08**	**244**	⇑*iP*		**P**	**09 33 27.1**	**+0.4**
KDI	**Kendari**	**60.15**	**277**	P		**P**	**09 33 27.3**	**-0.2**
	comp=Z,42nm,1.2s,comp=Z,4μm,mb4.6							
KAPI	**Kappang**	**62.49**	**274**	*eP*		**P**	**09 33 40.5**	**-2.3**
KAPI	**Kappang**	**62.49**	**274**	P		**P**	**09 33 42.6**	**-0.2**
	comp=Z,20nm,1.2s,mb4.4							
PCI	**Palu**	**63.82**	**279**	P		**P**	**09 33 53.0**	**+1.7**
	comp=Z,364nm,1.1s,comp=Z,3μm,mb5.7							
MYLDM	**Lahad Datu**	**67.35**	**284**	⇑P		**P**	**09 34 16.3**	**+3.0**
TSM	**Tawau**	**67.58**	**283**	⇓P		**P**	**09 34 16.1**	**+1.3**
SDKM	**Sandakan**	**68.72**	**284**	⇓P		**P**	**09 34 22.8**	**+1.1**
MJAR	**Matsushiro Arr**	**69.51**	**323**	P		**P**	**09 34 25.1**	**-0.8**
	comp=Z,42nm,0.8s,mb5.0,baz=160,slow=5.9,SNR=73							
MAJO	**Matsushiro**	**69.51**	**323**	*eP*		**P**	**09 34 24.9**	**-1.1**
MAT	**Matsushiro**	**69.51**	**323**	P		**P**	**09 34 24.5**	**-1.4**
MAT				S		S	09 42 46.6	-3.3
KKM	**Kota Kinabalu**	**69.78**	**284**	P		**P**	**09 34 28.6**	**+0.6**
	comp=Z,98nm,0.8s,mb5.4							
UGM	**Wanagema**	**70.29**	**268**	P		**P**	**09 34 31.1**	**0.0**
	comp=Z,222nm,0.8s,mb5.8							
ADK	**Adak**	**70.98**	**1**	*eP*		**P**	**09 34 32.8**	**-1.5**
BJI	**Banjamegara**	**71.24**	**269**	P		**P**	**09 34 37.5**	**+0.8**
BTM	**Bintulu**	**71.59**	**280**	⇓P		**P**	**09 34 40.1**	**+1.3**
SBUM	**Sibu**	**72.12**	**279**	⇑P		**P**	**09 34 43.1**	**+1.3**
SBUM	**Sibu**	**72.12**	**279**	P		**P**	**09 34 42.6**	**+0.8**
SMY	**Shemya**	**72.18**	**355**	*eP*		**P**	**09 34 39.7**	**-1.5**
LEM	**Lembang**	**73.37**	**269**	P		**P**	**09 34 49.5**	**+0.5**
	comp=Z,390nm,0.9s,mb5.8							
SKR	**Severo-Kuril's**	**73.50**	**343**	*eP*		**P**	**09 34 47.0**	**-1.8**
KSM	**Kuching**	**73.56**	**278**	*eP*		**P**	**09 34 50.7**	**+0.6**
	comp=Z,69nm,0.8s,mb5.1							
KSM	**Kuching**	**73.56**	**278**	⇑P		**P**	**09 34 51.1**	**+1.0**
KSM	**Kuching**	**73.56**	**278**	P		**P**	**09 34 50.6**	**+0.5**

	comp=Z,133nm,1.0s,comp=Z,1μm,mb5.3							
UNV	**Unalaska Valle**	**73.58**	**7**	*eP*		**P**	**09 34 47.5**	**-1.7**
	comp=Z,36nm,0.5s,mb5.0							
XMIS	**Christmas Isla**	**74.11**	**264**	*eP*		**P**	**09 34 53.7**	**+0.5**
TPI	**Tanjungpandan**	**74.63**	**273**	P		**P**	**09 34 56.2**	**+0.1**
	comp=Z,90nm,1.1s,comp=Z,882nm,mb5.1							
FALS	**False Pass**	**74.96**	**8**	*eP*		**P**	**09 34 51.6**	**-5.3**
PET	**Petropavlovsk**	**74.98**	**345**	*deP*		**P**	**09 34 55.7**	**-1.4**
PET				pmax		pmax		
	comp=Z,179nm,2.5s,mb5.0							
YSS	**Yuzh-Sakhalins**	**75.05**	**333**	*eP*		**P**	**09 34 57.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**75.05**	**333**	⇓*iP*		**P**	**09 34 57.0**	**-0.7**
YSS				pmax		pmax		
	comp=Z,160nm,0.9s,mb5.5							
PETK	**Petropavlovsk-**	**75.29**	**345**	P		**P**	**09 34 58.2**	**-0.7**
	comp=Z,75nm,0.7s,mb5.2,baz=110,slow=7.0,SNR=113							
PETK	**Petropavlovsk-**	**75.29**	**345**	P		**P**	**09 34 58.2**	**-0.7**
SDPT	**Sand Point**	**75.88**	**10**	*eP*		**P**	**09 35 00.6**	**-1.5**
KSRS	**Korea Array**	**76.27**	**318**	P		**P**	**09 35 05.0**	**+0.4**
	comp=Z,15nm,1.0s,mb4.4,baz=141,slow=6.1,SNR=26							
KSRS				pP		pP	09 37 04.8	+3.5
	comp=Z,2.7nm,1.0s,baz=135,slow=7.2,SNR=4.3							
SNCC	**San Nicolas Is**	**76.28**	**47**	⇑P		**P**	**09 35 04.9**	**+0.1**
	baz=76							
KS15	**Wonju Array Si**	**76.29**	**318**	*eP*		**P**	**09 35 05.5**	**+0.7**
BSC	**Santa Cruz Isl**	**76.63**	**46**	⇓P		**P**	**09 35 06.8**	**+0.2**
	baz=77,SNR=15							
V03C	**Hunter Liggett**	**76.72**	**44**	⇓P		**P**	**09 35 07.7**	**+0.6**
	baz=77,SNR=5.7							
SCI	**San Clemente I**	**76.81**	**48**	⇑P		**P**	**09 35 07.8**	**+0.1**
	baz=77,SNR=6.0							
SBC	**Santa Barbara**	**76.82**	**46**	⇓P		**P**	**09 35 08.0**	**+0.3**
	baz=77							
PKM	**Peak Mountain**	**77.01**	**46**	⇓P		**P**	**09 35 09.2**	**+0.5**
	baz=77,SNR=18							
SAO	**San Andreas Ge**	**77.02**	**43**	*eP*		**P**	**09 35 09.1**	**+0.3**
BLG	**Laguna Peak**	**77.08**	**47**	⇓P		**P**	**09 35 08.9**	**-0.2**
	baz=77							
INCN	**Inchon**	**77.10**	**318**	*eP*		**P**	**09 35 08.8**	**-0.4**
SMMC	**Simmler**	**77.13**	**45**	⇑P		**P**	**09 35 09.9**	**+0.5**
	baz=77							
CIS	**Catalina Islan**	**77.15**	**48**	⇑P		**P**	**09 35 09.1**	**-0.4**
	baz=77							
PTRM	**Twissleman Ran**	**77.19**	**45**	*eP*		**P**	**09 35 10.3**	**+0.6**
U04C	**Hernandez Rese**	**77.22**	**44**	⇑P		**P**	**09 35 10.6**	**+0.8**
	baz=77,SNR=11							
NSHM	**Saint Helena R**	**77.34**	**41**	*eP*		**P**	**09 35 10.6**	**+0.1**
HOPS	**Hopland**	**77.34**	**41**	*eP*		**P**	**09 35 10.5**	**+0.1**
FMP	**Fort Macarthur**	**77.39**	**47**	⇓P		**P**	**09 35 10.9**	**0.0**

MDJ XS sS 09 48 08.5 -3.0
MDJ AMB AMB
comp=Z,118nm,1.0s,mb5.2
MDJ AMB AMB
comp=Z,172nm,4.2s
GMRC Granite Mounta 79.80 48 ⇓P **P 09 35 23.8 +0.1**
baz=80
IRM Iron Mountain 79.83 48 ⇑P **P 09 35 24.2 +0.4**
baz=80,SNR=33
GRAC Grapevine Rang 79.84 45 ⇓P **P 09 35 24.2 +0.4**
baz=80,SNR=10
FURC Furnace Creek, 79.89 46 ⇑P **P 09 35 23.9 -0.2**
baz=80,SNR=14
TUQ Turquoise Moun 79.97 47 ⇓P **P 09 35 24.7 +0.2**
baz=80,SNR=18
SHOC Shoshone 79.97 46 ⇓P **P 09 35 24.3 -0.3**
baz=80,SNR=11
BBOR Butler Butte 79.98 38 P **P 09 35 24.5 +0.1**
NVAR Mina Array Bea 80.02 43 P **P 09 35 24.9 +0.2**
comp=Z,22nm,0.8s,mb4.6,baz=224,slow=8.4,SNR=126
NVAR pP pP 09 37 26.2 +3.3
comp=Z,0.2nm,0.6s,baz=192,slow=41,SNR=3.0
NVAR PKKPbc PKKPbc 09 54 06.2 +0.4
comp=Z,0.4nm,0.6s,baz=61,slow=3.1,SNR=3.5
NVAR Mina Array Bea 80.02 43 P **P 09 35 24.9 +0.2**
NVAR pP pP 09 37 26.2 +3.3
NVAR PKKPbc PKKPbc 09 54 06.2 +0.4
I02A Mapleton 80.02 36 ⇓P **P 09 35 24.9 +0.3**
baz=80
O06A Flanigan 80.05 41 ⇑P **P 09 35 25.0 +0.2**
baz=80,SNR=35
PAHR Pah Rah Range 80.06 42 *e*P **P 09 35 24.9 0.0**
comp=Z,53nm,1.0s,mb4.8
Y12C Blythe 80.06 49 ⇑P **P 09 35 25.4 +0.3**
baz=80,SNR=13
113A Mohawk Valley, 80.10 50 ⇓P **P 09 35 25.5 +0.2**
baz=80,SNR=8.7
R08A Mina 80.10 43 ⇑P **P 09 35 25.4 +0.2**
baz=80,SNR=5.4
U10A Ash Meadows, A 80.22 46 ⇑P **P 09 35 26.1 +0.3**
baz=80,SNR=11
P07A Fallon 80.28 42 ⇑P **P 09 35 26.3 +0.3**
baz=80
I03A Eugene 80.31 37 ⇓P **P 09 35 26.7 +0.6**
baz=80
S09A Goldfield 80.33 44 ⇑P **P 09 35 26.2 -0.2**
baz=80,SNR=16
LDFC Landfair 80.34 48 *e*P **P 09 35 27.2 +0.7**
N06A Buffalo Meadow 80.39 41 ⇓P **P 09 35 26.7 +0.1**
baz=80,SNR=32
214A Organ Pipe Nat 80.39 51 ⇑P **P 09 35 27.4 +0.5**
baz=80,SNR=17
Q08A Gabbs 80.50 43 ⇓P **P 09 35 27.1 -0.1**
baz=81,SNR=34
V11A Goodsprings 80.52 47 ⇑P **P 09 35 27.4 0.0**
baz=81,SNR=13
TPH Tonopah 80.53 44 *e*P **P 09 35 28.1 +0.7**
TPNV Topopah Spring 80.56 45 ⇑P **P 09 35 27.7 +0.1**
baz=81,SNR=28
TPNV Topopah Spring 80.56 45 *e*P **P 09 35 27.6 0.0**
Y13A Salome 80.59 49 ⇑P **P 09 35 28.4 +0.6**
baz=81,SNR=24
PDMCI Parker Dam,Lak 80.62 49 ⇓P **P 09 35 28.2 +0.2**
baz=81,SNR=19
W12A Cal Nev Ari 80.63 48 ⇓P **P 09 35 28.4 +0.5**
baz=81
O07A Toulon 80.64 42 ⇓P **P 09 35 28.0 +0.1**
baz=81,SNR=55
R09A Tonopah 80.72 44 ⇑P **P 09 35 28.3 -0.1**
baz=81,SNR=25
H03A Soap Creek Ran 80.75 36 ⇓P **P 09 35 28.8 +0.5**
baz=81
MOD Modoc 80.78 40 *e*P **P 09 35 28.8 +0.2**
S10A Tonopah Range, 80.86 45 ⇓P **P 09 35 29.2 +0.1**
baz=81,SNR=61
V12A Nelson 80.86 47 ⇑P **P 09 35 29.3 +0.1**
baz=81,SNR=12
P08A Dixie Valley 80.88 42 ⇓P **P 09 35 29.5 +0.3**
baz=81,SNR=6.2
K05A Summer Lake 80.92 39 ⇓P **P 09 35 29.6 +0.4**
baz=81,SNR=25
N07B Gerlach 80.94 41 ⇓P **P 09 35 29.5 +0.1**
baz=81,SNR=22
Q09A Carvers 80.97 43 ⇓P **P 09 35 29.8 +0.1**
baz=81,SNR=5.7
X13A Yucca 80.99 49 ⇓P **P 09 35 30.2 +0.3**
baz=81,SNR=24
Z14A Wintersburg 81.00 50 ⇑P **P 09 35 30.5 +0.6**
baz=81,SNR=28
SHPR Sheep Range 81.06 46 *e*P **P 09 35 30.5 +0.3**
M07A Soldier Meadow 81.17 40 ⇓P **P 09 35 31.0 +0.4**
baz=81,SNR=31
O08A Rochester Mine 81.17 42 ⇓P **P 09 35 30.9 +0.3**
baz=81,SNR=6.7
115A Sonoran Desert 81.19 51 ⇓P **P 09 35 31.2 +0.3**
baz=81,SNR=12
W13A Hualapai Mount 81.21 48 ⇓P **P 09 35 31.4 +0.4**
baz=81,SNR=18
Y14A Wickenburg 81.25 49 ⇓P **P 09 35 31.4 +0.2**
baz=81,SNR=26
R10A Warm Springs 81.25 44 ⇑P **P 09 35 31.5 +0.4**
baz=81,SNR=54
S11A Rachel 81.27 45 ⇓P **P 09 35 31.2 0.0**
baz=81,SNR=18
SSOR Sweet Springs 81.32 36 P **P 09 35 31.4 +0.2**
H04A Detroit Lake 81.37 36 ⇓P **P 09 35 31.1 -0.4**
baz=82,SNR=7.8
F03A Seaside 81.39 35 ⇑P **P 09 35 32.1 +0.5**
baz=82
P09A Austin 81.40 43 ⇑P **P 09 35 31.9 +0.1**
baz=82,SNR=13
T11A Corn Creek, Al 81.41 46 ⇑P **P 09 35 32.3 +0.4**
baz=82,SNR=60
216A Three Points, 81.42 52 ⇓P **P 09 35 33.0 +0.9**
baz=82,SNR=28
L07A Adell 81.43 40 ⇓P **P 09 35 32.5 +0.6**
baz=82,SNR=22
U12A Valley of Fire 81.45 47 ⇓P **P 09 35 32.6 +0.4**
baz=82,SNR=7.8
N08A GE Springer Mi 81.46 41 ⇓P **P 09 35 32.2 +0.1**
baz=82,SNR=54
Q10A Clear Creek Ra 81.48 44 ⇓P **P 09 35 32.3 +0.1**
baz=82,SNR=8.9
T12A Moapa 81.48 46 ⇑P **P 09 35 32.3 0.0**
baz=82
116A Eloy 81.51 51 ⇑P **P 09 35 33.2 +0.7**
baz=82,SNR=29
G04A Mulino 81.53 36 ⇑P **P 09 35 32.7 +0.3**
baz=82
V13A Grand Canyon W 81.53 47 ⇓P **P 09 35 32.7 +0.1**
baz=82,SNR=23
SNY Shenyang 81.57 320 ⇓P **P 09 35 32.5 -0.1**
SNY AMB AMB
comp=Z,23nm,1.6s,mb4.4
I05A Bend 81.57 37 ⇑P **P 09 35 32.9 +0.3**
baz=82,SNR=9.9
X14A Yava 81.59 49 ⇓P **P 09 35 33.6 +0.7**
baz=82,SNR=20
CN2 Changchun 81.62 322 *e*P **P 09 35 33.0 +0.2**
CN2 *e*XP sP 09 38 24.0 -4.0
CN2 *e*S S 09 44 58.8 -0.8
CN2 SS SS 09 50 38.3 +4.6
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.2
CN2 AMB AMB
comp=Z,600nm,5.0s
J06A Christmas Vall 81.67 39 ⇓P **P 09 35 33.0 -0.2**
baz=82,SNR=31
M08A Happy Creek Ra 81.69 41 ⇑P **P 09 35 33.7 +0.5**
baz=82,SNR=24
O09A Fish Creek Ran 81.71 42 ⇑P **P 09 35 33.5 0.0**
baz=82,SNR=30
Y15A Casa Rosa Ranc 81.74 50 ⇑P **P 09 35 34.3 +0.6**
baz=82,SNR=50
KLR Kul'dur 81.74 329 *e*P **P 09 35 30.0 -3.3**
R11A Troy Canyon, C 81.76 45 ⇓P **P 09 35 33.3 -0.4**
baz=82,SNR=28
E03A Lebam 81.78 34 ⇑P **P 09 35 33.8 +0.2**
baz=82
217A Green Valley 81.78 52 ⇓P **P 09 35 34.9 +0.9**
baz=82,SNR=39
W14A Seligman 81.83 48 ⇑P **P 09 35 34.9 +0.8**
baz=82,SNR=49
U13A Pakoon Wash 81.83 47 ⇑P **P 09 35 34.5 +0.3**
baz=82,SNR=55
BMN Battle Mountai 81.84 42 *e*P **P 09 35 34.2 +0.1**
S12A Delamar Landin 81.86 46 ⇑P **P 09 35 35.0 +0.8**
baz=82,SNR=12
P10A Eureka 81.87 43 ⇑P **P 09 35 34.3 0.0**
baz=82,SNR=11
K07A Rock Creek Ran 81.88 39 ⇓P **P 09 35 34.5 +0.3**
baz=82,SNR=36
N09A Rock Creek Ran 81.88 42 ⇓P **P 09 35 34.5 +0.2**
baz=82,SNR=18
H05A Mades 81.89 37 ⇑P **P 09 35 34.1 -0.1**
baz=82,SNR=8.2
Q11A Duckwater 81.98 44 ⇑P **P 09 35 35.0 +0.2**
baz=82,SNR=24
F04A Amboy 82.01 35 ⇑P **P 09 35 34.6 -0.2**
baz=82,SNR=10
V14A Boquillas Ranc 82.03 48 ⇑P **P 09 35 35.8 +0.6**
baz=82,SNR=52
D03A Wishkah Elem. 82.03 34 ⇓P **P 09 35 35.3 +0.4**
baz=82
WHN Wuhan 82.04 306 P **P 09 35 36.0 +0.7**
I06A Prineville 82.05 38 ⇓P **P 09 35 35.6 +0.6**
baz=82,SNR=44
HOOD Mount Hood Mea 82.06 36 *e*P **P 09 35 35.4 +0.3**
TUC Tucson 82.06 52 *e*P **P 09 35 36.2 +0.8**
comp=Z,48nm,0.9s,mb4.9
TUC Tucson 82.06 52 *e*P **P 09 35 36.2 +0.8**
TUC pmax pmax
comp=Z,48nm,0.9s,mb4.9
X15A Humboldt 82.07 49 ⇓P **P 09 35 36.0 +0.7**
baz=82,SNR=54
Z16A Peralta Trail, 82.09 51 ⇑P **P 09 35 36.2 +0.7**
baz=82,SNR=38
WVOR Wild Horse Val 82.10 40 *e*P **P 09 35 35.2 -0.1**
comp=Z,55nm,0.9s,mb5.0
WVOR Wild Horse Val 82.10 40 *e*P **P 09 35 35.2 -0.1**
WVOR pmax pmax
comp=Z,55nm,0.9s,mb5.0
L08A Fields 82.13 40 ⇑P **P 09 35 35.9 +0.4**
baz=82,SNR=53
VIPM Ingram Point 82.15 37 P **P 09 35 35.7 +0.2**
C03A Quillayute Air 82.16 33 ⇑P **P 09 35 36.0 +0.5**
baz=82
NLWA Neilton Lookou 82.16 34 *e*P **P 09 35 35.8 +0.3**
NLWA Neilton Lookou 82.16 34 ⇓P **P 09 35 36.0 +0.5**
baz=82
SVW2 Sparrevohn 82.17 11 *e*P **P 09 35 33.9 -1.3**
T13A Saint George 82.19 46 ⇑P **P 09 35 36.4 +0.5**
baz=82,SNR=37
G05A Wamic 82.20 36 ⇑P **P 09 35 36.1 +0.3**
baz=82
OOW Octopus West 82.21 33 P **P 09 35 36.4 +0.6**
O10A Cortez Mining, 82.22 43 ⇓P **P 09 35 36.1 +0.2**
baz=82,SNR=17
117A Oracle 82.22 52 ⇑P **P 09 35 37.1 +0.9**
baz=82,SNR=54
PPI Padang Panjang 82.23 272 P **P 09 35 37.4 +0.7**
comp=Z,24nm,0.8s,comp=Z,3µm,mb4.7
J07A Hines 82.24 39 ⇓P **P 09 35 36.1 +0.1**
baz=82,SNR=23
318A Bisbee 82.25 53 ⇑P **P 09 35 37.2 +0.9**
baz=82,SNR=54
M09A Marrel Ranch, 82.25 41 ⇑P **P 09 35 36.6 +0.5**
baz=82,SNR=25
E04A Onalaska 82.26 35 ⇑P **P 09 35 36.4 +0.3**
baz=82,SNR=7.5
P11A Circle Ranch, 82.30 44 ⇓P **P 09 35 36.5 +0.1**
baz=82,SNR=6.4
Y16A Circle Bar Ran 82.32 50 ⇓P **P 09 35 37.4 +0.8**
baz=82,SNR=53
K08A Mann Creek Ran 82.36 40 ⇓P **P 09 35 37.0 +0.4**
baz=82,SNR=62
U14A Mt Trumbull 82.38 47 ⇑P **P 09 35 37.7 +0.8**
baz=82,SNR=71
TDL Tradedollar La 82.38 35 P **P 09 35 37.1 +0.4**
W15A Williams 82.39 49 ⇑P **P 09 35 37.9 +0.9**
baz=82,SNR=8.0
R12A Pony Springs, 82.40 45 ⇓P **P 09 35 37.1 +0.2**
baz=82,SNR=44
H06A Lindquist Farm 82.45 37 ⇓P **P 09 35 36.8 -0.2**
baz=83,SNR=36
N10A Dunphy 82.45 42 ⇑P **P 09 35 37.4 +0.2**
baz=83,SNR=24
L09A Wilkinson Ranc 82.45 41 ⇑P **P 09 35 37.3 +0.1**
baz=83,SNR=27
218A Dragoon 82.46 52 ⇑P **P 09 35 38.5 +1.1**
baz=83,SNR=14
SEW Seward 82.48 14 *e*P **P 09 35 34.9 -1.9**
comp=Z,46nm,0.8s,mb5.0
S13A Holt Ranch, En 82.51 46 ⇑P **P 09 35 38.0 +0.4**
baz=83,SNR=46
F05A White Salmon 82.51 36 ⇓P **P 09 35 37.1 -0.2**
baz=83,SNR=6.9
I07A Izee 82.54 38 ⇓P **P 09 35 37.9 +0.3**
baz=83,SNR=28
G06A Carlson Farm, 82.58 37 ⇑P **P 09 35 37.6 -0.1**
baz=83,SNR=12
X16A Lo Alia Ranch, P 82.61 50 ⇑P **P 09 35 38.7 +0.6**
baz=83,SNR=68
Q12A Willow Creek R 82.63 44 ⇓P **P 09 35 38.1 0.0**
baz=83,SNR=20
O11A Cowboy Ranch, 82.67 43 ⇑P **P 09 35 38.5 +0.2**
baz=83,SNR=48
SLKM Skilak Lake 82.67 13 *e*P **P 09 35 36.4 -1.4**
Y17A Roosevelt 82.69 51 ⇓P **P 09 35 39.0 +0.5**
baz=83,SNR=23
MAW Mawson 82.70 200 *e*P **P 09 35 38.1 +0.1**
comp=Z,4.0nm,0.6s,mb4.1
MAW Mawson 82.70 200 P **P 09 35 38.2 +0.3**
comp=Z,4.3nm,0.6s,mb4.2,baz=136,slow=8.2,SNR=19
MAW pP pP 09 37 38.9 +1.9
comp=Z,5.2nm,0.8s,baz=113,slow=3.8,SNR=5.0
MAW Mawson 82.70 200 *e*P **P 09 35 38.1 +0.1**
MAW pmax pmax
comp=Z,4.0nm,0.6s
J08A Circle Bar Ran 82.73 39 ⇓P **P 09 35 38.4 -0.1**
baz=83,SNR=19
R13A O'Grain Ranch, 82.75 45 ⇓P **P 09 35 39.1 +0.4**
baz=83,SNR=17
319A Douglas 82.75 53 ⇓P **P 09 35 39.9 +1.0**
baz=83,SNR=60
E05A Randle 82.76 35 ⇓P **P 09 35 38.1 -0.5**
baz=83,SNR=12
B04A Port Angeles 82.77 33 ⇓P **P 09 35 39.0 +0.4**
baz=83
T14A Hurricane 82.77 47 ⇑P **P 09 35 39.3 +0.4**
baz=83,SNR=48
V15A Kaibab Nationa 82.78 48 ⇓P **P 09 35 39.7 +0.8**
baz=83,SNR=41
K09A Rome 82.80 40 ⇑P **P 09 35 39.0 +0.2**
baz=83,SNR=40
H07A Lands Inn, Kim 82.81 38 ⇓P **P 09 35 38.6 -0.2**
baz=83,SNR=43
F06A Goldendale 82.82 36 ⇑P **P 09 35 38.7 -0.2**
baz=83,SNR=8.1
118A Homack Ranch, 82.83 52 ⇑P **P 09 35 40.3 +1.0**
baz=83,SNR=50
CCUT Cedar City 82.83 46 *e*P **P 09 35 39.5 +0.4**
comp=Z,36nm,0.9s,mb4.9
C04A Brinnon 82.83 34 ⇓P **P 09 35 39.0 +0.1**
baz=83,SNR=10
M10A I.L. Ranch, Tu 82.87 42 ⇓P **P 09 35 39.7 +0.4**
baz=83,SNR=63
W16A Flagstaff 82.88 49 ⇑P **P 09 35 40.1 +0.7**
baz=83,SNR=49
ARUT Antelope Range 82.90 46 *e*P **P 09 35 39.4 -0.1**
comp=Z,31nm,1.1s,mb4.8
ARUT Antelope Range 82.90 46 *e*P **P 09 35 39.4 -0.1**
ARUT pmax pmax
comp=Z,31nm,1.1s,mb4.8
I08A Drewsey 82.99 39 ⇑P **P 09 35 40.0 +0.2**
baz=83,SNR=36
Z18A Geronimo 82.99 51 ⇓P **P 09 35 40.8 +0.7**
baz=83,SNR=9.4
N11A Elko Archery C 82.99 42 ⇑P **P 09 35 40.0 +0.1**
baz=83,SNR=14
U15A North Rim 83.00 48 ⇑P **P 09 35 40.9 +0.9**
baz=83,SNR=107
D05A Enumclaw 83.03 35 ⇓P **P 09 35 40.2 +0.4**
baz=83,SNR=11
GAMB Gambell 83.03 3 *e*P **P 09 35 39.4 -0.1**
219A White Tail Can 83.06 53 ⇓P **P 09 35 41.2 +0.8**
baz=83,SNR=44
S14A Cedar City 83.07 46 ⇑P **P 09 35 40.7 +0.4**
baz=83,SNR=16
Q13A Wheeler Ranch, 83.12 45 ⇑P **P 09 35 40.5 -0.1**
baz=83,SNR=31
G07A Ruggs Ranch, H 83.14 37 ⇓P **P 09 35 40.4 -0.1**
baz=83,SNR=18
J09A Fry Pan Ranch, 83.15 39 ⇑P **P 09 35 40.7 +0.1**
baz=83,SNR=32
E06A Yakima 83.18 36 ⇓P **P 09 35 40.5 -0.1**
baz=83,SNR=6.4
PGC Sidney 83.18 33 *e*P **P 09 35 40.8 +0.2**
WUAZ Wupatki 83.19 49 *e*P **P 09 35 41.6 +0.6**
WUAZ Wupatki 83.19 49 ⇑P **P 09 35 41.3 +0.3**
baz=83,SNR=22
L10A Juniper Basin 83.22 41 ⇑P **P 09 35 41.2 +0.2**
baz=83,SNR=52
T15A Red Dirt Ranch 83.23 47 ⇑P **P 09 35 41.6 +0.4**
baz=83,SNR=33
ELK Elko 83.27 43 *e*P **P 09 35 41.2 0.0**
comp=Z,38nm,1.0s,mb4.9
ELK Elko 83.27 43 *e*P **P 09 35 41.3 0.0**
ELK pmax pmax
comp=Z,38nm,1.0s
H08A Prairie City 83.28 38 ⇑P **P 09 35 41.0 -0.2**
baz=83,SNR=14
IPM Ipoh 83.29 277 P **P 09 35 42.2 +0.2**
comp=Z,203nm,0.9s,comp=Z,2µm,mb5.6
M11A Holland Ranch, 83.29 42 ⇓P **P 09 35 41.8 +0.4**
baz=83,SNR=24
RC01 Rabbit Creek A 83.30 13 *e*P **P 09 35 39.2 -1.7**
comp=Z,105nm,1.2s,mb5.2
Y18A Canyon Day Jun 83.32 51 ⇓P **P 09 35 42.7 +1.1**
baz=83,SNR=48
O12A Currie 83.33 43 ⇑P **P 09 35 41.5 -0.1**
baz=84,SNR=25
K10A MacKenzie Ranc 83.37 40 ⇑P **P 09 35 41.6 -0.1**
baz=84,SNR=26
F07A Phinny Hill Vi 83.37 36 ⇓P **P 09 35 41.4 -0.2**
baz=84
P13A Bates Ranch, G 83.38 44 ⇓P **P 09 35 42.1 +0.3**
baz=84,SNR=43
119A Ashpeak Ranch, 83.38 52 ⇓P **P 09 35 42.8 +0.8**
baz=84,SNR=21
R14A James Farms, M 83.45 46 ⇑P **P 09 35 42.4 +0.2**
baz=84,SNR=5.1
W17A Winslow 83.45 49 ⇑P **P 09 35 42.8 +0.5**
baz=84,SNR=6.1
N12A Clover Valley, 83.46 43 ⇑P **P 09 35 42.2 0.0**
baz=84,SNR=34
C05A Tolt Reservoir 83.50 34 ⇓P **P 09 35 41.8 -0.4**
baz=84,SNR=17
I09A Lost Marbles R 83.52 39 ⇑P **P 09 35 42.1 -0.3**
baz=84,SNR=19
G08A Pilot Rock 83.56 37 ⇑P **P 09 35 42.6 0.0**
baz=84,SNR=26
S15A Panguitch 83.58 47 ⇑P **P 09 35 44.1 +1.2**
baz=84,SNR=26
A04A Legoe Bay, Lum 83.60 33 ⇑P **P 09 35 42.5 -0.2**
baz=84
Q14A Sevier Lake (B 83.63 45 ⇓P **P 09 35 43.4 +0.3**
baz=84,SNR=58
B05A Bryant 83.64 34 ⇑P **P 09 35 42.8 -0.1**
baz=84,SNR=13
D06A Cle Elum 83.64 35 ⇑P **P 09 35 42.7 -0.2**
baz=84,SNR=9.8
Z19A T-Link Ranch, 83.66 52 ⇓P **P 09 35 43.9 +0.6**
baz=84,SNR=5.9
U16A Tuba City 83.67 48 ⇑P **P 09 35 43.9 +0.5**
baz=84,SNR=50
JCW Jim Creek 83.68 34 *e*P **P 09 35 42.6 -0.5**
L11A Cat Creek Ranc 83.72 41 ⇑P **P 09 35 43.7 +0.2**
baz=84,SNR=42
X18A Snowflake 83.74 50 ⇑P **P 09 35 44.2 +0.4**
baz=84,SNR=22
O13A Hicks Ranch, I 83.76 44 ⇓P **P 09 35 43.8 +0.1**
baz=84,SNR=9.7
J10A Berg Farm, Mel 83.79 40 ⇓P **P 09 35 43.6 -0.2**
baz=84,SNR=14
E07A Sunnyside 83.81 36 ⇓P **P 09 35 44.0 +0.2**
baz=84,SNR=18
T16A Glen Canyon Da 83.83 47 ⇓P **P 09 35 44.5 +0.4**
baz=84,SNR=20
M12A Wells 83.84 42 ⇓P **P 09 35 44.2 +0.1**
baz=84,SNR=22
RSW Rattlesnake Hi 83.86 36 *e*P **P 09 35 44.3 +0.3**
comp=Z,147nm,1.4s,mb5.3
K11A Parker Ranch, 83.88 41 ⇑P **P 09 35 44.5 +0.3**
baz=84,SNR=16
PMR Palmer 83.88 13 *e*P **P 09 35 42.7 -1.1**
comp=Z,41nm,0.5s,mb5.2
PMR Palmer 83.88 13 *e*P **P 09 35 42.7 -1.1**
PMR pmax pmax
comp=Z,41nm,0.5s,mb5.2
HAWA Hanford 83.89 36 *e*P **P 09 35 44.1 0.0**
R15A Junction 83.91 46 ⇑P **P 09 35 45.0 +0.5**
baz=84,SNR=6.8
H09A Durkee 83.95 38 ⇓P **P 09 35 44.5 -0.1**
baz=84,SNR=32
F08A Pendleton 83.96 37 ⇓P **P 09 35 44.3 -0.3**
baz=84,SNR=11
Y19A Nutrioso 83.98 51 ⇓P **P 09 35 45.8 +0.9**
baz=84,SNR=39
GBL Gable Mountain 84.05 36 P **P 09 35 45.0 +0.1**
RPW Rockport 84.06 34 P **P 09 35 44.3 -0.7**
C06A Tall Timber Ra 84.06 34 ⇓P **P 09 35 44.6 -0.4**
baz=84
P14A Drum Mountains 84.08 45 ⇓P **P 09 35 45.6 +0.3**
baz=84,SNR=18
A05A Maple Falls 84.10 33 ⇓P **P 09 35 44.5 -0.6**
baz=84
B06A Marblemount 84.11 34 ⇓P **P 09 35 44.2 -1.0**
baz=84,SNR=5.2
D07A Quincy 84.12 35 ⇓P **P 09 35 45.2 0.0**
baz=84,SNR=8.6
MSU Marysvale 84.13 46 *e*P **P 09 35 46.3 +0.8**
S16A Weppner Ranch, 84.13 47 ⇓P **P 09 35 45.5 -0.1**
baz=84,SNR=16
I10A Payette 84.14 39 ⇑P **P 09 35 45.9 +0.4**
baz=84,SNR=9.1
L12A House Creek Ra 84.17 42 ⇓P **P 09 35 45.9 +0.2**
baz=84,SNR=16
X19A St. Johns 84.17 51 ⇓P **P 09 35 46.5 +0.7**
baz=84,SNR=24
ETW Entiat 84.17 35 *e*P **P 09 35 45.3 -0.3**
comp=Z,23nm,0.6s,mb4.9
W18A Petrified Fore 84.17 50 ⇑P **P 09 35 46.2 +0.4**
baz=84
E08A Dider Farm, El 84.21 36 ⇑P **P 09 35 45.4 -0.3**
baz=84
U17A Shonto 84.23 48 ⇓P **P 09 35 46.4 +0.3**
baz=84,SNR=8.0
G09A Cove 84.24 38 ⇓P **P 09 35 45.7 -0.2**
baz=84,SNR=16
Q15A Fillmore 84.24 45 ⇑P **P 09 35 46.2 +0.1**
baz=84,SNR=12
BMO Blue Mountains 84.27 38 *e*P **P 09 35 45.7 -0.4**
M13A Montello 84.29 43 ⇑P **P 09 35 46.1 -0.2**
baz=84,SNR=43
V18A Ganado 84.31 49 ⇑P **P 09 35 46.9 +0.4**
baz=84,SNR=29
T17A Navajo Res., N 84.32 48 ⇓P **P 09 35 47.2 +0.6**
baz=84,SNR=30
MFID Camas Ranch 84.35 40 ⇑P **P 09 35 46.4 -0.1**
baz=84,SNR=13
C07A Waterville 84.37 35 ⇑P **P 09 35 45.9 -0.6**
baz=84,SNR=15
F09A S2 Ranch, Elgi 84.41 37 ⇑P **P 09 35 46.7 0.0**
baz=84
W19A Sanders 84.42 50 ⇑P **P 09 35 47.5 +0.4**
baz=84,SNR=6.6
WTV Waterville 84.43 35 P **P 09 35 46.4 -0.4**
PPLA Purkeypile 84.45 11 *e*P **P 09 35 44.0 -2.5**
comp=Z,12nm,0.7s,mb4.5
H10A Noah's Angus R 84.45 39 ⇑P **P 09 35 46.6 -0.4**
baz=85,SNR=46
R16A Teasdale 84.48 46 ⇓P **P 09 35 47.9 +0.6**
baz=85,SNR=21
K12A Draper Farm, C 84.50 41 ⇑P **P 09 35 47.1 -0.2**
baz=85,SNR=15
I11A Placerville 84.55 40 ⇑P **P 09 35 47.4 -0.1**
baz=85,SNR=30
DUG Dugway 84.56 44 ⇓P **P 09 35 47.3 -0.3**
baz=85
DUG Dugway 84.56 44 *e*P **P 09 35 47.4 -0.2**
P15A Leamington 84.59 45 ⇑P **P 09 35 47.5 -0.3**
baz=85
D08A Wollman Farm, 84.62 36 ⇑P **P 09 35 47.7 -0.1**
baz=85,SNR=17
G10A Bishop Farm, J 84.63 38 ⇑P **P 09 35 47.4 -0.4**
baz=85,SNR=42
S17A Black Ridge (B 84.63 47 ⇑P **P 09 35 47.7 -0.4**
baz=85,SNR=22
N14A Grayback Hills 84.65 43 ⇓P **P 09 35 47.6 -0.4**
baz=85
U18A Rough Rock, Ch 84.70 49 ⇑P **P 09 35 48.5 +0.1**
baz=85,SNR=23

J12A	Stokes Ranch,	84.71	41	⇓P		P	09 35 48.3	+0.1		
	baz=85,SNR=20									
E09A	Wood Farm, Sta	84.74	37	⇓P		P	09 35 47.8	-0.5		
	baz=85,SNR=7.1									
B07A	Winthrop	84.80	34	⇑P		P	09 35 48.2	-0.4		
	baz=85,SNR=17									
L13A	Double Diamond	84.81	42	⇑P		P	09 35 48.6	-0.2		
	baz=85,SNR=7.0									
M14A	Sheep Mountain	84.89	43	⇑P		P	09 35 48.9	-0.3		
	baz=85,SNR=22									
OD2	Odessa Site #2	84.93	36	*e*P		P	09 35 48.7	-0.5		
	comp=Z,57nm,1.1s,mb5.0									
F10A	Beach Ranch, E	84.95	38	⇓P		P	09 35 48.7	-0.6		
	baz=85,SNR=24									
H11A	Donnelly	84.95	39	⇓P		P	09 35 49.1	-0.3		
	baz=85,SNR=50									
V19A	Window Rock	84.95	50	⇑P		P	09 35 49.4	-0.2		
	baz=85									
D09A	Jones Farm, Ri	84.96	36	⇑P		P	09 35 49.1	-0.3		
	baz=85,SNR=20									
C08A	Higginbotham F	84.98	35	⇑P		P	09 35 49.1	-0.4		
	baz=85,SNR=11									
I12A	Atlanta	84.98	40	⇑P		P	09 35 50.0	+0.4		
	baz=85,SNR=35									
Q16A	Castle Valley	85.01	46	⇑P		P	09 35 50.1	+0.2		
	baz=85									
A07A	Ashnola River,	85.01	34	⇓P		P	09 35 49.3	-0.3		
	baz=85,SNR=17									
K13A	Stover Farm, H	85.02	42	⇑P		P	09 35 50.0	+0.2		
	baz=85,SNR=16									
T18A	Mexican Hat	85.04	48	⇑P		P	09 35 50.3	+0.2		
	baz=85,SNR=91									
R17A	Hanksville Air	85.08	47	⇑P		P	09 35 50.0	-0.2		
	baz=85,SNR=18									
N15A	Stansbury Isla	85.11	44	⇓P		P	09 35 49.9	-0.4		
	baz=85,SNR=9.1									
B08A	Colville Reser	85.16	35	⇑P		P	09 35 49.6	-0.8		
	baz=85,SNR=26									
G11A	Walters Elk Ra	85.19	38	⇓P		P	09 35 50.1	-0.5		
	baz=85									
S18A	Hurst Farm, Bl	85.22	47	⇑P		P	09 35 50.7	-0.2		
	baz=85,SNR=14									
L14A	Malta	85.23	42	⇓P		P	09 35 50.8	0.0		
	baz=85									
MPU	Maple Canyon	85.25	45	*e*P		P	09 35 51.2	+0.2		
KTH	Kantishna Hill	85.29	12	*e*P		P	09 35 48.1	-2.4		
	comp=Z,48nm,0.9s,mb5.0									
HLID	Hailey	85.30	41	*e*P		P	09 35 51.5	+0.3		
HLID	Hailey	85.30	41	⇑P		P	09 35 51.4	+0.2		
	baz=85,SNR=33									
TRF	Thorofare Moun	85.32	12	*e*P		P	09 35 49.1	-1.7		
	comp=Z,93nm,0.8s,mb5.4									
BJT	Baijiatuau	85.32	315	*e*P		P	09 35 51.4	0.0		
BJI	Beijing	85.33	315	P		P	09 35 51.5	+0.1		
BJI				S		S	09 45 39.5	+3.4		
BJI				SS		SS	09 51 30.3	+2.3		
BJI				AMB		AMB				
	comp=Z,62nm,1.0s,mb5.1									
BJI				AMB		AMB				
	comp=Z,335nm,4.3s									
CHUM	Lake Minchumin	85.33	11	*e*P		P	09 35 48.7	-2.1		
	comp=Z,127nm,1.3s,mb5.3									
J13A	Cove Ranch, Pi	85.36	41	⇑P		P	09 35 51.9	+0.4		
	baz=86,SNR=46									
SPUT	South Promonto	85.36	43	*e*P		P	09 35 51.9	+0.4		
SEY	Seymchan	85.38	347	⇑*e*P		P	09 35 50.1	-0.9		
HVU	Hansel Valley	85.40	43	*e*P		P	09 35 52.0	+0.3		
C09A	Chrisman Ranch	85.41	36	⇑P		P	09 35 51.1	-0.5		
	baz=86,SNR=8.0									
O16A	Springville	85.43	45	⇑P		P	09 35 51.6	-0.2		
	baz=86,SNR=11									
M15A	Larsen Ranch,	85.44	43	⇑P		P	09 35 51.3	-0.6		
	baz=86									
GSI	Gunungsitoli	85.47	273	P		P	09 35 53.3	+0.6		
	comp=Z,137nm,1.0s,mb5.4									
T19A	Beclabito	85.49	49	⇓P		P	09 35 52.1	-0.1		
	baz=86,SNR=14									
D10A	Wagner Farm, O	85.54	37	⇑P		P	09 35 51.6	-0.6		
	baz=86									
K14A	Jones Ranch, D	85.54	42	⇑P		P	09 35 52.3	0.0		
	baz=86,SNR=11									
A08A	Turner Farm, O	85.54	34	⇑P		P	09 35 51.9	-0.3		
	baz=86,SNR=36									
SRU	San Rafael	85.55	46	⇑P		P	09 35 52.4	0.0		
	baz=86,SNR=20									
SRU	San Rafael	85.55	46	*e*P		P	09 35 52.5	+0.1		
H12A	Diamond D Ranc	85.56	40	⇑P		P	09 35 52.4	+0.1		
	baz=86,SNR=43									
P17A	Butcher Ranch,	85.58	46	⇑P		P	09 35 52.2	-0.4		
	baz=86									
R18A	Canyonlands Na	85.62	47	⇓P		P	09 35 52.6	-0.2		
	baz=86,SNR=31									
JLU	Jordanelle	85.66	44	*e*P		P	09 35 53.3	+0.3		
I13A	Wildhorse Cree	85.67	40	⇑P		P	09 35 53.2	+0.3		
	baz=86,SNR=10									
J14A	Carey	85.73	41	⇑P		P	09 35 53.8	+0.6		
	baz=86,SNR=32									
LAZ	Ladron	85.74	51	*e*P		P	09 35 54.2	+0.7		
	comp=Z,5.1nm,0.7s,mb4.3									
E11A	Bogner Ranch,	85.75	38	⇑P		P	09 35 51.8	-1.4		
	baz=86,SNR=14									
LENM	Lemitar	85.75	52	*e*P		P	09 35 54.0	+0.4		
L15A	Malad City	85.76	43	⇓P		P	09 35 52.9	-0.5		
	baz=86,SNR=7.9									
BPAW	Bear Paw Mtn.	85.77	11	*e*P		P	09 35 50.2	-2.7		
	comp=Z,71nm,1.6s,mb5.0									
Q18A	Rafter H Ranch	85.81	46	⇑P		P	09 35 53.1	-0.6		
	baz=86,SNR=21									
N16A	Rees Ranch, Co	85.81	44	⇑P		P	09 35 53.2	-0.5		
	baz=86									
MCK	McKinley	85.84	12	*e*P		P	09 35 51.9	-1.3		
S19A	Harvey Farm, M	85.84	48	⇓P		P	09 35 53.7	-0.2		
	baz=86,SNR=16									
SKAG	Skagway	85.85	20	*e*P		P	09 35 53.8	+0.4		
	comp=Z,184nm,2.1s,mb5.3									
M16A	Huntsville	85.90	44	⇑P		P	09 35 53.7	-0.4		
	baz=86,SNR=9.5									
A09A	Danville	85.92	35	⇓P		P	09 35 53.7	-0.3		
	baz=86,SNR=23									
H13A	Challis	85.93	40	⇑P		P	09 35 54.3	+0.2		
	baz=86,SNR=20									
O17A	Robinson Place	85.93	45	⇓P		P	09 35 54.7	+0.4		
	baz=86,SNR=37									
C10A	Spilker Farm,	85.95	36	⇓P		P	09 35 53.7	-0.5		
	baz=86									
F12A	Elk City	85.98	38	⇓P		P	09 35 54.0	-0.3		
	baz=86,SNR=108									
P18A	Preston Nutter	85.98	46	⇓P		P	09 35 54.5	0.0		
	baz=86,SNR=6.1									
BNM	Barren Site	86.00	52	*e*P		P	09 35 54.8	+0.1		
	comp=Z,15nm,0.7s,mb4.7									
R19A	Curley Farm, L	86.02	47	⇑P		P	09 35 54.5	-0.2		
	baz=86,SNR=11									
MVCO	Mesa Verde	86.04	48	*e*P		P	09 35 54.0	-0.8		
MVCO	Mesa Verde	86.04	48	⇑P		P	09 35 54.7	-0.1		
	baz=86,SNR=6.9									
D11A	Klaveano Farm,	86.06	37	⇓P		P	09 35 53.8	-0.9		
	baz=86,SNR=13									
LPM	Los Pinos Moun	86.07	52	*e*P		P	09 35 55.3	+0.3		
I14A	Mackay	86.08	41	⇑P		P	09 35 55.2	+0.3		
	baz=86,SNR=38									
HWUT	Hardware Ranch	86.09	43	*e*P		P	09 35 54.5	-0.5		
E12A	Beaver Dam Sad	86.15	38	⇑P		P	09 35 54.3	-0.9		
	baz=86,SNR=15									
TXAR	Lajitas Array	86.21	57	P		P	09 35 56.5	+0.7		
	comp=Z,18nm,0.7s,mb4.8,baz=217,slow=6.4,SNR=240									
TXAR				pP		pP	09 37 57.8	+1.5		
	comp=Z,2.6nm,1.2s,baz=241,slow=5.2,SNR=3.2									
TXAR				PKKPbc		PKKPbc	09 53 50.4	-0.6		
	comp=Z,0.4nm,0.8s,baz=159,slow=3.5,SNR=4.9									
PV10	Paradox Valley	86.21	47	*e*P		P	09 35 55.3	-0.3		
	comp=Z,411nm,0.9s,mb6.1									
G13A	Cobalt	86.22	39	⇑P		P	09 35 55.4	-0.1		
	baz=86,SNR=31									
N17A	Moffit Pass	86.24	44	⇑P		P	09 35 55.6	-0.1		
	baz=86									
B10A	Chitwood Farm,	86.27	36	⇓P		P	09 35 55.2	-0.5		
	baz=86									
MENT	Mentasta	86.30	15	*e*P		P	09 35 55.0	-0.4		
NEW	Newport	86.31	36	*e*P		P	09 35 55.2	-0.6		
Q19A	Hogan Spring (	86.33	47	⇓P		P	09 35 55.9	-0.2		
	baz=86,SNR=19									
GYA	Guiyang	86.37	300	⇓*i*P		P	09 35 57.0	+0.3		
GYA				PP		PP	09 39 31.0	+2.5		
GYA				SKS			09 45 31.0			
GYA				S		S	09 45 47.8	+1.2		
GYA				XS		sS	09 49 17.5	-3.8		
GYA						SS	SS	09 51 49.0	+5.4	
GYA						AMB	AMB			
	comp=Z,20nm,1.0s,mb4.7									
GYA						AMB	AMB			
	comp=Z,180nm,5.9s									
L16A	Fish Haven	86.38	43	⇑P		P	09 35 56.1	-0.2		
	baz=86,SNR=10									
PV01	Paradox Valley	86.42	48	*e*P		P	09 35 56.2	-0.4		
	comp=Z,2um,1.0s									
J15A	Blackfoot	86.44	42	⇑P		P	09 35 57.4	+0.8		
	baz=87,SNR=30									
O18A	Roosevelt	86.45	45	⇓P		P	09 35 56.7	0.0		
	baz=87,SNR=7.0									
A10A	Northport	86.48	35	⇓P		P	09 35 56.3	-0.3		
	baz=87,SNR=13									
ANMO	Albuquerque	86.48	51	*e*P		P	09 35 57.0	0.0		
ANMO	Albuquerque	86.48	51	*d*⇑*i*P		P	09 35 54.9	-2.1		
ANMO				*i* *PP		pP	09 37 54.4	-3.1		
H14A	Leadore	86.50	40	⇑P		P	09 35 57.2	+0.4		
	baz=87,SNR=26									
F13A	Darby	86.54	39	⇑P		P	09 35 56.5	-0.4		
	baz=87,SNR=44									
M17A	Scullys Gap (B	86.61	44	⇑P		P	09 35 56.8	-0.6		
	baz=87,SNR=5.3									
D12A	Red Ives Fores	86.63	37	⇑P		P	09 35 56.8	-0.5		
	baz=87									
K16A	Soda Springs	86.69	42	⇓P		P	09 35 58.2	+0.4		
	baz=87,SNR=11									
I15A	Monteview	86.72	41	⇑P		P	09 35 58.4	+0.5		
	baz=87,SNR=12									
G14A	Jackson	86.77	40	⇓P		P	09 35 58.3	+0.2		
	baz=87,SNR=8.5									
B11A	Sandpoint	86.82	36	⇑P		P	09 35 57.9	-0.4		
	baz=87,SNR=15									
P19A	Cripple Cowboy	86.84	46	⇓P		P	09 35 58.2	-0.3		
	baz=87,SNR=9.2									
GDL2	Guadalupe Moun	86.87	54	*e*P		P	09 35 59.5	+0.6		
J16A	Bone	86.90	42	⇑P		P	09 35 59.0	+0.2		
	baz=87,SNR=31									
C12B	Naegeli Ranch,	86.92	37	⇓P		P	09 35 58.6	-0.1		
	baz=87,SNR=21									
MCMT	McKenzie Canyo	86.92	40	*e*P		P	09 35 59.1	+0.3		
	comp=Z,23nm,0.8s,mb4.8									
H15A	Lima	86.94	40	⇑P		P	09 35 59.4	+0.5		
	baz=87,SNR=29									
AHID	Auburn Hatcher	86.97	43	*e*P		P	09 35 59.4	+0.3		
	comp=Z,11nm,0.6s,mb4.7									
E13A	Vior	86.97	38	⇑P		P	09 35 58.1	-0.9		
	baz=87,SNR=20									
M18A	Lyman	86.98	44	⇓P		P	09 35 59.0	-0.2		
	baz=87,SNR=13									
N18A	Larsen Ranch,	87.02	45	⇓P		P	09 35 58.5	-0.8		
	baz=87,SNR=8.5									
COLA	College	87.07	12	*e*P		P	09 35 57.4	-1.6		
	comp=Z,82nm,0.7s,mb5.5									
COLA	College	87.07	12	*d*⇑*i*P		P	09 35 57.2	-1.8		
K17A	Gardner Place,	87.07	43	⇑P		P	09 35 59.7	+0.1		
	baz=87,SNR=17									
A11A	Hall Mountain,	87.12	35	⇓P		P	09 35 59.9	+0.3		
	baz=87,SNR=15									
RRI2	Red Ridge	87.12	42	*e*P		P	09 36 00.2	+0.5		
F14A	Wisdom	87.12	39	⇑P		P	09 35 59.6	-0.1		
	baz=87,SNR=15									
D13A	Huson	87.16	38	⇓P		P	09 35 59.2	-0.7		
	baz=87,SNR=17									
L18A	Fontenelle, Gr	87.24	44	⇓P		P	09 36 00.2	-0.2		
	baz=87,SNR=7.9									
B12A	Libby	87.27	36	⇑P		P	09 36 00.2	-0.2		
	baz=87,SNR=7.5									
I16A	Newdale	87.28	41	⇑P		P	09 36 01.1	+0.6		
	baz=87,SNR=37									
N19A	John Jarvie Ra	87.31	45	⇑P		P	09 36 00.1	-0.6		
	baz=87,SNR=6.8									
G15A	Dillon	87.31	40	⇓P		P	09 36 00.9	+0.3		
	baz=87,SNR=86									
MSO	Missoula	87.32	38	*e*P		P	09 35 59.8	-0.8		
DCID1	Drake Creek	87.33	42	*e*P		P	09 36 01.6	+0.9		
DLMT	Dillon	87.35	40	*e*P		P	09 36 01.1	+0.3		
E14A	Clinton	87.36	39	⇑P		P	09 36 00.6	-0.3		
	baz=88,SNR=40									
BSMT	Bassoo Peak	87.38	37	*e*P		P	09 36 00.7	-0.2		
C13A	Hot Springs	87.41	37	⇓P		P	09 36 00.2	-0.9		
	baz=88,SNR=12									
REDW	Red Top Meadow	87.42	42	*e*P		P	09 36 01.2	+0.1		
TPAW	Teton Pass	87.42	42	*e*P		P	09 36 01.6	+0.5		
A12A	Yaak River Ran	87.49	36	⇑P		P	09 36 01.2	-0.2		
	baz=88,SNR=14									
J17A	Brown Place, J	87.51	42	⇑P		P	09 36 01.7	+0.1		
	baz=88,SNR=16									
SNOW	Snow King Moun	87.53	42	*e*P		P	09 36 02.1	+0.4		
K18A	Toltan Ranch,	87.58	43	⇑P		P	09 36 02.2	+0.3		
	baz=88,SNR=39									
M19A	Rock Springs	87.61	44	⇑P		P	09 36 01.7	-0.4		
	baz=88,SNR=7.2									
IMW	Indian Meadow	87.63	42	*e*P		P	09 36 02.7	+0.6		
F15A	Butte	87.66	39	⇑P		P	09 36 02.2	0.0		
	baz=88,SNR=28									
LRM	Limekiln Ridge	87.67	39	*e*P		P	09 36 02.2	-0.1		
MOOW	Moose Ponds	87.68	42	*e*P		P	09 36 02.9	+0.5		
LOHW	Long Hollow	87.70	42	*e*P		P	09 36 02.5	+0.1		
D14A	Greenough	87.71	38	⇓P		P	09 36 01.5	-0.9		
	baz=88,SNR=23									
XAN	Xi'an	87.71	307	P		P	09 36 03.5	+0.7		
XAN				AP		pP	09 38 00.0	-3.8		
XAN				XP		sP	09 38 57.3	-2.3		
XAN				AMB		AMB				
	comp=Z,105nm,1.1s,mb5.5									
XAN				AMB		AMB				
	comp=Z,206nm,5.3s									
G16A	Moss Hill, Enn	87.76	40	⇑P		P	09 36 02.9	+0.2		
	baz=88,SNR=14									
CHMT	Chamberlain Mo	87.77	38	*e*P		P	09 36 02.2	-0.5		
L19A	Farson	87.77	44	⇓P		P	09 36 02.9	0.0		
	baz=88,SNR=22									
QLMT	Earthquake Lak	87.79	41	*e*P		P	09 36 03.7	+0.8		
H16A	Russell Place,	87.84	41	⇓P		P	09 36 04.0	+0.8		
	baz=88,SNR=18									
B13A	Whitefish	87.85	37	⇑P		P	09 36 02.1	-0.9		
	baz=88,SNR=10									
SYO	Syowa Base	87.86	193	⇓*e*P		P	09 36 02.4	-0.5		
I17A	Pilgrim Creek	87.87	42	⇑P		P	09 36 03.9	+0.6		
	baz=88,SNR=8.6									
E15A	Deer Lodge	87.87	39	⇓P		P	09 36 02.9	-0.3		
	baz=88,SNR=18									
J18A	Kendall Valley	87.88	43	⇓P		P	09 36 03.3	-0.1		
	baz=88,SNR=90									
C14A	Swan Lake	87.93	37	⇑P		P	09 36 02.8	-0.7		
	baz=88									
BW06	Boulder Array	87.96	43	*e*P		P	09 36 03.3	-0.4		
BW06	Boulder Array	87.96	43	⇑P		P	09 36 03.3	-0.4		
	baz=88,SNR=30									
PDAR	Pinedale Array	87.96	43	P		P	09 36 03.2	-0.5		
	comp=Z,15nm,0.8s,mb4.8,baz=212,slow=3.1,SNR=129									
PDAR				pP		pP	09 38 06.7	+1.9		
	comp=Z,1.3nm,0.9s,baz=197,slow=3.1,SNR=5.0									
PDAR				PP		PP	09 39 39.6	-1.1		
	comp=Z,0.7nm,0.8s,baz=236,slow=6.9,SNR=4.0									
PDAR				PKKPbc		PKKPbc	09 53 45.3	-2.1		
	comp=Z,0.5nm,0.6s,baz=123,slow=4.4,SNR=5.3									
YFT	Old Faithful	87.97	41	*e*P		P	09 36 05.8	+2.1		
BILL	Bilibino	87.98	354	*e*P		P	09 36 02.4	-0.9		
	comp=Z,31nm,0.8s,mb5.1									
BILL	Bilibino	87.98	354	⇓*i*P		P	09 36 01.8	-1.4		
BILL				*i*			09 39 38.4			
BILL				pmax		pmax				
	comp=Z,33nm,0.8s,mb5.1									
HIA	Hailar	87.98	324	*e*P		P	09 36 03.4	-0.2		
	comp=Z,28nm,1.1s,mb4.9									
HIA	Hailar	87.98	324	*e*P		P	09 36 03.4	-0.2		
HIA				pmax		pmax				
	comp=Z,28nm,1.1s									
YMR	Madison River	88.00	41	*e*P		P	09 36 04.5	+0.7		
	comp=Z,74nm,1.0s,mb5.4									
SMCO	Snowmass	88.01	47	*e*P		P	09 36 04.3	+0.3		
BOZ	Bozeman (W)	88.08	40	*e*P		P	09 36 04.1	-0.1		
	comp=Z,68nm,1.3s,mb5.2									
BOZ	Bozeman (W)	88.08	40	⇑P		P	09 36 04.1	-0.1		
	baz=88,SNR=24									
BOZ	Bozeman (W)	88.08	40	*e*P		P	09 36 04.1	-0.1		
BOZ				pmax		pmax				
	comp=Z,68nm,1.3s,mb5.2									
H17A	Grant Village	88.10	41	⇑P		P	09 36 05.7	+1.3		
	baz=88,SNR=11									
F16A	Kennard Place,	88.15	40	⇑P		P	09 36 04.8	+0.3		
	baz=88,SNR=5.8									
YNR	Norris Junctio	88.20	41	*e*P		P	09 36 06.3	+1.6		
I18A	Diamond G Ranc	88.24	42	⇑P		P	09 36 05.0	0.0		
	baz=88,SNR=19									
M20A	Sweetwater, Wa	88.25	45	⇑P		P	09 36 05.3	+0.1		
	baz=88,SNR=14									
D15A	Lincoln	88.26	38	⇑P		P	09 36 05.0	0.0		
	baz=88,SNR=26									
L20A	Wamsutter	88.39	44	⇓P		P	09 36 06.0	+0.2		
	baz=88,SNR=27									
SDCO	Great Sand Dun	88.41	49	*e*P		P	09 36 05.7	-0.3		
K19A	Absolon Red Bu	88.44	43	⇑P		P	09 36 05.3	-0.7		
	baz=89,SNR=14									
G17A	Pierce Place,	88.46	40	⇑P		P	09 36 06.5	+0.5		
	baz=89									
EGAK	Eagle	88.47	15	*e*P		P	09 36 04.8	-0.7		
HRY	Holter Researc	88.50	39	*e*P		P	09 36 06.2	+0.1		
E16A	East Helena	88.50	39	⇓P		P	09 36 06.0	-0.2		
	baz=89,SNR=7.4									
B14A	Marquette Ranc	88.51	37	⇓P		P	09 36 05.5	-0.6		
	baz=89,SNR=39									
WALA	Waterton Lakes	88.52	36	*e*P		P	09 36 06.0	-0.2		
C15A	Salmond Ranch,	88.59	38	⇑P		P	09 36 05.8	-0.8		
	baz=89,SNR=15									
K20A	Yellowstone Ra	88.69	44	⇑P		P	09 36 06.3	-0.8		
	baz=89,SNR=10									
COLD	Coldfoot	88.75	10	*e*P		P	09 36 06.3	-0.5		
	comp=Z,46nm,0.8s,mb5.4									
A14A	Double T Ranch	88.75	36	⇑P		P	09 36 06.8	-0.4		
	baz=89,SNR=20									
F17A	Fitzpatrick Pl	88.80	40	⇑P		P	09 36 08.1	+0.6		
	baz=89,SNR=27									
HHC	Hu-ho-hao-te	88.81	314	*e*P		P	09 36 08.3	+0.6		
HHC					AP	pP	09 38 09.0	0.0		
HHC					XP	sP	09 39 00.0	-4.8		
HHC					PP	PP	09 39 50.0	+2.5		
HHC					SKS		09 45 45.3			
HHC					S	S	09 46 08.3	-0.2		
HHC					XS	sS	09 49 39.5	-5.4		
HHC					SS	SS	09 52 20.8	+2.7		
HHC					AMB	AMB				
	comp=Z,42nm,1.1s,mb5.2									
D16A	Dana Ranch, Ca	88.83	39	⇓P		P	09 36 07.6	-0.1		
	baz=89,SNR=18									
B15A	Bradely Ranch,	88.89	37	⇓P		P	09 36 06.8	-1.1		
	baz=89,SNR=13									
E17A	Martinsdale	88.95	39	⇓P		P	09 36 08.2	-0.1		
	baz=89,SNR=10									
BSI	Banda Aceh	89.01	276	P		P	09 36 09.5	+0.2		
	comp=Z,76nm,1.1s,mb5.4									
L21A	Rawlins	89.01	45	⇓P		P	09 36 08.1	-0.6		
	baz=89,SNR=13									
SNAA	Sanae	89.10	178	*e*P		P	09 36 03.5	-5.1		
SNAA				*e*			09 36 04.9			
SNAA				*e*			09 36 15.1			
SNAA	Sanae	89.10	178	*e*P		P	09 36 04.0	-4.5		
	comp=Z,111nm,0.8s,mb4.7									
SNAA	Sanae	89.10	178	⇑*e*P		P	09 36 04.5	-4.1		
C16A	Fuhringer Ranc	89.10	38	⇓P		P	09 36 08.4	-0.5		
	baz=89									
KMI	Kunming	89.12	297	P		P	09 36 11.0	+1.4		
KMI					AP	pP	09 38 10.8	-0.1		
KMI					XP	sP	09 39 04.3	-2.4		
KMI					S	S	09 46 12.3	+0.2		
KMI					XS	sS	09 49 45.0	-3.6		
KMI					SS	SS	09 52 27.8	+4.5		
KMI					AMB	AMB				
	comp=Z,62nm,1.1s,mb5.3									
KMI					AMB	AMB				
	comp=Z,229nm,4.7s									
A15A	Johnson Ranch,	89.14	37	⇓P		P	09 36 08.3	-0.7		
	baz=89,SNR=17									
G18A	Lazy EL Ranch,	89.18	41	⇓P		P	09 36 09.5	+0.1		
	baz=89,SNR=19									
VNA3	Neumayer Olymp	89.21	176	*e*P		P	09 36 08.9	-0.2		
VNA3				*e*			09 36 10.2			
VNA3				*e*			09 36 19.8			
ISCO	Idaho Springs	89.23	47	*e*P		P	09 36 09.6	-0.2		
	comp=Z,32nm,1.8s,mb4.9									
ISCO	Idaho Springs	89.23	47	*e*P		P

RSSD Black Hills 92.16 44 *e*P P 09 36 22.3 -0.8
LZH Lanzhou 92.34 307 *e*P P 09 36 24.5 +0.3
LZH AP pP 09 38 21.0 -5.0
LZH PP PP 09 40 18.0 +2.9
LZH SKS 09 46 04.0
LZH *e*S S 09 46 40.0 -0.2
LZH XS sS 09 50 14.0 -4.8
LZH SS SS 09 53 12.0 +3.3
LZH AMB AMB
comp=Z,48nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,359nm,6.0s
CBKS Cedar Bluff 92.98 50 *e*P P 09 36 26.8 -0.3
comp=Z,64nm,1.3s,mb5.5
CBKS Cedar Bluff 92.98 50 *e*P P 09 36 26.8 -0.2
CBKS pmax pmax
comp=Z,64nm,1.3s,mb5.5
INK Inuvik 93.14 15 *e*P P 09 36 25.6 -1.4
DGMT Dagmar 93.89 40 *e*P P 09 36 30.8 -0.1
comp=Z,102nm,1.1s,mb5.9
DGMT Dagmar 93.89 40 ⇑P P 09 36 31.0 0.0
baz=94
ULN Ulaanbaatar 94.73 319 *e*P P 09 36 33.8 -1.0
comp=Z,7.9nm,0.8s,mb4.9
ULN Ulaanbaatar 94.73 319 *e*P P 09 36 33.8 -1.0
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SONM Songino Array 95.13 319 P P 09 36 35.5 -1.1
comp=Z,2.8nm,0.8s,mb4.5,baz=116,slow=4.6,SNR=12
SONM pP pP 09 38 42.5 +3.9
comp=Z,0.5nm,0.4s,baz=332,slow=24,SNR=3.3
SONM PP PP 09 40 40.0 +3.8
comp=Z,2.3nm,1.0s,baz=120,slow=8.7,SNR=5.6
KSU1 Kansas State U 95.36 51 *e*P P 09 36 38.1 +0.3
YKA Yellowknife Ar 95.39 25 P P 09 36 36.1 -1.3
comp=Z,7.8nm,0.9s,mb4.8,baz=236,slow=4.7,SNR=16
YKW3 Yellowknife Ar 95.42 25 *e*P P 09 36 35.9 -1.6
GTA Gaotai 96.51 309 P P 09 36 43.0 0.0
GTA XP sP 09 39 37.3 -3.4
GTA S S 09 47 13.0 -3.0
GTA XS sS 09 50 50.0 -6.1
GTA AMB AMB
comp=Z,9.0nm,1.2s,mb4.9
GTA AMB AMB
comp=Z,225nm,4.5s
ECSD EROS,Sioux Fal 96.96 46 *e*P P 09 36 43.6 -1.3
comp=Z,3.0nm,0.5s,mb4.8
TIXI Tiksi 97.77 345 *e*P Pdif 09 36 46.4 -2.1
comp=Z,7.4nm,0.8s
TIXI Tiksi 97.77 345⇑ *e*P Pdif 09 36 45.9 -2.6
TIXI pmax pmax
comp=Z,11nm,1.3s,mb5.0
ZAK Zakamensk 97.98 321 *e*P Pdif 09 36 47.3 -2.1
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.4
TLY Talaya 98.22 322 *e*P Pdif 09 36 52.4 +1.9
TLY pmax pmax
comp=Z,12nm,2.2s,mb4.8
TAPN Taplejung 102.61 295 *e*P PKiKP 09 41 28.1 +0.1
ODAN Odare 102.76 294 *e*P PKiKP 09 41 28.1 -0.2
RAMN Ramite 103.47 294 *e*P PKiKP 09 41 29.1 -0.5
JIRN Jiri 104.00 295 *e*P PKiKP 09 41 29.8 -0.8
comp=Z,11nm,0.5s
GUN Gumba 104.33 295 *e*P PKiKP 09 41 30.3 -0.9
comp=Z,4.5nm,0.3s
PKI Pulchoki 104.65 294 *e*P PKiKP 09 41 30.1 -1.7
comp=Z,9.2nm,0.4s
DMN Daman 104.92 294 *e*P PKiKP 09 41 31.4 -0.9
DANN Dangsing 106.25 295 *e*P PKiKP 09 41 33.8 -0.9
comp=Z,15nm,0.5s
KOLN Koldanda 106.25 294 *e*P PKiKP 09 41 33.3 -1.4
comp=Z,11nm,0.6s
WMQ Urumqi 106.44 311 *e*PDIF Pdif 09 37 28.0 +0.9
WMQ PP PP 09 42 03.0 +2.7
WMQ SS SS 09 56 23.0 +0.5
WMQ PP PP
comp=Z,64nm,8.0s
PYUN Piuthan 106.85 294 *e*P PKiKP 09 41 34.0 -1.8
comp=Z,8.9nm,0.5s
ZALV Zalesovo Beam 109.83 321 PKiKP PKiKP 09 41 38.8 -1.8
comp=Z,6.5nm,0.5s,baz=147,slow=0.8,SNR=21
ZALV SKP 09 44 23.4
comp=Z,2.0nm,0.7s,baz=187,slow=0.6,SNR=5.2
MK31 Makanchi Array 110.66 314 *e*PKiKP PKiKP 09 41 40.4 -2.0
MK31 Makanchi Array 110.66 314 *i* PKiKP PKiKP 09 41 40.5 -1.9
MK31 pmax pmax
comp=Z,6.0nm,0.4s
MKAR Makanchi Array 110.66 314 Pdiff Pdif 09 37 46.9 +1.1
comp=Z,0.8nm,0.6s,baz=90,slow=6.7,SNR=9.2
MKAR PKiKP PKiKP 09 41 40.8 -1.6
comp=Z,7.3nm,0.5s,baz=159,slow=0.6,SNR=78
MKAR SKP 09 44 25.1
comp=Z,1.4nm,0.7s,baz=85,slow=0.8,SNR=5.3
MKAR Makanchi Array 110.66 314 Pdif Pdif 09 37 46.9 +1.1
MKAR PKPdf PKiKP 09 41 40.8 -1.6
MKAR SKP 09 44 25.1
MKAR Makanchi Array 110.66 314 P Pdif 09 37 46.9 +1.0
MKAR 09 41 40.8
NVS Novosibirsk 110.83 322 *e*PKiKP PKiKP 09 41 39.6 -2.9
NVS *e* 09 42 30.6
KURK Kurchatov 113.39 318 PKiKP PKiKP 09 41 45.9 -1.6
comp=Z,13nm,0.7s,baz=93,slow=1.7,SNR=32
KURK PP PP 09 42 46.1 -3.3
comp=Z,2.1nm,0.8s,baz=98,slow=5.9,SNR=4.0
KURK SKP 09 44 30.9
comp=Z,2.5nm,0.7s,baz=87,slow=2.0,SNR=6.4
KURK Kurchatov 113.39 318 *e*PKiKP PKiKP 09 41 45.3 -2.2
KURK Kurchatov 113.39 318⇑ *i*PKiKP PKiKP 09 41 45.6 -1.9
ULHL Ulahol 114.54 308 P PKPdf 09 41 49.5 -0.4
SNR=9.6
TKM2 Tokmak 2 115.06 309 *e*PKiKP PKiKP 09 41 49.4 -1.6
TKM2 Tokmak 2 115.06 309 P PKPdf 09 41 49.9 -1.1
SNR=17
KZA Kyzart 115.26 308 P PKPdf 09 41 51.5 +0.2
SNR=6.0
KBK Karagaybulak 115.52 309 P PKPdf 09 41 50.9 -0.9
SNR=5.6
CHMS Chumysh 115.69 309 P PKPdf 09 41 51.0 -1.2
SNR=5.3
AAK Ala-Archa 115.85 309 *e*PKPdf PKPdf 09 41 51.6 -0.9
AAK Ala-Archa 115.85 309 P PKPdf 09 41 51.6 -0.9
SNR=7.0
USP Ospenovka 115.88 309 P PKPdf 09 41 51.1 -1.4
SNR=16
EKS2 Erkin-Say 116.38 309 *e*PKPdf PKPdf 09 41 52.4 -1.1
EKS2 Erkin-Say 116.38 309 P PKPdf 09 41 52.8 -0.7
SNR=7.7
AML Almayashu 116.42 308 P PKPdf 09 41 53.3 -0.3
SNR=8.8
VOSK Vostochnaya 118.10 320 PKiKP PKPdf 09 41 54.4 -2.1
VOSK pmax pmax
comp=Z,15nm,0.8s
BVA0 Borovoye Array 118.43 320 *i* PKiKP PKPdf 09 41 55.6 -1.5
BVA0 pmax pmax
comp=Z,4.0nm,0.5s
BVAR Borovoye Array 118.43 320 PKP PKPdf 09 41 55.8 -1.3
comp=Z,17nm,0.4s,baz=93,slow=1.3,SNR=75
BVAR SKP 09 44 40.8
comp=Z,3.7nm,0.8s,baz=78,slow=2.1,SNR=5.7
BRVK Borovoye 118.49 320 *e*PKiKP PKPdf 09 41 55.8 -1.4
KK31 Karatay Array 118.79 309 *i* PKiKP PKPdf 09 41 56.5 -1.6
KK31 pmax pmax
comp=Z,8.0nm,0.5s
SFJD Kangerlussuaq 121.81 22 *i* P PKPdf 09 42 01.5 -1.7
SFJD
comp=Z,190nm,18.0s
SVE Sverdlovsk 123.26 326 *e*PKiKP PKPdf 09 42 05.2 -1.1
SVE pmax pmax
comp=Z,44nm,0.8s
SOKR Solikamsk 124.29 330*d* *i*PKiKP PKPdf 09 42 06.8 -1.4
SOKR pmax pmax
comp=Z,50nm,1.0s
ARU Arti 124.47 326 *e*PKPdf PKPdf 09 42 07.7 -0.9
ARU Arti 124.47 326 *i* PKiKP PKPdf 09 42 07.5 -1.1
ARU 09 43 59.6
AB31 Akbulak array 125.50 317 PKiKP PKPdf 09 42 09.6 -1.2
AB31 pmax pmax
comp=Z,29nm,1.1s
AKTK Aktyubinsk 126.44 319 PKP PKPdf 09 42 11.7 -0.8
AKTO Aktyubinsk 126.44 319 PKP PKPdf 09 42 11.7 -0.9
comp=Z,12nm,0.7s,baz=77,slow=2.7,SNR=36
AKTO Aktyubinsk 126.44 319 *i* PKiKP PKPdf 09 42 10.1 -2.5
AKTO pmax pmax
comp=Z,3.0nm,0.7s

BOSA Boshof 127.37 206 PKP PKPdf 09 42 15.5 +0.4
comp=Z,5.6nm,0.7s,baz=143,slow=4.2,SNR=8.2
KEV Kevo 127.45 349 *e*p PKPdf 09 42 12.1 -1.9
comp=Z,11nm,0.5s
KEV Kevo 127.45 349 *e*PKiKP PKPdf 09 42 12.1 -1.9
KEV pmax pmax
comp=Z,11nm,0.5s
ARCES ARCESS Array B 127.90 350 PKP PKPdf 09 42 13.6 -1.3
comp=Z,17nm,0.5s,baz=13,slow=1.4,SNR=95
KLMR Klimovskoe 131.00 337 *e*PKiKP PKPdf 09 42 19.8 -1.1
KLMR *e* 09 44 52.4
JOF Joensuu 132.18 343 *e*p PKPdf 09 42 21.0 -2.1
comp=Z,23nm,0.5s
JOF Joensuu 132.18 343 *e*PKiKP PKPdf 09 42 21.0 -2.1
JOF pmax pmax
comp=Z,23nm,0.5s
KAF Kangasniemi 134.18 345 *e*p PKPdf 09 42 25.0 -1.9
comp=Z,14nm,0.5s
KAF Kangasniemi 134.18 345 *e*PKiKP PKPdf 09 42 25.0 -1.9
KAF pmax pmax
comp=Z,14nm,0.5s
OBN Obninsk 135.93 332⇓ *i*PKiKP PKPdf 09 42 29.6 -0.7
OBN pmax pmax
comp=Z,20nm,0.6s
NB2 NORSAR Subarra137.93 354 PKP 09 42 22.0
comp=Z,4.3nm,0.7s,baz=17,slow=2.6
NOA NORSAR Array B137.93 354 PKhKP 09 42 22.5
comp=Z,8.4nm,0.9s,baz=15,slow=4.9,SNR=15
NOA PKP PKPdf 09 42 33.4 -0.4
comp=Z,8.8nm,0.7s,baz=14,slow=4.0,SNR=15
NOA SKPbc SKPbc 09 45 16.4 +0.5
comp=Z,3.1nm,0.9s,baz=14,slow=4.3,SNR=3.2
NOA NORSAR Array B137.93 354 PKP 09 42 22.5
NOA PKP PKPdf 09 42 33.4 -0.4
NOA SKPbc SKPbc 09 45 16.4 +0.5
NOA NORSAR Array B137.93 354 PKHKP 09 42 22.5
NOA 09 42 33.4
KIV Kislovodsk 138.40 315 *e*PKiKP PKPdf 09 42 34.5 -0.7
KIV pmax pmax
comp=Z,18nm,1.1s
EZM Erzurum 140.80 310 *e*P PKPdf 09 42 35.7 -4.0
ANN Anapa 141.41 319 *i* PKHKP 09 42 31.1
ANN pmax pmax
comp=Z,266nm,1.2s
KAC Achnashellach 141.54 7 *e*P PKPdf 09 42 34.5 -6.0
MCD Coleburn Disti 141.65 5 *e*P PKPdf 09 42 34.4 -6.2
KPL Plockton 141.66 7 *e*P PKPdf 09 42 34.8 -5.9
GUMT Gumushane 141.94 312 *e*P PKPdf 09 42 38.3 -3.5
EZC Erzincan 141.97 310 *e*P PKPdf 09 42 39.8 -2.0
KAR1 Arisaig 142.05 7 *e*P PKPdf 09 42 35.5 -5.8
AKASG Malin Array Be 142.20 332 PKhKP 09 42 36.7
comp=Z,26nm,0.5s,baz=42,slow=4.1,SNR=94
AKASG PKP PKPdf 09 42 41.9 +0.1
comp=Z,7.8nm,0.7s,baz=43,slow=3.9,SNR=9.3
AKASG SKPbc SKPbc 09 45 26.9 -0.6
comp=Z,5.4nm,0.7s,baz=39,slow=2.8,SNR=8.5
AKASG Malin Array Be 142.20 332 PKP PKPdf 09 42 36.7 -5.2
AKASG PKP PKPdf 09 42 41.9 +0.1
AKASG SKPbc SKPbc 09 45 26.9 -0.6
AKASG Malin Array Be 142.20 332 PKHKP 09 42 36.7
AKASG 09 42 41.9
AKBB Malin Array Si 142.20 332 *e*PKPpre 09 42 36.9
KIEV Kiev 142.21 332 *e*PKPpre 09 42 36.5
PTK Pertek 142.58 309 *e*P PKPdf 09 42 40.6 -2.3
MUD Monsted U'grnd 142.65 354 *i* P PKPdf 09 42 39.2 -3.3
comp=Z,31nm,0.7s
MUD
comp=Z,710nm,19.0s
EAB Aberfoyle 142.93 6 *e*P PKPdf 09 42 38.3 -4.7
EBH Black Hill 142.95 5 *e*P PKPdf 09 42 38.4 -4.7
COP Copenhagen 142.98 350 *e*P PKPdf 09 42 39.8 -3.3
COP LR LR
comp=Z,250nm,17.0s
COP Copenhagen 142.98 350 *i* P PKPdf 09 42 39.8 -3.3
comp=Z,26nm,0.8s
COP
comp=Z,250nm,17.0s
BSD Bornholm Skovb 143.09 348 *i* P PKPdf 09 42 39.5 -3.8
comp=Z,64nm,0.8s
BSD
comp=Z,910nm,18.0s
PGBU Glenifferbraes 143.29 6 *e*P PKPdf 09 42 40.2 -3.4
EDI Edinburgh 143.30 5 *e*P PKPdf 09 42 39.9 -3.7
ESY Stoneypath 143.35 5 *e*P PKPdf 09 42 39.9 -3.9
EAU Auchinoon 143.35 5 *e*P PKPdf 09 42 39.8 -3.9
EBL Broad Law 143.46 5 *e*P PKPdf 09 42 39.1 -4.8
XSO Sourhope Farm 143.80 4 *e*P PKPdf 09 42 42.6 -1.9
ESK Eskdalemuir 143.90 5 P PKPdf 09 42 41.9 -2.8
ESK Eskdalemuir 143.90 5 *e*P PKPdf 09 42 41.9 -2.8
ESK Eskdalemuir 143.90 5 *e*PKHKP PKPdf 09 42 42.0 -2.7
SVSK Karacayir 143.91 312 *e*P PKPdf 09 42 45.3 +0.1
ECK Cauldkaine Hil 144.04 5 *e*P PKPdf 09 42 42.5 -2.4
TOKT Tokat 144.05 313 *e*P PKPdf 09 42 45.4 0.0
GAL1 Galloway 144.19 7 *e*P PKPdf 09 42 43.1 -2.1
GKP Gorka Klasztor 144.28 345 *i* PKPdf PKPdf 09 42 44.7 -0.7
XAL Allendale 144.43 5 *e*P PKPdf 09 42 44.4 -1.2
BYBT Boyabat 144.73 316 *e*P PKPdf 09 42 47.5 +0.9
GAZ Gaziantep 144.80 308 *e*P PKPdf 09 42 46.8 -0.1
DMUB Kingscourt 144.84 9⇓ *i*P PKPdf 09 42 45.8 -0.6
KIS Kishinev 144.98 328 *e*P PKPdf 09 42 45.0 -1.8
LVV L'vov 145.04 335 *i* PKiKP PKPdf 09 42 46.5 -0.3
HPK Haverah Park 145.37 4 P PKPdf 09 42 47.2 -0.1
HPK Haverah Park 145.37 4 *e*P PKPdf 09 42 47.2 -0.1
TOS Tosya 145.43 316 *e*P PKPdf 09 42 49.0 +1.2
DLF Lyons Farm 145.48 9⇓ *i*P PKPdf 09 42 47.8 +0.3
DSB Dublin 145.55 9 *e*PKPdf PKPdf 09 42 46.9 -0.7
KWP Kalwaria 145.71 336 *e*PKPdf PKPdf 09 42 49.2 +1.2
KWP *e* 09 42 51.5
KWP Kalwaria 145.71 336⇑P PKPdf 09 42 43.4 -4.6
KWP Kalwaria 145.71 336⇑ *i*P PKPdf 09 42 43.4 -4.6
KOZT Kozan 145.71 309 *e*P PKPdf 09 42 49.3 +0.9
MBAR Mbarara 145.76 238*d* *i*PKiKP PKPdf 09 42 50.1 +0.9
LHO Holmfirth 145.77 4 *e*P PKPdf 09 42 48.1 +0.1
RUE Ruedersdorf 145.80 348 *e*PKPdf PKPdf 09 42 49.3 +1.2
RUE Ruedersdorf 145.80 348 *e*PKPbc PKPbc 09 42 49.5 -0.3
CEYT Ceyhan 145.95 308 *e*P PKPdf 09 42 49.8 +1.0
HTY Hatay 145.97 306 *e*P PKPdf 09 42 50.9 +2.1
KBI1 Birley Grange 146.08 4 *e*P PKPdf 09 42 48.5 0.0
TLCR 146.19 325⇓P PKPdf 09 42 48.3 -0.6
TLCR 146.19 325⇓ *i*P PKPdf 09 42 48.3 -0.6
STNC Stoke 146.19 5 *e*P PKPdf 09 42 50.0 +1.3
SAFT Safranbolu 146.21 317 *e*P PKPdf 09 42 48.5 -0.6
OJC Ojcow 146.25 340 *e*PKP PKPdf 09 42 50.5 +1.6
SBD1 Bryn Du 146.28 6 *e*P PKPdf 09 42 49.4 +0.6
KWE Weaver Farm 146.29 5 *e*P PKPdf 09 42 48.7 -0.1
BRTR Keskin Array B 146.31 314 PKPbc PKPbc 09 42 51.0 -0.6
comp=Z,43nm,0.7s,baz=135,slow=4.4,SNR=91
BRTR pPKPbc 09 45 01.4
comp=Z,0.5nm,0.4s,baz=145,slow=39,SNR=3.3
KARA Karaisali 146.36 309 *e*P PKPdf 09 42 49.8 +0.3
KAMT Kaman 146.43 313 *e*P PKPdf 09 42 51.0 +1.4
STHS Stebnicka Huta 146.43 337 *e*PKP PKPdf 09 42 51.1 +1.9
STHS *e* 09 42 54.3
KOLS Kolonicke sedl 146.44 336 *e*PKiKP PKPdf 09 42 49.0 -0.2
KOLS *i* 09 42 51.3
KOLS MLR MLR
comp=Z,900nm,32.6s
KOLS Kolonicke sedl 146.44 336 *e*PKP PKPdf 09 42 49.0 -0.2
KOLS *i* 09 42 51.2
CWF Charnwood Fore 146.61 4 *e*P PKPdf 09 42 50.5 +1.1
UZH Uzhgorod 146.68 336⇓ *e*PKiKP PKPdf 09 42 49.3 -0.3
UZH *i* 09 42 52.3
HLM1 Long Mynd 146.70 6 *e*P PKPdf 09 42 48.3 -1.2
HWQ Hawqa 146.72 303 *e*P PKPbc 09 42 52.5 -0.4
KSP Ksiaz 146.73 344 *i* PKPdf PKPbc 09 42 52.4 0.0
KSP *e* 09 42 55.4
KSP Ksiaz 146.73 344 *e*PKP PKPdf 09 42 49.2 -0.5
KSP *i* PKPdf PKPbc 09 42 52.2 -0.2
NIE Niedzica 146.76 338 *e*PKP PKPbc 09 42 52.4 -0.1
CRVS Cervenica-Dubn 146.78 337 *e*PKP2 PKPbc 09 42 52.4 -0.2
CRVS MLR MLR
comp=Z,500nm,28.0s
CRVS Cervenica-Dubn 146.78 337 *e*PKP PKPbc 09 42 52.4 -0.2
CRVS *e* 09 42 55.5
CRVS *e* 09 45 05.4
VRI Vrincioaia 146.81 328⇓P PKPdf 09 42 48.1 -1.8
VRI P 09 42 52.1
VRI Vrincioaia 146.81 328⇓ *i*P PKPdf 09 42 48.1 -1.8
ANTO Ankara 146.82 315 *e*P PKPdf 09 42 51.8 +1.6
ANTO Ankara 146.82 315 *e*PKPdf PKPdf 09 42 48.4 -1.8
ANTO *e*PKPbc PKPbc 09 42 52.8 -0.2
ANTO Ankara 146.82 315⇑ *i*P PKPdf 09 42 48.4 -1.8

LOD Lodumlu 146.83 315 *e*P PKPdf 09 42 52.5 +2.3
PLOR Plostina 146.86 328⇑ *i*P PKPdf 09 42 50.4 +0.4
TIRR Tirgusor 146.88 325⇓P PKPdf 09 42 47.9 -2.2
TIRR Tirgusor 146.88 325⇓ *i*P PKPdf 09 42 47.9 -2.2
MERS Mersin 146.91 308 *e*P PKPdf 09 42 52.6 +2.2
BMR Baia Mare 146.95 333 ⇑P PKPdf 09 42 48.4 -1.7
BMR P 09 42 52.8
BMR Baia Mare 146.95 333⇑ *i*P PKPdf 09 42 48.4 -1.7
TRPA Tarpa 146.99 335⇑ *i*P PKPbc 09 42 52.6 -0.6
HARR Harsova 146.99 326 P PKPbc 09 42 53.1 -0.1
HARR Harsova 146.99 326⇓ *i*P PKPdf 09 42 50.3 0.0
CLZ Clausthal 147.01 351 *e*PKP2 PKPbc 09 42 52.7 -0.4
CLZ Clausthal 147.01 351 *e*PKPdf PKPdf 09 42 50.0 -0.1
CLZ *e*PKPbc PKPbc 09 42 52.7 -0.4
BHL Bhannes 147.06 303 *e*P PKPbc 09 42 53.7 -0.1
CLL Collm 147.06 348 *e*PKP PKPdf 09 42 50.0 -0.2
CLL ⇓ *i*PKP PKPbc 09 42 52.7 -0.6
CLL Collm 147.06 348⇓ *e*PKiKP PKPdf 09 42 50.0 -0.2
CLL *i* 09 42 55.8
CLL *i* 09 45 39.8
CLL pmax pmax
comp=Z,27nm,1.5s
CLL pmax pmax
comp=Z,137nm,0.7s
CLL pmax pmax
comp=Z,108nm,1.0s
CLL Collm 147.06 348 *e*PKPdf PKPdf 09 42 49.7 -0.5
CLL *e*PKPbc PKPbc 09 42 52.6 -0.7
CLL *e*PKPab PKPab 09 42 55.8 -0.8
CLL Collm 147.06 348 *e*PKPdf PKPdf 09 42 50.0 -0.2
comp=Z,27nm,1.5s
CLL ⇓ *i*PKPbc PKPbc 09 42 52.7 -0.6
comp=Z,137nm,0.7s
CLL ⇑ *i*PKPab PKPab 09 42 55.8 -0.8
comp=Z,108nm,1.0s
CLL *i* SKPbc SKPbc 09 45 39.8 +1.1
comp=Z,16nm,1.0s
CLL *e*PP PP 09 46 32.0 +8.7
HTR Trewern Hill 147.09 6 *e*P PKPdf 09 42 49.3 -0.9
OKC Ostrava-Krasne 147.10 341 *e*PKP PKPbc 09 42 52.9 -0.5
OKC Ostrava-Krasne 147.10 341⇑ *e*PKP PKPbc 09 42 52.9 -0.5
UPC Upice 147.11 344 *e*PKPDF PKPdf 09 42 50.2 -0.1
UPC ⇑ *e*PKP PKPbc 09 42 53.3 -0.1
UPC *e*PKPAB PKPab 09 42 56.6 -0.2
DPC Dobruska-Polom 147.17 343 *e*PKPDF PKPdf 09 42 50.3 -0.1
DPC ⇑ *e*PKP PKPbc 09 42 53.5 -0.1
DPC *e*PKPAB PKPab 09 42 57.2 +0.1
MCH1 Michaelchurch 147.20 6 *e*P PKPdf 09 42 49.1 -1.3
BRG Berggiesshubel 147.27 346 *i* PKIKP PKPdf 09 42 50.1 -0.5
BRG *i* 09 42 56.8
BRG *i* 09 45 40.3
BRG Berggiesshubel 147.27 346 *e*PKPdf PKPdf 09 42 50.2 -0.4
BRG *e*PKPbc PKPbc 09 42 53.4 -0.4
BRG *e*PKPab PKPab 09 42 56.9 -0.6
BRG Berggiesshubel 147.27 346 *i* PKP PKPdf 09 42 50.1 -0.4
comp=Z,19nm,1.1s
BRG *i* 09 42 53.6
comp=Z,74nm,0.8s
BRG *i* 09 42 56.8
comp=Z,61nm,0.9s
BRG *e*pPKP pPKPdf 09 44 57.8 -2.8
comp=Z,5.3nm,1.0s
BRG *i* 09 45 40.3
comp=Z,9.5nm,0.9s
WTSB Winterswijk 147.31 355 *e*PKP PKPdf 09 42 52.8 +2.3
comp=Z,138nm,0.8s
FBE Freiberg 147.36 347 *e*PKPdf PKPdf 09 42 50.5 -0.2
FBE *e*PKPbc PKPbc 09 42 53.8 -0.2
FBE *e*PKPab PKPab 09 42 57.4 -0.4
PVCC Panska Ves 147.45 345 *e*PKPDF PKPdf 09 42 51.3 +0.4
PVCC ⇑ *e*PKP PKPbc 09 42 54.0 -0.3
PVCC *e*PKPAB PKPab 09 42 57.4 -0.8
MLR Muntele Rosu 147.46 328 P PKPbc 09 42 53.9 -0.6
MLR Muntele Rosu 147.46 328⇓ *i*P PKPdf 09 42 51.2 +0.2
MDU Mudurnu 147.56 317 *e*P PKPbc 09 42 54.1 -0.8
HGH Gray Hill 147.58 6 *e*P PKPdf 09 42 50.0 -1.0
EREN Erenkoy 147.68 306 *e*P PKPbc 09 42 55.0 -0.3
IKL Isikli 147.77 308 *e*P PKPbc 09 42 54.7 -0.9
BUG Bochum--Univer 147.79 354 *e*PKPdf PKPdf 09 42 50.8 -0.6
BUG *e*PKPbc PKPbc 09 42 54.1 -1.0
PRU Pruhonice 147.96 345 *e*P PKPbc 09 42 55.2 -0.4
PRU *e* 09 43 00.0
PRU Pruhonice 147.96 345⇑ *e*PKP PKPbc 09 42 55.2 -0.4
PRU *e*PKPAB PKPab 09 43 00.0 -0.3
MOX Moxa 147.96 349 *e*PKP PKPdf 09 42 51.1 -0.6
MOX *e* 09 42 54.9
comp=Z,158nm,1.5s
MOX Moxa 147.96 349 *e*PKPdf PKPdf 09 42 51.2 -0.5
MOX *e*PKPbc PKPbc 09 42 54.9 -0.7
DRGR 147.98 333 ⇑P PKPdf 09 42 50.8 -1.1
DRGR P 09 42 55.3
DRGR 147.98 333⇑ *i*P PKPdf 09 42 50.8 -1.0
TANN Tannenbergstha 148.02 348 *e*PKPdf PKPdf 09 42 51.5 -0.3
TANN *e*PKPbc PKPbc 09 42 55.4 -0.3
TANN *e*PKPab PKPab 09 42 59.9 -0.6
WERD Werda 148.02 348 *e*PKPdf PKPdf 09 42 51.4 -0.4
WERD *e*PKPbc PKPbc 09 42 55.2 -0.5
WERD *e*PKPab PKPab 09 42 59.8 -0.7
GULT Gulveren 148.03 317 *e*P PKPbc 09 42 54.5 -1.7
VRAC Vranov 148.04 342 ⇑P PKPdf 09 42 50.2 -1.6
VRAC P 09 42 55.6
VRAC Vranov 148.04 342⇑ *i*P PKPdf 09 42 50.3 -1.6
VYHS Vyhne 148.05 339 *e*PKP PKPbc 09 42 55.6 -0.3
VYHS *e* 09 43 00.9
VYHS *e* 09 45 09.8
UBBA Unterbreizbach 148.06 351 *e*PKPbc PKPbc 09 42 54.7 -1.1
GUNZ Gunzen 148.09 348 *e*PKPdf PKPdf 09 42 51.8 -0.1
GUNZ *e*PKPbc PKPbc 09 42 55.5 -0.4
GUNZ *e*PKPab PKPab 09 43 00.3 -0.5
GUNZ *e*pPKPbc pPKPbc 09 45 01.2 -2.9
KOLL Kolacno 148.12 340 *e*PKP PKPbc 09 42 56.1 0.0
WERN Wernitzgruen 148.16 348 *e*PKPdf PKPdf 09 42 51.8 -0.2
WERN *e*PKPbc PKPbc 09 42 55.6 -0.5
WERN *e*PKPab PKPab 09 43 00.8 -0.3
PSZ Piszkesteto 148.17 337 *e*PKPbc PKPbc 09 42 55.6 -0.6
PSZ Piszkesteto 148.17 337⇓ *e*PKP PKPbc 09 42 55.8 -0.4
PSZ Piszkesteto 148.17 337⇓ *i*P PKPdf 09 42 53.5 +1.4
EYL Eskiyayla 148.19 318 *e*P PKPbc 09 42 55.8 -0.7
GPA Golpazari 148.24 317 *e*P PKPbc 09 42 56.2 -0.5
LFK Lefkose 148.25 306 *e*P PKPbc 09 42 56.2 -0.6
ESKT Eskisehir 148.29 315 *e*P PKPbc 09 42 56.1 -0.6
TFO1 Folkestone 148.34 1 *e*P PKPbc 09 42 55.2 -1.3
HRT Hereke 148.35 318 *e*P PKPbc 09 42 55.0 -1.9
TREC Trest 148.35 343⇑ *e*PKP PKPbc 09 42 56.3 -0.3
TREC *e*PKPAB PKPab 09 43 01.9 0.0
HDMB Hadim 148.36 310 *e*P PKPbc 09 42 55.5 -1.5
SMOL Smolenice 148.49 341 *e*PKP PKPbc 09 42 57.2 +0.2
SMOL *e* 09 43 03.0
MANZ Manzenberg 148.50 348 *e*PKPdf PKPdf 09 42 52.2 -0.4
MANZ *e*PKPbc PKPbc 09 42 56.0 -0.3
MANZ *e*PKPab PKPab 09 43 01.7 -0.8
CSS Prodhromos 148.52 306 *e*PKPbc PKPbc 09 42 56.6 -0.9
ADVT Abdulvahap 148.53 318 *e*P PKPbc 09 42 56.5 -0.9
HGN Heimansgroeve 148.57 356 *e*PKP PKPbc 09 42 56.4 -0.7
comp=Z,71nm,1.6s
UCC Uccle 148.63 358 PKPbc PKPbc 09 42 56.5 -0.7
DYA Yadsworthy 148.64 8 P PKPbc 09 42 55.4 -1.8
DYA Yadsworthy 148.64 8 *e*P PKPbc 09 42 55.4 -1.8
MODS Modra-Piesok 148.66 341 *e*PKP2 PKPbc 09 42 57.4 0.0
MODS MLR MLR
comp=Z,700nm,18.7s
MODS Modra-Piesok 148.66 341 *e*PKP PKPbc 09 42 57.4 0.0
MODS *e* 09 43 02.7
ROTZ Rotzenmuhle 148.69 348 *e*PKPbc PKPbc 09 42 57.1 -0.3
ROTZ *e*PKPab PKPab 09 43 03.0 -0.3
LEF Lefka 148.80 306 *e*P PKPbc 09 42 57.3 -0.8
BUD Budapest 148.85 338⇓ *e*P PKPbc 09 42 57.2 -0.7
BUD Budapest 148.85 338⇓ *e*PKP PKPbc 09 42 57.2 -0.7
TNS Taunus Mts 148.86 352 *e*PKPdf PKPdf 09 42 52.9 -0.3
TNS *e*PKPbc PKPbc 09 42 57.4 -0.4
TNS *e*PKPab PKPab 09 43 03.1 -0.9
ZST Bratislava 148.88 341 *e*PKP2 PKPbc 09 42 58.2 +0.3
ZST MLR MLR
comp=Z,300nm,16.7s
ZST Bratislava 148.88 341 *e*PKP PKPbc 09 42 58.2 +0.3
ZST *e* 09 43 04.9
MENF Mencas 148.91 0 PKP PKPbc 09 42 57.2 -0.7
SNF Seneffe 148.92 358 PKPbc PKPbc 09 42 57.4 -0.6
SNF PKPab PKPab 09 43 01.4 -2.8
GRF Grafenberg Arr 148.95 349 *e*PKPbc PKPbc 09 42 57.6 -0.5
GRF *e*PKPab PKPab 09 43 04.0 -0.4

BCLA	**Clavier**	**148.96**	**356**	PKPbc	PKPbc	09 42 57.3	-0.8
BCLA				PKPab	PKPab	09 43 02.7	-1.7
KHC	**Kasperske Hory**	**148.99**	**346**	*e*PKPDF	PKPdf	09 42 52.8	-0.6
KHC			⇑	*e*PKP	PKPbc	09 42 57.9	-0.3
KHC				*e*PKPAB	PKPab	09 43 04.3	-0.2
ALT	**Altintas**	**149.02**	**315**	*e*P	PKPbc	09 42 57.2	-1.4
WET	**Wettzell**	**149.13**	**346**	*e*PKPdf	PKPdf	09 42 53.2	-0.4
WET				*e*PKPbc	PKPbc	09 42 57.6	-0.9
WET				*e*PKPab	PKPab	09 43 04.7	-0.4
WET				*e*pPKPbc	pPKPbc	09 45 04.6	-2.4
GEC2	**GERESS Array S**	**149.22**	**345**	*e*PKPdf	PKPdf	09 42 52.9	-0.9
GEC2				*e*PKPbc	PKPbc	09 42 58.3	-0.5
GEC2	**GERESS Array S**	**149.22**	**345**	*e*PKPdf	PKPdf	09 42 53.1	-0.7
GEC2				*e*PKPbc	PKPbc	09 42 58.2	-0.6
GEC2				*e*PKPab	PKPab	09 43 05.0	-0.5
GERES	**GERESS Array B**	**149.22**	**345**	PKP	PKPdf	09 42 53.1	-0.7
	comp=Z,11nm,1.0s,baz=54,slow=5.0,SNR=14						
GERES				PKPbc	PKPbc	09 42 58.1	-0.6
	comp=Z,54nm,0.8s,baz=45,slow=0.4,SNR=15						
DOU	**Dourbes**	**149.32**	**357**	PKPbc	PKPbc	09 42 58.4	-0.5
DOU				PKPab	PKPab	09 43 04.9	-1.0
BZS	**Buzias**	**149.37**	**333**	⇓*i*P	PKPdf	09 42 52.8	-1.3
TOD	**Tromm**	**149.42**	**352**	PKP	PKPbc	09 42 58.4	-0.8
CONA	**Conrad Observa**	**149.49**	**342**	⇓*i*PKiKP	PKiKP	09 42 59.2	-0.9
	comp=Z,148nm,0.8s,SNR=46						
CSNA	**Conrad Observa**	**149.49**	**342**	⇓*i*PKiKP	PKiKP	09 42 59.3	-0.8
	comp=Z,98nm,0.7s						
RUP	**Ruppelstein**	**149.53**	**354**	PKP	PKPbc	09 42 58.6	-0.9
WLF	**Walferdange**	**149.65**	**355**	PKPbc	PKPbc	09 42 59.7	0.0
WLF				PKPab	PKPab	09 43 06.7	-0.6
WLF	**Walferdange**	**149.65**	**355**	*e*PKHKP	PKPbc	09 42 59.0	-0.7
WLF	**Walferdange**	**149.65**	**355**	*e*PKPdf	PKPdf	09 42 54.5	+0.1
WLF				*e*PKPbc	PKPbc	09 42 59.7	0.0
BNT	**Bandirma**	**149.71**	**319**	*e*P	PKPbc	09 42 58.8	-1.4
MOA	**Molln**	**150.01**	**344**	⇓*i*PKPbc	PKPbc	09 42 59.9	-0.7
	comp=Z,39nm,0.6s,SNR=19						
PKSM	**Moragy**	**150.07**	**337**	⇓P	PKPdf	09 42 54.2	-1.0
PKSM	**Moragy**	**150.07**	**337**	⇓*i*P	PKPdf	09 42 54.2	-1.0
LANF	**Langenberg**	**150.16**	**353**	PKP	PKPbc	09 43 00.3	-0.7
STU	**Stuttgart**	**150.18**	**351**	*e*PKPbc	PKPbc	09 43 00.9	-0.1
STU	**Stuttgart**	**150.18**	**351**	*e*PKPdf	PKPdf	09 42 55.1	-0.2
STU				*e*PKPab	PKPbc	09 43 00.6	-0.4
ARSA	**Arzberg**	**150.20**	**342**	⇓*i*PKPbc	PKPbc	09 43 00.0	-1.1
	comp=Z,36nm,0.9s,SNR=11						
KULA	**Kula-Manisa**	**150.27**	**315**	*e*P	PKPbc	09 43 00.7	-0.9
FUR	**Furstenfeldbru**	**150.40**	**348**	*e*PKPbc	PKPbc	09 43 00.9	-0.6
LPK	**Lapseki**	**150.41**	**320**	*e*P	PKPbc	09 42 59.8	-2.1
RJOB	**Jochberg**	**150.48**	**346**	*e*PKPbc	PKPbc	09 43 01.0	-0.7
RJOB				*e*PKPab	PKPab	09 43 10.7	-0.1
RJOB				*e*pPKPbc	pPKPbc	09 45 08.8	-1.7
STR	**Strasbourg**	**150.56**	**353**	PKP	PKPbc	09 43 01.7	-0.2
FLN	**La Foliniere**	**150.62**	**4**	*e*PKIKP	PKPdf	09 42 55.1	-0.8
AKS	**Akhisar**	**150.63**	**317**	*e*P	PKPbc	09 43 00.4	-1.9
KOGS	**Kog**	**150.69**	**340**	*e*PKPdf	PKPdf	09 42 55.1	-1.1
KOGS				*i* PKPbc	PKPbc	09 43 01.1	-1.2
KOGS				*i* PKPab	PKPab	09 43 10.8	-1.0
BFO	**Black Forest**	**150.73**	**352**	*e*PKPbc	PKPbc	09 43 01.3	-1.0
BFO	**Black Forest**	**150.73**	**352**	*e*PKPbc	PKPbc	09 43 01.5	-0.8
BFO				*e*PKPab	PKPab	09 43 10.8	-1.0
BFO				*e*pPKPbc	pPKPbc	09 45 10.5	-0.6
ROSF	**Rostrenen**	**150.78**	**8**	*e*PKIKP	PKPdf	09 42 55.1	-1.1
LDF	**La Druitiere**	**150.81**	**3**	*e*PKIKP	PKPdf	09 42 55.3	-0.9
SOKA	**Soboth**	**150.86**	**342**	⇑*i*PKPbc	PKPbc	09 43 01.5	-1.2
	comp=Z,89nm,1.0s						
VTS	**Vitosha**	**150.91**	**327**	⇓P	PKPdf	09 42 58.2	+1.6
VTS	**Vitosha**	**150.91**	**327**	⇓*i*P	PKPdf	09 42 58.2	+1.6
SGMF	**Saint Gilles**	**150.95**	**7**	*e*PKIKP	PKPdf	09 42 55.3	-1.2
KBA	**Koelnbreinsper**	**150.96**	**344**	⇓*i*PKPbc	PKPbc	09 43 01.7	-1.2
	comp=Z,64nm,0.6s,SNR=8.7						
GRR	**Gorron**	**150.97**	**4**	*e*PKIKP	PKPdf	09 42 55.6	-0.9
ECH	**Echery**	**150.99**	**353**	PKP	PKPbc	09 43 02.0	-0.9
ECH	**Echery**	**150.99**	**353**	*e*PKIKP	PKPbc	09 43 01.3	-1.6
THEF	**They Montfort**	**151.09**	**355**	PKP	PKPbc	09 43 01.9	-1.2
WATA	**Walderalm**	**151.13**	**347**	⇓*i*PKPbc	PKPbc	09 43 02.4	-0.9
	comp=Z,48nm,0.4s,SNR=13						
RETA	**Reutte**	**151.15**	**348**	⇓*i*PKPbc	PKPbc	09 43 02.4	-0.8
	comp=Z,28nm,0.6s						
OBKA	**Obir**	**151.16**	**342**	⇓*i*PKPbc	PKPbc	09 43 02.0	-1.3
	comp=Z,29nm,0.6s,SNR=12						
WTTA	**Wattenberg**	**151.19**	**347**	⇓*i*PKiKP	PKiKP	09 43 02.8	-0.9
	comp=Z,192nm,0.6s,SNR=34						
QUIF	**Quistinic**	**151.21**	**8**	*e*PKIKP	PKPdf	09 42 55.6	-1.3
MYKA	**Terra Mystica**	**151.29**	**344**	⇓*i*PKPbc	PKPbc	09 43 02.1	-1.6
	comp=Z,62nm,0.6s						
SQTA	**Sankt Quirin**	**151.32**	**347**	⇓*i*PKiKP	PKiKP	09 43 03.0	-1.0
	comp=Z,72nm,0.6s						
MOF	**Molkenrain**	**151.35**	**353**	PKP	PKPbc	09 43 01.9	-1.8
GCIS	**Gornji Cirnik**	**151.41**	**340**	*e*PKPdf	PKPdf	09 42 56.7	-0.5
GCIS				*e*PKPbc	PKPbc	09 43 03.2	-0.7
GCIS				*e*PKPab	PKPab	09 43 13.6	-1.1
ABTA	**Abfaltersbach**	**151.47**	**345**	⇓*i*PKPbc	PKPbc	09 43 02.8	-1.3
	comp=Z,131nm,0.6s,SNR=23						
DAVA	**Damuels**	**151.51**	**349**	⇓*i*PKiKP	PKiKP	09 43 03.5	-0.8
	comp=Z,105nm,1.1s,SNR=16						
SEST	**Monte Rota**	**151.54**	**346**	PKP	PKPbc	09 43 03.2	-1.0
PTCC	**Patocco-Chiusa**	**151.58**	**344**	PKP	PKPdf	09 42 56.2	-1.3
LJU	**Ljubljana**	**151.59**	**342**	*e*PKPdf	PKPdf	09 42 54.0	-3.5
LJU				*i* PKPbc	PKPbc	09 43 03.5	-0.8
LJU				*e*PKPab	PKPab	09 43 14.0	-1.5
LJU	**Ljubljana**	**151.59**	**342**	*i* PKIKP	PKPbc	09 43 03.5	-0.8
FETA	**Feichten**	**151.60**	**348**	⇓*i*PKiKP	PKiKP	09 43 03.8	-0.8
	comp=Z,62nm,0.7s,SNR=11						
CADS	**Cadrg**	**151.64**	**343**	*e*PKPdf	PKPdf	09 42 56.0	-1.5
CADS				*i* PKPbc	PKPbc	09 43 02.8	-1.6
CADS				*e*PKPab	PKPab	09 43 13.9	-1.8
GMNA	**Gemona**	**151.73**	**344**	PKP	PKPdf	09 42 56.6	-1.1
VOJ	**Vojsko**	**151.78**	**343**	*e*PKPdf	PKPdf	09 42 56.8	-1.0
VOJ				*e*		09 43 03.3	
VOJ				*e*		09 43 14.6	
BOJS	**Bojanci**	**151.85**	**341**	*i* PKPdf	PKPdf	09 42 57.0	-0.9
BOJS				*i* PKPbc	PKPbc	09 43 04.5	-0.4
BOJS				*i* PKPab	PKPab	09 43 15.8	-0.8
LOMF	**Lomont**	**151.88**	**353**	PKP	PKPbc	09 43 03.8	-1.1
APPI	**Appiano**	**152.02**	**347**	PKP	PKPbc	09 43 03.5	-1.8
STIP	**Stip**	**152.09**	**327**	*e*PKP	PKPdf	09 42 59.8	+1.4
TRI	**Trieste**	**152.11**	**343**	*e*PKPbc	PKPbc	09 43 04.6	-0.9
TRI				*e*PKPab	PKPab	09 43 16.3	-1.4
VAY	**Valandovo**	**152.16**	**326**	*e*PKP	PKPdf	09 42 59.9	+1.4
LOR	**Lormes**	**152.18**	**358**	*e*PKIKP	PKPdf	09 42 57.7	-0.6
	comp=Z,14nm,0.9s						
HYF	**Humbligny**	**152.20**	**360**	*e*PKIKP	PKPdf	09 42 58.1	-0.3
SKO	**Skopje**	**152.26**	**328**	*e*PKP	PKPdf	09 42 59.9	+1.3
CTI	**Castel Tesino**	**152.33**	**346**	PKP	PKPbc	09 43 04.7	-1.3
TUE	**Stuetta**	**152.39**	**349**	*e*PKPdf	PKPdf	09 42 57.1	-1.5
TUE				PKP	PKPbc	09 43 05.5	-0.6
TUE				*e*PKPbc	PKPbc	09 43 05.7	-0.3
SSF	**Saint Saulge**	**152.39**	**358**	*e*PKIKP	PKPdf	09 42 57.7	-0.9
	comp=Z,35nm,1.2s						
AVF	**Avril sur Loir**	**152.67**	**358**	*e*PKIKP	PKPdf	09 42 57.8	-1.3
CABF	**La Chapelle**	**152.69**	**354**	*e*PKIKP	PKPdf	09 42 59.1	0.0
MFF	**Saint Martin d**	**152.79**	**4**	*e*PKIKP	PKPdf	09 42 58.3	-0.9
	comp=Z,17nm,0.7s						
SMF	**Signal de Mont**	**152.80**	**358**	*e*PKIKP	PKPdf	09 42 58.0	-1.2
KRUS	**Krusevo**	**152.80**	**328**	*e*PKP	PKPdf	09 42 58.5	-1.0
KRUS				*e*PKP	PKPbc	09 43 06.3	-0.8
BGF	**Bois d'Agland**	**152.91**	**359**	*e*PKIKP	PKPdf	09 42 58.8	-0.6
	comp=Z,11nm,0.6s						
BIA	**Bitola**	**153.02**	**327**	*e*PKP	PKPdf	09 42 59.9	+0.1
TCF	**Toulx Ste Croi**	**153.19**	**0**	*e*PKIKP	PKPdf	09 42 58.9	-0.9
	comp=Z,25nm,0.9s						
OHR	**Ohrid**	**153.22**	**328**	*e*PKP	PKPdf	09 43 00.9	+0.8
AGO	**Saint Agoulin**	**153.41**	**359**	PKP	PKPbc	09 43 08.7	+0.4
ORO	**Oropa**	**153.43**	**351**	PKP	PKPbc	09 43 07.0	-1.3
PLDF	**La Plantade**	**153.48**	**358**	PKP	PKPbc	09 43 08.9	+0.5
LPL	**La Plagne**	**153.70**	**353**	*e*PKIKP	PKPdf	09 43 00.5	-0.1
PYM	**Petit Puy Mans**	**153.72**	**359**	PKP	PKPbc	09 43 09.5	+0.6
LPG	**La Plagne**	**153.72**	**353**	*e*PKIKP	PKPdf	09 43 00.7	+0.1
RJF	**Les Rejaudoux**	**154.16**	**1**	*e*PKIKP	PKPdf	09 43 00.5	-0.7
BNI	**Bardonecchia**	**154.17**	**353**	*e*PKPdf	PKPdf	09 43 00.2	-1.0
BNI				*e*PKPbc	PKPbc	09 43 10.2	+0.3
LBL	**Lubilhac**	**154.23**	**358**	PKP	PKPbc	09 43 10.5	+0.5
ORIF	**Oris-en-Rattie**	**154.38**	**354**	*e*PKIKP	PKPdf	09 43 01.2	-0.3
MBDF	**Montbardon**	**154.47**	**353**	*e*PKIKP	PKPdf	09 43 01.3	-0.4
CAF	**Calviac**	**154.55**	**0**	*e*PKIKP	PKPdf	09 43 01.2	-0.6
SMRF	**Simiane la Rot**	**155.35**	**354**	*e*PKIKP	PKPdf	09 43 02.8	-0.1
LASF	**Ste Croix**	**155.36**	**357**	*e*PKIKP	PKPdf	09 43 02.6	-0.3
	comp=Z,60nm,1.2s						
LMR	**La Mourre**	**155.88**	**353**	*e*PKIKP	PKPdf	09 43 02.6	-1.0
SJPF	**Ste Jean**	**156.17**	**6**	*e*PKIKP	PKPdf	09 43 04.9	+0.9
PGF	**Pioggiola**	**156.24**	**348**	*e*PKIKP	PKPdf	09 43 03.0	-1.1
	comp=Z,130nm,1.4s						
EPF	**Esparros**	**156.38**	**4**	*e*PKIKP	PKPdf	09 43 03.9	-0.4
	comp=Z,18nm,1.0s						
EVO	**Evora**	**158.93**	**23**	*e*PKIKP	PKPdf	09 43 06.2	-1.3
	comp=Z,27nm,1.1s						
ESDC	**Sonseca Array**	**159.08**	**14**	PKP	PKPdf	09 43 06.6	-1.1
	comp=Z,3.0nm,0.8s,baz=5.7,slow=1.4,SNR=7.7						
ESDC				PKPab	PKPab	09 43 46.9	-1.0
	comp=Z,6.0nm,0.8s,baz=347,slow=4.6,SNR=13						
KEST	**Kesra**	**162.59**	**341**	PKPab	PKPab	09 44 03.2	-0.3
	comp=Z,10nm,0.9s,baz=112,slow=0.7,SNR=15						
LIC	**Lamto**	**165.08**	**150**	*e*PKIKP	PKPdf	09 43 12.8	-1.6
	comp=Z,32nm,0.9s						
LIC	**Lamto**	**165.08**	**150**	*e*PKIKP	PKPdf	09 43 12.8	-1.6
	comp=Z,80nm,1.4s						
LIC	**Lamto**	**165.08**	**150**	*e*PKP2	PKPab	09 44 15.5	+0.6
	comp=Z,40nm,1.1s						
KIC	**Kosan Boka**	**165.33**	**151**	*e*PKIKP	PKPdf	09 43 13.1	-1.5
	comp=Z,63nm,0.9s						
KIC	**Kosan Boka**	**165.33**	**151**	*e*PKP2	PKPab	09 44 16.7	+0.7
	comp=Z,179nm,1.5s						
TIC	**Toumodi**	**165.45**	**150**	*e*PKIKP	PKPdf	09 43 13.0	-1.7
	comp=Z,53nm,0.9s						
TIC	**Toumodi**	**165.45**	**150**	*e*PKP2	PKPab	09 44 16.0	-0.6
	comp=Z,16nm,0.4s						
DBIC	**Dimbokro**	**165.55**	**150**	PKP	PKPdf	09 43 13.4	-1.4
	comp=Z,7.3nm,0.8s,baz=246,slow=3.1,SNR=13						
DBIC				PKPab	PKPab	09 44 17.0	0.0
	comp=Z,4.4nm,0.7s,baz=147,slow=8.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**173.75**	**174**	PKP	PKPdf	09 43 17.6	-1.8
	comp=Z,10nm,1.0s,baz=325,slow=1.1,SNR=32						
TORD				PKPab	PKPab	09 44 53.2	+0.1
	comp=Z,1.6nm,0.6s,baz=175,slow=4.0,SNR=6.3						
TAM	**Tamanrasset**	**175.49**	**319**	*e*PKPdf	PKPdf	09 43 19.8	0.0

GUC 27 09:26:34.3±0.6, 2295S×7037W, h36km±3km, MD3.6, ML3.0, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.17**	**206**	⇑*i*P	Pn	09 26 40.7	-0.3
MECH				*i* S	Sn	09 26 45.6	0.0
MECH				AML	AML	09 26 46.5	
	comp=E,7μm,0.5s						
CEN1	**Los Morros**	**0.47**	**161**	*e*P	Pn	09 26 46.4	+1.8
CEN1				*i* S	Sn	09 26 55.4	+3.8
ANCH	**Antofagasta**	**0.73**	**183**	*i* P	Pn	09 26 48.0	-0.2
ANCH				*i* S	Sn	09 26 58.0	-0.2
ANCH				AML	AML	09 27 00.7	
	comp=N,1μm,0.3s						
TOCH	**Tocopilla**	**0.86**	**10**	⇑*i*P	Pn	09 26 49.9	-0.1
TOCH				*i* S	Sn	09 27 01.6	+0.3
TOCH				AML	AML	09 27 02.8	
	comp=E,1μm,0.4s						
LVC	**Limon Verde**	**1.38**	**76**	*e*P	Pn	09 26 58.9	+1.8
LVC				*i* S	Sn	09 27 17.5	+3.4
LVC				AML	AML	09 27 18.5	
	comp=E,374nm,0.2s						
CPN1	**Cerro Paranal**	**1.67**	**181**	AML	AML	09 27 27.2	
	comp=E,144nm,0.2s						
PB01	**Plate Boundary**	**2.06**	**23**	AML	AML	09 27 38.4	
	comp=E,245nm,0.5s						

NEIC 27 09:30:01.9, 3977N×2072E, h19km, MD3.1(ATH), After ATH.
ATH 27 09:30:01.9, 3977N×2072E, h19km±1km, MD3.1/6
SKO 27 09:30:01.2, 3970N×2073E, h71km
CSEM 27 09:30:01.8±0.3, 3981N×2073E, h2km, MD3.1, Error ellipse: s-maj=6.0km s-min=5.1km az=109.0
ISCJB 27 09:30:02.1±0.5, 3979N±003×2074E±005, h10km, Error ellipse: s-maj=5.2km s-min=3.7km az=12.1

ISC 27 09:30:02.8±0.6, 3977N±003×2073E±005, h5km±7km, n10, σ0≤84/18, 1C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.15**	**139**	⇑*i*PB	**Pg**	**09 30 05.9**	**+0.1**
JAN				*e*SB	**Sg**	**09 30 09.2**	**+1.4**
KEK	**Kerkira**	**0.72**	**266**	⇓*i*PB	**Pg**	**09 30 15.2**	**-1.4**
KEK				*e*SN	**Sg**	**09 30 26.4**	**+0.5**
KZN	**Kozani**	**0.97**	**56**	*e*PN	**Pg**	**09 30 20.3**	**-1.1**
KZN				*e*SN	**Sg**	**09 30 34.3**	**+0.4**
THL	**Klokotos Trika**	**1.02**	**101**	*e*PN	**Pg**	**09 30 20.9**	**-1.4**
EVR	**Evrytania**	**1.20**	**135**	*e*PN	**Pn**	**09 30 25.0**	**-1.1**
BIA	**Bitola**	**1.33**	**20**	*e*Pg	**Pg**	**09 30 28.7**	**+0.3**
BIA				*e*Sg	**Sg**	**09 30 45.9**	**+0.3**
OHR	**Ohrid**	**1.34**	**2**	*e*Pg	**Pg**	**09 30 28.3**	**-0.3**
OHR				*e*Sg	**Sg**	**09 30 46.9**	**+0.9**
OHR	**Ohrid**	**1.34**	**2**	*e*Pg	**Pg**	**09 30 28.4**	**-0.2**
OHR				*e*Sg	**Sg**	**09 30 46.9**	**+0.9**
VLS	**Valsamata**	**1.59**	**184**	*e*PN	**Pn**	**09 30 31.2**	**-0.4**
VLS				*e*SN	**Sn**	**09 30 53.5**	**+1.0**
KRUS	**Krusevo**	**1.65**	**14**	*e*Pn	**Pn**	**09 30 33.1**	**+0.7**
KRUS				*e*Sg	**Sg**	**09 30 55.6**	**-0.2**

CSEM 27 09:33:52.0±0.6, 3857N×2869W, h19km±4km, ML3.1, Error ellipse: s-maj=4.9km s-min=4.7km az=162.0, After PDA

PDA 27 09:33:52.0±0.6, 3857N×2869W, h19km±4km, MD3.5, ML3.1, Error ellipse: s-maj=4.9km s-min=4.7km az=162.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.01**	**333**	*i* P	Pg	09 33 55.3	0.0
CALA				*e*S	Sg	09 33 57.1	-0.4
CALA	**Caldeira**	**0.01**	**333**	*e*S	Sg	09 33 57.1	-0.4
PCED	**Cedros**	**0.06**	**354**	*i* P	Pg	09 33 55.0	-0.5
PCED				*i* S	Sg	09 33 57.2	-0.6
PCED				A		09 33 57.8	
	2μm,0.2s						
PCED	**Cedros**	**0.06**	**354**	*i* S	Sg	09 33 57.2	-0.6
HOR	**Horta**	**0.07**	**130**	*i* P	Pg	09 33 54.9	-0.6
HOR				*i* S	Sg	09 33 57.1	-0.7
HOR	**Horta**	**0.07**	**130**	*i* S	Sg	09 33 57.1	-0.7
ROSA	**Rosais**	**0.39**	**67**	*e*P	Pg	09 33 58.5	-1.6
ROSA				*e*S	Sg	09 34 03.7	-1.8
PMAN	**Manadas**	**0.48**	**82**	*e*P	Pg	09 34 00.0	-1.7
PMAN				*e*S	Sg	09 34 06.1	-2.1
PMAN				A		09 34 07.2	
	101nm,0.1s						
PMAN	**Manadas**	**0.48**	**82**	*e*P	Pg	09 34 00.0	-1.7
PMAN				*e*S	Sg	09 34 06.1	-2.1

NIED 27 09:47:00, 28.10N×140.00E, h520km, Mw4.6 Best double couple: M0 7.78000×10^15 NP1:φs263.00000°, δ73.00000°, λ-85.00000°. NP2:φs67.00000°, δ17.00000°, λ-105.00000°.
ISCJB 27 09:47:45.2±1.3, 28.11N±006×140.0E±02, h535km±17km, Error ellipse: s-maj=26.7km s-min=9.5km az=176.9
JMA 27 09:47:45.2±0.3, 28.14N×139.98E, h537km±5km, M3.8

ISC 27 09:47:47.8±1.4, 2822N±006×1400E±02, h513km±17km, n19, σ0≤86/27, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.26**	**119**	P	**P**	**09 48 54.8**	**-0.6**
CBIJ				*e*S	**S**	**09 49 49.6**	**-0.7**
JHHJ	**Haha-jima-NKT**	**2.52**	**128**	P	**P**	**09 48 57.1**	**+0.2**
JHHJ				*e*S	**S**	**09 49 52.9**	**-0.1**
JHJ2	**Mitsune**	**4.87**	**358**	P	**P**	**09 49 15.3**	**+1.1**
JHJ2				*e*S	**S**	**09 50 25.6**	**+0.7**
BSO1	**Boso 1**	**6.47**	**7**	P	**P**	**09 49 29.4**	**+0.4**
BSO1				*e*S	**S**	**09 50 52.3**	**+0.4**
BSO3	**Boso 3**	**6.57**	**4**	*e*S	**S**	**09 50 54.9**	**+1.1**
JIE	**Ise**	**6.75**	**336**	P	**P**	**09 49 33.0**	**+1.2**
BSO4	**Boso 4**	**6.75**	**3**	*e*S	**S**	**09 50 59.1**	**+2.1**
TATJ	**Tateyama 2**	**6.79**	**359**	*e*S	**S**	**09 50 57.2**	**-0.5**
JAA	**Atsumi**	**6.83**	**340**	P	**P**	**09 49 33.4**	**+0.9**
JWM	**Minabe**	**6.86**	**326**	P	**P**	**09 49 33.2**	**+0.3**
JOD2	**Odawara 2**	**7.06**	**354**	P	**P**	**09 49 35.8**	**+1.0**
JOD2				*e*S	**S**	**09 51 01.9**	**-0.7**
MRT2	**Murotomisaki 2**	**7.18**	**317**	P	**P**	**09 49 35.1**	**-1.0**
JAI	**Aioi**	**7.29**	**321**	P	**P**	**09 49 37.5**	**+0.3**
JAJ2	**Tsuna**	**7.55**	**326**	P	**P**	**09 49 39.0**	**-0.8**
JHU	**Hanno**	**7.63**	**356**	P	**P**	**09 49 40.5**	**0.0**
JHU				*e*S	**S**	**09 51 12.6**	**-0.5**
JRY	**Ryogami san**	**7.82**	**354**	P	**P**	**09 49 42.2**	**-0.3**
JRY				*e*S	**S**	**09 51 15.6**	**-1.1**
JYT	**Yasato**	**7.98**	**1**	*e*S	**S**	**09 51 18.7**	**-1.0**
JAG	**Ashikaga**	**8.19**	**357**	P	**P**	**09 49 45.3**	**-0.9**
JAG				S	**S**	**09 51 21.7**	**-1.8**
JHO	**Hitachi**	**8.38**	**3**	P	**P**	**09 49 48.6**	**+0.4**

BJI 27 10:13:47.4, 155S×13.16W, h9km, mB5.8, mb6.1, Ms5.6, Msz5.2
MOS 27 10:13:47.8±0.8, 129S×1328W, h10km, mb5.8/91, MS5.0/33, Error ellipse: s-maj=10.1km s-min=3.0km az=69.4
ISCJB 27 10:13:48.1±0.2, 130S±003×1323W±003, h10km, mb5.5/234, MS5.1/147, Error ellipse: s-maj=5.6km s-min=4.1km az=45.0
IDC 27 10:13:48.3±0.4, 121S×1325W, h0km, mb4.7/25, mb1 4.8/27, mb1mx4.8/27, mbtmp4.7/27, ML4.3/2, MS4.8/21, Ms1 4.8/21, ms1mx4.8/22, Error ellipse: s-maj=13.8km s-min=12.9km az=138.0
GCMT 27 10:13:49.7±0.1, 1.11S×1320W, h12km, MW5.5/103, Moment Tensor Solution. s78,c122; s103,c260; Duration: 1s3 Moment tensor: Scale 10^17Nm; Mrr 1.79±.02; Mθθ 0.02±.02; Mφφ -1.81±.02; Mrθ 0.01±.06; Mθφ 0.20±.02; Mφr 0.26±.05; Best double couple: M0 1.83000×10^17 NP1:φs173.00000°, δ41.00000°, λ88.00000°. NP2:φs355.00000°, δ49.00000°, λ92.00000°. Principal axes: T 1.8090, Plg86.0000°, Azm280.0000°; N 0.0390, Plg1.0000°, Azm174.0000°; P -1.8500, Plg4.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.
NEIC 27 10:13:49.6±0.2, 136S×1329W, h10km, mb5.7/146, MS5.2/119 Error ellipse: s-maj=5.3km s-min=3.4km az=134.0
SZGRF 27 10:14:02.2, 029S×1208W, h33km, mb5.8, MS4.9, North of Ascension Island

ISC 27 10:13:49.9±0.2, 132S±003×1329W±003, h10km, (h13km±1.3km: pP-P), n778, σ0≤83/701, mb5.5/234, MS5.1/147, 59C-23D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**11.14**	**48**	*e*Pn	**Pn**	**10 16 25.6**	**-3.8**
LIC				*e*Sn	**Sn**	**10 18 23.5**	**-11**
	85nm,0.6s						
LIC	**Lamto**	**11.14**	**48**	*e*P	**Pn**	**10 16 26.2**	**-3.2**
	532nm,1.7s						
TIC	**Toumodi**	**11.43**	**46**	*e*P	**Pn**	**10 16 27.4**	**-6.0**
	580nm,1.1s						
KIC	**Kosan Boka**	**11.44**	**48**	*e*P	**Pn**	**10 16 27.9**	**-5.7**
	1μm,1.4s						
DBIC	**Dimbokro**	**11.57**	**47**	Pn	**Pn**	**10 16 32.0**	**-3.3**
	1.2nm,0.3s,baz=208,slow=15,SNR=16						
DBIC				Sn	**Sn**	**10 18 29.6**	**-15**
	2.5nm,0.3s,baz=123,slow=16,SNR=3.2						
DBIC				LR	LR	10 20 01.2	
	comp=Z,18μm,21.0s,baz=207,slow=32						
DBIC	**Dimbokro**	**11.57**	**47**	*e*Pn	**Pn**	**10 16 31.5**	**-3.8**
	307nm,1.5s						
DBIC				*e*Sn	**Sn**	**10 18 30.5**	**-14**
DBIC	**Dimbokro**	**11.57**	**47**	*e*P	**Pn**	**10 16 31.5**	**-3.8**
DBIC				pmax	pmax		
	comp=Z,310nm,1.5s						
BBTS	**Babate**	**16.20**	**349**	Pn	**Pn**	**10 17 34.4**	**-3.5**
	comp=

CMAH Djebel Manchou 42.38 25 P **P 10 21 49.0 +4.5**
KEST Kesra 42.48 28 P **P 10 21 45.8 +0.4**
comp=Z,18nm,1.2s,mb4.6,baz=180,slow=5.3,SNR=19
KEST LR LR 10 40 25.6
comp=Z,1µm,19.4s,MS4.8,baz=40,slow=38
GUD Guadarrama 42.59 10 ⇓P **P 10 21 47.0 +0.8**
comp=Z,350nm,3.1s
GUD Guadarrama 42.59 10 ⇓P **P 10 21 47.0 +0.8**
GUD pmax pmax
comp=Z,350nm,3.1s
ETOR Torete 43.17 12 P **P 10 21 50.8 -0.1**
comp=Z,37nm,2.1s,mb4.8
ETOR Torete 43.17 12 P **P 10 21 50.8 -0.1**
ETOR pmax pmax
comp=Z,37nm,2.1s,mb4.8
LSZ Lusaka 43.20 111 P **P 10 21 51.4 -0.2**
comp=Z,8.0nm,0.6s,mb4.6,baz=299,slow=6.4,SNR=24
LSZ S **S 10 28 22.0 +3.3**
comp=Z,0.5nm,0.3s,baz=104,slow=12,SNR=2.6
LSZ Lusaka 43.20 111 *e*P **P 10 21 50.2 -1.4**
comp=Z,194nm,1.9s,mb5.5
LSZ LR LR
comp=Z,3µm,22.0s,MS5.2
ELOB Lobios 43.25 6 P **P 10 21 50.8 -0.7**
comp=Z,423nm,3.1s
ECAL Calabor 43.47 7 P **P 10 21 53.4 +0.1**
comp=Z,706nm,2.9s,mb5.9
MBAR Mbarara 44.02 90 P **P 10 22 00.9 +2.6**
comp=Z,109nm,1.6s,mb5.3,SNR=11
MBAR Mbarara 44.02 90 *i* P **P 10 21 58.2 -0.1**
MBAR LR LR
comp=Z,762nm,20.0s,MS4.6
MBAR Mbarara 44.02 90 *i* P **P 10 21 58.2 -0.1**
MBAR MLR MLR
comp=Z,762nm,20.0s,MS4.6
EMAZ Mazaricos 44.24 5 P **P 10 21 59.9 +0.5**
comp=Z,569nm,2.6s,mb5.8
LBTB Lobatse 44.30 125 P **P 10 22 01.3 +1.0**
comp=Z,10nm,0.9s,mb4.1,baz=274,slow=9.6,SNR=8.5
LBTB Lobatse 44.30 125 *e*P **P 10 22 00.8 +0.6**
comp=Z,103nm,1.6s,mb5.3
LBTB LR LR
comp=Z,2µm,20.0s,MS5.1
ESAC San Caprasio 44.39 14 P **P 10 22 00.8 +0.1**
comp=Z,1µm,2.6s,mb6.2
SUR Sutherland 44.55 137 P **P 10 22 02.9 +0.7**
comp=Z,22nm,1.1s,mb4.9,baz=293,slow=8.2,SNR=4.3
EARI Arriondas 45.01 8 P **P 10 22 06.7 +1.1**
comp=Z,1µm,2.5s,mb6.2
ELAN Lanestosa 45.23 10 P **P 10 22 08.0 +0.7**
comp=Z,928nm,2.6s,mb6.2
EBIE Bielsa 45.45 14 P **P 10 22 09.5 +0.4**
comp=Z,959nm,3.0s
ETSF Etsaut 45.48 13 *e*P **P 10 22 09.8 +0.4**
ELIZ Elizondo 45.53 12 P **P 10 22 10.3 +0.5**
comp=Z,89nm,1.5s,mb5.5
ELIZ Elizondo 45.53 12 P **P 10 22 10.3 +0.6**
ELIZ pmax pmax
comp=Z,89nm,1.5s,mb5.5
SJPF Ste Jean 45.54 12 *e*P **P 10 22 10.2 +0.3**
comp=Z,51nm,0.9s,mb5.2
SJPF Ste Jean 45.54 12 *e*P **P 10 22 10.2 +0.3**
comp=Z,26nm,0.9s,mb5.2
SJPF Ste Jean 45.54 12 *e*P **P 10 22 10.2 +0.3**
SJPF pmax pmax
comp=Z,25nm,0.9s,mb5.1
EALK Alkurruntz 45.59 12 P **P 10 22 10.2 +0.1**
comp=Z,416nm,2.1s,mb6.0
VIEF Viey 45.61 14 *e*P **P 10 22 10.8 +0.4**
VSL Villasalto 45.62 25 *e*P **P 10 22 11.6 +1.0**
comp=Z,282nm,1.5s,mb6.0
ATE Arette 45.63 13 *e*P **P 10 22 10.7 +0.1**
OSSF Osses 45.67 12 *e*P **P 10 22 11.0 +0.1**
REYF Montagne du Re 45.69 13 *e*P **P 10 22 11.8 +0.8**
BOSA Boshof 45.70 130 P **P 10 22 10.9 -0.4**
comp=Z,7.8nm,0.8s,mb4.7,baz=306,slow=10,SNR=9.9
BOSA LR LR 10 37 57.8
comp=Z,2µm,20.1s,MS5.0,baz=307,slow=32
BOSA Boshof 45.70 130 P **P 10 22 10.9 -0.4**
BOSA LR LR 10 37 57.8
EPF Esparros 45.82 14 *e*P **P 10 22 12.5 +0.4**
comp=Z,572nm,1.9s,mb5.9
EPF Esparros 45.82 14 *e*P **P 10 22 12.5 +0.4**
comp=Z,286nm,1.9s,mb5.9
EPF Esparros 45.82 14 *e*P **P 10 22 12.5 +0.4**
EPF pmax pmax
comp=Z,286nm,1.9s,mb5.9
MLS Moulis 45.94 15 *e*P **P 10 22 13.4 +0.4**
LRDF Laroque-de-Fa 46.30 16 *e*P **P 10 22 16.0 +0.1**
CSLB Castelbuono 46.52 30 P **P 10 22 19.3 +1.7**
comp=Z,30nm,1.0s,mb5.2
GIB Gibilmanna 46.54 30 P **P 10 22 18.3 +0.5**
comp=Z,68nm,1.4s,mb5.4
GIB Gibilmanna 46.54 30 P **P 10 22 18.3 +0.5**
GIB pmax pmax
comp=Z,68nm,1.4s,mb5.4
MTLF Montolieu 46.59 16 *e*P **P 10 22 17.7 -0.4**
OSPF L'Ospedale 47.39 23 *e*P **P 10 22 24.9 +0.5**
MTTG Motta San Giov 47.40 31 P **P 10 22 26.5 +1.9**
GELF Grande-Etoile 47.57 18 *e*P **P 10 22 26.9 +1.1**
BERF Bertagne 47.59 19 *e*P **P 10 22 27.0 +1.1**
CEL Celeste 47.70 31 *e*P **P 10 22 27.0 +0.2**
comp=Z,194nm,1.4s,mb5.9
CEL LR LR
comp=Z,1µm,21.0s,MS4.8
LFF La Frestale 47.72 13 *e*P **P 10 22 26.9 0.0**
comp=Z,144nm,1.2s,mb5.6
LFF La Frestale 47.72 13 *e*P **P 10 22 26.9 0.0**
comp=Z,72nm,1.2s,mb5.6
LFF La Frestale 47.72 13 *e*P **P 10 22 26.9 0.0**
LFF pmax pmax
comp=Z,72nm,1.2s,mb5.6
LASF Ste Croix 47.72 17 *e*P **P 10 22 27.1 +0.1**
comp=Z,509nm,1.8s,mb5.9
TREF Trevaresse 47.77 18 *e*P **P 10 22 28.3 +1.0**
PUYF Puyloubier 47.79 19 *e*P **P 10 22 28.4 +0.9**
PRAF Pradon 47.87 18 *e*P **P 10 22 29.1 +1.0**
LMR La Mourre 47.88 19 *e*P **P 10 22 28.3 +0.2**
comp=Z,175nm,1.2s,mb5.6
LMR La Mourre 47.88 19 *e*P **P 10 22 28.3 +0.2**
comp=Z,87nm,1.3s,mb5.6
LMR La Mourre 47.88 19 *e*P **P 10 22 28.3 +0.2**
LMR pmax pmax
comp=Z,87nm,1.3s,mb5.6
TAVF Tavernes 47.98 19 *e*P **P 10 22 29.9 +0.9**
CAF Calviac 48.03 15 *e*P **P 10 22 29.0 -0.3**
comp=Z,81nm,0.9s,mb5.4
CAF Calviac 48.03 15 *e*P **P 10 22 29.0 -0.3**
comp=Z,40nm,0.9s,mb5.5
CAF Calviac 48.03 15 *e*P **P 10 22 29.0 -0.3**
CAF pmax pmax
comp=Z,40nm,0.9s,mb5.5
PGF Pioggiola 48.07 22 *e*P **P 10 22 29.8 +0.1**
comp=Z,62nm,0.9s,mb5.3
PGF Pioggiola 48.07 22 *e*P **P 10 22 29.8 +0.1**
comp=Z,31nm,0.9s,mb5.3
PGF Pioggiola 48.07 22 *e*P **P 10 22 29.8 +0.1**
PGF pmax pmax
comp=Z,31nm,0.9s,mb5.3
VILF Villemus 48.08 18 *e*P **P 10 22 30.6 +0.9**
BBGH Gun Hill 48.09 289 PFAKE 10 22 40.0 +10
BBGH LR LR
comp=Z,4µm,19.0s,MS5.4
FRF La Foret Royal 48.12 19 *e*P **P 10 22 30.0 -0.1**
SMRF Simiane la Rot 48.15 18 *e*P **P 10 22 31.0 +0.8**
comp=Z,116nm,1.4s,mb5.4
SMRF Simiane la Rot 48.15 18 *e*P **P 10 22 31.0 +0.8**
comp=Z,116nm,1.4s,mb5.7
RJF Les Rejaudoux 48.25 14 *e*P **P 10 22 30.7 -0.3**
comp=Z,80nm,1.0s,mb5.4
RJF Les Rejaudoux 48.25 14 *e*P **P 10 22 30.7 -0.3**
comp=Z,40nm,1.0s,mb5.4
RJF Les Rejaudoux 48.25 14 *e*P **P 10 22 30.7 -0.3**
RJF pmax pmax
comp=Z,40nm,1.0s,mb5.4
STOF St-Etienne Org 48.27 19 *e*P **P 10 22 30.2 -1.0**
CALN Calern 48.37 20 *e*P **P 10 22 32.6 +0.6**
GRI Girifalco 48.39 31 P **P 10 22 32.9 +0.7**
FRNF Fournols 48.58 15 *e*P **P 10 22 34.0 +0.4**
MVIF Mont Vial 48.59 20 *e*P **P 10 22 33.9 +0.2**
OCF Saint Nazaire 48.61 18 *e*P **P 10 22 35.1 +1.3**
OG26 St.-Nazaire-De 48.61 18 *e*P **P 10 22 35.1 +1.3**
LBL Lubilhac 48.62 16 *e*P **P 10 22 34.0 +0.1**
LUCF Luceram 48.65 20 *e*P **P 10 22 34.0 -0.1**
SBF Sospel 48.66 20 *e*P **P 10 22 34.3 +0.1**
comp=Z,137nm,1.2s,mb5.6
SBF Sospel 48.66 20 *e*P **P 10 22 34.3 +0.1**
comp=Z,68nm,1.2s,mb5.6
SBF Sospel 48.66 20 *e*P **P 10 22 34.3 +0.1**
SBF pmax pmax
comp=Z,68nm,1.2s,mb5.5
VIVF Saint-Julien-l 48.67 17 *e*P **P 10 22 34.4 +0.1**
comp=Z,198nm,1.6s,mb5.6
VIVF Saint-Julien-l 48.67 17 *e*P **P 10 22 34.4 +0.1**
comp=Z,99nm,1.6s,mb5.6
VIVF Saint-Julien-l 48.67 17 *e*P **P 10 22 34.4 +0.1**
VIVF pmax pmax
comp=Z,99nm,1.6s,mb5.6
TOUF Mont Tournerai 48.73 20 *e*P **P 10 22 35.6 +0.9**
AUTN L'Aution 48.77 20 *e*P **P 10 22 34.2 -0.8**
MAON Monte Argentar 48.80 24 P **P 10 22 35.1 -0.2**
SAOF Saorge 48.81 20 *e*P **P 10 22 35.4 +0.1**
TIP Timpagrande 48.83 31 *e*P **P 10 22 35.0 -0.6**
comp=Z,180nm,1.6s,mb5.8
TIP LR LR
comp=Z,2µm,20.0s,MS5.0
IMI Imperia 48.86 20 P **P 10 22 36.6 +0.9**
VERF Verneugheol 48.90 15 *e*P **P 10 22 36.7 +0.7**
MGR Morigerati 48.95 29 P **P 10 22 36.7 +0.2**
CUC Castrocucco 48.97 30 *e*P **P 10 22 37.0 +0.3**
comp=Z,310nm,1.9s,mb6.0
CUC LR LR
comp=Z,1µm,19.0s,MS5.0
SURF Saint Ours 49.00 19 *e*P **P 10 22 38.4 +1.6**
SSB Saint Sauveur 49.02 17 *e*P **P 10 22 36.9 0.0**
SSB Saint Sauveur 49.02 17 *e*P **P 10 22 37.9 +1.0**
comp=Z,0.3nm,1.6s
PYM Petit Puy Mans 49.04 15 *e*P **P 10 22 37.7 +0.6**
ORIF Oris-en-Rattie 49.09 18 *e*P **P 10 22 38.3 +0.8**
comp=Z,387nm,1.7s,mb5.8
ORIF Oris-en-Rattie 49.09 18 *e*P **P 10 22 38.3 +0.8**
comp=Z,193nm,1.7s,mb5.9
ORIF Oris-en-Rattie 49.09 18 *e*P **P 10 22 38.3 +0.8**
ORIF pmax pmax
comp=Z,193nm,1.7s,mb5.9
MFF Saint Martin d 49.10 12 *e*P **P 10 22 37.3 -0.2**
comp=Z,38nm,0.9s,mb5.1
MFF Saint Martin d 49.10 12 *e*P **P 10 22 37.3 -0.2**
comp=Z,19nm,0.9s,mb5.1
MFF Saint Martin d 49.10 12 *e*P **P 10 22 37.3 -0.2**
MFF pmax pmax
comp=Z,19nm,0.9s,mb5.1
MTCE Montecelio 49.15 26 P **P 10 22 38.9 +0.9**
SGO Sicignano 49.16 29 P **P 10 22 39.4 +1.3**
DOI San Damiano 49.16 19 P **P 10 22 39.4 +1.4**
comp=Z,24nm,1.6s,mb5.0
DOI San Damiano 49.16 19 P **P 10 22 39.4 +1.4**
DOI pmax pmax
comp=Z,24nm,1.6s,mb5.0
CERT Cerreto 49.19 26 P **P 10 22 38.2 -0.1**
MBDF Montbardon 49.20 19 *e*P **P 10 22 39.4 +1.1**
comp=Z,94nm,1.1s,mb5.5
MBDF Montbardon 49.20 19 *e*P **P 10 22 39.4 +1.1**
comp=Z,47nm,1.1s,mb5.4
MBDF Montbardon 49.20 19 *e*P **P 10 22 39.4 +1.1**
MBDF pmax pmax
comp=Z,47nm,1.1s,mb5.4
CSSN Cassano Irpino 49.26 28 P **P 10 22 40.1 +1.3**
comp=Z,533nm,2.4s,mb6.2
SIV San Ignacio 49.28 250 P **P 10 22 40.8 +1.3**
comp=Z,6.6nm,1.0s,mb4.6,baz=93,slow=10,SNR=20
TCF Toulx Ste Croi 49.34 14 *e*P **P 10 22 39.7 +0.4**
comp=Z,792nm,1.9s,mb6.1
TCF Toulx Ste Croi 49.34 14 *e*P **P 10 22 39.7 +0.4**
comp=Z,396nm,1.9s,mb6.1
TCF Toulx Ste Croi 49.34 14 *e*P **P 10 22 39.7 +0.4**
TCF pmax pmax
comp=Z,396nm,1.9s,mb6.1
GRN Grenoble 49.34 18 *e*P **P 10 22 40.4 +1.0**
AGO Saint Agoulin 49.35 15 *e*P **P 10 22 39.8 +0.4**
SGG Gregorio Mates 49.37 27 P **P 10 22 40.4 +0.7**
comp=Z,68nm,1.4s,mb5.5
PLDF La Plantade 49.40 15 *e*P **P 10 22 40.2 +0.4**
VVLD Villa Vallelon 49.41 26 P **P 10 22 40.2 +0.2**
comp=Z,465nm,2.1s,mb6.2
MNS Montasola 49.42 25 P **P 10 22 40.4 +0.4**
GDM Grand'Maison 49.42 18 *e*P **P 10 22 40.7 +0.7**
PTQR Pietraquaria 49.43 26 P **P 10 22 41.2 +1.0**
comp=Z,140nm,1.7s,mb5.7
PSB1 Pescosannita 49.44 28 P **P 10 22 40.9 +0.7**
comp=Z,183nm,1.7s,mb5.8
BNI Bardonecchia 49.46 19 *e*P **P 10 22 39.4 -0.9**
comp=Z,238nm,1.8s,mb5.9
BNI LR LR
comp=Z,2µm,20.0s,MS5.2
BNI Bardonecchia 49.46 19 *e*P **P 10 22 39.4 -0.9**
BNI pmax pmax
comp=Z,238nm,1.8s,mb5.9
BNI MLR MLR
comp=Z,2µm,20.0s,MS5.2
FIAM Fiamignano 49.51 26 P **P 10 22 41.4 +0.7**
comp=Z,259nm,2.0s,mb5.9
MIDA Miranda 49.51 27 P **P 10 22 41.4 +0.6**
comp=Z,354nm,1.9s,mb6.1
RNI2 Rionero Sannit 49.51 27 P **P 10 22 42.6 +1.8**
comp=Z,392nm,1.6s,mb6.2
INTR Introdacqua 49.65 27 P **P 10 22 42.4 +0.6**
comp=Z,649nm,2.2s,mb6.3
AQU L'Aquila 49.70 26 *e*P **P 10 22 43.3 +1.1**
comp=Z,2µm,2.3s,mb6.7
AQU LR LR
comp=Z,2µm,20.0s,MS5.2
AQU L'Aquila 49.70 26 *e*P **P 10 22 43.3 +1.1**
AQU pmax pmax
comp=Z,2µm,2.3s,mb6.7
AQU MLR MLR
comp=Z,2µm,20.0s,MS5.2
RSP Reno Superiore 49.74 19 P **P 10 22 43.8 +1.4**
CSNT Castellina Chi 49.74 23 P **P 10 22 42.3 -0.2**
comp=Z,47nm,1.6s,mb5.3
BGF Bois d'Agland 49.75 15 *e*P **P 10 22 42.7 +0.2**
QUIF Quistinic 49.82 9 *e*P **P 10 22 42.5 -0.5**
comp=Z,335nm,1.9s,mb5.8
QUIF Quistinic 49.82 9 *e*P **P 10 22 42.5 -0.5**
comp=Z,167nm,1.9s,mb5.7
QUIF Quistinic 49.82 9 *e*P **P 10 22 42.5 -0.5**
QUIF pmax pmax
comp=Z,167nm,1.9s,mb5.7
GRGR Grenville 49.85 287 PFAKE 10 23 00.0 +16
GRGR LR LR
comp=Z,782nm,19.0s,MS4.7
LPG La Plagne 49.88 18 *e*P **P 10 22 44.6 +1.1**
comp=Z,201nm,1.4s,mb5.7
LPG La Plagne 49.88 18 *e*P **P 10 22 44.6 +1.1**
comp=Z,101nm,1.4s,mb5.7
LPG La Plagne 49.88 18 *e*P **P 10 22 44.6 +1.1**
LPG pmax pmax
comp=Z,101nm,1.4s,mb5.7
LPL La Plagne 49.90 18 *e*P **P 10 22 44.6 +1.0**
comp=Z,218nm,1.4s,mb5.7
LPL La Plagne 49.90 18 *e*P **P 10 22 44.6 +1.0**
comp=Z,109nm,1.4s,mb5.7
LPL La Plagne 49.90 18 *e*P **P 10 22 44.6 +1.0**
LPL pmax pmax
comp=Z,109nm,1.4s,mb5.7
ASS Assisi 49.96 25 P **P 10 22 44.6 +0.5**
comp=Z,25nm,1.4s,mb5.0
ASS Assisi 49.96 25 P **P 10 22 44.6 +0.5**
ASS pmax pmax
comp=Z,25nm,1.4s,mb5.0
NRCA Norcia 49.97 25 P **P 10 22 44.5 +0.3**
comp=Z,7.4nm,1.0s,mb4.7
VLC Villacollemand 49.97 22 P **P 10 22 43.8 -0.4**
comp=Z,268nm,2.2s,mb5.9
OG05 Jujurieux 49.98 17 *e*P **P 10 22 44.6 +0.3**
TERO Teramo 50.01 26 P **P 10 22 45.5 +1.0**
comp=Z,375nm,2.1s,mb6.0
RSL Roselend 50.02 18 *e*P **P 10 22 45.3 +0.8**
MURB Monte Urbino 50.07 25 P **P 10 22 44.9 -0.1**
comp=Z,236nm,2.6s,mb6.3
SMF Signal de Mont 50.09 15 *e*P **P 10 22 44.9 -0.1**
comp=Z,296nm,1.8s,mb5.7
SMF Signal de Mont 50.09 15 *e*P **P 10 22 44.9 -0.1**
comp=Z,148nm,1.8s,mb5.7
SMF Signal de Mont 50.09 15 *e*P **P 10 22 44.9 -0.1**
SMF pmax pmax
comp=Z,148nm,1.8s,mb5.7
AVF Avril sur Loir 50.09 15 *e*P **P 10 22 45.1 0.0**
comp=Z,49nm,1.1s,mb5.2
AVF Avril sur Loir 50.09 15 *e*P **P 10 22 45.1 0.0**
comp=Z,24nm,1.1s,mb5.2
AVF Avril sur Loir 50.09 15 *e*P **P 10 22 45.1 0.0**
AVF pmax pmax
comp=Z,24nm,1.1s,mb5.1
CRE Caprese Michel 50.13 24 P **P 10 22 45.5 +0.1**
comp=Z,180nm,2.5s,mb5.7
CRE Caprese Michel 50.13 24 P **P 10 22 45.5 +0.1**
CRE pmax pmax
comp=Z,180nm,2.5s,mb5.7
BOB Bobbio (Coli) 50.15 21 P **P 10 22 46.7 +1.1**
comp=Z,790nm,2.2s,mb6.4
BOB Bobbio (Coli) 50.15 21 P **P 10 22 46.7 +1.1**
BOB pmax pmax
comp=Z,790nm,2.2s,mb6.4
BADI Badiali 50.16 24 P **P 10 22 45.8 +0.1**
comp=Z,500nm,2.4s,mb6.1
ERBM Eremo 50.20 22 P **P 10 22 47.0 +1.0**
comp=Z,1µm,3.2s
GSCL Gusciola 50.21 22 P **P 10 22 46.8 +0.8**
comp=Z,117nm,2.4s,mb5.5
ROSF Rostrenen 50.22 9 *e*P **P 10 22 45.6 -0.4**
SGMF Saint Gilles 50.25 9 *e*P **P 10 22 45.9 -0.3**
comp=Z,549nm,1.9s,mb6.0
SGMF Saint Gilles 50.25 9 *e*P **P 10 22 45.9 -0.3**
comp=Z,274nm,1.9s,mb6.0
SGMF Saint Gilles 50.25 9 *e*P **P 10 22 45.9 -0.3**
SGMF pmax pmax
comp=Z,274nm,1.9s,mb6.0
FNVD Fontana Vidola 50.26 23 P **P 10 22 45.8 -0.6**
comp=Z,505nm,2.5s,mb6.1
PIEI Pieia 50.30 24 P **P 10 22 47.2 +0.5**
comp=Z,28nm,0.9s,mb5.3
SFI Santa Sofia 50.33 24 P **P 10 22 46.8 -0.1**
comp=Z,282nm,2.2s,mb5.9
SFI Santa Sofia 50.33 24 P **P 10 22 46.8 -0.1**
SFI pmax pmax
comp=Z,282nm,2.2s,mb5.9
SSF Saint Saulge 50.38 15 *e*P **P 10 22 47.2 -0.1**
comp=Z,235nm,1.6s,mb5.7
SSF Saint Saulge 50.38 15 *e*P **P 10 22 47.2 -0.1**
comp=Z,118nm,1.5s,mb5.7
SSF Saint Saulge 50.38 15 *e*P **P 10 22 47.2 -0.1**
SSF pmax pmax
comp=Z,118nm,1.5s,mb5.7
CING Cingoli 50.44 25 P **P 10 22 47.8 0.0**
comp=Z,133nm,1.5s,mb5.8
OG01 Vacheresse 50.61 18 *e*P **P 10 22 50.2 +1.2**
LOR Lormes 50.66 15 *e*P **P 10 22 49.2 -0.2**
comp=Z,142nm,1.3s,mb5.4
LOR Lormes 50.66 15 *e*P **P 10 22 49.2 -0.2**
comp=Z,71nm,1.3s,mb5.4
LOR Lormes 50.66 15 *e*P **P 10 22 49.2 -0.2**
LOR pmax pmax
comp=Z,71nm,1.3s,mb5.4
GRR Gorron 50.67 11 *e*P **P 10 22 49.2 -0.3**
comp=Z,125nm,1.0s,mb5.5
GRR Gorron 50.67 11 *e*P **P 10 22 49.2 -0.3**
comp=Z,63nm,1.0s,mb5.5
GRR Gorron 50.67 11 *e*P **P 10 22 49.2 -0.3**
GRR pmax pmax
comp=Z,63nm,1.0s,mb5.5
CABF La Chapelle 50.68 17 *e*P **P 10 22 49.4 -0.2**
comp=Z,558nm,1.9s,mb5.9
CABF La Chapelle 50.68 17 *e*P **P 10 22 49.4 -0.2**
comp=Z,279nm,1.9s,mb5.9
CABF La Chapelle 50.68 17 *e*P **P 10 22 49.4 -0.2**
CABF pmax pmax
comp=Z,279nm,1.9s,mb5.9
LDF La Druitiere 51.01 11 *e*P **P 10 22 51.8 -0.2**
comp=Z,492nm,1.8s,mb5.8
LDF La Druitiere 51.01 11 *e*P **P 10 22 51.8 -0.2**
comp=Z,246nm,1.8s,mb5.8
LDF La Druitiere 51.01 11 *e*P **P 10 22 51.8 -0.2**
LDF pmax pmax
comp=Z,246nm,1.8s,mb5.8
FLN La Foliniere 51.10 11 *e*P **P 10 22 52.2 -0.5**
comp=Z,69nm,1.1s,mb5.2
FLN La Foliniere 51.10 11 *e*P **P 10 22 52.2 -0.5**
comp=Z,34nm,1.1s,mb5.2
FLN La Foliniere 51.10 11 *e*P **P 10 22 52.2 -0.5**
FLN pmax pmax
comp=Z,35nm,1.1s,mb5.2
LOMF Lomont 51.57 17 *e*P **P 10 22 56.0 -0.2**
TUE Stuetta 51.59 20 *e*P **P 10 22 56.0 -0.4**
comp=Z,289nm,2.1s,mb5.8
MABI Malga Bissina 51.64 21 P **P 10 22 56.1 -0.7**
BBS Basel-Blauen 51.88 18 *e*P **P 10 22 58.5 0.0**
BRMO Bormio 51.95 21 P **P 10 22 57.5 -1.6**
HINF Hinteralfeld 52.00 17 *e*P **P 10 22 58.6 -0.8**
comp=Z,249nm,1.7s,mb5.6
HINF Hinteralfeld 52.00 17 *e*P **P 10 22 58.6 -0.8**
comp=Z,125nm,1.7s,mb5.6
HINF Hinteralfeld 52.00 17 *e*P **P 10 22 58.6 -0.8**
HINF pmax pmax
comp=Z,125nm,1.7s,mb5.6
HAU Haudompre 52.02 17 *e*P **P 10 22 59.1 -0.5**
comp=Z,501nm,1.7s,mb5.9
HAU Haudompre 52.02 17 *e*P **P 10 22 59.1 -0.5**
comp=Z,250nm,1.7s,mb5.9
HAU Haudompre 52.02 17 *e*P **P 10 22 59.1 -0.5**
HAU pmax pmax
comp=Z,251nm,1.7s,mb5.9
CTI Castel Tesino 52.05 22 P **P 10 22 59.9 +0.1**
MOF Molkenrain 52.11 17 *e*P **P 10 22 59.6 -0.6**
MEZF Maizieres J'vi 52.12 15 *e*P **P 10 23 00.2 -0.1**
comp=Z,856nm,1.9s,mb6.0
MEZF Maizieres J'vi 52.12 15 *e*P **P 10 23 00.2 -0.1**
comp=Z,856nm,1.9s,mb6.3
THEF They Montfort 52.12 16 *e*P **P 10 23 00.0 -0.3**
HCY Herceg Novi 52.15 30 ⇓*i* P **P 10 23 00.5 -0.1**
ULC Ulcinj 52.17 31 ⇓*i* P **P 10 23 02.2 +1.4**
BUM Brajici-Budva 52.24 30 *e*P **P 10 23 03.1 +1.8**
OHR Ohrid 52.36 32 *e*P **P 10 23 02.1 -0.1**
FELD Feldberg im Sc 52.40 18 *e*P **P 10 23 01.9 -0.5**
ECH Echery 52.45 17 *e*P **P 10 23 02.3 -0.4**
ECH Echery 52.45 17 *e*P **P 10 23 02.5 -0.3**
comp=Z,240nm,2.1s,mb5.8
ECH Echery 52.45 17 *e*P **P 10 23 02.5 -0.2**
ECH pmax pmax
comp=Z,240nm,2.1s,mb5.8
DAVA Damuels 52.48 20 ⇑*i* P **P 10 23 02.1 -1.0**
comp=Z,86nm,1.0s,mb5.7,SNR=24
BRY Bratogost 52.51 29 ⇓*i* P **P 10 23 01.0 -2.3**
TTG Podgorica 52.51 30 ⇓*i* P **P 10 23 04.6 +1.2**
LIBD Limburg 52.52 18 *e*P **P 10 23 03.5 +0.2**
FETA Feichten 52.55 21 ⇑*i* P **P 10 23 02.9 -0.6**
comp=Z,74nm,1.7s,mb5.3,SNR=11
TRI Trieste 52.59 24 *e*P **P 10 23 03.9 +0.1**
comp=Z,470nm,1.9s,mb6.1
TRI Trieste 52.59 24 P **P 10 23 04.3 +0.5**
TRI pmax pmax
comp=Z,480nm,1.9s,mb6.1
CDF Champ du Feu 52.66 17 *e*P **P 10 23 03.6 -0.7**
NKY Niksic 52.67 30 ⇓*i* P **P 10 23 05.5 +1.0**
KRUS Krusevo 52.78 32 *e*P **P 10 23 04.8 -0.6**
SPAK Spaichingen-Ko 52.84 18 *e*P **P 10 23 05.2 -0.5**
GMNA Gemona 52.84 23 P **P 10 23 05.3 -0.4**
SEST Monte Rota 52.85 22 P **P 10 23 06.7 +0.9**
SQTA Sankt Quirin 52.89 21 ⇑*i* P **P 10 23 05.3 -0.8**
comp=Z,35nm,0.8s,mb5.3
BFO Black Forest 52.90 18 P **P 10 23 06.6 +0.5**
comp=Z,199nm,1.7s,mb5.8,SNR=10
BFO Black Forest 52.90 18 *e*P **P 10 23 04.0 -2.1**
comp=Z,288nm,2.0s,mb5.9
BFO LR LR
comp=Z,2µm,19.0s,MS5.1
BFO Black Forest 52.90 18 *e*P **P 10 23 04.0 -2.1**
BFO pmax pmax
comp=Z,288nm,2.0s,mb5.9
BFO MLR MLR
comp=Z,2µm,19.0s,MS5.1
BFO Black Forest 52.90 18 *e*P **P 10 23 05.6 -0.5**
comp=Z,424nm,2.3s,mb6.0
UPM Unac-Piva 52.91 29 ⇓*i* P **P 10 23 04.6 -1.7**
FVI Forni Avoltri 52.94 22 P **P 10 23 06.7 +0.3**
RETA Reutte 52.96 20 ⇑*i* P **P 10 23 05.6 -0.9**
comp=Z,54nm,1.7s,mb5.2,SNR=14
ABTA Abfaltersbach 52.96 22 ⇑*i* P **P 10 23 06.5 0.0**
comp=Z,89nm,2.2s,mb5.3,SNR=15
PVY Plav 52.99 30 ⇓*i* P **P 10 23 08.1 +1.2**
PTCC Patocco-Chiusa 53.00 23 P **P 10 23 06.9 +0.1**
CADS Cadrg 53.00 23 *i* P **P 10 23 06.9 0.0**
CADS *e*S **S 10 30 40.0 +3.5**
BOJS Bojanci 53.03 25 *i* P **P 10 23 07.4 +0.3**
BOJS *e*S **S 10 30 37.3 +0.3**
WTTA Wattenberg 53.08 21 ⇑*i* P **P 10 23 06.6 -0.8**
comp=Z,103nm,1.4s,mb5.5,SNR=7.7
IVA Berane 53.16 30 *e*P **P 10 23 09.2 +1.1**

LJU	**Ljubljana**	**53.17**	**24**	*e*P	**P**	**10 23 08.3 +0.2**
LJU				*e*S	**S**	**10 30 40.2 +1.4**
PLE	**Pljevlja**	**53.24**	**29**	⇓*i*P	**P**	**10 23 10.0 +1.3**
MYKA	**Terra Mystica**	**53.29**	**23**	⇑*i*P	**P**	**10 23 09.5 +0.4**
	comp=Z,48nm,1.2s,mb5.3					
SKO	**Skopje**	**53.31**	**32**	*e*P	**P**	**10 23 10.1 +0.8**
LANF	**Langenberg**	**53.32**	**17**	*e*P	**P**	**10 23 08.7 -0.5**
BAIF	**Baives**	**53.34**	**14**	*e*P	**P**	**10 23 08.7 -0.6**
	comp=Z,103nm,0.9s,mb5.5					
BAIF	**Baives**	**53.34**	**14**	*e*P	**P**	**10 23 08.7 -0.6**
	comp=Z,52nm,0.9s,mb5.5					
BAIF	**Baives**	**53.34**	**14**	*e*P	**P**	**10 23 08.7 -0.6**
BAIF				pmax	pmax	
	comp=Z,51nm,0.9s,mb5.5					
DOU	**Dourbes**	**53.47**	**14**	P	**P**	**10 23 08.4 -1.8**
	comp=Z,62nm,2.5s,mb5.1					
VAY	**Valandovo**	**53.47**	**33**	*e*P	**P**	**10 23 09.1 -1.3**
VAY	**Valandovo**	**53.47**	**33**	*i* P	**P**	**10 23 10.0 -0.4**
WLF	**Walferdange**	**53.47**	**16**	P	**P**	**10 23 10.5 +0.3**
	comp=Z,72nm,2.6s,mb5.1					
WLF	**Walferdange**	**53.47**	**16**	*e*P	**P**	**10 23 10.4 +0.1**
	comp=Z,249nm,2.1s,mb5.8					
WLF				LR	LR	
	comp=Z,1µm,19.0s,MS5.0					
WLF	**Walferdange**	**53.47**	**16**	*e*P	**P**	**10 23 10.4 +0.1**
	comp=Z,407nm,2.4s,mb5.9					
GIVF	**Givet**	**53.53**	**14**	*e*P	**P**	**10 23 09.9 -0.8**
	comp=Z,246nm,1.4s,mb5.7					
GIVF	**Givet**	**53.53**	**14**	*e*P	**P**	**10 23 09.9 -0.8**
	comp=Z,123nm,1.4s,mb5.6					
GIVF	**Givet**	**53.53**	**14**	*e*P	**P**	**10 23 09.9 -0.8**
GIVF				pmax	pmax	
	comp=Z,123nm,1.4s,mb5.6					
OBKA	**Obir**	**53.55**	**24**	⇑*i*P	**P**	**10 23 11.2 +0.3**
	comp=Z,96nm,1.5s,mb5.5,SNR=16					
STU	**Stuttgart**	**53.56**	**18**	*e*P	**P**	**10 23 10.7 -0.2**
	comp=Z,29nm,1.0s,mb5.2					
SOH	**Sokhos**	**53.56**	**34**	*i* P	**P**	**10 23 11.0 -0.1**
DOBS	**Dobrina**	**53.64**	**25**	*e*P	**P**	**10 23 11.6 0.0**
BDRM	**Kayabasi**	**53.68**	**40**	⇑*i*P	**P**	**10 23 10.8 -1.3**
KTD	**Kalmit**	**53.71**	**17**	*e*P	**P**	**10 23 11.8 -0.2**
FUR	**Furstenfeldbru**	**53.72**	**20**	*e*P	**P**	**10 23 11.9 -0.2**
FUR				pmax	pmax	
	comp=Z,150nm,1.2s,mb5.8					
FUR	**Furstenfeldbru**	**53.72**	**20**	*e*P	**P**	**10 23 11.9 -0.2**
	comp=Z,150nm,1.2s,mb5.8					
RUP	**Ruppelstein**	**53.76**	**16**	*e*P	**P**	**10 23 12.2 -0.2**
SOKA	**Soboth**	**53.89**	**24**	⇑*i*P	**P**	**10 23 13.5 +0.1**
	comp=Z,72nm,1.8s,mb5.3					
GCAM	**G?zelcaml?**	**53.92**	**40**	*i* P	**P**	**10 23 13.8 -0.1**
BCLA	**Clavier**	**53.94**	**15**	P	**P**	**10 23 13.6 -0.1**
	comp=Z,38nm,1.9s,mb5.0					
MLSB	**Milas**	**54.03**	**40**	*e*P	**P**	**10 23 13.8 -0.8**
ABH	**Alteburg**	**54.05**	**17**	*e*P	**P**	**10 23 14.0 -0.5**
UCC	**Uccle**	**54.06**	**14**	P	**P**	**10 23 14.0 -0.6**
KKB	**Krupnik**	**54.12**	**33**	*i* P	**P**	**10 23 15.9 +0.7**
TOD	**Tromm**	**54.18**	**18**	*e*P	**P**	**10 23 15.0 -0.4**
KOGS	**Kog**	**54.20**	**25**	*i* P	**P**	**10 23 16.0 +0.3**
YER	**Yerkesik**	**54.27**	**41**	*e*P	**P**	**10 23 15.2 -1.1**
MMB	**Musomiste**	**54.29**	**34**	*i* P	**P**	**10 23 16.4 0.0**
DALT	**Dalyan (Mudla)**	**54.29**	**41**	*e*P	**P**	**10 23 16.2 -0.3**
MEM	**Membach**	**54.30**	**15**	P	**P**	**10 23 16.3 +0.1**
TURN	**Turunc**	**54.33**	**41**	*i* P	**P**	**10 23 11.9 -4.9**
HGN	**Heimansgroeve**	**54.42**	**15**	*e*P	**P**	**10 23 17.0 -0.2**
	comp=Z,171nm,2.4s,mb5.6					
HGN	**Heimansgroeve**	**54.42**	**15**	*e*PP	PP	10 25 31.2 +12
HGN	**Heimansgroeve**	**54.42**	**15**	*e*S	**S**	**10 31 00.5 +4.9**
HGN	**Heimansgroeve**	**54.42**	**15**	*e*SS	SS	10 34 51.0 +13
FETY	**Fethiye**	**54.51**	**42**	*e*P	**P**	**10 23 16.6 -1.5**
MOA	**Molln**	**54.54**	**22**	⇑*i*P	**P**	**10 23 16.7 -1.4**
	comp=Z,49nm,1.5s,mb5.3,SNR=15					
MOA				⇓*i*PP	PP	10 25 18.3 -2.2
	comp=Z,22nm,1.4s					
ARSA	**Arzberg**	**54.55**	**24**	⇑*i*P	**P**	**10 23 18.0 -0.2**
	comp=Z,32nm,1.2s,mb5.2,SNR=14					
TNS	**Taunus Mts**	**54.62**	**17**	*e*P	**P**	**10 23 18.3 -0.3**
TNS				*e*		10 25 17.7
TNS				pmax	pmax	
	comp=Z,285nm,2.2s,mb5.9					
TNS	**Taunus Mts**	**54.62**	**17**	*e*P	**P**	**10 23 18.3 -0.3**
	comp=Z,285nm,2.2s,mb5.9					
TNS				*e*PP	PP	10 25 17.7 -3.5
AKAS	**Kas**	**54.64**	**42**	⇑*i*P	**P**	**10 23 19.1 0.0**
VTS	**Vitosha**	**54.68**	**33**	P	**P**	**10 23 20.4 +1.1**
VTS	**Vitosha**	**54.68**	**33**	*i* P	**P**	**10 23 20.0 +0.7**
VTS	**Vitosha**	**54.68**	**33**	⇑*i*P	**P**	**10 23 19.9 +0.6**
DLF	**Lyons Farm**	**54.71**	**5**	*e*P	**P**	**10 23 17.0 -2.3**
RZN	**Rozhen**	**54.91**	**34**	*i* P	**P**	**10 23 20.5 -0.4**
AKHS	**Akhisar**	**54.99**	**39**	⇑*i*P	**P**	**10 23 21.4 -0.1**
AKS	**Akhisar**	**54.99**	**39**	*e*P	**P**	**10 23 22.6 +1.0**
GRF	**Grafenberg Arr**	**55.01**	**19**	*e*P	**P**	**10 23 20.7 -0.8**
GRF				*e*		10 25 23.4
GRF				*e*S	**S**	**10 30 53.9 -10**
GRF				pmax	pmax	
	comp=Z,56nm,1.0s,mb5.5					
GRF				MLR	MLR	
	comp=Z,1µm,21.3s,MS4.9					
GRF	**Grafenberg Arr**	**55.01**	**19**	*e*P	**P**	**10 23 20.7 -0.8**
	comp=Z,56nm,1.0s,mb5.5					
GRF				*e*PP	PP	10 25 23.4 -1.4
GRF				*e*S	**S**	**10 30 53.9 -10**
GRF				*e*L		10 45 50.8
	comp=Z,1µm,21.3s					
PKSM	**Moragy**	**55.06**	**27**	P	**P**	**10 23 22.6 +0.6**
PKSM	**Moragy**	**55.06**	**27**	⇑*i*P	**P**	**10 23 21.8 -0.1**
WET	**Wettzell**	**55.11**	**21**	*e*P	**P**	**10 23 21.0 -1.2**
WET				*e*		10 25 22.7
WET				pmax	pmax	
	comp=Z,527nm,2.4s,mb6.1					
WET	**Wettzell**	**55.11**	**21**	*e*P	**P**	**10 23 21.0 -1.2**
	comp=Z,527nm,2.4s,mb6.1					
WET				*e*PP	PP	10 25 22.7 -3.0
GEC2	**GERESS Array S**	**55.16**	**21**	*e*P	**P**	**10 23 21.7 -0.8**
	comp=Z,90µm,1.9s					
GEC2				*e*PP	PP	10 25 14.6 -11
GEC2	**GERESS Array S**	**55.16**	**21**	*e*P	**P**	**10 23 21.8 -0.8**
GEC2				*e*		10 25 23.6
GEC2				pmax	pmax	
	comp=Z,186nm,1.5s,mb5.9					
GEC2	**GERESS Array S**	**55.16**	**21**	*e*P	**P**	**10 23 21.8 -0.8**
	comp=Z,186nm,1.5s,mb5.9					
GEC2				*e*PP	PP	10 25 23.6 -2.5
GERES	**GERESS Array B**	**55.16**	**21**	P	**P**	**10 23 21.8 -0.8**
	comp=Z,27nm,0.9s,mb5.3,baz=193,slow=5.5,SNR=97					
GERES				LR	LR	10 47 15.2
	comp=Z,931nm,18.5s,MS4.9,baz=224,slow=36					
GOLH	**Golhisar**	**55.16**	**41**	*i* P	**P**	**10 23 23.0 +0.1**
PGB	**Panagyurishte**	**55.17**	**33**	*i* P	**P**	**10 23 23.3 +0.5**
HUMP	**Col San Antoni**	**55.20**	**293**	*e*P	**P**	**10 23 24.4 +1.0**
	comp=Z,91nm,1.3s,mb5.6					
CSNA	**Conrad Observa**	**55.23**	**23**	⇑*i*P	**P**	**10 23 22.7 -0.4**
	comp=Z,67nm,1.8s,mb5.4					
CONA	**Conrad Observa**	**55.23**	**24**	⇑*i*P	**P**	**10 23 22.8 -0.3**
	comp=Z,50nm,1.4s,mb5.4,SNR=10.0					
CONA				⇑*i*PP	PP	10 25 26.4 -0.4
	comp=Z,38nm,1.9s					
KDZ	**Kurdzhali**	**55.28**	**35**	*i* P	**P**	**10 23 23.6 0.0**
DMUB	**Kingscourt**	**55.28**	**5**	*e*P	**P**	**10 23 15.9 -7.5**
KULA	**Kula-Manisa**	**55.31**	**40**	*e*P	**P**	**10 23 24.3 +0.4**
SOP	**Sopron**	**55.31**	**24**	⇑*e*P	**P**	**10 23 24.0 +0.3**
KHC	**Kasperske Hory**	**55.35**	**21**	*e*P	**P**	**10 23 22.8 -1.2**
KHC				*e*pP	pP	10 23 28.2 +1.0
KHC				*e*PP	PP	10 25 26.0 -1.8
KHC				*e*S	**S**	**10 31 09.7 +1.5**
KHC				AMS	AMS	10 47 20.0
	comp=Z,2µm,16.2s					
BUG	**Bochum--Univer**	**55.38**	**15**	*e*P	**P**	**10 23 23.9 -0.3**
	comp=Z,101nm,1.5s,mb5.6					
ROTZ	**Rotzenmuhle**	**55.41**	**20**	*e*P	**P**	**10 23 23.5 -0.9**
	comp=Z,303nm,2.3s,mb5.9					
ROTZ				*e*PP	PP	10 25 25.0 -3.3
MANZ	**Manzenberg**	**55.56**	**20**	*e*P	**P**	**10 23 25.2 -0.3**
	comp=Z,459nm,2.5s,mb6.1					
MANZ				*e*PP	PP	10 25 25.8 -3.9
UBBA	**Unterbreizbach**	**55.61**	**18**	*e*P	**P**	**10 23 25.2 -0.6**
	comp=Z,275nm,2.4s,mb5.9					
UBBA				*e*PP	PP	10 25 26.7 -3.4
DEMI	**Demirci**	**55.65**	**39**	*i* P	**P**	**10 23 26.2 -0.1**
ANTB	**Antalya**	**55.71**	**42**	*e*P	**P**	**10 23 27.1 +0.3**
WTSB	**Winterswijk**	**55.74**	**15**	*e*P	**P**	**10 23 26.7 0.0**
	comp=Z,115nm,2.5s,mb5.5					
KHAL	**Karahalli**	**55.76**	**40**	⇑*i*P	**P**	**10 23 27.3 +0.2**
ZST	**Bratislava**	**55.94**	**24**	*e*P	**P**	**10 23 28.1 -0.1**
ZST				pmax	pmax	
	comp=Z,440nm,2.4s,mb6.1					
ZST	**Bratislava**	**55.94**	**24**	*e*P	**P**	**10 23 28.1 -0.1**
ZST				*e*S	**S**	**10 31 17.3 +1.1**
MOX	**Moxa**	**55.97**	**19**	*e*P	**P**	**10 23 28.1 -0.2**
	comp=Z,328nm,2.4s,mb5.9					
MOX						
	comp=Z,1µm,20.0s					
MOX	**Moxa**	**55.97**	**19**	*e*P	**P**	**10 23 28.1 -0.2**
MOX				pmax	pmax	
	comp=Z,328nm,2.4s,mb5.9					
MOX				MLR	MLR	
	comp=Z,1µm,20.0s,MS5.0					
MOX	**Moxa**	**55.97**	**19**	*e*P	**P**	**10 23 27.6 -0.7**
	comp=Z,364nm,2.3s,mb6.0					
MOX				*e*PP	PP	10 25 30.1 -3.2
BCK	**Bucak**	**55.97**	**42**	*e*P	**P**	**10 23 28.5 -0.2**
BZS	**Buzias**	**56.00**	**29**	P	**P**	**10 23 29.6 +0.9**
BZS	**Buzias**	**56.00**	**29**	⇓*i*P	**P**	**10 23 28.9 +0.2**
TANN	**Tannenbergstha**	**56.05**	**20**	*e*P	**P**	**10 23 28.2 -0.7**
	comp=Z,286nm,2.4s,mb5.9					
MODS	**Modra-Piesok**	**56.16**	**24**	*e*P	**P**	**10 23 30.1 +0.3**
MODS				pmax	pmax	
	comp=Z,63nm,1.7s,mb5.4					
MODS	**Modra-Piesok**	**56.16**	**24**	*e*P	**P**	**10 23 30.1 +0.3**
MODS				*e*S	**S**	**10 31 27.3 +8.3**
GDZ	**Gediz**	**56.16**	**40**	*i* P	**P**	**10 23 30.4 +0.4**
EDRB	**Edirne**	**56.17**	**35**	*e*P	**P**	**10 23 29.9 -0.1**
BUD	**Budapest**	**56.20**	**26**	⇑*e*P	**P**	**10 23 30.2 +0.1**
IBBN	**Ibbenburen**	**56.30**	**15**	*e*P	**P**	**10 23 30.2 -0.5**
	comp=Z,51nm,1.2s,mb5.4					
LEF	**Lefka**	**56.33**	**45**	*e*P	**P**	**10 23 30.6 -0.7**
PRU	**Pruhonice**	**56.41**	**21**	*e*P	**P**	**10 23 31.0 -0.6**
PRU				*e*pP	pP	10 23 36.1 +1.3
PRU				*e*S	**S**	**10 31 28.6 +6.3**
PRU				AMS	AMS	10 48 40.0
	comp=Z,2µm,17.1s					
ALT	**Altintas**	**56.55**	**40**	*e*P	**P**	**10 23 33.6 +0.8**
SHUT	**Suhut-Afyon**	**56.55**	**41**	*e*P	**P**	**10 23 34.0 +1.3**
CSS	**Prodhromos**	**56.57**	**46**	*e*P	**P**	**10 23 32.0 -1.0**
CSS	**Prodhromos**	**56.57**	**46**	*e*P	**P**	**10 23 31.4 -1.5**
	comp=Z,75nm,1.5s,mb5.5					
CSS				LR	LR	
	comp=Z,930nm,20.0s,MS4.9					
CLZ	**Clausthal**	**56.62**	**17**	*e*P	**P**	**10 23 32.9 -0.1**
CLZ				*e*		10 25 37.8
CLZ				pmax	pmax	
	comp=Z,253nm,2.5s,mb5.8					
CLZ	**Clausthal**	**56.62**	**17**	*e*P	**P**	**10 23 32.9 -0.1**
	comp=Z,253nm,2.5s,mb5.8					
CLZ				*e*PP	PP	10 25 37.8 -1.3
SZH	**Strazhica**	**56.62**	**34**	*i* P	**P**	**10 23 33.3 +0.1**
VRAC	**Vranov**	**56.63**	**23**	P	**P**	**10 23 33.1 0.0**
VRAC	**Vranov**	**56.63**	**23**	⇑*i*P	**P**	**10 23 31.9 -1.2**
GEMT	**Gemlik**	**56.77**	**38**	*e*P	**P**	**10 23 32.6 -1.6**
KOLL	**Kolacno**	**56.78**	**25**	*e*P	**P**	**10 23 34.1 -0.1**
LFK	**Lefkose**	**56.87**	**45**	*e*P	**P**	**10 23 35.4 +0.3**
PVCC	**Panska Ves**	**56.87**	**21**	*e*P	**P**	**10 23 34.9 +0.1**
PVCC				*e*pP	pP	10 23 38.7 +0.7
PVCC				AMS	AMS	10 48 30.0
	comp=Z,2µm,17.1s					
VYHS	**Vyhne**	**56.90**	**25**	*e*P	**P**	**10 23 34.6 -0.4**
VYHS				pmax	pmax	
	comp=Z,68nm,1.6s,mb5.4					
BOLV	**Bolvadin**	**56.90**	**41**	⇑*i*P	**P**	**10 23 36.0 +0.7**
PSZ	**Piszkesteto**	**56.91**	**26**	*e*P	**P**	**10 23 35.7 +0.6**
	comp=Z,44nm,1.0s,mb5.4					
PSZ	**Piszkesteto**	**56.91**	**26**	P	**P**	**10 23 35.8 +0.6**
PSZ				pmax	pmax	
	comp=Z,44nm,1.0s,mb5.4					
PSZ	**Piszkesteto**	**56.91**	**26**	⇑*e*P	**P**	**10 23 35.3 +0.1**
PSZ	**Piszkesteto**	**56.91**	**26**	⇓*i*P	**P**	**10 23 34.7 -0.5**
BRG	**Berggiesshubel**	**56.94**	**20**	*i* P	**P**	**10 23 34.4 -0.9**
	comp=Z,40nm,1.7s,mb5.2					
BRG				*i*		10 23 39.5
BRG				PP	PP	10 25 38.5 -3.5
BRG				S	**S**	**10 31 33.0 +3.8**
BRG				LR	LR	
	comp=Z,820nm,14.1s,MS5.0					
BRG	**Berggiesshubel**	**56.94**	**20**	*i* P	**P**	**10 23 34.4 -0.9**
BRG				*i*		10 23 39.5
BRG						10 25 38.5
BRG				S	**S**	**10 31 33.0 +3.8**
BRG				pmax	pmax	
	comp=Z,40nm,1.7s,mb5.2					
BRG				MLR	MLR	
	comp=Z,820nm,14.1s,MS5.0					
BRG	**Berggiesshubel**	**56.94**	**20**	*e*P	**P**	**10 23 34.2 -1.1**
	comp=Z,66nm,1.7s,mb5.4					
BRG				*e*PP	PP	10 25 38.3 -3.6
BRG	**Berggiesshubel**	**56.94**	**20**	*i* P	**P**	**10 23 34.4 -0.9**
	comp=Z,66nm,1.7s,mb5.4					
BRG				*i*		10 23 39.5
	comp=Z,75nm,1.6s					
BRG				PP	PP	10 25 38.5 -3.5
	comp=Z,128nm,2.1s					
BRG				S	**S**	**10 31 33.0 +3.8**
BRG						
	comp=N,1µm,15.1s					
BRG						
	comp=E,1µm,15.9s					
BRG						
	comp=Z,1µm,14.1s					
YLV	**Yalova**	**56.96**	**38**	*e*P	**P**	**10 23 32.2 -3.4**
HDMB	**Hadim**	**56.99**	**43**	*e*P	**P**	**10 23 36.6 +0.7**
CLL	**Collm**	**56.99**	**19**	⇑*i*P	**P**	**10 23 34.2 -1.4**
	comp=Z,137nm,1.9s,mb5.7					
CLL				*i*		10 23 39.7
CLL				*e*S	**S**	**10 31 35.0 +5.1**
CLL				pmax	pmax	
	comp=Z,137nm,1.9s,mb5.7					
CLL				MLR	MLR	
	comp=Z,900nm,18.8s,MS4.9					
CLL	**Collm**	**56.99**	**19**	⇑*i*P	**P**	**10 23 34.2 -1.4**
CLL				*i*		10 23 39.7
CLL				*e*S	**S**	**10 31 35.0 +5.1**
CLL				pmax	pmax	
	comp=Z,137nm,1.9s,mb5.7					
CLL				MLR	MLR	
	comp=Z,900nm,18.8s,MS4.9					
CLL	**Collm**	**56.99**	**19**	*e*P	**P**	**10 23 34.9 -0.7**
	comp=Z,132nm,1.9s,mb5.6					
CLL	**Collm**	**56.99**	**19**	⇑*i*P	**P**	**10 23 34.2 -1.4**
	comp=Z,137nm,1.9s,mb5.7					
CLL				*i* pP	pP	10 23 39.7 +0.9
CLL				*e*PP	PP	10 25 39.0 -3.4
CLL				*e*S	**S**	**10 31 35.0 +5.1**
CLL				*e*(SSS)		10 38 06.0
CLL				LH		10 44 00.0
	comp=N,700nm,20.1s					
CLL				LH		10 44 00.0
	comp=E,1µm,19.0s					
ESK	**Eskdalemuir**	**57.05**	**7**	*e*P	**P**	**10 23 35.8 -0.2**
ADVT	**Abdulvahap**	**57.10**	**38**	*e*P	**P**	**10 23 37.5 +0.8**
ESKT	**Eskisehir**	**57.28**	**40**	*e*P	**P**	**10 23 37.5 -0.4**
ESKT	**Eskisehir**	**57.28**	**40**	*i* P	**P**	**10 23 38.7 +0.8**
DPC	**Dobruska-Polom**	**57.37**	**22**	*e*P	**P**	**10 23 37.3 -1.0**
DPC				*e*pP	pP	10 23 42.6 +1.1
DPC				*e*S	**S**	**10 31 38.2 +3.3**
DPC				AMS	AMS	10 46 40.0
	comp=E,1µm,16.4s					
DRGR		**57.38**	**29**	P	**P**	**10 23 38.9 +0.4**
DRGR		**57.38**	**29**	⇓*i*P	**P**	**10 23 38.5 0.0**
UPC	**Upice**	**57.38**	**22**	*e*P	**P**	**10 23 38.1 -0.3**
UPC				*e*pP	pP	10 23 42.9 +1.3
PRD	**Provadia**	**57.40**	**34**	*i* P	**P**	**10 23 38.9 +0.2**
EREN	**Erenkoy**	**57.44**	**45**	*e*P	**P**	**10 23 39.6 +0.4**
IKL	**Isikli**	**57.45**	**45**	*e*P	**P**	**10 23 38.9 -0.3**
LADK	**Ladik-KONYA**	**57.55**	**42**	*e*P	**P**	**10 23 39.5 -0.4**
KDHN	**Kadinhani**	**57.56**	**41**	⇑*i*P	**P**	**10 23 40.1 +0.1**
GULT	**Gulveren**	**57.59**	**39**	*e*P	**P**	**10 23 41.0 +0.9**
OKC	**Ostrava-Krasne**	**57.66**	**24**	*e*P	**P**	**10 23 40.5 +0.1**
OKC				*e*pP	pP	10 23 44.9 +1.3
OKC				*e*S	**S**	**10 31 46.7 +7.9**
KSP	**Ksiaz**	**57.75**	**22**	*e*P	**P**	**10 23 41.1 +0.1**
KSP				LMZ		10 49 48.1
	comp=E,3µm,18.4s					
KSP	**Ksiaz**	**57.75**	**22**	⇑*e*P	**P**	**10 23 40.3 -0.7**
KSP				*e*S	**S**	**10 31 40.0 0.0**
KSP				MLR	MLR	
	comp=Z,3µm,18.4s,MS5.5					
BHL	**Bhannes**	**57.76**	**48**	*e*P	**P**	**10 23 41.8 +0.4**
LVC	**Limon Verde**	**57.97**	**244**	*e*P	**P**	**10 23 43.8 +0.6**
LVC				LR	LR	
	comp=Z,1µm,22.0s,MS5.0					
SDV	**Santo Domingo**	**58.03**	**281**	*e*P	**P**	**10 23 44.5 +0.8**
MDU	**Mudurnu**	**58.05**	**39**	*e*P	**P**	**10 23 43.8 +0.5**
HENT	**Hendek**	**58.05**	**39**	*i* P	**P**	**10 23 43.7 +0.4**
MLR	**Muntele Rosu**	**58.10**	**32**	P	**P**	**10 23 43.8 +0.2**
MLR	**Muntele Rosu**	**58.10**	**32**	⇑*i*P	**P**	**10 23 43.3 -0.3**
HWQ	**Hawqa**	**58.15**	**48**	*e*P	**P**	**10 23 44.5 +0.3**
PSN	**Preselentsi**	**58.15**	**34**	*i* P	**P**	**10 23 42.8 -1.2**
RUE	**Ruedersdorf**	**58.24**	**19**	*e*P	**P**	**10 23 44.0 -0.4**
TRPA	**Tarpa**	**58.26**	**27**	⇑*i*P	**P**	**10 23 44.1 -0.6**
CRVS	**Cervenica-Dubn**	**58.34**	**26**	*e*P	**P**	**10 23 45.4 +0.2**
CRVS				pmax	pmax	
	comp=Z,198nm,1.7s,mb5.9					
MERS	**Mersin**	**58.34**	**44**	*e*P	**P**	**10 23 45.2 -0.3**
BMR	**Baia Mare**	**58.38**	**28**	P	**P**	**10 23 46.1 +0.6**
BSEG	**Bad Segeberg**	**58.45**	**16**	*e*P	**P**	**10 23 45.2 -0.7**
BSEG				pmax	pmax	
	comp=Z,432nm,2.4s,mb6.1					
BSEG	**Bad Segeberg**	**58.45**	**16**	*e*P	**P**	**10 23 45.2 -0.7**
	comp=Z,432nm,2.4s,mb6.1					
UZH	**Uzhgorod**	**58.51**	**27**	⇓*i*P	**P**	**10 23 46.0 -0.4**
UZH				*i*		10 23 51.0
UZH				*e*S	**S**	**10 31 48.0 -2.0**
UZH				*e*		10 35 38.0
UZH				*e*		10 38 02.0
UZH				MLR	MLR	
	comp=N,500nm,15.0s,MS5.0					
UZH				MLR	MLR	
	comp=E,800nm,15.0s,MS5.0					
UZH				MLR	MLR	
	comp=Z,550nm,15.0s,MS4.8					
OJC	**Ojcow**	**58.63**	**24**	*e*P	**P**	**10 23 46.3 -0.9**
OJC				*e*PcP	PcP	10 24 36.8 -0.5
OJC				*e*S	**S**	**10 31 55.4 +4.0**
OJC				L		10 48 31.0
	comp=Z,1.0nm,21.6s					
STHS	**Stebnicka Huta**	**58.63**	**26**	*e*P	**P**	**10 23 47.7 +0.5**
STHS				pmax	pmax	
	comp=Z,9.0nm,1.2s,mb4.7					
PLOR	**Plostina**	**58.71**	**32**	⇑*i*P	**P**	**10 23 47.3 -0.5**
LOD	**Lodumlu**	**58.72**	**40**	*e*P	**P**	**10 23 48.7 +0.6**
KOLS	**Kolonicke sedl**	**58.73**	**27**	*e*P	**P**	**10 23 47.9 0.0**
KOLS				pmax	pmax	
	comp=Z,79nm,1.4s,mb5.5					
ANTO	**Ankara**	**58.73**	**40**	*e*P	**P**	**10 23 49.0 +0.9**
ANTO	**Ankara**	**58.73**	**40**	*e*P	**P**	**10 23 49.1 +1.0**
	comp=Z,942nm,2.3s,mb6.4					
ANTO				LR	LR	
	comp=Z,763nm,19.0s,MS4.8					
ANTO	**Ankara**	**58.73**	**40**	*e*P	**P**	**10 23 49.1 +1.0**
ANTO				pmax	pmax	
	comp=Z,941nm,2.3s,mb6.4					
ANTO				MLR	MLR	
	comp=Z,763nm,19.0s,MS4.8					
ANTO	**Ankara**	**58.73**	**40**	⇓*i*P	**P**	**10 23 48.5 +0.4**
GULE	**Gulek**	**58.73**	**44**	⇑*i*P	Px	10 23 26.6
VRI	**Vrincioaia**	**58.76**	**32**	P	**P**	**10 23 47.9 -0.3**
VRI	**Vrincioaia**	**58.76**	**32**	⇑*i*P	**P**	**10 23 47.3 -0.9**
TIRR	**Tirgusor**	**58.76**	**34**	*i* P	**P**	**10 23 47.1 -1.1**
KRTS	**Karatas**	**58.80**	**45**	*e*P	**P**	**10 23 49.4 +0.7**
KARA	**Karaisali**	**58.91**	**44**	*e*P	**P**	**10 23 49.4 -0.1**
BBSR	**BB Station**	**58.97**	**309**	PFAKE		10 24 00.0 +10
BBSR				LR	LR	
	comp=Z,1µm,19.0s,MS5.0					
KAMT	**Kaman**	**59.06**	**41**	*e*P	**P**	**10 23 51.3 +0.9**
BR131	**Keskin Array S**	**59.20**	**41**	PFAKE		10 24 00.0 +8.6
BR131				LR	LR	
	comp=Z,703nm,19.0s,MS4.8					
BRTR	**Keskin Array B**	**59.20**	**41**	P	**P**	**10 23 52.2 +0.9**
	comp=Z,36nm,0.9s,mb5.4,baz=223,slow=6.7,SNR=68					
BRTR				LR	LR	10 51 26.8
	comp=Z,668nm,19.4s,MS4.8,baz=223,slow=38					
CEYT	**Ceyhan**	**59.27**	**45**	*e*P	**P**	**10 23 52.2 +0.2**
COBT	**Iskenderun**	**59.40**	**45**	*i* P	**P**	**10 23 53.5 +0.7**
KWP	**Kalwaria**	**59.43**	**26**	*e*P	**P**	**10 23 53.5 +0.7**
KWP				LMZ		10 51 44.2
	comp=Z,2µm,20.3s					
KWP	**Kalwaria**	**59.43**	**26**	*e*P	**P**	**10 23 53.5 +0.7**
KWP				LR	LR	
	comp=Z,2µm,20.0s,MS5.3					
KWP	**Kalwaria**	**59.43**	**26**	P	**P**	**10 23 53.3 +0.5**
KWP				pmax	pmax	
	comp=Z,150nm,1.3s,mb5.9					
KWP	**Kalwaria**	**59.43**	**26**	⇑*i*P	**P**	**10 23 51.2 -1.6**
AVNT	**Avonos**	**59.52**	**42**	*i* P	**P**	**10 23 54.0 +0.4**
KOZT	**Kozan**	**59.55**	**44**	*e*P	**P**	**10 23 53.2 -0.6**
CDAG	**Cicekdag**	**59.63**	**41**	⇑*i*P	**P**	**10 23 55.6 +1.3**
**

comp=Z,380nm,2.5s,mb6.0,baz=209,slow=6.5
NOA NORSAR Array B 64.99 13 P **P 10 24 28.6 -1.3**
comp=Z,9.8nm,1.0s,mb4.8,baz=208,slow=6.6,SNR=9.6
NOA LR LR 10 53 04.5
comp=Z,325nm,18.4s,MS4.6,baz=210,slow=36
SOC Sochi 65.07 40 *e*P **P 10 24 29.6 -1.1**
SOC *e**PP pP 10 24 31.7 -2.3
SOC *e*S S 10 33 13.7 +0.4
SOC *e*SS SS 10 37 27.7 +2.1
SOC *e*SSS 10 40 19.5
SOC pmax pmax
comp=Z,60nm,0.9s,mb5.6
MNK Minsk 65.12 25 *e*P **P 10 24 33.0 +2.2**
OTAV Otavalo 65.18 271 *e*P **P 10 24 31.6 -0.4**
comp=Z,66nm,1.7s,mb5.4
OTAV LR LR
comp=Z,2μm,21.0s,MS5.2
DDEM Demirkent 65.20 43 *i*P **P 10 24 30.1 -1.6**
HAKT HAKKARI 65.23 47⇑*i*P **P 10 24 35.4 +3.5**
NAY Al-Naaiem 65.25 57 *e*P **P 10 24 31.9 -0.2**
baz=57
NAY AMb AMB 10 24 37.0
comp=Z,98nm,1.8s,mb5.5,baz=57
TUTA Tutak 65.32 45⇑*i*P **P 10 24 32.8 +0.4**
DBOC Borcka 65.34 43 *i*P **P 10 24 27.8 -4.7**
DAGI Agillar 65.39 43 *i*P **P 10 24 30.2 -2.7**
VANB Van 65.41 46 *e*P **P 10 24 33.3 +0.3**
RDF Al-Radifah 65.41 57 *e*P **P 10 24 32.6 -0.7**
baz=57
RDF AMb AMB 10 24 38.2
comp=Z,206nm,1.9s,mb5.8,baz=57
MIB Mutribah 65.48 56 *e*P **P 10 24 32.6 -1.1**
baz=56
MIB AMb AMB 10 24 38.3
comp=Z,118nm,1.8s,mb5.6,baz=56
AGRB Hanur-Agry 65.51 45 *e*P **P 10 24 34.1 +0.4**
KBD Kabd 65.60 57 *e*P **P 10 24 34.2 -0.2**
baz=57
KBD AMb AMB 10 24 39.5
comp=Z,145nm,1.9s,mb5.7,baz=57
QRN Al-Qurain 65.67 58 *e*P **P 10 24 33.9 -1.0**
baz=58
QRN AMb AMB 10 24 40.1
comp=Z,183nm,1.8s,mb5.8,baz=58
UMR Umm Al-Rimmam 65.73 57 *e*P **P 10 24 34.9 -0.3**
baz=57
UMR AMb AMB 10 24 40.0
comp=Z,248nm,2.0s,mb5.9,baz=57
DYDN Diyadin 66.00 45⇑*i*P **P 10 24 36.5 -0.3**
ONI Oni 67.07 42 P **P 10 24 43.5 -0.1**
BCIP Isla Barro Col 67.10 280 PFAKE 10 25 00.0 +16
BCIP LR LR
comp=Z,1μm,22.0s,MS5.0
KIV Kislovodsk 67.16 41 P **P 10 24 44.3 +0.2**
comp=Z,354nm,1.5s,mb6.2,SNR=7.8
KIV Kislovodsk 67.16 41 *e*P **P 10 24 44.4 +0.2**
comp=Z,274nm,1.7s,mb6.0
KIV LR LR
comp=Z,474nm,20.0s,MS4.7
KIV Kislovodsk 67.16 41 *e*P **P 10 24 43.0 -1.1**
KIV *e*PPP 10 28 48.7
KIV *e*S S 10 33 38.4 -0.2
KIV pmax pmax
comp=Z,54nm,0.9s,mb5.6
KIV pmax pmax
comp=Z,126nm,3.8s
KIV MLR MLR
comp=Z,399nm,20.0s,MS4.6
GOR Gori 67.27 43 P **P 10 24 46.9 +2.0**
VSU Vasula 67.48 21*d*/P **P 10 24 45.0 -0.9**
TBLG Delisi 67.60 43 P **P 10 24 47.9 +0.9**
MTA Mtatsminda 67.62 43 P **P 10 24 47.9 +0.8**
DGRG David-gareji 67.92 44 P **P 10 24 41.1 -8.0**
VORD Divnogorie 68.50 33 *e*P **P 10 24 51.5 -1.0**
VORD pmax pmax
comp=Z,70nm,1.2s,mb5.5
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,70nm,1.1s
VSR Storozhevoye 68.57 32 *e*P **P 10 24 51.8 -1.1**
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,40nm,1.0s
MSEY Mahe Island 68.73 94 PFAKE 10 25 10.0 +15
MSEY LR LR
comp=Z,945nm,20.0s,MS5.0
LBNH Lisbon 69.02 319 PFAKE 10 25 10.0 +14
LBNH LR LR
comp=Z,1μm,20.0s,MS5.2
VNA1 Neumayer--Stat 69.30 178 *e*P **P 10 24 58.1 +1.1**
VNA1 *e* pP 10 25 00.3 0.0
VNA1 *e* 10 25 05.2
OBN Obninsk 69.41 28⇓*e*P **P 10 24 56.6 -1.4**
OBN Obninsk 69.41 28⇓*i*P **P 10 24 56.5 -1.5**
OBN *i* pP 10 25 01.4 +0.1
OBN *e* 10 25 16.6
OBN *e* 10 27 31.6
OBN *e*S S 10 34 12.2 +7.1
OBN *e*SS SS 10 38 34.9 +2.4
OBN pmax pmax
comp=Z,103nm,2.0s,mb5.4
VNA2 Neumayer--Watz 69.60 178 *e*P **P 10 24 59.5 +0.6**
VNA2 *e* pP 10 25 01.7 -0.5
VNA2 *e* 10 25 05.8
VRHR Novokhopersk 69.84 33 *e*P **P 10 24 59.9 -0.8**
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.7
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.6s
VNA3 Neumayer Olymp 69.85 179 *e*P **P 10 24 59.3 -1.2**
VNA3 *e* pP 10 25 02.0 -1.7
VNA3 *e* 10 25 06.1
MAK Makhachkala 69.96 43 *e*P **P 10 24 56.2 -5.5**
MAK *e* 10 25 20.4
MAK *i* 10 27 31.7
MAK *e*PPP 10 29 14.6
MAK *e*S S 10 34 04.5 -7.6
MAK *i* 10 34 58.7
MAK *e*SS SS 10 38 43.1 +1.6
MAK pmax pmax
comp=Z,704nm,1.8s,mb6.3
CNNC Cliffs of the 70.26 308 PFAKE 10 25 20.0 +16
CNNC LR LR
comp=Z,1μm,20.0s,MS5.2
MOS Moscow 70.27 28 *e*P **P 10 24 58.4 -4.9**
MOS *e* 10 25 19.4
MOS *e* 10 27 33.4
MOS *e*PPP 10 29 17.9
MOS *e* 10 34 11.3
MOS pmax pmax
comp=Z,379nm,2.1s,mb6.0
MOS pmax pmax
comp=Z,1μm,2.5s,mb6.3
MOS MLR MLR
comp=Z,1μm,20.0s,MS5.1
SNAA Sanae 70.56 177 *e*P **P 10 25 00.4 -4.4**
SNAA *e* pP 10 25 02.1 -6.0
SNAA *e* 10 25 06.4
SNAA Sanae 70.56 177 *e*P **P 10 25 00.8 -4.1**
comp=Z,41nm,1.1s,mb5.3
SNAA Sanae 70.56 177 *e*P **P 10 25 00.8 -4.0**
SNAA pmax pmax
comp=Z,41nm,1.1s
CBN Corbin 70.73 311 PFAKE 10 25 20.0 +14
CBN LR LR
comp=Z,1μm,21.0s,MS5.1
LONY Lake Ozonia 70.92 318 PFAKE 10 25 20.0 +12
LONY LR LR
comp=Z,1μm,20.0s,MS5.2
BINY Binghamton 71.01 316 PFAKE 10 25 20.0 +12
BINY LR LR
comp=Z,2μm,22.0s,MS5.3
SCHQ Schefferville 71.03 331 P **P 10 25 09.0 +1.0**
comp=Z,5.7nm,0.8s,mb4.5,baz=231,slow=7.3,SNR=4.5
SCHQ LR LR 10 50 51.0
comp=Z,552nm,20.6s,MS4.8,baz=96,slow=31
NVL N'lazarevskaya 71.24 171 P **P 10 25 09.9 +0.9**
NVL pmax pmax
comp=Z,38nm,1.2s,mb5.2

DWPF Disney 71.46 300 PFAKE 10 25 20.0 +8.9
DWPF LR LR
comp=Z,1μm,19.0s,MS5.2
JOF Joensuu 72.21 20 *e*p **P 10 25 14.1 -0.8**
comp=Z,6.9nm,0.6s,mb4.8
JOF Joensuu 72.21 20 *e*P **P 10 25 14.1 -0.8**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BLA Blacksburg 72.76 310 PFAKE 10 25 30.0 +11
BLA LR LR
comp=Z,2μm,22.0s,MS5.3
MCWV Mont Chateau 73.00 312 PFAKE 10 25 30.0 +10
MCWV LR LR
comp=Z,1μm,21.0s,MS5.2
ERPA Erie 73.81 315 PFAKE 10 25 40.0 +15
ERPA LR LR
comp=Z,1μm,19.0s,MS5.3
KLMR Klimovskoe 73.98 24 *i*P **P 10 25 24.4 -1.0**
KLMR pmax pmax
comp=Z,157nm,1.6s,mb5.7
GOGA Godfrey 74.28 305 PFAKE 10 25 40.0 +12
GOGA LR LR
comp=Z,1μm,20.0s,MS5.2
TGUH Tegucigalpa,Un 74.81 285 *e*P **P 10 25 31.7 +0.5**
comp=Z,64nm,1.1s,mb5.5
ARCES ARCESS Array B 75.36 13 P **P 10 25 32.5 -0.8**
comp=Z,1.9nm,0.6s,mb4.2,baz=224,slow=3.3,SNR=9.2
ARCES LR LR 11 00 46.8
comp=Z,523nm,18.1s,MS4.9,baz=62,slow=38
ACSO Alum Creek Sta 75.47 312 *e*P **P 10 25 35.3 +0.8**
comp=Z,45nm,1.3s,mb5.2
ACSO LR LR
comp=Z,916nm,20.0s,MS5.1
KEV Kevo 75.88 13 PFAKE 10 25 50.0 +14
KEV LR LR
comp=Z,642nm,19.0s,MS5.0
SYO Syowa Base 76.19 163⇓*e*P **P 10 25 36.0 -2.0**
SYO Syowa Base 76.19 163⇓*i*P **P 10 25 38.8 +0.8**
ABKT Ailbek 76.22 51 P **P 10 25 38.0 -0.9**
comp=Z,188nm,1.6s,mb5.8,SNR=28
AAM Ann Arbor 76.48 314 PFAKE 10 25 50.0 +10
AAM LR LR
comp=Z,2μm,21.0s,MS5.3
LVZ Lovozero 76.57 17⇑*e*P **P 10 25 40.3 +0.1**
LVZ pmax pmax
comp=Z,123nm,1.8s,mb5.5
BRAL Brewton 76.81 302 PFAKE 10 25 50.0 +7.6
BRAL LR LR
comp=Z,2μm,22.0s,MS5.4
LRAL Lakeview Retre 77.11 304 PFAKE 10 26 00.0 +16
LRAL LR LR
comp=Z,1μm,19.0s,MS5.3
WCI Wyandotte Cave 77.53 310 *e*P **P 10 25 46.4 +0.2**
comp=Z,46nm,1.5s,mb5.2
WCI Wyandotte Cave 77.53 310 *e*P **P 10 25 46.4 +0.2**
WCI pmax pmax
comp=Z,47nm,1.5s,mb5.2
GLMI Grayling 77.78 316 PFAKE 10 26 00.0 +13
GLMI LR LR
comp=Z,2μm,20.0s,MS5.4
DAG Danmarks Havn 78.06 359⇑*i*P **P 10 25 48.1 -0.3**
DAG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
DAG Danmarks Havn 78.06 359⇑*i*P **P 10 25 48.1 -0.3**
comp=Z,6.7nm,0.6s,mb4.8
WVT Waverly 78.33 307 *e*P **P 10 25 50.1 -0.6**
comp=Z,22nm,1.0s,mb5.0
WVT Waverly 78.33 307 P **P 10 25 50.1 -0.6**
WVT pmax pmax
comp=Z,22nm,1.0s,mb5.0
OLIL Olney 79.01 310 *e*P **P 10 25 53.3 -1.1**
comp=Z,32nm,1.1s,mb5.2
AKTK Aktyubinsk 79.20 38 *i*P **P 10 25 53.0 -2.2**
AKTO Aktyubinsk 79.20 38 *i*P **P 10 25 53.9 -1.3**
AKTO pmax pmax
comp=Z,29nm,2.3s,mb4.8
AB31 Akbulak array 80.11 40 P **P 10 25 58.8 -1.4**
AB31 pmax pmax
comp=Z,323nm,2.2s,mb5.9
FVM French Village 80.69 309 *e*P **P 10 26 02.8 -0.7**
comp=Z,18nm,0.9s,mb5.0
FVM French Village 80.69 309 *e*P **P 10 26 02.8 -0.8**
FVM pmax pmax
comp=Z,19nm,0.9s,mb5.0
ARU Arti 81.14 32 P **P 10 26 05.6 +0.1**
comp=Z,232nm,1.1s,mb6.0,SNR=13
ARU Arti 81.14 32 *e*P **P 10 26 04.5 -1.0**
comp=Z,409nm,2.0s,mb6.0
ARU LR LR
comp=Z,871nm,21.0s,MS5.1
ARU Arti 81.14 32*c*/*i*P **P 10 26 04.9 -0.6**
ARU 10 29 11.0
ARU S S 10 36 17.4 +2.1
ARU SS SS 10 41 29.5 -0.8
ARU pmax pmax
comp=Z,181nm,2.5s,mb5.6
SOKR Solikamsk 81.16 29*c*/*i*P **P 10 26 05.3 -0.3**
SOKR S S 10 36 17.4 +2.0
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.4
SOKR MLR MLR
comp=Z,640nm,19.0s,MS5.0
KBS Kingsbay 81.23 5 PFAKE 10 26 20.0 +14
KBS LR LR
comp=Z,500nm,19.0s,MS4.9
CCM Cathedral Cave 81.34 309 *e*P **P 10 26 05.8 -1.2**
comp=Z,8.6nm,0.8s,mb4.7
CCM LR LR
comp=Z,2μm,19.0s,MS5.4
JFWS Jewell Farm 81.36 314 PFAKE 10 26 20.0 +13
JFWS LR LR
comp=Z,1μm,21.0s,MS5.2
UALR University of 81.77 305 *e*P **P 10 26 09.2 -0.1**
comp=Z,26nm,1.1s,mb5.1
SVE Sverdlovsk 82.35 32 *e*P **P 10 26 12.0 +0.1**
MIAR Mount Ida 82.74 305 *e*P **P 10 26 12.9 -1.6**
comp=Z,137nm,2.1s,mb5.6
MIAR LR LR
comp=Z,1μm,19.0s,MS5.2
MIAR Mount Ida 82.74 305 *e*P **P 10 26 12.9 -1.6**
MIAR pmax pmax
comp=Z,137nm,2.1s,mb5.6
MIAR MLR MLR
comp=Z,1μm,19.0s,MS5.2
EYMN Ely 83.08 318 PFAKE 10 26 30.0 +14
EYMN LR LR
comp=Z,1μm,19.0s,MS5.4
NATX Nacogdoches 83.36 302 *e*P **P 10 26 17.3 -0.4**
comp=Z,121nm,1.5s,mb5.7
MAW Mawson 83.52 158 P **P 10 26 18.8 +1.0**
comp=Z,11nm,0.8s,mb5.0,baz=286,slow=8.0,SNR=19
MAW LR LR 10 54 43.0
comp=Z,505nm,21.6s,MS4.9,baz=289,slow=29
MAW Mawson 83.52 158 *e*P **P 10 26 18.4 +0.6**
comp=Z,24nm,1.6s,mb5.1
MAW Mawson 83.52 158 *e*P **P 10 26 18.4 +0.6**
MAW pmax pmax
comp=Z,24nm,1.6s
HKT Hockley 84.19 300 *e*P **P 10 26 21.6 -0.5**
comp=Z,38nm,1.8s,mb5.2
HKT LR LR
comp=Z,764nm,21.0s,MS5.1
HKT Hockley 84.19 300 *e*P **P 10 26 21.6 -0.4**
HKT pmax pmax
comp=Z,38nm,1.8s,mb5.2
HKT MLR MLR
comp=Z,764nm,21.0s,MS5.1
KBL Kabul 84.42 55 *e*P **P 10 26 23.0 -0.1**
comp=Z,70nm,1.7s,mb5.5
KBL Kabul 84.42 55 P **P 10 26 24.2 +1.1**
KBL pmax pmax
comp=Z,70nm,1.7s,mb5.5
KSU1 Kansas State U 85.64 309 *e*P **P 10 26 28.5 -0.7**
comp=Z,15nm,0.8s,mb5.3
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.4
KVTX Kingsville 85.82 298 PFAKE 10 26 40.0 +10
KVTX LR LR
comp=Z,774nm,20.0s,MS5.1
AGMN Agassiz Refuge 86.03 318 *e*P **P 10 26 30.4 -0.4**
comp=Z,184nm,2.0s,mb6.0
AGMN LR LR
comp=Z,607nm,22.0s,MS5.0
ECSD EROS,Sioux Fal 86.08 314 *e*P **P 10 26 29.8 -1.3**
comp=Z,188nm,1.9s,mb6.0
ECSD LR LR

comp=Z,970nm,19.0s,MS5.2
ULM Lac du Bonnet 86.26 320 P **P 10 26 30.9 -1.0**
comp=Z,4.5nm,0.7s,mb4.8,baz=35,slow=4.8,SNR=3.6
ULM LR LR 11 03 41.8
comp=Z,489nm,18.9s,MS4.9,baz=262,slow=35
KK31 Karatay Array 86.36 47 *i*P **P 10 26 31.6 -1.0**
KK31 pmax pmax
comp=Z,79nm,1.5s,mb5.7
WMOK Wichita Mounta 87.04 305 *e*P **P 10 26 35.2 -0.9**
comp=Z,29nm,1.3s,mb5.3
WMOK LR LR
comp=Z,1μm,20.0s,MS5.2
WMOK Wichita Mounta 87.04 305 *e*P **P 10 26 35.2 -0.9**
WMOK pmax pmax
comp=Z,29nm,1.3s,mb5.3
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.2
BRVK Borovoye 87.17 37 P **P 10 26 36.3 0.0**
comp=Z,87nm,1.1s,mb5.9,SNR=15
BRVK Borovoye 87.17 37 *e*P **P 10 26 35.7 -0.6**
comp=Z,219nm,2.2s,mb6.0
BRVK LR LR
comp=Z,533nm,21.0s,MS4.9
BRVK Borovoye 87.17 37 *e*P **P 10 26 35.7 -0.6**
BRVK pmax pmax
comp=Z,219nm,2.2s,mb6.0
BRVK MLR MLR
comp=Z,533nm,21.0s,MS4.9
BVA0 Borovoye Array 87.23 37 *i*P **P 10 26 35.4 -1.2**
BVA0 pmax pmax
comp=Z,84nm,2.9s,mb5.5
BVAR Borovoye Array 87.23 37 P **P 10 26 36.1 -0.5**
comp=Z,6.6nm,0.9s,mb4.9,baz=260,slow=4.4,SNR=29
BVAR LR LR 11 08 37.7
comp=Z,620nm,21.7s,MS5.0,baz=259,slow=38
VOSK Vostochnaya 87.56 37 P **P 10 26 38.1 -0.1**
VOSK pmax pmax
comp=Z,149nm,2.3s,mb5.8
JCT Junction City 87.66 300 *e*P **P 10 26 39.2 0.0**
comp=Z,27nm,1.0s,mb5.4
JCT LR LR
comp=Z,701nm,22.0s,MS5.0
JCT Junction City 87.66 300 *e*P **P 10 26 39.2 0.0**
JCT pmax pmax
comp=Z,27nm,1.0s,mb5.4
JCT MLR MLR
comp=Z,701nm,22.0s,MS5.0
POO Poona 87.70 72⇓*ix* x 10 26 38.0
comp=Z,278nm,2.0s
CBKS Cedar Bluff 88.05 309 *e*P **P 10 26 41.1 +0.3**
comp=Z,121nm,1.6s,mb5.9
CBKS LR LR
comp=Z,1μm,19.0s,MS5.4
CBKS Cedar Bluff 88.05 309 *e*P **P 10 26 41.1 +0.2**
CBKS pmax pmax
comp=Z,121nm,1.6s,mb5.9
CBKS MLR MLR
comp=Z,1μm,19.0s,MS5.4
AML Almayashu 88.63 48 *e*P **P 10 26 44.4 +0.8**
comp=Z,34nm,1.2s,mb5.5
EKS2 Erkin-Say 88.72 47 *e*P **P 10 26 43.1 -0.9**
comp=Z,74nm,1.5s,mb5.8
EKS2 LR LR
comp=Z,467nm,19.0s,MS4.9
EKS2 Erkin-Say 88.72 47 P **P 10 26 44.7 +0.7**
SNR=14
AAK Ala-Archa 89.25 48 P **P 10 26 46.7 +0.3**
comp=Z,244nm,1.1s,mb6.5,SNR=20
AAK Ala-Archa 89.25 48 PFAKE 10 27 00.0 +14
AAK LR LR
comp=Z,602nm,19.0s,MS5.0
AAK Ala-Archa 89.25 48 P **P 10 26 46.9 +0.5**
SNR=24
USP Ospenovka 89.28 47 P **P 10 26 46.0 -0.6**
SNR=11
FRU Bishkek 89.34 47⇑*i*P **P 10 26 48.0 +1.1**
FRU pmax pmax
comp=Z,350nm,2.1s,mb6.3
AMTX Amarillo 89.43 305 PFAKE 10 27 00.0 +13
AMTX LR LR
comp=Z,1μm,21.0s,MS5.2
KZA Kyzart 89.78 48 P **P 10 26 50.5 +1.5**
SNR=12
OGNE Ogallala 89.91 311 *e*P **P 10 26 49.0 -0.6**
comp=Z,58nm,1.1s,mb5.8
TKM2 Tokmak 2 90.07 47 *e*P **P 10 26 50.0 -0.3**
comp=Z,82nm,1.7s,mb5.8
TKM2 LR LR
comp=Z,755nm,19.0s,MS5.1
TKM2 Tokmak 2 90.07 47 *e*P **P 10 26 50.0 -0.3**
TKM2 pmax pmax
comp=Z,82nm,1.7s,mb5.8
TKM2 MLR MLR
comp=Z,755nm,19.0s,MS5.1
TKM2 Tokmak 2 90.07 47 P **P 10 26 50.7 +0.4**
SNR=12
KSH Kashi 90.26 51 P **P 10 26 53.0 +1.8**
KSH *e*AP pP 10 26 58.0 +3.4
KSH *e*XP sP 10 27 00.5 +4.7
KSH *e*PP PP 10 30 29.5 +4.4
KSH *e*SKS 10 37 21.5
KSH *e*S S 10 37 44.5 -1.2
KSH *e*XS sS 10 37 52.5 +1.3
KSH *e*SS SS 10 43 47.5 +2.3
KSH AMB AMB
comp=Z,70nm,0.4s,mb6.3
KSH LR LR
comp=N,2μm,16.5s,MS5.9
KSH LR LR
comp=E,2μm,11.6s,MS5.9
KSH LR LR
comp=Z,2μm,11.5s,MS5.7
FFC Flin Flon 90.31 325 *e*P **P 10 26 50.4 -0.8**
comp=Z,87nm,2.0s,mb5.7
FFC LR LR
comp=Z,795nm,20.0s,MS5.2
FFC Flin Flon 90.31 325 *e*P **P 10 26 50.4 -0.7**
FFC pmax pmax
comp=Z,87nm,2.0s,mb5.7
FFC MLR MLR
comp=Z,795nm,20.0s,MS5.2
ULHL Ulahol 90.53 48 P **P 10 26 53.4 +0.9**
SNR=12
TXAR Lajitas Array 90.97 299 P **P 10 26 54.3 -0.5**
comp=Z,2.4nm,0.9s,mb4.5,baz=121,slow=6.4,SNR=26
TXAR LR LR 11 03 38.7
comp=Z,612nm,21.2s,MS5.0,baz=0.0,slow=33
SMLA Simla 91.06 59 *i*P **P 10 26 54.8 -0.4**
NDI New Delhi 91.07 61 *ex* **P 10 26 54.0 -1.3**
RSSD Black Hills 91.45 314 *e*P **P 10 26 57.0 +0.3**
comp=Z,19nm,1.5s,mb5.2
RSSD LR LR
comp=Z,2μm,22.0s,MS5.5
RSSD Black Hills 91.45 314 *e*P **P 10 26 57.0 +0.3**
RSSD pmax pmax
comp=Z,19nm,1.5s,mb5.2
RSSD MLR MLR
comp=Z,2μm,22.0s,MS5.5
DGMT Dagmar 91.58 318 *e*P **P 10 26 57.5 +0.3**
comp=Z,269nm,2.3s,mb6.2
DGMT LR LR
comp=Z,2μm,20.0s,MS5.5
KURK Kurchatov 92.22 39 P **P 10 26 59.2 -0.9**
comp=Z,7.7nm,1.1s,mb4.9,baz=277,slow=5.2,SNR=20
KURK Kurchatov 92.22 39 *e*P **P 10 26 59.3 -0.8**
comp=Z,68nm,1.9s,mb5.7
KURK LR LR
comp=Z,477nm,20.0s,MS4.9
KURK Kurchatov 92.22 39 *e*P **P 10 26 59.3 -0.8**
KURK pmax pmax
comp=Z,68nm,1.9s,mb5.7
KURK MLR MLR
comp=Z,477nm,20.0s,MS4.9
PHWY Pilot Hill 92.50 311 *e*P **P 10 26 57.5 -4.1**
comp=Z,59nm,2.0s,mb5.6
SDCO Great Sand Dun 92.56 308 *e*P **P 10 27 02.5 +0.6**
comp=Z,82nm,2.0s,mb5.8
ISCO Idaho Springs 92.63 310 PFAKE 10 27 10.0 +7.8
ISCO LR LR
comp=Z,1μm,22.0s,MS5.4
ANMO Albuquerque 93.36 305 *e*P **P 10 27 06.3 +0.6**
comp=Z,6.6nm,1.1s,mb5.0
ANMO LR LR
comp=Z,943nm,20.0s,MS5.2
ANMO Albuquerque 93.36 305 *e*P **P 10 27 06.3 +0.6**
ANMO pmax pmax
comp=Z,7.0nm,1.1s

ANMO MLR MLR
comp=Z,943nm,20.0s
BNM Barren Site 93.50 304 *e*P **P 10 27 06.5 +0.1**
comp=Z,46nm,1.9s,mb5.6
LPM Los Pinos Moun 93.51 304 *e*P **P 10 27 07.0 +0.6**
comp=Z,11nm,1.2s,mb5.2
LENM Lemitar 93.79 304 *e*P **P 10 27 09.1 +1.3**
comp=Z,7.8nm,1.0s,mb5.1
LAZ Ladron 93.92 304 *e*P **P 10 27 09.0 +0.7**
comp=Z,11nm,1.5s,mb5.1
MK31 Makanchi Array 94.78 43 *e*P **P 10 27 09.4 -2.5**
MK31 Makanchi Array 94.78 43 *i* P **P 10 27 10.4 -1.6**
MK31 pmax pmax
comp=Z,11nm,1.0s,mb5.2
MKAR Makanchi Array 94.78 43 P **P 10 27 11.5 -0.5**
comp=Z,3.1nm,0.9s,mb4.8,baz=266,slow=3.6,SNR=18
MKAR LR LR 11 12 14.6
comp=Z,436nm,21.4s,MS4.9,baz=266,slow=37
NVS Novosibirsk 94.84 35 *e*P **P 10 27 08.5 -3.5**
MVCO Mesa Verde 94.95 307 PFAKE 10 27 20.0 +7.0
MVCO LR LR
comp=Z,760nm,21.0s,MS5.1
EGMT Eagleton 95.31 318 PFAKE 10 27 30.0 +16
EGMT LR LR
comp=Z,2μm,21.0s,MS5.5
BW06 Boulder Array 95.50 313 PFAKE 10 27 30.0 +15
BW06 LR LR
comp=Z,1μm,20.0s,MS5.3
PDAR Pinedale Array 95.50 313 P **P 10 27 14.4 -1.0**
comp=Z,1.0nm,1.0s,mb4.2,baz=93,slow=3.3,SNR=4.8
PDAR PP PP 10 31 08.8 +2.6
comp=Z,1.8nm,1.0s,baz=74,slow=6.6,SNR=5.5
ZALV Zalesovo Beam 95.84 36 P **P 10 27 15.6 -1.1**
comp=Z,0.4nm,0.2s,mb4.4,baz=90,slow=1.5,SNR=4.3
ZALV LR LR 11 14 50.2
comp=Z,317nm,20.6s,MS4.8,baz=118,slow=38
LKWY Lake 96.00 315 PFAKE 10 27 30.0 +12
LKWY LR LR
comp=Z,2μm,21.0s,MS5.5
YKA Yellowknife Ar 96.39 333 P **P 10 27 18.0 -0.9**
comp=Z,3.5nm,0.8s,mb4.8,baz=79,slow=5.0,SNR=9.6
YKA LR LR 11 06 19.3
comp=Z,238nm,20.9s,MS4.7,baz=90,slow=33
AHID Auburn Hatcher 96.64 313 PFAKE 10 27 30.0 +9.5
AHID LR LR
comp=Z,901nm,19.0s,MS5.3
BOZ Bozeman (W) 96.78 316 PFAKE 10 27 30.0 +8.9
BOZ LR LR
comp=Z,784nm,19.0s,MS5.2
HWUT Hardware Ranch 97.07 312 PFAKE 10 27 30.0 +7.5
HWUT LR LR
comp=Z,2μm,21.0s,MS5.5
EDM Edmonton 97.08 323 *e*P **P 10 27 21.5 -0.8**
MPU Maple Canyon 97.25 310 PFAKE 10 27 30.0 +6.6
MPU LR LR
comp=Z,2μm,21.0s,MS5.6
MVU Marysvale 97.81 309 PFAKE 10 27 40.0 +14
MVU LR LR
comp=Z,1μm,20.0s,MS5.3
DUG Dugway 98.13 310 PFAKE 10 27 40.0 +13
DUG LR LR
comp=Z,2μm,22.0s,MS5.5
MSO Missoula 98.25 317 PFAKE 10 27 40.0 +12
MSO LR LR
comp=Z,1μm,19.0s,MS5.4
WMQ Urumqi 98.84 46 P **P 10 27 30.0 -0.4**
WMQ XP sP 10 27 37.0 +2.0
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.8
WMQ LR LR
comp=N,534nm,18.0s,MS5.2
WMQ LR LR
comp=E,468nm,20.0s,MS5.2
WMQ LR LR
comp=Z,412nm,18.0s,MS5.0
HLID Hailey 98.97 314 PFAKE 10 27 40.0 +9.0
HLID LR LR
comp=Z,1μm,21.0s,MS5.3
ELK Elko 99.92 311 PFAKE 10 27 50.0 +15
ELK LR LR
comp=Z,2μm,20.0s,MS5.5
NEW Newport 100.18 319 PFAKE 10 27 50.0 +14
NEW LR LR
comp=Z,1μm,20.0s,MS5.4
GLA Glamis 100.39 303 PFAKE 10 27 50.0 +13
GLA LR LR
comp=Z,751nm,20.0s,MS5.2
BMO Blue Mountains 100.86 315 PFAKE 10 27 50.0 +11
BMO LR LR
comp=Z,1μm,19.0s,MS5.4
TPNV Topopah Spring 101.15 307 PFAKE 10 27 50.0 +10
TPNV LR LR
comp=Z,556nm,20.0s,MS5.1
BMN Battle Mountai 101.45 311 PFAKE 10 27 50.0 +8.2
BMN LR LR
comp=Z,1μm,20.0s,MS5.4
CASY Casey 101.78 160 PFAKE 10 27 50.0 +6.8
CASY LR LR
comp=Z,478nm,19.0s,MS5.0
GSC Goldstone 101.79 306 PFAKE 10 28 00.0 +17
GSC LR LR
comp=Z,654nm,20.0s,MS5.2
HAWA Hanford 102.13 317 PFAKE 10 28 00.0 +15
HAWA LR LR
comp=Z,1μm,19.0s,MS5.5
DAC Darwin (Calif) 102.31 307 PFAKE 10 28 00.0 +14
DAC LR LR
comp=Z,435nm,19.0s,MS5.0
MWC Mount Wilson 102.95 305 PFAKE 10 28 00.0 +12
MWC LR LR
comp=Z,905nm,22.0s,MS5.3
LSA Lhasa 103.19 60 PFAKE 10 28 00.0 +11
LSA LR LR
comp=Z,653nm,20.0s,MS5.2
MOD Modoc 103.51 313 PFAKE 10 28 00.0 +9.1
MOD LR LR
comp=Z,1μm,21.0s,MS5.3
CMB Columbia Colle 104.25 309 PFAKE 10 28 10.0 +16
CMB LR LR
comp=Z,877nm,22.0s,MS5.2
NLWA Neilton Lookou 104.81 319 PFAKE 10 28 10.0 +13
NLWA LR LR
comp=Z,2μm,20.0s,MS5.7
COR Corvallis 105.10 316 PFAKE 10 32 20.0 +7.1
COR LR LR
comp=Z,1μm,19.0s,MS5.4
HUMO Hull Mountain 105.30 314 PFAKE 10 32 20.0 +6.7
HUMO LR LR
comp=Z,782nm,20.0s,MS5.2
HOPS Hopland 106.15 310 PFAKE 10 32 30.0 +15
HOPS LR LR
comp=Z,1μm,21.0s,MS5.5
MCCM Marconi Confer 106.17 309 PFAKE 10 32 30.0 +15
MCCM LR LR
comp=Z,1μm,19.0s,MS5.4
COLA College 108.68 341 PFAKE 10 32 30.0 +11
COLA LR LR
comp=Z,214nm,20.0s,MS4.7
SONM Songino Array 110.51 39 PP PP 10 33 03.6 +5.4
comp=Z,0.9nm,0.9s,baz=302,slow=6.8,SNR=4.0
CHTO Chiang Mai 111.44 70 PFAKE 10 32 40.0 +15
CHTO LR LR
comp=Z,524nm,22.0s,MS5.1
LZH Lanzhou 112.50 51 *e*PKP PKiKP 10 32 20.0 -7.0
LZH PP PP
comp=Z,216nm,7.9s
LZH LR LR
comp=N,649nm,18.0s
LZH LR LR
comp=Z,875nm,19.3s,MS5.4
CD2 Chengdu 113.73 57 *e*PDIF Pdif 10 28 36.3 0.0
CD2 PP PP 10 33 25.3 +3.3
CD2 SKS SKSdf 10 39 39.3 -2.8
CD2 S Sdif 10 41 01.3 -3.2
CD2 SS SS 10 49 08.0 -2.6
CD2 PP PP
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,440nm,14.4s,MS5.4
CD2 LR LR
comp=E,680nm,16.8s,MS5.4
CD2 LR LR
comp=Z,610nm,19.0s,MS5.2
KMI Kunming 114.03 63 PKP PKiKP 10 32 29.0 -1.2
KMI XPKP 10 32 34.0
KMI PP PP 10 33 27.5 +3.1
KMI PP PP
comp=Z,326nm,5.1s
KMI LR LR
comp=N,580nm,18.4s,MS5.3
KMI LR LR
comp=E,491nm,19.9s,MS5.3
KMI LR LR
comp=Z,457nm,22.8s,MS5.0
HHC Hu-ho-hao-te 116.63 44 *e*PKP PKPdf 10 32 33.0 -1.8
HHC PP PP 10 33 45.8 +3.9
HHC PKS 10 36 07.3
HHC SKS SKSdf 10 39 40.3 -6.9
HHC SKKS SKKSac 10 40 33.8 -10
HHC SS SS 10 49 47.0 -0.9
HHC LR LR
comp=N,357nm,20.2s,MS5.2
HHC LR LR
comp=E,509nm,23.8s,MS5.2
HHC LR LR
comp=Z,402nm,26.2s,MS4.9
GYA Guiyang 117.23 61 PDIF Pdif 10 28 51.3 -0.6
GYA PKP PKPdf 10 32 36.5 +0.2
GYA PP PP 10 33 52.3 +5.5
GYA PKS 10 36 10.5
GYA SKS SKSdf 10 39 45.0 -3.9
GYA SKKS SKKSac 10 40 42.8 -5.5
GYA SS SS 10 49 53.5 -3.3
GYA PP PP
comp=Z,160nm,7.5s
GYA LR LR
comp=N,210nm,19.6s,MS5.0
GYA LR LR
comp=E,290nm,20.5s,MS5.0
GYA LR LR
comp=Z,350nm,19.2s,MS5.0
HIA Hailar 117.66 33 PFAKE 10 32 50.0 +14
HIA LR LR
comp=Z,677nm,20.0s,MS5.3
RKT Rikitea 118.33 243 *e*SS SS 10 50 16.5 +5.3
comp=Z,560nm,30.5s
RKT Rikitea 118.33 243 *e*LR LR 11 08 51.8
comp=Z,934nm,25.8s
BJI Beijing 120.16 43 PKP PKPdf 10 32 40.8 -0.8
BJI SS SS 10 50 33.0 -0.5
BJI LR LR
comp=N,385nm,25.7s,MS5.0
BJI LR LR
comp=E,317nm,26.0s,MS5.0
BJI LR LR
comp=Z,494nm,31.6s
BJT Baijiatuan 120.17 43 PFAKE 10 32 50.0 +8.4
BJT LR LR
comp=Z,740nm,19.0s,MS5.3
QIZ Qiongzhong 121.62 68 PKP PKPdf 10 32 42.3 -2.7
QIZ PP PP 10 34 14.5 -2.8
QIZ SS SS 10 50 50.8 -3.1
QIZ LR LR
comp=E,674nm,19.9s
QIZ LR LR
comp=Z,801nm,16.5s,MS5.5
NWAO Narrogin (SRO) 122.27 131 PFAKE 10 33 00.0 +14
NWAO LR LR
comp=Z,661nm,22.0s,MS5.2
KLR Kul'dur 123.67 27 *e*PKIKP PKPdf 10 32 44.0 -4.0
KLR pmax pmax
comp=Z,140nm,2.2s
MDJ Mudanjiang 125.83 32 PKP PKPdf 10 32 51.3 -1.0
MDJ XPKP 10 32 56.0
MDJ PP PP 10 34 42.5 -1.7
MDJ PKS 10 36 25.8
MDJ SS SS 10 51 46.3 +1.7
MDJ LR LR
comp=N,187nm,28.9s,MS4.8
MDJ LR LR
comp=E,209nm,32.6s,MS4.8
MDJ LR LR
comp=Z,348nm,25.1s
MDJ Mudanjiang 125.83 32 PFAKE 10 33 00.0 +7.7
MDJ LR LR
comp=Z,515nm,20.0s,MS5.2
TAOE Nuku Hiva Isla 126.10 258 *e*LR LR 11 12 37.4
comp=Z,3μm,21.3s
PETK Petropavlovsk- 127.85 7 PKP PKPdf 10 32 56.0 0.0
comp=Z,5.6nm,0.9s,baz=70,slow=6.1,SNR=4.7
INCN Inchon 128.49 41 PFAKE 10 33 10.0 +12
INCN LR LR
comp=Z,545nm,20.0s,MS5.2
MBWA Marble Bar 128.93 119 PFAKE 10 33 10.0 +11
MBWA LR LR
comp=Z,986nm,22.0s,MS5.5
KSRS Korea Array 129.34 40 PKP PKPdf 10 32 59.1 -0.2
comp=Z,0.7nm,0.6s,baz=298,slow=2.6,SNR=3.9
KKM Kota Kinabalu 129.41 83 PFAKE 10 33 10.0 +10
KKM LR LR
comp=Z,913nm,22.0s,MS5.4
KAPI Kappang 132.67 98 PFAKE 10 33 20.0 +14
KAPI LR LR
comp=Z,390nm,20.0s,MS5.1
PPT Papeete 133.04 244 *e*SS SS 10 53 23.9 +7.9
comp=Z,391nm,30.2s
PPT Papeete 133.04 244 *e*LR LR 11 15 41.1
comp=Z,830nm,23.2s
ERM Erimo 134.28 25 PFAKE 10 33 20.0 +12
ERM LR LR
comp=Z,668nm,21.0s,MS5.3
MAJO Matsushiro 136.14 34 PFAKE 10 33 20.0 +7.9
MAJO LR LR
comp=Z,453nm,21.0s,MS5.2
MJAR Matsushiro Arr 136.14 34 PKP PKPdf 10 33 12.1 0.0
comp=Z,2.3nm,1.0s,baz=343,slow=3.9,SNR=4.5
STKA Stephens Creek 139.30 146 PKhKP 10 33 14.6
comp=Z,1.8nm,0.8s,baz=307,slow=5.3,SNR=3.3
ASAR Alice Springs 139.58 130 PKP PKPdf 10 33 17.9 -0.8
comp=Z,3.3nm,0.8s,baz=231,slow=1.8,SNR=9.9
WRA Warramunga Arr 141.87 125 PKhKP 10 33 18.2
comp=Z,1.9nm,0.8s,baz=239,slow=2.3,SNR=7.0
WRA PKP PKPdf 10 33 23.8 +0.8
comp=Z,3.5nm,1.0s,baz=244,slow=2.2,SNR=6.2
ARMA Armidale 145.32 157 *e*P PKPbc 10 33 28.4 -0.1
CTA Charters Tower 150.76 138 *e*P PKPbc 10 33 42.8 -0.7
comp=Z,13nm,1.0s
CTA Charters Tower 150.76 138 PKPbc PKPbc 10 33 42.4 -1.2
comp=Z,9.3nm,0.8s,baz=237,slow=1.9,SNR=6.7
CTAO Charters Tower 150.76 138 *e*PKPdf PKPdf 10 33 38.7 +0.7
COEN Coen 152.17 124 *e*PKPdf PKPdf 10 33 37.3 -3.0

CSEM ***27*** *10:16:56.7, 3324N×3538E, h4km, ML2.9, After GRAL*
GRAL ***27*** *10:16:56.7±0.3, 3324N×3538E, h4km±2km, MD2.9*
GII ***27*** *10:16:56.9±1.5, 3343N×3544E, h0km, ML2.1/1, EXPLOSION*
ISCJB ***27*** *10:16:58.8±0.6, 3344N±002×3540E±004, h0km, Error ellipse: s-maj=5.1km s-min=3.3km az=17.7*

ISC 27 10:16:59.4±0.6, 3345N±003×3540E±004, h0km, n13, σ1§10/21, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matirih**	**0.07**	**304**	*e*P	**Pg**	**10 17 01.3**	**+0.4**
HRI	**Mount Hermon**	**0.33**	**123**	Pg	**Pg**	**10 17 03.8**	**-1.9**
HRI				Sg	**Sg**	**10 17 10.9**	**+0.9**
KSDI	**Kefar Szold**	**0.33**	**140**	Pg	**Pg**	**10 17 04.3**	**-1.5**
KSDI				Sg	**Sg**	**10 17 10.4**	**+0.3**
RCY	**Rachaya**	**0.35**	**84**	*e*P	**Pg**	**10 17 05.0**	**-1.1**
RCY				*e*S	**Sg**	**10 17 11.3**	**+0.6**
HNTI	**Hanita**	**0.41**	**208**	Pg	**Pg**	**10 17 06.5**	**-0.7**
HNTI				Sg	**Sg**	**10 17 14.4**	**+1.8**
MMA0B	**Mount Meron ar**	**0.43**	**180**	Pg	**Pg**	**10 17 07.0**	**-0.6**
MMA0B				Sg	**Sg**	**10 17 14.6**	**+1.3**
BHL	**Bhannes**	**0.50**	**24**	*e*P	**Pg**	**10 17 09.3**	**+0.3**
KSHT	**Keshet**	**0.58**	**144**	Pg	**Pg**	**10 17 09.8**	**-0.7**
KSHT				Sg	**Sg**	**10 17 18.4**	**+0.5**
OFRI	**'Ofer**	**0.90**	**203**	Pg	**Pg**	**10 17 15.6**	**-1.0**
HWQ	**Hawqa**	**0.94**	**28**	*e*P	**Pg**	**10 17 17.0**	**-0.5**
HWQ				*e*S	**Sg**	**10 17 31.9**	**+2.2**
MMLI	**Mount Malkishu**	**1.01**	**179**	Sg	**Sg**	**10 17 33.3**	**+1.5**
HMDT	**Nahal Hemdat**	**1.20**	**175**	Pg	**Pg**	**10 17 20.7**	**-1.6**
HMDT				Sg	**Sg**	**10 17 38.4**	**+0.6**
SLTI	**Sal'it**	**1.24**	**194**	Sg	**Sg**	**10 17 38.7**	**-0.6**

NIED ***27*** *10:22:00, 4190N×14230E, h59km, Mw4.7 Best double couple: M0 1.06000×10^16 NP1:φs25.00000°, δ65.00000°, λ87.00000°. NP2:φs212.00000°, δ25.00000°, λ96.00000°.*
JMA ***27*** *10:22:01.4±0.2, 4192N×14232E, h73km±3km, M4.3 Broadband fault plane solution: P waves. NP1: φs172.00000°, δ13.00000°, λ47.00000°. NP2:φs36.00000°, δ80.00000°, λ99.00000°. Principal axes: T Plg54.0000°, Azm317.0000°; N Plg9.0000°, Azm214.0000°; P Plg35.0000°, Azm118.0000°;*
JMA Felt III J1.
ISCJB ***27*** *10:22:01.9±0.2, 4196N±002×14224E±002, h67km±1km, mb4.6/99 Error ellipse: s-maj=4.1km s-min=2.6km az=165.4*
BJI ***27*** *10:22:02.9, 42.18N×142.40E, h91km, mB5.0, mb4.8*
MOS ***27*** *10:22:02.6±0.9, 4202N×142.19E, h74km, mb5.0/53, Error ellipse: s-maj=8.6km s-min=5.3km az=107.2*
IDC ***27*** *10:22:03.9±0.5, 4200N×142.18E, h74km±4km, mb4.1/22, mb1 4.3/25, mb1mx4.2/29, mbtmp4.1/25, MS3.5/3, Ms1 3.5/3, ms1mx3.1/28, Error ellipse: s-maj=11.7km s-min=7.3km az=106.0*
NEIC ***27*** *10:22:04.2±0.2, 4202N×142.18E, mb4.8/47, MW4.6(NIED), Error ellipse: s-maj=5.7km s-min=3.6km az=150.0*
NEIC Recorded [3 JMA] in the Shizunai area, [2 JMA] in south-central Hokkaido and [1 JMA] in southwestern Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures, Honshu.

ISC 27 10:22:02.8±0.2, 4196N±002×14224E±002, h60km±2km, h75km±1.8km; pP-P, n424, σ0.73/455, mb4.7/99, 104C-91D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.50**	**49**	⇑P	**Pn**	**10 22 13.6**	**-1.2**
JNBK				*e*S	**Sn**	**10 22 23.1**	**-0.4**
ERM	**Erimo**	**0.69**	**85**	*e*Pg	**Pn**	**10 22 16.1**	**-0.8**
ERM				*e*Sg	**Sn**	**10 22 25.5**	**-1.7**
ERM	**Erimo**	**0.69**	**85**	*c i*PN	**Pn**	**10 22 16.1**	**-0.8**
JEM	**Erimo**	**0.69**	**85**	⇑P	**Pn**	**10 22 16.0**	**-0.9**
JEM				*e*S	**Sn**	**10 22 26.8**	**-0.4**
JBT2	**Biratori 2**	**0.83**	**6**	⇓P	**Pn**	**10 22 18.2**	**-0.5**
JBT2				*e*S	**Sn**	**10 22 30.6**	**+0.3**
JKB	**Kayabe**	**0.91**	**266**	⇓P	**Pn**	**10 22 19.4**	**-0.2**
JKB				*e*S	**Sn**	**10 22 32.6**	**+0.6**
JNB	**Noboribetsu**	**1.03**	**300**	⇓P	**Pn**	**10 22 20.8**	**-0.5**
JNB				*e*S	**Sn**	**10 22 35.3**	**+0.4**
JCH	**Churui**	**1.06**	**51**	⇑P	**Pn**	**10 22 20.9**	**-0.8**
JCH				*e*S	**Sn**	**10 22 35.2**	**-0.4**
JEW	**Eniwo**	**1.06**	**327**	⇓P	**Pn**	**10 22 21.9**	**+0.2**
JEW				*e*S	**Sn**	**10 22 37.1**	**+1.4**
JOT	**Ohata**	**1.06**	**238**	P	**Pn**	**10 22 21.4**	**-0.3**
JOT				*e*S	**Sn**	**10 22 36.1**	**+0.4**
JFR	**Furan**	**1.23**	**12**	⇓P	**Pn**	**10 22 23.6**	**-0.4**
JYM2	**Yakumo 2**	**1.40**	**277**	⇓P	**Pn**	**10 22 26.0**	**-0.2**
JYM2				*e*S	**Sn**	**10 22 44.3**	**+0.5**
JANG	**Nango**	**1.67**	**199**	P	**Pn**	**10 22 29.7**	**-0.1**
JANG				*e*S	**Sn**	**10 22 50.7**	**+0.5**
JAR	**Ashorobuto**	**1.75**	**40**	⇑P	**Pn**	**10 22 30.5**	**-0.4**
JAR				*e*S	**Sn**	**10 22 52.3**	**+0.2**
JHR	**Hokuryu**	**1.83**	**348**	⇓P	**Pn**	**10 22 32.8**	**+0.9**
JHR				*e*S	**Sn**	**10 22 56.4**	**+2.4**
JSK	**Shakotan**	**1.91**	**318**	P	**Pn**	**10 22 33.5**	**+0.5**
JKK2	**Kamakawa 2**	**1.95**	**11**	P	**Pn**	**10 22 33.9**	**+0.3**
ASAJ	**Asahikawa**	**2.18**	**7**	P	**Pn**	**10 22 37.1**	**+0.5**
	50nm,0.3s,baz=228,slow=16,SNR=315						
ASAJ				S	**Sn**	**10 23 03.0**	**+0.5**
	54nm,0.3s,baz=359,slow=29,SNR=14						
ASAJ	**Asahikawa**	**2.18**	**7**	PN	**Pn**	**10 22 37.2**	**+0.5**
ASAJ				S	**Sn**	**10 23 03.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,50nm,0.3s						
ASAJ				smax			
	comp=N,54nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.37**	**51**	⇓*i*PN	**Pn**	**10 22 52.7**	**-0.3**
YUK				*i* S	**Sn**	**10 23 29.7**	**-2.0**
YUK				pmax	pmax		
	comp=N,230nm,0.3s						
YUK				pmax	pmax		
	comp=E,380nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				smax			
	comp=N,5μm,1.0s						
YUK				smax			
	comp=E,5μm,1.0s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,2μm,0.5s						
YSS	**Yuzh-Sakhalins**	**5.01**	**4**	*e*Pn	**Pn**	**10 23 17.5**	**+2.1**
YSS	**Yuzh-Sakhalins**	**5.01**	**4**	*e*PN	**Pn**	**10 23 17.0**	**+1.6**
YSS				*i* S	**Sn**	**10 24 14.0**	**+2.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax			
	comp=N,90nm,1.0s						
YSS				smax			
	comp=E,50nm,1.0s						
KUR	**Kuril'sk**	**5.24**	**49**	*e*PN	**Pn**	**10 23 14.8**	**-3.7**
KUR				pmax	pmax		
	comp=Z,220nm,0.8s						
MAJO	**Matsushiro**	**6.25**	**211**	*e*Pn	**Pn**	**10 23 34.7**	**+2.3**
MAT	**Matsushiro**	**6.25**	**211**	P	**Pn**	**10 23 33.8**	**+1.4**
MAT				*e*S	**Sn**	**10 24 39.4**	**-2.9**
MJAR	**Matsushiro Arr**	**6.25**	**211**	P	**Pn**	**10 23 34.1**	**+1.8**
	comp=Z,3.5nm,0.3s,baz=24,slow=14,SNR=18						
MJAR	**Matsushiro Arr**	**6.25**	**211**	PN	**Pn**	**10 23 34.1**	**+1.7**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
HABR	**Khabarovsk**	**8.26**	**325**	*e*PN	**Pn**	**10 24 01.3**	**+1.5**
HABR				*e*S	**Sn**	**10 25 35.8**	**+4.3**
JHJ	**Hachijo jima 2**	**9.03**	**193**	P	**Pn**	**10 24 08.2**	**-2.3**
	comp=Z,13nm,0.3s,baz=60,slow=9.2,SNR=7.8						
JHJ				S	**Sn**	**10 25 42.0**	**-8.7**
	comp=Z,27nm,0.3s,baz=253,slow=22,SNR=6.8						
MDJ	**Mudanjiang**	**9.60**	**290**	P	**Pn**	**10 24 17.5**	**-0.7**
MDJ				S	**Sn**	**10 26 03.8**	**-0.7**
MDJ				PCP	PcP	10 30 31.3	+1.6
MDJ				AMB	AMB		
	comp=Z,23nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,146nm,5.5s						
MDJ				LR	LR		
	comp=N,72nm,25.6s						
MDJ				LR	LR		
	comp=E,188nm,32.3s						
MDJ				LR	LR		
	comp=Z,265nm,31.0s						
MDJ	**Mudanjiang**	**9.60**	**290**	*e*Pn	**Pn**	**10 24 22.1**	**+3.9**
	comp=Z,25nm,1.0s						
KLR	**Kul'dur**	**10.34**	**318**	*e*PN	**Pn**	**10 24 26.8**	**-1.4**
KLR				pmax	pmax		
	comp=E,20nm,1.0s						
KLR				pmax	pmax		
	comp=Z,60nm,1.0s						
KSRS	**Korea Array**	**11.91**	**253**	P	**Pn**	**10 24 51.4**	**+1.6**
	comp=Z,1.6nm,0.3s,baz=65,slow=14,SNR=19						
KSRS				S	**Sn**	**10 27 06.1**	**+5.2**
	comp=Z,0.5nm,0.3s,baz=66,slow=24,SNR=6.5						
KSRS				LR	LR	10 29 10.6	
	comp=Z,162nm,19.2s,baz=244,slow=36						
KSRS	**Korea Array**	**11.91**	**253**	PN	**Pn**	**10 24 51.4**	**+1.7**
KSRS				S	**Sn**	**10 27 06.1**	**+5.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,162nm,19.2s						
KS15	**Wonju Array Si**	**11.94**	**253**	*e*Pn	**Pn**	**10 24 54.8**	**+4.6**
CN2	**Changchun**	**12.46**	**284**	*e*P	**Pn**	**10 24 59.5**	**+2.3**
CN2				*e*XP		10 25 19.8	
CN2				*e*S	**Sn**	**10 27 16.5**	**+2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
PETK	**Petropavlovsk-**	**15.24**	**38**	P	**Pn**	**10 25 31.4**	**-2.7**

comp=Z,0.2nm,0.3s,baz=174,slow=7.0,SNR=5.8
PETK Petropavlovsk- 15.24 38 P **Pn** **10 25 31.4 -2.7**
CLNS Chul'man 18.61 329 *eP* **Pn** **10 26 15.4 -0.4**
CLNS pmax pmax
comp=Z,26nm,0.9s
CLNS pmax pmax
comp=N,16nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,0.9s
BJI Beijing 19.75 273 P **Pn** **10 26 25.8 -3.8**
BJI S **S** **10 29 59.5 -7.3**
BJI AMB AMB
comp=Z,38nm,1.1s
BJI AMB AMB
comp=Z,107nm,4.2s
BJI LR LR
comp=N,367nm,24.9s
BJI LR LR
comp=E,274nm,25.0s
BJI LR LR
comp=Z,260nm,31.3s
BJT Baijiatuau 19.76 273 *eP* **Pn** **10 26 26.1 -3.6**
comp=Z,25nm,0.8s
BJT Baijiatuau 19.76 273 *eP* **Pn** **10 26 26.1 -3.6**
BJT pmax pmax
comp=Z,25nm,0.8s
YAK Yakutsk 21.47 344 *eP* **P** **10 26 43.4 -2.6**
comp=Z,37nm,0.7s,mb4.8
YAK Yakutsk 21.47 344 *eP* **P** **10 26 41.2 -4.7**
YAK *e* 10 27 03.6
YAK *eS* **S** **10 30 33.1 -7.2**
YAK *e**SS sS 10 31 02.2 +0.3
YAK *eSS* 10 31 36.3
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=Z,19nm,1.0s,mb4.4
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK pmax pmax
comp=Z,23nm,1.0s,mb4.5
YAK pmax pmax
comp=N,30nm,1.1s
YAK pmax pmax
comp=E,41nm,1.3s
YAK smax
comp=N,196nm,1.8s
YAK smax
comp=E,69nm,1.6s
YAK MLR MLR
comp=Z,53nm,13.0s
SEY Seymchan 21.85 12⇑ *iP* **P** **10 26 47.4 -2.6**
HHC Hu-ho-hao-te 22.98 278 *eP* **P** **10 27 02.0 -0.2**
HHC AP 10 27 17.0
HHC PP 10 27 34.8
HHC PCP PcP 10 30 51.0 +1.0
HHC S **S** **10 31 04.0 -3.9**
HHC SS 10 31 51.5
HHC AMB AMB
comp=Z,17nm,0.8s,mb4.5
HHC AMB AMB
comp=Z,257nm,8.7s
HHC LR LR
comp=N,376nm,15.5s
HHC LR LR
comp=E,254nm,15.5s
HHC LR LR
comp=Z,179nm,19.0s
BOD Bodaibo 23.89 321 *eP* **P** **10 27 07.9 -2.6**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
ULN Ulaanbaatar 25.46 295 *eP* **P** **10 27 24.7 -0.2**
comp=Z,28nm,1.6s,mb4.5
ULN Ulaanbaatar 25.46 295 *eP* **P** **10 27 24.7 -0.2**
ULN pmax pmax
comp=Z,27nm,1.6s,mb4.5
SONM Songino Array 25.90 295 P **P** **10 27 28.1 -0.8**
comp=Z,6.5nm,0.9s,mb4.2,baz=77,slow=8.8,SNR=18
SONM LR LR 10 38 26.9
comp=Z,177nm,18.5s,baz=79,slow=38
SONM Songino Array 25.90 295 P **P** **10 27 28.1 -0.8**
SONM pmax pmax
comp=Z,7.0nm,0.9s
SONM MLR MLR
comp=Z,177nm,18.5s
XAN Xi'an 27.29 264 P **P** **10 27 41.3 -0.3**
XAN AMB AMB
comp=Z,11nm,1.2s,mb4.3
XAN AMB AMB
comp=Z,229nm,4.6s
TLY Talaya 27.85 304 *eP* **P** **10 27 46.0 -0.4**
comp=Z,9.2nm,1.1s,mb4.3
TLY Talaya 27.85 304 *eP* **P** **10 27 45.9 -0.5**
TLY *eS* **S** **10 32 30.6 +5.4**
TLY pmax pmax
comp=Z,12nm,1.4s,mb4.3
TLY MLR MLR
comp=Z,105nm,18.0s
ZAK Zakamensk 28.00 301 *eP* **P** **10 27 42.5 -5.2**
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb3.9
LZH Lanzhou 30.22 272 *eP* **P** **10 28 10.0 +2.4**
LZH AP pP 10 28 26.0 +3.5
LZH XP sP 10 28 36.0 +6.4
LZH PP PP 10 29 13.0 -3.6
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.6
LZH AMB AMB
comp=Z,127nm,6.1s
LZH LR LR
comp=N,736nm,14.6s
LZH LR LR
comp=Z,948nm,15.7s
TIXI Tiksi 30.50 352 *eP* **P** **10 28 10.2 +0.6**
GTA Gaotai 32.04 280 *eP* **P** **10 28 23.8 +0.2**
GTA AP pP 10 28 41.3 +2.8
GTA S **S** **10 33 31.0 0.0**
GTA XS sS 10 34 01.8 +5.4
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb4.2
GTA AMB AMB
comp=Z,80nm,6.3s
GTA LR LR
comp=N,141nm,13.8s
GTA LR LR
comp=E,125nm,13.8s
GTA LR LR
comp=Z,200nm,15.3s
CD2 Chengdu 32.62 263 *eP* **P** **10 28 26.8 -1.9**
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
CD2 AMB AMB
comp=Z,60nm,4.2s
CD2 LR LR
comp=N,420nm,10.8s
CD2 LR LR
comp=Z,400nm,10.8s
GYA Guiyang 32.97 253 P **P** **10 28 32.8 +1.0**
GYA AP pP 10 28 50.3 +3.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,70nm,4.9s
KRAR Krasnoyarsk 34.52 311⇑ *iP* **P** **10 28 44.4 -0.6**
KRAR pmax pmax
comp=Z,45nm,1.0s,mb5.3
KMI Kunming 36.59 255 P **P** **10 29 03.0 0.0**
KMI AP pP 10 29 22.3 +4.2
KMI PP PP 10 30 31.0 +3.8
KMI AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
KMI AMB AMB
comp=Z,110nm,4.8s
KMI LR LR
comp=Z,108nm,23.9s
ZAA0 Zalesovo Array 39.23 308 *eP* **P** **10 29 24.6 -0.3**
ZALV Zalesovo Beam 39.23 308 P **P** **10 29 24.1 -0.8**
comp=Z,14nm,0.8s,mb4.8,baz=88,slow=7.9,SNR=50
ZALV pP pP 10 29 41.8 +1.6
comp=Z,2.6nm,0.5s,baz=88,slow=9.0,SNR=2.8
ZALV PcP PcP 10 31 31.7 -1.2
comp=Z,2.7nm,0.6s,baz=80,slow=3.5,SNR=3.9
ZALV LR LR 10 46 19.2
comp=Z,63nm,19.9s,baz=72,slow=37
ZALV Zalesovo Beam 39.23 308 P **P** **10 29 24.1 -0.8**
ZALV pP pP 10 29 41.8 +1.6
ZALV PcP PcP 10 31 31.7 -1.2
ZALV LR LR 10 46 19.2
ZALV Zalesovo Beam 39.23 308 P **P** **10 29 24.1 -0.8**
ZALV *e* pP 10 29 46.7 -0.3
ZALV pmax pmax
comp=E,15nm,1.4s
ZALV pmax pmax
comp=Z,16nm,1.4s,mb4.6
MK31 Makanchi Array 42.22 298 *eP* **P** **10 29 49.1 -0.6**
MK31 Makanchi Array 42.22 298 *iP* **P** **10 29 49.0 -0.7**
MK31 pmax pmax
comp=Z,17nm,0.8s,mb4.7
MKAR Makanchi Array 42.22 298 P **P** **10 29 49.0 -0.7**
comp=Z,12nm,0.8s,mb4.6,baz=81,slow=9.3,SNR=58
MKAR pP pP 10 30 06.3 +1.3
comp=Z,6.6nm,0.9s,baz=80,slow=7.5,SNR=6.6
MKAR Makanchi Array 42.22 298 P **P** **10 29 49.0 -0.7**
MKAR pP pP 10 30 06.3 +1.3
MKAR Makanchi Array 42.22 298 P **P** **10 29 49.0 -0.7**
MKAR *PP pP 10 30 06.4 +1.4
MKAR pmax pmax
comp=Z,12nm,0.8s
MKAR pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 42.61 270 P **P** **10 29 54.0 +0.9**
LSA Lhasa 42.61 270 *eP* **P** **10 29 54.4 +1.3**
comp=Z,4.5nm,0.3s,mb4.7
LSA Lhasa 42.61 270 *eP* **P** **10 29 54.4 +1.3**
LSA pmax pmax
comp=Z,4.0nm,0.3s,mb4.6
CHTO Chiang Mai 43.30 251 *eP* **P** **10 29 59.2 +0.4**
comp=Z,5.5nm,0.8s,mb4.3
CHTO Chiang Mai 43.30 251 *eP* **P** **10 29 59.2 +0.4**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KTH Kantishna Hill 43.37 37 *eP* **P** **10 29 59.1 +0.3**
comp=Z,11nm,1.0s,mb4.5
CMAR Chiang Mai Arr 43.54 251 P **P** **10 30 00.9 +0.2**
comp=Z,1.5nm,0.4s,mb4.1,baz=31,slow=8.6,SNR=7.6
CMAR Chiang Mai Arr 43.54 251 P **P** **10 30 00.9 +0.2**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
KURK Kurchatov 43.55 304 P **P** **10 30 00.3 -0.1**
comp=Z,28nm,0.8s,mb5.0,baz=77,slow=8.8,SNR=42
KURK Kurchatov 43.55 304 *eP* **P** **10 29 59.5 -0.8**
comp=Z,28nm,0.9s,mb5.0
KURK Kurchatov 43.55 304 P **P** **10 30 00.3 0.0**
KURK pmax pmax
comp=Z,28nm,0.8s,mb5.0
MCK McKinley 44.24 36 *eP* **P** **10 30 05.2 -0.6**
comp=Z,20nm,1.4s,mb4.7
MCK McKinley 44.24 36 *eP* **P** **10 30 05.2 -0.5**
MCK pmax pmax
comp=Z,20nm,1.4s,mb4.7
COLA College 44.63 35*d iP* **P** **10 30 08.4 -0.4**
TAPN Taplejung 46.42 270 *eP* **P** **10 30 24.0 +0.5**
comp=Z,77nm,1.1s,mb5.5
ODAN Odare 46.93 269 *eP* **P** **10 30 28.2 +0.8**
JIRN Jiri 47.39 271 *eP* **P** **10 30 31.4 +0.4**
comp=Z,10nm,0.3s,mb5.2
RAMN Ramite 47.47 270 *eP* **P** **10 30 31.6 0.0**
comp=Z,62nm,0.9s,mb5.6
EGAK Eagle 47.48 34 *eP* **P** **10 30 29.6 -1.6**
comp=Z,18nm,1.4s,mb4.8
GUN Gumba 47.48 272 *eP* **P** **10 30 32.0 +0.2**
comp=Z,45nm,0.5s,mb5.7
BVA0 Borovoye Array 47.85 309 *iP* **P** **10 30 33.4 -0.8**
BVAR Borovoye Array 47.85 309 P **P** **10 30 33.8 -0.4**
comp=Z,4.0nm,0.4s,mb4.8,baz=80,slow=9.7,SNR=20
BVAR pP pP 10 30 51.1 +1.3
comp=Z,2.3nm,0.7s,baz=74,slow=11,SNR=3.4
BVAR PcP PcP 10 32 01.4 -0.6
comp=Z,2.7nm,0.7s,baz=90,slow=5.9,SNR=4.3
BVAR Borovoye Array 47.85 309 P **P** **10 30 33.8 -0.4**
BVAR *PP pP 10 30 51.1 +1.3
BVAR 10 32 01.4
BVAR pmax pmax
comp=Z,4.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 47.90 309 *eP* **P** **10 30 34.3 -0.3**
comp=Z,44nm,1.8s,mb5.2
BRVK Borovoye 47.90 309 *eP* **P** **10 30 34.3 -0.3**
BRVK pmax pmax
comp=Z,44nm,1.8s,mb5.2
KKN Kakani 48.00 272 *eP* **P** **10 30 35.8 +0.1**
comp=Z,48nm,0.7s,mb5.6
KKN Kakani 48.00 272 *eP* **P** **10 30 35.8 +0.1**
KKN pmax pmax
comp=Z,48nm,0.7s,mb5.6
TKM2 Tokmak 2 48.00 295 *eP* **P** **10 30 36.1 +0.6**
comp=Z,28nm,0.8s,mb5.3
TKM2 Tokmak 2 48.00 295 *eP* **P** **10 30 36.1 +0.6**
TKM2 pmax pmax
comp=Z,28nm,0.8s,mb5.3
PKI Pulchoki 48.02 272 *eP* **P** **10 30 35.7 -0.2**
DMN Daman 48.22 272 *eP* **P** **10 30 37.6 +0.1**
comp=Z,33nm,0.8s,mb5.4
GKN Gorkha 48.36 273 *eP* **P** **10 30 38.6 +0.1**
comp=Z,22nm,0.5s,mb5.5
DANN Dangsing 48.83 273 *eP* **P** **10 30 42.6 +0.5**
comp=Z,104nm,0.7s,mb6.0
KOLN Koldanda 49.26 273 *eP* **P** **10 30 45.5 +0.1**
comp=Z,15nm,0.4s,mb5.3
PYUN Piuthan 49.54 274 *eP* **P** **10 30 47.5 0.0**
INK Inuvik 49.75 29 *eP* **P** **10 30 48.0 -0.6**
comp=Z,140nm,0.9s,mb6.0
INK Inuvik 49.75 29 *eP* **P** **10 30 48.0 -0.6**
INK pmax pmax
comp=Z,140nm,0.9s
KK31 Karatay Array 51.34 297 *iP* **P** **10 30 59.7 -1.2**
KK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
SVE Sverdlovsk 51.96 316⇑ *eP* **P** **10 31 05.4 +0.1**
SVE pmax pmax
comp=Z,32nm,0.9s,mb5.2
ARU Arti 53.17 316 *eP* **P** **10 31 13.6 -0.7**
comp=Z,4.4nm,0.4s,mb4.7
ARU Arti 53.17 316*d iP* **P** **10 31 13.3 -1.0**
ARU *PP pP 10 31 30.9 +0.8
ARU *e* 10 32 18.0
ARU *e* 10 33 13.8
ARU S **S** **10 38 41.3 +1.1**
ARU SS SS 10 42 18.7 -1.1
ARU pmax pmax
comp=Z,28nm,1.2s,mb5.1
DLBC Dease Lake 54.41 40 P **P** **10 31 24.4 +1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=227,slow=3.4,SNR=6.4
SPITS Spitsbergen Ar 55.83 348 P **P** **10 31 32.3 -1.0**
comp=Z,3.0nm,0.8s,mb4.4,baz=9.9,slow=10,SNR=4.7
SPITS Spitsbergen Ar 55.83 348 P **P** **10 31 32.3 -1.0**
SPITS pmax pmax
comp=Z,3.0nm,0.8s
AKTK Aktyubinsk 55.94 310 P **P** **10 31 33.9 -0.5**
AKTO Aktyubinsk 55.94 310 P **P** **10 31 33.9 -0.5**
comp=Z,2.2nm,0.6s,mb4.4,baz=50,slow=12,SNR=7.1
AKTO Aktyubinsk 55.94 310 P **P** **10 31 33.9 -0.5**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KBL Kabul 56.37 288 *eP* **P** **10 31 36.6 -1.1**
comp=Z,6.6nm,0.7s,mb4.8
KBL Kabul 56.37 288 *eP* **P** **10 31 36.7 -1.0**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
RES Resolute Bay 57.69 15 *eP* **P** **10 31 45.0 -1.4**
comp=Z,203nm,0.8s
LVZ Lovozero 57.91 335⇑ *eP* **P** **10 31 45.6 -2.5**
LVZ pmax pmax
comp=Z,71nm,1.9s,mb5.4
KEV Kevo 59.09 338 *ep* **P** **10 31 55.3 -1.0**
comp=Z,0.6nm,0.3s,mb4.1
KEV Kevo 59.09 338 *eP* **P** **10 31 55.3 -1.0**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
YKA Yellowknife Ar 59.26 32 P **P** **10 31 56.7 -0.8**
comp=Z,3.2nm,0.8s,mb4.4,baz=304,slow=6.6,SNR=13
YKA Yellowknife Ar 59.26 32 P **P** **10 31 56.7 -0.8**
YKA Yellowknife Ar 59.26 32 P **P** **10 31 56.7 -0.9**
YKA pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 59.64 339 P **P** **10 31 59.1 -0.9**
comp=Z,3.9nm,0.9s,mb4.4,baz=9.8,slow=7.9,SNR=5.0
ARCES ARCESS Array B 59.64 339 P **P** **10 31 59.2 -0.9**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
JOF Joensuu 61.95 331 *ep* **P** **10 32 14.5 -1.4**
comp=Z,1.9nm,0.3s,mb4.7
JOF Joensuu 61.95 331 *eP* **P** **10 32 14.5 -1.4**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
WRAB Tennant Creek 62.01 188⇑ *eP* **P** **10 32 14.0 -2.6**
WRA Warramunga Arr 62.02 188 P **P** **10 32 15.1 -1.6**
comp=Z,1.6nm,0.5s,mb4.4,baz=6.3,slow=6.9,SNR=36
WRA pP pP 10 32 35.1 +2.1
comp=Z,3.2nm,0.9s,baz=7.8,slow=7.7,SNR=7.5
WRA Warramunga Arr 62.02 188 P **P** **10 32 15.1 -1.6**
WRA *PP pP 10 32 35.1 +2.2
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA pmax pmax
comp=Z,3.0nm,0.9s
A07A Ashnola River, 63.99 47⇑ P **P** **10 32 29.0 -0.6**
baz=64
C05A Tolt Reservoir 64.03 48⇑ P **P** **10 32 29.5 -0.4**
baz=64
KAF Kangasniemi 64.25 332 *ep* **P** **10 32 30.2 -0.9**
comp=Z,0.9nm,0.4s,mb4.2
KAF Kangasniemi 64.25 332 *eP* **P** **10 32 30.2 -0.9**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
B07A Winthrop 64.47 47⇓ P **P** **10 32 32.7 -0.1**
baz=64
A08A Turner Farm, O 64.64 46⇓ P **P** **10 32 33.8 -0.1**
baz=64
B08A Colville Reser 64.95 47⇓ P **P** **10 32 35.7 -0.2**
baz=65
A09A Danville 65.00 46⇑ P **P** **10 32 36.0 -0.2**
baz=65
A10A Northport 65.54 45⇑ P **P** **10 32 39.6 -0.1**
baz=65
VSR Storozhevoye 65.69 318 *eP* **P** **10 32 39.9 -0.7**
VSR pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
VSR pmax pmax
comp=N,9.0nm,1.2s
VSR pmax pmax
comp=E,8.0nm,0.8s
ASAR Alice Springs 65.74 188 P **P** **10 32 40.5 -0.7**
comp=E,0.6nm,0.5s,mb3.9,baz=3.0,slow=7.4,SNR=9.4
ASAR pP pP 10 33 00.7 +3.2
comp=E,1.3nm,0.7s,baz=8.3,slow=6.8,SNR=5.3
ASAR Alice Springs 65.74 188 P **P** **10 32 40.5 -0.6**
ASAR *PP pP 10 33 00.7 +3.2
ASAR pmax pmax
comp=Z,1.0nm,0.5s
ASAR pmax pmax
comp=Z,1.0nm,0.7s
VORD Divnogorie 65.78 317 *eP* **P** **10 32 40.2 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.6s
C09A Chrisman Ranch 65.85 47⇑ P **P** **10 32 41.3 -0.5**
baz=66
D08A Wollman Farm, 65.94 48⇓ P **P** **10 32 41.9 -0.4**
baz=66
A11A Hall Mountain, 66.19 45⇓ P **P** **10 32 43.9 0.0**
baz=66
G07A Ruggs Ranch, H 66.58 50⇓ P **P** **10 32 46.5 +0.1**
baz=66
YBH Yreka Blue Hor 66.89 54 P **P** **10 32 49.5 +1.0**
comp=E,1.9nm,0.7s,mb4.2,baz=247,slow=7.6,SNR=3.6
YBH Yreka Blue Hor 66.89 54 P **P** **10 32 49.5 +1.1**
YBH pmax pmax
comp=Z,2.0nm,0.7s
D11A Klaveano Farm, 67.36 47⇑ P **P** **10 32 50.9 -0.5**
baz=67
B13A Whitefish 67.54 45⇓ P **P** **10 32 52.4 -0.1**
baz=67
G09A Cove 67.64 49⇓ P **P** **10 32 53.2 +0.1**
baz=67
BSMT Bassoo Peak 67.69 45 *eP* **P** **10 32 48.5 -4.9**
A14A Double T Ranch 67.71 44⇓ P **P** **10 32 53.2 -0.4**
baz=67
E11A Bogner Ranch, 67.85 47⇓ P **P** **10 32 54.0 -0.5**
baz=68
C13A Hot Springs 67.91 45⇓ P **P** **10 32 54.4 -0.5**
baz=68
J07A Hines 67.92 51⇑ P **P** **10 32 55.2 +0.3**
baz=68
G10A Bishop Farm, J 68.00 48⇑ P **P** **10 32 55.1 -0.3**
baz=68
A15A Johnson Ranch, 68.06 43⇑ P **P** **10 32 55.0 -0.7**
baz=68
E12A Beaver Dam Sad 68.16 47⇑ P **P** **10 32 56.7 +0.3**
baz=68
KIV Kislovodsk 68.21 310 *eP* **P** **10 32 57.8 +1.0**
comp=Z,38nm,1.0s,mb5.4
KIV Kislovodsk 68.21 310 *eP* **P** **10 32 57.4 +0.7**
KIV pmax pmax
comp=Z,41nm,1.1s,mb5.4
C14A Swan Lake 68.29 45⇑ P **P** **10 32 57.4 +0.1**
baz=68
D13A Huson 68.34 46⇑ P **P** **10 32 57.5 0.0**
baz=68
K07A Rock Creek Ran 68.37 52⇑ P **P** **10 32 57.8 0.0**
baz=68
G11A Walters Elk Ra 68.41 48⇓ P **P** **10 32 58.0 0.0**
baz=68
J08A Circle Bar Ran 68.42 51⇓ P **P** **10 32 58.2 +0.2**
baz=68
I09A Lost Marbles R 68.46 50⇓ P **P** **10 32 58.8 +0.4**
baz=68
B15A Bradely Ranch, 68.57 44⇑ P **P** **10 32 58.5 -0.4**
baz=68,SNR=5.8
H10A Noah's Angus R 68.64 49⇑ P **P** **10 32 59.3 -0.2**
baz=68
A16A West Butte Ran 68.66 43⇓ P **P** **10 32 59.0 -0.5**
baz=68
O04C Chester 68.71 55⇓ P **P** **10 33 00.3 +0.4**
baz=68
L07A Adell 68.73 52⇓ P **P** **10 33 00.4 +0.3**
baz=68
F12A Elk City 68.75 47⇓ P **P** **10 33 00.3 +0.3**
baz=68
D14A Greenough 68.85 45⇓ P **P** **10 33 00.6 -0.1**
baz=69
C15A Salmond Ranch, 68.89 44⇓ P **P** **10 33 01.1 +0.2**
baz=69,SNR=5.3
B16A M & M Farms, S 68.94 43⇓ P **P** **10 33 00.7 -0.5**
baz=69,SNR=9.4
H11A Donnelly 68.98 48⇑ P **P** **10 33 01.1 -0.4**
baz=69
A17A Triple J Farms 69.11 42⇑ P **P** **10 33 02.0 -0.3**
baz=69
N06A Buffalo Meadow 69.21 54⇑ P **P** **10 33 03.4 +0.4**
baz=69
M07A Soldier Meadow 69.21 53⇓ P **P** **10 33 03.8 +0.7**
baz=69
FFC Flin Flon 69.25 34 *eP* **P** **10 33 02.7 -0.3**
comp=Z,9.5nm,0.8s,mb4.8
FFC Flin Flon 69.25 34 *eP* **P** **10 33 02.7 -0.3**
FFC pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
C16A Fuhringer Ranc 69.32 44⇑ P **P** **10 33 04.0 +0.4**

baz=69
B17A L&G Farms, Che 69.48 43 ⇓P P **10 33 04.5 -0.1**
baz=69
K10A MacKenzie Ranc 69.70 50 ⇓P P **10 33 05.8 -0.2**
baz=69
H12A Diamond D Ranc 69.72 48 ⇓P P **10 33 06.1 -0.1**
baz=69
E15A Deer Lodge 69.73 45 ⇓P P **10 33 06.2 0.0**
baz=69
LAVA Lava Cap Winer 69.88 56 ⇓P P **10 33 07.2 0.0**
baz=70
MFID Camas Ranch 69.89 49 ⇑P P **10 33 07.1 -0.1**
baz=70
NB2 NORSAR Subarra 69.91 337 P P **10 33 05.8 -1.2**
comp=Z,8.3nm,0.8s,mb4.7,baz=36,slow=6.5
NOA NORSAR Array B 69.91 337 P P **10 33 05.7 -1.3**
comp=Z,5.5nm,0.7s,mb4.6,baz=37,slow=6.1,SNR=18
NOA pP pP 10 33 27.2 +3.8
comp=Z,4.1nm,0.8s,baz=37,slow=6.1,SNR=4.3
NOA NORSAR Array B 69.91 337 P P **10 33 05.7 -1.3**
NOA *PP pP 10 33 27.2 +3.8
NOA pmax pmax
comp=Z,6.0nm,0.7s
NOA pmax pmax
comp=Z,4.0nm,0.8s
C17A Wharram Farm, 69.93 44 ⇑P P **10 33 06.7 -0.6**
baz=70
B18A Beardsley Farm 69.94 42 ⇑P P **10 33 07.4 +0.1**
baz=70
HRY Holter Researc 69.97 45 *eP* P **10 33 08.3 +0.7**
I12A Atlanta 70.05 49 ⇑P P **10 33 07.9 -0.2**
baz=70
H13A Challis 70.05 48 ⇑P P **10 33 08.2 +0.1**
baz=70
F15A Butte 70.19 46 ⇑P P **10 33 09.0 0.0**
baz=70
EGMT Eagleton 70.19 43 ⇑P P **10 33 08.8 -0.1**
baz=70
L10A Juniper Basin 70.37 51 ⇑P P **10 33 10.4 +0.3**
baz=70
J12A Stokes Ranch, 70.41 49 ⇑P P **10 33 10.4 +0.1**
baz=70
DLMT Dillon 70.44 46 *eP* P **10 33 10.9 +0.4**
comp=Z,71nm,2.8s,mb5.1
H14A Leadore 70.50 47 ⇑P P **10 33 11.4 +0.5**
baz=70
I13A Wildhorse Cree 70.54 48 ⇑P P **10 33 11.5 +0.4**
baz=70
HLID Hailey 70.59 49 ⇑P P **10 33 12.0 +0.6**
baz=70
G15A Dillon 70.62 46 ⇑P P **10 33 11.6 0.0**
baz=70,SNR=8.0
MCMT McKenzie Canyo 70.65 47 *eP* P **10 33 10.9 -0.8**
E17A Martinsdale 70.65 45 ⇑P P **10 33 11.8 0.0**
baz=70
M10A I.L. Ranch, Tu 70.68 51 ⇑P P **10 33 12.2 +0.2**
baz=70
L11A Cat Creek Ranc 70.72 50 ⇑P P **10 33 12.5 +0.2**
baz=70
R06C Coleville 70.82 55 ⇑P P **10 33 13.3 +0.4**
baz=71
AKASG Malin Array Be 70.82 322 P P **10 33 11.4 -1.3**
comp=Z,4.3nm,0.5s,mb4.7,baz=44,slow=6.0,SNR=35
AKASG Malin Array Be 70.82 322 P P **10 33 11.4 -1.3**
AKASG Malin Array Be 70.82 322 P P **10 33 11.4 -1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 70.82 322 *eP* P **10 33 11.6 -1.1**
KIEV Kiev 70.83 322 *eP* P **10 33 11.7 -1.1**
comp=Z,7.9nm,0.8s,mb4.7
KIEV Kiev 70.83 322 *eP* P **10 33 11.7 -1.1**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
J13A Cove Ranch, Pi 70.83 49 ⇑P P **10 33 13.4 +0.4**
baz=71
H15A Lima 70.89 47 ⇑P P **10 33 13.4 +0.2**
baz=71
I14A Mackay 70.90 48 ⇑P P **10 33 13.6 +0.3**
baz=71
K12A Draper Farm, C 70.91 50 ⇑P P **10 33 13.6 +0.2**
baz=71
S05C Merced 71.01 57 ⇑P P **10 33 14.3 +0.2**
baz=71
E18A Harlowton 71.07 44 ⇑P P **10 33 14.4 +0.1**
baz=71
F17A Fitzpatrick Pl 71.12 45 ⇓P P **10 33 14.5 -0.1**
baz=71
L12A House Creek Ra 71.16 50 ⇓P P **10 33 15.3 +0.4**
baz=71
M11A Holland Ranch, 71.17 51 ⇑P P **10 33 15.7 +0.7**
baz=71
J14A Carey 71.25 48 ⇓P P **10 33 16.1 +0.6**
baz=71
G17A Pierce Place, 71.46 45 ⇓P P **10 33 17.3 +0.7**
baz=71
Q08A Gabbs 71.53 54 ⇑P P **10 33 17.7 +0.5**
baz=71
NVAR Mina Array Bea 71.58 55 P P **10 33 17.9 +0.4**
comp=Z,2.0nm,0.7s,mb4.1,baz=287,slow=6.0,SNR=15
NVAR pP pP 10 33 37.6 +3.6
comp=Z,1.2nm,0.6s,baz=307,slow=6.9,SNR=4.2
T06C Millerton Lake 71.60 57 ⇓P P **10 33 17.9 +0.2**
baz=71
F18A Big Timber 71.61 44 ⇓P P **10 33 17.9 +0.3**
baz=71
M12A Wells 71.69 51 ⇑P P **10 33 18.3 +0.2**
baz=71
J15A Blackfoot 71.80 48 ⇑P P **10 33 19.4 +0.7**
baz=72
L13A Double Diamond 71.81 50 ⇑P P **10 33 19.6 +0.8**
baz=72
P10A Eureka 71.93 53 ⇑P P **10 33 20.3 +0.7**
baz=72
N12A Clover Valley, 71.98 51 ⇓P P **10 33 20.7 +0.8**
baz=72
I16A Newdale 72.01 47 ⇓P P **10 33 20.9 +0.9**
baz=72
G18A Lazy EL Ranch, 72.08 45 ⇓P P **10 33 21.3 +0.9**
baz=72
H17A Grant Village 72.16 46 ⇓P P **10 33 21.9 +1.0**
baz=72
J16A Bone 72.34 47 ⇓P P **10 33 22.9 +0.9**
baz=72
R09A Tonopah 72.44 54 ⇑P P **10 33 23.2 +0.5**
baz=72
Q10A Clear Creek Ra 72.47 53 ⇓P P **10 33 23.3 +0.4**
baz=72
O12A Currie 72.52 51 ⇑P P **10 33 23.7 +0.6**
baz=72
M14A Sheep Mountain 72.53 50 ⇓P P **10 33 23.7 +0.6**
baz=72
K16A Soda Springs 72.64 48 ⇓P P **10 33 24.3 +0.6**
baz=72
S09A Goldfield 72.68 55 ⇑P P **10 33 24.8 +0.6**
baz=72
L15A Malad City 72.74 49 ⇑P P **10 33 24.8 +0.4**
baz=72
J17A Brown Place, J 72.77 47 ⇓P P **10 33 24.8 +0.3**
baz=72
S10A Tonopah Range, 72.94 54 ⇓P P **10 33 26.0 +0.4**
baz=73
N14A Grayback Hills 73.04 50 ⇓P P **10 33 26.7 +0.5**
baz=73
K17A Gardner Place, 73.06 47 ⇓P P **10 33 26.6 +0.3**
baz=73
M15A Larsen Ranch, 73.06 49 ⇓P P **10 33 26.8 +0.4**
baz=73
L16A Fish Haven 73.27 48 ⇑P P **10 33 28.2 +0.7**
baz=73
R11A Troy Canyon, C 73.27 53 ⇑P P **10 33 27.7 +0.1**
baz=73
Q12A Willow Creek R 73.27 52 ⇓P P **10 33 28.2 +0.6**
baz=73
N15A Stansbury Isla 73.40 50 ⇓P P **10 33 28.8 +0.5**
baz=73
P13A Bates Ranch, G 73.48 52 ⇑P P **10 33 28.9 +0.1**
baz=73
MPMC Manual Prospec 73.58 56 ⇓P P **10 33 29.8 +0.3**
baz=73
K18A Toltan Ranch, 73.62 47 ⇑P P **10 33 29.5 -0.1**
baz=73
M16A Huntsville 73.62 49 ⇓P P **10 33 29.7 +0.1**
baz=73
S11A Rachel 73.63 54 ⇑P P **10 33 30.2 +0.5**
baz=73
DUG Dugway 73.69 50 *eP* P **10 33 30.8 +0.8**
comp=Z,4.7nm,0.8s,mb4.5
DUG Dugway 73.69 50 ⇑P P **10 33 29.9 -0.2**
baz=73
DUG Dugway 73.69 50 *eP* P **10 33 30.8 +0.8**
DUG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
FURC Furnace Creek, 73.71 56 ⇓P P **10 33 30.6 +0.4**
baz=74
TPNV Topopah Spring 73.78 55 ⇓P P **10 33 31.1 +0.5**
baz=74
BW06 Boulder Array 73.80 47 *eP* P **10 33 30.6 0.0**
comp=Z,3.4nm,0.7s,mb4.4
BW06 Boulder Array 73.80 47 ⇑P P **10 33 30.4 -0.2**
baz=74,SNR=5.2
PDAR Pinedale Array 73.80 47 P P **10 33 30.6 0.0**
comp=Z,3.3nm,0.7s,mb4.4,baz=269,slow=2.5,SNR=24
PDAR pP pP 10 33 50.0 +2.8
comp=Z,1.5nm,0.9s,baz=319,slow=1.7,SNR=3.4
Q13A Wheeler Ranch, 73.80 52 ⇑P P **10 33 31.2 +0.5**
baz=74
O15A The Old Anders 73.83 50 ⇑P P **10 33 31.4 +0.6**
baz=74
R12A Pony Springs, 73.87 53 ⇑P P **10 33 31.1 0.0**
baz=74
P14A Drum Mountains 73.94 51 ⇑P P **10 33 31.8 +0.3**
baz=74
M17A Scullys Gap (B 74.06 48 ⇑P P **10 33 32.5 +0.3**
baz=74
L18A Fontenelle, Gr 74.10 48 ⇑P P **10 33 32.7 +0.3**
baz=74
T11A Corn Creek, Al 74.21 54 ⇓P P **10 33 33.3 +0.1**
baz=74
Q14A Sevier Lake (B 74.22 52 ⇓P P **10 33 33.4 +0.2**
baz=74
N17A Moffit Pass 74.32 49 ⇑P P **10 33 33.9 +0.2**
baz=74
L19A Farson 74.36 47 ⇓P P **10 33 34.1 +0.2**
baz=74
P15A Leamington 74.41 51 ⇓P P **10 33 34.3 +0.1**
baz=74
M18A Lyman 74.42 48 ⇓P P **10 33 34.3 +0.1**
baz=74
O16A Springville 74.43 50 ⇑P P **10 33 34.2 -0.2**
baz=74
MPU Maple Canyon 74.49 50 *eP* P **10 33 35.4 +0.7**
comp=Z,5.7nm,0.7s,mb4.6
Q15A Fillmore 74.73 51 ⇑P P **10 33 36.1 0.0**
baz=74
S13A Holt Ranch, En 74.80 53 ⇓P P **10 33 36.8 +0.3**
baz=74
ULM Lac du Bonnet 75.06 34 P P **10 33 36.5 -1.3**
comp=Z,2.2nm,0.6s,mb4.3,baz=115,slow=1.2,SNR=3.5
KOLS Kolonicke sedl 75.23 324 *eP* P **10 33 38.5 -0.3**
KOLS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
O18A Roosevelt 75.24 49 ⇓P P **10 33 39.4 +0.4**
baz=75,SNR=5.0
N19A John Jarvie Ra 75.28 48 ⇑P P **10 33 39.3 +0.1**
baz=75
STHS Stebnicka Huta 75.31 325 *eP* P **10 33 39.9 +0.6**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
OJC Ojcow 75.32 326 *eP* P **10 33 39.0 -0.3**
U13A Pakoon Wash 75.51 54 ⇓P P **10 33 41.0 +0.4**
baz=75
L21A Rawlins 75.53 46 ⇓P P **10 33 40.3 -0.3**
baz=75
GMRC Granite Mounta 75.55 56 ⇑P P **10 33 41.1 +0.2**
baz=75
CRVS Cervenica-Dubn 75.61 324 *eP* P **10 33 40.2 -0.8**
SRU San Rafael 75.73 50 *eP* P **10 33 42.2 +0.4**
comp=Z,4.7nm,0.7s,mb4.5
SRU San Rafael 75.73 50 ⇓P P **10 33 41.9 +0.1**
baz=75,SNR=6.4
SRU San Rafael 75.73 50 *eP* P **10 33 42.2 +0.4**
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
R16A Teasdale 75.73 51 ⇑P P **10 33 42.6 +0.7**
baz=76
U14A Mt Trumbull 75.98 54 ⇑P P **10 33 44.1 +0.8**
baz=76
S16A Weppner Ranch, 76.05 52 ⇓P P **10 33 44.3 +0.6**
baz=76
BRTR Keskin Array B 76.09 311 P P **10 33 43.6 -0.3**
comp=Z,2.6nm,0.8s,mb4.2,baz=74,slow=3.5,SNR=5.7
BRTR Keskin Array B 76.09 311 P P **10 33 43.6 -0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
R17A Hanksville Air 76.09 51 ⇑P P **10 33 44.3 +0.4**
baz=76
P19A Cripple Cowboy 76.25 49 ⇑P P **10 33 45.0 +0.2**
baz=76
BC3 Big Chuckw Mtn 76.42 57 ⇑P P **10 33 46.1 +0.2**
baz=76
U15A North Rim 76.50 53 ⇑P P **10 33 46.6 +0.3**
baz=76
V14A Boquillas Ranc 76.55 54 ⇑P P **10 33 46.8 +0.3**
baz=76
Q19A Hogan Spring (76.55 49 ⇑P P **10 33 46.4 -0.1**
baz=76,SNR=9.5
S17A Black Ridge (B 76.57 51 ⇑P P **10 33 46.7 +0.1**
baz=76,SNR=5.8
R18A Canyonlands Na 76.58 50 ⇓P P **10 33 46.7 0.0**
baz=76
DPC Dobruska-Polom 76.64 328 *eP* P **10 33 47.2 +0.4**
UPC Upice 76.64 328 *eP* P **10 33 47.0 +0.2**
X13A Yucca 76.80 55 ⇓P P **10 33 48.3 +0.3**
baz=76
PDMCI Parker Dam,Lak 76.81 56 ⇑P P **10 33 48.2 +0.2**
baz=77
W14A Seligman 76.84 54 ⇑P P **10 33 48.8 +0.5**
baz=77
V15A Kaibab Nationa 76.99 53 ⇑P P **10 33 49.7 +0.6**
baz=77
S18A Hurst Farm, Bl 77.00 51 ⇓P P **10 33 49.2 +0.1**
baz=77
VYHS Vyhne 77.05 325 *eP* P **10 33 48.9 -0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
PV10 Paradox Valley 77.08 50 *eP* P **10 33 50.5 +1.0**
comp=Z,196nm,0.8s
CLL Collm 77.16 330 *i* P P **10 33 49.1 -0.6**
CLL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CLL Collm 77.16 330 *i* P P **10 33 49.1 -0.6**
comp=Z,9.0nm,0.8s,mb4.8
PVCC Panska Ves 77.19 329 *eP* P **10 33 49.8 -0.1**
U16A Tuba City 77.39 53 ⇓P P **10 33 51.9 +0.6**
baz=77,SNR=5.4
T18A Mexican Hat 77.45 51 ⇑P P **10 33 51.7 +0.1**
baz=77
S19A Harvey Farm, M 77.45 50 ⇑P P **10 33 51.5 -0.1**
baz=77
X14A Yava 77.46 55 ⇑P P **10 33 52.0 +0.3**
baz=77
PV01 Paradox Valley 77.51 50 *eP* P **10 33 52.2 +0.3**
PRU Pruhonice 77.63 328 *eP* P **10 33 52.2 -0.1**
SMCO Snowmass 77.68 48 *eP* P **10 33 53.9 +1.0**
comp=Z,1.9nm,0.7s,mb4.1
TREC Trest 77.81 328 *eP* P **10 33 53.4 +0.1**
X15A Humboldt 77.85 55 ⇓P P **10 33 54.1 +0.3**
baz=78
W16A Flagstaff 77.86 54 ⇓P P **10 33 54.2 +0.3**
baz=78
ISCO Idaho Springs 77.99 47 *eP* P **10 33 54.5 -0.1**
comp=Z,49nm,2.7s,mb5.0
ISCO Idaho Springs 77.99 47 *eP* P **10 33 54.5 -0.1**
ISCO pmax pmax
comp=Z,49nm,2.7s,mb5.0
Y15A Casa Rosa Ranc 78.15 55 ⇓P P **10 33 55.7 +0.2**
baz=78
MVCO Mesa Verde 78.19 50 ⇓P P **10 33 55.7 0.0**
baz=78
X16A Lo Mia Camp, P 78.38 54 ⇓P P **10 33 57.2 +0.4**
baz=78
V18A Ganado 78.39 52 ⇓P P **10 33 57.4 +0.5**
baz=78
KHC Kasperske Hory 78.69 328 *eP* P **10 33 58.3 +0.1**
Y16A Circle Bar Ran 78.72 55 ⇑P P **10 33 59.1 +0.4**
baz=78
GERES GERESS Array B 78.87 328 P P **10 33 58.7 -0.5**
comp=Z,1.4nm,0.6s,mb4.1,baz=31,slow=5.4,SNR=12
GERES GERESS Array B 78.87 328 P P **10 33 58.7 -0.5**
GERES pmax pmax
comp=Z,1.0nm,0.6s
115A Sonoran Desert 79.06 56 ⇑P P **10 34 01.2 +0.6**
baz=79
X18A Snowflake 79.19 53 ⇓P P **10 34 01.5 +0.3**
baz=79
Y17A Roosevelt 79.23 54 ⇑P P **10 34 02.1 +0.7**
baz=79
X19A St. Johns 79.66 53 ⇑P P **10 34 04.5 +0.7**
baz=79,SNR=5.1
Y18A Canyon Day Jun 79.66 54 ⇑P P **10 34 04.2 +0.4**
baz=79
SOKA Soboth 80.07 326 ⇓*i*P P **10 34 05.9 +0.2**
comp=Z,11nm,0.8s,mb4.8
118A Homack Ranch, 80.49 55 ⇑P P **10 34 08.6 +0.3**
baz=80
119A Ashpeak Ranch, 80.80 54 ⇓P P **10 34 10.0 0.0**
baz=80
218A Dragoon 80.90 55 ⇓P P **10 34 10.8 +0.3**
baz=81
ANMO Albuquerque 80.95 51⇑*eP* P **10 34 11.0 +0.3**
RETA Reutte 81.12 329 ⇓*i*P P **10 34 11.5 +0.1**
comp=Z,12nm,1.1s,mb4.8
219A White Tail Can 81.36 55 ⇓P P **10 34 13.3 +0.3**
baz=81
FETA Feichten 81.52 329 ⇓*i*P P **10 34 13.6 +0.1**
comp=Z,7.5nm,1.0s,mb4.6
DAVA Damuels 81.62 329 ⇓*i*P P **10 34 14.0 0.0**
comp=Z,14nm,0.9s,mb4.9
CDF Champ du Feu 81.64 332 *eP* P **10 34 13.4 -0.7**
comp=Z,7.3nm,0.6s,mb4.5
CDF Champ du Feu 81.64 332 *eP* P **10 34 13.4 -0.7**
comp=Z,3.7nm,0.6s,mb4.5
CDF Champ du Feu 81.64 332 *eP* P **10 34 13.4 -0.7**
CDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
319A Douglas 81.78 55 ⇑P P **10 34 15.2 -0.1**
baz=82
ECH Echery 81.84 332 *eP* P **10 34 14.1 -1.1**
HINF Hinteralfeld 82.29 331 *eP* P **10 34 16.3 -1.2**
HAU Haudompre 82.31 332 *eP* P **10 34 16.4 -1.2**
comp=Z,12nm,0.8s,mb4.6
HAU Haudompre 82.31 332 *eP* P **10 34 16.4 -1.2**
comp=Z,8.8nm,0.8s,mb4.6
HAU Haudompre 82.31 332 *eP* P **10 34 16.4 -1.2**
HAU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CABF La Chapelle 83.59 331 *eP* P **10 34 24.6 +0.3**
LOR Lormes 83.80 333 *eP* P **10 34 24.4 -1.0**
comp=Z,20nm,0.8s,mb5.0
LOR Lormes 83.80 333 *eP* P **10 34 24.4 -1.0**
comp=Z,10nm,0.8s,mb5.0
LOR Lormes 83.80 333 *eP* P **10 34 24.4 -1.0**
LOR pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
FLN La Foliniere 83.88 336 *eP* P **10 34 24.5 -1.2**
comp=Z,9.5nm,0.7s,mb4.7
FLN La Foliniere 83.88 336 *eP* P **10 34 24.5 -1.2**
comp=Z,4.8nm,0.7s,mb4.7
FLN La Foliniere 83.88 336 *eP* P **10 34 24.5 -1.2**
FLN pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LDF La Druitiere 83.92 336 *eP* P **10 34 25.4 -0.5**
SSF Saint Saulge 84.10 333 *eP* P **10 34 26.0 -0.9**
comp=Z,14nm,0.8s,mb4.9
SSF Saint Saulge 84.10 333 *eP* P **10 34 26.0 -0.9**
comp=Z,7.3nm,0.8s,mb4.9
SSF Saint Saulge 84.10 333 *eP* P **10 34 26.0 -0.9**
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
LPL La Plagne 84.29 330 *eP* P **10 34 27.6 -0.3**
comp=Z,9.0nm,0.6s,mb4.8
LPL La Plagne 84.29 330 *eP* P **10 34 27.6 -0.3**
comp=Z,4.5nm,0.6s,mb4.8
LPL La Plagne 84.29 330 *eP* P **10 34 27.6 -0.3**
LPL pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
LPG La Plagne 84.30 330 *eP* P **10 34 27.7 -0.2**
comp=Z,31nm,1.1s,mb5.1
LPG La Plagne 84.30 330 *eP* P **10 34 27.7 -0.2**
comp=Z,16nm,1.1s,mb5.0
LPG La Plagne 84.30 330 *eP* P **10 34 27.7 -0.2**
LPG pmax pmax
comp=Z,16nm,1.1s,mb5.1
GRR Gorron 84.33 336 *eP* P **10 34 27.1 -0.9**
comp=Z,18nm,0.8s,mb4.9
GRR Gorron 84.33 336 *eP* P **10 34 27.1 -0.9**
comp=Z,8.8nm,0.8s,mb4.9
GRR Gorron 84.33 336 *eP* P **10 34 27.1 -0.9**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SMF Signal de Mont 84.35 333 *eP* P **10 34 27.4 -0.8**
comp=Z,22nm,0.9s,mb5.0
SMF Signal de Mont 84.35 333 *eP* P **10 34 27.4 -0.8**
comp=Z,11nm,0.9s,mb5.0
SMF Signal de Mont 84.35 333 *eP* P **10 34 27.4 -0.8**
SMF pmax pmax
comp=Z,11nm,0.9s,mb5.0
AVF Avril sur Loir 84.39 333 *eP* P **10 34 27.6 -0.8**
comp=Z,24nm,0.7s,mb5.1
AVF Avril sur Loir 84.39 333 *eP* P **10 34 27.6 -0.8**
comp=Z,12nm,0.7s,mb5.1
AVF Avril sur Loir 84.39 333 *eP* P **10 34 27.6 -0.8**
AVF pmax pmax
comp=Z,12nm,0.7s,mb5.1
SGMF Saint Gilles 84.94 337 *eP* P **10 34 30.5 -0.6**
MBDF Montbardon 84.95 330 *eP* P **10 34 30.3 -0.9**
comp=Z,9.0nm,0.6s,mb4.8
MBDF Montbardon 84.95 330 *eP* P **10 34 30.3 -0.9**
comp=Z,4.5nm,0.6s,mb4.8
MBDF Montbardon 84.95 330 *eP* P **10 34 30.3 -0.9**
MBDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
ORIF Oris-en-Rattie 85.11 331 *eP* P **10 34 31.6 -0.4**
TCF Toulx Ste Croi 85.21 333 *eP* P **10 34 31.8 -0.7**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 85.21 333 *eP* P **10 34 31.8 -0.7**
comp=Z,5.7nm,1.0s,mb4.7
TCF Toulx Ste Croi 85.21 333 *eP* P **10 34 31.8 -0.7**
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 85.61 331 *eP* P **10 34 33.9 -0.6**
comp=Z,42nm,1.2s,mb5.2
VIVF Saint-Julien-l 85.61 331 *eP* P **10 34 33.9 -0.6**
comp=Z,21nm,1.2s,mb5.2
VIVF Saint-Julien-l 85.61 331 *eP* P **10 34 33.9 -0.6**
VIVF pmax pmax
comp=Z,21nm,1.2s,mb5.2
MFF Saint Martin d 85.70 335 *eP* P **10 34 34.6 -0.3**
comp=Z,24nm,0.9s,mb5.1
MFF Saint Martin d 85.70 335 *eP* P **10 34 34.6 -0.3**
comp=Z,12nm,0.9s,mb5.1
MFF Saint Martin d 85.70 335 *eP* P **10 34 34.6 -0.3**
MFF pmax pmax
comp=Z,12nm,0.9s,mb5.1
RJF Les Rejaudoux 86.31 333 *eP* P **10 34 37.6 -0.4**
comp=Z,9.6nm,0.7s,mb4.8
RJF Les Rejaudoux 86.31 333 *eP* P **10 34 37.6 -0.4**
comp=Z,4.8nm,0.7s,mb4.8
RJF Les Rejaudoux 86.31 333 *eP* P **10 34 37.6 -0.4**
RJF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
CAF Calviac 86.46 333 *eP* P **10 34 38.8 +0.1**
comp=Z,32nm,0.8s,mb5.3
CAF Calviac 86.46 333 *eP* P **10 34 38.8 +0.1**
comp=Z,16nm,0.8s,mb5.3
CAF Calviac 86.46 333 *eP* P **10 34 38.8 +0.1**
CAF pmax pmax
comp=Z,16nm,0.8s,mb5.3
TXAR Lajitas Array 86.63 53 P P **10 34 39.9 +0.1**
comp=Z,1.5nm,0.7s,mb4.3,baz=293,slow=3.6,SNR=17
TXAR Lajitas Array 86.63 53 P P **10 34 39.9 +0.1**
TXAR pmax pmax
comp=Z,2.0nm,0.7s
LFF La Frestale 86.89 334 *eP* P **10 34 40.7 -0.1**
MIV Mineville/With 88.54 25 *eP* P **10 34 49.3 +0.6**

ISCJB ***27*** *10:39:39.3±0.9, 8.15S±004×11868E±005, h12km±6km, mb4.3/17, Error ellipse: s-maj=8.5km s-min=5.8km az=154.5*
IDC ***27*** *10:39:39.0±0.7, 821S×11853E, h0km, mb4.1/12, mb1 4.2/14, mb1mx4.2/22, mbtmp4.1/14, ML4.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.9/29, Error ellipse: s-maj=29.9km s-min=11.3km az=61.0*
DJA ***27*** *10:39:43, 828S×11885E, h10km, Mw5.1/4*
NEIC ***27*** *10:39:44.3±0.3, 8.19S×11861E, h35km, mb4.7/5, Error ellipse: s-maj=13.8km s-min=6.5km az=59.0*
NEIC Felt [III] at Bima.
ISC 27 10:39:41.9±0.8, 820S±004×11865E±005, h16km±6km, n53,

σ1§03/51, **mb4.3**/17, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.34**	**173**	P	**Pg**	**10 39 49.0**	**0.0**
KHKI	**Kahang-Kahang**	**3.01**	**267**	P	**Pn**	**10 40 35.3**	**+6.3**
KAPI	**Kappang**	**3.35**	**19**	Pn	**Pn**	**10 40 33.3**	**-0.3**
	63nm,0.3s,baz=193,slow=7.0,SNR=124						
KAPI				Sn	**Sn**	**10 41 11.2**	**-1.8**
	94nm,0.3s,baz=99,slow=22,SNR=16						
KAPI				LR	LR	10 42 09.2	
	comp=Z,507nm,20.8s,baz=196,slow=44						
KAPI	**Kappang**	**3.35**	**19**	P	**Pn**	**10 40 33.1**	**-0.5**
DNP	**Denpasar**	**3.44**	**262**	P	**Pg**	**10 40 46.6**	**-1.2**
IGBI	**Denpasar**	**3.52**	**260**	P	**Pn**	**10 40 37.2**	**+1.2**
KMMI	**Kalianget**	**4.78**	**284**	P	**Pg**	**10 41 09.3**	**-4.2**
KMMI	**Kalianget**	**4.78**	**284**	P	**Pn**	**10 40 58.9**	**+5.6**
BATI	**Baumata**	**5.34**	**112**	Pn	**Pn**	**10 41 05.2**	**+4.3**
	17nm,0.3s,baz=295,slow=9.8,SNR=14						
BATI				Sn	**Sn**	**10 42 10.6**	**+8.4**
	baz=120,slow=20,SNR=1.9						
BATI				LR	LR	10 43 28.6	
	comp=Z,275nm,21.3s,baz=265,slow=42						
BATI	**Baumata**	**5.34**	**112**	P	**Pn**	**10 41 10.3**	**+9.3**
	67nm,1.1s,734nm0.2nm						
BATI	**Baumata**	**5.34**	**112**	P	**Pn**	**10 41 02.8**	**+1.8**
	48nm,0.5s,724nm0.2nm						
KDI	**Kendari**	**5.77**	**43**	P	**Pg**	**10 41 32.5**	**0.0**
	19nm,1.1s,0.1nm						
KDI	**Kendari**	**5.77**	**43**	P	**Pn**	**10 41 10.1**	**+3.1**
BBKI	**Banjar Baru**	**6.04**	**321**	P	**Pg**	**10 41 39.1**	**+1.5**
	162nm,0.9s,0.6nm						
KRKI	**Karangkates**	**6.13**	**270**	P	Px	10 41 26.4	
KRKI	**Karangkates**	**6.13**	**270**	P	**Pn**	**10 41 17.4**	**+5.5**
SJI	**Sawahan**	**6.83**	**273**	P	Px	10 41 31.5	
SJI	**Sawahan**	**6.83**	**273**	P	**Pn**	**10 41 27.0**	**+5.5**
MBWA	**Marble Bar**	**12.93**	**175**	*e*P	**Pn**	**10 42 43.0**	**-2.0**
KAKA	**Kakadu**	**14.28**	**109**	*e*P	Px	10 42 48.9	
	15nm,0.7s						
KAKA	**Kakadu**	**14.28**	**109**	P	Px	10 42 57.5	
	42nm,0.8s,242nm						
WRA	**Warramunga Arr**	**19.16**	**129**	P	**Pn**	**10 44 04.8**	**-0.9**
	0.9nm,0.3s,baz=302,slow=12,SNR=82						
WRA				S	**Sn**	**10 47 34.5**	**-5.7**
	0.1nm,0.3s,baz=299,slow=23,SNR=4.1						
WRA	**Warramunga Arr**	**19.16**	**129**	P	**Pn**	**10 44 04.8**	**-0.9**
WRA				S	**Sn**	**10 47 34.5**	**-5.7**
WRAB	**Tennant Creek**	**19.16**	**129**	*e*P	**Pn**	**10 44 04.6**	**-1.1**
	4.4nm,0.6s						
WRAB	**Tennant Creek**	**19.16**	**129**	P	**Pn**	**10 44 05.1**	**-0.6**
WB2	**Warramunga Arr**	**19.17**	**129**	*e*P	**Pn**	**10 44 05.2**	**-0.6**
WB2				*e*S	**Sn**	**10 47 32.9**	**-7.6**
ASAR	**Alice Springs**	**21.22**	**138**	P	**P**	**10 44 27.6**	**+0.5**
	6.3nm,0.5s,mb4.2,baz=316,slow=11,SNR=54						
ASAR				S	**S**	**10 48 25.4**	**+2.8**
	1.3nm,0.9s,baz=314,slow=23,SNR=4.9						
KLBR	**Kellerberrin**	**23.29**	**182**	*e*P	**P**	**10 44 48.4**	**-0.7**
	52nm,1.7s,mb4.7						
MUN	**Mundaring**	**23.77**	**185**	*e*P	sP	10 45 09.8	+9.2
FORT	**Forrest**	**24.13**	**160**	*e*P	**P**	**10 44 57.2**	**+0.1**
	53nm,3.6s						
NWAO	**Narrogin (SRO)**	**24.64**	**183**	P	**P**	**10 45 01.4**	**-0.4**
	3.2nm,0.5s,mb4.1,baz=340,slow=12,SNR=3.7						
NWAO	**Narrogin (SRO)**	**24.64**	**183**	*e*P	**P**	**10 45 01.1**	**-0.7**
COEN	**Coen**	**24.73**	**106**	*e*P	**P**	**10 45 02.8**	**0.0**
	15nm,0.8s,mb4.6						
CTA	**Charters Tower**	**29.20**	**117**	P	**P**	**10 45 43.6**	**+0.6**
	2.6nm,0.8s,mb4.0,baz=280,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**31.79**	**141**	*e*P	**P**	**10 46 06.2**	**+0.5**
	4.4nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**31.79**	**141**	P	**P**	**10 46 06.5**	**+0.8**
	6.0nm,0.5s,mb4.7,baz=311,slow=9.1,SNR=19						
CMAR	**Chiang Mai Arr**	**32.86**	**324**	P	**P**	**10 46 15.3**	**+0.1**
	0.6nm,0.3s,mb4.0,baz=154,slow=7.9,SNR=2.8						
ARMA	**Armidale**	**37.94**	**130**	*e*P	**P**	**10 47 01.3**	**+2.5**
KSRS	**Korea Array**	**46.23**	**10**	P	**P**	**10 48 06.8**	**+0.4**
	2.5nm,0.9s,mb4.1,baz=196,slow=9.4,SNR=4.3						
RAMN	**Ramite**	**46.76**	**319**	*e*P	**P**	**10 48 11.7**	**+1.0**
JIRN	**Jiri**	**47.51**	**320**	*e*P	**P**	**10 48 17.0**	**+0.4**
	4.1nm,0.4s,mb4.8						
GUN	**Gumba**	**47.88**	**320**	*e*P	**P**	**10 48 19.8**	**+0.4**
DANN	**Dangsing**	**49.55**	**319**	*e*P	**P**	**10 48 32.0**	**-0.3**
	6.5nm,0.5s,mb4.9						
PYUN	**Piuthan**	**49.90**	**318**	*e*P	**P**	**10 48 35.1**	**+0.2**
	2.6nm,0.5s,mb4.5						
SONM	**Songino Array**	**56.83**	**350**	P	**P**	**10 49 26.3**	**+0.8**
	0.9nm,0.8s,mb3.9,baz=198,slow=8.9,SNR=3.6						
MKAR	**Makanchi Array**	**63.59**	**333**	P	**P**	**10 50 11.0**	**-0.9**
	0.9nm,0.6s,mb4.0,baz=169,slow=5.2,SNR=5.4						
KURK	**Kurchatov**	**68.13**	**334**	P	**P**	**10 50 39.8**	**-1.2**
	0.6nm,0.5s,mb3.9,baz=133,slow=6.6,SNR=2.3						
ZALV	**Zalesovo Beam**	**68.17**	**339**	P	**P**	**10 50 39.5**	**-1.7**
	1.4nm,0.4s,mb4.3,baz=139,slow=5.2,SNR=4.9						
VNDA	**Vanda**	**72.83**	**171**	P	**P**	**10 51 09.9**	**+0.5**
	0.8nm,0.4s,mb4.0,baz=310,slow=9.3,SNR=15						
QSPA	**South Pole Qui**	**81.79**	**180**	P	**P**	**10 51 60.0**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=327,slow=2.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**117.98**	**281**	PKP	PKPdf	10 58 26.6	-2.3
	0.4nm,0.5s,baz=46,slow=1.6,SNR=4.8						
TXAR	**Lajitas Array**	**135.09**	**56**	PKP	PKPdf	10 59 01.8	+0.5
	0.1nm,0.5s,baz=281,slow=2.2,SNR=3.6						
TXAR	**Lajitas Array**	**135.09**	**56**	PKP	PKPdf	10 59 01.8	+0.5

NIED ***27*** *10:40:00, 39.10N×142.50E, h5km, Mw4.1 Best double couple: M0 1.66000×10^15 NP1:φs153.00000°, δ71.00000°, λ-38.00000°. NP2:φs257.00000°, δ54.00000°, λ-157.00000°.*

JMA ***27*** *10:40:57.6±0.1, 39.12N×142.52E, h26km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φs167.00000°, δ35.00000°, λ-18.00000°. NP2: φs272.00000°, δ80.00000°, λ-123.00000°. Principal axes: T Plg27.0000°, Azm28.0000°; N Plg33.0000°, Azm279.0000°; P Plg45.0000°, Azm149.0000°;*

JMA Felt I J1.

ISCJB ***27*** *10:40:57.5±1.2, 3902N×003E×142.50E×007, h18km±8km, mb4.0/14 Error ellipse: s-maj=9.9km s-min=5.5km az=13.7*

MOS ***27*** *10:41:00.3±1.1, 3896N×142.47E, h42km, mb4.4/9, Error ellipse: s-maj=15.0km s-min=10.2km az=79.4*

BJI ***27*** *10:41:01.4, 3900N×142.50E, h36km, mb4.6*

NEIC ***27*** *10:41:01.5±1.1, 3902N×142.50E, h36km±10km, mb4.6/1, MW4.1(NIED), Error ellipse: s-maj=13.1km s-min=9.2km az=122.0*

NEIC Recorded [1 JMA] in Iwate and Miyagi Prefectures.

IDC ***27*** *10:41:03.4±1.8, 3891N×142.42E, h56km±17km, mb3.7/11, mb1 3.9/16, mb1mx3.8/26, mbtmp3.8/16, ML4.0/5, MS3.2/4, Ms1 3.2/4, ms1mx2.9/35, Error ellipse: s-maj=19.8km s-min=10.8km az=97.0*

ISC 27 10:40:58.0±1.2, 3906N±003×14244E±007, h10km±6km, n46, σ1§11/56, mb4.0/14**, 2C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.60**	**272**	⇓P	**Pg**	**10 41 10.4**	**+0.8**
OFUJ				S	**Sg**	**10 41 19.3**	**+1.9**
MIYJ	**Miyakonagasawa**	**0.70**	**317**	⇓P	**Pg**	**10 41 11.0**	**-0.6**
MIYJ				S	**Sg**	**10 41 20.4**	**-0.4**
JMK	**Ichinoseki**	**0.95**	**264**	⇑P	**Pg**	**10 41 16.3**	**-0.1**
JMK				*e*S	**Sg**	**10 41 29.4**	**+0.6**
JOM	**Ohasama**	**0.98**	**295**	⇓P	**Pg**	**10 41 16.3**	**-0.6**
JOM				S	**Sg**	**10 41 29.3**	**-0.3**
JTH	**Tanohata**	**0.98**	**333**	P	**Pg**	**10 41 15.6**	**-1.3**
JIO	**Ouri**	**1.04**	**235**	⇑P	**Pb**	**10 41 17.2**	**-1.0**
JIO				*e*S	**Sg**	**10 41 31.0**	**-0.7**
JKZ	**Kuzumaki**	**1.26**	**317**	⇓P	**Pn**	**10 41 20.1**	**-1.6**
JKZ				S	**Sb**	**10 41 36.6**	**-1.5**
JANG	**Nango**	**1.49**	**332**	P	**Pn**	**10 41 23.4**	**-1.5**
ERM	**Erimo**	**3.00**	**10**	*e*P	**Pn**	**10 41 46.3**	**+0.7**
MJAR	**Matsushiro Arr**	**4.19**	**234**	P	**Pn**	**10 42 03.6**	**+1.6**
	7.0nm,0.3s,baz=36,slow=12,SNR=46						
MJAR				LR	LR	10 43 37.0	
	comp=Z,245nm,19.0s,baz=40,slow=38						
MJAR	**Matsushiro Arr**	**4.19**	**234**	P	**Pn**	**10 42 03.6**	**+1.6**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,245nm,19.0s						
MAJO	**Matsushiro**	**4.19**	**234**	*e*P	**Pn**	**10 42 03.2**	**+1.2**
MAT	**Matsushiro**	**4.19**	**234**	P	**Pn**	**10 42 03.2**	**+1.2**
MAT				*e*S	**Sn**	**10 42 55.5**	**+4.5**
ASAJ	**Asahikawa**	**5.05**	**1**	P	**Pn**	**10 42 17.2**	**+3.4**
	comp=Z,4.9nm,0.3s,baz=239,slow=16,SNR=22						
ASAJ				S	**Sn**	**10 43 19.4**	**+7.2**
	comp=Z,3.1nm,0.3s,baz=18,slow=20,SNR=3.5						
ASAJ				LR	LR	10 44 55.6	
	comp=Z,186nm,18.4s,baz=168,slow=45						
ASAJ	**Asahikawa**	**5.05**	**1**	P	**Pn**	**10 42 17.3**	**+3.5**
ASAJ				S	**Sn**	**10 43 19.4**	**+7.2**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,187nm,18.4s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**26**	*e*P	**Pn**	**10 42 24.5**	**+3.2**
YUK				*e*S	**Sn**	**10 43 19.3**	**-6.3**
YUK				pmax	pmax		
	comp=E,220nm,0.5s						
YUK				smax			
	comp=N,470nm,0.6s						
YUK				smax			
	comp=E,470nm,0.6s						
JHJ	**Hachijo jima 2**	**6.31**	**201**	P	**Pn**	**10 42 30.8**	**-0.3**
	comp=E,18nm,0.3s,baz=84,slow=15,SNR=11						
JHJ				S	**Sn**	**10 43 41.0**	**-2.2**
	comp=E,11nm,0.3s,baz=76,slow=18,SNR=2.3						
JHJ				LR	LR	10 45 07.7	
	comp=E,244nm,20.3s,baz=77,slow=40						
KSRS	**Korea Array**	**11.53**	**267**	P	**Pn**	**10 43 46.4**	**+3.8**
	comp=E,0.2nm,0.3s,baz=80,slow=14,SNR=3.9						
CBIJ	**Chichi jima**	**11.94**	**181**	P	**Pn**	**10 43 48.1**	**-0.1**
	comp=E,8.0nm,0.3s,baz=263,slow=19,SNR=4.1						
PETK	**Petropavlovsk-**	**17.54**	**32**	LR	LR	10 52 39.4	
	comp=E,74nm,18.6s,baz=225,slow=39						
YAK	**Yakutsk**	**24.29**	**345**	*e*P	**P**	**10 46 17.2**	**+2.0**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
SONM	**Songino Array**	**27.39**	**300**	P	**P**	**10 46 45.0**	**+1.5**
	comp=N,0.7nm,0.9s,mb3.2,baz=81,slow=8.9,SNR=3.0						
SONM	**Songino Array**	**27.39**	**300**	P	**P**	**10 46 45.0**	**+1.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KMI	**Kunming**	**36.10**	**259**	P	**P**	**10 48 00.3**	**+0.2**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
ZAA0	**Zalesovo Array**	**41.18**	**311**	*e*P	**P**	**10 48 42.5**	**+0.1**
ZALV	**Zalesovo Beam**	**41.18**	**311**	P	**P**	**10 48 42.1**	**-0.3**
	comp=Z,1.3nm,0.5s,mb3.8,baz=81,slow=9.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**41.18**	**311**	P	**P**	**10 48 42.1**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
MK31	**Makanchi Array**	**43.76**	**301**	*e*P	**P**	**10 49 03.2**	**-0.3**
MKAR	**Makanchi Array**	**43.76**	**301**	P	**P**	**10 49 03.4**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=88,slow=9.4,SNR=9.9						
MKAR	**Makanchi Array**	**43.76**	**301**	P	**P**	**10 49 03.4**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**45.34**	**307**	P	**P**	**10 49 16.6**	**+0.4**
	comp=Z,3.6nm,0.6s,mb4.4,baz=82,slow=8.6,SNR=26						
KURK	**Kurchatov**	**45.34**	**307**	P	**P**	**10 49 16.6**	**+0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**49.40**	**297**	*e*P	**P**	**10 49 48.5**	**+0.7**
	comp=Z,4.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**49.40**	**297**	*e*P	**P**	**10 49 48.5**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**59.18**	**189**	P	**P**	**10 50 58.4**	**-0.7**
	comp=Z,2.5nm,0.5s,mb4.5,baz=6.1,slow=6.8,SNR=27						
WRA	**Warramunga Arr**	**59.18**	**189**	P	**P**	**10 50 58.4**	**-0.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YKA	**Yellowknife Ar**	**61.66**	**31**	P	**P**	**10 51 17.7**	**+2.0**
	comp=Z,0.9nm,0.7s,mb4.0,baz=304,slow=6.6,SNR=3.6						
YKA	**Yellowknife Ar**	**61.66**	**31**	P	**P**	**10 51 17.7**	**+2.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**62.91**	**189**	P	**P**	**10 51 23.0**	**-1.4**
	comp=Z,1.1nm,0.8s,mb4.0,baz=9.9,slow=9.1,SNR=8.3						
ASAR	**Alice Springs**	**62.91**	**189**	P	**P**	**10 51 23.0**	**-1.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**73.14**	**54**	P	**P**	**10 52 27.7**	**-1.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=300,slow=6.4,SNR=3.7						
AKASG	**Malin Array Be**	**73.19**	**322**	P	**P**	**10 52 28.7**	**-0.2**
	comp=Z,1.7nm,0.4s,mb4.4,baz=44,slow=6.1,SNR=6.0						
AKASG	**Malin Array Be**	**73.19**	**322**	P	**P**	**10 52 28.7**	**-0.2**
AKASG	**Malin Array Be**	**73.19**	**322**	P	**P**	**10 52 28.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDAR	**Pinedale Array**	**75.68**	**46**	P	**P**	**10 52 43.2**	**-0.2**
	comp=Z,0.6nm,0.8s,mb3.6,baz=238,slow=1.1,SNR=4.3						
TXAR	**Lajitas Array**	**88.25**	**53**	P	**P**	**10 53 49.3**	**-0.5**
	comp=Z,0.4nm,0.9s,mb3.7,baz=292,slow=3.7,SNR=4.1						

PRU ***27*** *11:07:57.1, 5029N×1873E, h0km*

NEIC ***27*** *11:07:57.0±0.9, 5025N×1883E, h5km, MG2.5(WAR), Error ellipse: s-maj=16.4km s-min=7.7km az=188.0*

WAR 27 11:07:56.4, 5028N×1882E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.62**	**225**	*e*PG	Pg	11 08 08.7	+0.5
OKC				*e*SG	Sg	11 08 16.4	+0.2
	comp=Z,10nm,0.4s						
OJC	**Ojcow**	**0.63**	**95**	*e*Pg	Pg	11 08 08.8	+0.4
OJC				*e*Sg	Sg	11 08 17.7	+1.1
NIE	**Niedzica**	**1.29**	**131**	*e*Pg	Pg	11 08 21.6	+0.5
NIE				*e*Sg	Sg	11 08 39.8	+2.0
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	Pg	11 08 25.3	-1.8
DPC				*e*SG	Sg	11 08 46.5	-1.4
	comp=Z,8.1nm,0.4s						
KSP	**Ksiaz**	**1.71**	**290**	*e*Pg	Pg	11 08 28.4	-0.8
KSP				*e*Sg	Sg	11 08 50.5	-0.8
VYHS	**Vyhne**	**1.78**	**180**	*e*PN	Pn	11 08 27.6	-0.8
VYHS				*e*SN	Sn	11 08 51.0	-0.7
STHS	**Stebnicka Huta**	**1.79**	**118**	*e*PN	Pn	11 08 30.1	+1.6
STHS				*e*SN	Sn	11 08 54.9	+3.1
UPC	**Upice**	**1.81**	**278**	*e*SG	Sg	11 08 52.0	-2.6
PRU	**Pruhonice**	**2.77**	**266**	*e*SG	Sg	11 09 23.5	-1.8
	comp=Z,4.5nm,0.4s						
KHC	**Kasperske Hory**	**3.59**	**253**	*e*SG	Sg	11 09 49.9	-1.8
CLL	**Collm**	**3.83**	**288**	*e*Sg	Sg	11 10 00.0	+0.5

CSEM ***27*** *11:22:16.1, 3459N×2406E, h33km, ML3.6, After HLW*

HLW 27 11:22:16.1, 3459N×2406E, h33km, Mb3.6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLUM		**3.24**	**162**	P	Pn	11 23 04.5	-0.1
SLUM		**3.24**	**162**	P	Pn	11 23 04.4	-0.2
HMAT	**Matruh**	**4.32**	**143**	P	Pn	11 23 19.7	+0.2
HMAT				S	Sn	11 24 06.2	-2.5
SWA2		**5.46**	**167**	P	Pn	11 23 35.1	-0.1
SWA2		**5.46**	**167**	P	Pn	11 23 35.1	-0.1
HHAG	**Hagoal**	**8.23**	**122**	P	Pn	11 24 13.8	+0.7
HHAG				S	Sn	11 25 39.8	-5.1
AMAG	**Maghara**	**8.66**	**114**	P	Pn	11 24 19.9	+0.8
HKAT	**Jabal Katrina**	**10.41**	**123**	P	Pn	11 24 44.4	+1.3
HKAT	**Jabal Katrina**	**10.41**	**123**	P	Pn	11 24 44.3	+1.3

IDC ***27*** *11:25:10.2±1.3, 285N×96.15E, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.0/20, mbtmp4.2/9, ML4.6/1, MS3.5/1, Ms1 3.7/1, ms1mx3.3/29, Error ellipse: s-maj=61.6km s-min=17.2km az=58.0*

BJI ***27*** *11:25:12.8, 296N×96.59E, h22km, mB5.4, mb4.7*

ISCJB ***27*** *11:25:14.5±2.6, 29N±0.1×962E±0.1, h43km±19km, mb4.4/21, Error ellipse: s-maj=31.6km s-min=11.4km az=135.2*

NEIC ***27*** *11:25:15.5±0.5, 285N×96.19E, h35km, mb4.6/9, Error ellipse: s-maj=21.8km s-min=7.3km az=57.0*

DJA ***27*** *11:25:20.6±0.0, 346N×96.41E, h30km, Mjma3.7/6, MLv4.3/6, Mwp3.9/1*

ISC 27 11:25:15.9±2.7, 28N±02×962E±02, h37km±20km, n34, σ0§47/31, mb4.4/21**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.06**	**138**	P	Px	11 25 54.6	
BSI	**Banda Aceh**	**2.78**	**341**	P	**Pn**	**11 25 57.3**	**-0.6**
TRSI	**Tarutung**	**2.88**	**106**	P	**Pn**	**11 26 06.4**	**+7.0**
IPM	**Ipoh**	**5.09**	**71**	P	**Pn**	**11 26 29.4**	**-0.3**
PPI	**Padang Panjang**	**5.33**	**128**	P	Px	11 26 46.9	
	28nm,0.9s,0.2nm						
SNG	**Songkhla**	**6.16**	**46**	P	**Pn**	**11 26 45.0**	**+0.6**
	200nm,0.9s						
KKTK	**Khon Kaen**	**14.91**	**26**	P	**Pn**	**11 28 49.0**	**+4.9**
	494nm,1.0s						
CMAR	**Chiang Mai Arr**	**15.75**	**10**	Pn	**Pn**	**11 28 55.5**	**+0.5**
	0.7nm,0.3s,baz=199,slow=11,SNR=15						
CMAR				LR	LR	11 35 09.3	
	comp=Z,160nm,19.8s,baz=200,slow=38						
ODAN	**Odare**	**25.32**	**341**	*e*P	**P**	**11 30 39.6**	**+0.3**
	10nm,0.4s,mb4.7						
RAMN	**Ramite**	**25.67**	**340**	*e*P	**P**	**11 30 43.2**	**+0.8**
	12nm,0.5s,mb4.6						
TAPN	**Taplejung**	**25.68**	**342**	*e*P	**P**	**11 30 42.4**	**-0.1**
	7.8nm,0.4s,mb4.5						
JIRN	**Jiri**	**26.46**	**340**	*e*P	**P**	**11 30 49.7**	**+0.1**
	15nm,0.8s,mb4.6						
GUN	**Gumba**	**26.80**	**339**	*e*P	**P**	**11 30 52.5**	**-0.1**
	15nm,0.5s,mb4.8						
KOLN	**Koldanda**	**27.55**	**335**	*e*P	**P**	**11 30 59.6**	**+0.3**
	8.4nm,0.5s,mb4.6						
DANN	**Dangsing**	**28.00**	**336**	*e*P	**P**	**11 31 03.1**	**-0.2**
	7.0nm,0.5s,mb4.6						
PYUN	**Piuthan**	**28.10**	**335**	*e*P	**P**	**11 31 04.3**	**+0.1**
	3.8nm,0.4s,mb4.4						
GTA	**Gaotai**	**36.55**	**5**	*e*P	**P**	**11 32 18.0**	**0.0**
GTA				AP	pP	11 32 29.5	+0.9
GTA				XP	sP	11 32 33.8	+0.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**43.76**	**123**	P	**P**	**11 33 18.0**	**-0.1**
	comp=Z,1.8nm,0.5s,mb4.1,baz=301,slow=9.1,SNR=28						
TKM2	**Tokmak 2**	**43.92**	**338**	*e*P	**P**	**11 33 19.6**	**+0.5**
	comp=Z,2.2nm,0.6s,mb4.1						
AAK	**Ala-Archa**	**44.10**	**337**	*e*P	**P**	**11 33 21.6**	**+1.1**
	comp=Z,4.4nm,0.9s,mb4.2						
EKS2	**Erkin-Say**	**44.41**	**336**	*e*P	**P**	**11 33 22.9**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**45.19**	**128**	P	**P**	**11 33 29.5**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.7,baz=297,slow=7.8,SNR=9.5						
MK31	**Makanchi Array**	**45.41**	**347**	*e*P	**P**	**11 33 30.2**	**-0.7**
MKAR	**Makanchi Array**	**45.41**	**347**	P	**P**	**11 33 30.3**	**-0.6**
	comp=Z,4.5nm,0.3s,mb4.7,baz=160,slow=9.0,SNR=95						
SONM	**Songino Array**	**45.68**	**10**	P	**P**	**11 33 32.4**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.5,baz=191,slow=9.4,SNR=18						
SONM				PcP	PcP	11 35 11.3	+0.8
	comp=Z,1.6nm,0.6s,baz=208,slow=3.4,SNR=6.0						
KURK	**Kurchatov**	**49.95**	**345**	*e*P	**P**	**11 34 05.8**	**-0.2**
	comp=Z,4.3nm,0.9s,mb4.5						
ZAA0	**Zalesovo Array**	**51.79**	**351**	*e*P	**P**	**11 34 18.9**	**-0.8**
ZALV	**Zalesovo Beam**	**51.79**	**351**	P	**P**	**11 34 19.1**	**-0.6**
	comp=Z,4.8nm,0.6s,mb4.6,baz=176,slow=6.8,SNR=27						
STKA	**Stephens Creek**	**55.20**	**132**	P	**P**	**11 34 45.4**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.2,baz=313,slow=16,SNR=3.7						
STKA	**Stephens Creek**	**55.20**	**132**	*e*P	**P**	**11 34 45.5**	**+0.3**
AKASG	**Malin Array Be**	**73.35**	**322**	P	**P**	**11 36 43.7**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=103,slow=4.1,SNR=4.9						
AKASG	**Malin Array Be**	**73.35**	**322**	P	**P**	**11 36 43.7**	**-0.1**
ARCES	**ARCESS Array B**	**80.66**	**340**	P	**P**	**11 37 24.9**	**+0.4**
	comp=Z,3.1nm,0.9s,mb4.2,baz=100,slow=6.1,SNR=9.5						
TXAR	**Lajitas Array**	**142.77**	**29**	PKhKP		11 44 42.0	
	comp=Z,0.2nm,0.6s,baz=231,slow=4.8,SNR=5.9						
TXAR				PKP	PKPdf	11 44 45.1	-0.9
	comp=Z,0.3nm,0.7s,baz=344,slow=2.9,SNR=5.7						

GUC 27 11:32:55.7±0.5, 2274S×7067W, h42km±7km, MD3.6, ML2.9, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.42**	**150**	⇓*i*P	Pn	11 33 05.0	-0.5
MECH				*i* S	Sn	11 33 12.6	+0.2
MECH				AML	AML	11 33 13.4	
	comp=N,2μm,0.5s						
CEN1	**Los Morros**	**0.78**	**146**	*i* P	Pn	11 33 12.2	+1.9
C

comp=Z,626µm,21.4s
NOUC Port Laguerre 11.73 161 *e*P **Pn** **11 52 45.8 -0.3**
NOUC *e*S **Sn** **11 54 50.1 -5.7**
DZM Mont Dzumac 11.75 160 *e*P **Pn** **11 52 46.5 +0.1**
DZM *e*S **Sn** **11 54 51.3 -5.0**
DZM Mont Dzumac 11.75 160 *e*P **Pn** **11 52 45.3 -1.0**
comp=Z,852nm,1.6s
NORM Noumea 11.91 160 *e*P **Pn** **11 52 48.0 -0.6**
LASL Noumea 11.93 160 *e*P **Pn** **11 52 49.4 +0.6**
PLUM Mont Dore 12.00 160 *e*P **Pn** **11 52 50.3 +0.5**
PLUM *e*S **Sn** **11 54 58.9 -3.6**
TARA Tarawa 16.24 42 *e*Pn **Pn** **11 53 47.0 +0.3**
comp=Z,252nm,1.2s
FUNA Funafuti 16.92 83 *e*Pn **Pn** **11 53 50.0 -5.3**
EIDS Eidsvold 17.77 215 *e*Pn **Pn** **11 54 05.2 -0.7**
comp=Z,6µm,2.3s
CTA Charters Tower 17.83 238 *e*P **Pn** **11 54 06.1 -0.5**
comp=Z,927nm,0.9s
CTA *e*S **S** **11 57 36.5 +6.4**
CTA Charters Tower 17.83 238 P **Pn** **11 54 07.7 +1.1**
comp=Z,15nm,0.3s,baz=65,slow=12,SNR=104
CTA Charters Tower 17.83 238 *e*P **Pn** **11 54 06.1 -0.5**
CTA pmax pmax
comp=Z,927nm,0.9s
CTAO Charters Tower 17.83 238 *e*P **Pn** **11 54 06.3 -0.3**
comp=Z,16µm,2.4s
CTAO Charters Tower 17.83 238 P **Pn** **11 54 07.8 +1.2**
CTAO Charters Tower 17.83 238 P **Pn** **11 54 07.4 +0.8**
comp=Z,2µm,2.6s
COEN Coen 18.82 259 *e*Pn **Pn** **11 54 20.2 +1.5**
comp=Z,5µm,1.8s
COEN Coen 18.82 259 P **Pn** **11 54 20.2 +1.5**
comp=Z,860nm,2.1s
COEN Coen 18.82 259 P **Pn** **11 54 20.0 +1.3**
comp=Z,860nm,2.1s
MMPI Merauke 21.66 275 P **P** **11 54 53.3 +4.5**
MMPI Merauke 21.66 275 P **P** **11 54 49.7 +0.9**
MMPI Merauke 21.66 275 P **P** **11 54 49.8 +1.0**
comp=Z,2µm,1.7s,mb6.3
ARMA Armidale 21.70 205⇓ *i*P **P** **11 54 48.9 -0.1**
ARMA *e*S **S** **11 58 48.4 +1.2**
JAY Jayapura 22.94 290 P **P** **11 55 04.3 +1.9**
JAY Jayapura 22.94 290 P **P** **11 55 00.7 -1.7**
JAY Jayapura 22.94 290 P **P** **11 55 00.4 -2.0**
comp=Z,555nm,2.1s,mb5.6
AFI Afiamalu 25.56 99 P **P** **11 55 27.0 +0.1**
comp=Z,461nm,0.9s,mb6.0,baz=228,slow=1.3,SNR=40
AFI LR LR 12 03 47.4
comp=Z,152µm,19.7s,MS6.5,baz=280,slow=32
AFI Afiamalu 25.56 99 *e*P **P** **11 55 23.3 -3.7**
comp=Z,490nm,0.9s,mb6.0
AFI P 11 55 26.5
AFI P 11 55 27.0
AFI LR LR 12 03 47.4
AFI Afiamalu 25.56 99 P **P** **11 55 27.0 +0.1**
AFI pmax pmax
comp=Z,461nm,0.9s,mb6.0
AFI MLR MLR
comp=Z,152µm,19.7s,MS6.5
RAO Raoul Island 25.97 137 LR LR 12 03 35.6
comp=Z,80µm,19.6s,MS6.3,baz=81,slow=31
RAO Raoul Island 25.97 137 *e*P **P** **11 55 32.8 +2.3**
OUZ Omahuta 26.26 159 P **P** **11 55 37.4 +4.4**
CNB Canberra Magne 26.89 204 *e*P **P** **11 55 38.2 -0.5**
CNB *e* 11 56 59.8
CNB *e*S **S** **12 00 17.0 +3.9**
CAN Canberra 27.04 204 *e*P **P** **11 55 40.1 0.0**
comp=Z,246nm,1.4s,mb5.5
CAN LR LR
comp=Z,104µm,21.0s,MS6.4
CAN Canberra 27.04 204 *e*P **P** **11 55 40.1 0.0**
CAN pmax pmax
comp=Z,246nm,1.4s,mb5.5
CAN MLR MLR
comp=Z,104µm,21.0s,MS6.4
STKA Stephens Creek 28.19 219⇓ *i*P **P** **11 55 49.5 -0.9**
comp=Z,110nm,1.2s,mb5.4
STKA *e*S **S** **12 00 35.1 +1.5**
STKA Stephens Creek 28.19 219 P **P** **11 55 49.6 -0.8**
comp=Z,57nm,0.8s,mb5.3,baz=28,slow=8.3,SNR=57
STKA LR LR 12 06 31.8
comp=Z,312µm,20.9s,MS6.9,baz=39,slow=35
WRAB Tennant Creek 28.25 248 P **P** **11 55 50.0 -1.1**
comp=Z,1µm,1.6s,mb6.3,SNR=46
WRAB Tennant Creek 28.25 248 *e*P **P** **11 55 49.7 -1.4**
comp=Z,1µm,1.8s,mb6.2
WRAB Tennant Creek 28.25 248 *e*P **P** **11 55 49.7 -1.4**
WRAB pmax pmax
comp=Z,1µm,1.8s,mb6.2
WRAB Tennant Creek 28.25 248 P **P** **11 55 50.3 -0.8**
WB2 Warramunga Arr 28.25 248⇓ *i*P **P** **11 55 49.7 -1.4**
WB2 *e*S **S** **12 00 34.9 0.0**
WB2 *e*SCS ScS 12 06 35.5 +0.1
WRA Warramunga Arr 28.26 248 P **P** **11 55 49.8 -1.5**
comp=Z,42nm,0.9s,mb5.0,baz=79,slow=9.3,SNR=117
WRA PcP PcP 11 59 04.5 +0.4
comp=Z,10.0nm,0.6s,baz=79,slow=3.3,SNR=7.0
WRA LR LR 12 06 05.0
comp=Z,237µm,22.0s,MS6.7,baz=70,slow=34
WRA Warramunga Arr 28.26 248 P **P** **11 55 49.8 -1.4**
WRA 11 59 04.5
WRA pmax pmax
comp=Z,42nm,0.9s
WRA MLR MLR
comp=Z,237µm,22.0s
KAKA Kakadu 29.18 264⇓ *i*P Px 11 55 42.9
comp=Z,1µm,1.5s
ASAR Alice Springs 29.75 241 P **P** **11 56 02.5 -1.9**
comp=Z,61nm,0.9s,mb5.3,baz=72,slow=9.5,SNR=171
ASAR ScP ScP 12 02 48.9 +1.8
comp=Z,8.3nm,0.8s,baz=63,slow=4.1,SNR=5.7
ASAR Alice Springs 29.75 241 P **P** **11 56 02.5 -1.9**
ASAR 12 02 48.9
ASAR pmax pmax
comp=Z,61nm,0.9s
GUMO Guam 29.87 324 LR LR 12 06 43.7
comp=Z,80µm,22.0s,MS6.3,baz=150,slow=34
GUMO Guam 29.87 324 PFAKE 11 56 20.0 +15
GUMO LR LR
comp=Z,80µm,22.0s,MS6.3
URZ Urewera 30.26 156 LR LR 12 06 34.8
comp=Z,93µm,18.8s,MS6.5,baz=162,slow=33
URZ Urewera 30.26 156 P **P** **11 56 11.3 +2.6**
TOO Toolangi 30.44 207⇓ *i*P **P** **11 56 10.0 -0.3**
TOO *e*S **S** **12 01 07.7 -1.2**
BKZ Black Stump Fm 30.82 158 P **P** **11 56 14.2 +0.6**
SWI Sorong 32.34 286 P **P** **11 56 31.5 +4.1**
SWI Sorong 32.34 286 P **P** **11 56 28.4 +1.0**
RPZ Rata Peaks 33.50 168 P **P** **11 56 37.8 +0.7**
comp=Z,119nm,0.8s,mb5.9,baz=338,slow=4.9,SNR=28
MOO Moorlands 33.98 200 *e*P **P** **11 56 41.8 +0.6**
MOO *e*S **S** **12 02 02.7 -1.1**
TAU Tasmania Unive 34.35 200 *e*P **P** **11 56 45.1 +0.7**
comp=Z,244nm,1.4s,mb5.9
TAU Tasmania Unive 34.35 200 *e*P **P** **11 56 45.1 +0.6**
TAU pmax pmax
comp=Z,240nm,1.4s,mb5.9
AAI Ambon 34.48 280 P **P** **11 56 45.6 -0.4**
AAI Ambon 34.48 280 P **P** **11 56 45.3 -0.7**
AAI Ambon 34.48 280 P **P** **11 56 44.8 -1.2**
LBMI Labuha 35.98 284 P **P** **11 57 00.5 +1.6**
FORT Forrest 37.27 233⇓ *i*P **P** **11 57 08.8 -0.9**
comp=Z,600nm,0.9s,mb6.4
FORT *e*S **S** **12 02 53.4 -1.4**
RAR Rarotonga 37.82 110 LR LR 12 09 58.1
comp=Z,37µm,21.4s,MS6.2,baz=271,slow=32
BATI Baumata 37.88 267 P **P** **11 57 15.8 +0.7**
comp=Z,710nm,1.5s,mb6.2
KDI Kendari 39.84 277 P **P** **11 57 31.1 -0.4**
comp=Z,227nm,1.9s,mb5.6
BIPH Bislig 40.44 297⇑ *e*P **P** **11 57 35.3 -1.1**
DAV Davao City (W) 40.63 295 LR LR 12 15 04.8
comp=Z,16µm,18.5s,MS5.9,baz=294,slow=37
DAV Davao City (W) 40.63 295 PFAKE 11 57 50.0 +12
DAV LR LR
comp=Z,58µm,20.0s,MS6.4
DAV Davao City (W) 40.63 295⇑ *e*P **P** **11 57 39.0 +0.9**
MBWA Marble Bar 41.94 251 P **P** **11 57 48.2 -0.5**
SNR=31
MBWA Marble Bar 41.94 251 *e*P **P** **11 57 47.8 -0.9**
MBWA Marble Bar 41.94 251 P **P** **11 57 48.0 -0.7**
KAPI Kappang 42.43 275 P **P** **11 57 51.5 -1.3**
comp=Z,2µm,2.0s,mb6.4,SNR=64
KAPI Kappang 42.43 275⇑ P **P** **11 57 52.0 -0.8**
SNR=100
KAPI Kappang 42.43 275 *e*P **P** **11 57 49.9 -3.0**
KAPI LR LR
comp=Z,29µm,20.0s,MS6.2
KAPI Kappang 42.43 275 P **P** **11 57 51.2 -1.6**
PCI Palu 43.26 280 P **P** **11 58 01.2 +1.7**
KLBR Kellerberrin 45.83 236⇓ *i*P **P** **11 58 18.4 -1.4**
comp=Z,197nm,1.2s,mb5.9
KLBR *e*S **S** **12 05 03.6 +2.1**
KLBR *e* 12 08 35.3
SMKI Samarinda 45.91 280 P **P** **11 58 24.4 +3.6**
KHKI Kahang-Kahang 45.98 269 P **P** **11 58 19.4 -1.9**
DNP Denpasar 46.33 268 P **P** **11 58 24.3 +0.2**
comp=Z,1µm,1.1s,mb6.8
MYLDM Lahad Datu 46.38 288⇑ P **P** **11 58 29.4 +5.1**
MYLDM Lahad Datu 46.38 288 P **P** **11 58 31.0 +6.6**
IGBI Denpasar 46.38 268 P **P** **11 58 23.5 -0.9**
comp=Z,2µm,1.6s,mb6.7
NWAO Narrogin (SRO) 46.64 235 P **P** **11 58 25.9 -0.3**
SNR=25
NWAO Narrogin (SRO) 46.64 235 *e*P **P** **11 58 25.3 -0.9**
TSM Tawau 46.66 287⇑ P **P** **11 58 31.5 +4.9**
NBBI Negara 46.95 269 P **P** **11 58 37.3 +8.4**
comp=Z,954nm,1.8s,mb6.4
PAE Paea 47.08 104 *e*P **P** **11 58 30.1 +0.3**
comp=Z,1µm,1.1s,mb6.8
PPT Papeete 47.08 104 *e*P **P** **11 58 30.4 +0.6**
comp=Z,163nm,1.3s,mb5.8
PPT *e*S **S** **12 05 27.7 +8.0**
comp=Z,19µm,25.8s
PPT *e*LQ 12 10 03.6
comp=Z,145µm,28.0s
PPT *e*LR LR 12 12 22.9
comp=Z,105µm,23.2s,baz=278
PPT Papeete 47.08 104 P **P** **11 58 30.8 +0.9**
comp=Z,91nm,1.0s,mb5.7,baz=309,slow=2.3,SNR=6.1
PPT LR LR 12 15 02.9
comp=Z,44µm,18.5s,MS6.5,baz=272,slow=32
MUN Mundaring 47.20 236 *e*P **P** **11 58 29.8 -0.8**
MUN *e*PCP PP 12 00 22.3 +0.5
MUN *e*S **S** **12 05 22.9 +1.8**
MUN *e*SS SS 12 08 48.3 -0.5
MUN Mundaring 47.20 236 *e*P **P** **11 58 29.8 -0.8**
MUN *e* 12 00 22.3
MUN *e*S **S** **12 05 22.9 +1.8**
TIAR Tiarei 47.30 104 *e*P **P** **11 58 32.2 +0.6**
comp=Z,2µm,1.3s,mb7.0
TVO Taravao 47.40 104 *e*P **P** **11 58 32.8 +0.5**
comp=Z,3µm,1.2s,mb7.1
BBKI Banjar Baru 47.53 275 P **P** **11 58 33.6 +0.2**
comp=Z,1µm,1.7s,mb6.7
SDKM Sandakan 47.75 288⇑ P **P** **11 58 39.6 +4.5**
KMMI Kalianget 47.77 270 P **P** **11 58 35.3 0.0**
comp=Z,323nm,2.8s,mb5.9
MEH Mehetia 48.53 104 *e*P **P** **11 58 41.4 +0.4**
comp=Z,3µm,1.3s
PLKI Palangkaraya 48.66 277 P **P** **11 58 46.0 +3.8**
comp=Z,659nm,1.9s,mb6.3
PMOR Pomariorio Ree 48.70 100 *e*P **P** **11 58 43.3 +0.9**
comp=Z,602nm,1.4s,mb6.4
KKM Kota Kinabalu 48.81 288 *e*P **P** **11 58 44.9 +1.6**
comp=Z,308nm,1.3s,mb6.2
KKM LR LR
comp=Z,59µm,22.0s,MS6.5
KKM Kota Kinabalu 48.81 288⇑ P **P** **11 58 47.5 +4.3**
KKM Kota Kinabalu 48.81 288 P **P** **11 58 51.3 +8.0**
VAH Vaihoa 48.95 101 *e*P **P** **11 58 44.9 +0.5**
comp=Z,391nm,1.3s,mb6.3
KRKI Karangkates 49.10 269 P **P** **11 58 44.8 -0.8**
SJI Sawahan 49.83 269 P **P** **11 58 50.2 -0.9**
HON Honolulu 50.58 51 *e*P **P** **11 58 58.5 +1.9**
KIP Kipapa 50.62 50 *e*P **P** **11 58 57.4 +0.5**
KIP LR LR
comp=Z,102µm,19.0s,MS6.9
KIP Kipapa 50.62 50⇑ *e*P **P** **11 58 57.2 +0.3**
UGM Wanagama 51.03 269 P **P** **11 58 59.9 -0.3**
comp=Z,553nm,1.6s,mb6.2
SMRI Semarang 51.23 270 P **P** **11 59 01.5 -0.2**
comp=Z,853nm,2.2s,mb6.3
KHU Kahuku 51.28 54 *e*P **P** **11 59 01.0 -0.8**
SBUM Sibu 51.49 282⇑ P **P** **11 59 07.2 +3.6**
HKL Haleakala 51.57 52 *e*P **P** **11 59 04.5 +0.5**
STKI Sintang 51.59 279 P **P** **11 59 05.4 +1.0**
comp=Z,282nm,1.2s,mb6.1
POHA Pohakuloa 51.62 54 *e*P **P** **11 59 04.5 +0.1**
comp=Z,355nm,0.9s,mb6.3
BJII Banjamegara 51.91 269 P **P** **11 59 07.4 +0.6**
MJAR Matsushiro Arr 52.40 336 P **P** **11 59 10.4 +0.5**
comp=Z,16nm,1.0s,mb4.9,baz=171,slow=9.2,SNR=18
MJAR LR LR 12 18 44.4
comp=Z,35µm,20.5s,MS6.4,baz=145,slow=33
MAJO Matsushiro 52.40 336 *e*P **P** **11 59 10.4 +0.5**
MAT Matsushiro 52.40 336 P **P** **11 59 09.7 -0.2**
MAT S **S** **12 06 30.0 -3.4**
KSM Kuching 53.07 280 *e*P **P** **11 59 15.2 -0.2**
comp=Z,130nm,1.0s,mb5.8
KSM LR LR
comp=Z,15µm,19.0s,MS6.0
KSM Kuching 53.07 280⇑ P **P** **11 59 18.5 +3.1**
KSM Kuching 53.07 280 P **P** **11 59 19.6 +4.2**
comp=Z,181nm,1.1s,comp=Z,8µm,mb5.9
YHNB Yeheng 53.32 312 *e*P **P** **11 59 20.6 +3.6**
comp=Z,213nm,1.2s,mb6.0
JCJI Jatiwangi 53.45 270 P **P** **11 59 18.6 +0.5**
comp=Z,2µm,1.7s,mb6.7
LEM Lembang 54.04 270 P **P** **11 59 22.1 -0.4**
comp=Z,1µm,2.3s,mb6.4
TPI Tanjungpandan 54.70 274 P **P** **11 59 28.4 +1.1**
comp=Z,315nm,2.3s,mb5.9
CBJI Citeko 54.85 270 P **P** **11 59 26.8 -1.6**
comp=Z,2µm,2.4s,mb6.6
DBJI Dramaga 54.93 270 P **P** **11 59 28.0 -1.0**
comp=Z,674nm,1.8s,mb6.4
XMIS Christmas Isla 55.50 265 *e*P **P** **11 59 33.3 +0.2**
XMIS Christmas Isla 55.50 265 P **P** **11 59 33.7 +0.7**
comp=Z,456nm,1.1s,mb6.4
QZH Quanzhou 55.53 311 *i*P **P** **11 59 37.8 +4.8**
QZH S **S** **12 07 16.8 +0.6**
QZH AMB AMB
comp=Z,7µm,5.1s
QZH LR LR
comp=N,44µm,18.3s,MS6.7
QZH LR LR
comp=E,27µm,17.8s,MS6.7
QZH LR LR
comp=Z,48µm,24.1s
ERM Erimo 55.57 343 *e*P **P** **11 59 31.3 -1.7**
ERM LR LR
comp=Z,32µm,20.0s,MS6.4
SBJI Serang 55.60 270 P **P** **11 59 39.9 +6.1**
comp=Z,455nm,2.2s,mb6.1
PPBI Pangkal Pinang 56.31 275 P **P** **11 59 39.4 +0.5**
comp=Z,288nm,2.2s,mb5.9
YUK Yuzh-Kuril'sk 56.74 346 *e*P **P** **11 59 46.0 +4.7**
YUK *e* 12 00 39.0
YUK *e*S **S** **12 07 34.0 +2.5**
YUK *e*PS 12 07 47.0
YUK *e* 12 09 31.0
YUK pmax pmax
comp=Z,9µm,5.0s
YUK smax
comp=E,16µm,11.0s
YUK smax
comp=N,11µm,12.0s
TAOE Nuku Hiva Isla 56.75 93 *e*P **P** **11 59 41.1 -0.9**
TAOE *e*S **S** **12 07 41.6 +8.8**
comp=N,59µm,25.9s
TAOE *e*LR LR 12 16 36.3
comp=N,201µm,24.2s,baz=270
TAOE Nuku Hiva Isla 56.75 93 *e*P **P** **11 59 41.1 -0.9**
TAOE *e*S **S** **12 07 41.6 +8.8**
KLI Kotabumi 57.06 271 P **P** **11 59 47.3 +3.1**
comp=N,217nm,2.0s,comp=N,7µm,mb5.8
SSE Sheshan 57.44 318 *e*P **P** **11 59 47.5 +1.0**
SSE AP pP 12 00 00.0 +2.4
SSE PCP PcP 12 00 44.0 +4.0
SSE S **S** **12 07 39.0 -2.2**
SSE LR LR
comp=N,18µm,19.3s,MS6.3
SSE LR LR
comp=E,12µm,19.2s,MS6.3
SSE LR LR
comp=Z,29µm,20.4s,MS6.4
HKC Hong Kong Obse 57.55 305 P **P** **11 59 54.0 +6.6**
DRV Dumont d'Urvil 57.60 190 P **P** **11 59 48.0 +0.9**
DRV S **S** **12 07 46.0 +3.6**
DRV SS SS 12 11 37.0 +4.3
DRV L 12 14 00.0
ASAJ Asahikawa 57.66 343 LR LR 12 23 46.5
comp=Z,46µm,19.8s,MS6.6,baz=180,slow=35
KSRS Korea Array 57.93 328 P **P** **11 59 49.9 +0.1**
comp=Z,22nm,1.1s,mb5.1,baz=142,slow=7.2,SNR=17
KSRS LR LR 12 24 11.7
comp=Z,25µm,18.9s,MS6.3,baz=135,slow=35
GZH Guangzhou 58.60 306 P **P** **11 59 54.5 -0.3**
GZH S **S** **12 07 58.8 +2.1**
GZH LR LR
comp=N,18µm,19.7s,MS6.4
GZH LR LR
comp=E,22µm,22.9s,MS6.4
GZH LR LR
comp=Z,40µm,21.3s,MS6.5
INCN Inchon 58.63 327⇓ P **P** **11 59 57.8 +3.1**
SNR=11
INCN Inchon 58.63 327 *e*P **P** **11 59 60.0 +5.3**
comp=Z,249nm,1.3s,mb6.1
INCN LR LR
comp=Z,40µm,20.0s,MS6.5
MYKOM Kota Tinggi 59.41 279⇓ P **P** **12 00 02.7 +2.1**
MYKOM Kota Tinggi 59.41 279 P **P** **12 00 05.6 +5.0**
KSI Kapahiang 59.50 272 P **P** **12 00 01.2 0.0**
comp=Z,265nm,2.8s,mb5.8
QIZ Qiongzhong 59.61 300 P **P** **12 00 04.0 +2.1**
QIZ AP pP 12 00 15.0 +2.0
QIZ S **S** **12 08 10.5 +0.6**
QIZ XS sS 12 08 28.0 -0.3
QIZ SS SS 12 12 05.0 -1.1
QIZ LR LR
comp=E,26µm,25.1s
QIZ LR LR
comp=Z,54µm,27.2s,MS6.5
KGM Kluang 59.97 279⇑ P **P** **12 00 06.5 +2.0**
YSS Yuzh-Sakhalins 60.24 345 *e*P **P** **12 00 05.7 +0.1**
comp=Z,199nm,1.4s,mb6.0
YSS Yuzh-Sakhalins 60.24 345 *c i*P **P** **12 00 06.0 +0.4**
YSS *e**PP pP 12 00 16.5 -0.3
YSS *i **SP sP 12 00 23.0 +1.9
YSS *e* 12 00 53.0
YSS *e*PPP 12 03 48.0
YSS *i* S **S** **12 08 20.0 +3.0**
YSS *e*PS 12 08 36.0
YSS *e*SS SS 12 12 20.0 +4.9
YSS pmax pmax
comp=N,3µm,8.0s
YSS pmax pmax
comp=Z,6µm,8.0s
YSS smax
comp=E,15µm,12.0s
YSS MLR MLR
comp=N,36µm,18.0s,MS6.6
YSS MLR MLR
comp=E,19µm,18.0s,MS6.6
YSS MLR MLR
comp=Z,41µm,18.0s,MS6.6
RGRI Rengat 60.40 276 P **P** **12 00 12.9 +5.4**
comp=Z,776nm,1.4s,mb6.5
RKT Rikitea 60.86 110 *e*PP PP 12 02 21.7 -3.1
comp=Z,3µm,27.5s
RKT *e*S **S** **12 08 29.7 +3.7**
comp=Z,16µm,28.5s
RKT *e*SS SS 12 12 32.1 +6.5
comp=Z,7µm,27.2s
RKT *e*LQ 12 15 56.9
comp=Z,42µm,31.2s
RKT *e*LR LR 12 18 34.4
comp=Z,125µm,27.0s,baz=282
RKT Rikitea 60.86 110 *e*P **P** **12 00 09.1 -1.4**
comp=Z,114nm,1.1s,mb5.9
RKT *e*PP PP 12 02 21.7 -3.1
RKT *e*S **S** **12 08 29.7 +3.7**
RKT *e*SS SS 12 12 32.1 +6.5
RKT *e*LQ 12 15 56.9
RKT Rikitea 60.86 110 *e*P **P** **12 00 09.1 -1.4**
RKT *e* 12 02 21.7
RKT *e*S **S** **12 08 29.7 +3.7**
RKT *e*SS SS 12 12 32.1 +6.5
RKT pmax pmax
comp=Z,114nm,1.1s,mb5.9
KTGM Kuala Trenggan 60.99 282⇓ P **P** **12 00 13.3 +1.8**
SKR Severo-Kuril's 61.63 356 *e* PP 12 02 40.0 +8.8
SKR *e* 12 04 10.0
SKR *e*S **S** **12 08 36.0 +1.4**
SKR pmax pmax
comp=Z,8µm,14.0s
SKR pmax pmax
comp=N,5µm,10.0s
SKR pmax pmax
comp=Z,1µm,1.7s,mb6.7
SKR smax
comp=N,17µm,16.0s
SKR smax
comp=E,51µm,16.0s
SKR MLR MLR
comp=N,15µm,18.0s,MS6.3
SKR MLR MLR
comp=E,14µm,18.0s,MS6.3
SKR MLR MLR
comp=Z,26µm,18.0s,MS6.4
WHN Wuhan 61.79 313 P **P** **12 00 23.0 +6.5**
WHN S **S** **12 08 39.8 +2.4**
WHN LR LR
comp=N,80µm,19.1s
WHN LR LR
comp=E,104µm,27.2s
FRIM Kepong 61.91 280⇓ P **P** **12 00 19.4 +1.7**
PPI Padang Panjang 62.27 275 P **P** **12 00 21.8 +1.7**
comp=E,314nm,1.9s,mb6.1
UBT Ubonrachathani 62.35 294 P **P** **12 00 20.5 0.0**
DL2 Dalian 62.39 325 P **P** **12 00 19.5 -0.9**
DL2 S **S** **12 08 43.5 -1.1**
DL2 AMB AMB
comp=Z,30nm,1.3s,mb5.3
DL2 AMB AMB
comp=Z,2µm,5.7s
DL2 LR LR
comp=N,12µm,16.9s
DL2 LR LR
comp=Z,19µm,17.6s,MS6.3
MDJ Mudanjiang 62.73 334 P **P** **12 00 23.8 +1.3**
MDJ AP pP 12 00 35.5 +1.8
MDJ PP PP 12 02 45.5 +4.5
MDJ S **S** **12 08 52.0 +3.3**
MDJ SCS ScS 12 10 15.8 +3.7
MDJ AMB AMB
comp=Z,26nm,1.4s,mb5.2
MDJ AMB AMB
comp=Z,4µm,5.3s
MDJ LR LR
comp=N,24µm,17.1s,MS6.5
MDJ LR LR
comp=E,13µm,19.9s,MS6.5
MDJ LR LR
comp=Z,34µm,22.8s,MS6.5
MDJ Mudanjiang 62.73 334 *e*P **P** **12 00 23.6 +1.1**
comp=Z,167nm,1.4s,mb6.0
IPM Ipoh 62.80 281⇓ P **P** **12 00 25.0 +1.4**
IPM Ipoh 62.80 281 P **P** **12 00 24.8 +1.2**
comp=Z,230nm,2.1s,comp=Z,9µm,mb5.9
TIA Tai'an 63.30 320 P **P** **12 00 28.5 +2.0**
TIA S **S** **12 08 56.0 -0.1**
TIA LR LR
comp=E,9µm,18.0s
KULM Kulim 63.37 282⇑ P **P** **12 00 29.1 +1.7**
SNY Shenyang 63.42 329⇓ P **P** **12 00 24.3 -2.8**
SNY S **S** **12 08 54.3 -3.1**
SNY SS SS 12 13 04.0 -1.0
SNY AMB AMB
comp=Z,23nm,2.5s,mb4.9
SNY AMB AMB
comp=Z,5µm,5.5s
SNY LR LR
comp=N,16µm,14.0s,MS6.6
SNY LR LR
comp=E,25µm,18.3s,MS6.6
SNY LR LR
comp=Z,31µm,18.4s,MS6.5
PET Petropavlovsk 63.82 358 *e*P **P** **12 00 31.8 +2.3**
comp=Z,156nm,1.1s,mb6.0
PET Petropavlovsk 63.82 358 *c i*P **P** **12 00 27.5 -2.0**
PET *e*S **S** **12 09 00.6 -1.3**
PET *e*SS SS 12 13 13.3 +2.4

PET pmax pmax
comp=Z,5μm,6.2s
PET pmax pmax
comp=Z,6μm,14.8s
PET pmax pmax
comp=Z,165nm,1.4s,mb5.9
PET smax
comp=N,4μm,11.9s
PET smax
comp=N,5μm,6.8s
PET smax
comp=E,31μm,18.0s
HABR Khabarovsk 63.89 340 ⇑*i*P **P 12 00 34.9 +4.8**
HABR *e**PP pP 12 00 43.8 +2.5
HABR *e* 12 01 07.3
HABR *e* 12 02 52.0
HABR *e*S **S 12 09 07.2 +4.2**
HABR *e*PS 12 09 20.8
HABR *e* 12 09 24.8
HABR *e*SS SS 12 13 19.1 +6.9
HABR pmax pmax
comp=Z,327nm,1.9s,mb6.0
HABR MLR MLR
comp=Z,17μm,19.0s,MS6.3
SNG Songkhla 63.90 284 P **P 12 00 30.0 -0.9**
comp=Z,200nm,1.0s,mb6.1
COCO West Island 63.91 262 P **P 12 00 35.2 +4.2**
comp=Z,1μm,1.7s,mb6.6,SNR=8.2
PEA0B Petropavlovsk- 63.95 357 *e*P **P 12 00 31.8 +1.4**
PETK Petropavlovsk- 63.95 357 P **P 12 00 30.6 +0.2**
comp=Z,22nm,0.8s,mb5.2,baz=129,slow=5.8,SNR=24
PETK LR LR 12 25 27.6
comp=Z,21μm,20.6s,MS6.3,baz=71,slow=33
CN2 Changchun 63.96 331 *e*P **P 12 00 30.8 +0.2**
CN2 PCP PcP 12 01 05.3 -0.6
CN2 *e*S **S 12 09 03.0 -1.0**
CN2 *e*SS SS 12 13 14.5 +1.1
CN2 AMB AMB
comp=Z,70nm,1.5s,mb5.5
CN2 AMB AMB
comp=Z,4μm,6.0s
CN2 LR LR
comp=N,24μm,19.0s,MS6.5
CN2 LR LR
comp=E,16μm,19.0s,MS6.5
CN2 LR LR
comp=Z,36μm,23.0s,MS6.5
KKTK Khon Kaen 64.71 294 P **P 12 00 34.0 -2.1**
comp=Z,370nm,1.0s,mb6.4
CASY Casey 65.20 200 *e*P **P 12 00 37.4 -1.0**
comp=Z,289nm,1.6s,mb6.1
CASY LR LR
comp=Z,24μm,20.0s,MS6.4
ADK Adak 65.21 14 *e*P **P 12 00 41.9 +3.2**
comp=Z,418nm,1.4s,mb6.3
ADK LR LR
comp=Z,32μm,21.0s,MS6.5
ADK Adak 65.21 14 *e*P **P 12 00 41.9 +3.3**
ADK pmax pmax
comp=Z,418nm,1.4s,mb6.3
ADK MLR MLR
comp=Z,32μm,21.0s,MS6.5
GYA Guiyang 65.54 306 ⇓*i*P **P 12 00 44.0 +2.7**
GYA PP PP 12 03 09.5 +3.5
GYA SCP 12 05 13.0
GYA PCS 12 05 18.0
GYA S S 12 09 23.0 -1.2
GYA SKS 12 10 31.3
GYA SS SS 12 13 38.5 -0.2
GYA AMB AMB
comp=Z,310nm,1.0s,mb6.3
GYA AMB AMB
comp=Z,3μm,8.1s
GYA LR LR
comp=N,9μm,20.0s,MS6.4
GYA LR LR
comp=E,24μm,19.1s,MS6.4
GYA LR LR
comp=Z,20μm,20.0s,MS6.3
KLR Kul'dur 65.67 339 *e*P **P 12 00 38.5 -3.2**
KLR *e*S S 12 09 20.5 -4.4
KLR *e* 12 16 36.5
KLR smax
comp=N,18μm,16.5s
KLR smax
comp=E,13μm,16.5s
BJT Baijiatuau 66.28 323 PFAKE 12 01 00.0 +14
BJT LR LR
comp=Z,34μm,19.0s,MS6.6
BJI Beijing 66.29 323 P **P 12 00 50.3 +4.4**
BJI AP pP 12 00 59.3 +2.1
BJI S S 12 09 36.0 +3.1
BJI SS SS 12 13 53.5 +3.5
BJI AMB AMB
comp=Z,46nm,1.9s,mb5.2
BJI AMB AMB
comp=Z,5μm,5.7s
BJI LR LR
comp=N,24μm,21.9s,MS6.4
BJI LR LR
comp=E,15μm,21.9s,MS6.4
BJI LR LR
comp=Z,23μm,33.6s
VNDA Vanda 66.53 180 P **P 12 00 47.5 +0.7**
comp=Z,21nm,0.7s,mb5.3,baz=350,slow=7.2,SNR=74
VNDA LR LR 12 28 23.2
comp=Z,24μm,18.2s,MS6.5,baz=350,slow=35
SBA Scott Base 66.90 179 *e*P **P 12 00 51.5 +2.2**
comp=Z,86nm,1.1s,mb5.7
SBA Scott Base 66.90 179 *e*P **P 12 00 51.5 +2.3**
SBA pmax pmax
comp=Z,87nm,1.1s,mb5.7
NST Nakhon Sawan 66.91 292 P **P 12 00 50.0 -0.3**
comp=Z,58nm,1.0s,mb5.6
XAN Xi'an 67.55 314 P **P 12 00 53.3 -0.7**
XAN AP pP 12 01 05.3 0.0
XAN XP sP 12 01 10.8 +1.2
XAN PCP PcP 12 01 21.3 +0.2
XAN PP PP 12 03 23.0 -0.4
XAN SCP 12 05 21.0
XAN PCS 12 05 24.5
XAN S S 12 09 41.8 -6.4
XAN SCS ScS 12 10 43.0 -6.7
XAN AMB AMB
comp=Z,22nm,2.5s,mb4.7
XAN AMB AMB
comp=Z,3μm,8.0s
XAN LR LR
comp=Z,47μm,18.6s,MS6.7
KMI Kunming 68.15 303 P **P 12 00 57.0 -1.0**
KMI AP pP 12 01 03.5 -5.8
KMI XP sP 12 01 07.3 -6.2
KMI PP PP 12 03 29.5 +0.7
KMI S S 12 09 57.5 +1.8
KMI XS sS 12 10 11.0 -3.4
KMI SS SS 12 14 24.0 +4.8
KMI AMB AMB
comp=Z,29nm,2.0s,mb5.0
KMI AMB AMB
comp=Z,3μm,6.3s
KMI LR LR
comp=N,13μm,19.4s,MS6.5
KMI LR LR
comp=E,22μm,17.1s,MS6.5
KMI LR LR
comp=Z,35μm,25.4s
BDT Bhumibol Dam 68.46 293 P **P 12 01 00.0 -0.1**
BSI Banda Aceh 68.58 280 P **P 12 01 05.2 +4.3**
comp=Z,130nm,1.5s,comp=Z,6μm,mb5.7
CM31 Chiang Mai Arr 68.92 295 PFAKE 12 01 10.0 +7.1
CM31 LR LR
comp=Z,10μm,19.0s,MS6.1
CMAR Chiang Mai Arr 68.92 295 P **P 12 01 02.6 -0.3**
comp=Z,11nm,0.7s,mb4.9,baz=116,slow=4.7,SNR=44
CMAR PKP2ab 12 29 16.4
comp=Z,5.9nm,0.9s,baz=280,slow=5.5,SNR=15
CMAR LR LR 12 32 05.1
comp=Z,11μm,19.5s,MS6.1,baz=360,slow=37
CMAR Chiang Mai Arr 68.92 295 P **P 12 01 02.6 -0.3**
CMAR P'P'ab 12 29 16.4
CMAR LR LR 12 32 05.1
CHG Chiang Mai 69.04 295 ⇑P **P 12 01 03.2 -0.5**
comp=Z,58nm,0.7s,mb5.6
CHTO Chiang Mai 69.04 295 P **P 12 01 03.5 -0.2**
SNR=25

CHTO Chiang Mai 69.04 295 *e*P **P 12 01 02.7 -0.9**
comp=Z,110nm,1.4s,mb5.6
CHTO LR LR
comp=Z,18μm,20.0s,MS6.3
CHTO Chiang Mai 69.04 295 *e*P **P 12 01 02.7 -1.0**
CHTO pmax pmax
comp=Z,110nm,1.4s,mb5.6
CHTO MLR MLR
comp=Z,18μm,20.0s,MS6.3
CHTO Chiang Mai 69.04 295 P **P 12 01 01.3 -2.4**
comp=Z,52nm,1.9s,comp=Z,3μm,mb5.1
HHC Hu-ho-hao-te 69.57 321 *e*P **P 12 01 08.5 +2.0**
HHC PCP PcP 12 01 31.3 +1.9
HHC PP PP 12 03 44.8 +4.0
HHC S S 12 10 12.5 +0.5
HHC SCS ScS 12 11 03.5 -1.8
HHC SS SS 12 14 44.3 +3.6
HHC LR LR
comp=N,14μm,19.0s,MS6.4
HHC LR LR
comp=E,16μm,16.6s,MS6.4
HHC LR LR
comp=Z,24μm,16.7s,MS6.5
CD2 Chengdu 69.83 309 P **P 12 01 08.0 -0.3**
CD2 AP pP 12 01 19.3 -0.3
CD2 XP sP 12 01 23.3 -0.6
CD2 PP PP 12 03 44.8 +1.5
CD2 S S 12 10 14.3 -1.2
CD2 XS sS 12 10 32.3 -1.9
CD2 SKS 12 11 02.0
CD2 SS SS 12 14 42.5 -2.5
CD2 AMB AMB
comp=Z,70nm,0.7s,mb5.7
CD2 AMB AMB
comp=Z,4μm,6.8s
CD2 LR LR
comp=N,27μm,17.8s,MS6.6
CD2 LR LR
comp=E,19μm,22.6s,MS6.6
CD2 LR LR
comp=Z,31μm,22.6s,MS6.5
UNV Unalaska Valle 69.83 19 *e*P **P 12 01 06.6 -1.2**
BTO Baotou 70.39 320 *e*P **P 12 01 13.0 +1.5**
BTO S S 12 10 16.3 -5.3
HIA Hailar 70.64 332 *e*P **P 12 01 13.8 +1.0**
comp=Z,158nm,1.1s,mb5.9
HIA LR LR
comp=Z,35μm,20.0s,MS6.6
HIA Hailar 70.64 332 *e*P **P 12 01 13.8 +0.9**
HIA pmax pmax
comp=Z,158nm,1.1s
HIA MLR MLR
comp=Z,35μm,20.0s
MIR Mirnyy 71.76 203 ⇑*i*P **P 12 01 26.0 +6.6**
MIR *i* pP 12 01 34.0 +3.2
MIR *i*S S 12 10 38.0 +1.3
MIR *i*SS SS 12 15 13.0 +0.2
MIR pmax pmax
comp=Z,400nm,2.0s,mb6.0
MIR pmax pmax
comp=N,2μm,8.0s
LZH Lanzhou 72.17 314 *e*P **P 12 01 21.8 -0.6**
LZH AP pP 12 01 34.0 +0.2
LZH XP sP 12 01 39.5 +1.4
LZH S S 12 10 43.0 +0.6
LZH XS sS 12 11 01.0 -0.2
LZH SS SS 12 15 18.0 -2.8
LZH AMB AMB
comp=Z,3μm,6.0s
LZH LR LR
comp=E,26μm,17.4s
LZH LR LR
comp=Z,39μm,19.5s,MS6.7
SEY Seymchan 74.08 355 ⇑*i*P **P 12 01 33.5 +0.4**
NRGR Nerungri 74.19 340 *e*P **P 12 01 36.8 +3.0**
NRGR S S 12 11 11.7 +7.2
NRGR smax
comp=N,55nm,0.6s
CLNS Chul'man 74.27 340 *e*P **P 12 01 38.3 +4.0**
CLNS *e* 12 01 52.4
CLNS *e* 12 04 23.0
CLNS *e*PPP 12 06 10.3
CLNS *e*S S 12 11 11.1 +5.7
CLNS pmax pmax
comp=Z,169nm,1.5s,mb5.8
CLNS pmax pmax
comp=N,111nm,1.6s
CLNS pmax pmax
comp=E,57nm,1.6s
CLNS pmax pmax
comp=Z,24nm,1.8s,mb4.8
CLNS pmax pmax
comp=E,17nm,2.1s
CLNS pmax pmax
comp=N,46nm,1.8s
CLNS smax
comp=N,9μm,16.1s
CLNS smax
comp=E,13μm,16.3s
CIT Chita 75.41 331 *e*P **P 12 01 42.4 +1.4**
CIT *e* 12 01 57.6
CIT pmax pmax
comp=Z,754nm,2.7s,mb6.2
IMP Imphal 75.44 299 *e*P **P 12 01 40.0 -1.8**
ULN Ulaanbaatar 76.24 325 P **P 12 01 47.1 +1.3**
SNR=69
ULN Ulaanbaatar 76.24 325 *e*P **P 12 01 46.7 +0.8**
comp=Z,365nm,1.5s,mb6.1
ULN Ulaanbaatar 76.24 325 P **P 12 01 46.9 +1.0**
ULN pmax pmax
comp=Z,360nm,1.5s,mb6.1
ULN Ulaanbaatar 76.24 325 P **P 12 01 46.8 +0.9**
GTA Gaotai 76.54 315 ⇓P **P 12 01 47.8 0.0**
GTA AP pP 12 02 01.0 +1.8
GTA PP PP 12 04 43.5 +3.2
GTA S S 12 11 31.0 -0.3
GTA SKS 12 11 51.3
GTA SS SS 12 16 32.5 +5.3
GTA AMB AMB
comp=Z,14nm,1.8s,mb4.6
GTA AMB AMB
comp=Z,3μm,7.2s
GTA LR LR
comp=N,14μm,21.6s,MS6.5
GTA LR LR
comp=E,21μm,21.6s,MS6.5
GTA LR LR
comp=Z,28μm,21.6s,MS6.5
SONM Songino Array 76.59 325 P **P 12 01 48.5 +0.6**
comp=Z,14nm,0.7s,mb5.0,baz=134,slow=6.2,SNR=25
SONM LR LR 12 37 38.9
comp=Z,34μm,18.9s,MS6.7,baz=120,slow=37
SONM Songino Array 76.59 325 P **P 12 01 48.5 +0.6**
SONM pmax pmax
comp=Z,14nm,0.7s
SONM MLR MLR
comp=Z,34μm,18.9s
YAK Yakutsk 77.09 345 *e*P **P 12 01 49.7 -0.6**
comp=Z,199nm,0.8s,mb6.1
YAK Yakutsk 77.09 345 *e*P **P 12 01 49.9 -0.5**
YAK *e**PP pP 12 01 57.8 -4.0
YAK *e* pP 12 01 59.8 -2.0
YAK *e* 12 04 42.2
YAK *e*S S 12 11 37.1 +0.8
YAK *e**SS sS 12 11 54.3 -1.0
YAK *e* 12 12 10.8
YAK pmax pmax
comp=Z,127nm,1.1s,mb5.8
YAK pmax pmax
comp=N,43nm,1.4s
YAK pmax pmax
comp=E,22nm,1.5s
YAK pmax pmax
comp=Z,454nm,2.8s,mb5.9
YAK pmax pmax
comp=E,365nm,3.8s
YAK pmax pmax
comp=N,533nm,3.5s
YAK smax
comp=E,9μm,12.3s
YAK smax
comp=N,4μm,8.0s
YAK MLR MLR
comp=N,12μm,22.0s
YAK MLR MLR
comp=Z,17μm,20.0s,MS6.3
YAK MLR MLR
comp=N,6μm,21.0s
OHAK Old Harbor 77.17 23 *e*P **P 12 01 51.7 +0.8**
KDAK Kodiak Island 77.83 23 P **P 12 01 58.0 +3.4**
comp=N,523nm,0.8s,mb6.5,SNR=6.7
KDAK Kodiak Island 77.83 23 *e*P **P 12 01 55.4 +0.8**
comp=N,62nm,0.8s,mb5.6
BILL Bilibino 78.87 2 *e*P **P 12 01 59.9 -0.2**
comp=N,239nm,1.2s,mb6.0
BILL LR LR
comp=Z,18μm,19.0s,MS6.4
BILL Bilibino 78.87 2 *c i*P **P 12 01 59.8 -0.3**
BILL *i* pP 12 02 09.7 -1.9
BILL *i*S S 12 11 57.3 +2.0
BILL pmax pmax
comp=Z,124nm,1.5s,mb5.6
BILL MLR MLR
comp=Z,18μm,18.0s,MS6.4
BOD Bodaibo 79.03 336 *e*P **P 12 02 00.7 -0.5**
BOD pmax pmax
comp=Z,59nm,1.5s,mb5.3
SVW2 Sparrevohn 79.17 19 *e*P **P 12 02 02.4 +0.5**
LSA Lhasa 79.40 303 P **P 12 02 04.0 +0.1**
LSA AP pP 12 02 13.5 -1.9
LSA XP sP 12 02 17.5 -2.1
LSA LR LR
comp=N,7μm,30.6s,MS6.2
LSA LR LR
comp=E,16μm,28.4s,MS6.2
LSA LR LR
comp=Z,20μm,26.2s,MS6.3
LSA Lhasa 79.40 303 *e*P **P 12 02 04.3 +0.4**
comp=Z,98nm,1.5s,mb5.5
LSA Lhasa 79.40 303 *e*P **P 12 02 04.3 +0.4**
LSA pmax pmax
comp=Z,98nm,1.5s,mb5.5
CAL Calcutta 79.64 295 *e*P **P 12 02 14.5 +9.2**
CAL *e*S S 12 12 12.2 +7.0
CAL AMP 12 12 52.6
comp=Z,2μm,20.8s
ZAK Zakamensk 79.69 326 *e*P **P 12 02 05.1 +0.1**
ZAK *e* 12 05 13.2
ZAK *e* 12 12 08.5
ZAK pmax pmax
comp=Z,54nm,1.5s,mb5.3
IRK Irkutsk 80.14 328 *e*P **P 12 02 07.2 -0.2**
IRK *e*S S 12 12 14.4 +5.0
IRK pmax pmax
comp=Z,195nm,2.8s,mb5.5
TLY Talaya 80.17 327 ⇑P **P 12 02 09.1 +1.5**
SNR=25
TLY Talaya 80.17 327 *e*P **P 12 02 07.5 0.0**
comp=Z,66nm,1.0s,mb5.5
TLY Talaya 80.17 327 *c i*P **P 12 02 07.8 +0.3**
TLY *e* 12 05 13.0
TLY *e*S S 12 12 08.6 -1.1
TLY *e*SSS 12 20 43.4
TLY pmax pmax
comp=Z,147nm,2.1s,mb5.5
TLY MLR MLR
comp=Z,18μm,18.0s,MS6.5
SLKM Skilak Lake 80.60 22 *e*P **P 12 02 09.7 0.0**
SEW Seward 80.61 22 *e*P **P 12 02 12.6 +2.9**
comp=Z,291nm,1.6s,mb6.0
RC01 Rabbit Creek A 81.17 21 *e*P **P 12 02 12.8 +0.1**
comp=Z,132nm,1.4s,mb5.7
TAPN Taplejung 81.55 300 *e*P **P 12 02 14.8 -0.7**
comp=Z,198nm,1.5s,mb5.8
PPLA Purkeypile 81.58 19 *e*P **P 12 02 13.2 -1.6**
comp=Z,198nm,1.6s,mb5.8
MOY Mondy 81.58 327 *e*P **P 12 02 16.1 +1.0**
ODAN Odare 81.69 299 *e*P **P 12 02 15.6 -0.6**
comp=Z,152nm,1.1s,mb5.8
PMR Palmer 81.72 21 *e*P **P 12 02 17.7 +2.1**
comp=Z,12nm,0.7s,mb5.0
PMR Palmer 81.72 21 *e*P **P 12 02 17.7 +2.1**
PMR pmax pmax
comp=Z,12nm,0.7s,mb4.9
BOK Bokaro 82.14 296 *e*P **P 12 02 19.1 +0.4**
BOK *ex* x 12 12 30.3
CHUM Lake Minchumin 82.24 19 *e*P **P 12 02 17.4 -0.8**
comp=Z,137nm,1.4s,mb5.7
RAMN Ramite 82.39 299 *e*P **P 12 02 18.8 -1.1**
KTH Kantishna Hill 82.45 19 *e*P **P 12 02 18.1 -1.3**
comp=Z,118nm,1.3s,mb5.7
TRF Thorofare Moun 82.59 20 *e*P **P 12 02 19.0 -1.1**
comp=Z,76nm,1.1s,mb5.6
BPAW Bear Paw Mtn. 82.81 19 *e*P **P 12 02 19.8 -1.4**
comp=Z,90nm,1.5s,mb5.6
VIS Vishakhapatnam 82.92 290 *e*P **P 12 02 22.5 -0.4**
VIS *i*S S 12 12 39.1 -0.4
JIRN Jiri 82.94 300 *e*P **P 12 02 22.0 -0.7**
MCK McKinley 83.22 20 *e*P **P 12 02 23.1 -0.3**
comp=Z,187nm,1.2s,mb6.0
MCK McKinley 83.22 20 *e*P **P 12 02 23.1 -0.3**
MCK pmax pmax
comp=Z,187nm,1.2s,mb6.0
GUN Gumba 83.27 300 *e*P **P 12 02 23.8 -0.7**
comp=Z,282nm,1.3s,mb6.1
MAW Mawson 83.47 202 *e*S S 12 12 35.5 -7.8
MAW *e*SS SS 12 18 11.8 +2.8
MAW Mawson 83.47 202 P **P 12 02 25.4 +0.7**
comp=Z,19nm,0.9s,mb5.2,baz=101,slow=7.1,SNR=15
MAW LR LR 12 34 42.3
comp=Z,18μm,21.5s,MS6.4,baz=84,slow=32
MAW Mawson 83.47 202 ⇑*i*P **P 12 02 25.1 +0.4**
comp=Z,76nm,1.2s,mb5.6
MAW *e*S S 12 12 35.5 -7.8
MAW *e*SS SS 12 18 11.8 +2.8
MAW Mawson 83.47 202 ⇑*i*P **P 12 02 25.1 +0.4**
MAW *e*S S 12 12 35.5 -7.8
MAW *e*SS SS 12 18 11.8 +2.8
MAW pmax pmax
comp=Z,76nm,1.2s
PKI Pulchoki 83.58 300 *e*P **P 12 02 25.2 -0.8**
comp=Z,200nm,1.2s,mb6.1
PKI Pulchoki 83.58 300 *e*P **P 12 02 25.2 -0.8**
PKI pmax pmax
comp=Z,200nm,1.2s,mb6.1
KKN Kakani 83.75 300 *e*P **P 12 02 25.9 -1.0**
comp=Z,98nm,0.9s,mb5.9
KKN Kakani 83.75 300 *e*P **P 12 02 25.9 -1.0**
KKN pmax pmax
comp=Z,98nm,0.9s,mb5.9
DMN Daman 83.85 300 *e*P **P 12 02 26.7 -0.7**
comp=Z,447nm,1.1s,mb6.5
COLA College 84.34 19 *e*P **P 12 02 28.2 -0.9**
comp=Z,67nm,0.8s,mb5.8
COLA LR LR
comp=Z,46μm,20.0s,MS6.9
COLA College 84.34 19 *e*P **P 12 02 28.2 -0.8**
COLA pmax pmax
comp=Z,67nm,0.8s,mb5.8
COLA MLR MLR
comp=Z,46μm,20.0s,MS6.9
GKN Gorkha 84.35 300 *e*P **P 12 02 28.7 -1.3**
comp=Z,288nm,1.1s,mb6.3
PNL Peninsula 84.37 26 *e*P **P 12 02 30.0 +0.7**
comp=Z,535nm,2.0s,mb6.3
VIB Van Inlet 84.51 33 T 13 35 33.5
SNR=50
DIB Dawson Inlet, 84.52 33 T 13 35 34.5
SNR=60
MENT Mentasta 84.53 22 *e*P **P 12 02 31.0 +0.9**
MDRS Chennai 84.77 284 *ex* x 12 02 19.6
MDRS *ex* x 12 05 39.2
KCPM Cahto Peak 85.08 48 *e*P **P 12 02 33.6 +0.3**
comp=Z,56nm,1.3s,mb5.5
MCCM Marconi Confer 85.11 50 *e*P **P 12 02 33.9 +0.3**
KOLN Koldanda 85.18 299 *e*P **P 12 02 32.5 -1.6**
comp=Z,94nm,0.9s,mb5.9
KIPM Iron Peak 85.19 48 *e*P **P 12 02 34.1 +0.1**
comp=Z,370nm,1.8s,mb6.2
DANN Dangsing 85.19 300 *e*P **P 12 02 32.5 -1.7**
comp=Z,106nm,0.9s,mb6.0
COLD Coldfoot 85.21 17 *e*P **P 12 02 32.9 -0.5**
comp=Z,211nm,1.9s,mb6.0
HOPS Hopland 85.23 49 *e*P **P 12 02 34.4 +0.3**
comp=Z,160nm,1.5s,mb5.9
HOPS LR LR
comp=Z,50μm,19.0s,MS6.9
TIXI Tiksi 85.39 350 *e*P **P 12 02 33.9 -0.4**
comp=Z,286nm,1.8s,mb6.1
TIXI Tiksi 85.39 350 ⇓*i*P **P 12 02 33.2 -1.0**
TIXI pmax pmax

comp=Z,156nm,2.0s,mb5.8
KRMB Red Mountain 85.43 46 *e*P **P 12 02 35.3 +0.2**
comp=Z,91nm,1.4s,mb5.7
NSHM Saint Helena R 85.43 50 *e*P **P 12 02 34.5 -0.7**
K01A Sixes 85.45 45 ⇑P **P 12 02 35.0 -0.2**
baz=86
K01A ⇑S S 12 13 07.1 +3.2
baz=86
V03C Hunter Liggett 85.74 52 ⇑P **P 12 02 36.8 0.0**
baz=86
V03C ⇓S S 12 13 07.6 +0.6
baz=86
PYUN Piuthan 85.78 300 *e*P **P 12 02 35.2 -2.0**
SAO San Andreas Ge 85.79 51 *e*P **P 12 02 37.4 +0.4**
comp=Z,131nm,1.5s,mb5.9
SAO San Andreas Ge 85.79 51 *e*P **P 12 02 37.4 +0.4**
SAO pmax pmax
comp=Z,131nm,1.5s,mb5.9
L02A Cave Junction 85.85 46 ⇓P **P 12 02 37.5 +0.4**
baz=86
L02A ⇓S S 12 13 07.8 0.0
baz=86
Q03C Winters 85.91 50 ⇑P **P 12 02 37.9 +0.4**
baz=86
Q03C ⇓S S 12 13 10.1 +1.5
baz=86
SKAG Skagway 86.04 27 *e*P **P 12 02 39.3 +1.6**
comp=Z,43nm,1.4s,mb5.5
WDC Whiskeytown Da 86.11 48 *e*P **P 12 02 38.4 -0.1**
comp=Z,72nm,1.3s,mb5.7
WDC Whiskeytown Da 86.11 48 P **P 12 02 38.5 0.0**
WDC pmax pmax
comp=Z,72nm,1.3s,mb5.7
K02A Glendale 86.12 45 ⇑P **P 12 02 38.6 +0.2**
baz=86
K02A ⇑S S 12 13 12.0 +1.5
baz=86
U04C Hernandez Rese 86.19 52 ⇑P **P 12 02 38.0 -0.9**
baz=86,SNR=11
U04C ⇓S S 12 13 12.6 +1.2
baz=86
J02A Umpqua 86.25 45 ⇓P **P 12 02 39.7 +0.5**
baz=86
J02A ⇓S S 12 13 13.0 +1.3
baz=86
I02A Mapleton 86.29 44 ⇑P **P 12 02 39.6 +0.3**
baz=86
I02A ⇓S S 12 13 12.8 +0.8
baz=86
SNCC San Nicolas Is 86.33 55 *e*P **P 12 02 40.4 +0.7**
comp=Z,70nm,1.2s,mb5.8
SNCC San Nicolas Is 86.33 55 ⇓P **P 12 02 38.7 -1.1**
baz=86
SNCC ⇑S S 12 13 13.3 +0.4
baz=86
YBH Yreka Blue Hor 86.35 46 P **P 12 02 40.0 +0.4**
comp=Z,35nm,1.1s,mb5.5,baz=274,slow=1.3,SNR=24
YBH Yreka Blue Hor 86.35 46 *e*P **P 12 02 39.6 -0.1**
comp=Z,31nm,1.0s,mb5.5
YBH Yreka Blue Hor 86.35 46 P **P 12 02 40.0 +0.4**
YBH pmax pmax
comp=Z,35nm,1.1s
H02A Toledo 86.39 43 ⇓P **P 12 02 40.4 +0.6**
baz=87
PTRM Twissleman Ran 86.44 53 *e*P **P 12 02 41.2 +1.0**
BSC Santa Cruz Isl 86.44 55 ⇑P **P 12 02 39.6 -0.7**
baz=87
BSC ⇑S S 12 13 13.4 -0.5
baz=87
HUMO Hull Mountain 86.44 46 *e*P **P 12 02 40.6 +0.5**
comp=Z,36nm,1.1s,mb5.5
HUMO LR LR
comp=Z,41μm,19.0s,MS6.8
SBC Santa Barbara 86.49 54 ⇓P **P 12 02 40.2 -0.3**
baz=87
SBC ⇑S S 12 13 14.5 0.0
baz=87
SMMC Simmler 86.50 53 ⇓P **P 12 02 40.0 -0.6**
baz=87
SMMC ⇑S S 12 13 15.8 +1.3
baz=87
OHCM Honcut 86.51 49 *e*P **P 12 02 39.4 -1.1**
PKM Peak Mountain 86.53 54 ⇑P **P 12 02 40.6 -0.1**
baz=87,SNR=13
PKM ⇑S S 12 13 15.1 +0.3
baz=87
EGAK Eagle 86.54 21 *e*P **P 12 02 40.1 +0.1**
comp=Z,324nm,1.4s,mb6.4
EGAK LR LR
comp=Z,53μm,22.0s,MS6.9
WMQ Urumqi 86.61 316 P **P 12 02 41.0 +0.1**
WMQ AP pP 12 02 55.0 +2.6
WMQ PP PP 12 06 06.0 +2.7
WMQ S S 12 13 13.0 -2.2
WMQ SS SS 12 18 57.0 0.0
WMQ AMB AMB
comp=Z,56nm,1.2s,mb5.7
WMQ LR LR
comp=N,15μm,20.0s,MS6.5
WMQ LR LR
comp=E,12μm,20.0s,MS6.5
WMQ LR LR
comp=Z,14μm,20.0s,MS6.3
R04C Big Horse Ranc 86.61 50 ⇑P **P 12 02 40.2 -0.8**
baz=87
R04C ⇓S S 12 13 15.9 +0.5
baz=87
I03A Eugene 86.65 44 ⇓P **P 12 02 40.6 -0.4**
baz=87
I03A ⇓S S 12 13 16.6 +1.0
baz=87
U05C Westside ANR, 86.69 52 ⇓P **P 12 02 41.5 0.0**
baz=87
V05C Boulder Hill, 86.73 53 ⇓P **P 12 02 41.6 -0.1**
baz=87
V05C ⇑S S 12 13 19.3 +2.6
baz=87
S05C Merced 86.81 51 ⇑P **P 12 02 41.6 -0.4**
baz=87
S05C ⇓S S 12 13 18.1 +0.7
baz=87
COR Corvallis 86.83 44 PFAKE 12 02 50.0 +8.1
COR LR LR
comp=Z,20μm,20.0s,MS6.5
BUOR Burton Butte 86.84 46 P **P 12 02 42.9 +0.8**
H03A Soap Creek Ran 86.87 44 ⇑P **P 12 02 42.5 +0.4**
baz=87
LAVA Lava Cap Winer 86.90 50 ⇓P **P 12 02 41.9 -0.5**
baz=87
BLG Laguna Peak 86.92 55 ⇓P **P 12 02 41.8 -0.8**
baz=87
CMB Columbia Colle 86.96 51 *e*P **P 12 02 42.2 -0.5**
comp=Z,48nm,1.3s,mb5.6
CMB LR LR
comp=Z,45μm,19.0s,MS6.9
CMB Columbia Colle 86.96 51 *e*P **P 12 02 42.2 -0.5**
CMB pmax pmax
comp=Z,48nm,1.3s,mb5.6
CMB MLR MLR
comp=Z,45μm,19.0s,MS6.9
TRD Trivandrum 86.99 279 *e*P **P 12 02 42.8 -0.6**
TRD *ex* x 12 13 22.1
SCI San Clemente I 87.05 56 ⇑P **P 12 02 42.2 -1.1**
baz=87
LBCM Butte Creek Ri 87.05 48 P **P 12 02 43.1 0.0**
G03A Yamhill 87.08 43 ⇓P **P 12 02 43.2 +0.1**
baz=87
F03A Seaside 87.09 42 ⇑P **P 12 02 43.4 +0.2**
baz=87
O04C Chester 87.09 48 ⇓P **P 12 02 43.1 -0.2**
baz=87
C03A Quillayute Air 87.11 40 ⇓P **P 12 02 43.6 +0.4**
baz=87
T06C Millerton Lake 87.20 52 ⇓P **P 12 02 43.3 -0.6**
baz=87
CIS Catalina Islan 87.27 55 ⇓P **P 12 02 43.6 -0.8**
baz=87
E03A Lebam 87.29 42 ⇑P **P 12 02 44.1 0.0**
baz=88
HYB Hyderabad 87.29 288 *e*P **P 12 02 47.5 +2.7**
HYB *e*SKS 12 13 08.0
HYB Hyderabad 87.29 288 *i* P **P 12 02 46.0 +1.2**
HYB *e*SKS 12 13 08.0
HYB *e*PS 12 14 28.0
HYB LR LR 12 36 40.0
comp=Z,20nm,28.0s
OSI Osito Adit 87.33 54 *e*P **P 12 02 45.3 +0.7**
comp=Z,128nm,1.3s,mb6.0
OSI Osito Adit 87.33 54 ⇑P **P 12 02 44.4 -0.2**
baz=88
D03A Wishkah Elem. 87.34 41 ⇓P **P 12 02 44.6 +0.2**
baz=88
VES Vestal, Richgr 87.37 53 ⇑P **P 12 02 43.7 -1.0**
baz=88
NLWA Neilton Lookou 87.37 41 ⇑P **P 12 02 44.5 0.0**
baz=88
RCTC Rector, Farmer 87.37 52 ⇑P **P 12 02 43.9 -0.9**
baz=88
FMP Fort Macarthur 87.44 55 ⇓P **P 12 02 44.7 -0.5**
baz=88
BEKR Beckwourth 87.50 49 ⇑P **P 12 02 45.3 0.0**
baz=88
DECC Green Verdugo 87.55 55 ⇓P **P 12 02 44.8 -0.9**
baz=88
G04A Mulino 87.58 43 ⇑P **P 12 02 45.8 +0.3**
baz=88
H04A Detroit Lake 87.62 44 ⇑P **P 12 02 44.6 -1.1**
baz=88
NGP Nagpur 87.64 292 *e*S SKSac 12 13 12.2 +0.1
NGP *ex* x 12 46 39.4
comp=Z,13μm,19.3s
MWC Mount Wilson 87.76 55 *e*P **P 12 02 46.5 -0.2**
comp=Z,86nm,1.1s,mb5.9
MWC Mount Wilson 87.76 55 P **P 12 02 46.5 -0.2**
MWC pmax pmax
comp=Z,86nm,1.1s,mb5.9
P06A Stead Airport, 87.79 49 ⇑P **P 12 02 46.5 -0.2**
baz=88,SNR=6.3
WCN Washoe City 87.79 49 ⇑P **P 12 02 47.0 +0.3**
baz=88,SNR=10
R06C Coleville 87.81 50 ⇑P **P 12 02 46.9 +0.2**
baz=88
B04A Port Angeles 87.82 40 ⇓P **P 12 02 46.4 -0.3**
baz=88
KRAR Krasnoyarsk 87.82 328 ⇑*i*P **P 12 02 45.3 -1.1**
KRAR pmax pmax
comp=Z,23nm,0.5s,mb5.7
KRAR MLR MLR
comp=Z,10μm,20.0s,MS6.2
F04A Amboy 87.85 43 ⇑P **P 12 02 46.4 -0.5**
baz=88
E04A Onalaska 87.86 42 ⇓P **P 12 02 47.1 +0.3**
baz=88
K05A Summer Lake 87.93 46 ⇓P **P 12 02 47.0 -0.3**
baz=88,SNR=11
D04A Dobbs Creek Ra 87.97 41 ⇓P **P 12 02 47.3 0.0**
baz=88
O06A Flanigan 87.97 49 ⇑P **P 12 02 47.1 -0.4**
baz=88,SNR=8.4
EDW2 Edwards Air Fo 87.98 54 ⇑P **P 12 02 47.6 -0.1**
baz=88,SNR=20
MLAC Mammoth Lakes 88.03 51 ⇑P **P 12 02 47.8 -0.1**
baz=88
C04A Brinnon 88.05 41 ⇑P **P 12 02 47.7 0.0**
baz=88
BFSC Mount Baldy St 88.08 55 ⇓P **P 12 02 47.8 -0.4**
baz=88
I05A Bend 88.09 44 ⇓P **P 12 02 47.2 -0.8**
baz=88,SNR=6.4
MOD Modoc 88.11 47 *e*P **P 12 02 48.1 0.0**
comp=Z,67nm,1.3s,mb5.7
N06A Buffalo Meadow 88.13 48 ⇑P **P 12 02 47.8 -0.5**
baz=88
MTUM Tungsten Hills 88.17 52 *e*P **P 12 02 48.8 +0.3**
HOOD Mount Hood Mea 88.17 43 *e*P **P 12 02 49.3 +1.0**
PAHR Pah Rah Range 88.18 49 *e*P **P 12 02 48.9 +0.3**
comp=Z,201nm,1.7s,mb6.1
H05A Madras 88.26 44 ⇑P **P 12 02 48.2 -0.6**
baz=88
MURC Murrieta 88.30 55 ⇓P **P 12 02 48.2 -1.0**
baz=88
CWC Cottonwood Cre 88.31 53 ⇑P **P 12 02 48.7 -0.5**
baz=88,SNR=10
TIN Tinemaha 88.35 52 ⇑P **P 12 02 49.0 -0.4**
baz=88
LRMC Laurel Mountai 88.37 54 ⇑P **P 12 02 49.4 -0.2**
baz=88
G05A Wamic 88.38 43 ⇓P **P 12 02 48.7 -0.6**
baz=88
Q07A Schurz 88.40 50 ⇑P **P 12 02 49.0 -0.6**
baz=89
F05A White Salmon 88.47 43 ⇓P **P 12 02 49.0 -0.7**
baz=89
E05A Randle 88.48 42 ⇓P **P 12 02 49.3 -0.5**
baz=89
P07A Fallon 88.50 49 ⇓P **P 12 02 49.6 -0.4**
baz=89
LON Longmire 88.50 42 *e*P **P 12 02 48.9 -1.0**
comp=Z,45nm,1.5s,mb5.6
LON Longmire 88.50 42 *e*P **P 12 02 48.9 -1.0**
LON pmax pmax
comp=Z,45nm,1.5s,mb5.6
D05A Enumclaw 88.52 41 ⇓P **P 12 02 50.1 +0.2**
baz=89
CROR Criterion Ridg 88.52 44 P **P 12 02 50.6 +0.5**
A04A Legoe Bay, Lum 88.53 40 ⇓P **P 12 02 49.8 -0.1**
baz=89
J06A Christmas Vall 88.60 46 ⇑P **P 12 02 50.2 -0.2**
baz=89
DAC Darwin (Calif) 88.65 53 PFAKE 12 03 00.0 +9.2
DAC LR LR
comp=Z,121μm,19.0s,MS7.3
NVAR Mina Array Bea 88.65 51 P **P 12 02 50.9 +0.1**
comp=Z,14nm,0.8s,mb5.4,baz=236,slow=7.5,SNR=70
NVAR PKKP PKKPbc 12 20 38.4 +5.5
comp=Z,0.8nm,0.8s,baz=74,slow=2.2,SNR=4.6
NVAR PKPPKP 12 28 41.4
comp=Z,1.1nm,1.0s,baz=30,slow=2.0,SNR=3.6
NVAR Mina Array Bea 88.65 51 P **P 12 02 50.9 +0.1**
NVAR PKKP PKKPbc 12 20 38.4 +5.5
NVAR P'P' 12 28 41.4
MPMC Manual Prospec 88.67 53 ⇑P **P 12 02 50.9 -0.1**
baz=89,SNR=31
O07A Toulon 88.67 49 ⇑P **P 12 02 50.9 +0.1**
baz=89,SNR=16
BBRC Big Bear Sol-O 88.68 55 ⇓P **P 12 02 50.8 -0.3**
baz=89,SNR=9.1
I06A Prineville 88.76 45 ⇓P **P 12 02 50.7 -0.4**
baz=89
MONP Monument Peak 88.76 56 ⇓P **P 12 02 51.5 0.0**
baz=89
RRX Edison Barstow 88.77 54 ⇓P **P 12 02 50.8 -0.6**
baz=89
N07B Gerlach 88.77 48 ⇑P **P 12 02 51.1 -0.2**
baz=89
B05A Bryant 88.78 40 ⇑P **P 12 02 50.9 -0.3**
baz=89
R08A Mina 88.78 51 ⇑P **P 12 02 51.1 -0.3**
baz=89
M07A Soldier Meadow 88.79 48 ⇑P **P 12 02 51.0 -0.4**
baz=89,SNR=19
G06A Carlson Farm, 88.84 44 ⇑P **P 12 02 51.0 -0.5**
baz=89
L07A Adell 88.84 47 ⇑P **P 12 02 52.1 +0.5**
baz=89,SNR=31
JCW Jim Creek 88.86 40 *e*P **P 12 02 50.9 -0.7**
C05A Tolt Reservoir 88.86 41 ⇓P **P 12 02 51.4 -0.2**
baz=89
F06A Goldendale 88.89 43 ⇑P **P 12 02 51.4 -0.4**
baz=89
H06A Lindquist Farm 88.90 44 ⇑P **P 12 02 51.4 -0.4**
baz=89
PFO Pinyon Flat Ob 88.90 56 P **P 12 02 51.5 -0.6**
comp=Z,133nm,1.7s,mb6.0,SNR=10.0
PFO Pinyon Flat Ob 88.90 56 P **P 12 02 51.9 -0.2**
comp=Z,15nm,1.1s,mb5.2,baz=255,slow=3.8,SNR=19
PFO Pinyon Flat Ob 88.90 56 *e*P **P 12 02 51.7 -0.4**
comp=Z,83nm,1.5s,mb5.8
PFO Pinyon Flat Ob 88.90 56 ⇓P **P 12 02 51.7 -0.4**
baz=89
PFO Pinyon Flat Ob 88.90 56 P **P 12 02 51.9 -0.2**
PFO pmax pmax
comp=Z,15nm,1.1s,mb5.2
DVTC Desert V Tower 88.96 57 ⇑P **P 12 02 51.8 -0.6**
baz=89
E06A Yakima 88.99 42 ⇓P **P 12 02 52.3 +0.2**
baz=89
GRAC Grapevine Rang 89.00 52 ⇓P **P 12 02 52.3 -0.2**
baz=89
A05A Maple Falls 89.01 40 ⇓P **P 12 02 52.0 -0.3**
baz=89
GSC Goldstone 89.03 54 *e*P **P 12 02 52.7 0.0**
comp=Z,141nm,1.9s,mb6.0
GSC LR LR
comp=Z,109μm,19.3s,MS7.3
GSC Goldstone 89.03 54 ⇓P **P 12 02 52.2 -0.5**
baz=89,SNR=15
GSC Goldstone 89.03 54 *e*P **P 12 02 52.7 +0.1**
GSC pmax pmax
comp=Z,141nm,1.9s,mb6.0
GSC MLR MLR
comp=Z,109μm,19.0s,MS7.3
Q08A Gabbs 89.04 50 ⇓P **P 12 02 52.4 -0.2**
baz=89
K07A Rock Creek Ran 89.09 46 ⇑P **P 12 02 52.6 -0.1**
baz=89
P08A Dixie Valley 89.14 49 ⇑P **P 12 02 52.9 -0.2**
baz=89
J07A Hines 89.23 46 ⇑P **P 12 02 53.3 -0.1**
baz=89,SNR=10
O08A Rochester Mine 89.24 49 ⇓P **P 12 02 53.7 +0.2**
baz=89,SNR=22
B06A Marblemount 89.24 40 ⇓P **P 12 02 52.9 -0.4**
baz=89
D06A Cle Elum 89.26 42 ⇓P **P 12 02 53.2 -0.2**
baz=89
FURC Furnace Creek, 89.27 53 ⇓P **P 12 02 53.5 -0.2**
baz=89,SNR=37
SWSC Sam W. Stewart 89.28 56 ⇓P **P 12 02 53.4 -0.4**
baz=89,SNR=23
I07A Izee 89.28 45 ⇓P **P 12 02 53.8 +0.2**
baz=89
HEC Hector,Ludlow 89.29 54 ⇑P **P 12 02 53.4 -0.5**
baz=89
S09A Goldfield 89.29 51 ⇓P **P 12 02 53.4 -0.4**
baz=89,SNR=34
BELC Belle Mtn. 89.36 55 ⇓P **P 12 02 54.1 -0.2**
baz=90,SNR=47
M08A Happy Creek Ra 89.38 48 ⇑P **P 12 02 54.5 +0.3**
baz=90,SNR=18
TPH Tonopah 89.38 51 *e*P **P 12 02 54.8 +0.6**
comp=Z,217nm,2.0s,mb6.1
TPH Tonopah 89.38 51 P **P 12 02 55.1 +0.9**
TPH pmax pmax
comp=Z,220nm,1.9s,mb6.2
H07A Lands Inn, Kim 89.38 44 ⇓P **P 12 02 53.8 -0.3**
baz=90
N08A GE Springer Mi 89.38 48 ⇓P **P 12 02 54.6 +0.4**
baz=90,SNR=31
C06A Tall Timber Ra 89.44 41 ⇓P **P 12 02 54.0 -0.3**
baz=90
WVOR Wild Horse Val 89.45 47 *e*P **P 12 02 54.5 0.0**
comp=Z,220nm,1.6s,mb6.2
WVOR Wild Horse Val 89.45 47 *e*P **P 12 02 54.5 0.0**
WVOR pmax pmax
comp=Z,219nm,1.6s,mb6.2
F07A Phinny Hill Vi 89.50 43 ⇓P **P 12 02 55.0 +0.4**
baz=90
G07A Ruggs Ranch, H 89.50 44 ⇓P **P 12 02 54.2 -0.4**
baz=90
R09A Tonopah 89.54 51 ⇓P **P 12 02 54.7 -0.3**
baz=90
SHOC Shoshone 89.59 53 ⇓P **P 12 02 55.0 -0.2**
baz=90,SNR=8.9
L08A Fields 89.60 47 ⇑P **P 12 02 55.5 +0.4**
baz=90
Q09A Carvers 89.60 50 ⇑P **P 12 02 55.5 +0.2**
baz=90,SNR=14
K08A Mann Creek Ran 89.64 46 ⇓P **P 12 02 55.6 +0.3**
baz=90,SNR=18
U10A Ash Meadows, A 89.67 53 ⇓P **P 12 02 55.9 +0.3**
baz=90,SNR=19
ETW Entiat 89.72 41 *e*P **P 12 02 55.8 +0.2**
comp=Z,66nm,1.2s,mb5.8
BC3 Big Chuckw Mtn 89.72 56 ⇓P **P 12 02 56.0 +0.1**
baz=90,SNR=23
E07A Sunnyside 89.73 42 ⇓P **P 12 02 55.3 -0.4**
baz=90
TUQ Turquoise Moun 89.76 54 ⇑P **P 12 02 55.9 -0.1**
baz=90,SNR=28
J08A Circle Bar Ran 89.81 46 ⇑P **P 12 02 56.0 -0.1**
baz=90
P09A Austin 89.81 50 ⇑P **P 12 02 56.1 -0.1**
baz=90,SNR=12
GMRC Granite Mounta 89.82 55 ⇓P **P 12 02 56.2 -0.1**
baz=90,SNR=20
S10A Tonopah Range, 89.83 51 ⇓P **P 12 02 56.2 -0.2**
baz=90,SNR=58
D07A Quincy 89.83 42 ⇑P **P 12 02 55.8 -0.4**
baz=90
N09A Rock Creek Ran 89.85 48 ⇑P **P 12 02 56.4 +0.1**
baz=90,SNR=18
TPNV Topopah Spring 89.86 52 *e*P **P 12 02 56.3 -0.2**
comp=Z,269nm,1.9s,mb6.2
TPNV Topopah Spring 89.86 52 ⇑P **P 12 02 56.5 0.0**
baz=90
TPNV Topopah Spring 89.86 52 *e*P **P 12 02 56.3 -0.2**
TPNV pmax pmax
comp=Z,269nm,1.9s,mb6.2
RSW Rattlesnake Hi 89.86 43 *e*P **P 12 02 57.6 +1.3**
comp=Z,36nm,1.2s,mb5.6
I08A Drewsey 89.89 45 ⇓P **P 12 02 56.5 0.0**
baz=90,SNR=17
HAWA Hanford 89.90 43 *e*P **P 12 02 56.2 -0.2**
comp=Z,131nm,1.8s,mb6.0
HAWA LR LR
comp=Z,21μm,19.0s,MS6.6
MNGI Mangalore 89.91 283 *e*P **P 12 02 55.4 -1.8**
MNGI *ex* x 12 05 54.7
C07A Waterville 89.92 41 ⇓P **P 12 02 56.4 -0.1**
baz=90
O09A Fish Creek Ran 89.93 49 ⇑P **P 12 02 57.0 +0.3**
baz=90,SNR=43
BMN Battle Mountai 89.97 49 *e*P **P 12 02 56.8 -0.1**
comp=Z,43nm,1.1s,mb5.7
BMN LR LR
comp=Z,25μm,20.0s,MS6.6
BMN Battle Mountai 89.97 49 *e*P **P 12 02 56.8 -0.1**
BMN pmax pmax
comp=Z,43nm,1.1s,mb5.7
BMN MLR MLR
comp=Z,25μm,20.0s,MS6.6
H2OWA Water 89.97 43 P **P 12 02 57.4 +0.6**
H08A Prairie City 89.98 45 ⇑P **P 12 02 56.7 -0.2**
baz=90,SNR=10
G08A Pilot Rock 89.99 44 ⇑P **P 12 02 56.5 -0.4**
baz=90
L09A Wilkinson Ranc 90.04 47 ⇓P **P 12 02 57.6 +0.3**
baz=90,SNR=17
M09A Marrel Ranch, 90.05 48 ⇓P **P 12 02 57.7 +0.4**
baz=90,SNR=38
A07A Ashnola River, 90.09 40 ⇓P **P 12 02 57.1 -0.2**
baz=90
B07A Winthrop 90.10 41 ⇓P **P 12 02 57.0 -0.3**
baz=90
GLA Glamis 90.10 56 *e*P **P 12 02 58.1 +0.4**
comp=Z,117nm,1.4s,mb6.0
GLA LR LR
comp=Z,34μm,19.0s,MS6.8
GLA Glamis 90.10 56 ⇑P **P 12 02 57.9 +0.2**
baz=90,SNR=26
GLA Glamis 90.10 56 *e*P **P 12 02 58.1 +0.4**
GLA pmax pmax
comp=Z,117nm,1.4s,mb6.0
GLA MLR MLR
comp=Z,34μm,19.0s,MS6.8
R10A Warm Springs 90.14 51 ⇓P **P 12 02 58.1 +0.3**
baz=90,SNR=43
K09A Rome 90.17 47 ⇑P **P 12 02 57.9 +0.1**
baz=90,SNR=50
112A Yuma 90.19 57 ⇓P **P 12 02 58.0 -0.1**
baz=90,SNR=5.5
Q10A Clear Creek Ra 90.19 51 ⇑P **P 12 02 57.7 -0.3**
baz=90,SNR=37
E08A Dider Farm, El 90.24 43 ⇓P **P 12 02 58.0 0.0**
baz=90
V11A Goodsprings 90.24 54 ⇑P **P 12 02 58.1 -0.2**
baz=90,SNR=5.7
F08A Pendleton 90.25 43 ⇓P **P 12 02 57.9 -0.2**
baz=90
J09A Fry Pan Ranch, 90.31 46 ⇓P **P 12 02 58.6 +0.1**
baz=90
LDFC Landfair 90.32 54 *e*P **P 12 02 58.9 +0.2**
comp=Z,157nm,1.4s,mb6.2
LDFC LR LR
comp=Z,69μm,19.0s,MS7.1
P10A Eureka 90.33 50 ⇑P **P 12 02 58.9 +0.3**
baz=90,SNR=13
S11A Rachel 90.41 52 ⇑P **P 12 02 58.9 -0.2**
baz=91
U11A Corn Creek 90.41 53 ⇓P **P 12 02 59.1 0.0**
baz=91,SNR=7.2
O10A Cortez Mining, 90.47 49 ⇓P **P 12 02 59.4 +0.1**

baz=91,SNR=8.5
I09A **Lost Marbles R** 90.48 45 ⇓P P 12 02 59.3 0.0
baz=91
D08A **Wollman Farm,** 90.49 42 ⇓P P 12 02 59.0 -0.1
baz=91
Y12C **Blythe** 90.50 56 ⇑P P 12 02 59.2 -0.3
baz=91,SNR=15
N10A **Dunphy** 90.56 49 ⇑P P 12 02 59.7 0.0
baz=91,SNR=24
W12A **Cal Nev Ari** 90.57 54 ⇑P P 12 02 59.6 -0.3
baz=91
B08A **Colville Reser** 90.57 41 ⇓P P 12 02 59.9 +0.4
baz=91
C08A **Higginbotham F** 90.60 41 ⇓P P 12 02 59.3 -0.4
baz=91
NEE2 **Needles Airpor** 90.65 55 ⇑P P 12 03 00.3 +0.1
baz=91
V12A **Nelson** 90.68 54 ⇑P P 12 03 00.1 -0.3
baz=91
R11A **Troy Canyon, C** 90.70 51 ⇑P P 12 03 00.2 -0.2
baz=91,SNR=68
H09A **Durkee** 90.71 45 ⇓P P 12 02 59.8 -0.5
baz=91,SNR=16
OD2 **Odessa Site #2** 90.71 42 *e*P P 12 02 59.8 -0.4
comp=Z,443nm,2.1s,mb6.4
T11A **Corn Creek, Al** 90.73 52 ⇑P P 12 03 00.2 -0.3
baz=91
M10A **I.L. Ranch, Tu** 90.73 48 ⇓P P 12 03 00.6 +0.2
baz=91,SNR=38
Q11A **Duckwater** 90.76 51 ⇑P P 12 03 00.8 +0.1
baz=91,SNR=73
A08A **Turner Farm, O** 90.77 40 ⇑P P 12 03 00.4 -0.1
baz=91
G09A **Cove** 90.79 44 ⇓P P 12 03 00.7 +0.1
baz=91
K10A **MacKenzie Ranc** 90.80 47 ⇓P P 12 03 00.7 0.0
baz=91
F09A **S2 Ranch, Elgi** 90.81 44 ⇓P P 12 03 00.8 +0.1
baz=91
SYO **Syowa Base** 90.81 198 ⇓*e*P P 12 03 00.0 -0.3
SYO **Syowa Base** 90.81 198 ⇓*e*P P 12 03 05.0 +4.7
P11A **Circle Ranch,** 90.85 50 ⇑P P 12 03 01.0 0.0
baz=91,SNR=10
E09A **Wood Farm, Sta** 90.86 43 ⇓P P 12 03 00.9 0.0
baz=91
D09A **Jones Farm, Ri** 90.89 42 ⇓P P 12 03 01.0 0.0
baz=91
113A **Mohawk Valley,** 90.91 57 ⇓P P 12 03 01.5 0.0
baz=91
L10A **Juniper Basin** 90.92 47 ⇓P P 12 03 01.5 +0.2
baz=91
PDMCI **Parker Dam,Lak** 90.93 55 ⇑P P 12 03 01.4 -0.2
baz=91,SNR=8.6
BMO **Blue Mountains** 91.01 45 *e*P P 12 03 01.4 -0.2
comp=Z,45nm,1.2s,mb5.7
BMO LR LR
comp=Z,34µm,20.0s,MS6.8
BMO **Blue Mountains** 91.01 45 *e*P P 12 03 01.4 -0.2
BMO pmax pmax
comp=Z,45nm,1.2s,mb5.7
BMO MLR MLR
comp=Z,34µm,20.0s,MS6.8
T12A **Moapa** 91.01 53 ⇓P P 12 03 01.9 0.0
baz=91,SNR=8.4
J10A **Berg Farm, Mel** 91.03 46 ⇓P P 12 03 01.8 0.0
baz=91,SNR=9.1
O11A **Cowboy Ranch,** 91.06 49 ⇓P P 12 03 02.1 +0.1
baz=91
Y13A **Salome** 91.08 56 ⇓P P 12 03 02.0 -0.2
baz=91,SNR=14
U12A **Valley of Fire** 91.08 53 ⇓P P 12 03 02.4 +0.2
baz=91,SNR=6.6
S12A **Delamar Landin** 91.10 52 ⇓P P 12 03 02.3 0.0
baz=91
C09A **Chrisman Ranch** 91.11 42 ⇓P P 12 03 01.8 -0.3
baz=91
MK31 **Makanchi Array** 91.11 317 *e*P P 12 03 01.0 -1.1
MKAR **Makanchi Array** 91.11 317 P P 12 03 01.1 -1.1
comp=Z,7.4nm,0.5s,mb5.2,baz=90,slow=6.6,SNR=63
MKAR PKKP PKKPbc 12 20 26.9 -0.2
comp=Z,1.9nm,0.8s,baz=298,slow=2.6,SNR=8.7
MKAR LR LR 12 43 24.7
comp=Z,14µm,20.0s,MS6.4,baz=93,slow=35
N11A **Elko Archery C** 91.16 49 ⇑P P 12 03 02.6 +0.1
baz=91
I10A **Payette** 91.17 45 ⇓P P 12 03 02.9 +0.5
baz=91,SNR=11
A09A **Danville** 91.21 40 ⇓P P 12 03 02.5 0.0
baz=91
G10A **Bishop Farm, J** 91.24 44 ⇑P P 12 03 02.4 -0.3
baz=91
X13A **Yucca** 91.24 55 ⇑P P 12 03 02.9 -0.1
baz=91,SNR=7.3
M11A **Holland Ranch,** 91.26 48 ⇑P P 12 03 03.2 +0.3
baz=91,SNR=69
W13A **Hualapai Mount** 91.31 55 ⇓P P 12 03 03.2 -0.1
baz=91
H10A **Noah's Angus R** 91.33 45 ⇓P P 12 03 03.0 -0.1
baz=92
F10A **Beach Ranch, E** 91.34 43 ⇑P P 12 03 03.1 -0.1
baz=92
B09A **Rice** 91.35 41 ⇑P P 12 03 03.2 0.0
baz=92
GOA **Goa** 91.35 285 ⇑*i*P P 12 03 02.5 -1.4
GOA *i* x x 12 13 31.0
V13A **Grand Canyon W** 91.39 54 ⇓P P 12 03 03.6 0.0
baz=92
K11A **Parker Ranch,** 91.40 47 ⇑P P 12 03 03.7 +0.2
baz=92
Q12A **Willow Creek R** 91.43 51 ⇓P P 12 03 03.8 +0.1
baz=92,SNR=35
R12A **Pony Springs,** 91.44 51 ⇑P P 12 03 03.8 -0.1
baz=92
L11A **Cat Creek Ranc** 91.46 47 ⇑P P 12 03 04.0 +0.2
baz=92
ZAA0 **Zalesovo Array** 91.49 325 *e*P P 12 03 03.3 -0.3
ZALV **Zalesovo Beam** 91.49 325 P P 12 03 03.2 -0.4
comp=Z,3.3nm,0.7s,mb4.8,baz=113,slow=5.6,SNR=9.1
ZALV LR LR 12 45 23.4
comp=Z,12µm,18.9s,MS6.3,baz=102,slow=36
ZALV **Zalesovo Beam** 91.49 325 P P 12 03 03.2 -0.4
ZALV LR LR 12 45 23.4
ZALV **Zalesovo Beam** 91.49 325 P P 12 03 03.2 -0.5
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
ZALV MLR MLR
comp=Z,12µm,18.9s,MS6.3
ELK **Elko** 91.51 49 *e*P P 12 03 04.4 +0.3
comp=Z,57nm,1.2s,mb5.8
ELK LR LR
comp=Z,22µm,20.0s,MS6.6
ELK **Elko** 91.51 49 *e*P P 12 03 04.4 +0.3
ELK pmax pmax
comp=Z,57nm,1.2s
ELK MLR MLR
comp=Z,22µm,20.0s
214A **Organ Pipe Nat** 91.53 58 ⇑P P 12 03 04.3 0.0
baz=92,SNR=7.2
U13A **Pakoon Wash** 91.53 53 ⇑P P 12 03 04.3 0.0
baz=92,SNR=16
E10A **Myers Farm, Un** 91.54 43 ⇑P P 12 03 03.3 -0.8
baz=92
D10A **Wagner Farm, O** 91.57 42 ⇑P P 12 03 03.7 -0.5
baz=92
N12A **Clover Valley,** 91.68 49 ⇓P P 12 03 05.0 +0.1
baz=92,SNR=78
MFID **Camas Ranch** 91.69 46 ⇑P P 12 03 05.1 +0.2
baz=92,SNR=18
T13A **Saint George** 91.70 53 ⇓P P 12 03 05.6 +0.5
baz=92,SNR=21
Z14A **Wintersburg** 91.70 56 ⇑P P 12 03 05.4 +0.2
baz=92
I11A **Placerville** 91.72 46 ⇑P P 12 03 04.3 -0.6
baz=92
C10A **Spilker Farm,** 91.74 42 ⇓P P 12 03 04.5 -0.5
baz=92
O12A **Currie** 91.77 49 ⇓P P 12 03 05.5 +0.2
baz=92,SNR=73
Y14A **Wickenburg** 91.78 56 ⇓P P 12 03 05.4 -0.1
baz=92
G11A **Walters Elk Ra** 91.85 44 ⇑P P 12 03 04.8 -0.7
baz=92
S13A **Holt Ranch, En** 91.86 52 ⇑P P 12 03 05.9 +0.1
baz=92
H11A **Donnelly** 91.86 45 ⇓P P 12 03 05.1 -0.5
baz=92
A10A **Northport** 91.87 41 ⇑P P 12 03 05.4 -0.1
baz=92
M12A **Wells** 91.90 48 ⇑P P 12 03 05.9 0.0
baz=92
POO **Poona** 91.90 288 *e*P P 12 03 05.9 -0.5
POO *e*PCP PcP 12 03 07.0 -0.2
R13A **O'Grain Ranch,** 91.90 52 ⇓P P 12 03 06.5 +0.5
baz=92,SNR=37
B10A **Chitwood Farm,** 91.91 41 ⇓P P 12 03 05.6 -0.1
baz=92
NEW **Newport** 91.97 41 *e*P P 12 03 05.8 -0.3
comp=Z,48nm,1.2s,mb5.7
NEW **Newport** 91.97 41 P P 12 03 06.2 +0.2
NEW pmax pmax
comp=Z,48nm,1.2s
W14A **Seligman** 91.97 55 ⇓P P 12 03 06.7 +0.3
baz=92,SNR=15
X14A **Yava** 91.98 55 ⇑P P 12 03 06.3 -0.1
baz=92,SNR=6.3
L12A **House Creek Ra** 91.99 48 ⇓P P 12 03 06.2 -0.1
baz=92,SNR=34
Q13A **Wheeler Ranch,** 92.03 51 ⇑P P 12 03 06.3 -0.2
baz=92,SNR=24
V14A **Boquillas Ranc** 92.04 54 ⇑P P 12 03 06.9 +0.2
baz=92,SNR=18
E11A **Bogner Ranch,** 92.12 43 ⇑P P 12 03 06.2 -0.6
baz=92
P13A **Bates Ranch, G** 92.14 50 ⇓P P 12 03 07.1 +0.1
baz=92
LPIG **La Paz** 92.14 66 P P 12 03 07.9 +0.5
comp=Z,7.9nm,0.3s,mb5.5,baz=161,slow=16,SNR=4.1
U14A **Mt Trumbull** 92.15 53 ⇓P P 12 03 07.1 0.0
baz=92,SNR=23
115A **Sonoran Desert** 92.16 57 ⇑P P 12 03 07.3 0.0
baz=92
J12A **Stokes Ranch,** 92.17 46 ⇑P P 12 03 07.5 +0.4
baz=92
K12A **Draper Farm, C** 92.18 47 ⇑P P 12 03 07.3 +0.2
baz=93
D11A **Klaveano Farm,** 92.19 43 ⇓P P 12 03 06.8 -0.3
baz=92
ARUT **Antelope Range** 92.23 52 *e*P P 12 03 07.8 +0.3
comp=Z,48nm,1.3s,mb5.7
ARUT **Antelope Range** 92.23 52 *e*P P 12 03 07.8 +0.3
ARUT pmax pmax
comp=Z,48nm,1.3s,mb5.7
CCUT **Cedar City** 92.24 52 *e*P P 12 03 07.7 +0.1
comp=Z,162nm,2.0s,mb6.0
I12A **Atlanta** 92.27 46 ⇑P P 12 03 07.9 +0.3
baz=92,SNR=32
O13A **Hicks Ranch, I** 92.31 50 ⇓P P 12 03 07.9 +0.1
baz=92,SNR=27
Y15A **Casa Rosa Ranc** 92.32 56 ⇑P P 12 03 07.9 -0.1
baz=92,SNR=7.8
Z15A **Gila River Ind** 92.33 57 ⇓P P 12 03 08.3 +0.2
baz=92
T14A **Hurricane** 92.36 53 ⇑P P 12 03 08.2 +0.1
baz=92,SNR=6.1
S14A **Cedar City** 92.43 52 ⇓P P 12 03 08.3 -0.1
baz=93,SNR=9.9
M13A **Montello** 92.44 48 ⇑P P 12 03 08.8 +0.5
baz=93
B11A **Sandpoint** 92.50 41 ⇓P P 12 03 08.6 +0.1
baz=93
X15A **Humboldt** 92.51 56 ⇓P P 12 03 08.6 -0.2
baz=93,SNR=12
E12A **Beaver Dam Sad** 92.56 43 ⇑P P 12 03 08.5 -0.3
baz=93
116A **Eloy** 92.56 57 ⇑P P 12 03 09.0 -0.2
baz=93
Q14A **Sevier Lake (B** 92.60 51 ⇑P P 12 03 09.3 +0.2
baz=93
W15A **Williams** 92.62 55 ⇓P P 12 03 10.0 +0.6
baz=93
NVS **Novosibirsk** 92.62 325 *i* P P 12 03 07.4 -1.5
NVS *e* 12 06 54.0
NVS *i* S SKSac 12 13 37.9 -1.6
NVS pmax pmax
comp=Z,133nm,2.2s,mb6.0
NVS pmax pmax
comp=N,43nm,1.9s
NVS pmax pmax
comp=E,75nm,1.9s
NVS pmax pmax
comp=Z,66nm,2.1s,mb5.7
NVS pmax pmax
comp=N,43nm,1.6s
NVS pmax pmax
comp=E,50nm,1.9s
F12A **Elk City** 92.63 44 ⇓P P 12 03 08.6 -0.5
baz=93
A11A **Hall Mountain,** 92.63 41 ⇑P P 12 03 09.4 +0.4
baz=93,SNR=27
H12A **Diamond D Ranc** 92.63 45 ⇑P P 12 03 08.8 -0.4
baz=93
R14A **James Farms, M** 92.66 52 ⇓P P 12 03 09.8 +0.4
baz=93
216A **Three Points,** 92.66 58 ⇓P P 12 03 09.9 +0.3
baz=93
AJM **Ajmer** 92.67 296 *e*P P 12 03 10.8 +1.0
AJM *ex* x 12 14 05.0
HLID **Hailey** 92.73 46 *e*P P 12 03 10.0 +0.3
comp=E,45nm,1.3s,mb5.7
HLID LR LR
comp=Z,48µm,19.0s,MS7.0
HLID **Hailey** 92.73 46 ⇓P P 12 03 09.8 +0.2
baz=93,SNR=35
L13A **Double Diamond** 92.75 48 ⇑P P 12 03 10.3 +0.5
baz=93,SNR=11
K13A **Stover Farm, H** 92.77 47 ⇑P P 12 03 10.5 +0.6
baz=93,SNR=7.6
V15A **Kaibab Nationa** 92.82 54 ⇑P P 12 03 10.7 +0.4
baz=93,SNR=7.4
D12A **Red Ives Fores** 92.85 43 ⇓P P 12 03 09.9 -0.2
baz=93
U15A **North Rim** 92.85 54 ⇑P P 12 03 10.8 +0.4
baz=93,SNR=18
J13A **Cove Ranch, Pi** 92.86 46 ⇑P P 12 03 10.7 +0.4
baz=93
THN **Thein Dam** 92.88 302 *ex* P 12 03 07.8 -2.8
P14A **Drum Mountains** 92.88 50 ⇓P P 12 03 10.5 0.0
baz=93
T15A **Red Dirt Ranch** 92.90 53 ⇑P P 12 03 10.5 0.0
baz=93
C12B **Naegeli Ranch,** 92.92 42 ⇓P P 12 03 10.3 -0.1
baz=93
Z16A **Peralta Trail,** 92.94 57 ⇑P P 12 03 11.0 +0.1
baz=93
Y16A **Circle Bar Ran** 93.01 56 ⇓P P 12 03 11.3 +0.1
baz=93,SNR=10
B12A **Libby** 93.01 41 ⇑P P 12 03 11.0 +0.2
baz=93
I13A **Wildhorse Cree** 93.02 46 ⇓P P 12 03 11.0 +0.1
baz=93
S15A **Panguitch** 93.04 52 ⇓P P 12 03 11.7 +0.5
baz=93
N14A **Grayback Hills** 93.05 49 ⇑P P 12 03 11.1 -0.2
baz=93,SNR=21
H13A **Challis** 93.06 45 ⇓P P 12 03 11.3 +0.2
baz=93
M14A **Sheep Mountain** 93.07 48 ⇓P P 12 03 11.5 +0.2
baz=93,SNR=56
A12A **Yaak River Ran** 93.08 41 ⇑P P 12 03 11.2 +0.1
baz=93
X16A **Lo Mia Camp, P** 93.14 56 ⇑P P 12 03 11.7 -0.1
baz=93,SNR=6.0
217A **Green Valley** 93.15 58 ⇓P P 12 03 12.2 +0.3
baz=93
BGU **Big Grassy Mou** 93.18 49 *e*P P 12 03 11.8 0.0
comp=Z,66nm,1.6s,mb5.8
G13A **Cobalt** 93.18 45 ⇓P P 12 03 11.8 +0.1
baz=93
W16A **Flagstaff** 93.20 55 ⇑P P 12 03 12.2 +0.1
baz=93
DUG **Dugway** 93.20 50 *e*P P 12 03 12.1 +0.2
comp=Z,21nm,1.1s,mb5.5
DUG LR LR
comp=Z,9µm,19.0s,MS6.2
DUG **Dugway** 93.20 50 ⇑P P 12 03 11.3 -0.6
baz=93,SNR=9.8
DUG **Dugway** 93.20 50 *e*P P 12 03 12.1 +0.2
DUG pmax pmax
comp=Z,21nm,1.1s,mb5.5
DUG MLR MLR
comp=Z,9µm,19.0s,MS6.2
R15A **Junction** 93.21 52 ⇑P P 12 03 12.1 +0.1
baz=93
L14A **Malta** 93.25 48 ⇓P P 12 03 12.0 -0.1
baz=93,SNR=23
F13A **Darby** 93.26 44 ⇓P P 12 03 11.8 -0.3
baz=93
TUC **Tucson** 93.28 58 *e*P P 12 03 12.6 +0.1
comp=Z,7.9nm,1.0s,mb5.1
TUC **Tucson** 93.28 58 P P 12 03 12.7 +0.2
TUC pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
Q15A **Fillmore** 93.29 51 ⇑P P 12 03 12.5 +0.1
baz=93
J14A **Carey** 93.32 47 ⇓P P 12 03 13.0 +0.6
baz=94,SNR=9.1
MSU **Marysvale** 93.35 52 *e*P P 12 03 13.2 +0.5
comp=Z,59nm,1.4s,mb5.8
MSU **Marysvale** 93.35 52 *e*P P 12 03 13.2 +0.6
MSU pmax pmax
comp=Z,59nm,1.4s,mb5.8
117A **Oracle** 93.37 58 ⇑P P 12 03 13.0 +0.2
baz=94,SNR=6.4
K14A **Jones Ranch, D** 93.40 47 ⇑P P 12 03 13.0 +0.2
baz=94,SNR=22
WUAZ **Wupatki** 93.40 55 *e*P P 12 03 13.4 +0.5
comp=Z,11nm,1.1s,mb5.2
WUAZ **Wupatki** 93.40 55 ⇓P P 12 03 13.0 0.0
baz=94
D13A **Huson** 93.46 43 ⇑P P 12 03 12.7 -0.2
baz=94
O15A **The Old Anders** 93.47 50 ⇑P P 12 03 13.2 0.0
baz=94
P15A **Leamington** 93.48 51 ⇓P P 12 03 13.0 -0.2
baz=94
I14A **Mackay** 93.49 46 ⇑P P 12 03 13.3 +0.2
baz=94,SNR=35
Y17A **Roosevelt** 93.49 57 ⇑P P 12 03 12.4 -1.0
baz=94,SNR=6.3
E13A **Victor** 93.50 44 ⇓P P 12 03 12.4 -0.8
baz=94
C13A **Hot Springs** 93.50 42 ⇓P P 12 03 12.8 -0.3
baz=94
HVU **Hansel Valley** 93.54 48 *e*P P 12 03 13.5 +0.1
comp=Z,40nm,1.2s,mb5.7
HVU **Hansel Valley** 93.54 48 *e*P P 12 03 13.5 0.0
HVU pmax pmax
comp=Z,40nm,1.2s,mb5.7
N15A **Stansbury Isla** 93.56 49 ⇓P P 12 03 12.9 -0.7
baz=94,SNR=10
T16A **Glen Canyon Da** 93.58 53 ⇓P P 12 03 13.5 -0.2
baz=94
S16A **Weppner Ranch,** 93.65 52 ⇑P P 12 03 13.9 -0.2
baz=94
H14A **Leadore** 93.69 45 ⇓P P 12 03 14.0 -0.1
baz=94
NLU **North Lily Min** 93.71 50 *e*P P 12 03 10.8 -3.4
comp=Z,28nm,1.3s,mb5.5
U16A **Tuba City** 93.72 54 ⇓P P 12 03 14.8 +0.4
baz=94
B13A **Whitefish** 93.72 42 ⇓P P 12 03 13.5 -0.6
baz=94
M15A **Larsen Ranch,** 93.72 49 ⇓P P 12 03 13.9 -0.4
baz=94,SNR=6.9
G14A **Jackson** 93.75 45 ⇓P P 12 03 14.1 -0.2
baz=94,SNR=10.0
318A **Bisbee** 93.78 59 ⇓P P 12 03 14.7 -0.1
baz=94,SNR=5.5
NOQ **North Oquirrh** 93.81 49 *e*P P 12 03 15.3 +0.6
comp=Z,39nm,1.2s,mb5.7
218A **Dragoon** 93.83 58 ⇓P P 12 03 15.2 +0.1
baz=94,SNR=6.1
R16A **Teasdale** 93.84 52 ⇑P P 12 03 15.6 +0.7
baz=94
W17A **Winslow** 93.85 55 ⇑P P 12 03 15.3 +0.2
baz=94
L15A **Malad City** 93.87 48 ⇓P P 12 03 14.4 -0.5
baz=94,SNR=9.6
K15A **Arbon** 93.90 47 ⇑P P 12 03 15.5 +0.5
baz=94
F14A **Wisdom** 93.93 44 ⇑P P 12 03 14.7 -0.4
baz=94
P16A **Fountain Green** 93.96 51 ⇓P P 12 03 16.0 +0.6
baz=94
E14A **Clinton** 93.97 44 ⇑P P 12 03 15.2 0.0
baz=94
118A **Homack Ranch,** 94.02 58 ⇓P P 12 03 15.9 0.0
baz=94,SNR=9.4
Z18A **Geronimo** 94.04 57 ⇓P P 12 03 16.1 +0.2
baz=94
MPU **Maple Canyon** 94.05 50 *e*P P 12 03 16.3 +0.5
comp=Z,39nm,1.5s,mb5.6
C14A **Swan Lake** 94.07 42 ⇓P P 12 03 16.8 +1.1
baz=94
D14A **Greenough** 94.09 43 ⇑P P 12 03 16.2 +0.4
baz=94
MCMT **McKenzie Canyo** 94.09 45 *e*P P 12 03 16.0 +0.1
comp=Z,5.5nm,1.0s,mb5.2
J15A **Blackfoot** 94.11 47 ⇑P P 12 03 16.4 +0.4
baz=94,SNR=8.7
T17A **Navajo Res., N** 94.13 53 ⇑P P 12 03 16.6 +0.3
baz=94
Y18A **Canyon Day Jun** 94.17 57 ⇑P P 12 03 16.7 +0.2
baz=94,SNR=10
U17A **Shonto** 94.17 54 ⇓P P 12 03 16.7 +0.3
baz=94
O16A **Springville** 94.19 50 ⇓P P 12 03 16.3 -0.1
baz=94,SNR=10
I15A **Monteview** 94.19 46 ⇓P P 12 03 16.9 +0.5
baz=94,SNR=9.9
H15A **Lima** 94.19 46 ⇓P P 12 03 16.9 +0.5
baz=94,SNR=36
Q16A **Castle Valley** 94.20 51 ⇓P P 12 03 17.1 +0.6
baz=94
CHMT **Chamberlain Mo** 94.23 43 *e*P P 12 03 16.0 -0.5
comp=Z,34nm,1.6s,mb5.5
S17A **Black Ridge (B** 94.25 53 ⇑P P 12 03 16.4 -0.5
baz=94
M16A **Huntsville** 94.30 49 ⇑P P 12 03 17.0 0.0
baz=94
JLU **Jordanelle** 94.30 50 *e*P P 12 03 17.4 +0.5
comp=Z,102nm,1.9s,mb5.9
N16A **Rees Ranch, Co** 94.36 49 ⇓P P 12 03 17.0 -0.2
baz=94,SNR=6.6
319A **Douglas** 94.37 59 ⇑P P 12 03 17.2 -0.3
baz=94,SNR=6.2
DLMT **Dillon** 94.37 45 *e*P P 12 03 17.3 +0.2
comp=Z,102nm,1.5s,mb6.0
X18A **Snowflake** 94.37 56 ⇓P P 12 03 17.4 -0.1
baz=94,SNR=8.4
KURK **Kurchatov** 94.38 321 ⇓P P 12 03 17.5 +0.4
SNR=24
KURK **Kurchatov** 94.38 321 PKKP PKKPbc 12 20 17.4 -1.4
comp=Z,1.8nm,0.8s,baz=296,slow=3.3,SNR=7.9
KURK **Kurchatov** 94.38 321 *e*P P 12 03 15.7 -1.4
comp=Z,72nm,1.6s,mb5.9
KURK LR LR
comp=Z,23µm,19.0s,MS6.7
KURK **Kurchatov** 94.38 321 *e*P P 12 03 15.7 -1.4
KURK pmax pmax
comp=Z,73nm,1.6s,mb5.9
KURK MLR MLR
comp=Z,23µm,19.0s,MS6.7
HWUT **Hardware Ranch** 94.40 49 *e*P P 12 03 16.6 -0.8
comp=Z,23nm,1.4s,mb5.4
HWUT LR LR
comp=Z,44µm,19.0s,MS6.9
G15A **Dillon** 94.41 45 ⇓P P 12 03 17.4 0.0
baz=95,SNR=18
R17A **Hanksville Air** 94.46 52 ⇑P P 12 03 17.5 -0.3
baz=95,SNR=8.5
219A **White Tail Can** 94.50 58 ⇑P P 12 03 18.2 +0.1
baz=95,SNR=15
B14A **Marquette Ranc** 94.50 42 ⇑P P 12 03 17.7 0.0
baz=95
A14A **Double T Ranch** 94.52 41 ⇑P P 12 03 17.4 -0.4
baz=95
F15A **Butte** 94.53 44 ⇑P P 12 03 17.5 -0.4
baz=95
E15A **Deer Lodge** 94.54 44 ⇓P P 12 03 17.5 -0.4
baz=95
L16A **Fish Haven** 94.57 48 ⇓P P 12 03 17.7 -0.4
baz=95
119A **Ashpeak Ranch,** 94.59 58 ⇑P P 12 03 18.8 +0.2
baz=95
V18A **Ganado** 94.59 55 ⇓P P 12 03 18.4 0.0
baz=95
K16A **Soda Springs** 94.61 47 ⇓P P 12 03 18.8 +0.4
baz=95
P17A **Butcher Ranch,** 94.63 51 ⇑P P 12 03 18.5 0.0
baz=95
W18A **Petrified Fore** 94.65 55 ⇑P P 12 03 18.7 -0.1
baz=95
J16A **Bone** 94.67 47 ⇑P P 12 03 19.3 +0.7

baz=95,SNR=7.5
Z19A T-Link Ranch, 94.72 57 ⇑P **P** **12 03 18.9 -0.1**
baz=95
SRU San Rafael 94.73 51 *e*P **P** **12 03 19.9 +1.0**
comp=Z,12nm,1.1s,mb5.2
SRU San Rafael 94.73 51 ⇑P **P** **12 03 19.1 +0.1**
baz=95
SRU San Rafael 94.73 51 *e*P **P** **12 03 19.9 +0.9**
SRU pmax pmax
comp=Z,12nm,1.1s,mb5.2
D15A Lincoln 94.74 43 ⇓P **P** **12 03 18.7 -0.2**
baz=95
O17A Robinson Place 94.76 50 ⇑P **P** **12 03 19.6 +0.5**
baz=95,SNR=10
U18A Rough Rock, Ch 94.77 54 ⇑P **P** **12 03 19.2 0.0**
baz=95
N17A Moffit Pass 94.82 49 ⇓P **P** **12 03 19.1 -0.2**
baz=95
C15A Salmond Ranch, 94.82 42 ⇑P **P** **12 03 18.7 -0.5**
baz=95
Y19A Nutrioso 94.84 57 ⇑P **P** **12 03 19.9 +0.3**
baz=95,SNR=11
I16A Newdale 94.87 46 ⇓P **P** **12 03 19.7 +0.2**
baz=95,SNR=6.0
T18A Mexican Hat 94.89 53 ⇑P **P** **12 03 19.9 +0.1**
baz=95
S18A Hurst Farm, Bl 94.89 53 ⇑P **P** **12 03 19.4 -0.3**
baz=95,SNR=7.7
X19A St. Johns 94.89 56 ⇓P **P** **12 03 20.1 +0.3**
baz=95
G16A Moss Hill, Enn 94.89 45 ⇓P **P** **12 03 19.6 0.0**
baz=95
TKM2 Tokmak 2 94.92 313 *e*P **P** **12 03 21.6 +1.8**
comp=Z,13nm,1.3s,mb5.2
TKM2 Tokmak 2 94.92 313 *e*P **P** **12 03 21.6 +1.8**
TKM2 pmax pmax
comp=Z,13nm,1.3s,mb5.2
W19A Sanders 94.93 55 ⇑P **P** **12 03 19.8 -0.2**
baz=95
AHID Auburn Hatcher 94.95 48 PFAKE **12 03 30.0 +10**
AHID LR LR
comp=Z,43μm,19.0s,MS6.9
B15A Bradely Ranch, 94.95 42 ⇓P **P** **12 03 19.0 -0.8**
baz=95
A15A Johnson Ranch, 94.97 41 ⇑P **P** **12 03 19.1 -0.7**
baz=95
Q18A Rafter H Ranch 95.03 51 ⇑P **P** **12 03 19.9 -0.4**
baz=95
P18A Preston Nutter 95.03 51 ⇓P **P** **12 03 20.8 +0.5**
baz=95
M17A Scullys Gap (B 95.04 49 ⇑P **P** **12 03 20.6 +0.3**
baz=95
K17A Gardner Place, 95.08 48 ⇓P **P** **12 03 20.3 -0.2**
baz=95
R18A Canyonlands Na 95.09 52 ⇓P **P** **12 03 20.2 -0.5**
baz=95,SNR=6.6
BOZ Bozeman (W) 95.09 45 *e*P **P** **12 03 20.8 +0.3**
comp=Z,50nm,1.6s,mb5.7
BOZ LR LR
comp=Z,12μm,22.0s,MS6.3
BOZ Bozeman (W) 95.09 45 ⇑P **P** **12 03 20.6 +0.1**
baz=95,SNR=10
BOZ Bozeman (W) 95.09 45 *e*P **P** **12 03 20.8 +0.3**
BOZ pmax pmax
comp=Z,50nm,1.6s,mb5.7
BOZ MLR MLR
comp=Z,12μm,22.0s,MS6.3
F16A Kennard Place, 95.12 45 ⇑P **P** **12 03 21.0 +0.4**
baz=95,SNR=8.5
HRY Holter Researc 95.15 44 *e*P **P** **12 03 20.3 -0.4**
comp=Z,11nm,0.8s,mb5.3
TPAW Teton Pass 95.19 47 *e*P **P** **12 03 22.2 +1.3**
comp=Z,67nm,1.9s,mb5.8
H16A Russell Place, 95.19 46 ⇓P **P** **12 03 21.7 +0.7**
baz=95,SNR=9.6
E16A East Helena 95.22 44 ⇓P **P** **12 03 21.2 +0.2**
baz=95
IMW Indian Meadow 95.27 46 *e*P **P** **12 03 20.4 -0.9**
comp=Z,11nm,0.9s,mb5.3
V19A Window Rock 95.31 55 ⇓P **P** **12 03 22.3 +0.6**
baz=95
SNOW Snow King Moun 95.32 47 *e*P **P** **12 03 22.9 +1.3**
comp=Z,11nm,1.2s,mb5.2
O18A Roosevelt 95.32 50 ⇓P **P** **12 03 22.4 +0.7**
baz=96
J17A Brown Place, J 95.33 47 ⇓P **P** **12 03 22.3 +0.7**
baz=96
YMR Madison River 95.38 46 *e*P **P** **12 03 22.7 +0.9**
comp=Z,81nm,1.7s,mb5.9
D16A Dana Ranch, Ca 95.39 43 ⇑P **P** **12 03 22.0 +0.2**
baz=96
C16A Fuhringer Ranc 95.40 42 ⇓P **P** **12 03 21.1 -0.7**
baz=96
YFT Old Faithful 95.44 46 P **P** **12 03 22.5 +0.4**
comp=Z,157nm,2.0s,mb6.1
LOHW Long Hollow 95.45 47 *e*P **P** **12 03 22.4 +0.2**
comp=Z,29nm,1.6s,mb5.5
M18A Lyman 95.47 49 ⇓P **P** **12 03 21.6 -0.8**
baz=96
T19A Beclabito 95.51 54 ⇓P **P** **12 03 22.8 +0.2**
baz=96
I17A Pilgram Creek 95.53 46 ⇓P **P** **12 03 23.7 +1.2**
baz=96
B16A M & M Farms, S 95.53 42 ⇓P **P** **12 03 22.7 +0.3**
baz=96
R19A Curley Farm, L 95.56 52 ⇑P **P** **12 03 22.6 -0.2**
baz=96
S19A Harvey Farm, M 95.57 53 ⇓P **P** **12 03 22.1 -0.7**
baz=96,SNR=5.5
L18A Fontenelle, Gr 95.58 49 ⇓P **P** **12 03 22.9 +0.1**
baz=96
YNR Norris Junctio 95.59 46 *e*P **P** **12 03 24.3 +1.5**
comp=Z,88nm,1.9s,mb5.9
H17A Grant Village 95.61 46 ⇓P **P** **12 03 23.7 +0.8**
baz=96
FRU Bishkek 95.62 312 *e*P **P** **12 03 24.0 +1.1**
FRU *e* 12 07 18.0
FRU *e* 12 13 56.0
FRU MLR MLR
comp=Z,15μm,22.0s,MS6.4
G17A Pierce Place, 95.65 45 ⇑P **P** **12 03 23.0 0.0**
baz=96
Q19A Hogan Spring (95.67 52 ⇓P **P** **12 03 23.3 0.0**
baz=96
AAK Ala-Archa 95.67 312 PFAKE **12 03 30.0 +6.8**
AAK LR LR
comp=Z,17μm,21.0s,MS6.5
N18A Larsen Ranch, 95.69 50 ⇑P **P** **12 03 23.2 -0.2**
baz=96
K18A Toltan Ranch, 95.70 48 ⇑P **P** **12 03 23.8 +0.5**
baz=96
A16A West Butte Ran 95.70 41 ⇑P **P** **12 03 22.4 -0.8**
baz=96,SNR=5.6
LKWY Lake 95.76 46 PFAKE **12 03 40.0 +16**
LKWY LR LR
comp=Z,80μm,19.0s,MS7.2
E17A Martinsdale 95.76 44 ⇓P **P** **12 03 23.5 0.0**
baz=96
F17A Fitzpatrick Pl 95.81 45 ⇓P **P** **12 03 24.3 +0.6**
baz=96,SNR=13
J18A Kendall Valley 95.81 47 ⇓P **P** **12 03 23.9 +0.2**
baz=96
MVCO Mesa Verde 95.98 53 *e*P **P** **12 03 24.4 -0.3**
MVCO Mesa Verde 95.98 53 ⇓P **P** **12 03 25.0 +0.2**
baz=96
NVL N'lazarevskaya 95.99 189 P **P** **12 03 23.1 -1.0**
NVL *e*S SKSac 12 13 59.1 +1.7
NVL *e* 12 16 00.1
NVL pmax pmax
comp=Z,42nm,1.6s,mb5.6
NVL MLR MLR
comp=N,32μm,19.0s,MS6.8
NVL MLR MLR
comp=E,4μm,19.0s,MS6.8
NVL MLR MLR
comp=Z,47μm,19.0s,MS7.0
MAIT Maitri 95.99 189 *e*P **P** **12 03 25.2 +1.0**
D17A Six Diamond Ra 96.00 43 ⇓P **P** **12 03 24.9 +0.4**
baz=96
P19A Cripple Cowboy 96.00 51 ⇑P **P** **12 03 24.8 0.0**
baz=96
C17A Wharram Farm, 96.03 43 ⇓P **P** **12 03 24.2 -0.5**
baz=96
I18A Diamond G Ranc 96.03 47 ⇓P **P** **12 03 24.6 -0.2**
baz=96
N19A John Jarvie Ra 96.05 50 ⇑P **P** **12 03 24.4 -0.6**
baz=96
BW06 Boulder Array 96.07 48 PFAKE **12 03 40.0 +15**
BW06 LR LR
comp=Z,32μm,19.0s,MS6.8
BW06 Boulder Array 96.07 48 ⇑P **P** **12 03 24.8 -0.2**
baz=96
PDAR Pinedale Array 96.07 48 P **P** **12 03 24.7 -0.3**
comp=Z,4.6nm,0.9s,mb4.9,baz=243,slow=1.7,SNR=18
PDAR PKKP PKKPbc 12 20 14.3 +0.4
comp=Z,0.5nm,0.7s,baz=116,slow=3.4,SNR=3.7
PDAR LR LR 12 44 07.6
comp=Z,27μm,18.9s,MS6.7,baz=271,slow=34
PV01 Paradox Valley 96.08 52 *e*P **P** **12 03 25.2 0.0**
comp=Z,582nm,1.0s,mb7.0
L19A Farson 96.11 48 ⇑P **P** **12 03 24.8 -0.4**
baz=96
B17A L&G Farms, Che 96.11 42 ⇓P **P** **12 03 23.8 -1.2**
baz=96
M19A Rock Springs 96.16 49 ⇓P **P** **12 03 25.0 -0.4**
baz=96
AML Almayashu 96.18 312 *e*P **P** **12 03 25.9 +0.3**
comp=Z,45nm,1.6s,mb5.7
AML LR LR
comp=Z,12μm,19.0s,MS6.4
EKS2 Erkin-Say 96.20 312 PFAKE **12 03 40.0 +14**
EKS2 LR LR
comp=Z,20μm,21.0s,MS6.6
A17A Triple J Farms 96.28 41 ⇓P **P** **12 03 25.1 -0.7**
baz=96
E18A Harlowton 96.42 44 ⇑P **P** **12 03 26.6 +0.1**
baz=97,SNR=29
F18A Big Timber 96.46 45 ⇓P **P** **12 03 26.9 +0.2**
baz=97,SNR=6.8
G18A Lazy EL Ranch, 96.47 45 ⇑P **P** **12 03 27.1 +0.3**
baz=97
GCMT Greycliff 96.47 45 *e*P **P** **12 03 27.7 +1.0**
comp=Z,60nm,2.0s,mb5.7
YKA Yellowknife Ar 96.52 28 P **P** **12 03 25.6 -1.0**
comp=Z,19nm,0.9s,mb5.5,baz=260,slow=4.6,SNR=32
YKA LR LR 12 48 41.7
comp=Z,10μm,18.1s,MS6.3,baz=165,slow=36
YKA Yellowknife Ar 96.52 28 P **P** **12 03 25.6 -1.0**
YKA LR LR 12 48 41.8
YKA Yellowknife Ar 96.52 28 P **P** **12 03 25.6 -1.0**
YKA pmax pmax
comp=Z,19nm,1.0s
YKA MLR MLR
comp=Z,10μm,18.1s
BHJ Bhuj 96.58 292 *e*P **P** **12 03 26.7 -1.1**
BHJ AMb AMB 12 03 36.0
comp=Z,54nm,1.4s,mb5.8
K19A Absolon Red Bu 96.59 48 ⇓P **P** **12 03 27.0 -0.4**
baz=97
D18A Linhart Farms, 96.60 43 ⇑P **P** **12 03 27.3 0.0**
baz=97
LAZ Ladron 96.64 56 *e*P **P** **12 03 28.5 +0.6**
comp=Z,4.7nm,1.4s,mb4.7
RLMT Red Lodge 96.65 45 *e*P **P** **12 03 28.3 +0.8**
comp=Z,15nm,1.4s,mb5.2
RLMT Red Lodge 96.65 45 ⇑P **P** **12 03 28.3 +0.8**
baz=97
EGMT Eagleton 96.76 43 *e*P **P** **12 03 27.4 -0.6**
comp=Z,29nm,0.9s,mb5.7
EGMT LR LR
comp=Z,19μm,20.0s,MS6.6
EGMT Eagleton 96.76 43 ⇑P **P** **12 03 27.4 -0.6**
baz=97
Y22D IRIS PASSCAL I 96.77 57 ⇑P **P** **12 03 28.5 +0.1**
baz=97
B18A Beardsley Farm 96.80 42 ⇓P **P** **12 03 28.2 0.0**
baz=97
L20A Wamsutter 96.84 49 ⇑P **P** **12 03 29.3 +0.8**
baz=97
M20A Sweetwater, Wa 96.88 49 ⇓P **P** **12 03 29.0 +0.3**
baz=97
SNAA Sanae 96.93 185 *e*P **P** **12 03 24.4 -4.0**
SNAA *e* 12 03 30.9
SNAA *e* pP 12 03 37.0 -3.0
SNAA Sanae 96.93 185 *e*P **P** **12 03 23.2 -5.2**
comp=Z,24nm,1.0s,mb5.6
SNAA Sanae 96.93 185 P **P** **12 03 24.0 -4.4**
SNAA pmax pmax
comp=Z,24nm,1.0s
K20A Yellowstone Ra 96.94 48 ⇑P **P** **12 03 29.3 +0.3**
baz=97
BNM Barren Site 97.02 57 *e*P **P** **12 03 30.2 +0.6**
comp=Z,7.8nm,1.3s,mb5.0
ANMO Albuquerque 97.28 56 *e*P **P** **12 03 31.2 +0.5**
comp=Z,6.7nm,1.1s,mb5.0
ANMO LR LR
comp=Z,23μm,19.0s,MS6.7
SMCO Snowmass 97.47 52 *e*P **P** **12 03 29.8 -1.7**
comp=Z,21nm,1.6s,mb5.3
L21A Rawlins 97.55 49 ⇑P **P** **12 03 32.1 +0.4**
baz=98
VNA3 Neumayer Olymp 97.78 183 *e*P **P** **12 03 34.3 +2.1**
VNA3 *e* pP 12 03 45.3 +1.4
VNA2 Neumayer--Watz 97.98 183 *e*P **P** **12 03 36.2 +3.1**
VNA2 *e* pP 12 03 46.8 +2.0
VNA1 Neumayer--Stat 98.30 183 *e*P **P** **12 03 36.8 +2.2**
VNA1 *e* pP 12 03 48.3 +2.1
ISCO Idaho Springs 98.59 51 *e*P **P** **12 03 36.4 -0.1**
ISCO LR LR
comp=Z,83μm,19.0s,MS7.2
TXAR Lajitas Array 98.85 62 P **P** **12 03 38.2 +0.4**
comp=Z,1.0nm,0.9s,baz=219,slow=5.6,SNR=6.0
TXAR PKKPbc PKKPbc 12 20 00.9 -4.8
comp=Z,0.5nm,0.9s,baz=152,slow=3.7,SNR=3.4
TXAR PKKP PKKPbc 12 20 07.8 +2.1
comp=Z,0.8nm,0.6s,baz=102,slow=4.1,SNR=10
TXAR LR LR 12 39 21.5
comp=Z,29μm,21.2s,MS6.8,baz=20,slow=30
TXAR Lajitas Array 98.85 62 P **P** **12 03 38.2 +0.4**
TXAR PKKPbc PKKPbc 12 20 00.9 -4.8
TXAR PKKP PKKPbc 12 20 07.8 +2.1
TXAR LR LR 12 39 21.5
BRVK Borovoye 99.84 322 P Pdif 12 03 41.6 -0.1
SNR=13
BRVK Borovoye 99.84 322 *e*Pdif Pdif 12 03 40.5 -1.3
comp=Z,52nm,1.6s
BRVK LR LR
comp=Z,20μm,20.0s,MS6.6
BRVK Borovoye 99.84 322 *e*P Pdif 12 03 40.5 -1.2
BRVK pmax pmax
comp=Z,52nm,1.6s,mb5.7
BRVK MLR MLR
comp=Z,20μm,20.0s,MS6.6
DGMT Dagmar 100.50 42 PFAKE **12 04 00.0 +15**
DGMT LR LR
comp=Z,29μm,19.0s,MS6.8
AMTX Amarillo 101.17 56 PFAKE **12 04 00.0 +12**
AMTX LR LR
comp=Z,42μm,19.0s,MS7.0
FFC Flin Flon 102.23 36 PFAKE **12 04 00.0 +7.6**
FFC LR LR
comp=Z,21μm,19.0s,MS6.7
JCT Junction City 102.32 61 PFAKE **12 04 00.0 +7.2**
JCT LR LR
comp=Z,38μm,19.0s,MS6.9
CBKS Cedar Bluff 103.04 53 PFAKE **12 04 10.0 +14**
CBKS LR LR
comp=Z,48μm,20.0s,MS7.0
SVE Sverdlovsk 105.45 326 *e*P Pdif 12 04 07.5 +0.8
SVE *e*S SKSac 12 14 41.7 -1.9
SVE *e* 12 15 50.0
SVE MLR MLR
comp=Z,18μm,18.0s,MS6.7
ECSD EROS,Sioux Fal 105.56 48 PFAKE **12 08 30.0 +9.3**
ECSD LR LR
comp=Z,37μm,20.0s,MS6.9
HKT Hockley 105.70 62 PFAKE **12 08 30.0 +8.7**
HKT LR LR
comp=Z,31μm,20.0s,MS6.9
AGMN Agassiz Refuge 106.05 43 PFAKE **12 08 30.0 +8.6**
AGMN LR LR
comp=Z,26μm,19.0s,MS6.8
ARU Arti 106.62 326 PFAKE **12 08 30.0 +7.8**
ARU LR LR
comp=Z,20μm,19.0s,MS6.7
ARU Arti 106.62 326 P Pdif 12 04 16.8 +4.9
ARU S SKSac 12 14 53.0 +4.1
ARU SP SP 12 17 46.7 -5.1
ARU PS PS 12 17 56.6 -0.4
EFI East Falkland 108.57 155 PFAKE **12 08 40.0 +14**
EFI LR LR
comp=Z,7μm,21.0s,MS6.2
EYMN Ely 108.99 43 PFAKE **12 08 40.0 +13**
EYMN LR LR
comp=Z,18μm,19.0s,MS6.7
ABPO Ambohimpanom 109.33 245 PFAKE **12 08 40.0 +12**
ABPO LR LR
comp=Z,21μm,21.0s,MS6.7
CCM Cathedral Cave 109.69 53 PFAKE **12 08 40.0 +11**
CCM LR LR
comp=Z,31μm,19.0s,MS6.9
JFWS Jewell Farm 110.23 48 PFAKE **12 08 40.0 +11**
JFWS LR LR
comp=Z,19μm,20.0s,MS6.7
KBS Kingsbay 110.52 354 PFAKE **12 08 40.0 +11**
KBS LR LR
comp=Z,9μm,19.0s,MS6.4
KBS Kingsbay 110.52 354 *e*PP PP 12 09 03.7 -1.3
KBS *e*SS SS 12 24 32.7 +2.4
KBS AMS AMS 12 47 50.1
comp=Z,7μm,20.9s,MS6.2
BJO Bjornoya 113.15 350 *e*PP PP 12 09 23.6 -0.3
BJO *e*SS SS 12 25 03.3 -2.1
BJO AMS AMS 12 59 25.5
comp=Z,9μm,17.4s,MS6.4
BRAL Brewton 113.30 61 PFAKE **12 08 50.0 +14**
BRAL LR LR
comp=Z,28μm,21.0s,MS6.8
LRAL Lakeview Retre 113.30 59 PFAKE **12 08 50.0 +14**
LRAL LR LR
comp=Z,48μm,19.0s,MS7.1
LVZ Lovozero 113.69 341 PFAKE **12 08 50.0 +15**
LVZ LR LR
comp=Z,14μm,22.0s,MS6.5
GLMI Grayling 114.08 46 PFAKE **12 08 50.0 +13**
GLMI LR LR
comp=Z,37μm,19.0s,MS7.0
DAG Danmarks Havn 114.22 0⇓*e*P PKiKP **12 08 37.7 +1.6**
DAG LR LR
comp=Z,13μm,18.0s,MS6.6
DAG Danmarks Havn 114.22 0⇓*i*P PKiKP **12 08 37.7 +1.6**
comp=Z,1.5nm,0.8s
DAG
comp=Z,12μm,18.0s
KEV Kevo 114.83 344 PFAKE **12 08 50.0 +13**
KEV LR LR
comp=Z,18μm,20.0s,MS6.7
KLMR Klimovskoe 115.13 333 *e*PKIKP PKiKP **12 08 36.5 -1.7**
KLMR pmax pmax
comp=Z,32nm,1.3s
AAM Ann Arbor 115.13 48 PFAKE **12 08 50.0 +11**
AAM LR LR
comp=Z,38μm,19.0s,MS7.0
ARCES ARCESS Array B 115.38 345 PKiKP PKiKP **12 08 36.8 -1.7**
comp=Z,7.5nm,0.8s,baz=81,slow=1.8,SNR=16
ARCES PKKPbc PKKPbc 12 19 14.0 -1.3
comp=Z,3.2nm,0.9s,baz=245,slow=2.6,SNR=5.6
ARCES ARCESS Array B 115.38 345 *i* PKIKP PKPdf **12 08 36.8 -1.6**
ARCES **12 19 14.0**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
MAK Makhachkala 115.46 312 *e*P Pdif **12 04 51.3 +0.1**
MAK *e* **12 08 40.5**
MAK *i* **12 09 42.3**
MAK *e*PPP **12 12 16.2**
MAK *i* **12 15 28.2**
MAK *e* **12 15 51.2**
MAK *e*PS PS 12 19 25.1 +3.0
ACSO Alum Creek Sta 115.92 51 PFAKE **12 08 50.0 +10**
ACSO LR LR
comp=Z,59nm,19.0s,MS7.2
GOGA Godfrey 116.23 58 PFAKE **12 08 50.0 +8.8**
GOGA LR LR
comp=Z,41μm,20.0s,MS7.0
TRO Tromso 116.93 346 *e*PP PP 12 09 48.9 -1.6
TRO *e*SS SS 12 25 54.0 -1.0
TRO AMS AMS 13 05 22.8
comp=Z,11μm,21.3s,MS6.4
VRHR Novokhopersk 117.51 322 *i* PKIKP PKPdf **12 08 42.0 -1.1**
VRHR *e* **12 09 51.9**
VRHR *e*PS PS 12 19 45.3 +4.9
VRHR *e*SS SS 12 26 01.1 -2.7
VRHR *e*SSS **12 30 29.7**
VRHR pmax pmax
comp=Z,10.0nm,0.4s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,590nm,7.5s
VRHR pmax pmax
comp=N,880nm,8.1s
VRHR pmax pmax
comp=E,260nm,6.3s
VRHR MLR MLR
comp=Z,8μm,18.0s,MS6.4
VRHR MLR MLR
comp=N,6μm,21.0s,MS6.4
VRHR MLR MLR
comp=E,7μm,17.0s,MS6.4
JOF Joensuu 117.55 337 *e*p PKPdf **12 08 41.8 -1.0**
comp=E,4.9nm,0.7s
JOF Joensuu 117.55 337 *e*PKIKP PKPdf **12 08 41.8 -1.0**
JOF pmax pmax
comp=Z,5.0nm,0.7s
MTA Mtatsminda 117.65 311 P PP 12 09 56.4 -0.2
TBLG Delisi 117.68 311 P PP 12 09 54.5 -2.4
ERPA Erie 117.85 48 PFAKE **12 09 00.0 +16**
ERPA LR LR
comp=Z,47μm,19.0s,MS7.1
DWPF Disney 118.28 64 PFAKE **12 09 00.0 +15**
DWPF LR LR
comp=Z,21μm,21.0s,MS6.7
BLA Blacksburg 118.32 54 PFAKE **12 09 00.0 +15**
BLA LR LR
comp=Z,21μm,19.0s,MS6.8
ONI Oni 118.46 313 P PKPdf **12 08 48.1 +3.0**
ONI S PKiKP **12 08 49.9 +4.7**
ONI Oni 118.46 313 P PP **12 09 51.0 -11**
KIV Kislovodsk 118.71 314⇑*i*PKP PKPdf **12 08 46.1 +0.5**
KIV LR LR
comp=Z,9μm,20.0s,MS6.4
KIV Kislovodsk 118.71 314 *e*P Pdif **12 05 05.0 -0.6**
KIV *i* **12 08 46.2**
KIV *e* **12 10 01.0**
KIV *e* **12 15 36.6**
KIV *e*PS PS 12 19 50.2 -1.3
KIV *e*SS SS 12 26 19.4 -0.5
KIV pmax pmax
comp=Z,15nm,0.9s
KIV MLR MLR
comp=Z,11μm,22.0s,MS6.4
OBN Obninsk 118.92 328 *i* PKIKP PKPdf **12 08 46.2 +0.6**
OBN *i* PS PS 12 19 57.8 +4.9
OBN *i* SS SS 12 26 20.7 -1.0
OBN pmax pmax
comp=Z,41nm,1.3s
VSR Storozhevoye 118.94 323 *i* PKIKP PKPdf **12 08 49.0 +3.2**
VSR *e* **12 10 04.5**
VSR *e* **12 15 42.0**
VSR *e*PS PS 12 19 54.3 +1.0
VSR *e*SS SS 12 26 15.5 -6.7
VSR *e*SSS **12 30 45.3**
VSR pmax pmax
comp=Z,8.0nm,1.4s
VSR pmax pmax
comp=N,5.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,1.1s
VSR pmax pmax
comp=Z,470nm,6.3s
VSR pmax pmax
comp=N,170nm,8.3s
VSR pmax pmax
comp=E,520nm,6.9s
VSR MLR MLR
comp=E,7μm,19.0s,MS6.4
VSR MLR MLR
comp=Z,6μm,19.0s,MS6.2
VSR MLR MLR
comp=N,3μm,18.0s,MS6.4
VORD Divnogorie 118.95 323 *i* PKIKP PKPdf **12 08 47.8 +2.0**
VORD *e* **12 10 02.7**
VORD *e* **12 15 40.2**
VORD *e*PS PS 12 19 55.5 +2.1
VORD *e*SSS **12 30 42.9**
VORD pmax pmax
comp=Z,10.0nm,0.6s

VORD pmax pmax
comp=N,30nm,0.5s
VORD pmax pmax
comp=E,60nm,0.7s
VORD pmax pmax
comp=Z,550nm,6.5s
VORD pmax pmax
comp=N,160nm,6.6s
VORD pmax pmax
comp=E,210nm,6.2s
VORD MLR MLR
comp=Z,14µm,17.0s,MS6.7
VORD MLR MLR
comp=N,10µm,19.0s,MS6.7
VORD MLR MLR
comp=E,11µm,18.0s,MS6.7
BCIP Isla Barro Col 118.97 86 PFAKE 12 09 00.0 +13
BCIP LR LR
comp=Z,20µm,20.0s,MS6.8
HAKT HAKKARI 119.16 307 *i* P pPKPdf 12 08 59.1 +0.5
BHD Baghdad 119.17 302 *ex* pPKPdf 12 08 56.5 -2.3
JMIC Jan Mayen 119.76 357 *e* PP 12 10 07.5 -2.5
MSL Mosul 119.81 306 *ex* x 12 08 54.0
SFJD Kangerlussuaq 119.89 14 *i* P PP 12 09 55.8 -15
SFJD *i* 12 10 06.1
SFJD *i* S PS 12 20 03.0 +1.9
SFJD *i* 12 26 36.7
SFJD
comp=Z,13µm,21.0s
KAF Kangasniemi 119.91 338 *ep* PKPdf 12 08 47.4 +0.1
comp=Z,5.2nm,0.7s
KAF Kangasniemi 119.91 338 *e*PKIKP PKPdf 12 08 47.4 +0.1
KAF pmax pmax
comp=Z,5.0nm,0.7s
CBN Corbin 120.55 52 PFAKE 12 09 00.0 +11
CBN LR LR
comp=Z,43µm,21.0s,MS7.1
CNNC Cliffs of the 120.62 56 PFAKE 12 09 00.0 +10
CNNC LR LR
comp=Z,34µm,19.0s,MS7.0
BINY Binghamton 120.74 47 PFAKE 12 09 00.0 +10
BINY LR LR
comp=Z,73µm,19.0s,MS7.3
SOC Sochi 120.89 314 *i* PKIKP PKPdf 12 08 49.3 -0.5
SOC *e* 12 10 18.2
SOC *e*PPP 12 13 02.3
SOC *e* 12 15 42.7
SOC *e*PS PS 12 20 05.6 -5.5
SOC *e*SSS 12 31 17.6
BEST Besiri 121.01 308 *i* P PKPdf 12 08 51.0 +0.8
MARD Mardin 121.50 307 *i* P PP 12 10 01.5 -22
SCHQ Schefferville 121.79 31 PKP PKPdf 12 08 49.2 -1.9
comp=Z,5.3nm,0.8s,baz=348,slow=9.3,SNR=4.0
SCHQ Schefferville 121.79 31 PKP PKPdf 12 08 49.2 -1.9
ANN Anapa 122.12 316 *i* PKIKP PKiKP 12 08 56.1 +3.8
ANN *e* 12 10 26.5
ANN *e* 12 15 50.1
ANN pmax pmax
comp=Z,509nm,4.4s
ANN MLR MLR
comp=N,6µm,22.0s,MS6.4
ANN MLR MLR
comp=E,8µm,22.0s,MS6.4
ANN MLR MLR
comp=Z,10µm,22.0s,MS6.4
NSS Namsos 122.63 345 *e*PP PP 12 10 29.6 -0.1
NSS *e* 12 13 27.3
NSS *e*SS SS 12 27 12.7 +4.4
NSS AMS AMS 13 09 55.0
comp=Z,14µm,18.9s,MS6.6
BOSA Boshof 122.74 226 PKP PKPdf 12 08 52.5 -1.3
comp=Z,9.2nm,0.5s,baz=154,slow=1.3,SNR=26
BOSA Boshof 122.74 226 *e*PKPdf PKPdf 12 08 53.1 -0.8
BOSA LR LR
comp=Z,23µm,21.0s,MS6.8
BOSA Boshof 122.74 226 PKIKP PKPdf 12 08 52.6 -1.3
BOSA pmax pmax
comp=Z,9.0nm,0.5s
LBNH Lisbon 123.03 44 PFAKE 12 09 10.0 +16
LBNH LR LR
comp=Z,56µm,19.0s,MS7.2
MNK Minsk 123.66 330 *e*PKIKP PKPdf 12 08 51.0 -3.8
MNK *e* 12 09 04.0
MNK *e* 12 10 38.0
MNK *e*SSS 12 32 00.0
MNK MLR MLR
comp=Z,51µm,22.0s,MS7.1
MNK MLR MLR
comp=E,32µm,22.0s,MS7.0
MNK MLR MLR
comp=N,24µm,20.0s,MS7.0
LBTB Lobatse 124.60 229 *e*PKPdf PKPdf 12 08 57.0 -0.6
AKASG Malin Array Be 124.88 325 PKP PKPdf 12 08 56.2 -1.0
comp=N,8.1nm,0.8s,baz=61,slow=2.3,SNR=14
AKASG PKKPbc 12 18 38.8
comp=N,0.7nm,0.5s,baz=257,slow=3.0,SNR=5.4
AKASG Malin Array Be 124.88 325 PKP PKPdf 12 08 56.2 -1.0
AKASG PKKPbc 12 18 38.8
AKBB Malin Array Si 124.88 325 *e*PKPdf PKPdf 12 08 56.0 -1.2
KIEV Kiev 124.89 325 *e*PKPdf PKPdf 12 08 55.5 -1.8
KIEV LR LR
comp=Z,19µm,19.0s,MS6.8
MOL Molde 125.36 346 *e* 12 13 09.3
NB2 NORSAR Subarra125.68 343 PKPdf PKPdf 12 08 57.7 -0.8
comp=Z,8.4nm,1.0s,baz=39,slow=1.9
NB2 NORSAR Subarra125.68 343 PKPdf PKPdf 12 08 57.7 -0.8
baz=39,slow=1.9
NOA NORSAR Array B125.68 343 PKP PKPdf 12 08 57.9 -0.6
comp=Z,9.7nm,0.9s,baz=35,slow=2.0,SNR=18
NOA PKKPab 12 18 36.9
comp=Z,1.7nm,0.8s,baz=216,slow=4.0,SNR=3.4
GULE Gulek 126.17 308 *i* P Px 12 08 40.5
SUW Suwalki 126.18 331 *e*PKP PKiKP 12 09 03.0 +2.9
BORG Borgarnes 126.26 2 PFAKE 12 09 10.0 +11
BORG LR LR
comp=Z,11µm,20.0s,MS6.5
BR131 Keskin Array S 126.35 312 *e*PKPdf PKPdf 12 08 59.3 -1.1
BR131 LR LR
comp=Z,6µm,20.0s,MS6.3
BRTR Keskin Array B 126.35 312 PKP PKPdf 12 08 58.7 -1.7
comp=Z,2.4nm,0.9s,baz=48,slow=3.7,SNR=6.7
KIS Kishinev 126.85 322 *e*PKIKP PKPdf 12 09 01.0 -0.1
KIS *e* 12 11 00.0
KIS *e* 12 16 00.0
KIS Kishinev 126.85 322 *e*PP PP 12 11 00.0 +1.4
KIS LRM 13 08 40.0
comp=Z,19µm,20.0s
ANTO Ankara 126.92 312 *e*PKPdf PKPdf 12 09 01.3 -0.2
ANTO LR LR
comp=Z,8µm,21.0s,MS6.4
ANTO Ankara 126.92 312⇓ *i*P PKPdf 12 09 08.9 +7.4
KONO Kongsberg 127.29 343 *e*PKPdf PKPdf 12 09 01.2 -0.3
KONO *e*PP PP 12 10 60.0 -0.8
KONO *e*SS SS 12 28 09.3 +2.4
KONO AMS AMS 13 09 49.5
comp=Z,11µm,20.2s,MS6.5
LSZ Lusaka 127.52 241 *e*PKPdf PKPdf 12 09 02.8 -0.5
BER Bergen 127.79 346 *e*PP PP 12 11 03.6 -0.4
BER *e*PP PP 12 11 03.9 -0.1
BER *e*SS SS 12 28 20.7 +7.6
BER AMS AMS 13 12 29.3
comp=Z,12µm,20.5s,MS6.6
CSS Prodhromos 127.89 306 *e*PKPdf PKPdf 12 09 02.5 -1.0
CSS LR LR
comp=Z,12µm,21.0s,MS6.5
SDV Santo Domingo 127.96 87 *e*PKPdf PKPdf 12 09 02.9 -1.3
LVV L'vov 128.19 327 *i* PKIKP PKiKP 12 09 08.9 +4.7
BURAR Bucovina Array 128.70 324⇑ *i*P pPKPdf 12 09 13.5 -3.1
KWP Kalwaria 129.00 327 *e*PKP PKiKP 12 09 08.4 +2.6
KWP Kalwaria 129.00 327 *e*PKP PKiKP 12 09 08.4 +2.6
KWP LR LR
comp=Z,18µm,19.0s,MS6.8
KWP Kalwaria 129.00 327⇓ *i*P PKPdf 12 09 07.6 +2.5
BSD Bornholm Skovb 129.02 336 *e*P PKPdf 12 09 06.3 +1.3
BSD *i* 12 11 12.7
BSD *i* S Sdif 12 19 23.0 +6.6
BSD *i* 12 28 29.0
BSD Bornholm Skovb 129.02 336 *e*PKIKP PKPdf 12 09 06.3 +1.3
BSD *i* 12 11 12.7
BSD *i* 12 28 29.0
BSD Bornholm Skovb 129.02 336 *i* P PKPdf 12 09 06.3 +1.3
BSD *i* 12 11 12.7
BSD *i* S Sdif 12 19 23.0 +6.6
BSD *i* 12 28 29.0

MLR Muntele Rosu 129.32 321⇓ P PKiKP 12 09 09.4 +2.8
MLR Muntele Rosu 129.32 321⇓ *i*P PKiKP 12 09 09.4 +2.8
PRD Provadia 129.43 318 *i* P PKPdf 12 09 07.4 +1.2
COP Copenhagen 129.53 338 *e*P PKPdf 12 09 05.1 -0.9
COP *i* 12 11 21.4
COP LR LR
comp=Z,8µm,19.0s,MS6.4
COP Copenhagen 129.53 338 *i* P PKPdf 12 09 05.1 -0.9
COP *i* 12 11 21.4
COP
comp=Z,8µm,19.0s
KOLS Kolonicke sedl 129.63 327 *e*PKIKP PKPdf 12 09 07.3 +0.9
KOLS *e* 12 11 14.7
KOLS *e*SS SS 12 28 35.2 -1.6
KOLS Kolonicke sedl 129.63 327 *e*PKP PKPdf 12 09 07.2 +0.8
KOLS *e*PP PP 12 11 14.7 -2.0
KOLS *e*SS SS 12 28 35.2 -1.6
UZH Uzhgorod 129.79 326 *e*PKIKP PKPdf 12 09 07.0 +0.3
UZH *i* 12 09 12.7
UZH *e* 12 09 20.5
UZH *e* 12 16 13.0
UZH *i* 12 23 04.0
STHS Stebnicka Huta 129.90 328 *e*PKP PKPdf 12 09 08.4 +1.5
MUD Monsted U'grnd 130.04 341 *e*PKIKP 12 09 19.2
MUD *i* 12 28 50.6
MUD MLR MLR
comp=Z,13µm,20.0s,MS6.6
MUD Monsted U'grnd 130.04 341 *i* P 12 09 19.2
MUD *i* 12 11 16.7
MUD *i* 12 28 50.6
MUD
comp=Z,13µm,20.0s
CRVS Cervenica-Dubn 130.09 327 *e*PKIKP PKPdf 12 09 08.0 +0.8
CRVS *e* 12 11 16.7
CRVS *e*SS SS 12 28 40.4 -2.0
CRVS Cervenica-Dubn 130.09 327 *e*PKP PKPdf 12 09 08.0 +0.8
CRVS *e*PP PP 12 11 16.7 -2.9
CRVS *e*SKP 12 12 25.5
CRVS *e*SS SS 12 28 40.4 -2.0
OJC Ojcow 130.16 329 *e*PKPdf PKPdf 12 09 08.0 +0.7
OJC *e*pPKPdf pPKPdf 12 09 20.1 +0.8
OJC *e*PP PP 12 11 23.3 +3.3
OJC *e*SS SS 12 28 49.3 +6.2
OJC L 13 10 57.4
comp=Z,16nm,19.2s
OJC Ojcow 130.16 329 *e*PKIKP PKPdf 12 09 08.0 +0.7
OJC *e* 12 09 20.1
OJC *e* 12 11 23.3
OJC *e*SS SS 12 28 49.3 +6.2
JMB Yambol 130.29 317 *i* P PKiKP 12 09 11.8 +3.1
SZH Strazhica 130.36 319 *i* P PKiKP 12 09 12.5 +3.7
MBAR Mbarara 130.41 260⇓ *i*PKP PKPdf 12 09 08.8 -0.1
AKAS Kas 130.45 309 *i* P pPKPdf 12 09 14.4 -5.9
DRGR 130.58 324⇓ *i*P pPKPdf 12 09 14.1 -6.1
OKC Ostrava-Krasne 131.23 330 *e*PKP PKiKP 12 09 13.6 +3.3
OKC *e*PP PP 12 11 30.7 +3.8
OKC *e*SS SS 12 28 57.2 +1.1
OKC Ostrava-Krasne 131.23 330 *e*PKP PKiKP 12 09 13.6 +3.3
OKC *e*PP PP 12 11 30.7 +3.8
OKC *e*SS SS 12 28 57.2 +1.1
OKC AMS AMS 13 07 10.0
comp=Z,10µm,18.5s
GZR Gura Zlata 131.29 322⇓ *i*P pPKPdf 12 09 17.3 -4.3
KDZ Kurdzhali 131.43 317 *i* P PKiKP 12 09 14.3 +3.3
KSP Ksiaz 131.45 332 *e*PKP PKiKP 12 09 15.9 +5.2
KSP Ksiaz 131.45 332 *e*PKP PKPdf 12 09 11.3 +1.5
KSP *e* 12 09 16.0
KSP *e*PP PP 12 11 28.0 -0.3
KSP *e*PKS 12 12 24.0
KSP *e*Sdif Sdif 12 19 40.5 +3.8
KSP *e*SS SS 12 28 53.0 -5.8
KSP *e*SSS 12 33 36.5
KSP LR LR
comp=Z,48µm,19.4s,MS7.2
KSP Ksiaz 131.45 332 *e*PKIKP PKPdf 12 09 11.3 +1.5
KSP *e* 12 09 16.0
KSP *e* 12 11 28.0
KSP *e*SS SS 12 28 53.0 -5.8
PSZ Piszkesteto 131.51 327⇓ *e*P PKiKP 12 09 13.0 +2.1
PSZ Piszkesteto 131.51 327⇓ *e*PKP PKiKP 12 09 13.0 +2.1
PSZ Piszkesteto 131.51 327⇑ *i*P PKiKP 12 09 15.9 +5.0
BSEG Bad Segeberg 131.67 338 *e*PKPdf PKiKP 12 09 14.7 +3.6
BSEG *e*PP PP 12 11 36.5 +7.1
VYHS Vyhne 131.72 328 *e*PKIKP PKPdf 12 09 10.5 +0.2
VYHS *e* 12 11 35.4
VYHS *e*SS SS 12 28 58.1 -4.2
VYHS Vyhne 131.72 328 *e*PKP PKPdf 12 09 10.5 +0.2
VYHS *e*PP PP 12 11 35.4 +5.2
VYHS *e*SKP 12 12 35.8
VYHS *e*SS SS 12 28 58.1 -4.2
DPC Dobruska-Polom 131.77 331 *e*PKIKP PKPdf 12 09 10.7 +0.3
DPC *e* 12 09 17.1
DPC *e* 12 11 35.4
DPC *e*SS SS 12 29 00.8 -1.9
DPC MLR MLR
comp=Z,16µm,19.4s,MS6.8
DPC Dobruska-Polom 131.77 331 *e*PKP PKPdf 12 09 10.7 +0.3
DPC *e*pPKP pPKPdf 12 09 17.1 -5.3
DPC *e*PP PP 12 11 27.2 -3.1
DPC *e*x x 12 11 35.4
DPC *e*SS SS 12 29 00.8 -1.9
DPC AMS AMS 13 11 00.0
comp=Z,16µm,19.4s
UPC Upice 131.81 332 *e*PKIKP PKPdf 12 09 17.3 +6.9
UPC *e* 12 11 27.6
UPC Upice 131.81 332 *e*PKP pPKPdf 12 09 17.3 -5.1
UPC *e*PP PP 12 11 27.6 -3.0
UPC *e*SKP 12 12 36.8
PGB Panagyurishte 131.85 318 *i* P pPKPdf 12 09 16.1 -6.6
BZS Buzias 131.86 323⇑ P PKPdf 12 09 12.2 +1.6
BZS Buzias 131.86 323⇑ *i*P PKPdf 12 09 12.3 +1.6
RZN Rozhen 131.88 317 *i* P pPKPdf 12 09 17.6 -5.2
BBSR BB Station 131.95 56 PFAKE 12 09 20.0 +8.7
BBSR LR LR
comp=Z,19µm,20.0s,MS6.8
BUD Budapest 132.24 327⇓ *e*P PKiKP 12 09 15.5 +3.1
BUD Budapest 132.24 327⇓ *e*pPKP PKiKP 12 09 15.5 +3.1
VRAC Vranov 132.34 330 PKIKP pPKPdf 12 09 18.3 -5.2
VTS Vitosha 132.45 319 *i* P PKiKP 12 09 15.9 +2.9
PVCC Panska Ves 132.46 332 *e*PKP PKPdf 12 09 13.3 +1.6
PVCC *e*SKP 12 12 35.6
PVCC *e*SS SS 12 29 08.3 -2.7
PVCC AMS AMS 13 15 10.0
comp=Z,19µm,18.8s
BRG Berggiesshubel 132.50 333 *i* PKP PKPdf 12 09 13.5 +1.8
BRG *i* 12 09 19.4
BRG PP PP 12 11 30.0 -5.0
BRG *i* 12 12 38.7
BRG *i* 12 19 44.0
BRG *e* 12 22 57.7
BRG *e*P'P' 12 27 20.4
BRG *e* 12 29 09.0
BRG LR LR
comp=Z,11µm,19.3s,MS6.6
BRG Berggiesshubel 132.50 333 *i* PKIKP PKPdf 12 09 13.5 +1.8
BRG *i* 12 09 19.4
BRG *e* 12 29 09.0
BRG MLR MLR
comp=Z,11µm,19.3s,MS6.6
BRG Berggiesshubel 132.50 333 *e*PKPdf PKPdf 12 09 13.4 +1.7
BRG *e*PP PP 12 11 40.8 +5.8
BRG *e*SKPdf SKPdf 12 12 38.7 -5.5
BRG Berggiesshubel 132.50 333 *i* PKP PKPdf 12 09 13.5 +1.8
comp=Z,31nm,1.6s
BRG *i* 12 09 19.4
comp=Z,96nm,1.5s
BRG PP PP 12 11 30.0 -5.0
BRG *i* 12 12 38.7
comp=Z,104nm,1.6s
BRG *i* 12 19 44.0
BRG *e* 12 22 57.7
comp=Z,80nm,2.5s
BRG *e*PKPPKP 12 27 20.4
comp=Z,9.4nm,1.4s
BRG *e* 12 29 09.0
BRG
comp=N,12µm,19.4s
BRG
comp=E,9µm,19.0s
BRG
comp=Z,18µm,19.3s

CLL Collm 132.59 334 *e*PKP PKPdf 12 09 10.0 -1.9
CLL *i* 12 09 18.3
CLL *e*PP PP 12 11 38.0 +2.5
CLL *i* SKP 12 12 39.1
CLL *e*PKS 12 12 43.0
CLL *i* 12 12 58.1
CLL *e*Sdif Sdif 12 19 54.0 +7.8
CLL LR LR
comp=Z,19µm,18.5s,MS6.8
CLL Collm 132.59 334 *e*PKIKP PKPdf 12 09 10.0 -1.9
CLL *i* 12 09 18.3
CLL *e* 12 11 38.0
CLL pmax pmax
comp=Z,161nm,1.9s
CLL MLR MLR
comp=Z,19µm,18.5s,MS6.8
CLL Collm 132.59 334 *e*SKPdf SKPbc 12 12 39.2 +3.0
CLL Collm 132.59 334 *e*PKPdf PKPdf 12 09 10.0 -1.9
CLL *i* sPKPdf 12 09 18.3
comp=Z,54nm,1.5s
CLL *e*PP PP 12 11 38.0 +2.5
CLL *ex* x 12 12 30.0
CLL *i* SKPbc SKPbc 12 12 39.1 +2.9
comp=Z,82nm,1.6s
CLL *e*PKSab 12 12 43.0
comp=Z,161nm,1.9s
CLL *e*PKSdf 12 12 49.0
CLL *i* (sSKPdf) 12 12 58.1
CLL *e*PPP 12 14 28.0
CLL *e*PPPP 12 16 35.0
CLL *e*Sdif Sdif 12 19 54.0 +7.8
CLL *e*PS PS 12 21 48.0 -4.9
CLL *ex* x 12 22 25.0
CLL *e*PPS 12 23 25.0
CLL *e*SS SS 12 29 14.0 +1.4
CLL *e*SKSSKSac 12 31 22.0
CLL *e*SSS 12 34 03.0
CLL *ex* x 12 35 50.0
CLL Lm 13 15 00.0
comp=N,12µm,18.2s
CLL Lm 13 15 00.0
comp=E,8µm,18.4s
CLL Lm 13 15 00.0
comp=Z,19µm,18.5s
MODS Modra-Piesok 132.60 329 *e*PKIKP PKiKP 12 09 14.6 +1.5
MODS *e* 12 11 42.5
MODS *e*SS SS 12 29 09.8 -3.2
MODS Modra-Piesok 132.60 329 *e*PKP PKiKP 12 09 14.6 +1.5
MODS *e*PP PP 12 11 42.5 +6.7
MODS *e*SKP 12 12 39.0
MODS *e*SS SS 12 29 09.8 -3.2
FBE Freiberg 132.72 334 *e*PKPdf PKiKP 12 09 15.1 +1.8
FBE *e*PP PP 12 11 41.4 +5.0
FBE *e*SKPdf SKPdf 12 12 39.5 -5.2
ZST Bratislava 132.81 329 *e*PKIKP pPKPdf 12 09 18.5 -5.9
ZST *e* 12 11 42.5
ZST *e*SS SS 12 29 15.0 -0.5
ZST Bratislava 132.81 329 *e*PKP pPKPdf 12 09 18.5 -5.9
ZST *e*PP PP 12 11 42.5 +5.4
ZST *e*SKP 12 12 40.4
ZST *e*SS SS 12 29 14.9 -0.6
PRU Pruhonice 132.85 332 *e*PKIKP PKiKP 12 09 17.3 +3.7
PRU *e* 12 11 40.7
PRU *e*SS SS 12 29 18.1 +2.3
PRU MLR MLR
comp=Z,17µm,18.6s,MS6.8
PRU Pruhonice 132.85 332 *e*PKP PKiKP 12 09 17.3 +3.7
PRU *e*PP PP 12 11 40.7 +3.4
PRU *e*SKP 12 12 33.8
PRU *e*SS SS 12 29 18.1 +2.3
PRU AMS AMS 13 13 40.0
comp=Z,17µm,18.6s
KKB Krupnik 132.88 318 *i* P PKPdf 12 09 13.8 +1.1
TREC Trest 132.88 331 AMS AMS 13 11 30.0
comp=Z,14µm,18.4s
PKSM Moragy 133.22 326⇓ P PKPdf 12 09 10.6 -2.7
PKSM ⇓ *e*P 12 09 14.8
PKSM Moragy 133.22 326⇓ *i*P PKPdf 12 09 10.6 -2.6
CLZ Clausthal 133.28 336 *e*PKPdf PKPdf 12 09 16.9 +3.7
CLZ *e*PP PP 12 11 45.0 +5.2
SOP Sopron 133.42 328⇓ *e*P PKiKP 12 09 16.0 +1.2
SOP Sopron 133.42 328⇓ *e*pPKP pPKPdf 12 09 16.0 -10
VAY Valandovo 133.48 318 *i* P PKPdf 12 09 14.8 +0.9
TANN Tannenbergstha 133.48 334 *e*PKPdf PKiKP 12 09 17.1 +2.3
TANN *e*PP PP 12 11 46.8 +5.6
TANN *e*SKPdf SKPdf 12 12 42.6 -3.5
WERD Werda 133.53 334 *e*PP PP 12 11 48.2 +6.7
WERD *e*SKPdf SKPdf 12 12 42.4 -3.7
GUNZ Gunzen 133.58 334 *e*SKPdf SKPdf 12 12 42.6 -3.6
WERN Wernitzgruen 133.61 334 *e*PKPdf PKPdf 12 09 15.6 +1.8
WERN *e*PP PP 12 11 47.4 +5.3
WERN *e*SKPdf SKPdf 12 12 42.7 -3.6
CONA Conrad Observa 133.62 329⇓ *i*PKPdf PKPdf 12 09 12.7 -1.3
comp=Z,58nm,2.2s
CONA ⇑ *i*SKPab 12 12 43.1
comp=Z,76nm,1.6s
CSNA Conrad Observa 133.62 329⇓ *i*PKPdf PKPdf 12 09 12.6 -1.3
comp=Z,11nm,1.4s
CSNA ⇓ *e*SKPab 12 12 43.9
comp=Z,68nm,1.5s
MOX Moxa 133.68 334 *e*P PKiKP 12 09 19.1 +3.9
comp=Z,95nm,2.2s
MOX *e* 12 11 50.3
MOX *e* 12 12 43.0
MOX
comp=Z,12µm,20.0s
MOX Moxa 133.68 334 *e*PKIKP PKiKP 12 09 19.1 +3.9
MOX *e* 12 11 50.3
MOX pmax pmax
comp=Z,95nm,2.2s
MOX MLR MLR
comp=Z,12µm,20.0s,MS6.6
MOX Moxa 133.68 334 *e*PP PP 12 11 48.8 +6.4
MOX *e*SKPdf SKPdf 12 12 42.5 -3.9
SKO Skopje 133.89 319 *e*PKP PKPdf 12 09 12.6 -2.1
IBBN Ibbenburen 133.90 338 *e*SKPdf SKPdf 12 12 44.4 -2.4
KHC Kasperske Hory 133.90 332 *e*PKIKP PKPdf 12 09 15.1 +0.7
KHC *e* 12 09 22.5
KHC *e* 12 12 43.8
KHC *e*SS SS 12 29 30.9 +2.4
KHC MLR MLR
comp=Z,20µm,23.5s,MS6.8
KHC Kasperske Hory 133.90 332 *e*PKP PKPdf 12 09 15.1 +0.7
KHC *e*pPKP pPKPdf 12 09 19.6 -6.8
KHC *e*SPKP 12 09 22.5
KHC *e*PP PP 12 11 43.8 -0.2
KHC *e*SKP 12 12 39.0
KHC *e*SS SS 12 29 30.9 +2.4
KHC AMS AMS 13 07 40.0
comp=Z,20µm,23.5s
MANZ Manzenberg 133.95 333 *e*PKPdf PKPdf 12 09 15.9 +1.4
MANZ *e*PP PP 12 11 51.1 +6.9
MANZ *e*SKPdf SKPdf 12 12 43.7 -3.2
GEC2 GERESS Array S 134.05 331 *e*PKPdf PKPdf 12 09 14.6 -0.1
GEC2 GERESS Array S 134.05 331 *e*PKIKP PKPdf 12 09 16.2 +1.5
GEC2 *e* 12 11 50.5
GEC2 GERESS Array S 134.05 331 *e*PKPdf PKPdf 12 09 16.2 +1.5
GEC2 *e*PP PP 12 11 50.5 +5.6
GEC2 *e*SKPdf SKPdf 12 12 44.1 -3.1
GERES GERESS Array B 134.05 331 PKP PKPdf 12 09 13.5 -1.2
comp=Z,2.2nm,0.6s,baz=75,slow=1.5,SNR=12
GERES SKPab 12 12 44.8
comp=Z,3.9nm,1.0s,baz=48,slow=2.0,SNR=7.0
ROTZ Rotzenmuhle 134.07 333 *e*PKPdf PKiKP 12 09 17.4 +1.4
ROTZ *e*PP PP 12 11 50.5 +5.5
ROTZ *e*SKPdf SKPdf 12 12 44.6 -2.6
UBBA Unterbreizbach 134.22 336 *e*PKPdf PKiKP 12 09 18.0 +1.7
UBBA *e*PP PP 12 11 50.5 +4.7
UBBA *e*SKPdf SKPdf 12 12 44.9 -2.5
WET Wettzell 134.22 332 *e*SKPdf SKPdf 12 12 44.7 -2.8
ARSA Arzberg 134.23 329⇓ *e*SKPab SKPdf 12 12 45.5 -2.1
comp=Z,68nm,2.1s
ESK Eskdalemuir 134.31 348 PFAKE 12 09 30.0 +15
ESK LR LR
comp=Z,14µm,20.0s,MS6.7
ESK Eskdalemuir 134.31 348 AMS AMS 13 15 11.5
comp=Z,13µm,19.4s,MS6.7
KRUS Krusevo 134.32 319 *e*PKP PKPdf 12 09 13.6 -1.9
KOGS Kog 134.38 327 *e*PKPdf PKPdf 12 09 15.9 +0.5
KOGS *e*SS SS 12 29 38.5 +4.0
MOA Molln 134.46 330⇑ *e*PKPdf PKPdf 12 09 14.3 -1.2
comp=Z,15nm,1.1s

MOA ⇓*i*SKPab 12 12 46.2
comp=Z,77nm,1.5s
GRF Grafenberg Arr 134.56 334 *e*PKIKP PKiKP 12 09 18.0 +1.0
GRF *e* 12 11 52.8
GRF Grafenberg Arr 134.56 334 *e*PKPdf PKiKP 12 09 18.0 +1.0
GRF *e*PP PP 12 11 52.8 +4.8
GRF *e*L 13 11 56.5
comp=Z,16µm,20.0s
PERS Pernice 134.85 328 *e*PKPdf PKiKP 12 09 19.9 +2.1
PERS *e*PP PP 12 11 51.8 +1.7
PERS *e*SKP 12 12 44.0
SOKA Soboth 134.86 328⇑*i*PKPdf PKPdf 12 09 16.1 -0.2
comp=Z,4.7nm,1.0s
SOKA ⇓*i*SKPab 12 12 47.4
comp=Z,41nm,1.5s
SISC Sisak 134.93 326 P PKPdf 12 09 17.7 +1.2
SISC Sisak 134.93 326 *i* P PKPdf 12 09 17.7 +1.2
DOBS Dobrina 134.98 327 *e*PKPdf PKiKP 12 09 18.8 +0.7
DOBS *e*PP PP 12 11 48.7 -2.3
GAL1 Galloway 135.02 349 *e*P PKPdf 12 09 17.5 +1.2
GAL1 AMS AMS 13 11 24.9
comp=Z,11µm,19.7s,MS6.6
HPK Haverah Park 135.24 346 AMS AMS 13 17 14.8
comp=Z,12µm,19.0s,MS6.7
RJOB Jochberg 135.25 331 *e*SKPdf SKPdf 12 12 47.6 -1.8
TNS Taunus Mts 135.30 336 *e*SKPdf SKPdf 12 12 47.6 -1.8
BOJS Bojanci 135.51 327 *e*PKPdf PKiKP 12 09 20.1 +1.0
BOJS *e*PP PP 12 11 56.4 +2.0
BOJS *e*SKP 12 12 49.4
BOJS *e* 12 13 56.7
BOJS *e* 12 25 03.8
BOJS *e*SS SS 12 29 51.5 +3.3
BOJS *e* 12 32 02.8
BOJS *e* 12 34 54.0
BOJS Bojanci 135.51 327 *e*PKPdf PKiKP 12 09 20.1 +1.0
BOJS *e*PP PP 12 11 56.4 +2.0
BOJS *e*SKP 12 12 49.4
BOJS *e* 12 13 56.7
BOJS *e* 12 25 03.8
BOJS *e*SS SS 12 29 51.5 +3.3
BOJS *e* 12 32 02.8
BOJS *e* 12 34 54.0
BOJS *e* 12 45 30.8
BOJS *e* 12 46 53.3
LJU Ljubljana 135.55 328 *e*PKPdf PKPdf 12 09 19.0 +1.4
LJU *e*PP PP 12 11 56.3 +1.8
LJU *e*SKP 12 12 49.4
LJU *e* 12 13 56.7
LJU *e*Sdif Sdif 12 20 11.5 +0.7
LJU *e*SS SS 12 29 54.0 +5.5
LJU Ljubljana 135.55 328 *e*PKPdf PKPdf 12 09 19.0 +1.4
LJU *e*PP PP 12 11 56.3 +1.8
LJU *e*SKP 12 12 49.4
LJU *e* 12 13 56.7
LJU *e*Sdiff Sdif 12 20 11.5 +0.7
LJU *e*SS SS 12 29 54.0 +5.5
LJU *e* 12 45 54.2
LJU Ljubljana 135.55 328 *e*PKIKP PKPdf 12 09 19.0 +1.4
LJU *e* 12 11 56.3
LJU *e*SS SS 12 29 54.0 +5.5
MYKA Terra Mystica 135.61 329⇓*e*PKiKP PKiKP 12 09 19.8 +0.5
comp=Z,20nm,1.4s
MYKA ⇓*i*SKPdf SKPdf 12 12 49.3 -0.7
comp=Z,57nm,1.6s
TOD Tromm 135.64 335 PKP PKPdf 12 09 17.0 -0.7
FUR Furstenfeldbru 135.66 332 *e*SKPdf SKPdf 12 12 49.7 -0.4
STON Ston 135.73 322 P PKPdf 12 09 17.7 -0.3
STON Ston 135.73 322 *i* P PKPdf 12 09 17.7 -0.3
CADS Cadrg 135.83 329 *e*PKPdf PKiKP 12 09 20.5 +0.7
VOY Vojsko 135.88 328 *e*PKPdf PKiKP 12 09 20.8 +0.9
VOY *e* 12 09 27.3
PTCC Patocco-Chiusa 135.91 329 PKP PKiKP 12 09 20.7 +0.8
MEM Membach 135.92 338 PKP PKiKP 12 09 22.5 +2.7
ABH Alteburg 135.93 337 PKP PKPdf 12 09 17.0 -1.2
GMNA Gemona 136.05 329 PKP PKiKP 12 09 23.5 +3.3
ABTA Abfaltersbach 136.09 330⇑*i*PKPdf PKPdf 12 09 16.9 -1.7
comp=Z,19nm,1.0s
ABTA ⇓*i*SKPdf SKPdf 12 12 50.5 -0.4
comp=Z,27nm,1.3s
WATA Walderalm 136.12 331⇓*i*PKiKP PKiKP 12 09 20.4 +0.1
comp=Z,9.4nm,0.8s
STU Stuttgart 136.12 334 *e*SKPdf SKPdf 12 12 50.7 -0.2
WTTA Wattenberg 136.15 331⇓*i*PKPdf PKPdf 12 09 16.6 -2.1
comp=Z,4.5nm,0.6s
WTTA ⇓*i*PKPdf pPKPdf 12 09 22.4 -8.3
comp=Z,30nm,1.1s
WTTA ⇓*e*SKPdf SKPdf 12 12 51.4 +0.3
comp=Z,71nm,1.5s
SEST Monte Rota 136.23 330 PKP PKiKP 12 09 23.9 +3.4
RUP Ruppelstein 136.26 337 PKP PKPdf 12 09 16.6 -2.2
NVLJ Novalja 136.33 326 P PKiKP 12 09 22.3 +1.5
NVLJ Novalja 136.33 326 *i* P PKiKP 12 09 22.3 +1.5
BCLA Clavier 136.33 339 SKPdf SKPdf 12 12 48.5 -2.8
UCC Uccle 136.34 340 SKPdf SKPdf 12 12 47.8 -3.5
SQTA Sankt Quirin 136.38 331⇓*e*PKiKP PKiKP 12 09 20.9 +0.1
SQTA ⇓*e*SKPdf SKPdf 12 12 51.8 +0.3
RETA Reutte 136.39 332⇓*e*PKPdf PKPdf 12 09 16.3 -2.8
comp=Z,18nm,1.2s
RETA ⇓*i*SKPdf SKPdf 12 12 52.1 +0.7
comp=Z,51nm,1.8s
SBD1 Bryn Du 136.58 347 P PKiKP 12 09 21.4 +0.4
SBD1 Bryn Du 136.58 347 *e*P PKiKP 12 09 21.4 +0.4
SNF Seneffe 136.61 340 PKP PKiKP 12 09 23.7 +2.5
SNF SKP 12 12 53.2
WLF Walferdange 136.64 337 PKP PKiKP 12 09 21.8 +0.5
WLF SKP 12 12 52.8
WLF Walferdange 136.64 337 *e*PKIKP PKiKP 12 09 21.5 +0.2
WLF Walferdange 136.64 337 *e*SKPdf SKPdf 12 12 52.5 +0.7
FETA Feichten 136.75 332⇑*e*PKPdf PKPdf 12 09 16.9 -2.9
comp=Z,29nm,1.1s
FETA ⇑*i*SKPdf SKPdf 12 12 54.0 +1.9
comp=Z,55nm,1.4s
GIVF Givet 136.76 339 *e*PKIKP PKPdf 12 09 19.5 -0.2
comp=Z,82nm,1.2s
SPAK Spaichingen-Ko 136.81 334 PKP PKPdf 12 09 17.0 -2.9
BFO Black Forest 136.83 335 PKPdf PKPdf 12 09 18.1 -1.9
BFO LR LR
comp=Z,14µm,19.0s,MS6.7
BFO Black Forest 136.83 335 *e*PKPdf PKiKP 12 09 23.0 +1.3
BFO *e*PP PP 12 12 01.9 -0.4
BFO *e*SKPdf SKPdf 12 12 52.2 0.0
DOU Dourbes 136.85 339 PKP PKPdf 12 09 19.4 -0.5
DOU SKPdf SKPdf 12 12 50.8 -1.4
HLM1 Long Mynd 136.86 347 *e*P PKiKP 12 09 21.9 +0.3
ANWB Willy Bob 136.93 76 PFAKE 12 09 30.0 +9.0
ANWB LR LR
comp=Z,15µm,21.0s,MS6.7
DAVA Damuels 136.94 332⇓*i*PKPdf PKPdf 12 09 15.9 -4.2
comp=Z,4.4nm,0.7s
DAVA ⇓*i*pPKiKP 12 09 26.3
comp=Z,26nm,1.2s
DAVA ⇓*e*SKPdf SKPdf 12 12 53.8 +1.3
comp=Z,40nm,1.6s
CTI Castel Tesino 137.00 330 PKP PKiKP 12 09 24.1 +2.0
BAIF Baives 137.01 339 *e*PKIKP PKPdf 12 09 19.2 -1.0
comp=Z,53nm,1.3s
GRGR Grenville 137.04 84 PFAKE 12 09 30.0 +8.7
GRGR LR LR
comp=Z,9µm,20.0s,MS6.5
CDF Champ du Feu 137.20 335 *e*PKIKP PKPdf 12 09 19.8 -0.8
comp=Z,124nm,1.7s
FELD Feldberg im Sc 137.32 334 PKP PKPdf 12 09 22.0 +1.2
HTR Trewern Hill 137.36 347 *e*P PKPdf 12 09 22.4 +1.6
MCH1 Michaelchurch 137.37 347 *e*P PKPdf 12 09 22.3 +1.5
MCH1 AMS AMS 13 13 31.6
comp=Z,13µm,20.3s,MS6.7
ECH Echery 137.41 335 PKP PKPdf 12 09 20.6 -0.4
ECH LR LR
comp=Z,11µm,19.0s,MS6.6
SWN1 Swindon 137.53 345 AMS AMS 13 14 17.6
comp=Z,11µm,21.6s,MS6.6
FDF Fort de France 137.61 80 PFAKE 12 09 30.0 +7.7
FDF LR LR
comp=Z,15µm,19.0s,MS6.7
HGH Gray Hill 137.66 346 *e*P PKPdf 12 09 22.7 +1.3
MOF Molkenrain 137.70 335 PKP PKPdf 12 09 20.1 -1.5
TUE Stuetta 137.79 332 *e*PKPdf PKPdf 12 09 20.5 -1.2
HINF Hinteralfeld 137.85 335 *e*PKIKP PKPdf 12 09 20.9 -0.9
comp=Z,64nm,1.3s
THEF They Montfort 137.87 336 PKP PKPdf 12 09 20.8 -1.0
HAU Haudompre 137.90 336 *e*PKIKP PKPdf 12 09 21.1 -0.8
comp=Z,46nm,1.1s
HAU *e*MLR MLR
comp=Z,15µm,19.5s,MS6.5
HAU Haudompre 137.90 336 *e*PKIKP PKPdf 12 09 21.1 -0.8
HAU MLR MLR
comp=Z,15µm,19.5s,MS6.8
MEZF Maizieres J'vi 138.01 337 *e*PKIKP PKPdf 12 09 20.7 -1.4
comp=Z,234nm,1.5s
FSSB Fossombrone 138.04 327 PKP PKiKP 12 09 27.4 +3.1
LOMF Lomont 138.23 335 PKP PKPdf 12 09 20.3 -2.2
PIEI Pieia 138.27 327 PKP PKPdf 12 09 23.9 +1.2
SFI Santa Sofia 138.39 327 PKP PKiKP 12 09 27.8 +2.8
NRCA Norcia 138.42 325 P PKPdf 12 09 24.7 +1.7
PSB1 Pescosannita 138.44 322 PKP PKiKP 12 09 25.2 0.0
MURB Monte Urbino 138.46 326 PKP PKPdf 12 09 23.3 +0.2
INTR Introdacqua 138.49 324 PKP PKiKP 12 09 25.3 0.0
MIDA Miranda 138.52 323 PKP PKPdf 12 09 24.6 +1.3
CUC Castrocucco 138.54 320 PFAKE 12 09 40.0 +17
CUC LR LR
comp=Z,10µm,19.0s,MS6.6
AQU L'Aquila 138.56 325 PFAKE 12 09 40.0 +17
AQU LR LR
comp=Z,13µm,20.0s,MS6.7
FNVD Fontana Vidola 138.59 328 PKP PKPdf 12 09 24.3 +1.0
HTL Hartland 138.64 347 AMS AMS 13 22 04.1
comp=Z,10µm,19.7s,MS6.5
PTQR Pietraquaria 138.78 324 PKP PKPdf 12 09 25.4 +1.7
MNS Montasola 138.95 325 PKP PKPdf 12 09 23.6 -0.4
BOB Bobbio (Coli) 139.00 330 PKP PKiKP 12 09 28.4 +2.1
DYA Yadsworthy 139.04 346 AMS AMS 13 19 41.7
comp=Z,10µm,19.4s,MS6.6
CERT Cerreto 139.06 324 PKP PKiKP 12 09 28.5 +2.0
MAIM Mastiano 139.09 328 PKP PKPdf 12 09 24.1 -0.1
CABF La Chapelle 139.12 335 *e*PKIKP PKPdf 12 09 22.9 -1.3
comp=Z,290nm,1.5s
BBGH Gun Hill 139.13 83 PFAKE 12 09 40.0 +15
BBGH LR LR
comp=Z,19µm,22.0s,MS6.8
LATE Laterza 139.29 326 P PKiKP 12 09 27.3 +0.4
CEL Celeste 139.46 318 PFAKE 12 09 40.0 +15
CEL LR LR
comp=Z,9µm,20.0s,MS6.5
LOR Lormes 139.48 337 *e*PKIKP PKPdf 12 09 23.0 -1.8
comp=Z,40nm,1.1s
LOR *e*MLR MLR
comp=Z,20µm,20.8s,MS6.5
LOR Lormes 139.48 337 *e*PKIKP PKPdf 12 09 23.0 -1.8
LOR MLR MLR
comp=Z,20µm,20.8s,MS6.8
FLN La Foliniere 139.66 342 *e*PKIKP PKPdf 12 09 23.2 -1.9
comp=Z,84nm,1.2s
FLN *e*MLR MLR
comp=Z,16µm,21.0s,MS6.5
FLN La Foliniere 139.66 342 *e*PKIKP PKPdf 12 09 23.2 -1.9
FLN MLR MLR
comp=Z,16µm,21.0s,MS6.8
LDF La Druitiere 139.70 342 *e*PKIKP PKPdf 12 09 23.4 -1.8
comp=Z,99nm,1.4s
LPL La Plagne 139.71 333 *e*PKIKP PKPdf 12 09 24.2 -1.1
comp=Z,95nm,1.4s
LPG La Plagne 139.71 333 *e*PKIKP PKPdf 12 09 24.1 -1.2
comp=Z,49nm,1.0s
SSF Saint Saulge 139.78 337 *e*PKIKP PKPdf 12 09 23.8 -1.6
comp=Z,71nm,1.3s
SMF Signal de Mont 140.00 337 *e*PKIKP PKPdf 12 09 24.8 -1.0
BDFB Brasilia 140.06 131 PFAKE 12 09 40.0 +13
BDFB LR LR
comp=Z,10µm,22.0s,MS6.5
AVF Avril sur Loir 140.07 337 *e*PKIKP PKPdf 12 09 24.9 -1.0
comp=Z,34nm,1.2s
BNI Bardonecchia 140.09 333 *e*PKPdf PKPdf 12 09 27.3 +1.3
BNI LR LR
comp=Z,19µm,20.0s,MS6.8
GRR Gorron 140.11 342 *e*PKIKP PKPdf 12 09 24.4 -1.5
comp=Z,99nm,1.5s
BGF Bois d'Agland 140.45 338 *e*PKIKP PKPdf 12 09 25.3 -1.3
comp=Z,95nm,1.4s
SAOF Saorge 140.50 331 PKP PKPdf 12 09 25.2 -1.6
ORIF Oris-en-Rattie 140.55 333 *e*PKIKP PKPdf 12 09 25.5 -1.3
comp=Z,131nm,1.5s
ORIF *e*MLR MLR
comp=Z,20µm,20.2s,MS6.6
AUTN L'Aution 140.55 331 PKP PKPdf 12 09 27.1 +0.2
SBF Sospel 140.64 331 *e*PKIKP PKPdf 12 09 25.3 -1.8
comp=Z,221nm,1.4s
LUCF Luceram 140.66 331 PKP PKPdf 12 09 27.9 +0.8
SGMF Saint Gilles 140.71 344 *e*PKIKP PKPdf 12 09 25.4 -1.6
comp=Z,104nm,1.4s
MVIF Mont Vial 140.75 331 PKP PKPdf 12 09 26.9 -0.3
AGO Saint Agoulin 140.77 337 PKP PKPdf 12 09 29.2 +2.0
PGF Pioggiola 140.83 328 *e*PKIKP PKPdf 12 09 25.5 -1.9
comp=Z,126nm,1.1s
ROSF Rostrenen 140.83 345 *e*PKIKP PKPdf 12 09 25.6 -1.6
comp=Z,76nm,1.4s
TCF Toulx Ste Croi 140.92 338 *e*PKIKP PKPdf 12 09 26.1 -1.4
comp=Z,132nm,1.5s
CALN Calern 140.99 331 PKP PKPdf 12 09 27.7 0.0
VIVF Saint-Julien-l 141.12 334 *e*PKIKP PKPdf 12 09 26.9 -1.0
comp=Z,153nm,1.5s
QUIF Quistinic 141.19 344 *e*PKIKP PKPdf 12 09 26.3 -1.6
comp=Z,104nm,1.6s
FRF La Foret Royal 141.25 331 *e*PKIKP PKPdf 12 09 26.4 -1.8
comp=Z,121nm,1.4s
LBL Lubilhac 141.40 336 PKP PKPdf 12 09 26.3 -2.1
SMRF Simiane la Rot 141.42 333 *e*PKIKP PKPdf 12 09 27.4 -1.1
comp=Z,170nm,1.5s
MFF Saint Martin d 141.47 340 *e*PKIKP PKPdf 12 09 27.0 -1.5
comp=Z,72nm,1.2s
LMR La Mourre 141.49 331 *e*PKIKP PKPdf 12 09 27.0 -1.6
comp=Z,297nm,1.6s
RJF Les Rejaudoux 142.01 338 *e*PKIKP PKPdf 12 09 28.0 -1.5
RJF *e*MLR MLR
comp=Z,20µm,21.2s,MS6.6
RJF Les Rejaudoux 142.01 338 *e*PKIKP PKPdf 12 09 28.0 -1.5
RJF MLR MLR
comp=Z,20µm,21.3s,MS6.9
LASF Ste Croix 142.09 334 *e*PKIKP PKPdf 12 09 28.5 -1.2
comp=Z,147nm,1.5s
CAF Calviac 142.12 337 *e*PKIKP PKPdf 12 09 28.4 -1.3
comp=Z,103nm,1.4s
LFF La Frestale 142.61 338 *e*PKIKP PKPdf 12 09 29.1 -1.4
LRDF Laroque-de-Fa 143.58 335 PKP PKPdf 12 09 33.7 +1.4
SJAF Saint Jean de 143.80 334 PKP PKPdf 12 09 32.6 -0.1
FILF Fillols 143.88 334 PKP PKPdf 12 09 33.7 +0.8
MLS Moulis 144.15 336 PKP PKPdf 12 09 34.1 +0.8
VALF Valcebollere 144.24 335 PKP PKPdf 12 09 32.4 -1.1
SALF Salau 144.28 336 PKP PKPdf 12 09 32.4 -1.2
EPF Esparros 144.39 337 *e*PKIKP PKPdf 12 09 32.6 -1.1
comp=Z,461nm,1.8s
RESF Ens 144.58 337 PKP PKPdf 12 09 34.3 +0.2
REYF Montagne du Re 144.63 338 PKP PKPdf 12 09 34.1 -0.1
VIEF Vieu 144.63 337 PKP PKPdf 12 09 33.7 -0.5
ORDF Ordiarp 144.71 338 PKP PKPdf 12 09 36.3 +2.0
ATE Arette 144.73 338 PKP PKPdf 12 09 33.7 -0.6
EBIE Bielsa 144.76 337 PKP PKPdf 12 09 35.4 +1.0
OSSF Osses 144.78 339 PKP PKiKP 12 09 36.8 -1.4
ETSF Etsaut 144.84 338 *e*PKIKP PKPdf 12 09 33.2 -1.3
comp=Z,289nm,1.0s
EALK Alkurruntz 144.90 339 PKP PKPdf 12 09 36.5 +1.9
ELIZ Elizondo 144.96 339 PKP PKiKP 12 09 37.5 -1.0
KEST Kesra 145.19 319 PKPbc PKPbc 12 09 34.8 -0.2
comp=Z,21nm,1.0s,baz=312,slow=2.3,SNR=28
EPOB Poblet 145.50 335 PKP PKPdf 12 09 37.3 +1.6
ELAN Lanestosa 145.53 341 PKP PKiKP 12 09 37.7 -2.0
ECRI Cripan 145.79 340 PKP PKiKP 12 09 40.4 +0.1
CMAH Djebel Manchou 145.81 322 P PKiKP 12 09 40.0 -0.5
ESAC San Caprasio 145.82 337 PKP PKiKP 12 09 41.1 +0.8
EARI Arriondas 146.00 343 PKP PKiKP 12 09 41.4 +0.7
ABSA Djebel Ababsia 146.00 322 P PKiKP 12 09 43.0 +2.1
ERTA Horta de San J 146.14 335 PKP PKiKP 12 09 40.9 -0.1
CKFL Kef-Lekhel 146.37 323 P PKiKP 12 09 41.0 -0.7
EPON Pontenova 146.48 346 PKP PKiKP 12 09 40.1 -1.5
CASM Ain Smara 146.60 323 P PKiKP 12 09 40.0 -2.1
DFRA Djebel Bou Aff 146.77 324 P PKiKP 12 09 41.0 -1.5
CTEI Djebel Teioual 146.79 323 P PKiKP 12 09 42.0 -0.5
EMOS Mosqueruela 146.97 335 PKP PKiKP 12 09 42.0 -0.8
ETOR Torete 147.20 338 PKP PKiKP 12 09 40.2 -3.1
STS Santiago 147.21 347 PKP PKiKP 12 09 41.4 -1.8
EMAZ Mazaricos 147.24 348 PKP PKiKP 12 09 41.1 -2.1
SET Setif 147.28 324 P PKiKP 12 09 42.0 -1.5
ERUA La Rua 147.35 345 PKP PKiKP 12 09 42.9 -0.6
GUD Guadarrama 148.10 340 PKP PKiKP 12 09 42.9 -2.2
EMHD Djebel Mahouad 148.65 327 P PKPdf 12 09 42.2 +1.1
ESLA Sonseca Array 148.90 339 *e*PKPab PKPab 12 09 48.9 -0.4
ESLA LR LR
comp=Z,64µm,19.0s,MS7.4
PAB San Pablo 149.15 339 *e*PKPdf PKPdf 12 09 43.2 +1.4
EVIA Vianos 149.26 336 PKP PKiKP 12 09 47.0 -0.5
MTE Manteigas 149.33 345 *e*PKPab PKPab 12 09 49.4 -1.6
EBNR Beni Rached 149.34 328 P PKPab 12 09 49.3 -1.9
ECHA Ech Chlef 149.53 328 P PKiKP 12 09 49.2 +1.0
EANR 'Ain N'Sour 149.82 328 P PKiKP 12 09 48.8 0.0
EHUE Huescar 150.00 335 PKP PKiKP 12 09 48.0 -1.1
ETRT Tiaret 150.15 328 P PKiKP 12 09 47.5 -2.0
EBAN Banos Encina 150.17 337 PKP PKiKP 12 09 47.4 -2.1
EQES Quesada 150.21 336 PKP PKiKP 12 09 48.8 -0.7
OJGS Djebel Guires 150.35 328 P PKiKP 12 09 50.0 +0.1
EADA Adamuz 150.46 339 PKP PKiKP 12 09 47.2 -2.8
USTO Oran 150.82 330 P PKPdf 12 09 45.0 +0.4
ODJA Bouhanifia 150.94 329 P PKPab 12 09 57.0 -0.8
EVO Evora 151.21 344 *e*PKIKP PKPbc 12 09 49.9 -1.1
comp=Z,206nm,1.2s
EVO *e*MLR MLR
comp=Z,25µm,20.8s,MS6.7
EGUA Guajares 151.24 336 PKP PKPbc 12 09 50.4 -0.8
LIS Lisbon 151.32 346 *e*P PKPdf 12 09 42.1 -3.2
LIS *e*SS SS 12 32 50.9 +1.6
LIS *e*SS SS 12 32 50.9 +1.6
LIS AMS AMS 13 19 43.2
comp=N,13µm,23.9s
ODZI Dziouia 151.50 331 P pPKPdf 12 09 55.0 -2.7
EMIN Mina Concepcio 151.52 341 PKP PKPbc 12 09 50.3 -1.5
PDA Ponta Delgada 152.43 14 *e*PKP PKiKP 12 09 54.0 -0.1
PDA Ponta Delgada 152.43 14 *i* PP PP 12 13 29.0 -6.1
PDA *i* SS SS 12 33 20.0 +19
TAM Tamanrasset 154.84 301 *e*PKPbc PKPbc 12 09 56.8 -2.7
TOA0 Torodi Ar. Sit 160.83 278 *e*PKPdf PKPdf 12 09 56.9 -1.5
TORD Torodi Ar. Bea 160.83 278 PKP PKPdf 12 09 57.3 -1.1
comp=N,7.1nm,0.9s,baz=18,slow=1.5,SNR=17
TORD PKPab PKPab 12 10 40.8 -0.1
comp=N,17nm,1.1s,baz=66,slow=3.0,SNR=3.9
ASCN Ascension 160.90 190 PFAKE 12 10 10.0 +11
ASCN LR LR
comp=Z,15µm,19.0s
KIC Kosan Boka 166.31 251 *e*P PKPdf 12 10 08.3 +4.7
comp=Z,291nm,1.6s
DBIC Dimbokro 166.52 253 PKP PKPdf 12 10 04.6 +0.8
comp=Z,12nm,1.1s,baz=50,slow=1.8,SNR=4.8
DBIC Dimbokro 166.52 253 *e*PKPdf PKPdf 12 10 04.9 +1.1
DBIC LR LR
comp=Z,29µm,19.0s
DBIC Dimbokro 166.52 253 PKIKP PKPdf 12 10 04.6 +0.8
DBIC pmax pmax
comp=Z,12nm,1.1s
LIC Lamto 166.53 250 *e*PKIKP PKPdf 12 10 01.1 -2.7
comp=Z,130nm,1.6s
LIC *e*MLR MLR
comp=Z,36µm,22.5s
LIC Lamto 166.53 250 *e*P PKPdf 12 10 05.1 +1.3
comp=Z,132nm,1.7s
LIC Lamto 166.53 250 *e*PKPdf PKPdf 12 10 01.1 -2.7
LIC LR LR
comp=Z,18µm,22.5s
TIC Toumodi 166.67 252 *e*P PKPdf 12 10 08.8 +4.9
comp=Z,540nm,1.9s

ISCJB ***27*** *12:04:36.2±5.2, 1134S×009×162.1E±0.1, h5km±32km, mb4.4/8, Error ellipse: s-maj=21.9km s-min=12.5km az=148.3*

IDC ***27*** *12:04:38.7±1.5, 1142S×16171E, h0km, mb4.3/7, mb1 4.5/8, mb1mx4.3/17, mbtmp4.3/8, MS5.0/1, Ms1 5.0/1, ms1mx4.0/23, Error ellipse: s-maj=39.5km s-min=21.9km az=78.0*

NEIC ***27*** *12:04:43.9±2.7, 11.16S×16180E, h49km±21km, mb4.7/5, Error ellipse: s-maj=27.2km s-min=14.5km az=99.0*

ISC 27 12:04:46.6±4.2, 1133S±009×1619E±02, h67km±33km, n24, σ1§40/24, mb4.4/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.67**	**315**	Pn	**Pn**	**12 05 22.0**	**-5.2**
	baz=330,slow=20,SNR=3.5						
HNR				LR	LR	12 05 57.6	
	comp=Z,25µm,18.1s,baz=165,slow=30						
HNR				Sn	**Sn**	**12 05 57.9**	**-0.6**
	156nm,0.3s,baz=194,slow=23,SNR=3.1						
HNR	**Honiara**	**2.67**	**315**	Pn	**Pn**	**12 05 22.0**	**-5.2**
HNR				LR	LR	12 05 57.6	
HNR				Sn	**Sn**	**12 05 57.9**	**-0.6**
CTA	**Charters Tower**	**17.36**	**238**	*e*P	**Pn**	**12 08 47.5**	**+3.0**
	32nm,0.8s						
CTA	**Charters Tower**	**17.36**	**238**	P	**Pn**	**12 08 44.4**	**-0.1**
	0.9nm,0.3s,baz=63,slow=12,SNR=22						
CTA	**Charters Tower**	**17.36**	**238**	P	**Pn**	**12 08 44.4**	**-0.1**
CTA				*e*P		12 08 47.5	
CTAO	**Charters Tower**	**17.36**	**238**	*e*P	**Pn**	**12 08 47.1**	**+2.6**
	120nm,1.3s						
COEN	**Coen**	**18.42**	**260**	*e*P	**Pn**	**12 08 59.2**	**+1.8**
	55nm,1.1s						
ARMA	**Armidale**	**21.24**	**205**	*e*P	**P**	**12 09 27.5**	**+0.3**
STKA	**Stephens Creek**	**27.71**	**219**	*e*P	**P**	**12 10 28.6**	**-0.1**
	9.1nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**27.71**	**219**	P	**P**	**12 10 28.0**	**-0.6**
	5.3nm,0.7s,mb4.2,baz=32,slow=12,SNR=4.3						
WRAB	**Tennant Creek**	**27.81**	**249**	*e*P	**P**	**12 10 28.7**	**-1.0**
WB2	**Warramunga Arr**	**27.81**	**249**	*e*P	**P**	**12 10 34.0**	**+4.3**
WRA	**Warramunga Arr**	**27.82**	**249**	P	**P**	**12 10 28.0**	**-1.8**
	4.4nm,1.0s,mb4.0,baz=79,slow=9.1,SNR=6.4						
KAKA	**Kakadu**	**28.80**	**264**	*e*P	Px	12 10 22.5	
	11nm,0.6s						
ASAR	**Alice Springs**	**29.29**	**242**	P	**P**	**12 10 41.5**	**-1.3**
	5.2nm,0.9s,mb4.2,baz=75,slow=9.6,SNR=14						
FORT	**Forrest**	**36.80**	**233**	*e*P	**P**	**12 11 52.2**	**+4.1**
	46nm,0.8s,mb5.5						
KAPI	**Kappang**	**42.12**	**275**	*e*P	**P**	**12 12 29.7**	**-3.0**
	14nm,0.8s,mb4.7						
VNDA	**Vanda**	**66.18**	**180**	P	**P**	**12 15 27.1**	**+0.4**
	3.3nm,0.9s,mb4.2,baz=343,slow=6.0,SNR=7.9						
CMAR	**Chiang Mai Arr**	**68.75**	**295**	P	**P**	**12 15 44.1**	**+0.2**
	1.7nm,0.6s,mb4.0,baz=126,slow=5.1,SNR=9.3						
ULN	**Ulaanbaatar**	**76.33**	**326**	*e*P	**P**	**12 16 30.4**	**+2.0**
SONM	**Songino Array**	**76.68**	**325**	P	**P**	**12 16 32.6**	**+2.3**
	2.0nm,0.7s,baz=132,slow=5.6,SNR=5.7						
MKAR	**Makanchi Array**	**91.14**	**317**	P	**P**	**12 17 44.0**	**-0.1**
	0.4nm,0.6s,baz=105,slow=9.1,SNR=4.1						
YKA	**Yellowknife Ar**	**96.98**	**28**	P	**P**	**12 18 08.6**	**-1.9**
	1.2nm,1.0s,mb4.3,baz=262,slow=4.7,SNR=4.6						
KEST	**Kesra**	**145.22**	**319**	PKPbc	PKPbc	12 24 18.2	+1.4
	3.3nm,0.9s,baz=338,slow=9.7,SNR=4.5						

IDC 27 12:22:51.1±6.2, 708S×12915E, h215km±60km, mb3.6/3, mb1 3.7/5, mb1mx3.4/15, mbtmp3.7/5, Error ellipse: s-maj=61.4km s-min=16.2km az=57.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.25**	**240**	P	Pn	12 24 21.5	-0.4
	18nm,0.3s,baz=124,slow=3.5,SNR=22						
BATI				S	S	12 25 34.4	+0.4
	17nm,0.3s,baz=60,slow=22,SNR=14						
KAKA	**Kakadu**	**6.47**	**150**	*e*P	Px	12 24 03.5	
	15nm,0.2s						
KAKA				*e*S	Sx	12 25 03.2	
WRA	**Warramunga Arr**	**13.74**	**159**	P	Pn	12 25 51.7	-5.6
	0.9nm,0.3s,baz=335,slow=14,SNR=46						
WRA				S	S	12 28 18.9	-11
	2.3nm,0.3s,baz=336,slow=23,SNR=9.2						
WB2	**Warramunga Ar**	**13.75**	**159**	*e*P	Pn	12 25 51.7	-5.7
WB2				*e*S	S	12 28 16.2	-14
ASAR	**Alice Springs**	**17.11**	**165**	P	P	12 26 37.4	+1.0
	1.1nm,0.3s,baz=348,slow=9.8,SNR=59						
ASAR				S	S	12 29 43.5	0.0
	0.7nm,0.3s,baz=347,slow=25,SNR=7.0						
STKA	**Stephens Creek**	**27.27**	**156**	*e*P	P	12 28 16.3	+0.7
	2.2nm,0.8s						
STKA	**Stephens Creek**	**27.27**	**156**	P	P	12 28 15.1	-0.5
	0.5nm,0.3s,baz=356,slow=7.9,SNR=4.0						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	12 33 26.8	+0.8
	1.2nm,0.5s,baz=126,slow=7.3,SNR=16						
ZALV	**Zalesovo Beam**	**71.28**	**334**	P	P	12 33 45.7	-1.3
	0.5nm,0.4s,baz=119,slow=5.6,SNR=4.1						

NEIC ***27*** *12:49:22.5, 1649N×9997W, h16km, MD4.1(MEX), After MEX.*

MEX 27 12:49:22.5±0.9, 1649N×9997W, h16km±48km, MD4.1,

Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.38**	**7**	*i* P	Pg	12 49 28.9	-1.4
ACX				*i* S	Sg	12 49 34.3	-1.3
CAIG	**El Cayaco**	**0.63**	**333**	*i* P	Pg	12 49 32.9	-1.9
CAIG				*i* S	Sg	12 49 39.6	-3.6
PNIG	**Pinotepa**	**1.77**	**93**	*i* P	Pn	12 49 47.6	-4.8
PNIG				*i* S	Sn	12 50 09.8	-4.8
ZIIG	**Zihuatanejo**	**1.81**	**308**	*i* P	Pn	12 49 50.6	-2.5
ZIIG				*i* S	Sn	12 50 10.5	-5.3
PLIG	**Platanillo**	**1.95**	**13**	*e*P	Pn	12 49 53.0	-1.9
PLIG				*i* S	Sn	12 50 16.0	-3.0
UTMO	**Huajuapan**	**2.46**	**57**	*e*P	Pn	12 49 58.8	-3.2
UTMO				*i* S	Sn	12 50 28.8	-3.0
MZVM		**2.78**	**15**	*e*P	Pn	12 50 03.0	-3.3
MZVM				*i* S	Sn	12 50 35.8	-3.7
VHO	**Vista Hermosa**	**3.15**	**79**	*e*P	Pn	12 50 09.0	-2.5
VHO				*i* S	Sn	12 50 45.2	-3.6
PTVM	**Pico Tres Padr**	**3.19**	**15**	*e*P	Pn	12 50 09.8	-2.3
PTVM				*i* S	Sn	12 50 46.5	-3.4
IIO	**Organos**	**3.31**	**21**	*e*P	Pn	12 50 11.8	-1.8
IIO				*i* S	Sn	12 50 48.7	-3.9
MOIG	**Morelia**	**3.38**	**340**	*i* S	Sn	12 50 52.1	-2.3
CMIG	**Matias Romero**	**4.91**	**82**	*e*P	Pn	12 50 32.5	-3.1
CMIG				*i* S	Sn	12 51 28.1	-4.0

*ISCJB **27** 12:50:44.2±0.4, 3788N±002×160W±003, h3km±3km, Error ellipse: s-maj=4.5km s-min=3.1km az=149.1*
*CSEM **27** 12:50:45.9±0.1, 3775N×156W, h5km, ML3.5/12, Error ellipse: s-maj=1.2km s-min=0.9km az=145.0*
*MDD **27** 12:50:46.1±0.2, 3775N×157W, h0km, mb3.5/1, mbLg3.0/26, Error ellipse: s-maj=3.1km s-min=1.7km az=160.0, PRIMO*
MDD EMS: IV INTENSIDAD MIMA.
*SFS **27** 12:50:46.0, 3776N×155W, h0km, ML3.1*
*LDG **27** 12:50:46.6±0.2, 3773N×151W, h2km, Ml3.5/4, Error ellipse: s-maj=4.3km s-min=2.0km az=140.0*
*NEIC **27** 12:50:46.0, 3775N×156W, h0km, MN3.0(MDD), After MDD.*
NEIC Felt [IV] in the Aledo area.
ISC 27 12:50:45.4±0.4, 3781N±002×159W±002, h5km±3km, n98, σ1§16/139, 3C-2D, Spain
INMG 27 12:50:46.0±1.5, 3774N×155W, h4km±3km, ML3.2, Error ellipse: s-maj=3.1km s-min=1.6km az=129.0, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXLO	**Lorca**	**0.16**	**212**	Pg	**Pg**	**12 50 47.8**	**-0.7**
	SNR=7.9						
EXLO				Lg		12 50 50.0	
	SNR=7.9						
EXLO	**Lorca**	**0.16**	**212**	Pg	**Pg**	**12 50 47.8**	**-0.7**
	SNR=7.9						
EXLO				Lg		12 50 50.0	
	SNR=7.9						
EMUR	**La Murta**	**0.28**	**84**	Pg	**Pg**	**12 50 51.1**	**+0.3**
	318nm,0.2s,SNR=18						
EMUR				Lg		12 50 55.1	
	1μm,0.2s,SNR=5.0						
EMUR	**La Murta**	**0.28**	**84**	⇑Pg	**Pg**	**12 50 51.1**	**+0.3**
	318nm,0.2s,SNR=18						
EMUR				Lg		12 50 55.1	
	1μm,0.2s,SNR=5.0						
CART	**Cartagena**	**0.52**	**115**	*e*Pg	**Pg**	**12 50 54.9**	**-0.5**
CART	**Cartagena**	**0.52**	**115**	*e*Pg	**Pg**	**12 50 54.8**	**-0.6**
CART	**Cartagena**	**0.52**	**115**	*i* P	**Pg**	**12 50 55.1**	**-0.3**
CART	**Cartagena**	**0.52**	**115**	⇑P	**Pg**	**12 50 55.1**	**-0.3**
CART				S	**Sg**	**12 51 01.6**	**-0.6**
EHUE	**Huescar**	**0.79**	**271**	Pg	**Pg**	**12 51 00.5**	**0.0**
	9.4nm,0.3s,SNR=7.9						
EHUE				Lg		12 51 12.8	
	74nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**0.83**	**2**	Pg	**Pg**	**12 51 02.2**	**+0.9**
	46nm,0.3s,SNR=18						
ETOB				Lg		12 51 15.5	
	677nm,0.3s,SNR=19						
ETOB	**Tobarra**	**0.83**	**2**	⇓Pg	**Pg**	**12 51 02.2**	**+0.8**
	46nm,0.3s,SNR=18						
ETOB				Lg		12 51 15.5	
	677nm,0.3s,SNR=19						
ENIJ	**Nijar**	**0.97**	**210**	Pg	**Pg**	**12 51 02.8**	**-1.2**
	73nm,0.2s,SNR=18						
ENIJ				Lg		12 51 16.5	
	195nm,0.3s,SNR=9.1						
ENIJ	**Nijar**	**0.97**	**210**	⇓Pg	**Pg**	**12 51 02.8**	**-1.1**
	73nm,0.2s,SNR=18						
ENIJ				Lg		12 51 16.5	
	195nm,0.3s,SNR=9.1						
EVIA	**Vianos**	**1.09**	**319**	Pg	**Pg**	**12 51 07.2**	**+0.9**
	56nm,0.1s,SNR=108						
EVIA				Lg		12 51 23.2	
	123nm,0.1s,SNR=15						
EQES	**Quesada**	**1.17**	**270**	Pg	**Pg**	**12 51 07.9**	**+0.1**
EQES				Lg		12 51 25.1	
EQES	**Quesada**	**1.17**	**270**	Pg	**Pg**	**12 51 07.9**	**+0.1**
	44nm,0.1s,SNR=56						
EQES				Lg		12 51 25.1	
	211nm,0.2s,SNR=18						
EQES	**Quesada**	**1.17**	**270**	Pg	**Pg**	**12 51 07.9**	**+0.1**
	44nm,0.1s,SNR=56						
EQES				Lg		12 51 25.1	
	211nm,0.2s,SNR=18						
EBER	**Berja**	**1.38**	**229**	Pg	**Pg**	**12 51 10.9**	**-0.9**
	68nm,0.3s,SNR=18						
EBER				Lg		12 51 29.4	
	327nm,0.5s,SNR=8.4						
EBER	**Berja**	**1.38**	**229**	⇑Pg	**Pg**	**12 51 10.9**	**-0.9**
	68nm,0.3s,SNR=18						
EBER				Lg		12 51 29.4	
	327nm,0.5s,SNR=8.4						
EBEN	**Beniarda**	**1.40**	**50**	Pg	**Pg**	**12 51 10.4**	**-1.8**
	52nm,0.3s,SNR=67						
EBEN				Lg		12 51 30.5	
	224nm,0.9s,SNR=5.6						
EBEN	**Beniarda**	**1.40**	**50**	Pg	**Pg**	**12 51 10.4**	**-1.8**
	52nm,0.3s,SNR=67						
EBEN				Lg		12 51 30.5	
	224nm,0.9s,SNR=5.6						
EQUE	**Quentar**	**1.59**	**248**	Pg	**Pg**	**12 51 15.2**	**-0.6**
	32nm,0.3s,SNR=62						
EQUE				Lg		12 51 36.7	
	78nm,0.3s,SNR=9.9						
ECOG	**Cogollos-Vega**	**1.66**	**252**	Pg	**Pg**	**12 51 17.2**	**+0.1**
	60nm,0.3s,SNR=20						
ECOG				Lg		12 51 40.1	
	105nm,0.2s,SNR=15						
EBAN	**Banos Encina**	**1.77**	**282**	Pn	**Pn**	**12 51 17.3**	**+0.7**
	26nm,0.2s,SNR=18						
EBAN				Sn	**Sn**	**12 51 41.1**	**+1.7**
	83nm,0.2s,SNR=7.9						
ECHE	**Chera**	**1.84**	**15**	Pn	**Pn**	**12 51 17.3**	**-0.3**
ECHE				Pg	**Pg**	**12 51 20.7**	**+0.1**
ECHE				Lg		12 51 46.4	
ECHE				Lg		12 51 47.4	
ECHE	**Chera**	**1.84**	**15**	Pn	**Pn**	**12 51 17.3**	**-0.3**
	1.6nm,0.2s,SNR=7.9						
ECHE				Pg	**Pg**	**12 51 20.7**	**+0.1**
	16nm,0.2s,SNR=37						
ECHE				Lg		12 51 46.4	
	61nm,0.3s,SNR=9.4						
EGUA	**Guajares**	**1.85**	**239**	Pn	**Pn**	**12 51 17.8**	**+0.1**
	37nm,0.4s,SNR=7.9						
EGUA				Lg		12 51 46.2	
	95nm,0.5s,SNR=7.9						
ERON	**Agron**	**1.93**	**246**	Pn	**Pn**	**12 51 21.2**	**+2.4**
	14nm,0.3s,SNR=7.9						
ERON				Lg		12 51 44.8	
	9.2nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**2.14**	**264**	Pn	**Pn**	**12 51 23.7**	**+2.1**
	9.9nm,0.2s,SNR=7.9						
ELUQ				Lg		12 51 55.1	
	24nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.14**	**253**	Pn	**Pn**	**12 51 22.8**	**+1.1**
	12nm,0.3s,SNR=12						
ELOJ				Lg		12 51 54.4	
	10nm,0.2s,SNR=5.9						
EADA	**Adamuz**	**2.38**	**279**	Pn	**Pn**	**12 51 25.0**	**-0.1**
	6.7nm,0.1s,SNR=24						
EADA				Sn	**Sn**	**12 51 55.3**	**+0.6**
	40nm,0.2s,SNR=7.4						
EADA				Lg		12 52 03.7	
	73nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**2.61**	**61**	Pn	**Pn**	**12 51 27.3**	**-0.8**
EIBI				Sn	**Sn**	**12 51 57.1**	**-3.1**
EIBI	**Ibiza**	**2.61**	**61**	Pn	**Pn**	**12 51 27.3**	**-0.8**
	24nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**12 51 57.1**	**-3.0**
	22nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.61**	**61**	Pn	**Pn**	**12 51 27.3**	**-0.8**
	24nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**12 51 57.1**	**-3.0**
	22nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**2.62**	**316**	Pn	**Pn**	**12 51 28.2**	**-0.2**
	1.0nm,0.2s,SNR=11						
ESDC	**Sonseca Array**	**2.62**	**316**	Pg	**Pg**	**12 51 35.6**	**-0.1**
	13nm,0.3s,SNR=71						
ESDC				Sn	**Sn**	**12 51 59.3**	**-1.3**
	12nm,0.1s,SNR=3.9						
ESDC				Lg		12 52 09.3	
	34nm,0.3s,SNR=11						
ESDC	**Sonseca Array**	**2.62**	**316**	Pn	**Pn**	**12 51 28.2**	**-0.2**
	1.0nm,0.2s,baz=128,slow=13,SNR=11						
ESDC				Pg	**Pg**	**12 51 35.6**	**-0.1**
	13nm,0.3s,baz=131,slow=17,SNR=71						
ESDC				Sn	**Sn**	**12 51 59.3**	**-1.3**
	12nm,0.1s,baz=128,slow=30,SNR=3.9						
ESDC				Lg		12 52 09.3	
	34nm,0.3s,baz=131,slow=29,SNR=11						
ESLA	**Sonseca Array**	**2.62**	**316**	*e*Pn	**Pn**	**12 51 27.9**	**-0.4**
ESLA	**Sonseca Array**	**2.62**	**316**	*e*Pn	**Pn**	**12 51 27.9**	**-0.5**
EMOS	**Mosqueruela**	**2.69**	**19**	Pn	**Pn**	**12 51 31.3**	**+2.0**
EMOS				Pg	**Pg**	**12 51 37.0**	**+0.1**
EMOS	**Mosqueruela**	**2.69**	**19**	Pn	**Pn**	**12 51 31.3**	**+2.0**
	17nm,0.4s,SNR=6.9						
EMOS	**Mosqueruela**	**2.69**	**19**	Pg	**Pg**	**12 51 37.0**	**0.0**
	28nm,0.7s,SNR=7.7						
EMOS				Lg		12 52 11.3	
	13nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.69**	**19**	Pn	**Pn**	**12 51 31.3**	**+2.0**
	17nm,0.4s,SNR=6.9						
EMOS				Pg	**Pg**	**12 51 37.0**	**+0.1**
	28nm,0.7s,SNR=7.7						
EMOS				Lg		12 52 11.3	
	13nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**2.77**	**310**	*e*Pn	**Pn**	**12 51 30.3**	**0.0**
PAB	**San Pablo**	**2.77**	**310**	*e*Pn	**Pn**	**12 51 30.3**	**0.0**
EMIJ	**Mijas**	**2.83**	**245**	Pn	**Pn**	**12 51 30.7**	**-0.4**
EMIJ				Pg	**Pg**	**12 51 36.9**	**-2.7**
EMIJ				Pn	**Pn**	**12 51 37.2**	**+6.0**
EMIJ				Lg		12 52 19.2	
EMIJ	**Mijas**	**2.83**	**245**	Pn	**Pn**	**12 51 30.7**	**-0.4**
	0.6nm,0.2s,SNR=5.2						
EMIJ				Pg	**Pg**	**12 51 36.9**	**-2.7**
	9.9nm,0.4s,SNR=5.2						
EMIJ				Lg		12 52 19.2	
	10nm,0.3s,SNR=4.7						
ETOR	**Torete**	**3.02**	**353**	Pg	**Pg**	**12 51 42.9**	**-0.4**
	143nm,0.3s,SNR=7.9						
ETOR				Lg		12 52 24.6	
	102nm,0.3s,SNR=7.9						
ETOR	**Torete**	**3.02**	**353**	Pg	**Pg**	**12 51 42.9**	**-0.4**
	143nm,0.3s,SNR=7.9						
ETOR				Lg		12 52 24.6	
	102nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.46**	**326**	Pn	**Pn**	**12 51 39.6**	**-0.2**
GUD				Pg	**Pg**	**12 51 50.4**	**-1.2**
GUD	**Guadarrama**	**3.46**	**326**	Pn	**Pn**	**12 51 39.6**	**-0.2**
	SNR=7.9						
GUD	**Guadarrama**	**3.46**	**326**	Pn	**Pn**	**12 51 41.2**	**+1.4**
	1.3nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**12 51 50.4**	**-1.2**
	2.4nm,0.2s,SNR=7.9						
GUD				Lg		12 52 35.7	
	27nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**3.48**	**25**	Pn	**Pn**	**12 51 41.1**	**+1.0**
ERTA				Sn	**Sn**	**12 52 21.6**	**0.0**
ERTA				Lg		12 52 34.6	
ERTA	**Horta de San J**	**3.48**	**25**	Pn	**Pn**	**12 51 41.1**	**+1.0**
	2.8nm,0.3s,SNR=6.0						
ERTA				Sn	**Sn**	**12 52 21.6**	**0.0**
	7.5nm,0.3s,SNR=7.9						
ERTA				Lg		12 52 34.6	
	8.5nm,0.3s,SNR=8.9						
ERTA	**Horta de San J**	**3.48**	**25**	Pn	**Pn**	**12 51 41.1**	**+1.1**
	2.8nm,0.3s,SNR=6.0						
ERTA				Sn	**Sn**	**12 52 21.6**	**0.0**
	7.5nm,0.3s,SNR=7.9						
ERTA				Lg		12 52 34.6	
	8.5nm,0.3s,SNR=8.9						
ESPR	**Espera**	**3.52**	**256**	Pn	**Pn**	**12 51 44.3**	**+3.5**
	0.8nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.52**	**256**	Pn	**Pn**	**12 51 44.4**	**+3.6**
	0.8nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.96**	**59**	Pn	**Pn**	**12 51 45.5**	**-1.2**
	11nm,0.3s,SNR=7.7						
ETOS	**Mallorca**	**3.96**	**59**	Pn	**Pn**	**12 51 45.5**	**-1.2**
	11nm,0.3s,SNR=7.7						
ESAC	**San Caprasio**	**4.00**	**12**	Lg		12 52 54.1	
	87nm,0.5s,SNR=6.6						
ESAC	**San Caprasio**	**4.00**	**12**	Lg		12 52 54.1	
	87nm,0.5s,SNR=6.6						
EMIN	**Mina Concepcio**	**4.02**	**271**	Pn	**Pn**	**12 51 47.5**	**-0.1**
	2.6nm,0.4s,SNR=35						
EMIN				Sn	**Sn**	**12 52 33.4**	**-1.7**
	1.9nm,0.1s,SNR=6.7						
EMIN				Lg		12 52 53.9	
	5.7nm,0.3s,SNR=5.0						
EMIN	**Mina Concepcio**	**4.02**	**271**	Pn	**Pn**	**12 51 47.5**	**-0.1**
	2.6nm,0.4s,SNR=35						
EMIN				Sn	**Sn**	**12 52 33.4**	**-1.7**
	1.9nm,0.1s,SNR=6.7						
EMIN				Lg		12 52 53.9	
	5.7nm,0.3s,SNR=5.0						
EPLA	**Plasencia**	**4.16**	**304**	Pn	**Pn**	**12 51 49.8**	**+0.3**
	5.5nm,0.3s,SNR=7.1						
EPLA				Sn	**Sn**	**12 52 36.6**	**-1.8**
	9.2nm,0.3s,SNR=6.1						
EPLA				Lg		12 52 57.3	
	41nm,0.5s,SNR=6.1						
EBAD	**Badajoz**	**4.37**	**284**	Pn	**Pn**	**12 51 52.7**	**+0.4**
	1.4nm,0.1s,SNR=9.7						
EBAD				Sn	**Sn**	**12 52 41.9**	**-1.7**
	9.8nm,0.3s,SNR=5.1						
EBAD				Lg		12 53 05.6	
	31nm,0.3s,SNR=12						
EBAD	**Badajoz**	**4.37**	**284**	Pn	**Pn**	**12 51 52.7**	**+0.4**
	1.4nm,0.1s,SNR=9.7						
EBAD				Sn	**Sn**	**12 52 41.9**	**-1.7**
	9.8nm,0.3s,SNR=5.1						
EBAD				Lg		12 53 05.6	
	31nm,0.3s,SNR=12						
EGRO	**El Granado**	**4.68**	**268**	Pn	**Pn**	**12 51 57.0**	**+0.4**
	0.7nm,0.1s,SNR=13						
EGRO				Sn	**Sn**	**12 52 50.3**	**-1.0**
	0.6nm,0.1s,SNR=5.4						
EGRO				Lg		12 53 15.7	
	6.0nm,0.3s,SNR=4.5						
EGRO	**El Granado**	**4.68**	**268**	Pn	**Pn**	**12 51 57.0**	**+0.3**
	0.7nm,0.1s,SNR=13						
EGRO				Sn	**Sn**	**12 52 50.3**	**-1.1**
	0.6nm,0.1s,SNR=5.4						
EGRO				Lg		12 53 15.7	
	6.0nm,0.3s,SNR=4.5						
IZUN	**Zunzarren**	**5.04**	**1**	Pn	**Pn**	**12 52 04.4**	**+2.8**
	0.4nm,0.1s,SNR=7.9						
IZUN				Lg		12 53 30.7	
	1.5nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**5.04**	**1**	Pn	**Pn**	**12 52 04.4**	**+2.8**
	0.4nm,0.1s,SNR=7.9						
IZUN				Lg		12 53 30.7	
	1.5nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**5.05**	**15**	Lg		12 53 26.2	
	SNR=7.9						
EBIE	**Bielsa**	**5.05**	**15**	Lg		12 53 26.2	
	SNR=7.9						
EORO	**Oroz-Betelu**	**5.08**	**2**	Pn	**Pn**	**12 52 04.7**	**+2.6**
	6.5nm,0.5s,SNR=5.8						
EORO	**Oroz-Betelu**	**5.08**	**2**	Pg	**Pg**	**12 52 23.4**	**+0.7**
	SNR=7.9						
EORO				Lg		12 53 28.2	
	11nm,0.5s,SNR=5.3						
EORO	**Oroz-Betelu**	**5.08**	**2**	Pn	**Pn**	**12 52 04.7**	**+2.6**
	6.5nm,0.5s,SNR=5.8						
EORO				Lg		12 53 28.2	
	11nm,0.5s,SNR=5.3						
EVO	**Evora**	**5.11**	**280**	*e*Pn	**Pn**	**12 52 04.1**	**+1.6**
EVO				*e*Sn	**Sn**	**12 53 02.1**	**+0.2**
EVO				*e*Sg	**Sg**	**12 53 30.9**	**+1.5**
	90nm,0.6s						
IUSE	**Utxeti**	**5.13**	**0**	Pn	**Pn**	**12 52 06.4**	**+3.6**
	2.0nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**5.13**	**0**	Pn	**Pn**	**12 52 06.4**	**+3.7**
	2.0nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**5.14**	**9**	*e*Pn	**Pn**	**12 52 03.5**	**+0.5**
ETSF				*e*Sn	**Sn**	**12 53 00.9**	**-1.8**
ETSF				*e*Sg	**Sg**	**12 53 30.5**	**+0.1**
	9.0nm,0.4s						
ETSF	**Etsaut**	**5.14**	**9**	*e*Pn	**Pn**	**12 52 03.5**	**+0.5**
ETSF				*e*Sn	**Sn**	**12 53 00.9**	**-1.8**
ETSF				*e*Sg	**Sg**	**12 53 30.5**	**+0.1**
	4.5nm,0.4s						
EVOP	**Sao Brissos**	**5.20**	**280**	*e*Pn	**Pn**	**12 52 04.1**	**+0.4**
EVOP				*e*Sn	**Sn**	**12 53 02.1**	**-1.9**
EVOP				*e*Sg	**Sg**	**12 53 30.9**	**-1.3**
	45nm,0.6s						
SJPF	**Ste Jean**	**5.30**	**3**	*e*Pn	**Pn**	**12 52 06.5**	**+1.3**
SJPF				*e*Sn	**Sn**	**12 53 03.6**	**-3.0**
SJPF				*e*Sg	**Sg**	**12 53 35.6**	**0.0**
	10nm,0.5s						
SJPF	**Ste Jean**	**5.30**	**3**	*e*Pn	**Pn**	**12 52 06.5**	**+1.3**
SJPF				*e*Sn	**Sn**	**12 53 03.6**	**-3.0**
SJPF				*e*Sg	**Sg**	**12 53 35.6**	**0.0**
	5.2nm,0.5s						
EALK	**Alkurruntz**	**5.40**	**1**	Pn	**Pn**	**12 52 08.6**	**+2.1**
	6.3nm,0.4s,SNR=6.3						
EALK				Lg		12 53 36.8	
	1.9nm,0.3s,SNR=7.9						
EPF	**Esparros**	**5.42**	**15**	*e*Pn	**Pn**	**12 52 06.5**	**-0.2**
EPF				*e*Sn	**Sn**	**12 53 07.4**	**-2.0**
EPF				*e*Sg	**Sg**	**12 53 38.4**	**-0.9**
	12nm,0.4s						
EPF	**Esparros**	**5.42**	**15**	*e*Pn	**Pn**	**12 52 06.5**	**-0.2**
EPF				*e*Sn	**Sn**	**12 53 07.4**	**-2.0**
EPF				*e*Sg	**Sg**	**12 53 38.4**	**-0.9**
	5.9nm,0.4s						
ELAN	**Lanestosa**	**5.59**	**346**	Pn	**Pn**	**12 52 10.6**	**+1.5**
	0.5nm,0.1s,SNR=9.8						
ELAN				Lg		12 53 46.8	
	2.0nm,0.2s						
ELAN	**Lanestosa**	**5.59**	**346**	Pn	**Pn**	**12 52 10.6**	**+1.5**
	0.5nm,0.1s,SNR=9.8						
ELAN				Lg		12 53 46.8	
	2.0nm,0.2s						
ECAL	**Calabor**	**5.71**	**318**	Pn	**Pn**	**12 52 11.6**	**+0.8**
	3.4nm,0.3s,SNR=28						
ECAL				Lg		12 53 48.0	
	15nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**5.71**	**318**	Pn	**Pn**	**12 52 11.6**	**+0.7**
	3.4nm,0.3s,SNR=28						
ECAL				Lg		12 53 48.0	
	15nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.13**	**334**	Pn	**Pn**	**12 52 18.1**	**+1.5**
	2.3nm,0.2s,SNR=26						
EARI				Sn	**Sn**	**12 53 25.7**	**-1.4**
	10nm,0.6s,SNR=7.9						
EARI				Lg		12 54 03.8	
	1.6nm,0.4s,SNR=5.0						
EARI	**Arriondas**	**6.13**	**334**	Pn	**Pn**	**12 52 18.1**	**+1.5**
	2.3nm,0.2s,SNR=26						
EARI				Sn	**Sn**	**12 53 25.7**	**-1.4**
	10nm,0.6s,SNR=7.9						
EARI				Lg		12 54 03.8	
	1.6nm,0.4s,SNR=5.0						
ELOB	**Lobios**	**6.42**	**311**	Lg		12 54 09.1	
	17nm,0.5s,SNR=5.3						
ELOB	**Lobios**	**6.42**	**311**	Lg		12 54 09.1	
	17nm,0.5s,SNR=5.3						
LFF	**La Frestale**	**7.33**	**13**	*e*Pn	**Pn**	**12 52 33.2**	**+0.2**
CAF	**Calviac**	**7.62**	**20**	*e*Pn	**Pn**	**12 52 37.6**	**+0.6**
PGF	**Pioggiola**	**9.38**	**56**	*e*Pn	**Pn**	**12 53 01.5**	**+0.3**

*MOS **27** 12:52:45.7±0.9, 720S×12856E, h104km, mb5.1/23, Error ellipse: s-maj=14.8km s-min=6.2km az=110.7*
*BJI **27** 12:52:45.5, 788S×12900E, h158km, mB5.6, mb5.1*
*IDC **27** 12:52:48.9±0.7, 731S×12868E, h123km±6km, mb4.7/15, mb1 4.7/18, mb1mx4.7/21, mbtmp4.7/18, Error ellipse: s-maj=14.7km s-min=8.0km az=67.0*
*ISCJB **27** 12:52:52.1±0.6, 739S±003×12866E±004, h174km±5km, mb5.0/63, Error ellipse: s-maj=7.0km s-min=4.9km az=148.1*
*NEIC **27** 12:52:52.6±0.8, 731S×12857E, h158km±7km, mb5.1/30, Error ellipse: s-maj=6.6km s-min=3.7km az=57.0*
*DJA **27** 12:52:53.6±0.0, 750S×12883E, h151km, mb4.9/16, mB6.0/2, MLv5.0/5, Mw(mB)5.7/2*
ISC 27 12:52:53.2±0.6, 742S±003×12867E±004, h168km±5km, h163km±3.1km; pP-P, n221, σ1§06/178, mb5.0/63, 24C-8D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.74**	**353**	P	**Pn**	**12 53 50.6**	**-0.1**
AAI	**Ambon**	**3.74**	**353**	P	**Pn**	**12 53 51.0**	**+0.3**
BATI	**Baumata**	**5.67**	**240**	P	**Pn**	**12 54 13.7**	**-2.0**
	915nm,0.3s,baz=115,slow=2.9,SNR=426						
BATI				S	**Sn**	**12 55 14.3**	**-6.2**
	329nm,0.3s,baz=279,slow=22,SNR=11						
BATI	**Baumata**	**5.67**	**240**	P	**Pn**	**12 54 14.2**	**-1.5**
	2μm,0.7s,9.0nm						
KAKA	**Kakadu**	**6.44**	**145**	⇓*i*P	Px	12 54 09.7	
	417nm,0.1s						
KAKA				*e*S	Sx	12 55 19.5	
LBMI	**Labuha**	**6.84**	**350**	P	**Pn**	**12 54 32.3**	**+1.1**
	144nm,0.9s,0.6nm						
KDI	**Kendari**	**6.93**	**299**	P	**Pn**	**12 54 32.2**	**-0.3**
	288nm,0.8s,0.6nm						
KAPI	**Kappang**	**9.18**	**285**	Pn	**Pn**	**12 55 01.7**	**-0.5**
	378nm,0.7s,SNR=8.5						
KAPI	**Kappang**	**9.18**	**285**	P	**Pn**	**12 54 59.0**	**-3.2**
	4.3nm,0.3s,baz=122,slow=6.3,SNR=19						
KAPI	**Kappang**	**9.18**	**285**	*e*Pn	**Pn**	**12 55 00.8**	**-1.4**
KAPI	**Kappang**	**9.18**	**285**	P	**Pn**	**12 55 00.7**	**-1.5**
	37nm,1.2s						
MMPI	**Merauke**	**11.65**	**96**	P	**Pn**	**12 55 34.1**	**-0.4**
	581nm,0.8s						
JAY	**Jayapura**	**12.94**	**68**	P	**Pn**	**12 55 51.8**	**+0.7**
KHKI	**Kahang

comp=Z,64nm,0.7s,comp=Z,5µm
BTM Bintulu 18.79 304 ⇑P **P 12 57 06.1 +6.1**
BJII Banjamegara 18.80 269 P **P 12 57 00.9 +0.8**
SBUM Sibu 19.12 300 ⇑P **P 12 57 05.2 +1.7**
SBUM Sibu 19.12 300 P **P 12 57 05.6 +2.1**
KSM Kuching 20.34 295 *e*P **P 12 57 16.2 -0.4**
comp=Z,98nm,0.9s
KSM Kuching 20.34 295 ⇓P **P 12 57 16.8 +0.2**
KSM Kuching 20.34 295 P **P 12 57 16.3 -0.3**
comp=Z,142nm,1.1s
CTA Charters Tower 21.19 128 ⇑*i*P **P 12 57 27.8 +2.2**
comp=Z,17nm,1.0s,mb4.3
CTA Charters Tower 21.19 128 P **P 12 57 27.0 +1.3**
comp=Z,17nm,0.7s,mb4.5,baz=304,slow=11,SNR=14
CTA S **S 13 01 14.6 +2.8**
comp=Z,6.3nm,0.8s,baz=322,slow=15,SNR=4.1
CTA Charters Tower 21.19 128 ⇑*i*P **P 12 57 27.8 +2.2**
CTA pmax pmax
comp=Z,17nm,1.0s
CTAO Charters Tower 21.19 128 *e*P **P 12 57 28.2 +2.6**
comp=Z,39nm,1.2s,mb4.6
CTAO Charters Tower 21.19 128 *e*P **P 12 57 28.2 +2.6**
CTAO pmax pmax
comp=Z,39nm,1.2s,mb4.6
CTAO Charters Tower 21.19 128 P **P 12 57 27.8 +2.2**
comp=Z,29nm,1.2s,mb4.5
TPI Tanjungpandan 21.43 281 P **P 12 57 27.8 -0.5**
FORT Forrest 23.25 181 *e*P **P 12 57 46.4 +0.8**
comp=Z,37nm,0.5s,mb5.1
KLBR Kellerberrin 26.12 202 *e*P **P 12 58 12.1 +0.5**
comp=Z,19nm,0.8s,mb4.8
MUN Mundaring 27.05 204 *e*P **P 12 58 20.3 +0.3**
STKA Stephens Creek 27.15 155 ⇑*i*P **P 12 58 22.3 +1.4**
comp=Z,25nm,0.6s,mb5.0
STKA *e*S sS 13 03 51.6 +2.8
STKA Stephens Creek 27.15 155 P **P 12 58 22.4 +1.6**
comp=Z,45nm,0.8s,mb5.2,baz=326,slow=9.0,SNR=64
NWAO Narrogin (SRO) 27.51 201 P **P 12 58 24.8 +0.8**
comp=Z,12nm,0.4s,mb5.0,baz=39,slow=8.9,SNR=32
ARMA Armidale 31.41 140 *e*P **P 12 59 01.4 +2.9**
CNB Canberra Magne 33.64 149 *e*P **P 12 59 20.3 +2.4**
TOO Toolangi 33.68 155 ⇑*i*P **P 12 59 21.4 +3.2**
BDT Bhumibol Dam 38.22 310 P **P 12 59 57.5 +0.5**
CMAR Chiang Mai Arr 39.00 312 P **P 13 00 03.5 -0.1**
comp=Z,6.8nm,0.6s,mb4.5,baz=143,slow=7.3,SNR=56
CMAR PcP PcP 13 02 11.8 +1.3
comp=Z,3.9nm,0.6s,baz=158,slow=3.1,SNR=12
CHG Chiang Mai 39.23 312 ⇑P **P 13 00 05.1 -0.3**
comp=Z,22nm,0.9s,mb4.8
CHTO Chiang Mai 39.23 312 *e*P **P 13 00 05.2 -0.2**
comp=Z,17nm,0.8s,mb4.7
CHTO Chiang Mai 39.23 312 *e*P **P 13 00 05.2 -0.2**
CHTO pmax pmax
comp=Z,17nm,0.8s,mb4.7
GYA Guiyang 39.88 328 ⇑*i*P **P 13 00 10.5 -0.2**
GYA AP pP 13 00 45.5 -1.5
GYA XP sP 13 01 03.8 -2.3
GYA PP PP 13 01 48.5 +2.5
GYA PCP PcP 13 02 14.5 +1.4
GYA SCP ScP 13 05 47.0 +0.6
GYA S **S 13 06 01.3 -1.6**
GYA XS sS 13 07 03.5 -3.1
GYA SCS ScS 13 09 58.0 -2.0
GYA AMB AMB
comp=Z,30nm,0.9s,mb4.9
GYA AMB AMB
comp=Z,130nm,4.6s
GYA LR LR
comp=N,2µm,16.2s
GYA LR LR
comp=E,2µm,16.5s
GYA LR LR
comp=Z,2µm,15.0s
WHN Wuhan 40.17 341 ⇓P **P 13 00 13.5 +0.5**
NJ2 Nanjing 40.35 347 *e*P **P 13 00 15.3 +0.8**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
KMI Kunming 41.03 323 P **P 13 00 20.8 +0.6**
KMI AP pP 13 00 57.8 +1.1
KMI XP sP 13 01 13.5 -2.2
KMI AMB AMB
comp=Z,18nm,0.8s,mb4.8
KS15 Wonju Array Si 44.63 359 *e*P **P 13 00 49.3 +0.4**
MJAR Matsushiro Arr 44.64 11 P **P 13 00 47.5 -1.5**
comp=Z,10nm,0.6s,mb4.6,baz=187,slow=9.6,SNR=41
MAJO Matsushiro 44.64 11 *e*P **P 13 00 47.4 -1.6**
MAJO pmax pmax
comp=Z,20nm,0.7s,mb4.9
MAJO Matsushiro 44.64 11 *e*P **P 13 00 47.4 -1.6**
MAJO pmax pmax
comp=Z,20nm,0.7s,mb4.9
MAT Matsushiro 44.64 11 P **P 13 00 47.1 -1.9**
KSRS Korea Array 44.64 359 P **P 13 00 49.0 0.0**
comp=Z,6.7nm,0.7s,mb4.4,baz=176,slow=10,SNR=18
KSRS sP pP 13 01 29.4 +3.2
comp=Z,2.7nm,0.7s,baz=178,slow=8.9,SNR=3.1
CD2 Chengdu 44.97 329 ⇓*i*P **P 13 00 51.3 -0.4**
CD2 AP pP 13 01 26.8 -2.0
CD2 XP sP 13 01 45.3 -2.4
CD2 PP PP 13 02 39.3 -1.1
CD2 PCS PcS 13 06 22.5 -1.5
CD2 S **S 13 07 16.5 -0.9**
CD2 XS sS 13 08 19.5 -2.6
CD2 SS SS 13 10 35.3 -7.5
CD2 AMB AMB
comp=Z,60nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,80nm,4.2s
XAN Xi'an 45.28 337 P **P 13 00 52.5 -1.6**
XAN AP pP 13 01 26.3 -5.0
XAN XP sP 13 01 46.0 -4.1
XAN AMB AMB
comp=Z,62nm,0.8s,mb5.3
BJT Baijiatuao 48.59 347 *e*P **P 13 01 19.1 -0.6**
comp=Z,36nm,0.7s,mb5.1
BJT Baijiatuao 48.59 347 *e*P **P 13 01 19.1 -0.6**
BJT pmax pmax
comp=Z,36nm,0.7s
BJI Beijing 48.61 347 P **P 13 01 19.0 -0.8**
BJI AMB AMB
comp=Z,79nm,0.7s,mb5.5
LZH Lanzhou 49.17 333 *e*P **P 13 01 24.5 +0.4**
LZH AP pP 13 01 58.5 -3.4
LZH XP sP 13 02 13.5 -7.1
LZH PP PP 13 03 23.0 +3.3
LZH *e*S **S 13 08 16.3 -0.4**
LZH XS sS 13 09 21.0 -1.4
LZH *e*SS SS 13 11 49.0 -1.5
LZH AMB AMB
comp=Z,111nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,851nm,6.9s
SNY Shenyang 49.23 355 ⇑P **P 13 01 23.5 -1.0**
SNY AMB AMB
comp=Z,13nm,1.1s,mb4.5
HHC Hu-ho-hao-te 50.55 343 *e*P **P 13 01 34.5 +0.1**
HHC AP pP 13 02 10.0 -2.4
HHC XP sP 13 02 29.0 -2.0
HHC PCP PcP 13 02 49.3 -0.5
HHC PP PP 13 03 35.5 +3.4
HHC S **S 13 08 36.5 +0.8**
HHC XS sS 13 09 40.8 -0.9
HHC SCS ScS 13 11 05.0 -3.0
HHC SS SS 13 12 10.5 -1.7
HHC AMB AMB
comp=Z,42nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,2µm,5.9s
HHC LR LR
comp=N,2µm,19.0s
HHC LR LR
comp=E,3µm,19.0s
HHC LR LR
comp=Z,3µm,20.2s
LSA Lhasa 51.60 317 P **P 13 01 43.0 +0.5**
LSA Lhasa 51.60 317 *e*P **P 13 01 43.2 +0.7**
comp=Z,18nm,0.6s,mb4.9
LSA Lhasa 51.60 317 *e*P **P 13 01 43.2 +0.7**
LSA pmax pmax
comp=Z,18nm,0.6s,mb4.9
RPZ Rata Peaks 51.72 141 P **P 13 01 45.6 +2.3**
comp=Z,31nm,0.6s,mb5.1,baz=325,slow=2.4,SNR=13
MDJ Mudanjiang 51.80 1 P **P 13 01 44.5 +0.8**
MDJ AMB AMB
comp=Z,12nm,1.6s,mb4.3
MDJ AMB AMB
comp=Z,2µm,16.1s
ODAN Odare 52.54 312 *e*P **P 13 01 49.1 -0.5**
comp=Z,32nm,0.5s,mb5.3
TAPN Taplejung 52.59 313 *e*P **P 13 01 49.6 -0.3**
comp=Z,29nm,0.4s,mb5.4
RAMN Ramite 53.18 312 *e*P **P 13 01 54.0 -0.2**
comp=Z,50nm,0.6s,mb5.4
URZ Urewera 53.34 133 P **P 13 01 55.7 +0.4**
comp=Z,6.2nm,0.5s,mb4.6,baz=266,slow=5.8,SNR=8.4
GTA Gaotai 53.72 332 ⇑*i*P **P 13 01 58.3 +0.4**
GTA AP pP 13 02 34.0 -2.2
GTA XP sP 13 02 52.5 -2.3
GTA S **S 13 09 21.0 +2.1**
GTA XS sS 13 10 26.0 +0.4
GTA AMB AMB
comp=Z,75nm,0.7s,mb5.5
GTA AMB AMB
comp=Z,2µm,6.3s
GTA LR LR
comp=N,2µm,18.0s
GTA LR LR
comp=E,3µm,17.1s
GTA LR LR
comp=Z,3µm,17.1s
JIRN Jiri 53.88 312 *e*P **P 13 01 58.9 -0.4**
comp=Z,19nm,0.5s,mb5.1
GUN Gumba 54.24 312 *e*P **P 13 02 01.6 -0.3**
comp=Z,38nm,0.4s,mb5.5
PKI Pulchoki 54.40 312 *e*P **P 13 02 02.5 -0.6**
comp=Z,18nm,0.5s,mb5.1
PKI Pulchoki 54.40 312 *e*P **P 13 02 02.5 -0.6**
PKI pmax pmax
comp=Z,18nm,0.5s,mb5.1
KKN Kakani 54.62 312 *e*P **P 13 02 04.1 -0.5**
comp=Z,16nm,0.5s,mb5.0
KKN Kakani 54.62 312 *e*P **P 13 02 04.1 -0.5**
KKN pmax pmax
comp=Z,16nm,0.5s,mb5.0
DMN Daman 54.65 311 *e*P **P 13 02 04.4 -0.5**
GKN Gorkha 55.21 312 *e*P **P 13 02 08.2 -0.7**
comp=Z,44nm,0.3s,mb5.6
HYB Hyderabad 55.32 297 *e*P **P 13 02 09.0 -0.8**
HYB Hyderabad 55.32 297 *i* P **P 13 02 09.0 -0.8**
YSS Yuzh-Sakhalins 55.56 12 *e*P **P 13 02 11.0 0.0**
comp=Z,33nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 55.56 12 ⇑*i*P **P 13 02 10.5 -0.5**
YSS pmax pmax
comp=Z,32nm,0.7s,mb5.3
KOLN Koldanda 55.86 311 *e*P **P 13 02 13.1 -0.4**
comp=Z,37nm,0.6s,mb5.4
HABR Khabarovsk 55.94 5 *e*P **P 13 02 12.1 -1.5**
HABR S **S 13 09 48.5 +0.3**
HABR *e* 13 11 44.2
DANN Dangsing 56.05 311 *e*P **P 13 02 14.3 -0.6**
comp=Z,24nm,0.5s,mb5.3
PYUN Piuthan 56.49 311 *e*P **P 13 02 17.7 -0.3**
HIA Hailar 56.99 353 ⇑*i*P **P 13 02 20.8 -0.2**
ULN Ulaanbaatar 58.27 343 *e*P **P 13 02 30.7 +0.7**
comp=Z,22nm,0.7s,mb5.1
ULN Ulaanbaatar 58.27 343 ⇑*i*P **P 13 02 30.2 +0.2**
ULN *i* *PP pP 13 03 06.0 -3.0
SONM Songino Array 58.43 343 P **P 13 02 31.9 +0.7**
comp=Z,26nm,0.8s,mb5.1,baz=169,slow=7.3,SNR=101
NDI New Delhi 61.20 308 *e*P **P 13 02 43.0 -7.5**
ZAK Zakamensk 61.64 342 ⇑*i*P **P 13 02 52.8 -0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
TLY Talaya 62.67 343 P **P 13 03 00.6 +0.8**
comp=Z,106nm,0.6s,mb5.8,SNR=5.2
TLY Talaya 62.67 343 *e*P **P 13 03 00.3 +0.6**
comp=Z,11nm,0.7s,mb4.8
TLY Talaya 62.67 343 *e*P **P 13 03 00.2 +0.4**
TLY *e* 13 11 38.7
TLY pmax pmax
comp=Z,11nm,0.7s,mb4.8
WMQ Urumqi 63.03 328 P **P 13 03 03.0 +0.6**
WMQ AP pP 13 03 41.0 -0.9
WMQ XP sP 13 03 59.0 -1.1
WMQ PP PP 13 05 25.0 +1.7
WMQ S **S 13 11 18.0 -1.5**
WMQ SCS ScS 13 12 36.0 -2.8
WMQ SS SS 13 15 29.0 +0.4
WMQ AMB AMB
comp=Z,45nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,85nm,6.0s
WMQ LR LR
comp=N,2µm,18.0s
WMQ LR LR
comp=E,2µm,18.0s
WMQ LR LR
comp=Z,2µm,18.0s
MOY Mondy 63.47 341 *e*P **P 13 03 06.3 +1.2**
PETK Petropavlovsk- 65.14 19 P **P 13 03 16.5 +0.7**
comp=Z,34nm,0.6s,mb5.3,baz=176,slow=3.5,SNR=81
PETK pP pP 13 03 47.0 -8.6
comp=Z,5.4nm,0.5s,baz=176,slow=1.4,SNR=2.7
PETK Petropavlovsk- 65.14 19 P **P 13 03 16.5 +0.7**
PETK pP pP 13 03 47.0 -8.6
PET Petropavlovsk 65.38 19 ⇑*i*P **P 13 03 17.5 +0.1**
PET pmax pmax
comp=Z,77nm,1.7s,mb5.3
BOD Bodaibo 66.10 351 ⇓*i*P **P 13 03 21.5 -0.5**
BOD pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
MK31 Makanchi Array 67.86 328 *e*P **P 13 03 33.5 +0.2**
MK31 Makanchi Array 67.86 328 *i* P **P 13 03 33.3 0.0**
MK31 pmax pmax
comp=Z,13nm,0.5s,mb4.9
MKAR Makanchi Array 67.86 328 P **P 13 03 33.5 +0.2**
comp=Z,20nm,0.6s,mb5.0,baz=116,slow=8.0,SNR=109
MKAR PcP PcP 13 03 58.0 -0.6
comp=Z,5.8nm,0.6s,baz=121,slow=5.3,SNR=6.6
KZA Kyzart 69.25 320 P **P 13 03 43.3 +1.3**
SNR=12
YAK Yakutsk 69.25 1 *e*P **P 13 03 41.0 -0.5**
comp=Z,80nm,0.6s,mb5.6
YAK Yakutsk 69.25 1 ⇑*i*P **P 13 03 40.9 -0.6**
YAK *i* *PP pP 13 04 20.9 -0.9
YAK pmax pmax
comp=Z,90nm,0.8s,mb5.5
TKM2 Tokmak 2 69.47 321 P **P 13 03 43.9 +0.6**
SNR=16
KBK Karagaybulak 69.74 321 P **P 13 03 45.9 +0.9**
SNR=9.4
AAK Ala-Archa 70.01 320 P **P 13 03 47.2 +0.5**
comp=Z,100nm,0.9s,mb5.5,SNR=14
AAK Ala-Archa 70.01 320 *e*P **P 13 03 47.4 +0.7**
comp=Z,15nm,0.9s,mb4.7
AAK Ala-Archa 70.01 320 *e*P **P 13 03 47.4 +0.7**
AAK pmax pmax
comp=Z,15nm,0.9s,mb4.7
AAK Ala-Archa 70.01 320 P **P 13 03 47.6 +0.9**
SNR=19
AML Almayashu 70.27 320 P **P 13 03 49.3 +1.1**
SNR=23
USP Ospenovka 70.34 321 P **P 13 03 49.1 +0.5**
SNR=32
EKS2 Erkin-Say 70.48 320 P **P 13 03 50.5 +1.0**
SNR=19
ZAA0 Zalesovo Array 71.38 334 *e*P **P 13 03 54.0 -0.7**
ZALV Zalesovo Beam 71.38 334 P **P 13 03 53.9 -0.8**
comp=Z,29nm,0.5s,mb5.2,baz=132,slow=5.6,SNR=162
ZALV sP pP 13 04 37.5 +2.4
comp=Z,6.5nm,0.9s,baz=103,slow=4.7,SNR=1.5
KURK Kurchatov 72.19 329 P **P 13 03 59.2 -0.4**
comp=Z,316nm,0.5s,mb6.3,SNR=46
KURK Kurchatov 72.19 329 *e*P **P 13 03 59.7 +0.1**
comp=Z,37nm,0.5s,mb5.4
KURK Kurchatov 72.19 329*c* *i*P **P 13 03 59.5 -0.1**
KURK *i* *PP pP 13 04 42.3 +2.1
KURK pmax pmax
comp=Z,60nm,1.3s,mb5.2
VNDA Vanda 72.19 173 P **P 13 04 00.5 +1.3**
comp=Z,4.2nm,0.5s,mb4.4,baz=321,slow=6.3,SNR=41
SEY Seymchan 72.46 11 ⇑*i*P **P 13 04 01.4 +0.5**
NVS Novosibirsk 72.67 334 *i* P **P 13 04 01.0 -1.3**
NVS pmax pmax
comp=N,8.0nm,0.6s
NVS pmax pmax
comp=Z,17nm,0.6s,mb5.0
NVS pmax pmax
comp=E,10.0nm,0.7s
KK31 Karatay Array 72.79 319 *i* P **P 13 04 03.6 +0.3**
KK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
MAW Mawson 74.08 201 *e*P **P 13 04 12.0 +1.6**
comp=Z,4.5nm,0.6s,mb4.4
MAW Mawson 74.08 201 P **P 13 04 12.1 +1.7**
comp=Z,6.5nm,0.7s,mb4.5,baz=79,slow=6.6,SNR=12
MAW Mawson 74.08 201 *e*P **P 13 04 12.0 +1.6**
MAW pmax pmax
comp=Z,5.0nm,0.6s
BVA0 Borovoye Array 77.72 328 *i* P **P 13 04 30.8 -0.4**
BVA0 pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
BRVK Borovoye 77.79 328 P **P 13 04 31.7 +0.1**
comp=Z,119nm,0.6s,mb5.7,SNR=7.5
BRVK Borovoye 77.79 328 *e*P **P 13 04 31.3 -0.3**
comp=Z,13nm,0.8s,mb4.6
BRVK Borovoye 77.79 328 *e*P **P 13 04 31.3 -0.3**
BRVK pmax pmax
comp=Z,13nm,0.8s,mb4.6
TIXI Tiksi 78.90 0 *e*P **P 13 04 36.5 -0.8**
comp=Z,19nm,0.5s,mb5.0
TIXI Tiksi 78.90 0 ⇓*i*P **P 13 04 36.0 -1.4**
TIXI pmax pmax
comp=Z,13nm,0.6s,mb4.7
BILL Bilibino 79.82 13 ⇑*e*P **P 13 04 44.0 +1.6**
BILL pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
AB31 Akbulak array 82.02 322 P **P 13 04 53.5 -0.9**
AB31 pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
QSPA South Pole Qui 82.56 180 P **P 13 04 58.1 +1.4**
comp=Z,14nm,0.6s,mb4.9,baz=314,slow=0.9,SNR=42
QSPA South Pole Qui 82.56 180 P **P 13 04 58.1 +1.4**
SYO Syowa Base 82.79 201 ⇓*e*P **P 13 04 58.0 -0.1**
SVE Sverdlovsk 84.45 329 *e*P **P 13 05 06.0 -0.7**
SVE pmax pmax
comp=Z,37nm,1.1s,mb5.0
ARU Arti 85.37 328 P **P 13 05 10.1 -1.2**
comp=Z,96nm,0.5s,mb5.8,SNR=5.3
ARU Arti 85.37 328 *e*P **P 13 05 10.2 -1.1**
comp=Z,29nm,1.2s,mb4.9
ARU Arti 85.37 328*c* *i*P **P 13 05 09.8 -1.5**
ARU PPP 13 10 23.3
ARU S S 13 15 18.5 -9.3
ARU pmax pmax
comp=Z,22nm,1.0s,mb4.8
MCK McKinley 93.24 26 *e*P **P 13 05 47.4 -0.9**
comp=Z,13nm,1.0s,mb5.0
MCK McKinley 93.24 26 *e*P **P 13 05 47.4 -0.8**
MCK pmax pmax
comp=Z,13nm,1.0s,mb5.0
COLA College 93.89 25 ⇑*i*P **P 13 05 49.7 -1.5**
SNAA Sanae 94.95 194 *e*P **P 13 05 53.8 -2.2**
YKA Yellowknife Ar 108.71 26 PKiKP PKiKP 13 11 01.8 0.0
comp=Z,1.4nm,0.6s,baz=308,slow=1.7,SNR=10
GERES GERESS Array B 111.89 320 PKiKP PKiKP 13 11 08.5 +0.3
comp=Z,2.6nm,0.5s,baz=65,slow=2.1,SNR=13
NVAR Mina Array Bea 112.59 52 PKiKP PKiKP 13 11 09.9 0.0
comp=Z,0.6nm,0.7s,baz=270,slow=2.8,SNR=4.4
WTTA Wattenberg 113.64 319 ⇑*i*PKiKP PKiKP 13 11 12.0 +0.4
comp=Z,13nm,0.5s
DAVA Damuels 114.78 319 ⇑*i*PKiKP PKiKP 13 11 14.2 +0.3
comp=Z,7.2nm,0.5s
BFO Black Forest 115.46 320 *e*PKPdf PKPdf 13 11 23.0 +7.9
HINF Hinteralfeld 116.56 320 *e*PKIKP PKPdf 13 11 17.0 -0.2
comp=Z,12nm,0.5s
PGF Pioggiola 116.69 314 *e*PKIKP PKPdf 13 11 17.8 +0.1
comp=Z,6.8nm,0.4s
HAU Haudompre 116.82 321 *e*PKIKP PKPdf 13 11 17.7 0.0
GIVF Givet 116.99 323 *e*PKIKP PKPdf 13 11 18.6 +0.6
HWUT Hardware Ranch 117.01 47 *e*PKPdf PKPdf 13 11 11.4 -6.9
SNOW Snow King Moun 117.08 45 *e*PKPdf PKPdf 13 11 20.8 +2.4
LOHW Long Hollow 117.14 45 *e*PKPdf PKPdf 13 11 20.1 +1.6
BAIF Baives 117.37 323 *e*PKIKP PKPdf 13 11 19.1 +0.4
comp=Z,12nm,0.9s
LPG La Plagne 117.39 318 *e*PKIKP PKPdf 13 11 19.5 +0.6
comp=Z,7.9nm,0.6s
LPL La Plagne 117.39 318 *e*PKIKP PKPdf 13 11 19.4 +0.5
comp=Z,10nm,0.5s
SBF Sospel 117.42 316 *e*PKIKP PKPdf 13 11 19.4 +0.4
CABF La Chapelle 117.46 319 *e*PKIKP PKPdf 13 11 19.5 +0.5
comp=Z,21nm,0.5s
MBDF Montbardon 117.61 317 *e*PKIKP PKPdf 13 11 21.1 +1.7
comp=Z,17nm,0.8s
KEST Kesra 118.02 307 PKP PKPdf 13 11 21.1 +0.6
comp=Z,1.3nm,0.5s,baz=28,slow=4.9,SNR=7.1
FRF La Foret Royal 118.06 316 *e*PKIKP PKPdf 13 11 20.3 0.0
PDAR Pinedale Array 118.12 45 PKP PKPdf 13 11 21.1 +0.6
comp=Z,2.0nm,0.8s,baz=166,slow=1.3,SNR=12
ORIF Oris-en-Rattie 118.16 317 *e*PKIKP PKPdf 13 11 20.6 +0.2
comp=Z,9.0nm,0.5s
LOR Lormes 118.65 320 *e*PKIKP PKPdf 13 11 21.4 +0.1
comp=Z,5.3nm,0.6s
SMF Signal de Mont 118.89 320 *e*PKIKP PKPdf 13 11 21.1 -0.7
comp=Z,5.2nm,0.6s
SSF Saint Saulge 118.95 320 *e*PKIKP PKPdf 13 11 22.2 +0.3
comp=Z,12nm,0.5s
VIVF Saint-Julien-l 118.98 318 *e*PKIKP PKPdf 13 11 22.2 +0.2
AVF Avril sur Loir 119.15 320 *e*PKIKP PKPdf 13 11 22.1 -0.2
comp=Z,7.4nm,0.5s
BGF Bois d'Agland 119.56 320 *e*PKIKP PKPdf 13 11 23.5 +0.4
comp=Z,21nm,0.5s
TCF Toulx Ste Croi 120.07 320 *e*PKIKP PKPdf 13 11 24.4 +0.3
comp=Z,10nm,0.7s
SFJD Kangerlussuaq 120.51 360 PKP PKPdf 13 11 23.3 -1.0
comp=Z,6.5nm,0.6s,baz=174,slow=4.3,SNR=4.6
LDF La Druitiere 120.56 323 *e*PKIKP PKPdf 13 11 25.8 +0.9
CAF Calviac 120.69 318 *e*PKIKP PKPdf 13 11 26.0 +0.7
comp=Z,8.4nm,0.6s
RJF Les Rejaudoux 120.90 319 *e*PKIKP PKPdf 13 11 26.1 +0.4
MTLF Montolieu 121.17 317 *e*PKIKP PKPdf 13 11 26.4 +0.1
comp=Z,6.2nm,0.5s
MFF Saint Martin d 121.44 321 *e*PKIKP PKPdf 13 11 26.8 +0.1
comp=Z,14nm,0.5s
RSSD Black Hills 121.45 42 *e*PKPdf PKPdf 13 11 27.6 +0.8
LFF La Frestale 121.55 319 *e*PKIKP PKPdf 13 11 27.7 +0.8
SGMF Saint Gilles 122.16 324 *e*PKIKP PKPdf 13 11 28.0 0.0
comp=Z,12nm,0.7s
ROSF Rostrenen 122.54 324 *e*PKIKP PKPdf 13 11 29.4 +0.7
ANMO Albuquerque 122.61 53 *e*PKPdf PKPdf 13 11 30.2 +0.9
QUIF Quistinic 122.68 323 *e*PKIKP PKPdf 13 11 29.1 +0.1
comp=Z,6.4nm,0.5s
ULM Lac du Bonnet 123.51 33 PKP PKPdf 13 11 30.7 +0.2
comp=Z,3.0nm,0.5s,baz=187,slow=13,SNR=3.5
TXAR Lajitas Array 126.28 59 PKP PKPdf 13 11 38.0 +1.6
comp=Z,1.0nm,0.4s,baz=168,slow=2.8,SNR=31
TOA0 Torodi Ar. Sit 127.59 281 *e*PKPdf PKPdf 13 11 39.5 +0.2
TORD Torodi Ar. Bea 127.59 281 PKP PKPdf 13 11 39.1 -0.2
comp=Z,4.6nm,0.5s,baz=46,slow=2.1,SNR=50
PLCA Paso Flores 128.92 161 PKP PKiKP 13 11 43.5 +1.6
comp=Z,5.0nm,0.9s,baz=167,slow=1.5,SNR=9.6
JCT Junction City 129.23 57 *e*PKPdf PKPdf 13 11 43.4 +1.3
EVO Evora 130.20 315 *e*PKIKP PKPdf 13 11 43.8 +0.1
comp=Z,7.6nm,0.7s
SCHQ Schefferville 131.11 12 PKP PKPdf 13 11 46.3 +1.4
comp=Z,7.5nm,0.6s,baz=304,slow=3.8,SNR=12
KIC Kosan Boka 133.75 272 *e*P PKPdf 13 11 51.4 +0.3
comp=Z,21nm,0.6s
DBIC Dimbokro 133.89 272 PKP PKPdf 13 11 52.8 +1.4
comp=Z,5.0nm,0.5s,baz=26,slow=1.7,SNR=13
LIC Lamto 134.02 271 *e*P PKPdf 13 11 52.9 +1.3
comp=Z,22nm,0.5s
TIC Toumodi 134.05 272 *e*P PKPdf 13 11 51.7 0.0
comp=Z,13nm,0.4s
LVC Limon Verde 145.54 150 *e*PKPdf PKiKP 13 12 14.6 -1.7
NNA Nana 148.14 127 *e*PKPbc PKiKP 13 12 21.9 0.0

IDC 27 13:51:23.2±6.2,**792S**×**12744E**,**h262**km±65km,**mb3.2**/3,
mb1 3.4/5,**mb1mx3.1**/15,**mbtmp3.3**/5,**Error ellipse:**
s-maj=81.7km s-min=18.7km az=56.0,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	Time	Res ISC
BATI	**Baumata**	**4.37**	**238**	P	Pn	13 52 32.3	+0.3
	7.5nm,0.3s,baz=64,slow=6.0,SNR=18						
BATI				S	S	13 53 27.0	+0.3
	31nm,0.3s,baz=13,slow=11,SNR=11						
KAKA	**Kakadu**	**6.84**	**134**	*e*P	Px	13 52 32.6	
	67nm,0.2s						
KAKA				*e*S	Sx	13 53 43.3	
WRA	**Warramunga Arr**	**13.69**	**152**	P	Pn	13 54 18.8	-8.5
	2.4nm,0.3s,baz=324,slow=14,SNR=101						
WRA				S	S	13 56 44.2	-15
	2.1nm,0.3s,baz=334,slow=22,SNR=8.2						
WB2	**Warramunga Arr**	**13.70**	**151**	*e*P	Pn	13 54 19.0	-8.3
WB2				*e*S	S	13 56 44.3	-15
ASAR	**Alice Springs**	**16.84**	**159**	P	P	13 55 02.5	0.0

	1.2nm,0.3s,baz=342,slow=11,SNR=75								
ASAR					S	S	13 58 04.4	-0.3	
	0.6nm,0.3s,baz=342,slow=20,SNR=19								
STKA	**Stephens Creek**	**27.24**	**153**		P	P	13 56 43.7	+0.3	
	1.2nm,0.6s,baz=328,slow=12,SNR=4.9								
MKAR	**Makanchi Array**	**67.64**	**328**		P	P	14 01 52.7	+0.7	
	0.3nm,0.5s,baz=111,slow=7.9,SNR=4.4								
ZALV	**Zalesovo Beam**	**71.31**	**335**		P	P	14 02 13.6	-0.7	
	0.5nm,0.5s,baz=118,slow=2.2,SNR=3.9								

NEIC ***27*** *14:04:55.3±0.8,2123N×14290E,h400km,mb3.8/2,Error ellipse: s-maj=46.0km s-min=17.5km az=98.0*

IDC 27 14:04:49.1±14.0,2144N×14315E,h342km±149km, mb3.4/6,mb1 3.6/6,mb1mx3.2/23,mbtmp3.4/6,Error ellipse: s-maj=65.1km s-min=15.9km az=82.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KSRS	**Korea Array**	**20.70**	**324**	P		P	14 09 04.1		+0.1
	1.1nm,0.6s,baz=146,slow=8.5,SNR=4.9								
COEN	**Coen**	**35.17**	**180**	*e*P		P	14 11 09.7		-2.2
WRAB	**Tennant Creek**	**42.01**	**192**	*e*P		P	14 12 07.9		-0.2
	6.7nm,0.7s								
WB2	**Warramunga Arr**	**42.02**	**192**	*e*P		P	14 12 08.0		-0.2
WRA	**Warramunga Arr**	**42.02**	**192**	P		P	14 12 08.1		-0.1
	7.5nm,0.9s,baz=16,slow=8.9,SNR=49								
ASAR	**Alice Springs**	**45.73**	**192**	P		P	14 12 37.7		+0.3
	3.7nm,0.7s,baz=14,slow=9.0,SNR=72								
STKA	**Stephens Creek**	**53.03**	**182**	*e*P		P	14 13 32.1		+0.1
	1.8nm,0.6s								
STKA	**Stephens Creek**	**53.03**	**182**	P		P	14 13 31.3		-0.7
	1.1nm,0.6s,baz=9.0,slow=7.2,SNR=5.9								
KURK	**Kurchatov**	**57.64**	**317**	P		P	14 14 04.3		-0.1
	0.7nm,0.5s,baz=94,slow=7.6,SNR=3.5								
COLD	**Coldfoot**	**61.42**	**24**	*e*P		P	14 14 34.2		+4.5
NVAR	**Mina Array Bea**	**83.33**	**51**	P		P	14 16 39.2		+0.7
	0.6nm,0.7s,baz=267,slow=4.3,SNR=4.9								

BJI ***27*** *14:16:35.4,3689N×7117E,h190km,mB5.5,mb4.6*
ISCJB ***27*** *14:16:35.4±0.3,3664N±002×7141E±003,h178km±3km, mb4.3/47,Error ellipse: s-maj=4.0km s-min=2.8km az=160.2*
MOS ***27*** *14:16:35.8±0.9,3668N×7142E,h183km,mb4.4/32,Error ellipse: s-maj=8.2km s-min=5.2km az=105.6*
NEIC ***27*** *14:16:36.8±0.6,3666N×7145E,h179km±6km,mb4.5/32, Error ellipse: s-maj=6.4km s-min=3.8km az=48.0*
IDC ***27*** *14:16:38.8±1.0,3662N×7131E,h204km±9km,mb3.9/17, mb1 4.0/20,mb1mx3.9/25,mbtmp3.9/20,Error ellipse: s-maj=10.8km s-min=9.4km az=2.0*
NNC ***27*** *14:16:41.5±2.8,3711N×7125E,h200km±21km,mb3.5, mpv5.1,Error ellipse: s-maj=22.3km s-min=16.5km az=15.0*

ISC 27 14:16:36.5±0.3,3666N±002×7146E±003,h171km±3km, h193km±4.0km;pP-P,n205,σ1§14/239,mb4.3/47,20C-15D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
CEP	**Cherat**	**2.86**	**172**	⇑P		**Pn**	**14 17 25.1**		**+2.1**
CEP				S		**Sn**	**14 17 58.0**		**-1.0**
KBL	**Kabul**	**2.89**	**224**	*e*Pn		**Pn**	**14 17 24.1**		**+0.8**
KBL				*e*Sn		**Sn**	**14 17 59.3**		**-0.3**
CHCP	**Chirah Chowk**	**3.34**	**153**	P		**Pn**	**14 17 32.1**		**+3.1**
SBDP	**Sheikh Budin**	**4.38**	**187**	P		**Pn**	**14 17 43.1**		**+0.8**
KSH	**Kashi**	**4.56**	**50**	⇑*i*P		**Pn**	**14 17 47.3**		**+2.9**
KSH				S		**Sn**	**14 18 40.5**		**+2.9**
	comp=N,89nm,0.4s								
KSH				Smax					
	comp=E,86nm,0.5s								
SARP	**Sargodha**	**4.83**	**168**	P		**Pn**	**14 17 48.8**		**+0.7**
JMU	**Jammu**	**4.85**	**143**	*e*S		**Sn**	**14 18 42.5**		**-2.0**
THN	**Thein Dam**	**5.49**	**139**	*e*P		**Pn**	**14 17 57.7**		**+1.0**
THN				*e*S		**Sn**	**14 18 57.8**		**-1.7**
DLH	**Dalhousie**	**5.54**	**137**	*e*P		**Pn**	**14 17 58.0**		**+0.7**
DLH				*e*S		**Sn**	**14 18 58.0**		**-2.8**
AML	**Almayashu**	**5.73**	**17**	*e*Pn		**Pn**	**14 18 00.6**		**+0.9**
	comp=E,633nm,0.5s								
AML				*e*Sn		**Sn**	**14 19 02.5**		**-2.5**
AML	**Almayashu**	**5.73**	**17**	P		**Pn**	**14 18 00.6**		**+0.9**
	SNR=914								
UCH	**Uchtor**	**6.04**	**22**	*e*Pn		**Pn**	**14 18 04.8**		**+1.1**
	comp=E,63nm,0.3s								
UCH				*e*Sn		**Sn**	**14 19 10.0**		**-2.4**
UCH	**Uchtor**	**6.04**	**22**	P		**Pn**	**14 18 04.9**		**+1.2**
	SNR=54								
KZA	**Kyzart**	**6.15**	**27**	P		**Pn**	**14 18 05.6**		**+0.4**
	SNR=106								
EKS2	**Erkin-Say**	**6.25**	**16**	*e*Pn		**Pn**	**14 18 07.3**		**+0.8**
	comp=E,62nm,0.5s								
EKS2				*e*Sn		**Sn**	**14 19 09.1**		**-8.3**
EKS2	**Erkin-Say**	**6.25**	**16**	P		**Pn**	**14 18 07.4**		**+0.8**
	SNR=90								
AAK	**Ala-Archa**	**6.41**	**21**	P		**Pn**	**14 18 09.6**		**+1.0**
	SNR=81								
KK31	**Karatay Array**	**6.47**	**354**	⇓P		**Pn**	**14 18 09.6**		**+0.2**
	comp=E,66nm,0.3s,baz=167,slow=9.1,SNR=655								
KK31				⇑S		**Sn**	**14 19 18.2**		**-4.5**
	comp=E,60nm,0.5s,baz=168,slow=15,SNR=18								
KK31	**Karatay Array**	**6.47**	**354**	*i* PN		**Pn**	**14 18 09.6**		**+0.1**
KK31				pmax		pmax			
	comp=Z,113nm,0.2s								
KBK	**Karagaybulak**	**6.56**	**23**	P		**Pn**	**14 18 11.8**		**+1.1**
	SNR=68								
ULHL	**Ulahol**	**6.69**	**32**	P		**Pn**	**14 18 12.9**		**+0.6**
	SNR=46								
CHMS	**Chumysh**	**6.82**	**21**	P		**Pn**	**14 18 14.6**		**+0.6**
	SNR=58								
SDNR	**Sundarnagar**	**6.89**	**137**	*e*P		**Pn**	**14 18 15.0**		**0.0**
SDNR				*e*S		**Sn**	**14 19 28.0**		**-4.7**
USP	**Ospenovka**	**7.00**	**19**	P		**Pn**	**14 18 16.2**		**-0.1**
	SNR=44								
TKM2	**Tokmak 2**	**7.01**	**26**	⇓P		**Pn**	**14 18 17.4**		**+0.8**
	comp=Z,79nm,0.5s								
TKM2				⇑S		**Sn**	**14 19 35.6**		**0.0**
	comp=Z,67nm,0.8s								
TKM2	**Tokmak 2**	**7.01**	**26**	*e*Pn		**Pn**	**14 18 17.3**		**+0.7**
	comp=Z,120nm,0.5s								
TKM2	**Tokmak 2**	**7.01**	**26**	*i* PN		**Pn**	**14 18 17.5**		**+0.9**
TKM2				pmax		pmax			
	comp=Z,79nm,0.5s								
TKM2	**Tokmak 2**	**7.01**	**26**	P		**Pn**	**14 18 17.4**		**+0.8**
	SNR=164								
SMLA	**Simla**	**7.28**	**138**	*i* P		**Pn**	**14 18 20.8**		**+0.6**
SMLA				*i* S		**Sn**	**14 19 38.9**		**-3.1**
SMLA				*ex*		x	14 19 42.7		
	comp=E,2μm,0.3s								
SMLA				*ex*		x	14 19 42.8		
	comp=N,4μm,0.3s								
KLP	**Kalpa**	**7.61**	**130**	*e*P		**Pn**	**14 18 25.9**		**+1.3**
KLP				*e*S		**Sn**	**14 19 48.3**		**-1.7**
KLP				AML		AML	14 19 50.4		
	comp=E,739nm,0.5s								
KLP				AML		AML	14 19 51.4		
	comp=N,2μm,0.7s								
DDI	**Dehra Dun**	**8.39**	**137**	*e*P		**Pn**	**14 18 34.0**		**-0.8**
DDI				*ex*		x	14 20 08.0		
JOSI	**Joshimath**	**9.09**	**130**	*e*P		**Pn**	**14 18 45.5**		**+1.3**
JOSI				*e*S		**Sn**	**14 20 22.6**		**-2.8**
JOSI				AML		AML	14 20 33.8		
	comp=N,476nm,0.7s								
JOSI				AML		AML	14 20 34.2		
	comp=E,419nm,0.8s								
NDI	**New Delhi**	**9.32**	**147**	*e*P		**Pn**	**14 18 47.5**		**+0.3**
NDI				*e*S		**Sn**	**14 20 24.5**		**-6.4**
KHET	**Khetri**	**9.32**	**156**	*e*P		**Pn**	**14 18 46.0**		**-1.2**
KHET				*e*S		**Sn**	**14 20 23.2**		**-7.7**
KHET				AML		AML	14 20 25.9		
	comp=E,81nm,0.5s								
KHET				AML		AML	14 20 26.2		
	comp=N,52nm,0.3s								
SONA	**Sohna**	**9.64**	**149**	*e*P		**Pn**	**14 18 51.0**		**-0.4**
SONA				*e*S		**Sn**	**14 20 29.8**		**-8.8**
SONA				AML		AML	14 20 34.6		
	comp=E,107nm,0.4s								
SONA				AML		AML	14 20 35.2		
	comp=N,73nm,0.3s								
PTH	**Pithoragarh**	**10.21**	**132**	*ex*		x	14 19 04.5		
PTH				*ex*		x	14 20 16.6		
LGTI	**Lohaghat**	**10.30**	**132**	*e*P		**Pn**	**14 18 59.9**		**-0.1**
LGTI				*e*S		**Sn**	**14 20 47.5**		**-6.9**
AJM	**Ajmer**	**10.51**	**164**	*e*P		**Pn**	**14 19 01.0**		**-1.8**
AJM				*i* S		**Sn**	**14 20 52.0**		**-7.5**
AGRA	**Agra**	**10.89**	**148**	*e*P		**Pn**	**14 19 07.7**		**-0.1**
AGRA				*e*S		**Sn**	**14 21 00.5**		**-8.3**
AGRA				AML		AML	14 21 07.1		
	comp=N,82nm,0.3s								
AGRA				AML		AML	14 21 07.4		
	comp=E,121nm,0.3s								
MK31	**Makanchi Array**	**12.95**	**35**	⇓P		**Pn**	**14 19 33.2**		**-0.8**
	comp=E,14nm,0.8s,baz=222,slow=11,SNR=54								
MK31				⇑S		**Sn**	**14 21 56.9**		**-0.6**
	comp=E,7.9nm,1.1s,baz=197,slow=21,SNR=4.4								
MK31	**Makanchi Array**	**12.95**	**35**	*e*Pn		**Pn**	**14 19 32.3**		**-1.7**
MK31	**Makanchi Array**	**12.95**	**35**	*i* P		**Pn**	**14 19 34.0**		**0.0**
MK31				pmax		pmax			
	comp=Z,4.0nm,0.3s								
MKAR	**Makanchi Array**	**12.95**	**35**	P		**Pn**	**14 19 33.9**		**-0.1**
	comp=E,0.7nm,0.3s,baz=226,slow=11,SNR=48								
MKAR	**Makanchi Array**	**12.95**	**35**	P		**Pn**	**14 19 33.9**		**-0.1**
MKAR	**Makanchi Array**	**12.95**	**35**	P		**Pn**	**14 19 33.9**		**-0.1**
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
PYUN	**Piuthan**	**12.95**	**128**	*e*P		**Pn**	**14 19 33.9**		**-0.4**
DANN	**Dangsing**	**13.28**	**125**	*e*P		**Pn**	**14 19 38.3**		**-0.1**
	comp=E,59nm,0.3s								
KOLN	**Koldanda**	**13.56**	**127**	*e*P		**Pn**	**14 19 42.3**		**+0.2**
	comp=E,44nm,0.3s								
GKN	**Gorkha**	**14.09**	**124**	*e*P		**Pn**	**14 19 48.4**		**-0.2**
	comp=E,125nm,0.3s								
WMQ	**Urumqi**	**14.30**	**55**	P		**Pn**	**14 19 51.0**		**-0.1**
WMQ				XP			14 20 36.0		
WMQ				S		**Sn**	**14 22 26.0**		**-4.1**
WMQ				PCP		PcP	14 24 55.0		-0.2
WMQ				AMB		AMB			
	comp=Z,32nm,0.8s								
WMQ				LR		LR			
	comp=N,956nm,6.0s								
WMQ				LR		LR			
	comp=E,1μm,6.0s								
WMQ				LR		LR			
	comp=Z,985nm,6.0s								
KKN	**Kakani**	**14.65**	**123**	*e*P		**Pn**	**14 19 55.8**		**+0.2**
	comp=Z,80nm,0.4s								
KKN	**Kakani**	**14.65**	**123**	*e*P		**Pn**	**14 19 55.8**		**+0.2**
KKN				pmax		pmax			
	comp=Z,80nm,0.4s								
DMN	**Daman**	**14.66**	**124**	*e*P		**Pn**	**14 19 56.4**		**+0.7**
KURBB	**Kurchatov Arra**	**14.85**	**18**	⇑P		**Pn**	**14 19 55.8**		**-2.1**
	comp=E,1.5nm,0.5s								
PKI	**Pulchoki**	**14.88**	**124**	*e*P		**Pn**	**14 19 59.2**		**+0.7**
KURK	**Kurchatov**	**14.96**	**18**	⇓P		**Pn**	**14 19 57.3**		**-1.9**
	comp=Z,17nm,1.2s								
KURK	**Kurchatov**	**14.96**	**18**	P		**Pn**	**14 19 55.8**		**-3.4**
	comp=Z,0.3nm,0.3s,baz=210,slow=12,SNR=28								
KURK	**Kurchatov**	**14.96**	**18**	*e*Pn		**Pn**	**14 19 56.9**		**-2.3**
	comp=Z,16nm,1.0s								
KURK	**Kurchatov**	**14.96**	**18**	P		**Pn**	**14 19 57.3**		**-1.9**
KURK				pmax		pmax			
	comp=Z,17nm,1.2s								
GUN	**Gumba**	**14.98**	**122**	*e*P		**Pn**	**14 20 00.5**		**+0.8**
	comp=Z,39nm,0.2s								
AB01	**Akbulak array**	**15.12**	**330**	⇑P		**Pn**	**14 19 59.1**		**-2.1**
	comp=Z,7.5nm,0.5s								
AB01				⇑S		**S**	**14 22 39.9**		**-10**
	comp=Z,29nm,0.8s								
AB31	**Akbulak array**	**15.12**	**330**	P		**Pn**	**14 19 59.0**		**-2.2**
AB31				S		**S**	**14 22 37.7**		**-12**
AB31				pmax		pmax			
	comp=Z,12nm,0.4s								
AB31				smax					
	comp=N,35nm,0.9s								
JIRN	**Jiri**	**15.36**	**122**	*e*P		**Pn**	**14 20 05.0**		**+0.7**
	comp=N,139nm,0.4s								
VOSK	**Vostochnaya**	**16.06**	**359**	⇓P		**Pn**	**14 20 11.2**		**-1.5**
	comp=N,7.6nm,0.6s								
VOSK				⇑S		**S**	**14 23 04.7**		**-6.2**
	comp=N,6.3nm,0.9s								
VOSK	**Vostochnaya**	**16.06**	**359**	P		**Pn**	**14 20 11.1**		**-1.5**
VOSK				pmax		pmax			
	comp=Z,8.0nm,0.6s								
RAMN	**Ramite**	**16.09**	**123**	*e*P		**Pn**	**14 20 13.4**		**+0.2**
	comp=Z,90nm,0.6s								
BVA0	**Borovoye Array**	**16.38**	**358**	⇓P		**Pn**	**14 20 16.2**		**-0.2**
	comp=Z,2.1nm,1.1s,baz=159,slow=12,SNR=29								
BVA0				⇑S		**S**	**14 23 13.2**		**-5.0**
	comp=Z,2.0nm,1.3s,baz=153,slow=32,SNR=6.4								
BVA0	**Borovoye Array**	**16.38**	**358**	*i* P		**Pn**	**14 20 16.2**		**-0.3**
BVA0				pmax		pmax			
	comp=Z,2.0nm,1.2s								
BVAR	**Borovoye Array**	**16.38**	**358**	P		**Pn**	**14 20 15.0**		**-1.5**
	comp=Z,1.6nm,0.3s,baz=161,slow=12,SNR=32								
BVAR				S		**S**	**14 23 13.7**		**-4.4**
	comp=Z,0.4nm,0.3s,baz=167,slow=27,SNR=6.4								
BVAR	**Borovoye Array**	**16.38**	**358**	P		**Pn**	**14 20 15.0**		**-1.5**
BVAR				S		**S**	**14 23 13.7**		**-4.4**
BVAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
BRVK	**Borovoye**	**16.41**	**357**	*e*Pn		**Pn**	**14 20 15.8**		**-1.1**
	comp=Z,15nm,0.8s								
BRVK	**Borovoye**	**16.41**	**357**	*e*P		**Pn**	**14 20 15.8**		**-1.1**
BRVK				pmax		pmax			
	comp=Z,15nm,0.8s								
TAPN	**Taplejung**	**16.60**	**119**	*e*P		**Pn**	**14 20 20.1**		**+0.7**
	comp=Z,72nm,0.5s								
ODAN	**Odare**	**16.69**	**121**	*e*P		**Pn**	**14 20 21.1**		**+0.7**
	comp=Z,139nm,0.8s								
AKTK	**Aktyubinsk**	**16.83**	**329**	P		**Pn**	**14 20 21.9**		**0.0**
AKTK				S		**S**	**14 23 20.2**		**-7.6**
AKTO	**Aktyubinsk**	**16.83**	**329**	⇓P		**Pn**	**14 20 21.7**		**-0.2**
	comp=Z,1.7nm,0.7s								
AKTO				⇓S		**S**	**14 23 19.7**		**-8.1**
	comp=Z,2.6nm,1.1s								
AKTO	**Aktyubinsk**	**16.83**	**329**	P		**Pn**	**14 20 21.9**		**0.0**
	comp=Z,2.3nm,0.3s,baz=140,slow=11,SNR=21								
AKTO				S		**S**	**14 23 20.2**		**-7.6**
	comp=Z,0.5nm,0.3s,baz=180,slow=23,SNR=6.7								
AKTO	**Aktyubinsk**	**16.83**	**329**	P		**Pn**	**14 20 21.9**		**0.0**
AKTO				S		**S**	**14 23 20.2**		**-7.6**
AKTO				pmax		pmax			
	comp=Z,2.0nm,0.3s								
AKTO				smax					
	comp=N,1.0nm,0.3s								
LSA	**Lhasa**	**17.87**	**107**	P		**Pn**	**14 20 37.0**		**+2.5**
LSA	**Lhasa**	**17.87**	**107**	*e*Pn		**Pn**	**14 20 37.0**		**+2.4**
	comp=N,13nm,0.6s								
LSA	**Lhasa**	**17.87**	**107**	*e*P		**Pn**	**14 20 37.0**		**+2.5**
LSA				pmax		pmax			
	comp=Z,13nm,0.6s								
POO	**Poona**	**18.19**	**173**	*ex*		x	14 20 35.0		
ZAA0	**Zalesovo Array**	**19.62**	**24**	*e*Pn		**P**	**14 20 51.5**		**0.0**
ZALV	**Zalesovo Beam**	**19.62**	**24**	P		**P**	**14 20 51.7**		**+0.3**
	comp=Z,1.6nm,0.3s,baz=216,slow=11,SNR=31								
ZALV				S		**S**	**14 24 20.3**		**-3.0**
	comp=Z,0.3nm,0.3s,baz=206,slow=16,SNR=4.0								
ZALV	**Zalesovo Beam**	**19.62**	**24**	P		**P**	**14 20 51.7**		**+0.3**
ZALV				S		**S**	**14 24 20.3**		**-3.0**
ZALV				pmax		pmax			
	comp=Z,2.0nm,0.3s								
NVS	**Novosibirsk**	**19.90**	**20**	*i* P		**P**	**14 20 54.6**		**+0.1**
NVS				*i* S		**S**	**14 24 25.1**		**-3.8**
NVS				pmax		pmax			
	comp=Z,36nm,0.8s								
NVS				pmax		pmax			
	comp=N,16nm,1.0s								
NVS				pmax		pmax			
	comp=E,7.0nm,1.0s								
NVS				smax					
	comp=N,29nm,1.6s								
NVS				smax					
	comp=E,15nm,1.6s								
HYB	**Hyderabad**	**20.17**	**160**	*e*P		**P**	**14 20 59.0**		**+1.3**
HYB				*e*S		**S**	**14 24 39.0**		**+4.2**
HYB	**Hyderabad**	**20.17**	**160**	*i* P		**P**	**14 20 59.0**		**+1.3**
HYB				*e*S		**S**	**14 24 39.0**		**+4.2**
ARU	**Arti**	**21.60**	**340**	P		**P**	**14 21 12.8**		**+0.3**
	comp=E,3.3nm,0.6s,mb3.9								
ARU	**Arti**	**21.60**	**340**	*d* iP		**P**	**14 21 12.6**		**+0.1**
ARU				*e*S		**S**	**14 24 56.1**		**-4.3**
ARU				pmax		pmax			
	comp=Z,10.0nm,1.2s,mb4.1								
GTA	**Gaotai**	**22.47**	**74**	P		**P**	**14 21 23.3**		**+2.0**
GTA				AP			14 21 57.0		
GTA				XP		sP	14 22 17.3		+3.9
GTA				S		**S**	**14 25 18.0**		**+3.1**
GTA				AMB		AMB			
	comp=Z,7.0nm,0.9s,mb4.1								
GTA				AMB		AMB			
	comp=Z,834nm,6.3s								
GTA				LR		LR			
	comp=N,807nm,17.7s								
GTA				LR		LR			
	comp=E,638nm,19.5s								
GTA				LR		LR			
	comp=Z,830nm,19.8s								
KIV	**Kislovodsk**	**23.04**	**297**	*e*P		**P**	**14 21 31.2**		**+4.7**
KIV				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.2								
ZAK	**Zakamensk**	**26.61**	**49**	*e*P		**P**	**14 21 59.1**		**+0.4**
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.1s,mb3.8								
CD2	**Chengdu**	**27.37**	**93**	*e*P		**P**	**14 22 06.8**		**+1.1**
CD2				AP		pP	14 22 42.5		+1.5
CD2				PP		PP	14 23 03.3		-7.6
CD2				S		**S**	**14 26 32.5**		**-0.5**
CD2				SS		SS	14 28 06.0		-30
CD2				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.6								
SONM	**Songino Array**	**27.94**	**55**	P		**P**	**14 22 12.3**		**+1.7**
	comp=Z,1.9nm,0.8s,mb3.9,baz=253,slow=9.6,SNR=14								
SONM				pP		pP	14 22 52.4		+6.5
	comp=Z,0.9nm,0.8s,baz=271,slow=10,SNR=2.5								
SONM	**Songino Array**	**27.94**	**55**	P		**P**	**14 22 12.3**		**+1.7**
SONM				*PP		pP	14 22 52.4		+6.5
SONM				pmax		pmax			
	comp=Z,2.0nm,0.8s								
SONM				pmax		pmax			
	comp=Z,1.0nm,0.8s								
ULN	**Ulaanbaatar**	**28.38**	**56**	*e*P		**P**	**14 22 15.4**		**+1.0**
	comp=Z,1.4nm,0.7s,mb3.8								
ULN	**Ulaanbaatar**	**28.38**	**56**	⇑*i*P		**P**	**14 22 15.2**		**+0.7**
ULN				*i* *PP		pP	14 22 56.5		+6.6
KMI	**Kunming**	**29.08**	**104**	P		**P**	**14 22 23.3**		**+2.4**
KMI				AP		pP	14 23 01.0		+4.6
KMI				XP		sP	14 23 21.0		+4.9
KMI				AMB		AMB			
	comp=Z,5.0nm,0.9s,mb4.2								
BRTR	**Keskin Array B**	**29.73**	**288**	P		**P**	**14 22 26.4**		**-0.1**
	comp=Z,1.5nm,0.6s,mb3.9,baz=94,slow=8.1,SNR=6.1								
BRTR				pP		pP	14 23 05.8		+3.7
	comp=Z,1.3nm,0.7s,baz=98,slow=9.2,SNR=2.8								
BRTR	**Keskin Array B**	**29.73**	**288**	P		**P**	**14 22 26.5**		**-0.1**
BRTR				*PP		pP	14 23 05.8		+3.7
BRTR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
CHTO	**Chiang Mai**	**29.98**	**119**	*e*P		**P**	**14 22 30.3**		**+1.4**
	comp=Z,3.3nm,0.5s,mb4.3								
CHTO	**Chiang Mai**	**29.98**	**119**	*e*P		**P**	**14 22 30.3**		**+1.4**
CHTO				pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.3								
OBN	**Obninsk**	**30.05**	**319**	*e*P		**P**	**14 22 30.8**		**+1.6**
OBN				pmax		pmax			
	comp=Z,8.0nm,0.6s,mb4.6								
CMAR	**Chiang Mai Arr**	**30.21**	**119**	P		**P**	**14 22 32.0**		**+1.1**
	comp=Z,4.9nm,0.8s,mb4.3,baz=305,slow=8.5,SNR=35								
CMAR	**Chiang Mai Arr**	**30.21**	**119**	P		**P**	**14 22 32.1**		**+1.1**
CMAR				pmax		pmax			
	comp=Z,5.0nm,0.8s								
HHC	**Hu-ho-hao-te**	**31.36**	**70**	*e*P		**P**	**14 22 41.8**		**+0.9**
HHC				AP		pP	14 23 18.0		+1.5
HHC				XP		sP	14 23 38.0		+1.8
HHC				PP		PP	14 23 53.5		-1.6
HHC				S		**S**	**14 27 34.8**		**-0.5**
HHC				XS		sS	14 28 41.5		+3.2
HHC				SS		SS	14 29 36.0		-21
HHC				SCS		ScS	14 32 52.3		-2.7
HHC				AMB		AMB			
	comp=Z,18nm,0.6s,mb5.0								
HHC				AMB		AMB			
	comp=Z,197nm,5.5s								
GYA	**Guiyang**	**31.52**	**99**	P		**P**	**14 22 43.0**		**+0.6**
GYA				AP		pP	14 23 22.5		+4.4
GYA				XP		sP	14 23 43.8		+6.1
GYA				PP		PP	14 23 55.5		-1.6
GYA				PCP		PcP	14 25 32.0		+1.0
GYA				S		**S**	**14 27 37.5**		**-0.6**
GYA				SCP		ScP	14 28 57.5		-0.5
GYA				SCS		ScS	14 32 54.3		-2.0
GYA				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.6								
AKASG	**Malin Array Be**	**33.13**	**309**	P		**P**	**14 22 55.7**		**-0.4**
	comp=Z,2.8nm,0.4s,mb4.3,baz=78,slow=7.6,SNR=6.8								
AKASG	**Malin Array Be**	**33.13**	**309**	P		**P**	**14 22 55.7**		**-0.4**
AKASG				pmax		pmax			
	comp=Z,3.0nm,0.4s								
MLR	**Muntele Rosu**	**35.02**	**299**	⇓*i*P		**P**	**14 23 14.6**		**+2.1**
BURAR	**Bucovina Array**	**35.51**	**303**	⇓*i*P		**P**	**14 23 17.3**		**+0.7**
VOIR		**35.65**	**299**	⇑*i*P		**P**	**14 23 18.9**		**+1.0**
JOF	**Joensuu**	**35.91

LPG	La Plagne	48.37	302	*e*P	P	14 25 02.4	+1.6		
	comp=Z,2.7nm,0.6s,mb4.0								
LPG	La Plagne	48.37	302	*e*P	P	14 25 02.4	+1.6		
LPG				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.1								
LPL	La Plagne	48.38	302	*e*P	P	14 25 02.3	+1.4		
MBDF	Montbardon	48.54	301	*e*P	P	14 25 02.9	+0.8		
	comp=Z,6.6nm,0.5s,mb4.2								
MBDF	Montbardon	48.54	301	*e*P	P	14 25 02.9	+0.8		
	comp=Z,3.3nm,0.5s,mb4.2								
MBDF	Montbardon	48.54	301	*e*P	P	14 25 02.9	+0.8		
MBDF				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.2								
CABF	La Chapelle	48.57	303	*e*P	P	14 25 02.5	+0.2		
	comp=Z,4.6nm,0.5s,mb4.1								
CABF	La Chapelle	48.57	303	*e*P	P	14 25 02.5	+0.2		
	comp=Z,2.3nm,0.5s,mb4.1								
CABF	La Chapelle	48.57	303	*e*P	P	14 25 02.5	+0.2		
CABF				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.0								
BAIF	Baives	49.08	308	*e*P	P	14 25 06.3	+0.2		
LOR	Lormes	49.91	305	*e*P	P	14 25 13.5	+1.1		
VIVF	Saint-Julien-I	49.96	301	*e*P	P	14 25 12.9	+0.1		
SMF	Signal de Mont	50.07	304⇑	*i*P	P	14 25 13.1	-0.5		
	comp=Z,9.7nm,0.6s,mb4.3								
SMF	Signal de Mont	50.07	304⇑	*i*P	P	14 25 13.1	-0.5		
	comp=Z,4.8nm,0.6s,mb4.3								
SMF	Signal de Mont	50.07	304⇑	*i*P	P	14 25 13.1	-0.5		
SMF				pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.3								
SSF	Saint Saulge	50.19	304	*e*P	P	14 25 15.5	+1.0		
AVF	Avril sur Loir	50.36	304⇑	*i*P	P	14 25 15.2	-0.6		
	comp=Z,10nm,0.7s,mb4.3								
AVF	Avril sur Loir	50.36	304⇑	*i*P	P	14 25 15.2	-0.6		
	comp=Z,5.2nm,0.7s,mb4.3								
AVF	Avril sur Loir	50.36	304⇑	*i*P	P	14 25 15.2	-0.6		
AVF				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.2								
TCF	Toulx Ste Croi	51.25	304	*e*P	P	14 25 22.2	-0.3		
LDF	La Druitiere	52.17	307	*e*P	P	14 25 29.3	0.0		
MJAR	Matsushiro Arr	52.55	69	P	P	14 25 32.9	+0.6		
	comp=Z,2.3nm,0.8s,mb3.9,baz=292,slow=8.7,SNR=7.1								
MJAR	Matsushiro Arr	52.55	69	P	P	14 25 32.9	+0.6		
MJAR				pmax	pmax				
	comp=Z,2.0nm,0.9s								
GRR	Gorron	52.70	307	*e*P	P	14 25 32.2	-0.9		
SGMF	Saint Gilles	53.83	307	*e*P	P	14 25 39.9	-1.5		
SEY	Seymchan	54.08	34⇓	*i*P	P	14 25 42.7	-0.3		
ETSF	Etsaut	54.15	300	*e*P	P	14 25 43.6	-0.2		
	comp=Z,10nm,0.6s,mb4.5								
ETSF	Etsaut	54.15	300	*e*P	P	14 25 43.6	-0.2		
	comp=Z,5.1nm,0.6s,mb4.4								
ETSF	Etsaut	54.15	300	*e*P	P	14 25 43.6	-0.2		
ETSF				pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.4								
ROSF	Rostrenen	54.26	308	*e*P	P	14 25 43.7	-0.8		
	comp=Z,8.9nm,0.7s,mb4.3								
ROSF	Rostrenen	54.26	308	*e*P	P	14 25 43.7	-0.8		
	comp=Z,4.4nm,0.7s,mb4.3								
ROSF	Rostrenen	54.26	308	*e*P	P	14 25 43.7	-0.8		
ROSF				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.3								
QUIF	Quistinic	54.31	307	*e*P	P	14 25 44.0	-0.9		
BILL	Bilibino	58.30	26⇓	*e*P	P	14 26 12.9	+0.1		
BILL				pmax	pmax				
	comp=Z,11nm,1.1s,mb4.6								
SUMG	Summit	61.03	341	*e*P	P	14 26 32.3	+0.9		
	comp=Z,2.4nm,0.6s,mb4.2								
LSZ	Lusaka	65.83	226	P	P	14 27 02.0	-1.6		
	comp=Z,15nm,0.8s,mb4.9								
LSZ	Lusaka	65.83	226	P	P	14 27 02.0	-1.6		
LSZ				pmax	pmax				
	comp=Z,15nm,0.8s,mb4.9								
TORD	Torodi Ar. Bea	66.09	269	P	P	14 27 02.3	-3.1		
	comp=Z,4.8nm,0.7s,mb4.4,baz=50,slow=5.8,SNR=45								
COLA	College	74.22	16	*e*P	P	14 27 53.5	-0.4		
	comp=Z,3.2nm,0.8s,mb4.1								
COLA	College	74.22	16	*e*P	P	14 27 53.6	-0.4		
COLA				pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.1								
DBIC	Dimbokro	75.07	267	P	P	14 27 56.0	-3.7		
	comp=Z,2.3nm,0.6s,mb4.0,baz=40,slow=3.6,SNR=5.2								
DBIC	Dimbokro	75.07	267	P	P	14 27 56.1	-3.7		
DBIC				pmax	pmax				
	comp=Z,2.0nm,0.6s								
KAKA	Kakadu	75.49	118	*e*P	x	14 27 45.9			
	comp=Z,5.2nm,0.6s								
YKA	Yellowknife Ar	81.07	3	P	P	14 28 31.5	-0.4		
	comp=Z,5.2nm,0.6s,mb4.3,baz=348,slow=5.3,SNR=34								
YKA	Yellowknife Ar	81.07	3	*i* P	P	14 28 31.5	-0.4		
YKA				pmax	pmax				
	comp=Z,5.0nm,0.6s								
NWAO	Narrogin (SRO)	81.37	142	P	P	14 28 31.7	-2.2		
	comp=Z,10.0nm,0.9s,mb4.5,baz=310,slow=1.3,SNR=3.6								
NWAO	Narrogin (SRO)	81.37	142	P	P	14 28 31.7	-2.2		
NWAO	Narrogin (SRO)	81.37	142	P	P	14 28 31.7	-2.1		
NWAO				pmax	pmax				
	comp=Z,10.0nm,0.9s								
WRA	Warramunga Arr	81.77	122	P	P	14 28 34.6	-1.6		
	comp=Z,6.7nm,0.7s,mb4.4,baz=324,slow=4.9,SNR=26								
WRA	Warramunga Arr	81.77	122	P	P	14 28 34.6	-1.6		
WRA				pmax	pmax				
	comp=Z,7.0nm,0.7s								
WRAB	Tennant Creek	81.77	122	*e*P	P	14 28 34.5	-1.7		
	comp=Z,7.1nm,0.7s,mb4.4								
WRAB	Tennant Creek	81.77	122	*e*P	P	14 28 34.5	-1.7		
WRAB				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.4								
WB2	Warramunga Arr	81.77	122	*e*P	P	14 28 34.6	-1.6		
SCHQ	Schefferville	82.09	337	P	P	14 28 37.1	-0.3		
	comp=Z,3.0nm,0.9s,mb3.9,baz=323,slow=8.6,SNR=3.6								
ASAR	Alice Springs	84.05	125	P	P	14 28 46.4	-1.5		
	comp=Z,5.9nm,0.7s,mb4.4,baz=312,slow=5.1,SNR=19								
ASAR	Alice Springs	84.05	125	P	P	14 28 46.4	-1.5		
ASAR				pmax	pmax				
	comp=Z,6.0nm,0.7s								
FORT	Forrest	85.51	134	*e*P	P	14 28 54.2	-0.8		
	comp=Z,15nm,0.6s,mb4.9								
VNDA	Vanda	125.56	164	PKP	PKPdf	14 35 13.2	-2.7		
	comp=Z,1.3nm,1.0s,baz=277,slow=5.4,SNR=4.0								
VNDA	Vanda	125.56	164	PKIKP	PKPdf	14 35 13.2	-2.7		
VNDA				pmax	pmax				
	comp=Z,1.0nm,1.0s								
PLCA	Paso Flores	150.23	250	PKPbc	PKPbc	14 36 05.3	-1.6		
	comp=Z,1.9nm,0.8s,baz=71,slow=6.1,SNR=4.3								
PLCA	Paso Flores	150.23	250	PKPbc	PKPbc	14 36 05.3	-1.6		
PLCA	Paso Flores	150.23	250	PKIKP	PKPbc	14 36 05.3	-1.6		
PLCA				pmax	pmax				
	comp=Z,2.0nm,0.8s								

*ISCJB **27** 14:19:55.9±0.5, 245.5°×005.1°×10026E±008, h49km, mb4.4/24, Error ellipse: s-maj=11.2km s-min=6.6km az=165.9*
*DJA **27** 14:19:57, 228.5°×100.17E, h10km, MLv4.5/6*
*IDC **27** 14:19:58.7±0.8, 229.5°×10037E, h49km±4km, mb4.0/16, mb1 4.1/17, mb1mx4.0/26, mbtmp4.0/17, Error ellipse: s-maj=28.6km s-min=10.0km az=54.0*
*BJI **27** 14:19:58.9, 220.5°×100.50E, h50km, mB5.1, mb5.1*
*NEIC **27** 14:19:58.9±0.4, 223.5°×100.48E, mb4.7/7, Error ellipse: s-maj=18.3km s-min=6.1km az=52.0*
ISC 27 14:19:58.5±0.5,**239.5°**±005.1°×**10035E**±008,**h51**km, **h51**km±.8km:**pP-P**,**n47**,**σ0.96**/44,**mb4.4**/24,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PDSI	Padang	1.47	4	P		Pn	14 20 21.5	-1.1
PDSI	Padang	1.47	4	S		Sn	14 20 40.0	-0.7
PPI	Padang Panjang	1.92	1	P		Pn	14 20 28.8	+0.1
PPI	Padang Panjang	1.92	1	S		Sn	14 20 52.9	+1.2
KSI	Kapahiang	2.57	119	P		Pn	14 20 42.4	+4.7
RGRI	Rengat	2.83	45	P		Pn	14 20 42.6	+1.3
MYKOM	Kota Tinggi	5.43	40	P		Pn	14 21 18.2	+1.3
IPM	Ipoh	6.85	6	P		Pn	14 21 38.0	+1.5
KAPI	Kappang	19.54	98	P		Pn	14 24 21.5	-2.2
	1.4nm,0.3s,baz=263,slow=15,SNR=5.3							
CMAR	Chiang Mai Arr	20.76	356	P		P	14 24 33.6	-1.6
	4.5nm,0.6s,baz=188,slow=9.9,SNR=22							
CMAR				pP			14 24 46.9	
	4.6nm,0.8s,baz=186,slow=9.9,SNR=11							
LSA	Lhasa	33.09	345	P		P	14 26 29.0	-0.7
WRA	Warramunga Arr	37.50	120	P		P	14 27 07.6	-0.1
	8.2nm,0.7s,mb4.7,baz=301,slow=9.1,SNR=71							
WRA				pP		pP	14 27 21.1	+0.1
	1.6nm,0.5s,baz=301,slow=8.9,SNR=4.9							
WRA				PcP		PcP	14 29 25.8	+0.5
	0.6nm,0.6s,baz=321,slow=4.3,SNR=4.6							
WRAB	Tennant Creek	37.51	120	*e*P		P	14 27 07.5	-0.3
	8.3nm,0.6s,mb4.6							
WB2	Warramunga Arr	37.51	120	*e*P		P	14 27 07.4	-0.4
ASAR	Alice Springs	38.75	126	P		P	14 27 18.7	+0.5
	3.6nm,0.5s,mb4.3,baz=302,slow=7.9,SNR=76							
ASAR				pP			14 27 32.4	+0.9
	6.1nm,0.8s,baz=306,slow=8.1,SNR=12							
ASAR				PcP		PcP	14 29 30.3	+1.2
	1.1nm,0.6s,baz=318,slow=3.0,SNR=4.4							
KSRS	Korea Array	47.17	30	P		P	14 28 25.9	-0.3
	2.4nm,0.7s,mb4.3,baz=223,slow=8.8,SNR=5.9							
WMQ	Urumqi	47.38	348	*e*P		P	14 28 28.5	+0.9
WMQ				AMB		AMB		
	comp=Z,24nm,1.0s,mb5.1							
STKA	Stephens Creek	48.63	132	*e*P		P	14 28 38.7	+1.2
	comp=Z,3.5nm,0.6s,mb4.6							
STKA	Stephens Creek	48.63	132	P		P	14 28 38.5	+1.0
	comp=Z,3.5nm,0.6s,mb4.6,baz=304,slow=8.5,SNR=13							
STKA				pP		pP	14 28 51.5	+0.2
	comp=Z,3.9nm,0.6s,baz=290,slow=10,SNR=6.1							
SONM	Songino Array	50.29	5	P		P	14 28 50.5	+0.7
	comp=Z,2.0nm,0.6s,mb4.3,baz=189,slow=9.2,SNR=20							
SONM				pP		pP	14 29 03.0	-0.6
	comp=Z,1.2nm,0.7s,baz=190,slow=9.2,SNR=4.8							
SONM	Songino Array	50.29	5	P		P	14 28 50.5	+0.7
SONM				pP		pP	14 29 03.0	-0.6
TKM2	Tokmak 2	50.32	336	*e*P		P	14 28 51.0	+0.8
	comp=Z,10nm,0.8s,mb4.9							
TKM2				*e*		pP	14 29 04.5	+0.6
ULN	Ulaanbaatar	50.38	6	P		P	14 28 50.7	+0.2
	comp=Z,1.4nm,0.7s,mb4.1							
AML	Almayashu	50.46	334	*e*P		P	14 28 52.3	+1.1
	comp=Z,2.2nm,0.6s,mb4.4							
AML				*e*		pP	14 29 05.8	+0.8
EKS2	Erkin-Say	50.86	335	*e*P		P	14 28 55.3	+1.1
	comp=Z,5.9nm,0.7s,mb4.6							
CN2	Changchun	51.20	23	*e*P		P	14 28 56.0	-0.7
CN2				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
MK31	Makanchi Array	51.49	344	*e*P		P	14 28 58.9	0.0
MKAR	Makanchi Array	51.49	344	P		P	14 28 59.0	+0.1
	comp=Z,1.0nm,0.3s,mb4.2,baz=157,slow=8.8,SNR=37							
MKAR				pP		pP	14 29 12.2	-0.5
	comp=Z,4.2nm,0.7s,baz=147,slow=7.8,SNR=10							
MKAR	Makanchi Array	51.49	344	P		P	14 28 59.0	+0.1
MKAR				pP		pP	14 29 12.2	-0.5
KURK	Kurchatov	56.07	344	P		P	14 29 31.3	-1.0
	comp=Z,0.6nm,0.4s,mb4.0,baz=182,slow=6.6,SNR=11							
KURK				pP		pP	14 29 45.2	-1.0
	comp=Z,8.0nm,0.8s,baz=164,slow=7.1,SNR=32							
KURK	Kurchatov	56.07	344	*e*P		P	14 29 32.1	-0.2
KURK				pP		pP	14 29 45.2	-1.0
KURK				*e*		pP	14 29 45.6	-0.6
ZAA0	Zalesovo Array	57.61	349	*e*P		P	14 29 42.1	-1.0
ZAA0				*e*		pP	14 29 55.3	-1.8
ZALV	Zalesovo Beam	57.61	349	P		P	14 29 42.7	-0.4
	comp=Z,1.2nm,0.3s,mb4.4,baz=170,slow=8.4,SNR=9.0							
ZALV				pP		pP	14 29 55.9	-1.2
	comp=Z,8.0nm,0.8s,baz=160,slow=4.7,SNR=12							
ZALV	Zalesovo Beam	57.61	349	P		P	14 29 42.7	-0.4
ZALV				pP		pP	14 29 55.9	-1.2
ASAJ	Asahikawa	59.73	34	P		P	14 29 58.0	0.0
	comp=Z,12nm,1.0s,mb4.9,baz=210,slow=24,SNR=9.3							
BVAR	Borovoye Array	60.66	340	P		P	14 30 03.4	-0.9
	comp=Z,2.3nm,0.6s,mb4.5,baz=143,slow=9.2,SNR=13							
BVAR				pP		pP	14 30 17.5	-0.9
	comp=Z,2.1nm,0.5s,baz=140,slow=7.8,SNR=7.5							
AKTK	Aktyubinsk	63.86	331	P		P	14 30 24.6	-1.2
AKTO	Aktyubinsk	63.86	331	P		P	14 30 24.6	-1.2
	comp=Z,1.0nm,0.5s,mb4.1,baz=142,slow=3.0,SNR=3.8							
MMAI	Mount Meron Ar	70.54	306	P		P	14 31 09.8	+1.3
	comp=Z,1.4nm,0.6s,mb4.1,baz=93,slow=7.8,SNR=2.9							
PETK	Petropavlovsk-	73.02	32	P		P	14 31 21.9	-1.0
	comp=Z,2.8nm,0.8s,mb4.3,baz=155,slow=4.8,SNR=4.4							
BRTR	Keskin Array B	73.84	312	P		P	14 31 27.7	-0.3
	comp=Z,1.3nm,0.8s,mb3.9,baz=140,slow=9.7,SNR=4.7							
TIXI	Tiksi	76.18	9	*e*P		P	14 31 39.8	-1.1
	comp=Z,2.6nm,0.6s,mb4.3							
VNDA	Vanda	81.72	169	*e*P		P	14 32 13.0	+1.9
	comp=Z,0.2nm,0.5s,mb3.3							
ARCES	ARCESS Array B	86.95	340	P		P	14 32 38.1	+0.4
	comp=Z,5.9nm,1.0s,mb4.8,baz=102,slow=5.0,SNR=14							
TXAR	Lajitas Array	144.79	38	PKP		PKPdf	14 39 30.3	-0.2
	comp=Z,4.8nm,0.6s,baz=286,slow=1.1,SNR=60							
MIAR	Mount Ida	145.47	21	*e*PKP		PKPdf	14 39 31.4	-0.1
MIAR				*e*pPKP		pPKPdf	14 39 45.9	-1.0
JCT	Junction City	146.16	32	*e*PKP		PKPdf	14 39 33.7	+0.9
JCT				*e*			14 39 48.1	

*ISK **27** 14:35:09.9, 3694N×2931E, h9km, MD3.0*
*CSEM **27** 14:35:09.3±0.1, 3694N×2933E, h5km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.7km az=158.0*
*ISCJB **27** 14:35:10.2±0.6, 3694N±004×2932E±004, h7km±7km, Error ellipse: s-maj=7.0km s-min=4.8km az=135.2*
*DDA **27** 14:35:11.4, 3700N×2930E, h7km±5km, Md3.0*
ISC 27 14:35:10.6±0.6,**3693N**±003×**2934E**±004,**h7**km±6km,**n12**, **σ0.88**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GOLH	Golhisar	0.35	30	*i* P		Pg	14 35 17.0	-0.5
GOLH				*i* S		Sg	14 35 23.3	+1.0
FETY	Fethiye	0.36	215	*e*PG		Pg	14 35 17.2	-0.4
FETY				*e*SG		Sg	14 35 22.9	+0.6
DALT	Dalyan (Mudla)	0.58	254	*e*PG		Pg	14 35 21.0	-0.9
DALT				*e*SG		Sg	14 35 29.6	+0.2
AKAS	Kas	0.73	163	*i* P		Pg	14 35 25.4	+0.8
AKAS				*i* S		Sg	14 35 39.3	+5.2
DENT	Denizli	0.86	344	*e*PG		Pg	14 35 26.6	-0.5
DENT				*e*SG		Sg	14 35 38.8	+0.5
YER	Yerkesik	0.87	284	*e*PG		Pg	14 35 26.5	-0.8
YER				*e*SG		Sg	14 35 38.5	0.0
ANTB	Antalya	1.06	91	*e*PN		Pn	14 35 31.0	-0.8
BCK	Bucak	1.13	62	*e*PN		Pn	14 35 32.4	-0.5
DAT	Datca	1.43	262	*e*PN		Pn	14 35 36.5	-0.3
BDRM	Kayabasi	1.52	276	*i* P		Pn	14 35 39.7	+1.5
BDRM				*i* S		Sn	14 36 01.1	+2.9
BODT	Bodrum	1.63	275	*e*PN		Pn	14 35 38.2	-1.5
HDMB	Hadim	2.52	88	*e*PN		Pn	14 35 52.3	+0.4

*HLW **27** 15:09:58.2, 37.44N×30.99E, h33km, Mb3.6*
*CSEM **27** 15:09:59.9±0.1, 37.27N×30.80E, h122km±1km, Mw3.1, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
*ISCJB **27** 15:10:01.4±0.3, 37.16N±003×30.84E±003, h134km±4km, mb3.5/2, Error ellipse: s-maj=5.2km s-min=3.5km az=44.0*
*ISK **27** 15:10:01.9, 37.27N×30.83E, h131km, ML3.5*
*NIC **27** 15:10:02.4±0.2, 37.29N×30.89E, h71km, ML3.2, MW3.1*
*IDC **27** 15:10:02.5±1.3, 37.14N×30.99E, h132km±14km, mb3.2/2, mb1 3.4/7, mb1mx3.1/23, mbtmp3.2/7, Error ellipse: s-maj=16.3km s-min=11.5km az=88.0*
*NEIC **27** 15:10:03.1±0.5, 37.16N×30.93E, h133km±9km, MG3.2(NIC), Error ellipse: s-maj=10.3km s-min=8.0km az=60.0*
*GII **27** 15:10:05.5±0.0, 36.76N×31.16E, h0km, ML2.8/4*
ISC 27 15:10:02.5±0.3,**3716N**±003×**3084E**±003,**h127**km±4km, **n78**,**σ0.88**/96,**mb3.7**/2,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BCK	Bucak	0.36	326	PG		Pn	15 10 20.7	+0.2
BCK				*e*SG		Sn	15 10 33.9	-0.2
GOLH	Golhisar	1.02	275	*i* P		Pn	15 10 26.2	+0.9
GOLH	Golhisar	1.02	275	*i* P		Pn	15 10 26.2	+0.9
GOLH				*i* S		Sn	15 10 42.8	+0.2
HDMB	Hadim	1.33	98	*e*PN		Pn	15 10 29.1	+0.6
AKAS	Kas	1.36	227	*i* P		Pn	15 10 29.2	+0.4
AKAS	Kas	1.36	227	*i* P		Pn	15 10 29.2	+0.4
AKAS				*i* S		Sn	15 10 48.0	-0.7
SHUT	Suhut-Afyon	1.41	351	*e*PN		Pn	15 10 28.1	-1.2
FETY	Fethiye	1.50	250	*e*PN		Pn	15 10 31.2	+0.8
DENT	Denizli	1.55	293	*e*PN		Pn	15 10 30.5	-0.5
KHL	Karahalli	1.56	318	*e*PN		Pn	15 10 30.2	-0.8
LADK	Ladik-KONYA	1.59	49	*e*PN		Pn	15 10 31.2	-0.2
KHAL	Karahalli	1.61	319	*i* P		Pn	15 10 31.0	-0.6
KHAL	Karahalli	1.61	319	*i* P		Pn	15 10 31.0	-0.6
KHAL				*i* S		Sn	15 10 52.0	-1.9
DALT	Dalyan (Mudla)	1.81	258	*e*PN		Pn	15 10 34.1	+0.2
TURN	Turunc	1.81	262	*i* P		Pn	15 10 38.2	+4.2
KIZT	Kizilcal	1.90	25	*e*PN		Pn	15 10 34.5	-0.6
YER	Yerkesik	2.04	270	*e*PN		Pn	15 10 37.0	+0.2
KULA	Kula-Manisa	2.19	309	*e*PN		Pn	15 10 38.2	-0.4
MANT	Manisa	2.24	307	*i* P		Pn	15 10 38.9	-0.3
ALFC	Alevga	2.46	144	P		Pn	15 10 41.6	-0.4
	6.9nm,0.2s							
ALFC				S		Sn	15 11 12.9	+0.6
IKL	Isikli	2.47	111	*e*PN		Pn	15 10 43.3	+1.2
IKL	Isikli	2.47	111	Pn		Pn	15 10 43.4	+1.3
PPCY	Paphos	2.58	151	P		Pn	15 10 44.0	+0.4
LEF	Lefka	2.63	140	Pn		Pn	15 10 43.2	-1.0
LEF	Lefka	2.63	140	Pn		Pn	15 10 43.2	-1.0
DAT	Datca	2.65	262	*e*PN		Pn	15 10 44.7	+0.3
DAT				*e*SN		Sn	15 11 16.6	-0.1
MAMC	Mammari	2.77	135	P		Pn	15 10 46.2	+0.2
BODT	Bodrum	2.82	269	*e*PN		Pn	15 10 46.6	0.0
LFK	Lefkose	2.88	130	*e*PN		Pn	15 10 48.2	+0.9
LFK	Lefkose	2.88	130	Pn		Pn	15 10 47.4	0.0
LFK				Sg		Sn	15 11 13.4	-8.6
SZAC	Souni-Zanaja	2.92	145	P		Pn	15 10 48.1	+0.2
SZAC				S		Sn	15 11 24.0	+1.1
MERS	Mersin	2.96	95	*e*PN		Pn	15 10 49.1	+0.7
CSS	Prodhromos	2.98	137	P		Pn	15 10 48.8	0.0
	2.0nm,0.3s							
CSS				S		Sn	15 11 25.3	+0.9
EREN	Erenkoy	3.14	120	*e*PN		Pn	15 10 52.0	+1.1
PHNC	Paralimni	3.37	129	P		Pn	15 10 54.3	+0.5
	1.6nm,0.3s							
PHNC				S		Sn	15 11 34.1	+0.7
KARA	Karaisali	3.37	87	*e*PN		Pn	15 10 54.7	+1.0
BR131	Keskin Array S	3.37	40	*e*P		Pn	15 10 53.7	-0.2
BR131	Keskin Array S	3.37	40	*e*P		Pn	15 10 53.7	-0.1
BRTR	Keskin Array B	3.37	40	P		Pn	15 10 53.1	-0.7
	0.4nm,0.3s,baz=217,slow=16,SNR=7.4							
BRTR				S		Sn	15 11 33.1	-0.4
	0.3nm,0.3s,baz=266,slow=7.4,SNR=5.0							
IDI	Anoyia	5.16	251	P		Pn	15 11 19.1	+1.5
	1.6nm,0.3s,baz=118,slow=7.7,SNR=9.4							
HNTI	Hanita	5.40	138	P		Pn	15 11 20.7	-0.2
HNTI				S		Sn	15 12 18.8	-3.2
MMC6	Mount Meron ar	5.57	137	P		Pn	15 11 23.4	+0.1
MMA4	Mount Meron ar	5.57	137	P		Pn	15 11 23.4	+0.1
MMA0B	Mount Meron ar	5.58	137	P		Pn	15 11 23.1	-0.2
MMAI	Mount Meron Ar	5.58	137	P		Pn	15 11 23.3	0.0
	13nm,0.3s,baz=321,slow=12,SNR=42							
MMAI				S		Sn	15 12 23.9	-2.3
	16nm,0.3s,baz=312,slow=23,SNR=15							
MMA2	Mount Meron ar	5.58	137	Pn		Pn	15 11 23.4	+0.1
HRI	Mount Hermon	5.58	133	Pn		Pn	15 11 23.9	+0.5
KSDI	Kefar Szold	5.59	134	Pn		Pn	15 11 23.2	-0.3
OFRI	'Ofer	5.67	142	Pn		Pn	15 11 24.1	-0.5
HRHR	Har Ka'horesh	5.75	139	P		Pn	15 11 36.8	+11
KSHT	Keshet	5.83	134	Pn		Pn	15 11 27.0	+0.3
MMLI	Mount Malkishu	6.03	140	Pn		Pn	15 11 29.8	+0.4
MMLI				S		Sn	15 12 34.3	-2.9
HMDT	Nahal Hemdat	6.23	140	Pn		Pn	15 11 32.8	+0.6
HMDT				S		Sn	15 12 42.1	0.0
RSH		6.63	158	P		Pn	15 11 36.8	-0.7
DSI	Dead Sea	6.72	145	Pn		Pn	15 11 37.9	-0.9
AMAG	Maghara	6.79	162	P		Pn	15 11 39.0	-0.6
AMAG	Maghara	6.79	162	P		Pn	15 11 39.0	-0.7
HMAT	Matruh	6.80	208	P		Pn	15 11 40.5	+0.7
RTMI	Retamim	6.88	151	Pn		Pn	15 11 41.6	+0.7
MZDA	Masada	6.94	146	Pn

comp=E,184nm,0.3s

IDC 27 15:33:25.3±3.5, 226S×10052E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, Error ellipse: s-maj=150.9km s-min=24.2km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.41**	**120**	P	P	15 40 40.3	-0.1
	1.0nm,0.6s,baz=298,slow=9.2,SNR=9.9						
ASAR	**Alice Springs**	**38.68**	**126**	P	P	15 40 51.2	+0.1
	0.6nm,0.5s,baz=303,slow=7.7,SNR=25						
SONM	**Songino Array**	**50.15**	**5**	P	P	15 42 23.6	+1.1
	0.2nm,0.4s,baz=183,slow=8.0,SNR=2.9						
MKAR	**Makanchi Array**	**51.42**	**344**	P	P	15 42 31.6	-0.4
	0.2nm,0.5s,baz=157,slow=8.8,SNR=4.8						
TXAR	**Lajitas Array**	**144.59**	**38**	PKP	PKPdf	15 53 03.2	-1.4
	0.5nm,0.5s,baz=0.0,slow=2.1,SNR=11						

*IDC **27** 15:46:05.5±0.4, 167S×10031E, h0km, mb5.0/23, mb1 5.0/24, mb1mx5.0/24, mbtmp5.0/24, ML4.8/1, MS4.0/14, Ms1 4.0/14, ms1mx3.8/28, Error ellipse: s-maj=18.6km s-min=11.8km az=58.0*

*MOS **27** 15:46:09.9±0.8, 153S×10047E, h39km, mb5.4/39, Error ellipse: s-maj=12.5km s-min=5.1km az=113.7*

*BJI **27** 15:46:09.0, 177S×10029E, h46km, mB5.3, mb5.2, Ms4.7, Msz4.3*

*NEIC **27** 15:46:10.8±0.2, 163S×10044E, h35km, mb5.3/46, Error ellipse: s-maj=8.1km s-min=3.9km az=54.0*

NEIC Felt [III] at Padang, Padangpanjang and Painan.

*ISCJB **27** 15:46:10.1±0.2, 169S±003×10017E±003, h40km, mb5.2/123, MS4.2/24, Error ellipse: s-maj=5.0km s-min=3.1km az=36.8*

*DJA **27** 15:46:13, 177S×10010E, h51km, Mw5.2/10*

ISC 27 15:46:12.5±0.2, 170S±003×10018E±003, h46km, h46km±4.0km: pP-P, n319, σ1§01/302, mb5.2/123, MS4.2/24, 30C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.83**	**20**	P	**Pn**	**15 46 28.4**	**+0.4**
PPI	**Padang Panjang**	**1.26**	**10**	P	**Pn**	**15 46 35.0**	**+1.3**
RGRI	**Rengat**	**2.54**	**58**	P	**Pn**	**15 46 52.4**	**+1.1**
KSI	**Kapahiang**	**3.10**	**129**	P	**Pn**	**15 46 59.2**	**+0.3**
JMBI	**JAMBI**	**3.47**	**89**	P	**Pn**	**15 47 04.7**	**+0.7**
TRSI	**Tarutung**	**3.90**	**342**	P	**Pn**	**15 47 11.5**	**+1.6**
GSI	**Gunungsitoli**	**3.96**	**319**	P	**Pn**	**15 47 11.8**	**+1.0**
KGM	**Kluang**	**4.85**	**40**	⇑P	**Pn**	**15 47 24.6**	**+1.6**
MYKOM	**Kota Tinggi**	**5.05**	**47**	⇑P	**Pn**	**15 47 27.2**	**+1.4**
MYKOM	**Kota Tinggi**	**5.05**	**47**	P	**Pn**	**15 47 26.7**	**+0.9**
FRIM	**Kepong**	**5.12**	**16**	⇑P	**Pn**	**15 47 28.9**	**+2.2**
KLI	**Kotabumi**	**5.63**	**124**	P	**Pn**	**15 47 35.2**	**+1.4**
	371nm,0.8s,7μm2.6nm						
PPBI	**Pangkal Pinang**	**5.98**	**94**	P	**Pn**	**15 47 39.2**	**+0.7**
	36nm,0.8s,1μm0.5nm						
IPM	**Ipoh**	**6.20**	**8**	⇑P	**Pn**	**15 47 45.3**	**+3.8**
IPM	**Ipoh**	**6.20**	**8**	P	**Pn**	**15 47 45.0**	**+3.5**
	396nm,0.9s,3μm1.1nm						
KULM	**Kulim**	**6.96**	**4**	⇓P	**Pn**	**15 47 54.5**	**+2.5**
TPI	**Tanjungpandan**	**7.55**	**98**	P	**Pn**	**15 47 59.9**	**-0.2**
	77nm,1.0s,914nm0.3nm						
KTGM	**Kuala Trenggan**	**7.58**	**23**	⇑P	**Pn**	**15 48 03.7**	**+3.1**
DBJI	**Dramaga**	**8.14**	**127**	P	**Pn**	**15 48 08.2**	**0.0**
	116nm,1.0s,2μm0.6nm						
CBJI	**Citeko**	**8.14**	**125**	P	**Pn**	**15 48 12.8**	**+4.6**
BSI	**Banda Aceh**	**8.65**	**326**	P	**Pn**	**15 48 14.4**	**-0.8**
	112nm,0.7s,1μm0.7nm						
SNG	**Songkhla**	**8.83**	**3**	P	**Pn**	**15 48 19.0**	**+1.3**
	300nm,1.0s						
LEM	**Lembang**	**9.00**	**125**	P	**Pn**	**15 48 21.1**	**+1.1**
	95nm,0.9s,3μm						
XMIS	**Christmas Isla**	**10.28**	**148**	*e*P	**Pn**	**15 48 30.4**	**-7.1**
XMIS				*e*S	**Sn**	**15 50 13.7**	**-18**
KSM	**Kuching**	**10.61**	**73**	P	**Pn**	**15 48 42.7**	**+0.6**
	34nm,1.0s						
BJII	**Banjamegara**	**11.03**	**121**	P	**Pn**	**15 48 48.2**	**+0.5**
STKI	**Sintang**	**11.44**	**81**	P	**Pn**	**15 48 54.7**	**+1.3**
	62nm,0.9s						
SMRI	**Semarang**	**11.53**	**118**	P	**Pn**	**15 48 56.4**	**+1.8**
	109nm,0.8s						
SBUM	**Sibu**	**12.73**	**71**	P	**Pn**	**15 49 12.4**	**+1.4**
SJI	**Sawahan**	**13.01**	**118**	P	**Pn**	**15 49 14.5**	**-0.4**
KMMI	**Kalianget**	**14.74**	**112**	P	**Pn**	**15 49 38.9**	**+0.6**
	71nm,0.9s						
BBKI	**Banjar Baru**	**14.76**	**97**	P	**Pn**	**15 49 45.4**	**+6.9**
KHKI	**Kahang-Kahang**	**16.73**	**114**	P	**Pn**	**15 50 03.5**	**-0.3**
KKM	**Kota Kinabalu**	**17.77**	**64**	*e*P	**Pn**	**15 50 17.4**	**+0.7**
	93nm,1.0s						
KKM	**Kota Kinabalu**	**17.77**	**64**	P	**Pn**	**15 50 18.7**	**+2.0**
SDKM	**Sandakan**	**18.50**	**67**	⇑P	**Pn**	**15 50 26.0**	**+0.4**
TSM	**Tawau**	**18.66**	**71**	⇓P	**Pn**	**15 50 28.0**	**+0.4**
BDT	**Bhumibol Dam**	**18.86**	**357**	P	**Pn**	**15 50 28.0**	**-1.9**
MYLDM	**Lahad Datu**	**19.54**	**69**	P	**Pn**	**15 50 38.6**	**+0.5**
PCI	**Palu**	**19.67**	**88**	P	**Pn**	**15 50 39.4**	**-0.3**
	86nm,1.1s,1μm						
KAPI	**Kappang**	**19.82**	**100**	P	**Pn**	**15 50 37.2**	**-4.2**
	2.8nm,0.3s,baz=272,slow=11,SNR=9.8						
KAPI				LR	LR	15 58 28.4	
	comp=Z,247nm,19.5s,baz=338,slow=38						
KAPI	**Kappang**	**19.82**	**100**	*e*P	**Pn**	**15 50 34.7**	**-6.6**
	56nm,0.8s						
KAPI	**Kappang**	**19.82**	**100**	P	**Pn**	**15 50 37.7**	**-3.7**
	32nm,1.1s,424nm						
CMAR	**Chiang Mai Arr**	**20.07**	**357**	P	**P**	**15 50 39.8**	**-2.4**
	50nm,0.7s,baz=185,slow=8.2,SNR=86						
CMAR				PcP	PcP	15 54 57.0	+0.4
	3.0nm,0.8s,baz=214,slow=3.0,SNR=8.2						
CMAR				LR	LR	15 58 30.6	
	comp=Z,429nm,18.9s,MS3.8,baz=164,slow=37						
CHG	**Chiang Mai**	**20.42**	**357**	⇓P	**P**	**15 50 45.6**	**-0.4**
	22nm,0.7s						
CHTO	**Chiang Mai**	**20.42**	**357**	*e*P	**P**	**15 50 43.1**	**-2.9**
	14nm,0.7s						
CHTO	**Chiang Mai**	**20.42**	**357**	*e*P	**P**	**15 50 43.1**	**-2.9**
CHTO				pmax	pmax		
	comp=Z,14nm,0.7s						
CHTO	**Chiang Mai**	**20.42**	**357**	P	**P**	**15 50 44.5**	**-1.5**
	comp=Z,28nm,0.9s						
KDI	**Kendari**	**22.53**	**96**	P	**P**	**15 51 08.3**	**-0.4**
	comp=Z,33nm,1.0s,mb4.7						
QIZ	**Qiongzhong**	**22.69**	**24**	P	**P**	**15 51 07.5**	**-2.8**
QIZ				S	**S**	**15 55 14.0**	**-1.7**
QIZ				AMB	AMB		
	comp=Z,64nm,0.9s,mb5.0						
QIZ				LR	LR		
	comp=Z,733nm,27.4s,MS4.0						
BATI	**Baumata**	**24.82**	**111**	P	**P**	**15 51 26.1**	**-4.6**
	comp=Z,17nm,0.5s,mb4.9,baz=270,slow=4.8,SNR=9.3						
KMI	**Kunming**	**26.78**	**5**	P	**P**	**15 51 48.3**	**0.0**
KMI				AP	pP	15 52 00.5	+0.1
KMI				XP	sP	15 52 05.0	-0.8
KMI				PP		15 52 36.0	
KMI				S	**S**	**15 56 20.5**	**-0.7**
KMI				XS	sS	15 56 38.8	-2.8
KMI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.5						
KMI				AMB	AMB		
	comp=Z,406nm,5.9s						
KMI				LR	LR		
	comp=N,431nm,20.1s,MS4.1						
KMI				LR	LR		
	comp=E,312nm,16.2s,MS4.1						
KMI				LR	LR		
	comp=Z,525nm,19.7s,MS4.1						
DAV	**Davao City (W)**	**26.81**	**71**	LR	LR	16 03 21.7	
	comp=Z,174nm,19.0s,MS3.6,baz=58,slow=39						
MBWA	**Marble Bar**	**27.16**	**137**	*e*P	**P**	**15 51 50.6**	**-1.1**
	comp=Z,6.0nm,0.6s,mb4.3						
LBMI	**Labuha**	**27.34**	**88**	P	**P**	**15 51 53.1**	**-0.4**
	comp=Z,64nm,1.0s,mb5.1						
SHL	**Shillong**	**28.27**	**344**	⇑*i*P	**P**	**15 52 00.0**	**-1.6**
SHL				*ex*	x	15 56 30.0	
HYB	**Hyderabad**	**28.55**	**313**	*i* P	**P**	**15 52 04.0**	**-0.2**
GYA	**Guiyang**	**28.69**	**12**	⇑*i*P	**P**	**15 52 04.3**	**-1.0**
GYA				AP	pP	15 52 14.0	-3.5
GYA				XP	sP	15 52 18.3	-4.6
GYA				PP	PP	15 52 57.3	-14
GYA				PCP	PcP	15 55 15.3	+0.1
GYA				S	**S**	**15 56 49.0**	**-2.3**
GYA				XS	sS	15 57 05.3	-6.3
GYA				SCP	ScP	15 58 52.8	-0.2
GYA				SCS	ScS	16 02 44.5	-2.0
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,360nm,5.1s						
GYA				LR	LR		
	comp=N,2μm,11.0s,MS5.1						
GYA				LR	LR		
	comp=E,2μm,10.5s,MS5.1						
GYA				LR	LR		
	comp=Z,2μm,11.2s,MS5.0						
ODAN	**Odare**	**30.96**	**337**	*e*P	**P**	**15 52 26.6**	**+1.2**
	comp=Z,120nm,0.5s,mb6.0						
TAPN	**Taplejung**	**31.28**	**338**	*e*P	**P**	**15 52 29.6**	**+1.4**
	comp=Z,92nm,0.5s,mb5.9						
RAMN	**Ramite**	**31.35**	**336**	*e*P	**P**	**15 52 30.4**	**+1.5**
	comp=Z,37nm,0.4s,mb5.6						
JIRN	**Jiri**	**32.14**	**336**	*e*P	**P**	**15 52 37.1**	**+1.2**
	comp=Z,87nm,0.4s,mb5.9						
PKI	**Pulchoki**	**32.39**	**335**	*e*P	**P**	**15 52 38.6**	**+0.6**
	comp=Z,22nm,0.5s,mb5.2						
PKI	**Pulchoki**	**32.39**	**335**	*e*P	**P**	**15 52 38.6**	**+0.6**
PKI				pmax	pmax		
	comp=Z,22nm,0.5s,mb5.2						
LSA	**Lhasa**	**32.39**	**345**	P	**P**	**15 52 39.0**	**+1.0**
LSA	**Lhasa**	**32.39**	**345**	*e*P	**P**	**15 52 38.9**	**+0.9**
	comp=Z,97nm,0.9s,mb5.6						
LSA				*e*PcP	PcP	15 55 25.9	+1.1
LSA	**Lhasa**	**32.39**	**345**	*e*P	**P**	**15 52 38.9**	**+0.9**
LSA				*e*		15 55 25.9	
LSA				pmax	pmax		
	comp=Z,97nm,0.9s,mb5.6						
GUN	**Gumba**	**32.49**	**336**	*e*P	**P**	**15 52 40.2**	**+1.3**
	comp=Z,185nm,0.4s,mb6.3						
DMN	**Daman**	**32.55**	**335**	*e*P	**P**	**15 52 40.1**	**+0.7**
	comp=Z,27nm,0.6s,mb5.4						
CD2	**Chengdu**	**32.61**	**6**	⇑*i*P	**P**	**15 52 37.8**	**-2.1**
CD2				AP	pP	15 52 47.3	-4.8
CD2				XP	sP	15 52 51.8	-5.7
CD2				PP	PP	15 53 47.8	-6.5
CD2				PCP	PcP	15 55 22.5	-2.9
CD2				S	**S**	**15 57 51.5**	**-1.1**
CD2				XS	sS	15 58 07.5	-5.5
CD2				PCS	PcS	15 59 06.5	-4.1
CD2				SS	SS	15 59 50.8	-24
CD2				SCS	ScS	16 03 05.3	-0.1
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,190nm,9.5s						
CD2				LR	LR		
	comp=N,490nm,13.2s,MS4.6						
CD2				LR	LR		
	comp=E,540nm,13.0s,MS4.6						
CD2				LR	LR		
	comp=Z,640nm,15.6s,MS4.4						
KKN	**Kakani**	**32.63**	**335**	*e*P	**P**	**15 52 40.9**	**+0.8**
	comp=Z,44nm,0.4s,mb5.7						
KKN	**Kakani**	**32.63**	**335**	*e*P	**P**	**15 52 40.9**	**+0.8**
KKN				pmax	pmax		
	comp=Z,44nm,0.4s,mb5.7						
POO	**Poona**	**32.78**	**309**	*e*P	**P**	**15 52 42.0**	**+0.4**
GKN	**Gorkha**	**33.09**	**334**	*e*P	**P**	**15 52 44.9**	**+0.7**
	comp=Z,53nm,0.5s,mb5.8						
KOLN	**Koldanda**	**33.36**	**333**	*e*P	**P**	**15 52 47.5**	**+1.0**
	comp=Z,92nm,0.7s,mb5.8						
MUN	**Mundaring**	**33.70**	**155**	*e*P	**P**	**15 52 49.9**	**+0.5**
DANN	**Dangsing**	**33.78**	**333**	*e*P	**P**	**15 52 51.0**	**+0.8**
	comp=Z,146nm,0.4s,mb6.2						
PYUN	**Piuthan**	**33.92**	**332**	*e*P	**P**	**15 52 51.6**	**+0.2**
LGTI	**Lohaghat**	**36.37**	**330**	*e*P	**P**	**15 53 13.0**	**+0.5**
PTH	**Pithoragarh**	**36.47**	**330**	*ex*	x	15 53 16.2	
XAN	**Xi'an**	**36.49**	**12**	P	**P**	**15 53 11.3**	**-2.1**
XAN				AP	pP	15 53 21.0	-4.7
XAN				XP	sP	15 53 25.0	-6.2
XAN				PP	PP	15 54 33.5	-3.7
XAN				S	**S**	**15 58 47.8**	**-4.6**
XAN				XS	sS	15 59 10.3	-2.7
XAN				AMB	AMB		
	comp=Z,33nm,0.6s,mb5.4						
XAN				AMB	AMB		
	comp=Z,34nm,4.7s						
XAN				LR	LR		
	comp=N,214nm,16.6s						
XAN				LR	LR		
	comp=E,220nm,11.6s						
XAN				LR	LR		
	comp=Z,653nm,15.1s,MS4.5						
NDI	**New Delhi**	**37.38**	**326**	*e*P	**P**	**15 53 19.5**	**-1.6**
LZH	**Lanzhou**	**37.75**	**5**	*e*P	**P**	**15 53 23.0**	**-1.0**
LZH				AP	pP	15 53 35.0	-1.4
LZH				XP	sP	15 53 39.0	-2.8
LZH				PP	PP	15 54 53.0	+2.0
LZH				*e*S	**S**	**15 59 14.0**	**+2.6**
LZH				XS	sS	15 59 27.3	-4.8
LZH				*e*SS	SS	16 01 49.0	-10
LZH				AMB	AMB		
	comp=Z,68nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,371nm,6.5s						
LZH				LR	LR		
	comp=N,706nm,14.0s						
LZH				LR	LR		
	comp=Z,946nm,15.8s,MS4.7						
NJ2	**Nanjing**	**37.95**	**26**	*e*P	**P**	**15 53 25.5**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	**37.99**	**121**	P	**P**	**15 53 23.6**	**-2.8**
	comp=Z,12nm,0.4s,mb5.0,baz=303,slow=9.1,SNR=166						
WRA				PcP	PcP	15 55 40.6	-0.9
	comp=Z,5.1nm,0.6s,baz=309,slow=2.2,SNR=8.2						
WRA				S	**S**	**15 59 07.7**	**-8.0**
	comp=Z,1.4nm,0.9s,baz=295,slow=16,SNR=3.3						
WRAB	**Tennant Creek**	**38.00**	**121**	P	**P**	**15 53 23.0**	**-3.4**
	comp=Z,197nm,0.6s,mb6.0,SNR=26						
WRAB	**Tennant Creek**	**38.00**	**121**	*e*P	**P**	**15 53 23.6**	**-2.8**
	comp=Z,16nm,0.6s,mb4.9						
WRAB				*e*PcP	PcP	15 55 40.5	-0.9
WRAB	**Tennant Creek**	**38.00**	**121**	*e*P	**P**	**15 53 23.6**	**-2.8**
WRAB				*e*		15 55 40.6	
WRAB				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**38.00**	**121**	P	**P**	**15 53 23.6**	**-2.8**
	comp=Z,27nm,0.7s,mb5.1						
WB2	**Warramunga Arr**	**38.00**	**121**	*e*P	**P**	**15 53 23.6**	**-2.9**
FORT	**Forrest**	**39.16**	**140**	*e*P	**P**	**15 53 36.1**	**+0.1**
	comp=Z,24nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**39.29**	**126**	P	**P**	**15 53 35.5**	**-1.6**
	comp=Z,24nm,0.7s,mb5.0,baz=298,slow=8.0,SNR=308						
ASAR				PcP	PcP	15 55 44.9	-0.5
	comp=Z,7.3nm,0.7s,baz=307,slow=2.7,SNR=12						
ASAR				S	**S**	**15 59 28.8**	**-6.3**
	comp=Z,1.4nm,0.9s,baz=297,slow=17,SNR=5.3						
ASAR				PKiKP	PKiKP	16 02 56.2	-1.9
	comp=Z,0.3nm,0.8s,baz=328,slow=0.4,SNR=4.2						
ASAR	**Alice Springs**	**39.29**	**126**	P	**P**	**15 53 35.6**	**-1.6**
ASAR						15 55 44.9	
ASAR				S	**S**	**15 59 28.8**	**-6.3**
SMLA	**Simla**	**39.30**	**328**	*i* P	**P**	**15 53 36.7**	**-0.5**
SMLA				*ex*	x	15 53 38.5	
	comp=Z,35nm,0.4s						
SMLA				*i* x	x	15 59 51.1	
GTA	**Gaotai**	**40.91**	**360**	P	**P**	**15 53 49.5**	**-0.9**
GTA				AP	pP	15 53 59.5	-3.3
GTA				XP	sP	15 54 03.5	-4.7
GTA				S	**S**	**15 59 58.0**	**-0.9**
GTA				XS	sS	16 00 14.0	-5.7
GTA				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.6						
GTA				AMB	AMB		
	comp=Z,152nm,5.1s						
GTA				LR	LR		
	comp=N,205nm,15.6s,MS4.3						
GTA				LR	LR		
	comp=E,210nm,14.4s,MS4.3						
GTA				LR	LR		
	comp=Z,355nm,16.2s,MS4.3						
THN	**Thein Dam**	**41.09**	**328**	*e*P	**P**	**15 53 50.4**	**-1.6**
HHC	**Hu-ho-hao-te**	**43.60**	**13**	*e*P	**P**	**15 54 12.3**	**0.0**
HHC				AP	pP	15 54 22.5	-2.3
HHC				XP	sP	15 54 26.3	-3.9
HHC				PP	PP	15 55 56.5	+2.0
HHC				S	**S**	**16 00 40.8**	**+2.3**
HHC				XS	sS	16 00 56.3	-3.2
HHC				SS	SS	16 03 47.5	-7.4
HHC				SCS	ScS	16 04 06.5	-1.4
HHC				AMB	AMB		
	comp=Z,23nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=N,396nm,20.2s,MS4.4						
HHC				LR	LR		
	comp=E,206nm,20.2s,MS4.4						
HHC				LR	LR		
	comp=Z,357nm,20.2s,MS4.3						
BJT	**Baijiatuau**	**44.02**	**18**	*e*P	**P**	**15 54 15.2**	**-0.5**
	comp=Z,26nm,0.6s,mb5.1						
BJT	**Baijiatuau**	**44.02**	**18**	*e*P	**P**	**15 54 15.2**	**-0.5**
BJT				pmax	pmax		
	comp=Z,26nm,0.6s						
BJI	**Beijing**	**44.05**	**18**	P	**P**	**15 54 15.3**	**-0.6**
BJI				S	**S**	**16 00 46.8**	**+1.8**
BJI				AMB	AMB		
	comp=Z,55nm,0.8s,mb5.3						
BJI				AMB	AMB		
	comp=Z,226nm,4.6s						
BJI				LR	LR		
	comp=N,317nm,26.9s,MS4.3						
BJI				LR	LR		
	comp=E,424nm,25.4s,MS4.3						
BJI				LR	LR		
	comp=Z,154nm,22.8s,MS3.9						
DL2	**Dalian**	**44.97**	**24**	*e*P	**P**	**15 54 23.0**	**-0.3**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
KBL	**Kabul**	**46.40**	**324**	*e*P	**P**	**15 54 34.3**	**-0.3**
	comp=Z,8.4nm,0.5s,mb4.9						
KBL	**Kabul**	**46.40**	**324**	*e*P	**P**	**15 54 34.3**	**-0.3**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
KSRS	**Korea Array**	**46.67**	**31**	P	**P**	**15 54 35.9**	**-0.8**
	comp=Z,14nm,0.6s,mb5.0,baz=225,slow=7.9,SNR=54						
KSRS				PcP	PcP	15 56 09.2	-0.7
	comp=Z,3.1nm,0.9s,baz=238,slow=3.2,SNR=5.3						
KSRS				LR	LR	16 13 52.8	
	comp=Z,138nm,19.6s,MS3.9,baz=215,slow=36						
WMQ	**Urumqi**	**46.68**	**348**	P	**P**	**15 54 37.0**	**+0.4**
WMQ				AP	pP	15 54 47.0	-2.3
WMQ				XP	sP	15 54 51.0	-3.6
WMQ				PP	PP	15 56 26.0	-1.1
WMQ				S	**S**	**16 01 23.0**	**+0.1**
WMQ				XS	sS	16 01 39.0	-5.0
WMQ				SCS	ScS	16 04 27.0	-0.5
WMQ				SS	SS	16 04 43.0	-6.8
WMQ				AMB	AMB		
	comp=Z,135nm,0.8s,mb5.9						
WMQ				AMB	AMB		
	comp=Z,378nm,4.0s						
WMQ				LR	LR		
	comp=N,124nm,16.0s,MS4.1						
WMQ				LR	LR		
	comp=E,117nm,16.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,115nm,16.0s,MS3.9						
GUMO	**Guam**	**46.84**	**70**	LR	LR	16 12 53.6	
	comp=Z,134nm,20.2s,MS3.9,baz=233,slow=34						
CTA	**Charters Tower**	**48.57**	**115**	*e*P	**P**	**15 54 49.0**	**-2.7**
	comp=Z,9.4nm,0.6s,mb5.0						
CTA	**Charters Tower**	**48.57**	**115**	*e*P	**P**	**15 54 49.0**	**-2.7**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULHL	**Ulahol**	**48.80**	**336**	P	**P**	**15 54 54.2**	**+1.0**
	SNR=6.7						
KZA	**Kyzart**	**49.07**	**335**	P	**P**	**15 54 56.5**	**+1.4**
	SNR=39						
STKA	**Stephens Creek**	**49.22**	**132**	⇑*i*P	**P**	**15 54 55.6**	**-0.9**
	comp=Z,11nm,0.4s,mb5.2						
STKA	**Stephens Creek**	**49.22**	**132**	P	**P**	**15 54 55.7**	**-0.9**
	comp=Z,9.5nm,0.4s,mb5.2,baz=306,slow=7.4,SNR=42						
STKA				LR	LR	16 15 06.8	
	comp=Z,203nm,20.9s,MS4.1,baz=21,slow=35						
UCH	**Uchtor**	**49.50**	**335**	P	**P**	**15 54 59.7**	**+1.2**
	comp=Z,8.3nm,0.8s,mb4.8						
CBIJ	**Chichi jima**	**49.55**	**52**	LR	LR	16 14 14.4	
	comp=Z,137nm,21.0s,MS3.9,baz=92,slow=34						
TKM2	**Tokmak 2**	**49.63**	**336**	*e*P	**P**	**15 55 00.2**	**+0.8**
	comp=Z,74nm,0.5s,mb6.0						
TKM2	**Tokmak 2**	**49.63**	**336**	*e*P	**P**	**15 55 00.3**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,74nm,0.5s,mb6.0						
TKM2	**Tokmak 2**	**49.63**	**336**	P	**P**	**15 55 00.5**	**+1.1**
	SNR=144						
SONM	**Songino Array**	**49.63**	**5**	P	**P**	**15 54 59.1**	**-0.2**
	comp=Z,57nm,0.7s,mb5.7,baz=188,slow=9.4,SNR=308						
SONM				PcP	PcP	15 56 19.9	-0.4
	comp=Z,5.5nm,0.5s,baz=189,slow=3.8,SNR=9.4						
SONM				LR	LR	16 18 30.8	
	comp=Z,238nm,18.0s,MS4.2,baz=339,slow=39						
SONM	**Songino Array**	**49.63**	**5**	P	**P**	**15 54 59.1**	**-0.3**
SONM						15 56 19.9	
KBK	**Karagaybulak**	**49.67**	**336**	P	**P**	**15 55 01.3**	**+1.5**
	SNR=34						
ULN	**Ulaanbaatar**	**49.73**	**6**	*e*P	**P**	**15 54 59.4**	**-0.7**
	comp=Z,38nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**49.73**	**6**	*e*P	**P**	**15 54 59.4**	**-0.7**
ULN				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**49.73**	**6**	P	**P**	**15 54 59.7**	**-0.4**
	comp=Z,55nm,0.8s,mb5.6						
AML	**Almayashu**	**49.77**	**334**	*e*P	**P**	**15 55 01.5**	**+0.9**
	comp=Z,38nm,0.5s,mb5.7						
AML	**Almayashu**	**49.77**	**334**	P	**P**	**15 55 01.8**	**+1.3**
	SNR=42						
AAK	**Ala-Archa**	**49.84**	**335**	P	**P**	**15 55 02.7**	**+1.6**
	comp=Z,258nm,0.5s,mb6.5,SNR=34						
AAK	**Ala-Archa**	**49.84**	**335**	P	**P**	**15 55 01.9**	**+0.8**
	SNR=42						
FRU	**Bishkek**	**49.96**	**336**	⇑*i*P	**P**	**15 55 03.0**	**+1.1**
FRU				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
CHMS	**Chumysh**	**50.04**	**336**	P	**P**	**15 55 03.0**	**+0.4**
	SNR=18						
EKS2	**Erkin-Say**	**50.17**	**335**	*e*P	**P**	**15 55 04.7**	**+1.1**
	comp=Z,61nm,0.6s,mb5.8						
EKS2	**Erkin-Say**	**50.17**	**335**	P	**P**	**15 55 04.6**	**+1.1**
	SNR=108						
USP	**Ospenovka**	**50.36**	**336**

TOO Toolangi 54.80 136 *eP* **P 15 55 38.6 +0.6**
ABKT Ailbek 55.33 320 P **P 15 55 41.3 -0.5**
comp=Z,164nm,0.9s,mb6.1,SNR=9.9
KURK Kurchatov 55.37 344 P **P 15 55 41.0 -0.8**
comp=Z,606nm,0.7s,SNR=34
KURK Kurchatov 55.37 344 *eP* **P 15 55 41.2 -0.6**
comp=Z,67nm,0.8s,mb5.7
KURK Kurchatov 55.37 344 P **P 15 55 41.6 -0.2**
KURK pmax pmax
comp=Z,77nm,0.8s,mb5.8
ARMA Armidale 56.43 126⇑ *iP* **P 15 55 49.8 -0.1**
ZAA0 Zalesovo Array 56.91 349 *eP* **P 15 55 52.1 -0.7**
ZALV Zalesovo Beam 56.91 349 P **P 15 55 52.1 -0.6**
comp=Z,65nm,0.5s,mb5.9,baz=174,slow=6.0,SNR=465
KLR Kul'dur 57.59 24 *eP* **P 15 55 52.6 -5.0**
KRAR Krasnoyarsk 57.83 355⇓ *iP* **P 15 55 58.4 -0.8**
KRAR pmax pmax
comp=Z,32nm,0.6s,mb5.5
NVS Novosibirsk 58.06 349 *i* P **P 15 55 58.7 -2.1**
NVS *i* pP 15 56 14.2 +0.4
NVS pmax pmax
comp=Z,27nm,0.8s,mb5.3
NVS pmax pmax
comp=N,13nm,0.6s
NVS pmax pmax
comp=E,12nm,0.6s
QRN Al-Qurain 58.45 305 *eP* **P 15 56 02.9 -1.2**
baz=305
QRN AMb AMB 15 56 20.8
comp=Z,108nm,1.6s,mb5.6,baz=305
RDF Al-Radifah 58.82 305 *eP* **P 15 56 05.9 -0.7**
baz=305
RDF AMb AMB 15 56 07.7
comp=Z,68nm,1.5s,mb5.5,baz=305
UMR Umm Al-Rimmam 58.92 306 *eP* **P 15 56 06.7 -0.7**
baz=306
UMR AMb AMB 15 56 29.5
comp=Z,52nm,1.2s,mb5.4,baz=306
NAY Al-Naaiem 59.19 306 *eP* **P 15 56 08.7 -0.6**
baz=306
NAY AMb AMB 15 56 09.4
comp=Z,24nm,0.6s,mb5.4,baz=306
MIB Mutribah 59.32 306 *eP* **P 15 56 09.9 -0.2**
baz=306
MIB AMb AMB 15 56 10.9
comp=Z,51nm,0.9s,mb5.5,baz=306
VOSK Vostochnaya 59.51 340 P **P 15 56 10.0 -1.0**
VOSK pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
BVA0 Borovoye Array 59.97 340 *i* P **P 15 56 12.9 -1.2**
BVA0 pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BVAR Borovoye Array 59.97 340 P **P 15 56 13.2 -0.8**
comp=Z,19nm,0.5s,mb5.4,baz=143,slow=9.3,SNR=159
BRVK Borovoye 60.03 340 P **P 15 56 13.7 -0.8**
comp=Z,214nm,0.5s,mb6.4,SNR=18
BRVK Borovoye 60.03 340 *eP* **P 15 56 13.6 -0.9**
comp=Z,19nm,0.6s,mb5.3
BRVK Borovoye 60.03 340 *eP* **P 15 56 13.6 -0.9**
BRVK pmax pmax
comp=Z,19nm,0.6s,mb5.3
BOD Bodaibo 60.36 8⇓ *iP* **P 15 56 15.6 -1.1**
BOD pmax pmax
comp=Z,12nm,1.3s,mb4.8
YSS Yuzh-Sakhalins 61.14 32 *eP* **P 15 56 20.4 -1.8**
comp=Z,40nm,0.8s,mb5.6
YSS Yuzh-Sakhalins 61.14 32⇑ *iP* **P 15 56 22.0 -0.2**
YSS pmax pmax
comp=Z,50nm,0.8s,mb5.7
AB31 Akbulak array 61.46 331 P **P 15 56 23.6 -0.7**
AB31 pmax pmax
comp=Z,60nm,0.7s,mb5.8
AKTO Aktyubinsk 63.18 331 P **P 15 56 34.8 -1.0**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
SVE Sverdlovsk 66.47 338⇓ *eP* **P 15 56 56.8 -0.3**
SVE pmax pmax
comp=Z,64nm,0.9s,mb5.7
ARU Arti 67.00 336 P **P 15 56 59.3 -1.2**
comp=Z,172nm,0.7s,mb6.2,SNR=13
ARU Arti 67.00 336 *eP* **P 15 56 59.5 -1.0**
comp=Z,30nm,0.9s,mb5.3
ARU Arti 67.00 336 *c iP* **P 15 56 59.6 -0.9**
ARU *eS* S 16 05 52.1 +1.6
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.4
YAK Yakutsk 67.41 15 *eP* **P 15 57 01.0 -2.0**
comp=Z,69nm,0.9s,mb5.7
YAK Yakutsk 67.41 15⇑ *eP* **P 15 57 01.0 -2.0**
YAK pmax pmax
comp=Z,62nm,0.8s,mb5.7
KIV Kislovodsk 68.43 319 *eP* **P 15 57 09.9 +0.1**
comp=Z,22nm,0.8s,mb5.2
KIV Kislovodsk 68.43 319⇑ *eP* **P 15 57 09.9 +0.1**
KIV pmax pmax
comp=Z,43nm,1.1s,mb5.4
SOKR Solikamsk 69.85 338 *c iP* **P 15 57 18.0 -0.2**
SOKR pmax pmax
comp=Z,50nm,0.9s,mb5.4
MAW Mawson 70.61 194 P **P 15 57 24.1 +1.4**
comp=Z,2.1nm,0.8s,mb4.1,baz=48,slow=9.3,SNR=4.3
MAW LR LR 16 20 16.4
comp=Z,206nm,20.5s,MS4.4,baz=295,slow=29
CSS Prodhromos 72.18 308 *eP* **P 15 57 32.7 -0.2**
comp=Z,8.0nm,0.7s,mb4.8
VRHR Novokhopersk 72.18 326 *eP* **P 15 57 32.0 -0.5**
VRHR pmax pmax
comp=Z,120nm,0.5s,mb6.1
VRHR pmax pmax
comp=N,20nm,0.4s
VRHR pmax pmax
comp=E,30nm,0.4s
ANN Anapa 72.23 318 *eP* **P 15 57 26.6 -6.4**
ANN pmax pmax
comp=Z,372nm,1.8s,mb6.0
PETK Petropavlovsk- 72.54 32 P **P 15 57 33.6 -1.0**
comp=Z,11nm,0.7s,mb4.9,baz=206,slow=0.6,SNR=25
BRTR Keskin Array B 73.25 312 P **P 15 57 38.5 -0.7**
comp=Z,9.9nm,0.8s,mb4.8,baz=133,slow=7.2,SNR=34
BRTR Keskin Array B 73.25 312⇑ *eP* **P 15 57 38.5 -0.6**
BR131 Keskin Array S 73.25 312 *eP* **P 15 57 38.4 -0.8**
comp=Z,8.4nm,0.7s,mb4.8
VORD Divnogorie 73.46 325 *eP* **P 15 57 38.9 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 73.63 325 *c iP* **P 15 57 40.0 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.7s
SEY Seymchan 75.29 22⇑ *eP* **P 15 57 49.5 -1.0**
TIXI Tiksi 75.54 9 *eP* **P 15 57 50.0 -1.7**
comp=E,71nm,0.5s,mb5.8
TIXI Tiksi 75.54 9⇑ *eP* **P 15 57 50.1 -1.7**
TIXI pmax pmax
comp=Z,41nm,0.4s,mb5.7
BOSA Boshof 75.95 241 P **P 15 57 56.2 +1.1**
comp=Z,3.0nm,0.5s,mb4.5,baz=76,slow=16,SNR=5.6
BOSA LR LR 16 27 57.4
comp=Z,168nm,20.0s,MS4.3,baz=102,slow=33
BOSA Boshof 75.95 241 P **P 15 57 56.2 +1.1**
BOSA LR LR 16 27 57.4
MOS Moscow 76.33 329 *eP* **P 15 57 48.2 -8.4**
MOS *e* 15 58 09.4
MOS pmax pmax
comp=Z,39nm,0.7s,mb5.5
OBN Obninsk 76.63 328 *eP* **P 15 57 57.7 -0.7**
comp=Z,105nm,1.3s,mb5.6
OBN Obninsk 76.63 328 *ceP* **P 15 57 57.9 -0.4**
OBN *i* 15 58 03.8
OBN pmax pmax
comp=Z,65nm,1.0s,mb5.5
KLMR Klimovskoe 77.64 334 *eP* **P 15 58 03.1 -0.7**
KLMR pmax pmax
comp=Z,45nm,1.4s,mb5.2
SYO Syowa Base 78.20 199⇓ *e*PcP PcP 15 58 18.6 +2.4
TIRR Tirgusor 78.26 316 ⇓*P* **P 15 58 07.6 -0.1**
TIRR Tirgusor 78.26 316⇓ *iP* **P 15 58 07.6 -0.1**
URZ Urewera 78.69 129 P **P 15 58 08.6 -1.6**
comp=Z,7.7nm,0.6s,mb4.8,baz=340,slow=11,SNR=8.5

AKASG Malin Array Be 79.36 322 P **P 15 58 12.6 -0.9**
comp=Z,4.4nm,0.6s,mb4.5,baz=85,slow=4.9,SNR=14
VRI Vrincioaia 79.75 317⇓⇓ *iP* **P 15 58 16.1 +0.3**
VRI Vrincioaia 79.75 317⇓⇑ *iP* **P 15 58 16.1 +0.3**
MLR Muntele Rosu 80.20 317⇑⇑ *iP* **P 15 58 18.9 +0.7**
MLR Muntele Rosu 80.20 317⇑⇑ *iP* **P 15 58 19.0 +0.7**
VOIR 80.81 316⇑⇑ *iP* **P 15 58 21.2 -0.3**
BURAR Bucovina Array 81.15 319⇓⇓ *iP* **P 15 58 24.3 +1.0**
BUR08 Bucovina Ar. S 81.17 319 *eP* **P 15 58 24.2 +0.8**
JOF Joensuu 82.02 334 *ep* **P 15 58 26.9 -0.6**
comp=Z,17nm,0.6s,mb5.2
JOF Joensuu 82.02 334 *eP* **P 15 58 26.9 -0.6**
JOF pmax pmax
comp=Z,17nm,0.6s,mb5.2
VNDA Vanda 82.42 169 P **P 15 58 29.6 +0.2**
comp=Z,1.9nm,0.6s,mb4.2,baz=311,slow=5.9,SNR=20
VNDA Vanda 82.42 169 *eP* **P 15 58 29.6 +0.2**
comp=Z,6.6nm,1.2s,mb4.4
VNDA Vanda 82.42 169 *eP* **P 15 58 29.6 +0.2**
VNDA pmax pmax
comp=Z,7.0nm,1.2s
BILL Bilibino 82.82 20⇓ *iP* **P 15 58 29.7 -1.9**
BILL Bilibino 82.82 20 *eP* **P 15 58 29.7 -1.9**
BILL pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
TRPA Tarpa 83.02 319⇑ *iP* **P 15 58 33.2 +0.1**
KWP Kalwaria 83.19 320 *eP* **P 15 58 33.9 0.0**
BZS Buzias 83.21 316⇑⇑ *iP* **P 15 58 34.2 +0.1**
BZS Buzias 83.21 316⇑ *iP* **P 15 58 34.3 +0.2**
KOLS Kolonicke sedl 83.34 320 *i* P **P 15 58 35.6 +0.9**
KOLS *e* pP 15 58 51.7 +3.4
KOLS pmax pmax
comp=Z,20nm,0.9s,mb5.2
KOLS Kolonicke sedl 83.34 320 *i* P **P 15 58 35.5 +0.8**
KOLS *e* pP pP 15 58 51.7 +3.4
SUW Suwalki 83.74 325 *eP* **P 15 58 36.1 -0.6**
CRVS Cervenica-Dubn 83.86 319 *eP* **P 15 58 37.6 +0.2**
CRVS pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
KAF Kangasniemi 84.00 333 *ep* **P 15 58 37.1 -0.7**
comp=Z,40nm,0.5s,mb5.8,baz=98,slow=4.6
KAF Kangasniemi 84.00 333 *eP* **P 15 58 37.1 -0.7**
KAF pmax pmax
comp=Z,40nm,0.5s,mb5.8
STHS Stebnicka Huta 84.09 320 *i* P **P 15 58 39.2 +0.7**
STHS *e* pP 15 58 55.2 +3.1
STHS pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
STHS Stebnicka Huta 84.09 320 *i* P **P 15 58 39.2 +0.7**
STHS *e*pP pP 15 58 55.2 +3.1
OJC Ojcow 85.14 321 *eP* **P 15 58 44.0 +0.2**
PKSM Moragy 85.36 316⇑⇑ *iP* **P 15 58 45.1 +0.1**
PKSM Moragy 85.36 316⇑ *iP* **P 15 58 45.1 +0.1**
VYHS Vyhne 85.52 319 *eP* **P 15 58 45.7 0.0**
VYHS pmax pmax
comp=Z,5.0nm,1.5s,mb4.5
OKC Ostrava-Krasne 86.14 320 *e*pP pP 15 59 01.0 -1.4
ARCES ARCESS Array B 86.25 340 P **P 15 58 48.8 -0.2**
comp=Z,6.9nm,0.5s,mb5.2,baz=105,slow=5.4,SNR=84
ARE0 ARCESS Array S 86.25 340 *eP* **P 15 58 48.6 -0.3**
MODS Modra-Piesok 86.53 318 *eP* **P 15 58 50.8 0.0**
MODS pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
ZST Bratislava 86.63 318 *i* P **P 15 58 51.9 +0.7**
ZST pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
KOGS Kog 87.03 316 *eP* **P 15 58 53.6 +0.4**
DPC Dobruska-Polom 87.37 320 *eP* **P 15 58 55.3 +0.5**
GOLS Golise 87.42 316 *eP* **P 15 58 55.7 +0.6**
BOJS Bojanci 87.64 315 *eP* **P 15 58 56.4 +0.2**
PERS Pernice 87.82 317 *eP* **P 15 58 57.5 +0.5**
LJU Ljubljana 88.18 316 *i* P **P 15 58 59.4 +0.6**
QSPA South Pole Qui 88.26 180 *eP* **P 15 58 59.6 +1.2**
comp=Z,2.0nm,0.5s,mb4.6
PRU Pruhonice 88.47 320 *eP* **P 15 59 00.6 +0.6**
PVCC Panska Ves 88.50 320 *eP* **P 15 59 00.3 +0.2**
BRG Berggiesshubel 88.92 321 *i* P **P 15 59 02.4 +0.3**
BRG *e* pP 15 59 18.7 +2.9
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
BRG Berggiesshubel 88.92 321 *eP* **P 15 59 02.3 +0.2**
comp=Z,7.0nm,0.8s,mb5.0
BRG Berggiesshubel 88.92 321 *i* P **P 15 59 02.4 +0.3**
comp=Z,7.3nm,0.8s,mb5.1
BRG *e* pP 15 59 18.7 +2.9
comp=Z,6.3nm,0.8s
GEC2 GERESS Array S 88.94 319 *eP* **P 15 59 02.7 +0.4**
GEC2 pmax pmax
comp=Z,19nm,1.6s,mb5.2
GEC2 GERESS Array S 88.94 319 *eP* **P 15 59 02.7 +0.4**
comp=Z,19nm,1.6s,mb5.2
GERES GERESS Array B 88.94 319 P **P 15 59 02.7 +0.5**
comp=Z,3.3nm,0.8s,mb4.7,baz=93,slow=3.9,SNR=18
KHC Kasprske Hory 89.04 319 *eP* **P 15 59 03.1 +0.4**
FBE Freiberg 89.30 321 *eP* **P 15 59 04.4 +0.5**
comp=Z,10.0nm,1.1s,mb5.1
WET Wettzell 89.50 319 *eP* **P 15 59 05.2 +0.3**
WET pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
WET Wettzell 89.50 319 *eP* **P 15 59 05.2 +0.3**
comp=Z,7.0nm,0.9s,mb5.0
CLL Collm 89.54 321 *eP* **P 15 59 05.0 0.0**
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
CLL Collm 89.54 321 *eP* **P 15 59 05.0 0.0**
comp=Z,6.0nm,0.9s,mb4.9
HFS Hagfors 89.70 330 P **P 15 59 06.0 +0.4**
baz=131,slow=5.9
WERN Wernitzgruen 89.89 320 *eP* **P 15 59 07.2 +0.6**
comp=Z,6.0nm,1.2s,mb4.8
GUNZ Gunzen 89.92 320 *eP* **P 15 59 07.2 +0.4**
comp=Z,439nm,5.3s
WERD Werda 89.94 320 *eP* **P 15 59 07.1 +0.2**
comp=Z,9.0nm,1.4s,mb4.9
ROTZ Rotzenmuhle 89.97 320 *eP* **P 15 59 07.5 +0.4**
comp=Z,6.0nm,1.0s,mb4.9
MANZ Manzenberg 90.04 320 *eP* **P 15 59 08.0 +0.6**
comp=Z,8.0nm,1.1s,mb5.0
MOX Moxa 90.39 320 *eP* **P 15 59 08.2 -0.8**
MOX Moxa 90.39 320 *eP* **P 15 59 08.1 -0.9**
comp=Z,14nm,1.5s,mb5.1
GRF Grafenberg Arr 90.61 320 *eP* **P 15 59 10.6 +0.6**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
GRF Grafenberg Arr 90.61 320 *eP* **P 15 59 10.6 +0.6**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
GRF Grafenberg Arr 90.61 320 *eP* **P 15 59 10.6 +0.6**
comp=Z,7.0nm,0.9s,mb5.0
NB2 NORSAR Subarra 90.97 331 P **P 15 59 11.0 -0.5**
comp=Z,3.4nm,0.6s,mb4.8,baz=94,slow=4.6
NOA NORSAR Array B 90.97 331 P **P 15 59 11.3 -0.2**
comp=Z,4.1nm,0.6s,mb4.9,baz=93,slow=4.8,SNR=17
NOA LR LR 16 44 04.4
comp=Z,70nm,18.8s,MS4.1,baz=295,slow=38
NOA NORSAR Array B 90.97 331 P **P 15 59 11.3 -0.2**
NOA LR LR 16 44 04.4
CLZ Clausthal 91.20 322 *eP* **P 15 59 10.8 -1.9**
CLZ pmax pmax
comp=Z,18nm,1.8s,mb5.1
CLZ Clausthal 91.20 322 *eP* **P 15 59 10.8 -1.9**
comp=Z,18nm,1.8s,mb5.1
DAVOX Davos/Dischmat 91.43 317 P **P 15 59 14.8 +0.9**
comp=Z,8.2nm,0.6s,mb5.3
DAVOS Davos 91.49 317 P **P 15 59 14.8 +0.6**
KEST Kesra 91.66 306 P **P 15 59 16.9 +1.7**
comp=Z,5.6nm,0.8s,mb4.9,baz=331,slow=0.8,SNR=11
TNS Taunus Mts 92.40 320 *eP* **P 15 59 18.9 +0.6**
TNS pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
TNS Taunus Mts 92.40 320 *eP* **P 15 59 18.9 +0.6**
comp=Z,9.0nm,1.0s,mb5.0
LPG La Plagne 93.61 315 *eP* **P 15 59 24.4 +0.4**
comp=Z,7.6nm,0.7s,mb5.0
LPG La Plagne 93.61 315 *eP* **P 15 59 24.4 +0.4**
comp=Z,3.8nm,0.7s,mb4.9
LPG La Plagne 93.61 315 *eP* **P 15 59 24.4 +0.4**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
LPL La Plagne 93.62 315 *eP* **P 15 59 24.4 +0.3**
comp=Z,5.3nm,0.5s,mb4.9
LPL La Plagne 93.62 315 *eP* **P 15 59 24.4 +0.3**
comp=Z,2.7nm,0.5s,mb4.9
LPL La Plagne 93.62 315 *eP* **P 15 59 24.4 +0.3**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb5.0
FRF La Foret Royal 93.72 313 *eP* **P 15 59 24.7 +0.1**
GIVF Givet 94.74 320 *eP* **P 15 59 31.5 +2.4**
LOR Lormes 95.54 317 *eP* **P 15 59 32.0 -0.8**
comp=Z,10nm,0.7s,mb5.0
LOR Lormes 95.54 317 *eP* **P 15 59 32.0 -0.8**
comp=Z,5.3nm,0.7s,mb5.1
LOR Lormes 95.54 317 *eP* **P 15 59 32.0 -0.8**
LOR pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
AVF Avril sur Loir 95.91 317 *eP* **P 15 59 36.0 +1.5**
TORD Torodi Ar. Bea 98.64 283 P **P 15 59 47.5 0.0**
comp=Z,0.8nm,0.7s,mb4.4,baz=89,slow=5.4,SNR=5.6
YKA Yellowknife Ar 114.04 17 PKiKP PKiKP 16 04 44.2 -2.1
comp=Z,0.5nm,0.8s,baz=193,slow=3.7,SNR=4.1
SCHQ Schefferville 125.98 351 PKP PKPdf 16 05 09.0 -0.6
comp=Z,2.8nm,0.5s,baz=218,slow=2.7,SNR=7.2
NVAR Mina Array Bea 129.26 39 PKP PKPdf 16 05 17.0 +0.7
comp=Z,1.4nm,0.7s,baz=252,slow=2.5,SNR=9.2
ULM Lac du Bonnet 129.74 13 PKP PKPdf 16 05 16.2 -0.7
comp=Z,3.6nm,0.5s,baz=7.0,slow=6.0,SNR=3.2
ULM Lac du Bonnet 129.74 13 PKP PKPdf 16 05 16.2 -0.7
PDAR Pinedale Array 131.23 29 PKP PKPdf 16 05 19.1 -0.8
comp=Z,0.9nm,0.6s,baz=308,slow=1.4,SNR=8.1
RSSD Black Hills 132.61 24 *e*PKPdf PKPdf 16 05 21.5 -1.0
PLCA Paso Flores 136.93 190 PKP PKPdf 16 05 30.1 -0.6
comp=Z,1.1nm,0.8s,baz=166,slow=2.6,SNR=3.2
WMOK Wichita Mounta 142.68 26 *e*PKPpre 16 05 35.2
BDFB Brasilia 144.14 240 PKP PKPdf 16 05 42.9 -1.4
comp=Z,2.3nm,0.5s,baz=74,slow=11,SNR=6.3
TXAR Lajitas Array 144.36 37 PKP PKPdf 16 05 42.5 -1.9
comp=Z,15nm,0.5s,baz=226,slow=1.1,SNR=127
MIAR Mount Ida 144.90 20 *e*PKP PKPdf 16 05 43.5 -1.7
WVT Waverly 144.95 11 *e*PKP PKPdf 16 05 42.8 -2.4
UALR University of 145.09 18 *e*PKP PKPdf 16 05 43.9 -1.6
TZTN Tazewell 145.16 5 *e*PKP PKPdf 16 05 43.6 -2.0
JCT Junction City 145.68 32 *e*PKP PKPdf 16 05 46.2 -0.4
TKL Tuckaleechee C 146.02 6 *e*PKP PKPdf 16 05 46.3 -0.8
CPCT Cooper Cave 146.14 7 *e*PKP PKPdf 16 05 46.4 -0.9
OXF Oxford 146.15 14 *e*PKPdf PKPdf 16 05 46.9 -0.4
SWET Sewanee 146.17 9 *e*PKPdf PKPdf 16 05 46.5 -0.9
NATX Nacogdoches 146.99 24 *e*PKPbc PKPbc 16 05 50.0 -0.8
JSC Jenkinsville 147.56 2 *e*PKPbc PKPbc 16 05 51.2 -1.1
LRAL Lakeview Retre 148.11 11 *e*PKPbc PKPbc 16 05 52.2 -1.7
LCO Las Campanas 148.24 195 *e*PKPdf PKPbc 16 05 52.3 -2.0
GOGA Godfrey 148.27 6 *e*PKPbc PKPbc 16 05 53.1 -1.2

IDC 27 15:55:54.0±4.8, 1779S×17708W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.6/3, Error ellipse: s-maj=374.3km s-min=34.7km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.90**	**259**	P		P	16 04 18.2	-0.5
	0.3nm,0.9s,baz=96,slow=6.7,SNR=4.0							
ASAR	**Alice Springs**	**46.04**	**254**	P		P	16 04 20.1	+0.3
	0.3nm,0.4s,baz=88,slow=8.5,SNR=15							
PDAR	**Pinedale Array**	**86.40**	**43**	P		P	16 08 38.7	+0.4
	1.1nm,1.0s,baz=230,slow=3.7,SNR=4.5							

IDC 27 15:58:58.1±6.5, 2379S×17920E, h540km±75km, mb2.7/3, mb1 3.1/4, mb1mx2.9/16, mbtmp2.9/4, Error ellipse: s-maj=61.4km s-min=28.7km az=7.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**14.53**	**187**	P		P	16 02 02.4	-0.2
	1.4nm,0.3s,baz=6.9,slow=10.0,SNR=7.7							
URZ				S		S	16 04 34.6	0.0
	0.3nm,0.3s,baz=197,slow=19,SNR=4.5							
ASAR	**Alice Springs**	**41.33**	**261**	P		P	16 05 57.2	+0.3
	0.4nm,0.5s,baz=94,slow=7.1,SNR=12							
ASAR				PcP		PcP	16 07 42.9	+0.3
	0.3nm,0.7s,baz=100,slow=4.8,SNR=4.2							
WRA	**Warramunga Arr**	**41.68**	**266**	P		P	16 05 59.4	-0.4
	0.6nm,0.3s,baz=104,slow=8.4,SNR=79							
TXAR	**Lajitas Array**	**91.00**	**58**	P		P	16 11 05.2	+0.3
	0.2nm,0.6s,baz=214,slow=6.3,SNR=3.1							
ARCES	**ARCESS Array B**	**131.63**	**348**	PKP		PKPdf	16 17 07.8	-0.9
	1.9nm,0.8s,baz=35,slow=2.2,SNR=5.4							
AKASG	**Malin Array Be**	**144.48**	**327**	PKP		PKPdf	16 17 31.3	-1.4
	0.5nm,0.4s,baz=55,slow=4.0,SNR=4.1							

*IDC **27** 16:24:54.2±0.8, 1430S×7606W, h0km, mb3.8/7, mb1 4.0/10, mb1mx4.0/19, mbtmp3.9/10, ML3.8/2, MS3.4/3, Ms1 3.4/3, ms1mx3.1/20, Error ellipse: s-maj=34.8km s-min=15.9km az=70.0*
*ISCJB **27** 16:24:55.2±3.1, 1428S±007×760W±0.1, h16km±23km, mb3.8/6, Error ellipse: s-maj=23.8km s-min=7.7km az=154.1*
*NEIC **27** 16:24:57.9±2.9, 1424S×7601W, h27km±20km, ML4.1(LIM), Error ellipse: s-maj=18.1km s-min=8.6km az=64.0*
NEIC Felt [II] at Ica.
ISC 27 16:24:58.6±3.2, 1428S±007×760W±01, h26km±24km, n25, σ0s81/25, mb3.8/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	**Nana**	**2.43**	**339**	Pn		**Pn**	**16 25 35.7**	**-0.9**
	5.9nm,0.3s,baz=173,slow=11,SNR=13							
NNA				LR		LR	16 26 03.9	
	comp=Z,335nm,19.0s,baz=250,slow=29							
NNA				Sn		**Sn**	**16 26 07.0**	**+1.4**
	110nm,0.3s,baz=116,slow=11,SNR=7.2							
NNA	**Nana**	**2.43**	**339**	*e*Pn		**Pn**	**16 25 34.4**	**-2.3**
NNA				*e*Pg		**Pn**	**16 25 41.1**	**+4.4**
NNA				LR		LR	16 26 03.9	
NNA				Sn		**Sn**	**16 26 07.0**	**+1.4**
NNA				*e*Sg		**Sn**	**16 26 11.9**	**+6.3**
ARE	**Arequipa**	**4.83**	**117**	*eP*		**Pn**	**16 26 11.0**	**+1.4**
ARE				*e*S		**Sn**	**16 27 21.0**	**+16**
ATAH	**Atahualpa**	**7.62**	**341**	Pn		**Pn**	**16 26 47.6**	**-0.3**
	0.5nm,0.3s,baz=60,slow=8.1,SNR=2.6							
ATAH				Sn		**Sn**	**16 28 13.8**	**+0.3**
	1.5nm,0.3s,baz=20,slow=4.6,SNR=2.4							
LVC	**Limon Verde**	**10.65**	**142**	Pn		**Pn**	**16 27 29.5**	**0.0**
	1.3nm,0.3s,baz=328,slow=8.4,SNR=8.3							
LVC				Lg			16 30 25.0	
	0.7nm,0.3s,baz=132,slow=20,SNR=7.0							
LVC				LR		LR	16 31 55.3	
	comp=Z,239nm,18.8s,baz=119,slow=39							
LVC	**Limon Verde**	**10.65**	**142**	*e*Pn		**Pn**	**16 27 28.9**	**-0.6**
LVC				*e*Sn		**Sn**	**16 29 23.1**	**-4.8**
LVC				Lg			16 30 25.0	
LVC				LR		LR	16 31 55.3	
SIV	**San Ignacio**	**14.48**	**99**	Pn		**Pn**	**16 28 21.3**	**-0.6**
	0.7nm,0.3s,baz=276,slow=13,SNR=9.4							
CFAA	**Coronel Fontan**	**18.64**	**159**	P		**Pn**	**16 29 15.3**	**+0.5**
	0.0nm,0.3s,baz=329,slow=11,SNR=3.7							
CFAA	**Coronel Fontan**	**18.64**	**159**	P		**Pn**	**16 29 15.3**	**+0.5**
SDV	**Santo Domingo**	**23.62**	**13**	P		**P**	**16 30 07.9**	**+0.1**
	5.7nm,0.7s,mb4.1,baz=298,slow=9.7,SNR=6.9							
PLCA	**Paso Flores**	**26.77**	**171**	P		**P**	**16 30 37.2**	**+0.9**
	1.5nm,0.9s,mb3.5,baz=294,slow=19,SNR=3.1							
BDFB	**Brasilia**	**27.03**	**96**	LR		LR	16 42 21.4	
	comp=Z,181nm,18.9s,baz=100,slow=39							
TXAR	**Lajitas Array**	**50.95**	**328**	P		**P**	**16 33 57.1**	**-0.8**
	0.4nm,0.7s,mb3.5,baz=150,slow=7.9,SNR=5.9							
PDAR	**Pinedale Array**	**64.60**	**333**	P		**P**	**16 35 34.1**	**+0.4**
	0.1nm,0.4s,baz=165,slow=9.2,SNR=2.1							
TOA0	**Torodi Ar. Sit**	**81.58**	**74**	*eP*		**P**	**16 37 13.5**	**-1.2**
TORD	**Torodi Ar. Bea**	**81.58**	**74**	P		**P**	**16 37 14.8**	**0.0**
	4.2nm,0.8s,mb4.4,baz=265,slow=4.5,SNR=14							
YKA	**Yellowknife Ar**	**82.27**	**343**	P		**P**	**16 37 17.8**	**+0.5**
	0.5nm,0.6s,mb3.6,baz=146,slow=6.1,SNR=2.6							
VNDA	**Vanda**	**82.71**	**191**	P		**P**	**16 37 18.7**	**-0.9**
	0.7nm,0.9s,mb3.7,baz=153,slow=4.5,SNR=2.0							
VNDA	**Vanda**	**82.71**	**191**	P		**P**	**16 37 18.7**	**-0.9**
ASAR	**Alice Springs**	**132.30**	**218**	PKP		PKPdf	16 44 09.1	-2.1
	0.4nm,1.0s,baz=129,slow=1.5,SNR=3.3							
WRA	**Warramunga Arr**	**134.78**	**222**	PKP		PKPdf	16 44 14.2	-1.7
	0.4nm,0.9s,baz=133,slow=2.3,SNR=4.6							
ZALV	**Zalesovo Beam**	**137.63**	**17**	PKP		PKPdf	16 44 18.8	-1.3
	0.3nm,0.4s,baz=318,slow=2.0,SNR=3.6							
MKAR	**Makanchi Array**	**142.83**	**25**	PKP		PKPdf	16 44 29.0	-0.7
	0.4nm,0.7s,baz=221,slow=40,SNR=2.9							
ULN	**Ulaanbaatar**	**146.42**	**356**	*e*PKPbc		PKPbc	16 44 37.0	-0.2
SONM	**Songino Array**	**146.49**	**357**	PKPbc		PKPbc	16 44 36.4	-1.0
	1.2nm,0.7s,baz=336,slow=1.8,SNR=9.9							

IDC 27 16:49:26.4±5.0, 600S×14081E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/13, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=191.9km s-min=30.5km az=94.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.22**	**204**	Pn	Pn	16 53 05.0	+2.1
	0.2nm,0.3s,baz=19,slow=11,SNR=14						
ASAR	**Alice Springs**	**18.79**	**200**	P	Pn	16 53 46.7	-1.1
	0.3nm,0.3s,baz=28,slow=11,SNR=34						
SONM	**Songino Array**	**61.57**	**334**	P	P	16 59 46.7	+1.2
	0.5nm,0.8s,baz=151,slow=3.4,SNR=3.5						
MKAR	**Makanchi Array**	**73.65**	**322**	P	P	17 01 01.2	-0.7
	0.7nm,0.8s,baz=105,slow=6.8,SNR=4.9						

DJA 27 17:35:02, 152S×11952E, h10km, MLv3.5/1, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.69**	**27**	P	Pg	17 35 14.5	-0.8
PCI	**Palu**	**0.69**	**27**	S	Sg	17 35 25.2	+0.9
KAPI	**Kappang**	**3.48**	**176**	P	Pn	17 35 56.2	0.0
KDI	**Kendari**	**3.93**	**128**	P	Pn	17 36 02.6	+0.2

*NEIC **27** 18:04:03.0±1.3, 885S×11832E, h105km±13km, mb4.6/16, Error ellipse: s-maj=16.2km s-min=6.5km az=67.0*
*ISCJB **27** 18:04:03.4±0.5, 880S±004×11853E±004, h128km±5km, mb4.2/21, Error ellipse: s-maj=8.4km s-min=5.5km az=38.1*
*IDC **27** 18:04:03.7±2.1, 879S×11840E, h107km±17km, mb4.0/9, mb1 4.0/12, mb1mx3.9/20, mbtmp4.0/12, Error ellipse: s-maj=22.4km s-min=8.5km az=61.0*
*DJA **27** 18:04:06, 898S×11845E, h59km, MLv4.7/10*

ISC 27 18:04:04.7±0.5, 879S±005×11848E±004, h118km±5km, n47, σ0§96/52, mb4.3/21, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMNI	**Bima**	**0.32**	**40**	P	**Pn**	**18 04 20.7**	**-0.8**
KHKI	**Kahang-Kahang**	**2.87**	**278**	P	**Pn**	**18 04 49.4**	**+0.1**
DNP	**Denpasar**	**3.24**	**272**	P	**Pn**	**18 04 54.0**	**-0.1**
IGBI	**Denpasar**	**3.30**	**269**	P	**Pn**	**18 04 54.9**	**0.0**
NBBI	**Negara**	**3.84**	**276**	P	**Pn**	**18 05 02.1**	**0.0**
KAPI	**Kappang**	**3.95**	**19**	P	**Pn**	**18 05 04.7**	**+1.1**
	20nm,0.3s,baz=228,slow=16,SNR=64						
KAPI				S	**Sn**	**18 05 49.7**	**+0.4**
	32nm,0.3s,baz=87,slow=24,SNR=12						
KAPI	**Kappang**	**3.95**	**19**	P	**Pn**	**18 05 04.6**	**+1.0**
BATI	**Baumata**	**5.30**	**106**	P	**Pn**	**18 05 21.8**	**+0.1**
	25nm,0.3s,baz=286,slow=3.1,SNR=53						
BATI				S	**Sn**	**18 06 20.4**	**-1.3**
	18nm,0.3s,baz=36,slow=22,SNR=12						
BATI	**Baumata**	**5.30**	**106**	P	**Pn**	**18 05 21.7**	**0.0**
	53nm,0.6s,1µm0.4nm						
BBKI	**Banjar Baru**	**6.41**	**325**	P	**Pn**	**18 05 40.8**	**+4.1**
	104nm,1.0s,1µm0.3nm						
SJI	**Sawahan**	**6.73**	**278**	P	**Pn**	**18 05 42.3**	**+1.3**
PLKI	**Palangkaraya**	**7.93**	**325**	P	**Pn**	**18 06 01.0**	**+3.7**
PCI	**Palu**	**7.94**	**10**	P	**Pn**	**18 06 03.3**	**+5.8**
MBWA	**Marble Bar**	**12.36**	**175**	*e*Pn	**Pn**	**18 06 53.2**	**-3.5**
	9.9nm,0.6s						
MBWA				*e*Sn	**Sn**	**18 08 55.1**	**-18**
KAKA	**Kakadu**	**14.26**	**107**	*e*P	Px	18 07 04.5	
	12nm,0.7s						
KAKA				*e*S	Sx	18 09 34.7	
WRA	**Warramunga Arr**	**18.93**	**128**	P	**P**	**18 08 16.3**	**-0.1**
	1.4nm,0.3s,baz=302,slow=12,SNR=112						
WRA				S	**S**	**18 11 36.6**	**-8.7**
	0.3nm,0.3s,baz=296,slow=23,SNR=4.0						
WRAB	**Tennant Creek**	**18.93**	**128**	*e*Pn	**P**	**18 08 16.4**	**-0.1**
	5.5nm,0.6s						
WRAB				*e*Sn	**S**	**18 11 35.7**	**-10**
WB2	**Warramunga Arr**	**18.93**	**128**	*e*P	**P**	**18 08 16.3**	**-0.2**
WB2				*e*S	**S**	**18 11 36.8**	**-8.7**
ASAR	**Alice Springs**	**20.90**	**137**	P	**P**	**18 08 38.4**	**+0.6**
	13nm,0.3s,baz=311,slow=9.8,SNR=205						
ASAR				S	**S**	**18 12 27.7**	**+3.5**
	1.9nm,0.6s,baz=311,slow=24,SNR=6.3						
ASAR				ScP	ScP	18 16 08.3	+1.0
	0.8nm,0.6s,baz=320,slow=2.0,SNR=5.2						
KLBR	**Kellerberrin**	**22.70**	**182**	*e*P	**P**	**18 08 55.9**	**-0.6**
	18nm,1.2s,mb4.3						
KLBR				*e*S	**S**	**18 12 57.4**	**+1.5**
MUN	**Mundaring**	**23.17**	**185**	*e*P	pP	18 09 17.8	-6.4
MUN				*e*S	**S**	**18 13 09.4**	**+5.9**
FORT	**Forrest**	**23.64**	**159**	*e*P	**P**	**18 09 05.8**	**+0.7**
	12nm,0.6s,mb4.4						
NWAO	**Narrogin (SRO)**	**24.05**	**183**	P	**P**	**18 09 09.2**	**+0.4**
	7.4nm,0.4s,mb4.4,baz=337,slow=7.4,SNR=14						
NWAO	**Narrogin (SRO)**	**24.05**	**183**	*e*P	**P**	**18 09 08.8**	**0.0**
	43nm,1.2s,mb4.7						
STKA	**Stephens Creek**	**31.44**	**140**	*e*P	**P**	**18 10 16.1**	**+1.2**
	3.5nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**31.44**	**140**	P	**P**	**18 10 16.1**	**+1.3**
	5.4nm,0.5s,mb4.6,baz=320,slow=7.8,SNR=20						
CMAR	**Chiang Mai Arr**	**33.24**	**325**	P	**P**	**18 10 31.6**	**+0.9**
	0.8nm,0.5s,mb3.8,baz=154,slow=6.3,SNR=7.2						
CMAR				PcP	PcP	18 13 11.3	+0.6
	0.6nm,0.6s,baz=158,slow=1.9,SNR=5.4						
TAPN	**Taplejung**	**46.68**	**321**	*e*P	**P**	**18 12 21.4**	**-0.2**
KSRS	**Korea Array**	**46.84**	**10**	P	**P**	**18 12 24.3**	**+1.6**
	1.2nm,0.6s,mb3.8,baz=188,slow=9.7,SNR=7.7						
RAMN	**Ramite**	**47.09**	**320**	*e*P	**P**	**18 12 25.0**	**+0.1**
	8.0nm,0.5s,mb4.7						
JIRN	**Jiri**	**47.85**	**320**	*e*P	**P**	**18 12 30.3**	**-0.4**
	12nm,0.5s,mb5.0						
GUN	**Gumba**	**48.22**	**320**	*e*P	**P**	**18 12 33.4**	**-0.2**
	14nm,0.7s,mb4.9						
GKN	**Gorkha**	**49.08**	**319**	*e*P	**P**	**18 12 39.1**	**-1.0**
	8.4nm,0.4s,mb5.0						
KOLN	**Koldanda**	**49.60**	**318**	*e*P	**P**	**18 12 42.6**	**-1.5**
	9.0nm,0.5s,mb4.9						
DANN	**Dangsing**	**49.88**	**319**	*e*P	**P**	**18 12 45.3**	**-0.9**
	25nm,0.6s,mb5.3						
SONM	**Songino Array**	**57.38**	**350**	P	**P**	**18 13 40.4**	**-0.1**
	1.4nm,0.5s,mb4.2,baz=169,slow=8.7,SNR=18						
KBL	**Kabul**	**63.58**	**316**	*e*P	**P**	**18 14 20.6**	**-2.3**
	2.7nm,0.6s,mb4.2						
MK31	**Makanchi Array**	**64.03**	**333**	*e*P	**P**	**18 14 25.1**	**-0.6**
MKAR	**Makanchi Array**	**64.03**	**333**	P	**P**	**18 14 24.7**	**-0.9**
	0.9nm,0.6s,mb3.8,baz=152,slow=6.4,SNR=16						
AAK	**Ala-Archa**	**65.01**	**326**	*e*P	**P**	**18 14 33.0**	**+0.9**
	2.2nm,1.0s,mb3.9						
ZALV	**Zalesovo Beam**	**68.66**	**339**	P	**P**	**18 14 53.6**	**-1.4**
	1.7nm,0.6s,mb4.1,baz=142,slow=5.6,SNR=9.6						
MAW	**Mawson**	**69.26**	**200**	P	**P**	**18 14 57.5**	**-1.1**
	0.6nm,0.7s,mb3.5						
PETK	**Petropavlovsk-**	**70.08**	**24**	P	**P**	**18 15 04.8**	**+1.0**
	5.8nm,0.9s,mb4.4,baz=204,slow=6.9,SNR=6.0						
VNDA	**Vanda**	**72.28**	**171**	P	**P**	**18 15 18.1**	**+1.4**
	0.9nm,0.9s,mb3.6						
QSPA	**South Pole Qui**	**81.21**	**180**	*e*P	**P**	**18 16 07.8**	**+1.0**
	1.7nm,0.9s,mb3.9						
YKA	**Yellowknife Ar**	**114.21**	**24**	PKP	PKiKP	18 22 30.0	+0.2
	0.2nm,0.3s,baz=295,slow=2.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	**117.92**	**280**	PKP	PKPdf	18 22 38.4	+0.1
	0.2nm,0.3s,baz=33,slow=1.9,SNR=5.7						

IDC 27 18:09:55.7±2.5, 363N×6333E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.6/5, MS3.6/1, Ms1 3.6/1, ms1mx2.9/34, Error ellipse: s-maj=69.7km s-min=34.6km az=75.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**37.83**	**64**	P	P	18 17 14.7	+0.5
	0.7nm,0.8s,baz=256,slow=9.5,SNR=4.9						
LSZ	**Lusaka**	**39.54**	**241**	LR	LR	18 31 57.1	
	comp=Z,75nm,18.7s,baz=14,slow=33						
ZALV	**Zalesovo Beam**	**53.15**	**16**	P	P	18 19 14.4	-0.7
	0.2nm,0.3s,baz=219,slow=6.9,SNR=4.0						
SONM	**Songino Array**	**57.47**	**33**	P	P	18 19 46.7	+0.3
	0.8nm,0.8s,baz=238,slow=8.5,SNR=6.3						
WRA	**Warramunga Arr**	**73.49**	**112**	P	P	18 21 30.5	-0.2
	0.8nm,1.0s,baz=292,slow=5.2,SNR=4.0						
ASAR	**Alice Springs**	**73.79**	**116**	P	P	18 21 32.6	+0.2
	0.7nm,1.0s,baz=290,slow=6.1,SNR=7.4						
TXAR	**Lajitas Array**	**144.93**	**340**	PKP	PKPdf	18 29 36.1	+0.5
	0.4nm,0.8s,baz=90,slow=3.8,SNR=4.2						

*ISCJB **27** 18:46:58.8±0.4, 980N±003×12656E±004, h33km, mb4.2/19, MS3.5/6, Error ellipse: s-maj=5.4km s-min=3.7km az=163.9*
*MAN **27** 18:46:58, 976N×12636E, h1km, mb4.8, ML3.7, MS3.7*
*NEIC **27** 18:47:09.0±2.0, 971N×12635E, h118km±18km, mb4.6/10, Error ellipse: s-maj=22.6km s-min=8.0km az=59.0*
*IDC **27** 18:47:10.2±3.0, 961N×12609E, h126km±27km, mb3.6/11, mb1 3.8/13, mb1mx3.7/23, mbtmp3.7/13, MS3.6/8, Ms1 3.6/8, ms1mx3.3/33, Error ellipse: s-maj=38.0km s-min=12.4km az=66.0*

ISC 27 18:46:58.2±1.1, 979N±003×12650E±004, h14km±6km, n63, σ1§33/66, mb4.2/19, MS3.5/6, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.00**	**270**	*e*P	**Pg**	**18 47 15.4**	**-2.2**
SCPH				*i* S	**Sg**	**18 47 26.9**	**-3.7**
BUTP	**Butuan**	**1.19**	**227**	*e*P	**Pn**	**18 47 19.2**	**-1.2**
BUTP				*e*S	**Sb**	**18 47 34.3**	**-1.6**
BIPH	**Bislig**	**1.60**	**185**	⇓*i*P	**Pn**	**18 47 26.5**	**+0.5**
BIPH				*i* S	**Sn**	**18 47 45.1**	**-1.4**
MSLP	**Maasin**	**1.66**	**282**	*e*P	**Pn**	**18 47 26.5**	**-0.3**
MSLP				*e*S	**Sn**	**18 47 48.1**	**+0.2**
PLP	**Palo**	**2.03**	**313**	⇑*e*P	**Pn**	**18 47 32.3**	**+0.3**
PLP				*e*S	**Sn**	**18 47 57.4**	**+0.2**
BESP	**Borongan**	**2.08**	**330**	*e*P	**Pn**	**18 47 34.4**	**+1.6**
OCLP	**Ormoc**	**2.25**	**304**	*e*P	**Pn**	**18 47 36.7**	**+1.7**
BUKP	**Musuan**	**2.37**	**217**	*e*P	**Pn**	**18 47 38.4**	**+1.7**
LLP	**Lapu-Lapu**	**2.55**	**282**	⇑*i*P	**Pn**	**18 47 40.0**	**+0.8**
LLP				*i* S	**Sn**	**18 48 09.6**	**-0.5**
TBP	**Tagbilaran**	**2.61**	**268**	*e*P	**Pn**	**18 47 40.1**	**+0.2**
TBP				*e*S	**Sn**	**18 48 09.7**	**-1.7**
MATI	**Mati**	**2.83**	**185**	*e*P	**Pn**	**18 47 44.8**	**+1.7**
DAV	**Davao City (W)**	**2.85**	**199**	P	**Pg**	**18 47 52.0**	**-0.9**
	68nm,0.3s,baz=3.3,slow=3.1,SNR=6.4						
DAV				S	**Sn**	**18 48 19.5**	**+2.1**
	57nm,0.3s,baz=97,slow=22,SNR=6.3						
DAV				LR	LR	18 49 18.8	
	comp=Z,1µm,18.7s,baz=318,slow=50						
KCP	**Kidapawan**	**3.09**	**207**	⇑*e*P	**Pn**	**18 47 48.9**	**+2.3**
KCP				*i* S	**Sn**	**18 48 24.8**	**+1.4**
SNPH	**Sibulan**	**3.25**	**262**	*e*P	**Pn**	**18 47 50.5**	**+1.7**
CNP	**Catarman**	**3.25**	**326**	*e*P	**Pn**	**18 47 49.8**	**+0.9**
CTBH	**Cotabato--PC H**	**3.39**	**221**	*e*P	**Pn**	**18 47 51.9**	**+1.2**
CTBH				*e*S	**Sn**	**18 48 30.5**	**-0.2**
PAGZ	**Pagadian**	**3.64**	**238**	*e*P	**Pn**	**18 47 55.2**	**+1.1**
GUIM	**Jordan**	**3.94**	**283**	*e*P	**Pn**	**18 47 58.5**	**+0.2**
RCP	**Roxas**	**4.09**	**296**	⇑*e*P	**Pn**	**18 48 02.3**	**+1.9**
IPIL	**Ipil**	**4.37**	**243**	*e*P	**Pn**	**18 48 05.2**	**+1.1**
PVCP	**Virac**	**4.43**	**329**	*e*P	**Pn**	**18 48 08.3**	**+3.3**
OTRP	**Odiongan**	**5.09**	**301**	*e*P	**Pn**	**18 48 16.4**	**+2.3**
CAUP	**Cauayan**	**8.45**	**328**	*e*P	**Pn**	**18 49 00.8**	**+0.6**
KAPI	**Kappang**	**16.17**	**205**	LR	LR	18 57 36.8	
	comp=Z,216nm,19.0s,baz=271,slow=40						
BATI	**Baumata**	**20.06**	**188**	P	**P**	**18 51 33.1**	**+1.9**
	4.2nm,0.3s,baz=133,slow=3.7,SNR=14						
KAKA	**Kakadu**	**23.12**	**165**	*e*P	Px	18 51 47.8	
	9.7nm,0.6s						
JHJ	**Hachijo jima 2**	**26.25**	**26**	LR	LR	19 02 56.3	
	comp=Z,105nm,19.1s,MS3.4,baz=234,slow=36						
CMAR	**Chiang Mai Arr**	**28.05**	**291**	P	**P**	**18 52 47.5**	**-1.9**
	0.7nm,0.7s,mb3.4,baz=102,slow=6.9,SNR=5.7						
CMAR				LR	LR	19 04 24.8	
	comp=Z,111nm,19.7s,MS3.5,baz=123,slow=37						
MJAR	**Matsushiro Arr**	**28.67**	**20**	LR	LR	19 02 07.9	
	comp=Z,75nm,21.0s,MS3.3,baz=215,slow=31						
WRAB	**Tennant Creek**	**30.53**	**165**	*e*P	**P**	**18 53 09.7**	**-1.6**
	2.0nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**30.53**	**165**	P	**P**	**18 53 09.6**	**-1.7**
	0.7nm,0.5s,mb3.7,baz=345,slow=9.3,SNR=12						
WB2	**Warramunga Arr**	**30.54**	**165**	*e*P	**P**	**18 53 10.9**	**-0.4**
MBWA	**Marble Bar**	**31.46**	**192**	*e*P	**P**	**18 53 20.3**	**+0.8**
	34nm,1.5s,mb5.0						
ASAR	**Alice Springs**	**34.03**	**168**	P	**P**	**18 53 40.7**	**-1.2**
	1.1nm,0.4s,mb4.1,baz=346,slow=7.4,SNR=31						
ASAR				PcP	PcP	18 56 18.7	-1.1
	0.6nm,0.7s,baz=349,slow=3.0,SNR=4.3						
CTA	**Charters Tower**	**35.49**	**147**	P	**P**	**18 53 55.5**	**+0.9**
	5.2nm,0.9s,mb4.5,baz=298,slow=9.0,SNR=4.2						
CTA	**Charters Tower**	**35.49**	**147**	P	**P**	**18 53 55.5**	**+0.9**
CTAO	**Charters Tower**	**35.49**	**147**	*e*P	**P**	**18 53 54.9**	**+0.3**
	8.0nm,0.9s,mb4.7						
HNR	**Honiara**	**38.37**	**119**	LR	LR	19 08 06.9	
	comp=Z,106nm,18.1s,MS3.7,baz=290,slow=32						
FORT	**Forrest**	**40.36**	**178**	*e*P	**P**	**18 54 35.5**	**-0.1**
	17nm,0.6s,mb5.0						
TAPN	**Taplejung**	**40.49**	**301**	*e*P	**P**	**18 54 38.1**	**+1.2**
	4.9nm,0.7s,mb4.4						
ODAN	**Odane**	**40.62**	**300**	*e*P	**P**	**18 54 38.6**	**+0.7**
	9.1nm,0.7s,mb4.5						
RAMN	**Ramite**	**41.32**	**300**	*e*P	**P**	**18 54 44.9**	**+1.2**
SONM	**Songino Array**	**41.55**	**340**	P	**P**	**18 54 45.5**	**+0.2**
	0.2nm,0.4s,mb3.1,baz=157,slow=9.8,SNR=2.7						
JIRN	**Jiri**	**41.87**	**301**	*e*P	**P**	**18 54 47.5**	**-0.7**
	4.2nm,0.4s,mb4.4						
GUN	**Gumba**	**42.21**	**301**	*e*P	**P**	**18 54 49.9**	**-1.1**
	8.4nm,0.7s,mb4.5						
MUN	**Mundaring**	**42.68**	**193**	*e*P	**P**	**18 54 54.4**	**-0.2**
DMN	**Dyan**	**42.78**	**300**	*e*P	**P**	**18 54 54.4**	**-1.2**
GKN	**Gorkha**	**43.29**	**301**	*e*P	**P**	**18 55 00.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**43.38**	**191**	P	**P**	**18 54 57.3**	**-3.0**
	7.5nm,0.8s,mb4.5,baz=57,slow=8.5,SNR=7.2						
NWAO	**Narrogin (SRO)**	**43.38**	**191**	P	**P**	**18 54 57.3**	**-3.0**
NWAO				P		18 54 57.4	
STKA	**Stephens Creek**	**43.87**	**161**	*e*P	**P**	**18 55 03.8**	**-0.5**
	1.9nm,0.9s,mb3.8						
STKA	**Stephens Creek**	**43.87**	**161**	P	**P**	**18 55 03.4**	**-0.9**
	1.4nm,0.4s,mb4.0,baz=326,slow=9.2,SNR=6.3						
KOLN	**Koldanda**	**44.11**	**300**	*e*P	**P**	**18 55 05.0**	**-1.3**
DANN	**Dangsing**	**44.13**	**301**	*e*P	**P**	**18 55 03.9**	**-2.6**
PETK	**Petropavlovsk-**	**49.98**	**24**	LR	LR	19 19 09.2	
	comp=Z,40nm,18.3s,MS3.5,baz=60,slow=38						
YAK	**Yakutsk**	**52.20**	**2**	P	**P**	**18 56 07.7**	**-0.6**
	5.7nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**52.55**	**323**	P	**P**	**18 56 09.1**	**-2.1**
	0.7nm,0.6s,mb3.8,baz=118,slow=9.3,SNR=11						
MKAR				LR	LR	19 19 51.6	
	comp=Z,58nm,18.8s,MS3.6,baz=166,slow=37						
ZALV	**Zalesovo Beam**	**55.16**	**331**	P	**P**	**18 56 27.4**	**-2.7**
	0.3nm,0.3s,mb3.8,baz=32,slow=8.0,SNR=3.0						
KBL	**Kabul**	**57.79**	**305**	P	**P**	**18 56 46.5**	**-2.8**
ARCES	**ARCESS Array B**	**84.72**	**340**	P	**P**	**18 59 30.1**	**-1.3**
	1.8nm,0.7s,mb4.3,baz=79,slow=5.4,SNR=9.3						
YKA	**Yellowknife Ar**	**94.10**	**24**	P	**P**	**19 00 16.4**	**+0.4**
	0.7nm,0.6s,mb4.3,baz=300,slow=4.4,SNR=10						
YKA	**Yellowknife Ar**	**94.10**	**24**	P	**P**	**19 00 16.4**	**+0.3**
PLCA	**Paso Flores**	**145.68**	**157**	PKPbc	PKPbc	19 06 35.2	-1.7
	1.7nm,0.8s,baz=140,slow=6.8,SNR=4.9						

IDC 27 18:53:20.9±4.6, 2154S×17557W, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.0/19, mbtmp4.2/6, ML2.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/33, Error ellipse: s-maj=160.3km s-min=30.0km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.41**	**26**	Pn	Pn	18 55 23.2	-0.9
	2.2nm,0.3s,baz=221,slow=20,SNR=5.0						
AFI				Sn	Sn	18 56 53.2	-6.6
	1.7nm,0.3s,baz=68,slow=19,SNR=2.5						
URZ	**Urewera**	**17.82**	**199**	LR	LR	19 02 46.8	
	comp=Z,102nm,20.8s,baz=114,slow=32						
RPZ	**Rata Peaks**	**24.75**	**204**	LR	LR	19 07 10.2	
	comp=Z,99nm,19.5s,baz=183,slow=34						
CTA	**Charters Tower**	**35.65**	**265**	P	P	19 00 21.8	+0.8
	2.1nm,0.6s,baz=81,slow=12,SNR=2.1						
STKA	**Stephens Creek**	**39.40**	**246**	P	P	19 00 51.6	-1.1
	0.8nm,0.6s,baz=81,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**46.50**	**257**	P	P	19 01 49.6	-0.6
	2.6nm,0.7s,baz=98,slow=6.6,SNR=27						
WRA	**Warramunga Arr**	**46.71**	**262**	P	P	19 01 51.5	-0.5
	1.3nm,0.5s,baz=92,slow=8.4,SNR=46						
CMAR	**Chiang Mai Arr**	**92.60**	**289**	P	P	19 06 36.9	+1.9
	1.8nm,0.9s,baz=118,slow=3.4,SNR=13						
AKASG	**Malin Array Be**	**145.00**	**332**	PKPbc	PKPbc	19 12 58.2	-1.0
	1.6nm,0.6s,baz=41,slow=3.9,SNR=7.5						

*IDC **27** 19:00:21.6±1.6, 400N×12796E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.7/6, Error ellipse: s-maj=202.5km s-min=17.7km az=69.0*
*ISCJB **27** 19:00:25.7±2.3, 40N±02×1279E±05, h44km±24km, mb3.9/10, Error ellipse: s-maj=93.8km s-min=12.2km az=157.9*
*NEIC **27** 19:00:26.7±0.6, 397N×12793E, h35km, mb4.4/4, Error ellipse: s-maj=53.7km s-min=7.8km az=67.0*

ISC 27 19:00:28.0±1.9, 40N±02×1280E±05, h48km±19km, n14, σ0§78/14, mb3.9/10, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**5.49**	**334**	*e*P	**Pn**	**19 01 49.6**	**+2.3**
SCPH	**Surigao**	**6.28**	**336**	*e*S	**Pn**	**19 01 56.7**	**-1.4**
WRA	**Warramunga Arr**	**24.58**	**166**	P	**P**	**19 05 43.6**	**-0.1**
	1.1nm,0.6s,mb3.6,baz=350,slow=10.0,SNR=18						
WB2	**Warramunga Arr**	**24.59**	**166**	*e*P	**P**	**19 05 43.5**	**-0.2**
ASAR	**Alice Springs**	**28.08**	**169**	P	**P**	**19 06 14.8**	**-0.4**
	0.3nm,0.5s,mb3.1,baz=347,slow=7.2,SNR=7.5						
STKA	**Stephens Creek**	**37.94**	**161**	P	**P**	**19 07 41.9**	**+0.9**
	1.1nm,0.7s,mb3.7,baz=350,slow=11,SNR=3.6						
ULN	**Ulaanbaatar**	**47.28**	**341**	*e*P	**P**	**19 08 56.4**	**-0.2**
	3.2nm,0.8s,mb4.3						
SONM	**Songino Array**	**47.47**	**340**	P	**P**	**19 08 57.7**	**-0.4**
	1.1nm,0.8s,mb3.9,baz=154,slow=8.4,SNR=9.3						
MK31	**Makanchi Array**	**58.09**	**325**	*e*P	**P**	**19 10 16.4**	**0.0**
MKAR	**Makanchi Array**	**58.09**	**325**	P	**P**	**19 10 16.7**	**+0.2**
	0.6nm,0.4s,mb4.0,baz=119,slow=8.0,SNR=16						
TKM2	**Tokmak 2**	**60.41**	**318**	*e*P	**P**	**19 10 33.3**	**+0.7**
	1.7nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**60.95**	**332**	P	**P**	**19 10 36.6**	**+0.5**
	0.3nm,0.4s,mb3.7,baz=108,slow=7.7,SNR=2.2						
EKS2	**Erkin-Say**	**61.53**	**317**	*e*P	**P**	**19 10 39.7**	**-0.5**
	2.5nm,0.6s,mb4.5						
KBL	**Kabul**	**62.40**	**307**	P	**P**	**19 10 45.9**	**-0.3**
	1.9nm,0.8s,mb4.3						

*ISCJB **27** 19:03:44.3±0.5, 3223N±002×11578W±003, h11km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=149.4*
*ECX **27** 19:03:46.3±0.9, 3218N×11581W, h4km, MD3.6, ML3.7*
*NEIC **27** 19:03:46.3, 3218N×11581W, h4km, ML3.6(ECX), ML3.3(PAS), After ECX.*

ISC 27 19:03:45.3±0.3, 3219N±002×11582W±002, h8km±5km, n21, σ1§12/41, 9C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dowling**	**0.28**	**203**	⇑*i*P	**Pg**	**19 03 51.0**	**+0.1**
RDX				*e*S	**Sg**	**19 03 54.7**	**0.0**
RMX	**La Rumorosa**	**0.46**	**332**	⇑*e*P	**Pg**	**19 03 55.1**	**+0.8**
RMX				*e*S	**Sg**	**19 04 01.5**	**+1.1**
EMX	**El Mayor**	**0.53**	**113**	⇑*e*P	**Pg**	**19 03 55.6**	**0.0**
EMX				*e*S	**Sg**	**19 04 03.3**	**+0.9**
CBX	**Cerro Bola**	**0.73**	**280**	⇑*i*P	**Pg**	**19 03 59.5**	**+0.2**
CBX				*e*S	**Sg**	**19 04 09.4**	**+0.6**
CBX				⇑*e*		19 04 10.8	
	comp=E,4µm,0.3s						
CBX				⇓*e*		19 04 11.4	
	comp=N,5µm,0.5s						
ENX	**Ensenada**	**0.79**	**247**	⇑*e*P	**Pg**	**19 04 00.5**	**+0.2**
ENX				*e*S	**Sg**	**19 04 11.0**	**+0.4**
ENX				*e*		19 04 12.0	
	comp=E,2µm,0.2s						
ECNX	**Esteban Cantu**	**0.85**	**231**	⇑*e*P	**Pg**	**19 04 01.7**	**0.0**
ECNX				*e*S	**Sg**	**19 04 12.8**	**+0.1**
PBX	**Punta Banda**	**0.89**	**240**	⇑*e*P	**Pg**	**19 04 02.4**	**0.0**
PBX				*e*S	**Sg**	**19 04 14.4**	**+0.3**
PBX				⇓*e*		19 04 15.1	
	comp=N,4µm,0.3s						
PBX				⇓*e*		19 04 15.2	
	comp=E,2µm,0.4s						
ECBX	**El Chinero**	**0.97**	**138**	⇓*e*P	**Pg**	**19 04 02.6**	**-1.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.64**	**279**	*e*P	**Pn**	**19 21 03.1**	**0.0**
DZM				*e*S	**Sn**	**19 21 55.8**	**0.0**
RPZ	**Rata Peaks**	**20.82**	**181**	LR	LR	19 31 20.4	
	comp=Z,99nm,20.1s,baz=22,slow=31						
ASAR	**Alice Springs**	**34.39**	**261**	P	P	**19 26 38.9**	**+0.4**
	0.4nm,0.7s,mb3.5,baz=87,slow=8.5,SNR=3.8						
WRA	**Warramunga Arr**	**34.56**	**268**	P	P	**19 26 39.5**	**-0.5**
	0.3nm,0.5s,mb3.5,baz=98,slow=8.3,SNR=5.3						
CMAR	**Chiang Mai Arr**	**81.80**	**294**	P	P	**19 32 10.3**	**+0.1**
	0.7nm,0.9s,mb3.6,baz=142,slow=4.0,SNR=5.2						
SONM	**Songino Array**	**91.29**	**322**	P	P	**19 32 56.0**	**0.0**
	0.8nm,1.0s,mb4.0,baz=104,slow=4.6,SNR=3.6						

MAN 27 19:22:51,967N×12601E,h12km,mb3.5,ML2.2,MS1.7, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.52**	**282**	*e*P	Pg	19 23 02.9	+1.7
SCPH				*e*S	Sg	19 23 13.9	+5.7
BUTP	**Butuan**	**0.80**	**209**	*e*P	Pg	19 23 06.6	+0.2
BUTP				*e*S	Sg	19 23 21.3	+4.5
MSLP	**Maasin**	**1.22**	**292**	*e*P	Pn	19 23 14.9	+1.1
PLP	**Palo**	**1.79**	**326**↓	*e*P	Pn	19 23 20.8	-1.0
PLP				*e*S	Sn	19 23 45.2	+0.7
BUKP	**Musuan**	**2.01**	**208**	*e*P	Pn	19 23 24.3	-0.5
TBP	**Tagbilaran**	**2.11**	**271**	*e*P	Pn	19 23 27.5	+1.3
TBP				*e*S	Sn	19 23 58.9	+6.5
PAGZ	**Pagadian**	**3.16**	**235**	*e*P	Pn	19 23 42.8	+2.1
IPIL	**Ipil**	**3.88**	**241**	*e*P	Pn	19 23 52.0	+1.5

MAN 27 19:32:25,961N×12588E,h9km,mb3.7,ML2.4,MS2.0,1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.42**	**293**	*e*P	Pg	19 32 34.7	+1.5
SCPH				*e*S	Sg	19 32 44.8	+5.9
BUTP	**Butuan**	**0.69**	**202**	*e*P	Pg	19 32 38.8	+0.4
BUTP				*e*S	Sg	19 32 53.2	+5.8
MSLP	**Maasin**	**1.13**	**297**	*e*P	Pb	19 32 46.7	-0.1
PLP	**Palo**	**1.78**	**330**↓	*e*P	Pn	19 32 52.8	-3.2
PLP				*e*S	Sn	19 33 17.8	-1.0
BUKP	**Musuan**	**1.90**	**205**	*e*P	Pn	19 32 57.8	+0.1
TBP	**Tagbilaran**	**1.99**	**272**	*e*P	Pn	19 32 57.1	-1.8
TBP				*e*S	Sn	19 33 27.4	+3.4

*KRSC **27** 20:31:09.0±2.3, 4900N×158.11E, h20km±20km, ML4.3*
*NEIC **27** 20:31:23.7±6.7, 5001N×15766E, h28km±47km, mb4.0/2, Error ellipse: s-maj=28.0km s-min=14.4km az=142.0*
*ISCJB **27** 20:31:24.8±1.6, 500N±0.1×1576E±0.1, h56km±13km, mb3.8/9, Error ellipse: s-maj=21.5km s-min=9.9km az=142.2*
*IDC **27** 20:31:24.7±0.8, 4993N×15764E, h36km±6km, mb3.5/7, mb1 3.8/9, mb1mx3.5/23, mbtmp3.4/9, ML3.3/2, Error ellipse: s-maj=26.6km s-min=17.4km az=139.0*
*MOS **27** 20:31:24.6±1.3, 5015N×15759E, h52km, mb4.0/6, Error ellipse: s-maj=20.0km s-min=11.5km az=77.2*
ISC 27 20:31:25.4±1.6, 499N±01×1576E±01, h44km±13km, h40km±.8km; pP-P, n34, σ0§89/36, mb3.8/9, 3C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.19**	**309**	*e*PN	**Pn**	**20 31 44.9**	**-0.5**
SKR				*i*		20 31 55.5	
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=E,140nm,0.5s						
SKR				pmax	pmax		
	comp=Z,280nm,0.5s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=E,2μm,0.5s						
MIPR	**Malaya Ipel'ka**	**2.39**	**348**	*e*P	**Pn**	**20 32 02.9**	**+0.9**
GRL	**Gorelyy**	**2.64**	**7**	*e*P	**Pn**	**20 32 04.6**	**-0.7**
GRL				*i* S	**Sn**	**20 32 45.2**	**+9.2**
PET	**Petropavlovsk**	**3.16**	**12**	*e*Pn	**Pn**	**20 32 07.8**	**-4.8**
PET				*e*Sn	**Sn**	**20 32 49.4**	**+0.4**
PEA0B	**Petropavlovsk-**	**3.17**	**2**	*e*Pn	**Pn**	**20 32 13.3**	**+0.6**
PETK	**Petropavlovsk-**	**3.17**	**2**	Pn	**Pn**	**20 32 13.3**	**+0.6**
	comp=E,1.7nm,0.3s,baz=148,slow=17,SNR=25						
SDLR	**Sedlovina**	**3.44**	**13**	*e*P	**Pn**	**20 32 15.6**	**-0.8**
SPN	**Mys Shipunski**	**3.52**	**25**	P	**Pn**	**20 32 17.5**	**+0.1**
GNL	**Ganaly**	**3.77**	**3**	*e*P	**Pn**	**20 32 21.3**	**+0.4**
KMNR	**Kamenistaya**	**6.05**	**15**	*e*P	**Pn**	**20 32 53.6**	**+1.5**
KBTR	**Krutoberegovo**	**7.03**	**25**	P	**Pn**	**20 33 03.7**	**-1.9**
KBTR	**Krutoberegovo**	**7.03**	**25**	*e*P	**Pn**	**20 33 04.1**	**-1.5**
YSS	**Yuzh-Sakhalins**	**10.28**	**259**	Pn	**Pn**	**20 33 54.9**	**+4.8**
ERM	**Erimo**	**12.76**	**237**↑	*i* PN	**Pn**	**20 34 17.2**	**-6.8**
MAJO	**Matsushiro**	**19.37**	**234**	P	**Pn**	**20 35 43.5**	**-5.1**
	comp=E,4.5nm,0.7s						
MAJO	**Matsushiro**	**19.37**	**234**	P	**Pn**	**20 35 43.5**	**-5.1**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**19.37**	**234**	P	**Pn**	**20 35 48.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=21,slow=10,SNR=3.4						
YAK	**Yakutsk**	**19.55**	**319**	*e*P	**Pn**	**20 35 48.2**	**-2.3**
YAK	**Yakutsk**	**19.55**	**319**↑	*i* P	**Pn**	**20 35 47.6**	**-2.9**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MCK	**McKinley**	**31.30**	**44**	P	**P**	**20 37 39.6**	**-1.2**
	comp=Z,3.0nm,0.9s,mb4.1						
MCK	**McKinley**	**31.30**	**44**	P	**P**	**20 37 39.6**	**-1.2**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	**46.58**	**40**	P	**P**	**20 39 48.7**	**+0.3**
	comp=Z,0.6nm,0.9s,mb3.5,baz=305,slow=8.7,SNR=3.2						
YKA	**Yellowknife Ar**	**46.58**	**40**	P	**P**	**20 39 48.6**	**+0.3**
YKA	**Yellowknife Ar**	**46.58**	**40**	P	**P**	**20 39 48.7**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**48.09**	**303**↑	*i* P	**P**	**20 40 00.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**48.13**	**297**	P	**P**	**20 40 00.5**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=58,slow=6.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**55.97**	**258**	P	**P**	**20 41 00.9**	**+1.7**
	comp=Z,0.2nm,0.3s,mb3.6,baz=30,slow=7.5,SNR=4.1						
PDAR	**Pinedale Array**	**60.50**	**58**	P	**P**	**20 41 31.1**	**+0.5**
	comp=Z,0.6nm,0.8s,mb3.8,baz=306,slow=9.9,SNR=3.6						
WRA	**Warramunga Arr**	**72.55**	**203**	P	**P**	**20 42 47.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=17,slow=6.6,SNR=5.6						
WRA				pP	pP	20 42 59.1	-1.3
	comp=Z,0.5nm,0.6s,baz=17,slow=6.0,SNR=3.8						
WRA	**Warramunga Arr**	**72.55**	**203**	P	**P**	**20 42 47.4**	**-0.2**
WRA				*PP	pP	20 42 59.1	-1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**73.39**	**64**	P	**P**	**20 42 52.8**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=306,slow=4.6,SNR=12						
TXAR				pP	pP	20 43 04.0	-1.6
	comp=Z,0.8nm,0.6s,baz=301,slow=4.4,SNR=7.1						
TXAR	**Lajitas Array**	**73.39**	**64**	P	**P**	**20 42 52.8**	**+0.1**
TXAR				*PP	pP	20 43 04.0	-1.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**76.80**	**336**	P	**P**	**20 43 12.1**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=29,slow=6.1,SNR=6.3						
GERES				pP	pP	20 43 23.5	-1.4
	comp=Z,0.7nm,0.7s,baz=32,slow=7.8,SNR=3.5						
GERES	**GERESS Array B**	**76.80**	**336**	P	**P**	**20 43 12.1**	**+0.1**
GERES				*PP	pP	20 43 23.5	-1.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						

MAN 27 20:39:39,515N×12635E,h97km,mb4.8,ML3.7,MS3.7, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.68**	**304**	*e*P	Pn	20 40 06.7	-0.6
GSPH				*e*S	Sn	20 40 26.4	-2.5
MATI	**Mati**	**1.79**	**357**	*e*P	Pn	20 40 10.1	+1.3
MATI				*e*S	Sn	20 40 36.0	+4.6
KCP	**Kidapawan**	**2.23**	**326**↓	*e*P	Pn	20 40 16.4	+1.9
KCP				*i* S	Sn	20 40 46.7	+5.0
BUKP	**Musuan**	**3.00**	**335**	*e*P	Pn	20 40 26.8	+2.1
PAGZ	**Pagadian**	**3.98**	**313**	*e*P	Pn	20 40 40.6	+2.6
IPIL	**Ipil**	**4.58**	**305**	*e*P	Pn	20 40 48.0	+2.0

*ISK **27** 21:19:33.4, 3468N×2683E, h26km, ML3.9*
*ISCJD **27** 21:19:43.2±0.3, 3523N±002×2730E±002, h33km±8km, mb3.6/4, Error ellipse: s-maj=3.6km s-min=3.2km az=40.5*
*CSEM **27** 21:19:43.2±0.1, 3523N×2736E, h32km, MD3.9, Error ellipse: s-maj=2.3km s-min=1.1km az=34.0*
*IDC **27** 21:19:43.6±3.1, 3526N×2720E, h21km±24km, mb3.6/4, mb1 3.5/9, mb1mx3.4/22, mbtmp3.5/9, ML3.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/35, Error ellipse: s-maj=25.2km s-min=16.1km az=173.0*
*HLW **27** 21:19:44.0, 3536N×2736E, h33km, Mb3.7*
*NEIC **27** 21:19:46.3, 3556N×2704E, h30km, MD3.9(ATH), After ATH.*
*THE **27** 21:19:46.7, 3561N×2702E, h0km±8km, Error ellipse: s-maj=20.9km s-min=1.0km az=130.0*
*ATH **27** 21:19:46.3, 3556N×2704E, h30km, MD3.9/10*
*GII **27** 21:19:47.0±0.0, 3509N×2766E, h0km, ML3.6/2*
ISC 27 21:19:44.6±0.6, 3527N±002×2724E±002, h29km±5km, n118, σ1§04/140, mb3.6/4, 1C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.28**	**347**↓	*i* PB	**Pb**	**21 19 51.3**	**-0.5**
KARP				*e*SB	**Sb**	**21 19 56.1**	**-0.5**
ARG	**Arkhangelos**	**1.19**	**37**	*e*PN	**Pn**	**21 20 07.6**	**+2.3**
ARG				*e*SN	**Sn**	**21 20 22.7**	**+2.3**
NPS	**Neapolis**	**1.33**	**270**↑	*i* PN	**Pn**	**21 20 08.4**	**+1.2**
NPS				*e*SN	**Sn**	**21 20 24.9**	**+0.9**
DAT	**Datca**	**1.48**	**11**	*e*PN	**Pn**	**21 20 08.6**	**-0.7**
BODT	**Bodrum**	**1.79**	**2**	*e*PN	**Pn**	**21 20 12.9**	**-0.7**
THR1	**Thera Island**	**1.81**	**308**	P	**Pn**	**21 20 13.1**	**-0.8**
THR1				S	**Sn**	**21 20 34.0**	**-1.9**
THR6	**Thira Island,**	**1.85**	**306**	P	**Pn**	**21 20 13.6**	**-0.7**
THR3	**Thira Island,**	**1.88**	**308**	P	**Pn**	**21 20 14.0**	**-0.7**
DALT	**Dalyan (Mudla)**	**1.88**	**37**	*e*PN	**Pn**	**21 20 14.2**	**-0.5**
DALT				*e*SN	**Sn**	**21 20 44.1**	**+6.7**
THR4	**Thira Island,**	**1.91**	**309**	P	**Pn**	**21 20 13.8**	**-1.4**
IDI	**Anoyia**	**1.92**	**271**	Pn	**Pn**	**21 20 16.3**	**+0.9**
	29nm,0.3s,baz=73,slow=16,SNR=156						
IDI				Pg	**Pn**	**21 20 18.3**	**+3.0**
	31nm,0.3s,baz=80,slow=17,SNR=159						
IDI				Lg		21 20 42.8	
	51nm,0.3s,baz=133,slow=22,SNR=7.2						
IDI	**Anoyia**	**1.92**	**271**	Pn	**Pn**	**21 20 16.2**	**+0.8**
IDI	**Anoyia**	**1.92**	**271**	Pg	**Pn**	**21 20 18.3**	**+2.9**
FETY	**Fethiye**	**2.02**	**47**	*e*PN	**Pn**	**21 20 16.1**	**-0.7**
YER	**Yerkesik**	**2.04**	**24**	*e*PN	**Pn**	**21 20 17.0**	**0.0**
MLSB	**Milas**	**2.07**	**12**	*e*PN	**Pn**	**21 20 17.0**	**-0.4**
KSL	**Kastellorizon**	**2.10**	**65**	*e*PN	**Pn**	**21 20 22.0**	**+4.2**
APE	**Apeiranthos**	**2.27**	**323**	P	**Pn**	**21 20 18.8**	**-1.3**
APE				S	**Sn**	**21 20 43.5**	**-3.5**
APE	**Apeiranthos**	**2.27**	**323**	*e*PN	**Pn**	**21 20 19.2**	**-0.9**
APE				*e*SN	**Sn**	**21 20 43.3**	**-3.7**
SMG	**Samos**	**2.46**	**353**	*e*PN	**Pn**	**21 20 22.0**	**-0.7**
VAM	**Vamos**	**2.49**	**274**	*e*PN	**Pn**	**21 20 24.7**	**+1.5**
DENT	**Denizli**	**2.87**	**30**	*e*PN	**Pn**	**21 20 28.0**	**-0.3**
BLCB	**Balcova**	**3.11**	**357**	*e*PN	**Pn**	**21 20 30.3**	**-1.4**
ANTB	**Antalya**	**3.21**	**59**	*e*PN	**Pn**	**21 20 32.2**	**-0.9**
CHOS	**Chios island**	**3.25**	**343**	P	**Pn**	**21 20 32.8**	**-0.9**
KULA	**Kula-Manisa**	**3.43**	**19**	*e*PN	**Pn**	**21 20 36.3**	**+0.2**
BCK	**Bucak**	**3.48**	**50**	*e*PN	**Pn**	**21 20 36.8**	**0.0**
KHL	**Karahalli**	**3.56**	**30**	*e*PN	**Pn**	**21 20 38.4**	**+0.5**
KYTH	**Kithira**	**3.56**	**288**	*e*PN	**Pn**	**21 20 39.0**	**+1.1**
AKS	**Akhisar**	**3.63**	**7**	*e*PN	**Pn**	**21 20 38.1**	**-0.7**
VLI	**Veliai**	**3.77**	**294**	*e*PN	**Pn**	**21 20 41.0**	**+0.2**
DID	**Didima**	**3.92**	**306**	P	**Pn**	**21 20 43.2**	**+0.3**
SLUM		**4.13**	**205**	P	**Pn**	**21 20 46.7**	**+0.9**
SLUM				S	**Sn**	**21 21 32.2**	**-0.9**
SLUM		**4.13**	**205**	P	**Pn**	**21 20 46.7**	**+0.9**
SLUM				S	**Sn**	**21 21 32.2**	**-0.9**
HMAT	**Matruh**	**4.17**	**182**	P	**Pn**	**21 20 46.7**	**+0.5**
HMAT				S	**Sn**	**21 21 32.4**	**-1.6**
SHUT	**Suhut-Afyon**	**4.22**	**38**	*e*PN	**Pn**	**21 20 47.8**	**+0.9**
BALB	**Balikesir**	**4.39**	**6**	*e*PN	**Pn**	**21 20 49.2**	**-0.1**
LTK	**Loutraki**	**4.40**	**310**	P	**Pn**	**21 20 51.0**	**+1.6**
ALT	**Altintas**	**4.42**	**30**	*e*PN	**Pn**	**21 20 50.5**	**+0.8**
DST	**Dursunbey**	**4.47**	**14**	*e*PN	**Pn**	**21 20 50.1**	**-0.2**
HDMB	**Hadim**	**4.57**	**67**	*e*PN	**Pn**	**21 20 50.6**	**-1.2**
LEF	**Lefka**	**4.63**	**90**	*e*PN	**Pn**	**21 20 48.7**	**-3.9**
ITM	**Ithomi**	**4.70**	**295**	*e*PN	**Pn**	**21 20 54.0**	**+0.5**
PYL	**PYLOS**	**4.74**	**292**	P	**Pn**	**21 20 53.3**	**-0.8**
CSS	**Prodhromos**	**5.00**	**92**	*e*PN	**Pn**	**21 20 54.6**	**-3.1**
CSS	**Prodhromos**	**5.00**	**92**	*e*Pn	**Pn**	**21 20 58.7**	**+0.9**
	17nm,0.6s						
CSS				*e*Sn	**Sn**	**21 21 52.6**	**-2.0**
GADA	**Gvkgeada**	**5.03**	**348**	*e*PN	**Pn**	**21 20 56.5**	**-1.5**
LADK	**Ladik-KONYA**	**5.05**	**53**	*e*PN	**Pn**	**21 20 59.5**	**+1.1**
ESKT	**Eskisehir**	**5.12**	**33**	*e*PN	**Pn**	**21 21 00.2**	**+0.8**
LFK	**Lefkose**	**5.15**	**88**	*e*PN	**Pn**	**21 20 57.5**	**-2.3**
KIZT	**Kizilcal**	**5.17**	**44**	*e*PN	**Pn**	**21 21 01.0**	**+1.0**
IKL	**Isikli**	**5.33**	**78**	*e*PN	**Pn**	**21 21 00.4**	**-1.8**
AGG	**Agios Georgios**	**5.42**	**315**	P	**Pn**	**21 21 04.2**	**+0.7**
EREN	**Erenkoy**	**5.67**	**85**	*e*PN	**Pn**	**21 21 04.8**	**-2.0**
MERS	**Mersin**	**6.11**	**73**	*e*PN	**Pn**	**21 21 11.2**	**-1.7**
SWA2		**6.20**	**195**	P	**Pn**	**21 21 15.3**	**+1.2**
SWA2				S	**Sn**	**21 22 21.6**	**-2.4**
LOD	**Lodumlu**	**6.36**	**42**	*e*PN	**Pn**	**21 21 17.2**	**+0.8**
KAMT	**Kaman**	**6.58**	**50**	*e*PN	**Pn**	**21 21 19.7**	**+0.3**
HHAG	**Hagoal**	**6.70**	**141**	P	**Pn**	**21 21 20.8**	**-0.3**
HSAF	**As Saff**	**6.71**	**146**	P	**Pn**	**21 21 20.9**	**-0.3**
BRTR	**Keskin Array B**	**6.76**	**47**	Pn	**Pn**	**21 21 23.1**	**+1.3**
	0.2nm,0.3s,baz=23,slow=23,SNR=6.6						
BRTR				Sn	**Sn**	**21 22 39.8**	**+2.0**
	0.2nm,0.3s,baz=216,slow=26,SNR=2.5						
AMAG	**Maghara**	**6.81**	**131**	P	**Pn**	**21 21 22.0**	**-0.6**
RSH		**6.93**	**127**	P	**Pn**	**21 21 23.5**	**-0.7**
MMC1	**Mount Meron ar**	**7.13**	**106**	Pn	**Pn**	**21 21 27.9**	**+1.0**
MMA0B	**Mount Meron ar**	**7.13**	**106**	Pn	**Pn**	**21 21 27.1**	**+0.1**
MMAI	**Mount Meron Ar**	**7.13**	**106**	Pn	**Pn**	**21 21 27.2**	**+0.2**
	2.8nm,0.3s,baz=310,slow=12,SNR=23						
MMAI				Sn	**Sn**	**21 22 47.0**	**0.0**
	6.7nm,0.3s,baz=294,slow=23,SNR=8.6						
MMA1	**Mount Meron ar**	**7.13**	**106**	Pn	**Pn**	**21 21 27.4**	**+0.4**
MMC3	**Mount Meron ar**	**7.14**	**106**	Pn	**Pn**	**21 21 26.8**	**-0.3**
MMC5	**Mount Meron ar**	**7.14**	**106**	Pn	**Pn**	**21 21 27.6**	**+0.5**
HRSH	**Kfar Ka'horesh**	**7.15**	**109**	P	**Pn**	**21 21 23.4**	**-3.8**
MMLI	**Mount Malkishu**	**7.37**	**110**	Pn	**Pn**	**21 21 30.9**	**+0.6**
ZAF		**7.47**	**142**	P	**Pn**	**21 21 31.4**	**-0.3**
HMDT	**Nahal Hemdat**	**7.53**	**111**	Pn	**Pn**	**21 21 33.5**	**+1.1**
RTMI	**Retamim**	**7.53**	**122**	Pn	**Pn**	**21 21 32.0**	**-0.5**
DSI	**Dead Sea**	**7.74**	**116**	Pn	**Pn**	**21 21 36.5**	**+1.2**
DSI				Sn	**Sn**	**21 23 01.7**	**-0.3**
MZDA	**Masada**	**7.86**	**118**	Pn	**Pn**	**21 21 37.4**	**+0.3**
MZDA				Sn	**Sn**	**21 23 03.3**	**-1.8**
KRMI	**Paran Flat**	**8.13**	**127**	Pn	**Pn**	**21 21 40.5**	**-0.2**
HFRF	**Wahat Farafira**	**8.15**	**173**	P	**Pn**	**21 21 41.5**	**+0.6**
PRNI	**Paran**	**8.17**	**125**	Pn	**Pn**	**21 21 41.6**	**+0.4**
HRFI	**Mount Harif**	**8.39**	**126**	Pn	**Pn**	**21 21 44.3**	**0.0**
MBRI	**Mt Berech**	**8.47**	**128**	Pn	**Pn**	**21 21 46.1**	**+0.7**
EIL	**Elat**	**8.58**	**128**	Pn	**Pn**	**21 21 47.5**	**+0.6**
	0.6nm,0.3s,baz=340,slow=13,SNR=16						
EIL				Sn	**Sn**	**21 23 17.9**	**-4.7**
	3.0nm,0.3s,baz=297,slow=17,SNR=6.8						
EIL	**Elat**	**8.58**	**128**	Pn	**Pn**	**21 21 47.5**	**+0.6**
EIL				Sn	**Sn**	**21 23 17.9**	**-4.7**
EIL	**Elat**	**8.58**	**128**	Pn	**Pn**	**21 21 47.6**	**+0.8**
ASF	**Jabal al Asfar**	**8.62**	**108**	Pn	**Pn**	**21 21 49.0**	**+1.6**
	0.2nm,0.3s,baz=56,slow=15,SNR=2.1						
ASUT		**8.68**	**154**	P	**Pn**	**21 21 48.3**	**+0.1**
TR2		**8.80**	**139**	P	**Pn**	**21 21 49.9**	**0.0**
HKAT	**Jabal Katrina**	**8.84**	**138**	P	**Pn**	**21 21 50.6**	**+0.1**
HHRG	**Al Ghardaqah**	**9.68**	**144**	P	**Pn**	**21 22 01.8**	**-0.1**
HDK1	**Dakhla**	**9.87**	**169**	P	**Pn**	**21 22 05.9**	**+1.3**
MLR	**Muntele Rosu**	**10.26**	**355**	LR	LR	21 26 38.5	
	comp=Z,59nm,18.9s,baz=283,slow=40						
HSFG		**10.40**	**145**	P	**Pn**	**21 22 12.0**	**+0.2**
HDK2	**Wahat Dakhilah**	**11.02**	**172**	P	**Pn**	**21 22 21.6**	**+1.3**
GERES	**GERESS Array B**	**16.85**	**328**	Pn	**Pn**	**21 23 40.1**	**+1.9**
	0.1nm,0.3s,baz=146,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**31.89**	**233**	P	**P**	**21 26 06.9**	**-0.5**
	0.3nm,0.4s,mb3.4,baz=32,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**42.29**	**57**	P	**P**	**21 27 35.7**	**+0.3**
	0.8nm,0.6s,mb3.5,baz=273,slow=7.3,SNR=12						
ZALV	**Zalesovo Beam**	**43.70**	**46**	P	**P**	**21 27 45.8**	**-0.9**
	0.8nm,0.5s,mb3.7,baz=268,slow=9.2,SNR=4.9						
SONM	**Songino Array**	**58.10**	**51**	P	**P**	**21 29 35.8**	**+0.7**
	0.4nm,0.5s,mb3.7,baz=284,slow=7.9,SNR=4.6						

*ISCJB **27** 21:27:21.0±0.8, 4145N±006×4099E±005, h6km±6km, Error ellipse: s-maj=11.2km s-min=4.1km az=153.2*
*CSEM **27** 21:27:20.5, 4144N×4104E, h16km, MD3.4, After ISK*
*ISK **27** 21:27:20.5, 4144N×4104E, h16km, MD3.4*
ISC 27 21:27:22.1±0.7, 4138N±007×4105E±005, h8km±5km, n16, σ1§20/23, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZAR	**Pazar-Rize**	**0.23**	**209**	*e*PG	**Pg**	**21 27 27.1**	**+0.4**
PZAR				*e*SG	**Sg**	**21 27 31.8**	**+2.0**
BCA	**Borcka**	**0.44**	**81**	*e*PG	**Pg**	**21 27 29.9**	**-0.8**
BCA				*e*SG	**Sg**	**21 27 36.2**	**-0.2**
KTUT	**Trabzon**	**1.04**	**248**	*e*PG	**Pg**	**21 27 41.6**	**-0.6**
KTUT				*e*SG	**Sg**	**21 27 56.3**	**+0.6**
EZM	**Erzurum**	**1.49**	**171**	*e*PN	**Pn**	**21 27 47.8**	**-1.3**
GUMT	**Gumushane**	**1.50**	**233**	*e*PN	**Pn**	**21 27 48.0**	**-1.2**
KARS	**Kars**	**1.73**	**116**	*e*PN	**Pn**	**21 27 51.5**	**-0.9**
ESPY	**Espiye-Giresun**	**1.81**	**256**	*e*PN	**Pn**	**21 27 51.3**	**-2.2**
EZC	**Erzincan**	**1.88**	**210**	*e*PN	**Pn**	**21 27 56.5**	**+2.1**
ONI	**Oni**	**2.16**	**55**	P	**Pn**	**21 27 59.2**	**+0.9**
ONI				S	**Sg**	**21 28 31.7**	**+0.3**
AGRB	**Hanur-Agry**	**2.33**	**140**	*e*PN	**Pn**	**21 28 00.3**	**-0.4**
GOR	**Gori**	**2.37**	**74**	P	**Pn**	**21 28 02.1**	**+0.9**
GOR				S	**Sb**	**21 28 36.5**	**+2.1**
PTK	**Pertek**	**2.79**	**208**	*e*PN	**Pn**	**21 28 06.7**	**-0.3**
TBLG	**Delisi**	**2.79**	**82**	P	**Pb**	**21 28 13.1**	**+0.9**
TBLG				S	**Sb**	**21 28 49.5**	**+3.0**
DGRG	**David-gareji**	**3.25**	**87**	P	**Pg**	**21 28 23.0**	**-1.4**
DGRG				S	**Sg**	**21 29 04.9**	**-1.7**
SVRC	**Sivrice-ELAZID**	**3.28**	**205**	*e*PN	**Pn**	**21 28 13.7**	**-0.1**
SVSK	**Karacayir**	**3.41**	**246**	*e*PN	**Pn**	**21 28 15.6**	**+0.1**

IDC 27 21:29:22.9±27.0, 1912S×17350W, h0km, mb4.4/4, mb1 4.5/4, mb1mx4.0/18, mbtmp4.4/4, Error ellipse: s-maj=496.9km s-min=159.4km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.86**	**262**	P	P	**21 36 42.6**	**+0.8**
	2.9nm,0.6s,baz=88,slow=9.4,SNR=5.1						
STKA	**Stephens Creek**	**42.20**	**243**	P	P	21 37 17.8	+0.1
	1.3nm,0.6s,baz=85,slow=6.5,SNR=3.4						
ASAR	**Alice Springs**	**48.96**	**255**	P	P	21 38 11.1	-0.3
	4.8nm,0.5s,baz=94,slow=7.6,SNR=86						
WRA	**Warramunga Arr**	**49.00**	**260**	P	P	21 38 11.1	-0.6
	3.2nm,0.6s,baz=98,slow=8.4,SNR=33						

*SGS **27** 22:00:43.0, 29.13N×3488E, h14km*
*CSEM **27** 22:00:42.5±0.1, 2903N×3499E, h10km, ML3.6, Error ellipse: s-maj=2.9km s-min=1.8km az=115.0*
*ISCJB **27** 22:00:43.1±0.5, 2910N±002×3488E±004, h5km±5km, Error ellipse: s-maj=6.4km s-min=3.0km az=178.3*
*HLW **27** 22:00:43.5, 2906N×3508E, h14km, Mb3.4*
*GII **27** 22:00:43.3±0.

IDC ***27*** *22:27:01.9±1.1, 1758N×121.31E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/20, mbtmp3.6/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/27, Error ellipse: s-maj=40.0km s-min=19.1km az=67.0*

MAN ***27*** *22:27:04, 1771N×12101E, h15km, mb4.2, ML3.1, MS2.8*

ISCJB ***27*** *22:27:05.2±0.7, 1773N±005×12104E±005, h22km±6km, mb3.5/6, MS3.0/2, Error ellipse: s-maj=9.1km s-min=7.2km az=25.1*

ISC 27 22:27:04.9±0.8, 1771N±005×12109E±004, h9km±6km, n18, σ1§17/19, mb3.5/6, MS3.0/2, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.36**	**261**	*e*P		**Pg**	**22 27 11.6**	**-0.5**
ABRA				*e*S		**Sg**	**22 27 16.5**	**-0.4**
SIPP	**Brgy, Tapao**	**0.64**	**290**	⇑*i*P		**Sg**	**22 27 27.2**	**+1.7**
PIP	**Pasuquin**	**0.76**	**324**	⇓*i*P		**Pg**	**22 27 19.4**	**-0.1**
CAUP	**Casuyan**	**1.03**	**137**	*e*P		**Pg**	**22 27 25.2**	**+0.4**
SGCP	**Mt. Cagua**	**1.05**	**60**	*e*P		**Pg**	**22 27 24.5**	**-0.6**
PALP	**Palanan**	**1.43**	**117**	⇑*e*P		**Pn**	**22 27 30.4**	**-0.6**
PALP				*i* S		**Sn**	**22 27 52.2**	**+2.3**
BOLP	**Bolinao**	**1.73**	**221**	*e*P		**Pn**	**22 27 33.2**	**-2.0**
BALP	**Baler**	**2.01**	**166**	*e*P		**Pn**	**22 27 39.3**	**+0.3**
SCZP	**Santa Cruz**	**2.23**	**211**	*e*P		**Pn**	**22 27 41.4**	**-0.6**
LUBP	**Lubang**	**4.03**	**192**	*e*P		**Pn**	**22 28 08.9**	**+2.0**
KSRS	**Korea Array**	**20.57**	**16**	P		**P**	**22 31 43.6**	**-0.4**
	1.3nm,0.5s,baz=197,slow=11,SNR=4.2							
CMAR	**Chiang Mai Arr**	**21.07**	**275**	P		**P**	**22 31 50.9**	**+1.4**
	1.6nm,0.6s,mb3.5,baz=84,slow=8.3,SNR=13							
JHJ	**Hachijo jima 2**	**22.76**	**44**	LR		LR	22 38 52.9	
	comp=Z,62nm,19.4s,MS3.1,baz=111,slow=31							
SONM	**Songino Array**	**32.37**	**341**	P		**P**	**22 33 35.4**	**+0.7**
	0.4nm,0.4s,mb3.6,baz=164,slow=9.2,SNR=3.0							
SONM				LR		LR	22 48 56.5	
	comp=Z,24nm,19.3s,MS2.9,baz=304,slow=40							
WRA	**Warramunga Arr**	**39.61**	**160**	P		**P**	**22 34 32.8**	**-4.2**
	0.3nm,0.6s,mb3.2,baz=340,slow=9.0,SNR=2.3							
ASAR	**Alice Springs**	**42.98**	**163**	P		**P**	**22 35 02.5**	**-2.2**
	0.3nm,0.4s,mb3.4,baz=340,slow=7.2,SNR=5.7							
MKAR	**Makanchi Array**	**43.11**	**321**	P		**P**	**22 35 05.7**	**+0.3**
	1.0nm,0.8s,mb3.6,baz=102,slow=9.4,SNR=8.7							
ZALV	**Zalesovo Beam**	**45.72**	**331**	P		**P**	**22 35 24.9**	**-1.3**
	0.4nm,0.4s,mb3.7,baz=137,slow=5.3,SNR=3.1							

CSEM ***27*** *22:30:28.4±0.2, 5154N×16.11E, h1km, ML3.1/4, Error ellipse: s-maj=3.2km s-min=1.6km az=28.0*

ISCJB ***27*** *22:30:28.4±0.8, 5142N±004×1601E±004, h0km, Error ellipse: s-maj=6.5km s-min=3.2km az=24.9*

PRU ***27*** *22:30:29.6, 5147N×1610E, h0km*

WAR ***27*** *22:30:29.6, 5150N×1609E, Mw2.4*

NEIC ***27*** *22:30:31.2±1.4, 5137N×1595E, h5km, ML2.5(SZGRF), Error ellipse: s-maj=15.1km s-min=6.7km az=187.0*

VIE ***27*** *22:30:32.3±0.8, 5130N×1588E, h0km, ML2.5/2, Error ellipse: s-maj=5.3km s-min=4.5km az=178.0, Suspected Mining induced.*

ISC 27 22:30:28.4±0.8, 5151N±004×1608E±004, h0km, n25, σ0§92/43, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**169**	*e*Pg		**Pg**	**22 30 41.9**	**+0.4**
KSP				*e*Sg		**Sg**	**22 30 51.4**	**+1.0**
KSP	**Ksiaz**	**0.68**	**169**	*e*Pg		**Pg**	**22 30 41.9**	**+0.4**
KSP				*e*Sg		**Sg**	**22 30 51.2**	**+0.9**
UPC	**Upice**	**1.01**	**182**	*e*PG		**Pg**	**22 30 47.9**	**+0.2**
DPC	**Dobruska-Polom**	**1.17**	**172**	*e*PG		**Pg**	**22 30 50.6**	**-0.3**
DPC				*e*SG		**Sg**	**22 31 04.9**	**-1.2**
	comp=Z,31nm,0.5s							
PVCC	**Panska Ves**	**1.37**	**225**	*e*PG		**Pg**	**22 30 55.3**	**+0.6**
BRG	**Berggiesshubel**	**1.49**	**245**	Pg		**Pg**	**22 30 57.1**	**+0.2**
BRG				Sg		**Sg**	**22 31 17.3**	**+1.1**
BRG	**Berggiesshubel**	**1.49**	**245**	P		**Pg**	**22 30 57.1**	**+0.2**
BRG				SG		**Sg**	**22 31 17.3**	**+1.1**
	comp=Z,30nm,0.4s							
PRU	**Pruhonice**	**1.81**	**213**	*e*PG		**Pg**	**22 31 02.3**	**-0.8**
PRU				*e*SG		**Sg**	**22 31 26.5**	**-0.1**
	comp=Z,20nm,0.4s							
CLL	**Collm**	**1.94**	**265**	*e*Pn		**Pn**	**22 31 02.0**	**-0.6**
CLL				*e*Pg		**Pg**	**22 31 05.0**	**-0.6**
CLL				*ex*		x	22 31 26.0	
CLL				*i* Sg		**Sg**	**22 31 31.2**	**+0.6**
	comp=Z,10.0nm,0.6s							
OKC	**Ostrava-Krasne**	**2.13**	**141**	*e*PG		**Pg**	**22 31 08.1**	**-1.1**
OKC				*e*SG		**Sg**	**22 31 32.3**	**-4.5**
	comp=Z,9.1nm,0.4s							
VRAC	**Vranov**	**2.23**	**171**	*e*Pn		**Pn**	**22 31 06.3**	**-0.3**
KRUC	**Moravsky**	**2.46**	**175**	P		**Pn**	**22 31 10.8**	**+1.0**
TANN	**Tannenbergstha**	**2.54**	**246**	Pn		**Pn**	**22 31 11.3**	**+0.5**
WERD	**Werda**	**2.61**	**247**	Pn		**Pn**	**22 31 11.6**	**-0.2**
OJC	**Ojcow**	**2.69**	**117**	P		**Pn**	**22 31 19.2**	**+6.3**
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN		**Pn**	**22 31 15.9**	**+0.5**
KHC				*e*PG		**Pg**	**22 31 22.6**	**-0.8**
KHC				*e*SN		**Sn**	**22 31 49.9**	**-0.7**
KHC				*e*SG		**Sg**	**22 31 59.5**	**-1.1**
	comp=Z,7.4nm,0.5s							
MOX	**Moxa**	**2.95**	**255**	*e*PG		**Pg**	**22 31 24.6**	**-0.3**
MOX				*e*SG		**Sg**	**22 32 04.5**	**+1.5**
ROTZ	**Rotzenmuhle**	**3.02**	**236**	Sg		**Sg**	**22 32 04.1**	**-1.3**
GEC2	**GERESS Array S**	**3.08**	**211**	Pn		**Pn**	**22 31 19.2**	**+1.0**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*PG		**Pg**	**22 31 27.7**	**-2.7**
MODS				*e*SG		**Sg**	**22 32 14.0**	**+1.7**
KOLL	**Kolacno**	**3.29**	**152**	*e*SG		**Sg**	**22 32 16.2**	**+2.0**
VYHS	**Vyhne**	**3.50**	**148**	*e*PG		**Pg**	**22 31 36.2**	**+0.6**
VYHS				*e*SG		**Sg**	**22 32 21.6**	**+0.6**
CONA	**Conrad Observa**	**3.59**	**182**	⇑*i*Pn		**Pn**	**22 31 26.3**	**+1.0**
	comp=Z,0.3nm,0.2s							
CONA				⇓*e*Pg		**Pg**	**22 31 36.9**	**-0.3**
	comp=Z,1.7nm,0.4s							
CONA				⇑*e*Sg		**Sg**	**22 32 22.8**	**-0.9**
	comp=Z,7.7nm,0.4s							
GRA1	**Grafenberg Arr**	**3.59**	**241**	Sg		**Sg**	**22 32 23.4**	**-0.3**
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*PG		**Pg**	**22 31 42.8**	**-0.5**
STHS				*e*SG		**Sg**	**22 32 33.0**	**-1.0**

IDC 27 22:36:24.6±3.7, 508N×9489E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/20, mbtmp3.5/5, Error ellipse: s-maj=156.2km s-min=22.1km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.87**	**16**	Pn		Pn	22 39 48.6	+6.0
	baz=200,slow=14,SNR=2.6							
MKAR	**Makanchi Array**	**42.96**	**347**	P		P	22 44 25.4	+0.1
	0.5nm,0.5s,baz=165,slow=7.3,SNR=9.1							
SONM	**Songino Array**	**43.73**	**11**	P		P	22 44 31.5	0.0
	0.4nm,0.7s,baz=178,slow=6.9,SNR=3.4							
WRA	**Warramunga Arr**	**46.06**	**124**	P		P	22 44 50.6	0.0
	0.3nm,0.6s,baz=302,slow=9.3,SNR=2.9							
ASAR	**Alice Springs**	**47.58**	**129**	P		P	22 45 02.3	-0.1
	0.2nm,0.5s,baz=296,slow=7.7,SNR=3.8							
ZALV	**Zalesovo Beam**	**49.41**	**352**	P		P	22 45 15.8	-0.2
	0.8nm,0.5s,baz=175,slow=8.2,SNR=5.0							

ISCJB ***27*** *23:37:02.6±0.6, 2217N±005×9413E±005, h36km±6km, mb4.2/27, MS3.2/3, Error ellipse: s-maj=10.3km s-min=4.3km az=40.4*

BJI ***27*** *23:37:03.1, 2210N×9420E, h46km, mB4.5, mb4.4*

LDG ***27*** *23:37:03.3±0.1, 2230N×9407E, h33km, Mb4.4/11, Ms3.1/1, Error ellipse: s-maj=8.3km s-min=6.2km az=31.0*

IDC ***27*** *23:37:04.6±0.6, 2212N×9416E, h40km±3km, mb3.9/13, mb1 4.0/14, mb1mx3.9/24, mbtmp3.9/14, ML4.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/21, Error ellipse: s-maj=34.0km s-min=11.1km az=54.0*

NEIC ***27*** *23:37:05.2±0.4, 2214N×9420E, h47km±3km, mb4.2/13, Error ellipse: s-maj=8.9km s-min=3.4km az=218.0*

ISC 27 23:37:05.1±0.5, 2220N±005×9419E±005, h42km±4km, h43km±1.4km: pP-P, n84, σ0§98/96, mb4.2/27, MS3.2/3, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.58**	**355**	*e*P		**Pn**	**23 37 45.0**	**+0.5**
IMP				*e*S		**Sn**	**23 38 16.0**	**+1.4**
CHG	**Chiang Mai**	**5.59**	**126**	PG		**Pn**	**23 38 24.9**	**-0.8**
CHG				SG		**Sn**	**23 39 43.9**	**+15**
CHTO	**Chiang Mai**	**5.59**	**126**	*e*Pn		**Pn**	**23 38 25.1**	**-0.6**
	55nm,0.9s							
CHTO						Sn	**23 39 27.9**	**-0.8**
CM31	**Chiang Mai Arr**	**5.81**	**129**	*e*Pn		**Pn**	**23 38 28.3**	**-0.5**
	19nm,0.6s							
CM31						Sn	**23 39 32.0**	**-2.2**
CMAR	**Chiang Mai Arr**	**5.81**	**129**	P		**Pn**	**23 38 28.4**	**-0.4**
	3.6nm,0.3s,baz=308,slow=14,SNR=119							
CMAR				S		**Sn**	**23 39 43.9**	**+10**
	baz=281,slow=25,SNR=2.2							
CMAR				LR		LR	23 41 14.6	
	comp=Z,115nm,21.9s,baz=290,slow=43							
BDT	**Bhumibol Dam**	**6.70**	**137**	P		**Pn**	**23 38 41.5**	**+0.5**
	29nm,1.0s							
ODAN	**Odare**	**7.74**	**308**	*e*Pn		**Pn**	**23 38 56.4**	**+1.2**
ODAN				*e*Sn		**Sn**	**23 40 20.7**	**-0.8**
	33nm,0.3s							
TAPN	**Taplejung**	**7.81**	**312**	*e*Pn		**Pn**	**23 38 57.1**	**+0.9**
TAPN				*e*Sn		**Sn**	**23 40 23.2**	**-0.1**
	228nm,1.0s							
LSA	**Lhasa**	**7.95**	**341**	*e*Pn		**Pn**	**23 38 59.5**	**+1.4**
	15nm,0.6s							
LSA				*e*Sn		**Sn**	**23 40 25.7**	**-1.1**
RAMN	**Ramite**	**8.37**	**306**	*e*Pn		**Pn**	**23 39 05.9**	**+2.0**
NST	**Nakhon Sawan**	**8.59**	**138**	P		**Pn**	**23 39 09.0**	**+2.1**
JIRN	**Jiri**	**9.07**	**308**	*e*Pn		**Pn**	**23 39 14.3**	**+0.8**
JIRN				*e*Sn		**Sn**	**23 40 52.7**	**-1.5**
	29nm,0.3s							
GUN	**Gumba**	**9.44**	**309**	*e*Pn		**Pn**	**23 39 19.6**	**+1.1**
GUN				*e*Sn		**Sn**	**23 41 02.1**	**-1.2**
	69nm,0.7s							
PKI	**Pulchoki**	**9.60**	**306**	*e*Pn		**Pn**	**23 39 21.7**	**+1.0**
PKI				*e*Sn		**Sn**	**23 41 06.0**	**-1.2**
	22nm,0.5s							
KKN	**Kakani**	**9.81**	**306**	*e*Pn		**Pn**	**23 39 25.5**	**+1.9**
KKN				*e*Sn		**Sn**	**23 41 10.4**	**-2.1**
GKN	**Gorkha**	**10.40**	**306**	*e*Pn		**Pn**	**23 39 31.5**	**-0.3**
GKN				*e*Sn		**Sn**	**23 41 24.5**	**-2.5**
	24nm,0.3s							
KOLN	**Koldanda**	**11.09**	**302**	*e*Pn		**Pn**	**23 39 41.1**	**0.0**
KOLN				*e*Sn		**Sn**	**23 41 39.1**	**-4.7**
	29nm,0.5s							
DANN	**Dangsing**	**11.25**	**305**	*e*Pn		**Pn**	**23 39 43.4**	**+0.1**
DANN				*e*Sn		**Sn**	**23 41 44.2**	**-3.5**
	18nm,0.4s							
HYB	**Hyderabad**	**15.46**	**255**	*i* P		**Pn**	**23 40 46.5**	**+6.1**
HYB				*e*S		**Sn**	**23 43 25.0**	**-5.6**
LZH	**Lanzhou**	**16.19**	**29**	*e*P		**Pn**	**23 40 47.0**	**-2.6**
LZH					AMB	AMB		
	comp=Z,29nm,1.5s							
LZH					AMB	AMB		
	comp=Z,202nm,7.5s							
XAN	**Xi'an**	**17.53**	**45**	P		**Pn**	**23 41 03.8**	**-2.5**
XAN				AP		pP	23 41 14.0	-3.2
XAN					AMB	AMB		
	comp=Z,4.0nm,0.9s							
XAN					AMB	AMB		
	comp=Z,130nm,6.7s							
WMQ	**Urumqi**	**22.23**	**348**	*e*P		**P**	**23 42 02.5**	**+4.5**
WMQ					AMB	AMB		
	comp=Z,24nm,1.0s,mb4.6							
KBL	**Kabul**	**25.24**	**305**	*e*P		**P**	**23 42 27.4**	**+0.2**
	comp=Z,8.3nm,0.8s,mb4.3							
NACB	**Ninganchiao**	**25.26**	**80**	Pn		**P**	**23 42 26.8**	**-0.7**
TKM2	**Tokmak 2**	**25.82**	**327**	*e*P		**P**	**23 42 32.7**	**+0.3**
	comp=Z,2.0nm,0.6s,mb3.8							
UCH	**Uchtor**	**25.88**	**325**	*e*P		**P**	**23 42 34.8**	**+1.8**
	comp=Z,1.7nm,0.3s,mb4.0							
AAK	**Ala-Archa**	**26.18**	**326**	*e*P		**P**	**23 42 37.2**	**+1.6**
	comp=Z,2.4nm,0.7s,mb3.8							
AML	**Almayashu**	**26.26**	**324**	*e*P		**P**	**23 42 35.8**	**-0.6**
	comp=Z,2.4nm,0.6s,mb3.9							
MK31	**Makanchi Array**	**26.36**	**341**	*e*P		**P**	**23 42 37.6**	**+0.4**
MK31				*e*PcP		PcP	23 46 01.7	-0.5
MKAR	**Makanchi Array**	**26.36**	**341**	P		**P**	**23 42 37.4**	**+0.2**
	comp=Z,5.2nm,0.7s,mb4.2,baz=150,slow=10,SNR=45							
MKAR					pP	pP	23 42 49.3	+0.8
	comp=Z,9.7nm,0.9s,baz=147,slow=10,SNR=9.2							
MKAR					PcP	PcP	23 46 01.9	-0.3
	comp=Z,0.5nm,0.5s,baz=123,slow=1.2,SNR=4.3							
MKAR					pPcP		23 46 15.0	
	comp=Z,0.5nm,0.6s,baz=75,slow=3.9,SNR=3.6							
MKAR	**Makanchi Array**	**26.36**	**341**	P		**P**	**23 42 37.4**	**+0.2**
MKAR					pP	pP	23 42 49.3	+0.8
MKAR					PcP	PcP	23 46 01.9	-0.3
MKAR					pPcP		23 46 15.0	
EKS2	**Erkin-Say**	**26.58**	**325**	*e*P		**P**	**23 42 39.8**	**+0.6**
SONM	**Songino Array**	**27.39**	**18**	P		**P**	**23 42 48.4**	**+1.9**
	comp=Z,0.3nm,0.5s,mb3.1,baz=214,slow=6.6,SNR=4.6							
SONM					ScP	ScP	23 49 39.7	-2.1
	comp=Z,0.6nm,0.7s,baz=198,slow=4.2,SNR=5.6							
ULN	**Ulaanbaatar**	**27.61**	**19**	*e*P		**P**	**23 42 47.9**	**-0.5**
KURK	**Kurchatov**	**30.96**	**341**	P		**P**	**23 43 17.4**	**-0.7**
	comp=Z,2.2nm,0.5s,mb4.2,baz=152,slow=8.4,SNR=9.7							
KURK					pP	pP	23 43 30.1	+0.5
	comp=Z,2.8nm,0.7s,baz=151,slow=8.4,SNR=4.7							
KURK					PcP	PcP	23 46 13.3	-0.3
	comp=Z,2.0nm,0.6s,baz=167,slow=2.2,SNR=10							
KURK					pPcP		23 46 25.7	
	comp=Z,1.3nm,0.7s,baz=162,slow=2.0,SNR=5.1							
KURK					ScP	ScP	23 49 52.4	-0.8
	comp=Z,0.9nm,0.6s,baz=154,slow=2.6,SNR=5.5							
KURK	**Kurchatov**	**30.96**	**341**	*e*P		**P**	**23 43 17.7**	**-0.5**
KURK				*e*		pP	23 43 29.2	-0.3
KURK					pP	pP	23 43 30.1	+0.5
KURK					PcP	PcP	23 46 13.3	-0.3
KURK				*e*PcP		PcP	23 46 13.4	-0.2
KURK					pPcP		23 46 25.7	
KURK					ScP	ScP	23 49 52.4	-0.8
ZAA0	**Zalesovo Array**	**32.49**	**350**	*e*P		**P**	**23 43 31.1**	**-0.4**
ZAA0				*e*		pP	23 43 42.9	0.0
ZALV	**Zalesovo Beam**	**32.49**	**350**	P		**P**	**23 43 30.7**	**-0.8**
	comp=Z,1.9nm,0.4s,mb4.3,baz=162,slow=10,SNR=18							
ZALV					LR	LR	23 56 57.7	
	comp=Z,30nm,18.7s,MS3.0,baz=232,slow=37							
KSRS	**Korea Array**	**32.77**	**55**	LR		LR	23 58 57.1	
	comp=Z,52nm,20.9s,MS3.2,baz=208,slow=40							
BVAR	**Borovoye Array**	**35.75**	**335**	P		**P**	**23 44 00.1**	**+0.3**
	comp=Z,1.3nm,0.7s,mb3.9,baz=146,slow=11,SNR=7.7							
BVAR					PcP	PcP	23 46 26.1	-0.9
	comp=Z,1.3nm,0.8s,baz=172,slow=2.9,SNR=4.5							
BVAR					pPcP		23 46 39.5	
	comp=Z,0.7nm,0.6s,baz=186,slow=1.4,SNR=3.2							
AKTK	**Aktyubinsk**	**39.90**	**324**	P		**P**	**23 44 35.4**	**+0.5**
AKTK					pP	pP	23 44 47.4	+1.0
AKTO	**Aktyubinsk**	**39.90**	**324**	P		**P**	**23 44 35.4**	**+0.5**
	comp=Z,2.6nm,0.5s,mb4.2,baz=119,slow=9.0,SNR=10							
AKTO					pP	pP	23 44 47.4	+1.0
	comp=Z,1.6nm,0.6s,baz=146,slow=8.5,SNR=2.9							
MJAR	**Matsushiro Arr**	**40.59**	**59**	LR		LR	00 01 52.1	
	comp=Z,55nm,19.6s,MS3.4,baz=250,slow=37							
BR131	**Keskin Array S**	**53.80**	**304**	*e*P		**P**	**23 46 23.9**	**+0.2**
AKASG	**Malin Array Be**	**57.36**	**317**	P		**P**	**23 46 48.5**	**-0.6**
	comp=Z,2.2nm,0.6s,mb4.4,baz=84,slow=6.1,SNR=8.6							
AKASG					pP	pP	23 46 59.8	-1.3
	comp=Z,1.6nm,0.5s,baz=88,slow=6.1,SNR=3.8							
WRA	**Warramunga Arr**	**57.38**	**134**	P		**P**	**23 46 48.3**	**-1.2**
	comp=Z,2.0nm,1.1s,mb4.1,baz=321,slow=7.4,SNR=3.7							
WRA					pP	pP	23 47 00.8	-0.8
	comp=Z,3.1nm,0.7s,baz=322,slow=7.4,SNR=7.9							
TIRR	**Tirgusor**	**57.69**	**309**	P		**P**	**23 46 50.6**	**-0.9**
ASAR	**Alice Springs**	**59.76**	**137**	P		**P**	**23 47 05.5**	**-0.5**
	comp=Z,1.1nm,0.8s,mb3.9,baz=324,slow=7.6,SNR=8.2							
ASAR					pP	pP	23 47 17.7	-0.5
	comp=Z,1.7nm,0.8s,baz=322,slow=7.1,SNR=9.4							
KWP	**Kalwaria**	**61.52**	**315**	P		**P**	**23 47 16.8**	**-1.0**
ARCES	**ARCESS Array B**	**61.96**	**338**	P		**P**	**23 47 20.1**	**-0.2**
	comp=Z,2.3nm,0.7s,mb4.4,baz=98,slow=6.5,SNR=11							
ARCES					pP	pP	23 47 31.8	-0.8
	comp=Z,2.6nm,0.7s,baz=69,slow=7.9,SNR=2.0							
PSZ	**Piszkesteto**	**63.47**	**314**	*e*P		**P**	**23 47 30.7**	**-0.1**
PSZ				*e*			23 47 47.5	
NB2	**NORSAR Subarra**	**67.46**	**328**	P		**P**	**23 47 55.7**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=84,slow=6.5							
NOA	**NORSAR Array B**	**67.46**	**328**	P		**P**	**23 47 55.6**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.2,baz=85,slow=6.6,SNR=7.2							
NOA					pP	pP	23 48 07.3	-1.4
	comp=Z,1.2nm,0.7s,baz=85,slow=6.2,SNR=3.3							
GERES	**GERESS Array B**	**67.47**	**315**	P		**P**	**23 47 57.2**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.2,baz=75,slow=5.7,SNR=18							
GERES					pP	pP	23 48 07.5	-1.4
	comp=Z,1.5nm,0.7s,baz=80,slow=5.7,SNR=6.4							
CDF	**Champ du Feu**	**71.74**	**316**	*e*P		**P**	**23 48 22.8**	**-0.1**
PGF	**Pioggiola**	**71.91**	**309**	*e*P		**P**	**23 48 24.1**	**0.0**
LPG	**La Plagne**	**72.77**	**313**	*e*P		**P**	**23 48 29.7**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.4							
LPG	**La Plagne**	**72.77**	**313**	*e*P		**P**	**23 48 29.7**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.3							
LPL	**La Plagne**	**72.78**	**313**	*e*P		**P**	**23 48 29.8**	**+0.6**
	comp=Z,3.6nm,0.6s,mb4.2							
LPL	**La Plagne**	**72.78**	**313**	*e*P		**P**	**23 48 29.8**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.2							
FRF	**La Foret Royal**	**73.33**	**311**	*e*P		**P**	**23 48 32.5**	**0.0**
	comp=Z,31nm,1.0s,mb4.9							
FRF	**La Foret Royal**	**73.33**	**311**	*e*P		**P**	**23 48 32.5**	**0.0**
	comp=Z,15nm,1.0s,mb4.9							
ORIF	**Oris-en-Rattie**	**73.51**	**312**	*e*P		**P**	**23 48 33.3**	**-0.3**
	comp=Z,20nm,1.2s,mb4.6							
ORIF	**Oris-en-Rattie**	**73.51**	**312**	*e*P		**P**	**23 48 33.3**	**-0.3**
	comp=Z,9.9nm,1.2s,mb4.6							
VIVF	**Saint-Julien-l**	**74.36**	**312**	*e*P		**P**	**23 48 38.4**	**-0.1**
SMF	**Signal de Mont**	**74.43**	**314**	*e*P		**P**	**23 48 38.8**	**-0.1**
SSF	**Saint Saulge**	**74.54**	**315**	*e*P		**P**	**23 48 39.4**	**-0.1**
	comp=Z,7.0nm,0.9s,mb4.3							
SSF	**Saint Saulge**	**74.54**	**315**	*e*P		**P**	**23 48 39.4**	**-0.1**
	comp=Z,3.5nm,0.9s,mb4.3							
AVF	**Avril sur Loir**	**74.71**	**315**	*e*P		**P**	**23 48 40.4**	**-0.1**
TCF	**Toulx Ste Croi**	**75.61**	**314**	*e*P		**P**	**23 48 46.0**	**+0.3**
RJF	**Les Rejaudoux**	**76.37**	**313**	*e*P		**P**	**23 48 50.6**	**+0.5**
	comp=Z,3.5nm,0.6s,mb4.2							
RJF	**Les Rejaudoux**	**76.37**	**313**	*e*P		**P**	**23 48 50.6**	**+0.5**
	comp=Z,1.8nm,0.6s,mb4.2							
LDF	**La Druitiere**	**76.43**	**317**	*e*P		**P**	**23 48 50.0**	**-0.3**
MTLF	**Montolieu**	**76.49**	**311**	*e*P		**P**	**23 48 50.9**	**+0.1**
FLN	**La Foliniere**	**76.60**	**317**	*e*P		**P**	**23 48 51.4**	**+0.1**
SGMF	**Saint Gilles**	**78.07**	**317**	*e*P		**P**	**23 48 59.6**	**+0.1**
	comp=Z,6.5nm,0.7s,mb4.4							
SGMF	**Saint Gilles**	**78.07**	**317**	*e*P		**P**	**23 48 59.6**	**+0.1**
	comp=Z,3.3nm,0.6s,mb4.4							
ROSF	**Rostrenen**	**78.49**	**318**	*e*P		**P**	**23 49 01.9**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.2							
ROSF	**Rostrenen**	**78.49**	**318**	*e*P		**P**	**23 49 01.9**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.2							
INK	**Inuvik**	**83.29**	**16**	P		**P**	**23 49 28.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**87.39**	**283**	P		**P**	**23 49 49.4**	**+0.9**
	comp=Z,1.1nm,0.9s,mb4.1,baz=69,slow=4.2,SNR=6.8							
TORD	**Torodi Ar. Bea**	**87.39**	**283**	P		**P**	**23 49 49.4**	**+0.9**
TXAR	**Lajitas Array**	**125.96**	**19**	PKP	PKPdf		23 56 02.0	-1.2
	comp=Z,0.1nm,0.5s,baz=46,slow=2.6,SNR=3.9							
TXAR					pPKP	pPKPdf	23 56 15.1	-1.2
	comp=Z,0.2nm,0.6s,baz=178,slow=2.1,SNR=3.2							
SDV	**Santo Domingo**	**145.71**	**333**	PKPbc	PKPbc		23 56 39.6	-0.7
	comp=Z,6.6nm,0.7s,baz=38,slow=3.6,SNR=11							
SDV					pPKPbc	pPKPbc	23 56 52.6	-0.7
	comp=Z,7.9nm,0.6s,baz=9.2,slow=3.3,SNR=7.5							

IDC 28 00:21:48.5±2.7, 2104N×12256E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.6/5, Error ellipse: s-maj=236.2km s-min=20.1km az=63.0, Tiaran region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.49**	**318**	P		P	00 29 37.5	+0.2
	0.3nm,0.4s,baz=106,slow=9.1,SNR=12							

YOJ	**Yonaguni jima** baz=119	**0.72 120**	*i* P	Pb	00 39 52.5	0.0
YOJ	baz=119		S	Sb	00 40 02.6	+0.5
EHP	**Heping Village** baz=226	**0.73 226**	*e*P	Pb	00 39 53.1	+0.4
TAP1	**Taipei** baz=287	**0.76 287**	*e*P	Pb	00 39 54.7	+1.6
TAP1	baz=287		*e*S	Sb	00 40 05.6	+2.5
TWY	**Chenhua** baz=305	**0.79 305**	*e*P	Pb	00 39 55.0	+1.3
TWY	baz=305		*e*S	Sb	00 40 06.8	+2.6
PCYT	**Pengchaiyu** baz=344	**0.83 344**	*e*P	Pb	00 39 55.0	+0.5
TWS1	**Kuangyinshan** baz=289	**0.86 289**	*e*P	Pb	00 39 56.3	+1.3
TWS1	baz=289		*e*S	Sb	00 40 08.7	+2.5
NSK	**Sanguang** baz=261	**0.89 261**	⇓P	Pb	00 39 55.8	+0.4
NSK	baz=261		*e*S	Sb	00 40 06.9	+0.1
NNS	**Nan Shan** baz=235	**0.94 246**	*e*P	Pb	00 39 57.2	+0.9
NNS	baz=235		*e*S	Sb	00 40 09.5	+1.1
TWD	**Chiawan** baz=222	**0.99 222**	*e*P	Pb	00 39 57.2	0.0
WHF	**Hehuan Shan** baz=235	**1.17 235**	P	Pn	00 40 01.2	+1.2
WHF	baz=235		*e*S	Sb	00 40 16.5	+1.3
TWT	**Tachien** baz=233	**1.19 242**	*e*P	Pn	00 40 01.9	+1.8
TWT	baz=233		*e*S	Sb	00 40 18.3	+2.8
NSTT	**Nanjuang** baz=247	**1.21 261**	*e*P	Pn	00 40 02.4	+1.9
NSTT	baz=247		*e*S	Sb	00 40 19.5	+3.2
HSN	**Hsinchu** baz=271	**1.23 269**	*e*P	Pn	00 40 00.9	+0.1
ESL	**Shilin** baz=204	**1.29 219**	*e*P	Pn	00 40 02.3	+0.7
IRIF	**Iriomote-Funau**	**1.37 110**	P	Pn	00 40 04.4	+1.7
IRIF			*e*S	Sn	00 40 21.9	+1.5
TWQ1	**Liyutan** baz=251	**1.48 252**	*e*P	Pn	00 40 07.6	+3.3
TWQ1	baz=251		*e*S	Sn	00 40 27.4	+4.2
HATJ	**Hateruma jima**	**1.55 119**	*e*S	Sn	00 40 27.1	+2.2
EHY	**Hungye** baz=215	**1.60 215**	*e*P	Pn	00 40 06.3	+0.5
SMLT	**Sun Moon Lake** baz=235	**1.60 234**	*e*P	Pn	00 40 07.5	+1.6
TYC	**Yuchr** baz=236	**1.62 236**	*e*P	Pn	00 40 09.2	+3.1
TYC	baz=236		*e*S	Sn	00 40 31.3	+4.8
TCU	**Taichung** baz=239	**1.64 246**	*e*P	Pn	00 40 10.3	+3.8
TCU	baz=239		*e*S	Sn	00 40 33.6	+6.5
JKRS	**Kuro-shima**	**1.65 110**	*e*S	Sn	00 40 30.5	+3.3
JIJ	**Ishigaki jima**	**1.72 105**	P	Pn	00 40 07.1	-0.4
JIJ			*e*S	Sn	00 40 30.1	+1.1
TWF1	**Yuli** baz=201	**1.74 213**	*e*P	Pn	00 40 08.4	+0.7
TWF1	baz=201		*e*S	Sn	00 40 32.6	+3.1
WNT	**Mingjian** baz=258	**1.76 238**	*e*P	Pn	00 40 11.7	+3.6
YUS	**Yu-Shan** baz=209	**1.82 224**	P	Pn	00 40 11.9	+2.9
YUS	baz=209		*e*S	Sn	00 40 35.1	+3.5
ALS	**Alishan** baz=211	**1.90 227**	*e*P	Pn	00 40 13.3	+3.3
CHN5	**Tsauling** baz=231	**1.93 231**	*e*P	Pn	00 40 14.6	+4.1
CHN5	baz=231		*e*S	Sn	00 40 40.2	+5.9
CHN2	**Minshiung** baz=251	**2.12 233**	*e*P	Pn	00 40 15.4	+2.4
CHN4	**Tsaushan** baz=212	**2.15 227**	*e*P	Pn	00 40 16.4	+2.9
CHN4	baz=212		*e*S	Sn	00 40 45.9	+6.2
WTP	**Ta-pu** baz=210	**2.21 225**	*e*P	Pn	00 40 18.1	+3.8
WTP	baz=210		*e*S	Sn	00 40 46.0	+4.8
TWK	**Hsinying** baz=212	**2.28 228**	*e*P	Pn	00 40 18.9	+3.7
TWK	baz=212		*e*S	Sn	00 40 48.9	+6.0
TWG	**Pinlang** baz=210	**2.30 210**	*e*P	Pn	00 40 16.1	+0.7
CHN1	**Nanshi** baz=226	**2.31 226**	*e*P	Pn	00 40 19.6	+4.0
SGST	**Jiashian** baz=208	**2.35 223**	*e*P	Pn	00 40 19.7	+3.5
SGST	baz=208		*e*S	Sn	00 40 47.2	+2.6
SSD	**Sandimen** baz=203	**2.58 217**	*e*P	Pn	00 40 21.7	+2.3
SCZT	**Fangliau** baz=199	**2.90 213**	*e*P	Pn	00 40 25.7	+2.0

MOS 28 00:42:17.1±0.8, 4398N×4561E, h10km, mb3.6/1, Error ellipse: s-maj=43.4km s-min=9.0km az=47.3, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTKR	**Batakoyurt**	**0.99**	**232**	*e*PG	Pg	00 42 37.2	+1.1
BTKR				*e*S	Sg	00 42 55.1	+6.2
PRTR	**Priterechnaya**	**0.99**	**257**	*e*PG	Pg	00 42 36.6	+0.5
PRTR				*e*S	Sg	00 42 54.2	+5.2
SNJR	**Sundja**	**1.08**	**213**	*e*PG	Pg	00 42 38.5	+0.6
SNJR				*e*S	Sg	00 42 57.2	+5.2
KMSR	**Komsomolskaya**	**1.14**	**238**	*e*PG	Pg	00 42 39.0	+0.1
KMSR				*e*S	Sb	00 42 58.1	+4.5
ARNR	**Ardon**	**1.25**	**231**	*e*PG	Pg	00 42 40.6	-0.5
ARNR				*e*S	Sb	00 43 01.1	+4.2
KORR	**Kora**	**1.44**	**232**	*e*PG	Pg	00 42 43.0	-1.6
KORR				*e*S	Sn	00 43 05.2	+3.1
LSNR	**Lesken**	**1.48**	**242**	*e*PG	Pg	00 42 43.7	-1.9
LSNR				*e*S	Sn	00 43 06.3	+3.1
LACR	**Lac**	**1.50**	**220**	*e*PG	Pg	00 42 44.0	-1.9
LACR				*e*S	Sn	00 43 07.0	+3.3
ZEI	**Tsey**	**1.74**	**226**	*e*PN	Pn	00 42 47.0	-0.3
ZEI				*e*S	Sn	00 43 12.2	+2.6
DIGR	**Digorskoe uzhe**	**1.83**	**234**	*e*PN	Pn	00 42 48.3	-0.3
DIGR				*e*S	Sn	00 43 14.7	+2.9

GUC 28 01:11:30.3±0.9, 2423S×6943W, h82km±13km, MD3.6, ML3.3, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**0.97**	**246**	*e*P	Pn	01 11 50.5	+1.3
CPN1				*i* S	Sn	01 12 05.0	+1.8
ANCH	**Antofagasta**	**1.05**	**301**	*e*P	Pn	01 11 52.8	+2.8
ANCH				*i* S	Sn	01 12 07.9	+3.1
ANCH				AML	AML	01 12 09.2	
	comp=N,1μm,0.2s						
CEN1	**Los Morros**	**1.09**	**320**	*e*P	Pn	01 11 50.5	-0.1
CEN1				*i* S	Sn	01 12 05.9	+0.1
CEN1				AML	AML	01 12 07.9	
	comp=N,500nm,0.6s						
LVC	**Limon Verde**	**1.68**	**17**	⇓*e*P	Pn	01 11 59.6	+1.5
LVC				*i* S	Sn	01 12 20.9	+1.9
LVC				AML	AML	01 12 22.8	
	comp=E,553nm,0.2s						
TOCH	**Tocopilla**	**2.24**	**341**	*e*P	Pn	01 12 05.3	-0.2

NIED ***28*** *01:19:00, 3460N×14280E, h5km, Mw3.4 Best double couple: M0 1.64000×10^14 NP1:φs202.00000°, δ66.00000°, λ-103.00000°. NP2:φs51.00000°, δ27.00000°, λ-64.00000°.*

JMA 28 01:19:04.5±0.4, 3460N×14277E, h11km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.48**	**273**	P	Pn	01 19 31.0	0.0
BSO1				*e*S	Sn	01 19 48.9	-1.5
BSO2	**Boso 2**	**1.67**	**276**	*e*S	Sn	01 19 56.8	+1.8
BSO3	**Boso 3**	**1.87**	**277**	P	Pn	01 19 37.7	+1.2
BSO3				*e*S	Sn	01 20 02.0	+1.9
BSO4	**Boso 4**	**2.04**	**282**	P	Pn	01 19 40.1	+1.4
BSO4				*e*S	Sn	01 20 06.4	+2.2
JHO	**Hitachi**	**2.69**	**319**	P	Pn	01 19 48.5	+0.8
JHO				*e*S	Sn	01 20 19.9	-0.4
JOD2	**Odawara 2**	**3.10**	**283**	*e*S	Sn	01 20 30.2	-0.1
JHU	**Hanno**	**3.12**	**295**	*e*S	Sn	01 20 32.1	+1.3
JFK	**Kawauchi**	**3.16**	**331**	P	Pn	01 19 54.2	0.0
JFK				*e*S	Sn	01 20 29.7	-2.1
JAG	**Ashikaga**	**3.26**	**305**	P	Pn	01 19 57.6	+2.0
JAG				*e*S	Sn	01 20 34.9	+0.6
JRY	**Ryogami san**	**3.46**	**295**	*e*S	Sn	01 20 41.6	+2.2
JMM	**Marumori**	**3.63**	**334**	P	Pn	01 20 00.5	-0.1
JMM				*e*S	Sn	01 20 41.6	-1.8
JMK	**Ichinoseki**	**4.52**	**344**	P	Pn	01 20 14.4	+1.6
JMK				*e*S	Sn	01 21 03.3	-2.0

MAN 28 01:29:50, 740N×12212E, h14km, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.44**	**188**	⇓*i*P	Pg	01 30 00.3	+1.4
ZMPH				*i* S	Sg	01 30 06.2	+1.5
IPIL	**Ipil**	**0.59**	**49**	*e*P	Pg	01 30 02.3	+0.7
IPIL				*e*S	Sg	01 30 10.3	+0.8
PAGZ	**Pagadian**	**1.33**	**70**	*e*P	Pn	01 30 15.1	+1.0
PAGZ				*e*S	Sb	01 30 32.9	+1.4

SZGRF ***28*** *01:51:21.5, 2125S×17535W, h33km, Tonga Islands*
ISCJB ***28*** *01:51:37.0±0.3, 2018S±007×17561W±008, h152km, mb4.5/27, Error ellipse: s-maj=11.5km s-min=8.3km az=136.3*
IDC ***28*** *01:51:38.2±0.8, 2015S×17551W, h151km±6km, mb4.2/13, mb1 4.4/14, mb1mx4.3/19, mbtmp4.2/14, Error ellipse: s-maj=15.0km s-min=11.9km az=120.0*
NEIC ***28*** *01:51:38.1±0.2, 2014S×17553W, mb4.7/18, Error ellipse: s-maj=9.8km s-min=6.3km az=137.0*

ISC 28 01:51:38.7±0.3, 2017S±007×17557W±008, h154km, h154km±1.1km; pP-P, n138, σ0.975/54, mb4.5/27, 4C-12D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.20**	**31**	P	**Pn**	**01 53 14.5**	**-7.0**
	42nm,0.3s,baz=207,slow=9.0,SNR=27						
AFI				S	**Sn**	**01 54 25.3**	**-17**
	86nm,0.3s,baz=248,slow=19,SNR=12						
RAO	**Raoul Island**	**9.29**	**193**	S	**Sn**	**01 55 26.1**	**-6.4**
	170nm,0.3s,baz=52,slow=19,SNR=4.6						
RAR	**Rarotonga**	**14.82**	**97**	S	**Sn**	**01 57 33.2**	**-12**
	4.0nm,0.3s,baz=311,slow=19,SNR=2.7						
DZM	**Mont Dzumac**	**16.89**	**260**	*e*P	**Pn**	**01 55 30.2**	**+4.1**
DZM	**Mont Dzumac**	**16.89**	**260**	*e*Pn	**Pn**	**01 55 30.3**	**+4.2**
URZ	**Urewera**	**19.12**	**198**	P	**P**	**01 55 48.8**	**-1.0**
	7.1nm,0.3s,baz=28,slow=8.2,SNR=21						
URZ				S	**S**	**01 59 08.7**	**-10**
	3.3nm,0.3s,baz=80,slow=22,SNR=14						
RPZ	**Rata Peaks**	**26.01**	**202**	P	**P**	**01 56 57.9**	**+0.7**
	67nm,0.6s,mb5.5,baz=62,slow=11,SNR=46						
RPZ				S	**S**	**02 01 17.9**	**+1.4**
	7.5nm,0.8s,baz=15,slow=19,SNR=2.8						
ARMA	**Armidale**	**31.26**	**244**	*e*P	**P**	**01 57 45.0**	**+0.9**
CNB	**Canberra Magne**	**34.30**	**236**	*e*P	**P**	**01 58 10.5**	**+0.1**
CTA	**Charters Tower**	**35.79**	**263**	*e*P	**P**	**01 58 24.5**	**+1.1**
	19nm,0.4s,mb5.1						
CTA	**Charters Tower**	**35.79**	**263**	P	**P**	**01 58 24.6**	**+1.2**
	24nm,0.4s,mb5.1,baz=92,slow=10,SNR=54						
CTAO	**Charters Tower**	**35.79**	**263**	*e*P	**P**	**01 58 24.4**	**+1.1**
	25nm,0.5s,mb5.1						
TOO	**Toolangi**	**37.94**	**234**	*e*P	**P**	**01 58 41.1**	**-0.2**
COEN	**Coen**	**39.84**	**272**	*e*P	**P**	**01 58 58.1**	**+0.7**
	9.1nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**39.98**	**244**	*e*P	**P**	**01 58 58.1**	**-0.3**
	5.0nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**39.98**	**244**	P	**P**	**01 58 58.0**	**-0.4**
	10.0nm,0.8s,mb4.5,baz=87,slow=9.1,SNR=18						
ASAR	**Alice Springs**	**46.81**	**256**	P	**P**	**01 59 52.7**	**-0.5**
	7.9nm,0.7s,mb4.5,baz=88,slow=8.4,SNR=50						
ASAR				PcP	PcP	02 01 24.1	+0.3
	5.0nm,0.6s,baz=105,slow=3.8,SNR=14						
ASAR				ScP	ScP	02 05 05.5	+2.4
	1.5nm,1.0s,baz=88,slow=4.6,SNR=5.0						
ASAR				S	**S**	**02 06 29.9**	**-2.1**
	0.5nm,0.7s,baz=93,slow=17,SNR=4.3						
WB2	**Warramunga Arr**	**46.89**	**261**	*e*P	**P**	**01 59 53.1**	**-0.8**
WRAB	**Tennant Creek**	**46.90**	**261**	*e*P	**P**	**01 59 54.1**	**+0.2**
	8.5nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**46.90**	**261**	P	**P**	**01 59 53.1**	**-0.8**
	5.2nm,0.5s,mb4.4,baz=96,slow=5.1,SNR=50						
WRA				PcP	PcP	02 01 24.4	+0.2
	4.6nm,0.8s,baz=103,slow=3.0,SNR=7.5						
KAKA	**Kakadu**	**50.25**	**270**	*e*P	Px	02 00 04.1	
	7.8nm,0.6s						
FORT	**Forrest**	**51.52**	**246**	*e*P	**P**	**02 00 28.0**	**-0.9**
	24nm,0.7s,mb4.9						
SBA	**Scott Base**	**58.37**	**184**	*e*P	**P**	**02 01 19.0**	**+1.8**
	20nm,0.7s,mb5.1						
VNDA	**Vanda**	**58.45**	**186**	P	**P**	**02 01 18.8**	**+0.9**
	7.8nm,0.7s,mb4.7,baz=1.9,slow=7.9,SNR=60						
VNDA				PcP	PcP	02 02 07.2	+0.4
	3.8nm,0.8s,baz=48,slow=3.4,SNR=5.9						
MBWA	**Marble Bar**	**60.15**	**257**	*e*P	**P**	**02 01 29.5**	**-0.9**
	6.5nm,0.7s,mb4.6						
KLBR	**Kellerberrin**	**60.26**	**244**	*e*P	**P**	**02 01 30.2**	**-0.8**
	14nm,1.0s,mb4.8						
CASY	**Casey**	**65.24**	**205**	*e*P	**P**	**02 02 03.2**	**-0.1**
	13nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**71.32**	**322**	P	**P**	**02 02 41.3**	**-0.3**
	6.7nm,0.7s,mb4.5,baz=155,slow=5.7,SNR=13						
MAJO	**Matsushiro**	**71.32**	**322**	*e*P	**P**	**02 02 42.4**	**+0.8**
	11nm,0.9s,mb4.6						
MAT	**Matsushiro**	**71.32**	**322**	P	**P**	**02 02 42.7**	**+1.1**
PETK	**Petropavlovsk-**	**76.56**	**344**	P	**P**	**02 03 11.7**	**0.0**
	8.5nm,0.7s,mb4.5,baz=117,slow=8.8,SNR=9.0						
KSRS	**Korea Array**	**78.17**	**317**	P	**P**	**02 03 22.8**	**+1.8**
	1.6nm,0.7s,mb3.7,baz=131,slow=5.6,SNR=3.7						
NVAR	**Mina Array Bea**	**79.23**	**42**	P	**P**	**02 03 26.7**	**-0.1**
	2.4nm,0.8s,mb3.9,baz=226,slow=8.6,SNR=6.0						
NVAR				pP	pP	02 04 04.1	-0.8
	4.8nm,1.0s,baz=220,slow=7.8,SNR=5.4						
NVAR	**Mina Array Bea**	**79.23**	**42**	P	**P**	**02 03 26.7**	**-0.1**
NVAR				pP	pP	02 04 04.1	-0.8
TUC	**Tucson**	**80.99**	**51**	*e*P	**P**	**02 03 36.7**	**+0.4**
	1.2nm,0.6s,mb3.7						
TUC				*e*pP	pP	02 04 15.1	+0.4
MAW	**Mawson**	**82.64**	**199**	P	**P**	**02 03 44.2**	**-0.2**
	4.0nm,0.6s,mb4.3,baz=129,slow=6.6,SNR=5.5						
TXAR	**Lajitas Array**	**84.96**	**56**	P	**P**	**02 03 56.6**	**-0.3**
	1.5nm,1.0s,mb3.7,baz=218,slow=7.4,SNR=8.7						
TXAR				pP	pP	02 04 35.0	-0.5
	1.8nm,1.0s,baz=219,slow=5.8,SNR=4.6						
ANMO	**Albuquerque**	**85.43**	**50**	*e*P	**P**	**02 03 58.7**	**-0.3**
	2.9nm,1.1s,mb3.9						
ANMO				*e*pP	pP	02 04 37.9	+0.2
MCK	**McKinley**	**86.17**	**12**	*e*P	**P**	**02 04 01.5**	**-0.5**
	14nm,1.0s,mb4.6						
TPAW	**Teton Pass**	**86.67**	**41**	*e*P	**P**	**02 04 04.6**	**-0.3**
PDAR	**Pinedale Array**	**87.17**	**42**	P	**P**	**02 04 07.2**	**-0.2**
	0.6nm,0.9s,baz=217,slow=5.1,SNR=3.4						
PDAR				pP	pP	02 04 45.2	-1.0
	0.6nm,0.8s,baz=255,slow=3.5,SNR=3.2						
COLA	**College**	**87.41**	**11**	*e*P	**P**	**02 04 07.5**	**-0.4**
	7.5nm,1.0s,mb4.5						
PLCA	**Paso Flores**	**87.84**	**133**	P	**P**	**02 04 10.4**	**-0.4**
	5.5nm,0.9s,mb4.4,baz=229,slow=5.0,SNR=14						
PLCA	**Paso Flores**	**87.84**	**133**	*e*P	**P**	**02 04 10.3**	**-0.5**
	5.4nm,0.8s,mb4.4						
SNAA	**Sanae**	**88.27**	**178**	*e*	**P**	**02 04 07.4**	**-4.8**
SNAA				*e*		02 04 13.2	
SNAA	**Sanae**	**88.27**	**178**	*e*P	**P**	**02 04 07.4**	**-4.8**
	8.0nm,0.7s,mb4.7						
VNA3	**Neumayer Olymp**	**88.31**	**175**	*e*	**P**	**02 04 11.7**	**-0.7**
VNA3				*e*		02 04 16.9	
VNA2	**Neumayer--Watz** baz=201,slow=3.3	**88.78**	**176**	*e*	**P**	**02 04 14.6**	**0.0**
VNA2				*e*		02 04 20.1	
VNA1	**Neumayer--Stat**	**88.99**	**176**	*e*	**P**	**02 04 15.5**	**-0.1**
LCO	**Las Campanas**	**92.63**	**122**	*e*P	**P**	**02 04 33.5**	**+0.2**
	9.3nm,0.8s,mb5.0						
INK	**Inuvik** 146nm,1.1s	**93.37**	**14**	*e*P	**P**	**02 04 35.5**	**-0.1**
ZALV	**Zalesovo Beam**	**111.66**	**321**	PKiKP	PKiKP	02 09 53.1	-1.5
	0.3nm,0.3s,baz=122,slow=1.9,SNR=3.7						
MK31	**Makanchi Array**	**112.63**	**313**	*e*PKP	PKiKP	02 09 55.8	-1.0
MKAR	**Makanchi Array**	**112.63**	**313**	PKiKP	PKiKP	02 09 55.5	-1.2
	0.7nm,0.4s,baz=128,slow=0.9,SNR=10						
KURK	**Kurchatov**	**115.29**	**317**	*e*PKPdf	PKPdf	02 10 00.6	-1.1
TKM2	**Tokmak 2**	**117.08**	**309**	*e*PKPdf	PKPdf	02 10 04.6	-0.8
AAK	**Ala-Archa**	**117.88**	**308**	*e*PKPdf	PKPdf	02 10 06.2	-0.8
EKS2	**Erkin-Say**	**118.41**	**308**	*e*PKPdf	PKPdf	02 10 07.0	-1.0
BRVK	**Borovoye**	**120.34**	**320**	*e*PKPdf	PKPdf	02 10 10.2	-1.1
KBL	**Kabul**	**121.73**	**299**	*e*PKPdf	PKPdf	02 10 14.8	+0.2
ARU	**Arti**	**126.21**	**326**	*e*PKPdf	PKPdf	02 10 21.9	-0.6
BOSA	**Boshof**	**127.50**	**203**	PKP	PKPdf	02 10 26.2	+0.3
	3.6nm,0.7s,baz=155,slow=8.7,SNR=6.5						
ARCES	**ARCESS Array B**	**128.98**	**351**	PKP	PKPdf	02 10 26.7	-0.7
	4.4nm,0.9s,baz=358,slow=2.7,SNR=10						
LSZ	**Lusaka**	**137.74**	**215**	*e*PKPdf	PKPdf	02 10 45.0	-0.5
TSUM	**Tsumeb**	**138.81**	**199**	*e*PKPdf	PKPdf	02 10 46.5	-0.9
NOA	**NORSAR Array B**	**138.88**	**355**	PKP	PKPdf	02 10 48.1	+1.9
	1.5nm,0.8s,baz=14,slow=3.7,SNR=3.0						
AKASG	**Malin Array Be**	**143.78**	**333**	PKP	PKPdf	02 10 52.2	-3.1
	1.7nm,0.5s,baz=41,slow=4.3,SNR=9.1						
BSEG	**Bad Segeberg**	**145.99**	**354**	*e*PKPbc	PKPbc	02 11 00.4	+0.4
BUR08	**Bucovina Ar. S**	**147.83**	**333**	*e*PKPbc	PKPbc	02 11 06.8	+1.4
BURAR	**Bucovina Array**	**147.84**	**333**	*i*P	PKiKP	02 11 07.2	0.0
STHS	**Stebnicka Huta**	**147.87**	**339**	*e*PKP	PKPab	02 11 09.7	+1.4
CLL	**Collm**	**148.20**	**350**	⇓*i*PKP	PKPbc	02 11 06.2	0.0
CLL				*e*		02 11 12.0	
CLL				*e*		02 11 49.0	
CLL	**Collm**	**148.20**	**350**	*e*PKPbc	PKPbc	02 11 06.2	0.0
CLL	**Collm**	**148.20**	**350**	⇓*i*PKPbc	PKPbc	02 11 06.2	0.0
	comp=Z,7.0nm,0.8s						
CLL				*e*PKPab	PKPab	02 11 10.0	+0.4
CLL				*e*pPKPab	pPKPab	02 11 49.0	-0.2
BR131	**Keskin Array S**	**148.27**	**314**	*e*PKPbc	PKPbc	02 11 06.5	-0.4
BRTR	**Keskin Array B**	**148.27**	**314**	PKPbc	PKPbc	02 11 06.2	-0.7
	comp=Z,3.0nm,0.7s,baz=130,slow=3.0,SNR=13						
UPC	**Upice**	**148.36**	**346**	*e*PKPbc	PKPbc	02 11 07.1	+0.4
DPC	**Dobruska-Polom**	**148.44**	**345**	*e*PKPbc	PKPbc	02 11 07.4	+0.5
OKC	**Ostrava-Krasne**	**148.44**	**343**	*e*PKPbc	PKPbc	02 11 06.8	-0.1
BRG	**Berggiesshubel**	**148.45**	**348**	*e*P	PKPbc	02 11 07.4	+0.5
	comp=Z,5.3nm,1.0s						
VRI	**Vrincioaia**	**148.48**	**330**	⇑*i*P	PKPbc	02 11 07.3	+0.1
PVCC	**Panska Ves**	**148.65**	**348**	*e*PKPbc	PKPbc	02 11 07.6	+0.2
MOX	**Moxa**	**149.06**	**351**	*e*PKP	PKPbc	02 11 08.6	+0.1
	comp=Z,14nm,1.5s						
MOX	**Moxa**	**149.06**	**351**	*e*PKPbc	PKPbc	02 11 08.7	+0.2
TANN	**Tannenbergstha**	**149.15**	**350**	*e*PKPbc	PKPbc	02 11 09.2	+0.5
PRU	**Pruhonice**	**149.17**	**347**	*e*PKPbc	PKPbc	02 11 09.0	+0.2
VYHS	**Vyhne**	**149.44**	**341**	*e*PKP	PKPbc	02 11 09.7	+0.2
VYHS				*e*		02 11 52.1	
KOLL	**Kolacno**	**149.50**	**342**	*e*PKP	PKPbc	02 11 10.2	+0.6
DRGR		**149.53**	**335**	⇓*i*P	PKPbc	02 11 10.5	+0.8
VOIR		**149.59**	**331**	⇑*i*P	PKPbc	02 11 10.9	+1.0
PSZ	**Piszkesteto**	**149.61**	**339**	*e*PKPbc	PKPbc	02 11 10.2	+0.3
MANZ	**Manzenberg**	**149.62**	**350**	*e*PKPbc	PKPbc	02 11 10.4	+0.5
ROTZ	**Rotzenmuhle**	**149.82**	**350**	*e*PKPbc	PKPbc	02 11 10.9	+0.6
TNS	**Taunus Mts**	**149.84**	**355**	*e*PKPbc	PKPbc	02 11 10.3	-0.1
SMOL	**Smolenice**	**149.84**	**343**	*e*PKP	PKPbc	02 11 11.2	+0.8
MODS	**Modra-Piesok**	**150.01**	**343**	*e*PKP	PKPbc	02 11 11.8	+0.9
GRF	**Grafenberg Arr**	**150.04**	**351**	*e*PKPbc	PKPbc	02 11 11.5	+0.6
GIVF	**Givet**	**150.13**	**359**	*e*PKP1	PKPbc	02 11 10.8	-0.3
BAIF	**Baives**	**150.17**	**0**	*e*PKP1	PKPbc	02 11 11.0	-0.2
	comp=Z,32nm,1.1s						
KHC	**Kasperske Hory**	**150.18**	**348**	*e*PKPbc	PKPbc	02 11 11.5	+0.3
KHC				*e*PKPab	PKPab	02 11 18.2	+0.5
ZST	**Bratislava**	**150.22**	**343**	*e*PKP	PKPbc	02 11 12.2	+0.8
GEC2	**GERESS Array S**	**150.43**	**348**	*e*PKPbc	PKPbc	02 11 12.0	+0.2
GEC2	**GERESS Array S**	**150.43**	**348**	*e*PKPbc	PKPbc	02 11 12.1	+0.3
GERES	**GERESS Array B**	**150.43**	**348**	PKPbc	PKPbc	02 11 11.8	0.0
	comp=Z,4.4nm,0.7s,baz=30,slow=2.2,SNR=39						
GERES				PKPab	PKPab	02 11 18.4	-0.4
	comp=Z,1.2nm,0.6s,baz=33,slow=3.4,SNR=7.0						
GERES				pPKPab	pPKPab	02 11 55.5	-2.8
	comp=Z,0.8nm,0.6s,baz=68,slow=3.6,SNR=2.4						
WLF	**Walferdange**	**150.53**	**358**	*e*PKPbc	PKPbc	02 11 12.6	+0.5
WLF	**Walferdange**	**150.53**	**358**	*e*PKPbc	PKPbc	02 11 12.7	+0.6
CSS	**Prodhromos**	**150.57**	**306**	*e*PKPbc	PKPbc	02 11 11.9	-0.7
GZR	**Gura Zlata**	**150.63**	**333**	⇓*i*P	PKPbc	02 11 12.5	+0.1
CONA	**Conrad Observa**	**150.80**	**344**	⇓*i*PKiKP	PKiKP	02 11 13.3	0.0
	comp=Z,12nm,1.3s						
CSNA	**Conrad Observa**	**150.80**	**344**	⇓*i*PKiKP	PKiKP	02 11 13.3	0.0
	comp=Z,6.3nm,0.6s						
BZS	**Buzias**	**150.93**	**335**	⇑*i*P	PKPbc	02 11 13.1	0.0
FLN	**La Foliniere**	**151.20**	**7**	*e*PKP1	PKPbc	02 11 12.8	-0.8
ROSF	**Rostrenen**	**151.22**	**11**	*e*PKP1	PKPbc	02 11 12.5	-1.2
	comp=Z,13nm,0.8s						
MOA	**Molln**	**151.25**	**346**	⇓*i*PKi

LVC	**Limon Verde**	**1.65**	**85**	Pg		**Pn**	**02 14 30.7**	**+0.3**
	400nm,0.3s,baz=253,slow=12,SNR=1813								
LVC				Lg			02 14 51.2		
	915nm,0.3s,baz=351,slow=19,SNR=35								
LCO	**Las Campanas**	**6.23**	**180**	*e*Pn		**Pn**	**02 15 35.1**	**+1.9**
	29nm,0.4s								
LCO				*e*Sn		**Sn**	**02 16 42.0**	**-1.2**
ARE	**Arequipa**	**6.31**	**353**	*e*P		**Pn**	**02 15 33.0**	**-1.3**
ARE				*e*S		**Sn**	**02 16 45.0**	**-0.1**
CFAA	**Coronel Fontan**	**9.08**	**167**	Pn		**Pn**	**02 16 12.6**	**+0.3**
	0.2nm,0.3s,baz=8.3,slow=15,SNR=5.1								
CFAA				Sn		**Sn**	**02 18 00.6**	**+7.4**
	0.2nm,0.3s,baz=288,slow=20,SNR=2.3								
CFAA				LR		LR	02 19 42.9		
	comp=Z,50nm,20.9s,baz=332,slow=38								
CFAA	**Coronel Fontan**	**9.08**	**167**	Pn		**Pn**	**02 16 12.6**	**+0.2**
CFAA				Sn		**Sn**	**02 18 00.6**	**+7.4**
CFAA				LR		LR	02 19 42.9		
SIV	**San Ignacio**	**11.30**	**55**	Pn		**Pn**	**02 16 41.5**	**-1.2**
	1.6nm,0.3s,baz=243,slow=13,SNR=29								
SIV				Sn		**Sn**	**02 18 49.2**	**+1.6**
	0.2nm,0.3s,baz=156,slow=20,SNR=2.4								
NNA	**Nana**	**12.21**	**330**	Pn		**Pn**	**02 16 59.1**	**+3.9**
	1.0nm,0.3s,baz=139,slow=19,SNR=2.6								
NNA	**Nana**	**12.21**	**330**	*e*Pn		**Pn**	**02 16 59.2**	**+4.0**
	10.0nm,0.3s								
ATAH	**Atahualpa**	**17.33**	**333**	LR		LR	02 24 06.9		
	comp=Z,87nm,21.5s,baz=208,slow=35								
PLCA	**Paso Flores**	**17.92**	**180**	P		**Pn**	**02 18 09.8**	**+0.1**
	0.0nm,0.3s,baz=0.0,slow=6.1,SNR=2.0								
PLCA				LR		LR	02 24 39.1		
	comp=Z,202nm,20.4s,baz=360,slow=35								
PLCA	**Paso Flores**	**17.92**	**180**	P		**Pn**	**02 18 09.8**	**+0.1**
PLCA				LR		LR	02 24 39.1		
BDFB	**Brasilia**	**22.54**	**76**	P		**P**	**02 18 59.3**	**-0.8**
	1.5nm,0.5s,mb3.7,baz=241,slow=15,SNR=9.6								
BDFB				LR		LR	02 28 42.3		
	comp=Z,115nm,21.3s,MS3.3,baz=73,slow=39								
PCRV	**Puerto La Cruz**	**33.26**	**11**	LR		LR	02 34 17.4		
	comp=Z,70nm,18.6s,MS3.4,baz=19,slow=37								
RCBR	**Riachuelo**	**37.53**	**69**	*e*P		**P**	**02 21 13.1**	**-0.9**
	9.6nm,0.7s,mb4.6								
TXAR	**Lajitas Array**	**60.74**	**327**	P		**P**	**02 24 12.8**	**+1.8**
	0.2nm,0.5s,mb3.5,baz=152,slow=10,SNR=6.2								
TXAR				LR		LR	02 46 53.2		
	comp=Z,43nm,19.3s,MS3.6,baz=185,slow=32								
SNAA	**Sanae**	**61.65**	**161**	*e*P		**P**	**02 24 12.7**	**-3.9**
	2.7nm,0.7s,mb4.5								
SDCO	**Great Sand Dun**	**68.51**	**331**	*e*P		**P**	**02 25 00.3**	**-1.2**
	20nm,1.4s,mb4.8								
DBIC	**Dimbokro**	**70.67**	**74**	P		**P**	**02 25 14.6**	**-0.9**
	3.7nm,0.7s,mb4.4,baz=231,slow=7.8,SNR=11								
DBIC				LR		LR	02 57 12.2		
	comp=Z,74nm,18.2s,MS4.0,baz=154,slow=37								
DBIC	**Dimbokro**	**70.67**	**74**	*e*P		**P**	**02 25 15.2**	**-0.2**
	4.8nm,0.7s,mb4.5								
DBIC				LR		LR	02 57 12.2		
PPT	**Papeete**	**73.43**	**258**	LR		LR	02 49 09.1		
	comp=Z,172nm,22.0s,MS4.3,baz=96,slow=29								
PDAR	**Pinedale Array**	**74.39**	**331**	P		**P**	**02 25 38.2**	**+1.3**
	0.2nm,0.8s,mb3.1,baz=128,slow=5.1,SNR=2.3								
ULM	**Lac du Bonnet**	**76.03**	**344**	LR		LR	03 04 29.2		
	comp=Z,68nm,19.1s,MS4.0,baz=340,slow=40								
TOA0	**Torodi Ar. Sit**	**79.33**	**71**	*e*P		**P**	**02 26 05.4**	**0.0**
TORD	**Torodi Ar. Bea**	**79.33**	**71**	P		**P**	**02 26 05.4**	**+0.1**
	3.4nm,0.5s,mb4.6,baz=254,slow=5.1,SNR=119								
BOSA	**Boshof**	**84.31**	**118**	P		**P**	**02 26 31.6**	**+0.1**
	4.0nm,0.9s,mb4.6,baz=268,slow=4.5,SNR=8.8								
BOSA				LR		LR	03 01 16.3		
	comp=Z,83nm,19.2s,MS4.1,baz=331,slow=34								
BOSA	**Boshof**	**84.31**	**118**	*e*P		**P**	**02 26 31.8**	**+0.3**
	3.3nm,0.6s,mb4.6								
BOSA				LR		LR	03 01 16.3		
YKA	**Yellowknife Ar**	**91.83**	**341**	P		**P**	**02 27 06.3**	**-0.2**
	0.4nm,0.6s,mb3.9,baz=144,slow=4.9,SNR=3.8								
ASAR	**Alice Springs**	**128.03**	**209**	PKP		PKPdf	02 33 06.5	+0.9
	0.3nm,0.5s,baz=122,slow=1.4,SNR=3.7								
WRA	**Warramunga Arr**	**131.03**	**212**	PKP		PKPdf	02 33 12.4	+1.1
	0.3nm,0.5s,baz=155,slow=1.8,SNR=6.6								
ZALV	**Zalesovo Beam**	**143.78**	**24**	PKP		PKPdf	02 33 33.0	-0.8
	1.3nm,0.4s,baz=337,slow=3.3,SNR=3.4								
AAK	**Ala-Archa**	**144.97**	**47**	*e*PKPdf		PKPdf	02 33 37.9	+1.8
MKAR	**Makanchi Array**	**147.61**	**36**	PKPbc		PKPbc	02 33 44.6	+1.4
	2.0nm,0.7s,baz=303,slow=3.3,SNR=13								

*CSEM **28** 02:14:24.6±0.1,3934N×2044E,h5km,ML3.6/6,Error ellipse: s-maj=2.1km s-min=1.5km az=88.0*
*THE **28** 02:14:25.7,3935N×2051E,h0km±1km,ML3.6/6,Error ellipse: s-maj=1.8km s-min=0.6km az=253.0*
*NEIC **28** 02:14:26.0,3938N×2054E,h3km,MD3.5(ATH),After ATH.*
*ISCJB **28** 02:14:26.1±0.5,3936N±002×2049E±004,h10km,Error ellipse: s-maj=4.0km s-min=2.9km az=174.8*
*ATH **28** 02:14:26.0,3938N×2054E,h3km,MD3.5/8*
*SKO **28** 02:14:27.6,3946N×2055E,h3km,M1.9,ML2.3*

ISC 28 02:14:25.8±0.5,3935N±002×2051E±004,h1km±4km,n36,σ0§85/65,1D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.23**	**322**	P		**Pg**	**02 14 30.0**	**-0.2**
IGT				S		**Sg**	**02 14 34.1**	**+0.9**
JAN	**Janina**	**0.40**	**41**	⇓*i*Pg		**Pg**	**02 14 32.5**	**-1.0**
JAN				*e*SG		**Sg**	**02 14 37.8**	**-0.9**
KEK	**Kerkira**	**0.66**	**303**	*e*PG		**Pg**	**02 14 38.7**	**+0.3**
EVR	**Evrytania**	**1.10**	**113**	*e*PG		**Pg**	**02 14 46.8**	**0.0**
EVR				*e*SG		**Sg**	**02 15 01.0**	**0.0**
VLS	**Valsamata**	**1.17**	**177**	P		**Pg**	**02 14 47.8**	**-0.5**
VLS				S		**Sg**	**02 15 04.9**	**+1.4**
VLS	**Valsamata**	**1.17**	**177**	*e*Pb		**Pb**	**02 14 48.8**	**-0.1**
VLS				S		**Sg**	**02 15 04.9**	**+1.4**
VLS				*e*Sb		**Sb**	**02 15 05.4**	**+0.9**
THL	**Klokotos Trika**	**1.18**	**79**	P		**Pn**	**02 14 46.7**	**-2.7**
THL				S		**Sg**	**02 15 04.7**	**+0.9**
THL	**Klokotos Trika**	**1.18**	**79**	*e*PB		**Pn**	**02 14 47.3**	**-2.1**
THL				*e*SB		**Sn**	**02 15 03.6**	**-2.5**
THL	**Klokotos Trika**	**1.18**	**79**	*e*Pb		**Pn**	**02 14 47.3**	**-2.1**
THL				*e*Sb		**Sn**	**02 15 03.6**	**-2.5**
THL				S		**Sg**	**02 15 04.7**	**+0.9**
KFL	**Anninata**	**1.26**	**170**	P		**Pn**	**02 14 48.6**	**-1.9**
KFL				S		**Sn**	**02 15 08.0**	**0.0**
KZN	**Kozani**	**1.36**	**45**	*e*PN		**Pn**	**02 14 51.7**	**-0.2**
KZN				*e*SB		**Sb**	**02 15 09.8**	**-0.1**
AGG	**Agios Georgios**	**1.45**	**103**	P		**Pn**	**02 14 51.8**	**-1.3**
AGG				S		**Sg**	**02 15 12.9**	**+0.5**
AGG	**Agios Georgios**	**1.45**	**103**	P		**Pn**	**02 14 51.8**	**-1.3**
AGG				S		**Sg**	**02 15 12.9**	**+0.5**
RLS	**Riolos of Patr**	**1.49**	**150**	*e*PB		**Pb**	**02 14 54.7**	**+0.4**
FNA	**Florina**	**1.58**	**25**	P		**Pn**	**02 14 54.1**	**-0.8**
FNA				S		**Sn**	**02 15 16.1**	**+0.2**
LIT	**Litokhoron**	**1.70**	**63**	P		**Pn**	**02 14 55.7**	**-0.8**
LIT				S		**Sn**	**02 15 19.4**	**+0.5**
BIA	**Bitola**	**1.78**	**20**	P		**Pn**	**02 14 56.8**	**-0.8**
BIA				S		**Sn**	**02 15 21.7**	**+0.8**
BIA	**Bitola**	**1.78**	**20**	*e*Pn		**Pn**	**02 14 57.8**	**+0.2**
BIA				S		**Sn**	**02 15 21.7**	**+0.8**
BIA				*e*Sg		**Sg**	**02 15 23.3**	**+0.4**
BIA	**Bitola**	**1.78**	**20**	*e*Pn		**Pn**	**02 14 57.8**	**+0.2**
BIA				*e*Sg		**Sg**	**02 15 23.3**	**+0.4**
BIA				*e*Lg			02 15 24.9	
	comp=E,41nm,0.7s							
BIA				*e*Lg			02 15 25.2	
	comp=N,29nm,0.6s							
LKR	**Lokris**	**2.06**	**109**	P		**Pn**	**02 15 01.1**	**-0.4**
LKR				S		**Sn**	**02 15 28.6**	**+0.8**
LKR	**Lokris**	**2.06**	**109**	*e*Pg		**Pn**	**02 15 04.0**	**+2.5**
LKR				S		**Sn**	**02 15 28.6**	**+0.8**
XOR	**Xorichti**	**2.08**	**89**	P		**Pn**	**02 15 01.6**	**-0.1**
XOR				S		**Sn**	**02 15 29.5**	**+1.3**
KRUS	**Krusevo**	**2.09**	**15**	*e*Pn		**Pn**	**02 15 01.9**	**-0.1**
KRUS	**Krusevo**	**2.09**	**15**	*e*Pn		**Pn**	**02 15 02.0**	**0.0**
KRUS				*e*Sg		**Sn**	**02 15 29.2**	**+0.6**
KRUS				*e*Lg			02 15 29.8	
	comp=E,14nm,0.7s							
KRUS				*e*Lg			02 15 29.8	
	comp=N,9.0nm,0.4s							
GRG	**Griva**	**2.16**	**41**	P		**Pn**	**02 15 03.0**	**+0.1**
HORT	**Hortiatis**	**2.34**	**57**	P		**Pn**	**02 15 05.1**	**-0.3**
HORT				S		**Sn**	**02 15 35.1**	**+0.2**
PLG	**Polygyros**	**2.48**	**65**	P		**Pn**	**02 15 07.3**	**+0.1**
PLG				S		**Sn**	**02 15 38.6**	**+0.5**
PAIG	**Paliouri**	**2.51**	**76**	P		**Pn**	**02 15 06.7**	**-1.0**

VAY	**Valandovo**	**2.52**	**38**	*e*Pn		**Pn**	**02 15 09.9**	**+2.1**
VAY				*e*Sg		**Sn**	**02 15 38.6**	**-0.5**
VAY				*e*Lg			02 15 40.7	
	comp=E,33nm,1.2s							
VAY				*e*Lg			02 15 41.0	
	comp=N,22nm,0.9s							
KNT	**Kendrikon**	**2.57**	**45**	P		**Pn**	**02 15 08.6**	**+0.1**
SOH	**Sokhos**	**2.63**	**55**	P		**Pn**	**02 15 09.4**	**+0.1**
SOH				S		**Sn**	**02 15 42.9**	**+1.1**
PYL	**PYLOS**	**2.64**	**158**	P		**Pn**	**02 15 08.7**	**-0.7**
STIP	**Stip**	**2.67**	**28**	P		**Pn**	**02 15 10.2**	**+0.4**
STIP	**Stip**	**2.67**	**28**	*e*Pn		**Pn**	**02 15 10.4**	**+0.6**
STIP				*e*Sg		**Sn**	**02 15 42.2**	**-0.5**
STIP				*e*Lg			02 15 43.4	
	comp=E,6.4nm,0.9s							
STIP				*e*Lg			02 15 47.5	
	comp=N,7.4nm,1.2s							
DID	**Didima**	**2.82**	**130**	P		**Pn**	**02 15 11.7**	**-0.3**
BARS	**Barje**	**3.60**	**15**	*e*Pn		**Pn**	**02 15 22.4**	**-0.3**

*IDC **28** 02:39:59.3±1.0,1217N×14395E,h0km,mb3.7/5,mb1 4.0/5,mb1mx3.7/21,mbtmp3.7/5,MS3.0/1,Ms1 3.0/1,ms1mx2.5/26,Error ellipse: s-maj=43.3km s-min=17.8km az=114.0*
*ISCJB **28** 02:40:00.5±6.2,122N±02×1438E±03,h18km±45km,mb3.8/5,Error ellipse: s-maj=48.2km s-min=13.7km az=30.7*

ISC 28 02:40:01.5±7.2,122N±02×1439E±03,h13km±45km,n7,σ0§73/7,mb3.8/5,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.67**	**33**	Pn		**Pn**	**02 40 30.5**	**0.0**
	141nm,0.3s,baz=220,slow=5.0,SNR=35							
GUMO				Sn		**Sn**	**02 40 51.6**	**-0.2**
	90nm,0.3s,baz=156,slow=21,SNR=8.1							
MJAR	**Matsushiro Arr**	**24.80**	**349**	LR		LR	02 55 02.3	
	comp=Z,36nm,18.7s,baz=155,slow=36							
WRA	**Warramunga Arr**	**33.29**	**197**	P		**P**	**02 46 38.0**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=20,slow=9.5,SNR=15							
ASAR	**Alice Springs**	**36.95**	**195**	P		**P**	**02 47 11.1**	**+0.6**
	0.3nm,0.3s,mb3.5,baz=21,slow=12,SNR=4.6							
MKAR	**Makanchi Array**	**61.87**	**317**	P		**P**	**02 50 20.6**	**+0.1**
	0.2nm,0.6s,mb3.5,baz=90,slow=8.9,SNR=3.4							
YKA	**Yellowknife Ar**	**84.52**	**27**	P		**P**	**02 52 33.6**	**-0.4**
	0.6nm,0.5s,mb4.0,baz=285,slow=5.1,SNR=8.1							
NVAR	**Mina Array Bea**	**88.51**	**51**	P		**P**	**02 52 54.8**	**+0.7**
	0.5nm,0.6s,mb4.0,baz=267,slow=5.4,SNR=2.8							

*GUC **28** 03:50:57.5±1.0,2007S×70.65W,h24km±9km,ML3.8*
*IDC **28** 03:51:16.3±5.1,2083S×68.16W,h134km±41km,mb3.3/1,mb1 3.3/3,mb1mx3.1/15,mbtmp3.2/3,Error ellipse: s-maj=70.5km s-min=26.3km az=117.0*

ISC 28 03:50:58.4±2.1,1977S±010×703W±02,h46km±21km,n9,σ1§04/12,1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB01	**Plate Boundary**	**1.48**	**149**	⇓*e*P		**Pn**	**03 51 21.8**	**-0.8**
PB01				*i* S		**Sn**	**03 51 40.6**	**-0.2**
TOCH	**Tocopilla**	**2.32**	**178**	*e*P		**Pn**	**03 51 32.7**	**-1.4**
TOCH				*i* S		**Sn**	**03 51 59.5**	**-1.9**
TOCH				AML		AML	03 52 10.0	
	comp=N,765nm,0.0s							
MACH	**Maria Elena**	**2.47**	**168**	*e*P		**Pn**	**03 51 37.0**	**+0.9**
MACH				*i* S		**Sn**	**03 52 06.1**	**+1.0**
LVC	**Limon Verde**	**3.12**	**156**	*e*P		**Pn**	**03 51 46.5**	**+1.4**
CEN1	**Los Morros**	**3.61**	**178**	*e*P		**Pn**	**03 51 52.5**	**+0.7**
CEN1				*i* S		**Sn**	**03 52 46.6**	**+14**
CEN1				AML		AML	03 53 01.6	
	comp=E,148nm,0.6s							
SIV	**San Ignacio**	**9.56**	**68**	P		**Pn**	**03 53 13.5**	**0.0**
	comp=E,0.4nm,0.3s,baz=247,slow=13,SNR=9.2							
PLCA	**Paso Flores**	**20.90**	**181**	P		**P**	**03 55 37.8**	**+1.0**
	comp=E,0.3nm,0.3s,baz=352,slow=11,SNR=8.2							
TORD	**Torodi Ar. Bea**	**78.02**	**71**	P		**P**	**04 02 51.8**	**-0.8**
	comp=E,0.4nm,0.5s,baz=248,slow=5.4,SNR=13							
SONM	**Songino Array**	**151.87**	**5**	PKPbc		PKPbc	04 10 57.3	+9.1
	comp=E,0.6nm,0.5s,baz=340,slow=1.9,SNR=6.1							
SONM				PKPab		PKPab	04 11 07.9	+11
	comp=E,0.4nm,0.5s,baz=31,slow=3.9,SNR=3.1							

NEIC 28 04:49:05.6,4337S×17897E,h33km,ML4.2(WEL),After WEL.,Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAWZ	**Paruwai Farm**	**3.29**	**306**	P		Pn	04 49 54.1	-0.7
PAWZ				S		Sn	04 50 28.5	-4.3
BFZ	**Birch Farm**	**3.37**	**322**	P		Pn	04 49 55.1	-0.7
MSWZ	**Moikau Station**	**3.38**	**304**	P		Pn	04 49 54.8	-1.2
MTW	**Mount Morrison**	**3.39**	**309**	P		Pn	04 49 55.3	-0.9
BHW	**Baring Head**	**3.61**	**301**	P		Pn	04 49 58.5	-0.7
CAW	**Cannon Point**	**3.67**	**307**	P		Pn	04 49 59.2	-0.8
MRZ	**Mangatainoka R**	**3.70**	**316**	P		Pn	04 49 59.8	-0.6
WEL	**Wellington**	**3.75**	**302**	P		Pn	04 50 00.6	-0.4
SNZO	**South Karori**	**3.77**	**302**	P		Pn	04 50 00.8	-0.6
MRW	**Makara Radio**	**3.82**	**303**	P		Pn	04 50 01.5	-0.6
KIW	**Kapiti Island**	**3.92**	**308**	P		Pn	04 50 03.0	-0.5
TSZ	**Takapari Road**	**4.00**	**325**	P		Pn	04 50 03.7	-0.8
TCW	**Tory Channel**	**4.09**	**300**	P		Pn	04 50 05.4	-0.4
KHZ	**Kahutara**	**4.10**	**282**	P		Pn	04 50 04.2	-1.7
BSWZ	**Blackbirch Sta**	**4.11**	**292**	P		Pn	04 50 05.1	-0.9
KNZ	**Kokohu**	**4.45**	**347**	P		Pn	04 50 09.4	-1.4
BKZ	**Black Stump Fm**	**4.59**	**335**	P		Pn	04 50 11.5	-1.2
MQZ	**McQueen's Vall**	**4.61**	**264**	P		Pn	04 50 12.2	-0.6
MOVZ	**Moawhango**	**4.64**	**327**	P		Pn	04 50 12.9	-0.4
NNZ	**Nelson**	**4.67**	**296**	P		Pn	04 50 13.2	-0.5
WAZ	**Wanganui**	**4.69**	**319**	P		Pn	04 50 14.7	+0.7
THZ	**Tophouse**	**4.76**	**288**	P		Pn	04 50 13.5	-1.4
WNVZ	**Wahianoa**	**4.77**	**327**	P		Pn	04 50 15.3	+0.2
TUVZ	**Tukino**	**4.80**	**328**	P		Pn	04 50 15.6	+0.1
FWVZ	**Far West T-bar**	**4.85**	**327**	P		Pn	04 50 16.3	+0.1
LTZ	**Lake Taylor**	**4.94**	**275**	P		Pn	04 50 16.8	-0.7
KATZ	**Kakaramea**	**5.04**	**330**	P		Pn	04 50 18.3	-0.5
MWZ	**Matawai**	**5.15**	**347**	P		Pn	04 50 18.7	-1.6
QRZ	**Quartz Range**	**5.42**	**296**	P		Pn	04 50 23.9	-0.2
DSZ	**Denniston Nort**	**5.54**	**285**	P		Pn	04 50 24.8	-0.8
PKE	**Pukeiti**	**5.61**	**316**	P		Pn	04 50 28.1	+1.4
ODZ	**Otahua Downs**	**6.21**	**252**	P		Pn	04 50 34.8	-0.1
LBZ	**Lake Benmore**	**6.43**	**258**	P		Pn	04 50 37.9	0.0

IDC 28 04:52:38.0±45.0,1524S×17054W,h0km,mb4.1/3,mb1 4.3/3,mb1mx3.8/17,mbtmp4.1/3,MS3.5/1,Ms1 3.4/1,ms1mx2.9/18,Error ellipse: s-maj=888.7km s-min=187.5km az=79.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**1.79**	**318**	LR		LR	04 53 36.1	
	comp=Z,429nm,19.5s,baz=342,slow=32							
STKA	**Stephens Creek**	**46.51**	**240**	P		P	05 01 08.0	+0.7
	0.7nm,0.3s,baz=62,slow=8.4,SNR=5.6							
STKA				LR		LR	05 18 28.9	
	comp=Z,59nm,20.5s,baz=189,slow=33							
WRA	**Warramunga Arr**	**52.56**	**256**	P		P	05 01 53.0	-0.7
	0.5nm,0.4s,baz=98,slow=6.9,SNR=17							
ASAR	**Alice Springs**	**52.78**	**252**	P		P	05 01 55.2	0.0
	4.2nm,0.5s,baz=88,slow=8.1,SNR=63							

*PRU **28** 05:37:27.5,5154N×1604E,h0km*

WAR 28 05:37:27.8,5157N×1601E,Mw2.5,1C-3D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**166**	*e*Pg		Pg	05 37 41.5	-0.6
KSP				*e*Sg		Sg	05 37 51.4	-0.4
UPC	**Upice**	**1.06**	**180**	*e*PG		Pg	05 37 47.2	-0.9
DPC	**Dobruska-Polom**	**1.24**	**171**	*e*PG		Pg	05 37 50.2	-1.3
DPC				*e*SG		Sg	05 38 06.2	-1.3
	comp=Z,30nm,0.4s							
PVCC	**Panska Ves**	**1.38**	**222**	*e*PG		Pg	05 37 53.4	-0.9
PVCC				*e*SG		Sg	05 38 12.3	+0.1
	comp=Z,51nm,0.3s							
BRG	**Berggiesshubel**	**1.47**	**243**	PN		Pn	05 37 54.2	-1.4
BRG				PG		Pg	05 37 55.1	-0.9
BRG				SG		Sg	05 38 15.0	-0.1
	comp=Z,35nm,0.4s							

PRU	**Pruhonice**	**1.84**	**211**	*e*PN		Pn	05 37 59.2	-1.3
PRU				*e*PG		Pg	05 38 00.8	-2.2
PRU				*e*SG		Sg	05 38 25.9	-0.8
	comp=Z,16nm,0.3s							
CLL	**Collm**	**1.90**	**263**	*i* Pn		Pn	05 37 59.3	-2.1
CLL				*e*Pg		Pg	05 38 02.0	-2.2
CLL				*i* x		x	05 38 06.3	
CLL				*e*Sg		Sg	05 38 29.0	+0.2
	comp=Z,9.0nm,0.6s							
OKC	**Ostrava-Krasne**	**2.20**	**141**	*e*SG		Sg	05 38 36.6	-1.9
KHC	**Kasperske Hory**	**2.90**	**213**	*e*PN		Pn	05 38 14.3	-0.8
KHC				*e*PG		Pg	05 38 20.3	-2.9
KHC				*e*SN		Sn	05 38 48.0	-2.5
KHC				*e*SG		Sg	05 38 58.4	-2.3
	comp=Z,5.3nm,0.3s							
MOX	**Moxa**	**2.92**	**253**	*e*PG		Pg	05 38 22.1	-1.6
MOX				*e*SG		Sg	05 39 01.6	+0.1
BSD	**Bornholm Skovb**	**3.61**	**350**	*i* P		Pn	05 38 22.5	-2.4
BSD				*i* S		Sn	05 39 01.9	-6.3
BSD				*i* LG			05 39 05.1	
CONA	**Conrad Observa**	**3.65**	**182**	⇓*i*Pn		Pn	05 38 27.7	+2.3
	comp=Z,0.7nm,0.1s							
CONA				⇑*e*Sg		Sg	05 39 23.7	-1.1
	comp=Z,5.0nm,0.4s							
MOA	**Molln**	**3.89**	**198**	⇓*i*Pn		Pn	05 38 28.1	-0.6
	comp=Z,1.4nm,0.2s							
MOA				⇓*e*Sg		Sg	05 39 32.6	-0.2
	comp=Z,0.9nm,0.1s							

*GII **28** 05:44:33.2±1.2,3379N×3662E,h0km,ML2.5/2,EXPLOSION*

ISC 28 05:44:32.8±1.7,3376N±007×369E±01,h0km,n10,σ0§75/14,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RCY	**Rachaya**	**0.90**	**253**	*e*P		**Pg**	**05 44 49.0**	**-1.0**
HWQ	**Hawqa**	**0.91**	**305**	*e*P		**Pg**	**05 44 51.5**	**+1.2**
BHL	**Bhannes**	**1.01**	**279**	*e*P		**Pg**	**05 44 52.2**	**+0.1**
HRI	**Mount Hermon**	**1.05**	**243**	Pg		**Pg**	**05 44 51.7**	**-1.2**
KSHT	**Keshet**	**1.16**	**229**	Pg		**Pg**	**05 44 54.1**	**-0.9**
KSHT				Sg		**Sg**	**05 45 10.8**	**+0.7**
MMA0B	**Mount Meron ar**	**1.42**	**239**	Pg		**Pg**	**05 44 59.0**	**-1.0**
MMA0B				Sg		**Sg**	**05 45 18.4**	**0.0**
MMLI	**Mount Malkishu**	**1.78**	**223**	Pn		**Pn**	**05 45 04.7**	**-0.1**
MMLI				Sn		**Sn**	**05 45 28.9**	**+0.8**
HMDT	**Nahal Hemdat**	**1.87**	**217**	Pn		**Pn**	**05 45 06.0**	**0.0**
HMDT				Sn		**Sn**	**05 45 31.1**	**+0.9**
OFRI	**'Ofer**	**1.93**	**235**	Pn		**Pn**	**05 45 07.1**	**+0.2**
SLTI	**Sal'it**	**2.14**	**226**	Pn		**Pn**	**05 45 10.2**	**+0.4**

MAN 28 05:50:57,994N×12590E,h19km,mb4.2,ML3.1,MS2.8,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**0.44**	**249**	*e*P		Pg	05 51 07.0	+1.0
SCPH				*i* S		Sg	05 51 16.6	+4.5
BUTP	**Butuan**	**1.00**	**196**	*e*P		Pb	05 51 15.7	-0.1
MSLP	**Maasin**	**1.05**	**281**	*e*P		Pb	05 51 16.4	-0.2
MSLP				*e*S		Sb	05 51 31.6	+1.7
TBP	**Tagbilaran**	**2.03**	**263**	*e*P		Pn	05 51 31.0	+0.8
TBP				*e*S		Sn	05 51 56.7	+1.7
BUKP	**Musuan**	**2.21**	**202**	*e*P		Pn	05 51 33.1	+0.4
RCP	**Roxas**	**3.50**	**298**	⇑*i*P		Pn	05 51 51.1	+0.7

*MOS **28** 05:51:43.6±2.1,4988N×15833E,h5km,mb4.3/1,Error ellipse: s-maj=47.7km s-min=15.3km az=87.3*

KRSC 28 05:51:43.6±1.0,4988N×15833E,h5km±5km,ML4.1,East of Kuril Islands

|

comp=N,12nm,0.5s
AB01 Akbulak array 15.03 331 ⇓P Pn 07 12 04.9 -1.0
comp=N,1.5nm,0.8s
PKI Pulchoki 15.15 122 eP Pn 07 12 08.1 +0.5
comp=N,14nm,0.6s
GUN Gumba 15.26 120 eP Pn 07 12 09.6 +0.6
comp=N,3.9nm,0.3s
JIRN Jiri 15.63 120 eP Pn 07 12 14.5 +1.0
comp=N,23nm,0.4s
RAMN Ramite 16.36 121 eP Pn 07 12 22.1 -0.2
comp=N,7.1nm,0.5s
AKTO Aktyubinsk 16.72 330 ⇑P Pn 07 12 28.2 +1.8
comp=N,0.5nm,0.9s
TAPN Taplejung 16.89 118 eP Pn 07 12 30.2 +1.6
comp=N,7.7nm,0.3s

IDC 28 07:20:31.0±4.4, 245S×1014±1E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=194.0km s-min=28.9km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**37.85**	**127**	P	P	07 27 49.8	0.0
	0.4nm,0.4s,baz=301,slow=7.9,SNR=7.6						
SONM	**Songino Array**	**50.27**	**4**	P	P	07 29 29.2	+0.2
	0.4nm,0.3s,baz=188,slow=9.5,SNR=4.0						
MKAR	**Makanchi Array**	**51.85**	**343**	P	P	07 29 40.9	-0.1
	0.6nm,0.5s,baz=157,slow=8.5,SNR=6.6						

*IDC **28** 07:44:01.6±1.7, 232S×1004±2E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, MS3.1/2, Ms1 3.1/2, ms1mx2.7/38, Error ellipse: s-maj=72.4km s-min=17.4km az=56.0*
*ISCJB **28** 07:44:07.3±2.8, 223S×102±1004E±0.3, h57km±19km, mb3.9/9, Error ellipse: s-maj=50.5km s-min=15.7km az=153.2*
*DJA **28** 07:44:08, 219S×1003±2E, h10km, MLv4.3/4*
ISC 28 07:44:08.0±2.9, 24S×102×1004E±0.3, h45km±21km, n17, σ0.9≥72, 14, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**1.42**	**1**	P	Pn	07 44 30.6	-0.8
PDSI	**Padang**	**1.42**	**1**	S	Sn	07 44 48.5	-0.4
PPI	**Padang Panjang**	**1.88**	**359**	P	Pn	07 44 37.9	+0.3
PPI	**Padang Panjang**	**1.88**	**359**	S	Sn	07 45 01.1	+1.0
KSI	**Kapahiang**	**2.51**	**121**	P	Pn	07 44 52.3	+6.0
KAPI	**Kappang**	**19.45**	**98**	LR	LR	07 56 51.6	
	comp=Z,35nm,21.8s,baz=115,slow=40						
WRA	**Warramunga Arr**	**37.44**	**120**	P	P	07 51 16.6	-0.6
	1.3nm,0.4s,mb4.1,baz=301,slow=9.4,SNR=24						
ASAR	**Alice Springs**	**38.69**	**126**	P	P	07 51 28.0	+0.2
	0.8nm,0.5s,mb3.8,baz=299,slow=7.9,SNR=21						
KSRS	**Korea Array**	**47.09**	**30**	P	P	07 52 35.0	-0.6
	1.1nm,0.6s,mb4.0,baz=212,slow=8.4,SNR=2.8						
STKA	**Stephens Creek**	**48.59**	**132**	P	P	07 52 48.3	+1.0
	0.7nm,0.4s,mb4.1,baz=341,slow=17,SNR=6.2						
SONM	**Songino Array**	**50.24**	**5**	P	P	07 52 59.4	-0.1
	0.5nm,0.5s,mb3.8,baz=191,slow=9.0,SNR=5.4						
MKAR	**Makanchi Array**	**51.48**	**344**	P	P	07 53 08.9	+0.1
	0.4nm,0.3s,mb3.8,baz=157,slow=9.0,SNR=12						
ZALV	**Zalesovo Beam**	**57.59**	**349**	P	P	07 53 54.1	+1.1
	0.5nm,0.3s,mb4.0,baz=182,slow=6.6,SNR=2.7						
BVAR	**Borovoye Array**	**60.63**	**340**	P	P	07 54 13.0	-1.4
	0.3nm,0.4s,mb3.8,baz=111,slow=8.0,SNR=3.3						
AKTO	**Aktyubinsk**	**63.87**	**331**	LR	LR	08 30 11.4	
	comp=Z,19nm,18.1s,baz=110,slow=43						
ARCES	**ARCESS Array B**	**86.94**	**340**	P	P	07 56 48.1	+0.2
	0.6nm,0.7s,mb4.0,baz=95,slow=4.5,SNR=3.6						
TXAR	**Lajitas Array**	**144.70**	**38**	PKP	PKPdf	08 03 39.8	-0.8
	0.5nm,0.7s,baz=260,slow=1.3,SNR=6.7						

*IDC **28** 07:55:46.3±1.5, 3965N×2067E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=32.6km s-min=16.9km az=111.0*
*CSEM **28** 07:55:47.7±0.1, 3978N×2071E, h5km, MD3.6, Error ellipse: s-maj=2.0km s-min=1.7km az=134.0*
*ISCJB **28** 07:55:48.9±0.7, 3977N±002×2070E±004, h8km±6km, mb3.4/3, Error ellipse: s-maj=5.5km s-min=3.2km az=17.0*
*ATH **28** 07:55:48.3, 3978N×2069E, h17km±1km, MD3.6/6*
*NEIC **28** 07:55:48.3, 3978N×2069E, h17km, MD3.6(ATH), After ATH.*
*SKO **28** 07:55:48.8, 3966N×2089E, h0km, M2.4, ML2.9*
*THE **28** 07:55:49.2, 3977N×2075E, h3km±1km, ML3.8/7, Error ellipse: s-maj=1.3km s-min=0.6km az=292.0*
ISC 28 07:55:49.2±0.5, 3976N±002×2070E±003, h8km±3km, n78, σ1.9≥07/141, mb3.4/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.15**	**131**	ePB	Pg	07 55 52.8	+0.4
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	07 55 56.4	+0.1
IGT				S	Sg	07 56 02.9	+1.8
KEK	**Kerkira**	**0.70**	**267**	ePN	Pn	07 56 01.7	-3.7
KEK	**Kerkira**	**0.70**	**267**	P	Pg	07 56 02.7	0.0
KZN	**Kozani**	**0.99**	**56**	P	Pg	07 56 08.1	-0.1
KZN	**Kozani**	**0.99**	**56**	ePN	Pn	07 56 07.1	-2.3
THL	**Klokotos Trika**	**1.03**	**100**	P	Pg	07 56 07.4	-1.6
THL				S	Sg	07 56 22.9	+0.5
FNA	**Florina**	**1.15**	**26**	P	Pg	07 56 10.4	-0.9
FNA				S	Sg	07 56 26.8	+0.6
EVR	**Evrytania**	**1.20**	**134**	ePN	Pn	07 56 11.1	-1.2
EVR	**Evrytania**	**1.20**	**134**	P	Pb	07 56 12.0	-0.2
BIA	**Bitola**	**1.35**	**20**	P	Pn	07 56 13.9	-0.4
BIA				S	Sb	07 56 32.5	+0.4
BIA	**Bitola**	**1.35**	**20**	ePn	Pn	07 56 14.0	-0.3
BIA				S	Sb	07 56 32.5	+0.4
BIA				eSg	Sg	07 56 33.6	+1.0
BIA	**Bitola**	**1.35**	**20**	ePn	Pn	07 56 14.1	-0.3
BIA				eSg	Sg	07 56 33.6	+1.0
BIA				eLg		07 56 34.7	
	comp=N,131nm,0.5s						
BIA				eLg		07 56 34.8	
	comp=E,166nm,0.6s						
LIT	**Litokhoron**	**1.42**	**75**	P	Pn	07 56 14.0	-1.3
LIT				S	Sb	07 56 34.6	+0.5
AGG	**Agios Georgios**	**1.46**	**120**	P	Pn	07 56 15.3	-0.5
AGG				S	Sn	07 56 35.4	+0.3
VLS	**Valsamata**	**1.58**	**183**	P	Pn	07 56 17.9	+0.4
VLS				S	Sn	07 56 39.7	+1.6
VLS	**Valsamata**	**1.58**	**183**	P	Pn	07 56 19.3	+1.8
VLS	**Valsamata**	**1.58**	**183**	ePn	Pn	07 56 18.2	+0.7
VLS				S	Sn	07 56 39.7	+1.6
KFL	**Anninata**	**1.65**	**178**	P	Pn	07 56 18.6	+0.2
KFL				S	Sn	07 56 40.5	+0.8
KRUS	**Krusevo**	**1.67**	**14**	ePn	Pn	07 56 20.2	+1.5
KRUS				eSg	Sg	07 56 43.3	+0.5
KRUS	**Krusevo**	**1.67**	**14**	ePn	Pn	07 56 20.3	+1.6
KRUS				eSg	Sg	07 56 43.3	+0.6
KRUS				eLg		07 56 44.1	
	comp=N,52nm,0.6s						
KRUS				eLg		07 56 44.2	
	comp=E,81nm,0.5s						
GRG	**Griva**	**1.77**	**47**	P	Pn	07 56 19.9	-0.2
GRG				S	Sn	07 56 43.7	+0.9
XOR	**Xorichti**	**1.96**	**101**	P	Pn	07 56 22.0	-0.8
XOR				S	Sn	07 56 48.0	+0.4
LKR	**Lokris**	**2.10**	**121**	P	Pn	07 56 24.8	+0.2
LKR				S	Sn	07 56 52.3	+1.4
VAY	**Valandovo**	**2.11**	**42**	P	Pn	07 56 24.2	-0.7
VAY				S	Sn	07 56 52.2	+0.9
VAY	**Valandovo**	**2.11**	**42**	ePn	Pn	07 56 25.2	+0.3
VAY				eSg	Sg	07 56 50.6	-6.6
VAY				S	Sn	07 56 52.2	+0.9
VAY	**Valandovo**	**2.11**	**42**	ePn	Pn	07 56 25.2	+0.4
VAY				eSg	Sg	07 56 50.7	-6.5
VAY				eLg		07 56 52.1	
	comp=E,61nm,0.6s						
VAY				eLg		07 56 53.2	
	comp=N,71nm,0.7s						
KNT	**Kendrikon**	**2.19**	**49**	P	Pn	07 56 24.9	-0.9
PLG	**Polygyros**	**2.19**	**73**	P	Pn	07 56 24.9	-1.0
PLG				S	Sn	07 56 53.5	+0.2
PLG	**Polygyros**	**2.19**	**73**	P	Pn	07 56 28.4	+2.5
PLG	**Polygyros**	**2.19**	**73**	ePN	Pn	07 56 26.0	+0.1
PLG	**Polygyros**	**2.19**	**73**	ePn	Pn	07 56 27.3	+1.4
PLG				S	Sn	07 56 53.5	+0.2
SKO	**Skopje**	**2.28**	**14**	ePn	Pn	07 56 29.0	+1.8
SKO				eSg	Sg	07 56 57.6	-5.0
SKO	**Skopje**	**2.28**	**14**	ePn	Pn	07 56 29.0	+1.8
SKO				eSg	Sg	07 56 57.6	-5.0
SKO				eLg		07 56 58.1	
	comp=E,65nm,0.8s						
SKO				eLg		07 56 58.8	
	comp=N,58nm,0.5s						
SOH	**Sokhos**	**2.29**	**61**	P	Pn	07 56 26.4	-0.9
SOH				S	Sn	07 56 55.6	0.0
OUR	**Ouranopolis**	**2.58**	**76**	P	Pn	07 56 30.6	-0.7
OUR				S	Sn	07 57 02.7	-0.2
DID	**Didima**	**3.00**	**138**	P	Pn	07 56 36.9	-0.1
DID				S	Sn	07 57 14.0	+0.9
TIP	**Timpagrande**	**3.11**	**261**	P	Pn	07 56 38.3	-0.2
IDI	**Anoyia**	**5.56**	**142**	Pn	Pn	07 57 10.6	-1.7
	comp=N,0.6nm,0.3s,baz=14,slow=19,SNR=2.8						
IDI				Sn	Sn	07 58 11.8	-4.6
	comp=N,1.0nm,0.3s,baz=53,slow=15,SNR=4.7						
MLR	**Muntele Rosu**	**6.91**	**32**	Pn	Pn	07 57 33.7	+3.0
	comp=N,0.3nm,0.3s,baz=109,slow=21,SNR=2.4						
MLR				Sn	Sn	07 58 50.4	+0.9
	comp=N,0.2nm,0.3s,baz=83,slow=22,SNR=2.2						
MLR	**Muntele Rosu**	**6.91**	**32**	Pn	Pn	07 57 33.7	+3.0
MLR				Sn	Sn	07 58 50.4	+0.9
NOA	**NORSAR Array B**	**22.11**	**348**	P	P	08 00 42.6	-2.0
	comp=N,0.4nm,0.7s,mb3.0,baz=157,slow=11,SNR=3.5						
TORD	**Torodi Ar. Bea**	**31.36**	**218**	P	P	08 02 08.2	-2.1
	comp=N,0.5nm,0.6s,mb3.5,baz=31,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**44.37**	**60**	P	P	08 03 57.6	-2.3
	comp=N,0.6nm,0.5s,mb3.6,baz=280,slow=6.8,SNR=5.4						

*MAN **28** 08:06:20, 4.18N×12651E, h57km, mb5.3, ML4.3, MS4.5*
*IDC **28** 08:06:24.8±2.8, 456N×12637E, h67km±25km, mb4.1/15, mb1 4.3/17, mb1mx4.2/23, mbtmp4.1/17, MS3.4/9, Ms1 3.5/9, ms1mx3.3/23, Error ellipse: s-maj=34.0km s-min=11.7km az=76.0*
*ISCJB **28** 08:06:25.5±0.6, 455N±003×12637E±007, h93km±6km, mb4.5/15, Error ellipse: s-maj=12.2km s-min=5.4km az=169.8*
*DJA **28** 08:06:26.4±0.0, 438N×12643E, h10km, mb5.0/7, mB5.6/5, Mjma4.3/4, MLv5.1/4, Mw(mB)5.3/5*
*NEIC **28** 08:06:29.5±0.9, 448N×12624E, h113km±8km, mb4.8/4, Error ellipse: s-maj=11.0km s-min=5.1km az=74.0*
ISC 28 08:06:27.3±0.6, 452N±003×12637E±008, h94km±5km, n55, σ0.9≥94/58, mb4.5/15, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.11**	**318**	eP	Pn	08 06 57.9	-3.1
MATI	**Mati**	**2.41**	**357**	eP	Pn	08 07 03.5	-1.6
MATI				eS	Sn	08 07 32.0	-2.0
DAV	**Davao City (W)**	**2.66**	**343**	P	Pn	08 07 11.6	+3.3
	140nm,0.3s,baz=30,slow=6.5,SNR=6.7						
DAV				S	Sn	08 07 43.4	+3.6
	92nm,0.3s,baz=82,slow=22,SNR=7.3						
DAV	**Davao City (W)**	**2.66**	**343**	P	Pn	08 07 11.6	+3.3
DAV				S	Sn	08 07 43.4	+3.6
DAV	**Davao City (W)**	**2.66**	**343**	P	Pn	08 07 11.1	+2.8
KCP	**Kidapawan**	**2.78**	**333**	⇑eP	Pn	08 07 09.3	-0.7
KCP				*i* S	Sn	08 07 46.8	+3.9
BUKP	**Musuan**	**3.58**	**339**	eP	Pn	08 07 20.2	-0.5
PAGZ	**Pagadian**	**4.45**	**318**	eP	Pn	08 07 33.4	+0.9
ZMPH	**Zamboanga City**	**4.92**	**300**	⇓eP	Pn	08 07 37.3	-1.6
ZMPH				eS	Sn	08 08 22.7	-12
LBMI	**Labuha**	**5.24**	**168**	P	Pn	08 07 43.7	+0.4
	117nm,0.6s,3μm1.4nm						
SCPH	**Surigao**	**5.30**	**351**	eP	Pn	08 07 48.1	+4.0
TBP	**Tagbilaran**	**5.71**	**334**	eP	Pn	08 07 49.8	+0.2
MYLDM	**Lahad Datu**	**7.87**	**275**	P	Pn	08 08 21.8	+2.7
AAI	**Ambon**	**8.35**	**167**	P	Pn	08 08 24.5	-1.1
	68nm,0.8s,2μm						
PCI	**Palu**	**8.47**	**231**	P	Pn	08 08 26.6	-0.6
	131nm,1.1s,0.4nm						
KDI	**Kendari**	**9.22**	**204**	P	Pn	08 08 37.1	-0.3
	78nm,0.9s,5μm						
KAPI	**Kappang**	**11.55**	**215**	P	Pn	08 09 08.9	-0.3
	1.7nm,0.3s,baz=187,slow=6.6,SNR=7.7						
KAPI				LR	LR	08 13 53.5	
	comp=Z,176nm,21.0s,baz=220,slow=39						
KAPI	**Kappang**	**11.55**	**215**	P	Pn	08 09 09.2	0.0
	13nm,1.0s,161nm						
BATI	**Baumata**	**14.88**	**190**	P	Pn	08 09 53.6	+0.8
	6.7nm,0.3s,baz=302,slow=7.9,SNR=3.9						
BATI				LR	LR	08 16 15.0	
	comp=Z,117nm,18.2s,baz=314,slow=40						
KSM	**Kuching**	**16.32**	**260**	ePn	Pn	08 10 10.8	-0.2
KAKA	**Kakadu**	**18.15**	**161**	eP	Px	08 10 16.7	
	13nm,0.5s						
GUMO	**Guam**	**20.35**	**62**	LR	LR	08 17 26.9	
	comp=Z,165nm,20.1s,baz=246,slow=33						
WRAB	**Tennant Creek**	**25.53**	**162**	eP	P	08 11 48.0	+0.7
	33nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**25.54**	**162**	P	P	08 11 46.9	-0.5
	20nm,0.7s,mb4.7,baz=344,slow=10,SNR=98						
WRA				S	S	08 16 07.3	-1.0
	1.0nm,0.9s,baz=347,slow=17,SNR=4.9						
WB2	**Warramunga Arr**	**25.54**	**162**	eP	P	08 11 47.9	+0.5
WB2				eS	S	08 16 07.7	-0.6
ASAR	**Alice Springs**	**28.96**	**166**	P	P	08 12 18.6	+0.6
	4.0nm,0.6s,mb4.2,baz=344,slow=7.2,SNR=81						
ASAR				S	S	08 17 01.8	-0.3
	0.8nm,0.9s,baz=346,slow=19,SNR=4.2						
CMAR	**Chiang Mai Arr**	**30.17**	**300**	ScP	ScP	08 19 05.8	+3.7
	1.2nm,0.3s,baz=129,slow=2.5,SNR=4.6						
CMAR				LR	LR	08 24 02.9	
	comp=Z,62nm,18.3s,baz=110,slow=35						
KSRS	**Korea Array**	**32.81**	**2**	P	P	08 12 50.9	-0.9
	2.1nm,0.5s,mb4.2,baz=180,slow=9.9,SNR=6.6						
MJAR	**Matsushiro Arr**	**33.67**	**17**	LR	LR	08 23 51.8	
	comp=Z,80nm,20.9s,baz=160,slow=41						
KLBR	**Kelberrin**	**36.84**	**192**	eP	P	08 13 26.4	0.0
	12nm,0.8s,mb4.9						
MUN	**Mundaring**	**37.56**	**194**	eP	P	08 13 32.8	+0.2
NWAO	**Narrogin (SRO)**	**38.24**	**192**	P	P	08 13 38.1	-0.1
	20nm,1.0s,mb4.9,baz=22,slow=11,SNR=15						
STKA	**Stephens Creek**	**38.99**	**159**	eP	P	08 13 45.5	+1.0
	7.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**38.99**	**159**	P	P	08 13 45.4	+0.8
	7.3nm,0.5s,mb4.7,baz=330,slow=8.2,SNR=15						
SHL	**Shillong**	**39.13**	**306**	eP	P	08 13 45.5	-0.4
ARMA	**Armidale**	**42.32**	**147**	eP	P	08 14 12.0	0.0
JIRN	**Jiri**	**44.63**	**305**	eP	P	08 14 30.6	0.0
GUN	**Gumba**	**44.98**	**306**	eP	P	08 14 33.6	+0.2
SONM	**Songino Array**	**46.44**	**341**	P	P	08 14 45.6	+1.0
	1.4nm,0.7s,baz=159,slow=7.2,SNR=8.0						
SONM				PcP	PcP	08 16 20.5	+2.6
	0.7nm,0.7s,baz=129,slow=3.8,SNR=2.4						
SONM	**Songino Array**	**46.44**	**341**	P	P	08 14 45.6	+1.0
SONM				PcP	PcP	08 16 20.5	+2.6
KOLN	**Koldanda**	**46.79**	**304**	eP	P	08 14 47.3	-0.4
	15nm,0.8s,mb4.8						
DANN	**Dangsing**	**46.87**	**305**	eP	P	08 14 47.3	-1.0
PETK	**Petropavlovsk-**	**54.84**	**23**	P	P	08 15 48.1	+0.5
	2.5nm,0.6s,mb4.4,baz=210,slow=5.1,SNR=4.3						
PETK				LR	LR	08 40 38.4	
	comp=Z,29nm,18.8s,baz=91,slow=38						
MK31	**Makanchi Array**	**56.71**	**325**	eP	P	08 16 02.3	+1.2
MKAR	**Makanchi Array**	**56.71**	**325**	P	P	08 16 00.9	-0.2
	0.6nm,0.3s,mb4.1,baz=123,slow=7.0,SNR=11						
MKAR				ScP	ScP	08 20 50.8	+3.5
	1.2nm,0.8s,baz=117,slow=4.2,SNR=5.6						
MKAR				LR	LR	08 40 51.0	
	comp=Z,47nm,18.3s,baz=356,slow=36						
ZALV	**Zalesovo Beam**	**59.73**	**333**	P	P	08 16 21.9	-0.1
	0.5nm,0.3s,mb4.0,baz=129,slow=6.8,SNR=2.5						
ZALV				LR	LR	08 48 08.4	
	comp=Z,18nm,18.1s,baz=296,slow=42						
KURK	**Kurchatov**	**60.89**	**327**	P	P	08 16 30.7	+0.7
	1.5nm,0.4s,mb4.4,baz=128,slow=7.2,SNR=6.7						
KURK	**Kurchatov**	**60.89**	**327**	P	P	08 16 30.7	+0.7
BVAR	**Borovoye Array**	**66.47**	**327**	P	P	08 17 06.7	0.0
	1.0nm,0.6s,baz=134,slow=8.5,SNR=5.2						
AKTK	**Aktyubinsk**	**72.83**	**322**	P	P	08 17 45.3	-0.5
AKTO	**Aktyubinsk**	**72.83**	**322**	P	P	08 17 45.3	-0.5
	0.9nm,0.4s,mb4.0,baz=118,slow=12,SNR=4.4						
VNDA	**Vanda**	**84.25**	**173**	P	P	08 18 49.3	+1.4
	1.2nm,0.6s,baz=319,slow=6.1,SNR=18						
ARCES	**ARCESS Array B**	**89.59**	**340**	P	P	08 19 13.4	-0.6
	3.4nm,0.7s,mb4.6,baz=67,slow=6.8,SNR=10						
NOA	**NORSAR Array B**	**97.93**	**334**	P	P	08 19 51.4	-1.0
	0.9nm,0.7s,mb4.4,baz=66,slow=4.4,SNR=3.3						
NOA				LR	LR	09 13 42.1	
	comp=Z,25nm,20.2s,baz=140,slow=41						
TORD	**Torodi Ar. Bea**	**122.33**	**289**	PKP	PKPdf	08 25 13.4	+0.9
	0.8nm,0.8s,baz=52,slow=1.5,SNR=4.1						

*CSEM **28** 08:29:46.0, 3906N×2158E, h28km, MD3.0/3, After ATH*
ATH 28 08:29:46.1, 3906N×2157E, h28km±2km, MD3.0/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.23**	**128**	ePB	Pb	08 29 52.5	0.0
EVR				eSB	Sb	08 29 57.5	+0.7
JAN	**Janina**	**0.82**	**317**	ePN	Pn	08 30 02.0	+0.3
JAN				eSN	Sn	08 30 13.5	+0.6
VLS	**Valsamata**	**1.17**	**221**	ePN	Pn	08 30 08.5	+1.9
KRUS	**Krusevo**	**2.32**	**354**	ePn	Pn	08 30 30.1	+7.7

*IDC **28** 09:29:21.0±10.0, 36.17N×7084E, h137km±90km, mb3.3/5, mb1 3.3/9, mb1mx3.2/25, mbtmp3.3/9, Error ellipse: s-maj=61.5km s-min=32.0km az=1.0*
*BJI **28** 09:29:25.6, 3629N×7087E, h207km*
*ISCJB **28** 09:29:26.0±0.3, 3652N±002×7078E±005, h190km±6km, mb3.5/3, Error ellipse: s-maj=6.4km s-min=3.9km az=168.8*
*MOS **28** 09:29:26.4±1.3, 3652N×7073E, h197km, mb3.8/2, Error ellipse: s-maj=17.2km s-min=10.3km az=91.3*
*NEIC **28** 09:29:27.2±0.6, 3651N×7083E, h186km±8km, mb4.8/4, Error ellipse: s-maj=10.2km s-min=5.9km az=67.0*
*NNC **28** 09:29:33.2±3.2, 3706N×7069E, h200km±37km, mb2.8, mpv4.2, Error ellipse: s-maj=30.9km s-min=19.3km az=22.0*
ISC 28 09:29:27.1±0.4, 3652N±002×7081E±005, h182km±5km, n57, σ1.9≥09/74, mb3.5/3, 6C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.45**	**217**	ePn	Pn	09 30 09.7	+0.4
KBL				eSn	Sn	09 30 41.3	-0.7
CEP	**Cherat**	**2.84**	**161**	⇑P	Pn	09 30 14.9	+1.0
CEP				S	Sn	09 30 50.0	-0.2
CHCP	**Chirah Chowk**	**3.49**	**144**	P	Pn	09 30 23.1	+1.2
NIL	**Nilore**	**3.49**	**144**	ePn	Pn	09 30 23.1	+1.2
SBDP	**Sheikh Budin**	**4.21**	**180**	P	Pn	09 30 30.9	0.0
SARP	**Sargodha**	**4.84**	**161**	P	Pn	09 30 38.8	-0.2
KSH	**Kashi**	**5.05**	**52**	eP	Pn	09 30 44.0	+2.3
KSH				S	Sn	09 31 41.8	+1.5
KSH				Smax			
	comp=N,16nm,0.5s						
KSH				Smax			
	comp=E,12nm,0.2s						
THN	**Thein Dam**	**5.75**	**134**	eP	Pn	09 30 49.6	-1.2
THN				eS	Sn	09 31 53.9	-2.7
DLH	**Dalhousie**	**5.82**	**132**	eS	Sn	09 31 55.0	-3.3
AML	**Almayashu**	**6.03**	**21**	ePn	Pn	09 30 54.9	+0.5
AML				eSn	Sn	09 32 02.0	-1.2
AML	**Almayashu**	**6.03**	**21**	P	Pn	09 30 55.0	+0.7
	SNR=36						
UCH	**Uchtor**	**6.38**	**26**	ePn	Pn	09 31 00.0	+1.1
UCH				eSn	Sn	09 32 09.4	-1.9
KZA	**Kyzart**	**6.53**	**30**	P	Pn	09 31 01.8	+0.9
	SNR=6.1						
EKS2	**Erkin-Say**	**6.54**	**20**	ePn	Pn	09 31 01.6	+0.6
EKS2				eSn	Sn	09 32 12.3	-3.0
EKS2	**Erkin-Say**	**6.54**	**20**	P	Pn	09 31 01.7	+0.7
	SNR=17						
KK31	**Karatay Array**	**6.58**	**358**	P	Pn	09 31 01.5	0.0
	comp=E,4.1nm,0.2s,baz=179,slow=12,SNR=270						
KK31				⇑S	Sn	09 32 10.7	-5.4
	comp=E,6.2nm,0.5s,baz=198,slow=14,SNR=9.5						
AAK	**Ala-Archa**	**6.73**	**24**	P	Pn	09 31 04.3	+0.8
	SNR=13						
KBK	**Karagaybulak**	**6.91**	**26**	P	Pn	09 31 07.3	+1.5
	SNR=5.1						
ULHL	**Ulahol**	**7.09**	**35**	P	Pn	09 31 09.2	+0.9
	SNR=7.0						
CHMS	**Chumysh**	**7.14**	**24**	P	Pn	09 31 09.3	+0.4
	SNR=8.0						
USP	**Ospenovka**	**7.31**	**22**	P	Pn	09 31 10.7	-0.4
	SNR=28						
TKM2	**Tokmak 2**	**7.38**	**29**	⇑P	Pn	09 31 12.3	+0.3
TKM2	comp=E,20nm,0.8s			⇑S	Sn	09 32 33.1	-2.0
	comp=E,6.1nm,0.6s						
TKM2	**Tokmak 2**	**7.38**	**29**	ePn	Pn	09 31 12.4	+0.4
TKM2				eSn	Sn	09 32 32.9	-2.2
TKM2	**Tokmak 2**	**7.38**	**29**	P	Pn	09 31 12.6	+0.7
	SNR=14						
SMLA	**Simla**	**7.54**	**134**	*i* P	Pn	09 31 13.6	-0.7
SMLA				*i* S	Sn	09 32 34.3	-4.9
SMLA				*i* S	Sn	09 32 34.7	-4.4
KLP	**Kalpa**	**7.93**	**127**	eP	Pn	09 31 20.3	+0.9
KLP				eS	Sn	09 32 43.9	-4.5
JOSI	**Joshimath**	**9.41**	**127**	eS	Sn	09 33 17.4	-6.5
JOSI				AML	AML	09 33 20.4	
	comp=N,448nm,1.1s						
JOSI				AML	AML	09 33 20.5	
	comp=E,457nm,0.9s						
KHET	**Khetri**	**9.42**	**152**	eS	Sn	09 33 15.1	-9.0
MKAR	**Makanchi Array**	**13.36**	**36**	P	Pn	09 32 30.3	+0.8
	comp=E,0.4nm,0.3s,baz=222,slow=12,SNR=11						
DANN	**Dangsing**	**13.63**	**123**	eP	Pn	09 32 31.9	-1.

*IDC **28** 09:32:09.1±3.1,247N×12785E,h60km±28km,mb4.2/15, mb1 4.3/15,mb1mx4.2/20,mbtmp4.2/15,MS3.4/3, Ms1 3.4/3,ms1mx3.0/28,Error ellipse: s-maj=32.9km s-min=11.2km az=72.0*

*ISCJB **28** 09:32:13.4±1.5,245N±006×12777E±008,h115km±14km, mb4.5/25,Error ellipse: s-maj=14.0km s-min=7.8km az=155.6*

*BJI **28** 09:32:13.8,240N×12780E,h103km,mB4.9,mb4.8*

*NEIC **28** 09:32:13.8±0.3,245N×12781E,mb4.7/10,Error ellipse: s-maj=10.1km s-min=5.7km az=67.0*

*DJA **28** 09:32:18.9±0.0,238N×12747E,h60km,mB5.5/2, Mjma4.0/3,MLv4.7/3,Mw(mB)5.2/2,Mwp4.9/4*

ISC 28 09:32:14.2±1.3,244N±006×12783E±008,h106km±12km, n52,σ1§00/46,mb4.5/25,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**3.08**	**186**	P	**Pn**	**09 32 59.7**	**-1.4**
LBMI	**Labuha**	**3.08**	**186**	S	**Sn**	**09 33 46.1**	**+8.8**
DAV	**Davao City (W)**	**5.11**	**334**	LR	LR	09 35 35.3	
	comp=Z,251nm,21.3s,baz=107,slow=40						
AAI	**Ambon**	**6.10**	**177**	P	**Pn**	**09 33 43.7**	**+1.8**
	178nm,0.9s,0.4nm						
KDI	**Kendari**	**8.21**	**219**	P	**Pn**	**09 34 09.9**	**-0.7**
	70nm,0.8s,0.2nm						
KDI	**Kendari**	**8.21**	**219**	S	**Sn**	**09 35 40.4**	**-1.4**
	70nm,0.8s,0.2nm						
KAPI	**Kappang**	**10.95**	**227**	P	**Pn**	**09 34 47.3**	**-0.4**
	4.9nm,0.3s,baz=47,slow=7.3,SNR=4.7						
KKM	**Kota Kinabalu**	**12.12**	**288**	*e*Pn	**Pn**	**09 35 04.2**	**+0.9**
SBUM	**Sibu**	**15.59**	**270**	P	**Pn**	**09 35 51.9**	**+3.7**
KAKA	**Kakadu**	**15.74**	**163**	*e*P	Px	09 35 33.0	
	17nm,0.7s						
KHKI	**Kahang-Kahang**	**16.24**	**228**	P	**Pn**	**09 35 59.5**	**+3.3**
KMMI	**Kalianget**	**16.74**	**236**	P	**Pn**	**09 36 06.1**	**+3.7**
	100nm,0.8s,2μm						
SJI	**Sawahan**	**18.94**	**238**	P	**P**	**09 36 29.6**	**+2.5**
GUMO	**Guam**	**20.16**	**56**	LR	LR	09 43 10.2	
	comp=Z,60nm,19.0s,baz=90,slow=33						
COEN	**Coen**	**22.30**	**137**	*e*P	**P**	**09 37 03.4**	**+0.4**
	5.7nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**23.14**	**164**	*e*P	**P**	**09 37 10.8**	**-0.4**
	62nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	**23.15**	**164**	P	**P**	**09 37 10.2**	**-1.1**
	47nm,0.7s,mb4.9,baz=345,slow=10,SNR=134						
WB2	**Warramunga Arr**	**23.15**	**164**	*e*P	**P**	**09 37 10.8**	**-0.6**
MBWA	**Marble Bar**	**24.76**	**198**	*e*P	**P**	**09 37 25.8**	**-0.3**
	12nm,0.6s,mb4.5						
XMIS	**Christmas Isla**	**25.53**	**239**	*e*P	**P**	**09 37 33.1**	**-0.1**
ASAR	**Alice Springs**	**26.62**	**167**	P	**P**	**09 37 42.7**	**-0.1**
	3.1nm,0.6s,mb4.0,baz=357,slow=8.1,SNR=63						
ASAR				ScP	ScP	09 44 40.0	+5.0
	0.6nm,0.6s,baz=344,slow=2.4,SNR=4.4						
CTA	**Charters Tower**	**28.78**	**142**	*e*P	**P**	**09 38 07.1**	**+4.9**
	6.1nm,1.8s,mb3.9						
CMAR	**Chiang Mai Arr**	**32.47**	**301**	P	**P**	**09 38 34.6**	**-0.1**
	1.4nm,0.4s,mb4.1,baz=123,slow=7.1,SNR=5.3						
FORT	**Forrest**	**33.04**	**180**	*e*P	**P**	**09 38 39.6**	**+0.1**
	31nm,0.7s,mb5.2						
KSRS	**Korea Array**	**34.84**	**0**	P	**P**	**09 38 54.5**	**-0.5**
	0.9nm,0.6s,mb3.8,baz=174,slow=9.7,SNR=4.1						
KLBR	**Kellerberrin**	**35.17**	**195**	*e*P	**P**	**09 38 57.4**	**-0.5**
	16nm,0.7s,mb5.0						
MUN	**Mundaring**	**35.96**	**197**	*e*P	**P**	**09 39 04.3**	**-0.4**
XAN	**Xi'an**	**36.05**	**333**	P	**P**	**09 39 05.0**	**-0.4**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**36.55**	**160**	*e*P	**P**	**09 39 09.9**	**+0.2**
	comp=Z,38nm,0.7s,mb5.4						
STKA	**Stephens Creek**	**36.55**	**160**	P	**P**	**09 39 09.9**	**+0.2**
	comp=Z,43nm,0.7s,mb5.5,baz=336,slow=8.1,SNR=104						
NWAO	**Narrogin (SRO)**	**36.58**	**195**	P	**P**	**09 39 09.4**	**-0.5**
	comp=Z,9.2nm,0.6s,mb4.9,baz=1.2,slow=9.3,SNR=13						
NWAO	**Narrogin (SRO)**	**36.58**	**195**	*e*P	**P**	**09 39 09.5**	**-0.4**
	comp=Z,5.8nm,0.6s,mb4.7						
ARMA	**Armidale**	**39.80**	**147**	*e*P	**P**	**09 39 37.7**	**+0.7**
LZH	**Lanzhou**	**40.16**	**329**	*e*P	**P**	**09 39 40.0**	**+0.1**
LZH				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,56nm,4.3s						
CNB	**Canberra Magne**	**42.64**	**154**	*e*P	**P**	**09 40 02.1**	**+2.0**
TOO	**Toolangi**	**43.05**	**159**	*e*P	**P**	**09 40 05.3**	**+1.8**
GTA	**Gaotai**	**44.76**	**329**	*e*P	**P**	**09 40 20.5**	**+3.4**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**48.86**	**341**	P	**P**	**09 40 49.1**	**+0.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=153,slow=8.2,SNR=9.3						
PETK	**Petropavlovsk-**	**56.22**	**21**	P	**P**	**09 41 42.7**	**-0.4**
	comp=Z,2.8nm,0.9s,mb4.3,baz=110,slow=8.1,SNR=4.3						
MK31	**Makanchi Array**	**59.23**	**325**	*e*P	**P**	**09 42 04.8**	**+0.5**
MKAR	**Makanchi Array**	**59.23**	**325**	P	**P**	**09 42 04.8**	**+0.6**
	comp=Z,4.1nm,0.5s,mb4.7,baz=118,slow=8.4,SNR=35						
RPZ	**Rata Peaks**	**60.09**	**145**	P	**P**	**09 42 09.0**	**-1.2**
	comp=Z,8.8nm,0.8s,mb4.8,baz=90,slow=7.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**62.22**	**333**	P	**P**	**09 42 22.9**	**-1.5**
	comp=Z,0.8nm,0.3s,mb4.2,baz=137,slow=7.4,SNR=5.2						
KURK	**Kurchatov**	**63.41**	**327**	P	**P**	**09 42 32.3**	**-0.1**
	comp=Z,3.3nm,0.5s,mb4.5,baz=127,slow=6.3,SNR=15						
KURK	**Kurchatov**	**63.41**	**327**	*e*P	**P**	**09 42 32.1**	**-0.2**
	comp=Z,4.8nm,0.6s,mb4.6						
KURK				*e*pP	pP	09 42 58.4	-0.2
BVAR	**Borovoye Array**	**68.99**	**327**	P	**P**	**09 43 07.5**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.9,baz=139,slow=7.0,SNR=6.6						
BVAR				LR	LR	10 12 43.2	
	comp=Z,74nm,19.9s,baz=111,slow=35						
BRVK	**Borovoye**	**69.06**	**327**	*e*P	**P**	**09 43 08.3**	**-0.1**
	comp=Z,2.1nm,0.5s,mb4.2						
BRVK				*e*pP	pP	09 43 34.1	-1.0
VNDA	**Vanda**	**82.02**	**173**	P	**P**	**09 44 22.4**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.1,baz=318,slow=5.7,SNR=18						
ARCES	**ARCESS Array B**	**92.03**	**340**	P	**P**	**09 45 09.6**	**-1.2**
	comp=Z,2.5nm,0.8s,mb4.5,baz=61,slow=9.4,SNR=3.8						
TXAR	**Lajitas Array**	**121.50**	**53**	PKP	PKPdf	09 50 57.4	+1.5
	comp=Z,0.6nm,0.7s,baz=234,slow=1.2,SNR=8.7						
JCT	**Junction City**	**124.05**	**50**	*e*PKPdf	PKPdf	09 51 01.6	+0.8
TORD	**Torodi Ar. Bea**	**124.35**	**288**	PKP	PKPdf	09 51 02.3	+0.6
	comp=Z,1.8nm,0.6s,baz=45,slow=2.1,SNR=11						

*NEIC **28** 09:34:27.9,3988N×2067E,h3km,MD3.2(ATH),After ATH.*

*CSEM **28** 09:34:27.4±0.2,3980N×2068E,h5km,MD3.2,Error ellipse: s-maj=4.9km s-min=3.8km az=117.0*

*ISCJB **28** 09:34:28.2±0.5,3977N±002×2071E±003,h6km±5km, Error ellipse: s-maj=4.6km s-min=4.1km az=31.8*

*THE **28** 09:34:28.0,3977N×2076E,h0km±1km,ML3.2/5,Error ellipse: s-maj=1.8km s-min=0.6km az=259.0*

*ATH **28** 09:34:28.3,3979N×2074E,h12km±5km,MD3.2/5*

ISC 28 09:34:28.5±0.5,3975N±003×2071E±003,h10km±4km,n22, σ0§99/36,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.14**	**131**	*e*PG	**Pg**	**09 34 31.9**	**+0.2**
JAN				*e*SG	**Sg**	**09 34 34.5**	**+0.7**
IGT	**Igoumenitsa**	**0.36**	**234**	P	**Pg**	**09 34 35.4**	**-0.3**
IGT				S	**Sg**	**09 34 42.0**	**+1.5**
KEK	**Kerkira**	**0.71**	**267**	*e*PB	**Pb**	**09 34 41.0**	**-1.9**
KEK				*e*SB	**Sb**	**09 34 53.0**	**+0.3**
KEK	**Kerkira**	**0.71**	**267**	*e*Pg	**Pg**	**09 34 40.8**	**-1.3**
KZN	**Kozani**	**0.98**	**55**	*e*PB	**Pb**	**09 34 46.5**	**-1.2**
THL	**Klokotos Trika**	**1.02**	**100**	P	**Pg**	**09 34 47.0**	**-1.1**
THL				S	**Sg**	**09 35 00.6**	**-0.8**
THL	**Klokotos Trika**	**1.02**	**100**	*e*Pb	**Pb**	**09 34 47.3**	**-1.0**
THL				S	**Sg**	**09 35 00.6**	**-0.8**
FNA	**Florina**	**1.15**	**26**	P	**Pb**	**09 34 49.2**	**-1.3**
FNA				S	**Sb**	**09 35 06.0**	**+0.5**
EVR	**Evrytania**	**1.19**	**134**	*e*PB	**Pb**	**09 34 51.0**	**-0.1**
EVR	**Evrytania**	**1.19**	**134**	*e*Pg	**Pg**	**09 34 52.0**	**+0.7**
BIA	**Bitola**	**1.35**	**20**	P	**Pn**	**09 34 52.6**	**-0.8**
BIA				S	**Sb**	**09 35 11.9**	**+0.6**
BIA	**Bitola**	**1.35**	**20**	*e*Pn	**Pn**	**09 34 52.5**	**-0.9**
BIA				S	**Sb**	**09 35 11.9**	**+0.6**
BIA				*e*Sg	**Sg**	**09 35 13.3**	**+1.3**
BIA	**Bitola**	**1.35**	**20**	*e*Pn	**Pn**	**09 34 52.5**	**-0.9**
BIA				*e*Sg	**Sg**	**09 35 13.3**	**+1.4**
LIT	**Litokhoron**	**1.41**	**75**	P	**Pn**	**09 34 53.0**	**-1.2**
LIT				S	**Sn**	**09 35 13.8**	**+0.9**
AGG	**Agios Georgios**	**1.45**	**120**	P	**Pn**	**09 34 54.5**	**-0.3**
AGG				S	**Sn**	**09 35 14.8**	**+1.0**
VLS	**Valsamata**	**1.57**	**184**	P	**Pn**	**09 34 56.9**	**+0.4**
VLS	**Valsamata**	**1.57**	**184**	*e*Pb	**Pb**	**09 35 01.3**	**+3.6**
VLS	**Valsamata**	**1.57**	**184**	*e*PB	**Pb**	**09 34 59.0**	**+1.3**
VLS	**Valsamata**	**1.57**	**184**	P	**Pn**	**09 34 56.9**	**+0.4**
KFL	**Anninata**	**1.64**	**178**	P	**Pn**	**09 34 57.4**	**0.0**
KRUS	**Krusevo**	**1.67**	**14**	*e*Pn	**Pn**	**09 34 59.6**	**+1.8**
KRUS				*e*Sg	**Sg**	**09 35 22.5**	**+0.4**
KRUS	**Krusevo**	**1.67**	**14**	*e*Pn	**Pn**	**09 34 59.7**	**+1.9**
KRUS				*e*Sg	**Sg**	**09 35 22.6**	**+0.4**

*NEIC **28** 09:37:28.7,3981N×2067E,h12km,MD3.0(ATH),After ATH.*

*CSEM **28** 09:37:29.1±0.1,3981N×2067E,h2km,MD3.0,Error ellipse: s-maj=2.8km s-min=2.3km az=174.0*

ATH 28 09:37:29.0,3981N×2071E,h14km±2km,MD3.0/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.19**	**145**	*e*PG	Pg	09 37 32.9	-0.4
JAN				*e*SG	Sg	09 37 36.2	-0.1
KEK	**Kerkira**	**0.71**	**262**	*e*PB	Pb	09 37 41.8	-1.3
KEK				*e*SB	Sb	09 37 53.0	+0.3
KZN	**Kozani**	**0.95**	**58**	*e*PB	Pb	09 37 47.4	+0.1
EVR	**Evrytania**	**1.23**	**136**	*e*PB	Pb	09 37 53.0	+0.9
EVR	**Evrytania**	**1.23**	**136**	*e*Pb	Pb	09 37 54.0	+1.9
KRUS	**Krusevo**	**1.61**	**15**	*e*Pn	Pn	09 38 00.3	+3.3
KRUS				*e*Sg	Sg	09 38 23.4	+2.5
KRUS	**Krusevo**	**1.61**	**15**	*e*Pn	Pn	09 38 00.4	+3.4
KRUS				*e*Sg	Sg	09 38 23.5	+2.6
VLS	**Valsamata**	**1.63**	**183**	*e*PB	Pb	09 37 59.6	+0.7

*ISCJB **28** 09:37:49.2±0.9,464N±02×273W±02,h10km,mb3.8/8, MS3.5/10,Error ellipse: s-maj=29.3km s-min=19.4km az=2.2*

*IDC **28** 09:37:49.7±0.9,4642N×2732W,h0km,mb3.8/8,mb1 4.0/8, mb1mx3.8/26,mbtmp3.8/8,MS3.5/10,Ms1 3.5/10, ms1mx3.2/35,Error ellipse: s-maj=31.9km s-min=22.4km az=174.0*

*NEIC **28** 09:37:51.1±0.6,4637N×2730W,h10km,Error ellipse: s-maj=20.4km s-min=15.0km az=176.0*

ISC 28 09:37:51.2±0.9,464N±02×273W±02,h10km,n22,σ0§58/10, mb3.8/8,MS3.5/10,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**22.00**	**120**	LR	LR	09 50 20.0	
	comp=Z,41nm,19.8s,MS2.9,baz=159,slow=34						
DAVOX	**Davos/Dischmat**	**25.41**	**75**	LR	LR	09 52 12.8	
	comp=Z,71nm,18.5s,MS3.2,baz=258,slow=34						
GERES	**GERESS Array B**	**27.52**	**70**	LR	LR	09 53 29.9	
	comp=Z,104nm,18.5s,MS3.4,baz=98,slow=34						
HFS	**Hagfors**	**27.61**	**45**	LR	LR	09 54 09.9	
	comp=Z,56nm,19.0s,MS3.2,baz=70,slow=36						
VRAC	**Vranov**	**29.30**	**68**	LR	LR	09 54 57.2	
	comp=Z,135nm,18.3s,MS3.6,baz=289,slow=35						
KEST	**Kesra**	**29.36**	**98**	LR	LR	09 53 55.2	
	comp=Z,69nm,18.0s,MS3.3,baz=256,slow=33						
AKASG	**Malin Array Be**	**36.90**	**62**	P	**P**	**09 44 58.6**	**-1.2**
	0.7nm,0.4s,mb3.8,baz=288,slow=8.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**41.13**	**134**	P	**P**	**09 45 35.6**	**+0.1**
	1.6nm,0.9s,mb3.6,baz=330,slow=9.2,SNR=5.6						
TORD				LR	LR	10 01 23.8	
	comp=Z,160nm,19.7s,MS3.9,baz=330,slow=34						
DBIC	**Dimbokro**	**44.01**	**147**	LR	LR	10 04 17.2	
	comp=Z,67nm,19.6s,MS3.6,baz=1.3,slow=36						
ULM	**Lac du Bonnet**	**44.33**	**301**	LR	LR	10 02 35.2	
	comp=Z,74nm,20.2s,MS3.6,baz=264,slow=34						
PDAR	**Pinedale Array**	**56.18**	**299**	P	**P**	**09 47 30.5**	**-0.4**
	0.6nm,1.6s,mb3.6,baz=91,slow=4.5,SNR=3.5						
DLBC	**Dease Lake**	**57.78**	**323**	LR	LR	10 10 31.7	
	comp=Z,91nm,18.2s,MS3.9,baz=276,slow=34						
BVAR	**Borovoye Array**	**58.74**	**44**	P	**P**	**09 47 49.9**	**+1.0**
	1.8nm,0.7s,mb4.2,baz=310,slow=5.3,SNR=8.2						
TXAR	**Lajitas Array**	**60.40**	**283**	P	**P**	**09 48 00.8**	**+0.1**
	0.5nm,0.8s,mb3.6,baz=68,slow=7.1,SNR=5.8						
TXAR	**Lajitas Array**	**60.40**	**283**	P	**P**	**09 48 00.8**	**+0.1**
KURK	**Kurchatov**	**64.15**	**43**	P	**P**	**09 48 25.5**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=305,slow=19,SNR=7.1						
MKAR	**Makanchi Array**	**68.62**	**44**	P	**P**	**09 48 54.4**	**+0.3**
	1.1nm,0.6s,mb3.9,baz=321,slow=5.5,SNR=7.6						
MKAR	**Makanchi Array**	**68.62**	**44**	P	**P**	**09 48 54.4**	**+0.3**
SONM	**Songino Array**	**77.84**	**30**	P	**P**	**09 49 48.5**	**0.0**
	0.8nm,0.7s,mb3.8,baz=334,slow=8.2,SNR=2.6						
VNDA	**Vanda**	**148.51**	**184**	PKPbc	PKPbc	09 57 37.4	+0.8
	1.3nm,0.9s,baz=250,slow=3.3,SNR=5.5						
WRA	**Warramunga Arr**	**149.65**	**36**	PKPbc	PKPbc	09 57 40.7	-0.4
	1.9nm,0.9s,baz=336,slow=2.9,SNR=12						
ASAR	**Alice Springs**	**152.76**	**40**	PKPbc	PKPbc	09 57 48.0	-0.2
	1.3nm,0.7s,baz=346,slow=2.0,SNR=13						

*IDC **28** 09:42:12.6±0.7,2207S×17362E,h0km,mb4.3/12, mb1 4.5/12,mb1mx4.5/16,mbtmp4.3/12,MS4.6/22, Ms1 4.6/22,ms1mx4.5/29,Error ellipse: s-maj=22.7km s-min=19.4km az=102.0*

*NEIC **28** 09:42:15.2±0.3,2201S×17348E,h10km,mb5.0/30, MS4.9/4,Error ellipse: s-maj=11.4km s-min=8.2km az=139.0*

*ISCJB **28** 09:42:19.0±0.3,2213S±006×17343E±006,h45km, mb4.8/49,MS4.7/33,Error ellipse: s-maj=8.8km s-min=7.0km az=44.4*

*MOS **28** 09:42:19.0±1.5,2203S×17325E,h33km,mb4.9/26,Error ellipse: s-maj=13.3km s-min=9.8km az=160.9*

*SZGRF **28** 09:42:20.9,2135S×17567E,h33km,mb4.8,South of Fiji Islands*

*BJI **28** 09:42:22.0,2210S×17340E,h49km,mB5.2,mb5.0,Ms5.2, Msz4.9*

*GCMT **28** 09:42:25.8±0.1,2193S×17358E,h15km,MW5.3/89, Moment Tensor Solution. s74,c125; s89,c159; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.95±.17; $M_{\theta\theta}$1.88±.17; $M_{\phi\phi}$0.07±.17; $M_{r\theta}$1.10±.45; $M_{\theta\phi}$9.24±.14; $M_{\phi r}$-0.57±.45; Best double couple: $M_0$9.39500×10^{16} NP1:ϕ±3.00000°,δ81.00000°, λ-174.00000°. NP2:ϕ±272.00000°,δ84.00000°, λ-9.00000°. Principal axes: T 10.2750, Plg2.0000°, Azm318.0000°; N -1.7600, Plg80.0000°, Azm59.0000°; P -8.5140, Plg10.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 09:42:20.9±0.3,2211S±006×17348E±006,h47km, h47km±1.9km:pP-P,n188,σ1§23/101,mb4.8/49,MS4.7/33, 12C-7D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**10.53**	**134**	LR	LR	09 48 02.7	
	comp=Z,7μm,18.9s,baz=354,slow=34						
OUZ	**Omahuta**	**13.07**	**180**	P	**Pn**	**09 45 27.5**	**+3.7**
AFI	**Afiamalu**	**16.21**	**62**	LR	LR	09 50 52.4	
	comp=Z,1μm,19.5s,baz=238,slow=32						
AFI	**Afiamalu**	**16.21**	**62**	*e*P	**Pn**	**09 46 02.5**	**-3.0**
AFI	**Afiamalu**	**16.21**	**62**	*e*P	**Pn**	**09 46 08.1**	**+2.5**
URZ	**Urewera**	**16.40**	**170**	Pn	**Pn**	**09 46 09.0**	**+1.3**
	1.3nm,0.3s,baz=18,slow=8.7,SNR=8.9						
URZ				LR	LR	09 50 59.6	
	comp=Z,3μm,20.4s,baz=158,slow=32						
URZ	**Urewera**	**16.40**	**170**	P	**Pn**	**09 46 13.5**	**+5.8**
HNR	**Honiara**	**18.10**	**312**	P	**Pn**	**09 46 23.6**	**-5.4**
	3.1nm,0.3s,baz=13,slow=5.6,SNR=2.9						
HNR				LR	LR	09 52 21.0	
	comp=Z,1μm,21.6s,baz=136,slow=34						
HNR	**Honiara**	**18.10**	**312**	*e*Pn	**Pn**	**09 46 23.2**	**-5.8**
	397nm,1.2s						
SNZO	**South Karori**	**19.17**	**177**	P	**Pn**	**09 46 38.6**	**-3.1**
	154nm,1.6s						
EIDS	**Eidsvold**	**20.75**	**257**	*e*P	**P**	**09 46 57.5**	**-0.3**
	28nm,1.2s						
ARMA	**Armidale**	**21.24**	**243**	*e*P	**P**	**09 47 06.3**	**+3.2**
ARMA				*e*S	**S**	**09 51 12.1**	**+15**
RPZ	**Rata Peaks**	**21.64**	**185**	P	**P**	**09 47 06.9**	**-0.3**
	9.5nm,1.1s,mb4.2,baz=48,slow=4.1,SNR=2.7						
RPZ				LR	LR	09 54 17.5	
	comp=Z,2μm,19.7s,MS4.6,baz=357,slow=33						
TARA	**Tarawa**	**23.32**	**359**	P	**P**	**09 47 23.4**	**-1.8**
	149nm,1.1s,mb5.3						
CNB	**Canberra Magne**	**24.83**	**233**	*e*P	**P**	**09 47 41.0**	**+2.2**
CNB				*e*S	**S**	**09 52 16.0**	**+18**
RAR	**Rarotonga**	**24.87**	**93**	LR	LR	09 55 04.5	
	comp=Z,1μm,20.4s,MS4.3,baz=261,slow=31						
CAN	**Canberra**	**25.10**	**233**	*e*P	**P**	**09 47 42.4**	**+1.1**
	47nm,1.4s,mb4.8						
CAN	**Canberra**	**25.10**	**233**	*e*P	**P**	**09 47 42.4**	**+1.1**
CAN				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.8						
CTA	**Charters Tower**	**25.47**	**269**	*e*P	**P**	**09 47 45.3**	**+0.6**
	comp=Z,6.1nm,0.7s,mb4.2						
CTA				*e*S	**S**	**09 52 15.1**	**+6.3**
CTA	**Charters Tower**	**25.47**	**269**	P	**P**	**09 47 43.9**	**-0.9**
	comp=Z,9.1nm,1.0s,mb4.3,baz=92,slow=12,SNR=5.2						
CTA				LR	LR	09 56 47.0	
	comp=Z,790nm,19.2s,MS4.2,baz=92,slow=34						
CTA	**Charters Tower**	**25.47**	**269**	*e*P	**P**	**09 47 45.3**	**+0.6**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CTAO	**Charters Tower**	**25.47**	**269**	P	**P**	**09 47 45.0**	**+0.3**
	comp=Z,8.1nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**25.47**	**269**	P	**P**	**09 47 45.1**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
PMG	**Port Moresby**	**28.24**	**292**	P	**P**	**09 48 11.4**	**+1.7**
PMG				pmax	pmax		
	comp=Z,11nm,0.8s						
TOO	**Toolangi**	**28.61**	**231**	*e*P	**P**	**09 48 14.1**	**+1.3**
TOO				*e*S	**S**	**09 53 11.8**	**+14**
STKA	**Stephens Creek**	**29.93**	**244**	*e*P	**P**	**09 48 24.9**	**+0.3**
	comp=Z,5.3nm,0.8s,mb4.3						
STKA				*e*S	**S**	**09 53 29.8**	**+11**
STKA	**Stephens Creek**	**29.93**	**244**	P	**P**	**09 48 24.4**	**-0.2**
	comp=Z,5.7nm,0.9s,mb4.3,baz=90,slow=9.3,SNR=7.5						
STKA				LR	LR	09 59 21.8	
	comp=Z,1μm,21.0s,MS4.6,baz=69,slow=34						
TAU	**Tasmania Unive**	**30.07**	**220**	*e*P	**P**	**09 48 26.6**	**+0.9**
	comp=Z,24nm,1.1s,mb4.8						
TAU	**Tasmania Unive**	**30.07**	**220**	*e*P	**P**	**09 48 26.6**	**+0.9**
TAU				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
PPT	**Papeete**	**34.99**	**89**	*e*S	**S**	**09 54 35.0**	**-2.9**
	comp=Z,322nm,24.0s						
PPT				*e*LQ		09 56 43.8	
	comp=Z,4μm,28.5s						
PPT				*e*LR	LR	09 58 25.6	
	comp=Z,2μm,26.2s,baz=251						
PPT	**Papeete**	**34.99**	**89**	LR	LR	09 59 21.2	
	comp=Z,931nm,19.4s,MS4.5,baz=257,slow=30						
ASAR	**Alice Springs**	**36.41**	**260**	P	**P**	**09 49 20.2**	**-0.9**
	comp=Z,9.1nm,0.9s,mb4.7,baz=85,slow=8.8,SNR=46						
ASAR	**Alice Springs**	**36.41**	**260**	P	**P**	**09 49 20.3**	**-0.8**
ASAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WB2	**Warramunga Arr**	**36.52**	**266**	*e*P	**P**	**09 49 20.6**	**-1.5**
WRAB	**Tennant Creek**	**36.52**	**266**	*e*P	**P**	**09 49 19.6**	**-2.6**
	comp=Z,11nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**36.52**	**266**	*e*P	**P**	**09 49 20.4**	**-1.7**
WRA	**Warramunga Arr**	**36.53**	**266**	P	**P**	**09 49 20.1**	**-2.1**
	comp=Z,5.8nm,1.1s,mb4.3,baz=100,slow=8.7,SNR=18						
WRA				LR	LR	10 02 38.5	
	comp=Z,903nm,21.3s,MS4.5,baz=85,slow=33						
FORT	**Forrest**	**41.34**	**248**	*e*P	**P**	**09 50 01.8**	**-0.6**
	comp=Z,26nm,0.8s,mb4.9						
GUMO	**Guam**	**45.23**	**319**	LR	LR	10 07 36.3	
	comp=Z,847nm,20.1s,MS4.7,baz=97,slow=34						
TAOE	**Nuku Hiva Isla**	**46.41**	**81**	*e*LR	LR	10 03 43.7	
	comp=Z,2μm,25.5s,baz=261						
RKT	**Rikitea**	**47.39**	**102**	*e*S	**S**	**09 57 41.2**	**-0.6**
	comp=Z,177nm,30.2s						
RKT				*e*LQ		10 01 44.5	
	comp=Z,2μm,32.2s						
RKT				*e*LR	LR	10 04 09.3	
	comp=Z,1μm,28.2s,baz=276						
BATI	**Baumata**	**49.09**	**276**	LR	LR	10 10 56.5	
	comp=Z,2μm,20.7s,MS5.0,baz=318,slow=35						
MBWA	**Marble Bar**	**49.75**	**260**	*e*P	**P**	**09 51 08.7**	**-0.3**
	comp=Z,58nm,1.1s,mb5.5						
KLBR	**Kellerberrin**	**50.15**	**247**	*e*P	**P**	**09 51 11.1**	**-0.8**
	comp=Z,16nm,0.9s,mb5.0						
NWAO	**Narrogin (SRO)**	**50.52**	**245**	LR	LR	10 11 25.6	
	comp=Z,1μm,20.4s,MS4.9,baz=82,slow=35						
NWAO	**Narrogin (SRO)**	**50.52**	**245**	*e*P	**P**	**09 51 14.5**	**-0.1**
	comp=Z,37nm,

MDJ LR LR
comp=Z,345nm,35.3s,MS4.4
MDJ Mudanjiang 77.56 330 P **P** **09 54 13.7 +1.9**
comp=Z,4.7nm,0.6s,mb4.6
HABR Khabarovsk 78.22 335 *e*P **P** **09 54 21.1 +5.8**
HABR *e* 09 54 26.8
HABR *e*SP 09 54 32.7
HABR *e*S S 10 04 18.7 +12
HABR *e* 10 04 35.7
CN2 Changchun 78.99 327 *e*P **P** **09 54 18.3 -1.4**
CN2 *e*XP sP 09 54 36.5 -2.0
CN2 *e*S S 10 04 15.5 +0.6
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,300nm,21.0s,MS4.8
CN2 LR LR
comp=E,300nm,21.0s,MS4.8
CN2 LR LR
comp=Z,300nm,21.0s,MS4.6
KLR Kul'dur 80.14 334 *e*P **P** **09 54 33.0 +7.2**
GYA Guiyang 80.70 303 P **P** **09 54 31.5 +2.1**
GYA XP sP 09 54 45.5 -2.8
GYA PP PP 09 57 36.5 +2.5
GYA S S 10 04 34.0 +0.2
GYA SKS 10 04 43.8
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
GYA AMB AMB
comp=Z,70nm,4.8s
GYA LR LR
comp=N,450nm,20.0s,MS5.0
GYA LR LR
comp=E,480nm,19.8s,MS5.0
GYA LR LR
comp=Z,420nm,20.6s,MS4.8
BJI Beijing 81.67 319 P **P** **09 54 35.3 +1.1**
BJI S S 10 04 44.5 +1.3
BJI SS SS 10 10 01.3 -0.8
BJI AMB AMB
comp=Z,6.0nm,0.4s,mb4.9
BJI AMB AMB
comp=Z,189nm,4.9s
BJI LR LR
comp=N,240nm,25.3s,MS4.7
BJI LR LR
comp=E,285nm,24.7s,MS4.7
BJI LR LR
comp=Z,855nm,34.7s
PMSA Palmer Station 82.84 159 LR LR 10 27 49.6
comp=Z,253nm,18.7s,MS4.6,baz=319,slow=33
KMI Kunming 83.14 300 P **P** **09 54 42.0 -0.2**
KMI AP pP 09 54 56.5 +0.6
KMI XP sP 09 55 02.3 +1.2
KMI PP PP 09 57 56.8 +2.6
KMI S S 10 04 56.5 -2.4
KMI XS sS 10 05 20.5 -1.4
KMI SS SS 10 10 23.5 -1.0
KMI AMB AMB
comp=Z,13nm,0.9s,mb5.0
KMI AMB AMB
comp=Z,119nm,6.3s
KMI LR LR
comp=N,550nm,24.3s,MS5.0
KMI LR LR
comp=E,387nm,20.9s,MS5.0
KMI LR LR
comp=Z,653nm,18.7s,MS5.0
CMAR Chiang Mai Arr 83.28 293 P **P** **09 54 44.1 +1.0**
comp=Z,1.3nm,0.3s,mb4.4,baz=214,slow=4.8,SNR=6.8
CMAR Chiang Mai Arr 83.28 293 P **P** **09 54 44.1 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CHTO Chiang Mai 83.44 293 *e*P **P** **09 54 43.3 -0.6**
comp=Z,13nm,1.1s,mb4.9
CHTO Chiang Mai 83.44 293 *e*P **P** **09 54 43.3 -0.5**
CHTO pmax pmax
comp=Z,13nm,1.1s,mb4.9
HHC Hu-ho-hao-te 84.98 318 *e*P **P** **09 54 51.8 +0.6**
HHC AP pP 09 55 05.5 +0.5
HHC XP sP 09 55 10.3 +0.1
HHC PP PP 09 58 09.8 +0.9
HHC SKS 10 05 09.8
HHC S S 10 05 15.0 -1.7
HHC XS sS 10 05 37.0 -2.8
HHC SS SS 10 10 52.3 +1.2
HHC AMB AMB
comp=Z,22nm,0.5s,mb5.5
HHC AMB AMB
comp=Z,189nm,5.8s
HHC LR LR
comp=N,314nm,26.2s,MS4.9
HHC LR LR
comp=E,563nm,28.5s,MS4.9
HHC LR LR
comp=Z,684nm,27.4s,MS4.9
CD2 Chengdu 85.12 306 *e*P **P** **09 54 51.3 -0.9**
CD2 AP pP 09 55 05.3 -0.6
CD2 XP sP 09 55 10.8 -0.3
CD2 PP PP 09 58 10.3 +0.1
CD2 SKS 10 05 08.5
CD2 S S 10 05 15.8 -2.7
CD2 SS SS 10 10 52.0 -1.5
CD2 AMB AMB
comp=Z,20nm,1.3s,mb5.1
CD2 AMB AMB
comp=Z,250nm,7.2s
CD2 LR LR
comp=N,420nm,19.0s,MS5.1
CD2 LR LR
comp=E,430nm,14.2s,MS5.1
CD2 LR LR
comp=Z,350nm,14.3s,MS4.9
HIA Hailar 85.61 328 *e*P **P** **09 54 54.4 +0.3**
comp=Z,3.1nm,0.3s,mb5.0
HIA Hailar 85.61 328 *e*P **P** **09 54 54.4 +0.3**
HIA pmax pmax
comp=Z,3.0nm,0.3s
CMB Columbia Colle 86.18 46 *e*P **P** **09 54 57.4 +0.1**
comp=Z,12nm,1.2s,mb5.0
CMB Columbia Colle 86.18 46 *e*P **P** **09 54 57.4 +0.2**
CMB pmax pmax
comp=Z,12nm,1.2s,mb5.0
SNAA Sanae 86.44 181 *e*P **P** **09 54 51.9 -6.1**
comp=Z,4.3nm,1.0s,mb4.6
SNAA Sanae 86.44 181 *e*P **P** **09 54 51.9 -6.1**
SNAA pmax pmax
comp=Z,4.0nm,1.0s
USHA Ushuaia 86.99 149 LR LR 10 24 42.1
comp=Z,408nm,19.8s,MS4.8,baz=41,slow=29
HUMO Hull Mountain 87.00 41 P **P** **09 55 01.7 +0.6**
comp=Z,6.9nm,0.9s,mb4.9
LZH Lanzhou 87.59 311 *e*P **P** **09 55 04.8 +0.6**
LZH AP pP 09 55 16.5 -1.5
LZH XP sP 09 55 22.5 -0.7
LZH *e*PP PP 09 58 33.0 +2.9
LZH S S 10 05 39.0 -3.3
LZH *e*SS SS 10 11 30.3 +0.7
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,58nm,5.7s
LZH LR LR
comp=N,265nm,17.6s
LZH LR LR
comp=Z,397nm,18.8s,MS4.8
NVAR Mina Array Bea 87.78 47 P **P** **09 55 04.5 -0.6**
comp=Z,3.0nm,1.1s,mb4.4,baz=226,slow=6.3,SNR=9.2
NVAR Mina Array Bea 87.78 47 P **P** **09 55 04.5 -0.6**
TPNV Topopah Spring 88.47 49 *e*P **P** **09 55 08.8 +0.5**
comp=Z,5.3nm,0.9s,mb4.8
TPNV Topopah Spring 88.47 49 *e*P **P** **09 55 08.8 +0.5**
TPNV pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
BILL Bilibino 90.03 357⇓ *e*P **P** **09 55 20.0 +5.1**
BILL *e* 09 58 53.2
BILL *e*S S 10 05 54.0 -10
BILL pmax pmax
comp=Z,12nm,1.4s,mb5.0
ELK Elko 90.98 46 *e*P **P** **09 55 20.9 +0.9**
comp=Z,7.1nm,1.0s,mb5.0
ELK Elko 90.98 46 *e*P **P** **09 55 20.9 +0.9**
ELK pmax pmax
comp=Z,7.0nm,1.0s
WUAZ Wupatki 91.29 52 *e*P **P** **09 55 21.8 +0.2**
comp=Z,8.5nm,1.2s,mb5.0
ULN Ulaanbaatar 91.54 322 *e*P **P** **09 55 21.3 -1.1**
comp=Z,8.2nm,1.2s,mb4.9
ULN Ulaanbaatar 91.54 322 *e*P **P** **09 55 21.3 -1.1**
ULN pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
COLA College 91.67 15 *e*P **P** **09 55 22.6 0.0**
comp=Z,13nm,1.2s,mb5.1
COLA LR LR
comp=Z,363nm,19.0s,MS4.8
SONM Songino Array 91.90 322 P **P** **09 55 23.0 -1.0**
comp=Z,1.3nm,1.2s,mb4.2,baz=100,slow=3.6,SNR=3.7
SONM LR LR 10 32 16.7
comp=Z,241nm,22.0s,MS4.6,baz=17,slow=33
GTA Gaotai 91.98 312 *e*P **P** **09 55 25.5 +0.9**
GTA AP pP 09 55 39.5 +1.0
GTA XP sP 09 55 44.5 +0.9
GTA S S 10 06 22.8 -0.1
GTA XS sS 10 06 45.5 -0.7
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.6
GTA PP PP
comp=Z,133nm,4.8s
GTA LR LR
comp=N,377nm,19.2s,MS5.0
GTA LR LR
comp=E,363nm,18.6s,MS5.0
GTA LR LR
comp=Z,576nm,22.8s,MS5.0
DAWY Dawson 93.36 19 P **P** **09 55 29.5 -0.9**
DAWY *e* 09 55 36.3
EGAK Eagle 93.38 18 *e*P **P** **09 55 36.0 +5.6**
comp=Z,46nm,1.8s,mb5.6
TXAR Lajitas Array 94.69 60 P **P** **09 55 41.0 +3.7**
comp=Z,1.6nm,1.1s,mb4.4,baz=240,slow=2.7,SNR=7.0
TXAR LR LR 10 29 43.7
comp=Z,265nm,20.4s,MS4.7,baz=275,slow=30
ANMO Albuquerque 94.70 54 *e*P **P** **09 55 36.0 -1.2**
comp=Z,2.4nm,1.2s,mb4.5
ANMO LR LR
comp=Z,278nm,20.0s,MS4.7
ANMO Albuquerque 94.70 54 *i* P **P** **09 55 37.9 +0.6**
ANMO pmax pmax
comp=Z,6.0nm,1.9s
PDAR Pinedale Array 95.69 46 PP PP 09 59 32.2 -1.7
comp=Z,0.6nm,1.0s,baz=216,slow=7.3,SNR=3.6
PDAR LR LR 10 30 15.3
comp=Z,213nm,20.8s,MS4.6,baz=245,slow=30
HYB Hyderabad 100.80 284 *e*P Pdif 09 56 06.0 +1.5
WMQ Urumqi 102.05 312 *e*P Pdif 09 56 10.0 -0.1
WMQ PP PP 10 00 23.0 +0.6
WMQ SKS 10 06 44.0
WMQ LR LR
comp=N,197nm,20.0s,MS4.8
WMQ LR LR
comp=E,184nm,20.0s,MS4.8
WMQ LR LR
comp=Z,224nm,20.0s,MS4.7
KURK Kurchatov 109.80 318 PP PP 10 01 27.6 +8.3
comp=Z,0.4nm,0.6s,baz=108,slow=6.4,SNR=3.6
BVAR Borovoye Array 115.15 319 PKP PKiKP 10 00 54.8 -1.8
comp=Z,0.3nm,0.3s,baz=29,slow=3.3,SNR=2.4
AKTK Aktyubinsk 122.86 317 PKP PKPdf 10 01 09.8 -1.8
AKTO Aktyubinsk 122.86 317 PKP PKPdf 10 01 09.8 -1.8
comp=Z,0.8nm,0.7s,baz=100,slow=4.8,SNR=4.2
AKTO Aktyubinsk 122.86 317 PKIKP PKPdf 10 01 09.8 -1.8
AKTO pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 128.81 346 PKP PKPdf 10 01 21.1 -1.3
comp=Z,2.2nm,0.9s,baz=157,slow=14,SNR=15
ARCES ARCESS Array B 128.81 346 PKIKP PKPdf 10 01 21.1 -1.3
ARCES pmax pmax
comp=Z,2.0nm,0.9s
NOA NORSAR Array B 139.18 347 PKP PKPdf 10 01 38.9 -3.2
comp=Z,1.1nm,0.9s,baz=350,slow=7.2,SNR=3.4
NOA NORSAR Array B 139.18 347 PKIKP PKPdf 10 01 38.9 -3.2
NOA pmax pmax
comp=Z,1.0nm,0.9s
MLR Muntele Rosu 144.72 319 PKP PKPdf 10 01 50.7 -1.7
comp=Z,25nm,1.4s,baz=177,slow=5.8,SNR=6.0
MLR Muntele Rosu 144.72 319 PKIKP PKPdf 10 01 50.7 -1.7
MLR pmax pmax
comp=Z,25nm,1.4s
MLR Muntele Rosu 144.72 319⇓ *i*P PKPdf 10 01 50.6 -1.8
KOLS Kolonicke sedl 144.81 327 *e*PKP PKPdf 10 01 52.1 -0.4
KOLS *e* 10 01 58.9
UZH Uzhgorod 144.99 326 *e*PKHKP PKPdf 10 01 50.0 -2.8
UZH *i* PKPdf 10 01 52.0 -0.8
UZH *i* 10 01 59.0
STHS Stebnicka Huta 145.01 328 *e*PKIKP PKPdf 10 01 51.7 -1.1
STHS *e* 10 01 57.3
STHS Stebnicka Huta 145.01 328 *e*PKP PKPdf 10 01 51.6 -1.2
STHS *e* 10 01 57.3
CRVS Cervenica-Dubn 145.24 327 *e*PKP PKPdf 10 01 51.8 -1.4
CRVS *e* 10 01 59.7
VOIR 145.28 320⇓ PKPbc 10 01 54.1 +0.8
VOIR 145.28 320⇓ *i*P PKPbc 10 01 54.1 +0.8
BSEG Bad Segeberg 145.75 342 *e*PKPbc PKPbc 10 01 53.2 -1.2
DRGR 145.88 323⇓ *i*P PKiKP 10 01 59.3 +0.8
OKC Ostrava-Krasne 146.18 331 *e*PKP PKiKP 10 01 58.7 -0.4
OKC *e* 10 02 03.5
OKC Ostrava-Krasne 146.18 331 *e*PKP PKiKP 10 01 58.7 -0.4
OKC *ex* x 10 02 03.5
OKC AMS AMS 11 04 20.0
comp=Z,300nm,24.4s
KSP Ksiaz 146.23 334 *e*PKP PKPdf 10 01 55.1 +0.2
KSP *e*PKPdf PKiKP 10 02 00.8 +1.7
MORC Moravsky Berou 146.50 331 *e*PKP PKPdf 10 01 53.8 -1.5
DPC Dobruska-Polom 146.59 333 *e*PKP PKPdf 10 01 56.3 +0.8
DPC *e* 10 02 03.0
DPC Dobruska-Polom 146.59 333 *e*PKP PKPdf 10 01 56.3 +0.8
DPC *ex* x 10 02 03.0
DPC AMS AMS 11 06 10.0
comp=Z,400nm,23.9s
UPC Upice 146.60 334 *e*PKP PKPdf 10 01 56.1 +0.6
UPC *ex* x 10 02 03.7
PSZ Piszkesteto 146.67 327⇑ *e*P PKPdf 10 01 56.5 +0.8
PSZ Piszkesteto 146.67 327⇑ *e*PKP PKPdf 10 01 56.5 +0.8
EKA Eskdalemuir Ar 146.72 356 PKPbc PKPdf 10 01 54.5 -1.0
comp=Z,0.8nm,0.7s,baz=9.5,slow=1.1,SNR=2.7
EKA Eskdalemuir Ar 146.72 356 PKIKP PKPdf 10 01 54.5 -1.1
EKA pmax pmax
comp=Z,1.0nm,0.7s
VYHS Vyhne 146.81 329 *e*PKP PKPdf 10 01 55.9 0.0
VYHS *e* 10 02 04.3
CLL Collm 147.13 337 *e*PKP PKPdf 10 01 57.0 +0.6
CLL *e*PKP PKiKP 10 02 02.0 +1.0
CLL *i* 10 02 04.8
CLL LR LR
comp=Z,200nm,21.5s,MS4.9
CLL Collm 147.13 337 *e*PKPbc PKPdf 10 01 57.0 +0.6
comp=Z,10.0nm,1.4s
CLL *e*PKPab PKiKP 10 02 02.0 +1.0
comp=Z,8.0nm,0.9s
CLL *i* (sPKPab) pPKPdf 10 02 04.8 -5.9
comp=Z,31nm,1.3s
CLL *e*PPS 10 18 17.0
CLL *e*SSS 10 29 52.0
CLL LmV 11 01 00.0
comp=Z,200nm,21.5s
BRG Berggiesshubel 147.14 336 *e*PKP PKPdf 10 01 57.6 +1.2
comp=Z,9.5nm,1.0s
BRG *i* 10 02 05.5
comp=Z,45nm,1.6s
BRG *e* 10 02 41.8
comp=Z,8.3nm,1.2s
PVCC Panska Ves 147.17 335 *e*PKP PKPdf 10 01 57.3 +0.8
PVCC *ex* x 10 02 06.0
BZS Buzias 147.19 322⇑ *i*P PKiKP 10 02 07.6 +6.4
BZS Buzias 147.19 322⇑ *i*P PKiKP 10 02 07.6 +6.3
VRAC Vranov 147.26 332 PKPbc PKPbc 10 01 58.0 -1.0
comp=Z,2.3nm,0.4s,baz=72,slow=2.0,SNR=4.4
VRAC Vranov 147.26 332 *e*PKP PKPdf 10 01 58.1 +1.5
VRAC Vranov 147.26 332 PKP2 PKPdf 10 01 58.0 +1.4
VRAC pmax pmax
comp=Z,2.0nm,0.4s
PRU Pruhonice 147.60 334 *e*PKP PKPdf 10 01 58.7 +1.5
PRU *e* 10 02 05.8
PRU Pruhonice 147.60 334 *e*PKP PKPdf 10 01 58.7 +1.5
PRU *ex* x 10 02 05.8
PRU AMS AMS 11 00 50.0
comp=Z,400nm,29.1s
MODS Modra-Piesok 147.63 330 *e*PKP PKPdf 10 01 59.1 +1.8
MODS *e* 10 02 07.3
TANN Tannenbergstha 148.06 337 *e*PKPbc PKPbc 10 02 00.2 -0.9
MOX Moxa 148.17 338 *e*P PKPab 10 02 11.0 +6.6
comp=Z,25nm,1.5s
PKSM Moragy 148.44 326⇑ *e*P PKPbc 10 02 01.0 -1.3
PKSM Moragy 148.44 326⇑ *i*P PKPbc 10 02 00.9 -1.4
MANZ Manzenberg 148.54 337 *e*PKPbc PKPbc 10 02 01.5 -0.9
CONA Conrad Observa 148.60 331⇑ *i*PKPbc PKPbc 10 02 01.8 -0.8
comp=Z,15nm,1.6s
CSNA Conrad Observa 148.61 331⇑ *i*PKPbc PKPbc 10 02 01.9 -0.8
comp=Z,13nm,1.6s
KHC Kasperske Hory 148.67 334 *e*PKP PKPbc 10 02 01.3 -1.4
KHC *e* 10 02 09.9
KHC Kasperske Hory 148.67 334 *e*PKP PKPbc 10 02 01.3 -1.4
KHC *ex* x 10 02 09.9
KHC AMS AMS 11 00 40.0
comp=Z,500nm,29.4s
ROTZ Rotzenmuhle 148.69 336 *e*PKPbc PKPbc 10 02 01.8 -1.0
GEC2 GERESS Array S 148.84 334 *e*PKPbc PKPbc 10 02 02.2 -1.0
GERES GERESS Array B 148.84 334 PKPbc PKPbc 10 02 00.7 -2.5
comp=Z,3.7nm,0.8s,baz=56,slow=2.4,SNR=21
GERES GERESS Array B 148.84 334 PKIKP PKPbc 10 02 00.7 -2.5
GERES pmax pmax
comp=Z,4.0nm,0.9s
GRF Grafenberg Arr 149.11 337 *e*PKPbc PKPbc 10 02 03.2 -0.6
GRF *e*L 11 06 36.9
comp=Z,166nm,22.0s
MOA Molln 149.38 332⇑ *i*PKPbc PKPbc 10 02 03.0 -1.5
comp=Z,7.3nm,1.2s
MEM Membach 149.90 344 PKP PKPbc 10 02 04.4 -1.4
MEM APKP 10 02 15.1
SOKA Soboth 149.91 330⇑ *i*PKPbc PKPbc 10 02 04.4 -1.5
comp=Z,17nm,1.6s
KBA Koelnbreinsper 150.37 332⇓ *i*PKPbc PKPbc 10 02 04.8 -2.2
comp=Z,6.5nm,0.8s
GIVF Givet 150.66 345 *e*PKP1 PKPbc 10 02 05.9 -1.7
DOU Dourbes 150.72 345 PKP PKPbc 10 02 06.7 -1.1
WLF Walferdange 150.73 343 PKP PKPbc 10 02 07.8 0.0
WLF Walferdange 150.73 343 *e*PKPbc PKPbc 10 02 07.1 -0.7
BAIF Baives 150.85 346 *e*PKP1 PKPbc 10 02 06.4 -1.7
BFO Black Forest 151.26 339 *e*PKPbc PKPbc 10 02 07.4 -1.7
BFO *e*PKPab PKPab 10 02 16.5 -0.6
BFO Black Forest 151.26 339 *e*PKPbc PKPbc 10 02 07.6 -1.5
FETA Feichten 151.50 335⇑ *i*PKPbc PKPbc 10 02 08.6 -1.1
comp=Z,8.4nm,1.1s
CDF Champ du Feu 151.53 341 *e*PKP1 PKPbc 10 02 07.8 -1.9
comp=Z,48nm,1.3s
DAVA Damuels 151.61 336⇑ *i*PKPbc PKPbc 10 02 08.6 -1.3
comp=Z,13nm,1.4s
DAVOX Davos/Dischmat 152.03 336 PKPbc PKPbc 10 02 08.6 -2.3
comp=Z,7.1nm,0.8s,baz=339,slow=1.3,SNR=5.3
HINF Hinteralfeld 152.19 340 *e*PKP1 PKPbc 10 02 09.1 -2.1
TORD Torodi Ar. Bea 168.14 223 PKP PKPdf 10 02 21.3 -1.8
comp=Z,0.8nm,1.0s,baz=112,slow=1.6,SNR=3.2
TORD PKPab PKPab 10 03 29.9 -1.2
comp=Z,2.5nm,1.0s,baz=121,slow=3.7,SNR=7.6
TORD Torodi Ar. Bea 168.14 223 PKP PKPdf 10 02 21.3 -1.8
TORD PKPab PKPab 10 03 29.9 -1.2

IDC 28 09:42:41.5±3.7, 569S×14960E, h0km, mb3.5/2, mb1 3.9/2, mb1mx3.5/15, mbtmp3.6/2, Error ellipse: s-maj=132.6km s-min=47.4km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.52**	**225**	P	P	09 47 21.7	+0.3
	1.2nm,0.6s,baz=49,slow=10,SNR=27						
ASAR	**Alice Springs**	**23.41**	**219**	P	P	09 47 51.4	-1.0
	1.4nm,0.5s,baz=57,slow=8.7,SNR=34						
TORD	**Torodi Ar. Bea**	**147.51**	**286**	PKPbc	PKPbc	10 02 28.7	0.0
	1.2nm,0.9s,baz=98,slow=0.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**147.51**	**286**	PKPbc	PKPbc	10 02 28.7	0.0

HLW ***28*** *09:51:01.6, 2984N×3668E, h15km, Mb3.3*
SGS ***28*** *09:51:03.0, 30.12N×3623E, h5km*
ISCJB ***28*** *09:51:04.0±0.6, 2983N±003×3620E±004, h0km, Error ellipse: s-maj=5.4km s-min=4.0km az=172.2*
GII ***28*** *09:51:04.7±0.7, 2988N×3610E, h0km, ML2.7/6, EXPLOSION*
CSEM ***28*** *09:51:07.8±0.4, 2972N×3613E, h25km, ML2.8, Error ellipse: s-maj=12.8km s-min=4.1km az=45.0*

ISC 28 09:51:04.2±0.6, 2983N±003×3623E±004, h0km, n25, σ0 65/34, 2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.03**	**265**	Pg	**Pg**	**09 51 24.1**	**0.0**
HRFI	**Mount Harif**	**1.06**	**282**	Pg	**Pg**	**09 51 23.8**	**-0.8**
EIL	**Elat**	**1.12**	**262**	Pg	**Pg**	**09 51 25.4**	**-0.3**
EIL				Sg	**Sg**	**09 51 41.1**	**+0.7**
MBRI	**Mt Berech**	**1.15**	**269**	Pg	**Pg**	**09 51 25.8**	**-0.4**
MBRI				Sg	**Sg**	**09 51 42.4**	**+1.3**
HQLS		**1.15**	**243**	P	**Pg**	**09 51 25.8**	**-0.4**
ZFRI	**Zfri**	**1.16**	**309**	Pg	**Pg**	**09 51 25.8**	**-0.7**
ZFRI				Sg	**Sg**	**09 51 41.7**	**0.0**
PRNI	**Paran**	**1.18**	**296**	Pg	**Pg**	**09 51 25.8**	**-1.2**
PRNI				Sg	**Sg**	**09 51 43.1**	**+0.8**
JLOS		**1.27**	**211**	P	**Pg**	**09 51 28.5**	**0.0**
KRMI	**Paran Flat**	**1.34**	**283**	Pg	**Pg**	**09 51 28.7**	**-1.2**
KRMI				Sg	**Sg**	**09 51 47.0**	**-0.2**
HBST	**Basata**	**1.44**	**245**	⇓P	**Pn**	**09 51 31.6**	**0.0**
RMNI	**Mount Ramon**	**1.48**	**301**	Pn	**Pn**	**09 51 32.2**	**+0.1**
TBKS	**Tabuk**	**1.62**	**170**	P	**Pn**	**09 51 34.2**	**+0.1**
MZDA	**Masada**	**1.66**	**333**	Pn	**Pn**	**09 51 33.7**	**-0.8**
MZDA				Sn	**Sn**	**09 51 56.0**	**-0.5**
BDAS	**Al Bad'**	**1.71**	**216**	S	**Sn**	**09 51 58.8**	**+1.0**
BDAS	**Al Bad'**	**1.71**	**216**	P	**Pn**	**09 51 35.0**	**-0.2**
RTMI	**Retamim**	**1.81**	**313**	Pn	**Pn**	**09 51 36.5**	**-0.1**
RTMI				Sn	**Sn**	**09 52 00.2**	**0.0**
YTIR	**Yattir**	**1.81**	**328**	Pn	**Pn**	**09 51 36.4**	**-0.3**
DSI	**Dead Sea**	**1.88**	**337**	Pn	**Pn**	**09 51 37.5**	**-0.2**
KZIT	**Kziot**	**1.92**	**305**	Pn	**Pn**	**09 51 38.0**	**-0.1**
KZIT				Sn	**Sn**	**09 52 02.8**	**-0.1**
HNKL	**Nakhl**	**1.96**	**274**	⇓P	**Pn**	**09 51 39.0**	**+0.3**
HKAT	**Jabal Katrina**	**2.35**	**237**	P	**Pn**	**09 51 43.9**	**-0.2**
HMDT	**Nahal Hemdat**	**2.49**	**346**	Pn	**Pn**	**09 51 46.8**	**+0.7**
HMDT				Sn	**Sn**	**09 52 19.0**	**+1.8**
TRZ		**2.62**	**237**	P	**Pn**	**09 51 47.5**	**-0.4**
MMLI	**Mount Malkishu**	**2.69**	**345**	Pn	**Pn**	**09 51 49.9**	**+1.1**
WJHS		**3.09**	**177**	P	**Pn**	**09 51 54.6**	**+0.4**

NEIC ***28*** *10:00:16.0, 1720N×9687W, h70km, MD4.0(MEX), After MEX.*

MEX 28 10:00:16.1±0.8, 1717N×9688W, h70km±6km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.17**	**126**	*i* P	Pn	10 00 25.3	-1.3
VHO				*i* S	Sn	10 00 32.6	-1.6
OXX	**Oaxaca**	**0.18**	**121**	*i* P	Pn	10 00 25.6	-1.0
OXX				*i* S	Sn	10 00 32.5	-1.8
UTMO	**Huajuapan**	**1.10**	**307**	*i* P	Pn	10 00 35.3	-0.5
UTMO				*i* S	Sn	10 00 48.7	-1.8
PNIG	**Pinotepa**	**1.42**	**237**	*i* P	Pn	10 00 38.5	-1.6
PNIG				*i* S	Sn	10 00 56.4	-1.7
CMIG	**Matias Romero**	**1.91**	**92**	*i* P	Pn	10 00 45.3	-1.2
CMIG				*i* S	Sn	10 01 08.3	-1.4
PPM	**Popocatepetl**	**2.51**	**319**	*i* P	Pn	10 00 53.1	-1.6
PPM				*i* S	Sn	10 01 22.4	-1.8
LVIG	**Laguna Verde**	**2.57**	**10**	*e*P	Pn	10 00 51.0	-4.6
LVIG				*i* S	Sn	10 01 20.1	-5.6
LVIG	**Laguna Verde**	**2.57**	**10**	*i* P	Pn	10 00 51.9	-3.6
LVIG				*e*S	Sn	10 01 20.8	-5.0
ACX	**Acapulco**	**2.92**	**264**	*e*P	Pn	10 00 57.7	-2.5
ACX				*i* S	Sn	10 01 32.8	-1.5
IIO	**Organos**	**2.97**	**324**	*i* P	Pn	10 01 01.5	+0.5
IIO				*i* S	Sn	10 01 34.1	-1.4
MZVM		**3.00**	**312**	*i* P	Pn	10 00 59.6	-1.7
MZVM				*i* S	Sn	10 01 35.1	-1.1
PBVM	**Pinon**	**3.08**	**317**	*e*P	Pn	10 01 02.8	+0.4
PBVM				*i* S	Sn	10 01 37.2	-0.8
PTVM	**Pico Tres Padr**	**3.21**	**319**	*i* P	Pn	10 01 04.1	0.0
PTVM				*i* S	Sn	10 01 41.7	+0.5
PTVM	**Pico Tres Padr**	**3.21**	**319**	*i* P	Pn	10 01 04.1	0.0
PTVM				*i* S	Sn	10 01 40.0	-1.1
CAIG	**El Cayaco**	**3.24**	**268**	*i* P	Pn	10 01 03.4	-1.2
CAIG				*i* S	Sn	10 01 38.2	-3.8

CAIG	**El Cayaco**	**3.24**	**268**	*i* P	Pn	10 01 03.4	-1.2
CAIG				*i* S	Sn	10 01 39.3	-2.8
TGIG		**3.62**	**96**	*e*P	Pn	10 01 07.4	-2.3
TGIG				*i* S	Sn	10 01 48.4	-2.9
PCIG		**3.81**	**112**	*e*P	Pn	10 01 13.5	+1.2
PCIG				*i* S	Sn	10 01 54.0	-1.8
ZIIG	**Zihuatanejo**	**4.40**	**276**	*e*P	Pn	10 01 26.7	+6.3
ZIIG				*i* S	Sn	10 02 10.6	+0.2

SZGRF ***28*** *10:05:49.3, 347S×102·66E, h52km, mb5.3, Southern Sumatera, Indonesia*
BJI ***28*** *10:05:50.4, 3.19S×100·29E, h50km, mB5.1, mb5.0, Ms4.8, Msz4.5*
MOS ***28*** *10:05:57.5±1.0, 2.15S×100·60E, h46km, mb5.3/43, Error ellipse: s-maj=12.1km s-min=5.2km az=114.1*
ISCJB ***28*** *10:05:57.4±0.2, 238S±003×100·34E±003, h48km, mb5.1/116, MS4.4/25, Error ellipse: s-maj=4.9km s-min=3.2km az=142.7*
IDC ***28*** *10:05:59.0±0.4, 2.27S×100·54E, h49km±3km, mb4.6/27, mb1 4.7/28, mb1mx4.7/28, mbtmp4.6/28, MS4.3/13, Ms1 4.3/13, ms1mx4.1/33, Error ellipse: s-maj=14.7km s-min=8.4km az=58.0*
NEIC ***28*** *10:05:59.5±0.1, 2.26S×100·53E, mb5.2/50, Error ellipse: s-maj=6.7km s-min=3.5km az=54.0*
NEIC Felt [III] at Mukomuko and Padang; [II] at Padangpanjang, Sumatra.
DJA ***28*** *10:05:59, 239S×100.18E, h51km, Mw5.4/12*
ISC 28 10:05:59.4±0.2, 236S±003×10035E±003, h50km, h50km±1.1km; pP-P, n316, σ1°06/306, mb5.1/116, MS4.4/25, 25C-16D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.45**	**5**	P	**Pn**	**10 06 22.0**	**-1.3**
PDSI	**Padang**	**1.45**	**5**	S	**Sn**	**10 06 40.3**	**-0.8**
PPI	**Padang Panjang**	**1.90**	**2**	P	**Pn**	**10 06 29.4**	**0.0**
KSI	**Kapahiang**	**2.58**	**120**	P	**Pn**	**10 06 39.4**	**+0.6**
KSI	**Kapahiang**	**2.58**	**120**	S	**Sn**	**10 07 14.8**	**+5.8**
TRSI	**Tarutung**	**4.58**	**342**	P	**Pn**	**10 07 09.5**	**+3.3**
KGM	**Kluang**	**5.27**	**34**	⇑P	**Pn**	**10 07 16.9**	**+1.2**
MYKOM	**Kota Tinggi**	**5.41**	**40**	⇓P	**Pn**	**10 07 19.2**	**+1.6**
MYKOM	**Kota Tinggi**	**5.41**	**40**	P	**Pn**	**10 07 17.7**	**0.0**
FRIM	**Kepong**	**5.71**	**13**	⇑P	**Pn**	**10 07 23.3**	**+1.6**
BLSI	**Bandar Lampung** 342nm,0.9s,4μm1.3nm	**5.73**	**122**	P	**Pn**	**10 07 23.6**	**+1.6**
PPBI	**Pangkal Pinang** 71nm,0.9s,2μm0.8nm	**5.79**	**88**	P	**Pn**	**10 07 25.2**	**+2.4**
IPM	**Ipoh** 136nm,0.8s,1μm0.5nm	**6.83**	**6**	P	**Pn**	**10 07 39.3**	**+2.2**
SBJI	**Serang** 247nm,1.0s,7μm0.9nm	**6.87**	**123**	P	**Pn**	**10 07 42.0**	**+4.4**
TPI	**Tanjungpandan** 84nm,0.6s,0.4nm	**7.31**	**93**	P	**Pn**	**10 07 44.1**	**+0.4**
KULM	**Kulim**	**7.61**	**2**	⇓P	**Pn**	**10 07 49.3**	**+1.5**
DBJI	**Dramaga** 250nm,0.9s,8μm1.0nm	**7.62**	**123**	P	**Pn**	**10 07 47.8**	**-0.1**
CBJI	**Citeko** 848nm,0.7s,3.2nm	**7.63**	**122**	P	**Pn**	**10 07 51.6**	**+3.5**
KTGM	**Kuala Trenggan**	**8.13**	**20**	⇓P	**Pn**	**10 07 57.9**	**+3.0**
LEM	**Lembang** 183nm,1.1s,0.7nm	**8.49**	**122**	P	**Pn**	**10 08 00.4**	**+0.5**
XMIS	**Christmas Isla**	**9.63**	**147**	*e*P	**Pn**	**10 08 08.3**	**-7.2**
XMIS				*e*S	**Sn**	**10 09 46.6**	**-16**
COCO	**West Island** 82nm,0.6s	**10.36**	**199**	*e*Pn	**Pn**	**10 08 23.5**	**-2.1**
COCO				*e*Sn	**Sn**	**10 10 06.1**	**-14**
BJII	**Banjamegara**	**10.55**	**118**	P	**Pn**	**10 08 28.7**	**+0.6**
KSM	**Kuching** 15nm,0.8s	**10.66**	**69**	*e*Pn	**Pn**	**10 08 25.3**	**-4.4**
KSM	**Kuching** 24nm,1.0s	**10.66**	**69**	⇑P	**Pn**	**10 08 33.8**	**+4.1**
KSM	**Kuching**	**10.66**	**69**	P	**Pn**	**10 08 34.3**	**+4.6**
STKI	**Sintang**	**11.39**	**78**	P	**Pn**	**10 08 45.6**	**+6.1**
SJI	**Sawahan**	**12.56**	**116**	P	**Pn**	**10 08 54.9**	**-0.7**
SBUM	**Sibu**	**12.80**	**68**	⇓P	**Pn**	**10 09 03.8**	**+5.0**
SBUM	**Sibu**	**12.80**	**68**	P	**Pn**	**10 09 03.0**	**+4.2**
BBKI	**Banjar Baru**	**14.52**	**95**	P	**Pn**	**10 09 28.4**	**+6.3**
KHKI	**Kahang-Kahang**	**16.32**	**112**	P	**Pn**	**10 09 45.7**	**+0.4**
SMKI	**Samarinda** 198nm,0.4s,8μm	**16.96**	**84**	P	**Pn**	**10 10 00.0**	**+6.6**
KKM	**Kota Kinabalu** 9.2nm,0.4s	**17.91**	**62**	*e*P	**Pn**	**10 10 06.5**	**+1.3**
TSM	**Tawau**	**18.72**	**69**	⇑P	**Pn**	**10 10 16.9**	**+1.9**
PCI	**Palu**	**19.54**	**86**	P	pP	10 10 36.2	+1.7
KAPI	**Kappang** 924nm,0.8s,SNR=6.9	**19.54**	**98**	Pn	**Pn**	**10 10 22.4**	**-2.4**
KAPI	**Kappang** 6.0nm,0.3s,baz=296,slow=5.2,SNR=15	**19.54**	**98**	P	**Pn**	**10 10 21.6**	**-3.2**
KAPI	**Kappang** 83nm,0.8s	**19.54**	**98**	*e*P	**Pn**	**10 10 22.2**	**-2.6**
KAPI	**Kappang** 82nm,1.0s,641nm	**19.54**	**98**	P	**Pn**	**10 10 22.6**	**-2.2**
CM31	**Chiang Mai Arr** 12nm,0.6s	**20.74**	**356**	*e*P	**P**	**10 10 36.2**	**+0.2**
CMAR	**Chiang Mai Arr** 20nm,0.6s,baz=187,slow=10.0,SNR=48	**20.74**	**356**	P	**P**	**10 10 34.7**	**-1.3**
CMAR				PcP	PcP	10 14 44.9	+0.6
	1.9nm,0.7s,baz=225,slow=3.2,SNR=6.7						
CMAR				LR	LR	10 18 54.2	
	comp=Z,500nm,19.3s,MS3.9,baz=313,slow=38						
CMAR	**Chiang Mai Arr**	**20.74**	**356**	*i* P	**P**	**10 10 34.7**	**-1.3**
CMAR				pmax	pmax		
	comp=Z,20nm,0.6s						
CHTO	**Chiang Mai**	**21.09**	**356**	*e*P	**P**	**10 10 38.0**	**-1.7**
	comp=Z,6.2nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**21.09**	**356**	*e*P	**P**	**10 10 38.1**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
KDI	**Kendari**	**22.30**	**95**	P	**P**	**10 10 51.9**	**-0.9**
	comp=Z,43nm,1.0s,comp=Z,3μm,mb4.8						
QIZ	**Qiongzhong**	**23.22**	**23**	P	**P**	**10 11 02.0**	**-0.5**
QIZ				S	**S**	**10 15 11.8**	**+1.1**
QIZ				LR	LR		
	comp=Z,732nm,14.8s,MS4.3						
BATI	**Baumata**	**24.43**	**110**	P	**P**	**10 11 10.3**	**-3.4**
	comp=Z,36nm,0.6s,mb5.0,baz=254,slow=3.9,SNR=5.0						
BATI	**Baumata**	**24.43**	**110**	P	**P**	**10 11 10.5**	**-3.2**
	comp=Z,31nm,0.7s,mb4.8						
KOD	**Kodaikanal**	**25.99**	**299**	*e*P	**P**	**10 11 28.1**	**+0.3**
VIS	**Vishakhapatnam**	**26.07**	**321**	*e*P	**P**	**10 11 29.8**	**+1.3**
MBWA	**Marble Bar**	**26.56**	**136**	*e*P	**P**	**10 11 32.5**	**-0.4**
	comp=Z,24nm,1.0s,mb4.7						
MBWA	**Marble Bar**	**26.56**	**136**	P	**P**	**10 11 36.3**	**+3.4**
	comp=Z,30nm,1.2s,mb4.7						
DAV	**Davao City (W)**	**26.87**	**69**	LR	LR	10 23 07.3	
	comp=Z,496nm,18.3s,MS4.1,baz=237,slow=39						
LBMI	**Labuha**	**27.20**	**87**	P	**P**	**10 11 39.1**	**+0.3**
	comp=Z,135nm,1.0s,mb5.4						
KMI	**Kunming**	**27.42**	**5**	P	**P**	**10 11 43.8**	**+3.2**
KMI				AP	pP	10 11 52.3	-1.1
KMI				XP	sP	10 11 56.0	-3.4
KMI				PP		10 12 30.5	
KMI				S	**S**	**10 16 19.8**	**+2.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI				AMB	AMB		
	comp=Z,98nm,5.7s						
KMI				LR	LR		
	comp=N,550nm,18.2s,MS4.3						
KMI				LR	LR		
	comp=E,387nm,14.4s,MS4.3						
KMI				LR	LR		
	comp=Z,631nm,18.2s,MS4.2						
IMP	**Imphal**	**27.69**	**347**	*e*P	**P**	**10 11 42.0**	**-1.0**
SHL	**Shillong**	**28.95**	**344**	*e*P	**P**	**10 11 53.5**	**-0.7**
SHL				*ex*	x	10 16 39.5	
GYA	**Guiyang**	**29.30**	**12**	P	**P**	**10 12 01.8**	**+4.5**
GYA				AP	pP	10 12 13.5	+3.3
GYA				XP	sP	10 12 19.8	+3.7
GYA				PP	PP	10 12 56.8	-7.4
GYA				S	**S**	**10 16 48.8**	**+1.8**
GYA				XS	sS	10 17 11.8	+3.0
GYA				SCS	ScS	10 22 32.8	-2.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=N,830nm,16.0s,MS4.5						
GYA				LR	LR		
	comp=E,650nm,17.5s,MS4.5						
GYA				LR	LR		
	comp=Z,980nm,16.0s,MS4.5						
FITZ	**Fitzroy Crossi**	**29.32**	**124**	*e*P	**P**	**10 11 54.2**	**-3.4**
BOK	**Bokaro**	**29.57**	**332**	*e*P	**P**	**10 12 00.6**	**+0.9**
BOK				AMb	AMB	10 12 02.5	
	comp=Z,30nm,0.7s,mb5.1						
ODAN	**Odare**	**31.63**	**338**	*e*P	**P**	**10 12 18.6**	**+0.7**
	comp=Z,52nm,0.6s,mb5.5						
TAPN	**Taplejung**	**31.95**	**338**	*e*P	**P**	**10 12 21.7**	**+1.0**
	comp=Z,113nm,0.8s,mb5.8						
RAMN	**Ramite**	**32.02**	**336**	*e*P	**P**	**10 12 22.4**	**+1.1**
	comp=Z,47nm,0.6s,mb5.5						
KAD	**Karad**	**32.37**	**308**	*e*P	**P**	**10 12 24.8**	**+0.3**
JIRN	**Jiri**	**32.82**	**336**	*e*P	**P**	**10 12 28.9**	**+0.6**
	comp=Z,125nm,0.7s,mb6.0						
MUN	**Mundaring**	**33.03**	**155**	*e*P	**P**	**10 12 31.6**	**+1.5**
MUN				*e*pP	pP	10 12 45.5	+2.4
PKI	**Pulchoki**	**33.06**	**335**	*e*P	**P**	**10 12 30.3**	**-0.1**
	comp=Z,21nm,0.6s,mb5.2						
PKI	**Pulchoki**	**33.06**	**335**	*e*P	**P**	**10 12 30.3**	**-0.1**
PKI				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
LSA	**Lhasa**	**33.08**	**345**	*e*P	**P**	**10 12 31.2**	**+0.7**
	comp=Z,61nm,0.7s,mb5.6						
LSA	**Lhasa**	**33.08**	**345**	*e*P	**P**	**10 12 31.2**	**+0.7**
LSA				pmax	pmax		
	comp=Z,61nm,0.7s,mb5.6						
GUN	**Gumba**	**33.16**	**336**	*e*P	**P**	**10 12 31.9**	**+0.6**
	comp=Z,100nm,0.5s,mb6.0						
DMN	**Daman**	**33.22**	**335**	*e*P	**P**	**10 12 32.2**	**+0.4**
	comp=Z,48nm,0.9s,mb5.4						
CD2	**Chengdu**	**33.25**	**5**	⇑*i*P	**P**	**10 12 32.0**	**0.0**
CD2				AP	pP	10 12 41.5	-3.5
CD2				XP	sP	10 12 45.8	-5.1
CD2				PP	PP	10 13 44.3	-3.7
CD2				PCP	PcP	10 15 13.3	-0.3
CD2				S	**S**	**10 17 49.8**	**+1.1**
CD2				PCS	PcS	10 18 57.8	-1.5
CD2				SCS	ScS	10 22 43.5	-11
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,310nm,5.9s						
CD2				LR	LR		
	comp=N,770nm,17.8s,MS4.6						
CD2				LR	LR		
	comp=E,570nm,13.2s,MS4.6						
CD2				LR	LR		
	comp=Z,770nm,14.4s,MS4.5						
KKN	**Kakani**	**33.30**	**335**	*e*P	**P**	**10 12 32.4**	**-0.1**
	comp=Z,65nm,0.7s,mb5.7						
KKN	**Kakani**	**33.30**	**335**	*e*P	**P**	**10 12 32.4**	**-0.1**
KKN				pmax	pmax		
	comp=Z,65nm,0.7s,mb5.7						
POO	**Poona**	**33.33**	**310**	*ex*	**P**	**10 12 32.0**	**-0.9**
POO				*e*P		10 12 33.8	
POO				AMb	AMB	10 12 35.1	
	comp=Z,27nm,0.6s,mb5.4						
KLBR	**Kellerberrin**	**33.39**	**152**	*e*P	**P**	**10 12 33.9**	**+0.7**
	comp=Z,17nm,0.9s,mb5.0						
KLBR				*e*pP	pP	10 12 47.9	+1.7
NACB	**Ninganchiao**	**33.51**	**37**	*e*P	**P**	**10 12 34.8**	**+0.5**
	comp=Z,38nm,0.8s,mb5.4						
GKN	**Gorkha**	**33.76**	**334**	*e*P	**P**	**10 12 36.4**	**-0.1**
	comp=Z,80nm,0.9s,mb5.7						
KOLN	**Koldanda**	**34.02**	**333**	*e*P	**P**	**10 12 39.2**	**+0.4**
	comp=Z,40nm,0.7s,mb5.5						
NWAO	**Narrogin (SRO)**	**34.28**	**154**	P	**P**	**10 12 41.2**	**+0.2**
	comp=Z,16nm,0.8s,mb5.0,baz=318,slow=11,SNR=10						
NWAO	**Narrogin (SRO)**	**34.28**	**154**	*e*P	**P**	**10 12 41.4**	**+0.4**
	comp=Z,9.6nm,0.6s,mb4.9						
NWAO	**Narrogin (SRO)**	**34.28**	**154**	*e*P	**P**	**10 12 41.4**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DANN	**Dangsing**	**34.45**	**334**	*e*P	**P**	**10 12 42.6**	**+0.2**
	comp=Z,164nm,0.9s,mb6.0						
XAN	**Xi'an**	**37.10**	**12**	P	**P**	**10 13 03.0**	**-2.1**
XAN				AP	pP	10 13 13.0	-5.2
XAN				PP	PP	10 14 39.0	+8.5
XAN				SCS	ScS	10 23 04.5	-11
XAN				AMB	AMB		
	comp=Z,123nm,5.3s						
XAN				LR	LR		
	comp=N,232nm,11.0s,MS4.2						
XAN				LR	LR		
	comp=E,117nm,13.3s,MS4.2						
XAN				LR	LR		
	comp=Z,751nm,18.8s						
WRA	**Warramunga Arr**	**37.51**	**120**	P	**P**	**10 13 07.1**	**-1.8**
	comp=Z,53nm,0.6s,mb5.5,baz=301,slow=9.0,SNR=404						
WRA				PcP	PcP	10 15 26.2	-0.2
	comp=Z,4.2nm,0.6s,baz=306,slow=2.2,SNR=5.3						
WRA				S	**S**	**10 18 49.6**	**-4.9**
	comp=Z,4.6nm,1.0s,baz=293,slow=16,SNR=7.8						
WRA				LR	LR	10 30 07.8	
	comp=Z,201nm,18.1s,MS4.0,baz=290,slow=39						
WRA	**Warramunga Arr**	**37.51**	**120**	P	**P**	**10 13 07.1**	**-1.7**
WRA						10 15 26.2	
WRA				S	**S**	**10 18 49.6**	**-4.9**
WRAB	**Tennant Creek**	**37.52**	**120**	P	**P**	**10 13 07.0**	**-1.9**
	comp=Z,646nm,0.7s,mb6.5,SNR=81						
WRAB	**Tennant Creek**	**37.52**	**120**	*e*P	**P**	**10 13 07.3**	**-1.5**
	comp=Z,60nm,0.6s,mb5.5						
WRAB				*e*	pP	10 13 21.6	-0.4
WRAB	**Tennant Creek**	**37.52**	**120**	*i* P	**P**	**10 13 07.3**	**-1.6**
WRAB	**Tennant Creek**	**37.52**	**120**	P	**P**	**10 13 07.5**	**-1.4**
	comp=Z,109nm,0.9s,comp=Z,909nm,mb5.6						
WB2	**Warramunga Arr**	**37.52**	**120**	*e*P	**P**	**10 13 06.9**	**-2.0**
WB2				*e*pP	pP	10 13 21.3	-0.8
WB2				*e*S	**S**	**10 18 49.6**	**-5.1**
NDI	**New Delhi**	**38.02**	**326**	*e*P	**P**	**10 13 09.0**	**-4.0**
LZH	**Lanzhou**	**38.39**	**5**	*e*P	**P**	**10 13 15.0**	**-1.0**
LZH				AP	pP	10 13 24.0	-5.1
LZH				XP	sP	10 13 29.3	-5.7
LZH				PP	PP	10 14 48.0	+3.4
LZH				PCP	PcP	10 15 29.0	+0.3
LZH				*e*S	**S**	**10 19 11.0**	**+3.7**
LZH				AMB	AMB		
	comp=Z,33nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,200nm,7.5s						
LZH				LR	LR		
	comp=N,665nm,16.4s						
LZH				LR	LR		
	comp=Z,768nm,17.6s,MS4.6						
NJ2	**Nanjing**	**38.47**	**26**	*e*P	**P**	**10 13 17.0**	**+0.3**
NJ2				AP	pP	10 13 32.3	+2.4
NJ2				XP	sP	10 13 39.5	+3.7
NJ2				PP	PP	10 14 50.5	+4.9
NJ2				S	**S**	**10 19 05.0**	**-3.7**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,200nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,18.0s						
NJ2				LR	LR		
	comp=E,2μm,26.7s						
NJ2				LR	LR		
	comp=Z,2μm,16.7s,MS4.9						
FORT	**Forrest**	**38.54**	**140**	*e*P	**P**	**10 13 17.0**	**-0.4**
	comp=Z,25nm,0.8s,mb5.0						
FORT				*e*pP	pP	10 13 31.4	+0.9
FORT				*e*		10 14 39.3	
ASAR	**Alice Springs**	**38.76**	**126**	P	**P**	**10 13 18.3**	**-1.0**
	comp=Z,36nm,0.7s,mb5.2,baz=302,slow=7.9,SNR=302						
ASAR				PcP	PcP	10 15 30.4	+0.3
	comp=Z,6.8nm,0.6s,baz=313,slow=2.6,SNR=8.5						
ASAR				S	**S**	**10 19 09.0**	**-4.3**
	comp=Z,3.7nm,1.1s,baz=300,slow=17,SNR=12						
DDI	**Dehra Dun**	**38.85**	**328**	*e*P	**P**	**10 13 18.5**	**-1.4**
GTA	**Gaotai**	**41.57**	**359**	⇑*e*P	**P**	**10 13 41.8**	**-0.5**
GTA				AP	pP	10 13 51.8	-3.8
GTA				XP	sP	10 13 55.8	-5.7
GTA				S	**S**	**10 19 56.0**	**+1.2**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.1						
GTA				AMB	AMB		
	comp=Z,167nm,4.8s						
GTA				LR	LR		
	comp=N,377nm,20.1s,MS4.4						
GTA				LR	LR		
	comp=E,363nm,18.9s,MS4.4						
GTA				LR	LR		
	comp=Z,572nm,23.4s,MS4.4						
THN	**Thein Dam**	**41.74**	**328**	*e*P	**P**	**10 13 41.7**	**-2.1**
NIL	**Nilore**	**44.00**	**327**	*e*P	**P**	**10 14 01.6**	**-0.4**
	comp=Z,16nm,0.8s,mb4.8						
NIL	**Nilore**	**44.00**	**327**	*e*P	**P**	**10 14 01.7**	**-0.4**
NIL				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
BJI	**Beijing**	**44.62**	**17**	P	**P**	**10 14 07.3**	**+0.3**
BJI				S	**S**	**10 20 44.0**	**+4.4**
BJI				AMB	AMB		
	comp=Z,32nm,0.7s,mb5.3						
BJI				AMB	AMB		
	comp=Z,166nm,6.5s						
BJI				LR	LR		
	comp=N,463nm,21.0s						
BJI				LR	LR		
	comp=E,258nm,27.8s						
BJI				LR	LR		
	comp=Z,342nm,29.0s						
KSRS	**Korea Array**	**47.16**	**30**	P	**P**	**10 14 26.2**	**-0.7**
	comp=Z,9.1nm,0.6s,mb4.9,baz=224,slow=7.9,SNR=32						
KSRS				LR	LR	10 34 46.3	
	comp=Z,148nm,20.0s,MS4.0,baz=220,slow=37						
WMQ	**Urumqi**	**47.36**	**348**	P	**P**	**10 14 29.0**	**+0.6**
WMQ				AP	pP	10 14 39.0	-2.9
WMQ				XP	sP	10 14 43.0	-4.7
WMQ				PP	PP	10 16 19.0	-1.1
WMQ				S	**S**	**10 21 20.0**	**+1.3**
WMQ				ScS	ScS	10 24 17.0	-1.0
WMQ				SS	SS	10 24 41.0	-6.1
WMQ				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,75nm,4.0s						
WMQ				LR	LR		
	comp=N,201nm,15.0s,MS4.3						
WMQ				LR	LR		
	comp=E,197nm,15.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,215nm,15.0s,MS4.2						
CTA	**Charters Tower**	**48.13**	**115**	*e*P	**P**	**10 14 33.8**	**-1.0**
	comp=Z,20nm,1.2s,mb5.0						
CTA	**Charters Tower**	**48.13**	**115**	*e*P	**P**	**10 14 33.8**	**-1.0**
CTA				pmax	pmax		
	comp=Z,20nm,1.2s						
CTAO	**Charters Tower**	**48.13**	**115**	*e*P	**P**	**10 14 33.4**	**-1.5**
	comp=Z,22nm,1.0s,mb5.1						
CTAO	**Charters Tower**	**48.13**	**115**	*e*P	**P**	**10 14 33.4**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
CTAO	**Charters Tower**	**48.13**	**115**	P	**P**	**10 14 34.3**	**-0.5**
	comp=Z,35nm,1.1s,mb5.3						
STKA	**Stephens Creek**	**48.65**	**132**	*e*P	**P**	**10 14 38.2**	**-0.5**
	comp=Z,27nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**48.65**	**132**	P	**P**	**10 14 38.4**	**-0.3**
	comp=Z,35nm,0.7s,mb5.5,baz=307,slow=7.9,SNR=76						
STKA				LR	LR	10 34 36.9	
	comp=Z,462nm,20.9s,MS4.4,baz=14,slow=35						
KZA	**Kyzart**	**49.74**	**336**	P	**P**	**10 14 48.4**	**+1.6**
	SNR=10						
UCH	**Uchtor**	**50.17**	**335**	*e*P	**P**	**10 14 51.1**	**+1.0**
	comp=Z,7.3nm,0.8s,mb4.8						
SONM	**Songino Array**	**50.27**	**5**	P	**P**	**10 14 50.9**	**+0.2**
	comp=Z,16nm,0.8s,mb5.1,baz=188,slow=8.8,SNR=70						
SONM				pP	pP	10 15 03.4	-0.9
	comp=Z,12nm,0.9s,baz=188,slow=8.6,SNR=8.1						
SONM				PcP	PcP	10 16 07.8	-1.2
	comp=Z,3.0nm,0.5s,baz=190,slow=4.8,SNR=5.2						
SONM				ScP	ScP	10 19 59.9	-1.0
	comp=Z,0.4nm,0.8s,baz=151,slow=3.3,SNR=2.1						
SONM	**Songino Array**	**50.27**	**5**	P	**P**	**10 14 50.9**	**+0.2**
SONM				*PP	pP	10 15 03.4	-0.9
SONM						10 16 07.8	
TKM2	**Tokmak 2**	**50.30**	**336**	*e*P	**P**	**10 14 51.5**	**+0.5**
	comp=Z,78nm,0.7s,mb5.8						
TKM2				*e*	pP	10 15 05.4	+0.7
TKM2	**Tokmak 2**	**50.30**	**336**	*e*P	**P**	**10 14 51.6**	**+0.6**
TKM2				*e*	pP	10 15 05.4	+0.8
TKM2				pmax	pmax		
	comp=Z,78nm,0.7s,mb5.8						
TKM2	**Tokmak 2**	**50.30**	**336**	P	**P**	**10 14 51.8**	**+0.8**
	SNR=9.9						
KBK	**Karagaybulak**	**50.34**	**336**	P	**P**	**10 14 52.5**	**+1.1**
	SNR=10						
ULN	**Ulaanbaatar**	**50.37**	**6**	*e*P	**P**	**10 14 51.5**	**+0.1**
	comp=Z,8.3nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**50.37**	**6**	*e*P	**P**	**10 14 51.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
AML	**Almayashu**	**50.44**	**334**	*e*P	**P**	**10 14 52.8**	**+0.7**
	comp=Z,29nm,0.6s,mb5.5						
AML				*e*	pP	10 15 07.0	+1.3
AML	**Almayashu**	**50.44**	**334**	P	**P**	**10 14 52.9**	**+0.8**
	SNR=8.5						
AAK	**Ala-Archa**	**50.51**	**335**	P	**P**	**10 14 53.2**	**+0.6**
	comp=Z,91nm,0.5s,mb6.0,SNR=5.2						
AAK	**Ala-Archa**	**50.51**	**335**	P	**P**	**10 14 53.4**	**+0.8**
	SNR=11						
CHMS	**Chumysh**	**50.71**	**336**	P	**P**	**10 14 54.8**	**+0.7**
	SNR=7.0						
EKS2	**Erkin-Say**	**50.84**	**335**	*e*P	**P**	**10 14 55.8**	**+0.7**
	comp=Z,63nm,0.7s,mb5.7						
EKS2	**Erkin-Say**	**50.84**	**335**	P	**P**	**10 14 55.9**	**+0.8**
	SNR=21						
USP	**Ospenovka**	**51.03**	**336**	P	**P**	**10 14 56.6**	**+0.1**
	SNR=27						
CN2	**Changchun**	**51.18**	**23**	*e*P	**P**	**10 14 58.3**	**+0.7**
CN2				*e*AP	pP	10 15 06.0	-5.3
CN2				*e*S	**S**	**10 22 12.8**	**+0.5**
CN2				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.5						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.5						
MK31	**Makanchi Array**	**51.47**	**344**	*e*P	**P**	**10 14 59.2**	**-0.5**
MK31				*e*	pP	10 15 12.8	-0.5
MK31	**Makanchi Array**	**51.47**	**344**	*i* P	**P**	**10 14 59.0**	**-0.7**
MK31				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						

comp=Z,11nm,0.9s,mb4.8
TLY Talaya 53.91 3 *e*P **P 10 15 18.0 +0.3**
TLY pmax pmax
comp=Z,14nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,274nm,15.0s,MS4.4
HIA Hailar 54.10 16 *e*P **P 10 15 18.8 -0.3**
comp=Z,6.4nm,0.8s,mb4.6
HIA Hailar 54.10 16 *e*P **P 10 15 18.8 -0.3**
HIA pmax pmax
comp=Z,6.0nm,0.8s
TOO Toolangi 54.21 136 *e*P **P 10 15 21.9 +1.7**
CAN Canberra 55.71 132 *e*P **P 10 15 30.8 -0.2**
comp=Z,28nm,1.0s,mb5.2
CAN *e* pP 10 15 45.8 +1.0
CAN Canberra 55.71 132 *e*P **P 10 15 30.8 -0.3**
CAN *e* pP 10 15 45.8 +0.9
CAN pmax pmax
comp=Z,27nm,1.0s,mb5.2
ARMA Armidale 55.91 126 *e*P **P 10 15 33.3 +0.7**
CNB Canberra Magne 55.98 132 *e*P **P 10 15 33.4 +0.4**
KURK Kurchatov 56.05 344 P **P 10 15 32.4 -0.8**
comp=Z,288nm,0.8s,mb6.4,SNR=10
KURK Kurchatov 56.05 344 P **P 10 15 32.0 -1.2**
comp=Z,4.2nm,0.5s,mb4.8,baz=182,slow=6.5,SNR=49
KURK pP pP 10 15 46.0 -0.9
comp=Z,27nm,0.8s,baz=164,slow=7.2,SNR=32
KURK S **S 10 23 24.3 +6.2**
comp=Z,0.3nm,0.5s,baz=141,slow=17,SNR=3.9
KURK LR LR 10 43 09.9
comp=Z,469nm,21.8s,MS4.5,baz=120,slow=40
KURK Kurchatov 56.05 344 *e*P **P 10 15 32.0 -1.2**
comp=Z,42nm,0.8s,mb5.5
KURK *e* pP 10 15 46.2 -0.7
KURK Kurchatov 56.05 344 *e*P **P 10 15 32.0 -1.2**
KURK *e* pP 10 15 46.2 -0.8
KURK pmax pmax
comp=Z,42nm,0.8s,mb5.5
ZAA0 Zalesovo Array 57.59 349 *e*P **P 10 15 42.7 -1.2**
ZAA0 *e* pP 10 15 56.5 -1.3
ZALV Zalesovo Beam 57.59 349 P **P 10 15 42.9 -1.1**
comp=Z,7.8nm,0.6s,mb4.9,baz=183,slow=6.4,SNR=35
ZALV pP pP 10 15 57.0 -0.8
comp=Z,41nm,0.8s,baz=172,slow=5.7,SNR=23
ZALV S **S 10 23 37.2 -1.0**
comp=Z,0.6nm,0.3s,baz=161,slow=14,SNR=4.0
ZALV LR LR 10 45 18.8
comp=Z,117nm,19.2s,MS4.0,baz=290,slow=41
ZALV Zalesovo Beam 57.59 349 P **P 10 15 42.9 -1.1**
ZALV *PP pP 10 15 57.0 -0.8
ZALV S **S 10 23 37.3 -0.9**
KLR Kul'dur 58.12 24 *e*P **P 10 15 43.2 -4.6**
NVS Novosibirsk 58.74 349 *e*P **P 10 15 50.4 -1.6**
NVS *e*S **S 10 23 52.2 -1.0**
NVS pmax pmax
comp=N,5.0nm,0.8s
NVS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
NVS pmax pmax
comp=E,8.0nm,1.2s
HABR Khabarovsk 58.93 26 *e*P **P 10 15 51.5 -2.0**
HABR *e*PP pP 10 16 00.4 -7.0
HABR *e* 10 16 39.2
HABR *e* 10 18 00.3
HABR *e*S **S 10 23 55.2 -0.8**
HABR *e* 10 24 12.6
HABR *e* 10 25 37.4
RDF Al-Radifah 59.34 306 *e*P **P 10 15 56.2 -0.5**
baz=306
RDF AMb AMB 10 15 58.1
comp=Z,77nm,1.2s,mb5.6,baz=306
UMR Umm Al-Rimmam 59.45 306 *e*P **P 10 15 56.6 -0.8**
baz=306
UMR AMb AMB 10 15 58.6
comp=Z,76nm,0.9s,mb5.7,baz=306
NAY Al-Naaiem 59.72 306 *e*P **P 10 15 58.5 -0.8**
baz=306
NAY AMb AMB 10 16 08.6
comp=Z,19nm,1.5s,mb4.9,baz=306
MIB Mutribah 59.85 307 *e*P **P 10 15 59.8 -0.5**
baz=307
MIB AMb AMB 10 16 01.4
comp=Z,93nm,1.1s,mb5.7,baz=307
VOSK Vostochnaya 60.19 340 P **P 10 16 00.6 -1.5**
VOSK pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
BVA0 Borovoye Array 60.64 340 *i* P **P 10 16 03.6 -1.5**
BVA0 pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
BVAR Borovoye Array 60.64 340 P **P 10 16 03.9 -1.3**
comp=Z,14nm,0.7s,mb5.2,baz=144,slow=8.9,SNR=55
BVAR pP pP 10 16 17.7 -1.4
comp=Z,16nm,0.6s,baz=146,slow=9.6,SNR=12
BVAR LR LR 10 46 53.7
comp=Z,644nm,20.1s,MS4.8,baz=113,slow=40
BVAR Borovoye Array 60.64 340 P **P 10 16 03.9 -1.2**
BVAR *PP pP 10 16 17.7 -1.4
BRVK Borovoye 60.71 340 *e*P **P 10 16 04.1 -1.4**
comp=Z,14nm,0.7s,mb5.2
BRVK Borovoye 60.71 340 *e*P **P 10 16 04.1 -1.5**
BRVK pmax pmax
comp=Z,14nm,0.7s,mb5.2
BOD Bodaibo 60.99 8 *e*P **P 10 16 06.0 -1.4**
BOD pmax pmax
comp=Z,35nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 61.61 32⇑ *e*P **P 10 16 11.1 -0.7**
YSS pmax pmax
comp=Z,20nm,0.8s,mb5.3
AB31 Akbulak array 62.12 331 P **P 10 16 13.5 -1.7**
AB31 pmax pmax
comp=Z,17nm,0.6s,mb5.3
AKTK Aktyubinsk 63.84 331 P **P 10 16 25.4 -1.2**
AKTO Aktyubinsk 63.84 331 P **P 10 16 25.4 -1.2**
comp=Z,3.7nm,0.4s,mb4.8,baz=119,slow=6.6,SNR=19
AKTO Aktyubinsk 63.84 331 *i* P **P 10 16 24.9 -1.7**
AKTO pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
SVE Sverdlovsk 67.15 338⇓ *e*P **P 10 16 47.6 -0.2**
SVE *e* 10 17 16.5
SVE *e*S S 10 25 30.1 -8.3
SVE pmax pmax
comp=Z,49nm,1.0s,mb5.5
ARU Arti 67.68 336 *e*P **P 10 16 49.9 -1.3**
comp=Z,11nm,0.6s,mb5.1
ARU Arti 67.68 336 *d i*P **P 10 16 49.9 -1.3**
ARU *e*PPP 10 20 58.9
ARU *e*S S 10 25 47.4 +2.7
ARU SS SS 10 30 08.2 +1.6
ARU pmax pmax
comp=Z,48nm,1.7s,mb5.2
YAK Yakutsk 68.00 14 *e*P **P 10 16 52.3 -0.9**
comp=Z,52nm,0.8s,mb5.6
YAK Yakutsk 68.00 14⇑ *e*P **P 10 16 51.8 -1.3**
YAK pmax pmax
comp=Z,91nm,0.9s,mb5.8
KIV Kislovodsk 69.04 319 *e*P **P 10 16 60.0 -0.1**
comp=Z,37nm,1.0s,mb5.3
KIV *e* pP 10 17 14.5 +0.3
KIV Kislovodsk 69.04 319 *e*P **P 10 17 00.5 +0.5**
KIV *e*S S 10 26 03.9 +2.4
KIV pmax pmax
comp=Z,22nm,1.0s,mb5.0
MAW Mawson 70.02 194 *e*P **P 10 17 07.7 +2.1**
comp=Z,9.5nm,0.8s,mb4.8
MAW Mawson 70.02 194 P **P 10 17 06.9 +1.4**
comp=Z,8.7nm,0.7s,mb4.8,baz=25,slow=8.8,SNR=10
MAW LR LR 10 40 59.3
comp=Z,319nm,19.6s,MS4.6,baz=103,slow=30
MAW Mawson 70.02 194 *e*P **P 10 17 07.7 +2.1**
MAW pmax pmax
comp=Z,10.0nm,0.8s
SOKR Solikamsk 70.53 338 *e*P **P 10 17 08.3 -0.5**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VRHR Novokhopersk 72.82 326 *e*P **P 10 17 22.3 -0.5**
VRHR *e* pP 10 17 36.7 -0.4
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.5
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.4s
ANN Anapa 72.83 318 *e*P **P 10 17 20.6 -2.4**
ANN *e*S S 10 26 41.7 -3.7
ANN pmax pmax
comp=Z,122nm,1.5s,mb5.6
PETK Petropavlovsk- 73.01 32 P **P 10 17 22.6 -1.3**
comp=Z,5.2nm,0.7s,mb4.6,baz=195,slow=2.6,SNR=5.9
PET Petropavlovsk 73.47 32⇑ *e*P **P 10 17 26.1 -0.5**
PET pmax pmax
comp=Z,75nm,1.5s,mb5.4
BR131 Keskin Array S 73.82 312 *e*P **P 10 17 28.4 -0.6**
comp=Z,7.4nm,0.7s,mb4.7
BR131 *e* pP 10 17 42.9 -0.3
BRTR Keskin Array B 73.82 312 P **P 10 17 27.9 -1.0**
comp=Z,5.9nm,0.8s,mb4.6,baz=131,slow=6.6,SNR=23
BRTR pP pP 10 17 41.4 -1.8
comp=Z,9.4nm,0.7s,baz=134,slow=7.2,SNR=16
BRTR Keskin Array B 73.82 312⇑ *e*P **P 10 17 28.0 -0.9**
VORD Divnogorie 74.09 325 *e*P **P 10 17 29.4 -0.9**
VORD *e* pP 10 17 44.0 -0.6
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=E,20nm,0.9s
VSR Storozhevoye 74.27 325 *e*P **P 10 17 30.0 -1.3**
VSR *e* pP 10 17 45.0 -0.6
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,20nm,1.4s
LBTB Lobatse 75.19 245 LR LR 10 45 11.6
comp=E,283nm,19.9s,MS4.6,baz=126,slow=31
LBTB Lobatse 75.19 245 *e*P **P 10 17 37.8 +0.6**
comp=E,6.0nm,0.5s,mb4.8
LBTB Lobatse 75.19 245 *e*P **P 10 17 37.8 +0.6**
LBTB pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BOSA Boshof 75.78 241 P **P 10 17 41.2 +0.6**
comp=Z,5.9nm,0.5s,mb4.8,baz=121,slow=4.3,SNR=21
BOSA LR LR 10 46 13.0
comp=Z,255nm,18.9s,MS4.5,baz=127,slow=32
BOSA Boshof 75.78 241 *e*P **P 10 17 40.8 +0.2**
comp=Z,8.5nm,0.9s,mb4.7
BOSA Boshof 75.78 241 *e*P **P 10 17 40.8 +0.2**
BOSA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SEY Seymchan 75.83 22⇑ *e*P **P 10 17 38.8 -1.2**
TIXI Tiksi 76.16 9 *e*P **P 10 17 39.9 -1.9**
comp=Z,12nm,0.7s,mb4.9
TIXI Tiksi 76.16 9⇑ *e*P **P 10 17 39.7 -2.1**
TIXI pmax pmax
comp=Z,40nm,1.5s,mb5.1
MOS Moscow 76.98 329 *e*P **P 10 17 45.5 -1.2**
MOS *e* pP 10 17 56.2 -4.9
MOS *e* 10 20 34.4
MOS pmax pmax
comp=Z,67nm,1.1s,mb5.5
OBN Obninsk 77.28 328⇑ *e*P **P 10 17 48.7 +0.3**
OBN pmax pmax
comp=Z,78nm,1.5s,mb5.4
SYO Syowa Base 77.64 199⇓ *i*P **P 10 17 50.0 -0.1**
SYO Syowa Base 77.64 199⇓ *e*PcP PcP 10 18 00.4 +0.3
SYO Syowa Base 77.64 199⇓ *e*sP sP 10 18 15.8 +5.7
KLMR Klimovskoe 78.31 334 *e*P **P 10 17 49.9 -4.1**
KLMR pmax pmax
comp=Z,37nm,1.3s,mb5.2
TIRR Tirgusor 78.86 316⇓ *i*P **P 10 17 56.8 -0.6**
TIRR Tirgusor 78.86 316⇓ *i*P **P 10 17 56.8 -0.6**
HARR Harsova 79.25 316⇓ *i*P **P 10 17 59.3 -0.2**
AKASG Malin Array Be 79.98 322 P **P 10 18 02.2 -1.1**
comp=Z,1.5nm,0.5s,mb4.2,baz=91,slow=4.5,SNR=11
AKASG pP pP 10 18 15.2 -2.6
comp=Z,0.8nm,0.3s,baz=87,slow=5.4,SNR=4.7
AKASG Malin Array Be 79.98 322 P **P 10 18 02.2 -1.1**
AKASG pP pP 10 18 15.2 -2.6
AKASG Malin Array Be 79.98 322 *i* P **P 10 18 02.9 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
VRI Vrincioaia 80.35 317⇑ P **P 10 18 06.4 +0.9**
VRI Vrincioaia 80.35 317⇑ *i*P **P 10 18 06.4 +0.9**
MLR Muntele Rosu 80.80 317 P **P 10 18 07.8 -0.1**
comp=Z,5.3nm,0.5s,mb4.8,baz=106,slow=5.0,SNR=7.0
MLR pP pP 10 18 23.1 +0.7
comp=Z,13nm,0.8s,baz=125,slow=4.8,SNR=7.4
MLR Muntele Rosu 80.80 317⇑ *i*P **P 10 18 08.7 +0.8**
VOIR 81.40 316⇓ P **P 10 18 11.1 0.0**
VOIR 81.40 316⇓ *i*P **P 10 18 11.1 0.0**
VNDA Vanda 81.74 169 P **P 10 18 12.7 +0.4**
comp=Z,5.0nm,1.0s,mb4.4,baz=301,slow=5.5,SNR=19
BURAR Bucovina Array 81.76 319⇑ P **P 10 18 13.9 +1.0**
BURAR Bucovina Array 81.76 319⇑ *i*P **P 10 18 13.9 +1.0**
BUR08 Bucovina Ar. S 81.78 319 *e*P **P 10 18 13.5 +0.5**
TSUM Tsumeb 82.39 251 *e*P **P 10 18 17.9 +1.0**
comp=Z,6.1nm,0.8s,mb4.6
JOF Joensuu 82.69 334 *e*p **P 10 18 16.7 -0.8**
comp=Z,9.1nm,0.6s,mb5.0
JOF Joensuu 82.69 334 *e*P **P 10 18 16.7 -0.8**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
SBA Scott Base 82.83 169 *e*P **P 10 18 19.4 +1.4**
comp=Z,7.7nm,0.7s,mb4.8
SBA Scott Base 82.83 169 *e*P **P 10 18 19.4 +1.4**
SBA pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KWP Kalwaria 83.80 320⇓ P **P 10 18 24.2 +0.7**
KWP Kalwaria 83.80 320⇓ *i*P **P 10 18 24.2 +0.7**
BZS Buzias 83.81 316⇑ *i*P **P 10 18 24.0 +0.4**
KOLS Kolonicke sedl 83.95 320 *i*P **P 10 18 25.2 +0.9**
KOLS *e* pP 10 18 39.9 +1.1
KOLS pmax pmax
comp=Z,21nm,1.1s,mb5.2
KOLS Kolonicke sedl 83.95 320 *i* P **P 10 18 25.2 +0.9**
KOLS *e*pP pP 10 18 39.9 +1.1
SUW Suwalki 84.38 325 *e*P **P 10 18 26.5 +0.2**
SUW *e* pP 10 18 41.3 +0.4
CRVS Cervenica-Dubn 84.47 319 *e*P **P 10 18 26.4 -0.5**
CRVS *e*pP pP 10 18 40.9 -0.6
KAF Kangasniemi 84.66 333 *e*p **P 10 18 27.8 +0.2**
comp=Z,12nm,0.6s,mb5.2
KAF Kangasniemi 84.66 333 *e*P **P 10 18 27.8 +0.2**
KAF pmax pmax
comp=Z,12nm,0.6s,mb5.2
STHS Stebnicka Huta 84.70 320 *e*P **P 10 18 28.7 +0.7**
STHS *e* pP 10 18 43.7 +1.1
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
STHS Stebnicka Huta 84.70 320 *e*P **P 10 18 28.7 +0.7**
STHS *e*pP pP 10 18 43.7 +1.1
PKSM Moragy 85.95 316⇑ *i*P **P 10 18 34.7 +0.3**
VYHS Vyhne 86.13 319 *e*P **P 10 18 35.3 +0.1**
VYHS *e* pP 10 18 50.5 +0.7
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.6
VYHS Vyhne 86.13 319 *e*P **P 10 18 35.3 +0.1**
VYHS *e*pP pP 10 18 50.4 +0.6
ARCES ARCESS Array B 86.93 340 P **P 10 18 38.7 0.0**
comp=Z,4.2nm,0.4s,mb5.1,baz=105,slow=5.2,SNR=78
ARCES pP pP 10 18 52.3 -0.9
comp=Z,3.6nm,0.6s,baz=220,slow=7.4,SNR=4.2
MODS Modra-Piesok 87.14 318 *e*P **P 10 18 40.7 +0.6**
MODS pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
MODS Modra-Piesok 87.14 318 *e*P **P 10 18 40.6 +0.5**
QSPA South Pole Qui 87.60 180 LR LR 10 52 23.7
comp=Z,129nm,18.9s,MS4.4,baz=8.9,slow=32
DPC Dobruska-Polom 87.98 320 *e*P **P 10 18 45.1 +1.0**
DPC *e*pP pP 10 19 00.1 +1.3
GOLS Golise 88.01 316 *e*P **P 10 18 45.4 +1.0**
GOLS *i* pP pP 10 18 59.8 +0.8
KSP Ksiaz 88.06 321 *e*P **P 10 18 44.9 +0.4**
GROS Grobnik 88.14 316 *e*P **P 10 18 45.6 +0.6**
GROS *i* pP pP 10 19 00.3 +0.7
UPC Upice 88.20 321 *e*P **P 10 18 46.0 +0.9**
ARSA Arzberg 88.20 317⇑ *i*P **P 10 18 43.8 -1.4**
PERS Pernice 88.42 317 *e*P **P 10 18 47.2 +0.9**
PERS *e*pP pP 10 19 02.0 +1.0
SOKA Soboth 88.48 317⇑ *i*PcP PcP 10 18 47.6 -0.6
comp=Z,11nm,1.2s
VISS Visnje 88.54 316 *e*P **P 10 18 47.6 +0.7**
PRU Pruhonice 89.09 320 *e*P **P 10 18 50.1 +0.7**
PVCC Panska Ves 89.12 320 *e*P **P 10 18 50.5 +1.0**
BRG Berggiesshubel 89.54 321 *e*P **P 10 18 52.1 +0.7**
BRG *e* pP 10 19 07.1 +1.0
BRG pmax pmax
comp=Z,35nm,2.1s,mb5.3
BRG Berggiesshubel 89.54 321 *e*P **P 10 18 52.3 +0.9**
comp=Z,56nm,2.0s,mb5.5
BRG Berggiesshubel 89.54 321 *e*P **P 10 18 52.0 +0.6**
comp=Z,58nm,2.1s,mb5.5
BRG *e* pP 10 19 07.0 +0.9
comp=Z,9.4nm,0.9s
GEC2 GERESS Array S 89.55 319 *e*P **P 10 18 52.4 +0.9**
GEC2 pmax pmax
comp=Z,36nm,1.6s,mb5.5
GEC2 GERESS Array S 89.55 319 *e*P **P 10 18 52.4 +0.9**
comp=Z,36nm,1.6s,mb5.5
GERES GERESS Array B 89.55 319 P **P 10 18 51.8 +0.3**
comp=Z,2.3nm,0.7s,mb4.7,baz=93,slow=4.5,SNR=20
GERES pP pP 10 19 05.1 -1.1
comp=Z,1.9nm,0.7s,baz=84,slow=4.2,SNR=4.9
KHC Kasperske Hory 89.65 319 *e*P **P 10 18 53.1 +1.1**
KHC *e*pP pP 10 19 07.5 +0.8
WET Wettzell 90.11 319 *e*P **P 10 18 54.9 +0.8**
WET pmax pmax
comp=Z,12nm,1.1s,mb5.1
WET Wettzell 90.11 319 *e*P **P 10 18 54.9 +0.8**
comp=Z,12nm,1.1s,mb5.1
CLL Collm 90.16 321 *e*P **P 10 18 54.0 -0.3**
CLL *e* pP 10 19 06.0 -3.0
CLL Collm 90.16 321 *e*P **P 10 18 54.9 +0.6**
comp=Z,19nm,1.6s,mb5.2
ABTA Abfaltersbach 90.22 317⇓ *i*P **P 10 18 55.2 +0.5**
comp=Z,8.8nm,1.1s,mb5.0
WERD Werda 90.55 320 *e*P **P 10 18 56.7 +0.5**
comp=Z,8.0nm,1.1s,mb5.0
ROTZ Rotzenmuhle 90.58 320 *e*P **P 10 18 57.5 +1.2**
comp=Z,19nm,1.4s,mb5.2
MANZ Manzenberg 90.66 320 *e*P **P 10 18 57.8 +1.1**
comp=Z,16nm,1.1s,mb5.3
WTTA Wattenberg 90.84 317⇑ *i*PcP PcP 10 18 58.1 -0.5
comp=Z,13nm,0.9s
MOX Moxa 91.00 320 *e*P **P 10 18 59.2 +0.9**
comp=Z,13nm,1.5s,mb5.0
GRF Grafenberg Arr 91.22 319 *e*P **P 10 19 00.0 +0.7**
GRF *e*PP pP 10 19 15.1 +1.1
GRF pmax pmax
comp=Z,33nm,1.4s,mb5.5
GRF Grafenberg Arr 91.22 319 *e*P **P 10 19 00.0 +0.7**
GRF *e*PP pP 10 19 15.1 +1.1
GRF pmax pmax
comp=Z,33nm,1.4s,mb5.5
GRF Grafenberg Arr 91.22 319 *e*P **P 10 19 00.0 +0.7**
comp=Z,33nm,1.4s,mb5.5
GRF *e*pP pP 10 19 15.1 +1.1
NB2 NORSAR Subarra 91.63 331 P **P 10 19 01.0 +0.1**
comp=Z,0.2nm,0.6s,mb3.6,baz=92,slow=5.6
NOA NORSAR Array B 91.63 331 P **P 10 19 00.8 -0.1**
comp=Z,2.3nm,0.8s,mb4.6,baz=95,slow=5.0,SNR=5.9
NOA pP pP 10 19 12.9 -2.7
comp=Z,1.9nm,0.8s,baz=94,slow=4.6,SNR=3.6
DAVOX Davos/Dischmat 92.03 317 P **P 10 19 03.8 +0.7**
comp=Z,5.5nm,0.6s,mb5.0,baz=173,slow=3.0,SNR=5.6
DAVOX pP pP 10 19 18.5 +0.7
comp=Z,6.4nm,0.7s,baz=58,slow=12,SNR=5.0
DAVA Damuels 92.04 317⇑ *i*PcP PcP 10 19 04.2 +0.3
comp=Z,18nm,1.1s
DAVOS Davos 92.09 317 P **P 10 19 03.8 +0.4**
DAVOS *PP pP 10 19 18.5 +0.4
KEST Kesra 92.18 306 P **P 10 19 05.8 +1.7**
comp=Z,4.2nm,0.9s,mb4.8,baz=293,slow=3.3,SNR=5.5
TNS Taunus Mts 93.02 320 *e*P **P 10 19 08.1 +0.5**
TNS pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
TNS Taunus Mts 93.02 320 *e*P **P 10 19 08.1 +0.5**
comp=Z,10.0nm,0.8s,mb5.3
CHGN Chignik 98.20 34 *e*P **P 10 19 29.1 -1.9**
TORD Torodi Ar. Bea 98.96 283 P **P 10 19 35.0 -0.4**
comp=Z,0.5nm,0.6s,mb4.2,baz=72,slow=4.8,SNR=3.2
SCHQ Schefferville 126.66 351 PKP PKPdf 10 24 56.5 -0.7
comp=Z,6.9nm,0.9s,baz=264,slow=3.5,SNR=6.4
NVAR Mina Array Bea 129.66 40 PKP PKPdf 10 25 04.3 +0.8
comp=Z,0.8nm,0.7s,baz=263,slow=1.9,SNR=6.2
ULM Lac du Bonnet 130.34 14 PKP PKPdf 10 25 03.6 -0.8
comp=Z,3.3nm,0.5s,baz=177,slow=4.1,SNR=2.8
PDAR Pinedale Array 131.72 29 PKP PKPdf 10 25 07.8 +0.6
comp=Z,0.3nm,0.6s,baz=78,slow=2.1,SNR=5.4
PDAR pPKP pPKPdf 10 25 22.2 -0.2
comp=Z,0.4nm,0.5s,baz=158,slow=1.9,SNR=3.1
PLCA Paso Flores 136.31 190 PKP PKPdf 10 25 16.9 +0.9
comp=Z,1.4nm,1.0s,baz=147,slow=5.9,SNR=3.4
WMOK Wichita Mounta 143.20 27 *e*PKPdf PKPdf 10 25 24.1 -4.5
BDFB Brasilia 143.96 239 PKP PKPdf 10 25 29.4 -1.0
comp=Z,2.4nm,0.5s,baz=139,slow=12,SNR=6.9
CFAA Coronel Fontan 144.52 197 PKP PKPdf 10 25 30.2 -0.8
comp=Z,2.7nm,0.6s,baz=158,slow=3.3,SNR=64
TXAR Lajitas Array 144.78 38 PKP PKPdf 10 25 30.4 -1.1
comp=Z,32nm,0.6s,baz=218,slow=1.2,SNR=625
TXAR pPKP pPKPdf 10 25 45.4 -1.4
comp=Z,14nm,0.6s,baz=258,slow=0.8,SNR=10
MIAR Mount Ida 145.45 20 *e*PKPdf PKPdf 10 25 31.8 -0.7
WVT Waverly 145.56 12 *e*PKPdf PKPdf 10 25 31.3 -1.4
UALR University of 145.66 19 *e*PKPdf PKPdf 10 25 32.6 -0.3
TZTN Tazewell 145.80 6 *e*PKPdf PKPdf 10 25 32.1 -0.9
TZTN *e*pPKPdf pPKPdf 10 25 47.3 -1.0
JCT Junction City 146.15 32 *e*PKPdf PKPdf 10 25 33.6 -0.2
JCT *e* 10 25 48.6
TKL Tuckaleechee C 146.65 6 *e*PKPdf PKPdf 10 25 34.7 +0.2
OXF Oxford 146.75 15 *e*PKPdf PKPdf 10 25 35.0 +0.3
NATX Nacogdoches 147.52 24 *e*PKPbc PKPbc 10 25 38.8 0.0
LCO Las Campanas 147.64 195 *e*PKPbc PKPbc 10 25 39.7 +0.6
HKT Hockley 148.56 28 *e*PKPbc PKPbc 10 25 41.3 -0.2
LRAL Lakeview Retre 148.72 12 *e*PKPbc PKPbc 10 25 40.4 -1.5
GOGA Godfrey 148.91 6 *e*PKPbc PKPbc 10 25 41.5 -0.9
LVC Limon Verde 153.05 202 PKPbc PKPbc 10 25 53.8 +1.4
comp=Z,6.3nm,0.6s,baz=284,slow=1.5,SNR=4.7
SIV San Ignacio 154.12 225 PKPbc PKPbc 10 25 54.7 -0.1
baz=85,slow=4.1

IDC ***28*** *10:23:03.8±0.9, 6085S×3508W, h0km, mb4.5/8, mb1 4.5/8, mb1mx4.3/14, mbtmp4.4/8, MS3.8/2, Ms1 3.7/2, ms1mx3.4/20, Error ellipse: s-maj=30.1km s-min=23.5km az=87.0*

ISCJB ***28*** *10:23:04.5±0.6, 6095S±007×342W±02, h10km, mb4.7/13, MS3.6/2, Error ellipse: s-maj=14.2km s-min=10.1km az=167.8*

NEIC ***28*** *10:23:06.8±0.5, 6106S×3397W, h10km, mb4.9/4, Error ellipse: s-maj=11.6km s-min=10.3km az=176.0*

ISC 28 10:23:06.5±0.5, 6096S±007×341W±02, h10km, n21, σ0°85/23, mb4.7/13, MS3.6/2, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station** 68nm,1.3s	**14.09**	**241**	*e*P	Pn	**Pn**	**10 26 25.7**	**-0.1**
VNA3	**Neumayer Olymp**	**14.16**	**147**	*e*P		**Pn**	**10 26 26.1**	**-0.6**
VNA1	**Neumayer--Stat**	**14.23**	**144**	*e*P		**Pn**	**10 26 28.7**	**+1.0**
VNA2	**Neumayer--Watz** baz=302,slow=16	**14.62**	**144**	*e*P		**Pn**	**10 26 33.1**	**+0.1**
EFI	**East Falkland** 74nm,0.8s	**16.11**	**294**	*e*P		**Pn**	**10 26 55.5**	**+2.7**
EFI				*e*Sn		**Sn**	**10 29 38.3**	**-13**
SNAA	**Sanae**	**16.27**	**144**	*e*P		**Pn**	**10 26 53.9**	**-0.8**
SNAA	**Sanae** 19nm,1.1s	**16.27**	**144**	*e*Pn		**Pn**	**10 26 53.5**	**-1.2**
SNAA				*e*Sn		**Sn**	**10 29 44.1**	**-11**
QSPA	**South Pole Qui** 1.5nm,0.4s,mb4.1,baz=181,slow=2.8,SNR=7.6	**29.27**	**180**	P		**P**	**10 29 08.7**	**+0.5**
QSPA				LR	LR		10 39 55.2	
	comp=Z,154nm,19.4s,MS3.6,baz=266,slow=34							
PLCA	**Paso Flores** 3.3nm,1.1s,mb4.0,baz=192,slow=6.9,SNR=3.2	**30.03**	**296**	P		**P**	**10 29 08.2**	**-7.1**
PLCA				LR	LR		10 41 58.6	
	comp=Z,156nm,18.7s,MS3.7,baz=286,slow=38							
SIV	**San Ignacio** 1.3nm,0.6s,mb4.1,baz=154,slow=12,SNR=6.0	**48.90**	**325**	P		**P**	**10 31 49.4**	**-3.0**
BOSA	**Boshof** 11nm,0.6s,mb5.0	**50.63**	**78**	*e*P		**P**	**10 32 00.1**	**-5.4**
LBTB	**Lobatse** 8.1nm,0.5s,mb4.9,baz=241,slow=10,SNR=3.8	**53.83**	**76**	P		**P**	**10 32 29.5**	**+0.2**
LSZ	**Lusaka** 39nm,1.9s,mb5.2	**63.43**	**73**	*e*P		**P**	**10 33 37.1**	**+0.9**
LIC	**Lamto** 32nm,0.8s,mb5.3	**70.74**	**31**	*e*P		**P**	**10 34 22.3**	**-0.3**
KIC	**Kosan Boka** 60nm,1.0s,mb5.5	**70.95**	**31**	*e*P		**P**	**10 34 23.7**	**-0.1**
TIC	**Toumodi** 48nm,0.9s,mb5.4	**71.15**	**31**	*e*P		**P**	**10 34 24.7**	**-0.4**
DBIC	**Dimbokro**	**71.22**	**31**	P		**P**	**10 34 25.7**	**+0.3**

8.9nm,0.8s,mb4.7,baz=165,slow=5.2,SNR=10
TOA0 Torodi Ar. Sit 79.16 35 *e*P **P 10 35 11.2 0.0**
TORD Torodi Ar. Bea 79.16 35 P **P 10 35 11.6 +0.4**
6.4nm,0.8s,mb4.6,baz=198,slow=6.6,SNR=28
ASAR Alice Springs 95.12 169 P **P 10 36 29.9 +0.2**
0.8nm,0.7s,mb4.2,baz=182,slow=3.8,SNR=12
WRA Warramunga Arr 98.85 169 P **P 10 36 46.0 -0.6**
0.3nm,0.7s,mb4.0,baz=193,slow=4.2,SNR=4.6

*THE **28** 10:29:28.2, 3651N×2562E, h0km±1km, Error ellipse: s-maj=2.6km s-min=0.7km az=117.0*
*NEIC **28** 10:29:28.3, 3646N×2552E, h5km, ML3.2(ATH), After ATH.*
*ATH **28** 10:29:28.3, 3646N×2552E, h5km, MD3.2/8, ML3.2*
*CSEM **28** 10:29:28.5±0.1, 3649N×2552E, h12km, ML3.2, Error ellipse: s-maj=3.0km s-min=2.4km az=95.0*
*ISCJB **28** 10:29:29.3±0.7, 3650N±004×2558E±006, h10km±4km, Error ellipse: s-maj=8.1km s-min=5.4km az=25.8*

ISC 28 10:29:29.3±0.7, 3649N±004×2561E±006, h9km±4km, n21, σ1§02/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THR1	**Thera Island**	**0.17**	**224**	P		**Pg**	**10 29 33.0**	**+0.1**
THR1				S		**Sg**	**10 29 35.8**	**+0.4**
THR4	**Thira Island,**	**0.17**	**259**	P		**Pg**	**10 29 32.0**	**-1.0**
THR3	**Thira Island,**	**0.19**	**243**	P		**Pg**	**10 29 32.7**	**-0.5**
THR6	**Thira Island,**	**0.22**	**231**	P		**Pg**	**10 29 33.7**	**0.0**
THR6				S		**Sg**	**10 29 37.1**	**+0.4**
THR5	**Thira Island,**	**0.22**	**250**	P		**Pg**	**10 29 32.9**	**-0.9**
THR5				S		**Sg**	**10 29 37.9**	**+1.0**
APE	**Apeiranthos**	**0.58**	**354**	P		**Pg**	**10 29 39.4**	**-1.1**
APE				S		**Sg**	**10 29 48.9**	**+0.8**
APE	**Apeiranthos**	**0.58**	**354**	*e*PG		**Pg**	**10 29 39.7**	**-0.8**
APE				*e*SB		**Sb**	**10 29 49.1**	**-0.8**
APE	**Apeiranthos**	**0.58**	**354**	*e*Pg		**Pg**	**10 29 39.7**	**-0.8**
APE				*e*Sb		**Sb**	**10 29 49.1**	**-0.8**
SMG	**Samos**	**1.56**	**39**	*e*PB		**Pb**	**10 30 00.0**	**+1.7**
KARP	**Karpathos**	**1.57**	**126**	*e*PB		**Pb**	**10 29 58.8**	**+0.3**
VAM	**Vamos**	**1.57**	**227**	*e*PB		**Pn**	**10 29 57.0**	**-0.4**
CHOS	**Chios island**	**1.92**	**11**	P		**Pn**	**10 30 01.2**	**-1.0**
CHOS				S		**Sn**	**10 30 26.3**	**-0.2**
PTL	**Penteli**	**2.08**	**319**	*e*PG		**Pn**	**10 30 06.5**	**+2.1**
PTL	**Penteli**	**2.08**	**319**	*e*Pg		**Pn**	**10 30 07.5**	**+3.1**
KYTH	**Kithira**	**2.09**	**265**	*e*PG		**Pn**	**10 30 05.0**	**+0.6**
ATH	**Athens Observa**	**2.11**	**315**	*e*PG		**Pn**	**10 30 07.3**	**+2.5**
DID	**Didima**	**2.15**	**299**	P		**Pn**	**10 30 03.5**	**-1.8**
DID				S		**Sn**	**10 30 32.4**	**+0.3**
VLI	**Veliai**	**2.16**	**277**	*e*Pb		**Pn**	**10 30 04.5**	**-0.9**
VLI	**Veliai**	**2.16**	**277**	*e*PN		**Pn**	**10 30 06.5**	**+1.1**
LKR	**Lokris**	**2.99**	**317**	P		**Pn**	**10 30 15.4**	**-1.4**
LKR				S		**Sn**	**10 30 53.6**	**+0.8**
PYL	**PYLOS**	**3.13**	**279**	P		**Pn**	**10 30 18.0**	**-0.8**

*NEIC **28** 10:32:46.0±1.0, 1305N×8983W, h35km, mb4.3/4, MD4.3(SNET), Error ellipse: s-maj=21.5km s-min=11.6km az=202.0*
NEIC Felt [III] at San Salvador.
*IDC **28** 10:32:48.7±2.8, 1364N×8917W, h41km±24km, mb3.5/4, mb1 3.9/6, mb1mx3.7/20, mbtmp3.6/6, ML3.8/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/30, Error ellipse: s-maj=65.9km s-min=19.0km az=44.0*
*ISCJB **28** 10:32:49.3±0.5, 1334N±008×8968W±006, h62km±7km, mb4.0/7, Error ellipse: s-maj=16.8km s-min=3.9km az=34.1*
*CASC **28** 10:32:50.0±1.8, 1333N×8969W, h54km±11km, MD4.3, ML3.9, mb4.3(NEIC)*

ISC 28 10:32:50.6±0.4, 1337N±008×8968W±006, h56km±8km, n70, σ1§24/56, mb4.0/7, MS3.5/2, 14C-14D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SONS		**0.37**	**355**	⇓*e*P		x	10 32 59.9	
SONS				*e*S		x	10 33 08.1	
SONS				*i*			10 33 11.5	
SONS				AML		x	10 33 11.6	
	comp=Z,12μm,0.4s							
SBLS	**San Blas**	**0.47**	**7**	⇓*i*P		x	10 33 01.9	
SNJE	**San Jose**	**0.50**	**9**	⇓*i*P		x	10 33 02.2	
RTR	**El Retiro**	**0.53**	**4**	⇓*i*P		x	10 33 02.7	
BOQS	**Boqueron**	**0.54**	**47**	⇑*e*P		x	10 33 02.6	
SNET	**Serv Nac Est T**	**0.54**	**54**	⇓*e*P		x	10 33 02.2	
SNET				*e*S		x	10 33 12.3	
SNET				*i*			10 33 14.7	
	comp=Z,14μm,0.4s							
LFRS	**El Faro**	**0.66**	**67**	⇓*i*P		x	10 33 03.7	
LFU	**La Fuente**	**0.67**	**56**	⇑*e*P		x	10 33 04.5	
LBRS	**Las Brisas**	**0.72**	**59**	⇓*i*P		x	10 33 05.1	
RBDL	**Robledal**	**0.74**	**360**	⇓*i*P		x	10 33 05.7	
SNVI	**San Vicente**	**0.86**	**73**	⇓*e*P		x	10 33 06.4	
SNVI				*e*S		x	10 33 20.1	
MTO2	**Montecristo 2**	**1.07**	**17**	⇑*e*P		x	10 33 10.1	
MTO2				*e*S		x	10 33 25.9	
PCO	**Pacaya**	**1.36**	**319**	⇓*e*P		**Pn**	**10 33 14.2**	**+0.9**
VSM	**San Miguel**	**1.37**	**87**	⇑*e*P		x	10 33 13.4	
BLLM	**Bellamira**	**1.41**	**87**	⇑*e*P		x	10 33 13.8	
CAHU	**Cacacuatique**	**1.49**	**74**	⇓*e*P		x	10 33 15.1	
FUG	**Fuego 3**	**1.55**	**314**	⇑*e*P		**Pn**	**10 33 16.5**	**+0.5**
FG6		**1.66**	**316**	⇑*e*P		**Pn**	**10 33 18.2**	**+0.8**
FG6				*e*S		**Sn**	**10 33 38.2**	**+0.6**
CNCH	**Conchagua**	**1.80**	**93**	⇓*e*P		x	10 33 18.9	
CNCH				*e*S		x	10 33 42.7	
JAT	**Jato**	**2.12**	**297**	⇑*e*P		**Pn**	**10 33 23.4**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.44**	**73**	*e*Pn		**Pn**	**10 33 27.8**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.44**	**73**	*e*P		**Pn**	**10 33 27.9**	**-0.1**
TGUH				⇓*e*P			10 33 28.0	
CRIN	**San Cristobal**	**2.65**	**104**	*e*P		**Pn**	**10 33 30.0**	**-1.0**
TEL3	**Telica 3**	**2.88**	**106**	⇑*e*P		**Pn**	**10 33 32.6**	**-1.4**
CNGN	**Cerro Negro**	**3.04**	**106**	⇑*e*P		**Pn**	**10 33 34.7**	**-1.5**
MIRN	**Miramar**	**3.04**	**107**	⇑*e*P		**Pn**	**10 33 34.6**	**-1.7**
MOMN	**Momotombo**	**3.21**	**107**	*e*P		**Pn**	**10 33 37.4**	**-1.3**
COPN	**Copaltepe**	**3.24**	**111**	*e*P		**Pn**	**10 33 37.6**	**-1.4**
CSAN		**3.39**	**110**	⇑*e*P		**Pn**	**10 33 41.2**	**+0.1**
APYN	**Apoyeque**	**3.44**	**109**	*e*P		**Pn**	**10 33 40.2**	**-1.5**
XAVN	**Gruta Xavier**	**3.49**	**110**	*e*P		**Pn**	**10 33 41.8**	**-0.7**
TISN	**Laguna Tiscapa**	**3.55**	**110**	⇑*e*P		**Pn**	**10 33 43.0**	**-0.2**
MGAN	**Managua**	**3.57**	**110**	*e*P		**Pn**	**10 33 43.2**	**-0.3**
MGAN				AML		AML	10 34 23.6	
	comp=E,68nm,0.5s							
MGAN				*e*S		**Sn**	**10 34 24.8**	**+0.4**
HUEN		**3.58**	**106**	⇑*e*P		**Pn**	**10 33 42.0**	**-1.6**
CRUN	**El Crucero**	**3.58**	**112**	*e*P		**Pn**	**10 33 43.6**	**0.0**
TICN	**Ticuantepe**	**3.62**	**111**	*e*P		**Pn**	**10 33 44.7**	**+0.5**
APON	**Apoyo**	**3.81**	**112**	*e*P		**Pn**	**10 33 46.5**	**-0.4**
LIM1	**Limonal**	**5.08**	**121**	*e*P		**Pn**	**10 34 04.8**	**+0.6**
VCR	**Vista de Mar**	**5.11**	**129**	*e*P		**Pn**	**10 34 04.7**	**0.0**
CUI	**Cuipilapa**	**5.16**	**121**	*e*P		**Pn**	**10 34 06.2**	**+0.8**
JCR	**Jicaral**	**5.68**	**128**	*e*P		**Pn**	**10 34 15.0**	**+0.5**
CGA2	**Cerro Gallo 2**	**6.10**	**123**	*e*P		**Pn**	**10 34 20.1**	**+1.8**
CMIG	**Matias Romero**	**6.24**	**307**	P		**Pn**	**10 34 20.4**	**+0.4**
	comp=E,2.0nm,0.3s,baz=133,slow=12,SNR=24							
CMIG				S		**Sn**	**10 35 29.9**	**-0.1**
	comp=E,3.6nm,0.3s,baz=112,slow=16,SNR=4.0							
CMIG	**Matias Romero**	**6.24**	**307**	*i* P		**Pn**	**10 34 19.9**	**-0.2**
CMIG				*i* S		**Sn**	**10 35 24.0**	**-6.0**
PRS1	**Puriscal**	**6.25**	**122**	*e*P		**Pn**	**10 34 21.8**	**+1.6**
QCR	**Quepos**	**6.68**	**125**	*e*P		**Pn**	**10 34 27.1**	**+0.9**
URSC	**Urasca**	**6.77**	**121**	*e*P		**Pn**	**10 34 28.6**	**+1.3**
BUS	**Buena Vista**	**6.94**	**123**	*e*P		**Pn**	**10 34 32.3**	**+2.6**
BAR1		**7.47**	**123**	*e*P		**Pn**	**10 34 39.4**	**+2.3**
VHO	**Vista Hermosa**	**7.74**	**299**	*e*P		**Pn**	**10 34 37.8**	**-2.8**
VHO				*i* S		**Sn**	**10 36 05.3**	**-1.6**
ACR	**Cerro Adams**	**7.93**	**126**	*e*P		**Pn**	**10 34 44.6**	**+1.3**
PPM	**Popocatepetl**	**10.29**	**305**	*i* P		**Pn**	**10 35 19.4**	**+3.9**
PPM				*i* S		**Sn**	**10 37 10.8**	**+1.4**
CAIG	**El Cayaco**	**10.85**	**291**	*e*P		**Pn**	**10 35 17.9**	**-5.3**
CAIG				*i* S		**Sn**	**10 37 21.0**	**-2.2**
CHI2		**17.96**	**117**	⇓*e*P		Px	10 33 29.8	
SDV	**Santo Domingo**	**19.21**	**101**	P		**Pn**	**10 37 06.2**	**-5.4**
	comp=E,0.2nm,0.3s,baz=293,slow=15,SNR=3.1							
TXAR	**Lajitas Array**	**20.51**	**323**	P		**P**	**10 37 25.9**	**+1.8**
	comp=E,1.4nm,0.4s,baz=146,slow=11,SNR=43							
TXAR				ScP		ScP	10 45 07.3	+1.4
	comp=E,0.5nm,0.9s,baz=148,slow=5.4,SNR=3.6							
TXAR	**Lajitas Array**	**20.51**	**323**	P		**P**	**10 37 25.9**	**+1.8**
TXAR				ScP		ScP	10 45 07.3	+1.4
OXF	**Oxford**	**21.05**	**1**	*e*P		**P**	**10 37 31.3**	**+1.4**
	comp=E,28nm,1.0s,mb4.5							
OXF				*ep*P			10 37 42.0	
MIAR	**Mount Ida**	**21.38**	**351**	*e*P		**P**	**10 37 37.1**	**+3.7**
	comp=E,2.8nm,0.6s,mb3.8							
SWET	**Sewanee**	**22.02**	**8**	*e*P		**P**	**10 37 40.6**	**+0.3**
WMOK	**Wichita Mounta**	**22.81**	**340**	*e*P		**P**	**10 37 47.3**	**-1.5**
	comp=E,2.8nm,0.6s,mb3.9							
WMOK				*ep*P			10 38 00.7	
TKL	**Tuckaleechee C**	**22.82**	**12**	LR		LR	10 46 49.9	
	comp=E,157nm,18.6s,MS3.5,baz=254,slow=38							
SIUC	**Southern Illin**	**24.25**	**1**	*e*P		**P**	**10 38 03.2**	**+0.9**
	comp=E,16nm,0.8s,mb4.5							
NVAR	**Mina Array Bea**	**35.59**	**320**	P		**P**	**10 39 43.6**	**+0.9**
	comp=E,0.8nm,0.7s,mb3.8,baz=142,slow=7.8,SNR=4.8							
ULM	**Lac du Bonnet**	**37.12**	**353**	LR		LR	10 58 17.2	
	comp=E,89nm,18.8s,MS3.6,baz=262,slow=41							
SIV	**San Ignacio**	**40.64**	**135**	P		**P**	**10 40 23.3**	**-2.1**
	comp=E,1.2nm,0.6s,mb3.7,baz=321,slow=7.3,SNR=9.9							
YKA	**Yellowknife Ar**	**52.17**	**346**	P		**P**	**10 41 53.3**	**-2.0**
	comp=E,0.5nm,0.4s,mb3.8,baz=130,slow=7.8,SNR=7.6							
YKA	**Yellowknife Ar**	**52.17**	**346**	P		**P**	**10 41 53.3**	**-2.0**
WRA	**Warramunga Arr**	**137.41**	**255**	PKP		PKPdf	10 52 10.2	+1.4
	comp=E,0.3nm,0.9s,baz=21,slow=0.9,SNR=5.7							
CMAR	**Chiang Mai Arr**	**147.25**	**345**	PKPbc		PKPbc	10 52 27.2	-1.4
	comp=E,0.5nm,0.3s,baz=344,slow=4.0,SNR=5.1							

*LDG **28** 10:38:26.2±0.1, 4163N×8163E, h10km, Mb4.9/12, Error ellipse: s-maj=5.5km s-min=4.9km az=89.0*
*IDC **28** 10:38:27.3±0.6, 4177N×8177E, h0km, mb4.4/14, mb1 4.4/20, mb1mx4.3/27, mbtmp4.3/20, ML3.9/6, Error ellipse: s-maj=15.7km s-min=10.1km az=68.0*
*ISCJB **28** 10:38:28.3±1.0, 4172N±002×8180E±004, h20km±8km, mb4.6/40, Error ellipse: s-maj=5.2km s-min=3.9km az=167.0*
*MOS **28** 10:38:29.7±1.1, 4179N×8175E, h29km, mb4.8/28, Error ellipse: s-maj=8.7km s-min=5.5km az=117.6*
*BJI **28** 10:38:30.4, 4173N×8183E, h28km, mB4.6, mb4.4, ML4.5, Ms4.2, Msz3.9*
*NEIC **28** 10:38:31.4±1.2, 4177N×8179E, h28km±9km, mb4.7/20, Error ellipse: s-maj=5.6km s-min=4.0km az=65.0*
*NNC **28** 10:38:34.1±7.2, 4209N×8147E, h6km±33km, mb4.7, mpv4.5, Error ellipse: s-maj=43.7km s-min=12.0km az=143.0*

ISC 28 10:38:29.4±1.0, 4173N±002×8174E±004, h13km±6km, n178, σ1§24/206, mb4.6/39, 14C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.84**	**294**	⇑Pn		**Pn**	**10 39 30.8**	**+2.7**
	389nm,0.5s							
KNDC				⇑Lg			10 40 26.0	
	3μm,1.0s							
AAA	**Alma-Ata**	**3.87**	**295**	*e*PN		**Pn**	**10 39 35.4**	**+6.8**
AAA				*i* S		**Sg**	**10 40 26.7**	**-6.9**
AAA				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AAA				smax				
	comp=E,1.0nm,0.3s							
ULHL	**Ulahol**	**4.13**	**279**	P		**Pn**	**10 39 33.8**	**+1.6**
	SNR=57							
TKM2	**Tokmak 2**	**4.71**	**287**	⇓Pn		**Pn**	**10 39 42.1**	**+2.0**
	comp=E,113nm,0.5s							
TKM2				⇑Lg			10 40 54.1	
	comp=E,1μm,0.9s							
TKM2	**Tokmak 2**	**4.71**	**287**	*e*Pn		**Pn**	**10 39 41.9**	**+1.8**
TKM2				*e*Sg		**Sg**	**10 40 57.1**	**-3.5**
TKM2	**Tokmak 2**	**4.71**	**287**	P		**Pn**	**10 39 42.2**	**+2.1**
	SNR=132							
WMQ	**Urumqi**	**4.86**	**62**	*e*P		**Pn**	**10 39 45.8**	**+3.7**
WMQ				S		**Sn**	**10 40 43.8**	**+5.6**
WMQ				Smax				
	comp=N,358nm,0.5s							
WMQ				Smax				
	comp=E,576nm,0.5s							
KZA	**Kyzart**	**4.86**	**276**	P		**Pn**	**10 39 44.8**	**+2.7**
	SNR=7.2							
KSH	**Kashi**	**4.91**	**245**	⇓*i*P		**Pn**	**10 39 47.3**	**+4.4**
KSH				S		**Sn**	**10 40 45.0**	**+5.4**
KSH				Smax				
	comp=N,79nm,0.8s							
KSH				Smax				
	comp=E,125nm,1.0s							
MK31	**Makanchi Array**	**5.08**	**4**	Pn		**Pn**	**10 39 46.6**	**+1.4**
	comp=E,67nm,0.7s,baz=187,slow=13,SNR=473							
MK31				⇑Lg			10 41 04.2	
	comp=E,182nm,0.6s,baz=188,slow=32,SNR=6.7							
MK31	**Makanchi Array**	**5.08**	**4**	*e*Pn		**Pn**	**10 39 46.6**	**+1.4**
MK31				*e*S		**Sg**	**10 41 03.4**	**-9.1**
MK31	**Makanchi Array**	**5.08**	**4**	*i* PN		**Pn**	**10 39 46.6**	**+1.4**
MK31				pmax	pmax			
	comp=Z,12nm,0.2s							
MKAR	**Makanchi Array**	**5.08**	**4**	Pn		**Pn**	**10 39 46.6**	**+1.4**
	comp=E,6.6nm,0.3s,baz=192,slow=13,SNR=115							
MKAR				Sn		**Sn**	**10 40 44.8**	**+1.0**
	comp=Z,18nm,0.3s,baz=180,slow=19,SNR=5.1							
MKAR				Lg			10 41 06.2	
	comp=Z,48nm,0.3s,baz=188,slow=33,SNR=16							
MKAR	**Makanchi Array**	**5.08**	**4**	PN		**Pn**	**10 39 46.7**	**+1.5**
MKAR							10 40 44.8	
MKAR							10 41 06.2	
MKAR				pmax	pmax			
	comp=Z,7.0nm,0.3s							
MKAR				smax				
	comp=N,18nm,0.3s							
KBK	**Karagaybulak**	**5.13**	**283**	P		**Pn**	**10 39 47.9**	**+2.0**
	SNR=65							
CHMS	**Chumysh**	**5.33**	**286**	P		**Pn**	**10 39 50.3**	**+1.6**
	SNR=5.4							
FRU	**Bishkek**	**5.40**	**284**	*e*PN		**Pn**	**10 39 52.0**	**+2.4**
FRU				*i*			10 40 08.0	
FRU				*e*S		**Sg**	**10 41 15.6**	**-7.1**
FRU				pmax	pmax			
	comp=Z,370nm,1.6s							
FRU				smax				
	comp=E,1μm,1.6s							
UCH	**Uchtor**	**5.41**	**278**	*e*Pn		**Pn**	**10 39 52.9**	**+3.2**
	comp=E,123nm,0.8s							
UCH				*e*S		**Sg**	**10 41 17.4**	**-5.7**
UCH	**Uchtor**	**5.41**	**278**	P		**Pn**	**10 39 53.3**	**+3.5**
	SNR=5.9							
AAK	**Ala-Archa**	**5.46**	**282**	P		**Pn**	**10 39 52.2**	**+1.8**
	SNR=39							
USP	**Ospenovka**	**5.57**	**288**	P		**Pn**	**10 39 53.1**	**+1.1**
	SNR=32							
EKS2	**Erkin-Say**	**5.99**	**282**	*e*Pn		**Pn**	**10 39 59.4**	**+1.7**
	comp=E,103nm,0.6s							
EKS2				*e*Pg		**Pg**	**10 40 19.9**	**-4.2**
EKS2				*e*S		**Sg**	**10 41 36.7**	**-4.9**
AML	**Almayashu**	**6.02**	**277**	*e*Pn		**Pn**	**10 40 00.5**	**+2.5**
	comp=E,207nm,0.6s							
AML				*e*Pg		**Pg**	**10 40 21.6**	**-3.0**
AML				*e*Sg		**Sg**	**10 41 36.2**	**-6.2**
AML	**Almayashu**	**6.02**	**277**	P		**Pg**	**10 40 22.3**	**-2.3**
	SNR=12							
KK31	**Karatay Array**	**8.43**	**283**	⇑Pn		**Pn**	**10 40 31.3**	**+0.2**
	comp=E,2.1nm,0.6s,baz=97,slow=12,SNR=30							
KK31				⇑Pg		Pn	10 41 02.0	+31
	comp=E,15nm,0.6s,baz=89,slow=14,SNR=7.3							
KK31				⇓Lg			10 42 52.5	
	comp=E,52nm,0.6s,baz=105,slow=25,SNR=4.8							
KK31	**Karatay Array**	**8.43**	**283**	*i* P		**Pn**	**10 40 31.3**	**+0.2**
KK31				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KURBB	**Kurchatov Arra**	**9.17**	**347**	⇑Pn		**Pn**	**10 40 41.4**	**+0.1**
	comp=Z,4.4nm,0.7s							
KURBB				⇑Lg			10 43 13.7	
	comp=Z,27nm,0.8s							
KURK	**Kurchatov**	**9.25**	**348**	⇑Pn		**Pn**	**10 40 42.1**	**-0.2**
	comp=Z,22nm,0.6s							
KURK				⇓Lg			10 43 15.3	
	comp=Z,154nm,0.8s							
KURK	**Kurchatov**	**9.25**	**348**	Pn		**Pn**	**10 40 42.2**	**-0.2**
	comp=E,0.3nm,0.3s,baz=172,slow=12,SNR=12							
KURK				Sn		**Sn**	**10 42 22.4**	**-3.8**
	comp=Z,1.3nm,0.3s,baz=160,slow=24,SNR=6.7							
KURK				Lg			10 43 14.0	
	comp=Z,1.3nm,0.3s,baz=313,slow=31,SNR=3.7							
KURK	**Kurchatov**	**9.25**	**348**	*e*Pn		**Pn**	**10 40 44.0**	**+1.7**
KURK				Sn		**Sn**	**10 42 22.4**	**-3.8**
KURK				Lg			10 43 14.0	
KURK	**Kurchatov**	**9.25**	**348**	*e*P		**Pn**	**10 40 44.0**	**+1.6**
KURK							10 42 22.4	
THN	**Thein Dam**	**10.45**	**209**	*e*P		**Pn**	**10 40 58.1**	**-0.7**

THN				*e*S		**Sn**	**10 42 52.5**	**-3.2**
CHCP	**Chirah Chowk**	**10.48**	**223**	P		**Pn**	**10 41 02.3**	**+3.0**
NIL	**Nilore**	**10.49**	**223**	*e*Pn		**Pn**	**10 41 01.2**	**+1.8**
	comp=Z,112nm,0.6s							
NIL				*e*Sn		**Sn**	**10 42 56.4**	**-0.5**
NIL	**Nilore**	**10.49**	**223**	*e*P		**Pn**	**10 41 01.3**	**+1.8**
NIL				*e*			10 42 56.4	
NIL				pmax	pmax			
	comp=Z,112nm,0.6s							
SDNR	**Sundarnagar**	**10.90**	**202**	*e*P		**Pn**	**10 41 07.6**	**+2.6**
SDNR				*e*S		**Sn**	**10 43 04.6**	**-2.2**
CEP	**Cherat**	**11.07**	**228**	P		**Pn**	**10 41 08.8**	**+1.4**
CEP				S		**Sn**	**10 43 09.0**	**-2.1**
SMLA	**Simla**	**11.20**	**201**	*e*P		**Pn**	**10 41 08.9**	**-0.2**
SMLA				*e*S		**Sn**	**10 43 07.6**	**-6.6**
SMLA				*ex*	x		10 43 14.3	
	comp=E,725nm,0.3s							
SMLA				*ex*	x		10 43 15.7	
	comp=N,955nm,0.3s							
JOSI	**Joshimath**	**11.28**	**190**	*e*P		**Pn**	**10 41 09.1**	**-1.2**
JOSI				*e*S		**Sn**	**10 43 07.5**	**-8.8**
JOSI				AML	AML		10 43 23.3	
	comp=N,80nm,0.7s							
JOSI				AML	AML		10 43 24.6	
	comp=E,63nm,0.5s							
DDI	**Dehra Dun**	**11.76**	**196**	*e*P		**Pn**	**10 41 16.5**	**-0.3**
DDI				*ex*	x		10 41 18.5	
KBL	**Kabul**	**12.30**	**238**	*e*Pn		**Pn**	**10 41 25.3**	**+1.1**
	comp=E,16nm,0.6s							
KBL	**Kabul**	**12.30**	**238**	*e*P		**Pn**	**10 41 25.3**	**+1.1**
KBL				pmax	pmax			
	comp=Z,16nm,0.6s							
ZAA0	**Zalesovo Array**	**12.40**	**8**	*e*Pn		**Pn**	**10 41 23.3**	**-2.2**
ZALV	**Zalesovo Beam**	**12.40**	**8**	Pn		**Pn**	**10 41 23.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=190,slow=12,SNR=11							
ZALV				Sn		**Sn**	**10 43 43.5**	**0.0**
	comp=Z,1.1nm,0.3s,baz=192,slow=19,SNR=3.5							
ZALV				Lg			10 44 59.5	
	comp=Z,0.4nm,0.3s,baz=181,slow=25,SNR=4.2							
KALG	**Kalgarh**	**12.43**	**192**	*e*P		**Pn**	**10 41 18.5**	**-7.5**
KALG				*e*S		**Sn**	**10 43 29.6**	**-15**
KALG				AML	AML		10 43 39.5	
	comp=E,49nm,0.3s							
NVS	**Novosibirsk**	**13.16**	**4**	*e*P		**Pn**	**10 41 37.7**	**+1.9**
NVS				*e*S		**Sn**	**10 43 58.9**	**-3.1**
DANN	**Dangsing**	**13.45**	**172**	*e*P		**Pn**	**10 41 40.5**	**+0.6**
	comp=E,26nm,0.6s							
NDI	**New Delhi**	**13.52**	**197**	*e*P		**Pn**	**10 41 39.0**	**-1.9**
NDI				*ex*	x		10 44 03.5	
BVA0	**Borovoye Array**	**13.65**	**330**	P		**Pn**	**10 41 42.9**	**+0.3**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.5s							
BVAR	**Borovoye Array**	**13.65**	**330**	Pn		**Pn**	**10 41 40.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=124,slow=13,SNR=10							
BVAR				Sn		**Sn**	**10 44 08.3**	**-5.7**
	comp=Z,0.8nm,0.3s,baz=131,slow=19,SNR=3.5							
BVAR				Lg			10 45 36.7	
	comp=Z,1.1nm,0.3s,baz=147,slow=31,SNR=5.3							
BVAR	**Borovoye Array**	**13.65**	**330**	P		**Pn**	**10 41 40.9**	**-1.7**
BVAR							10 44 08.3	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVAR				smax				
	comp=N,1.0nm,0.3s							
BRVK	**Borovoye**	**13.72**	**330**	*e*Pn		**Pn**	**10 41 42.4**	**-1.0**
	comp=N,14nm,0.8s							
BRVK	**Borovoye**	**13.72**	**330**	*e*P		**Pn**	**10 41 42.4**	**-1.1**
BRVK				pmax	pmax			
	comp=Z,14nm,0.8s							
AYAN	**Aya Nagar**	**13.74**	**197**	*e*P		**Pn**	**10 41 44.1**	**+0.2**
AYAN				*ex*	x		10 44 06.5	
SONA	**Sohna**	**13.97**	**197**	*e*P		**Pn**	**10 41 45.4**	**-1.6**
SONA				*ex*	x		10 44 14.8	
SONA				AML	AML		10 44 48.8	
	comp=N,20nm,0.4s							
SONA				AML	AML		10 44 49.5	
	comp=E,29nm,0.4s							
KOLN	**Koldanda**	**14.01**	**173**	*e*P		**Pn**	**10 41 47.3**	**-0.2**
	comp=E,25nm,0.6s							
GUN	**Gumba**	**14.19**	**165**	*e*P		**Pn**	**10 41 52.4**	**+2.4**
KHET	**Khetri**	**14.46**	**201**	*e*P		**Pn**	**10 41 52.1**	**-1.5**
KHET				*ex*	x		10 44 23.5	
KHET				A

comp=Z,24nm,0.7s,mb5.1
OBN Obninsk 32.23 310⇓ *e*P P **10 44 56.9 -0.2**
OBN *e* 10 46 04.4
OBN *e*S S **10 49 57.5 -12**
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
KSRS Korea Array 35.51 81 P P **10 45 24.7 -1.2**
comp=Z,1.1nm,0.6s,mb4.0,baz=284,slow=7.0,SNR=3.4
KSRS Korea Array 35.51 81 P P **10 45 24.7 -1.1**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
BRTR Keskin Array B 36.14 283 P P **10 45 32.1 +1.0**
comp=Z,5.6nm,0.7s,mb4.6,baz=101,slow=9.1,SNR=24
BRTR Keskin Array B 36.14 283 P P **10 45 32.2 +1.0**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 36.74 302 P P **10 45 35.6 -0.5**
comp=Z,4.9nm,0.6s,mb4.5,baz=69,slow=8.9,SNR=11
AKASG Malin Array Be 36.74 302 P P **10 45 35.7 -0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
HABR Khabarovsk 37.57 61 *e*P P **10 45 41.8 -1.5**
HABR *e*SP 10 45 55.3
HABR *e* 10 47 07.4
HABR *e* 10 47 58.1
HABR *e*SS SS 10 54 09.5 -7.2
HABR *e* 10 55 51.9
TIXI Tiksi 37.79 22⇑ *e*P P **10 45 42.3 -2.5**
TIXI pmax pmax
comp=Z,14nm,2.4s,mb4.3
VRI Vrincioaia 39.27 295⇑ *i*P P **10 45 59.2 +1.7**
PLOR Plostina 39.32 295⇓ *i*P P **10 45 58.8 +0.8**
BURAR Bucovina Array 39.86 298 *i*P P **10 46 03.0 +0.5**
BUR08 Bucovina Ar. S 39.87 298 *e*P P **10 46 02.6 +0.1**
MLR Muntele Rosu 39.89 295⇓ *i*P P **10 46 04.1 +1.3**
ARCES ARCESS Array B 39.91 333 P P **10 46 02.5 -0.2**
comp=Z,2.6nm,0.6s,mb4.2,baz=97,slow=9.9,SNR=14
ARCES PcP PcP 10 48 07.7 -0.2
comp=Z,6.2nm,1.0s,baz=111,slow=4.9,SNR=3.6
ARCES ARCESS Array B 39.91 333 P P **10 46 02.5 -0.1**
ARCES 10 48 07.7
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES pmax pmax
comp=Z,6.0nm,1.0s
VOIR 40.51 295⇑ *i*P P **10 46 08.7 +0.8**
KWP Kalwaria 41.05 302⇑ *i*P P **10 46 14.0 +1.7**
STHS Stebnicka Huta 42.02 302 *e*P P **10 46 19.8 -0.5**
STHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.1
OJC Ojcow 42.75 303 *e*P P **10 46 26.4 +0.2**
BZS Buzias 42.78 296⇓ *i*P P **10 46 27.6 +1.1**
PKSM Moragy 44.58 298⇓ *i*P P **10 46 41.1 +0.1**
DPC Dobruska-Polom 44.88 304 *e*P P **10 46 44.0 +0.7**
UPC Upice 45.03 305 *e*P P **10 46 44.9 +0.4**
NB2 NORSAR Subarra 45.52 320 P P **10 46 47.3 -0.9**
comp=Z,6.8nm,0.5s,mb4.8,baz=81,slow=7.9
NOA NORSAR Array B 45.52 320 P P **10 46 47.7 -0.5**
comp=Z,6.4nm,0.5s,mb4.8,baz=82,slow=8.0,SNR=26
NOA NORSAR Array B 45.52 320 P P **10 46 47.7 -0.5**
NOA pmax pmax
comp=Z,6.0nm,0.5s
NAO01 NORSAR Array S 45.71 320 *e*P P **10 46 48.7 -1.0**
comp=Z,4.4nm,0.4s,mb4.7
PRU Pruhonice 46.08 304 *e*P P **10 46 57.4 +4.6**
CLL Collm 46.64 306 *i* P P **10 46 56.8 -0.4**
CLL *i* *PP pP 10 47 05.8 +4.6
CLL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CLL Collm 46.64 306 *i* P P **10 46 56.8 -0.4**
comp=Z,7.0nm,0.6s,mb4.8
CLL LH 10 28 00.0
comp=Z,100nm,20.8s
CLL *i* pP pP 10 47 05.8 +4.6
KHC Kasperske Hory 46.94 303 *e*P P **10 47 00.6 +1.1**
GERES GERESS Array B 46.95 303 P P **10 46 59.6 0.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=64,slow=8.0,SNR=12
GERES GERESS Array B 46.95 303 P P **10 46 59.6 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GRF Grafenberg Arr 48.22 305 *e*P P **10 47 10.1 +0.6**
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
GRF Grafenberg Arr 48.22 305 *e*P P **10 47 10.1 +0.6**
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
GRF Grafenberg Arr 48.22 305 *e*P P **10 47 10.1 +0.6**
comp=Z,6.0nm,0.7s,mb4.7
BFO Black Forest 50.48 304 *e*P P **10 47 30.5 +3.7**
comp=Z,4.6nm,0.4s,mb4.5
BFO Black Forest 50.48 304 *e*P P **10 47 30.5 +3.8**
BFO pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
CDF Champ du Feu 51.10 304 *e*P P **10 47 31.2 -0.2**
HINF Hinteralfeld 51.59 304 *e*P P **10 47 34.8 -0.3**
HAU Haudompre 51.83 304 *e*P P **10 47 36.6 -0.3**
GSPH General Santos 52.23 121 *e*P S **10 54 57.9 -7.1**
GSPH *e*S 10 55 07.4
BAIF Baives 52.33 307 *e*P P **10 47 40.7 +0.1**
MEZF Maizieres J'vi 52.43 305 *e*P P **10 47 41.6 +0.2**
MATI Mati 52.44 119 *e*P S **10 55 05.3 -2.5**
CABF La Chapelle 52.54 303 *e*P P **10 47 41.7 -0.5**
comp=Z,10.0nm,0.8s,mb4.5
CABF La Chapelle 52.54 303 *e*P P **10 47 41.7 -0.5**
comp=Z,5.0nm,0.8s,mb4.5
CABF La Chapelle 52.54 303 *e*P P **10 47 41.7 -0.5**
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPG La Plagne 52.58 301 *e*P P **10 47 43.0 +0.5**
comp=Z,21nm,0.7s,mb4.8
LPG La Plagne 52.58 301 *e*P P **10 47 43.0 +0.5**
comp=Z,10nm,0.7s,mb4.9
LPG La Plagne 52.58 301 *e*P P **10 47 43.0 +0.5**
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LPL La Plagne 52.58 301 *e*P P **10 47 43.0 +0.4**
comp=Z,17nm,0.5s,mb4.9
LPL La Plagne 52.58 301 *e*P P **10 47 43.0 +0.4**
comp=Z,8.6nm,0.5s,mb4.9
LPL La Plagne 52.58 301 *e*P P **10 47 43.0 +0.4**
LPL pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
SBF Sospel 52.82 299 *e*P P **10 47 44.2 -0.2**
comp=Z,41nm,0.9s,mb5.1
SBF Sospel 52.82 299 *e*P P **10 47 44.2 -0.2**
comp=Z,21nm,0.9s,mb5.1
SBF Sospel 52.82 299 *e*P P **10 47 44.2 -0.2**
SBF pmax pmax
comp=Z,21nm,0.9s,mb5.1
MBDF Montbardon 52.89 300 *e*P P **10 47 44.1 -0.7**
comp=Z,17nm,0.9s,mb4.7
MBDF Montbardon 52.89 300 *e*P P **10 47 44.1 -0.7**
comp=Z,8.4nm,0.9s,mb4.7
MBDF Montbardon 52.89 300 *e*P P **10 47 44.1 -0.7**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 53.38 301 *e*P P **10 47 47.9 -0.6**
comp=Z,14nm,0.7s,mb4.7
ORIF Oris-en-Rattie 53.38 301 *e*P P **10 47 47.9 -0.6**
comp=Z,7.2nm,0.7s,mb4.7
ORIF Oris-en-Rattie 53.38 301 *e*P P **10 47 47.9 -0.6**
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LOR Lormes 53.66 304 *e*P P **10 47 49.6 -0.9**
SSF Saint Saulge 53.97 304 *e*P P **10 47 52.2 -0.5**
AVF Avril sur Loir 54.18 304 *e*P P **10 47 53.6 -0.7**
comp=Z,15nm,0.9s,mb4.6
AVF Avril sur Loir 54.18 304 *e*P P **10 47 53.6 -0.7**
comp=Z,7.4nm,0.9s,mb4.6
AVF Avril sur Loir 54.18 304 *e*P P **10 47 53.6 -0.7**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 55.11 304 *e*P P **10 48 00.1 -0.9**
comp=Z,8.7nm,0.8s,mb4.5
TCF Toulx Ste Croi 55.11 304 *e*P P **10 48 00.1 -0.9**
comp=Z,4.3nm,0.8s,mb4.5
TCF Toulx Ste Croi 55.11 304 *e*P P **10 48 00.1 -0.9**
TCF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
COLA College 66.90 21 *e*P P **10 49 20.8 0.0**
comp=Z,4.3nm,0.7s,mb4.6
COLA College 66.90 21 *e*P P **10 49 20.8 0.0**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
INK Inuvik 67.15 13 *e*P P **10 49 21.8 -0.6**
comp=Z,33nm,0.4s,mb5.7
TORD Torodi Ar. Bea 73.99 273 P P **10 50 04.1 -0.8**
comp=Z,3.3nm,0.5s,mb4.5,baz=44,slow=5.1,SNR=51
YKA Yellowknife Ar 75.30 8 P P **10 50 11.0 -0.7**
comp=Z,2.3nm,0.6s,mb4.3,baz=340,slow=5.9,SNR=12
YKA Yellowknife Ar 75.30 8 P P **10 50 11.0 -0.7**
YKA Yellowknife Ar 75.30 8 P P **10 50 11.0 -0.7**
YKA pmax pmax
comp=Z,2.0nm,0.6s
WRAB Tennant Creek 78.29 130 *e*P P **10 50 30.0 +0.9**
comp=Z,7.4nm,1.1s,mb4.5
WRAB Tennant Creek 78.29 130 *e*P P **10 50 30.0 +0.9**
WRAB pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
WRA Warramunga Arr 78.29 130 P P **10 50 30.3 +1.2**
comp=Z,3.7nm,0.8s,mb4.4,baz=326,slow=5.4,SNR=30
WRA Warramunga Arr 78.29 130 P P **10 50 30.3 +1.2**
WRA pmax pmax
comp=Z,4.0nm,0.8s
WB2 Warramunga Arr 78.30 130 *e*P P **10 50 30.3 +1.2**
ASAR Alice Springs 81.00 133 P P **10 50 44.9 +1.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=325,slow=5.2,SNR=30
ASAR Alice Springs 81.00 133 P P **10 50 44.9 +1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
DBIC Dimbokro 83.07 273 P P **10 50 54.7 -0.3**
comp=Z,4.3nm,0.7s,mb4.6,baz=32,slow=9.0,SNR=6.8
DBIC Dimbokro 83.07 273 P P **10 50 54.7 -0.3**
DBIC pmax pmax
comp=Z,4.0nm,0.7s
KIC Kosan Boka 83.19 272 *e*P P **10 50 55.1 -0.5**
comp=Z,32nm,0.7s,mb5.5
TIC Toumodi 83.21 273 *e*P P **10 50 55.0 -0.7**
comp=Z,14nm,0.5s,mb5.3
LIC Lamto 83.49 273 *e*P P **10 50 56.8 -0.4**
comp=Z,22nm,0.9s,mb4.9
LIC Lamto 83.49 273 *e*P P **10 50 56.6 -0.6**
comp=Z,38nm,1.1s,mb5.3
LIC Lamto 83.49 273 *e*P P **10 50 56.8 -0.4**
comp=Z,11nm,0.9s,mb4.9
BOSA Boshof 87.28 227 P P **10 51 15.6 -0.1**
comp=Z,2.0nm,0.8s,mb4.4,baz=37,slow=5.1,SNR=2.7
BOSA Boshof 87.28 227 P P **10 51 15.6 0.0**
BOSA pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
NEW Newport 88.86 12 *e*P P **10 51 23.2 +0.1**
comp=Z,8nm,0.8s,mb4.6
NEW Newport 88.86 12 *e*P P **10 51 23.2 +0.2**
NEW pmax pmax
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 95.28 8 P P **10 51 51.8 -1.1**
comp=Z,0.5nm,0.8s,mb4.0,baz=342,slow=3.8,SNR=4.3

NEIC 28 10:44:16.3, 3837S×17567E, h173km, MG4.0(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KATZ	**Kakaramea**	**0.61**	**178**	P		Pn	10 44 40.6	-0.1
HIZ	**Hauiti**	**0.66**	**257**	P		Pn	10 44 41.0	0.0
HIZ				S		Sn	10 44 59.7	-0.2
WTVZ	**West Tongariro**	**0.75**	**185**	P		Pn	10 44 41.5	0.0
WTVZ				S		Sn	10 45 00.6	-0.5
NGZ	**Ngauruhoe**	**0.81**	**184**	P		Pn	10 44 42.1	+0.2
WPVZ	**Whakapapa**	**0.84**	**187**	P		Pn	10 44 42.1	0.0
FWVZ	**Far West T-bar**	**0.89**	**186**	P		Pn	10 44 42.7	+0.3
TUVZ	**Tukino**	**0.90**	**181**	P		Pn	10 44 42.7	+0.2
WNVZ	**Wahianoa**	**0.96**	**183**	P		Pn	10 44 43.2	+0.3
BKZ	**Black Stump Fm**	**1.02**	**141**	P		Pn	10 44 42.9	-0.5
MOVZ	**Moawhango**	**1.04**	**176**	P		Pn	10 44 43.2	-0.3
URZ	**Urewera**	**1.14**	**85**	P		Pn	10 44 44.2	-0.2
MWZ	**Matawai**	**1.46**	**89**	*e*P		Pn	10 44 47.6	+0.4
WAZ	**Wanganui**	**1.48**	**201**	P		Pn	10 44 47.6	+0.2
NEZ	**North Egmont**	**1.52**	**233**	P		Pn	10 44 47.6	-0.2
PKE	**Pukeiti**	**1.55**	**237**	P		Pn	10 44 48.5	+0.4
KNZ	**Kokohu**	**1.70**	**113**	P		Pn	10 44 50.0	+0.4
TSZ	**Takapari Road**	**1.70**	**172**	P		Pn	10 44 49.2	-0.4
PUZ	**Puketiti**	**2.06**	**83**	P		Pn	10 44 53.6	+0.1
MXZ	**Matakaoa Point**	**2.23**	**70**	P		Pn	10 44 56.1	+0.6
MRZ	**Mangatainoka R**	**2.29**	**182**	P		Pn	10 44 54.7	-1.4
BFZ	**Birch Farm**	**2.35**	**169**	P		Pn	10 44 55.7	-1.1
KIW	**Kapiti Island**	**2.56**	**193**	P		Pn	10 44 57.5	-1.7
CAW	**Cannon Point**	**2.77**	**189**	P		Pn	10 44 59.9	-1.9
MTW	**Mount Morrison**	**2.79**	**183**	P		Pn	10 44 59.8	-2.2
MRW	**Makara Radio**	**2.95**	**194**	P		Pn	10 45 01.9	-2.0
WEL	**Wellington**	**2.99**	**193**	P		Pn	10 45 02.3	-2.2
PAWZ	**Paruwai Farm**	**3.02**	**183**	P		Pn	10 45 02.5	-2.2
SNZO	**South Karori**	**3.03**	**194**	P		Pn	10 45 02.6	-2.3
MSWZ	**Moikau Station**	**3.06**	**186**	P		Pn	10 45 03.0	-2.3
BHW	**Baring Head**	**3.10**	**191**	P		Pn	10 45 03.4	-2.3
NNZ	**Nelson**	**3.35**	**211**	P		Pn	10 45 06.4	-2.4
QRZ	**Quartz Range**	**3.45**	**224**	P		Pn	10 45 07.3	-2.8
THZ	**Tophouse**	**4.00**	**211**	P		Pn	10 45 15.3	-1.8
KHZ	**Kahutara**	**4.36**	**201**	P		Pn	10 45 18.8	-2.9
DSZ	**Denniston Nort**	**4.49**	**220**	P		Pn	10 45 20.2	-3.2

*IDC **28** 10:50:35.3±1.0,2198S×17365E,h0km,mb4.0/8, mb1 4.3/8,mb1mx4.2/13,mbtmp4.0/8,MS4.2/24, Ms1 4.2/24,ms1mx4.1/32,Error ellipse: s-maj=35.8km s-min=23.6km az=161.0*
*BJI **28** 10:50:37.7,2230S×17360E,h10km,mB5.5,mb4.8*
*NEIC **28** 10:50:37.8±0.7,2226S×17360E,h10km,mb4.6/5,Error ellipse: s-maj=22.4km s-min=17.0km az=154.0*
*GCMT **28** 10:50:37.8±0.2,2193S×17364E,h16km±1km,MW5.0/70, Moment Tensor Solution. s32,c38; s70,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.12; $M_{\theta\theta}$0.75±.12; $M_{\phi\phi}$0.17±.11; $M_{r\theta}$0.78±.31; $M_{\theta\phi}$3.06±.09; $M_{r\phi}$0.92±.31; Best double couple: $M_0$3.23200×10^{16} NP1:ϕ_s94.00000°,δ76.00000°,λ6.00000°. NP2: ϕ_s2.00000°,δ84.00000°,λ166.00000°. Principal axes: T 3.8350, Plg14.0000°, Azm317.0000°; N -1.2060, Plg75.0000°, Azm162.0000°; P -2.6300, Plg6.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **28** 10:50:39.4±0.7,223S±0.1×1736E±0.1,h35km,mb4.2/16, MS4.2/20 Error ellipse: s-maj=19.1km s-min=14.9km az=150.1*

ISC 28 10:50:41.3±0.7, 222S±01×1736E±01, h35km, n53, σ1§22/21, mb4.2/16, MS4.2/20, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RAO	**Raoul Island**	**10.34**	**134**	LR		LR	10 56 23.9	
	comp=Z,2μm,18.3s,baz=304,slow=33							
AFI	**Afiamalu**	**16.15**	**62**	LR		LR	10 59 13.7	
	comp=Z,617nm,19.1s,baz=230,slow=32							
URZ	**Urewera**	**16.26**	**170**	LR		LR	10 59 21.2	
	comp=Z,1μm,19.4s,baz=161,slow=32							
HNR	**Honiara**	**18.28**	**312**	LR		LR	11 00 42.9	
	comp=Z,410nm,21.5s,baz=139,slow=34							
ARMA	**Armidale**	**21.31**	**243**	*e*P		**P**	**10 55 27.4 +2.3**	
RPZ	**Rata Peaks**	**21.54**	**185**	LR		LR	11 02 39.2	
	comp=Z,794nm,18.2s,MS4.2,baz=1.5,slow=33							
RAR	**Rarotonga**	**24.72**	**93**	LR		LR	11 03 16.4	
	comp=Z,427nm,20.2s,MS3.9,baz=263,slow=31							
CAN	**Canberra**	**25.14**	**233**	*e*P		**P**	**10 56 02.0 -1.1**	
CTA	**Charters Tower**	**25.60**	**270**	P		**P**	**10 56 08.2 +0.8**	
	3.0nm,0.7s,mb4.0,baz=93,slow=11,SNR=3.1							
CTA				LR		LR	11 04 40.5	
	comp=Z,171nm,18.2s,MS3.6,baz=274,slow=33							
STKA	**Stephens Creek**	**30.01**	**244**	*e*P		**P**	**10 56 47.3 +0.5**	
	2.9nm,1.3s,mb3.9							
STKA	**Stephens Creek**	**30.01**	**244**	P		**P**	**10 56 46.9 +0.1**	
	3.2nm,0.8s,mb4.1,baz=107,slow=6.0,SNR=4.4							
STKA				LR		LR	11 07 52.9	
	comp=Z,478nm,19.3s,MS4.2,baz=56,slow=34							
PPT	**Papeete**	**34.85**	**89**	*e*LQ			11 05 06.2	
	1μm,28.2s							
PPT				*e*LR		LR	11 06 42.6	
	582nm,26.5s,baz=249							
PPT	**Papeete**	**34.85**	**89**	LR		LR	11 07 43.0	
	comp=Z,398nm,19.3s,MS4.2,baz=116,slow=30							
ASAR	**Alice Springs**	**36.53**	**260**	P		**P**	**10 57 42.8 -0.9**	
	2.0nm,0.8s,mb4.0,baz=86,slow=9.1,SNR=14							
WB2	**Warramunga Arr**	**36.65**	**266**	*e*P		**P**	**10 57 42.8 -1.9**	
WRAB	**Tennant Creek**	**36.65**	**266**	P		**P**	**10 57 44.9 +0.1**	
	4.8nm,0.9s,mb4.3							
WRA	**Warramunga Arr**	**36.66**	**266**	P		**P**	**10 57 43.0 -1.8**	
	1.3nm,0.8s,mb3.8,baz=98,slow=8.3,SNR=12							
WRA				LR		LR	11 11 00.6	
	comp=Z,314nm,21.9s,MS4.0,baz=75,slow=33							
KAKA	**Kakadu**	**40.30**	**277**	*e*P		Px	10 57 58.9	
	30nm,1.4s							
TAOE	**Nuku Hiva Isla**	**46.29**	**81**	*e*LR		LR	11 12 00.7	
	716nm,25.5s,baz=244							
RKT	**Rikitea**	**47.23**	**101**	*e*LQ			11 10 03.9	
	573nm,32.5s							
RKT				*e*LR		LR	11 12 17.8	
	478nm,32.2s							
MBWA	**Marble Bar**	**49.87**	**261**	*e*P		**P**	**10 59 31.1 -0.3**	
	14nm,0.8s,mb5.1							
VNDA	**Vanda**	**55.64**	**183**	P		**P**	**11 00 13.8 +0.6**	
	0.7nm,1.0s,mb3.6,baz=352,slow=8.0,SNR=3.0							
VNDA				LR		LR	11 18 56.6	
	comp=Z,198nm,20.4s,MS4.2,baz=12,slow=30							
SBA	**Scott Base**	**55.78**	**182**	*e*P		**P**	**11 00 15.1 +0.9**	
	4.7nm,0.9s,mb4.5							
MJAR	**Matsushiro Arr**	**67.35**	**330**	P		**P**	**11 01 35.1 +2.4**	
	5.5nm,1.1s,mb4.5,baz=170,slow=6.5,SNR=6.0							
MJAR				LR		LR	11 27 18.7	
	comp=Z,110nm,21.6s,MS4.0,baz=180,slow=33							
RPN	**Rapa Nui**	**69.16**	**112**	LR		LR	11 24 20.4	
	comp=Z,230nm,19.6s,MS4.4,baz=257,slow=29							
KSRS	**Korea Array**	**73.31**	**324**	P		**P**	**11 02 13.3 +4.1**	
	4.0nm,1.0s,mb4.3,baz=134,slow=6.2,SNR=5.2							
KSRS				LR		LR	11 33 21.0	
	comp=Z,64nm,18.3s,MS3.9,baz=38,slow=35							
PETK	**Petropavlovsk-**	**76.28**	**350**	LR		LR	11 28 03.3	
	comp=Z,149nm,21.5s,MS4.3,baz=158,slow=30							
MAW	**Mawson**	**77.20**	**202**	LR		LR	11 34 47.2	
	comp=Z,106nm,19.4s,MS4.2,baz=277,slow=34							
CN2	**Changchun**	**79.17**	**327**	*e*P		**P**	**11 02 47.5 +5.1**	
CN2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
CMAR	**Chiang Mai Arr**	**83.46**	**293**	P		**P**	**11 03 05.7 0.0**	
	comp=Z,1.6nm,0.9s,mb4.1,baz=141,slow=4.0,SNR=7.2							
CMAR				LR		LR	11 40 32.7	
	comp=Z,55nm,19.8s,MS3.9,baz=125,slow=36							
CHTO	**Chiang Mai**	**83.61**	**293**	*e*P		**P**	**11 03 06.4 -0.1**	
	comp=Z,16nm,1.5s,mb4.9							
PFO	**Pinyon Flat Ob**	**86.66**	**52**	LR		LR	11 32 07.2	
	comp=Z,152nm,21.6s,MS4.4,baz=142,slow=29							
YBH	**Yreka Blue Hor**	**86.66**	**42**	LR		LR	11 32 55.2	
	comp=Z,185nm,20.0s,MS4.5,baz=336,slow=29							
LPIG	**La Paz**	**87.07**	**63**	LR		LR	11 32 11.2	
	comp=Z,105nm,19.9s,MS4.2,baz=234,slow=29							
NVAR	**Mina Array Bea**	**87.77**	**47**	P		**P**	**11 03 25.8 -0.9**	
	comp=Z,1.7nm,1.0s,mb4.2,baz=226,slow=6.8,SNR=6.5							
NVAR	**Mina Array Bea**	**87.77**	**47**	P		**P**	**11 03 25.8 -0.9**	
SONM	**Songino Array**	**92.08**	**322**	P		**P**	**11 03 48.2 +1.6**	
	comp=Z,0.5nm,0.7s,mb4.0,baz=102,slow=1.8,SNR=4.9							
SONM				LR		LR	11 38 33.8	
	comp=Z,108nm,20.4s,MS4.3,baz=173,slow=31							
PLCA	**Paso Flores**	**93.57**	**137**	LR		LR	11 35 37.0	
	comp=Z,186nm,21.8s,MS4.5,baz=183,slow=29							
TXAR	**Lajitas Array**	**94.62**	**60**	P		**P**	**11 03 57.4 -1.4**	
	comp=Z,0.2nm,0.8s,mb3.6,baz=224,slow=7.5,SNR=3.0							
TXAR				LR		LR	11 37 22.5	
	comp=Z,138nm,20.4s,MS4.4,baz=65,slow=30							
PDAR	**Pinedale Array**	**95.67**	**46**	LR		LR	11 38 57.8	
	comp=Z,123nm,18.4s,MS4.4,baz=314,slow=30							
OKC	**Ostrava-Krasne**	**146.35**	**331**	*e*PKP		PKiKP	11 10 24.5	+3.3
DPC	**Dobruska-Polom**	**146.76**	**333**	*e*PKP		PKiKP	11 10 21.8	-0.3
UPC	**Upice**	**146.77**	**334**	*e*PKP		pPKPdf	11 10 31.0	+1.9
CLL	**Collm**	**147.29**	**337**	*i* PKPbc		PKPbc	11 10 21.8	+1.0
CLL				*i* pPKPab		PKiKP	11 10 26.2	+3.1
	comp=Z,21nm,1.6s							
CLL				*ex*		x	11 10 33.0	
CLL				L			12 07 00.0	
	comp=Z,100nm,20.9s							
BRG	**Berggiesshubel**	**147.30**	**336**	*e*P		PKiKP	11 10 23.1	0.0
	comp=Z,5.3nm,1.1s							
BRG				*e*			11 10 27.1	
	comp=Z,18nm,1.3s							
PVCC	**Panska Ves**	**147.34**	**335**	*e*PKP		PKiKP	11 10 26.5	+3.3
PRU	**Pruhonice**	**147.77**	**334**	*e*PKP		PKiKP	11 10 24.0	-0.2
MOX	**Moxa**	**148.33**	**338**	*e*PKP		PKPab	11 10 30.0	+3.2
KHC	**Kasperske Hory**	**148.84**	**334**	*e*PKP		PKiKP	11 10 26.7	+0.3
KHC				*ex*		x	11 10 30.3	
GEC2	**GERESS Array S**	**149.01**	**334**	*e*PKPbc		PKiKP	11 10 27.8	+1.0
GERES	**GERESS Array B**	**149.01**	**334**	PKPbc		PKPbc	11 10 23.8	-1.7
	comp=Z,2.7nm,0.8s,baz=48,slow=2.0,SNR=12							
GRF	**Grafenberg Arr**	**149.27**	**337**	*e*PKP		PKPbc	11 10 23.9	-2.2
TORD	**Torodi Ar. Bea**	**168.15**	**222**	PKPab		PKPab	11 11 55.3	+2.4
	comp=Z,1.1nm,0.8s,baz=132,slow=3.3,SNR=4.2							

*IDC **28** 11:24:43.2±8.5,3668N×7139E,h46km±76km,mb3.5/4, mb1 3.7/9,mb1mx3.5/25,mbtmp3.7/9,ML3.3/2,Error ellipse: s-maj=74.2km s-min=26.5km az=39.0*
*ISCJB **28** 11:24:50.1±0.4,3693N±003×7162E±006,h132km±7km, mb3.4/4,Error ellipse: s-maj=8.1km s-min=4.2km az=173.6*
*NEIC **28** 11:24:51.0±0.8,3692N×7165E,h122km±10km,mb4.4/5, Error ellipse: s-maj=13.5km s-min=7.6km az=74.0*
*MOS **28** 11:24:50.4±0.7,3699N×7142E,h126km,mb4.0/2,Error ellipse: s-maj=24.2km s-min=10.4km az=83.7*
*NNC **28** 11:24:56.0±3.3,3743N×7128E,h206km±32km,mb3.0, mpv4.1,Error ellipse: s-maj=29.9km s-min=18.9km az=17.0*

ISC 28 11:24:51.3±0.4, 3692N±003×7163E±006, h129km±7km, n50, σ1§26/66, mb3.4/4, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CEP	**Cherat**	**3.10**	**176**	P		**Pn**	**11 25 40.9 +1.8**	
CEP				S		**Sn**	**11 26 17.0 +1.0**	
KBL	**Kabul**	**3.17**	**222**	*e*Pn		**Pn**	**11 25 39.2 -0.9**	
KBL				*e*Sn		**Sn**	**11 26 16.4 -1.3**	
CHCP	**Chirah Chowk**	**3.52**	**157**	P		**Pn**	**11 25 46.6 +2.0**	
NIL	**Nilore**	**3.52**	**157**	*e*Pn		**Pn**	**11 25 46.8 +2.1**	
NIL				*e*Sn		**Sn**	**11 26 28.2 +2.2**	
SBDP	**Sheikh Budin**	**4.66**	**189**	P		**Pn**	**11 25 59.3 -0.5**	
AML	**Almayashu**	**5.45**	**16**	*e*Pn		**Pn**	**11 26 09.9 -0.4**	
AML				*e*Sn		**Sn**	**11 27 11.4 -0.5**	
AML	**Almayashu**	**5.45**	**16**	P		**Pn**	**11 26 11.1 +0.8**	
	SNR=17							
THN	**Thein Dam**	**5.60**	**142**	*e*P		**Pn**	**11 26 12.5 +0.1**	
THN				*e*S		**Sn**	**11 27 14.3 -1.3**	
DLH	**Dalhousie**	**5.64**	**139**	*ex*		x	11 26 04.0	
DLH				*e*S		**Sn**	**11 27 15.0 -1.6**	
EKS2	**Erkin-Say**	**5.97**	**15**	*e*Pn		**Pn**	**11 26 17.5 +0.2**	
	14nm,0.6s							
EKS2	**Erkin-Say**	**5.97**	**15**	P		**Pn**	**11 26 18.1 +0.8**	
	SNR=5.8							
AAK	**Ala-Archa**	**6.12**	**20**	*e*Pn		**Pn**	**11 26 20.2 +0.9**	
	5.8nm,0.3s							
AAK				*e*Sn		**Sn**	**11 27 29.0 +0.9**	
AAK	**Ala-Archa**	**6.12**	**20**	*e*PN		**Pn**	**11 26 20.2 +0.9**	
AAK				*e*			11 27 29.0	
AAK				pmax		pmax		
	comp=Z,6.0nm,0.3s							
AAK	**Ala-Archa**	**6.12**	**20**	P		**

	comp=E,647nm,0.3s							
DDI	**Dehra Dun**	**8.48**	**139**	*ex*	x	11 28 26.0		
JOSI	**Joshimath**	**9.15**	**132**	*eP*	**Pn**	**11 26 59.9**	**-0.4**	
JOSI				*eS*	**Sn**	**11 28 35.6**	**-5.9**	
JOSI				AML	AML	11 28 48.1		
	comp=E,105nm,0.3s							
JOSI				AML	AML	11 28 51.6		
	comp=N,59nm,0.3s							
KHET	**Khetri**	**9.49**	**157**	*eS*	**Sn**	**11 28 40.9**	**-9.0**	
KUDL	**Kundal**	**9.66**	**154**	*eS*	**Sn**	**11 28 45.1**	**-8.7**	
MKAR	**Makanchi Array**	**12.66**	**35**	P	**Pn**	**11 27 44.8**	**-1.8**	
	comp=N,0.2nm,0.3s,baz=224,slow=14,SNR=4.3							
DANN	**Dangsing**	**13.31**	**126**	*eP*	**Pn**	**11 27 54.2**	**-1.0**	
	comp=N,7.2nm,0.3s							
KOLN	**Koldanda**	**13.61**	**129**	*eP*	**Pn**	**11 27 58.2**	**-0.9**	
GKN	**Gorkha**	**14.12**	**125**	*eP*	**Pn**	**11 28 03.7**	**-1.8**	
	comp=N,12nm,0.4s							
KURK	**Kurchatov**	**14.68**	**18**	P	**Pn**	**11 28 08.5**	**-3.8**	
	comp=N,0.0nm,0.3s,baz=207,slow=12,SNR=2.7							
AB01	**Akbulak array**	**14.97**	**329**	⇓P	**Pn**	**11 28 11.3**	**-4.8**	
	comp=N,2.6nm,0.5s,baz=146,slow=12							
AB01				⇓S	**Sn**	**11 30 48.8**	**-13**	
	comp=N,3.6nm,0.7s							
JIRN	**Jiri**	**15.37**	**123**	*eP*	**Pn**	**11 28 19.6**	**-1.7**	
	comp=N,13nm,0.4s							
RAMN	**Ramite**	**16.11**	**124**	*eP*	**Pn**	**11 28 30.6**	**+0.2**	
BVAR	**Borovoye Array**	**16.13**	**357**	P	**Pn**	**11 28 29.3**	**-1.1**	
	comp=N,0.5nm,0.3s,baz=171,slow=12,SNR=9.7							
BVAR	**Borovoye Array**	**16.13**	**357**	P	**Pn**	**11 28 29.3**	**-1.1**	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
TAPN	**Taplejung**	**16.61**	**120**	*eP*	**Pn**	**11 28 36.4**	**-0.1**	
AKTK	**Aktyubinsk**	**16.68**	**328**	P	**Pn**	**11 28 35.7**	**-1.5**	
AKTK				S	**S**	**11 31 30.4**	**-12**	
AKTO	**Aktyubinsk**	**16.68**	**328**	⇓P	**Pn**	**11 28 31.4**	**-5.8**	
	comp=Z,1.0nm,0.5s							
AKTO				⇓S	**S**	**11 31 29.0**	**-14**	
	comp=Z,0.5nm,1.1s							
AKTO	**Aktyubinsk**	**16.68**	**328**	P	**Pn**	**11 28 35.7**	**-1.5**	
	comp=Z,1.7nm,0.3s,baz=129,slow=11,SNR=23							
AKTO				S	**S**	**11 31 30.4**	**-12**	
	comp=Z,0.1nm,0.3s,baz=10.0,slow=17,SNR=3.6							
AKTO	**Aktyubinsk**	**16.68**	**328**	P	**Pn**	**11 28 35.7**	**-1.5**	
AKTO				S	**S**	**11 31 30.5**	**-12**	
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ZALV	**Zalesovo Beam**	**19.33**	**24**	P	**P**	**11 29 07.9**	**+1.7**	
	comp=Z,1.1nm,0.3s,baz=224,slow=11,SNR=14							
ZALV	**Zalesovo Beam**	**19.33**	**24**	P	**P**	**11 29 07.9**	**+1.7**	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ARCES	**ARCESS Array B**	**40.95**	**337**	P	**P**	**11 32 22.1**	**+1.4**	
	comp=Z,4.7nm,0.9s,mb4.1,baz=103,slow=8.8,SNR=6.2							
ARCES	**ARCESS Array B**	**40.95**	**337**	P	**P**	**11 32 22.2**	**+1.5**	
ARCES				pmax	pmax			
	comp=Z,5.0nm,1.0s							
NOA	**NORSAR Array B**	**44.35**	**323**	P	**P**	**11 32 48.6**	**+0.4**	
	comp=Z,1.0nm,0.8s,mb3.5,baz=96,slow=7.7,SNR=3.3							
NOA	**NORSAR Array B**	**44.35**	**323**	P	**P**	**11 32 48.6**	**+0.4**	
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**81.78**	**122**	P	**P**	**11 36 57.7**	**+1.9**	
	comp=Z,0.1nm,0.5s,mb2.8,baz=324,slow=4.3,SNR=3.1							
ASAR	**Alice Springs**	**84.08**	**125**	P	**P**	**11 37 09.2**	**+1.6**	
	comp=Z,0.3nm,0.7s,mb3.1,baz=330,slow=5.4,SNR=3.0							

SGS ***28*** *12:11:27.2, 3027N×3630E, h7km*
CSEM ***28*** *12:11:27.2, 3027N×3630E, h7km, ML3.0, After SNSN*
ISCJB ***28*** *12:11:30.2±0.7, 2985N±003×3621E±004, h0km, Error ellipse: s-maj=5.5km s-min=4.2km az=177.3*
GII ***28*** *12:11:31.5±0.7, 2992N×3608E, h0km, ML2.3/5, EXPLOSION*

ISC 28 12:11:30.4±0.7, 2984N±003×3625E±005, h0km, n19, σ0$76/29, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.05**	**264**	Pg	**Pg**	**12 11 51.0**	**+0.5**
HRFI	**Mount Harif**	**1.07**	**281**	Pg	**Pg**	**12 11 50.4**	**-0.5**
HRFI				Sg	**Sg**	**12 12 05.4**	**+0.7**
EIL	**Elat**	**1.14**	**262**	Pg	**Pg**	**12 11 52.1**	**-0.2**
EIL				Sg	**Sg**	**12 12 08.1**	**+1.0**
MBRI	**Mt Berech**	**1.16**	**268**	Pg	**Pg**	**12 11 52.4**	**-0.3**
MBRI				Sg	**Sg**	**12 12 08.9**	**+1.2**
HQLS		**1.17**	**243**	P	**Pg**	**12 11 51.9**	**-0.9**
ZFRI	**Zfri**	**1.17**	**308**	Pg	**Pg**	**12 11 51.8**	**-1.0**
ZFRI				Sg	**Sg**	**12 12 07.2**	**-0.7**
PRNI	**Paran**	**1.19**	**296**	Pg	**Pg**	**12 11 52.4**	**-0.9**
PRNI				Sg	**Sg**	**12 12 08.2**	**-0.5**
JLOS		**1.29**	**211**	P	**Pg**	**12 11 55.0**	**-0.1**
KRMI	**Paran Flat**	**1.35**	**282**	Pg	**Pg**	**12 11 55.3**	**-1.0**
KRMI				Sg	**Sg**	**12 12 13.4**	**-0.3**
TBKS	**Tabuk**	**1.64**	**171**	P	**Pn**	**12 12 00.2**	**-0.2**
MZDA	**Masada**	**1.65**	**333**	Pn	**Pn**	**12 12 00.1**	**-0.5**
MZDA				Sn	**Sn**	**12 12 22.4**	**-0.1**
BDAS	**Al Bad'**	**1.73**	**216**	S	**Sn**	**12 12 26.3**	**+1.9**
BDAS	**Al Bad'**	**1.73**	**216**	P	**Pn**	**12 12 01.4**	**-0.3**
YTIR	**Yattir**	**1.80**	**327**	Pn	**Pn**	**12 12 03.2**	**+0.5**
RTMI	**Retamim**	**1.81**	**312**	Sn	**Sn**	**12 12 26.9**	**+0.5**
DSI	**Dead Sea**	**1.88**	**337**	Pn	**Pn**	**12 12 04.2**	**+0.4**
DSI				Sn	**Sn**	**12 12 29.1**	**+0.9**
KZIT	**Kziot**	**1.92**	**304**	Pn	**Pn**	**12 12 04.4**	**+0.1**
KZIT				Sn	**Sn**	**12 12 28.2**	**-0.9**
RSHS		**2.00**	**220**	P	**Pn**	**12 12 04.4**	**-1.0**
HMDT	**Nahal Hemdat**	**2.48**	**346**	Pn	**Pn**	**12 12 12.5**	**+0.5**
HMDT				Sn	**Sn**	**12 12 44.4**	**+1.4**

NEIC ***28*** *12:40:38.3±1.2, 829S×11456E, h10km, mb4.1/2, Error ellipse: s-maj=23.5km s-min=14.8km az=73.0*
NEIC Felt [III] at Buleleng.
IDC ***28*** *12:40:41.2±1.6, 839S×11501E, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.6/18, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=50.3km s-min=25.4km az=50.0*
ISCJB ***28*** *12:40:43.5±0.7, 851S±0.10×11484E±0.008, h28km±5km, mb3.7/5, Error ellipse: s-maj=20.1km s-min=7.3km az=40.0*
DJA ***28*** *12:40:44, 836S×11488E, h10km, MLv4.1/7*

ISC 28 12:40:44.0±0.7, 835S±008×11495E±005, h16km±6km, n16, σ1$15/17, mb3.7/5, 1D, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	**Negara**	**0.33**	**266**	P	**Pg**	**12 40 49.5**	**-1.4**
NBBI	**Negara**	**0.33**	**266**	S	**Sg**	**12 40 54.6**	**-0.9**
DNP	**Denpasar**	**0.42**	**142**	P	**Pg**	**12 40 54.4**	**+2.0**
IGBI	**Denpasar**	**0.51**	**158**	P	**Pg**	**12 40 55.1**	**+1.0**
KHKI	**Kahang-Kahang**	**0.65**	**92**	P	**Pg**	**12 40 56.9**	**+0.1**
KMMI	**Kalianget**	**1.62**	**323**	P	**Pn**	**12 41 12.3**	**+0.5**
KMMI	**Kalianget**	**1.62**	**323**	S	**Sn**	**12 41 33.1**	**+0.7**
KRKI	**Karangkates**	**2.48**	**274**	P	**Pn**	**12 41 25.9**	**+2.2**
KAPI	**Kappang**	**5.80**	**56**	Pn	**Pn**	**12 42 07.9**	**-1.6**
	5.6nm,0.3s,baz=246,slow=10.0,SNR=11						
MBWA	**Marble Bar**	**13.55**	**161**	*e*Pn	**Pn**	**12 43 52.1**	**-3.5**
MBWA				eSn	**Sn**	**12 46 15.1**	**-11**
WRA	**Warramunga Arr**	**22.02**	**124**	P	**P**	**12 45 36.7**	**-1.2**
	0.5nm,0.5s,mb3.2,baz=298,slow=12,SNR=13						
WRAB	**Tennant Creek**	**22.03**	**124**	*e*P	**P**	**12 45 37.8**	**-0.2**
	1.6nm,0.5s,mb3.7						
ASAR	**Alice Springs**	**23.70**	**132**	P	**P**	**12 45 55.0**	**-0.4**
	1.3nm,0.8s,mb3.4,baz=308,slow=9.1,SNR=22						
ASAR				PcP	PcP	12 49 38.0	-1.4
	0.2nm,0.4s,baz=302,slow=1.6,SNR=5.9						
CM31	**Chiang Mai Arr**	**30.97**	**329**	*e*P	**P**	**12 46 53.8**	**-6.8**
	4.6nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**30.97**	**329**	P	**P**	**12 47 01.3**	**+0.7**
	0.6nm,0.7s,mb3.6,baz=155,slow=8.7,SNR=4.4						
VOIR		**95.81**	**315**	⇓*i*P	**P**	**12 54 09.7**	**0.0**
VOIR				S		12 54 17.1	

ISCJB ***28*** *12:43:11.9±0.6, 1083N±004×6234W±003, h92km±7km, Error ellipse: s-maj=6.9km s-min=4.6km az=149.7*
FUNV ***28*** *12:43:12.5, 1090N×6223W, h86km, MW2.9*
TRN ***28*** *12:43:16.3, 1097N×6211W, h74km, MD2.9*

ISC 28 12:43:12.8±0.6, 1087N±004×6234W±003, h85km±7km, n20, σ1$04/33, 2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.24**	**153**	⇓*e*P	**Pn**	**12 43 25.6**	**+0.2**
GUIV				*e*S	**Sn**	**12 43 34.4**	**-0.3**
TCE	**Chacachacare**	**0.60**	**106**	*e*P	**Pn**	**12 43 28.6**	**+0.7**
TCE				*e*S	**Sn**	**12 43 38.8**	**-0.3**
CRUV	**Carupano**	**0.91**	**258**	⇓*i*P	**Pn**	**12 43 31.3**	**+0.2**
CRUV				*e*S	**Sn**	**12 43 44.7**	**-0.1**
GUNV	**Guanoco**	**0.92**	**220**	*e*P	**Pn**	**12 43 32.2**	**+0.9**
GUNV				*e*S	**Sn**	**12 43 46.6**	**+1.6**
TRN	**Trinidad (W)**	**0.94**	**103**	*e*P	**Pn**	**12 43 31.9**	**+0.5**
TRN				*e*S	**Sn**	**12 43 44.5**	**-1.0**
TPP	**Pointe-a-Pierr**	**1.03**	**122**	*e*P	**Pn**	**12 43 33.9**	**+1.4**
TPP				*e*S	**Sn**	**12 43 47.5**	**+0.3**
TBH	**Brigand Hill**	**1.30**	**107**	*e*P	**Pn**	**12 43 36.0**	**+0.2**
GRW	**Mount Saint Ca**	**1.45**	**27**	*e*P	**Pn**	**12 43 38.1**	**+0.5**
GRHS	**Sauteurs**	**1.51**	**27**	*e*P	**Pn**	**12 43 40.3**	**+1.9**
GRHS				*e*S	**Sn**	**12 43 56.2**	**-1.7**
TPR	**Prospect**	**1.56**	**78**	*e*P	**Pn**	**12 43 39.8**	**+0.7**
GRSS	**Sisters**	**1.59**	**26**	*e*P	**Pn**	**12 43 41.0**	**+1.5**
GRSS				*e*S	**Sn**	**12 43 57.7**	**-2.0**
GRIC	**Isle de Caille**	**1.59**	**27**	*e*P	**Pn**	**12 43 40.9**	**+1.4**
GRIC				*e*S	**Sn**	**12 43 57.5**	**-2.2**
BOT	**Bacolet**	**1.62**	**79**	*e*P	**Pn**	**12 43 40.1**	**+0.3**
PCRV	**Puerto La Cruz**	**2.36**	**253**	*e*P	**Pn**	**12 43 49.7**	**0.0**
PCRV				*e*S	**Sn**	**12 44 17.5**	**-0.5**
IBAV	**Isla La Blanqu**	**2.39**	**294**	*e*P	**Pn**	**12 43 49.6**	**-0.5**
RIOV	**Rio Grande**	**2.83**	**169**	*e*P	**Pn**	**12 43 54.4**	**-1.5**
PRGV	**PARIAGUAN**	**3.09**	**228**	*e*S	**Sn**	**12 44 34.8**	**-0.8**
GURV	**El Guri**	**3.17**	**194**	*e*P	**Pn**	**12 44 00.8**	**+0.1**
GURV				*e*S	**Sn**	**12 44 35.0**	**-2.5**
CUPV	**Cœpira**	**3.49**	**257**	*e*P	**Pn**	**12 44 05.5**	**+0.6**
CUPV				*e*S	**Sn**	**12 44 45.0**	**-0.1**
LUEV	**Luepa**	**5.07**	**170**	*e*P	**Pn**	**12 44 25.5**	**-0.8**
LUEV				*e*S	**Sn**	**12 45 18.5**	**-5.1**

IDC 28 12:45:42.3±1.2, 2969N×4247W, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/21, mbtmp3.9/8, MS3.7/15, Ms1 3.6/15, ms1mx3.4/29, Error ellipse: s-maj=46.9km s-min=19.2km az=21.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**28.20**	**116**	LR	LR	13 00 23.3	
	comp=Z,200nm,18.7s,baz=307,slow=31						
SCHQ	**Schefferville**	**30.62**	**332**	P		12 51 57.0	-1.0
	11nm,0.9s,baz=122,slow=9.5,SNR=7.2						
SCHQ				LR	LR	13 02 40.3	
	comp=Z,221nm,19.8s,baz=81,slow=33						
MDT	**Midelt**	**32.40**	**75**	LR	LR	13 01 47.0	
	comp=Z,49nm,18.5s,baz=149,slow=30						
BORG	**Borgarnes**	**37.51**	**15**	LR	LR	13 05 27.5	
	comp=Z,170nm,19.4s,baz=55,slow=32						
SFJD	**Kangerlussuaq**	**37.66**	**355**	LR	LR	13 06 12.6	
	comp=Z,61nm,18.1s,baz=238,slow=33						
DBIC	**Dimbokro**	**42.14**	**115**	P	P	12 53 36.8	+0.1
	1.2nm,0.5s,baz=274,slow=9.3,SNR=5.2						
DBIC				LR	LR	13 08 26.6	
	comp=Z,172nm,18.5s,baz=288,slow=32						
TORD	**Torodi Ar. Bea**	**43.99**	**102**	P	P	12 53 50.9	-0.8
	1.8nm,1.1s,baz=294,slow=8.7,SNR=6.1						
TORD				LR	LR	13 09 34.5	
	comp=Z,34nm,20.2s,baz=140,slow=33						
ULM	**Lac du Bonnet**	**44.70**	**313**	LR	LR	13 10 47.6	
	comp=Z,93nm,18.5s,baz=53,slow=34						
BDFB	**Brasilia**	**45.38**	**188**	LR	LR	13 10 13.5	
	comp=Z,50nm,21.1s,baz=14,slow=32						
GERES	**GERESS Array B**	**46.37**	**49**	P	P	12 54 11.0	+0.8
	0.3nm,0.2s,baz=285,slow=12,SNR=4.2						
GERES				LR	LR	13 10 13.6	
	comp=Z,52nm,18.2s,baz=274,slow=32						
TXAR	**Lajitas Array**	**52.68**	**286**	P	P	12 54 58.9	+0.2
	0.4nm,0.8s,baz=106,slow=9.2,SNR=5.0						
PDAR	**Pinedale Array**	**54.35**	**303**	P	P	12 55 11.7	+0.9
	2.7nm,0.7s,baz=84,slow=8.2,SNR=25						
YKA	**Yellowknife Ar**	**55.92**	**328**	LR	LR	13 19 49.6	
	comp=Z,41nm,19.3s,baz=95,slow=37						
ELK	**Elko**	**58.92**	**302**	LR	LR	13 19 08.5	
	comp=Z,105nm,18.7s,baz=192,slow=34						
NVAR	**Mina Array Bea**	**61.82**	**300**	P	P	12 56 03.0	-0.2
	0.3nm,0.7s,baz=79,slow=9.3,SNR=4.0						
PLCA	**Paso Flores**	**74.74**	**202**	LR	LR	13 32 01.1	
	comp=Z,64nm,18.4s,baz=190,slow=37						
ZALV	**Zalesovo Beam**	**85.08**	**28**	P	P	12 58 20.2	+0.4
	0.3nm,0.3s,baz=270,slow=4.3,SNR=3.1						
MKAR	**Makanchi Array**	**89.02**	**34**	LR	LR	13 37 04.9	
	comp=Z,38nm,19.9s,baz=176,slow=35						
PETK	**Petropavlovsk-**	**95.70**	**348**	LR	LR	13 40 27.0	
	comp=Z,25nm,21.8s,baz=269,slow=34						

ISCJB ***28*** *12:58:15.1±0.2, 6621N±003×13550W±005, h10km, mb4.1/23, MS3.8/5, Error ellipse: s-maj=4.2km s-min=3.1km az=9.2*
IDC ***28*** *12:58:15.7±0.6, 6624N×13526W, h0km, mb3.9/14, mb1 4.2/16, mb1mx4.1/24, mbtmp4.0/16, ML4.6/2, MS3.4/5, Ms1 3.3/5, ms1mx2.8/49, Error ellipse: s-maj=15.9km s-min=9.2km az=51.0*
BJI ***28*** *12:58:18.0, 6620N×13550W, h20km, mB4.7, mb4.8, Ms4.7, Msz4.2*
NEIC ***28*** *12:58:18.0, 6619N×13555W, h20km, mb4.3/4, ML4.3(AEIC), MW4.1(PGC), MW4.1(SLM), After PGC.*
PGC ***28*** *12:58:18.0±0.0, 6619N×13555W, h20km, ML4.5/2, Mw4.1, 148km southwest of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 28 12:58:16.9±0.2, 6620N±003×13541W±005, h10km, (h19km±1.2km: pP-P), n140, σ0$91/154, mb4.1/23, MS3.8/5, 40C-38D, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	**2.24**	**18**	*e*Pn	**Pn**	**12 58 54.0**	**+0.1**
INK				*e*Sn	**Sn**	**12 59 21.6**	**0.0**
INK	**Inuvik**	**2.24**	**18**	Pn	**Pn**	**12 58 53.9**	**-0.1**
INK				⇓Sn	**Sn**	**12 59 21.4**	**-0.2**
DAWY	**Dawson**	**2.73**	**220**	P	**Pn**	**12 58 59.6**	**-1.0**
DAWY				S	**Sn**	**12 59 34.4**	**+0.8**
DAWY	**Dawson**	**2.73**	**220**	Pn	**Pn**	**12 58 59.7**	**-1.0**
DAWY				⇓Sg	**Sg**	**12 59 41.6**	**-2.7**
EGAK	**Eagle**	**2.79**	**242**	P	**Pn**	**12 59 00.5**	**-1.1**
EGAK				S	**Sn**	**12 59 35.5**	**+0.4**
BCA3	**Beaver Creek A**	**4.17**	**224**	P	**Pn**	**12 59 19.5**	**-1.0**
BCA3				S	**Sn**	**13 00 12.1**	**+2.8**
DOT	**Dot Lake**	**4.48**	**239**	P	**Pn**	**12 59 24.1**	**-0.7**
DOT				S	**Sn**	**13 00 19.6**	**+2.7**
MENT	**Mentasta**	**4.85**	**231**	*e*P	**Pn**	**12 59 28.6**	**-1.2**
IL1	**Eielson Array**	**4.99**	**259**	P	**Pn**	**12 59 30.7**	**-1.0**
COLA	**College**	**5.34**	**261**	P	**Pn**	**12 59 35.8**	**-0.7**
PAX	**Paxson**	**5.41**	**238**	P	**Pn**	**12 59 37.3**	**-0.2**
HYT	**Haines Junctio**	**5.48**	**191**	Pn	**Pn**	**12 59 38.2**	**-0.2**
WHY	**Whitehorse**	**5.57**	**177**	P	**Pn**	**12 59 39.3**	**-0.4**
WHY	**Whitehorse**	**5.57**	**177**	⇓Pn	**Pn**	**12 59 39.1**	**-0.6**
WHY				⇓Sg	**Sg**	**13 01 10.3**	**-5.1**
COLD	**Coldfoot**	**5.96**	**287**	P	**Pn**	**12 59 44.8**	**-0.2**
SKAG	**Skagway**	**6.77**	**180**	P	**Pn**	**12 59 56.1**	**0.0**
PLBC	**Pleasant Camp**	**6.78**	**184**	Pn	**Pn**	**12 59 55.0**	**-1.3**
PLBC				Sg	**Sg**	**13 01 47.5**	**-6.9**
BPAW	**Bear Paw Mtn.**	**6.89**	**259**	*e*Pn	**Pn**	**12 59 56.5**	**-1.3**
	14nm,0.5s						
TRF	**Thorofare Moun**	**6.91**	**253**	P	**Pn**	**12 59 57.8**	**-0.3**
KTH	**Kantishna Hill**	**7.11**	**255**	*e*Pn	**Pn**	**13 00 00.4**	**-0.4**
	24nm,0.8s						
KTH				*e*Sg	**Sg**	**13 01 59.2**	**-5.7**
IM3	**Indian Mountai**	**7.45**	**277**	P	**Pn**	**13 00 04.8**	**-0.6**
CHUM	**Lake Minchumin**	**7.51**	**260**	*e*Pn	**Pn**	**13 00 05.7**	**-0.7**
	154nm,0.5s						
ROMN	**Roman Lake**	**7.53**	**96**	Pn	**Pn**	**13 00 06.3**	**-0.3**
ROMN				Sn	**Sn**	**13 01 26.8**	**-5.1**
ROMN				Sg	**Sg**	**13 02 13.9**	**-4.5**
PMR	**Palmer**	**7.61**	**239**	*e*P	**Pn**	**13 00 09.2**	**+1.6**
PPLA	**Purkeypile**	**7.94**	**253**	P	**Pn**	**13 00 11.8**	**-0.4**
RC01	**Rabbit Creek A**	**8.17**	**238**	*e*Pn	**Pn**	**13 00 18.3**	**+3.0**
	28nm,0.9s						
DLBC	**Dease Lake**	**8.18**	**160**	Pn	**Pn**	**13 00 14.4**	**-1.1**
	4.9nm,0.3s,baz=3.7,slow=10,SNR=82						
DLBC				Sn	**Sn**	**13 01 42.3**	**-5.5**
	0.7nm,0.3s,baz=162,slow=20,SNR=2.2						
DLBC				Lg		13 02 30.0	
	5.4nm,0.3s,baz=102,slow=19,SNR=8.9						
DLBC	**Dease Lake**	**8.18**	**160**	*e*Pn	**Pn**	**13 00 14.1**	**-1.4**
DLBC	**Dease Lake**	**8.18**	**160**	⇓Pn	**Pn**	**13 00 14.1**	**-1.4**
DLBC				⇓Sg	Sn	13 02 32.1	+44
FNBB	**Fort Nelson**	**9.29**	**136**	P	**Pn**	**13 00 29.2**	**-1.4**
FNBB	**Fort Nelson**	**9.29**	**136**	⇓P	**Pn**	**13 00 29.3**	**-1.3**
YKW3	**Yellowknife Ar**	**9.70**	**102**	P	**Pn**	**13 00 34.0**	**-2.2**
YKW3				Sn	**Sn**	**13 02 15.4**	**-10**
YKA	**Yellowknife Ar**	**9.73**	**103**	Pn	**Pn**	**13 00 34.3**	**-2.4**
	7.3nm,0.3s,baz=301,slow=12,SNR=113						
YKA				Sn	**Sn**	**13 02 17.0**	**-8.9**
	4.3nm,0.3s,baz=301,slow=23,SNR=6.8						
YKA				Lg		13 03 24.0	
	3.6nm,0.3s,baz=299,slow=28,SNR=5.2						
YKA				LR	LR	13 04 48.6	
	comp=Z,45nm,19.4s,baz=165,slow=41						
YKA	**Yellowknife Ar**	**9.73**	**103**	Pn	**Pn**	**13 00 34.3**	**-2.4**
YKA				Sn	**Sn**	**13 02 17.1**	**-8.9**
YKA				Lg		13 03 24.0	
YKA				LR	LR	13 04 48.6	
BBB	**Bella Bella**	**14.53**	**162**	LR	LR	13 07 41.1	
	comp=Z,140nm,19.5s,baz=299,slow=39						
RES	**Resolute Bay**	**15.62**	**40**	*e*P	**Pn**	**13 01 52.6**	**-4.0**
	212nm,0.4s						
RES				*e*S	**Sn**	**13 04 36.3**	**-13**
EDM	**Edmonton**	**16.98**	**129**	*e*P	**Pn**	**13 02 11.4**	**-2.7**
A06A	**Chilliwack**	**18.61**	**150**	⇓P	**Pn**	**13 02 35.1**	**+0.7**
	baz=19						
A07A	**Ashnola River,**	**18.89**	**148**	⇓P	**Pn**	**13 02 37.4**	**-0.3**
	baz=19						
A09A	**Danville**	**19.36**	**145**	⇑P	**Pn**	**13 02 43.1**	**-0.2**
	baz=19						
FFC	**Flin Flon**	**19.79**	**109**	*e*P	**Pn**	**13 02 46.1**	**-2.4**
	15nm,1.0s						
A11A	**Hall Mountain,**	**19.92**	**141**	⇑P	**Pn**	**13 02 50.4**	**+0.3**
	baz=20						
C07A	**Waterville**	**20.25**	**149**	⇓P	**P**	**13 02 52.6**	**+0.6**
	baz=20						
C08A	**Higginbotham F**	**20.38**	**147**	⇑P	**P**	**13 02 52.5**	**-0.9**
	baz=20,SNR=5.1						
WALA	**Waterton Lakes**	**20.49**	**136**	*e*P	**P**	**13 02 56.5**	**+2.0**
	5.7nm,0.8s						
A14A	**Double T Ranch**	**20.70**	**136**	⇓P	**P**	**13 02 56.9**	**+0.1**
	baz=21						
A15A	**Johnson Ranch,**	**20.89**	**135**	⇑P	**P**	**13 02 58.5**	**-0.4**
	baz=21						
B13A	**Whitefish**	**20.96**	**138**	⇑P	**P**	**13 02 59.3**	**-0.3**
	baz=21						
D08A	**Wollman Farm,**	**21.09**	**147**	⇓P	**P**	**13 03 01.6**	**+0.5**
	baz=21						
A16A	**West Butte Ran**	**21.25**	**133**	⇓P	**P**	**13 03 03.0**	**+0.2**
	baz=21						
B14A	**Marquette Ranc**	**21.30**	**136**	⇑P	**P**	**13 03 03.5**	**+0.2**
	baz=21						
E07A	**Sunnyside**	**21.37**	**149**	⇓P	**P**	**13 03 03.9**	**-0.1**
	baz=21						
D10A	**Wagner Farm, O**	**21.47**	**144**	⇑P	**P**	**13 03 05.2**	**+0.1**
	baz=21						
A17A	**Triple J Farms**	**21.53**	**131**	⇑P	**P**	**13 03 05.9**	**+0.2**
	baz=22,SNR=6.5						
B15A	**Bradely Ranch,**	**21.54**	**135**	⇓P	**P**	**13 03 05.9**	**-0.1**
	baz=22,SNR=6.0						
C13A	**Hot Springs**	**21.57**	**139**	⇑P	**P**	**13 03 06.3**	**+0.1**
	baz=22						
E08A	**Dider Farm, El**	**21.60**	**148**	⇑P	**P**	**13 03 06.0**	**-0.5**
	baz=22						
B16A	**M & M Farms, S**	**21.70**	**134**	⇑P	**P**	**13 03 06.7**	**-0.9**
	baz=22,SNR=6.9						
C14A	**Swan Lake**	**21.71**	**138**	⇓P	**P**	**13 03 07.4**	**-0.3**
	baz=22,SNR=5.0						
F06A	**Goldendale**	**21.94**	**152**	⇑P	**P**	**13 03 09.7**	**-0.5**
	baz=22						
C15A	**Salmond Ranch,**	**22.02**	**136**	⇓P	**P**	**13 03 11.0**	**-0.1**
	baz=22,SNR=6.8						
B17A	**L&G Farms, Che**	**22.08**	**132**	⇓P	**P**	**13 03 11.7**	**0.0**
	baz=22,SNR=6.6						
D13A	**Huson**	**22.14**	**140**	⇓P	**P**	**13 03 11.6**	**-0.7**
	baz=22						
C16A	**Fuhringer Ranc**	**22.24**	**134**	⇓P	**P**	**13 03 13.0**	**-0.4**
	baz=22						
B18A	**Beardsley Farm**	**22.30**	**131**	⇑P	**P**	**13 03 13.9**	**-0.1**
	baz=22						
F08A	**P

I16A	**Newdale**	**25.91**	**138**	⇑P		**P**	**13 03 50.8**	**+2.1**
	baz=26							
J15A	**Blackfoot**	**26.10**	**140**	⇑P		**P**	**13 03 51.7**	**+1.3**
	baz=26,SNR=5.4							
K12A	**Draper Farm, C**	**26.20**	**144**	⇑P		**P**	**13 03 52.8**	**+1.5**
	baz=26							
J16A	**Bone**	**26.43**	**139**	⇑P		**P**	**13 03 55.0**	**+1.6**
	baz=26							
PDAR	**Pinedale Array**	**27.47**	**136**	P		**P**	**13 04 03.4**	**+0.6**
	1.7nm,0.8s,mb3.6,baz=0.2,slow=5.5,SNR=15							
ELK	**Elko**	**27.91**	**146**	P		**P**	**13 04 06.4**	**-0.4**
	0.5nm,0.6s,mb3.4,baz=231,slow=16,SNR=2.5							
NVAR	**Mina Array Bea**	**29.50**	**152**	P		**P**	**13 04 22.1**	**+1.2**
	0.3nm,0.4s,mb3.3,baz=335,slow=9.0,SNR=4.0							
PETK	**Petropavlovsk-**	**34.39**	**281**	P		**P**	**13 05 04.8**	**+1.2**
	6.4nm,1.0s,mb4.5,baz=52,slow=7.3,SNR=6.0							
ANMO	**Albuquerque**	**35.62**	**137**	LR	LR		13 21 19.1	
	comp=Z,133nm,19.3s,MS3.7,baz=67,slow=39							
TXAR	**Lajitas Array**	**41.69**	**136**	P		**P**	**13 06 05.7**	**+0.3**
	0.5nm,0.6s,mb3.3,baz=346,slow=8.2,SNR=9.0							
TXAR				PcP	PcP		13 08 03.5	+1.7
	0.2nm,0.6s,baz=351,slow=4.6,SNR=2.6							
ARCES	**ARCESS Array B**	**43.89**	**10**	P		**P**	**13 06 23.4**	**+0.6**
	4.7nm,1.0s,mb4.2,baz=348,slow=8.3,SNR=3.6							
LPIG	**La Paz**	**45.01**	**147**	LR	LR		13 25 31.1	
	comp=Z,53nm,18.4s,MS3.5,baz=25,slow=36							
NOA	**NORSAR Array B**	**50.70**	**20**	P		**P**	**13 07 16.3**	**+0.5**
	0.7nm,0.8s,mb3.6,baz=337,slow=8.0,SNR=2.5							
MDJ	**Mudanjiang**	**52.09**	**296**	P		**P**	**13 07 26.5**	**0.0**
MDJ				AMB	AMB			
	comp=Z,3.0nm,1.2s,mb4.1							
MDJ				AMB	AMB			
	comp=Z,48nm,4.5s							
CN2	**Changchun**	**54.29**	**298**	*e*P	**P**		**13 07 48.3**	**+5.6**
ZALV	**Zalesovo Beam**	**56.35**	**333**	P	**P**		**13 07 56.9**	**-0.6**
	comp=Z,0.8nm,0.3s,mb4.2,baz=14,slow=9.2,SNR=7.7							
SONM	**Songino Array**	**56.89**	**315**	P	**P**		**13 08 01.8**	**+0.4**
	comp=Z,1.2nm,0.9s,mb3.9,baz=46,slow=4.3,SNR=4.5							
BJI	**Beijing**	**60.84**	**303**	P	**P**		**13 08 28.8**	**-0.1**
BJI				SS	SS		13 20 44.5	+0.3
BJI				AMB	AMB			
	comp=Z,8.0nm,0.7s,mb5.0							
BJI				AMB	AMB			
	comp=Z,168nm,3.6s							
BJI				LR	LR			
	comp=N,204nm,14.8s,MS4.6							
BJI				LR	LR			
	comp=E,219nm,15.5s,MS4.6							
BJI				LR	LR			
	comp=Z,38nm,14.6s,MS3.7							
HHC	**Hu-ho-hao-te**	**61.64**	**307**	*e*P	**P**		**13 08 34.5**	**+0.2**
HHC				AP	pP		13 08 40.5	+3.0
HHC				XP	sP		13 08 45.3	+6.6
HHC				PP	PP		13 10 52.5	+3.1
HHC				PCS	PcS		13 13 18.0	-0.6
HHC				S	**S**		**13 16 51.5**	**-4.6**
HHC				SCS	ScS		13 18 20.3	-5.2
HHC				SS	SS		13 20 53.5	-3.1
HHC				AMB	AMB			
	comp=Z,24nm,0.5s							
HHC				AMB	AMB			
	comp=Z,157nm,6.0s							
HHC				LR	LR			
	comp=N,159nm,17.8s,MS4.5							
HHC				LR	LR			
	comp=E,257nm,19.0s,MS4.5							
HHC				LR	LR			
	comp=Z,150nm,16.6s,MS4.2							
GERES	**GERESS Array B**	**62.87**	**22**	P	**P**		**13 08 42.9**	**+0.5**
	comp=Z,0.3nm,0.2s,mb4.0,baz=356,slow=11,SNR=2.2							
AKTO	**Aktyubinsk**	**63.24**	**350**	LR	LR		13 36 23.0	
	comp=Z,26nm,18.0s,MS3.5,baz=328,slow=36							
MKAR	**Makanchi Array**	**63.68**	**332**	P	**P**		**13 08 47.3**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=51,slow=4.8,SNR=3.8							
GTA	**Gaotai**	**66.51**	**316**	*e*P	**P**		**13 09 13.5**	**+7.2**
GTA				AP	pP		13 09 18.3	+8.8
GTA				XP	sP		13 09 20.8	+10
GTA				AMB	AMB			
	comp=Z,3.0nm,0.9s,mb4.3							
NJ2	**Nanjing**	**67.09**	**297**	*e*P	**P**		**13 09 12.0**	**+1.9**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.9							
LZH	**Lanzhou**	**68.41**	**312**	*e*P	**P**		**13 09 24.8**	**+6.4**
LZH				AP	pP		13 09 29.8	+8.2
LZH				XP	sP		13 09 31.3	+8.4
LZH				AMB	AMB			
	comp=Z,18nm,1.3s,mb4.9							
LZH				AMB	AMB			
	comp=Z,75nm,4.3s							
GYA	**Guiyang**	**76.43**	**305**	P	**P**		**13 10 04.8**	**-1.5**
GYA				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
KMI	**Kunming**	**78.94**	**308**	P	**P**		**13 10 22.0**	**+1.6**
KMI				AP	pP		13 10 28.5	+4.8
KMI				XP	sP		13 10 31.5	+6.6
KMI				AMB	AMB			
	comp=Z,4.0nm,1.5s,mb4.1							
CMAR	**Chiang Mai Arr**	**86.38**	**309**	P	**P**		**13 10 58.5**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.3,baz=0.7,slow=6.7,SNR=5.1							
TORD	**Torodi Ar. Bea**	**94.76**	**42**	P	**P**		**13 11 38.0**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.9,baz=347,slow=5.9,SNR=2.8							

*CSEM **28** 13:21:04.1±0.1, 39.19N×4171E, h2km, MD3.1, Error ellipse: s-maj=3.9km s-min=2.3km az=158.0*
*ISCJB **28** 13:21:05.9±0.4, 39.15N±002×4166E±004, h10km, Error ellipse: s-maj=4.4km s-min=2.8km az=35.7*
*DDA **28** 13:21:05.1, 39.11N×4165E, h21km±1km, Md2.8*
*ISK **28** 13:21:06.1, 3920N×4165E, h10km, MD3.1*

ISC 28 13:21:05.9±0.6, 3913N±002×4163E±004, h1km±6km, n16, σ0§83/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BNGL	**BINGOL**	**0.42**	**245**	*i* P		**Pg**	**13 21 13.6**	**-0.2**
BNGL				*i* S		**Sg**	**13 21 20.6**	**+1.4**
ERZM	**Erzurum**	**0.80**	**345**	*i* P		**Pg**	**13 21 20.6**	**-0.6**
ERZM				*i* S		**Sg**	**13 21 30.1**	**-1.4**
EZM	**Erzurum**	**0.80**	**345**	*e*PG		**Pg**	**13 21 20.6**	**-0.6**
EZM				*e*SG		**Sg**	**13 21 31.5**	**-0.1**
HOMI	**Horasan**	**0.94**	**13**	*e*P		**Pg**	**13 21 25.0**	**+1.2**
HOMI				*i* S		**Sg**	**13 21 37.8**	**+1.8**
TUTA	**Tutak**	**0.96**	**73**	*i* P		**Pg**	**13 21 22.6**	**-1.6**
TUTA				*i* S		**Sg**	**13 21 36.6**	**0.0**
AGRB	**Hanur-Agry**	**1.14**	**67**	*e*PN		**Pg**	**13 21 27.3**	**-0.5**
AGRB				*e*SN		**Sg**	**13 21 43.8**	**+1.2**
BEST	**Besiri**	**1.27**	**193**	*i* P		**Pg**	**13 21 29.4**	**-0.8**
BEST				*i* S		**Sg**	**13 21 47.1**	**+0.5**
DDEM	**Demirkent**	**1.76**	**3**	*i* P		**Pn**	**13 21 37.7**	**+0.3**
DDEM				*i* S		**Sb**	**13 22 02.5**	**+0.9**
PTK	**Pertek**	**1.76**	**263**	*e*PN		**Pn**	**13 21 37.6**	**+0.1**
PTK				*e*SN		**Sn**	**13 22 01.1**	**+0.6**
MARD	**Mardin**	**1.94**	**201**	*i* P		**Pn**	**13 21 39.6**	**-0.2**
MARD				*i* S		**Sb**	**13 22 06.0**	**-0.5**
DAGI	**Agillar**	**1.96**	**6**	*i* P		**Pn**	**13 21 40.4**	**+0.2**
DAGI				*i* S		**Sb**	**13 22 06.7**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.97**	**248**	*e*PN		**Pn**	**13 21 40.7**	**+0.4**
GUMT	**Gumushane**	**2.12**	**309**	*e*PN		**Pn**	**13 21 42.0**	**-0.5**
ELZG	**Elazig**	**2.16**	**254**	*e*P		**Pn**	**13 21 42.5**	**-0.4**
ELZG				*i* S		**Sb**	**13 22 12.4**	**-0.7**
BCA	**Borcka**	**2.31**	**360**	*e*PN		**Pn**	**13 21 44.0**	**-1.1**
URFA	**Urfa**	**2.78**	**234**	*e*PN		**Pn**	**13 21 52.8**	**+1.3**

*IDC **28** 13:41:14.2±0.6, 3175S×17801W, h0km, mb4.5/12, mb1 4.6/14, mb1mx4.5/19, mbtmp4.5/14, ML4.9/1, MS4.1/13, Ms1 4.1/13, ms1mx3.9/28, Error ellipse: s-maj=19.7km s-min=15.9km az=104.0*
*ISCJB **28** 13:41:18.2±0.5, 3213S±005×178.14W±009, h33km, mb4.5/16, MS4.1/12, Error ellipse: s-maj=10.9km s-min=5.9km az=20.5*
*MOS **28** 13:41:18.9±1.9, 3172S×178.10W, h33km, mb5.3/3, Error ellipse: s-maj=16.1km s-min=12.8km az=68.5*
*NEIC **28** 13:41:21.2±1.4, 3168S×17795W, h49km±11km, mb5.0/6, Error ellipse: s-maj=13.3km s-min=9.3km az=128.0*
*GCMT **28** 13:41:21.2±0.4, 3193S×17754W, h28km±1km, MW5.0/49, Moment Tensor Solution. s29,c37; s49,c65; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.76±.22; Mθθ 0.21±.16; Mϕϕ 2.55±.14; Mrθ 0.19±.35; Mθϕ 0.64±.13; Mϕr 2.97±.26; Best double couple: Mo 4.04000×10^16 NP1: ϕs 205.00000°, δ23.00000°, λ112.00000°. NP2:*

ϕs 1.00000°, δ69.00000°, λ81.00000°. Principal axes: T 4.1320, Plg65.0000°, Azm256.0000°; N -0.1880, Plg8.0000°, Azm5.0000°; P -3.9470, Plg23.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 28 13:41:20.0±0.5, 3206S×17808W±009, h35km, (h32km±5km:pP-P), n101, σ1§43/61, mb4.5/16, MS4.1/12, 4C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**2.81**	**3**	Pn		**Pn**	**13 41 56.8**	**-5.6**
	271nm,0.3s,baz=79,slow=22,SNR=5.8							
RAO				Sn		**Sn**	**13 42 28.7**	**-6.2**
	446nm,0.3s,baz=257,slow=24,SNR=4.4							
RAO	**Raoul Island**	**2.81**	**3**	*e*P		**Pn**	**13 41 56.3**	**-6.0**
RAO				Sn		**Sn**	**13 42 28.7**	**-6.2**
PUZ	**Puketiti**	**6.71**	**206**	P		**Pn**	**13 42 52.3**	**-3.6**
PUZ				S		**Sn**	**13 44 12.1**	**+1.0**
MWZ	**Matawai**	**7.22**	**209**	*e*P		**Pn**	**13 42 59.0**	**-3.9**
MWZ				S		**Sn**	**13 44 24.5**	**+0.9**
URZ	**Urewera**	**7.33**	**211**	Pn		**Pn**	**13 43 01.3**	**-3.2**
	2.3nm,0.3s,baz=110,slow=2.3,SNR=16							
URZ				Sn		**Sn**	**13 44 27.0**	**+0.5**
	27nm,0.3s,baz=184,slow=22,SNR=10							
URZ	**Urewera**	**7.33**	**211**	P		**Pn**	**13 43 01.2**	**-3.3**
WCZ	**Waipu Caves**	**7.39**	**236**	*e*P		**Pn**	**13 43 10.9**	**+5.6**
OUZ	**Omahuta**	**7.62**	**243**	P		**Pn**	**13 43 13.8**	**+5.3**
BKZ	**Black Stump Fm**	**8.35**	**210**	P		**Pn**	**13 43 15.4**	**-3.1**
BKZ				S		**Sn**	**13 44 49.8**	**-1.8**
MRZ	**Mangatainoka R**	**9.99**	**209**	*e*P		**Pn**	**13 43 36.9**	**-4.0**
MRZ				S		**Sn**	**13 45 25.0**	**-6.7**
SNZO	**South Karori**	**10.89**	**210**	P		**Pn**	**13 43 53.6**	**+0.3**
THZ	**Tophouse**	**12.07**	**214**	*e*P		**Pn**	**13 44 04.1**	**-5.3**
THZ				S		**Sn**	**13 46 16.8**	**-5.8**
RPZ	**Rata Peaks**	**14.44**	**213**	Pn		**Pn**	**13 44 36.4**	**-5.3**
	0.7nm,0.3s,baz=358,slow=20,SNR=2.5							
RPZ				Sn		**Sn**	**13 47 06.9**	**-14**
	1.8nm,0.3s,baz=350,slow=16,SNR=7.6							
DZM	**Mont Dzumac**	**16.98**	**302**	*e*P		**Pn**	**13 45 16.6**	**+1.7**
AFI	**Afiamalu**	**18.97**	**19**	P		**Pn**	**13 45 32.2**	**-7.0**
	1.2nm,0.3s,baz=37,slow=13,SNR=3.2							
AFI	**Afiamalu**	**18.97**	**19**	*e*P		**Pn**	**13 45 34.1**	**-5.1**
RAR	**Rarotonga**	**19.58**	**61**	LR	LR		13 51 00.9	
	comp=Z,457nm,20.2s,baz=240,slow=30							
ARMA	**Armidale**	**25.92**	**266**	*e*P		**P**	**13 46 52.5**	**+3.6**
CNB	**Canberra Magne**	**27.22**	**254**	*e*P		**P**	**13 47 03.2**	**+2.6**
CAN	**Canberra**	**27.52**	**254**	P		**P**	**13 47 04.0**	**+0.8**
EIDS	**Eidsvold**	**27.80**	**276**	*e*P		**P**	**13 47 05.6**	**-0.3**
PPT	**Papeete**	**29.51**	**68**	*e*LR		LR	13 54 41.3	
	57.4nm,27.8s,baz=245							
PPT	**Papeete**	**29.51**	**68**	LR		LR	13 56 20.1	
	comp=Z,189nm,18.1s,MS3.8,baz=248,slow=31							
TOO	**Toolangi**	**30.28**	**249**	*e*P		**P**	**13 47 30.8**	**+3.0**
CTA	**Charters Tower**	**34.03**	**282**	⇑*i*P		**P**	**13 48 02.0**	**+1.1**
	15nm,0.6s,mb5.1							
CTA	**Charters Tower**	**34.03**	**282**	P		**P**	**13 48 01.4**	**+0.5**
	36nm,1.0s,mb5.2,baz=105,slow=9.6,SNR=19							
CTA				LR		LR	14 00 38.9	
	comp=Z,812nm,19.4s,MS4.5,baz=64,slow=34							
CTA	**Charters Tower**	**34.03**	**282**	⇑*i*P		**P**	**13 48 02.0**	**+1.1**
CTA				pmax	pmax			
	comp=Z,15nm,0.6s							
CTAO	**Charters Tower**	**34.03**	**282**	*e*P		**P**	**13 48 01.8**	**+1.0**
	comp=Z,78nm,1.3s,mb5.5							
CTAO	**Charters Tower**	**34.03**	**282**	*e*P		**P**	**13 48 01.8**	**+0.9**
CTAO				pmax	pmax			
	comp=Z,78nm,1.3s,mb5.5							
STKA	**Stephens Creek**	**34.07**	**259**	*e*P		**P**	**13 48 02.0**	**+0.9**
	comp=Z,7.2nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**34.07**	**259**	P		**P**	**13 48 02.0**	**+0.9**
	comp=Z,12nm,1.0s,mb4.8,baz=103,slow=8.1,SNR=11							
STKA				LR		LR	14 01 32.4	
	comp=Z,801nm,18.3s,MS4.5,baz=280,slow=36							
RKT	**Rikitea**	**39.02**	**88**	*e*LR		LR	13 59 15.3	
	comp=Z,518nm,24.5s,baz=249							
COEN	**Coen**	**39.69**	**288**	*e*P		**P**	**13 48 49.2**	**+0.2**
	comp=Z,9.8nm,0.9s,mb4.5							
TAOE	**Nuku Hiva Isla**	**42.04**	**65**	*e*LR		LR	14 00 28.7	
	comp=Z,828nm,28.0s							
ASAR	**Alice Springs**	**42.98**	**269**	P		**P**	**13 49 15.3**	**-0.7**
	comp=Z,5.0nm,0.5s,mb4.5,baz=109,slow=7.0,SNR=78							
WB2	**Warramunga Arr**	**44.11**	**274**	⇑*i*P		**P**	**13 49 24.0**	**-1.1**
WRAB	**Tennant Creek**	**44.11**	**274**	*e*P		**P**	**13 49 23.8**	**-1.4**
WRAB	**Tennant Creek**	**44.11**	**274**	*i* P		**P**	**13 49 24.8**	**-0.3**
WRA	**Warramunga Arr**	**44.12**	**274**	P		**P**	**13 49 24.2**	**-0.9**
	comp=Z,10nm,0.4s,mb4.9,baz=113,slow=7.8,SNR=241							
WRA				LR		LR	14 07 15.7	
	comp=Z,821nm,18.5s,MS4.7,baz=110,slow=35							
FORT	**Forrest**	**45.58**	**257**	*e*P		**P**	**13 49 35.6**	**-1.1**
	comp=Z,34nm,1.2s,mb5.2							
SBA	**Scott Base**	**46.38**	**184**	*e*P		**P**	**13 49 46.2**	**+3.8**
	comp=Z,13nm,1.1s,mb4.8							
SBA	**Scott Base**	**46.38**	**184**	*e*P		**P**	**13 49 46.2**	**+3.9**
SBA				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.8							
VNDA	**Vanda**	**46.44**	**186**	P		**P**	**13 49 45.6**	**+2.8**
	comp=Z,0.8nm,0.7s,mb3.8,baz=15,slow=4.0,SNR=5.6							
VNDA				LR		LR	14 06 47.3	
	comp=Z,207nm,18.5s,MS4.1,baz=14,slow=33							
KAKA	**Kakadu**	**49.17**	**281**	*e*P		Px	13 49 48.2	
	comp=Z,10nm,0.6s							
KLBR	**Kellerberrin**	**53.76**	**252**	*e*P		**P**	**13 50 37.0**	**-2.0**
	comp=Z,26nm,1.3s,mb5.0							
GUMO	**Guam**	**57.62**	**316**	LR		LR	14 09 19.5	
	comp=Z,58nm,20.6s,MS3.7,baz=59,slow=29							
QSPA	**South Pole Qui**	**58.05**	**180**	P		**P**	**13 51 12.1**	**+3.2**
	comp=Z,8.3nm,0.9s,mb4.7,baz=16,slow=3.1,SNR=9.6							
CBIJ	**Chichi Jima**	**59.96**	**323**	LR		LR	14 16 31.8	
	comp=Z,211nm,19.6s,MS4.4,baz=174,slow=30							
MAW	**Mawson**	**70.73**	**201**	P		**P**	**13 52 33.1**	**+1.0**
	comp=Z,6.3nm,1.0s,mb4.5,baz=276,slow=15,SNR=3.9							
SYO	**Syowa Base**	**75.49**	**193**	*e*P		**P**	**13 53 00.2**	**+0.1**
SNAA	**Sanae**	**76.50**	**178**	*e*		**P**	**13 53 03.4**	**-2.4**
SNAA				*e*		pP	13 53 12.7	-4.1
SNAA				*e*			13 53 23.9	
SNAA	**Sanae**	**76.50**	**178**	*e*P		**P**	**13 53 02.9**	**-2.9**
VNA3	**Neumayer Olymp**	**76.66**	**176**	*e*		**P**	**13 53 08.0**	**+1.3**
VNA3				*e*		pP	13 53 17.9	+0.2
VNA3				*e*			13 53 29.1	
VNA2	**Neumayer--Watz**	**77.09**	**177**	*e*		**P**	**13 53 11.0**	**+1.8**
	baz=162,slow=3.1							
VNA2				*e*		pP	13 53 20.6	+0.5
VNA2				*e*			13 53 31.9	
VNA1	**Neumayer--Stat**	**77.32**	**177**	*e*		**P**	**13 53 12.3**	**+1.8**
VNA1				*e*		pP	13 53 22.1	+0.7
VNA1				*e*			13 53 33.3	
MJAR	**Matsushiro Arr**	**79.57**	**326**	LR		LR	14 23 50.7	
	comp=Z,88nm,18.2s,MS4.1,baz=180,slow=32							
PLCA	**Paso Flores**	**81.43**	**133**	P		**P**	**13 53 32.5**	**-0.9**
	comp=Z,2.2nm,1.1s,mb4.0,baz=209,slow=12,SNR=3.4							
KSRS	**Korea Array**	**85.57**	**320**	LR		LR	14 27 17.9	
	comp=Z,66nm,18.7s,MS4.0,baz=286,slow=32							
PETK	**Petropavlovsk-**	**87.40**	**346**	P		**P**	**13 54 02.0**	**-1.0**
	comp=Z,3.3nm,0.6s,mb4.7,baz=120,slow=8.5,SNR=11							
CFAA	**Coronel Fontan**	**88.30**	**127**	LR		LR	14 24 10.2	
	comp=Z,15nm,21.0s,MS3.4,baz=51,slow=29							
NVAR	**Mina Array Bea**	**89.50**	**43**	P		**P**	**13 54 13.5**	**+0.1**
	comp=Z,0.8nm,0.7s,mb4.2,baz=220,slow=7.1,SNR=5.7							
ELK	**Elko**	**92.81**	**43**	P		**P**	**13 54 28.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb4.1,baz=223,slow=11,SNR=3.7							
LVC	**Limon Verde**	**93.19**	**119**	LR		LR	14 28 21.3	
	comp=Z,98nm,18.9s,MS4.3,baz=77,slow=30							
TXAR	**Lajitas Array**	**93.34**	**57**	P		**P**	**13 54 30.7**	**-0.7**
	comp=Z,0.3nm,0.7s,mb3.9,baz=190,slow=6.4,SNR=4.0							
CMAR	**Chiang Mai Arr**	**93.89**	**289**	LR		LR	14 35 16.4	
	comp=Z,70nm,18.1s,MS4.2,baz=160,slow=35							
MKAR	**Makanchi Array**	**118.78**	**309**	PKP		PKPdf	14 00 02.5	-1.6
	comp=Z,1.0nm,0.6s,baz=60,slow=0.6,SNR=5.4							
ZALV	**Zalesovo Beam**	**119.22**	**318**	PKP		PKPdf	14 00 03.6	-1.1
	comp=Z,0.7nm,0.4s,baz=104,slow=3.4,SNR=4.2							
KURK	**Kurchatov**	**122.14**	**313**	PKP		PKPdf	14 00 08.9	-1.6
	comp=Z,2.7nm,0.6s,baz=112,slow=1.9,SNR=15							
KURK	**Kurchatov**	**122.14**	**313**	*i* PKIKP		PKPdf	14 00 12.0	+1.6
ARCES	**ARCESS Array B**	**140.19**	**347**	PKhKP			14 00 35.9	
	comp=Z,4.6nm,0.9s,baz=272,slow=3.2,SNR=4.3							
ARCES				PKP		PKPdf	14 00 43.0	-1.0
	comp=Z,2.7nm,0.6s,baz=14,slow=2.5,SNR=7.5							
JOF	**Joensuu**	**143.93**	**338**	epkp		PKPdf	14 00 48.2	-2.6
	comp=Z,1.2nm,0.4s							
VRHR	**Novokhopersk**	**145.28**	**315**	*e*PKIKP		PKPdf	14 00 52.1	-1.4
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.5s							
VRHR				pmax	pmax			
	comp=N,10.0nm,0.6s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.4s							
MOS	**Moscow**	**145.65**	**324**	*e*PKP2		PKPdf	14 00 52.0	-2.0
MOS				pmax	pmax			
	comp=Z,130nm,1.4s							
KAF	**Kangasniemi**	**146.09**	**340**	*e*pkp		PKPdf	14 00 53.6	-0.9
	comp=Z,3.3nm,0.4s,baz=35,slow=3.5							
KAF	**Kangasniemi**	**146.09**	**340**	*e*PKIKP		PKPdf	14 00 53.6	-0.9
KAF				pmax	pmax			
	comp=Z,3.0nm,0.4s							
OBN	**Obninsk**	**146.48**	**324**	*e*PKPbc		PKPbc	14 00 55.7	-1.1
OBN	**Obninsk**	**146.48**	**324**	‖*i*PKP2		PKPbc	14 00 55.8	-1.1
OBN				*e*			14 07 53.4	
OBN				pmax	pmax			
	comp=Z,148nm,1.8s							
VSR	**Storozhevoye**	**146.70**	**316**	*e*PKP2		PKPbc	14 00 56.3	-1.3
VSR				pmax	pmax			
	comp=Z,20nm,1.1s							
VSR				pmax	pmax			
	comp=N,7.0nm,1.0s							
VSR				pmax	pmax			
	comp=E,30nm,1.2s							
VORD	**Divnogorie**	**146.72**	**316**	*e*PKP2		PKPbc	14 00 56.5	-1.2
VORD				pmax	pmax			
	comp=Z,50nm,1.5s							
VORD				pmax	pmax			
	comp=N,9.0nm,0.7s							
VORD				pmax	pmax			
	comp=E,20nm,0.8s							
VSU	**Vasula**	**148.71**	**335**	*i* PKP2		PKPbc	14 01 02.5	-0.3
NB2	**NORSAR Subarra**	**150.38**	**351**	PKP		PKPbc	14 01 05.4	-1.4
	comp=Z,12nm,1.2s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**150.38**	**351**	PKPbc		PKPbc	14 01 05.3	-1.5
	comp=Z,2.4nm,0.7s,baz=14,slow=4.2,SNR=7.7							
NOA				PKPab		PKPab	14 01 12.9	-0.4
	comp=Z,3.2nm,0.7s,baz=18,slow=2.9,SNR=11							
AKASG	**Malin Array Be**	**152.56**	**321**	PKPbc		PKPbc	14 01 11.2	-1.0
	comp=Z,5.8nm,0.8s,baz=49,slow=2.7,SNR=32							
AKASG				PKPab		PKPab	14 01 20.9	-1.8
	comp=Z,4.7nm,0.6s,baz=51,slow=3.0,SNR=10							
AKASG	**Malin Array Be**	**152.56**	**321**	PKPbc		PKPbc	14 01 11.2	-1.0
AKASG				PKPab		PKPab	14 01 20.9	-1.8
KIEV	**Kiev**	**152.57**	**321**	*e*PKPbc		PKPbc	14 01 10.9	-1.3
BR131	**Keskin Array S**	**153.29**	**296**	*e*PKPbc		PKPbc	14 01 13.9	-0.3
BRTR	**Keskin Array B**	**153.29**	**296**	PKPbc		PKPbc	14 01 13.8	-0.4
	comp=Z,2.7nm,0.5s,baz=145,slow=4.0,SNR=6.1							
BRTR				PKPab		PKPab	14 01 25.1	-1.1
	comp=Z,5.2nm,0.9s,baz=97,slow=5.0,SNR=6.8							
KWP	**Kalwaria**	**156.57**	**325**	*e*PKPab		PKPab	14 01 38.3	-1.5
KOLS	**Kolonicke sedl**	**157.24**	**324**	*e*PKP		PKPab	14 01 41.7	-1.1
STHS	**Stebnicka Huta**	**157.42**	**326**	*e*PKP		PKPab	14 01 42.1	-1.4
CRVS	**Cervenica-Dubn**	**157.66**	**325**	*e*PKP		PKPab	14 01 42.7	-1.9
CLL	**Collm**	**159.11**	**340**	*i* PKP2		PKPab	14 01 48.8	-1.9
CLL				pmax	pmax			
	comp=Z,32nm,1.7s							
CLL	**Collm**	**159.11**	**340**	*i* PKPab		PKPab	14 01 48.8	-1.9
	comp=Z,32nm,1.7s							
CLL				*ex*		x	14 01 55.0	
VYHS	**Vyhne**	**159.20**	**327**	*e*PKP		PKPab	14 01 49.9	-1.4
BRG	**Berggiesshubel**	**159.21**	**338**	*e*PKP2		PKPab	14 01 49.9	-1.3
BRG				pmax	pmax			
	comp=Z,15nm,1.6s							
BRG	**Berggiesshubel**	**159.21**	**338**	*e*P		PKPab	14 01 49.9	-1.3
	comp=Z,25nm,1.6s							
MODS	**Modra-Piesok**	**159.99**	**329**	*e*PKP		PKPab	14 01 53.0	-1.7
KHC	**Kasperske Ho

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.81**	**19**	Pn	**Pn**	**14 15 36.0**	**-0.3**
	2.8nm,0.3s,baz=53,slow=23,SNR=5.4						
AFI				Sn	Sx	14 17 24.9	
	0.6nm,0.3s,baz=48,slow=23,SNR=2.3						
AFI	**Afiamalu**	**10.81**	**19**	*e*P	**Pn**	**14 15 33.6**	**-2.7**
AFI				Pn	**Pn**	**14 15 36.0**	**-0.3**
AFI				Sn	Sx	14 17 24.9	
RAR	**Rarotonga**	**14.78**	**81**	Pn	**Pn**	**14 16 30.4**	**-0.1**
	2.5nm,0.3s,baz=40,slow=21,SNR=4.5						
RAR				LR	LR	14 20 40.3	
	comp=Z,151nm,20.4s,baz=273,slow=30						
RAR	**Rarotonga**	**14.78**	**81**	*e*Pn	**Pn**	**14 16 30.6**	**+0.2**
RAR				LR	LR	14 20 40.3	
URZ	**Urewera**	**15.38**	**203**	Sn	**Sn**	**14 19 18.1**	**-9.2**
	0.3nm,0.3s,baz=12,slow=19,SNR=2.9						
PPT	**Papeete**	**25.05**	**80**	*e*LR	LR	14 24 49.5	
	138nm,25.0s						
PPT	**Papeete**	**25.05**	**80**	LR	LR	14 25 48.8	
	comp=Z,37nm,18.4s,MS2.9,baz=263,slow=30						
HNR	**Honiara**	**27.68**	**298**	LR	LR	14 27 34.5	
	comp=Z,85nm,20.1s,MS3.3,baz=247,slow=32						
CTA	**Charters Tower**	**35.62**	**269**	P	**P**	**14 19 59.3**	**+0.7**
	2.9nm,0.5s,mb4.5,baz=85,slow=12,SNR=5.9						
CTAO	**Charters Tower**	**35.62**	**269**	*e*P	**P**	**14 19 59.5**	**+1.0**
	5.8nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**38.47**	**249**	LR	LR	14 34 00.4	
	comp=Z,121nm,18.0s,MS3.8,baz=178,slow=33						
ASAR	**Alice Springs**	**46.07**	**260**	P	**P**	**14 21 23.4**	**-1.2**
	2.0nm,0.9s,mb4.1,baz=94,slow=8.2,SNR=14						
ASAR	**Alice Springs**	**46.07**	**260**	P	**P**	**14 21 23.4**	**-1.2**
WRAB	**Tennant Creek**	**46.51**	**265**	*e*P	**P**	**14 21 28.0**	**-0.1**
	2.3nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**46.52**	**265**	P	**P**	**14 21 27.9**	**-0.3**
	2.0nm,0.7s,mb4.1,baz=95,slow=8.3,SNR=22						
MJAR	**Matsushiro Arr**	**74.57**	**323**	P	**P**	**14 24 39.6**	**+0.4**
	2.9nm,1.1s,mb4.1,baz=153,slow=8.2,SNR=2.6						
NVAR	**Mina Array Bea**	**82.15**	**42**	P	**P**	**14 25 26.7**	**+5.7**
	0.3nm,0.7s,mb3.4,baz=209,slow=8.3,SNR=3.7						
CMAR	**Chiang Mai Arr**	**93.54**	**289**	P	**P**	**14 26 20.2**	**+3.5**
	2.6nm,0.8s,mb4.7,baz=136,slow=3.3,SNR=17						
CHTO	**Chiang Mai**	**93.68**	**289**	*e*P	**P**	**14 26 21.3**	**+4.0**
	2.0nm,0.8s,mb4.6						
BR131	**Keskin Array S**	**151.03**	**309**	*e*PKPbc	PKPbc	14 32 56.7	+3.4
BRTR	**Keskin Array B**	**151.03**	**309**	PKPbc	PKPbc	14 32 57.0	+3.8
	1.9nm,0.8s,baz=20,slow=4.6,SNR=4.7						
MMAI	**Mount Meron Ar**	**151.60**	**295**	PKPbc	PKPbc	14 32 58.9	+4.1
	4.8nm,0.8s,baz=58,slow=4.1,SNR=6.2						
TORD	**Torodi Ar. Bea**	**168.68**	**166**	PKPab	PKPab	14 34 22.9	+5.2
	0.5nm,0.8s,baz=198,slow=3.6,SNR=2.5						

*TRN **28** 14:18:09.2, 15.18N×6044W, h72km, MD5.2, M4.7(FDF)*
TRN Felt V Martinique, widely inDominica also felt in St. Vincent.
*ISCJB **28** 14:18:10.3±0.2, 15.15N±001×6058W±002, h81km, mb4.5/48, Error ellipse: s-maj=3.3km s-min=1.7km az=170.9*
*NEIC **28** 14:18:11.2±0.3, 15.14N×6053W, mb4.8/25, Error ellipse: s-maj=5.7km s-min=3.7km az=110.0*
*IDC **28** 14:18:11.4±0.5, 15.16N×6052W, h82km±4km, mb4.0/20, mb1 4.2/22, mb1mx4.1/26, mbtmp4.0/22, MS3.7/12, Ms1 3.7/12, ms1mx3.5/33, Error ellipse: s-maj=11.9km s-min=9.2km az=103.0*
*BJI **28** 14:18:11.1, 15.10N×6050W, h80km, mB5.0, Ms5.1, Msz4.8*
*RSPR **28** 14:18:15.0, 1541N×6079W, h125km±29km, MD4.8/9, MD4.8/9*

ISC 28 14:18:12.7±0.2, 1509N±001×6067W±002, h83km, h83km±1.2km:pP-P, n374, σ0992/401, mb4.5/48, 141C-120D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.58**	**202**	⇑*i*P	**Pn**	**14 18 25.8**	**-1.7**
FDF	**Fort de France**	**0.59**	**233**	*e*Pn	**Pn**	**14 18 26.1**	**-1.4**
FDF				*e*Sn	**Sn**	**14 18 38.5**	**0.0**
FDF	**Fort de France**	**0.59**	**233**	⇑*i*P	**Pn**	**14 18 26.4**	**-1.2**
DSTT	**Stowe**	**0.63**	**284**	⇓*i*P	**Pn**	**14 18 27.7**	**-0.2**
DBCT	**Belle View Cho**	**0.68**	**285**	⇑*i*P	**Pn**	**14 18 28.4**	**0.0**
BIM	**Bigot**	**0.69**	**214**	⇓*i*P	**Pn**	**14 18 27.5**	**-1.1**
DSHT	**Scott's Head**	**0.69**	**280**	⇑*i*P	**Pn**	**14 18 28.6**	**+0.1**
DPMT	**Pointe Michel**	**0.70**	**284**	*e*P	**Pn**	**14 18 28.7**	**0.0**
DPMT				*e*S	**Sn**	**14 18 41.1**	**+0.6**
MDN	**Morne-Daniel**	**0.73**	**288**	⇑*i*P	**Pn**	**14 18 29.2**	**+0.2**
MDN				*e*S	**Sn**	**14 18 43.0**	**+1.8**
DWS	**Wesley**	**0.78**	**307**	⇑*i*P	**Pn**	**14 18 28.8**	**-0.7**
DWS				*e*S	**Sn**	**14 18 41.8**	**-0.2**
SLW	**Petit Monier**	**1.10**	**194**	⇓*i*P	**Pn**	**14 18 31.4**	**-1.7**
SLW	**Petit Monier**	**1.10**	**194**	⇓*i*P	**Pn**	**14 18 32.4**	**-0.8**
SFG	**Saint Francois**	**1.26**	**336**	⇑*i*P	**Pn**	**14 18 32.4**	**-2.8**
SLPE	**Piton Saint Es**	**1.28**	**194**	⇓*i*P	**Pn**	**14 18 35.0**	**-0.4**
DOG	**Dongo Capester**	**1.31**	**316**	⇓*e*P	**Pn**	**14 18 34.3**	**-1.4**
SLB	**Belfond**	**1.31**	**196**	⇑*i*P	**Pn**	**14 18 35.3**	**-0.4**
HMG	**Houelmont**	**1.33**	**312**	⇓*i*P	**Pn**	**14 18 34.9**	**-1.1**
SLDE	**Delcer**	**1.34**	**196**	⇓*i*P	**Pn**	**14 18 36.0**	**-0.1**
BCG	**Bois Riant Cap**	**1.35**	**317**	⇓*e*P	**Pn**	**14 18 34.8**	**-1.5**
SCG	**Saint Claude**	**1.35**	**314**	⇓*i*P	**Pn**	**14 18 35.0**	**-1.3**
MCLT	**Moule a Chique**	**1.40**	**191**	⇑*e*P	**Pn**	**14 18 37.1**	**+0.2**
LZG	**Guadaloupe-1**	**1.49**	**314**	⇓*e*P	**Pn**	**14 18 36.7**	**-1.4**
SFAN	**Fancy Village**	**1.77**	**196**	*e*P	**Pn**	**14 18 41.9**	**+0.2**
SFAN				*e*S	**Sn**	**14 19 05.1**	**+1.5**
SSV	**Crater Summit**	**1.83**	**196**	⇓*i*P	**Pn**	**14 18 42.5**	**0.0**
BHS	**Barnard House**	**1.84**	**194**	⇑*i*P	**Pn**	**14 18 42.6**	**0.0**
BHS				*e*S	**Sn**	**14 19 06.1**	**+0.8**
SVV	**Soufriere Volc**	**1.84**	**197**	⇑*i*P	**Pn**	**14 18 42.8**	**+0.2**
SVV				*e*S	**Sn**	**14 19 06.2**	**+0.9**
SVB	**Belmont**	**1.90**	**197**	⇓*i*P	**Pn**	**14 18 42.9**	**-0.5**
SVB				*e*S	**Sn**	**14 19 07.6**	**+0.9**
FCV	**Fort Charlotte**	**2.00**	**196**	⇓*i*P	**Pn**	**14 18 44.6**	**-0.1**
FCV				*e*S	**Sn**	**14 19 10.1**	**+0.9**
BBGH	**Gun Hill**	**2.22**	**151**	*e*Pn	**Pn**	**14 18 44.0**	**-3.6**
BPA	**Boggy Peak**	**2.25**	**330**	⇑*i*P	**Pn**	**14 18 46.5**	**-1.6**
BPA				*e*S	**Sn**	**14 19 13.4**	**-1.7**
BBSP	**Saint Philip**	**2.30**	**149**	⇑*i*P	**Pn**	**14 18 46.6**	**-2.1**
BBSP				*e*S	**Sn**	**14 19 12.7**	**-3.5**
ANWB	**Willy Bob**	**2.78**	**337**	*e*Pn	**Pn**	**14 18 51.0**	**-4.1**
GRSS	**Sisters**	**2.92**	**198**	⇑*i*P	**Pn**	**14 18 57.5**	**+0.4**
GRSS				*e*S	**Sn**	**14 19 32.9**	**+1.6**
GRIC	**Isle de Caille**	**2.93**	**198**	⇓*e*P	**Pn**	**14 18 57.8**	**+0.6**
GRIC				*e*S	**Sn**	**14 19 32.9**	**+1.5**
SKI	**Saint Kitts**	**2.99**	**319**	⇓*i*P	**Pn**	**14 18 56.8**	**-1.1**
SKI				*e*S	**Sn**	**14 19 32.3**	**-0.5**
GRHS	**Sauteurs**	**3.00**	**198**	⇑*i*P	**Pn**	**14 18 58.8**	**+0.6**
GRHS				*e*S	**Sn**	**14 19 33.2**	**-0.1**
GRW	**Mount Saint Ca**	**3.07**	**198**	*e*P	**Pn**	**14 18 58.9**	**-0.3**
GRW				*e*S	**Sn**	**14 19 36.2**	**+1.4**
GRGR	**Grenville**	**3.10**	**198**	*e*Pn	**Pn**	**14 18 59.3**	**-0.1**
GRGR				*e*Sn	**Sn**	**14 19 36.7**	**+1.2**
SEUS	**St. Eustatius**	**3.26**	**317**	⇓*e*P	**Pn**	**14 19 00.9**	**-0.8**
SEUS				*e*S	**Sn**	**14 19 38.5**	**-1.0**
SABA	**Saba**	**3.52**	**316**	⇓*e*P	**Pn**	**14 19 04.4**	**-0.9**
SABA				*e*S	**Sn**	**14 19 42.7**	**-3.2**
SMRT	**St. Maarten**	**3.74**	**322**	⇓*e*P	**Pn**	**14 19 05.6**	**-2.5**
SMRT				*e*S	**Sn**	**14 19 47.4**	**-3.6**
TOSP	**Speyside**	**3.77**	**178**	⇓*e*P	**Pn**	**14 19 07.3**	**-1.4**
TOSP				*e*S	**Sn**	**14 19 49.0**	**-2.9**
TPR	**Prospect**	**3.88**	**182**	*e*P	**Pn**	**14 19 02.7**	**-7.4**
BOT	**Bacolet**	**3.90**	**181**	*e*P	**Pn**	**14 19 09.2**	**-1.2**
TRN	**Trinidad (W)**	**4.47**	**189**	*e*P	**Pn**	**14 19 17.6**	**-0.6**
TRN				*e*S	**Sn**	**14 20 07.5**	**-1.6**
TCE	**Chacachacare**	**4.50**	**194**	*e*P	**Pn**	**14 19 18.6**	**+0.1**
TCE				*e*S	**Sn**	**14 20 09.2**	**-0.3**
TBH	**Brigand Hill**	**4.60**	**185**	*e*P	**Pn**	**14 19 19.9**	**0.0**
TBH				*e*S	**Sn**	**14 20 11.6**	**-0.4**
GUIV	**Guiria**	**4.67**	**199**	*e*P	**Pn**	**14 19 21.2**	**+0.4**
GUIV				*e*S	**Sn**	**14 20 11.6**	**-2.2**
TPP	**Pointe-a-Pierr**	**4.81**	**189**	*e*P	**Pn**	**14 19 22.9**	**+0.2**
TPP				*e*S	**Sn**	**14 20 15.7**	**-1.4**
IBAV	**Isla La Blanqu**	**5.00**	**230**	⇑*i*P	**Pn**	**14 19 25.6**	**+0.2**
IBAV				*e*S	**Sn**	**14 20 19.8**	**-2.2**
TBVI	**Tortola**	**5.02**	**312**	⇑*e*P	**Pn**	**14 19 23.6**	**-2.0**
TBVI				*e*S	**Sn**	**14 20 19.7**	**-2.7**
ABV	**Anegada**	**5.04**	**316**	⇑*e*P	**Pn**	**14 19 25.1**	**-0.7**
ABV	**Anegada**	**5.04**	**316**	⇑*e*P	**Pn**	**14 19 25.8**	**0.0**
ABV				*e*S	**Sn**	**14 20 20.6**	**-2.1**
CRUV	**Carupano**	**5.05**	**210**	*e*P	**Pn**	**14 19 27.9**	**+1.8**
CRUV				*e*S	**Sn**	**14 20 21.1**	**-2.1**
STVI	**Saint Thomas**	**5.23**	**309**	⇑*e*P	**Pn**	**14 19 27.8**	**-0.7**
STVI				*e*S	**Sn**	**14 20 25.9**	**-1.6**
GUNV	**Guanoco**	**5.38**	**205**	*e*P	**Pn**	**14 19 32.2**	**+1.7**
GUNV				*e*S	**Sn**	**14 20 29.1**	**-2.1**
HUMP	**Col San Antoni**	**5.82**	**302**	⇑*e*P	**Pn**	**14 19 37.5**	**+1.1**
HUMP				*e*S	**Sn**	**14 20 41.2**	**-0.7**
SJG	**San Juan**	**6.05**	**300**	⇑*e*P	**Pn**	**14 19 39.0**	**-0.7**
SJG	**San Juan**	**6.05**	**300**	*e*Pn	**Pn**	**14 19 39.9**	**+0.2**
	202nm,0.6s						
SJG				*e*Sn	**Sn**	**14 20 47.0**	**-0.6**
SJG	**San Juan**	**6.05**	**300**	⇑*e*P	**Pn**	**14 19 39.1**	**-0.6**
SJG				*e*S	**Sn**	**14 20 46.0**	**-1.6**
PCRV	**Puerto La Cruz**	**6.24**	**219**	P	**Pn**	**14 19 43.3**	**+1.1**
	7.4nm,0.3s,baz=56,slow=2.5,SNR=24						
PCRV				S	**Sn**	**14 20 50.6**	**-1.5**
	22nm,0.3s,baz=221,slow=21,SNR=7.5						
PCRV				LR	LR	14 21 34.1	
	comp=Z,356nm,21.4s,baz=252,slow=32						
PCRV	**Puerto La Cruz**	**6.24**	**219**	⇑*e*P	**Pn**	**14 19 43.2**	**+1.0**
ICM	**Isla Caja Muer**	**6.27**	**297**	⇑*e*P	**Pn**	**14 19 42.9**	**+0.2**
ICM				*e*S	**Sn**	**14 20 50.3**	**-2.5**
ORCV	**Isla La Orchil**	**6.29**	**239**	⇑*i*P	**Pn**	**14 19 42.5**	**-0.4**
ORCV				*e*S	**Sn**	**14 20 50.1**	**-3.2**
OBIP	**Obispado Ponce**	**6.41**	**298**	⇑*e*P	**Pn**	**14 19 44.7**	**+0.2**
OBIP				*e*S	**Sn**	**14 20 54.9**	**-1.2**
ORIV	**Oritupano**	**6.56**	**204**	*e*P	**Pn**	**14 19 47.7**	**+1.1**
GBPR	**Guanica, Bosqu**	**6.61**	**297**	⇓*e*P	**Pn**	**14 19 48.6**	**+1.3**
GBPR				*e*S	**Sn**	**14 20 59.5**	**-1.7**
AOPR	**Arecibo Observ**	**6.67**	**300**	⇑*e*P	**Pn**	**14 19 49.1**	**+1.0**
AOPR	**Arecibo Observ**	**6.67**	**300**	⇑*e*P	**Pn**	**14 19 49.9**	**+1.8**
AOPR				*e*S	**Sn**	**14 21 01.6**	**-1.0**
CRPR	**Cabo Rojo, PR**	**6.82**	**296**	⇑*e*P	**Pn**	**14 19 51.1**	**+1.0**
CRPR				*e*S	**Sn**	**14 21 04.6**	**-1.8**
LSP	**Las Mesas**	**6.87**	**297**	⇑*e*P	**Pn**	**14 19 52.7**	**+1.8**
LSP				*e*S	**Sn**	**14 21 05.7**	**-1.9**
AGPR	**Aguadilla, PR**	**7.03**	**299**	⇑*e*P	**Pn**	**14 19 55.0**	**+2.1**
AGPR	**Aguadilla, PR**	**7.03**	**299**	⇑*e*P	**Pn**	**14 19 55.1**	**+2.2**
AGPR				*e*S	**Sn**	**14 21 12.4**	**+1.1**
RIOV	**Rio Grande**	**7.07**	**189**	*e*P	**Pn**	**14 19 53.1**	**-0.5**
CUPV	**Cœpira**	**7.07**	**226**	⇑*e*P	**Pn**	**14 19 55.1**	**+1.5**
CUPV				*e*S	**Sn**	**14 21 09.0**	**-3.5**
BIRV	**Birongo**	**7.13**	**231**	⇑*i*P	**Pn**	**14 19 54.7**	**+0.2**
GURV	**El Guri**	**7.66**	**198**	*e*P	**Pn**	**14 20 00.9**	**-0.8**
TURV	**Turiamo**	**8.38**	**237**	⇑*e*P	**Pn**	**14 20 10.8**	**-0.6**
JACV	**Jacura**	**8.89**	**244**	⇑*e*P	**Pn**	**14 20 18.9**	**+0.4**
BAUV	**El Baul**	**9.45**	**231**	⇑*i*P	**Pn**	**14 20 26.0**	**-0.1**
SIQV	**Siquisique**	**9.95**	**245**	*e*P	**Pn**	**14 20 32.7**	**-0.1**
SANV	**Sanarito**	**10.29**	**238**	*e*P	**Pn**	**14 20 37.7**	**+0.1**
CURV	**Curarigua**	**10.38**	**242**	*e*P	**Pn**	**14 20 39.1**	**+0.4**
DABV	**Dabajuro**	**10.56**	**248**	⇑*e*P	**Pn**	**14 20 41.0**	**-0.2**
SDDR	**Presa de Saban**	**10.87**	**292**	*e*Pn	**Pn**	**14 20 45.4**	**0.0**
	108nm,0.6s						
SDDR				*e*Sn	**Sn**	**14 22 43.3**	**-1.8**
SDV	**Santo Domingo**	**11.53**	**239**	P	**Pn**	**14 20 54.8**	**+0.4**
	7.9nm,0.3s,baz=85,slow=8.8,SNR=46						
SDV				S	**Sn**	**14 22 59.9**	**-1.5**
	2.2nm,0.3s,baz=9.6,slow=21,SNR=2.8						
SDV				LR	LR	14 25 45.6	
	comp=Z,234nm,20.4s,baz=48,slow=39						
SDV	**Santo Domingo**	**11.53**	**239**	*e*Pn	**Pn**	**14 20 53.9**	**-0.5**
	31nm,0.4s						
ELOV	**Elorza**	**11.81**	**228**	*e*P	**Pn**	**14 20 58.0**	**-0.2**
SOCV	**Socops**	**12.05**	**237**	*e*P	**Pn**	**14 21 01.4**	**-0.1**
VIGV	**El Vigia**	**12.17**	**240**	*e*P	**Pn**	**14 21 02.5**	**-0.6**
BBSR	**BB Station**	**17.59**	**349**	*e*P	**Pn**	**14 22 04.6**	**-7.8**
	60nm,0.6s						
BCIP	**Isla Barro Col**	**19.64**	**255**	*e*P	**Pn**	**14 22 36.1**	**-1.0**
	146nm,1.1s						
OTAV	**Otavalo**	**22.95**	**232**	*e*P	**P**	**14 23 10.2**	**-0.1**
	41nm,0.8s,mb4.8						
TGUH	**Tegucigalpa,Un**	**25.77**	**271**	P	**P**	**14 23 36.7**	**+0.7**
ATAH	**Atahualpa**	**28.12**	**220**	P	**P**	**14 23 57.1**	**+0.1**
	8.2nm,0.7s,mb4.4,baz=35,slow=12,SNR=4.7						
ATAH				LR	LR	14 36 12.6	
	comp=Z,150nm,18.3s,baz=255,slow=38						
TKL	**Tuckaleechee C**	**29.11**	**319**	LR	LR	14 33 44.9	
	comp=Z,124nm,21.9s,baz=242,slow=32						
SIV	**San Ignacio**	**30.89**	**181**	P	**P**	**14 24 21.9**	**+0.4**
	5.4nm,0.6s,mb4.4,baz=11,slow=9.1,SNR=26						
NNA	**Nana**	**31.31**	**212**	*e*P	**P**	**14 24 22.9**	**-2.3**
	14nm,0.7s,mb4.8						
SADO	**Sadowa**	**33.47**	**336**	P	**P**	**14 24 42.4**	**-1.4**
	8.1nm,0.9s,mb4.6,baz=194,slow=6.7,SNR=3.6						
SADO				LR	LR	14 37 13.1	
	comp=Z,99nm,18.6s,baz=146,slow=34						
LVC	**Limon Verde**	**38.33**	**192**	P	**P**	**14 25 25.0**	**-0.6**
	25nm,0.7s,mb5.1,baz=12,slow=5.8,SNR=19						
LVC	**Limon Verde**	**38.33**	**192**	*e*P	**P**	**14 25 24.8**	**-0.8**
	25nm,0.8s,mb5.1						
JCT	**Junction City**	**38.98**	**300**	*e*P	**P**	**14 25 29.7**	**-1.3**
	20nm,0.9s,mb4.9						
WMOK	**Wichita Mounta**	**39.41**	**307**	*e*P	**P**	**14 25 33.2**	**-1.4**
	5.5nm,0.5s,mb4.6						
ECSD	**EROS,Sioux Fal**	**41.83**	**320**	*e*P	**P**	**14 25 55.1**	**+0.7**
	12nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**42.01**	**297**	P	**P**	**14 25 55.6**	**-0.5**
	0.9nm,0.6s,mb3.7,baz=113,slow=8.0,SNR=12						
TXAR				pP	pP	14 26 15.2	-0.7
	2.0nm,0.7s,baz=116,slow=8.4,SNR=5.6						
TXAR				PcP	PcP	14 27 50.6	+0.8
	2.2nm,0.8s,baz=121,slow=5.6,SNR=6.3						
AGMN	**Agassiz Refuge**	**43.97**	**326**	*e*P	**P**	**14 26 10.3**	**-1.2**
	5.9nm,0.5s,mb4.6						
LCO	**Las Campanas**	**44.90**	**192**	*e*P	**P**	**14 26 18.1**	**-1.0**
	11nm,0.9s,mb4.6						
ULM	**Lac du Bonnet**	**45.16**	**329**	P	**P**	**14 26 19.1**	**-1.9**
	3.6nm,0.6s,mb4.3,baz=108,slow=8.3,SNR=2.9						
ULM				LR	LR	14 43 55.7	
	comp=Z,141nm,18.4s,baz=218,slow=34						
ANMO	**Albuquerque**	**45.51**	**304**	*e*P	**P**	**14 26 24.0**	**0.0**
	4.2nm,1.1s,mb4.1						
ANMO				*e*pP	pP	14 26 43.9	-0.3
SDCO	**Great Sand Dun**	**45.51**	**308**	*e*P	**P**	**14 26 23.5**	**-0.5**
	3.7nm,0.8s,mb4.2						
CFAA	**Coronel Fontan**	**46.99**	**189**	P	**P**	**14 26 35.1**	**-0.5**
	1.3nm,0.8s,mb3.7,baz=345,slow=6.3,SNR=18						
CFAA				pP	pP	14 26 54.7	-1.1
	1.0nm,0.7s,baz=346,slow=7.2,SNR=4.0						
319A	**Douglas**	**47.13**	**299**	⇑P	**P**	**14 26 37.5**	**+0.7**
	baz=47,SNR=5.9						
219A	**White Tail Can**	**47.21**	**300**	⇓P	**P**	**14 26 38.2**	**+0.8**
	baz=47,SNR=8.1						
R21A	**Cimarron**	**47.24**	**309**	⇓P	**P**	**14 26 37.8**	**+0.3**
	baz=47						
119A	**Ashpeak Ranch,**	**47.38**	**301**	⇑P	**P**	**14 26 39.5**	**+0.8**
	baz=48,SNR=5.6						
LPIG	**La Paz**	**47.41**	**289**	LR	LR	14 47 15.9	
	comp=Z,89nm,20.9s,baz=17,slow=37						
Z19A	**T-Link Ranch,**	**47.44**	**301**	⇓P	**P**	**14 26 39.8**	**+0.6**
	baz=48						
M22A	**Cedar Creek Ra**	**47.48**	**313**	⇓P	**P**	**14 26 40.3**	**+1.0**
	baz=48						
Y19A	**Nutrioso**	**47.55**	**302**	⇑P	**P**	**14 26 40.8**	**+0.8**
	baz=48						
X19A	**St. Johns**	**47.67**	**303**	⇑P	**P**	**14 26 41.6**	**+0.7**
	baz=48						
O21A	**Pagoda**	**47.72**	**311**	⇑P	**P**	**14 26 41.7**	**+0.4**
	baz=48						
318A	**Bisbee**	**47.74**	**299**	⇓P	**P**	**14 26 42.1**	**+0.6**
	baz=48,SNR=13						
218A	**Dragoon**	**47.87**	**300**	⇓P	**P**	**14 26 43.8**	**+1.2**
	baz=48						
118A	**Hook Ranch,**	**47.91**	**300**	⇑P	**P**	**14 26 43.6**	**+0.7**
	baz=48,SNR=7.4						
T19A	**Beclabito**	**47.98**	**306**	⇑P	**P**	**14 26 43.3**	**+0.1**
	baz=48						
Y18A	**Canyon Day Jun**	**48.15**	**302**	⇓P	**P**	**14 26 45.3**	**+0.6**
	baz=48						
L21A	**Rawlins**	**48.21**	**313**	⇓P	**P**	**14 26 45.0**	**0.0**
	baz=48						
X18A	**Snowflake**	**48.22**	**303**	⇓P	**P**	**14 26 45.5**	**+0.3**
	baz=48						
S19A	**Harvey Farm, M**	**48.28**	**307**	⇑P	**P**	**14 26 45.5**	**-0.2**
	baz=48						
217A	**Green Valley**	**48.49**	**299**	⇑P	**P**	**14 26 47.6**	**+0.3**
	baz=49,SNR=6.4						
R19A	**Curley Farm, L**	**48.52**	**308**	⇓P	**P**	**14 26 47.4**	**0.0**
	baz=49						
TUC	**Tucson**	**48.54**	**300**	*e*P	**P**	**14 26 47.6**	**0.0**
	11nm,1.3s,mb4.6						
TUC				*e*pP	pP	14 27 07.0	-1.0
117A	**Oracle**	**48.54**	**300**	⇓P	**P**	**14 26 48.1**	**+0.5**
	baz=49,SNR=10						
M20A	**Sweetwater, Wa**	**48.63**	**312**	⇑P	**P**	**14 26 48.0**	**-0.3**
	baz=49						
Q19A	**Hogan Spring (**	**48.69**	**309**	⇓P	**P**	**14 26 49.1**	**+0.4**
	baz=49						
T18A	**Mexican Hat**	**48.71**	**306**	⇑P	**P**	**14 26 48.8**	**-0.1**
	baz=49,SNR=12						
Y17A	**Roosevelt**	**48.80**	**302**	⇓P	**P**	**14 26 50.6**	**+0.9**
	baz=49						
L20A	**Wamsutter**	**48.91**	**313**	⇑P	**P**	**14 26 49.8**	**-0.5**
	baz=49						
S18A	**Hurst Farm, Bl**	**48.93**	**307**	⇑P	**P**	**14 26 50.8**	**+0.2**
	baz=49						
R18A	**Canyonlands Na**	**49.02**	**308**	⇑P	**P**	**14 26 51.4**	**+0.1**
	baz=49						
K20A	**Yellowstone Ra**	**49.12**	**314**	⇓P	**P**	**14 26 51.8**	**-0.2**
	baz=49						
N19A	**John Jarvie Ra**	**49.17**	**311**	⇑P	**P**	**14 26 52.2**	**-0.1**
	baz=49						
Y16A	**Circle Bar Ran**	**49.36**	**302**	⇓P	**P**	**14 26 54.5**	**+0.6**
	baz=50,SNR=5.4						
Q18A	**Rafter H Ranch**	**49.38**	**309**	⇓P	**P**	**14 26 54.1**	**+0.1**
	baz=50						
T17A	**Navajo Res., N**	**49.40**	**306**	⇑P	**P**	**14 26 54.2**	**0.0**
	baz=50						
K19A	**Absolon Red Bu**	**49.52**	**314**	⇓P	**P**	**14 26 55.0**	**0.0**
	baz=50						
S17A	**Black Ridge (B**	**49.54**	**307**	⇓P	**P**	**14 26 55.8**	**+0.5**
	baz=50						
WUAZ	**Wupatki**	**49.56**	**304**	*e*P	**P**	**14 26 55.9**	**+0.5**
	21nm,0.8s,mb5.1						
WUAZ				*e*pP	pP	14 27 15.6	-0.2
WUAZ	**Wupatki**	**49.56**	**304**	⇓P	**P**	**14 26 55.9**	**+0.5**
	baz=50,SNR=5.6						
P18A	**Preston Nutter**	**49.60**	**309**	⇑P	**P**	**14 26 56.2**	**+0.5**
	baz=50						
W16A	**Flagstaff**	**49.61**	**303**	⇓P	**P**	**14 26 56.8**	**+1.0**
	baz=50						
R17A	**Hanksville Air**	**49.65**	**308**	⇑P	**P**	**14 26 56.4**	**+0.3**
	baz=50						
L19A	**Farson**	**49.66**	**313**	⇓P	**P**	**14 26 56.4**	**+0.4**
	baz=50						
SRU	**San Rafael**	**49.68**	**309**	⇑P	**P**	**14 26 56.1**	**-0.1**
	baz=50						
T16A	**Glen Canyon Da**	**49.95**	**306**	⇑P	**P**	**14 26 58.8**	**+0.5**
	baz=50						
M18A	**Lyman**	**49.96**	**312**	⇓P	**P**	**14 26 58.5**	**+0.1**
	baz=50						
BW06	**Boulder Array**	**50.00**	**314**	⇓P	**P**	**14 26 58.5**	**-0.1**
	baz=50,SNR=5.8						
PDAR	**Pinedale Array**	**50.00**	**314**	P	**P**	**14 26 58.3**	**-0.4**
	2.6nm,0.5s,mb4.4,baz=116,slow=8.0,SNR=22						
PDAR				pP	pP

J15A	Blackfoot baz=52	52.20	314	⇑P	P	14 27 15.8 +0.7
D17A	Six Diamond Ra baz=52	52.21	319	⇓P	P	14 27 16.2 +1.1
Q13A	Wheeler Ranch, baz=52	52.30	308	⇓P	P	14 27 16.4 +0.5
G16A	Moss Hill, Enn baz=52	52.31	316	⇑P	P	14 27 16.4 +0.6
BOZ	Bozeman (W) baz=52	52.33	316	⇑P	P	14 27 16.6 +0.6
A18A	Metzger Ranch, baz=52	52.34	321	⇓P	P	14 27 15.8 -0.2
M14A	Sheep Mountain baz=52	52.36	311	⇑P	P	14 27 16.6 +0.3
F16A	Kennard Place, baz=52	52.37	317	⇑P	P	14 27 16.6 +0.3
V12A	Nelson baz=52	52.38	304	⇓P	P	14 27 17.1 +0.5
P13A	Bates Ranch, G baz=52,SNR=9.2	52.40	308	⇑P	P	14 27 17.1 +0.5
I15A	Monteview baz=52	52.41	314	⇓P	P	14 27 16.8 +0.2
L14A	Malta baz=52	52.41	312	⇑P	P	14 27 16.5 -0.2
IRM	Iron Mountain baz=52,SNR=6.3	52.41	302	⇑P	P	14 27 17.4 +0.5
C17A	Wharram Farm, baz=52	52.43	319	⇑P	P	14 27 17.0 +0.3
K14A	Jones Ranch, D baz=53,SNR=5.6	52.50	312	⇓P	P	14 27 17.3 0.0
BC3	Big Chuckw Mtn baz=53	52.60	301	⇓P	P	14 27 18.2 -0.1
R12A	Pony Springs, baz=53,SNR=5.6	52.63	307	⇓P	P	14 27 18.7 +0.3
E16A	East Helena baz=53	52.64	318	⇑P	P	14 27 18.2 -0.1
S12A	Delamar Landin baz=53	52.69	306	⇓P	P	14 27 19.5 +0.7
B17A	L&G Farms, Che baz=53	52.69	320	⇑P	P	14 27 19.1 +0.4
H15A	Lima baz=53	52.70	315	⇓P	P	14 27 18.9 +0.1
D16A	Dana Ranch, Ca baz=53	52.73	318	⇑P	P	14 27 19.1 +0.2
G15A	Dillon baz=53	52.75	316	⇓P	P	14 27 19.4 +0.3
A17A	Triple J Farms baz=53	52.87	321	⇓P	P	14 27 20.5 +0.5
GMRC	Granite Mounta baz=53	52.91	302	⇑P	P	14 27 21.2 +0.7
M13A	Montello baz=53	52.92	311	⇓P	P	14 27 20.0 -0.5
Q12A	Willow Creek R baz=53	52.93	308	⇓P	P	14 27 21.1 +0.5
L13A	Double Diamond baz=53	52.94	312	⇓P	P	14 27 20.3 -0.2
J14A	Carey baz=53	52.94	313	⇑P	P	14 27 21.2 +0.6
F15A	Butte baz=53	52.96	316	⇑P	P	14 27 20.8 +0.1
I14A	Mackay baz=53	53.06	314	⇓P	P	14 27 22.4 +0.9
P12A	McGill baz=53	53.08	308	⇑P	P	14 27 21.9 +0.3
BELC	Belle Mtn. baz=53	53.09	301	⇑P	P	14 27 22.0 +0.1
C16A	Fuhringer Ranc baz=53	53.11	319	⇓P	P	14 27 22.2 +0.5
O12A	Currie baz=53	53.12	309	⇑P	P	14 27 22.7 +0.8
K13A	Stover Farm, H baz=53	53.17	312	⇓P	P	14 27 22.8 +0.5
H14A	Leadore baz=53	53.19	315	⇑P	P	14 27 23.6 +1.2
TUQ	Turquoise Moun baz=53	53.21	303	⇑P	P	14 27 22.8 +0.1
B16A	M & M Farms, S baz=53	53.30	320	⇑P	P	14 27 23.8 +0.7
MONP	Monument Peak baz=53,SNR=5.1	53.33	300	⇑P	P	14 27 24.4 +0.8
D15A	Lincoln baz=54	53.36	318	⇓P	P	14 27 23.9 +0.4
R11A	Troy Canyon, C baz=54	53.39	307	⇑P	P	14 27 24.2 +0.2
A16A	West Butte Ran baz=54	53.42	320	⇓P	P	14 27 24.5 +0.5
N12A	Clover Valley, baz=54	53.46	310	⇑P	P	14 27 24.9 +0.5
M12A	Wells baz=54	53.49	311	⇓P	P	14 27 24.6 -0.1
I13A	Wildhorse Cree baz=54	53.52	314	⇓P	P	14 27 25.3 +0.5
Q11A	Duckwater baz=54	53.53	307	⇑P	P	14 27 25.5 +0.5
F14A	Wisdom baz=54	53.54	316	⇑P	P	14 27 25.7 +0.8
MDT	Midelt comp=Z,51nm,19.9s,baz=168,slow=29	53.58	60	LR	LR	14 44 07.8
HLID	Hailey baz=54	53.63	313	⇓P	P	14 27 25.9 +0.3
C15A	Salmond Ranch, baz=54	53.65	319	⇓P	P	14 27 26.5 +0.8
TPNV	Topopah Spring baz=54	53.68	305	⇓P	P	14 27 26.8 +0.7
K12A	Draper Farm, C baz=54	53.76	312	⇓P	P	14 27 26.9 +0.4
O11A	Cowboy Ranch, baz=54,SNR=18	53.77	309	⇑P	P	14 27 27.1 +0.3
GSC	Goldstone baz=54	53.91	303	⇓P	P	14 27 27.5 -0.3
R10A	Warm Springs baz=54	53.93	307	⇑P	P	14 27 28.4 +0.5
J12A	Stokes Ranch, baz=54	54.04	313	⇓P	P	14 27 28.8 +0.1
Q10A	Clear Creek Ra baz=54,SNR=5.7	54.10	307	⇓P	P	14 27 29.8 +0.7
S10A	Tonopah Range, baz=54,SNR=8.0	54.10	306	⇑P	P	14 27 29.8 +0.6
A15A	Johnson Ranch, baz=54	54.13	320	⇑P	P	14 27 29.5 +0.3
M11A	Holland Ranch, baz=54	54.13	310	⇑P	P	14 27 29.9 +0.6
F13A	Darby baz=54	54.17	316	⇓P	P	14 27 29.5 -0.1
I12A	Atlanta baz=54	54.20	313	⇓P	P	14 27 29.8 0.0
L11A	Cat Creek Ranc baz=54	54.26	311	⇑P	P	14 27 30.6 +0.3
E13A	Victor baz=54	54.27	317	⇑P	P	14 27 30.8 +0.6
P10A	Eureka baz=54	54.29	308	⇑P	P	14 27 30.2 -0.2
C14A	Swan Lake baz=54	54.38	318	⇓P	P	14 27 30.9 -0.1
BFSC	Mount Baldy St baz=55	54.49	301	⇓P	P	14 27 32.8 +0.8
R09A	Tonopah baz=55	54.52	306	⇓P	P	14 27 32.9 +0.6
A14A	Double T Ranch baz=55	54.56	320	⇑P	P	14 27 32.4 +0.2
S09A	Goldfield baz=55	54.57	306	⇓P	P	14 27 33.0 +0.4
K11A	Parker Ranch, baz=55	54.60	312	⇑P	P	14 27 33.3 +0.6
G12A	Big Creek, Yel baz=55	54.67	315	⇓P	P	14 27 32.8 -0.4
M10A	I.L. Ranch, Tu baz=55	54.70	310	⇑P	P	14 27 33.7 +0.2
L10A	Juniper Basin baz=55	54.77	311	⇑P	P	14 27 34.2 +0.3
F12A	Elk City baz=55	54.79	316	⇓P	P	14 27 33.9 -0.1
I11A	Placerville baz=55	54.81	313	⇑P	P	14 27 34.7 +0.5
EDW2	Edwards Air Fo baz=55	54.83	302	⇓P	P	14 27 35.2 +0.7
C13A	Hot Springs baz=55	54.88	318	⇓P	P	14 27 35.9 +1.2
O09A	Fish Creek Ran baz=55,SNR=9.4	54.93	309	⇓P	P	14 27 35.6 +0.4
H11A	Donnelly baz=55	55.03	314	⇓P	P	14 27 35.9 +0.1
K10A	MacKenzie Ranc baz=55	55.20	312	⇓P	P	14 27 37.4 +0.4
DBIC	Dimbokro 4.2nm,1.1s,mb4.4,baz=265,slow=11,SNR=1.9	55.32	92	P	P	14 27 36.5 -1.8
M09A	Marrel Ranch, baz=55	55.35	310	⇑P	P	14 27 38.4 +0.3
NVAR	Mina Array Bea 3.4nm,0.7s,mb4.5,baz=99,slow=6.8,SNR=28	55.51	306	P	P	14 27 39.8 +0.5
NVAR	5.2nm,0.7s,baz=96,slow=6.7,SNR=9.8			pP	pP	14 28 00.6 +0.5
H10A	Noah's Angus R baz=56	55.52	314	⇑P	P	14 27 39.2 -0.1
E11A	Bogner Ranch, baz=56,SNR=6.1	55.59	316	⇓P	P	14 27 39.8 +0.1
L09A	Wilkinson Ranc baz=56	55.63	311	⇑P	P	14 27 40.4 +0.3
O08A	Rochester Mine baz=56	55.68	309	⇑P	P	14 27 40.4 -0.1
N08A	GE Springer Mi baz=56,SNR=6.0	55.75	309	⇑P	P	14 27 40.9 -0.1
K09A	Rome baz=56	55.80	312	⇑P	P	14 27 41.4 0.0
D11A	Klaveano Farm, baz=56	55.85	317	⇓P	P	14 27 41.4 -0.2
G10A	Bishop Farm, J baz=56	55.94	315	⇑P	P	14 27 42.5 +0.2
A12A	Yaak River Ran baz=56	55.94	319	⇓P	P	14 27 43.4 +1.2
M08A	Happy Creek Ra baz=56	56.05	310	⇑P	P	14 27 43.9 +0.7
L08A	Fields baz=56	56.15	311	⇓P	P	14 27 43.8 -0.1
O07A	Toulon baz=56	56.21	308	⇑P	P	14 27 44.8 +0.5
B11A	Sandpoint baz=56	56.25	319	⇓P	P	14 27 44.3 -0.1
PLCA	Paso Flores 8.5nm,0.9s,mb4.8,baz=7.9,slow=7.7,SNR=27	56.29	189	P	P	14 27 44.5 -0.2
PLCA	comp=Z,156nm,19.2s,baz=6.7,slow=35			LR	LR	14 51 16.3
PLCA	Paso Flores 5.4nm,0.8s,mb4.6	56.29	189	eP	P	14 27 44.4 -0.3
BORG	Borgarnes comp=Z,216nm,18.5s,baz=35,slow=31	56.34	19	LR	LR	14 47 26.6
N07B	Gerlach baz=56	56.38	309	⇓P	P	14 27 45.6 +0.1
G09A	Cove baz=56	56.39	315	⇑P	P	14 27 45.8 +0.3
A11A	Hall Mountain, baz=56	56.40	319	⇓P	P	14 27 46.4 +0.9
R06C	Coleville baz=56	56.41	306	⇑P	P	14 27 46.7 +0.9
M07A	Soldier Meadow baz=57	56.62	310	⇓P	P	14 27 47.6 +0.4
NEW	Newport 7.6nm,0.7s,mb4.8	56.69	318	eP	P	14 27 47.2 -0.3
H08A	Prairie City baz=57	56.84	314	⇑P	P	14 27 48.7 0.0
L07A	Adell baz=57	56.85	311	⇓P	P	14 27 49.0 +0.1
N06A	Buffalo Meadow baz=57	57.02	309	⇑P	P	14 27 49.6 -0.4
I07A	Izee baz=57	57.34	313	⇑P	P	14 27 52.2 -0.1
SJPF	Ste Jean 46nm,1.4s,mb5.0	57.60	48	eP	P	14 28 00.8 +6.7
K05A	Summer Lake baz=58	58.10	311	⇑P	P	14 27 58.1 +0.5
B07A	Winthrop baz=59	58.67	318	⇑P	P	14 28 01.1 -0.4
SUMG	Summit 9.0nm,1.0s,mb4.8	58.93	8	eP	P	14 28 02.1 -0.7
TORD	Torodi Ar. Bea 0.9nm,0.7s,mb3.9,baz=283,slow=6.2,SNR=4.2	60.33	83	P	P	14 28 10.8 -2.6
TORD	2.6nm,0.8s,baz=278,slow=5.2,SNR=5.6			pP	pP	14 28 31.6 -2.9
TORD	Torodi Ar. Bea	60.33	83	P	P	14 28 10.8 -2.6
TORD				pP	pP	14 28 31.6 -2.9
YKA	Yellowknife Ar 1.9nm,0.6s,mb4.3,baz=106,slow=7.5,SNR=11	60.45	334	P	P	14 28 11.5 -1.9
YKA	3.4nm,0.6s,baz=106,slow=7.4,SNR=5.8			pP	pP	14 28 33.1 -1.3
YKA	comp=Z,46nm,18.9s,baz=180,slow=33			LR	LR	14 51 01.1
YKA	Yellowknife Ar	60.45	334	P	P	14 28 11.5 -1.9
YKA				pP	pP	14 28 33.1 -1.3
YKA				LR	LR	14 51 01.1
TCF	Toulx Ste Croi 45nm,1.5s,mb5.0	60.54	45	eP	P	14 28 17.7 +3.4
SSF	Saint Saulge	61.54	44	eP	P	14 28 25.6 +4.5
SMF	Signal de Mont 90nm,1.8s,mb5.2	61.71	45	eP	P	14 28 26.8 +4.6
LOR	Lormes 20nm,1.0s,mb4.8	61.81	44	eP	P	14 28 27.4 +4.5
DOU	Dourbes comp=Z,11nm,2.0s,mb4.5	62.73	41	P	P	14 28 27.7 -1.3
BCLA	Clavier comp=Z,17nm,2.8s,mb4.5	63.22	41	P	P	14 28 30.2 -2.1
MEM	Membach	63.70	41	P	P	14 28 33.4 -2.0
JMIC	Jan Mayen comp=Z,64nm,0.7s,mb5.5,baz=236,slow=8.2,SNR=2.7	63.98	17	P	P	14 28 34.5 -2.4
KEST	Kesra comp=Z,2.8nm,0.8s,mb4.1,baz=24,slow=5.5,SNR=4.7	65.22	57	P	P	14 28 43.4 -2.2
DAVOX	Davos/Dischmat comp=Z,1.6nm,0.4s,mb4.2,baz=309,slow=7.9,SNR=4.3	65.86	45	P	P	14 28 47.7 -1.8
DAVOX	comp=Z,2.0nm,0.5s,baz=253,slow=13,SNR=3.0			pP	pP	14 29 10.4 -0.4
NOA	NORSAR Array B comp=Z,2.4nm,1.0s,mb4.0,baz=260,slow=6.5,SNR=5.1	68.15	30	P	P	14 29 01.6 -2.1
NOA	comp=Z,3.1nm,0.9s,baz=260,slow=5.9,SNR=4.0			pP	pP	14 29 25.1 -0.1
NOA	comp=Z,59nm,19.3s,baz=295,slow=30			LR	LR	14 52 14.2
CLL	Collm	68.17	40	eP	P	14 29 02.0 -2.0
GERES	GERESS Array B comp=Z,1.7nm,0.8s,mb3.9,baz=266,slow=5.4,SNR=11	68.52	43	P	P	14 29 03.5 -2.8
INK	Inuvik comp=Z,314nm,1.0s	69.75	338	eP	P	14 29 11.4 -2.1
DAWY	Dawson	71.61	333	eP	P	14 29 24.2 -0.7
MENT	Mentasta	73.53	332	eP	P	14 29 37.1 +0.8
ARCES	ARCESS Array B comp=Z,2.6nm,0.8s,mb4.0,baz=302,slow=7.0,SNR=4.1	74.64	21	P	P	14 29 40.6 -2.1
BUR08	Bucovina Ar. S	76.25	44	eP	P	14 29 51.6 -0.7
TRF	Thorofare Moun comp=Z,16nm,0.8s,mb4.8	76.47	332	eP	P	14 29 54.1 +0.9
AKASG	Malin Array Be comp=Z,0.4nm,0.4s,mb3.5,baz=277,slow=4.4,SNR=4.0	78.41	40	P	P	14 30 00.8 -3.5
AKASG	Malin Array Be	78.41	40	P	P	14 30 00.8 -3.5
BRTR	Keskin Array B comp=Z,0.5nm,0.5s,mb3.6,baz=316,slow=3.4,SNR=2.4	83.76	51	P	P	14 30 32.3 -0.7
BRTR	comp=Z,1.8nm,0.7s,baz=273,slow=4.7,SNR=4.2			pP	pP	14 30 53.0 -2.0
WMQ	Urumqi	114.63	25	ePKP	PKiKP	14 36 40.0 -3.6
MDJ	Mudanjiang	119.85	352	PKP	PKPdf	14 36 50.8 -2.8
CN2	Changchun	121.13	355	ePKP	PKPdf	14 36 51.0 -5.1
CN2				PP	PP	14 38 25.3 -0.3
HHC	Hu-ho-hao-te	123.88	7	ePKP	PKPdf	14 36 57.3 -4.2
HHC				XPKP		14 37 34.0
HHC				PP	PP	14 38 45.5 +1.3
HHC				PKS		14 40 32.5
HHC				SKS	SKSdf	14 43 57.0 -9.2
HHC				SKKS	SKKSac	14 45 27.5 -9.1
HHC	comp=Z,109nm,10.7s			PP	PP	
HHC	comp=N,171nm,21.4s			LR	LR	
HHC	comp=E,221nm,22.6s			LR	LR	
HHC	comp=Z,137nm,22.6s			LR	LR	
BJI	Beijing	125.08	3	PKP	PKPdf	14 37 02.5 -1.3
LZH	Lanzhou	127.03	16	ePKP	PKPdf	14 37 03.5 -4.2
LZH				XPKP		14 37 41.5
CD2	Chengdu	131.87	18	ePKP	PKPdf	14 37 14.3 -2.7
CD2				XPKP		14 37 44.3
CD2				PP	PP	14 39 39.3 +2.3
CD2				PKS		14 40 49.3
CD2				SKS	SKSdf	14 44 15.5 -5.8
CD2				SKKS	SKKSac	14 46 21.0 -6.1
CD2				SS	SS	14 57 04.3 -1.4
CD2	comp=Z,90nm,8.2s			PP	PP	
CD2	comp=N,130nm,21.0s			LR	LR	
CD2	comp=Z,180nm,18.4s			LR	LR	
NJ2	Nanjing	133.12	1	ePKP	PKPdf	14 37 15.8 -3.6
KMI	Kunming	136.88	22	PKP	PKPdf	14 37 25.3 -1.2
KMI				XPKP		14 37 55.0
GYA	Guiyang	136.90	17	PP	PP	14 40 11.3 +2.5
GYA				PKS		14 40 58.8
GYA				SKS	SKSdf	14 44 23.5 -6.8
GYA				SKKS	SKKSac	14 46 52.5 -5.0
GYA				SS	SS	14 58 03.5 -2.6
GYA	comp=Z,60nm,6.4s			PP	PP	
GYA	comp=N,130nm,19.0s			LR	LR	
GYA	comp=E,150nm,20.5s			LR	LR	
GYA	comp=Z,180nm,18.0s			LR	LR	
CNB	Canberra Magne	146.39	228	eP	PKPdf	14 37 41.0 -2.1
ARMA	Armidale	146.69	237	eP	PKPab	14 37 46.5 -0.3
TOO	Toolangi	147.78	221	eP	PKPab	14 37 51.6 +0.7
STKA	Stephens Creek comp=Z,3.0nm,0.8s,baz=5.6,slow=5.3,SNR=4.7	153.70	227	PKPbc	PKPbc	14 38 02.3 -0.3
ASAR	Alice Springs comp=Z,0.5nm,0.8s,baz=87,slow=1.0,SNR=4.2	163.83	236	PKP	PKPdf	14 38 05.8 -1.1
ASAR	comp=Z,1.2nm,1.0s,baz=116,slow=4.0,SNR=7.3			PKPab	PKPab	14 38 59.0 -0.8
WRA	Warramunga Arr comp=Z,1.0nm,0.9s,baz=9.2,slow=0.5,SNR=6.9	164.90	249	PKP	PKPdf	14 38 06.2 -1.7
WRA	comp=Z,6.5nm,0.8s,baz=99,slow=4.2,SNR=44			PKPab	PKPab	14 39 04.5 0.0

IDC 28 14:25:48.3±1.9, 148N×12581E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/17, mbtmp3.7/3, MS3.3/1, Ms1 3.3/1, ms1mx2.9/24, Error ellipse: s-maj=174.6km s-min=23.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 2.7nm,0.8s,baz=337,slow=11,SNR=27	22.88	159	P	P	14 30 53.5	-0.2
WRA	comp=Z,73nm,20.8s,baz=85,slow=38			LR	LR	14 40 13.5	
ASAR	Alice Springs 0.2nm,0.3s,baz=345,slow=12,SNR=5.0	26.21	163	P	P	14 31 25.3	+0.3
MKAR	Makanchi Array 0.6nm,0.4s,baz=123,slow=7.5,SNR=13	58.88	326	P	P	14 35 49.1	0.0

*ATH **28** 14:41:15.9, 3666N×2981E, h5km, MD3.3/3*
*ISK **28** 14:41:19.9, 3699N×2909E, h5km, MD3.2*
*CSEM **28** 14:41:20.5±0.1, 3699N×2909E, h5km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.5km az=141.0*
*ISCJB **28** 14:41:21.2±0.6, 3699N±003×2909E±003, h1km±5km, Error ellipse: s-maj=5.2km s-min=3.6km az=145.5*
*DDA **28** 14:41:24.2, 37.17N×2922E, h8km±20km, Md3.3*

ISC 28 14:41:21.7±0.5, 3699N±003×2908E±003, h4km±5km, n19, σ0§85/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.35	179	ePG	Pg	14 41 27.8	-0.7
FETY				eSG	Sg	14 41 33.7	+0.6
TURN	Turunc	0.40	253	iP	Pg	14 41 34.1	+4.7
TURN				iS	Sg	14 41 49.9	+15
DALT	Dalyan (Mudla)	0.42	238	ePG	Pg	14 41 29.2	-0.5
DALT				eSG	Sg	14 41 36.2	+1.1
GOLH	Golhisar	0.46	57	iP	Pg	14 41 29.1	-1.4
GOLH				iS	Sg	14 41 36.8	+0.4
YER	Yerkesik	0.65	283	ePG	Pg	14 41 33.9	-0.3
DENT	Denizli	0.76	357	ePG	Pg	14 41 35.5	-0.8
DENT				eSG	Sg	14 41 47.3	+1.0
AKAS	Kas	0.87	151	iP	Pg	14 41 38.8	+0.5
AKAS				iS	Sg	14 41 58.9	+9.4
MLSB	Milas	1.08	287	ePN	Pn	14 41 41.5	-2.2
ARG	Arkhangelos	1.09	225	ePG	Pg	14 41 42.5	-0.1
ARG				eSB	Sb	14 42 03.0	+5.3
DAT	Datca	1.23	258	ePN	Pn	14 41 44.6	-1.1
DAT				eSN	Sn	14 42 02.4	-0.5
BCK	Bucak	1.29	68	ePN	Pn	14 41 45.7	-0.9
BCK				eSN	Sn	14 42 04.3	0.0
BDRM	Kayabasi	1.31	274	iP	Pn	14 41 47.1	+0.3
BDRM				iS	Sg	14 42 04.5	+0.7
KHL	Karahalli	1.38	15	ePN	Pn	14 41 47.0	-0.7
KHAL	Karahalli	1.42	13	iP	Pn	14 41 49.5	+1.2
KHAL				iS	Sb	14 42 08.3	+1.2
BODT	Bodrum	1.42	273	ePN	Pn	14 41 47.8	-0.5
BODT				eSN	Sn	14 42 08.2	+0.8
MANT	Manisa	1.55	345	iP	Pn	14 41 50.3	+0.1
MANT				iS	Sn	14 42 15.3	+4.5
KULA	Kula-Manisa	1.56	348	ePN	Pn	14 41 49.5	-0.7
KARP	Karpathos	2.12	228	ePN	Pn	14 41 59.0	+1.1
HDMB	Hadim	2.73	90	ePN	Pn	14 42 06.2	-0.1
HDMB				eSN	Sn	14 42 40.8	+1.0

*BJI **28** 14:43:44.1, 1354N×12066E, h148km, mB4.8, mb4.7*
*ISCJB **28** 14:43:44.8±0.3, 1382N±003×12068E±005, h136km±3km, mb4.2/38, Error ellipse: s-maj=8.3km s-min=4.7km az=170.6*
*MAN **28** 14:43:45, 1384N×12054E, h115km, mb4.2, ML3.1, MS2.8*
*MOS **28** 14:43:47.6±0.7, 1388N×12085E, h170km, mb4.3/26, Error ellipse: s-maj=17.4km s-min=8.1km az=113.9*
*IDC **28** 14:43:47.9±4.0, 1386N×12080E, h154km±39km, mb3.9/21, mb1 4.0/22, mb1mx4.0/27, mbtmp3.9/22, Error ellipse: s-maj=19.3km s-min=9.4km az=68.0*
*NEIC **28** 14:43:47.3±2.6, 1383N×12080E, h148km±24km, mb4.3/7, Error ellipse: s-maj=13.7km s-min=5.6km az=60.0*

ISC 28 14:43:45.9±0.3, 1382N±003×12067E±005, h131km±3km, n106, σ1§07/108, mb4.2/38, 8C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.39	42	⇓iP	Pn	14 44 04.1	-0.3
TGY				iS	Sn	14 44 18.5	0.0
LUBP	Lubang	0.42	259	eP	Pn	14 44 03.0	-1.6
SJMP	San Jose	1.42	162	eP	Pn	14 44 13.2	0.0
SJMP				eS	Sn	14 44 33.5	-0.4
POLP	Polillo Island	1.53	53	eP	Pn	14 44 15.1	+0.7
GQP	Guinayangan	1.73	87	⇓eP	Pn	14 44 17.9	+1.3
PCPH	Palayan	1.78	13	⇑eP	Pn	14 44 15.6	-1.8
PCPH				eS	Sn	14 44 43.5	+2.1
BUSP	Coron	1.86	194	eP	Pn	14 44 17.4	-0.9
BUSP				eS	Sn	14 44 42.0	-0.9
OTRP	Odiongan	1.96	138	eP	Pn	14 44 20.0	+0.6
OTRP				eS	Sn	14 44 45.4	+0.4
AUQP	San Andres	2.01	104	eP	Pn	14 44 23.0	+3.0
SCZP	Santa Cruz	2.08	339	eP	Pn	14 44 19.4	-1.6
BALP	Baler	2.10	25	eP	Pn	14 44 21.2	0.0
BOLP	Bolinao	2.65	344	eP	Pn	14 44 26.9	-1.1
KALP	Kalibo	2.68	142	⇓eP	Pn	14 44 34.3	+5.9
ENPP	El Nido	2.87	205	eP	Pn	14 44 30.6	-0.2
CUYO	Cuyo Island	2.97	173	eP	Pn	14 44 32.1	0.0
RCP	Roxas	3.02	138	⇑eP	Pn	14 44 34.8	+2.0
CAUP	Cauayan	3.30	20	eP	Pn	14 44 36.9	+0.4
PVCP	Virac	3.39	93	eP	Pn	14 44 39.6	+2.0
ABRA	Dolores	3.81	1	eP	Pn	14 44 41.0	-2.1
QIZ	Qiongzhong	11.61	298	P	Pn	14 46 27.5	-0.1
QIZ				XP		14 47 06.0	
QIZ				eS	Sn	14 48 40.3	+4.7
QIZ	comp=Z,23nm,1.2s			AMB	AMB		
KSM	Kuching	15.98	221	ePn	Pn	14 47 32.1	+8.6
KAPI	Kappang	18.73	183	P	P	14 47 55.6	+1.0
CMAR	comp=Z,0.8nm,0.3s,baz=358,slow=8.1,SNR=7.4 Chiang Mai Arr	21.37	285	P	P	14 48 24.5	+1.5
CMAR	comp=Z,3.7nm,0.8s,mb3.8,baz=104,slow=7.5,SNR=28			pmax	pmax		
CMAR	Chiang Mai Arr	21.37	285	P	P	14 48 24.5	+1.5
CHTO	comp=Z,4.0nm,0.8s Chiang Mai	21.43	286	eP	P	14 48 24.3	+0.7
CHTO	comp=Z,4.9nm,1.0s,mb3.8 Chiang Mai	21.43	286	eP	P	14 48 24.3	+0.7
CHTO	comp=Z,5.0nm,1.0s,mb3.8			pmax	pmax		
XAN	Xi'an	22.78	334	P	P	14 48 37.0	-0.3
XAN	comp=Z,13nm,0.7s,mb4.5			AMB	AMB		
XAN	comp=Z,63nm,5.0s			AMB	AMB		
BATI	Baumata comp=Z,15nm,0.5s,mb4.8,baz=290,slow=0.7,SNR=9.3	24.05	173	P	P	14 48 49.5	+0.4
KSRS	Korea Array comp=Z,1.9nm,0.7s,mb3.8,baz=198,slow=11,SNR=5.1	24.41	14	P	P	14 48 51.4	-0.8
KSRS	Korea Array	24.41	14	P	P	14 48 51.4	-0.8
KSRS	comp=Z,2.0nm,0.7s,mb3.8			pmax	pmax		
LZH	Lanzhou	26.83	329	eP	P	14 49 15.3	+1.3

LZH AMB AMB
comp=Z,18nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,89nm,4.3s
GTA Gaotai 31.43 328 eP **P 14 49 56.0 +1.3**
GTA AMB AMB
comp=Z,8.0nm,1.0s,mb4.4
ASAJ Asahikawa 35.54 28 P **P 14 50 29.3 -1.0**
comp=Z,5.8nm,0.8s,mb4.3,baz=318,slow=12,SNR=3.1
ASAJ Asahikawa 35.54 28 P **P 14 50 29.3 -1.0**
ASAJ pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 35.79 344 eP **P 14 50 32.5 +0.2**
comp=Z,4.8nm,0.7s,mb4.2
ULN Ulaanbaatar 35.79 344 eP **P 14 50 32.5 +0.2**
ULN pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
SONM Songino Array 35.94 344 P **P 14 50 33.8 +0.2**
comp=Z,7.4nm,0.6s,mb4.5,baz=163,slow=9.9,SNR=62
SONM Songino Array 35.94 344 P **P 14 50 33.8 +0.2**
SONM pmax pmax
comp=Z,7.0nm,0.6s
WRAB Tennant Creek 36.14 158 eP **P 14 50 34.4 -1.2**
WRA Warramunga Arr 36.14 158 P **P 14 50 34.7 -0.9**
comp=Z,1.7nm,0.6s,mb3.9,baz=337,slow=9.4,SNR=23
WRA Warramunga Arr 36.14 158 P **P 14 50 34.7 -0.9**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WB2 Warramunga Ar 36.15 158 eP **P 14 50 34.6 -1.1**
ZAK Zakamensk 39.12 342 eP **P 14 50 59.4 -1.0**
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
ASAR Alice Springs 39.44 161 P **P 14 51 03.0 -0.2**
comp=Z,1.6nm,0.4s,mb4.0,baz=337,slow=6.7,SNR=45
ASAR PcP PcP 14 53 08.7 -0.1
comp=Z,0.4nm,0.4s,baz=336,slow=2.6,SNR=4.8
ASAR Alice Springs 39.44 161 P **P 14 51 03.1 -0.2**
ASAR 14 53 08.7
ASAR pmax pmax
comp=Z,2.0nm,0.4s
CTA Charters Tower 42.05 143 P **P 14 51 24.5 -0.3**
comp=Z,4.7nm,0.9s,mb4.1,baz=315,slow=14,SNR=4.0
CTA Charters Tower 42.05 143 P **P 14 51 24.5 -0.3**
CTA pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 45.92 324 eP **P 14 51 56.1 +0.7**
MKAR Makanchi Array 45.92 324 P **P 14 51 56.1 +0.8**
comp=Z,3.5nm,0.6s,mb4.2,baz=124,slow=8.9,SNR=13
MKAR Makanchi Array 45.92 324 P **P 14 51 56.2 +0.8**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
KZA Kyzart 48.24 315 P **P 14 52 15.8 +2.4**
SNR=6.6
TKM2 Tokmak 2 48.32 316 P **P 14 52 15.6 +1.5**
SNR=5.8
YAK Yakutsk 48.58 6↑ eP **P 14 52 14.5 -1.2**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.5
KBK Karagaybulak 48.66 315 P **P 14 52 18.5 +1.8**
SNR=6.6
PETK Petropavlovsk- 48.94 29 P **P 14 52 17.6 -1.0**
comp=Z,4.8nm,1.0s,mb4.1,baz=229,slow=3.9,SNR=7.4
PETK Petropavlovsk- 48.94 29 P **P 14 52 17.6 -1.0**
PETK pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
ZAA0 Zalesovo Array 48.94 333 eP **P 14 52 17.6 -1.0**
ZALV Zalesovo Beam 48.94 333 P **P 14 52 18.2 -0.4**
comp=Z,5.3nm,0.4s,mb4.5,baz=128,slow=6.5,SNR=28
ZALV Zalesovo Beam 48.94 333 P **P 14 52 18.2 -0.4**
ZALV pmax pmax
comp=Z,5.0nm,0.4s,mb4.5
AAK Ala-Archa 48.96 315 eP **P 14 52 20.6 +1.6**
comp=Z,2.0nm,0.7s,mb3.9
AAK Ala-Archa 48.96 315 eP **P 14 52 20.6 +1.6**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
USP Ospenovka 49.20 316 P **P 14 52 21.8 +1.1**
SNR=6.3
AML Almayashu 49.34 314 P **P 14 52 24.0 +2.2**
SNR=5.6
EKS2 Erkin-Say 49.47 315 eP **P 14 52 24.2 +1.4**
comp=Z,4.7nm,0.8s,mb4.2
EKS2 Erkin-Say 49.47 315 P **P 14 52 24.4 +1.6**
SNR=6.9
STKA Stephens Creek 49.66 157 P **P 14 52 24.2 -0.1**
comp=Z,2.1nm,0.8s,mb3.8,baz=335,slow=13,SNR=3.3
KURK Kurchatov 50.08 326 eP **P 14 52 28.0 +0.5**
comp=Z,28nm,0.6s,mb5.1
KURK Kurchatov 50.08 326↑ eP **P 14 52 28.0 +0.7**
KURK pmax pmax
comp=Z,49nm,1.2s,mb5.0
NVS Novosibirsk 50.23 333 eP **P 14 52 27.1 -1.2**
NVS pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
NVS pmax pmax
comp=E,5.0nm,1.0s
BRVK Borovoye 55.73 326 eP **P 14 53 09.0 +0.3**
comp=E,23nm,1.1s,mb4.9
BRVK Borovoye 55.73 326 eP **P 14 53 09.0 +0.3**
BRVK pmax pmax
comp=Z,23nm,1.1s,mb4.9
TIXI Tiksi 58.02 3 eP **P 14 53 23.2 -1.3**
comp=Z,2.1nm,0.5s,mb4.2
TIXI Tiksi 58.02 3↑ eP **P 14 53 23.0 -1.6**
TIXI pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
BILL Bilibino 61.61 18 *de*P **P 14 53 48.1 -1.0**
BILL *e**PP pP 14 54 49.4 +29
BILL *e* 14 56 01.7
BILL *eS* **S 15 01 57.8 -2.8**
BILL pmax pmax
comp=Z,14nm,1.5s,mb4.6
AKTK Aktyubinsk 62.11 320 P **P 14 53 52.8 0.0**
AKTO Aktyubinsk 62.11 320 P **P 14 53 52.8 0.0**
comp=Z,3.9nm,0.5s,mb4.5,baz=95,slow=8.8,SNR=13
AKTO Aktyubinsk 62.11 320 P **P 14 53 52.8 0.0**
AKTO pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
SVE Sverdlovsk 62.29 327 eP **P 14 53 52.7 -1.2**
SVE pmax pmax
comp=Z,21nm,1.4s,mb4.8
ARU Arti 63.27 327 *c iP* **P 14 53 59.8 -0.6**
ARU *e* 14 56 17.2
ARU *e*PPP 14 57 54.6
ARU *eS* **S 15 02 22.0 +0.2**
ARU SS SS 15 06 24.0 -6.3
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
OBN Obninsk 75.43 324↑ eP **P 14 55 14.5 -0.7**
OBN *eS* SKSac 15 05 04.5 -8.2
OBN pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
COLD Coldfoot 77.04 24 eP **P 14 55 25.3 +1.2**
ASF Jabal al Asfar 77.58 300 P **P 14 55 27.5 -0.3**
comp=Z,2.4nm,0.5s,mb4.1,baz=76,slow=2.8,SNR=4.2
ASF Jabal al Asfar 77.58 300 P **P 14 55 27.5 -0.3**
ASF pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 78.97 339 P **P 14 55 34.5 -0.3**
comp=Z,2.5nm,0.5s,mb4.1,baz=76,slow=6.8,SNR=28
ARCES ARCESS Array B 78.97 339 P **P 14 55 34.5 -0.2**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
BRTR Keskin Array B 79.06 308 P **P 14 55 36.0 +0.2**
comp=Z,1.6nm,0.7s,mb3.8,baz=90,slow=3.7,SNR=6.0
BRTR Keskin Array B 79.06 308 P **P 14 55 36.1 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
EIL Elat 79.63 298 P **P 14 55 40.0 +0.8**
comp=Z,2.0nm,0.4s,mb4.1,baz=101,slow=6.2,SNR=3.7
EIL Elat 79.63 298 P **P 14 55 40.0 +0.8**
AKASG Malin Array Be 80.35 320 P **P 14 55 41.6 -1.0**
comp=Z,0.4nm,0.4s,mb3.4,baz=80,slow=2.7,SNR=4.4
AKASG Malin Array Be 80.35 320 *i* P **P 14 55 42.4 -0.2**
BUR08 Bucovina Ar. S 83.56 317 eP **P 14 55 59.7 +0.3**
NOA NORSAR Array B 87.14 333 P **P 14 56 15.6 -1.3**
comp=Z,1.3nm,0.6s,mb3.9,baz=67,slow=4.5,SNR=4.4
NOA NORSAR Array B 87.14 333 P **P 14 56 15.6 -1.3**
NOA NORSAR Array B 87.14 333 P **P 14 56 15.6 -1.3**
NOA pmax pmax
comp=Z,1.0nm,0.6s
OKC Ostrava-Krasne 87.45 321 AMS AMS 16 13 00.0
comp=Z,300nm,19.5s
DPC Dobruska-Polom 88.40 322 AMS AMS 16 09 10.0
comp=Z,400nm,16.2s
PVCC Panska Ves 89.39 322 AMS AMS 16 14 00.0
comp=Z,400nm,15.4s
PRU Pruhonice 89.60 322 AMS AMS 16 09 50.0
comp=Z,500nm,17.5s
KHC Kasperske Hory 90.49 321 AMS AMS 16 10 30.0
comp=Z,500nm,16.0s
NKC Novy Kostel 90.76 322 AMS AMS 16 11 00.0
comp=Z,500nm,16.7s
YKA Yellowknife Ar 92.68 22 P **P 14 56 41.4 -1.3**
comp=Z,0.7nm,0.5s,mb4.0,baz=307,slow=4.4,SNR=7.5
YKA Yellowknife Ar 92.68 22 P **P 14 56 41.4 -1.3**
YKA Yellowknife Ar 92.68 22 P **P 14 56 41.4 -1.4**
YKA pmax pmax
comp=Z,1.0nm,0.5s
VNDA Vanda 94.16 172 P **P 14 56 48.5 -0.6**
comp=Z,0.6nm,0.6s,mb3.9,baz=325,slow=5.6,SNR=3.8
VNDA Vanda 94.16 172 P **P 14 56 48.6 -0.5**
VNDA pmax pmax
comp=Z,1.0nm,0.6s

*ISCJB **28** 14:45:55.6±3.0, 7.1S±05×1014E±06, h33km, mb3.8/7, Error ellipse: s-maj=111.5km s-min=16.0km az=144.6*
*NEIC **28** 14:45:59.4±2.2, 6.88S×101.68E, mb4.0/1, Error ellipse: s-maj=87.4km s-min=12.4km az=55.0*
*IDC **28** 14:46:00.2±3.4, 6.79S×101.81E, h33km±7km, mb3.6/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=136.3km s-min=19.0km az=54.0*

ISC 28 14:45:58.7±3.1, 70S±05×1015E±07, h35km, n10, σ0≥30/8, mb3.8/7, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**25.42**	**354**	P	**P**	**14 51 22.9**	**-0.4**
	2.6nm,0.8s,mb3.8,baz=186,slow=8.4,SNR=20						
CHTO	**Chiang Mai**	**25.78**	**354**	*e*P	**P**	**14 51 26.2**	**-0.3**
	6.3nm,1.4s,mb4.0						
WRA	**Warramunga Arr**	**34.33**	**115**	P	**P**	**14 52 42.4**	**+0.1**
	1.0nm,0.9s,mb3.7,baz=285,slow=11,SNR=3.2						
WRA				pP	pP	14 52 51.8	-0.6
	1.1nm,0.7s,baz=286,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**35.22**	**122**	P	**P**	**14 52 49.8**	**-0.2**
	0.3nm,0.9s,mb3.2,baz=303,slow=7.5,SNR=3.2						
ASAR				pP	pP	14 53 00.2	+0.1
	0.6nm,0.7s,baz=295,slow=7.4,SNR=3.0						
STKA	**Stephens Creek**	**44.78**	**129**	pP		14 54 19.4	-0.1
	1.6nm,0.8s,baz=287,slow=11,SNR=1.9						
SONM	**Songino Array**	**54.77**	**4**	P	**P**	**14 55 25.4**	**+0.6**
	1.4nm,0.6s,mb4.1,baz=182,slow=8.9,SNR=13						
MKAR	**Makanchi Array**	**56.22**	**344**	P	**P**	**14 55 35.1**	**-0.2**
	0.6nm,0.7s,mb3.8,baz=170,slow=8.8,SNR=2.5						
ZAA0	**Zalesovo Array**	**62.33**	**349**	*e*P	**P**	**14 56 17.6**	**+0.2**
ZALV	**Zalesovo Beam**	**62.33**	**349**	P	**P**	**14 56 17.6**	**+0.2**
	1.1nm,0.6s,mb4.2,baz=168,slow=5.2,SNR=7.2						
TXAR	**Lajitas Array**	**147.50**	**44**	PKPbc	PKPbc	15 05 41.5	+1.6
	0.8nm,0.7s,baz=251,slow=1.6,SNR=9.9						
TXAR				pPKPbc	pPKPbc	15 05 51.3	+0.1
	0.4nm,0.7s,baz=282,slow=1.2,SNR=3.7						

*CSEM **28** 14:50:33.5, 33.32N×35.53E, h0km, ML2.9, After GRAL*
*GRAL **28** 14:50:33.5±0.3, 33.32N×35.53E, h0km±95km, MD2.9*
*GII **28** 14:50:33.7±1.6, 33.40N×35.66E, h0km, ML2.0/1, EXPLOSION*
*ISCJB **28** 14:50:35.0±0.6, 3344N±002×3559E±005, h0km, Error ellipse: s-maj=5.6km s-min=3.3km az=15.5*

ISC 28 14:50:35.6±0.6, 3345N±003×3561E±005, h0km, n11, σ1≥23/18, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.18**	**78**	*e*P	**Pg**	**14 50 39.0**	**0.0**
RCY				*e*S	**Sg**	**14 50 43.2**	**+1.9**
HRI	**Mount Hermon**	**0.21**	**150**	Pg	**Pg**	**14 50 38.6**	**-1.0**
HRI				Sg	**Sg**	**14 50 41.7**	**-0.6**
MATL	**Matirih**	**0.24**	**280**	*e*P	**Pg**	**14 50 37.8**	**-2.4**
BHL	**Bhannes**	**0.46**	**5**	*e*P	**Pg**	**14 50 44.0**	**-0.3**
BHL				*e*S	**Sg**	**14 50 51.9**	**+1.6**
MMA0B	**Mount Meron ar**	**0.47**	**202**	Pg	**Pg**	**14 50 44.8**	**+0.3**
MMA0B				Sg	**Sg**	**14 50 51.5**	**+1.0**
KSHT	**Keshet**	**0.49**	**160**	Pg	**Pg**	**14 50 43.0**	**-2.1**
KSHT				Sg	**Sg**	**14 50 51.8**	**+0.3**
HNTI	**Hanita**	**0.52**	**225**	Sg	**Sg**	**14 50 54.2**	**+2.1**
HWQ	**Hawqa**	**0.87**	**19**	*e*P	**Pg**	**14 50 51.8**	**-0.6**
MMLI	**Mount Malkishu**	**1.02**	**189**	Pg	**Pg**	**14 50 53.9**	**-1.2**
MMLI				Sg	**Sg**	**14 51 08.8**	**+0.4**
HMDT	**Nahal Hemdat**	**1.20**	**183**	Pg	**Pg**	**14 50 56.8**	**-1.7**
HMDT				Sg	**Sg**	**14 51 15.2**	**+1.2**
SLTI	**Sal'it**	**1.30**	**202**	Sg	**Sg**	**14 51 17.9**	**+0.7**

TRN 28 14:54:43.9, 1493N×6130W, h154km, MD3.7, M2.8(FDF), 2C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.24**	**143**↑	*e*P	Pn	14 55 05.5	+0.7
FDF			↑	*e*S	Sn	14 55 22.6	+2.0
BIM	**Bigot**	**0.47**	**151**	*e*P	Pn	14 55 06.1	+0.6
MVM	**Montagne Vaucl**	**0.54**	**133**	*e*P	Pn	14 55 06.6	+0.7
DOG	**Dongo Capester**	**1.14**	**345**	*e*P	Pn	14 55 11.2	+0.9
SCG	**Saint Claude**	**1.15**	**342**	*e*P	Pn	14 55 11.4	+1.0
LZG	**Guadaloupe-1**	**1.29**	**339**	*e*P	Pn	14 55 12.4	+0.8
BPA	**Boggy Peak**	**2.17**	**346**	*e*P	Pn	14 55 24.1	+2.9
BPA				*e*S	Sn	14 55 49.8	-0.3

*BJI **28** 15:00:02.8, 5520N×15850W, h44km, mB5.0, mb4.8, Ms4.7, Msz4.4*
*ISCJB **28** 15:00:03.8±0.9, 5529N±009×15835W±007, h48km±6km, mb4.2/23, MS3.4/2, Error ellipse: s-maj=15.1km s-min=6.0km az=164.2*
*IDC **28** 15:00:04.6±0.8, 5529N×158.45W, h40km±6km, mb3.7/14, mb1 3.9/14, mb1mx3.8/21, mbtmp3.7/14, MS3.4/3, Ms1 3.4/3, ms1mx2.9/38, Error ellipse: s-maj=25.1km s-min=12.7km az=15.0*
*NEIC **28** 15:00:04.9±0.8, 5523N×158.47W, h44km±6km, ML3.9(AEIC), Error ellipse: s-maj=10.4km s-min=5.5km az=168.0*

ISC 28 15:00:05.0±0.9, 5520N±008×15839W±007, h45km±6km, h41km±4.3km:pP-P, n56, σ0≥94/55, mb4.2/23, MS3.4/2, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGN	**Chignik**	**1.11**	**359**	P	**Pn**	**15 00 23.1**	**-0.9**
CHGN				S	**Sn**	**15 00 40.0**	**+1.9**
SDPT	**Sand Point**	**1.20**	**278**	P	**Pn**	**15 00 24.0**	**-1.3**
SDPT				S	**Sn**	**15 00 42.5**	**+2.1**
FALS	**False Pass**	**2.91**	**265**	P	**Pn**	**15 00 48.2**	**-0.5**
OHAK	**Old Harbor**	**3.50**	**52**	P	**Pn**	**15 00 56.0**	**-0.8**
KDAK	**Kodiak Island**	**4.13**	**49**	*e*P	**Pn**	**15 01 04.6**	**-0.8**
SVW2	**Sparrevohn**	**6.10**	**13**	*e*P	**Pn**	**15 01 32.6**	**+0.1**
SEW	**Seward**	**6.87**	**41**	*e*Pn	**Pn**	**15 01 43.1**	**+0.1**
RC01	**Rabbit Creek A**	**7.47**	**34**	*e*Pn	**Pn**	**15 01 52.2**	**+1.1**
PMR	**Palmer**	**8.04**	**33**	P	**Pn**	**15 01 57.9**	**-1.1**
PPLA	**Purkeypile**	**8.36**	**20**	*e*P	**Pn**	**15 02 05.8**	**+2.5**
	22nm,0.8s						
CHUM	**Lake Minchumin**	**9.24**	**17**	*e*P	**Pn**	**15 02 16.4**	**+1.1**
	8.3nm,0.7s						
BPAW	**Bear Paw Mtn.**	**9.68**	**20**	*e*P	**Pn**	**15 02 21.6**	**+0.2**
	8.2nm,0.9s						
COLA	**College**	**11.03**	**24**	*e*P	**Pn**	**15 02 37.3**	**-2.5**
	6.1nm,0.8s						
PNL	**Peninsula**	**11.16**	**59**	P	**Pn**	**15 02 41.5**	**-0.1**
EGAK	**Eagle**	**12.86**	**35**	*e*P	**Pn**	**15 03 04.2**	**-0.6**
	3.0nm,0.8s						
DAWY	**Dawson**	**13.04**	**39**	*e*P	**Pn**	**15 03 07.4**	**+0.2**
SKAG	**Skagway**	**13.14**	**62**	*e*P	**Pn**	**15 03 09.5**	**+0.8**
DLBC	**Dease Lake**	**15.81**	**67**	LR	LR	15 09 15.5	
	comp=Z,70nm,20.3s,baz=263,slow=35						
INK	**Inuvik**	**17.45**	**31**	*e*P	**Pn**	**15 04 03.6**	**-1.0**
YKA	**Yellowknife Ar**	**23.39**	**54**	P	**P**	**15 05 08.8**	**-0.6**
	0.6nm,0.6s,mb3.2,baz=264,slow=7.7,SNR=3.3						
YKA				pP		15 05 19.7	
	1.4nm,0.9s,baz=273,slow=8.7,SNR=3.0						
PETK	**Petropavlovsk-**	**25.48**	**284**	P	**P**	**15 05 26.9**	**-1.6**
	6.9nm,0.8s,mb4.2,baz=74,slow=13,SNR=9.8						
PETK	**Petropavlovsk-**	**25.48**	**284**	P	**P**	**15 05 26.9**	**-1.6**
YBH	**Yreka Blue Hor**	**26.89**	**105**	LR	LR	15 13 50.9	
	comp=Z,128nm,20.9s,MS3.5,baz=308,slow=31						
NVAR	**Mina Array Bea**	**31.61**	**105**	P	**P**	**15 06 24.6**	**+1.3**
	0.2nm,0.5s,mb3.2,baz=304,slow=8.6,SNR=2.8						
NVAR				pP	pP	15 06 34.6	-0.6
	0.8nm,0.6s,baz=303,slow=8.7,SNR=5.1						
PDAR	**Pinedale Array**	**33.67**	**91**	P	**P**	**15 06 41.9**	**+0.6**
	0.2nm,0.5s,mb3.3,baz=323,slow=7.3,SNR=2.7						
MDJ	**Mudanjiang**	**45.58**	**288**	P	**P**	**15 08 19.8**	**-0.3**
MDJ				AMB	AMB		
	comp=Z,4.0nm,2.3s,mb3.9						
TXAR	**Lajitas Array**	**46.49**	**101**	P	**P**	**15 08 29.2**	**+1.7**
	comp=Z,0.2nm,0.5s,mb3.3,baz=307,slow=7.5,SNR=3.4						
TXAR				pP	pP	15 08 38.2	-1.8
	comp=Z,1.0nm,0.6s,baz=313,slow=5.1,SNR=12						
TXAR				pPcP		15 10 11.5	
	comp=Z,0.4nm,0.7s,baz=315,slow=1.3,SNR=3.4						
TXAR				LR	LR	15 25 18.2	
	comp=Z,44nm,20.8s,MS3.4,baz=40,slow=32						
TXAR	**Lajitas Array**	**46.49**	**101**	P	**P**	**15 08 29.2**	**+1.7**
TXAR				pP	pP	15 08 38.2	-1.8
TXAR				pPcP		15 10 11.5	
TXAR				LR	LR	15 25 18.2	
CN2	**Changchun**	**48.36**	**290**	*e*P	**P**	**15 08 41.0**	**-0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
KSRS	**Korea Array**	**51.37**	**282**	P	**P**	**15 09 04.9**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=42,slow=6.4,SNR=4.9						
SONM	**Songino Array**	**55.23**	**305**	P	**P**	**15 09 33.0**	**0.0**
	comp=Z,2.5nm,0.8s,mb4.3,baz=43,slow=6.9,SNR=16						
SONM				PcP	PcP	15 10 34.5	+1.2
	comp=Z,1.0nm,0.6s,baz=37,slow=2.6,SNR=5.7						
ARCES	**ARCESS Array B**	**55.54**	**358**	P	**P**	**15 09 34.3**	**-0.6**
	comp=Z,5.1nm,1.0s,mb4.5,baz=65,slow=9.5,SNR=4.4						
BJI	**Beijing**	**55.94**	**293**	P	**P**	**15 09 37.8**	**-0.4**
BJI				S	**S**	**15 17 23.3**	**+0.8**
BJI				SS	SS	15 21 10.0	+1.7
BJI				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.9						
BJI				AMB	AMB		
	comp=Z,126nm,4.5s						
ZALV	**Zalesovo Beam**	**59.46**	**322**	P	**P**	**15 10 02.2**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.9,baz=36,slow=5.5,SNR=4.5						
NJ2	**Nanjing**	**60.39**	**284**	*e*P	**P**	**15 10 12.5**	**+3.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NB2	**NORSAR Subarra**	**63.82**	**6**	P	**P**	**15 10 32.1**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.3,baz=355,slow=6.9						
NOA	**NORSAR Array B**	**63.82**	**6**	P	**P**	**15 10 32.3**	**+0.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=353,slow=6.7,SNR=5.1						
GTA	**Gaotai**	**64.70**	**303**	P	**P**	**15 10 38.0**	**0.0**
GTA				AP	pP	15 10 48.8	-2.2
GTA				XP	sP	15 10 52.5	-3.6
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**66.27**	**319**	P	**P**	**15 10 47.9**	**-0.1**
	comp=Z,2.5nm,1.1s,mb4.2,baz=214,slow=38,SNR=3.0						
GYA	**Guiyang**	**71.41**	**290**	P	**P**	**15 11 20.3**	**0.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
AKASG	**Malin Array Be**	**74.28**	**355**	P	**P**	**15 11 35.7**	**-1.2**
	comp=Z,1.7nm,0.4s,mb4.3,baz=7.7,slow=6.0,SNR=4.5						
AKASG				pP	pP	15 11 49.7	-0.4
	comp=Z,1.0nm,0.5s,baz=4.4,slow=5.4,SNR=3.6						
AKASG	**Malin Array Be**	**74.28**	**355**	P	**P**	**15 11 35.7**	**-1.2**
AKASG				pP	pP	15 11 49.7	-0.4
GERES	**GERESS Array B**	**76.12**	**5**	pP	pP	15 12 00.5	-0.2
	comp=Z,0.6nm,0.5s,baz=3.8,slow=6.0,SNR=2.7						
TAPN	**Taplejung**	**80.34**	**304**	*e*P	**P**	**15 12 11.9**	**+0.7**
	comp=Z,8.4nm,0.9s,mb4.7						
GUN	**Gumba**	**80.72**	**306**	*e*P	**P**	**15 12 13.9**	**+0.7**
JIRN	**Jiri**	**80.79**	**306**	*e*P	**P**	**15 12 14.3**	**+0.7**
ODAN	**Odare**	**80.90**	**304**	*e*P	**P**	**15 12 14.5**	**+0.3**
KKN	**Kakani**	**81.10**	**307**	*e*P	**P**	**15 12 15.8**	**+0.5**
RAMN	**Ramite**	**81.20**	**305**	*e*P	**P**	**15 12 15.9**	**+0.1**
	comp=Z,11nm,0.9s,mb4.8						
GKN	**Gorkha**	**81.21**	**307**	*e*P	**P**	**15 12 16.1**	**+0.2**
PKI	**Pulchoki**	**81.23**	**306**	*e*P	**P**	**15 12 15.6**	**-0.3**
DANN	**Dangsing**	**81.32**	**308**	*e*P	**P**	**15 12 16.3**	**-0.1**
	comp=Z,21nm,0.8s,mb5.1						
KOLN	**Koldanda**	**81.89**	**308**	*e*P	**P**	**15 12 19.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**82.04**	**291**	P	**P**	**15 12 20.2**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=14,slow=4.9,SNR=9.8						
CMAR				pP	pP	15 12 33.0	-0.7
	comp=Z,1.6nm,0.8s,baz=15,slow=5.5,SNR=5.7						
BRTR	**Keskin Array B**	**84.89**	**351**	P	**P**	**15 12 33.3**	**-1.4**
	comp=Z,1.1nm,0.8s,mb4.0,baz=13,slow=3.1,SNR=3.5						
QSPA	**South Pole Qui**	**144.98**	**180**	PKPbc	PKPdf	15 19 34.7	-0.4
	comp=Z,1.2nm,0.3s,baz=125,slow=2.3,SNR=3.3						

*BJI **28** 15:16:04.3, 951N×10794E, h10km, mB5.0, mb4.5, Ms5.2, Msz5.0*
*ISCJB **28** 15:16:07.0±0.2, 992N±003×10815E±005, h10km, mb4.4/31, MS4.6/27, Error ellipse: s-maj=7.7km s-min=3.8km az=156.3*
*IDC **28** 15:16:06.9±0.5, 998N×10828E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.3/24, mbtmp4.3/17, ML4.1/2, MS4.5/25, Ms1 4.5/25, ms1mx4.5/33, Error ellipse: s-maj=33.9km s-min=11.3km az=61.0*
*GCMT **28** 15:16:08.5±0.2, 1002N×10828E, h12km, MW5.2/81, Moment Tensor Solution. s41,c56; s81,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.14; $M_{\theta\theta}$-4.34±.11; $M_{\phi\phi}$5.46±.14; $M_{r\theta}$-1.35±.32; $M_{\theta\phi}$-4.44±.11; $M_{\phi r}$-1.65±.39; Best double couple: M_o6.99400×10^{16} NP1:ϕ_s115.00000°, δ72.00000°, λ-172.00000°. NP2: ϕ_s22.00000°, δ82.00000°, λ-19.00000°. Principal axes: T 7.3080, Plg7.0000°, Azm70.0000°; N -0.6290, Plg70.0000°, Azm180.0000°; P -6.6790, Plg19.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **28** 15:16:08.5±0.2, 999N×10830E, h10km, mb4.7/11 Error ellipse: s-maj=9.7km s-min=3.7km az=57.0*
NEIC Felt [III] at Ho Chi Minh City, Vietnam.
*DJA **28** 15:16:19.8±0.0, 1002N×10859E, h51km, mB5.5/10, MLv5.2/2, Mw(mB)5.2/10, Mwp4.7/7*

ISC 28 15:16:10.9±2.1, 998N±004×10825E±006, h25km±16km, n112, σ0≥85/98, mb4.4/31, MS4.6/27, 1C-1D, South China Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**8.05**	**250**	P	**Pn**	**15 18 05.0**	**-1.3**
	660nm,1.0s						
KKTK	**Khon Kaen**	**8.24**	**321**	PN	**Pn**	**15 18 15.0**	**+6.1**
KKTK				PG	**Sn**	**15 19 57.0**	**+16**
SBUM	**Sibu**	**8.46**	**152**	P	**Pn**	**15 18 13.4**	**+1.5**
KSM	**Kuching**	**8.70**	**166**	*e*P	**Pn**	**15 18 14.8**	**-0.4**
	93nm,0.7s						
KSM	**Kuching**	**8.70**	**166**	P	**Pn**	**15 18 15.1**	**-0.1**
	165nm,1.1s,1μm0.5nm						
NNT	**Nongplab**	**8.75**	**288**	P	**Pn**	**15 18 14.9**	**-1.0**
QIZ	**Qiongzhong**	**9.12**	**10**	P	**Pn**	**15 18 25.3**	**+4.2**
QIZ				S	**Sn**	**15 20 09.3**	**+6.3**
QIZ				LR	LR		
	comp=E,23μm,15.9s						
QIZ				LR	LR		
	comp=Z,10μm,14.1s						
STKI	**Sintang**	**10.36**	**162**	P	**Pn**	**15 18 40.3**	**+2.3**
	comp=Z,62nm,0.9s						
MYLDM	**Lahad Datu**	**11.22**	**114**	P	**Pn**	**15 18 58.0**	**+8.2**
CM31	**Chiang Mai Arr**	**12.34**	**314**	*e*Pn	**Pn**	**15 19 04.8**	**-0.3**
**C

KSI	Kapahiang	14.67	203	P		Pn	15 19 46.7	+10
	comp=Z,128nm,1.8s,comp=Z,3µm							
KMI	Kunming	15.95	342	P		Pn	15 19 58.5	+4.8
KMI				AP		pP	15 20 06.0	+2.2
KMI				S		Sn	15 22 57.0	+7.2
KMI				XS		sS	15 23 08.8	-5.3
KMI				SS			15 23 16.8	
KMI				AMB	AMB			
	comp=Z,13nm,1.3s							
KMI				AMB	AMB			
	comp=Z,366nm,4.5s							
KMI				LR	LR			
	comp=N,5µm,11.0s							
KMI				LR	LR			
	comp=E,10µm,12.5s							
KMI				LR	LR			
	comp=Z,6µm,14.6s							
GYA	Guiyang	16.46	355	P		Pn	15 20 00.5	+0.3
GYA				S		Sn	15 23 01.8	-0.4
GYA				AMB	AMB			
	comp=Z,20nm,1.0s							
GYA				AMB	AMB			
	comp=Z,130nm,4.8s							
GYA				LR	LR			
	comp=N,3µm,12.9s							
GYA				LR	LR			
	comp=E,6µm,13.5s							
GYA				LR	LR			
	comp=Z,3µm,14.1s							
DBJI	Dramaga	16.49	185	P		pP	15 20 13.4	+3.4
	comp=Z,74nm,2.1s							
LEM	Lembang	16.71	182	P		Pn	15 20 10.1	+6.6
	comp=Z,84nm,1.7s,comp=Z,9µm							
BJII	Banjamegara	17.26	175	P		Pn	15 20 20.1	+10
SJI	Sawahan	17.94	169	P		Pn	15 20 24.7	+5.9
SJI	Sawahan	17.94	169	P		Pn	15 20 24.7	+5.9
SJI	Sawahan	17.94	169	P		Pn	15 20 26.0	+7.2
KAPI	Kappang	18.79	142	P		Pn	15 20 28.3	-0.9
	comp=Z,0.7nm,0.3s,baz=309,slow=8.8,SNR=17							
KAPI	Kappang	18.79	142	P		Pn	15 20 29.5	+0.3
	comp=Z,82nm,1.3s,comp=Z,759nmcomp=Z,0.2nm							
KAPI	Kappang	18.79	142	P		Pn	15 20 29.1	-0.1
	comp=Z,82nm,1.3s,comp=Z,759nm							
KAPI	Kappang	18.79	142	P		Pn	15 20 29.8	+0.6
	comp=Z,82nm,1.3s,comp=Z,759nm							
KHKI	Kahang-Kahang	19.64	158	P		Pn	15 20 39.4	0.0
KHKI	Kahang-Kahang	19.64	158	P		Pn	15 20 39.4	0.0
KHKI	Kahang-Kahang	19.64	158	P		Pn	15 20 42.5	+3.1
IGBI	Denpasar	19.90	160	P		Pn	15 20 41.1	-1.3
IGBI	Denpasar	19.90	160	P		Pn	15 20 41.1	-1.3
KDI	Kendari	19.91	133	P		Pn	15 20 43.0	+0.3
	comp=Z,94nm,1.2s,comp=Z,5µmcomp=Z,0.3nm							
KDI	Kendari	19.91	133	P		Pn	15 20 42.6	-0.1
	comp=Z,94nm,1.2s,comp=Z,5µm							
KDI	Kendari	19.91	133	P		Pn	15 20 43.2	+0.5
	comp=Z,94nm,1.2s,comp=Z,5µm							
CD2	Chengdu	21.24	349 ⇑	*i*P		P	15 20 55.0	-0.1
CD2				AP			15 20 59.3	
CD2				XP		sP	15 21 02.5	-2.7
CD2				PP			15 21 20.0	
CD2				S		S	15 24 49.5	-0.6
CD2				XS		sS	15 24 56.5	-4.5
CD2				SS			15 25 25.0	
CD2				AMB	AMB			
	comp=Z,40nm,1.2s,mb4.6							
CD2				AMB	AMB			
	comp=Z,250nm,7.2s							
CD2				LR	LR			
	comp=N,4µm,13.2s							
CD2				LR	LR			
	comp=Z,3µm,9.6s							
LBMI	Labuha	21.87	118	P		pP	15 21 13.7	+4.7
	comp=Z,112nm,1.5s,comp=Z,1µmcomp=Z,0.4nm							
LBMI	Labuha	21.87	118	P		pP	15 21 13.7	+4.7
	comp=Z,112nm,1.5s,comp=Z,1µm							
XAN	Xi'an	23.95	1	P		P	15 21 23.3	+0.1
XAN				AP			15 21 32.0	
XAN				XP		sP	15 21 36.3	+2.6
XAN				PP			15 22 03.0	
XAN				S		S	15 25 42.5	+4.1
XAN				AMB	AMB			
	comp=Z,234nm,7.6s							
XAN				LR	LR			
	comp=E,6µm,16.4s							
XAN				LR	LR			
	comp=Z,2µm,10.7s							
AAI	Ambon	24.06	123	P		P	15 21 25.0	+0.6
AAI	Ambon	24.06	123	P		P	15 21 25.0	+0.6
BATI	Baumata	25.24	142	P		P	15 21 34.2	-0.9
	comp=Z,30nm,0.8s,mb4.9,baz=217,slow=3.2,SNR=9.1							
BATI	Baumata	25.24	142	P		P	15 21 36.5	+1.3
	comp=Z,35nm,1.1s,mb4.8							
JOW	Kunigami	25.27	46	LR		LR	15 30 14.1	
	comp=Z,2µm,21.8s,MS4.5,baz=336,slow=34							
ODAN	Odare	25.88	313	*e*P		P	15 21 41.7	+0.8
	comp=Z,46nm,0.9s,mb5.0							
TAPN	Taplejung	25.95	314	*e*P		P	15 21 41.8	+0.3
	comp=Z,22nm,0.6s,mb4.8							
LZH	Lanzhou	26.29	352	*e*P		P	15 21 46.0	+1.5
LZH				AP		pP	15 21 49.8	-2.1
LZH				XP		sP	15 21 53.3	-1.6
LZH				PP			15 22 34.0	
LZH				S		S	15 26 21.0	+5.2
LZH				XS		sS	15 26 31.0	+3.0
LZH				AMB	AMB			
	comp=Z,38nm,1.0s,mb4.9							
LZH				AMB	AMB			
	comp=Z,149nm,4.2s							
LZH				LR	LR			
	comp=E,2µm,12.4s							
LZH				LR	LR			
	comp=Z,4µm,15.7s,MS5.0							
RAMN	Ramite	26.51	312	*e*P		P	15 21 47.8	+1.3
JIRN	Jiri	27.22	313	*e*P		P	15 21 53.1	+0.2
GUN	Gumba	27.59	313	*e*P		P	15 21 57.0	+0.8
	comp=Z,71nm,1.4s,mb5.1							
PKI	Pulchoki	27.73	312	*e*P		P	15 21 57.6	+0.1
KKN	Kakani	27.95	312	*e*P		P	15 21 59.2	-0.3
DMN	Daman	27.97	312	*e*P		P	15 21 59.5	-0.2
GKN	Gorkha	28.54	312	*e*P		P	15 22 04.9	+0.2
KOLN	Koldanda	29.18	311	*e*P		P	15 22 10.5	+0.1
	comp=Z,15nm,1.0s,mb4.7							
DANN	Dangsing	29.37	312	*e*P		P	15 22 12.4	+0.2
GTA	Gaotai	30.26	347	*e*P		P	15 22 19.5	-0.3
GTA				AP		pP	15 22 25.0	-2.3
GTA				XP		sP	15 22 28.0	-2.3
GTA				AMB	AMB			
	comp=Z,3.0nm,1.4s,mb3.8							
GTA				AMB	AMB			
	comp=Z,165nm,4.5s							
GTA				LR	LR			
	comp=N,3µm,17.4s,MS5.3							
GTA				LR	LR			
	comp=E,4µm,15.0s,MS5.3							
GTA				LR	LR			
	comp=Z,2µm,15.3s,MS4.9							
HHC	Hu-ho-hao-te	30.88	5	*e*P		P	15 22 31.5	+6.2
HHC				PCP		PcP	15 25 20.0	-1.8
HHC				S		S	15 27 41.5	+14
HHC				AMB	AMB			
	comp=Z,19nm,0.7s,mb5.0							
HHC				AMB	AMB			
	comp=Z,157nm,4.4s							
HHC				LR	LR			
	comp=N,3µm,14.3s,MS5.4							
HHC				LR	LR			
	comp=E,5µm,15.5s,MS5.4							
HHC				LR	LR			
	comp=Z,2µm,17.8s,MS4.8							
KSRS	Korea Array	32.60	30	LR		LR	15 36 03.7	
	comp=Z,573nm,20.1s,MS4.3,baz=216,slow=37							
MBWA	Marble Bar	32.94	160	*e*P		P	15 22 42.9	-0.7
GUMO	Guam	36.00	81	LR		LR	15 35 20.1	
	comp=Z,400nm,18.9s,MS4.2,baz=245,slow=32							
CN2	Changchun	36.86	21	*e*P		P	15 23 15.5	-1.7
CN2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.7							
SONM	Songino Array	37.76	358	P		P	15 23 25.9	+1.2
	comp=Z,1.4nm,0.9s,mb3.7,baz=182,slow=9.7,SNR=6.4							
SONM				LR		LR	15 39 31.2	
	comp=Z,2µm,18.2s,MS5.0,baz=170,slow=37							
ULN	Ulaanbaatar	37.77	359	*e*P		P	15 23 26.8	+1.9
	comp=Z,16nm,1.6s,mb4.5							
ULN	Ulaanbaatar	37.77	359	P		P	15 23 30.3	+5.4
	comp=Z,7.4nm,1.8s,mb4.1							
MAJO	Matsushiro	37.87	41	*e*P		P	15 23 24.0	-1.9
	comp=Z,12nm,1.1s,mb4.5							
MJAR	Matsushiro Arr	37.87	41	P		P	15 23 24.7	-1.2
	comp=Z,2.8nm,1.0s,mb4.0,baz=229,slow=9.4,SNR=4.8							
MJAR				LR		LR	15 40 20.2	
	comp=Z,520nm,18.6s,MS4.4,baz=240,slow=38							
WRA	Warramunga Arr	39.29	139	P		P	15 23 37.5	-0.5
	comp=Z,26nm,0.9s,mb4.9,baz=318,slow=9.2,SNR=170							
WRA				PcP		PcP	15 25 46.0	-0.6
	comp=Z,1.1nm,0.8s,baz=324,slow=2.8,SNR=2.4							
WRA				LR		LR	15 41 07.7	
	comp=Z,297nm,20.7s,MS4.1,baz=305,slow=38							
WRAB	Tennant Creek	39.29	139	*e*P		P	15 23 37.6	-0.4
	comp=Z,32nm,1.1s,mb5.0							
WRAB	Tennant Creek	39.29	139	P		P	15 23 35.9	-2.1
	comp=Z,34nm,1.1s,mb5.0							
WB2	Warramunga Arr	39.30	139	*e*P		P	15 23 37.6	-0.5
ASAR	Alice Springs	41.80	143	P		P	15 23 58.5	-0.3
	comp=Z,5.6nm,0.7s,mb4.3,baz=323,slow=8.1,SNR=164							
ASAR				PcP		PcP	15 25 55.2	+0.5
	comp=Z,0.9nm,0.6s,baz=324,slow=3.3,SNR=4.1							
KLBR	Kellerberrin	42.33	168	*e*P		P	15 24 01.7	-1.1
	comp=Z,9.1nm,0.6s,mb4.6							
MUN	Mundaring	42.41	170	*e*P		P	15 24 03.9	+0.4
MK31	Makanchi Array	42.81	334	*e*P		P	15 24 07.0	+0.4
MKAR	Makanchi Array	42.81	334	P		P	15 24 07.2	+0.6
	comp=Z,1.0nm,0.6s,mb3.7,baz=153,slow=7.7,SNR=7.3							
MKAR				LR		LR	15 43 24.4	
	comp=Z,1µm,20.6s,MS4.7,baz=353,slow=38							
KBL	Kabul	43.34	311	*e*P		P	15 24 11.5	+0.4
	comp=Z,6.4nm,0.6s,mb4.5							
TKM2	Tokmak 2	43.44	325	*e*P		P	15 24 12.4	+0.6
	comp=Z,6.0nm,0.8s,mb4.4							
NWAO	Narrogin (SRO)	43.52	169	P		P	15 24 11.8	-0.7
	comp=Z,9.9nm,0.6s,mb4.7,baz=325,slow=9.0,SNR=11							
AAK	Ala-Archa	43.90	324	*e*P		P	15 24 16.6	+1.1
	comp=Z,6.4nm,1.0s,mb4.3							
KURK	Kurotov	47.37	335	P		P	15 24 42.6	-0.2
	comp=Z,1.7nm,0.2s,mb4.5,baz=142,slow=7.6,SNR=3.8							
ZAA0	Zalesovo Array	47.69	341	*e*P		P	15 24 45.0	-0.2
ZALV	Zalesovo Beam	47.69	341	P		P	15 24 44.9	-0.4
	comp=Z,3.5nm,0.7s,mb4.5,baz=151,slow=6.3,SNR=17							
ZALV				LR		LR	15 45 27.3	
	comp=Z,407nm,19.9s,MS4.4,baz=152,slow=37							
STKA	Stephens Creek	52.44	144 ⇓	*i*P		P	15 25 21.2	-0.4
	comp=Z,4.1nm,0.6s,mb4.5							
STKA	Stephens Creek	52.44	144	P		P	15 25 21.3	-0.3
	comp=Z,8.0nm,0.8s,mb4.7,baz=322,slow=8.4,SNR=14							
STKA				LR		LR	15 52 30.7	
	comp=Z,346nm,18.1s,MS4.4,baz=134,slow=42							
BVAR	Borovoye Array	52.63	332	P		P	15 25 22.4	-0.3
	comp=Z,0.4nm,0.5s,mb3.6,baz=134,slow=6.2,SNR=3.1							
ARMA	Armidale	57.88	136	*e*P		P	15 26 02.6	+1.7
PETK	Petropavlovsk-	58.43	33	LR		LR	15 52 50.1	
	comp=Z,346nm,18.8s,MS4.5,baz=243,slow=38							
TIXI	Tiksi	62.91	7	*e*P		P	15 26 34.1	-0.6
BRTR	Keskin Array B	71.87	309	P		P	15 27 31.8	-0.2
	comp=Z,1.0nm,0.9s,mb3.8,baz=113,slow=6.7,SNR=2.9							
BRTR				LR		LR	16 01 39.2	
	comp=Z,152nm,18.0s,MS4.3,baz=264,slow=38							
AKASG	Malin Array Be	75.40	320	P		P	15 27 51.9	-0.6
	comp=Z,0.3nm,0.2s,mb3.8,baz=83,slow=4.8,SNR=3.9							
RPZ	Rata Peaks	78.00	139	LR		LR	16 03 30.6	
	comp=Z,387nm,18.6s,MS4.8,baz=47,slow=36							
ARCES	ARCESS Array B	78.17	339	LR		LR	16 06 47.4	
	comp=Z,716nm,18.9s,MS5.0,baz=97,slow=39							
URZ	Urewera	80.01	132	LR		LR	16 02 23.1	
	comp=Z,160nm,20.2s,MS4.4,baz=11,slow=35							
AFI	Afiamalu	82.79	105	LR		LR	16 01 01.0	
	comp=Z,146nm,18.2s,MS4.4,baz=301,slow=33							
LSZ	Lusaka	83.17	253	LR		LR	15 59 31.6	
	comp=Z,184nm,21.7s,MS4.4,slow=31							
HFS	Hagfors	83.69	330	LR		LR	16 09 09.6	
	comp=Z,601nm,18.3s,MS5.0,baz=81,slow=38							
MAW	Mawson	83.91	196	LR		LR	16 01 09.0	
	comp=Z,393nm,18.9s,MS4.8,baz=31,slow=32							
NOA	NORSAR Array B	84.74	331	LR		LR	16 08 09.1	
	comp=Z,352nm,19.9s,MS4.8,baz=80,slow=37							
GERES	GERESS Array B	85.55	319	P		P	15 28 47.6	+0.6
	comp=Z,0.2nm,0.3s,mb3.9,baz=77,slow=6.0,SNR=4.5							
GERES				LR		LR	16 11 33.9	
	comp=Z,344nm,18.1s,MS4.8,baz=260,slow=39							
BOSA	Boshof	88.65	241	LR		LR	16 07 35.4	
	comp=Z,555nm,18.1s,MS5.0,baz=68,slow=35							
JMIC	Jan Mayen	89.01	343	LR		LR	16 11 10.8	
	comp=Z,278nm,18.5s,MS4.7,baz=251,slow=37							
VNDA	Vanda	92.34	170	P		P	15 29 18.9	+0.4
VNDA				LR		LR	16 09 47.2	
	comp=Z,1.6nm,0.9s,mb4.3,baz=294,slow=6.3,SNR=7.6							
	comp=Z,194nm,20.1s,MS4.5,baz=326,slow=35							
RAR	Rarotonga	95.37	111	LR		LR	16 06 32.2	
	comp=Z,167nm,20.1s,MS4.5,baz=307,slow=32							
PLCA	Paso Flores	149.36	182	PKPbc		PKPbc	15 35 58.5	+0.5
	comp=Z,3.2nm,0.8s,baz=169,slow=2.1,SNR=7.3							

*ISCJB **28** 15:42:46.2±0.7, 445N±0.1×283W±0.10, h10km, mb4.0/17, MS3.9/8, Error ellipse: s-maj=20.1km s-min=10.1km az=2.2*
*IDC **28** 15:42:46.6±0.9, 4457N×28.17W, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.8/24, mbtmp3.7/10, ML3.6/1, MS3.9/8, Ms1 3.9/8, ms1mx3.5/31, Error ellipse: s-maj=30.0km s-min=19.7km az=6.0*
*NEIC **28** 15:42:48.0±0.5, 4448N×28.19W, h10km, mb4.4/9, Error ellipse: s-maj=14.4km s-min=7.6km az=179.0*
*CSEM **28** 15:42:48.0, 4448N×28.19W, h10km, mb4.4/8, After NEIC*
ISC 28 15:42:48.2±0.7, 445N±01×2820W±010, h10km, n46, σ0°86/36, mb4.0/17, MS3.9/8, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EKA	Eskdalemuir Ar	19.31	47	P		Pn	15 47 13.4	-0.7
	0.1nm,0.3s,baz=230,slow=10.0,SNR=3.2							
MFF	Saint Martin d	19.71	74	*e*P		Pn	15 47 21.6	+2.6
	88nm,1.7s							
MFF	Saint Martin d	19.71	74	*e*P		Pn	15 47 21.6	+2.6
	44nm,1.7s							
RJF	Les Rejaudoux	21.01	77	*e*P		P	15 47 32.7	+1.0
TCF	Toulx Ste Croi	21.37	74	*e*P		P	15 47 35.1	-0.4
	44nm,1.3s,mb4.3							
TCF	Toulx Ste Croi	21.37	74	*e*P		P	15 47 35.1	-0.4
	22nm,1.3s,mb4.3							
BGF	Bois d'Agland	21.77	74	*e*P		P	15 47 39.3	-0.6
	31nm,1.0s,mb4.4							
BGF	Bois d'Agland	21.77	74	*e*P		P	15 47 39.3	-0.6
	15nm,1.0s,mb4.4							
AVF	Avril sur Loir	22.10	73	*e*P		P	15 47 42.5	-0.8
	16nm,1.0s,mb4.1							
AVF	Avril sur Loir	22.10	73	*e*P		P	15 47 42.5	-0.8
	7.9nm,1.0s,mb4.1							
SSF	Saint Saulge	22.18	72	*e*P		P	15 47 45.2	+1.0
	26nm,1.0s,mb4.3							
SSF	Saint Saulge	22.18	72	*e*P		P	15 47 45.2	+1.0
	13nm,1.0s,mb4.3							
LOR	Lormes	22.40	72	*e*P		P	15 47 47.3	+0.8
	51nm,1.4s,mb4.5							
LOR	Lormes	22.40	72	*e*P		P	15 47 47.3	+0.8
	25nm,1.4s,mb4.5							
SMF	Signal de Mont	22.45	73	*e*P		P	15 47 47.9	+0.8
HAU	Haudompre	24.02	69	*e*P		P	15 48 01.7	-1.2
	22nm,1.0s,mb4.2							
HAU	Haudompre	24.02	69	*e*P		P	15 48 01.7	-1.2
	11nm,1.0s,mb4.2							
CDF	Champ du Feu	24.61	68	*e*P		P	15 48 07.9	-0.4
SFJD	Kangerlussuaq	25.53	340	LR		LR	15 56 07.2	
	comp=Z,197nm,18.4s,MS3.7,baz=142,slow=31							
TUE	Stuetta	26.23	72	*e*P		P	15 48 23.0	-0.1
	8.0nm,0.6s,mb4.4							
TUE	Stuetta	26.23	72	*e*P		P	15 48 23.0	-0.1
	8.0nm,0.6s,mb4.4							
SCHQ	Schefferville	26.73	307	LR		LR	15 57 14.3	
	comp=Z,184nm,18.0s,MS3.7,baz=73,slow=32							
GERES	GERESS Array B	28.80	66	P		P	15 48 45.7	-0.4
	0.2nm,0.5s,mb3.1,baz=266,slow=4.7,SNR=3.4							
VRAC	Vranov	30.62	65	LR		LR	15 59 55.8	
	comp=Z,130nm,21.6s,MS3.5,slow=34							
BBTS	Babate	31.36	158	LR		LR	15 59 20.7	
	comp=Z,498nm,20.3s,MS4.2,baz=62,slow=32							
SADO	Sadowa	35.76	289	LR		LR	16 04 08.4	
	comp=Z,207nm,18.1s,MS3.9,baz=243,slow=36							
AKASG	Malin Array Be	38.36	60	P		P	15 50 07.9	-1.1
	0.2nm,0.3s,mb3.3,baz=278,slow=9.4,SNR=3.0							
TOA0	Torodi Ar. Sit	40.34	131	*e*P		P	15 50 25.3	-0.6
TOA0	Torodi Ar. Sit	40.34	131	*e*P		P	15 50 25.3	-0.7
TORD	Torodi Ar. Bea	40.34	131	P		P	15 50 25.6	-0.3
	3.5nm,0.8s,mb4.1,baz=325,slow=8.3,SNR=16							
TKL	Tuckaleechee C	42.71	278	LR		LR	16 06 04.0	
	comp=Z,73nm,21.4s,MS3.5,baz=289,slow=33							
BRTR	Keskin Array B	45.16	74	P		P	15 51 06.3	+1.5
	0.8nm,0.8s,mb3.6,baz=304,slow=6.4,SNR=2.6							
YKA	Yellowknife Ar	50.24	323	P		P	15 51 43.8	-0.1
	1.1nm,0.8s,mb3.9,baz=81,slow=7.6,SNR=2.4							
YKA	Yellowknife Ar	50.24	323	P		P	15 51 43.8	-0.2
PDAR	Pinedale Array	56.51	299	P		P	15 52 30.9	+0.5
	0.4nm,0.7s,mb3.6,baz=70,slow=11,SNR=3.2							
PDAR	Pinedale Array	56.51	299	P		P	15 52 30.9	+0.5
TXAR	Lajitas Array	60.18	283	P		P	15 52 56.2	+0.1
	1.3nm,0.9s,mb4.0,baz=69,slow=7.1,SNR=9.2							
TXAR	Lajitas Array	60.18	283	P		P	15 52 56.2	0.0
MVU	Marysvale	60.55	296	*e*P		P	15 52 59.2	+0.6
	1.9nm,0.5s,mb4.5							
MVU	Marysvale	60.55	296	*e*P		P	15 52 59.2	+0.6
	1.9nm,0.5s,mb4.5							
MKAR	Makanchi Array	70.39	43	P		P	15 54 01.6	-0.5
	0.7nm,0.8s,mb3.6,baz=328,slow=5.1,SNR=2.9							
SONM	Songino Array	79.76	29	P		P	15 54 55.5	-0.6
	0.9nm,0.8s,mb3.7,baz=322,slow=6.9,SNR=7.5							
BOSA	Boshof	87.61	135	LR		LR	16 30 35.7	
	comp=Z,65nm,20.5s,MS4.0,baz=246,slow=33							
PLCA	Paso Flores	93.00	211	LR		LR	16 37 49.7	
	comp=Z,190nm,19.1s,MS4.6,baz=178,slow=36							
VNDA	Vanda	146.63	184	PKPbc		PKPbc	16 02 28.9	+0.4
	1.6nm,1.1s,baz=188,slow=4.3,SNR=3.7							
VNDA	Vanda	146.63	184	PKPbc		PKPbc	16 02 28.9	+0.4

*ISCJB **28** 15:43:12.1±0.9, 2486N±006×122.40E±002, h15km±9km, Error ellipse: s-maj=10.5km s-min=3.4km az=1.2*
*TAP **28** 15:43:12.9, 2480N×122.33E, h5km±2km, ML3.2, D*
*JMA **28** 15:43:13.2±0.2, 2423N×122.34E, h33km, M2.6*
ISC 28 15:43:11.5±0.6, 2481N±004×12241E±002, h1km±5km, n32, σ1°06/44, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.43	298	*i*P		Pg	15 43 20.1	+0.3
	baz=303							
TWB1				*e*S		Sg	15 43 24.9	-0.6
	baz=303							
TWC	Suao	0.55	249	*e*S		Sg	15 43 30.4	+1.3
	baz=245							
ILA	Ilan	0.60	266	S		Sg	15 43 31.1	+0.2
	baz=265							
NWF	Wu-fen Shan	0.63	295	*e*P		Pg	15 43 24.2	+0.7
	baz=298							
YOJ	Yonaguni jima	0.64	122	P		Pg	15 43 25.8	+2.0
YOJ				S		Sg	15 43 34.7	+2.5
TWE	Neicheng	0.68	263	P		Pg	15 43 24.1	-0.5
	baz=262							
TWE				S		Sg	15 43 33.1	-0.3
	baz=262							
ENA	Nanau	0.72	238	P		Pg	15 43 25.2	0.0
	baz=234							
ENA				*e*S		Sg	15 43 35.4	+0.9
	baz=234							
TWA	Mucha	0.77	283	*e*P		Pg	15 43 26.9	+0.7
	baz=284							
ENTT	Nioudou	0.79	258	P		Pg	15 43 26.4	-0.1
	baz=256							
ENTT				*e*S		Sg	15 43 36.0	-0.8
	baz=256							
TWS1	Kuangyinshan	0.95	288	*e*P		Pg	15 43 30.4	+0.8
	baz=289							
NSK	Sanguang	0.97	262	P		Pg	15 43 29.3	-0.7
	baz=261							
NSK				*e*S		Sg	15 43 40.5	-2.1
	baz=261							
NNS	Nan Shan	1.01	249	*e*P		Pg	15 43 30.9	0.0
	baz=247							
NNS				*e*S		Sg	15 43 43.3	-0.8
	baz=247							
TWD	Chiawan	1.04	226	*e*P		Pg	15 43 30.8	-0.6
	baz=222							
TWD				*e*S		Sg	15 43 44.8	0.0
	baz=222							
WHF	Hehuan Shan	1.24	238	P		Pg	15 43 35.0	-0.2
	baz=235							
WHF				*e*S		Sg	15 43 49.6	-1.5
	baz=235							
TWT	Tachien	1.25	244	*e*P		Pg	15 43 35.0	-0.5
	baz=242							
IRIF	Iriomote-Funau	1.29	111	P		Pg	15 43 34.9	-1.3
IRIF				S		Sg	15 43 51.9	-1.0
NSTT	Nanjuang	1.29	263	*e*P		Pg	15 43 36.7	+0.4
	baz=261							
ESL	Shilin	1.33	222	*e*P		Pn	15 43 37.0	-0.2
	baz=219							
JKRS	Kuro-shima	1.56	111	P		Pn	15 43 39.2	-1.1
JKRS				*e*S		Sn	15 43 57.6	-3.6
TWQ1	Liyutan	1.56	253	*e*P		Pn	15 43 41.5	+1.2
	baz=252							
EHY	Hungye	1.63	218	*e*P		Pn	15 43 39.9	-1.4
	baz=215							
JIJ	Ishigaki jima	1.64	105	P		Pn	15 43 40.9	-0.5
JIJ				*e*S		Sn	15 44 01.5	-1.6
SMLT	Sun Moon Lake	1.66	237	*e*P		Pn	15 43 43.2	+1.5
	baz=234							
TYC	Yuchr	1.68	238	*e*P		Pn	15 43 43.3	+1.4
	baz=236							
TWF1	Yuli	1.77	215	*e*P		Pn	15 43 42.5	-0.7
	baz=213					

RPZ	**Rata Peaks**	**16.95**	**206**	S		**S**	**15 58 21.9**	**-0.1**
	1.4nm,0.3s,baz=265,slow=13,SNR=6.2								
ASAR	**Alice Springs**	**42.56**	**266**	P		**P**	**15 59 09.5**	**0.0**
	0.3nm,0.3s,mb2.9,baz=96,slow=6.4,SNR=13								
ASAR				PcP		PcP	16 00 56.7	+0.3	
	0.5nm,0.3s,baz=106,slow=3.8,SNR=5.7								
ASAR				ScP		ScP	16 04 22.1	+1.7	
	0.6nm,0.8s,baz=112,slow=3.7,SNR=4.9								
WRAB	**Tennant Creek**	**43.40**	**271**	*e*P		**P**	**15 59 16.4**	**+0.3**
	1.5nm,0.7s,mb3.3								
WRAB				*e*pP		pP	16 00 00.1	-13	
WRA	**Warramunga Arr**	**43.41**	**271**	P		**P**	**15 59 16.4**	**+0.2**
	0.9nm,0.4s,mb3.4,baz=109,slow=6.2,SNR=48								
WRA				PcP		PcP	16 00 59.6	+0.4	
	0.7nm,0.7s,baz=119,slow=3.3,SNR=6.8								
WRA				ScP		ScP	16 04 24.9	+1.0	
	0.4nm,0.8s,baz=107,slow=3.5,SNR=3.3								
WRA				S		**S**	**16 05 23.8**	**+0.6**	
	0.7nm,0.8s,baz=108,slow=13,SNR=4.5								
SNAA	**Sanae**	**79.72**	**179**	*e*		**P**	**16 03 15.8**	**-1.2**	
VNA3	**Neumayer Olymp**	**79.90**	**176**	*e*		**P**	**16 03 20.7**	**+2.8**	
VNA2	**Neumayer--Watz**	**80.33**	**177**	*e*		**P**	**16 03 23.5**	**+3.3**	
	baz=195,slow=6.6								
VNA1	**Neumayer--Stat**	**80.56**	**177**	*e*		**P**	**16 03 24.8**	**+3.4**	
PLCA	**Paso Flores**	**84.04**	**133**	P		**P**	**16 03 42.1**	**+2.1**	
	1.6nm,0.8s,mb3.9,baz=24,slow=2.3,SNR=3.9								
PLCA	**Paso Flores**	**84.04**	**133**	*e*P		**P**	**16 03 42.3**	**+2.3**	
	1.5nm,0.8s,mb3.9								
PETK	**Petropavlovsk-**	**84.15**	**346**	P		**P**	**16 03 37.9**	**-2.0**	
	3.5nm,0.7s,mb4.3,baz=110,slow=7.7,SNR=8.2								
PETK	**Petropavlovsk-**	**84.15**	**346**	P		**P**	**16 03 37.9**	**-2.0**	
NVAR	**Mina Array Bea**	**87.54**	**43**	P		**P**	**16 03 55.6**	**-1.2**	
	1.3nm,0.5s,mb4.0,baz=165,slow=6.2,SNR=8.5								
TXAR	**Lajitas Array**	**92.10**	**58**	P		**P**	**16 04 18.0**	**-0.3**	
	0.3nm,0.7s,mb3.4,baz=222,slow=2.4,SNR=2.8								
MKAR	**Makanchi Array**	**116.27**	**311**	PKP		PKPdf	16 09 49.3	-1.1	
	0.7nm,0.7s,baz=54,slow=2.5,SNR=6.6								
ARCES	**ARCESS Array B**	**136.94**	**348**	PKP		PKPdf	16 10 29.7	+0.6	
	3.0nm,0.8s,baz=90,slow=2.4,SNR=5.0								
ARCES	**ARCESS Array B**	**136.94**	**348**	PKP		PKPdf	16 10 29.7	+0.6	
NB2	**NORSAR Subarra**	**147.12**	**351**	PKP		PKPdf	16 10 48.7	+1.3	
	comp=Z,1.7nm,0.6s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**147.12**	**351**	PKPbc		PKPbc	16 10 48.7	-1.3	
	comp=Z,4.5nm,0.8s,baz=15,slow=4.5,SNR=9.2								
NOA	**NORSAR Array B**	**147.12**	**351**	PKPbc		PKPbc	16 10 48.7	-1.3	
HFS	**Hagfors**	**147.59**	**348**	PKPbc		PKPbc	16 10 49.4	-1.9	
	comp=Z,4.5nm,0.6s,baz=45,slow=2.3,SNR=14								
AKASG	**Malin Array Be**	**149.67**	**324**	PKPbc		PKPbc	16 10 56.0	-0.8	
	comp=Z,4.5nm,0.5s,baz=45,slow=3.2,SNR=19								
AKASG				PKPab		PKPab	16 11 01.5	-1.5	
	comp=Z,3.3nm,0.5s,baz=46,slow=4.8,SNR=14								
BRTR	**Keskin Array B**	**151.27**	**301**	PKPbc		PKPbc	16 11 00.7	-0.2	
	comp=Z,1.8nm,0.5s,baz=138,slow=4.7,SNR=5.0								
TORD	**Torodi Ar. Bea**	**164.38**	**182**	PKP		PKPdf	16 11 11.9	+0.6	
	comp=Z,0.6nm,0.7s,baz=349,slow=1.5,SNR=3.2								
TORD				PKPab		PKPab	16 12 08.6	+1.5	
	comp=Z,1.2nm,0.7s,baz=176,slow=3.4,SNR=6.0								

IDC 28 16:05:07.7±2.4, 581S×13090E, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.4/14, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=142.4km s-min=30.1km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.44**	**167**	Pn	Pn	16 08 31.9	-1.7
	0.3nm,0.3s,baz=350,slow=13,SNR=18						
WRA				Sn	Sn	16 11 02.6	-12
	0.6nm,0.3s,baz=335,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**17.99**	**171**	P	Pn	16 09 20.4	+1.0
	0.2nm,0.3s,baz=357,slow=11,SNR=21						
ASAR				S	Sn	16 12 27.0	-14
	0.1nm,0.3s,baz=354,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**67.73**	**326**	P	P	16 16 07.2	+0.1
	0.5nm,0.4s,baz=116,slow=7.1,SNR=13						

*ISCJB **28** 16:18:34.9±0.2, 4935N±001×678E±002, h0km, Error ellipse: s-maj=2.3km s-min=1.8km az=172.1*
*LDG **28** 16:18:36.6±0.1, 4938N×680E, h1km, Md2.9/1, Ml3.2/13, Error ellipse: s-maj=1.7km s-min=1.4km az=147.0, Suspected Mining induced.*
*STR **28** 16:18:36.0±0.2, 4938N×677E, h1km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **28** 16:18:36.7±0.3, 4936N×687E, h1km, ML2.4/4, Error ellipse: s-maj=4.4km s-min=3.3km az=63.0*
*BNS **28** 16:18:36.7±1.0, 4938N×681E, h1km, ML1.9*
*NEIC **28** 16:18:36.0, 4938N×677E, h1km, ML3.2(LDG), ML2.7(STR), After STR.*
*CSEM **28** 16:18:36.4±0.0, 4938N×682E, h1km, ML3.1/14, Error ellipse: s-maj=1.0km s-min=0.8km az=105.0*

ISC 28 16:18:35.7±0.2, 4936N±001×678E±002, h0km, n78, σ1§11/137, 1C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.39**	**28**	*e*Pg	**Pg**	**16 18 43.6**	**+0.5**
	SNR=20						
RUP	**Ruppelstein**	**0.39**	**28**	Pg	**Pg**	**16 18 43.5**	**+0.3**
RUP				Sg	**Sg**	**16 18 48.5**	**+0.3**
RUP	**Ruppelstein**	**0.39**	**28**	Pg	**Pg**	**16 18 43.6**	**+0.4**
	SNR=20						
RUP				Sg	**Sg**	**16 18 48.5**	**+0.3**
WLF	**Walferdange**	**0.51**	**307**	*e*Pg	**Pg**	**16 18 47.1**	**+1.6**
	SNR=6.5						
WLF				*e*Sg	**Sg**	**16 18 54.5**	**+2.4**
	SNR=4.6						
WLF	**Walferdange**	**0.51**	**307**	P	**Pg**	**16 18 47.3**	**+1.8**
WLF	**Walferdange**	**0.51**	**307**	*e*Pg	**Pg**	**16 18 47.0**	**+1.5**
WLF	**Walferdange**	**0.51**	**307**	*e*Pg	**Pg**	**16 18 47.0**	**+1.5**
WLF				Sg	**Sg**	**16 18 54.5**	**+2.4**
	SNR=4.6						
ABH	**Alteburg**	**0.72**	**43**	*e*Pg	**Pg**	**16 18 49.6**	**0.0**
	SNR=4.4						
ABH	**Alteburg**	**0.72**	**43**	Pg	**Pg**	**16 18 49.5**	**-0.1**
ABH				Sg	**Sg**	**16 18 58.9**	**-0.1**
ABH	**Alteburg**	**0.72**	**43**	Pg	**Pg**	**16 18 49.6**	**0.0**
	SNR=4.4						
ABH				Sg	**Sg**	**16 18 58.9**	**-0.1**
LANF	**Langenberg**	**0.77**	**119**	Pg	**Pg**	**16 18 50.4**	**-0.2**
LANF				Sg	**Sg**	**16 19 02.4**	**+1.8**
KTD	**Kalmit**	**0.85**	**92**	Pg	**Pg**	**16 18 52.5**	**+0.4**
KTD				Sg	**Sg**	**16 19 04.7**	**+1.5**
BGG	**Burgeitz**	**0.92**	**23**	*e*Pg	**Pg**	**16 18 53.7**	**+0.3**
HILG	**Hillesheim**	**0.94**	**356**	*e*Pg	**Pg**	**16 18 53.2**	**-0.5**
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pn	**Pn**	**16 18 56.1**	**-0.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**16 19 08.9**	**+0.9**
	52nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pg	**Pg**	**16 18 55.1**	**+0.1**
CDF				*e*Pn	**Pn**	**16 18 56.1**	**-0.9**
CDF				*e*Sg	**Sg**	**16 19 08.9**	**+0.9**
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pn	**Pn**	**16 18 56.1**	**-0.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**16 19 08.9**	**+0.9**
	26nm,0.2s,SNR=1.0						
RFYF	**Reffroy**	**1.13**	**230**	*e*Pg	**Pg**	**16 18 58.9**	**+1.5**
	baz=50						
RFYF				*e*Sn	**Sn**	**16 19 14.0**	**-0.9**
	134nm,0.3s						
RFYF	**Reffroy**	**1.13**	**230**	*e*Pg	**Pg**	**16 18 58.9**	**+1.5**
RFYF				*e*Sn	**Sn**	**16 19 14.0**	**-0.9**
	67nm,0.3s						
ECH	**Echery**	**1.17**	**167**	Pg	**Pg**	**16 18 58.9**	**+0.7**
ECH				Sg	**Sg**	**16 19 14.7**	**+1.3**
ECH	**Echery**	**1.17**	**167**	*e*Pg	**Pg**	**16 18 58.4**	**+0.2**
	SNR=19						
ECH	**Echery**	**1.17**	**167**	*e*Pg	**Pg**	**16 18 58.2**	**0.0**
ECH				*e*S	**Sg**	**16 19 14.4**	**+1.0**
KOE	**Koeppel**	**1.23**	**30**	*e*Pg	**Pg**	**16 18 58.7**	**-0.6**
STB	**Steinbach**	**1.24**	**2**	*e*Pg	**Pg**	**16 18 59.6**	**+0.1**
STB				*e*Sg	**Sg**	**16 19 16.0**	**+0.5**
	26nm,0.3s						
KLL	**Kalltalsperre**	**1.32**	**347**	*e*Pg	**Pg**	**16 19 00.5**	**-0.6**
TOD	**Tromm**	**1.34**	**79**	*e*Pg	**Pg**	**16 18 59.9**	**-1.5**
	SNR=8.2						
TOD	**Tromm**	**1.34**	**79**	Pg	**Pg**	**16 19 00.9**	**-0.6**
TOD				Sg	**Sg**	**16 19 19.2**	**+0.3**
MEM	**Membach**	**1.35**	**339**	P	**Pg**	**16 19 02.3**	**+0.8**
DREG	**Dreilaegerbach**	**1.35**	**345**	*e*Pg	**Pg**	**16 19 01.2**	**-0.4**
TNS	**Taunus Mts**	**1.38**	**51**	*e*Pn	**Pn**	**16 19 01.1**	**-1.2**
	SNR=2.0						
TNS				*e*Sg	**Sg**	**16 19 19.7**	**-0.5**
	SNR=3.8						
HAU	**Haudompre**	**1.39**	**192**	*e*Pg	**Pg**	**16 19 03.0**	**+0.7**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**16 19 21.3**	**+1.1**
	61nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.39**	**192**	*e*Pn	**Pn**	**16 19 01.8**	**-0.5**
HAU				*e*Pg	**Pg**	**16 19 03.0**	**+0.7**
HAU				*e*Sg	**Sg**	**16 19 21.3**	**+1.1**
HAU	**Haudompre**	**1.39**	**192**	*e*Pg	**Pg**	**16 19 03.0**	**+0.7**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**16 19 21.3**	**+1.1**
	31nm,0.2s,SNR=1.0						
BCLA	**Clavier**	**1.43**	**319**	P	**Pn**	**16 19 04.8**	**+2.0**
MEZF	**Maizieres J'vi**	**1.43**	**234**	*e*Pg	**Pg**	**16 19 03.7**	**+0.6**
	baz=50,SNR=1.0						
MEZF				*e*Sg	**Sg**	**16 19 22.7**	**+1.2**
	36nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.43**	**234**	*e*Pg	**Pg**	**16 19 03.7**	**+0.6**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**16 19 22.7**	**+1.2**
	18nm,0.3s,SNR=1.0						
BFO	**Black Forest**	**1.45**	**135**	*e*Pn	**Pn**	**16 19 02.6**	**-0.6**
	SNR=1.6						
BFO				*e*Sg	**Sg**	**16 19 20.9**	**-1.5**
	SNR=4.1						
BFO	**Black Forest**	**1.45**	**135**	*e*P	**Pn**	**16 19 02.7**	**-0.5**
BFO				*e*S	**Sg**	**16 19 23.7**	**+1.3**
BFO	**Black Forest**	**1.45**	**135**	Pn	**Pn**	**16 19 02.7**	**-0.5**
	SNR=1.6						
BFO				Sg	**Sg**	**16 19 20.9**	**-1.5**
	SNR=4.1						
BFO				*e*S	**Sg**	**16 19 23.7**	**+1.3**
GIVF	**Givet**	**1.47**	**301**	*e*Pg	**Pg**	**16 19 03.7**	**-0.2**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**16 19 21.7**	**-1.7**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**16 19 24.2**	**+1.3**
	25nm,0.5s,SNR=1.0						
HGN	**Heimansgroeve**	**1.51**	**339**	*e*Pn	**Pn**	**16 19 03.5**	**-0.5**
	3.2nm,0.2s						
HGN	**Heimansgroeve**	**1.51**	**339**	*e*Pg	**Pg**	**16 19 05.7**	**+1.1**
	16nm,0.7s						
HGN				*e*Sg	**Sg**	**16 19 24.8**	**+0.6**
HGN	**Heimansgroeve**	**1.51**	**339**	*e*Pg	**Pg**	**16 19 05.7**	**+1.0**
	16nm,0.7s						
HGN				*e*Sg	**Sg**	**16 19 24.8**	**+0.6**
MOF	**Molkenrain**	**1.53**	**171**	Pg	**Pg**	**16 19 05.3**	**+0.3**
MOF				Sg	**Sg**	**16 19 25.5**	**+0.7**
MOF	**Molkenrain**	**1.53**	**171**	*e*Pg	**Pg**	**16 19 05.5**	**+0.4**
	SNR=21						
HINF	**Hinteralfeld**	**1.55**	**178**	*e*Pg	**Pg**	**16 19 05.6**	**+0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**16 19 25.9**	**+0.5**
	62nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**1.55**	**178**	*e*Pn	**Pn**	**16 19 03.7**	**-0.8**
HINF				*e*Pg	**Pg**	**16 19 05.6**	**+0.3**
HINF				*e*Sg	**Sg**	**16 19 25.9**	**+0.5**
HINF	**Hinteralfeld**	**1.55**	**178**	*e*Pg	**Pg**	**16 19 05.6**	**+0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**16 19 25.9**	**+0.5**
	31nm,0.3s,SNR=1.0						
DOU	**Dourbes**	**1.60**	**298**	P	**Pn**	**16 19 06.3**	**+1.1**
DOU	**Dourbes**	**1.60**	**298**	P	**Pn**	**16 19 06.2**	**+1.0**
FELD	**Feldberg im Sc**	**1.69**	**151**	Pg	**Pg**	**16 19 08.4**	**+0.2**
BAIF	**Baives**	**1.81**	**294**	*e*Pg	**Pg**	**16 19 10.1**	**-0.3**
	SNR=1.0						
SPAK	**Spaichingen-Ko**	**1.83**	**133**	Pg	**Pg**	**16 19 10.7**	**-0.1**
LOMF	**Lomont**	**2.01**	**179**	*e*Pg	**Pg**	**16 19 14.6**	**+0.4**
	SNR=2.6						
LOMF	**Lomont**	**2.01**	**179**	Pg	**Pg**	**16 19 14.4**	**+0.1**
CABF	**La Chapelle**	**2.79**	**190**	*e*Sg	**Sg**	**16 20 05.9**	**+0.6**
	19nm,0.5s,SNR=1.0						
CABF	**La Chapelle**	**2.79**	**190**	*e*Sg	**Sg**	**16 20 05.9**	**+0.6**
	9.4nm,0.5s,SNR=1.0						
LOR	**Lormes**	**2.86**	**224**	*e*Pn	**Pn**	**16 19 21.7**	**-0.9**
	baz=51,SNR=1.0						
LOR				*e*Sn	**Sn**	**16 19 55.4**	**-2.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**16 20 06.9**	**-0.7**
	15nm,0.4s,baz=39,SNR=1.0						
LOR	**Lormes**	**2.86**	**224**	*e*Pn	**Pn**	**16 19 21.7**	**-0.9**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**16 19 55.4**	**-2.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**16 20 06.9**	**-0.7**
	7.4nm,0.4s,SNR=1.0						
DAVA	**Damuels**	**2.93**	**134**	↑*e*Pn	**Pn**	**16 19 25.0**	**+1.5**
	1.0nm,0.2s						
DAVA				↓*e*Sg	**Sg**	**16 20 12.3**	**+2.5**
	6.9nm,0.3s						
SSF	**Saint Saulge**	**3.17**	**225**	*e*Pn	**Pn**	**16 19 26.1**	**-0.8**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**16 20 01.9**	**-3.5**
	13nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**3.17**	**225**	*e*Pn	**Pn**	**16 19 26.1**	**-0.8**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**16 20 01.9**	**-3.5**
	6.4nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**3.36**	**217**	*e*Pn	**Pn**	**16 19 29.3**	**-0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**16 20 06.8**	**-3.1**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**16 20 22.2**	**-1.3**
	7.9nm,0.3s						
SMF	**Signal de Mont**	**3.36**	**217**	*e*Pn	**Pn**	**16 19 29.3**	**-0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**16 20 06.8**	**-3.1**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**16 20 22.2**	**-1.3**
	4.0nm,0.3s						
FETA	**Feichten**	**3.53**	**130**	↓*i*Pn	**Pn**	**16 19 33.4**	**+1.7**
	3.6nm,0.5s						
FETA				↓*i*Sg	**Sg**	**16 20 29.6**	**+0.5**
	1.5nm,0.4s						
WERD	**Werda**	**3.73**	**71**	*e*Sg	**Sg**	**16 20 33.7**	**-1.9**
	SNR=2.9						
BGF	**Bois d'Agland**	**3.85**	**225**	*e*Pn	**Pn**	**16 19 35.3**	**-0.9**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**16 20 19.5**	**-2.6**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**16 20 38.1**	**-1.4**
	45nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**3.85**	**225**	*e*Pn	**Pn**	**16 19 35.3**	**-0.9**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**16 20 19.5**	**-2.6**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**16 20 38.1**	**-1.4**
	23nm,0.4s,SNR=1.0						
CLL	**Collm**	**4.44**	**62**	*e*Sg	**Sg**	**16 20 55.0**	**-3.2**
KHC	**Kasperske Hory**	**4.46**	**90**	*e*PN	**Pn**	**16 19 44.5**	**0.0**
KHC				*e*SN	**Sn**	**16 20 35.5**	**-1.6**
KHC				*ex*	x	16 20 58.5	
ORIF	**Oris-en-Rattie**	**4.49**	**188**	*e*Sg	**Sg**	**16 20 58.1**	**-1.7**
	5.7nm,0.5s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.49**	**188**	*e*Sg	**Sg**	**16 20 58.1**	**-1.7**
	2.8nm,0.5s,SNR=1.0						
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn	**Pn**	**16 19 46.2**	**0.0**
	SNR=9.2						
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn	**Pn**	**16 19 45.9**	**-0.3**
GEC2				*e*Sn	**Sn**	**16 20 36.6**	**-3.3**
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn	**Pn**	**16 19 45.9**	**-0.3**
GEC2				*e*Sn	**Sn**	**16 20 36.7**	**-3.3**
BRG	**Berggiesshubel**	**4.85**	**69**	SG	**Sg**	**16 21 10.0**	**-1.5**
	0.8nm,0.7s						
FRF	**La Foret Royal**	**5.80**	**181**	*e*Pn	**Pn**	**16 19 58.9**	**-4.1**
	SNR=1.0						

*ISCJB **28** 16:44:32.1±0.4, 2369N±002×12207E±002, h24km±3km, Error ellipse: s-maj=3.6km s-min=2.3km az=141.9*
*JMA **28** 16:44:32.8±0.3, 2361N×122.13E, h31km*
*TAP **28** 16:44:33.4, 2371N×12200E, h37km, ML3.4, C*

ISC 28 16:44:32.2±0.5, 2369N±002×12206E±002, h20km±3km, n54, σ0§75/99, 4C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.48**	**272**	*e*P	**Pb**	**16 44 42.8**	**+0.9**
	baz=261						
TEGC				*e*S	**Sb**	**16 44 50.1**	**+1.6**
	baz=261						
HWA	**Hwalien**	**0.51**	**305**	*e*P	**Pb**	**16 44 42.8**	**+0.5**
	baz=303						
HWA				*i* S	**Sb**	**16 44 50.1**	**+0.7**
	baz=303						
ESF	**Shoufeng Towns**	**0.54**	**290**	*e*P	**Pb**	**16 44 43.0**	**+0.1**
	baz=289						
TWD	**Chiawan**	**0.58**	**312**	↑*i*P	**Pb**	**16 44 43.9**	**+0.3**
	baz=315						
TWD				*i* S	**Sb**	**16 44 51.8**	**+0.4**
	baz=315						
ESL	**Shilin**	**0.59**	**282**	↑*i*P	**Pb**	**16 44 43.8**	**0.0**
	baz=281						
ESL				S	**Sb**	**16 44 51.5**	**-0.1**
	baz=281						
EHY	**Hungye**	**0.70**	**255**	*i* P	**Pb**	**16 44 46.0**	**+0.3**
	baz=252						
EHY				S	**Sb**	**16 44 54.9**	**0.0**
	baz=252						
TWF1	**Yuli**	**0.78**	**245**	*i* P	**Pb**	**16 44 47.2**	**+0.2**
	baz=233						
TWF1				S	**Sb**	**16 44 57.4**	**+0.3**
	baz=233						
ENA	**Nanau**	**0.79**	**338**	P	**Pb**	**16 44 47.4**	**+0.1**
	baz=336						
ENA				*e*S	**Sb**	**16 44 58.1**	**+0.6**
	baz=336						
WHF	**Hehuan Shan**	**0.86**	**302**	*i* P	**Pb**	**16 44 48.2**	**-0.2**
	baz=294						
WHF				S	**Sb**	**16 44 59.0**	**-0.5**
	baz=294						
CHKT	**Chengkung**	**0.87**	**228**	*e*P	**Pb**	**16 44 47.5**	**-1.1**
	baz=215						
CHKT				*e*S	**Sb**	**16 44 57.8**	**-1.9**
	baz=215						
TWC	**Suao**	**0.94**	**348**	*i* P	**Pb**	**16 44 50.1**	**+0.4**
	baz=351						
TWC				S	**Sb**	**16 45 02.0**	**+0.3**
	baz=351						
NNS	**Nan Shan**	**0.98**	**320**	P	**Pb**	**16 44 50.1**	**-0.3**
	baz=321						
NNS				*e*S	**Sb**	**16 45 02.7**	**-0.2**
	baz=321						
TWT	**Tachien**	**0.99**	**305**	P	**Pb**	**16 44 50.5**	**-0.1**
	baz=305						
TWT				*e*S	**Sb**	**16 45 02.9**	**-0.2**
	baz=305						
YUS	**Yu-Shan**	**1.04**	**259**	↑*i*P	**Pb**	**16 44 51.6**	**+0.2**
	baz=257						
YUS				*i* S	**Sb**	**16 45 03.8**	**-0.8**
	baz=257						
ENTT	**Nioudou**	**1.05**	**335**	*e*P	**Pb**	**16 44 51.4**	**-0.2**
	baz=336						
ENTT				*e*S	**Sb**	**16 45 04.7**	**-0.3**
	baz=336						
ELDTW	**Lidau**	**1.08**	**243**	*e*P	**Pn**	**16 44 51.1**	**-1.1**
	baz=231						
ELDTW				*e*S	**Sb**	**16 45 04.3**	**-1.5**
	baz=231						
SMLT	**Sun Moon Lake**	**1.08**	**281**	*i* P	**Pn**	**16 44 51.9**	**-0.2**
	baz=279						
SMLT				*e*S	**Sb**	**16 45 04.9**	**-1.0**
	baz=279						
TWE	**Neicheng**	**1.09**	**341**	P	**Pn**	**16 44 52.3**	**0.0**
	baz=343						
TWE				*e*S	**Sb**	**16 45 05.8**	**-0.3**
	baz=343						
ILA	**Ilan**	**1.11**	**345**	*e*P	**Pn**	**16 44 52.5**	**-0.1**
	baz=347						
ILA				*e*S	**Sb**	**16 45 06.5**	**-0.2**
	baz=347						
TYC	**Yuchr**	**1.12**	**281**	↑*i*P	**Pn**	**16 44 52.4**	**-0.3**
	baz=280						
YOJ	**Yonaguni jima**	**1.16**	**48**	P	**Pn**	**16 44 53.5**	**+0.3**
YOJ				*e*S	**Sb**	**16 45 08.2**	**+0.1**
ALS	**Alishan**	**1.17**	**261**	*i* P	**Pn**	**16 44 53.7**	**+0.4**
	baz=268						
ALS				*e*S	**Sb**	**16 45 07.8**	**-0.5**
	baz=268						
NSK	**Sanguang**	**1.17**	**327**	P	**Pn**	**16 44 53.1**	**-0.3**
	baz=328						
NSK				*e*S	**Sb**	**16 45 07.4**	**-1.2**
	baz=328						
TWG	**Pinlang**	**1.25**	**227**	*e*P	**Pn**	**16 44 53.3**	**-1.3**
	baz=233						
TWG				*e*S	**Sn**	**16 45 08.4**	**-2.4**
	baz=233						
CHN5	**Tsauling**	**1.27**	**266**	↓*i*P	**Pn**	**16 44 55.7**	**+0.9**
	baz=265						
CHN5				*e*S	**Sn**	**16 45 11.0**	**-0.2**
	baz=265						
WNT	**Mingjian**	**1.28**	**279**	*e*P	**Pn**	**16 44 55.1**	**+0.3**
	baz=278						
TWB1	**Santiao Chiao**	**1.31**	**357**	*e*P	**Pn**	**16 44 53.2**	**-2.2**
	baz=359						
NSTT	**Nanjuang**	**1.35**	**314**	*e*P	**Pn**	**16 44 57.0**	**+1.1**
	baz=315						
NSTT				*e*S	**Sn**	**16 45 12.7**	**-0.5**
	baz=315						
TCU	**Taichung**	**1.35**	**290**	*e*P	**Pn**	**16 44 56.9**	**+1.1**
	baz=290						
TCU				*e*S	**Sn**	**16 45 11.4**	**-1.7**
	baz=290						
TWQ1	**Liyutan**	**1.35**	**299**	*e*P	**Pn**	**16 44 56.7**	**+0.9**
	baz=299						
TWA	**Mucha**	**1.36**	**341**	*e*P	**Pn**	**16 44 56.2**	**+0.2**
	baz=332						
TWA				*e*S	**Sn**	**16 45 13.0**	**-0.4**
	baz=332						
WGK	**Gukeng**	**1.38**	**270**	*e

CHN8	**Yiju**	**1.73**	**259**	*e*P		**Pn**	**16 45 02.1**	**+1.0**
	baz=257							
CHN8				*e*S		**Sn**	**16 45 23.0**	**+0.4**
	baz=257							
TWM1	**Shoushan**	**1.74**	**241**	*e*P		**Pn**	**16 45 04.5**	**+3.3**
	baz=239							
JKRS	**Kuro-shima**	**1.86**	**73**	P		**Pn**	**16 45 03.3**	**+0.4**
JKRS				S		**Sn**	**16 45 26.1**	**+0.2**
SCZT	**Fangliau**	**1.87**	**226**	*e*P		**Pn**	**16 45 04.5**	**+1.6**
	baz=224							
SCZT				*e*S		**Sn**	**16 45 25.8**	**-0.1**
	baz=224							
JIJ	**Ishigaki jima**	**2.02**	**70**	P		**Pn**	**16 45 04.9**	**-0.1**
JIJ				S		**Sn**	**16 45 28.9**	**-0.8**
JTJ	**Tarama**	**2.59**	**68**	*e*S		**Sn**	**16 45 43.1**	**-0.7**

*ISCJB **28** 16:46:19.9±1.6, 3733N±005×14199E±008, h18km±8km, mb3.7/5, Error ellipse: s-maj=12.4km s-min=6.7km az=33.6*
*NEIC **28** 16:46:20.4±1.1, 3727N×14249E, h35km, mb4.2/1, Error ellipse: s-maj=19.7km s-min=16.9km az=106.0*
*JMA **28** 16:46:22.0±0.2, 3735N×14192E, h40km±4km, M3.4*
*IDC **28** 16:46:22.4±3.5, 3716N×14230E, h49km±29km, mb3.4/4, mb1 3.5/6, mb1mx3.3/22, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=29.0km s-min=21.6km az=110.0*

ISC 28 16:46:20.9±1.4, 3738N±005×14191E±007, h10km±6km, n18, σ0f98/28, mb3.7/5, 4C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.82**	**269**	⇑P	**Pg**	**16 46 37.4**	**+0.7**
JFK				S	**Sg**	**16 46 48.2**	**+0.8**
ONAJ	**Iwakimizuishiy**	**0.93**	**253**	⇑P	**Pg**	**16 46 38.5**	**-0.2**
ONAJ				S	**Sg**	**16 46 50.3**	**-0.5**
JMM	**Marumori**	**1.01**	**299**	⇑P	**Pg**	**16 46 40.5**	**+0.3**
JMM				S	**Sg**	**16 46 52.3**	**-1.0**
JIO	**Ouri**	**1.16**	**338**	P	**Pb**	**16 46 42.6**	**-0.4**
JIO				S	**Sb**	**16 46 57.1**	**-0.9**
JFT	**Otama**	**1.26**	**277**	⇑P	**Pn**	**16 46 44.6**	**+0.1**
JFT				S	**Sb**	**16 47 00.7**	**-0.2**
JHO	**Hitachi**	**1.32**	**235**	P	**Pn**	**16 46 43.7**	**-1.6**
JHO				S	**Sb**	**16 46 58.8**	**-3.9**
JOU	**Okura**	**1.39**	**315**	P	**Pn**	**16 46 47.1**	**+0.8**
JOU				S	**Sn**	**16 47 05.0**	**+0.3**
JFY	**Yanaizu**	**1.75**	**271**	P	**Pn**	**16 46 52.1**	**+0.8**
JFY				*e*S	**Sn**	**16 47 14.0**	**+0.3**
MJAR	**Matsushiro Arr**	**3.08**	**255**	P	**Pn**	**16 47 12.1**	**+2.6**
	1.4nm,0.3s,baz=88,slow=15,SNR=13						
MJAR				S	**Sn**	**16 47 50.6**	**+4.2**
	2.8nm,0.3s,baz=82,slow=31,SNR=5.1						
MAJO	**Matsushiro**	**3.08**	**255**	*e*Pn	**Pn**	**16 47 12.7**	**+3.2**
MAT	**Matsushiro**	**3.08**	**255**	P	**Pn**	**16 47 07.9**	**-1.6**
MAT				*e*S	**Sn**	**16 47 47.0**	**+0.6**
ASAJ	**Asahikawa**	**6.75**	**4**	P	**Pn**	**16 48 01.4**	**+1.5**
	0.4nm,0.3s,baz=294,slow=16,SNR=5.1						
SONM	**Songino Array**	**27.92**	**303**	P	**P**	**16 52 11.0**	**0.0**
	0.7nm,0.6s,mb3.5,baz=106,slow=9.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**41.97**	**312**	P	**P**	**16 54 10.9**	**-0.9**
	0.5nm,0.6s,mb3.3,baz=77,slow=6.5,SNR=4.8						
MK31	**Makanchi Array**	**44.27**	**302**	P	**P**	**16 54 30.5**	**0.0**
MKAR	**Makanchi Array**	**44.27**	**302**	P	**P**	**16 54 30.1**	**-0.4**
	0.9nm,0.7s,mb3.6,baz=92,slow=9.7,SNR=6.3						
KURK	**Kurchatov**	**46.03**	**308**	*e*P	**P**	**16 54 43.8**	**-0.6**
	1.9nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**61.19**	**188**	P	**P**	**16 56 31.3**	**-4.4**
	0.4nm,0.7s,mb3.7,baz=24,slow=5.3,SNR=7.7						

*ISCJB **28** 16:52:17.1±0.4, 5919N±004×15209W±008, h77km±6km, mb3.7/8, Error ellipse: s-maj=7.9km s-min=6.1km az=144.4*
*IDC **28** 16:52:18.5±5.1, 5945N×15216W, h57km±51km, mb3.5/8, mb1 3.8/9, mb1mx3.6/20, mbtmp3.6/9, ML4.4/1, Error ellipse: s-maj=35.7km s-min=19.2km az=21.0*
*NEIC **28** 16:52:19.5, 5919N×15207W, h54km, ML3.4(AEIC), After AEIC.*
NEIC Felt at Homer.

ISC 28 16:52:18.5±0.4, 5917N±004×15211W±008, h66km±6km, n41, σ0f75/41, mb3.7/8, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUL	**Augustine Lava**	**0.71**	**288**	P	**Pn**	**16 52 33.4**	**+0.1**
AUL				S	**Sn**	**16 52 44.7**	**+0.6**
KDAK	**Kodiak Island**	**1.42**	**190**	*e*P	**Pn**	**16 52 42.5**	**+0.3**
SEW	**Seward**	**1.64**	**54**	P	**Pn**	**16 52 44.4**	**-0.7**
SLKM	**Skilak Lake**	**1.64**	**35**	P	**Pn**	**16 52 45.1**	**-0.1**
OHAK	**Old Harbor**	**2.05**	**198**	*e*P	**Pn**	**16 52 50.8**	**+0.1**
FIB	**Fire Island**	**2.22**	**25**	*e*Pn	**Pn**	**16 52 54.0**	**+1.0**
RC01	**Rabbit Creek A**	**2.26**	**31**	P	**Pn**	**16 52 53.8**	**+0.3**
SVW2	**Sparrevohn**	**2.60**	**320**	P	**Pn**	**16 52 57.6**	**-0.5**
PMR	**Palmer**	**2.84**	**30**	*e*Pn	**Pn**	**16 53 00.9**	**-0.5**
MID	**Middleton Isla**	**2.97**	**80**	*e*P	**Pn**	**16 53 03.4**	**+0.3**
EYAK	**Cordova Ski Ar**	**3.49**	**64**	P	**Pn**	**16 53 09.9**	**-0.3**
PPLA	**Purkeypile**	**3.74**	**359**	*e*P	**Pn**	**16 53 14.6**	**+1.0**
TT01	**Tatalina**	**4.20**	**335**	P	**Pn**	**16 53 20.0**	**+0.1**
TRF	**Thorofare Moun**	**4.38**	**11**	P	**Pn**	**16 53 22.2**	**-0.2**
KTH	**Kantishna Hill**	**4.43**	**7**	P	**Pn**	**16 53 23.2**	**+0.2**
CHGN	**Chignik**	**4.44**	**232**	*e*P	**Pn**	**16 53 23.3**	**+0.1**
CHUM	**Lake Minchumin**	**4.73**	**359**	*e*P	**Pn**	**16 53 27.0**	**-0.1**
MCK	**McKinley**	**4.82**	**17**	P	**Pn**	**16 53 28.8**	**+0.4**
BPAW	**Bear Paw Mtn.**	**4.97**	**6**	P	**Pn**	**16 53 31.0**	**+0.6**
PAX	**Paxson**	**4.99**	**37**	P	**Pn**	**16 53 31.2**	**+0.5**
MENT	**Mentasta**	**5.55**	**44**	*e*P	**Pn**	**16 53 38.1**	**-0.3**
SDPT	**Sand Point**	**5.94**	**233**	*e*P	**Pn**	**16 53 42.0**	**-1.7**
COLA	**College**	**6.06**	**17**	P	**Pn**	**16 53 45.3**	**0.0**
IL1	**Eielson Array**	**6.13**	**21**	P	**Pn**	**16 53 46.2**	**0.0**
BCA3	**Beaver Creek A**	**6.34**	**48**	P	**Pn**	**16 53 48.6**	**-0.6**
PNL	**Peninsula**	**6.51**	**80**	*e*P	**Pn**	**16 53 51.3**	**-0.1**
	135nm,1.5s						
IM3	**Indian Mountai**	**6.88**	**354**	P	**Pn**	**16 53 56.0**	**-0.4**
SIT	**Sitka**	**9.13**	**96**	*e*P	**Pn**	**16 54 25.7**	**-1.6**
	78nm,1.3s						
DLBC	**Dease Lake**	**11.46**	**84**	P	**Pn**	**16 54 59.3**	**+0.2**
	1.3nm,0.3s,baz=254,slow=11,SNR=11						
PETK	**Petropavlovsk-**	**28.03**	**280**	P	**P**	**16 58 03.2**	**+0.2**
	5.2nm,0.9s,mb4.0,baz=69,slow=14,SNR=19						
PETK	**Petropavlovsk-**	**28.03**	**280**	P	**P**	**16 58 03.2**	**+0.2**
NVAR	**Mina Array Bea**	**29.93**	**119**	P	**P**	**16 58 21.8**	**+2.0**
	0.1nm,0.3s,mb2.9,baz=306,slow=11,SNR=2.6						
NVAR				pP	pP	16 58 38.8	+2.9
	0.2nm,0.6s,baz=289,slow=8.0,SNR=4.4						
TXAR	**Lajitas Array**	**44.27**	**111**	P	**P**	**17 00 24.0**	**+2.8**
	0.2nm,0.7s,mb3.0,baz=309,slow=6.3,SNR=3.6						
TXAR	**Lajitas Array**	**44.27**	**111**	P	**P**	**17 00 24.0**	**+2.8**
ARCES	**ARCESS Array B**	**51.58**	**1**	P	**P**	**17 01 16.6**	**-0.5**
	5.5nm,1.0s,mb4.5,baz=0.0,slow=7.3,SNR=5.7						
KSRS	**Korea Array**	**53.81**	**284**	P	**P**	**17 01 34.6**	**+0.6**
	0.9nm,0.5s,mb4.1,baz=33,slow=7.0,SNR=5.6						
SONM	**Songino Array**	**55.65**	**307**	P	**P**	**17 01 47.1**	**0.0**
	0.3nm,0.5s,mb3.6,baz=60,slow=5.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**58.31**	**324**	pP	pP	17 02 21.8	-1.4
	0.4nm,0.4s,baz=31,slow=8.7,SNR=3.5						
MKAR	**Makanchi Array**	**65.36**	**322**	P	**P**	**17 02 52.7**	**-0.6**
	0.3nm,0.4s,mb3.4,baz=33,slow=6.5,SNR=6.7						
AKASG	**Malin Array Be**	**70.48**	**359**	P	**P**	**17 03 23.8**	**-1.6**
	0.8nm,0.6s,mb3.8,baz=359,slow=5.5,SNR=2.7						
AKASG	**Malin Array Be**	**70.48**	**359**	P	**P**	**17 03 23.8**	**-1.6**

*ISCJB **28** 16:57:52.6±0.3, 5143N±002×16.14E±002, h0km, Error ellipse: s-maj=2.6km s-min=1.8km az=20.4*
*NEIC **28** 16:57:52.9±0.4, 5156N×16.19E, h5km, ML2.9(CLL), ML2.7(BRG), Error ellipse: s-maj=5.7km s-min=4.7km az=69.0*
*MOS **28** 16:57:53.5±3.3, 5160N×1587E, h10km, mb3.7/1, Error ellipse: s-maj=8.2km s-min=4.7km az=87.2*
*LDG **28** 16:57:53.5±0.3, 5151N×1603E, h1km, Ml3.6/4, Error ellipse: s-maj=8.3km s-min=4.5km az=20.0, Suspected Mining induced.*
*WAR **28** 16:57:53.8, 5149N×1609E, Mw2.8*
*IDC **28** 16:57:54.2±0.7, 5151N×1597E, h0km, mb3.4/1, mb1 3.5/9, mb1mx3.4/25, mbtmp3.4/9, ML3.3/8, Error ellipse: s-maj=9.8km s-min=6.3km az=97.0*
*BGR **28** 16:57:54.6±0.5, 5142N×16.16E, h1km, ML3.2, Error ellipse: s-maj=6.7km s-min=4.4km az=26.0*
*IPEC **28** 16:57:54.4±0.2, 5148N×16.12E, h8km±1km, ML2.6/3, Error ellipse: s-maj=1.4km s-min=0.7km az=44.0*
*PRU **28** 16:57:55.3, 5145N×16.10E, h0km, Felt In Harrachov*
*CSEM **28** 16:57:55.0±0.1, 5147N×1606E, h1km, ML3.6/14, Error ellipse: s-maj=2.6km s-min=1.9km az=27.0*

ISC 28 16:57:53.8±0.3, 5149N±002×1611E±002, h0km, n108, σ1f07/192, 14C-13D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**170**	*e*Pg	**Pg**	**16 58 05.9**	**-0.5**
KSP				*e*Sg	**Sg**	**16 58 13.2**	**-1.6**
KSP	**Ksiaz**	**0.66**	**170**	*e*Pg	**Pg**	**16 58 06.6**	**+0.2**
KSP				*e*Sg	**Sg**	**16 58 14.5**	**-0.4**
KSP	**Ksiaz**	**0.66**	**170**	*e*Pg	**Pg**	**16 58 05.8**	**-0.6**
KSP				*e*		16 58 08.0	
KSP				*e*Sg	**Sg**	**16 58 14.2**	**-0.7**
KSP				*e*		16 58 19.2	
KSP	**Ksiaz**	**0.66**	**170**	*e*P	**Pg**	**16 58 05.8**	**-0.6**
KSP				*e*		16 58 14.2	
UPC	**Upice**	**0.98**	**184**	*e*Pg	**Pg**	**16 58 12.8**	**+0.2**
DPC	**Dobruska-Polom**	**1.15**	**173**	*e*Pn	**Pn**	**16 58 14.7**	**-2.3**
DPC				*e*Sg	**Sg**	**16 58 30.3**	**-0.4**
DPC	**Dobruska-Polom**	**1.15**	**173**	*e*P	**Pg**	**16 58 14.8**	**-1.0**
DPC				*e*		16 58 31.2	
DPC				smax			
	comp=N,115nm,0.8s						
DPC	**Dobruska-Polom**	**1.15**	**173**	Pg	**Pg**	**16 58 14.8**	**-1.0**
DPC				*e*Sg	**Sg**	**16 58 30.8**	**+0.2**
DPC	**Dobruska-Polom**	**1.15**	**173**	*e*PG	**Pg**	**16 58 14.8**	**-1.0**
DPC				*e*SG	**Sg**	**16 58 31.2**	**+0.6**
	comp=Z,115nm,0.8s						
PVCC	**Panska Ves**	**1.37**	**226**	Pg	**Pg**	**16 58 20.6**	**+0.6**
PVCC				*e*Sg	**Sg**	**16 58 38.4**	**+0.7**
PVCC	**Panska Ves**	**1.37**	**226**	*e*PN	**Pn**	**16 58 19.3**	**-0.8**
PVCC				*e*PG	**Pg**	**16 58 20.6**	**+0.6**
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn	**Pn**	**16 58 21.6**	**-0.3**
BRG				*e*Sg	**Sg**	**16 58 43.0**	**+1.2**
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn	**Pn**	**16 58 21.5**	**-0.4**
BRG	**Berggiesshubel**	**1.50**	**247**	Pg	**Pg**	**16 58 22.8**	**+0.3**
BRG				*e*Sg	**Sg**	**16 58 41.0**	**-0.8**
BRG	**Berggiesshubel**	**1.50**	**247**	PN	**Pn**	**16 58 21.1**	**-0.8**
BRG				PG	**Pg**	**16 58 22.8**	**+0.3**
BRG				SG	**Sg**	**16 58 43.0**	**+1.2**
	comp=Z,163nm,0.4s						
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	**Pn**	**16 58 24.6**	**-0.7**
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	**Pn**	**16 58 24.6**	**-0.8**
RUE				*e*Sg	**Sg**	**16 58 50.2**	**+0.2**
PRU	**Pruhonice**	**1.80**	**214**	*e*P	**Pn**	**16 58 25.7**	**-0.4**
PRU				*e*		16 58 51.4	
PRU				smax			
	comp=N,57nm,0.5s						
PRU	**Pruhonice**	**1.80**	**214**	*e*PN	**Pn**	**16 58 25.7**	**-0.4**
PRU				*e*PG	**Pg**	**16 58 27.5**	**-0.8**
PRU				*e*SG	**Sg**	**16 58 51.4**	**-0.3**
	comp=Z,57nm,0.5s						
FBE	**Freiberg**	**1.82**	**253**	*e*Pn	**Pn**	**16 58 27.0**	**+0.6**
GKP	**Gorka Klasztor**	**1.91**	**21**	*e*Pn	**Pn**	**16 58 32.2**	**+4.6**
GKP				*e*Pg	**Pg**	**16 58 36.2**	**+5.8**
GKP				*e*Sg	**Sg**	**16 58 58.1**	**+2.8**
GKP	**Gorka Klasztor**	**1.91**	**21**	*e*Pn	**Pn**	**16 58 32.2**	**+4.6**
GKP				*e*Pg	**Pg**	**16 58 36.2**	**+5.7**
GKP				*e*Sg	**Sg**	**16 58 58.1**	**+2.9**
RAC	**Raciborz**	**1.93**	**136**	*e*Pg	**Pg**	**16 58 31.0**	**+0.2**
RAC				*e*Sg	**Sg**	**16 58 56.5**	**+0.7**
CLL	**Collm**	**1.95**	**266**	*e*Pn	**Pn**	**16 58 27.6**	**-0.6**
CLL				*e*Pg	**Pg**	**16 58 31.0**	**-0.2**
CLL				*i* Sg	**Sg**	**16 58 56.3**	**-0.3**
CLL	**Collm**	**1.95**	**266**	*e*Pn	**Pn**	**16 58 28.0**	**-0.2**
CLL				*e*Pg	**Pg**	**16 58 31.0**	**-0.2**
CLL				*i* Sg	**Sg**	**16 58 56.3**	**-0.3**
CLL	**Collm**	**1.95**	**266**	*e*Pn	**Pn**	**16 58 28.0**	**-0.2**
CLL				*e*Pg	**Pg**	**16 58 31.0**	**-0.2**
CLL				*ex*	x	16 58 35.0	
CLL				*i* Sg	**Sg**	**16 58 56.3**	**-0.3**
	comp=Z,48nm,0.5s						
CLL				*i* x	x	16 59 06.0	
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*P	**Pn**	**16 58 27.2**	**-3.0**
OKC				*e*		16 59 00.4	
OKC				smax			
	comp=N,69nm,0.7s						
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*PN	**Pn**	**16 58 27.2**	**-3.0**
OKC				*e*PG	**Pg**	**16 58 32.9**	**-1.1**
OKC				*e*SG	**Sg**	**16 59 00.4**	**-0.9**
	comp=Z,69nm,0.7s						
VRAC	**Vranov**	**2.21**	**172**	Pn	**Pn**	**16 58 32.0**	**+0.4**
	comp=Z,5.4nm,0.3s,baz=347,slow=16,SNR=12						
VRAC				Pg	**Pg**	**16 58 36.1**	**0.0**
	comp=Z,5.4nm,0.3s,baz=351,slow=17,SNR=13						
VRAC				Lg		16 59 04.6	
	comp=Z,6.0nm,0.3s,baz=80,slow=23,SNR=9.9						
VRAC	**Vranov**	**2.21**	**172**	P	**Pn**	**16 58 32.0**	**+0.4**
VRAC						16 59 04.6	
VRAC				pmax	pmax		
	comp=Z,5.0nm,0.3s						
VRAC				pmax	pmax		
	comp=Z,5.0nm,0.3s						
VRAC	**Vranov**	**2.21**	**172**	*e*Pn	**Pn**	**16 58 31.7**	**+0.1**
VRAC	**Vranov**	**2.21**	**172**	⇑*i*P	**Pn**	**16 58 34.0**	**+2.4**
VRAC	**Vranov**	**2.21**	**172**	Pg	**Pg**	**16 58 36.0**	**0.0**
VRAC				*e*Sg	**Sg**	**16 59 02.4**	**-2.2**
	comp=Z,23nm,0.3s						
VRAC	**Vranov**	**2.21**	**172**	⇑*i*P	**Pn**	**16 58 34.0**	**+2.4**
TREC	**Trest**	**2.23**	**191**	*e*PN	**Pn**	**16 58 33.6**	**+1.6**
TREC				*e*PG	**Pg**	**16 58 36.0**	**-0.6**
KRUC	**Moravsky**	**2.44**	**176**	*e*Pn	**Pn**	**16 58 35.7**	**+0.9**
KRUC	**Moravsky**	**2.44**	**176**	*e*Pg	**Pg**	**16 58 38.9**	**-1.6**
KRUC				*e*Sg	**Sg**	**16 59 10.5**	**-1.5**
	comp=Z,24nm,0.3s						
TANN	**Tannenbergstha**	**2.54**	**246**	*e*Pn	**Pn**	**16 58 35.3**	**-1.0**
WERD	**Werda**	**2.62**	**248**	*e*Pn	**Pn**	**16 58 37.6**	**+0.3**
WERD				*e*Sg	**Sg**	**16 59 17.9**	**0.0**
NKC	**Novy Kostel**	**2.64**	**243**	Pg	**Pg**	**16 58 43.9**	**-0.4**
NKC				Sg	**Sg**	**16 59 19.9**	**+1.4**
	comp=Z,102nm,0.3s						
NKC	**Novy Kostel**	**2.64**	**243**	*e*PN	**Pn**	**16 58 37.0**	**-0.6**
NKC				*e*PG	**Pg**	**16 58 43.9**	**-0.4**
NKC				*e*SG	**Sg**	**16 59 19.9**	**+1.4**
	comp=Z,102nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**16 58 44.8**	**0.0**
OJC				*e*Sg	**Sg**	**16 59 20.2**	**+1.0**
OJC	**Ojcow**	**2.66**	**117**	*e*Pn	**Pn**	**16 58 36.3**	**-1.6**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**16 58 44.8**	**0.0**
OJC				*e*Sg	**Sg**	**16 59 20.2**	**+1.0**
JAVC	**Velka Javorina**	**2.82**	**159**	*e*Sg	**Sg**	**16 59 23.3**	**-1.0**
	comp=Z,42nm,0.6s						
KHC	**Kasperske Hory**	**2.86**	**215**	Pg	**Pg**	**16 58 47.0**	**-1.7**
KHC				Sn	**Sn**	**16 59 16.4**	**+0.6**
KHC				*e*Sg	**Sg**	**16 59 23.7**	**-2.1**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**16 58 40.7**	**0.0**
KHC				*e*PG	**Pg**	**16 58 47.0**	**-1.7**
KHC				*e*SN	**Sn**	**16 59 16.4**	**+0.6**
KHC				*e*SG	**Sg**	**16 59 26.3**	**+0.5**
	comp=Z,43nm,0.8s						
MGBB	**Grossbuechelbe**	**2.90**	**240**	⇓*i*Pn	**Pn**	**16 58 41.7**	**+0.5**
MANZ	**Manzenberg**	**2.95**	**241**	*e*Pn	**Pn**	**16 58 41.7**	**-0.2**
MOX	**Moxa**	**2.96**	**255**	*e*Pn	**Pn**	**16 58 41.2**	**-0.7**
MOX				*e*Sg	**Sg**	**16 59 29.3**	**+0.5**
MOX	**Moxa**	**2.96**	**255**	*e*PN	**Pn**	**16 58 42.5**	**+0.5**
MOX				*e*PG	**Pg**	**16 58 50.2**	**-0.3**
MOX				*e*SG	**Sg**	**16 59 29.6**	**+0.8**
ROTZ	**Rotzenmuhle**	**3.02**	**237**	*e*Pn	**Pn**	**16 58 43.6**	**+0.8**
GEC2	**GERESS Array S**	**3.07**	**211**	*e*Pn	**Pn**	**16 58 43.6**	**+0.2**
GEC2	**GERESS Array S**	**3.07**	**211**	*e*Pn	**Pn**	**16 58 43.4**	**0.0**
GEC2	**GERESS Array S**	**3.07**	**211**	*e*Pn	**Pn**	**16 58 43.4**	**0.0**
GERES	**GERESS Array B**	**3.07**	**211**	Pn	**Pn**	**16 58 42.9**	**-0.6**
	comp=Z,2.8nm,0.3s,baz=31,slow=11,SNR=72						
GERES				Pg	**Pg**	**16 58 50.5**	**-2.1**
	comp=Z,6.6nm,0.3s,baz=29,slow=17,SNR=40						
GERES				Lg		16 59 29.9	
	comp=Z,7.2nm,0.3s,baz=29,slow=26,SNR=9.8						
GERES	**GERESS Array B**	**3.07**	**211**	P	**Pn**	**16 58 42.9**	**-0.5**
GERES						16 59 29.9	
GERES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
GERES				pmax	pmax		
	comp=Z,7.0nm,0.3s						
GERES	**GERESS Array B**	**3.07**	**211**	Pg	**Pg**	**16 58 50.5**	**-2.0**
SMOL	**Smolenice**	**3.10**	**164**	*e*PG	**Pg**	**16 58 53.3**	**+0.2**
SMOL				*e*SG	**Sg**	**16 59 33.8**	**+0.6**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**16 58 44.5**	**+0.2**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**16 58 44.3**	**0.0**
WET				*e*Sg	**Sg**	**16 59 32.5**	**-1.8**
MODS	**Modra-Piesok**	**3.21**	**166**	*e*P	**Pg**	**16 58 55.2**	**-0.1**
MODS				*e*		16 59 36.4	
MODS				smax			
	comp=N,16nm,0.8s						
MODS	**Modra-Piesok**	**3.21**	**166**	*e*PG	**Pg**	**16 58 55.2**	**-0.1**
MODS				*e*SG	**Sg**	**16 59 36.4**	**-0.4**
KOLL	**Kolacno**	**3.27**	**152**	*e*SG	**Sg**	**16 59 38.6**	**-0.1**
ZST	**Bratislava**	**3.36**	**169**	*e*SG	**Sg**	**16 59 40.8**	**-0.8**
NIE	**Niedzica**	**3.39**	**126**	*e*P	**Pg**	**16 58 58.3**	**-0.5**
NIE				*e*S	**Sg**	**16 59 42.8**	**+0.1**
VYHS	**Vyhne**	**3.48**	**149**	*e*PN	**Pn**	**16 58 48.9**	**-0.2**
VYHS				*e*PG	**Pg**	**16 59 00.3**	**-0.1**
VYHS				*e*SG	**Sg**	**16 59 45.0**	**-0.4**
CONA	**Conrad Observa**	**3.57**	**183**	⇓*i*Pn	**Pn**	**16 58 51.5**	**+1.2**
	comp=N,3.2nm,0.5s						
CONA				⇓*i*Pg	**Pg**	**16 59 01.6**	**-0.6**
	comp=N,4.8nm,0.3s						
CONA				⇑*i*Sg	**Sg**	**16 59 48.5**	**+0.2**
	comp=N,26nm,0.5s						
CSNA	**Conrad Observa**	**3.57**	**183**	⇓*i*Pn	**Pn**	**16 58 51.5**	**+1.1**
	comp=N,1.9nm,0.4s						
CSNA				⇓*e*Pg	**Pg**	**16 59 01.5**	**-0.6**
	comp=N,10nm,0.3s						
CSNA				⇑*e*Sg	**Sg**	**16 59 47.5**	**-0.9**
	comp=N,18nm,0.5s						
GRA1	**Grafenberg Arr**	**3.60**	**242**	Pn	**Pn**	**16 58 50.9**	**+0.2**
GRF	**Grafenberg Arr**	**3.60**	**242**	*e*Pn	**Pn**	**16 58 50.9**	**+0.2**
BSD	**Bornholm Skovb**	**3.70**	**349**	*i* P	**Pn**	**16 58 50.9**	**-1.3**
BSD				*e*S	**Sn**	**16 59 32.0**	**-4.5**
BSD				*e*S	**Sn**	**16 59 32.5**	**-4.0**
BSD				*e*Lg		16 59 51.4	
BSD	**Bornholm Skovb**	**3.70**	**349**	*i* P	**Pn**	**16 58 50.9**	**-1.3**
BSD				*e*S	**Sn**	**16 59 32.0**	**-4.5**
BSD				*e*S	**Sn**	**16 59 32.5**	**-4.0**
BSD	**Bornholm Skovb**	**3.70**	**349**	*i* P	**Pn**	**16 58 50.9**	**-1.3**
BSD				*e*S	**Sn**	**16 59 32.0**	**-4.5**
BSD				*e*S	**Sn**	**16 59 32.5**	**-4.0**
BSD				*e*LG		16 59 51.4	
MOA	**Molln**	**3.83**	**199**	⇑*i*Pn	**Pn**	**16 58 54.8**	**+0.8**
	comp=N,3.6nm,0.3s						
MOA				⇑*i*Pg	**Pg**	**16 59 08.1**	**+0.9**
	comp=N,7.6nm,0.3s						
MOA				⇑*i*Sn	**Sn**	**16 59 42.4**	**+2.7**
	comp=N,8.4nm,0.5s						
MOA				⇑*i*Sg	**Sg**	**16 59 56.9**	**0.0**
	comp=N,32nm,0.6s						
HROE	**Hohe Rhon--Fla**	**3.88**	**258**	⇓*i*Pn	**Pn**	**16 58 54.8**	**+0.2**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PN	**Pn**	**16 58 55.7**	**+1.0**
STHS				*e*PG	**Pg**	**16 59 08.9**	**+0.7**
STHS				*e*SG	**Sg**	**16 59 59.1**	**+0.7**
ARSA	**Arzberg**	**4.26**	**185**	⇑*i*Pn	**Pn**	**16 59 01.9**	**+2.1**
	comp=N,1.3nm,0.3s						
ARSA				⇑*e*Sg	**Sg**	**17 00 10.9**	**+0.4**
	comp=N,29nm,0.8s						
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PN	**Pn**	**16 59 02.6**	**+2.1**
CRVS				*e*PG	**Pg**	**16 59 16.2**	**0.0**
CRVS				*e*SG	**Sg**	**17 00 12.2**	**+0.2**
KWP	**Kalwaria**	**4.60**	**111**	⇓*i*P	**Pb**	**16 59 17.3**	**+2.0**
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*PN	**Pn**	**16 59 05.6**	**-0.5**
KOLS				*e*PG	**Pg**	**16 59 24.5**	**+0.4**
KBA	**Koelnbreinsper**	**4.77**	**203**	⇑*i*Pn	**Pn**	**16 59 07.9**	**+1.1**
	comp=N,2.4nm,0.3s						
KBA				⇓*e*Sg	**Sg**	**17 00 32.2**	**+5.3**
	comp=N,13nm,0.5s						
UZH	**Uzhgorod**	**4.90**	**123**	*e*P	**Pn**	**16 59 11.5**	**+2.8**
UZH				*e*		17 00 08.0	
OBKA	**Obir**	**5.09**	**192**

ISP	**Isparta**	**1.40**	**52**	*e*PN	**Pn**	**17 16 04.5**	**+0.3**
KHAL	**Karahalli**	**1.42**	**12**	*i* P	**Pn**	**17 16 05.1**	**+0.7**
KHAL				*i* S	**Sb**	**17 16 24.2**	**+0.9**
BODT	**Bodrum**	**1.45**	**274**	*e*PN	**Pn**	**17 16 05.0**	**+0.2**
KULA	**Kula-Manisa**	**1.58**	**347**	*e*PN	**Pn**	**17 16 06.5**	**0.0**
SHUT	**Suhut-Afyon**	**1.94**	**35**	*e*PN	**Pn**	**17 16 11.5**	**0.0**
ALT	**Altintas**	**2.21**	**20**	*e*PN	**Pn**	**17 16 15.1**	**-0.2**
HDMB	**Hadim**	**2.69**	**89**	*e*PN	**Pn**	**17 16 22.3**	**+0.4**

JMA 28 17:29:02.2±0.3, 2866N×13969E, h424km, M3.5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.70**	**125**	P	P	17 30 05.5	+0.5
CBIJ				*e*S	S	17 30 55.0	-0.9
JHHJ	**Haha-jima-NKT**	**2.99**	**132**	P	P	17 30 07.7	+0.5
JHHJ				*e*S	S	17 30 59.7	-0.2
JHU	**Hanno**	**7.18**	**357**	P	P	17 30 48.9	+0.8
JYT	**Yasato**	**7.56**	**3**	P	P	17 30 54.0	+1.7
JAG	**Ashikaga**	**7.75**	**359**	P	P	17 30 55.4	+1.1
JHO	**Hitachi**	**7.96**	**5**	P	P	17 30 58.5	+1.8

IDC 28 17:33:51.5±9.3, 563S×1117W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.8/19, mbtmp4.1/3, ML4.0/1, MS3.2/6, Ms1 3.2/6, ms1mx3.0/27, Error ellipse: s-maj=314.3km s-min=96.2km az=140.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**13.28**	**28**	*e*P	Pn	17 37 01.6	+0.1
	27nm,0.9s						
KIC	**Kosan Boka**	**13.53**	**28**	*e*P	Pn	17 37 04.2	-0.7
	38nm,0.8s						
TIC	**Toumodi**	**13.65**	**27**	*e*P	Pn	17 37 06.6	0.0
	15nm,0.3s						
DBIC	**Dimbokro**	**13.75**	**27**	Pn	Pn	17 37 07.8	-0.2
	0.7nm,0.3s,baz=183,slow=11,SNR=6.7						
DBIC				LR	LR	17 41 15.7	
	comp=Z,105nm,20.6s,baz=133,slow=32						
TORD	**Torodi Ar. Bea**	**22.62**	**34**	P	P	17 38 54.2	+0.2
	5.8nm,0.7s,baz=223,slow=11,SNR=27						
TORD				LR	LR	17 46 26.9	
	comp=Z,83nm,20.4s,baz=180,slow=33						
MDT	**Midelt**	**38.74**	**9**	LR	LR	17 56 24.1	
	comp=Z,63nm,18.9s,baz=193,slow=35						
KEST	**Kesra**	**45.44**	**24**	LR	LR	18 01 16.3	
	comp=Z,26nm,20.0s,baz=219,slow=36						
GERES	**GERESS Array B**	**58.45**	**19**	P	P	17 43 49.2	+0.1
	1.3nm,0.8s,baz=196,slow=6.7,SNR=9.2						
GERES				LR	LR	18 08 46.3	
	comp=Z,37nm,18.6s,baz=127,slow=36						
CFAA	**Coronel Fontan**	**59.17**	**237**	LR	LR	18 04 47.0	
	comp=Z,5.0nm,19.8s,baz=292,slow=31						

GUC 28 17:35:31.2±0.6, 2226S×6999W, h44km±2km, ML3.7, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.22**	**73**	*e*P	Pn	17 35 39.6	+0.6
MACH				*i* S	Sn	17 35 46.1	+1.5
TOCH	**Tocopilla**	**0.26**	**310**	*e*P	Pn	17 35 39.1	-0.3
TOCH				*i* S	Sn	17 35 45.1	0.0
TOCH				AML	AML	17 35 45.9	
	comp=E,18μm,0.1s						
PECH	**Pedro de Valdi**	**0.44**	**139**	*i* P	Pn	17 35 41.9	+0.4
PECH				*i* S	Sn	17 35 49.6	+1.0
MECH	**Mejillones**	**0.94**	**207**	*e*P	Pn	17 35 48.4	+0.3
MECH				*i* S	Sn	17 36 01.7	+1.4
LVC	**Limon Verde**	**1.05**	**110**	*e*P	Pn	17 35 50.8	+1.2
LVC				*i* S	Sn	17 36 05.3	+2.2
CEN1	**Los Morros**	**1.14**	**190**	*e*P	Pn	17 35 54.8	+4.0
CEN1				*i* S	Sn	17 36 11.3	+6.0
PB01	**Plate Boundary**	**1.30**	**21**	*i* P	Pn	17 35 53.4	+0.6

*ISCJB **28** 17:44:16.6±2.6, 136S±0.1×767W±0.2, h3km±15km, mb3.8/5, Error ellipse: s-maj=30.6km s-min=10.1km az=149.8*
*IDC **28** 17:44:18.9±1.1, 1343S×7666W, h0km, mb3.8/5, mb1 4.1/8, mb1mx3.9/19, mbtmp3.9/8, ML4.3/2, MS3.2/2, Ms1 3.2/2, ms1mx2.4/21, Error ellipse: s-maj=40.9km s-min=12.5km az=75.0*
*NEIC **28** 17:44:19.7±6.5, 1344S×7683W, h18km±40km, mb4.0/1, Error ellipse: s-maj=30.0km s-min=11.7km az=71.0*
ISC 28 17:44:19.0±2.6, 135S±01×767W±02, h5km±16km, n17, σ1©23/17, mb3.8/5, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.47**	**355**	Pn	**Pn**	**17 44 44.6**	**-1.5**
	357nm,0.3s,baz=188,slow=13,SNR=212						
NNA				Pg	**Pg**	**17 44 47.2**	**0.0**
	357nm,0.3s,baz=185,slow=15,SNR=232						
NNA				Lg		17 45 04.5	
	168nm,0.3s,baz=265,slow=16,SNR=18						
NNA	**Nana**	**1.47**	**355**	Pn	**Pn**	**17 44 44.6**	**-1.5**
NNA				Pg	**Pg**	**17 44 47.2**	**0.0**
NNA				Lg		17 45 04.5	
ATAH	**Atahualpa**	**6.63**	**345**	Pn	**Pn**	**17 45 55.2**	**-1.9**
	2.8nm,0.3s,baz=156,slow=6.6,SNR=12						
ATAH				Sn	**Sn**	**17 47 04.9**	**-8.2**
	1.8nm,0.3s,baz=42,slow=20,SNR=2.3						
ATAH				Lg		17 47 42.2	
	2.2nm,0.3s,baz=9.6,slow=18,SNR=3.9						
ATAH				LR	LR	17 48 12.2	
	comp=Z,118nm,20.1s,baz=196,slow=36						
LVC	**Limon Verde**	**11.73**	**142**	Pn	**Pn**	**17 47 08.1**	**+1.0**
	0.3nm,0.3s,baz=318,slow=12,SNR=3.4						
LVC				Sn	**Sn**	**17 49 17.5**	**-1.0**
	0.4nm,0.3s,baz=104,slow=22,SNR=2.9						
LVC				Lg		17 50 22.6	
	0.1nm,0.3s,baz=86,slow=15,SNR=4.0						
OTAV	**Otavalo**	**13.72**	**353**	*e*P	**Pn**	**17 47 36.9**	**+2.7**
	8.6nm,1.0s						
SIV	**San Ignacio**	**15.32**	**101**	Pn	**Pn**	**17 47 56.7**	**+0.6**
	0.0nm,0.3s,baz=288,slow=20,SNR=2.2						
SDV	**Santo Domingo**	**23.00**	**16**	P	**P**	**17 49 25.0**	**+0.2**
	1.4nm,0.3s,mb3.9,baz=158,slow=8.7,SNR=3.7						
SDV	**Santo Domingo**	**23.00**	**16**	*e*P	**P**	**17 49 24.0**	**-0.9**
	2.2nm,0.5s,mb3.8						
PCRV	**Puerto La Cruz**	**26.36**	**28**	LR	LR	18 01 04.5	
	comp=Z,74nm,20.1s,baz=164,slow=38						
PLCA	**Paso Flores**	**27.70**	**170**	P	**P**	**17 50 07.2**	**-0.9**
	1.6nm,0.6s,mb3.8,baz=349,slow=6.3,SNR=4.4						
PLCA	**Paso Flores**	**27.70**	**170**	P	**P**	**17 50 07.2**	**-0.9**
TXAR	**Lajitas Array**	**49.88**	**329**	P	**P**	**17 53 15.4**	**+2.0**
	0.8nm,0.7s,mb3.8,baz=154,slow=9.3,SNR=4.9						
PDAR	**Pinedale Array**	**63.55**	**333**	P	**P**	**17 54 50.7**	**+0.2**
	0.3nm,0.6s,mb3.5,baz=126,slow=9.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**82.05**	**74**	P	**P**	**17 56 41.5**	**+0.6**
	1.1nm,0.7s,mb3.9,baz=258,slow=5.1,SNR=5.0						
WRA	**Warramunga Arr**	**134.90**	**223**	PKhKP		18 03 37.7	
	0.2nm,0.4s,baz=129,slow=1.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**137.05**	**16**	PKhKP		18 03 40.1	
	0.3nm,0.4s,baz=257,slow=5.8,SNR=2.2						
ZALV				PKP	PKPdf	18 03 44.7	+1.8
	0.6nm,0.5s,baz=316,slow=4.1,SNR=4.4						
SONM	**Songino Array**	**145.63**	**356**	PKPbc	PKPbc	18 04 00.4	+1.7
	3.7nm,0.9s,baz=336,slow=3.4,SNR=18						

*NEIC **28** 18:18:02.8, 3561N×1121W, h0km, MG3.9(MDD), After MDD.*
*MDD **28** 18:18:03.0±3.3, 3562N×11.19W, h0km, mb3.9/5, Error ellipse: s-maj=35.0km s-min=25.3km az=112.0, PRIMO*
INMG 28 18:18:04.1±0.8, 3555N×1113W, h0km, ML2.2, Error ellipse: s-maj=7.2km s-min=4.1km az=111.0, Azores-Cape St. Vincent Ridge
ISC 28 18:18:05.0±1.8, 3583N±008×111W±01, h10km, n20, σ0©88/29, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**2.47**	**53**	P	**Pn**	**18 18 46.0**	**+0.7**
MORF				S	**Sn**	**18 19 17.3**	**+1.8**
	0.0nm,0.3s						
EGRO	**El Granado**	**3.38**	**59**	P	**Pn**	**18 18 58.3**	**+0.5**
	0.8nm,0.1s,SNR=10						
EGRO				S	**Sn**	**18 19 38.7**	**+0.8**
	1.6nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.05**	**60**	P	**Pn**	**18 19 07.3**	**+0.2**
	0.5nm,0.1s,SNR=6.5						
EMIN				S	**Sn**	**18 19 54.8**	**+0.2**
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.05**	**60**	P	**Pn**	**18 19 07.3**	**+0.2**
	0.5nm,0.1s,SNR=6.5						
EMIN				S	**Sn**	**18 19 54.8**	**+0.2**
	0.5nm,0.1s,SNR=7.9						
ESPR	**Espera**	**4.37**	**75**	P	**Pn**	**18 19 10.7**	**-0.7**
	1.6nm,0.1s,SNR=6.1						
ESPR				S	**Sn**	**18 20 01.3**	**-1.0**
	2.7nm,0.2s,SNR=7.9						
ESPR	**Espera**	**4.37**	**75**	P	**Pn**	**18 19 10.7**	**-0.7**
	1.6nm,0.1s,SNR=6.1						
ESPR				S	**Sn**	**18 20 01.3**	**-1.0**
	2.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.38**	**47**	S	**Sn**	**18 20 03.4**	**+0.7**
	1.0nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.38**	**47**	S	**Sn**	**18 20 03.4**	**+0.8**
	1.0nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**4.61**	**81**	P	**Pn**	**18 19 13.8**	**-0.9**
	0.8nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.73**	**64**	P	**Pn**	**18 19 29.7**	**-0.4**
	1.0nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**18 20 34.4**	**-1.4**
	0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.73**	**64**	P	**Pn**	**18 19 29.7**	**-0.4**
	1.0nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**18 20 34.4**	**-1.5**
	0.8nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.48**	**21**	S	**Sn**	**18 20 53.6**	**-0.7**
	0.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.48**	**21**	S	**Sn**	**18 20 53.6**	**-0.7**
	0.5nm,0.1s,SNR=4.0						
EQES	**Quesada**	**6.75**	**71**	P	**Pn**	**18 19 44.8**	**+0.8**
	1.3nm,0.1s,SNR=4.0						
EQES	**Quesada**	**6.75**	**71**	P	**Pn**	**18 19 44.8**	**+0.7**
	1.3nm,0.1s,SNR=4.0						
ESDC	**Sonseca Array**	**6.84**	**54**	P	**Pn**	**18 19 46.0**	**+0.7**
	0.6nm,0.1s,SNR=4.0						
ESDC	**Sonseca Array**	**6.84**	**54**	P	**Pn**	**18 19 46.0**	**+0.6**
	0.6nm,0.1s,baz=234,slow=12,SNR=4.0						
ECAL	**Calabor**	**6.99**	**28**	S	**Sn**	**18 21 05.7**	**-1.2**
	0.5nm,0.3s,SNR=4.0						
ECAL	**Calabor**	**6.99**	**28**	S	**Sn**	**18 21 05.7**	**-1.2**
	0.5nm,0.3s,SNR=4.0						

KRSC 28 19:07:31.1±0.6, 5342N×15802E, h223km±32km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	**0.28**	**350**	*e*P	Pn	19 08 01.1	+0.9
GNL				*i* S	S	19 08 22.5	-0.5
AVH	**Avacha**	**0.46**	**110**	*e*P	Pn	19 08 02.4	+1.7
PET	**Petropavlovsk**	**0.55**	**136**	*e*P	Pn	19 08 02.4	+1.4
NLC	**Nalytchevo**	**0.83**	**107**	*e*P	Pn	19 08 03.8	+1.6
NLC				*i* S	S	19 08 27.7	+1.2
RUS	**Russkaya**	**1.03**	**163**	*e*P	Pn	19 08 04.7	+1.3
RUS				*i* S	S	19 08 28.9	+0.3
SPN	**Mys Shipunski**	**1.25**	**104**	*e*P	Pn	19 08 05.8	+1.0
SPN				*i* S	S	19 08 30.7	-0.5
TUMR	**Tumrok**	**2.24**	**33**	P	Pn	19 08 15.6	+2.0
TUMR				*i* S	S	19 08 49.0	+1.9
KMNR	**Kamenistaya**	**2.67**	**28**	P	Pn	19 08 21.3	+3.1
KBTR	**Krutoberegovo**	**3.94**	**43**	P	Pn	19 08 34.4	+1.6
KBTR				*i* S	S	19 09 19.8	-1.9

*NEIC **28** 19:26:20.2, 1571N×9568W, h7km, MD3.9(MEX), After MEX.*
MEX 28 19:26:18.9±1.5, 1561N×9576W, h11km±21km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.70**	**29**	*i* P	Pn	19 26 44.7	-3.8
CMIG				*i* S	Sn	19 27 05.1	-5.2
VHO	**Vista Hermosa**	**1.73**	**327**	*i* P	Pn	19 26 46.5	-2.5
VHO				*i* S	Sn	19 27 07.3	-3.9
OXX	**Oaxaca**	**1.74**	**328**	*e*P	Pn	19 26 47.0	-2.1
OXX				*i* S	Sn	19 27 06.8	-4.4
PNIG	**Pinotepa**	**2.41**	**289**	*e*P	Pn	19 26 58.5	+0.2
PNIG				*i* S	Sn	19 27 27.2	-0.6
PNIG	**Pinotepa**	**2.41**	**289**	*i* P	Pn	19 26 53.7	-4.6
PNIG				*i* S	Sn	19 27 24.0	-3.8
PCIG		**2.45**	**87**	*e*P	Pn	19 26 56.9	-1.9
PCIG				*i* S	Sn	19 27 24.5	-4.3
TGIG		**2.79**	**65**	*e*P	Pn	19 27 00.7	-2.8
TGIG				*i* S	Sn	19 27 33.0	-4.2
UTMO	**Huajuapan**	**2.96**	**319**	*i* P	Pn	19 27 03.3	-2.5
UTMO				*i* S	Sn	19 27 36.5	-4.8
TPIG	**Tehuac#an**	**3.19**	**331**	*i* S	Sn	19 27 43.7	-3.5
PPM	**Popocatepetl**	**4.40**	**322**	*e*P	Pn	19 27 25.6	-0.1
PPM				*i* S	Sn	19 28 20.9	+4.0
CAIG	**El Cayaco**	**4.56**	**289**	*e*P	Pn	19 27 31.3	+3.4
CAIG				*i* S	Sn	19 28 25.8	+4.8

IDC 28 19:27:15.0±6.0, 2110S×17933W, h645km±74km, mb3.0/5, mb1 3.3/5, mb1mx3.0/17, mbtmp3.0/5, Error ellipse: s-maj=172.7km s-min=34.4km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.20**	**266**	P	P	19 32 53.2	0.0
	2.5nm,0.4s,baz=80,slow=9.8,SNR=6.0						
ASAR	**Alice Springs**	**43.17**	**258**	P	P	19 34 22.0	+0.3
	0.8nm,0.4s,baz=93,slow=7.7,SNR=16						
WB2	**Warramunga Arr**	**43.28**	**263**	*e*P	P	19 34 22.5	0.0
WRA	**Warramunga Arr**	**43.29**	**263**	P	P	19 34 22.6	0.0
	0.8nm,0.3s,baz=97,slow=7.3,SNR=100						
NVAR	**Mina Array Bea**	**82.32**	**44**	P	P	19 38 31.2	+0.1
	0.5nm,0.5s,baz=220,slow=9.4,SNR=3.3						
TXAR	**Lajitas Array**	**88.43**	**58**	P	P	19 39 01.3	+0.7
	0.6nm,0.8s,baz=219,slow=7.0,SNR=4.1						
ARCES	**ARCESS Array B**	**129.28**	**349**	PKP	PKPdf	19 45 10.3	-0.6
	3.4nm,0.9s,baz=48,slow=1.3,SNR=3.7						
AKASG	**Malin Array Be**	**142.92**	**330**	PKP	PKPdf	19 45 34.5	-2.1
	1.0nm,0.4s,baz=47,slow=4.0,SNR=8.4						
BRTR	**Keskin Array B**	**146.31**	**311**	PKPbc	PKPbc	19 45 45.8	+0.5
	0.5nm,0.7s,baz=46,slow=4.2,SNR=2.9						
GERES	**GERESS Array B**	**150.42**	**342**	PKPbc	PKPbc	19 45 55.6	+0.5
	0.2nm,0.5s,baz=35,slow=4.1,SNR=3.9						

*NEIC **28** 19:36:03.1, 16.12N×9721W, h23km, MD3.9(MEX), After MEX.*
MEX 28 19:36:03.0±0.6, 1611N×9721W, h23km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.92**	**288**	*i* P	Pb	19 36 17.3	-3.1
PNIG				*i* S	Sb	19 36 29.4	-2.8
VHO	**Vista Hermosa**	**1.06**	**26**	*i* P	Pn	19 36 19.4	-3.1
VHO				*i* S	Sb	19 36 32.6	-3.5
OXX	**Oaxaca**	**1.07**	**26**	*e*P	Pn	19 36 19.5	-3.1
OXX				*i* S	Sb	19 36 31.1	-5.3
OXX	**Oaxaca**	**1.07**	**26**	*e*P	Pn	19 36 19.5	-3.1
OXX				*i* S	Sb	19 36 32.5	-4.0
UTMO	**Huajuapan**	**1.80**	**342**	*i* P	Pn	19 36 31.2	-1.4
UTMO				*i* S	Sn	19 36 51.0	-3.8
TPIG	**Tehuac#an**	**2.30**	**356**	*e*P	Pn	19 36 37.1	-2.5
TPIG				*i* S	Sn	19 37 04.4	-2.8
CMIG	**Matias Romero**	**2.43**	**66**	*i* P	Pn	19 36 39.1	-2.3
CMIG				*i* S	Sn	19 37 08.2	-2.2
ACX	**Acapulco**	**2.70**	**286**	*e*P	Pn	19 36 48.1	+3.0
ACX				*i* S	Sn	19 37 19.4	+2.3
ACX	**Acapulco**	**2.70**	**286**	*i* P	Pn	19 36 45.5	+0.4
ACX				*i* S	Sn	19 37 17.0	-0.1
CAIG	**El Cayaco**	**3.08**	**288**	*e*P	Pn	19 36 48.1	-2.1
CAIG				*i* S	Sn	19 37 19.5	-6.8
CAIG	**El Cayaco**	**3.08**	**288**	*e*P	Pn	19 36 48.1	-2.1
CAIG				*i* S	Sn	19 37 22.9	-3.4
PPM	**Popocatepetl**	**3.23**	**336**	*e*P	Pn	19 36 51.0	-1.4
PPM				*i* S	Sn	19 37 26.9	-3.3
PPM	**Popocatepetl**	**3.23**	**336**	*e*P	Pn	19 36 51.0	-1.4
PPM				*i* S	Sn	19 37 27.9	-2.3
MZVM		**3.61**	**328**	*i* P	Pn	19 36 55.1	-2.6
MZVM				*i* S	Sn	19 37 37.6	-2.0
IIO	**Organos**	**3.75**	**338**	*e*P	Pn	19 36 58.5	-1.0
IIO				*i* S	Sn	19 37 40.2	-2.7
PCIG		**3.86**	**95**	*e*P	Pn	19 36 59.0	-2.0
PCIG				*i* S	Sn	19 37 43.4	-2.4
TGIG		**3.98**	**80**	*e*P	Pn	19 37 01.8	-0.9
TGIG				*i* S	Sn	19 37 45.0	-3.6

*ATH **28** 19:43:36.5, 3767N×2681E, h23km, MD3.0/3*
*CSEM **28** 19:43:36.5±0.3, 3784N×2680E, h25km, MD2.6, Error ellipse: s-maj=9.3km s-min=7.4km az=78.0*
*ISCJB **28** 19:43:37.4±1.4, 3780N±004×2670E±008, h12km±9km, Error ellipse: s-maj=10.7km s-min=5.9km az=157.3*
*DDA **28** 19:43:37.7, 3783N×2677E, h7km±2km, Md2.6*
ISC 28 19:43:37.5±0.9, 3779N±004×2668E±009, h9km±11km, n7, σ0©69/12, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.15**	**124**	*e*PB	**Pg**	**19 43 40.8**	**0.0**
SMG				*e*SB	**Sg**	**19 43 43.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.45**	**102**	*i* P	**Pg**	**19 43 45.7**	**-0.6**
GCAM				*i* S	**Sg**	**19 43 53.0**	**+0.8**
URLA	**Izmir**	**0.57**	**353**	*i* P	**Pg**	**19 43 48.8**	**+0.2**
URLA				*i* S	**Sg**	**19 43 56.5**	**+0.4**
KDAG	**Bornova**	**0.77**	**37**	*i* P	**Pg**	**19 43 51.1**	**-1.2**
KDAG				*i* S	**Sg**	**19 44 01.7**	**-0.6**
BDRM	**Kayabasi**	**0.95**	**140**	*i* P	**Pg**	**19 43 55.6**	**-0.1**
BDRM				*i* S	**Sg**	**19 44 08.3**	**+0.2**
APE	**Apeiranthos**	**1.17**	**232**	*e*PN	**Pn**	**19 43 59.2**	**-0.8**
PRK	**Paraskevi**	**1.48**	**348**	*e*PN	**Pn**	**19 44 05.8**	**+1.4**

*ISCJB **28** 20:11:18.8±2.0, 143N±02×1454E±03, h120km±16km, mb3.8/5, Error ellipse: s-maj=53.0km s-min=30.9km az=168.3*
*IDC **28** 20:11:18.8±2.1, 1433N×14553E, h106km±15km, mb3.5/5, mb1 3.6/5, mb1mx3.4/20, mbtmp3.5/5, MS3.1/1, Ms1 3.1/1, ms1mx2.5/28, Error ellipse: s-maj=42.7km s-min=24.7km az=79.0*
ISC 28 20:11:19.1±2.2, 143N±02×1455E±03, h109km±18km, n7, σ0©49/7, mb3.8/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.95**	**221**	P	**Pn**	**20 11 39.5**	**-0.3**
	511nm,0.3s,baz=34,slow=3.6,SNR=338						
GUMO				S	**Sn**	**20 11 55.4**	**+0.2**
	1μm,0.3s,baz=347,slow=23,SNR=50						
WRA	**Warramunga Arr**	**35.77**	**198**	P	**P**	**20 18 07.9**	**0.0**
	0.4nm,0.7s,mb3.5,baz=20,slow=9.1,SNR=4.3						
PETK	**Petropavlovsk-**	**39.89**	**11**	LR	LR	20 34 00.1	
	comp=Z,31nm,21.8s,baz=277,slow=34						
SONM	**Songino Array**	**46.50**	**324**	P	**P**	**20 19 35.9**	**+0.5**
	0.6nm,0.6s,mb3.5,baz=137,slow=8.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**61.40**	**324**	P	**P**	**20 21 23.0**	**-0.7**
	0.9nm,0.6s,mb4.0,baz=94,slow=6.7,SNR=5.6						
MKAR	**Makanchi Array**	**61.40**	**316**	P	**P**	**20 21 23.9**	**+0.1**
	1.5nm,0.4s,mb4.4,baz=90,slow=8.3,SNR=27						
NVAR	**Mina Array Bea**	**85.99**	**52**	P	**P**	**20 23 47.8**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=263,slow=6.2,SNR=4.3						

*ISCJB **28** 20:33:29.5±1.5, 1187N±005×142.17E±003, h2km±9km, mb4.7/53, MS4.0/18, Error ellipse: s-maj=8.6km s-min=5.5km az=-3.1*
*BJI **28** 20:33:31.5, 1188N×14262E, h25km, mB5.0, mb4.8, Ms4.5, Msz4.3*
*MOS **28** 20:33:34.9±1.0, 1192N×14221E, h43km, mb4.7/26, Error ellipse: s-maj=13.1km s-min=8.2km az=107.7*
*NEIC **28** 20:33:34.5±3.0, 1191N×14222E, h25km±21km, mb4.7/20, Error ellipse: s-maj=6.7km s-min=6.5km az=135.0*
*IDC **28** 20:33:37.9±2.6, 1189N×14227E, h55km±26km, mb4.2/17, mb1 4.4/18, mb1mx4.3/24, mbtmp4.2/18, MS3.7/12, Ms1 3.8/12, ms1mx3.5/36, Error ellipse: s-maj=18.8km s-min=12.0km az=95.0*
ISC 28 20:33:32.9±1.6, 1186N±005×14224E±003, h14km±10km, h25km±2.4km:pP-P, n251, σ0©68/254, mb4.7/53, MS4.0/18, 75C-68D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.08**	**56**	P	**Pn**	**20 34 22.6**	**+1.3**
	127nm,0.3s,baz=257,slow=2.5,SNR=50						
GUMO				S	**Sn**	**20 35 00.0**	**+2.1**
	119nm,0.3s,baz=27,slow=23,SNR=6.9						
GUMO				LR	LR	20 35 33.6	
	comp=Z,668nm,20.4s,baz=304,slow=38						
GUMO	**Guam**	**3.08**	**56**	*e*P	**Pn**	**20 34 22.2**	**+1.0**
GUMO	**Guam**	**3.08**	**56**	P	**Pn**	**20 34 22.6**	**+1.3**
GUMO				S	**Sn**	**20 35 00.0**	**+2.0**
GUMO				pmax	pmax		
	comp=Z,127nm,0.3s						
GUMO				smax			
	comp=N,119nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,668nm,20.4s						
JOW	**Kunigami**	**19.86**	**321**	LR	LR	20 45 10.3	
	comp=Z,337nm,18.3s,baz=240,slow=35						
MJAR	**Matsushiro Arr**	**24.84**	**352**	P	**P**	**20 38 53.1**	**-1.8**
	comp=Z,6.9nm,0.7s,mb4.3,baz=171,slow=8.7,SNR=15						
MJAR				LR	LR	20 48 34.7	
	comp=Z,167nm,18.5s,MS3.6,baz=165,slow=36						
MJAR	**Matsushiro Arr**	**24.84**	**352**	P	**P**	**20 38 53.2**	**-1.7**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,167nm,18.5s						
MAJO	**Matsushiro**	**24.84**	**352**	*e*P	**P**	**20 38 52.6**	**-2.4**
	comp=Z,16nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**24.84**	**352**	*e*P	**P**	**20 38 52.6**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
MAT	**Matsushiro**	**24.84**	**352**	P	**P**	**20 38 54.1**	**-0.8**

comp=Z,4.0nm,1.1s,mb4.3
MDJ AMB AMB
comp=Z,64nm,3.5s
MDJ LR LR
comp=N,91nm,7.1s
MDJ LR LR
comp=E,139nm,6.6s
MDJ LR LR
comp=Z,213nm,8.0s
CN2 Changchun 34.97 339 *e*P **P** **20 40 25.5 +0.8**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
ASAR Alice Springs 36.24 193 P **P** **20 40 36.2 +0.5**
comp=Z,1.3nm,0.5s,mb4.2,baz=22,slow=12,SNR=28
ASAR Alice Springs 36.24 193 P **P** **20 40 36.3 +0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
BJI Beijing 36.30 325 P **P** **20 40 36.8 +0.7**
BJI S **S** **20 46 16.3 -0.3**
BJI AMB AMB
comp=Z,30nm,0.6s,mb5.4
BJI AMB AMB
comp=Z,123nm,4.0s
BJI LR LR
comp=N,238nm,18.3s,MS4.2
BJI LR LR
comp=E,255nm,15.6s,MS4.2
BJI LR LR
comp=Z,146nm,18.5s,MS3.8
GYA Guiyang 36.46 299 P **P** **20 40 39.8 +2.0**
GYA AP pP 20 40 47.3 +5.3
GYA XP sP 20 40 50.8 +7.1
GYA PP PP 20 42 04.8 +4.0
GYA PCP PcP 20 43 02.8 +1.0
GYA S **S** **20 46 19.8 +0.3**
GYA XS sS 20 46 32.8 +6.4
GYA SS SS 20 48 47.8 -11
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,390nm,15.0s,MS4.3
GYA LR LR
comp=E,150nm,16.8s,MS4.3
GYA LR LR
comp=Z,400nm,17.0s,MS4.3
HHC Hu-ho-hao-te 39.49 323 *e*P **P** **20 41 03.3 +0.2**
HHC AP pP 20 41 13.0 +5.7
HHC XP sP 20 41 15.3 +6.3
HHC PP PP 20 42 38.5 +4.7
HHC PCP PcP 20 43 07.0 -3.8
HHC S **S** **20 47 03.8 -1.1**
HHC XS sS 20 47 17.0 +5.1
HHC SCS ScS 20 51 06.5 -4.9
HHC AMB AMB
comp=Z,18nm,0.5s,mb5.1
HHC AMB AMB
comp=Z,142nm,5.0s
HHC LR LR
comp=N,195nm,17.8s,MS4.2
HHC LR LR
comp=E,190nm,15.5s,MS4.2
HHC LR LR
comp=Z,229nm,21.4s
KMI Kunming 39.56 295 P **P** **20 41 05.5 +1.5**
KMI AP pP 20 41 13.0 +4.8
KMI XP sP 20 41 17.8 +7.9
KMI PP PP 20 42 40.3 +5.4
KMI S **S** **20 47 06.0 -0.5**
KMI XS sS 20 47 20.3 +6.9
KMI AMB AMB
comp=Z,5.0nm,1.2s,mb4.1
KMI AMB AMB
comp=Z,121nm,5.0s
KMI LR LR
comp=N,194nm,14.3s,MS4.2
KMI LR LR
comp=E,149nm,15.1s,MS4.2
KMI LR LR
comp=Z,140nm,15.9s,MS3.9
CD2 Chengdu 40.27 304 ⇓ *i*P **P** **20 41 10.5 +0.7**
CD2 AP pP 20 41 19.5 +5.5
CD2 XP sP 20 41 23.3 +7.6
CD2 PP PP 20 42 47.8 +5.3
CD2 S **S** **20 47 17.0 0.0**
CD2 XS sS 20 47 29.5 +5.6
CD2 SS SS 20 50 11.0 -4.5
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,390nm,4.8s
CD2 LR LR
comp=N,230nm,12.0s,MS4.4
CD2 LR LR
comp=E,240nm,14.2s,MS4.4
CD2 LR LR
comp=Z,210nm,12.0s,MS4.2
LZH Lanzhou 42.17 311 *e*P **P** **20 41 26.5 +1.2**
LZH AP pP 20 41 32.0 +2.5
LZH XP sP 20 41 35.0 +3.8
LZH PP PP 20 43 09.0 +6.0
LZH *e*S **S** **20 47 47.0 +2.0**
LZH SS SS 20 50 46.0 -7.0
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.6
LZH AMB AMB
comp=Z,76nm,4.6s
LZH LR LR
comp=E,325nm,14.4s
LZH LR LR
comp=Z,544nm,15.3s,MS4.5
CMAR Chiang Mai Arr 42.23 284 P **P** **20 41 26.9 +0.8**
comp=Z,15nm,0.7s,mb4.7,baz=86,slow=6.8,SNR=32
CMAR LR LR 20 58 10.0
comp=Z,118nm,18.7s,MS3.8,baz=116,slow=35
CMAR Chiang Mai Arr 42.23 284 *i*P **P** **20 41 27.6 +1.6**
CMAR pmax pmax
comp=Z,15nm,0.7s
CHTO Chiang Mai 42.24 285 *e*P **P** **20 41 27.9 +1.7**
comp=Z,1.9nm,0.6s,mb3.9
CHTO Chiang Mai 42.24 285 *e*P **P** **20 41 27.9 +1.8**
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
PETK Petropavlovsk- 42.96 14 P **P** **20 41 30.1 -1.3**
comp=Z,3.3nm,0.9s,mb4.1,baz=173,slow=6.8,SNR=4.0
PETK LR LR 20 58 45.1
comp=Z,106nm,19.9s,MS3.7,baz=191,slow=35
PETK Petropavlovsk- 42.96 14 P **P** **20 41 30.1 -1.4**
PETK pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
PETK MLR MLR
comp=Z,106nm,19.9s,MS3.7
STKA Stephens Creek 43.49 181 *e*P **P** **20 41 34.9 -1.1**
comp=Z,3.6nm,1.0s,mb4.1
STKA Stephens Creek 43.49 181 P **P** **20 41 35.4 -0.6**
comp=Z,3.7nm,0.8s,mb4.2,baz=333,slow=14,SNR=5.8
STKA LR LR 20 59 17.7
comp=Z,83nm,18.1s,MS3.7,baz=204,slow=35
ULN Ulaanbaatar 46.39 328 *e*P **P** **20 41 59.9 +1.0**
comp=Z,5.0nm,0.8s,mb4.5
ULN Ulaanbaatar 46.39 328 *e*P **P** **20 41 59.9 +1.0**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GTA Gaotai 46.46 314 P **P** **20 42 00.5 +0.9**
GTA AP pP 20 42 05.3 +1.4
GTA XP sP 20 42 07.8 +2.2
GTA AMB AMB
comp=Z,11nm,0.8s,mb4.8
GTA AMB AMB
comp=Z,81nm,4.5s
GTA LR LR
comp=N,125nm,14.7s,MS4.1
GTA LR LR
comp=E,98nm,16.2s,MS4.1
GTA LR LR
comp=Z,101nm,15.3s,MS3.9
SONM Songino Array 46.72 327 P **P** **20 42 02.4 +0.8**
comp=Z,3.5nm,0.5s,mb4.5,baz=142,slow=7.1,SNR=29
SONM PcP PcP 20 43 34.3 -0.6
comp=Z,0.8nm,0.6s,baz=140,slow=3.5,SNR=2.8
SONM LR LR 21 00 22.8
comp=Z,98nm,19.1s,MS3.8,baz=211,slow=34
SONM Songino Array 46.72 327 P **P** **20 42 02.4 +0.9**
SONM 20 43 34.3
SONM pmax pmax
comp=Z,4.0nm,0.5s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,98nm,19.1s
ZAK Zakamensk 49.89 328 *e*P **P** **20 42 26.0 0.0**
ZAK pmax pmax
comp=Z,11nm,1.0s,mb4.8
BOD Bodaibo 50.65 341 *e*P **P** **20 42 30.8 -0.8**
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
YAK Yakutsk 50.91 352 *e*P **P** **20 42 32.2 -1.2**
comp=Z,26nm,0.8s,mb5.2
YAK Yakutsk 50.91 352 *e*P **P** **20 42 32.2 -1.2**
YAK pmax pmax
comp=Z,26nm,0.8s,mb5.2
TAPN Taplejung 53.23 295 *e*P **P** **20 42 51.9 +0.5**
comp=Z,10nm,0.8s,mb4.8
JIRN Jiri 54.61 295 *e*P **P** **20 43 01.9 +0.5**
GUN Gumba 54.90 296 *e*P **P** **20 43 04.1 +0.5**
KKN Kakani 55.42 296 *e*P **P** **20 43 06.6 -0.7**
DMN Daman 55.56 295 *e*P **P** **20 43 06.2 -2.1**
GKN Gorkha 56.01 296 *e*P **P** **20 43 11.1 -0.4**
comp=Z,17nm,0.9s,mb5.0
WMQ Urumqi 56.50 315 *e*P **P** **20 43 16.0 +1.2**
WMQ XP sP 20 43 27.0 +6.2
WMQ PP PP 20 45 24.0 +3.5
WMQ S **S** **20 51 04.0 -1.8**
WMQ SS SS 20 54 51.0 -2.1
WMQ AMB AMB
comp=Z,34nm,1.0s,mb5.3
WMQ LR LR
comp=N,86nm,16.0s
WMQ LR LR
comp=Z,1μm,18.0s,MS5.0
DANN Dangsing 56.80 296 *e*P **P** **20 43 17.6 +0.4**
KOLN Koldanda 56.90 295 *e*P **P** **20 43 16.3 -1.6**
comp=Z,16nm,1.0s,mb5.0
TIXI Tiksi 60.30 355 *i*P **P** **20 43 39.2 -1.6**
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MK31 Makanchi Array 60.98 317 *e*P **P** **20 43 46.1 +0.3**
MKAR Makanchi Array 60.98 317 P **P** **20 43 46.2 +0.4**
comp=Z,10nm,0.7s,mb5.1,baz=96,slow=8.1,SNR=80
MKAR Makanchi Array 60.98 317 *i*P **P** **20 43 46.2 +0.3**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
ZAA0 Zalesovo Array 61.56 325 *e*P **P** **20 43 48.6 -1.1**
ZALV Zalesovo Beam 61.56 325 P **P** **20 43 48.9 -0.7**
comp=Z,3.0nm,0.6s,mb4.6,baz=108,slow=6.7,SNR=15
ZALV Zalesovo Beam 61.56 325 P **P** **20 43 48.9 -0.7**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
NVS Novosibirsk 62.73 326 *e*P **P** **20 43 56.3 -1.2**
NVS pmax pmax
comp=E,6.0nm,1.2s
NVS pmax pmax
comp=Z,11nm,1.2s,mb4.9
KURK Kurchatov 64.27 321 P **P** **20 44 07.5 -0.3**
comp=Z,14nm,0.6s,mb5.2,baz=105,slow=6.7,SNR=30
KURK Kurchatov 64.27 321 *c i*P **P** **20 44 07.4 -0.4**
KURK pmax pmax
comp=Z,31nm,1.1s,mb5.2
TKM2 Tokmak 2 64.94 312 *e*P **P** **20 44 12.5 +0.2**
comp=Z,4.5nm,1.2s,mb4.4
TKM2 Tokmak 2 64.94 312 *e*P **P** **20 44 12.5 +0.2**
TKM2 pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
KBL Kabul 69.58 303 *e*P **P** **20 44 41.2 -0.7**
comp=Z,6.2nm,1.1s,mb4.5
KBL Kabul 69.58 303 *e*P **P** **20 44 41.2 -0.7**
KBL pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BVAR Borovoye Array 69.70 322 P **P** **20 44 42.0 -0.2**
comp=Z,9.9nm,0.4s,mb5.1,baz=108,slow=8.1,SNR=73
BVAR Borovoye Array 69.70 322 P **P** **20 44 42.0 -0.3**
BVAR pmax pmax
comp=Z,10.0nm,0.4s
BRVK Borovoye 69.77 322 *e*P **P** **20 44 42.4 -0.3**
comp=Z,21nm,0.9s,mb5.1
BRVK Borovoye 69.77 322 *e*P **P** **20 44 42.4 -0.3**
BRVK pmax pmax
comp=Z,21nm,0.9s,mb5.1
COLD Coldfoot 70.51 22 *e*P **P** **20 44 46.4 -0.6**
comp=Z,7.7nm,0.9s,mb4.6
PPT Papeete 73.39 112 *e*S S 20 54 42.3 +7.9
comp=Z,59nm,28.5s
PPT Papeete 73.39 112 *e*LR LR 21 07 35.3
comp=Z,50nm,25.2s
SVE Sverdlovsk 75.57 326 *e*P **P** **20 45 17.0 -0.1**
SVE pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ARU Arti 76.72 325 *e*P **P** **20 45 22.6 -1.1**
comp=Z,4.8nm,0.8s,mb4.5
ARU Arti 76.72 325 *c i*P **P** **20 45 22.5 -1.2**
ARU *e* 20 48 12.2
ARU *e*S S 20 55 10.0 -0.2
ARU *e*SS SS 21 00 06.5 +0.9
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
C04A Brinnon 84.52 43 ⇑P **P** **20 46 05.7 0.0**
baz=84
I02A Mapleton 84.66 46 ⇓P **P** **20 46 06.6 +0.1**
baz=85
H03A Soap Creek Ran 84.91 46 ⇓P **P** **20 46 08.2 +0.5**
baz=85
B05A Bryant 84.98 42 ⇓P **P** **20 46 08.2 +0.2**
baz=85
F04A Amboy 85.25 44 ⇑P **P** **20 46 09.5 0.0**
baz=85
TDL Tradedollar La 85.31 44 P **P** **20 46 10.2 +0.5**
G04A Mulino 85.37 45 ⇓P **P** **20 46 10.3 +0.3**
baz=85
C05A Tolt Reservoir 85.37 42 ⇓P **P** **20 46 09.9 -0.1**
baz=85
YKA Yellowknife Ar 85.56 27 P **P** **20 46 08.9 -1.6**
comp=Z,4.0nm,0.8s,mb4.7,baz=293,slow=5.3,SNR=8.9
YKA LR LR 21 23 11.7
comp=Z,35nm,18.2s,MS3.8,baz=155,slow=35
YKA Yellowknife Ar 85.56 27 P **P** **20 46 08.9 -1.6**
YKA LR LR 21 23 11.7
YKA Yellowknife Ar 85.56 27 *i*P **P** **20 46 09.6 -1.0**
YKA pmax pmax
comp=Z,4.0nm,0.8s
E05A Randle 85.57 43 ⇓P **P** **20 46 11.0 0.0**
baz=86
H04A Detroit Lake 85.68 45 ⇓P **P** **20 46 11.7 +0.1**
baz=86
C06A Tall Timber Ra 85.84 42 ⇑P **P** **20 46 12.2 -0.1**
baz=86
A07A Ashnola River, 85.92 41 ⇑P **P** **20 46 11.9 -0.8**
baz=86,SNR=5.3
D06A Cle Elum 86.04 43 ⇓P **P** **20 46 13.1 -0.2**
baz=86
E06A Yakima 86.10 43 ⇓P **P** **20 46 13.6 0.0**
baz=86
G05A Wamic 86.16 45 ⇓P **P** **20 46 13.9 -0.1**
baz=86
NLW Nelson Butte 86.17 42 P **P** **20 46 13.9 0.0**
TBM Table Mountain 86.21 43 P **P** **20 46 14.2 +0.1**
B07A Winthrop 86.22 41 ⇑P **P** **20 46 13.4 -0.7**
baz=86,SNR=5.8
EBG Ellensburg 86.29 43 P **P** **20 46 14.8 +0.3**
H05A Madras 86.36 45 ⇑P **P** **20 46 15.1 +0.2**
baz=86
F06A Goldendale 86.41 44 ⇓P **P** **20 46 14.9 -0.2**
baz=86
I05A Bend 86.44 46 ⇓P **P** **20 46 14.8 -0.5**
baz=86
C07A Waterville 86.44 42 ⇓P **P** **20 46 14.6 -0.7**
baz=86
CROR Criterion Ridg 86.44 45 P **P** **20 46 15.3 -0.1**
D07A Quincy 86.62 43 ⇓P **P** **20 46 15.6 -0.6**
baz=86
G06A Carlson Farm, 86.63 45 ⇓P **P** **20 46 16.0 -0.2**
baz=86
A08A Turner Farm, O 86.65 41 ⇓P **P** **20 46 15.5 -0.8**
baz=86,SNR=7.1
B08A Colville Reser 86.76 41 ⇑P **P** **20 46 15.8 -1.0**
baz=87,SNR=14
EPH Ephrata 86.83 42 P **P** **20 46 17.0 -0.2**
E07A Sunnyside 86.85 43 ⇓P **P** **20 46 17.4 +0.1**
baz=87
H06A Lindquist Farm 86.95 45 ⇑P **P** **20 46 17.0 -0.8**
baz=87,SNR=7.9
K05A Summer Lake 87.03 47 ⇑P **P** **20 46 18.6 +0.3**
baz=87
A09A Danville 87.09 41 ⇑P **P** **20 46 17.4 -1.0**
baz=87,SNR=5.3
C08A Higginbotham F 87.09 42 ⇑P **P** **20 46 17.3 -1.1**
baz=87,SNR=13
GBL Gable Mountain 87.10 43 P **P** **20 46 18.7 +0.2**
HAWA Hanford 87.11 43 *e*P **P** **20 46 18.7 +0.1**
comp=Z,9.9nm,0.7s,mb5.2
I06A Prineville 87.23 46 ⇑P **P** **20 46 18.7 -0.5**
baz=87,SNR=6.2
G07A Ruggs Ranch, H 87.29 44 ⇑P **P** **20 46 18.8 -0.6**
baz=87,SNR=8.1
D08A Wollman Farm, 87.35 43 ⇑P **P** **20 46 18.9 -0.8**
baz=87,SNR=5.7
E08A Dider Farm, El 87.40 43 ⇑P **P** **20 46 20.0 +0.1**
baz=87
OD2 Odessa Site #2 87.40 42 P **P** **20 46 19.6 -0.4**
J06A Christmas Vall 87.43 46 ⇓P **P** **20 46 19.8 -0.4**
baz=87,SNR=7.0
H07A Lands Inn, Kim 87.52 45 ⇓P **P** **20 46 20.7 0.0**
baz=87
C09A Chrisman Ranch 87.59 42 ⇑P **P** **20 46 20.5 -0.4**
baz=88
MOD Modoc 87.64 48 *e*P **P** **20 46 20.2 -1.1**
I07A Izee 87.69 46 ⇓P **P** **20 46 21.5 +0.1**
baz=88
A10A Northport 87.74 40 ⇑P **P** **20 46 21.0 -0.6**
baz=88,SNR=6.0
D09A Jones Farm, Ri 87.75 42 ⇑P **P** **20 46 21.1 -0.6**
baz=88,SNR=8.2
F08A Pendleton 87.76 44 ⇓P **P** **20 46 21.2 -0.5**
baz=88,SNR=12
G08A Pilot Rock 87.77 44 ⇑P **P** **20 46 21.1 -0.6**
baz=88,SNR=5.8
ARCES ARCESS Array B 87.92 342 P **P** **20 46 20.6 -1.4**
comp=Z,2.6nm,0.7s,mb4.6,baz=63,slow=5.5,SNR=9.1
ARCES ARCESS Array B 87.92 342 P **P** **20 46 20.6 -1.4**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
J07A Hines 88.00 46 ⇓P **P** **20 46 23.0 +0.1**
baz=88,SNR=5.1
E09A Wood Farm, Sta 88.00 43 ⇓P **P** **20 46 22.4 -0.4**
baz=88,SNR=7.1
BEKR Beckwourth 88.09 50 ⇑P **P** **20 46 23.4 0.0**
baz=88,SNR=5.8
H08A Prairie City 88.16 45 ⇑P **P** **20 46 23.6 -0.1**
baz=88
K07A Rock Creek Ran 88.21 47 ⇑P **P** **20 46 23.8 -0.1**
baz=88,SNR=7.3
N06A Buffalo Meadow 88.26 49 ⇓P **P** **20 46 24.3 0.0**
baz=88,SNR=6.2
L07A Adell 88.31 48 ⇑P **P** **20 46 25.0 +0.6**
baz=88
F09A S2 Ranch, Elgi 88.37 44 ⇑P **P** **20 46 24.7 +0.1**
baz=88
D10A Wagner Farm, O 88.44 42 ⇑P **P** **20 46 24.7 -0.2**
baz=88
A11A Hall Mountain, 88.50 40 ⇓P **P** **20 46 25.5 +0.3**
baz=88
G09A Cove 88.57 44 ⇑P **P** **20 46 25.3 -0.3**
baz=88,SNR=6.0
M07A Soldier Meadow 88.59 48 ⇓P **P** **20 46 26.4 +0.6**
baz=88
J08A Circle Bar Ran 88.59 46 ⇓P **P** **20 46 25.4 -0.3**
baz=88,SNR=8.2
WCN Washoe City 88.67 50 ⇓P **P** **20 46 26.6 +0.4**
baz=89
E10A Myers Farm, Un 88.70 43 ⇑P **P** **20 46 26.4 +0.3**
baz=89
WVOR Wild Horse Val 88.71 47 *e*P **P** **20 46 26.1 -0.3**
comp=Z,7.3nm,1.0s,mb5.0
WVOR Wild Horse Val 88.71 47 *e*P **P** **20 46 26.1 -0.2**
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
K08A Mann Creek Ran 88.75 47 ⇓P **P** **20 46 26.0 -0.5**
baz=89,SNR=11
F10A Beach Ranch, E 88.76 43 ⇑P **P** **20 46 26.4 -0.1**
baz=89
N07B Gerlach 88.89 49 ⇑P **P** **20 46 27.2 0.0**
baz=89,SNR=9.0
I09A Lost Marbles R 88.95 45 ⇑P **P** **20 46 27.3 -0.1**
baz=89
L08A Fields 88.99 47 ⇑P **P** **20 46 27.6 0.0**
baz=89,SNR=18
BMO Blue Mountains 89.01 44 *e*P **P** **20 46 27.1 -0.6**
comp=Z,13nm,1.0s,mb5.2
BMO Blue Mountains 89.01 44 *e*P **P** **20 46 27.1 -0.6**
BMO pmax pmax
comp=Z,13nm,1.0s,mb5.2
G10A Bishop Farm, J 89.02 44 ⇑P **P** **20 46 27.0 -0.7**
baz=89,SNR=10
J09A Fry Pan Ranch, 89.10 46 ⇓P **P** **20 46 27.8 -0.3**
baz=89,SNR=10
O07A Toulon 89.12 49 ⇑P **P** **20 46 28.7 +0.4**
baz=89
OBN Obninsk 89.13 326 ⇑ *e*P **P** **20 46 26.0 -2.0**
OBN *e* 20 49 55.8
OBN pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
M08A Happy Creek Ra 89.15 48 ⇓P **P** **20 46 28.7 +0.3**
baz=89
T06C Millerton Lake 89.27 52 ⇑P **P** **20 46 29.5 +0.4**
baz=89
K09A Rome 89.30 47 ⇓P **P** **20 46 28.8 -0.3**
baz=89,SNR=6.2
E11A Bogner Ranch, 89.33 43 ⇑P **P** **20 46 29.0 -0.1**
baz=89
H10A Noah's Angus R 89.47 45 ⇑P **P** **20 46 29.4 -0.4**
baz=89,SNR=8.4
N08A GE Springer Mi 89.51 48 ⇓P **P** **20 46 29.7 -0.4**
baz=89,SNR=6.6
G11A Walters Elk Ra 89.57 44 ⇓P **P** **20 46 29.2 -1.1**
baz=89,SNR=8.5
PKM Peak Mountain 89.70 55 ⇓P **P** **20 46 32.2 +1.0**
baz=90
E12A Beaver Dam Sad 89.74 43 ⇓P **P** **20 46 30.8 -0.2**
baz=90
M09A Marrel Ranch, 89.83 48 ⇓P **P** **20 46 32.3 +0.7**
baz=90
B13A Whitefish 89.88 40 ⇑P **P** **20 46 32.0 +0.4**
baz=90
K10A MacKenzie Ranc 89.88 46 ⇑P **P** **20 46 31.5 -0.3**
baz=90,SNR=8.1
N09A Rock Creek Ran 89.93 48 ⇑P **P** **20 46 32.3 +0.2**
baz=90
H11A Donnelly 89.94 44 ⇑P **P** **20 46 31.6 -0.4**
baz=90
NVAR Mina Array Bea 89.99 51 P **P** **20 46 32.6 +0.2**
comp=Z,3.5nm,0.6s,mb4.9,baz=272,slow=5.3,SNR=26
C13A Hot Springs 90.02 41 ⇑P **P** **20 46 32.6 +0.3**
baz=90
I11A Placerville 90.20 45 ⇓P **P** **20 46 32.6 -0.6**
baz=90,SNR=5.9
L10A Juniper Basin 90.36 47 ⇑P **P** **20 46 33.8 -0.3**
baz=90,SNR=8.7
O09A Fish Creek Ran 90.36 49 ⇓P **P** **20 46 34.6 +0.5**
baz=90
MFID Camas Ranch 90.43 45 ⇓P **P** **20 46 34.1 -0.2**
baz=90,SNR=6.0
K11A Parker Ranch, 90.47 46 ⇑P **P** **20 46 34.9 +0.3**
baz=90
F13A Darby 90.75 43 ⇓P **P** **20 46 36.0 +0.2**
baz=91
A15A Johnson Ranch, 90.78 40 ⇓P **P** **20 46 35.9 +0.1**
baz=91
I12A Atlanta 90.81 45 ⇑P **P** **20 46 36.2 +0.1**
baz=91
L11A Cat Creek Ranc 90.84 47 ⇑P **P** **20 46 36.5 +0.2**
baz=91
R09A Tonopah 90.98 51 ⇓P **P** **20 46 37.5 +0.5**
baz=91
J12A Stokes Ranch, 90.99 45 ⇑P **P** **20 46 37.1 +0.1**
baz=91
S09A Goldfield 91.00 51 ⇑P **P** **20 46 37.8 +0.7**
baz=91
G13A Cobalt 91.03 44 ⇑P **P** **20 46 36.9 -0.2**
baz=91
M11A Holland Ranch, 91.03 47 ⇑P **P** **20 46 37.4 +0.3**
baz=91
B15A Bradely Ranch, 91.10 40 ⇑P **P** **20 46 37.6 +0.2**
baz=91
H13A Challis 91.18 44 ⇑P **P** **20 46 38.0 +0.2**
baz=91
LRMC Laurel Mountai 91.24 53 ⇑P **P** **20 46 39.2 +0.9**
baz=91
HLID Hailey 91.37 45 *e*P **P** **20 46 38.7 0.0**
comp=Z,3.5nm,1.0s,mb4.6
HLID Hailey 91.37 45 ⇓P **P** **20 46 38.9 +0.2**

	baz=91								
L12A	**House Creek Ra**	91.38	47	⇑P		P	20 46 39.1	+0.3	
	baz=91								
S10A	**Tonopah Range,**	91.42	51	⇑P		P	20 46 39.7	+0.6	
	baz=91								
I13A	**Wildhorse Cree**	91.47	45	⇓P		P	20 46 39.6	+0.4	
	baz=91								
J13A	**Cove Ranch, Pi**	91.59	45	⇑P		P	20 46 39.9	+0.2	
	baz=92								
ELK	**Elko**	91.63	48	*e*P		P	20 46 40.8	+0.9	
	comp=Z,1.6nm,0.8s,mb4.4								
ELK	**Elko**	91.63	48	*e*P		P	20 46 40.8	+0.8	
ELK				pmax		pmax			
	comp=Z,2.0nm,0.8s								
M12A	**Wells**	91.66	47	⇓P		P	20 46 40.8	+0.7	
	baz=92								
E15A	**Deer Lodge**	91.67	42	⇑P		P	20 46 39.9	-0.1	
	baz=92								
N12A	**Clover Valley,**	91.74	48	⇓P		P	20 46 40.5	0.0	
	baz=92								
I14A	**Mackay**	91.92	44	⇓P		P	20 46 41.6	+0.3	
	baz=92								
F15A	**Butte**	91.95	42	⇑P		P	20 46 41.4	+0.1	
	baz=92								
TPNV	**Topopah Spring**	91.96	52	*e*P		P	20 46 42.4	+0.8	
	comp=Z,3.6nm,1.0s,mb4.7								
TPNV	**Topopah Spring**	91.96	52	⇓P		P	20 46 42.4	+0.8	
	baz=92								
TPNV	**Topopah Spring**	91.96	52	*e*P		P	20 46 42.4	+0.8	
TPNV				pmax		pmax			
	comp=Z,4.0nm,1.0s,mb4.7								
J14A	**Carey**	92.07	45	⇓P		P	20 46 42.4	+0.5	
	baz=92								
R11A	**Troy Canyon, C**	92.07	50	⇓P		P	20 46 42.5	+0.4	
	baz=92								
L13A	**Double Diamond**	92.15	46	⇓P		P	20 46 42.8	+0.4	
	baz=92								
D16A	**Dana Ranch, Ca**	92.17	41	⇓P		P	20 46 42.5	+0.1	
	baz=92								
B17A	**L&G Farms, Che**	92.22	40	⇓P		P	20 46 42.7	+0.2	
	baz=92								
M13A	**Montello**	92.22	47	⇑P		P	20 46 42.9	+0.2	
	baz=92								
H15A	**Lima**	92.25	44	⇓P		P	20 46 42.9	+0.1	
	baz=92								
E16A	**East Helena**	92.26	42	⇑P		P	20 46 42.6	-0.1	
	baz=92								
C17A	**Wharram Farm,**	92.47	40	⇓P		P	20 46 43.4	-0.3	
	baz=92								
F16A	**Kennard Place,**	92.55	42	⇑P		P	20 46 43.9	-0.2	
	baz=92								
A18A	**Metzger Ranch,**	92.58	39	⇑P		P	20 46 44.1	-0.1	
	baz=92								
BOZ	**Bozeman (W)**	92.59	42	⇓P		P	20 46 44.0	-0.3	
	baz=92								
G16A	**Moss Hill, Enn**	92.61	43	⇑P		P	20 46 44.2	-0.2	
	baz=92								
L14A	**Malta**	92.67	46	⇑P		P	20 46 45.0	+0.3	
	baz=92								
D17A	**Six Diamond Ra**	92.68	41	⇑P		P	20 46 44.4	-0.3	
	baz=92								
M14A	**Sheep Mountain**	92.76	47	⇓P		P	20 46 45.3	+0.2	
	baz=93								
J15A	**Blackfoot**	92.79	45	⇑P		P	20 46 45.8	+0.5	
	baz=93								
R12A	**Pony Springs,**	92.81	50	⇓P		P	20 46 46.0	+0.5	
	baz=93								
E17A	**Martinsdale**	92.81	41	⇓P		P	20 46 45.2	-0.1	
	baz=93								
MONP	**Monument Peak**	92.95	56	⇓P		P	20 46 47.3	+1.0	
	baz=93								
K15A	**Arbon**	92.96	45	⇓P		P	20 46 46.0	0.0	
	baz=93								
EGMT	**Eagleton**	92.96	40	⇑P		P	20 46 45.9	-0.1	
	baz=93								
H16A	**Russell Place,**	93.16	43	⇓P		P	20 46 47.4	+0.5	
	baz=93								
L15A	**Malad City**	93.28	46	⇑P		P	20 46 47.9	+0.4	
	baz=93								
I16A	**Newdale**	93.28	44	⇑P		P	20 46 47.8	+0.2	
	baz=93								
G17A	**Pierce Place,**	93.29	43	⇓P		P	20 46 47.9	+0.4	
	baz=93								
E18A	**Harlowton**	93.39	41	⇑P		P	20 46 48.2	+0.2	
	baz=93								
M15A	**Larsen Ranch,**	93.41	47	⇑P		P	20 46 48.2	0.0	
	baz=93								
P14A	**Drum Mountains**	93.56	48	⇓P		P	20 46 48.8	-0.1	
	baz=93								
K16A	**Soda Springs**	93.56	45	⇑P		P	20 46 49.4	+0.5	
	baz=93								
Q14A	**Sevier Lake (B**	93.60	49	⇓P		P	20 46 49.0	-0.1	
	baz=94								
RLMT	**Red Lodge**	94.33	42	*e*P		P	20 46 52.4	+0.1	
RLMT	**Red Lodge**	94.33	42	⇓P		P	20 46 52.6	+0.2	
	baz=94								
J18A	**Kendall Valley**	94.51	44	⇑P		P	20 46 53.5	+0.3	
	baz=94								
AKASG	**Malin Array Be**	94.92	324	LR		LR	21 32 45.2		
	comp=Z,90nm,18.9s,MS4.3,baz=75,slow=37								
PDAR	**Pinedale Array**	94.99	45	P		P	20 46 56.3	+0.9	
	comp=Z,0.3nm,0.6s,mb3.9,baz=290,slow=2.7,SNR=3.1								
TORD	**Torodi Ar. Bea**	133.64	301	PKP		PKPdf	20 52 49.4	-0.9	
	comp=Z,0.4nm,0.5s,baz=45,slow=1.9,SNR=8.4								
LVC	**Limon Verde**	148.45	114	*e*PKPbc		PKPbc	20 53 20.9	+0.8	

IDC ***28*** *20:37:34.5±2.1, 8.735S×117.92E, h0km, mb3.7/3, mb1 4.0/6, mb1mx3.7/19, mbtmp3.9/6, ML4.0/3, Error ellipse: s-maj=43.3km s-min=22.2km az=68.0*

ISCJB ***28*** *20:37:35.7±0.5, 8.74S±0.06×117.78E±0.04, h33km, mb3.8/3, Error ellipse: s-maj=8.4km s-min=5.1km az=2.6*

DJA ***28*** *20:37:37.8±0.0, 8.60S×117.71E, h37km, Mjma3.9/8, MLv4.3/8, Mwp3.1/1*

ISC 28 20:37:37.7±0.6, 8.75S±0.007×117.74E±0.004, h35km, n16, σ1§24/19, mb3.8/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
KHKI	**Kahang-Kahang**	2.14	280	P		Pn	20 38 09.5		-1.5
DNP	**Denpasar**	2.50	271	P		Pn	20 38 15.4		-0.5
IGBI	**Denpasar**	2.56	268	P		Pn	20 38 16.5		-0.3
IGBI	**Denpasar**	2.56	268	S		Sn	20 38 48.2		+1.5
NBBI	**Negara**	3.10	277	P		Pn	20 38 25.2		+0.9
KMMI	**Kalianget**	4.10	294	P		Pn	20 38 37.6		-0.3
KAPI	**Kappang**	4.21	28	Pn		Pn	20 38 38.6		-0.9
	5.8nm,0.3s,baz=200,slow=4.2,SNR=15								
KAPI				Sn		Sn	20 39 28.1		+0.6
	7.2nm,0.3s,baz=11,slow=23,SNR=7.7								
KAPI	**Kappang**	4.21	28	P		Pn	20 38 37.9		-1.6
KRKI	**Karangkates**	5.26	276	P		Pn	20 38 59.9		+6.0
BBKI	**Banjar Baru**	5.99	331	P		Px	20 39 25.3		
SJI	**Sawahan**	5.99	279	P		Pn	20 39 03.1		-0.9
BATI	**Baumata**	6.02	104	Pn		Pn	20 39 03.3		-1.1
	20nm,0.3s,baz=279,slow=9.5,SNR=31								
BATI				Sn		Sn	20 40 13.3		+1.1
	10nm,0.3s,baz=34,slow=20,SNR=7.2								
WRA	**Warramunga Arr**	19.54	127	P		Pn	20 42 00.6		-3.3
	0.3nm,0.3s,baz=303,slow=12,SNR=9.4								
WRA				S		S	20 45 26.6		-15
	0.1nm,0.3s,baz=300,slow=20,SNR=2.8								
ASAR	**Alice Springs**	21.44	136	P		P	20 42 23.1		+0.1
	2.0nm,0.6s,mb3.6,baz=311,slow=9.1,SNR=21								
ASAR				S		S	20 46 13.5		-5.5
	0.4nm,0.8s,baz=314,slow=22,SNR=3.0								
STKA	**Stephens Creek**	31.95	139	P		P	20 44 02.4		+2.0
	2.7nm,0.8s,mb4.1,baz=312,slow=12,SNR=3.0								
SONM	**Songino Array**	57.22	351	P		P	20 47 23.8		+2.4
	0.5nm,0.9s,mb3.5,baz=167,slow=7.1,SNR=2.5								

ISCJB ***28*** *21:03:05.2±1.2, 1103N±0.06×6225W±0.05, h78km±12km, Error ellipse: s-maj=10.4km s-min=7.2km az=165.9*

FUNV ***28*** *21:03:06.2, 1099N×6227W, h82km, MW2.6*

TRN ***28*** *21:03:10.5, 11.14N×6194W, h30km, MD2.9*

ISC 28 21:03:05.6±1.2, 1102N±0.06×6225W±0.05, h78km±13km, n8, σ0§89/14, 1C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
GUIV	**Guiria**	0.38	176	*e*P		Pn	21 03 18.8		+0.6
GUIV				*e*S		Sn	21 03 28.2		+0.8
TRN	**Trinidad (W)**	0.91	114	*e*P		Pn	21 03 23.9		+0.4
TRN				*e*S		Sn	21 03 35.7		-1.1
ITEV	**Isla Los Testi**	0.93	291	⇑*i*P		Pn	21 03 23.8		+0.2
ITEV				*e*S		Sn	21 03 37.7		+0.6
CRUV	**Carupano**	1.03	250	⇓*i*P		Pn	21 03 24.6		-0.3
CRUV				*e*S		Sn	21 03 38.2		-1.1
GUNV	**Guanoco**	1.09	219	*e*P		Pn	21 03 25.6		0.0
GUNV				*e*S		Sn	21 03 40.5		-0.2
GRW	**Mount Saint Ca**	1.27	27	*e*P		Pn	21 03 30.0		+2.1
GRW				*e*S		Sn	21 03 42.8		-1.8
TPR	**Prospect**	1.45	83	*e*P		Pn	21 03 30.4		+0.2
PCRV	**Puerto La Cruz**	2.49	250	*e*P		Pn	21 03 43.7		-0.4

IDC ***28*** *21:04:38.6±2.2, 4.354N×105.35W, h0km, mb4.1/1, mb1 4.2/3, mb1mx3.6/20, mbtmp4.0/3, ML3.8/2, Error ellipse: s-maj=55.6km s-min=8.8km az=153.0*

NEIC ***28*** *21:04:40.8±0.7, 4.374N×105.26W, h0km, ML3.1, Error ellipse: s-maj=9.9km s-min=8.0km az=164.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

ISC 28 21:04:40.3±0.6, 4361N±004×10544W±005, h0km, n18, σ1§88/38, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
RWWY	**Rawlins**	2.32	215	*e*Pn		Pn	21 05 22.9		+3.2
RWWY				*e*Sn		Sn	21 05 43.6		-5.3
RWWY				*e*Sg		Sg	21 05 56.5		+1.7
BW06	**Boulder Array**	3.12	256	*e*Pn		Pn	21 05 33.1		+2.3
BW06				*e*Pg		Pg	21 05 41.7		+1.5
PDAR	**Pinedale Array**	3.12	256	Pn		Pn	21 05 33.3		+2.5
	9.5nm,0.3s,baz=85,slow=17,SNR=25								
PDAR				Lg			21 06 17.6		
	17nm,0.3s,baz=74,slow=31,SNR=13								
PDAR	**Pinedale Array**	3.12	256	Pn		Pn	21 05 33.3		+2.5
PDAR				Lg			21 06 17.6		
OGNE	**Ogallala**	3.67	135	*e*Pn		Pn	21 05 39.5		+1.2
OGNE				*e*Pg		Pg	21 05 50.3		-0.3
ISCO	**Idaho Springs**	3.81	182	*e*Pn		Pn	21 05 43.0		+2.8
ISCO				*e*Pg		Pg	21 05 50.3		-2.9
ISCO				*e*Sn		Sn	21 06 24.3		-1.3
ISCO				*e*Sg		Sg	21 06 40.4		-2.2
MOOW	**Moose Ponds**	3.85	274	*e*Pn		Pn	21 05 44.1		+3.4
SNOW	**Snow King Moun**	3.87	270	Pn		Pn	21 05 45.5		+4.6
REDW	**Red Top Meadow**	3.94	268	*e*Pn		Pn	21 05 44.8		+2.7
REDW				*e*Pg		Pg	21 05 54.2		-1.7
REDW				*e*Sn		Sn	21 06 27.7		-1.3
REDW				*e*Sg		Sg	21 06 43.9		-3.1
IMW	**Indian Meadow**	3.99	276	*e*Pn		Pn	21 05 45.0		+2.3
IMW				*e*Pg		Pg	21 05 54.9		-2.0
IMW				Sn		Sn	21 06 31.7		+1.5
TPAW	**Teton Pass**	4.01	270	*e*Pn		Pn	21 05 45.1		+2.2
TPAW				*e*Pg		Pg	21 05 56.0		-1.1
DCID1	**Drake Creek**	4.17	272	*e*Pn		Pn	21 05 46.9		+1.7
DCID1				Pg		Pg	21 05 58.1		-2.1
RRI2	**Red Ridge**	4.29	269	*e*Pn		Pn	21 05 47.7		+1.0
RRI2				*e*Pg		Pg	21 06 00.9		-1.6
RRI2				*e*Sn		Sn	21 06 36.0		-1.4
RRI2				*e*Sg		Sg	21 07 04.3		+6.3
DGMT	**Dagmar**	4.94	10	*e*Pn		Pn	21 05 55.4		-0.3
DGMT				*e*Pg		Pg	21 06 09.2		-5.8
HWUT	**Hardware Ranch**	4.94	248	*e*Pn		Pn	21 05 58.3		+2.6
	7.1nm,0.4s								
HWUT				*e*Pg		Pg	21 06 13.2		-1.8
HWUT				*e*Sg		Sg	21 07 17.2		-1.8
ULM	**Lac du Bonnet**	9.32	41	Pn		Pn	21 06 52.1		-3.7
	2.4nm,0.3s,baz=233,slow=11,SNR=9.7								
ULM				Lg			21 09 27.0		
	0.8nm,0.3s,baz=307,slow=15,SNR=2.5								
ULM	**Lac du Bonnet**	9.32	41	Pn		Pn	21 06 52.1		-3.7
ULM				Lg			21 09 27.0		
ARCES	**ARCESS Array B**	61.58	18	P		P	21 14 56.8		-2.1
	2.0nm,0.8s,baz=324,slow=6.0,SNR=5.8								

NIED ***28*** *21:05:00, 24.60N×122.00E, h83km, Mw4.6 Best double couple: M08.49000×10^15 NP1:φs338.00000°, δ88.00000°, λ-32.00000°. NP2:φs69.00000°, δ58.00000°, λ-177.00000°.*

BJI ***28*** *21:05:11.9, 24.85N×122.06E, h62km, mB4.8, mb4.4, ML4.7, Ms4.1, Msz4.1*

ISCJB ***28*** *21:05:12.6±0.2, 24.81N±0.02×122.04E±0.02, h78km±1km, mb4.4/37, Error ellipse: s-maj=3.0km s-min=2.5km az=44.5*

IDC ***28*** *21:05:13.4±0.7, 24.80N×122.11E, h78km±6km, mb4.0/13, mb1 4.1/16, mb1mx4.1/22, mbtmp4.0/16, MS3.3/11, Ms1 3.3/11, ms1mx3.1/41, Error ellipse: s-maj=13.8km s-min=11.1km az=58.0*

JMA ***28*** *21:05:13.5±0.3, 24.61N×122.00E, h74km, M4.5*

TAP ***28*** *21:05:13.7, 24.78N×121.98E, h69km, ML5.4, B*

NEIC ***28*** *21:05:14.3, 24.82N×122.01E, h65km, mb4.6/19, After TAP.*

NEIC Recorded [4 TAP] in I-lan; [3 TAP] in Hua-lien; [2 TAP] in Miao-li, Nan-t'ou, T'ai-chung, T'ai-pei and T'ao-yuan; [1 TAP] in Hsin-chu Counties.

MOS ***28*** *21:05:15.6±1.0, 24.81N×122.14E, h115km, mb4.5/23, Error ellipse: s-maj=11.3km s-min=7.7km az=106.1*

ISC 28 21:05:13.6±0.2, 2480N±002×12204E±002, h72km±1km, h79km±2.8km:pP-P, n188, σ1§02/235, mb4.4/37, 5C-36D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
TWB1	**Santiao Chiao**	0.21	348	⇓*i*P		Pn	21 05 24.6		0.0
	baz=9.0								
TWB1				*i* S		Sn	21 05 31.9		-0.6
	baz=9.0								
ILA	**Ilan**	0.27	262	*i* P		Pn	21 05 24.9		+0.1
	baz=275								
ILA				S		Sn	21 05 32.6		-0.4
	baz=275								
TWE	**Neicheng**	0.35	256	⇓*i*P		Pn	21 05 25.2		-0.1
	baz=263								
NWF	**Wu-fen Shan**	0.35	319	⇓*i*P		Pn	21 05 25.5		+0.1
	baz=328								
NWF				*i* S		Sn	21 05 33.4		-0.6
	baz=328								
TWA	**Mucha**	0.45	293	⇓*i*P		Pn	21 05 25.9		-0.2
	baz=295								
TWA				*e*S		Sn	21 05 34.4		-1.0
	baz=295								
ENTT	**Nioudou**	0.46	249	⇓*i*P		Pn	21 05 26.3		+0.1
	baz=253								
ENA	**Nanau**	0.46	216	⇓*i*P		Pn	21 05 26.4		+0.2
	baz=211								
ENA				*e*S		Sn	21 05 35.6		0.0
	baz=211								
TAP1	**Taipei**	0.52	297	⇓*i*P		Pn	21 05 26.5		-0.3
	baz=302								
TAP1				S		Sn	21 05 35.3		-1.3
	baz=302								
TATO	**Taipei**	0.53	289	*e*P		Pn	21 05 26.1		-0.8
TATO				*e*S		Sn	21 05 35.9		-0.8
EHP	**Heping Village**	0.56	209	*e*P		Pn	21 05 27.0		-0.2
	baz=203								
EHP				*e*S		Sn	21 05 37.7		+0.5
	baz=203								
TWY	**Chenhua**	0.61	320	P		Pn	21 05 27.8		0.0
	baz=325								
TWY				S		Sn	21 05 37.6		-0.6
	baz=325								
YHNB	**Yeheng**	0.61	258	*e*P		Pn	21 05 27.8		0.0
YHNB				*e*S		Sn	21 05 37.8		-0.4
NSK	**Sanguang**	0.63	259	⇓*i*P		Pn	21 05 27.9		0.0
	baz=266								
TWS1	**Kuangyinshan**	0.64	298	⇓*i*P		Pn	21 05 28.0		0.0
	baz=310								
TWS1				S		Sn	21 05 38.1		-0.4
	baz=310								
NNS	**Nan Shan**	0.70	239	⇓*i*P		Pn	21 05 29.4		+0.7
	baz=245								
NNS				S		Sn	21 05 40.4		+0.5
	baz=245								
NACB	**Ninganchiao**	0.74	213	*e*P		Pn	21 05 28.2		-1.0
NACB				*e*S		Sn	21 05 39.3		-1.4
NCU	**National Centr**	0.79	282	P		Pn	21 05 30.1		+0.5
	baz=284								
NCU				*e*S		Sn	21 05 41.4		-0.2
	baz=284								
PCYT	**Pengchaiyu**	0.82	2	P		Pn	21 05 30.5		+0.4
	baz=14								
PCYT				S		Sn	21 05 42.9		+0.6
	baz=14								
TWD	**Chiawan**	0.82	209	⇓*i*P		Pn	21 05 29.5		-0.6
	baz=214								
TWD				*e*S		Sn	21 05 41.6		-0.7
	baz=214								
HWA	**Hwalien**	0.91	206	⇓*i*P		Pn	21 05 30.9		-0.3
	baz=192								
YOJ	**Yonaguni jima**	0.95	111	P		Pn	21 05 31.6		0.0
YOJ				*e*S		Sn	21 05 44.9		-0.1
YOJ	**Yonaguni jima**	0.95	111	⇓*i*P		Pn	21 05 31.6		0.0
	baz=110								
YOJ				*e*S		Sn	21 05 44.8		-0.1
	baz=110								
TWT	**Tachien**	0.96	235	⇓*i*P		Pn	21 05 32.7		+1.1
	baz=235								
NSTT	**Nanjuang**	0.96	260	⇓*i*P		Pn	21 05 31.7		+0.1
	baz=260								
NSTT				*e*S		Sn	21 05 44.3		-0.9
	baz=260								
WHF	**Hehuan Shan**	0.96	227	⇓*i*P		Pn	21 05 32.1		+0.4
	baz=220								
HSN	**Hsinchu**	0.97	270	*e*P		Pn	21 05 31.8		0.0
	baz=273								
HSN				*e*S		Sn	21 05 44.6		-0.8
	baz=273								
ESF	**Shoufeng Towns**	1.05	208	*e*P		Pn	21 05 31.5		-1.3
	baz=213								
ESL	**Shilin**	1.13	209	⇓*i*P		Pn	21 05 32.5		-1.3
	baz=207								
TEGC	**Jichi Village**	1.18	203	*e*P		Pn	21 05 34.1		-0.4
	baz=190								
TWQ1	**Liyutan**	1.24	249	⇓*i*P		Pn	21 05 35.7		+0.5
	baz=258								
TWQ1				*e*S		Sn	21 05 51.2		-0.1
	baz=258								
SMLT	**Sun Moon Lake**	1.38	229	⇓*i*P		Pn	21 05 37.9		+0.8
	baz=220								
SMLT				S		Sn	21 05 56.4		+1.6
	baz=220								
TYC	**Yuchr**	1.40	230	⇓*i*P		Pn	21 05 37.9		+0.6
	baz=221								
TYC				*e*S		Sn	21 05 56.0		+0.8
	baz=221								
TCU	**Taichung**	1.40	243	P		Pn	21 05 37.8		+0.5
	baz=241								
EHY	**Hungye**	1.45	207	⇓*i*P		Pn	21 05 36.1		-1.8
	baz=204								
WNT	**Mingjian**	1.54	234	*e*P		Pn	21 05 38.5		-0.7
	baz=242								
WNT				*e*S		Sn	21 05 58.5		+0.1
	baz=242								
TWF1	**Yuli**	1.59	205	⇓*i*P		Pn	21 05 38.0		-1.9
	baz=208								
IRIF	**Iriomote-Funau**	1.61	106	P		Pn	21 05 40.1		0.0
IRIF				*e*S		Sn	21 06 00.5		+0.4
YUS	**Yu-Shan**	1.64	217	⇓*i*P		Pn	21 05 41.2		+0.7
	baz=204								
YUS				S		Sn	21 06 01.2		+0.4
	baz=204								
ALS	**Alishan**	1.71	221	⇓*i*P		Pn	21 05 42.4		+1.0
	baz=228								
ALS				*e*S		Sn	21 06 04.1		+1.7
	baz=228								
CHN5	**Tsauling**	1.73	226	⇓*i*P		Pn	21 05 42.2		+0.5
	baz=234								
WGK	**Gukeng**	1.75	231	*e*P		Pn	21 05 42.4		+0.5
	baz=238								
WGK				*e*S		Sn	21 06 03.9		+0.6
	baz=238								
HATJ	**Hateruma jima**	1.77	114	P		Pn	21 05 42.3		0.0
CHKT	**Chengkung**	1.80	200	⇓*i*P		Pn	21 05 41.3		-1.4
	baz=194								
CHKT				*e*S		Sn	21 06 01.0		-3.7
	baz=194								
WTCT	**Ta-ch'eng**	1.85	240	*e*P		Pn	21 05 42.8		-0.5
	baz=237								
WTCT				*e*S		Sn	21 06 04.6		-1.3
	baz=237								
ELDTW	**Lidau**	1.86	210	⇓P		Pn	21 05 42.3		-1.1
	baz=199								
JKRS	**Kuro-shima**	1.88	107	P		Pn	21 05 44.1		+0.4
JKRS				*e*S		Sn	21 06 07.9		+1.3
CHN2	**Minshiung**	1.91	229	*e*P		Pn	21 05 44.2		+0.2
	baz=236								
CHN2				*e*S		Sn	21 06 08.2		+1.0
	baz=236								
CHN4	**Tsaushan**	1.96	223	*e*P		Pn	21 05 45.6		+0.9
	baz=218								
CHN4				S		Sn	21 06 10.3		+1.9
	baz=218								
CHY	**Chiayi**	1.96	229	*e*P		Pn	21 05 45.2		+0.4
	baz=237								
JIJ	**Ishigaki jima**	1.97	102	P		Pn	21 05 44.8		0.0
JIJ				*e*S		Sn	21 06 08.7		+0.1
WSF	**Szhu**	2.02	235	⇓P		Pn	21 05 45.4		-0.2
	baz=232								
WSF				*e*S		Sn	21 06 09.6		-0.4
	baz=232								
WTP	**Ta-pu**	2.02	220	⇓*i*P		Pn	21 05 45.9		+0.3
	baz=228								
WTP				*e*S		Sn	21 06 11.5		+1.5
	baz=228								
TWK	**Hsinying**	2.08	223	*e*P		Pn	21 05 46.9		+0.5
	baz=218								
TWK				*e*S		Sn	21 06 12.3		+0.9
	baz=218								
CHN1	**Nanshi**	2.12	221	⇓P		Pn	21 05 47.2		+0.3
	baz=228								
CHN1				*e*S		Sn	21 06 14.2		+1.8
	baz=228								
TWG	**Pinlang**	2.16	204	*e*P		Pn	21 05 45.6		-1.9
	baz=192								
SGST	**Jiashian**	2.17	218	⇓*i*P		Pn	21 05 48.2		+0.6
	baz=224								
SGST				*e*S		Sn	21 06 14.5		+1.0
	baz=224								
TTN	**Taitung**	2.20	202	*e*P		Pn	21 05 47.3		-0.7
	baz=192								
CHN8	**Yiju**	2.21	229	*e*P		Pn	21 05 47.9		-0.2
	baz=227								
SCLT	**Jiali**	2.34	226	*e*P		Pn	21 05 48.6		-1.2
	baz=224								
ECL	**Taimali**	2.41	205	*e*P		Pn	21 05 49.0		-1.9
	baz=194								
TAI1	**Yung-k'ang**	2

JOW	**Kunigami**	**5.97**	**69**	P		**Pn**	**21 06 38.8**	**-0.6**
	comp=E,8.4nm,0.3s,baz=266,slow=11,SNR=5.2							
JOW				S		**Sn**	**21 07 47.2**	**+0.8**
	comp=E,2.9nm,0.3s,baz=115,slow=19,SNR=2.5							
JOW	**Kunigami**	**5.97**	**69**	P		**Pn**	**21 06 40.4**	**+1.0**
JOW	**Kunigami**	**5.97**	**69**	*e*P		**Pn**	**21 06 41.1**	**+1.7**
	baz=73							
CVP	**Callao Caves**	**7.07**	**182**	⇓*e*P		**Pn**	**21 06 54.9**	**+0.4**
CVP				*e*S		**Sn**	**21 08 10.7**	**-2.6**
ABRA	**Dolores**	**7.22**	**190**	*e*P		**Pn**	**21 06 57.0**	**+0.5**
JAM	**Amami Oshima**	**7.67**	**60**	P		**Pn**	**21 07 03.7**	**+1.1**
PALP	**Palanan**	**7.71**	**177**	*e*P		**Pn**	**21 07 03.5**	**+0.3**
PALP				*e*S		**Sn**	**21 08 24.0**	**-5.0**
CAUP	**Cauayan**	**7.82**	**182**	*e*P		**Pn**	**21 07 08.1**	**+3.4**
WHN	**Wuhan**	**8.89**	**312**	*e*P		**Pn**	**21 07 19.8**	**+0.5**
WHN				S		**Sn**	**21 09 04.3**	**+6.4**
BALP	**Baler**	**9.03**	**183**	*e*P		**Pn**	**21 07 22.6**	**+1.4**
POLP	**Polillo Island**	**10.02**	**181**	*e*P		**Pn**	**21 07 35.6**	**+0.8**
PVCP	**Virac**	**11.33**	**169**	*e*P		**Pn**	**21 07 52.9**	**+0.3**
KSRS	**Korea Array**	**13.58**	**20**	P		**Pn**	**21 08 23.3**	**+0.4**
	comp=E,0.4nm,0.3s,baz=197,slow=13,SNR=10							
KSRS				LR		LR	21 14 22.1	
	comp=E,98nm,20.1s,baz=161,slow=41							
GYA	**Guiyang**	**13.97**	**280**	⇑*i*P		**Pn**	**21 08 29.8**	**+1.7**
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s							
GYA				AMB		AMB		
	comp=Z,60nm,6.5s							
GYA				LR		LR		
	comp=N,700nm,4.2s							
GYA				LR		LR		
	comp=E,430nm,4.2s							
GYA				LR		LR		
	comp=Z,590nm,4.1s							
XAN	**Xi'an**	**14.66**	**312**	P		**Pn**	**21 08 37.0**	**-0.1**
XAN				AP			21 08 43.8	
XAN				AMB		AMB		
	comp=Z,6.0nm,1.1s							
XAN				AMB		AMB		
	comp=Z,103nm,3.7s							
XAN				LR		LR		
	comp=N,125nm,4.9s							
XAN				LR		LR		
	comp=E,124nm,5.2s							
XAN				LR		LR		
	comp=Z,209nm,5.8s							
MAJO	**Matsushiro**	**18.15**	**46**	*e*P		**Pn**	**21 09 21.9**	**+1.3**
	comp=Z,1.7nm,0.4s							
MAJO	**Matsushiro**	**18.15**	**46**	*e*P		**Pn**	**21 09 21.9**	**+1.3**
MAJO				pmax		pmax		
	comp=Z,2.0nm,0.4s							
MJAR	**Matsushiro Arr**	**18.15**	**46**	P		**Pn**	**21 09 18.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=238,slow=9.7,SNR=7.1							
MJAR				LR		LR	21 16 45.6	
	comp=Z,69nm,21.2s,baz=230,slow=38							
HHC	**Hu-ho-hao-te**	**18.24**	**334**	*e*P		**Pn**	**21 09 25.0**	**+3.3**
HHC				AP		pP	21 09 36.0	+0.3
HHC				XP		sP	21 09 38.5	-6.4
HHC				AMB		AMB		
	comp=Z,14nm,1.4s							
HHC				AMB		AMB		
	comp=Z,135nm,4.6s							
HHC				LR		LR		
	comp=N,160nm,17.8s							
HHC				LR		LR		
	comp=E,191nm,19.0s							
HHC				LR		LR		
	comp=Z,170nm,20.2s							
CN2	**Changchun**	**19.16**	**8**	*e*P		**Pn**	**21 09 32.8**	**+0.2**
CN2				AMB		AMB		
	comp=Z,30nm,0.8s							
LZH	**Lanzhou**	**19.27**	**310**	⇑P		**Pn**	**21 09 34.5**	**+0.5**
LZH				AP		pP	21 09 43.0	-4.1
LZH				XP		sP	21 09 49.0	-7.3
LZH				PP			21 09 54.0	
LZH				*e*S		**S**	**21 13 11.0**	**+4.4**
LZH				SS			21 13 32.0	
LZH				AMB		AMB		
	comp=Z,51nm,1.0s							
LZH				AMB		AMB		
	comp=Z,250nm,4.5s							
LZH				LR		LR		
	comp=E,731nm,11.8s							
LZH				LR		LR		
	comp=Z,908nm,12.6s							
CHTO	**Chiang Mai**	**22.24**	**259**	*e*P		**P**	**21 10 03.9**	**-0.6**
	comp=Z,11nm,1.0s,mb4.1							
CHTO	**Chiang Mai**	**22.24**	**259**	*e*P		**P**	**21 10 03.9**	**-0.6**
CHTO				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.1							
CM31	**Chiang Mai Arr**	**22.36**	**258**	*e*P		**P**	**21 10 06.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**22.36**	**258**	P		**P**	**21 10 06.8**	**+1.1**
	comp=Z,1.8nm,0.7s,mb3.5,baz=69,slow=8.4,SNR=9.9							
CMAR				pP			21 10 23.6	
	comp=Z,5.2nm,0.9s,baz=58,slow=7.9,SNR=12							
CMAR				PcP		PcP	21 13 58.5	-0.2
	comp=Z,0.8nm,0.7s,baz=36,slow=2.2,SNR=6.2							
CMAR				LR		LR	21 20 23.0	
	comp=Z,27nm,18.8s,baz=60,slow=41							
CMAR	**Chiang Mai Arr**	**22.36**	**258**	P		**P**	**21 10 06.9**	**+1.2**
CMAR							21 13 58.5	
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
CMAR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
CMAR				MLR		MLR		
	comp=Z,27nm,18.8s							
GTA	**Gaotai**	**23.71**	**313**	P		**P**	**21 10 20.0**	**+1.1**
GTA				AMB		AMB		
	comp=Z,13nm,1.2s,mb4.1							
GUMO	**Guam**	**24.24**	**113**	LR		LR	21 18 43.9	
	comp=Z,69nm,19.8s,baz=33,slow=34							
GUMO	**Guam**	**24.24**	**113**	P		**P**	**21 10 23.4**	**-0.5**
ASAJ	**Asahikawa**	**25.54**	**36**	LR		LR	21 21 18.0	
	comp=Z,98nm,19.3s,baz=182,slow=38							
HABR	**Khabarovsk**	**25.76**	**20**	*e*P		**P**	**21 10 36.9**	**-0.4**
HABR				*e**PP		pP	21 10 56.8	+2.5
HABR				*e*			21 11 16.1	
HABR				*e*			21 14 00.7	
HABR				*e*S		**S**	**21 14 58.8**	**-2.2**
ULN	**Ulaanbaatar**	**25.90**	**337**	*e*P		**P**	**21 10 39.0**	**+0.4**
	comp=Z,9.2nm,0.9s,mb4.2							
ULN	**Ulaanbaatar**	**25.90**	**337**	*e*P		**P**	**21 10 39.0**	**+0.4**
ULN				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.2							
SONM	**Songino Array**	**26.11**	**336**	P		**P**	**21 10 41.1**	**+0.6**
	comp=Z,8.6nm,0.9s,mb4.2,baz=153,slow=8.3,SNR=38							
SONM				PcP		PcP	21 14 05.5	-0.8
	comp=Z,0.5nm,0.6s,baz=136,slow=2.6,SNR=3.5							
SONM				ScP		ScP	21 17 36.8	-2.8
	comp=Z,0.9nm,0.9s,baz=113,slow=3.4,SNR=4.9							
SONM				LR		LR	21 22 01.1	
	comp=Z,104nm,19.2s,baz=148,slow=39							
SONM	**Songino Array**	**26.11**	**336**	P		**P**	**21 10 41.1**	**+0.6**
SONM				PcP		PcP	21 14 05.5	-0.8
SONM				ScP		ScP	21 17 36.8	-2.8
SONM				LR		LR	21 22 01.1	
SONM	**Songino Array**	**26.11**	**336**	P		**P**	**21 10 41.1**	**+0.5**
SONM							21 14 05.5	
SONM				pmax		pmax		
	comp=Z,9.0nm,0.9s							
SONM				pmax		pmax		
	comp=Z,1.0nm,0.6s							
SONM				pmax		pmax		
	comp=N,1.0nm,0.9s							
SONM				MLR		MLR		
	comp=Z,104nm,19.2s							
SHL	**Shillong**	**27.27**	**278**	*e*P		**P**	**21 10 53.0**	**+1.7**
TLY	**Talaya**	**30.30**	**337**	*e*P		**P**	**21 11 18.1**	**+0.3**
TLY				pmax		pmax		
	comp=Z,14nm,1.6s,mb4.3							
TLY				MLR		MLR		
	comp=Z,66nm,16.0s							
TAPN	**Taplejung**	**30.88**	**282**	*e*P		**P**	**21 11 25.4**	**+2.1**
	comp=Z,14nm,0.8s,mb4.8							
ODAN	**Odare**	**31.20**	**281**	*e*P		**P**	**21 11 26.9**	**+0.9**
	comp=Z,7.4nm,0.6s,mb4.6							
JIRN	**Jiri**	**32.21**	**283**	*e*P		**P**	**21 11 36.7**	**+1.7**
GUN	**Gumba**	**32.47**	**283**	*e*P		**P**	**21 11 38.1**	**+0.9**
KKN	**Kakani**	**33.01**	**283**	*e*P		**P**	**21 11 42.6**	**+0.7**
	comp=Z,8.5nm,0.6s,mb4.7							
KKN	**Kakani**	**33.01**	**283**	*e*P		**P**	**21 11 42.6**	**+0.7**
KKN				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.8							
DMN	**Daman**	**33.18**	**283**	*e*P		**P**	**21 11 43.7**	**+0.3**
GKN	**Gorkha**	**33.57**	**284**	*e*P		**P**	**21 11 47.1**	**+0.3**
	comp=Z,9.9nm,0.9s,mb4.6							
DANN	**Dangsing**	**34.32**	**284**	*e*P		**P**	**21 11 54.4**	**+1.1**
KOLN	**Koldanda**	**34.50**	**283**	*e*P		**P**	**21 11 56.0**	**+1.2**
	comp=Z,5.3nm,0.6s,mb4.6							
YAK	**Yakutsk**	**37.57**	**6**	*e*P		**P**	**21 12 19.1**	**-1.5**
	comp=Z,12nm,0.9s,mb4.7							
YAK	**Yakutsk**	**37.57**	**6**	⇓*e*P		**P**	**21 12 19.3**	**-1.3**
YAK				pmax		pmax		
	comp=Z,22nm,1.3s,mb4.8							
MKAR	**Makanchi Array**	**38.44**	**315**	P		**P**	**21 12 28.1**	**-0.1**
	comp=Z,3.4nm,0.6s,mb4.3,baz=109,slow=9.8,SNR=11							
MKAR				pP		pP	21 12 46.2	+0.5
	comp=Z,2.7nm,0.7s,baz=102,slow=9.6,SNR=2.0							
MKAR				LR		LR	21 28 26.6	
	comp=Z,35nm,19.4s,baz=22,slow=36							
MKAR	**Makanchi Array**	**38.44**	**315**	P		**P**	**21 12 28.1**	**-0.1**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MKAR				MLR		MLR		
	comp=Z,35nm,19.4s							
PETK	**Petropavlovsk-**	**38.92**	**34**	LR		LR	21 27 41.9	
	comp=Z,60nm,20.8s,baz=38,slow=35							
PET	**Petropavlovsk**	**39.37**	**35**	P		**P**	**21 12 37.1**	**+1.3**
ZAA0	**Zalesovo Array**	**40.16**	**326**	*e*P		**P**	**21 12 41.2**	**-1.1**
ZALV	**Zalesovo Beam**	**40.16**	**326**	P		**P**	**21 12 41.1**	**-1.2**
	comp=Z,2.8nm,0.8s,mb4.1,baz=99,slow=9.2,SNR=12							
ZALV				pP		pP	21 12 59.9	-0.1
	comp=Z,2.7nm,0.8s,baz=110,slow=8.5,SNR=4.2							
ZALV				LR		LR	21 30 54.5	
	comp=Z,16nm,20.4s,baz=115,slow=38							
ZALV	**Zalesovo Beam**	**40.16**	**326**	P		**P**	**21 12 41.1**	**-1.2**
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.2							
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.2							
ZALV				MLR		MLR		
	comp=Z,16nm,20.4s							
NVS	**Novosibirsk**	**41.41**	**327**	*e*P		**P**	**21 12 48.9**	**-3.7**
NVS				pmax		pmax		
	comp=Z,10.0nm,1.5s,mb4.4							
TKM2	**Tokmak 2**	**42.00**	**307**	*e*P		**P**	**21 12 58.8**	**+1.1**
	comp=Z,6.5nm,0.7s,mb4.5							
TKM2	**Tokmak 2**	**42.00**	**307**	*e*P		**P**	**21 12 58.8**	**+1.1**
TKM2				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.4							
KURK	**Kurchatov**	**42.12**	**319**	LR		LR	21 30 57.7	
	comp=Z,30nm,19.6s,baz=95,slow=37							
KURK	**Kurchatov**	**42.12**	**319**	*e*P		**P**	**21 12 57.9**	**-0.6**
	comp=Z,18nm,1.6s,mb4.5							
KURK	**Kurchatov**	**42.12**	**319**	⇑*e*P		**P**	**21 12 58.7**	**+0.2**
KURK				pmax		pmax		
	comp=Z,12nm,1.7s,mb4.3							
FITZ	**Fitzroy Crossi**	**42.79**	**175**	*e*P		**P**	**21 13 02.4**	**-1.8**
EKS2	**Erkin-Say**	**43.28**	**307**	*e*P		**P**	**21 13 08.9**	**+0.8**
	comp=Z,2.5nm,0.6s,mb4.1							
MBWA	**Marble Bar**	**45.74**	**183**	P		**P**	**21 13 25.3**	**-2.5**
WRAB	**Tennant Creek**	**46.05**	**164**	*e*P		**P**	**21 13 29.3**	**-0.9**
	comp=Z,7.6nm,0.8s,mb4.5							
WRAB				*e*PcP		PcP	21 15 04.5	-1.2
WRAB				*e*S		**S**	**21 20 05.9**	**-4.5**
WRAB	**Tennant Creek**	**46.05**	**164**	*e*P		**P**	**21 13 29.3**	**-0.9**
WRAB				*e*			21 15 04.5	
WRAB				*e*S		**S**	**21 20 05.9**	**-4.5**
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.5							
WRA	**Warramunga Arr**	**46.06**	**164**	P		**P**	**21 13 29.6**	**-0.7**
	comp=Z,7.4nm,0.7s,mb4.5,baz=347,slow=8.5,SNR=33							
WRA				pP		pP	21 13 47.6	-0.7
	comp=Z,4.1nm,0.7s,baz=346,slow=8.7,SNR=5.0							
WRA				PcP		PcP	21 15 04.9	-0.7
	comp=Z,0.7nm,0.4s,baz=330,slow=3.9,SNR=5.0							
WRA	**Warramunga Arr**	**46.06**	**164**	P		**P**	**21 13 29.6**	**-0.7**
WRA							21 15 04.9	
WRA				pmax		pmax		
	comp=Z,7.0nm,0.7s							
WRA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
WRA				pmax		pmax		
	comp=Z,1.0nm,0.4s							
WB2	**Warramunga Arr**	**46.06**	**164**	*e*P		**P**	**21 13 29.4**	**-0.9**
KBL	**Kabul**	**46.60**	**295**	*e*P		**P**	**21 13 35.6**	**+1.1**
	comp=Z,5.1nm,0.9s,mb4.2							
KBL				*e*PcP		PcP	21 15 07.0	-0.6
KBL	**Kabul**	**46.60**	**295**	*e*P		**P**	**21 13 35.7**	**+1.2**
KBL				*e*			21 15 07.0	
KBL				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.2							
TIXI	**Tiksi**	**47.04**	**3**	*e*P		**P**	**21 13 35.9**	**-1.5**
	comp=Z,24nm,1.0s,mb4.9							
TIXI	**Tiksi**	**47.04**	**3**	*e*P		**P**	**21 13 35.9**	**-1.4**
TIXI				pmax		pmax		
	comp=Z,24nm,1.0s,mb4.9							
ASAR	**Alice Springs**	**49.54**	**166**	P		**P**	**21 13 56.4**	**-0.7**
	comp=Z,2.4nm,0.8s,mb4.2,baz=342,slow=7.0,SNR=26							
ASAR				PcP		PcP	21 15 15.2	-2.8
	comp=Z,1.7nm,0.9s,baz=348,slow=3.3,SNR=4.4							
ASAR	**Alice Springs**	**49.54**	**166**	P		**P**	**21 13 56.4**	**-0.7**
ASAR							21 15 15.2	
ASAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ASAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
CTAO	**Charters Tower**	**50.46**	**150**	P		**P**	**21 14 02.1**	**-2.1**
BILL	**Bilibino**	**50.84**	**20**	*e*P		**P**	**21 14 04.7**	**-1.8**
BILL	**Bilibino**	**50.84**	**20**	⇓*e*P		**P**	**21 14 04.5**	**-2.0**
BILL				*e**PP		pP	21 14 39.6	+15
BILL				*e*			21 16 02.5	
BILL				*e*S		**S**	**21 21 08.6**	**-8.3**
BILL				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.6							
SVE	**Sverdlovsk**	**54.01**	**323**	*e*P		**P**	**21 14 29.3**	**-0.8**
SVE				pmax		pmax		
	comp=Z,17nm,1.3s,mb4.9							
ARU	**Arti**	**55.09**	**323**	*e*P		**P**	**21 14 36.7**	**-1.2**
	comp=Z,11nm,1.1s,mb4.8							
ARU	**Arti**	**55.09**	**323**	*d i*P		**P**	**21 14 37.0**	**-0.9**
ARU				*e*			21 16 40.9	
ARU				*e*S		**S**	**21 22 14.3**	**-0.6**
ARU				*e*SS		SS	21 25 56.6	-2.7
ARU				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.8							
STKA	**Stephens Creek**	**59.38**	**161**	*e*P		**P**	**21 15 07.1**	**-1.3**
	comp=Z,3.9nm,0.8s,mb4.5							
STKA	**Stephens Creek**	**59.38**	**161**	P		**P**	**21 15 07.5**	**-0.9**
	comp=Z,4.3nm,0.7s,mb4.6,baz=339,slow=8.0,SNR=8.3							
STKA				pP		pP	21 15 26.7	-0.3
	comp=Z,2.1nm,0.6s,baz=20,slow=3.6,SNR=2.7							
CNB	**Canberra Magne**	**65.15**	**156**	*e*P		**P**	**21 15 47.0**	**+0.1**
KIV	**Kislovodsk**	**65.81**	**309**	*e*P		**P**	**21 15 50.5**	**-0.7**
KIV				pmax		pmax		
	comp=Z,17nm,1.1s,mb4.8							
TOO	**Toolangi**	**65.85**	**160**	*e*P		**P**	**21 15 51.1**	**-0.2**
OBN	**Obninsk**	**67.50**	**322**	⇑*i*P		**P**	**21 16 01.2**	**-0.5**
OBN				*e**PP		pP	21 16 30.2	+9.4
OBN				*e*			21 18 27.5	
OBN				*e*S		S	21 24 49.3	-3.0
OBN				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.8							
ANN	**Anapa**	**69.28**	**311**	*e*P		**P**	**21 16 14.8**	**+1.7**
ANN				pmax		pmax		
	comp=Z,61nm,1.0s,mb5.4							
INK	**Inuvik**	**72.36**	**22**	*e*P		**P**	**21 16 30.1**	**-1.3**
AKASG	**Malin Array Be**	**72.93**	**318**	P		**P**	**21 16 33.4**	**-1.6**
	comp=Z,2.8nm,0.7s,mb4.2,baz=59,slow=6.2,SNR=9.0							
AKASG	**Malin Array Be**	**72.93**	**318**	P		**P**	**21 16 33.4**	**-1.6**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.7s							
BR131	**Keskin Array S**	**73.43**	**306**	*e*P		**P**	**21 16 37.7**	**-0.5**
	comp=Z,6.5nm,1.0s,mb4.4							
BRTR	**Keskin Array B**	**73.43**	**306**	P		**P**	**21 16 38.1**	**-0.1**
	comp=Z,5.1nm,0.9s,mb4.3,baz=102,slow=5.2,SNR=13							
BRTR	**Keskin Array B**	**73.43**	**306**	P		**P**	**21 16 38.1**	**-0.1**
BRTR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
NB2	**NORSAR Subarra**	**78.04**	**332**	P		**P**	**21 17 02.9**	**-1.2**
	comp=Z,4.0nm,0.9s,mb4.2,baz=58,slow=5.6							
NOA	**NORSAR Array B**	**78.04**	**332**	P		**P**	**21 17 03.3**	**-0.8**
	comp=Z,1.8nm,0.8s,mb3.9,baz=58,slow=5.6,SNR=5.3							
NOA				LR		LR	21 53 11.2	
	comp=Z,39nm,18.0s,baz=55,slow=37							
NOA	**NORSAR Array B**	**78.04**	**332**	P		**P**	**21 17 03.3**	**-0.8**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NOA				MLR		MLR		
	comp=Z,39nm,18.0s							
PSZ	**Piszkesteto**	**79.62**	**318**	*e*P		**P**	**21 17 12.5**	**-0.5**
	comp=Z,2.7nm,0.7s,mb4.2							
PSZ	**Piszkesteto**	**79.62**	**318**	*e*P		**P**	**21 17 12.5**	**-0.5**
PSZ				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.2							
YKA	**Yellowknife Ar**	**82.10**	**23**	P		**P**	**21 17 24.5**	**-1.4**
	comp=Z,2.4nm,0.7s,mb4.1,baz=310,slow=5.1,SNR=14							
YKA	**Yellowknife Ar**	**82.10**	**23**	P		**P**	**21 17 24.5**	**-1.4**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GERES	**GERESS Array B**	**82.86**	**321**	P		**P**	**21 17 30.0**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.4,baz=48,slow=2.0,SNR=4.4							
GERES	**GERESS Array B**	**82.86**	**321**	P		**P**	**21 17 30.0**	**-0.1**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**95.45**	**43**	P		**P**	**21 18 30.3**	**-0.2**
	comp=Z,1.4nm,0.8s,mb4.5,baz=283,slow=5.4,SNR=8.5							
SDV	**Santo Domingo**	**144.31**	**22**	*e*PKPdf		PKPdf	21 24 39.0	-3.2

MAN 28 21:07:06,1360N×12061E,h96km,mb4.1,ML2.9,MS2.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**290**	*e*P	Pn	21 07 22.1	+1.6
SJMP	**San Jose**	**1.24**	**157**	*e*P	Pn	21 07 30.2	+1.3
BUSP	**Coron**	**1.64**	**194**	*e*P	Pn	21 07 34.6	+0.7
OTRP	**Odiongan**	**1.84**	**132**	*e*P	Pn	21 07 36.8	+0.4
ENPP	**El Nido**	**2.65**	**206**	*e*P	Pn	21 07 48.3	+1.3
CUYO	**Cuyo Island**	**2.76**	**172**	*e*P	Pn	21 07 49.1	+0.6

*ISCJB **28** 21:18:26.7±0.5, 951S±007×15552E±008, h10km, mb4.1/11, MS3.6/4, Error ellipse: s-maj=12.4km s-min=9.5km az=22.6*

*IDC **28** 21:18:27.1±1.5, 954S×15552E, h0km, mb3.9/9, mb1 4.1/9, mb1mx4.0/16, mbtmp3.9/9, MS3.6/5, Ms1 3.6/5, ms1mx3.2/28, Error ellipse: s-maj=46.9km s-min=22.8km az=114.0*

*NEIC **28** 21:18:28.3±0.4, 951S×15554E, h10km, mb4.4/2, Error ellipse: s-maj=10.5km s-min=7.9km az=113.0*

ISC 28 21:18:28.5±0.5, 950S±007×1553E±009, h10km, n30, σ0s89/27, mb4.1/11, MS3.6/4, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.36**	**90**	LR	LR	21 20 57.6	
	comp=Z,311nm,19.0s,baz=232,slow=34						
HNR	**Honiara**	**4.36**	**90**	*e*Pn	**Pn**	**21 19 34.4**	**-0.3**
CTAO	**Charters Tower**	**13.83**	**219**	Pn	**Pn**	**21 21 43.9**	**-0.7**
EIDS	**Eidsvold**	**16.34**	**194**	*e*P	**Pn**	**21 22 21.7**	**+3.5**
	53nm,1.4s						
ARMA	**Armidale**	**21.13**	**189**	*e*P	**P**	**21 23 13.8**	**+0.2**
WRA	**Warramunga Arr**	**22.95**	**241**	P	**P**	**21 23 32.7**	**-0.5**
	2.0nm,0.9s,mb3.6,baz=64,slow=9.4,SNR=7.9						
WRA				LR	LR	21 31 37.0	
	comp=Z,75nm,19.6s,MS3.1,baz=155,slow=34						
ASAR	**Alice Springs**	**25.01**	**233**	P	**P**	**21 23 52.6**	**-0.2**
	1.9nm,0.9s,mb3.6,baz=68,slow=9.3,SNR=14						
GUMO	**Guam**	**25.26**	**335**	P	**P**	**21 23 54.7**	**-0.3**
STKA	**Stephens Creek**	**25.75**	**208**	*e*P	**P**	**21 23 59.4**	**0.0**
	5.2nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**25.75**	**208**	P	**P**	**21 23 59.4**	**0.0**
	7.0nm,0.9s,mb4.2,baz=30,slow=12,SNR=10						
STKA				LR	LR	21 34 06.9	
	comp=Z,270nm,18.1s,MS3.8,baz=193,slow=37						
STKA	**Stephens Creek**	**25.75**	**208**	*e*P	**P**	**21 23 59.1**	**-0.2**
	3.1nm,1.2s,mb3.7						
FITZ	**Fitzroy Crossi**	**30.23**	**250**	P	**P**	**21 24 38.8**	**-0.8**
RPZ	**Rata Peaks**	**36.67**	**161**	LR	LR	21 36 46.8	
	comp=Z,145nm,18.9s,MS3.8,baz=179,slow=30						
NWAO	**Narrogin (SRO)**	**42.29**	**231**	LR	LR	21 42 41.4	
	comp=Z,87nm,19.8s,MS3.6,baz=303,slow=34						
NWAO	**Narrogin (SRO)**	**42.29**	**231**	P	**P**	**21 26 22.2**	**-0.3**
NACB	**Ninganchiao**	**47.10**	**316**	P	**P**	**21 27 01.0**	**+0.1**
MAJO	**Matsushiro**	**48.61**	**341**	*e*P	**P**	**21 27 11.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**62.35**	**297**	P	**P**	**21 28 53.0**	**+1.2**
	1.0nm,0.9s,mb3.9,baz=112,slow=4.2,SNR=5.0						
CHTO	**Chiang Mai**	**62.48**	**297**	P	**P**	**21 28 53.0**	**+0.4**
CASY	**Casey**	**64.40**	**198**	*e*P	**P**	**21 29 05.8**	**+1.3**
SBA	**Scott Base**	**68.58**	**177**	P	**P**	**21 29 30.4**	**-0.7**
ULN	**Ulaanbaatar**	**71.39**	**328**	P	**P**	**21 29 48.7**	**0.0**
SONM	**Songino Array**	**71.72**	**328**	P	**P**	**21 29 51.9**	**+1.2**
	1.3nm,0.9s,mb3.9,baz=122,slow=5.3,SNR=8.9						
QSPA	**South Pole Qui**	**80.50**	**180**	P	**P**	**21 30 40.5**	**+0.3**
	23nm,1.5s,mb4.9						
MCK	**McKinley**	**84.17**	**22**	*e*P	**P**	**21 30 59.6**	**0.0**
	24nm,1.5s,mb5.1						
COLA	**College**	**85.21**	**21**	*e*P	**P**	**21 31 02.5**	**-2.3**
MKAR	**Makanchi Array**	**85.62**	**319**	P	**P**	**21 31 06.1**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.23	271	ePn	Pn	21 33 58.4	-0.5
CTA	Charters Tower	13.74	219	Pn	Pn	21 35 14.1	-0.2
	0.5nm,0.3s,baz=28,slow=13,SNR=3.6						
CTA	Charters Tower	13.74	219	Pn	Pn	21 35 14.1	-0.2
CTAO	Charters Tower	13.74	219	eP	Pn	21 35 13.2	-1.0
	1.0nm,0.3s						
EIDS	Eidsvold	16.25	194	eP	Pn	21 35 52.2	+4.4
	27nm,0.8s						
ARMA	Armidale	21.04	189	eP	P	21 36 44.6	+1.0
WRAB	Tennant Creek	22.87	241	eP	P	21 37 03.8	+0.6
	7.7nm,0.8s,mb4.3						
WB2	Warramunga Arr	22.87	241	eP	P	21 37 03.4	+0.1
WRA	Warramunga Arr	22.88	241	P	P	21 37 02.8	-0.6
	6.7nm,1.0s,mb4.1,baz=66,slow=9.8,SNR=16						
WRA				LR	LR	21 45 07.4	
	comp=Z,194nm,18.1s,MS3.6,baz=60,slow=34						
ASAR	Alice Springs	24.93	233	P	P	21 37 22.6	-0.4
	3.5nm,0.9s,mb4.1,baz=65,slow=9.8,SNR=27						
STKA	Stephens Creek	25.66	208	eP	P	21 37 30.8	+1.2
	9.2nm,0.8s,mb4.5						
STKA	Stephens Creek	25.66	208	P	P	21 37 29.8	+0.2
	11nm,0.8s,mb4.5,baz=32,slow=9.8,SNR=15						
STKA				LR	LR	21 47 07.5	
	comp=Z,592nm,19.5s,MS4.1,baz=25,slow=36						
STKA	Stephens Creek	25.66	208	eP	P	21 37 29.8	+0.2
	1.8nm,0.7s,mb3.8						
AFI	Afiamalu	32.30	101	LR	LR	21 48 09.0	
	comp=Z,175nm,21.4s,MS3.7,baz=273,slow=30						
DAV	Davao City (W)	34.09	298	P	P	21 38 44.1	-0.5
MBWA	Marble Bar	36.27	247	P	P	21 39 02.2	-1.2
NWAO	Narrogin (SRO)	42.21	231	P	P	21 39 53.7	+0.9
	10nm,1.2s,mb4.4,baz=70,slow=7.9,SNR=3.0						
NWAO	Narrogin (SRO)	42.21	231	eP	P	21 39 53.5	+0.6
	8.0nm,1.0s,mb4.4						
NACB	Ninganchiao	47.14	316	P	P	21 40 33.3	+1.0
YHNB	Yeheng	47.62	316	P	P	21 40 37.7	+1.7
MJAR	Matsushiro Arr	48.68	341	LR	LR	21 58 00.1	
	comp=Z,60nm,19.6s,MS3.6,baz=195,slow=32						
MAJO	Matsushiro	48.68	341	P	P	21 40 43.9	-0.2
KSRS	Korea Array	53.45	333	LR	LR	22 00 34.4	
	comp=Z,40nm,20.4s,MS3.5,baz=160,slow=32						
PPT	Papeete	53.82	105	LR	LR	21 59 52.4	
	comp=Z,83nm,20.8s,MS3.8,baz=358,slow=31						
CM31	Chiang Mai Arr	62.37	297	P	P	21 42 23.2	+0.3
CMAR	Chiang Mai Arr	62.37	297	P	P	21 42 23.3	+0.4
	1.0nm,0.9s,mb4.0,baz=103,slow=4.2,SNR=5.8						
PETK	Petropavlovsk-	62.47	1	LR	LR	22 04 33.1	
	comp=Z,120nm,21.1s,MS4.0,baz=174,slow=31						
CHTO	Chiang Mai	62.50	297	eP	P	21 42 23.4	-0.4
VNDA	Vanda	68.00	179	P	P	21 42 57.6	-0.9
	1.2nm,1.1s,mb4.0,baz=341,slow=8.2,SNR=3.7						
VNDA				LR	LR	22 07 18.8	
	comp=Z,70nm,19.6s,MS3.9,baz=356,slow=31						
SBA	Scott Base	68.50	177	P	P	21 43 02.1	+0.5
SONM	Songino Array	71.77	328	P	P	21 43 23.0	+0.8
	1.4nm,0.8s,mb4.1,baz=140,slow=7.3,SNR=9.7						
BILL	Bilibino	77.81	4	P	P	21 43 56.0	-0.7
QSPA	South Pole Qui	80.41	180	eP	P	21 44 10.5	-0.5
	16nm,1.3s,mb4.8						
MAW	Mawson	82.22	203	LR	LR	22 18 46.8	
	comp=Z,59nm,18.8s,MS4.0,baz=354,slow=34						
MCK	McKinley	84.26	22	P	P	21 44 30.0	-1.2
MKAR	Makanchi Array	85.67	319	P	P	21 44 39.1	+0.5
	0.2nm,0.6s,mb3.5,baz=93,slow=4.7,SNR=2.4						
ZALV	Zalesovo Beam	86.59	326	P	P	21 44 42.1	-0.9
	0.5nm,0.5s,mb4.0,baz=120,slow=5.7,SNR=2.6						
BBB	Bella Bella	89.28	37	LR	LR	22 16 50.9	
	comp=Z,107nm,20.1s,MS4.3,baz=317,slow=30						
YBH	Yreka Blue Hor	90.24	48	LR	LR	22 17 59.1	
	comp=Z,90nm,21.9s,MS4.2,baz=342,slow=31						
EKS2	Erkin-Say	90.40	313	P	P	21 45 01.1	-0.3
NVAR	Mina Array Bea	92.92	52	P	P	21 45 13.8	+0.5
	1.2nm,0.8s,mb4.3,baz=233,slow=5.0,SNR=5.2						
NVAR	Mina Array Bea	92.92	52	P	P	21 45 13.8	+0.5
YKA	Yellowknife Ar	98.37	28	LR	LR	22 25 48.4	
	comp=Z,24nm,18.2s,MS3.7,baz=230,slow=33						
BDFB	Brasilia	145.78	137	PKPbc	PKPbc	21 51 40.2	+0.2
	0.8nm,0.4s,baz=202,slow=5.4,SNR=2.6						
TORD	Torodi Ar. Bea	154.09	280	PKPbc	PKPbc	21 52 02.0	+1.2
	0.3nm,0.6s,baz=61,slow=2.1,SNR=2.1						

*ISCJB **28** 21:57:28.1±0.8,2853N×009×5421E×006,h10km, Error ellipse: s-maj=14.2km s-min=5.4km az=158.6*
*THR **28** 21:57:31.9±0.4,2864N×5409E,h14km±4km, ML3.0*
*CSEM **28** 21:57:32.7±0.5,2856N×5402E,h35km, ML3.0, Error ellipse: s-maj=27.2km s-min=10.3km az=156.0*

ISC 28 21:57:30.4±0.9,285N±01×5419E±006,h11km±12km,n10, σ0§69/14,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.08	258	ePg	Pg	21 57 51.3	0.0
GHIR				eSg	Sg	21 58 05.5	+0.1
GHIR				AML	AML	21 58 09.3	
	comp=N,378nm,0.3s						
GHIR				AML	AML	21 58 10.8	
	comp=E,473nm,0.4s						
GHIR	Ghir-Karzin	1.08	258	ePg	Pg	21 57 51.3	0.0
	SNR=90						
GHIR				eSg	Sg	21 58 05.5	+0.1
	SNR=90						
BNDS	Bandar-Abbas	2.07	122	ePn	Pg	21 58 10.4	+0.1
BNDS				AML	AML	21 58 48.9	
	comp=E,56nm,0.4s						
BNDS				AML	AML	21 58 49.2	
	comp=N,48nm,0.5s						
KRBR	Kerman	2.68	56	ePn	Pn	21 58 17.2	+3.6
KRBR				eSg	Sg	21 58 56.3	-0.4
KRBR				AML	AML	21 59 01.4	
	comp=E,88nm,0.9s						
KRBR				AML	AML	21 59 01.8	
	comp=N,60nm,0.7s						
KRBR	Kerman	2.68	56	ePn	Pn	21 58 17.2	+3.6
	SNR=52						
KRBR				eSg	Sg	21 58 56.3	-0.4
	SNR=90						
SLWS		4.87	221	P	Pn	21 58 44.1	+0.5
BTHS		5.36	215	P	Pn	21 58 50.9	+0.4
HRDDS		7.00	219	S	Sn	22 00 28.6	-4.1
HRDDS		7.00	219	P	Pn	21 59 12.8	-0.2
LYLS		9.00	226	P	Pn	21 59 39.4	-1.0

CASC 28 22:02:51.6±2.2,1489N×8963W,h5km,MD4.1,6C-5D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO2	Montecristo 2	0.55	152	eP	x	22 03 01.7	
MTO2				eS	x	22 03 10.7	
NBG	Las Nubes	0.76	247	eP	Pg	22 03 05.2	-1.0
RBDL	Robledal	0.78	184⇓	eP	x	22 03 05.7	
RBDL				eS	x	22 03 17.9	
RTR	El Retiro	0.99	181⇓	eP	x	22 03 09.8	
SNJE	San Jose	1.02	179⇑	eP	x	22 03 10.4	
SBLS	San Blas	1.04	180	eP	x	22 03 10.7	
IXG	Ixpaco	1.07	228⇓	eP	Pg	22 03 11.1	-1.1
IXG				eS	Sg	22 03 28.1	+2.0
BOQS	Boqueron	1.20	164⇓	eP	x	22 03 13.6	
FUG	Fuego 3	1.26	250⇑	eP	Pg	22 03 14.3	-1.4
FUG				eS	Sg	22 03 34.3	+2.3
FG6		1.26	255⇑	eP	Pg	22 03 13.9	-1.9
FG6				eS	Sg	22 03 34.1	+2.0
LBRS	Las Brisas	1.28	154⇑	eP	x	22 03 15.2	
LFRS	El Faro	1.37	156⇑	eP	x	22 03 16.6	
LFRS				eS	x	22 03 36.4	
SNVI	San Vicente	1.48	149	eP	x	22 03 18.8	
SNVI				eS	x	22 03 40.7	
CAHU	Cacacuatique	1.77	129⇓	eP	x	22 03 23.1	
VSM	San Miguel	1.96	138	eP	x	22 03 23.8	
BLLM	Bellamira	1.97	137⇑	eP	x	22 03 26.5	
TGUH	Tegucigalpa,Un	2.43	110	eP	Pn	22 03 32.1	+0.1

*NIED **28** 22:09:00,22.70N×12130E,h47km, Mw4.2 Best double couple: M₀2.09000×10¹⁵ NP1:φ₀225.00000°,δ73.00000°, λ130.00000°. NP2:φ₀335.00000°,δ43.00000°,λ26.00000°.*
*ISCJB **28** 22:09:52.5±0.3,2265N±002×12135E±002,h24km±3km, mb3.9/15,MS3.5/7, Error ellipse: s-maj=3.3km s-min=3.1km az=149.1*
*NEIC **28** 22:09:53.4,2274N×121.19E,h26km,mb4.3/4,ML4.6(TAP), After TAP.*
NEIC Recorded [3 TAP] in T'ai-tung and [1 TAP] in Chia-i and P'ing-tung Counties.
*TAP **28** 22:09:54.3,2275N×121.19E,h20km,ML4.3,B*
*JMA **28** 22:09:55.2±0.2,2272N×12135E,h62km,M4.2*
*IDC **28** 22:09:57.2±5.1,2272N×12140E,h57km±49km,mb3.6/11, mb1 3.7/12,mb1mx3.6/23,mbtmp3.6/12,ML3.8/1,MS3.5/6, Ms1 3.6/6,ms1mx3.1/31, Error ellipse: s-maj=28.1km s-min=14.4km az=64.0*
*BJI **28** 22:10:00.4,2300N×12081E,h26km,mB4.4,mb4.3,ML3.8, Ms4.0,Msz3.9*

ISC 28 22:09:53.2±0.4,2267N±002×12131E±002,h19km±2km, n105,σ1§14/139,mb3.9/15,MS3.5/7,7C-19D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.17	298⇑	iP	Pg	22 09 58.9	+1.0
	baz=292						
TWG	Pinlang	0.26	304⇑	iP	Pg	22 09 59.0	-0.3
TWG	baz=303			S	Sg	22 10 02.2	-1.2
	baz=303						
ECL	Taimali	0.34	257⇑	iP	Pg	22 10 00.4	-0.1
	baz=235						
ECL				S	Sg	22 10 04.7	-0.7
	baz=235						
CHKT	Chengkung	0.43	7⇓	iP	Pg	22 10 02.7	+0.6
	baz=24						
CHKT				i S	Sg	22 10 09.1	+1.0
	baz=24						
TAW	Tawu	0.49	230	P	Pg	22 10 03.4	+0.2
	baz=221						
TAW				eS	Sg	22 10 10.0	0.0
	baz=221						
EAST	Anshuo	0.51	236	eP	Pg	22 10 03.4	-0.2
	baz=229						
ELDTW	Lidau	0.58	333	⇓P	Pb	22 10 03.4	-1.3
	baz=345						
ELDTW				eS	Sb	22 10 09.8	-2.8
	baz=345						
SSD	Sandimen	0.63	277⇑	iP	Pb	22 10 04.6	-1.0
	baz=269						
SSD				S	Sb	22 10 10.9	-3.0
	baz=269						
LAY	Lan-yu	0.67	160	P	Pb	22 10 08.0	+1.7
	baz=156						
LAY				eS	Sb	22 10 17.7	+2.5
	baz=156						
TWF1	Yuli	0.68	359	⇓P	Pb	22 10 04.9	-1.5
	baz=8.0						
SCZT	Fangliau	0.70	245	⇓P	Pb	22 10 06.9	+0.1
	baz=236						
SGLT	Jiouru	0.76	274	eP	Pb	22 10 07.6	-0.2
	baz=269						
SGST	Jiashian	0.78	301⇑	iP	Pb	22 10 08.0	-0.2
	baz=300						
SGST				S	Sb	22 10 17.8	-0.6
	baz=300						
EHY	Hungye	0.83	1	⇓P	Pb	22 10 07.1	-1.9
	baz=7.0						
TWM1	Shoushan	0.83	280⇑	iP	Pb	22 10 09.8	+0.8
	baz=279						
HEN	Hengchun	0.85	218	eP	Pb	22 10 09.4	+0.1
	baz=204						
WTP	Ta-pu	0.85	312⇓	iP	Pb	22 10 09.0	-0.4
	baz=320						
WTP				S	Sb	22 10 19.7	-0.8
	baz=320						
TSEB	Hengchuen, Pin	0.86	206	eP	Pb	22 10 09.8	+0.3
	baz=191						
TWK1	Hengchun	0.86	213	eP	Pb	22 10 09.5	-0.1
	baz=199						
YUS	Yu-Shan	0.88	338⇓	iP	Pb	22 10 08.9	-0.9
	baz=348						
YUS				S	Sb	22 10 18.8	-2.3
	baz=348						
CHN1	Nanshi	0.88	305⇓	iP	Pb	22 10 10.0	+0.1
	baz=312						
CHN1				i S	Sb	22 10 21.5	+0.3
	baz=312						
KAU	Kaohsiung	0.93	264	eP	Pb	22 10 13.3	+2.6
	baz=247						
KAU				eS	Sb	22 10 26.9	+4.3
	baz=247						
TWP	Hsiaoliuchiu	0.93	250	eP	Pb	22 10 11.5	+0.8
	baz=244						
CHN4	Tsaushan	0.94	316⇓	iP	Pb	22 10 08.8	-0.2
	baz=324						
CHN4				S	Sb	22 10 23.0	0.0
	baz=324						
ALS	Alishan	0.95	331⇓	iP	Pb	22 10 10.5	-0.6
	baz=334						
TWK	Hsinying	0.96	308	⇓P	Pb	22 10 11.0	-0.2
	baz=318						
TWK				S	Sb	22 10 23.4	-0.1
	baz=318						
TEGC	Jichi Village	1.05	12	eP	Pb	22 10 12.3	-0.6
	baz=27						
TAI1	Yung-k'ang	1.06	290	eP	Pb	22 10 14.1	+1.1
	baz=287						
TAI1				eS	Sb	22 10 27.8	+1.4
	baz=287						
CHN5	Tsauling	1.09	328⇓	iP	Pb	22 10 13.0	-0.4
	baz=329						
ESL	Shilin	1.14	6	eP	Pn	22 10 11.4	-2.7
	baz=10.0						
SCLT	Jiali	1.14	296	eP	Pn	22 10 14.5	+0.3
	baz=294						
SCLT				eS	Sb	22 10 29.8	+1.0
	baz=294						
CHN2	Minshiung	1.15	318	P	Pn	22 10 14.6	+0.4
	baz=319						
CHN2				S	Sb	22 10 30.4	+1.5
	baz=319						
CHY	Chiayi	1.16	315⇓	iP	Pn	22 10 14.7	+0.3
	baz=324						
CHY				S	Sb	22 10 29.1	0.0
	baz=324						
CHN8	Yiju	1.21	304	eP	Pn	22 10 15.3	+0.2
	baz=303						
CHN8				eS	Sb	22 10 31.3	+0.5
	baz=303						
WGK	Gukeng	1.22	326	eP	Pn	22 10 15.6	+0.4
	baz=328						
WGK				eS	Sb	22 10 31.9	+0.9
	baz=328						
SMLT	Sun Moon Lake	1.26	343⇓	iP	Pn	22 10 15.6	-0.2
	baz=349						
SMLT				S	Sb	22 10 32.8	+0.6
	baz=349						
TYC	Yuchr	1.29	341⇓	iP	Pn	22 10 16.3	+0.1
	baz=355						
TYC				S	Sn	22 10 33.2	+0.2
	baz=355						
HWA	Hwalien	1.33	12	eP	Pn	22 10 15.0	-1.7
	baz=15						
WNT	Mingjian	1.33	335⇓	iP	Pn	22 10 17.7	+0.9
	baz=337						
WNT				S	Sn	22 10 35.2	+1.3
	baz=337						
WSF	Szhu	1.39	314	eP	Pn	22 10 17.9	+0.4
	baz=314						
WSF				eS	Sn	22 10 35.9	+0.6
	baz=314						
TWD	Chiawan	1.42	11	eP	Pn	22 10 16.2	-1.8
	baz=13						
WHF	Hehuan Shan	1.47	359	eP	Pn	22 10 17.8	-0.9
	baz=9.0						
WTCT	Ta-ch'eng	1.51	322	eP	Pn	22 10 19.5	+0.2
	baz=322						
NACB	Ninganchiao	1.52	10	ePn	Pn	22 10 15.8	-3.5
NACB				eSn	Sn	22 10 38.6	0.0
TCU	Taichung	1.58	339⇓	iP	Pn	22 10 21.4	+1.2
	baz=341						
TCU				eS	Sn	22 10 41.6	+1.6
	baz=341						
TWT	Tachien	1.58	356⇓	eP	Pn	22 10 19.9	-0.3
	baz=8.0						
TWQ1	Liyutan	1.74	344⇓	iP	Pn	22 10 23.6	+1.3
	baz=347						
TWQ1				eS	Sn	22 10 46.9	+2.9
	baz=347						
NNS	Nan Shan	1.76	2	eP	Pn	22 10 22.0	-0.7
	baz=19						
ENA	Nanau	1.79	13	eP	Pn	22 10 21.8	-1.3
	baz=14						
PNG	Penghu	1.84	299	eP	Pn	22 10 23.1	-0.7
	baz=298						
NSTT	Nanjuang	1.97	352	eP	Pn	22 10 25.7	+0.2
	baz=340						
NSTT				eS	Sn	22 10 51.9	+2.2
	baz=340						
ENTT	Nioudou	1.97	7	eP	Pn	22 10 24.8	-0.7
	baz=22						
YHNB	Yeheng	1.99	2	ePn	Pn	22 10 24.9	-0.9
TWC	Suao	1.99	14	eP	Pn	22 10 26.1	+0.2
	baz=16						
NSK	Sanguang	1.99	1	eP	Pn	22 10 25.4	-0.4
	baz=20						
TWE	Neicheng	2.06	9	eP	Pn	22 10 26.1	-0.8
	baz=23						
ILA	Ilan	2.12	11	eP	Pn	22 10 29.2	+1.5
	baz=12						
TATO	Taipei	2.30	4	ePn	Pn	22 10 30.4	+0.4
TATO				eSn	Sn	22 10 57.6	-0.2
TWA	Mucha	2.31	6	eP	Pn	22 10 31.5	+1.3
	baz=20						
YOJ	Yonaguni jima	2.37	41	P	Pn	22 10 31.8	+0.8
YOJ				eS	Sn	22 10 59.1	-0.5
YOJ	Yonaguni jima	2.37	41	eP	Pn	22 10 30.6	-0.5
	baz=42						
TWB1	Santiao Chiao	2.41	15	eP	Pn	22 10 31.8	+0.2
	baz=17						
TWS1	Kuangyinshan	2.42	2	eP	Pn	22 10 32.1	+0.3
	baz=22						
NWF	Wu-fen Shan	2.42	10	eP	Pn	22 10 32.0	+0.1
	baz=22						
TWY	Chenhua	2.60	6	eP	Pn	22 10 37.0	+2.7
	baz=23						
HATJ	Hateruma jima	2.68	59	P	Pn	22 10 36.1	+0.8
HATJ				eS	Sn	22 11 06.8	-0.4
IRIF	Iriomote-Funau	2.77	53	P	Pn	22 10 37.6	+1.0
IRIF				eS	Sn	22 11 09.5	0.0
JKRS	Kuro-shima	2.93	57	P	Pn	22 10 39.7	+0.9
JKRS				eS	Sn	22 11 13.6	+0.2
JIJ	Ishigaki jima	3.10	57	P	Pn	22 10 41.7	+0.6
JIJ				eS	Sn	22 11 16.7	-0.9
KNM	Kinmen	3.16	304	eP	Pn	22 10 42.9	+1.0
	baz=302						
QZH	Quanzhou	3.36	313⇑	iP	Pn	22 10 43.8	-0.9
QZH				Smax			
	comp=N,660nm,0.7s						
QZH				Smax			
	comp=E,420nm,0.7s						
JTJ	Tarama	3.68	57	P	Pn	22 10 50.0	+1.0
JTJ				eS	Sn	22 11 32.0	+0.1
JMJ	Miyako jima 2	4.23	59	P	Pn	22 10 58.1	+1.5
JMJ				eS	Sn	22 11 45.4	-0.1
JOGS	Gusukube	4.29	60	P	Pn	22 10 58.9	+1.4
JKE	Kume jima 2	6.17	53	P	Pn	22 11 23.8	+0.4
INCN	Inchon	15.46	16	Pn	Pn	22 13 28.7	-1.4
XAN	Xi'an	15.70	319	P	Pn	22 13 39.3	+5.9
XAN				AMB	AMB		
	comp=Z,11nm,1.1s						
XAN				AMB	AMB		
	comp=Z,47nm,3.5s						
KSRS	Korea Array	15.80	20	P	Pn	22 13 35.8	+1.2
	comp=Z,0.4nm,0.3s,baz=194,slow=12,SNR=5.8						
MJAR	Matsushiro Arr	20.13	43	P	P	22 14 27.4	+1.3
	comp=Z,0.7nm,0.4s,baz=36,slow=34,SNR=4.3						
LZH	Lanzhou	20.21	315	eP	P	22 14 29.5	+2.5
LZH				AP		22 14 35.5	
LZH				XP	sP	22 14 37.5	+2.5
LZH				AMB	AMB		
	comp=Z,44nm,1.0s						
LZH				AMB	AMB		
	comp=Z,171nm,5.8s						
LZH				LR	LR		
	comp=N,365nm,12.8s						
LZH				LR	LR		
	comp=Z,590nm,14.1s,MS4.1						
CHTO	Chiang Mai	21.26	264	eP	P	22 14 36.6	-1.8
CMAR	Chiang Mai Arr	21.35	263	P	P	22 14 42.2	+2.8
	comp=Z,0.5nm,0.5s,mb3.1,baz=71,slow=7.8,SNR=4.0						
CMAR				LR	LR	22 24 10.6	
	comp=Z,101nm,18.2s,MS3.2,baz=90,slow=40						
KSM	Kuching	23.63	208	eP	P	22 15 01.2	-2.3
	comp=Z,11nm,0.9s,mb4.3						
GUMO	Guam	24.12	108	P	P	22 15 04.8	-3.1
GTA	Gaotai	24.75	317	eP	P	22 15 16.0	+2.5
GTA				AP		22 15 20.5	
GTA				XP	sP	22 15 23.0	+1.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb3.8						
ULN	Ulaanbaatar	27.61	339	eP	P	22 15 37.1	-2.1
	comp=Z,1.0nm,0.4s,mb3.8						
SONM	Songino Array	27.80	338	P	P	22 15 39.3	-1.6
	comp=Z,0.9nm,0.8s,mb3.5,baz=151,slow=9.9,SNR=7.4						
SONM				LR	LR	22 28 16.0	
	comp=Z,141nm,18.4s,MS3.6,baz=131,slow=40						
SONM	Songino Array	27.80	338	P	P	22 15 39.3	-1.6
SONM				LR	LR	22 28 15.9	
MK31	Makanchi Array	39.51	317	eP	P	22 17 24.1	+1.6
MK31				ePP	PP	22 18 51.0	-2.3
MKAR	Makanchi Array	39.51	317	P	P	22 17 22.8	+0.2
	comp=Z,2.3nm,0.8s,mb4.0,baz=114,slow=8.6,SNR=19						
MKAR				PcP	PcP	22 19 29.6	-0.4
	comp=Z,0.2nm,0.6s,baz=104,slow=4.6,SNR=2.4						
PETK	Petropavlovsk-	41.06	33	LR	LR	22 33 44.4	
	comp=Z,41nm,21.7s,MS3.2,baz=83,slow=35						
ZAA0	Zalesovo Array	41.57	328	eP	P	22 17 39.1	-0.4
ZALV	Zalesovo Beam	41.57	328	P	P	22 17 39.3	-0.3
	comp=Z,2.5nm,0.5s,mb4.1,baz=113,slow=8.3,SNR=17						
ZALV				LR	LR	22 35 47.2	
	comp=Z,24nm,20.1s,MS3.1,baz=115,slow=37						
KURK	Kurchatov	43.33	321	P	P	22 17 54.4	+0.6
	comp=Z,2.4nm,1.1s,mb3.9,baz=152,slow=6.6,SNR=10						
MBWA	Marble Bar	43.59	182	eP	P	22 17 54.5	-1.7
	comp=Z,15nm,1.0s,mb4.7						
EKS2	Erkin-Say	44.04	308	P	P	22 17 57.5	-2.2
WRA	Warramunga Arr	44.23	162	P	P	22 17 59.6	-1.7
	comp=Z,0.8nm,0.5s,mb3.7,baz=344,slow=8.9,SNR=10.0						
WRA				PcP	PcP	22 19 46.0	+0.1
	comp=Z,0.3nm,0.7s,baz=342,slow=2.8,SNR=2.8						
ASAR	Alice Springs	47.66	164	P	P	22 18 27.6	-0.8
	comp=Z,0.4nm,0.5s,mb3.7,baz=354,slow=15,SNR=6.6						
BVAR	Borovoye Array	48.91	322	P	P	22 18 36.5	-1.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=121,slow=10,SNR=5.8						
BVAR				PcP	PcP	22 20 00.6	-1.4
	comp=Z,0.8nm,0.6s,baz=118,slow=2.6,SNR=6.1						
BRVK	Borovoye	48.99	322	eP	P	22 18 36.1	-2.3
	comp=Z,2.8nm,0.9s,mb4.3						
AKTO	Aktyubinsk	55.93	316	LR	LR	22 44 47.5	
	comp=Z,47nm,18.2s,MS3.6,baz=46,slow=37						
ARU	Arti	56.38	324	P	P	22 19 27.9	-5.1
STKA	Stephens Creek	57.61	160	P	P	22 19 42.7	+0.7
	comp=Z,2.0nm,0.8s,mb4.2,baz=315,slow=20,SNR=2.6						
PMR	Palmer	70.12	31	P	P	22 21 01.7	-2.4
NOA	NORSAR Array B	79.61	332	P	P	22 21 57.4	-1.5
	comp=Z,0.9nm,0.7s,mb3.8,baz=58,slow=9.0,SNR=3.2						
NOA				LR	LR	23 00 36.9	
	comp=Z,70nm,19.6s,MS4.0,baz=40,slow=38						

*ISCJB **28** 22:13:09.7±1.3,25S±0.1×100.1E±0.2,h55km,mb3.6/6, Error ellipse: s-maj=36.4km s-min=14.1km az=159.4*
*IDC **28** 22:13:13.7±2.1,2.14S×10061E,h54km±8km,mb3.3/7, mb1 3.4/7,mb1mx3.3/21,mbtmp3.3/7,MS3.9/1,Ms1 3.9/1, ms1mx2.8/22, Error ellipse: s-maj=100.1km s-min=15.8km az=54.0*

**ISC 28 22:13:13.1±1.5,23

ASAR	**Alice Springs**	**38.73**	**126**	P		**P**		**22 20 32.0**	**0.0**
	0.5nm,0.5s,mb3.5,baz=303,slow=8.5,SNR=8.3								
ASAR				pP		pP		22 20 46.8	+0.2
	0.5nm,0.6s,baz=315,slow=8.9,SNR=4.0								
SONM	**Songino Array**	**50.22**	**5**	P		**P**		**22 22 02.6**	**-0.6**
	0.3nm,0.5s,mb3.6,baz=190,slow=7.2,SNR=2.8								
MKAR	**Makanchi Array**	**51.44**	**344**	P		**P**		**22 22 13.0**	**+0.5**
	0.2nm,0.3s,mb3.6,baz=153,slow=8.7,SNR=8.7								
ZALV	**Zalesovo Beam**	**57.55**	**349**	P		**P**		**22 22 56.5**	**-0.1**
	0.3nm,0.3s,mb3.8,baz=211,slow=8.2,SNR=2.6								
BVAR	**Borovoye Array**	**60.62**	**340**	P		**P**		**22 23 18.1**	**+0.2**
	0.4nm,0.5s,mb3.8,baz=147,slow=5.9,SNR=3.9								
BVAR				pP		pP		22 23 32.7	-0.7
	0.2nm,0.4s,baz=124,slow=8.3,SNR=2.2								
TXAR	**Lajitas Array**	**144.70**	**38**	PKP		PKPdf		22 32 44.4	+0.2
	1.1nm,0.6s,baz=260,slow=0.9,SNR=15								
TXAR				pPKP		pPKPdf		22 32 59.9	-1.2
	0.2nm,0.5s,baz=235,slow=0.9,SNR=3.0								

*ISCJB **28** 22:14:60.0±0.5, 2996S×005×17621W±0.07, h33km, mb4.3/13, MS3.5/5, Error ellipse: s-maj=9.4km s-min=6.3km az=16.8*

*NEIC **28** 22:14:59.7±2.9, 2993S×17620W, h23km±20km, mb4.5/7, Error ellipse: s-maj=13.3km s-min=8.6km az=99.0*

*IDC **28** 22:15:06.0±2.6, 2956S×17629W, h68km±21km, mb3.9/9, mb1 4.1/9, mb1mx4.0/16, mbtmp3.9/9, MS3.6/6, Ms1 3.6/6, ms1mx3.2/27, Error ellipse: s-maj=22.3km s-min=21.9km az=121.0*

ISC 28 22:15:02.0±0.5, 2988S±005×17621W±007, h35km, n40, σ1♀31/34, mb4.3/13, MS3.5/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.61**	**292**	P	**Pn**	**22 15 28.0**	**+0.1**
	569nm,0.3s,baz=114,slow=8.2,SNR=13						
RAO				S	**Sn**	**22 15 48.8**	**+1.3**
	972nm,0.3s,baz=66,slow=23,SNR=9.5						
PUZ	**Puketiti**	**9.37**	**208**	*e*P	**Pn**	**22 17 12.4**	**-2.1**
PUZ				S	**Sn**	**22 19 00.3**	**+1.7**
MWZ	**Matawai**	**9.90**	**210**	*e*P	**Pn**	**22 17 19.1**	**-2.6**
URZ	**Urewera**	**10.02**	**212**	P	**Pn**	**22 17 20.9**	**-2.5**
	2.2nm,0.3s,baz=339,slow=15,SNR=13						
URZ				S	**Sn**	**22 19 15.1**	**+0.5**
	14nm,0.3s,baz=248,slow=21,SNR=19						
URZ	**Urewera**	**10.02**	**212**	P	**Pn**	**22 17 21.0**	**-2.4**
AFI	**Afiamalu**	**16.41**	**15**	Pn	**Pn**	**22 18 50.0**	**+0.4**
RPZ	**Rata Peaks**	**17.14**	**213**	P	**Pn**	**22 18 56.4**	**-2.2**
	1.3nm,0.3s,baz=15,slow=20,SNR=3.7						
RPZ				S	**S**	**22 21 57.4**	**-19**
	1.7nm,0.3s,baz=121,slow=23,SNR=4.3						
RAR	**Rarotonga**	**17.15**	**64**	LR	LR	22 23 54.3	
	comp=Z,169nm,18.2s,baz=32,slow=31						
FUNA	**Funafuti**	**21.68**	**348**	P	**P**	**22 19 49.5**	**-0.2**
PPT	**Papeete**	**27.22**	**69**	*e*LR	LR	22 27 11.4	
	132nm,27.0s						
PPT	**Papeete**	**27.22**	**69**	LR	LR	22 28 33.4	
	comp=Z,103nm,19.6s,MS3.4,baz=183,slow=30						
CTA	**Charters Tower**	**35.26**	**277**	P	**P**	**22 21 52.9**	**-0.5**
	1.9nm,0.4s,mb4.3,baz=90,slow=10,SNR=3.7						
CTA				LR	LR	22 34 37.1	
	comp=Z,75nm,18.9s,MS3.5,baz=229,slow=33						
CTAO	**Charters Tower**	**35.26**	**277**	*e*P	**P**	**22 21 53.2**	**-0.2**
	1.9nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**36.11**	**256**	P	**P**	**22 22 01.9**	**+1.3**
	1.8nm,0.5s,mb4.3,baz=98,slow=15,SNR=4.6						
STKA				pP	pP	22 22 17.5	+6.8
	3.1nm,0.7s,baz=75,slow=7.4,SNR=5.3						
STKA				LR	LR	22 34 08.7	
	comp=Z,66nm,19.6s,MS3.4,baz=199,slow=32						
STKA	**Stephens Creek**	**36.11**	**256**	*e*P	**P**	**22 22 01.2**	**+0.7**
	0.5nm,0.6s,mb3.6						
STKA				LR	LR	22 34 08.7	
ASAR	**Alice Springs**	**44.69**	**266**	P	**P**	**22 23 11.2**	**-0.5**
	0.9nm,0.6s,mb3.8,baz=106,slow=8.2,SNR=9.4						
ASAR				pP	pP	22 23 28.0	+6.0
	1.5nm,0.6s,baz=98,slow=7.1,SNR=11						
WB2	**Warramunga Arr**	**45.62**	**271**	*e*P	**P**	**22 23 18.4**	**-0.7**
WRAB	**Tennant Creek**	**45.63**	**271**	*e*P	**P**	**22 23 18.9**	**-0.3**
	2.1nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**45.63**	**271**	P	**P**	**22 23 18.7**	**-0.5**
	2.1nm,0.6s,mb4.2,baz=109,slow=7.9,SNR=31						
WRA				LR	LR	22 41 57.3	
	comp=Z,50nm,19.6s,MS3.5,baz=320,slow=35						
SBA	**Scott Base**	**48.68**	**185**	P	**P**	**22 23 42.6**	**+0.5**
	11nm,1.7s,mb4.6						
VNDA	**Vanda**	**48.77**	**186**	P	**P**	**22 23 44.5**	**+1.7**
	1.6nm,1.2s,mb3.9,baz=359,slow=6.6,SNR=2.4						
CASY	**Casey**	**56.32**	**208**	*e*P	**P**	**22 24 42.5**	**+3.6**
	13nm,0.9s,mb5.0						
QSPA	**South Pole Qui**	**60.23**	**180**	P	**P**	**22 25 09.9**	**+3.9**
	5.8nm,0.9s,mb4.6,baz=38,slow=2.6,SNR=12						
QSPA	**South Pole Qui**	**60.23**	**180**	*e*P	**P**	**22 25 07.0**	**+1.0**
	5.9nm,0.8s,mb4.7						
SNAA	**Sanae**	**78.62**	**178**	*e*	**P**	**22 26 58.9**	**-0.8**
SNAA				*e*		22 27 01.9	
SNAA	**Sanae**	**78.62**	**178**	*e*P	**P**	**22 26 58.6**	**-1.1**
	4.2nm,0.9s,mb4.4						
VNA3	**Neumayer Olymp**	**78.71**	**176**	*e*	**P**	**22 27 02.8**	**+2.6**
VNA3				*e*		22 27 06.4	
VNA2	**Neumayer--Watz**	**79.17**	**176**	*e*	**P**	**22 27 05.8**	**+3.1**
	baz=169,slow=3.6						
VNA2				*e*		22 27 08.6	
VNA1	**Neumayer--Stat**	**79.39**	**176**	*e*	**P**	**22 27 05.5**	**+1.6**
VNA1				*e*		22 27 08.9	
LPIG	**La Paz**	**82.95**	**57**	LR	LR	22 58 49.5	
	comp=Z,60nm,19.2s,MS4.0,baz=200,slow=32						
NVAR	**Mina Array Bea**	**86.81**	**42**	P	**P**	**22 27 42.9**	**+0.3**
	1.6nm,0.7s,mb4.4,baz=220,slow=8.5,SNR=12						
TXAR	**Lajitas Array**	**90.81**	**56**	P	**P**	**22 28 01.0**	**-0.7**
	1.1nm,0.9s,mb4.2,baz=201,slow=6.7,SNR=7.9						
PDAR	**Pinedale Array**	**94.70**	**43**	P	**P**	**22 28 19.1**	**-0.2**
	0.5nm,0.8s,mb4.0,baz=223,slow=3.7,SNR=4.5						
MCK	**McKinley**	**95.76**	**12**	P	**P**	**22 28 22.4**	**-1.3**
KURK	**Kurchatov**	**121.81**	**314**	PKP	PKPdf	22 33 50.4	-1.4
	0.7nm,0.8s,baz=101,slow=1.8,SNR=3.9						
KURK	**Kurchatov**	**121.81**	**314**	PKP	PKPdf	22 33 50.4	-1.4
NB2	**NORSAR Subarra**	**148.45**	**353**	PKP	PKPdf	22 34 43.0	+2.5
	comp=Z,0.9nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.45**	**353**	PKPbc	PKPbc	22 34 41.5	-2.5
	comp=Z,1.3nm,0.8s,baz=14,slow=4.3,SNR=3.2						
AKASG	**Malin Array Be**	**151.80**	**325**	PKPbc	PKPbc	22 34 52.4	-0.1
	comp=Z,1.4nm,0.5s,baz=45,slow=2.7,SNR=7.0						
TORD	**Torodi Ar. Bea**	**163.24**	**173**	PKPab	PKPab	22 35 53.9	+2.3
	comp=Z,3.4nm,0.9s,baz=188,slow=3.6,SNR=15						

*IDC **28** 22:25:05.6±0.8, 100N×126.16E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, ML3.9/1, Error ellipse: s-maj=41.8km s-min=15.4km az=71.0*

*ISCJB **28** 22:25:08.5±0.4, 101N±005×12609E±0.10, h33km, mb4.2/17, Error ellipse: s-maj=14.3km s-min=7.2km az=170.4*

*NEIC **28** 22:25:10.6±0.3, 103N×126.17E, h35km, mb4.3/8, Error ellipse: s-maj=12.9km s-min=6.5km az=81.0*

ISC 28 22:25:10.6±0.4, 100N±005×12616E±010, h35km, n30, σ0♀83/29, mb4.2/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**6.06**	**354**	Pn	**Pn**	**22 26 35.7**	**-2.1**
KAPI	**Kappang**	**8.76**	**227**	Pn	**Pn**	**22 27 14.3**	**-0.6**
	1.3nm,0.3s,baz=85,slow=11,SNR=2.5						
FITZ	**Fitzroy Crossi**	**18.99**	**182**	*e*P	**Pn**	**22 29 29.7**	**-0.5**
WRAB	**Tennant Creek**	**22.30**	**159**	*e*P	**P**	**22 30 04.8**	**-0.3**
	11nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**22.30**	**159**	P	**P**	**22 30 04.2**	**-0.9**
	3.8nm,0.8s,mb3.9,baz=339,slow=11,SNR=31						
WB2	**Warramunga Arr**	**22.31**	**159**	*e*P	**P**	**22 30 04.7**	**-0.5**
GUMO	**Guam**	**22.34**	**55**	P	**P**	**22 30 06.1**	**+0.4**
MBWA	**Marble Bar**	**22.91**	**196**	P	**P**	**22 30 12.6**	**+1.0**
NACB	**Ninganchiao**	**23.46**	**349**	*e*P	**P**	**22 30 16.0**	**-1.1**
	13nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**25.65**	**163**	P	**P**	**22 30 37.3**	**+0.1**
	2.0nm,0.8s,mb3.7,baz=348,slow=13,SNR=12						
CHTO	**Chiang Mai**	**32.03**	**305**	*e*P	**P**	**22 31 33.3**	**-0.8**
	0.9nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**35.82**	**157**	P	**P**	**22 32 07.0**	**+0.1**
	2.1nm,0.7s,mb4.2,baz=319,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**35.82**	**157**	*e*P	**P**	**22 32 06.1**	**-0.8**
	0.9nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**49.53**	**343**	*e*P	**P**	**22 33 57.6**	**-0.3**
	1.5nm,1.1s,mb3.9						
SONM	**Songino Array**	**49.70**	**343**	P	**P**	**22 33 59.2**	**+0.1**
	0.3nm,0.7s,mb3.4,baz=151,slow=9.2,SNR=3.5						
PETK	**Petropavlovsk-**	**58.15**	**22**	P	**P**	**22 35 01.9**	**+1.1**
	7.4nm,1.1s,mb4.6,baz=210,slow=8.3,SNR=2.9						
MK31	**Makanchi Array**	**59.48**	**326**	*e*P	**P**	**22 35 11.4**	**+1.2**
MKAR	**Makanchi Array**	**59.48**	**326**	P	**P**	**22 35 10.6**	**+0.4**
	1.0nm,0.5s,mb4.1,baz=122,slow=6.8,SNR=19						
MKAR				PcP	PcP	22 35 57.4	-0.1
	1.0nm,0.7s,baz=115,slow=5.5,SNR=4.4						
TKM2	**Tokmak 2**	**61.42**	**320**	P	**P**	**22 35 23.4**	**-0.1**
KBL	**Kabul**	**62.75**	**309**	*e*P	**P**	**22 35 33.0**	**+0.4**
	1.2nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**62.76**	**334**	P	**P**	**22 35 31.9**	**-0.4**
	0.5nm,0.4s,mb4.0,baz=147,slow=6.9,SNR=3.8						
KURK	**Kurchatov**	**63.74**	**328**	P	**P**	**22 35 39.4**	**+0.7**
	3.4nm,0.7s,mb4.5,baz=131,slow=6.1,SNR=19						
KURK	**Kurchatov**	**63.74**	**328**	*e*P	**P**	**22 35 38.7**	**-0.1**
	5.1nm,0.7s,mb4.7						
CASY	**Casey**	**68.06**	**187**	*e*P	**P**	**22 36 09.5**	**+3.2**
	32nm,0.6s,mb5.5						
BVAR	**Borovoye Array**	**69.30**	**328**	P	**P**	**22 36 14.1**	**-0.2**
	0.6nm,0.8s,mb3.5,baz=104,slow=6.1,SNR=2.6						
BILL	**Bilibino**	**72.32**	**15**	*e*P	**P**	**22 36 31.6**	**-0.7**
	2.0nm,0.4s,mb4.4						
AKTK	**Aktyubinsk**	**75.44**	**322**	P	**P**	**22 36 51.8**	**+0.8**
AKTO	**Aktyubinsk**	**75.44**	**322**	P	**P**	**22 36 51.8**	**+0.8**
	1.6nm,0.8s,mb4.0,baz=146,slow=4.8,SNR=2.9						
MCK	**McKinley**	**86.84**	**26**	*e*P	**P**	**22 37 52.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**123.18**	**286**	PKP	PKPdf	22 44 06.3	+1.6
	0.4nm,0.6s,baz=49,slow=0.3,SNR=3.4						

GUC 28 22:35:52.9±0.8, 2348S×6686W, h220km, ML3.8, 3C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.08**	**294**	↑*i*P	Pn	22 36 35.5	+1.8
LVC				*i* S	S	22 37 07.9	+2.3
CEN1	**Los Morros**	**3.07**	**271**	↓*i*P	Pn	22 36 48.3	+3.9
CEN1				*i* S	S	22 37 29.8	+4.9
CEN1				AML	AML	22 37 31.8	
	comp=N,61nm,0.6s						
ANCH	**Antofagasta**	**3.27**	**266**	↑*i*P	Pn	22 36 49.0	+2.3
ANCH				*i* S	S	22 37 31.4	+2.5
PB01	**Plate Boundary**	**3.44**	**314**	*e*P	Pn	22 36 48.4	-0.3
CPN1	**Cerro Paranal**	**3.44**	**250**	↑*i*P	Pn	22 36 51.5	+2.8
CPN1				*i* S	S	22 37 35.8	+3.2
CPN1				AML	AML	22 37 43.4	
	comp=E,116nm,0.6s						

*BJI **28** 22:49:24.8, 3180N×11550W, h18km, mB4.9, mb4.9, Msz4.8*

*NEIC **28** 22:49:31.8, 3180N×11555W, h8km, ML4.1(ECX), After ECX.*

NEIC Felt at El Cajon and San Diego, California.

ECX 28 22:49:31.8±0.6, 3180N×11555W, h8km, MD3.9, ML4.0, 7C-5D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMX	**El Mayor**	**0.32**	**54**	↑*e*P	Pg	22 49 37.7	-0.4
EMX				*e*S	Sg	22 49 42.2	-0.1
EMX				↑*e*		22 49 42.6	
	comp=E,10μm,0.4s						
EMX				↑*e*		22 49 42.9	
	comp=N,10μm,0.3s						
RDX	**Rancho Dowling**	**0.37**	**291**	↑*i*P	Pg	22 49 38.6	-0.4
RDX				*e*S	Sg	22 49 43.6	-0.2
RDX				↓*e*		22 49 46.1	
	comp=N,9μm,0.9s						
RDX				↓*e*		22 49 47.6	
	comp=E,6μm,0.5s						
ECBX	**El Chinero**	**0.53**	**128**	↑*e*P	Pg	22 49 41.5	-0.7
ECBX				*e*S	Sg	22 49 48.6	-0.5
SPX	**San Pedro Mart**	**0.76**	**175**	↓*e*P	Pg	22 49 45.4	-0.9
SPX				*e*S	Sg	22 49 55.5	-0.7
YUH	**Yuha Desert**	**0.90**	**339**	↓*i*P	Pg	22 49 47.7	-1.5
ECNX	**Esteban Cantu**	**0.91**	**261**	↑*e*P	Pg	22 49 47.9	-1.3
ECNX				*e*S	Sg	22 50 00.1	-0.9
PBX	**Punta Banda**	**1.01**	**267**	↑*e*P	Pg	22 49 49.7	-1.4
PBX				*e*S	Sg	22 50 02.9	-1.3
PBX				*e*		22 50 05.5	
	comp=N,6μm,0.3s						
PBX				↓*e*		22 50 06.2	
	comp=E,5μm,0.9s						
COA	**Coachella**	**1.12**	**19**	*e*P	Pg	22 49 50.9	-2.4
YMD	**Yuma Desert**	**1.13**	**48**	*e*P	Pg	22 49 50.8	-2.8
GLA	**Glamis**	**1.39**	**26**	*e*P	Pn	22 49 54.5	-3.0
GLA				*e*S	Sb	22 50 15.3	-0.6
PFO	**Pinyon Flat Ob**	**1.96**	**337**	*e*Pn	Pn	22 50 04.1	-1.3
PFO				*e*Pg	Pg	22 50 09.0	-0.4
PFO				*e*Sg	Sg	22 50 32.4	-2.4
MWC	**Mount Wilson**	**3.21**	**320**	*e*Pn	Pn	22 50 23.8	+1.3
MWC				*e*Pg	Pg	22 50 27.2	-6.1
MWC				*e*Sn	Sn	22 51 01.7	+0.8
MWC				*e*Sg	Sg	22 51 08.9	-6.0
PASC	**Pasadena Art C**	**3.24**	**318**	*e*Pn	Pn	22 50 23.5	+0.5
PASC				*e*Pg	Pg	22 50 35.2	+1.3
PASC				*e*Sn	Sn	22 51 01.8	+0.1
PASC				*e*Sg	Sg	22 51 08.7	-7.3
GSC	**Goldstone**	**3.65**	**344**	*e*Pn	Pn	22 50 28.6	0.0
GSC				*e*Pg	Pg	22 50 37.3	-4.4
GSC				*e*Sn	Sn	22 51 13.1	+1.3
GSC				*e*Sg	Sg	22 51 27.4	-1.5
OSI	**Osito Adit**	**3.87**	**317**	*e*Pn	Pn	22 50 32.2	+0.7
OSI				*e*Pg	Pg	22 50 39.6	-6.3
OSI				*e*Sn	Sn	22 51 17.0	-0.3
OSI				*e*Sg	Sg	22 51 25.8	-10
TUC	**Tucson**	**4.07**	**82**	*e*Pn	Pn	22 50 32.0	-2.4
TUC				*e*Pg	Pg	22 50 50.1	+0.2
TUC				*e*Sn	Sn	22 51 23.3	+1.1
TUC				*e*Sg	Sg	22 51 46.3	+3.6
MDJ	**Mudanjiang**	**83.61**	**319**	P	P	23 01 52.8	-7.9
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s						
CN2	**Changchun**	**86.40**	**321**	*e*P	P	23 02 07.0	-7.8
BJI	**Beijing**	**93.95**	**323**	P	P	23 02 42.3	-8.0
BJI				AMB	AMB		
	comp=Z,10.0nm,0.4s						
NJ2	**Nanjing**	**98.28**	**316**	*e*P	P	23 03 05.3	-4.8

IDC 28 22:56:00.6±3.5, 253S×10019E, h52km±8km, mb3.2/4, mb1 3.3/4, mb1mx3.2/20, mbtmp3.2/4, Error ellipse: s-maj=149.3km s-min=20.5km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.56**	**120**	P	P	23 03 10.0	-0.1
	0.4nm,0.7s,baz=303,slow=8.9,SNR=4.8						
WRA				pP	pP	23 03 23.4	-0.4
	0.4nm,0.5s,baz=303,slow=9.0,SNR=2.7						
ASAR	**Alice Springs**	**38.78**	**126**	P	P	23 03 20.1	-0.3
	0.4nm,0.5s,baz=302,slow=8.1,SNR=6.3						
ASAR				pP	pP	23 03 34.2	+0.1
	0.4nm,0.5s,baz=300,slow=8.2,SNR=3.4						
SONM	**Songino Array**	**50.45**	**5**	P	P	23 04 53.0	0.0
	0.6nm,1.0s,baz=171,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**51.59**	**344**	P	P	23 05 01.3	-0.3
	0.2nm,0.4s,baz=156,slow=7.9,SNR=6.3						
TXAR	**Lajitas Array**	**145.00**	**38**	PKPbc	PKPbc	23 15 32.5	+0.3
	0.6nm,0.6s,baz=267,slow=0.5,SNR=7.9						
TXAR				pPKPbc		23 15 47.5	
	0.4nm,0.7s,baz=199,slow=1.1,SNR=4.0						

CASC 28 22:59:42.2±2.3, 1483N×9120W, h180km±14km, MD4.1, 3C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FG6		**0.41**	**131**	↓*e*P	Pn	23 00 08.1	+1.5
FG6				*e*S	Sn	23 00 26.5	+1.1
FUG	**Fuego 3**	**0.52**	**138**	↑*e*P	Pn	23 00 08.0	+0.9
FUG				*e*S	Sn	23 00 26.8	+0.7
JAT	**Jato**	**0.66**	**219**	↑*e*P	Pn	23 00 08.5	+0.7
NBG	**Las Nubes**	**0.86**	**106**	↓*e*P	Pn	23 00 10.7	+1.8
IXG	**Ixpaco**	**0.98**	**132**	↓*e*P	Pn	23 00 10.6	+0.9
IXG				*e*S	Sn	23 00 30.6	-0.3
RBDL	**Robledal**	**1.64**	**116**	*e*P	x	23 00 15.7	
RTR	**El Retiro**	**1.77**	**121**	*e*P	x	23 00 16.4	
RTR				*e*S	x	23 00 46.2	
SNJE	**San Jose**	**1.82**	**122**	*e*P	x	23 00 17.3	
SBLS	**San Blas**	**1.82**	**123**	*e*P	x	23 00 17.5	
SBLS				*e*S	x	23 00 47.5	
MTO2	**Montecristo 2**	**1.83**	**103**	*e*P	x	23 00 18.2	
BOQS	**Boqueron**	**2.16**	**120**	*e*P	x	23 00 21.2	
BOQS				*e*S	x	23 00 54.7	

MAN 28 23:02:47, 1502N×12166E, h80km, mb4.0, ML2.8, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.40**	**136**	*e*P	Pn	23 03 02.4	+2.5
POLP				*e*S	Sn	23 03 13.6	+4.2
BALP	**Baler**	**0.72**	**354**	*e*P	Pn	23 03 06.4	+3.5
GQP	**Guinayangan**	**1.35**	**145**	↓*e*P	Pn	23 03 12.2	+1.9
GQP				*e*S	Sn	23 03 30.1	+2.2
CAUP	**Cauayan**	**1.92**	**5**	*e*P	Pn	23 03 18.7	+0.8

IGQ 28 23:05:34.8, 254S×8045W, h10km±3km, Mb4.0, Ms3.8, 1C, Error ellipse: s-maj=10.1km s-min=3.6km az=47.4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**2.09**	**60**	P	Pn	23 06 12.4	+2.4
ARRY	**Arrayan**	**2.25**	**63**	↑P	Pn	23 06 15.0	+2.9
JUI6	**Juive**	**2.27**	**61**	P	Pn	23 06 12.6	+0.2
CAMI	**Rancho Maria**	**2.69**	**46**	P	Pn	23 06 21.4	+3.3
TAMB	**Tambo**	**2.78**	**49**	P	Pn	23 06 22.0	+2.6
TAMB	**Tambo**	**2.78**	**49**	S	Sn	23 06 56.0	+3.0
VC1	**Cotopaxi 1**	**2.79**	**47**	P	Pn	23 06 22.3	+2.8
PINO	**Pino**	**3.00**	**38**	P	Pn	23 06 23.5	+1.0
PINO	**Pino**	**3.00**	**38**	S	Sn	23 06 58.5	-0.1
ANTI	**Antisana**	**3.09**	**48**	P	Pn	23 06 26.8	+3.1
CAYA	**Cayambe**	**3.58**	**43**	P	Pn	23 06 34.2	+3.8

*ISCJB **28** 23:25:17.7±0.6, 1.1S±0.1×1307W±009, h10km, mb4.0/8, Error ellipse: s-maj=18.9km s-min=8.9km az=146.0*

*IDC **28** 23:25:18.3±2.5, 1.16S×1310W, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, ML3.1/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/24, Error ellipse: s-maj=55.9km s-min=40.5km az=86.0*

*NEIC **28** 23:25:19.6±0.5, 1.13S×1308W, h10km, mb4.3/3, Error ellipse: s-maj=15.0km s-min=8.6km az=152.0*

ISC 28 23:25:19.6±0.6, 12S±01×1310W±009, h10km, n15, σ0♀91/16, mb4.0/8, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**11.35**	**46**	Pn	**Pn**	**23 28 01.1**	**-0.9**
	0.1nm,0.3s,baz=232,slow=16,SNR=2.7						
DBIC				Sn	**Sn**	**23 30 11.2**	**+2.1**
	0.1nm,0.3s,baz=120,slow=20,SNR=5.3						
DBIC				LR	LR	23 31 29.2	
	comp=Z,92nm,19.6s,baz=146,slow=33						
TOA0	**Tordi Ar. Sit**	**20.46**	**45**	*e*P	**P**	**23 29 56.4**	**-1.2**
TORD	**Tordi Ar. Bea**	**20.46**	**45**	P	**P**	**23 29 56.2**	**-1.4**
	2.6nm,0.5s,baz=232,slow=11,SNR=37						
TORD				LR	LR	23 37 26.7	
	comp=Z,58nm,18.4s,baz=295,slow=36						
TORD	**Tordi Ar. Bea**	**20.46**	**45**	P	**P**	**23 29 56.2**	**-1.4**
TORD				LR	LR	23 37 26.7	
RCBR	**Riachuelo**	**23.21**	**258**	*e*P	**P**	**23 30 27.9**	**+0.8**
	0.8nm,0.3s,mb3.6						
TRIS	**Tristan da Cun**	**35.70**	**179**	P	**P**	**23 32 18.6**	**+0.3**
LSZ	**Lusaka**	**43.08**	**111**	P	**P**	**23 33 20.5**	**+0.3**
	1.0nm,0.6s,mb3.7,baz=283,slow=14,SNR=3.3						
BBGH	**Gun Hill**	**48.22**	**289**	P	**P**	**23 34 00.6**	**-0.4**
GERES	**GERESS Array B**	**54.98**	**21**	P	**P**	**23 34 51.1**	**+0.1**
	1.8nm,0.8s,mb4.2,baz=191,slow=6.5,SNR=16						
SJG	**San Juan**	**55.58**	**293**	*e*P	**P**	**23 34 56.1**	**+0.2**
	23nm,0.4s						
SDV	**Santo Domingo**	**58.18**	**281**	P	**P**	**23 35 14.3**	**-0.2**
	7.2nm,1.7s,mb4.4						
BRTR	**Keskin Array B**	**58.99**	**41**	P	**P**	**23 35 21.3**	**+1.7**
	2.1nm,0.9s,mb4.2,baz=220,slow=7.5,SNR=7.9						
AKASG	**Malin Array Be**	**63.00**	**29**	P	**P**	**23 35 46.1**	**-0.5**
	0.5nm,0.3s,mb4.1,baz=225,slow=6.7,SNR=5.2						
SUMG	**Summit**	**75.38**	**352**	*e*P	**P**	**23 37 03.4**	**+0.4**
	4.6nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**94.57**	**43**	P	**P**	**23 38 39.9**	**-0.8**
	0.2nm,0.7s

SEW Seward 2.06 153 P Pn 23 57 35.0 -0.6
MCK McKinley 2.09 30 P Pn 23 57 36.4 +0.5
BPAW Bear Paw Mtn. 2.16 4 P Pn 23 57 37.2 +0.3
BPAW eSn Sn 23 57 59.3 -3.5
SVW2 Sparrevohn 2.23 249 P Pn 23 57 37.9 +0.1
TT01 Tatalina 2.40 296 P Pn 23 57 40.6 +0.5
AUL Augustine Lava 2.79 203 P Pn 23 57 46.0 +0.6
PAX Paxson 2.89 67 P Pn 23 57 46.6 -0.1
EYAK Cordova Ski Ar 3.02 115 P Pn 23 57 45.9 -2.6
COLA College 3.31 26 P Pn 23 57 52.4 -0.1
IL1 Eielson Array 3.45 33 P Pn 23 57 54.0 -0.3
MID Middleton Isla 3.51 134 eP Pn 23 57 54.5 -0.6
MENT Mentasta 3.65 71 eP Pn 23 57 56.2 -0.8
MENT eSn Sn 23 58 39.8 +0.9
DOT Dot Lake 3.73 60 P Pn 23 57 57.5 -0.6
GCSA Galena City Sc 3.77 320 P Pn 23 57 59.6 +1.0
IM3 Indian Mountai 4.19 346 P Pn 23 58 04.8 +0.5
KDAK Kodiak Island 4.24 189 ePn Pn 23 58 04.0 -1.0
KDAK eSn Sn 23 58 53.2 +0.1
BCA3 Beaver Creek A 4.54 72 P Pn 23 58 08.3 -0.8
OHAK Old Harbor 4.85 193 P Pn 23 58 12.1 -1.3
COLD Coldfoot 5.32 5 P Pn 23 58 20.3 +0.7
EGAK Eagle 5.37 54 ePn Pn 23 58 19.7 -0.7
DAWY Dawson 5.82 63 P Pn 23 58 25.7 -0.8
PNL Peninsula 6.25 106 P Pn 23 58 30.5 -1.9
CHGN Chignik 6.75 216 eP Pn 23 58 38.8 -0.4
WHY Whitehorse 8.00 92 P Pn 23 58 54.5 -1.8
SDPT Sand Point 8.17 220 P Pn 23 58 59.8 +1.2
TNA Tin City 8.20 303 P Pn 23 58 59.0 0.0
SKAG Skagway 8.21 101 eP Pn 23 58 57.8 -1.4
SIT Sitka 9.47 114 P Pn 23 59 13.3 -3.1
INK Inuvik 9.79 42 ePn Pn 23 59 20.2 -0.5
INK eSn Sn 00 01 08.4 -0.3
DLBC Dease Lake 11.13 99 P Pn 23 59 37.1 -1.8
1.5nm,0.3s,baz=286,slow=10,SNR=12
DLBC S Sn 00 01 33.7 -7.7
2.3nm,0.3s,baz=355,slow=24,SNR=3.6
DLBC LR LR 00 04 56.5
comp=Z,570nm,18.6s,baz=33,slow=42
DLBC ScP ScP 00 08 53.9 +0.2
0.4nm,0.3s,baz=318,slow=7.5,SNR=5.3
DLBC Dease Lake 11.13 99 P Pn 23 59 37.1 -1.8
DLBC S Sn 00 01 33.7 -7.7
DLBC LR LR 00 04 56.5
DLBC ScP ScP 00 08 53.9 +0.2
CRAG Craig 11.43 116 eP Pn 23 59 41.2 -1.9
28nm,0.6s
BBB Bella Bella 15.86 118 P Pn 00 00 40.6 -0.6
1.0nm,0.3s,baz=304,slow=11,SNR=10
BBB S S 00 03 29.5 -16
1.2nm,0.3s,baz=44,slow=19,SNR=10
BBB LR LR 00 07 26.7
comp=Z,86nm,18.1s,baz=330,slow=39
BBB Bella Bella 15.86 118 P Pn 00 00 40.6 -0.6
BBB S S 00 03 29.5 -16
BBB LR LR 00 07 26.7
YKA Yellowknife Ar 16.96 72 P Pn 00 00 53.3 -1.5
2.1nm,0.3s,baz=280,slow=10,SNR=46
YKA LR LR 00 07 16.9
comp=Z,143nm,18.2s,baz=150,slow=36
YKA ScP ScP 00 09 03.7 +0.2
0.7nm,0.3s,baz=289,slow=2.2,SNR=38
YKA Yellowknife Ar 16.96 72 P Pn 00 00 53.4 -1.5
YKA LR LR 00 07 16.9
YKA ScP ScP 00 09 03.7 +0.2
BILL Bilibino 18.61 307⇓ eP Pn 00 01 17.2 -3.5
BILL i S S 00 04 42.2 +1.0
BILL pmax pmax
comp=Z,60nm,1.3s
VDB Vedder Mountai 20.77 115 P P 00 01 38.1 +1.0
JCW Jim Creek 21.48 116 P P 00 01 45.9 +1.1
EDM Edmonton 21.83 96⇓ iP P 00 01 48.3 -0.2
EDM S S 00 05 35.3 -10
WRW Wenatchee Ridg 22.18 115 P P 00 01 53.5 +1.3
TBM Table Mountain 22.84 116 P P 00 02 00.5 +1.3
MTMW Mount Mitchell 23.08 120 P P 00 02 02.9 +1.4
EPH Ephrata 23.12 115 P P 00 02 02.3 +0.4
RES Resolute Bay 23.21 34 eP P 00 02 02.1 -0.4
comp=Z,888nm,0.8s,mb6.2
RES S S 00 06 09.7 +2.0
OD2 Odessa Site #2 23.48 113 P P 00 02 05.5 +0.3
NEW Newport 23.51 110 P P 00 02 06.1 +0.6
WRD Warden 23.75 115 P P 00 02 07.1 -0.5
GBL Gable Mountain 23.77 116 P P 00 02 08.3 +0.4
HOOD Mount Hood Mea 23.88 120 eP P 00 02 10.2 +1.3
comp=Z,216nm,0.8s,mb5.5
HOOD PcP PcP 00 05 49.0 -0.4
WALA Waterton Lakes 24.38 105 eP P 00 02 13.7 +0.3
comp=Z,156nm,1.2s,mb5.2
WIFE Three Sisters- 24.86 122 P P 00 02 19.5 +1.8
VIPM Ingram Point 24.97 120 P P 00 02 20.1 +1.3
SEY Seymchan 25.38 297⇑ eP P 00 02 21.4 -0.9
HUMO Hull Mountain 25.64 126 P P 00 02 20.8 +2.0
YBH Yreka Blue Hor 26.48 127 P P 00 02 34.1 +1.7
comp=Z,48nm,0.8s,mb5.0,baz=6.0,slow=4.3,SNR=99
YBH ScP ScP 00 09 28.2 +0.4
comp=Z,3.1nm,1.0s,baz=176,slow=1.3,SNR=5.7
YBH LR LR 00 11 56.3
comp=Z,135nm,19.1s,baz=355,slow=34
LTIM Timbered Crate 27.43 125 P P 00 02 42.8 +1.8
PET Petropavlovsk 27.68 274 eP P 00 02 51.2 +8.1
PET e 00 07 19.3
PET MLR MLR
comp=Z,100nm,22.0s
PETK Petropavlovsk- 28.07 275 P P 00 02 46.0 -0.6
comp=Z,7.1nm,0.7s,mb4.3,baz=61,slow=8.9,SNR=8.1
PETK LR LR 00 13 49.1
comp=Z,106nm,19.8s,baz=73,slow=36
PETK Petropavlovsk- 28.07 275 P P 00 02 46.0 -0.6
PETK LR LR 00 13 49.1
DCID1 Drake Creek 29.75 109 eP P 00 03 03.2 +1.6
comp=Z,68nm,0.9s,mb5.3
DCID1 ePP PP 00 04 07.3 -2.5
BMN Battle Mountai 29.75 121 eP P 00 03 02.9 +1.2
comp=Z,18nm,0.6s,mb4.9
BMN Battle Mountai 29.75 121 eP P 00 03 02.9 +1.3
BMN pmax pmax
comp=Z,18nm,0.6s,mb4.9
RRI2 Red Ridge 29.89 110 eP P 00 03 04.1 +1.3
comp=Z,48nm,0.8s,mb5.2
TPAW Teton Pass 29.94 109 eP P 00 03 04.7 +1.5
comp=Z,43nm,0.8s,mb5.1
TPAW ePP PP 00 04 12.0 +0.1
SNOW Snow King Moun 30.05 109 eP P 00 03 06.0 +1.9
comp=Z,34nm,0.8s,mb5.0
ELK Elko 30.31 118 P P 00 03 08.3 +1.8
comp=Z,43nm,0.9s,mb5.1,baz=319,slow=8.6,SNR=138
ELK ScP ScP 00 09 40.6 +0.9
comp=Z,0.6nm,0.6s,baz=343,slow=4.3,SNR=4.4
ELK LR LR 00 14 12.6
comp=Z,165nm,21.3s,baz=292,slow=34
ELK Elko 30.31 118 P P 00 03 08.4 +1.9
ELK 00 09 40.6
TIXI Tiksi 30.43 322⇑ iP P 00 03 06.7 -0.6
TIXI pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
NVAR Mina Array Bea 31.03 124 P P 00 03 14.7 +1.7
comp=Z,66nm,0.9s,mb5.4,baz=310,slow=8.4,SNR=247
NVAR PcP PcP 00 06 07.7 +1.0
comp=Z,4.7nm,0.6s,baz=292,slow=2.1,SNR=6.9
NVAR ScP ScP 00 09 42.4 +0.2
comp=Z,3.1nm,0.9s,baz=295,slow=2.4,SNR=8.4
PDAR Pinedale Array 31.13 109 P P 00 03 14.8 +1.0
comp=Z,16nm,0.8s,mb4.8,baz=316,slow=5.1,SNR=79
PDAR PcP PcP 00 06 06.9 0.0
comp=Z,1.8nm,0.6s,baz=131,slow=2.0,SNR=4.5
PDAR ScP ScP 00 09 42.3 -0.1
comp=Z,1.7nm,0.6s,baz=138,slow=0.7,SNR=9.0
PDAR LR LR 00 16 26.8
comp=Z,289nm,19.8s,baz=352,slow=37
ULM Lac du Bonnet 32.01 86 P P 00 03 21.9 +0.4
comp=Z,22nm,0.7s,mb5.0,baz=311,slow=8.7,SNR=17
ULM PcP PcP 00 06 08.4 -0.8
comp=Z,8.6nm,0.7s,baz=343,slow=2.3,SNR=3.1
ULM LR LR 00 16 57.7
comp=Z,193nm,21.7s,baz=76,slow=37
RSSD Black Hills 32.60 101 eP P 00 03 27.4 +0.8
RWWY Rawlins 33.05 107 eP P 00 03 31.0 +0.5
comp=Z,18nm,0.6s,mb5.1
RWWY ePcP PcP 00 06 12.2 0.0
AGMN Agassiz Refuge 33.37 88 eP P 00 03 33.2 -0.1
comp=Z,45nm,0.8s,mb5.3
AGMN ePP PP 00 04 52.3 +2.4
AGMN ePcP PcP 00 06 14.4 +1.4

MWC Mount Wilson 34.82 127 eP P 00 03 47.1 +1.2
comp=Z,51nm,1.2s,mb5.2
MWC ePcP PcP 00 06 17.4 0.0
MWC Mount Wilson 34.82 127 eP P 00 03 47.1 +1.2
MWC e 00 06 17.4
MWC pmax pmax
comp=Z,51nm,1.2s,mb5.2
YAK Yakutsk 34.96 306*c iP* P 00 03 46.4 -0.5
YAK e*PP pP 00 04 05.8 +0.4
YAK e 00 06 14.8
YAK eS S 00 09 11.3 -1.1
YAK e 00 13 53.9
YAK pmax pmax
comp=Z,92nm,0.9s,mb5.6
YAK pmax pmax
comp=E,30nm,1.2s
YAK pmax pmax
comp=N,14nm,1.0s
YAK smax
comp=E,159nm,3.2s
YAK smax
comp=N,203nm,3.0s
SMCO Snowmass 35.18 110 eP P 00 03 49.4 +0.4
comp=N,14nm,1.2s,mb4.7
SMCO ePcP PcP 00 06 18.7 +0.4
LDFC Landfair 35.20 123 eP P 00 03 50.3 +1.0
comp=N,113nm,0.8s,mb5.8
MVCO Mesa Verde 36.14 113 eP P 00 03 57.2 0.0
comp=N,26nm,0.7s,mb5.3
GLA Glamis 37.10 124 eP P 00 04 07.1 +1.7
comp=N,80nm,1.1s,mb5.6
GLA ePcP PcP 00 06 25.2 +1.0
GLA Glamis 37.10 124 eP P 00 04 07.1 +1.7
GLA e 00 06 25.2
GLA pmax pmax
comp=Z,80nm,1.1s,mb5.6
CBKS Cedar Bluff 38.76 102 eP P 00 04 19.8 +0.4
comp=Z,92nm,0.9s,mb5.6
CBKS ePcP PcP 00 06 28.3 -0.9
CBKS Cedar Bluff 38.76 102 eP P 00 04 19.8 +0.4
CBKS e 00 06 28.3
CBKS pmax pmax
comp=Z,92nm,0.9s,mb5.6
ANMO Albuquerque 38.93 113⇑ eP P 00 04 20.8 0.0
ANMO pmax pmax
comp=Z,21nm,1.2s
YSS Yuzh-Sakhalins 39.30 279⇑ eP P 00 04 21.3 -2.4
YSS pmax pmax
comp=Z,55nm,1.3s,mb5.2
SCIA State Center 39.38 93 eP P 00 04 24.6 +0.1
comp=Z,56nm,0.8s,mb5.5
SCIA ePP PP 00 05 58.7 +2.7
KSU1 Kansas State U 39.99 99 eP P 00 04 29.5 0.0
comp=Z,124nm,0.6s,mb5.9
KSU1 ePP PP 00 06 02.8 +0.1
KSU1 ePcP PcP 00 06 33.1 0.0
CLNS Chul'man 40.17 302 eP P 00 04 31.1 +0.3
CLNS pmax pmax
comp=Z,42nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,29nm,0.9s
CLNS pmax pmax
comp=N,35nm,0.9s
AMTX Amarillo 41.10 108 eP P 00 04 39.3 +0.6
comp=N,28nm,0.9s,mb5.1
GLMI Grayling 41.21 83 eP P 00 04 39.8 +0.3
comp=N,113nm,0.8s,mb5.8
HABR Khabarovsk 41.73 286 eP P 00 04 41.2 -2.6
HABR e*PP pP 00 04 56.4 -6.3
HABR eS S 00 10 54.2 -0.5
HABR e 00 11 20.8
HABR eSS SS 00 14 01.8 -0.8
HABR e 00 14 38.2
SCHQ Schefferville 41.82 60 P P 00 04 44.5 +0.1
comp=N,9.6nm,0.5s,mb4.8,baz=321,slow=9.0,SNR=31
SCHQ LR LR 00 24 26.2
comp=N,60nm,20.4s,baz=22,slow=39
POHA Pohakuloa 42.26 186 P P 00 04 48.8 +0.4
HDIL Hopedale 42.28 91 eP P 00 04 47.8 -0.5
comp=N,276nm,1.2s,mb5.9
HDIL ePP PP 00 06 27.4 0.0
WMOK Wichita Mounta 42.54 105 eP P 00 04 50.3 -0.2
comp=N,56nm,0.9s,mb5.3
WMOK ePcP PcP 00 06 40.6 -0.9
WMOK Wichita Mounta 42.54 105 eP P 00 04 50.3 -0.2
WMOK e 00 06 40.6
WMOK pmax pmax
comp=Z,56nm,0.9s,mb5.3
KHU Kahuku 42.77 186 eP P 00 04 53.7 +1.2
AAM Ann Arbor 43.58 84 eP P 00 04 59.6 +0.8
comp=Z,58nm,0.5s,mb5.6
AAM Ann Arbor 43.58 84 eP P 00 04 59.7 +0.9
AAM pmax pmax
comp=Z,58nm,0.5s,mb5.6
BOD Bodaibo 43.64 309 eP P 00 04 58.1 -1.0
BOD pmax pmax
comp=Z,24nm,1.0s,mb4.9
OLIL Olney 44.28 91 eP P 00 05 04.2 -0.3
comp=Z,118nm,0.8s,mb5.7
OLIL ePcP PcP 00 06 47.5 +0.1
SIUC Southern Illin 44.57 93 eP P 00 05 06.0 -0.8
comp=Z,112nm,1.0s,mb5.5
TXAR Lajitas Array 44.95 114 P P 00 05 11.1 +1.2
comp=Z,34nm,0.9s,mb5.1,baz=325,slow=6.3,SNR=255
TXAR PcP PcP 00 06 49.9 0.0
comp=Z,1.9nm,0.6s,baz=224,slow=3.8,SNR=4.8
TXAR ScP ScP 00 10 35.2 +0.5
comp=Z,1.9nm,0.8s,baz=306,slow=2.4,SNR=7.7
TXAR LR LR 00 25 36.9
comp=Z,146nm,20.5s,baz=80,slow=38
TXAR Lajitas Array 44.95 114 P P 00 05 11.1 +1.2
TXAR PcP PcP 00 06 49.9 0.0
TXAR ScP ScP 00 10 35.2 +0.5
TXAR LR LR 00 25 36.9
TXAR Lajitas Array 44.95 114 P P 00 05 11.1 +1.2
TXAR 00 06 49.9
MIAR Mount Ida 45.10 100 eP P 00 05 10.6 -0.5
comp=Z,40nm,0.9s,mb5.2
MIAR ePcP PcP 00 06 50.0 -0.3
MIAR ePP PP 00 06 59.4 +1.9
MIAR Mount Ida 45.10 100 eP P 00 05 10.6 -0.4
MIAR e 00 06 50.0
MIAR e 00 06 59.4
MIAR pmax pmax
comp=Z,40nm,0.9s,mb5.2
USIN University of 45.10 92 eP P 00 05 10.6 -0.4
comp=Z,406nm,1.3s,mb6.0
USIN ePcP PcP 00 06 49.8 -0.4
ACSO Alum Creek Sta 45.52 86 eP P 00 05 13.8 -0.4
comp=Z,88nm,0.8s,mb5.5
ACSO ePcP PcP 00 06 51.8 +0.1
JCT Junction City 45.66 109 eP P 00 05 15.8 +0.3
comp=Z,157nm,0.9s,mb5.7
JCT ePcP PcP 00 06 51.5 -0.8
JCT Junction City 45.66 109 eP P 00 05 15.8 +0.3
JCT e 00 06 51.5
JCT pmax pmax
comp=Z,157nm,0.9s,mb5.7
LONY Lake Ozonia 46.01 75 eP P 00 05 17.2 -0.8
comp=Z,17nm,0.6s,mb4.9
LONY ePP PP 00 07 06.6 -0.4
NCB Newcomb 46.68 75 eP P 00 05 22.7 -0.6
comp=Z,24nm,1.0s,mb4.9
NCB ePcP PcP 00 06 54.8 -0.8
OXF Oxford 47.08 96 eP P 00 05 26.8 +0.3
comp=Z,231nm,0.8s,mb6.0
OXF ePcP PcP 00 06 57.3 +0.1
BINY Binghamton 47.24 78 eP P 00 05 27.8 +0.1
comp=Z,50nm,0.6s,mb5.4
MCWV Mont Chateau 47.44 83 eP P 00 05 29.0 -0.3
comp=Z,56nm,0.8s,mb5.3
MCWV ePcP PcP 00 06 58.3 -0.1
TZTN Tazewell 48.19 89 eP P 00 05 35.0 -0.1
comp=Z,70nm,1.0s,mb5.5
TZTN ePcP PcP 00 07 02.9 +1.8
VBMS Vicksburg 48.45 99 eP P 00 05 37.6 +0.5
comp=Z,65nm,0.5s,mb5.7
ARCES ARCESS Array B 48.78 2 P P 00 05 38.4 -0.8
comp=Z,3.9nm,0.8s,mb4.4,baz=9.5,slow=3.7,SNR=10
ARCES pP pP 00 05 59.5 +0.9
comp=Z,3.7nm,0.6s,baz=12,slow=6.4,SNR=3.2
ARCES PcP PcP 00 07 02.8 +0.1
comp=Z,6.4nm,0.7s,baz=8.4,slow=4.2,SNR=5.1
ARCES ScP ScP 00 10 49.7 -0.5
comp=Z,3.0nm,0.8s,baz=3.4,slow=4.1,SNR=4.2

ARCES ARCESS Array B 48.78 2 P P 00 05 38.4 -0.8
ARCES pP pP 00 05 59.5 +0.9
ARCES PcP PcP 00 07 02.8 +0.1
ARCES ScP ScP 00 10 49.7 -0.5
ARCES ARCESS Array B 48.78 2 P P 00 05 38.4 -0.8
ARCES *PP pP 00 05 59.5 +0.9
ARCES 00 07 02.8
TKL Tuckaleechee C 48.80 90 eP P 00 05 40.0 +0.2
BLA Blacksburg 49.13 86 eP P 00 05 42.2 -0.1
comp=Z,58nm,0.6s,mb5.7
BLA Blacksburg 49.13 86 eP P 00 05 42.2 -0.1
BLA pmax pmax
comp=Z,58nm,0.6s,mb5.7
LRAL Lakeview Retre 49.43 95 eP P 00 05 43.7 -0.9
comp=Z,24nm,0.7s,mb5.2
LRAL e pP 00 06 00.8 -3.3
MJAR Matsushiro Arr 49.50 273 P P 00 05 44.6 -0.5
comp=Z,1.9nm,0.5s,mb4.3,baz=3.7,slow=7.7,SNR=6.4
CN2 Changchun 49.61 289⇓ P P 00 05 45.5 -0.4
CN2 eAP pP 00 06 01.3 -4.0
CN2 eS S 00 12 47.5 -0.4
CN2 AMB AMB
comp=Z,70nm,0.8s,mb5.6
CN2 LR LR
comp=N,600nm,18.0s
CN2 LR LR
comp=E,300nm,18.0s
CN2 LR LR
comp=Z,700nm,19.0s
CBN Corbin 49.76 83 eP P 00 05 47.3 +0.2
comp=Z,191nm,1.3s,mb5.9
GOGA Godfrey 50.78 91 eP P 00 05 54.4 -0.5
comp=Z,9.7nm,0.7s,mb4.9
GOGA ePcP PcP 00 07 11.8 +1.1
GOGA Godfrey 50.78 91 eP P 00 05 54.4 -0.5
GOGA e 00 07 11.8
GOGA pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BRAL Brewton 51.08 96 eP P 00 05 56.7 -0.4
comp=Z,92nm,0.7s,mb5.9
TLY Talaya 52.19 310*c iP* P 00 06 05.6 +0.5
TLY pmax pmax
comp=Z,21nm,1.1s,mb5.1
ZAK Zakamensk 53.38 310 eP P 00 06 13.9 0.0
ZAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KSRS Korea Array 53.57 282 P P 00 06 16.1 +0.7
comp=Z,12nm,0.8s,mb5.0,baz=30,slow=7.2,SNR=27
KSRS pP pP 00 06 36.3 +1.2
comp=Z,6.2nm,0.8s,baz=28,slow=6.6,SNR=4.0
ULN Ulaanbaatar 54.04 305⇑ eP P 00 06 18.6 -0.1
SONM Songino Array 54.32 306 P P 00 06 22.1 +1.3
comp=Z,39nm,0.7s,mb5.5,baz=31,slow=7.2,SNR=227
SONM ScP ScP 00 11 13.4 -1.1
comp=Z,2.5nm,1.1s,baz=48,slow=2.2,SNR=4.2
JOF Joensuu 55.43 359 ep P 00 06 27.5 -1.0
comp=Z,7.6nm,1.0s,mb4.7
NVS Novosibirsk 55.93 325⇑ iP P 00 06 30.3 -1.9
NVS e*PP pP 00 06 50.4 -1.6
NVS eS S 00 14 06.3 -7.3
NVS pmax pmax
comp=Z,49nm,0.9s,mb5.5
NVS pmax pmax
comp=N,39nm,1.7s
NVS pmax pmax
comp=E,14nm,0.6s
NVS smax
comp=E,42nm,3.2s
KAF Kangasniemi 56.24 1 ep P 00 06 33.5 -0.8
comp=E,4.8nm,0.7s,mb4.6
KAF Kangasniemi 56.24 1 eP P 00 06 33.5 -0.8
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ZAA0 Zalesovo Array 56.29 324 eP P 00 06 34.0 -0.8
ZALV Zalesovo Beam 56.29 324 P P 00 06 34.2 -0.6
comp=Z,35nm,0.6s,mb5.6,baz=29,slow=7.1,SNR=122
ZALV pP pP 00 06 55.0 +0.4
comp=Z,15nm,0.7s,baz=32,slow=6.6,SNR=4.4
ZALV sP sP 00 07 04.8 +1.4
comp=Z,3.9nm,0.4s,baz=24,slow=7.9,SNR=1.7
ZALV Zalesovo Beam 56.29 324 P P 00 06 34.2 -0.6
ZALV pP pP 00 06 55.0 +0.4
ZALV sP sP 00 07 04.8 +1.4
ZALV Zalesovo Beam 56.29 324 P P 00 06 34.2 -0.6
ZALV *PP pP 00 06 55.0 +0.4
NB2 NORSAR Subarra 56.60 10 P P 00 06 35.5 -1.4
comp=Z,2.2nm,0.6s,mb4.4,baz=351,slow=7.4
NOA NORSAR Array B 56.60 10 P P 00 06 35.6 -1.3
comp=Z,2.8nm,0.7s,mb4.4,baz=350,slow=7.2,SNR=9.8
NOA LR LR 00 30 31.7
comp=Z,35nm,18.3s,baz=290,slow=36
SOKR Solikamsk 56.89 343*c iP* P 00 06 38.4 -0.6
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
KLMR Klimovskoe 57.24 354 eP P 00 06 41.0 -0.4
KLMR e*PP pP 00 06 58.5 -2.8
KLMR pmax pmax
comp=Z,49nm,1.3s,mb5.4
HHC Hu-ho-hao-te 58.03 297 eP P 00 06 47.5 +0.3
HHC AP pP 00 07 03.3 -3.8
HHC PP PP 00 08 57.3 +1.2
HHC AMB AMB
comp=Z,27nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,125nm,4.9s
HHC LR LR
comp=N,2μm,13.1s
HHC LR LR
comp=E,1μm,15.5s
HHC LR LR
comp=Z,1μm,19.0s
SVE Sverdlovsk 58.96 340⇓ eP P 00 06 52.9 -0.6
SVE pmax pmax
comp=Z,49nm,1.2s,mb5.4
ARU Arti 59.67 341*d iP* P 00 06 57.1 -1.3
ARU e*PP pP 00 07 17.0 -1.4
ARU e 00 07 42.8
ARU e 00 09 08.6
ARU eS S 00 15 03.9 +1.6
ARU eSS SS 00 18 55.7 -2.3
ARU pmax pmax
comp=Z,38nm,1.0s,mb5.4
BRVK Borovoye 60.72 333 P P 00 07 04.0 -1.5
BRVK pmax pmax
comp=Z,44nm,1.0s,mb5.4
BVA0 Borovoye Array 60.72 333 *i* P P 00 07 04.4 -1.2
BVA0 pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BVAR Borovoye Array 60.72 333 P P 00 07 05.1 -0.5
comp=Z,19nm,0.7s,mb5.3,baz=35,slow=7.2,SNR=82
BVAR pP pP 00 07 24.8 -0.8
comp=Z,9.0nm,0.7s,baz=33,slow=8.9,SNR=6.0
KURK Kurchatov 60.88 326 P P 00 07 06.7 0.0
comp=Z,13nm,0.5s,mb5.2,baz=29,slow=6.8,SNR=21
KURK pP pP 00 07 27.1 +0.3
comp=Z,5.7nm,0.5s,baz=29,slow=6.8,SNR=4.8
VOSK Vostochnaya 60.88 332 P P 00 07 04.7 -1.9
VOSK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
OBN Obninsk 63.11 355 eP P 00 07 21.4 -0.2
comp=Z,24nm,0.4s,mb5.5
OBN Obninsk 63.11 355⇓ iP P 00 07 21.3 -0.3
OBN e*PP pP 00 07 41.2 -0.5
OBN e 00 09 37.3
OBN eS S 00 15 49.2 +3.3
OBN pmax pmax
comp=Z,52nm,1.2s,mb5.3
MK31 Makanchi Array 63.42 322 eP P 00 07 22.4 -1.3
MK31 Makanchi Array 63.42 322 *i* P P 00 07 22.7 -1.0
MK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
MKAR Makanchi Array 63.42 322 P P 00 07 22.9 -0.8
comp=Z,18nm,0.8s,mb5.1,baz=37,slow=6.7,SNR=106
MKAR pP pP 00 07 43.7 -0.3
comp=Z,4.7nm,0.5s,baz=46,slow=6.2,SNR=4.0
BSEG Bad Segeberg 63.55 12 eP P 00 07 23.9 -0.5
BSEG pmax pmax
comp=Z,104nm,2.1s,mb5.3
BSEG Bad Segeberg 63.55 12 eP P 00 07 23.9 -0.5
comp=Z,104nm,2.1s,mb5.3
GTA Gaotai 63.98 305⇑ P P 00 07 28.0 +0.4
GTA AP pP 00 07 44.3 -3.5
GTA AMB AMB
comp=Z,43nm,0.9s,mb5.3
GTA AMB AMB

comp=Z,103nm,4.2s
GTA LR LR
comp=N,2µm,19.5s
GTA LR LR
comp=E,1µm,17.7s
GTA LR LR
comp=Z,2µm,20.1s
WMQ Urumqi 64.42 317 *eP* **P 00 07 33.0 +2.6**
WMQ AMB AMB
comp=Z,25nm,1.2s,mb4.9
XAN Xi'an 64.90 295 P **P 00 07 32.8 -0.8**
XAN AMB AMB
comp=Z,14nm,0.8s,mb4.8
NRDL Niedersach Rie 64.95 12 *eP* **P 00 07 32.9 -0.7**
comp=Z,9.0nm,0.8s,mb4.7
LZH Lanzhou 65.26 300 *eP* **P 00 07 36.0 +0.1**
LZH AP pP 00 07 49.3 -6.9
LZH AMB AMB
comp=Z,61nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,257nm,4.4s
LZH LR LR
comp=E,896nm,13.4s
LZH LR LR
comp=Z,2µm,16.6s
WHN Wuhan 65.51 289 ⇑P **P 00 07 37.0 -0.6**
AKTK Aktyubinsk 65.55 340 P **P 00 07 37.0 -0.6**
AKTK pP pP 00 07 57.5 -0.4
AKTO Aktyubinsk 65.55 340 P **P 00 07 37.0 -0.6**
comp=Z,17nm,0.8s,mb4.9,baz=17,slow=6.1,SNR=22
AKTO pP pP 00 07 57.5 -0.4
comp=Z,23nm,0.7s,baz=24,slow=5.3,SNR=14
TGUH Tegucigalpa,Un 65.56 107 *eP* **P 00 07 38.5 +0.4**
comp=Z,53nm,1.0s,mb5.3
CLZ Clausthal 65.62 12 *eP* **P 00 07 38.4 +0.4**
CLZ pmax pmax
comp=Z,25nm,1.1s,mb5.0
CLZ Clausthal 65.62 12 *eP* **P 00 07 38.4 +0.4**
comp=Z,25nm,1.1s,mb5.0
GUMO Guam 65.90 253 LR LR 00 32 31.0
comp=Z,590nm,21.1s,baz=95,slow=32
AB31 Akbulak array 66.36 338 P **P 00 07 40.8 -2.0**
AB31 pmax pmax
comp=Z,27nm,0.7s,mb5.2
CLL Collm 66.40 11 *i* P **P 00 07 42.3 -0.7**
CLL *i* pP 00 08 04.6 +1.3
CLL *e* 00 08 19.0
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CLL Collm 66.40 11 *eP* **P 00 07 42.2 -0.8**
comp=Z,9.0nm,1.0s,mb4.5
CLL Collm 66.40 11 *i* P **P 00 07 42.3 -0.7**
comp=Z,9.0nm,1.0s,mb4.5
CLL *i* pP pP 00 08 04.6 +1.3
CLL *ex* x 00 08 19.0
UBBA Unterbreizbach 66.59 13 *eP* **P 00 07 44.4 +0.2**
comp=Z,14nm,1.5s,mb4.6
BAIF Baives 66.64 17 *eP* **P 00 07 44.5 0.0**
GIVF Givet 66.68 16 *eP* **P 00 07 44.6 -0.2**
comp=Z,43nm,1.1s,mb4.9
GIVF Givet 66.68 16 *eP* **P 00 07 44.6 -0.2**
comp=Z,21nm,1.1s,mb4.9
GIVF Givet 66.68 16 *eP* **P 00 07 44.6 -0.2**
GIVF pmax pmax
comp=Z,21nm,1.1s,mb4.9
VRHR Novokhopersk 66.83 351 *eP* **P 00 07 44.9 -0.8**
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,1.3s
VSR Storozhevoye 66.87 353 *eP* **P 00 07 45.0 -1.0**
VSR pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.8s
BRG Berggiesshubel 66.91 10 *i* P **P 00 07 46.1 -0.1**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRG Berggiesshubel 66.91 10 *eP* **P 00 07 46.1 -0.1**
comp=Z,11nm,1.0s,mb4.6
BRG Berggiesshubel 66.91 10 *i* P **P 00 07 46.1 -0.1**
comp=Z,11nm,1.1s,mb4.6
MOX Moxa 66.93 12 *eP* **P 00 07 46.3 -0.1**
comp=Z,17nm,1.1s,mb4.8
MOX *e* pP 00 08 08.0 +1.3
MOX Moxa 66.93 12 *eP* **P 00 07 46.3 -0.1**
MOX *e* pP 00 08 08.0 +1.3
MOX pmax pmax
comp=Z,17nm,1.1s,mb4.8
MOX Moxa 66.93 12 *eP* **P 00 07 46.2 -0.1**
comp=Z,15nm,1.0s,mb4.8
TNS Taunus Mts 67.01 14 *eP* **P 00 07 47.2 +0.3**
TNS pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
TNS Taunus Mts 67.01 14 *eP* **P 00 07 47.2 +0.3**
comp=Z,10.0nm,1.1s,mb4.6
VORD Divnogorie 67.11 353 *eP* **P 00 07 46.9 -0.6**
VORD pmax pmax
comp=Z,20nm,0.9s,mb5.0
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.8s
ROSF Rostrenen 67.12 23 *eP* **P 00 07 47.6 0.0**
KSP Ksiaz 67.12 9 *eP* **P 00 07 47.4 -0.2**
FLN La Foliniere 67.19 20 *eP* **P 00 07 47.6 -0.4**
comp=E,123nm,1.4s,mb5.2
FLN La Foliniere 67.19 20 *eP* **P 00 07 47.6 -0.4**
comp=E,62nm,1.4s,mb5.2
FLN La Foliniere 67.19 20 *eP* **P 00 07 47.6 -0.4**
FLN pmax pmax
comp=Z,62nm,1.4s,mb5.2
TANN Tannenbergstha 67.23 11 *eP* **P 00 07 48.2 -0.1**
comp=Z,10.0nm,1.1s,mb4.6
WLF Walferdange 67.28 16 *eP* **P 00 07 48.3 -0.3**
comp=Z,72nm,2.2s,mb5.1
PVCC Panska Ves 67.30 10 *eP* **P 00 07 51.7 +3.0**
SGMF Saint Gilles 67.32 22 *eP* **P 00 07 48.7 -0.2**
LDF La Druitiere 67.41 20 *eP* **P 00 07 49.1 -0.3**
NKC Novy Kostel 67.41 11 *eP* **P 00 07 49.7 +0.3**
UPC Upice 67.43 9 *eP* **P 00 07 49.7 +0.1**
UPC *ep* pP 00 08 14.9 +5.0
GRR Gorron 67.49 21 *eP* **P 00 07 49.7 -0.2**
comp=Z,57nm,1.1s,mb5.0
GRR Gorron 67.49 21 *eP* **P 00 07 49.7 -0.2**
comp=Z,28nm,1.1s,mb5.0
GRR Gorron 67.49 21 *eP* **P 00 07 49.7 -0.2**
GRR pmax pmax
comp=Z,28nm,1.1s,mb5.0
QUIF Quistinic 67.54 23 *eP* **P 00 07 50.1 -0.2**
DPC Dobruska-Polom 67.61 9 *eP* **P 00 07 50.7 0.0**
MANZ Manzenberg 67.62 12 *eP* **P 00 07 50.3 -0.5**
comp=Z,10.0nm,1.4s,mb4.5
AKASG Malin Array Be 67.69 360 P **P 00 07 50.3 -0.9**
comp=Z,11nm,0.6s,mb4.9,baz=0.4,slow=6.2,SNR=58
AKASG pP pP 00 08 10.8 -0.8
comp=Z,13nm,0.6s,baz=0.2,slow=6.3,SNR=6.7
AKBB Malin Array Si 67.69 360 *eP* **P 00 07 50.4 -0.9**
KIEV Kiev 67.70 360 *eP* **P 00 07 50.2 -1.0**
comp=Z,13nm,0.6s,mb4.9
KIEV Kiev 67.70 360 *eP* **P 00 07 50.2 -1.0**
KIEV pmax pmax
comp=Z,13nm,0.6s,mb4.9
GRF Grafenberg Arr 67.83 12 *eP* **P 00 07 52.1 0.0**
comp=Z,13nm,1.2s,mb4.6
GRF *ep* pP 00 08 07.0 -5.5
GRF Grafenberg Arr 67.83 12 *eP* **P 00 07 52.1 0.0**
GRF *e**PP pP 00 08 07.0 -5.5
GRF pmax pmax
comp=Z,13nm,1.2s,mb4.6
GRF Grafenberg Arr 67.83 12 *eP* **P 00 07 52.1 0.0**
GRF *e**PP pP 00 08 07.0 -5.5
GRF pmax pmax
comp=Z,13nm,1.2s,mb4.6
PRU Pruhonice 67.84 10 *eP* **P 00 07 52.3 +0.2**
PRU *ep* pP 00 08 17.7 +5.2
ROTZ Rotzenmuhle 67.85 11 *eP* **P 00 07 52.3 +0.1**
comp=Z,10.0nm,1.1s,mb4.6
OKC Ostrava-Krasne 68.24 7 *eP* **P 00 07 54.7 +0.1**
OKC *ep* pP 00 08 15.6 +0.5
MEZF Maizieres J'vi 68.28 17 *eP* **P 00 07 54.8 -0.1**
LVV L'vov 68.52 3 *eP* **P 00 07 55.9 -0.5**

WET Wettzell 68.53 11 *eP* **P 00 07 56.8 +0.3**
WET pmax pmax
comp=Z,17nm,1.3s,mb4.7
WET Wettzell 68.53 11 *eP* **P 00 07 56.8 +0.3**
comp=Z,17nm,1.3s,mb4.7
TREC Trest 68.60 9 *eP* **P 00 07 57.1 +0.2**
KHC Kasperske Hory 68.61 11 *eP* **P 00 07 57.1 +0.2**
KHC *ep* pP 00 08 18.9 +1.5
CDF Champ du Feu 68.65 15 *eP* **P 00 07 57.1 -0.1**
KWP Kalwaria 68.66 4 *eP* **P 00 07 56.9 -0.4**
comp=Z,19nm,1.0s,mb4.9
KWP Kalwaria 68.66 4 *eP* **P 00 07 56.9 -0.4**
KWP pmax pmax
comp=Z,19nm,1.0s,mb4.9
KWP Kalwaria 68.66 4⇓ *iP* **P 00 07 58.5 +1.2**
VRAC Vranov 68.67 8⇓ *iP* **P 00 07 57.1 -0.2**
USP Ospenovka 68.83 326 P **P 00 07 58.7 +0.2**
SNR=9.7
TKM2 Tokmak 2 68.86 325 *eP* **P 00 07 58.7 +0.1**
comp=Z,12nm,0.7s,mb4.8
TKM2 Tokmak 2 68.86 325 *eP* **P 00 07 58.7 +0.1**
TKM2 pmax pmax
comp=Z,12nm,0.7s,mb4.8
TKM2 Tokmak 2 68.86 325 P **P 00 07 58.7 +0.1**
SNR=17
GEC2 GERESS Array S 68.90 11 *eP* **P 00 07 58.9 +0.1**
comp=Z,1µm,1.0s
GEC2 *e* pP 00 08 21.0 +1.8
GEC2 GERESS Array S 68.90 11 *eP* **P 00 07 58.8 0.0**
comp=Z,8.0nm,1.0s,mb4.5
GERES GERESS Array B 68.90 11 P **P 00 07 58.7 -0.1**
comp=Z,4.1nm,1.0s,mb4.2,baz=343,slow=4.2,SNR=21
GERES pP pP 00 08 20.2 +1.0
comp=Z,3.3nm,0.8s,baz=358,slow=4.4,SNR=6.3
HAU Haudompre 68.94 16 *eP* **P 00 07 58.8 -0.2**
CHMS Chumysh 69.02 326 P **P 00 07 59.6 0.0**
SNR=12
HYF Humbligny 69.14 19 *eP* **P 00 08 00.3 +0.1**
HINF Hinteralfeld 69.19 16 *eP* **P 00 08 00.3 -0.2**
comp=Z,6.0nm,0.8s,mb4.2
HINF Hinteralfeld 69.19 16 *eP* **P 00 08 00.3 -0.2**
comp=Z,3.0nm,0.8s,mb4.2
HINF Hinteralfeld 69.19 16 *eP* **P 00 08 00.3 -0.2**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
FRU Bishkek 69.21 326 *eP* **P 00 08 01.0 +0.2**
KBK Karagaybulak 69.28 325 P **P 00 08 01.9 +0.6**
SNR=16
LOR Lormes 69.32 18 *eP* **P 00 08 01.1 -0.3**
comp=Z,30nm,1.0s,mb4.8
LOR Lormes 69.32 18 *eP* **P 00 08 01.1 -0.3**
comp=Z,15nm,1.0s,mb4.8
LOR Lormes 69.32 18 *eP* **P 00 08 01.1 -0.3**
LOR pmax pmax
comp=Z,15nm,1.0s,mb4.8
MFF Saint Martin d 69.34 21 *eP* **P 00 08 01.4 -0.1**
comp=Z,16nm,0.8s,mb4.6
MFF Saint Martin d 69.34 21 *eP* **P 00 08 01.4 -0.1**
comp=Z,7.9nm,0.8s,mb4.6
MFF Saint Martin d 69.34 21 *eP* **P 00 08 01.4 -0.1**
MFF pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
KOLS Kolonicke sedl 69.34 5 *eP* **P 00 08 01.9 +0.4**
KOLS *e* 00 08 29.2
KOLS pmax pmax
comp=Z,12nm,1.3s,mb4.6
FUR Furstenfeldbru 69.35 12 *eP* **P 00 08 01.7 +0.2**
FUR Furstenfeldbru 69.35 12 *eP* **P 00 08 01.7 +0.2**
AAK Ala-Archa 69.43 326 P **P 00 08 02.6 +0.5**
SNR=13
SSF Saint Saulge 69.47 18 *eP* **P 00 08 02.2 -0.1**
comp=Z,27nm,0.9s,mb4.8
SSF Saint Saulge 69.47 18 *eP* **P 00 08 02.2 -0.1**
comp=Z,13nm,0.9s,mb4.8
SSF Saint Saulge 69.47 18 *eP* **P 00 08 02.2 -0.1**
SSF pmax pmax
comp=Z,13nm,0.9s,mb4.8
KOLL Kolacno 69.51 7 *eP* **P 00 08 02.8 +0.3**
KOLL *e* pP 00 08 24.9 +1.9
SMOL Smolenice 69.51 8 *eP* **P 00 08 02.9 +0.3**
EKS2 Erkin-Say 69.59 326 *eP* **P 00 08 03.4 +0.3**
comp=Z,30nm,0.8s,mb5.2
EKS2 *e* pP 00 08 24.0 +0.4
EKS2 Erkin-Say 69.59 326 P **P 00 08 03.3 +0.2**
SNR=24
MODS Modra-Piesok 69.64 8 *eP* **P 00 08 04.1 +0.7**
MODS *e* pP 00 08 25.1 +1.3
MODS pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
UZH Uzhgorod 69.65 5⇑ *eP* **P 00 08 03.5 +0.1**
UZH *e* 00 08 33.0
AVF Avril sur Loir 69.71 18 *eP* **P 00 08 03.4 -0.4**
comp=Z,37nm,1.2s,mb4.8
AVF Avril sur Loir 69.71 18 *eP* **P 00 08 03.4 -0.4**
comp=Z,19nm,1.2s,mb4.8
AVF Avril sur Loir 69.71 18 *eP* **P 00 08 03.4 -0.4**
AVF pmax pmax
comp=Z,19nm,1.2s,mb4.8
KZA Kyzart 69.74 325 P **P 00 08 04.8 +0.7**
SNR=5.0
CD2 Chengdu 69.78 298⇑ *iP* **P 00 08 04.3 -0.2**
CD2 AP pP 00 08 22.3 -2.7
CD2 PP PP 00 10 40.8 +1.6
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,210nm,7.2s
CD2 LR LR
comp=N,610nm,14.4s
CD2 LR LR
comp=E,730nm,15.6s
CD2 LR LR
comp=Z,400nm,14.4s
BGF Bois d'Agland 69.86 19 *eP* **P 00 08 04.4 -0.3**
comp=Z,23nm,0.9s,mb4.7
BGF Bois d'Agland 69.86 19 *eP* **P 00 08 04.4 -0.3**
comp=Z,12nm,0.9s,mb4.7
BGF Bois d'Agland 69.86 19 *eP* **P 00 08 04.4 -0.3**
BGF pmax pmax
comp=Z,12nm,0.9s,mb4.7
SMF Signal de Mont 69.92 18 *eP* **P 00 08 04.7 -0.4**
comp=Z,32nm,1.1s,mb4.8
SMF Signal de Mont 69.92 18 *eP* **P 00 08 04.7 -0.4**
comp=Z,16nm,1.1s,mb4.8
SMF Signal de Mont 69.92 18 *eP* **P 00 08 04.7 -0.4**
SMF pmax pmax
comp=Z,16nm,1.1s,mb4.8
MOA Molln 69.94 10⇑ *iP* **P 00 08 05.9 +0.7**
comp=Z,10nm,1.2s,mb4.5
RETA Reutte 69.96 13⇓ *iP* **P 00 08 05.7 +0.4**
comp=Z,10nm,1.4s,mb4.5
CSNA Conrad Observa 69.99 9⇑ *iP* **P 00 08 05.8 +0.4**
comp=Z,14nm,1.2s,mb4.7
CONA Conrad Observa 69.99 9⇑ *iP* **P 00 08 05.8 +0.4**
comp=Z,14nm,1.2s,mb4.7,SNR=6.2
KK31 Karatay Array 70.01 329 *iP* **P 00 08 04.5 -1.2**
KK31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
TCF Toulx Ste Croi 70.03 19 *eP* **P 00 08 05.4 -0.3**
AML Almayashu 70.11 326 *eP* **P 00 08 07.4 +1.1**
comp=Z,21nm,0.8s,mb5.0
AML Almayashu 70.11 326 P **P 00 08 07.5 +1.2**
SNR=14
TRPA Tarpa 70.16 4⇑ *iP* **P 00 08 06.6 +0.1**
WATA Walderalm 70.20 12⇑ *iP* **P 00 08 07.6 +0.8**
comp=Z,8.4nm,0.8s,mb4.6
WATA ⇓ *iP*cP PcP 00 08 29.0 +0.9
comp=Z,14nm,1.0s
PSZ Piszkesteto 70.25 6 *eP* **P 00 08 07.3 +0.2**
comp=Z,11nm,0.9s,mb4.7
PSZ Piszkesteto 70.25 6 *eP* **P 00 08 07.3 +0.2**
PSZ pmax pmax
comp=Z,11nm,0.9s,mb4.7
PSZ Piszkesteto 70.25 6⇑ *iP* **P 00 08 07.5 +0.4**
CABF La Chapelle 70.27 16 *eP* **P 00 08 07.4 +0.2**
comp=Z,22nm,1.0s,mb4.7
CABF La Chapelle 70.27 16 *eP* **P 00 08 07.4 +0.2**
comp=Z,11nm,1.0s,mb4.6
CABF La Chapelle 70.27 16 *eP* **P 00 08 07.4 +0.2**
CABF pmax pmax
comp=Z,11nm,1.0s,mb4.6
SQTA Sankt Quirin 70.27 13 *i* P **P 00 08 07.9 +0.7**
WTTA Wattenberg 70.28 12⇑ *iP* **P 00 08 07.7 +0.4**
comp=Z,20nm,1.3s,mb4.8
FETA Feichten 70.42 13⇑ *iP* **P 00 08 09.4 +1.3**
comp=Z,14nm,1.2s,mb4.7

KBA Koelnbreinsper 70.62 11⇑ *iP* **P 00 08 10.0 +0.7**
comp=Z,26nm,1.2s,mb4.9
KBA ⇑ *iP*cP PcP 00 08 31.9 +1.9
comp=Z,20nm,0.8s
ARSA Arzberg 70.63 9⇑ *iP* **P 00 08 10.5 +1.1**
comp=Z,9.7nm,1.2s,mb4.5
BUR08 Bucovina Ar. S 70.72 3 *eP* **P 00 08 09.5 -0.5**
BURAR Bucovina Array 70.75 3⇑ *iP* **P 00 08 10.1 0.0**
ABTA Abfaltersbach 70.87 12⇓ *iP* **P 00 08 11.6 +0.8**
comp=Z,5.4nm,1.1s,mb4.3
RJF Les Rejaudoux 70.87 20 *eP* **P 00 08 11.9 +1.0**
LFF La Frestale 71.10 21 *eP* **P 00 08 12.1 -0.2**
comp=Z,37nm,0.9s,mb4.9
LFF La Frestale 71.10 21 *eP* **P 00 08 12.1 -0.2**
comp=Z,19nm,0.9s,mb4.9
LFF La Frestale 71.10 21 *eP* **P 00 08 12.1 -0.2**
LFF pmax pmax
comp=Z,19nm,0.9s,mb4.9
EMAZ Mazaricos 71.12 28 P **P 00 08 15.3 +2.9**
comp=Z,45nm,1.6s,mb5.0
EPON Pontenova 71.16 27 P **P 00 08 11.6 -1.0**
comp=Z,32nm,1.4s,mb5.0
SOKA Soboth 71.16 10⇑ *iP* **P 00 08 13.9 +1.2**
comp=Z,7.5nm,1.2s,mb4.4
PERS Pernice 71.21 10 *i* P **P 00 08 13.7 +0.8**
OBKA Obir 71.29 10⇑ *iP* **P 00 08 13.6 +0.2**
comp=Z,23nm,0.9s,mb5.0,SNR=12
OBKA ⇑ *iP*P pP 00 08 30.5 -3.4
comp=Z,14nm,1.1s
OBKA ⇑ *iP*cP PcP 00 08 35.5 +2.7
comp=Z,22nm,0.7s
CAF Calviac 71.33 20 *eP* **P 00 08 13.4 -0.3**
comp=Z,81nm,1.5s,mb5.0
CAF Calviac 71.33 20 *eP* **P 00 08 13.4 -0.3**
comp=Z,41nm,1.5s,mb5.0
CAF Calviac 71.33 20 *eP* **P 00 08 13.4 -0.3**
CAF pmax pmax
comp=Z,41nm,1.5s,mb5.0
ZAVS Zavodnje 71.41 10 *i* P **P 00 08 14.4 +0.3**
LPL La Plagne 71.43 16 *eP* **P 00 08 15.2 +0.9**
comp=Z,19nm,1.2s,mb4.5
LPL La Plagne 71.43 16 *eP* **P 00 08 15.2 +0.9**
comp=Z,9.6nm,1.2s,mb4.5
LPL La Plagne 71.43 16 *eP* **P 00 08 15.2 +0.9**
LPL pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
LPG La Plagne 71.45 16 *eP* **P 00 08 15.7 +1.3**
comp=Z,23nm,1.2s,mb4.6
LPG La Plagne 71.45 16 *eP* **P 00 08 15.7 +1.3**
comp=Z,12nm,1.2s,mb4.6
LPG La Plagne 71.45 16 *eP* **P 00 08 15.7 +1.3**
LPG pmax pmax
comp=Z,12nm,1.2s,mb4.6
CADS Cadrg 71.50 11 *eP* **P 00 08 14.2 -0.5**
DRGR 71.50 4⇑ *iP* **P 00 08 14.2 -0.5**
EARI Arriondas 71.59 25 P **P 00 08 15.5 +0.3**
comp=Z,36nm,1.1s,mb5.1
VIVF Saint-Julien-I 71.79 18 *eP* **P 00 08 16.4 -0.1**
comp=Z,81nm,1.6s,mb5.0
VIVF Saint-Julien-I 71.79 18 *eP* **P 00 08 16.4 -0.1**
comp=Z,41nm,1.6s,mb5.0
VIVF Saint-Julien-I 71.79 18 *eP* **P 00 08 16.4 -0.1**
VIVF pmax pmax
comp=Z,41nm,1.6s,mb5.0
PKSM Moragy 71.88 7⇓ *iP* **P 00 08 17.0 0.0**
ORIF Oris-en-Rattie 71.90 17 *eP* **P 00 08 17.4 +0.3**
comp=Z,32nm,1.4s,mb4.7
ORIF Oris-en-Rattie 71.90 17 *eP* **P 00 08 17.4 +0.3**
comp=Z,16nm,1.4s,mb4.7
ORIF Oris-en-Rattie 71.90 17 *eP* **P 00 08 17.4 +0.3**
ORIF pmax pmax
comp=Z,16nm,1.4s,mb4.7
ELAN Lanestosa 72.00 24 P **P 00 08 17.8 +0.1**
comp=Z,49nm,1.5s,mb5.1
MBDF Montbardon 72.21 16 *eP* **P 00 08 19.1 +0.1**
comp=Z,53nm,1.3s,mb4.9
MBDF Montbardon 72.21 16 *eP* **P 00 08 19.1 +0.1**
comp=Z,26nm,1.3s,mb4.9
MBDF Montbardon 72.21 16 *eP* **P 00 08 19.1 +0.1**
MBDF pmax pmax
comp=Z,27nm,1.3s,mb4.9
GYA Guiyang 72.42 293⇑ *iP* **P 00 08 23.5 +3.0**
GYA AP pP 00 08 37.0 -4.1
GYA PP PP 00 11 05.0 +3.1
GYA AMB AMB
comp=Z,30nm,0.7s,mb5.2
GYA AMB AMB
comp=Z,140nm,5.7s
GYA LR LR
comp=N,510nm,19.3s
GYA LR LR
comp=E,440nm,18.8s
GYA LR LR
comp=Z,540nm,19.0s
SJPF Ste Jean 72.53 23 *eP* **P 00 08 21.5 +0.6**
comp=Z,13nm,1.0s,mb4.4
SJPF Ste Jean 72.53 23 *eP* **P 00 08 21.5 +0.6**
comp=Z,6.3nm,1.0s,mb4.4
SJPF Ste Jean 72.53 23 *eP* **P 00 08 21.5 +0.6**
SJPF pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
PLOR Plostina 72.54 2⇓ *iP* **P 00 08 21.1 +0.2**
ECAL Calabor 72.57 27 P **P 00 08 26.4 +5.2**
comp=Z,19nm,1.2s,mb4.8
BZS Buzias 72.63 5⇑ *iP* **P 00 08 21.5 +0.1**
SMRF Simiane la Rot 72.78 17 *eP* **P 00 08 22.3 -0.1**
ETSF Etsaut 72.86 22 *eP* **P 00 08 23.3 +0.5**
comp=Z,58nm,1.4s,mb4.9
ETSF Etsaut 72.86 22 *eP* **P 00 08 23.3 +0.5**
comp=Z,29nm,1.4s,mb4.9
ETSF Etsaut 72.86 22 *eP* **P 00 08 23.3 +0.5**
ETSF pmax pmax
comp=Z,29nm,1.4s,mb4.9
MLR Muntele Rosu 72.89 2⇑ *iP* **P 00 08 22.9 0.0**
EPF Esparros 72.89 21 *eP* **P 00 08 23.4 +0.4**
GZR Gura Zlata 72.90 4⇑ *iP* **P 00 08 23.3 +0.3**
MTLF Montolieu 72.90 20 *eP* **P 00 08 23.0 -0.1**
comp=Z,33nm,1.0s,mb4.8
MTLF Montolieu 72.90 20 *eP* **P 00 08 23.0 -0.1**
comp=Z,16nm,1.0s,mb4.8
MTLF Montolieu 72.90 20 *eP* **P 00 08 23.0 -0.1**
MTLF pmax pmax
comp=Z,17nm,1.0s,mb4.8
EBIE Bielsa 73.19 22 P **P 00 08 27.1 +2.3**
comp=Z,35nm,1.8s,mb4.9
TLCR 73.22 360⇑ *iP* **P 00 08 24.6 -0.3**
HARR Harsova 73.71 1⇑ *iP* **P 00 08 27.9 +0.1**
KIV Kislovodsk 73.84 350 *eP* **P 00 08 28.2 -0.4**
comp=Z,30nm,0.9s,mb5.0
KIV *e* pP 00 08 49.8 +0.5
KIV Kislovodsk 73.84 350 *eP* **P 00 08 28.3 -0.3**
KIV *e* pP 00 08 49.9 +0.6
KIV pmax pmax
comp=Z,22nm,0.9s,mb4.9
GUD Guadarrama 74.36 25 P **P 00 08 30.1 -1.6**
comp=Z,4.1nm,0.6s,mb4.3
GUD Guadarrama 74.36 25 P **P 00 08 30.1 -1.5**
GUD pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
EPLA Plasencia 74.51 27 P **P 00 08 32.2 -0.3**
comp=Z,34nm,1.1s,mb5.0
EPLA Plasencia 74.51 27 P **P 00 08 32.2 -0.3**
EPLA pmax pmax
comp=Z,34nm,1.1s,mb5.0
KMI Kunming 75.28 296 P **P 00 08 36.3 -0.9**
KMI AP pP 00 08 54.5 -3.4
KMI PP PP 00 11 29.3 +3.1
KMI AMB AMB
comp=Z,7.0nm,0.9s,mb4.4
KMI AMB AMB
comp=Z,113nm,5.7s
KMI LR LR
comp=N,458nm,11.8s
KMI LR LR
comp=E,432nm,13.5s
KMI LR LR
comp=Z,315nm,19.5s
ESDC Sonseca Array 75.33 26 P **P 00 08 36.9 -0.4**
comp=Z,6.8nm,0.8s,mb4.4
ESLA Sonseca Array 75.33 26 *eP* **P 00 08 37.8 +0.5**
comp=Z,2.1nm,1.0s,mb3.8
EMOS Mosqueruela 75.33 23 P **P 00 08 37.6 +0.3**
comp=Z,76nm,1.9s,mb5.1
EVO Evora 75.55 29 *eP* **P 00 08 39.1 +0.6**
comp=Z,21nm,0.9s,mb4.6
LSA Lhasa 75.87 307 P **P 00 08 42.3 +1.8**

EVIA	**Vianos**	**76.62**	**25**	P	**P**	**00 08 45.1**	**+0.5**
	comp=Z,9.6nm,0.7s,mb4.6						
EVIA	**Vianos**	**76.62**	**25**	P	**P**	**00 08 45.1**	**+0.5**
EVIA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
EGRO	**El Granado**	**76.62**	**29**	P	**P**	**00 08 44.4**	**-0.2**
	comp=Z,14nm,0.8s,mb4.7						
ESPR	**Espera**	**77.62**	**28**	P	**P**	**00 08 49.0**	**-1.3**
	comp=Z,27nm,1.0s,mb4.9						
ABKT	**Ailbek**	**77.65**	**337**	P	**P**	**00 08 50.4**	**0.0**
	comp=Z,90nm,1.0s,mb5.5,SNR=7.0						
SDV	**Santo Domingo**	**77.81**	**94**	*e*P	**P**	**00 08 51.1**	**-0.5**
	comp=Z,23nm,1.1s,mb4.8						
SDV				*e*PP	PP	00 11 47.8	-0.1
ERON	**Agron**	**77.92**	**26**	P	**P**	**00 08 52.3**	**+0.4**
	comp=Z,7.6nm,0.8s,mb4.5						
EJIF	**Jimena Fronter**	**78.11**	**28**	P	**P**	**00 08 53.6**	**+0.6**
	comp=Z,13nm,0.9s,mb4.7						
EJIF	**Jimena Fronter**	**78.11**	**28**	P	**P**	**00 08 53.6**	**+0.6**
EJIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
EMIJ	**Mijas**	**78.15**	**27**	P	**P**	**00 08 53.8**	**+0.6**
	comp=Z,24nm,1.2s,mb4.8						
EBER	**Berja**	**78.22**	**25**	P	**P**	**00 08 54.5**	**+0.9**
	comp=Z,39nm,1.6s,mb4.9						
KBL	**Kabul**	**78.47**	**327**	*e*P	**P**	**00 08 53.1**	**-1.9**
	comp=Z,4.8nm,0.8s,mb4.3						
KBL				*e*PP	PP	00 11 53.3	+0.7
KBL	**Kabul**	**78.47**	**327**	*e*P	**P**	**00 08 53.1**	**-1.9**
KBL				*e*		00 11 53.3	
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ANTO	**Ankara**	**78.47**	**357**	*e*P	**P**	**00 08 55.3**	**+0.4**
	comp=Z,13nm,0.8s,mb4.7						
ANTO				*e*	pP	00 09 14.9	-0.8
ANTO	**Ankara**	**78.47**	**357**	*e*P	**P**	**00 08 55.3**	**+0.4**
ANTO				*e*	pP	00 09 15.0	-0.8
ANTO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
ANTO	**Ankara**	**78.47**	**357**	*i*P	**P**	**00 08 54.3**	**-0.6**
BR131	**Keskin Array S**	**78.59**	**356**	*e*P	**P**	**00 08 55.0**	**-0.5**
	comp=Z,6.5nm,0.9s,mb4.5						
BRTR	**Keskin Array B**	**78.59**	**356**	P	**P**	**00 08 55.0**	**-0.6**
	comp=Z,4.8nm,0.8s,mb4.4,baz=14,slow=3.5,SNR=16						
BRTR				pP	pP	00 09 15.8	-0.7
	comp=Z,4.5nm,0.8s,baz=36,slow=2.3,SNR=5.2						
TAPN	**Taplejung**	**79.27**	**309**	*e*P	**P**	**00 09 00.0**	**+0.5**
	comp=Z,60nm,0.7s,mb5.5						
GUN	**Gumba**	**79.42**	**311**	*e*P	**P**	**00 09 00.9**	**+0.6**
	comp=Z,77nm,0.9s,mb5.5						
JIRN	**Jiri**	**79.54**	**310**	*e*P	**P**	**00 09 01.7**	**+0.8**
KKN	**Kakani**	**79.75**	**311**	*e*P	**P**	**00 09 02.3**	**+0.2**
	comp=Z,39nm,0.7s,mb5.3						
KKN	**Kakani**	**79.75**	**311**	*e*P	**P**	**00 09 02.3**	**+0.2**
KKN				pmax	pmax		
	comp=Z,39nm,0.7s,mb5.3						
DANN	**Dangsing**	**79.77**	**313**	*e*P	**P**	**00 09 02.7**	**+0.5**
	comp=Z,157nm,0.7s,mb5.9						
GKN	**Gorkha**	**79.78**	**312**	*e*P	**P**	**00 09 02.2**	**0.0**
ODAN	**Odare**	**79.83**	**309**	*e*P	**P**	**00 09 02.8**	**+0.3**
	comp=Z,34nm,0.9s,mb5.2						
PKI	**Pulchoki**	**79.90**	**311**	*e*P	**P**	**00 09 03.1**	**+0.2**
DMN	**Daman**	**79.98**	**311**	*e*P	**P**	**00 09 03.9**	**+0.6**
RAMN	**Ramite**	**80.04**	**310**	*e*P	**P**	**00 09 03.9**	**+0.2**
	comp=Z,54nm,0.8s,mb5.4						
KOLN	**Koldanda**	**80.36**	**313**	*e*P	**P**	**00 09 05.3**	**0.0**
	comp=Z,37nm,0.8s,mb5.2						
HNR	**Honiara**	**80.57**	**229**	LR	LR	00 40 00.6	
	comp=Z,347nm,20.3s,baz=306,slow=32						
KEST	**Kesra**	**81.40**	**16**	P	**P**	**00 09 11.6**	**+0.8**
	comp=Z,6.1nm,1.0s,mb4.4,baz=276,slow=3.6,SNR=13						
KEST				pP	pP	00 09 33.0	+1.3
	comp=Z,2.6nm,0.7s,baz=337,slow=4.5,SNR=2.9						
CHTO	**Chiang Mai**	**82.47**	**296**	*e*P	**P**	**00 09 15.3**	**-1.3**
	comp=Z,4.8nm,1.0s,mb4.3						
CHTO	**Chiang Mai**	**82.47**	**296**	*e*P	**P**	**00 09 15.4**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
CMAR	**Chiang Mai Arr**	**82.79**	**296**	P	**P**	**00 09 17.9**	**-0.4**
	comp=Z,8.3nm,0.9s,mb4.5,baz=5.0,slow=6.0,SNR=25						
CMAR				pP	pP	00 09 39.1	-0.2
	comp=Z,11nm,0.8s,baz=6.9,slow=5.8,SNR=5.6						
CMAR				sP	sP	00 09 47.1	-0.7
	comp=Z,16nm,0.9s,baz=4.6,slow=5.8,SNR=7.8						
CMAR	**Chiang Mai Arr**	**82.79**	**296**	P	**P**	**00 09 17.9**	**-0.4**
CMAR				*PP	pP	00 09 39.2	-0.1
MMAI	**Mount Meron Ar**	**85.21**	**354**	P	**P**	**00 09 29.9**	**-0.6**
	comp=Z,4.8nm,0.8s,mb4.5,baz=323,slow=1.3,SNR=5.7						
ASF	**Jabal al Asfar**	**85.97**	**353**	P	**P**	**00 09 33.6**	**-0.6**
	comp=Z,4.9nm,0.8s,mb4.5,baz=218,slow=3.8,SNR=9.8						
ASF				pP	pP	00 09 54.9	-0.5
	comp=Z,5.5nm,0.8s,baz=29,slow=3.1,SNR=6.1						
MIB	**Mutribah**	**87.34**	**344**	*e*P	**P**	**00 09 40.3**	**-0.6**
	baz=344						
MIB				AMb	AMB	00 09 41.6	
	comp=Z,52nm,0.8s,mb5.5,baz=344						
UMR	**Umm Al-Rimmam**	**87.53**	**344**	*e*P	**P**	**00 09 41.0**	**-0.8**
	baz=343						
UMR				AMb	AMB	00 09 43.0	
	comp=Z,60nm,1.2s,mb5.5,baz=343						
NAY	**Al-Naaiem**	**87.90**	**344**	*e*P	**P**	**00 09 42.9**	**-0.7**
	baz=344						
NAY				AMb	AMB	00 09 51.9	
	comp=Z,14nm,1.8s,mb4.7,baz=344						
EIL	**Elat**	**88.56**	**355**	P	**P**	**00 09 46.5**	**-0.2**
	comp=Z,6.9nm,0.7s,mb4.8,baz=359,slow=4.2,SNR=7.3						
EIL	**Elat**	**88.56**	**355**	P	**P**	**00 09 46.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**102.18**	**27**	PKKPbc	PKKPbc	00 26 48.5	+0.4
	comp=Z,0.7nm,0.6s,baz=166,slow=1.1,SNR=5.5						
CAN	**Canberra**	**108.20**	**228**	*e*PKiKP	PKiKP	00 15 14.7	-6.3
PLCA	**Paso Flores**	**121.00**	**119**	PKP	PKPdf	00 15 44.4	-0.9
	comp=Z,1.7nm,0.9s,baz=27,slow=2.3,SNR=3.1						
VNDA	**Vanda**	**142.17**	**195**	PKhKP		00 16 20.4	
	comp=Z,0.9nm,0.7s,baz=5.4,slow=4.0,SNR=4.2						
LBTB	**Lobatse**	**143.01**	**5**	PKhKP		00 16 23.9	
	comp=Z,2.9nm,0.8s,baz=349,slow=9.2,SNR=5.9						
CASY	**Casey**	**146.42**	**226**	*e*PKPdf	PKPdf	00 16 33.6	+2.0
BOSA	**Boshof**	**146.58**	**6**	PKPbc	PKPbc	00 16 35.0	+0.3
	comp=Z,12nm,0.8s,baz=40,slow=2.2,SNR=12						
BOSA				pPKPbc	pPKPbc	00 16 57.2	+0.6
	comp=Z,19nm,0.7s,baz=26,slow=2.6,SNR=7.4						
SUR	**Sutherland**	**149.97**	**13**	PKPbc	PKPbc	00 16 44.6	+1.1
	comp=Z,6.7nm,0.9s,baz=13,slow=17,SNR=3.6						
SUR				pPKPbc	pPKPbc	00 17 05.8	+0.2
	comp=Z,14nm,0.6s,baz=146,slow=3.1,SNR=4.9						
SUR	**Sutherland**	**149.97**	**13**	*e*PKPdf	PKPbc	00 16 42.0	-1.5
SUR				PKPbc	PKPbc	00 16 44.6	+1.1
SUR				pPKPbc	pPKPbc	00 17 05.8	+0.2
QSPA	**South Pole Qui**	**151.76**	**180**	PKP	PKPdf	00 16 38.5	-1.4
	comp=Z,2.1nm,0.8s,baz=9.2,slow=0.9,SNR=3.9						
QSPA				PKPbc	PKPbc	00 16 46.7	+0.4
	comp=Z,19nm,0.7s,baz=288,slow=0.4,SNR=32						
QSPA				pPKPbc	pPKPbc	00 17 07.6	-0.8
	comp=Z,22nm,0.6s,baz=64,slow=1.8,SNR=6.2						
MIR	**Mirnyy**	**152.83**	**232**	*i*PKIKP	PKPdf	00 16 44.0	+2.3
MIR				pmax	pmax		
	comp=Z,100nm,1.8s						
VNA3	**Neumayer Olymp**	**162.50**	**138**	*e*P	PKPab	00 17 41.4	-0.8
VNA3				*e*		00 17 49.2	
VNA3				*e*		00 18 02.8	
VNA3				*e*		00 18 11.6	
MAW	**Mawson**	**164.55**	**234**	PKP	PKPdf	00 16 55.7	+0.1
	comp=Z,2.1nm,0.6s,baz=324,slow=10.0,SNR=5.4						
MAW	**Mawson**	**164.55**	**234**	PKP	PKPdf	00 16 55.7	+0.1

*ISCJB **28** 23:57:39.9±0.6, 4207N±004×8357E±005, h10km, mb3.8/2, Error ellipse: s-maj=6.8km s-min=4.5km az=146.7*
*IDC **28** 23:57:39.9±1.9, 4205N×8375E, h0km, mb4.0/1, mb1 3.5/5, mb1mx3.4/24, mbtmp3.4/5, ML3.0/4, MS2.8/1, Ms1 2.8/1, ms1mx2.1/39, Error ellipse: s-maj=47.8km s-min=14.7km az=69.0*
*BJI **28** 23:57:40.1, 4184N×8376E, h12km, ML3.6, Ms4.3, Msz4.2*
*NEIC **28** 23:57:41.0±0.7, 4200N×8370E, h10km, mb3.6/2, Error ellipse: s-maj=11.5km s-min=8.4km az=159.0*
*MOS **28** 23:57:42.1±1.1, 4206N×8367E, h33km, mb4.4/1, Error ellipse: s-maj=15.6km s-min=10.6km az=103.3*

ISC 28 23:57:41.8±0.6, 4203N±004×8365E±004, h10km, n29, σ1§32/48, mb3.8/2, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.47**	**58**	P	**Pn**	**23 58 37.5**	**+1.7**
WMQ				S	**Sn**	**23 59 19.5**	**+2.7**
WMQ				Smax			
	comp=N,325nm,0.8s						
WMQ				Smax			
	comp=E,286nm,0.8s						
MK31	**Makanchi Array**	**4.86**	**349**	*e*Pn	**Pn**	**23 58 56.8**	**+1.8**
MK31				*e*Pg	**Pg**	**23 59 11.8**	**-3.0**
MK31				*e*Sn	**Sn**	**23 59 50.2**	**-1.1**
MKAR	**Makanchi Array**	**4.86**	**349**	Pn	**Pn**	**23 58 56.3**	**+1.4**
	comp=E,0.3nm,0.3s,baz=164,slow=13,SNR=16						
MKAR				Pg	**Pg**	**23 59 08.7**	**-6.2**
	comp=E,1.6nm,0.3s,baz=165,slow=15,SNR=40						
MKAR				Sn	**Sn**	**23 59 53.4**	**+2.2**
	comp=E,1.1nm,0.3s,baz=157,slow=19,SNR=5.8						
MKAR				Lg		00 00 15.5	
	comp=E,4.2nm,0.3s,baz=169,slow=28,SNR=9.5						
MKAR	**Makanchi Array**	**4.86**	**349**	Pn	**Pn**	**23 58 56.3**	**+1.4**
MKAR				Pg	**Pg**	**23 59 08.7**	**-6.2**
MKAR				Sn	**Sn**	**23 59 53.4**	**+2.2**
MKAR				Lg		00 00 15.5	
MKAR	**Makanchi Array**	**4.86**	**349**	P	**Pn**	**23 58 56.3**	**+1.4**
MKAR						23 59 53.4	
TKM2	**Tokmak 2**	**6.02**	**281**	*e*Pn	**Pn**	**23 59 11.3**	**+0.4**
TKM2				*e*Pg	**Pg**	**23 59 33.3**	**-3.8**
KSH	**Kashi**	**6.35**	**249**	*e*P	**Pn**	**23 59 17.5**	**+2.1**
KSH				LR	LR		
	comp=N,1μm,5.7s						
KSH				LR	LR		
	comp=E,918nm,4.9s						
KSH				LR	LR		
	comp=Z,975nm,4.7s						
UCH	**Uchtor**	**6.80**	**275**	*e*Pn	**Pn**	**23 59 19.6**	**-1.9**
AAK	**Ala-Archa**	**6.81**	**278**	*e*Pn	**Pn**	**23 59 21.9**	**+0.2**
	comp=Z,5.4nm,0.6s						
AAK				*e*Pg	**Pg**	**23 59 50.3**	**-1.9**
AAK				*e*Sn	**Sn**	**00 00 41.1**	**+1.8**
AAK				*e*Sg	**Sg**	**00 01 19.5**	**-0.9**
AAK				*e*Sg	**Sg**	**00 01 19.5**	**-0.9**
AAK	**Ala-Archa**	**6.81**	**278**	*e*P	**Pn**	**23 59 21.9**	**+0.1**
AAK				*e*		00 00 41.2	
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AML	**Almayashu**	**7.41**	**274**	*e*Pn	**Pn**	**23 59 31.0**	**+1.1**
	comp=Z,7.8nm,0.7s						
AML				*e*Pg	**Pg**	**00 00 03.9**	**+0.3**
AML				*e*Sn	**Sn**	**00 00 55.5**	**+1.5**
AML				*e*Sg	**Sg**	**00 01 40.0**	**+0.5**
KURK	**Kurchatov**	**9.36**	**340**	Pn	**Pn**	**23 59 55.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=3.7						
KURK				Sn	**Sn**	**00 01 40.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=259,slow=25,SNR=3.1						
KURK				Lg		00 02 35.8	
	comp=Z,0.1nm,0.3s,baz=153,slow=29,SNR=4.4						
KURK				LR	LR	00 03 47.4	
	comp=Z,57nm,21.4s,baz=195,slow=40						
KURK	**Kurchatov**	**9.36**	**340**	P	**Pn**	**23 59 55.7**	**-0.9**
KURK						00 01 40.9	
ZALV	**Zalesovo Beam**	**11.95**	**3**	Pn	**Pn**	**00 00 30.4**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=4.5						
ZALV				Sn	**Sn**	**00 02 46.2**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=194,slow=17,SNR=2.3						
ZALV				Lg		00 04 00.3	
	comp=Z,0.1nm,0.3s,baz=195,slow=27,SNR=2.6						
ZALV	**Zalesovo Beam**	**11.95**	**3**	Pn	**Pn**	**00 00 30.4**	**-1.6**
ZALV				Sn	**Sn**	**00 02 46.2**	**+0.9**
ZALV				Lg		00 04 00.3	
ZALV	**Zalesovo Beam**	**11.95**	**3**	P	**Pn**	**00 00 30.5**	**-1.6**
ZALV						00 02 46.2	
KBL	**Kabul**	**13.69**	**242**	*e*Pn	**Pn**	**00 00 55.2**	**-0.7**
KBL				*e*Sn	**Sn**	**00 03 27.7**	**-0.2**
BVAR	**Borovoye Array**	**14.16**	**325**	Pn	**Pn**	**00 01 07.4**	**+5.2**
	baz=126,slow=14,SNR=4.7						
BVAR				Lg		00 05 15.8	
	baz=119,slow=29,SNR=5.1						
BVAR	**Borovoye Array**	**14.16**	**325**	Pn	**Pn**	**00 01 07.4**	**+5.2**
BVAR				Lg		00 05 15.8	
BRVK	**Borovoye**	**14.23**	**325**	*e*Pn	**Pn**	**00 01 02.4**	**-0.8**
	comp=Z,2.2nm,0.8s						
BRVK	**Borovoye**	**14.23**	**325**	*e*P	**Pn**	**00 01 02.4**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**17.09**	**62**	Pn	**Pn**	**00 01 38.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=253,slow=18,SNR=4.7						
ULN	**Ulaanbaatar**	**17.53**	**63**	Pn	**Pn**	**00 01 44.9**	**-1.2**
	comp=Z,0.7nm,0.4s						
ULN	**Ulaanbaatar**	**17.53**	**63**	P	**Pn**	**00 01 44.9**	**-1.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**26.87**	**146**	P	**P**	**00 03 22.7**	**0.0**
	comp=Z,0.6nm,0.3s,mb3.6,baz=323,slow=10.0,SNR=5.3						
OBN	**Obninsk**	**33.13**	**310**	P	**P**	**00 04 17.2**	**-0.7**
PSZ	**Piszkesteto**	**44.34**	**300**	*e*P	**P**	**00 05 51.3**	**-0.6**
	comp=Z,1.5nm,0.5s,mb4.0						
PSZ	**Piszkesteto**	**44.34**	**300**	*e*P	**P**	**00 05 51.3**	**-0.6**
PSZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
WLF	**Walferdange**	**52.28**	**307**	P	**P**	**00 06 53.1**	**0.0**

*SZGRF **29** 00:05:35.2, 623S×102.85E, h70km, mb5.8, Southwest of Sumatera, Indonesia*
*BJI **29** 00:05:44.7, 291S×101.07E, h35km, mB5.4, mb5.4, Ms5.2, Msz5.0*
*MOS **29** 00:05:45.9±0.9, 266S×101.23E, h33km, mb5.8/61, MS4.7/16, Error ellipse: s-maj=9.9km s-min=4.4km az=119.4*
*ISCJB **29** 00:05:46.2±0.2, 278S±003×101.05E±002, h35km, mb5.4/165, MS4.8/82, Error ellipse: s-maj=4.3km s-min=2.9km az=31.6*
*GCMT **29** 00:05:47.1±0.1, 3.15S×100.98E, h51km, MW5.4/86, Moment Tensor Solution. s86,c148; s86,c155; Duration: 1§2 Moment tensor: Scale 10^17Nm; Mrr 1.21±.03; Mθθ 0.74±.02; Mϕϕ -0.47±.03; Mrθ 0.75±.02; Mθϕ 0.86±.02; Mϕr -0.43±.02; Best double couple: M0 1.59700×10^17 NP1:ϕs 319.00000°, δ29.00000°, λ103.00000°. NP2:ϕs 124.00000°, δ62.00000°, λ83.00000°. Principal axes: T 1.4740, Plg72.0000°, Azm16.0000°; N 0.2420, Plg7.0000°, Azm127.0000°; P -1.7190, Plg16.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **29** 00:05:47.1±0.1, 286S×101.14E, h35km, mb5.4/41 Error ellipse: s-maj=6.0km s-min=4.0km az=49.0*
NEIC Felt [IV] at Bengkulu and [II] at Mukomuko.
*IDC **29** 00:05:49.0±0.5, 272S×101.18E, h48km±3km, mb4.8/26, mb1 4.9/27, mb1mx4.8/29, mbtmp4.9/27, MS4.6/28, Ms1 4.6/28, ms1mx4.6/35, Error ellipse: s-maj=14.5km s-min=9.5km az=62.0*
*DJA **29** 00:05:49.3±0.0, 303S×100.79E, h51km, mB6.0/31, Mjma5.3/15, MLv5.8/15, Mw(mB)5.6/31, Mwp5.1/32*

ISC 29 00:05:47.9±0.1, 287S±003×10101E±002, h37km, h37km±1.8km:pP-P, n533, σ1§13/495, mb5.4/164, MS4.8/82, 79C-21D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.77**	**116**	P	**Pn**	**00 06 16.2**	**+0.2**
PDSI	**Padang**	**2.02**	**344**	P	**Pn**	**00 06 21.5**	**+2.0**
PPI	**Padang Panjang**	**2.47**	**346**	P	**Pn**	**00 06 28.5**	**+2.8**
PPI	**Padang Panjang**	**2.47**	**346**	S	**Sn**	**00 07 01.1**	**+6.5**
RGRI	**Rengat**	**2.83**	**28**	P	**Pn**	**00 06 33.8**	**+3.1**
RGRI	**Rengat**	**2.83**	**28**	S	**Sn**	**00 07 10.4**	**+6.9**
JMBI	**JAMBI**	**2.90**	**65**	P	**Pn**	**00 06 34.6**	**+2.9**
KLI	**Kotabumi**	**4.32**	**117**	P	**Pn**	**00 06 54.2**	**+3.0**
PPBI	**Pangkal Pinang**	**5.17**	**82**	P	**Pn**	**00 07 04.3**	**+1.4**
	175nm,0.8s,8μm2.8nm						
KGM	**Kluang**	**5.37**	**26**	⇓P	**Pn**	**00 07 09.4**	**+3.8**
GSI	**Gunungsitoli**	**5.38**	**320**	P	**Pn**	**00 07 06.4**	**+0.7**
	694nm,0.8s,13nm						
MYKOM	**Kota Tinggi**	**5.43**	**32**	⇑P	**Pn**	**00 07 10.1**	**+3.8**
MYKOM	**Kota Tinggi**	**5.43**	**32**	P	**Pn**	**00 07 09.5**	**+3.1**
SBJI	**Serang**	**6.04**	**123**	P	**Pn**	**00 07 19.9**	**+5.0**
	715nm,1.2s,4.0nm						
FRIM	**Kepong**	**6.09**	**6**	⇓P	**Pn**	**00 07 19.2**	**+3.7**
TPI	**Tanjungpandan**	**6.64**	**89**	P	**Pn**	**00 07 26.3**	**+3.2**
	97nm,1.1s,3μm1.8nm						
DBJI	**Dramaga**	**6.80**	**123**	P	**Pn**	**00 07 27.6**	**+2.4**
	474nm,1.4s,10μm4.1nm						
CBJI	**Citeko**	**6.81**	**121**	P	**Pn**	**00 07 30.7**	**+5.3**
	1μm,1.0s,10nm						
IPM	**Ipoh**	**7.29**	**0**	⇑P	**Pn**	**00 07 36.7**	**+4.7**
IPM	**Ipoh**	**7.29**	**0**	P	**Pn**	**00 07 38.5**	**+6.4**
	501nm,0.8s,4μm1.7nm						

LEM	**Lembang**	**7.67**	**121**	P	**Pn**	**00 07 40.1**	**+2.9**
	500nm,1.1s,8μm2.2nm						
KULM	**Kulim**	**8.11**	**357**	⇓P	**Pn**	**00 07 47.1**	**+3.9**
KTGM	**Kuala Trenggan**	**8.41**	**15**	⇓P	**Pn**	**00 07 51.8**	**+4.4**
XMIS	**Christmas Isla**	**8.86**	**149**	*e*P	**Pn**	**00 07 46.5**	**-7.0**
XMIS				*e*S	**Sn**	**00 09 18.4**	**-14**
XMIS	**Christmas Isla**	**8.86**	**149**	P	**Pn**	**00 07 46.6**	**-6.9**
BJII	**Banjamegara**	**9.74**	**117**	P	**Pn**	**00 08 07.2**	**+1.6**
SNG	**Songkhla**	**9.98**	**358**	P	**Pn**	**00 08 11.0**	**+2.1**
	720nm,1.0s						
BSI	**Banda Aceh**	**10.07**	**326**	P	**Pn**	**00 08 11.2**	**+1.0**
	131nm,1.1s,1μm						
COCO	**West Island**	**10.14**	**204**	*e*Pn	**Pn**	**00 08 08.3**	**-2.8**
	239nm,0.6s						
COCO				*e*Sn	**Sn**	**00 10 01.4**	**-2.3**
COCO	**West Island**	**10.14**	**204**	P	**Pn**	**00 08 06.2**	**-4.9**
	198nm,0.7s,3μm						
KSM	**Kuching**	**10.25**	**65**	*e*Pn	**Pn**	**00 08 11.3**	**-1.3**
	176nm,1.3s						
KSM				*e*Sn	**Sn**	**00 10 06.6**	**+0.3**
KSM	**Kuching**	**10.25**	**65**	⇑P	**Pn**	**00 08 17.5**	**+4.9**
KSM	**Kuching**	**10.25**	**65**	P	**Pn**	**00 08 17.7**	**+5.1**
	130nm,1.5s,1μm						
SMRI	**Semarang**	**10.28**	**114**	P	**Pn**	**00 08 16.4**	**+3.5**
	314nm,1.0s						
SJI	**Sawahan**	**11.75**	**115**	P	**Pn**	**00 08 34.0**	**+0.8**
SBUM	**Sibu**	**12.39**	**65**	⇑P	**Pn**	**00 08 47.5**	**+5.6**
KRKI	**Karangkates**	**12.54**	**115**	P	**Pn**	**00 08 48.8**	**+4.8**
PLKI	**Palangkaraya**	**12.94**	**87**	P	Px	00 09 01.7	
BTM	**Bintulu**	**13.49**	**64**	⇑P	**Pn**	**00 09 02.0**	**+5.0**
KMMI	**Kalianget**	**13.56**	**108**	P	**Pn**	**00 09 00.7**	**+2.8**
	168nm,1.1s,3μm						
BBKI	**Banjar Baru**	**13.83**	**93**	P	**Pn**	**00 09 05.0**	**+3.5**
	311nm,0.8s,5μm						
KHKI	**Kahang-Kahang**	**15.52**	**111**	P	**Pn**	**00 09 25.8**	**+1.6**
SMKI	**Samarinda**	**16.37**	**82**	P	**Pn**	**00 09 41.1**	**+6.0**
	319nm,1.3s,6μm						
KKM	**Kota Kinabalu**	**17.58**	**60**	⇓P	**Pn**	**00 09 52.9**	**+2.7**
SDKM	**Sandakan**	**18.24**	**62**	⇓P	**Pn**	**00 10 00.5**	**+2.1**
TSM	**Tawau**	**18.29**	**67**	⇑P	**Pn**	**00 10 00.9**	**+1.9**
UBT	**Ubonrachathani**	**18.43**	**12**	P	**Pn**	**00 10 00.0**	**-0.6**
	347nm,1.0s						
NST	**Nakhon Sawan**	**18.44**	**357**	P	**Pn**	**00 09 54.4**	**-6.3**
KDM	**Kudat**	**18.55**	**58**	⇓P	**Pn**	**00 10 03.6**	**+1.6**
KAPI	**Kappang**	**18.82**	**97**	P	**Pn**	**00 10 03.3**	**-2.1**
	6.3nm,0.3s,baz=281,slow=10,SNR=63						
KAPI				S	**S**	**00 13 34.3**	**-2.2**
	0.3nm,0.3s,baz=221,slow=20,SNR=4.7						
KAPI	**Kappang**	**18.82**	**97**	P	**Pn**	**00 10 04.5**	**-0.9**
	172nm,1.1s,2μm						
PCI	**Palu**	**18.92**	**84**	P	**Pn**	**00 10 07.4**	**+0.8**
	370nm,1.9s,6μm						
MYLDM	**Lahad Datu**	**19.22**	**65**	⇓P	**Pn**	**00 10 12.2**	**+2.0**
MYLDM	**Lahad Datu**	**19.22**	**65**	P	**Pn**	**00 10 11.9**	**+1.7**
BDT	**Bhumibol Dam**	**20.08**	**354**	P	**P**	**00 10 15.0**	**-3.3**
	24nm,0.9s						
CM31	**Chiang Mai Arr**	**21.29**	**355**	*e*P	**P**	**00 10 29.5**	**-1.9**
CM31				LR	LR		
	comp=Z,3μm,19.0s,MS4.7						
CMAR	**Chiang Mai Arr**	**21.29**	**355**	P	**P**	**00 10 28.9**	**-2.4**
	comp=Z,45nm,0.8s,mb4.8,baz=184,slow=10.0,SNR=59						
CMAR				PcP	PcP	00 14 35.6	+0.2
	comp=Z,4.3nm,0.9s,baz=204,slow=3.9,SNR=5.1						
CMAR				ScP	ScP	00 18 08.2	-1.5
	comp=Z,6.5nm,0.9s,baz=207,slow=3.5,SNR=12						
CMAR				LR	LR	00 19 37.1	
	comp=Z,2μm,18.4s,MS4.6,baz=330,slow=39						
CMAR	**Chiang Mai Arr**	**21.29**	**355**	P	**P**	**00 10 28.9**	**-2.4**
CMAR				PcP	PcP	00 14 35.6	+0.2
CMAR				ScP	ScP	00 18 08.2	-1.5
CMAR				LR	LR	00 19 37.1	
CMAR	**Chiang Mai Arr**	**21.29**	**355**	P	**P**	**00 10 29.0**	**-2.4**
CMAR						00 14 35.6	
KDI	**Kendari**	**21.60**	**93**	P	**P**	**00 10 36.5**	**+1.6**
	comp=Z,190nm,1.3s,comp=Z,3μm,mb5.4						
CHG	**Ch

GYA LR LR
comp=E,3μm,15.0s,MS5.1
GYA LR LR
comp=Z,3μm,14.5s,MS5.1
HYB Hyderabad 29.95 313 *e*P **P 00 11 52.5 -0.3**
HYB Hyderabad 29.95 313 *i* P **P 00 11 52.5 -0.3**
HYB *e* 00 12 07.0
HYB *e*S **S 00 16 44.0 -4.2**
BOK Bokaro 30.31 332 *i* P **P 00 11 57.8 +1.7**
BOK *e*S **S 00 16 55.8 +2.0**
NGP Nagpur 32.13 319 *e*P **P 00 12 11.7 -0.3**
NGP AMb AMB 00 12 14.6
comp=Z,66nm,1.7s,mb5.2
MUN Mundaring 32.30 155 *e*P **P 00 12 14.3 +0.9**
MUN Mundaring 32.30 155 *e*P **P 00 12 14.3 +0.9**
ODAN Odare 32.34 337 *e*P **P 00 12 14.9 +1.0**
QZH Quanzhou 32.49 31 P **P 00 12 14.3 -0.9**
QZH S **S 00 17 19.0 -8.8**
QZH LR LR
comp=Z,5μm,28.4s,MS5.0
KAKA Kakadu 32.60 109 *e*P Px 00 11 56.4
comp=Z,10nm,0.6s
TAPN Taplejung 32.66 338 *e*P **P 00 12 18.3 +1.7**
comp=Z,1μm,1.0s
RAMN Ramite 32.74 336 *e*P **P 00 12 19.0 +1.7**
AKL Akola 33.19 316 *e*P **P 00 12 23.1 +1.7**
AKL AMb AMB 00 12 25.2
comp=Z,44nm,1.5s,mb5.2
KAD Karad 33.20 308 *i* P **P 00 12 22.2 +0.7**
KAD AMb AMB 00 12 24.9
comp=Z,52nm,1.2s,mb5.3
NACB Ninganchiao 33.52 36 *e*P **P 00 12 23.9 -0.3**
comp=Z,34nm,0.7s,mb5.4
JIRN Jiri 33.54 336 *e*P **P 00 12 25.9 +1.6**
NWAO Narrogin (SRO) 33.55 155 P **P 00 12 24.5 +0.1**
comp=Z,2.8nm,0.4s,mb4.5,baz=323,slow=5.1,SNR=2.5
NWAO LR LR 00 24 18.3
comp=Z,2μm,21.6s,MS4.8,baz=327,slow=33
NWAO Narrogin (SRO) 33.55 155 *e*P **P 00 12 24.7 +0.4**
comp=Z,67nm,1.3s,mb5.4
NWAO LR LR 00 24 18.3
NWAO Narrogin (SRO) 33.55 155 *e*P **P 00 12 24.7 +0.3**
NWAO pmax pmax
comp=Z,67nm,1.3s
CD2 Chengdu 33.69 4⇑*i*P **P 00 12 24.0 -1.5**
CD2 AP pP 00 12 33.8 -2.3
CD2 XP sP 00 12 37.8 -2.7
CD2 PP PP 00 13 37.5 -4.8
CD2 PCP PcP 00 15 03.0 -1.9
CD2 S **S 00 17 44.5 -1.8**
CD2 XS sS 00 18 00.5 -3.2
CD2 PCS PcS 00 18 47.3 -3.5
CD2 SS SS 00 19 51.5 -21
CD2 SCS ScS 00 22 44.0 -4.3
CD2 AMB AMB
comp=Z,50nm,0.8s,mb5.5
CD2 AMB AMB
comp=Z,400nm,7.2s
CD2 LR LR
comp=N,4μm,25.2s
CD2 LR LR
comp=E,3μm,19.2s
CD2 LR LR
comp=Z,4μm,20.4s,MS5.2
LSA Lhasa 33.73 344 P **P 00 12 27.0 +1.1**
YHNB Yeheng 33.77 35 *e*P **P 00 12 24.4 -1.9**
comp=Z,240nm,1.5s,mb5.9
YHNB *e*PP PP 00 13 41.3 -2.1
YHNB LR LR
comp=Z,862nm,21.0s,MS4.5
PKI Pulchoki 33.79 335 *e*P **P 00 12 27.6 +1.1**
GUN Gumba 33.89 336 *e*P **P 00 12 28.9 +1.6**
DMN Daman 33.95 334 *e*P **P 00 12 29.1 +1.2**
KKN Kakani 34.03 335 *e*P **P 00 12 29.8 +1.2**
POO Poona 34.16 310 *i* P **P 00 12 30.1 +0.2**
GKN Gorkha 34.50 334 *e*P **P 00 12 33.7 +1.1**
KOLN Koldanda 34.77 332 *e*P **P 00 12 36.2 +1.3**
comp=Z,448nm,1.0s,mb6.3
DANN Dangsing 35.19 333 *e*P **P 00 12 39.8 +1.2**
comp=Z,356nm,0.5s,mb6.5
WHN Wuhan 35.58 20⇑P **P 00 12 41.8 -0.1**
WHN AP pP 00 12 48.0 -4.5
WHN S **S 00 18 13.0 -2.4**
WHN AMB AMB
comp=Z,148nm,1.0s,mb5.9
WHN LR LR
comp=N,6μm,17.0s,MS5.5
WHN LR LR
comp=E,1μm,13.7s,MS5.5
WHN LR LR
comp=Z,5μm,14.9s,MS5.4
WRAB Tennant Creek 36.70 120 *e*P **P 00 12 50.1 -1.5**
comp=Z,97nm,1.0s,mb5.6
WRAB *e*S **S 00 18 26.5 -6.4**
WRAB LR LR
comp=Z,507nm,20.0s,MS4.3
WRAB Tennant Creek 36.70 120 *e*P **P 00 12 50.1 -1.5**
WRAB *e*S **S 00 18 26.5 -6.4**
WRAB pmax pmax
comp=Z,97nm,1.0s,mb5.6
WRAB MLR MLR
comp=Z,507nm,20.0s,MS4.3
WRAB Tennant Creek 36.70 120 P **P 00 12 49.7 -1.9**
comp=Z,113nm,1.4s,comp=Z,1μm,mb5.5
WB2 Warramunga Arr 36.70 120⇑*i*P **P 00 12 49.7 -2.0**
WB2 *e*S **S 00 18 23.6 -9.3**
XAN Xi'an 37.46 11 P **P 00 12 56.5 -1.4**
XAN AP pP 00 13 04.3 -4.2
XAN PP PP 00 14 24.3 +0.4
XAN S **S 00 18 38.5 -5.5**
XAN AMB AMB
comp=Z,88nm,1.0s,mb5.5
XAN AMB AMB
comp=Z,223nm,10.9s
XAN LR LR
comp=N,406nm,18.7s,MS4.9
XAN LR LR
comp=E,2μm,22.5s,MS4.9
XAN LR LR
comp=Z,4μm,16.7s
FORT Forrest 37.74 140 *e*P **P 00 13 02.9 +2.6**
comp=Z,38nm,0.5s,mb5.4
LGTI Lohaghat 37.79 330 *e*P **P 00 13 01.9 +1.2**
LGTI *ex* x 00 18 57.0
PTH Pithoragarh 37.88 330 *e*P **P 00 13 04.0 +2.4**
PTH *ex* x 00 18 49.5
ASAR Alice Springs 37.93 126 P **P 00 13 00.9 -1.2**
comp=Z,14nm,0.7s,mb4.8,baz=299,slow=7.8,SNR=87
ASAR PcP PcP 00 15 17.6 -0.1
comp=Z,5.8nm,0.7s,baz=300,slow=2.8,SNR=5.2
ASAR S **S 00 18 45.5 -6.2**
comp=Z,21nm,1.1s,baz=301,slow=16,SNR=20
ASAR ScS ScS 00 23 08.6 -3.4
comp=Z,1.3nm,1.0s,baz=302,slow=5.2,SNR=5.6
NJ2 Nanjing 38.64 25 *e*P **P 00 13 09.0 +1.1**
NJ2 AP pP 00 13 18.3 -0.2
NJ2 XP sP 00 13 22.3 -0.7
NJ2 PP PP 00 14 42.8 +5.9
NJ2 S **S 00 19 02.5 +0.5**
NJ2 XS sS 00 19 18.5 -1.1
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,80nm,4.2s
NJ2 LR LR
comp=N,1μm,19.0s,MS5.0
NJ2 LR LR
comp=E,2μm,16.6s,MS5.0
NJ2 LR LR
comp=Z,14μm,16.8s,MS5.8
AJM Ajmer 38.73 320 *i* P **P 00 13 08.9 +0.1**
AJM AMb AMB 00 13 13.5
comp=Z,75nm,1.4s,mb5.2
AJM *i* PP PP 00 14 39.7 +1.7
NDI New Delhi 38.80 326 *e*P **P 00 13 08.5 -0.8**
NDI *ex* x 00 19 02.0
LZH Lanzhou 38.84 4⇓P **P 00 13 09.0 -0.5**
LZH AP pP 00 13 18.3 -1.8
LZH XP sP 00 13 23.3 -1.3
LZH PP PP 00 14 44.0 +5.0
LZH S **S 00 19 00.3 -4.6**
LZH XS sS 00 19 26.0 +3.5
LZH SS SS 00 21 50.0 -7.2
LZH AMB AMB
comp=Z,76nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,379nm,4.6s
LZH LR LR
comp=N,4μm,16.8s
LZH LR LR
comp=Z,5μm,17.9s,MS5.4
SSE Sheshan 38.86 28 P **P 00 13 10.3 +0.6**
SSE AP pP 00 13 21.5 +1.1
SSE XP sP 00 13 26.5 +1.7
SSE PP PP 00 14 41.0 +1.7
SSE S **S 00 19 07.0 +1.6**
SSE XS sS 00 19 25.8 +2.8
SSE AMB AMB
comp=Z,54nm,0.9s,mb5.3
SSE AMB AMB
comp=Z,256nm,5.5s
SSE LR LR
comp=N,959nm,19.4s,MS4.7
SSE LR LR
comp=E,640nm,19.5s,MS4.7
SSE LR LR
comp=Z,1μm,16.8s,MS4.9
JOW Kunigami 39.56 40 LR LR 00 29 02.1
comp=Z,417nm,20.0s,MS4.3,baz=88,slow=35
DDI Dehra Dun 39.62 328⇑*i*P **P 00 13 15.2 -0.9**
DDI *ex* x 00 19 14.0
BHJ Bhuj 40.10 312 *i* P **P 00 13 21.3 +1.1**
BHJ AMb AMB 00 13 24.3
comp=Z,80nm,1.0s,mb5.4
SMLA Simla 40.72 328 *i* P **P 00 13 25.8 +0.6**
SMLA *ex* x 00 13 29.0
comp=Z,278nm,0.6s
SMLA *i* x x 00 19 38.8
SDNR Sundarnagar 41.12 328 *ex* x 00 13 43.0
SDNR *ex* x 00 19 36.0
BHK Bhakra 41.35 327 *e*P **P 00 13 29.6 -0.8**
TIA Tai'an 41.69 20 *e*P **P 00 13 31.5 -1.6**
GTA Gaotai 42.08 359 P **P 00 13 35.5 -0.7**
GTA AP pP 00 13 45.3 -1.7
GTA XP sP 00 13 49.3 -2.1
GTA PP PP 00 15 16.5 +2.3
GTA PCP PcP 00 15 30.0 -0.6
GTA SCP ScP 00 19 16.0 -2.4
GTA PCS PcS 00 19 19.8 -2.4
GTA S **S 00 19 52.0 -1.1**
GTA XS sS 00 20 07.8 -3.1
GTA SS SS 00 22 53.0 -8.7
GTA SCS ScS 00 23 32.3 -3.5
GTA AMB AMB
comp=Z,24nm,1.5s,mb4.6
GTA AMB AMB
comp=Z,306nm,8.0s
GTA LR LR
comp=N,2μm,19.9s,MS5.1
GTA LR LR
comp=E,1μm,15.5s,MS5.1
GTA LR LR
comp=Z,2μm,20.8s
DLH Dalhousie 42.46 328 *e*P **P 00 13 39.0 -0.5**
THN Thein Dam 42.51 328 *e*P **P 00 13 38.6 -1.3**
THN *ex* x 00 20 05.8
COEN Coen 43.06 107 *e*P **P 00 13 41.3 -3.3**
comp=Z,8.0nm,1.0s,mb4.4
COEN PP PP 00 15 23.3 -1.8
COEN *e*PcP PcP 00 15 33.6 -0.8
COEN *e*ScP ScP 00 19 20.7 -2.2
COEN Coen 43.06 107 P **P 00 13 44.3 -0.3**
comp=Z,5.4nm,1.1s,mb4.2
BTO Baotou 44.04 10 *e*P **P 00 13 51.5 -0.6**
HHC Hu-ho-hao-te 44.56 11 *e*P **P 00 13 56.5 +0.3**
HHC AP pP 00 14 06.3 -0.7
HHC XP sP 00 14 10.0 -1.4
HHC PP PP 00 15 42.8 +2.0
HHC S **S 00 20 29.3 -0.1**
HHC XS sS 00 20 44.8 -2.5
HHC SCS ScS 00 23 50.3 -1.0
HHC AMB AMB
comp=Z,71nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,542nm,5.0s
HHC LR LR
comp=N,2μm,13.1s,MS5.2
HHC LR LR
comp=E,1μm,16.6s,MS5.2
HHC LR LR
comp=Z,1μm,16.7s,MS4.9
NIL Nilore 44.77 327 *e*P **P 00 13 58.0 -0.1**
comp=Z,93nm,0.8s,mb5.7
NIL *e*PcP PcP 00 15 38.0 -1.8
NIL *e*PP PP 00 15 43.8 +0.7
NIL Nilore 44.77 327 *e*P **P 00 13 58.0 -0.1**
NIL *e* 00 15 38.0
NIL *e* 00 15 43.8
NIL pmax pmax
comp=Z,93nm,0.8s,mb5.7
BJI Beijing 44.91 17 P **P 00 13 58.8 -0.2**
BJI PP PP 00 15 45.0 +0.5
BJI S **S 00 20 37.5 +3.0**
BJI AMB AMB
comp=Z,76nm,1.5s,mb5.3
BJI LR LR
comp=N,3μm,18.7s,MS5.3
BJI LR LR
comp=E,2μm,19.2s,MS5.3
BJI LR LR
comp=Z,2μm,22.3s,MS4.9
PMG Port Moresby 46.31 100 *e*P **P 00 14 10.2 -0.3**
PMG LR LR
comp=Z,418nm,20.0s,MS4.4
GUMO Guam 46.48 68 *e*P **P 00 14 10.0 -1.8**
GUMO *e*PcP PcP 00 15 45.3 -0.8
KS15 Wonju Array Si 47.23 29 *e*P **P 00 14 18.7 +1.3**
KSRS Korea Array 47.26 29 P **P 00 14 16.6 -1.0**
comp=Z,52nm,1.1s,mb5.4,baz=225,slow=7.6,SNR=34
KSRS pP pP 00 14 29.0 +0.6
comp=Z,31nm,1.0s,baz=229,slow=8.4,SNR=9.1
KSRS LR LR 00 36 20.3
comp=Z,702nm,18.4s,MS4.7,baz=234,slow=39
CTA Charters Tower 47.32 115⇑*i*P **P 00 14 16.8 -1.6**
comp=Z,42nm,1.4s,mb5.2
CTA Charters Tower 47.32 115 LR LR 00 36 04.5
comp=Z,655nm,21.1s,MS4.6,baz=283,slow=38
CTA Charters Tower 47.32 115⇑*i*P **P 00 14 16.8 -1.6**
CTA pmax pmax
comp=Z,42nm,1.4s
CTAO Charters Tower 47.32 115 *e*P **P 00 14 17.0 -1.4**
comp=Z,204nm,1.5s,mb5.8
CTAO *e*PcP PcP 00 15 48.6 -0.4
CTAO LR LR
comp=Z,705nm,21.0s,MS4.6
CTAO Charters Tower 47.32 115 *e*P **P 00 14 17.0 -1.4**
CTAO *e* 00 15 48.6
CTAO pmax pmax
comp=Z,204nm,1.5s,mb5.8
CTAO MLR MLR
comp=Z,705nm,21.0s,MS4.6
CTAO Charters Tower 47.32 115 P **P 00 14 16.9 -1.5**
comp=Z,101nm,1.4s,comp=Z,1μm,mb5.5
KBL Kabul 47.82 324 *e*P **P 00 14 22.2 +0.2**
comp=Z,40nm,1.0s,mb5.4
KBL *e*PcP PcP 00 15 50.3 -0.1
KBL *e*S **S 00 21 19.4 +2.9**
KBL Kabul 47.82 324 *e*P **P 00 14 22.2 +0.2**
KBL *e* 00 15 50.3
KBL *e*S **S 00 21 19.4 +3.0**
KBL pmax pmax
comp=Z,40nm,1.0s,mb5.4
STKA Stephens Creek 47.83 132 *e*P **P 00 14 21.4 -0.7**
comp=Z,55nm,0.6s,mb5.8
STKA *e*S **S 00 21 12.2 -4.5**
STKA Stephens Creek 47.83 132 P **P 00 14 21.5 -0.7**
comp=Z,22nm,0.6s,mb5.4,baz=306,slow=7.8,SNR=77
STKA S **S 00 21 13.4 -3.3**
comp=Z,4.9nm,1.0s,baz=318,slow=14,SNR=3.0
STKA LR LR 00 34 56.0
comp=Z,1μm,21.2s,MS4.8,baz=297,slow=37
WMQ Urumqi 47.99 347⇑*i*P **P 00 14 24.0 +0.9**
WMQ AP pP 00 14 34.0 0.0
WMQ XP sP 00 14 38.0 -0.4
WMQ PP PP 00 16 15.0 -0.5
WMQ S **S 00 21 19.0 +0.5**
WMQ XS sS 00 21 35.0 -1.5
WMQ SCS ScS 00 24 12.0 -1.4
WMQ SS SS 00 24 42.0 -5.9
WMQ AMB AMB
comp=Z,578nm,1.0s,mb6.6
WMQ AMB AMB
comp=Z,1μm,5.0s
WMQ LR LR
comp=N,786nm,17.0s,MS4.9
WMQ LR LR
comp=E,675nm,16.0s,MS4.9
WMQ LR LR
comp=Z,632nm,16.0s,MS4.7
KSH Kashi 48.05 334 P **P 00 14 24.5 +0.9**
KSH *e*AP pP 00 14 34.3 -0.2
KSH XP sP 00 14 38.5 -0.4
KSH *e*PCP PcP 00 15 53.5 +2.3
KSH *e*PP PP 00 16 15.5 -0.6
KSH *e*SCP ScP 00 19 43.8 +0.8
KSH *e*PCS PcS 00 19 47.8 +1.0
KSH S **S 00 21 18.3 -1.2**
KSH XS sS 00 21 34.5 -2.9
KSH *e*SCS ScS 00 24 12.5 -1.5
KSH *e*SS SS 00 24 40.8 -8.2
KSH AMB AMB
comp=Z,549nm,1.2s,mb6.5
KSH LR LR
comp=N,2μm,5.5s
KSH LR LR
comp=E,1μm,5.8s
KSH LR LR
comp=Z,1μm,5.8s
SNY Shenyang 48.98 22⇓P **P 00 14 29.0 -1.8**
SNY S **S 00 21 22.0 -11**
SNY AMB AMB
comp=Z,19nm,1.5s,mb4.9
SNY LR LR
comp=N,1μm,15.5s
SNY LR LR
comp=Z,1μm,15.3s,MS5.0
ULHL Ulahol 50.20 336 P **P 00 14 40.6 +0.6**
SNR=24
KZA Kyzart 50.47 335 P **P 00 14 43.4 +1.3**
SNR=43
SONM Songino Array 50.71 5 P **P 00 14 44.3 +0.5**
comp=Z,162nm,0.9s,mb6.0,baz=187,slow=7.3,SNR=427
SONM pP pP 00 14 55.4 +0.6
comp=Z,62nm,0.8s,baz=193,slow=8.8,SNR=10
SONM ScP ScP 00 19 51.8 -2.4
comp=Z,6.1nm,1.1s,baz=204,slow=3.2,SNR=7.4
SONM LR LR 00 38 50.8
comp=Z,1μm,19.6s,MS4.9,baz=186,slow=39
SONM PKP2bc 00 45 59.3
comp=Z,0.8nm,1.1s,baz=48,slow=2.1,SNR=3.6
SONM Songino Array 50.71 5 P **P 00 14 44.3 +0.5**
SONM pP pP 00 14 55.4 +0.6
SONM ScP ScP 00 19 51.8 -2.4
SONM LR LR 00 38 50.8
SONM ⇑*e* 00 45 59.3
SONM Songino Array 50.71 5 P **P 00 14 44.3 +0.5**
SONM *PP pP 00 14 55.4 +0.7
ULN Ulaanbaatar 50.80 5 *e*P **P 00 14 43.5 -1.0**
comp=Z,117nm,1.0s,mb5.8
ULN LR LR
comp=Z,1μm,19.0s,MS5.0
ULN Ulaanbaatar 50.80 5 P **P 00 14 44.6 +0.1**
comp=Z,155nm,1.0s,comp=Z,1μm,mb5.9
UCH Uchtor 50.90 335 *e*P **P 00 14 46.4 +1.0**
comp=Z,38nm,1.2s,mb5.2
UCH *e*PcP PcP 00 16 02.6 +1.1
UCH *e*PP PP 00 16 42.2 +0.2
UCH *e*S **S 00 22 00.7 +1.3**
UCH Uchtor 50.90 335 P **P 00 14 46.5 +1.1**
SNR=11
TKM2 Tokmak 2 51.02 336 *e*P **P 00 14 46.8 +0.6**
comp=Z,109nm,0.9s,mb5.8
TKM2 Tokmak 2 51.02 336 *e*P **P 00 14 46.8 +0.5**
TKM2 pmax pmax
comp=Z,109nm,0.9s,mb5.8
TKM2 Tokmak 2 51.02 336 P **P 00 14 47.1 +0.8**
SNR=101
KBK Karagaybulak 51.07 335 P **P 00 14 48.0 +1.4**
SNR=72
AML Almayashu 51.18 334 *e*P **P 00 14 48.5 +1.1**
comp=Z,38nm,1.2s,mb5.2
AML *e*PcP PcP 00 16 03.4 +0.9
AML Almayashu 51.18 334 P **P 00 14 48.7 +1.3**
SNR=80
JHJ Hachijo jima 2 51.21 42 LR LR 00 33 28.8
comp=Z,651nm,20.7s,MS4.6,baz=287,slow=32
AAK Ala-Archa 51.24 335 *e*P **P 00 14 48.6 +0.7**
comp=Z,51nm,1.1s,mb5.4
AAK *e*PcP PcP 00 16 02.7 -0.1
AAK *e*PP PP 00 16 45.1 -0.1
AAK *e*S **S 00 22 05.6 +1.6**
AAK LR LR
comp=Z,746nm,20.0s,MS4.7
AAK Ala-Archa 51.24 335 *e*P **P 00 14 48.6 +0.7**
AAK *e* 00 16 02.7
AAK *e* 00 16 45.1
AAK *e*S **S 00 22 05.6 +1.6**
AAK pmax pmax
comp=Z,51nm,1.1s,mb5.4
AAK MLR MLR
comp=Z,746nm,20.0s,MS4.7
AAK Ala-Archa 51.24 335 P **P 00 14 49.0 +1.0**
SNR=36
FRU Bishkek 51.35 335⇑*i*P **P 00 14 49.0 +0.2**
FRU *i* pP 00 15 01.0 +1.3
FRU pmax pmax
comp=Z,180nm,1.4s,mb5.8
CN2 Changchun 51.38 23⇑P **P 00 14 47.8 -1.2**
CN2 *e*AP pP 00 14 57.8 -2.1
CN2 *e*XP sP 00 15 01.8 -2.5
CN2 PCP PcP 00 16 02.0 -1.3
CN2 PP PP 00 16 46.5 +0.1
CN2 *e*S **S 00 22 04.3 -1.7**
CN2 SS SS 00 25 39.0 -3.3
CN2 AMB AMB
comp=Z,50nm,0.7s,mb5.5
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,1μm,14.0s,MS5.2
CN2 LR LR
comp=E,600nm,14.0s,MS5.2
CN2 LR LR
comp=Z,1μm,19.0s,MS4.9
CHMS Chumysh 51.43 335 P **P 00 14 49.7 +0.3**
SNR=31
EKS2 Erkin-Say 51.57 334 *e*P **P 00 14 51.1 +0.7**
comp=Z,148nm,0.8s,mb6.0
EKS2 *e* pP 00 15 03.1 +1.8
EKS2 *e*PP PP 00 16 48.2 0.0
EKS2 Erkin-Say 51.57 334 P **P 00 14 51.5 +1.1**
SNR=16
USP Ospenovka 51.76 335 P **P 00 14 52.0 +0.2**
SNR=68
MK31 Makanchi Array 52.13 344 *e*P **P 00 14 54.4 -0.1**
MKAR Makanchi Array 52.13 344 P **P 00 14 54.2 -0.2**
comp=Z,62nm,0.6s,mb5.7,baz=155,slow=7.9,SNR=424
MKAR S **S 00 22 14.6 -1.5**
comp=Z,1.9nm,1.0s,baz=142,slow=14,SNR=3.9
MKAR LR LR 00 41 51.8
comp=Z,651nm,21.4s,MS4.6,baz=151,slow=42
MKAR Makanchi Array 52.13 344 P **P 00 14 54.3 -0.2**
MKAR S **S 00 22 14.6 -1.5**
MAJO Matsushiro 52.32 38 *e*P **P 00 14 56.0 -0.1**
MAJO LR LR
comp=Z,620nm,21.0s,MS4.6
MAT Matsushiro 52.32 38 P **P 00 14 54.3 -1.8**
MAT S **S 00 22 16.0 -3.1**
MJAR Matsushiro Arr 52.32 38 P **P 00 14 54.4 -1.8**
comp=Z,18nm,1.0s,mb5.0,baz=214,slow=6.5,SNR=19
MJAR ScP ScP 00 19 58.9 -2.5
comp=Z,5.3nm,0.9s,baz=200,slow=5.3,SNR=8.3
MJAR LR LR 00 37 56.0
comp=Z,320nm,19.6s,MS4.4,baz=245,slow=37
EIDS Eidsvold 53.05 120 *e*P **P 00 15 00.8 -1.0**
comp=Z,54nm,0.9s,mb5.5
ZAK Zakamensk 53.07 2⇓*i*P **P 00 15 00.9 -0.5**
ZAK *e* 00 16 07.9
ZAK pmax pmax
comp=Z,48nm,1.1s,mb5.3
KK31 Karatay Array 53.38 332 *i* P **P 00 15 02.0 -1.8**
KK31 Karatay Array 53.38 332 *i* P **P 00 15 02.9 -0.9**
KK31 pmax pmax

comp=Z,62nm,1.2s,mb5.4
MDJ Mudanjiang 53.73 25 P P **00 15 06.0 -0.3**
MDJ XP sP 00 15 18.8 -2.9
MDJ PP PP 00 17 07.5 -0.1
MDJ S S **00 22 38.5 +0.5**
MDJ AMB AMB
comp=Z,17nm,1.6s,mb4.7
MDJ AMB AMB
comp=Z,261nm,8.2s
MDJ LR LR
comp=E,1µm,23.4s
MDJ LR LR
comp=Z,2µm,23.4s,MS5.0
MOY Mondy 54.32 360 *e*P P **00 15 10.2 -0.3**
MOY pmax pmax
comp=Z,12nm,1.9s,mb4.5
TLY Talaya 54.38 2*c i*P P **00 15 11.5 +0.5**
TLY *e*S S **00 22 46.5 -0.1**
TLY *e* 00 23 06.7
TLY *e*SS SS 00 26 26.7 -2.7
TLY *e*SSS 00 28 23.3
TLY pmax pmax
comp=Z,135nm,1.0s,mb5.8
TLY MLR MLR
comp=Z,2µm,17.0s,MS5.2
IRK Irkutsk 54.97 2⇑*i*P P **00 15 14.7 -0.5**
IRK *e* 00 17 21.3
IRK *e* 00 18 24.1
IRK pmax pmax
comp=Z,210nm,1.4s,mb6.0
ARMA Armidale 55.08 125⇑*i*P P **00 15 16.8 +0.3**
KURK Kurchatov 56.72 343 P P **00 15 26.9 -0.9**
comp=Z,24nm,0.6s,mb5.4,baz=164,slow=7.2,SNR=65
KURK LR LR 00 43 13.4
comp=Z,598nm,18.8s,MS4.7,baz=165,slow=40
KURK Kurchatov 56.72 343*c i*P P **00 15 26.5 -1.2**
KURK pmax pmax
comp=Z,178nm,1.7s,mb5.8
ABKT Ailbek 56.75 320 P P **00 15 28.5 +0.2**
comp=Z,279nm,0.8s,mb6.3,SNR=12
VAN Vannovskaya 56.77 320⇑*i*P P **00 15 24.0 -4.4**
VAN *e*S S 00 23 44.4 +25
TAU Tasmania Unive 57.28 141 PFAKE 00 15 40.0 +8.1
TAU LR LR
comp=Z,1µm,19.0s,MS5.0
ZAA0 Zalesovo Array 58.20 349⇑*i*P P **00 15 37.3 -0.8**
ZAA0 *e*S S **00 23 31.4 -5.7**
ZALV Zalesovo Beam 58.20 349 P P **00 15 37.6 -0.5**
comp=Z,366nm,0.9s,mb6.4,baz=172,slow=5.7,SNR=524
ZALV S S **00 23 34.5 -2.6**
comp=Z,8.8nm,1.0s,baz=156,slow=12,SNR=15
ZALV LR LR 00 43 56.4
comp=Z,514nm,21.6s,MS4.6,baz=158,slow=39
ZALV PKP2bc 00 45 34.4
comp=Z,1.3nm,0.9s,baz=343,slow=4.6,SNR=4.5
ZALV Zalesovo Beam 58.20 349 P P **00 15 37.6 -0.5**
ZALV S S **00 23 34.5 -2.6**
ZALV LR LR 00 43 56.4
ZALV ⇑*e* 00 45 34.4
ZALV Zalesovo Beam 58.20 349 P P **00 15 37.6 -0.5**
ZALV S S **00 23 34.6 -2.6**
KLR Kul'dur 58.32 23 *e*P P **00 15 34.0 -5.0**
KLR *e* pP 00 15 46.8 -3.3
KLR *e*S S **00 23 31.0 -7.8**
KLR pmax pmax
comp=Z,180nm,1.8s,mb5.8
KLR MLR MLR
comp=Z,3µm,13.0s,MS5.5
HNR Honiara 58.90 99 *e*P P **00 15 41.9 -1.9**
HNR LR LR
comp=Z,597nm,20.0s,MS4.7
HABR Khabarovsk 59.09 26 *e*P P **00 15 40.8 -3.7**
HABR *e*SP 00 15 55.0
HABR *e* 00 16 29.5
HABR *e*S S **00 23 45.6 -3.3**
HABR *e* 00 24 02.5
HABR *e* 00 25 28.0
HABR *e*SS SS 00 27 40.0 -3.6
NVS Novosibirsk 59.36 348⇑*i*P P **00 15 44.4 -1.8**
NVS *e*S S **00 23 47.2 -5.0**
NVS pmax pmax
comp=Z,179nm,1.3s,mb5.9
NVS pmax pmax
comp=N,166nm,1.5s
NVS pmax pmax
comp=E,85nm,1.3s
NVS smax
comp=E,47nm,1.4s
ASAJ Asahikawa 59.76 34 P P **00 15 48.6 -0.6**
comp=E,16nm,0.4s,mb5.4,baz=227,slow=10,SNR=11
ASAJ LR LR 00 42 55.2
comp=E,301nm,19.8s,MS4.4,baz=262,slow=37
KBD Kabd 60.15 306 *e*P P **00 15 51.8 -0.3**
baz=306
KBD AMb AMB 00 15 54.6
comp=Z,62nm,2.0s,mb5.3,baz=306
RDF Al-Radifah 60.17 306 *e*P P **00 15 52.0 -0.3**
baz=306
RDF AMb AMB 00 15 54.6
comp=Z,127nm,1.9s,mb5.6,baz=306
UMR Umm Al-Rimmam 60.27 306 *e*P P **00 15 52.4 -0.6**
baz=306
UMR AMb AMB 00 15 54.7
comp=Z,142nm,1.3s,mb5.8,baz=306
NAY Al-Naaiem 60.54 306 *e*P P **00 15 54.2 -0.6**
baz=306
MIB Mutribah 60.67 307 *e*P P **00 15 55.8 +0.1**
baz=306
MIB AMb AMB 00 15 57.5
comp=Z,148nm,1.3s,mb6.0,baz=306
BVA0 Borovoye Array 61.34 339 *i* P P **00 15 58.5 -1.2**
BVA0 pmax pmax
comp=Z,15nm,0.9s,mb5.1
BVAR Borovoye Array 61.34 339 P P **00 15 58.5 -1.2**
comp=Z,30nm,0.6s,mb5.6,baz=142,slow=7.5,SNR=142
BOD Bodaibo 61.39 8 *e*P P **00 15 59.0 -1.0**
BOD pmax pmax
comp=Z,66nm,1.2s,mb5.6
BRVK Borovoye 61.40 339⇑*i*P P **00 15 59.1 -1.1**
BRVK LR LR
comp=Z,455nm,21.0s,MS4.6
YSS Yuzh-Sakhalins 61.69 31 *e*P P **00 16 01.8 -0.5**
YSS Yuzh-Sakhalins 61.69 31*ce*P P **00 16 01.5 -0.7**
YSS *e* pP 00 16 13.0 -0.4
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=Z,160nm,1.0s,mb6.1
CLNS Chul'man 62.59 15 *e*P P **00 16 07.7 -0.3**
CLNS *e* 00 16 45.9
CLNS *e* 00 18 23.2
CLNS *e*S S **00 24 30.2 -3.0**
CLNS *e* 00 25 54.9
CLNS *e*SS SS 00 28 30.3 -7.8
CLNS pmax pmax
comp=Z,50nm,1.0s,mb5.6
CLNS pmax pmax
comp=N,31nm,1.0s
CLNS pmax pmax
comp=E,24nm,1.1s
CLNS pmax pmax
comp=Z,1.0nm,0.2s,mb4.6
CLNS pmax pmax
comp=N,1.0nm,0.2s
CLNS pmax pmax
comp=E,4.0nm,0.6s
CLNS smax
comp=E,37nm,11.3s
CLNS smax
comp=N,60nm,12.9s
CLNS MLR MLR
comp=N,1µm,17.0s,MS5.3
CLNS MLR MLR
comp=Z,2µm,16.0s,MS5.4
CLNS MLR MLR
comp=E,2µm,19.0s,MS5.3
AB31 Akbulak array 62.88 331 P P **00 16 09.0 -1.1**
AB31 pmax pmax
comp=Z,135nm,0.8s,mb6.1
CASY Casey 63.65 176 *e*P P **00 16 12.1 -2.9**
comp=Z,22nm,1.1s,mb5.1
CASY LR LR
comp=Z,959nm,21.0s,MS5.0
AKTK Aktyubinsk 64.59 331 P P **00 16 20.4 -1.1**
AKTO Aktyubinsk 64.59 331 P P **00 16 20.4 -1.1**

comp=Z,42nm,1.0s,mb5.4,baz=129,slow=6.7,SNR=64
DZM Mont Dzumac 66.19 113 *e*P P **00 16 31.3 -1.1**
comp=Z,59nm,1.3s,mb5.5
MAK Makhachkala 66.27 320*d i*P P **00 16 30.5 -2.0**
MAK *i* 00 16 55.5
MAK *e* 00 18 59.8
MAK *e*PPP 00 20 42.8
MAK *i* S S 00 25 17.2 -2.1
MAK *e* 00 26 28.6
MAK pmax pmax
comp=Z,201nm,1.5s,mb5.9
MAK MLR MLR
comp=Z,324nm,19.0s,MS4.6
SVE Sverdlovsk 67.86 337⇓*e*P P **00 16 41.9 -0.3**
SVE *e* pP 00 16 55.0 +1.5
SVE *e* 00 19 06.4
SVE *e*PPP 00 20 46.7
SVE *e*S S 00 25 35.5 -2.4
SVE *e*SS SS 00 29 52.4 -7.8
SVE pmax pmax
comp=Z,187nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,677nm,22.0s,MS4.8
YAK Yakutsk 68.33 14 *e*P P **00 16 43.3 -1.7**
YAK LR LR
comp=Z,2µm,19.0s,MS5.3
YAK Yakutsk 68.33 14*c i*P P **00 16 43.3 -1.8**
YAK *e**PP pP 00 16 53.4 -3.0
YAK *e* 00 17 11.5
YAK *e*S S 00 25 39.5 -3.8
YAK *e* 00 26 39.6
YAK pmax pmax
comp=Z,190nm,0.9s,mb6.1
YAK pmax pmax
comp=E,58nm,1.2s
YAK pmax pmax
comp=N,67nm,1.0s
YAK pmax pmax
comp=Z,288nm,3.0s
YAK pmax pmax
comp=E,234nm,3.2s
YAK pmax pmax
comp=N,246nm,3.5s
YAK smax
comp=N,263nm,3.0s
YAK smax
comp=E,367nm,3.5s
YAK MLR MLR
comp=Z,2µm,21.0s,MS5.4
YAK MLR MLR
comp=N,1µm,20.0s,MS5.3
YAK MLR MLR
comp=E,1µm,21.0s,MS5.3
ARU Arti 68.40 336⇑*i*P P **00 16 43.9 -1.7**
ARU LR LR
comp=Z,600nm,21.0s,MS4.8
ARU Arti 68.40 336*c i*P P **00 16 44.8 -0.8**
ARU *e* 00 17 09.3
ARU *e* 00 19 14.5
ARU *e*PPP 00 20 55.3
ARU *e*S S 00 25 46.4 +2.1
ARU *e*SS SS 00 30 10.7 +2.2
ARU pmax pmax
comp=Z,137nm,1.3s,mb5.8
DRV Dumont d'Urvil 69.22 164 P P **00 16 55.0 +4.4**
DRV S S 00 25 49.0 -4.8
DRV SS SS 00 30 19.0 -1.8
DRV R 00 37 00.0
MAW Mawson 69.70 195 LR LR 00 41 08.7
comp=Z,1µm,21.4s,MS5.0,baz=38,slow=30
MAW Mawson 69.70 195 *e*P P **00 16 54.0 +0.4**
comp=Z,2.0nm,0.7s,mb4.2
KIV Kislovodsk 69.85 319⇑*i*P P **00 16 55.1 +0.2**
KIV LR LR
comp=Z,274nm,22.0s,MS4.5
KIV Kislovodsk 69.85 319 *e*P P **00 16 55.1 +0.2**
KIV *e* 00 17 14.9
KIV *e* 00 19 26.8
KIV *e*PPP 00 21 14.4
KIV *e*S S 00 26 00.5 -1.5
KIV pmax pmax
comp=Z,40nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,165nm,19.0s,MS4.3
ASF Jabal al Asfar 69.91 306 P P **00 16 56.5 +1.0**
comp=Z,19nm,1.1s,mb5.0,baz=75,slow=2.7,SNR=18
EIL Elat 70.83 303 P P **00 17 01.6 +0.3**
comp=Z,20nm,0.9s,mb5.0,baz=172,slow=1.0,SNR=16
SOKR Solikamsk 71.24 338*d i*P P **00 17 02.5 -0.5**
SOKR *e* 00 17 16.8
SOKR pmax pmax
comp=Z,100nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,880nm,26.0s,MS4.9
MMAI Mount Meron Ar 71.36 306 P P **00 17 05.2 +0.8**
baz=101,slow=7.8
SOC Sochi 71.67 318 *e*P P **00 17 03.7 -2.3**
SOC *e* 00 17 26.9
SOC *e* 00 19 44.1
SOC *e*PPP 00 21 26.1
SOC *e*S S 00 26 21.7 -1.4
SOC *e* 00 27 08.5
SOC *e*SS SS 00 30 56.8 -2.6
LSZ Lusaka 72.68 255 *e*P P **00 17 13.6 +1.1**
LSZ LR LR
comp=Z,595nm,21.0s,MS4.8
PEA0B Petropavlovsk- 73.08 32 *e*P P **00 17 13.2 -1.0**
PETK Petropavlovsk- 73.08 32 P P **00 17 12.8 -1.3**
comp=Z,31nm,0.9s,mb5.2,baz=265,slow=4.2,SNR=28
PETK LR LR 00 56 05.6
comp=Z,284nm,18.2s,MS4.6,baz=252,slow=41
PET Petropavlovsk 73.54 32⇑*e*P P **00 17 15.6 -1.3**
PET Petropavlovsk 73.54 32⇑*i*P P **00 17 15.7 -1.2**
PET *e* 00 20 02.4
PET *e*S S 00 26 41.5 -2.7
PET *e*PS 00 27 18.5
PET pmax pmax
comp=Z,145nm,0.8s,mb6.0
PET pmax pmax
comp=Z,200nm,9.0s
PET pmax pmax
comp=Z,100nm,16.1s
PET MLR MLR
comp=Z,400nm,21.0s,MS4.7
CSS Prodhromos 73.54 308 *e*P P **00 17 17.2 -0.2**
comp=Z,46nm,1.1s,mb5.3
CSS *e* pP 00 17 27.7 -1.0
VRHR Novokhopersk 73.61 326 *e*P P **00 17 16.4 -0.9**
VRHR pmax pmax
comp=Z,140nm,1.1s,mb5.8
VRHR pmax pmax
comp=N,70nm,1.2s
VRHR pmax pmax
comp=E,130nm,1.4s
ANN Anapa 73.64 318 *e*P pP 00 17 35.2 +6.1
ANN *e**PP pP 00 17 45.4 +16
ANN *e*S SKSac 00 27 22.3 +0.6
ANN pmax pmax
comp=Z,63nm,1.2s,mb5.4
RPZ Rata Peaks 73.66 135 LR LR 00 48 34.4
comp=Z,567nm,21.3s,MS4.8,baz=329,slow=35
BR131 Keskin Array S 74.64 312 *e*P P **00 17 23.0 -0.6**
BRTR Keskin Array B 74.64 312 P P **00 17 22.9 -0.7**
comp=Z,12nm,0.9s,mb4.8,baz=126,slow=7.3,SNR=32
BRTR LR LR 00 51 55.9
comp=Z,124nm,21.0s,MS4.2,baz=216,slow=37
BRTR Keskin Array B 74.64 312⇑*e*P P **00 17 23.0 -0.7**
VORD Divnogorie 74.88 325*c i*P P **00 17 23.7 -1.1**
VORD pmax pmax
comp=Z,60nm,1.1s,mb5.4
VORD pmax pmax
comp=N,50nm,1.3s
VORD pmax pmax
comp=E,70nm,1.0s
VSR Storozhevoye 75.06 325*c i*P P **00 17 24.6 -1.2**
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,50nm,1.2s
VSR pmax pmax
comp=Z,30nm,1.2s,mb5.1
VOR Voronezh 75.25 325 *e*P P **00 17 25.0 -1.9**
VOR pmax pmax
comp=Z,280nm,1.8s,mb5.9
ANTO Ankara 75.31 312 *e*P P **00 17 27.8 +0.3**

comp=Z,60nm,1.4s,mb5.3
ANTO Ankara 75.31 312 *e*P P **00 17 27.8 +0.3**
ANTO pmax pmax
comp=Z,60nm,1.4s,mb5.3
LBTB Lobatse 75.57 245 P P **00 17 30.4 +1.0**
LBTB LR LR
comp=Z,751nm,19.0s,MS5.0
SEY Seymchan 76.05 22⇑*e*P P **00 17 29.6 -1.6**
BOSA Boshof 76.12 241 LR LR 00 47 40.0
comp=Z,405nm,18.1s,MS4.8,baz=84,slow=33
BOSA Boshof 76.12 241 PFAKE 00 17 40.0 +7.6
BOSA LR LR
comp=Z,513nm,19.0s,MS4.8
TIXI Tiksi 76.55 9 *e*P P **00 17 31.9 -2.0**
TIXI *e*PP PP 00 20 24.1 -2.3
TIXI Tiksi 76.55 9*c i*P P **00 17 32.0 -1.9**
TIXI pmax pmax
comp=Z,186nm,1.7s,mb5.7
URZ Urewera 77.32 128 LR LR 00 51 31.6
comp=Z,397nm,19.8s,MS4.7,baz=296,slow=36
MOS Moscow 77.75 329 *e*P P **00 17 37.5 -3.5**
MOS *e*S S 00 27 26.1 -4.5
MOS pmax pmax
comp=Z,210nm,1.7s,mb5.8
MOS pmax pmax
comp=Z,500nm,2.1s,mb6.1
OBN Obninsk 78.06 328*c i*P P **00 17 42.5 -0.2**
OBN *i* pP 00 17 52.2 -1.9
OBN *i* 00 20 38.4
OBN *i*S S 00 27 31.7 -2.2
OBN *i*SS SS 00 32 30.1 -5.8
OBN pmax pmax
comp=Z,252nm,1.8s,mb5.8
KLMR Klimovskoe 79.04 334 *i*P P **00 17 47.5 -0.5**
KLMR pmax pmax
comp=Z,183nm,1.5s,mb5.8
TIRR Tirgusor 79.67 316⇑*e*P P **00 17 51.4 -0.4**
TIRR Tirgusor 79.67 316⇑*i*P P **00 17 51.4 -0.4**
HARR Harsova 80.06 316 P P **00 17 54.2 +0.3**
HARR Harsova 80.06 316⇑*i*P P **00 17 53.8 -0.1**
PRD Provadia 80.08 315 P P **00 17 53.5 -0.5**
NEF NEVSHA 80.18 315 P P **00 17 54.5 -0.1**
SUR Sutherland 80.19 238 P P **00 17 57.1 +2.2**
comp=Z,7.6nm,0.9s,mb4.6,baz=84,slow=10,SNR=1.9
SUR Sutherland 80.19 238 P P **00 17 57.1 +2.2**
SUR LR LR
comp=Z,1µm,21.0s,MS5.2
AKASG Malin Array Be 80.78 322 P P **00 17 56.3 -1.3**
comp=Z,7.4nm,0.7s,mb4.7,baz=92,slow=4.5,SNR=46
AKASG pP pP 00 18 11.3 +2.2
comp=Z,5.2nm,0.6s,baz=88,slow=5.0,SNR=6.7
AKASG PP PP 00 21 01.7 -0.4
comp=Z,2.7nm,0.8s,baz=90,slow=6.8,SNR=5.2
AKASG LR LR 00 59 30.4
comp=Z,202nm,20.6s,MS4.5,baz=105,slow=40
AKASG Malin Array Be 80.78 322 P P **00 17 56.3 -1.3**
AKASG pP pP 00 18 11.3 +2.2
AKASG PP PP 00 21 01.7 -0.4
AKASG LR LR 00 59 30.4
AKASG Malin Array Be 80.78 322 P P **00 17 56.3 -1.3**
AKASG **PP* pP 00 18 11.3 +2.2
AKASG 00 21 01.7
AKBB Malin Array Si 80.78 322 *e*P P **00 17 56.4 -1.2**
AKBB Malin Array Si 80.78 322 P P **00 17 56.8 -0.8**
KIEV Kiev 80.79 322 *e*P P **00 17 56.5 -1.1**
comp=Z,22nm,1.0s,mb5.0
KIEV *e*PcP PcP 00 18 01.8 -2.4
KIEV Kiev 80.79 322 *e*P P **00 17 56.5 -1.1**
KIEV *e* 00 18 01.8
KIEV pmax pmax
comp=Z,22nm,1.0s,mb5.0
RAO Raoul Island 80.82 119 LR LR 00 53 48.0
comp=Z,460nm,19.6s,MS4.8,baz=308,slow=36
VNDA Vanda 81.12 169 P P **00 18 01.2 +2.3**
comp=Z,4.0nm,0.9s,mb4.3,baz=281,slow=3.2,SNR=3.6
VNDA pP pP 00 18 13.0 +2.5
comp=Z,18nm,1.1s,baz=297,slow=4.7,SNR=13
VNDA LR LR 00 50 10.7
comp=Z,371nm,20.4s,MS4.7,baz=310,slow=33
VNDA Vanda 81.12 169 P P **00 18 01.3 +2.3**
VNDA **PP* pP 00 18 13.0 +2.5
SZH Strazhica 81.14 314 P P **00 17 58.6 -1.1**
VRI Vrincioaia 81.17 317 P P **00 18 00.5 +0.7**
VRI Vrincioaia 81.17 317⇑*i*P P **00 18 00.2 +0.4**
PLOR Plostina 81.22 317 P P **00 18 01.3 +1.3**
MLR Muntele Rosu 81.61 317 P P **00 18 02.6 +0.5**
MLR Muntele Rosu 81.61 317⇑*i*P P **00 18 02.5 +0.3**
RZN Rozhen 81.70 313 P P **00 18 02.2 -0.5**
SBA Scott Base 82.22 169 *e*P P **00 18 05.7 +0.9**
comp=Z,47nm,1.3s,mb5.2
SBA *e* 00 18 19.8
SBA LR LR
comp=Z,620nm,21.0s,MS5.0
SBA Scott Base 82.22 169 *e*P P **00 18 05.7 +0.9**
SBA *e* 00 18 19.8
SBA pmax pmax
comp=Z,47nm,1.3s,mb5.3
SBA MLR MLR
comp=Z,620nm,21.0s,MS5.0
VOIR 82.22 316 ⇓*e*P P **00 18 07.3 +1.9**
VOIR 82.22 316 ⇓*i*P P **00 18 07.3 +2.0**
BURAR Bucovina Array 82.57 319 ⇓*e*P P **00 18 08.1 +1.0**
BURAR Bucovina Array 82.57 319 ⇓*i*P P **00 18 08.1 +1.0**
BUR08 Bucovina Ar. S 82.59 319 *e*P P **00 18 07.9 +0.7**
BUR08 *e* pP 00 18 17.4 -1.3
MNK Minsk 82.63 326 *e*P P **00 18 06.0 -1.3**
MNK pmax pmax
comp=Z,270nm,1.2s,mb6.2
TSUM Tsumeb 82.86 251 *e*P P **00 18 10.1 +0.9**
comp=Z,20nm,1.1s,mb5.1
TSUM *e* 00 18 24.5
TSUM LR LR
comp=Z,982nm,21.0s,MS5.2
KKB Krupnik 82.93 313 P P **00 18 04.5 -4.6**
VTS Vitosha 82.97 313 P P **00 18 09.3 0.0**
VTS Vitosha 82.97 313 P P **00 18 08.9 -0.4**
VTS Vitosha 82.97 313 ⇓*i*P P **00 18 09.1 -0.2**
JOF Joensuu 83.42 334 *ep* P **00 18 10.4 -0.8**
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 83.42 334 *e*P P **00 18 10.4 -0.8**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BILL Bilibino 83.62 20 *e*P P **00 18 05.9 -6.2**
comp=Z,8.5nm,0.6s,mb5.0
BILL Bilibino 83.62 20 *e*P P **00 18 10.9 -1.2**
BILL pmax pmax
comp=Z,45nm,1.3s,mb5.4
BMR Baia Mare 83.72 318 P P **00 18 14.5 +1.4**
GZR Gura Zlata 83.78 316 P P **00 18 14.2 +0.8**
GZR Gura Zlata 83.78 316⇑*i*P P **00 18 14.3 +0.9**
DEV Deva 83.78 317⇑P P **00 18 15.0 +1.5**
DEV Deva 83.78 317⇑*i*P P **00 18 15.0 +1.6**
LVV L'vov 83.80 321 *e*P P **00 18 12.9 -0.5**
DRGR 84.08 317 P P **00 18 15.5 +0.6**
DRGR 84.08 317⇑*i*P P **00 18 15.5 +0.6**
APA Apatity 84.25 339⇑*i*P P **00 18 15.4 +0.1**
APA pmax pmax
comp=Z,90nm,1.2s,mb5.8
APA MLR MLR
comp=Z,1µm,13.0s,MS5.4
VSU Vasula 84.26 329 *i* P P **00 18 15.0 -0.6**
TRPA Tarpa 84.44 319⇑*i*P P **00 18 17.1 +0.4**
KWP Kalwaria 84.61 320 *e*P P **00 18 17.9 +0.4**
KWP LMZ 00 57 50.2
comp=Z,300nm,28.3s
KWP Kalwaria 84.61 320⇑*i*P P **00 18 17.9 +0.4**
BZS Buzias 84.62 316 P P **00 18 18.2 +0.4**
BZS Buzias 84.62 316 ⇓*i*P P **00 18 17.7 0.0**
UZH Uzhgorod 84.69 319 ⇓*i*P P **00 18 18.0 0.0**
UZH *e* 00 18 36.0
UZH *e* 00 21 32.7
KOLS Kolonicke sedl 84.76 319 *i* P P **00 18 19.1 +0.8**
KOLS *e* pP 00 18 28.7 -1.2
KOLS pmax pmax
comp=Z,79nm,1.3s,mb5.7
KOLS Kolonicke sedl 84.76 319 *i* P P **00 18 19.1 +0.8**
KOLS *e*pP pP 00 18 28.7 -1.2
SUW Suwalki 85.17 325 *e*P P **00 18 20.3 0.0**
SUW LMZ 00 55 07.4
comp=Z,300nm,28.0s
CRVS Cervenica-Dubn 85.28 319 *i* P P **00 18 21.1 +0.2**
CRVS *e* 00 18 35.8
CRVS pmax pmax
comp=Z,30nm,1.6s,mb5.2

CRVS Cervenica-Dubn 85.28 319 *i* P **P** **00 18 21.1 +0.2**
CRVS *e*pP pP 00 18 35.8 +3.3
KAF Kangasniemi 85.41 333 *e*p **P** **00 18 20.4 -0.9**
comp=Z,12nm,0.6s,mb5.2,baz=99,slow=4.6
KAF Kangasniemi 85.41 333 *e*P **P** **00 18 20.4 -0.9**
KAF pmax pmax
comp=Z,12nm,0.6s,mb5.2
STHS Stebnicka Huta 85.51 320 *i* P **P** **00 18 22.5 +0.4**
STHS *e* 00 18 38.7
STHS pmax pmax
comp=Z,18nm,1.2s,mb5.2
STHS Stebnicka Huta 85.51 320 *i* P **P** **00 18 22.5 +0.4**
STHS *e*pP pP 00 18 38.7 +5.1
NIE Niedzica 86.11 320 *e*P **P** **00 18 25.7 +0.7**
PSZ Piszkesteto 86.15 318 P **P** **00 18 26.0 +0.7**
PSZ Piszkesteto 86.15 318⇑ *e*P **P** **00 18 25.4 +0.1**
PSZ Piszkesteto 86.15 318⇑ *i*P **P** **00 18 25.4 +0.1**
OJC Ojcow 86.56 321 *e*P **P** **00 18 27.1 -0.1**
AFI Afiamalu 86.62 104 LR LR 00 52 51.8
comp=Z,162nm,20.8s,MS4.4,baz=290,slow=33
BUD Budapest 86.67 318⇑ *e*P **P** **00 18 28.0 +0.1**
PKSM Moragy 86.77 316⇑ *e*P **P** **00 18 28.1 -0.2**
PKSM Moragy 86.77 316 P **P** **00 18 28.8 +0.5**
PKSM Moragy 86.77 316⇑ *i*P **P** **00 18 28.2 -0.1**
VYHS Vyhne 86.94 319 *i* P **P** **00 18 29.1 0.0**
VYHS *e* 00 18 47.4
VYHS *e* 00 21 53.4
VYHS pmax pmax
comp=Z,24nm,1.5s,mb5.2
VYHS Vyhne 86.94 319 *i* P **P** **00 18 29.1 0.0**
VYHS *e*pP pP 00 18 47.4 +6.7
VYHS *e* 00 19 00.0
VYHS *e*PP PP 00 21 53.4 +0.9
NVL N'lazarevskaya 87.04 199 P pP 00 18 45.2 +4.4
NVL pmax pmax
comp=Z,16nm,1.2s,mb5.1
QSPA South Pole Qui 87.10 180 P **P** **00 18 30.7 +1.3**
comp=Z,3.5nm,0.6s,mb4.8,baz=292,slow=5.4,SNR=1.9
QSPA pP pP 00 18 44.5 +3.5
comp=Z,6.6nm,0.7s,baz=305,slow=4.6,SNR=1.9
QSPA South Pole Qui 87.10 180 P **P** **00 18 30.7 +1.3**
QSPA pP pP 00 18 44.5 +3.5
KEV Kevo 87.17 340 *e*p **P** **00 18 29.3 -0.5**
comp=Z,13nm,0.8s,mb5.2
KEV Kevo 87.17 340 *e*P **P** **00 18 29.3 -0.5**
KEV pmax pmax
comp=Z,13nm,0.8s,mb5.2
KOLL Kolacno 87.23 319 *i* P **P** **00 18 30.6 0.0**
OKC Ostrava-Krasne 87.56 320 *e*P **P** **00 18 32.5 +0.4**
OKC *e*pP pP 00 18 42.8 -0.9
OKC Ostrava-Krasne 87.56 320 *e*P **P** **00 18 32.5 +0.4**
OKC *e*pP pP 00 18 42.8 -0.9
OKC AMS AMS 01 07 20.0
comp=Z,300nm,15.6s
ARCES ARCESS Array B 87.62 340 P **P** **00 18 31.5 -0.5**
comp=Z,35nm,0.9s,mb5.6,baz=92,slow=4.1,SNR=26
ARCES pP pP 00 18 45.7 +2.1
comp=Z,14nm,0.8s,baz=102,slow=4.9,SNR=3.9
ARCES PP PP 00 21 58.3 +0.9
comp=Z,6.8nm,0.9s,baz=131,slow=5.3,SNR=5.0
ARCES LR LR 01 01 27.1
comp=Z,392nm,21.6s,MS4.8,baz=112,slow=38
ARCES ARCESS Array B 87.62 340 P **P** **00 18 31.5 -0.5**
ARCES pP pP 00 18 45.7 +2.1
ARCES PP PP 00 21 58.3 +0.9
ARCES LR LR 01 01 27.1
ARCES ARCESS Array B 87.62 340 P **P** **00 18 31.5 -0.5**
ARCES *PP pP 00 18 45.7 +2.1
ARCES 00 21 58.3
CEL Celeste 87.92 308 *e*P **P** **00 18 34.6 +0.5**
comp=Z,69nm,1.5s,mb5.7
MODS Modra-Piesok 87.95 318 *e*P **P** **00 18 34.3 +0.3**
MODS pmax pmax
comp=Z,31nm,1.6s,mb5.3
ZST Bratislava 88.05 318 *e*P **P** **00 18 34.7 +0.2**
ZST *e* 00 18 50.2
ZST *e* 00 22 02.1
ZST pmax pmax
comp=Z,19nm,1.2s,mb5.2
ZST Bratislava 88.05 318 *e*P **P** **00 18 34.7 +0.2**
ZST *e*pP pP 00 18 50.2 +4.1
ZST *e*PP PP 00 22 02.1 +0.7
KOGS Kog 88.44 316 *i* P **P** **00 18 36.6 +0.3**
GKP Gorka Klasztor 88.54 323 *e*P **P** **00 18 37.0 +0.3**
GKP LMZ 00 56 07.7
comp=Z,300nm,31.5s
GKP Gorka Klasztor 88.54 323 *e*P **P** **00 18 37.0 +0.3**
GKP LR LR
comp=Z,300nm,31.5s,MS4.5
DPC Dobruska-Polom 88.79 320 *e*P **P** **00 18 38.6 +0.7**
DPC *e*pP pP 00 18 48.0 -1.5
DPC *e*sP sP 00 18 55.5 +1.7
GOLS Golise 88.83 316 *e*P **P** **00 18 38.9 +0.7**
CONA Conrad Observa 88.85 318⇑ *i*P **P** **00 18 38.3 +0.1**
comp=Z,14nm,1.4s,mb5.1
CSNA Conrad Observa 88.85 318⇑ *i*P **P** **00 18 38.3 +0.1**
comp=Z,12nm,1.2s,mb5.1
KSP Ksiaz 88.86 321 *e*P **P** **00 18 39.1 +0.9**
KSP LMZ 01 03 58.8
comp=Z,600nm,24.2s
KSP Ksiaz 88.86 321⇑ *e*P **P** **00 18 38.8 +0.6**
KSP *e**PP pP 00 18 57.3 +7.4
UPC Upice 89.00 320 *e*P **P** **00 18 39.5 +0.6**
UPC *e*pP pP 00 18 48.9 -1.6
UPC *e*sP sP 00 18 58.1 +3.3
ARSA Arzberg 89.01 317⇑ *i*PcP PcP 00 18 39.5 -1.0
comp=Z,35nm,1.6s,SNR=13
BOJS Bojanci 89.04 315 *i* P **P** **00 18 39.6 +0.4**
TREC Trest 89.22 319 *e*P **P** **00 18 40.3 +0.3**
TREC *ex* x 00 18 59.6
TREC AMS AMS 01 07 50.0
comp=Z,300nm,22.4s
SOKA Soboth 89.30 317⇑ *i*PcP PcP 00 18 41.0 -0.8
comp=Z,44nm,1.4s
LJU Ljubljana 89.59 316 *e*P **P** **00 18 42.4 +0.6**
OBKA Obir 89.61 316⇑ *i*PcP PcP 00 18 42.6 -0.6
comp=Z,27nm,1.5s
PRU Pruhonice 89.89 320 *e*P **P** **00 18 43.4 +0.3**
PRU *e*pP pP 00 18 52.1 -2.6
PRU *e*sP sP 00 19 01.3 +2.3
PRU AMS AMS 01 05 40.0
comp=Z,300nm,19.7s
MOA Molln 89.91 318⇑ *i*P **P** **00 18 43.4 +0.2**
comp=Z,14nm,1.2s,mb5.2
PVCC Panska Ves 89.92 320 *e*P **P** **00 18 43.8 +0.6**
PVCC *e*pP pP 00 18 54.3 -0.6
PVCC AMS AMS 01 05 30.0
comp=Z,500nm,22.5s
CADS Cadrg 90.16 316 *e*P **P** **00 18 44.5 +0.1**
MYKA Terra Mystica 90.25 316⇑ *i*PcP PcP 00 18 45.2 -0.8
comp=Z,36nm,1.7s
BRG Berggiesshubel 90.34 321 *e*P **P** **00 18 45.9 +0.7**
comp=Z,37nm,1.5s,mb5.5
BRG *i* 00 19 05.2
BRG *e* 00 19 16.5
BRG LR LR
comp=Z,320nm,27.3s,MS4.6
BRG Berggiesshubel 90.34 321 *e*P **P** **00 18 45.8 +0.6**
comp=Z,61nm,1.5s,mb5.7
BRG *e*pP pP 00 19 05.1 +8.3
BRG Berggiesshubel 90.34 321 *e*P **P** **00 18 45.9 +0.7**
comp=Z,61nm,1.5s,mb5.7
BRG *i* 00 19 05.2
comp=Z,26nm,1.1s
BRG *e* 00 19 16.5
comp=Z,4.0nm,1.1s
BRG
comp=N,382nm,19.9s
BRG
comp=E,407nm,24.7s
BRG
comp=Z,528nm,27.3s
GEC2 GERESS Array S 90.36 319 *e*P **P** **00 18 47.1 +1.8**
comp=Z,18µm,1.6s
GEC2 PP PP 00 22 19.5 -0.3
GEC2 GERESS Array S 90.36 319 *e*P **P** **00 18 45.8 +0.5**
GEC2 pmax pmax
comp=Z,99nm,1.6s,mb5.9
GEC2 GERESS Array S 90.36 319 *e*P **P** **00 18 45.8 +0.5**
comp=Z,99nm,1.6s,mb5.9
GEC2 *e*pP pP 00 19 05.2 +8.3
GERES GERESS Array B 90.36 319 P **P** **00 18 45.4 +0.1**
comp=Z,12nm,1.1s,mb5.1,baz=108,slow=4.3,SNR=50
GERES PP PP 00 22 21.9 +2.1
comp=Z,1.5nm,1.0s,baz=81,slow=6.4,SNR=4.0
KHC Kasperske Hory 90.46 319 *e*P **P** **00 18 46.0 +0.2**
KHC *e**PP pP 00 18 54.2 -3.2
KHC MLR MLR
comp=Z,400nm,18.2s,MS4.9
KHC Kasperske Hory 90.46 319 *e*P **P** **00 18 46.0 +0.2**
KHC *e*pP pP 00 18 54.2 -3.2
KHC *ex* x 00 19 05.2
KHC AMS AMS 01 08 40.0
comp=Z,400nm,18.2s
KBA Koelnbreinsper 90.48 317⇑ *i*P **P** **00 18 45.7 -0.2**
comp=Z,15nm,1.1s,mb5.3
RUE Ruedersdorf 90.56 322 *e*P **P** **00 18 46.3 +0.2**
comp=Z,33nm,0.9s,mb5.7
RUE *e*PP PP 00 22 20.5 -0.8
RUE Ruedersdorf 90.56 322 *e*P **P** **00 18 46.8 +0.7**
comp=Z,150nm,1.4s,mb6.1
RUE *e*pP pP 00 19 06.1 +8.3
FBE Freiberg 90.72 321 *e*P **P** **00 18 47.5 +0.6**
comp=Z,62nm,1.5s,mb5.7
RJOB Jochberg 90.89 318 *e*P **P** **00 18 47.2 -0.6**
comp=Z,16nm,1.3s,mb5.2
WET Wettzell 90.92 319 *e*P **P** **00 18 48.4 +0.5**
WET pmax pmax
comp=Z,52nm,1.4s,mb5.7
WET Wettzell 90.92 319 *e*P **P** **00 18 48.4 +0.5**
comp=Z,52nm,1.4s,mb5.7
CLL Collm 90.96 321⇑ *i*P **P** **00 18 48.0 -0.1**
comp=Z,49nm,1.6s,mb5.6
CLL *i* 00 19 08.1
CLL *e*S S 00 29 45.0 +2.3
CLL LR LR
comp=Z,300nm,21.7s,MS4.7
CLL Collm 90.96 321⇑ *i*P **P** **00 18 48.0 -0.1**
CLL *e*S S 00 29 45.0 +2.3
CLL pmax pmax
comp=Z,49nm,1.6s,mb5.6
CLL MLR MLR
comp=Z,300nm,21.7s,MS4.7
CLL Collm 90.96 321 *e*P **P** **00 18 48.2 +0.1**
comp=Z,51nm,1.6s,mb5.6
CLL *e*pP pP 00 19 07.7 +8.0
CLL Collm 90.96 321⇑ *i*P **P** **00 18 48.0 -0.1**
comp=Z,49nm,1.6s,mb5.6
CLL *i* x x 00 19 08.1
CLL *e*SKSac SKSac 00 29 07.0 -10
CLL *e*S S 00 29 45.0 +2.3
comp=N,200nm,29.9s
CLL *e*PS PS 00 30 54.0 -1.2
CLL *ex* x 00 31 48.0
CLL *e*SSSS 00 42 54.0
CLL Lm 01 06 00.0
comp=N,200nm,19.5s
CLL Lm 01 06 00.0
comp=E,300nm,20.4s
CLL Lm 01 06 00.0
comp=Z,300nm,21.7s
ABTA Abfaltersbach 91.03 317⇑ *i*P **P** **00 18 47.9 -0.6**
comp=Z,15nm,1.2s,mb5.2
NKC Novy Kostel 91.26 320 *e*P **P** **00 18 50.3 +0.9**
NKC *e*pP pP 00 18 58.3 -2.8
NKC *e* 00 19 06.5
NKC Novy Kostel 91.26 320 *e*P **P** **00 18 50.3 +0.9**
NKC *e*pP pP 00 18 58.3 -2.8
NKC *e*sP sP 00 19 06.5 +1.2
NKC AMS AMS 01 06 40.0
comp=Z,400nm,16.8s
TANN Tannenbergstha 91.26 320 *e*P **P** **00 18 49.9 +0.5**
comp=Z,46nm,1.7s,mb5.5
TANN *e*pP pP 00 19 09.1 +8.0
WERN Wernitzgruen 91.31 320 *e*P **P** **00 18 50.4 +0.7**
comp=Z,24nm,1.4s,mb5.3
WERN *e*pP pP 00 19 09.8 +8.5
GUNZ Gunzen 91.34 320 *e*P **P** **00 18 50.4 +0.6**
comp=Z,32nm,1.4s,mb5.5
GUNZ *e*pP pP 00 19 09.7 +8.2
WERD Werda 91.36 320 *e*P **P** **00 18 50.3 +0.4**
comp=Z,26nm,1.3s,mb5.4
WERD *e*pP pP 00 19 09.5 +8.0
ROTZ Rotzenmuhle 91.39 320 *e*P **P** **00 18 51.0 +0.9**
comp=Z,42nm,1.5s,mb5.5
MANZ Manzenberg 91.46 320 *e*P **P** **00 18 51.1 +0.7**
comp=Z,64nm,1.5s,mb5.7
MANZ *e*pP pP 00 19 11.4 +9.4
WTTA Wattenberg 91.66 317⇑ *i*P **P** **00 18 51.2 -0.1**
comp=Z,20nm,1.0s,mb5.4
WATA Walderalm 91.70 317⇑ *i*PcP PcP 00 18 51.9 -0.5
comp=Z,13nm,1.1s
MOX Moxa 91.81 320 *e*P **P** **00 18 52.5 +0.5**
comp=Z,32nm,1.6s,mb5.4
MOX *e* 00 19 12.3
MOX Moxa 91.81 320 *e*P **P** **00 18 52.5 +0.5**
MOX pmax pmax
comp=Z,32nm,1.6s,mb5.4
MOX Moxa 91.81 320 *e*P **P** **00 18 52.2 +0.2**
comp=Z,29nm,1.4s,mb5.4
MOX *e*pP pP 00 19 11.3 +7.7
FUR Furstenfeldbru 91.93 318 *e*P **P** **00 18 52.7 +0.1**
FUR pmax pmax
comp=Z,32nm,1.2s,mb5.5
FUR Furstenfeldbru 91.93 318 *e*P **P** **00 18 52.7 +0.1**
comp=Z,32nm,1.2s,mb5.5
SQTA Sankt Quirin 91.94 317⇑ *i*P **P** **00 18 52.7 0.0**
comp=Z,8.2nm,0.7s,mb5.2
GRF Grafenberg Arr 92.02 319 *e*P **P** **00 18 53.5 +0.5**
GRF pmax pmax
comp=Z,88nm,1.8s,mb5.8
GRF Grafenberg Arr 92.02 319 *e*P **P** **00 18 53.5 +0.5**
GRF pmax pmax
comp=Z,88nm,1.8s,mb5.8
GRF Grafenberg Arr 92.02 319 *e*P **P** **00 18 53.5 +0.5**
comp=Z,88nm,1.8s,mb5.8
RETA Reutte 92.26 317⇑ *i*P **P** **00 18 54.0 -0.1**
comp=Z,17nm,1.0s,mb5.3
FETA Feichten 92.27 317⇑ *i*PcP PcP 00 18 54.5 -0.5
comp=Z,16nm,1.1s
NOA NORSAR Array B 92.38 331 P **P** **00 18 53.5 -1.0**
comp=Z,9.9nm,1.0s,mb5.1,baz=95,slow=4.9,SNR=13
NOA PP PP 00 22 38.6 +3.2
comp=Z,3.9nm,0.9s,baz=91,slow=7.5,SNR=4.8
NOA LR LR 01 04 29.0
comp=Z,340nm,21.7s,MS4.8,baz=105,slow=38
NOA NORSAR Array B 92.38 331 P **P** **00 18 53.5 -0.9**
NOA 00 22 38.7
CLZ Clausthal 92.62 322 *e*P **P** **00 18 55.7 0.0**
CLZ pmax pmax
comp=Z,37nm,1.4s,mb5.6
CLZ Clausthal 92.62 322 *e*P **P** **00 18 55.7 0.0**
comp=Z,37nm,1.4s,mb5.6
BSEG Bad Segeberg 92.70 324 *e*P **P** **00 18 56.3 +0.3**
BSEG pmax pmax
comp=Z,32nm,1.4s,mb5.6
BSEG Bad Segeberg 92.70 324 *e*P **P** **00 18 56.3 +0.3**
comp=Z,32nm,1.4s,mb5.6
NRDL Niedersach Rie 92.80 322 *e*P **P** **00 18 57.1 +0.6**
comp=Z,25nm,1.3s,mb5.5
NRDL *e*pP pP 00 19 16.5 +8.3
UBBA Unterbreizbach 92.84 321 *e*P **P** **00 18 56.8 +0.1**
comp=Z,50nm,2.0s,mb5.6
DAVA Damuels 92.85 317⇑ *i*PcP PcP 00 18 57.2 -0.3
comp=Z,38nm,1.7s,SNR=6.4
KEST Kesra 93.00 305 P **P** **00 18 59.1 +1.2**
comp=Z,3.7nm,1.2s,mb4.7,baz=106,slow=9.5,SNR=3.6
KEST LR LR 01 01 23.6
comp=Z,86nm,18.9s,MS4.2,baz=340,slow=36
KONO Kongsberg 93.17 329⇑ *e*P **P** **00 18 56.9 -1.2**
STU Stuttgart 93.33 319 *e*P **P** **00 18 59.2 +0.1**
comp=Z,40nm,1.7s,mb5.6
TNS Taunus Mts 93.82 320 *e*P **P** **00 19 01.8 +0.5**
TNS pmax pmax
comp=Z,29nm,1.2s,mb5.6
TNS Taunus Mts 93.82 320 *e*P **P** **00 19 01.8 +0.5**
comp=Z,29nm,1.2s,mb5.6
BFO Black Forest 93.91 318 *e*P **P** **00 19 01.3 -0.4**
BFO pmax pmax
comp=Z,20nm,1.4s,mb5.3
BFO Black Forest 93.91 318 *e*P **P** **00 19 01.3 -0.4**
comp=Z,20nm,1.4s,mb5.3
CDF Champ du Feu 94.61 318 *e*P **P** **00 19 04.4 -0.5**
HINF Hinteralfeld 94.90 318 *e*P **P** **00 19 05.1 -1.2**
MBDF Montbardon 95.01 314 *e*P **P** **00 19 06.2 -0.7**
LPG La Plagne 95.02 315 *e*P **P** **00 19 06.2 -0.7**
comp=Z,34nm,1.2s,mb5.3
LPG La Plagne 95.02 315 *e*P **P** **00 19 06.2 -0.7**
comp=Z,17nm,1.2s,mb5.3
LPG La Plagne 95.02 315 *e*P **P** **00 19 06.2 -0.7**
LPG pmax pmax
comp=Z,17nm,1.2s,mb5.3
LPL La Plagne 95.03 315 *e*P **P** **00 19 06.3 -0.6**
comp=Z,14nm,0.9s,mb5.1
LPL La Plagne 95.03 315 *e*P **P** **00 19 06.3 -0.6**
comp=Z,7.0nm,0.9s,mb5.1
LPL La Plagne 95.03 315 *e*P **P** **00 19 06.3 -0.6**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
FRF La Foret Royal 95.12 313 *e*P **P** **00 19 06.0 -1.4**
LMR La Mourre 95.23 313 *e*P **P** **00 19 07.0 -0.9**
HAU Haudompre 95.24 318 *e*P **P** **00 19 06.6 -1.2**
comp=Z,36nm,1.3s,mb5.3
HAU Haudompre 95.24 318 *e*P **P** **00 19 06.6 -1.2**
comp=Z,18nm,1.3s,mb5.3
HAU Haudompre 95.24 318 *e*P **P** **00 19 06.6 -1.2**
HAU pmax pmax
comp=Z,18nm,1.3s,mb5.3
CABF La Chapelle 95.45 316 *e*P **P** **00 19 06.8 -2.1**
comp=Z,26nm,1.1s,mb5.3
CABF La Chapelle 95.45 316 *e*P **P** **00 19 06.8 -2.1**
comp=Z,13nm,1.1s,mb5.3
CABF La Chapelle 95.45 316 *e*P **P** **00 19 06.8 -2.1**
CABF pmax pmax
comp=Z,13nm,1.1s,mb5.3
ORIF Oris-en-Rattie 95.64 315 *e*P **P** **00 19 09.3 -0.5**
SMRF Simiane la Rot 95.89 314 *e*P **P** **00 19 09.8 -1.1**
MEZF Maizieres J'vi 96.08 318 *e*P **P** **00 19 10.0 -1.7**
GIVF Givet 96.16 320 *e*P **P** **00 19 10.5 -1.5**
LOR Lormes 96.95 317 *e*P **P** **00 19 15.1 -0.5**
comp=Z,60nm,1.5s,mb5.5
LOR Lormes 96.95 317 *e*P **P** **00 19 15.1 -0.5**
comp=Z,30nm,1.5s,mb5.5
LOR Lormes 96.95 317 *e*P **P** **00 19 15.1 -0.5**
LOR pmax pmax
comp=Z,30nm,1.5s,mb5.5
SSF Saint Saulge 97.20 317 *e*P **P** **00 19 15.9 -0.9**
TOA0 Torodi Ar. St 99.71 283 *e*Pdif Pdif 00 19 30.6 +2.7
TORD Torodi Ar. Bea 99.71 283 P Pdif 00 19 28.6 +0.7
comp=Z,0.6nm,0.8s,baz=96,slow=6.1,SNR=2.7
TORD PP PP 00 23 44.0 +11
comp=Z,1.1nm,1.1s,baz=94,slow=4.3,SNR=3.6
TORD LR LR 01 00 57.1
comp=Z,259nm,20.8s,MS4.7,baz=95,slow=33
MCK McKinley 101.36 25 *e*Pdif Pdif 00 19 33.5 -1.6
COLA College 101.46 24 PFAKE 00 19 50.0 +14
COLA LR LR
comp=Z,413nm,20.0s,MS5.0
ESLA Sonseca Array 103.34 310 PFAKE 00 20 00.0 +16
ESLA LR LR
comp=Z,912nm,19.0s,MS5.3
DBIC Dimbokro 106.08 276 *e*PKiKP PKiKP 00 24 09.4 +0.2
DBIC LR LR
comp=Z,383nm,21.0s,MS4.9
PPT Papeete 107.57 109 *e*LR LR 00 55 10.6
comp=Z,324nm,24.0s
YKA Yellowknife Ar 114.90 17 PKP PKiKP 00 24 22.6 -1.8
comp=Z,0.8nm,0.8s,baz=320,slow=2.4,SNR=3.7
RKT Rikitea 119.67 119 *e*LR LR 01 01 27.2
comp=Z,322nm,32.2s
EDM Edmonton 122.38 24 *e*PKPdf PKPdf 00 24 37.7 -1.4
YBH Yreka Blue Hor 124.98 39 PKP PKPdf 00 24 44.4 -0.1
comp=Z,0.6nm,0.3s,baz=262,slow=2.0,SNR=2.8
MOD Modoc 126.38 38 *e*PKPdf PKPdf 00 24 46.6 -0.5
MOD *e*PP PP 00 26 40.9 -1.1
MSO Missoula 126.74 29 *e*PKPdf PKPdf 00 24 46.6 -1.1
MSO *e* 00 24 59.1
SCHQ Schefferville 127.26 351 PKP PKPdf 00 24 47.7 -0.7
comp=Z,13nm,1.1s,baz=8.1,slow=7.1,SNR=3.4
SCHQ Schefferville 127.26 351 PKP PKPdf 00 24 47.7 -0.7
DLMT Dillon 128.44 30 *e*PKPdf PKPdf 00 24 50.6 -0.3
DLMT *e*PP PP 00 26 54.0 -1.4
NVAR Mina Array Bea 129.62 40 PKP PKPdf 00 24 53.5 +0.1
comp=Z,1.7nm,0.6s,baz=282,slow=1.4,SNR=17
NVAR pPKP pPKPdf 00 25 07.5 +2.0
comp=Z,1.2nm,0.7s,baz=137,slow=34,SNR=6.2
NVAR SKP 00 28 25.2
comp=Z,1.2nm,0.8s,baz=265,slow=3.7,SNR=3.6
ELK Elko 130.11 36 PKP PKPdf 00 24 54.5 +0.1
comp=Z,3.4nm,1.0s,baz=253,slow=5.7,SNR=10
ULM Lac du Bonnet 130.66 14 PKP PKPdf 00 24 54.3 -0.8
comp=Z,4.5nm,0.6s,baz=339,slow=6.0,SNR=4.7
PDAR Pinedale Array 131.83 30 PKP PKPdf 00 24 56.0 -1.5
comp=Z,1.3nm,0.8s,baz=17,slow=1.5,SNR=9.6
PDAR pPKP pPKPdf 00 25 10.7 +1.2
comp=Z,1.0nm,0.7s,baz=90,slow=1.5,SNR=4.5
PDAR PP PP 00 27 14.7 -2.7
comp=Z,2.1nm,1.1s,baz=300,slow=2.9,SNR=4.8
PDAR SKPbc SKPbc 00 28 17.2 -3.4
comp=Z,9.5nm,1.1s,baz=343,slow=1.5,SNR=19
PDAR SKP 00 28 26.5
comp=Z,4.6nm,0.7s,baz=57,slow=0.1,SNR=8.2
DUG Dugway 131.88 35 *e*PKPdf PKPdf 00 24 57.0 -0.6
GSC Goldstone 132.37 43 *e*PKPdf PKPdf 00 24 59.8 +1.0
GSC *e* 00 25 13.7
GSC *e*PP PP 00 27 19.6 -1.9
RSSD Black Hills 133.33 25 *e*PKPdf PKPdf 00 24 59.6 -0.7
WUAZ Wupatki 135.79 39 *e*PKPdf PKPdf 00 25 04.8 -0.3
WUAZ *e* 00 25 21.6
PLCA Paso Flores 135.93 189 PKP PKPdf 00 25 04.8 -0.5
comp=Z,1.4nm,0.7s,baz=184,slow=4.5,SNR=2.8
PLCA SKPab 00 28 40.3
comp=Z,2.9nm,0.9s,baz=132,slow=0.9,SNR=3.4
PLCA Paso Flores 135.93 189 PKP PKPdf 00 25 04.8 -0.5
PLCA SKPab 00 28 40.3
ECSD EROS,Sioux Fal 136.40 19 *e*PKPdf PKPdf 00 25 05.2 -0.9
ECSD *e*PP PP 00 27 46.3 +0.2
ANMO Albuquerque 139.14 35 *e*PKPpre 00 25 05.0
ANMO *e*PKPdf PKPdf 00 25 10.5 -0.8
ANMO *e* 00 25 24.9
ANMO *e*SKPdf SKPdf 00 28 43.0 -0.5
ANMO *e*SKPab 00 28 53.0
ANMO Albuquerque 139.14 35⇑ *i*PKIKP PKPdf 00 25 12.3 +0.9
WMOK Wichita Mounta 143.34 28 *e*PKPdf PKPdf 00 25 14.3 -4.6
WMOK *e*PP PP 00 28 27.9 -1.1
WCI Wyandotte Cave 144.18 10 *e*PKPdf PKPdf 00 25 17.0 -3.3
WCI *e* 00 25 28.9
BDFB Brasilia 144.26 238 PKP PKPdf 00 25 19.5 -1.5
comp=Z,2.0nm,0.4s,baz=143,slow=3.2,SNR=11
BDFB Brasilia 144.26 238 PKP PKPdf 00 25 19.5 -1.5
BDFB *e*PKPdf PKPdf 00 25 19.8 -1.2
TXAR Lajitas Array 144.75 39 PKP PKPdf 00 25 20.1 -1.4
comp=Z,12nm,0.5s,baz=261,slow=1.3,SNR=142
TXAR pPKP pPKPdf 00 25 35.0 +1.4
comp=Z,14nm,0.6s,baz=229,slow=0.9,SNR=8.6
TXAR SKPbc SKPbc 00 28 56.5 -1.7
comp=Z,5.4nm,0.9s,baz=246,slow=2.2,SNR=5.6
TXAR Lajitas Array 144.75 39 PKIKP PKPdf 00 25 20.2 -1.4
TXAR 00 25 35.0
CBN Corbin 144.80 358 *e*PKPdf PKPdf 00 25 19.1 -2.3
CBN *e*PP PP 00 28 36.3 -0.9
PVMO Portageville 145.18 15 *e*PKP PKPdf 00 25 20.2 -1.8
UTMT University of 145.46 14 *e*PKPbc PKPbc 00 25 21.6 -1.0
UTMT *e* 00 25 37.3
MIAR Mount Ida 145.68 22 *e*PKPdf PKPdf 00 25 22.5 -0.5
MIAR *e* 00 25 38.2
BLA Blacksburg 145.79 2 *e*PKPdf PKPdf 00 25 21.4 -1.7
BLA *e* 00 25 37.9
WVT Waverly 145.91 13 *e*PKPdf PKPdf 00 25 22.2 -1.1
WVT *e* 00 25 37.2
WVT *e*PP PP 00 28 41.3 -2.7
WVT *e*SKP 00 28 57.7
WVT Waverly 145.91 13 *e*PKP2 PKPab 00 25 22.2 -2.2
WVT *e* 00 28 41.3
UALR University of 145.91 20 *e*PKP PKPdf 00 25 22.7 -0.6
UALR *e* 00 25 38.3
JCT Junction City 146.21 33 *e*PKPdf PKPdf 00 25 23.7 -0.3
JCT *e* 00 25 35.5
JCT *e*SKP 00 28 58.0
TZTN Tazewell 146.22 7 *e*PKPdf PKPdf 00 25 23.4 -0.5
TZTN *e* 00 25 38.9
TZTN *e*PP PP 00 28 44.5 -1.3
TZTN *e*SKP 00 28 56.5
MAIG Mazatlaan 146.63 50 *e*P PKPdf 00 25 24.2 -0.7
OXF Oxford 147.05 16 *e*PKPdf PKPdf 00 25 24.9 -0.4
OXF *e* 00 25 38.8
OXF *e*PP PP 00 28 49.0 -1.8
TKL Tuckaleechee C 147.07 7 *e*PKPdf PKPdf 00 25 24.6 -0.7
TKL *e* 00 25 40.1
TKL *e*PP PP 00 28 45.5 -5.2
LCO Las Campanas 147.32 194 *e*PKPdf PKPdf 00 25 26.8 +0.8
LCO *e* 00 25 41.0
NATX Nacogdoches 147.69 25 *e*PKPbc PKPbc 00 25 27.6 -1.6
NATX *e*PP PP 00 28 53.2 -1.6

CNNC	**Cliffs of the**	**147.77**	**358**	*e*PKPdf	PKPdf	00 25 26.3	-0.2
HKT	**Hockley**	**148.69**	**29**	*e*PKPdf	PKPdf	00 25 27.9	-0.2
HKT				*e*PKPbc	PKPbc	00 25 31.3	-0.6
HKT				*e*		00 25 45.7	
HKT				*e*SKP		00 29 05.4	
HKT	**Hockley**	**148.69**	**29**	*e*PKIKP	PKPdf	00 25 27.9	-0.3
HKT				*e*		00 25 31.3	
HKT				*e*		00 29 05.4	
VBMS	**Vicksburg**	**148.86**	**19**	*e*PKPbc	PKPbc	00 25 30.6	-1.6
LRAL	**Lakeview Retre**	**149.06**	**13**	*e*PKPdf	PKPdf	00 25 27.4	-1.3
LRAL				*e*		00 25 35.7	
LRAL				*e*SKP		00 29 00.1	
GOGA	**Godfrey**	**149.32**	**7**	*e*PKPbc	PKPbc	00 25 32.1	-1.3
CJM	**Chamela**	**149.65**	**55**	*e*P	PKPbc	00 25 33.7	-0.9
ZAIG	**Zacatecas**	**149.77**	**47**	*e*P	PKPdf	00 25 30.2	+0.1
SFJM	**Santa Fe**	**150.74**	**51**	*i* P	PKPbc	00 25 37.8	+0.6
LVC	**Limon Verde**	**152.83**	**201**	*e*PKPbc	PKPbc	00 25 43.1	+1.2
CAIG	**El Cayaco**	**154.79**	**55**	*e*P	PKPdf	00 25 34.6	-3.1
SDDR	**Presa de Saban**	**162.30**	**335**	*e*PKPab	PKPab	00 26 32.6	-1.0
OTAV	**Otavalo**	**177.33**	**192**	*e*PKPdf	PKPdf	00 25 55.2	-0.3

IDC 29 00:19:16.4±20.0, 196N×12758E, h482km±250km, mb2.9/4, mb1 3.1/4, mb1mx2.8/15, mbtmp2.9/4, Error ellipse: s-maj=257.2km s-min=19.0km az=54.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**12.70**	**198**	P	P	00 22 02.5	-0.1
	31nm,0.3s,baz=17,slow=20,SNR=7.6						
ASAR	**Alice Springs**	**26.20**	**167**	P	P	00 24 11.8	+0.2
	0.5nm,0.3s,baz=350,slow=7.1,SNR=7.2						
CMAR	**Chiang Mai Arr**	**32.51**	**302**	P	P	00 25 06.6	0.0
	0.5nm,0.3s,baz=122,slow=6.8,SNR=4.8						
STKA	**Stephens Creek**	**36.18**	**160**	P	P	00 25 37.0	-0.2
	1.0nm,0.4s,baz=335,slow=9.4,SNR=5.9						
MKAR	**Makanchi Array**	**59.49**	**325**	P	P	00 28 32.1	0.0
	1.8nm,1.1s,baz=114,slow=7.6,SNR=3.7						

IDC 29 00:20:03.8±1.5, 052S×10321E, h44km±10km, mb3.3/4, mb1 3.3/4, mb1mx3.2/17, mbtmp3.3/4, Error ellipse: s-maj=88.5km s-min=20.2km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**37.63**	**130**	P	P	00 27 14.3	-0.4
	0.4nm,0.5s,baz=302,slow=8.0,SNR=8.9						
ASAR				pP	pP	00 27 28.1	+1.4
	0.3nm,0.6s,baz=299,slow=8.2,SNR=2.4						
MKAR	**Makanchi Array**	**50.57**	**341**	P	P	00 28 58.5	+0.5
	0.2nm,0.4s,baz=158,slow=9.2,SNR=2.7						
MKAR				pP	pP	00 29 10.5	+0.2
	0.2nm,0.5s,baz=156,slow=9.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**56.39**	**347**	P	P	00 29 40.2	-0.4
	0.2nm,0.3s,baz=174,slow=4.2,SNR=2.6						
BRTR	**Keskin Array B**	**74.72**	**311**	P	P	00 31 39.8	+0.5
	0.7nm,0.8s,baz=107,slow=7.2,SNR=3.0						
TXAR	**Lajitas Array**	**141.56**	**39**	PKP	PKPdf	00 39 28.2	-2.8
	0.5nm,0.6s,baz=264,slow=1.2,SNR=8.1						
TXAR				pPKP	pPKPdf	00 39 42.5	-2.2
	0.4nm,0.8s,baz=315,slow=2.1,SNR=3.9						

*ISCJB **29** 00:25:53.8±0.7, 50.1N±0.1×1503E±02, h366km±12km, mb3.3/5, Error ellipse: s-maj=23.1km s-min=9.9km az=136.5*
*MOS **29** 00:25:53.5±2.5, 50.12N×150.05E, h351km, mb3.5/4, Error ellipse: s-maj=24.1km s-min=11.3km az=60.0*
*IDC **29** 00:25:56.6±1.7, 4985N×150.45E, h383km±20km, mb3.2/6, mb1 3.3/8, mb1mx3.0/23, mbtmp3.1/8, Error ellipse: s-maj=26.3km s-min=14.2km az=145.0*

ISC 29 00:25:54.5±0.8, 500N±01×1502E±02, h357km±12km, n23, σ1§40/26, mb3.3/5, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.62**	**53**	P	**Pn**	**00 27 23.5**	**+2.5**
	0.2nm,0.3s,baz=242,slow=12,SNR=9.4						
RUS	**Russkaya**	**5.77**	**62**	P	**Pn**	**00 27 24.3**	**+1.6**
RUS				S	**S**	**00 28 30.5**	**-3.8**
YSS	**Yuzh-Sakhalins**	**5.81**	**241**	*i* PN	**Pn**	**00 27 18.7**	**-4.6**
PET	**Petropavlovsk**	**6.09**	**57**	*i* PN	**Pn**	**00 27 23.7**	**-2.6**
NLC	**Nalytchevo**	**6.53**	**57**	P	**Pn**	**00 27 31.6**	**+0.3**
NLC				S	**S**	**00 28 43.4**	**-6.7**
SPN	**Mys Shipunski**	**6.87**	**59**	P	**Pn**	**00 27 36.2**	**+0.9**
ASAJ	**Asahikawa**	**7.84**	**224**	P	**Pn**	**00 27 50.9**	**+4.2**
	2.6nm,0.3s,baz=3.4,slow=9.3,SNR=8.0						
ASAJ	**Asahikawa**	**7.84**	**224**	PN	**Pn**	**00 27 50.9**	**+4.2**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ERM	**Erimo**	**9.36**	**214**	*i* PN	**Pn**	**00 28 04.3**	**-0.4**
KBTR	**Krutoberegovo**	**9.81**	**46**	P	**Pn**	**00 28 11.1**	**+1.3**
KBTR				S	**S**	**00 29 54.6**	**-6.3**
SEY	**Seymchan**	**13.04**	**4**	*i* PN	**Pn**	**00 28 44.2**	**-3.7**
YAK	**Yakutsk**	**16.55**	**325**	*i* P	**P**	**00 29 24.2**	**-1.0**
KSRS	**Korea Array**	**20.31**	**240**	P	**P**	**00 30 03.9**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=42,slow=12,SNR=5.1						
KSRS	**Korea Array**	**20.31**	**240**	P	**P**	**00 30 03.9**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**43.81**	**293**	P	**P**	**00 33 27.4**	**+1.4**
	comp=Z,0.8nm,0.6s,mb3.0,baz=65,slow=5.4,SNR=13						
MKAR	**Makanchi Array**	**43.81**	**293**	*e*P	**P**	**00 33 28.7**	**+2.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**44.01**	**300**	P	**P**	**00 33 30.9**	**+3.3**
	comp=Z,0.7nm,0.3s,mb3.3,baz=67,slow=8.1,SNR=2.3						
KURK	**Kurchatov**	**44.01**	**300**	P	**P**	**00 33 30.9**	**+3.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.4						
YKA	**Yellowknife Ar**	**49.51**	**37**	P	**P**	**00 34 09.0**	**-0.5**
	comp=Z,1.2nm,0.5s,mb3.4,baz=302,slow=6.8,SNR=10						
YKA	**Yellowknife Ar**	**49.51**	**37**	P	**P**	**00 34 09.0**	**-0.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**64.39**	**53**	P	**P**	**00 35 52.8**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.2,baz=349,slow=3.7,SNR=4.2						
ASAR	**Alice Springs**	**74.74**	**195**	P	**P**	**00 36 55.5**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.5,baz=13,slow=5.9,SNR=6.1						
ASAR	**Alice Springs**	**74.74**	**195**	*e*P	**P**	**00 36 55.6**	**-0.2**

*TIR **29** 00:27:57.8±3.1, 4167N×2080E, h4km±435km, ML2.7*
*THE **29** 00:27:58.9, 4166N×2079E, h0km±1km, ML3.2/2, Error ellipse: s-maj=2.7km s-min=0.6km az=288.0*
*NEIC **29** 00:27:58.9, 4166N×2079E, h0km, ML3.2(THE), ML2.7(PDG), ML2.4(SKO), After THE.*
*ISCJB **29** 00:27:58.7±0.3, 4165N×003×2079E±003, h2km±7km, Error ellipse: s-maj=5.3km s-min=2.5km az=28.9*
*CSEM **29** 00:27:59.8±0.2, 4158N×2089E, h2km, ML2.2, Error ellipse: s-maj=6.4km s-min=3.0km az=38.0*
*SKO **29** 00:27:59.5, 4162N×2085E, h15km, M1.9, ML2.2*
*PDG **29** 00:28:00.3±0.4, 4161N×2087E, h9km±1km, ML2.7/10, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*

ISC 29 00:27:59.6±0.3, 4163N±003×2078E±003, h11km±7km, n40, σ1§13/79, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.26**	**281**	*e*PG	**Pg**	**00 28 03.2**	**-1.7**
PHP				*i* SG	**Sg**	**00 28 07.2**	**-1.3**
KRUS	**Krusevo**	**0.44**	**127**	*e*Pg	**Pg**	**00 28 08.4**	**+0.3**
KRUS				*e*Sg	**Sg**	**00 28 15.3**	**+1.4**
KRUS	**Krusevo**	**0.44**	**127**	*e*Pg	**Pg**	**00 28 08.5**	**+0.3**
KRUS				*e*Sg	**Sg**	**00 28 15.4**	**+1.5**
KRUS				*e*Lg		00 28 15.8	
	comp=E,55nm,0.2s						
KRUS				*e*Lg		00 28 15.8	
	comp=N,65nm,0.2s						
SKO	**Skopje**	**0.60**	**55**	P	**Pg**	**00 28 11.1**	**0.0**
SKO				S	**Sg**	**00 28 20.7**	**+1.7**
SKO	**Skopje**	**0.60**	**55**	*e*Pg	**Pg**	**00 28 11.9**	**+0.8**
SKO				*e*Sg	**Sg**	**00 28 19.5**	**+0.5**
SKO				S	**Sg**	**00 28 20.7**	**+1.7**
SKO	**Skopje**	**0.60**	**55**	*e*Pg	**Pg**	**00 28 11.9**	**+0.8**
SKO				*e*Sg	**Sg**	**00 28 19.5**	**+0.6**
SKO				*e*Lg		00 28 20.3	
	comp=N,205nm,0.3s						
SKO				*e*Lg		00 28 20.8	
	comp=E,149nm,0.3s						
QSH	**Qafa e Shtames**	**0.67**	**261**	*e*PG	**Pg**	**00 28 14.5**	**+2.0**
BIA	**Bitola**	**0.74**	**146**	P	**Pg**	**00 28 13.0**	**-0.8**
BIA				S	**Sg**	**00 28 25.0**	**+1.6**
BIA	**Bitola**	**0.74**	**146**	P	**Pg**	**00 28 13.0**	**-0.8**
BIA				S	**Sg**	**00 28 25.0**	**+1.6**
BIA	**Bitola**	**0.74**	**146**	*e*Pg	**Pg**	**00 28 13.0**	**-0.8**
BIA				*e*Sg	**Sg**	**00 28 24.0**	**+0.6**
BIA				*e*Lg		00 28 24.9	
	comp=N,80nm,0.3s						
BIA				*e*Lg		00 28 25.3	
	comp=E,72nm,0.3s						
TIR	**Tirane**	**0.75**	**248**	*e*PG	**Pg**	**00 28 13.1**	**-0.9**
PUK	**Puka**	**0.78**	**302**	*e*PG	**Pg**	**00 28 13.5**	**-1.2**
PUK				*i* SG	**Sg**	**00 28 25.0**	**+0.1**
PUK				*e*PN	**Sn**	**00 28 41.4**	**+13**
FNA	**Florina**	**0.96**	**152**	P	**Pg**	**00 28 17.2**	**-0.8**
FNA				S	**Sg**	**00 28 31.8**	**+1.3**
STIP	**Stip**	**1.05**	**86**	P	**Pb**	**00 28 18.6**	**-1.2**
STIP				S	**Sb**	**00 28 33.9**	**+0.3**
STIP	**Stip**	**1.05**	**86**	*e*Pg	**Pg**	**00 28 18.5**	**-1.3**
STIP				S	**Sb**	**00 28 33.9**	**+0.3**
STIP	**Stip**	**1.05**	**86**	*e*Pg	**Pg**	**00 28 18.5**	**-1.3**
STIP				*e*Sg	**Sg**	**00 28 32.8**	**-0.7**
STIP				*e*Lg		00 28 33.7	
	comp=N,20nm,0.3s						
STIP				*e*Lg		00 28 34.5	
	comp=E,18nm,0.6s						
PVY	**Plav**	**1.14**	**328**	⇓*i* Pg	**Pg**	**00 28 22.2**	**+0.8**
PVY				*e*Sg	**Sg**	**00 28 39.9**	**+3.8**
ULC	**Ulcinj**	**1.19**	**287**	⇑*i* Pg	**Pg**	**00 28 23.8**	**+1.3**
ULC				*e*Sg	**Sg**	**00 28 43.0**	**+5.0**
ULC	**Ulcinj**	**1.19**	**287**	*i* PG	**Pg**	**00 28 23.8**	**+1.3**
ULC				*i* SG	**Sg**	**00 28 43.0**	**+5.0**
VAY	**Valandovo**	**1.38**	**102**	P	**Pg**	**00 28 24.6**	**-1.4**
VAY				S	**Sg**	**00 28 44.6**	**+0.7**
VAY	**Valandovo**	**1.38**	**102**	*e*Pg	**Pg**	**00 28 24.7**	**-1.3**
VAY				S	**Sg**	**00 28 44.6**	**+0.7**
VAY	**Valandovo**	**1.38**	**102**	*e*Pg	**Pg**	**00 28 24.7**	**-1.3**
VAY				*e*Sg	**Sg**	**00 28 43.3**	**-0.6**
VAY				*e*Lg		00 28 44.2	
	comp=E,34nm,0.7s						
VAY				*e*Lg		00 28 44.9	
	comp=N,45nm,0.7s						
PDG	**Podgorica**	**1.39**	**306**	*i* PG	**Pg**	**00 28 26.6**	**+0.4**
PDG				*i* SG	**Sg**	**00 28 48.7**	**+4.5**
PDG	**Podgorica**	**1.39**	**306**	*e*Pg	**Pg**	**00 28 26.6**	**+0.4**
PDG				*e*Sg	**Sg**	**00 28 48.7**	**+4.5**
TTG	**Podgorica**	**1.39**	**306**	*e*Pg	**Pg**	**00 28 26.6**	**+0.4**
TTG				*e*Sg	**Sg**	**00 28 48.7**	**+4.5**
GRG	**Griva**	**1.39**	**118**	P	**Pg**	**00 28 25.2**	**-1.1**
GRG				S	**Sg**	**00 28 45.0**	**+0.6**
BEY	**Berane**	**1.40**	**332**	*i* PG	**Pg**	**00 28 26.8**	**+0.3**
BEY				*i* SG	**Sg**	**00 28 48.6**	**+3.9**
BEY	**Berane**	**1.40**	**332**	⇑*i* Pg	**Pg**	**00 28 26.8**	**+0.3**
BEY				*e*Sg	**Sg**	**00 28 48.6**	**+3.9**
IVA	**Berane**	**1.40**	**332**	⇑*i* Pg	**Pg**	**00 28 26.8**	**+0.3**
IVA				*e*Sg	**Sg**	**00 28 48.6**	**+3.9**
BUM	**Brajici-Budva**	**1.56**	**296**	⇑*i* PN	**Pg**	**00 28 29.9**	**+0.5**
BUM				*e*Sn	**Sg**	**00 28 54.1**	**+4.5**
BUM	**Brajici-Budva**	**1.56**	**296**	*i* PG	**Pg**	**00 28 29.9**	**+0.5**
BUM				*i* SG	**Sg**	**00 28 54.1**	**+4.5**
KNT	**Kendrikon**	**1.66**	**106**	P	**Pn**	**00 28 28.8**	**+0.2**
NKY	**Niksic**	**1.77**	**312**	⇑*i* PN	**Pg**	**00 28 33.7**	**+0.1**
NKY				*e*Sn	**Sg**	**00 28 59.4**	**+2.8**
NKY	**Niksic**	**1.77**	**312**	*i* PG	**Pg**	**00 28 33.7**	**+0.1**
NKY				*i* SG	**Sg**	**00 28 59.4**	**+2.8**
HCY	**Herceg Novi**	**1.89**	**296**	⇓*i* PN	**Pg**	**00 28 34.4**	**-1.4**
HCY				*e*Sn	**Sg**	**00 29 02.3**	**+2.1**
PLE	**Pljevlja**	**1.98**	**329**	⇓*i* PN	**Pg**	**00 28 35.7**	**-1.9**
PLE				*e*Sn	**Sg**	**00 29 04.0**	**+0.7**
BRY	**Bratogost**	**2.09**	**308**	⇓*i* PN	**Pg**	**00 28 38.0**	**-1.6**
BRY				*e*Sn	**Sg**	**00 29 06.6**	**-0.1**
UPM	**Unac-Piva**	**2.10**	**319**	⇑*i* PN	**Pg**	**00 28 38.6**	**-1.1**
UPM				*e*Sn	**Sg**	**00 29 07.0**	**+0.1**
SOH	**Sokhos**	**2.10**	**112**	P	**Pn**	**00 28 35.0**	**+0.3**

*MOS **29** 00:32:00.4±2.8, 1980S×175.89W, h91km, mb4.9/6, Error ellipse: s-maj=14.8km s-min=10.0km az=163.6*
*SZGRF **29** 00:32:00.0, 19.10S×176.28E, h33km, South of Fiji Islands*
*ISCJB **29** 00:32:08.0±1.3, 1997S±005×175.85W±0.06, h178km±13km, mb4.7/34, Error ellipse: s-maj=10.6km s-min=7.3km az=38.4*
*NEIC **29** 00:32:08.8±1.1, 1995S×175.77W, h176km±11km, mb5.0/19, Error ellipse: s-maj=9.6km s-min=5.9km az=135.0*
*IDC **29** 00:32:14.2±0.8, 1998S×175.96W, h217km±7km, mb4.1/14, mb1 4.4/15, mb1mx4.3/20, mbtmp4.2/15, Error ellipse: s-maj=15.1km s-min=9.9km az=125.0*
*DJA **29** 00:32:29.4±0.0, 2074S×177.11W, h284km, mB5.6/4, Mw(mB)5.3/4, Mwp5.0/2*

ISC 29 00:32:08.8±1.3, 1995S±006×17578W±005, h172km±12km, h223km±2.9km: pP-P, n167, σ1§07/97, mb4.7/34, 6C-21D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.13**	**33**	P	**Pn**	**00 33 50.3**	**-0.4**
	128nm,0.3s,baz=207,slow=6.8,SNR=44						
AFI				S	**Sn**	**00 35 02.8**	**-8.1**
	137nm,0.3s,baz=232,slow=19,SNR=17						
AFI	**Afiamalu**	**7.13**	**33**	*e*Pn	**Pn**	**00 33 50.3**	**-0.4**
	212nm,0.4s						
AFI				*e*Sn	**Sn**	**00 35 01.1**	**-10**
AFI	**Afiamalu**	**7.13**	**33**	*e*P	**Pn**	**00 33 50.3**	**-0.4**
AFI				*e*		00 35 01.1	
AFI				pmax	pmax		
	comp=Z,212nm,0.4s						
RAR	**Rarotonga**	**15.05**	**98**	P	**Pn**	**00 35 34.9**	**+2.0**
	comp=Z,1.5nm,0.3s,baz=260,slow=11,SNR=3.2						
RAR				S	**S**	**00 38 20.0**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=210,slow=20,SNR=2.7						
RAR	**Rarotonga**	**15.05**	**98**	*e*P	**Pn**	**00 35 31.7**	**-1.2**
RAR				S	**S**	**00 38 20.0**	**-0.6**
DZM	**Mont Dzumac**	**16.73**	**260**	*e*P	**Pn**	**00 35 56.6**	**+3.3**
DZM	**Mont Dzumac**	**16.73**	**260**	*e*P	**Pn**	**00 35 52.9**	**-0.4**
	comp=Z,280nm,0.8s						
DZM				*e*		00 35 58.5	
NOUC	**Port Laguerre**	**16.86**	**260**	*e*P	**Pn**	**00 35 57.9**	**+3.0**
PUZ	**Puketiti**	**18.79**	**195**	P	**P**	**00 36 14.6**	**+1.4**
MWZ	**Matawai**	**19.22**	**196**	P	**P**	**00 36 19.8**	**+0.1**
URZ	**Urewera**	**19.26**	**197**	P	**P**	**00 36 19.8**	**-0.3**
	comp=Z,40nm,0.3s,baz=15,slow=10,SNR=138						
URZ				S	**S**	**00 39 40.9**	**-8.1**
	comp=Z,1.7nm,0.3s,baz=341,slow=16,SNR=7.6						
URZ	**Urewera**	**19.26**	**197**	P	**P**	**00 36 19.8**	**-0.3**
BKZ	**Black Stump Fm**	**20.28**	**198**	P	**P**	**00 36 29.3**	**-1.7**
SNZO	**South Karori**	**22.78**	**199**	P	**P**	**00 36 55.8**	**-0.7**
DSZ	**Denniston Nort**	**24.15**	**203**	P	**P**	**00 37 09.2**	**+0.3**
KHZ	**Kahutara**	**24.15**	**200**	P	**P**	**00 37 08.5**	**-0.4**
RPZ	**Rata Peaks**	**26.13**	**202**	P	**P**	**00 37 26.8**	**0.0**
	comp=Z,78nm,0.5s,mb5.6,baz=4.5,slow=2.9,SNR=39						
JCZ	**Jackson Bay**	**27.30**	**205**	*e*P	**P**	**00 37 37.1**	**-0.1**
EIDS	**Eidsvold**	**31.00**	**254**	*e*P	**P**	**00 38 10.5**	**+0.3**
	comp=Z,33nm,0.6s,mb5.2						
ARMA	**Armidale**	**31.18**	**244**	⇓*i* P	**P**	**00 38 12.7**	**+1.0**
CNB	**Canberra Magne**	**34.26**	**236**	⇓*i* P	**P**	**00 38 38.8**	**+0.4**
CTA	**Charters Tower**	**35.62**	**263**	⇓*i* P	**P**	**00 38 51.0**	**+0.7**
	comp=Z,62nm,0.4s,mb5.6						
CTA	**Charters Tower**	**35.62**	**263**	P	**P**	**00 38 50.8**	**+0.5**
	comp=Z,69nm,0.4s,mb5.7,baz=91,slow=11,SNR=89						
CTA				PcP	PcP	00 41 15.8	+0.6
	comp=Z,4.6nm,0.7s,baz=45,slow=4.3,SNR=3.2						
CTA	**Charters Tower**	**35.62**	**263**	⇓*i* P	**P**	**00 38 51.0**	**+0.7**
CTA				pmax	pmax		
	comp=Z,62nm,0.4s						
CTAO	**Charters Tower**	**35.62**	**263**	*e*P	**P**	**00 38 51.0**	**+0.7**
	comp=Z,75nm,0.4s,mb5.7						
CTAO	**Charters Tower**	**35.62**	**263**	*e*P	**P**	**00 38 51.0**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,75nm,0.4s,mb5.7						
CTAO	**Charters Tower**	**35.62**	**263**	P	**P**	**00 38 50.7**	**+0.4**
	comp=Z,137nm,1.1s,comp=Z,1μm,mb5.5						
PMG	**Port Moresby**	**37.27**	**281**	*e*P	**P**	**00 39 05.1**	**+0.8**
	comp=Z,91nm,0.9s,mb5.4						
PMG	**Port Moresby**	**37.27**	**281**	*e*P	**P**	**00 39 05.1**	**+0.8**
PMG				pmax	pmax		
	comp=Z,91nm,0.9s						
PMG	**Port Moresby**	**37.27**	**281**	P	**P**	**00 39 05.2**	**+0.9**
	comp=Z,136nm,1.0s,comp=Z,935nm,mb5.5						
TOO	**Toolangi**	**37.90**	**234**	*e*P	**P**	**00 39 09.3**	**0.0**
COEN	**Coen**	**39.63**	**272**	*e*P	**P**	**00 39 24.4**	**+0.3**
	comp=Z,42nm,0.8s,mb5.1						
COEN	**Coen**	**39.63**	**272**	P	**P**	**00 39 24.5**	**+0.5**
	comp=Z,37nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**39.90**	**244**	⇓*i* P	**P**	**00 39 25.9**	**-0.1**
	comp=Z,9.8nm,0.4s,mb4.8						
STKA				*e*PCP	PcP	00 41 28.9	+0.7
STKA	**Stephens Creek**	**39.90**	**244**	P	**P**	**00 39 25.5**	**-0.5**
	comp=Z,16nm,0.8s,mb4.7,baz=95,slow=9.4,SNR=27						
STKA				PcP	PcP	00 41 28.7	+0.5
	comp=Z,9.4nm,0.6s,baz=88,slow=5.1,SNR=7.5						
ASAR	**Alice Springs**	**46.67**	**256**	P	**P**	**00 40 19.7**	**-0.7**
	comp=Z,47nm,0.6s,mb5.3,baz=95,slow=8.4,SNR=469						
ASAR				pP	pP	00 41 09.1	+11
	comp=Z,12nm,0.8s,baz=85,slow=8.3,SNR=2.1						
ASAR				PcP	PcP	00 41 51.0	-0.3
	comp=Z,4.8nm,0.6s,baz=103,slow=4.0,SNR=7.1						
ASAR				ScP	ScP	00 45 23.9	-4.8
	comp=Z,1.1nm,0.8s,baz=104,slow=3.0,SNR=4.5						
ASAR	**Alice Springs**	**46.67**	**256**	P	**P**	**00 40 19.7**	**-0.7**
ASAR						00 41 51.1	
WB2	**Warramunga Arr**	**46.73**	**261**	⇓*i* P	**P**	**00 40 19.5**	**-1.4**
WRAB	**Tennant Creek**	**46.73**	**261**	*e*P	**P**	**00 40 19.5**	**-1.4**
	comp=Z,34nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**46.73**	**261**	*e*P	**P**	**00 40 19.5**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**46.73**	**261**	P	**P**	**00 40 19.8**	**-1.1**
	comp=Z,57nm,0.9s,mb5.2						
KAKA	**Kakadu**	**50.05**	**270**	⇓*i* P	Px	00 40 30.4	
	comp=Z,19nm,0.3s						
GUMO	**Guam**	**51.08**	**308**	P	**P**	**00 40 58.7**	**+4.7**
FORT	**Forrest**	**51.42**	**246**	*e*P	**P**	**00 40 54.9**	**-1.5**
	comp=Z,24nm,0.7s,mb4.9						
SWI	**Sorong**	**55.13**	**283**	P	**P**	**00 41 24.2**	**+0.5**
	comp=Z,164nm,0.8s,comp=Z,1μm,mb5.8						
SBA	**Scott Base**	**58.56**	**184**	*e*P	**P**	**00 41 50.0**	**+3.1**
VNDA	**Vanda**	**58.65**	**186**	P	**P**	**00 41 49.0**	**+1.6**
	comp=Z,2.2nm,0.7s,mb4.1,baz=5.4,slow=7.1,SNR=14						
VNDA	**Vanda**	**58.65**	**186**	*e*P	**P**	**00 41 49.6**	**+2.1**
	comp=Z,11nm,1.4s,mb4.5						
VNDA	**Vanda**	**58.65**	**186**	*e*P	**P**	**00 41 49.6**	**+2.2**
VNDA				pmax	pmax		
	comp=Z,11nm,1.4s						
BATI	**Baumata**	**59.01**	**270**	P	**P**	**00 41 51.1**	**+0.2**
	comp=Z,48nm,0.4s,mb5.7,baz=128,slow=2.5,SNR=6.3						
BATI	**Baumata**	**59.01**	**270**	P	**P**	**00 41 54.3**	**+3.4**
	comp=Z,28nm,0.8s,mb5.1						
MBWA	**Marble Bar**	**60.00**	**257**	*e*P	**P**	**00 41 56.5**	**-1.2**
	comp=Z,21nm,0.8s,mb5.0						
MBWA	**Marble Bar**	**60.00**	**257**	P	**P**	**00 41 57.2**	**-0.5**
	comp=Z,60nm,1.0s,mb5.4						
KLBR	**Kellerberrin**	**60.17**	**244**	*e*P	**P**	**00 41 56.9**	**-1.7**
	comp=Z,12nm,0.5s,mb5.0						
NWAO	**Narrogin (SRO)**	**60.47**	**243**	P	**P**	**00 41 59.6**	**-1.0**
	comp=Z,9.9nm,1.1s,mb4.6,baz=134,slow=11						
NWAO	**Narrogin (SRO)**	**60.47**	**243**	*e*P	**P**	**00 42 00.0**	**-0.7**
MUN	**Mundaring**	**61.44**	**244**	*e*P	**P**	**00 42 06.3**	**-0.9**
KDI	**Kendari**	**61.99**	**276**	P	**P**	**00 42 13.8**	**+2.7**
	comp=Z,17nm,1.2s,comp=Z,2μm,mb4.7						
KAPI	**Kappang**	**64.31**	**274**	P	**P**	**00 42 25.1**	**-1.4**
	comp=Z,5.7nm,0.7s,mb4.5,baz=98,slow=14,SNR=4.2						
KAPI	**Kappang**	**64.31**	**274**	P	**P**	**00 42 25.1**	**-1.4**
CASY	**Casey**	**65.35**	**205**	*e*P	**P**	**00 42 31.3**	**-0.9**
	comp=Z,20nm,0.8s,mb5.0						
MJAR	**Matsushiro Arr**	**71.03**	**322**	P	**P**	**00 43 07.6**	**-0.4**
	comp=Z,3.7nm,0.5s,mb4.4,baz=154,slow=6.3,SNR=8.0						
MAJO	**Matsushiro**	**71.03**	**322**	*e*P	**P**	**00 43 08.0**	**0.0**
	comp=Z,4.8nm,0.4s,mb4.6						
MAJO	**Matsushiro**	**71.03**	**322**	*e*P	**P**	**00 43 08.0**	**0.0**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
LEM	**Lembang**	**75.13**	**268**	P	**P**	**00 43 32.9**	**+0.3**
	comp=Z,141nm,1.0s,mb5.5						
DBJI	**Dramaga**	**76.04**	**268**	P	**P**	**00 43 37.2**	**-0.6**
PETK	**Petropavlovsk-**	**76.30**	**344**	P	**P**	**00 43 38.4**	**+0.2**
	comp=Z,12nm,1.1s,mb4.4,baz=101,slow=7.9,SNR=5.9						
PETK	**Petropavlovsk-**	**76.30**	**344**	P	**P**	**00 43 38.4**	**+0.2**
CMB	**Columbia Colle**	**77.66**	**42**	*e*P	**P**	**00 43 46.4**	**+0.2**
	comp=Z,2.5nm,0.8s,mb3.9						
CMB	**Columbia Colle**	**77.66**	**42**	*e*P	**P**	**00 43 46.4**	**+0

TLCR		**147.64**	**327**	⇓	*i* P	PKPbc	00 51 33.1	+0.2
UZH	**Uzhgorod**	**147.89**	**337**	⇓	*i* PKP2	PKPbc	00 51 34.3	+0.8
CLL	**Collm**	**147.95**	**350**		*e*PKPbc	PKPbc	00 51 33.4	-0.1
CLL	**Collm**	**147.95**	**350**		*i* PKPbc	PKPbc	00 51 33.7	+0.2
	comp=Z,5.0nm,0.7s							
CLL					*i* PKPab	PKPab	00 51 36.1	-0.5
CLL					*ep*PKPbc	pPKPbc	00 52 19.0	+0.7
CLL					*i* (sPKPbc)		00 52 32.2	
CRVS	**Cervenica-Dubn**	**147.96**	**338**		*e*PKP2	PKPab	00 51 38.6	+1.9
CRVS	**Cervenica-Dubn**	**147.96**	**338**		*e*PKP	PKPab	00 51 38.5	+1.8
BR131	**Keskin Array S**	**147.98**	**314**		*e*PKPbc	PKPbc	00 51 33.8	-0.2
BRTR	**Keskin Array B**	**147.98**	**314**		PKPbc	PKPbc	00 51 34.1	+0.2
	comp=Z,9.8nm,0.7s,baz=144,slow=5.3,SNR=41							
OKC	**Ostrava-Krasne**	**148.18**	**343**		*e*PKP	PKPbc	00 51 34.6	+0.4
DPC	**Dobruska-Polom**	**148.18**	**345**		*e*PKP	PKPbc	00 51 34.4	+0.2
BRG	**Berggiesshubel**	**148.20**	**348**		*e*PKPbc	PKPbc	00 51 34.4	+0.2
TRPA	**Tarpa**	**148.22**	**336**	⇑	*i*P	PKPbc	00 51 33.7	-0.6
FBE	**Freiberg**	**148.26**	**349**		*e*PKPbc	PKPbc	00 51 33.2	-1.1
HARR	**Harsova**	**148.44**	**327**	⇑	*i*P	PKPab	00 51 39.5	+0.7
ANTO	**Ankara**	**148.47**	**315**		*e*PKPbc	PKPbc	00 51 35.5	+0.2
ANTO	**Ankara**	**148.47**	**315**	⇓	*i*P	PKPbc	00 51 36.0	+0.7
MLR	**Muntele Rosu**	**148.85**	**330**	⇑	*i*P	PKPbc	00 51 36.9	+0.9
WERD	**Werda**	**148.90**	**350**		*e*PKPbc	PKPbc	00 51 36.6	+0.6
TANN	**Tannenbergstha**	**148.90**	**350**		*e*PKPbc	PKPbc	00 51 36.5	+0.5
PRU	**Pruhonice**	**148.92**	**347**		*e*PKP	PKPbc	00 51 36.4	+0.3
GUNZ	**Gunzen**	**148.97**	**350**		*e*PKPbc	PKPbc	00 51 36.5	+0.3
VYHS	**Vyhne**	**149.18**	**341**		*e*PKP	PKPbc	00 51 37.4	+0.7
KOLL	**Kolacno**	**149.23**	**341**		*e*PKP	PKPbc	00 51 37.6	+0.7
DRGR		**149.25**	**335**	⇓	*i*P	PKPbc	00 51 37.4	+0.4
VOIR		**149.31**	**331**	⇓	*i*P	PKPbc	00 51 37.7	+0.5
PSZ	**Piszkesteto**	**149.34**	**339**	⇑	*i*P	PKPbc	00 51 37.3	+0.1
MANZ	**Manzenberg**	**149.38**	**350**		*e*PKPbc	PKPbc	00 51 37.6	+0.4
SMOL	**Smolenice**	**149.57**	**343**		*e*PKP	PKPbc	00 51 39.0	+1.3
MODS	**Modra-Piesok**	**149.75**	**343**		*e*PKP	PKPbc	00 51 39.4	+1.3
GIVF	**Givet**	**149.91**	**359**		*e*PKP1	PKPbc	00 51 38.7	+0.2
KHC	**Kasperske Hory**	**149.93**	**348**		*e*PKP	PKPbc	00 51 38.9	+0.3
BAIF	**Baives**	**149.96**	**0**		*e*PKP1	PKPbc	00 51 38.9	+0.3
WET	**Wettzell**	**150.06**	**349**		*e*PKPbc	PKPbc	00 51 38.8	-0.1
GEC2	**GERESS Array S**	**150.18**	**347**		*e*PKPbc	PKPbc	00 51 39.2	+0.1
GEC2	**GERESS Array S**	**150.18**	**347**		*e*PKPbc	PKPbc	00 51 39.2	0.0
GERES	**GERESS Array B**	**150.18**	**347**		PKPbc	PKPbc	00 51 39.0	-0.2
	comp=Z,2.7nm,0.6s,baz=29,slow=2.6,SNR=30							
CONA	**Conrad Observa**	**150.54**	**344**	⇓	*i*PKiKP	PKiKP	00 51 40.5	-0.2
	comp=Z,4.7nm,0.6s							
CSNA	**Conrad Observa**	**150.54**	**344**	⇓	*i*PKiKP	PKiKP	00 51 40.6	-0.1
	comp=Z,4.7nm,0.6s							
BZS	**Buzias**	**150.65**	**335**	⇓	*i*P	PKPbc	00 51 38.6	-1.8
MOA	**Molln**	**151.00**	**346**	⇓	*i*PKiKP	PKiKP	00 51 41.2	-0.5
	comp=Z,3.0nm,0.5s							
FLN	**La Foliniere**	**151.01**	**6**		*e*PKP1	PKPbc	00 51 41.3	+0.2
	comp=Z,8.0nm,0.4s							
LDF	**La Druitiere**	**151.21**	**6**		*e*PKP1	PKPbc	00 51 41.3	-0.3
	comp=Z,5.8nm,0.4s							
SGMF	**Saint Gilles**	**151.24**	**9**		*e*PKP1	PKPbc	00 51 41.4	-0.3
PKSM	**Moragy**	**151.25**	**339**	⇑	*i*P	PKPbc	00 51 41.8	0.0
GRR	**Gorron**	**151.34**	**7**		*e*PKP1	PKPbc	00 51 41.8	-0.1
	comp=Z,13nm,0.4s							
CDF	**Champ du Feu**	**151.50**	**356**		*e*PKP1	PKPbc	00 51 42.5	+0.2
	comp=Z,12nm,0.7s							
MEZF	**Maizieres J'vi**	**151.51**	**359**		*e*PKP1	PKPbc	00 51 42.6	+0.3
	comp=Z,5.9nm,0.4s							
KBA	**Koelnbreinsper**	**151.93**	**347**	⇓	*i*PKiKP	PKiKP	00 51 43.6	0.0
	comp=Z,2.9nm,0.5s							
HAU	**Haudompre**	**151.96**	**357**		*e*PKP1	PKPbc	00 51 43.3	0.0
	comp=Z,8.7nm,0.5s							
WATA	**Walderalm**	**152.03**	**349**	⇓	*i*PKiKP	PKiKP	00 51 43.5	-0.4
	comp=Z,4.9nm,0.5s							
WTTA	**Wattenberg**	**152.09**	**349**	⇓	*i*PKiKP	PKiKP	00 51 43.9	-0.1
	comp=Z,10nm,0.5s							
HINF	**Hinteralfeld**	**152.12**	**356**		*e*PKP1	PKPbc	00 51 43.6	-0.1
	comp=Z,3.4nm,0.6s							
ABTA	**Abfaltersbach**	**152.42**	**348**	⇓	*i*PKiKP	PKiKP	00 51 44.0	-0.7
	comp=Z,5.4nm,0.5s							
HYF	**Humbligny**	**152.72**	**2**		*e*PKP1	PKPbc	00 51 45.5	+0.5
LOR	**Lormes**	**152.75**	**1**		*e*PKP1	PKPbc	00 51 44.8	-0.3
	comp=Z,5.5nm,0.5s							
SSF	**Saint Saulge**	**152.95**	**1**		*e*PKP1	PKPbc	00 51 45.8	+0.2
	comp=Z,5.3nm,0.6s							
MFF	**Saint Martin d**	**153.18**	**7**		*e*PKP1	PKPbc	00 51 45.9	-0.2
	comp=Z,5.7nm,0.6s							
AVF	**Avril sur Loir**	**153.22**	**1**		*e*PKP1	PKPbc	00 51 45.9	-0.3
BGF	**Bois d'Agland**	**153.44**	**2**		*e*PKP1	PKPbc	00 51 46.6	0.0
	comp=Z,4.7nm,0.4s							
TCF	**Toulx Ste Croi**	**153.68**	**3**		*e*PKP1	PKPbc	00 51 46.9	-0.3
	comp=Z,2.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**172.82**	**160**		PKP	PKPdf	00 51 55.5	-2.6
	comp=Z,1.2nm,1.0s,baz=225,slow=1.8,SNR=3.9							
TORD					PKPab	PKPab	00 53 25.6	+0.7
	comp=Z,0.7nm,0.9s,baz=181,slow=3.3,SNR=3.8							

DJA 29 00:39:46.8±0.0, 980S×11412E, h30km, MLv 3.9/5, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.41**	**46**	P	Pn	00 40 09.4	-1.0
IGBI	**Denpasar**	**1.41**	**46**	S	Sn	00 40 28.3	+0.4
NBBI	**Negara**	**1.50**	**19**	P	Pn	00 40 11.2	-0.5
NBBI	**Negara**	**1.50**	**19**	S	Sn	00 40 31.5	+1.2
DNP	**Denpasar**	**1.55**	**44**	P	Pn	00 40 13.2	+0.8
DNP	**Denpasar**	**1.55**	**44**	S	Sn	00 40 34.8	+3.3
KHKI	**Kahang-Kahang**	**2.05**	**46**	P	Pn	00 40 20.3	+1.1
KHKI	**Kahang-Kahang**	**2.05**	**46**	S	Sn	00 40 48.7	+4.9
KRKI	**Karangkates**	**2.32**	**315**	P	Pn	00 40 22.3	-0.6

*IDC **29** 00:39:44.7±2.3, 4.01S×153.35E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/16, mbtmp3.9/5, Error ellipse: s-maj=77.5km s-min=34.4km az=102.0*
*ISCJB **29** 00:39:50.7±1.6, 38S±0.1×152.8E±0.3, h33km, mb3.9/7, Error ellipse: s-maj=45.2km s-min=16.4km az=3.7*
*NEIC **29** 00:39:52.4±1.2, 384S×152.88E, h35km, mb3.8/1, Error ellipse: s-maj=38.3km s-min=14.5km az=95.0*

ISC 29 00:39:53.0±1.6, 39S±01×152.8E±03, h35km, n14, σ0§81/10, mb3.9/7, 1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**21.95**	**245**	*e*P	Px	00 44 28.8	
	13nm,0.6s						
WRAB	**Tennant Creek**	**24.05**	**227**	*e*P	**P**	**00 45 05.2**	**+0.1**
	21nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**24.05**	**227**	⇓ *i*P	**P**	**00 45 05.2**	**+0.1**
ASAR	**Alice Springs**	**26.84**	**221**	P	**P**	**00 45 30.2**	**-0.1**
	0.9nm,0.3s,mb3.7,baz=49,slow=8.3,SNR=12						
STKA	**Stephens Creek**	**29.79**	**199**	*e*P	**P**	**00 45 57.2**	**+0.7**
	0.2nm,0.5s,mb3.1						
TAU	**Tasmania Unive**	**39.19**	**186**	P	**P**	**00 47 17.6**	**0.0**
NWAO	**Narrogin (SRO)**	**44.03**	**225**	P	**P**	**00 47 57.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**57.47**	**295**	P	**P**	**00 49 39.1**	**+0.1**
	0.6nm,0.3s,mb4.0,baz=116,slow=5.1,SNR=4.8						
SONM	**Songino Array**	**65.52**	**328**	P	**P**	**00 50 34.7**	**+1.8**
	0.3nm,0.5s,mb3.6,baz=142,slow=7.2,SNR=2.7						
MKAR	**Makanchi Array**	**79.61**	**319**	P	**P**	**00 51 56.5**	**-0.3**
	0.5nm,0.2s,mb4.0,baz=98,slow=6.8,SNR=2.4						
BVAR	**Borovoye Array**	**88.48**	**323**	P	**P**	**00 52 40.0**	**-1.7**
	0.5nm,0.6s,mb3.9,baz=99,slow=3.6,SNR=3.0						
GERES	**GERESS Array B**	**123.25**	**329**	PKP	PKPdf	00 58 44.9	-1.4
	0.2nm,0.4s,baz=41,slow=3.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**149.99**	**290**	PKPbc	PKPbc	00 59 38.5	-2.4
	0.9nm,0.7s,baz=88,slow=2.0,SNR=21						
TORD	**Torodi Ar. Bea**	**149.99**	**290**	PKPbc	PKPbc	00 59 38.5	-2.4

*ISK **29** 00:57:57.9, 3693N×2924E, h6km, MD3.3*
*CSEM **29** 00:57:57.7±0.1, 3693N×2926E, h5km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.5km az=149.0*
*ISCJB **29** 00:57:58.5±0.5, 3695N±003×2924E±003, h3km±5km, Error ellipse: s-maj=4.8km s-min=3.6km az=138.6*
*NEIC **29** 00:57:58.0, 3694N×2923E, h6km, MD3.1(ISK), After ISK.*
*DDA **29** 00:57:59.4, 3705N×2928E, h6km±22km, Md3.0*

ISC 29 00:57:58.9±0.5, 3694N±003×2925E±003, h4km±5km, n37, σ0§93/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.33**	**203**	*e*PG	**Pg**	**00 58 04.5**	**-0.9**
FETY				*e*SG	**Sg**	**00 58 10.0**	**+0.3**
GOLH	**Golhisar**	**0.39**	**41**	*i* P	**Pg**	**00 58 05.7**	**-0.6**
GOLH				*i* S	**Sg**	**00 58 12.6**	**+1.2**
DALT	**Dalyan (Mudla)**	**0.52**	**251**	*e*PG	**Pg**	**00 58 07.7**	**-1.1**
DALT				*e*SG	**Sg**	**00 58 15.9**	**+0.3**
TURN	**Turunc**	**0.52**	**262**	*i* P	**Pg**	**00 58 12.6**	**+3.7**
TURN				*i* S	**Sg**	**00 58 25.1**	**+9.4**
AKAS	**Kas**	**0.77**	**158**	*i* P	**Pg**	**00 58 13.2**	**-0.4**
AKAS				*i* S	**Sg**	**00 58 27.8**	**+4.3**
YER	**Yerkesik**	**0.79**	**284**	*e*PG	**Pg**	**00 58 13.7**	**-0.4**
YER				*e*SG	**Sg**	**00 58 24.8**	**+0.4**
DENT	**Denizli**	**0.83**	**348**	*e*PG	**Pg**	**00 58 14.4**	**-0.4**
DENT				*e*SG	**Sg**	**00 58 26.5**	**+1.0**
KSL	**Kastellorizon**	**0.84**	**161**	*e*P	**Pg**	**00 58 16.5**	**+1.5**
ANTB	**Antalya**	**1.13**	**92**	*e*PN	**Pn**	**00 58 20.1**	**-1.4**
ARG	**Arkhangelos**	**1.16**	**231**	*e*P	**Pg**	**00 58 19.5**	**-1.6**
ARG	**Arkhangelos**	**1.16**	**231**	P	**Pg**	**00 58 20.1**	**-1.0**
BCK	**Bucak**	**1.19**	**64**	*e*PN	**Pn**	**00 58 21.6**	**-0.8**
MLSB	**Milas**	**1.23**	**287**	*e*PN	**Pn**	**00 58 21.6**	**-1.2**
ISP	**Isparta**	**1.35**	**48**	*e*PN	**Pn**	**00 58 23.4**	**-1.1**
ISP	**Isparta**	**1.35**	**48**	P	**Pn**	**00 58 26.0**	**+1.5**
DAT	**Datca**	**1.35**	**261**	*e*PN	**Pn**	**00 58 24.5**	**-0.2**
KHL	**Karahalli**	**1.40**	**9**	*e*PN	**Pn**	**00 58 24.9**	**-0.3**
KHAL	**Karahalli**	**1.44**	**8**	*i* P	**Pn**	**00 58 26.0**	**+0.2**
KHAL				*i* S	**Sb**	**00 58 45.0**	**+0.1**
BDRM	**Kayabasi**	**1.45**	**275**	*i* P	**Pn**	**00 58 25.2**	**-0.7**
BDRM				*i* S	**Sb**	**00 58 45.0**	**-0.2**
BODT	**Bodrum**	**1.55**	**275**	*e*PN	**Pn**	**00 58 27.1**	**-0.2**
KULA	**Kula-Manisa**	**1.64**	**344**	*e*PN	**Pn**	**00 58 28.0**	**-0.4**
SHUT	**Suhut-Afyon**	**1.91**	**32**	*e*PN	**Pn**	**00 58 31.7**	**-0.6**
SMG	**Samos**	**2.07**	**292**	*e*P	**Pn**	**00 58 33.9**	**-0.5**
SMG	**Samos**	**2.07**	**292**	P	**Pn**	**00 58 34.4**	**0.0**
DEMI	**Demirci**	**2.14**	**349**	*i* P	**Pn**	**00 58 34.3**	**-1.0**
DEMI				*i* S	**Sn**	**00 59 02.9**	**+0.5**
KARP	**Karpathos**	**2.19**	**231**	*e*P	**Pn**	**00 58 37.2**	**+1.1**
KARP	**Karpathos**	**2.19**	**231**	P	**Pn**	**00 58 37.7**	**+1.6**
ALT	**Altintas**	**2.22**	**18**	*e*PN	**Pn**	**00 58 36.8**	**+0.3**
AKS	**Akhisar**	**2.24**	**330**	*e*PN	**Pn**	**00 58 35.9**	**-0.9**
BLCB	**Balcova**	**2.27**	**310**	*e*PN	**Pn**	**00 58 36.7**	**-0.4**
HDMB	**Hadim**	**2.59**	**89**	*e*PN	**Pn**	**00 58 42.1**	**+0.4**
LADK	**Ladik-KONYA**	**2.78**	**62**	*e*PN	**Pn**	**00 58 44.1**	**0.0**
KIZT	**Kizilcal**	**2.84**	**46**	*e*PN	**Pn**	**00 58 45.5**	**+0.4**
NPS	**Neapolis**	**3.39**	**241**	*e*P	**Pn**	**00 58 55.0**	**+2.4**
NPS	**Neapolis**	**3.39**	**241**	P	**Pn**	**00 58 54.8**	**+2.2**
IDI	**Anoyia**	**3.89**	**246**	P	**Pn**	**00 59 01.6**	**+2.1**
NVR	**Nevrokopi**	**6.07**	**318**	P	**Pn**	**00 59 31.1**	**+1.7**

MOS 29 00:58:30.2±3.0, 4275N×4712E, h10km, mb3.7/1, 4D, Error ellipse: s-maj=11.6km s-min=8.3km az=21.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUJR	**Buynaksk**	**0.07**	**353**	⇓ *i*PG	Pg	00 58 31.0	-1.5
KRNR	**Karanay**	**0.17**	**296**	⇓ *i*PG	Pg	00 58 31.2	-2.8
KRNR				pmax	pmax		
	comp=Z,114nm,0.2s						
UNCR	**Uncukul**	**0.24**	**262**	*i* PG	Pg	00 58 36.0	+0.9
UNCR				*e*S	Sg	00 58 42.5	+4.0
UNCR				pmax	pmax		
	comp=Z,47nm,0.2s						
DBC	**Dubki**	**0.34**	**322**	⇓ *i*PG	Pg	00 58 31.1	-5.9
MAK	**Makhachkala**	**0.35**	**53**	⇓ *i*PG	Pg	00 58 37.1	-0.1
MAK				*i*		00 58 42.5	
MAK				pmax	pmax		
	comp=Z,32nm,0.1s						
MAK				smax			
	comp=E,663nm,0.4s						
MAK				smax			
	comp=N,607nm,0.4s						
KMKR	**Kumukh**	**0.62**	**181**	*e*PG	Pg	00 58 48.0	+5.8
KMKR				pmax	pmax		
	comp=Z,35nm,0.2s						
BTLR	**Botlikh**	**0.67**	**263**	PG	Pg	00 58 43.0	-0.1
BTLR				*e*S	Sg	00 58 54.7	+2.9
SNJR	**Sundja**	**1.73**	**281**	*e*PN	Pn	00 59 04.4	+4.2
SNJR				*i* S	Sn	00 59 28.4	+6.1
VLKR	**Vladikavkaz**	**1.82**	**280**	*e*PN	Pn	00 59 05.7	+4.2
VLKR				*e*S	Sn	00 59 30.7	+6.1
LACR	**Lac**	**2.08**	**273**	*e*PN	Pn	00 59 08.7	+3.6
LACR				*e*S	Sn	00 59 36.0	+4.9
ARNR	**Ardon**	**2.13**	**283**	*e*PN	Pn	00 59 10.4	+4.6
ARNR				*e*S	Sn	00 59 38.8	+6.5
KMSR	**Komsomolskaya**	**2.16**	**288**	*e*PN	Pn	00 59 11.2	+4.9
KMSR				*e*S	Sn	00 59 40.3	+7.2
KORR	**Kora**	**2.27**	**280**	*e*PN	Pn	00 59 11.8	+4.1
KORR				*e*S	Sn	00 59 41.4	+5.7
ZEI	**Tsey**	**2.37**	**272**	*e*PN	Pn	00 59 12.6	+3.5
ZEI				*e*S	Sn	00 59 42.5	+4.2
LSNR	**Lesken**	**2.48**	**283**	*e*PN	Pn	00 59 15.2	+4.6
LSNR				*e*S	Sn	00 59 47.0	+6.1
DIGR	**Digorskoe uzhe**	**2.61**	**274**	*e*PN	Pn	00 59 15.9	+3.5
DIGR				*e*S	Sn	00 59 48.5	+4.4

*ISCJB **29** 01:03:54.1±0.8, 34S±0.1×684E±0.1, h10km, mb4.0/13, MS3.8/9, Error ellipse: s-maj=18.4km s-min=18.1km az=159.4*
*IDC **29** 01:03:54.4±1.0, 336S×6833E, h0km, mb3.9/10, mb1 3.9/10, mb1mx3.8/23, mbtmp3.9/10, MS3.8/9, Ms1 3.8/9, ms1mx3.5/30, Error ellipse: s-maj=28.8km s-min=21.3km az=156.0*
*NEIC **29** 01:03:55.9±0.7, 340S×6836E, h10km, mb4.3/5, Error ellipse: s-maj=18.0km s-min=16.8km az=141.0*

ISC 29 01:03:56.1±0.8, 34S±01×684E±01, h10km, n27, σ1§08/21, mb4.0/13, MS3.8/9, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.13**	**53**	P	**P**	**01 11 08.9**	**+1.6**
	0.9nm,0.3s,mb4.1,baz=244,slow=9.9,SNR=6.9						
CMAR				LR	LR	01 25 31.0	
	comp=Z,87nm,18.6s,MS3.6,baz=59,slow=35						
LSZ	**Lusaka**	**41.27**	**251**	P	**P**	**01 11 43.0**	**+1.0**
	1.4nm,0.8s,mb3.7,baz=74,slow=6.4,SNR=3.1						
LSZ				LR	LR	01 26 12.6	
	comp=Z,171nm,18.0s,MS4.0,baz=340,slow=32						
LSZ	**Lusaka**	**41.27**	**251**	*e*P	**P**	**01 11 43.5**	**+1.6**
	1.7nm,0.7s,mb3.8						
LSZ				LR	LR	01 26 12.6	
AAK	**Ala-Archa**	**46.14**	**6**	*e*P	**P**	**01 12 22.1**	**+1.4**
	1.9nm,0.8s,mb4.1						
TKM2	**Tokmak 2**	**46.55**	**7**	*e*P	**P**	**01 12 25.2**	**+1.3**
	4.8nm,1.0s,mb4.4						
BOSA	**Boshof**	**48.02**	**234**	LR	LR	01 30 04.3	
	comp=Z,101nm,18.4s,MS3.8,baz=230,slow=33						
MK31	**Makanchi Array**	**51.46**	**12**	*e*P	**P**	**01 13 02.5**	**+1.0**
MKAR	**Makanchi Array**	**51.46**	**12**	P	**P**	**01 13 00.5**	**-1.0**
	0.5nm,0.7s,mb3.5,baz=182,slow=7.3,SNR=3.6						
MKAR				LR	LR	01 36 02.2	
	comp=Z,56nm,18.2s,MS3.6,baz=273,slow=38						
MKAR	**Makanchi Array**	**51.46**	**12**	P	**P**	**01 13 00.5**	**-1.0**
MKAR				LR	LR	01 36 02.2	
BRTR	**Keskin Array B**	**53.45**	**327**	P	**P**	**01 13 17.5**	**+1.0**
	0.8nm,0.8s,mb3.7,baz=134,slow=10,SNR=3.4						
AKTK	**Aktyubinsk**	**54.34**	**352**	P	**P**	**01 13 21.8**	**-0.9**
AKTO	**Aktyubinsk**	**54.34**	**352**	P	**P**	**01 13 21.8**	**-0.9**
	2.0nm,1.0s,mb4.0,baz=180,slow=7.1,SNR=4.3						
KURK	**Kurchatov**	**54.60**	**8**	P	**P**	**01 13 23.2**	**-1.4**
	2.1nm,0.8s,mb4.2,baz=208,slow=7.7,SNR=5.8						
KURK				LR	LR	01 35 31.5	
	comp=Z,49nm,21.0s,MS3.5,baz=20,slow=35						
KURK	**Kurchatov**	**54.60**	**8**	*e*P	**P**	**01 13 24.1**	**-0.5**
	3.4nm,0.9s,mb4.4						
KURK				LR	LR	01 35 31.4	
ZAA0	**Zalesovo Array**	**58.76**	**11**	*e*P	**P**	**01 13 52.9**	**-1.3**
ZALV	**Zalesovo Beam**	**58.76**	**11**	P	**P**	**01 13 52.9**	**-1.2**
	1.2nm,0.6s,mb4.1,baz=205,slow=6.6,SNR=6.7						
ZALV				LR	LR	01 38 03.3	
	comp=Z,43nm,18.1s,MS3.6,baz=61,slow=35						
ZALV	**Zalesovo Beam**	**58.76**	**11**	P	**P**	**01 13 52.9**	**-1.2**
ZALV				LR	LR	01 38 03.3	
SONM	**Songino Array**	**60.90**	**28**	P	**P**	**01 14 09.7**	**+0.8**
	3.6nm,0.9s,mb4.5,baz=221,slow=4.7,SNR=18						
MAW	**Mawson**	**64.22**	**182**	LR	LR	01 35 06.4	
	comp=Z,110nm,21.9s,MS4.0,baz=75,slow=29						
ASAR	**Alice Springs**	**66.28**	**114**	P	**P**	**01 14 44.6**	**-0.5**
	1.1nm,1.0s,mb3.8,baz=270,slow=6.0,SNR=5.7						
WRAB	**Tennant Creek**	**66.30**	**110**	*e*P	**P**	**01 14 44.8**	**-0.5**
	3.2nm,0.7s,mb4.5						
TORD	**Torodi Ar. Bea**	**68.16**	**286**	P	**P**	**01 14 56.0**	**-1.1**
	0.3nm,0.8s,mb3.4,baz=96,slow=2.9,SNR=2.2						
TORD	**Torodi Ar. Bea**	**68.16**	**286**	P	**P**	**01 14 56.0**	**-1.1**
KSRS	**Korea Array**	**68.47**	**48**	LR	LR	01 44 40.1	
	comp=Z,64nm,19.7s,MS3.9,baz=100,slow=36						
ARCES	**ARCESS Array B**	**78.32**	**346**	LR	LR	01 48 21.5	
	comp=Z,73nm,18.2s,MS4.0,baz=5.3,slow=34						
NVAR	**Mina Array Bea**	**144.59**	**9**	PKP	PKPdf	01 23 33.0	-0.4
	0.6nm,0.7s,baz=19,slow=3.6,SNR=4.9						
TXAR	**Lajitas Array**	**153.10**	**344**	PKPbc	PKPbc	01 23 54.3	-0.5
	0.3nm,0.7s,baz=65,slow=2.0,SNR=3.7						

*TEH **29** 01:10:07.3, 34.10N×46.81E, h6km, ML3.9*
*IDC **29** 01:10:44.0±1.5, 3420N×4671E, h0km, mb3.9/10, mb1 3.9/15, mb1mx3.8/28, mbtmp3.9/15, ML3.6/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/33, Error ellipse: s-maj=36.5km s-min=12.3km az=158.0*
*ISCJB **29** 01:10:43.3±0.6, 3403N±002×4676E±002, h11km±4km, mb4.0/18, Error ellipse: s-maj=4.0km s-min=3.2km az=26.5*
*CSEM **29** 01:10:44.9±0.1, 3405N×4675E, h25km, mb4.2/8, Ms4.3, Error ellipse: s-maj=1.8km s-min=1.4km az=66.0*
*MOS **29** 01:10:46.2±1.1, 3400N×4674E, h37km, mb4.2/11, Error ellipse: s-maj=11.9km s-min=9.0km az=103.7*
*THR **29** 01:10:47.4±0.6, 3412N×4693E, h15km, ML3.7*
*NEIC **29** 01:10:49.7, 3420N×4709E, h16km, mb4.2/9, ML3.8(THR), After THR.*

ISC 29 01:10:44.5±0.6, 3405N±002×4678E±002, h5km±4km, n152, σ1§13/164, mb4.0/18, 4C-1D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**0.33**	**328**	*e*Pg	**Pg**	**01 10 51.3**	**+0.3**
IGHG				*e*		01 11 05.4	
IVIS	**Veis**	**0.48**	**7**	*e*Sg	**Sg**	**01 10 59.7**	**-0.4**
IVIS	**Veis**	**0.48**	**7**	*e*Pg	**Pg**	**01 10 53.0**	**-0.8**
IVIS				*e*Sg	**Sg**	**01 10 59.7**	**-0.4**
IVIS				*e*		01 11 00.5	
IKOM	**Komasi**	**0.62**	**78**	*e*Sg	**Sg**	**01 11 04.8**	**+0.4**
IKOM	**Komasi**	**0.62**	**78**	⇓ *e*Pg	**Pg**	**01 10 55.3**	**-1.1**
IKOM				*e*Sg	**Sg**	**01 11 04.8**	**+0.4**
IKOM				*e*		01 11 05.8	
IDHR	**Dehrash**	**0.73**	**333**	⇑ *e*Pg	**Pg**	**01 10 57.6**	**-0.9**
IDHR				*e*Sg	**Sg**	**01 11 08.1**	**+0.1**
IDHR	**Dehrash**	**0.73**	**333**	*e*Pg	**Pg**	**01 10 57.3**	**-1.2**
IDHR				*e*Sg	**Sg**	**01 11 08.2**	**+0.2**
IDHR				*e*		01 11 09.0	
ILIN	**Lien**	**0.88**	**10**	*e*Pg	**Pg**	**01 11 00.4**	**-1.0**
ILIN	**Lien**	**0.88**	**10**	*e*Pg	**Pg**	**01 11 00.4**	**-1.0**
ILIN				*e*Sg	**Sg**	**01 11 11.1**	**-1.8**
ILIN				*e*		01 11 15.0	
BHD	**Baghdad**	**2.15**	**250**	*ex*	x	01 11 21.0	
BHD				*ex*	x	01 11 49.0	
SHGR	**Shooshtar-Gavs**	**2.57**	**138**	Pn	**Pn**	**01 11 32.0**	**+5.2**
SHGR				Sn	**Sn**	**01 12 08.0**	**+10**
SHGR	**Shooshtar-Gavs**	**2.57**	**138**	*e*Pn	**Pn**	**01 11 30.1**	**+3.3**
SHGR				AML	AML

IKIA e 01 14 14.6
ISAD Sadrabad 6.18 108 *e*Pn **Pn 01 12 16.8 +0.5**
ISAD Sadrabad 6.18 108 *e*Pn **Pn 01 12 16.8 +0.5**
ISAD e 01 13 08.4
IGLO Ghaloghah 6.26 65 *e*Pn **Pn 01 12 17.4 -0.1**
IGLO e 01 12 46.0
ICHK Chekchek 6.64 104 *e*Pn **Pn 01 12 22.6 -0.1**
ICHK Chekchek 6.64 104 *e*Pn **Pn 01 12 22.6 -0.1**
ICHK e 01 14 24.9
ASYS 6.85 198 P **Pn 01 12 24.8 -0.8**
IMOK Mouk 7.10 133 *e*Pn **Pn 01 12 29.2 +0.1**
IMOK Mouk 7.10 133 *e*Pn **Pn 01 12 29.2 +0.1**
IMOK e 01 13 58.5
ISRV Sarvestan 7.12 129 *e*Pn **Pn 01 12 29.6 +0.3**
ISRV Sarvestan 7.12 129 *e*Pn **Pn 01 12 29.6 +0.3**
ISRV e 01 13 57.9
ASF Jabal al Asfar 8.50 260 Pn **Pn 01 12 47.9 -0.3**
comp=Z,0.4nm,0.3s,baz=81,slow=3.8,SNR=3.4
ASF Sn **Sn 01 14 25.2 +0.7**
comp=Z,0.4nm,0.3s,baz=129,slow=14,SNR=2.4
ASF Lg 01 15 13.2
comp=Z,0.3nm,0.3s,baz=287,slow=13,SNR=4.0
ASF LR LR 01 16 55.5
comp=Z,81nm,19.1s,baz=304,slow=44
ASF Jabal al Asfar 8.50 260 P **Pn 01 12 47.9 -0.3**
ASF 01 14 25.2
ASF MLR MLR
comp=Z,81nm,19.1s
MMAI Mount Meron Ar 9.55 267 Pn **Pn 01 13 03.1 +0.4**
comp=Z,0.5nm,0.3s,baz=81,slow=14,SNR=2.7
MMAI Sn **Sn 01 14 59.8 +9.4**
comp=Z,0.5nm,0.3s,baz=75,slow=34,SNR=2.2
MMAI Lg 01 15 46.9
comp=Z,0.8nm,0.3s,baz=83,slow=34,SNR=3.3
MMAI LR LR 01 17 18.3
comp=Z,82nm,19.4s,baz=105,slow=42
BTHS 10.58 159 P **Pn 01 13 14.7 -2.0**
EIL Elat 10.96 250 Pn **Pn 01 13 21.8 -0.2**
comp=Z,0.3nm,0.3s,baz=53,slow=6.6,SNR=3.5
EIL Lg 01 16 33.2
comp=Z,0.3nm,0.3s,baz=92,slow=18,SNR=2.5
EIL LR LR 01 18 14.4
comp=Z,85nm,21.4s,baz=255,slow=41
EIL Elat 10.96 250 Pn **Pn 01 13 21.8 -0.2**
EIL Lg 01 16 33.2
EIL LR LR 01 18 14.4
HRDDS 11.33 167 S **Sn 01 15 25.6 -8.3**
HRDDS 11.33 167 P **Pn 01 13 25.0 -1.9**
BANOM Banah 11.55 132 Pn **Pn 01 13 27.7 -2.4**
SNR=19
NAZ Nazwa, Dubai 11.88 137 Pn **Pn 01 13 34.1 -0.4**
SNR=11
BR131 Keskin Array S 11.95 302 *e*Pn **Pn 01 13 35.7 +0.3**
BRTR Keskin Array B 11.95 302 Pn **Pn 01 13 38.6 +3.2**
comp=Z,0.1nm,0.3s,baz=109,slow=15,SNR=3.9
ASUD Al Ashush, Dub 11.98 139 Pn **Pn 01 13 34.7 -1.2**
SNR=22
FAQ Al Faqa, Dubai 12.03 138 Pn **Pn 01 13 35.5 -1.1**
SNR=6.7
HATD Hatta, Dubai 12.27 136 Pn **Pn 01 13 38.0 -1.9**
VORD Divnogorie 17.77 344 *e*P **Pn 01 14 52.7 +0.3**
VORD pmax pmax
comp=Z,6.0nm,0.7s
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 18.03 344 *e*P **Pn 01 14 55.5 -0.1**
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=Z,5.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,0.6s
IDI Anoyia 18.05 280 P **Pn 01 14 57.1 +1.1**
comp=E,1.1nm,0.3s,baz=80,slow=8.3,SNR=9.4
AKTK Aktyubinsk 18.33 23 P **Pn 01 14 59.4 +0.1**
AKTK Aktyubinsk 18.33 23 P **Pn 01 14 59.4 +0.1**
AKTO Aktyubinsk 18.33 23 P **Pn 01 14 59.4 +0.1**
comp=E,0.1nm,0.3s,baz=203,slow=13,SNR=3.2
MLR Muntele Rosu 19.61 312 P **Pn 01 15 15.1 +0.2**
comp=E,0.1nm,0.3s,baz=140,slow=7.9,SNR=3.1
MLR LR LR 01 23 26.0
comp=E,104nm,18.4s,baz=160,slow=39
MLR Muntele Rosu 19.61 312 *i*P **Pn 01 15 15.4 +0.5**
VOIR 20.15 311 *i*P **P 01 15 20.5 +1.1**
AKASG Malin Array Be 21.01 328 P **P 01 15 27.1 -1.6**
comp=E,1.6nm,0.7s,mb3.5,baz=136,slow=12,SNR=4.2
AKASG Malin Array Be 21.01 328 P **P 01 15 27.1 -1.6**
AKASG Malin Array Be 21.01 328 P **P 01 15 27.1 -1.6**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
BURAR Bucovina Array 21.12 316 *i*P **P 01 15 30.1 +0.2**
BUR08 Bucovina Ar. S 21.15 316 *e*P **P 01 15 30.1 0.0**
BUR08 Bucovina Ar. S 21.15 316 *e*P **P 01 15 30.1 -0.1**
EKS2 Erkin-Say 22.78 60 *e*P **P 01 15 45.1 -2.5**
comp=Z,2.1nm,0.8s,mb3.6
EKS2 Erkin-Say 22.78 60 *e*P **P 01 15 45.2 -2.5**
comp=Z,2.1nm,0.8s,mb3.6
ARU Arti 23.80 16 *e*P **P 01 15 57.2 -0.8**
comp=Z,2.6nm,0.6s,mb3.8
ARU Arti 23.80 16 *e*P **P 01 15 57.2 -0.8**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
ARU Arti 23.80 16 *e*P **P 01 15 57.2 -0.8**
comp=Z,2.6nm,0.6s,mb3.8
TKM2 Tokmak 2 24.14 60 *e*P **P 01 15 59.5 -1.7**
comp=Z,1.1nm,0.4s,mb3.6
TKM2 Tokmak 2 24.14 60 *e*P **P 01 15 59.5 -1.7**
TKM2 pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
TKM2 Tokmak 2 24.14 60 *e*P **P 01 15 59.5 -1.7**
comp=Z,1.1nm,0.4s,mb3.6
BRVK Borovoye 25.32 34 *e*P **P 01 16 11.5 -0.3**
comp=Z,3.5nm,0.7s,mb4.0
BRVK Borovoye 25.32 34 *e*P **P 01 16 11.5 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
BRVK Borovoye 25.32 34 *e*P **P 01 16 11.5 -0.4**
comp=Z,3.5nm,0.7s,mb4.0
BVAR Borovoye Array 25.35 34 P **P 01 16 11.7 -0.4**
comp=Z,2.5nm,0.7s,mb3.9,baz=225,slow=10,SNR=16
BVAR Borovoye Array 25.35 34 P **P 01 16 11.7 -0.4**
BVAR pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 28.52 45 P **P 01 16 39.9 -0.8**
comp=Z,0.8nm,0.5s,mb3.8,baz=252,slow=8.9,SNR=6.5
KURK Kurchatov 28.52 45 *e*P **P 01 16 40.9 +0.2**
comp=Z,1.4nm,0.8s,mb3.7
KURK Kurchatov 28.52 45 P **P 01 16 39.9 -0.8**
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KURK Kurchatov 28.52 45 *e*P **P 01 16 40.9 +0.2**
comp=Z,1.4nm,0.8s,mb3.7
MK31 Makanchi Array 29.62 54 *e*P **P 01 16 50.6 +0.1**
MK31 Makanchi Array 29.62 54 *e*P **P 01 16 50.7 +0.2**
MKAR Makanchi Array 29.62 54 P **P 01 16 50.8 +0.3**
comp=Z,2.8nm,0.7s,mb4.1,baz=248,slow=7.3,SNR=25
MKAR Makanchi Array 29.62 54 P **P 01 16 50.8 +0.3**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MBDF Montbardon 32.42 301 *e*P **P 01 17 17.9 +2.7**
comp=Z,15nm,0.7s,mb4.6
MBDF Montbardon 32.42 301 *e*P **P 01 17 17.9 +2.7**
comp=Z,7.3nm,0.7s,mb4.6
MBDF Montbardon 32.42 301 *e*P **P 01 17 17.9 +2.7**
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
LPG La Plagne 32.51 303 *e*P **P 01 17 16.7 +0.7**
comp=Z,18nm,1.0s,mb4.6
LPG La Plagne 32.51 303 *e*P **P 01 17 16.7 +0.7**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LPG La Plagne 32.51 303 *e*P **P 01 17 16.7 +0.7**
comp=Z,17nm,1.0s,mb4.9
BNI Bardonecchia 32.51 302 *e*P **P 01 17 15.9 -0.1**
BNI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BNI Bardonecchia 32.51 302 *e*P **P 01 17 15.9 -0.1**
comp=Z,7.5nm,0.6s,mb4.8
LPL La Plagne 32.52 303 *e*P **P 01 17 16.9 +0.8**
CABF La Chapelle 33.10 305 *e*P **P 01 17 20.7 -0.5**
ZALV Zalesovo Beam 33.27 42 P **P 01 17 22.0 -0.6**
comp=Z,0.6nm,0.4s,mb3.9,baz=251,slow=9.1,SNR=6.4
ZALV Zalesovo Beam 33.27 42 P **P 01 17 22.0 -0.6**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
WLF Walferdange 33.58 310 *e*P **P 01 17 24.1 -1.3**
comp=Z,3.9nm,0.6s,mb4.5
WLF Walferdange 33.58 310 *e*P **P 01 17 24.1 -1.2**
WLF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
WLF Walferdange 33.58 310 *e*P **P 01 17 24.1 -1.2**
comp=Z,3.9nm,0.6s,mb4.5
HFS Hagfors 33.83 331 P **P 01 17 26.2 -1.2**
comp=Z,4.3nm,0.6s,mb4.5,baz=126,slow=7.5,SNR=9.9
HFS Hagfors 33.83 331 P **P 01 17 26.2 -1.2**
HFS pmax pmax
comp=Z,4.0nm,0.6s
NOA NORSAR Array B 35.36 331 P **P 01 17 38.5 -2.0**
comp=Z,0.8nm,0.7s,mb3.8,baz=124,slow=8.7,SNR=3.0
NOA NORSAR Array B 35.36 331 P **P 01 17 38.5 -2.0**
NOA pmax pmax
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 40.30 317 P **P 01 18 21.0 -1.4**
comp=Z,2.2nm,0.8s,mb3.9,baz=105,slow=8.9,SNR=6.0
EKA Eskdalemuir Ar 40.30 317 P **P 01 18 21.0 -1.4**
EKA pmax pmax
comp=Z,2.0nm,0.8s
MDT Midelt 42.54 283 P **P 01 18 41.5 +0.4**
comp=Z,1.1nm,0.7s,mb3.7,baz=54,slow=8.7,SNR=3.3
TOA0 Torodi Ar. Sit 45.81 254 *e*P **P 01 19 06.5 -0.9**
TOA0 Torodi Ar. Sit 45.81 254 *e*P **P 01 19 06.5 -1.0**
TORD Torodi Ar. Bea 45.81 254 P **P 01 19 07.0 -0.5**
comp=Z,1.6nm,1.0s,mb3.9,baz=58,slow=6.5,SNR=7.3

IDC 29 01:16:15.1±15.0, 376S×10127E, h120km±144km, mb3.3/6, mb1 3.3/6, mb1mx3.2/20, mbtmp3.3/6, Error ellipse: s-maj=119.5km s-min=22.6km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**37.20**	**125**	P		P 01 23 15.0	0.0
	0.2nm,0.3s,baz=304,slow=7.4,SNR=4.0						
SONM	**Songino Array**	**51.57**	**4**	P		P 01 25 09.3	+0.5
	0.9nm,0.6s,baz=189,slow=7.3,SNR=5.8						
MKAR	**Makanchi Array**	**53.05**	**344**	P		P 01 25 20.6	+0.9
	0.8nm,0.8s,baz=143,slow=8.3,SNR=5.8						
KURK	**Kurchatov**	**57.64**	**343**	P		P 01 25 52.7	+0.2
	0.5nm,0.3s,baz=165,slow=6.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**59.12**	**349**	P		P 01 26 01.4	-1.4
	0.3nm,0.3s,baz=167,slow=8.9,SNR=2.3						
BVAR	**Borovoye Array**	**62.26**	**339**	P		P 01 26 23.9	-0.2
	0.2nm,0.4s,baz=132,slow=6.0,SNR=3.8						
TXAR	**Lajitas Array**	**145.27**	**40**	PKPbc	PKPbc	01 35 38.5	-0.8
	0.2nm,0.5s,baz=298,slow=1.9,SNR=3.7						

SGS 29 01:20:48.0, 2426N×3642E, h21km, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMJS	**Umm Lajj**	**1.26**	**40**	P		P 01 21 08.8	-1.7
UMJS	**Umm Lajj**	**1.26**	**40**	P		P 01 21 08.7	-1.7
YNBS	**Yanbu' al Bahr**	**1.44**	**87**	P		P 01 21 11.2	-1.7
YNBS	**Yanbu' al Bahr**	**1.44**	**87**	S		Sn 01 21 26.5	-4.6
YNBS	**Yanbu' al Bahr**	**1.44**	**87**	P		Pn 01 21 11.2	-1.7
YOBS		**2.12**	**87**	S		Sn 01 21 45.1	-2.9
YOBS		**2.12**	**87**	P		Pn 01 21 20.7	-1.6
YOBS		**2.12**	**87**	P		Pn 01 21 20.8	-1.5

LDG 29 01:29:54.4±0.1, 1845S×16786E, h10km, Mb4.3/2, Error ellipse: s-maj=19.3km s-min=2.9km az=102.0
ISCJB 29 01:29:57.9±2.7, 188S±0.1×168.1E±0.2, h45km±22km, mb4.4/3, Error ellipse: s-maj=28.8km s-min=18.3km az=4.7
IDC 29 01:30:15.6±6.8, 1901S×16802E, h195km±63km, mb3.6/5, mb1 3.6/5, mb1mx3.5/16, mbtmp3.6/5, MS3.4/1, Ms1 3.3/1, ms1mx2.8/19, Error ellipse: s-maj=35.2km s-min=24.4km az=43.0
NEIC 29 01:30:16.0±0.6, 1899S×16798E, h200km, mb4.2/2, Error ellipse: s-maj=19.4km s-min=18.6km az=47.0

ISC 29 01:29:58.1±2.9, 189S±01×1685E±02, h44km±24km, n49, σ0s48/15, mb4.4/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOUC	**Port Laguerre**	**3.75**	**213**	*e*P		**Pn 01 30 53.2**	**-0.2**
NOUC				*e*S		**Sn 01 31 36.7**	**+0.3**
NORM	**Noumea**	**3.77**	**209**	*e*P		**Pn 01 30 53.7**	**0.0**
NORM				*e*S		**Sn 01 31 36.7**	**-0.2**
AFI	**Afiamalu**	**19.58**	**78**	LR		LR 01 39 52.1	
	comp=Z,57nm,18.9s,baz=47,slow=29						
URZ	**Urewera**	**20.67**	**160**	P		**P 01 34 41.7**	**+7.5**
	7.9nm,0.8s,baz=0.0,slow=5.1,SNR=4.0						
CTA	**Charters Tower**	**20.98**	**263**	P		**P 01 34 38.4**	**+0.6**
	2.2nm,0.6s,baz=96,slow=9.2,SNR=3.2						
CTAO	**Charters Tower**	**20.98**	**263**	*e*P		**P 01 34 32.4**	**-5.3**
	15nm,1.4s						
STKA	**Stephens Creek**	**27.40**	**237**	P		**P 01 35 38.9**	**-0.7**
	0.9nm,0.5s,baz=100,slow=11,SNR=3.4						
STKA				LR		LR 01 46 11.1	
	comp=Z,80nm,19.1s,baz=24,slow=35						
STKA	**Stephens Creek**	**27.40**	**237**	P		**P 01 35 38.9**	**-0.7**
STKA				LR		LR 01 46 11.1	
ASAR	**Alice Springs**	**32.50**	**256**	P		**P 01 36 25.0**	**+0.2**
	4.3nm,0.5s,mb4.6,baz=83,slow=8.6,SNR=70						
JHJ	**Hachijo jima 2**	**58.58**	**332**	P		**P 01 39 51.4**	**+0.9**
	864nm,0.8s,baz=148,slow=19,SNR=2.7						
ULN	**Ulaanbaatar**	**86.20**	**324**	*e*P		**P 01 42 34.0**	**-0.7**
	2.4nm,0.7s,mb4.5						
SONM	**Songino Array**	**86.55**	**323**	P		**P 01 42 35.8**	**-0.6**
	1.1nm,0.7s,mb4.2,baz=145,slow=5.7,SNR=8.1						
VNA3	**Neumayer Olymp**	**90.05**	**181**	*e*		**P 01 42 53.0**	**+0.2**
VNA3				*e*		pP 01 43 02.0	-4.0
VNA2	**Neumayer--Watz**	**90.33**	**181**	*e*		**P 01 42 54.4**	**+0.3**
	baz=192,slow=3.6						
VNA2				*e*		pP 01 43 03.3	-4.0
ARCES	**ARCESS Array B**	**124.59**	**345**	PKP	PKPdf	01 48 48.9	-3.1
	1.2nm,0.4s,baz=67,slow=2.3,SNR=12						
ARCES	**ARCESS Array B**	**124.59**	**345**	PKP	PKPdf	01 48 48.9	-3.1
GERES	**GERESS Array B**	**143.89**	**331**	PKP	PKPdf	01 49 26.4	-2.1
	0.5nm,0.6s,baz=38,slow=2.4,SNR=5.5						
BAIF	**Baives**	**146.50**	**342**	*e*PKP1	PKPbc	01 49 33.7	-0.7
	3.5nm,0.5s						
CDF	**Champ du Feu**	**146.89**	**337**	*e*PKP1	PKPbc	01 49 34.9	-0.7
	1.1nm,0.6s						
HINF	**Hinteralfeld**	**147.54**	**337**	*e*PKP1	PKPbc	01 49 36.4	-1.0
HAU	**Haudompre**	**147.57**	**337**	*e*PKP1	PKPbc	01 49 36.7	-0.8
	13nm,0.8s						
TUE	**Stuetta**	**147.61**	**333**	*e*PKPbc	PKPbc	01 49 37.3	-0.4
CABF	**La Chapelle**	**148.83**	**336**	*e*PKP1	PKPbc	01 49 40.6	-0.3
	9.9nm,0.6s						
FLN	**La Foliniere**	**148.94**	**346**	*e*PKP1	PKPbc	01 49 40.0	-1.1
	14nm,0.6s						
LDF	**La Druitiere**	**149.01**	**345**	*e*PKP1	PKPbc	01 49 40.1	-1.2
LOR	**Lormes**	**149.07**	**339**	*e*PKP1	PKPbc	01 49 40.7	-0.7
	13nm,0.6s						
SSF	**Saint Saulge**	**149.36**	**340**	*e*PKP1	PKPbc	01 49 41.5	-0.7
	14nm,0.7s						
GRR	**Gorron**	**149.38**	**346**	*e*PKP1	PKPbc	01 49 41.1	-1.1
	6.6nm,0.5s						
LPL	**La Plagne**	**149.48**	**334**	*e*PKP1	PKPbc	01 49 42.3	-0.2
	5.3nm,0.7s						
LPG	**La Plagne**	**149.49**	**334**	*e*PKP1	PKPbc	01 49 42.5	0.0
	5.1nm,0.6s						
SMF	**Signal de Mont**	**149.62**	**339**	*e*PKP1	PKPbc	01 49 42.3	-0.5
SGMF	**Saint Gilles**	**149.87**	**348**	*e*PKP1	PKPbc	01 49 42.2	-1.2
	14nm,0.8s						
BNI	**Bardonecchia**	**149.88**	**334**	*e*PKPbc	PKPbc	01 49 42.7	-0.9
BGF	**Bois d'Agland**	**150.02**	**340**	*e*PKP1	PKPbc	01 49 43.0	-0.8
	14nm,0.8s						
MBDF	**Montbardon**	**150.10**	**333**	*e*PKP1	PKPbc	01 49 43.2	-0.9
QUIF	**Quistinic**	**150.31**	**349**	*e*PKP1	PKPbc	01 49 43.5	-1.0
ORIF	**Oris-en-Rattie**	**150.31**	**335**	*e*PKP1	PKPbc	01 49 44.0	-0.6
	15nm,0.8s						
TCF	**Toulx Ste Croi**	**150.47**	**340**	*e*PKP1	PKPbc	01 49 44.0	-0.9
	12nm,0.9s						
SBF	**Sospel**	**150.49**	**332**	*e*PKP1	PKPbc	01 49 44.0	-1.0
	40nm,1.0s						
PGF	**Pioggiola**	**150.74**	**328**	*e*PKP1	PKPbc	01 49 44.9	-0.8
	57nm,1.0s						
VIVF	**Saint-Julien-l**	**150.84**	**336**	*e*PKP1	PKPbc	01 49 45.1	-0.7
	16nm,0.9s						
MFF	**Saint Martin d**	**150.87**	**344**	*e*PKP1	PKPbc	01 49 44.9	-0.9
	6.2nm,0.6s						
FRF	**La Foret Royal**	**151.08**	**332**	*e*PKP1	PKPbc	01 49 45.7	-0.7
SMRF	**Simiane la Rot**	**151.21**	**334**	*e*PKP1	PKPbc	01 49 46.3	-0.4
LMR	**La Mourre**	**151.32**	**332**	*e*PKP1	PKPbc	01 49 46.0	-1.0
	19nm,0.8s						
RJF	**Les Rejaudoux**	**151.56**	**340**	*e*PKP1	PKPbc	01 49 46.6	-0.9
LASF	**Ste Croix**	**151.81**	**336**	*e*PKP1	PKPbc	01 49 47.5	-0.6
LFF	**La Frestale**	**152.13**	**341**	*e*PKP1	PKPbc	01 49 48.5	-0.3
TORD	**Torodi Ar. Bea**	**166.06**	**248**	PKP	PKPdf	01 49 58.8	-0.4
	0.4nm,0.9s,baz=122,slow=1.9,SNR=2.2						

MOS 29 01:30:33.2±0.6, 4493N×3496E, h20km, mb3.7/1, 1C-1D, Error ellipse: s-maj=36.9km s-min=25.2km az=140.5, Crimea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUDU	**Sudak**	**0.05**	**144**	*i*P		Pb 01 30 37.6	+0.8
SUDU				*e*S		Sb 01 30 41.0	+1.8
FEO	**Feodosiya**	**0.32**	**74**	*e*P		Pb 01 30 41.8	+1.6
FEO				*e*S		Sb 01 30 47.8	+2.8
ALU	**Alushta**	**0.47**	**238**	*i*P		Pb 01 30 44.4	+1.7
ALU				*e*S		Sb 01 30 52.3	+3.1
YAL	**Yalta**	**0.72**	**232**	*e*P		Pb 01 30 47.4	+0.3
YAL				*e*S		Sb 01 30 57.7	+1.1
SEV	**Sevastopol'**	**1.00**	**247**	*e*P		Pb 01 30 52.3	+0.6
SEV				*e*S		Sb 01 31 06.0	+1.6

IDC 29 01:44:59.9±0.6, 2.19S×10045E, h0km, mb4.4/18, mb1 4.6/19, mb1mx4.5/24, mbtmp4.5/19, ML4.9/1, MS3.4/3, Ms1 3.5/3, ms1mx3.1/27, Error ellipse: s-maj=19.8km s-min=13.8km az=57.0
BJI 29 01:45:00.6, 230S×10050E, h47km, mB5.1, mb4.9, Ms5.1, Ms24.7
MOS 29 01:45:05.0±0.9, 2.17S×10051E, h49km, mb4.7/27, Error ellipse: s-maj=16.4km s-min=8.1km az=104.8
NEIC 29 01:45:06.6±0.3, 225S×10050E, mb4.8/22, Error ellipse: s-maj=11.2km s-min=5.2km az=51.0
ISCJB 29 01:45:08.0±1.0, 2.16S±007×10058E±008, h77km±7km, mb4.6/44, Error ellipse: s-maj=16.4km s-min=6.9km az=142.0
DJA 29 01:45:08, 2.13S×10037E, h20km, MLv4.9/4

ISC 29 01:45:08.4±1.1, 221S±007×10057E±008, h63km±8km, n97, σ0s77/88, mb4.7/44, 3C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**0.90**	**83**	P		**Pn 01 45 26.4**	**+1.1**
PDSI	**Padang**	**1.29**	**355**	P		**Pn 01 45 29.2**	**-1.2**
PDSI	**Padang**	**1.29**	**355**	S		**Sn 01 45 46.4**	**-0.4**
PPI	**Padang Panjang**	**1.75**	**354**	P		**Pn 01 45 36.2**	**-0.3**
KSI	**Kapahiang**	**2.48**	**125**	P		**Pn 01 45 50.8**	**+4.3**
KAPI	**Kappang**	**19.35**	**99**	P		**Pn 01 49 29.7**	**-0.9**
	3.4nm,0.3s,baz=300,slow=7.5,SNR=16						
KAPI				LR		LR 01 58 35.8	
	comp=Z,107nm,18.9s,baz=33,slow=42						
CMAR	**Chiang Mai Arr**	**20.59**	**356**	P		**P 01 49 41.8**	**-0.6**
	6.7nm,0.6s,baz=187,slow=10,SNR=16						
CMAR				LR		LR 01 57 41.1	
	comp=Z,71nm,19.8s,baz=145,slow=37						
CMAR	**Chiang Mai Arr**	**20.59**	**356**	*i*P		**P 01 49 43.4**	**+1.0**
MBWA	**Marble Bar**	**26.52**	**137**	*e*P		**P 01 50 40.5**	**+0.2**
	4.4nm,0.7s,mb4.1						
ODAN	**Odare**	**31.57**	**337**	*e*P		**P 01 51 26.1**	**+1.1**
	18nm,0.6s,mb5.1						
TAPN	**Taplejung**	**31.89**	**338**	*e*P		**P 01 51 29.1**	**+1.3**
	24nm,0.7s,mb5.1						
JIRN	**Jiri**	**32.76**	**336**	*e*P		**P 01 51 36.7**	**+1.2**
	43nm,0.7s,mb5.5						
GUN	**Gumba**	**33.11**	**336**	*e*P		**P 01 51 39.3**	**+0.8**
	46nm,0.4s,mb5.7						
DMN	**Daman**	**33.17**	**334**	*e*P		**P 01 51 40.3**	**+1.2**
KKN	**Kakani**	**33.25**	**335**	*e*P		**P 01 51 39.9**	**+0.1**
	11nm,0.4s,mb5.1						
KKN	**Kakani**	**33.25**	**335**	*e*P		**P 01 51 39.9**	**+0.1**
KKN				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.1						
GKN	**Gorkha**	**33.72**	**334**	*e*P		**P 01 51 44.1**	**+0.3**
	comp=Z,8.7nm,0.3s,mb5.1						
KOLN	**Koldanda**	**33.98**	**332**	*e*P		**P 01 51 46.7**	**+0.6**
	comp=Z,14nm,0.7s,mb5.0						
DANN	**Dangsing**	**34.40**	**333**	*e*P		**P 01 51 50.3**	**+0.5**
WRAB	**Tennant Creek**	**37.41**	**121**	*e*P		**P 01 52 15.4**	**-0.2**
	comp=Z,24nm,0.6s,mb5.2						
WRAB				*e*PcP	PcP	01 54 31.7	-1.7
WRAB	**Tennant Creek**	**37.41**	**121**	*e*P		**P 01 52 15.4**	**-0.2**
WRAB				*e*		01 54 31.7	
WRAB				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
WB2	**Warramunga Arr**	**37.41**	**121**	*e*P		**P 01 52 15.0**	**-0.6**
NJ2	**Nanjing**	**38.23**	**26**	*e*P		**P 01 52 22.5**	**+0.1**
ASAR	**Alice Springs**	**38.67**	**126**	P		**P 01 52 26.1**	**-0.1**
	comp=Z,11nm,0.5s,mb4.8,baz=302,slow=7.9,SNR=175						
ASAR				PcP	PcP	01 54 38.3	+1.0
	comp=Z,2.4nm,0.6s,baz=310,slow=3.1,SNR=8.7						
ASAR	**Alice Springs**	**38.67**	**126**	P		**P 01 52 26.1**	**-0.1**
ASAR						01 54 38.3	
ASAR				pmax	pmax		
	comp=Z,11nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COEN	**Coen**	**43.68**	**108**	*e*P		**P 01 53 08.0**	**+0.5**
	comp=Z,4.3nm,0.9s,mb4.2						
KSRS	**Korea Array**	**46.91**	**30**	P		**P 01 53 31.6**	**-1.0**
	comp=Z,3.4nm,0.6s,mb4.5,baz=223,slow=8.0,SNR=9.0						
KSRS	**Korea Array**	**46.91**	**30**	P		**P 01 53 31.6**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
WMQ	**Urumqi**	**47.25**	**347**	P		**P 01 53 37.0**	**+1.8**
WMQ				AMB	AMB		
	comp=Z,34nm,1.0s,mb5.2						
CTA	**Charters Tower**	**48.00**	**115**	*e*P		**P 01 53 41.6**	**+0.2**
	comp=Z,4.4nm,1.0s,mb4.4						
CTA	**Charters Tower**	**48.00**	**115**	P		**P 01 53 41.1**	**-0.3**
	comp=Z,2.9nm,0.5s,mb4.6,baz=290,slow=10,SNR=5.5						
CTA	**Charters Tower**	**48.00**	**115**	*e*P		**P 01 53 41.6**	**+0.2**
CTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	**Stephens Creek**	**48.59**	**132**	*i*P		**P 01 53 46.4**	**+0.6**
	comp=Z,6.8nm,0.5s,mb4.9						
STKA	**Stephens Creek**	**48.59**	**132**	P		**P 01 53 46.0**	**+0.2**
	comp=Z,9.5nm,0.5s,mb5.1,baz=307,slow=7.3,SNR=26						
SONM	**Songino Array**	**50.09**	**5**	P		**P 01 53 57.6**	**+0.7**
	comp=Z,3.4nm,0.6s,mb4.6,baz=190,slow=9.2,SNR=38						
SONM				PcP	PcP	01 55 16.1	+0.4
	comp=Z,1.0nm,0.4s,baz=186,slow=4.7,SNR=5.4						
SONM	**Songino Array**	**50.09**	**5**	P		**P 01 53 57.6**	**+0.7**
SONM						01 55 16.1	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ULN	**Ulaanbaatar**	**50.19**	**6**	*e*P		**P 01 53 58.8**	**+1.1**
	comp=Z,2.8nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**50.19**	**6**

	comp=Z,7.0nm,1.0s,mb4.7							
ZAA0	**Zalesovo Array**	**57.47**	**349**	*e*P		**P**	**01 54 50.4**	**-0.3**
ZALV	**Zalesovo Beam**	**57.47**	**349**	P		**P**	**01 54 50.4**	**-0.4**
	comp=Z,2.4nm,0.3s,mb4.7,baz=178,slow=6.7,SNR=16							
ZALV	**Zalesovo Beam**	**57.47**	**349**	P		**P**	**01 54 50.4**	**-0.3**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.3s,mb4.6							
BVA0	**Borovoye Array**	**60.57**	**340**	P		**P**	**01 55 11.2**	**-1.0**
BVA0				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.3							
BRVK	**Borovoye**	**60.63**	**340**	*e*P		**P**	**01 55 11.9**	**-0.8**
	comp=Z,2.2nm,0.4s,mb4.6							
BRVK	**Borovoye**	**60.63**	**340**	*e*P		**P**	**01 55 11.9**	**-0.7**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.6							
BOD	**Bodaibo**	**60.80**	**8**	*e*P		**P**	**01 55 13.9**	**+0.2**
BOD				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb5.0							
AB31	**Akbulak array**	**62.09**	**331**	P		**P**	**01 55 21.6**	**-0.9**
AB31				pmax		pmax		
	comp=Z,6.0nm,0.5s,mb5.0							
AKTK	**Aktyubinsk**	**63.81**	**331**	P		**P**	**01 55 32.8**	**-1.1**
AKTK				LR		LR	02 24 27.8	
AKTO	**Aktyubinsk**	**63.81**	**331**	P		**P**	**01 55 32.8**	**-1.1**
	comp=Z,1.0nm,0.3s,mb4.3,baz=155,slow=9.3,SNR=5.0							
AKTO				LR		LR	02 24 27.8	
	comp=Z,40nm,20.4s,baz=39,slow=37							
AKTO	**Aktyubinsk**	**63.81**	**331**	P		**P**	**01 55 32.8**	**-1.1**
AKTO				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.3							
AKTO				MLR		MLR		
	comp=Z,40nm,20.4s							
SVE	**Sverdlovsk**	**67.09**	**337**	*e*P		**P**	**01 55 53.1**	**-1.9**
SVE				pmax		pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
ARU	**Arti**	**67.62**	**336**	*e*P		**P**	**01 55 57.6**	**-0.8**
	comp=Z,3.6nm,0.6s,mb4.6							
ARU	**Arti**	**67.62**	**336**	*i* P		**P**	**01 55 57.6**	**-0.7**
ARU				*e*PP		PP	01 58 26.9	-1.3
ARU				*e*PPP			02 00 00.2	
ARU				*e*S		S	02 04 55.5	+5.1
ARU				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.6							
YAK	**Yakutsk**	**67.80**	**14**↑	*e*P		**P**	**01 55 58.8**	**-0.5**
YAK				pmax		pmax		
	comp=Z,17nm,0.7s,mb5.2							
MAW	**Mawson**	**70.23**	**194**	P		**P**	**01 56 15.2**	**+0.9**
	comp=Z,2.4nm,0.6s,mb4.3,baz=53,slow=10,SNR=4.5							
MAW	**Mawson**	**70.23**	**194**	P		**P**	**01 56 15.2**	**+0.8**
MAW				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MMAI	**Mount Meron Ar**	**70.61**	**306**	P		**P**	**01 56 17.9**	**+0.5**
	comp=Z,2.3nm,0.6s,mb4.3,baz=80,slow=9.4,SNR=5.1							
PETK	**Petropavlovsk-**	**72.75**	**32**	P		**P**	**01 56 28.8**	**-1.0**
	comp=Z,4.3nm,0.8s,mb4.4,baz=191,slow=4.0,SNR=4.2							
PETK	**Petropavlovsk-**	**72.75**	**32**	P		**P**	**01 56 28.8**	**-1.0**
PETK				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
BR131	**Keskin Array S**	**73.88**	**312**	*e*P		**P**	**01 56 35.5**	**-1.2**
	comp=Z,3.3nm,0.8s,mb4.3							
BR131				*e*pP		pP	01 56 49.1	-4.9
BRTR	**Keskin Array B**	**73.88**	**312**	P		**P**	**01 56 35.5**	**-1.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=132,slow=6.7,SNR=7.2							
BRTR	**Keskin Array B**	**73.88**	**312**	P		**P**	**01 56 35.5**	**-1.2**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
LBTB	**Lobatse**	**75.45**	**245**	*e*P		**P**	**01 56 45.5**	**-0.6**
	comp=Z,1.5nm,0.4s,mb4.3							
LBTB	**Lobatse**	**75.45**	**245**	*e*P		**P**	**01 56 45.6**	**-0.6**
LBTB				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.4							
TIXI	**Tiksi**	**75.97**	**9**	*e*P		**P**	**01 56 47.5**	**-0.6**
	comp=Z,4.1nm,0.6s,mb4.5							
TIXI	**Tiksi**	**75.97**	**9**↑	*e*P		**P**	**01 56 47.5**	**-0.6**
TIXI				pmax		pmax		
	comp=Z,10.0nm,1.5s,mb4.5							
BOSA	**Boshof**	**76.06**	**241**	P		**P**	**01 56 48.9**	**-0.6**
	comp=Z,2.3nm,0.9s,mb4.1,baz=91,slow=9.8,SNR=8.8							
BOSA	**Boshof**	**76.06**	**241**	P		**P**	**01 56 48.9**	**-0.6**
BOSA	**Boshof**	**76.06**	**241**	P		**P**	**01 56 48.9**	**-0.7**
BOSA				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
OBN	**Obninsk**	**77.27**	**328**	*e*P		**P**	**01 56 55.9**	**+0.1**
OBN				pmax		pmax		
	comp=Z,20nm,1.5s,mb4.8							
MLR	**Muntele Rosu**	**80.84**	**317**	P		**P**	**01 57 15.2**	**-0.3**
	comp=Z,2.3nm,1.0s,mb4.1,baz=107,slow=11,SNR=3.6							
MLR	**Muntele Rosu**	**80.84**	**317**	P		**P**	**01 57 15.2**	**-0.3**
MLR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
BUR08	**Bucovina Ar. S**	**81.80**	**319**	*e*P		**P**	**01 57 21.1**	**+0.5**
BUR08				*e*pP		pP	01 57 35.2	-2.9
ARCES	**ARCESS Array B**	**86.86**	**340**	P		**P**	**01 57 46.1**	**+0.4**
	comp=Z,2.2nm,0.3s,mb4.8,baz=99,slow=5.5,SNR=50							
ARCES	**ARCESS Array B**	**86.86**	**340**	P		**P**	**01 57 46.2**	**+0.5**
ARCES				pmax		pmax		
	comp=Z,2.0nm,0.3s							
GERES	**GERESS Array B**	**89.58**	**319**	P		**P**	**01 57 59.2**	**+0.2**
	comp=Z,0.6nm,0.7s,mb4.1,baz=72,slow=4.3,SNR=6.4							
GERES	**GERESS Array B**	**89.58**	**319**	P		**P**	**01 57 59.2**	**+0.1**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**129.40**	**40**	PKP		PKPdf	02 04 12.7	+2.3
	comp=Z,0.1nm,0.4s,baz=235,slow=3.2,SNR=3.7							
WMOK	**Wichita Mounta**	**142.96**	**27**	*e*PKPdf		PKPdf	02 04 32.9	-2.6
TXAR	**Lajitas Array**	**144.52**	**38**	PKP		PKPdf	02 04 38.4	-0.1
	comp=Z,9.2nm,0.6s,baz=271,slow=1.0,SNR=157							
TXAR	**Lajitas Array**	**144.52**	**38**	PKIKP		PKPdf	02 04 38.4	0.0
TXAR				pmax		pmax		
	comp=Z,9.0nm,0.6s							
MIAR	**Mount Ida**	**145.23**	**21**	*e*PKPbc		PKPbc	02 04 39.7	+0.5
WVT	**Waverly**	**145.36**	**12**	*e*PKPbc		PKPbc	02 04 39.3	-0.3
TZTN	**Tazewell**	**145.62**	**6**	*e*PKPbc		PKPbc	02 04 40.1	-0.3
JCT	**Junction City**	**145.90**	**32**	*e*PKPbc		PKPbc	02 04 42.2	+0.8
LCO	**Las Campanas**	**147.85**	**194**	*e*PKPbc		PKPbc	02 04 47.6	+0.5

*ISCJB **29** 01:50:28.8±0.4, 5723S±005×1480E±02, h10km, mb4.7/17, MS4.5/8, Error ellipse: s-maj=12.3km s-min=7.1km az=176.7*
*IDC **29** 01:50:29.6±0.7, 5717S×14806E, h0km, mb4.6/7, mb1 4.7/8, mb1mx4.5/14, mbtmp4.6/8, ML3.9/1, MS4.5/9, Ms1 4.5/9, ms1mx4.4/13, Error ellipse: s-maj=27.7km s-min=18.2km az=86.0*
*NEIC **29** 01:50:31.0±3.9, 5723S×14790E, h11km±24km, mb4.8/13, Error ellipse: s-maj=12.1km s-min=6.4km az=76.0*
*GCMT **29** 01:50:31.0±0.2, 5723S×14754E, h12km, MW5.1/80, Moment Tensor Solution. s50,c67; s80,c132; Duration: 0 Moment tensor: Scale 10^16Nm; Mr=0.55±.15; Mθθ=2.55±.13; Mφφ=-3.10±.16; Mrθ=0.67±.37; Mrφ=-5.37±.11; Mθφ=-1.42±.37; Best double couple: M=6.23900×10^16 NP1:φ=77.00000°, δ=80.00000°, λ=-173.00000°. NP2: φ=346.00000°, δ=83.00000°, λ=-10.00000°. Principal axes: T 5.7980, Plg2.0000°, Azm31.0000°; N 0.8810, Plg78.0000°, Azm130.0000°; P -6.6810, Plg12.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 29 01:50:31.2±4.8, 5722S±004×1480E±02, h13km±31km, n72, σ0=86/34, mb4.7/17, MS4.5/8, 7C-1D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**6.76**	**71**	*e*Pn	**Pn**	**01 52 09.7**	**-0.2**
TAU	**Tasmania Unive**	**14.34**	**358**	*e*Pn	**Pn**	**01 53 54.5**	**+0.9**
	76nm,1.1s						
TOO	**Toolangi**	**19.73**	**354**	*e*P	**Pn**	**01 55 00.9**	**-0.9**
TOO				*i* S	**Sn**	**01 58 43.2**	**+0.1**
RPZ	**Rata Peaks**	**19.83**	**57**	P	**Pn**	**01 55 01.2**	**-1.7**
	0.3nm,0.3s,baz=196,slow=15,SNR=2.1						
RPZ				LR	LR	02 01 06.0	
	comp=Z,2μm,19.3s,baz=108,slow=32						
VNDA	**Vanda**	**20.95**	**172**	P	**P**	**01 55 13.1**	**-0.2**
	18nm,1.4s,baz=338,slow=12,SNR=25						
VNDA	**Vanda**	**20.95**	**172**	P	**P**	**01 55 13.1**	**-0.2**
SBA	**Scott Base**	**21.70**	**169**	*e*P	**P**	**01 55 22.3**	**+1.0**
	117nm,1.8s,mb5.0						
CAN	**Canberra**	**21.92**	**2**	*e*P	**P**	**01 55 26.4**	**+2.4**
CNB	**Canberra Magne**	**21.93**	**3**	*e*P	**P**	**01 55 25.1**	**+1.0**
STKA	**Stephens Creek**	**25.72**	**347**	*e*P	**P**	**01 56 01.3**	**+0.3**
	20nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**25.72**	**347**	P	**P**	**01 56 01.2**	**+0.2**
	28nm,1.0s,mb4.8,baz=166,slow=9.8,SNR=15						
STKA				LR	LR	02 04 02.6	
	comp=Z,835nm,18.4s,MS4.3,baz=346,slow=32						
URZ	**Urewera**	**26.94**	**58**	P	**P**	**01 56 12.1**	**+0.1**
	19nm,0.9s,mb4.6,baz=222,slow=3.4,SNR=7.7						
URZ				LR	LR	02 06 43.1	
	comp=Z,1μm,18.8s,MS4.5,baz=212,slow=36						
FORT	**Forrest**	**29.84**	**324**	*e*P	**P**	**01 56 37.1**	**-0.7**
	25nm,0.7s,mb5.1						
FORT	**Forrest**	**29.84**	**324**	*e*P	**P**	**01 56 37.2**	**-0.6**
	28nm,0.6s,mb5.2						
EIDS	**Eidsvold**	**31.91**	**5**	*e*P	**P**	**01 56 56.9**	**+0.8**
	28nm,1.4s,mb4.9						
QSPA	**South Pole Qui**	**32.88**	**180**	P	**P**	**01 57 04.5**	**+0.3**
	1.3nm,0.3s,mb4.4,baz=351,slow=7.5,SNR=6.2						
ASAR	**Alice Springs**	**35.04**	**337**	P	**P**	**01 57 22.3**	**-1.1**
	5.9nm,0.8s,mb4.6,baz=165,slow=8.7,SNR=28						
ASAR				PcP	PcP	01 59 55.7	+0.5
	1.4nm,0.9s,baz=164,slow=3.4,SNR=4.8						
CTA	**Charters Tower**	**37.10**	**357**	*e*P	**P**	**01 57 41.5**	**+0.4**
	11nm,1.0s,mb4.6						
CTAO	**Charters Tower**	**37.10**	**357**	*e*P	**P**	**01 57 41.5**	**+0.4**
	23nm,1.2s,mb4.9						
WB2	**Warramunga Arr**	**38.57**	**339**↑	*i* P	**P**	**01 57 52.0**	**-1.5**
WRAB	**Tennant Creek**	**38.58**	**339**	*e*P	**P**	**01 57 52.2**	**-1.4**
	22nm,1.0s,mb4.8						
MBWA	**Marble Bar**	**41.55**	**318**	*e*P	**P**	**01 58 18.0**	**-0.2**
	20nm,1.0s,mb4.7						
COEN	**Coen**	**43.33**	**353**	*e*P	**P**	**01 58 32.8**	**+0.1**
	13nm,1.0s,mb4.6						
KAKA	**Kakadu**	**45.98**	**339**	*e*P	Px	01 58 37.7	
	18nm,0.8s						
PMG	**Port Moresby**	**47.71**	**359**	*e*P	**P**	**01 59 08.1**	**+0.7**
	8.8nm,0.9s,mb4.8						
SNAA	**Sanae**	**49.78**	**192**	*e*P	**P**	**01 59 18.9**	**-3.8**
	17nm,1.3s,mb4.9						
VNA3	**Neumayer Olymp**	**50.86**	**189**	*e*P	**P**	**01 59 30.4**	**-0.5**
VNA3				*e*		01 59 40.6	
VNA3				*e*		01 59 45.3	
VNA2	**Neumayer--Watz**	**50.96**	**190**	*e*P	**P**	**01 59 31.3**	**-0.3**
VNA2				*e*		01 59 43.4	
VNA2				*e*		01 59 46.7	
VNA1	**Neumayer--Stat**	**51.30**	**190**	*e*P	**P**	**01 59 34.7**	**+0.5**
VNA1				*e*		01 59 44.7	
VNA1				*e*		01 59 48.9	
KAPI	**Kappang**	**56.61**	**326**	P	**P**	**02 00 13.2**	**-0.4**
	6.7nm,0.6s,mb4.8,baz=176,slow=6.4,SNR=7.0						
PPT	**Papeete**	**60.55**	**76**	*e*LQ		02 15 59.7	
	590nm,26.2s						
PPT				*e*LR	LR	02 18 22.7	
	406nm,29.0s						
PPT	**Papeete**	**60.55**	**76**	LR	LR	02 22 42.1	
	comp=Z,196nm,18.5s,MS4.3,baz=204,slow=32						
RKT	**Rikitea**	**63.91**	**93**	*e*LQ		02 17 17.9	
	587nm,30.5s						
RKT				*e*LR	LR	02 19 59.2	
	403nm,28.8s						
PLCA	**Paso Flores**	**77.17**	**151**	*e*P	**P**	**02 02 24.2**	**-0.1**
	4.2nm,1.0s,mb4.3						
LBTB	**Lobatse**	**84.92**	**230**	*e*P	**P**	**02 03 05.8**	**+0.1**
	6.8nm,1.1s,mb4.7						
JOW	**Kunigami**	**85.36**	**342**	LR	LR	02 40 04.0	
	comp=Z,318nm,21.5s,MS4.7,baz=107,slow=35						
CMAR	**Chiang Mai Arr**	**85.73**	**314**	P	**P**	**02 03 10.6**	**+0.9**
	1.4nm,0.3s,mb4.7,baz=186,slow=5.4,SNR=3.1						
CMAR				LR	LR	02 38 29.5	
	comp=Z,335nm,19.8s,MS4.7,baz=149,slow=34						
CHTO	**Chiang Mai**	**86.05**	**314**	*e*P	**P**	**02 03 11.5**	**+0.3**
JHJ	**Hachijo jima 2**	**90.25**	**353**	LR	LR	02 41 10.6	
	comp=Z,404nm,20.7s,MS4.8,baz=69,slow=34						
MJAR	**Matsushiro Arr**	**93.77**	**352**	LR	LR	02 43 00.0	
	comp=Z,84nm,20.6s,MS4.2,baz=160,slow=34						
KSRS	**Korea Array**	**95.82**	**344**	LR	LR	02 46 17.1	
	comp=Z,138nm,18.3s,MS4.5,baz=353,slow=35						
BVAR	**Borovoye Array**	**126.73**	**313**	PKP	PKPdf	02 09 33.8	+0.8
	0.6nm,0.7s,baz=116,slow=3.4,SNR=3.2						
TORD	**Torodi Ar. Bea**	**129.08**	**224**	PKP	PKPdf	02 09 38.6	-0.1
	1.7nm,1.2s,baz=170,slow=0.9,SNR=4.2						
SDCO	**Great Sand Dun**	**129.36**	**79**	*e*PKPdf	PKPdf	02 09 41.0	+2.5
AKASG	**Malin Array Be**	**144.48**	**286**	PKP	PKPdf	02 10 05.1	-0.8
	0.2nm,0.2s,baz=125,slow=2.2,SNR=9.1						
KEST	**Kesra**	**145.08**	**250**	PKPbc	PKPbc	02 10 08.5	+1.5
	4.8nm,0.8s,baz=142,slow=2.3,SNR=9.8						
BZS	**Buzias**	**145.49**	**274**↑	*i* P	PKPdf	02 10 08.6	+0.7
DRGR		**145.63**	**276**	*i* P	PKPbc	02 10 12.9	+4.5
TRPA	**Tarpa**	**146.54**	**278**↑	*i* P	PKPbc	02 10 14.6	+3.5
KOLS	**Kolonicke sedl**	**147.15**	**279**	*e*PKP	PKPbc	02 10 14.9	+2.1
PKSM	**Moragy**	**147.48**	**272**↑	*i* P	PKPbc	02 10 16.1	+2.3
CRVS	**Cervenica-Dubn**	**147.57**	**279**	*e*PKP	PKPbc	02 10 16.1	+2.1
PSZ	**Piszkesteto**	**147.84**	**276**	*e*PKPbc	PKPbc	02 10 15.8	+1.0
PSZ	**Piszkesteto**	**147.84**	**276**↑	*e*PKP	PKPab	02 10 19.8	+2.5
BUD	**Budapest**	**148.05**	**275**↑	*e*pPKP	PKPab	02 10 20.5	+2.4
VYHS	**Vyhne**	**148.75**	**276**	*e*PKP	PKPab	02 10 19.2	-1.7
KOLL	**Kolacno**	**149.03**	**276**	*e*PKP	PKPbc	02 10 17.6	-0.2
MDT	**Midelt**	**149.23**	**229**	PKPbc	PKPbc	02 10 19.6	+0.8
	1.7nm,1.0s,baz=72,slow=5.4,SNR=3.2						
SOP	**Sopron**	**149.51**	**273**↑	*e*pPKP/A	PKPbc	02 10 21.6	+2.6
MODS	**Modra-Piesok**	**149.53**	**275**	*e*PKP	PKPbc	02 10 21.5	+2.5
VRAC	**Vranov**	**150.43**	**276**	PKPbc	PKPbc	02 10 23.8	+2.6
	2.8nm,0.7s,baz=134,slow=6.8,SNR=5.5						
RES	**Resolute Bay**	**151.03**	**29**	*e*PKPbc	PKPbc	02 10 21.4	-0.5
DPC	**Dobruska-Polom**	**151.15**	**277**	*e*PKPbc	PKPbc	02 10 24.7	+1.9
DPC				*e*pPKP	PKPab	02 10 35.8	+5.0
UPC	**Upice**	**151.40**	**277**	*e*PKPbc	PKPbc	02 10 26.7	+3.3
GEC2	**GERESS Array S**	**151.74**	**273**	*e*PKPbc	PKPbc	02 10 24.1	-0.1
GERES	**GERESS Array B**	**151.74**	**273**	PKPbc	PKPbc	02 10 24.2	0.0
	2.0nm,0.7s,baz=148,slow=3.0,SNR=11						
GERES				PKPab	PKPab	02 10 34.4	+1.2
	1.1nm,0.6s,baz=146,slow=2.6,SNR=7.4						
PRU	**Pruhonice**	**151.92**	**275**	*e*PKPbc	PKPbc	02 10 23.8	-0.8
KHC	**Kasperske Hory**	**151.97**	**273**	*e*PKPbc	PKPbc	02 10 25.7	+1.0
KHC				*e*pPKP	PKPab	02 10 38.6	+4.4
ARCES	**ARCESS Array B**	**152.65**	**320**	PKPbc	PKPbc	02 10 26.6	+1.0
	3.2nm,0.8s,baz=90,slow=1.8,SNR=5.3						
ARCES				PKPab	PKPab	02 10 37.8	+1.2
	1.8nm,0.6s,baz=74,slow=1.8,SNR=4.1						
NKC	**Novy Kostel**	**153.19**	**274**	*e*PKPbc	PKPbc	02 10 31.1	+3.7
CLL	**Collm**	**153.45**	**277**	*e*PKPbc	PKPbc	02 10 30.0	+2.0
CLL				*e*PKPab	PKPab	02 10 42.0	+1.6
GRF	**Grafenberg Arr**	**153.56**	**272**	*e*PKP	PKPbc	02 10 30.6	+2.3

*CSEM **29** 01:53:00.9±0.1, 3696N×2925E, h5km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.3km az=141.0*
*ISK **29** 01:53:01.4, 3696N×2923E, h8km, MD3.1*
*NEIC **29** 01:53:01.0, 3697N×2923E, h9km, MD3.1(ISK), ML3.1(ATH), After ISK.*
*ISCJB **29** 01:53:02.6±0.4, 3699N±003×2922E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.1km az=39.8*
*DDA **29** 01:53:03.0, 3698N×2923E, h7km±15km, Md3.1*

ISC 29 01:53:02.7±0.4, 3698N±003×2922E±004, h10km, n29, σ1=10/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.36**	**197**	PG	**Pg**	**01 53 08.4**	**-1.4**
FETY				*e*SG	**Sg**	**01 53 14.1**	**-0.5**
GOLH	**Golhisar**	**0.38**	**47**	*i* P	**Pg**	**01 53 09.2**	**-1.0**
GOLH				*i* S	**Sg**	**01 53 16.5**	**+1.3**
TURN	**Turunc**	**0.50**	**258**	*i* P	**Pg**	**01 53 16.9**	**+4.4**
TURN				*i* S	**Sg**	**01 53 29.5**	**+10**
DALT	**Dalyan (Mudla)**	**0.51**	**246**	*e*PG	**Pg**	**01 53 11.9**	**-0.7**
DALT				*e*SG	**Sg**	**01 53 19.7**	**+0.3**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**01 53 16.7**	**-0.7**
DENT	**Denizli**	**0.79**	**349**	*e*PG	**Pg**	**01 53 17.2**	**-0.7**
DENT				*e*SG	**Sg**	**01 53 29.1**	**+1.0**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**01 53 18.1**	**-0.3**
AKAS				*i* S	**Sg**	**01 53 31.3**	**+2.5**
ANTB	**Antalya**	**1.16**	**94**	*e*PN	**Pn**	**01 53 23.9**	**-1.0**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pb**	**01 53 24.1**	**-0.8**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**01 53 24.8**	**-0.6**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**01 53 24.4**	**-1.1**
DAT	**Datca**	**1.34**	**260**	*e*PN	**Pn**	**01 53 27.6**	**+0.2**
ISP	**Isparta**	**1.34**	**50**	*e*PN	**Pn**	**01 53 27.2**	**-0.3**
ISP	**Isparta**	**1.34**	**50**	P	**Pn**	**01 53 29.3**	**+1.8**
KHL	**Karahalli**	**1.36**	**10**	*e*PN	**Pn**	**01 53 27.6**	**-0.2**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**01 53 12.9**	**-15**
KHAL				*i* S	**Sn**	**01 53 47.7**	**+0.7**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**01 53 28.8**	**+0.2**
BDRM				*i* S	**Sn**	**01 53 47.7**	**+0.4**
BODT	**Bodrum**	**1.53**	**274**	*e*PN	**Pn**	**01 53 29.4**	**-0.6**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**01 53 30.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*PN	**Pn**	**01 53 35.4**	**+0.3**
SMG	**Samos**	**2.03**	**292**	P	**Pn**	**01 53 33.7**	**-3.3**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**01 53 38.6**	**-0.5**
KARP	**Karpathos**	**2.19**	**230**	P	**Pn**	**01 53 42.1**	**+2.9**
AKS	**Akhisar**	**2.19**	**330**	*e*PN	**Pn**	**01 53 39.1**	**-0.2**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**01 53 44.6**	**-0.5**
KIZT	**Kizilcal**	**2.83**	**47**	*e*PN	**Pn**	**01 53 47.8**	**-0.2**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**01 53 54.0**	**+2.9**
NPS	**Neapolis**	**3.38**	**241**	P	**Pn**	**01 53 58.9**	**+3.3**
LAST	**Lasithi**	**3.53**	**240**	P	**Pn**	**01 54 00.7**	**+3.1**

*NEIC **29** 02:26:39.4, 1970N×10563W, h14km, MD3.8(MEX), After MEX.*

MEX 29 02:26:39.3±0.7, 1971N×10563W, h12km±28km, MD3.8, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.59**	**110**	*i* P	Pg	02 26 49.2	-1.5
CJM				*i* S	Sg	02 26 57.2	-1.3
ANIG	**Ahuacatlan**	**1.69**	**38**	*i* P	Pn	02 27 05.5	-3.2
ANIG				*i* S	Sn	02 27 26.6	-3.8
SFJM	**Santa Fe**	**2.55**	**72**	*i* P	Pn	02 27 18.5	-2.0
SFJM				*i* S	Sn	02 27 47.6	-3.9
MMIG	**Aquila**	**2.58**	**123**	*i* P	Pn	02 27 18.1	-2.7
MMIG				*i* S	Sn	02 27 48.2	-3.9
MAIG	**Mazatlaan**	**3.54**	**348**	*e*P	Pn	02 27 32.7	-1.5
ZAIG	**Zacatecas**	**4.17**	**43**	*e*P	Pn	02 27 44.6	+1.7
ZIIG	**Zihuatanejo**	**4.46**	**117**	*e*P	Pn	02 27 46.3	-0.5
ZIIG				*i* S	Sn	02 28 37.4	-1.3
ZIIG	**Zihuatanejo**	**4.46**	**117**	*i* P	Pn	02 27 44.2	-2.6
ZIIG				*i* S	Sn	02 28 37.4	-1.3
MZVM		**6.06**	**94**	*e*P	Pn	02 28 07.4	-1.4
MZVM				*i* S	Sn	02 29 14.4	-3.7

*ISCJB **29** 02:33:13.0±1.6, 2455N±007×1415E±02, h74km±15km, mb4.1/17, Error ellipse: s-maj=23.2km s-min=11.1km az=11.2*
*NEIC **29** 02:33:15.8±0.3, 2456N×14162E, mb4.1/8, Error ellipse: s-maj=13.5km s-min=7.5km az=98.0*
*IDC **29** 02:33:15.8±0.8, 2458N×14162E, h84km±6km, mb3.7/11, mb1 4.0/12, mb1mx3.8/22, mbtmp3.8/12, MS3.0/1, Ms1 3.0/1, ms1mx2.7/45, Error ellipse: s-maj=21.5km s-min=15.2km az=90.0*

ISC 29 02:33:14.9±1.5, 2457N±007×1416E±02, h76km±14km, h87km±3.2km: pP-P, n25, σ0=76/25, mb4.1/17, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.57**	**11**	P	**Pn**	**02 33 56.1**	**+1.9**
	207nm,0.3s,baz=294,slow=21,SNR=40						
CBIJ				S	**Sn**	**02 34 22.9**	**-1.6**
	105nm,0.3s,baz=269,slow=22,SNR=6.8						
CBIJ				LR	LR	02 34 29.5	
	comp=Z,337nm,21.5s,baz=184,slow=29						
KAPI	**Kappang**	**36.30**	**219**	P	**P**	**02 40 12.4**	**+1.0**
	3.0nm,0.5s,mb4.5,baz=214,slow=18,SNR=6.0						
COEN	**Coen**	**38.32**	**178**	*e*P	**P**	**02 40 29.0**	**+0.7**
	3.8nm,0.7s,mb4.3						
CTAO	**Charters Tower**	**44.62**	**174**	*e*P	**P**	**02 41 18.0**	**-1.8**
	2.2nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**44.80**	**190**	*e*P	**P**	**02 41 20.9**	**-0.3**
	9.3nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**44.80**	**190**	*e*P	**P**	**02 41 21.

ASAR	**Alice Springs**	**20.55 136**	P		**P**	**02 55 15.3**	**+0.8**	
	8.2nm,1.0s,baz=320,slow=11,SNR=39							
ASAR			S		**S**	**02 58 59.8**	**+0.7**	
	2.9nm,0.9s,baz=318,slow=26,SNR=7.3							
ASAR			ScP		ScP	03 02 52.9	+2.8	
	1.1nm,0.8s,baz=336,slow=1.6,SNR=5.1							
ASAR	**Alice Springs**	**20.55 136**	P		**P**	**02 55 15.3**	**+0.8**	
ASAR			S		**S**	**02 58 59.8**	**+0.7**	
ASAR			ScP		ScP	03 02 52.9	+2.8	
CMAR	**Chiang Mai Arr**	**33.61 325**	P		**P**	**02 57 16.6**	**+1.6**	
	1.6nm,0.3s,mb4.3,baz=146,slow=6.6,SNR=3.9							
ULN	**Ulaanbaatar**	**57.72 351**	*e*P		**P**	**03 00 25.1**	**+1.1**	
	1.4nm,0.6s,mb4.2							
SONM	**Songino Array**	**57.79 350**	P		**P**	**03 00 25.6**	**+1.0**	
	2.5nm,0.6s,mb4.4,baz=168,slow=8.0,SNR=20							
KBL	**Kabul**	**63.93 316**	*e*P		**P**	**03 01 05.5**	**-1.0**	
	4.2nm,0.6s,mb4.5							
MK31	**Makanchi Array**	**64.43 333**	*e*P		**P**	**03 01 09.6**	**0.0**	
MKAR	**Makanchi Array**	**64.43 333**	P		**P**	**03 01 09.3**	**-0.2**	
	0.6nm,0.3s,mb3.9,baz=147,slow=6.4,SNR=14							
MKAR			pP		pP	03 01 26.4	-7.5	
	0.6nm,0.6s,baz=152,slow=6.7,SNR=2.9							
MKAR			sP		sP	03 01 31.9	-13	
	0.4nm,0.5s,baz=147,slow=7.3,SNR=2.8							
MKAR	**Makanchi Array**	**64.43 333**	P		**P**	**03 01 09.3**	**-0.3**	
MKAR			pP		pP	03 01 26.4	-7.5	
MKAR			sP		sP	03 01 31.9	-13	
EKS2	**Erkin-Say**	**65.81 325**	*e*P		**P**	**03 01 19.2**	**+0.6**	
	3.3nm,0.9s,mb4.2							
ZALV	**Zalesovo Beam**	**69.07 339**	P		**P**	**03 01 38.3**	**-0.5**	
	1.5nm,0.5s,mb4.0,baz=136,slow=6.0,SNR=5.7							
ZALV			pP		pP	03 01 54.5	-9.0	
	0.5nm,0.3s,baz=151,slow=5.6,SNR=2.5							
BVAR	**Borovoye Array**	**74.26 332**	P		**P**	**03 02 09.5**	**-0.5**	
	1.4nm,0.7s,mb3.8,baz=133,slow=6.5,SNR=5.5							
AKTK	**Aktyubinsk**	**79.14 325**	P		**P**	**03 02 37.5**	**-0.1**	
AKTO	**Aktyubinsk**	**79.14 325**	P		**P**	**03 02 37.5**	**-0.1**	
	1.9nm,0.6s,mb4.1,baz=96,slow=4.5,SNR=12							
BRTR	**Keskin Array B**	**91.93 310**	P		**P**	**03 03 40.1**	**-1.3**	
	0.8nm,0.9s,mb4.0,baz=92,slow=4.5,SNR=2.7							

IDC 29 02:55:42.4±6.2, 1597S×16791E, h136km±39km, mb3.7/3, mb1 3.9/3, mb1mx3.5/16, mbtmp3.7/3, Error ellipse: s-maj=80.8km s-min=36.2km az=124.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOUC	**Port Laguerre**	**6.29**	**194**	*e*P	Pn	02 57 16.6	+3.8
NOUC				*e*S	Sn	02 58 26.8	+3.4
ASAR	**Alice Springs**	**32.83**	**251**	P	P	03 02 03.2	-0.1
	1.1nm,0.5s,baz=77,slow=9.1,SNR=6.9						
ASAR				ScP	ScP	03 08 16.1	-0.6
	1.1nm,1.1s,baz=98,slow=4.0,SNR=4.6						
MJAR	**Matsushiro Arr**	**59.28**	**332**	P	P	03 05 29.1	-0.6
	3.8nm,0.9s,baz=169,slow=7.4,SNR=5.9						
SONM	**Songino Array**	**83.85**	**323**	P	P	03 07 57.6	+1.0
	1.2nm,0.6s,baz=131,slow=5.0,SNR=8.7						
ARCES	**ARCESS Array B**	**121.60**	**345**	PKP	PKPdf	03 14 19.0	-0.3
	3.2nm,0.8s,baz=62,slow=2.0,SNR=14						
CDF	**Champ du Feu**	**143.95**	**338**	*e*PKP1	PKPdf	03 15 00.8	-0.9
	2.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**144.26**	**334**	PKP	PKPdf	03 15 02.0	-0.3
	5.2nm,0.5s,baz=299,slow=3.4,SNR=13						
HINF	**Hinteralfeld**	**144.60**	**338**	*e*PKP1	PKPdf	03 15 01.9	-1.0
HAU	**Haudompre**	**144.62**	**338**	*e*PKP1	PKPdf	03 15 02.2	-0.7
CABF	**La Chapelle**	**145.90**	**337**	*e*PKP1	PKPbc	03 15 06.9	+0.9
	6.9nm,0.6s						
FLN	**La Foliniere**	**145.94**	**346**	*e*PKP1	PKPbc	03 15 06.8	+0.8
LDF	**La Druitiere**	**146.01**	**346**	*e*PKP1	PKPbc	03 15 07.5	+1.2
LOR	**Lormes**	**146.10**	**340**	*e*PKP1	PKPbc	03 15 07.2	+0.6
	16nm,0.9s						
GRR	**Gorron**	**146.38**	**346**	*e*PKP1	PKPbc	03 15 07.8	+0.5
SSF	**Saint Saulge**	**146.40**	**341**	*e*PKP1	PKPbc	03 15 08.1	+0.7
	19nm,1.0s						
LPL	**La Plagne**	**146.57**	**336**	*e*PKP1	PKPbc	03 15 09.0	+1.0
	4.6nm,0.5s						
LPG	**La Plagne**	**146.58**	**336**	*e*PKP1	PKPbc	03 15 09.1	+1.1
	4.6nm,0.4s						
SMF	**Signal de Mont**	**146.66**	**340**	*e*PKP1	PKPbc	03 15 08.6	+0.4
AVF	**Avril sur Loir**	**146.69**	**341**	*e*PKP1	PKPbc	03 15 08.4	+0.1
	3.6nm,0.6s						
BGF	**Bois d'Agland**	**147.06**	**341**	*e*PKP1	PKPbc	03 15 10.4	+1.1
	6.0nm,0.5s						
MBDF	**Montbardon**	**147.20**	**335**	*e*PKP1	PKPbc	03 15 09.7	-0.1
	3.9nm,0.4s						
ORIF	**Oris-en-Rattie**	**147.40**	**336**	*e*PKP1	PKPbc	03 15 11.0	+0.7
	8.1nm,0.6s						
TCF	**Toulx Ste Croi**	**147.50**	**341**	*e*PKP1	PKPbc	03 15 11.6	+1.1
SBF	**Sospel**	**147.62**	**333**	*e*PKP1	PKPbc	03 15 11.0	0.0
	22nm,0.7s						
MFF	**Saint Martin d**	**147.87**	**344**	*e*PKP1	PKPbc	03 15 11.7	+0.1

*BJI **29** 02:59:06.8, 21.20S×33.30E, h10km, mB5.5, mb5.4, Ms5.3, Msz5.0*
*ISCJB **29** 02:59:08.9±0.2, 21.15S±0.003×33.16E±0.004, h10km, mb5.1/158, MS4.8/27, Error ellipse: s-maj=5.5km s-min=3.7km az=33.4*
*MOS **29** 02:59:09.2±0.8, 21.00S×33.40E, h10km, mb5.3/78, MS4.6/11, Error ellipse: s-maj=12.8km s-min=5.0km az=99.9*
*IDC **29** 02:59:09.1±0.5, 21.03S×33.29E, h0km, mb4.6/21, mb1 4.8/23, mb1mx4.7/25, mbtmp4.6/23, ML5.0/2, MS4.7/14, Ms1 4.7/14, ms1mx4.5/38, Error ellipse: s-maj=18.5km s-min=13.5km az=83.0*
*NEIC **29** 02:59:10.4±0.2, 21.17S×33.26E, h10km, mb5.3/82, Error ellipse: s-maj=6.2km s-min=5.8km az=127.0*
*PRE **29** 02:59:10.6±0.3, 21.52S×33.39E, h5km, ML6.2*
*GCMT **29** 02:59:10.4±0.2, 21.03S×33.12E, h12km, MW5.2/60, Moment Tensor Solution. s48,c74; s60,c105; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.68±.02; Mθθ-0.02±.02; Mφφ 0.70±.02; Mrθ-0.27±.04; Mφθ-0.17±.01; Mφr 0.46±.04; Best double couple: M0 0.89400×10^17 NP1: φs 360.00000°, δ28.00000°, λ-69.00000°. NP2: φs 157.00000°, δ64.00000°, λ-101.00000°. Principal axes: T 0.9090, Plg18.0000°, Azm255.0000°; N -0.0310, Plg10.0000°, Azm161.0000°; P -0.8780, Plg69.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **29** 02:59:12.8, 21.37S×32.04E, h33km, mb5.1, Mozambique*
*DJA **29** 02:59:13, 21.10S×32.87E, h10km, Mw5.8/8*

ISC 29 02:59:10.8±0.2, 2116S±003×3327E±003, h10km, (h12km±1.3km: pP-P), n677, σ1102/408, mb5.1/158, MS4.8/27, 145C-130D, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.24**	**248**	*e*P	**Pn**	**03 00 03.2**	**+1.4**
MSNA				*e*S	**Sn**	**03 00 41.5**	**+1.0**
MSNA				AML	AML	03 01 22.9	
	comp=Z,2μm,0.6s						
SLR	**Silverton**	**6.46**	**224**	*e*P	**Pn**	**03 00 45.1**	**-0.9**
SLR				*e*S	**Sn**	**03 01 53.7**	**-6.0**
SLR				AML	AML	03 02 49.4	
	comp=Z,2μm,0.6s						
ERPM	**east rand prop**	**6.92**	**221**	*e*P	**Pn**	**03 00 50.0**	**-2.3**
ERPM				*e*S	**Sn**	**03 02 02.8**	**-8.2**
ERPM				AML	AML	03 02 49.4	
	comp=Z,645nm,0.8s						
KSR	**Koster**	**7.48**	**230**	*e*P	**Pn**	**03 00 59.8**	**-0.3**
KSR				*e*S	**Sn**	**03 02 19.3**	**-5.7**
KSR				AML	AML	03 03 07.2	
	comp=Z,886nm,0.5s						
LSZ	**Lusaka**	**7.59**	**320**	P	**Pn**	**03 00 59.7**	**-1.8**
	SNR=90						
LSZ	**Lusaka**	**7.59**	**320**	Pn	**Pn**	**03 00 58.4**	**-3.2**
	comp=Z,14nm,0.3s,baz=146,slow=15,SNR=53						
LSZ				Sn	**Sn**	**03 02 18.4**	**-9.3**
	comp=Z,92nm,0.3s,baz=218,slow=23,SNR=5.9						
LSZ				Lg		03 02 58.3	
	comp=Z,167nm,0.3s,baz=221,slow=20,SNR=4.0						
LSZ				LR	LR	03 04 05.5	
	comp=Z,6μm,20.8s,baz=138,slow=40						
LSZ	**Lusaka**	**7.59**	**320**	*e*Pn	**Pn**	**03 00 57.7**	**-3.8**
LSZ				*e*Sn	**Sn**	**03 02 20.3**	**-7.3**
LSZ				*e*Sg	**Sg**	**03 03 01.3**	**-13**
PRYS	**Parys**	**7.88**	**222**	*e*P	**Pn**	**03 01 04.5**	**-1.0**
PRYS				*e*S	**Sn**	**03 02 27.7**	**-7.0**
PRYS				AML	AML	03 03 24.7	
	comp=Z,859nm,0.7s						
LBTB	**Lobatse**	**8.04**	**240**	Pn	**Pn**	**03 01 06.8**	**-0.9**
	comp=Z,34nm,0.3s,baz=66,slow=13,SNR=185						
LBTB				Sn	**Sn**	**03 02 36.4**	**-2.3**
	comp=Z,39nm,0.3s,baz=135,slow=18,SNR=3.1						
LBTB				Lg		03 03 15.4	
	comp=Z,56nm,0.3s,baz=166,slow=19,SNR=3.9						
LBTB				LR	LR	03 04 32.8	
	comp=Z,8μm,22.0s,baz=76,slow=40						
LBTB	**Lobatse**	**8.04**	**240**	*e*Pn	**Pn**	**03 01 06.6**	**-1.0**
	comp=Z,0.9nm,0.6s						
LBTB				*e*Sn	**Sn**	**03 02 37.0**	**-1.6**
LBTB				*e*Sg	Sn	03 03 24.4	+46
LBTB	**Lobatse**	**8.04**	**240**	P	**Pn**	**03 01 06.8**	**-0.9**
LBTB						03 02 36.4	
LBTB				pmax	pmax		
	comp=Z,34nm,0.3s						
LBTB				smax			
	comp=N,39nm,0.3s						
LBTB				MLR	MLR		
	comp=Z,8μm,22.0s						
LBTB	**Lobatse**	**8.04**	**240**	*e*P	**Pn**	**03 01 08.0**	**+0.4**
LBTB				*e*S	**Sn**	**03 02 34.0**	**-4.6**
LBTB				AML	AML	03 03 25.1	
	comp=Z,751nm,0.6s						
SWZ	**Schweizer**	**9.40**	**229**	*e*P	**Pn**	**03 01 26.1**	**-0.3**
SWZ				*e*S	**Sn**	**03 03 05.1**	**-7.1**
SWZ				AML	AML	03 04 04.4	
	comp=Z,744nm,0.7s						
BOSA	**Boshof**	**10.39**	**223**	Pn	**Pn**	**03 01 38.6**	**-1.3**
	comp=Z,17nm,0.3s,baz=53,slow=14,SNR=122						
BOSA				Sn	**Sn**	**03 03 29.7**	**-6.7**
	comp=Z,18nm,0.3s,baz=5.9,slow=19,SNR=5.1						
BOSA				Lg		03 04 30.9	
	comp=Z,18nm,0.3s,baz=315,slow=20,SNR=2.5						
BOSA				LR	LR	03 05 55.5	
	comp=Z,12μm,18.4s,baz=52,slow=39						
BOSA	**Boshof**	**10.39**	**223**	*e*Pn	**Pn**	**03 01 38.2**	**-1.7**
	comp=Z,3.1nm,0.9s						
BOSA				*e*Sn	**Sn**	**03 03 29.2**	**-7.2**
BOSA	**Boshof**	**10.39**	**223**	*e*P	**Pn**	**03 01 38.2**	**-1.7**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**10.39**	**223**	*e*P	**Pn**	**03 01 39.4**	**-0.5**
BOSA				*e*S	**Sn**	**03 03 27.6**	**-8.8**
BOSA				AML	AML	03 04 37.8	
	comp=Z,359nm,0.7s						
HVD	**Gariep Dam**	**11.72**	**215**	*e*P	**Pn**	**03 01 56.9**	**-1.2**
HVD				*e*S	**Sn**	**03 03 58.5**	**-10**
HVD				AML	AML	03 05 37.3	
	comp=Z,493nm,0.7s						
UPI	**Upington**	**13.06**	**234**	*e*P	**Pn**	**03 02 17.1**	**+0.7**
UPI				*e*S	**Sn**	**03 04 33.2**	**-8.6**
UPI				AML	AML	03 06 27.2	
	comp=Z,310nm,0.7s						
ABPO	**Ambohimpanom**	**13.28**	**83**	*e*Pn	**Pn**	**03 02 18.5**	**-1.1**
	comp=Z,165nm,1.1s						
ABPO				*e*Sn	**Sn**	**03 04 37.0**	**-10**
GRM	**Grahamstown**	**13.51**	**205**	*e*P	**Pn**	**03 02 21.0**	**-1.5**
GRM				*e*S	**Sn**	**03 04 40.1**	**-13**
GRM				AML	AML	03 06 43.5	
	comp=Z,187nm,0.6s						
TSUM	**Tsumeb**	**14.86**	**275**	Pn	**Pn**	**03 02 36.1**	**-4.9**
	comp=Z,4.2nm,0.3s,baz=99,slow=11,SNR=58						
TSUM				Sn	**Sn**	**03 05 13.1**	**-13**
	comp=Z,4.1nm,0.3s,baz=217,slow=20,SNR=2.9						
TSUM				Lg		03 06 46.2	
	comp=Z,7.0nm,0.3s,baz=270,slow=20,SNR=2.0						
TSUM				LR	LR	03 08 33.4	
	comp=Z,7μm,19.8s,baz=87,slow=38						
TSUM	**Tsumeb**	**14.86**	**275**	*e*Pn	**Pn**	**03 02 36.0**	**-5.0**
SUR	**Sutherland**	**15.75**	**222**	Pn	**Pn**	**03 02 52.6**	**-0.2**
	comp=Z,2μm,1.2s,SNR=48						
SUR	**Sutherland**	**15.75**	**222**	P	**Pn**	**03 02 55.4**	**+2.7**
	SNR=9.2						
SUR	**Sutherland**	**15.75**	**222**	Pn	**Pn**	**03 02 51.1**	**-1.7**
	comp=Z,9.7nm,0.3s,baz=53,slow=13,SNR=63						
SUR				Sn	**Sn**	**03 05 34.6**	**-13**
	comp=Z,2.5nm,0.3s,baz=330,slow=18,SNR=3.1						
SUR				Lg		03 07 17.6	
	comp=Z,4.6nm,0.3s,baz=135,slow=19,SNR=2.3						
SUR				LR	LR	03 09 19.5	
	comp=Z,6μm,18.9s,baz=48,slow=38						
SUR	**Sutherland**	**15.75**	**222**	*e*Pn	**Pn**	**03 02 51.7**	**-1.1**
	comp=Z,474nm,1.2s						
SUR	**Sutherland**	**15.75**	**222**	*e*P	**Pn**	**03 02 53.4**	**+0.6**
SUR				*e*S	**Sn**	**03 05 36.1**	**-11**
CVNA	**Calvinia**	**15.87**	**227**	*e*P	**Pn**	**03 02 55.2**	**+0.9**
CVNA				*e*S	**Sn**	**03 05 39.4**	**-11**
CVNA				AML	AML	03 07 34.7	
	comp=Z,302nm,0.7s						
KOMG	**Komaggas**	**16.63**	**236**	*e*P	**Pn**	**03 03 06.6**	**+2.4**
KOMG				*e*S	**Sn**	**03 05 58.8**	**-10**
KOMG				AML	AML	03 08 16.7	
	comp=Z,142nm,0.7s						
CER	**Ceres**	**17.36**	**223**	*e*P	**Pn**	**03 03 15.4**	**+2.2**
CER				*e*S	**Sn**	**03 06 14.0**	**-12**
CER				AML	AML	03 08 26.1	
	comp=Z,121nm,0.7s						
ELIM	**Elim**	**17.92**	**219**	*e*P	**Pn**	**03 03 22.9**	**+2.8**
ELIM				*e*S	**Sn**	**03 06 27.2**	**-13**
ELIM				AML	AML	03 08 47.7	
	comp=Z,134nm,0.7s						
MBAR	**Mbarara**	**20.58**	**353**	P	**P**	**03 03 50.1**	**0.0**
	comp=Z,610nm,0.7s,SNR=24						
MSEY	**Mahe Island**	**27.08**	**56**	⇑P	**P**	**03 04 55.3**	**+1.4**
	SNR=7.8						
MSEY	**Mahe Island**	**27.08**	**56**	*e*P	**P**	**03 04 55.5**	**+1.6**
RBK	**Rabkut**	**43.56**	**30**	⇓P	**P**	**03 07 16.7**	**+1.6**
	SNR=5.6						
TOA0	**Torodi Ar. Sit**	**46.09**	**315**	*e*P	**P**	**03 07 34.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**46.09**	**315**	P	**P**	**03 07 34.2**	**-1.1**
	comp=Z,9.4nm,0.7s,mb4.8,baz=126,slow=7.8,SNR=39						
TORD				PP	PP	03 09 26.1	+2.5
	comp=Z,5.6nm,0.8s,baz=136,slow=7.6,SNR=4.3						
TORD				LR	LR	03 26 41.9	
	comp=Z,602nm,20.8s,MS4.5,baz=130,slow=36						
TORD	**Torodi Ar. Bea**	**46.09**	**315**	P	**P**	**03 07 34.2**	**-1.1**
TORD				PP	PP	03 09 26.1	+2.5
TORD				LR	LR	03 26 41.9	
KIC	**Kosan Boka**	**46.26**	**302**	*e*P	**P**	**03 07 36.6**	**-0.1**
	comp=Z,182nm,1.4s,mb5.8						
LIC	**Lamto**	**46.40**	**302**	*e*P	**P**	**03 07 40.6**	**+2.7**
	comp=Z,54nm,1.3s,mb5.0						
LIC				*e*MLR	MLR		
	comp=Z,2μm,22.2s,MS4.8						
LIC	**Lamto**	**46.40**	**302**	*e*P	**P**	**03 07 37.3**	**-0.6**
	comp=Z,52nm,1.3s,mb5.3						
LIC	**Lamto**	**46.40**	**302**	*e*P	**P**	**03 07 40.6**	**+2.7**
	comp=Z,27nm,1.3s,mb5.0						
LIC				LR	LR		
	comp=Z,1μm,22.3s,MS4.8						
DBIC	**Dimbokro**	**46.54**	**302**	P	**P**	**03 07 38.6**	**-0.3**
	comp=Z,9.9nm,0.7s,mb4.8,baz=111,slow=11,SNR=9.7						
DBIC				LR	LR	03 25 30.7	
	comp=Z,1μm,20.9s,MS4.9,baz=114,slow=34						
DBIC	**Dimbokro**	**46.54**	**302**	*e*P	**P**	**03 07 34.2**	**-4.7**
	comp=Z,42nm,1.4s,mb5.2						
DBIC				LR	LR	03 25 30.8	
TIC	**Toumodi**	**46.65**	**302**	*e*P	**P**	**03 07 39.9**	**+0.1**
	comp=Z,152nm,0.9s,mb5.9						
SYO	**Syowa Base**	**48.00**	**177**	⇓*e*P	**P**	**03 07 50.0**	**+0.4**
SYO	**Syowa Base**	**48.00**	**177**	⇓*i*pP	pP	03 07 52.4	-0.4
BSY	**Bisya**	**49.48**	**30**	⇓P	**P**	**03 08 02.8**	**+1.2**
	SNR=12						
JMDO	**Jabal Madar**	**49.59**	**31**	⇑P	**P**	**03 08 03.8**	**+1.5**
	SNR=5.8						
ARQ	**Aragi**	**49.69**	**28**	⇓P	**P**	**03 08 04.3**	**+1.2**
	SNR=9.8						
MAW	**Mawson**	**50.02**	**166**	P	**P**	**03 08 05.9**	**+0.9**
	comp=Z,14nm,0.7s,mb5.1,baz=312,slow=11,SNR=20						
MAW				LR	LR	03 25 37.3	
	comp=Z,582nm,18.2s,MS4.6,baz=330,slow=32						
MAW	**Mawson**	**50.02**	**166**	*e*P	**P**	**03 08 05.9**	**+0.8**
	comp=Z,3.0nm,0.7s,mb4.4						
WBK	**Wadi Bani Khal**	**50.21**	**31**	⇓P	**P**	**03 08 08.3**	**+1.2**
	SNR=11						
EIL	**Elat**	**50.56**	**2**	LR	LR	03 28 20.9	
	comp=Z,388nm,19.5s,MS4.4,baz=63,slow=35						
MAIT	**Maitri**	**51.23**	**189**	*e*P	**P**	**03 08 17.9**	**+3.7**
TAM	**Tamanrasset**	**51.39**	**327**	*e*P	**P**	**03 08 15.8**	**-0.1**
	comp=Z,40nm,1.5s,mb5.1						
TAM	**Tamanrasset**	**51.39**	**327**	*e*P	**P**	**03 08 15.8**	**-0.1**
TAM				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
RDF	**Al-Radifah**	**51.67**	**16**	*e*P	**P**	**03 08 17.7**	**-0.2**
	baz=16						
RDF				AMb	AMB	03 08 22.2	
	comp=Z,62nm,1.1s,mb5.5,baz=16						
NAY	**Al-Naaiem**	**51.90**	**16**	*e*P	**P**	**03 08 19.5**	**-0.1**
	baz=16						
NAY				AMb	AMB	03 08 25.4	
	comp=Z,33nm,1.2s,mb5.1,baz=16						
KBD	**Kabd**	**51.94**	**16**	*e*P	**P**	**03 08 19.5**	**-0.5**
	baz=16						
KBD				AMb	AMB	03 08 26.2	
	comp=Z,99nm,1.4s,mb5.5,baz=16						
UMR	**Umm Al-Rimmam**	**52.30**	**16**	*e*P	**P**	**03 08 22.3**	**-0.4**
	baz=16						
UMR				AMb	AMB	03 08 28.7	
	comp=Z,346nm,1.3s,mb6.1,baz=16						
MIB	**Mutribah**	**52.45**	**15**	*e*P	**P**	**03 08 23.3**	**-0.5**
	baz=16						
MIB				AMb	AMB	03 08 29.7	
	comp=Z,113nm,1.1s,mb5.7,baz=16						
ASF	**Jabal al Asfar**	**53.15**	**4**	LR	LR	03 30 34.2	
	comp=Z,508nm,19.8s,MS4.6,baz=59,slow=36						
SNAA	**Sanae**	**54.62**	**193**	*e*P	**P**	**03 08 37.5**	**-1.6**
VNA2	**Neumayer--Watz**	**55.13**	**195**	*e*P	**P**	**03 08 45.1**	**+2.2**
	baz=30,slow=5.3						
VNA2				*e*	pP	03 08 46.7	+0.6
VNA2				*e*	pP	03 08 49.4	+3.3
VNA2				*e*		03 08 54.3	
VNA1	**Neumayer--Stat**	**55.16**	**196**	*e*P	**P**	**03 08 44.5**	**+1.4**
VNA1				*e*	pP	03 08 47.1	+0.8
VNA1				*e*		03 08 49.6	
VNA1				*e*		03 08 55.0	
VNA3	**Neumayer Olymp**	**55.90**	**195**	*e*P	**P**	**03 08 49.6**	**+1.2**
VNA3				*e*	pP	03 08 51.4	-0.2
VNA3				*e*	pP	03 08 54.2	+2.6
HYB	**Hyderabad**	**58.65**	**53**	*e*P	**P**	**03 09 07.5**	**-1.1**
HYB	**Hyderabad**	**58.65**	**53**	*i*P	**P**	**03 09 07.5**	**-1.1**
BR131	**Keskin Array S**	**60.57**	**0**	*e*P	**P**	**03 09 21.7**	**+0.3**
BRTR	**Keskin Array B**	**60.57**	**0**	P	**P**	**03 09 20.9**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.4,baz=176,slow=8.3,SNR=9.8						
BRTR	**Keskin Array B**	**60.57**	**0**	P	**P**	**03 09 20.9**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VAY	**Valandovo**	**62.95**	**351**	*e*P	**P**	**03 09 37.4**	**0.0**
KBL	**Kabul**	**65.00**	**32**	*e*P	**P**	**03 09 50.1**	**-0.9**
	comp=Z,9.5nm,0.9s,mb4.8						
KBL	**Kabul**	**65.00**	**32**	*e*P	**P**	**03 09 50.2**	**-0.9**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
MAK	**Makhachkala**	**65.14**	**11**	*e*P	**P**	**03 09 45.4**	**-6.4**
MAK				*e*		03 10 19.2	
MAK				*i*		03 12 09.0	
MAK				*e*PPP		03 13 44.5	
MAK				*e*S	S	03 18 30.7	-3.8
MAK				*e*		03 19 37.0	
MAK				pmax	pmax		
	comp=Z,206nm,1.6s,mb5.9						
MAK				MLR	MLR		
	comp=Z,609nm,15.0s,MS4.9						
KIV	**Kislovodsk**	**65.37**	**7**	*e*P	**P**	**03 09 52.8**	**-0.5**
	comp=Z,20nm,1.1s,mb5.0						
KIV	**Kislovodsk**	**65.37**	**7**	*e*P	**P**	**03 09 52.8**	**-0.4**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
BSI	**Banda Aceh**	**66.31**	**74**	P	**P**	**03 10 03.9**	**+3.9**
	comp=Z,50nm,1.4s,mb5.4						
MLR	**Muntele Rosu**	**66.67**	**354**	P	**P**	**03 10 02.1**	**+0.5**
	comp=Z,19nm,1.1s,mb5.0,baz=154,slow=5.3,SNR=8.4						
MLR	**Muntele Rosu**	**66.67**	**354**	P	**P**	**03 10 02.1**	**+0.6**
MLR				pmax	pmax		
	comp=Z,19nm,1.1s						
MLR	**Muntele Rosu**	**66.67**	**354**	⇑*i*P	**P**	**03 10 02.0**	**+0.5**
VOIR		**66.70**	**354**	P	**P**	**03 10 02.3**	**+0.6**
VOIR		**66.70**	**354**	⇓*i*P	**P**	**03 10 01.8**	**0.0**
GZR	**Gura Zlata**	**66.92**	**352**	P	**P**	**03 10 04.7**	**+1.5**
PLOR	**Plostina**	**66.96**	**355**	P	**P**	**03 10 04.2**	**+0.8**
PLOR	**Plostina**	**66.96**	**355**	⇑*i*P	**P**	**03 10 03.6**	**+0.2**
VRI	**Vrincioaia**	**66.97**	**355**	P	**P**	**03 10 04.2**	**+0.7**
VRI	**Vrincioaia**	**66.97**	**355**	⇑*i*P	**P**	**03 10 04.0**	**+0.5**
PGF	**Pioggiola**	**67.23**	**341**	*e*P	**P**	**03 10 03.5**	**-1.7**
	comp=Z,188nm,1.5s,mb5.6						
PGF	**Pioggiola**	**67.23**	**341**	*e*P	**P**	**03 10 03.5**	**-1.7**
	comp=Z,94nm,1.5s,mb5.6						
PGF	**Pioggiola**	**67.23**	**341**	*e*P	**P**	**03 10 03.5**	**-1.7**
PGF				pmax	pmax		
	comp=Z,94nm,1.5s,mb5.6						
BZS	**Buzias**	**67.30**	**351**	P	**P**	**03 10 06.2**	**+0.6**
BZS	**Buzias**	**67.30**	**351**	⇑*i*P	**P**	**03 10 06.1**	**+0.5**
ERON	**Agron**	**67.61**	**329**	P	**P**	**03 10 09.0**	**+1.2**
	comp=Z,16nm,1.2s,mb4.9						
**EHU

comp=Z,9.9nm,1.0s,mb4.7,baz=241,slow=3.1,SNR=12
QSPA South Pole Qui 68.99 180 P **P**
KOGS Kog 69.03 347 *eP* **P** **03 10 16.9 +1.0**
DANN Dangsing 69.28 47 *eP* **P** **03 10 16.9 -1.5**
comp=Z,106nm,1.2s,mb5.7
KSI Kapahiang 69.41 86 P **P** **03 10 25.6 +6.0**
comp=Z,116nm,1.1s,mb5.7
ROBS Robic 69.44 345 *iP* **P** **03 10 19.6 +0.7**
SOKA Soboth 69.51 347 ⇑*iP* **P** **03 10 20.5 +1.1**
comp=Z,15nm,1.2s,mb4.8
BUD Budapest 69.52 350 *eP* **P** **03 10 17.1 -2.3**
SMRF Simiane la Rot 69.62 339 *eP* **P** **03 10 20.3 +0.2**
comp=Z,144nm,1.8s,mb5.3
SMRF Simiane la Rot 69.62 339 *eP* **P** **03 10 20.3 +0.2**
comp=Z,144nm,1.8s,mb5.6
EMIN Mina Concepcio 69.62 327 P **P** **03 10 19.6 -0.7**
comp=Z,32nm,1.8s,mb5.0
GKN Gorkha 69.66 47 *eP* **P** **03 10 19.1 -1.6**
comp=Z,116nm,1.1s,mb5.7
CAM4 Nova Friburgo 69.69 253 ⇓*iP* **P** **03 10 20.8 -0.4**
CAM4 *i* pP 03 10 24.9 +0.5
CAM4 *i* 03 10 29.6
DMN Daman 69.73 48 *eP* **P** **03 10 20.2 -1.0**
comp=Z,91nm,1.1s,mb5.6
PSZ Piszkesteto 69.80 350 *eP* **P** **03 10 21.3 +0.1**
comp=Z,24nm,1.1s,mb5.0
PSZ Piszkesteto 69.80 350 *eP* **P** **03 10 21.3 +0.1**
PSZ pmax pmax
comp=Z,24nm,1.1s,mb5.0
PSZ Piszkesteto 69.80 350 ‖*eP* **P** **03 10 20.9 -0.3**
PSZ Piszkesteto 69.80 350 ‖*iP* **P** **03 10 21.1 -0.1**
MBDF Montbardon 69.90 340 *eP* **P** **03 10 22.6 +0.8**
comp=Z,40nm,1.1s,mb5.0
MBDF Montbardon 69.90 340 *eP* **P** **03 10 22.6 +0.8**
comp=Z,20nm,1.1s,mb5.0
MBDF Montbardon 69.90 340 *eP* **P** **03 10 22.6 +0.8**
MBDF pmax pmax
comp=Z,20nm,1.1s,mb5.0
PKI Pulchoki 69.92 48 *eP* **P** **03 10 21.0 -1.4**
comp=Z,86nm,1.0s,mb5.6
PKI Pulchoki 69.92 48 *eP* **P** **03 10 21.0 -1.4**
PKI pmax pmax
comp=Z,86nm,1.0s,mb5.6
ARSA Arzberg 69.95 347 ⇑*iP* **P** **03 10 22.9 +0.8**
comp=Z,7.4nm,1.1s,mb4.5
KKN Kakani 69.97 48 *eP* **P** **03 10 21.4 -1.3**
comp=Z,119nm,1.2s,mb5.7
KKN Kakani 69.97 48 *eP* **P** **03 10 21.4 -1.3**
KKN pmax pmax
comp=Z,119nm,1.2s,mb5.7
ABTA Abfaltersbach 70.15 345 ⇑*iP* **P** **03 10 24.7 +1.4**
comp=Z,11nm,1.1s,mb4.7
SOP Sopron 70.16 348 ‖*eP* **P** **03 10 23.6 +0.3**
UZH Uzhgorod 70.16 352 *eP* **P** **03 10 23.0 -0.4**
UZH *i* pP 03 10 27.0 +0.4
UZH *eS* S 03 19 34.0 -0.6
BNI Bardonecchia 70.22 340 *eP* **P** **03 10 22.0 -1.8**
comp=Z,30nm,1.3s,mb5.1
BNI Bardonecchia 70.22 340 *eP* **P** **03 10 22.0 -1.8**
BNI pmax pmax
comp=Z,30nm,1.3s,mb5.1
MTLF Montolieu 70.25 336 *eP* **P** **03 10 24.0 0.0**
KBA Koelnbreinsper 70.26 346 ⇑*eP* **P** **03 10 25.1 +1.1**
comp=Z,9.7nm,1.1s,mb4.7
ORIF Oris-en-Rattie 70.35 340 *eP* **P** **03 10 25.0 +0.4**
comp=Z,68nm,1.5s,mb5.1
ORIF *e*MLR MLR
comp=Z,626nm,18.0s,MS4.6
ORIF Oris-en-Rattie 70.35 340 *eP* **P** **03 10 25.0 +0.4**
comp=Z,34nm,1.5s,mb5.1
ORIF Oris-en-Rattie 70.35 340 *eP* **P** **03 10 25.0 +0.4**
ORIF pmax pmax
comp=Z,34nm,1.5s,mb5.1
GUN Gumba 70.46 48 *eP* **P** **03 10 24.8 -0.9**
comp=Z,131nm,1.0s,mb5.8
KOLS Kolonicke sedl 70.46 352 *eP* **P** **03 10 26.7 +1.5**
KOLS pmax pmax
comp=Z,74nm,2.8s,mb5.1
KOLS Kolonicke sedl 70.46 352 *eP* **P** **03 10 26.7 +1.5**
KOLS *es*P sP 03 10 37.8 +8.1
JIRN Jiri 70.52 49 *eP* **P** **03 10 25.1 -1.0**
comp=Z,120nm,1.0s,mb5.8
CONA Conrad Observa 70.53 348 ⇑*iP* **P** **03 10 26.4 +0.8**
comp=Z,12nm,1.1s,mb4.7
CSNA Conrad Observa 70.53 348 ⇑*iP* **P** **03 10 26.4 +0.7**
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 70.53 350 *eP* **P** **03 10 25.4 -0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CRVS Cervenica-Dubn 70.54 352 *eP* **P** **03 10 25.3 -0.4**
CRVS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CRVS Cervenica-Dubn 70.54 352 *eP* **P** **03 10 25.2 -0.5**
ZST Bratislava 70.55 349 *eP* **P** **03 10 30.1 +4.4**
ZST pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
LPG La Plagne 70.59 341 *eP* **P** **03 10 26.2 +0.1**
comp=Z,56nm,1.4s,mb5.0
LPG La Plagne 70.59 341 *eP* **P** **03 10 26.2 +0.1**
comp=Z,28nm,1.4s,mb5.0
LPG La Plagne 70.59 341 *eP* **P** **03 10 26.2 +0.1**
LPG pmax pmax
comp=Z,28nm,1.4s,mb5.0
LPL La Plagne 70.62 341 *eP* **P** **03 10 26.3 +0.1**
comp=Z,64nm,1.6s,mb5.0
LPL La Plagne 70.62 341 *eP* **P** **03 10 26.3 +0.1**
comp=Z,32nm,1.6s,mb5.0
LPL La Plagne 70.62 341 *eP* **P** **03 10 26.3 +0.1**
LPL pmax pmax
comp=Z,32nm,1.6s,mb5.0
MODS Modra-Piesok 70.68 349 *eP* **P** **03 10 26.6 0.0**
MODS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
MODS MLR MLR
comp=Z,200nm,18.7s,MS4.4
MODS Modra-Piesok 70.68 349 *eP* **P** **03 10 26.6 0.0**
MODS *es*P sP 03 10 39.2 +8.2
KOLL Kolacno 70.69 350 *eP* **P** **03 10 26.2 -0.4**
EPF Esparros 70.71 335 *eP* **P** **03 10 27.4 +0.6**
comp=Z,97nm,1.5s,mb5.2
EPF Esparros 70.71 335 *eP* **P** **03 10 27.4 +0.6**
comp=Z,48nm,1.5s,mb5.2
EPF Esparros 70.71 335 *eP* **P** **03 10 27.4 +0.6**
EPF pmax pmax
comp=Z,48nm,1.5s,mb5.2
TUE Stuetta 70.71 343 *eP* **P** **03 10 27.2 +0.4**
comp=Z,32nm,1.3s,mb5.1
MOA Molln 70.78 347 ⇑*iP* **P** **03 10 28.0 +0.8**
comp=Z,16nm,1.2s,mb4.8
WTTA Wattenberg 70.84 345 ⇑*iP* **P** **03 10 29.3 +1.7**
comp=Z,28nm,1.5s,mb5.0
FETA Feichten 70.85 344 ⇑*iP* **P** **03 10 28.6 +1.0**
comp=Z,15nm,1.1s,mb4.8
DAVOX Davos/Dischmat 70.85 343 P **P** **03 10 26.5 -1.1**
comp=Z,2.3nm,0.7s,mb4.2,baz=284,slow=17,SNR=4.2
ODAN Odare 70.89 50 *eP* **P** **03 10 27.4 -0.9**
comp=Z,116nm,1.0s,mb5.8
SQTA Sankt Quirin 70.91 344 ⇑*iP* **P** **03 10 28.9 +0.9**
DAVOS Davos 70.93 343 P **P** **03 10 26.5 -1.6**
ETSF Etsaut 70.95 334 *eP* **P** **03 10 28.2 -0.1**
comp=Z,17nm,0.9s,mb4.7
ETSF Etsaut 70.95 334 *eP* **P** **03 10 28.2 -0.1**
comp=Z,8.7nm,0.9s,mb4.7
ETSF Etsaut 70.95 334 *eP* **P** **03 10 28.2 -0.1**
ETSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
IPM Ipoh 71.07 77 P **P** **03 10 32.3 +2.6**
comp=Z,62nm,1.1s,mb5.5
STHS Stebnicka Huta 71.07 352 *eP* **P** **03 10 29.1 +0.2**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
EPLA Plasencia 71.11 329 P **P** **03 10 29.0 -0.4**
comp=Z,69nm,1.6s,mb5.3
EPLA Plasencia 71.11 329 P **P** **03 10 29.0 -0.3**
EPLA pmax pmax
comp=Z,69nm,1.6s,mb5.3
RETA Reutte 71.27 344 ⇑*iP* **P** **03 10 30.8 +0.7**
comp=Z,14nm,1.3s,mb4.8
DAVA Damuels 71.32 343 ⇑*iP* **P** **03 10 30.9 +0.5**
comp=Z,21nm,1.6s,mb4.8
SJPF Ste Jean 71.40 334 *eP* **P** **03 10 31.1 0.0**
TAPN Taplejung 71.41 50 *eP* **P** **03 10 30.4 -1.1**
KIEV Kiev 71.63 357 *eP* **P** **03 10 31.2 -1.0**
comp=Z,13nm,1.1s,mb4.8
KIEV Kiev 71.63 357 *eP* **P** **03 10 31.2 -1.0**
KIEV pmax pmax
comp=Z,13nm,1.1s,mb4.8
AKASG Malin Array Be 71.63 357 P **P** **03 10 31.2 -1.1**
comp=Z,9.6nm,1.0s,mb4.7,baz=181,slow=5.6,SNR=9.7
AKASG Malin Array Be 71.63 357 P **P** **03 10 31.2 -1.1**
AKASG pmax pmax
comp=Z,10.0nm,1.0s
AKBB Malin Array Si 71.63 357 *eP* **P** **03 10 31.0 -1.2**
CAF Calviac 71.67 337 *eP* **P** **03 10 33.1 +0.5**
comp=Z,115nm,1.7s,mb5.2
CAF Calviac 71.67 337 *eP* **P** **03 10 33.1 +0.5**
comp=Z,58nm,1.7s,mb5.2
CAF Calviac 71.67 337 *eP* **P** **03 10 33.1 +0.5**
CAF pmax pmax
comp=Z,58nm,1.7s,mb5.2
VRAC Vranov 71.71 349 LR LR 03 42 25.3
comp=Z,286nm,18.4s,MS4.6,baz=170,slow=36
FUR Furstenfeldbru 71.77 345 *eP* **P** **03 10 33.4 +0.2**
FUR pmax pmax
comp=Z,76nm,1.5s,mb5.4
FUR Furstenfeldbru 71.77 345 *eP* **P** **03 10 33.4 +0.2**
comp=Z,76nm,1.5s,mb5.4
CABF La Chapelle 71.80 341 *eP* **P** **03 10 33.8 +0.5**
comp=Z,48nm,1.2s,mb5.0
CABF La Chapelle 71.80 341 *eP* **P** **03 10 33.8 +0.5**
comp=Z,24nm,1.2s,mb5.0
CABF La Chapelle 71.80 341 *eP* **P** **03 10 33.8 +0.5**
CABF pmax pmax
comp=Z,24nm,1.2s,mb5.0
GEC2 GERESS Array S 71.85 347 *eP* **P** **03 10 33.4 -0.2**
comp=Z,3μm,1.1s
GEC2 GERESS Array S 71.85 347 *eP* **P** **03 10 33.4 -0.2**
GEC2 pmax pmax
comp=Z,3μm,1.1s
GEC2 GERESS Array S 71.85 347 *eP* **P** **03 10 33.2 -0.4**
comp=Z,16nm,1.3s,mb4.8
GERES GERESS Array B 71.85 347 P **P** **03 10 33.7 +0.1**
comp=Z,1.9nm,0.7s,mb4.2,baz=161,slow=5.2,SNR=16
GERES GERESS Array B 71.85 347 P **P** **03 10 33.7 +0.1**
GERES pmax pmax
comp=Z,2.0nm,0.7s
OJC Ojcow 72.06 351 *eP* **P** **03 10 33.9 -0.9**
KHC Kasperske Hory 72.14 347 *eP* **P** **03 10 34.5 -0.9**
LFF La Frestade 72.17 336 *eP* **P** **03 10 35.7 +0.1**
comp=Z,250nm,1.8s,mb5.5
LFF La Frestade 72.17 336 *eP* **P** **03 10 35.7 +0.1**
comp=Z,125nm,1.8s,mb5.5
LFF La Frestade 72.17 336 *eP* **P** **03 10 35.7 +0.1**
LFF pmax pmax
comp=Z,125nm,1.8s,mb5.5
RJF Les Rejaudoux 72.19 337 *eP* **P** **03 10 35.9 +0.2**
comp=Z,126nm,1.8s,mb5.2
RJF *e*MLR MLR
comp=Z,710nm,18.0s,MS4.7
RJF Les Rejaudoux 72.19 337 *eP* **P** **03 10 35.9 +0.2**
comp=Z,63nm,1.8s,mb5.2
RJF LR LR
comp=Z,710nm,18.0s,MS5.0
RJF Les Rejaudoux 72.19 337 *eP* **P** **03 10 35.9 +0.2**
RJF pmax pmax
comp=Z,63nm,1.8s,mb5.2
RJF MLR MLR
comp=Z,710nm,18.0s,MS5.0
DBJI Dramaga 72.28 90 P **P** **03 10 42.8 +5.8**
comp=Z,93nm,1.0s,comp=Z,5μm,mb5.7
KSH Kashi 72.35 33 *eP* **P** **03 10 39.3 +2.4**
KSH *e*AP pP 03 10 43.5 +3.4
KSH *e*XP sP 03 10 46.3 +5.0
KSH *e*PCP PcP 03 10 57.0 +2.2
KSH *e*PP PP 03 13 22.5 +4.5
KSH *e*S S 03 20 02.0 +1.7
KSH *e*XS sS 03 20 10.0 +4.3
KSH *e*SKS 03 20 38.8
KSH *e*SCS ScS 03 20 42.3 -1.3
KSH AMB AMB
comp=Z,106nm,0.4s,mb6.1
KSH LR LR
comp=Z,812nm,3.8s
CBJI Citeko 72.42 90 P **P** **03 10 41.7 +3.8**
comp=Z,487nm,0.6s
SMF Signal de Mont 72.55 339 *eP* **P** **03 10 37.8 0.0**
comp=Z,44nm,1.3s,mb4.9
SMF Signal de Mont 72.55 339 *eP* **P** **03 10 37.8 0.0**
comp=Z,22nm,1.3s,mb4.9
SMF Signal de Mont 72.55 339 *eP* **P** **03 10 37.8 0.0**
SMF pmax pmax
comp=Z,22nm,1.3s,mb4.9
KK31 Karatay Array 72.55 28 *iP* **P** **03 10 36.9 -1.0**
KK31 pmax pmax
comp=Z,31nm,0.9s,mb5.2
HINF Hinteralfeld 72.65 342 *eP* **P** **03 10 38.5 +0.1**
comp=Z,49nm,1.5s,mb4.9
HINF Hinteralfeld 72.65 342 *eP* **P** **03 10 38.5 +0.1**
comp=Z,24nm,1.5s,mb4.9
HINF Hinteralfeld 72.65 342 *eP* **P** **03 10 38.5 +0.1**
HINF pmax pmax
comp=Z,24nm,1.5s,mb4.9
BFO Black Forest 72.69 343 *eP* **P** **03 10 38.0 -0.7**
BFO pmax pmax
comp=Z,24nm,1.8s,mb4.8
BFO Black Forest 72.69 343 *eP* **P** **03 10 38.0 -0.7**
comp=Z,24nm,1.8s,mb4.8
TCF Toulx Ste Croi 72.79 338 *eP* **P** **03 10 39.8 +0.5**
comp=Z,188nm,1.8s,mb5.4
TCF Toulx Ste Croi 72.79 338 *eP* **P** **03 10 39.8 +0.5**
comp=Z,94nm,1.8s,mb5.4
TCF Toulx Ste Croi 72.79 338 *eP* **P** **03 10 39.8 +0.5**
TCF pmax pmax
comp=Z,94nm,1.8s,mb5.4
BGF Bois d'Agland 72.80 339 *eP* **P** **03 10 38.8 -0.6**
comp=Z,24nm,1.0s,mb4.8
BGF Bois d'Agland 72.80 339 *eP* **P** **03 10 38.8 -0.6**
comp=Z,12nm,1.0s,mb4.8
BGF Bois d'Agland 72.80 339 *eP* **P** **03 10 38.8 -0.6**
BGF pmax pmax
comp=Z,12nm,1.0s,mb4.8
AVF Avril sur Loir 72.84 339 *eP* **P** **03 10 39.7 +0.1**
comp=Z,34nm,1.1s,mb4.9
AVF Avril sur Loir 72.84 339 *eP* **P** **03 10 39.7 +0.1**
comp=Z,17nm,1.1s,mb4.9
AVF Avril sur Loir 72.84 339 *eP* **P** **03 10 39.7 +0.1**
AVF pmax pmax
comp=Z,17nm,1.1s,mb4.9
HAU Haudompre 72.97 341 *eP* **P** **03 10 40.2 -0.1**
comp=Z,118nm,1.6s,mb5.3
HAU *e*MLR MLR
comp=Z,545nm,17.8s,MS4.6
HAU Haudompre 72.97 341 *eP* **P** **03 10 40.2 -0.1**
comp=Z,59nm,1.6s,mb5.3
HAU LR LR
comp=Z,540nm,17.8s,MS4.9
HAU Haudompre 72.97 341 *eP* **P** **03 10 40.2 -0.1**
HAU pmax pmax
comp=Z,59nm,1.6s,mb5.3
HAU MLR MLR
comp=Z,540nm,17.8s,MS4.9
LEM Lembang 72.99 91 P **P** **03 10 44.5 +3.2**
comp=Z,108nm,1.0s,mb5.7
SSF Saint Saulge 73.02 339 *eP* **P** **03 10 40.3 -0.3**
comp=Z,77nm,1.9s,mb5.0
SSF Saint Saulge 73.02 339 *eP* **P** **03 10 40.3 -0.3**
comp=Z,39nm,1.9s,mb5.0
SSF Saint Saulge 73.02 339 *eP* **P** **03 10 40.3 -0.3**
SSF pmax pmax
comp=Z,39nm,1.9s,mb5.0
ROTZ Rotzenmuhle 73.05 346 *eP* **P** **03 10 40.9 +0.2**
comp=Z,19nm,1.1s,mb4.9
CDF Champ du Feu 73.06 342 *eP* **P** **03 10 40.3 -0.6**
comp=Z,55nm,1.6s,mb4.9
CDF Champ du Feu 73.06 342 *eP* **P** **03 10 40.3 -0.6**
comp=Z,28nm,1.6s,mb4.9
CDF Champ du Feu 73.06 342 *eP* **P** **03 10 40.3 -0.6**
CDF pmax pmax
comp=Z,27nm,1.6s,mb4.9
LOR Lormes 73.09 340 *eP* **P** **03 10 41.0 0.0**
comp=Z,53nm,1.6s,mb4.9
LOR *e*MLR MLR
comp=Z,664nm,19.0s,MS4.6
LOR Lormes 73.09 340 *eP* **P** **03 10 41.0 0.0**
comp=Z,26nm,1.6s,mb4.9
LOR LR LR
comp=Z,660nm,19.0s,MS4.9
LOR Lormes 73.09 340 *eP* **P** **03 10 41.0 0.0**
LOR pmax pmax
comp=Z,26nm,1.6s,mb4.9
LOR MLR MLR
comp=Z,660nm,19.0s,MS4.9
GRF Grafenberg Arr 73.21 345 *eP* **P** **03 10 42.1 +0.4**
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.0
GRF Grafenberg Arr 73.21 345 *eP* **P** **03 10 42.1 +0.4**
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.0
GRF Grafenberg Arr 73.21 345 *eP* **P** **03 10 42.1 +0.4**
comp=Z,24nm,1.1s,mb5.0
AML Almayashu 73.22 30 *eP* **P** **03 10 40.2 -1.8**
comp=Z,11nm,0.4s,mb5.2
MANZ Manzenberg 73.28 346 *eP* **P** **03 10 42.3 +0.2**
comp=Z,10.0nm,1.0s,mb4.7
HYF Humbligny 73.49 339 *eP* **P** **03 10 43.5 +0.1**
TANN Tannenbergstha 73.60 346 *eP* **P** **03 10 44.2 +0.2**
comp=Z,20nm,1.4s,mb4.8
EKS2 Erkin-Say 73.67 30 *eP* **P** **03 10 44.2 -0.4**
comp=Z,20nm,1.1s,mb5.0
MEZF Maizieres J'vi 73.80 341 *eP* **P** **03 10 45.5 +0.3**
comp=Z,30nm,1.0s,mb4.9
MEZF Maizieres J'vi 73.80 341 *eP* **P** **03 10 45.5 +0.3**
comp=Z,30nm,1.0s,mb5.2
MFF Saint Martin d 73.91 337 *eP* **P** **03 10 46.1 +0.2**
comp=Z,140nm,1.7s,mb5.3
MFF Saint Martin d 73.91 337 *eP* **P** **03 10 46.1 +0.2**
comp=Z,70nm,1.7s,mb5.3
MFF Saint Martin d 73.91 337 *eP* **P** **03 10 46.1 +0.2**
MFF pmax pmax
comp=Z,70nm,1.7s,mb5.3
AAK Ala-Archa 73.98 30 *eP* **P** **03 10 46.1 -0.3**
comp=Z,25nm,1.4s,mb5.0
AAK Ala-Archa 73.98 30 *eP* **P** **03 10 46.1 -0.3**
AAK pmax pmax
comp=Z,25nm,1.4s,mb5.0
MOX Moxa 74.00 346 *eP* **P** **03 10 46.9 +0.6**
comp=Z,21nm,1.6s,mb4.8
MOX
comp=Z,400nm,16.0s
MOX Moxa 74.00 346 *eP* **P** **03 10 46.9 +0.6**
MOX pmax pmax
comp=Z,21nm,1.6s,mb4.8
MOX MLR MLR
comp=Z,400nm,16.0s,MS4.8
MOX Moxa 74.00 346 *eP* **P** **03 10 46.7 +0.4**
comp=Z,13nm,1.2s,mb4.7
AB31 Akbulak array 74.02 18 P **P** **03 10 44.6 -1.9**
AB31 pmax pmax
comp=Z,25nm,1.1s,mb5.1
FRU Bishkek 74.20 30 *eP* **P** **03 10 44.0 -3.7**
FRU *e* 03 11 02.0
CLL Collm 74.32 347 *eP* **P** **03 10 46.0 -2.2**
CLL *i* pP pP 03 10 50.0 -1.5
CLL *i* sP sP 03 10 53.6 +0.9
CLL *eS* S 03 20 26.0 +3.9
CLL LR LR
comp=Z,400nm,18.7s,MS4.7
CLL Collm 74.32 347 *eP* **P** **03 10 48.4 +0.2**
comp=Z,18nm,1.3s,mb4.8
CLL Collm 74.32 347 *iP* **P** **03 10 48.2 0.0**
comp=Z,10.0nm,1.4s,mb4.5
CLL *i* pP pP 03 10 50.0 -1.5
comp=Z,15nm,1.4s
CLL *i* sP sP 03 10 53.6 +0.9
CLL *e*(PcP) PcP 03 11 00.0 -2.9
CLL *eS* S 03 20 26.0 +3.9
CLL *e*PS 03 21 01.0
CLL *e*SS SS 03 25 24.0 +15
CLL *ex* x 03 26 24.0
CLL LmH 03 42 00.0
comp=N,200nm,20.6s
CLL LmH 03 42 00.0
comp=E,600nm,18.4s
CLL LV 03 47 00.0
comp=Z,400nm,18.7s
AKTK Aktyubinsk 74.56 16 P **P** **03 10 48.2 -1.4**
AKTO Aktyubinsk 74.56 16 P **P** **03 10 48.2 -1.4**
comp=Z,8.9nm,1.1s,mb4.6,baz=184,slow=5.2,SNR=16
AKTO Aktyubinsk 74.56 16 P **P** **03 10 48.2 -1.4**
AKTO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TKM2 Tokmak 2 74.73 31 *eP* **P** **03 10 50.2 -0.5**
comp=Z,36nm,1.1s,mb5.2
TKM2 Tokmak 2 74.73 31 *eP* **P** **03 10 50.2 -0.6**
TKM2 pmax pmax
comp=Z,36nm,1.1s,mb5.2
BJII Banjamegara 74.77 92 P **P** **03 10 57.9 +6.2**
LSA Lhasa 75.23 50 P **P** **03 10 54.0 0.0**
LSA Lhasa 75.23 50 *eP* **P** **03 10 54.4 +0.4**
comp=Z,55nm,1.1s,mb5.4
LSA Lhasa 75.23 50 *eP* **P** **03 10 54.4 +0.4**
LSA pmax pmax
comp=Z,55nm,1.1s,mb5.4
GIVF Givet 75.29 342 *eP* **P** **03 10 53.6 -0.2**
CMAR Chiang Mai Arr 75.40 63 P **P** **03 10 54.5 -0.7**
comp=Z,19nm,1.0s,mb5.0,baz=253,slow=6.9,SNR=26
CMAR LR LR 03 44 49.7
comp=Z,174nm,18.2s,MS4.4,baz=235,slow=36
CMAR Chiang Mai Arr 75.40 63 P **P** **03 10 54.5 -0.7**
CMAR pmax pmax
comp=Z,19nm,1.0s
CMAR MLR MLR
comp=Z,174nm,18.2s
BAIF Baives 75.44 341 *eP* **P** **03 10 55.0 +0.3**
comp=Z,105nm,1.7s,mb5.2
BAIF Baives 75.44 341 *eP* **P** **03 10 55.0 +0.3**
comp=Z,52nm,1.7s,mb5.2
BAIF Baives 75.44 341 *eP* **P** **03 10 55.0 +0.3**
BAIF pmax pmax
comp=Z,52nm,1.7s,mb5.2
CHTO Chiang Mai 75.57 63 ⇑P **P** **03 10 57.4 +1.3**
SNR=11
CHTO Chiang Mai 75.57 63 *eP* **P** **03 10 55.6 -0.6**
comp=Z,159nm,2.0s,mb5.6
CHTO Chiang Mai 75.57 63 *eP* **P** **03 10 55.6 -0.6**
CHTO pmax pmax
comp=Z,159nm,2.0s,mb5.6
LDF La Druitiere 75.58 338 *eP* **P** **03 10 55.3 -0.2**
comp=Z,160nm,1.8s,mb5.3
LDF La Druitiere 75.58 338 *eP* **P** **03 10 55.3 -0.2**
comp=Z,80nm,1.8s,mb5.3
LDF La Druitiere 75.58 338 *eP* **P** **03 10 55.3 -0.2**
LDF pmax pmax
comp=Z,80nm,1.8s,mb5.3
GRR Gorron 75.67 337 *eP* **P** **03 10 56.2 +0.1**
comp=Z,38nm,1.2s,mb4.9
GRR Gorron 75.67 337 *eP* **P** **03 10 56.2 +0.1**
comp=Z,19nm,1.2s,mb4.9
GRR Gorron 75.67 337 *eP* **P** **03 10 56.2 +0.1**
GRR pmax pmax
comp=Z,19nm,1.2s,mb4.9
OBN Obninsk 76.02 2 *eP* **P** **03 10 55.2 -2.7**
OBN *e* 03 11 05.5
OBN *e* 03 13 43.4
OBN *eS* S 03 20 37.5 -3.3
OBN pmax pmax
comp=Z,16nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
SGMF Saint Gilles 76.19 336 *eP* **P** **03 10 59.3 +0.3**
comp=Z,72nm,1.3s,mb5.1
SGMF Saint Gilles 76.19 336 *eP* **P** **03 10 59.3 +0.3**
comp=Z,36nm,1.3s,mb5.1
SGMF Saint Gilles 76.19 336 *eP* **P** **03 10 59.3 +0.3**
SGMF pmax pmax
comp=Z,36nm,1.3s,mb5.1
ROSF Rostrenen 76.53 336 *eP* **P** **03 10 59.9 -1.0**
comp=Z,104nm,1.5s,mb5.2
ROSF Rostrenen 76.53 336 *eP* **P** **03 10 59.9 -1.0**
comp=Z,52nm,1.5s,mb5.2
ROSF Rostrenen 76.53 336 *eP* **P** **03 10 59.9 -1.0**
ROSF pmax pmax
comp=Z,52nm,1.5s,mb5.2
BDFB Brasilia 76.56 258 P **P** **03 11 02.3 +0.3**
comp=Z,16nm,0.8s,mb5.0,baz=76,slow=10,SNR=25
BDFB Brasilia 76.56 258 P **P** **03 11 02.3 +0.4**
BDFB pmax pmax
comp=Z,16nm,0.8s
VNDA Vanda 77.08 170 P **P** **03 11 05.2 +1.5**
comp=Z,3.5nm,0.7s,mb4.4,baz=270,slow=4.9,SNR=14
VNDA Vanda 77.08 170 P **P** **03 11 05.3 +1.5**
VNDA pmax pmax
comp=Z,4.0nm,0.7s
BSEG Bad Segeberg 77.36 346 *eP* **P** **03 11 06.0 +0.5**
BSEG pmax pmax
comp=Z,31nm,1.4s,mb5.0
BSEG Bad Segeberg 77.36 346 *eP* **P** **03 11 06.0 +0.5**
comp=Z,31nm,1.4s,mb5.0
SBA Scott Base 77.60 171 *eP* **P** **03 11 06.3 -0.4**

comp=Z,81nm,1.8s,mb5.3
SBA Scott Base 77.60 171 *e*P **P** 03 11 06.3 -0.4
SBA pmax pmax
comp=Z,81nm,1.8s,mb5.3
KSM Kuching 78.45 84 *e*P **P** 03 11 14.6 +2.0
comp=Z,58nm,1.1s,mb5.4
KSM Kuching 78.45 84 P **P** 03 11 19.1 +6.5
comp=Z,44nm,1.3s,mb5.2
MBWA Marble Bar 79.48 109 *e*P **P** 03 11 17.9 -0.2
comp=Z,28nm,1.3s,mb5.0
ARU Arti 80.19 14 *e*P **P** 03 11 20.3 -0.6
comp=Z,18nm,1.1s,mb4.9
ARU Arti 80.19 14⇑ *e*P **P** 03 11 20.1 -0.9
ARU pmax pmax
comp=Z,20nm,1.4s,mb4.8
BRVK Borovoye 80.58 22 ⇑P **P** 03 11 24.6 +1.5
SNR=7.5
BRVK Borovoye 80.58 22 *e*P **P** 03 11 22.2 -1.0
BVA0 Borovoye Array 80.59 22 P **P** 03 11 23.4 +0.2
BVA0 pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
BVAR Borovoye Array 80.59 22 P **P** 03 11 22.3 -0.9
comp=Z,7.0nm,0.7s,mb4.7,baz=224,slow=6.2,SNR=32
BVAR PP PP 03 14 27.7 +0.6
comp=Z,7.5nm,1.1s,baz=212,slow=5.3,SNR=5.1
BVAR LR LR 03 52 46.5
comp=Z,336nm,18.3s,MS4.7,baz=259,slow=40
BVAR Borovoye Array 80.59 22 P **P** 03 11 22.3 -0.9
BVAR 03 14 27.7
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BVAR pmax pmax
comp=Z,8.0nm,1.1s
SBUM Sibu 80.59 84 P **P** 03 11 29.6 +5.4
MK31 Makanchi Array 80.80 32 *e*P **P** 03 11 23.4 -1.1
MK31 Makanchi Array 80.80 32 *i* P **P** 03 11 23.0 -1.5
MK31 pmax pmax
comp=Z,14nm,1.1s,mb4.8
MKAR Makanchi Array 80.80 32 P **P** 03 11 23.6 -0.9
comp=Z,4.6nm,0.7s,mb4.5,baz=216,slow=5.0,SNR=32
MKAR Makanchi Array 80.80 32 P **P** 03 11 23.6 -0.9
MKAR pmax pmax
comp=Z,5.0nm,0.7s
WMQ Urumqi 81.64 37 *e*P **P** 03 11 29.0 0.0
WMQ XP sP 03 11 36.0 +2.4
WMQ PP PP 03 14 38.0 +1.9
WMQ S S 03 21 40.0 -1.4
WMQ SS SS 03 26 59.0 -0.3
WMQ AMB AMB
comp=Z,41nm,1.2s,mb5.2
WMQ AMB AMB
comp=Z,73nm,7.0s
WMQ LR LR
comp=N,198nm,20.0s,MS4.7
WMQ LR LR
comp=E,256nm,20.0s,MS4.7
WMQ LR LR
comp=Z,234nm,20.0s,MS4.5
KMI Kunming 81.65 59 P **P** 03 11 31.0 +1.4
KMI AP pP 03 11 34.5 +1.6
KMI PP PP 03 14 40.0 +3.5
KMI S S 03 21 41.3 -1.0
KMI SKS 03 21 46.3
KMI XS sS 03 21 48.0 +0.2
KMI AMB AMB
comp=Z,12nm,1.1s,mb4.7
KMI AMB AMB
comp=Z,251nm,4.7s
KMI LR LR
comp=N,310nm,19.3s,MS4.9
KMI LR LR
comp=E,398nm,17.2s,MS4.9
KMI LR LR
comp=Z,436nm,16.9s,MS4.9
KLMR Klimovskoe 81.88 3 *e*P **P** 03 11 28.6 -1.3
KLMR pmax pmax
comp=Z,30nm,1.9s,mb4.9
KURK Kurchatov 81.95 27 P **P** 03 11 30.5 0.0
comp=Z,164nm,1.1s,mb5.9,SNR=9.8
KURK Kurchatov 81.95 27 LR LR 03 47 43.7
comp=Z,395nm,21.1s,MS4.8,baz=220,slow=36
KURK Kurchatov 81.95 27 *e*P **P** 03 11 30.0 -0.5
comp=Z,38nm,1.1s,mb5.2
KURK Kurchatov 81.95 27⇓ *i*P **P** 03 11 30.2 -0.3
KURK pmax pmax
comp=Z,45nm,1.3s,mb5.2
SOKR Solikamsk 82.72 12 *c i*P **P** 03 11 36.3 +2.0
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
FORT Forrest 83.36 120 *e*P **P** 03 11 39.1 +0.6
comp=Z,25nm,0.9s,mb5.2
NOA NORSAR Array B 83.83 349 P **P** 03 11 39.1 -0.9
comp=Z,3.4nm,0.9s,mb4.5,baz=152,slow=4.9,SNR=4.6
NOA NORSAR Array B 83.83 349 P **P** 03 11 39.1 -0.9
NOA pmax pmax
comp=Z,3.0nm,0.9s
QIZ Qiongzhong 84.91 67 P **P** 03 11 46.0 -0.5
QIZ S S 03 22 17.0 +1.4
QIZ AMB AMB
comp=Z,210nm,5.5s
QIZ LR LR
comp=Z,508nm,27.1s,MS4.8
KAPI Kappang 84.94 93 P **P** 03 11 52.4 +5.6
comp=Z,5.0nm,1.1s,mb4.6
CD2 Chengdu 85.15 54 *e*P **P** 03 11 47.3 -0.2
CD2 AP pP 03 11 52.0 +1.2
CD2 XP sP 03 11 54.8 +2.8
CD2 PP PP 03 15 06.5 +1.4
CD2 SKS 03 22 08.5
CD2 S S 03 22 16.5 -1.0
CD2 XS sS 03 22 24.5 +1.4
CD2 SS SS 03 27 54.5 +2.6
CD2 AMB AMB
comp=Z,90nm,1.5s,mb5.7
CD2 AMB AMB
comp=Z,320nm,5.8s
CD2 LR LR
comp=N,450nm,21.6s,MS5.0
CD2 LR LR
comp=E,460nm,20.4s,MS5.0
CD2 LR LR
comp=Z,520nm,20.4s,MS4.9
GYA Guiyang 85.41 60⇓ *i*P **P** 03 11 48.5 -0.3
GYA PP PP 03 15 08.0 +0.7
GYA SKS 03 22 09.5
GYA S S 03 22 17.3 -2.9
GYA SS SS 03 27 55.5 -0.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,110nm,6.6s
GYA LR LR
comp=N,330nm,19.8s,MS4.8
GYA LR LR
comp=E,230nm,20.0s,MS4.8
GYA LR LR
comp=Z,430nm,19.5s,MS4.8
PLCA Paso Flores 86.34 228 P **P** 03 11 52.9 -0.4
comp=Z,2.6nm,0.8s,mb4.5,baz=89,slow=4.7,SNR=4.6
PLCA Paso Flores 86.34 228 *e*P **P** 03 11 52.1 -1.3
comp=Z,73nm,2.1s,mb5.5
PLCA Paso Flores 86.34 228 *e*P **P** 03 11 52.1 -1.2
PLCA pmax pmax
comp=Z,73nm,2.1s
GTA Gaotai 86.51 45 *e*P **P** 03 11 53.8 -0.2
GTA AP pP 03 11 58.5 +1.2
GTA XP sP 03 12 01.5 +3.0
GTA PP PP 03 15 16.8 +0.8
GTA SKS 03 22 16.5
GTA S S 03 22 28.0 -2.5
GTA XS sS 03 22 35.8 -0.2
GTA SS SS 03 28 09.0 -2.5
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.7
GTA AMB AMB
comp=Z,182nm,6.5s
GTA LR LR
comp=N,491nm,20.5s,MS5.1
GTA LR LR
comp=E,675nm,21.1s,MS5.1
GTA LR LR
comp=Z,823nm,22.9s,MS5.1
NVS Novosibirsk 86.87 26 *e*P **P** 03 11 53.1 -2.3
NVS *e* 03 15 18.7
NVS *e*S S 03 22 24.1 -9.2
NVS *e* 03 23 52.3
NVS pmax pmax
comp=Z,17nm,1.2s,mb5.2
NVS pmax pmax
comp=N,10.0nm,1.3s
NVS pmax pmax
comp=Z,22nm,1.8s,mb5.1
NVS pmax pmax
comp=N,15nm,1.4s
NVS smax
comp=N,143nm,3.3s
ZALV Zalesovo Beam 86.93 28 P **P** 03 11 54.6 -1.1
comp=N,0.9nm,0.5s,mb4.2,baz=240,slow=2.9,SNR=5.3
ZALV PP PP 03 15 20.5 +1.5
comp=N,5.5nm,0.9s,baz=243,slow=8.2,SNR=7.7
ZALV Zalesovo Beam 86.93 28 P **P** 03 11 54.6 -1.1
ZALV PP PP 03 15 20.5 +1.5
ZALV Zalesovo Beam 86.93 28 P **P** 03 11 54.6 -1.1
ZALV 03 15 20.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.3
ZALV pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
LZH Lanzhou 87.65 50 P **P** 03 12 01.0 +1.4
LZH AP pP 03 12 04.5 +1.5
LZH XP sP 03 12 07.0 +2.8
LZH SKS 03 22 27.0
LZH S S 03 22 38.0 -3.7
LZH XS sS 03 22 51.0 +3.8
LZH AMB AMB
comp=Z,28nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,133nm,4.2s
LZH LR LR
comp=N,724nm,17.3s
LZH LR LR
comp=Z,1μm,19.5s,MS5.4
XAN Xi'an 90.45 54 P **P** 03 12 12.0 -0.9
XAN AMB AMB
comp=Z,13nm,1.5s,mb5.0
XAN AMB AMB
comp=Z,145nm,5.0s
ASAR Alice Springs 90.84 116 P **P** 03 12 15.3 +0.3
comp=Z,6.1nm,0.8s,mb5.0,baz=242,slow=3.6,SNR=39
ASAR Alice Springs 90.84 116 P **P** 03 12 15.4 +0.4
ASAR pmax pmax
comp=Z,6.0nm,0.8s
LVC Limon Verde 92.57 245 *e*P **P** 03 12 23.1 0.0
comp=Z,64nm,1.4s,mb5.9
WRAB Tennant Creek 92.70 112 *e*P **P** 03 12 23.1 -0.6
comp=Z,5.9nm,1.0s,mb5.0
WRAB Tennant Creek 92.70 112 *e*P **P** 03 12 23.2 -0.5
WRAB pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
STKA Stephens Creek 93.50 126 P **P** 03 12 27.1 -0.1
comp=Z,4.2nm,0.9s,mb4.9,baz=244,slow=4.9,SNR=7.7
STKA Stephens Creek 93.50 126 *e*P **P** 03 12 26.8 -0.4
comp=Z,0.8nm,0.8s,mb4.2
SONM Songino Array 94.74 40 P **P** 03 12 31.6 -0.7
comp=Z,1.3nm,0.8s,mb4.4,baz=245,slow=5.1,SNR=7.8
SONM Songino Array 94.74 40 P **P** 03 12 31.6 -0.7
SONM pmax pmax
comp=Z,1.0nm,0.8s
ULN Ulaanbaatar 95.15 40⇑ *e*P **P** 03 12 33.1 -1.1
HHC Hu-ho-hao-te 95.17 48 *e*P **P** 03 12 35.3 +0.8
HHC XP sP 03 12 40.5 +1.5
HHC PP PP 03 16 27.5 +2.8
HHC SKS 03 23 09.8
HHC S S 03 23 47.5 -2.3
HHC XS sS 03 23 52.5 -2.9
HHC SS SS 03 30 19.0 +2.3
HHC AMB AMB
comp=Z,13nm,0.7s,mb5.5
HHC AMB AMB
comp=Z,147nm,6.5s
HHC LR LR
comp=N,358nm,17.8s,MS5.1
HHC LR LR
comp=E,536nm,21.4s,MS5.1
HHC LR LR
comp=Z,674nm,19.0s,MS5.1
NJ2 Nanjing 97.38 59 *e*P **P** 03 12 44.8 0.0
NJ2 AMB AMB
comp=Z,40nm,0.8s,mb5.9
BJI Beijing 98.13 50 P **P** 03 12 49.5 +1.6
BJI AMB AMB
comp=Z,13nm,0.9s,mb5.5
CN2 Changchun 105.86 49 PDIF Pdif 03 13 20.5 -1.7
CN2 PP PP 03 17 46.8 +1.2
MDJ Mudanjiang 108.94 49 PDIF Pdif 03 13 35.5 -0.4
MDJ PP PP 03 18 10.5 +2.3
RES Resolute Bay 119.95 346 *e*PKPdf PKPdf 03 18 00.4 -0.3
BILL Bilibino 124.89 20 *e*PKPdf PKPdf 03 18 10.3 -0.1
BILL Bilibino 124.89 20 *e*PKIKP PKPdf 03 18 10.3 -0.1
ULM Lac du Bonnet 130.80 319 PKP PKPdf 03 18 20.1 -2.1
comp=Z,3.1nm,0.6s,baz=168,slow=5.6,SNR=2.9
ULM Lac du Bonnet 130.80 319 *e*PKPdf PKPdf 03 18 21.4 -0.8
INK Inuvik 132.15 353 *e*PKPdf PKPdf 03 18 23.6 -0.6
ECSD EROS,Sioux Fal 132.93 311 *e*PKPdf PKPdf 03 18 26.1 -0.4
YKA Yellowknife Ar 133.23 340 PKP PKPdf 03 18 26.4 +0.1
comp=Z,2.5nm,0.6s,baz=36,slow=2.0,SNR=12
YKA Yellowknife Ar 133.23 340 PKP PKPdf 03 18 26.4 +0.1
YKA Yellowknife Ar 133.23 340 PKIKP PKPdf 03 18 26.4 0.0
YKA pmax pmax
comp=Z,3.0nm,0.6s
EGAK Eagle 136.25 357 *e*PKPdf PKPdf 03 18 31.9 0.0
JCT Junction City 137.01 292 *e*PKPdf PKPdf 03 18 35.6 +1.1
MCK McKinley 137.43 1 *e*PKPdf PKPdf 03 18 33.7 -0.5
RSSD Black Hills 138.00 313 *e*PKPdf PKPdf 03 18 35.5 -0.4
TXAR Lajitas Array 140.39 291 PKHKP 03 18 34.5
comp=Z,0.6nm,0.8s,baz=124,slow=4.6,SNR=6.1
TXAR PKP PKPdf 03 18 40.5 -0.1
comp=Z,1.5nm,0.7s,baz=122,slow=5.2,SNR=7.4
TXAR Lajitas Array 140.39 291 PKHKP 03 18 34.6
TXAR 03 18 40.6
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=Z,2.0nm,0.7s
B17A L&G Farms, Che 140.52 322 ⇓P PKPdf 03 18 40.3 0.0
baz=140
A16A West Butte Ran 140.63 323 ⇓P PKPdf 03 18 40.9 +0.4
baz=140
SDCO Great Sand Dun 140.83 304 *e*PKPdf PKPdf 03 18 40.3 -1.0
C17A Wharram Farm, 140.83 321 ⇓P PKPdf 03 18 40.5 -0.4
baz=141
L21A Rawlins 141.02 311 ⇑P PKPdf 03 18 41.1 -0.3
baz=141
F18A Big Timber 141.02 318 ⇑P PKPdf 03 18 41.1 -0.2
baz=141
D17A Six Diamond Ra 141.03 320 ⇓P PKPdf 03 18 41.5 +0.2
baz=141
RLMT Red Lodge 141.08 317 ⇑P PKPdf 03 18 41.7 +0.3
baz=141
A15A Johnson Ranch, 141.25 324 ⇓P PKPdf 03 18 42.3 +0.7
baz=141
N21A Black Mountain 141.52 309 ⇑P PKPdf 03 18 42.0 -0.4
baz=141
SMCO Snowmass 141.59 307 *e*PKPdf PKPdf 03 18 40.0 -2.6
F17A Fitzpatrick Pl 141.60 319 ⇓P PKPdf 03 18 42.7 +0.4
baz=142
N20A Spence Gulch, 142.03 310 ⇑P PKPdf 03 18 43.2 0.0
baz=142
ANMO Albuquerque 142.16 300 *e*PKPdf PKPdf 03 18 41.6 -2.1
BW06 Boulder Array 142.23 313 *e*PKPdf PKPdf 03 18 42.6 -1.0
BW06 Boulder Array 142.23 313 ⇓P PKPdf 03 18 43.4 -0.2
baz=142
PDAR Pinedale Array 142.23 313 PKP PKPdf 03 18 43.3 -0.3
comp=Z,1.5nm,0.8s,baz=104,slow=3.2,SNR=9.4
BOZ Bozeman (W) 142.32 319 *e*PKPpre 03 18 39.9
J18A Kendall Valley 142.37 314 ⇑P PKPdf 03 18 44.1 +0.3
baz=142
C14A Swan Lake 142.48 323 ⇓P PKPdf 03 18 43.8 -0.1
baz=142
MOOW Moose Ponds 142.62 315 *e*PKPdf PKPdf 03 18 43.1 -1.2
D14A Greenough 142.72 322 ⇑P PKPdf 03 18 44.7 +0.4
baz=143
TPAW Teton Pass 142.87 315 *e*PKPdf PKPdf 03 18 44.5 -0.2
P19A Cripple Cowboy 142.94 308 ⇓P PKPdf 03 18 45.5 +0.5
baz=143
N18A Larsen Ranch, 142.98 311 ⇓P PKPdf 03 18 45.2 +0.2
baz=143
G15A Dillon 143.09 318 ⇑P PKPdf 03 18 45.7 +0.7
baz=143
RRI2 Red Ridge 143.17 315 *e*PKPdf PKPdf 03 18 45.0 -0.2
A11A Hall Mountain, 143.20 326 ⇓P PKPdf 03 18 46.5 +1.4
baz=143
D13A Huson 143.25 322 ⇑P PKPdf 03 18 46.5 +1.3
baz=143
MVCO Mesa Verde 143.27 304 *e*PKPdf PKPdf 03 18 43.1 -2.5
MVCO Mesa Verde 143.27 304 ⇓P PKPdf 03 18 46.5 +0.9
baz=143
Q19A Hogan Spring (143.36 307 ⇓P PKPdf 03 18 45.8 +0.1
baz=143
R19A Curley Farm, L 143.56 306 ⇓P PKPdf 03 18 46.4 +0.3
baz=144
S19A Harvey Farm, M 143.62 305 ⇑P PKPdf 03 18 46.4 +0.2
baz=144
T19A Beclabito 143.78 304 ⇑P PKPdf 03 18 47.2 +0.7
baz=144,SNR=7.0
P18A Preston Nutter 143.86 309 ⇓P PKPdf 03 18 47.6 +1.0
baz=144,SNR=44
J15A Blackfoot 143.88 316 ⇓P PKPdf 03 18 47.3 +0.9
baz=144,SNR=7.2
H14A Leadore 143.90 318 ⇑P PKPdf 03 18 46.2 -0.2
baz=144
R18A Canyonlands Na 144.00 307 ⇓P PKPdf 03 18 47.1 +0.2
baz=144,SNR=6.6
HWUT Hardware Ranch 144.06 313 *e*PKPdf PKPdf 03 18 47.4 +0.5
G13A Cobalt 144.19 319 ⇓P PKPdf 03 18 48.1 +1.2
baz=144,SNR=6.6
M16A Huntsville 144.22 312 ⇑P PKPdf 03 18 47.3 +0.2
baz=144
SRU San Rafael 144.24 308 ⇑P PKPdf 03 18 47.7 +0.5
baz=144
S18A Hurst Farm, Bl 144.28 306 ⇑P PKPdf 03 18 48.3 +0.9
baz=144
I14A Mackay 144.29 317 ⇑P PKPdf 03 18 47.9 +0.8
baz=144
A09A Danville 144.32 328 ⇑P PKPdf 03 18 48.2 +1.2
baz=144
T18A Mexican Hat 144.35 305 ⇓P PKPdf 03 18 48.7 +1.2
baz=144,SNR=6.7
F12A Elk City 144.45 321 ⇓P PKPdf 03 18 48.4 +1.1
baz=144
H13A Challis 144.47 319 ⇑P PKPdf 03 18 48.5 +1.0
baz=144,SNR=14
W19A Sanders 144.48 301 ⇑P PKPdf 03 18 48.8 +1.0
baz=144,SNR=6.1
U18A Rough Rock, Ch 144.54 303 ⇑P PKPdf 03 18 48.6 +0.8
baz=144,SNR=18
X19A St. Johns 144.55 300 ⇑P PKPdf 03 18 49.2 +1.3
baz=144,SNR=8.7
R17A Hanksville Air 144.60 307 ⇑P PKPdf 03 18 49.3 +1.4
baz=144,SNR=8.1
Y19A Nutrioso 144.61 299 ⇑P PKPdf 03 18 50.2 +2.2
baz=144,SNR=12
J14A Carey 144.62 316 ⇓P PKPdf 03 18 49.1 +1.3
baz=144
A08A Turner Farm, O 144.67 328 ⇓P PKPdf 03 18 49.3 +1.6
baz=145
I13A Wildhorse Cree 144.71 318 ⇑P PKPdf 03 18 48.9 +1.0
baz=145,SNR=8.1
Z19A T-Link Ranch, 144.75 298 ⇓P PKPdf 03 18 49.2 +0.9
baz=145,SNR=6.8
K14A Jones Ranch, D 144.75 315 ⇑P PKPdf 03 18 49.1 +1.1
baz=145,SNR=12
V18A Ganado 144.77 302 ⇓P PKPdf 03 18 49.4 +1.1
baz=145,SNR=9.5
H12A Diamond D Ranc 144.85 319 ⇑P PKPdf 03 18 49.3 +1.2
baz=145,SNR=5.7
119A Ashpeak Ranch, 144.87 297 ⇓P PKPdf 03 18 49.8 +1.2
baz=145,SNR=8.3
S17A Black Ridge (B 144.91 306 ⇑P PKPdf 03 18 49.9 +1.4
baz=145,SNR=33
219A White Tail Can 144.96 296 ⇑P PKPdf 03 18 49.7 +1.0
baz=145
J13A Cove Ranch, Pi 145.00 317 ⇓P PKPdf 03 18 50.2 +1.7
baz=145,SNR=42
N15A Stansbury Isla 145.01 312 ⇑P PKPdf 03 18 49.8 +1.3
baz=145,SNR=5.7
L14A Malta 145.02 314 ⇓P PKPbc 03 18 50.0 +2.1
baz=145,SNR=9.0
X18A Snowflake 145.06 300 ⇓P PKPbc 03 18 50.7 +2.5
baz=145,SNR=19
319A Douglas 145.06 295 ⇓P PKPbc 03 18 51.0 +2.7
baz=145,SNR=9.6
HLID Hailey 145.07 317 *e*PKPdf PKPdf 03 18 49.4 +0.8
HLID Hailey 145.07 317 ⇑P PKPbc 03 18 50.4 +2.4
baz=145,SNR=21
E10A Myers Farm, Un 145.10 323 ⇑P PKPbc 03 18 51.0 +3.0
baz=145
B08A Colville Reser 145.10 328 ⇓P PKPbc 03 18 50.6 +2.7
baz=145
T17A Navajo Res., N 145.10 305 ⇑P PKPbc 03 18 48.9 +0.6
baz=145,SNR=32
U17A Shonto 145.11 304 ⇑P PKPbc 03 18 49.7 +1.4
baz=145,SNR=6.6
A07A Ashnola River, 145.15 329 ⇓P PKPbc 03 18 49.4 +1.4
baz=145,SNR=8.5
R16A Teasdale 145.22 307 ⇓P PKPbc 03 18 50.0 +1.4
baz=145,SNR=18
Y18A Canyon Day Jun 145.28 299 ⇑P PKPbc 03 18 50.4 +1.4
baz=145,SNR=36
K13A Stover Farm, H 145.30 316 ⇓P PKPbc 03 18 50.1 +1.4
baz=145,SNR=29
M14A Sheep Mountain 145.32 313 ⇑P PKPbc 03 18 50.2 +1.4
baz=145,SNR=16
P15A Leamington 145.35 310 ⇑P PKPbc 03 18 50.4 +1.4
baz=145,SNR=6.0
I12A Atlanta 145.41 318 ⇑P PKPbc 03 18 50.5 +1.4
baz=145,SNR=16
B07A Winthrop 145.42 328 ⇓P PKPbc 03 18 50.4 +1.5
baz=145
118A Homack Ranch, 145.44 297 ⇑P PKPbc 03 18 50.6 +1.1
baz=145,SNR=46
F10A Beach Ranch, E 145.46 323 ⇓P PKPdf 03 18 50.1 +1.0
baz=145
L13A Double Diamond 145.46 315 ⇑P PKPdf 03 18 50.5 +1.3
baz=145,SNR=25
H11A Donnelly 145.47 320 ⇑P PKPdf 03 18 50.7 +1.5
baz=145
S16A Weppner Ranch, 145.49 306 ⇓P PKPdf 03 18 50.5 +1.1
baz=145,SNR=25
N14A Grayback Hills 145.49 312 ⇑P PKPdf 03 18 51.0 +1.7
baz=145,SNR=9.2
DUG Dugway 145.49 311 ⇓P PKPdf 03 18 51.1 +1.8
baz=145
DUG Dugway 145.49 311 *e*PKIKP PKPdf 03 18 49.9 +0.5
W17A Winslow 145.54 302 ⇓P PKPdf 03 18 51.7 +2.1
baz=145,SNR=5.2
U16A Tuba City 145.60 304 ⇓P PKPdf 03 18 51.5 +1.8
baz=146,SNR=9.2
218A Dragoon 145.62 296 ⇑P PKPdf 03 18 51.1 +1.2
baz=146,SNR=31
Q15A Fillmore 145.63 309 ⇓P PKPdf 03 18 51.1 +1.4
baz=146,SNR=18
T16A Glen Canyon Da 145.65 305 ⇓P PKPdf 03 18 51.6 +1.9
baz=146
E09A Wood Farm, Sta 145.65 324 ⇑P PKPdf 03 18 51.1 +1.7
baz=146,SNR=15
318A Bisbee 145.65 295 ⇓P PKPdf 03 18 51.5 +1.6
baz=146,SNR=83
J12A Stokes Ranch, 145.66 317 ⇓P PKPbc 03 18 51.8 +1.9
baz=146,SNR=27
G10A Bishop Farm, J 145.80 322 ⇑P PKPdf 03 18 51.6 +1.9
baz=146,SNR=26
R15A Junction 145.83 307 ⇓P PKPbc 03 18 52.3 +1.7
baz=146,SNR=18
K12A Draper Farm, C 145.84 316 ⇓P PKPdf 03 18 51.8 +1.9
baz=146,SNR=41
WTV Waterville 145.85 327 P PKPdf 03 18 50.9 +1.2
I11A Placerville 145.86 319 ⇑P PKPbc 03 18 52.1 +1.6
baz=146,SNR=44
EPH Ephrata 145.89 326 P PKPdf 03 18 51.3 +1.5
C07A Waterville 145.91 327 ⇓P PKPbc 03 18 52.1 +1.7
baz=146,SNR=15
P14A Drum Mountains 145.91 310 ⇓P PKPbc 03 18 52.3 +1.5
baz=146,SNR=13
M13A Montello 145.94 314 ⇑P PKPbc 03 18 52.3 +1.6
baz=146
WUAZ Wupatki 145.96 303 *e*PKPbc PKPbc 03 18 52.2 +1.1
WUAZ Wupatki 145.96 303 ⇓P PKPdf 03 18 52.4 +2.1
baz=146
Y17A Roosevelt 145.96 299 ⇑P PKPbc 03 18 52.8 +1.7
baz=146,SNR=36
H10A Noah's Angus R 145.97 320 ⇓P PKPbc 03 18 52.4 +1.6
baz=146,SNR=53
A05A Maple Falls 145.98 331 ⇑P PKPbc 03 18 53.1 +2.5
baz=146
F09A S2 Ranch, Elgi 146.00 323 ⇑P PKPbc 03 18 53.2 +2.4
baz=146
MFID Camas Ranch 146.04 318 ⇑P PKPbc 03 18 53.0 +2.0

	baz=146,SNR=46						
S15A	**Panguitch**	**146.07 307**	⇑P		PKPbc	03 18 52.8	+1.5
	baz=146,SNR=6.5						
117A	**Oracle**	**146.10 297**	⇓P		PKPbc	03 18 53.4	+1.8
	baz=146,SNR=72						
L12A	**House Creek Ra**	**146.14 315**	⇓P		PKPbc	03 18 53.4	+2.1
	baz=146,SNR=33						
BMO	**Blue Mountains**	**146.16 321**	*e*PKPbc		PKPbc	03 18 51.3	0.0
TUC	**Tucson**	**146.18 297**	*e*PKPbc		PKPbc	03 18 52.9	+1.1
G09A	**Cove**	**146.19 322**	⇓P		PKPbc	03 18 53.0	+1.6
	baz=146,SNR=6.8						
W16A	**Flagstaff**	**146.19 302**	⇑P		PKPbc	03 18 54.1	+2.4
	baz=146,SNR=6.7						
D07A	**Quincy**	**146.19 327**	⇑P		PKPbc	03 18 53.6	+2.3
	baz=146,SNR=14						
I10A	**Payette**	**146.28 320**	⇑P		PKPbc	03 18 53.4	+1.7
	baz=146,SNR=8.6						
X16A	**Lo Mia Camp, P**	**146.28 301**	⇑P		PKPbc	03 18 53.8	+1.8
	baz=146,SNR=30						
Q14A	**Sevier Lake (B**	**146.29 309**	⇓P		PKPbc	03 18 53.7	+1.8
	baz=146,SNR=58						
217A	**Green Valley**	**146.30 296**	⇓P		PKPbc	03 18 54.0	+1.8
	baz=146,SNR=34						
T15A	**Red Dirt Ranch**	**146.30 306**	⇓P		PKPbc	03 18 53.9	+1.9
	baz=146,SNR=5.3						
O13A	**Hicks Ranch, I**	**146.34 312**	⇓P		PKPbc	03 18 53.8	+1.7
	baz=146,SNR=6.5						
R14A	**James Farms, M**	**146.35 308**	⇓P		PKPbc	03 18 54.0	+1.9
	baz=146						
U15A	**North Rim**	**146.41 304**	⇓P		PKPbc	03 18 54.0	+1.6
	baz=146,SNR=20						
M12A	**Wells**	**146.42 314**	⇑P		PKPbc	03 18 54.1	+1.9
	baz=146,SNR=37						
F08A	**Pendleton**	**146.44 324**	⇓P		PKPbc	03 18 53.4	+1.3
	baz=146						
Y16A	**Circle Bar Ran**	**146.44 300**	⇑P		PKPbc	03 18 54.3	+1.8
	baz=146,SNR=26						
H09A	**Durkee**	**146.47 321**	⇓P		PKPbc	03 18 54.0	+1.7
	baz=146,SNR=11						
HAWA	**Hanford**	**146.48 325**	*e*PKPbc		PKPbc	03 18 53.1	+0.9
K11A	**Parker Ranch,**	**146.49 317**	⇓P		PKPbc	03 18 53.5	+1.1
	baz=146						
V15A	**Kaibab Nationa**	**146.50 303**	⇑P		PKPbc	03 18 54.3	+1.6
	baz=146,SNR=26						
B05A	**Bryant**	**146.51 330**	⇓P		PKPbc	03 18 53.8	+1.5
	baz=146						
Z16A	**Peralta Trail,**	**146.51 299**	⇑P		PKPbc	03 18 54.1	+1.3
	baz=146						
TBM	**Table Mountain**	**146.53 327**	P		PKPbc	03 18 53.1	+0.8
E07A	**Sunnyside**	**146.54 326**	⇑P		PKPbc	03 18 54.6	+2.2
	baz=146,SNR=5.2						
J10A	**Berg Farm, Mel**	**146.62 319**	⇓P		PKPbc	03 18 54.2	+1.5
	baz=146						
L11A	**Cat Creek Ranc**	**146.62 316**	⇑P		PKPbc	03 18 54.3	+1.6
	baz=146,SNR=16						
D06A	**Cle Elum**	**146.63 327**	⇑P		PKPbc	03 18 53.9	+1.2
	baz=146						
P13A	**Bates Ranch, G**	**146.63 310**	⇓P		PKPbc	03 18 54.6	+1.7
	baz=146,SNR=62						
S14A	**Cedar City**	**146.65 307**	⇓P		PKPbc	03 18 54.4	+1.4
	baz=146						
C05A	**Tolt Reservoir**	**146.71 329**	⇑P		PKPbc	03 18 54.6	+1.8
	baz=147						
W15A	**Williams**	**146.75 302**	⇑P		PKPbc	03 18 55.4	+2.1
	baz=147,SNR=8.2						
N12A	**Clover Valley,**	**146.75 313**	⇓P		PKPbc	03 18 55.2	+2.0
	baz=147,SNR=18						
216A	**Three Points,**	**146.80 296**	⇓P		PKPbc	03 18 55.2	+1.5
	baz=147,SNR=5.8						
O12A	**Currie**	**146.81 312**	⇓P		PKPbc	03 18 54.9	+1.5
	baz=147						
T14A	**Hurricane**	**146.82 306**	⇑P		PKPbc	03 18 54.8	+1.3
	baz=147						
Q13A	**Wheeler Ranch,**	**146.83 310**	⇓P		PKPbc	03 18 55.0	+1.5
	baz=147,SNR=34						
G08A	**Pilot Rock**	**146.85 323**	⇑P		PKPbc	03 18 54.6	+1.3
	baz=147,SNR=9.2						
116A	**Eloy**	**146.90 297**	⇑P		PKPbc	03 18 55.0	+1.1
	baz=147,SNR=16						
X15A	**Humboldt**	**146.90 301**	⇑P		PKPbc	03 18 55.3	+1.5
	baz=147,SNR=33						
I09A	**Lost Marbles R**	**146.91 320**	⇑P		PKPbc	03 18 55.6	+2.0
	baz=147						
ELK	**Elko**	**146.94 313**	*e*PKPbc		PKPbc	03 18 54.7	+1.0
M11A	**Holland Ranch,**	**146.99 315**	⇓P		PKPbc	03 18 55.6	+1.7
	baz=147,SNR=19						
F07A	**Phinny Hill Vi**	**147.00 325**	⇑P		PKPbc	03 18 55.1	+1.3
	baz=147						
K10A	**MacKenzie Ranc**	**147.02 318**	⇑P		PKPbc	03 18 55.5	+1.6
	baz=147,SNR=5.4						
R13A	**O'Grain Ranch,**	**147.09 308**	⇓P		PKPbc	03 18 55.8	+1.5
	baz=147,SNR=7.5						
U14A	**Mt Trumbull**	**147.10 305**	⇑P		PKPbc	03 18 55.8	+1.4
	baz=147,SNR=19						
Y15A	**Casa Rosa Ranc**	**147.11 300**	⇓P		PKPbc	03 18 55.9	+1.5
	baz=147,SNR=43						
L10A	**Juniper Basin**	**147.12 316**	⇑P		PKPbc	03 18 55.3	+1.1
	baz=147,SNR=11						
E06A	**Yakima**	**147.14 326**	⇑P		PKPbc	03 18 55.4	+1.3
	baz=147						
H08A	**Prairie City**	**147.14 322**	⇑P		PKPbc	03 18 55.5	+1.3
	baz=147						
D05A	**Enumclaw**	**147.21 328**	⇑P		PKPbc	03 18 55.7	+1.4
	baz=147						
S13A	**Holt Ranch, En**	**147.22 307**	⇓P		PKPbc	03 18 55.6	+0.9
	baz=147,SNR=22						
G07A	**Ruggs Ranch, H**	**147.26 324**	⇓P		PKPbc	03 18 55.1	+0.7
	baz=147						
J09A	**Fry Pan Ranch,**	**147.26 319**	⇓P		PKPbc	03 18 55.8	+1.2
	baz=147,SNR=21						
V14A	**Boquillas Ranc**	**147.28 303**	⇑P		PKPbc	03 18 55.8	+1.0
	baz=147,SNR=29						
115A	**Sonoran Desert**	**147.30 298**	⇓P		PKPbc	03 18 56.5	+1.5
	baz=147,SNR=8.9						
Q12A	**Willow Creek R**	**147.38 310**	⇓P		PKPbc	03 18 56.1	+1.1
	baz=147,SNR=7.9						
W14A	**Seligman**	**147.38 303**	⇓P		PKPbc	03 18 56.2	+1.1
	baz=147,SNR=44						
LON	**Longmire**	**147.42 327**	*e*PKPbc		PKPbc	03 18 53.8	-1.1
X14A	**Yava**	**147.43 301**	⇓P		PKPbc	03 18 56.7	+1.4
	baz=147,SNR=10						
I08A	**Drewsey**	**147.44 321**	⇓P		PKPbc	03 18 55.8	+0.8
	baz=147						
M10A	**I.L. Ranch, Tu**	**147.44 315**	⇑P		PKPbc	03 18 56.1	+1.0
	baz=147						
T13A	**Saint George**	**147.45 306**	⇓P		PKPbc	03 18 56.4	+1.0
	baz=147,SNR=7.9						
O11A	**Cowboy Ranch,**	**147.50 313**	⇑P		PKPbc	03 18 56.3	+1.0
	baz=147						
R12A	**Pony Springs,**	**147.50 309**	⇑P		PKPbc	03 18 56.4	+1.0
	baz=147,SNR=9.6						
E05A	**Randle**	**147.53 327**	⇓P		PKPbc	03 18 56.0	+0.8
	baz=147						
F06A	**Goldendale**	**147.54 325**	⇓P		PKPbc	03 18 56.0	+0.7
	baz=147						
K09A	**Rome**	**147.60 318**	⇓P		PKPbc	03 18 56.1	+0.6
	baz=148,SNR=35						
H07A	**Lands Inn, Kim**	**147.61 322**	⇑P		PKPbc	03 18 56.5	+1.0
	baz=148,SNR=15						
Y14A	**Wickenburg**	**147.66 300**	⇓P		PKPbc	03 18 56.6	+0.6
	baz=148,SNR=26						
J08A	**Circle Bar Ran**	**147.69 320**	⇑P		PKPbc	03 18 56.4	+0.6
	baz=148						
U13A	**Pakoon Wash**	**147.70 305**	⇑P		PKPbc	03 18 56.6	+0.6
	baz=148,SNR=20						
Z14A	**Wintersburg**	**147.75 299**	⇑P		PKPbc	03 18 57.1	+0.9
	baz=148						
P11A	**Circle Ranch,**	**147.82 312**	⇑P		PKPbc	03 18 56.9	+0.7
	baz=148						
I07A	**Izee**	**147.88 322**	⇓P		PKPbc	03 18 56.8	+0.6
	baz=148						
V13A	**Grand Canyon W**	**147.89 304**	⇓P		PKPbc	03 18 57.2	+0.7
	baz=148,SNR=21						
L09A	**Wilkinson Ranc**	**147.92 317**	⇑P		PKPbc	03 18 57.3	+0.9
	baz=148						
214A	**Organ Pipe Nat**	**147.94 297**	⇓P		PKPbc	03 18 57.3	+0.5
	baz=148,SNR=7.6						
S12A	**Delamar Landin**	**147.95 308**	⇑P		PKPbc	03 18 56.9	+0.3
	baz=148,SNR=21						
H06A	**Lindquist Farm**	**147.96 323**	⇓P		PKPbc	03 18 57.2	+0.7
	baz=148						
W13A	**Hualapai Mount**	**148.04 303**	⇓P		PKPbc	03 18 57.2	+0.2
	baz=148,SNR=24						
Q11A	**Duckwater**	**148.05 310**	⇑P		PKPbc	03 18 57.3	+0.5
	baz=148,SNR=19						
K08A	**Mann Creek Ran**	**148.05 319**	⇓P		PKPbc	03 18 56.7	0.0
	baz=148,SNR=16						
M09A	**Marrel Ranch,**	**148.09 316**	⇑P		PKPbc	03 18 57.0	+0.1
	baz=148						
X13A	**Yucca**	**148.14 302**	⇑P		PKPbc	03 18 57.9	+0.6
	baz=148,SNR=16						
J07A	**Hines**	**148.19 320**	⇓P		PKPbc	03 18 57.5	+0.5
	baz=148						
L08A	**Fields**	**148.26 318**	⇑P		PKPbc	03 18 57.5	+0.2
	baz=148						
P10A	**Eureka**	**148.28 312**	⇑P		PKPbc	03 18 57.7	+0.3
	baz=148						
HOOD	**Mount Hood Mea**	**148.30 325**	*e*PKPbc		PKPbc	03 18 58.3	+1.0
WVOR	**Wild Horse Val**	**148.31 318**	*e*PKPbc		PKPbc	03 18 58.3	+0.9
Y13A	**Salome**	**148.35 300**	⇑P		PKPbc	03 18 58.4	+0.6
	baz=148						
T11A	**Corn Creek, Al**	**148.36 307**	⇓P		PKPbc	03 18 58.3	+0.6
	baz=148,SNR=32						
I06A	**Prineville**	**148.37 322**	⇓P		PKPbc	03 18 58.3	+0.8
	baz=148						
N09A	**Rock Creek Ran**	**148.42 315**	⇓P		PKPbc	03 18 58.4	+0.7
	baz=148						
O09A	**Fish Creek Ran**	**148.53 314**	⇑P		PKPbc	03 18 59.5	+1.4
	baz=148						
K07A	**Rock Creek Ran**	**148.54 319**	⇓P		PKPbc	03 18 59.1	+1.1
	baz=148,SNR=11						
113A	**Mohawk Valley,**	**148.56 299**	⇑P		PKPbc	03 18 59.1	+0.8
	baz=148,SNR=5.2						
Q10A	**Clear Creek Ra**	**148.58 311**	⇓P		PKPbc	03 18 58.9	+0.7
	baz=148						
S11A	**Rachel**	**148.59 308**	⇑P		PKPbc	03 18 59.6	+1.3
	baz=148,SNR=5.8						
V12A	**Nelson**	**148.60 304**	⇑P		PKPbc	03 18 59.5	+1.1
	baz=148,SNR=15						
M08A	**Happy Creek Ra**	**148.67 317**	⇑P		PKPbc	03 18 59.4	+1.0
	baz=149						
J06A	**Christmas Vall**	**148.76 321**	⇑P		PKPbc	03 18 59.8	+1.3
	baz=149,SNR=18						
P09A	**Austin**	**148.78 313**	⇑P		PKPbc	03 18 59.6	+0.9
	baz=149						
N08A	**GE Springer Mi**	**148.85 315**	⇑P		PKPbc	03 19 00.4	+1.5
	baz=149,SNR=9.8						
Y12C	**Blythe**	**148.93 301**	⇑P		PKPbc	03 19 00.6	+1.3
	baz=149,SNR=9.4						
S10A	**Tonopah Range,**	**149.10 309**	⇓P		PKPbc	03 19 00.8	+1.2
	baz=149,SNR=15						
M07A	**Soldier Meadow**	**149.21 317**	⇑P		PKPbc	03 19 00.5	+0.8
	baz=149,SNR=8.5						
TPNV	**Topopah Spring**	**149.23 307**	*e*PKPbc		PKPbc	03 19 00.4	+0.4
TPNV			*e*PKPab		PKPab	03 19 05.4	+1.0
TPNV	**Topopah Spring**	**149.23 307**	⇑P		PKPbc	03 19 00.7	+0.8
	baz=149,SNR=6.3						
R09A	**Tonopah**	**149.31 310**	⇓P		PKPbc	03 19 00.7	+0.6
	baz=149						
GLA	**Glamis**	**149.35 299**	*e*PKPbc		PKPbc	03 19 00.6	+0.2
GLA			*e*PKPab		PKPab	03 19 05.1	0.0
P08A	**Dixie Valley**	**149.35 313**	⇓P		PKPbc	03 19 01.1	+1.0
	baz=149						
N07B	**Gerlach**	**149.40 316**	⇑P		PKPbc	03 19 01.0	+0.7
	baz=149						
TPH	**Tonopah**	**149.49 310**	*e*PKPbc		PKPbc	03 19 00.4	-0.1
TPH			*e*PKPab		PKPab	03 19 04.8	-0.6
U10A	**Ash Meadows, A**	**149.49 307**	⇓P		PKPbc	03 19 02.0	+1.4
	baz=149,SNR=16						
TUQ	**Turquoise Moun**	**149.52 304**	⇓P		PKPbc	03 19 02.2	+1.4
	baz=149,SNR=5.7						
GMRC	**Granite Mounta**	**149.53 303**	⇓P		PKPbc	03 19 01.6	+0.8
	baz=149,SNR=15						
MOD	**Modoc**	**149.63 319**	*e*PKPbc		PKPbc	03 19 00.2	-0.6
MOD			*e*PKPab		PKPab	03 19 04.6	-1.3
S09A	**Goldfield**	**149.63 309**	⇑P		PKPbc	03 19 01.7	+0.8
	baz=150,SNR=24						
SHOC	**Shoshone**	**149.64 306**	⇓P		PKPbc	03 19 01.4	+0.4
	baz=150						
Q08A	**Gabbs**	**149.64 312**	⇓P		PKPbc	03 19 01.7	+0.8
	baz=150,SNR=13						
O07A	**Toulon**	**149.66 315**	⇑P		PKPbc	03 19 01.1	+0.2
	baz=150						
BC3	**Big Chuckw Mtn**	**149.70 301**	⇑P		PKPbc	03 19 02.3	+1.1
	baz=150,SNR=5.2						
FURC	**Furnace Creek,**	**149.87 307**	⇑P		PKPbc	03 19 02.5	+0.9
	baz=150,SNR=28						
BELC	**Belle Mtn.**	**150.03 302**	⇓P		PKPbc	03 19 03.2	+1.2
	baz=150,SNR=5.5						
GRAC	**Grapevine Rang**	**150.04 308**	⇓P		PKPbc	03 19 03.1	+1.2
	baz=150,SNR=17						
HEC	**Hector,Ludlow**	**150.04 304**	⇓P		PKPbc	03 19 03.4	+1.4
	baz=150,SNR=5.4						
NVAR	**Mina Array Bea**	**150.10 311**	PKP		PKPdf	03 18 59.7	+2.7
	comp=Z,5.6nm,0.8s,baz=114,slow=1.6,SNR=13						
NVAR			PKPbc		PKPbc	03 19 04.0	+2.0
	comp=Z,8.9nm,0.7s,baz=115,slow=2.3,SNR=23						
GSC	**Goldstone**	**150.25 305**	⇑P		PKPbc	03 19 03.2	+0.7
	baz=150,SNR=5.2						
GSC	**Goldstone**	**150.25 305**	*e*PKIKP		PKPbc	03 19 02.7	+0.2
O06A	**Flanigan**	**150.28 316**	⇓P		PKPbc	03 19 02.7	+0.3
	baz=150						
DVTC	**Desert U Tower**	**150.49 299**	⇓P		PKPbc	03 19 03.4	+0.3
	baz=150						
MPMC	**Manual Prospec**	**150.49 307**	⇓P		PKPbc	03 19 03.7	+0.6
	baz=150,SNR=22						
PFO	**Pinyon Flat Ob**	**150.51 301**	⇓P		PKPbc	03 19 04.1	+0.9
	baz=150,SNR=6.5						
PFO	**Pinyon Flat Ob**	**150.51 301**	*e*PKIKP		PKPbc	03 19 03.8	+0.6
PFO			*e*			03 19 08.6	
P06A	**Stead Airport,**	**150.58 315**	⇑P		PKPbc	03 19 02.2	-0.9
	baz=150						
J02A	**Umpqua**	**150.63 324**	⇑P		PKPbc	03 19 02.1	-1.0
	baz=150						
WCN	**Washoe City**	**150.68 314**	⇓P		PKPbc	03 19 03.6	+0.2
	baz=151						
HUMO	**Hull Mountain**	**150.78 322**	*e*PKPdf		PKPdf	03 18 58.8	+0.8
HUMO			*e*PKPbc		PKPbc	03 19 03.5	0.0
BEKR	**Beckwourth**	**150.78 316**	⇑P		PKPbc	03 19 04.5	+0.9
	baz=151						
R06C	**Coleville**	**150.85 312**	⇓P		PKPbc	03 19 04.7	+0.9
	baz=151						
LRMC	**Laurel Mountai**	**150.86 306**	⇑P		PKPbc	03 19 04.5	+0.5
	baz=151						
LBCM	**Butte Creek Ri**	**150.88 318**	P		PKPbc	03 19 00.3	-3.5
MURC	**Murrieta**	**151.11 302**	⇑P		PKPbc	03 19 04.6	0.0
	baz=151						
BFSC	**Mount Baldy St**	**151.27 303**	⇑P		PKPbc	03 19 04.8	-0.2
	baz=151						
EDW2	**Edwards Air Fo**	**151.30 305**	⇑P		PKPbc	03 19 04.7	-0.3
	baz=151						
L02A	**Cave Junction**	**151.43 322**	⇓P		PKPbc	03 19 05.1	+0.1
	baz=151						
MWC	**Mount Wilson**	**151.58 303**	*e*PKPbc		PKPbc	03 19 05.1	-0.6
LAVA	**Lava Cap Winer**	**151.61 314**	⇓P		PKPbc	03 19 05.1	-0.4
	baz=152						
CMB	**Columbia Colle**	**151.73 312**	*e*PKPbc		PKPbc	03 19 03.2	-2.7
T06C	**Millerton Lake**	**151.73 310**	⇑P		PKPbc	03 19 06.1	+0.2
	baz=152						
VES	**Vestal, Richgr**	**151.77 307**	⇑P		PKPbc	03 19 05.8	-0.3
	baz=152						
WDC	**Whiskeytown Da**	**151.77 319**	*e*PKPbc		PKPbc	03 19 04.3	-1.6
PKM	**Peak Mountain**	**152.69 306**	⇓P		PKPbc	03 19 08.4	+0.2
	baz=153						

GUC 29 03:23:20.0±0.5, 2236S×6998W, h44km±2km, MD3.6, ML3.8, 1C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.26**	**51**	⇓*i*P		Pn		03 23 28.7	+0.5
MACH				*i* S		Sn		03 23 35.2	+1.3
TOCH	**Tocopilla**	**0.34**	**321**	*i* P		Pn		03 23 28.7	-0.2
TOCH				*i* S		Sn		03 23 35.3	0.0
TOCH				AML		AML		03 23 35.7	
	comp=E,27μm,0.1s								
MECH	**Mejillones**	**0.86**	**210**	⇓*i*P		Pn		03 23 35.9	+0.2
MECH				*i* S		Sn		03 23 48.2	+1.0
MECH				AML		AML		03 23 56.9	
	comp=E,4μm,0.3s								
LVC	**Limon Verde**	**1.02**	**105**	⇓*i*P		Pn		03 23 39.1	+1.3
LVC				*i* S		Sn		03 23 53.2	+2.3
LVC				AML		AML		03 23 53.4	
	comp=N,16μm,0.2s								
CEN1	**Los Morros**	**1.05**	**191**	⇑*i*P		Pn		03 23 41.3	+3.0
CEN1				*i* S		Sn		03 23 58.0	+6.3
CEN1				AML		AML		03 24 00.0	
	comp=N,1μm,0.4s								
PB01	**Plate Boundary**	**1.39**	**19**	AML		AML		03 24 03.6	
	comp=E,4μm,0.3s								
SPCH	**San Pedro de A**	**1.73**	**109**	AML		AML		03 24 26.9	
	comp=E,2μm,0.5s								
CPN1	**Cerro Paranal**	**2.29**	**190**	AML		AML		03 24 34.9	
	comp=N,534nm,0.3s								

IDC ***29*** *03:26:21.8±0.5, 3638S×9758W, h0km, mb4.7/17, mb1 4.9/17, mb1mx4.8/20, mbtmp4.7/17, ML4.8/1, MS5.5/21, Ms1 5.5/21, ms1mx5.3/26, Error ellipse: s-maj=15.1km s-min=14.3km az=142.0*

BJI ***29*** *03:26:22.6, 3680S×9740W, h10km, mB5.7, Ms6.1, Msz6.1*

ISCJB ***29*** *03:26:22.4±0.2, 3672S±004×9749W±005, h10km, mb5.4/113, MS5.6/210, Error ellipse: s-maj=6.4km s-min=4.8km az=137.5*

MOS ***29*** *03:26:22.3±1.3, 3655S×9769W, h10km, mb5.8/40, MS5.4/14, Error ellipse: s-maj=13.2km s-min=7.7km az=92.2*

GCMT ***29*** *03:26:22.7±0.1, 3643S×9835W, h24km, MW6.3/115, Moment Tensor Solution. s115,c264; s115,c468; Duration: 3s6 Moment tensor: Scale 1018Nm; Mrr=0.19±.02; Mθθ=0.34±.02; Mϕϕ=0.52±.02; Mrθ=0.10±.04; Mθϕ=-4.13±.02; Mϕr=0.16±.04; Best double couple: Mo=4.15600×1018 NP1:ϕs=93.00000°, δ=88.00000°, λ=179.00000°. NP2:ϕs=183.00000°, δ=89.00000°, λ=2.00000°. Principal axes: T 4.2540, Plg2.0000°, Azm48.0000°; N -0.1960, Plg88.0000°, Azm217.0000°; P -4.0580, Plg0.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***29*** *03:26:22.7±0.3, 3676S×9740W, h10km, mb5.6/97, MS5.6/191 Error ellipse: s-maj=8.9km s-min=7.9km az=114.0*

ISC 29 03:26:24.1±0.2, 3672S±004×9743W±005, h10km, n870, σ0s84/586, mb5.5/112, MS5.6/210, 197C-202D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.90**	**310**			Pn	**Pn**	**03 29 38.1**	**-3.1**
	4.9nm,0.3s,baz=138,slow=5.0,SNR=28								
RPN						Sn	**Sn**	**03 32 16.1**	**+0.5**
	2.9nm,0.3s,baz=224,slow=15,SNR=1.8								
RPN	**Rapa Nui**	**13.90**	**310**	*e*Pn			**Pn**	**03 29 37.8**	**-3.4**
	5μm,1.7s								
COYC	**Coyhaique**	**20.97**	**123**	⇓*e*P			**P**	**03 31 10.2**	**+3.0**
PLCA	**Paso Flores**	**21.32**	**109**	P			**P**	**03 31 13.8**	**+2.7**
	24nm,0.8s,mb4.6,baz=280,slow=10,SNR=15								
PLCA				S			**S**	**03 35 17.0**	**+9.3**
	10.0nm,1.2s,baz=120,slow=20,SNR=1.5								
PLCA				LR		LR		03 37 56.9	
	comp=Z,15μm,19.5s,MS5.4,baz=275,slow=32								
PLCA	**Paso Flores**	**21.32**	**109**	*e*P			**P**	**03 31 10.8**	**-0.3**
	207nm,1.3s,mb5.3								
PLCA				LR		LR			
	comp=Z,15μm,22.0s,MS5.3								
PLCA	**Paso Flores**	**21.32**	**109**	P			**P**	**03 31 14.2**	**+3.2**
PLCA				pmax		pmax			
	comp=Z,210nm,1.2s								
CLCH	**Cerro Calan**	**22.24**	**89**	*e*P			**P**	**03 31 22.4**	**+1.5**
FCH	**Farellones**	**22.46**	**89**	*e*P			**P**	**03 31 26.6**	**+3.3**
TLL	**Tololo Astrono**	**23.12**	**81**	*e*P			**P**	**03 31 30.8**	**+0.4**
LCO	**Las Campanas**	**23.68**	**79**	*e*P			**P**	**03 31 32.6**	**-3.5**
	comp=Z,232nm,1.3s,mb5.5								
LCO				LR		LR			
	comp=Z,10μm,21.0s,MS5.2								
CFAA	**Coronel Fontan**	**24.64**	**87**	P			**P**	**03 31 44.6**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=253,slow=9.8,SNR=11								
CFAA				S			**S**	**03 36 14.9**	**+8.7**
	comp=Z,0.3nm,0.7s,baz=257,slow=15,SNR=1.8								
CFAA				LR		LR		03 39 22.1	
	comp=Z,1μm,20.2s,MS4.5,baz=254,slow=32								
USHA	**Ushuaia**	**26.85**	**142**	P			**P**	**03 32 07.4**	**+2.7**
	comp=Z,16nm,1.0s,mb4.5,baz=264,slow=9.6,SNR=5.1								
USHA				LR		LR		03 40 52.2	
	comp=Z,30μm,19.9s,MS5.8,baz=280,slow=32								
LVC	**Limon Verde**	**28.37**	**68**	P			**P**	**03 32 18.6**	**+0.1**
	comp=Z,46nm,1.0s,mb5.0,baz=232,slow=8.6,SNR=20								
LVC	**Limon Verde**	**28.37**	**68**	*e*P			**P**	**03 32 18.3**	**-0.2**
	comp=Z,52nm,1.0s,mb5.1								
LVC				LR		LR			
	comp=Z,6μm,19.0s,MS5.2								
ARE	**Arequipa**	**30.58**	**56**	*e*P			**P**	**03 32 37.0**	**-1.1**
NNA	**Nana**	**30.82**	**42**	P			**P**	**03 32 38.9**	**-1.4**
	comp=Z,5.7nm,0.7s,mb4.5,baz=209,slow=13,SNR=2.7								
NNA	**Nana**	**30.82**	**42**	*e*P			**P**	**03 32 37.3**	**-2.9**
	comp=Z,71nm,1.4s,mb5.3								
NNA				LR		LR			
	comp=Z,4μm,20.0s,MS5.1								
EFI	**East Falkland**	**31.50**	**131**	PFAKE				03 33 00.0	+14
EFI				LR		LR			
	comp=Z,16μm,21.0s,MS5.7								
EFI	**East Falkland**	**31.50**	**131**	*i* P			**P**	**03 32 44.1**	**-1.9**
ATAH	**Atahualpa**	**34.31**	**35**	P			**P**	**03 33 08.8**	**-2.0**
	comp=Z,13nm,0.9s,mb4.8,baz=186,slow=5.9,SNR=10.0								
ATAH				S			**S**	**03 38 40.2**	**+2.1**
	comp=Z,1.7nm,0.5s,baz=93,slow=19,SNR=2.3								
ATAH				LR		LR		03 44 06.6	
	comp=Z,16μm,21.4s,MS5.7,baz=191,slow=31								
PMSA	**Palmer Station**	**34.37**	**155**	LR		LR		03 43 53.8	
	comp=Z,13μm,21.8s,MS5.6,baz=310,slow=30								
PMSA	**Palmer Station**	**34.37**	**155**	PFAKE				03 33 20.0	+9.2
PMSA				LR		LR			

PPT LR LR 03 50 18.8
comp=Z,15µm,19.0s,MS6.0,baz=112,slow=29
PMOR Pomariorio Ree 49.65 282 eP P 03 35 14.7 -1.4
TGUH Tegucigalpa,Un 51.40 13 eP P 03 35 25.4 -3.8
comp=Z,56nm,0.8s,mb5.5
TGUH LR LR
comp=Z,6µm,21.0s,MS5.6
SDV Santo Domingo 51.88 34 eP P 03 35 28.2 -4.7
comp=Z,24nm,0.8s,mb5.2
SDV LR LR
comp=Z,4µm,20.0s,MS5.5
QSPA South Pole Qui 53.50 180 P P 03 35 45.5 +1.4
comp=Z,5.9nm,1.0s,mb4.5,baz=133,slow=4.1,SNR=6.5
QSPA LR LR 03 53 52.1
comp=Z,4µm,20.1s,MS5.5,baz=303,slow=31
VHO Vista Hermosa 53.50 1 eP P 03 35 48.6 +3.9
CAIG El Cayaco 53.54 357 eP P 03 35 39.7 -5.4
CMIG Matias Romero 53.57 3 eP P 03 35 48.6 +3.4
ZIIG Zihuatanejo 54.17 355 eP P 03 35 50.6 +1.0
VNA3 Neumayer Olymp 55.01 157 eP P 03 35 56.3 +1.1
VNA3 e 03 36 03.6
VNA3 e 03 36 11.4
PPM Popocatepetl 55.49 359 eP P 03 36 03.3 +4.1
VNA1 Neumayer--Stat 55.59 156 eP P 03 36 01.0 +1.7
VNA1 e 03 36 08.7
VNA1 e 03 36 16.2
SBA Scott Base 55.63 195 eP P 03 35 53.9 -5.7
comp=Z,166nm,1.4s,mb5.9
SBA LR LR
comp=Z,2µm,20.0s,MS5.3
SBA Scott Base 55.63 195 eP P 03 35 55.1 -4.5
SBA pmax pmax
comp=Z,170nm,1.3s,mb5.9
RAR Rarotonga 55.79 268 LR LR 03 53 05.7
comp=Z,8µm,20.3s,MS5.8,baz=124,slow=29
RAR Rarotonga 55.79 268 PFAKE 03 36 10.0 +8.5
RAR LR LR
comp=Z,11µm,19.0s,MS6.0
VNA2 Neumayer--Watz 55.80 157 eP P 03 36 02.2 +1.3
baz=257,slow=5.9
VNA2 e 03 36 09.7
VNA2 e 03 36 16.6
LVIG Laguna Verde 56.15 1 eP P 03 36 07.5 +3.6
CJM Chamela 56.37 351 eP P 03 36 07.2 +1.7
VNDA Vanda 56.73 195 P P 03 36 08.4 +1.0
comp=Z,3.6nm,1.1s,baz=111,slow=8.2,SNR=6.5
VNDA LR LR 03 57 11.6
comp=Z,3µm,18.3s,MS5.4,baz=103,slow=32
SNAA Sanae 57.02 158 eP P 03 36 04.4 -5.1
comp=Z,35nm,1.2s,mb5.3
SNAA Sanae 57.02 158⇑ eP P 03 36 06.9 -2.6
SNAA pmax pmax
comp=Z,20nm,1.4s
SFJM Santa Fe 57.14 354 eP P 03 36 14.5 +3.5
GRGR Grenville 59.13 42 PFAKE 03 36 40.0 +15
GRGR LR LR
comp=Z,7µm,22.0s,MS5.8
ZAIG Zacatecas 59.37 354 eP P 03 36 26.7 +0.3
SDDR Presa de Saban 60.66 29 eP P 03 36 32.5 -3.0
comp=Z,70nm,0.9s,mb5.8
SDDR LR LR
comp=Z,3µm,22.0s,MS5.4
BBGH Gun Hill 61.10 43 PFAKE 03 36 50.0 +12
BBGH LR LR
comp=Z,5µm,19.0s,MS5.7
MAIT Maitri 61.69 159 eP P 03 36 42.1 +0.3
NVL N'lazarevskaya 61.72 159 eP pP 03 36 52.6 +7.4
NVL eS S **03 45 18.8 +14**
NVL pmax pmax
comp=Z,36nm,1.1s,mb5.4
SJG San Juan 62.02 34 PFAKE 03 37 00.0 +15
SJG LR LR
comp=Z,4µm,20.0s,MS5.6
RCBR Riachuelo 63.83 77 PFAKE 03 37 10.0 +13
RCBR LR LR
comp=Z,4µm,20.0s,MS5.6
KVTX Kingsville 63.92 360 PFAKE 03 37 10.0 +13
KVTX LR LR
comp=Z,1µm,19.0s,MS5.1
URZ Urewera 65.34 240 P P 03 37 07.8 +1.3
comp=Z,40nm,1.1s,mb5.4,baz=19,slow=3.2,SNR=8.8
SNZO South Karori 65.54 236 PFAKE 03 37 20.0 +12
SNZO LR LR
comp=Z,28µm,20.0s,MS6.5
TRIS Tristan da Cun 65.67 119 PFAKE 03 37 20.0 +11
TRIS LR LR
comp=Z,3µm,20.0s,MS5.5
TXAR Lajitas Array 65.97 354 P P 03 37 06.5 -3.9
comp=Z,2.8nm,0.9s,baz=174,slow=6.3,SNR=12
TXAR LR LR 04 00 04.1
comp=Z,3µm,19.8s,MS5.4,baz=250,slow=31
RAO Raoul Island 66.08 251 PFAKE 03 37 20.0 +8.6
RAO LR LR
comp=Z,9µm,19.0s,MS6.0
DWPF Disney 66.22 15 PFAKE 03 37 20.0 +7.9
DWPF LR LR
comp=Z,6µm,20.0s,MS5.8
HKT Hockley 66.34 2 eP P 03 37 12.2 -0.5
comp=Z,118nm,1.7s,mb5.6
HKT LR LR
comp=Z,1µm,21.0s,MS5.0
JCT Junction City 66.88 358 eP P 03 37 13.9 -2.4
JCT LR LR
comp=Z,1µm,20.0s,MS5.1
XMAS Kiritimati 67.65 291 PFAKE 03 37 30.0 +8.4
XMAS LR LR
comp=Z,13µm,20.0s,MS6.2
DRV Dumont d'Urvil 68.05 201 S S 03 46 33.0 +11
DRV SS SS 03 50 42.0 -1.6
DRV L 03 54 00.0
DRV R 03 58 00.0
BRAL Brewton 68.08 10 eP P 03 37 22.1 -1.7
comp=Z,104nm,1.3s,mb5.7
BRAL LR LR
comp=Z,3µm,21.0s,MS5.5
NATX Nacogdoches 68.17 3 eP P 03 37 23.2 -1.2
comp=Z,125nm,1.2s,mb5.8
NATX LR LR
comp=Z,1µm,20.0s,MS5.1
319A Douglas 68.64 349 ⇑P P 03 37 26.9 -0.4
baz=68
319A ⇑S S 03 46 32.0 +2.0
baz=68
318A Bisbee 68.82 349 ⇑P P 03 37 28.2 -0.2
baz=68,SNR=16
318A ⇑S S 03 46 32.7 +0.6
baz=68
GDL2 Guadalupe Moun 68.87 354 eP P 03 37 34.9 +6.2
VBMS Vicksburg 68.89 6 eP P 03 37 25.5 -3.3
VBMS LR LR
comp=Z,2µm,22.0s,MS5.3
219A White Tail Can 69.25 349 ⇓P P 03 37 30.8 -0.3
baz=69,SNR=12
219A ⇓S S 03 46 39.2 +2.0
baz=69
217A Green Valley 69.28 348 ⇓P P 03 37 31.8 +0.6
baz=69,SNR=5.3
217A ⇓S S 03 46 38.5 +0.9
baz=69
AFI Afiamalu 69.34 268 eP P 03 37 28.3 -3.9
comp=Z,221nm,1.5s,mb5.9
AFI LR LR
comp=Z,9µm,22.0s,MS6.0
218A Dragoon 69.35 349 ⇑P P 03 37 31.8 +0.1
baz=69
218A ⇑S S 03 46 39.8 +1.5
baz=69
216A Three Points, 69.61 347 ⇓P P 03 37 33.3 -0.1
baz=69
216A ⇑S S 03 46 42.3 +0.8
baz=69
TUC Tucson 69.80 348 eP P 03 37 33.8 -0.7
comp=Z,50nm,1.4s,mb5.3
TUC LR LR
comp=Z,1µm,20.0s,MS5.2
214A Organ Pipe Nat 69.82 346 ⇑P P 03 37 34.7 +0.1
baz=70
214A ⇑S S 03 46 44.8 +0.9
baz=70
SYO Syowa Base 69.91 165⇓ eP P 03 37 34.8 0.0
118A Homack Ranch, 69.99 349 ⇑P P 03 37 35.2 -0.4
baz=70
118A ⇓S S 03 46 46.4 +0.5
baz=70
119A Ashpeak Ranch, 70.01 349 ⇑P P 03 37 35.6 -0.1
baz=70
119A ⇓S S 03 46 46.9 +0.8
baz=70
117A Oracle 70.05 348 ⇑P P 03 37 36.1 +0.1
baz=70
117A ⇓S S 03 46 47.1 +0.6
baz=70
LRAL Lakeview Retre 70.08 9 eP P 03 37 34.2 -2.0
LRAL LR LR
comp=Z,3µm,22.0s,MS5.5
116A Eloy 70.20 347 ⇑P P 03 37 37.0 0.0
baz=70
116A ⇓S S 03 46 49.8 +1.4
baz=70
115A Sonoran Desert 70.43 347 ⇓P P 03 37 38.3 -0.1
baz=70
115A ⇑S S 03 46 53.7 +2.7
baz=70
113A Mohawk Valley, 70.80 345 ⇓P P 03 37 40.7 +0.1
baz=70
113A ⇓S S 03 46 56.7 +1.5
baz=70
Z16A Peralta Trail, 70.91 348 ⇑S S 03 46 58.8 +2.2
baz=70
GOGA Godfrey 70.98 12 eP P 03 37 38.2 -3.5
comp=Z,56nm,1.2s,mb5.4
GOGA LR LR
comp=Z,4µm,20.0s,MS5.6
MIAR Mount Ida 70.99 3 eP P 03 37 39.6 -2.1
MIAR LR LR
comp=Z,2µm,22.0s,MS5.3
Z15A Gila River Ind 70.99 347 ⇑P P 03 37 42.2 +0.4
baz=71
Z15A ⇑S S 03 46 58.4 +0.9
baz=71
WMOK Wichita Mounta 71.10 359 eP P 03 37 40.0 -2.4
comp=Z,37nm,1.4s,mb5.1
WMOK LR LR
comp=Z,1µm,19.0s,MS5.2
WMOK Wichita Mounta 71.10 359 eP P 03 37 45.2 +2.8
Y18A Canyon Day Jun 71.11 349 ⇓P P 03 37 42.5 0.0
baz=71
Y17A Roosevelt 71.16 348 ⇑P P 03 37 43.0 +0.2
baz=71,SNR=12
Y19A Nutrioso 71.17 350 ⇓P P 03 37 43.3 +0.5
baz=71,SNR=14
DVTC Desert V Tower 71.19 343 ⇑P P 03 37 43.0 0.0
baz=71
Z14A Wintersburg 71.21 346 ⇑P P 03 37 43.1 0.0
baz=71
OXF Oxford 71.26 7 eP P 03 37 43.3 -0.1
comp=Z,125nm,1.1s,mb5.8
OXF LR LR
comp=Z,2µm,20.0s,MS5.4
OXF Oxford 71.26 7 eP P 03 37 43.3 -0.1
OXF pmax pmax
comp=Z,125nm,1.1s,mb5.8
OXF MLR MLR
comp=Z,2µm,20.0s,MS5.4
UALR University of 71.29 4 eP P 03 37 42.4 -1.1
comp=Z,44nm,1.1s,mb5.3
GLA Glamis 71.29 345 eP P 03 37 38.7 -4.9
comp=Z,40nm,1.3s,mb5.2
GLA Glamis 71.29 345 eP P 03 37 38.7 -4.9
GLA e 03 38 04.2
GLA pmax pmax
comp=Z,40nm,1.2s,mb5.2
NHSC New Hope 71.31 15 eP P 03 37 40.2 -3.5
comp=Z,190nm,1.1s,mb5.9
NHSC LR LR
comp=Z,4µm,21.0s,MS5.7
AMTX Amarillo 71.35 356 eP P
AMTX LR LR **03 37 42.9 -1.0**
comp=Z,2µm,19.0s,MS5.4
SWSC Sam W. Stewart 71.39 344 ⇑P P 03 37 44.5 +0.3
baz=71
Y16A Circle Bar Ran 71.45 348 ⇑P P 03 37 44.8 +0.3
baz=71,SNR=11
109C Camp Elliot, M 71.65 343 ⇑P P 03 37 45.6 -0.1
baz=71
Y15A Casa Rosa Ranc 71.67 347 ⇓P P 03 37 45.8 -0.1
baz=71
Y14A Wickenburg 71.78 346 ⇑P P 03 37 47.0 +0.5
baz=71,SNR=14
ANMO Albuquerque 71.80 352 LR LR 04 02 20.9
comp=Z,602nm,21.1s,MS4.8,baz=117,slow=30
ANMO Albuquerque 71.80 352 eP P 03 37 44.2 -2.3
comp=Z,22nm,1.2s,mb5.0
ANMO LR LR
comp=Z,2µm,19.0s,MS5.4
Y13A Salome 71.82 346 ⇓P P 03 37 46.7 0.0
baz=72
X18A Snowflake 71.84 349 ⇓P P 03 37 46.6 -0.2
baz=72
Y12C Blythe 71.90 345 ⇓P P 03 37 47.1 -0.1
baz=72
X16A Lo Mia Camp, P 71.97 348 ⇓P P 03 37 47.7 +0.1
baz=72
BC3 Big Chuckw Mtn 72.00 344 ⇓P P 03 37 47.7 -0.2
baz=72
SCI San Clemente I 72.09 341 ⇑P P 03 37 48.1 -0.3
baz=72
X15A Humboldt 72.17 347 ⇑P P 03 37 49.3 +0.4
baz=72,SNR=16
PFO Pinyon Flat Ob 72.19 343 eP P 03 37 48.5 -0.4
comp=Z,24nm,1.2s,mb5.0
PFO LR LR
comp=Z,1µm,22.0s,MS5.1
PFO Pinyon Flat Ob 72.19 343 ⇓P P 03 37 49.0 +0.1
baz=72
PFO Pinyon Flat Ob 72.19 343 eP P 03 37 48.5 -0.4
PFO pmax pmax
comp=Z,24nm,1.2s,mb5.0
PFO MLR MLR
comp=Z,1µm,22.0s,MS5.1
X14A Yava 72.28 347 ⇓P P 03 37 49.5 0.0
baz=72
W19A Sanders 72.33 350 ⇑P P 03 37 50.5 +0.8
baz=72
MURC Murrieta 72.35 343 ⇓P P 03 37 50.1 +0.1
baz=72
PDMCI Parker Dam,Lak 72.35 346 ⇑P P 03 37 50.4 +0.5
baz=72
SWET Sewanee 72.37 10 eP P 03 37 46.3 -3.7
W18A Petrified Fore 72.38 349 ⇓P P 03 37 50.8 +0.8
baz=72
BELC Belle Mtn. 72.46 344 ⇑P P 03 37 50.6 +0.1
baz=72
X13A Yucca 72.58 346 ⇑P P 03 37 51.5 +0.3
baz=72,SNR=6.6
W16A Flagstaff 72.64 348 ⇓P P 03 37 52.2 +0.6
baz=72
CPCT Cooper Cave 72.80 11 eP P 03 37 51.7 -0.9
W15A Williams 72.85 347 ⇓P P 03 37 53.7 +0.8
baz=72,SNR=7.1
V19A Window Rock 72.87 350 ⇑P P 03 37 53.1 +0.2
baz=72
BBRC Big Bear Sol-O 72.92 343 ⇓P P 03 37 53.1 -0.2
baz=73
V18A Ganado 73.00 349 ⇓P P 03 37 54.1 +0.4
baz=73,SNR=10.0
WVT Waverly 73.03 8 eP P 03 37 53.3 -0.6
WVT LR LR
comp=Z,2µm,21.0s,MS5.4
WUAZ Wupatki 73.03 348 eP P 03 37 48.9 -5.0
comp=Z,22nm,1.2s,mb5.0
WUAZ LR LR
comp=Z,1µm,21.0s,MS5.2
WUAZ Wupatki 73.03 348 ⇑P P 03 37 54.1 +0.2
baz=73
W14A Seligman 73.03 347 ⇓P P 03 37 54.1 +0.2
baz=73,SNR=16
BFSC Mount Baldy St 73.07 343 ⇓P P 03 37 54.1 -0.1
baz=73
W13A Hualapai Mount 73.08 346 ⇑P P 03 37 54.3 +0.1
baz=73,SNR=5.5
TKL Tuckaleechee C 73.12 12 eP P 03 37 53.2 -1.3
UTMT University of 73.13 7 eP P 03 37 53.1 -1.4
GMRC Granite Mounta 73.13 344 ⇑P P 03 37 54.5 0.0
baz=73
MWC Mount Wilson 73.15 342 eP P 03 37 54.2 -0.5
comp=Z,67nm,1.4s,mb5.4
MWC Mount Wilson 73.15 342 eP P 03 37 54.2 -0.5
MWC pmax pmax
comp=Z,67nm,1.3s,mb5.4
BLG Laguna Peak 73.30 341 ⇓P P 03 37 55.9 +0.3
baz=73
LDFC Landfair 73.30 345 eP P 03 37 55.7 +0.1
HEC Hector,Ludlow 73.33 344 ⇓P P 03 37 55.9 +0.2
baz=73,SNR=7.7
V14A Boquillas Ranc 73.45 347 ⇓P P 03 37 56.9 +0.5
baz=73,SNR=16
V15A Kaibab Nationa 73.46 348 ⇓P P 03 37 56.7 +0.2
baz=73,SNR=6.6
U16A Tuba City 73.60 348 ⇓P P 03 37 58.0 +0.7
baz=73
U18A Rough Rock, Ch 73.68 350 ⇓P P 03 37 58.0 +0.3
baz=73
EDW2 Edwards Air Fo 73.76 343 ⇑P P 03 37 58.3 0.0
baz=73
SBC Santa Barbara 73.78 341 ⇓P P 03 37 58.4 +0.1
baz=74
TUQ Turquoise Moun 73.82 344 ⇓P P 03 37 58.7 +0.1
baz=74
V13A Grand Canyon W 73.83 346 ⇓P P 03 37 58.7 +0.1
baz=74,SNR=12
CNNC Cliffs of the 73.87 17 eP P 03 37 56.9 -2.0
comp=Z,52nm,1.0s,mb5.4
CNNC LR LR
comp=Z,9µm,20.0s,MS6.0
V12A Nelson 73.88 345 ⇓P P 03 37 58.8 -0.1
baz=74,SNR=7.5
GSC Goldstone 73.89 344 eP P 03 37 57.9 -1.1
comp=Z,64nm,1.3s,mb5.4
GSC Goldstone 73.89 344 ⇓P P 03 37 58.8 -0.2
baz=74
GSC Goldstone 73.89 344 eP P 03 37 57.9 -1.1
GSC pmax pmax
comp=Z,64nm,1.3s,mb5.4
T19A Beclabito 73.97 350 ⇑P P 03 37 59.3 -0.1
baz=74
U17A Shonto 73.98 349 ⇓P P 03 37 59.1 -0.4
baz=74
TZTN Tazewell 74.03 12 eP P 03 37 57.3 -2.5
comp=Z,62nm,1.2s,mb5.4
U15A North Rim 74.08 348 ⇓P P 03 38 00.1 +0.1
baz=74,SNR=9.7
V11A Goodsprings 74.10 345 ⇑P P 03 38 00.5 +0.2
baz=74
U14A Mt Trumbull 74.22 347 ⇓P P 03 38 01.2 +0.3
baz=74,SNR=12
PKM Peak Mountain 74.24 341 ⇓P P 03 38 01.1 0.0
baz=74
LRMC Laurel Mountai 74.26 343 ⇓P P 03 38 01.2 0.0
baz=74
MVCO Mesa Verde 74.27 351 eP P 03 38 00.0 -1.2
comp=Z,95nm,1.4s,mb5.5
MVCO LR LR
comp=Z,2µm,20.0s,MS5.3
MVCO Mesa Verde 74.27 351 ⇑P P 03 38 01.4 +0.2
baz=74,SNR=9.7
SHOC Shoshone 74.34 344 ⇓P P 03 38 01.6 -0.1
baz=74
U13A Pakoon Wash 74.37 346 ⇓P P 03 38 01.8 0.0
baz=74
T18A Mexican Hat 74.39 350 ⇓P P 03 38 01.9 0.0
baz=74,SNR=13
T17A Navajo Res., N 74.39 349 ⇓P P 03 38 02.5 +0.6
baz=74,SNR=6.5
SIUC Southern Illin 74.45 7 eP P 03 38 01.4 -0.8
comp=Z,55nm,1.2s,mb5.4
SDCO Great Sand Dun 74.47 353 eP P 03 38 00.4 -1.9
comp=Z,34nm,1.5s,mb5.0
SDCO LR LR
comp=Z,2µm,19.0s,MS5.4
T16A Glen Canyon Da 74.49 348 ⇓P P 03 38 02.9 +0.5
baz=74
U12A Valley of Fire 74.50 346 ⇑P P 03 38 02.8 +0.3
baz=74
FVM French Village 74.61 6 eP P 03 37 57.6 -5.6
comp=Z,110nm,1.4s,mb5.6
FVM French Village 74.61 6 eP P 03 37 57.6 -5.6
FVM pmax pmax
comp=Z,83nm,1.3s,mb5.5
CCM Cathedral Cave 74.62 5 eP P 03 37 59.4 -3.8
comp=Z,96nm,1.0s,mb5.7
CCM LR LR
comp=Z,1µm,19.0s,MS5.1
CCM Cathedral Cave 74.62 5 P P 03 37 59.5 -3.7
CCM pmax pmax
comp=Z,96nm,1.0s,mb5.7
U11A Corn Creek 74.66 345 ⇓P P 03 38 03.7 +0.2
baz=74
T15A Red Dirt Ranch 74.67 348 ⇑P P 03 38 03.9 +0.5
baz=74,SNR=5.5
SMMC Simmler 74.68 341 ⇑P P 03 38 04.2 +0.6
baz=74
SHPR Sheep Range 74.69 345 eP P 03 38 04.1 +0.5
MPMC Manual Prospec 74.77 343 ⇓P P 03 38 04.0 -0.1
baz=74
T12A Moapa 74.81 346 ⇑P P 03 38 04.7 +0.4
baz=74
T14A Hurricane 74.83 347 ⇓P P 03 38 04.7 +0.3
baz=74
U10A Ash Meadows, A 74.86 344 ⇓P P 03 38 04.7 +0.1
baz=74
USIN University of 74.86 8 eP P 03 38 06.3 +1.7
S19A Harvey Farm, M 74.88 350 ⇑P P 03 38 04.8 +0.1
baz=74,SNR=7.9
MAW Mawson 74.93 172 P P 03 38 05.1 +0.3
comp=Z,4.8nm,1.0s,mb4.4,baz=231,slow=15,SNR=2.8
MAW LR LR 04 10 01.7
comp=Z,3µm,18.8s,MS5.7,baz=188,slow=35
MAW Mawson 74.93 172 eP P 03 38 05.1 +0.3
comp=Z,9.3nm,1.1s,mb4.6
MAW LR LR
comp=Z,6µm,20.0s,MS5.8
T13A Saint George 74.94 346 ⇑P P 03 38 05.4 +0.3
baz=75,SNR=6.5
VES Vestal, Richgr 74.94 342 ⇑P P 03 38 04.9 -0.3
baz=75
S18A Hurst Farm, Bl 74.95 350 ⇑P P 03 38 05.5 +0.4
baz=75,SNR=20
DAC Darwin (Calif) 75.00 343 PFAKE 03 38 20.0 +15
DAC LR LR
comp=Z,1µm,20.0s,MS5.2
S17A Black Ridge (B 75.01 349 ⇓P P 03 38 05.6 +0.1
baz=75
FURC Furnace Creek, 75.02 344 ⇓P P 03 38 05.3 -0.2
baz=75
CASY Casey 75.09 191 PFAKE 03 38 20.0 +14
CASY LR LR
comp=Z,3µm,20.0s,MS5.5
CBKS Cedar Bluff 75.19 358 eP P 03 38 04.8 -1.6
comp=Z,102nm,1.2s,mb5.6
CBKS LR LR
comp=Z,4392µm,19.0s
S16A Weppner Ranch, 75.22 348 ⇑P P 03 38 06.7 0.0
baz=75
BLA Blacksburg 75.23 14 eP P 03 38 04.9 -1.8
comp=Z,94nm,1.4s,mb5.5
BLA LR LR
comp=Z,3µm,21.0s,MS5.6
BBSR BB Station 75.24 28 PFAKE 03 38 20.0 +13
BBSR LR LR
comp=Z,2µm,22.0s,MS5.5
CWC Cottonwood Cre 75.27 343 ⇑P P 03 38 06.6 -0.3
baz=75
SLM Saint Louis 75.28 6 eP P 03 38 08.1 +1.1
comp=Z,170nm,1.4s,mb5.8
SLM Saint Louis 75.28 6 eP P 03 38 08.1 +1.1
SLM pmax pmax
comp=Z,170nm,1.4s,mb5.8
WCI Wyandotte Cave 75.28 9 eP P 03 38 05.5 -1.6
WCI LR LR
comp=Z,470nm,21.0s,MS4.8
R21A Cimarron 75.30 352 ⇑P P 03 38 07.2 +0.1
baz=75
TPNV Topopah Spring 75.35 345 eP P 03 38 06.8 -0.6
comp=Z,56nm,1.3s,mb5.3
TPNV LR LR
comp=Z,2µm,21.0s,MS5.5
TPNV Topopah Spring 75.35 345 ⇑P P 03 38 07.9 +0.5
baz=75,SNR=11
T11A Corn Creek, Al 75.41 345 ⇓P P 03 38 08.0 +0.2
baz=75
RCTC Rector, Farmer 75.43 342 ⇓P P 03 38 07.7 -0.2
baz=75
R19A Curley Farm, L 75.44 350 ⇓P P 03 38 08.1 +0.2
baz=75
KSU1 Kansas State U 75.45 1 eP P 03 38 06.0 -2.0
comp=Z,90nm,1.0s,mb5.7
KSU1 LR LR
comp=Z,1µm,20.0s,MS5.2
S13A Holt Ranch, En 75.48 347 ⇓P P 03 38 08.6 +0.4
baz=75,SNR=14
S14A Cedar City 75.53 347 ⇑P P 03 38 08.7 +0.3

baz=75
OLIL Olney 75.57 8 *e*P P 03 38 07.9 -0.8
comp=Z,82nm,1.1s,mb5.6
R18A Canyonlands Na 75.62 350 ⇑P P 03 38 09.1 +0.2
baz=75,SNR=9.0
GRAC Grapevine Rang 75.64 344 ⇑P P 03 38 09.1 0.0
baz=75
V03C Hunter Liggett 75.68 340 ⇓P P 03 38 09.2 -0.1
baz=75
S12A Delamar Landin 75.69 346 ⇓P P 03 38 09.7 +0.3
baz=75
R16A Teasdale 75.75 349 ⇓P P 03 38 10.2 +0.5
baz=75,SNR=9.1
R17A Hanksville Air 75.77 349 ⇓P P 03 38 10.5 +0.8
baz=75,SNR=5.9
R15A Junction 75.81 348 ⇑P P 03 38 10.5 +0.5
baz=76,SNR=6.2
U04C Hernandez Rese 75.88 341 ⇓P P 03 38 10.1 -0.3
baz=76
S11A Rachel 75.91 345 ⇓P P 03 38 10.9 +0.2
baz=76
R14A James Farms, M 76.02 347 ⇓P P 03 38 12.0 +0.7
baz=76,SNR=5.9
SMCO Snowmass 76.03 352 *e*P P 03 38 11.2 -0.1
comp=Z,54nm,1.2s,mb5.3
R13A O'Grain Ranch, 76.08 347 ⇑P P 03 38 11.9 +0.3
baz=76
MVU Marysvale 76.09 348 PFAKE 03 38 20.0 +8.4
MVU LR LR
comp=Z,1μm,19.0s,MS5.2
MSU Marysvale 76.09 348 *e*P P 03 38 12.5 +0.9
Q19A Hogan Spring (76.09 351 ⇓P P 03 38 12.0 +0.4
baz=76,SNR=9.7
T06C Milleton Lake 76.21 342 ⇓P P 03 38 11.8 -0.5
baz=76
MTUM Tungsten Hills 76.26 343 *e*P P 03 38 13.4 +0.8
S09A Goldfield 76.30 344 ⇓P P 03 38 12.9 +0.1
baz=76,SNR=16
Q16A Castle Valley 76.33 349 ⇑P P 03 38 13.3 +0.4
baz=76,SNR=6.0
R12A Pony Springs, 76.34 346 ⇑P P 03 38 13.0 -0.1
baz=76
Q18A Rafter H Ranch 76.35 350 ⇑P P 03 38 13.0 -0.1
baz=76,SNR=5.8
S10A Tonopah Range, 76.36 345 ⇓P P 03 38 13.0 -0.2
baz=76
SRU San Rafael 76.42 350 ⇓P P 03 38 13.6 +0.1
baz=76,SNR=15
SRU San Rafael 76.42 350 *e*P P 03 38 13.4 -0.1
SAO San Andreas Ge 76.43 340 *e*P P 03 38 12.2 -1.4
comp=Z,52nm,1.2s,mb5.3
SAO LR LR
comp=Z,3μm,21.0s,MS5.5
ISCO Idaho Springs 76.52 354 *e*P P 03 38 09.6 -4.4
comp=Z,20nm,1.4s,mb4.8
ISCO LR LR
comp=Z,2μm,19.0s,MS5.4
R11A Troy Canyon, C 76.56 345 ⇓P P 03 38 14.7 +0.4
baz=76,SNR=13
Q15A Fillmore 76.60 348 ⇓P P 03 38 14.6 +0.1
baz=76
TPH Tonopah 76.64 344 *e*P P 03 38 13.9 -0.8
comp=Z,73nm,1.3s,mb5.5
TPH LR LR
comp=Z,742nm,20.0s,MS5.0
R10A Warm Springs 76.65 345 ⇑P P 03 38 14.4 -0.4
baz=76
S05C Merced 76.69 341 ⇑P P 03 38 14.9 -0.2
baz=76
P19A Cripple Cowboy 76.72 351 ⇓P P 03 38 15.5 +0.3
baz=76,SNR=5.2
MIR Mirnyy 76.74 184 ⇑ *i*P P 03 38 25.0 +10
MIR *i*S S 03 48 08.0 +6.2
MIR pmax pmax
comp=Z,200nm,1.5s,mb5.8
Q14A Sevier Lake (B 76.74 347 ⇑P P 03 38 15.7 +0.4
baz=76,SNR=11
R09A Tonopah 76.76 344 ⇑P P 03 38 15.7 +0.2
baz=76,SNR=8.7
P17A Butcher Ranch, 76.80 349 ⇑P P 03 38 15.5 -0.1
baz=76
CBN Corbin 76.82 16 PFAKE 03 38 30.0 +14
CBN LR LR
comp=Z,8μm,21.0s,MS6.0
Q13A Wheeler Ranch, 76.84 347 ⇑P P 03 38 16.7 +0.8
baz=76,SNR=10
P18A Preston Nutter 76.89 350 ⇑P P 03 38 16.5 +0.4
baz=76,SNR=6.3
Q11A Duckwater 77.05 345 ⇑P P 03 38 16.7 -0.4
baz=77
Q12A Willow Creek R 77.08 346 ⇓P P 03 38 17.5 +0.3
baz=77,SNR=5.2
P16A Fountain Green 77.08 349 ⇓P P 03 38 17.3 +0.1
baz=77
R08A Mina 77.10 343 ⇑P P 03 38 17.3 -0.1
baz=77
O21A Pagoda 77.11 352 ⇓P P 03 38 18.3 +1.0
baz=77
P15A Leamington 77.14 348 ⇑P P 03 38 17.6 +0.1
baz=77
Q10A Clear Creek Ra 77.18 345 ⇓P P 03 38 17.5 -0.3
baz=77
NVAR Mina Array Bea 77.22 343 P P 03 38 15.0 -3.1
comp=Z,13nm,0.8s,mb4.9,baz=174,slow=7.4,SNR=32
HDIL Hopedale 77.26 6 *e*P P 03 38 17.8 -0.4
comp=Z,117nm,1.4s,mb5.6
HDIL LR LR
comp=Z,2μm,20.0s,MS5.4
P14A Drum Mountains 77.29 348 ⇓P P 03 38 19.0 +0.6
baz=77,SNR=6.3
P13A Bates Ranch, G 77.33 347 ⇑P P 03 38 19.0 +0.4
baz=77,SNR=13
CMB Columbia Colle 77.35 342 *e*P P 03 38 18.5 -0.2
comp=Z,56nm,1.4s,mb5.3
CMB LR LR
comp=Z,2μm,19.0s,MS5.4
OGNE Ogallala 77.41 356 *e*P P 03 38 18.2 -0.8
comp=Z,64nm,0.9s,mb5.5
OGNE LR LR
comp=Z,1μm,20.0s,MS5.2
MPU Maple Canyon 77.47 349 *e*P P 03 38 26.2 +6.9
O18A Roosevelt 77.48 350 ⇑P P 03 38 20.0 +0.5
baz=77,SNR=7.8
NLU North Lily Min 77.48 349 *e*P P 03 38 20.6 +1.2
O17A Robinson Place 77.51 350 ⇑P P 03 38 19.6 0.0
baz=77
Q08A Gabbs 77.55 344 ⇓P P 03 38 19.8 -0.1
baz=77,SNR=11
WAKR Walker 77.56 342 *e*P P 03 38 23.4 +3.5
R06C Coleville 77.58 342 ⇑P P 03 38 20.1 0.0
baz=77
O16A Springville 77.64 349 ⇑P P 03 38 21.1 +0.7
baz=77
N21A Black Mountain 77.66 352 ⇑P P 03 38 20.8 +0.3
baz=77,SNR=6.3
MCWV Mont Chateau 77.71 14 PFAKE 03 38 30.0 +9.3
MCWV LR LR
comp=Z,5μm,19.0s,MS5.8
ACSO Alum Creek Sta 77.72 11 *e*P P 03 38 20.8 0.0
ACSO LR LR
comp=Z,2μm,19.0s,MS5.5
DAU Daniels Canyon 77.80 349 *e*P P 03 38 21.8 +0.6
N20A Spence Gulch, 77.82 352 ⇑P P 03 38 21.9 +0.6
baz=77
DUG Dugway 77.84 348 *e*P P 03 38 20.9 -0.6
comp=Z,62nm,1.3s,mb5.4
DUG LR LR
comp=Z,1μm,19.0s,MS5.2
DUG Dugway 77.84 348 ⇓P P 03 38 21.9 +0.5
baz=78,SNR=7.9
P10A Eureka 77.96 345 ⇓P P 03 38 22.4 +0.2
baz=78
O13A Hicks Ranch, I 77.98 347 ⇑P P 03 38 22.9 +0.7
baz=78,SNR=5.9
N19A John Jarvie Ra 77.99 351 ⇓P P 03 38 22.0 -0.2
baz=78,SNR=9.5
JLU Jordanelle 78.02 349 *e*P P 03 38 22.6 +0.2
P09A Austin 78.04 345 ⇑P P 03 38 22.8 +0.2
baz=78
SDMD Soldier's Deli 78.10 16 *e*P P 03 38 26.3 +3.5
MCCM Marconi Confer 78.12 340 PFAKE 03 38 30.0 +7.0
MCCM LR LR
comp=Z,2μm,20.0s,MS5.5
LAVA Lava Cap Winer 78.12 342 ⇓P P 03 38 23.3 +0.2
baz=78
N18A Larsen Ranch, 78.13 351 ⇑P P 03 38 23.2 +0.2
baz=78,SNR=5.8
NOQ North Oquirrh 78.17 349 *e*P P 03 38 28.6 +5.3
O12A Currie 78.25 347 ⇑P P 03 38 24.0 +0.3
baz=78
N17A Moffit Pass 78.26 350 ⇑P P 03 38 24.5 +0.8
baz=78,SNR=8.4
O11A Cowboy Ranch, 78.29 346 ⇑P P 03 38 24.1 +0.1
baz=78
Q03C Winters 78.34 341 ⇑P P 03 38 24.6 +0.3
baz=78
SCIA State Center 78.35 3 PFAKE 03 38 30.0 +5.8
SCIA LR LR
comp=Z,2μm,22.0s,MS5.3
WCN Washoe City 78.40 342 ⇑P P 03 38 25.0 +0.5
baz=78
M20A Sweetwater, Wa 78.45 352 ⇓P P 03 38 25.3 +0.4
baz=78
N15A Stansbury Isla 78.47 348 ⇓P P 03 38 25.1 +0.2
baz=78,SNR=5.4
POHA Pohakuloa 78.47 305 PFAKE 03 38 40.0 +15
POHA LR LR
comp=Z,7μm,20.0s,MS6.0
M21A Separation Pea 78.48 352 ⇓P P 03 38 25.2 +0.2
baz=78
N14A Grayback Hills 78.54 348 ⇓P P 03 38 25.5 +0.2
baz=78,SNR=9.0
RWWY Rawlins 78.54 353 *e*P P 03 38 23.3 -2.0
comp=Z,7.6nm,0.4s,mb5.0
O10A Cortez Mining, 78.61 345 ⇑P P 03 38 25.8 +0.1
baz=78
M18A Lyman 78.63 350 ⇑P P 03 38 25.9 +0.2
baz=78,SNR=7.1
O09A Fish Creek Ran 78.64 345 ⇓P P 03 38 25.0 -0.9
baz=78
PAHR Pah Rah Range 78.69 343 *e*P P 03 38 27.0 +0.8
M16A Huntsville 78.74 349 ⇓P P 03 38 26.9 +0.5
baz=78,SNR=5.9
M17A Scullys Gap (B 78.75 350 ⇓P P 03 38 26.2 -0.2
baz=78
MVL Millersville 78.77 16 *e*P P 03 38 29.9 +3.3
P06A Stead Airport, 78.79 343 ⇓P P 03 38 26.5 -0.2
baz=78
ELK Elko 78.80 346 *e*P P 03 38 26.5 -0.3
comp=Z,49nm,1.3s,mb5.3
ELK LR LR
comp=Z,1μm,20.0s,MS5.3
L21A Rawlins 78.83 352 ⇑P P 03 38 26.5 -0.4
baz=78
OHCM Honcut 78.86 341 *e*P P 03 38 31.3 +4.1
SPUT South Promonto 78.86 349 *e*P P 03 38 26.9 -0.2
N12A Clover Valley, 78.87 346 ⇑P P 03 38 27.0 -0.1
baz=78,SNR=14
BMN Battle Mountai 78.90 345 *e*P P 03 38 25.4 -1.9
comp=Z,90nm,1.4s,mb5.5
BMN LR LR
comp=Z,857nm,19.0s,MS5.1
HOPS Hopland 78.96 340 *e*P P 03 38 26.3 -1.4
comp=Z,128nm,1.1s,mb5.8
HOPS LR LR
comp=Z,2μm,19.0s,MS5.4
O08A Rochester Mine 78.97 344 ⇓P P 03 38 27.1 -0.6
baz=79
L20A Wamsutter 78.98 352 ⇓P P 03 38 27.2 -0.6
baz=79,SNR=6.6
O07A Toulon 79.01 343 ⇓P P 03 38 27.9 0.0
baz=79,SNR=12
M15A Larsen Ranch, 79.01 349 ⇑P P 03 38 27.5 -0.4
baz=79,SNR=7.0
HWUT Hardware Ranch 79.02 349 *e*P P 03 38 24.4 -3.5
comp=Z,19nm,1.0s,mb5.0
HWUT LR LR
comp=Z,2μm,19.0s,MS5.5
SSPA Standing Stone 79.05 15 *e*P P 03 38 26.7 -1.4
comp=Z,122nm,1.4s,mb5.6
SSPA LR LR
comp=Z,2μm,21.0s,MS5.5
BEKR Beckwourth 79.08 342 ⇓P P 03 38 27.9 -0.4
baz=79,SNR=11
L18A Fontenelle, Gr 79.11 350 ⇓P P 03 38 28.6 +0.2
baz=79,SNR=5.5
L19A Farson 79.20 351 ⇓P P 03 38 28.4 -0.5
baz=79,SNR=7.3
M14A Sheep Mountain 79.20 348 ⇓P P 03 38 28.4 -0.6
baz=79,SNR=7.9
M13A Montello 79.20 347 ⇑P P 03 38 29.0 0.0
baz=79
O06A Flanigan 79.23 343 ⇓P P 03 38 28.6 -0.5
baz=79
HVU Hansel Valley 79.38 348 *e*P P 03 38 34.0 +4.2
M12A Wells 79.39 347 ⇓P P 03 38 29.4 -0.6
baz=79
L16A Fish Haven 79.40 349 ⇑P P 03 38 29.4 -0.6
baz=79,SNR=8.8
L17A Cokeville 79.40 350 ⇓P P 03 38 29.1 -0.9
baz=79,SNR=7.0
N08A GE Springer Mi 79.43 344 ⇑P P 03 38 29.8 -0.4
baz=79,SNR=13
JFWS Jewell Farm 79.53 5 *e*P P 03 38 28.2 -2.5
comp=Z,36nm,0.8s,mb5.3
JFWS LR LR
comp=Z,2μm,20.0s,MS5.5
L15A Malad City 79.53 349 ⇑P P 03 38 30.2 -0.5
baz=79,SNR=6.0
M11A Holland Ranch, 79.57 346 ⇓P P 03 38 30.8 -0.1
baz=79
ALLY Alegheny Colle 79.58 13 *e*P P 03 38 37.4 +6.4
N07B Gerlach 79.62 344 ⇓P P 03 38 31.2 0.0
baz=79
K20A Yellowstone Ra 79.63 352 ⇓P P 03 38 30.6 -0.6
baz=79,SNR=11
AAM Ann Arbor 79.64 10 *e*P P 03 38 29.4 -1.9
comp=Z,166nm,1.0s,mb5.9
AAM LR LR
comp=Z,3μm,21.0s,MS5.6
FUNA Funafuti 79.66 267 PFAKE 03 38 40.0 +7.8
FUNA LR LR
comp=Z,8μm,19.0s,MS6.1
N06A Buffalo Meadow 79.79 343 ⇓P P 03 38 32.4 +0.2
baz=80,SNR=20
M10A I.L. Ranch, Tu 79.81 346 ⇓P P 03 38 32.6 +0.3
baz=80
K18A Toltan Ranch, 79.81 351 ⇓P P 03 38 32.7 +0.5
baz=79,SNR=5.7
K19A Absolon Red Bu 79.85 351 ⇓P P 03 38 32.0 -0.4
baz=80,SNR=8.1
L13A Double Diamond 79.87 348 ⇑P P 03 38 32.2 -0.3
baz=80,SNR=9.0
BW06 Boulder Array 79.88 351 *e*P P 03 38 29.7 -2.9
BW06 LR LR
comp=Z,1μm,20.0s,MS5.3
BW06 Boulder Array 79.88 351 ⇓P P 03 38 32.0 -0.6
baz=80,SNR=32
PDAR Pinedale Array 79.88 351 P P 03 38 29.4 -3.2
comp=Z,4.9nm,0.7s,mb4.6,baz=150,slow=6.1,SNR=28
M09A Mamel Ranch, 79.90 345 ⇑P P 03 38 32.4 -0.3
baz=80
K17A Gardner Place, 80.05 350 ⇓P P 03 38 33.6 +0.1
baz=80
ERPA Erie 80.06 13 PFAKE 03 38 40.0 +6.4
ERPA LR LR
comp=Z,3μm,19.0s,MS5.7
ECSD EROS,Sioux Fal 80.08 1 *e*P P 03 38 30.3 -3.4
comp=Z,68nm,1.0s,mb5.5
ECSD LR LR
comp=Z,2μm,19.0s,MS5.5
AHID Auburn Hatcher 80.08 350 PFAKE 03 38 40.0 +6.3
AHID LR LR
comp=Z,2μm,19.0s,MS5.5
L12A House Creek Ra 80.12 347 ⇑P P 03 38 34.2 +0.3
baz=80
M08A Happy Creek Ra 80.12 344 ⇑P P 03 38 34.1 +0.2
baz=80
K14A Jones Ranch, D 80.19 348 ⇑P P 03 38 34.1 -0.2
baz=80
K15A Arbon 80.22 349 ⇓P P 03 38 34.4 0.0
baz=80
K16A Soda Springs 80.22 349 ⇑P P 03 38 34.3 -0.1
baz=80,SNR=12
LBCM Butte Creek Ri 80.24 342 P P 03 38 35.3 +0.7
M07A Soldier Meadow 80.24 344 ⇑P P 03 38 34.4 -0.2
baz=80
L11A Cat Creek Ranc 80.28 346 ⇑P P 03 38 34.5 -0.3
baz=80,SNR=22
WDC Whiskeytown Da 80.31 341 *e*P P 03 38 33.5 -1.5
comp=Z,109nm,1.4s,mb5.6
WDC LR LR
comp=Z,891nm,19.0s,MS5.1
L10A Juniper Basin 80.33 346 ⇑P P 03 38 35.0 0.0
baz=80
J18A Kendall Valley 80.38 351 ⇑P P 03 38 34.9 -0.4
baz=80,SNR=7.1
K13A Stover Farm, H 80.44 348 ⇓P P 03 38 35.5 -0.1
baz=80,SNR=7.8
L09A Wilkinson Ranc 80.52 345 ⇓P P 03 38 35.7 -0.3
baz=80
K12A Draper Farm, C 80.57 347 ⇑P P 03 38 36.3 0.0
baz=80
J17A Brown Place, J 80.62 350 ⇑P P 03 38 36.5 0.0
baz=80,SNR=5.1
REDW Red Top Meadow 80.64 350 *e*P P 03 38 33.8 -2.9
comp=Z,144nm,1.4s,mb5.7
J16A Bone 80.66 350 ⇓P P 03 38 36.7 0.0
baz=80,SNR=10.0
RRI2 Red Ridge 80.69 350 *e*P P 03 38 36.3 -0.6
comp=Z,51nm,1.4s,mb5.3
RSSD Black Hills 80.69 355 *e*P P 03 38 36.8 -0.1
comp=Z,64nm,1.3s,mb5.4
RSSD LR LR
comp=Z,2μm,22.0s,MS5.4
SNOW Snow King Moun 80.72 350 *e*P P 03 38 36.0 -1.1
comp=Z,28nm,1.0s,mb5.2
TPAW Teton Pass 80.78 350 *e*P P 03 38 36.2 -1.2
comp=Z,109nm,1.3s,mb5.6
L08A Fields 80.82 344 ⇓P P 03 38 37.9 +0.2
baz=80
I18A Diamond G Ranc 80.83 351 ⇑P P 03 38 37.9 +0.3
baz=80,SNR=7.2
LOHW Long Hollow 80.85 350 *e*P P 03 38 37.1 -0.7
comp=Z,80nm,1.4s,mb5.5
L07A Adell 80.88 344 ⇓P P 03 38 37.8 -0.2
baz=80
KHMM Horse Mountain 80.90 340 *e*P P 03 38 40.0 +1.8
J15A Blackfoot 80.90 349 ⇓P P 03 38 38.3 +0.2
baz=80,SNR=9.3
DCID1 Drake Creek 80.91 350 *e*P P 03 38 38.1 0.0
comp=Z,244nm,1.5s,mb5.9
K11A Parker Ranch, 80.91 346 ⇑P P 03 38 38.1 0.0
baz=81
BINY Binghamton 80.95 16 *e*P P 03 38 36.6 -1.8
comp=Z,144nm,1.6s,mb5.7
BINY LR LR
comp=Z,5μm,21.0s,MS5.8
MOD Modoc 80.99 343 *e*P P 03 38 38.3 -0.3
comp=Z,84nm,1.2s,mb5.5
MOD LR LR
comp=Z,2μm,21.0s,MS5.5
MOOW Moose Ponds 81.00 350 *e*P P 03 38 37.0 -1.6
comp=Z,9.6nm,0.8s,mb4.8
J14A Carey 81.00 348 ⇓P P 03 38 38.8 +0.2
baz=81,SNR=7.5
K10A MacKenzie Ranc 81.08 346 ⇓P P 03 38 38.9 -0.2
baz=81,SNR=14
WVOR Wild Horse Val 81.12 344 *e*P P 03 38 38.8 -0.4
comp=Z,56nm,1.2s,mb5.4
WVOR LR LR
comp=Z,1μm,22.0s,MS5.2
I17A Pilgram Creek 81.15 350 ⇓P P 03 38 39.7 +0.4
baz=81
IMW Indian Meadow 81.17 350 *e*P P 03 38 39.3 -0.2
comp=Z,94nm,1.3s,mb5.6
K09A Rome 81.18 345 ⇑P P 03 38 39.5 -0.1
baz=81
J13A Cove Ranch, Pi 81.18 348 ⇓P P 03 38 39.4 -0.2
baz=81,SNR=13
J12A Stokes Ranch, 81.20 347 ⇓P P 03 38 39.6 -0.1
baz=81,SNR=9.3
I16A Newdale 81.23 350 ⇑P P 03 38 39.6 -0.2
baz=81
TAU Tasmania Unive 81.25 222 *e*P P 03 38 33.9 -6.4
comp=Z,81nm,1.5s,mb5.4
TAU LR LR
comp=Z,17μm,20.0s,MS6.4
KIP Kipapa 81.28 305 PFAKE 03 38 50.0 +9.4
KIP LR LR
comp=Z,8μm,20.0s,MS6.0
LAMM Antelope Mount 81.29 341 P P 03 38 39.8 -0.4
K08A Mann Creek Ran 81.37 344 ⇑P P 03 38 40.6 0.0
baz=81,SNR=11
HLID Hailey 81.38 348 *e*P P 03 38 40.1 -0.6
comp=Z,124nm,1.3s,mb5.7
HLID LR LR
comp=Z,1μm,19.0s,MS5.2
HLID Hailey 81.38 348 ⇑P P 03 38 41.0 +0.4
baz=81,SNR=20
YBH Yreka Blue Hor 81.43 341 *e*P P 03 38 40.0 -0.9
comp=Z,53nm,1.0s,mb5.4
YBH LR LR
comp=Z,1μm,19.0s,MS5.2
MFID Camas Ranch 81.50 347 ⇑P P 03 38 41.6 +0.4
baz=81
I15A Monteview 81.50 349 ⇓P P 03 38 42.0 +0.8
baz=81
K07A Rock Creek Ran 81.50 344 ⇑P P 03 38 41.8 +0.5
baz=81,SNR=9.9
I14A Mackay 81.58 348 ⇓P P 03 38 42.1 +0.4
baz=81,SNR=22
H17A Grant Village 81.61 351 ⇑P P 03 38 42.4 +0.6
baz=81
I13A Wildhorse Cree 81.68 348 ⇓P P 03 38 42.7 +0.5
baz=81,SNR=9.1
J10A Berg Farm, Mel 81.69 346 ⇓P P 03 38 42.7 +0.5
baz=81
I12A Atlanta 81.73 347 ⇑P P 03 38 43.0 +0.5
baz=81,SNR=6.0
LKWY Lake 81.76 351 PFAKE 03 38 50.0 +7.4
LKWY LR LR
comp=Z,2μm,21.0s,MS5.4
J09A Fry Pan Ranch, 81.81 345 ⇑P P 03 38 43.2 +0.3
baz=82,SNR=14
K05A Summer Lake 81.91 343 ⇓P P 03 38 43.8 +0.3
baz=82
J08A Circle Bar Ran 81.97 345 ⇑P P 03 38 43.6 -0.1
baz=82,SNR=21
GLMI Grayling 81.99 9 PFAKE 03 38 50.0 +6.2
GLMI LR LR
comp=Z,3μm,20.0s,MS5.6
I11A Placerville 82.00 347 ⇑P P 03 38 44.3 +0.5
baz=82
H16A Russell Place, 82.01 350 ⇑P P 03 38 44.6 +0.7
baz=82
L02A Cave Junction 82.06 341 ⇑P P 03 38 44.0 -0.2
baz=82,SNR=7.5
QLMT Earthquake Lak 82.16 350 *e*P P 03 38 47.1 +2.5
J07A Hines 82.17 344 ⇓P P 03 38 45.0 +0.3
baz=82
RLMT Red Lodge 82.17 352 *e*P P 03 38 41.8 -3.0
comp=Z,75nm,1.3s,mb5.5
RLMT LR LR
comp=Z,2μm,21.0s,MS5.5
RLMT Red Lodge 82.17 352 ⇓P P 03 38 44.7 0.0
baz=82,SNR=12
H14A Leadore 82.24 349 ⇓P P 03 38 45.9 +0.8
baz=82
J06A Christmas Vall 82.24 343 ⇑P P 03 38 45.3 +0.1
baz=82,SNR=14
KBO Bosley Butte 82.28 340 *e*P P 03 38 46.6 +1.2
HUMO Hull Mountain 82.31 341 *e*P P 03 38 45.2 -0.3
comp=Z,57nm,1.2s,mb5.4
HUMO LR LR
comp=Z,2μm,21.0s,MS5.5
I10A Payette 82.33 346 ⇑P P 03 38 46.5 +1.0
baz=82
H13A Challis 82.33 348 ⇑P P 03 38 46.1 +0.5
baz=82,SNR=7.4
G18A Lazy EL Ranch, 82.39 351 ⇓P P 03 38 46.3 +0.4
baz=82,SNR=7.4
I09A Lost Marbles R 82.41 345 ⇓P P 03 38 46.2 +0.2
baz=82,SNR=12
H12A Diamond D Ranc 82.42 348 ⇓P P 03 38 46.8 +0.8
baz=82
I08A Drewsey 82.52 345 ⇑P P 03 38 47.0 +0.4
baz=82,SNR=15
G17A Pierce Place, 82.54 351 ⇓P P 03 38 47.3 +0.6
baz=82
G16A Moss Hill, Enn 82.60 350 ⇓P P 03 38 47.9 +0.9
baz=82
G15A Dillon 82.64 349 ⇑P P 03 38 48.4 +1.2
baz=82
H11A Donnelly 82.77 347 ⇑P P 03 38 48.9 +1.0
baz=82
H10A Noah's Angus R 82.80 346 ⇑P P 03 38 48.6 +0.6
baz=82
G13A Cobalt 82.84 348 ⇑P P 03 38 48.5 +0.3
baz=82,SNR=8.4
DLMT Dillon 82.84 349 *e*P P 03 38 47.7 -0.6
comp=Z,72nm,1.6s,mb5.5
G14A Jackson 82.86 349 ⇑P P 03 38 49.0 +0.7
baz=82

I07A Izee 82.88 344 ⇓P P 03 38 49.1 +0.6
baz=82,SNR=15
I06A Prineville 82.91 344 ⇓P P 03 38 49.1 +0.5
baz=83
KEBM Edson Butte 82.92 340 eP P 03 38 55.5 +6.8
BOZ Bozeman (W) 82.98 350 eP P 03 38 46.2 -2.7
comp=Z,52nm,1.4s,mb5.4
BOZ LR LR
comp=Z,1µm,20.0s,MS5.2
BOZ Bozeman (W) 82.98 350 ⇑P P 03 38 49.5 +0.6
baz=83
BOZ Bozeman (W) 82.98 350 eP P 03 38 46.2 -2.8
BOZ pmax pmax
comp=Z,52nm,1.4s,mb5.4
BOZ MLR MLR
comp=Z,1µm,20.0s,MS5.2
F18A Big Timber 82.99 351 ⇓P P 03 38 49.8 +0.9
baz=83,SNR=5.1
NCB Newcomb 83.03 17 eP P 03 38 49.0 -0.2
comp=Z,74nm,1.5s,mb5.5
NCB LR LR
comp=Z,7µm,20.0s,MS6.0
H09A Durkee 83.06 346 ⇑P P 03 38 49.8 +0.4
baz=83
F17A Fitzpatrick Pl 83.11 351 ⇓P P 03 38 50.2 +0.6
baz=83,SNR=11
F16A Kennard Place, 83.12 350 ⇑P P 03 38 50.3 +0.7
baz=83
H08A Prairie City 83.12 345 ⇑P P 03 38 50.0 +0.3
baz=83,SNR=11
BMO Blue Mountains 83.16 346 eP P 03 38 50.6 +0.7
comp=Z,64nm,1.6s,mb5.4
BMO LR LR
comp=Z,1µm,19.0s,MS5.3
J02A Umpqua 83.18 341 ⇑P P 03 38 50.1 0.0
baz=83
LCCM Lewis and Clar 83.21 350 P P 03 38 50.4 +0.3
F15A Butte 83.30 349 ⇓P P 03 38 51.0 +0.4
baz=83,SNR=7.0
I05A Bend 83.36 343 ⇑P P 03 38 51.4 +0.4
baz=83,SNR=7.3
H07A Lands Inn, Kim 83.38 344 ⇓P P 03 38 51.7 +0.6
baz=83,SNR=16
F14A Wisdom 83.40 349 ⇓P P 03 38 51.5 +0.4
baz=83,SNR=17
G11A Walters Elk Ra 83.49 347 ⇓P P 03 38 51.9 +0.3
baz=83,SNR=17
F13A Darby 83.53 348 ⇓P P 03 38 52.0 +0.3
baz=83,SNR=9.7
G10A Bishop Farm, J 83.55 346 ⇓P P 03 38 52.2 +0.3
baz=83,SNR=11
LONY Lake Ozonia 83.57 16 eP P 03 38 51.1 -0.9
comp=Z,96nm,1.2s,mb5.8
F12A Elk City 83.66 348 ⇓P P 03 38 52.7 +0.2
baz=83,SNR=16
E18A Harlowton 83.67 351 ⇓P P 03 38 53.2 +0.7
baz=83
G09A Cove 83.67 346 ⇑P P 03 38 52.8 +0.3
baz=83,SNR=11
I03A Eugene 83.67 342 ⇓P P 03 38 52.8 +0.3
baz=83
E17A Martinsdale 83.68 351 ⇓P P 03 38 52.6 +0.1
baz=83,SNR=7.9
H06A Lindquist Farm 83.69 344 ⇓P P 03 38 53.0 +0.3
baz=83,SNR=10.0
H05A Madras 83.81 343 ⇓P P 03 38 53.9 +0.7
baz=84
LBNH Lisbon 83.84 18 PFAKE 03 39 00.0 +6.6
LBNH LR LR
comp=Z,6µm,19.0s,MS6.0
I02A Mapleton 83.84 341 ⇓P P 03 38 54.3 +0.9
baz=84
E16A East Helena 83.86 350 ⇓P P 03 38 54.1 +0.7
baz=84,SNR=12
E15A Deer Lodge 83.89 349 ⇑P P 03 38 54.1 +0.5
baz=84
G08A Pilot Rock 83.92 345 ⇓P P 03 38 54.4 +0.6
baz=84
E14A Clinton 84.01 349 ⇑P P 03 38 55.2 +1.0
baz=84
G07A Ruggs Ranch, H 84.05 344 ⇓P P 03 38 54.9 +0.5
baz=84,SNR=6.0
HRY Holter Researc 84.06 350 eP P 03 38 59.6 +5.1
CROR Criterion Rdg 84.07 343 P P 03 38 55.0 +0.5
H04A Detroit Lake 84.07 343 ⇑P P 03 38 54.6 0.0
baz=84,SNR=11
F09A S2 Ranch, Elgi 84.11 346 ⇓P P 03 38 55.2 +0.5
baz=84
E13A Victor 84.14 348 ⇓P P 03 38 55.6 +0.7
baz=84
F10A Beach Ranch, E 84.23 346 ⇑P P 03 38 55.8 +0.4
baz=84,SNR=16
G06A Carlson Farm, 84.23 344 ⇓P P 03 38 55.8 +0.5
baz=84,SNR=9.9
COR Corvallis 84.25 342 eP P 03 38 54.5 -1.0
comp=Z,270nm,1.3s,mb6.2
COR LR LR
comp=Z,3µm,20.0s,MS5.6
D18A Linhart Farms, 84.27 352 ⇑P P 03 38 56.1 +0.6
baz=84
D16A Dana Ranch, Ca 84.33 350 ⇓P P 03 38 56.5 +0.7
baz=84
H03A Soap Creek Ran 84.33 342 ⇓P P 03 38 56.2 +0.3
baz=84,SNR=5.9
D17A Six Diamond Ra 84.34 351 ⇓P P 03 38 56.5 +0.7
baz=84,SNR=12
E12A Beaver Dam Sad 84.35 348 ⇑P P 03 38 56.7 +0.7
baz=84
F08A Pendleton 84.36 345 ⇓P P 03 38 56.4 +0.4
baz=84,SNR=5.4
G05A Wamic 84.39 343 ⇓P P 03 38 56.6 +0.4
baz=84
E11A Bogner Ranch, 84.41 347 ⇑P P 03 38 56.1 -0.2
baz=84,SNR=21
EYMN Ely 84.46 4 eP P 03 38 54.9 -1.6
comp=Z,49nm,1.1s,mb5.5
EYMN LR LR
comp=Z,2µm,21.0s,MS5.5
D15A Lincoln 84.48 350 ⇓P P 03 38 56.7 +0.1
baz=84
MSO Missoula 84.48 349 eP P 03 38 54.6 -2.0
comp=Z,49nm,1.5s,mb5.4
MSO LR LR
comp=Z,817nm,20.0s,MS5.1
HOOD Mount Hood Mea 84.54 343 eP P 03 38 55.1 -1.9
comp=Z,101nm,1.0s,mb5.9
G04A Mulino 84.63 343 ⇑P P 03 38 57.8 +0.4
baz=84,SNR=10
AGMN Agassiz Refuge 84.65 1 eP P 03 38 56.9 -0.5
comp=Z,50nm,1.0s,mb5.6
AGMN LR LR
comp=Z,1µm,20.0s,MS5.3
D14A Greenough 84.66 349 ⇑P P 03 38 57.5 0.0
baz=84
E10A Myers Farm, Un 84.70 346 ⇑P P 03 38 58.0 +0.3
baz=84,SNR=9.1
F07A Phinny Hill Vi 84.70 344 ⇓P P 03 38 58.5 +0.7
baz=84,SNR=8.8
F06A Goldendale 84.77 344 ⇓P P 03 38 58.8 +0.7
baz=84,SNR=10
C17A Wharram Farm, 84.82 351 ⇑P P 03 38 59.2 +0.9
baz=84,SNR=9.6
D13A Huson 84.82 348 ⇓P P 03 38 59.0 +0.7
baz=84,SNR=5.3
E09A Wood Farm, Sta 84.92 346 ⇑P P 03 38 59.4 +0.5
baz=85,SNR=10
G03A Yamhill 84.93 342 ⇑P P 03 38 59.3 +0.4
baz=85
D12A Red Ives Fores 84.93 348 ⇑P P 03 38 59.3 +0.5
baz=85
DGMT Dagmar 85.03 355 eP P 03 38 56.2 -3.2
comp=Z,194nm,1.4s,mb6.0
DGMT LR LR
comp=Z,1µm,21.0s,MS5.3
DGMT Dagmar 85.03 355 ⇑P P 03 38 60.0 +0.7
baz=85
F05A White Salmon 85.03 343 ⇑P P 03 39 00.2 +0.8
baz=85,SNR=10
EGMT Eagleton 85.08 352 eP P 03 38 59.7 +0.1
comp=Z,4.4nm,1.0s,mb4.5
EGMT LR LR
comp=Z,1µm,20.0s,MS5.3
EGMT Eagleton 85.08 352 ⇓P P 03 39 00.3 +0.7
baz=85,SNR=5.8
E08A Dider Farm, El 85.09 345 ⇑P P 03 39 00.0 +0.4
baz=85,SNR=7.2
HAWA Hanford 85.09 345 eP P 03 38 59.7 0.0
comp=Z,101nm,1.0s,mb5.9
HAWA LR LR
comp=Z,2µm,20.0s,MS5.5
D11A Klaveano Farm, 85.10 347 ⇑P P 03 38 59.9 +0.2
baz=85
RSW Rattlesnake Hi 85.10 345 P P 03 39 00.8 +1.0
C16A Fuhringer Ranc 85.11 350 ⇑P P 03 39 00.4 +0.6
baz=85
SNIWA Snively Ranch 85.19 345 P P 03 39 01.1 +0.9
CNB Canberra Magne 85.20 229 eP P 03 38 58.6 -2.2
C15A Salmond Ranch, 85.21 350 ⇑P P 03 39 00.5 +0.3
baz=85
D10A Wagner Farm, O 85.28 347 ⇑P P 03 39 00.6 0.0
baz=85,SNR=19
F04A Amboy 85.30 343 ⇓P P 03 39 00.9 +0.1
baz=85,SNR=10
E07A Sunnyside 85.32 345 ⇓P P 03 39 01.1 +0.3
baz=85,SNR=11
C14A Swan Lake 85.37 349 ⇓P P 03 39 01.5 +0.5
baz=85
C13A Hot Springs 85.41 348 ⇑P P 03 39 01.6 +0.3
baz=85
CAN Canberra 85.42 229 eP P 03 38 57.3 -4.7
comp=Z,33nm,1.1s,mb5.4
CAN Canberra 85.42 229 eP P 03 38 59.0 -2.9
B18A Beardsley Farm 85.45 352 ⇑P P 03 39 02.2 +0.8
baz=85,SNR=7.7
B17A L&G Farms, Che 85.47 351 ⇓P P 03 39 02.1 +0.5
baz=85,SNR=15
PKME Peaks-Kenny Pk 85.48 20 PFAKE 03 39 10.0 +8.4
PKME LR LR
comp=Z,4µm,20.0s,MS5.8
D09A Jones Farm, Ri 85.48 346 ⇑P P 03 39 02.0 +0.4
baz=85,SNR=8.0
E06A Yakima 85.55 344 ⇑P P 03 39 02.6 +0.7
baz=85,SNR=8.8
C12B Naegeli Ranch, 85.59 348 ⇓P P 03 39 02.2 +0.1
baz=85
D08A Wollman Farm, 85.60 345 ⇑P P 03 39 02.7 +0.5
baz=85,SNR=14
B16A M & M Farms, S 85.71 351 ⇓P P 03 39 02.9 +0.1
baz=85,SNR=5.7
B15A Bradely Ranch, 85.73 350 ⇑P P 03 39 03.1 +0.3
baz=85,SNR=7.2
E05A Randle 85.74 343 ⇑P P 03 39 02.2 -0.7
baz=85,SNR=9.2
B14A Marquette Ranc 85.88 349 ⇓P P 03 39 03.8 +0.2
baz=86
LON Longmire 85.93 343 eP P 03 39 02.0 -1.9
comp=Z,62nm,1.4s,mb5.7
LON Longmire 85.93 343 eP P 03 39 02.0 -1.9
LON pmax pmax
comp=Z,62nm,1.4s,mb5.7
TOO Toolangi 85.94 225 eP P 03 39 01.5 -3.0
D07A Quincy 85.94 345 ⇓P P 03 39 04.0 +0.1
baz=86,SNR=8.1
A18A Metzger Ranch, 85.98 352 ⇑P P 03 39 04.3 +0.3
baz=86,SNR=5.4
C10A Spilker Farm, 86.02 347 ⇑P P 03 39 04.3 0.0
baz=86
EPH Ephrata 86.02 345 P P 03 39 04.9 +0.6
TBM Table Mountain 86.06 344 P P 03 39 05.7 +1.3
B13A Whitefish 86.07 349 ⇓P P 03 39 05.0 +0.5
baz=86,SNR=6.6
A17A Triple J Farms 86.10 351 ⇑P P 03 39 05.5 +0.9
baz=86,SNR=6.0
D06A Cle Elum 86.13 344 ⇓P P 03 39 05.0 +0.2
baz=86,SNR=7.0
E03A Lebam 86.15 342 ⇑P P 03 39 05.2 +0.2
baz=86
C09A Chrisman Ranch 86.18 346 ⇓P P 03 39 05.7 +0.6
baz=86,SNR=7.2
A16A West Butte Ran 86.22 351 ⇑P P 03 39 05.6 +0.4
baz=86,SNR=16
C08A Higginbotham F 86.32 346 ⇑P P 03 39 06.1 +0.4
baz=86,SNR=7.6
B12A Libby 86.34 348 ⇓P P 03 39 06.4 +0.6
baz=86,SNR=5.8
D05A Enumclaw 86.38 344 ⇑P P 03 39 06.0 -0.1
baz=86
A15A Johnson Ranch, 86.40 350 ⇑P P 03 39 06.7 +0.6
baz=86,SNR=6.3
NEW Newport 86.41 347 eP P 03 39 05.6 -0.6
comp=Z,107nm,1.1s,mb6.0
NEW LR LR
comp=Z,1µm,20.0s,MS5.3
WTV Waterville 86.42 345 P P 03 39 04.8 -1.4
C07A Waterville 86.44 345 ⇑P P 03 39 06.5 +0.2
baz=86,SNR=9.6
B11A Sandpoint 86.44 347 ⇓P P 03 39 06.8 +0.4
baz=86,SNR=15
B10A Chitwood Farm, 86.47 347 ⇑P P 03 39 07.1 +0.6
baz=86
A14A Double T Ranch 86.49 350 ⇓P P 03 39 07.0 +0.5
baz=86,SNR=13
A13A Flathead Natio 86.60 349 ⇓P P 03 39 07.7 +0.6
baz=86,SNR=14
ULM Lac du Bonnet 86.61 1 P P 03 39 06.5 -0.6
comp=Z,9.5nm,0.7s,mb5.1,baz=187,slow=6.3,SNR=3.5
ULM LR LR 04 16 03.8
comp=Z,1µm,18.9s,MS5.4,baz=353,slow=35
ULM Lac du Bonnet 86.61 1 eP P 03 39 05.8 -1.3
comp=Z,131nm,1.8s,mb5.9
ULM LR LR
comp=Z,2µm,21.0s,MS5.5
WALA Waterton Lakes 86.65 349 eP P 03 39 07.5 +0.2
comp=Z,116nm,1.7s,mb5.8
C05A Tolt Reservoir 86.79 344 ⇑P P 03 39 08.4 +0.3
baz=86,SNR=5.7
A12A Yaak River Ran 86.80 348 ⇑P P 03 39 08.8 +0.7
baz=86,SNR=7.6
B08A Colville Reser 86.92 346 ⇓P P 03 39 09.4 +0.7
baz=87
A11A Hall Mountain, 86.95 348 ⇑P P 03 39 09.3 +0.5
baz=87,SNR=8.7
NLWA Neilton Lookou 87.02 342 PFAKE 03 39 20.0 +11
NLWA LR LR
comp=Z,1µm,19.0s,MS5.3
ARMA Armidale 87.03 234 eP P 03 39 07.9 -2.1
C04A Brinnon 87.11 343 ⇓P P 03 39 09.8 +0.2
baz=87
A10A Northport 87.18 347 ⇑P P 03 39 09.9 0.0
baz=87,SNR=8.1
B07A Winthrop 87.18 345 ⇑P P 03 39 10.4 +0.4
baz=87
A09A Danville 87.37 346 ⇓P P 03 39 11.2 +0.3
baz=87,SNR=15
B05A Bryant 87.42 344 ⇑P P 03 39 11.6 +0.5
baz=87
A08A Turner Farm, O 87.48 346 ⇑P P 03 39 11.7 +0.3
baz=87,SNR=7.2
A07A Ashnola River, 87.79 345 ⇓P P 03 39 12.7 -0.2
baz=88,SNR=6.9
A05A Maple Falls 88.11 344 ⇑P P 03 39 14.9 +0.5
baz=88
SUR Sutherland 90.25 132 PFAKE 03 39 40.0 +15
SUR LR LR
comp=Z,3µm,22.0s,MS5.7
TARA Tarawa 90.52 271 PFAKE 03 39 40.0 +13
TARA LR LR
comp=Z,6µm,19.0s,MS6.0
EDM Edmonton 90.63 351 eP P 03 39 25.3 -0.9
FFC Flin Flon 91.16 357 eP P 03 39 28.1 -0.4
comp=Z,62nm,1.6s,mb5.7
FFC LR LR
comp=Z,2µm,21.0s,MS5.4
STKA Stephens Creek 92.23 227 eP P 03 39 32.1 -2.3
comp=Z,7.3nm,1.2s,mb4.9
STKA Stephens Creek 92.23 227 P P 03 39 31.7 -2.7
comp=Z,2.7nm,0.9s,mb4.6,baz=102,slow=5.7,SNR=6.3
STKA LR LR 04 12 32.0
comp=Z,9µm,21.7s,MS6.2,baz=154,slow=30
HNR Honiara 94.38 255 LR LR 04 13 22.2
comp=Z,3µm,21.2s,MS5.7,baz=136,slow=30
HNR Honiara 94.38 255 PFAKE 03 39 50.0 +5.5
HNR LR LR
comp=Z,3µm,20.0s,MS5.8
SCHQ Schefferville 94.90 17 LR LR 04 19 38.9
comp=Z,5µm,18.5s,MS6.0,baz=222,slow=34
SCHQ Schefferville 94.90 17 PFAKE 03 40 00.0 +14
SCHQ LR LR
comp=Z,6µm,20.0s,MS6.1
FCC Fort Churchill 95.17 2 eP P 03 39 43.3 -3.6
comp=Z,46nm,1.3s,mb5.8
FCC Fort Churchill 95.17 2 eP P 03 39 43.3 -3.6
FCC pmax pmax
comp=Z,46nm,1.3s,mb5.8
BOSA Boshof 95.62 132 LR LR 04 14 45.3
comp=Z,2µm,21.9s,MS5.6,baz=230,slow=30
BOSA Boshof 95.62 132 PFAKE 03 40 00.0 +10
BOSA LR LR
comp=Z,3µm,22.0s,MS5.7
BOSA Boshof 95.62 132 eP P 03 39 49.0 -1.0
DBIC Dimbokro 96.00 86 LR LR 04 18 08.1
comp=Z,2µm,21.2s,MS5.6,baz=209,slow=32
DBIC Dimbokro 96.00 86 PFAKE 03 40 00.0 +8.1
DBIC LR LR
comp=Z,2µm,21.0s,MS5.6
DBIC Dimbokro 96.00 86 eP P 03 39 51.4 -0.5
TSUM Tsumeb 97.27 120 PFAKE 03 40 10.0 +12
TSUM LR LR
comp=Z,1µm,19.0s,MS5.5
WRAK Wrangell Islan 97.40 341 PFAKE 03 40 10.0 +13
WRAK LR LR
comp=Z,1µm,19.0s,MS5.5
CTA Charters Tower 97.56 238 LR LR 04 16 41.1
comp=Z,13µm,21.0s,MS6.4,baz=127,slow=31
CTAO Charters Tower 97.56 238 PFAKE 03 40 10.0 +11
CTAO LR LR
comp=Z,13µm,21.0s,MS6.4
CTAO Charters Tower 97.56 238 eP P 03 39 56.6 -2.3
LBTB Lobatse 98.45 130 eP P 03 40 01.7 -1.2
LBTB LR LR
comp=Z,2µm,22.0s,MS5.6
MIDW Midway 98.98 298 PFAKE 03 40 10.0 +5.0
MIDW LR LR
comp=Z,9µm,21.0s,MS6.3
YKA Yellowknife Ar 99.84 352 P Pdif 03 40 05.4 -3.3
comp=Z,0.7nm,0.8s,baz=161,slow=4.1,SNR=3.6
YKA LR LR 04 23 42.4
comp=Z,608nm,18.0s,MS5.2,baz=140,slow=35
YKA Yellowknife Ar 99.84 352 P Pdif 03 40 05.4 -3.4
YKA LR LR 04 23 42.4
ASAR Alice Springs 102.86 227 Pdiff Pdif 03 40 19.1 -3.2
comp=Z,2.3nm,1.1s,baz=143,slow=3.8,SNR=4.7
ASAR PP PP 03 44 36.2 +0.4
comp=Z,2.1nm,1.0s,baz=132,slow=6.4,SNR=4.5
NWAO Narrogin (SRO) 103.52 209 PFAKE 03 40 40.0 +15
NWAO LR LR
comp=Z,3µm,22.0s,MS5.8
PMG Port Moresby 104.09 247 PFAKE 03 40 40.0 +12
PMG LR LR
comp=Z,5µm,19.0s,MS6.0
PMG Port Moresby 104.09 247 eP Pdif 03 40 25.9 -1.8
KDAK Kodiak Island 104.88 333 PFAKE 03 40 40.0 +8.8
KDAK LR LR
comp=Z,4µm,20.0s,MS5.9
WRAB Tennant Creek 105.42 230 PFAKE 03 45 00.0 +12
WRAB LR LR
comp=Z,16µm,20.0s,MS6.6
EGAK Eagle 106.80 342 PFAKE 03 45 00.0 +11
EGAK LR LR
comp=Z,2µm,21.0s,MS5.7
LSZ Lusaka 107.20 125 PFAKE 03 45 00.0 +8.9
LSZ LR LR
comp=Z,2µm,21.0s,MS5.5
COLA College 108.65 340 PFAKE 03 45 00.0 +7.8
COLA LR LR
comp=Z,1µm,20.0s,MS5.5
SFJD Kangerlussuaq 109.35 18 PFAKE 03 45 00.0 +6.6
SFJD LR LR
comp=Z,5µm,20.0s,MS6.1
RTC Rabat Centre 109.75 62 PFAKE 03 45 10.0 +15
RTC LR LR
comp=Z,2µm,22.0s,MS5.6
RES Resolute Bay 111.14 1 ePKIKP PKiKP 03 44 55.5 -1.2
SFS San Fernando 111.48 60 PFAKE 03 45 10.0 +12
SFS LR LR
comp=Z,2µm,21.0s,MS5.5
ADK Adak 111.98 319 PFAKE 03 45 10.0 +11
ADK LR LR
comp=Z,6µm,21.0s,MS6.2
MTE Manteigas 112.53 56 PFAKE 03 45 10.0 +10
MTE LR LR
comp=Z,2µm,21.0s,MS5.6
MBWA Marble Bar 112.58 218 PFAKE 03 45 10.0 +8.9
MBWA LR LR
comp=Z,6µm,19.0s,MS6.2
PAB San Pablo 114.27 58 PFAKE 03 45 10.0 +6.3
PAB LR LR
comp=Z,2µm,22.0s,MS5.7
PAB San Pablo 114.27 58 eP Pdif 03 41 20.8 +7.9
ESLA Sonseca Array 114.59 58 PFAKE 03 45 10.0 +5.7
ESLA LR LR
comp=Z,11µm,21.0s,MS6.5
ABPO Ambohimpanom 115.30 143 PFAKE 03 45 20.0 +14
ABPO LR LR
comp=Z,1µm,20.0s,MS5.5
MBAR Mbarara 119.36 116 PFAKE 03 45 20.0 +5.7
MBAR LR LR
comp=Z,1µm,22.0s,MS5.5
GUMO Guam 120.14 265 PFAKE 03 45 30.0 +14
GUMO LR LR
comp=Z,3µm,20.0s,MS5.9
ESK Eskdalemuir 121.49 42 PFAKE 03 45 30.0 +13
ESK LR LR
comp=Z,2µm,19.0s,MS5.7
EKA Eskdalemuir Ar 121.52 42 PKP PKPdf 03 45 16.9 -0.1
comp=Z,1.5nm,0.9s,baz=292,slow=2.2,SNR=2.5
AVF Avril sur Loir 122.40 53 ePKP1 PKPdf 03 45 18.6 -0.5
comp=Z,10nm,0.9s
SSF Saint Saulge 122.60 53 ePKP1 PKPdf 03 45 19.2 -0.2
comp=Z,28nm,1.4s
SMF Signal de Mont 122.67 53 ePKP1 PKPdf 03 45 20.0 +0.4
comp=Z,40nm,1.3s
LOR Lormes 122.89 53 ePKP1 PKPdf 03 45 20.2 +0.2
comp=Z,43nm,1.3s
ORIF Oris-en-Rattie 123.39 56 ePKP1 PKPdf 03 45 21.3 +0.3
comp=Z,40nm,1.3s
VSL Villasalto 123.84 63 PFAKE 03 45 30.0 +7.9
VSL LR LR
comp=Z,1µm,19.0s,MS5.6
BNI Bardonecchia 123.97 56 PFAKE 03 45 30.0 +7.9
BNI LR LR
comp=Z,2µm,22.0s,MS5.7
BNI Bardonecchia 123.97 56 ePKIKP PKPdf 03 45 21.4 -0.7
BAIF Baives 124.03 50 ePKP1 PKPdf 03 45 22.0 -0.1
comp=Z,34nm,1.1s
LPL La Plagne 124.17 55 ePKP1 PKPdf 03 45 23.4 +0.9
comp=Z,36nm,1.1s
LPG La Plagne 124.17 56 ePKP1 PKPdf 03 45 22.9 +0.4
comp=Z,33nm,1.2s
GIVF Givet 124.42 50 ePKP1 PKPdf 03 45 23.4 +0.6
HINF Hinteralfeld 124.99 53 ePKP1 PKPdf 03 45 24.0 0.0
comp=Z,42nm,1.4s
WLF Walferdange 125.11 51 PFAKE 03 45 30.0 +5.8
WLF LR LR
comp=Z,1µm,22.0s,MS5.5
WLF Walferdange 125.11 51 ePKIKP PKPdf 03 45 23.2 -1.0
BILL Bilibino 125.78 333 PFAKE 03 45 40.0 +15
BILL LR LR
comp=Z,3µm,21.0s,MS5.9
BILL Bilibino 125.78 333 ePKIKP PKPdf 03 45 23.6 -1.3
KAPI Kappang 125.88 228 PFAKE 03 45 40.0 +13
KAPI LR LR
comp=Z,6µm,20.0s,MS6.2
BFO Black Forest 126.09 53 PFAKE 03 45 40.0 +14
BFO LR LR
comp=Z,1µm,21.0s,MS5.6
BFO Black Forest 126.09 53 ePKPdf PKPdf 03 45 35.9 +10
VLC Villacollemand 126.18 58 PFAKE 03 45 40.0 +14
VLC LR LR
comp=Z,606nm,19.0s,MS5.3
TUE Stuetta 126.20 55 PFAKE 03 45 40.0 +14
TUE LR LR
comp=Z,2µm,22.0s,MS5.7
PET Petropavlovsk 126.24 313 PFAKE 03 45 40.0 +14
PET LR LR
comp=Z,5µm,21.0s,MS6.1
PET Petropavlovsk 126.24 313 ePKIKP PKPdf 03 45 24.8 -1.4
WDD Wield Dalam 126.25 69 PFAKE 03 45 40.0 +13
WDD LR LR
comp=Z,2µm,20.0s,MS5.8
STU Stuttgart 126.77 52 ePKIKP PKPdf 03 45 26.4 -1.0
STU Stuttgart 126.77 52 ePKPdf PKPdf 03 45 33.7 +6.3
DAVA Damuels 126.79 54⇑ epPKiKP PKiKP 03 45 37.5 +10
comp=Z,27nm,1.4s
FETA Feichten 127.27 55⇓ ipPKiKP PKiKP 03 45 35.3 +6.5
comp=Z,11nm,1.0s
RETA Reutte 127.42 54⇓ ipPKiKP PKiKP 03 45 35.4 +6.2
comp=Z,19nm,1.2s
SQTA Sankt Quirin 127.64 55⇑ ipPKiKP PKiKP 03 45 36.5 +6.8
AQU L'Aquila 127.69 61 PFAKE 03 45 40.0 +11

AQU LR LR

comp=Z,1μm,19.0s,MS5.5

AQU L'Aquila 127.69 61 *e*PKIKP PKPdf 03 45 28.5 -0.8
UBBA Unterbreizbach 127.80 50 *e*PKPdf PKPdf 03 45 37.2 +7.9
WTTA Wattenberg 127.93 55⇑*i*pPKiKP PKPdf 03 45 40.2 +11
comp=Z,40nm,1.7s
CEL Celeste 128.14 67 PFAKE 03 45 40.0 +10
CEL LR LR

comp=Z,1μm,20.0s,MS5.7

CLZ Clausthal 128.27 49 *e*PKPdf PKPdf 03 45 34.9 +4.8
GRF Grafenberg Arr 128.29 52 *e*PKIKP PKPdf 03 45 37.4 +7.2
GRF *e* 03 47 39.7
GRF *e*SS SS 04 04 47.4 -3.0
GRF MLR MLR

comp=Z,1μm,22.0s,MS5.5

GRF Grafenberg Arr 128.29 52 *e*PKIKP PKPdf 03 45 37.4 +7.2
GRF *e* 03 47 39.7
GRF *e*SS SS 04 04 47.4 -3.0
GRF Grafenberg Arr 128.29 52 *e*PKPdf PKPdf 03 45 37.4 +7.2
GRF *e*PP PP 03 47 39.7 +4.6
GRF *e*PPP 03 50 13.9
GRF *e*SS SS 04 04 47.4 -3.0
GRF *e*L 04 38 18.0

comp=Z,1μm,22.0s

ABTA Abfaltersbach 128.37 56⇓*i*pPKiKP PKPdf 03 45 36.9 +6.5
comp=Z,18nm,1.6s
CUC Castrocucco 128.66 65 PFAKE 03 45 40.0 +8.7
CUC LR LR

comp=Z,1μm,20.0s,MS5.7

BSEG Bad Segeberg 128.68 46 *e*PKPdf PKPdf 03 45 37.3 +6.5
MOX Moxa 128.76 51 *e*PKP PKPdf 03 45 41.0 +10
comp=Z,77nm,1.8s
MOX

comp=Z,600nm,20.0s

MOX Moxa 128.76 51 *e*PKPdf PKPdf 03 45 38.5 +7.4
MANZ Manzenberg 128.91 51 *e*PKPdf PKPdf 03 45 37.6 +6.2
TRI Trieste 128.93 57 PFAKE 03 45 40.0 +8.4
TRI LR LR

comp=Z,742nm,20.0s,MS5.4

CADS Cadrg 129.05 56 *e*PKPdf PKPdf 03 45 41.0 +9.3
TIP Timpagrande 129.09 66 PFAKE 03 45 40.0 +7.9
TIP LR LR

comp=Z,2μm,21.0s,MS5.8

WET Wettzell 129.21 53 *e*PKPdf PKPdf 03 45 37.9 +5.9
KONO Kongsberg 129.22 39 PFAKE 03 45 40.0 +8.3
KONO LR LR

comp=Z,2μm,22.0s,MS5.7

TANN Tannenbergstha 129.23 51 *e*PKPdf PKPdf 03 45 34.8 +2.8
KBS Kingsbay 129.47 14 PFAKE 03 45 40.0 +8.3
KBS LR LR

comp=Z,2μm,21.0s,MS5.7

COCO West Island 129.53 198 PFAKE 03 45 40.0 +6.2
COCO LR LR

comp=Z,2μm,20.0s,MS5.8

KHC Kasperske Hory 129.65 53 *e*PKP PKPdf 03 45 42.5 +10
OBKA Obir 129.66 56⇑*i*pPKiKP PKPdf 03 45 40.7 +7.8
comp=Z,6.7nm,0.8s
GEC2 GERESS Array S 129.67 53 *e*PKPdf PKPdf 03 45 31.9 -1.0
GEC2 GERESS Array S 129.67 53 *e*PKPdf PKPdf 03 45 35.5 +2.6
GERES GERESS Array B 129.67 53 PKP PKPdf 03 45 35.0 +2.1
comp=Z,1.6nm,0.8s,baz=192,slow=1.2,SNR=12
CLL Collm 129.76 50 *e*PKP PKPdf 03 45 36.0 +3.0
CLL *i* 03 45 43.0
CLL *i* 03 45 50.4
CLL LR LR

comp=Z,2μm,24.1s,MS5.7

CLL Collm 129.76 50 *e*PKIKP PKPdf 03 45 36.0 +3.0
CLL *i* 03 45 43.0
CLL MLR MLR

comp=Z,2μm,24.1s,MS5.7

CLL Collm 129.76 50 *e*PKPdf PKPdf 03 45 39.3 +6.3
CLL Collm 129.76 50 *e*(PKPdf) PKPdf 03 45 36.0 +3.0
CLL *i* x x 03 45 43.0

comp=Z,23nm,1.5s

CLL *i* x x 03 45 50.4

comp=Z,111nm,2.4s

CLL *i* x x 03 46 07.0
CLL *e*PPS 03 59 36.0
CLL *e*(SS) 04 05 33.0
CLL *e*SSS 04 09 57.0
CLL *e*SSSS 04 13 30.0
MOA Molln 129.80 55⇑*i*pPKiKP PKPdf 03 45 42.7 +10
comp=Z,5.4nm,0.8s
BOJS Bojanci 129.88 58 *e*PKPdf PKPdf 03 45 43.4 +10
SOKA Soboth 130.03 56⇑*i*pPKiKP PKPdf 03 45 41.4 +7.8
comp=Z,7.4nm,0.8s
NOA NORSAR Array B 130.17 37 PKP PKPdf 03 45 33.1 -0.4
comp=Z,1.4nm,0.9s,baz=271,slow=1.8,SNR=3.0
BRG Berggiesshubel 130.25 51 *e*P PKPdf 03 45 44.1 +10
BRG *i* 04 05 59.0
BRG *e* 04 10 23.0
BRG LR LR

comp=Z,610nm,20.8s,MS5.3

BRG Berggiesshubel 130.25 51 *e*PKPdf PKPdf 03 45 37.4 +3.5
BRG Berggiesshubel 130.25 51 *e*P PKPdf 03 45 44.1 +10
comp=Z,12nm,1.2s
BRG *i* 04 05 59.0
BRG *e* 04 10 23.0
BRG

comp=N,994nm,30.3s

BRG

comp=E,1μm,33.1s

BRG

comp=Z,1μm,20.8s

PVCC Panska Ves 130.57 51 *e*PKP PKPdf 03 45 41.4 +6.9
PVCC *ex* x 03 45 44.6
PVCC AMS AMS 04 36 40.0

comp=Z,1μm,21.5s

CSNA Conrad Observa 130.86 55⇑*i*pPKiKP PKPdf 03 45 44.5 +9.3
comp=Z,9.8nm,1.0s
CONA Conrad Observa 130.87 55⇑*i*pPKiKP PKPdf 03 45 44.6 +9.4
comp=Z,11nm,1.1s
TREC Trest 130.91 53 *e*PKP PKPdf 03 45 46.2 +11
TREC *ex* x 03 45 51.8
DAV Davao City (W) 130.99 244 PFAKE 03 45 50.0 +13
DAV LR LR

comp=Z,3μm,22.0s,MS6.0

DPC Dobruska-Polom 131.64 52 *e*PKP PKPdf 03 45 43.6 +7.0
DPC *ex* x 03 45 48.0
DPC AMS AMS 04 35 00.0

comp=Z,1μm,23.9s

MSEY Mahe Island 131.67 143 PFAKE 03 45 50.0 +12
MSEY LR LR

comp=Z,2μm,22.0s,MS5.7

MODS Modra-Piesok 131.88 54 *e*PKP PKPdf 03 45 33.2 -3.9
TIR Tirane 132.01 64 PFAKE 03 45 50.0 +12
TIR LR LR

comp=Z,781nm,19.0s,MS5.4

PKSM Moragy 132.35 58⇓*i*P PKPdf 03 45 45.4 +7.3
VYHS Vyhne 132.93 55 *e*PKP PKPdf 03 45 33.8 -5.3
VYHS *e* 03 45 44.4
PSZ Piszkesteto 133.52 56 PFAKE 03 45 50.0 +10
PSZ LR LR

comp=Z,2μm,21.0s,MS5.7

PSZ Piszkesteto 133.52 56 *e*PKIKP PKPdf 03 45 39.4 -0.8
ERM Erimo 133.71 296 PFAKE 03 45 50.0 +9.2
ERM LR LR

comp=Z,7μm,22.0s,MS6.3

OJC Ojcow 133.82 52 *e*PKPdf PKPdf 03 45 43.1 +2.4
OJC *e*SP SP 03 58 29.3 +1.2
OJC L 04 47 15.9

comp=Z,0.9nm,22.2s

OJC Ojcow 133.82 52 *e*PKIKP PKPdf 03 45 43.1 +2.4
OJC *e*SP SP 03 58 29.3 +1.2
BZS Buzias 134.26 59⇓*i*P PKPdf 03 45 42.4 +0.7
STHS Stebnicka Huta 134.64 54 *e*PKP PKPdf 03 45 34.3 -8.0
GZR Gura Zlata 135.02 59⇓*i*P PKPdf 03 45 49.0 +5.9
YSS Yuzh-Sakhalins 135.02 303 PFAKE 03 45 50.0 +7.0
YSS LR LR

comp=Z,2μm,19.0s,MS5.9

YSS Yuzh-Sakhalins 135.02 303 *e*PKIKP PKPdf 03 45 41.5 -1.5
DRGR 135.22 58⇓*i*P PKPdf 03 45 47.3 +3.9
TRPA Tarpa 135.31 56⇓*i*P PKPdf 03 45 51.7 +8.2
KWP Kalwaria 135.61 54 PFAKE 03 45 50.0 +5.9
KWP LR LR

comp=Z,2μm,20.0s,MS5.8

KEV Kevo 135.75 24 PFAKE 03 45 50.0 +6.3
KEV LR LR

comp=Z,926nm,19.0s,MS5.5

MJAR Matsushiro Arr 135.90 287 PKP PKPdf 03 45 44.5 -0.6
comp=Z,2.9nm,0.9s,baz=176,slow=3.8,SNR=4.8
MAJO Matsushiro 135.90 287 PFAKE 03 46 00.0 +15
MAJO LR LR

comp=Z,3μm,20.0s,MS6.0

MAJO Matsushiro 135.90 287 *e*PKIKP PKPdf 03 45 43.5 -1.5
MAT Matsushiro 135.90 287 *e*PKP PKPdf 03 45 48.7 +3.7
KKM Kota Kinabalu 136.67 233 PFAKE 03 46 00.0 +13
KKM LR LR

comp=Z,523nm,22.0s,MS5.2

BUR08 Bucovina Ar. S 137.02 57 *e*PKPdf PKPdf 03 45 44.0 -2.7
BURAR Bucovina Array 137.03 57⇑*i*P PKPdf 03 45 49.6 +2.8
MLR Muntele Rosu 137.23 60 PKhKP 03 45 40.6
comp=Z,4.4nm,1.3s,baz=236,slow=12,SNR=2.1
MLR Muntele Rosu 137.23 60⇓*i*P PKPdf 03 45 58.3 +11
PLOR Plostina 137.77 59⇑*i*P PKPdf 03 45 58.8 +11
TIXI Tiksi 137.78 340 *e*PKPdf PKPdf 03 45 45.7 -1.7
TIXI LR LR

comp=Z,1μm,21.0s,MS5.7

TIXI Tiksi 137.78 340⇑*i*PKIKP PKPdf 03 45 47.4 0.0
VRI Vrincioaia 137.83 59⇑*i*P PKPdf 03 46 04.8 +16
APA Apatity 138.71 26 *i* PKIKP PKPdf 03 46 04.0 +15
APA *i* 03 51 48.0
APA *i* 03 52 54.0
APA MLR MLR

comp=Z,2μm,20.0s,MS5.9

TIRR Tirgusor 138.81 62⇓*i*P PKPdf 03 46 02.2 +12
ISP Isparta 139.01 72 PFAKE 03 46 00.0 +9.3
ISP LR LR

comp=Z,1μm,22.0s,MS5.5

LVZ Lovozero 139.01 25 PFAKE 03 46 00.0 +10
LVZ LR LR

comp=Z,981nm,20.0s,MS5.5

KIEV Kiev 139.85 52 *e*PKPdf PKPdf 03 45 50.6 -1.2
KIEV LR LR

comp=Z,2μm,22.0s,MS5.7

AKASG Malin Array Be 139.86 52 PKP PKPdf 03 45 50.2 -1.7
comp=Z,0.5nm,0.3s,baz=274,slow=3.0,SNR=5.5
AKBB Malin Array Si 139.86 52 *e*PKPdf PKPdf 03 45 50.5 -1.4
EIL Elat 139.87 86 PKP PKPdf 03 45 52.2 -0.4
comp=Z,1.8nm,0.4s,baz=39,slow=18,SNR=2.6
EIL Elat 139.87 86 PKP PKPdf 03 45 52.2 -0.4
HABR Khabarovsk 140.35 304 *i* P Pdif 03 43 07.7 -1.2
HABR *e* 03 48 51.4
HABR *e*PPP 03 51 55.2
HABR *e*SS SS 04 07 17.6 +1.7
HABR *e*SSS 04 12 31.9
ANTO Ankara 141.21 70 PFAKE 03 46 10.0 +15
ANTO LR LR

comp=Z,738nm,21.0s,MS5.4

MMAI Mount Meron Ar 141.43 81 PKP PKPdf 03 45 55.5 +0.2
comp=Z,0.8nm,0.4s,baz=252,slow=7.4,SNR=3.7
YAK Yakutsk 141.52 326 *e*PKP PKPdf 03 45 54.7 +0.2
YAK LR LR

comp=Z,5μm,21.0s,MS6.2

YAK Yakutsk 141.52 326 *e*PKIKP PKPdf 03 45 56.8 +2.3
YAK pmax pmax

comp=Z,23nm,1.1s

YAK pmax pmax

comp=E,8.0nm,1.1s

YAK pmax pmax

comp=N,6.0nm,1.0s

BR131 Keskin Array S 141.82 70 *e*PKPdf PKPdf 03 45 53.9 -1.9
BR131 LR LR

comp=Z,951nm,22.0s,MS5.5

BRTR Keskin Array B 141.82 70 PKP PKPdf 03 45 55.3 -0.5
comp=Z,2.3nm,0.7s,baz=204,slow=5.1,SNR=8.7
ASF Jabal al Asfar 142.34 83 PKP PKPdf 03 45 56.0 -0.9
comp=Z,1.4nm,0.7s,baz=76,slow=4.2,SNR=2.7
KLR Kul'dur 142.55 305 *e*PKIKP PKPdf 03 45 58.0 +1.3
KLMR Klimovskoe 143.76 34 *e*PKIKP PKPdf 03 46 04.7 +6.2
MDJ Mudanjiang 143.89 298 PKP PKPdf 03 45 57.0 -2.3
MDJ XPKP 03 46 01.5
MDJ PP PP 03 49 13.0 -0.4
MDJ SS SS 04 07 55.3 -1.9
MDJ PP PP

comp=Z,405nm,10.3s

MDJ LR LR

comp=N,3μm,35.6s

MDJ LR LR

comp=Z,4μm,33.1s,MS6.0

MDJ Mudanjiang 143.89 298 *e*PKPdf PKPdf 03 45 55.8 -3.5
MDJ LR LR

comp=Z,3μm,22.0s,MS6.0

OBN Obninsk 143.90 45 *e*PKPdf PKPdf 03 45 57.0 -1.9
OBN ⇑*e*PKP PKPdf 03 46 01.0 +2.1
OBN LR LR

comp=Z,2μm,23.0s,MS5.8

OBN Obninsk 143.90 45 *i* PKIKP PKPdf 03 46 01.9 +3.0
OBN *e*SS SS 04 08 41.1 +45
OBN pmax pmax

comp=Z,56nm,1.2s

KSRS Korea Array 144.08 285 PKP PKPdf 03 45 58.6 -1.2
comp=Z,3.5nm,0.8s,baz=110,slow=3.4,SNR=4.8
MOS Moscow 144.35 43 *e*PKIKP PKPdf 03 46 04.2 +4.5
MOS pmax pmax

comp=Z,51nm,0.8s

MOS MLR MLR

comp=Z,900nm,19.0s,MS5.6

YHNB Yeheng 144.76 261 PFAKE 03 46 10.0 +8.6
YHNB LR LR

comp=Z,2μm,22.0s,MS5.9

TATO Taipei 144.82 262 PFAKE 03 46 10.0 +8.5
TATO LR LR

comp=Z,3μm,22.0s,MS5.9

INCN Inchon 145.09 285 *e*PKPdf PKPdf 03 46 01.0 -0.6
INCN LR LR

comp=Z,3μm,20.0s,MS6.0

ANN Anapa 145.25 62 *i* PKIKP PKPdf 03 46 00.9 -0.7
ANN *e* 03 46 07.4
ANN pmax pmax

comp=Z,88nm,1.0s

CLNS Chul'man 145.47 319 *e*PKIKP PKPdf 03 46 06.7 +5.1
CLNS pmax pmax

comp=Z,139nm,1.0s

CLNS pmax pmax

comp=E,48nm,1.0s

CLNS pmax pmax

comp=N,69nm,1.2s

VOR Voronezh 146.04 50 PKP2 PKPab 03 46 03.0 -1.2
VOR pmax pmax

comp=Z,340nm,2.2s

VSR Storozhevoye 146.10 51 *e*PKP2 PKPab 03 46 04.7 +0.3
VSR pmax pmax

comp=Z,9.0nm,1.0s

VSR pmax pmax

comp=N,4.0nm,1.3s

VSR pmax pmax

comp=E,5.0nm,0.7s

CN2 Changchun 146.82 296 *e*PKP PKPbc 03 46 06.5 +0.3
CN2 PP PP 03 49 36.3 +5.5
CN2 PP PP

comp=Z,700nm,8.0s

CN2 LR LR

comp=Z,2μm,19.0s,MS6.0

SOC Sochi 146.83 65 *i* PKP2 PKPab 03 46 09.4 +1.9
SOC *e* 03 49 34.9
QZH Quanzhou 147.10 259 PKP PKPab 03 46 08.0 -1.1
SSE Sheshan 147.62 271 PKP PKPdf 03 46 05.5 -0.6
SSE PP PP 03 49 38.3 +2.5
SSE SS SS 04 08 39.5 -0.8
SSE PP PP

comp=Z,262nm,5.4s

SSE LR LR

comp=Z,2μm,16.3s,MS6.0

VRHR Novokhopersk 147.65 51 *e*PKP2 PKPbc 03 46 08.4 +0.2
VRHR pmax pmax

comp=Z,40nm,1.0s

VRHR pmax pmax

comp=N,7.0nm,0.4s

VRHR pmax pmax

comp=E,20nm,0.9s

KIV Kislovodsk 148.99 64 *e*PKPbc PKPbc 03 46 10.9 -1.0
KIV LR LR

comp=Z,913nm,20.0s,MS5.6

KIV Kislovodsk 148.99 64 *i* PKP2 PKPbc 03 46 12.3 +0.3
KIV *e* 03 53 14.9
KIV *e*SS SS 04 08 59.4 +4.2
KIV *e*SSS 04 14 38.6
KIV pmax pmax

comp=Z,35nm,1.0s

NAY Al-Naaiem 149.57 94 *e*P PKPab 03 46 17.6 -1.4
baz=94
NAY AMb AMB 03 46 31.1

comp=Z,70nm,1.1s,baz=94

RDF Al-Radifah 149.69 95 *e*P PKPab 03 46 17.7 -1.7
baz=95
RDF AMb AMB 03 46 31.5

comp=Z,111nm,0.9s,baz=95

NJ2 Nanjing 149.81 272 *e*PKP PKPdf 03 46 02.3 -7.3
NJ2 APKP 03 46 12.3
NJ2 XPKP 03 46 16.5
NJ2 PKS 03 49 36.0
NJ2 PP PP

comp=Z,1μm,10.2s

NJ2 LR LR

comp=Z,35μm,23.8s,MS7.1

MIB Mutribah 149.87 93 *e*P PKPab 03 46 17.4 -2.8
baz=93
MIB AMb AMB 03 46 28.6

comp=Z,119nm,0.8s,baz=93

UMR Umm Al-Rimmam 150.07 94 *e*P PKPab 03 46 17.9 -3.1
baz=94
UMR AMb AMB 03 46 25.5

comp=Z,141nm,0.9s,baz=94

QIZ Qiongzhong 150.29 241 PKP PKPdf 03 46 06.0 -4.7
QIZ PP PP 03 49 51.8 +0.8
QIZ SS SS 04 09 07.0 -2.5
QIZ LR LR

comp=N,1μm,25.2s,MS5.8

QIZ LR LR

comp=E,1μm,21.9s,MS5.8

QIZ LR LR

comp=Z,2μm,23.7s,MS5.9

QIZ Qiongzhong 150.29 241 PFAKE 03 46 20.0 +9.3
QIZ LR LR

comp=Z,2μm,21.0s,MS5.9

HIA Hailar 150.37 307 *e*PKPbc PKPbc 03 46 12.6 -2.5
HIA *e*PKPab PKPab 03 46 17.8 -3.8
HIA LR LR

comp=Z,5μm,22.0s,MS6.3

HIA Hailar 150.37 307 *e*PKIKP PKPdf 03 46 12.6 +2.7
HIA *e* 03 46 17.8
BOD Bodaibo 150.43 326 *e*PKIKP PKPbc 03 46 17.2 +2.2
BOD pmax pmax

comp=Z,43nm,1.3s

TRD Trivandrum 151.46 168 *e*P PKPdf 03 46 09.8 -2.9
TIA Tai'an 152.29 279 *e*PKP PKPbc 03 46 17.5 -2.6
MAK Makhachkala 152.50 66 *i* PKIKP PKPbc 03 46 21.1 +0.8
MAK *e* 03 53 14.2
MAK *e*PPP 03 53 33.4
MAK *e*SS SS 04 09 36.4 +2.2
MAK pmax pmax

comp=Z,265nm,1.5s

KOD Kodaikanal 153.23 169 *e*P PKPdf 03 46 12.8 -2.5
BJI Beijing 153.54 288 PKP PKPdf 03 46 17.8 +2.8
BJI SS SS 04 09 42.0 -3.8
BJI PP PP

comp=Z,375nm,5.5s

BJI LR LR

comp=N,2μm,26.7s,MS5.9

BJI LR LR

comp=E,2μm,28.6s,MS5.9

BJI LR LR

comp=Z,4μm,32.5s,MS6.0

BJT Baijiatuan 153.54 287 *e*PKPdf PKPdf 03 46 13.3 -1.6
BJT LR LR

comp=Z,3μm,20.0s,MS6.1

ARU Arti 154.53 32 *e*PKPbc PKPbc 03 46 21.0 -3.3
ARU *e*PKPab PKPab 03 46 34.2 -4.6
ARU LR LR

comp=Z,2μm,22.0s,MS5.9

ARU Arti 154.53 32 *c*PKIKP PKPbc 03 46 22.9 -1.3
ARU *i* 03 46 33.1
SVE Sverdlovsk 155.10 29 *e*PKP2 PKPab 03 46 47.8 +6.6
SVE pmax pmax

comp=Z,38nm,1.3s

MNGI Mangalore 155.32 162 *ex* x 03 47 13.4
TIY Taiyuan 156.24 281 PKP PKPdf 03 46 13.5 -5.3
TIY LR LR

comp=N,665nm,18.0s,MS5.7

TIY LR LR

comp=E,663nm,14.1s,MS5.7

TIY LR LR

comp=Z,1μm,16.8s,MS5.8

MDRS Chennai 156.35 174 *e*P PKPdf 03 46 15.3 -4.3
CM31 Chiang Mai Arr 156.79 223 PFAKE 03 46 30.0 +10
CM31 LR LR

comp=Z,2μm,22.0s,MS6.0

CMAR Chiang Mai Arr 156.79 223 PKP PKPdf 03 46 19.2 -0.8
comp=Z,1.4nm,0.4s,baz=209,slow=29,SNR=2.7
HHC Hu-ho-hao-te 157.07 289 *e*PKP PKPdf 03 46 16.0 -3.7
HHC APKP 03 46 27.0
HHC PKS 03 49 48.0
HHC PP PP 03 50 29.5 0.0
HHC SKS SKSdf 03 53 16.0 -10
HHC SKKS SKKSac 03 57 12.8 -5.6
HHC SS SS 04 10 17.8 -6.2
HHC PP PP

comp=Z,527nm,7.1s

HHC LR LR

comp=N,1μm,20.2s,MS6.0

HHC LR LR

comp=E,2μm,25.0s,MS6.0

HHC LR LR

comp=Z,4μm,25.0s,MS6.1

CHTO Chiang Mai 157.08 223 PFAKE 03 46 30.0 +10
CHTO LR LR

comp=Z,2μm,22.0s,MS5.9

CHTO Chiang Mai 157.08 223 *e*PKIKP PKPdf 03 46 18.8 -1.6
GYA Guiyang 157.12 250 PKP PKPdf 03 46 19.0 -1.3
GYA PKP2 PKPab 03 46 51.8 +0.9
GYA PP PP 03 50 28.5 -1.2
GYA SKKS SKKSac 03 57 15.0 -4.2
GYA SS SS 04 10 20.3 -4.2
GYA PP PP

comp=Z,1μm,6.0s

GYA LR LR

comp=N,1μm,19.2s,MS5.8

GYA LR LR

comp=E,980nm,19.7s,MS5.8

GYA LR LR

comp=Z,1μm,17.7s,MS5.8

AKTK Aktyubinsk 157.68 44 PKP PKPdf 03 46 19.9 -0.3
AKTK PKPab PKPab 03 46 50.6 -2.0
AKTO Aktyubinsk 157.68 44 PKP PKPdf 03 46 19.9 -0.3
comp=Z,1.7nm,0.9s,baz=252,slow=1.9,SNR=4.9
AKTO PKPab PKPab 03 46 50.6 -2.0
comp=Z,3.9nm,0.9s,baz=332,slow=7.9,SNR=4.4
ULN Ulaanbaatar 158.83 309 *e*PKPdf PKPdf 03 46 20.9 -0.7
ULN LR LR

comp=Z,6μm,22.0s,MS6.4

TLY Talaya 158.85 322 PFAKE 03 46 30.0 +8.4
TLY LR LR

comp=Z,3μm,21.0s,MS6.2

KMI Kunming 159.23 242 PKP PKPdf 03 46 20.0 -2.9
KMI PP PP 03 50 39.8 -1.3
KMI SKKS SKKSac 03 57 26.3 -3.9
KMI SS SS 04 10 40.5 -6.1
KMI PP PP

comp=Z,186nm,7.4s

KMI LR LR

comp=N,2μm,30.7s

KMI LR LR

comp=E,2μm,23.8s

KMI LR LR

comp=Z,4μm,23.8s

SONM Songino Array 159.25 310 PKP PKPdf 03 46 24.5 +2.3
comp=Z,2.9nm,1.0s,baz=132,slow=2.2,SNR=9.9
SONM PKPab PKPab 03 46 56.8 -2.7
comp=Z,5.3nm,1.0s,baz=87,slow=2.0,SNR=5.5
KAD Karad 159.29 157 *e*P PKPdf 03 46 20.6 -2.5
ZAK Zakamensk 159.80 319 *e*PKIKP PKPdf 03 46 35.0 +12
ZAK pmax pmax

comp=Z,5.0nm,1.4s

POO Poona 160.32 155 *e*P PKPdf 03 46 21.1 -3.2
HYB Hyderabad 160.45 168 *i* PKP PKPab 03 46 58.0 -7.3
HYB *e* 03 47 13.0
HYB *e* 03 51 02.0
VIS Vishakhapatnam 161.06 182 *e*P PKPdf 03 46 22.0 -3.1
CD2 Chengdu 161.48 258 *e*PKP PKPdf 03 46 21.8 -3.4
CD2 APKP 03 46 26.8
CD2 XPKP 03 46 30.3
CD2 PKP2 PKPab 03 47 08.5 -1.2
CD2 PP PP 03 50 53.3 -0.2
CD2 SKS SKSdf 03 53 21.8 -8.4
CD2 SS SS 04 11 03.5 -7.3
CD2 PP PP

comp=Z,370nm,9.6s

CD2 LR LR

comp=Z,3μm,20.2s

BRVK Borovoye 161.54 24 PFAKE 03 46 30.0 +5.5
BRVK LR LR

comp=Z,3μm,22.0s

BRVK	**Borovoye**	**161.54**	**24**	*e*PKIKP	PKPdf	03 46 23.4	-1.1
BVAR	**Borovoye Array**	**161.60**	**24**	PKP	PKPdf	03 46 22.9	-1.6
	comp=Z,0.4nm,0.4s,baz=41,slow=4.3,SNR=3.5						
BVAR				PKPab	PKPab	03 47 07.9	-1.6
	comp=Z,1.1nm,0.6s,baz=329,slow=1.7,SNR=2.3						
NVS	**Novosibirsk**	**161.87**	**359**	*e*PKIKP	PKPdf	03 46 35.9	+11
NVS				pmax	pmax		
	comp=Z,23nm,1.1s						
BHJ	**Bhuj**	**162.55**	**137**	*e*P	PKPdf	03 46 24.7	-1.8
ZAA0	**Zalesovo Array**	**162.70**	**356**	*e*PKPdf	PKPdf	03 46 23.6	-2.0
ZALV	**Zalesovo Beam**	**162.70**	**356**	PKP	PKPdf	03 46 24.4	-1.2
	comp=Z,1.4nm,0.8s,baz=297,slow=1.0,SNR=6.6						
LZH	**Lanzhou**	**162.86**	**274**	*e*PKP	PKPdf	03 46 21.0	-5.4
LZH				APKP		03 46 31.0	
LZH				XPKP		03 46 33.5	
LZH				PP	PP	03 51 01.0	+0.1
LZH				SKKS	SKKSac	03 57 44.0	-4.7
LZH				PP	PP		
	comp=Z,319nm,4.2s						
LZH				LR	LR		
	comp=E,3μm,18.6s						
LZH				LR	LR		
	comp=Z,3μm,19.0s						
AKL	**Akola**	**163.32**	**162**	*e*P	PKPdf	03 46 23.5	-3.8
KURK	**Kurchatov**	**165.73**	**10**	PKP	PKPdf	03 46 27.6	-0.9
	comp=Z,0.9nm,0.8s,baz=356,slow=1.2,SNR=4.2						
KURK				PP	PP	03 51 17.0	+2.7
	comp=Z,1.0nm,0.9s,baz=354,slow=5.7,SNR=3.5						
KURK	**Kurchatov**	**165.73**	**10**	PKIKP	PKPdf	03 46 27.6	-0.9
KURK						03 51 17.0	
KURK				MLR	MLR		
	comp=Z,4μm,22.0s						
SHL	**Shillong**	**166.32**	**218**	*e*P	PKPdf	03 46 30.1	+0.3
AJM	**Ajmer**	**167.76**	**144**	*e*P	PKPdf	03 46 26.9	-3.9
KBL	**Kabul**	**168.78**	**97**	*e*PKIKP	PKPdf	03 46 33.0	+1.7
MK31	**Makanchi Array**	**169.93**	**1**	*e*PKPdf	PKPdf	03 46 27.0	-4.5
MKAR	**Makanchi Array**	**169.93**	**1**	PKP	PKPdf	03 46 31.7	+0.1
	comp=Z,0.6nm,1.0s,baz=319,slow=4.2,SNR=3.5						
MKAR				PKPab	PKPab	03 47 44.4	-1.9
	comp=Z,2.8nm,0.9s,baz=12,slow=3.5,SNR=3.1						
LSA	**Lhasa**	**169.97**	**228**	PKP	PKPdf	03 46 35.0	+2.9
LSA	**Lhasa**	**169.97**	**228**	PFAKE		03 46 40.0	+7.9
LSA				LR	LR		
	comp=Z,2μm,21.0s						
NDI	**New Delhi**	**170.81**	**149**	*ex*	x	03 46 45.0	
EKS2	**Erkin-Say**	**171.00**	**46**	*e*PKPdf	PKPdf	03 46 31.4	-0.9
EKS2				LR	LR		
	comp=Z,3μm,21.0s						
AML	**Almayashu**	**171.27**	**49**	PFAKE		03 46 40.0	+7.6
AML				LR	LR		
	comp=Z,2μm,22.0s						
UCH	**Uchtor**	**171.69**	**46**	PFAKE		03 46 40.0	+7.4
UCH				LR	LR		
	comp=Z,1μm,22.0s						
NIL	**Nilore**	**171.78**	**109**	PFAKE		03 46 40.0	+7.0
NIL				LR	LR		
	comp=Z,99nm,21.0s						
TKM2	**Tokmak 2**	**171.81**	**39**	*e*PKPdf	PKPdf	03 46 32.0	-0.7
TKM2				LR	LR		
	comp=Z,3μm,21.0s						
WMQ	**Urumqi**	**171.90**	**333**	*e*PKP	PKPdf	03 46 32.0	-0.7
WMQ				PP	PP	03 51 48.0	+2.1
WMQ				SKS	SKSdf	03 53 34.0	-1.9
WMQ				SKKS	SKKSac	03 58 34.0	+1.2
WMQ				SS	SS	04 12 55.0	+1.0
WMQ				PP	PP		
	comp=Z,154nm,10.0s						
WMQ				LR	LR		
	comp=N,3μm,26.0s						
WMQ				LR	LR		
	comp=E,4μm,25.0s						
WMQ				LR	LR		
	comp=Z,4μm,25.0s						
SMLA	**Simla**	**172.84**	**140**	*e*P	PKPdf	03 46 32.3	-1.3

*IDC **29** 03:36:21.5±1.6, 37.08S×94.47W, h0km, mb4.3/5, mb1 4.6/5, mb1mx4.3/13, mbtmp4.3/5, MS4.5/1, Ms1 4.5/1, ms1mx3.7/22, Error ellipse: s-maj=193.4km s-min=22.6km az=88.0*

*ISCJB **29** 03:36:22.1±0.5, 37.1S±0.1×95.0W±0.5, h10km, mb4.3/15, Error ellipse: s-maj=61.0km s-min=11.7km az=167.0*

*NEIC **29** 03:36:22.4±0.6, 37.15S×94.14W, h10km, mb4.5/10, Error ellipse: s-maj=62.7km s-min=12.6km az=82.0*

ISC 29 03:36:24.1±0.5, 371S±101×950W±105, h10km, n22, σ0s41/18, mb4.3/15, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**33.59**	**31**	LR	LR	03 52 42.5	
	comp=Z,871nm,19.6s,baz=40,slow=30						
QSPA	**South Pole Qui**	**53.11**	**180**	P	**P**	**03 45 41.6**	**+0.4**
	3.2nm,0.5s,mb4.5,baz=144,slow=4.0,SNR=6.2						
VNA3	**Neumayer Olymp**	**53.89**	**156**	*e*	**P**	**03 45 46.8**	**-0.2**
VNA3				*e*		03 45 54.7	
VNA3				*e*		03 46 14.8	
VNA1	**Neumayer--Stat**	**54.45**	**156**	*e*	**P**	**03 45 51.4**	**+0.3**
VNA1				*e*		03 45 59.2	
VNA2	**Neumayer--Watz**	**54.68**	**156**	*e*	**P**	**03 45 52.7**	**0.0**
	baz=254,slow=6.7						
VNA2				*e*		03 46 00.4	
VNA2				*e*		03 46 20.4	
SNAA	**Sanae**	**55.93**	**158**	*e*P	**P**	**03 45 57.2**	**-4.5**
	12nm,1.2s,mb4.8						
VNDA	**Vanda**	**56.84**	**195**	P	**P**	**03 46 07.7**	**-0.5**
	3.0nm,1.1s,mb4.2,baz=129,slow=7.7,SNR=5.0						
TXAR	**Lajitas Array**	**66.59**	**352**	P	**P**	**03 47 14.1**	**-0.3**
	1.9nm,0.8s,mb4.2,baz=172,slow=9.6,SNR=13						
TUC	**Tucson**	**70.61**	**346**	*e*P	**P**	**03 47 39.0**	**-0.5**
	2.9nm,1.0s,mb4.2						
ANMO	**Albuquerque**	**72.48**	**350**	*e*P	**P**	**03 47 50.3**	**-0.3**
	3.2nm,0.9s,mb4.2						
WUAZ	**Wupatki**	**73.84**	**346**	*e*P	**P**	**03 47 59.6**	**+0.9**
	19nm,1.8s,mb4.7						
TPNV	**Topopah Spring**	**76.26**	**343**	*e*P	**P**	**03 48 13.0**	**+0.4**
	2.5nm,0.9s,mb4.1						
NVAR	**Mina Array Bea**	**78.17**	**342**	P	**P**	**03 48 23.7**	**+0.4**
	2.4nm,0.9s,mb4.1,baz=178,slow=6.3,SNR=8.5						
DUG	**Dugway**	**78.64**	**346**	*e*P	**P**	**03 48 25.7**	**-0.2**
	16nm,1.8s,mb4.7						
ELK	**Elko**	**79.66**	**345**	*e*P	**P**	**03 48 31.5**	**0.0**
	5.7nm,1.1s,mb4.4						
PDAR	**Pinedale Array**	**80.59**	**349**	P	**P**	**03 48 36.0**	**-0.4**
	2.7nm,0.9s,mb4.2,baz=167,slow=5.4,SNR=15						
MOD	**Modoc**	**81.95**	**341**	*e*P	**P**	**03 48 44.1**	**+0.4**
	4.1nm,0.8s,mb4.4						
WVOR	**Wild Horse Val**	**82.04**	**343**	*e*P	**P**	**03 48 44.2**	**+0.1**
	3.5nm,1.0s,mb4.2						
HLID	**Hailey**	**82.20**	**346**	*e*P	**P**	**03 48 44.6**	**-0.4**
	4.2nm,1.0s,mb4.3						
MDJ	**Mudanjiang**	**145.77**	**297**	*e*PKPbc	PKPbc	03 56 00.9	-2.1
KURK	**Kurchatov**	**165.66**	**16**	PKP	PKPdf	03 56 25.5	-2.9
	1.9nm,1.0s,baz=326,slow=1.4,SNR=4.5						
KURK	**Kurchatov**	**165.66**	**16**	PKP	PKPdf	03 56 25.5	-2.9

*CSEM **29** 03:37:02.7±0.1, 38.54N×21.78E, h4km, MD3.2, Error ellipse: s-maj=2.3km s-min=2.0km az=4.0*

*ATH **29** 03:37:03.8, 38.60N×21.81E, h21km±6km, MD3.2/6*

*NEIC **29** 03:37:03.8, 38.60N×21.81E, h21km, MD3.2(ATH), After ATH.*

*ISCJB **29** 03:37:04.1±0.5, 38.56N±0.03×21.77E±0.04, h10km, Error ellipse: s-maj=4.2km s-min=3.7km az=5.9*

*THE **29** 03:37:04.1, 38.57N×21.79E, h2km, ML3.4/4, Error ellipse: s-maj=0.6km s-min=0.3km az=181.0*

ISC 29 03:37:04.2±0.5, 3856N±0.03×2178E±0.04, h6km±4km, n45, σ1s00/82, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.36**	**3**	*e*PB	**Pg**	**03 37 10.6**	**-0.6**
EVR				*e*SB	**Sg**	**03 37 16.4**	**+0.5**
RLS	**Riolos of Patr**	**0.56**	**207**	*e*PN	**Pg**	**03 37 16.3**	**+1.3**
AGG	**Agios Georgios**	**0.63**	**43**	P	**Pg**	**03 37 15.6**	**-0.7**
AGG				S	**Sg**	**03 37 25.1**	**+0.6**
LKR	**Lokris**	**0.96**	**84**	P	**Pg**	**03 37 21.5**	**-1.1**
LKR				S	**Sg**	**03 37 35.7**	**+0.7**
LKR	**Lokris**	**0.96**	**84**	*e*Pn	**Pn**	**03 37 21.4**	**-2.8**
LKR				S	**Sg**	**03 37 35.7**	**+0.7**
VLS	**Valsamata**	**1.01**	**248**	P	**Pg**	**03 37 23.0**	**-0.6**
VLS				S	**Sg**	**03 37 38.1**	**+1.3**
VLS	**Valsamata**	**1.01**	**248**	*e*Pn	**Pn**	**03 37 23.4**	**-1.6**
VLS				S	**Sg**	**03 37 38.1**	**+1.3**
THL	**Klokotos Trika**	**1.02**	**10**	P	**Pg**	**03 37 22.9**	**-0.9**
THL				S	**Sg**	**03 37 37.5**	**+0.4**
THL	**Klokotos Trika**	**1.02**	**10**	*e*Pn	**Pn**	**03 37 23.1**	**-2.0**
THL				S	**Sg**	**03 37 37.5**	**+0.4**
LTK	**Loutraki**	**1.07**	**119**	P	**Pg**	**03 37 24.4**	**-0.4**
LTK				S	**Sg**	**03 37 40.0**	**+1.3**
XOR	**Xorichti**	**1.36**	**53**	P	**Pn**	**03 37 29.2**	**-0.6**
XOR				S	**Sb**	**03 37 48.2**	**+0.4**
DID	**Didima**	**1.56**	**132**	P	**Pn**	**03 37 32.0**	**-0.4**
DID				S	**Sn**	**03 37 53.8**	**+0.9**
LIT	**Litokhoron**	**1.64**	**19**	P	**Pn**	**03 37 32.9**	**-0.7**
LIT				S	**Sn**	**03 37 55.4**	**+0.5**
KZN	**Kozani**	**1.75**	**360**	*e*PN	**Pn**	**03 37 35.4**	**+0.3**
PAIG	**Paliouri**	**2.01**	**47**	P	**Pn**	**03 37 37.9**	**-0.8**
FNA	**Florina**	**2.25**	**352**	P	**Pn**	**03 37 41.4**	**-0.5**
FNA				S	**Sn**	**03 38 10.6**	**+0.6**
GRG	**Griva**	**2.44**	**11**	P	**Pn**	**03 37 44.3**	**-0.3**
GRG				S	**Sn**	**03 38 15.7**	**+0.9**
BIA	**Bitola**	**2.48**	**352**	*e*Pn	**Pn**	**03 37 47.1**	**+1.9**
BIA	**Bitola**	**2.48**	**352**	*e*Pn	**Pn**	**03 37 47.2**	**+2.0**
SOH	**Sokhos**	**2.56**	**28**	P	**Pn**	**03 37 46.0**	**-0.3**
SOH				S	**Sn**	**03 38 18.7**	**+0.8**
KRUS	**Krusevo**	**2.84**	**352**	*e*Pn	**Pn**	**03 37 53.5**	**+3.4**

*TIR **29** 03:51:00.2±2.8, 41.19N×20.52E, h20km±35km, ML2.5*

*ISCJB **29** 03:51:02.2±0.5, 41.27N±0.03×20.37E±0.03, h10km, Error ellipse: s-maj=4.9km s-min=2.4km az=34.9*

*THE **29** 03:51:02.7, 41.33N×20.40E, h10km±4km, ML2.5/1, Error ellipse: s-maj=6.2km s-min=0.8km az=40.0*

*SKO **29** 03:51:03.4, 41.17N×20.45E, h15km, M1.8, ML2.1*

*PDG **29** 03:51:03.3±0.4, 41.24N×20.31E, h0km±11km, ML2.5/9, Error ellipse: s-maj=1.7km s-min=2.3km az=0.0*

*NEIC **29** 03:51:03.3, 41.24N×20.31E, h0km, ML2.5(PDG), After PDG.*

*CSEM **29** 03:51:04.3±0.3, 41.16N×20.52E, h1km±3km, ML2.1, Error ellipse: s-maj=3.7km s-min=2.2km az=30.0*

ISC 29 03:51:03.2±0.5, 4127N±004×2039E±004, h15km±10km, n33, σ1s55/61, 6C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.41**	**281**	*e*PG	**Pg**	**03 51 13.1**	**+1.8**
PHP	**Peshkopia**	**0.41**	**5**	*e*PG	**Pg**	**03 51 10.2**	**-1.3**
PHP				*e*SG	**Sg**	**03 51 17.5**	**+0.4**
QSH	**Qafa e Shtames**	**0.44**	**304**	*e*PG	**Pg**	**03 51 14.0**	**+2.0**
KRUS	**Krusevo**	**0.65**	**81**	*i* Pg	**Pg**	**03 51 16.0**	**+0.1**
KRUS				*i* Sg	**Sg**	**03 51 26.2**	**+1.7**
KRUS	**Krusevo**	**0.65**	**81**	*i* Pg	**Pg**	**03 51 16.0**	**+0.1**
KRUS				*e*Lg		03 51 26.2	
	comp=E,32nm,0.2s						
KRUS				*i* Sg	**Sg**	**03 51 26.2**	**+1.7**
KRUS				*e*Lg		03 51 26.3	
	comp=N,40nm,0.3s						
BIA	**Bitola**	**0.75**	**110**	P	**Pg**	**03 51 16.8**	**-0.9**
BIA				S	**Sg**	**03 51 28.4**	**+0.8**
BIA	**Bitola**	**0.75**	**110**	*i* Pg	**Pg**	**03 51 16.7**	**-1.0**
BIA				*i* Sg	**Sg**	**03 51 28.2**	**+0.6**
BIA	**Bitola**	**0.75**	**110**	*i* Pg	**Pg**	**03 51 16.7**	**-1.0**
BIA				*i* Sg	**Sg**	**03 51 28.2**	**+0.7**
BIA				*e*Lg		03 51 28.4	
	comp=N,50nm,0.3s						
BIA				*e*Lg		03 51 30.2	
	comp=E,54nm,0.5s						
PUK	**Puka**	**0.85**	**334**	*e*PG	**Pg**	**03 51 18.5**	**-1.3**
PUK				*i* SG	**Sg**	**03 51 32.5**	**+1.5**
FNA	**Florina**	**0.89**	**123**	P	**Pg**	**03 51 20.2**	**-0.2**
FNA				S	**Sg**	**03 51 33.3**	**+1.2**
SKO	**Skopje**	**1.05**	**48**	*e*Pg	**Pg**	**03 51 24.9**	**+1.5**
SKO				*i* Sg	**Sg**	**03 51 37.4**	**+0.2**
SKO				*e*Lg		03 51 37.8	
	comp=N,64nm,0.3s						
SKO				*e*Lg		03 51 39.8	
	comp=E,27nm,0.4s						
ULC	**Ulcinj**	**1.10**	**309**	⇓*i*Pg	**Pg**	**03 51 22.9**	**-1.5**
ULC				*e*Sg	**Sg**	**03 51 39.8**	**+1.0**
ULC	**Ulcinj**	**1.10**	**309**	*i* Pg	**Pg**	**03 51 22.9**	**-1.5**
ULC				*i* SG	**Sg**	**03 51 39.8**	**+1.0**
PVY	**Plav**	**1.36**	**347**	⇑*i*Pg	**Pg**	**03 51 28.2**	**-1.1**
PVY				*e*Sg	**Sg**	**03 51 50.0**	**+3.0**
PVY	**Plav**	**1.36**	**347**	*i* Pg	**Pg**	**03 51 28.2**	**-1.1**
PVY				*i* SG	**Sg**	**03 51 50.0**	**+3.0**
PDG	**Podgorica**	**1.43**	**324**	*i* PG	**Pg**	**03 51 28.9**	**-1.8**
PDG				*i* SG	**Sg**	**03 51 52.2**	**+2.8**
PDG	**Podgorica**	**1.43**	**324**	⇓*i*Pg	**Pg**	**03 51 28.9**	**-1.8**
PDG				*e*Sg	**Sg**	**03 51 52.2**	**+2.8**
TTG	**Podgorica**	**1.43**	**324**	⇓*i*Pg	**Pg**	**03 51 28.9**	**-1.8**
TTG				*e*Sg	**Sg**	**03 51 52.2**	**+2.8**
BUM	**Brajici-Budva**	**1.52**	**313**	⇑*i*Pg	**Pg**	**03 51 30.5**	**-1.9**
BUM				*e*Sg	**Sg**	**03 51 54.1**	**+2.0**
BUM	**Brajici-Budva**	**1.52**	**313**	*i* PG	**Pg**	**03 51 30.5**	**-1.9**
BUM				*i* SG	**Sg**	**03 51 54.1**	**+2.0**
BEY	**Berane**	**1.64**	**347**	*i* PG	**Pg**	**03 51 34.5**	**-0.2**
BEY				*i* SG	**Sg**	**03 51 58.8**	**+2.8**
BEY	**Berane**	**1.64**	**347**	⇑*i*Pn	**Pg**	**03 51 34.5**	**-0.2**
BEY				*e*Sn	**Sg**	**03 51 58.8**	**+2.8**
IVA	**Berane**	**1.64**	**347**	⇑*i*Pn	**Pg**	**03 51 34.5**	**-0.2**
IVA				*e*Sn	**Sg**	**03 51 58.8**	**+2.8**
VAY	**Valandovo**	**1.64**	**88**	*e*Pn	**Pg**	**03 51 32.7**	**-2.0**
VAY				*i* Sg	**Sg**	**03 51 55.0**	**-1.0**
VAY				*e*Lg		03 51 55.3	
	comp=N,17nm,0.9s						
VAY				*e*Lg		03 51 56.4	
	comp=E,12nm,0.4s						
IGT	**Igoumenitsa**	**1.74**	**182**	S	**Sn**	**03 51 56.7**	**+1.9**
HCY	**Herceg Novi**	**1.84**	**310**	⇓*i*Pn	**Pg**	**03 51 37.0**	**-1.5**
HCY				*e*Sn	**Sg**	**03 52 04.1**	**+1.8**
HCY	**Herceg Novi**	**1.84**	**310**	*i* PG	**Pg**	**03 51 37.0**	**-1.5**
HCY				*i* SG	**Sg**	**03 52 04.1**	**+1.8**
NKY	**Niksic**	**1.86**	**326**	⇓*i*Pn	**Pg**	**03 51 37.1**	**-1.7**
NKY				*e*Sn	**Sg**	**03 52 04.6**	**+1.7**
NKY	**Niksic**	**1.86**	**326**	*i* PG	**Pg**	**03 51 37.1**	**-1.7**
NKY				*i* SG	**Sg**	**03 52 04.6**	**+1.7**
TREB	**Trebinje**	**2.10**	**314**	⇑*i*Pn	**Pg**	**03 51 41.5**	**-1.9**
BRY	**Bratogost**	**2.13**	**320**	*e*Pn	**Pg**	**03 51 41.3**	**-2.8**
BRY				*e*Sn	**Sg**	**03 52 10.9**	**-0.8**
BRY	**Bratogost**	**2.13**	**320**	*i* PG	**Pg**	**03 51 41.3**	**-2.8**
UPM	**Unac-Piva**	**2.22**	**331**	⇑*i*Pn	**Pg**	**03 51 43.2**	**-2.6**
UPM				*e*Sn	**Sg**	**03 52 13.4**	**-1.2**

*NEIC **29** 04:13:21.5±5.3, 7.13S×153.96E, h163km±44km, mb4.0/1, Error ellipse: s-maj=54.6km s-min=25.1km az=96.0*

IDC 29 04:13:20.7±12.0, 710S×15390E, h152km±102km, mb3.5/4, mb1 3.5/5, mb1mx3.3/16, mbtmp3.4/5, Error ellipse: s-maj=110.4km s-min=35.3km az=90.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**14.89**	**209**	P	Pn	04 16 44.1	+0.3
	0.3nm,0.3s,baz=46,slow=14,SNR=4.4						
CTA	**Charters Tower**	**14.89**	**209**	P	Pn	04 16 44.1	+0.3
WRAB	**Tennant Creek**	**22.86**	**234**	*e*P	P	04 18 11.2	+0.1
	5.2nm,0.9s						
ASAR	**Alice Springs**	**25.30**	**227**	P	P	04 18 33.5	+0.2
	0.9nm,0.8s,baz=57,slow=8.8,SNR=8.6						
STKA	**Stephens Creek**	**27.20**	**203**	P	P	04 18 50.1	-0.1
	2.3nm,0.7s,baz=24,slow=13,SNR=5.5						
SONM	**Songino Array**	**68.84**	**328**	P	P	04 24 08.9	+0.3
	0.6nm,0.7s,baz=131,slow=6.7,SNR=6.0						
MKAR	**Makanchi Array**	**82.77**	**319**	P	P	04 25 27.6	-0.1
	0.9nm,0.7s,baz=112,slow=5.4,SNR=7.1						
MDT	**Midelt**	**147.55**	**325**	PKPbc	PKPbc	04 32 47.3	-0.3
	1.6nm,1.2s,baz=122,slow=4.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.00**	**285**	PKPbc	PKPbc	04 32 58.9	-0.1
	0.3nm,0.6s,baz=97,slow=1.1,SNR=3.6						

MOS 29 04:34:02.1±1.0, 4303N×4603E, h7km, mb3.9/1, 1C-2D, Error ellipse: s-maj=14.1km s-min=6.6km az=23.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	**Botlikh**	**0.39**	**159**	⇓*i*PG	Pg	04 34 09.7	0.0
BTLR				*i* S	Sg	04 34 17.3	+2.5
BTLR				pmax	pmax		
	comp=Z,98nm,0.3s						
DBC	**Dubki**	**0.59**	**91**	*e*PG	Pg	04 34 11.5	-1.9
DBC				*i* S	Sg	04 34 20.0	-1.1
DBC				pmax	pmax		
	comp=Z,69nm,0.1s						
KRNR	**Karanay**	**0.68**	**107**	*i* PG	Pg	04 34 14.7	-0.4
KRNR				*i* S	Sg	04 34 24.5	+0.6
KRNR				pmax	pmax		
	comp=Z,86nm,0.1s						
BUJR	**Buynaksk**	**0.82**	**104**	*i* PG	Pg	04 34 21.2	+3.4
BUJR				*i* S	Sg	04 34 33.2	+4.8
SNJR	**Sundja**	**0.89**	**273**	*e*PG	Pg	04 34 19.7	+0.5
SNJR				*i* S	Sg	04 34 31.8	+1.0
GNBR	**Gunib**	**0.94**	**133**	*i* PG	Pg	04 34 21.0	+0.9
GNBR				*e*S	Sg	04 34 32.2	-0.1
VLKR	**Vladikavkaz**	**0.99**	**271**	*e*PG	Pg	04 34 21.3	+0.2
VLKR				*e*S	Sg	04 34 34.9	+0.9
MAK	**Makhachkala**	**1.08**	**93**	*e*PG	Sn	04 34 41.2	+2.3
MAK				*e*		04 34 43.4	
MAK				smax			
	comp=E,582nm,0.4s						
MAK				smax			
	comp=N,363nm,0.3s						
TRKR	**Terskaya**	**1.17**	**307**	⇑*i*PG	Pg	04 34 24.6	0.0
TRKR				*i* S	Sg	04 34 40.4	+0.6
KMKR	**Kumukh**	**1.20**	**138**	*i* PG	Pg	04 34 25.0	0.0
KMKR				*i* S	Sg	04 34 42.0	+1.5
KMKR				pmax	pmax		
	comp=Z,49nm,0.2s						
LACR	**Lac**	**1.29**	**262**	⇓*i*PG	Pg	04 34 26.5	-0.3
LACR				*i* S	Sb	04 34 44.1	+0.7
ARNR	**Ardon**	**1.29**	**278**	*e*PG	Pg	04 34 26.4	-0.5
ARNR				*e*S	Sb	04 34 43.7	+0.2
KMSR	**Komsomolskaya**	**1.31**	**286**	*e*PG	Pg	04 34 26.8	-0.5
KMSR				*e*S	Sb	04 34 44.4	+0.3
KORR	**Kora**	**1.44**	**273**	*e*PG	Pg	04 34 29.0	-0.7
KORR				*i* S	Sn	04 34 48.0	+0.3
PRTR	**Priterechnaya**	**1.46**	**300**	*e*PG	Pg	04 34 29.4	-0.8
PRTR				*e*S	Sn	04 34 48.8	+0.5
URKR	**Urkarakh**	**1.47**	**126**	*e*PG	Pg	04 34 31.0	+0.8
URKR				*e*S	Sn	04 34 51.0	+2.7
ZEI	**Tsey**	**1.59**	**261**	*e*PG	Pg	04 34 29.5	-3.0
ZEI				*e*S	Sn	04 34 50.5	-0.8
LSNR	**Lesken**	**1.64**	**279**	*e*PN	Pn	04 34 31.8	+0.5
LSNR				*e*S	Sn	04 34 53.1	+0.5
DIGR	**Digorskoe uzhe**	**1.80**	**267**	*e*PN	Pn	04 34 34.0	+0.5

*IDC **29** 04:34:38.9±0.8, 0.19N×131.02E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/17, mbtmp4.1/9, ML3.9/1, Error ellipse: s-maj=30.2km s-min=15.7km az=64.0*

*NEIC **29** 04:34:40.6±0.3, 0.15N×130.98E, h10km, mb4.3/7, Error ellipse: s-maj=9.5km s-min=5.2km az=57.0*

*ISCJB **29** 04:34:43.3±1.6, 0.12N±0.09×131.00E±0.09, h48km±16km, mb4.2/11, Error ellipse: s-maj=19.3km s-min=9.4km az=43.2*

*DJA **29** 04:34:47, 0.08S×131.04E, h30km, mb4.4/5*

ISC 29 04:34:40.4±2.4, 019N±008×13106E±007, h8km±15km, n29, σ0s81/28, mb4.2/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.06**	**169**	P	**Pg**	**04 35 00.6**	**-0.2**
LBMI	**Labuha**	**3.65**	**257**	P	**Pn**	**04 35 39.6**	**+2.4**
AAI	**Ambon**	**4.80**	**217**	P	**Pn**	**04 35 54.4**	**+1.4**
KAPI	**Kappang**	**12.42**	**245**	Pn	**Pn**	**04 37 36.0**	**-1.6**
	0.7nm,0.3s,baz=33,slow=17,SNR=2.9						
KAPI	**Kappang**	**12.42**	**245**	P	Px	04 37 49.1	
	7.8nm,1.1s						
SMKI	**Samarinda**	**13.86**	**267**	P	**Pn**	**04 37 56.7**	**-0.7**
COEN	**Coen**	**18.48**	**140**	*e*P	**Pn**	**04 38 57.4**	**+0.3**
	20nm,1.3s						
COEN	**Coen**	**18.48**	**140**	P	**Pn**	**04 38 58.2**	**+1.2**
	7.7nm,1.4s						
PMG	**Port Moresby**	**18.65**	**121**	*e*P	**Pn**	**04 38 59.4**	**+0.3**
	29nm,1.0s						
PMG	**Port Moresby**	**18.65**	**121**	P	**Pn**	**04 39 03.2**	**+4.1**
	36nm,1.4s						
WRAB	**Tennant Creek**	**20.25**	**171**	*e*P	**P**	**04 39 15.7**	**-0.7**
	8.2nm,0.7s						
WB2	**Warramunga Arr**	**20.26**	**171**	*e*P	**P**	**04 39 15.8**	**-0.6**
ASAR	**Alice Springs**	**23.87**	**174**	P	**P**	**04 39 54.3**	**-0.2**
	27nm,0.9s,mb4.7,baz=346,slow=9.3,SNR=176						
CTA	**Charters Tower**	**25.05**	**144**	P	**P**	**04 40 06.2**	**+0.8**
	0.8nm,0.3s,mb3.7,baz=335,slow=9.8,SNR=5.4						
CTAO	**Charters Tower**	**25.05**	**144**	*e*P	**P**	**04 40 05.9**	**+0.6**
	5.6nm,0.9s,mb4.1						
HNR	**Honiara**	**30.30**	**109**	P	**P**	**04 40 52.6**	**0.0**
	129nm,0.4s,baz=215,slow=6.1,SNR=4.2						
STKA	**Stephens Creek**	**33.41**	**164**	P	**P**	**04 41 19.0**	**-0.6**
	5.3nm,0.9s,mb4.5,baz=329,slow=12,SNR=8.0						
STKA	**Stephens Creek**	**33.41**	**164**	P	**P**	**04 41 19.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**36.39**	**302**	P	**P**	**04 41 45.8**	**+0.2**
	1.9nm,0.3s,mb4.5,baz=118,slow=6.6,SNR=5.

KDI	**Kendari**	**9.37**	**219**	P		**Pn**	**05 34 24.0**	**+1.4**
	42nm,0.7s							
PCI	**Palu**	**9.65**	**244**	P		**Pn**	**05 34 35.2**	**+8.6**
	79nm,1.0s							
MYLDM	**Lahad Datu**	**10.13**	**280**	P		**Pn**	**05 34 35.5**	**+2.4**
KAPI	**Kappang**	**12.08**	**226**	P		**Pn**	**05 34 54.6**	**-5.1**
	2.4nm,0.3s,baz=44,slow=6.3,SNR=8.3							
KAPI				S		**Sn**	**05 37 00.5**	**-12**
	1.6nm,0.3s,baz=72,slow=20,SNR=4.4							
KAPI	**Kappang**	**12.08**	**226**	*e*Pn		**Pn**	**05 34 54.1**	**-5.6**
	10.0nm,0.4s							
KAPI				*e*Sn		**Sn**	**05 37 01.0**	**-12**
KAPI	**Kappang**	**12.08**	**226**	P		**Pn**	**05 34 54.5**	**-5.3**
	10nm,1.4s,184nm							
KKM	**Kota Kinabalu**	**12.53**	**283**	*e*Pn		**Pn**	**05 35 01.7**	**-4.1**
BATI	**Baumata**	**14.33**	**200**	P		**Pn**	**05 35 31.1**	**+1.0**
	4.3nm,0.3s,baz=329,slow=5.9,SNR=2.7							
SBUM	**Sibu**	**16.29**	**267**	P		**Pn**	**05 35 56.1**	**+1.0**
KAKA	**Kakadu**	**16.46**	**166**	*e*P		Px	05 35 40.3	
	15nm,0.8s							
GUMO	**Guam**	**19.09**	**57**	LR		LR	05 41 59.8	
	comp=Z,169nm,19.3s,baz=209,slow=30							
PMG	**Port Moresby**	**22.52**	**124**	P		**P**	**05 37 09.4**	**+4.6**
	5.8nm,0.8s,mb4.0							
PMG	**Port Moresby**	**22.52**	**124**	P		**P**	**05 37 09.5**	**+4.7**
PMG				pmax		pmax		
	comp=Z,6.0nm,0.8s							
COEN	**Coen**	**22.55**	**140**	*e*P		**P**	**05 37 09.2**	**+4.0**
	comp=Z,3.7nm,0.7s,mb3.8							
WRAB	**Tennant Creek**	**23.87**	**166**	*e*P		**P**	**05 37 17.6**	**-0.3**
	comp=Z,33nm,1.0s,mb4.6							
WRAB				*e*pP			05 37 33.8	
WRAB	**Tennant Creek**	**23.87**	**166**	*e*P		**P**	**05 37 17.6**	**-0.3**
WRAB				pmax		pmax		
	comp=Z,33nm,1.0s,mb4.6							
WB2	**Warramunga Arr**	**23.88**	**166**	*i*P		**P**	**05 37 17.6**	**-0.4**
MBWA	**Marble Bar**	**25.86**	**199**	*e*P		**P**	**05 37 35.2**	**-0.7**
	comp=Z,6.4nm,0.9s,mb4.0							
XMIS	**Christmas Isla**	**26.59**	**239**	*e*P		**P**	**05 37 38.4**	**-4.3**
ASAR	**Alice Springs**	**27.39**	**169**	P		**P**	**05 37 49.0**	**-0.8**
	comp=Z,4.4nm,0.8s,mb4.0,baz=5.3,slow=9.0,SNR=36							
ASAR				PcP		PcP	05 41 07.7	+0.2
	comp=Z,1.3nm,0.5s,baz=0.5,slow=2.1,SNR=6.8							
ASAR				ScP		ScP	05 44 41.5	-1.0
	comp=Z,0.6nm,0.7s,baz=325,slow=1.5,SNR=4.9							
ASAR	**Alice Springs**	**27.39**	**169**	P		**P**	**05 37 49.0**	**-0.8**
ASAR							05 41 07.7	
ASAR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ASAR				pmax		pmax		
	comp=N,1.0nm,0.7s							
NJ2	**Nanjing**	**29.93**	**343**	*e*P		**P**	**05 38 12.5**	**+0.3**
NJ2				AMB		AMB		
	comp=Z,60nm,1.0s,mb5.2							
WHN	**Wuhan**	**30.15**	**335**	P		**P**	**05 38 15.5**	**+1.3**
GYA	**Guiyang**	**31.06**	**320**	P		**P**	**05 38 21.0**	**-1.3**
GYA				AP		pP	05 38 37.5	-0.7
GYA				XP		sP	05 38 47.8	+1.9
GYA				PP		PP	05 39 23.5	-10
GYA				S		**S**	**05 43 22.0**	**-0.9**
GYA				XS		sS	05 43 48.5	-1.7
GYA				SCP		ScP	05 44 43.0	-11
GYA				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.5							
GYA				AMB		AMB		
	comp=Z,70nm,5.0s							
GYA				LR		LR		
	comp=N,370nm,10.6s							
GYA				LR		LR		
	comp=E,280nm,11.0s							
GYA				LR		LR		
	comp=Z,420nm,11.3s							
CMAR	**Chiang Mai Arr**	**32.58**	**300**	P		**P**	**05 38 34.6**	**-1.1**
	comp=Z,5.6nm,0.8s,mb4.5,baz=116,slow=7.5,SNR=22							
CMAR	**Chiang Mai Arr**	**32.58**	**300**	P		**P**	**05 38 34.6**	**-1.1**
CMAR				pmax		pmax		
	comp=Z,6.0nm,0.8s							
CHTO	**Chiang Mai**	**32.72**	**300**	*e*P		**P**	**05 38 34.8**	**-2.2**
	comp=Z,16nm,1.1s,mb4.8							
CHTO	**Chiang Mai**	**32.72**	**300**	*e*P		**P**	**05 38 34.8**	**-2.2**
CHTO				pmax		pmax		
	comp=Z,16nm,1.1s,mb4.8							
KMI	**Kunming**	**32.89**	**313**	P		**P**	**05 38 39.0**	**+0.6**
KMI				AMB		AMB		
	comp=Z,11nm,1.1s,mb4.6							
KSRS	**Korea Array**	**33.91**	**359**	P		**P**	**05 38 47.7**	**+0.6**
	comp=Z,6.4nm,0.8s,mb4.5,baz=178,slow=9.6,SNR=15							
KSRS	**Korea Array**	**33.91**	**359**	P		**P**	**05 38 47.7**	**+0.6**
KSRS				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.5							
FORT	**Forrest**	**33.97**	**181**	*e*P		**P**	**05 38 48.3**	**+0.6**
	comp=Z,15nm,0.6s,mb5.0							
MAJO	**Matsushiro**	**34.19**	**14**	*e*P		**P**	**05 38 49.6**	**+0.1**
	comp=Z,14nm,0.8s,mb4.8							
MAJO	**Matsushiro**	**34.19**	**14**	*e*P		**P**	**05 38 49.7**	**+0.2**
MAJO				pmax		pmax		
	comp=Z,14nm,0.8s,mb4.8							
MAT	**Matsushiro**	**34.19**	**14**	P		**P**	**05 38 49.5**	**0.0**
MJAR	**Matsushiro Arr**	**34.19**	**14**	P		**P**	**05 38 49.7**	**+0.2**
	comp=Z,11nm,0.7s,mb4.8,baz=183,slow=9.7,SNR=25							
MJAR	**Matsushiro Arr**	**34.19**	**14**	P		**P**	**05 38 49.7**	**+0.2**
MJAR				pmax		pmax		
	comp=Z,11nm,0.7s							
XAN	**Xi'an**	**35.54**	**331**	P		**P**	**05 39 00.5**	**-0.7**
XAN				AMB		AMB		
	comp=Z,23nm,1.0s,mb5.1							
XAN				AMB		AMB		
	comp=Z,139nm,9.2s							
CD2	**Chengdu**	**35.98**	**322**	*e*P		**P**	**05 39 05.0**	**0.0**
CD2				AP		pP	05 39 21.0	-0.2
CD2				XP		sP	05 39 28.8	-0.1
CD2				PP		PP	05 40 29.3	+1.3
CD2				S		**S**	**05 44 39.5**	**+0.4**
CD2				XS		sS	05 45 05.5	-1.1
CD2				SS		SS	05 47 04.8	-14
CD2				AMB		AMB		
	comp=Z,30nm,0.5s,mb5.5							
CD2				AMB		AMB		
	comp=Z,50nm,4.2s							
CD2				LR		LR		
	comp=N,410nm,8.4s							
CD2				LR		LR		
	comp=E,440nm,10.8s							
CD2				LR		LR		
	comp=Z,180nm,7.2s							
STKA	**Stephens Creek**	**37.21**	**161**	*e*P		**P**	**05 39 15.2**	**-0.2**
	comp=Z,5.3nm,0.4s,mb4.8							
STKA	**Stephens Creek**	**37.21**	**161**	P		**P**	**05 39 15.0**	**-0.4**
	comp=Z,5.1nm,0.3s,mb4.9,baz=338,slow=6.2,SNR=25							
STKA				pP		pP	05 39 31.1	-0.6
	comp=Z,5.4nm,0.4s,baz=336,slow=7.6,SNR=4.9							
BJI	**Beijing**	**38.16**	**345**	P		**P**	**05 39 22.0**	**-1.3**
BJI				AMB		AMB		
	comp=Z,21nm,0.7s,mb5.1							
BJI				AMB		AMB		
	comp=Z,194nm,5.4s							
LZH	**Lanzhou**	**39.71**	**328**	*e*P		**P**	**05 39 36.8**	**+0.4**
LZH				AP		pP	05 39 54.5	+1.7
LZH				XP		sP	05 40 02.5	+2.1
LZH				PP		PP	05 41 12.0	+3.2
LZH				*e*S		**S**	**05 45 37.3**	**+1.9**
LZH				AMB		AMB		
	comp=Z,51nm,1.0s,mb5.3							
LZH				AMB		AMB		
	comp=Z,266nm,5.4s							
LZH				LR		LR		
	comp=E,796nm,13.3s							
LZH				LR		LR		
	comp=Z,930nm,15.4s							
ARMA	**Armidale**	**40.22**	**148**	*e*P		**P**	**05 39 32.4**	**-8.3**
HHC	**Hu-ho-hao-te**	**40.30**	**340**	*e*P		**P**	**05 39 43.8**	**+2.6**
HHC				AP		pP	05 39 59.8	+2.2
HHC				XP		sP	05 40 05.5	+0.3
HHC				PP		PP	05 41 20.5	+5.4
HHC				S		**S**	**05 47 0.0**	**+2.9**
HHC				SS		SS	05 48 44.3	-0.7
HHC				AMB		AMB		
	comp=Z,14nm,0.6s,mb5.0							
HHC				AMB		AMB		
	comp=Z,168nm,5.2s							
HHC				LR		LR		
	comp=N,228nm,15.5s							
HHC				LR		LR		
	comp=E,171nm,19.0s							
HHC				LR		LR		
	comp=Z,181nm,19.0s							
CN2	**Changchun**	**40.34**	**357**	*e*P		**P**	**05 39 41.8**	**+0.3**
MDJ	**Mudanjiang**	**41.08**	**1**	P		**P**	**05 39 49.0**	**+1.5**
MDJ				AMB		AMB		
	comp=Z,19nm,1.2s,mb4.8							
MDJ				AMB		AMB		
	comp=Z,119nm,5.8s							
MDJ				LR		LR		
	comp=N,114nm,20.9s							
MDJ				LR		LR		
	comp=Z,103nm,21.4s							
MDJ	**Mudanjiang**	**41.08**	**1**	*e*P		**P**	**05 39 48.5**	**+1.0**
	comp=Z,16nm,1.0s,mb4.8							
SHL	**Shillong**	**41.51**	**306**	*e*P		**P**	**05 39 51.0**	**-0.4**
LSA	**Lhasa**	**44.00**	**311**	P		**P**	**05 40 11.5**	**0.0**
LSA	**Lhasa**	**44.00**	**311**	*e*P		**P**	**05 40 11.7**	**+0.2**
	comp=Z,12nm,0.8s,mb4.7							
LSA				*e*pP		pP	05 40 26.7	-1.4
LSA	**Lhasa**	**44.00**	**311**	*e*P		**P**	**05 40 11.7**	**+0.2**
LSA				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.7							
GTA	**Gaotai**	**44.31**	**328**	*e*P		**P**	**05 40 13.8**	**-0.1**
GTA				AP		pP	05 40 29.0	-1.4
GTA				XP		sP	05 40 35.8	-2.2
GTA				AMB		AMB		
	comp=Z,15nm,1.1s,mb4.6							
HABR	**Khabarovsk**	**45.27**	**6**	*e*P		**P**	**05 40 21.7**	**+0.4**
HABR				*e*PP		pP	05 41 03.5	+26
HABR				*e*			05 42 10.6	
HABR				*e*S		**S**	**05 46 48.2**	**-8.6**
HABR				*e*			05 49 54.8	
HABR				*e*SS		SS	05 50 15.0	-6.1
ULN	**Ulaanbaatar**	**48.01**	**341**	*e*P		**P**	**05 40 42.5**	**-0.2**
	comp=Z,5.7nm,0.8s,mb4.5							
ULN	**Ulaanbaatar**	**48.01**	**341**	*e*P		**P**	**05 40 42.5**	**-0.2**
ULN				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.5							
SONM	**Songino Array**	**48.21**	**340**	P		**P**	**05 40 43.8**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.2,baz=151,slow=7.9,SNR=9.3							
SONM	**Songino Array**	**48.21**	**340**	P		**P**	**05 40 43.8**	**-0.4**
SONM				pmax		pmax		
	comp=Z,3.0nm,0.7s							
WMQ	**Urumqi**	**54.03**	**324**	*e*P		**P**	**05 41 28.0**	**0.0**
PETK	**Petropavlovsk-**	**55.10**	**21**	P		**P**	**05 41 37.6**	**+2.0**
	comp=Z,16nm,0.8s,mb5.1,baz=190,slow=5.5,SNR=12							
PETK	**Petropavlovsk-**	**55.10**	**21**	P		**P**	**05 41 37.6**	**+2.0**
PETK				pmax		pmax		
	comp=Z,16nm,0.8s,mb5.1							
YAK	**Yakutsk**	**58.52**	**1**	*e*P		**P**	**05 41 59.8**	**+0.2**
YAK				pmax		pmax		
	comp=Z,13nm,0.6s,mb5.1							
MKAR	**Makanchi Array**	**58.85**	**325**	P		**P**	**05 42 01.5**	**-0.7**
	comp=Z,4.4nm,0.4s,mb4.8,baz=111,slow=8.2,SNR=89							
MKAR	**Makanchi Array**	**58.85**	**325**	P		**P**	**05 42 01.5**	**-0.7**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.4s							
ZAA0	**Zalesovo Array**	**61.70**	**332**	*e*P		**P**	**05 42 19.9**	**-1.7**
ZALV	**Zalesovo Beam**	**61.70**	**332**	P		**P**	**05 42 19.6**	**-2.0**
	comp=Z,2.2nm,0.7s,mb4.3,baz=113,slow=6.6,SNR=14							
ZALV	**Zalesovo Beam**	**61.70**	**332**	P		**P**	**05 42 19.6**	**-2.0**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.3							
AAK	**Ala-Archa**	**61.80**	**317**	*e*P		**P**	**05 42 22.1**	**-0.3**
	comp=Z,2.5nm,0.7s,mb4.3							
AAK	**Ala-Archa**	**61.80**	**317**	*e*P		**P**	**05 42 22.2**	**-0.3**
AAK				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.4							
EKS2	**Erkin-Say**	**62.30**	**317**	*e*P		**P**	**05 42 25.6**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.6							
NVS	**Novosibirsk**	**62.98**	**333**	*e*P		**P**	**05 42 27.5**	**-2.6**
KURK	**Kurchatov**	**62.99**	**327**	*e*P		**P**	**05 42 29.2**	**-1.0**
	comp=Z,12nm,0.9s,mb4.8							
KURK	**Kurchatov**	**62.99**	**327**	*e*P		**P**	**05 42 29.2**	**-1.0**
KURK				pmax		pmax		
	comp=Z,12nm,0.9s,mb4.8							
TIXI	**Tiksi**	**68.17**	**0**	*e*P		**P**	**05 43 02.7**	**-0.6**
TIXI				pmax		pmax		
	comp=Z,6.0nm,1.4s,mb4.2							
BRVK	**Borovoye**	**68.65**	**327**	*e*P		**P**	**05 43 05.3**	**-1.2**
	comp=Z,8.6nm,0.9s,mb4.6							
BRVK	**Borovoye**	**68.65**	**327**	*e*P		**P**	**05 43 05.3**	**-1.3**
BRVK				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.6							
VNDA	**Vanda**	**82.86**	**173**	P		**P**	**05 44 27.1**	**-0.1**
	comp=Z,2.9nm,0.8s,mb4.1,baz=308,slow=5.8,SNR=14							
VNDA	**Vanda**	**82.86**	**173**	*e*P		**P**	**05 44 26.8**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.1							
VNDA	**Vanda**	**82.86**	**173**	P		**P**	**05 44 27.2**	**0.0**
VNDA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BOZ	**Bozeman (W)**	**107.88**	**40**	*e*PKPdf		PKiKP	05 50 26.6	-4.0
TORD	**Torodi Ar. Bea**	**124.71**	**288**	PKP		PKPdf	05 51 02.5	-1.0
	comp=Z,0.9nm,0.7s,baz=58,slow=2.6,SNR=6.2							
TORD				pPKP		pPKPdf	05 51 20.7	-1.9
	comp=Z,0.9nm,0.8s,baz=116,slow=2.1,SNR=3.5							

IDC 29 05:37:32.5±1.9, 1255S×16613E, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/17, mbtmp4.1/6, MS3.8/1, Ms1 3.8/1, ms1mx2.9/26, Error ellipse: s-maj=56.8km s-min=33.6km az=89.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**31.34**	**173**	LR		LR		05 54 16.0	
	comp=Z,172nm,18.5s,baz=297,slow=32								
ASAR	**Alice Springs**	**32.48**	**246**	P		P		05 44 03.1	-1.9
	0.6nm,0.7s,baz=91,slow=7.0,SNR=3.7								
NWAO	**Narrogin (SRO)**	**48.95**	**237**	P		P		05 46 22.2	+1.4
	5.0nm,0.6s,baz=99,slow=4.4,SNR=3.9								
VNDA	**Vanda**	**65.00**	**181**	P		P		05 48 13.9	0.0
	0.4nm,0.7s,baz=5.5,slow=6.5,SNR=3.3								
CMAR	**Chiang Mai Arr**	**73.06**	**294**	P		P		05 49 06.0	+1.1
	2.8nm,0.7s,baz=130,slow=4.7,SNR=9.5								
SONM	**Songino Array**	**80.09**	**324**	P		P		05 49 43.8	-0.4
	0.3nm,0.4s,baz=132,slow=6.1,SNR=4.5								
MKAR	**Makanchi Array**	**94.87**	**317**	P		P		05 50 55.7	-0.8
	1.5nm,0.7s,baz=94,slow=6.8,SNR=13								
TORD	**Torodi Ar. Bea**	**164.81**	**274**	PKPab		PKPab		05 58 35.8	+0.4
	0.7nm,0.9s,baz=97,slow=3.1,SNR=3.1								

CASC 29 05:37:48.2±1.0, 1354N×9218W, h94km±37km, MD4.0, 3C, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.94**	**34**	*i*P		*e*P	Pn	05 38 07.9	+0.3
FUG	**Fuego 3**	**1.58**	**55**	*i*P		*e*P	Pn	05 38 16.0	+0.7
FG6		**1.62**	**51**	*e*P		*e*P	Pn	05 38 16.9	+1.3
RBDL	**Robledal**	**2.49**	**76**	*e*P		*e*P	x	05 38 27.7	
RTR	**El Retiro**	**2.49**	**81**	*e*P		*e*P	x	05 38 27.6	
RTR				*e*S		*e*S	x	05 38 58.6	
SBLS	**San Blas**	**2.50**	**83**	*e*P		*e*P	x	05 38 27.5	
SBLS				*e*S		*e*S	x	05 38 59.0	
SNJE	**San Jose**	**2.52**	**82**	*e*P		*e*P	x	05 38 27.4	
BOQS	**Boqueron**	**2.83**	**86**	*e*P		*e*P	x	05 38 32.4	
LFRS	**El Faro**	**3.03**	**88**	*e*P		*e*P	x	05 38 34.9	
LBRS	**Las Brisas**	**3.06**	**86**	*i*P		*e*P	x	05 38 35.4	
SNVI	**San Vicente**	**3.25**	**88**	*e*P		*e*P	x	05 38 38.3	
SNVI						*e*S	x	05 39 16.9	
VSM	**San Miguel**	**3.80**	**91**	*e*P		*e*P	x	05 38 45.9	
BLLM	**Bellamira**	**3.84**	**91**	*e*P		*e*P	x	05 38 46.5	
CNCH	**Conchagua**	**4.24**	**93**	*e*P		*e*P	x	05 38 51.2	

KRSC 29 06:29:08.2±0.1, 5514N×16476E, h41km±40km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.54**	**315**	*e*P		*e*P	Pn	06 29 32.7	-0.3
KBTR				*e*S		*e*S	Sn	06 29 49.5	-2.2
MKZ	**Mys Kozlova**	**1.85**	**253**	P		P	Pn	06 29 38.3	+1.0
MKZ				S		S	Sn	06 30 00.0	+0.6
ZLN	**Zelenaya**	**2.41**	**293**	P		P	Pn	06 29 47.8	+2.7
ZLN				S		S	Sn	06 30 17.7	+4.4
SRKR	**Sorokina**	**2.53**	**308**	*e*P		*e*P	Pn	06 29 48.9	+2.2
BZMR	**Bezymyannaya**	**2.55**	**290**	P		P	Pn	06 29 50.0	+3.0
BZMR				S		S	Sn	06 30 20.8	+4.0
BZWR	**Bezymyannyi-We**	**2.56**	**291**	*e*P		*e*P	Pn	06 29 49.5	+2.4
BZWR				S		S	Sn	06 30 19.8	+2.9
KLY	**Klyuchi**	**2.60**	**299**	P		P	Pn	06 29 48.8	+1.1
KLY				S		S	Sn	06 30 19.7	+1.7
KRSR	**Krestovskiy**	**2.61**	**296**	P		P	Pn	06 29 50.4	+2.6
KIRR	**Kirishev**	**2.64**	**290**	P		P	Pn	06 29 51.2	+3.0
KIRR				S		S	Sn	06 30 22.7	+3.8
TUMR	**Tumrok**	**2.65**	**275**	*e*P		P	Pn	06 29 51.2	+2.9
TUMR				S		S	Sn	06 30 22.5	+3.4
KMNR	**Kamenistaya**	**2.65**	**285**	P		P	Pn	06 29 51.7	+3.4
KMNR				S		S	Sn	06 30 23.9	+4.7
KPT	**Kopyto**	**2.71**	**290**	P		P	Pn	06 29 52.5	+3.4
KOZ	**Kozyrevsk**	**2.92**	**290**	P		P	Pn	06 29 55.5	+3.4
SRDR	**Sredinnyy**	**3.09**	**295**	P		P	Pn	06 29 58.1	+3.8
KII	**Karymskiy**	**3.28**	**252**	P		P	Pn	06 30 00.0	+3.0
NLC	**Nalytchevo**	**3.75**	**240**	P		P	Pn	06 30 05.2	+1.8
NLC				S		S	Sn	06 30 46.4	+0.2
AVH	**Avacha**	**4.00**	**244**	P		P	Pn	06 30 09.5	+2.6
AVH				S		S	Sn	06 30 55.0	+2.5
GNL	**Ganaly**	**4.24**	**253**	*e*P		P	Pn	06 30 13.4	+3.3

*IDC **29** 06:35:09.4±0.8, 2120S×17449W, h0km, mb4.1/7, mb1 4.4/8, mb1mx4.2/17, mbtmp4.1/8, ML4.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/27, Error ellipse: s-maj=35.7km s-min=23.0km az=132.0*

*ISCJB **29** 06:35:12.9±0.6, 213S±0.1×1746W±0.1, h33km, mb4.2/10, MS3.7/6, Error ellipse: s-maj=21.8km s-min=13.1km az=41.5*

*NEIC **29** 06:35:15.6±5.4, 2126S×17459W, h42km±49km, mb4.4/3, Error ellipse: s-maj=23.0km s-min=16.2km az=149.0*

ISC 29 06:35:14.9±0.6, 213S±01×1746W±01, h35km, n26, σ0993/16, mb4.2/10, MS3.7/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.78**	**21**	Pn		Pn	**Pn**	**06 36 57.3**	**-8.4**
	5.8nm,0.3s,baz=326,slow=17,SNR=8.7								
AFI				Sn		Sn	**Sn**	**06 38 18.9**	**-14**
	5.1nm,0.3s,baz=115,slow=20,SNR=3.7								
AFI				T				06 44 51.2	
	2.0nm,0.3s,baz=133,slow=23,SNR=4.1								
RAR	**Rarotonga**	**13.83**	**93**	Pn		Pn	**Pn**	**06 38 15.7**	**-13**
	5.2nm,0.3s,baz=277,slow=19,SNR=7.5								
URZ	**Urewera**	**18.40**	**201**	P		P	**Pn**	**06 39 26.9**	**-0.3**
	0.9nm,0.3s,baz=0.7,slow=23,SNR=5.4								
HNR	**Honiara**	**27.16**	**292**	LR		LR		06 49 31.1	
	comp=Z,142nm,20.4s,MS3.5,baz=96,slow=32								
STKA	**Stephens Creek**	**40.34**	**245**	LR		LR		06 58 20.4	
	comp=Z,102nm,19.1s,MS3.7,baz=202,slow=34								
COEN	**Coen**	**40.79**	**273**	*e*P		P	**P**	**06 42 53.5**	**+0.3**
	6.0nm,1.0s,mb4.2								
STCH	**Steam Cracks**	**44.66**	**27**	*e*P		P	**P**	**06 43 25.6**	**+1.2**
ASAR	**Alice Springs**	**47.44**	**257**	P		P	**P**	**06 43 45.5**	**-0.8**
	3.0nm,0.8s,mb4.2,baz=89,slow=8.1,SNR=31								
ASAR				PcP		PcP		06 45 17.2	+0.7
	1.1nm,0.7s,baz=98,slow=3.9,SNR=5.9								
WB2	**Warramunga Ar**	**47.63**	**262**	*e*P		P	**P**	**06 43 47.7**	**-0.2**
WRAB	**Tennant Creek**	**47.63**	**262**	*e*P		P	**P**	**06 43 47.3**	**-0.7**
	3.0nm,0.8s,mb4.4								
VNDA	**Vanda**	**57.47**	**186**	P		P	**P**	**06 45 01.1**	**+1.1**
	0.7nm,0.8s,mb3.7,baz=20,slow=7.9,SNR=3.8								
MJAR	**Matsushiro Arr**	**72.72**	**322**	P		P	**P**	**06 46 39.6**	**+0.2**
	2.2nm,0.6s,mb4.2,baz=152,slow=5.3,SNR=4.2								
NVAR	**Mina Array Bea**	**79.43**	**42**	P		P	**P**	**06 47 17.0**	**-0.6**
	1.6nm,0.7s,mb4.1,baz=222,slow=8.0,SNR=14								
KSRS	**Korea Array**	**79.57**	**317**	LR		LR		07 17 03.8	
	comp=Z,41nm,19.2s,MS3.8,baz=318,slow=32								
TXAR	**Lajitas Array**	**84.81**	**56**	P		P	**P**	**06 47 44.9**	**-1.2**
	0.4nm,1.0s,mb3.5,baz=51,slow=3.6,SNR=3.5								
TXAR				LR		LR		07 17 57.0	
	comp=Z,54nm,18.4s,MS4.0,baz=5.0,slow=30								
TRF	**Thorofare Moun**	**86.55**	**11**	*e*P		P	**P**	**06 47 52.8**	**-1.1**
	5.6nm,0.8s,mb4.8								
PDAR	**Pinedale Array**	**87.36**	**42**	P		P	**P**	**06 47 58.6**	**+0.3**
	0.3nm,0.7s,mb3.6,baz=220,slow=4.1,SNR=2.8								
CFAA	**Coronel Fontan**	**92.09**	**125**	LR		LR		07 20 40.0	
	comp=Z,5.8nm,18.8s,MS3.0,baz=42,slow=30								
CMAR	**Chiang Mai Arr**	**93.36**	**288**	P		P	**P**	**06 48 29.1**	**+2.3**
	1.4nm,0.3s,mb4.9,baz=48,slow=2.1,SNR=7.6								
LVC	**Limon Verde**	**95.48**	**117**	LR		LR		07 22 35.4	
	comp=Z,56nm,18.1s,MS4.1,baz=196,slow=30								
KURK	**Kurchatov**	**116.69**	**317**	PKP		PKPdf		06 53 54.2	-1.0
	0.4nm,0.2s,baz=108,slow=3.0,SNR=2.2								
BVAR	**Borovoye Array**	**121.69**	**320**	PKP		PKPdf		06 54 04.4	-0.3
	0.7nm,0.7s,baz=116,slow=3.4,SNR=3.2								
AKASG	**Malin Array Be**	**145.15**	**333**	PKP		PKPdf		06 54 47.6	-0.9
	3.4nm,0.6s,baz=40,slow=4.1,SNR=22								
BRTR	**Keskin Array B**	**149.67**	**314**	PKPbc		PKPbc		06 55 01.4	+0.3
	1.9nm,0.8s,baz=121,slow=4.7,SNR=6.8								
KHC	**Kasperske Hory**	**151.42**	**349**	*e*PKPbc		PKPbc		06 55 04.5	-0.4
GERES	**GERESS Array B**	**151.67**	**348**	PKPab		PKPab		06 55 16.0	+1.8
	2.4nm,1.1s,baz=328,slow=1.3,SNR=6.6								

*NEIC **29** 06:42:41.9, 1608N×9893W, h7km, MD4.

Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.28**	**162**	*e*PG	Pg	07 34 30.5	-0.2
JAN				*e*SG	Sg	07 34 34.2	-0.1
KEK	**Kerkira**	**0.75**	**254**	*e*PB	Pb	07 34 39.6	-1.2
KZN	**Kozani**	**0.88**	**64**	*e*PB	Pb	07 34 42.0	-1.0
EVR	**Evrytania**	**1.30**	**140**	*e*PB	Pb	07 34 50.0	-0.1
KRUS	**Krusevo**	**1.50**	**15**	*e*Pn	Pn	07 34 57.9	+5.2
KRUS				*e*Sg	Sg	07 35 21.5	+8.0

NEIC 29 07:36:08.3, 3782S×17659E, h144km, MG3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.60**	**137**	P	Pn	07 36 29.5	0.0
MWZ	**Matawai**	**0.90**	**125**	P	Pn	07 36 31.5	-0.1
PUZ	**Puketiti**	**1.34**	**101**	P	Pn	07 36 34.9	-0.8
BKZ	**Black Stump Fm**	**1.35**	**183**	P	Pn	07 36 35.6	-0.2
BKZ				S	Sn	07 36 56.6	-0.2
MXZ	**Matakaoa Point**	**1.39**	**80**	P	Pn	07 36 36.3	+0.2
NGZ	**Ngauruhoe**	**1.56**	**209**	P	Pn	07 36 38.6	+0.6
WPVZ	**Whakapapa**	**1.61**	**210**	P	Pn	07 36 38.8	+0.3
TUVZ	**Tukino**	**1.62**	**207**	P	Pn	07 36 39.0	+0.3
WNVZ	**Wahianoa**	**1.69**	**207**	P	Pn	07 36 39.6	+0.1
MOVZ	**Moawhango**	**1.72**	**202**	P	Pn	07 36 39.2	-0.5
WAZ	**Wanganui**	**2.31**	**212**	P	Pn	07 36 46.2	-0.5
BFZ	**Birch Farm**	**2.87**	**185**	P	Pn	07 36 51.8	-1.9
MRZ	**Mangatainoka R**	**2.94**	**195**	P	Pn	07 36 52.4	-2.2
KIW	**Kapiti Island**	**3.31**	**203**	P	Pn	07 36 56.3	-3.0
MTW	**Mount Morrison**	**3.44**	**194**	P	Pn	07 36 57.9	-3.1
CAW	**Cannon Point**	**3.49**	**199**	P	Pn	07 36 58.5	-3.1
MRW	**Makara Radio**	**3.71**	**203**	P	Pn	07 37 01.1	-3.4
MSWZ	**Moikau Station**	**3.74**	**196**	P	Pn	07 37 01.3	-3.6
WEL	**Wellington**	**3.74**	**202**	P	Pn	07 37 01.8	-3.1
SNZO	**South Karori**	**3.78**	**202**	P	Pn	07 37 01.7	-3.7
BHW	**Baring Head**	**3.82**	**200**	P	Pn	07 37 02.2	-3.8
TCW	**Tory Channel**	**3.83**	**207**	P	Pn	07 37 02.6	-3.5
NNZ	**Nelson**	**4.21**	**215**	P	Pn	07 37 07.4	-3.6
BSWZ	**Blackbirch Sta**	**4.42**	**207**	P	Pn	07 37 10.2	-3.6
THZ	**Tophouse**	**4.86**	**215**	P	Pn	07 37 15.7	-3.9
KHZ	**Kahutara**	**5.15**	**206**	P	Pn	07 37 19.2	-4.3

TAP 29 07:56:30.5, 2481N×12225E, h8km, ML3.5, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.31**	**309**	P	Pg	07 56 37.6	+0.9
	baz=308						
TWB1				*i* S	Sg	07 56 42.4	+1.6
	baz=308						
TWC	**Suao**	**0.42**	**242**	P	Pg	07 56 39.0	+0.4
	baz=253						
TWC				*e*S	Sg	07 56 45.1	+1.0
	baz=253						
NWF	**Wu-fen Shan**	**0.50**	**301**	P	Pg	07 56 41.9	+1.7
	baz=290						
NWF				*e*S	Sg	07 56 49.4	+2.6
	baz=290						
TWE	**Neicheng**	**0.54**	**261**	*e*P	Pg	07 56 41.8	+0.9
	baz=262						
TWE				*e*S	Sg	07 56 49.8	+1.7
	baz=262						
ENA	**Nanau**	**0.60**	**231**	*e*P	Pg	07 56 42.8	+0.7
	baz=232						
TWA	**Mucha**	**0.63**	**286**	*e*P	Pg	07 56 44.4	+1.7
	baz=274						
TWA				*e*S	Sg	07 56 54.3	+3.4
	baz=274						
ENTT	**Nioudou**	**0.65**	**255**	*e*P	Pg	07 56 43.7	+0.8
	baz=265						
ENTT				*e*S	Sg	07 56 53.6	+2.2
	baz=265						
TWY	**Chenhua**	**0.75**	**308**	*e*P	Pg	07 56 46.6	+1.6
	baz=306						
TWY				*e*S	Sg	07 56 58.0	+3.2
	baz=306						
TWS1	**Kuangyinshan**	**0.81**	**291**	*e*P	Pg	07 56 47.6	+1.5
	baz=290						
NSK	**Sanguang**	**0.82**	**261**	*e*P	Pg	07 56 46.7	+0.4
	baz=271						
NSK				*e*S	Sg	07 56 59.2	+2.2
	baz=271						
PCYT	**Pengchaiyu**	**0.83**	**349**	*e*P	Pg	07 56 47.5	+1.0
	baz=339						
NNS	**Nan Shan**	**0.88**	**245**	P	Pg	07 56 48.0	+0.6
	baz=252						
NNS				*e*S	Sg	07 57 00.7	+1.8
	baz=252						
TWD	**Chiawan**	**0.94**	**220**	P	Pg	07 56 49.3	+0.8
	baz=232						
TWD				*e*S	Sg	07 57 02.4	+1.6
	baz=232						
WHF	**Hehuan Shan**	**1.12**	**234**	*e*P	Pg	07 56 52.1	+0.2
	baz=228						
WHF				*e*S	Sg	07 57 07.6	+1.2
	baz=228						
NSTT	**Nanjuang**	**1.15**	**261**	P	Pb	07 56 53.7	+1.1
	baz=263						
NSTT				*e*S	Sg	07 57 10.2	+2.6
	baz=263						
ESL	**Shilin**	**1.24**	**217**	*e*P	Pn	07 56 53.4	-0.7
	baz=228						
TWQ1	**Liyutan**	**1.42**	**251**	*e*P	Pn	07 56 58.2	+1.7
	baz=244						
SMLT	**Sun Moon Lake**	**1.54**	**233**	*e*P	Pn	07 57 00.8	+2.6
	baz=231						
SMLT				*e*S	Sn	07 57 21.0	+2.7
	baz=231						
EHY	**Hungye**	**1.55**	**213**	*e*P	Pn	07 56 58.7	+0.4
	baz=222						
TYC	**Yuchr**	**1.56**	**235**	*e*P	Pn	07 57 00.3	+1.9
	baz=232						
TYC				*e*S	Sn	07 57 22.6	+3.8
	baz=232						
ALS	**Alishan**	**1.85**	**226**	*e*P	Pn	07 57 03.9	+1.5
	baz=234						
ALS				*e*S	Sn	07 57 32.2	+6.2
	baz=234						
CHN5	**Tsauling**	**1.88**	**230**	*e*P	Pn	07 57 05.0	+2.2
	baz=238						
CHN5				*e*S	Sn	07 57 32.5	+5.8
	baz=238						
CHN4	**Tsaushan**	**2.10**	**227**	*e*P	Pn	07 57 07.8	+2.0
	baz=236						
CHN4				*e*S	Sn	07 57 37.5	+5.3
	baz=236						
WTP	**Ta-pu**	**2.16**	**224**	*e*P	Pn	07 57 08.5	+1.8
	baz=233						
CHN1	**Nanshi**	**2.26**	**225**	*e*P	Pn	07 57 09.5	+1.4
	baz=234						
CHN1				*e*S	Sn	07 57 41.1	+5.0
	baz=234						

*ISCJB **29** 08:22:14.5±0.7, 3701N±004×29.36E±004, h7km±6km, Error ellipse: s-maj=6.2km s-min=5.3km az=153.7*
*CSEM **29** 08:22:14.2±0.1, 3699N×2933E, h15km, MD3.2, Error ellipse: s-maj=1.4km s-min=1.0km az=153.0*
*ISK **29** 08:22:14.3, 3699N×2933E, h14km, MD3.2*
*DDA **29** 08:22:17.1, 3697N×2922E, h7km±4km, Md3.2*

ISC 29 08:22:15.5±0.6, 3700N±004×2934E±004, h14km±5km, n16, σ0°93/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.30**	**36**	*i* P	**Pg**	**08 22 24.3**	**+2.5**
GOLH				*i* S	**Sg**	**08 22 31.2**	**+5.3**
FETY	**Fethiye**	**0.41**	**210**	*e*PG	**Pg**	**08 22 22.9**	**-0.8**
FETY				*e*SG	**Sg**	**08 22 29.0**	**-0.2**
DALT	**Dalyan (Mudla)**	**0.60**	**248**	*e*PG	**Pg**	**08 22 26.4**	**-0.9**
DALT				*e*SG	**Sg**	**08 22 35.4**	**+0.1**
AKAS	**Kas**	**0.79**	**164**	*i* P	**Pg**	**08 22 32.6**	**+1.8**
AKAS				*i* S	**Sg**	**08 22 47.3**	**+6.2**
DENT	**Denizli**	**0.80**	**342**	*e*PG	**Pg**	**08 22 30.1**	**-0.8**
DENT				*e*SG	**Sg**	**08 22 41.6**	**+0.2**
YER	**Yerkesik**	**0.85**	**280**	*e*PG	**Pg**	**08 22 31.9**	**-0.2**
YER				*e*SG	**Sg**	**08 22 43.3**	**+0.1**
ANTB	**Antalya**	**1.06**	**95**	*e*PG	**Pg**	**08 22 35.3**	**-0.6**
BCK	**Bucak**	**1.10**	**65**	*e*PN	**Pn**	**08 22 36.0**	**-0.5**
MLSB	**Milas**	**1.28**	**284**	*e*PN	**Pn**	**08 22 38.2**	**-0.8**
KHL	**Karahalli**	**1.33**	**6**	*e*PN	**Pn**	**08 22 39.2**	**-0.4**
DAT	**Datca**	**1.44**	**260**	*e*PN	**Pn**	**08 22 40.5**	**-0.6**
BDRM	**Kayabasi**	**1.52**	**273**	*i* P	**Pn**	**08 22 44.6**	**+2.4**
BDRM				*i* S	**Sn**	**08 23 03.1**	**+1.3**
KULA	**Kula-Manisa**	**1.61**	**341**	*e*PN	**Pn**	**08 22 43.3**	**-0.2**
BODT	**Bodrum**	**1.62**	**273**	*e*PN	**Pn**	**08 22 43.3**	**-0.3**
HDMB	**Hadim**	**2.52**	**90**	*e*PN	**Pn**	**08 22 56.0**	**0.0**
KIZT	**Kizilcal**	**2.75**	**46**	*e*PN	**Pn**	**08 22 58.8**	**-0.4**

*CSEM **29** 08:22:52.5±0.1, 3864N×4331E, h2km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.0km az=69.0*

DDA 29 08:22:53.4, 3858N×4339E, h2km±3km, Md3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.02**	**353**	*e*PG	Pg	08 22 54.7	+0.7
TVAN	**Van**	**0.05**	**167**	*i* P	Pg	08 22 54.5	+0.1
TVAN				*i* S	Sg	08 22 55.8	+0.8
VANT	**Van**	**0.13**	**181**	*e*PG	Pg	08 22 58.1	+2.2
TUTA	**Tutak**	**0.94**	**332**	*i* P	Pg	08 23 12.6	+1.1
TUTA				*i* S	Sg	08 23 24.9	+1.3
HAKT	**HAKKARI**	**1.04**	**166**	*i* P	Pg	08 23 16.9	+3.5
HAKT				*i* S	Sg	08 23 31.9	+4.9
AGRB	**Hanur-Agry**	**1.05**	**343**	*e*PG	Pg	08 23 12.3	-1.1

*CSEM **29** 08:36:07.8±0.1, 3694N×2929E, h8km, MD2.9, Error ellipse: s-maj=2.7km s-min=1.7km az=146.0*
*ISCJB **29** 08:36:08.8±0.6, 3695N±004×2927E±005, h8km±6km, Error ellipse: s-maj=7.9km s-min=4.9km az=143.7*
*ISK **29** 08:36:08.0, 3695N×2928E, h10km, MD2.9*
*DDA **29** 08:36:10.0, 3700N×2920E, h7km±6km, Md3.0*

ISC 29 08:36:09.4±0.6, 3695N±004×2926E±005, h12km±5km, n16, σ0°83/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.34**	**204**	*e*PG	**Pg**	**08 36 15.4**	**-0.9**
FETY				*e*SG	**Sg**	**08 36 20.9**	**0.0**
GOLH	**Golhisar**	**0.37**	**40**	*i* P	**Pg**	**08 36 16.7**	**-0.2**
GOLH				*i* S	**Sg**	**08 36 23.7**	**+1.8**
DALT	**Dalyan (Mudla)**	**0.53**	**250**	*e*PG	**Pg**	**08 36 19.0**	**-0.8**
DALT				*e*SG	**Sg**	**08 36 27.3**	**+0.5**
TURN	**Turunc**	**0.53**	**262**	*i* P	**Pg**	**08 36 24.8**	**+5.0**
TURN				*i* S	**Sg**	**08 36 36.6**	**+10**
AKAS	**Kas**	**0.77**	**159**	*i* P	**Pg**	**08 36 25.5**	**+1.3**
AKAS				*i* S	**Sg**	**08 36 40.3**	**+6.1**
YER	**Yerkesik**	**0.80**	**284**	*e*PG	**Pg**	**08 36 24.3**	**-0.6**
DENT	**Denizli**	**0.82**	**347**	*e*PG	**Pg**	**08 36 24.6**	**-0.7**
BCK	**Bucak**	**1.18**	**64**	*e*PN	**Pn**	**08 36 30.7**	**-1.0**
MLSB	**Milas**	**1.24**	**287**	*e*PN	**Pn**	**08 36 31.9**	**-0.6**
ISP	**Isparta**	**1.34**	**48**	*e*PN	**Pn**	**08 36 33.6**	**-0.2**
DAT	**Datca**	**1.37**	**261**	*e*PN	**Pn**	**08 36 33.9**	**-0.3**
KHL	**Karahalli**	**1.39**	**9**	*e*PN	**Pn**	**08 36 34.2**	**-0.3**
BDRM	**Kayabasi**	**1.46**	**275**	*i* P	**Pn**	**08 36 36.6**	**+1.1**
BDRM				*i* S	**Sn**	**08 36 56.3**	**+1.8**
BODT	**Bodrum**	**1.56**	**275**	*e*PN	**Pn**	**08 36 36.9**	**-0.1**
KULA	**Kula-Manisa**	**1.63**	**343**	*e*PN	**Pn**	**08 36 37.7**	**-0.2**
HDMB	**Hadim**	**2.58**	**89**	*e*PN	**Pn**	**08 36 50.7**	**-0.3**

KRSC 29 08:40:16.6±0.5, 5532N×16245E, h5km±5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.87**	**209**	*e*P	Pg	08 40 34.9	+1.6
MKZ				*i* S	Sg	08 40 48.4	+3.8
KBTR	**Krutoberegovo**	**0.91**	**13**	*e*P	Pg	08 40 35.7	+1.6
KBTR				*i* S	Sg	08 40 50.3	+4.3
ZLN	**Zelenaya**	**1.17**	**308**	P	Pg	08 40 39.9	+1.0
BZMR	**Bezymyannaya**	**1.27**	**300**	*e*P	Pg	08 40 40.5	-0.4
BZMR				*i* S	Sg	08 40 58.2	+0.8
BZWR	**Bezymyannyi-We**	**1.28**	**301**	*e*P	Pn	08 40 41.4	+0.3
TUMR	**Tumrok**	**1.32**	**269**	P	Pn	08 40 42.5	+0.9
KMNR	**Kamenistaya**	**1.33**	**290**	*e*P	Pn	08 40 42.6	+0.8
KMNR				*i* S	Sb	08 41 01.2	+1.9
KIRR	**Kirishev**	**1.35**	**299**	P	Pn	08 40 42.9	+0.8
KIRR				*i* S	Sb	08 41 02.0	+2.0
KRSR	**Krestovskiy**	**1.39**	**311**	*e*P	Pn	08 40 42.7	0.0
KPT	**Kopyto**	**1.42**	**298**	*e*P	Pn	08 40 44.3	+1.3
KPT				*i* S	Sb	08 41 04.0	+2.1
KLY	**Klyuchi**	**1.42**	**315**	*e*P	Pn	08 40 42.3	-0.7
KLY				*i* S	Sb	08 41 01.1	-0.8
SRKR	**Sorokina**	**1.52**	**332**	P	Pn	08 40 44.9	+0.5
SRKR				*i* S	Sn	08 41 06.0	+1.5
KOZ	**Kozyrevsk**	**1.64**	**298**	P	Pn	08 40 47.6	+1.6
SRDR	**Sredinnyy**	**1.84**	**304**	P	Pn	08 40 49.4	+0.6
KII	**Karymskiy**	**2.17**	**235**	P	Pn	08 40 55.3	+2.0
SPN	**Mys Shipunski**	**2.64**	**214**	P	Pn	08 41 00.3	+0.5
SPN				*i* S	Sn	08 41 31.9	-0.3
NLC	**Nalytchevo**	**2.82**	**222**	P	Pn	08 41 03.3	+1.0
NLC				*i* S	Sn	08 41 37.0	+0.4
GNL	**Ganaly**	**3.09**	**240**	P	Pn	08 41 07.8	+1.8

*ISCJB **29** 08:46:38.2±2.7, 5633S±008×283W±0.1, h205km±28km, mb4.6/18, Error ellipse: s-maj=13.8km s-min=11.1km az=26.2*
*BJI **29** 08:46:39.0, 5640S×2830W, h200km, mB4.9*
*NEIC **29** 08:46:39.0±1.9, 5636S×2832W, h200km±17km, mb4.8/10, Error ellipse: s-maj=10.5km s-min=8.5km az=188.0*
*IDC **29** 08:46:40.9±1.4, 5629S×2845W, h216km±12km, mb4.3/10, mb1 4.3/11, mb1mx4.2/14, mbtmp4.3/11, Error ellipse: s-maj=14.4km s-min=12.8km az=96.0*

ISC 29 08:46:39.2±2.3, 5637S±008×283W±01, h200km±24km, n67, σ0°84/32, mb4.6/18, 1C-4D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.75**	**157**	⇓*i* Pn	**Pn**	**08 50 22.6**	**+0.6**
VNA1				*e*		08 50 24.4	
VNA1				*e*		08 50 27.5	
VNA1				*e*		08 50 29.3	
VNA3	**Neumayer Olymp**	**16.91**	**159**	⇓*i* Pn	**Pn**	**08 50 24.4**	**+0.5**
VNA3				*e*		08 50 26.5	
VNA3				*e*		08 50 30.9	
VNA2	**Neumayer--Watz**	**17.15**	**157**	⇓*i* Pn	**Pn**	**08 50 26.8**	**+0.1**
	baz=317,slow=12						
VNA2				*e*		08 50 31.8	
VNA2				*e*		08 50 33.3	
EFI	**East Falkland**	**18.01**	**273**	*e*Pn	**Pn**	**08 50 36.4**	**-0.6**
	88nm,1.2s						
SNAA	**Sanae**	**18.72**	**155**	*e*P	**P**	**08 50 40.0**	**-2.2**
	184nm,0.6s						
SNAA				*e*PcP	PcP	08 54 57.7	-2.7
PMSA	**Palmer Station**	**19.21**	**229**	P	**P**	**08 50 47.4**	**-0.2**
	0.7nm,0.3s,baz=187,slow=8.1,SNR=3.4						
PMSA	**Palmer Station**	**19.21**	**229**	*e*P	**P**	**08 50 48.9**	**+1.3**
	48nm,0.6s						
USHA	**Ushuaia**	**22.49**	**257**	P	**P**	**08 51 21.2**	**-0.3**
	3.1nm,0.9s,mb3.9,baz=95,slow=14,SNR=3.7						
PLCA	**Paso Flores**	**31.43**	**282**	ScP	ScP	08 58 48.3	-4.9
	1.9nm,0.7s,baz=188,slow=2.4,SNR=4.7						
PLCA	**Paso Flores**	**31.43**	**282**	*e*P	**P**	**08 52 42.2**	**+0.7**
SYO	**Syowa Base**	**31.74**	**141**	⇓*e*P	**P**	**08 52 42.6**	**-1.2**
SYO	**Syowa Base**	**31.74**	**141**	⇓*e*pP	pP	08 53 19.2	-5.4
CFAA	**Coronel Fontan**	**37.11**	**295**	P	**P**	**08 53 27.9**	**-2.3**
	0.3nm,0.6s,baz=166,slow=9.0,SNR=5.8						
CFAA				PcP	PcP	08 55 45.8	-0.3
	0.2nm,0.4s,baz=190,slow=3.3,SNR=3.5						
MAW	**Mawson**	**40.27**	**144**	*e*P	**P**	**08 53 57.1**	**+1.1**
	10nm,0.5s,mb4.5						
MAW	**Mawson**	**40.27**	**144**	P	**P**	**08 53 56.6**	**+0.5**
	15nm,0.6s,mb4.6,baz=241,slow=7.7,SNR=34						
MAW				PcP	PcP	08 55 56.3	+1.0
	5.3nm,0.8s,baz=294,slow=4.9,SNR=3.6						
SUR	**Sutherland**	**41.34**	**76**	*e*P	**P**	**08 54 05.2**	**0.0**
	36nm,1.3s,mb4.6						
BDFB	**Brasilia**	**43.33**	**332**	P	**P**	**08 54 22.3**	**+1.0**
	2.1nm,0.6s,mb3.8,baz=135,slow=14,SNR=5.5						
SBA	**Scott Base**	**45.72**	**184**	*e*P	**P**	**08 54 40.3**	**+0.8**
	26nm,0.9s,mb4.6						
VNDA	**Vanda**	**46.23**	**183**	P	**P**	**08 54 45.8**	**+2.3**
	32nm,0.6s,mb4.8,baz=187,slow=6.6,SNR=329						
VNDA				ScP	ScP	08 59 46.6	-2.6
	1.8nm,0.8s,baz=265,slow=1.6,SNR=4.7						
VNDA	**Vanda**	**46.23**	**183**	*e*P	**P**	**08 54 45.1**	**+1.6**
	34nm,0.7s,mb4.8						
BOSA	**Boshof**	**46.66**	**77**	P	**P**	**08 54 46.9**	**-0.6**
	10nm,0.9s,mb4.1,baz=221,slow=8.5,SNR=11						
LBTB	**Lobatse**	**49.71**	**74**	*e*P	**P**	**08 55 11.0**	**+0.1**
	20nm,1.0s,mb4.4						
TSUM	**Tsumeb**	**50.39**	**62**	*e*P	**P**	**08 55 16.1**	**+0.1**
	6.5nm,0.7s,mb4.1						
LSZ	**Lusaka**	**59.08**	**70**	*e*P	**P**	**08 56 18.4**	**+0.1**
	25nm,1.2s,mb4.7						
LIC	**Lamto**	**65.25**	**26**	*e*P	**P**	**08 56 59.3**	**0.0**
	96nm,0.8s,mb5.5						
KIC	**Kosan Boka**	**65.45**	**26**	*e*P	**P**	**08 57 00.6**	**+0.1**
	59nm,0.8s,mb5.3						
TIC	**Toumodi**	**65.66**	**26**	*e*P	**P**	**08 57 01.9**	**0.0**
	79nm,0.6s,mb5.5						
DBIC	**Dimbokro**	**65.72**	**26**	P	**P**	**08 57 02.3**	**+0.1**
	12nm,0.5s,mb4.8,baz=171,slow=7.3,SNR=32						
TOA0	**Torodi Ar. Sit**	**73.65**	**31**	*e*P	**P**	**08 57 51.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.65**	**31**	P	**P**	**08 57 51.0**	**+0.5**
	34nm,0.5s,mb5.2,baz=199,slow=6.4,SNR=332						
NWAO	**Narrogin (SRO)**	**86.36**	**152**	P	**P**	**08 58 57.7**	**-0.8**
	4.0nm,0.6s,mb4.3,baz=192,slow=5.0,SNR=4.1						
NWAO	**Narrogin (SRO)**	**86.36**	**152**	P	**P**	**08 58 57.7**	**-0.8**
STKA	**Stephens Creek**	**91.69**	**171**	P	**P**	**08 59 23.0**	**-0.5**
	0.8nm,0.4s,mb4.0,baz=182,slow=16,SNR=3.6						
ASAR	**Alice Springs**	**98.87**	**164**	P	**P**	**08 59 55.8**	**-0.5**
	1.7nm,0.7s,mb4.5,baz=181,slow=4.1,SNR=18						
SDCO	**Great Sand Dun**	**114.11**	**302**	*e*PKPdf	PKiKP	09 04 53.9	+0.2
PDAR	**Pinedale Array**	**119.97**	**303**	PKP	PKPdf	09 05 03.9	-0.9
	0.2nm,0.5s,baz=108,slow=5.8,SNR=3.1						
HLID	**Hailey**	**122.88**	**300**	*e*PKPdf	PKPdf	09 05 11.8	+1.4
AKTK	**Aktyubinsk**	**128.03**	**54**	PKP	PKPdf	09 05 19.4	-0.6
AKTO	**Aktyubinsk**	**128.03**	**54**	PKP	PKPdf	09 05 19.4	-0.6
	1.1nm,0.4s,baz=54,slow=8.7,SNR=5.2						
ARCES	**ARCESS Array B**	**131.48**	**22**	PKP	PKPdf	09 05 25.7	-0.3
	2.5nm,0.9s,baz=189,slow=1.7,SNR=5.3						
ARCES	**ARCESS Array B**	**131.48**	**22**	PKP	PKPdf	09 05 25.7	-0.3
KMI	**Kunming**	**133.02**	**111**	PKP	PKPdf	09 05 33.8	+3.5
YKA	**Yellowknife Ar**	**135.98**	**318**	PKP	PKPdf	09 05 34.3	-0.3
	1.6nm,0.4s,baz=131,slow=2.1,SNR=20						
YKA				SKPbc	SKPbc	09 08 43.2	-4.0
	2.6nm,1.1s,baz=104,slow=2.3,SNR=4.0						
YKA	**Yellowknife Ar**	**135.98**	**318**	PKP	PKPdf	09 05 34.4	-0.3
YKA				SKPbc	SKPbc	09 08 43.2	-4.0
GYA	**Guiyang**	**136.13**	**114**	PDIF	Pdif	09 02 41.3	-0.7
GYA				PKP	PKPdf	09 05 39.5	+3.4
GYA				PP	PP	09 08 22.0	+3.6
GYA				PKS		09 09 13.0	
GYA				PP	PP		
	comp=Z,80nm,6.5s						
GYA				LR	LR		
	comp=N,220nm,20.7s						
GYA				LR	LR		
	comp=E,80nm,22.4s						
GYA				LR	LR		
	comp=Z,240nm,21.0s						
MKAR	**Makanchi Array**	**137.59**	**72**	PKP	PKPdf	09 05 38.9	+0.8
	comp=Z,0.4nm,0.5s,baz=212,slow=2.9,SNR=5.7						
MKAR				SKPbc	SKPbc	09 08 47.5	-5.0
	comp=Z,1.0nm,0.8s,baz=270,slow=2.4,SNR=7.6						
MKAR				SKPbc	SKPbc	09 08 47.5	-5.0
MKAR	**Makanchi Array**	**137.59**	**72**	PKP	PKPdf	09 05 38.9	+0.8
CD2	**Chengdu**	**138.18**	**107**	*e*PKP	PKPdf	09 05 43.5	+3.8
CD2				PP	PP	09 08 37.0	+5.8
CD2				PKS		09 09 18.5	
CD2				PP	PP		
	comp=Z,90nm,8.2s						
CD2				LR	LR		
	comp=N,160nm,20.2s						
CD2				LR	LR		
	comp=Z,180nm,18.6s						
WMQ	**Urumqi**	**138.59**	**80**	PKP	PKPdf	09 05 44.0	+4.0
LZH	**Lanzhou**	**142.17**	**102**	*e*PKP	PKPdf	09 05 50.0	+3.2
LZH				PP	PP		
	comp=Z,145nm,6.3s						
LZH				LR	LR		
	comp=N,353nm,19.5s						
LZH				LR	LR		
	comp=Z,536nm,20.4s						
ZALV	**Zalesovo Beam**	**143.08**	**65**	PKP	PKPdf	09 05 46.4	-1.4
	comp=Z,1.1nm,0.3s,baz=282,slow=2.9,SNR=6.7						
ZALV				SKP		09 09 02.4	
	comp=Z,1.4nm,0.7s,baz=259,slow=3.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**143.08**	**65**	PKP	PKPdf	09 05 46.4	-1.4
ZALV				SKP		09 09 02.4	
INK	**Inuvik**	**145.64**	**321**	*e*PKPbc	PKPbc	09 05 52.2	-0.4
DAWY	**Dawson**	**146.53**	**312**	*e*PKPbc	PKPbc	09 05 55.0	-0.3
DAWY				*e*PKPab	PKPab	09 05 57.1	+0.3
NJ2	**Nanjing**	**146.71**	**123**	*e*PKP	PKPab	09 05 58.8	+0.3
HHC	**Hu-ho-hao-te**	**149.79**	**104**	*e*PKP	PKPab	09 06 03.5	-7.2
HHC				PKS		09 09 37.3	
HHC				PP	PP	09 09 44.5	+4.0
HHC				PP	PP		
	comp=Z,97nm,10.7s						
HHC				LR	LR		
	comp=N,112nm,17.8s						
HHC				LR	LR		
	comp=E,230nm,17.8s						
HHC				LR	LR		
	comp=Z,130nm,19.0s						
COLA	**College**	**150.27**	**311**	*e*PKPbc	PKPbc	09 06 04.4	-0.4
COLA				*e*PKPab	PKPab	09 06 12.2	+0.2
MCK	**McKinley**	**150.47**	**309**	*e*PKPbc	PKPbc	09 06 05.7	+0.3
TRF	**Thorofare Moun**	**151.00**	**308**	*e*PKPbc	PKPbc	09 06 06.6	0.0
TRF				*e*PKPab	PKPab	09 06 15.9	+0.8
KTH	**Kantishna Hill**

1.8nm,0.7s,mb4.2,baz=140,slow=8.3,SNR=9.8
SONM PcP PcP 09 02 28.0 +0.8
0.9nm,0.7s,baz=131,slow=3.7,SNR=4.3
MKAR Makanchi Array 64.41 317 P **P** **09 02 51.1 +1.0**
1.4nm,0.7s,mb4.1,baz=94,slow=8.9,SNR=7.9
MKAR PcP PcP 09 03 24.4 +0.1
0.7nm,0.7s,baz=89,slow=5.8,SNR=2.8
MKAR Makanchi Array 64.41 317 P **P** **09 02 51.1 +1.0**
MKAR PcP PcP 09 03 24.4 +0.1
ZALV Zalesovo Beam 64.71 325 P **P** **09 02 52.0 +0.1**
1.0nm,0.4s,mb4.2,baz=110,slow=6.7,SNR=5.9
ZALV Zalesovo Beam 64.71 325 P **P** **09 02 52.0 +0.1**
KURK Kurchatov 67.59 321 *e*P **P** **09 03 10.7 +0.3**
5.9nm,0.9s,mb4.6
RC01 Rabbit Creek A 68.57 28 *e*P **P** **09 03 17.3 +0.9**
2.1nm,0.6s,mb4.2
PPT Papeete 69.55 113 LR LR 09 26 56.7
comp=Z,61nm,21.9s,MS3.8,baz=204,slow=30
BVAR Borovoye Array 72.96 322 P **P** **09 03 43.8 +0.5**
3.5nm,0.8s,mb4.4,baz=101,slow=7.7,SNR=14
BRVK Borovoye 73.03 322 *e*P **P** **09 03 44.4 +0.7**
1.3nm,0.5s,mb4.1
YKA Yellowknife Ar 85.10 27 P **P** **09 04 50.2 +0.7**
1.1nm,0.7s,mb4.1,baz=283,slow=5.2,SNR=4.5
YKA Yellowknife Ar 85.10 27 P **P** **09 04 50.2 +0.7**
WVOR Wild Horse Val 86.97 48 *e*P **P** **09 04 57.2 -2.1**
13nm,0.7s,mb5.3
NVAR Mina Array Bea 88.03 51 P **P** **09 05 05.9 +1.6**
1.3nm,0.6s,mb4.3,baz=271,slow=4.2,SNR=11
LBTB Lobatse 121.78 247 *e*PKPdf PKPdf 09 11 08.8 +0.3
DBIC Dimbokro 146.26 299 PKPbc PKPbc 09 11 55.6 +0.2
3.4nm,0.7s,baz=37,slow=5.3,SNR=5.8

BJI ***29*** *09:03:02.1, 395N× 12809E, h37km, mB5.2, mb5.0, Ms4.6, Msz4.4*
MOS ***29*** *09:03:13.9± 0.8, 450N× 12779E, h116km, mb5.0/27, Error ellipse: s-maj=15.6km s-min=7.0km az=105.1*
ISCJB ***29*** *09:03:14.2± 0.2, 448N± 003× 12789E± 003, h116km, mb4.9/79, Error ellipse: s-maj=5.0km s-min=4.2km az=155.7*
MAN ***29*** *09:03:15, 4.17N× 12721E, h222km, mb5.6, ML4.6, MS5.0*
NEIC ***29*** *09:03:16.9± 1.0, 443N× 12782E, h127km± 9km, mb5.0/37, Error ellipse: s-maj=8.1km s-min=4.9km az=83.0*
IDC ***29*** *09:03:16.4± 2.4, 445N× 12776E, h120km± 22km, mb4.5/17, mb1 4.5/19, mb1mx4.4/21, mbtmp4.5/19, MS3.4/5, Ms1 3.4/5, ms1mx3.1/30, Error ellipse: s-maj=21.6km s-min=10.1km az=83.0*
DJA ***29*** *09:03:19, 432N× 12777E, h146km, Mw5.3/5*
ISC 29 09:03:16.2± 0.2, 445N± 003× 12786E± 003, h118km, h118km± 4.4km: pP-P, n171, σ1 08/179, mb4.9/79, 13C-4D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**3.32**	**299**	*e*P	**Pn**	**09 04 05.0**	**-1.7**
GSPH				*e*S	**Sn**	**09 04 44.9**	**-0.8**
DAV	**Davao City (W)**	**3.45**	**319**	P	**Pn**	**09 04 10.7**	**+2.3**
62nm,0.3s,baz=104,slow=8.4,SNR=5.7							
DAV				S	**Sn**	**09 04 52.2**	**+3.4**
124nm,0.3s,baz=106,slow=22,SNR=7.1							
DAV				LR	LR	09 05 07.3	
comp=Z,302nm,19.4s,baz=115,slow=33							
DAV	**Davao City (W)**	**3.45**	**319**	P	**Pn**	**09 04 12.7**	**+4.3**
KCP	**Kidapawan**	**3.75**	**313**	*e*P	**Pn**	**09 04 13.1**	**+0.8**
KCP				*i* S	**Sn**	**09 04 58.3**	**+2.4**
BUKP	**Musuan**	**4.40**	**321**	*e*P	**Pn**	**09 04 22.4**	**+1.3**
CTBH	**Cotabato--PC H**	**4.53**	**308⇑**	*e*P	**Pn**	**09 04 21.4**	**-1.3**
CTBH				*i* S	**Sn**	**09 05 13.1**	**-1.4**
BUTP	**Butuan**	**5.01**	**334**	*e*P	**Pn**	**09 04 35.8**	**+6.5**
LBMI	**Labuha**	**5.07**	**184**	P	**Pn**	**09 04 32.3**	**+2.2**
PAGZ	**Pagadian**	**5.59**	**307**	*e*P	**Pn**	**09 04 34.9**	**-2.1**
SCPH	**Surigao**	**5.79**	**336**	*e*P	**Pn**	**09 04 42.4**	**+2.6**
SCPH				*e*S	**Sn**	**09 05 38.2**	**-6.9**
IPIL	**Ipil**	**6.22**	**302**	*e*P	**Pn**	**09 04 43.3**	**-2.2**
SWI	**Sorong**	**6.28**	**147**	P	**Pn**	**09 04 48.6**	**+2.2**
89nm,0.8s,4μm1.2nm							
AAI	**Ambon**	**8.09**	**178**	P	**Pn**	**09 05 14.1**	**+3.1**
68nm,0.7s,0.2nm							
MYLDM	**Lahad Datu**	**9.36**	**275**	⇑P	**Pn**	**09 05 28.7**	**+0.6**
MYLDM	**Lahad Datu**	**9.36**	**275**	P	**Pn**	**09 05 30.6**	**+2.5**
PCI	**Palu**	**9.62**	**237**	P	**Pn**	**09 05 33.0**	**+1.3**
118nm,1.1s,1μm							
KDI	**Kendari**	**9.86**	**212**	P	**Pn**	**09 05 32.2**	**-2.7**
79nm,0.6s,4μm							
TSM	**Tawau**	**9.96**	**269**	⇑P	**Pn**	**09 05 35.4**	**-0.8**
SDKM	**Sandakan**	**10.69**	**277**	⇑P	**Pn**	**09 05 46.0**	**0.0**
SMKI	**Samarinda**	**11.70**	**246**	P	**Pn**	**09 06 00.3**	**+0.8**
286nm,0.8s,4μm							
KKM	**Kota Kinabalu**	**11.70**	**278**	*e*Pn	**Pn**	**09 05 58.5**	**-1.0**
KAPI	**Kappang**	**12.41**	**221**	Pn	**Pn**	**09 06 06.3**	**-2.5**
266nm,1.2s,SNR=5.1							
KAPI	**Kappang**	**12.41**	**221**	P	**Pn**	**09 06 06.5**	**-2.3**
3.7nm,0.3s,baz=24,slow=9.9,SNR=20							
KAPI	**Kappang**	**12.41**	**221**	*e*Pn	**Pn**	**09 06 05.8**	**-3.0**
40nm,1.1s							
BTM	**Bintulu**	**14.80**	**266**	⇑P	**Pn**	**09 06 39.6**	**0.0**
BATI	**Baumata**	**15.15**	**196**	P	**Pn**	**09 06 45.7**	**+1.7**
3.7nm,0.3s,baz=313,slow=5.2,SNR=3.5							
SBUM	**Sibu**	**15.74**	**263**	⇑P	**Pn**	**09 06 51.6**	**+0.2**
KAKA	**Kakadu**	**17.65**	**165**	*e*P	Px	09 06 59.9	
11nm,0.6s							
KSM	**Kuching**	**17.77**	**261**	*e*P	**Pn**	**09 07 15.8**	**-0.5**
25nm,0.9s							
KSM	**Kuching**	**17.77**	**261**	⇑P	**Pn**	**09 07 15.8**	**-0.5**
GUMO	**Guam**	**19.08**	**60**	P	**P**	**09 07 35.1**	**+5.4**
6.3nm,0.3s,baz=176,slow=9.7,SNR=5.4							
YHNB	**Yeheng**	**21.05**	**343**	*e*P	**P**	**09 07 52.6**	**+1.8**
68nm,0.9s,mb5.0							
JOW	**Kunigami**	**22.26**	**1**	P	**P**	**09 08 04.0**	**+0.4**
75nm,0.8s,mb5.1,baz=208,slow=11,SNR=5.3							
PMG	**Port Moresby**	**23.65**	**126**	*i* P	**P**	**09 08 16.1**	**-0.9**
PMG				pmax	pmax		
comp=Z,6.0nm,1.1s							
WRAB	**Tennant Creek**	**25.06**	**165**	P	**P**	**09 08 30.0**	**+0.3**
comp=Z,452nm,0.7s,mb5.0,SNR=14							
WRAB	**Tennant Creek**	**25.06**	**165**	*e*P	**P**	**09 08 29.5**	**-0.1**
comp=Z,49nm,0.7s,mb5.0							
WRAB	**Tennant Creek**	**25.06**	**165**	*e*P	**P**	**09 08 29.5**	**-0.2**
WRAB				pmax	pmax		
comp=Z,49nm,0.7s,mb5.0							
WB2	**Warramunga Arr**	**25.07**	**165**	*e*P	**P**	**09 08 29.6**	**-0.2**
WB2				*e*	pP	09 08 53.2	-1.9
MBWA	**Marble Bar**	**26.67**	**197**	*e*P	**P**	**09 08 45.4**	**+1.2**
comp=Z,6.6nm,0.8s,mb4.2							
ASAR	**Alice Springs**	**28.56**	**168**	P	**P**	**09 09 00.8**	**-0.2**
comp=Z,2.2nm,0.6s,mb4.0,baz=353,slow=7.5,SNR=30							
ASAR				PcP	PcP	09 12 09.4	-0.3
comp=Z,2.4nm,0.6s,baz=351,slow=2.4,SNR=7.6							
ASAR				ScP	ScP	09 15 39.6	-0.7
comp=Z,2.1nm,0.8s,baz=338,slow=2.6,SNR=10							
ASAR	**Alice Springs**	**28.56**	**168**	P	**P**	**09 09 00.9**	**-0.1**
ASAR						09 12 09.5	
NJ2	**Nanjing**	**28.73**	**344**	*e*P	**P**	**09 09 03.3**	**+0.8**
NJ2				AMB	AMB		
comp=Z,10.0nm,0.8s,mb4.5							
WHN	**Wuhan**	**28.91**	**335**	⇓P	**P**	**09 09 05.8**	**+1.7**
GYA	**Guiyang**	**29.83**	**319**	P	**P**	**09 09 15.0**	**+2.7**
GYA				PP	PP	09 10 17.0	-5.0
GYA				PCP	PcP	09 12 15.0	+2.0
GYA				S	**S**	**09 14 06.0**	**+5.3**
GYA				AMB	AMB		
comp=Z,20nm,0.7s,mb4.9							
GYA				AMB	AMB		
comp=Z,180nm,4.8s							
GYA				LR	LR		
comp=N,1μm,18.0s							
GYA				LR	LR		
comp=E,830nm,18.3s							
GYA				LR	LR		
comp=Z,1μm,19.8s							
CMAR	**Chiang Mai Arr**	**31.50**	**299**	P	**P**	**09 09 26.6**	**-0.5**
comp=Z,1.4nm,0.3s,mb4.1,baz=112,slow=7.2,SNR=9.5							
CMAR	**Chiang Mai Arr**	**31.50**	**299**	*i* P	**P**	**09 09 26.8**	**-0.3**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
KMI	**Kunming**	**31.69**	**313**	P	**P**	**09 09 29.5**	**+0.8**
KMI				AP	pP	09 09 38.5	-16
KMI				S	**S**	**09 14 35.8**	**+6.0**
KMI				SS	SS	09 16 29.0	-22
KMI				AMB	AMB		
comp=Z,15nm,1.1s,mb4.6							
KMI				LR	LR		
comp=N,159nm,13.5s							
KMI				LR	LR		
comp=E,183nm,10.1s							
KMI				LR	LR		
comp=Z,107nm,13.0s							
KS15	**Wonju Array Si**	**32.84**	**0**	*e*P	**P**	**09 09 38.0**	**-0.6**
KSRS	**Korea Array**	**32.85**	**0**	P	**P**	**09 09 39.0**	**+0.4**
comp=Z,27nm,0.7s,mb5.2,baz=177,slow=9.9,SNR=71							
KSRS				LR	LR	09 22 33.1	
comp=Z,27nm,18.2s,baz=358,slow=35							
MAJO	**Matsushiro**	**33.32**	**15**	*e*P	**P**	**09 09 42.2**	**-0.6**
comp=Z,18nm,0.8s,mb4.9							
MAJO	**Matsushiro**	**33.32**	**15**	*e*P	**P**	**09 09 42.2**	**-0.6**
MAJO				pmax	pmax		
comp=Z,18nm,0.8s,mb5.0							
MAT	**Matsushiro**	**33.32**	**15**	P	**P**	**09 09 40.8**	**-2.0**
MJAR	**Matsushiro Arr**	**33.32**	**15**	P	**P**	**09 09 41.6**	**-1.2**
comp=Z,4.8nm,0.6s,mb4.5,baz=186,slow=9.4,SNR=13							
MJAR				PcP	PcP	09 12 22.9	+0.7
comp=Z,2.1nm,0.6s,baz=184,slow=3.3,SNR=5.5							
MJAR				LR	LR	09 20 43.0	
comp=Z,55nm,21.0s,baz=175,slow=31							
MJAR	**Matsushiro Arr**	**33.32**	**15**	P	**P**	**09 09 41.6**	**-1.2**
MJAR						09 12 22.9	
XAN	**Xi'an**	**34.30**	**331**	P	**P**	**09 09 51.5**	**+0.2**
XAN				AP	pP	09 10 02.0	-15
XAN				AMB	AMB		
comp=Z,70nm,1.0s,mb5.5							
XAN				AMB	AMB		
comp=Z,112nm,11.8s							
CD2	**Chengdu**	**34.75**	**322**	*e*P	**P**	**09 09 57.3**	**+2.1**
CD2				PP	PP	09 11 19.0	+2.6
CD2				PCP	PcP	09 12 27.5	+1.1
CD2				S	**S**	**09 15 20.3**	**+3.3**
CD2				PCS	PcS	09 16 13.3	+0.1
CD2				SS	SS	09 17 42.3	-10
CD2				AMB	AMB		
comp=Z,10.0nm,0.9s,mb4.7							
CD2				AMB	AMB		
comp=Z,30nm,4.8s							
FORT	**Forrest**	**35.03**	**180**	*e*P	**P**	**09 09 57.2**	**-0.4**
comp=Z,19nm,0.7s,mb5.0							
BJT	**Baijiatuao**	**36.95**	**345**	*e*P	**P**	**09 10 13.6**	**-0.3**
comp=Z,82nm,1.0s,mb5.6							
BJT	**Baijiatuao**	**36.95**	**345**	*e*P	**P**	**09 10 13.6**	**-0.2**
BJT				pmax	pmax		
comp=Z,82nm,1.0s							
BJI	**Beijing**	**36.97**	**345**	P	**P**	**09 10 14.0**	**0.0**
BJI				AMB	AMB		
comp=Z,57nm,1.0s,mb5.5							
BJI				AMB	AMB		
comp=Z,263nm,4.0s							
MUN	**Mundaring**	**37.89**	**196**	*e*P	**P**	**09 10 22.1**	**+0.3**
STKA	**Stephens Creek**	**38.42**	**161**	*e*P	**P**	**09 10 26.6**	**+0.3**
comp=Z,19nm,0.6s,mb5.1							
STKA	**Stephens Creek**	**38.42**	**161**	P	**P**	**09 10 26.6**	**+0.2**
comp=Z,25nm,0.7s,mb5.2,baz=338,slow=8.5,SNR=25							
LZH	**Lanzhou**	**38.47**	**328**	⇓P	**P**	**09 10 28.0**	**+1.2**
LZH				AP	pP	09 10 38.5	-15
LZH				XP	sP	09 10 41.3	-25
LZH				PP	PP	09 11 56.0	-1.2
LZH				S	**S**	**09 16 23.0**	**+10**
LZH				XS	sS	09 16 39.0	-20
LZH				SS	SS	09 19 06.0	-1.8
LZH				AMB	AMB		
comp=Z,117nm,1.1s,mb5.6							
LZH				AMB	AMB		
comp=Z,408nm,5.7s							
NWAO	**Narrogin (SRO)**	**38.52**	**194**	P	**P**	**09 10 27.2**	**+0.1**
comp=Z,5.8nm,0.7s,mb4.5,baz=55,slow=13,SNR=4.2							
HHC	**Hu-ho-hao-te**	**39.09**	**340**	*e*P	**P**	**09 10 32.5**	**+0.7**
HHC				AP	pP	09 10 43.3	-15
HHC				XP	sP	09 10 47.0	-25
HHC				PP	PP	09 12 08.5	+4.7
HHC				PCP	PcP	09 12 40.8	+1.4
HHC				S	**S**	**09 16 29.8**	**+7.3**
HHC				XS	sS	09 16 47.8	-21
HHC				SCS	ScS	09 20 36.8	+8.1
HHC				AMB	AMB		
comp=Z,22nm,0.9s,mb5.0							
HHC				AMB	AMB		
comp=Z,139nm,7.0s							
HHC				LR	LR		
comp=N,118nm,15.5s							
HHC				LR	LR		
comp=E,143nm,15.5s							
HHC				LR	LR		
comp=Z,93nm,15.5s							
CN2	**Changchun**	**39.24**	**357**	*e*P	**P**	**09 10 33.0**	**-0.1**
CN2				*e*S	**S**	**09 16 32.5**	**+7.7**
CN2				AMB	AMB		
comp=Z,10.0nm,0.7s,mb4.8							
MDJ	**Mudanjiang**	**40.03**	**2**	P	**P**	**09 10 40.0**	**+0.4**
MDJ				AMB	AMB		
comp=Z,21nm,1.2s,mb4.8							
MDJ				AMB	AMB		
comp=Z,73nm,4.4s							
MDJ	**Mudanjiang**	**40.03**	**2**	*e*P	**P**	**09 10 40.3**	**+0.7**
comp=Z,15nm,0.9s,mb4.8							
SHL	**Shillong**	**40.37**	**305**	⇓P	**P**	**09 10 42.5**	**-0.2**
LSA	**Lhasa**	**42.83**	**310**	P	**P**	**09 11 04.8**	**+2.2**
GTA	**Gaotai**	**43.08**	**328**	P	**P**	**09 11 05.3**	**+0.8**
GTA				AP	pP	09 11 15.0	-16
GTA				XP	sP	09 11 18.8	-26
GTA				PP	PP	09 12 48.3	+1.4
GTA				S	**S**	**09 17 28.5**	**+6.8**
GTA				XS	sS	09 17 45.0	-23
GTA				AMB	AMB		
comp=Z,40nm,1.0s,mb5.1							
GTA				AMB	AMB		
comp=Z,141nm,6.6s							
GTA				LR	LR		
comp=N,106nm,15.6s							
GTA				LR	LR		
comp=E,91nm,14.4s							
GTA				LR	LR		
comp=Z,98nm,14.1s							
YSS	**Yuzh-Sakhalins**	**44.26**	**15**	*e*P	**P**	**09 11 14.1**	**+0.2**
comp=Z,15nm,0.5s,mb5.0							
YSS	**Yuzh-Sakhalins**	**44.26**	**15**	*c i*P	**P**	**09 11 14.8**	**+1.0**
YSS				pmax	pmax		
comp=Z,50nm,1.5s,mb5.0							
HABR	**Khabarovsk**	**44.29**	**7**	*e*P	**P**	**09 11 13.5**	**-0.5**
HABR				*e**PP	pP	09 11 37.8	-3.3
HABR				*e*SP		09 11 50.5	
HABR				*e*		09 12 54.7	
HABR				*e*		09 12 57.9	
HABR				*e*S	**S**	**09 17 39.6**	**+0.6**
HABR				*e*		09 18 23.0	
HABR				*e*		09 20 59.7	
HABR				*e*SSS		09 21 57.7	
TAPN	**Taplejung**	**44.51**	**305**	*e*P	**P**	**09 11 16.3**	**+0.1**
comp=Z,42nm,1.1s,mb5.1							
ODAN	**Odare**	**44.58**	**304**	*e*P	**P**	**09 11 17.0**	**+0.2**
comp=Z,28nm,0.7s,mb5.1							
KLR	**Kul'dur**	**44.74**	**4**	*e*P	**P**	**09 11 13.8**	**-3.8**
HIA	**Hailar**	**45.19**	**353**	*c i*P	**P**	**09 11 21.0**	**-0.1**
RAMN	**Ramite**	**45.27**	**304**	*e*P	**P**	**09 11 22.5**	**+0.3**
comp=Z,43nm,1.0s,mb5.1							
JIRN	**Jiri**	**45.88**	**305**	*e*P	**P**	**09 11 26.9**	**-0.1**
comp=Z,62nm,1.3s,mb5.2							
GUN	**Gumba**	**46.23**	**305**	*e*P	**P**	**09 11 29.7**	**0.0**
comp=Z,32nm,0.9s,mb5.0							
DMN	**Daman**	**46.75**	**304**	*e*P	**P**	**09 11 33.8**	**0.0**
ULN	**Ulaanbaatar**	**46.80**	**341**	*e*P	**P**	**09 11 34.6**	**+0.8**
comp=Z,26nm,0.8s,mb5.0							
ULN	**Ulaanbaatar**	**46.80**	**341**	*e*P	**P**	**09 11 34.6**	**+0.8**
ULN				pmax	pmax		
comp=Z,26nm,0.8s,mb5.0							
SONM	**Songino Array**	**46.99**	**340**	P	**P**	**09 11 35.6**	**+0.3**
comp=Z,9.1nm,0.8s,mb4.6,baz=151,slow=8.8,SNR=59							
SONM				PcP	PcP	09 13 04.6	-1.2
comp=Z,2.3nm,0.7s,baz=157,slow=4.5,SNR=4.9							
GKN	**Gorkha**	**47.28**	**304**	*e*P	**P**	**09 11 37.7**	**-0.2**
KOLN	**Koldanda**	**48.05**	**304**	*e*P	**P**	**09 11 43.9**	**0.0**
DANN	**Dangsing**	**48.13**	**305**	*e*P	**P**	**09 11 44.3**	**-0.2**
comp=Z,36nm,0.6s,mb5.4							
ZAK	**Zakamensk**	**50.23**	**340**	*e*P	**P**	**09 11 59.3**	**-0.8**
ZAK				*e*		09 13 16.6	
ZAK				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.4							
TLY	**Talaya**	**51.21**	**341**	*e*P	**P**	**09 12 05.8**	**-1.6**
TLY				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.7							
CLNS	**Chul'man**	**52.29**	**358**	*e*P	**P**	**09 12 15.7**	**+0.4**
CLNS				pmax	pmax		
comp=Z,14nm,0.8s,mb5.0							
CLNS				pmax	pmax		
comp=N,9.0nm,0.9s							
CLNS				pmax	pmax		
comp=E,6.0nm,1.1s							
WMQ	**Urumqi**	**52.79**	**324**	P	**P**	**09 12 20.0**	**+0.7**
WMQ				PP	PP	09 14 22.0	+2.1
WMQ				S	**S**	**09 19 38.0**	**-0.7**
WMQ				AMB	AMB		
comp=Z,45nm,1.0s,mb5.5							
WMQ				AMB	AMB		
comp=Z,85nm,5.0s							
WMQ				LR	LR		
comp=N,48nm,17.0s							
WMQ				LR	LR		
comp=E,49nm,17.0s							
WMQ				LR	LR		
comp=Z,57nm,16.0s							
BOD	**Bodaibo**	**54.33**	**351**	*e*P	**P**	**09 12 30.2**	**0.0**
BOD				pmax	pmax		
comp=Z,11nm,1.0s,mb4.8							
PETK	**Petropavlovsk-**	**54.34**	**22**	P	**P**	**09 12 31.1**	**+0.7**
comp=Z,32nm,0.7s,mb5.5,baz=195,slow=5.0,SNR=27							
YAK	**Yakutsk**	**57.47**	**1**	*e*P	**P**	**09 12 52.4**	**-0.1**
comp=Z,59nm,0.7s,mb5.7							
YAK	**Yakutsk**	**57.47**	**1⇑**	*i*P	**P**	**09 12 52.3**	**-0.2**
YAK				pmax	pmax		
comp=Z,79nm,1.0s,mb5.7							
MK31	**Makanchi Array**	**57.62**	**324**	*e*P	**P**	**09 12 54.3**	**+0.4**
MK31	**Makanchi Array**	**57.62**	**324**	*i* P	**P**	**09 12 54.1**	**+0.2**
MK31				pmax	pmax		
comp=Z,24nm,0.6s,mb5.4							
MKAR	**Makanchi Array**	**57.62**	**324**	P	**P**	**09 12 54.3**	**+0.4**
comp=Z,22nm,0.6s,mb5.4,baz=121,slow=8.3,SNR=253							
MKAR				PcP	PcP	09 13 44.7	-1.1
comp=Z,4.3nm,0.7s,baz=118,slow=5.3,SNR=4.2							
MKAR				LR	LR	09 39 31.8	
comp=Z,23nm,18.6s,baz=178,slow=38							
MKAR	**Makanchi Array**	**57.62**	**324**	P	**P**	**09 12 54.3**	**+0.4**
MKAR						09 13 44.7	
NIL	**Nilore**	**58.39**	**307**	*e*P	**P**	**09 12 59.5**	**+0.1**
comp=Z,7.9nm,0.9s,mb4.7							
NIL	**Nilore**	**58.39**	**307**	*e*P	**P**	**09 12 59.6**	**+0.1**
NIL				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.8							
ULHL	**Ulahol**	**59.25**	**317**	P	**P**	**09 13 06.2**	**+0.9**
SNR=11							
KZA	**Kyzart**	**59.85**	**317**	P	**P**	**09 13 10.8**	**+1.4**
SNR=20							
TKM2	**Tokmak 2**	**59.96**	**318**	*e*P	**P**	**09 13 10.8**	**+0.6**
comp=Z,17nm,0.8s,mb5.1							
TKM2	**Tokmak 2**	**59.96**	**318**	*e*P	**P**	**09 13 10.8**	**+0.6**
TKM2				pmax	pmax		
comp=Z,17nm,0.8s,mb5.1							
TKM2	**Tokmak 2**	**59.96**	**318**	P	**P**	**09 13 10.8**	**+0.6**
SNR=18							
KBK	**Karagaybulak**	**60.29**	**317**	P	**P**	**09 13 13.5**	**+1.0**
SNR=5.1							
UCH	**Uchtor**	**60.42**	**317**	*e*P	**P**	**09 13 15.0**	**+1.7**
comp=Z,4.1nm,0.7s,mb4.6							
ZAA0	**Zalesovo Array**	**60.47**	**332**	*e*P	**P**	**09 13 12.0**	**-1.3**
ZALV	**Zalesovo Beam**	**60.47**	**332**	P	**P**	**09 13 12.5**	**-0.9**
comp=Z,5.9nm,0.6s,mb4.8,baz=116,slow=6.8,SNR=28							
CHMS	**Chumysh**	**60.56**	**318**	P	**P**	**09 13 14.6**	**+0.4**
SNR=6.1							
AAK	**Ala-Archa**	**60.59**	**317**	P	**P**	**09 13 15.2**	**+0.8**
comp=Z,45nm,0.9s,mb5.5,SNR=5.0							
AAK	**Ala-Archa**	**60.59**	**317**	*e*P	**P**	**09 13 14.8**	**+0.3**
comp=Z,8.1nm,0.9s,mb4.8							
AAK	**Ala-Archa**	**60.59**	**317**	*e*P	**P**	**09 13 14.8**	**+0.4**
AAK				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.8							
AAK	**Ala-Archa**	**60.59**	**317**	P	**P**	**09 13 14.9**	**+0.5**
SNR=6.2							
USP	**Ospenovka**	**60.84**	**318**	P	**P**	**09 13 16.5**	**+0.4**
SNR=23							
SEY	**Seymchan**	**61.09**	**13⇑**	*e*P	**P**	**09 13 18.1**	**+0.7**
SEY				*e**PP	pP	09 13 45.9	-0.1
EKS2	**Erkin-Say**	**61.09**	**317**	*e*P	**P**	**09 13 18.3**	**+0.5**
comp=Z,17nm,0.8s,mb5.1							
EKS2	**Erkin-Say**	**61.09**	**317**	P	**P**	**09 13 18.8**	**+0.9**
SNR=18							
NVS	**Novosibirsk**	**61.75**	**333**	*e*P	**P**	**09 13 19.9**	**-2.1**
NVS				*e*	pP	09 13 51.6	+1.0
NVS				pmax	pmax		
comp=Z,28nm,1.4s,mb5.1							
NVS				pmax	pmax		
comp=E,18nm,1.3s							
KURK	**Kurchatov**	**61.75**	**327**	P	**P**	**09 13 22.3**	**+0.2**
comp=E,477nm,0.6s,SNR=26							
KURK	**Kurchatov**	**61.75**	**327**	*e*P	**P**	**09 13 22.1**	**0.0**
comp=E,1.4nm,0.4s,mb4.3							
KURK	**Kurchatov**	**61.75**	**327**	*i* P	**P**	**09 13 22.0**	**-0.1**
KURK				*i* *PP	pP	09 13 51.3	+0.6
KURK				pmax	pmax		
comp=Z,41nm,0.7s,mb5.6							
KBL	**Kabul**	**61.99**	**307**	*e*P	**P**	**09 13 24.1**	**0.0**
comp=Z,4.2nm,0.6s,mb4.7							
KBL	**Kabul**	**61.99**	**307**	*e*P	**P**	**09 13 24.1**	**+0.1**
KBL				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6							
KK31	**Karatay Array**	**63.48**	**316**	*i* P	**P**	**09 13 33.7**	**-0.1**
KK31				pmax	pmax		
comp=Z,13nm,0.7s,mb5.0							
VOSK	**Vostochnaya**	**66.89**	**326**	P	**P**	**09 13 54.4**	**-1.2**
VOSK				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.5							
TIXI	**Tiksi**	**67.11**	**0**	*e*P	**P**	**09 13 55.9**	**-0.8**
comp=Z,25nm,0.6s,mb5.2							
TIXI	**Tiksi**	**67.11**	**0**	⇓*i*P	**P**	**09 13 56.0**	**-0.7**
TIXI				pmax	pmax		
comp=Z,36nm,1.1s,mb5.1							
BVA0	**Borovoye Array**	**67.34**	**327**	*i* P	**P**	**09 13 57.9**	**-0.5**
BVA0				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.2							
BRVK	**Borovoye**	**67.41**	**

comp=Z,28nm,0.9s,mb5.1
MCK McKinley 83.02 26 *e*P **P** **09 15 27.9 -0.2**
comp=Z,30nm,0.9s,mb5.1
MCK McKinley 83.02 26 *e*P **P** **09 15 27.9 -0.2**
MCK pmax pmax
comp=Z,30nm,0.9s,mb5.1
KIV Kislovodsk 83.46 314 *e*P **P** **09 15 30.4 -0.4**
KIV pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
COLA College 83.56 25 *e*P **P** **09 15 30.1 -0.8**
comp=Z,6.9nm,0.8s,mb4.5
COLA College 83.56 25 *e*P **P** **09 15 30.1 -0.8**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
VNDA Vanda 84.00 173 P **P** **09 15 33.0 +0.2**
comp=Z,2.2nm,0.8s,mb4.0,baz=319,slow=5.9,SNR=12
VNDA LR LR 09 50 47.5
comp=Z,92nm,18.8s,baz=209,slow=34
VNDA Vanda 84.00 173 *e*P **P** **09 15 31.7 -1.1**
comp=Z,1.2nm,0.8s,mb3.8
VNDA Vanda 84.00 173 *e*P **P** **09 15 31.7 -1.1**
VNDA pmax pmax
comp=Z,1.0nm,0.8s
PPT Papeete 84.26 108 P **P** **09 15 35.8 +0.4**
comp=Z,14nm,0.6s,mb5.0,baz=217,slow=20,SNR=3.7
MAW Mawson 84.82 200 P **P** **09 15 37.1 0.0**
comp=Z,4.0nm,0.8s,mb4.4,baz=21,slow=8.4,SNR=3.7
OBN Obninsk 87.12 325 *e*P **P** **09 15 47.3 -1.5**
OBN pmax pmax
comp=Z,12nm,0.6s,mb5.0
ARCES ARCESS Array B 90.16 340 P **P** **09 16 01.2 -1.5**
comp=Z,3.4nm,0.6s,mb4.6,baz=79,slow=6.2,SNR=11
AKASG Malin Array Be 92.05 321 P **P** **09 16 10.0 -1.9**
comp=Z,2.1nm,0.5s,mb4.6,baz=70,slow=4.5,SNR=5.9
SYO Syowa Base 93.50 201⇑*e*P **P** **09 16 17.2 -1.0**
RES Resolute Bay 96.91 10 *e*P **P** **09 16 32.8 -0.9**
comp=Z,937nm,1.7s
YKA Yellowknife Ar 98.38 25 P **P** **09 16 40.3 -0.2**
comp=Z,2.1nm,0.8s,mb4.7,baz=298,slow=4.8,SNR=7.2
SCHQ Schefferville 119.68 10 PKP PKPdf 09 21 52.0 -0.2
comp=Z,7.2nm,1.1s,baz=302,slow=4.9,SNR=3.7
TXAR Lajitas Array 120.27 52 PKP PKPdf 09 21 54.4 +0.3
comp=Z,0.7nm,0.7s,baz=176,slow=3.3,SNR=6.4
TORD Torodi Ar. Bea 123.76 289 PKP PKPdf 09 22 00.5 -0.6
comp=Z,1.6nm,0.8s,baz=51,slow=1.8,SNR=7.3
TORD Torodi Ar. Bea 123.76 289 PKP PKPdf 09 22 00.5 -0.6
PLCA Paso Flores 140.26 158 PKP PKPdf 09 22 32.9 +1.3
comp=Z,2.5nm,1.0s,baz=233,slow=5.1,SNR=2.9

GUC 29 09:29:14.2±0.8, 2308S×7074W, h36km±6km, MD3.5, ML2.7, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.27**	**95**⇑	*i*P	Pn	09 29 21.6	-0.3
MECH				*i* S	Sn	09 29 27.0	-0.2
MECH				AML	AML	09 29 31.6	
	comp=E,2μm,0.4s						
CEN1	**Los Morros**	**0.59**	**122**⇓	*i*P	Pn	09 29 26.5	+0.5
CEN1				*i* S	Sn	09 29 35.4	+1.0
ANCH	**Antofagasta**	**0.67**	**153**	*e*P	Pn	09 29 27.0	-0.2
ANCH				*i* S	Sn	09 29 36.0	-0.5
LVC	**Limon Verde**	**1.75**	**75**	*e*P	Pn	09 29 45.7	+3.7
LVC				*i* S	Sn	09 30 09.1	+5.9

*DDA **29** 09:29:30.9, 4056N×2740E, h19km±1km, Md3.1*
*ISK **29** 09:29:30.7, 4059N×2744E, h6km, MD3.3, ML3.2*
*NEIC **29** 09:29:30.5, 4060N×2743E, h5km, MD3.4(ATH), ML3.2(ISK), After ISK.*
*ISCJB **29** 09:29:30.9±0.5, 4059N±002×2743E±003, h3km±4km, Error ellipse: s-maj=3.7km s-min=3.3km az=146.8*
*CSEM **29** 09:29:30.8±0.1, 4060N×2746E, h7km, MD3.3, Error ellipse: s-maj=1.4km s-min=1.3km az=75.0*
*ATH **29** 09:29:31.9, 4058N×2760E, h47km, MD3.4/3*

ISC 29 09:29:31.5±0.5, 4060N±002×2742E±003, h8km±3km, n45, σ0s78/59, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.14**	**87**	PG	**Pg**	**09 29 34.2**	**-0.1**
TKR	**Tekirdag**	**0.40**	**13**	*e*PG	**Pg**	**09 29 39.2**	**-0.1**
TKR				*e*SG	**Sg**	**09 29 45.9**	**+1.2**
TKR	**Tekirdag**	**0.40**	**13**	Pg	**Pg**	**09 29 38.8**	**-0.6**
EDC	**Edincik**	**0.42**	**126**	PG	**Pg**	**09 29 39.1**	**-0.5**
BNT	**Bandirma**	**0.45**	**122**	PG	**Pg**	**09 29 39.4**	**-0.8**
BNT				*e*SG	**Sg**	**09 29 45.8**	**-0.3**
LPK	**Lapseki**	**0.55**	**246**	*e*PG	**Pg**	**09 29 42.3**	**+0.3**
KCT	**Karacabey**	**0.79**	**114**	*e*PG	**Pg**	**09 29 45.8**	**-0.8**
CTT	**Catalca**	**0.94**	**54**	*e*PG	**Pg**	**09 29 48.9**	**-0.7**
ELBA	**Catalca**	**0.94**	**54**	*i* P	**Pg**	**09 29 50.8**	**+1.2**
ELBA				*i* S	**Sg**	**09 30 04.8**	**+2.9**
ENEZ	**Enez**	**0.97**	**279**	*e*PG	**Pg**	**09 29 50.7**	**+0.6**
BALB	**Balikesir**	**1.02**	**160**	*e*PG	**Pg**	**09 29 50.5**	**-0.4**
BALB				*e*SG	**Sg**	**09 30 04.5**	**+0.3**
CTKS	**Kestanelik-??a**	**1.04**	**52**	*e*PG	**Pg**	**09 29 50.8**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.10**	**37**	*e*PN	**Pn**	**09 29 51.9**	**-1.3**
EZN	**Ezine**	**1.14**	**228**	*e*PN	**Pn**	**09 29 52.2**	**-1.5**
BGKT	**Bogazkoy**	**1.18**	**60**	*e*PN	**Pn**	**09 29 53.4**	**-0.9**
BGKT				*e*SN	**Sn**	**09 30 10.0**	**-0.6**
GADA	**Gvkgeada**	**1.23**	**251**	*e*PN	**Pn**	**09 29 54.0**	**-0.9**
DURS	**Dursunbey**	**1.28**	**140**	*i* P	**Pn**	**09 29 54.7**	**-1.0**
DURS				*i* S	**Sb**	**09 30 12.9**	**+0.4**
BOZC	**Bozcaada**	**1.29**	**235**	*i* P	**Pn**	**09 29 54.8**	**-1.0**
BOZC				*i* S	**Sb**	**09 30 12.6**	**-0.1**
ISK	**Istanbul-Kandi**	**1.33**	**69**	*e*PN	**Pn**	**09 29 55.3**	**-1.1**
EDRB	**Edirne**	**1.35**	**338**	*e*PN	**Pn**	**09 29 56.7**	**+0.1**
DST	**Dursunbey**	**1.35**	**136**	*e*PN	**Pn**	**09 29 56.5**	**-0.2**
DST				*e*SN	**Sn**	**09 30 15.4**	**+0.6**
GEMT	**Gemlik**	**1.36**	**96**	*e*PN	**Pn**	**09 29 56.2**	**-0.5**
GEMT				*e*SN	**Sn**	**09 30 15.2**	**+0.3**
KLYT	**Kilyos**	**1.39**	**61**	*e*PN	**Pn**	**09 29 57.7**	**+0.4**
AYVA	**Ayvalik**	**1.40**	**204**	*i* P	**Pn**	**09 29 57.5**	**+0.2**
AYVA				*i* S	**Sb**	**09 30 16.4**	**+0.5**
YLV	**Yalova**	**1.49**	**90**	*e*PN	**Pn**	**09 29 59.0**	**+0.5**
RDO	**Rodhopi**	**1.53**	**292**	*e*P	**Pn**	**09 29 59.8**	**+0.7**
RDO				*e*S	**Sn**	**09 30 20.1**	**+0.9**
PRK	**Paraskevi**	**1.61**	**214**	*e*P	**Pn**	**09 29 59.9**	**-0.3**
PRK				*e*S	**Sn**	**09 30 20.6**	**-0.6**
HRT	**Hereke**	**1.72**	**82**	*e*PN	**Pn**	**09 30 01.1**	**-0.6**
AKHS	**Akhisar**	**1.74**	**170**	*i* P	**Pn**	**09 30 02.0**	**0.0**
AKHS				*i* S	**Sn**	**09 30 24.2**	**-0.2**
AKS	**Akhisar**	**1.74**	**170**	*e*PN	**Pn**	**09 30 01.9**	**-0.1**
ADVT	**Abdulvahap**	**1.77**	**94**	*e*PN	**Pn**	**09 30 02.4**	**-0.1**
SILT	**Sile**	**1.78**	**71**	*e*PN	**Pn**	**09 30 01.9**	**-0.6**
DEMI	**Demirci**	**1.84**	**147**	*i* P	**Pn**	**09 30 03.6**	**+0.1**
LIA	**Limnos Island**	**1.85**	**249**	*e*P	**Pn**	**09 30 04.4**	**+0.9**
CAVI	**Cavuskoy**	**1.89**	**101**	*e*PN	**Pn**	**09 30 03.8**	**-0.2**
GDZ	**Gediz**	**2.19**	**133**	*i* P	**Pn**	**09 30 08.4**	**+0.3**
GDZ				*i* S	**Sn**	**09 30 40.3**	**+4.9**
BLCB	**Balcova**	**2.23**	**188**	*e*PN	**Pn**	**09 30 10.0**	**+1.3**
GPA	**Golpazari**	**2.23**	**97**	*e*PN	**Pn**	**09 30 10.0**	**+1.3**
KULA	**Kula-Manisa**	**2.29**	**155**	*e*PN	**Pn**	**09 30 10.4**	**+0.9**
GULT	**Gulveren**	**2.37**	**93**	*e*PN	**Pn**	**09 30 11.4**	**+0.8**
ALT	**Altintas**	**2.58**	**126**	*e*PN	**Pn**	**09 30 13.3**	**-0.3**
KHL	**Karahalli**	**2.79**	**144**	*e*PN	**Pn**	**09 30 17.5**	**+1.1**
MDU	**Mudurnu**	**2.90**	**91**	*e*PN	**Pn**	**09 30 18.6**	**+0.7**
KIZT	**Kizilcal**	**3.84**	**115**	*e*PN	**Pn**	**09 30 32.2**	**+1.3**
MLR	**Muntele Rosu**	**5.01**	**348**⇑	*i*P	**Pn**	**09 30 45.4**	**-1.5**
MLR				S	Sn	09 30 48.3	-57

MAN 29 09:48:18, 1357N×12151E, h15km, mb4.2, ML3.0, MS2.8, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.77**	**314**⇑	*e*P	Pg	09 48 35.8	+2.9
AUQP	**San Andres**	**1.16**	**102**	*e*P	Pn	09 48 41.5	+1.8
SJMP	**San Jose**	**1.17**	**199**	*e*P	Pn	09 48 39.8	0.0
POLP	**Polilio Island**	**1.23**	**20**	*e*P	Pn	09 48 39.1	-1.5
LUBP	**Lubang**	**1.24**	**278**	*e*P	Pn	09 48 39.5	-1.3
LUBP				*e*S	Sb	09 48 57.6	+0.8
OTRP	**Odiongan**	**1.30**	**157**	*e*P	Pn	09 48 41.4	-0.3
OTRP				*e*S	Sb	09 48 59.3	+0.7
BUSP	**Coron**	**2.01**	**219**	*e*P	Pn	09 48 53.6	+2.1
PCPH	**Palayan**	**2.02**	**349**⇑	*e*P	Pn	09 48 52.0	+0.4
PCPH				*e*S	Sn	09 49 18.9	+2.4
BALP	**Baler**	**2.16**	**2**	*e*P	Pn	09 48 55.0	+1.5
BALP				*e*S	Sn	09 49 24.2	+4.2

GUC 29 10:02:34.9±0.5, 2366S×6883W, h40km±3km, MD3.8, ML2.8, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.04**	**356**	*e*P	Pn	10 02 53.9	+0.9
LVC				*i* S	Sn	10 03 08.7	+2.3
CEN1	**Los Morros**	**1.29**	**282**	*e*P	Pn	10 02 59.2	+2.8
CEN1				*i* S	Sn	10 03 17.4	+5.0
ANCH	**Antofagasta**	**1.45**	**269**	*e*P	Pn	10 03 00.2	+1.6
ANCH				*i* S	Sn	10 03 18.9	+2.5
ANCH				AML	AML	10 03 20.2	
	comp=N,354nm,0.1s						
CPN1	**Cerro Paranal**	**1.73**	**236**	*i* S	Sn	10 03 27.2	+3.8
CPN1				AML	AML	10 03 34.4	
	comp=E,114nm,0.2s						

*IDC **29** 10:02:31.7±0.9, 3622N×7128E, h0km, mb4.0/10, mb1 4.1/14, mb1mx4.0/23, mbtmp4.0/14, ML4.0/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/30, Error ellipse: s-maj=20.3km s-min=19.4km az=170.0*
*MOS **29** 10:02:42.9±1.7, 3656N×7152E, h106km, mb3.9/9, Error ellipse: s-maj=11.6km s-min=6.3km az=92.4*
*ISCJB **29** 10:02:43.7±0.4, 3648N±002×7171E±005, h127km±6km, mb3.8/10, Error ellipse: s-maj=6.4km s-min=3.7km az=175.6*
*BJI **29** 10:02:44.4, 3640N×7170E, h113km*
*NEIC **29** 10:02:44.4±0.8, 3642N×7173E, h113km±10km, mb5.1/12, Error ellipse: s-maj=10.3km s-min=6.8km az=66.0*
*NNC **29** 10:02:45.2±5.4, 3671N×7105E, h115km±62km, mb3.7, mpv4.8, Error ellipse: s-maj=42.4km s-min=31.7km az=2.0*

ISC 29 10:02:44.9±0.3, 3646N±002×7174E±005, h122km±5km, n106, σ1s26/117, mb3.8/10, 6C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.63**	**177**	⇑P	**Pn**	**10 03 27.8**	**+1.3**
CEP				S	**Sn**	**10 04 16.0**	**+18**
KBL	**Kabul**	**2.92**	**230**	*e*Pn	**Pn**	**10 03 28.8**	**-1.3**
KBL				*e*Sn	**Sn**	**10 04 06.2**	**+1.2**
CHCP	**Chirah Chowk**	**3.06**	**155**	⇑P	**Pn**	**10 03 35.1**	**+3.1**
NIL	**Nilore**	**3.06**	**156**	*e*Pn	**Pn**	**10 03 35.1**	**+3.0**
SBDP	**Sheikh Budin**	**4.22**	**191**	P	**Pn**	**10 03 47.4**	**0.0**
KSH	**Kashi**	**4.53**	**46**⇓	*i*P	**Pn**	**10 03 54.5**	**+3.1**
KSH				S	**Sn**	**10 04 45.3**	**+2.1**
KSH				Smax			
	comp=N,60nm,0.3s						
KSH				Smax			
	comp=E,41nm,0.3s						
SARP	**Sargodha**	**4.59**	**170**	P	**Pn**	**10 03 53.3**	**+0.9**
THN	**Thein Dam**	**5.19**	**140**	*e*P	**Pn**	**10 04 01.9**	**+1.5**
THN				*ex*	x	10 05 03.8	
DLH	**Dalhousie**	**5.24**	**137**	*e*P	**Pn**	**10 04 02.0**	**+0.9**
DLH				*ex*	x	10 05 02.0	
AML	**Almayashu**	**5.86**	**14**	P	**Pn**	**10 04 10.1**	**+0.7**
	SNR=5.4						
UCH	**Uchtor**	**6.15**	**20**	*e*Pn	**Pn**	**10 04 13.4**	**+0.2**
	comp=E,9.1nm,0.4s						
UCH				*e*Sn	**Sn**	**10 05 19.3**	**-2.9**
UCH	**Uchtor**	**6.15**	**20**	P	**Pn**	**10 04 14.5**	**+1.3**
	SNR=6.6						
KZA	**Kyzart**	**6.24**	**25**	P	**Pn**	**10 04 14.3**	**-0.1**
	SNR=45						
EKS2	**Erkin-Say**	**6.39**	**14**	*e*Pn	**Pn**	**10 04 15.9**	**-0.6**
	comp=E,50nm,0.7s						
EKS2				*e*Sn	**Sn**	**10 05 25.1**	**-3.0**
EKS2	**Erkin-Say**	**6.39**	**14**	P	**Pn**	**10 04 16.1**	**-0.5**
	SNR=34						
AAK	**Ala-Archa**	**6.52**	**18**	P	**Pn**	**10 04 18.5**	**+0.2**
	SNR=102						
SDNR	**Sundarnagar**	**6.58**	**137**	*e*P	**Pn**	**10 04 20.4**	**+1.2**
SDNR				*ex*	x	10 05 33.4	
KBK	**Karagaybulak**	**6.67**	**21**	P	**Pn**	**10 04 20.9**	**+0.6**
	SNR=20						
KK31	**Karatay Array**	**6.70**	**352**	⇓P	**Pn**	**10 04 18.0**	**-2.7**
	comp=E,45nm,0.4s,baz=180,slow=12,SNR=711						
KK31				⇑S	**Sn**	**10 05 30.0**	**-5.6**
	comp=E,29nm,0.5s,baz=181,slow=24,SNR=6.6						
KK31	**Karatay Array**	**6.70**	**352**	PN	**Pn**	**10 04 18.1**	**-2.6**
KK31				pmax	pmax		
	comp=Z,47nm,0.3s						
FRU	**Bishkek**	**6.74**	**18**	*e*PN	**Pn**	**10 04 21.0**	**-0.2**
FRU				pmax	pmax		
	comp=Z,60nm,1.0s						
ULHL	**Ulahol**	**6.75**	**30**	P	**Pn**	**10 04 21.9**	**+0.5**
	SNR=13						
CHMS	**Chumysh**	**6.93**	**19**	P	**Pn**	**10 04 23.4**	**-0.4**
	SNR=32						
SMLA	**Simla**	**6.97**	**138**	*i* P	**Pn**	**10 04 25.8**	**+1.3**
SMLA				*e*S	**Sn**	**10 05 38.3**	**-4.1**
TKM2	**Tokmak 2**	**7.11**	**24**	⇑P	**Pn**	**10 04 26.4**	**+0.3**
	comp=Z,25nm,0.5s						
TKM2				⇑S	**Sn**	**10 05 45.4**	**+0.1**
	comp=Z,11nm,0.6s						
TKM2	**Tokmak 2**	**7.11**	**24**	*e*Pn	**Pn**	**10 04 26.1**	**0.0**
	comp=Z,39nm,0.5s						
TKM2				*e*		10 04 42.9	
TKM2	**Tokmak 2**	**7.11**	**24**	*e*PN	**Pn**	**10 04 26.1**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,39nm,0.5s						
TKM2	**Tokmak 2**	**7.11**	**24**	P	**Pn**	**10 04 26.5**	**+0.3**
	SNR=69						
USP	**Ospenovka**	**7.12**	**16**	P	**Pn**	**10 04 25.3**	**-1.1**
	SNR=31						
KLP	**Kalpa**	**7.30**	**130**	*e*P	**Pn**	**10 04 29.3**	**+0.4**
KLP				*ex*	x	10 05 51.1	
JOSI	**Joshimath**	**8.79**	**130**	*e*P	**Pn**	**10 04 50.1**	**+1.1**
JOSI				AMb	AMB	10 04 53.3	
	comp=Z,540nm,0.8s						
JOSI				*ex*	x	10 06 15.7	
NDI	**New Delhi**	**9.02**	**148**	*ex*	x	10 05 51.0	
KHET	**Khetri**	**9.04**	**156**	*e*P	**Pn**	**10 04 51.4**	**-1.0**
KHET				AMb	AMB	10 04 53.1	
	comp=Z,53nm,0.3s						
KHET				*e*S	**Sn**	**10 06 26.5**	**-5.9**
AYAN	**Aya Nagar**	**9.16**	**149**	*e*P	**Pn**	**10 04 53.2**	**-0.9**
KUDL	**Kundal**	**9.21**	**153**	*e*P	**Pn**	**10 04 53.6**	**-1.1**
KUDL				AMb	AMB	10 04 55.6	
	comp=Z,37nm,0.5s						
SONA	**Sohna**	**9.35**	**150**	*e*P	**Pn**	**10 04 55.9**	**-0.7**
SONA				*e*S	**Sn**	**10 06 35.0**	**-4.8**
PTH	**Pithoragarh**	**9.90**	**132**	*e*P	**Pn**	**10 05 02.0**	**-2.0**
LGTI	**Lohaghat**	**9.99**	**132**	*e*P	**Pn**	**10 05 05.0**	**-0.2**
LGTI				*ex*	x	10 06 51.0	
AJM	**Ajmer**	**10.25**	**165**	*i* P	**Pn**	**10 05 07.0**	**-1.7**
ABKT	**Ailbek**	**10.97**	**282**	Pn	**Pn**	**10 05 11.9**	**-6.3**
	comp=Z,248nm,0.5s,SNR=8.0						
DANN	**Dangsing**	**12.97**	**125**	*e*P	**Pn**	**10 05 44.0**	**-0.7**
	comp=Z,40nm,0.3s						
MKAR	**Makanchi Array**	**12.98**	**34**	Pn	**Pn**	**10 05 44.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=292,slow=20,SNR=4.0						
MK31	**Makanchi Array**	**12.98**	**34**	P	**Pn**	**10 05 45.2**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=227,slow=13,SNR=6.0						
MK31	**Makanchi Array**	**12.98**	**34**	*e*P	**Pn**	**10 05 45.2**	**+0.6**
KOLN	**Koldanda**	**13.26**	**127**	*e*P	**Pn**	**10 05 47.3**	**-1.1**
	comp=Z,30nm,0.4s						
GKN	**Gorkha**	**13.78**	**124**	*e*P	**Pn**	**10 05 54.3**	**-0.8**
	comp=Z,153nm,0.6s						
KKN	**Kakani**	**14.35**	**123**	*e*P	**Pn**	**10 06 01.2**	**-1.2**
	comp=Z,58nm,0.5s						
KKN	**Kakani**	**14.35**	**123**	*e*P	**Pn**	**10 06 01.2**	**-1.2**
KKN				pmax	pmax		
	comp=Z,58nm,0.5s						
DMN	**Daman**	**14.35**	**124**	*e*P	**Pn**	**10 06 01.8**	**-0.6**
	comp=Z,104nm,0.7s						
PKI	**Pulchoki**	**14.58**	**124**	*e*P	**Pn**	**10 06 04.4**	**-0.9**
	comp=Z,43nm,0.6s						
PKI	**Pulchoki**	**14.58**	**124**	*e*P	**Pn**	**10 06 04.4**	**-0.9**
PKI				pmax	pmax		
	comp=Z,43nm,0.6s						
GUN	**Gumba**	**14.68**	**121**	*e*P	**Pn**	**10 06 05.6**	**-1.0**
	comp=Z,169nm,1.0s						
KURBB	**Kurchatov Arra**	**14.98**	**17**	⇓P	**Pn**	**10 06 11.7**	**+1.6**
	comp=Z,0.6nm,0.5s						
JIRN	**Jiri**	**15.05**	**122**	*e*P	**Pn**	**10 06 10.4**	**-0.9**
	comp=Z,60nm,0.4s						
KURK	**Kurchatov**	**15.09**	**17**	⇓P	**Pn**	**10 06 11.5**	**+0.1**
	comp=Z,6.1nm,0.9s						
KURK	**Kurchatov**	**15.09**	**17**	Pn	**Pn**	**10 06 06.2**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=7.2						
KURK	**Kurchatov**	**15.09**	**17**	*e*P	**Pn**	**10 06 13.8**	**+2.4**
	comp=Z,5.2nm,0.8s						
KURK	**Kurchatov**	**15.09**	**17**	*e*P	**Pn**	**10 06 13.8**	**+2.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AB01	**Akbulak array**	**15.41**	**330**	⇓P	**Pn**	**10 06 10.1**	**-5.5**
	comp=Z,4.4nm,0.5s						
AB31	**Akbulak array**	**15.41**	**330**	P	**Pn**	**10 06 10.0**	**-5.6**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
RAMN	**Ramite**	**15.79**	**123**	*e*P	**Pn**	**10 06 19.1**	**-1.3**
	comp=Z,43nm,0.4s						
VOSK	**Vostochnaya**	**16.27**	**358**	⇑P	**Pn**	**10 06 22.4**	**-3.7**
	comp=Z,3.0nm,0.6s						
TAPN	**Taplejung**	**16.30**	**119**	*e*P	**Pn**	**10 06 26.2**	**-0.5**
	comp=Z,59nm,0.6s						
ODAN	**Odare**	**16.39**	**121**	*e*P	**Pn**	**10 06 27.2**	**-0.6**
BVA0	**Borovoye Array**	**16.59**	**357**	⇓P	**Pn**	**10 06 27.8**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=179,slow=16,SNR=14						
BVA0	**Borovoye Array**	**16.59**	**357**	P	**Pn**	**10 06 28.0**	**-2.0**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR	**Borovoye Array**	**16.59**	**357**	Pn	**Pn**	**10 06 25.7**	**-4.3**
	comp=Z,1.5nm,0.3s,baz=159,slow=13,SNR=23						
BVAR	**Borovoye Array**	**16.59**	**357**	P	**Pn**	**10 06 25.7**	**-4.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**16.63**	**357**	*e*P	**Pn**	**10 06 30.0**	**-0.5**
	comp=Z,4.8nm,0.6s						
BRVK	**Borovoye**	**16.63**	**357**	*e*P	**Pn**	**10 06 30.0**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTK	**Aktyubinsk**	**17.12**	**329**	P	**Pn**	**10 06 33.0**	**-3.5**
AKTK				S	**S**	**10 09 30.6**	**-17**
AKTO	**Aktyubinsk**	**17.12**	**329**	P	**Pn**	**10 06 33.0**	**-3.5**
	comp=Z,2.8nm,0.3s,baz=137,slow=13,SNR=39						
AKTO				S	**S**	**10 09 30.6**	**-17**
	comp=Z,0.4nm,0.3s,baz=198,slow=19,SNR=3.6						
AKTO	**Aktyubinsk**	**17.12**	**329**	P	**Pn**	**10 06 33.0**	**-3.5**
AKTO				S	**S**	**10 09 30.6**	**-16**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
LSA	**Lhasa**	**17.59**	**107**	P	**Pn**	**10 06 45.0**	**+2.6**
LSA	**Lhasa**	**17.59**	**107**	*e*P	**Pn**	**10 06 44.8**	**+2.4**
	comp=Z,11nm,0.4s						
LSA	**Lhasa**	**17.59**	**107**	*e*P	**Pn**	**10 06 44.8**	**+2.4**
LSA				pmax	pmax		
	comp=Z,11nm,0.4s						
ZAA0	**Zalesovo Array**	**19.71**	**23**	*e*P	**P**	**10 07 05.5**	**+1.0**
ZALV	**Zalesovo Beam**	**19.71**	**23**	P	**P**	**10 07 05.6**	**+1.1**
	comp=Z,3.6nm,0.3s,baz=209,slow=9.7,SNR=16						
ZALV	**Zalesovo Beam**	**19.71**	**23**	P	**P**	**10 07 05.6**	**+1.1**
ZALV	**Zalesovo Beam**	**19.71**	**23**	P	**P**	**10 07 05.6**	**+1.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
HYB	**Hyderabad**	**19.90**	**161**	*e*P	**P**	**10 07 10.5**	**+3.6**
HYB	**Hyderabad**	**19.90**	**161**	*i* P	**P**	**10 07 10.5**	**+3.6**
NVS	**Novosibirsk**	**20.01**	**20**	*e*P	**P**	**10 07 07.8**	**0.0**
NVS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA	**Gaotai**	**22.30**	**74**	*e*P	**P**	**10 07 38.3**	**+6.0**
SONM	**Songino Array**	**27.87**	**55**	P	**P**	**10 08 27.3**	**+4.4**
	comp=Z,0.5nm,0.6s,mb3.2,baz=280,slow=8.6,SNR=3.2						
SONM	**Songino Array**	**27.87**	**55**	P	**P**	**10 08 27.3**	**+4.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.91**	**120**	P	**P**	**10 08 45.1**	**+3.8**
	comp=Z,0.6nm,0.3s,mb3.7,baz=2.5,slow=20,SNR=3.8						
CMAR	**Chiang Mai Arr**	**29.91**	**120**	P	**P**	**10 08 45.1**	**+3.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MMAI	**Mount Meron Ar**	**29.95**	**274**	LR	LR	10 22 59.4	
	comp=Z,2.6nm,18.1s,baz=30,slow=42						
BRTR	**Keskin Array B**	**30.02**	**288**	P	**P**	**10 08 43.1**	**+1.1**
	comp=Z,0.9nm,0.7s,mb3.5,baz=96,slow=8.9,SNR=3.4						
BRTR	**Keskin Array B**	**30.02**	**288**	P	**P**	**10 08 43.1**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**33.44**	**309**	P	**P**	**10 09 12.2**	**+0.4**
	comp=Z,2.4nm,0.6s,mb4.2,baz=79,slow=7.4,SNR=6.6						
AKASG	**Malin Array Be**	**33.44**	**309**	P	**P**	**10 09 12.2**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**41.41**	**337**	P	**P**	**10 10 19.9**	**+1.1**
	comp=Z,1.5nm,0.5s,mb4.1,baz=116,slow=8.2,SNR=12						
ARCES				LR	LR	10 29 04.2	
	comp=Z,32nm,18.9s,baz=1.0,slow=38						
ARCES	**ARCESS Array B**	**41.41**	**337**	P	**P**	**10 10 19.9**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES				MLR	MLR		
	comp=Z,33nm,18.9s						
NB2	**NORSAR Subarra**	**44.77**	**323**	P	**P**	**10 10 46.3**	**+0.4**
	comp=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUS	**Usuki**	**0.35**	**338**	⇓P	**Pn**	**11 17 59.2**	**-0.4**
JUS				S	**Sn**	**11 18 06.6**	**-0.2**
JKIT	**Kitakata**	**0.40**	**254**	⇓P	**Pn**	**11 17 59.5**	**-0.5**
JKIT				S	**Sn**	**11 18 07.3**	**-0.2**
JTSN	**Tsuno**	**0.60**	**215**	⇓P	**Pn**	**11 18 01.9**	**-0.3**
JTSN				S	**Sn**	**11 18 11.4**	**0.0**
JTO	**Tosashimizu**	**0.76**	**80**	⇑P	**Pn**	**11 18 03.6**	**-0.6**
JTO				*eS*	**Sn**	**11 18 14.0**	**-1.0**
UWA2	**Uwa jima 2**	**0.77**	**51**	⇓P	**Pn**	**11 18 03.9**	**-0.4**
UWA2				*eS*	**Sn**	**11 18 14.8**	**-0.3**
JIU2	**Izumi 2**	**0.94**	**259**	⇓P	**Pn**	**11 18 06.9**	**+0.3**
JIU2				S	**Sn**	**11 18 20.2**	**+1.0**
JNA	**Nagahama**	**0.95**	**30**	⇓P	**Pn**	**11 18 06.7**	**0.0**
JNA				eS	**Sn**	**11 18 18.8**	**-0.5**
JTZ	**Takazaki**	**1.09**	**220**	P	**Pn**	**11 18 09.0**	**+0.5**
JTZ				S	**Sn**	**11 18 24.5**	**+1.9**
KSRS	**Korea Array**	**5.73**	**326**	P	**Pn**	**11 19 12.3**	**+0.3**
	4.5nm,0.3s,baz=145,slow=15,SNR=40						
KSRS				S	**Sn**	**11 20 17.3**	**+0.9**
	5.1nm,0.3s,baz=144,slow=25,SNR=13						
KSRS	**Korea Array**	**5.73**	**326**	P	**Pn**	**11 19 12.4**	**+0.4**
KSRS				S	**Sn**	**11 20 17.3**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KSRS				smax			
	comp=N,5.0nm,0.3s						
MAJO	**Matsushiro**	**6.43**	**52**	*e*Pn	**Pn**	**11 19 22.9**	**+1.3**
	comp=N,22nm,0.4s						
MAJO	**Matsushiro**	**6.43**	**52**	*e*P	**Pn**	**11 19 22.9**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,22nm,0.4s						
MAT	**Matsushiro**	**6.43**	**52**	P	**Pn**	**11 19 22.7**	**+1.1**
MAT				S	**Sn**	**11 20 32.6**	**-1.0**
MJAR	**Matsushiro Arr**	**6.43**	**52**	P	**Pn**	**11 19 23.0**	**+1.4**
	comp=Z,5.9nm,0.3s,baz=242,slow=14,SNR=68						
MJAR				S	**Sn**	**11 20 33.6**	**0.0**
	baz=330,slow=4.8,SNR=2.9						
MJAR				LR	LR	11 22 14.2	
	comp=Z,466nm,18.1s,baz=290,slow=41						
MJAR	**Matsushiro Arr**	**6.43**	**52**	P	**Pn**	**11 19 23.0**	**+1.4**
MJAR				S	**Sn**	**11 20 33.6**	**0.0**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,467nm,18.1s						
JOW	**Kunigami**	**6.68**	**209**	P	**Pn**	**11 19 29.2**	**+4.1**
	comp=Z,3.5nm,0.3s,baz=168,slow=22,SNR=2.5						
JOW				S	**Sn**	**11 20 36.5**	**-3.3**
	comp=Z,4.0nm,0.3s,baz=122,slow=26,SNR=5.9						
CBIJ	**Chichi jima**	**10.53**	**120**	LR	LR	11 23 23.1	
	comp=Z,374nm,21.8s,baz=321,slow=31						
ASAJ	**Asahikawa**	**14.10**	**33**	P	**Pn**	**11 21 06.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=220,slow=8.5,SNR=5.8						
ASAJ				LR	LR	11 26 21.5	
	comp=Z,119nm,18.4s,baz=168,slow=36						
BJI	**Beijing**	**14.61**	**304**	P	**Pn**	**11 21 19.5**	**+6.5**
BJI				AMB	AMB		
	comp=Z,24nm,0.8s						
BJI				LR	LR		
	comp=N,317nm,19.4s						
BJI				LR	LR		
	comp=E,241nm,29.6s						
BJI				LR	LR		
	comp=Z,226nm,28.1s						
KLR	**Kul'dur**	**16.48**	**360**	*e*P	**Pn**	**11 21 38.2**	**+1.3**
GUMO	**Guam**	**22.43**	**145**	LR	LR	11 31 43.4	
	comp=Z,51nm,18.4s,MS3.0,baz=268,slow=37						
GYA	**Guiyang**	**22.80**	**261**	P	**P**	**11 22 45.5**	**-2.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
ULN	**Ulaanbaatar**	**24.10**	**316**	*e*P	**P**	**11 23 00.1**	**+0.2**
	comp=Z,7.0nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**24.10**	**316**	*e*P	**P**	**11 23 00.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
SONM	**Songino Array**	**24.47**	**316**	P	**P**	**11 23 03.3**	**0.0**
	comp=Z,10.0nm,0.8s,mb4.3,baz=123,slow=10,SNR=52						
SONM				PcP	PcP	11 26 39.6	-1.0
	comp=Z,0.4nm,0.6s,baz=132,slow=2.1,SNR=3.0						
SONM				LR	LR	11 33 39.0	
	comp=Z,178nm,18.3s,MS3.6,baz=58,slow=39						
SONM	**Songino Array**	**24.47**	**316**	P	**P**	**11 23 03.3**	**0.0**
SONM						11 26 39.6	
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,178nm,18.3s						
GTA	**Gaotai**	**26.69**	**294**	*e*P	**P**	**11 23 22.5**	**-1.0**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb3.9						
ZAK	**Zakamensk**	**27.50**	**318**	*e*P	**P**	**11 23 32.2**	**+1.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.8						
PETK	**Petropavlovsk-**	**27.51**	**35**	LR	LR	11 34 41.9	
	comp=Z,48nm,22.0s,MS3.0,baz=231,slow=37						
CHTO	**Chiang Mai**	**32.62**	**253**	*e*P	**P**	**11 24 15.2**	**-0.9**
	comp=Z,2.1nm,0.8s,mb4.1						
CHTO	**Chiang Mai**	**32.62**	**253**	*e*P	**P**	**11 24 15.3**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**32.80**	**252**	P	**P**	**11 24 17.1**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.2,baz=46,slow=8.1,SNR=13						
CMAR				LR	LR	11 37 27.2	
	comp=Z,80nm,18.6s,MS3.5,baz=227,slow=36						
CMAR	**Chiang Mai Arr**	**32.80**	**252**	P	**P**	**11 24 17.1**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,80nm,18.6s						
ZALV	**Zalesovo Beam**	**39.35**	**317**	P	**P**	**11 25 14.2**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.5,baz=122,slow=12,SNR=3.5						
ZALV				PcP	PcP	11 27 19.7	-1.2
	comp=Z,0.3nm,0.3s,baz=112,slow=3.9,SNR=2.5						
ZALV				LR	LR	11 42 42.5	
	comp=Z,67nm,19.4s,MS3.5,baz=233,slow=38						
MK31	**Makanchi Array**	**39.99**	**305**	*e*P	**P**	**11 25 17.8**	**-1.0**
MKAR	**Makanchi Array**	**39.99**	**305**	P	**P**	**11 25 18.1**	**-0.6**
	comp=Z,4.4nm,0.7s,mb4.3,baz=92,slow=11,SNR=39						
MKAR				PcP	PcP	11 27 22.3	-0.7
	comp=Z,0.4nm,0.6s,baz=74,slow=2.1,SNR=2.9						
MKAR				ScP	ScP	11 31 06.5	-1.0
	comp=Z,0.5nm,0.7s,baz=83,slow=4.9,SNR=3.6						
MKAR				LR	LR	11 43 15.9	
	comp=Z,81nm,18.5s,MS3.6,baz=270,slow=38						
MKAR	**Makanchi Array**	**39.99**	**305**	P	**P**	**11 25 18.2**	**-0.6**
MKAR						11 27 22.3	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,81nm,18.5s						
KURK	**Kurchatov**	**42.63**	**311**	*e*P	**P**	**11 25 39.8**	**-0.6**
	comp=Z,2.6nm,0.7s,mb4.1						
KURK	**Kurchatov**	**42.63**	**311**	*e*P	**P**	**11 25 39.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
TKM2	**Tokmak 2**	**44.88**	**300**	*e*P	**P**	**11 25 58.9**	**+0.3**
	comp=Z,13nm,0.7s,mb4.9						
TKM2	**Tokmak 2**	**44.88**	**300**	*e*P	**P**	**11 25 58.9**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
AAK	**Ala-Archa**	**45.72**	**300**	*e*P	**P**	**11 26 04.8**	**-0.5**
	comp=Z,5.4nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**45.72**	**300**	*e*P	**P**	**11 26 04.8**	**-0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
EKS2	**Erkin-Say**	**46.24**	**300**	*e*P	**P**	**11 26 08.8**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.2						
BRVK	**Borovoye**	**47.87**	**314**	*e*P	**P**	**11 26 20.3**	**-1.5**
	comp=Z,3.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**47.87**	**314**	*e*P	**P**	**11 26 20.3**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**56.12**	**178**	P	**P**	**11 27 24.1**	**+0.7**
	comp=Z,1.2nm,0.6s,mb4.1,baz=9.6,slow=13,SNR=30						
ASAR	**Alice Springs**	**56.12**	**178**	P	**P**	**11 27 24.1**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**61.66**	**25**	*e*P	**P**	**11 28 02.2**	**+0.9**
	comp=Z,145nm,1.2s						
STKA	**Stephens Creek**	**64.91**	**171**	P	**P**	**11 28 24.6**	**+1.4**
	comp=Z,2.4nm,0.7s,mb4.4,baz=327,slow=7.8,SNR=4.6						
STKA	**Stephens Creek**	**64.91**	**171**	*e*P	**P**	**11 28 24.2**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.7						
ARCES	**ARCESS Array B**	**65.16**	**338**	LR	LR	11 59 16.3	
	comp=Z,50nm,20.7s,MS3.7,baz=202,slow=38						
NWAO	**Narrogin (SRO)**	**66.76**	**193**	LR	LR	11 59 01.0	
	comp=Z,77nm,21.8s,MS3.9,baz=92,slow=37						
RES	**Resolute Bay**	**68.56**	**12**	*e*P	**P**	**11 28 46.3**	**+0.3**
	comp=Z,95nm,0.8s						
YKA	**Yellowknife Ar**	**71.29**	**27**	P	**P**	**11 29 04.8**	**+1.9**
	comp=Z,0.6nm,0.7s,mb3.6,baz=296,slow=6.0,SNR=3.5						
YKA	**Yellowknife Ar**	**71.29**	**27**	P	**P**	**11 29 04.8**	**+1.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**72.68**	**319**	P	**P**	**11 29 09.9**	**-1.6**
	comp=Z,1.4nm,0.6s,mb4.1,baz=56,slow=6.2,SNR=4.9						
AKASG	**Malin Array Be**	**72.68**	**319**	P	**P**	**11 29 09.9**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**74.89**	**334**	LR	LR	12 05 30.0	
	comp=Z,32nm,19.3s,MS3.6,baz=235,slow=38						
BRTR	**Keskin Array B**	**75.58**	**308**	P	**P**	**11 29 27.8**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.1,baz=113,slow=5.6,SNR=8.7						
BRTR	**Keskin Array B**	**75.58**	**308**	P	**P**	**11 29 27.8**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**83.74**	**48**	P	**P**	**11 30 13.5**	**+0.6**
	comp=Z,0.5nm,0.7s,mb3.7,baz=305,slow=5.5,SNR=5.3						

ISCJB ***29*** *11:34:58.0±4.8, 322S±008×1000E±02, h24km±35km, mb3.9/6, Error ellipse: s-maj=40.1km s-min=13.2km az=179.6*
DJA ***29*** *11:35:00, 290S×9960E, h10km, MLv4.2/3*
IDC ***29*** *11:35:02.1±2.4, 294S×10038E, h24km±5km, mb3.7/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, Error ellipse: s-maj=103.5km s-min=20.3km az=60.0*

ISC 29 11:34:57.4±4.9, 317S±008×1001E±03, h3km±33km, h26km±.2km: pP-P, n11, σ0s98/10, mb3.9/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**2.27**	**8**	P	**Pn**	**11 35 35.7**	**-0.1**
PDSI	**Padang**	**2.27**	**8**	S	**Sn**	**11 36 03.1**	**-1.2**
PPI	**Padang Panjang**	**2.71**	**5**	P	**Pn**	**11 35 42.5**	**+0.6**
PPI	**Padang Panjang**	**2.71**	**5**	S	**Sn**	**11 36 16.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**21.52**	**357**	P	**P**	**11 39 46.6**	**-1.2**
	1.0nm,0.5s,mb3.5,baz=187,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**38.46**	**125**	P	**P**	**11 42 20.1**	**-0.8**
	0.8nm,0.6s,mb3.6,baz=299,slow=7.9,SNR=6.5						
STKA	**Stephens Creek**	**48.28**	**131**	P	**P**	**11 43 43.2**	**+3.2**
	1.7nm,0.8s,mb4.1,baz=305,slow=9.8,SNR=3.5						
SONM	**Songino Array**	**51.09**	**5**	P	**P**	**11 44 01.5**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=187,slow=7.8,SNR=9.2						
SONM				pP	pP	11 44 08.7	+6.7
	2.2nm,0.7s,baz=187,slow=9.0,SNR=12						
MKAR	**Makanchi Array**	**52.19**	**345**	P	**P**	**11 44 09.8**	**+0.4**
	1.6nm,0.7s,mb4.1,baz=150,slow=8.0,SNR=18						
MKAR				pP	pP	11 44 17.1	+6.7
	1.8nm,0.7s,baz=157,slow=6.6,SNR=12						
ZALV	**Zalesovo Beam**	**58.34**	**349**	P	**P**	**11 44 53.2**	**-0.4**
	0.8nm,0.5s,mb4.0,baz=174,slow=4.0,SNR=7.1						
ZALV				pP	pP	11 45 00.8	+6.2
	0.7nm,0.3s,baz=179,slow=7.0,SNR=3.8						
TXAR	**Lajitas Array**	**145.53**	**39**	PKPbc	PKPbc	11 54 38.0	+0.1
	2.0nm,0.7s,baz=298,slow=1.0,SNR=10						

IDC 29 11:52:34.4±11.0, 232N×9456E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, MS3.6/1, Ms1 3.6/1, ms1mx2.3/30, Error ellipse: s-maj=226.1km s-min=103.1km az=151.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.60**	**15**	Pn	Pn	11 56 28.9	+0.1
	baz=206,slow=12,SNR=7.0						
MKAR	**Makanchi Array**	**45.56**	**348**	P	P	12 00 56.0	0.0
	0.8nm,0.6s,baz=165,slow=9.1,SNR=8.2						
SONM	**Songino Array**	**46.48**	**11**	P	P	12 01 03.2	0.0
	0.2nm,0.5s,baz=180,slow=9.4,SNR=3.2						
KURK	**Kurchatov**	**50.07**	**347**	P	P	12 01 30.4	-0.5
	0.2nm,0.3s,baz=165,slow=6.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**52.08**	**353**	P	P	12 01 45.9	0.0
	0.3nm,0.3s,baz=193,slow=5.9,SNR=2.6						
CTA	**Charters Tower**	**55.36**	**116**	LR	LR	12 26 12.7	
	comp=Z,51nm,19.8s,baz=227,slow=36						

MOS ***29*** *12:25:06.3±0.8, 1601S×17982W, h417km, mb4.4/18, Error ellipse: s-maj=19.1km s-min=11.0km az=152.0*
ISCJB ***29*** *12:25:09.3±0.8, 1614S±007×17985W±005, h453km±9km, mb4.4/42, Error ellipse: s-maj=11.8km s-min=6.7km az=153.3*
IDC ***29*** *12:25:10.2±1.5, 1618S×17984W, h447km±17km, mb4.1/13, mb1 4.3/14, mb1mx4.1/20, mbtmp4.1/14, Error ellipse: s-maj=17.3km s-min=10.4km az=142.0*
NEIC ***29*** *12:25:10.1±0.6, 1611S×17981W, h450km±7km, mb4.5/31, Error ellipse: s-maj=7.8km s-min=4.4km az=152.0*

ISC 29 12:25:10.4±0.8, 1612S±007×17983W±005, h451km±10km, h445km±10.0km: pP-P, n92, σ0s75/93, mb4.4/42, 12C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**7.60**	**353**	*e*Pn	**P**	**12 27 01.5**	**-0.2**
	108nm,0.5s						
AFI	**Afiamalu**	**8.08**	**75**	P	**P**	**12 27 06.8**	**+0.1**
	17nm,0.3s,baz=55,slow=5.6,SNR=27						
AFI				S	**S**	**12 28 42.6**	**+0.4**
	0.6nm,0.3s,baz=340,slow=20,SNR=3.7						
AFI	**Afiamalu**	**8.08**	**75**	*e*Pn	**P**	**12 27 06.4**	**-0.3**
AFI	**Afiamalu**	**8.08**	**75**	P	**P**	**12 27 06.8**	**+0.1**
AFI				S	**S**	**12 28 42.6**	**+0.5**
AFI				pmax	pmax		
	comp=Z,17nm,0.3s						
AFI				smax			
	comp=N,1.0nm,0.3s						
URZ	**Urewera**	**22.23**	**186**	P	**P**	**12 29 29.7**	**-2.0**
	comp=N,21nm,0.6s,mb4.9,baz=41,slow=5.9,SNR=13						
RPZ	**Rata Peaks**	**28.59**	**194**	P	**P**	**12 30 26.8**	**-1.3**
	comp=N,26nm,0.6s,mb4.8,baz=243,slow=1.8,SNR=19						
PAE	**Paea**	**28.97**	**97**	*e*P	**P**	**12 30 31.5**	**-0.4**
	comp=N,278nm,1.1s,mb5.6						
PAE	**Paea**	**28.97**	**97**	*e*P	**P**	**12 30 31.5**	**-0.4**
PAE				pmax	pmax		
	comp=Z,278nm,1.1s,mb5.6						
TIAR	**Tiarei**	**29.19**	**97**	*e*P	**P**	**12 30 33.6**	**-0.3**
	comp=Z,301nm,1.0s						
TVO	**Taravao**	**29.28**	**98**	*e*P	**P**	**12 30 34.5**	**-0.1**
	comp=Z,238nm,0.7s						
TVO	**Taravao**	**29.28**	**98**	*e*P	**P**	**12 30 34.5**	**-0.1**
TVO				pmax	pmax		
	comp=Z,238nm,0.7s						
ARMA	**Armidale**	**29.73**	**236**	⇑*i*P	**P**	**12 30 39.5**	**+1.1**
PMOR	**Pomariorio Ree**	**30.77**	**92**	*e*P	**P**	**12 30 47.5**	**-0.1**
	comp=Z,43nm,0.9s,mb4.9						
VAH	**Vaihoa**	**31.00**	**93**	*e*P	**P**	**12 30 49.1**	**-0.5**
	comp=Z,36nm,0.9s,mb4.8						
CTA	**Charters Tower**	**32.45**	**258**	⇑*i*P	**P**	**12 31 02.4**	**+0.4**
	comp=Z,8.5nm,0.8s,mb4.2						
CTA	**Charters Tower**	**32.45**	**258**	⇑*i*P	**P**	**12 31 02.4**	**+0.4**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CTAO	**Charters Tower**	**32.45**	**258**	*e*P	**P**	**12 31 02.4**	**+0.4**
	comp=Z,12nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**32.45**	**258**	*e*P	**P**	**12 31 02.4**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
PMG	**Port Moresby**	**32.85**	**278**	*e*P	**P**	**12 31 06.8**	**+1.3**
	comp=Z,24nm,0.8s,mb4.7						
PMG	**Port Moresby**	**32.85**	**278**	⇓*i*P	**P**	**12 31 06.5**	**+1.0**
PMG				*i**PP	pP	12 32 23.5	-2.6
CNB	**Canberra Magne**	**33.50**	**229**	*e*P	**P**	**12 31 11.3**	**+0.5**
TOO	**Toolangi**	**37.30**	**228**	*e*P	**P**	**12 31 42.8**	**+0.3**
STKA	**Stephens Creek**	**38.35**	**239**	⇑*i*P	**P**	**12 31 52.0**	**+0.7**
	comp=Z,33nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**38.35**	**239**	P	**P**	**12 31 52.1**	**+0.9**
	comp=Z,39nm,0.7s,mb4.9,baz=77,slow=7.8,SNR=82						
STKA				ScP	ScP	12 37 00.7	+2.2
	comp=Z,5.2nm,1.0s,baz=117,slow=4.5,SNR=4.9						
WB2	**Warramunga Arr**	**43.64**	**258**	⇑*i*P	**P**	**12 32 33.1**	**-0.7**
WRAB	**Tennant Creek**	**43.64**	**258**	*e*P	**P**	**12 32 32.9**	**-0.9**
	comp=Z,8.3nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**43.64**	**258**	*e*P	**P**	**12 32 32.9**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**44.00**	**253**	P	**P**	**12 32 36.6**	**0.0**
	comp=Z,85nm,0.6s,mb5.4,baz=85,slow=8.5,SNR=1714						
ASAR				PcP	PcP	12 34 13.3	+0.5
	comp=Z,1.6nm,0.5s,baz=101,slow=4.1,SNR=3.9						
ASAR				ScP	ScP	12 37 22.3	+1.1
	comp=Z,2.1nm,0.7s,baz=97,slow=4.3,SNR=9.3						
ASAR				S	**S**	**12 38 31.8**	**-3.1**
	comp=Z,1.5nm,0.7s,baz=84,slow=15,SNR=12						
ASAR	**Alice Springs**	**44.00**	**253**	P	**P**	**12 32 36.6**	**0.0**
ASAR						12 34 13.3	
ASAR				S	**S**	**12 38 31.8**	**-3.1**
ASAR				pmax	pmax		
	comp=Z,85nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.7s						
ASAR				smax			
	comp=N,2.0nm,0.7s						
KAKA	**Kakadu**	**46.28**	**268**	⇑*i*P	Px	12 32 39.1	
	comp=N,42nm,0.4s						
FORT	**Forrest**	**49.58**	**243**	⇑*i*P	**P**	**12 33 18.2**	**-0.7**
	comp=N,32nm,0.6s,mb4.8						
BATI	**Baumata**	**55.20**	**269**	P	**P**	**12 34 00.9**	**+1.2**
	comp=N,20nm,0.6s,mb4.6,baz=228,slow=1.8,SNR=7.2						
MBWA	**Marble Bar**	**57.21**	**255**	*e*P	**P**	**12 34 13.4**	**-0.2**
	comp=N,22nm,0.7s,mb4.6						
KLBR	**Kellerberrin**	**58.43**	**243**	⇑*i*P	**P**	**12 34 21.0**	**-0.8**
	comp=N,31nm,0.7s,mb4.8						
NWAO	**Narrogin (SRO)**	**58.87**	**241**	*e*P	**P**	**12 34 24.2**	**-0.5**
	comp=N,14nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	**58.87**	**241**	*e*P	**P**	**12 34 24.2**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,14nm,0.6s						
MUN	**Mundaring**	**59.74**	**242**	*e*P	**P**	**12 34 31.0**	**+0.3**
KAPI	**Kappang**	**60.23**	**273**	P	**P**	**12 34 33.7**	**-0.5**
	comp=Z,4.5nm,0.6s,mb4.1,baz=81,slow=4.9,SNR=4.0						
KAPI	**Kappang**	**60.23**	**273**	P	**P**	**12 34 33.6**	**-0.5**
VNDA	**Vanda**	**62.11**	**184**	P	**P**	**12 34 46.0**	**+0.5**
	comp=Z,2.4nm,0.6s,mb3.8,baz=354,slow=6.8,SNR=19						
VNDA	**Vanda**	**62.11**	**184**	*e*P	**P**	**12 34 45.7**	**+0.2**
	comp=Z,3.1nm,0.7s,mb3.9						
VNDA	**Vanda**	**62.11**	**184**	P	**P**	**12 34 46.1**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SBA	**Scott Base**	**62.12**	**183**	*e*P	**P**	**12 34 47.4**	**+1.8**
	comp=Z,11nm,0.9s,mb4.3						
SBA	**Scott Base**	**62.12**	**183**	*e*P	**P**	**12 34 47.4**	**+1.8**
SBA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
YSS	**Yuzh-Sakhalins**	**71.22**	**334**	⇑*i*P	**P**	**12 35 48.2**	**+5.7**
YSS				pmax	pmax		
	comp=Z,84nm,1.7s,mb5.0						
MWC	**Mount Wilson**	**77.15**	**48**	*e*P	**P**	**12 36 16.8**	**+0.2**
	comp=Z,6.4nm,0.5s,mb4.4						
MWC	**Mount Wilson**	**77.15**	**48**	*e*P	**P**	**12 36 16.8**	**+0.2**
MWC				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
CMB	**Columbia Colle**	**77.49**	**44**	*e*P	**P**	**12 36 17.9**	**-0.4**
	comp=Z,4.8nm,0.9s,mb4.0						
CMB	**Columbia Colle**	**77.49**	**44**	*e*P	**P**	**12 36 17.9**	**-0.4**
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
NVAR	**Mina Array Bea**	**79.09**	**45**	P	**P**	**12 36 27.4**	**+0.4**
	comp=Z,8.1nm,0.7s,mb4.4,baz=226,slow=8.7,SNR=69						
NVAR				pP	pP	12 38 07.7	+1.4
	comp=Z,1.2nm,1.0s,baz=242,slow=8.8,SNR=4.2						
NVAR	**Mina Array Bea**	**79.09**	**45**	P	**P**	**12 36 27.4**	**+0.4**
NVAR				pP	pP	12 38 07.7	+1.4
MOD	**Modoc**	**79.61**	**41**	*e*P	**P**	**12 36 29.8**	**+0.2**
	comp=Z,4.4nm,0.6s,mb4.2						
TPH	**Tonopah**	**79.65**	**45**	*e*P	**P**	**12 36 30.2**	**+0.3**
	comp=Z,4.1nm,0.7s,mb4.1						
TPH	**Tonopah**	**79.65**	**45**	*e*P	**P**	**12 36 30.2**	**+0.3**
TPH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
LDFC	**Landfair**	**79.69**	**49**	*e*P	**P**	**12 36 30.9**	**+0.6**
	comp=Z,20nm,1.0s,mb4.6						
TPNV	**Topopah Spring**	**79.77**	**47**	*e*P	**P**	**12 36 30.8**	**+0.1**
	comp=Z,4.0nm,0.6s,mb4.1						
TPNV	**Topopah Spring**	**79.77**	**47**	*e*P	**P**	**12 36 30.8**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
BMN	**Battle Mountai**	**80.83**	**43**	*e*P	**P**	**12 36 36.2**	**+0.1**
	comp=Z,12nm,1.1s,mb4.4						
BMN	**Battle Mountai**	**80.83**	**43**	*e*P	**P**	**12 36 36.2**	**+0.1**
BMN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
WVOR

GERES	**GERESS Array B**	**145.53**	**344**	PKP2	PKPab	12 43 57.5	-0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						

NIED ***29*** *12:38:00,4230N×143.10E,h53km,Mw3.8 Best double couple: M₀5.35000×10¹⁴ NP1:φs36.00000°,δ67.00000°, λ88.00000°. NP2:φs220.00000°,δ23.00000°,λ94.00000°.*
IDC ***29*** *12:38:13.2±5.1,4219N×14385E,h74km±23km,mb3.6/6, mb1 3.6/9,mb1mx3.5/24,mbtmp3.6/9,MS3.6/1,Ms1 3.6/1, ms1mx2.5/39,Error ellipse: s-maj=76.8km s-min=28.9km az=106.0*
ISCJB ***29*** *12:38:14.9±0.6,4225N±006×14308E±006,h66km±4km, mb3.8/6,Error ellipse: s-maj=11.4km s-min=6.0km az=154.1*
MOS ***29*** *12:38:15.1±1.8,4220N×14348E,h96km,mb3.9/6,Error ellipse: s-maj=20.8km s-min=16.1km az=87.2*
JMA ***29*** *12:38:16.8±0.1,4232N×14305E,h50km±1km,M3.6*
JMA Felt I J1.

ISC 29 12:38:16.1±0.6,4228N±006×14308E±006,h60km±4km, n28,σ0°72/35,mb3.8/6,5C-4D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.24**	**271**	⇓P	**Pn**	**12 38 25.1**	**-0.6**
JNBK				*e*S	**Sn**	**12 38 32.1**	**-0.5**
JEM	**Erimo**	**0.27**	**167**	⇑P	**Pn**	**12 38 26.2**	**+0.3**
JCH	**Churui**	**0.40**	**32**	⇑P	**Pn**	**12 38 26.5**	**-0.5**
JCH				*e*S	**Sn**	**12 38 34.1**	**-0.8**
JBT2	**Biratori 2**	**0.73**	**314**	⇓P	**Pn**	**12 38 30.4**	**-0.2**
JOB	**Onbets**	**0.84**	**42**	⇑P	**Pn**	**12 38 32.6**	**+0.6**
JOB				*e*S	**Sn**	**12 38 45.1**	**+1.4**
JFR	**Furan**	**0.96**	**338**	⇓P	**Pn**	**12 38 32.3**	**-1.2**
JAR	**Ashorobuto**	**1.14**	**26**	⇑P	**Pn**	**12 38 35.7**	**-0.2**
JAR				*e*S	**Sn**	**12 38 49.8**	**-0.9**
JEW	**Eniwo**	**1.33**	**296**	⇓P	**Pn**	**12 38 38.8**	**+0.4**
JEW				*e*S	**Sn**	**12 38 56.1**	**+1.0**
JAB	**Ashibetsu**	**1.38**	**333**	P	**Pn**	**12 38 39.7**	**+0.6**
JAK	**Akkeshi**	**1.40**	**58**	⇑P	**Pn**	**12 38 39.2**	**-0.1**
JAK				*e*S	**Sn**	**12 38 57.2**	**+0.5**
ASAJ	**Asahikawa**	**1.87**	**349**	P	**Pn**	**12 38 46.6**	**+0.9**
	48nm,0.3s,baz=198,slow=11,SNR=264						
ASAJ				S	**Sn**	**12 39 02.4**	**-5.9**
	27nm,0.3s,baz=189,slow=10,SNR=18						
YUK	**Yuzh-Kuril'sk**	**2.69**	**48**	*e*PN	**Pn**	**12 38 56.9**	**0.0**
YUK				*e*S	**Sn**	**12 39 28.4**	**+0.1**
YUK				smax			
	comp=N,2μm,0.6s						
YUK				smax			
	comp=E,1μm,0.4s						
YUK				smax			
	comp=N,520nm,0.7s						
YUK				smax			
	comp=E,360nm,0.5s						
MJAR	**Matsushiro Arr**	**6.85**	**215**	P	**Pn**	**12 39 54.4**	**+0.5**
	comp=E,0.5nm,0.3s,baz=29,slow=14,SNR=5.4						
MJAR	**Matsushiro Arr**	**6.85**	**215**	PN	**Pn**	**12 39 54.4**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**12.60**	**253**	P	**Pn**	**12 41 18.4**	**+6.0**
	comp=Z,0.2nm,0.3s,baz=63,slow=14,SNR=3.0						
JOW	**Kunigami**	**19.60**	**223**	LR	LR	12 50 19.2	
	comp=Z,156nm,18.2s,baz=88,slow=36						
SONM	**Songino Array**	**26.33**	**295**	P	**P**	**12 43 46.2**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.5,baz=73,slow=8.2,SNR=6.5						
SONM	**Songino Array**	**26.33**	**295**	P	**P**	**12 43 46.2**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**39.52**	**308**	P	**P**	**12 45 40.5**	**-0.2**
	comp=Z,1.1nm,0.4s,mb4.0,baz=88,slow=8.2,SNR=8.0						
ZALV	**Zalesovo Beam**	**39.52**	**308**	P	**P**	**12 45 40.5**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**42.62**	**298**	P	**P**	**12 46 06.3**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.8,baz=81,slow=10.0,SNR=16						
MKAR	**Makanchi Array**	**42.62**	**298**	P	**P**	**12 46 06.3**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**43.88**	**304**	P	**P**	**12 46 16.9**	**+0.5**
	comp=Z,1.4nm,0.4s,mb4.1,baz=76,slow=8.6,SNR=7.3						
KURK	**Kurchatov**	**43.88**	**304**	P	**P**	**12 46 16.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
BVAR	**Borovoye Array**	**48.12**	**309**	P	**P**	**12 46 49.3**	**-0.3**
	comp=Z,0.8nm,0.3s,mb4.2,baz=81,slow=10,SNR=7.4						
BVAR	**Borovoye Array**	**48.12**	**309**	P	**P**	**12 46 49.3**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	**NORSAR Array B**	**69.85**	**337**	P	**P**	**12 49 17.5**	**-2.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=38,slow=6.5,SNR=2.4						
NOA	**NORSAR Array B**	**69.85**	**337**	P	**P**	**12 49 17.5**	**-2.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

HLW ***29*** *12:43:25.6,2992N×3666E,h14km,Mb2.9*
CSEM ***29*** *12:43:26.4±0.7,2988N×3635E,h2km,ML2.9,Error ellipse: s-maj=16.6km s-min=8.6km az=73.0*
ISCJB ***29*** *12:43:27.7±0.7,2985N±003×3627E±004,h0km,Error ellipse: s-maj=5.3km s-min=4.1km az=171.7*
SGS ***29*** *12:43:28.0,3006N×3628E,h6km*
GII ***29*** *12:43:28.4±0.9,2988N×3615E,h0km,ML2.5/3, EXPLOSION*

ISC 29 12:43:27.8±0.7,2985N±003×3631E±004,h0km,n27, σ0°77/39,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.10**	**264**	Pg	**Pg**	**12 43 48.3**	**-0.6**
HRFI	**Mount Harif**	**1.12**	**280**	Pg	**Pg**	**12 43 48.4**	**-0.9**
HRFI				Sg	**Sg**	**12 44 04.4**	**+0.6**
EIL	**Elat**	**1.20**	**262**	Pg	**Pg**	**12 43 50.4**	**-0.3**
EIL				Sg	**Sg**	**12 44 07.0**	**+0.7**
ZFRI	**Zfri**	**1.21**	**306**	Pg	**Pg**	**12 43 49.8**	**-1.1**
ZFRI				Sg	**Sg**	**12 44 06.4**	**-0.2**
MBRI	**Mt Berech**	**1.22**	**268**	Pg	**Pg**	**12 43 50.5**	**-0.6**
MBRI				Sg	**Sg**	**12 44 07.6**	**+0.7**
HQLS		**1.22**	**244**	P	**Pg**	**12 43 50.8**	**-0.4**
HQLS		**1.22**	**244**	P	**Pg**	**12 43 50.8**	**-0.4**
HQLS				S	**Sg**	**12 44 07.8**	**+0.8**
PRNI	**Paran**	**1.24**	**294**	Pg	**Pg**	**12 43 50.4**	**-1.1**
PRNI				Sg	**Sg**	**12 44 07.7**	**+0.2**
JLOS		**1.32**	**213**	P	**Pg**	**12 43 53.2**	**0.0**
JLOS		**1.32**	**213**	P	**Pg**	**12 43 53.2**	**0.0**
JLOS				S	**Sg**	**12 44 12.4**	**+2.1**
KRMI	**Paran Flat**	**1.40**	**281**	Pg	**Pg**	**12 43 53.4**	**-1.3**
KRMI				Sg	**Sg**	**12 44 12.0**	**-0.9**
HBST	**Basata**	**1.52**	**246**	P	**Pn**	**12 43 55.7**	**-0.5**
RMNI	**Mount Ramon**	**1.53**	**299**	Pn	**Pn**	**12 43 55.6**	**-0.8**
TBKS	**Tabuk**	**1.64**	**173**	P	**Pn**	**12 43 58.3**	**+0.4**
MZDA	**Masada**	**1.67**	**331**	Pn	**Pn**	**12 43 58.2**	**0.0**
MZDA				Sn	**Sn**	**12 44 21.4**	**+1.1**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**12 43 59.4**	**-0.2**
YTIR	**Yattir**	**1.82**	**326**	Pn	**Pn**	**12 44 00.5**	**+0.1**
RTMI	**Retamim**	**1.84**	**311**	Pn	**Pn**	**12 44 01.1**	**+0.5**
RTMI				Sn	**Sn**	**12 44 24.4**	**-0.3**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**12 44 02.1**	**+0.7**
DSI				Sn	**Sn**	**12 44 27.9**	**+2.0**
KZIT	**Kziot**	**1.96**	**303**	Sn	**Sn**	**12 44 28.1**	**+0.5**
HNKL	**Nakhl**	**2.03**	**273**	P	**Pn**	**12 44 03.1**	**-0.1**
HNKL				S	**Sn**	**12 44 30.1**	**+0.9**
HKAT	**Jabal Katrina**	**2.42**	**237**	P	**Pn**	**12 44 08.0**	**-0.6**
HMDT	**Nahal Hemdat**	**2.49**	**344**	Pn	**Pn**	**12 44 10.3**	**+0.8**
TR2		**2.70**	**238**	P	**Pn**	**12 44 11.9**	**-0.5**
TR1		**2.77**	**229**	P	**Pn**	**12 44 13.2**	**-0.2**
AMAG	**Maghara**	**2.80**	**287**	P	**Pn**	**12 44 13.0**	**-0.8**
SUZ		**3.02**	**271**	P	**Pn**	**12 44 16.9**	**0.0**

IDC 29 13:05:37.6±2.0,1274N×9211E,h0km,mb3.6/3,mb1 3.6/4, mb1mx3.4/20,mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=66.4km s-min=26.4km az=64.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.70**	**48**	Pn	Pn	13 07 45.0	+0.2
	0.1nm,0.3s,baz=236,slow=15,SNR=4.4						
MKAR	**Makanchi Array**	**34.94**	**348**	P	P	13 12 31.5	+0.3
	2.6nm,1.3s,baz=156,slow=7.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**41.52**	**354**	P	P	13 13 26.1	-0.4
	0.5nm,0.3s,baz=168,slow=7.4,SNR=3.4						
ASAR	**Alice Springs**	**54.58**	**131**	P	P	13 15 08.1	+0.1
	0.3nm,0.4s,baz=308,slow=6.8,SNR=20						

ISCJB ***29*** *13:07:40.5±0.4,5144N±002×16.14E±003,h0km,Error ellipse: s-maj=3.3km s-min=2.2km az=21.5*
NEIC ***29*** *13:07:41.6±0.4,5153N×1625E,h5km,ML3.4(SZGRF), Error ellipse: s-maj=5.0km s-min=4.7km az=82.0*
IPEC ***29*** *13:07:42.3±0.3,5148N×1625E,h0km,ML2.7/3,Error ellipse: s-maj=2.3km s-min=1.6km az=49.0*
IDC ***29*** *13:07:43.4±0.8,5143N×1612E,h0km,mb1 3.5/5, mb1mx3.3/22,mbtmp3.4/5,ML3.1/5,Error ellipse: s-maj=11.8km s-min=7.8km az=107.0*
WAR ***29*** *13:07:44.0,5144N×1612E,Mw2.9*
CSEM ***29*** *13:07:44.2±0.2,5141N×1606E,h0km,ML3.6/10,Error ellipse: s-maj=3.6km s-min=2.5km az=18.0*
PRU ***29*** *13:07:44.4,5139N×1607E,h0km*
VIE ***29*** *13:07:45.8±0.7,5127N×1595E,h0km,mb2.5/4,ML3.0/4, Error ellipse: s-maj=4.9km s-min=3.1km az=37.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 29 13:07:42.1±0.4,5147N±002×1612E±003,h0km,n48, σ1°05/92,3C-7D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**13 07 55.1**	**+0.8**
KSP				*e*Sg	**Sg**	**13 08 02.7**	**+0.1**
KSP	**Ksiaz**	**0.64**	**170**	⇓*i*Pg	**Pg**	**13 07 55.1**	**+0.8**
KSP				*e*Sg	**Sg**	**13 08 02.5**	**-0.1**
KSP				*e*		13 08 07.2	
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**13 07 55.0**	**+0.7**
KSP				*e*Sg	**Sg**	**13 08 02.4**	**-0.2**
UPC	**Upice**	**0.97**	**184**	*e*PG	**Pg**	**13 08 01.1**	**+0.4**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**13 08 03.9**	**+0.1**
DPC				*e*SG	**Sg**	**13 08 17.4**	**-1.0**
	comp=Z,70nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**227**	*e*Pg	**Pg**	**13 08 08.5**	**+0.3**
PVCC				Sg	**Sg**	**13 08 26.5**	**+0.7**
	comp=Z,191nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**227**	*e*PG	**Pg**	**13 08 08.4**	**+0.2**
PVCC				*e*SG	**Sg**	**13 08 26.5**	**+0.7**
	comp=Z,191nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**247**	Pg	**Pg**	**13 08 11.1**	**+0.4**
BRG	**Berggiesshubel**	**1.50**	**247**	PN	**Pn**	**13 08 09.9**	**-0.3**
BRG				PG	**Pg**	**13 08 11.1**	**+0.4**
BRG				SG	**Sg**	**13 08 31.3**	**+1.2**
	comp=Z,78nm,0.4s						
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**13 08 14.0**	**-0.2**
PRU				*e*PG	**Pg**	**13 08 15.8**	**-0.6**
PRU				*e*SG	**Sg**	**13 08 38.2**	**-1.5**
	comp=Z,33nm,0.2s						
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**13 08 17.0**	**+0.5**
CLL				*e*Pg	**Pg**	**13 08 19.0**	**-0.6**
CLL				*e*Sg	**Sg**	**13 08 46.0**	**+1.0**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**13 08 17.0**	**+0.5**
CLL				*e*Pg	**Pg**	**13 08 19.0**	**-0.6**
CLL				*e*	x	13 08 24.0	
CLL				*ex*	x	13 08 35.0	
CLL				*e*Sg	**Sg**	**13 08 46.0**	**+1.0**
	comp=Z,35nm,0.4s						
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PG	**Pg**	**13 08 21.2**	**-0.8**
OKC				*e*SG	**Sg**	**13 08 47.0**	**-2.0**
	comp=Z,32nm,0.4s						
VRAC	**Vranov**	**2.19**	**172**	Pn	**Pn**	**13 08 20.1**	**+0.4**
	comp=Z,3.1nm,0.3s,baz=351,slow=18,SNR=13						
VRAC				Lg		13 08 51.5	
	comp=Z,16nm,0.3s,baz=86,slow=11,SNR=12						
VRAC	**Vranov**	**2.19**	**172**	*e*Pn	**Pn**	**13 08 19.9**	**+0.2**
VRAC				*e*Sg	**Sg**	**13 08 50.9**	**-1.5**
	comp=Z,30nm,0.3s						
TREC	**Trest**	**2.22**	**191**	*e*PN	**Pn**	**13 08 21.1**	**+1.0**
TREC				*e*PG	**Pg**	**13 08 23.7**	**-0.9**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**13 08 23.3**	**+0.4**
KRUC				*e*Sg	**Sg**	**13 08 58.1**	**-1.7**
	comp=Z,21nm,0.3s						
NKC	**Novy Kostel**	**2.64**	**243**	*e*PN	**Pn**	**13 08 26.5**	**+0.7**
NKC				*e*PG	**Pg**	**13 08 32.6**	**0.0**
NKC				*e*SG	**Sg**	**13 09 07.5**	**+0.7**
	comp=Z,59nm,0.4s						
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**13 08 32.1**	**-0.7**
OJC				*e*Sg	**Sg**	**13 09 08.4**	**+1.3**
JAVC	**Velka Javorina**	**2.80**	**159**	*e*Pn	**Pn**	**13 08 30.3**	**+2.2**
JAVC				*e*Sg	**Sg**	**13 09 13.4**	**+1.4**
	comp=Z,46nm,0.8s						
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**13 08 28.8**	**0.0**
KHC				*e*PG	**Pg**	**13 08 35.5**	**-1.3**
KHC				*e*SN	**Sn**	**13 09 04.0**	**+0.1**
KHC				*e*SG	**Sg**	**13 09 12.6**	**-1.2**
	comp=Z,23nm,0.5s						
MOX	**Moxa**	**2.96**	**255**	*e*PG	**Pg**	**13 08 39.5**	**+0.7**
MOX				*e*SG	**Sg**	**13 09 18.7**	**+1.6**
GEC2	**GERESS Array S**	**3.06**	**212**	*e*Pn	**Pn**	**13 08 32.3**	**+0.7**
GEC2	**GERESS Array S**	**3.06**	**212**	*e*Pn	**Pn**	**13 08 32.3**	**+0.7**
GERES	**GERESS Array B**	**3.06**	**212**	Pn	**Pn**	**13 08 32.9**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=34,slow=13,SNR=13						
GERES				Pg	**Pg**	**13 08 38.2**	**-2.4**
	comp=Z,6.0nm,0.3s,baz=30,slow=17,SNR=37						
GERES				Lg		13 09 17.7	
	comp=Z,4.6nm,0.3s,baz=33,slow=33,SNR=4.9						
GERES	**GERESS Array B**	**3.06**	**212**	Pg	**Pg**	**13 08 38.2**	**-2.4**
MODS	**Modra-Piesok**	**3.19**	**166**	*e*Pg	**Pg**	**13 08 43.0**	**-0.2**
MODS				*e*Sg	**Sg**	**13 09 23.3**	**-1.3**
MODS	**Modra-Piesok**	**3.19**	**166**	*e*PG	**Pg**	**13 08 43.0**	**-0.2**
MODS				*e*SG	**Sg**	**13 09 23.5**	**-1.3**
KOLL	**Kolacno**	**3.25**	**152**	*e*Sg	**Sg**	**13 09 27.7**	**+1.2**
KOLL	**Kolacno**	**3.25**	**152**	*e*SG	**Sg**	**13 09 27.7**	**+1.2**
ZST	**Bratislava**	**3.34**	**169**	*e*Sg	**Sg**	**13 09 28.9**	**-0.5**
ZST	**Bratislava**	**3.34**	**169**	*e*SG	**Sg**	**13 09 28.9**	**-0.5**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**13 08 46.4**	**-0.4**
NIE				*e*S	**Sg**	**13 09 32.2**	**+1.6**
VYHS	**Vyhne**	**3.46**	**149**	*e*PG	**Pg**	**13 08 48.2**	**-0.2**
VYHS				*e*SG	**Sg**	**13 09 33.6**	**+0.4**
VYHS	**Vyhne**	**3.46**	**149**	*e*Pg	**Pg**	**13 08 48.3**	**-0.1**
VYHS				*e*Sg	**Sg**	**13 09 33.6**	**+0.4**
CONA	**Conrad Observa**	**3.55**	**183**	⇓*i*Pn	**Pn**	**13 08 39.6**	**+1.2**
	comp=Z,1.7nm,0.3s						
CONA				⇓*i*Pg	**Pg**	**13 08 49.7**	**-0.5**
	comp=Z,11nm,0.5s						
CONA				⇓*e*Sg	**Sg**	**13 09 33.9**	**-2.3**
	comp=Z,15nm,0.3s						
CSNA	**Conrad Observa**	**3.55**	**183**	⇓*i*Pn	**Pn**	**13 08 39.6**	**+1.1**
CSNA				⇓*i*Pg	**Pg**	**13 08 49.7**	**-0.5**
	comp=Z,9.1nm,0.3s						
GRF	**Grafenberg Arr**	**3.59**	**242**	*e*Pn	**Pn**	**13 08 39.9**	**+0.9**
GRF				*e*Sg	**Sg**	**13 09 36.8**	**-0.7**
BSD	**Bornholm Skovb**	**3.72**	**349**	*i* P	**Pn**	**13 08 39.8**	**-0.9**
BSD				*i* S	**Sn**	**13 09 23.6**	**-1.5**
MOA	**Molln**	**3.82**	**199**	⇑*i*Pn	**Pn**	**13 08 42.9**	**+0.8**
	comp=Z,2.7nm,0.2s						
MOA				⇑*i*Pg	**Pg**	**13 08 55.2**	**-0.1**
	comp=Z,11nm,0.5s						
MOA				⇑*e*Sg	**Sg**	**13 09 45.0**	**+0.1**
	comp=Z,14nm,0.3s						
MOA	**Molln**	**3.82**	**199**	Pg	**Pg**	**13 08 55.2**	**-0.1**
	comp=Z,11nm,0.5s						
MOA				Sg	**Sg**	**13 09 45.0**	**+0.2**
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PN	**Pn**	**13 08 43.6**	**+0.9**
STHS				*e*PG	**Pg**	**13 08 56.8**	**+0.6**
STHS				*e*SG	**Sg**	**13 09 51.3**	**+5.0**
ARSA	**Arzberg**	**4.25**	**185**	⇓*e*Sg	**Sg**	**13 09 59.6**	**+1.2**
	comp=Z,21nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*SG	**Sg**	**13 10 04.7**	**+4.9**
KOLS	**Kolonicke sedl**	**4.70**	**120**	*e*	**Sg**	**13 10 14.5**	**+1.5**
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	**Pn**	**13 09 40.3**	**-3.1**
	comp=Z,0.7nm,0.3s,baz=303,slow=11,SNR=3.2						
AKASG				Sn	**Sn**	**13 11 12.7**	**-4.9**
	comp=Z,0.9nm,0.3s,baz=255,slow=27,SNR=4.4						
HFS	**Hagfors**	**8.79**	**352**	Pn	**Pn**	**13 09 49.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=168,slow=15,SNR=4.8						
HFS				Sn	**Sn**	**13 11 25.7**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=176,slow=28,SNR=3.4						
ARCES	**ARCESS Array B**	**18.66**	**10**	Pn	**Pn**	**13 11 58.2**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=7.3						

NEIC ***29*** *13:21:42.0±1.0,935S×12026E,h75km±10km,mb4.4/13, Error ellipse: s-maj=17.0km s-min=6.4km az=65.0*
ISCJB ***29*** *13:21:42.5±0.6,929S±005×12033E±004,h99km±6km, mb4.5/23,Error ellipse: s-maj=8.9km s-min=5.2km az=33.7*

DJA ***29*** *13:21:43.9±0.0,949S×12029E,h100km,mB5.8/4, MLv4.7/7,Mw(mB)5.5/4,Mwp3.5/3*
IDC ***29*** *13:21:45.8±1.7,920S×12057E,h111km±14km,mb4.1/10, mb1 4.1/13,mb1mx3.9/20,mbtmp4.0/13,MS3.2/1, Ms1 3.1/1,ms1mx2.5/23,Error ellipse: s-maj=25.8km s-min=7.2km az=54.0*

ISC 29 13:21:43.7±0.6,931S±005×12033E±004,h92km±6km,n53, σ0°94/54,mb4.5/23,1D,Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.41**	**105**	P	**Pn**	**13 22 36.1**	**+1.3**
	83nm,0.3s,baz=296,slow=2.2,SNR=218						
BATI				S	**Sn**	**13 23 13.9**	**-0.4**
	92nm,0.3s,baz=152,slow=22,SNR=14						
BATI	**Baumata**	**3.41**	**105**	P	**Pn**	**13 22 35.8**	**+1.0**
BATI	**Baumata**	**3.41**	**105**	S	**Sn**	**13 23 13.6**	**-0.7**
KAPI	**Kappang**	**4.30**	**352**	P	**Pn**	**13 22 47.8**	**+0.8**
	17nm,0.3s,baz=170,slow=7.1,SNR=240						
KAPI				S	**Sn**	**13 23 34.8**	**-1.3**
	27nm,0.3s,baz=158,slow=21,SNR=7.2						
KAPI	**Kappang**	**4.30**	**352**	P	**Pn**	**13 22 47.8**	**+0.8**
KAPI				S	**Sn**	**13 23 34.8**	**-1.3**
KAPI	**Kappang**	**4.30**	**352**	P	**Pn**	**13 22 47.7**	**+0.7**
KHKI	**Kahang-Kahang**	**4.76**	**281**	P	**Pn**	**13 22 53.8**	**+0.7**
KHKI	**Kahang-Kahang**	**4.76**	**281**	S	**Sn**	**13 23 45.9**	**-1.1**
DNP	**Denpasar**	**5.09**	**277**	P	**Pn**	**13 23 00.2**	**+2.5**
IGBI	**Denpasar**	**5.14**	**275**	P	**Pn**	**13 22 59.6**	**+1.3**
IGBI	**Denpasar**	**5.14**	**275**	S	**Sn**	**13 23 55.4**	**-1.0**
KDI	**Kendari**	**5.78**	**23**	P	**Pn**	**13 23 09.1**	**+2.0**
	40nm,0.9s,3μm0.1nm						
MBWA	**Marble Bar**	**11.79**	**183**	*e*Pn	**Pn**	**13 24 24.8**	**-4.1**
MBWA				*e*Sn	**Sn**	**13 26 24.6**	**-14**
KAKA	**Kakadu**	**12.36**	**107**	*e*P	Px	13 24 18.3	
	10nm,0.5s						
KAKA				*e*S	Sx	13 26 26.8	
KKM	**Kota Kinabalu**	**15.79**	**345**	*e*Pn	**Pn**	**13 25 19.1**	**-1.8**
	24nm,0.9s						
WRAB	**Tennant Creek**	**17.18**	**129**	*e*Pn	**Pn**	**13 25 36.8**	**-1.3**
	9.0nm,0.8s						
WRAB				*e*Sn	**Sn**	**13 28 28.6**	**-20**
WB2	**Warramunga Arr**	**17.19**	**130**	*e*P	**Pn**	**13 25 36.8**	**-1.4**
WB2				*e*S	S	13 28 30.5	-22
ASAR	**Alice Springs**	**19.30**	**139**	P	**Pn**	**13 26 02.5**	**-1.0**
	1.0nm,0.3s,baz=319,slow=10,SNR=94						
ASAR				S	**S**	**13 29 28.8**	**-6.3**
	0.4nm,0.3s,baz=313,slow=24,SNR=12						
ASAR				ScP	ScP	13 33 48.5	0.0
	0.1nm,0.3s,baz=336,slow=2.4,SNR=5.0						
MUN	**Mundaring**	**22.88**	**189**	*e*P	pP	13 26 53.7	-4.4
NWAO	**Narrogin (SRO)**	**23.68**	**186**	P	**P**	**13 26 47.8**	**+0.9**
	8.9nm,1.0s,mb4.0,baz=0.0,slow=13,SNR=5.7						
NWAO	**Narrogin (SRO)**	**23.68**	**186**	*e*P	**P**	**13 26 47.6**	**+0.6**
	14nm,1.2s,mb4.2						
STKA	**Stephens Creek**	**29.89**	**142**	⇓*i*P	**P**	**13 27 43.9**	**+1.1**
	6.5nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**29.89**	**142**	P	**P**	**13 27 44.4**	**+1.5**
	9.6nm,0.5s,mb4.7,baz=321,slow=8.6,SNR=36						
STKA				LR	LR	13 41 31.7	
	comp=Z,46nm,19.5s,baz=206,slow=40						
STKA	**Stephens Creek**	**29.89**	**142**	*e*P	**P**	**13 27 43.5**	**+0.7**
	2.3nm,0.7s,mb3.9						
CMAR	**Chiang Mai Arr**	**34.73**	**323**	P	**P**	**13 28 25.6**	**+0.3**
	2.0nm,0.5s,mb4.2,baz=148,slow=7.0,SNR=9.9						
CHTO	**Chiang Mai**	**35.01**	**323**	*e*P	**P**	**13 28 28.1**	**+0.5**
	2.1nm,0.4s,mb4.3						
LSA	**Lhasa**	**47.89**	**325**	*e*P	**P**	**13 30 13.7**	**+1.0**
	8.6nm,1.0s,mb4.5						
TAPN	**Taplejung**	**48.24**	**320**	*e*P	**P**	**13 30 15.5**	**0.0**
	6.2nm,0.5s,mb4.7						
RAMN	**Ramite**	**48.68**	**319**	*e*P	**P**	**13 30 18.8**	**-0.1**
	8.4nm,0.4s,mb5.0						
JIRN	**Jiri**	**49.43**	**319**	*e*P	**P**	**13 30 24.6**	**0.0**
	9.1nm,0.4s,mb5.1						
GUN	**Gumba**	**49.80**	**319**	*e*P	**P**	**13 30 27.1**	**-0.3**
	7.1nm,0.4s,mb4.9						
PKI	**Pulchoki**	**49.88**	**318**	*e*P	**P**	**13 30 27.0**	**-1.0**
	8.8nm,0.4s,mb5.0						
DMN	**Daman**	**50.10**	**318**	*e*P	**P**	**13 30 29.2**	**-0.5**
	7.5nm,0.5s,mb4.8	

*BJI **29** 13:46:08.7, 48.33N×146.62E, h422km, mB4.8, mb4.5*
*IDC **29** 13:46:09.8±1.2, 47.88N×146.66E, h437km±17km, mb3.2/14, mb1 3.4/18, mb1mx3.3/26, mbtmp3.2/18, Error ellipse: s-maj=19.2km s-min=10.8km az=168.0*
*NEIC **29** 13:46:09.7±0.5, 47.80N×146.70E, h439km±7km, mb4.0/9, Error ellipse: s-maj=11.2km s-min=6.9km az=156.0*

ISC 29 13:46:09.4±0.4, 4769N±006×14674E±009, h438km±6km, n76, σ1§19/93, mb3.6/22, 2C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YSS	**Yuzh-Sakhalins**	**2.81**	**256**	*eP*		**P**	**13 47 15.6**	**+1.5**
YSS	**Yuzh-Sakhalins**	**2.81**	**256**	*i*PN		**P**	**13 47 15.9**	**+1.9**
YSS				*eS*		**S**	**13 48 06.6**	**+0.1**
YSS				pmax	pmax			
	comp=Z,110nm,0.9s							
YSS				smax				
	comp=N,260nm,2.0s							
JRA	**Rausu**	**3.92**	**197**	P		**P**	**13 47 22.9**	**-0.2**
JWK2	**Keihoku**	**4.10**	**236**	P		**P**	**13 47 26.9**	**+2.2**
JTKR	**Abashiri--Toko**	**4.21**	**209**	P		**P**	**13 47 26.4**	**+0.7**
JTKR				*eS*		**S**	**13 48 27.8**	**0.0**
NEM2	**Nemuro 2**	**4.38**	**190**	P		**P**	**13 47 25.1**	**-2.2**
NEM2				*eS*		**S**	**13 48 25.9**	**-4.7**
ASAJ	**Asahikawa**	**4.59**	**221**	P		**P**	**13 47 30.6**	**+1.3**
	comp=N,2.7nm,0.3s,baz=37,slow=4.3,SNR=24							
ASAJ				S		**S**	**13 48 36.6**	**+2.3**
	comp=N,0.9nm,0.3s,baz=138,slow=34,SNR=2.2							
ASAJ	**Asahikawa**	**4.59**	**221**	PN		**P**	**13 47 30.6**	**+1.3**
ASAJ				S		**S**	**13 48 36.6**	**+2.3**
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ASAJ				smax				
	comp=N,1.0nm,0.3s							
JKK2	**Kamakawa 2**	**4.73**	**218**	P		**P**	**13 47 32.6**	**+2.1**
JAR	**Ashorobuto**	**4.86**	**207**	P		**P**	**13 47 31.7**	**-0.2**
JAR				*eS*		**S**	**13 48 38.9**	**-0.1**
JAK	**Akkeshi**	**4.91**	**198**	P		**P**	**13 47 30.3**	**-2.0**
JAK				*eS*		**S**	**13 48 35.4**	**-4.4**
JFR	**Furan**	**5.38**	**214**	P		**P**	**13 47 37.8**	**+0.8**
JCH	**Churui**	**5.61**	**206**	P		**P**	**13 47 37.4**	**-1.9**
JCH				*eS*		**S**	**13 48 47.5**	**-5.0**
JNBK	**Urakawa-nobuka**	**6.10**	**209**	P		**P**	**13 47 42.6**	**-1.7**
JNBK				*eS*		**S**	**13 48 55.9**	**-6.0**
JEW	**Eniwo**	**6.12**	**220**	P		**P**	**13 47 45.0**	**+0.5**
JEW				*eS*		**S**	**13 48 59.7**	**-2.5**
ERM	**Erimo**	**6.21**	**205**	*e*P		**P**	**13 47 44.7**	**-0.9**
	comp=N,73nm,0.5s							
ERM				*eS*		**S**	**13 48 53.0**	**-11**
ERM	**Erimo**	**6.21**	**205**	*e*PN		**P**	**13 47 44.7**	**-0.9**
ERM				pmax	pmax			
	comp=Z,73nm,0.5s							
JKB	**Kayabe**	**7.08**	**217**	P		**P**	**13 47 53.4**	**-1.3**
JKB				*eS*		**S**	**13 49 14.9**	**-5.9**
JOT	**Ohata**	**7.50**	**215**	P		**P**	**13 47 58.7**	**-0.5**
JOT				*eS*		**S**	**13 49 22.3**	**-6.9**
JOSM	**Okushiri--Mats**	**7.61**	**225**	P		**P**	**13 48 01.5**	**+1.1**
HABR	**Khabarovsk**	**7.87**	**280**	*e*PN		**P**	**13 48 00.6**	**-2.5**
HABR				*eS*		**S**	**13 49 31.6**	**-4.8**
JANG	**Nango**	**8.22**	**209**	P		**P**	**13 48 06.3**	**-0.8**
JANG				*eS*		**S**	**13 49 37.5**	**-6.1**
PETK	**Petropavlovsk-**	**8.85**	**48**	P		**P**	**13 48 13.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=225,slow=8.0,SNR=2.6							
JOM	**Ohasama**	**9.11**	**208**	P		**P**	**13 48 17.2**	**+0.4**
JOM				*eS*		**S**	**13 49 57.9**	**-3.6**
JMK	**Ichinoseki**	**9.61**	**207**	P		**P**	**13 48 23.8**	**+1.5**
JMK				*eS*		**S**	**13 50 10.5**	**-1.0**
MDJ	**Mudanjiang**	**12.28**	**262**	P		**P**	**13 48 52.3**	**+1.0**
MDJ				AMB		AMB		
	comp=Z,13nm,0.7s							
MDJ				AMB		AMB		
	comp=Z,73nm,5.0s							
MDJ	**Mudanjiang**	**12.28**	**262**	*e*P		**P**	**13 48 51.8**	**+0.5**
	comp=Z,8.7nm,0.5s							
MAJO	**Matsushiro**	**12.80**	**213**	*e*P		**P**	**13 48 57.9**	**+0.8**
	comp=Z,5.9nm,0.5s							
MAJO	**Matsushiro**	**12.80**	**213**	*e*PN		**P**	**13 48 57.9**	**+0.8**
MAJO				pmax	pmax			
	comp=Z,6.0nm,0.5s							
MJAR	**Matsushiro Arr**	**12.80**	**213**	P		**P**	**13 48 58.9**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=14,slow=12,SNR=16							
MJAR	**Matsushiro Arr**	**12.80**	**213**	PN		**P**	**13 48 58.9**	**+1.8**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
CN2	**Changchun**	**15.35**	**263**	*e*P		**P**	**13 49 23.5**	**-0.9**
CN2				AMB		AMB		
	comp=Z,20nm,0.7s							
KSRS	**Korea Array**	**17.18**	**240**	P		**P**	**13 49 45.8**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=47,slow=9.8,SNR=14							
KSRS	**Korea Array**	**17.18**	**240**	P		**P**	**13 49 45.8**	**+1.9**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ULN	**Ulaanbaatar**	**26.47**	**285**	*e*P		**P**	**13 51 14.1**	**+4.8**
	comp=Z,3.0nm,1.1s,mb3.6							
ULN	**Ulaanbaatar**	**26.47**	**285**	*e*P		**P**	**13 51 14.1**	**+4.8**
ULN				pmax	pmax			
	comp=Z,3.0nm,1.1s,mb3.6							
SONM	**Songino Array**	**26.91**	**285**	P		**P**	**13 51 12.9**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.2,baz=81,slow=8.9,SNR=2.8							
SONM	**Songino Array**	**26.91**	**285**	P		**P**	**13 51 12.9**	**-0.3**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GTA	**Gaotai**	**34.55**	**274**	*e*P		**P**	**13 52 20.8**	**+1.4**
GTA				AMB		AMB		
	comp=Z,5.0nm,1.0s,mb3.8							
COLA	**College**	**38.12**	**39**	*e*P		**P**	**13 52 47.6**	**-1.1**
	comp=Z,7.0nm,0.6s,mb4.2							
COLA	**College**	**38.12**	**39**	*e*P		**P**	**13 52 47.6**	**-1.1**
COLA				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.2							
ZALV	**Zalesovo Beam**	**38.50**	**303**	P		**P**	**13 52 50.7**	**-1.3**
	comp=Z,0.5nm,0.3s,mb3.3,baz=60,slow=8.5,SNR=3.2							
ZALV	**Zalesovo Beam**	**38.50**	**303**	P		**P**	**13 52 50.7**	**-1.2**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb3.6							
MK31	**Makanchi Array**	**42.62**	**294**	*e*P		**P**	**13 53 24.5**	**-0.6**
MKAR	**Makanchi Array**	**42.62**	**294**	P		**P**	**13 53 24.9**	**-0.3**
	comp=Z,1.8nm,0.5s,mb3.6,baz=67,slow=7.5,SNR=14							
MKAR	**Makanchi Array**	**42.62**	**294**	P		**P**	**13 53 24.9**	**-0.3**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KURK	**Kurchatov**	**43.19**	**300**	P		**P**	**13 53 29.6**	**+0.1**
	comp=Z,2.0nm,0.4s,mb3.8,baz=74,slow=8.9,SNR=17							
KURK	**Kurchatov**	**43.19**	**300**	P		**P**	**13 53 29.7**	**+0.1**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb3.8							
LSA	**Lhasa**	**45.92**	**268**	*e*P		**P**	**13 53 53.4**	**+2.3**
	comp=Z,2.0nm,0.4s,mb3.8							
LSA	**Lhasa**	**45.92**	**268**	*e*P		**P**	**13 53 53.4**	**+2.3**
LSA				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb3.8							
BVAR	**Borovoye Array**	**46.86**	**306**	P		**P**	**13 53 57.3**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.2,baz=81,slow=9.2,SNR=3.7							
BVAR	**Borovoye Array**	**46.86**	**306**	P		**P**	**13 53 57.3**	**-0.6**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
DLBC	**Dease Lake**	**48.02**	**45**	P		**P**	**13 54 07.4**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.4,baz=238,slow=9.5,SNR=4.0							
CMAR	**Chiang Mai Arr**	**48.48**	**250**	P		**P**	**13 54 11.4**	**+0.7**
	comp=Z,0.4nm,0.3s,mb3.2,baz=39,slow=7.3,SNR=4.5							
AAK	**Ala-Archa**	**49.49**	**292**	*e*P		**P**	**13 54 17.4**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.2							
AAK	**Ala-Archa**	**49.49**	**292**	*e*P		**P**	**13 54 17.4**	**-0.5**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.3							
ARU	**Arti**	**51.32**	**315**	*e*P		**P**	**13 54 29.9**	**-1.2**
YKA	**Yellowknife Ar**	**52.72**	**35**	P		**P**	**13 54 39.9**	**-1.2**
	comp=Z,1.5nm,0.6s,mb3.4,baz=304,slow=7.1,SNR=8.7							
YKA	**Yellowknife Ar**	**52.72**	**35**	P		**P**	**13 54 39.9**	**-1.2**
YKA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CMB	**Columbia Colle**	**64.81**	**61**	P		**P**	**13 56 04.0**	**+0.5**
	comp=Z,4.1nm,1.0s,mb4.0							
CMB	**Columbia Colle**	**64.81**	**61**	P		**P**	**13 56 04.0**	**+0.5**
CMB				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.0							
NVAR	**Mina Array Bea**	**65.77**	**59**	P		**P**	**13 56 10.4**	**+1.0**
	comp=Z,2.1nm,0.7s,mb3.9,baz=295,slow=6.1,SNR=19							
NOA	**NORSAR Array B**	**65.84**	**338**	P		**P**	**13 56 08.3**	**-1.2**
	comp=Z,1.4nm,0.8s,mb3.6,baz=35,slow=6.1,SNR=4.6							
NOA	**NORSAR Array B**	**65.84**	**338**	P		**P**	**13 56 08.3**	**-1.2**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
PDAR	**Pinedale Array**	**67.61**	**51**	P		**P**	**13 56 20.9**	**+0.1**
	comp=Z,1.6nm,0.5s,mb3.9,baz=22,slow=0.7,SNR=23							
DUG	**Dugway**	**67.66**	**55**	*e*P		**P**	**13 56 21.3**	**+0.1**
	comp=Z,1.8nm,0.8s,mb3.8							
DUG	**Dugway**	**67.66**	**55**	*e*P		**P**	**13 56 21.3**	**+0.1**
DUG				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.8							
TPNV	**Topopah Spring**	**67.97**	**59**	*e*P		**P**	**13 56 23.4**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.1							
TPNV	**Topopah Spring**	**67.97**	**59**	*e*P		**P**	**13 56 23.4**	**+0.2**
TPNV				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.0							
AKASG	**Malin Array Be**	**68.26**	**323**	P		**P**	**13 56 23.8**	**-0.9**
	comp=Z,0.5nm,0.3s,mb3.6,baz=33,slow=6.3,SNR=4.4							
AKASG	**Malin Array Be**	**68.26**	**323**	*i* P		**P**	**13 56 25.0**	**+0.3**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAR	**Alice Springs**	**71.95**	**192**	P		**P**	**13 56 48.4**	**+1.3**
	comp=Z,0.5nm,0.7s,mb3.1,baz=2.2,slow=5.2,SNR=3.5							
ASAR	**Alice Springs**	**71.95**	**192**	P		**P**	**13 56 48.4**	**+1.4**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TXAR	**Lajitas Array**	**80.71**	**56**	P		**P**	**13 57 36.0**	**+0.3**
	comp=Z,1.6nm,0.5s,mb4.0,baz=286,slow=3.5,SNR=18							
TXAR	**Lajitas Array**	**80.71**	**56**	P		**P**	**13 57 36.0**	**+0.3**
TXAR	**Lajitas Array**	**80.71**	**56**	P		**P**	**13 57 36.0**	**+0.4**
TXAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							

*TEH **29** 13:51:08.7, 34.13N×50.06E, h5km, ML3.8*
*ISCJB **29** 13:52:10.2±0.3, 34.17N±002×50.06E±003, h10km, Error ellipse: s-maj=3.6km s-min=3.2km az=167.4*
*THR **29** 13:52:10.8±1.5, 34.29N×50.11E, h6km±12km, ML3.5*
*CSEM **29** 13:52:10.0±0.1, 34.15N×50.06E, h16km, ML3.5, Error ellipse: s-maj=1.7km s-min=1.6km az=152.0*

ISC 29 13:52:11.4±0.3, 3419N±002×5006E±003, h10km, n67, σ1§09/88, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAO	**Ashtian**	**0.36**	**355**	*e*Pg		**Pg**	**13 52 17.0**	**-1.5**
GHVR	**GHOM**	**1.06**	**74**	*e*Pg		**Pg**	**13 52 30.0**	**-1.8**
GHVR				AML	AML		13 52 47.2	
	comp=E,1μm,0.3s							
IRAZ	**Razeghan**	**1.22**	**355**	*e*Pn		**Pn**	**13 52 32.3**	**-2.2**
IRAZ				*e*Sg		**Sg**	**13 52 50.3**	**-0.3**
IRAZ	**Razeghan**	**1.22**	**355**	*e*Pn		**Pn**	**13 52 32.3**	**-2.2**
IRAZ				*e*			13 52 33.3	
IRAZ				*e*Sg		**Sg**	**13 52 50.3**	**-0.3**
IKLH	**Kolahrood**	**1.53**	**124**	*e*Pg		**Pn**	**13 52 37.0**	**-1.7**
IKLH				*e*Sg		**Sn**	**13 52 56.5**	**-2.2**
IKLH	**Kolahrood**	**1.53**	**124**	*e*Pg		**Pn**	**13 52 37.0**	**-1.7**
IKLH				*e*Sg		**Sn**	**13 52 56.5**	**-2.2**
IKLH				*e*			13 53 01.1	
IMHD	**Mahdasht**	**1.57**	**18**	*e*Pn		**Pn**	**13 52 38.6**	**-0.7**
IMHD				*e*Sg		**Sg**	**13 53 00.7**	**-1.3**
IMHD	**Mahdasht**	**1.57**	**18**	*e*Pn		**Pn**	**13 52 38.6**	**-0.7**
IMHD				*e*Sg		**Sg**	**13 53 00.7**	**-1.3**
IMHD				*e*			13 53 01.3	
IVRN	**Varamin**	**1.59**	**59**	*e*Pn		**Pn**	**13 52 39.3**	**-0.3**
IVRN				*e*Sg		**Sg**	**13 53 02.1**	**-0.5**
IVRN	**Varamin**	**1.59**	**59**	*e*Pn		**Pn**	**13 52 39.2**	**-0.4**
IVRN				*e*Pn		**Pn**	**13 52 39.3**	**-0.3**
IVRN				*e*			13 52 40.6	
IVRN				*e*Sg		**Sg**	**13 53 02.1**	**-0.5**
IPIR	**Pirpir**	**1.65**	**155**	*e*Pn		**Pn**	**13 52 39.6**	**-0.8**
IPIR				*e*Sn		**Sn**	**13 53 01.0**	**-0.7**
IPIR	**Pirpir**	**1.65**	**155**	*e*Pn		**Pn**	**13 52 39.6**	**-0.8**
IPIR				*e*Sn		**Sn**	**13 53 01.0**	**-0.7**
IPIR				*e*			13 53 06.4	
ISFB	**Sefidab**	**1.81**	**84**	*e*Pn		**Pn**	**13 52 42.0**	**-0.6**
ISFB				*e*Sn		**Sn**	**13 53 06.3**	**+0.7**
ISFB	**Sefidab**	**1.81**	**84**	*e*Pn		**Pn**	**13 52 42.0**	**-0.6**
ISFB				*e*Sn		**Sn**	**13 53 06.3**	**+0.7**
ISFB				*e*			13 53 18.6	
THKV	**Tehran--Karaj**	**1.85**	**21**	*e*Pg		**Pn**	**13 52 43.9**	**+0.8**
THKV				AML	AML		13 53 11.2	
	comp=N,820nm,0.3s							
THKV				AML	AML		13 53 21.0	
	comp=E,444nm,0.7s							
CHTH	**Charan**	**1.93**	**27**	*e*Pg		**Pn**	**13 52 44.9**	**+0.8**
CHTH				*e*Sg		**Sg**	**13 53 11.5**	**-1.7**
CHTH	**Charan**	**1.93**	**27**	*e*Pn		**Pn**	**13 52 44.8**	**+0.6**
	SNR=47							
CHTH				*e*Sg		**Sg**	**13 53 11.5**	**-1.8**
	SNR=91							
IKOM	**Komasi**	**2.12**	**270**	*e*Pn		**Pn**	**13 52 46.8**	**0.0**
IKOM	**Komasi**	**2.12**	**270**	*e*Pn		**Pn**	**13 52 46.8**	**0.0**
IKOM				*e*			13 53 27.8	
DAMV	**Damavand**	**2.13**	**47**	*e*Pn		**Pn**	**13 52 47.5**	**+0.6**
DAMV				AML	AML		13 53 20.7	
	comp=E,328nm,0.4s							
DAMV				AML	AML		13 53 22.6	
	comp=N,353nm,0.5s							
IDMV	**Damavand**	**2.13**	**49**	*e*Pn		**Pn**	**13 52 47.7**	**+0.7**
IDMV				*e*Sn		**Sn**	**13 53 14.8**	**+1.3**
IDMV	**Damavand**	**2.13**	**49**	*e*Pn		**Pn**	**13 52 47.7**	**+0.7**
IDMV				*e*			13 52 48.7	
IDMV				*e*Sn		**Sn**	**13 53 14.8**	**+1.3**
IZEF	**Zefreh**	**2.29**	**124**	*e*Pn		**Pn**	**13 52 50.0**	**+0.8**
IZEF				*e*Sn		**Sn**	**13 53 17.2**	**-0.2**
IZEF	**Zefreh**	**2.29**	**124**	*e*Pn		**Pn**	**13 52 50.0**	**+0.8**
IZEF				*e*Sn		**Sn**	**13 53 17.2**	**-0.2**
IZEF				*e*			13 53 21.4	
SHGR	**Shooshtar-Gavs**	**2.33**	**207**	*e*Pn		**Pg**	**13 52 52.7**	**-3.3**
SHGR				AML	AML		13 53 28.4	
	comp=N,252nm,0.6s							
SHGR				AML	AML		13 53 33.6	
	comp=E,196nm,0.5s							
IGAR	**Gharneh**	**2.43**	**136**	*e*Pn		**Pg**	**13 52 53.2**	**-4.8**
IGAR	**Gharneh**	**2.43**	**136**	*e*Pn		**Pg**	**13 52 53.2**	**-4.8**
IGAR				*e*Sn		**Sn**	**13 53 19.4**	**-1.5**
IGAR				*e*			13 53 33.0	
IFIR	**Firoozkooh**	**2.64**	**56**	*e*Pn		**Pn**	**13 52 54.8**	**+0.8**
IFIR				*e*Sn		**Sn**	**13 53 27.1**	**+0.9**
IFIR	**Firoozkooh**	**2.64**	**56**	*e*Pn		**Pn**	**13 52 54.8**	**+0.8**
IFIR				*e*Sn		**Sn**	**13 53 27.1**	**+0.9**
IFIR				*e*			13 53 34.5	
ILAS	**Lasjerd**	**2.66**	**63**	*e*Pn		**Pn**	**13 52 55.0**	**+0.7**
ILAS	**Lasjerd**	**2.66**	**63**	*e*Pn		**Pn**	**13 52 55.0**	**+0.7**
ILAS				*e*			13 53 44.9	
NASN	**Na'in**	**2.68**	**120**	*e*Pn		**Pn**	**13 52 57.1**	**+2.6**
IVIS	**Veis**	**2.68**	**278**	*e*Pn		**Pn**	**13 52 55.1**	**+0.6**
IVIS	**Veis**	**2.68**	**278**	*e*Pn		**Pn**	**13 52 55.1**	**+0.6**
IVIS				*e*			13 53 40.5	
ZNJK	**Zanjan**	**2.72**	**336**	*e*Pn		**Pn**	**13 52 56.5**	**+1.4**
IPRN	**Peran**	**2.77**	**42**	*e*Pn		**Pn**	**13 52 51.7**	**-4.1**
IGHG	**Ghaleghazi**	**2.90**	**274**	*e*Pn		**Pn**	**13 52 59.1**	**+1.6**
IGHG	**Ghaleghazi**	**2.90**	**274**	*e*Pn		**Pn**	**13 52 59.1**	**+1.6**
IALA	**Alasht**	**2.94**	**49**	*e*Pn		**Pn**	**13 52 59.3**	**+1.2**
IALA				*e*			13 53 06.5	
IDHR	**Dehrash**	**3.08**	**281**	*e*Pn		**Pn**	**13 52 59.8**	**-0.3**
IDHR	**Dehrash**	**3.08**	**281**	*e*Pn		**Pn**	**13 52 59.8**	**-0.3**
IDHR				*e*			13 53 51.9	
ISHM	**Shahmirzad**	**3.10**	**58**	*e*Pn		**Pn**	**13 53 01.2**	**+0.8**
ISHM	**Shahmirzad**	**3.10**	**58**	*e*Pn		**Pn**	**13 53 01.2**	**+0.8**
ISHM				*e*			13 53 58.9	
IANJ	**Anjilo**	**3.42**	**67**	*e*Pn		**Pn**	**13 53 04.7**	**+0.1**
IANJ	**Anjilo**	**3.42**	**67**	*e*Pn		**Pn**	**13 53 04.7**	**+0.1**
IANJ				*e*			13 54 06.7	
ISAD	**Sadrabad**	**3.79**	**126**	*e*Pn		**Pn**	**13 53 09.6**	**-0.3**
ISAD	**Sadrabad**	**3.79**	**126**	*e*Pn		**Pn**	**13 53 09.6**	**-0.3**
ISAD				*e*			13 54 14.9	
IGLO	**Ghaloghah**	**3.85**	**52**	*e*Pn		**Pn**	**13 53 10.8**	**+0.2**
IGLO				*e*			13 53 26.6	
ISRB	**Sarab**	**4.12**	**333**	*e*Pn		**Pn**	**13 53 14.1**	**-0.2**
ISRB	**Sarab**	**4.12**	**333**	*e*Pn		**Pn**	**13 53 14.1**	**-0.2**
ISRB				*e*			13 53 30.5	
ICHK	**Chekchek**	**4.12**	**117**	*e*Pn		**Pn**	**13 53 13.8**	**-0.6**
ICHK	**Chekchek**	**4.12**	**117**	*e*Pn		**Pn**	**13 53 13.8**	**-0.6**
ICHK				*e*			13 54 28.0	
IBST	**Bostanabad**	**4.35**	**325**	*e*Pn		**Pn**	**13 53 17.7**	**+0.2**
IBST	**Bostanabad**	**4.35**	**325**	*e*Pn		**Pn**	**13 53 17.7**	**+0.2**
IBST				*e*			13 53 19.6	
IMEH	**Mehriz**	**4.74**	**125**	*e*Pn		**Pn**	**13 53 23.2**	**+0.3**
IMEH	**Mehriz**	**4.74**	**125**	*e*Pn		**Pn**	**13 53 23.2**	**+0.3**
IMEH				*e*			13 54 41.9	
IHRS	**Heris**	**4.79**	**330**	*e*Pn		**Pn**	**13 53 22.3**	**-1.3**
UMR	**Umm Al-Rimmam**	**5.03**	**204**	*e*P		**Pn**	**13 53 26.8**	**-0.1**
IBAF	**Bafgh**	**5.30**	**118**	*e*Pn		**Pn**	**13 53 32.5**	**+1.9**
IBAF	**Bafgh**	**5.30**	**118**	*e*Pn		**Pn**	**13 53 32.5**	**+1.9**
KBD	**Kabd**	**5.39**	**203**	*e*P		**Pn**	**13 53 31.6**	**-0.2**
	baz=203							
ISRV	**Sarvestan**	**5.45**	**151**	*e*Pn		**Pn**	**13 53 31.6**	**-1.0**
NAY	**Al-Naaiem**	**5.48**	**207**	*e*P		**Pn**	**13 53 33.2**	**+0.2**
	baz=207							
NAY				AML	AML		13 54 32.4	
	comp=Z,5.0nm,0.5s,baz=207							
RDF	**Al-Radifah**	**5.67**	**203**	*e*P		**Pn**	**13 53 36.2**	**+0.6**
	baz=203							
RDF				AML	AML		13 54 37.4	
	comp=Z,11nm,0.3s,baz=203							
IKOO	**Kooshah**	**7.69**	**101**	*e*Pn		**Pn**	**13 54 05.0**	**+1.6**
IMON	**Monand**	**8.06**	**94**	*e*Pn		**Pn**	**13 54 10.5**	**+2.0**
IDAH	**Dahanechah**	**8.32**	**97**	*e*Pn		**Px**	13 53 09.9	

MAN 29 14:07:55, 1603N×12057E, h32km, mb3.9, ML2.6, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BCPH	**Baguio City Da**	**0.35**	**1**	*i*P		**Pb**	14 08 05.5	+2.2
BCPH				*i* S		Sb	14 08 10.8	+1.9
BALP	**Baler**	**1.01**	**107**	*e*P		**Pn**	14 08 13.0	+0.1
CAUP	**Cauayan**	**1.50**	**53**	*e*P		**Pn**	14 08 20.2	+0.4
CAUP				*e*S		Sn	14 08 38.3	0.0
ABRA	**Dolores**	**1.61**	**5**	*e*P		**Pn**	14 08 22.1	+0.8

*IDC **29** 14:53:36.2±0.9, 1282N×12367E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.7/19, mbtmp3.8/7, MS3.4/6, Ms1 3.4/6, ms1mx3.0/39, Error ellipse: s-maj=47.8km s-min=17.6km az=65.0*
*ISCJB **29** 14:53:38.7±1.8, 1288N±003×12347E±004, h15km±12km, mb3.9/8, MS3.2/4, Error ellipse: s-maj=7.1km s-min=5.5km az=166.4*
*MAN **29** 14:53:38, 1287N×12350E, h13km, mb4.5, ML3.4, MS3.3*
MAN INTENSITY II - LIGNON HILL, LEGASPI CITY.
*NEIC **29** 14:53:41.9±0.7, 1270N×12345E, h35km, mb4.6/2, Error ellipse: s-maj=40.3km s-min=11.4km az=61.0*
NEIC Felt [II PIVS] at Legaspi, Luzon.

ISC 29 14:53:38.7±0.8, 1286N±003×12350E±004, h10km±6km, n30, σ1§02/31, mb3.9/8, MS3.2/4, 1C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMPH	**Masbate**	**0.51**	**166**	*e*P		**Pg**	**14 53 49.6**	**+0.9**
MMPH				*e*S		**Sg**	**14 53 54.9**	**-0.5**
PVCP	**Virac**	**0.97**	**41**	*e*P		**Pg**	**14 53 56.6**	**-0.9**
PVCP				*e*S		**Sg**	**14 54 11.4**	**+1.3**
RCP	**Roxas**	**1.48**	**210**	*e*P		**Pn**	**14 54 04.7**	**-0.8**
OTRP	**Odiongan**	**1.52**	**251**	*e*P		**Pn**	**14 54 05.8**	**-0.3**
OTRP				*e*S		**Sn**	**14 54 28.1**	**+2.2**
KALP	**Kalibo**	**1.63**	**224**	*i*P		**Pn**	**14 54 07.5**	**0.0**
OCLP	**Ormoc**	**2.10**	**149**	*e*P		**Pn**	**14 54 13.9**	**0.0**
PLP	**Palo**	**2.22**	**139**	*e*P		**Pn**	**14 54 14.8**	**-0.8**
PLP				*i* S		**Sn**	**14 54 42.8**	**-0.4**
BESP	**Borongan**	**2.27**	**123**	*e*P		**Pn**	**14 54 18.2**	**+1.8**
BESP				*e*S		**Sn**	**14 54 45.6**	**+1.2**
GUIM	**Jordan**	**2.39**	**202**	*e*P		**Pn**	**14 54 18.2**	**+0.2**
GUIM				*e*S		**Sn**	**14 54 48.2**	**+0.9**
POLP	**Polilio Island**	**2.40**	**321**	*e*P		**Pn**	**14 54 22.7**	**+4.6**
LLLP	**Lapu-Lapu**	**2.57**	**170**	*e*P		**Pn**	**14 54 19.9**	**-0.5**
LLLP				*e*S		**Sn**	**14 54 52.0**	**+0.2**
MSLP	**Maasin**	**3.

KLYT	**Kilyos**	**1.85**	**323**	*e*PN	**Pn**	**15 11 21.8**	**-0.2**
KULA	**Kula-Manisa**	**1.92**	**229**	*e*PN	**Pn**	**15 11 23.3**	**+0.3**
BGKT	**Bogazkoy**	**1.93**	**317**	*e*PN	**Pn**	**15 11 23.6**	**+0.5**
ISP	**Isparta**	**1.94**	**180**	*e*PN	**Pn**	**15 11 24.3**	**+1.1**
BALB	**Balikesir**	**2.04**	**267**	*e*PN	**Pn**	**15 11 25.1**	**+0.5**
BNT	**Bandirma**	**2.07**	**287**	*e*PN	**Pn**	**15 11 25.7**	**+0.6**
CTKS	**Kestanelik-??a**	**2.11**	**314**	*e*PN	**Pn**	**15 11 25.4**	**-0.2**
EDC	**Edincik**	**2.11**	**286**	*e*PN	**Pn**	**15 11 25.7**	**+0.1**
LADK	**Ladik-KONYA**	**2.14**	**137**	*e*PN	**Pn**	**15 11 26.0**	**0.0**
SAFT	**Safranbolu**	**2.20**	**48**	*e*PN	**Pn**	**15 11 26.8**	**-0.1**
AKHS	**Akhisar**	**2.28**	**247**	*i* P	**Pg**	**15 11 32.4**	**-1.0**
AKHS				*i* S	**Sg**	**15 12 03.6**	**+0.8**
AKS	**Akhisar**	**2.28**	**247**	*e*PN	**Pn**	**15 11 28.6**	**+0.6**
KONT	**Konya--Tatoy**	**2.33**	**141**	*e*PN	**Pn**	**15 11 29.0**	**+0.2**
ELDT	**Eldivan**	**2.34**	**72**	*i* P	**Pn**	**15 11 27.7**	**-1.1**
ELDT				*i* S	**Sn**	**15 11 58.4**	**+0.4**
CTYL	**Yal??k??y-??at**	**2.39**	**316**	*e*PN	**Pn**	**15 11 29.6**	**+0.1**
KAMT	**Kaman**	**2.51**	**99**	*e*PN	**Pn**	**15 11 31.1**	**+0.1**
BALT	**Daday**	**2.80**	**50**	*i* P	**Pb**	**15 11 40.2**	**+0.1**
BALT				*i* S	**Sg**	**15 12 20.0**	**+0.6**
ELL	**Elmali**	**3.07**	**189**	*e*PN	**Pn**	**15 11 39.6**	**+0.8**
HDMB	**Hadim**	**3.21**	**151**	*e*PN	**Pn**	**15 11 41.6**	**+0.8**
EDRB	**Edirne**	**3.53**	**307**	*e*PN	**Pn**	**15 11 46.4**	**+1.3**

NIED ***29*** *15:28:00, 46.20N×152.60E, h35km, Mw4.7 Best double couple: M0 1.28000×10^16 NP1: φ 135.00000°, δ 82.00000°, λ -39.00000°. NP2: φ 231.00000°, δ 52.00000°, λ -170.00000°.*

SZGRF ***29*** *15:28:53.9, 46.02N×153.04E, h33km, mb5.1, Kuril Islands, Russia*

SKHL ***29*** *15:28:53.5±2.6, 45.90N×152.40E, h35km±3km, mb5.1/7, mbv6.4/1, ms4.5/1*

JMA ***29*** *15:28:54.9±0.7, 46.23N×152.58E, h30km, M5.3*

ISCJB ***29*** *15:28:54.8±0.8, 46.00N±004×152.32E±005, h30km±6km, mb4.9/110, MS4.2/31, Error ellipse: s-maj=8.2km s-min=3.1km az=144.7*

BJI ***29*** *15:28:54.2, 46.30N×152.46E, h32km, mB4.9, mb4.8, Ms4.4, Msz4.3*

MOS ***29*** *15:28:55.3±1.0, 46.07N×152.27E, h32km, mb5.1/46, MS4.1/20, Error ellipse: s-maj=8.0km s-min=5.2km az=104.9*

IDC ***29*** *15:28:56.8±7.2, 46.23N×152.11E, h28km±49km, mb4.2/17, mb1 4.4/19, mb1mx4.3/23, mbtmp4.2/19, ML3.7/2, MS4.1/18, Ms1 4.1/18, ms1mx3.9/34, Error ellipse: s-maj=18.3km s-min=14.5km az=151.0*

NEIC ***29*** *15:28:56.2±1.6, 46.12N×152.31E, h27km±11km, mb5.0/55, MS4.4/4, Error ellipse: s-maj=7.4km s-min=4.3km az=148.0*

ISC 29 15:28:58.0±0.5, 4603N±004×15234E±005, h42km±3km, h47km±3.1km: pP-P, n351, σ1§06/366, mb4.9/110, MS4.2/32, 51C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res	ISC
					Op		h m s		
KUR	**Kuril'sk**	**3.24**	**257**	⇑ *i*PN	**Pn**		**15 29 42.6**	**-3.6**	
KUR				*i* S	**Sn**		**15 30 21.7**	**-1.8**	
KUR				pmax	pmax				
	comp=N,100nm,0.7s								
KUR				pmax	pmax				
	comp=E,90nm,0.7s								
KUR				pmax	pmax				
	comp=Z,770nm,0.7s								
KUR				smax					
	comp=N,12μm,2.0s								
KUR				smax					
	comp=E,11μm,2.0s								
KUR				smax					
	comp=N,4μm,0.7s								
KUR				smax					
	comp=E,2μm,0.7s								
KUR	**Kuril'sk**	**3.24**	**257**	⇑ *i*P	**Pn**		**15 29 42.6**	**-3.6**	
KUR				AMB	AMB		15 29 44.9		
	comp=E,103nm,0.7s								
KUR				AMB	AMB		15 29 44.9		
	comp=E,86nm,0.7s								
KUR				AMB	AMB		15 29 44.9		
	comp=E,774nm,0.7s								
KUR				*i* S	**Sn**		**15 30 21.7**	**-1.8**	
KUR				A			15 30 32.8		
	comp=E,12μm,1.6s								
KUR				A			15 30 32.8		
	comp=E,10μm,1.6s								
KUR				A			15 30 36.2		
	comp=E,4μm,0.5s								
KUR				A			15 30 36.2		
	comp=E,2μm,0.5s								
YUK	**Yuzh-Kuril'sk**	**5.01**	**249**	⇑ *i*PN	**Pn**		**15 30 12.4**	**+1.9**	
YUK				*e*S	**Sn**		**15 31 10.4**	**+3.4**	
YUK				pmax	pmax				
	comp=Z,510nm,0.5s								
YUK				pmax	pmax				
	comp=N,190nm,0.4s								
YUK				pmax	pmax				
	comp=E,280nm,0.4s								
YUK				pmax	pmax				
	comp=Z,3μm,2.0s								
YUK				pmax	pmax				
	comp=N,2μm,3.0s								
YUK				pmax	pmax				
	comp=E,3μm,3.0s								
YUK				smax					
	comp=N,6μm,2.0s								
YUK				smax					
	comp=E,4μm,1.0s								
YUK				smax					
	comp=N,4μm,0.7s								
YUK				smax					
	comp=E,3μm,0.6s								
YUK	**Yuzh-Kuril'sk**	**5.01**	**249**	⇑ *i*P	**Pn**		**15 30 12.4**	**+1.9**	
YUK				AMB	AMB		15 30 16.3		
	comp=E,510nm,0.5s								
YUK				AMB	AMB		15 30 16.3		
	comp=E,190nm,0.4s								
YUK				AMB	AMB		15 30 16.3		
	comp=E,280nm,0.4s								
YUK				AMB	AMB		15 30 25.6		
	comp=E,3μm,2.0s								
YUK				AMB	AMB		15 30 25.6		
	comp=E,2μm,3.0s								
YUK				AMB	AMB		15 30 25.6		
	comp=E,3μm,3.0s								
YUK				*e*S	**Sn**		**15 31 10.4**	**+3.4**	
YUK				A			15 31 18.0		
	comp=E,4μm,1.0s								
YUK				A			15 31 18.0		
	comp=E,6μm,2.0s								
YUK				A			15 31 31.0		
	comp=E,4μm,0.7s								
YUK				A			15 31 31.0		
	comp=E,3μm,0.6s								
SKR	**Severo-Kuril's**	**5.29**	**27**	*e*P	**Pn**		**15 30 15.0**	**+0.6**	
SKR				AMB	AMB		15 30 16.5		
	comp=E,140nm,0.5s								
SKR				A			15 31 16.0		
	comp=E,390nm,0.4s								
SKR				A			15 31 16.0		
	comp=E,240nm,0.4s								
SKR				A			15 31 16.0		
	comp=E,130nm,0.4s								
SKR				AMS	AMS		15 32 24.0		
	comp=E,3μm,10.0s								
NEM2	**Nemuro 2**	**5.41**	**243**	P	**Pn**		**15 30 15.9**	**0.0**	
NEM2				*e*S	**Sn**		**15 31 15.7**	**-1.1**	
JRA	**Rausu**	**5.53**	**250**	P	**Pn**		**15 30 20.2**	**+2.5**	
JNK	**Nakash**	**5.95**	**248**	P	**Pn**		**15 30 25.0**	**+1.6**	
JNK				*e*S	**Sn**		**15 31 30.8**	**+0.6**	
JAK	**Akkeshi**	**6.25**	**244**	P	**Pn**		**15 30 27.6**	**+0.1**	
JAK				*e*S	**Sn**		**15 31 36.8**	**-0.8**	
JTKR	**Abashiri--Toko**	**6.32**	**254**	P	**Pn**		**15 30 30.7**	**+2.2**	
JMP	**Maruseppu**	**6.68**	**256**	P	**Pn**		**15 30 36.4**	**+3.0**	
YSS	**Yuzh-Sakhalins**	**6.68**	**281**	*e*P	**Pn**		**15 30 35.2**	**+1.7**	
	comp=E,98nm,0.9s								
YSS	**Yuzh-Sakhalins**	**6.68**	**281**	*e*PN	**Pn**		**15 30 35.0**	**+1.5**	
YSS				*e*S	**Sn**		**15 31 50.0**	**+1.7**	
YSS				pmax	pmax				
	comp=E,120nm,1.0s								
YSS				pmax	pmax				
	comp=Z,80nm,1.0s								
YSS				MLR	MLR				
	comp=N,800nm,16.0s								
YSS				MLR	MLR				
	comp=Z,2μm,16.0s								
YSS				MLR	MLR				
	comp=E,2μm,18.0s								
YSS	**Yuzh-Sakhalins**	**6.68**	**281**	*e*P	**Pn**		**15 30 35.0**	**+1.5**	
YSS				AMB	AMB		15 30 37.1		
	comp=E,80nm,1.0s								
YSS				AMB	AMB		15 30 37.1		
	comp=E,120nm,1.0s								
YSS				*e*pP			15 30 48.0		
YSS				*e*S	**Sn**		**15 31 50.0**	**+1.7**	
YSS				*e*LQ			15 32 22.0		
YSS				AMS	AMS		15 32 54.0		
	comp=E,2μm,16.0s								
YSS				AMS	AMS		15 32 54.0		
	comp=E,2μm,18.0s								
YSS				AMS	AMS		15 32 54.0		
	comp=E,800nm,16.0s								
JAR	**Ashorobuto**	**6.69**	**249**	P	**Pn**		**15 30 35.5**	**+1.9**	
JOB	**Onbets**	**6.84**	**246**	P	**Pn**		**15 30 36.4**	**+0.8**	
JOB				*e*S	**Sn**		**15 31 52.1**	**-0.1**	
JKK2	**Kamakawa 2**	**7.14**	**256**	P	**Pn**		**15 30 42.7**	**+3.0**	
ASAJ	**Asahikawa**	**7.16**	**258**	Pn	**Pn**		**15 30 43.6**	**+3.6**	
	comp=E,7.6nm,0.3s,baz=95,slow=13,SNR=74								
ASAJ				Sn	**Sn**		**15 32 04.0**	**+4.0**	
	comp=E,2.9nm,0.3s,baz=56,slow=5.8,SNR=1.6								
ASAJ				LR	LR		15 33 22.0		
	comp=E,1μm,20.3s,baz=317,slow=38								
ASAJ	**Asahikawa**	**7.16**	**258**	P	**Pn**		**15 30 43.8**	**+3.8**	
ASAJ	**Asahikawa**	**7.16**	**258**	PN	**Pn**		**15 30 43.7**	**+3.7**	
ASAJ							15 32 04.0		
ASAJ				pmax	pmax				
	comp=Z,8.0nm,0.3s								
ASAJ				smax					
	comp=N,3.0nm,0.3s								
ASAJ				MLR	MLR				
	comp=Z,1μm,20.3s								
JCH	**Churui**	**7.29**	**245**	P	**Pn**		**15 30 41.9**	**+0.1**	
JCH				*e*S	**Sn**		**15 32 01.2**	**-1.9**	
JFR	**Furan**	**7.52**	**251**	P	**Pn**		**15 30 47.0**	**+2.0**	
UGL	**Uglegorsk**	**7.59**	**297**	*e*P	**Pn**		**15 30 47.0**	**+1.1**	
UGL				AMB	AMB		15 30 49.0		
	comp=Z,258nm,1.0s								
UGL				AMS	AMS		15 34 09.0		
	comp=Z,2μm,20.0s								
UGL				AMS	AMS		15 34 09.0		
	comp=Z,4μm,15.0s								
JAB	**Ashibetsu**	**7.63**	**254**	P	**Pn**		**15 30 49.7**	**+3.2**	
ERM	**Erimo**	**7.74**	**242**	*e*Pn	**Pn**		**15 30 49.2**	**+1.2**	
	comp=Z,141nm,0.7s								
ERM				*e*Sn	**Sn**		**15 32 13.0**	**-1.3**	
ERM	**Erimo**	**7.74**	**242**	*e*PN	**Pn**		**15 30 49.2**	**+1.2**	
ERM				pmax	pmax				
	comp=Z,141nm,0.7s								
JEM	**Erimo**	**7.74**	**242**	P	**Pn**		**15 30 49.3**	**+1.3**	
JNBK	**Urakawa-nobuka**	**7.85**	**245**	P	**Pn**		**15 30 49.5**	**+0.1**	
JBT2	**Biratori 2**	**7.85**	**249**	P	**Pn**		**15 30 50.3**	**+0.8**	
PEA0B	**Petropavlovsk-**	**7.89**	**24**	*e*Pn	**Pn**		**15 30 49.7**	**-0.3**	
PETK	**Petropavlovsk-**	**7.89**	**24**	Pn	**Pn**		**15 30 49.5**	**-0.5**	
	comp=Z,1.1nm,0.3s,baz=178,slow=9.7,SNR=23								
PETK				Sn	**Sn**		**15 32 20.4**	**+2.5**	
	baz=210,slow=24,SNR=2.0								
PETK				LR	LR		15 34 02.4		
	comp=Z,242nm,20.4s,baz=210,slow=39								
PETK	**Petropavlovsk-**	**7.89**	**24**	Pn	**Pn**		**15 30 49.5**	**-0.5**	
PETK				Sn	**Sn**		**15 32 20.4**	**+2.5**	
PETK				LR	LR		15 34 02.4		
TYV	**Tymovskoe**	**8.05**	**310**	⇑ *e*P	**Pn**		**15 30 52.0**	**-0.2**	
TYV				AMB	AMB		15 30 53.0		
	comp=Z,30nm,1.0s								
TYV				AMS	AMS		15 33 54.0		
	comp=Z,2μm,20.0s								
PET	**Petropavlovsk**	**8.11**	**28**	Pn	**Pn**		**15 30 57.1**	**+4.0**	
PET				*e*Sn	**Sn**		**15 32 16.6**	**-6.7**	
PET	**Petropavlovsk**	**8.11**	**28**	*e*PN	**Pn**		**15 30 49.3**	**-3.7**	
JEW	**Eniwo**	**8.42**	**252**	P	**Pn**		**15 30 59.4**	**+2.1**	
JNB	**Noboribetsu**	**8.86**	**250**	P	**Pn**		**15 31 04.2**	**+0.9**	
JNB				*e*S	**Sn**		**15 32 40.2**	**-1.5**	
JKB	**Kayabe**	**9.14**	**247**	P	**Pn**		**15 31 07.2**	**0.0**	
JKB				*e*S	**Sn**		**15 32 44.0**	**-4.7**	
JYM2	**Yakumo 2**	**9.46**	**250**	P	**Pn**		**15 31 11.7**	**+0.1**	
JANG	**Nango**	**9.71**	**238**	P	**Pn**		**15 31 12.4**	**-2.6**	
JANG				*e*S	**Sn**		**15 32 54.9**	**-7.8**	
JSR	**Shiriuchi**	**9.72**	**247**	P	**Pn**		**15 31 14.8**	**-0.3**	
JTM	**Tenmabayashi**	**9.73**	**241**	P	**Pn**		**15 31 14.3**	**-0.9**	
JTM				*e*S	**Sn**		**15 32 56.7**	**-6.4**	
JTH	**Tanohata**	**9.79**	**235**	P	**Pn**		**15 31 14.4**	**-1.7**	
JTH				*e*S	**Sn**		**15 32 55.8**	**-8.8**	
JOSM	**Okushiri--Mats**	**10.06**	**252**	P	**Pn**		**15 31 20.3**	**+0.5**	
NKL	**Nikolayevsk**	**10.39**	**318**	*e*L			15 34 19.0		
NKL				AMS	AMS		15 35 48.0		
	comp=Z,1μm,17.0s								
NKL				AMS	AMS		15 35 48.0		
	comp=Z,900nm,17.0s								
NKL				AMS	AMS		15 35 48.0		
	comp=Z,1μm,17.0s								
OFUJ	**Ofunato**	**10.49**	**232**	P	**Pn**		**15 31 23.2**	**-2.5**	
OFUJ				*e*S	**Sn**		**15 33 14.1**	**-7.7**	
JRG	**Rokugo**	**10.86**	**237**	P	**Pn**		**15 31 29.0**	**-1.7**	
JIO	**Ouri**	**11.11**	**231**	P	**Pn**		**15 31 32.2**	**-2.0**	
JIO				*e*S	**Sn**		**15 33 28.8**	**-8.2**	
JYA	**Atsumi**	**11.93**	**236**	P	**Pn**		**15 31 43.8**	**-1.5**	
HABR	**Khabarovsk**	**12.00**	**288**	PN	**Pn**		**15 31 42.7**	**-3.6**	
JFY	**Yanaizu**	**12.77**	**232**	P	**Pn**		**15 31 55.8**	**-1.0**	
MJAR	**Matsushiro Arr**	**14.22**	**233**	Pn	**Pn**		**15 32 15.4**	**-1.2**	
	comp=Z,0.4nm,0.3s,baz=29,slow=13,SNR=14								
MJAR				LR	LR		15 38 27.7		
	comp=Z,376nm,19.2s,baz=55,slow=40								
MAJO	**Matsushiro**	**14.22**	**233**	*e*Pn	**Pn**		**15 32 14.7**	**-1.9**	
	comp=Z,28nm,0.6s								
MAJO				*e*			15 32 25.3		
MAJO	**Matsushiro**	**14.22**	**233**	*e*P	**Pn**		**15 32 14.7**	**-1.9**	
MAJO				pmax	pmax				
	comp=Z,28nm,0.6s								
MAT	**Matsushiro**	**14.22**	**233**	P	**Pn**		**15 32 14.7**	**-1.9**	
MAT				S	**Sn**		**15 35 00.2**	**+7.4**	
KLR	**Kul'dur**	**14.24**	**290**	*e*P	**Pn**		**15 32 16.3**	**-0.5**	
KLR				MLR	MLR				
	comp=N,700nm,13.5s								
KLR				MLR	MLR				
	comp=Z,2μm,13.5s								
MDJ	**Mudanjiang**	**16.06**	**273**	P	**Pn**		**15 32 42.0**	**+1.4**	
MDJ				S	**S**		**15 35 44.8**	**-4.7**	
MDJ				AMB	AMB				
	comp=Z,27nm,1.0s								
MDJ				AMB	AMB				
	comp=Z,144nm,6.0s								
MDJ				LR	LR				
	comp=N,294nm,16.6s								
MDJ				LR	LR				
	comp=E,524nm,18.5s								
MDJ				LR	LR				
	comp=Z,702nm,18.5s								
MDJ	**Mudanjiang**	**16.06**	**273**	*e*Pn	**Pn**		**15 32 38.1**	**-2.5**	
	comp=Z,20nm,0.8s								
ZEA	**Zeya**	**17.85**	**305**	*e*P	**Pn**		**15 33 00.5**	**-2.3**	
ZEA				AMB	AMB		15 33 02.4		
	comp=Z,74nm,1.4s								
CN2	**Changchun**	**19.15**	**273**	*e*P	**Pn**		**15 33 17.0**	**-1.6**	
CN2				*e*AP	pP		15 33 28.5	+0.8	
CN2				*e*S	**S**		**15 36 42.5**	**-10**	
CN2				AMB	AMB				
	comp=Z,10.0nm,0.7s								
CN2				AMB	AMB				
	comp=Z,200nm,4.0s								
CN2				LR	LR				
	comp=N,400nm,14.0s								
CN2				LR	LR				
	comp=E,600nm,14.0s								
CN2				LR	LR				
	comp=Z,500nm,16.0s								
KSRS	**Korea Array**	**20.07**	**253**	P	**P**		**15 33 27.2**	**-0.4**	
	comp=Z,15nm,0.8s,baz=56,slow=11,SNR=21								
KSRS				LR	LR		15 40 13.2		
	comp=Z,354nm,21.2s,MS3.7,baz=58,slow=34								
KSRS	**Korea Array**	**20.07**	**253**	P	**P**		**15 33 27.3**	**-0.3**	
KSRS				pmax	pmax				
	comp=Z,15nm,0.8s								
KSRS				MLR	MLR				
	comp=Z,354nm,21.2s,MS3.7								
CLNS	**Chul'man**	**20.10**	**313**	*e*P	pP		15 33 42.0	+4.0	
CLNS				*e*PP	pP		15 33 51.3	+13	
CLNS				*e*			15 33 54.1		
CLNS				*e*S	**S**		**15 37 29.4**	**+18**	
CLNS				*e*SS			15 37 42.4		
CLNS				*e*			15 37 55.5		
CLNS				pmax	pmax				
	comp=E,10.0nm,1.2s								
CLNS				pmax	pmax				
	comp=N,10.0nm,1.2s								
CLNS				pmax	pmax				
	comp=Z,13nm,1.2s								
CLNS				MLR	MLR				
	comp=N,264nm,13.0s,MS4.0								
CLNS				MLR	MLR				
	comp=Z,472nm,17.0s,MS3.9								
CLNS				MLR	MLR				
	comp=E,392nm,16.0s,MS4.0								
YAK	**Yakutsk**	**20.65**	**329**	*e*P	**P**		**15 33 32.7**	**-1.0**	
	comp=E,189nm,1.1s								
YAK				*e*			15 33 38.4		
YAK	**Yakutsk**	**20.65**	**329**	*e*P	**P**		**15 33 32.6**	**-1.1**	
YAK				*e*PP			15 33 45.0		
YAK				*e*			15 33 51.5		
YAK				*e*SS			15 37 57.2		
YAK				pmax	pmax				
	comp=E,154nm,1.1s								
YAK				pmax	pmax				
	comp=E,92nm,1.4s								
YAK				pmax	pmax				
	comp=N,94nm,1.2s								
YAK				pmax	pmax				
	comp=Z,46nm,1.2s								
YAK				MLR	MLR				
	comp=Z,404nm,25.0s,MS3.7								
YAK				MLR	MLR				
	comp=E,324nm,22.0s								
YAK				MLR	MLR				
	comp=N,218nm,14.0s								
HIA	**Hailar**	**22.11**	**290**	P	**P**		**15 33 49.2**	**-0.2**	
	comp=N,10nm,0.8s,mb4.3								
HIA	**Hailar**	**22.11**	**290**	P	**P**		**15 33 49.2**	**-0.2**	
HIA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
BILL	**Bilibino**	**23.22**	**13**	*e*P	**P**		**15 33 59.2**	**-1.7**	
	comp=E,16nm,1.2s,mb4.3								
BILL	**Bilibino**	**23.22**	**13**	⇑ *i*P	**P**		**15 33 57.5**	**-3.4**	
BILL				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.2								
BJI	**Beijing**	**26.94**	**270**	P	**P**		**15 34 38.5**	**+3.3**	
BJI				S	**S**		**15 39 07.0**	**-2.2**	
BJI				AMB	AMB				
	comp=Z,29nm,0.9s,mb4.8								
BJI				LR	LR				
	comp=N,258nm,16.4s,MS4.2								
BJI				LR	LR				
	comp=E,665nm,21.1s,MS4.2								
BJI				LR	LR				
	comp=Z,513nm,19.2s,MS4.1								
BJT	**Baijiatuau**	**26.95**	**270**	P	**P**		**15 34 33.9**	**-1.4**	
TIXI	**Tiksi**	**28.02**	**344**	⇓ *i*P	**P**		**15 34 41.5**	**-3.0**	
TIXI				pmax	pmax				
	comp=Z,7.0nm,2.2s,mb3.9								
TIXI				MLR	MLR				
	comp=Z,200nm,18.0s,MS3.8								
NJ2	**Nanjing**	**29.28**	**253**	*e*P	**P**		**15 34 56.0**	**-0.1**	
NJ2				AMB	AMB				
	comp=Z,40nm,0.6s,mb5.3								
HHC	**Hu-ho-hao-te**	**29.82**	**275**	*e*P	**P**		**15 35 01.0**	**+0.2**	
HHC				AP	pP		15 35 13.0	+0.8	
HHC				XP	sP		15 35 19.0	+1.8	
HHC				PP	PP		15 35 58.3	-10	
HHC				S	**S**		**15 39 53.5**	**-1.0**	
HHC				XS	sS		15 40 14.0	+0.5	
HHC				SS	SS		15 41 31.3	-31	
HHC				AMB	AMB				
	comp=Z,16nm,0.6s,mb4.9								
HHC				AMB	AMB				
	comp=Z,138nm,5.2s								
HHC				LR	LR				
	comp=N,360nm,15.5s,MS4.3								
HHC				LR	LR				
	comp=E,472nm,19.0s,MS4.3								
HHC				LR	LR				
	comp=Z,529nm,15.5s,MS4.3								
ULN	**Ulaanbaatar**	**30.64**	**290**	P	**P**		**15 35 06.1**	**-1.9**	
	comp=Z,3.0nm,0.9s,mb4.1								
ULN	**Ulaanbaatar**	**30.64**	**290**	P	**P**		**15 35 06.1**	**-1.9**	
ULN				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.1								
SONM	**Songino Array**	**31.08**	**290**	P	**P**		**15 35 10.4**	**-1.4**	
	comp=Z,0.7nm,0.4s,mb3.8,baz=76,slow=8.7,SNR=5.9								
SONM				PcP	PcP		15 38 05.5	-0.9	
	comp=Z,0.8nm,0.6s,baz=94,slow=1.8,SNR=4.4								
SONM				LR	LR		15 48 31.9		
	comp=Z,377nm,19.2s,MS4.1,baz=337,slow=38								
SONM	**Songino Array**	**31.08**	**290**	P	**P**		**15 35 10.4**	**-1.4**	
SONM							15 38 05.5		
SONM				pmax	pmax				
	comp=Z,1.0nm,0.4s								
SONM				MLR	MLR				
	comp=Z,377nm,19.2s								
WHN	**Wuhan**	**33.23**	**256**	P	**P**		**15 35 31.5**	**+0.6**	
XAN	**Xi'an**	**34.92**	**266**	P	**P**		**15 35 46.0**	**+0.5**	
XAN				AP	pP		15 35 59.5	+2.5	
XAN				AMB	AMB				
	comp=Z,18nm,1.1s,mb4.9								
XAN				AMB	AMB				
	comp=Z,88nm,4.5s								
KTH	**Kantishna Hill**	**35.66**	**40**	*e*P	**P**		**15 35 52.0**	**+0.6**	
	comp=Z,21nm,1.1s,mb5.0								
KTH				*e*			15 35 58.9		
SEW	**Seward**	**36.42**	**46**	P	**P**		**15 36 02.8**	**+4.8**	
	comp=Z,22nm,1.2s,mb5.0								
MCK	**McKinley**	**36.55**	**40**	*e*P	**P**		**15 35 58.4**	**-0.7**	
	comp=Z,14nm,1.2s,mb4.7								
MCK	**McKinley**	**36.55**	**40**	*e*P	**P**		**15 35 58.4**	**-0.7**	
MCK				pmax	pmax				
	comp=Z,14nm,1.2s,mb4.7								
COLA	**College**	**37.03**	**38**	*e*P	**P**		**15 36 03.4**	**+0.2**	
	comp=Z,16nm,1.1s,mb4.8								
COLA	**College**	**37.03**	**38**	*e*P	**P**		**15 36 03.4**	**+0.2**	
COLA				pmax	pmax				
	comp=Z,16nm,1.1s,mb4.8								
LZH	**Lanzhou**	**37.38**	**272**	*e*P	**P**		**15 36 07.5**	**+1.0**	
LZH				AP	pP		15 36 21.8	+3.8	
LZH				XP	sP		15 36 25.5	+2.5	
LZH				*e*PP	PP		15 37 35.0	+2.8	
LZH				*e*S	**S**		**15 41 47.0**	**-4.5**	
LZH				XS	sS		15 42 12.0	+1.2	
LZH				AMB	AMB				
	comp=Z,42nm,1.0s,mb5.2								
LZH				AMB	AMB				
	comp=Z,135nm,4.0s								
LZH				LR	LR				
	comp=E,609nm,14.1s								
LZH				LR	LR				
	comp=Z,947nm,15.8s,MS4.7								
GTA	**Gaotai**	**38.56**	**279**	*e*P	**P**		**15 36 17.8**	**+1.4**	
GTA				AP	pP		15 36 30.5	+2.5	
GTA				XP	sP	

CD2 LR LR
comp=E,330nm,13.2s,MS4.5
CD2 LR LR
comp=Z,410nm,15.6s,MS4.4
GYA Guiyang 41.04 258⇑ *i*P **P 15 36 38.3 +1.2**
GYA AP pP 15 36 50.8 +2.0
GYA PP PP 15 38 17.5 +5.3
GYA PCP PcP 15 38 39.3 +2.9
GYA SCP ScP 15 42 23.3 +0.8
GYA PCS PcS 15 42 28.3 +0.8
GYA S **S** **15 42 48.0 +1.3**
GYA XS sS 15 43 08.3 +2.2
GYA SS SS 15 45 46.0 -3.8
GYA AMB AMB
comp=Z,30nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,80nm,4.2s
GYA LR LR
comp=N,250nm,12.2s,MS4.4
GYA LR LR
comp=E,230nm,11.7s,MS4.4
GYA LR LR
comp=Z,320nm,11.9s,MS4.4
INK Inuvik 42.55 32 *e*P **P 15 36 48.8 -0.1**
comp=Z,107nm,0.6s,mb5.8
ZALV Zalesovo Beam 42.60 306 P **P 15 36 47.0 -2.5**
comp=Z,0.3nm,0.3s,baz=69,slow=9.4,SNR=2.4
ZALV PcP PcP 15 38 41.1 0.0
comp=Z,2.2nm,0.7s,baz=66,slow=3.6,SNR=9.0
ZALV LR LR 15 55 37.7
comp=Z,475nm,18.3s,baz=72,slow=38
KMI Kunming 44.59 260 P **P 15 37 07.0 +1.1**
KMI AP pP 15 37 20.0 +2.4
KMI PP PP 15 38 51.3 +0.9
KMI S **S** **15 43 36.3 -2.5**
KMI XS sS 15 44 01.3 +3.0
KMI SS SS 15 46 50.0 -9.4
KMI AMB AMB
comp=Z,13nm,1.1s,mb4.7
KMI LR LR
comp=N,209nm,17.5s,MS4.2
KMI LR LR
comp=E,154nm,14.1s,MS4.2
KMI LR LR
comp=Z,110nm,14.8s,MS3.9
WMQ Urumqi 44.69 292 *e*P **P 15 37 08.0 +1.5**
WMQ PP PP 15 38 54.0 +2.8
WMQ S **S** **15 43 41.0 +1.1**
WMQ SS SS 15 46 53.0 -7.9
WMQ AMB AMB
comp=Z,35nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,94nm,4.0s
WMQ LR LR
comp=N,193nm,16.0s,MS4.2
WMQ LR LR
comp=E,154nm,16.0s,MS4.2
WMQ LR LR
comp=Z,168nm,16.0s,MS4.1
MKAR Makanchi Array 46.80 298 P **P 15 37 21.3 -1.8**
comp=Z,2.3nm,0.6s,mb4.3,baz=64,slow=3.8,SNR=20
MKAR PcP PcP 15 38 56.2 +0.5
comp=Z,2.3nm,0.8s,baz=58,slow=3.1,SNR=6.0
MKAR LR LR 15 57 59.0
comp=Z,461nm,18.9s,MS4.5,baz=36,slow=37
MKAR Makanchi Array 46.80 298 P **P 15 37 21.3 -1.8**
MKAR PcP PcP 15 38 56.2 +0.5
MKAR LR LR 15 57 59.0
MKAR Makanchi Array 46.80 298 P **P 15 37 21.3 -1.8**
MKAR 15 38 56.2
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,461nm,18.9s
KURK Kurchatov 47.32 304 P **P 15 37 25.8 -1.3**
comp=Z,5.5nm,0.2s,mb5.0,baz=71,slow=8.4,SNR=5.8
KURK LR LR 15 58 13.5
comp=Z,183nm,19.2s,MS4.1,baz=55,slow=37
KURK Kurchatov 47.32 304 *e*P **P 15 37 24.7 -2.4**
comp=Z,7.2nm,0.9s,mb4.6
KURK Kurchatov 47.32 304 P **P 15 37 25.8 -1.3**
KURK pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
KURK MLR MLR
comp=Z,183nm,19.2s,MS4.1
LSA Lhasa 49.78 273 *e*P **P 15 37 47.8 +1.5**
comp=Z,16nm,0.9s,mb5.0
LSA Lhasa 49.78 273 *e*P **P 15 37 47.8 +1.5**
LSA pmax pmax
comp=Z,16nm,0.9s,mb5.0
BVAR Borovoye Array 50.91 310 LR LR 16 01 06.1
comp=Z,328nm,19.0s,MS4.4,baz=60,slow=38
BRVK Borovoye 50.95 310 *e*P **P 15 37 53.2 -1.6**
comp=Z,10nm,1.2s,mb4.6
BRVK Borovoye 50.95 310 *e*P **P 15 37 53.2 -1.6**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CHTO Chiang Mai 51.43 257 *e*P **P 15 38 00.1 +1.2**
comp=Z,24nm,1.0s,mb5.1
CHTO Chiang Mai 51.43 257 *e*P **P 15 38 00.1 +1.3**
CHTO pmax pmax
comp=Z,24nm,1.0s,mb5.1
CMAR Chiang Mai Arr 51.68 256 P **P 15 37 59.6 -1.1**
comp=Z,9.7nm,0.8s,mb4.8,baz=36,slow=7.5,SNR=53
CMAR LR LR 16 00 09.1
comp=Z,105nm,18.5s,MS3.9,baz=52,slow=36
CMAR Chiang Mai Arr 51.68 256 P **P 15 37 59.6 -1.1**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CMAR MLR MLR
comp=Z,105nm,18.5s
RES Resolute Bay 51.69 18 *e*P **P 15 37 57.2 -2.9**
comp=Z,83nm,0.9s,mb5.7
SHL Shillong 51.82 269 *e*P **P 15 38 03.0 +1.3**
YKA Yellowknife Ar 51.82 36 P **P 15 38 00.2 -1.0**
comp=Z,1.6nm,0.7s,mb4.0,baz=300,slow=6.9,SNR=5.9
YKA Yellowknife Ar 51.82 36 P **P 15 38 00.2 -1.0**
YKA Yellowknife Ar 51.82 36 P **P 15 38 00.2 -1.0**
YKA pmax pmax
comp=Z,2.0nm,0.7s
TKM2 Tokmak 2 52.84 296 *e*P **P 15 38 09.1 0.0**
comp=Z,1.5nm,0.6s,mb4.1
TKM2 Tokmak 2 52.84 296 *e*P **P 15 38 09.1 +0.1**
TKM2 pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
TAPN Taplejung 53.61 273 *e*P **P 15 38 16.6 +1.7**
comp=Z,17nm,0.7s,mb5.1
SVE Sverdlovsk 54.00 317⇑ *e*P **P 15 38 16.0 -1.3**
SVE pmax pmax
comp=Z,14nm,1.0s,mb4.8
SVE MLR MLR
comp=Z,470nm,17.0s,MS4.6
EKS2 Erkin-Say 54.11 297 *e*P **P 15 38 17.3 -1.1**
comp=Z,3.4nm,0.7s,mb4.4
ODAN Odare 54.13 273 *e*P **P 15 38 20.1 +1.4**
comp=Z,29nm,1.0s,mb5.2
JIRN Jiri 54.47 275 *e*P **P 15 38 22.6 +1.4**
GUN Gumba 54.53 275 *e*P **P 15 38 22.8 +1.2**
RAMN Ramite 54.63 274 *e*P **P 15 38 23.3 +1.0**
comp=Z,24nm,0.3s,mb5.7
KKN Kakani 55.02 275 *e*P **P 15 38 26.2 +1.0**
PKI Pulchoki 55.07 275 *e*P **P 15 38 26.5 +1.0**
ARU Arti 55.18 318 *e*P **P 15 38 23.4 -2.5**
comp=Z,14nm,1.1s,mb4.9
ARU Arti 55.18 318⇑ *e*P **P 15 38 23.5 -2.4**
ARU pmax pmax
comp=Z,17nm,1.6s,mb4.8
DMN Daman 55.26 275 *e*P **P 15 38 28.2 +1.3**
GKN Gorkha 55.34 276 *e*P **P 15 38 28.5 +1.1**
comp=Z,125nm,1.0s,mb5.9
DANN Dangsing 55.73 277 *e*P **P 15 38 31.9 +1.6**
comp=Z,103nm,0.6s,mb6.0
KOLN Koldanda 56.20 276 *e*P **P 15 38 34.8 +1.2**
comp=Z,115nm,1.0s,mb5.9
LGTI Lohaghat 57.47 280 *e*P **P 15 38 44.5 +1.9**
ARCES ARCESS Array B 54.36 341 P **P 15 38 47.5 -0.7**
comp=Z,3.6nm,0.8s,mb4.5,baz=27,slow=5.6,SNR=5.8
ARCES ARCESS Array B 58.36 341 P **P 15 38 47.5 -0.7**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
DDI Dehra Dun 58.43 282 *ex* **P 15 38 47.0 -2.3**
AKTO Aktyubinsk 58.81 312 LR LR 16 06 36.6
comp=Z,555nm,18.2s,MS4.7,baz=159,slow=39
WALA Waterton Lakes 59.31 50 P **P 15 38 52.9 -2.2**
comp=Z,5.2nm,0.9s,mb4.6
FFC Flin Flon 61.64 39 P **P 15 39 11.3 +0.4**
comp=Z,4.4nm,0.8s,mb4.6
FFC Flin Flon 61.64 39 P **P 15 39 11.3 +0.4**
FFC pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KBL Kabul 61.84 292 *e*P **P 15 39 11.7 -0.9**
comp=Z,22nm,0.9s,mb5.3
KBL Kabul 61.84 292 *e*P **P 15 39 11.7 -0.9**
KBL pmax pmax
comp=Z,22nm,0.9s,mb5.3
FCC Fort Churchill 62.16 33 *e*P **P 15 39 13.8 -0.6**
comp=Z,8.0nm,0.8s,mb4.9
FCC Fort Churchill 62.16 33 *e*P **P 15 39 13.8 -0.6**
FCC pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
CMB Columbia Colle 62.20 63 P **P 15 39 12.6 -2.4**
comp=Z,4.9nm,0.9s,mb4.6
CMB Columbia Colle 62.20 63 P **P 15 39 12.6 -2.4**
CMB pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
HLID Hailey 62.36 55 P **P 15 39 25.4 +9.4**
comp=Z,6.4nm,1.3s,mb4.6
NVAR Mina Array Bea 63.24 62 P **P 15 39 22.2 +0.3**
comp=Z,1.6nm,0.9s,mb4.2,baz=290,slow=7.8,SNR=6.0
DUG Dugway 65.41 57 P **P 15 39 37.3 +1.2**
comp=Z,11nm,1.2s,mb4.8
DUG Dugway 65.41 57 P **P 15 39 37.3 +1.2**
DUG pmax pmax
comp=Z,11nm,1.2s,mb4.8
TPNV Topopah Spring 65.44 62 *e*P **P 15 39 35.6 -0.7**
comp=Z,12nm,1.3s,mb4.8
TPNV Topopah Spring 65.44 62 *e*P **P 15 39 35.6 -0.7**
TPNV pmax pmax
comp=Z,12nm,1.3s,mb4.8
OBN Obninsk 65.60 325⇓ *i*P **P 15 39 36.3 -0.7**
OBN *e* 15 40 07.7
OBN pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
PDAR Pinedale Array 65.61 53 P **P 15 39 38.0 +0.7**
comp=Z,0.9nm,0.8s,mb3.9,baz=275,slow=1.1,SNR=7.9
PDAR LR LR 16 05 57.8
comp=Z,77nm,18.8s,MS3.9,baz=304,slow=34
HYB Hyderabad 66.48 271 *i*P **P 15 39 44.0 +0.8**
ABKT Ailbek 66.51 301 P **P 15 39 43.2 0.0**
comp=Z,75nm,0.8s,mb5.8,SNR=6.5
LDFC Landfair 67.36 63 P **P 15 39 48.7 +0.1**
comp=Z,13nm,1.0s,mb4.9
ULM Lac du Bonnet 67.42 40 LR LR 16 09 49.7
comp=Z,96nm,18.6s,MS4.0,baz=334,slow=36
WRAB Tennant Creek 67.64 198 *e*P **P 15 39 50.6 +0.2**
comp=Z,3.1nm,0.8s,mb4.4
WRAB Tennant Creek 67.64 198 *e*P **P 15 39 50.6 +0.2**
WRAB pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
AFI Afiamalu 67.86 142 LR LR 16 06 09.1
comp=Z,178nm,18.8s,MS4.3,baz=209,slow=33
NB2 NORSAR Subarra 68.74 341 P **P 15 39 55.8 -1.0**
comp=Z,22nm,1.1s,mb5.0,baz=28,slow=6.5
NOA NORSAR Array B 68.74 341 P **P 15 39 56.1 -0.7**
comp=Z,5.1nm,0.6s,mb4.7,baz=27,slow=6.3,SNR=26
NOA LR LR 16 13 34.7
comp=Z,88nm,18.9s,MS4.0,baz=20,slow=39
NOA NORSAR Array B 68.74 341 P **P 15 39 56.1 -0.7**
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA MLR MLR
comp=Z,88nm,18.9s
KIV Kislovodsk 70.92 314 *e*P **P 15 40 11.3 +0.8**
comp=Z,24nm,0.9s,mb5.1
KIV Kislovodsk 70.92 314⇓ *i*P **P 15 40 10.5 0.0**
KIV pmax pmax
comp=Z,24nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,200nm,19.0s,MS4.4
ASAR Alice Springs 71.36 198 P **P 15 40 15.2 +2.0**
comp=Z,1.2nm,0.7s,mb4.0,baz=11,slow=5.2,SNR=24
ASAR Alice Springs 71.36 198 P **P 15 40 15.2 +2.0**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 71.85 326 P **P 15 40 14.6 -1.4**
comp=Z,3.9nm,0.4s,mb4.7,baz=34,slow=5.8,SNR=17
AKASG LR LR 16 13 54.6
comp=Z,187nm,19.5s,MS4.4,baz=55,slow=38
AKASG Malin Array Be 71.85 326 P **P 15 40 14.6 -1.4**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG MLR MLR
comp=Z,187nm,19.5s
AKBB Malin Array Si 71.85 326 *e*P **P 15 40 14.6 -1.5**
KIEV Kiev 71.86 326 *e*P **P 15 40 14.3 -1.8**
comp=Z,11nm,1.0s,mb4.8
KIEV Kiev 71.86 326 *e*P **P 15 40 14.3 -1.8**
KIEV pmax pmax
comp=Z,11nm,1.0s,mb4.7
ANN Anapa 72.85 317 *e*P **P 15 40 15.2 -6.9**
ANN *e**PP pP 15 40 25.1 -9.5
ANN *e*S S 15 49 35.7 -9.3
ANN *e*SS SS 15 54 22.7 -1.9
ANN pmax pmax
comp=Z,75nm,1.0s,mb5.6
LVV L'vov 74.53 328 *e*P **P 15 40 31.6 -0.2**
KWP Kalwaria 75.17 329 *e*P **P 15 40 36.1 +0.6**
KWP Kalwaria 75.17 329 *e*P **P 15 40 36.1 +0.6**
KWP Kalwaria 75.17 329⇑ *i*P **P 15 40 36.2 +0.7**
OJC Ojcow 75.69 331 *e*P **P 15 40 38.5 0.0**
STHS Stebnicka Huta 75.87 330 *e*P **P 15 40 39.5 -0.1**
STHS pmax pmax
comp=Z,12nm,0.9s,mb4.8
BUR08 Bucovina Ar. S 75.88 326 *e*P **P 15 40 39.3 -0.3**
BURAR Bucovina Array 75.89 326⇑ *i*P **P 15 40 39.8 0.0**
BURAR Bucovina Array 75.89 326⇑ *i*P **P 15 40 39.8 +0.1**
KOLS Kolonicke sedl 75.91 329 *e*P **P 15 40 39.4 -0.4**
KOLS *e* pP 15 40 49.7 -2.6
KOLS pmax pmax
comp=Z,124nm,2.9s,mb5.3
KOLS Kolonicke sedl 75.91 329 *e*P **P 15 40 39.3 -0.5**
KOLS *e*pP pP 15 40 49.7 -2.6
UZH Uzhgorod 76.15 328 *e*P **P 15 40 40.5 -0.7**
UZH *e* pP 15 40 54.7 +1.0
NIE Niedzica 76.19 330 *e*P **P 15 40 42.3 +0.9**
CRVS Cervenica-Dubn 76.22 329 *i*P **P 15 40 41.7 +0.1**
CRVS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KSP Ksiaz 76.31 333 *e*P **P 15 40 41.5 -0.5**
TLCR 76.41 323⇑ *i*P **P 15 40 42.4 -0.3**
OKC Ostrava-Krasne 76.57 331 *e*P **P 15 40 43.7 +0.1**
OKC AMS AMS 16 18 10.0
NRDL Niedersach Rie 76.65 337 *e*P **P 15 40 43.6 -0.3**
comp=Z,20nm,1.5s,mb4.8
UPC Upice 76.69 333 *e*P **P 15 40 44.3 +0.1**
DPC Dobruska-Polom 76.73 333 *e*P **P 15 40 44.6 +0.2**
DPC AMS AMS 16 19 00.0
comp=Z,400nm,5.7s
CLL Collm 76.90 335⇑ *i*P **P 15 40 44.8 -0.6**
CLL pmax pmax
comp=Z,37nm,1.3s,mb5.2
CLL Collm 76.90 335 *e*P **P 15 40 44.7 -0.7**
comp=Z,38nm,1.4s,mb5.1
CLL Collm 76.90 335⇑ *i*P **P 15 40 44.8 -0.6**
comp=Z,37nm,1.3s,mb5.2
BRG Berggiesshubel 77.00 334 *e*P **P 15 40 45.2 -0.8**
comp=Z,15nm,1.3s,mb4.8
PVCC Panska Ves 77.12 334 *e*P **P 15 40 46.3 -0.3**
PVCC AMS AMS 16 17 00.0
comp=Z,200nm,20.5s
TIRR Tirgusor 77.16 322⇑ *i*P **P 15 40 43.9 -3.1**
CLZ Clausthal 77.17 337 *e*P **P 15 40 47.0 +0.2**
CLZ pmax pmax
comp=Z,45nm,1.5s,mb5.2
CLZ Clausthal 77.17 337 *e*P **P 15 40 47.0 +0.2**
comp=Z,45nm,1.5s,mb5.2
HARR Harsova 77.18 323⇑ *i*P **P 15 40 47.2 +0.2**
HARR Harsova 77.18 323⇑ *i*P **P 15 40 47.2 +0.1**
MLR Muntele Rosu 77.35 325 P **P 15 40 49.4 +1.4**
MLR Muntele Rosu 77.35 325⇓ *i*P **P 15 40 48.9 +0.9**
VYHS Vyhne 77.49 330 *i*P **P 15 40 49.0 +0.3**
VYHS *e* 15 40 56.3
VYHS pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VYHS Vyhne 77.49 330 *i*P **P 15 40 49.0 +0.3**
VYHS *e*pP pP 15 40 56.3 -5.0
VRAC Vranov 77.54 332 P **P 15 40 49.4 +0.4**
VRAC Vranov 77.54 332⇑ *i*P **P 15 40 49.2 +0.2**
KOLL Kolacno 77.57 331 *e*P **P 15 40 49.4 +0.2**
PRU Pruhonice 77.60 334 AMS AMS 16 17 40.0
comp=Z,300nm,5.9s
PSZ Piszkesteto 77.61 329 *e*P **P 15 40 49.4 -0.1**
comp=Z,20nm,1.2s,mb4.9
PSZ Piszkesteto 77.61 329 *e*P **P 15 40 49.4 0.0**
PSZ pmax pmax
comp=Z,20nm,1.2s,mb4.9
PSZ Piszkesteto 77.61 329⇑ *i*P **P 15 40 50.2 +0.8**
VOIR 77.75 325 P **P 15 40 50.9 +0.7**
VOIR 77.75 325⇑ *i*P **P 15 40 51.2 +1.0**
TANN Tannenbergstha 77.85 335 *e*P **P 15 40 50.5 -0.2**
comp=Z,18nm,1.6s,mb4.8
MOX Moxa 77.89 336 *e*P **P 15 40 50.8 -0.1**
comp=Z,28nm,1.3s,mb5.0
MOX Moxa 77.89 336 *e*P **P 15 40 50.8 -0.1**
MOX pmax pmax
comp=Z,28nm,1.3s,mb5.0
MOX Moxa 77.89 336 *e*P **P 15 40 50.5 -0.4**
comp=Z,17nm,1.1s,mb4.9
TREC Trest 77.91 333 *e*P **P 15 40 51.2 +0.1**
TREC AMS AMS 16 18 00.0
SMOL Smolenice 77.95 331 *e*P **P 15 40 52.0 +0.7**
NKC Novy Kostel 78.02 335 *e*P **P 15 40 51.7 +0.1**
MODS Modra-Piesok 78.13 331 *i*P **P 15 40 53.0 +0.7**
MODS pmax pmax
comp=Z,11nm,1.1s,mb4.7
STKA Stephens Creek 78.15 189 P **P 15 40 54.0 +1.7**
comp=Z,0.7nm,0.7s,mb3.7,baz=343,slow=3.8,SNR=3.6
STKA Stephens Creek 78.15 189 P **P 15 40 52.2 -0.1**
comp=Z,0.8nm,1.1s
UBBA Unterbreizbach 78.19 337 *e*P **P 15 40 52.2 -0.4**
comp=Z,7.0nm,0.9s,mb4.6
TXAR Lajitas Array 78.31 60 P **P 15 40 54.9 +1.2**
comp=Z,3.5nm,0.7s,mb4.4,baz=301,slow=4.2,SNR=26
TXAR Lajitas Array 78.31 60 P **P 15 40 54.9 +1.2**
TXAR pmax pmax
comp=Z,4.0nm,0.7s
MANZ Manzenberg 78.34 335 *e*P **P 15 40 52.9 -0.5**
comp=Z,10.0nm,1.0s,mb4.7
ZST Bratislava 78.34 331 *e*P **P 15 40 53.9 +0.5**
ZST pmax pmax
comp=Z,15nm,0.9s,mb4.9
ROTZ Rotzenmuhle 78.50 335 *e*P **P 15 40 54.6 +0.3**
comp=Z,14nm,1.0s,mb4.8
BR131 Keskin Array S 78.55 316 *e*P **P 15 40 55.1 +0.4**
comp=Z,13nm,1.0s,mb4.8
BRTR Keskin Array B 78.55 316 P **P 15 40 54.8 0.0**
comp=Z,8.9nm,0.9s,mb4.7,baz=69,slow=4.1,SNR=30
BRTR LR LR 16 21 34.1
comp=Z,119nm,18.8s,MS4.2,baz=70,slow=40
MIB Mutribah 78.58 301 *e*P **P 15 40 54.8 -0.3**
baz=301
MIB AMb AMB 15 40 56.5
comp=Z,64nm,1.0s,mb5.5,baz=301
KHC Kasperske Hory 78.65 334 *e*P **P 15 40 55.2 0.0**
KHC AMS AMS 16 17 10.0
comp=Z,400nm,5.2s
GZR Gura Zlata 78.68 326 P **P 15 40 55.4 0.0**
GZR Gura Zlata 78.68 326⇓ *i*P **P 15 40 55.5 +0.1**
WET Wettzell 78.86 334 *e*P **P 15 40 56.5 +0.2**
WET pmax pmax
comp=Z,20nm,1.0s,mb5.0
WET Wettzell 78.86 334 *e*P **P 15 40 56.5 +0.2**
comp=Z,20nm,1.0s,mb5.0
GRF Grafenberg Arr 78.86 335 *e*P **P 15 40 56.5 +0.2**
GRF pmax pmax
comp=Z,68nm,1.5s,mb5.4
GRF Grafenberg Arr 78.86 335 *e*P **P 15 40 56.5 +0.2**
GRF pmax pmax
comp=Z,68nm,1.5s,mb5.4
GRF Grafenberg Arr 78.86 335 *e*P **P 15 40 56.5 +0.2**
comp=Z,68nm,1.5s,mb5.4
GEC2 GERESS Array S 78.87 334 *e*P **P 15 40 55.0 -1.4**
comp=Z,3nm,1.1s
GEC2 GERESS Array S 78.87 334 *e*P **P 15 40 56.1 -0.2**
comp=Z,18nm,1.4s,mb4.8
GERES GERESS Array B 78.87 334 P **P 15 40 56.2 -0.2**
comp=Z,4.1nm,0.6s,mb4.5,baz=35,slow=4.9,SNR=29
GERES GERESS Array B 78.87 334 P **P 15 40 56.2 -0.1**
GERES pmax pmax
comp=Z,4.0nm,0.6s
BZS Buzias 78.94 327 P **P 15 40 56.4 -0.4**
BZS Buzias 78.94 327⇓ *i*P **P 15 40 56.5 -0.3**
CONA Conrad Observa 78.98 332⇑ *i*P **P 15 40 57.7 +0.7**
comp=Z,12nm,0.7s,mb5.0
CSNA Conrad Observa 78.98 332⇑ *i*P **P 15 40 57.7 +0.7**
comp=Z,11nm,0.7s,mb4.9
NAY Al-Naaiem 79.04 301 *e*P **P 15 40 57.0 -0.7**
baz=301
NAY AMb AMB 15 40 59.1
comp=Z,30nm,1.1s,mb5.1,baz=301
RDF Al-Radifah 79.09 300 *e*P **P 15 40 57.7 -0.3**
baz=300
RDF AMb AMB 15 41 00.2
comp=Z,97nm,1.4s,mb5.5,baz=300
MEM Membach 79.43 339 P **P 15 40 59.5 +0.2**
comp=Z,16nm,1.1s,mb4.9
PKSM Moragy 79.52 329⇓ *i*P **P 15 40 58.8 -1.1**
PKSM Moragy 79.52 329⇓ *i*P **P 15 40 58.8 -1.1**
MOA Molln 79.57 333⇑ *i*P **P 15 41 00.4 +0.2**
comp=Z,7.8nm,0.8s,mb4.7
TOD Tromm 79.62 337 *e*P **P 15 41 00.7 +0.3**
ARSA Arzberg 79.69 332⇑ *i*P **P 15 41 01.2 +0.4**
comp=Z,14nm,1.2s,mb4.8
ABH Alteburg 79.70 338 *e*P **P 15 41 00.9 0.0**
BCLA Clavier 79.78 339 P **P 15 41 01.4 +0.1**
RUP Ruppelstein 80.00 338 *e*P **P 15 41 02.9 +0.4**
GIVF Givet 80.19 339 *e*P **P 15 41 03.1 -0.4**
SOKA Soboth 80.35 332⇑ *i*P **P 15 41 04.7 +0.2**
comp=Z,24nm,1.2s,mb5.0
PERS Pernice 80.36 332 *e*P **P 15 41 04.3 -0.2**
BAIF Baives 80.38 340 *e*P **P 15 41 04.4 -0.1**
comp=Z,16nm,0.8s,mb4.7
BAIF Baives 80.38 340 *e*P **P 15 41 04.4 -0.1**
comp=Z,8.1nm,0.8s,mb4.7
BAIF Baives 80.38 340 *e*P **P 15 41 04.4 -0.1**
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KBA Koelnbreinsper 80.54 333⇑ *i*P **P 15 41 06.2 +0.7**
comp=Z,32nm,1.2s,mb5.1
LEGS Legarje 80.90 331 *i*P **P 15 41 06.9 -0.5**
BFO Black Forest 80.91 337 *e*P **P 15 41 05.4 -2.0**
comp=Z,14nm,1.1s,mb4.8
BFO Black Forest 80.91 337 *e*P **P 15 41 05.4 -2.0**
BFO pmax pmax
comp=Z,14nm,1.1s,mb4.8
BFO Black Forest 80.91 337 *e*P **P 15 41 06.5 -0.9**
comp=Z,15nm,1.0s,mb4.9
WTTA Wattenberg 80.91 334⇑ *i*P **P 15 41 08.1 +0.7**
comp=Z,21nm,0.8s,mb5.1
RETA Reutte 80.97 335⇑ *i*P **P 15 41 08.2 +0.4**
comp=Z,9.3nm,0.8s,mb4.7
SQTA Sankt Quirin 81.08 334⇑ *i*P **P 15 41 08.9 +0.6**
CDF Champ du Feu 81.12 337⇑ *i*P **P 15 41 08.4 -0.1**
comp=Z,54nm,1.2s,mb5.0
CDF Champ du Feu 81.12 337⇑ *i*P **P 15 41 08.4 -0.1**
comp=Z,27nm,1.2s,mb5.0
CDF Champ du Feu 81.12 337⇑ *i*P **P 15 41 08.4 -0.1**
CDF pmax pmax
comp=Z,27nm,1.2s,mb5.0
BOJS Bojanci 81.31 331 *i*P **P 15 41 08.9 -0.7**
ECH Echery 81.33 337 *e*P **P 15 41 09.2 -0.4**
FETA Feichten 81.40 335⇑ *i*P **P 15 41 10.4 +0.4**
comp=Z,12nm,1.0s,mb4.8
FELD Feldberg im Sc 81.41 337 *e*P **P 15 41 10.2 +0.1**
DAVA Damuels 81.41 335⇑ *i*P **P 15 41 09.3 -0.8**
comp=Z,14nm,1.4s,mb4.7
MEZF Maizieres J'vi 81.62 339 *e*P **P 15 41 11.3 +0.2**
MOF Molkenrain 81.67 337 *e*P **P 15 41 11.5 +0.1**
HAU Haudompre 81.74 338 *e*P **P 15 41 11.5 -0.3**
HAU *e*MLR MLR
comp=Z,130nm,21.2s,MS4.0
HAU Haudompre 81.74 338 *e*P **P 15 41 11.5 -0.3**
HAU MLR MLR
comp=Z,130nm,21.3s,MS4.3
HINF Hinteralfeld 81.78 337 *e*P **P 15 41 11.7 -0.3**
PPT Papeete 82.17 125 *e*LR LR 16 06 49.8
comp=Z,223nm,24.2s
TUE Stuetta 82.31 335 *e*P **P 15 41 14.8 0.0**
comp=Z,9.2nm,0.9s,mb4.7
FLN La Foliniere 82.66 342 *e*P **P 15 41 16.3 -0.3**
FLN *e*MLR MLR
comp=Z,124nm,22.2s,MS3.9
FLN La Foliniere 82.66 342 *e*P **P 15 41 16.3 -0.3**
FLN MLR MLR
comp=Z,120nm,22.3s,MS4.2
LDF La Druitiere 82.75 342 *e*P **P 15 41 16.6 -0.4**
LOR Lormes 83.06 339⇑ *i*P **P 15 41 18.5 -0.2**

	comp=Z,63nm,1.5s,mb5.1							
LOR				*e*MLR	MLR			
	comp=Z,204nm,21.2s,MS4.2							
LOR	**Lormes**	**83.06**	**339**	⇑*i*P	**P**	**15 41 18.5**	**-0.2**	
	comp=Z,32nm,1.5s,mb5.1							
LOR				LR	LR			
	comp=Z,200nm,21.3s,MS4.5							
LOR	**Lormes**	**83.06**	**339**	⇑*i*P	**P**	**15 41 18.5**	**-0.2**	
LOR				pmax	pmax			
	comp=Z,31nm,1.5s,mb5.1							
LOR				MLR	MLR			
	comp=Z,200nm,21.3s,MS4.5							
CABF	**La Chapelle**	**83.09**	**337**	*e*P	**P**	**15 41 18.9**	**0.0**	
GRR	**Gorron**	**83.10**	**342**	*e*P	**P**	**15 41 18.8**	**-0.1**	
SSF	**Saint Saulge**	**83.34**	**339**	*e*P	**P**	**15 41 20.0**	**-0.2**	
AVF	**Avril sur Loir**	**83.63**	**339**	⇑*i*P	**P**	**15 41 21.6**	**-0.1**	
	comp=Z,20nm,1.0s,mb4.9							
AVF	**Avril sur Loir**	**83.63**	**339**	⇑*i*P	**P**	**15 41 21.6**	**-0.1**	
	comp=Z,10nm,1.0s,mb4.9							
AVF	**Avril sur Loir**	**83.63**	**339**	⇑*i*P	**P**	**15 41 21.6**	**-0.1**	
AVF				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.9							
ROSF	**Rostrenen**	**83.64**	**344**	*e*P	**P**	**15 41 21.5**	**-0.1**	
SMF	**Signal de Mont**	**83.65**	**339**	⇑*i*P	**P**	**15 41 21.8**	**+0.1**	
	comp=Z,77nm,1.2s,mb5.4							
SMF	**Signal de Mont**	**83.65**	**339**	⇑*i*P	**P**	**15 41 21.8**	**+0.1**	
	comp=Z,39nm,1.2s,mb5.4							
SMF	**Signal de Mont**	**83.65**	**339**	⇑*i*P	**P**	**15 41 21.8**	**+0.1**	
SMF				pmax	pmax			
	comp=Z,39nm,1.2s,mb5.4							
LPL	**La Plagne**	**83.92**	**336**	⇑*i*P	**P**	**15 41 23.8**	**+0.6**	
	comp=Z,14nm,0.9s,mb4.8							
LPL	**La Plagne**	**83.92**	**336**	⇑*i*P	**P**	**15 41 23.8**	**+0.6**	
	comp=Z,6.9nm,0.9s,mb4.8							
LPL	**La Plagne**	**83.92**	**336**	⇑*i*P	**P**	**15 41 23.8**	**+0.6**	
LPL				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.8							
LPG	**La Plagne**	**83.94**	**336**	⇑*i*P	**P**	**15 41 24.0**	**+0.8**	
	comp=Z,45nm,1.3s,mb5.2							
LPG	**La Plagne**	**83.94**	**336**	⇑*i*P	**P**	**15 41 24.0**	**+0.8**	
	comp=Z,23nm,1.3s,mb5.1							
LPG	**La Plagne**	**83.94**	**336**	⇑*i*P	**P**	**15 41 24.0**	**+0.8**	
LPG				pmax	pmax			
	comp=Z,23nm,1.3s,mb5.2							
BGF	**Bois d'Agland**	**83.98**	**339**	*e*P	**P**	**15 41 23.6**	**+0.2**	
TCF	**Toulx Ste Croi**	**84.38**	**340**	*e*P	**P**	**15 41 25.5**	**0.0**	
	comp=Z,38nm,1.2s,mb5.1							
TCF	**Toulx Ste Croi**	**84.38**	**340**	*e*P	**P**	**15 41 25.5**	**0.0**	
	comp=Z,19nm,1.2s,mb5.1							
TCF	**Toulx Ste Croi**	**84.38**	**340**	*e*P	**P**	**15 41 25.5**	**0.0**	
TCF				pmax	pmax			
	comp=Z,19nm,1.2s,mb5.1							
MFF	**Saint Martin d**	**84.64**	**341**	*e*P	**P**	**15 41 26.9**	**+0.1**	
MBDF	**Montbardon**	**84.64**	**336**	*e*P	**P**	**15 41 27.0**	**+0.2**	
ORIF	**Oris-en-Rattie**	**84.71**	**337**	⇑*i*P	**P**	**15 41 27.6**	**+0.4**	
ORIF				*e*MLR	MLR			
	comp=Z,127nm,21.0s,MS4.0							
LRAL	**Lakeview Retre**	**84.79**	**47**	P	**P**	**15 41 23.2**	**-4.6**	
	comp=Z,27nm,0.6s,mb5.5							
VIVF	**Saint-Julien-l**	**85.09**	**338**	*e*P	**P**	**15 41 29.6**	**+0.5**	
SBF	**Sospel**	**85.24**	**335**	*e*P	**P**	**15 41 30.5**	**+0.6**	
	comp=Z,67nm,1.2s,mb5.4							
SBF	**Sospel**	**85.24**	**335**	*e*P	**P**	**15 41 30.5**	**+0.6**	
	comp=Z,34nm,1.2s,mb5.3							
SBF	**Sospel**	**85.24**	**335**	*e*P	**P**	**15 41 30.5**	**+0.6**	
SBF				pmax	pmax			
	comp=Z,34nm,1.2s,mb5.3							
RJF	**Les Rejaudoux**	**85.47**	**340**	*e*P	**P**	**15 41 30.5**	**-0.5**	
RJF				*e*MLR	MLR			
	comp=Z,153nm,20.8s,MS4.1							
RJF	**Les Rejaudoux**	**85.47**	**340**	*e*P	**P**	**15 41 30.5**	**-0.5**	
RJF				MLR	MLR			
	comp=Z,150nm,20.8s,MS4.4							
SMRF	**Simiane la Rot**	**85.66**	**337**	*e*P	**P**	**15 41 32.6**	**+0.6**	
	comp=Z,29nm,1.1s,mb5.1							
SMRF	**Simiane la Rot**	**85.66**	**337**	*e*P	**P**	**15 41 32.6**	**+0.6**	
	comp=Z,29nm,1.1s,mb5.4							
CAF	**Calviac**	**85.70**	**339**	*e*P	**P**	**15 41 32.9**	**+0.8**	
LMR	**La Mourre**	**85.99**	**336**	*e*P	**P**	**15 41 33.7**	**+0.1**	
	comp=Z,30nm,1.0s,mb5.2							
LMR	**La Mourre**	**85.99**	**336**	*e*P	**P**	**15 41 33.7**	**+0.1**	
	comp=Z,15nm,1.0s,mb5.2							
LMR	**La Mourre**	**85.99**	**336**	*e*P	**P**	**15 41 33.7**	**+0.1**	
LMR				pmax	pmax			
	comp=Z,15nm,1.0s,mb5.2							
LFF	**La Frestale**	**86.00**	**340**	*e*P	**P**	**15 41 33.9**	**+0.3**	
MTLF	**Montolieu**	**87.14**	**339**	*e*P	**P**	**15 41 39.2**	**0.0**	
EPF	**Esparros**	**87.90**	**340**	*e*P	**P**	**15 41 43.2**	**+0.3**	
SJPF	**Ste Jean**	**88.19**	**341**	*e*P	**P**	**15 41 44.9**	**+0.7**	
ETSF	**Etsaut**	**88.24**	**340**	*e*P	**P**	**15 41 45.2**	**+0.7**	
KEST	**Kesra**	**92.04**	**331**	LR	LR	16 25 40.0		
	comp=Z,35nm,21.7s,MS3.8,baz=304,slow=37							
TORD	**Torodi Ar. Bea**	**115.43**	**328**	PKP	PKPdf	15 47 34.7	-0.6	
	comp=Z,0.4nm,0.5s,baz=7,8,slow=1.2,SNR=2.9							
VNDA	**Vanda**	**123.41**	**178**	PKP	PKPdf	15 47 49.0	+0.2	
	comp=Z,0.4nm,0.9s,baz=350,slow=4.5,SNR=3.6							
DBIC	**Dimbokro**	**123.73**	**332**	PKP	PKPdf	15 47 50.0	-1.3	
	comp=Z,3.9nm,0.9s,baz=47,slow=2.2,SNR=3.4							
DBIC	**Dimbokro**	**123.73**	**332**	PKIKP	PKPdf	15 47 50.1	-1.3	
DBIC				pmax	pmax			
	comp=Z,4.0nm,0.9s							
SIV	**San Ignacio**	**139.09**	**54**	PKP	PKPdf	15 48 20.4	+0.2	
	comp=Z,0.6nm,0.7s,baz=353,slow=3.6,SNR=6.4							
CFAA	**Coronel Fontan**	**145.65**	**80**	PKPbc	PKPbc	15 48 32.4	+0.6	
	comp=Z,0.3nm,0.8s,baz=301,slow=7.1,SNR=3.6							
PLCA	**Paso Flores**	**148.67**	**96**	PKPbc	PKPbc	15 48 41.2	+1.3	
	comp=Z,2.9nm,0.8s,baz=12,slow=2.0,SNR=4.3							
PLCA	**Paso Flores**	**148.67**	**96**	PKPbc	PKPbc	15 48 41.2	+1.3	
PLCA	**Paso Flores**	**148.67**	**96**	PKP2	PKPbc	15 48 41.2	+1.3	
PLCA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
VNA2	**Neumayer--Watz**	**153.17**	**195**	*e*PKPdf	PKPbc	15 48 50.2	+0.6	
	baz=45,slow=0.9							
VNA2				*e*		15 49 03.4		
VNA2				*e*		15 49 10.7		
VNA3	**Neumayer Olymp**	**153.27**	**193**	*e*PKPdf	PKPbc	15 48 50.7	+0.9	
VNA3				*e*		15 49 03.3		
VNA3				*e*		15 49 10.7		

*ISCJB **29** 15:48:19.2±1.0, 876S±006×7481W±008, h138km±10km, mb4.3/21, Error ellipse: s-maj=13.8km s-min=8.4km az=145.9*

*NEIC **29** 15:48:20.5±0.8, 870S×7473W, h129km±8km, mb4.5/15, Error ellipse: s-maj=10.2km s-min=6.8km az=53.0*

NEIC Felt [II] at Puerto Inca.

*IDC **29** 15:48:20.5±0.7, 876S×7481W, h130km±5km, mb3.8/7, mb1 4.1/11, mb1mx3.9/22, mbtmp3.9/11, Error ellipse: s-maj=11.8km s-min=11.0km az=46.0*

ISC 29 15:48:20.1±0.9, 876S±006×7476W±007, h126km±10km, n42, σ0°90/38, mb4.4/21, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.81**	**212**	P	**Pn**	**15 49 19.0**	**+1.8**
	31nm,0.3s,baz=15,slow=9.6,SNR=56						
NNA				S	**Sn**	**15 50 00.6**	**-0.9**
	58nm,0.3s,baz=354,slow=9.6,SNR=5.0						
NNA	**Nana**	**3.81**	**212**	*e*Pn	**Pn**	**15 49 18.2**	**+1.0**
NNA				P		15 49 19.0	
NNA				S	**Sn**	**15 50 00.6**	**-0.9**
ATAH	**Atahualpa**	**4.00**	**296**	P	**Pn**	**15 49 20.1**	**+0.4**
	30nm,0.3s,baz=76,slow=7.2,SNR=263						
ATAH				S	**Sn**	**15 50 04.5**	**-1.6**
	260nm,0.3s,baz=282,slow=5.9,SNR=26						
OTAV	**Otavalo**	**9.66**	**337**	*e*Pn	**Pn**	**15 50 35.6**	**-0.4**
	4.9nm,0.5s						
SIV	**San Ignacio**	**15.18**	**120**	P	**Pn**	**15 51 48.4**	**+0.5**
	0.8nm,0.3s,baz=295,slow=14,SNR=35						
PAYG	**Puerto Ayora**	**17.42**	**297**	*e*Pn	**Pn**	**15 52 16.1**	**+0.6**
	64nm,1.1s						
SDV	**Santo Domingo**	**18.00**	**13**	P	**P**	**15 52 21.9**	**+0.8**
	2.3nm,0.3s,baz=184,slow=13,SNR=13						
SDV	**Santo Domingo**	**18.00**	**13**	*e*P	**P**	**15 52 21.6**	**+0.5**
	16nm,0.8s						
PCRV	**Puerto La Cruz**	**21.34**	**28**	P	**P**	**15 52 58.3**	**+1.0**
	8.3nm,0.5s,mb4.3,baz=328,slow=7.4,SNR=4.1						
CFAA	**Coronel Fontan**	**23.53**	**166**	P	**P**	**15 53 20.9**	**+2.2**
	0.2nm,0.6s,baz=347,slow=14,SNR=4.5						
TXAR	**Lajitas Array**	**47.01**	**325**	P	**P**	**15 56 38.5**	**-0.3**
	0.9nm,0.6s,mb3.7,baz=145,slow=9.0,SNR=8.9						
ANMO	**Albuquerque**	**52.80**	**327**	*e*P	**P**	**15 57 23.2**	**+0.8**
	4.2nm,1.0s,mb4.4						
SDCO	**Great Sand Dun**	**54.46**	**330**	*e*P	**P**	**15 57 34.9**	**+0.4**
	6.3nm,0.8s,mb4.7						

PV01	**Paradox Valley**	**56.31**	**328**	P	**P**	**15 57 48.5**	**+0.7**	
RSSD	**Black Hills**	**58.93**	**336**	*e*P	**P**	**15 58 05.0**	**-0.9**	
	5.4nm,1.0s,mb4.5							
DUG	**Dugway**	**60.06**	**327**	*e*P	**P**	**15 58 14.6**	**+0.8**	
	18nm,1.6s,mb4.8							
PDAR	**Pinedale Array**	**60.30**	**331**	P	**P**	**15 58 15.4**	**+0.1**	
	1.0nm,0.7s,mb4.0,baz=116,slow=6.8,SNR=8.4							
PDAR				PcP	PcP	15 59 00.3	+1.0	
	0.3nm,0.5s,baz=134,slow=7.6,SNR=3.0							
HWUT	**Hardware Ranch**	**60.43**	**329**	*e*P	**P**	**15 58 16.1**	**-0.1**	
	7.9nm,0.7s,mb4.8							
NVAR	**Mina Array Bea**	**62.02**	**322**	P	**P**	**15 58 28.1**	**+1.0**	
	1.7nm,0.8s,mb4.1,baz=147,slow=7.6,SNR=9.1							
NVAR				PcP	PcP	15 59 07.6	+1.1	
	0.3nm,0.6s,baz=120,slow=5.3,SNR=3.8							
HLID	**Hailey**	**63.30**	**329**	*e*P	**P**	**15 58 36.1**	**+0.6**	
	2.0nm,0.8s,mb4.1							
WVOR	**Wild Horse Val**	**64.80**	**325**	*e*P	**P**	**15 58 45.3**	**0.0**	
	3.5nm,1.0s,mb4.1							
WALA	**Waterton Lakes**	**67.03**	**333**	*e*P	**P**	**15 58 59.1**	**-0.3**	
	9.0nm,1.1s,mb4.5							
LIC	**Lamto**	**71.09**	**80**	*e*PKP2	**P**	**15 59 25.0**	**-0.3**	
	48nm,1.6s,mb5.1							
TIC	**Toumodi**	**71.18**	**80**	*e*PKP2	**P**	**15 59 24.8**	**-1.0**	
	11nm,0.3s,mb5.2							
DBIC	**Dimbokro**	**71.34**	**80**	P	**P**	**15 59 26.2**	**-0.6**	
	4.2nm,0.5s,mb4.5,baz=231,slow=4.8,SNR=11							
DBIC	**Dimbokro**	**71.34**	**80**	*e*P	**P**	**15 59 26.0**	**-0.8**	
	10.0nm,0.9s,mb4.7							
KIC	**Kosan Boka**	**71.39**	**80**	*e*PKP2	**P**	**15 59 26.0**	**-1.1**	
	38nm,1.0s,mb5.2							
SNAA	**Sanae**	**76.08**	**162**	*e*P	**P**	**15 59 50.1**	**-3.2**	
	11nm,1.5s,mb4.4							
YKA	**Yellowknife Ar**	**77.38**	**342**	P	**P**	**16 00 00.5**	**-0.2**	
	1.9nm,0.7s,mb3.9,baz=143,slow=6.1,SNR=10							
YKA				pP	pP	16 00 34.4	+2.1	
	1.0nm,0.5s,baz=142,slow=5.9,SNR=4.5							
YKA				sP	sP	16 00 46.4	+0.5	
	0.5nm,0.5s,baz=139,slow=6.1,SNR=2.4							
YKA	**Yellowknife Ar**	**77.38**	**342**	P	**P**	**16 00 00.5**	**-0.2**	
YKA				pP	pP	16 00 34.4	+2.1	
YKA				sP	sP	16 00 46.4	+0.5	
TOA0	**Torodi Ar. Sit**	**78.97**	**75**	*e*P	**P**	**16 00 09.0**	**-1.5**	
TORD	**Torodi Ar. Bea**	**78.97**	**75**	P	**P**	**16 00 09.5**	**-1.0**	
	1.1nm,0.6s,mb3.9,baz=274,slow=4.8,SNR=8.2							
TORD				pP	pP	16 00 43.3	+1.1	
	1.2nm,0.6s,baz=275,slow=5.8,SNR=3.0							
TORD	**Torodi Ar. Bea**	**78.97**	**75**	P	**P**	**16 00 09.5**	**-1.0**	
TORD				pP	pP	16 00 43.3	+1.1	
TAM	**Tamanrasset**	**84.51**	**66**	*e*P	**P**	**16 00 40.1**	**+0.7**	
	4.3nm,1.0s,mb4.3							
TSUM	**Tsumeb**	**89.36**	**109**	P	**P**	**16 01 02.9**	**-0.1**	
	3.4nm,1.0s,mb4.3							
STKA	**Stephens Creek**	**126.71**	**219**	PKP	PKPdf	16 07 09.6	+0.4	
	1.9nm,0.9s,baz=148,slow=23,SNR=3.5							
ZALV	**Zalesovo Beam**	**132.04**	**16**	PKP	PKPdf	16 07 18.2	-0.4	
	0.8nm,0.6s,baz=349,slow=2.9,SNR=4.1							
ZALV				pPKP	pPKPdf	16 07 54.8	+2.2	
	0.4nm,0.3s,baz=242,slow=3.2,SNR=2.4							
KURK	**Kurchatov**	**132.73**	**23**	PKP	PKPdf	16 07 20.8	+0.8	
	0.3nm,0.6s,baz=308,slow=2.6,SNR=3.0							
ASAR	**Alice Springs**	**137.30**	**220**	PKhKP		16 07 20.4		
	0.2nm,0.6s,baz=96,slow=1.9,SNR=3.5							
ASAR				PKP	PKPdf	16 07 29.4	0.0	
	0.7nm,0.7s,baz=136,slow=1.9,SNR=7.3							
MKAR	**Makanchi Array**	**137.33**	**23**	PKP	PKPdf	16 07 28.6	-0.1	
	0.3nm,0.6s,baz=17,slow=1.5,SNR=3.0							
SONM	**Songino Array**	**141.04**	**359**	PKP	PKPdf	16 07 33.6	-1.9	
	0.6nm,0.8s,baz=22,slow=1.6,SNR=3.4							
KSRS	**Korea Array**	**144.82**	**328**	PKP	PKPdf	16 07 41.8	-0.8	
	1.0nm,0.7s,baz=56,slow=2.5,SNR=5.1							

*ISCJB **29** 15:50:28.7±1.2, 203S±0.1×692W±02, h108km±10km, Error ellipse: s-maj=25.7km s-min=13.3km az=29.4*

*GUC **29** 15:50:29.6±1.0, 2030S×6914W, h93km±9km, ML4.1*

*IDC **29** 15:50:32.7±4.1, 2048S×6885W, h115km±30km, mb3.4/2, mb1 3.5/4, mb1mx3.3/17, mbtmp3.5/4, Error ellipse: s-maj=77.8km s-min=22.0km az=118.0*

*NEIC **29** 15:50:34.3±2.0, 2083S×6840W, h126km±15km, Error ellipse: s-maj=51.5km s-min=13.2km az=121.0*

ISC 29 15:50:29.8±1.2, 203S±01×692W±02, h100km±10km, n16, σ0°95/23, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.82**	**201**	*e*P	**Pn**	**15 50 48.1**	**-0.2**
PB01				*i* S	**Sn**	**15 51 01.4**	**-0.8**
PB01				AML	AML	15 51 02.8	
	comp=N,16μm,0.2s						
TOCH	**Tocopilla**	**2.05**	**208**	*e*P	**Pn**	**15 51 03.3**	**+0.3**
TOCH				*i* S	**Sn**	**15 51 28.6**	**+0.2**
TOCH				AML	AML	15 51 32.4	
	comp=N,2μm,0.1s						
LVC	**Limon Verde**	**2.33**	**174**	P	**Pn**	**15 51 07.5**	**+0.8**
	comp=N,35nm,0.3s,baz=358,slow=12,SNR=125						
LVC				S	**Sn**	**15 51 35.3**	**+0.3**
	comp=N,28nm,0.3s,baz=316,slow=14,SNR=7.6						
LVC	**Limon Verde**	**2.33**	**174**	P	**Pn**	**15 51 07.5**	**+0.8**
LVC				S	**Sn**	**15 51 35.3**	**+0.3**
LVC	**Limon Verde**	**2.33**	**174**	*e*P	**Pn**	**15 51 07.7**	**+0.9**
LVC				*i* S	**Sn**	**15 51 36.1**	**+1.1**
LVC				AML	AML	15 51 40.5	
	comp=E,564nm,0.3s						
PECH	**Pedro de Valdi**	**2.35**	**191**	*e*P	**Pn**	**15 51 07.5**	**+0.5**
PECH				*i* S	**Sn**	**15 51 34.8**	**-0.7**
PECH				AML	AML	15 51 36.4	
	comp=E,2μm,0.4s						
CEN1	**Los Morros**	**3.24**	**197**	*e*P	**Pn**	**15 51 20.9**	**+2.2**
CEN1				*i* S	**Sn**	**15 52 08.4**	**+12**
CEN1				AML	AML	15 52 20.3	
	comp=E,166nm,0.7s						
CPN1	**Cerro Paranal**	**4.47**	**195**	*e*P	**Pn**	**15 51 41.0**	**+5.6**
SIV	**San Ignacio**	**8.80**	**62**	P	**Pn**	**15 52 33.7**	**-0.5**
	comp=E,2.0nm,0.3s,baz=254,slow=11,SNR=6.2						
LCO	**Las Campanas**	**8.80**	**189**	*e*P	**Pn**	**15 52 33.0**	**-1.1**
CFAA	**Coronel Fontan**	**11.31**	**176**	P	**Pn**	**15 53 03.4**	**-4.8**
	comp=E,0.0nm,0.3s,baz=202,slow=15,SNR=3.4						
CFAA				S	**Sn**	**15 54 59.7**	**-13**
	comp=E,0.0nm,0.3s,baz=351,slow=8.9,SNR=3.2						
CFAA	**Coronel Fontan**	**11.31**	**176**	P	**Pn**	**15 53 03.4**	**-4.8**
CFAA				S	**Sn**	**15 54 59.7**	**-13**
PLCA	**Paso Flores**	**20.42**	**183**	P	**P**	**15 54 57.1**	**-1.8**
	comp=E,1.9nm,0.7s,baz=354,slow=9.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.18**	**71**	P	**P**	**16 02 13.8**	**+0.8**
	comp=E,0.6nm,0.5s,baz=238,slow=5.3,SNR=4.1						
TORD				pP	pP	16 02 40.1	+1.2
	comp=E,0.9nm,0.8s,baz=245,slow=5.7,SNR=3.0						
MKAR	**Makanchi Array**	**144.78**	**35**	PKP	PKPdf	16 09 55.1	+0.3
	comp=E,0.2nm,0.6s,baz=336,slow=3.2,SNR=4.0						
SONM	**Songino Array**	**152.28**	**6**	PKPbc	PKPbc	16 10 15.7	+2.0
	comp=E,0.3nm,0.3s,baz=338,slow=0.6,SNR=4.2						

*BJI **29** 15:53:30.2, 4594S×16667E, h120km, mb4.9*

*GCMT **29** 15:53:31.6±0.2, 4494S×16732E, h116km±1km, MW5.2/83, Moment Tensor Solution. s71,c105; s83,c136; Duration: 1±0 Moment tensor: Scale 10^16 Nm; Mrr=5.83±.16; Mθθ=-3.66±.20; Mφφ=-2.17±.21; Mrθ=1.48±.14; Mθφ=-3.90±.19; Mφr=4.76±.13; Best double couple: M=8.01500×10^16 NP1=∅s76.00000°, δ43.00000°, λ136.00000°. NP2=∅s201.00000°, δ61.00000°, λ56.00000°. Principal axes: T 8.8030, Plg59.0000°, Azm62.0000°; N -1.5760, Plg29.0000°, Azm219.0000°; P -7.2270, Plg10.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **29** 15:53:31.6±0.2, 4500S×16741E, mb4.9/21 Error ellipse: s-maj=7.5km s-min=4.8km az=156.0*

NEIC Items knocked from shelves at Queenstown.

*IDC **29** 15:53:31.4±0.6, 4486S×16774E, h111km±4km, mb4.3/13, mb1 4.4/14, mb1mx4.4/17, mbtmp4.4/14, MS4.0/7, Ms1 3.9/7, ms1mx3.6/13, Error ellipse: s-maj=16.7km s-min=11.6km az=56.0*

*ISCJB **29** 15:53:31.8±0.3, 4500S±004×16754E±005, h127km±4km, mb5.0/37, Error ellipse: s-maj=7.0km s-min=5.6km az=153.9*

*MOS **29** 15:53:32.1±1.1, 4506S×16739E, h121km, mb4.9/14, Error ellipse: s-maj=16.4km s-min=11.7km az=111.3*

*DJA **29** 15:53:39.5±0.0, 4526S×16702E, h167km, mB5.9/4, Mw(mB)5.6/4, Mwp5.6/3*

ISC 29 15:53:32.9±0.3, 4501S±004×16757E±005, h122km±4km,

h111km±3.1km: pP-P, n240, σ0°96/136, mb5.0/37, 8C-15D, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.42**	**38**	P	**Pn**	**15 53 51.1**	**+0.5**
MLZ	**Mavora Lakes**	**0.55**	**129**	P	**Pn**	**15 53 51.1**	**-0.2**
DCZ	**Deep Cove**	**0.55**	**212**	⇑P	**Pn**	**15 53 49.1**	**-2.2**
WHZ	**Wether Hill Ro**	**0.93**	**163**	P	**Pn**	**15 53 53.5**	**-0.8**
WKZ	**Wanaka**	**1.05**	**81**	⇓P	**Pn**	**15 53 57.0**	**+1.5**
EAZ	**Earnscleugh**	**1.25**	**101**	⇓P	**Pn**	**15 53 58.8**	**+1.2**
JCZ	**Jackson Bay**	**1.26**	**43**	⇓P	**Pn**	**15 53 59.0**	**+1.2**
TUZ	**Tuapeka**	**1.73**	**124**	⇓P	**Pn**	**15 54 03.8**	**+0.7**
LBZ	**Lake Benmore**	**1.97**	**73**	⇓P	**Pn**	**15 54 06.6**	**+0.6**
FOZ	**Fox Glacier**	**2.10**	**47**	⇓P	**Pn**	**15 54 09.1**	**+1.5**
ODZ	**Otahua Downs**	**2.18**	**92**	P	**Pn**	**15 54 08.8**	**+0.1**
RPZ	**Rata Peaks**	**2.81**	**64**	P	**Pn**	**15 54 16.8**	**0.0**
	358nm,0.3s,baz=236,slow=5.8,SNR=1419						
RPZ				S	**Sn**	**15 54 50.1**	**-0.5**
	1μm,0.3s,baz=348,slow=20,SNR=40						
RPZ	**Rata Peaks**	**2.81**	**64**	⇓P	**Pn**	**15 54 16.8**	**0.0**
WVZ	**Waitaha Valley**	**2.99**	**51**	P	**Pn**	**15 54 18.7**	**-0.4**
MQZ	**McQueen's Vall**	**3.87**	**72**	P	**Pn**	**15 54 30.7**	**0.0**
CRLZ	**Canterbury Las**	**3.90**	**70**	P	**Pn**	**15 54 31.0**	**-0.1**
LTZ	**Lake Taylor**	**4.06**	**58**	P	**Pn**	**15 54 32.6**	**-0.7**
DSZ	**Denniston Nort**	**4.49**	**45**	P	**Pn**	**15 54 38.7**	**-0.3**
KHZ	**Kahutara**	**5.04**	**61**	P	**Pn**	**15 54 45.7**	**-0.7**
THZ	**Tophouse**	**5.06**	**52**	P	**Pn**	**15 54 45.8**	**-0.9**
NNZ	**Nelson**	**5.70**	**50**	*e*P	**Pn**	**15 54 53.9**	**-1.3**
SNZO	**South Karori**	**6.39**	**57**	*e*Pn	**Pn**	**15 55 05.7**	**+1.0**
	285nm,0.9s						
SNZO				*e*Sn	**Sn**	**15 56 14.0**	**-2.2**
WTAZ	**Waiatarua**	**9.65**	**36**	P	**Pn**	**15 55 48.2**	**-0.4**
MKAZ	**Moumakai**	**9.75**	**39**	P	**Pn**	**15 55 49.9**	**-0.1**
URZ	**Urewera**	**9.82**	**50**	P	**Pn**	**15 55 46.6**	**-4.3**
	7.7nm,0.3s,baz=242,slow=7.8,SNR=42						
URZ				S	**Sn**	**15 57 31.9**	**-7.3**
	11nm,0.3s,baz=71,slow=18,SNR=7.0						
URZ	**Urewera**	**9.82**	**50**	P	**Pn**	**15 55 46.5**	**-4.4**
MWZ	**Matawai**	**9.99**	**52**	*e*P	**Pn**	**15 55 50.2**	**-3.0**
KUZ	**Kuaotunu**	**10.30**	**40**	P	**Pn**	**15 55 57.4**	**+0.1**
WCZ	**Waipu Caves**	**10.42**	**32**	*e*P	**Pn**	**15 55 59.6**	**+0.6**
MCQ	**Macquarie Isla**	**11.00**	**207**	*e*P	**Pn**	**15 56 05.8**	**-0.7**
TAU	**Tasmania Unive**	**14.73**	**271**	*e*Pn	**Pn**	**15 56 55.1**	**+0.1**
	246nm,1.4s						
TAU				*e*Sn	**Sn**	**15 59 28.0**	**-10**
TAU	**Tasmania Unive**	**14.73**	**271**	*e*P	**Pn**	**15 56 55.1**	**0.0**
TAU				*e*		15 59 28.0	
TAU				pmax	pmax		
	comp=Z,246nm,1.4s						
MOO	**Moorlands**	**14.95**	**273**	*e*P	**Pn**	**15 56 58.6**	**+0.7**
MOO				*e*S	**Sn**	**15 59 32.9**	**-10**
MOO				*e*T		16 11 18.5	
CNB	**Canberra Magne**	**16.92**	**299**	⇓*i*P	**Pn**	**15 57 23.3**	**+1.1**
CNB				*e*T		16 13 38.1	
TOO	**Toolangi**	**18.14**	**286**	⇓*i*P	**P**	**15 57 36.3**	**+0.7**
TOO				*e*S	**S**	**16 00 49.6**	**-7.4**
TOO				*e*T		16 13 51.0	
TOO	**Toolangi**	**18.14**	**286**	⇓*i*P	**P**	**15 57 36.3**	**+0.7**
TOO				*e*S	**S**	**16 00 49.6**	**-7.4**
ARMA	**Armidale**	**19.21**	**314**	*e*P	**P**	**15 57 49.5**	**+2.2**
STKA	**Stephens Creek**	**24.08**	**294**	*e*P	**P**	**15 58 37.9**	**+1.0**
	comp

	comp=Z,15nm,0.8s,mb4.9						
MUN	**Mundaring**	**41.59 270**	*e*P		**P**	**16 01 07.9**	**-0.8**
KAKA	**Kakadu**	**43.92 306**	⇓*i*P		Px	16 01 11.7	
	comp=Z,30nm,0.6s						
KAKA	**Kakadu**	**43.92 306**	P		Px	16 01 11.9	
FITZ	**Fitzroy Crossi**	**43.98 294**	P		**P**	**16 01 27.6**	**-0.4**
PPT	**Papeete**	**44.97 67**	*e*LR		LR	16 14 24.0	
	comp=Z,751nm,35.2s						
QSPA	**South Pole Qui**	**45.12 180**	P		**P**	**16 01 37.9**	**+1.5**
	comp=Z,4.8nm,0.5s,mb4.5,baz=359,slow=0.7,SNR=10						
QSPA			pP		pP	16 02 03.9	-0.3
	comp=Z,15nm,0.9s,baz=355,slow=3.0,SNR=4.3						
QSPA	**South Pole Qui**	**45.12 180**	*e*P		**P**	**16 01 38.0**	**+1.7**
	comp=Z,6.6nm,0.8s,mb4.4						
QSPA			*e*			16 01 52.1	
QSPA			*e*pP		pP	16 02 04.4	+0.3
QSPA			*e*sP		sP	16 02 17.3	-0.6
QSPA			*e*PcP		PcP	16 03 14.6	0.0
MBWA	**Marble Bar**	**45.78 285**	*e*P		**P**	**16 01 41.3**	**-1.0**
	comp=Z,13nm,0.8s,mb4.7						
MBWA			*e*pP		pP	16 02 07.6	-2.6
MBWA	**Marble Bar**	**45.78 285**	P		**P**	**16 01 41.6**	**-0.7**
PMOR	**Pomariorio Ree**	**47.94 66**	*e*P		**P**	**16 01 59.9**	**+0.8**
	comp=Z,49nm,1.1s,mb5.3						
BATI	**Baumata**	**51.16 299**	P		**P**	**16 02 24.2**	**+0.7**
	comp=Z,20nm,0.6s,mb5.4,baz=190,slow=2.0,SNR=8.0						
BATI	**Baumata**	**51.16 299**	P		**P**	**16 02 24.4**	**+0.9**
RKT	**Rikitea**	**51.21 85**	*e*LR		LR	16 17 17.1	
	comp=Z,678nm,34.0s						
AAI	**Ambon**	**53.68 308**	P		**P**	**16 02 43.3**	**+1.2**
MAW	**Mawson**	**54.41 207**	P		**P**	**16 02 46.8**	**+0.1**
	comp=Z,2.6nm,0.9s,mb4.2,baz=132,slow=5.1,SNR=3.8						
MAW			PcP		PcP	16 03 49.1	+0.3
	comp=Z,10nm,1.0s,baz=90,slow=5.5,SNR=4.8						
MAW			LR		LR	16 22 27.7	
	comp=Z,134nm,21.8s,baz=115,slow=32						
MAW	**Mawson**	**54.41 207**	P		**P**	**16 02 45.2**	**-1.5**
	comp=Z,0.9nm,0.8s,mb3.9						
MAW	**Mawson**	**54.41 207**	P		**P**	**16 02 46.8**	**+0.1**
MAW						16 03 49.1	
MAW			pmax		pmax		
	comp=Z,3.0nm,0.9s						
MAW			pmax		pmax		
	comp=Z,11nm,1.0s						
LBMI	**Labuha**	**56.59 310**	P		**P**	**16 03 03.2**	**+0.2**
	comp=Z,48nm,1.0s,mb5.5						
KDI	**Kendari**	**56.69 303**	P		**P**	**16 03 03.2**	**-0.5**
	comp=Z,28nm,1.1s,mb5.2						
KAPI	**Kappang**	**57.60 299**	P		**P**	**16 03 09.7**	**-0.5**
	comp=Z,28nm,0.8s,mb5.3,baz=163,slow=5.9,SNR=17						
KAPI	**Kappang**	**57.60 299**	*e*P		**P**	**16 03 09.1**	**-1.1**
	comp=Z,44nm,1.0s,mb5.5						
IGBI	**Denpasar**	**57.66 292**	P		**P**	**16 03 10.0**	**-0.6**
KHKI	**Kahang-Kahang**	**57.70 293**	P		**P**	**16 03 10.2**	**-0.6**
SYO	**Syowa Base**	**59.99 199**⇑	*e*P		**P**	**16 03 23.3**	**-2.6**
SJI	**Sawahan**	**60.70 290**	P		**P**	**16 03 31.9**	**+0.4**
PCI	**Palu**	**60.78 302**	P		**P**	**16 03 32.5**	**+0.4**
BJII	**Banjamegara**	**62.37 289**	P		**P**	**16 03 42.4**	**-0.4**
CLJI	**Cilicap**	**62.56 288**	P		**P**	**16 03 43.0**	**-1.0**
PLKI	**Palangkaraya**	**63.41 296**	P		**P**	**16 03 49.5**	**-0.1**
	comp=Z,74nm,1.0s,mb5.6						
SNAA	**Sanae**	**63.43 183**	*e*P		**P**	**16 03 45.3**	**-3.6**
	comp=Z,30nm,1.4s,mb5.0						
SNAA			*e*pP		pP	16 04 14.4	-4.1
SNAA	**Sanae**	**63.43 183**	*e*P		**P**	**16 03 45.3**	**-3.6**
SNAA			*e**PP		pP	16 04 14.4	-4.0
SNAA			pmax		pmax		
	comp=Z,30nm,1.4s						
VNA3	**Neumayer Olymp**	**64.04 181**	*e*P		**P**	**16 03 52.5**	**-0.5**
LEM	**Lembang**	**64.15 287**	P		**P**	**16 03 55.7**	**+1.2**
	comp=Z,109nm,1.2s,mb5.5						
VNA2	**Neumayer--Watz**	**64.32 182**	*e*P		**P**	**16 03 54.8**	**0.0**
	baz=166,slow=4.2						
VNA2			*e*		pP	16 04 22.9	-1.5
VNA2			*e*			16 04 32.5	
VNA1	**Neumayer--Stat**	**64.62 182**	*e*P		**P**	**16 03 57.1**	**+0.4**
VNA1			*e*		pP	16 04 26.1	-0.2
VNA1			*e*			16 04 35.8	
DBJI	**Dramaga**	**64.94 287**	P		**P**	**16 04 00.5**	**+0.9**
	comp=Z,232nm,1.1s,comp=Z,2μm,mb5.9						
STKI	**Sintang**	**66.74 295**	P		**P**	**16 04 11.4**	**+0.3**
	comp=Z,41nm,1.3s,comp=Z,4μm,mb5.1						
SBUM	**Sibu**	**68.09 298**	P		**P**	**16 04 19.5**	**-0.2**
KKM	**Kota Kinabalu**	**68.48 303**	*e*P		**P**	**16 04 21.6**	**-0.4**
KKM	**Kota Kinabalu**	**68.48 303**	P		**P**	**16 04 21.5**	**-0.5**
KSM	**Kuching**	**68.56 295**	*e*P		**P**	**16 04 22.1**	**-0.5**
	comp=Z,25nm,0.8s,mb5.1						
KSM	**Kuching**	**68.56 295**	P		**P**	**16 04 22.2**	**-0.4**
PPBI	**Pangkal Pinang**	**68.57 289**	P		**P**	**16 04 22.1**	**-0.5**
	comp=Z,21nm,1.4s,mb4.8						
KSI	**Kapahiang**	**69.87 286**	P		**P**	**16 04 30.5**	**-0.2**
	comp=Z,56nm,1.1s,mb5.3						
EFI	**East Falkland**	**75.96 153**	*e*P		**P**	**16 05 07.2**	**+1.2**
	comp=Z,29nm,1.0s,mb5.0						
EFI	**East Falkland**	**75.96 153**	*e*P		**P**	**16 05 07.2**	**+1.2**
EFI			pmax		pmax		
	comp=Z,29nm,1.0s,mb5.0						
PLCA	**Paso Flores**	**80.01 139**	P		**P**	**16 05 29.5**	**+0.9**
	comp=Z,14nm,0.9s,mb4.8,baz=212,slow=6.6,SNR=13						
PLCA			LR		LR	16 32 50.1	
	comp=Z,63nm,20.7s,baz=189,slow=30						
PLCA	**Paso Flores**	**80.01 139**	*e*P		**P**	**16 05 29.9**	**+1.3**
	comp=Z,26nm,1.3s,mb4.9						
PLCA	**Paso Flores**	**80.01 139**	*e*P		**P**	**16 05 30.0**	**+1.4**
PLCA			pmax		pmax		
	comp=Z,26nm,1.3s						
MJAR	**Matsushiro Arr**	**85.41 337**	P		**P**	**16 05 55.9**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.4,baz=166,slow=6.6,SNR=7.7						
MJAR	**Matsushiro Arr**	**85.41 337**	P		**P**	**16 05 55.9**	**-0.3**
MJAR			pmax		pmax		
	comp=Z,4.0nm,0.9s						
MAJO	**Matsushiro**	**85.41 337**	*e*P		**P**	**16 05 56.0**	**-0.3**
	comp=Z,12nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**85.41 337**	*e*P		**P**	**16 05 56.0**	**-0.2**
MAJO			pmax		pmax		
	comp=Z,12nm,1.0s,mb4.8						
CFAA	**Coronel Fontan**	**88.43 135**	P		**P**	**16 06 11.8**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=209,slow=4.9,SNR=11						
CFAA	**Coronel Fontan**	**88.43 135**	P		**P**	**16 06 11.8**	**+0.5**
NJ2	**Nanjing**	**88.55 320**	*e*P		**P**	**16 06 13.0**	**+1.5**
NJ2			AMB		AMB		
	comp=Z,90nm,1.0s,mb5.8						
CMAR	**Chiang Mai Arr**	**88.65 298**	P		**P**	**16 06 12.6**	**+0.3**
	comp=Z,13nm,0.9s,mb5.0,baz=154,slow=3.3,SNR=81						
CMAR			pP		pP	16 06 40.5	-3.1
	comp=Z,2.0nm,0.9s,baz=160,slow=3.5,SNR=2.0						
CMAR	**Chiang Mai Arr**	**88.65 298**	P		**P**	**16 06 12.6**	**+0.3**
CMAR			*PP		pP	16 06 40.6	-3.0
CMAR			pmax		pmax		
	comp=Z,13nm,0.9s						
CMAR			pmax		pmax		
	comp=Z,2.0nm,0.9s						
CHTO	**Chiang Mai**	**88.91 298**	*e*P		**P**	**16 06 13.8**	**+0.3**
	comp=Z,7.3nm,0.9s,mb4.7						
CHTO			*e*pP		pP	16 06 42.1	-2.7
CHTO	**Chiang Mai**	**88.91 298**	*e*P		**P**	**16 06 13.8**	**+0.3**
CHTO			*e**PP		pP	16 06 42.1	-2.8
CHTO			pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
WHN	**Wuhan**	**89.42 316**	⇓P		**P**	**16 06 16.5**	**+0.8**
WHN			AMB		AMB		
	comp=Z,35nm,0.8s,mb5.4						
KSRS	**Korea Array**	**89.55 329**	P		**P**	**16 06 17.1**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.6,baz=146,slow=5.5,SNR=7.1						
KSRS	**Korea Array**	**89.55 329**	P		**P**	**16 06 17.1**	**+1.0**
KSRS			pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KMI	**Kunming**	**91.38 305**	P		**P**	**16 06 26.5**	**+1.6**
KMI			AMB		AMB		
	comp=Z,11nm,1.1s,mb4.9						
KMI			LR		LR		
	comp=Z,65nm,48.9s						
XAN	**Xi'an**	**94.94 315**	P		**P**	**16 06 41.0**	**-0.1**
XAN			AMB		AMB		
	comp=Z,6.0nm,1.1s,mb4.9						
PETK	**Petropavlovsk-**	**98.10 354**	LR		LR	16 46 59.3	
	comp=Z,55nm,21.2s,baz=295,slow=33						
BOSA	**Boshof**	**99.08 213**	LR		LR	16 46 22.1	
	comp=Z,67nm,18.5s,baz=12,slow=32						
SONM	**Songino Array**	**106.88 322**	PKKPbc		PKKPbc	16 23 02.9	+1.3
	comp=Z,1.4nm,0.9s,baz=272,slow=2.0,SNR=7.3						
TXAR	**Lajitas Array**	**109.28 68**	PKKPbc		PKKPbc	16 22 55.0	+1.6
	comp=Z,0.4nm,1.0s,baz=126,slow=2.9,SNR=3.6						
ANMO	**Albuquerque**	**111.16 61**⇑	*i*PKIKP		PKiKP	16 11 51.5	-0.2
PDAR	**Pinedale Array**	**114.33 53**	PKP		PKiKP	16 11 58.5	+1.0
	comp=Z,0.1nm,0.5s,baz=301,slow=1.9,SNR=4.0						
MKAR	**Makanchi Array**	**118.16 309**	PKP		PKPdf	16 12 03.9	-0.9
	comp=Z,3.9nm,0.9s,baz=156,slow=2.0,SNR=20						
MKAR			PKKPbc		PKKPbc	16 22 24.9	+1.2
	comp=Z,0.8nm,0.8s,baz=326,slow=1.5,SNR=5.0						
MKAR	**Makanchi Array**	**118.16 309**	PKIKP		PKPdf	16 12 03.9	-0.9
MKAR			pmax		pmax		
	comp=Z,4.0nm,0.9s						
MKAR			pmax		pmax		
	comp=Z,1.0nm,0.8s						
KZA	**Kyzart**	**119.47 301**	P		PKPdf	16 12 08.3	+0.9
	SNR=8.9						
TIXI	**Tiksi**	**119.55 347**⇑	*i*PKIKP		PKPdf	16 12 04.8	-1.9
TKM2	**Tokmak 2**	**119.75 302**	P		PKPdf	16 12 07.8	-0.2
	SNR=5.6						
KBK	**Karagaybulak**	**119.98 302**	P		PKPdf	16 12 08.7	+0.3
	SNR=6.5						
CHMS	**Chumysh**	**120.30 302**	P		PKPdf	16 12 08.6	-0.4
	SNR=7.1						
USP	**Ospennovka**	**120.60 302**	P		PKPdf	16 12 09.5	0.0
	SNR=6.6						
EKS2	**Erkin-Say**	**120.70 301**	P		PKPdf	16 12 10.2	+0.5
	SNR=12						
ZALV	**Zalesovo Beam**	**121.04 317**	PKP		PKPdf	16 12 08.6	-1.4
	comp=Z,1.3nm,0.5s,baz=169,slow=2.3,SNR=8.5						
ZALV	**Zalesovo Beam**	**121.04 317**	PKIKP		PKPdf	16 12 08.6	-1.4
ZALV			pmax		pmax		
	comp=Z,1.0nm,0.5s						
NVS	**Novosibirsk**	**122.30 317**	*e*PKIKP		PKPdf	16 12 10.1	-2.3
KURK	**Kurchatov**	**122.40 311**	PKP		PKPdf	16 12 12.0	-0.8
	comp=Z,10nm,0.8s,baz=114,slow=1.9,SNR=54						
KURK	**Kurchatov**	**122.40 311**	PKIKP		PKPdf	16 12 12.0	-0.8
KURK			pmax		pmax		
	comp=Z,10.0nm,0.8s						
YKA	**Yellowknife Ar**	**123.70 33**	PKP		PKPdf	16 12 13.5	-1.4
	comp=Z,1.4nm,0.7s,baz=257,slow=1.7,SNR=7.5						
YKA			PKKPbc		PKKPbc	16 22 01.8	-1.5
	comp=Z,1.4nm,0.7s,baz=51,slow=4.4,SNR=7.9						
YKA	**Yellowknife Ar**	**123.70 33**	PKP		PKPdf	16 12 13.5	-1.4
YKA			PKKPbc		PKKPbc	16 22 01.8	-1.5
YKA	**Yellowknife Ar**	**123.70 33**	PKIKP		PKPdf	16 12 13.5	-1.4
YKA			pmax		pmax		
	comp=Z,1.0nm,0.7s						
YKA			pmax		pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**127.97 311**	PKP		PKPdf	16 12 22.8	-0.6
	comp=Z,3.5nm,0.7s,baz=130,slow=4.6,SNR=21						
BVAR	**Borovoye Array**	**127.97 311**	PKIKP		PKPdf	16 12 22.8	-0.6
BVAR			pmax		pmax		
	comp=Z,4.0nm,0.7s						
AKTK	**Aktyubinsk**	**133.92 303**	PKP		PKPdf	16 12 34.3	-0.4
AKTO	**Aktyubinsk**	**133.92 303**	PKP		PKPdf	16 12 34.3	-0.4
	comp=Z,3.5nm,0.8s,baz=180,slow=3.0,SNR=11						
AKTO	**Aktyubinsk**	**133.92 303**	PKIKP		PKPdf	16 12 34.3	-0.4
AKTO			pmax		pmax		
	comp=Z,4.0nm,0.8s						
SVE	**Sverdlovsk**	**134.61 312**	*e*PKIKP		PKPdf	16 12 35.8	0.0
SVE			pmax		pmax		
	comp=Z,12nm,1.0s						
ARU	**Arti**	**135.59 311**⇑	*i*PKIKP		PKPdf	16 12 37.2	-0.4
LIC	**Lamto**	**140.83 192**	*e*P		PKPdf	16 12 39.9	-8.8
	comp=Z,69nm,1.9s						
KIC	**Kosan Boka**	**140.92 192**	*e*P		PKPdf	16 12 41.8	-7.0
	comp=Z,51nm,1.0s						
TIC	**Toumodi**	**141.24 192**	*e*P		PKPdf	16 12 41.5	-7.9
	comp=Z,6.8nm,0.2s						
DBIC	**Dimbokro**	**141.24 192**	PKhKP			16 12 42.0	
	comp=Z,3.5nm,0.7s,baz=122,slow=5.6,SNR=8.3						
DBIC			PKP		PKPdf	16 12 48.7	-0.7
	comp=Z,2.1nm,0.5s,baz=153,slow=2.5,SNR=4.2						
DBIC	**Dimbokro**	**141.24 192**	PKHKP			16 12 42.0	
DBIC						16 12 48.7	
DBIC			pmax		pmax		
	comp=Z,4.0nm,0.7s						
DBIC			pmax		pmax		
	comp=Z,2.0nm,0.5s						
CSS	**Prodhromos**	**143.95 270**	*e*PKPdf		PKPdf	16 12 49.9	-3.7
SCHQ	**Schefferville**	**144.47 54**	PKP		PKPdf	16 12 52.4	-1.3
	comp=Z,8.7nm,0.8s,baz=242,slow=4.5,SNR=4.7						
SCHQ	**Schefferville**	**144.47 54**	PKIKP		PKPdf	16 12 52.4	-1.3
SPB4	**Spitsbergen Ar**	**144.87 350**	*e*PKPdf		PKPdf	16 12 51.8	-2.0
ANN	**Anapa**	**145.13 288**	*i*PKP2		PKPab	16 12 53.2	-2.1
ANN			pmax		pmax		
	comp=Z,141nm,1.6s						
VORD	**Divnogorie**	**145.47 299**	*e*PKP2		PKPab	16 12 55.2	-1.1
VORD			pmax		pmax		
	comp=Z,90nm,0.9s						
VORD			pmax		pmax		
	comp=N,40nm,0.8s						
VORD			pmax		pmax		
	comp=E,100nm,0.8s						
VSR	**Storozhevoye**	**145.60 299***c*	*i*PKP2		PKPab	16 12 55.7	-1.1
VSR			pmax		pmax		
	comp=Z,30nm,1.0s						
VSR			pmax		pmax		
	comp=N,2.0nm,0.5s						
VSR			pmax		pmax		
	comp=E,30nm,0.9s						
BR131	**Keskin Array S**	**145.91 278**	*e*PKPdf		PKPdf	16 12 57.1	+0.4
BR131			*ep*PKPdf		pPKPdf	16 13 27.0	-2.6
BRTR	**Keskin Array B**	**145.91 278**	PKPbc		PKPbc	16 12 57.2	-0.4
	comp=E,17nm,0.8s,baz=139,slow=4.9,SNR=55						
BRTR			pPKPbc		pPKPbc	16 13 27.4	-2.6
	comp=E,13nm,1.0s,baz=158,slow=4.0,SNR=5.5						
BRTR	**Keskin Array B**	**145.91 278**	PKP2		PKPab	16 12 57.3	-1.1
BRTR			pmax		pmax		
	comp=Z,17nm,0.8s						
BRTR			pmax		pmax		
	comp=Z,13nm,1.0s						
KLMR	**Klimovskoe**	**145.96 316**	*i*PKP2		PKPab	16 12 56.3	-1.6
TOA0	**Torodi Ar. Sit**	**146.04 205**	*e*PKPdf		PKPdf	16 12 57.5	-0.2
TOA0			*ep*PKPdf		pPKPdf	16 13 28.9	-1.6
TOA0			*es*PKPdf			16 13 36.1	
TORD	**Torodi Ar. Bea**	**146.04 205**	PKPbc		PKPbc	16 12 57.8	-1.0
	comp=Z,33nm,0.8s,baz=155,slow=2.1,SNR=152						
TORD			pPKPbc		pPKPbc	16 13 28.0	-3.0
	comp=Z,17nm,1.1s,baz=148,slow=2.1,SNR=3.2						
ANTO	**Ankara**	**146.57 277**	*e*PKPbc		PKPbc	16 12 59.1	-0.5
ANTO			*ep*PKPdf		pPKPdf	16 13 30.4	-0.2
LVZ	**Lovozero**	**146.64 330**⇑	*i*PKP2		PKPdf	16 12 58.3	+1.2
MOS	**Moscow**	**147.02 307**	*e*PKP2		PKPdf	16 12 59.9	+1.8
MOS			pmax		pmax		
	comp=Z,111nm,1.1s						
OBN	**Obninsk**	**147.59 306**	*e*PKPdf		PKPbc	16 13 01.8	-0.1
OBN	**Obninsk**	**147.59 306***c*	*i*PKP2		PKPbc	16 13 01.8	-0.1
OBN			pmax		pmax		
	comp=Z,74nm,1.0s						
ARCES	**ARCESS Array B**	**148.93 335**	PKPbc		PKPbc	16 13 04.8	-0.2
	comp=Z,27nm,0.9s,baz=57,slow=2.5,SNR=37						
ARCES	**ARCESS Array B**	**148.93 335**	PKP2		PKPbc	16 13 04.8	-0.2
ARCES			pmax		pmax		
	comp=Z,27nm,0.9s						
JOF	**Joensuu**	**149.45 321**	*e*pkp		PKPbc	16 13 04.8	-1.6
	comp=Z,13nm,0.6s						
AKASG	**Malin Array Be**	**151.76 297**	PKPbc		PKPbc	16 13 11.7	-0.6
	comp=Z,28nm,0.8s,baz=76,slow=2.8,SNR=73						
AKASG			pPKPbc		pPKPbc	16 13 41.6	-3.3
	comp=Z,5.0nm,0.8s,baz=87,slow=2.0,SNR=2.5						
AKASG	**Malin Array Be**	**151.76 297**	PKIKP		PKPbc	16 13 11.7	-0.6
AKASG						16 13 41.6	
AKASG			pmax		pmax		
	comp=Z,28nm,0.8s						
AKASG			pmax		pmax		
	comp=Z,5.0nm,0.8s						
AKBB	**Malin Array Si**	**151.76 297**	*e*PKPdf		PKPbc	16 13 11.1	-1.2
KIEV	**Kiev**	**151.77 297**	*e*PKPdf		PKPbc	16 13 11.7	-0.6
KAF	**Kangasniemi**	**151.91 321**	epkp		PKPbc	16 13 10.4	-1.9
	comp=Z,19nm,0.6s,baz=61,slow=2.1						
VSU	**Vasula**	**152.71 314**	*i* PKIKP		PKPbc	16 13 14.5	+0.4
TAM	**Tamanrasset**	**153.41 219**	*e*PKPbc		PKPbc	16 13 17.2	+0.4
TAM			*e*PKPab		PKPab	16 13 29.7	+0.3
BUR08	**Bucovina Ar. S**	**154.04 289**	*e*PKPbc		PKPbc	16 13 18.4	+0.9
BUR08			*e*PKPab		PKPab	16 13 31.7	+0.2
KOLS	**Kolonicke sedl**	**156.12 292**	*e*PKP		PKPab	16 13 40.6	+0.2
STHS	**Stebnicka Huta**	**156.82 293**	*e*PKP		PKPab	16 13 43.5	+0.1
HFS	**Hagfors**	**158.27 323**	PKPab		PKPab	16 13 48.3	-1.0
	comp=Z,5.3nm,0.7s,baz=123,slow=5.5,SNR=8.6						
HFS	**Hagfors**	**158.27 323**	PKP2		PKPab	16 13 48.3	-1.0
HFS			pmax		pmax		
	comp=Z,5.0nm,0.7s						
VYHS	**Vyhne**	**158.37 290**	*e*PKP		PKPab	16 13 49.5	-0.6
KOLL	**Kolacno**	**158.66 291**	*e*PKP		PKPab	16 13 51.2	-0.2
NB2	**NORSAR Subarra**	**158.75 327**	P		PKPab	16 13 50.0	-1.3
	comp=Z,2.0nm,0.8s,baz=60,slow=5.1						
NOA	**NORSAR Array B**	**158.75 327**	PKPab		PKPab	16 13 50.4	-0.9
	comp=Z,2.2nm,0.7s,baz=54,slow=4.6,SNR=4.1						
NOA	**NORSAR Array B**	**158.75 327**	PKP2		PKPab	16 13 50.4	-0.9
NOA			pmax		pmax		
	comp=Z,2.0nm,0.7s						
MODS	**Modra-Piesok**	**159.41 290**	*e*PKP		PKPab	16 13 54.7	+0.1
GROS	**Grobnik**	**160.48 284**	*e*PKP		PKPab	16 13 59.0	-0.3
BOJS	**Bojanci**	**160.53 281**	*e*PKP		PKPab	16 13 59.2	-0.4
PERS	**Pernice**	**160.76 285**	*e*PKP		PKPab	16 14 00.4	-0.2
KEST	**Kesra**	**161.04 248**	PKPab		PKPab	16 14 02.9	+0.8
	comp=Z,4.6nm,0.9s,baz=252,slow=1.9,SNR=9.1						
LJU	**Ljubljana**	**161.11 283**	*e*PKP		PKPab	16 14 02.0	-0.1
MOZS	**Mozjanca**	**161.19 283**	*e*PKP		PKPab	16 14 02.3	-0.2
GERES	**GERESS Array B**	**161.78 291**	PKP		PKPdf	16 13 16.9	-1.8
	comp=Z,0.6nm,0.8s,baz=299,slow=4.0,SNR=4.7						
GERES			PKPab		PKPab	16 14 04.5	-0.5
	comp=Z,1.8nm,0.7s,baz=84,slow=4.2,SNR=10.0						
GERES			pPKPab		pPKPab	16 14 34.6	-2.0
	comp=Z,2.9nm,1.1s,baz=116,slow=3.1,SNR=2.5						
GERES	**GERESS Array B**	**161.78 291**	PKIKP		PKPdf	16 13 16.9	-1.7
GERES						16 14 04.5	
GERES			pmax		pmax		
	comp=Z,1.0nm,0.8s						
GERES			pmax		pmax		
	comp=Z,2.0nm,0.7s						
GERES			pmax		pmax		
	comp=Z,3.0nm,1.1s						
ROBS	**Robic**	**161.83 283**	*e*PKP		PKPab	16 14 04.3	-1.0
KHC	**Kasperske Hory**	**161.84 292**	*e*PKPAB		PKPab	16 14 03.5	-1.8
CLL	**Collm**	**161.95 300**	*e*PKPdf		PKPdf	16 13 20.0	+1.3
CLL			*e*PKPab		PKPab	16 14 05.0	-0.6
	comp=Z,5.0nm,1.1s						
GRF	**Grafenberg Arr**	**163.32 295**	*e*PKP2		PKPab	16 14 11.8	+0.1
PGF	**Pioggiola**	**164.33 269**	*e*PKP2		PKPab	16 14 15.7	-0.7
	comp=Z,51nm,1.1s						
SBF	**Sospel**	**165.76 272**	*e*PKP2		PKPab	16 14 20.8	-1.8
	comp=Z,28nm,0.8s						
CDF	**Champ du Feu**	**166.06 291**	*e*PKP2		PKPab	16 14 22.8	-1.0
LMR	**La Mourre**	**166.30 270**	*e*PKP2		PKPab	16 14 24.2	-0.9
MBDF	**Montbardon**	**166.37 276**	*e*PKP2		PKPab	16 14 24.8	-0.5
HINF	**Hinteralfeld**	**166.40 289**	*e*PKP2		PKPab	16 14 24.4	-1.0
LPG	**La Plagne**	**166.47 279**	*e*PKP2		PKPab	16 14 24.9	-0.9
	comp=Z,21nm,1.0s						
LPL	**La Plagne**	**166.49 279**	*e*PKP2		PKPab	16 14 25.0	-0.8
	comp=Z,10nm,0.7s						
HAU	**Haudompre**	**166.72 290**	*e*PKP2		PKPab	16 14 25.7	-1.1
CABF	**La Chapelle**	**166.98 284**	*e*PKP2		PKPab	16 14 27.2	-0.8
ORIF	**Oris-en-Rattie**	**167.03 276**	*e*PKP2		PKPab	16 14 27.5	-0.7
	comp=Z,17nm,1.0s						
GIVF	**Givet**	**167.29 300**	*e*PKP2		PKPab	16 14 28.7	-0.5
VIVF	**Saint-Julien-l**	**167.87 275**	*e*PKP2		PKPab	16 14 31.0	-1.0
LASF	**Ste Croix**	**168.33 271**	*e*PKP2		PKPab	16 14 33.3	-0.7
	comp=Z,31nm,1.1s						
LOR	**Lormes**	**168.47 287**	*e*PKP2		PKPab	16 14 33.4	-1.1
SMF	**Signal de Mont**	**168.52 284**	*e*PKP2		PKPab	16 14 33.9	-0.9
SSF	**Saint Saulge**	**168.73 286**	*e*PKP2		PKPab	16 14 34.9	-0.8
AVF	**Avril sur Loir**	**168.85 285**	*e*PKP2		PKPab	16 14 36.2	-0.1
BGF	**Bois d'Agland**	**169.21 284**	*e*PKP2		PKPab	16 14 37.2	-0.7
	comp=Z,39nm,1.1s						
MTLF	**Montolieu**	**169.34 266**	*e*PKP2		PKPab	16 14 37.8	-0.7
TCF	**Toulx Ste Croi**	**169.66 282**	*e*PKP2		PKPab	16 14 39.7	-0.2
CAF	**Calviac**	**169.72 275**	*e*PKP2		PKPab	16 14 39.5	-0.7
RJF	**Les Rejaudoux**	**170.14 277**	*e*PKP2		PKPab	16 14 41.6	-0.4
	comp=Z,41n

ISC 29 16:56:42.6±1.1, 3415N±004×14023E±005, h48km±24km, n12, σ0946/21, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMY	Miyakejima3	0.60	263	P	Pn	16 56 55.0	+0.1
BSO3	Boso 3	0.69	20	P	Pn	16 56 56.3	+0.1
BSO3				eS	Sn	16 57 06.7	+0.7
BSO1	Boso 1	0.80	51	P	Pn	16 56 56.8	-0.8
BSO1				eS	Sn	16 57 08.3	-0.2
NJJJ	Nii jima 2	0.82	288	P	Pn	16 56 57.9	0.0
NJJJ				eS	Sn	16 57 09.3	+0.3
BSO4	Boso 4	0.85	6	P	Pn	16 56 58.5	+0.3
JIM2	Oshima 3	0.87	311	⇓P	Pn	16 56 58.2	-0.3
JIM2				eS	Sn	16 57 09.7	-0.5
JKO	Kozu shima	0.91	273	P	Pn	16 56 59.0	0.0
JKO				eS	Sn	16 57 10.9	-0.1
JHJ2	Mitsune	1.09	198	P	Pn	16 57 01.3	-0.1
JHJ2				eS	Sn	16 57 15.6	+0.3
KTJJ	Kamata 2	1.23	309	⇓P	Pn	16 57 03.0	-0.5
KTJJ				S	Sn	16 57 18.1	-0.9
JIZS	Izushimoda	1.25	297	P	Pn	16 57 03.9	+0.2
JIZS				S	Sn	16 57 19.7	+0.3
JOD2	Odawara 2	1.46	320	⇓P	Pn	16 57 06.0	-0.5
MAT	Matsushiro	2.91	326	P	Pn	16 57 27.5	+1.2
MAT				S	Sn	16 58 00.3	+0.3

*ISCJB **29** 17:09:09.2±0.4, 2728N±007×12623E±007, h168km±8km, mb3.6/7, Error ellipse: s-maj=15.0km s-min=4.8km az=140.8*
*IDC **29** 17:09:10.2±1.4, 2740N×12641E, h164km±17km, mb3.4/7, mb1 3.4/8, mb1mx3.3/22, mbtmp3.3/8, Error ellipse: s-maj=34.3km s-min=16.7km az=56.0*
*NEIC **29** 17:09:11.1±1.2, 2741N×12636E, h173km±14km, mb3.4/1, Error ellipse: s-maj=34.8km s-min=15.0km az=57.0*
*JMA **29** 17:09:11.1±0.4, 2729N×12627E, h164km, M3.9*

ISC 29 17:09:10.1±0.4, 2730N±007×12621E±007, h160km±8km, n28, σ0997/41, mb3.6/7, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.10	152	P	Pn	17 09 38.1	+1.4
JAGN	Aguni-jima	1.16	127	P	Pn	17 09 38.6	+1.4
JAGN				S	Sn	17 09 58.7	+0.7
JIH	Iheya	1.58	99	P	Pn	17 09 42.5	+1.2
JIH				S	Sn	17 10 04.7	-0.6
NAH1	Naha	1.71	129	P	Pn	17 09 43.9	+1.2
NAH1				S	Sn	17 10 06.8	-0.9
JJT2	Tamagusuku 2	1.80	130	P	Pn	17 09 45.2	+1.6
JJT2				S	Sn	17 10 09.3	0.0
JOW	Kunigami	1.90	104	P	Pn	17 09 45.5	+0.8
	34nm,0.3s,baz=246,slow=4.3,SNR=42						
JOW				S	Sn	17 10 09.2	-2.0
	266nm,0.3s,baz=79,slow=26,SNR=27						
JOW	Kunigami	1.90	104	P	Pn	17 09 45.6	+0.9
JOW				S	Sn	17 10 09.7	-1.6
JTK	Tokunoshima	2.48	78	P	Pn	17 09 51.6	+0.2
JMJ	Miyako jima 2	2.61	199	P	Pn	17 09 54.3	+1.2
JMJ				S	Sn	17 10 26.5	+0.1
JOGS	Gusukube	2.63	196	P	Pn	17 09 54.6	+1.2
JOGS				S	Sn	17 10 27.3	+0.5
JTJ	Tarama	2.98	208	P	Pn	17 09 56.4	-1.3
JTJ				S	Sn	17 10 33.7	-0.8
JAM	Amami Oshima	3.20	69	P	Pn	17 10 00.1	-0.3
JAM				S	Sn	17 10 37.0	-2.4
JIJ	Ishigaki jima	3.47	213	P	Pn	17 10 03.9	0.0
JIJ				eS	Sn	17 10 43.2	-2.4
JKRS	Kuro-shima	3.64	214	P	Pn	17 10 06.5	+0.4
JKRS				S	Sn	17 10 48.7	-0.8
IRIF	Iriomote-Funau	3.71	218	P	Pn	17 10 07.4	+0.5
IRIF				eS	Sn	17 10 50.4	-0.6
HATJ	Hateruma jima	3.89	214	eS	Sn	17 10 54.8	-0.5
JMZ	Minamidaito 2	4.72	107	P	Pn	17 10 19.1	-0.9
JMZ				S	Sn	17 11 08.3	-6.3
KSRS	Korea Array	10.22	8	P	Pn	17 11 32.6	-0.1
	0.1nm,0.3s,baz=181,slow=13,SNR=4.5						
SONM	Songino Array	25.69	328	P	P	17 14 25.7	+0.6
	2.8nm,0.6s,mb4.0,baz=143,slow=8.4,SNR=22						
MKAR	Makanchi Array	39.48	311	P	P	17 16 24.7	0.0
	1.5nm,0.5s,mb3.9,baz=89,slow=10,SNR=19						
ZALV	Zalesovo Beam	40.31	323	P	P	17 16 30.7	-0.8
	1.6nm,0.4s,mb4.0,baz=109,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	40.31	323	P	P	17 16 30.7	-0.8
KURK	Kurchatov	42.80	316	P	P	17 16 51.5	-0.3
	0.6nm,0.4s,mb3.6,baz=104,slow=7.7,SNR=2.7						
KURK	Kurchatov	42.80	316	eP	P	17 16 51.5	-0.3
	0.8nm,0.7s,mb3.5						
BVAR	Borovoye Array	48.28	318	P	P	17 17 35.4	+0.6
	0.2nm,0.4s,mb3.1,baz=80,slow=9.3,SNR=3.6						
ASAR	Alice Springs	51.21	171	P	P	17 17 58.0	+0.8
	0.2nm,0.6s,mb2.9,baz=0.3,slow=15,SNR=4.7						
YKA	Yellowknife Ar	78.31	24	P	P	17 20 51.0	-1.1
	0.8nm,0.7s,mb3.5,baz=310,slow=5.7,SNR=7.5						
DBIC	Dimbokro	121.88	298	PKP	PKPdf	17 27 45.0	-1.0
	3.0nm,1.0s,baz=42,slow=3.4,SNR=3.6						

*NEIC **29** 17:42:13.2, 1803N×9328W, h60km, MD4.5(MEX), After MEX.*

MEX 29 17:42:13.3±0.8, 1794N×9322W, h87km±17km, MD4.5, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.15	275	iP	Pn	17 42 29.3	-5.2
TUIG				iS	Sn	17 42 45.2	-5.3
TUIG	Tuzandepetl	1.15	275	iP	Pn	17 42 26.7	-7.9
TUIG				iS	Sn	17 42 42.6	-7.9
TGIG		1.16	175	iP	Pn	17 42 33.0	-1.7
TGIG				iS	Sn	17 42 49.2	-1.6
CMIG	Matias Romero	1.80	242	iP	Pn	17 42 42.4	-0.4
CMIG				iS	Sn	17 43 02.8	-2.4
CCIG	Comitan	1.95	148	iP	Pn	17 42 43.5	-1.3
CCIG				iS	Sn	17 43 08.7	+0.1
CCIG	Comitan	1.95	148	iP	Pn	17 42 43.5	-1.3
CCIG				iS	Sn	17 43 08.1	-0.6
SCIG	Sabancuy	2.18	62	iP	Pn	17 42 46.6	-1.2
SCIG				iS	Sn	17 43 12.8	-1.3
PCIG		2.23	180	iP	Pn	17 42 47.4	-1.0
PCIG				iS	Sn	17 43 13.5	-1.7
THIG		3.15	163	iP	Pn	17 43 00.4	-0.4
THIG				iS	Sn	17 43 35.2	-2.3
OXX	Oaxaca	3.45	256	eP	Pn	17 43 02.6	-2.3
OXX				iS	Sn	17 43 43.7	-1.1
VHO	Vista Hermosa	3.46	256	iP	Pn	17 43 04.1	-0.9
VHO				iS	Sn	17 43 42.9	-2.1
VHO	Vista Hermosa	3.46	256	iP	Pn	17 43 04.1	-0.9
VHO				iS	Sn	17 43 43.8	-1.2
LVIG	Laguna Verde	3.51	301	iS	Sn	17 43 44.5	-1.6
UTMO	Huajuapan	4.37	269	iP	Pn	17 43 16.2	-1.1
UTMO				iS	Sn	17 44 06.1	-0.9
PNIG	Pinotepa	4.94	253	eP	Pn	17 43 25.0	-0.1
PNIG				iS	Sn	17 44 22.7	+1.7
PNIG	Pinotepa	4.94	253	eP	Pn	17 43 23.5	-1.6
PNIG				iS	Sn	17 44 18.7	-2.3
CAIG	El Cayaco	6.79	264	eP	Pn	17 43 51.2	+1.0
CAIG				iS	Sn	17 44 59.8	-6.3
CAIG	El Cayaco	6.79	264	eP	Pn	17 43 51.2	+1.0
CAIG				iS	Sn	17 45 06.1	+0.1

*NEIC **29** 17:46:02.0, 1780N×9320W, h106km, MD4.0(MEX), After MEX.*

MEX 29 17:46:02.7±1.0, 1775N×9325W, h104km±16km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.97	173	iP	Pn	17 46 21.3	-1.8
TGIG				iS	Sn	17 46 37.7	-0.8
CMIG	Matias Romero	1.69	247	iP	Pn	17 46 30.1	-1.4
CMIG				iS	Sn	17 46 53.9	+0.5
CMIG	Matias Romero	1.69	247	iP	Pn	17 46 30.1	-1.4
CMIG				iS	Sn	17 46 52.8	-0.7
CCIG	Comitan	1.81	144	iP	Pn	17 46 32.1	-0.9
CCIG				iS	Sn	17 46 54.8	-1.3
PCIG		2.04	179	iP	Pn	17 46 35.6	-0.3
PCIG				iS	Sn	17 46 58.7	-2.5
THIG		2.98	161	eP	Pn	17 46 47.1	-1.2
THIG				iS	Sn	17 47 22.6	-0.9
OXX	Oaxaca	3.38	259	eP	Pn	17 46 54.9	+1.2
VHO	Vista Hermosa	3.39	259	eP	Pn	17 46 53.1	-0.6
VHO				iS	Sn	17 47 32.9	-0.4
PNIG	Pinotepa	4.86	255	eP	Pn	17 47 12.7	-0.8
PNIG				iS	Sn	17 48 08.3	-0.3
PNIG	Pinotepa	4.86	255	iP	Pn	17 47 11.8	-1.7
PNIG				iS	Sn	17 48 07.9	-0.7

*NEIC **29** 18:09:22.4, 5108N×17808W, h5km, ML3.6(AEIC), After AEIC.*
*ISCJB **29** 18:09:26.3±1.4, 516N±04×1782W±02, h48km±15km, mb3.9/9, MS3.3/2, Error ellipse: s-maj=71.5km s-min=10.8km az=170.8*
*IDC **29** 18:09:34.5±7.1, 5127N×17823W, h121km±60km, mb3.5/9, mb1 3.6/10, mb1mx3.5/23, mbtmp3.5/10, MS3.2/3, Ms1 3.2/3, ms1mx2.8/37, Error ellipse: s-maj=62.5km s-min=19.6km az=3.0*

ISC 29 18:09:26.7±1.6, 515N±04×1781W±01, h39km±15km, n16, σ0993/14, mb3.9/9, MS3.3/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	0.97	67	P	Pn	18 09 44.0	+0.2
AMKA	Amchitka	1.61	266	P	Pn	18 09 51.1	-1.5
AMKA				S	Sn	18 10 13.3	+1.1
PETK	Petropavlovsk-	14.86	286	P	Pn	18 12 58.5	+4.8
	0.1nm,0.3s,baz=90,slow=16,SNR=2.8						
PETK				LR	LR	18 18 35.3	
	comp=Z,41nm,20.3s,baz=222,slow=36						
YKA	Yellowknife Ar	34.83	47	P	P	18 16 16.6	+3.2
	0.9nm,0.6s,mb3.9,baz=284,slow=9.1,SNR=4.9						
PDAR	Pinedale Array	45.87	73	P	P	18 17 44.9	+0.1
	1.1nm,0.7s,mb3.9,baz=307,slow=3.3,SNR=12						
SONM	Songino Array	46.96	297	P	P	18 17 54.3	+0.9
	0.6nm,0.7s,mb3.6,baz=64,slow=9.8,SNR=4.1						
SONM				LR	LR	18 37 42.7	
	comp=Z,25nm,19.3s,MS3.2,baz=206,slow=36						
ANMO	Albuquerque	52.65	79	LR	LR	18 39 49.0	
	comp=Z,42nm,19.1s,MS3.5,baz=157,slow=34						
ZALV	Zalesovo Beam	54.24	314	PcP	PcP	18 19 51.9	0.0
	0.8nm,0.7s,baz=64,slow=3.4,SNR=4.5						
ARCES	ARCESS Array B	58.03	350	P	P	18 19 14.5	-0.4
	2.9nm,0.9s,mb4.3,baz=15,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	60.28	309	P	P	18 19 29.3	-1.5
	0.6nm,0.8s,mb3.7,baz=46,slow=6.6,SNR=3.7						
BVAR	Borovoye Array	61.06	320	P	P	18 19 35.9	-0.1
	0.6nm,0.3s,mb4.1,baz=54,slow=4.8,SNR=6.4						
AKTK	Aktyubinsk	67.82	325	P	P	18 20 20.6	+0.3
AKTO	Aktyubinsk	67.82	325	P	P	18 20 20.6	+0.3
	1.1nm,0.6s,mb4.1,baz=32,slow=9.5,SNR=4.6						
AKASG	Malin Array Be	75.55	342	P	P	18 21 05.9	-0.8
	0.2nm,0.2s,mb3.6,baz=16,slow=6.7,SNR=3.1						
BRTR	Keskin Array B	85.00	336	P	P	18 21 58.0	+0.3
	1.2nm,0.9s,mb4.0,baz=32,slow=8.5,SNR=4.5						
BOSA	Boshof	151.19	314	PKPbc	PKPbc	18 29 13.8	-1.6
	3.9nm,1.1s,baz=42,slow=1.7,SNR=3.3						

*ISCJB **29** 18:12:22.5±1.0, 1788S±009×17864W±006, h571km±13km, mb4.5/38, Error ellipse: s-maj=14.8km s-min=6.8km az=151.3*
*NEIC **29** 18:12:23.0±0.6, 1785S×17860W, h565km±7km, mb4.8/17, Error ellipse: s-maj=10.4km s-min=4.4km az=147.0*
*BJI **29** 18:12:22.9, 1780S×17860W, h564km, mB4.8, mb4.5*
*IDC **29** 18:12:23.5±1.5, 1786S×17861W, h568km±18km, mb3.9/17, mb1 4.1/18, mb1mx4.1/21, mbtmp3.9/18, Error ellipse: s-maj=16.7km s-min=9.8km az=144.0*
*DJA **29** 18:12:34, 1832S×17940W, h650km, Mw5.2/6*

ISC 29 18:12:23.3±0.9, 1788S±009×17860W±006, h567km±11km, n83, σ0973/80, mb4.5/38, 1C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.66	60	P	P	18 14 16.8	-1.6
	17nm,0.3s,baz=224,slow=9.0,SNR=7.9						
AFI				S	S	18 15 45.0	-7.5
	2.5nm,0.3s,baz=34,slow=22,SNR=2.2						
DZM	Mont Dzumac	14.66	251	eP	P	18 15 29.6	+0.4
DZM	Mont Dzumac	14.66	251	eP	P	18 15 30.2	+1.0
	47nm,0.7s						
NOUC	Port Laguerre	14.80	251	eP	P	18 15 31.5	+1.0
URZ	Urewera	20.65	190	P	P	18 16 24.1	-0.2
	11nm,0.8s,baz=324,slow=7.6,SNR=3.8						
EIDS	Eidsvold	29.11	250	eP	P	18 17 38.7	-0.5
	38nm,0.8s,mb5.1						
ARMA	Armidale	29.80	240	⇓iP	P	18 17 46.1	+1.0
CTA	Charters Tower	33.27	260	⇓iP	P	18 18 14.8	0.0
	24nm,0.7s,mb4.8						
CTAO	Charters Tower	33.27	260	eP	P	18 18 14.4	-0.4
	72nm,1.2s,mb5.1						
CTAO	Charters Tower	33.27	260	P	P	18 18 14.9	+0.1
	72nm,1.1s,775nm,mb5.1						
CNB	Canberra Magne	33.30	232	⇓iP	P	18 18 15.8	+1.0
COEN	Coen	36.92	270	eP	P	18 18 45.3	+0.1
	56nm,0.8s,mb5.2						
COEN	Coen	36.92	270	P	P	18 18 45.9	+0.7
	52nm,0.9s,440nm,mb5.0						
TOO	Toolangi	37.05	231	⇓iP	P	18 18 46.5	+0.6
MOO	Moorlands	37.99	223	eP	P	18 18 53.3	-0.2
STKA	Stephens Creek	38.48	241	⇓iP	P	18 18 58.4	+0.7
	39nm,0.6s,mb5.1						
STKA	Stephens Creek	38.48	241	P	P	18 18 58.5	+0.9
	48nm,0.5s,mb5.3,baz=91,slow=9.6,SNR=225						
JAY	Jayapura	42.72	286	P	P	18 19 32.5	+0.9
	103nm,0.6s,2μm,mb5.5						
WB2	Warramunga Arr	44.45	260	⇓iP	P	18 19 44.1	-0.8
WB2				eS	S	18 25 38.9	-0.4
WRAB	Tennant Creek	44.45	260	eP	P	18 19 44.1	-0.8
	460nm,2.5s,mb5.6						
WRAB	Tennant Creek	44.45	260	P	P	18 19 44.0	-0.9
	75nm,1.4s,mb5.0						
ASAR	Alice Springs	44.62	254	P	P	18 19 46.2	0.0
	196nm,0.6s,baz=88,slow=8.2,SNR=4856						
ASAR				PcP	PcP	18 21 15.8	-0.8
	3.0nm,0.4s,baz=109,slow=3.8,SNR=4.7						
ASAR				ScP	ScP	18 24 16.2	+1.0
	0.9nm,0.7s,baz=97,slow=4.2,SNR=4.7						
ASAR				S	S	18 25 39.9	-1.9
	2.5nm,1.0s,baz=86,slow=16,SNR=10						
KAKA	Kakadu	47.40	269	⇓iP	Px	18 19 51.2	
	50nm,0.4s						
GUMO	Guam	47.72	309	P	P	18 20 10.0	+0.3
	66nm,0.6s,mb5.3,baz=161,slow=7.1,SNR=7.7						
GUMO	Guam	47.72	309	P	P	18 20 10.0	+0.3
FORT	Forrest	49.85	245	⇓iP	P	18 20 24.6	-0.7
	57nm,0.6s,mb5.2						
LBMI	Labuha	55.64	282	P	P	18 21 07.2	+0.4
MBWA	Marble Bar	57.90	256	eP	P	18 21 21.4	-0.7
MBWA	Marble Bar	57.90	256	P	P	18 21 21.1	-1.1
KLBR	Kellerberrin	58.68	244	⇓iP	P	18 21 26.3	-0.9
	31nm,0.7s,mb4.6						
NWAO	Narrogin (SRO)	59.06	242	eP	P	18 21 28.5	-1.3
KDI	Kendari	59.11	276	P	P	18 21 29.5	-0.9
	24nm,1.1s,mb4.3						
MUN	Mundaring	59.97	243	⇑iP	P	18 21 35.6	-0.2
VNDA	Vanda	60.46	185	P	P	18 21 38.8	+0.6
	0.5nm,0.6s,baz=332,slow=6.2,SNR=5.3						
KAPI	Kappang	61.51	274	P	P	18 21 44.3	-1.9
	8.4nm,0.9s,mb4.2						
PCI	Palu	62.73	278	P	P	18 21 55.6	+1.5
	76nm,1.0s,707nm,mb5.1						
KHKI	Kahang-Kahang	64.50	269	P	P	18 22 04.2	-1.2
MJAR	Matsushiro Arr	67.78	323	P	P	18 22 24.7	-0.5
	4.1nm,0.6s,mb4.2,baz=152,slow=5.9,SNR=8.1						
MAT	Matsushiro	67.78	323	P	P	18 22 24.7	-0.5
SJI	Sawahan	68.33	269	P	P	18 22 29.0	-0.1
BJII	Banjamegara	70.40	268	P	P	18 22 41.2	-0.3
STKI	Sintang	70.94	276	P	P	18 22 45.5	+0.8
	43nm,1.2s,1μm,mb4.9						
KSM	Kuching	72.50	277	P	P	18 22 54.1	+0.4
	75nm,1.1s,mb5.0						
LEM	Lembang	72.53	268	P	P	18 22 54.4	+0.5
	126nm,0.8s,4μm,mb5.4						
PETK	Petropavlovsk-	73.61	345	P	P	18 22 59.3	+0.2
	2.6nm,0.9s,mb3.7,baz=254,slow=14,SNR=3.6						
KSRS	Korea Array	74.56	318	P	P	18 23 05.4	+0.5
	1.8nm,0.7s,mb3.6,baz=135,slow=6.9,SNR=6.1						
CMB	Columbia Colle	77.94	43	eP	P	18 23 23.2	-0.2
	14nm,1.0s,mb4.2						
PFO	Pinyon Flat Ob	78.28	49	P	P	18 23 25.6	+0.2
	4.2nm,0.8s,mb3.9,baz=358,slow=4.5,SNR=4.1						
YBH	Yreka Blue Hor	78.62	39	P	P	18 23 27.6	+0.7
	11nm,0.8s,mb4.3,baz=202,slow=1.9,SNR=20						
LBCM	Butte Creek Ri	78.92	41	P	P	18 23 28.9	+0.3
BUOR	Burton Butte	79.22	39	P	P	18 23 30.7	+0.5
NVAR	Mina Array Bea	79.53	44	P	P	18 23 32.2	+0.3
	11nm,0.8s,mb4.2,baz=224,slow=8.9,SNR=59						
TPNV	Topopah Spring	80.13	46	eP	P	18 23 35.1	0.0
	3.5nm,0.6s,mb3.9						
WVOR	Wild Horse Val	81.50	40	eP	P	18 23 41.8	-0.2
	18nm,1.0s,mb4.5						
TUC	Tucson	81.83	52	eP	P	18 23 44.3	+0.4
	18nm,1.3s,mb4.3						
HDW	Hoodsport	81.98	34	P	P	18 23 44.7	+0.4
ELK	Elko	82.76	43	eP	P	18 23 48.5	+0.1
	9.5nm,1.0s,mb4.3						
WUAZ	Wupatki	82.86	49	eP	P	18 23 49.8	+0.7
	19nm,1.0s,mb4.6						
HAWA	Hanford	83.19	37	eP	P	18 23 50.3	-0.1
	31nm,1.4s,mb4.7						
EPH	Ephrata	83.70	36	P	P	18 23 52.9	-0.1
MAW	Mawson	83.82	200	P	P	18 23 53.1	-0.1
	2.5nm,0.7s,mb3.9,baz=122,slow=13,SNR=6.9						
HLID	Hailey	84.73	41	eP	P	18 23 58.2	+0.1
	7.7nm,0.8s,mb4.3						
DLBC	Dease Lake	85.88	23	P	P	18 24 03.1	-0.1
	3.6nm,0.8s,mb4.0,baz=198,slow=6.6,SNR=4.3						
XAN	Xi'an	86.10	307	P	P	18 24 06.0	+1.1
XAN				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.5						
XAN				AMB	AMB		
	comp=Z,76nm,4.6s						
TXAR	Lajitas Array	86.13	58	P	P	18 24 06.1	+0.9
	comp=Z,10nm,0.7s,mb4.5,baz=221,slow=5.6,SNR=33						
ANMO	Albuquerque	86.22	52	P	P	18 24 05.4	0.0
	comp=Z,2.7nm,0.7s,mb4.0,baz=212,slow=4.6,SNR=6.2						
MCMT	McKenzie Canyo	86.34	41	P	P	18 24 06.4	+0.7
BSMT	Bassoo Peak	86.70	37	P	P	18 24 06.8	-0.5
LCCM	Lewis and Clar	87.43	40	P	P	18 24 11.1	+0.2
PDAR	Pinedale Array	87.46	44	P	P	18 24 10.8	-0.2
	comp=Z,6.7nm,0.7s,mb4.4,baz=218,slow=3.2,SNR=55						
PDAR				PP	PP	18 27 43.6	-3.1
	comp=Z,0.8nm,0.9s,baz=246,slow=7.3,SNR=5.5						
WALA	Waterton Lakes	87.82	37	eP	P	18 24 11.9	-0.7
	comp=Z,0.2nm,0.3s						
CMAR	Chiang Mai Arr	88.70	290	P	P	18 24 18.3	+0.9
	comp=Z,3.7nm,0.9s,mb4.2,baz=110,slow=2.9,SNR=23						
VNA3	Neumayer Olymp	90.78	176	e	P	18 24 21.3	-4.7
VNA3				e		18 24 25.3	
VNA3				e		18 24 31.4	
VNA2	Neumayer--Watz	91.22	177	e	P	18 24 27.8	-0.2
	baz=198,slow=3.8						
VNA2				e		18 24 33.6	
INK	Inuvik	91.91	15	eP	P	18 24 29.4	-1.7
	comp=Z,213nm,1.0s						
SONM	Songino Array	93.41	319	P	P	18 24 38.9	+0.5
	comp=Z,0.3nm,0.5s,mb3.6,baz=123,slow=7.7,SNR=3.2						
YKA	Yellowknife Ar	94.38	25	P	P	18 24 41.3	-1.2
	comp=Z,1.0nm,0.5s,mb4.2,baz=235,slow=4.7,SNR=11						
YKA	Yellowknife Ar	94.38	25	P	P	18 24 41.3	-1.2
MKAR	Makanchi Array	108.98	314	PKiKP	PKiKP	18 29 47.3	-1.5
	comp=Z,0.2nm,0.5s,baz=107,slow=1.6,SNR=5.0						
BR131	Keskin Array S	144.63	315	ePKPdf	PKPdf	18 30 55.9	-0.2
BRTR	Keskin Array B	144.63	315	PKP	PKPdf	18 30 55.5	-0.5
	comp=Z,2.0nm,0.5s,baz=116,slow=3.2,SNR=12						
CLL	Collm	145.40	347	iPKPbc	PKPbc	18 30 57.7	-0.5
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	147.54	345	PKPbc	PKPbc	18 31 03.9	-0.3
	comp=Z,1.4nm,0.5s,baz=27,slow=3.5,SNR=13						

*IDC **29** 18:50:02.4±0.9, 4568N×2724E, h0km, mb3.7/5, mb1 3.7/10, mb1mx3.6/23, mbtmp3.6/10, ML3.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.0/53, Error ellipse: s-maj=15.0km s-min=7.6km az=148.0*
*NEIC **29** 18:50:06.0, 4557N×2704E, h7km, mb4.0/1, ML3.8(BUC), After BUC.*
*SOF **29** 18:50:05.0, 4553N×2714E, h10km, MD3.0*
*CSEM **29** 18:50:05.3±0.1, 4554N×2697E, h8km, MD3.9/2, Error ellipse: s-maj=2.0km s-min=1.6km az=38.0*
*MOS **29** 18:50:06.3±1.0, 4567N×2703E, h34km, mb3.9/4, Error ellipse: s-maj=9.6km s-min=5.3km az=130.0*
*THE **29** 18:50:06.2, 4557N×2687E, h8km±35km, Error ellipse: s-maj=35.9km s-min=7.6km az=19.0*
*BUC **29** 18:50:06.3±0.3, 4562N±002×2702E, h25km±5km, MD3.9/2, Error ellipse: s-maj=4.6km s-min=3.7km az=26.0*
*ISCJB **29** 18:50:06.5±0.3, 4564N±002×2703E±002, h32km±2km, mb3.7/6, Error ellipse: s-maj=2.8km s-min=2.6km az=20.8*

ISC 29 18:50:07.1±0.2, 4562N±002×2706E±002, h24km±2km, n136, σ1913/190, mb3.7/6, 19C-21D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODB	Odobesti	0.15	359	P	Pb	18 50 11.5	-0.6
ODB	Odobesti	0.15	359	⇑iP	Pb	18 50 11.5	-0.6
ODB				iS	Sb	18 50 14.6	-0.9
PETR		0.16	50	⇑iP	Pb	18 50 12.2	0.0
PETR				iS	Sb	18 50 16.5	+0.9
GRER		0.25	194	⇓iP	Pb	18 50 13.3	0.0
GRER				iS	Sb	18 50 17.1	-0.4
VRI	Vrincioaia	0.34	316	P	Pb	18 50 12.9	-1.7
VRI	Vrincioaia	0.34	316	⇓P	Pb	18 50 13.1	-1.5
VRI				S	Sb	18 50 18.8	-0.9
VRI	Vrincioaia	0.34	316	iP	Pb	18 50 14.0	-0.6
VRI	Vrincioaia	0.34	316	⇓iP	Pb	18 50 13.0	-1.6

TIRR	**Tirgusor**	**1.51**	**140**	⇑P		**Pn**	**18 50 32.6**	**0.0**
TIRR				S		**Sn**	**18 50 52.9**	**+1.4**
TIRR	**Tirgusor**	**1.51**	**140**	P		**Pn**	**18 50 32.2**	**-0.4**
TIRR				*i* S		**Sn**	**18 50 52.5**	**+1.0**
TIRR	**Tirgusor**	**1.51**	**140**	*i* P		**Pn**	**18 50 31.2**	**-1.4**
TIRR	**Tirgusor**	**1.51**	**140**	⇑*i*P		**Pn**	**18 50 32.1**	**-0.5**
TIRR				*i* S		**Sn**	**18 50 52.5**	**+1.0**
IAS	**Iasi**	**1.61**	**12**	⇑*i*P		**Pn**	**18 50 34.2**	**+0.2**
IAS				*i* S		**Sn**	**18 50 55.5**	**+1.5**
ARR	**Arges**	**1.73**	**262**	⇓*i*P		**Pn**	**18 50 36.2**	**+0.6**
KIS	**Kishinev**	**1.84**	**41**	⇓P		**Pn**	**18 50 39.1**	**+2.0**
KIS				S		**Sn**	**18 51 03.6**	**+4.0**
KIS	**Kishinev**	**1.84**	**41**	*e*P		**Pn**	**18 50 39.0**	**+1.9**
KIS				*i* S		**Sn**	**18 51 03.0**	**+3.4**
KIS				smax				
	comp=N,1.0nm,0.7s							
KIS				smax				
	comp=E,1.0nm,0.7s							
KIS	**Kishinev**	**1.84**	**41**	*e*P		**Pn**	**18 50 39.0**	**+1.9**
KIS				*i* S		**Sn**	**18 51 03.0**	**+3.4**
	comp=E,1μm,0.7s							
KIS	**Kishinev**	**1.84**	**41**	⇓P		**Pn**	**18 50 39.1**	**+2.0**
KIS				S		**Sn**	**18 51 03.7**	**+4.1**
KIS	**Kishinev**	**1.84**	**41**	⇓*i*P		**Pn**	**18 50 40.5**	**+3.4**
KIS				*i* S		**Sn**	**18 51 01.3**	**+1.7**
MDB	**Medias**	**1.94**	**286**	P		**Pn**	**18 50 38.8**	**+0.2**
MDB	**Medias**	**1.94**	**286**	P		**Pn**	**18 50 38.8**	**+0.2**
PSN	**Preselentsi**	**2.10**	**157**	P		**Pn**	**18 50 41.0**	**+0.3**
PSN				S		**Sn**	**18 51 11.3**	**+5.2**
BURAR	**Bucovina Array**	**2.36**	**328**	P		**Pn**	**18 50 45.0**	**+0.7**
BURAR	**Bucovina Array**	**2.36**	**328**	⇓P		**Pn**	**18 50 45.5**	**+1.2**
BURAR	**Bucovina Array**	**2.36**	**328**	P		**Pn**	**18 50 45.0**	**+0.7**
BURAR				*i* S		**Sn**	**18 51 16.1**	**+3.6**
BURAR	**Bucovina Array**	**2.36**	**328**	⇓*i*P		**Pn**	**18 50 45.1**	**+0.8**
BURAR				*i* S		**Sn**	**18 51 16.1**	**+3.6**
PRD	**Provadia**	**2.44**	**174**	*i* P		**Pn**	**18 50 45.8**	**+0.5**
PRD				S		**Sn**	**18 51 22.9**	**+8.6**
SZH	**Strazhica**	**2.49**	**199**	P		**Pn**	**18 50 46.1**	**0.0**
PVL	**Pavlikeni**	**2.71**	**208**	*i* P		**Pn**	**18 50 51.2**	**+2.1**
PVL				S		**Sn**	**18 51 36.2**	**+15**
DEV	**Deva**	**2.92**	**277**	⇑*i*P		**Pn**	**18 50 53.0**	**+1.0**
GZR	**Gura Zlata**	**3.02**	**267**	P		**Pn**	**18 50 53.4**	**0.0**
GZR	**Gura Zlata**	**3.02**	**267**	P		**Pn**	**18 50 53.4**	**0.0**
GZR	**Gura Zlata**	**3.02**	**267**	⇓*i*P		**Pn**	**18 50 53.8**	**+0.4**
GZR				*i* S		**Sn**	**18 51 31.1**	**+2.4**
JMB	**Yambol**	**3.17**	**186**	P		**Pn**	**18 50 55.8**	**+0.3**
JMB				S		**Sn**	**18 51 32.3**	**-0.3**
JMB	**Yambol**	**3.17**	**186**	P		**Pn**	**18 51 04.9**	**+9.4**
BMR	**Baia Mare**	**3.20**	**311**	P		**Pn**	**18 50 55.8**	**-0.1**
BMR	**Baia Mare**	**3.20**	**311**	⇑*i*P		**Pn**	**18 50 56.1**	**+0.3**
BMR				*i* S		**Sn**	**18 51 35.8**	**+2.7**
DJES	**Djerdap**	**3.35**	**255**	*e*Pn		**Pn**	**18 50 58.4**	**+0.5**
PGB	**Panagyurishte**	**3.71**	**215**	*i* P		**Pn**	**18 51 03.3**	**+0.4**
BZS	**Buzias**	**3.82**	**272**	P		**Pn**	**18 51 03.7**	**-0.6**
BZS	**Buzias**	**3.82**	**272**	⇑P		**Pn**	**18 51 03.8**	**-0.6**
BZS	**Buzias**	**3.82**	**272**	P		**Pn**	**18 51 03.7**	**-0.7**
BZS	**Buzias**	**3.82**	**272**	⇓*i*P		**Pn**	**18 51 03.6**	**-0.8**
BZS				*i* S		**Sn**	**18 51 50.0**	**+1.5**
PLD	**Plovdiv**	**3.91**	**207**	P		**Pn**	**18 51 05.1**	**-0.5**
BOLS	**Boljevac**	**4.06**	**246**	*e*Pn		**Pn**	**18 51 07.4**	**-0.2**
VTS	**Vitosha**	**4.11**	**224**	P		**Pn**	**18 51 07.6**	**-0.7**
RZN	**Rozhen**	**4.29**	**204**	P		**Pn**	**18 51 10.6**	**-0.2**
UZH	**Uzhgorod**	**4.43**	**314**	*e*P		**Pn**	**18 51 11.7**	**-1.1**
UZH				*e*S		**Sn**	**18 52 01.7**	**-1.8**
UZH				pmax	pmax			
	comp=E,37nm,0.8s							
KOLS	**Kolonicke sedl**	**4.64**	**317**	*e*PN		**Pn**	**18 51 15.3**	**-0.4**
LVV	**L'vov**	**4.67**	**335**	*e*P		**Pn**	**18 51 16.8**	**+0.8**
LVV				*e*S		**Sn**	**18 52 11.5**	**+2.1**
BARS	**Barje**	**4.70**	**235**	*e*Pn		**Pn**	**18 51 17.7**	**+1.3**
KKB	**Krupnik**	**4.73**	**219**	P		**Pn**	**18 51 17.0**	**+0.1**
ALN	**Alexandroupoli**	**4.78**	**189**	P		**Pn**	**18 51 17.3**	**-0.3**
SEV	**Sevastopol'**	**4.80**	**101**	*e*P		**Pn**	**18 51 17.2**	**-0.7**
SEV				*e*S		**Sn**	**18 52 11.8**	**-0.9**
GRUS	**Gruza**	**4.84**	**251**	*e*Pn		**Pn**	**18 51 19.0**	**+0.6**
KWP	**Kalwaria**	**4.97**	**325**	*e*Pn		**Pn**	**18 51 21.3**	**+1.1**
CRVS	**Cervenica-Dubn**	**5.03**	**313**	*e*PN		**Pn**	**18 51 20.0**	**-0.9**
FRGS	**Fruska Gora**	**5.13**	**267**	*e*Pn		**Pn**	**18 51 20.3**	**-2.0**
YAL	**Yalta**	**5.16**	**100**	*e*P		**Pn**	**18 51 23.5**	**+0.8**
YAL				*e*S		**Sn**	**18 52 21.2**	**-0.2**
ALU	**Alushta**	**5.28**	**98**	*e*P		**Pn**	**18 51 23.1**	**-1.3**
ALU				*e*S		**Sn**	**18 52 22.1**	**-2.4**
AKASG	**Malin Array Be**	**5.28**	**15**	Pn		**Pn**	**18 51 21.2**	**-3.2**
	comp=E,2.2nm,0.3s,baz=208,slow=12,SNR=8.9							
AKASG				Sn		**Sn**	**18 52 19.9**	**-4.6**
	comp=E,5.5nm,0.3s,baz=200,slow=21,SNR=7.0							
AKASG				Lg			18 52 48.6	
	comp=E,13nm,0.3s,baz=197,slow=29,SNR=6.8							
AKASG	**Malin Array Be**	**5.28**	**15**	Pn		**Pn**	**18 51 21.2**	**-3.2**
AKASG				Sn		**Sn**	**18 52 19.9**	**-4.6**
AKASG				Lg			18 52 48.6	
AKASG	**Malin Array Be**	**5.28**	**15**	P		**Pn**	**18 51 21.2**	**-3.3**
AKASG							18 52 19.9	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.3s							
AKASG				smax				
	comp=N,6.0nm,0.3s							
KNT	**Kendrikon**	**5.39**	**216**	P		**Pn**	**18 51 25.8**	**-0.2**
PSZ	**Piszkesteto**	**5.43**	**298**	P		**Pn**	**18 51 26.1**	**-0.4**
PSZ	**Piszkesteto**	**5.43**	**298**	P		**Pn**	**18 51 26.1**	**-0.4**
STHS	**Stebnicka Huta**	**5.47**	**316**	*e*PN		**Pn**	**18 51 26.9**	**-0.1**
SUDU	**Sudak**	**5.66**	**95**	*e*P		**Pn**	**18 51 28.8**	**-0.8**
SUDU				*e*S		**Sn**	**18 52 32.1**	**-1.6**
BBLS	**Lazići**	**5.73**	**255**	*e*Pn		**Pn**	**18 51 32.5**	**+1.9**
LIA	**Limnos Island**	**5.89**	**194**	P		**Pn**	**18 51 32.0**	**-0.8**
PKSM	**Moragy**	**5.90**	**279**	P		**Pn**	**18 51 32.2**	**-0.8**
PKSM	**Moragy**	**5.90**	**279**	P		**Pn**	**18 51 32.2**	**-0.8**
NIE	**Niedzica**	**5.94**	**312**	*e*Pn		**Pn**	**18 51 34.5**	**+1.0**
VYHS	**Vyhne**	**6.31**	**300**	*e*PN		**Pn**	**18 51 37.6**	**-0.9**
VYHS				*e*SN		**Sn**	**18 52 48.1**	**-1.7**
KOLL	**Kolacno**	**6.61**	**300**	*e*P		**Pn**	**18 51 47.6**	**+5.0**
KOLL				*e*			18 52 49.5	
KOLL	**Kolacno**	**6.61**	**300**	*e*PN		**Pn**	**18 51 47.5**	**+4.9**
KOLL				*e*			18 52 49.5	
OJC	**Ojcow**	**6.70**	**316**	*e*Pn		**Pn**	**18 51 44.3**	**+0.4**
MODS	**Modra-Piesok**	**7.23**	**296**	*e*PN		**Pn**	**18 51 51.0**	**-0.2**
BRTR	**Keskin Array B**	**7.63**	**138**	Pn		**Pn**	**18 51 54.5**	**-2.3**
	comp=N,0.3nm,0.3s,baz=326,slow=12,SNR=7.8							
VRAC	**Vranov**	**7.99**	**301**	Pn		**Pn**	**18 52 00.4**	**-1.2**
	comp=N,0.2nm,0.3s,baz=99,slow=11,SNR=4.2							
GERES	**GERESS Array B**	**9.64**	**294**	Pn		**Pn**	**18 52 21.4**	**-2.8**
	comp=N,0.1nm,0.3s,baz=104,slow=12,SNR=2.2							
DAVOX	**Davos/Dischmat**	**11.96**	**282**	LR		LR	18 58 16.3	
	comp=N,62nm,20.1s,baz=184,slow=41							
HFS	**Hagfors**	**16.57**	**336**	Pn		**Pn**	**18 53 52.0**	**-5.6**
	comp=N,0.1nm,0.3s,baz=182,slow=40,SNR=3.5							
NB2	**NORSAR Subarra**	**18.03**	**335**	P		**Pn**	**18 54 10.8**	**-4.9**
	comp=Z,2.5nm,0.8s,baz=151,slow=11							
NOA	**NORSAR Array B**	**18.03**	**335**	Pn		**Pn**	**18 54 11.3**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=3.0							
ARU	**Arti**	**22.37**	**50**	*e*P		**P**	**18 55 03.3**	**+0.1**
	comp=Z,3.8nm,0.8s,mb3.9							
ARU	**Arti**	**22.37**	**50**	*e*P		**P**	**18 55 03.3**	**+0.1**
ARU				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb3.9							
ARCES	**ARCESS Array B**	**23.99**	**359**	P		**P**	**18 55 17.7**	**-1.7**
	comp=Z,2.4nm,0.8s,mb3.7,baz=15,slow=6.3,SNR=4.6							
ARCES	**ARCESS Array B**	**23.99**	**359**	P		**P**	**18 55 17.7**	**-1.7**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**37.26**	**56**	P		**P**	**18 57 14.5**	**-2.1**
	comp=Z,0.8nm,0.5s,mb3.8,baz=291,slow=9.4,SNR=3.7							
ZALV	**Zalesovo Beam**	**37.26**	**56**	P		**P**	**18 57 14.5**	**-2.1**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.9							
MKAR	**Makanchi Array**	**37.57**	**68**	P		**P**	**18 57 18.3**	**-1.0**
	comp=Z,0.4nm,0.8s,mb3.2,baz=269,slow=8.5,SNR=2.9							
TORD	**Torodi Ar. Bea**	**38.85**	**222**	P		**P**	**18 57 28.6**	**-1.8**
	comp=Z,1.4nm,0.4s,mb4.0,baz=28,slow=8.6,SNR=23							
SONM	**Songino Array**	**52.13**	**57**	P		**P**	**18 59 14.8**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=290,slow=8.5,SNR=5.0							
SONM	**Songino Array**	**52.13**	**57**	P		**P**	**18 59 14.8**	**-0.3**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.7s							

*BGS **29** 18:59:58.5±1.4, 1277N×6347W, h148km, mb6.9, MS6.7*
*SZGRF **29** 19:00:02.2, 1437N×6158W, h33km, mb7.3, MS6.8, Windward Islands*
*LDG **29** 19:00:16.9, 1495N×6123W, h140km*
*ISCJB **29** 19:00:18.3±0.1, 1509N±001×61226W±0009, h145km,*

mb6.8/458, Error ellipse: s-maj=1.8km s-min=1.3km az=175.0
*TRN **29** 19:00:18.6, 1503N×6103W, h148km, MD7.3, M7.3(FDF)*
TRN Felt widely throughout the EasternCarib bean from Guyana to Puerto Rico. Damage to buildings in Barbados, Martini que, minor damage in Saint Lucia VII, Dominica VII - Poweroutages.
*MOS **29** 19:00:18.2±0.7, 1497N×6128W, h152km, mb6.8/143, MS6.9/34, Error ellipse: s-maj=4.9km s-min=3.2km az=47.8*
*GCMT **29** 19:00:19.6±0.1, 1506N×6141W, h148km, MW7.4/119, Moment Tensor Solution. s117,c322; s119,c584; Duration: 12±2 Moment tensor: Scale 10^20 Nm; Mrr=0.49±.01; Mθθ 0.99±.00; Mϕϕ -0.50±.01; Mrθ -0.36±.00; Mθϕ 0.44±.00; Mϕr 1.42±.01; Best double couple: M0 1.56700×10^20 NP1:ϕs 109.00000°, δ58.00000°, λ-32.00000°. NP2:ϕs 217.00000°, δ64.00000°, λ-144.00000°. Principal axes: T 1.1110, Plg3.0000°, Azm342.0000°; N 0.9110, Plg46.0000°, Azm248.0000°; P -2.0220, Plg44.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IGIL **29** 19:00:19.6, 1495N×6124W, h143km, MS6.6*
*BJI **29** 19:00:19.6, 1500N×6130W, h147km, mB6.7*
*NEIC **29** 19:00:20.4±0.1, 1494N×6127W, h156km, mb6.9/278, ME7.5, MW7.4, MW7.7(CAR), Error ellipse: s-maj=2.1km s-min=1.3km az=163.0 Broadband fault plane solution: P waves. NP1:ϕs 205.0000°, δ75.0000°, λ-160.00000°. NP2:ϕs 110.00000°, δ71.00000°, λ-16.00000°. Principal axes: T Plg3.0000°, Azm337.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm68.0000°; Moment Tensor Solution. s72 Moment tensor: Scale 10^20 Nm; Mrr-0.30; Mθθ 0.78; Mϕϕ -0.48; Mrθ -0.40; Mθϕ 0.49; Mϕr 1.24; Best double couple: M0 1.50000×10^20 NP1:ϕs 211.00000°, δ67.00000°, λ-144.00000°. NP2:ϕs 105.00000°, δ58.00000°, λ-28.00000°. Principal axes: T 0.9500, Plg5.0000°, Azm336.0000°; N 0.8400, Plg48.0000°, Azm240.0000°; P -1.7900, Plg41.0000°, Azm71.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC One person killed, at least 100 injured, several buildings damaged or destroyed and power outages occurred on Martinique. Two people injured and several buildings destroyed on Barbados. Minor damage occurred on Saint Lucia and Saint Vincent. Power outages occurred on Guadeloupe. Felt [VII] at Fort-de-France and [VI] at Le Lamentin, Martinique. Felt [VII] at Cap Estate, Castries and Soufriere; [VI] at Choc and Gros Islet, Saint Lucia. Also felt [VI] at Bolans, Antigua. Felt [V] on Barbados, Grenada, Guadeloupe, Saint Kitts, Saint Vincent and Trinidad. Felt [IV] at Guaynabo, Humacao, Mayaguez, Rio Grande, San Juan and Trujillo Alto; [III] at Bayamon, Carolina, Catano, Cidra and Juncos, Puerto Rico. Felt [V] on Dominica; [IV] on Anguilla, Bequia, Nevis, Saint Martin, Tobago and Tortola; [III] on Saba, Saint Croix, Saint John, Saint Thomas, Sint Eustatius and at Savanna-la-Mar, Jamaica; [II] at Santo Domingo, Dominican Republic. Felt [V] at Georgetown and Linden, Guyana; [IV] at Lelydorp and [III] at Paramaribo, Suriname; [IV] at Kourou, French Guiana. Felt [IV] at Ciudad Bolivar, Ciudad Guayana and Maturin; [III] at Caracas and Puerto La Cruz, Venezuela. Felt at Armenia and Bogota, Colombia; at Macouria, Montjoly and Remire, French Guiana; at Overwacht, Suriname. Also felt throughout northern Guyana and Venezuela and as far south as Boa Vista, Brazil.
*IDC **29** 19:00:20.0±0.7, 1496N×6129W, h152km±5km, mb5.9/40, mb1 6.0/42, mb1mx6.0/42, mbtmp5.9/42, MS6.7/21, Ms1 6.7/21, ms1mx6.4/36 Error ellipse: s-maj=6.2km s-min=4.6km az=106.0*
*CASC **29** 19:00:23.2±2.5, 1473N×6111.6W, h178km±208km, mb7.0, mb6.9(NEIC)*

ISC 29 19:00:20.0±0.1, 1500N±001×61224W±0009, h147km, h147km±3.3km: pP-P, n2198, σ0 972/1965, mb6.8/458, 319C-574D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	**0.16**	**160**	⇓*e*P			**Pn**	**19 00 39.8**	**0.0**
PCM	**Pelee Case Pet**	**0.18**	**176**	⇓*e*P			**Pn**	**19 00 39.6**	**-0.3**
PCM	**Pelee Case Pet**	**0.18**	**176**	⇓*e*P			**Pn**	**19 00 39.9**	**0.0**
BAMF	**Morne Balai**	**0.19**	**158**	⇓*e*P			**Pn**	**19 00 39.7**	**0.0**
GBMF	**Grand Be**	**0.20**	**164**	⇓*e*P			**Pn**	**19 00 39.9**	**0.0**
PML	**Morne Lenard**	**0.22**	**170**	⇓*e*P			**Pn**	**19 00 39.9**	**-0.1**
DSHT	**Scott's Head**	**0.26**	**326**	⇓*i*P			**Pn**	**19 00 40.0**	**0.0**
FDF	**Fort de France**	**0.27**	**165**	P			**Pn**	**19 00 39.3**	**-0.8**
FDF	**Fort de France**	**0.27**	**165**	⇓*i*P			**Pn**	**19 00 40.0**	**-0.1**
FDF				*e*S			**Sn**	**19 00 56.3**	**+0.9**
DFBT	**Forest Bistro**	**0.28**	**332**	*e*P			**Pn**	**19 00 40.4**	**+0.3**
DBCT	**Belle View Cho**	**0.30**	**337**	⇑*i*P			**Pn**	**19 00 40.3**	**+0.2**
BVM	**Bellevue**	**0.30**	**149**	⇓*i*P			**Pn**	**19 00 39.6**	**-0.5**
DPMT	**Pointe Michel**	**0.30**	**331**	⇓*i*P			**Pn**	**19 00 40.1**	**-0.1**
ZAM	**Aeronautique**	**0.46**	**156**	⇓*i*P			**Pn**	**19 00 40.4**	**-0.5**
TRMF	**Trois Ilets**	**0.48**	**160**	⇓*i*P			**Pn**	**19 00 40.7**	**-0.2**
LPMF	**Morne Lapointe**	**0.49**	**149**	⇓*e*P			**Pn**	**19 00 40.3**	**-0.7**
BIM	**Bigot**	**0.50**	**163**	⇓*e*P			**Pn**	**19 00 40.8**	**-0.3**
MVM	**Montagne Vaucl**	**0.54**	**144**	⇓*e*P			**Pn**	**19 00 40.7**	**-0.5**
DWS	**Wesley**	**0.58**	**352**	⇑*i*P			**Pn**	**19 00 42.2**	**+0.8**
SLW	**Petit Monier**	**1.01**	**164**	⇓*e*P			**Pn**	**19 00 43.8**	**-0.8**
HMG	**Houelmont**	**1.08**	**335**	*e*P			**Pn**	**19 00 45.5**	**+0.3**
DOG	**Dongo Capester**	**1.10**	**340**	⇓*e*P			**Pn**	**19 00 45.4**	**0.0**
SCG	**Saint Claude**	**1.12**	**337**	⇓*e*P			**Pn**	**19 00 45.8**	**+0.2**
BCG	**Bois Riant Cap**	**1.15**	**341**	*e*P			**Pn**	**19 00 45.8**	**-0.1**
SLB	**Belfond**	**1.17**	**171**	⇑*i*P			**Pn**	**19 00 46.8**	**+0.7**
SFG	**Saint Francois**	**1.25**	**1**	⇑*e*P			**Pn**	**19 00 46.3**	**-0.5**
LZG	**Guadaloupe-1**	**1.26**	**335**	⇓*e*P			**Pn**	**19 00 47.0**	**+0.2**
MCLT	**Moule a Chique**	**1.31**	**168**	*e*P			**Pn**	**19 00 48.0**	**+0.7**
MCLT				*e*S			**Sn**	**19 01 07.6**	**-0.7**
DEG	**La Desirade**	**1.32**	**7**	⇓*e*P			**Pn**	**19 00 46.6**	**-0.8**
SFAN	**Fancy Village**	**1.60**	**178**	⇑*i*P			**Pn**	**19 00 51.4**	**+1.0**
SSV	**Crater Summit**	**1.66**	**179**	⇑*i*P			**Pn**	**19 00 51.5**	**+0.5**
SVV	**Soufriere Volc**	**1.67**	**180**	⇑*i*P			**Pn**	**19 00 52.0**	**+0.8**
BHS	**Barnard House**	**1.69**	**177**	⇑*i*P			**Pn**	**19 00 51.8**	**+0.4**
SVB	**Belmont**	**1.71**	**181**	*e*P			**Pn**	**19 00 51.6**	**0.0**
SVB	**Belmont**	**1.71**	**181**	*e*P			**Pn**	**19 00 51.9**	**+0.2**
SVB				*e*S			**Sn**	**19 01 17.6**	**+1.6**
FCV	**Fort Charlotte**	**1.83**	**181**	⇑*i*P			**Pn**	**19 00 53.2**	**+0.3**
MBRY		**1.92**	**332**	*e*P			**Pn**	**19 00 54.7**	**+0.7**
MBLG		**1.94**	**332**	*e*P			**Pn**	**19 00 54.9**	**+0.6**
MBLG				*e*S			**Sn**	**19 01 22.5**	**+1.9**
MLYT	**Lee's Yard**	**1.95**	**332**	*e*P			**Pn**	**19 00 55.5**	**+1.2**
MBWH		**1.97**	**332**	*e*P			**Pn**	**19 00 55.3**	**+0.7**
MBGB		**1.98**	**331**	*e*P			**Pn**	**19 00 55.3**	**+0.6**
BPA	**Boggy Peak**	**2.13**	**343**	⇓*i*P			**Pn**	**19 00 56.6**	**+0.1**
BPA				*e*S			**Sn**	**19 01 24.3**	**-0.2**
BBGH	**Gun Hill**	**2.45**	**139**	⇑*i*Pn			**Pn**	**19 01 00.4**	**0.0**
BBGH				*e*Sn			**Sn**	**19 01 31.9**	**+0.5**
BBGH	**Gun Hill**	**2.45**	**139**	*e*P			**Pn**	**19 01 00.5**	**+0.1**
BBGH	**Gun Hill**	**2.45**	**139**	*e*P			**Pn**	**19 00 59.9**	**-0.4**
NVBH	**Bath Hotel, Ne**	**2.50**	**328**	*e*P			**Pn**	**19 01 01.8**	**+0.8**
BBSP	**Saint Philip**	**2.54**	**137**	⇓*e*P			**Pn**	**19 00 59.5**	**-2.0**
ANWB	**Willy Bob**	**2.71**	**349**	⇑*e*Pn			**Pn**	**19 01 01.9**	**-1.7**
ANWB				*e*S			**Sn**	**19 01 34.3**	**-3.0**
SKI	**Saint Kitts**	**2.74**	**328**	*e*P			**Pn**	**19 01 04.3**	**+0.4**
SKI				*e*S			**Sn**	**19 01 38.6**	**+0.6**
GRW	**Mount Saint Ca**	**2.85**	**189**	⇑*i*P			**Pn**	**19 01 06.0**	**+0.6**
GRGR	**Grenville**	**2.88**	**188**	⇑*i*Pn			**Pn**	**19 01 05.3**	**-0.3**
GRGR	**Grenville**	**2.88**	**188**	*e*P			**Pn**	**19 01 05.2**	**-0.5**
TOSP	**Speyside**	**3.73**	**170**	*e*P			**Pn**	**19 01 16.4**	**-0.3**
TOSP				*e*S			**Sn**	**19 02 00.3**	**-0.5**
TPR	**Prospect**	**3.81**	**173**	*e*P			**Pn**	**19 01 17.5**	**-0.2**
BOT	**Bacolet**	**3.84**	**173**	⇑*i*P			**Pn**	**19 01 18.5**	**+0.5**
ITEV	**Isla Los Testi**	**4.07**	**207**	*e*P			**Pn**	**19 01 20.1**	**-0.9**
TCE	**Chacachacare**	**4.30**	**187**	*e*P			**Pn**	**19 01 24.3**	**+0.1**
TRN	**Trinidad (W)**	**4.32**	**182**	⇑*i*P			**Pn**	**19 01 25.3**	**+0.9**
GUIV	**Guiria**	**4.43**	**193**	*e*P			**Pn**	**19 01 24.4**	**-1.4**
GUIV				*e*S			**Sn**	**19 02 19.1**	**+2.0**
TBH	**Brigand Hill**	**4.49**	**178**	*e*P			**Pn**	**19 01 27.0**	**+0.4**
IBAV	**Isla La Blanqu**	**4.54**	**226**	*e*P			**Pn**	**19 01 26.5**	**-0.7**
IBAV				*e*S			**Sn**	**19 02 24.1**	**+4.5**
TPP	**Pointe-a-Pierr**	**4.65**	**183**	*e*P			**Pn**	**19 01 28.5**	**-0.3**
CRUV	**Carupano**	**4.72**	**205**	*e*P			**Pn**	**19 01 30.1**	**+0.4**
CRUV				*e*S			**Sn**	**19 02 27.9**	**+3.9**

GUNV	**Guanoco**	**5.09**	**199**	*e*P			**Pn**	**19 01 34.2**	**-0.4**
PTP	**Ponta Puerca**	**5.30**	**308**	*e*P			Px	19 05 05.6	
SJG	**San Juan**	**5.65**	**304**	*e*P			**Pn**	**19 01 41.6**	**-0.3**
	56μm,0.8s								
ORCV	**Isla La Orchil**	**5.78**	**237**	*e*P			**Pn**	**19 01 42.9**	**-0.8**
PCRV	**Puerto La Cruz**	**5.83**	**215**	P			**Pn**	**19 01 44.4**	**0.0**
	558nm,0.3s,baz=18,slow=2.8,SNR=336								
PCRV				S			**Sn**	**19 02 51.8**	**+1.3**
	2μm,0.3s,baz=34,slow=12,SNR=2.6								
PCRV				LR			LR	19 03 35.8	
	comp=Z,1023μm,18.8s,baz=37,slow=34								
PCRV	**Puerto La Cruz**	**5.83**	**215**	*e*P			**Pn**	**19 01 44.2**	**-0.3**
PCRV				*e*S			**Sn**	**19 02 53.3**	**+2.8**
CUPV	**Cœpira**	**6.63**	**223**	*e*P			**Pn**	**19 01 55.6**	**+0.5**
CUPV				*e*S			**Sn**	**19 03 13.2**	**+3.7**
BIRV	**Birongo**	**6.66**	**228**	*e*P			**Pn**	**19 01 55.4**	**-0.2**
RIOV	**Rio Grande**	**6.91**	**185**	*e*P			**Pn**	**19 01 57.0**	**-1.8**
GURV	**El Guri**	**7.42**	**194**	*e*P			**Pn**	**19 02 04.3**	**-1.3**
TURV	**Turiamo**	**7.88**	**236**	*e*P			**Pn**	**19 02 10.9**	**-0.9**
BAUV	**El Baul**	**8.98**	**229**	*e*P			**Pn**	**19 02 25.9**	**-0.6**
SANV	**Sanarito**	**9.79**	**237**	*e*P			**Pn**	**19 02 37.6**	**+0.4**
CURV	**Curarigua**	**9.86**	**241**	*e*P			**Pn**	**19 02 38.1**	**-0.1**
DABV	**Dabajuro**	**10.03**	**247**	*e*P			**Pn**	**19 02 39.7**	**-0.7**
SDDR	**Presa de Saban**	**10.41**	**294**	*e*P			**Pn**	**19 02 43.7**	**-1.8**
	18μm,0.5s								
SDV	**Santo Domingo**	**11.03**	**238**	P			**Pn**	**19 02 52.8**	**-0.8**
	6.3nm,0.3s,baz=83,slow=10,SNR=83								
SDV				S			**Sn**	**19 04 57.2**	**+1.6**
	156nm,0.3s,baz=347,slow=14,SNR=1.6								
SDV				LR			LR	19 07 41.2	
	comp=Z,657μm,18.6s,baz=78,slow=40								
SDV	**Santo Domingo**	**11.03**	**238**	*e*P			**Pn**	**19 02 52.6**	**-1.0**
	8μm,0.8s								
ELOV	**Elorza**	**11.35**	**226**	*e*P			**Pn**	**19 02 57.5**	**-0.4**
SOCV	**Socops**	**11.55**	**236**	*e*P			**Pn**	**19 03 00.5**	**0.0**
VIGV	**El Vigia**	**11.65**	**239**	*e*P			**Pn**	**19 03 01.2**	**-0.7**
VIRV	**Villa del Rosa**	**11.79**	**249**	*e*P			**Pn**	**19 03 01.5**	**-2.1**
LAPE	**La Pedrera**	**12.55**	**235**	⇑*e*P			Px	19 05 20.8	
MASC	**Masc**	**13.43**	**294**	*e*P			**Pn**	**19 03 20.5**	**-4.3**
MASC				*e*S			**Sn**	**19 05 46.9**	**-6.5**
RCC	**Rio Carpintero**	**14.67**	**292**	⇑*i*P			**Pn**	**19 03 35.6**	**-4.9**
RCC				*i* S			**Sn**	**19 06 27.2**	**+3.9**
	comp=N,2μm,1.9s								
RCC			

comp=Z,248nm,0.7s,mb6.0,baz=144,slow=10.0,SNR=186
TKL S **S** **19 10 44.0 +0.4**
comp=Z,178nm,0.7s,baz=348,slow=21,SNR=1.6
TKL P3KPbc 19 38 21.1
comp=Z,27nm,0.9s,baz=231,slow=2.8,SNR=5.5
TKL Tuckaleechee C 28.83 320 *e*P **P 19 06 04.1 -0.3**
TKL Tuckaleechee C 28.83 320 P **P 19 06 04.3 -0.1**
TKL S **S** **19 10 44.0 +0.5**
TKL pmax pmax
comp=Z,248nm,0.7s,mb6.0
TKL smax
comp=N,178nm,0.7s
TZTN Tazewell 29.27 321 *e*P **P 19 06 08.2 -0.1**
comp=N,1µm,1.1s,mb6.5
SSPA Standing Stone 29.38 334 *e*P **P 19 06 09.2 0.0**
comp=N,768nm,0.8s,mb6.5
JAT Jato 29.42 273 *e*P **P 19 06 10.1 +0.2**
LRAL Lakeview Retre 29.48 312 *e*P **P 19 06 10.0 -0.2**
comp=N,983nm,0.8s,mb6.6
MCWV Mont Chateau 29.50 330 *e*P **P 19 06 10.5 +0.3**
comp=N,5µm,0.7s,mb7.4
CCIG Comitan 29.78 277⇑ *i*P **P 19 06 12.5 -0.5**
BINY Binghamton 29.95 338 *e*P **P 19 06 14.6 +0.4**
comp=N,522nm,0.3s,mb6.7
LBNH Lisbon 30.54 345 *e*P **P 19 06 20.1 +0.7**
comp=N,2µm,0.9s,mb6.7
LBNH Lisbon 30.54 345 P **P 19 06 20.3 +1.0**
LBNH pmax pmax
comp=Z,2µm,0.9s,mb6.7
SIV San Ignacio 30.79 180 P **P 19 06 21.5 -0.3**
comp=Z,651nm,0.8s,mb6.4,baz=14,slow=7.9,SNR=378
SIV S **S** **19 11 15.3 +0.9**
comp=Z,512nm,0.9s,baz=42,slow=22,SNR=1.8
SIV P3KPbc 19 38 14.8
comp=Z,22nm,1.0s,baz=187,slow=7.9,SNR=5.2
SIV San Ignacio 30.79 180 P **P 19 06 21.5 -0.3**
SIV S **S** **19 11 15.3 +0.9**
SIV *e* 19 38 14.8
PKME Peaks-Kenny Pk 30.93 349 *e*P **P 19 06 23.2 +0.4**
comp=Z,8.5nm,0.3s
NCB Newcomb 30.93 342 *e*P **P 19 06 23.2 +0.4**
comp=Z,395nm,0.3s,mb6.6
NNA Nana 30.95 211 P **P 19 06 21.1 -2.2**
comp=Z,9µm,0.8s,mb7.5,SNR=23
NNA Nana 30.95 211 P **P 19 06 22.2 -1.0**
comp=Z,864nm,0.9s,mb6.5,baz=16,slow=8.3,SNR=55
NNA S **S** **19 11 15.5 -1.6**
comp=Z,266nm,1.0s,baz=145,slow=9.6,SNR=2.7
NNA LR LR 19 19 20.2
comp=Z,210µm,18.2s,baz=29,slow=37
NNA P3KPbc 19 38 15.0
comp=Z,21nm,1.0s,baz=257,slow=9.2,SNR=5.7
NNA Nana 30.95 211 *e*P **P 19 06 20.7 -2.6**
comp=Z,1µm,0.8s,mb6.7
ERPA Erie 31.51 333 *e*P **P 19 06 28.1 +0.2**
ACSO Alum Creek Sta 31.51 327 *e*P **P 19 06 27.9 -0.1**
comp=Z,488nm,0.3s,mb6.7
LONY Lake Ozonia 31.63 342 *e*P **P 19 06 29.0 +0.1**
comp=Z,2µm,0.7s,mb6.9
VBMS Vicksburg 31.70 308 *e*P **P 19 06 30.1 +0.4**
WVT Waverly 31.74 316 *e*P **P 19 06 29.1 -0.9**
comp=Z,756nm,1.0s,mb6.4
WVT Waverly 31.74 316 *e*P **P 19 06 29.1 -0.9**
WVT pmax pmax
comp=Z,756nm,1.0s,mb6.4
TUIG Tuzandepetl 31.95 280⇑ *i*P **P 19 06 31.9 -0.1**
OXF Oxford 31.96 313 *e*P **P 19 06 31.3 -0.6**
comp=Z,911nm,0.6s,mb6.7
OXF Oxford 31.96 313 *e*P **P 19 06 31.3 -0.7**
OXF pmax pmax
comp=Z,911nm,0.6s,mb6.7
WCI Wyandotte Cave 32.02 321 *e*P **P 19 06 32.8 +0.3**
comp=Z,2µm,0.8s,mb6.8
WCI Wyandotte Cave 32.02 321 *e*P **P 19 06 33.0 +0.5**
WCI pmax pmax
comp=Z,2µm,0.8s,mb6.8
CMIG Matias Romero 32.40 278 *e*P **P 19 06 36.6 +0.7**
RCBR Riachuelo 32.53 128 *e*P **P 19 06 37.3 +0.2**
comp=Z,15nm,0.5s
UTMT University of 32.55 316 *e*P **P 19 06 37.2 +0.1**
comp=Z,7µm,0.8s,mb7.4
MET Memphis--Engin 32.64 313 *e*P **P 19 06 38.3 +0.4**
comp=Z,2µm,0.6s,mb7.1
PAYG Puerto Ayora 32.69 244 *e*P **P 19 06 38.6 0.0**
comp=Z,8µm,1.5s,mb7.2
PAYG Puerto Ayora 32.69 244 *e*P **P 19 06 38.5 0.0**
USIN University of 32.71 319 *e*P **P 19 06 38.5 0.0**
comp=Z,692nm,0.6s,mb6.6
BLO Bloomington 32.77 322 *e*P **P 19 06 39.1 +0.2**
comp=Z,2µm,0.7s,mb6.9
BLO Bloomington 32.77 322 P **P 19 06 39.4 +0.5**
BLO pmax pmax
comp=Z,2µm,0.7s,mb6.9
ARE Arequipa 32.86 198 *e*P **P 19 06 36.0 -3.9**
BDFB Brasilia 33.12 156 P **P 19 06 42.9 +0.7**
comp=Z,138nm,0.8s,mb5.7,baz=321,slow=15,SNR=176
BDFB S **S** **19 11 52.3 +1.6**
comp=Z,283nm,0.9s,baz=5.1,slow=27,SNR=1.6
BDFB LR LR 19 21 27.6
comp=Z,61µm,20.7s,baz=151,slow=38
BDFB Brasilia 33.12 156 P **P 19 06 42.9 +0.7**
BDFB S **S** **19 11 52.3 +1.6**
BDFB pmax pmax
comp=Z,138nm,0.8s
BDFB smax
comp=N,283nm,0.9s
BDFB MLR MLR
comp=Z,61µm,20.7s
PVMO Portageville 33.16 315 *e*P **P 19 06 43.0 +0.6**
comp=Z,7µm,1.0s,mb7.4
SADO Sadowa 33.34 336 P **P 19 06 43.4 -0.4**
comp=Z,623nm,0.8s,mb6.4,baz=164,slow=7.7,SNR=160
SADO S **S** **19 11 53.7 +0.1**
comp=Z,74nm,0.8s,baz=280,slow=17,SNR=1.5
SADO Sadowa 33.34 336 P **P 19 06 43.4 -0.4**
SADO S **S** **19 11 53.7 +0.1**
AAM Ann Arbor 33.38 329 *e*P **P 19 06 44.4 +0.2**
comp=Z,2µm,0.7s,mb6.9
AAM Ann Arbor 33.38 329 P **P 19 06 44.7 +0.5**
AAM pmax pmax
comp=Z,5µm,1.1s,mb7.2
OLIL Olney 33.45 320 *e*P **P 19 06 45.2 +0.3**
comp=Z,965nm,0.7s,mb6.6
SIUC Southern Illin 33.56 318 *e*P **P 19 06 46.0 +0.1**
comp=Z,497nm,0.5s,mb6.5
HUIG Huatulco 33.62 276⇑ *i*P **P 19 06 44.2 -2.5**
LVIG Laguna Verde 33.88 283 *i* P **P 19 06 47.1 -1.7**
OXX Oaxaca 34.15 278 *i* P **P 19 06 50.7 -0.5**
VHO Vista Hermosa 34.16 278 *i* P **P 19 06 49.0 -2.3**
UALR University of 34.21 311 *e*P **P 19 06 51.4 -0.1**
comp=Z,759nm,0.6s,mb6.6
FVM French Village 34.50 317 *e*P **P 19 06 53.2 -0.8**
comp=Z,2µm,0.6s,mb7.1
FVM French Village 34.50 317 P **P 19 06 53.6 -0.3**
FVM pmax pmax
comp=Z,2µm,0.6s,mb6.9
SLM Saint Louis 34.74 318 *e*P **P 19 06 54.9 -1.1**
comp=Z,951nm,0.8s,mb6.5
SLM Saint Louis 34.74 318 P **P 19 06 55.2 -0.8**
SLM pmax pmax
comp=Z,950nm,0.9s,mb6.4
MIAR Mount Ida 35.01 310 *e*P **P 19 06 57.6 -0.8**
comp=Z,761nm,0.9s,mb6.3
MIAR Mount Ida 35.01 310 P **P 19 06 57.7 -0.7**
MIAR pmax pmax
comp=Z,2µm,1.0s,mb6.7
CCM Cathedral Cave 35.08 317 *e*P **P 19 06 57.9 -1.1**
comp=Z,830nm,0.8s,mb6.4
CCM Cathedral Cave 35.08 317 P **P 19 06 58.0 -0.9**
CCM pmax pmax
comp=Z,3µm,0.8s,mb6.9
HKT Hockley 35.11 301 *e*P **P 19 06 58.7 -0.7**
comp=Z,81nm,2.8s
HKT Hockley 35.11 301 P **P 19 06 58.9 -0.4**
HKT pmax pmax
comp=Z,3µm,1.3s,mb6.7
HDIL Hopedale 35.29 322 *e*P **P 19 07 00.6 -0.1**
comp=Z,2µm,1.3s,mb6.5
PNIG Pinotepa 35.52 277 *i* P **P 19 07 01.9 -1.2**
GLMI Grayling 35.73 331 *e*P **P 19 07 04.8 +0.4**
comp=Z,11µm,0.8s,mb7.5
PPM Popocatepetl 35.95 282 *i* P **P 19 07 07.0 +0.4**
IIO Organos 36.05 283 *e*P **P 19 07 07.4 0.0**
KVTX Kingsville 36.24 296 *e*P **P 19 07 10.0 +1.0**
comp=Z,3µm,0.9s,mb6.9
PBVM Pinon 36.38 282 *e*P **P 19 07 09.8 -0.5**

PTVM Pico Tres Padr 36.41 283 *e*P **P 19 07 10.2 -0.3**
UNM Universidad Na 36.47 282⇑ *i*P **P 19 07 10.3 -0.8**
PB01 Plate Boundary 36.72 193⇑ *i*P **P 19 07 09.7 -3.3**
PLIG Platanillo 36.78 281⇑ *i*P **P 19 07 13.5 -0.2**
CALA Caldeira 37.03 44 *e*P **P 19 07 16.9 +1.4**
HOR Horta 37.05 45 *e*P **P 19 07 17.3 +1.6**
PCED Cedros 37.05 44 *e*P **P 19 07 17.4 +1.7**
comp=Z,11µm,1.6s,mb7.2
PICO Pico 37.18 45 *e*P **P 19 07 18.8 +2.0**
ACX Acapulco 37.22 278 *i* P **P 19 07 16.8 -0.6**
JFWS Jewell Farm 37.32 324 *e*P **P 19 07 17.4 -0.5**
comp=Z,2µm,0.7s,mb6.8
JFWS Jewell Farm 37.32 324 P **P 19 07 17.5 -0.4**
JFWS pmax pmax
comp=Z,2µm,0.6s,mb6.9
ROSA Rosais 37.41 45 *e*P **P 19 07 20.2 +1.5**
PMAN Manadas 37.47 45 *e*P **P 19 07 20.7 +1.5**
comp=Z,6µm,1.5s,mb7.0
CAIG El Cayaco 37.54 279 *i* P **P 19 07 19.3 -0.8**
PGRA Graciosa 37.74 44 *e*P **P 19 07 22.7 +1.2**
comp=Z,17µm,1.5s,mb7.5
PSBA Serra de Santa 38.06 45 *e*P **P 19 07 25.1 +0.9**
comp=Z,14µm,1.5s,mb7.4
ADH Angra Heroismo 38.06 45 *e*P **P 19 07 26.6 +2.4**
LVC Limon Verde 38.12 192 P **P 19 07 22.9 -2.0**
comp=Z,163nm,0.5s,mb5.9,baz=14,slow=6.4,SNR=121
LVC S **S** **19 13 04.7 -2.3**
comp=Z,102nm,1.0s,baz=131,slow=18,SNR=3.5
LVC LR LR 19 24 48.6
comp=Z,155µm,20.5s,baz=353,slow=39
LVC P3KPbc 19 37 42.3
comp=Z,18nm,1.0s,baz=182,slow=4.8,SNR=4.4
LVC Limon Verde 38.12 192 *e*P **P 19 07 22.5 -2.3**
comp=Z,595nm,0.6s,mb6.4
LVC Limon Verde 38.12 192⇑ *i*P **P 19 07 22.4 -2.4**
PSCM Serra do Cume 38.17 45 *i* P **P 19 07 25.6 +0.5**
comp=Z,2µm,1.4s,mb6.6
MOIG Morelia 38.37 283⇑ *i*P **P 19 07 26.1 -1.0**
SCIA State Center 38.47 321 *e*P **P 19 07 26.9 -0.7**
comp=Z,171nm,1.2s,mb5.5
JCT Junction City 38.56 300 *e*P **P 19 07 27.0 -1.5**
comp=Z,986nm,1.0s,mb6.4
JCT Junction City 38.56 300 P **P 19 07 27.2 -1.3**
JCT pmax pmax
comp=Z,6µm,1.1s,mb7.1
ZIIG Zihuatanejo 38.66 280 *i* P **P 19 07 28.3 -1.2**
PSET Sete Cidades 38.74 47 *i* P **P 19 07 31.0 +1.1**
comp=Z,4µm,1.5s,mb6.8
PDA Ponta Delgada 38.75 47 *e*P **P 19 07 31.6 +1.7**
PDA *e*S S 19 13 38.0 +22
PDA *e*LQ 19 16 48.0
COWI Conover 38.84 329 *e*P **P 19 07 30.8 +0.2**
comp=Z,2µm,0.7s,mb6.8
CMLA Cha da Macela 38.85 47 P **P 19 07 31.5 +0.7**
comp=Z,26µm,1.2s,mb7.8,SNR=54
PSMN Pico do Norte, 38.86 49 *e*P **P 19 07 31.1 +0.2**
WMOK Wichita Mounta 39.03 307 *e*P **P 19 07 30.8 -1.6**
comp=Z,2µm,0.6s,mb6.8
WMOK Wichita Mounta 39.03 307 P **P 19 07 30.8 -1.6**
WMOK pmax pmax
comp=Z,2µm,0.6s,mb6.8
KSU1 Kansas State U 39.24 315 *e*P **P 19 07 32.4 -1.6**
comp=Z,3µm,0.6s,mb7.1
ZAIG Zacatecas 39.77 288⇑ *i*P **P 19 07 39.8 +1.1**
SCHQ Schefferville 39.99 355 P **P 19 07 40.3 +0.3**
comp=Z,730nm,0.8s,mb6.3,baz=172,slow=9.4,SNR=347
SCHQ S **S** **19 13 33.5 -0.8**
comp=Z,178nm,1.0s,baz=147,slow=2.8,SNR=2.6
SCHQ Schefferville 39.99 355 *e*P **P 19 07 39.6 -0.3**
comp=Z,3.5nm,0.6s
SFJM Santa Fe 40.12 284 *i* P **P 19 07 42.5 +1.0**
CAM3 Guarapari 40.91 150⇓ *i*P **P 19 07 47.6 -0.4**
CAM3 *i* 19 07 48.5
CAM3 *i* 19 07 52.7
CAM3 *i* 19 07 56.8
CAM3 *i* 19 07 58.8
CAM3 *i* 19 08 01.3
CAM3 *i* 19 08 29.4
EYMN Ely 41.28 329 *e*P **P 19 07 49.6 -1.1**
comp=Z,35µm,0.9s,mb8.0
CBKS Cedar Bluff 41.30 313 *e*P **P 19 07 50.2 -0.8**
comp=Z,2µm,0.6s,mb6.9
CBKS Cedar Bluff 41.30 313 P **P 19 07 50.5 -0.5**
CBKS pmax pmax
comp=Z,3µm,0.9s,mb6.9
AMTX Amarillo 41.33 306 *e*P **P 19 07 50.3 -1.0**
CAM4 Nova Friburgo 41.38 153⇓ *i*P **P 19 07 51.3 -0.5**
CAM4 *i* 19 07 52.8
CAM4 *i* 19 08 03.1
CAM4 *i* pP 19 08 24.8 +0.5
CAM4 *i* 19 08 29.3
CAM4 *i* 19 08 47.5
ECSD EROS,Sioux Fal 41.57 321 *e*P **P 19 07 52.0 -1.0**
comp=Z,74nm,1.0s,mb5.3
TXAR Lajitas Array 41.58 297 P **P 19 07 52.6 -0.9**
comp=Z,147nm,0.5s,mb5.9,baz=114,slow=7.4,SNR=566
TXAR S **S** **19 13 59.6 +1.0**
comp=Z,42nm,1.0s,baz=117,slow=5.2,SNR=2.7
TXAR LR LR 19 25 40.5
comp=Z,102µm,21.9s,baz=30,slow=37
TXAR P3KPbc 19 37 25.0
comp=Z,3.0nm,0.7s,baz=270,slow=3.8,SNR=9.2
TXAR PKPPKP 19 39 55.9
comp=Z,8.6nm,1.2s,baz=209,slow=2.3,SNR=4.6
TXAR Lajitas Array 41.58 297 P **P 19 07 52.6 -0.9**
TXAR S **S** **19 13 59.6 +1.0**
TXAR LR LR 19 25 40.5
TXAR *e* 19 37 25.0
TXAR P'P' 19 39 55.9
CJM Chamela 42.01 283⇑ *i*P **P 19 07 54.8 -2.2**
CHIE El Hierro 42.03 65⇓P **P 19 07 57.3 +0.2**
comp=Z,1µm,0.9s,mb6.5
EHIG Higuera 42.29 64⇓P **P 19 07 59.3 +0.1**
comp=Z,6µm,1.1s,mb7.1
EGOM La Gomera 42.75 65⇓P **P 19 08 02.5 -0.3**
comp=Z,4µm,1.9s,mb6.7
BBTS Babate 43.15 84 LR LR 19 23 35.9
comp=Z,88µm,20.5s,baz=281,slow=32
CCAN Las Canadas 43.28 65⇓P **P 19 08 07.5 +0.3**
comp=Z,522nm,0.8s,mb6.2
MAIG Mazatlaan 43.34 288⇑ *i*P **P 19 08 08.3 +0.6**
EBAJ Bajamar 43.56 64⇓P **P 19 08 10.0 +0.6**
comp=Z,3µm,1.0s,mb6.9
AGMN Agassiz Refuge 43.75 327 *e*P **P 19 08 09.3 -1.3**
comp=Z,35µm,0.9s,mb8.0
OGNE Ogallala 43.79 314 *e*P **P 19 08 10.2 -0.9**
comp=Z,171nm,1.2s,mb5.5
EOSO Osorio 44.19 65⇓P **P 19 08 14.9 +0.5**
comp=Z,8µm,2.4s,mb7.0
LCO Las Campanas 44.70 192 *e*P **P 19 08 16.4 -1.9**
comp=Z,1µm,1.1s,mb6.5
ULM Lac du Bonnet 44.97 329 P **P 19 08 18.9 -1.3**
comp=Z,1µm,0.6s,mb6.7,baz=132,slow=9.0,SNR=340
ULM S **S** **19 14 45.4 -2.0**
comp=Z,232nm,1.1s,baz=75,slow=20,SNR=1.7
ULM Lac du Bonnet 44.97 329 *e*P **P 19 08 18.6 -1.6**
comp=Z,2µm,1.0s,mb6.6
ANMO Albuquerque 45.12 305 *e*P **P 19 08 21.4 -0.3**
comp=Z,1µm,1.2s,mb6.4
ANMO Albuquerque 45.12 305 *e*P **P 19 08 21.4 -0.3**
ANMO pmax pmax
comp=Z,1µm,1.2s
SDCO Great Sand Dun 45.15 309 *e*P **P 19 08 21.1 -0.8**
comp=Z,480nm,0.3s,mb6.6
Y22D IRIS PASSCAL I 45.28 303⇑P **P 19 08 23.3 +0.3**
baz=45,SNR=49
Y22D ⇓S **S** **19 14 55.1 +2.8**
baz=45
TLL Tololo Astrono 45.84 192⇑ *i*P **P 19 08 25.4 -1.9**
ISCO Idaho Springs 45.90 311 *e*P **P 19 08 27.4 -0.3**
comp=Z,1µm,1.1s,mb6.5
ISCO Idaho Springs 45.90 311 P **P 19 08 27.5 -0.3**
ISCO pmax pmax
comp=Z,1µm,1.1s,mb6.5
EFAM Famara 46.08 64⇓P **P 19 08 30.6 +1.2**
comp=Z,16µm,2.0s,mb7.3
PHWY Pilot Hill 46.31 313 *e*P **P 19 08 30.0 -1.0**
comp=Z,2µm,1.1s,mb6.7
RSSD Black Hills 46.45 318 *e*P **P 19 08 31.4 -0.7**
comp=Z,339nm,0.7s,mb6.1
RSSD Black Hills 46.45 318 *e*P **P 19 08 31.4 -0.6**
RSSD pmax pmax
comp=Z,339nm,0.7s,mb6.1
SMCO Snowmass 46.69 310 *e*P **P 19 08 33.7 -0.3**
comp=Z,825nm,0.5s,mb6.6
319A Douglas 46.71 299⇓P **P 19 08 34.4 +0.2**
baz=47,SNR=1000
319A ⇓S **S** **19 15 14.0 +1.1**
baz=47
219A White Tail Can 46.79 300⇑P **P 19 08 35.4 +0.5**
baz=47,SNR=1000
219A ⇓S **S** **19 15 14.6 +0.6**
baz=47
CFAA Coronel Fontan 46.82 188 P **P 19 08 33.4 -1.6**
comp=Z,72nm,1.1s,baz=353,slow=7.1,SNR=146
CFAA S **S** **19 15 11.4 -2.7**
comp=Z,27nm,0.9s,baz=209,slow=17,SNR=7.4
R21A Cimarron 46.88 309⇑P **P 19 08 35.7 +0.3**
baz=47,SNR=714
R21A ⇑S **S** **19 15 15.8 +0.7**
baz=47
119A Ashpeak Ranch, 46.96 301⇑P **P 19 08 36.6 +0.4**
baz=47
119A ⇑S **S** **19 15 17.8 +1.4**
baz=47
Z19A T-Link Ranch, 47.03 302⇓P **P 19 08 37.1 +0.4**
baz=47
Z19A ⇓S **S** **19 15 17.9 +0.6**
baz=47
M22A Cedar Creek Ra 47.15 313⇑P **P 19 08 37.8 +0.3**
baz=47,SNR=239
M22A ⇓S **S** **19 15 20.5 +1.8**
baz=47
Y19A Nutrioso 47.15 303⇓P **P 19 08 38.3 +0.7**
baz=47
Y19A ⇑S **S** **19 15 21.4 +2.4**
baz=47
X19A St. Johns 47.27 303⇑P **P 19 08 39.3 +0.7**
baz=47,SNR=135
X19A ⇓S **S** **19 15 22.4 +1.7**
baz=47
MVCO Mesa Verde 47.29 307 *e*P **P 19 08 38.3 -0.3**
comp=Z,12µm,0.3s,mb8.0
MVCO Mesa Verde 47.29 307⇑P **P 19 08 38.5 -0.1**
baz=47
MVCO ⇑S **S** **19 15 20.8 -0.1**
baz=47
318A Bisbee 47.32 299⇓P **P 19 08 39.2 +0.2**
baz=47,SNR=963
318A ⇓S **S** **19 15 22.0 +0.5**
baz=47
V19A Window Rock 47.35 305⇓P **P 19 08 39.3 +0.2**
baz=47,SNR=270
V19A ⇓S **S** **19 15 22.3 +0.5**
baz=47
O21A Pagoda 47.38 311⇑P **P 19 08 39.6 +0.3**
baz=47,SNR=141
O21A ⇑S **S** **19 15 24.5 +2.4**
baz=47
218A Dragoon 47.45 300⇓P **P 19 08 40.3 +0.3**
baz=47,SNR=752
218A ⇓S **S** **19 15 25.6 +2.2**
baz=47
W19A Sanders 47.49 304⇓P **P 19 08 40.3 0.0**
baz=47,SNR=670
W19A ⇑S **S** **19 15 24.9 +1.0**
baz=47
118A Homack Ranch, 47.49 301⇓P **P 19 08 40.9 +0.6**
baz=47,SNR=1000
118A ⇓S **S** **19 15 27.0 +3.1**
baz=47
N21A Black Mountain 47.59 312⇑P **P 19 08 41.2 +0.2**
baz=48,SNR=319
N21A ⇓S **S** **19 15 26.9 +1.8**
baz=48
T19A Beclabito 47.60 306⇓P **P 19 08 41.1 0.0**
baz=48,SNR=814
T19A ⇑S **S** **19 15 26.1 +0.8**
baz=48
Z18A Geronimo 47.63 301⇓P **P 19 08 42.0 +0.7**
baz=48,SNR=112
Z18A ⇑S **S** **19 15 28.1 +2.3**
baz=48
CHNG Los Chungos 47.64 192⇓ *i*P **P 19 08 39.5 -1.7**
RWWY Rawlins 47.68 313 *e*P **P 19 08 41.4 -0.1**
comp=Z,2µm,0.6s,mb6.9
Y18A Canyon Day Jun 47.75 302⇓P **P 19 08 42.6 +0.3**
baz=48,SNR=355
M21A Separation Pea 47.76 313⇑P **P 19 08 42.4 +0.2**
baz=48,SNR=197
W18A Petrified Fore 47.77 304⇓P **P 19 08 42.4 0.0**
baz=48,SNR=244
X18A Snowflake 47.83 303⇑P **P 19 08 43.0 +0.2**
baz=48,SNR=738
L21A Rawlins 47.88 314⇓P **P 19 08 43.1 0.0**
baz=48
S19A Harvey Farm, M 47.92 308⇑P **P 19 08 43.5 0.0**
baz=48,SNR=688
V18A Ganado 48.06 305⇓P **P 19 08 44.3 -0.3**
baz=48,SNR=242
217A Green Valley 48.07 299⇓P **P 19 08 44.8 +0.1**
baz=48,SNR=727
TUC Tucson 48.12 300 *e*P **P 19 08 44.8 -0.3**
comp=Z,951nm,0.8s,mb6.5
TUC Tucson 48.12 300 P **P 19 08 44.8 -0.3**
TUC pmax pmax
comp=Z,830nm,0.9s,mb6.4
117A Oracle 48.12 300⇑P **P 19 08 45.3 +0.2**
baz=48,SNR=1000
N20A Spence Gulch, 48.15 312⇓P **P 19 08 45.3 +0.1**
baz=48
R19A Curley Farm, L 48.15 308⇓P **P 19 08 45.2 -0.1**
baz=48,SNR=232
U18A Rough Rock, Ch 48.16 306⇓P **P 19 08 45.5 +0.1**
baz=48,SNR=431
M20A Sweetwater, Wa 48.30 313⇑P **P 19 08 46.7 +0.3**
baz=48,SNR=308
P19A Cripple Cowboy 48.31 310⇓P **P 19 08 46.1 -0.4**
baz=48,SNR=134
Q19A Hogan Spring (48.33 309⇑P **P 19 08 46.3 -0.3**
baz=48
T18A Mexican Hat 48.34 307⇑P **P 19 08 46.5 -0.1**
baz=48
Y17A Roosevelt 48.40 302⇑P **P 19 08 47.1 -0.1**
baz=48
DGMT Dagmar 48.51 323 *e*P **P 19 08 47.7 -0.2**
comp=Z,1µm,1.1s,mb6.4
DGMT Dagmar 48.51 323⇑P **P 19 08 48.2 +0.4**
baz=48
W17A Winslow 48.55 304⇓P **P 19 08 48.1 -0.3**
baz=48,SNR=13
S18A Hurst Farm, Bl 48.56 307⇑P **P 19 08 48.4 0.0**
baz=48,SNR=555
L20A Wamsutter 48.58 313⇓P **P 19 08 48.8 +0.3**
baz=48,SNR=386
216A Three Points, 48.64 300⇑P **P 19 08 48.9 -0.2**
baz=49,SNR=168
R18A Canyonlands Na 48.66 308⇑P **P 19 08 48.9 -0.2**
baz=49
PEL Peldehue 48.71 191⇓ *i*P **P 19 08 48.1 -1.4**
K20A Yellowstone Ra 48.80 314⇑P **P 19 08 50.1 0.0**
baz=49
Z16A Peralta Trail, 48.82 301⇑P **P 19 08 50.9 +0.4**
baz=49,SNR=344
FCH Farellones 48.82 190⇑ *i*P **P 19 08 49.7 -0.7**
N19A John Jarvie Ra 48.83 312⇓P **P 19 08 49.9 -0.5**
baz=49
U17A Shonto 48.83 306⇓P **P 19 08 50.4 0.0**
baz=49,SNR=205
116A Eloy 48.93 300⇓P **P 19 08 51.3 0.0**
baz=49
CLCH Cerro Calan 48.93 190 *e*P **P 19 08 49.8 -1.4**
Y16A Circle Bar Ran 48.95 302⇑P **P 19 08 52.1 +0.6**
baz=49,SNR=1000
M19A Rock Springs 49.00 312⇓P **P 19 08 51.2 -0.5**
baz=49
X16A Lo Mia Camp, P 49.02 303⇑P **P 19 08 52.5 +0.6**
baz=49,SNR=775
Q18A Rafter H Ranch 49.03 309⇑P **P 19 08 52.2 +0.3**
baz=49
T17A Navajo Res., N 49.03 306⇓P **P 19 08 52.4 +0.4**
baz=49,SNR=518
U16A Tuba City 49.10 305⇓P **P 19 08 52.9 +0.3**
baz=49,SNR=310
WUAZ Wupatki 49.17 304 *e*P **P 19 08 53.2 +0.1**
comp=Z,3µm,0.5s,mb7.2
WUAZ Wupatki 49.17 304⇑P **P 19 08 53.5 +0.5**
baz=49,SNR=1000
S17A Black Ridge (B 49.17 307⇑P **P 19 08 53.5 +0.4**
baz=49,SNR=1000
K19A Absolon Red Bu 49.21 314⇑P **P 19 08 52.7 -0.5**
baz=49
N18A Larsen Ranch, 49.21 312⇑P **P 19 08 52.8 -0.5**
baz=49

W16A Flagstaff 49.21 304 ⇑P P 19 08 54.0 +0.6
baz=49,SNR=486
O18A Roosevelt 49.25 311 ⇓P P 19 08 53.6 0.0
baz=49,SNR=40
P18A Preston Nutter 49.25 310 ⇑P P 19 08 53.9 +0.3
baz=49,SNR=391
R17A Hanksville Air 49.29 308 ⇓P P 19 08 53.9 0.0
baz=49,SNR=389
LMEL Las Melosas 49.32 190 *e*P P 19 08 53.2 -0.9
SRU San Rafael 49.32 309 ⇑P P 19 08 54.3 +0.2
baz=49
L19A Farson 49.33 313 ⇓P P 19 08 54.2 0.0
baz=49
Z15A Gila River Ind 49.41 301 ⇑P P 19 08 55.2 +0.2
baz=49,SNR=49
T16A Glen Canyon Da 49.57 306 ⇑P P 19 08 56.7 +0.6
baz=50,SNR=518
P17A Butcher Ranch, 49.58 309 ⇓P P 19 08 56.3 +0.1
baz=50,SNR=463
M18A Lyman 49.63 312 ⇓P P 19 08 56.6 +0.1
baz=50
Y15A Casa Rosa Ranc 49.66 302 ⇑P P 19 08 57.2 +0.3
baz=50,SNR=692
X15A Humboldt 49.67 303 ⇑P P 19 08 57.5 +0.6
baz=50,SNR=646
BW06 Boulder Array 49.68 314 *e*P P 19 08 55.9 -0.9
comp=Z,3µm,1.1s,mb6.9
BW06 Boulder Array 49.68 314 ⇓P P 19 08 56.8 -0.1
baz=50
PDAR Pinedale Array 49.68 314 P P 19 08 56.1 -0.7
comp=Z,1µm,0.8s,mb6.5,baz=116,slow=9.5,SNR=1359
PDAR ScP ScP
19 13 56.2 -1.5
comp=Z,198nm,1.1s,baz=129,slow=3.8,SNR=4.9
PDAR S **S** **19 15 55.7 +1.4**
comp=Z,54nm,0.9s,baz=109,slow=6.0,SNR=4.3
PDAR LR LR
19 28 10.9
comp=Z,57µm,22.0s,baz=123,slow=34
PDAR PKPPKP
19 39 39.4
comp=Z,4.2nm,0.9s,baz=72,slow=1.1,SNR=4.4
PDAR P4KPbc
19 46 31.1
comp=Z,7.5nm,0.6s,baz=118,slow=6.0,SNR=6.3
PDAR Pinedale Array 49.68 314 P P **19 08 56.1 -0.7**
PDAR ScP ScP 19 13 56.2 -1.5
PDAR S **S** **19 15 55.7 +1.4**
PDAR LR LR 19 28 10.9
PDAR P'P' 19 39 39.4
LPA La Plata 49.73 176 *ce*P P **19 08 55.0 -2.1**
comp=Z,4µm,0.8s,mb7.0
LPA *ep*P pP 19 09 29.0 -1.8
LPA *e*PCP PcP 19 10 16.0 0.0
LPA *e*SCP PP 19 10 54.0 +0.7
LPA *i* S **S** **19 15 54.0 -0.9**
LPA pmax pmax
comp=Z,150µm,22.0s
LPA La Plata 49.73 176 ⇑ *e*P P **19 08 55.0 -2.1**
LPA *e**PP pP 19 09 29.0 -1.8
LPA *e* 19 10 16.0
LPA *e* 19 10 54.0
LPA *i* S **S** **19 15 54.0 -0.9**
LPA pmax pmax
comp=Z,4µm,0.8s,mb7.0
LPA MLR MLR
comp=Z,150µm,22.0s
L18A Fontenelle, Gr 49.76 313 ⇑P P **19 08 57.6 +0.2**
baz=50
Q16A Castle Valley 49.76 309 ⇑P P **19 08 57.5 0.0**
baz=50,SNR=411
O17A Robinson Place 49.77 310 ⇓P P **19 08 58.1 +0.5**
baz=50,SNR=1000
214A Organ Pipe Nat 49.77 299 ⇑P P **19 08 57.9 +0.1**
baz=50,SNR=257
S16A Weppner Ranch, 49.80 307 ⇓P P **19 08 58.0 +0.1**
baz=50,SNR=400
W15A Williams 49.82 304 ⇓P P **19 08 58.7 +0.7**
baz=50,SNR=301
R16A Teasdale 49.85 308 ⇑P P **19 08 58.4 +0.3**
baz=50,SNR=820
V15A Kaibab Nationa 49.86 304 ⇑P P **19 08 59.0 +0.7**
baz=50,SNR=522
K18A Toltan Ranch, 49.98 314 ⇑P P **19 08 59.4 +0.4**
baz=50,SNR=549
FCC Fort Churchill 50.02 338 *e*P P **19 08 58.0 -1.1**
comp=Z,1.8nm,0.4s
FCC Fort Churchill 50.02 338 P P **19 08 58.2 -0.9**
FCC pmax pmax
comp=Z,2µm,0.9s,mb6.6
N17A Moffit Pass 50.04 311 ⇑P P **19 08 59.5 -0.1**
baz=50,SNR=302
M17A Scullys Gap (B 50.07 312 ⇓P P **19 08 59.6 -0.2**
baz=50
U15A North Rim 50.08 305 ⇓P P **19 09 00.6 +0.7**
baz=50,SNR=687
Z14A Wintersburg 50.08 301 ⇓P P **19 09 00.3 +0.3**
baz=50,SNR=134
J18A Kendall Valley 50.15 314 ⇓P P **19 09 00.3 0.0**
baz=50
I18A Diamond G Ranc 50.16 315 ⇓P P **19 09 00.7 +0.2**
baz=50
X14A Yava 50.20 302 ⇓P P **19 09 01.5 +0.6**
baz=50,SNR=819
Y14A Wickenburg 50.21 302 ⇑P P **19 09 01.3 +0.2**
baz=50,SNR=241
T15A Red Dirt Ranch 50.27 306 ⇑P P **19 09 01.9 +0.5**
baz=50,SNR=507
RLMT Red Lodge 50.28 317 *e*P P **19 09 01.3 -0.1**
comp=Z,960nm,0.6s,mb6.6
RLMT Red Lodge 50.28 317 ⇓P P **19 09 01.4 0.0**
baz=50
P16A Fountain Green 50.30 309 ⇑P P **19 09 02.0 +0.4**
baz=50,SNR=153
O16A Springville 50.34 310 ⇓P P **19 09 01.9 +0.1**
baz=50,SNR=162
S15A Panguitch 50.39 307 ⇓P P **19 09 02.6 +0.3**
baz=50,SNR=256
L17A Cokeville 50.40 313 ⇓P P **19 09 01.8 -0.5**
baz=50
R15A Junction 50.44 307 ⇓P P **19 09 03.2 +0.5**
baz=50,SNR=211
N16A Rees Ranch, Co 50.47 311 ⇓P P **19 09 03.1 +0.3**
baz=50,SNR=304
W14A Seligman 50.48 303 ⇑P P **19 09 03.7 +0.7**
baz=50,SNR=451
G18A Lazy EL Ranch, 50.55 317 ⇓P P **19 09 03.4 0.0**
baz=50
V14A Boquillas Ranc 50.58 304 ⇓P P **19 09 04.4 +0.7**
baz=50,SNR=435
K17A Gardner Place, 50.63 313 ⇑P P **19 09 03.7 -0.3**
baz=51
FFC Flin Flon 50.65 331 P P **19 09 02.1 -1.8**
comp=Z,9µm,0.7s,mb7.5
FFC Flin Flon 50.65 331 *e*P P **19 09 02.3 -1.6**
comp=Z,1µm,0.9s,mb6.6
FFC Flin Flon 50.65 331 *e*P P **19 09 02.3 -1.6**
FFC pmax pmax
comp=Z,1µm,0.9s,mb6.6
J17A Brown Place, J 50.67 314 ⇑P P **19 09 04.4 +0.1**
baz=51
LOHW Long Hollow 50.68 315 *e*P P **19 09 03.6 -0.7**
comp=Z,2µm,0.7s,mb6.9
113A Mohawk Valley, 50.68 300 ⇑P P **19 09 04.3 -0.3**
baz=51,SNR=148
Q15A Fillmore 50.70 308 ⇑P P **19 09 04.7 +0.1**
baz=51,SNR=215
M16A Huntsville 50.72 311 ⇓P P **19 09 04.4 -0.3**
baz=51
SNOW Snow King Moun 50.73 314 *e*P P **19 09 04.7 -0.1**
comp=Z,681nm,0.9s,mb6.3
P15A Leamington 50.75 309 ⇓P P **19 09 05.1 +0.2**
baz=51
I17A Pilgram Creek 50.76 315 ⇑P P **19 09 05.0 +0.1**
baz=51,SNR=129
HWUT Hardware Ranch 50.76 312 *e*P P **19 09 04.2 -0.8**
comp=Z,2µm,1.0s,mb6.8
AHID Auburn Hatcher 50.76 313 *e*P P **19 09 04.3 -0.7**
comp=Z,3µm,1.1s,mb6.8
REDW Red Top Meadow 50.77 314 *e*P P **19 09 04.8 -0.3**
comp=Z,2µm,0.6s,mb6.9
L16A Fish Haven 50.78 312 ⇓P P **19 09 05.1 0.0**
baz=51
U14A Mt Trumbull 50.78 305 ⇑P P **19 09 05.9 +0.7**
baz=51,SNR=585
MOOW Moose Ponds 50.82 315 *e*P P **19 09 04.6 -0.7**
comp=Z,2µm,0.7s,mb6.9
T14A Hurricane 50.82 306 ⇓P P **19 09 05.5 0.0**
baz=51,SNR=197
LKWY Lake 50.85 316 *e*P P **19 09 06.6 +1.0**
comp=Z,516nm,0.7s,mb6.3

LKWY Lake 50.85 316 P P **19 09 07.0 +1.4**
LKWY pmax pmax
comp=Z,410nm,0.7s,mb6.2
F18A Big Timber 50.86 318 ⇓P P **19 09 05.9 +0.3**
baz=51
Y13A Salome 50.87 301 ⇑P P **19 09 06.4 +0.4**
baz=51
TPAW Teton Pass 50.88 314 *e*P P **19 09 05.7 -0.1**
comp=Z,143nm,0.3s,mb6.1
H17A Grant Village 50.91 316 ⇑P P **19 09 06.3 +0.3**
baz=51,SNR=69
X13A Yucca 50.99 302 ⇓P P **19 09 07.2 +0.3**
baz=51,SNR=390
IMW Indian Meadow 51.00 315 *e*P P **19 09 06.3 -0.4**
comp=Z,140nm,0.3s,mb6.1
R14A James Farms, M 51.03 307 ⇑P P **19 09 07.4 +0.3**
baz=51,SNR=38
O15A The Old Anders 51.07 310 ⇓P P **19 09 07.5 +0.2**
baz=51,SNR=164
DCID1 Drake Creek 51.07 314 *e*P P **19 09 07.4 +0.1**
comp=Z,2µm,0.9s,mb6.8
RRI2 Red Ridge 51.09 314 *e*P P **19 09 07.1 -0.3**
comp=Z,142nm,0.3s,mb6.1
W13A Hualapai Mount 51.11 303 ⇑P P **19 09 08.4 +0.6**
baz=51,SNR=495
K16A Soda Springs 51.12 313 ⇓P P **19 09 07.5 -0.2**
baz=51
PDMCI Parker Dam,Lak 51.20 302 ⇓P P **19 09 08.3 -0.1**
baz=51,SNR=236
E18A Harlowton 51.23 318 ⇑P P **19 09 08.5 +0.1**
baz=51,SNR=392
N15A Stansbury Isla 51.26 311 ⇓P P **19 09 08.8 +0.1**
baz=51
J16A Bone 51.27 314 ⇓P P **19 09 08.6 -0.2**
baz=51
DUG Dugway 51.30 310 *e*P P **19 09 09.1 +0.1**
comp=Z,3µm,1.2s,mb6.8
DUG Dugway 51.30 310 ⇓P P **19 09 09.2 +0.1**
baz=51,SNR=876
DUG Dugway 51.30 310 P P **19 09 09.3 +0.2**
DUG pmax pmax
comp=Z,3µm,1.2s,mb6.8
V13A Grand Canyon W 51.32 304 ⇑P P **19 09 09.7 +0.4**
baz=51,SNR=1000
G17A Pierce Place, 51.33 317 ⇓P P **19 09 09.7 +0.5**
baz=51,SNR=161
LIS Lisbon 51.33 52 *e*P P **19 09 09.7 +0.4**
LIS *e*S **S** **19 16 18.4 +1.2**
LIS *e*S **S** **19 16 18.5 +1.3**
LIS AMS AMS 19 24 29.9
comp=Z,64µm,31.0s
112A Yuma 51.33 300 ⇑P P **19 09 09.4 0.0**
baz=51,SNR=14
P14A Drum Mountains 51.35 309 ⇑P P **19 09 09.8 +0.4**
baz=51,SNR=1000
M15A Larsen Ranch, 51.36 311 ⇑P P **19 09 08.8 -0.6**
baz=51
I16A Newdale 51.37 315 ⇓P P **19 09 09.7 +0.2**
baz=51
Q14A Sevier Lake (B 51.37 308 ⇓P P **19 09 10.2 +0.6**
baz=51,SNR=894
D18A Linhart Farms, 51.39 319 ⇑P P **19 09 10.0 +0.5**
baz=51,SNR=481
U13A Pakoon Wash 51.40 305 ⇓P P **19 09 10.4 +0.5**
baz=51,SNR=434
Y12C Blythe 51.44 301 ⇑P P **19 09 10.2 0.0**
baz=51,SNR=128
L15A Malad City 51.46 312 ⇓P P **19 09 09.9 -0.2**
baz=51
T13A Saint George 51.46 306 ⇑P P **19 09 10.9 +0.6**
baz=51,SNR=208
H16A Russell Place, 51.47 316 ⇑P P **19 09 10.8 +0.6**
baz=51,SNR=618
F17A Fitzpatrick Pl 51.47 317 ⇓P P **19 09 10.5 +0.3**
baz=51,SNR=571
S13A Holt Ranch, En 51.53 306 ⇑P P **19 09 11.3 +0.5**
baz=52
GLA Glamis 51.60 300 *e*P P **19 09 11.4 0.0**
comp=Z,3µm,0.7s,mb7.0
GLA Glamis 51.60 300 ⇑P P **19 09 11.4 0.0**
baz=52,SNR=138
GLA Glamis 51.60 300 *e*P P **19 09 11.6 +0.2**
GLA pmax pmax
comp=Z,6µm,1.8s,mb6.9
NEE2 Needles Airpor 51.66 303 ⇑P P **19 09 11.9 +0.1**
baz=52,SNR=93
EGMT Eagleton 51.67 320 *e*P P **19 09 11.9 +0.2**
comp=Z,171nm,1.2s,mb5.5
EGMT Eagleton 51.67 320 ⇑P P **19 09 11.9 +0.2**
baz=52,SNR=610
R13A O'Grain Ranch, 51.73 307 ⇑P P **19 09 12.9 +0.5**
baz=52,SNR=528
N14A Grayback Hills 51.74 310 ⇑P P **19 09 12.6 +0.3**
baz=52
K15A Arbon 51.75 313 ⇑P P **19 09 12.5 +0.1**
baz=52
E17A Martinsdale 51.80 318 ⇓P P **19 09 12.7 +0.1**
baz=52
B18A Beardsley Farm 51.83 321 ⇑P P **19 09 13.3 +0.5**
baz=52,SNR=584
U12A Valley of Fire 51.86 305 ⇑P P **19 09 13.7 +0.5**
baz=52,SNR=216
ALMR Almeirim 51.86 52 *e*P P **19 09 13.5 +0.3**
J15A Blackfoot 51.88 314 ⇑P P **19 09 13.6 +0.3**
baz=52,SNR=134
D17A Six Diamond Ra 51.93 319 ⇑P P **19 09 13.8 +0.2**
baz=52
Q13A Wheeler Ranch, 51.93 308 ⇓P P **19 09 14.3 +0.6**
baz=52,SNR=791
W12A Cal Nev Ari 51.94 303 ⇑P P **19 09 14.3 +0.4**
baz=52,SNR=74
V12A Nelson 51.99 304 ⇓P P **19 09 14.4 +0.1**
baz=52,SNR=365
G16A Moss Hill, Enn 52.01 316 ⇑P P **19 09 14.3 +0.1**
baz=52,SNR=435
IRM Iron Mountain 52.01 302 ⇑P P **19 09 14.8 +0.4**
baz=52,SNR=1000
M14A Sheep Mountain 52.02 311 ⇓P P **19 09 14.2 -0.2**
baz=52
BOZ Bozeman (W) 52.03 317 *e*P P **19 09 13.8 -0.6**
comp=Z,438nm,0.3s,mb6.6
BOZ Bozeman (W) 52.03 317 ⇑P P **19 09 14.5 +0.1**
baz=52
BOZ Bozeman (W) 52.03 317 *e*P P **19 09 13.8 -0.5**
BOZ pmax pmax
comp=Z,2µm,1.2s,mb6.6
P13A Bates Ranch, G 52.04 309 ⇓P P **19 09 15.2 +0.7**
baz=52,SNR=522
T12A Moapa 52.05 305 ⇓P P **19 09 15.1 +0.4**
baz=52,SNR=152
F16A Kennard Place, 52.07 317 ⇓P P **19 09 14.7 0.0**
baz=52,SNR=346
A18A Metzger Ranch, 52.08 321 ⇓P P **19 09 14.9 +0.3**
baz=52
L14A Malta 52.08 312 ⇑P P **19 09 14.5 -0.3**
baz=52
I15A Monteview 52.09 314 ⇓P P **19 09 15.5 +0.7**
baz=52,SNR=124
LDFC Landfair 52.10 303 *e*P P **19 09 16.0 +0.9**
comp=Z,2µm,1.1s,mb6.7
C17A Wharram Farm, 52.16 319 ⇑P P **19 09 15.3 +0.1**
baz=52
O13A Hicks Ranch, I 52.16 309 ⇑P P **19 09 15.7 +0.3**
baz=52,SNR=285
EVO Evora 52.16 53 ⇓ *i*P P **19 09 14.8 -0.7**
comp=Z,1µm,0.8s,mb6.4,baz=260
EVO *e*MLR MLR
comp=Z,51µm,20.5s
K14A Jones Ranch, D 52.17 313 ⇓P P **19 09 15.7 +0.3**
baz=52
BC3 Big Chuckw Mtn 52.19 301 ⇑P P **19 09 15.9 +0.1**
baz=52,SNR=859
R12A Pony Springs, 52.26 307 ⇓P P **19 09 16.8 +0.6**
baz=52,SNR=1000
S12A Delamar Landin 52.31 306 ⇑P P **19 09 17.2 +0.6**
baz=52,SNR=108
RTC Rabat Centre 52.35 59 *e*P P **19 09 16.8 -0.2**
comp=Z,6µm,1.4s,mb7.0
E16A East Helena 52.35 318 ⇑P P **19 09 16.8 0.0**
baz=52
H15A Lima 52.38 315 ⇓P P **19 09 17.5 +0.6**
baz=52,SNR=465
EGRO El Granado 52.39 54 ⇓P P **19 09 17.7 +0.5**
comp=Z,12µm,2.9s,mb7.0
SWSC Sam W. Stewart 52.40 300 ⇑P P **19 09 17.4 +0.2**
baz=52,SNR=95
B17A L&G Farms, Che 52.42 320 ⇓P P **19 09 17.2 0.0**
baz=52

SFJD Kangerlussuaq 52.43 5 P P **19 09 17.1 +0.2**
comp=Z,165nm,0.9s,mb5.7,baz=179,slow=9.1,SNR=23
SFJD S **S** **19 16 29.0 -2.3**
comp=Z,43nm,1.1s,baz=152,slow=9.0,SNR=2.4
SFJD Kangerlussuaq 52.43 5 *i*P P **19 09 17.7 +0.8**
SFJD *i*S **S** **19 16 32.2 +0.9**
SFJD pmax pmax
comp=Z,960nm,0.9s,mb6.4
SFJD MLR MLR
comp=Z,24µm,18.0s
SFJD Kangerlussuaq 52.43 5 *i*P P **19 09 17.7 +0.8**
comp=Z,960nm,0.9s,mb6.4
SFJD *i*S **S** **19 16 32.2 +0.9**
SFJD
comp=Z,24µm,18.0s
D16A Dana Ranch, Ca 52.44 318 ⇓P P **19 09 17.4 +0.1**
baz=52
G15A Dillon 52.45 316 ⇑P P **19 09 17.8 +0.4**
baz=52
V11A Goodsprings 52.47 304 ⇓P P **19 09 18.1 +0.3**
baz=52,SNR=181
EZAM Zamans 52.48 48 ⇓P P **19 09 17.7 -0.1**
comp=Z,34nm,0.5s
EMAZ Mazaricos 52.48 47 ⇓P P **19 09 17.6 -0.2**
comp=Z,10µm,2.6s,mb7.0
GMRC Granite Mounta 52.51 302 ⇓P P **19 09 18.3 +0.2**
baz=52,SNR=561
U11A Corn Creek 52.53 305 ⇓P P **19 09 18.7 +0.5**
baz=52,SNR=7.8
T11A Corn Creek, Al 52.53 306 ⇓P P **19 09 18.6 +0.3**
baz=52,SNR=289
Q12A Willow Creek R 52.57 308 ⇑P P **19 09 18.8 +0.4**
baz=52,SNR=193
DLMT Dillon 52.58 316 *e*P P **19 09 18.6 +0.2**
comp=Z,2µm,0.7s,mb7.0
M13A Montello 52.58 311 ⇓P P **19 09 18.7 +0.2**
baz=52
L13A Double Diamond 52.60 312 ⇓P P **19 09 18.3 -0.3**
baz=52
A17A Triple J Farms 52.60 321 ⇓P P **19 09 18.7 +0.1**
baz=53
J14A Carey 52.62 313 ⇑P P **19 09 19.1 +0.3**
baz=53,SNR=926
DVTC Desert V Tower 52.62 300 ⇓P P **19 09 19.1 +0.2**
baz=52,SNR=222
F15A Butte 52.66 317 ⇓P P **19 09 19.1 +0.1**
baz=53
BELC Belle Mtn. 52.69 301 ⇑P P **19 09 19.6 +0.2**
baz=53,SNR=373
I14A Mackay 52.74 314 ⇓P P **19 09 19.9 +0.3**
baz=53,SNR=166
O12A Currie 52.76 309 ⇓P P **19 09 19.9 +0.1**
baz=53,SNR=415
STS Santiago 52.77 47 ⇓P P **19 09 19.7 -0.2**
comp=Z,283nm,0.8s,mb6.0
STS Santiago 52.77 47 ⇓P P **19 09 19.7 -0.2**
STS pmax pmax
comp=Z,283nm,0.8s,mb6.0
TUQ Turquoise Moun 52.81 303 ⇓P P **19 09 20.6 +0.3**
baz=53,SNR=814
C16A Fuhringer Ranc 52.84 319 ⇓P P **19 09 20.5 +0.2**
baz=53
K13A Stover Farm, H 52.84 312 ⇓P P **19 09 20.4 0.0**
baz=53,SNR=606
ELOB Lobios 52.86 49 ⇓P P **19 09 20.5 -0.1**
comp=Z,10µm,2.7s,mb7.1
H14A Leadore 52.88 315 ⇑P P **19 09 20.8 +0.2**
baz=53,SNR=487
MTE Manteigas 52.91 50 *e*P P **19 09 20.6 -0.4**
comp=Z,2µm,1.2s,mb6.8
MONP Monument Peak 52.91 300 ⇑P P **19 09 21.6 +0.5**
baz=53,SNR=1000
E15A Deer Lodge 52.95 317 ⇓P P **19 09 21.1 0.0**
baz=53
EBAD Badajoz 52.98 53 ⇓P P **19 09 21.8 +0.3**
comp=Z,12µm,2.5s,mb7.2
R11A Troy Canyon, C 53.02 307 ⇓P P **19 09 22.0 +0.2**
baz=53,SNR=604
S11A Rachel 53.02 306 ⇑P P **19 09 22.4 +0.6**
baz=53,SNR=304
PFO Pinyon Flat Ob 53.02 301 P P **19 09 22.0 +0.1**
comp=Z,2µm,1.3s,mb6.7
PFO Pinyon Flat Ob 53.02 301 *e*P P **19 09 21.8 0.0**
comp=Z,4µm,2.1s,mb6.7
PFO Pinyon Flat Ob 53.02 301 ⇑P P **19 09 22.1 +0.2**
baz=53,SNR=110
PFO Pinyon Flat Ob 53.02 301 P P **19 09 22.0 +0.1**
PFO pmax pmax
comp=Z,4µm,2.1s,mb6.7
B16A M & M Farms, S 53.03 320 ⇓P P **19 09 21.6 0.0**
baz=53
EMIN Mina Concepcio 53.06 54 ⇓P P **19 09 22.5 +0.4**
comp=Z,12µm,3.2s
HEC Hector,Ludlow 53.06 302 ⇑P P **19 09 22.6 +0.4**
baz=53,SNR=688
D15A Lincoln 53.07 318 ⇓P P **19 09 22.2 +0.2**
baz=53,SNR=679
J13A Cove Ranch, Pi 53.10 313 ⇓P P **19 09 22.3 0.0**
baz=53,SNR=448
N12A Clover Valley, 53.11 310 ⇑P P **19 09 22.5 +0.1**
baz=53,SNR=726
G14A Jackson 53.12 316 ⇑P P **19 09 22.3 -0.1**
baz=53
M12A Wells 53.14 311 ⇑P P **19 09 22.7 +0.1**
baz=53
A16A West Butte Ran 53.16 321 ⇓P P **19 09 22.7 +0.2**
baz=53,SNR=494
Q11A Duckwater 53.16 307 ⇑P P **19 09 22.7 -0.1**
baz=53,SNR=433
SHOC Shoshone 53.17 304 ⇓P P **19 09 23.2 +0.3**
baz=53,SNR=194
I13A Wildhorse Cree 53.20 314 ⇑P P **19 09 23.4 +0.4**
baz=53
SFS San Fernando 53.22 56 *e*P P **19 09 25.0 +1.7**
comp=Z,6µm,1.1s,mb7.2
SFS San Fernando 53.22 56 P P **19 09 25.1 +1.8**
SFS pmax pmax
comp=Z,6µm,1.1s,mb7.2
ELK Elko 53.23 310 *e*P P **19 09 22.9 -0.3**
comp=Z,2µm,0.6s,mb7.0
ELK Elko 53.23 310 *e*P P **19 09 23.0 -0.3**
ELK pmax pmax
comp=Z,2µm,0.6s
F14A Wisdom 53.24 316 ⇑P P **19 09 23.5 +0.3**
baz=53,SNR=283
U10A Ash Meadows, A 53.28 304 ⇑P P **19 09 24.4 +0.6**
baz=53
TPNV Topopah Spring 53.30 305 *e*P P **19 09 24.1 +0.3**
comp=Z,1µm,1.1s,mb6.6
TPNV Topopah Spring 53.30 305 ⇓P P **19 09 24.6 +0.8**
baz=53
TPNV Topopah Spring 53.30 305 P P **19 09 24.2 +0.4**
TPNV pmax pmax
comp=Z,1µm,1.1s,mb6.6
HLID Hailey 53.31 313 *e*P P **19 09 23.7 -0.1**
comp=Z,3µm,0.5s,mb7.3
HLID Hailey 53.31 313 ⇓P P **19 09 23.9 +0.1**
baz=53,SNR=834
C15A Salmond Ranch, 53.37 319 ⇑P P **19 09 24.4 +0.2**
baz=53
P11A Circle Ranch, 53.37 308 ⇑P P **19 09 24.5 +0.2**
baz=53,SNR=122
L12A House Creek Ra 53.39 312 ⇑P P **19 09 24.5 +0.1**
baz=53
O11A Cowboy Ranch, 53.41 309 ⇑P P **19 09 25.0 +0.4**
baz=53,SNR=1000
K12A Draper Farm, C 53.42 312 ⇓P P **19 09 24.7 0.0**
baz=53,SNR=469
H13A Challis 53.47 315 ⇓P P **19 09 24.5 -0.4**
baz=53
BBRC Big Bear Sol-O 53.48 302 ⇑P P **19 09 25.8 +0.6**
baz=53
109C Camp Elliot, M 53.49 300 ⇑P P **19 09 25.1 -0.1**
baz=53,SNR=37
E14A Clinton 53.50 317 ⇑P P **19 09 25.3 +0.1**
baz=54
GSC Goldstone 53.51 303 *e*P P **19 09 25.4 0.0**
comp=Z,316nm,0.4s,mb6.4
GSC Goldstone 53.51 303 ⇓P P **19 09 25.8 +0.3**
baz=53,SNR=337
GSC Goldstone 53.51 303 P P **19 09 25.5 +0.1**
GSC pmax pmax
comp=Z,620nm,0.9s,mb6.3
B15A Bradely Ranch, 53.53 320 ⇑P P **19 09 25.1 -0.2**
baz=54
ESPR Espera 53.56 55 ⇓P P **19 09 26.9 +1.2**
comp=Z,23µm,3.1s
R10A Warm Springs 53.56 307 ⇑P P **19 09 26.4 +0.7**

baz=54,SNR=341
G13A **Cobalt** 53.60 315 ⇑P P 19 09 25.4 -0.5
baz=54
RRX **Edison Barstow** 53.61 302 ⇓P P 19 09 26.7 +0.5
baz=54
N11A **Elko Archery C** 53.62 310 ⇑P P 19 09 26.3 +0.2
baz=54,SNR=116
MURC **Murrieta** 53.63 301 ⇓P P 19 09 26.6 +0.3
baz=54,SNR=114
ERUA **La Rua** 53.65 48 ⇓P P 19 09 26.4 +0.1
comp=Z,396nm,0.9s,mb6.1
ERUA **La Rua** 53.65 48 ⇓P P 19 09 26.4 +0.1
ERUA pmax pmax
comp=Z,396nm,0.9s,mb6.1
FURC **Furnace Creek,** 53.71 304 ⇓P P 19 09 27.5 +0.6
baz=54,SNR=132
J12A **Stokes Ranch,** 53.71 313 ⇑P P 19 09 26.6 -0.1
baz=54
D14A **Greenough** 53.72 318 ⇑P P 19 09 26.8 0.0
baz=54
S10A **Tonopah Range,** 53.73 306 ⇑P P 19 09 27.5 +0.5
baz=54,SNR=1000
Q10A **Clear Creek Ra** 53.73 307 ⇓P P 19 09 27.3 +0.4
baz=54,SNR=769
M11A **Holland Ranch,** 53.79 311 ⇑P P 19 09 27.6 +0.2
baz=54,SNR=844
EJIF **Jimena Fronter** 53.80 56 ⇓P P 19 09 29.1 +1.6
comp=Z,888nm,0.8s,mb6.5
EJIF **Jimena Fronter** 53.80 56 ⇓P P 19 09 29.1 +1.6
EJIF pmax pmax
comp=Z,888nm,0.8s,mb6.5
ECAL **Calabor** 53.84 49 ⇓P P 19 09 27.8 +0.1
comp=Z,8µm,2.4s,mb7.0
A15A **Johnson Ranch,** 53.86 320 ⇓P P 19 09 27.9 +0.1
baz=54
F13A **Darby** 53.87 316 ⇑P P 19 09 27.8 0.0
baz=54
EPON **Pontenova** 53.87 47 ⇓P P 19 09 27.8 -0.1
comp=Z,8µm,2.5s,mb7.0
H12A **Diamond D Ranc** 53.88 315 ⇓P P 19 09 27.7 -0.2
baz=54
MSO **Missoula** 53.92 317 *e*P P 19 09 27.5 -0.7
comp=Z,2µm,0.4s,mb7.2
P10A **Eureka** 53.92 308 ⇓P P 19 09 28.6 +0.2
baz=54,SNR=286
L11A **Cat Creek Ranc** 53.92 311 ⇓P P 19 09 28.6 +0.3
baz=54
EPLA **Plasencia** 53.94 51 ⇓P P 19 09 28.5 +0.1
comp=Z,15µm,2.2s,mb7.3
E13A **Victor** 53.97 317 ⇑P P 19 09 28.7 +0.1
baz=54
B14A **Marquette Ranc** 53.99 319 ⇑P P 19 09 28.4 -0.3
baz=54
O10A **Cortez Mining,** 54.08 309 ⇓P P 19 09 29.4 -0.1
baz=54,SNR=182
BFSC **Mount Baldy St** 54.08 302 ⇑P P 19 09 29.5 -0.1
baz=54,SNR=295
MDT **Midelt** 54.09 60 P P 19 09 30.1 +0.5
comp=Z,416nm,0.8s,mb6.2,baz=270,slow=7.6,SNR=439
MDT S S 19 16 57.3 +2.4
comp=Z,11nm,0.8s,baz=253,slow=20,SNR=1.7
R09A **Tonopah** 54.15 306 ⇑P P 19 09 30.1 +0.1
baz=54,SNR=369
MPMC **Manual Prospec** 54.16 304 ⇑P P 19 09 30.3 +0.1
baz=54,SNR=636
N10A **Dunphy** 54.17 310 ⇑P P 19 09 29.9 -0.2
baz=54,SNR=34
S09A **Goldfield** 54.19 306 ⇑P P 19 09 30.3 0.0
baz=54,SNR=757
GRAC **Grapevine Rang** 54.19 305 ⇓P P 19 09 30.6 +0.3
baz=54,SNR=194
TPH **Tonopah** 54.24 306 *e*P P 19 09 30.6 -0.1
comp=Z,3µm,0.7s,mb7.2
TPH **Tonopah** 54.24 306 P P 19 09 30.9 +0.2
TPH pmax pmax
comp=Z,1µm,1.2s,mb6.5
LRMC **Laurel Mountai** 54.25 303 ⇓P P 19 09 30.7 -0.1
baz=54,SNR=322
K11A **Parker Ranch,** 54.26 312 ⇓P P 19 09 31.1 +0.3
baz=54
MFID **Camas Ranch** 54.27 313 ⇑P P 19 09 30.9 +0.1
baz=54
A14A **Double T Ranch** 54.29 320 ⇓P P 19 09 30.5 -0.3
baz=54
Q09A **Carvers** 54.33 307 ⇓P P 19 09 31.5 +0.2
baz=54,SNR=99
D13A **Huson** 54.34 318 ⇑P P 19 09 31.1 -0.1
baz=54
M10A **I.L. Ranch, Tu** 54.36 311 ⇓P P 19 09 31.6 +0.1
baz=54,SNR=458
EMIJ **Mijas** 54.38 56 ⇓P P 19 09 32.0 +0.3
comp=Z,8µm,2.1s,mb7.1
MWC **Mount Wilson** 54.41 301 *e*P P 19 09 31.8 -0.2
comp=Z,2µm,1.3s,mb6.6
MWC **Mount Wilson** 54.41 301 P P 19 09 32.1 +0.1
MWC pmax pmax
comp=Z,2µm,1.2s,mb6.7
EDW2 **Edwards Air Fo** 54.42 302 ⇑P P 19 09 32.3 +0.2
baz=54
P09A **Austin** 54.42 308 ⇓P P 19 09 32.1 +0.2
baz=54,SNR=47
L10A **Juniper Basin** 54.42 311 ⇑P P 19 09 32.4 +0.4
baz=54
I11A **Placerville** 54.48 314 ⇓P P 19 09 32.1 -0.2
baz=54
PASC **Pasadena Art C** 54.51 301 *e*P P 19 09 31.9 -0.8
comp=Z,2µm,0.8s,mb6.9
FMP **Fort Macarthur** 54.55 301 ⇓P P 19 09 33.2 +0.2
baz=54,SNR=46
O09A **Fish Creek Ran** 54.57 309 ⇓P P 19 09 33.3 +0.2
baz=54,SNR=1000
C13A **Hot Springs** 54.60 318 ⇑P P 19 09 33.3 +0.3
baz=55
WALA **Waterton Lakes** 54.62 320 *e*P P 19 09 32.4 -0.8
comp=Z,18nm,0.7s
DECC **Green Verdugo** 54.64 301 ⇑P P 19 09 33.5 -0.1
baz=55,SNR=53
BMN **Battle Mountai** 54.65 309 *e*P P 19 09 33.6 0.0
comp=Z,293nm,1.3s,mb5.8
BMN **Battle Mountai** 54.65 309 P P 19 09 33.7 +0.1
BMN pmax pmax
comp=Z,4µm,1.2s,mb7.0
VAL **Valentia** 54.65 36 ⇓*i*P P 19 09 33.5 +0.1
VAL **Valentia** 54.65 36 ⇑*i*S S 19 17 06.2 +4.4
CWC **Cottonwood Cre** 54.68 304 ⇓P P 19 09 34.3 +0.4
baz=55,SNR=327
SCI **San Clemente I** 54.70 300 ⇓P P 19 09 34.4 +0.3
baz=55,SNR=133
H11A **Donnelly** 54.72 314 ⇓P P 19 09 33.7 -0.3
baz=55
B13A **Whitefish** 54.75 319 ⇑P P 19 09 34.1 -0.1
baz=55
EADA **Adamuz** 54.76 54 ⇓P P 19 09 34.8 +0.4
comp=Z,12µm,2.8s,mb7.1
K10A **MacKenzie Ranc** 54.87 312 ⇓P P 19 09 35.1 0.0
baz=55
TIN **Tinemaha** 54.88 305 ⇑P P 19 09 35.9 +0.6
baz=55
A13A **Flathead Natio** 54.89 320 ⇑P P 19 09 35.0 -0.2
baz=55
ELUQ **Luque** 54.91 54 ⇓P P 19 09 36.0 +0.5
comp=Z,596nm,0.9s,mb6.3
ELUQ **Luque** 54.91 54 ⇓P P 19 09 36.0 +0.5
ELUQ pmax pmax
comp=Z,597nm,0.9s,mb6.3
Q08A **Gabbs** 54.91 307 ⇓P P 19 09 35.5 -0.1
baz=55
J10A **Berg Farm, Mel** 54.94 313 ⇑P P 19 09 35.3 -0.3
baz=55
ELOJ **Sierra Loja** 54.95 55 ⇓P P 19 09 37.0 +1.2
comp=Z,597nm,0.8s,mb6.4
ELOJ **Sierra Loja** 54.95 55 ⇓P P 19 09 37.0 +1.2
ELOJ pmax pmax
comp=Z,597nm,0.8s,mb6.4
N09A **Rock Creek Ran** 54.95 310 ⇓P P 19 09 35.7 0.0
baz=55,SNR=437
R08A **Mina** 54.97 306 ⇓P P 19 09 36.0 +0.1
baz=55,SNR=226
OSI **Osito Adit** 55.00 302 *e*P P 19 09 35.7 -0.5
comp=Z,977nm,1.1s,mb6.5
OSI **Osito Adit** 55.00 302 ⇓P P 19 09 35.8 -0.3
baz=55,SNR=38
M09A **Marrel Ranch,** 55.01 310 ⇑P P 19 09 36.3 +0.2
baz=55,SNR=511
G11A **Walters Elk Ra** 55.07 315 ⇑P P 19 09 35.7 -0.8
baz=55
I10A **Payette** 55.12 314 ⇓P P 19 09 36.6 -0.2
baz=55
ARVC **Arvin** 55.13 302 ⇓P P 19 09 37.7 +0.6
baz=55
NVAR **Mina Array Bea** 55.14 307 P P 19 09 37.2 +0.1
comp=Z,650nm,0.8s,mb6.4,baz=100,slow=6.5,SNR=1634
NVAR ScP ScP 19 14 21.9 +0.4
comp=Z,99nm,1.1s,baz=107,slow=4.9,SNR=2.7
NVAR S S 19 17 09.1 +0.3
comp=Z,15nm,0.8s,baz=122,slow=6.5,SNR=2.6
NVAR PKPPKP 19 39 27.2
comp=Z,5.7nm,1.0s,baz=254,slow=1.1,SNR=5.3
NVAR **Mina Array Bea** 55.14 307 P P 19 09 37.2 +0.1
NVAR ScP ScP 19 14 21.9 +0.4
NVAR S S 19 17 09.1 +0.3
NVAR P'P' 19 39 27.2
PAB **San Pablo** 55.15 52 *e*P P 19 09 37.0 -0.3
comp=Z,3µm,1.4s,mb6.8
PAB **San Pablo** 55.15 52 P P 19 09 37.0 -0.2
PAB pmax pmax
comp=Z,3µm,1.3s,mb6.8
P08A **Dixie Valley** 55.16 308 ⇓P P 19 09 36.7 -0.6
baz=55,SNR=34
C12B **Naegeli Ranch,** 55.19 318 ⇑P P 19 09 37.1 -0.2
baz=55
H10A **Noah's Angus R** 55.20 314 ⇓P P 19 09 36.2 -1.2
baz=55
ERON **Agron** 55.20 55 ⇓P P 19 09 39.0 +1.3
comp=Z,506nm,0.8s,mb6.3
BLG **Laguna Peak** 55.23 301 ⇑P P 19 09 37.6 -0.3
baz=55,SNR=39
EARI **Arriondas** 55.24 47 ⇓P P 19 09 38.1 +0.3
comp=Z,10µm,2.4s,mb7.1
L09A **Wilkinson Ranc** 55.28 311 ⇓P P 19 09 38.3 +0.2
baz=55,SNR=214
E11A **Bogner Ranch,** 55.28 316 ⇑P P 19 09 37.6 -0.4
baz=55
O08A **Rochester Mine** 55.32 309 ⇑P P 19 09 38.0 -0.4
baz=55
EGUA **Guajares** 55.37 55 ⇓P P 19 09 39.0 +0.2
comp=Z,742nm,0.8s,mb6.5
EGUA **Guajares** 55.37 55 ⇓P P 19 09 39.0 +0.2
EGUA pmax pmax
comp=Z,742nm,0.8s,mb6.5
EBAN **Banos Encina** 55.38 54 ⇓P P 19 09 39.2 +0.4
comp=Z,673nm,0.8s,mb6.4
EBAN **Banos Encina** 55.38 54 ⇓P P 19 09 39.2 +0.4
EBAN pmax pmax
comp=Z,673nm,0.8s,mb6.4
N08A **GE Springer Mi** 55.39 309 ⇓P P 19 09 38.9 -0.1
baz=55,SNR=708
VES **Vestal, Richgr** 55.42 303 ⇑P P 19 09 39.4 +0.3
baz=55,SNR=128
ECOG **Cogollos-Vega** 55.43 55 ⇓P P 19 09 40.4 +1.2
comp=Z,1µm,0.8s,mb6.6
ECOG **Cogollos-Vega** 55.43 55 ⇓P P 19 09 40.4 +1.2
ECOG pmax pmax
comp=Z,1µm,0.8s,mb6.6
MLAC **Mammoth Lakes** 55.44 305 ⇑P P 19 09 39.9 +0.6
baz=55,SNR=79
K09A **Rome** 55.47 312 ⇑P P 19 09 39.3 -0.1
baz=55,SNR=233
ESDC **Sonseca Array** 55.47 52 ⇓P P 19 09 39.7 +0.2
comp=Z,540nm,0.8s,mb6.3
ESLA **Sonseca Array** 55.47 52 *e*P P 19 09 39.7 +0.3
comp=Z,37nm,0.6s,mb5.3
B12A **Libby** 55.49 319 ⇑P P 19 09 39.5 +0.1
baz=55,SNR=302
SNCC **San Nicolas Is** 55.54 300 *e*P P 19 09 40.1 0.0
comp=Z,816nm,0.9s,mb6.6
SNCC **San Nicolas Is** 55.54 300 ⇓P P 19 09 40.2 +0.1
baz=56,SNR=43
D11A **Klaveano Farm,** 55.56 317 ⇑P P 19 09 39.6 -0.4
baz=56
RCTC **Rector, Farmer** 55.60 304 ⇓P P 19 09 40.2 -0.3
baz=56,SNR=44
Q07A **Schurz** 55.60 307 ⇑P P 19 09 40.3 -0.1
baz=56,SNR=19
J09A **Fry Pan Ranch,** 55.62 312 ⇓P P 19 09 39.7 -0.8
baz=56
G10A **Bishop Farm, J** 55.63 315 ⇑P P 19 09 39.8 -0.7
baz=56
BMO **Blue Mountains** 55.65 314 *e*P P 19 09 39.4 -1.3
comp=Z,1µm,1.2s,mb6.6
BMO **Blue Mountains** 55.65 314 P P 19 09 39.7 -1.0
BMO pmax pmax
comp=Z,1µm,1.2s,mb6.6
A12A **Yaak River Ran** 55.67 319 ⇑P P 19 09 41.2 +0.4
baz=56
BSC **Santa Cruz Isl** 55.69 301 ⇓P P 19 09 41.0 -0.1
baz=56,SNR=183
EALB **Alboran** 55.69 57 ⇓P P 19 09 41.6 +0.5
comp=Z,29µm,2.7s,mb7.6
M08A **Happy Creek Ra** 55.70 310 ⇓P P 19 09 41.3 +0.2
baz=56,SNR=739
TIC **Toumodi** 55.70 92 *e*P P 19 09 41.0 -0.5
comp=Z,4µm,1.2s,mb7.1
I09A **Lost Marbles R** 55.75 313 ⇓P P 19 09 40.4 -1.0
baz=56
P07A **Fallon** 55.76 308 ⇓P P 19 09 40.5 -1.0
baz=56
LIC **Lamto** 55.79 93 ⇓*i*P P 19 09 41.3 -0.9
comp=Z,3µm,0.8s,mb6.9,baz=280
LIC *e*MLR MLR 19 09 41.3 -0.9
comp=Z,59µm,20.8s
LIC **Lamto** 55.79 93 *e*P P 19 09 41.7 -0.5
comp=Z,5µm,0.8s,mb7.4
LIC **Lamto** 55.79 93 ⇓*i*P P 19 09 41.3 -0.9
comp=Z,1µm,0.8s,mb6.9
LIC LR LR 19 09 41.3 -0.9
comp=Z,30µm,20.8s
EDM **Edmonton** 55.79 325 *e*P P 19 09 39.3 -2.2
SBC **Santa Barbara** 55.79 302 ⇓P P 19 09 41.8 -0.1
baz=56,SNR=38
L08A **Fields** 55.81 311 ⇑P P 19 09 42.1 +0.2
baz=56
O07A **Toulon** 55.85 309 ⇓P P 19 09 41.9 -0.3
baz=56
DBIC **Dimbokro** 55.85 92 P P 19 09 41.9 -0.8
comp=Z,618nm,0.5s,mb6.7,baz=269,slow=7.7,SNR=742
DBIC S S 19 17 18.7 -0.2
comp=Z,42nm,0.8s,baz=143,slow=11,SNR=1.8
DBIC LR LR 19 31 12.1
comp=Z,34µm,20.0s,baz=267,slow=33
DBIC PKPPKP 19 39 29.5
comp=Z,13nm,1.1s,baz=166,slow=1.6,SNR=6.1
DBIC **Dimbokro** 55.85 92 *e*P P 19 09 41.9 -0.7
comp=Z,4µm,1.1s,mb7.2
DBIC **Dimbokro** 55.85 92 P P 19 09 41.9 -0.7
DBIC S S 19 17 18.7 -0.2
DBIC pmax pmax
comp=Z,618nm,0.5s
DBIC smax
comp=N,42nm,0.8s
DBIC MLR MLR
comp=Z,34µm,20.0s
H09A **Durkee** 55.85 314 ⇓P P 19 09 41.5 -0.6
baz=56
F10A **Beach Ranch, E** 55.87 316 ⇓P P 19 09 41.3 -0.9
baz=56
EQES **Quesada** 55.89 54 ⇓P P 19 09 43.4 +0.9
comp=Z,15µm,2.1s,mb7.5
EBER **Berja** 55.92 55 ⇓P P 19 09 44.0 +1.3
comp=Z,23µm,2.2s,mb7.6
E10A **Myers Farm, Un** 55.92 316 ⇓P P 19 09 41.9 -0.7
baz=56
PKM **Peak Mountain** 55.92 302 ⇓P P 19 09 43.2 +0.4
baz=56,SNR=291
B11A **Sandpoint** 55.97 319 ⇑P P 19 09 42.9 0.0
baz=56
N07B **Gerlach** 56.02 309 ⇑P P 19 09 43.1 -0.2
baz=56
K08A **Mann Creek Ran** 56.02 312 ⇑P P 19 09 42.9 -0.4
baz=56
KIC **Kosan Boka** 56.03 92 *e*P P 19 09 43.5 -0.4
comp=Z,3µm,1.0s,mb7.1
R06C **Coleville** 56.04 306 ⇑P P 19 09 44.2 +0.6
baz=56,SNR=309
T06C **Millerton Lake** 56.05 305 ⇑P P 19 09 42.4 -1.2
baz=56
WVOR **Wild Horse Val** 56.07 311 *e*P P 19 09 42.8 -1.0
comp=Z,839nm,1.2s,mb6.4
WVOR **Wild Horse Val** 56.07 311 P P 19 09 43.0 -0.7
WVOR pmax pmax
comp=Z,1µm,1.3s,mb6.6
G09A **Cove** 56.08 315 ⇑P P 19 09 43.2 -0.5
baz=56
V05C **Boulder Hill,** 56.08 303 ⇓P P 19 09 43.4 -0.5
baz=56,SNR=26
SMMC **Simmler** 56.11 303 ⇓P P 19 09 44.6 +0.5
baz=56,SNR=187
PLCA **Paso Flores** 56.11 189 P P 19 09 43.0 -0.8
comp=Z,270nm,1.0s,mb6.0,baz=5.0,slow=7.7,SNR=137
PLCA S S 19 17 18.7 -2.6
comp=Z,25nm,1.0s,baz=43,slow=9.8,SNR=1.7
PLCA LR LR 19 35 49.3
comp=Z,96µm,21.9s,baz=7.8,slow=38
PLCA PKPPKP 19 39 24.2
comp=Z,6.2nm,0.9s,baz=191,slow=7.7,SNR=4.0
PLCA **Paso Flores** 56.11 189 *e*P P 19 09 42.3 -1.5
comp=Z,900nm,0.9s,mb6.6
PLCA **Paso Flores** 56.11 189 P P 19 09 43.1 -0.8
PLCA S S 19 17 18.7 -2.6
PLCA pmax pmax
comp=Z,270nm,1.0s
PLCA smax
comp=N,25nm,1.0s
PLCA MLR MLR
comp=Z,96µm,21.9s
A11A **Hall Mountain,** 56.12 319 ⇑P P 19 09 44.3 +0.3
baz=56
J08A **Circle Bar Ran** 56.14 312 ⇓P P 19 09 43.6 -0.5
baz=56
D10A **Wagner Farm, O** 56.18 317 ⇓P P 19 09 43.8 -0.6
baz=56
EHUE **Huescar** 56.26 54 ⇓P P 19 09 46.0 +0.8
comp=Z,1µm,1.4s,mb6.6
EHUE **Huescar** 56.26 54 ⇓P P 19 09 46.0 +0.8
EHUE pmax pmax
comp=Z,1µm,1.4s,mb6.6
F09A **S2 Ranch, Elgi** 56.27 315 ⇓P P 19 09 44.5 -0.6
baz=56
M07A **Soldier Meadow** 56.27 310 ⇑P P 19 09 45.4 +0.3
baz=56
U05C **Westside ANR,** 56.30 304 ⇓P P 19 09 45.1 -0.4
baz=56
I08A **Drewsey** 56.32 313 ⇓P P 19 09 44.8 -0.6
baz=56
WCN **Washoe City** 56.38 307 ⇑P P 19 09 45.9 -0.1
baz=56
C10A **Spilker Farm,** 56.40 318 ⇑P P 19 09 45.1 -0.9
baz=56
NEW **Newport** 56.41 318 *e*P P 19 09 45.1 -0.9
comp=Z,3µm,0.8s,mb7.1
NEW **Newport** 56.41 318 *e*P P 19 09 45.1 -0.9
NEW pmax pmax
comp=Z,3µm,0.8s
EVIA **Vianos** 56.44 53 ⇓P P 19 09 46.9 +0.5
comp=Z,689nm,1.1s,mb6.4
EVIA **Vianos** 56.44 53 ⇓P P 19 09 46.9 +0.5
EVIA pmax pmax
comp=Z,689nm,1.1s,mb6.4
ENIJ **Nijar** 56.47 55 ⇓P P 19 09 46.9 +0.2
comp=Z,730nm,0.8s,mb6.6
ENIJ **Nijar** 56.47 55 ⇓P P 19 09 46.9 +0.3
ENIJ pmax pmax
comp=Z,730nm,0.8s,mb6.6
B10A **Chitwood Farm,** 56.48 318 ⇑P P 19 09 45.8 -0.7
baz=56
ELAN **Lanestosa** 56.50 48 ⇓P P 19 09 47.0 +0.3
comp=Z,12µm,2.5s,mb7.3
L07A **Adell** 56.51 311 ⇓P P 19 09 46.7 -0.1
baz=56
H08A **Prairie City** 56.52 314 ⇑P P 19 09 47.0 +0.1
baz=56
P06A **Stead Airport,** 56.55 308 ⇓P P 19 09 46.6 -0.6
baz=56,SNR=11
K07A **Rock Creek Ran** 56.56 311 ⇑P P 19 09 46.8 -0.4
baz=56
O06A **Flanigan** 56.57 308 ⇑P P 19 09 46.7 -0.5
baz=56
S05C **Merced** 56.58 305 ⇓P P 19 09 47.2 -0.2
baz=56,SNR=126
BORG **Borgarnes** 56.61 19 P P 19 09 48.0 +0.9
comp=Z,7µm,1.3s,mb7.3,SNR=13
BORG **Borgarnes** 56.61 19 P P 19 09 48.1 +1.0
comp=Z,698nm,1.2s,mb6.3,baz=230,slow=4.9,SNR=26
BORG **Borgarnes** 56.61 19 *e*P P 19 09 48.8 +1.6
comp=Z,1µm,1.1s,mb6.7
E09A **Wood Farm, Sta** 56.62 316 ⇓P P 19 09 46.6 -0.9
baz=57
N06A **Buffalo Meadow** 56.66 309 ⇑P P 19 09 47.5 -0.4
baz=57
CMB **Columbia Colle** 56.71 306 *e*P P 19 09 47.8 -0.5
comp=Z,1µm,0.4s,mb7.2
CMB **Columbia Colle** 56.71 306 *e*P P 19 09 47.8 -0.5
CMB pmax pmax
comp=Z,1µm,0.4s,mb7.2
J07A **Hines** 56.74 312 ⇓P P 19 09 47.9 -0.5
baz=57
U04C **Hernandez Rese** 56.84 304 ⇓P P 19 09 48.9 -0.4
baz=57
D09A **Jones Farm, Ri** 56.86 317 ⇑P P 19 09 48.5 -0.8
baz=57
A10A **Northport** 56.88 319 ⇑P P 19 09 48.9 -0.5
baz=57
G08A **Pilot Rock** 56.89 315 ⇑P P 19 09 49.0 -0.5
baz=57
BEKR **Beckwourth** 56.93 308 ⇑P P 19 09 49.3 -0.5
baz=57
I07A **Izee** 57.02 313 ⇓P P 19 09 50.3 0.0
baz=57
C09A **Chrisman Ranch** 57.03 318 ⇑P P 19 09 50.0 -0.4
baz=57
ECRI **Cripan** 57.05 49 ⇓P P 19 09 51.6 +1.0
comp=Z,347nm,0.9s,mb6.2
ECRI **Cripan** 57.05 49 ⇓P P 19 09 51.6 +1.0
ECRI pmax pmax
comp=Z,347nm,0.9s,mb6.2
LAVA **Lava Cap Winer** 57.07 307 ⇑P P 19 09 51.0 +0.1
baz=57,SNR=307
ETOR **Torete** 57.09 51 ⇓P P 19 09 51.8 +0.9
comp=Z,2µm,1.8s,mb6.7
ETOR **Torete** 57.09 51 ⇓P P 19 09 51.8 +0.8
ETOR pmax pmax
comp=Z,2µm,1.8s,mb6.7
ODZI **Dziouia** 57.10 58 P P 19 09 57.0 +5.9
H07A **Lands Inn, Kim** 57.16 314 ⇑P P 19 09 51.0 -0.4
baz=57
R04C **Big Horse Ranc** 57.16 306 ⇓P P 19 09 51.8 +0.3
baz=57,SNR=63
V03C **Hunter Liggett** 57.17 303 ⇓P P 19 09 51.2 -0.4
baz=57,SNR=28
ETOB **Tobarra** 57.18 54 ⇓P P 19 09 52.9 +1.3
comp=Z,7µm,1.5s,mb7.3
MOD **Modoc** 57.20 310 *e*P P 19 09 50.6 -1.0
comp=Z,410nm,0.6s,mb6.4
E08A **Dider Farm, El** 57.23 316 ⇑P P 19 09 50.9 -0.9
baz=57
DLF **Lyons Farm** 57.26 36 ⇓*i*P P 19 09 51.6 -0.3
DMUB **Kingscourt** 57.26 35 ⇓*i*P P 19 09 51.5 -0.4
D08A **Wollman Farm,** 57.27 317 ⇑P P 19 09 51.8 -0.3
baz=57
J06A **Christmas Vall** 57.32 312 ⇑P P 19 09 51.7 -0.8
baz=57
DSB **Dublin** 57.33 36 *e*P P 19 09 52.5 +0.1
comp=Z,1µm,1.0s,mb6.8
EMUR **La Murta** 57.33 55 ⇓P P 19 09 53.1 +0.4
comp=Z,12µm,2.5s,mb7.3
G07A **Ruggs Ranch, H** 57.37 314 ⇓P P 19 09 52.5 -0.4
baz=57
SAO **San Andreas Ge** 57.41 304 *e*P P 19 09 53.0 -0.3
comp=Z,506nm,0.9s,mb6.3
SAO **San Andreas Ge** 57.41 304 P P 19 09 53.2 -0.1
SAO pmax pmax
comp=Z,3µm,1.8s,mb6.9
I06A **Prineville** 57.49 313 ⇓P P 19 09 53.7 0.0
baz=57
CART **Cartagena** 57.49 55 *e*P P 19 09 53.5 -0.3
comp=Z,2µm,1.5s,mb6.8
HAWA **Hanford** 57.52 316 *e*P P 19 09 53.0 -0.8
comp=Z,428nm,0.7s,mb6.4
C08A **Higginbotham F** 57.53 317 ⇑P P 19 09 53.5 -0.4
baz=58
A09A **Danville** 57.53 319 ⇓P P 19 09 53.4 -0.5
baz=58
F07A **Phinny Hill Vi** 57.68 315 ⇑P P 19 09 54.4 -0.6
baz=58
USTO **Oran** 57.69 57 P P 19 09 56.0 +0.8
HTL **Hartland** 57.71 39 P P 19 09 54.7 -0.4
HTL AMb AMB 19 10 09.5
comp=Z,6µm,1.8s,mb7.1
HTL 19 17 43.9
HTL AMS AMS 19 28 36.8
comp=Z,45µm,21.3s
HTL **Hartland** 57.71 39 *e*P P 19 09 54.7 -0.4
HTL AMb AMB 19 10 09.5
comp=Z,6µm,1.8s,mb7.1

HTL *e* 19 17 43.9
HTL AMS AMS 19 28 36.8
comp=Z,45µm,21.3s
QUIF Quistinic 57.71 42⇓*iP* P 19 09 55.2 0.0
comp=Z,15µm,1.6s,mb7.3
QUIF Quistinic 57.71 42⇓*iP* P 19 09 55.2 0.0
comp=Z,7µm,1.6s,mb7.3
QUIF Quistinic 57.71 42⇓*iP* P 19 09 55.2 0.0
QUIF pmax pmax
comp=Z,7µm,1.6s,mb7.3
H06A Lindquist Farm 57.73 314⇑P P 19 09 55.2 -0.1
baz=58
ECHE Chera 57.75 52⇓P P 19 09 56.5 +0.9
comp=Z,1µm,1.4s,mb6.5
ECHE Chera 57.75 52⇓P P 19 09 56.5 +0.9
ECHE pmax pmax
comp=Z,1µm,1.4s,mb6.5
ROSF Rostrenen 57.75 42⇓*iP* P 19 09 55.4 0.0
comp=Z,3µm,0.9s,mb6.8
ROSF Rostrenen 57.75 42⇓*iP* P 19 09 55.4 0.0
comp=Z,2µm,0.9s,mb6.8
ROSF Rostrenen 57.75 42⇓*iP* P 19 09 55.4 0.0
ROSF pmax pmax
comp=Z,2µm,0.9s,mb6.8
K05A Summer Lake 57.76 311⇑P P 19 09 55.9 +0.3
baz=58,SNR=626
E07A Sunnyside 57.78 316⇑P P 19 09 55.5 -0.2
baz=58
B08A Colville Reser 57.85 318⇑P P 19 09 55.3 -0.9
baz=58
ELIZ Elizondo 57.86 48⇓P P 19 09 56.5 +0.2
comp=Z,241nm,1.0s,mb6.0
ELIZ Elizondo 57.86 48⇓P P 19 09 56.5 +0.2
ELIZ pmax pmax
comp=Z,241nm,1.0s,mb6.0
EALK Alkurruntz 57.88 48⇓P P 19 09 56.8 +0.4
comp=Z,13µm,2.4s,mb7.3
DYA Yadsworthy 57.89 39 P P 19 09 55.6 -0.7
DYA AMb AMB 19 10 10.6
comp=Z,5µm,1.6s,mb7.1
DYA 19 17 44.5
DYA AMS AMS 19 29 18.4
comp=Z,45µm,20.5s
DYA Yadsworthy 57.89 39 *eP* P 19 09 55.6 -0.7
DYA AMb AMB 19 10 10.6
comp=Z,5µm,1.6s,mb7.1
DYA *e* 19 17 44.5
DYA AMS AMS 19 29 18.4
comp=Z,45µm,20.5s
GMM Mts of Mourne 57.91 35 *eP* P 19 09 55.6 -0.8
A08A Turner Farm, O 57.96 319⇑P P 19 09 56.2 -0.7
baz=58
ODJA Bouhanifia 57.98 58 P P 19 09 58.0 +0.7
D07A Quincy 58.00 317⇓P P 19 09 56.9 -0.3
baz=58
G06A Carlson Farm, 58.03 314⇑P P 19 09 57.7 +0.2
baz=58,SNR=153
Q03C Winters 58.05 306⇓P P 19 09 58.4 +0.7
baz=58,SNR=86
OSSF Osses 58.06 48 *eP* P 19 09 58.1 +0.4
SJPF Ste Jean 58.07 48⇓*iP* P 19 09 58.4 +0.7
comp=Z,8µm,1.1s,mb7.2
SJPF Ste Jean 58.07 48⇓*iP* P 19 09 58.4 +0.7
comp=Z,4µm,1.1s,mb7.2
SJPF Ste Jean 58.07 48⇓*iP* P 19 09 58.4 +0.7
SJPF pmax pmax
comp=Z,4µm,1.1s,mb7.2
HEX Exmoor 58.14 39 *eP* P 19 09 57.9 -0.2
C07A Waterville 58.17 317⇑P P 19 09 57.5 -0.9
baz=58
SGMF Saint Gilles 58.19 42⇓*iP* P 19 09 58.5 0.0
comp=Z,9µm,1.3s,mb7.1
SGMF Saint Gilles 58.19 42⇓*iP* P 19 09 58.5 0.0
comp=Z,4µm,1.3s,mb7.1
SGMF Saint Gilles 58.19 42⇓*iP* P 19 09 58.5 0.0
SGMF pmax pmax
comp=Z,4µm,1.3s,mb7.1
EBEN Beniarda 58.22 54⇓P P 19 10 00.2 +1.4
comp=Z,17µm,2.5s,mb7.4
EMOS Mosqueruela 58.22 52⇓P P 19 10 00.1 +1.2
comp=Z,14µm,2.9s,mb7.3
LARF Larrau 58.23 48 *eP* P 19 10 00.0 +1.2
F06A Goldendale 58.24 315⇑P P 19 09 58.9 0.0
baz=58
I05A Bend 58.28 313⇓P P 19 09 59.6 +0.4
baz=58,SNR=59
ORDF Ordiarp 58.29 48 *eP* P 19 09 59.4 +0.1
H05A Madras 58.34 313⇑P P 19 10 00.2 +0.6
baz=58,SNR=178
YRC Rhoscolyn 58.35 36 *eP* P 19 09 58.7 -0.8
YRE Yr Eifl 58.35 36 *eP* P 19 09 59.0 -0.5
B07A Winthrop 58.39 318⇓P P 19 09 59.4 -0.5
baz=58
ESAC San Caprasio 58.41 50⇓P P 19 10 01.2 +1.1
comp=Z,19µm,2.1s,mb7.5
ATE Arette 58.44 48 *eP* P 19 10 00.7 +0.4
WLF1 Llynfaes 58.46 36 *eP* P 19 09 59.7 -0.6
WLF1 AMb AMB 19 10 10.1
comp=Z,6µm,1.4s,mb7.2
G05A Wamic 58.51 314⇓P P 19 10 01.1 +0.3
baz=58,SNR=58
ETSF Etsaut 58.51 49⇓*iP* P 19 10 01.4 +0.6
comp=Z,6µm,1.3s,mb6.9
ETSF Etsaut 58.51 49⇓*iP* P 19 10 01.4 +0.6
comp=Z,3µm,1.3s,mb7.0
ETSF Etsaut 58.51 49⇓*iP* P 19 10 01.4 +0.6
ETSF pmax pmax
comp=Z,3µm,1.3s,mb7.0
YLL Llanberis 58.54 36 *eP* P 19 10 00.6 -0.2
WME Myndd Eilian 58.55 36 *eP* P 19 10 00.1 -0.8
D06A Cle Elum 58.58 316⇓P P 19 10 01.0 -0.2
baz=58
WIM Isle of Man 58.58 35 *eP* P 19 10 00.1 -1.0
REYF Montagne du Re 58.66 49 *eP* P 19 10 02.8 +0.9
JSA Saint Aubin 58.66 41 *eP* P 19 10 01.4 -0.3
JSA AMb AMB 19 10 11.9
comp=Z,4µm,1.6s,mb7.0
MCCM Marconi Confer 58.67 306 *eP* P 19 10 02.2 +0.1
comp=Z,2µm,1.2s,mb6.9
WDC Whiskeytown Da 58.68 309 *eP* P 19 09 59.5 -2.5
comp=Z,2µm,1.1s,mb6.8
WDC Whiskeytown Da 58.68 309 P P 19 09 59.7 -2.3
WDC pmax pmax
comp=Z,950nm,1.1s,mb6.5
A07A Ashnola River, 58.70 319⇑P P 19 10 02.3 +0.3
baz=59
KSK Scoval 58.71 31 *eP* P 19 10 01.0 -0.8
F05A White Salmon 58.73 315⇑P P 19 10 02.6 +0.3
baz=59,SNR=41
WPM1 Penmaenmawr 58.73 36 *eP* P 19 10 02.0 -0.1
GIM North Isle of 58.74 35 *eP* P 19 10 02.0 -0.2
HTR Trewern Hill 58.75 38 *eP* P 19 10 02.2 -0.1
HOOD Mount Hood Mea 58.76 314 *eP* P 19 10 02.6 +0.1
comp=Z,649nm,0.4s,mb6.8
GAL1 Galloway 58.80 34 *eP* P 19 10 01.7 -0.9
GAL1 AMb AMB 19 10 16.4
comp=Z,7µm,1.7s,mb7.2
GAL1 *e* 19 17 55.2
GAL1 AMS AMS 19 29 48.2
comp=Z,51µm,20.8s
MCH1 Michaelchurch 58.89 38 *eP* P 19 10 02.9 -0.3
MCH1 AMb AMB 19 10 17.1
comp=Z,7µm,1.7s,mb7.2
MCH1 *e* 19 17 46.3
MCH1 AMS AMS 19 30 12.7
comp=Z,47µm,20.4s
RRH Rhenigidale 58.89 31 *eP* P 19 10 02.5 -0.7
ERTA Horta de San J 58.90 51⇓P P 19 10 04.6 +1.0
comp=Z,17µm,2.7s,mb7.4
HGH Gray Hill 58.90 38 *eP* P 19 10 03.5 +0.1
HOPS Hopland 58.91 307 *eP* P 19 10 04.1 +0.5
comp=Z,15nm,0.6s
VIEF Viey 58.94 49 *eP* P 19 10 04.8 +1.0
KAR1 Arisaig 58.94 32 *eP* P 19 10 03.1 -0.3
YBH Yreka Blue Hor 58.95 310 PKPPKP 19 39 30.5
comp=Z,3.4nm,1.0s,baz=270,slow=6.1,SNR=2.2
YBH Yreka Blue Hor 58.95 310 *eP* P 19 10 02.3 -1.5
comp=Z,743nm,0.8s,mb6.6
YBH Yreka Blue Hor 58.95 310 P P 19 10 02.4 -1.5
YBH pmax pmax
comp=Z,740nm,0.8s
EBIE Bielsa 58.99 49⇓P P 19 10 05.3 +1.2
comp=Z,11µm,2.6s,mb7.2
LABF Labassere 59.00 49 *eP* P 19 10 05.0 +0.8
SBD1 Bryn Du 59.00 37 P P 19 10 03.6 -0.4
SBD1 Bryn Du 59.00 37 AMb AMB 19 10 02.6
comp=Z,19µm,1.6s,mb7.7
SBD1 *eP* 19 10 03.6
SBD1 Bryn Du 59.00 37 AMb AMB 19 10 02.6
comp=Z,19µm,1.6s,mb7.7
H04A Detroit Lake 59.02 313⇑P P 19 10 04.0 -0.3
baz=59
EANR `Ain N'Sour 59.04 57 P P 19 10 06.4 +1.8
HLM1 Long Mynd 59.11 37 *eP* P 19 10 04.4 -0.4
PMSU Muirshiel 59.12 33 *eP* P 19 10 03.8 -1.0
LON Longmire 59.13 316 *eP* P 19 10 03.9 -1.1
comp=Z,134nm,0.4s,mb6.1
LON Longmire 59.13 316 *eP* P 19 10 03.9 -1.2
LON pmax pmax
comp=Z,134nm,0.4s,mb6.1
RESF Ens 59.15 49 *eP* P 19 10 06.3 +1.0
ETRT Tiaret 59.17 58 P P 19 10 07.3 +1.8
KPL Plockton 59.18 31 *eP* P 19 10 03.9 -1.3
KPL AMb AMB 19 10 14.3
comp=Z,3µm,1.5s,mb6.9
KPL *e* 19 18 05.3
KPL AMS AMS 19 33 18.5
comp=Z,30µm,18.6s
EPF Esparros 59.19 49⇓*iP* P 19 10 06.2 +0.7
comp=Z,13µm,1.2s,mb7.3
EPF Esparros 59.19 49⇓*iP* P 19 10 06.2 +0.7
comp=Z,6µm,1.2s,mb7.3
EPF Esparros 59.19 49⇓*iP* P 19 10 06.2 +0.7
EPF pmax pmax
comp=Z,6µm,1.2s,mb7.3
GCD Castle Douglas 59.22 34 *eP* P 19 10 04.8 -0.7
PGBU Glenifferbraes 59.24 33 *eP* P 19 10 04.4 -1.2
PGBU AMb AMB 19 10 15.3
comp=Z,9µm,1.4s,mb7.4
PGBU *e* 19 17 52.9
PGBU AMS AMS 19 30 19.8
comp=Z,39µm,21.5s
C05A Tolt Reservoir 59.24 317⇑P P 19 10 04.0 -1.8
baz=59
HUMO Hull Mountain 59.25 311 *eP* P 19 10 04.2 -1.7
comp=Z,3.3nm,0.2s
ECHA Ech Chief 59.27 57 P P 19 10 07.1 +0.9
B06A Marblemount 59.28 318⇓P P 19 10 04.8 -1.3
baz=59
RRR Rubha Reidh 59.30 31 *eP* P 19 10 04.8 -1.1
G04A Mulino 59.31 314⇓P P 19 10 05.7 -0.6
baz=59,SNR=25
GRR Gorron 59.32 42⇓*iP* P 19 10 06.3 0.0
comp=Z,6µm,1.0s,mb7.1
GRR Gorron 59.32 42⇓*iP* P 19 10 06.3 0.0
comp=Z,3µm,1.0s,mb7.1
GRR Gorron 59.32 42⇓*iP* P 19 10 06.3 0.0
GRR pmax pmax
comp=Z,3µm,1.0s,mb7.1
D05A Enumclaw 59.34 316⇑P P 19 10 05.2 -1.3
baz=59
F04A Amboy 59.40 315⇑P P 19 10 05.8 -1.1
baz=59
EBNR Beni Rached 59.41 57 P P 19 10 08.9 +1.8
KAC Achnashellach 59.42 31 *eP* P 19 10 05.5 -1.3
MFF Saint Martin d 59.44 44⇓*iP* P 19 10 07.3 +0.2
comp=Z,4µm,1.0s,mb7.0
MFF Saint Martin d 59.44 44⇓*iP* P 19 10 07.3 +0.2
comp=Z,2µm,1.0s,mb7.0
MFF Saint Martin d 59.44 44⇓*iP* P 19 10 07.3 +0.2
MFF pmax pmax
comp=Z,2µm,1.0s,mb7.0
EAB Aberfoyle 59.45 33 *eP* P 19 10 06.2 -0.8
EIBI Ibiza 59.47 53⇓P P 19 10 08.0 +0.5
comp=Z,8µm,2.1s,mb7.2
MELF Melles 59.47 49 *eP* P 19 10 08.6 +1.2
SWN1 Swindon 59.48 39 *eP* P 19 10 07.0 -0.3
SWN1 AMb AMB 19 10 17.2
comp=Z,9µm,1.5s,mb7.4
SWN1 *e* 19 18 04.8
SWN1 AMS AMS 19 31 32.8
comp=Z,47µm,19.2s
EPOB Poblet 59.51 51⇓P P 19 10 08.1 +0.4
comp=Z,10µm,2.6s,mb7.2
B05A Bryant 59.63 317⇓P P 19 10 06.5 -1.9
baz=60
FLN La Foliniere 59.65 42⇓*iP* P 19 10 08.6 +0.1
comp=Z,7µm,1.0s,mb7.2,baz=256
FLN *e*MLR MLR
comp=Z,67µm,20.0s
FLN La Foliniere 59.65 42⇓*iP* P 19 10 08.6 +0.1
comp=Z,4µm,1.0s,mb7.2
FLN LR LR
comp=Z,67µm,20.0s
FLN La Foliniere 59.65 42⇓*iP* P 19 10 08.6 +0.1
FLN pmax pmax
comp=Z,4µm,1.0s,mb7.2
FLN MLR MLR
comp=Z,67µm,20.0s
STNC Stoke 59.66 37 *eP* P 19 10 07.9 -0.6
STNC AMb AMB 19 10 18.3
comp=Z,6µm,1.5s,mb7.2
STNC *e* 19 18 05.5
STNC AMS AMS 19 30 22.5
comp=Z,63µm,20.5s
L02A Cave Junction 59.66 310⇑P P 19 10 07.8 -1.0
baz=60
I03A Eugene 59.68 312⇓P P 19 10 07.8 -1.0
baz=60
MLS Moulis 59.72 49 *eP* P 19 10 09.5 +0.3
LFF La Frestale 59.76 47⇓*iP* P 19 10 09.4 0.0
comp=Z,8µm,1.2s,mb7.2
LFF La Frestale 59.76 47⇓*iP* P 19 10 09.4 0.0
comp=Z,4µm,1.2s,mb7.1
LFF La Frestale 59.76 47⇓*iP* P 19 10 09.4 0.0
LFF pmax pmax
comp=Z,4µm,1.2s,mb7.1
ECK Cauldkaine Hil 59.77 34 *eP* P 19 10 08.5 -0.7
ESK Eskdalemuir 59.77 34 P P 19 10 09.2 0.0
comp=Z,8µm,1.1s,mb7.5,SNR=86
ESK Eskdalemuir 59.77 34 *eP* P 19 10 08.6 -0.6
comp=Z,1µm,0.9s,mb6.8
ESK Eskdalemuir 59.77 34 *eP* P 19 10 08.4 -0.8
ESK AMb AMB 19 10 21.2
comp=Z,3µm,1.7s,mb6.8
ESK *e* 19 17 58.2
ESK AMS AMS 19 30 16.0
comp=Z,43µm,22.0s
ESK Eskdalemuir 59.77 34 *eP* P 19 10 08.6 -0.6
ESK pmax pmax
comp=Z,1µm,0.9s,mb6.8
SALF Salau 59.77 49 *eP* P 19 10 10.7 +1.2
WOL Wolverton 59.77 39 *eP* P 19 10 08.6 -0.7
WOL AMb AMB 19 10 19.1
comp=Z,10µm,1.5s,mb7.4
A05A Maple Falls 59.78 318⇑P P 19 10 07.8 -1.6
baz=60
COR Corvallis 59.79 313 *eP* P 19 10 09.8 +0.2
comp=Z,628nm,0.7s,mb6.5
COR Corvallis 59.79 313 *eP* P 19 10 09.8 +0.2
COR pmax pmax
comp=Z,629nm,0.7s,mb6.5
H03A Soap Creek Ran 59.79 313⇓P P 19 10 09.3 -0.3
baz=60,SNR=52
EKA Eskdalemuir Ar 59.80 34 P P 19 10 08.9 -0.5
comp=Z,244nm,0.7s,mb6.2,baz=260,slow=5.8,SNR=485
EKA Eskdalemuir Ar 59.80 34 P P 19 10 08.9 -0.5
EKA pmax pmax
comp=Z,244nm,0.7s
RSC Scourie 59.80 30 *eP* P 19 10 08.1 -1.3
EAU Auchinoon 59.80 34 *eP* P 19 10 09.0 -0.5
LDF La Druitiere 59.85 42⇓*iP* P 19 10 09.8 -0.1
comp=Z,6µm,1.2s,mb7.0
LDF La Druitiere 59.85 42⇓*iP* P 19 10 09.8 -0.1
comp=Z,3µm,1.2s,mb7.0
LDF La Druitiere 59.85 42⇓*iP* P 19 10 09.8 -0.1
LDF pmax pmax
comp=Z,3µm,1.2s,mb7.0
KWE Weaver Farm 59.85 37 *eP* P 19 10 09.2 -0.6
MDO Dochfour 59.87 32 *eP* P 19 10 09.5 -0.4
D04A Dobbs Creek Ra 59.87 316⇑P P 19 10 09.0 -1.1
baz=60
G03A Yamhill 59.89 314⇓P P 19 10 10.1 -0.2
baz=60,SNR=59
EBH Black Hill 59.91 33 *eP* P 19 10 09.4 -0.8
EMIR Miracle 59.91 50⇓P P 19 10 11.4 +0.9
comp=Z,175nm,0.7s,mb6.0
EDI Edinburgh 59.97 33 *eP* P 19 10 09.7 -0.9
EDI AMb AMB 19 10 19.1
comp=Z,2µm,1.3s,mb6.8
EDI *e* 19 18 08.0
EDI AMS AMS 19 30 52.5
comp=Z,41µm,20.2s
LHO Holmfirth 59.99 36 P P 19 10 10.4 -0.4
LHO Holmfirth 59.99 36 *eP* P 19 10 09.5 -1.2
EBL Broad Law 60.00 34 *eP* P 19 10 10.3 -0.5
I02A Mapleton 60.08 312⇓P P 19 10 11.3 -0.2
baz=60,SNR=30
CWF Charnwood Fore 60.09 37 *eP* P 19 10 10.3 -1.1
CWF AMb AMB 19 10 21.1
comp=Z,5µm,1.6s,mb7.1
CWF *e* 19 18 03.9
CWF AMS AMS 19 30 24.4
comp=Z,53µm,21.0s
C04A Brinnon 60.10 317⇑P P 19 10 09.8 -1.8
baz=60
KBI1 Birley Grange 60.10 37 *eP* P 19 10 11.1 -0.4
A04A Legoe Bay, Lum 60.12 318⇑P P 19 10 09.8 -2.0
baz=60
MVH1 Achvaich 60.13 31 *eP* P 19 10 10.4 -1.2
XAL Allendale 60.17 35 *eP* P 19 10 11.0 -1.0
F03A Seaside 60.18 315⇑P P 19 10 12.1 -0.1
baz=60,SNR=27
HEBO Mount Hebo 60.20 314 *eP* P 19 10 13.0 +0.6
comp=Z,2µm,0.9s,mb6.9
LDU Leeds Universi 60.23 36 *eP* P 19 10 11.8 -0.6
HPK Haverah Park 60.24 36 *eP* P 19 10 11.9 -0.6
HPK AMb AMB 19 10 20.4
comp=Z,3µm,1.2s,mb7.1
HPK *e* 19 18 12.5
HPK AMS AMS 19 30 57.2
comp=Z,84µm,22.2s
ESY Stoneypath 60.27 34 *eP* P 19 10 11.9 -0.7
E03A Lebam 60.28 315⇑P P 19 10 12.4 -0.5
baz=60,SNR=65
H02A Toledo 60.29 313⇑P P 19 10 13.0 0.0
baz=60
YKA Yellowknife Ar 60.31 335 P P 19 10 11.4 -1.3
comp=Z,611nm,0.6s,mb6.6,baz=106,slow=7.5,SNR=1687
YKA S S 19 18 13.3 -2.0
comp=Z,44nm,1.0s,baz=105,slow=14,SNR=2.7
YKA LR LR 19 36 53.7
comp=Z,24µm,19.3s,baz=115,slow=96
YKA PKPPKP 19 39 23.5
comp=Z,5.5nm,0.9s,baz=300,slow=1.7,SNR=6.6
YKA PKP2bc 19 39 40.9
comp=Z,8.8nm,1.0s,baz=295,slow=1.8,SNR=5.4
YKA P4KPbc 19 47 21.5
comp=Z,4.0nm,0.8s,baz=115,slow=5.0,SNR=5.5
YKA Yellowknife Ar 60.31 335 P P 19 10 11.4 -1.3
YKA S S 19 18 13.3 -2.0
YKA LR LR 19 36 53.7
YKA P'P' 19 39 23.6
YKA ⇑*e* 19 39 40.9
YKA Yellowknife Ar 60.31 335 P P 19 10 11.4 -1.4
YKA S S 19 18 13.3 -2.0
YKA pmax pmax
comp=Z,611nm,0.6s
YKA smax
comp=N,44nm,1.0s
YKA MLR MLR
comp=Z,24µm,19.3s
VALF Valcebollere 60.33 50 *eP* P 19 10 14.4 +1.1
XSO Sourhope Farm 60.34 34 *eP* P 19 10 11.8 -1.3
RJF Les Rejaudoux 60.36 46⇓*iP* P 19 10 13.3 -0.2
comp=Z,8µm,1.4s,mb7.1
RJF *e*MLR MLR
comp=Z,54µm,20.8s
RJF Les Rejaudoux 60.36 46⇓*iP* P 19 10 13.3 -0.2
comp=Z,4µm,1.4s,mb7.1
RJF LR LR
comp=Z,54µm,20.8s
RJF Les Rejaudoux 60.36 46⇓*iP* P 19 10 13.3 -0.2
RJF pmax pmax
comp=Z,4µm,1.4s,mb7.1
RJF MLR MLR
comp=Z,54µm,20.8s
K01A Sixes 60.38 311⇑P P 19 10 13.7 0.0
baz=60,SNR=29
CARF Carcanieres 60.43 49 *eP* P 19 10 14.4 +0.4
MCD Coleburn Disti 60.48 32 *eP* P 19 10 12.3 -1.8
B04A Port Angeles 60.51 317⇑P P 19 10 13.9 -0.5
baz=60
D03A Wishkah Elem. 60.52 316⇓P P 19 10 14.8 +0.2
baz=60,SNR=32
MME1 Meikle Cairn 60.54 32 *eP* P 19 10 12.6 -1.8
EMHD Djebel Mahouad 60.55 57 P P 19 10 15.9 +1.0
MTLF Montolieu 60.59 49⇓*iP* P 19 10 14.9 -0.2
comp=Z,6µm,1.2s,mb7.0
MTLF Montolieu 60.59 49⇓*iP* P 19 10 14.9 -0.2
comp=Z,3µm,1.2s,mb7.0
MTLF Montolieu 60.59 49⇓*iP* P 19 10 14.9 -0.2
MTLF pmax pmax
comp=Z,3µm,1.2s,mb7.0
PGC Sidney 60.59 318 *eP* P 19 10 13.8 -1.2
comp=Z,1µm,0.7s,mb6.9
NLWA Neilton Lookou 60.64 316 *eP* P 19 10 15.3 0.0
comp=Z,2µm,0.7s,mb7.0
NLWA Neilton Lookou 60.64 316⇑P P 19 10 15.5 +0.2
baz=61,SNR=76
ABA Alger-Bouzarea 60.64 56 P P 19 10 15.9 +0.3
ETOS Mallorca 60.67 53⇓P P 19 10 16.2 +0.6
comp=Z,11µm,2.6s,mb7.2
MLA1 Latheron 60.67 31 *eP* P 19 10 14.7 -0.6
CAF Calviac 60.69 47⇓*iP* P 19 10 15.6 -0.1
comp=Z,8µm,1.4s,mb7.0
CAF Calviac 60.69 47⇓*iP* P 19 10 15.6 -0.1
comp=Z,4µm,1.4s,mb7.0
CAF Calviac 60.69 47⇓*iP* P 19 10 15.6 -0.1
CAF pmax pmax
comp=Z,4µm,1.4s,mb7.0
FILF Fillols 60.75 49 *eP* P 19 10 16.3 +0.2
LRDF Laroque-de-Fa 60.77 49 *eP* P 19 10 16.5 +0.2
TOA0 Torodi Ar. Sit 60.88 83 *eP* P 19 10 16.4 -1.1
TORD Torodi Ar. Bea 60.88 83 P P 19 10 16.4 -1.1
comp=Z,1µm,0.8s,mb6.7,baz=287,slow=5.6,SNR=1914
TORD S S 19 18 24.1 0.0
comp=Z,23nm,1.0s,baz=250,slow=3.7,SNR=2.1
TORD LR LR 19 33 38.6
comp=Z,97µm,20.9s,baz=280,slow=33
TORD PKPPKP 19 39 27.9
comp=Z,6.8nm,0.9s,baz=107,slow=2.0,SNR=5.1
TORD PKP2bc 19 39 38.8
comp=Z,24nm,1.1s,baz=95,slow=2.2,SNR=7.9
TORD Torodi Ar. Bea 60.88 83 P P 19 10 16.4 -1.1
TORD S S 19 18 24.1 0.0
TORD LR LR 19 39 38.5
TORD P'P' 19 39 27.9
TORD ⇑*e* 19 39 38.8
SJAF Saint Jean de 60.98 50 *eP* P 19 10 18.4 +0.7
EJON La Jonquera 60.98 50⇓P P 19 10 18.5 +0.8
comp=Z,13µm,2.5s,mb7.3
TCF Toulx Ste Croi 60.99 45⇓*iP* P 19 10 17.5 -0.2
comp=Z,7µm,1.3s,mb7.0
TCF Toulx Ste Croi 60.99 45⇓*iP* P 19 10 17.5 -0.2
comp=Z,4µm,1.3s,mb7.0
TCF Toulx Ste Croi 60.99 45⇓*iP* P 19 10 17.5 -0.2
TCF pmax pmax
comp=Z,4µm,1.3s,mb7.0
VERF Verneugheol 61.10 46 *eP* P 19 10 18.7 +0.2
FRNF Fournols 61.10 46 *eP* P 19 10 18.4 -0.1
TFO1 Folkestone 61.17 40 *eP* P 19 10 17.6 -1.2
TFO1 AMb AMB 19 10 28.4
comp=Z,8µm,1.3s,mb7.3
TFO1 *e* 19 18 22.7
TFO1 AMS AMS 19 31 22.4
comp=Z,76µm,21.2s
C03A Quillayute Air 61.20 317⇑P P 19 10 19.7 +0.6
baz=61
HYF Humbligny 61.43 44⇓*iP* P 19 10 20.8 +0.1
PYM Petit Puy Mans 61.46 46 *eP* P 19 10 21.2 +0.3
BGF Bois d'Agland 61.47 45⇓*iP* P 19 10 20.6 -0.3
comp=Z,7µm,1.2s,mb7.1
BGF Bois d'Agland 61.47 45⇓*iP* P 19 10 20.6 -0.3
comp=Z,4µm,1.2s,mb7.1
BGF Bois d'Agland 61.47 45⇓*iP* P 19 10 20.6 -0.3
BGF pmax pmax
comp=Z,4µm,1.2s,mb7.1
CFF Clermont-Ferra 61.54 46 *eP* P 19 10 22.6 +1.2
AEU East Anglia Un 61.56 38 *eP* P 19 10 20.4 -1.0
LBL Lubilhac 61.56 46 *eP* P 19 10 22.0 +0.4
ABA1 Baconsthorpe 61.57 38 *eP* P 19 10 19.8 -1.7
AGO Saint Agoulin 61.59 46 *eP* P 19 10 21.8 +0.1
MENF Mencas 61.69 40 *eP* P 19 10 22.1 -0.2
AWI1 Witton 61.73 38 *eP* P 19 10 21.2 -1.3
AVF Avril sur Loir 61.84 45⇓*iP* P 19 10 23.0 -0.4
comp=Z,8µm,1.4s,mb7.0

AVF **Avril sur Loir** 61.84 45⇓*i*P P 19 10 23.0 -0.4
comp=Z,4µm,1.4s,mb7.0
AVF **Avril sur Loir** 61.84 45⇓*i*P P 19 10 23.0 -0.4
AVF pmax pmax
comp=Z,4µm,1.4s,mb7.0
LASF **Ste Croix** 61.85 48⇓*i*P P 19 10 23.9 +0.3
comp=Z,12µm,1.6s,mb7.2
AKF **Akfadou** 61.87 56 P P 19 10 23.0 -0.8
PLDF **La Plantade** 61.92 46 *e*P P 19 10 24.4 +0.5
SSF **Saint Saulge** 61.99 44⇓*i*P P 19 10 23.9 -0.5
comp=Z,5µm,1.2s,mb7.0
SSF **Saint Saulge** 61.99 44⇓*i*P P 19 10 23.9 -0.5
comp=Z,3µm,1.2s,mb7.0
SSF **Saint Saulge** 61.99 44⇓*i*P P 19 10 23.9 -0.5
SSF pmax pmax
comp=Z,3µm,1.2s,mb7.0
SMF **Signal de Mont** 62.16 45⇓*i*P P 19 10 25.2 -0.3
comp=Z,14µm,1.4s,mb7.3
SMF **Signal de Mont** 62.16 45⇓*i*P P 19 10 25.2 -0.3
comp=Z,7µm,1.4s,mb7.3
SMF **Signal de Mont** 62.16 45⇓*i*P P 19 10 25.2 -0.3
SMF pmax pmax
comp=Z,7µm,1.4s,mb7.3
WAL1 **Walls** 62.18 29 *e*P P 19 10 23.5 -1.9
LOR **Lormes** 62.25 44 *e*P P 19 10 25.7 -0.5
comp=Z,7µm,1.1s,mb7.1,baz=255
LOR *e*MLR MLR
comp=Z,63µm,22.2s
LOR **Lormes** 62.25 44 *e*P P 19 10 25.7 -0.5
comp=Z,3µm,1.1s,mb7.1
LOR LR LR
comp=Z,63µm,22.3s
LOR **Lormes** 62.25 44 *e*P P 19 10 25.7 -0.5
LOR pmax pmax
comp=Z,3µm,1.1s,mb7.1
LOR MLR MLR
comp=Z,63µm,22.3s
LRW **Lerwick** 62.35 29 *e*P P 19 10 25.4 -1.2
LRW AMb AMB 19 10 35.7
comp=Z,3µm,1.4s,mb6.9
LRW *e* 19 18 34.4
LRW AMS AMS 19 32 23.2
comp=Z,65µm,20.6s
SSB **Saint Sauveur** 62.47 47 *e*P P 19 10 28.8 +1.1
RES **Resolute Bay** 62.51 350 *e*P P 19 10 26.5 -0.9
RES **Resolute Bay** 62.51 350 P P 19 10 26.6 -0.8
VIVF **Saint-Julien-l** 62.52 47⇓*i*P P 19 10 28.6 +0.6
comp=Z,8µm,1.4s,mb7.1
VIVF **Saint-Julien-l** 62.52 47⇓*i*P P 19 10 28.6 +0.6
comp=Z,4µm,1.4s,mb7.1
VIVF **Saint-Julien-l** 62.52 47⇓*i*P P 19 10 28.6 +0.6
VIVF pmax pmax
comp=Z,4µm,1.4s,mb7.1
SET **Setif** 62.53 57 P P 19 10 30.0 +1.8
CKHR **Kef el Ahmar** 62.62 57 P P 19 10 38.0 +9.2
RPN **Rapa Nui** 62.71 228 P P 19 10 29.0 -0.5
comp=Z,19µm,1.7s,mb7.7,SNR=21
RPN **Rapa Nui** 62.71 228 *e*P P 19 10 28.8 -0.6
comp=Z,7µm,1.4s,mb7.3
PRAF **Pradon** 62.77 48 *e*P P 19 10 30.9 +1.2
SHEL **Horse Pasture** 62.83 117 P P 19 10 31.5 +1.0
comp=Z,1µm,1.0s,mb7.7,SNR=17
SHEL **Horse Pasture** 62.83 117 *e*P P 19 10 30.8 +0.3
comp=Z,3µm,1.0s,mb7.0
BAIF **Baives** 62.90 41 *e*P P 19 10 29.7 -0.7
TREF **Trevaresse** 62.91 48 *e*P P 19 10 32.0 +1.4
DFRA **Djebel Bou Aff** 62.92 56 P P 19 10 32.0 +1.2
GELF **Grande-Etoile** 62.92 49 *e*P P 19 10 31.2 +0.5
OCF **Saint Nazaire** 62.94 47 *e*P P 19 10 31.7 +0.9
OG26 **St.-Nazaire-De** 62.94 47 *e*P P 19 10 31.7 +0.9
SNF **Seneffe** 63.02 41 P P 19 10 30.6 -0.6
comp=Z,2µm,2.0s,mb6.5
SNF P'P' 19 39 32.4
SMRF **Simiane la Rot** 63.08 48⇓*i*P P 19 10 32.3 +0.6
comp=Z,5µm,1.3s,mb6.9
SMRF **Simiane la Rot** 63.08 48⇓*i*P P 19 10 32.3 +0.6
comp=Z,5µm,1.3s,mb7.2
BERF **Bertagne** 63.11 49 *e*P P 19 10 32.4 +0.5
UCC **Uccle** 63.11 40 P P 19 10 31.3 -0.5
UCC P'P' 19 39 29.1
PUYF **Puyloubier** 63.13 49 *e*P P 19 10 32.5 +0.4
DOU **Dourbes** 63.15 41 P P 19 10 31.5 -0.6
DOU P'P' 19 39 25.7
VILF **Villemus** 63.17 48 *e*P P 19 10 33.1 +0.8
SFTF **Sexfontaines** 63.17 43⇓*i*P P 19 10 31.7 -0.5
comp=Z,5µm,0.9s,mb7.0,baz=260
SFTF **Sexfontaines** 63.17 43⇓*i*P P 19 10 31.7 -0.5
comp=Z,5µm,0.9s,mb7.3
OG05 **Jujurieux** 63.20 46 *e*P P 19 10 32.4 0.0
MEZF **Maizieres J'vi** 63.22 43 *e*P P 19 10 32.2 -0.3
comp=Z,10µm,1.1s,mb7.3,baz=254
MEZF **Maizieres J'vi** 63.22 43 *e*P P 19 10 32.2 -0.3
comp=Z,10µm,1.0s,mb7.6
GIVF **Givet** 63.30 41 *e*P P 19 10 32.5 -0.5
comp=Z,5µm,1.1s,mb7.0
GIVF **Givet** 63.30 41 *e*P P 19 10 32.5 -0.5
comp=Z,3µm,1.0s,mb7.0
GIVF **Givet** 63.30 41 *e*P P 19 10 32.5 -0.5
GIVF pmax pmax
comp=Z,3µm,1.0s,mb7.0
GRN **Grenoble** 63.32 47 *e*P P 19 10 34.3 +1.1
STOF **St-Etienne Org** 63.32 48 *e*P P 19 10 33.3 0.0
CTEI **Djebel Teioual** 63.34 57 P P 19 10 34.0 +0.4
ORIF **Oris-en-Rattie** 63.38 47⇓*i*P P 19 10 34.2 +0.5
comp=Z,2µm,1.0s,mb6.7
ORIF *e*MLR MLR
comp=Z,64µm,23.0s
ORIF **Oris-en-Rattie** 63.38 47⇓*i*P P 19 10 34.2 +0.5
comp=Z,1µm,1.0s,mb6.7
ORIF **Oris-en-Rattie** 63.38 47⇓*i*P P 19 10 34.2 +0.5
ORIF pmax pmax
comp=Z,1µm,1.0s,mb6.7
TAVF **Tavernes** 63.40 49 *e*P P 19 10 34.1 +0.3
CASM **Ain Smara** 63.41 57 P P 19 10 35.0 +1.0
OG25 **Le Caire** 63.47 48 *e*P P 19 10 35.3 +1.0
RFYF **Reffroy** 63.51 43⇓*i*P P 19 10 33.9 -0.6
comp=Z,3µm,1.0s,mb6.8,baz=265
RFYF **Reffroy** 63.51 43⇓*i*P P 19 10 33.9 -0.6
comp=Z,3µm,1.0s,mb7.1
GDM **Grand'Maison** 63.57 47 *e*P P 19 10 35.8 +0.9
CKFL **Kef-Lekhel** 63.60 57 P P 19 10 37.0 +1.7
BCLA **Clavier** 63.65 41 P P 19 10 35.0 -0.3
comp=Z,2µm,1.7s,mb6.6
BCLA P'P' 19 39 28.4
CABF **La Chapelle** 63.69 45⇓*i*P P 19 10 35.3 -0.4
comp=Z,8µm,1.5s,mb7.0
CABF **La Chapelle** 63.69 45⇓*i*P P 19 10 35.3 -0.4
comp=Z,4µm,1.5s,mb7.0
CABF **La Chapelle** 63.69 45⇓*i*P P 19 10 35.3 -0.4
CABF pmax pmax
comp=Z,4µm,1.5s,mb7.0
LMR **La Mourre** 63.70 49⇓*i*P P 19 10 35.4 -0.4
comp=Z,4µm,1.4s,mb6.8
LMR **La Mourre** 63.70 49⇓*i*P P 19 10 35.4 -0.4
comp=Z,2µm,1.4s,mb6.8
LMR **La Mourre** 63.70 49⇓*i*P P 19 10 35.4 -0.4
LMR pmax pmax
comp=Z,2µm,1.4s,mb6.8
CAEH **'Ain El Ouahch** 63.70 56 P P 19 10 36.5 +0.5
THEF **They Montfort** 63.80 43 *e*P P 19 10 36.4 0.0
GIMEL **St. Georges /** 63.80 45⇓*i*Pdiff P 19 10 36.5 +0.1
comp=Z,641nm,0.7s,mb6.5
FRF **La Foret Royal** 63.82 49⇓*i*P P 19 10 36.2 -0.4
comp=Z,4µm,1.2s,mb6.8
FRF **La Foret Royal** 63.82 49⇓*i*P P 19 10 36.2 -0.4
comp=Z,2µm,1.2s,mb6.8
FRF **La Foret Royal** 63.82 49⇓*i*P P 19 10 36.2 -0.4
FRF pmax pmax
comp=Z,2µm,1.2s,mb6.8
BEBN **Eben Emael** 63.94 41 P P 19 10 36.7 -0.5
comp=Z,1µm,1.5s,mb6.5
BEBN P'P' 19 39 35.3
BNI **Bardonecchia** 63.96 47 *e*P P 19 10 38.1 +0.6
comp=Z,3µm,1.3s,mb6.9
BNI **Bardonecchia** 63.96 47 P P 19 10 38.2 +0.8
BNI pmax pmax
comp=Z,3µm,1.2s,mb7.0
RSL **Roselend** 63.97 46 *e*P P 19 10 38.2 +0.7
BRANT **Les Verrieres** 63.99 45⇓*i*Pdiff P 19 10 37.7 +0.1
comp=Z,873nm,0.7s,mb6.7
MBDF **Montbardon** 64.00 47⇓*i*P P 19 10 38.2 +0.5
comp=Z,7µm,1.3s,mb7.0
MBDF **Montbardon** 64.00 47⇓*i*P P 19 10 38.2 +0.5
comp=Z,4µm,1.3s,mb7.1
MBDF **Montbardon** 64.00 47⇓*i*P P 19 10 38.2 +0.5
MBDF pmax pmax
comp=Z,4µm,1.3s,mb7.1
SURF **Saint Ours** 64.01 48 *e*P P 19 10 39.0 +1.2
CALN **Calern** 64.01 48 *e*P P 19 10 38.2 +0.4
HAU **Haudompre** 64.02 44 *e*P P 19 10 36.9 -0.9
comp=Z,9µm,1.7s,mb7.0
HAU *e*MLR MLR
comp=Z,49µm,22.5s
HAU **Haudompre** 64.02 44 *e*P P 19 10 36.9 -0.9
comp=Z,5µm,1.7s,mb7.0
HAU LR LR
comp=Z,49µm,22.5s
HAU **Haudompre** 64.02 44 *e*P P 19 10 36.9 -0.9
HAU pmax pmax
comp=Z,5µm,1.7s,mb7.0
HAU MLR MLR
comp=Z,49µm,22.5s
LPL **La Plagne** 64.03 46⇓*i*P P 19 10 38.7 +0.8
comp=Z,5µm,1.0s,mb7.0
LPL **La Plagne** 64.03 46⇓*i*P P 19 10 38.7 +0.8
comp=Z,3µm,1.0s,mb7.0
LPL **La Plagne** 64.03 46⇓*i*P P 19 10 38.7 +0.8
LPL pmax pmax
comp=Z,3µm,1.0s,mb7.0
LPG **La Plagne** 64.05 46⇓*i*P P 19 10 38.9 +0.9
comp=Z,13µm,1.4s,mb7.3
LPG **La Plagne** 64.05 46⇓*i*P P 19 10 38.9 +0.9
comp=Z,7µm,1.4s,mb7.3
LPG **La Plagne** 64.05 46⇓*i*P P 19 10 38.9 +0.9
LPG pmax pmax
comp=Z,7µm,1.4s,mb7.3
OG01 **Vacheresse** 64.07 46 *e*P P 19 10 39.3 +1.1
WLF **Walferdange** 64.09 42 P P 19 10 37.8 -0.4
comp=Z,2µm,1.6s,mb6.8
WLF P'P' 19 39 30.4
WLF **Walferdange** 64.09 42 *e*P P 19 10 37.9 -0.3
comp=Z,4µm,1.2s,mb7.1
WLF **Walferdange** 64.09 42 *e*P P 19 10 38.0 -0.2
comp=Z,4µm,1.2s,mb7.1
WLF *e*S S 19 19 17.9 +15
WLF *e*SS SS 19 23 23.2 +8.6
HGN **Heimansgroeve** 64.10 41⇓*e*P P 19 10 38.1 -0.1
HGN **Heimansgroeve** 64.10 41 *e*S S 19 19 03.5 +0.3
HGN **Heimansgroeve** 64.10 41 *e*SS SS 19 23 34.3 +20
MEM **Membach** 64.12 41 P P 19 10 38.2 -0.2
comp=Z,2µm,1.3s,mb6.7
MEM P'P' 19 39 31.0
OG22 **Abries** 64.13 47 *e*P P 19 10 39.3 +0.7
CMAH **Djebel Manchou** 64.16 56 P P 19 10 37.0 -1.9
EMV **Vieux Emosson** 64.20 46⇓*i*Pdiff P 19 10 39.4 +0.4
comp=Z,703nm,0.7s,mb6.6
ABSA **Djebel Ababsia** 64.21 57 P P 19 10 37.0 -2.3
MVIF **Mont Vial** 64.21 48 *e*P P 19 10 39.6 +0.5
JMIC **Jan Mayen** 64.23 17 P P 19 10 38.8 +0.1
comp=Z,66nm,0.6s,mb5.6,baz=147,slow=9.1,SNR=3.0
JMIC **Jan Mayen** 64.23 17 *e*P P 19 10 39.2 +0.5
JMIC ⇓*e* 19 15 08.9
JMIC *e*S S 19 19 05.5 +1.4
JMIC *e*SS SS 19 23 14.6 -1.4
SALAN **Lac Salanfe** 64.26 46⇓*i*Pdiff P 19 10 39.4 0.0
comp=Z,665nm,0.7s,mb6.6
AIGLE **Aigle** 64.26 46⇓*i*Pdiff P 19 10 39.6 +0.2
comp=Z,562nm,0.7s,mb6.5
LOMF **Lomont** 64.27 44 *e*P P 19 10 39.5 +0.1
TOUF **Mont Tournerai** 64.29 48 *e*P P 19 10 40.2 +0.6
TORNY **Torny/Romont** 64.30 45⇓*i*Pdiff P 19 10 39.8 +0.1
comp=Z,966nm,0.7s,mb6.7
DOI **San Damiano** 64.32 48 P P 19 10 40.3 +0.5
HINF **Hinteralfeld** 64.33 44 *e*P P 19 10 38.8 -1.0
comp=Z,3µm,1.2s,mb6.8
HINF **Hinteralfeld** 64.33 44 *e*P P 19 10 38.8 -1.0
comp=Z,2µm,1.2s,mb6.8
HINF **Hinteralfeld** 64.33 44 *e*P P 19 10 38.8 -1.0
HINF pmax pmax
comp=Z,2µm,1.2s,mb6.8
LUCF **Luceram** 64.35 48 *e*P P 19 10 40.3 +0.3
GRYON **Gryon** 64.36 46⇓*i*Pdiff P 19 10 40.3 +0.3
comp=Z,543nm,0.7s,mb6.5
SBF **Sospel** 64.41 48⇓*i*P P 19 10 40.1 -0.3
comp=Z,4µm,1.2s,mb6.9
SBF **Sospel** 64.41 48⇓*i*P P 19 10 40.1 -0.3
comp=Z,2µm,1.2s,mb6.9
SBF **Sospel** 64.41 48⇓*i*P P 19 10 40.1 -0.3
SBF pmax pmax
comp=Z,2µm,1.2s,mb6.9
AUTN **L'Aution** 64.41 48 *e*P P 19 10 41.2 +0.8
SENIN **Lac Senin/Sane** 64.50 46⇓*i*Pdiff P 19 10 40.9 -0.1
comp=Z,826nm,0.7s,mb6.7
SAOF **Saorge** 64.50 48 *e*P P 19 10 41.3 +0.3
MOF **Molkenrain** 64.53 44 *e*P P 19 10 40.7 -0.4
BOURR **Bourrignon** 64.55 44⇓*i*Pdiff P 19 10 42.1 +0.9
comp=Z,801nm,0.7s,mb6.6
DIX **Grande Dixence** 64.55 46⇓*i*Pdiff P 19 10 41.5 +0.2
comp=Z,512nm,0.7s,mb6.5
ECH **Echery** 64.58 44 *e*P P 19 10 41.4 0.0
RUP **Ruppelstein** 64.68 42 *e*P P 19 10 42.2 +0.2
CDF **Champ du Feu** 64.68 43 *e*P P 19 10 41.4 -0.7
comp=Z,9µm,1.4s,mb7.1
CDF **Champ du Feu** 64.68 43 *e*P P 19 10 41.4 -0.7
comp=Z,5µm,1.4s,mb7.1
CDF **Champ du Feu** 64.68 43 *e*P P 19 10 41.4 -0.7
CDF pmax pmax
comp=Z,5µm,1.4s,mb7.1
LKBD **Leukerbad** 64.73 46⇓*i*Pdiff P 19 10 42.6 +0.2
comp=Z,755nm,0.7s,mb6.6
BBS **Basel-Blauen** 64.74 44 *e*P P 19 10 42.3 -0.2
WIMIS **Wimmis** 64.75 45⇓*i*Pdiff P 19 10 42.8 +0.2
comp=Z,483nm,0.7s,mb6.4
WTSB **Winterswijk** 64.80 39⇓*e*P P 19 10 42.7 -0.1
BALST **Balsthal** 64.86 45⇓*i*Pdiff P 19 10 44.7 +1.5
comp=Z,764nm,0.7s,mb6.6
LIBD **Limburg** 64.87 44 *e*P P 19 10 43.4 +0.1
ORO **Oropa** 64.92 46 P P 19 10 43.8 +0.1
comp=Z,6µm,1.9s,mb7.1
ORO **Oropa** 64.92 46 P P 19 10 43.8 +0.1
ORO pmax pmax
comp=Z,6µm,1.9s,mb7.1
MMK **Mattmark** 64.94 46⇓*i*Pdiff P 19 10 42.9 -0.9
comp=Z,535nm,0.7s,mb6.5
FIN **Finale Ligure** 64.99 48 P P 19 10 43.9 -0.3
ABH **Alteburg** 65.01 42 *e*P P 19 10 44.6 +0.4
STR **Strasbourg** 65.02 43 *e*P P 19 10 44.5 +0.2
BUG **Bochum--Univer** 65.02 40 *e*P P 19 10 43.8 -0.4
comp=Z,5µm,1.4s,mb7.1
BUG *e*S S 19 19 28.2 +14
BUG *e*SS SS 19 23 37.9 +8.8
LANF **Langenberg** 65.08 43 *e*P P 19 10 44.7 0.0
FELD **Feldberg im Sc** 65.11 44 *e*P P 19 10 44.6 -0.3
HASLI **Hasliberg/Brie** 65.12 45⇓*i*Pdiff P 19 10 44.8 -0.1
comp=Z,952nm,0.7s,mb6.7
SULZ **Cheisacher** 65.15 44⇓*i*Pdiff P 19 10 45.2 0.0
comp=Z,1µm,0.7s,mb6.9
KTD **Kalmit** 65.30 42 *e*P P 19 10 45.9 -0.2
BFO **Black Forest** 65.37 43 P P 19 10 45.7 -0.8
comp=Z,6µm,1.1s,mb7.4,SNR=80
BFO **Black Forest** 65.37 43 *e*P P 19 10 45.6 -0.9
comp=Z,1µm,1.1s,mb6.7
BFO **Black Forest** 65.37 43 *e*P P 19 10 45.8 -0.7
BFO *e*S S 19 19 32.7 +14
BFO pmax pmax
comp=Z,3µm,1.4s,mb6.9
BFO **Black Forest** 65.37 43 *e*P P 19 10 45.8 -0.7
comp=Z,3µm,1.4s,mb6.9
BFO *e*S S 19 19 32.7 +14
BFO *e*SS SS 19 23 45.4 +11
STAV **Stavanger** 65.40 32 *e*P P 19 10 45.9 -0.6
STAV AMb AMB 19 10 58.1
comp=Z,3µm,1.5s,mb6.9
SUE **Sulen** 65.42 29 *e*P P 19 10 46.1 -0.5
SUE **Sulen** 65.42 29 *e*P P 19 10 46.1 -0.5
SUE AMb AMB 19 10 58.6
comp=Z,2µm,1.7s,mb6.7
SLE **Schleitheim** 65.43 44⇓*i*Pdiff P 19 10 47.4 +0.5
comp=Z,829nm,0.7s,mb6.7
IBBN **Ibbenburen** 65.43 39 *e*P P 19 10 46.6 -0.3
comp=Z,8µm,1.3s,mb7.4
IBBN *e*S S 19 19 32.8 +13
IBBN *e*SS SS 19 23 43.3 +7.9
FUSIO **Fusio** 65.45 46⇓*i*Pdiff P 19 10 46.6 -0.5
comp=Z,1µm,0.7s,mb6.9
EGD **Espegrend** 65.46 30 *e*P P 19 10 45.7 -1.2
EGD *e* 19 10 51.4
ZUR **Degenried** 65.46 45⇓*i*Pdiff P 19 10 47.1 0.0
comp=Z,1µm,0.7s,mb6.8
FLACH **Flaach** 65.47 44⇓*i*Pdiff P 19 10 47.7 +0.5
comp=Z,987nm,0.7s,mb6.7
MUO **Muotathal** 65.47 45⇓*i*Pdiff P 19 10 46.9 -0.3
comp=Z,2µm,0.7s,mb7.0
PGF **Pioggiola** 65.49 50⇓*i*P P 19 10 47.0 -0.4
comp=Z,8µm,1.3s,mb7.1
PGF **Pioggiola** 65.49 50⇓*i*P P 19 10 47.0 -0.4
comp=Z,4µm,1.3s,mb7.1
PGF **Pioggiola** 65.49 50⇓*i*P P 19 10 47.0 -0.4
PGF pmax pmax
comp=Z,4µm,1.3s,mb7.1
ASK **Askoy** 65.49 30 *e*P P 19 10 45.7 -1.4
BER **Bergen** 65.54 30 *e*P P 19 10 46.3 -1.1
BER *e*P 19 10 46.8
BER AMb AMB 19 10 58.3
comp=Z,3µm,1.4s,mb6.9
BER *e*S S 19 19 19.7 -0.8
BER *e*SS SS 19 23 40.1 +3.5
BER AMS AMS 19 32 42.4
comp=Z,58µm,23.9s
DAG **Danmarks Havn** 65.54 10*b*⇓*i*P P 19 10 46.1 -1.0
TRULL **Truellikon** 65.55 44⇓*i*Pdiff P 19 10 47.9 +0.2
comp=Z,2µm,0.7s,mb6.9
OSPF **L'Ospedale** 65.61 51 *e*P P 19 10 48.1 -0.1
SPAK **Spaichingen-Ko** 65.65 44 *e*P P 19 10 48.0 -0.4
STEIN **Stein am Rhein** 65.68 44⇓*i*Pdiff P 19 10 49.1 +0.6
comp=Z,2µm,0.7s,mb6.9
MUGIO **Muggio** 65.68 46⇓*i*Pdiff P 19 10 47.8 -0.8
comp=Z,568nm,0.7s,mb6.5
WILA **Wila** 65.68 44⇓*i*Pdiff P 19 10 48.6 0.0
comp=Z,1µm,0.7s,mb6.8
LLS **Linth-Limmern** 65.71 45⇓*i*Pdiff P 19 10 48.3 -0.5
comp=Z,706nm,0.7s,mb6.6
VSL **Villasalto** 65.72 53 *e*P P 19 10 49.0 0.0
comp=Z,3µm,1.2s,mb7.1
KEST **Kesra** 65.73 57 P P 19 10 49.5 +0.4
comp=Z,591nm,0.7s,mb6.5,baz=191,slow=3.0,SNR=1552
KEST S S 19 19 23.8 0.0
comp=Z,6.8nm,1.1s,baz=329,slow=19,SNR=1.3
KEST LR LR 19 35 43.2
comp=Z,21µm,21.9s,baz=333,slow=32
KEST PKPPKP 19 39 22.6
comp=Z,16nm,1.2s,baz=126,slow=2.3,SNR=4.4
WEIN **Weingarten** 65.75 44⇓*i*Pdiff P 19 10 49.1 +0.1
comp=Z,1µm,0.7s,mb6.8
HLG **Helgoland** 65.76 37 *e*P P 19 10 48.5 -0.4
comp=Z,7µm,1.4s,mb7.3
HLG *e*S S 19 19 37.0 +14
HLG *e*SS SS 19 23 50.8 +10
TOD **Tromm** 65.80 42 *e*P P 19 10 48.8 -0.4
BLS5 **Blasjo** 65.88 31 *e*P P 19 10 50.5 +0.8
BLS5 *e* 19 10 50.5
BLS5 *i* 19 10 56.4
BLS5 AMb AMB 19 11 02.5
comp=Z,2µm,0.8s,mb6.9
DGI **Dorgali Grotta** 65.90 52 P P 19 10 50.1 0.0
BOB **Bobbio (Coli)** 65.90 47 P P 19 10 50.2 +0.2
TUE **Stuetta** 65.92 46 *e*P P 19 10 50.2 +0.1
comp=Z,2µm,1.2s,mb6.9
STU **Stuttgart** 65.98 43 *e*P P 19 10 49.9 -0.5
comp=Z,3µm,1.0s,mb7.1
STU **Stuttgart** 65.98 43 *e*P P 19 10 49.9 -0.5
STU pmax pmax
comp=Z,3µm,1.0s,mb7.1
STU **Stuttgart** 65.98 43 *e*P P 19 10 49.5 -0.9
comp=Z,4µm,1.1s,mb7.2
STU *e*S S 19 19 38.3 +12
STU *e*SS SS 19 23 55.0 +11
PLONS **Plons/SG** 65.98 45⇓*i*Pdiff P 19 10 50.9 +0.4
comp=Z,1µm,0.7s,mb6.8
VDL **Val di Lei** 65.99 46⇓*i*Pdiff P 19 10 50.6 0.0
comp=Z,718nm,0.7s,mb6.6
ODD1 **Odda** 66.07 31 *e*P P 19 10 49.9 -0.8
ODD1 AMb AMB 19 11 01.5
comp=Z,3µm,1.6s,mb6.8
LIENZ **Kamor/St.Gall** 66.07 45⇓*i*Pdiff P 19 10 51.3 +0.2
comp=Z,1µm,0.7s,mb6.8
HYA **Hoyanger** 66.12 29 *e*P P 19 10 51.7 +0.6
HYA AMb AMB 19 11 03.7
comp=Z,3µm,1.1s,mb7.0
DAVOS **Davos** 66.25 45 P P 19 10 53.1 +0.9
DAVOS S S 19 19 32.5 +2.9
DLBC **Dease Lake** 66.27 328 PKP2bc 19 39 27.6
comp=Z,12nm,1.1s,baz=321,slow=5.7,SNR=3.6
DLBC LR LR 19 41 25.0
comp=Z,59µm,19.0s,baz=96,slow=37
DLBC **Dease Lake** 66.27 328 *e*P P 19 10 52.2 +0.1
DAVOX **Davos/Dischmat** 66.31 45 P P 19 10 53.1 +0.6
comp=Z,435nm,0.8s,mb6.3,baz=268,slow=6.3,SNR=303
DAVOX S S 19 19 32.5 +2.2
comp=Z,10.0nm,0.9s,baz=244,slow=8.7,SNR=3.4
DAVOX PKKP 19 31 04.6
comp=Z,3.0nm,0.5s,baz=150,slow=6.3,SNR=3.9
DAVOX **Davos/Dischmat** 66.31 45⇓*i*Pdiff P 19 10 53.0 +0.4
comp=Z,1µm,0.7s,mb6.8
DAVA **Damuels** 66.33 45 *i*P P 19 10 52.8 +0.1
comp=Z,1µm,0.9s,mb6.7,SNR=319
DAVA ⇓*i*P 19 10 59.4
comp=Z,5µm,1.2s
DAVA ⇓*i*P'P'bc 19 39 27.7
comp=Z,199nm,1.2s
BERNI **Berninapass** 66.38 46⇓*i*Pdiff P 19 10 53.5 +0.4
comp=Z,1µm,0.7s,mb6.8
EFI **East Falkland** 66.44 178 P P 19 10 53.6 +0.5
comp=Z,10µm,0.9s,mb7.7,SNR=18
EFI **East Falkland** 66.44 178 *e*P P 19 10 53.0 -0.1
comp=Z,4µm,1.4s,mb7.0
EFI **East Falkland** 66.44 178 *e*P P 19 10 53.0 -0.1
EFI pmax pmax
comp=Z,4µm,1.4s,mb7.0
VLC **Villacollemand** 66.55 48 *e*P P 19 10 53.0 -1.2
comp=Z,2µm,1.1s,mb6.8
FUORN **Ofenpass-Fuorn** 66.56 45⇓*i*Pdiff P 19 10 54.6 +0.4
comp=Z,1µm,0.7s,mb6.9
PII **Pisa** 66.64 49 P P 19 10 54.1 -0.6
BDI **Bagni Di Lucca** 66.70 48 P P 19 10 53.7 -1.4
MABI **Malga Bissina** 66.71 46 P P 19 10 54.1 -1.0
MUD **Monsted U'grnd** 66.81 35⇓*i*P P 19 10 55.7 +0.2
comp=Z,1µm,1.0s,mb6.8
MUD *i*S S 19 19 29.8 -6.2
MUD *i* 19 19 41.3
MUD *i* 19 20 40.3
MUD **Monsted U'grnd** 66.81 35⇓*i*P P 19 10 55.7 +0.2
MUD *i*S S 19 19 29.8 -6.2
MUD pmax pmax
comp=Z,1µm,1.0s,mb6.8
MUD **Monsted U'grnd** 66.81 35⇓*i*P P 19 10 55.7 +0.2
comp=Z,1µm,1.0s,mb6.8
MUD *i*S S 19 19 29.8 -6.2
MUD *i* 19 19 41.3
MUD *i* 19 20 40.3
MUD
comp=Z,46µm,21.0s
FETA **Feichten** 66.90 45⇓*i*P P 19 10 56.4 +0.1
comp=Z,681nm,0.7s,mb6.6,SNR=709
FETA ⇓*i*P 19 11 05.4
comp=Z,5µm,1.2s
FETA ⇑*i*P'P'df 19 39 21.8
comp=Z,29nm,1.1s
FETA ⇑*i*P'P'ab 19 39 28.7
comp=Z,279nm,1.4s
DIB **Dawson Inlet,** 66.91 322 P P 19 10 56.4 +0.2
RETA **Reutte** 66.94 45⇓*e*P P 19 10 56.3 -0.3
comp=Z,696nm,1.4s,mb6.3,SNR=200
RETA ⇑*i*P 19 11 04.3
comp=Z,4µm,1.5s
RETA ⇓*i*P'P'df 19 39 21.9
comp=Z,44nm,1.3s
VIB **Van Inlet** 66.95 322 P P 19 10 56.9 +0.4
CLZ **Clausthal** 66.99 40 *e*P P 19 10 56.5 -0.3
CLZ pmax pmax
comp=Z,4µm,1.3s,mb7.0
CLZ **Clausthal** 66.99 40 *e*P P 19 10 56.5 -0.3
comp=Z,4µm,1.3s,mb7.0
CLZ *e*S S 19 19 52.0 +14
CLZ *e*SS SS 19 24 08.8 +9.3
MOL **Molde** 67.05 28 *e*P P 19 10 55.6 -1.4
MOL *e* 19 12 51.4
MOL *e*S S 19 19 39.1 +0.4
MOL *e*SKS 19 20 36.2
MAON **Monte Argentar** 67.06 50 P P 19 10 57.3 -0.2
FNVD **Fontana Vidola** 67.08 48 P P 19 10 57.0 -0.5
BSEG **Bad Segeberg** 67.15 37 *e*P P 19 10 57.3 -0.5
BSEG pmax pmax
comp=Z,3µm,1.2s,mb7.0
BSEG **Bad Segeberg** 67.15 37 *e*P P 19 10 57.3 -0.5
comp=Z,3µm,1.2s,mb7.0

BSEG eS S 19 19 53.0 +13
BSEG eSS SS 19 24 13.2 +11
WRAK Wrangell Islan 67.20 325 eP **P 19 10 58.1 0.0**
comp=Z,530nm,1.0s,mb6.3
APPI Appiano 67.22 46 P **P 19 10 57.1 -1.3**
SQTA Sankt Quirin 67.24 45 ⇓iP **P 19 10 58.2 -0.3**
comp=Z,431nm,0.5s,mb6.5
SQTA ⇑iP'P'ab 19 39 28.5
FUR Furstenfeldbru 67.32 44 eP **P 19 10 58.6 -0.4**
FUR pmax pmax
comp=Z,6µm,1.9s,mb7.1
FUR Furstenfeldbru 67.32 44 eP **P 19 10 58.6 -0.4**
comp=Z,6µm,1.9s,mb7.1
FUR eS S 19 19 56.5 +14
FUR eSS SS 19 24 19.1 +14
GRFO Grafenberg 67.37 42 eS S 19 19 57.2 +14
GRFO eSS SS 19 24 19.8 +14
GRF Grafenberg Arr 67.37 42 eP **P 19 10 58.7 -0.5**
comp=Z,8µm,2.1s,mb7.2
GRF eS S 19 19 49.7 +6.7
GRF eS S 19 19 57.0 +14
GRF eSS SS 19 24 22.9 +17
GRF LR LR
comp=Z,59µm,21.4s
GRF Grafenberg Arr 67.37 42 eP **P 19 10 58.7 -0.5**
GRF eS S 19 19 49.7 +6.7
GRF pmax pmax
comp=Z,8µm,2.1s,mb7.2
GRF MLR MLR
comp=Z,59µm,21.4s
GRF Grafenberg Arr 67.37 42 eP **P 19 10 58.7 -0.5**
GRF eS S 19 19 49.7 +6.7
GRF pmax pmax
comp=Z,8µm,2.1s,mb7.2
GRF Grafenberg Arr 67.37 42 eP **P 19 10 58.7 -0.5**
comp=Z,8µm,2.1s,mb7.2
GRF eS S 19 19 49.7 +6.7
GRF eS S 19 19 57.0 +14
GRF eSS SS 19 24 22.9 +17
GRF eL 19 34 25.7
comp=Z,59µm,21.4s
GRF ePKPPKP 19 39 20.3
WATA Walderalm 67.49 45 i P **P 19 10 59.8 -0.3**
SNR=60
WATA ⇑iP 19 11 08.6
comp=Z,1µm,1.3s
WATA ⇓iP'P'ab 19 39 28.2
comp=Z,77nm,1.0s
CTI Castel Tesino 67.50 46 P **P 19 10 59.6 -0.5**
comp=Z,2µm,1.0s,mb6.8
CTI Castel Tesino 67.50 46 P **P 19 10 59.6 -0.5**
CTI pmax pmax
comp=Z,2µm,1.0s,mb6.8
KONO Kongsberg 67.50 31 eP **P 19 11 00.2 +0.4**
comp=Z,3µm,1.3s,mb6.9
KONO Kongsberg 67.50 31 eP **P 19 10 59.8 0.0**
KONO e 19 16 50.6
KONO eS S 19 19 44.9 +0.8
KONO eSS SS 19 24 11.5 +4.4
KONO i 19 27 33.6
CRAG Craig 67.52 324 eP **P 19 10 59.8 -0.3**
comp=Z,1µm,0.8s,mb6.7
WTTA Wattenberg 67.53 45 ⇓iP **P 19 11 00.3 0.0**
comp=Z,570nm,1.4s,mb6.1,SNR=188
WTTA ⇑iP 19 11 07.7
comp=Z,2µm,1.4s
WTTA ⇑iP'P'df 19 39 22.0
comp=Z,30nm,1.1s,SNR=11
WTTA ⇑iP'P'ab 19 39 28.0
comp=Z,280nm,1.3s
ALE Alert 67.56 360 P **P 19 10 58.0 -1.9**
comp=Z,13µm,1.0s,mb7.6
DOMB Dombas 67.64 29 eP **P 19 11 01.4 +0.6**
CRE Caprese Michel 67.67 49 P **P 19 10 59.9 -1.4**
MOX Moxa 67.68 41 ⇑iP **P 19 11 00.5 -0.7**
comp=Z,3µm,2.1s,mb6.7
MOX Moxa 67.68 41 ⇑iP **P 19 11 00.5 -0.7**
MOX pmax pmax
comp=Z,3µm,2.1s,mb6.7
MOX Moxa 67.68 41 eP **P 19 11 00.9 -0.3**
comp=Z,896nm,1.3s,mb6.3
MOX eS S 19 20 01.4 +15
MOX eSS SS 19 24 20.4 +10
PTS Pantelleria 67.83 56 P **P 19 11 03.1 +0.7**
comp=Z,8µm,1.8s,mb7.2
PTS Pantelleria 67.83 56 P **P 19 11 03.1 +0.7**
PTS pmax pmax
comp=Z,8µm,1.8s,mb7.2
MANZ Manzenberg 67.96 42 eP **P 19 11 02.7 -0.2**
comp=Z,4µm,1.3s,mb7.0
MANZ eS S 19 20 04.4 +14
MANZ eSS SS 19 24 25.0 +10
ROTZ Rotzenmuhle 68.01 42 eP **P 19 11 03.1 -0.2**
comp=Z,3µm,1.5s,mb6.8
ROTZ eS S 19 20 05.4 +15
ROTZ eSS SS 19 24 27.8 +12
MURB Monte Urbino 68.09 49 P **P 19 11 02.6 -1.3**
OSL Oslo 68.10 31 eP **P 19 11 02.9 -0.7**
WERD Werda 68.11 41 eP **P 19 11 03.2 -0.6**
comp=Z,2µm,1.5s,mb6.7
ABTA Abfaltersbach 68.11 45 ⇓iP **P 19 11 03.7 -0.3**
comp=Z,466nm,0.9s,mb6.2,SNR=272
ABTA ⇓eP'P'df 19 39 19.5
comp=Z,14nm,1.1s
ABTA ⇑eP'P'ab 19 39 24.3
comp=Z,134nm,1.3s
GUNZ Gunzen 68.12 41 eP **P 19 11 03.5 -0.4**
comp=Z,2µm,1.4s,mb6.6
WERN Wernitzgruen 68.14 42 eP **P 19 11 03.8 -0.3**
comp=Z,2µm,1.4s,mb6.7
NKC Novy Kostel 68.19 42 ⇓iP **P 19 11 04.3 0.0**
NKC e 19 11 16.8
NKC epP pP 19 11 40.8 +0.9
NKC e 19 12 00.2
NKC eS S 19 19 57.8 +5.1
NKC e 19 21 04.1
NKC eSS SS 19 24 32.8 +15
NKC e 19 27 38.5
NKC eP'P' 19 39 21.3
NKC Novy Kostel 68.19 42 ⇓iP **P 19 11 04.3 0.0**
NKC e*PP pP 19 11 40.8 +0.9
NKC e 19 12 00.2
NKC eS S 19 19 57.8 +5.1
NKC Novy Kostel 68.19 42 ⇓iP **P 19 11 04.3 0.0**
NKC ex x 19 11 16.8
NKC epP pP 19 11 40.8 +0.9
NKC ex x 19 12 00.2
NKC eS S 19 19 57.8 +5.1
NKC ex x 19 21 04.1
NKC ex x 19 24 32.8
NKC ex x 19 27 38.5
NKC AMS AMS 19 32 40.0
comp=Z,319µm,46.6s
NKC ePKPPKP 19 39 21.3
TANN Tannenbergstha 68.20 41 eP **P 19 11 04.0 -0.4**
comp=Z,2µm,1.3s,mb6.8
TANN eS S 19 20 07.8 +15
TANN eSS SS 19 24 30.5 +12
NAO01 NORSAR Array S 68.31 30 eP **P 19 11 05.0 +0.1**
comp=Z,2µm,0.9s,mb6.8
RJOB Jochberg 68.33 44 eP **P 19 11 04.7 -0.6**
comp=Z,445nm,1.0s,mb6.2
RJOB eS S 19 20 06.5 +12
RJOB eSS SS 19 24 36.4 +16
WET Wettzell 68.42 43 eP **P 19 11 05.3 -0.5**
WET pmax pmax
comp=Z,2µm,1.3s,mb6.6
WET Wettzell 68.42 43 eP **P 19 11 05.3 -0.5**
comp=Z,2µm,1.3s,mb6.6
WET eS S 19 20 09.7 +14
WET eSS SS 19 24 35.2 +13
CERT Cerreto 68.44 51 P **P 19 11 05.9 -0.2**
NB2 NORSAR Subarra 68.50 30 P **P 19 11 06.9 +0.8**
comp=Z,4µm,1.1s,mb7.0,baz=260,slow=6.5
NOA NORSAR Array B 68.50 30 P **P 19 11 06.5 +0.5**
comp=Z,287nm,0.8s,mb6.1,baz=262,slow=6.3,SNR=578
NOA S S 19 19 55.6 -0.4
comp=Z,5.0nm,0.9s,baz=254,slow=9.5,SNR=2.7
NOA LR LR 19 35 04.3
comp=Z,49µm,21.8s,baz=265,slow=30
NOA PKPPKP 19 39 15.4
comp=Z,4.3nm,0.9s,baz=89,slow=4.2,SNR=4.2
NOA PKP2bc 19 39 22.3
comp=Z,42nm,1.2s,baz=78,slow=4.2,SNR=9.9

NOA NORSAR Array B 68.50 30 P **P 19 11 06.5 +0.5**
NOA S S 19 19 55.6 -0.4
NOA LR LR 19 35 04.3
NOA P'P' 19 39 15.4
NOA ⇑e 19 39 22.3
COP Copenhagen 68.54 36 ⇓iP **P 19 11 06.5 +0.1**
COP i S S 19 19 58.0 +1.4
COP pmax pmax
comp=Z,546nm,0.9s
COP MLR MLR
comp=Z,16µm,21.0s
COP Copenhagen 68.54 36 ⇓iP **P 19 11 06.5 +0.1**
comp=Z,546nm,0.9s,mb6.3
COP i S S 19 19 58.0 +1.4
comp=Z,16µm,21.0s
CING Cingoli 68.58 49 P **P 19 11 05.6 -1.3**
CLL Collm 68.59 40 ⇓iP **P 19 11 06.5 -0.3**
comp=Z,452nm,1.0s,mb6.2
CLL i 19 11 11.3
CLL i 19 11 18.2
CLL eS S 19 20 00.0 +2.6
CLL esS sS 19 21 03.0 +4.0
CLL eP'P' 19 39 17.0
CLL i 19 39 28.7
CLL Collm 68.59 40 ⇓iP **P 19 11 06.5 -0.3**
CLL eS S 19 20 00.0 +2.6
CLL pmax pmax
comp=Z,452nm,1.0s,mb6.2
CLL Collm 68.59 40 eP **P 19 11 06.2 -0.6**
comp=Z,2µm,1.2s,mb6.8
CLL eS S 19 20 10.8 +13
CLL eSS SS 19 24 33.9 +10
CLL Collm 68.59 40 ⇓iP **P 19 11 06.5 -0.3**
comp=Z,452nm,1.0s,mb6.2
CLL ePlp 19 11 10.0
comp=Z,43µm,24.4s
CLL i x x 19 11 11.3
CLL i x x 19 11 14.7
comp=Z,2µm,1.2s
CLL i Pmax 19 11 18.2
comp=Z,2µm,1.2s
CLL esP sP 19 12 01.0 +2.6
CLL eS S 19 20 00.0 +2.6
comp=N,132µm,29.1s
CLL eS S 19 20 00.0 +2.6
comp=E,55µm,22.8s
CLL ePS 19 20 46.0
CLL esS sS 19 21 03.0 +4.0
CLL eSS SS 19 24 30.0 +5.7
CLL eSSS 19 27 51.0
CLL eSSSS 19 29 24.0
CLL esPKKPdf 19 31 55.0
CLL ePKPPKPdf 19 39 17.0
CLL i PKPPKPab 19 39 22.2
GMNA Gemona 68.61 46 P **P 19 11 06.1 -0.9**
PTCC Patocco-Chiusa 68.69 46 P **P 19 11 07.0 -0.5**
KBA Koelnbreinsper 68.69 45 ⇓iP **P 19 11 07.3 -0.2**
comp=E,1µm,1.1s,mb6.5,SNR=341
KBA ⇓iP 19 11 15.9
comp=E,5µm,1.1s
KBA ⇑eP'P'df 19 39 19.4
comp=E,20nm,1.4s,SNR=9.9
KBA ⇓iP'P'ab 19 39 26.6
comp=E,136nm,1.4s
USI Ustica 68.69 54 P **P 19 11 07.2 -0.5**
AQU L'Aquila 68.75 50 eP **P 19 11 07.4 -0.6**
comp=E,1µm,1.0s,mb6.7
AQU L'Aquila 68.75 50 eP **P 19 11 07.4 -0.6**
AQU pmax pmax
comp=Z,2µm,1.0s,mb6.8
AQU L'Aquila 68.75 50 ⇓P **P 19 11 08.4 +0.4**
AQU L'Aquila 68.75 50 ⇓iP **P 19 11 08.4 +0.4**
FBE Freiberg 68.80 41 eP **P 19 11 07.7 -0.4**
comp=Z,2µm,1.3s,mb6.8
VENT Ventotene 68.80 52 P **P 19 11 08.2 -0.2**
KHC Kasperske Hory 68.88 43 ⇓iP **P 19 11 08.2 -0.5**
KHC e 19 11 16.0
KHC e 19 11 20.9
KHC epP pP 19 11 43.7 -0.6
KHC e 19 12 03.7
KHC eS S 19 20 05.0 +4.0
KHC e 19 21 06.4
KHC eSS SS 19 24 38.1 +9.2
KHC e 19 27 53.1
KHC eP'P' 19 39 20.7
KHC e 19 39 50.5
KHC LR LR
comp=Z,356µm,51.4s
KHC Kasperske Hory 68.88 43 ⇓iP **P 19 11 08.2 -0.5**
KHC e*PP pP 19 11 43.7 -0.6
KHC e 19 12 03.7
KHC eS S 19 20 05.0 +4.0
KHC Kasperske Hory 68.88 43 ⇑eP **P 19 11 07.7 -1.0**
KHC Kasperske Hory 68.88 43 ⇓iP **P 19 11 08.2 -0.5**
KHC ex x 19 11 16.0
KHC ex x 19 11 20.9
KHC epP pP 19 11 43.7 -0.6
KHC esP sP 19 12 03.7 +3.5
KHC eS S 19 20 05.0 +4.0
KHC eXS sS 19 21 06.4 +3.8
KHC eSS SS 19 24 38.1 +9.2
KHC ex x 19 27 53.1
KHC AMS AMS 19 33 00.0
comp=Z,356µm,51.4s
KHC ePKPPKP 19 39 20.7
KHC ex x 19 39 50.5
MYKA Terra Mystica 68.89 45 ⇓iP **P 19 11 08.5 -0.3**
comp=Z,585nm,0.8s,mb6.3
MYKA ⇓iP 19 11 16.9
comp=Z,2µm,1.0s
MYKA ⇑iP'P'ab 19 39 25.5
comp=Z,123nm,1.5s
SIT Sitka 68.90 326 eP **P 19 11 08.8 +0.1**
comp=Z,588nm,0.7s,mb6.4
SIT Sitka 68.90 326 eP **P 19 11 08.8 +0.2**
SIT pmax pmax
comp=Z,588nm,0.7s,mb6.4
CADS Cadrg 68.95 46 i P **P 19 11 08.5 -0.6**
CADS e 19 12 06.6
CADS ePP PP 19 13 50.0 +6.7
CADS e 19 15 33.8
CADS eS S 19 20 02.5 +0.7
GEC2 GERESS Array S 68.96 43 eP **P 19 11 08.2 -0.9**
comp=Z,59µm,1.5s,mb8.1
GEC2 GERESS Array S 68.96 43 eP **P 19 11 08.5 -0.7**
comp=Z,3µm,1.4s,mb6.8
GEC2 eS S 19 20 15.7 +14
GEC2 eSS SS 19 24 38.3 +8.3
GERES GERESS Array B 68.96 43 P **P 19 11 09.1 -0.1**
comp=Z,134nm,0.7s,mb5.8,baz=270,slow=4.9,SNR=567
GERES S S 19 20 02.3 +0.5
comp=Z,7.8nm,0.8s,baz=248,slow=0.5,SNR=2.2
GERES PKPPKP 19 39 13.7
comp=Z,3.4nm,0.9s,baz=123,slow=2.2,SNR=4.6
GERES GERESS Array B 68.96 43 P **P 19 11 09.1 -0.1**
GERES S S 19 20 02.3 +0.5
GERES pmax pmax
comp=Z,134nm,0.7s
GERES smax
comp=N,8.0nm,0.8s
RGN Rugen 68.96 37 eP **P 19 11 09.3 +0.2**
comp=N,3µm,1.1s,mb6.9
RGN Rugen 68.96 37 eP **P 19 11 08.9 -0.2**
comp=Z,4µm,1.2s,mb7.0
RGN eS S 19 20 15.6 +14
RGN eSS SS 19 24 42.8 +13
TRI Trieste 68.97 46 eP **P 19 11 08.6 -0.7**
comp=Z,3µm,1.6s,mb6.8
TRI Trieste 68.97 46 eP **P 19 11 08.6 -0.7**
TRI pmax pmax
comp=Z,3µm,1.6s,mb6.8
RUE Ruedersdorf 69.12 39 eP **P 19 11 09.7 -0.4**
comp=Z,2µm,1.1s,mb6.7
RUE Ruedersdorf 69.12 39 eP **P 19 11 09.5 -0.6**
comp=Z,3µm,1.3s,mb6.8
RUE eS S 19 20 17.1 +13
SKAG Skagway 69.13 328 eP **P 19 11 09.5 -0.5**
comp=Z,390nm,0.3s,mb6.6
SKDS Skadanscina 69.15 47 iP **P 19 11 09.8 -0.6**
BRG Berggiesshubel 69.17 41 ⇓iP **P 19 11 10.4 0.0**
comp=Z,250nm,1.0s,mb5.9
BRG i 19 11 18.4
BRG i 19 11 21.8

BRG sP sP 19 12 00.0 -2.0
BRG S S 19 20 07.0 +2.8
BRG SS SS 19 24 41.0 +7.9
BRG i P'P' 19 39 16.4
BRG LR LR
comp=Z,27µm,20.4s
BRG Berggiesshubel 69.17 41 ⇓iP **P 19 11 10.4 0.0**
BRG *SP sP 19 12 00.0 -2.0
BRG S S 19 20 07.0 +2.8
BRG SS SS 19 24 41.0 +7.9
BRG pmax pmax
comp=Z,250nm,1.0s,mb5.9
BRG MLR MLR
comp=Z,27µm,20.4s
BRG Berggiesshubel 69.17 41 eP **P 19 11 10.0 -0.4**
comp=Z,2µm,1.1s,mb6.8
BRG eS S 19 20 18.6 +14
BRG eSS SS 19 24 44.6 +11
BRG Berggiesshubel 69.17 41 ⇓iP **P 19 11 10.4 0.0**
comp=Z,418nm,1.0s,mb6.1
BRG i 19 11 18.4
comp=Z,2µm,1.1s
BRG i 19 11 21.8
comp=Z,2µm,1.1s
BRG sP sP 19 12 00.0 -2.0
BRG S S 19 20 07.0 +2.8
BRG SS SS 19 24 41.0 +7.9
BRG i PKPPKP 19 39 16.4
comp=Z,428nm,1.8s
BRG
comp=N,19µm,18.8s
BRG
comp=E,18µm,18.6s
BRG
comp=Z,46µm,20.4s
TRIS Tristan da Cun 69.28 140 eP **P 19 11 12.2 +0.9**
comp=Z,1µm,0.9s,mb6.7
MOA Molln 69.32 44 ⇑iP **P 19 11 10.7 -0.7**
comp=Z,2µm,1.5s,mb6.7,SNR=76
MOA ⇑eP'P'bc 19 39 15.5
SNR=12
NSS Namsos 69.35 26 eP **P 19 11 11.3 0.0**
NSS e 19 12 45.4
NSS eS S 19 20 06.6 +0.7
MIDA Miranda 69.40 51 P **P 19 11 12.4 +0.4**
CSLB Castelbuono 69.42 55 P **P 19 11 11.7 -0.5**
comp=Z,1µm,1.2s,mb6.5
LJU Ljubljana 69.50 46 i P **P 19 11 12.3 -0.3**
LJU e 19 11 25.1
LJU ePP PP 19 13 53.1 +5.1
LJU e 19 15 36.6
LJU eS S 19 20 08.9 +0.5
LJU e 19 21 02.8
LJU e 19 27 51.3
LJU e 19 30 10.4
LJU e 19 33 02.8
LJU Ljubljana 69.50 46 i P **P 19 11 12.3 -0.3**
LJU e 19 13 53.1
LJU e 19 15 36.6
LJU eS S 19 20 08.9 +0.5
LJU e 19 21 02.8
LJU e 19 27 51.3
OBKA Obir 69.51 46 ⇓iP **P 19 11 12.5 -0.2**
comp=Z,734nm,0.8s,mb6.5,SNR=228
OBKA ⇓iP 19 11 21.0
comp=Z,3µm,1.0s
OBKA i P'P'df 19 39 21.5
comp=Z,84nm,1.7s,SNR=25
PRU Pruhonice 69.53 42 ⇓iP **P 19 11 12.7 +0.1**
PRU e 19 11 25.6
PRU epP pP 19 11 47.9 -0.5
PRU e 19 12 07.2
PRU eS S 19 20 11.3 +2.8
PRU e 19 21 15.8
PRU eSS SS 19 24 44.2 +5.4
PRU e 19 28 16.4
PRU eP'P' 19 39 23.6
PRU LR LR
comp=Z,304µm,48.9s
PRU Pruhonice 69.53 42 ⇓iP **P 19 11 12.7 +0.1**
PRU e*PP pP 19 11 47.9 -0.5
PRU e 19 12 07.2
PRU eS S 19 20 11.3 +2.8
PRU eSS SS 19 24 44.2 +5.4
PRU Pruhonice 69.53 42 ⇓iP **P 19 11 12.7 +0.1**
PRU ex x 19 11 25.6
PRU epP pP 19 11 47.9 -0.5
PRU esP sP 19 12 07.2 +3.0
PRU eS S 19 20 11.3 +2.8
PRU eXS sS 19 21 15.8 +5.6
PRU eSS SS 19 24 44.2 +5.4
PRU ex x 19 28 16.4
PRU AMS AMS 19 33 20.0
comp=Z,304µm,48.9s
PRU ePKPPKP 19 39 23.6
PVCC Panska Ves 69.56 41 ⇓iP **P 19 11 12.8 0.0**
PVCC e 19 11 25.0
PVCC e 19 12 10.1
PVCC eS S 19 20 16.8 +8.0
PVCC e 19 21 07.9
PVCC eSS SS 19 24 45.6 +6.5
PVCC e 19 28 04.7
PVCC eP'P' 19 39 24.2
PVCC LR LR
comp=Z,359µm,51.9s
PVCC Panska Ves 69.56 41 ⇓iP **P 19 11 12.8 0.0**
PVCC e 19 12 10.1
PVCC eS S 19 20 16.8 +8.0
PVCC eSS SS 19 24 45.6 +6.5
PVCC Panska Ves 69.56 41 ⇓iP **P 19 11 12.8 0.0**
PVCC ex x 19 11 25.0
PVCC ex x 19 12 10.1
PVCC eS S 19 20 16.8 +8.0
PVCC eXS sS 19 21 07.9 -2.6
PVCC eSS SS 19 24 45.6 +6.5
PVCC ex x 19 28 04.7
PVCC AMS AMS 19 33 30.0
comp=Z,359µm,51.9s
PVCC ePKPPKP 19 39 24.2
HFS Hagfors 69.61 31 P **P 19 11 13.0 0.0**
comp=Z,230nm,0.9s,mb5.9,baz=251,slow=4.5,SNR=74
HFS S S 19 20 10.4 +1.4
comp=Z,14nm,0.8s,baz=109,slow=8.0,SNR=2.1
HFS Hagfors 69.61 31 P **P 19 11 13.0 +0.1**
HFS S S 19 20 10.4 +1.3
HFS pmax pmax
comp=Z,230nm,0.9s
HFS smax
comp=N,14nm,0.9s
INK Inuvik 69.64 338 eP **P 19 11 11.5 -1.5**
VAE Valguarnera 69.73 55 P **P 19 11 14.7 +0.6**
comp=N,206nm,0.9s,mb5.9,baz=107,slow=1.2,SNR=25
VAE S S 19 20 13.3 +2.0
comp=N,46nm,1.1s,baz=185,slow=11,SNR=2.4
NVLJ Novalja 69.77 48 P **P 19 11 13.0 -1.2**
NVLJ Novalja 69.77 48 i P **P 19 11 13.0 -1.2**
USHA Ushuaia 69.82 184 P **P 19 11 14.4 +0.3**
comp=N,332nm,0.8s,mb6.1,baz=359,slow=5.2,SNR=160
USHA S S 19 20 11.7 +0.3
comp=N,16nm,0.8s,baz=250,slow=21,SNR=2.0
USHA PKPPKP 19 39 17.6
comp=N,25nm,1.2s,baz=181,slow=3.2,SNR=4.3
SOKA Soboth 69.85 45 ⇓iP **P 19 11 13.9 -0.7**
comp=N,408nm,1.2s,mb6.0
SOKA ⇓iP 19 11 22.3
comp=N,1µm,1.2s
SOKA ⇓iP'P'bc 19 39 12.9
comp=N,29nm,1.3s
SOKA ⇓iP'P'df 19 39 22.1
comp=N,228nm,1.3s
CIGN Sant'Elia a Pi 69.89 51 P **P 19 11 14.6 -0.4**
PERS Pernice 69.91 45 i P **P 19 11 14.0 -1.0**
PERS e 19 11 26.7
BSD Bornholm Skovb 69.91 36 ⇓iP **P 19 11 14.4 -0.5**
comp=N,608nm,0.9s,mb6.3
BSD i S S 19 20 12.8 0.0
BSD i 19 21 14.3
BSD Bornholm Skovb 69.91 36 ⇓iP **P 19 11 14.4 -0.5**
BSD i S S 19 20 12.8 0.0
BSD pmax pmax
comp=Z,608nm,0.9s,mb6.3
BSD Bornholm Skovb 69.91 36 ⇓iP **P 19 11 14.4 -0.5**
comp=Z,608nm,0.9s,mb6.3

BSD *i* S S 19 20 12.8 0.0
BSD *i* 19 21 14.3
BSD
comp=Z,39µm,22.0s
WDD Wield Dalam 69.93 57 *e*P **P 19 11 15.8 +0.4**
comp=Z,4µm,1.2s,mb7.0
HVZN Vizzini 69.99 56 P **P 19 11 16.1 +0.4**
BOJS Bojanci 70.02 47 *i* P **P 19 11 15.5 -0.3**
BOJS *e*S S 19 20 14.7 +0.3
BOJS *e* 19 21 10.9
BOJS *e* 19 24 46.3
BOJS *e* 19 33 21.5
BOJS Bojanci 70.02 47 *i* P **P 19 11 15.5 -0.3**
BOJS *e*S S 19 20 14.7 +0.3
BOJS *e* 19 21 10.9
BOJS *e* 19 24 46.3
BOJS *e* 19 33 21.5
BOJS *e* 20 02 13.6
STOK Stokkvaagen 70.05 24 *e*P **P 19 11 15.9 +0.4**
STOK AMb AMB 19 11 28.1
comp=Z,3µm,1.9s,mb6.8
TREC Trest 70.14 43⇓*i*P **P 19 11 16.4 0.0**
TREC *e* 19 12 12.5
TREC *e*S S 19 20 19.7 +4.1
TREC Trest 70.14 43⇓*i*P **P 19 11 16.4 0.0**
TREC *ex* x 19 11 29.1
TREC *e*sP sP 19 12 12.5 +4.5
TREC *e*S S 19 20 19.7 +4.1
TREC *e*XS sS 19 21 18.4 +1.0
TREC *e*SS SS 19 24 58.2 +10
TREC *ex* x 19 28 17.0
TREC AMS AMS 19 33 30.0
comp=Z,314µm,49.6s
CRES Cresnjev 70.16 46 *i* P **P 19 11 16.1 -0.5**
ARSA Arzberg 70.17 45⇓*i*P **P 19 11 16.1 -0.6**
comp=Z,413nm,0.9s,mb6.2,SNR=169
ARSA ⇑*i*P'P'df 19 39 17.2
comp=Z,30nm,1.7s,SNR=6.9
ARSA ⇓*i*P'P'df 19 39 22.5
comp=Z,96nm,1.3s
CSNA Conrad Observa 70.39 44⇓*i*P **P 19 11 17.6 -0.3**
comp=Z,2µm,1.3s,mb6.6
CSNA ⇓*i*P'P'bc 19 39 10.2
comp=Z,64nm,1.5s
CSNA ⇓*i*P'P'df 19 39 21.6
comp=Z,64nm,1.3s
CONA Conrad Observa 70.39 44⇓*i*P **P 19 11 17.6 -0.4**
comp=Z,2µm,1.3s,mb6.7,SNR=111
CONA ⇓PP PP 19 13 54.6 -1.0
comp=Z,6µm,6.0s
CONA ⇓*e*S S 19 20 23.2 +4.5
comp=Z,16µm,6.6s
UPC Upice 70.48 41⇓*i*P **P 19 11 18.4 0.0**
UPC *e*S S 19 20 23.2 +3.7
UPC Upice 70.48 41⇓*i*P **P 19 11 18.4 0.0**
UPC *ex* x 19 11 26.9
UPC *e*pP pP 19 11 47.6 -6.6
UPC *e*S S 19 20 23.2 +3.7
UPC *e*PKPPKP 19 39 18.9
LOF Lofoten 70.52 23 *e*P **P 19 11 20.8 +2.4**
LOF AMb AMB 19 11 31.6
comp=Z,2µm,1.9s,mb6.5
MOR8 Moi Rana 70.60 25 *e*P **P 19 11 19.7 +0.9**
MOR8 AMb AMB 19 11 26.9
comp=Z,919nm,2.0s,mb6.2
KSP Ksiaz 70.66 41 *e*P **P 19 11 19.5 0.0**
KSP *e*PcP PcP 19 11 32.5 -7.1
KSP *e*PP PP 19 14 08.5 +11
KSP *e*S S 19 20 26.4 +4.8
KSP *e*SKS 19 21 20.3
KSP Ksiaz 70.66 41⇓*i*P **P 19 11 19.4 -0.1**
KSP *e* 19 14 01.0
KSP *e*S S 19 20 21.5 -0.1
KSP *e**SS sS 19 21 17.3 -6.2
CUC Castrocucco 70.67 53 *e*P **P 19 11 18.8 -1.0**
comp=Z,2µm,1.4s,mb6.7
DPC Dobruska-Polom 70.67 42⇓*i*P **P 19 11 19.7 +0.1**
DPC *e* 19 11 32.6
DPC *e*pP pP 19 11 51.0 -4.4
DPC *e* 19 12 16.0
DPC *e*S S 19 20 25.2 +3.4
DPC *e* 19 21 22.4
DPC *e*SS SS 19 25 01.2 +4.9
DPC *e* 19 28 20.4
DPC *e*P'P' 19 39 20.9
DPC LR LR
comp=Z,329µm,53.2s
DPC Dobruska-Polom 70.67 42⇓*i*P **P 19 11 19.7 +0.1**
DPC *e* 19 11 32.6
DPC *e* 19 12 16.0
DPC *e*S S 19 20 25.2 +3.4
DPC *e*SS SS 19 25 01.2 +4.9
DPC Dobruska-Polom 70.67 42⇓*i*P **P 19 11 19.7 +0.1**
DPC *ex* x 19 11 32.6
DPC *e*pP pP 19 11 51.0 -4.4
DPC *e*sP sP 19 12 16.0 +4.7
DPC *e*S S 19 20 25.2 +3.4
DPC *e*XS sS 19 21 22.4 -1.3
DPC *e*SS SS 19 25 01.2 +4.9
DPC *ex* x 19 28 20.4
DPC AMS AMS 19 34 00.0
comp=Z,329µm,53.2s
DPC *e*PKPPKP 19 39 20.9
KOGS Kog 70.69 46 *i* P **P 19 11 19.2 -0.6**
KOGS *e* 19 12 17.1
KOGS *e* 19 12 27.5
SISC Sisak 70.81 47 P **P 19 11 20.6 0.0**
SISC Sisak 70.81 47 *i* P **P 19 11 20.6 0.0**
CEL Celeste 70.84 54 *e*P **P 19 11 18.3 -2.6**
comp=Z,374nm,0.9s,mb6.1
VRAC Vranov 70.86 43 P **P 19 11 20.6 -0.1**
comp=Z,260nm,0.7s,mb6.1,baz=272,slow=6.6,SNR=216
VRAC S S 19 20 25.4 +1.4
comp=Z,8.0nm,0.8s,baz=174,slow=16,SNR=2.1
VRAC Vranov 70.86 43 P **P 19 11 20.8 0.0**
VRAC Vranov 70.86 43 P **P 19 11 20.6 -0.2**
VRAC S S 19 20 25.4 +1.4
VRAC pmax pmax
comp=Z,260nm,0.7s
VRAC smax
comp=N,8.0nm,0.8s
VRAC Vranov 70.86 43⇓*i*P **P 19 11 21.1 +0.3**
SOP Sopron 70.87 44⇓*e*P **P 19 11 20.5 -0.4**
STEI Steigen 71.12 23 *e*P **P 19 11 22.6 +0.6**
ORI Oriolo Calabro 71.14 52 P **P 19 11 22.1 -0.6**
ZST Bratislava 71.22 44 *e*P **P 19 11 23.0 0.0**
ZST *e* 19 13 59.8
ZST *e*S S 19 20 31.0 +2.8
ZST pmax pmax
comp=Z,3µm,1.2s,mb6.8
ZST Bratislava 71.22 44 *e*P **P 19 11 23.0 0.0**
ZST *e* 19 11 31.2
ZST *e*PP PP 19 13 59.8 -2.9
ZST *e*S S 19 20 31.0 +2.8
GKP Gorka Klasztor 71.24 38 *e*P **P 19 11 23.3 +0.4**
GKP *e* 19 11 35.3
GKP *e*S S 19 20 33.5 +5.3
GKP LMZ 19 34 00.8
comp=Z,176µm,37.9s
GKP Gorka Klasztor 71.24 38⇓*e*P **P 19 11 23.3 +0.4**
GKP *e*PcP PcP 19 11 35.3 -6.7
GKP *e*S S 19 20 33.5 +5.3
GKP LR LR
comp=Z,176µm,37.9s
GKP Gorka Klasztor 71.24 38⇓*e*P **P 19 11 23.3 +0.4**
GKP *e* 19 11 35.3
GKP *e*S S 19 20 33.5 +5.3
MODS Modra-Piesok 71.33 44 *e*P **P 19 11 23.7 +0.1**
MODS *e*S S 19 20 29.9 +0.4
MODS pmax pmax
comp=Z,2µm,1.2s,mb6.7
MODS Modra-Piesok 71.33 44 *e*P **P 19 11 23.7 +0.1**
MODS *e* 19 11 31.9
MODS *e*S S 19 20 29.9 +0.4
SMOL Smolenice 71.43 43 *e*P **P 19 11 24.4 +0.2**
SMOL *e*S S 19 20 38.0 +7.4
SMOL Smolenice 71.43 43 *e*P **P 19 11 24.3 +0.1**
SMOL *e* 19 11 32.3
SMOL *e*S S 19 20 38.0 +7.4
TIP Timpagrande 71.45 53 *e*P **P 19 11 22.9 -1.7**
comp=Z,870nm,1.1s,mb6.4
DAWY Dawson 71.45 333 *e*P **P 19 11 24.0 -0.1**

OKC Ostrava-Krasne 71.86 42⇓*i*P **P 19 11 26.9 +0.1**
OKC *e* 19 11 39.6
OKC *e*pP pP 19 11 56.6 -6.1
OKC *e* 19 12 21.3
OKC *e*S S 19 20 34.7 -0.8
OKC *e* 19 21 30.6
OKC *e*SS SS 19 25 44.2 +30
OKC *e* 19 29 13.6
OKC *e*P'P' 19 39 15.5
OKC Ostrava-Krasne 71.86 42⇓*i*P **P 19 11 26.9 +0.1**
OKC *e* 19 11 39.6
OKC *e* 19 12 21.3
OKC *e*S S 19 20 34.7 -0.8
OKC *e* 19 21 30.6
OKC Ostrava-Krasne 71.86 42⇓*i*P **P 19 11 26.9 +0.1**
OKC *ex* x 19 11 39.6
OKC *e*pP pP 19 11 56.6 -6.1
OKC *e*sP sP 19 12 21.3 +2.8
OKC *e*S S 19 20 34.7 -0.8
OKC *ex* x 19 21 30.6
OKC *ex* x 19 25 44.2
OKC *ex* x 19 29 13.6
OKC AMS AMS 19 34 20.0
comp=Z,105µm,43.6s
OKC *e*PKPPKP 19 39 15.5
RAC Raciborz 71.88 42⇓*e*P **P 19 11 27.5 +0.6**
RAC *e*S S 19 20 36.6 +0.9
RAC *e*sS sS 19 21 32.9 -4.9
RAC LR LR
comp=Z,55µm,18.0s
STON Ston 71.89 49 P **P 19 11 26.7 -0.4**
STON Ston 71.89 49 *i* P **P 19 11 26.7 -0.4**
KOLL Kolacno 72.07 43 *e*P **P 19 11 28.3 +0.2**
KOLL *e* 19 11 36.2
KOLL *e*S S 19 20 43.6 +5.6
RHK3 Tenkes 72.11 46⇓*e*P **P 19 11 28.2 -0.1**
KBS Kingsbay 72.16 11 *e*P **P 19 11 28.8 +0.7**
comp=Z,4µm,1.5s,mb6.9
KBS Kingsbay 72.16 11 *e*P **P 19 11 28.2 +0.2**
KBS *e*S S 19 20 38.8 +0.7
KBS *e*SS SS 19 25 25.6 +7.6
KBS Kingsbay 72.16 11 *e*P **P 19 11 28.8 +0.7**
KBS pmax pmax
comp=Z,4µm,1.5s,mb6.9
EGAK Eagle 72.26 334 *e*P **P 19 11 28.1 -0.8**
comp=Z,623nm,1.3s,mb6.2
PKSM Moragy 72.36 46 P **P 19 11 30.0 +0.3**
PKSM Moragy 72.36 46⇓*i*P **P 19 11 29.7 -0.1**
VYHS Vyhne 72.37 43 *e*P **P 19 11 29.6 -0.2**
VYHS *e*S S 19 20 43.2 +1.9
VYHS *e*SS SS 19 25 17.0 -5.3
VYHS pmax pmax
comp=Z,1µm,1.2s,mb6.4
VYHS Vyhne 72.37 43 *e*P **P 19 11 29.6 -0.2**
VYHS *e* 19 11 38.0
VYHS *e*S S 19 20 43.2 +1.9
VYHS *e*SS SS 19 25 17.0 -5.3
BRY Bratogost 72.51 49⇓*i*P **P 19 11 30.8 0.0**
HCY Herceg Novi 72.51 50⇓*i*P **P 19 11 31.0 +0.2**
HSP Hornsund 72.52 13 *e*P **P 19 11 32.1 +1.9**
BUD Budapest 72.55 44⇓*e*P **P 19 11 30.8 -0.1**
TRO Tromso 72.62 21 *e*P **P 19 11 31.0 +0.1**
TRO *e* 19 14 21.1
TRO *e*S S 19 20 42.2 -1.3
TRO *e*SS SS 19 25 28.3 +3.1
PKS7 Kunszentmiklos 72.66 45⇓*e*P **P 19 11 31.4 -0.2**
PENC Penc 72.70 44⇓*e*P **P 19 11 31.7 -0.1**
UPM Unac-Piva 72.75 49⇓*i*P **P 19 11 32.4 +0.2**
BUM Brajici-Budva 72.82 50⇓*i*P **P 19 11 33.1 +0.5**
NKY Niksic 72.85 49⇓*i*P **P 19 11 33.0 +0.2**
SPB4 Spitsbergen Ar 72.88 12 *e*P **P 19 11 32.4 +0.1**
OJC Ojcow 72.91 42 *e*P **P 19 11 33.0 0.0**
OJC *e*PcP PcP 19 11 49.6 +0.4
OJC *e*sP sP 19 12 23.4 -1.4
OJC *e*PP PP 19 14 16.8 -0.2
OJC *e*S S 19 20 49.3 +1.9
OJC *e*SS SS 19 25 33.8 +3.4
OJC L 19 41 12.9
comp=Z,45nm,20.2s
OJC Ojcow 72.91 42⇓*i*P **P 19 11 33.0 0.0**
OJC *e* 19 11 49.6
OJC *e**SP sP 19 12 23.4 -1.4
OJC *e* 19 14 16.8
OJC *e*S S 19 20 49.3 +1.9
OJC *e*SS SS 19 25 33.8 +3.4
OJC MLR MLR
comp=Z,45µm,20.2s
TTG Podgorica 73.08 50⇓*i*P **P 19 11 34.3 +0.2**
BJO Bjornoya 73.09 16 *e*P **P 19 11 34.5 +1.0**
BJO *e* 19 13 21.3
BJO *e*S S 19 20 49.5 +0.9
PLE Pljevlja 73.10 49⇓*i*P **P 19 11 34.7 +0.5**
PSZ Piszkesteto 73.11 44 *e*P **P 19 11 34.1 -0.1**
comp=Z,1µm,1.2s,mb6.5
PSZ Piszkesteto 73.11 44 *e*P **P 19 11 34.1 -0.1**
PSZ pmax pmax
comp=Z,1µm,1.2s,mb6.5
PSZ Piszkesteto 73.11 44⇓*e*P **P 19 11 34.4 +0.2**
PSZ Piszkesteto 73.11 44⇓*i*P **P 19 11 34.3 +0.1**
ULC Ulcinj 73.11 50⇓*i*P **P 19 11 34.6 +0.3**
PKSN Nyarlorinc 73.16 45⇓*e*P **P 19 11 34.8 +0.3**
NIE Niedzica 73.29 42 *i* P **P 19 11 36.2 +1.0**
MENT Mentasta 73.36 332 *e*P **P 19 11 35.4 +0.1**
IVA Berane 73.50 49⇓*i*P **P 19 11 36.7 +0.1**
WAR Warsaw 73.57 39 *e*P **P 19 11 37.3 +0.5**
WAR *e*PcP PcP 19 11 48.9 -3.1
WAR *e*S S 19 20 59.9 +5.1
WAR *e*SKS 19 21 40.8
WAR LMZ 19 35 57.9
comp=Z,82µm,30.0s
WAR Warsaw 73.57 39 *e*P **P 19 11 37.3 +0.5**
WAR *e*PcP PcP 19 11 48.9 -3.1
WAR *e*S S 19 20 59.9 +5.2
WAR *e*SKS 19 21 40.8
WAR LR LR
comp=Z,82µm,30.0s
WAR Warsaw 73.57 39 *e*P **P 19 11 37.3 +0.5**
WAR *e* 19 11 48.9
WAR *e*S S 19 20 59.9 +5.2
WAR *e* 19 21 40.8
PUK Puka 73.58 50 *e*PN **P 19 11 37.7 +0.6**
PVY Plav 73.59 50⇓*i*P **P 19 11 37.4 +0.3**
TIR Tirane 73.63 51 P **P 19 11 38.6 +1.2**
TIR Tirane 73.63 51 *e*PN **P 19 11 38.3 +0.9**
KEK Kerkira 73.74 53 P **P 19 11 39.4 +1.3**
KEK Kerkira 73.74 53 *e*P **P 19 11 38.3 +0.2**
STHS Stebnicka Huta 73.89 42 *e*P **P 19 11 40.0 +1.3**
STHS *e* 19 11 48.7
STHS *e* 19 14 26.0
STHS pmax pmax
comp=Z,738nm,1.1s,mb6.3
STHS Stebnicka Huta 73.89 42 *e*P **P 19 11 40.0 +1.3**
STHS *e* 19 11 48.7
STHS *e*PP PP 19 14 26.0 +0.6
STHS *e*S S 19 21 08.2 +10
PHP Peshkopia 74.02 50 *e*PN **P 19 11 41.0 +1.3**
CRVS Cervenica-Dubn 74.08 43 *e*P **P 19 11 40.6 +0.8**
CRVS *e* 19 11 47.6
CRVS *e*S S 19 20 59.5 -1.1
CRVS *e*SS SS 19 25 44.1 -4.2
CRVS pmax pmax
comp=Z,726nm,0.6s,mb6.6
CRVS Cervenica-Dubn 74.08 43 *e*P **P 19 11 40.6 +0.8**
CRVS *e* 19 11 47.6
CRVS *e*S S 19 20 59.5 -1.1
CRVS *e*SS SS 19 25 44.1 -4.2
KTK1 Kautokeino 74.13 22 *e*P **P 19 11 40.0 +0.3**
KTK1 ⇓*e* 19 14 45.0
KTK1 *e*S S 19 21 01.1 +0.6
KTK1 *e*SS SS 19 25 50.4 +2.2
IGT Igoumenitsa 74.17 53 P **P 19 11 41.1 +0.5**
TIM Timisoara 74.19 46 P **P 19 11 41.6 +1.0**
KBN Korca 74.40 52 *i* PN **P 19 11 43.0 +1.1**
BZS Buzias 74.47 46 P **P 19 11 42.3 +0.1**
BZS Buzias 74.47 46⇓*i*P **P 19 11 42.9 +0.7**
VLS Valsamata 74.53 54 P **P 19 11 42.6 -0.1**
VLS Valsamata 74.53 54 *e*P **P 19 11 42.7 0.0**
JAN Janina 74.56 52 *e*P **P 19 11 43.9 +1.1**
KOLS Kolonicke sedl 74.61 43 *e*P **P 19 11 43.3 +0.4**
KOLS pmax pmax
comp=Z,2µm,1.8s,mb6.4

KOLS Kolonicke sedl 74.61 43 *e*P **P 19 11 43.3 +0.4**
KOLS *e*S S 19 21 06.8 +0.3
KOLS *e*SS SS 19 25 53.0 -3.3
KOLS *e* 19 36 38.8
KOLS *e* 19 38 37.5
KOLS *e* 19 39 16.8
KOLS *e* 19 42 34.4
UZH Uzhgorod 74.65 43 *e*P **P 19 11 43.0 -0.1**
UZH *i* 19 11 54.7
UZH *e* 19 14 35.0
UZH *i* S S 19 21 04.0 -3.0
UZH *e* 19 21 47.0
UZH *e* 19 22 00.0
KRUS Krusevo 74.66 51 *i* P **P 19 11 43.6 +0.3**
comp=Z,375nm,1.1s,mb5.9
KFL Anninata 74.69 54 P **P 19 11 44.1 +0.5**
SKO Skopje 74.73 50 P **P 19 11 44.0 +0.2**
SKO Skopje 74.73 50 *i* P **P 19 11 43.7 0.0**
comp=Z,2µm,1.1s,mb6.6
SUW Suwalki 74.74 38 *e*P **P 19 11 43.4 -0.1**
SUW *e*PcP PcP 19 11 55.2 -1.8
SUW *e*S S 19 21 15.5 +7.7
SUW *e*SKS 19 21 43.5
SUW *e*SS SS 19 26 06.9 +8.8
SUW LMZ 19 35 50.7
comp=Z,203µm,37.0s
SUW Suwalki 74.74 38⇓*e*P **P 19 11 43.4 -0.2**
SUW *e*PcP PcP 19 11 55.2 -1.8
SUW *e*S S 19 21 15.5 +7.7
SUW *e*SKS 19 21 43.5
SUW *e*SS SS 19 26 06.9 +8.8
SUW Suwalki 74.74 38⇓*e*P **P 19 11 43.4 -0.2**
SUW *e* 19 11 55.2
SUW *e*S S 19 21 15.5 +7.7
SUW *e* 19 21 43.5
MID Middleton Isla 74.75 328 *e*P **P 19 11 44.2 +0.7**
comp=Z,518nm,0.7s,mb6.3
MID Middleton Isla 74.75 328 *e*P **P 19 11 44.2 +0.7**
MID pmax pmax
comp=Z,518nm,0.7s,mb6.3
BIA Bitola 74.76 51 P **P 19 11 43.7 -0.2**
BIA Bitola 74.76 51 *i* P **P 19 11 43.7 -0.2**
comp=Z,1µm,1.4s,mb6.3
FNA Florina 74.82 51 P **P 19 11 44.5 +0.2**
KWP Kalwaria 74.83 42 *e*P **P 19 11 45.2 +1.1**
KWP *e*PcP PcP 19 11 54.1 -3.4
KWP *e*S S 19 21 22.6 +14
KWP *e*SS SS 19 26 05.6 +6.0
KWP LMZ 19 35 52.5
comp=Z,242µm,45.2s
KWP Kalwaria 74.83 42⇓*e*P **P 19 11 45.2 +1.1**
KWP *e*PcP PcP 19 11 54.1 -3.3
KWP *e*S S 19 21 22.6 +14
KWP *e*SS SS 19 26 05.6 +6.0
KWP Kalwaria 74.83 42⇓*e*P **P 19 11 45.2 +1.1**
KWP *e* 19 11 54.1
KWP *e*SS SS 19 26 05.6 +6.0
KWP Kalwaria 74.83 42⇓*i*P **P 19 11 45.3 +1.2**
TRPA Tarpa 74.86 44⇓*i*P **P 19 11 44.6 +0.3**
ARCES ARCESS Array B 74.93 21 P **P 19 11 44.2 -0.1**
comp=Z,252nm,0.7s,mb6.0,baz=276,slow=4.8,SNR=266
ARCES S S 19 21 10.6 +1.3
comp=Z,24nm,1.0s,baz=202,slow=6.8,SNR=2.4
ARCES PKKPbc PKKPbc 19 31 11.3 +1.4
comp=Z,0.5nm,0.3s,baz=81,slow=4.0,SNR=4.2
ARCES PKPPKP 19 39 10.4
comp=Z,12nm,1.0s,baz=86,slow=1.8,SNR=5.1
ARE0 ARCESS Array S 74.93 21 *e*P **P 19 11 44.2 -0.1**
COLA College 75.12 334 *e*P **P 19 11 44.5 -1.0**
comp=Z,1µm,1.1s,mb6.5
COLA College 75.12 334 *e*P **P 19 11 44.5 -1.0**
COLA pmax pmax
comp=Z,1µm,1.1s,mb6.5
KZN Kozani 75.18 52 *e*P **P 19 11 46.8 +0.4**
RLS Riolos of Patr 75.23 54 *e*P **P 19 11 47.5 +0.8**
GZR Gura Zlata 75.31 46 P **P 19 11 47.2 +0.2**
GZR Gura Zlata 75.31 46⇓*i*P **P 19 11 47.5 +0.5**
DEV Deva 75.34 46⇑*i*P **P 19 11 48.1 +0.9**
DEV Deva 75.34 46⇑*i*P **P 19 11 48.1 +0.9**
EVR Evrytania 75.39 53 *e*P **P 19 11 49.0 +1.4**
KEV Kevo 75.44 21 *e*p **P 19 11 47.2 -0.1**
comp=Z,520nm,0.7s,mb6.3
KEV Kevo 75.44 21 *e*P **P 19 11 47.2 -0.1**
KEV pmax pmax
comp=Z,520nm,0.7s,mb6.3
THL Klokotos Trika 75.46 52 P **P 19 11 47.7 -0.3**
THL Klokotos Trika 75.46 52 *e*P **P 19 11 48.3 +0.3**
BMR Baia Mare 75.55 44 P **P 19 11 48.6 +0.3**
BMR Baia Mare 75.55 44⇑*i*P **P 19 11 48.8 +0.5**
GRG Griva 75.57 51 P **P 19 11 49.1 +0.5**
PYL PYLOS 75.61 55 P **P 19 11 48.8 -0.1**
VAL Valandovo 75.65 51 P **P 19 11 48.5 -0.5**
VAY Valandovo 75.65 51 *i* P **P 19 11 48.7 -0.4**
comp=Z,6µm,2.4s,mb6.8
LVV L'vov 75.66 42*c* *i*P **P 19 11 49.4 +0.5**
LVV *e*S S 19 21 18.3 +0.2
ITM Ithomi 75.71 55 *e*P **P 19 11 50.0 +0.5**
KAF Kangasniemi 75.73 29 *e*p **P 19 11 47.3 -1.7**
comp=Z,698nm,0.8s,mb6.3,baz=274,slow=5.6
KAF Kangasniemi 75.73 29 *e*P **P 19 11 47.3 -1.7**
KAF pmax pmax
comp=Z,698nm,0.8s,mb6.3
LIT Litokhoron 75.75 52 P **P 19 11 49.0 -0.6**
AGG Agios Georgios 75.78 53 P **P 19 11 50.1 +0.3**
KNT Kendrikon 75.92 51 P **P 19 11 50.9 +0.3**
PMR Palmer 75.96 330 *e*P **P 19 11 49.6 -0.7**
comp=Z,1µm,1.3s,mb6.4
PMR Palmer 75.96 330 *e*P **P 19 11 49.6 -0.7**
PMR pmax pmax
comp=Z,1µm,1.3s,mb6.3
VTS Vitosha 75.96 49 P **P 19 11 51.4 +0.6**
VTS Vitosha 75.96 49 *i* P **P 19 11 51.3 +0.5**
KKB Krupnik 75.96 50 *i* P **P 19 11 51.9 +1.1**
THE Thessaloniki 76.04 51 P **P 19 11 51.1 -0.2**
HORT Hortiatis 76.15 51 P **P 19 11 52.0 +0.1**
CRAR CRAIOVA 76.16 47 P **P 19 11 52.2 +0.3**
VSU Vasula 76.30 33 *i* P **P 19 11 51.8 -0.5**
VSU Vasula 76.30 33*d* *i*P **P 19 11 51.7 -0.6**
VSU *i**PP pP 19 12 27.2 -1.5
VSU pmax pmax
comp=Z,6µm,1.2s,mb7.1
SOH Sokhos 76.31 51 P **P 19 11 53.3 +0.5**
MDB Medias 76.33 46 P **P 19 11 53.5 +0.7**
MDB Medias 76.33 46⇓*i*P **P 19 11 53.8 +1.0**
LKR Lokris 76.34 53 P **P 19 11 52.8 -0.2**
LKR Lokris 76.34 53 *e*P **P 19 11 53.1 +0.1**
XOR Xorichti 76.39 53 P **P 19 11 52.9 -0.4**
LTK Loutraki 76.41 54 P **P 19 11 52.6 -0.8**
NEO Neokhori 76.42 53 *e*P **P 19 11 53.1 -0.3**
PLG Polygyros 76.44 51 P **P 19 11 53.6 +0.1**
PLG Polygyros 76.44 51 *e*P **P 19 11 53.9 +0.4**
MMB Musomiste 76.48 50 *i* P **P 19 11 54.9 +1.2**
NVR Nevrokopi 76.61 50 *e*P **P 19 11 54.9 +0.4**
PGB Panagyurishte 76.67 49 *i* P **P 19 11 55.5 +0.8**
PAIG Paliouri 76.68 52 P **P 19 11 54.5 -0.4**
BURAR Bucovina Array 76.71 44 P **P 19 11 55.4 +0.5**
BURAR Bucovina Array 76.71 44⇓*i*P **P 19 11 56.0 +1.1**
OUR Ouranopolis 76.85 51 P **P 19 11 56.1 +0.3**
VOIR 76.89 46 P **P 19 11 55.9 -0.1**
VOIR 76.89 46⇓*i*P **P 19 11 56.1 +0.2**
AOS Alonnisos 76.95 53 P **P 19 11 55.9 -0.5**
ATH Athens Observa 77.00 54 *e*P **P 19 11 57.1 +0.4**
PTL Penteli 77.11 54 *e*P **P 19 11 57.6 +0.3**
PLD Plovdiv 77.12 50 P **P 19 11 57.1 -0.2**
PLD Plovdiv 77.12 50 *i* P **P 19 11 56.1 -1.2**
RZN Rozhen 77.20 50 P **P 19 11 58.5 +0.8**
MNK Minsk 77.40 37 *e*P **P 19 11 57.0 -1.6**
MNK *e**PP pP 19 12 34.0 -1.0
MNK *e*PPP 19 16 45.0
MNK *e*S S 19 21 34.0 -2.9
MNK *e**SS sS 19 22 32.0 -7.8
MNK *e*SSS 19 29 56.0
MNK pmax pmax
comp=N,590nm,1.5s
MNK pmax pmax
comp=Z,2µm,1.2s,mb6.7
MNK pmax pmax
comp=E,4µm,1.8s
MNK smax
comp=N,3µm,9.0s
PVL Pavlikeni 77.42 48 *i* P **P 19 11 58.5 -0.4**
MLR Muntele Rosu 77.51 46 P **P 19 11 59.6 +0.2**

MLR	**Muntele Rosu**	**77.51**	**46**	⇓ *i* P	**P**	**19 11 59.8**	**+0.4**
KDZ	**Kurdzhali**	**77.72**	**50**	*i* P	**P**	**19 12 01.0**	**+0.3**
BUC1	**Bucharest**	**77.74**	**47**	P	**P**	**19 12 01.3**	**+0.6**
BUC1	**Bucharest**	**77.74**	**47**	⇑ *i* P	**P**	**19 12 00.8**	**+0.1**
DIM	**Dimitrovgrad**	**77.74**	**50**	*i* P	**P**	**19 12 01.5**	**+0.7**
VAM	**Vamos**	**77.80**	**56**	*e* P	PcP	19 12 13.9	+3.3
LIA	**Limnos Island**	**77.83**	**52**	P	**P**	**19 12 01.3**	**0.0**
SZH	**Strazhica**	**77.84**	**48**	P	PcP	19 12 12.7	+2.1
RDO	**Rodhopi**	**77.89**	**50**	*e* P	**P**	**19 12 01.6**	**0.0**
JOF	**Joensuu**	**77.94**	**28**	*e* p	**P**	**19 11 59.7**	**-1.7**
	comp=N,626nm,0.8s,mb6.3						
JOF	**Joensuu**	**77.94**	**28**	*e* P	**P**	**19 11 59.7**	**-1.7**
JOF				pmax	pmax		
	comp=Z,626nm,0.8s,mb6.3						
PLOR	**Plostina**	**77.94**	**46**	P	**P**	**19 12 01.3**	**-0.5**
PLOR	**Plostina**	**77.94**	**46**	⇓ *i* P	**P**	**19 12 01.4**	**-0.4**
PUL	**Pulkovo**	**77.96**	**31**	⇑ *e* P	**P**	**19 12 01.7**	**+0.1**
VRI	**Vrincioaia**	**77.99**	**46**	P	**P**	**19 12 01.6**	**-0.4**
VRI	**Vrincioaia**	**77.99**	**46**	⇓ *i* P	**P**	**19 12 02.6**	**+0.5**
APA	**Apatity**	**78.03**	**23**	*e* P	**P**	**19 12 00.0**	**-1.8**
APA				*i*		19 12 06.5	
APA				*i* *PP	pP	19 12 38.0	-0.3
APA				*i* S	S	19 21 38.0	-5.1
APA				*i* *SS	ScS	19 22 10.0	+2.3
APA				*i* PS		19 22 38.0	
APA				pmax	pmax		
	comp=Z,480nm,1.5s,mb5.9						
APA				MLR	MLR		
	comp=Z,102μm,19.0s						
KDAK	**Kodiak Island**	**78.18**	**327**	P	**P**	**19 12 03.0**	**+0.2**
	comp=Z,6μm,0.7s,mb7.3						
KDAK	**Kodiak Island**	**78.18**	**327**	*e* P	**P**	**19 12 03.0**	**+0.2**
	comp=Z,1μm,1.1s,mb6.5						
ODB	**Odobesti**	**78.23**	**46**	P	**P**	**19 12 03.5**	**+0.1**
ODB	**Odobesti**	**78.23**	**46**	⇑ *i* P	**P**	**19 12 03.3**	**-0.1**
ALN	**Alexandroupoli**	**78.31**	**51**	P	**P**	**19 12 03.4**	**-0.5**
GADA	**Gvkgeada**	**78.32**	**51**	*e* P	**P**	**19 12 04.2**	**+0.2**
SIVA	**Sivas**	**78.36**	**57**	P	**P**	**19 12 04.5**	**+0.2**
IDI	**Anoyia**	**78.38**	**56**	P	**P**	**19 12 04.8**	**+0.4**
	comp=Z,530nm,0.6s,mb6.3,baz=289,slow=7.5,SNR=296						
IDI				S	S	19 21 49.8	+1.7
	comp=Z,22nm,1.0s,baz=303,slow=14,SNR=3.5						
ENEZ	**Enez**	**78.42**	**51**	*e* P	**P**	**19 12 04.8**	**+0.2**
LVZ	**Lovozero**	**78.43**	**23**	P	**P**	**19 12 04.5**	**+0.5**
	comp=Z,5μm,1.2s,mb7.0,SNR=12						
LVZ	**Lovozero**	**78.43**	**23**	⇑ *e* P	**P**	**19 12 03.9**	**-0.1**
LVZ	**Lovozero**	**78.43**	**23**	⇑ *e* P	**P**	**19 12 03.8**	**-0.2**
LVZ				pmax	pmax		
	comp=Z,2μm,1.8s,mb6.4						
JMB	**Yambol**	**78.44**	**49**	P	**P**	**19 12 04.8**	**+0.2**
JMB	**Yambol**	**78.44**	**49**	P	**P**	**19 12 05.1**	**+0.5**
BOZC	**Bozcaada**	**78.50**	**52**	*i* P	**P**	**19 12 04.5**	**-0.4**
THR5	**Thira Island,**	**78.55**	**55**	P	**P**	**19 12 04.7**	**-0.6**
APE	**Apeiranthos**	**78.58**	**55**	P	**P**	**19 12 04.8**	**-0.7**
APE	**Apeiranthos**	**78.58**	**55**	*e* P	**P**	**19 12 04.7**	**-0.8**
APE	**Apeiranthos**	**78.58**	**55**	*d* P	**P**	**19 12 04.0**	**-1.5**
APE				pmax	pmax		
	comp=Z,2μm,1.8s,mb6.5						
APE	**Apeiranthos**	**78.58**	**55**	⇓ *i* P	**P**	**19 12 05.5**	**0.0**
THR4	**Thira Island,**	**78.58**	**55**	P	**P**	**19 12 04.8**	**-0.7**
THR6	**Thira Island,**	**78.60**	**55**	P	**P**	**19 12 04.7**	**-0.9**
THR1	**Thera Island**	**78.64**	**55**	P	**P**	**19 12 05.0**	**-0.8**
OHAK	**Old Harbor**	**78.65**	**326**	*e* P	**P**	**19 12 05.3**	**-0.2**
EDRB	**Edirne**	**78.67**	**50**	*e* P	**P**	**19 12 05.7**	**-0.1**
EZN	**Ezine**	**78.71**	**52**	*e* P	**P**	**19 12 06.2**	**+0.1**
CHOS	**Chios Island**	**78.75**	**53**	P	**P**	**19 12 06.0**	**-0.4**
PRK	**Paraskevi**	**78.77**	**52**	P	**P**	**19 12 05.2**	**-1.3**
PRK	**Paraskevi**	**78.77**	**52**	*e* P	**P**	**19 12 06.4**	**-0.1**
KIEV	**Kiev**	**78.83**	**40**	*e* P	**P**	**19 12 05.7**	**-0.8**
	comp=Z,917nm,1.0s,mb6.4						
KIEV	**Kiev**	**78.83**	**40**	*e* P	**P**	**19 12 05.7**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,917nm,1.0s,mb6.4						
AKASG	**Malin Array Be**	**78.84**	**40**	P	**P**	**19 12 05.2**	**-1.4**
	comp=Z,86nm,0.6s,mb5.6,baz=282,slow=4.2,SNR=84						
AKASG				S	S	19 21 53.0	+0.6
	comp=Z,4.7nm,0.9s,baz=267,slow=10,SNR=4.6						
AKASG				PKKPbc	PKKPbc	19 30 58.5	-2.1
	comp=Z,4.0nm,0.7s,baz=86,slow=2.6,SNR=6.5						
AKASG				PKPPKP		19 38 57.5	
	comp=Z,4.6nm,0.9s,baz=85,slow=2.6,SNR=5.2						
AKASG				LR	LR	19 43 18.5	
	comp=Z,80μm,21.4s,baz=285,slow=33						
AKASG	**Malin Array Be**	**78.84**	**40**	P	**P**	**19 12 05.2**	**-1.4**
AKASG				S	S	19 21 53.0	+0.6
AKASG				PKKPbc	PKKPbc	19 30 58.5	-2.1
AKASG				P'P'		19 38 57.5	
AKASG				LR	LR	19 43 18.5	
AKASG	**Malin Array Be**	**78.84**	**40**	P	**P**	**19 12 05.2**	**-1.4**
AKASG				S	S	19 21 53.0	+0.6
AKASG				smax			
	comp=N,5.0nm,1.0s						
AKASG				MLR	MLR		
	comp=Z,80μm,21.4s						
AKBB	**Malin Array Si**	**78.84**	**40**	*e* P	**P**	**19 12 05.8**	**-0.8**
LAST	**Lasithi**	**78.88**	**56**	P	**P**	**19 12 07.3**	**+0.2**
PRD	**Provadia**	**78.91**	**48**	P	**P**	**19 12 07.2**	**0.0**
LPK	**Lapseki**	**78.94**	**51**	*e* P	**P**	**19 12 07.9**	**+0.5**
NPS	**Neapolis**	**78.97**	**56**	P	**P**	**19 12 08.5**	**+0.9**
HARR	**Harsova**	**79.03**	**47**	P	**P**	**19 12 07.2**	**-0.6**
HARR	**Harsova**	**79.03**	**47**	⇓ *i* P	**P**	**19 12 08.1**	**-0.7**
AYVA	**Ayvalik**	**79.08**	**52**	*i* P	**P**	**19 12 08.0**	**-0.1**
SVW2	**Sparrevohn**	**79.10**	**330**	*e* P	**P**	**19 12 06.9**	**-0.9**
CVD	**Cernavoda**	**79.16**	**47**	P	**P**	**19 12 08.4**	**-0.1**
URLA	**Izmir**	**79.17**	**53**	*i* P	**P**	**19 12 09.1**	**+0.3**
KIS	**Kishinev**	**79.22**	**44**	P	**P**	**19 12 08.3**	**-0.5**
KIS	**Kishinev**	**79.22**	**44**	⇓ *i* P	**P**	**19 12 08.0**	**-0.8**
KIS				*i*		19 12 18.0	
KIS					pP	19 12 48.0	+2.7
KIS				*i* PPP		19 17 00.0	
KIS				*i* S	S	19 22 04.0	+7.4
KIS				*i* PS		19 22 32.0	
KIS				*i* SSS		19 30 32.0	
KIS				pmax	pmax		
	comp=E,6μm,5.0s						
KIS				pmax	pmax		
	comp=Z,12μm,5.0s						
KIS				pmax	pmax		
	comp=Z,43μm,20.0s						
KIS				smax			
	comp=N,33μm,12.0s						
KIS				smax			
	comp=E,81μm,13.0s						
KIS	**Kishinev**	**79.22**	**44**	⇓ *i* P	**P**	**19 12 08.0**	**-0.8**
	comp=E,1μm,2.0s,mb6.2						
KIS	**Kishinev**	**79.22**	**44**	*i* PcP	PcP	19 12 18.0	+1.4
KIS				*i* pP	pP	19 12 48.0	+2.7
KIS	**Kishinev**	**79.22**	**44**	*i* PP	PP	19 15 28.0	+18
	comp=E,15μm,28.0s						
PSN	**Preselentsi**	**79.39**	**48**	P	**P**	**19 12 09.9**	**+0.2**
TIRR	**Tirgusor**	**79.41**	**47**	*e* P	**P**	**19 12 09.1**	**-0.7**
	comp=E,1μm,1.4s,mb6.4						
TIRR	**Tirgusor**	**79.41**	**47**	*e* P	**P**	**19 12 09.1**	**-0.7**
TIRR				pmax	pmax		
	comp=Z,1μm,1.4s,mb6.4						
TIRR	**Tirgusor**	**79.41**	**47**	⇑ *i* P	**P**	**19 12 09.9**	**+0.1**
TKR	**Tekirdag**	**79.41**	**50**	*e* P	**P**	**19 12 10.1**	**+0.2**
ZKR	**Zakros**	**79.48**	**56**	P	**P**	**19 12 10.1**	**-0.3**
SMG	**Samos**	**79.48**	**54**	P	**P**	**19 12 11.4**	**+1.0**
SMG	**Samos**	**79.48**	**54**	*e* P	**P**	**19 12 10.1**	**-0.3**
BLCB	**Balcova**	**79.52**	**53**	*e* P	**P**	**19 12 10.8**	**+0.3**
BLCB	**Balcova**	**79.52**	**53**	P	**P**	**19 12 10.6**	**+0.1**
BLCB	**Balcova**	**79.52**	**53**	P	**P**	**19 12 10.6**	**+0.1**
MRMT	**Marmara Adasi**	**79.52**	**51**	*e* P	**P**	**19 12 09.8**	**-0.8**
CRLT	**Corlu**	**79.53**	**50**	*e* P	**P**	**19 12 11.0**	**+0.5**
PMSA	**Palmer Station**	**79.55**	**181**	LR	LR	19 47 24.9	
	comp=Z,81μm,21.9s,baz=6.8,slow=36						
PMSA	**Palmer Station**	**79.55**	**181**	*e* P	**P**	**19 12 10.1**	**+0.1**
	comp=Z,4μm,0.9s,mb7.0						
TLCR		**79.55**	**46**	⇑ *i* P	**P**	**19 12 10.3**	**-0.3**
KDAG	**Bornova**	**79.69**	**53**	*i* P	**P**	**19 12 11.4**	**-0.1**
EDC	**Edincik**	**79.77**	**51**	*e* P	**P**	**19 12 11.7**	**-0.2**
GCAM	**G?zelcaml?**	**79.79**	**54**	*i* P	**P**	**19 12 11.3**	**-0.8**
BNT	**Bandirma**	**79.81**	**51**	*e* P	**P**	**19 12 12.0**	**-0.1**
SLVT	**Silivri**	**79.86**	**50**	*e* P	**P**	**19 12 12.5**	**+0.1**
CTYL	**Yal??k??y-??at**	**79.87**	**50**	*e* P	**P**	**19 12 12.2**	**-0.2**
BALB	**Balikesir**	**79.92**	**52**	*e* P	**P**	**19 12 12.5**	**-0.2**
BODT	**Bodrum**	**79.98**	**54**	*e* P	**P**	**19 12 12.2**	**-0.8**
AKS	**Akhisar**	**80.01**	**52**	*e* P	**P**	**19 12 12.2**	**-1.0**
AKHS	**Akhisar**	**80.02**	**52**	*i* P	**P**	**19 12 12.8**	**-0.4**
CTT	**Catalca**	**80.04**	**50**	*e* P	**P**	**19 12 11.7**	**-1.7**
ELBA	**Catalca**	**80.04**	**50**	*i* P	**P**	**19 12 12.9**	**-0.5**
BDRM	**Kayabasi**	**80.08**	**54**	*i* P	**P**	**19 12 12.9**	**-0.7**
CTKS	**Kestanelik-??a**	**80.08**	**50**	*e* P	**P**	**19 12 11.7**	**-1.9**
KARP	**Karpathos**	**80.15**	**56**	P	**P**	**19 12 15.2**	**+1.2**
DAT	**Datca**	**80.25**	**55**	*e* P	**P**	**19 12 13.5**	**-1.0**
BGKT	**Bogazkoy**	**80.29**	**50**	*e* P	**P**	**19 12 14.4**	**-0.2**
MLSB	**Milas**	**80.30**	**54**	*e* P	**P**	**19 12 11.7**	**-3.1**
DURS	**Dursunbey**	**80.38**	**52**	*i* P	**P**	**19 12 14.8**	**-0.4**
KLYT	**Kilyos**	**80.47**	**50**	*e* P	**P**	**19 12 15.0**	**-0.6**
ISK	**Istanbul-Kandi**	**80.52**	**50**	*e* P	**P**	**19 12 15.6**	**-0.3**
MANT	**Manisa**	**80.66**	**53**	*i* P	**P**	**19 12 16.8**	**+0.1**
DEMI	**Demirci**	**80.67**	**52**	*i* P	**P**	**19 12 16.6**	**-0.2**
YER	**Yerkesik**	**80.72**	**54**	*e* P	**P**	**19 12 16.3**	**-0.8**
KULA	**Kula-Manisa**	**80.74**	**53**	*e* P	**P**	**19 12 16.8**	**-0.3**
GEMT	**Gemlik**	**80.75**	**51**	*e* P	**P**	**19 12 16.8**	**-0.3**
ULDT	**Uludag**	**80.77**	**51**	*i* P	**P**	**19 12 13.1**	**-4.2**
ARG	**Arkhangelos**	**80.79**	**55**	*e* P	**P**	**19 12 16.5**	**-0.9**
YLV	**Yalova**	**80.86**	**50**	*e* P	**P**	**19 12 17.3**	**-0.4**
SILT	**Sile**	**80.94**	**50**	*e* P	**P**	**19 12 17.8**	**-0.3**
TURN	**Turunc**	**81.03**	**54**	*i* P	**P**	**19 12 16.1**	**-2.6**
ADVT	**Abdulvahap**	**81.16**	**51**	*e* P	**P**	**19 12 19.3**	**0.0**
DENT	**Denizli**	**81.18**	**53**	*e* P	**P**	**19 12 19.0**	**-0.4**
GDZ	**Gediz**	**81.25**	**52**	*i* P	**P**	**19 12 19.5**	**-0.2**
CAVI	**Cavuskoy**	**81.28**	**51**	*e* P	**P**	**19 12 19.8**	**-0.1**
KHAL	**Karahalli**	**81.41**	**53**	*i* P	**P**	**19 12 20.4**	**-0.2**
KHL	**Karahalli**	**81.44**	**53**	*e* P	**P**	**19 12 20.0**	**-0.8**
EYL	**Eskiyayla**	**81.44**	**50**	*e* P	**P**	**19 12 21.3**	**+0.5**
FETY	**Fethiye**	**81.45**	**54**	*e* P	**P**	**19 12 20.1**	**-0.9**
RKT	**Rikitea**	**81.45**	**243**	⇑ *i* P	**P**	**19 12 21.0**	**-0.1**
	comp=Z,843nm,1.1s,mb6.3						
RKT	**Rikitea**	**81.45**	**243**	*e* LR	LR	19 37 46.3	
	comp=Z,869μm,99.8s,baz=56						
RKT	**Rikitea**	**81.45**	**243**	⇑ *i* P	**P**	**19 12 21.0**	**-0.1**
RKT				pmax	pmax		
	comp=Z,843nm,1.1s,mb6.3						
CHGN	**Chignik**	**81.60**	**326**	*e* P	**P**	**19 12 21.7**	**+0.5**
GPA	**Golpazari**	**81.61**	**51**	*e* P	**P**	**19 12 20.0**	**-1.7**
GOLH	**Golhisar**	**81.70**	**54**	*i* P	**P**	**19 12 23.0**	**+0.8**
ALT	**Altintas**	**81.73**	**52**	*e* P	**P**	**19 12 22.4**	**+0.1**
GULT	**Gulveren**	**81.74**	**50**	*e* P	**P**	**19 12 22.4**	**+0.1**
BORA	**Eskisehir**	**81.81**	**51**	*i* P	**P**	**19 12 22.5**	**-0.2**
HENT	**Hendek**	**81.94**	**50**	*i* P	**P**	**19 12 22.8**	**-0.5**
AKAS	**Kas**	**81.95**	**55**	*i* P	**P**	**19 12 24.0**	**+0.4**
ELL	**Elmali**	**82.08**	**54**	*e* P	**P**	**19 12 25.1**	**+0.9**
SHUT	**Suhut-Afyon**	**82.18**	**52**	*e* P	**P**	**19 12 24.9**	**+0.2**
KLMR	**Klimovskoe**	**82.18**	**29**	⇓ *i* P	**P**	**19 12 23.6**	**-0.6**
KLMR				*i* S	S	19 22 24.3	-2.5
KLMR				pmax	pmax		
	comp=Z,5μm,1.3s,mb7.0						
ESKT	**Eskisehir**	**82.19**	**51**	*e* P	**P**	**19 12 25.2**	**+0.5**
ESKT	**Eskisehir**	**82.19**	**51**	*i* P	**P**	**19 12 24.7**	**0.0**
KDZE	**Karadeniz Ereo**	**82.23**	**49**	*e* P	**P**	**19 12 24.3**	**-0.6**
OBN	**Obninsk**	**82.23**	**35**	P	**P**	**19 12 24.1**	**-0.5**
	comp=Z,41μm,0.8s,mb8.1						
OBN	**Obninsk**	**82.23**	**35**	*e* P	**P**	**19 12 24.6**	**0.0**
	comp=Z,8μm,1.0s,mb7.3						
OBN	**Obninsk**	**82.23**	**35**	*d* P	**P**	**19 12 24.4**	**-0.2**
OBN				*i*		19 15 36.1	
OBN				*i* S	S	19 22 27.2	-0.4
OBN				pmax	pmax		
	comp=Z,7μm,1.7s,mb7.0						
MDU	**Mudurnu**	**82.25**	**50**	*e* P	**P**	**19 12 25.1**	**+0.1**
ISP	**Isparta**	**82.30**	**53**	*e* P	**P**	**19 12 24.4**	**-0.9**
ISP	**Isparta**	**82.30**	**53**	P	**P**	**19 12 25.1**	**-0.2**
ISP	**Isparta**	**82.30**	**53**	P	**P**	**19 12 25.1**	**-0.2**
ISP	**Isparta**	**82.30**	**53**	⇓ *i* P	**P**	**19 12 25.2**	**-0.1**
BOLV	**Bolvadin**	**82.44**	**52**	*i* P	**P**	**19 12 26.3**	**+0.2**
BCK	**Bucak**	**82.45**	**53**	*e* P	**P**	**19 12 26.2**	**+0.1**
ANTB	**Antalya**	**82.63**	**54**	*e* P	**P**	**19 12 27.5**	**+0.4**
MOS	**Moscow**	**82.65**	**34**	*e* P	**P**	**19 12 21.6**	**-5.1**
MOS				*e*		19 15 34.0	
MOS				*i* S	S	19 22 29.6	-2.2
MOS				pmax	pmax		
	comp=Z,5μm,2.1s,mb6.8						
MOS				pmax	pmax		
	comp=Z,13μm,2.2s,mb7.3						
MOS				MLR	MLR		
	comp=Z,34μm,18.0s						
MOS				MLR	MLR		
	comp=E,31μm,18.0s						
SGKT	**Sivrigoynuk**	**82.85**	**50**	*i* P	**P**	**19 12 28.2**	**+0.1**
SDPT	**Sand Point**	**82.98**	**325**	*e* P	**P**	**19 12 28.8**	**+0.4**
	comp=E,2μm,0.8s,mb6.8						
KIZT	**Kizilcal**	**83.11**	**52**	*e* P	**P**	**19 12 29.0**	**-0.5**
SAFT	**Safranbolu**	**83.16**	**49**	*e* P	**P**	**19 12 29.1**	**-0.6**
KDHN	**Kadinhani**	**83.38**	**52**	*i* P	**P**	**19 12 31.4**	**+0.5**
LOD	**Lodumlu**	**83.54**	**51**	*e* P	**P**	**19 12 31.9**	**+0.3**
ANTO	**Ankara**	**83.57**	**51**	*e* P	**P**	**19 12 31.4**	**-0.4**
ANTO	**Ankara**	**83.57**	**51**	P	**P**	**19 12 31.9**	**+0.1**
	SNR=562						
ANTO	**Ankara**	**83.57**	**51**	*e* P	**P**	**19 12 31.7**	**-0.1**
	comp=E,4μm,1.0s,mb7.1						
ANTO	**Ankara**	**83.57**	**51**	*e* P	**P**	**19 12 31.7**	**-0.1**
ANTO				pmax	pmax		
	comp=Z,4μm,1.0s,mb7.1						
ANTO	**Ankara**	**83.57**	**51**	⇓ *i* P	**P**	**19 12 32.2**	**+0.4**
BALT	**Daday**	**83.60**	**49**	*i* P	**P**	**19 12 31.8**	**-0.2**
LADK	**Ladik-KONYA**	**83.65**	**52**	*e* P	**P**	**19 12 32.3**	**0.0**
KONT	**Konya--Tatoy**	**83.70**	**53**	*e* P	**P**	**19 12 32.6**	**+0.1**
ELDT	**Eldivan**	**83.89**	**50**	*i* P	**P**	**19 12 33.5**	**+0.1**
BZK	**Bozkurt**	**83.94**	**48**	*e* P	**P**	**19 12 33.5**	**-0.2**
ILGA	**Ilgaz**	**83.96**	**49**	*i* P	**P**	**19 12 33.3**	**-0.5**
CANT	**Cankiri**	**84.00**	**50**	*e* P	**P**	**19 12 34.3**	**+0.3**
HDMB	**Hadim**	**84.04**	**53**	*e* P	**P**	**19 12 33.9**	**-0.4**
TOS	**Tosya**	**84.19**	**49**	*e* P	**P**	**19 12 34.9**	**-0.1**
BR131	**Keskin Array S**	**84.23**	**51**	*e* P	**P**	**19 12 34.5**	**-0.7**
	comp=Z,1μm,0.9s,mb6.6						
BRTR	**Keskin Array B**	**84.23**	**51**	P	**P**	**19 12 34.5**	**-0.6**
	comp=Z,155nm,0.8s,mb5.8,baz=265,slow=4.4,SNR=524						
BRTR				S	S	19 22 41.7	-6.6
	comp=Z,4.1nm,1.0s,baz=141,slow=7.1,SNR=2.7						
BRTR				PKKPbc	PKKPbc	19 30 49.7	+1.6
	comp=Z,7.9nm,0.8s,baz=155,slow=4.4,SNR=4.1						
BRTR				PKPPKP		19 38 52.8	
	comp=Z,3.7nm,1.0s,baz=148,slow=6.1,SNR=4.5						
KAMT	**Kaman**	**84.38**	**51**	*e* P	**P**	**19 12 35.8**	**-0.1**
PPCY	**Paphos**	**84.44**	**56**	P	**P**	**19 12 35.8**	**-0.5**
ERMK	**Ermenek**	**84.45**	**54**	*i* P	**P**	**19 12 36.8**	**+0.4**
ALFC	**Alevga**	**84.57**	**55**	P	**P**	**19 12 36.2**	**-0.8**
	comp=Z,33nm,1.4s						
TSUM	**Tsumeb**	**84.65**	**111**	LR	LR	19 42 29.2	
	comp=Z,48μm,20.8s,baz=282,slow=30						
TSUM	**Tsumeb**	**84.65**	**111**	*e* P	**P**	**19 12 37.3**	**-0.3**
	comp=Z,963nm,1.0s,mb6.5						
VOR	**Voronezh**	**84.69**	**38**	⇓ *i* P	**P**	**19 12 36.0**	**-1.2**
VOR				*e* S	S	19 22 44.0	-8.4
VOR				pmax	pmax		
	comp=Z,8μm,1.6s,mb7.2						
CDAG	**Cicekdag**	**84.81**	**51**	*i* P	**P**	**19 12 38.6**	**+0.5**
LEF	**Lefka**	**84.81**	**55**	*e* P	**P**	**19 12 37.8**	**-0.4**
VSR	**Storozhevoye**	**84.82**	**38**	*d* P	**P**	**19 12 37.4**	**-0.5**
VSR				*e*		19 22 45.1	
VSR				*e* S	S	19 22 55.9	+2.2
VSR				*e* SP		19 23 53.8	
VSR				*e* SSS		19 31 52.1	
VSR				pmax	pmax		
	comp=Z,200nm,0.6s,mb6.0						
VSR				pmax	pmax		
	comp=N,50nm,0.5s						
VSR				pmax	pmax		
	comp=E,230nm,0.9s						
VSR				smax			
	comp=N,14μm,4.4s						
VSR				smax			
	comp=Z,2μm,5.0s						
VSR				smax			
	comp=E,12μm,4.7s						
CTKT	**Corum**	**84.86**	**49**	*i* P	**P**	**19 12 38.4**	**+0.1**
SZAC	**Souni-Zanaja**	**84.90**	**56**	P	**P**	**19 12 38.5**	**-0.1**
DIKM	**Dikmen**	**84.92**	**48**	*e* P	**P**	**19 12 39.1**	**+0.5**
VORD	**Divnogorie**	**84.97**	**39**	*d* P	**P**	**19 12 38.1**	**-0.5**
VORD				*e*		19 22 43.6	
VORD				*e* S	S	19 22 54.7	-0.5
VORD				*e* SP		19 23 52.6	
VORD				*e* SSS		19 31 56.9	
VORD				pmax	pmax		
	comp=Z,480nm,0.8s,mb6.3						
VORD				pmax	pmax		
	comp=N,190nm,1.1s						
VORD				pmax	pmax		
	comp=E,320nm,0.8s						
VORD				smax			
	comp=N,24μm,4.7s						
VORD				smax			
	comp=Z,7μm,5.5s						
VORD				smax			
	comp=E,17μm,4.6s						
BSTP	**Nigde**	**85.04**	**52**	*i* P	**P**	**19 12 39.9**	**+0.6**
MAMC	**Mammari**	**85.06**	**55**	P	**P**	**19 12 39.8**	**+0.4**
IKL	**Isikli**	**85.16**	**54**	*e* P	**P**	**19 12 39.3**	**-0.6**
CSS	**Prodhromos**	**85.20**	**55**	P	**P**	**19 12 40.9**	**+0.7**
	comp=E,13nm,0.9s						
CSS	**Prodhromos**	**85.20**	**55**	P	**P**	**19 12 39.6**	**-0.6**
CSS	**Prodhromos**	**85.20**	**55**	P	**P**	**19 12 40.9**	**+0.7**
LFK	**Lefkose**	**85.28**	**55**	*e* P	**P**	**19 12 40.9**	**+0.4**
NIG	**Nigde**	**85.38**	**52**	*e* P	**P**	**19 12 40.2**	**-0.8**
YOZ	**Yozgat**	**85.51**	**50**	*e* P	**P**	**19 12 41.7**	**+0.1**
ANN	**Anapa**	**85.58**	**45**	⇓ *i* P	**P**	**19 12 40.7**	**-1.1**
MERS	**Mersin**	**85.64**	**53**	*e* P	**P**	**19 12 42.6**	**+0.3**
KVT	**Kavak**	**85.65**	**49**	*e* P	**P**	**19 12 42.3**	**0.0**
EREN	**Erenkoy**	**85.72**	**55**	*e* P	**P**	**19 12 43.0**	**+0.3**
PHNC	**Paralimni**	**85.75**	**55**	P	**P**	**19 12 44.4**	**+1.5**
	comp=E,31nm,1.0s						
KARA	**Karaisali**	**85.95**	**53**	*e* P	**P**	**19 12 42.8**	**-1.0**
BNN	**Bunyan**	**86.11**	**51**	*e* P	**P**	**19 12 43.0**	**-1.6**
TOKT	**Tokat**	**86.22**	**49**	*e* P	**P**	**19 12 44.8**	**-0.3**
VRHR	**Novokhopersk**	**86.33**	**38**	*e* P	**P**	**19 12 45.0**	**-0.3**
VRHR				*e*		19 22 47.2	
VRHR				*e* S	SKSac	19 22 58.3	+0.4
VRHR				*e* SP		19 24 01.0	
VRHR				*e* SSS		19 32 22.1	
VRHR				pmax	pmax		
	comp=Z,330nm,0.7s,mb6.2						
VRHR				pmax	pmax		
	comp=E,100nm,0.9s						
VRHR				smax			
	comp=E,19μm,4.9s						
VRHR				smax			
	comp=Z,2μm,3.9s						
VRHR				smax			
	comp=N,8μm,4.4s						
KRTS	**Karatas**	**86.38**	**53**	*e* P	**P**	**19 12 45.8**	**-0.1**
KOZT	**Kozan**	**86.48**	**52**	*e* P	**P**	**19 12 46.0**	**-0.4**
CEYT	**Ceyhan**	**86.55**	**53**	*e* P	**P**	**19 12 46.7**	**-0.1**
PINB	**Pinarbasi**	**86.58**	**51**	*i* P	**P**	**19 12 47.8**	**+1.0**
SVSK	**Karacayir**	**86.67**	**50**	*e* P	**P**	**19 12 47.2**	**-0.1**
SARI	**SarD1z-Kayseri**	**86.80**	**51**	*e* P	**P**	**19 12 47.9**	**-0.1**
ANDN	**Andirin**	**86.85**	**52**	*i* P	**P**	**19 12 48.4**	**+0.2**
COBT	**Iskenderun**	**87.08**	**53**	*i* P	**P**	**19 12 50.0**	**+0.7**
HTY	**Hatay**	**87.10**	**54**	*e* P	**P**	**19 12 49.6**	**+0.2**
KMRS	**Kahramanmaras**	**87.29**	**52**	*e* P	**P**	**19 12 50.6**	**+0.3**
MMAI	**Mount Meron Ar**	**87.38**	**57**	P	**P**	**19 12 51.7**	**+0.9**
	comp=N,104nm,0.6s,mb5.8,baz=352,slow=3.5,SNR=221						
MMAI				S	SKSac	19 23 04.5	-0.5
	comp=N,5.7nm,0.9s,baz=159,slow=4.3,SNR=2.2						
MMAI				PKKP	PKKPbc	19 30 31.1	-9.3
	comp=N,3.0nm,0.6s,baz=10,slow=5.1,SNR=3.8						
MMAI				PKKPbc	PKKPbc	19 30 40.8	+0.4
	comp=N,5.2nm,0.6s,baz=89,slow=6.5,SNR=4.7						
MMAI				PKPPKP		19 38 44.1	
	comp=N,2.7nm,0.9s,baz=348,sl

MSL ex x 19 14 04.0
MSL i x x 19 16 56.0
MSL i x x 19 23 35.0
MSL ex x 19 24 04.0
MSL i x x 19 25 20.0
MSL i x x 19 25 35.0
HAKT HAKKARI 92.40 50 *i* P **P** **19 13 19.4 +5.2**
HKR Hakkari 92.42 50 *e*P **P** **19 13 14.9 +0.7**
CUKT Cukurca 92.43 51 *e*P **P** **19 13 14.2 -0.2**
TVO Taravao 92.66 252⇑ *i*P **P** **19 13 16.6 +0.9**
comp=Z,10μm,1.0s,mb7.9
TIAR Tiarei 92.69 253⇑ *i*P **P** **19 13 16.4 +0.6**
comp=Z,8μm,0.9s,mb7.9
VNA1 Neumayer--Stat 92.77 165 *e*P **P** **19 13 14.6 -0.4**
VNA1 *e* 19 13 21.8
VNA1 *e* 19 13 26.6
VNA1 *e* 19 13 59.4
VNA1 *e* 19 14 04.5
VNA1 *e* 19 30 29.2
VNA1 *e* 19 30 34.9
VNA1 *e* 19 38 44.8
VNA3 Neumayer Olymp 92.80 165 *e*P **P** **19 13 14.8 -0.3**
VNA3 *e* 19 13 21.6
VNA3 *e* 19 13 26.3
VNA3 *e* pP 19 13 50.4 -2.2
VNA3 *e* 19 13 59.1
VNA3 *e* 19 14 03.2
VNA3 *e* 19 21 27.3
VNA3 *e* 19 21 33.4
VNA3 *e* 19 30 28.5
VNA3 *e* 19 30 34.3
VNA3 *e* 19 38 42.8
PPT Papeete 92.90 253⇑ *i*P **P** **19 13 17.6 +0.8**
comp=Z,955nm,1.2s,mb6.8,baz=74
PPT Papeete 92.90 253 *e*LR LR 19 43 09.4
comp=Z,713μm,89.0s,baz=76
PPT Papeete 92.90 253 P **P** **19 13 17.5 +0.7**
comp=Z,797nm,1.1s,mb6.8,baz=88,slow=16,SNR=19
PPT Papeete 92.90 253 P **P** **19 13 17.5 +0.7**
PPT pmax pmax
comp=Z,797nm,1.1s
PAE Paea 92.93 253⇑ *i*P **P** **19 13 17.6 +0.7**
comp=Z,8μm,1.0s,mb7.8
ARU Arti 93.03 29 P **P** **19 13 16.0 -0.7**
comp=Z,4μm,1.7s,mb7.3,SNR=56
ARU Arti 93.03 29 *e*P **P** **19 13 16.2 -0.4**
comp=Z,2μm,1.5s,mb7.0
ARU Arti 93.03 29⇑ *e*P **P** **19 13 16.1 -0.6**
ARU pmax pmax
comp=Z,1μm,1.9s,mb6.8
MAK Makhachkala 93.05 44 *e*P **P** **19 13 18.0 +0.9**
MAK *i* 19 17 05.5
MAK *e*PPP 19 18 59.4
MAK *e*SS SS 19 30 27.7 -0.5
MAK pmax pmax
comp=N,3μm,0.8s
MAK pmax pmax
comp=Z,9μm,1.9s,mb7.6
MAK pmax pmax
comp=Z,5μm,1.4s,mb7.4
MAK MLR MLR
comp=Z,33μm,20.0s
MAK MLR MLR
comp=N,29μm,20.0s
VNA2 Neumayer--Watz 93.17 165 *e*P **P** **19 13 16.6 -0.2**
baz=314,slow=4.3
VNA2 *e* 19 13 22.6
VNA2 *e* 19 13 27.8
VNA2 *e* pP 19 13 51.7 -2.6
VNA2 *e* 19 14 00.9
VNA2 *e* 19 14 05.1
VNA2 *e* 19 21 28.2
VNA2 *e* 19 21 35.2
VNA2 *e* 19 30 24.5
VNA2 *e* 19 30 29.6
VNA2 *e* 19 30 33.9
VNA2 *e* 19 38 43.8
ADK Adak 93.20 326 *e*P **P** **19 13 16.6 -0.9**
comp=N,384nm,1.2s,mb6.4
ADK Adak 93.20 326 *e*P **P** **19 13 16.7 -0.8**
ADK pmax pmax
comp=Z,384nm,1.2s,mb6.4
TIXI Tiksi 93.30 357 *e*P **P** **19 13 16.7 -0.9**
comp=Z,627nm,1.0s,mb6.7
TIXI Tiksi 93.30 357⇑ *e*P **P** **19 13 17.1 -0.5**
TIXI pmax pmax
comp=Z,845nm,1.2s,mb6.8
LSZ Lusaka 93.31 105 ⇑P **P** **19 13 18.4 -0.3**
SNR=113
LSZ Lusaka 93.31 105 P **P** **19 13 19.5 +0.8**
comp=Z,125nm,1.1s,mb6.0,baz=290,slow=4.2,SNR=4.2
LSZ S SKSac 19 23 39.7 +0.1
comp=Z,12nm,1.0s,baz=256,slow=12,SNR=1.7
LSZ PKKPbc PKKPbc 19 30 29.2 +3.8
comp=Z,12nm,0.6s,baz=126,slow=1.3,SNR=11
LSZ PKPPKP 19 38 35.0
comp=Z,3.2nm,0.9s,baz=83,slow=6.7,SNR=2.5
LSZ LR LR 19 49 04.0
comp=Z,15μm,20.4s,baz=287,slow=31
LBTB Lobatse 93.41 115 PKKPbc PKKPbc 19 30 28.7 +3.2
comp=Z,14nm,0.8s,baz=168,slow=2.9,SNR=9.1
LBTB Lobatse 93.41 115 *e*P **P** **19 13 18.7 -0.3**
comp=Z,657nm,1.0s,mb6.7
LBTB Lobatse 93.41 115 *e*P **P** **19 13 18.7 -0.3**
LBTB pmax pmax
comp=Z,657nm,1.0s,mb6.7
SVE Sverdlovsk 93.77 28 *e*P **P** **19 13 20.4 +0.4**
SVE pmax pmax
comp=Z,857nm,1.3s,mb6.7
BOSA Boshof 94.03 118 P **P** **19 13 21.1 -0.7**
comp=Z,46nm,0.7s,mb5.7,baz=286,slow=3.5,SNR=25
BOSA S SKSac 19 23 41.0 -2.1
comp=Z,24nm,1.2s,baz=15,slow=8.1,SNR=2.4
BOSA PKKPbc PKKPbc 19 30 25.8 +1.8
comp=Z,9.7nm,0.7s,baz=50,slow=1.6,SNR=8.5
BOSA LR LR 19 51 20.6
comp=Z,37μm,21.9s,baz=183,slow=32
BOSA Boshof 94.03 118 *e*P **P** **19 13 20.7 -1.1**
comp=Z,294nm,0.6s,mb6.6
BHD Baghdad 94.44 54 *i* x x 19 13 26.5
BHD *i* x x 19 14 14.0
BHD *ex* x 19 17 15.0
BHD *ex* x 19 23 45.0
BHD *ex* x 19 24 23.0
BHD *ex* x 19 25 09.0
BHD *ex* x 19 25 26.0
SNAA Sanae 94.80 164 *e*P **P** **19 13 18.9 -5.4**
comp=Z,178nm,1.0s,mb6.2
SNAA Sanae 94.80 164 *e*P **P** **19 13 18.9 -5.4**
SNAA pmax pmax
comp=Z,178nm,1.0s
XMAS Kiritimati 95.48 274 *e*P **P** **19 13 29.1 +0.3**
comp=Z,628nm,1.4s,mb6.7
AKTK Aktyubinsk 95.98 34 P **P** **19 13 30.0 -0.3**
AKTK S SKSac 19 23 52.9 +0.1
AKTK PKKPbc PKKPbc 19 30 20.9 +1.6
AKTK LR LR 19 52 51.6
AKTO Aktyubinsk 95.98 34 P **P** **19 13 30.0 -0.3**
comp=Z,144nm,1.0s,mb6.3,baz=316,slow=3.7,SNR=181
AKTO S SKSac 19 23 52.9 +0.1
comp=Z,15nm,1.1s,baz=155,slow=19,SNR=3.7
AKTO PKKPbc PKKPbc 19 30 20.9 +1.6
comp=Z,31nm,0.8s,baz=96,slow=7.5,SNR=8.9
AKTO LR LR 19 52 51.6
comp=Z,29μm,20.7s,baz=126,slow=33
AB31 Akbulak array 97.67 34 P **P** **19 13 37.4 -0.5**
AB31 pmax pmax
comp=Z,419nm,1.0s,mb6.8
SEY Seymchan 98.02 345⇑ *e*P **P** **19 13 38.3 -0.9**
MIB Mutribah 98.06 56 *e*P **P** **19 13 39.7 -0.4**
baz=56
MIB AMb AMB 19 13 53.6
comp=Z,853nm,1.7s,mb6.9,baz=56
NAY Al-Naaiem 98.19 57 *e*P **P** **19 13 39.9 -0.8**
baz=57
NAY AMb AMB 19 13 55.2
comp=Z,526nm,1.6s,mb6.7,baz=57
UMR Umm Al-Rimmam 98.46 56 *e*P **P** **19 13 41.3 -0.6**
baz=56
UMR AMb AMB 19 13 54.9
comp=Z,804nm,1.3s,mb7.0,baz=56
MAIT Maitri 98.56 161 *e*P **P** **19 13 38.7 -2.6**
MAIT *e*E 19 13 48.2
MAIT *e*S SKSac 19 24 06.0 +1.1
RDF Al-Radifah 98.56 57 *e*P **P** **19 13 42.3 -0.1**
baz=57
RDF AMb AMB 19 13 56.1
comp=Z,1μm,1.2s,mb7.2,baz=57
NVL N'lazarevskaya 98.58 161 *e*P **P** **19 13 41.6 +0.2**
NVL *i* 19 14 33.1
NVL *e* PP 19 17 49.8 +5.7
NVL *e*S SKSac 19 24 06.3 +1.3
NVL 19 24 56.4
NVL *e* 19 31 52.2
NVL pmax pmax
comp=Z,55nm,1.0s,mb5.9
KBD Kabd 98.59 57 *e*P **P** **19 13 41.9 -0.6**
baz=57
KBD AMb AMB 19 13 58.1
comp=Z,666nm,1.3s,mb6.9,baz=57
QRN Al-Qurain 98.93 57 *e*P **P** **19 13 43.3 -0.7**
baz=57
QRN AMb AMB 19 13 57.9
comp=Z,489nm,1.6s,mb6.7,baz=57
BRVK Borovoye 100.46 27⇓ P Pdif 19 13 53.1 +2.8
SNR=54
BRVK Borovoye 100.46 27 *e*Pdif Pdif 19 13 49.5 -0.8
comp=Z,230nm,3.5s
BVA0 Borovoye Array 100.53 27 *i* P Pdif 19 13 50.0 -0.6
BVA0 pmax pmax
comp=Z,19nm,0.9s
BVAR Borovoye Array 100.53 27 P Pdif 19 13 50.7 +0.1
comp=Z,20nm,0.8s,baz=296,slow=4.3,SNR=34
BVAR PP PP 19 17 58.1 -0.4
comp=Z,24nm,0.9s,baz=289,slow=9.0,SNR=2.4
BVAR S SKSac 19 24 16.1 +0.4
comp=Z,4.1nm,0.6s,baz=323,slow=2.2,SNR=2.8
BVAR PKKPbc PKKPbc 19 30 08.0 +1.2
comp=Z,12nm,0.5s,baz=144,slow=2.8,SNR=7.5
BVAR Borovoye Array 100.53 27 P Pdif 19 13 50.7 +0.1
BVAR 19 17 58.1
BVAR S SKSac 19 24 16.1 +0.4
BVAR pmax pmax
comp=Z,20nm,0.8s
BVAR pmax pmax
comp=Z,24nm,0.9s
VOSK Vostochnaya 101.00 27 P Pdif 19 13 51.6 -1.1
VOSK pmax pmax
comp=Z,118nm,1.4s
YAK Yakutsk 102.75 355 *e*Pdif Pdif 19 14 01.3 +0.8
comp=Z,129nm,0.9s
YAK Yakutsk 102.75 355 *e*P Pdif 19 14 01.3 +0.8
YAK pmax pmax
comp=Z,129nm,0.9s
PET Petropavlovsk 104.07 336 *c i*P Pdif 19 14 07.4 +1.1
PET *e* 19 18 31.4
PET *e*PPP 19 20 37.9
PET *e* 19 24 30.9
PET *e*S Sdif 19 25 39.9 -4.1
PET *e*SP SP 19 27 17.9 -3.3
PET *e*SPP 19 28 09.8
PET *e*SS SS 19 33 02.0 +0.9
PET pmax pmax
comp=Z,33nm,0.7s
PET pmax pmax
comp=Z,11μm,16.2s
PET smax
comp=N,23μm,14.8s
PET MLR MLR
comp=Z,27μm,21.0s
NVS Novosibirsk 104.19 20 *e*P Pdif 19 14 12.6 +5.7
NVS *e* 19 24 30.1
NVS *e*S Sdif 19 25 44.4 -0.6
NVS pmax pmax
comp=Z,57nm,1.1s
NVS pmax pmax
comp=N,13nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
NVS smax
comp=N,957nm,3.0s
NVS smax
comp=E,135nm,2.1s
PETK Petropavlovsk- 104.37 337 Pdiff Pdif 19 14 09.4 +1.8
comp=E,5.4nm,0.7s,baz=94,slow=4.5,SNR=7.2
PETK PP PP 19 18 22.8 -4.3
comp=E,13nm,0.8s,baz=45,slow=10,SNR=3.4
PETK PKKPbc PKKPbc 19 29 52.0 -3.6
comp=E,7.6nm,0.8s,baz=144,slow=2.8,SNR=4.9
PETK PKKP PKKPbc 19 30 02.3 +6.7
comp=E,13nm,0.7s,baz=143,slow=2.2,SNR=8.9
QSPA South Pole Qui 104.96 180 Sdiff SKSac 19 24 36.7 +1.7
comp=E,12nm,0.8s,baz=358,slow=18,SNR=2.5
QSPA PKKPbc PKKPbc 19 29 51.9 -3.0
comp=E,16nm,0.6s,baz=64,slow=2.1,SNR=6.7
QSPA South Pole Qui 104.96 180 *e*Pdif Pdif 19 14 11.6 +1.3
comp=E,57nm,0.8s
ZAA0 Zalesovo Array 105.45 20 *e*Pdif Pdif 19 14 11.7 -0.8
ZALV Zalesovo Beam 105.45 20 Pdiff Pdif 19 14 11.9 -0.6
comp=E,1.8nm,0.6s,baz=331,slow=5.8,SNR=6.9
ZALV PKiKP PKiKP 19 18 22.8 -2.5
comp=E,37nm,1.0s,baz=306,slow=1.6,SNR=6.3
ZALV Sdiff SKSac 19 24 37.9 -0.7
comp=E,12nm,0.8s,baz=320,slow=2.4,SNR=2.5
ZALV PKKPbc PKKPbc 19 29 51.3 -1.1
comp=E,22nm,0.8s,baz=151,slow=3.6,SNR=6.5
KURK Kurchatov 105.73 25 Pdiff Pdif 19 14 13.6 -0.2
comp=E,9.0nm,0.9s,baz=320,slow=4.5,SNR=10
KURK PP PP 19 18 36.0 -1.3
comp=E,12nm,0.9s,baz=91,slow=5.0,SNR=7.0
KURK PKKPbc PKKPbc 19 29 49.4 -2.1
comp=E,43nm,1.1s,baz=142,slow=2.8,SNR=7.0
KURK PKKPab PKKPab 19 30 09.4 -0.2
comp=E,37nm,0.7s,baz=148,slow=3.4,SNR=9.0
KURK Kurchatov 105.73 25 *e*Pdif Pdif 19 14 13.2 -0.6
comp=E,65nm,1.5s
SKR Severo-Kuril's 106.88 336 *e* SKSdf 19 25 20.0 -6.2
SKR *e*PS PS 19 28 04.0 -4.9
SKR pmax pmax
comp=Z,8μm,10.0s
SKR MLR MLR
comp=N,19μm,20.0s
SKR MLR MLR
comp=E,22μm,20.0s
SKR MLR MLR
comp=Z,25μm,20.0s
BOD Bodaibo 107.35 3 *e*P Pdif 19 14 25.4 +4.5
BOD pmax pmax
comp=Z,49nm,0.9s
SYO Syowa Base 107.77 158‖ *e*X Pdif 19 14 24.8 +2.0
NRGR Nerungri 108.45 357 *e*P Pdif 19 14 29.7 +3.9
MKAR Makanchi Array 110.31 26 Pdiff Pdif 19 14 36.6 +2.5
comp=Z,2.6nm,1.0s,baz=258,slow=6.1,SNR=3.9
MKAR PKiKP PKiKP 19 18 33.5 -1.1
comp=Z,14nm,0.8s,baz=345,slow=1.9,SNR=9.4
MKAR PP PP 19 19 08.6 -2.0
comp=Z,28nm,0.9s,baz=325,slow=6.1,SNR=4.0
MKAR PKKPbc PKKPbc 19 29 34.0 -3.0
comp=Z,25nm,0.7s,baz=122,slow=2.6,SNR=9.4
MKAR Makanchi Array 110.31 26 Pdif Pdif 19 14 36.6 +2.5
MKAR *i* 19 18 33.5
MKAR 19 19 08.6
MKAR 19 29 34.0
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR pmax pmax
comp=Z,14nm,0.8s
MKAR pmax pmax
comp=Z,28nm,0.9s
AAA Alma-Ata 110.51 31 *e*P Pdif 19 14 40.7 +5.7
AAA pmax pmax
comp=Z,3μm,16.1s
MOY Mondy 111.84 12 *e*P Pdif 19 14 46.0 +5.1
MOY pmax pmax
comp=Z,9.0nm,2.7s
IRK Irkutsk 111.87 10 *e*P Pdif 19 14 51.4 +10
IRK *e* 19 19 28.1
IRK *e* 19 30 03.6
IRK pmax pmax
comp=Z,59nm,1.4s
TLY Talaya 112.31 10 *e*Pdif Pdif 19 14 45.6 +2.6
TLY ⇑ *i*PKP PKiKP 19 18 38.4 +0.1
TLY Talaya 112.31 10 *e*P Pdif 19 14 45.2 +2.2
TLY *e*PPP 19 21 58.8
TLY *e* 19 28 38.6
TLY *e* 19 29 52.8
TLY pmax pmax
comp=Z,145nm,2.3s
TLY MLR MLR
comp=Z,23μm,22.0s
KSH Kashi 112.68 35 PDIF Pdif 19 14 49.0 +4.4
KSH *e*XPKP 19 19 29.8
KSH PP PP 19 19 32.0 +4.2
KSH PP PP
comp=Z,27μm,9.4s
KSH LR LR
comp=N,65μm,18.8s
KSH LR LR
comp=E,36μm,16.5s
KSH LR LR
comp=Z,132μm,22.8s
AFI Afiamalu 113.01 261 PKiKP PKiKP 19 18 41.1 +0.6
comp=Z,19nm,0.8s,baz=265,slow=20,SNR=2.2
AFI Afiamalu 113.01 261 *i* PKIKP PKiKP 19 18 41.1 +0.6
AFI pmax pmax
comp=Z,19nm,0.8s
CIT Chita 113.11 4 *e*P Pdif 19 14 52.0 +5.5
CIT *e* 19 18 39.7
CIT *e* 19 19 35.2
ZAK Zakamensk 113.50 11 *e*P Pdif 19 14 46.5 -1.7
ZAK pmax pmax
comp=Z,12nm,1.5s
VNDA Vanda 113.86 189 Pdiff Pdif 19 14 52.0 +2.1
comp=Z,1.8nm,1.2s,baz=180,slow=1.4,SNR=2.7
VNDA PP PP 19 19 33.2 -2.8
comp=Z,28nm,1.0s,baz=224,slow=8.3,SNR=4.3
VNDA PKKPbc PKKPbc 19 29 25.8 -0.3
comp=Z,11nm,1.1s,baz=288,slow=5.6,SNR=4.0
VNDA Vanda 113.86 189 *e*Pdif Pdif 19 14 51.3 +1.5
VNDA Vanda 113.86 189 P Pdif 19 14 52.0 +2.1
VNDA 19 19 33.2
VNDA pmax pmax
comp=Z,2.0nm,1.2s
VNDA pmax pmax
comp=Z,28nm,1.0s
YSS Yuzh-Sakhalins 114.68 342 *e*PKiKP PKiKP 19 18 42.2 -0.8
YSS Yuzh-Sakhalins 114.68 342 *ce*P Pdif 19 15 02.0 +8.5
YSS *i* 19 18 42.0
YSS *e* 19 19 39.0
YSS *e* 19 22 08.0
YSS *e* 19 25 14.0
YSS *e*PS PS 19 29 06.0 -16
YSS pmax pmax
comp=Z,6μm,7.0s
YSS pmax pmax
comp=N,3μm,8.0s
YSS MLR MLR
comp=N,11μm,18.0s
YSS MLR MLR
comp=Z,22μm,18.0s
YSS MLR MLR
comp=N,12μm,20.0s
WMQ Urumqi 114.94 24 *e*PDIF Pdif 19 14 54.0 -0.7
WMQ PP PP 19 19 47.0 +3.5
WMQ SKS SKSdf 19 25 36.0 -6.0
WMQ SS SS 19 35 27.0 +0.2
WMQ PP PP
comp=Z,15μm,9.0s
WMQ LR LR
comp=N,62μm,21.0s
WMQ LR LR
comp=E,62μm,22.0s
WMQ LR LR
comp=Z,47μm,22.0s
NIL Nilore 115.02 41 *e*PKiKP PKiKP 19 18 40.6 -3.4
KLR Kul'dur 115.04 351 *e*P Pdif 19 14 54.0 -1.1
KLR *e* 19 25 11.8
HABR Khabarovsk 115.18 348 *i* PKIKP PKPdf 19 18 41.9 -2.0
HABR *e* 19 19 17.6
HABR *e* 19 43.9
HABR *e* 19 22 18.6
HABR *e* 19 25 20.3
HABR *e* 19 25 40.8
HABR *e*PS PS 19 29 26.3 -0.6
HABR *e*SS SS 19 35 31.5 +2.1
HABR *e*SSS 19 39 49.9
HIA Hailar 116.02 359 *e*PKPdf PKPdf 19 18 44.5 -1.0
JWK2 Keihoku 116.42 342 P PKPdf 19 18 51.0 +4.7
MAW Mawson 116.43 159 *e*PKP PKPdf 19 18 44.6 -1.0
comp=Z,58nm,0.8s
MAW *e*PKIKP PKPdf 19 18 55.9 +10
MAW *e*SKS SKSdf 19 25 26.7 -17
MAW *e*SKKS SKKSac 19 26 40.5 +0.4
MAW *e*PKKP PKKPbc 19 29 14.7 -2.3
MAW Mawson 116.43 159 PKP PKPdf 19 18 44.9 -0.7
comp=Z,68nm,0.7s,baz=263,slow=2.7,SNR=29
MAW PKKPbc PKKPbc 19 29 15.9 -1.1
comp=Z,14nm,0.8s,baz=60,slow=4.7,SNR=4.9
MAW Mawson 116.43 159 PKIKP PKPdf 19 18 44.9 -0.7
MAW 19 29 15.9
MAW pmax pmax
comp=Z,68nm,0.7s
SONM Songino Array 116.49 9 Pdiff Pdif 19 15 05.7 +4.2
comp=Z,3.8nm,1.0s,baz=329,slow=4.4,SNR=8.2
SONM PKP PKPdf 19 18 44.9 -1.5
comp=Z,17nm,0.5s,baz=299,slow=1.1,SNR=60
SONM PP PP 19 19 54.7 +0.7
comp=Z,36nm,1.1s,baz=8.5,slow=2.9,SNR=4.1
SONM PKKPbc PKKPbc 19 29 13.2 -3.3
comp=Z,6.8nm,0.5s,baz=166,slow=2.8,SNR=8.4
SONM SKKP 19 33 05.8
comp=Z,10nm,0.9s,baz=176,slow=3.6,SNR=2.8
SONM Songino Array 116.49 9 P Pdif 19 15 05.7 +4.2
SONM 19 18 44.9
SONM 19 19 54.7
SONM 19 29 13.2
SONM pmax pmax
comp=Z,4.0nm,1.0s
SONM pmax pmax
comp=Z,17nm,0.5s
SONM pmax pmax
comp=Z,36nm,1.1s
ULN Ulaanbaatar 116.56 9 *e*Pdif Pdif 19 15 03.1 +1.3
ULN ⇑ *i*PKP PKPdf 19 18 43.0 -3.5
MSEY Mahe Island 116.98 88⇑P PKPdf 19 18 48.3 +0.1
SNR=10
MSEY Mahe Island 116.98 88 *e*PKPdf PKPdf 19 18 47.5 -0.8
JMP Maruseppu 117.14 340 P PKPdf 19 18 46.4 -1.4
ASAJ Asahikawa 117.28 341 PKP PKPdf 19 18 47.6 -0.4
comp=Z,36nm,0.9s,baz=340,slow=6.0,SNR=4.7
THN Thein Dam 117.38 41 *e*P PKPdf 19 18 45.4 -3.2
DLH Dalhousie 117.46 40 *ex* x 19 18 55.0
BHK Bhakra 118.50 41 *ex* x 19 19 13.2
BHJ Bhuj 118.73 52 *e*P PKPdf 19 18 49.7 -1.7
JEW Eniwo 118.80 341 P PKPdf 19 18 51.3 +0.3
JEM Erimo 118.98 339 P PKPdf 19 18 51.9 +0.5
ERM Erimo 118.98 339 *e*PKPdf PKPdf 19 18 51.9 +0.5
SMLA Simla 119.17 41 *i* P PKPdf 19 18 51.2 -0.8
SMLA *i* x x 19 22 32.5
JSH Shimam 119.40 342 P PKPdf 19 18 51.4 -0.8
MDJ Mudanjiang 119.86 351 PKP PKPdf 19 18 53.5 +0.5
MDJ XPKP 19 19 43.8
MDJ SKS SKSdf 19 25 51.0 -0.4
MDJ S Sdif 19 27 53.0 -2.7
MDJ Mudanjiang 119.86 351 *e*PKPdf PKPdf 19 18 51.5 -1.5
JOT Ohata 120.24 341 P PKPdf 19 18 53.7 -0.1
DDI Dehra Dun 120.28 41 *e*P PKPdf 19 18 51.0 -3.2
DDI *ex* x 19 20 15.0
AJM Ajmer 120.51 46 *e*P PKPdf 19 18 53.4 -1.4
JTM Tenmabayashi 120.77 340 P PKPdf 19 18 53.9 -1.0
NDI New Delhi 120.84 43 *ex* PKPdf 19 18 53.0 -2.3
NDI *ex* x 19 20 22.0
CN2 Changchun 121.18 354 *e*PKP PKPdf 19 18 54.0 -1.5
CN2 *e*XPKP 19 19 53.0
CN2 PP PP 19 20 29.5 +3.3
CN2 SKS SKSdf 19 25 47.0 -6.9
CN2 SKKS SKKSac 19 27 02.8 -10
CN2 SS SS 19 36 44.0 -2.8
CN2 LR LR
comp=N,14μm,21.0s
CN2 LR LR
comp=E,23μm,21.0s
CN2 LR LR
comp=Z,43μm,25.0s
BHV Bhavnagar 121.48 52 *e*P PKPdf 19 18 56.0 -0.7
JOM Ohasama 121.88 340 P PKPdf 19 18 55.9 -1.1
PTH Pithoragarh 122.16 40 *e*P PKPdf 19 18 58.4 +0.5
PTH *ex* x 19 24 52.0
LGTI Lohaghat 122.25 40 *e*P PKPdf 19 18 56.6 -1.4
GTA Gaotai 123.06 17 PKP PKPdf 19 18 59.0 -0.3
GTA XPKP 19 19 57.5

GTA PP PP 19 20 42.8 +3.6
GTA PKS 19 22 33.3
GTA SKS SKSdf 19 25 54.0 -3.7
GTA LR LR
comp=N,24µm,26.8s
GTA LR LR
comp=E,29µm,25.9s
GTA LR LR
comp=Z,45µm,26.1s
JYA Atsumi 123.20 340 P PKPdf 19 18 59.0 -0.6
SNY Shenyang 123.29 356 PKPR PKiKP 19 19 03.5 +3.6
SNY PP PP 19 20 47.5 +7.0
SNY SKS SKSdf 19 25 54.0 -4.0
SNY SS SS 19 37 19.8 +6.1
SNY PP PP
comp=Z,6µm,7.8s
SNY LR LR
comp=E,29µm,22.7s
SNY LR LR
comp=Z,25µm,22.5s
JMM Marumori 123.50 339 P PKPdf 19 18 59.1 -1.1
URZ Urewera 123.91 234 PKP PKPdf 19 19 00.3 -0.5
comp=Z,35nm,0.6s,baz=152,slow=0.7,SNR=20
URZ PKKPbc PKKPbc 19 28 45.8 -2.5
comp=Z,27nm,0.8s,baz=265,slow=2.2,SNR=10
URZ SKKPbc 19 32 21.5
comp=Z,43nm,0.9s,baz=41,slow=13,SNR=3.3
HHC Hu-ho-hao-te 124.04 7 *e*PKP PKPdf 19 19 01.3 +0.2
HHC XPKP 19 19 55.8
HHC PP PP 19 20 51.8 +6.2
HHC PKS 19 22 36.3
HHC SKS SKSdf 19 25 51.5 -8.0
HHC SKKS SKKSac 19 27 25.3 -5.8
HHC SS SS 19 37 23.3 +0.1
HHC PP PP
comp=Z,16µm,11.9s
HHC LR LR
comp=N,21µm,21.4s
HHC LR LR
comp=E,22µm,25.0s
HHC LR LR
comp=Z,29µm,23.8s
TARA Tarawa 124.04 282 *e*PKPdf PKPdf 19 19 02.7 +0.8
BTO Baotou 124.09 8 *e*PKP PKPdf 19 19 00.5 -0.7
BTO S Sdif 19 28 34.0 +3.0
JSD Sado 124.17 341 P PKPdf 19 18 59.9 -1.6
POO Poona 124.61 54 *e*P PKPdf 19 19 00.9 -1.9
DANN Dangsing 125.18 38 *e*P PKPdf 19 19 04.0 +0.3
JYT Yasato 125.18 339 P PKPdf 19 19 02.5 -1.0
BJI Beijing 125.20 2 PKP PKPdf 19 19 02.5 -0.9
BJI XPKP 19 19 52.0
BJI S Sdif 19 28 36.3 -3.9
BJI SS SS 19 37 42.8 +5.1
BJI LR LR
comp=N,23µm,23.1s
BJI LR LR
comp=E,36µm,23.1s
BJI LR LR
comp=Z,41µm,31.4s
BJT Baijiatuau 125.22 2 *e*PKPdf PKPdf 19 19 02.0 -1.4
KOLN Koldanda 125.51 39 *e*P PKPdf 19 19 03.8 -0.5
comp=Z,2µm,1.6s
KAD Karad 125.55 56 *e*P PKPdf 19 19 03.8 -0.9
MAJO Matsushiro 125.56 341 *e*PKPdf PKPdf 19 19 01.9 -2.2
MAT Matsushiro 125.56 341 PKP PKPdf 19 19 02.3 -1.9
MAT Matsushiro 125.56 341 P PKPdf 19 19 02.7 -1.5
MJAR Matsushiro Arr 125.56 341 PKP PKPdf 19 19 03.0 -1.2
comp=Z,55nm,0.6s,baz=92,slow=0.8,SNR=142
MJAR PP PP 19 20 58.8 +2.9
comp=Z,52nm,1.0s,baz=0.3,slow=4.0,SNR=2.7
MJAR PKKPbc 19 28 47.0
comp=Z,4.8nm,0.7s,baz=181,slow=4.5,SNR=4.7
MJAR SKKPbc 19 32 16.6
comp=Z,14nm,1.0s,baz=206,slow=3.5,SNR=4.6
MIR Mirnyy 125.73 168 ⇓ *i* PKIKP PKPdf 19 19 09.0 +5.5
MIR pmax pmax
comp=Z,300nm,1.5s
JRY Ryogami san 125.81 340 P PKPdf 19 19 03.3 -1.4
GKN Gorkha 125.96 38 *e*P PKPdf 19 19 05.0 -0.2
comp=Z,3µm,1.2s
DL2 Dalian 126.32 357 PDIF Pdif 19 15 49.5 +4.3
DL2 PKP PKPdf 19 19 05.5 -0.1
DL2 PP PP 19 21 04.0 +3.3
DL2 SS SS 19 37 55.3 +3.6
DL2 LR LR
comp=N,10µm,21.6s
DL2 LR LR
comp=Z,18µm,34.3s
JOD2 Odawara 2 126.43 339 P PKPdf 19 19 05.1 -0.8
DRV Dumont d'Urvil 126.49 190 PP PP 19 21 06.0 +3.8
DRV SKS SKSdf 19 26 03.0 +0.3
DRV SKKS SKKSac 19 27 53.0 +7.6
DRV SP SP 19 30 58.0 +8.8
DRV SS SS 19 38 03.0 +8.6
DRV L 19 53 00.0
DRV R 20 01 00.0
DRV Dumont d'Urvil 126.49 190 PP PP 19 21 06.0 +3.8
DRV SKS SKSdf 19 26 03.0 +0.3
DRV SKKS SKKSac 19 27 53.0 +7.6
DRV SP SP 19 30 58.0 +8.8
DRV SS SS 19 38 03.0 +8.6
DRV L 19 53 00.0
DRV R 20 01 00.0
KKN Kakani 126.49 37 *e*P PKPdf 19 19 06.0 -0.2
comp=Z,823nm,0.7s
DMN Daman 126.53 38 *e*P PKPdf 19 19 06.1 -0.2
comp=Z,597nm,0.8s
JGF Kuroka 126.69 341 P PKPdf 19 19 05.4 -1.0
PKIN Phulchoki 126.72 38 *e*P PKPdf 19 19 06.0 -0.6
comp=Z,626nm,0.9s
PKI Pulchoki 126.73 38 *e*P PKPdf 19 19 06.1 -0.6
comp=Z,2µm,1.3s
GUN Gumba 126.75 37 *e*P PKPdf 19 19 06.7 0.0
comp=Z,5µm,1.6s
LATR Latur 126.78 53 *e*P PKPdf 19 19 05.0 -2.0
NGP Nagpur 126.98 48 *e*P PKPdf 19 19 05.2 -2.1
JIRN Jiri 127.12 37 *e*P PKPdf 19 19 06.9 -0.5
comp=Z,1µm,1.0s
KSRS Korea Array 127.13 351 PKP PKPdf 19 19 06.2 -0.9
comp=Z,101nm,1.1s,baz=21,slow=1.7,SNR=43
KSRS PP PP 19 21 08.1 +1.9
comp=Z,24nm,0.9s,baz=8.7,slow=5.8,SNR=3.5
KSRS Korea Array 127.13 351 PKIKP PKPdf 19 19 06.3 -0.9
KSRS 19 21 08.1
KSRS pmax pmax
comp=Z,101nm,1.1s
KSRS pmax pmax
comp=Z,24nm,0.9s
LZH Lanzhou 127.27 15 ⇓ PKP PKPdf 19 19 07.3 -0.2
LZH PP PP 19 21 11.0 +3.8
LZH SKS SKSdf 19 26 05.0 -0.7
LZH SKKS SKKSac 19 27 45.3 -6.4
LZH LR LR
comp=N,33µm,21.6s
LZH LR LR
comp=Z,44µm,23.0s
INCN Inchon 127.28 352 *e*PKPdf PKPdf 19 19 05.8 -1.7
RPZ Rata Peaks 127.28 226 PKP PKPdf 19 19 06.9 -0.2
comp=Z,58nm,0.8s,baz=100,slow=2.1,SNR=16
RPZ SKKPbc 19 32 16.9
comp=Z,30nm,0.9s,baz=350,slow=10,SNR=3.8
JWT Wachi 127.57 343 P PKPdf 19 19 07.8 -0.3
RAMN Ramite 127.90 37 *e*P PKPdf 19 19 08.5 -0.4
comp=Z,3µm,1.1s
JIE Ise 128.01 341 P PKPdf 19 19 09.0 +0.1
LSA Lhasa 128.19 31 PKP PKPdf 19 19 09.0 -0.4
LSA PP PP 19 21 14.5 +0.9
LSA LR LR
comp=N,10µm,45.0s
LSA LR LR
comp=E,11µm,38.3s
LSA LR LR
comp=Z,16µm,41.7s
LSA Lhasa 128.19 31 *e*PKIKP PKPdf 19 19 09.1 -0.3
TAPN Taplejung 128.23 36 *e*P PKPdf 19 19 09.2 -0.3
comp=Z,3µm,1.4s
JAD Aida 128.24 344 P PKPdf 19 19 08.6 -0.7
MNGI Mangalore 128.39 60 *i* P PKPdf 19 19 08.9 -1.2
MNGI *i* x x 19 26 11.4
MNGI *ex* x 19 39 30.1
comp=N,15µm,19.9s
ODAN Odare 128.42 36 *e*P PKPdf 19 19 09.6 -0.3
comp=N,1µm,1.0s
JHS Saijyo 128.45 345 P PKPdf 19 19 08.9 -0.9

CASY Casey 128.47 176 *e*PKP PKPdf 19 19 09.2 +0.5
CASY *e*SKP 19 22 19.7
HYB Hyderabad 128.90 52 *e*P PKPdf 19 19 09.5 -1.5
HYB *e*PP PP 19 21 16.0 -3.2
HYB *e*SKS SKSdf 19 26 04.0 -5.3
HYB Hyderabad 128.90 52 *i* Pdif Pdif 19 15 58.0 +1.3
HYB *e*PKP PKPdf 19 19 09.5 -1.5
HYB *ep*P 19 19 54.0
HYB *es*P 19 20 01.5
HYB *e*PP PP 19 21 16.0 -3.2
HYB *e* 19 22 22.0
HYB *e*SKS SKSdf 19 26 04.0 -5.3
HYB *e* 19 31 40.0
HYB *e* 19 33 00.0
HYB *e*SS SS 19 38 30.0 +3.6
JWZ Kozaga 129.11 342 P PKPdf 19 19 10.5 -0.6
SLGI Shiliguri 129.13 36 *ex* PKPdf 19 19 09.2 -2.1
JMN Monobe 129.46 344 P PKPdf 19 19 12.2 +0.5
JTU Tsushima 129.73 349 P PKPdf 19 19 12.8 +0.6
BOK Bokaro 129.80 40 *e*P PKPdf 19 19 10.0 -2.6
BOK *i* x x 19 22 27.7
XAN Xi'an 130.34 11 PKP PKPdf 19 19 13.0 -0.4
XAN PP PP 19 21 30.3 +3.1
XAN SKS SKSdf 19 26 04.3 -7.1
XAN LR LR
comp=N,6µm,34.6s
XAN LR LR
comp=E,25µm,31.5s
XAN LR LR
comp=Z,41µm,33.1s
JNU Nakatsue 130.78 347 P PKPdf 19 19 10.8 -3.4
JFU Fukue jima 2 131.67 349 P PKPdf 19 19 14.8 -1.1
SHL Shillong 131.92 33 *ex* x 19 18 03.5
SHL *ex* x 19 21 30.0
CD2 Chengdu 132.13 17 PKP PKPdf 19 19 16.0 -0.8
CD2 PP PP 19 21 39.3 +0.5
CD2 PKS 19 22 52.5
CD2 SKS SKSdf 19 26 12.5 -2.3
CD2 SKKS SKKSac 19 28 19.8 -2.2
CD2 SS SS 19 39 08.3 +4.7
CD2 PP PP
comp=Z,12µm,8.4s
CD2 LR LR
comp=N,47µm,28.8s
CD2 LR LR
comp=E,54µm,26.2s
CD2 LR LR
comp=Z,36µm,27.2s
CAL Calcutta 132.24 39 *ex* x 19 21 54.4
CAL *ex* x 19 39 20.9
BWNR Bhubaneshwar 132.25 44 *e*P PP 19 21 39.9 -0.6
BWNR *e*S SKKSac 19 28 29.9 +6.6
VIS Vishakhapatnam 132.27 48 *e*P PKPdf 19 19 16.4 -1.0
CBIJ Chichi jima 132.39 331 PKP PKPdf 19 19 15.6 -1.9
comp=Z,209nm,0.6s,baz=269,slow=13,SNR=6.1
CBIJ SKPbc SKPbc 19 22 28.8 -1.9
comp=Z,268nm,1.0s,baz=310,slow=8.8,SNR=3.7
CBIJ Chichi jima 132.39 331 P PKPdf 19 19 09.8 -7.6
TRD Trivandrum 132.42 63 *e*P PKPdf 19 19 18.0 +0.2
TRD *ex* x 19 21 47.0
JSU Suzuyama 132.43 346 P PKPdf 19 19 16.8 -0.6
MDRS Chennai 132.76 56 *e*P PKPdf 19 19 16.0 -2.3
AGT Agartala 132.92 35 *i* P PKPdf 19 19 19.0 +0.5
AGT *i* x x 19 20 35.0
NJ2 Nanjing 133.22 360 *e*PKP PKPdf 19 19 16.5 -2.4
NJ2 XPKP 19 20 15.8
NJ2 PP PP 19 21 46.3 +0.7
NJ2 PKS 19 22 50.0
NJ2 SKKS SKKSac 19 28 26.5 -2.1
NJ2 SS SS 19 39 16.5 0.0
NJ2 PP PP
comp=Z,10µm,9.2s
NJ2 LR LR
comp=N,45µm,26.8s
NJ2 LR LR
comp=E,57µm,31.4s
NJ2 LR LR
comp=Z,255µm,31.4s
IMP Imphal 133.63 32 *e*P PKPdf 19 19 19.0 -0.8
IMP *i* x x 19 19 24.0
SSE Sheshan 134.12 357 PKP PKPdf 19 19 17.3 -3.3
SSE PP PP 19 21 53.3 +2.0
SSE PP PP
comp=Z,3µm,10.7s
SSE LR LR
comp=N,11µm,19.0s
SSE LR LR
comp=E,58µm,19.0s
SSE LR LR
comp=Z,25µm,20.0s
DZM Mont Dzumac 134.41 254 *e*P PKPdf 19 19 11.8 -9.5
DZM *e*S SKPbc 19 22 41.3 +3.7
JAM Amami Oshima 135.60 346 P PKPdf 19 19 21.2 -2.2
KMI Kunming 137.17 22 PDIF Pdif 19 16 34.0 +0.5
KMI LR LR
comp=N,23µm,24.6s
KMI LR LR
comp=E,19µm,30.2s
KMI LR LR
comp=Z,39µm,37.4s
JOW Kunigami 137.41 347 PKP PKPdf 19 19 25.6 -1.3
comp=Z,125nm,0.6s,baz=174,slow=9.0,SNR=7.0
JOW SKPbc SKPbc 19 22 46.1 -0.6
comp=Z,198nm,1.1s,baz=4.6,slow=5.7,SNR=7.5
JOW Kunigami 137.41 347 P PKPdf 19 19 18.5 -8.3
HNR Honiara 139.43 273 PKP PKPdf 19 19 29.6 -1.2
comp=Z,77nm,0.6s,baz=7.8,slow=4.3,SNR=5.4
HNR SKKPbc 19 31 27.0
comp=Z,117nm,0.9s,baz=182,slow=11,SNR=3.7
HNR Honiara 139.43 273 *e*PKPdf PKPdf 19 19 31.6 +0.8
HNR Honiara 139.43 273 PKIKP PKPdf 19 19 29.6 -1.2
HNR pmax pmax
comp=Z,77nm,0.6s
HNR pmax pmax
comp=N,117nm,0.9s
CHTO Chiang Mai 141.14 31 ⇑ P PKPdf 19 19 34.5 +0.7
SNR=113
CHTO Chiang Mai 141.14 31 *e*PKHKP 19 19 26.4
CM31 Chiang Mai Arr 141.44 31 *e*PKPpre 19 19 27.3
CMAR Chiang Mai Arr 141.44 31 PKhKP 19 19 27.7
comp=N,18nm,0.6s,baz=310,slow=4.3,SNR=52
CMAR PKP PKPdf 19 19 33.3 -1.0
comp=N,51nm,0.7s,baz=318,slow=3.9,SNR=28
CMAR PP PP 19 22 37.0 -0.4
comp=N,67nm,0.9s,baz=316,slow=4.6,SNR=3.0
CMAR SKKPbc 19 31 15.1
comp=N,28nm,1.2s,baz=162,slow=3.5,SNR=4.1
CMAR Chiang Mai Arr 141.44 31 PKP PKPdf 19 19 33.3 -1.0
CMAR PP PP 19 22 37.0 -0.4
CMAR SKKPbc 19 31 15.1
CMAR Chiang Mai Arr 141.44 31 PKHKP 19 19 27.7
CMAR 19 19 33.3
CMAR 19 22 37.0
CMAR pmax pmax
comp=Z,18nm,0.6s
CMAR pmax pmax
comp=Z,51nm,0.7s
CMAR pmax pmax
comp=Z,67nm,0.9s
GUMO Guam 141.62 316 PKhKP 19 19 27.5
comp=Z,76nm,0.3s,baz=342,slow=3.2,SNR=9.9
GUMO Guam 141.62 316 PKHKP 19 19 27.5
GUMO pmax pmax
comp=Z,76nm,0.3s
GUMO Guam 141.62 316 P PKPdf 19 19 33.7 -1.0
HKC Hong Kong Obse 142.66 7 PKPdf PKPdf 19 19 32.0 -4.4
TAU Tasmania Unive 142.95 216 *e*PKPdf PKPdf 19 19 33.8 -2.5
MOO Moorlands 143.32 216 *e*PKP PKPdf 19 19 34.5 -2.4
MOO *e*PP PP 19 22 48.7 -0.3
MOO *e*SKP 19 23 04.1
MOO *e*SKKS SKKSac 19 29 28.7 +0.8
NST Nakhon Sawan 144.39 32 ⇑ P PKPdf 19 19 37.6 -2.0
comp=Z,1µm,1.1s
QIZ Qiongzhong 145.07 15 PKP PKPdf 19 19 37.5 -3.2
QIZ APKP 19 20 21.0
QIZ XPKP 19 20 37.0
QIZ PP PP 19 23 01.5 +2.8
QIZ SS SS 19 41 36.0 +0.1
QIZ Qiongzhong 145.07 15 *e*PKPdf PKPdf 19 19 39.6 -1.1
KKTK Khon Kaen 145.11 27 P PKPbc 19 19 40.0 -0.6
CNB Canberra Magne 145.93 228 ⇓ *i* PKP PKPdf 19 19 42.4 +0.7
CNB *e*PP PP 19 23 05.2 +0.2
CNB *e*SKKS SKKSac 19 29 46.1 +3.0

ARMA Armidale 146.18 237 *e*PKP PKPdf 19 19 42.8 +0.5
ARMA *e*PP PP 19 23 10.4 +3.5
ARMA *e*SKKS SKKSac 19 29 49.7 +4.9
NNT Nongplab 146.73 36 P PKPdf 19 19 43.0 -0.6
SGCP Mt. Cagua 146.82 354 *e*P PKPdf 19 19 44.6 +0.9
PIP Pasuquin 146.84 357 ⇓ *e*P PKPdf 19 19 44.8 +1.0
TOO Toolangi 147.35 221 ⇓ *i* PKP PKPdf 19 19 44.4 +0.4
TOO *i* PP PP 19 23 09.9 -3.2
TOO *i* SKKS SKKSac 19 29 53.3 +2.4
TOO Toolangi 147.35 221 ⇓ *i* PKP2 PKPdf 19 19 44.4 +0.4
TOO *i* 19 23 09.9
CVP Callao Caves 147.37 355 ⇓ *e*P PKPdf 19 19 44.1 -0.5
ABRA Dolores 147.51 357 *e*P PKPdf 19 19 44.7 -0.1
PALP Palanan 147.94 353 *e*P PKPdf 19 19 47.1 +1.5
EIDS Eidsvold 148.05 246 *e*PKPdf PKPdf 19 19 45.7 +0.1
CAUP Cauayan 148.12 354 *e*P PKPdf 19 19 45.9 0.0
BCPH Baguio City Da 148.77 357 ⇓ *i* P PKPdf 19 19 47.2 +0.3
BOLP Bolinao 148.81 358 *e*P PKPbc 19 19 50.0 -1.0
BSI Banda Aceh 149.08 51 P PKPdf 19 19 46.0 -1.6
BALP Baler 149.34 355 *e*P PKPdf 19 19 47.9 0.0
SCZP Santa Cruz 149.41 358 *e*P PKPbc 19 19 51.9 -0.6
PCPH Palayan 149.55 356 ⇓ *e*P PKPbc 19 19 51.9 -1.0
POLP Polillo Island 150.30 354 *e*P PKPbc 19 19 54.9 +0.2
PVCP Virac 151.10 349 *e*P PKPdf 19 19 51.4 +0.8
LUBP Lubang 151.42 357 *e*P PKPbc 19 19 55.6 -1.7
AUQP San Andres 151.60 352 *e*P PKPbc 19 19 57.9 +0.2
CNP Catarman 152.06 348 *e*P PKPdf 19 19 52.6 +0.5
SJMP San Jose 152.62 355 *e*P PKPdf 19 19 54.5 +1.5
OTRP Odiongan 152.63 353 *e*P PKPdf 19 19 53.3 +0.3
BESP Borongan 152.76 346 *e*P PKPbc 19 19 58.9 -1.5
BUSP Coron 153.14 357 *e*P PKPdf 19 19 54.4 +0.7
ADE Adelaide 153.23 218 P PKPdf 19 19 52.2 -1.1
STKA Stephens Creek 153.25 227 *e*PKP PKPdf 19 19 53.3 -0.1
comp=Z,392nm,0.9s
STKA *e*PP PP 19 23 51.0 +3.8
STKA *e*SKKS SKKSac 19 30 24.8 +1.2
STKA Stephens Creek 153.25 227 PKP PKPdf 19 19 53.1 -0.3
comp=Z,47nm,0.8s,baz=112,slow=1.9,SNR=36
STKA PKPbc PKPbc 19 19 58.6 -2.4
comp=Z,135nm,0.9s,baz=109,slow=2.1,SNR=51
PLP Palo 153.29 346 ⇓ *e*P PKPdf 19 19 52.8 -1.2
RCP Roxas 153.33 351 ⇓ *e*P PKPbc 19 19 57.5 -4.1
CTA Charters Tower 153.33 255 *e*PKP PKPdf 19 19 53.3 -0.5
comp=Z,252nm,1.3s
CTA Charters Tower 153.33 255 *e*PKP PKPbc 19 20 10.0 +8.5
CTA *e* 19 20 21.5
CTA *es*PKP 19 20 59.1
CTA *e*PP 19 23 22.3
CTA *e*SKKS SKKSac 19 30 28.7 +3.9
CTA Charters Tower 153.33 255 PKP PKPdf 19 19 53.8 0.0
comp=Z,28nm,1.0s,baz=253,slow=1.2,SNR=15
CTA PKPbc PKPbc 19 19 59.1 -2.4
comp=Z,57nm,0.6s,baz=8.0,slow=1.5,SNR=67
CTA Charters Tower 153.33 255 PKIKP PKPdf 19 19 53.8 0.0
CTA 19 19 59.1
CTA pmax pmax
comp=Z,28nm,1.0s
CTA pmax pmax
comp=Z,57nm,0.6s
CTAO Charters Tower 153.33 255 *e*PKPdf PKPdf 19 19 53.8 0.0
CTAO Charters Tower 153.33 255 P PKPdf 19 19 55.3 +1.5
OCLP Ormoc 153.49 347 *e*P PKPdf 19 19 54.1 -0.1
IPM Ipoh 153.85 44 P PKPdf 19 19 55.1 +0.3
ENPP El Nido 153.96 359 *e*P PKPdf 19 19 55.4 +0.5
CUYO Cuyo Island 154.23 355 *e*P PKPbc 19 19 59.9 -3.7
GUIM Jordan 154.27 351 *e*P PKPdf 19 19 54.8 -0.6
MSLP Maasin 154.32 346 *e*P PKPdf 19 19 59.8 +4.4
LLP Lapu-Lapu 154.33 348 *e*P PKPdf 19 19 55.4 -0.1
SCPH Surigao 154.50 344 *e*P PKPdf 19 19 54.5 -1.1
TBP Tagbilaran 154.96 348 *e*P PKPdf 19 19 56.2 -0.1
JAY Jayapura 155.07 298 P PKPdf 19 19 58.9 +2.4
BUTP Butuan 155.24 344 *e*P PKPdf 19 19 56.5 -0.1
PPR Puerto Princes 155.39 0 *e*P PKPdf 19 19 47.8 -9.0
BIPH Bislig 155.78 341 ⇑ *e*P PKPdf 19 19 55.2 -2.2
BATP Bataraza 156.34 2 *e*P PKPdf 19 19 58.2 0.0
COEN Coen 156.35 269 *e*PKPdf PKPdf 19 19 57.9 -0.2
COEN Coen 156.35 269 P PKPdf 19 19 59.4 +1.3
BUKP Musuan 156.44 344 *e*P PKPdf 19 19 58.1 -0.1
PPI Padang Panjang 156.79 53 P PKPdf 19 19 57.3 -1.5
PAGZ Pagadian 156.85 348 *e*P PKPdf 19 19 58.1 -0.7
MATI Mati 156.97 341 *e*P PKPdf 19 19 57.9 -1.1
IPIL Ipil 157.06 350 *e*P PKPdf 19 20 02.9 +3.9
DAV Davao City (W) 157.06 342 PKP PKPdf 19 19 58.6 -0.5
comp=Z,94nm,0.3s,baz=52,slow=12
DAV Davao City (W) 157.06 342 ⇑ *e*P PKPdf 19 19 59.7 +0.6
DAV Davao City (W) 157.06 342 P PKPdf 19 20 05.4 +6.3
PDSI Padang 157.13 54 P PKPdf 19 19 57.7 -1.5
MYKOM Kota Tinggi 157.72 43 P PKPdf 19 20 00.9 +1.0
COCO West Island 158.49 85 *e*PKPdf PKPdf 19 20 00.8 0.0
COCO West Island 158.49 85 P PKPdf 19 20 05.8 +5.0
SDKM Sandakan 159.44 4 ⇓ P PKPdf 19 20 01.9 -0.1
MYLDM Lahad Datu 159.96 1 ⇑⇑ P PKPdf 19 20 03.8 +1.3
MYLDM Lahad Datu 159.96 1 P PKPdf 19 20 03.6 +1.0
KSI Kapahiang 160.47 56 P PKPdf 19 20 02.0 -1.1
TSM Tawau 160.82 3 ⇓ P PKPdf 19 20 03.8 +0.3
SBUM Sibu 161.49 21 P PKPdf 19 20 04.3 +0.1
KSM Kuching 161.62 28 P PKPdf 19 20 08.5 +4.1
NWAO Narrogin (SRO) 162.09 176 PKP PKPdf 19 20 03.5 -0.8
comp=Z,77nm,1.1s,baz=202,slow=3.1,SNR=13
NWAO PKPab PKPab 19 20 49.8 -1.5
comp=Z,62nm,0.9s,baz=200,slow=6.0,SNR=4.2
NWAO Narrogin (SRO) 162.09 176 *e*PKPdf PKPdf 19 20 03.5 -0.8
NWAO Narrogin (SRO) 162.09 176 PKIKP PKPdf 19 20 03.5 -0.8
NWAO 19 20 49.8
NWAO pmax pmax
comp=Z,77nm,1.1s
NWAO pmax pmax
comp=Z,62nm,0.9s
FORT Forrest 162.13 207 *e*PKP PKPdf 19 20 03.1 -1.3
comp=Z,280nm,0.7s
FORT *e*PKPpB 19 20 54.6
FORT *e*PP PP 19 24 35.9 +0.9
FORT *e*SKKS SKKSac 19 31 09.1 -1.0
PPBI Pangkal Pinang 162.16 46 P PKPdf 19 20 04.3 -0.6
MUN Mundaring 162.93 173 *e*PKP PKPdf 19 20 03.5 -1.6
MUN *e*PKPpB 19 20 54.1
MUN *e*SKKS SKKSac 19 31 15.3 +1.3
MUN Mundaring 162.93 173 *e*PKIKP PKPdf 19 20 03.5 -1.6
MUN *e* 19 20 54.1
ASAR Alice Springs 163.33 237 PKP PKPdf 19 20 04.5 -1.2
comp=Z,28nm,0.7s,baz=81,slow=1.1,SNR=198
ASAR PKPab PKPab 19 20 57.0 -0.3
comp=Z,62nm,0.6s,baz=112,slow=4.0,SNR=7.2
ASAR Alice Springs 163.33 237 PKIKP PKPdf 19 20 04.6 -1.1
ASAR 19 20 57.0
ASAR pmax pmax
comp=Z,28nm,0.7s
ASAR pmax pmax
comp=Z,62nm,0.6s
LBMI Labuha 163.33 328 P PKPdf 19 20 04.8 -1.3
KLBR Kellerberrin 163.45 177 *e*PKP PKPdf 19 20 03.6 -2.0
comp=Z,374nm,1.1s
KLBR *e*PKPpB 19 20 59.7
KLBR *e* 19 22 26.1
TPI Tanjungpandan 163.62 43 P PKPdf 19 20 06.0 -0.3
WB2 Warramunga Arr 164.35 249 *e*PKP PKPdf 19 20 05.7 -1.0
WB2 *ep*PKP pPKPdf 19 20 42.0 -4.1
WB2 *e*PP PP 19 24 54.0 +5.6
WB2 *e*SKKS SKKSac 19 31 20.3 -2.0
WB2 *e* 19 32 21.1
WRAB Tennant Creek 164.35 249 P PKPdf 19 20 05.7 -1.0
DBJI Dramaga 165.52 56 P PKPdf 19 20 06.5 -1.5
PCI Palu 165.96 356 P PKPdf 19 20 07.4 -0.9
LEM Lembang 166.37 55 P PKPdf 19 20 08.5 -0.1
XMIS Christmas Isla 166.44 72 *e*PKPdf PKPdf 19 20 08.3 -0.3
XMIS Christmas Isla 166.44 72 P PKPdf 19 20 10.8 +2.2
PLKI Palangkaraya 166.45 21 P PKPdf 19 20 08.3 -0.4
KAKA Kakadu 166.54 278 *e*PKP x 19 19 51.1
comp=Z,289nm,1.0s
KAKA *ep*PKP x 19 20 55.4
KAKA *e* x 19 24 47.4
KAKA *e* x 19 25 25.2
BJII Banjamegara 168.29 50 P PKPdf 19 20 09.3 -0.7
KDI Kendari 168.40 341 P PKPdf 19 20 11.0 +0.9
KAPI Kappang 170.04 354 PKPab PKPab 19 21 27.4 +0.7
baz=162,slow=3.2
KAPI PP PP 19 25 16.0 +0.7
comp=Z,80nm,1.1s,baz=328,slow=6.7,SNR=3.1
KAPI Kappang 170.04 354 *e*PKPdf PKPdf 19 20 08.9 -2.3
KAPI Kappang 170.04 354 P PKPdf 19 20 09.0 -2.1
SJI Sawahan 170.04 44 P PKPdf 19 20 09.7 -1.4
KHKI Kahang-Kahang 172.72 26 P PKPdf 19 20 09.8 -2.6

BATI Baumata 173.26 314 PKP PKPdf 19 20 11.7 -0.9
comp=Z,40nm,0.6s,baz=244,slow=3.8
MBWA Marble Bar 173.80 188 *e*PKPdf PKPdf 19 20 10.9 -1.7
MBWA Marble Bar 173.80 188 P PKPdf 19 20 11.5 -1.1

MOS ***29*** *19:00:19.3± 1.0,2341N×9464E,h102km, mb5.2/18, Error ellipse: s-maj=11.3km s-min=5.0km az=123.4*
ISCJB ***29*** *19:00:20.5± 0.2, 2338N± 003×9453E± 003, h114km, mb5.0/65, Error ellipse: s-maj=4.5km s-min=3.0km az=36.0*
BJI ***29*** *19:00:21.6, 2364N×9452E, h100km, mB4.8, mb4.9*
NEIC ***29*** *19:00:22.2± 0.2, 2339N×9468E, mb5.1/22, Error ellipse: s-maj=7.4km s-min=3.7km az=51.0*
IDC ***29*** *19:00:22.2± 0.5, 2339N×9468E, h112km± 3km, mb4.6/27, mb1 4.6/28, mb1mx4.6/34, mbtmp4.6/28, Error ellipse: s-maj=13.6km s-min=7.3km az=48.0*
DJA ***29*** *19:00:33, 2300N×9465E, h194km, Mw5.9/10*
ISC 29 19:00:22.6± 0.2, 2337N± 003×9449E± 003, h116km, h116km± 1.5km; pP-P, n194, σ1§27/200, mb5.0/65, 9C-2D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**1.50**	**340**	*e*P	**Pn**	**19 00 48.0**	**-1.8**
IMP				*e*S	**Sn**	**19 01 05.0**	**-5.5**
AGT	**Agartala**	**3.02**	**280**	*i* x	x	19 01 01.0	
AGT				*i* x	x	19 02 09.0	
SHL	**Shillong**	**3.23**	**313**	⇑*i* P	**Pn**	**19 01 11.0**	**-0.8**
SHL				*e*S	**Sn**	**19 01 43.5**	**-6.4**
CHG	**Chiang Mai**	**6.15**	**137**	PN	**Pn**	**19 01 49.6**	**-1.4**
CHG				PG	**Pn**	**19 02 04.7**	**+14**
CHG				SG	**Sn**	**19 03 04.5**	**+4.5**
CHTO	**Chiang Mai**	**6.15**	**137**	*e*P	**Pn**	**19 01 48.5**	**-2.6**
	80nm,0.6s						
CHTO	**Chiang Mai**	**6.15**	**137**	*e*P	**Pn**	**19 01 48.5**	**-2.5**
CHTO				pmax	pmax		
	comp=Z,80nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.42**	**139**	P	**Pn**	**19 01 52.5**	**-2.2**
	comp=Z,8.1nm,0.3s,baz=313,slow=13,SNR=204						
CMAR				ScP	ScP	19 12 01.4	-0.4
	comp=Z,0.2nm,0.3s,baz=297,slow=1.7,SNR=19						
CMAR	**Chiang Mai Arr**	**6.42**	**139**	*i* P	**Pn**	**19 01 52.5**	**-2.2**
CMAR				pmax	pmax		
	comp=Z,17nm,0.3s						
SLGI	**Shiliguri**	**6.43**	**302**	*i* P	**Pn**	**19 01 53.5**	**-1.4**
SLGI				*i* S	**Sn**	**19 02 58.4**	**-8.5**
LSA	**Lhasa**	**6.98**	**335**	P	**Pn**	**19 02 02.0**	**-0.3**
LSA				S	**Sn**	**19 03 16.0**	**-4.2**
LSA				Smax			
	comp=N,430nm,0.7s						
LSA				Smax			
	comp=E,1μm,0.5s						
LSA	**Lhasa**	**6.98**	**335**	*e*P	**Pn**	**19 02 01.6**	**-0.7**
	comp=E,304nm,0.3s						
LSA	**Lhasa**	**6.98**	**335**	*e*P	**Pn**	**19 02 01.6**	**-0.7**
LSA				pmax	pmax		
	comp=Z,305nm,0.3s						
TAPN	**Taplejung**	**7.30**	**304**	*e*P	**Pn**	**19 02 05.1**	**-1.6**
	comp=Z,764nm,0.4s						
ODAN	**Odare**	**7.32**	**300**	*e*P	**Pn**	**19 02 05.0**	**-1.8**
	comp=Z,675nm,0.3s						
BDT	**Bhumibol Dam**	**7.42**	**144**	P	**Pn**	**19 02 17.0**	**+8.8**
	comp=Z,142nm,1.0s						
KMI	**Kunming**	**7.73**	**75**	⇑P	**Pn**	**19 02 13.5**	**+1.1**
KMI				LR	LR		
	comp=N,316nm,7.5s						
KMI				LR	LR		
	comp=E,201nm,9.8s						
BOK	**Bokaro**	**7.91**	**275**	*e*S	**Sn**	**19 03 34.0**	**-8.7**
RAMN	**Ramite**	**7.99**	**298**	*e*P	**Pn**	**19 02 14.7**	**-1.3**
	comp=E,770nm,0.4s						
BWNR	**Bhubaneshwar**	**8.63**	**251**	*e*P	**Pn**	**19 02 25.6**	**+0.9**
BWNR				*e*S	**Sn**	**19 03 53.9**	**-6.3**
JIRN	**Jiri**	**8.63**	**301**	*e*P	**Pn**	**19 02 23.0**	**-1.7**
	comp=E,590nm,0.3s						
GUN	**Gumba**	**8.99**	**302**	*e*P	**Pn**	**19 02 27.5**	**-2.0**
	comp=E,522nm,0.3s						
PKI	**Pulchoki**	**9.21**	**299**	*e*P	**Pn**	**19 02 30.3**	**-2.2**
	comp=E,343nm,0.3s						
PKI	**Pulchoki**	**9.21**	**299**	*e*P	**Pn**	**19 02 30.4**	**-2.1**
	comp=E,440nm,0.3s						
PKI	**Pulchoki**	**9.21**	**299**	*e*P	**Pn**	**19 02 30.4**	**-2.1**
PKI				pmax	pmax		
	comp=Z,440nm,0.3s						
PKIN	**Phulchoki**	**9.22**	**299**	*e*P	**Pn**	**19 02 30.4**	**-2.3**
	comp=Z,440nm,0.3s						
NST	**Nakhon Sawan**	**9.32**	**144**	P	**Pn**	**19 02 25.0**	**-9.0**
	comp=Z,33nm,0.6s						
KKN	**Kakani**	**9.41**	**300**	*e*P	**Pn**	**19 02 32.9**	**-2.3**
	comp=Z,446nm,0.2s						
KKN	**Kakani**	**9.41**	**300**	*e*P	**Pn**	**19 02 32.9**	**-2.3**
KKN				pmax	pmax		
	comp=Z,446nm,0.2s						
DMN	**Daman**	**9.47**	**298**	*e*P	**Pn**	**19 02 33.5**	**-2.6**
	comp=Z,270nm,0.3s						
GKN	**Gorkha**	**10.02**	**300**	*e*P	**Pn**	**19 02 40.8**	**-2.6**
	comp=Z,630nm,0.3s						
KOLN	**Koldanda**	**10.77**	**296**	*e*P	**Pn**	**19 02 50.4**	**-3.0**
	comp=Z,296nm,0.3s						
DANN	**Dangsing**	**10.86**	**299**	*e*P	**Pn**	**19 02 51.3**	**-3.4**
	comp=Z,289nm,0.4s						
CD2	**Chengdu**	**11.15**	**46**	*e*P	**Pn**	**19 02 59.3**	**+0.7**
CD2				PP		19 03 07.8	
CD2				S	**Sn**	**19 05 03.3**	**+1.9**
CD2				SS		19 05 17.0	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,230nm,8.4s						
CD2				LR	LR		
	comp=Z,150nm,7.2s						
GYA	**Guiyang**	**11.47**	**72**	P	**Pn**	**19 03 04.0**	**+1.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
VIS	**Vishakhapatnam**	**11.87**	**244**	*e*S	**Sn**	**19 05 06.7**	**-12**
LGTI	**Lohaghat**	**14.12**	**298**	*e*P	**Pn**	**19 03 35.0**	**-2.5**
LGTI				*ex*	x	19 06 06.0	
PTH	**Pithoragarh**	**14.19**	**299**	*e*P	**Pn**	**19 03 36.0**	**-2.3**
PTH				*ex*	x	19 06 03.4	
NGP	**Nagpur**	**14.47**	**264**	*e*P	**Pn**	**19 03 41.7**	**-0.2**
NGP				AMb	AMB	19 03 47.5	
	comp=Z,28nm,0.4s						
QIZ	**Qiongzhong**	**14.95**	**104**	P	**Pn**	**19 03 50.8**	**+2.8**
QIZ				*e*S	**Sn**	**19 06 29.3**	**-4.1**
QIZ				AMB	AMB		
	comp=Z,112nm,1.0s						
QIZ	**Qiongzhong**	**14.95**	**104**	*e*P	**Pn**	**19 03 50.4**	**+2.4**
	comp=Z,104nm,0.9s						
LZH	**Lanzhou**	**15.04**	**30**	*e*P	**Pn**	**19 03 46.5**	**-2.6**
LZH				XP	sP	19 04 13.5	-14
LZH				*e*S	**S**	**19 06 29.0**	**-16**
LZH				XS		19 06 49.0	
LZH				SS		19 06 55.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.3s						
LZH				AMB	AMB		
	comp=Z,90nm,4.1s						
BHPL	**Bhopal**	**15.68**	**273**	*e*P	**Pn**	**19 03 56.6**	**-0.6**
BHPL				AMb	AMB	19 04 02.3	
	comp=Z,36nm,0.4s						
BHPL				*ex*	x	19 06 37.4	
HYB	**Hyderabad**	**16.07**	**251**	*e*P	**Pn**	**19 04 03.0**	**+1.0**
HYB				*e*S	**S**	**19 06 47.0**	**-19**
HYB	**Hyderabad**	**16.07**	**251**	*i* P	**Pn**	**19 04 03.0**	**+1.0**
HYB				*e*		19 06 47.0	
HYB				*e*S	**S**	**19 07 00.0**	**-5.8**
DDI	**Dehra Dun**	**16.21**	**299**	*e*P	**Pn**	**19 04 02.5**	**-1.2**
DDI				*ex*	x	19 06 49.0	
NDI	**New Delhi**	**16.40**	**292**	*e*P	**Pn**	**19 04 07.5**	**+1.5**
NDI				*ex*	x	19 06 50.5	
AKL	**Akola**	**16.42**	**264**	*e*P	**Pn**	**19 04 05.6**	**-0.7**
XAN	**Xi'an**	**16.51**	**47**	P	**Pn**	**19 04 05.5**	**-1.8**
XAN				AMB	AMB		
	comp=Z,17nm,0.7s						
XAN				AMB	AMB		
	comp=Z,88nm,5.4s						
GTA	**Gaotai**	**16.62**	**15**	*e*P	**Pn**	**19 04 06.0**	**-2.6**
SMLA	**Simla**	**17.22**	**300**	*i* P	**Pn**	**19 04 15.3**	**-0.7**
SMLA				*i* x	x	19 07 15.8	
LATR	**Latur**	**17.46**	**257**	*ex*	x	19 07 23.0	
SDNR	**Sundarnagar**	**17.52**	**301**	*e*P	**Pn**	**19 04 20.0**	**+0.4**
SDNR				*ex*	x	19 07 27.0	
BSI	**Banda Aceh**	**17.78**	**177**	P	**Pn**	**19 04 24.7**	**+1.8**
	comp=Z,386nm,1.1s						
BHK	**Bhakra**	**17.93**	**300**	*ex*	x	19 07 30.4	
AJM	**Ajmer**	**18.27**	**284**	*e*P	**P**	**19 04 27.0**	**-0.3**
AJM				*ex*	x	19 07 32.7	
DLH	**Dalhousie**	**18.72**	**303**	*e*P	**P**	**19 04 32.0**	**-0.2**
THN	**Thein Dam**	**18.87**	**303**	*e*P	**P**	**19 04 34.2**	**+0.4**
THN				*ex*	x	19 07 55.6	
WHN	**Wuhan**	**19.08**	**64**	P	**P**	**19 04 35.5**	**-0.6**
IPM	**Ipoh**	**19.81**	**160**	P	**P**	**19 04 43.1**	**-1.0**
	comp=Z,150nm,0.8s,comp=Z,1μm						
POO	**Poona**	**19.87**	**260**	*e*P	**P**	**19 04 45.0**	**+0.3**
POO				*i* x	x	19 08 15.0	
KOD	**Kodaikanal**	**20.85**	**234**	*e*P	**P**	**19 04 57.1**	**+1.7**
WMQ	**Urumqi**	**21.16**	**346**	*e*P	**P**	**19 04 58.5**	**+0.2**
NIL	**Nilore**	**21.25**	**304**	*e*P	**P**	**19 04 59.6**	**+0.1**
	comp=Z,32nm,0.5s,mb4.9						
NIL	**Nilore**	**21.25**	**304**	*e*P	**P**	**19 04 59.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,32nm,0.5s,mb4.9						
MNGI	**Mangalore**	**21.35**	**244**	*ex*	x	19 05 15.2	
MYKOM	**Kota Tinggi**	**23.29**	**156**	P	**P**	**19 05 20.9**	**+0.7**
ULHL	**Ulahol**	**24.19**	**325**	P	**P**	**19 05 30.4**	**+2.2**
	SNR=41						
PPI	**Padang Panjang**	**24.37**	**166**	P	**P**	**19 05 28.9**	**-1.1**
	comp=Z,26nm,1.1s,comp=Z,2μm,mb4.5						
KZA	**Kyzart**	**24.60**	**324**	P	**P**	**19 05 34.5**	**+2.6**
	SNR=6.5						
PDSI	**Padang**	**24.82**	**166**	P	**P**	**19 05 32.3**	**-1.9**
	comp=Z,47nm,1.3s,comp=Z,1μm,mb4.8						
KBL	**Kabul**	**24.83**	**302**	*e*P	**P**	**19 05 35.9**	**+1.8**
	comp=Z,66nm,0.5s,mb5.3						
KBL	**Kabul**	**24.83**	**302**	*e*P	**P**	**19 05 35.9**	**+1.8**
KBL				pmax	pmax		
	comp=Z,66nm,0.5s,mb5.3						
TKM2	**Tokmak 2**	**25.01**	**326**	*i* P	**P**	**19 05 37.3**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,69nm,0.6s,mb5.3						
TKM2	**Tokmak 2**	**25.01**	**326**	P	**P**	**19 05 37.5**	**+1.9**
	SNR=97						
KBK	**Karagaybulak**	**25.16**	**325**	P	**P**	**19 05 39.4**	**+2.3**
	SNR=50						
MK31	**Makanchi Array**	**25.36**	**340**	*e*P	**P**	**19 05 39.7**	**+1.0**
MK31	**Makanchi Array**	**25.36**	**340**	*i* P	**P**	**19 05 39.7**	**+1.0**
MK31				pmax	pmax		
	comp=Z,88nm,0.5s,mb5.5						
MKAR	**Makanchi Array**	**25.36**	**340**	P	**P**	**19 05 38.8**	**+0.1**
	comp=Z,75nm,0.5s,mb5.4,baz=159,slow=8.4,SNR=141						
MKAR				pP	pP	19 06 02.8	-1.0
	comp=Z,8.9nm,0.5s,baz=192,slow=9.7,SNR=1.8						
MKAR				PcP	PcP	19 09 08.6	+0.3
	comp=Z,1.2nm,0.4s,baz=138,slow=3.5,SNR=2.8						
MKAR				ScP	ScP	19 12 36.9	-0.1
	comp=Z,2.6nm,0.8s,baz=184,slow=3.3,SNR=8.1						
MKAR	**Makanchi Array**	**25.36**	**340**	P	**P**	**19 05 38.8**	**+0.1**
MKAR				*PP	pP	19 06 02.8	-0.9
MKAR						19 09 08.6	
AAK	**Ala-Archa**	**25.39**	**324**	P	**P**	**19 05 41.2**	**+2.1**
	comp=Z,251nm,0.9s,mb5.6,SNR=26						
AAK	**Ala-Archa**	**25.39**	**324**	*e*P	**P**	**19 05 40.2**	**+1.1**
	comp=Z,31nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**25.39**	**324**	*e*P	**P**	**19 05 40.2**	**+1.1**
AAK				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**25.39**	**324**	P	**P**	**19 05 41.2**	**+2.1**
	SNR=33						
FRU	**Bishkek**	**25.46**	**324**	*e*P	**P**	**19 05 40.0**	**+0.3**
AML	**Almayashu**	**25.50**	**322**	P	**P**	**19 05 42.5**	**+2.5**
	SNR=7.2						
CHMS	**Chumysh**	**25.50**	**325**	P	**P**	**19 05 41.5**	**+1.4**
	SNR=11						
EKS2	**Erkin-Say**	**25.80**	**323**	P	**P**	**19 05 45.0**	**+2.2**
	SNR=34						
USP	**Ospenovka**	**25.82**	**325**	P	**P**	**19 05 44.5**	**+1.5**
	SNR=18						
SONM	**Songino Array**	**26.20**	**18**	P	**P**	**19 05 45.0**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=196,slow=9.3,SNR=20						
SONM				pP	pP	19 06 10.8	-0.6
	comp=Z,16nm,1.1s,baz=197,slow=11,SNR=11						
SONM				ScP	ScP	19 12 39.1	-0.3
	comp=Z,3.0nm,0.9s,baz=184,slow=3.2,SNR=10						
SONM	**Songino Array**	**26.20**	**18**	P	**P**	**19 05 45.0**	**-1.3**
SONM				*PP	pP	19 06 10.8	-0.6
ULN	**Ulaanbaatar**	**26.42**	**19**	*e*P	**P**	**19 05 48.1**	**-0.2**
	comp=Z,3.1nm,0.4s,mb4.1						
ULN	**Ulaanbaatar**	**26.42**	**19**	*e*P	**P**	**19 05 48.1**	**-0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
ULN	**Ulaanbaatar**	**26.42**	**19**	P	**P**	**19 05 54.1**	**+5.8**
	comp=Z,18nm,1.1s,mb4.4						
PPBI	**Pangkal Pinang**	**27.79**	**154**	P	**P**	**19 06 01.5**	**+0.6**
	comp=Z,33nm,0.8s,mb4.9						
KK31	**Karatay Array**	**27.94**	**321**	*i* P	**P**	**19 06 02.6**	**+0.7**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
STKI	**Sintang**	**28.44**	**142**	P	**P**	**19 06 07.9**	**+1.2**
	comp=Z,21nm,1.0s,mb4.6						
KURK	**Kurchatov**	**29.96**	**340**	P	**P**	**19 06 19.4**	**-0.4**
	comp=Z,13nm,0.6s,mb4.8,baz=149,slow=9.8,SNR=48						
KURK				pP	pP	19 06 45.1	0.0
	comp=Z,4.9nm,0.7s,baz=162,slow=7.4,SNR=4.6						
KURK				PcP	PcP	19 09 19.4	0.0
	comp=Z,6.1nm,0.6s,baz=166,slow=2.2,SNR=8.7						
KURK				pPcP		19 09 48.2	
	comp=Z,11nm,0.9s,baz=164,slow=2.3,SNR=13						
KURK				ScP	ScP	19 12 51.0	+0.1
	comp=Z,12nm,0.8s,baz=154,slow=2.7,SNR=28						
KURK	**Kurchatov**	**29.96**	**340**	P	**P**	**19 06 19.4**	**-0.4**
KURK				pP	pP	19 06 45.1	0.0
KURK				PcP	PcP	19 09 19.4	0.0
KURK				pPcP		19 09 48.2	
KURK				ScP	ScP	19 12 51.0	+0.1
KURK	**Kurchatov**	**29.96**	**340**	P	**P**	**19 06 19.4**	**-0.4**
KURK				*PP	pP	19 06 45.2	0.0
KURK						19 09 19.4	
KURK						19 12 51.0	
ZAA0	**Zalesovo Array**	**31.40**	**349**	*e*P	**P**	**19 06 32.5**	**+0.2**
ZALV	**Zalesovo Beam**	**31.40**	**349**	P	**P**	**19 06 32.4**	**+0.1**
	comp=Z,14nm,0.4s,mb5.0,baz=174,slow=8.7,SNR=96						
ZALV				pP	pP	19 06 57.1	-0.7
	comp=Z,2.5nm,0.4s,baz=186,slow=10,SNR=2.0						
ZALV				PcP	PcP	19 09 23.5	+0.3
	comp=Z,3.2nm,1.0s,baz=151,slow=6.3,SNR=2.3						
ZALV				ScP	ScP	19 12 55.2	-0.4
	comp=Z,1.0nm,0.4s,baz=161,slow=3.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**31.40**	**349**	P	**P**	**19 06 32.4**	**+0.1**
ZALV				pP	pP	19 06 57.1	-0.7
ZALV				PcP	PcP	19 09 23.4	+0.3
ZALV				ScP	ScP	19 12 55.2	-0.4
ZALV	**Zalesovo Beam**	**31.40**	**349**	P	**P**	**19 06 32.4**	**+0.1**
ZALV				*PP	pP	19 06 57.1	-0.7
ZALV						19 09 23.5	
KSRS	**Korea Array**	**31.88**	**56**	P	**P**	**19 06 36.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=225,slow=6.7,SNR=2.6						
KSRS				ScP	ScP	19 12 56.4	-1.2
	comp=Z,2.2nm,0.8s,baz=240,slow=3.3,SNR=5.2						
DBJI	**Dramaga**	**32.06**	**157**	P	**P**	**19 06 37.1**	**-1.4**
	comp=Z,58nm,1.0s,mb5.3						
NVS	**Novosibirsk**	**32.54**	**348**	*e*P	**P**	**19 06 40.7**	**-1.6**
NVS				*e*PP	pP	19 07 07.2	-0.7
NVS				*e*S	**S**	**19 11 46.9**	**-2.0**
NVS				pmax	pmax		
	comp=N,26nm,0.5s						
NVS				pmax	pmax		
	comp=E,20nm,0.5s						
NVS				pmax	pmax		
	comp=Z,32nm,0.5s,mb5.4						
NVS				smax			
	comp=N,20nm,1.4s						
NVS				smax			
	comp=E,15nm,0.7s						
KRAR	**Krasnoyarsk**	**32.63**	**358**	⇑*i* P	**P**	**19 06 43.2**	**+0.1**
KRAR				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.9						
BJII	**Banjamegara**	**33.94**	**152**	P	**P**	**19 06 56.2**	**+1.2**
VOSK	**Vostochnaya**	**34.35**	**335**	P	**P**	**19 06 58.7**	**+0.6**
VOSK				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.1						
BVA0	**Borovoye Array**	**34.82**	**334**	*i* P	**P**	**19 07 02.5**	**+0.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
BVAR	**Borovoye Array**	**34.82**	**334**	P	**P**	**19 07 02.7**	**+0.6**
	comp=Z,16nm,0.6s,mb5.0,baz=142,slow=11,SNR=82						
BVAR				pP	pP	19 07 28.3	+0.5
	comp=Z,3.0nm,0.5s,baz=132,slow=11,SNR=3.1						
BVAR				PcP	PcP	19 09 32.9	+0.2
	comp=Z,3.2nm,0.3s,baz=147,slow=4.5,SNR=15						
BVAR				pPcP		19 10 02.8	
	comp=Z,6.5nm,0.8s,baz=141,slow=5.0,SNR=8.4						
BVAR				ScP	ScP	19 13 08.0	+0.5
	comp=Z,2.7nm,0.7s,baz=138,slow=4.5,SNR=12						
BVAR	**Borovoye Array**	**34.82**	**334**	P	**P**	**19 07 02.7**	**+0.6**
BVAR				*PP	pP	19 07 28.3	+0.5
BVAR						19 09 32.9	
BRVK	**Borovoye**	**34.88**	**334**	*e*P	**P**	**19 07 02.6**	**-0.1**
	comp=Z,9.2nm,0.6s,mb4.8						
BRVK	**Borovoye**	**34.88**	**334**	*e*P	**P**	**19 07 02.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
SJI	**Sawahan**	**35.22**	**149**	P	**P**	**19 07 06.7**	**+0.7**
AB31	**Akbulak array**	**37.45**	**322**	P	**P**	**19 07 25.8**	**+1.2**
AB31				pmax	pmax		
	comp=Z,17nm,0.4s,mb5.3						
KAPI	**Kappang**	**37.47**	**136**	P	**P**	**19 07 24.4**	**-0.7**
	comp=Z,5.1nm,0.4s,mb4.8,baz=233,slow=2.9,SNR=5.1						
KAPI	**Kappang**	**37.47**	**136**	P	**P**	**19 07 26.2**	**+1.1**
	comp=Z,6.5nm,1.4s,mb4.4						
KDI	**Kendari**	**38.60**	**131**	P	**P**	**19 07 34.7**	**+0.1**
	comp=Z,22nm,0.8s,comp=Z,2μm,mb5.0						
AKTK	**Aktyubinsk**	**39.13**	**323**	P	**P**	**19 07 39.3**	**+0.7**
AKTK				ScP	ScP	19 13 23.8	0.0
AKTO	**Aktyubinsk**	**39.13**	**323**	P	**P**	**19 07 39.3**	**+0.7**
	comp=Z,8.6nm,0.3s,mb5.0,baz=116,slow=8.1,SNR=49						
AKTO				ScP	ScP	19 13 23.8	0.0
	comp=Z,3.7nm,0.6s,baz=113,slow=7.4,SNR=9.4						
MJAR	**Matsushiro Arr**	**39.76**	**60**	P	**P**	**19 07 42.4**	**-1.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=269,slow=8.8,SNR=5.4						
MJAR				pP	pP	19 08 08.7	-1.6
	comp=Z,3.9nm,1.0s,baz=259,slow=9.0,SNR=4.8						
MJAR				ScP	ScP	19 13 25.0	-1.5
	comp=Z,3.3nm,0.9s,baz=263,slow=4.7,SNR=5.6						
MJAR	**Matsushiro Arr**	**39.76**	**60**	P	**P**	**19 07 42.4**	**-1.7**
MJAR				*PP	pP	19 08 08.7	-1.6
SVE	**Sverdlovsk**	**41.50**	**332**	*e*P	**P**	**19 07 59.3**	**+1.3**
SVE				*e*	pP	19 08 24.1	-0.3
SVE				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.5						
UMR	**Umm Al-Rimmam**	**42.11**	**289**	*e*P	**P**	**19 08 04.6**	**+1.2**
	baz=289						
KBD	**Kabd**	**42.15**	**288**	*e*P	**P**	**19 08 04.9**	**+1.2**
	baz=288						
KBD				AMb	AMB	19 08 05.8	
	comp=Z,23nm,0.7s,mb5.0,baz=288						
ARU	**Arti**	**42.16**	**331**	*e*P	**P**	**19 08 03.9**	**+0.5**
	comp=Z,27nm,0.4s,mb5.3						
ARU	**Arti**	**42.16**	**331**	*d* iP	**P**	**19 08 04.1**	**+0.7**
ARU				*e*		19 09 43.8	
ARU				*e*S	**S**	**19 14 16.4**	**+2.0**
ARU				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.0						
RDF	**Al-Radifah**	**42.29**	**288**	*e*P	**P**	**19 08 06.1**	**+1.2**
	baz=288						
RDF				AMb	AMB	19 08 07.0	
	comp=Z,69nm,0.5s,mb5.6,baz=288						
MIB	**Mutribah**	**42.42**	**289**	*e*P	**P**	**19 08 07.1**	**+1.2**
	baz=289						
MIB				AMb	AMB	19 08 08.5	
	comp=Z,47nm,0.8s,mb5.3,baz=289						
NAY	**Al-Naaiem**	**42.54**	**288**	*e*P	**P**	**19 08 08.0**	**+1.1**
	baz=288						
NAY				AMb	AMB	19 08 09.4	
	comp=Z,33nm,0.8s,mb5.1,baz=288						
BATI	**Baumata**	**43.91**	**136**	P	**P**	**19 08 16.1**	**-1.9**
	comp=Z,96nm,0.6s,mb5.7,baz=350,slow=1.4,SNR=45						
BATI				PcP	PcP	19 10 01.4	-0.7
	comp=Z,16nm,0.4s,baz=227,slow=1.7,SNR=4.2						
BATI	**Baumata**	**43.91**	**136**	P	**P**	**19 08 16.3**	**-1.7**
	comp=Z,93nm,0.8s,comp=Z,797nm,mb5.6						
SOKR	**Solikamsk**	**44.80**	**334**	*d* iP	**P**	**19 08 25.6**	**+1.1**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
KIV	**Kislovodsk**	**46.91**	**309**	*e*P	**P**	**19 08 42.9**	**+1.5**
	comp=Z,26nm,0.6s,mb5.2						
KIV	**Kislovodsk**	**46.91**	**309**	⇑*e*P	**P**	**19 08 43.1**	**+1.7**
KIV				*i* *PP	pP	19 09 10.5	+2.2
KIV				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
GUMO	**Guam**	**48.55**	**92**	P	**P**	**19 08 53.7**	**-0.7**
	comp=Z,35nm,0.8s,mb5.3,baz=204,slow=20,SNR=2.4						
SOC	**Sochi**	**49.00**	**308**	*i* P	**P**	**19 09 06.8**	**+9.3**
MBWA	**Marble Bar**	**50.63**	**149**	*e*P	**P**	**19 09 09.6**	**-0.4**
	comp=Z,32nm,0.6s,mb5.5						
ASF	**Jabal al Asfar**	**51.20**	**293**	P	**P**	**19 09 15.9**	**+1.6**
	comp=Z,5.6nm,0.6s,mb4.8,baz=325,slow=6.4,SNR=12						
KAKA	**Kakadu**	**51.62**	**130**	*e*P	x	19 09 00.2	
	comp=Z,8.9nm,0.6s						
TIXI	**Tiksi**	**52.10**	**13**	*e*P	**P**	**19 09 18.2**	**-2.1**
	comp=Z,5.7nm,0.4s,mb5.0						
TIXI	**Tiksi**	**52.10**	**13**	⇑*i* P	**P**	**19 09 19.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MMAI	**Mount Meron Ar**	**52.38**	**294**	P	**P**	**19 09 24.6**	**+1.6**
	com

CTA	**Charters Tower**	**66.42 126**	P	**P**	**19 10 59.3**	**-0.3**
	comp=Z,8.3nm,0.8s,mb4.6,baz=322,slow=9.1,SNR=8.5					
CTA	**Charters Tower**	**66.42 126**	*eP*	**P**	**19 10 59.3**	**-0.4**
CTA			pmax	pmax		
	comp=Z,6.0nm,0.9s					
NOA	**NORSAR Array B**	**66.62 328**	P	**P**	**19 11 01.4**	**+1.1**
	comp=Z,70nm,0.7s,mb5.6,baz=101,slow=16,SNR=64					
GERES	**GERESS Array B**	**66.85 315**	P	**P**	**19 11 02.3**	**+0.3**
	comp=Z,3.6nm,0.5s,mb4.5,baz=67,slow=6.0,SNR=34					
GERES	**GERESS Array B**	**66.85 315**	P	**P**	**19 11 02.3**	**+0.3**
GERES	**GERESS Array B**	**66.85 315**	P	**P**	**19 11 02.3**	**+0.3**
VOY	**Vojsko**	**67.20 312**	*eP*	**P**	**19 11 04.4**	**+0.1**
VOY			*e*		19 11 09.7	
STKA	**Stephens Creek**	**71.04 139**⇑	*iP*	**P**	**19 11 27.4**	**-0.7**
	comp=Z,8.3nm,0.6s,mb4.7					
STKA	**Stephens Creek**	**71.04 139**	P	**P**	**19 11 27.5**	**-0.6**
	comp=Z,7.7nm,0.5s,mb4.8,baz=324,slow=5.2,SNR=41					
EKA	**Eskdalemuir Ar**	**75.30 324**	P	**P**	**19 11 52.3**	**-0.6**
	comp=Z,63nm,0.9s,mb5.4,baz=241,slow=2.8,SNR=1.8					
LSZ	**Lusaka**	**75.33 246**	*eP*	**P**	**19 11 54.2**	**+0.5**
	comp=Z,15nm,0.5s,mb5.0					
LSZ	**Lusaka**	**75.33 246**	*eP*	**P**	**19 11 54.2**	**+0.5**
LSZ			pmax	pmax		
	comp=Z,15nm,0.5s,mb5.0					
TOO	**Toolangi**	**77.28 141**	*eP*	**P**	**19 12 04.3**	**+0.1**
CNB	**Canberra Magne**	**78.14 137**	*eP*	**P**	**19 12 05.7**	**-3.3**
LBTB	**Lobatse**	**82.28 239**	*eP*	**P**	**19 12 32.5**	**+1.0**
	comp=Z,18nm,0.8s,mb4.9					
LBTB	**Lobatse**	**82.28 239**	*eP*	**P**	**19 12 32.5**	**+1.0**
LBTB			pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0					
NOUC	**Port Laguerre**	**83.19 117**	*eS*	S	19 22 44.6	-2.5
BOSA	**Boshof**	**84.34 236**	P	**P**	**19 12 42.9**	**+0.9**
	comp=Z,25nm,0.6s,mb5.2,baz=53,slow=3.6,SNR=49					
BOSA			pP	pP	19 13 11.6	-0.2
	comp=Z,9.2nm,0.8s,baz=45,slow=3.9,SNR=3.7					
TXAR	**Lajitas Array**	**124.77 19**	PKP	PKPdf	19 19 09.3	0.0
	comp=Z,4.9nm,0.8s,baz=1.4,slow=3.6,SNR=2.4					
USHA	**Ushuaia**	**146.09 198**	PKPbc	PKPbc	19 19 49.1	+0.3
	comp=Z,20nm,0.8s,baz=61,slow=1.8,SNR=5.2					

IDC 29 19:05:54.4±9.5, 2342N×14280E, h0km, mb4.3/2, mb1 4.3/4, mb1mx4.0/22, mbtmp4.3/4, ML4.5/1, Error ellipse: s-maj=224.2km s-min=96.0km az=89.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Ar**	**13.67 344**		Pn	Pn	19 09 09.5	0.0
	2.1nm,0.3s,baz=157,slow=10,SNR=20						
MAT	**Matsushiro**	**13.67 344**		P	Pn	19 09 09.9	+0.3
KSRS	**Korea Array**	**18.95 321**		P	Pn	19 10 17.7	+0.1
	0.6nm,0.3s,baz=136,slow=11,SNR=18						
SONM	**Songino Array**	**37.80 319**		P	P	19 13 11.5	-0.9
	1.6nm,0.7s,baz=130,slow=6.5,SNR=6.4						
KURK	**Kurchatov**	**55.99 316**		P	P	19 15 35.5	+0.9
	5.1nm,0.7s,baz=89,slow=7.0,SNR=8.5						

*LDG **29** 19:06:42.8±0.5, 1531S×16898E, h110km, Error ellipse: s-maj=97.4km s-min=5.0km az=104.0*
*BJI **29** 19:06:44.9, 1520S×16750E, h137km, mB4.9, mb4.9*
*ISCJB **29** 19:06:45.8±1.4, 1527S±006×16750E±009, h143km±12km, mb4.9/24, Error ellipse: s-maj=14.4km s-min=9.6km az=159.5*
*IDC **29** 19:06:45.6±2.1, 1521S×16751E, h127km±17km, mb4.6/13, mb1 4.6/14, mb1mx4.6/24, mbtmp4.6/14, MS5.8/1, Ms1 5.8/1, ms1mx4.4/32, Error ellipse: s-maj=16.4km s-min=12.9km az=53.0*
*MOS **29** 19:06:45.1±1.4, 1550S×16737E, h120km, mb4.9/2, Error ellipse: s-maj=15.9km s-min=12.3km az=174.3*
*NEIC **29** 19:06:46.9±1.2, 1523S×16748E, h138km±10km, mb5.1/7, Error ellipse: s-maj=8.8km s-min=8.2km az=72.0*
*DJA **29** 19:07:53, 1590S×164.12E, h650km, mb4.6/14*

ISC 29 19:06:46.8±1.3, 1525S±006×16750E±008, h133km±11km, n109, σ0§95/51, mb4.9/24, 34C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.86 188**		*eP*	**Pn**	**19 08 24.3**	**-0.6**
DZM				*eS*	**Sn**	**19 09 42.4**	**+0.8**
DZM	**Mont Dzumac**	**6.86 188**		*eP*	**Pn**	**19 08 24.1**	**-0.8**
	79nm,0.4s						
NOUC	**Port Laguerre**	**6.91 189**		*eP*	**Pn**	**19 08 24.6**	**-0.9**
NOUC				*eS*	**Sn**	**19 09 42.8**	**0.0**
HNR	**Honiara**	**9.37 307**		P	**Pn**	**19 08 58.8**	**+0.1**
	25nm,0.3s,baz=144,slow=0.7,SNR=11						
EIDS	**Eidsvold**	**18.38 234**		*eP*	**P**	**19 10 53.6**	**+2.2**
	27nm,0.9s						
AFI	**Afiamalu**	**20.10 89**		P	**P**	**19 11 10.9**	**+0.7**
	57nm,1.0s,baz=138,slow=14,SNR=2.2						
CTA	**Charters Tower**	**20.80 254**		P	**P**	**19 11 18.8**	**+1.1**
	7.9nm,0.7s,baz=85,slow=13,SNR=12						
CTA				PcP	PcP	19 15 20.9	-0.5
	4.3nm,0.7s,baz=43,slow=4.0,SNR=3.6						
CTAO	**Charters Tower**	**20.80 254**		P	**P**	**19 11 25.3**	**+7.6**
	25nm,1.0s						
ARMA	**Armidale**	**20.98 221**		*eP*	**P**	**19 11 20.6**	**+1.1**
URZ	**Urewera**	**24.44 161**		P	**P**	**19 11 52.8**	**-0.3**
	21nm,0.4s,mb5.0,baz=349,slow=9.5,SNR=16						
RPZ	**Rata Peaks**	**28.54 175**		P	**P**	**19 12 29.6**	**-0.2**
	35nm,0.7s,mb5.2,baz=280,slow=2.2,SNR=19						
STKA	**Stephens Creek**	**28.83 230**⇑	*iP*		**P**	**19 12 33.3**	**+0.7**
	21nm,0.4s,mb5.2						
STKA	**Stephens Creek**	**28.83 230**		*eP*	PcP	19 15 38.7	-0.3
	15nm,0.7s						
STKA	**Stephens Creek**	**28.83 230**		P	**P**	**19 12 33.3**	**+0.7**
	23nm,0.4s,mb5.3,baz=51,slow=7.5,SNR=51						
STKA				PcP	PcP	19 15 38.6	-0.4
	19nm,0.7s,baz=64,slow=2.4,SNR=15						
STKA				ScP	ScP	19 19 10.2	+2.0
	2.4nm,0.7s,baz=316,slow=5.1,SNR=5.3						
STKA				LR	LR	19 24 17.8	
	comp=Z,21μm,20.7s,baz=298,slow=36						
TOO	**Toolangi**	**29.57 217**		*eP*	**P**	**19 12 39.4**	**+0.4**
WB2	**Warramunga Ar**	**31.91 257**		*eP*	**P**	**19 12 58.0**	**-1.8**
WRAB	**Tennant Creek**	**31.91 257**		*eP*	**P**	**19 12 58.1**	**-1.7**
WRAB	**Tennant Creek**	**31.91 257**		P	**P**	**19 12 58.4**	**-1.4**
	18nm,1.4s,mb4.6						
MOO	**Moorlands**	**32.24 209**		*eP*	**P**	**19 13 02.8**	**+0.4**
ASAR	**Alice Springs**	**32.70 250**		P	**P**	**19 13 05.4**	**-1.3**
	26nm,0.5s,mb5.3,baz=76,slow=9.2,SNR=106						
ASAR				PcP	PcP	19 15 48.2	-1.2
	2.2nm,0.5s,baz=89,slow=2.4,SNR=5.7						
ASAR				ScP	ScP	19 19 21.8	+0.6
	2.0nm,0.9s,baz=96,slow=3.0,SNR=8.2						
ASAR	**Alice Springs**	**32.70 250**		P	**P**	**19 13 05.4**	**-1.3**
ASAR						19 15 48.2	
FORT	**Forrest**	**39.23 240**⇑	*iP*		**P**	**19 14 02.1**	**-0.1**
	65nm,0.6s,mb5.4						
LBMI	**Labuha**	**42.07 286**		P	**P**	**19 14 28.4**	**+2.6**
	32nm,1.6s,mb4.7						
BATI	**Baumata**	**43.00 271**		P	**P**	**19 14 33.1**	**-0.2**
	32nm,0.6s,mb5.1,baz=160,slow=3.7,SNR=13						
BATI	**Baumata**	**43.00 271**		P	**P**	**19 14 34.4**	**+1.1**
	40nm,1.0s,mb5.0						
MBWA	**Marble Bar**	**45.62 255**		P	**P**	**19 14 54.0**	**-0.1**
	47nm,1.1s,mb5.0						
KAPI	**Kappang**	**47.99 277**		P	**P**	**19 15 11.6**	**-1.0**
	17nm,0.7s,mb4.8,baz=124,slow=4.7,SNR=14						
KAPI				PcP	PcP	19 16 37.7	-1.1
	3.2nm,0.6s,baz=135,slow=4.3,SNR=2.7						
KAPI	**Kappang**	**47.99 277**		P	**P**	**19 15 11.8**	**-0.8**
	20nm,1.3s,mb4.6						
KLBR	**Kellerberrin**	**48.05 241**		*eP*	**P**	**19 15 11.6**	**-1.2**
	21nm,0.7s,mb4.9						
NWAO	**Narrogin (SRO)**	**48.68 239**		P	**P**	**19 15 16.7**	**-0.9**
	29nm,0.8s,mb4.9,baz=72,slow=4.6,SNR=17						
PCI	**Palu**	**49.15 282**		P	**P**	**19 15 23.0**	**+1.5**
	79nm,1.1s,mb5.3						
MUN	**Mundaring**	**49.40 241**		*eP*	**P**	**19 15 22.3**	**-0.9**
KHKI	**Kahang-Kahang**	**51.15 271**		P	**P**	**19 15 36.5**	**-0.1**
DRV	**Dumont d'Urvil**	**54.49 193**		Pdif	**P**	**19 15 54.0**	**-6.2**
DRV	**Dumont d'Urvil**	**54.49 193**		Pdif	**P**	**19 15 54.0**	**-6.2**
SJI	**Sawahan**	**55.00 271**		P	**P**	**19 16 05.1**	**+0.3**
STKI	**Sintang**	**57.37 280**		P	**P**	**19 16 22.6**	**+0.9**
	23nm,0.9s,724nm,mb5.0						
MJAR	**Matsushiro Ar**	**58.46 332**		P	**P**	**19 16 27.4**	**-1.4**
	2.9nm,0.6s,mb4.3,baz=171,slow=7.4,SNR=8.1						
DBJI	**Dramaga**	**60.12 271**		P	**P**	**19 16 40.6**	**0.0**
	76nm,1.5s,mb5.3						
VNDA	**Vanda**	**62.35 181**		P	**P**	**19 16 53.9**	**-0.8**
	10nm,0.6s,mb4.9,baz=358,slow=5.0,SNR=22						

SBA	**Scott Base**	**62.62 180**		*eP*	**P**	**19 16 57.2**	**+0.8**
	43nm,1.1s,mb5.2						
SBA	**Scott Base**	**62.62 180**		*eP*	**P**	**19 16 57.2**	**+0.8**
SBA				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.2						
KSRS	**Korea Array**	**64.29 326**		P	**P**	**19 17 07.0**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.0,baz=137,slow=8.2,SNR=6.2						
KSI	**Kapahiang**	**64.84 273**		P	**P**	**19 17 11.5**	**-0.6**
	comp=Z,56nm,0.8s,mb5.4						
GYA	**Guiyang**	**72.19 305**⇑	*iP*		**P**	**19 17 57.8**	**+0.4**
GYA				AMB	AMB		
	comp=Z,30nm,6.0s						
KMI	**Kunming**	**74.77 302**	⇑	P	**P**	**19 18 13.5**	**+0.9**
KMI				AMB	AMB		
	comp=Z,27nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**75.36 294**		P	**P**	**19 18 16.1**	**0.0**
	comp=Z,6.4nm,0.7s,mb4.4,baz=131,slow=4.9,SNR=57						
CHTO	**Chiang Mai**	**75.49 294**		*eP*	**P**	**19 18 16.8**	**-0.1**
	comp=Z,6.2nm,0.6s,mb4.4						
CHTO	**Chiang Mai**	**75.49 294**		*eP*	**P**	**19 18 16.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
LZH	**Lanzhou**	**78.83 312**		*eP*	**P**	**19 18 36.3**	**+1.2**
LZH				AMB	AMB		
	comp=Z,34nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,122nm,4.8s						
SYO	**Syowa Base**	**88.28 197**⇓	*ip*	PKiKP		19 19 05.2	
ARCES	**ARCESS Array B**	**120.81 345**		PKP	PKPdf	19 25 21.3	-1.2
	comp=Z,9.3nm,0.5s,baz=78,slow=1.1,SNR=19						
SUR	**Sutherland**	**122.91 214**		PKP	PKPdf	19 25 27.0	-0.7
	comp=Z,7.7nm,1.0s,baz=112,slow=5.4,SNR=3.8						
SUR	**Sutherland**	**122.91 214**		PKP	PKPdf	19 25 27.0	-0.7
BOSA	**Boshof**	**123.12 220**		PKP	PKPdf	19 25 27.7	-0.6
	comp=Z,5.4nm,0.7s,baz=125,slow=2.2,SNR=2.7						
LBTB	**Lobatse**	**125.40 223**		PKP	PKPdf	19 25 32.4	-0.3
	comp=Z,6.0nm,0.6s,baz=176,slow=2.4						
LSZ	**Lusaka**	**129.64 235**		PKP	PKPdf	19 25 41.1	+0.1
	comp=Z,3.5nm,0.4s,baz=161,slow=3.8,SNR=8.8						
NB2	**NORSAR Subarra**	**131.18 345**		PKPdf	PKPdf	19 25 42.2	-0.3
	comp=Z,13nm,1.4s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**131.18 345**		PKPdf	PKPdf	19 25 42.2	-0.3
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**131.18 345**		PKP	PKPdf	19 25 42.2	-0.3
	comp=Z,2.5nm,0.6s,baz=33,slow=2.0,SNR=4.9						
HFS	**Hagfors**	**131.28 343**		PKP	PKPdf	19 25 41.3	-1.4
	comp=Z,6.7nm,0.9s,baz=37,slow=3.7,SNR=3.2						
AKASG	**Malin Array Be**	**131.29 326**		PKP	PKPdf	19 25 42.0	-1.0
	comp=Z,1.1nm,0.6s,baz=49,slow=2.2,SNR=3.4						
GERES	**GERESS Array B**	**140.20 333**		PKhKP		19 25 51.5	
	comp=Z,1.7nm,0.6s,baz=49,slow=1.4,SNR=7.6						
GERES				PKP	PKPdf	19 25 59.6	-0.1
	comp=Z,1.9nm,0.6s,baz=29,slow=2.7,SNR=7.5						
FETA	**Feichten**	**142.89 333**		P	PKPdf	19 26 01.5	-3.1
	comp=Z,22nm,0.8s						
DAVA	**Damuels**	**143.04 334**		P	PKPdf	19 26 01.8	-3.0
	comp=Z,15nm,0.6s						
CDF	**Champ du Feu**	**143.14 338**		*e*PKP1	PKPdf	19 26 01.4	-3.5
	comp=Z,26nm,0.6s						
DAVOS	**Davos**	**143.43 334**		PKIKP	PKPdf	19 26 03.3	-2.2
DAVOX	**Davos/Dischmat**	**143.44 334**		PKP	PKPdf	19 26 03.2	-2.3
	comp=Z,28nm,0.5s,baz=5.8,slow=0.5,SNR=40						
HINF	**Hinteralfeld**	**143.79 338**		*e*PKP1	PKPdf	19 26 03.1	-3.0
	comp=Z,22nm,0.5s						
HAU	**Haudompre**	**143.81 338**⇑	*i*PKP1		PKPdf	19 26 03.5	-2.6
	comp=Z,53nm,0.8s						
MEZF	**Maizieres J'vi**	**143.83 340**⇑	*i*PKP1		PKPdf	19 26 03.8	-2.4
	comp=Z,48nm,0.6s						
TUE	**Stuetta**	**143.91 334**		*eP*	PKPdf	19 26 04.4	-2.0
CABF	**La Chapelle**	**145.09 337**⇑	*i*PKP1		PKPbc	19 26 08.4	+0.3
	comp=Z,111nm,0.5s						
CUC	**Castrocucco**	**145.10 320**		*e*PKPbc	PKPbc	19 26 06.7	-1.7
FLN	**La Foliniere**	**145.15 346**⇑	*i*PKP1		PKPbc	19 26 07.6	-0.7
	comp=Z,219nm,0.5s						
LDF	**La Druitiere**	**145.22 346**⇑	*i*PKP1		PKPbc	19 26 07.8	-0.7
	comp=Z,128nm,0.6s						
LOR	**Lormes**	**145.30 340**⇑	*i*PKP1		PKPbc	19 26 08.6	-0.2
	comp=Z,119nm,0.7s						
GRR	**Gorron**	**145.59 346**⇑	*i*PKP1		PKPbc	19 26 09.3	-0.3
	comp=Z,148nm,0.6s						
SSF	**Saint Saulge**	**145.59 341**⇑	*i*PKP1		PKPbc	19 26 09.7	0.0
	comp=Z,116nm,0.6s						
HYF	**Humbligny**	**145.68 342**⇑	*i*PKP1		PKPbc	19 26 10.2	+0.2
LPL	**La Plagne**	**145.75 336**⇑	*i*PKP1		PKPbc	19 26 10.6	+0.4
	comp=Z,71nm,0.6s						
LPG	**La Plagne**	**145.76 336**⇑	*i*PKP1		PKPbc	19 26 10.7	+0.4
	comp=Z,80nm,0.5s						
SMF	**Signal de Mont**	**145.85 340**⇑	*i*PKP1		PKPbc	19 26 10.0	-0.5
	comp=Z,82nm,0.9s						
AVF	**Avril sur Loir**	**145.88 340**⇑	*i*PKP1		PKPbc	19 26 10.1	-0.5
	comp=Z,89nm,0.6s						
SGMF	**Saint Gilles**	**146.08 348**⇑	*i*PKP1		PKPbc	19 26 10.6	-0.5
	comp=Z,98nm,0.6s						
ROSF	**Rostrenen**	**146.14 349**⇑	*i*PKP1		PKPbc	19 26 10.6	-0.7
	comp=Z,58nm,0.8s						
BNI	**Bardonecchia**	**146.16 335**		*e*PKPbc	PKPbc	19 26 11.6	+0.1
BGF	**Bois d'Agland**	**146.25 341**⇑	*i*PKP1		PKPbc	19 26 11.5	-0.2
	comp=Z,132nm,0.5s						
MBDF	**Montbardon**	**146.39 335**		*e*PKP1	PKPbc	19 26 11.8	-0.4
	comp=Z,55nm,0.6s						
QUIF	**Quistinic**	**146.52 349**⇑	*i*PKP1		PKPbc	19 26 11.7	-0.7
	comp=Z,30nm,0.6s						
ORIF	**Oris-en-Rattie**	**146.59 336**⇑	*i*PKP1		PKPbc	19 26 12.6	-0.1
	comp=Z,56nm,0.6s						
TCF	**Toulx Ste Croi**	**146.69 341**⇑	*i*PKP1		PKPbc	19 26 12.7	-0.3
	comp=Z,65nm,0.7s						
SBF	**Sospel**	**146.81 333**		*e*PKP1	PKPbc	19 26 13.5	+0.1
	comp=Z,191nm,0.9s						
MFF	**Saint Martin d**	**147.08 344**⇑	*i*PKP1		PKPbc	19 26 13.7	-0.4
	comp=Z,159nm,0.7s						
VIVF	**Saint-Julien-l**	**147.10 337**⇑	*i*PKP1		PKPbc	19 26 14.0	-0.2
	comp=Z,65nm,1.1s						
PGF	**Pioggiola**	**147.11 330**⇑	*i*PKP1		PKPbc	19 26 13.7	-0.6
	comp=Z,55nm,0.7s						
FRF	**La Foret Royal**	**147.39 334**⇑	*i*PKP1		PKPbc	19 26 14.3	-0.7
	comp=Z,60nm,0.9s						
SMRF	**Simiane la Rot**	**147.49 335**⇑	*i*PKP1		PKPbc	19 26 15.2	-0.1
	comp=Z,41nm,0.8s						
LMR	**La Mourre**	**147.63 334**⇑	*i*PKP1		PKPbc	19 26 14.9	-0.8
	comp=Z,77nm,1.1s						
RJF	**Les Rejaudoux**	**147.79 341**⇑	*i*PKP1		PKPbc	19 26 15.8	-0.2
	comp=Z,34nm,0.6s						
CAF	**Calviac**	**147.95 340**⇑	*i*PKP1		PKPbc	19 26 16.4	-0.1
	comp=Z,48nm,1.0s						
LASF	**Ste Croix**	**148.07 337**		*e*PKP1	PKPbc	19 26 16.7	-0.1
	comp=Z,66nm,0.9s						
LFF	**La Frestale**	**148.35 342**⇑	*i*PKP1		PKPbc	19 26 17.3	-0.2
	comp=Z,70nm,0.7s						
MTLF	**Montolieu**	**149.30 339**⇑	*i*PKP1		PKPbc	19 26 19.8	-0.2
	comp=Z,27nm,0.7s						
EPF	**Esparros**	**150.20 341**		*e*PKP1	PKPbc	19 26 21.8	-0.4
SJPF	**Ste Jean**	**150.59 343**		*e*PKP1	PKPbc	19 26 23.1	0.0
	comp=Z,27nm,0.9s						
ETSF	**Etsaut**	**150.60 342**⇑	*i*PKP1		PKPbc	19 26 23.4	+0.3
	comp=Z,22nm,0.5s						
KEST	**Kesra**	**151.75 320**		PKPbc	PKPbc	19 26 26.1	+0.1
	comp=Z,5.0nm,0.7s,baz=252,slow=1.6,SNR=22						
TORD	**Torodi Ar. Bea**	**166.08 263**		PKP	PKPdf	19 26 35.5	-1.4
	comp=Z,5.0nm,0.6s,baz=17,slow=0.6,SNR=9.0						

TRN 29 19:16:25.2, 1512N×6109W, h142km, MD3.5, M2.9(FDF), 3C-7D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSHT	**Scott's Head**	**0.29 290**⇓		*eP*	Pn	19 16 46.5	+1.8
DSHT				*eS*	Sn	19 17 00.5	+0.9
FDF	**Fort de France**	**0.38 189**⇓		*eP*	Pn	19 16 46.5	+1.4
FDF			⇓	*eS*	Sn	19 17 01.9	+1.7
DWS	**Wesley**	**0.50 335**		*eP*	Pn	19 16 47.6	+2.0
DWS				*eS*	Sn	19 17 02.6	+1.4
MVM	**Montagne Vaucl**	**0.59 161**		*eP*	Pn	19 16 47.5	+1.4
BIM	**Bigot**	**0.59 178**⇓		*eP*	Pn	19 16 47.5	+1.3
BIM			⇓	*eS*	Sn	19 17 05.5	+3.3
HMG	**Houelmont**	**1.04 326**		*eP*	Pn	19 16 50.9	+1.3
HMG				*eS*	Sn	19 17 09.2	+1.0
SCG	**Saint Claude**	**1.07 328**		*eP*	Pn	19 16 50.8	+1.0
SCG				*eS*	Sn	19 17 09.9	+1.2
SLW	**Petit Monier**	**1.10 172**⇓		*eP*	Pn	19 16 51.0	+0.9
SLW			⇓	*eS*	Sn	19 17 09.7	+0.6
SFG	**Saint Francois**	**1.14 355**⇑		*eP*	Pn	19 16 51.6	+1.1
DEG	**La Desirade**	**1.19 1**⇑		*eP*	Pn	19 16 51.7	+0.7
DEG			⇑	*eS*	Sn	19 17 11.4	+0.7
LZG	**Guadaloupe-1**	**1.22 327**		*eP*	Pn	19 16 52.2	+0.9
SVV	**Soufriere Volc**	**1.79 184**		*e*	Sn	19 17 21.3	-0.8
BHS	**Barnard House**	**1.81 181**		*e*	Sn	19 17 21.2	-1.3
FCV	**Fort Charlotte**	**1.95 184**		*eP*	Pn	19 17 00.5	+1.2
FCV	**Fort Charlotte**	**1.95 184**		*e*	Sn	19 17 25.8	+0.3
FCV				*eS*	Sn	19 17 25.9	+0.4

KRSC 29 19:25:51.0±1.3, 5078N×15742E, h5km±5km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.79**	**22**	P	Pn	19 26 22.4	-0.1
RUS				S	Sn	19 26 45.3	-0.3
AVH	**Avacha**	**2.62**	**18**	P	Pn	19 26 35.8	+1.9
NLC	**Nalytchevo**	**2.67**	**26**	S	Sn	19 27 05.4	-2.0
SPN	**Mys Shipunski**	**2.83**	**34**	S	Sn	19 27 11.2	+0.1
GNL	**Ganaly**	**2.94**	**6**	P	Pn	19 26 41.5	+3.2

*ISCJB **29** 19:32:12.2±3.9, 220S±0.1×1282E±0.2, h51km±35km, mb4.1/5, Error ellipse: s-maj=39.3km s-min=17.2km az=152.0*
*NEIC **29** 19:32:19.3±0.9, 220S×12792E, h100km, Error ellipse: s-maj=23.3km s-min=13.8km az=48.0*
*IDC **29** 19:32:21.5±3.1, 226S×12778E, h120km±28km, mb3.7/5, mb1 3.8/6, mb1mx3.5/19, mbtmp3.7/6, Error ellipse: s-maj=41.0km s-min=14.2km az=66.0*

ISC 29 19:32:20.0±3.2, 22S±0.2×1279E±0.2, h107km±29km, n8, σ0§78/9, mb3.9/5, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.57 251**		P	**Pn**	**19 34 21.7**	**+0.4**
	1.2nm,0.3s,baz=98,slow=12,SNR=6.5						
WB2	**Warramunga Arr**	**18.71 161**		*eP*	**P**	**19 36 28.5**	**-1.8**
ASAR	**Alice Springs**	**22.09 165**		P	**P**	**19 37 06.7**	**0.0**
	5.5nm,0.4s,mb4.2,baz=344,slow=12,SNR=75						
ASAR				S	**S**	**19 41 03.7**	**+0.3**
	1.8nm,0.7s,baz=350,slow=20,SNR=7.1						
CTA	**Charters Tower**	**25.24 136**		P	**P**	**19 37 37.5**	**+1.2**
	5.3nm,0.8s,mb4.0,baz=314,slow=11,SNR=4.1						
CTA	**Charters Tower**	**25.24 136**		P	**P**	**19 37 37.5**	**+1.2**
STKA	**Stephens Creek**	**32.20 158**		P	**P**	**19 38 38.4**	**+0.4**
	1.1nm,0.4s,mb4.0,baz=348,slow=10.0,SNR=13						
MKAR	**Makanchi Array**	**63.10 327**		P	**P**	**19 42 36.0**	**-0.2**
	1.3nm,0.9s,mb3.9,baz=121,slow=6.7,SNR=4.3						
KURK	**Kurchatov**	**67.37 329**		P	**P**	**19 43 03.5**	**-0.2**
	0.5nm,0.5s,mb3.6,baz=119,slow=6.1,SNR=3.6						

*BGS **29** 19:34:33.5±1.4, 1379N×6284W, h148km, mb5.3*
*LDG **29** 19:34:42.9, 1515N×6150W, h140km*
*BJI **29** 19:34:43.2, 1510N×6140W, h146km, mB4.9*
*ISCJB **29** 19:34:45.4±0.1, 1515N±002×6130W±002, h152km±1km, mb5.0/169, Error ellipse: s-maj=3.2km s-min=2.5km az=18.3*
*TRN **29** 19:34:45.1, 1519N×6099W, h146km, MD4.5, M4.4(FDF)*
TRN Felt III Martinique.
*MOS **29** 19:34:45.6±0.8, 1520N×6135W, h152km, mb5.1/65, Error ellipse: s-maj=8.0km s-min=4.4km az=47.1*
*NEIC **29** 19:34:46.3±0.1, 1509N×6138W, mb5.1/112, Error ellipse: s-maj=3.6km s-min=2.6km az=174.0*
NEIC Felt [VI] at Oistins and [V] at Bridgetown, Barbados and [IV] at Saint George's, Grenada. Felt on Guadeloupe, Saint Kitts, Saint Lucia, Saint Martin and Saint Vincent. Also felt at Arima and Chaguanas, Trinidad and at Caracas, Venezuela.
*IDC **29** 19:34:46.1±0.6, 1509N×6134W, h145km±5km, mb4.6/27, mb1 4.7/29, mb1mx4.7/31, mbtmp4.6/29, Error ellipse: s-maj=10.2km s-min=8.2km az=78.0*

**ISC 29 19:34:

CCM Cathedral Cave 34.92 317 eP P 19 41 23.9 -0.6
CCM pmax pmax
comp=Z,31nm,0.9s,mb4.9
LVC Limon Verde 38.24 191 P P 19 41 50.5 -2.2
comp=Z,5.4nm,0.6s,mb4.4,baz=14,slow=7.4,SNR=4.5
LVC Limon Verde 38.24 191 P P 19 41 50.5 -2.2
JCT Junction City 38.42 300 eP P 19 41 51.3 -1.2
comp=Z,45nm,0.5s,mb5.3
JCT Junction City 38.42 300 eP P 19 41 53.1 -1.1
JCT pmax pmax
comp=Z,45nm,0.5s,mb5.3
WMOK Wichita Mounta 38.89 307 eP P 19 41 56.6 -1.5
comp=Z,59nm,0.5s,mb5.5
WMOK Wichita Mounta 38.89 307 eP P 19 41 56.6 -1.5
WMOK pmax pmax
comp=Z,59nm,0.5s,mb5.5
SCHQ Schefferville 39.85 355 P P 19 42 06.2 +0.5
comp=Z,32nm,0.4s,mb5.3,baz=172,slow=7.5,SNR=38
SCHQ PcP PcP 19 44 07.7 -0.9
comp=Z,5.0nm,0.5s,baz=203,slow=7.0,SNR=4.1
EYMN Ely 41.12 329 eP P 19 42 15.2 -1.2
comp=Z,13nm,0.6s,mb4.7
AMTX Amarillo 41.19 306 eP P 19 42 15.8 -1.2
comp=Z,36nm,0.4s,mb5.3
ECSD EROS,Sioux Fal 41.41 321 eP P 19 42 18.0 -0.7
comp=Z,41nm,0.7s,mb5.2
TXAR Lajitas Array 41.45 297 P P 19 42 18.7 -0.5
comp=Z,8.0nm,0.4s,mb4.7,baz=120,slow=7.6,SNR=163
TXAR PcP PcP 19 44 14.3 -0.1
comp=Z,3.5nm,0.6s,baz=121,slow=6.4,SNR=4.5
CHIE El Hierro 42.04 65 P P 19 42 24.3 +0.2
comp=Z,67nm,0.9s,mb5.3
AGMN Agassiz Refuge 43.60 327 eP P 19 42 35.3 -1.0
comp=Z,182nm,0.4s,mb6.1
ULM Lac du Bonnet 44.81 329 P P 19 42 44.7 -1.2
comp=Z,68nm,0.4s,mb5.7,baz=133,slow=8.3,SNR=95
ULM pP pP 19 43 18.3 -0.2
comp=Z,14nm,0.7s,baz=121,slow=6.3,SNR=2.0
ULM PcP PcP 19 44 24.1 -1.2
comp=Z,6.8nm,0.5s,baz=85,slow=6.1,SNR=3.2
ULM Lac du Bonnet 44.81 329 P P 19 42 44.7 -1.2
ULM pP pP 19 43 18.3 -0.2
ULM PcP PcP 19 44 24.1 -1.2
ANMO Albuquerque 44.98 305 eP P 19 42 47.6 +0.1
comp=Z,3.4nm,0.4s,mb4.3
ANMO Albuquerque 44.98 305 ⇓ *P P 19 42 48.0 +0.5
ANMO *PP pP 19 43 19.1 -1.0
CFTV Fuerteventura 45.53 65 P P 19 42 52.2 +0.3
comp=Z,20nm,0.9s,mb4.8
ISCO Idaho Springs 45.75 311 eP P 19 42 53.3 -0.1
comp=Z,12nm,0.7s,mb4.6
ISCO Idaho Springs 45.75 311 eP P 19 42 53.3 -0.2
ISCO pmax pmax
comp=Z,12nm,0.7s,mb4.6
EFAM Famara 46.10 64 P P 19 42 57.3 +0.9
comp=Z,52nm,0.8s,mb5.2
RSSD Black Hills 46.30 317 eP P 19 42 57.1 -0.6
comp=Z,51nm,1.7s,mb4.9
RSSD Black Hills 46.30 317 eP P 19 42 57.2 -0.5
RSSD pmax pmax
comp=Z,51nm,1.7s,mb4.9
319A Douglas 46.58 299 ⇑P P 19 43 00.7 +0.6
baz=47,SNR=12
219A White Tail Can 46.66 300 ⇓P P 19 43 01.3 +0.6
baz=47,SNR=8.3
R21A Cimarron 46.73 309 ⇓P P 19 43 01.5 +0.3
baz=47
119A Ashpeak Ranch, 46.82 301 ⇓P P 19 43 02.7 +0.7
baz=47,SNR=7.7
Z19A T-Link Ranch, 46.89 302 ⇑P P 19 43 03.2 +0.6
baz=47
CFAA Coronel Fontan 46.94 188 P P 19 43 00.9 -1.9
comp=Z,1.2nm,0.8s,baz=350,slow=7.1,SNR=5.8
M22A Cedar Creek Ra 47.00 313 ⇑P P 19 43 04.0 +0.8
baz=47,SNR=6.0
Y19A Nutrioso 47.01 302 ⇑P P 19 43 04.4 +0.9
baz=47,SNR=5.8
X19A St. Johns 47.13 303 ⇑P P 19 43 04.9 +0.5
baz=47,SNR=11
MVCO Mesa Verde 47.14 307 ⇑P P 19 43 05.2 +0.8
baz=47
318A Bisbee 47.18 299 ⇓P P 19 43 05.3 +0.5
baz=47,SNR=12
V19A Window Rock 47.21 305 ⇓P P 19 43 05.1 +0.2
baz=47
O21A Pagoda 47.23 311 ⇑P P 19 43 05.3 +0.2
baz=47
218A Dragoon 47.31 300 ⇑P P 19 43 06.1 +0.3
baz=47,SNR=7.5
W19A Sanders 47.35 304 ⇑P P 19 43 06.3 +0.3
baz=47,SNR=9.4
118A Homack Ranch, 47.36 301 ⇑P P 19 43 06.5 +0.3
baz=47,SNR=7.3
N21A Black Mountain 47.44 312 ⇑P P 19 43 07.1 +0.4
baz=48
T19A Beclabito 47.46 306 ⇓P P 19 43 07.2 +0.3
baz=48,SNR=5.2
Z18A Geronimo 47.49 301 ⇓P P 19 43 07.9 +0.7
baz=48
M21A Separation Pea 47.61 313 ⇓P P 19 43 08.1 +0.2
baz=48
Y18A Canyon Day Jun 47.61 302 ⇓P P 19 43 08.4 +0.3
baz=48,SNR=5.2
W18A Petrified Fore 47.63 304 ⇓P P 19 43 08.6 +0.4
baz=48
X18A Snowflake 47.68 303 ⇑P P 19 43 09.2 +0.6
baz=48,SNR=8.6
L21A Rawlins 47.73 313 ⇑P P 19 43 09.1 +0.2
baz=48
S19A Harvey Farm, M 47.77 307 ⇓P P 19 43 09.2 -0.1
baz=48,SNR=7.1
V18A Ganado 47.91 305 ⇑P P 19 43 10.5 +0.1
baz=48
217A Green Valley 47.93 299 ⇓P P 19 43 10.5 -0.1
baz=48,SNR=7.2
TUC Tucson 47.98 300 P P 19 43 11.3 +0.3
N20A Spence Gulch, 48.00 312 ⇑P P 19 43 11.3 +0.3
baz=48
R19A Curley Farm, L 48.01 308 ⇓P P 19 43 11.2 +0.1
baz=48
U18A Rough Rock, Ch 48.02 306 ⇑P P 19 43 11.5 +0.3
baz=48
M20A Sweetwater, Wa 48.15 313 ⇑P P 19 43 12.4 +0.2
baz=48,SNR=5.2
P19A Cripple Cowboy 48.16 310 ⇓P P 19 43 12.1 -0.1
baz=48
Q19A Hogan Spring (48.19 309 ⇑P P 19 43 12.6 +0.2
baz=48
T18A Mexican Hat 48.19 307 ⇓P P 19 43 12.3 -0.2
baz=48,SNR=10.0
Y17A Roosevelt 48.26 302 ⇓P P 19 43 13.7 +0.6
baz=48,SNR=5.6
DGMT Dagmar 48.35 323 eP P 19 43 13.6 0.0
comp=Z,148nm,0.5s,mb5.9
S18A Hurst Farm, Bl 48.42 307 ⇑P P 19 43 14.3 +0.1
baz=48
L20A Wamsutter 48.43 313 ⇓P P 19 43 14.5 +0.2
baz=48
216A Three Points, 48.50 299 ⇑P P 19 43 15.0 0.0
baz=48
R18A Canyonlands Na 48.51 308 ⇑P P 19 43 14.8 -0.2
baz=48,SNR=6.7
K20A Yellowstone Ra 48.65 314 ⇓P P 19 43 15.5 -0.4
baz=49,SNR=6.4
N19A John Jarvie Ra 48.68 312 ⇑P P 19 43 15.5 -0.7
baz=49,SNR=21
Z16A Peralta Trail, 48.68 301 ⇓P P 19 43 16.7 +0.4
baz=49,SNR=6.9
116A Eloy 48.79 300 ⇓P P 19 43 17.3 +0.1
baz=49
Y16A Circle Bar Ran 48.81 302 ⇓P P 19 43 17.6 +0.3
baz=49,SNR=6.7
M19A Rock Springs 48.85 312 ⇑P P 19 43 17.2 -0.3
baz=49
X16A Lo Mia Camp, P 48.87 303 ⇑P P 19 43 18.5 +0.8
baz=49
Q18A Rafter H Ranch 48.88 309 ⇓P P 19 43 17.8 0.0
baz=49
T17A Navajo Res., N 48.88 306 ⇓P P 19 43 18.1 +0.3
baz=49
U16A Tuba City 48.95 305 ⇑P P 19 43 18.4 0.0
baz=49
WUAZ Wupatki 49.02 304 eP P 19 43 19.2 +0.3
comp=Z,44nm,0.9s,mb5.1
WUAZ Wupatki 49.02 304 ⇑P P 19 43 19.7 +0.8
baz=49
S17A Black Ridge (B 49.02 307 ⇓P P 19 43 19.2 +0.3
baz=49,SNR=7.1
K19A Absolon Red Bu 49.05 314 ⇑P P 19 43 18.5 -0.4
baz=49,SNR=14
N18A Larsen Ranch, 49.06 311 ⇓P P 19 43 18.7 -0.4
baz=49
W16A Flagstaff 49.07 303 ⇓P P 19 43 19.9 +0.6
baz=49,SNR=7.5
P18A Preston Nutter 49.10 310 ⇓P P 19 43 19.6 +0.2
baz=49,SNR=7.6
R17A Hanksville Air 49.14 308 ⇑P P 19 43 19.8 0.0
baz=49
SRU San Rafael 49.17 309 ⇑P P 19 43 19.8 -0.2
baz=49,SNR=7.0
L19A Farson 49.18 313 ⇑P P 19 43 19.7 -0.2
baz=49,SNR=9.9
T16A Glen Canyon Da 49.43 306 ⇑P P 19 43 22.3 +0.3
baz=49,SNR=7.7
P17A Butcher Ranch, 49.43 309 ⇓P P 19 43 22.0 +0.1
baz=49,SNR=6.7
M18A Lyman 49.48 312 ⇑P P 19 43 22.0 -0.3
baz=50,SNR=9.7
Y15A Casa Rosa Ranc 49.52 302 ⇓P P 19 43 23.3 +0.6
baz=50,SNR=6.3
BW06 Boulder Array 49.53 314 P P 19 43 22.5 -0.1
baz=50
PDAR Pinedale Array 49.53 314 P P 19 43 22.4 -0.2
comp=Z,24nm,0.5s,mb5.1,baz=120,slow=10,SNR=253
PDAR pP pP 19 43 55.5 -0.3
comp=Z,8.8nm,0.7s,baz=118,slow=9.4,SNR=2.5
PDAR PcP PcP 19 44 41.9 -0.4
comp=Z,3.1nm,0.6s,baz=112,slow=6.2,SNR=1.8
X15A Humboldt 49.53 303 ⇓P P 19 43 23.5 +0.7
baz=50,SNR=5.2
L18A Fontenelle, Gr 49.60 313 ⇑P P 19 43 23.6 +0.4
baz=50,SNR=6.8
Q16A Castle Valley 49.61 308 ⇓P P 19 43 23.2 -0.1
baz=50
O17A Robinson Place 49.62 310 ⇑P P 19 43 23.9 +0.6
baz=50,SNR=17
214A Organ Pipe Nat 49.64 299 ⇑P P 19 43 23.8 +0.2
baz=50
S16A Weppner Ranch, 49.66 307 ⇑P P 19 43 23.7 0.0
baz=50
W15A Williams 49.68 303 ⇑P P 19 43 24.6 +0.8
baz=50
R16A Teasdale 49.70 308 ⇓P P 19 43 24.4 +0.4
baz=50,SNR=5.1
V15A Kaibab Nationa 49.72 304 ⇓P P 19 43 24.8 +0.6
baz=50
K18A Toltan Ranch, 49.83 313 ⇑P P 19 43 25.2 +0.4
baz=50,SNR=6.7
N17A Moffit Pass 49.89 311 ⇑P P 19 43 25.6 +0.2
baz=50
M17A Scullys Gap (B 49.92 312 ⇓P P 19 43 25.4 -0.2
baz=50
U15A North Rim 49.93 305 ⇓P P 19 43 26.3 +0.5
baz=50
Z14A Wintersburg 49.94 301 ⇓P P 19 43 26.2 +0.3
baz=50
J18A Kendall Valley 49.99 314 ⇓P P 19 43 25.6 -0.5
baz=50,SNR=5.7
I18A Diamond G Ranc 50.01 315 ⇓P P 19 43 26.4 +0.2
baz=50,SNR=24
X14A Yava 50.06 302 ⇑P P 19 43 27.4 +0.6
baz=50,SNR=5.4
Y14A Wickenburg 50.07 302 ⇑P P 19 43 27.0 +0.1
baz=50
T15A Red Dirt Ranch 50.12 306 ⇓P P 19 43 27.8 +0.7
baz=50,SNR=6.0
RLMT Red Lodge 50.13 317 eP P 19 43 27.1 +0.1
comp=Z,77nm,1.1s,mb5.2
RLMT Red Lodge 50.13 317 ⇑P P 19 43 27.4 +0.3
baz=50
P16A Fountain Green 50.15 309 ⇑P P 19 43 27.9 +0.5
baz=50,SNR=5.4
O16A Springville 50.19 310 ⇑P P 19 43 27.7 +0.1
baz=50
S15A Panguitch 50.24 307 ⇓P P 19 43 28.4 +0.3
baz=50
R15A Junction 50.29 307 ⇓P P 19 43 28.7 +0.3
baz=50
N16A Rees Ranch, Co 50.32 311 ⇑P P 19 43 28.7 +0.1
baz=50,SNR=6.6
W14A Seligman 50.34 303 ⇓P P 19 43 29.5 +0.7
baz=50
G18A Lazy EL Ranch, 50.39 317 ⇓P P 19 43 28.8 -0.2
baz=50
V14A Boquillas Ranc 50.43 304 ⇑P P 19 43 29.9 +0.4
baz=50
K17A Gardner Place, 50.48 313 ⇓P P 19 43 29.3 -0.4
baz=50,SNR=11
FFC Flin 50.49 331 P P 19 43 28.2 -1.4
comp=Z,126nm,0.5s,mb5.8,SNR=15
J17A Brown Place, J 50.52 314 ⇑P P 19 43 30.4 +0.4
baz=50,SNR=19
LOHW Long Hollow 50.52 314 eP P 19 43 29.9 -0.2
comp=Z,14nm,0.8s,mb4.6
Q15A Fillmore 50.55 308 ⇑P P 19 43 30.6 +0.2
baz=50
M16A Huntsville 50.57 311 ⇑P P 19 43 30.3 -0.2
baz=51,SNR=12
P15A Leamington 50.61 309 ⇑P P 19 43 30.9 +0.1
baz=51
REDW Red Top Meadow 50.62 314 eP P 19 43 29.8 -1.0
comp=Z,9.3nm,0.4s,mb4.8
L16A Fish Haven 50.62 312 ⇑P P 19 43 30.8 -0.1
baz=51,SNR=12
U14A Mt Trumbull 50.63 305 ⇑P P 19 43 31.6 +0.6
baz=51
MOOW Moose Ponds 50.66 315 eP P 19 43 30.6 -0.5
comp=Z,6.3nm,0.8s,mb4.3
F18A Big Timber 50.70 318 ⇓P P 19 43 31.3 -0.1
baz=51,SNR=10
TPAW Teton Pass 50.73 314 eP P 19 43 31.4 -0.2
comp=Z,18nm,0.8s,mb4.8
Y13A Salome 50.73 301 ⇓P P 19 43 32.1 +0.3
baz=51,SNR=11
IMW Indian Meadow 50.84 315 eP P 19 43 31.8 -0.7
comp=Z,8.0nm,0.5s,mb4.6
X13A Yucca 50.85 302 ⇓P P 19 43 33.0 +0.4
baz=51
DCID1 Drake Creek 50.92 314 eP P 19 43 32.7 -0.3
comp=Z,20nm,0.8s,mb4.8
RRI2 Red Ridge 50.94 314 eP P 19 43 32.7 -0.5
comp=Z,11nm,0.6s,mb4.7
K16A Soda Springs 50.97 313 ⇑P P 19 43 33.5 +0.1
baz=51
W13A Hualapai Mount 50.97 303 ⇑P P 19 43 34.3 +0.7
baz=51,SNR=6.6
PDMCI Parker Dam,Lak 51.06 302 ⇓P P 19 43 34.6 +0.3
baz=51
E18A Harlowton 51.07 318 ⇑P P 19 43 34.2 0.0
baz=51,SNR=6.2
N15A Stansbury Isla 51.11 311 ⇑P P 19 43 34.5 0.0
baz=51
J16A Bone 51.12 314 ⇑P P 19 43 34.3 -0.3
baz=51,SNR=6.4
DUG Dugway 51.16 310 eP P 19 43 33.9 -1.0
comp=Z,28nm,0.9s,mb4.9
DUG Dugway 51.16 310 ⇑P P 19 43 35.0 +0.1
baz=51
DUG Dugway 51.16 310 eP P 19 43 33.9 -1.0
DUG pmax pmax
comp=Z,28nm,0.9s,mb4.9
G17A Pierce Place, 51.17 317 ⇑P P 19 43 35.2 +0.3
baz=51
V13A Grand Canyon W 51.17 304 ⇓P P 19 43 35.7 +0.6
baz=51,SNR=7.7
P14A Drum Mountains 51.20 309 ⇓P P 19 43 35.6 +0.4
baz=51,SNR=6.3
M15A Larsen Ranch, 51.21 311 ⇓P P 19 43 35.1 -0.1
baz=51
I16A Newdale 51.21 315 ⇑P P 19 43 35.3 +0.1
baz=51,SNR=6.4
Q14A Sevier Lake (B 51.23 308 ⇑P P 19 43 36.3 +0.9
baz=51,SNR=5.5
D18A Linhart Farms, 51.23 319 ⇓P P 19 43 36.0 +0.7
baz=51,SNR=18
U13A Pakoon Wash 51.26 305 ⇑P P 19 43 36.3 +0.6
baz=51
Y12C Blythe 51.30 301 ⇑P P 19 43 36.1 0.0
baz=51
L15A Malad City 51.30 312 ⇑P P 19 43 35.7 -0.2
baz=51,SNR=17
H16A Russell Place, 51.31 316 ⇑P P 19 43 36.6 +0.7
baz=51,SNR=12
T13A Saint George 51.32 305 ⇑P P 19 43 36.8 +0.7
baz=51
F17A Fitzpatrick Pl 51.32 317 ⇓P P 19 43 36.4 +0.4
baz=51,SNR=6.1
S13A Holt Ranch, En 51.39 306 ⇓P P 19 43 37.0 +0.4
baz=51
EGMT Eagleton 51.52 320 eP P 19 43 37.7 +0.3
comp=Z,75nm,1.0s,mb5.3
EGMT Eagleton 51.52 320 ⇑P P 19 43 37.5 +0.1
baz=52
NEE2 Needles Airpor 51.52 303 ⇓P P 19 43 37.8 +0.2
baz=52
N14A Grayback Hills 51.59 310 ⇓P P 19 43 38.0 -0.1
baz=52
K15A Arbon 51.59 313 ⇑P P 19 43 38.4 +0.3
baz=52,SNR=6.5
E17A Martinsdale 51.64 318 ⇓P P 19 43 38.6 +0.2
baz=52
B18A Beardsley Farm 51.67 321 ⇓P P 19 43 39.0 +0.4
baz=52,SNR=22
U12A Valley of Fire 51.71 305 ⇑P P 19 43 39.5 +0.5
baz=52
J15A Blackfoot 51.73 314 ⇑P P 19 43 39.1 0.0
baz=52
D17A Six Diamond Ra 51.78 319 ⇓P P 19 43 39.7 +0.3
baz=52
Q13A Wheeler Ranch, 51.79 308 ⇑P P 19 43 40.2 +0.6
baz=52,SNR=8.2
W12A Cal Nev Ari 51.80 303 ⇓P P 19 43 40.1 +0.3
baz=52
V12A Nelson 51.85 304 ⇓P P 19 43 40.4 +0.3
baz=52
G16A Moss Hill, Enn 51.85 316 ⇓P P 19 43 40.1 +0.2
baz=52
IRM Iron Mountain 51.87 302 ⇓P P 19 43 40.8 +0.6
baz=52,SNR=9.3
M14A Sheep Mountain 51.87 311 ⇑P P 19 43 40.2 0.0
baz=52,SNR=5.5
BOZ Bozeman (W) 51.87 317 P P 19 43 40.1 0.0
baz=52
P13A Bates Ranch, G 51.89 308 ⇓P P 19 43 41.1 +0.7
baz=52,SNR=5.6
F16A Kennard Place, 51.91 317 ⇑P P 19 43 40.4 0.0
baz=52
A18A Metzger Ranch, 51.92 321 ⇓P P 19 43 40.5 +0.1
baz=52,SNR=23
L14A Malta 51.93 312 ⇓P P 19 43 40.6 0.0
baz=52,SNR=9.4
I15A Monteview 51.94 314 ⇑P P 19 43 41.2 +0.5
baz=52,SNR=5.8
C17A Wharram Farm, 52.00 319 ⇑P P 19 43 41.0 0.0
baz=52,SNR=8.8
K14A Jones Ranch, D 52.02 312 ⇑P P 19 43 41.3 +0.1
baz=52,SNR=10
BC3 Big Chuckw Mtn 52.05 301 ⇑P P 19 43 41.9 +0.2
baz=52
R12A Pony Springs, 52.11 307 ⇑P P 19 43 42.7 +0.7
baz=52,SNR=7.5
EVO Evora 52.15 53 eP P 19 43 41.3 -0.9
comp=Z,44nm,1.0s,mb4.8
E16A East Helena 52.20 318 ⇓P P 19 43 42.2 -0.3
baz=52
H15A Lima 52.23 315 ⇑P P 19 43 43.1 +0.3
baz=52
SWSC Sam W. Stewart 52.26 300 ⇓P P 19 43 43.5 +0.3
baz=52
B17A L&G Farms, Che 52.26 320 ⇑P P 19 43 42.7 -0.3
baz=52,SNR=10
D16A Dana Ranch, Ca 52.28 318 ⇑P P 19 43 43.1 0.0
baz=52
G15A Dillon 52.29 316 ⇓P P 19 43 43.4 +0.2
baz=52
SFJD Kangerlussuaq 52.30 5 P P 19 43 43.1 +0.2
comp=Z,4.6nm,0.4s,mb4.5,baz=264,slow=10,SNR=4.3
V11A Goodsprings 52.33 304 ⇑P P 19 43 43.9 +0.2
baz=52
GMRC Granite Mounta 52.37 302 ⇓P P 19 43 44.3 +0.3
baz=52
EGRO El Granado 52.37 54 P P 19 43 44.3 +0.4
comp=Z,20nm,0.7s,mb4.9
T11A Corn Creek, Al 52.39 305 ⇑P P 19 43 44.4 +0.3
baz=52
M13A Montello 52.43 311 ⇓P P 19 43 44.4 +0.1
baz=52,SNR=6.9
A17A Triple J Farms 52.45 321 ⇑P P 19 43 44.2 -0.1
baz=52,SNR=16
L13A Double Diamond 52.45 312 ⇑P P 19 43 43.9 -0.5
baz=52
J14A Carey 52.47 313 ⇓P P 19 43 44.9 +0.4
baz=52,SNR=8.4
F15A Butte 52.51 317 ⇓P P 19 43 45.0 +0.2
baz=52
BELC Belle Mtn. 52.55 301 ⇑P P 19 43 45.9 +0.6
baz=52
I14A Mackay 52.59 314 ⇑P P 19 43 45.8 +0.4
baz=53
O12A Currie 52.61 309 ⇓P P 19 43 45.9 +0.3
baz=53
TUQ Turquoise Moun 52.67 303 ⇑P P 19 43 46.7 +0.5
baz=53,SNR=7.0
C16A Fuhringer Ranc 52.68 319 ⇓P P 19 43 45.8 -0.2
baz=53,SNR=11
K13A Stover Farm, H 52.69 312 ⇑P P 19 43 46.2 0.0
baz=53,SNR=9.7
H14A Leadore 52.73 315 ⇑P P 19 43 47.0 +0.6
baz=53
MONP Monument Peak 52.77 300 ⇓P P 19 43 47.6 +0.6
baz=53,SNR=6.3
E15A Deer Lodge 52.79 317 ⇑P P 19 43 46.8 -0.1
baz=53
ELOB Lobios 52.83 49 P P 19 43 47.2 0.0
comp=Z,19nm,0.8s,mb4.9
R11A Troy Canyon, C 52.87 307 ⇑P P 19 43 48.0 +0.5
baz=53
B16A M & M Farms, S 52.87 320 ⇑P P 19 43 47.3 -0.1
baz=53,SNR=7.1
D15A Lincoln 52.91 318 ⇑P P 19 43 47.8 +0.1
baz=53,SNR=10
HEC Hector,Ludlow 52.92 302 ⇑P P 19 43 48.5 +0.5
baz=53,SNR=5.5
J13A Cove Ranch, Pi 52.95 313 ⇓P P 19 43 48.0 -0.1
baz=53
EBAD Badajoz 52.96 53 P P 19 43 49.0 +0.8
comp=Z,11nm,1.5s,mb4.4
N12A Clover Valley, 52.96 310 ⇓P P 19 43 48.2 0.0
baz=53,SNR=9.4
G14A Jackson 52.97 316 ⇓P P 19 43 47.9 -0.3
baz=53,SNR=6.8
M12A Wells 52.99 311 ⇑P P 19 43 48.4 0.0
baz=53,SNR=5.5
A16A West Butte Ran 53.00 321 ⇓P P 19 43 48.4 0.0
baz=53,SNR=21
Q11A Duckwater 53.01 307 ⇑P P 19 43 48.7 +0.1
baz=53
SHOC Shoshone 53.02 304 ⇓P P 19 43 49.1 +0.3
baz=53
EMIN Mina Concepcio 53.04 54 P P 19 43 49.3 +0.4
comp=Z,13nm,0.7s,mb4.8
I13A Wildhorse Cree 53.05 314 ⇓P P 19 43 49.2 +0.4
baz=53
F14A Wisdom 53.08 316 ⇑P P 19 43 49.3 +0.3
baz=53
TPNV Topopah Spring 53.15 305 ⇓P P 19 43 50.4 +0.7
baz=53
HLID Hailey 53.16 313 eP P 19 43 49.6 0.0
HLID Hailey 53.16 313 ⇓P P 19 43 49.8 +0.2
baz=53,SNR=6.5
C15A Salmond Ranch, 53.22 319 ⇑P P 19 43 50.1 +0.1
baz=53,SNR=20
L12A House Creek Ra 53.24 312 ⇑P P 19 43 50.1 -0.1
baz=53
O11A Cowboy Ranch, 53.27 309 ⇓P P 19 43 50.8 +0.4
baz=53,SNR=15
K12A Draper Farm, C 53.27 312 ⇓P P 19 43 50.6 +0.1
baz=53,SNR=13
H13A Challis 53.32 315 ⇑P P 19 43 50.6 -0.2
baz=53
E14A Clinton 53.35 317 ⇓P P 19 43 51.0 0.0
baz=53
GSC Goldstone 53.37 303 ⇓P P 19 43 51.6 +0.3
baz=53
B15A Bradely Ranch, 53.37 320 ⇓P P 19 43 50.7 -0.3
baz=53,SNR=8.6
G13A Cobalt 53.45 315 ⇑P P 19 43 52.0 +0.3
baz=54
MURC Murrieta 53.50 301 ⇓P P 19 43 52.7 +0.4
baz=54
ESPR Espera 53.54 55 P P 19 43 53.9 +1.3
comp=Z,30nm,0.8s,mb5.1
J12A Stokes Ranch, 53.56 313 ⇑P P 19 43 52.5 0.0
baz=54

D14A **Greenough** **53.56** 318 ⇑P **P** **19 43 52.5 0.0**
baz=54

S10A **Tonopah Range,** **53.58** 306 ⇓P **P** **19 43 53.6 +0.8**
baz=54,SNR=6.1

Q10A **Clear Creek Ra** **53.58** 307 ⇓P **P** **19 43 53.3 +0.5**
baz=54

M11A **Holland Ranch,** **53.64** 311 ⇓P **P** **19 43 53.5 +0.4**
baz=54,SNR=7.6

A15A **Johnson Ranch,** **53.71** 320 ⇑P **P** **19 43 53.3 -0.2**
baz=54,SNR=35

F13A **Darby** **53.72** 316 ⇑P **P** **19 43 53.5 -0.2**
baz=54

H12A **Diamond D Ranc** **53.73** 314 ⇓P **P** **19 43 53.6 -0.1**
baz=54

L11A **Cat Creek Ranc** **53.77** 311 ⇓P **P** **19 43 54.0 -0.1**
baz=54,SNR=9.1

P10A **Eureka** **53.78** 308 ⇑P **P** **19 43 54.7 +0.5**
baz=54

EJIF **Jimena Fronter** **53.79** **56** P **P** **19 43 56.1 +1.7**
comp=Z,32nm,0.8s,mb5.1

EJIF **Jimena Fronter** **53.79** **56** P **P** **19 43 56.1 +1.7**
EJIF pmax pmax
comp=Z,32nm,0.8s,mb5.1

E13A **Victor** **53.81** 317 ⇑P **P** **19 43 54.3 0.0**
baz=54,SNR=7.9

B14A **Marquette Ranc** **53.83** 319 ⇑P **P** **19 43 54.0 -0.4**
baz=54

EPLA **Plasencia** **53.91** **51** P **P** **19 43 55.3 +0.1**
comp=Z,26nm,0.9s,mb5.0

EPLA **Plasencia** **53.91** **51** P **P** **19 43 55.3 +0.1**
EPLA pmax pmax
comp=Z,27nm,0.9s,mb5.0

C14A **Swan Lake** **53.94** 319 ⇓P **P** **19 43 55.3 +0.1**
baz=54

BFSC **Mount Baldy St** **53.94** 301 ⇑P **P** **19 43 55.7 +0.2**
baz=54

R09A **Tonopah** **54.00** 306 ⇑P **P** **19 43 56.0 +0.2**
baz=54

MPMC **Manual Prospec** **54.02** 304 ⇓P **P** **19 43 56.3 +0.3**
baz=54

N10A **Dunphy** **54.02** 310 ⇓P **P** **19 43 56.2 +0.2**
baz=54

S09A **Goldfield** **54.04** 306 ⇓P **P** **19 43 56.4 +0.2**
baz=54

GRAC **Grapevine Rang** **54.05** 305 ⇑P **P** **19 43 56.5 +0.2**
baz=54

LRMC **Laurel Mountai** **54.11** 303 ⇑P **P** **19 43 56.9 +0.2**
baz=54

K11A **Parker Ranch,** **54.11** 312 ⇑P **P** **19 43 56.4 -0.1**
baz=54

MFID **Camas Ranch** **54.12** 313 ⇓P **P** **19 43 56.4 -0.2**
baz=54

A14A **Double T Ranch** **54.13** 320 ⇑P **P** **19 43 56.2 -0.4**
baz=54,SNR=15

Q09A **Carvers** **54.19** 307 ⇑P **P** **19 43 57.3 +0.1**
baz=54

D13A **Huson** **54.19** 318 ⇑P **P** **19 43 56.7 -0.3**
baz=54

M10A **I.L. Ranch, Tu** **54.21** 310 ⇑P **P** **19 43 57.5 +0.2**
baz=54

L10A **Juniper Basin** **54.27** 311 ⇓P **P** **19 43 57.8 +0.1**
baz=54,SNR=13

EDW2 **Edwards Air Fo** **54.28** 302 ⇑P **P** **19 43 58.2 +0.3**
baz=54

I11A **Placerville** **54.33** 313 ⇓P **P** **19 43 57.8 -0.3**
baz=54

C13A **Hot Springs** **54.44** 318 ⇑P **P** **19 43 58.6 -0.3**
baz=54

WALA **Waterton Lakes** **54.47** 320 *eP* **P** **19 43 58.3 -0.7**
comp=Z,10nm,0.4s,mb4.9

BMN **Battle Mountai** **54.50** 309 *eP* **P** **19 43 59.5 +0.1**
comp=Z,30nm,0.9s,mb5.0

BMN **Battle Mountai** **54.50** 309 *eP* **P** **19 43 59.5 +0.1**
BMN pmax pmax
comp=Z,30nm,0.9s,mb5.0

H11A **Donnelly** **54.56** 314 ⇑P **P** **19 43 59.4 -0.4**
baz=55

B13A **Whitefish** **54.59** 319 ⇓P **P** **19 43 59.6 -0.3**
baz=55,SNR=7.7

K10A **MacKenzie Ranc** **54.72** 312 ⇑P **P** **19 44 01.0 +0.1**
baz=55,SNR=7.0

A13A **Flathead Natio** **54.74** 320 ⇑P **P** **19 44 00.7 -0.2**
baz=55,SNR=8.1

EADA **Adamuz** **54.74** **54** P **P** **19 44 03.1 +1.9**
comp=Z,6.1nm,0.8s,mb4.4

Q08A **Gabbs** **54.77** 307 ⇓P **P** **19 44 01.3 -0.1**
baz=55

J10A **Berg Farm, Mel** **54.79** 313 ⇑P **P** **19 44 01.3 -0.1**
baz=55

N09A **Rock Creek Ran** **54.80** 310 ⇑P **P** **19 44 01.3 -0.3**
baz=55

M09A **Marrel Ranch,** **54.86** 310 ⇑P **P** **19 44 02.2 +0.2**
baz=55,SNR=6.9

ELUQ **Luque** **54.90** **55** P **P** **19 44 03.6 +1.3**
comp=Z,9.6nm,0.9s,mb4.5

ELUQ **Luque** **54.90** **55** P **P** **19 44 03.6 +1.2**
ELUQ pmax pmax
comp=Z,10.0nm,0.9s,mb4.5

G11A **Walters Elk Ra** **54.92** 315 ⇓P **P** **19 44 01.9 -0.5**
baz=55

ELOJ **Sierra Loja** **54.93** **55** P **P** **19 44 04.2 +1.6**
comp=Z,12nm,0.8s,mb4.7

ELOJ **Sierra Loja** **54.93** **55** P **P** **19 44 04.2 +1.6**
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb4.7

NVAR **Mina Array Bea** **54.99** 306 P **P** **19 44 03.2 +0.2**
comp=Z,13nm,0.7s,mb4.8,baz=103,slow=6.8,SNR=24

NVAR pP pP 19 44 38.1 +1.3
comp=Z,4.8nm,0.8s,baz=90,slow=5.6,SNR=2.1

NVAR PcP PcP 19 45 03.1 +0.2
comp=Z,5.0nm,0.8s,baz=114,slow=4.4,SNR=3.6

C12B **Naegeli Ranch,** **55.03** 318 ⇓P **P** **19 44 03.0 -0.1**
baz=55

H10A **Noah's Angus R** **55.05** 314 ⇓P **P** **19 44 02.7 -0.6**
baz=55

E11A **Bogner Ranch,** **55.13** 316 ⇑P **P** **19 44 03.7 -0.1**
baz=55

L09A **Wilkinson Ranc** **55.13** 311 ⇑P **P** **19 44 04.2 +0.2**
baz=55,SNR=9.3

O08A **Rochester Mine** **55.17** 309 ⇑P **P** **19 44 04.1 -0.1**
baz=55

ERON **Agron** **55.19** **55** P **P** **19 44 04.6 +0.1**
comp=Z,13nm,0.8s,mb4.7

EARI **Arriondas** **55.21** **48** P **P** **19 44 03.9 -0.6**
comp=Z,17nm,0.9s,mb4.8

N08A **GE Springer Mi** **55.24** 309 ⇑P **P** **19 44 04.8 0.0**
baz=55,SNR=6.5

VES **Vestal, Richgr** **55.28** 303 ⇓P **P** **19 44 05.3 +0.2**
baz=55

K09A **Rome** **55.31** 312 ⇑P **P** **19 44 05.2 0.0**
baz=55

B12A **Libby** **55.33** 319 ⇑P **P** **19 44 05.6 +0.3**
baz=55,SNR=6.5

EBAN **Banos Encina** **55.36** **54** P **P** **19 44 06.5 +0.9**
comp=Z,29nm,1.0s,mb5.0

EBAN **Banos Encina** **55.36** **54** P **P** **19 44 06.5 +0.9**
EBAN pmax pmax
comp=Z,29nm,1.0s,mb5.0

D11A **Klaveano Farm,** **55.40** 317 ⇓P **P** **19 44 05.5 -0.3**
baz=55,SNR=6.5

ECOG **Cogollos-Vega** **55.41** **55** P **P** **19 44 07.7 +1.6**
comp=Z,35nm,0.8s,mb5.1

ECOG **Cogollos-Vega** **55.41** **55** P **P** **19 44 07.7 +1.6**
ECOG pmax pmax
comp=Z,35nm,0.8s,mb5.1

ESDC **Sonseca Array** **55.45** **52** P **P** **19 44 07.0 +0.7**
comp=Z,9.6nm,0.6s,mb4.7

G10A **Bishop Farm, J** **55.47** 315 ⇑P **P** **19 44 05.5 -0.8**
baz=56,SNR=6.1

A12A **Yaak River Ran** **55.51** 319 ⇓P **P** **19 44 07.0 +0.5**
baz=56,SNR=26

M08A **Happy Creek Ra** **55.55** 310 ⇓P **P** **19 44 06.9 0.0**
baz=56

BSC **Santa Cruz Isl** **55.55** 301 ⇓P **P** **19 44 07.3 +0.2**
baz=56

I09A **Lost Marbles R** **55.60** 313 ⇓P **P** **19 44 06.8 -0.5**
baz=56

EDM **Edmonton** **55.63** 325 *eP* **P** **19 44 06.3 -1.0**

L08A **Fields** **55.66** 311 ⇓P **P** **19 44 08.0 +0.3**
baz=56,SNR=9.7

O07A **Toulon** **55.70** 308 ⇓P **P** **19 44 08.5 +0.5**
baz=56,SNR=5.8

H09A **Durkee** **55.70** 314 ⇑P **P** **19 44 07.5 -0.4**
baz=56

F10A **Beach Ranch, E** **55.71** 316 ⇓P **P** **19 44 07.4 -0.6**
baz=56

B11A **Sandpoint** **55.82** 319 ⇓P **P** **19 44 08.8 +0.1**
baz=56,SNR=17

EQES **Quesada** **55.87** **54** P **P** **19 44 10.3 +1.0**
comp=Z,32nm,0.8s,mb5.2

N07B **Gerlach** **55.87** 309 ⇑P **P** **19 44 09.0 -0.3**
baz=56

LIC **Lamto** **55.88** **93** *eP* **P** **19 44 08.8 -0.9**
comp=Z,36nm,0.5s,mb5.1

LIC **Lamto** **55.88** **93** *eP* **P** **19 44 08.8 -0.9**
comp=Z,18nm,0.5s,mb5.2

R06C **Coleville** **55.89** 306 ⇑P **P** **19 44 10.4 +0.9**
baz=56

EBER **Berja** **55.91** **56** P **P** **19 44 11.3 +1.7**
comp=Z,25nm,0.7s,mb5.2

G09A **Cove** **55.92** 315 ⇑P **P** **19 44 09.0 -0.5**
baz=56

DBIC **Dimbokro** **55.94** **92** P **P** **19 44 09.4 -0.7**
comp=Z,12nm,0.4s,mb5.1,baz=275,slow=7.8,SNR=54

A11A **Hall Mountain,** **55.97** 319 ⇓P **P** **19 44 10.3 +0.5**
baz=56

J08A **Circle Bar Ran** **55.99** 312 ⇑P **P** **19 44 09.5 -0.5**
baz=56,SNR=6.8

D10A **Wagner Farm, O** **56.02** 317 ⇑P **P** **19 44 09.3 -0.9**
baz=56,SNR=5.6

F09A **S2 Ranch, Elgi** **56.11** 315 ⇑P **P** **19 44 09.9 -0.9**
baz=56

M07A **Soldier Meadow** **56.12** 310 ⇑P **P** **19 44 11.1 +0.1**
baz=56,SNR=6.5

I08A **Drewsey** **56.17** 313 ⇓P **P** **19 44 11.0 -0.3**
baz=56

PLCA **Paso Flores** **56.24** 188 P **P** **19 44 10.8 -0.9**
comp=Z,6.1nm,0.8s,mb4.5,baz=356,slow=7.2,SNR=7.5

PLCA pP pP 19 44 44.1 -1.6
comp=Z,3.0nm,0.7s,baz=297,slow=4.9,SNR=2.1

EHUE **Huescar** **56.25** **54** P **P** **19 44 13.2 +1.2**
comp=Z,29nm,1.0s,mb5.1

EHUE **Huescar** **56.25** **54** P **P** **19 44 13.2 +1.2**
EHUE pmax pmax
comp=Z,29nm,1.0s,mb5.1

L07A **Adell** **56.36** 311 ⇑P **P** **19 44 12.7 0.0**
baz=56

H08A **Prairie City** **56.37** 314 ⇓P **P** **19 44 12.6 -0.1**
baz=56,SNR=13

K07A **Rock Creek Ran** **56.41** 311 ⇓P **P** **19 44 12.8 -0.2**
baz=56

O06A **Flanigan** **56.42** 308 ⇓P **P** **19 44 12.8 -0.4**
baz=56

EVIA **Vianos** **56.42** **54** P **P** **19 44 14.3 +1.1**
comp=Z,9.3nm,0.8s,mb4.7

EVIA **Vianos** **56.42** **54** P **P** **19 44 14.4 +1.2**
EVIA pmax pmax
comp=Z,9.0nm,0.8s,mb4.7

ENIJ **Nijar** **56.46** **56** P **P** **19 44 14.3 +0.8**
comp=Z,23nm,0.7s,mb5.1

ENIJ **Nijar** **56.46** **56** P **P** **19 44 14.3 +0.8**
ENIJ pmax pmax
comp=Z,23nm,0.7s,mb5.1

E09A **Wood Farm, Sta** **56.47** 316 ⇑P **P** **19 44 12.5 -0.9**
baz=56

ELAN **Lanestosa** **56.47** **48** P **P** **19 44 14.2 +0.8**
comp=Z,20nm,0.8s,mb5.0

N06A **Buffalo Meadow** **56.51** 309 ⇓P **P** **19 44 13.5 -0.3**
baz=56

U04C **Hernandez Rese** **56.70** 304 ⇑P **P** **19 44 15.0 -0.2**
baz=57

D09A **Jones Farm, Ri** **56.71** 317 ⇓P **P** **19 44 14.4 -0.7**
baz=57

F08A **Pendleton** **56.72** 315 ⇓P **P** **19 44 14.4 -0.8**
baz=57

A10A **Northport** **56.73** 319 ⇓P **P** **19 44 14.4 -0.7**
baz=57

G08A **Pilot Rock** **56.73** 315 ⇑P **P** **19 44 14.8 -0.5**
baz=57

BEKR **Beckwourth** **56.78** 308 ⇑P **P** **19 44 15.4 -0.3**
baz=57

I07A **Izee** **56.86** 313 ⇑P **P** **19 44 15.9 -0.3**
baz=57

C09A **Chrisman Ranch** **56.87** 318 ⇓P **P** **19 44 15.6 -0.6**
baz=57

LAVA **Lava Cap Winer** **56.92** 307 ⇓P **P** **19 44 17.1 +0.3**
baz=57

H07A **Lands Inn, Kim** **57.01** 314 ⇑P **P** **19 44 16.9 -0.3**
baz=57

ECRI **Cripan** **57.02** **49** P **P** **19 44 18.3 +1.0**
comp=Z,6.5nm,0.6s,mb4.6

ECRI **Cripan** **57.02** **49** P **P** **19 44 18.3 +1.0**
ECRI pmax pmax
comp=Z,7.0nm,0.6s,mb4.7

ETOR **Torete** **57.07** **51** P **P** **19 44 18.8 +1.1**
comp=Z,20nm,0.9s,mb5.0

ETOR **Torete** **57.07** **51** P **P** **19 44 18.8 +1.1**
ETOR pmax pmax
comp=Z,20nm,0.9s,mb5.0

ETOB **Tobarra** **57.16** **54** P **P** **19 44 18.9 +0.5**
comp=Z,16nm,0.9s,mb4.6

J06A **Christmas Vall** **57.17** 312 ⇓P **P** **19 44 17.8 -0.6**
baz=57

DLF **Lyons Farm** **57.19** 36⇑ *iP* **P** **19 44 17.6 -0.7**

DMUB **Kingscourt** **57.19** 35⇑ *iP* **P** **19 44 18.1 -0.2**

G07A **Ruggs Ranch, H** **57.22** 314 ⇑P **P** **19 44 18.2 -0.5**
baz=57

EMUR **La Murta** **57.32** **55** P **P** **19 44 19.7 +0.1**
comp=Z,26nm,1.2s,mb4.9

I06A **Prineville** **57.34** 313 ⇑P **P** **19 44 19.3 -0.2**
baz=57

C08A **Higginbotham F** **57.37** 317 ⇓P **P** **19 44 19.1 -0.6**
baz=57,SNR=9.3

A09A **Danville** **57.38** 319 ⇓P **P** **19 44 19.1 -0.6**
baz=57,SNR=5.6

K05A **Summer Lake** **57.61** 311 ⇑P **P** **19 44 22.1 +0.6**
baz=58,SNR=5.8

E07A **Sunnyside** **57.62** 316 ⇑P **P** **19 44 21.1 -0.4**
baz=58

QUIF **Quistinic** **57.67** **43** *eP* **P** **19 44 21.7 -0.1**

ROSF **Rostrenen** **57.70** **42** *eP* **P** **19 44 22.0 0.0**
comp=Z,17nm,0.5s,mb4.8

ROSF **Rostrenen** **57.70** **42** *eP* **P** **19 44 22.0 0.0**
comp=Z,8.4nm,0.5s,mb4.8

ROSF **Rostrenen** **57.70** **42** *eP* **P** **19 44 22.0 0.0**
ROSF pmax pmax
comp=Z,8.0nm,0.5s,mb4.8

B08A **Colville Reser** **57.70** 318 ⇓P **P** **19 44 21.1 -0.8**
baz=58

ECHE **Chera** **57.73** **53** P **P** **19 44 23.1 +0.7**
comp=Z,9.3nm,0.9s,mb4.6

ECHE **Chera** **57.73** **53** P **P** **19 44 23.1 +0.7**
ECHE pmax pmax
comp=Z,9.0nm,0.9s,mb4.6

A08A **Turner Farm, O** **57.81** 319 ⇑P **P** **19 44 22.2 -0.6**
baz=58

ELIZ **Elizondo** **57.83** **48** P **P** **19 44 23.4 +0.4**
comp=Z,3.5nm,1.4s,mb4.0

ELIZ **Elizondo** **57.83** **48** P **P** **19 44 23.4 +0.4**
ELIZ pmax pmax
comp=Z,4.0nm,1.4s,mb4.1

D07A **Quincy** **57.84** 317 ⇓P **P** **19 44 22.6 -0.4**
baz=58

EALK **Alkurruntz** **57.85** **48** P **P** **19 44 22.7 -0.4**
comp=Z,27nm,1.6s,mb4.8

G06A **Carlson Farm,** **57.88** 314 ⇓P **P** **19 44 23.8 +0.5**
baz=58

SJPF **Ste Jean** **58.03** **48** *eP* **P** **19 44 25.0 +0.6**
comp=Z,94nm,0.9s,mb5.3

SJPF **Ste Jean** **58.03** **48** *eP* **P** **19 44 25.0 +0.6**
comp=Z,47nm,0.9s,mb5.3

SJPF **Ste Jean** **58.03** **48** *eP* **P** **19 44 25.0 +0.6**
SJPF pmax pmax
comp=Z,47nm,0.9s,mb5.3

SGMF **Saint Gilles** **58.14** **42** *eP* **P** **19 44 25.0 -0.1**
comp=Z,209nm,1.3s,mb5.5

SGMF **Saint Gilles** **58.14** **42** *eP* **P** **19 44 25.0 -0.1**
comp=Z,105nm,1.3s,mb5.5

SGMF **Saint Gilles** **58.14** **42** *eP* **P** **19 44 25.0 -0.1**
SGMF pmax pmax
comp=Z,105nm,1.3s,mb5.5

EMOS **Mosqueruela** **58.20** **52** P **P** **19 44 26.3 +0.7**
comp=Z,6.5nm,0.7s,mb4.6

B07A **Winthrop** **58.23** 318 ⇓P **P** **19 44 25.1 -0.6**
baz=58,SNR=12

E06A **Yakima** **58.38** 316 ⇓P **P** **19 44 26.7 -0.1**
baz=58

ESAC **San Caprasio** **58.38** **50** P **P** **19 44 28.1 +1.2**
comp=Z,51nm,0.9s,mb5.4

WLF1 **Llynfaes** **58.40** **36** *eP* **P** **19 44 26.6 -0.2**
WLF1 AMb AMb 19 44 40.6
comp=Z,106nm,1.7s,mb5.4

D06A **Cle Elum** **58.42** 316 ⇓P **P** **19 44 26.7 -0.4**
baz=58

YLL **Llanberis** **58.48** **36** *eP* **P** **19 44 27.8 +0.4**

ETSF **Etsaut** **58.48** **49** *eP* **P** **19 44 28.0 +0.4**
comp=Z,34nm,1.0s,mb4.8

ETSF **Etsaut** **58.48** **49** *eP* **P** **19 44 28.0 +0.4**
comp=Z,17nm,1.0s,mb4.8

ETSF **Etsaut** **58.48** **49** *eP* **P** **19 44 28.0 +0.4**
ETSF pmax pmax
comp=Z,17nm,1.0s,mb4.8

WME **Myndd Eilian** **58.48** **36** *eP* **P** **19 44 27.6 +0.2**

WIM **Isle of Man** **58.52** **35** *eP* **P** **19 44 27.9 +0.3**

A07A **Ashnola River,** **58.54** 319 ⇑P **P** **19 44 27.9 0.0**
baz=58,SNR=7.4

C06A **Tall Timber Ra** **58.61** 317 ⇓P **P** **19 44 28.3 0.0**
baz=59

WPM1 **Penmaenmawr** **58.67** **36** *eP* **P** **19 44 28.8 +0.1**

HTR **Trewern Hill** **58.69** **38** *eP* **P** **19 44 28.8 0.0**

GAL1 **Galloway** **58.73** **34** P **P** **19 44 28.9 -0.2**
GAL1 AMb AMb 19 44 29.7
comp=Z,76nm,0.8s,mb5.6

GAL1 **Galloway** **58.73** **34** *eP* **P** **19 44 28.9 -0.2**
GAL1 AMb AMb 19 44 29.7
comp=Z,76nm,0.8s,mb5.6

YBH **Yreka Blue Hor** **58.80** 310 P **P** **19 44 28.4 -1.4**
comp=Z,11nm,0.6s,mb4.9,baz=66,slow=3.9,SNR=23

MCH1 **Michaelchurch** **58.83** **38** *eP* **P** **19 44 29.5 -0.3**
MCH1 AMb AMb 19 44 41.5
comp=Z,92nm,1.7s,mb5.3

HGH **Gray Hill** **58.85** **38** *eP* **P** **19 44 30.2 +0.4**

KAR1 **Arisaig** **58.86** **32** *eP* **P** **19 44 29.6 -0.3**

H04A **Detroit Lake** **58.86** 313 ⇑P **P** **19 44 29.9 -0.3**
baz=59

ERTA **Horta de San J** **58.88** **51** P **P** **19 44 31.4 +1.0**
comp=Z,32nm,1.0s,mb5.1

E05A **Randle** **58.91** 315 ⇑P **P** **19 44 29.7 -0.7**
baz=59

SBD1 **Bryn Du** **58.94** **37** *eP* **P** **19 44 30.1 -0.4**

EBIE **Bielsa** **58.96** **49** P **P** **19 44 32.0 +1.1**
comp=Z,30nm,0.9s,mb5.1

KPL **Plockton** **59.11** **31** *eP* **P** **19 44 31.0 -0.6**

B06A **Marblemount** **59.13** 318 ⇑P **P** **19 44 31.6 -0.3**
baz=59

EPF **Esparros** **59.16** **49** *eP* **P** **19 44 32.8 +0.6**
comp=Z,118nm,1.0s,mb5.4

EPF **Esparros** **59.16** **49** *eP* **P** **19 44 32.8 +0.6**
comp=Z,59nm,1.0s,mb5.4

EPF **Esparros** **59.16** **49** *eP* **P** **19 44 32.8 +0.6**
EPF pmax pmax
comp=Z,59nm,1.0s,mb5.4

PGBU **Glenifferbraes** **59.17** **33** *eP* **P** **19 44 32.0 0.0**
PGBU AMb AMb 19 44 32.5
comp=Z,291nm,1.9s,mb5.8

GRR **Gorron** **59.28** **42** *eP* **P** **19 44 32.7 -0.2**
comp=Z,215nm,1.1s,mb5.6

GRR **Gorron** **59.28** **42** *eP* **P** **19 44 32.7 -0.2**
comp=Z,107nm,1.1s,mb5.6

GRR **Gorron** **59.28** **42** *eP* **P** **19 44 32.7 -0.2**
GRR pmax pmax
comp=Z,107nm,1.1s,mb5.6

KAC **Achnashellach** **59.35** **31** *eP* **P** **19 44 33.1 -0.1**

EAB **Aberfoyle** **59.38** **33** *eP* **P** **19 44 33.2 -0.2**

MFF **Saint Martin d** **59.40** **45** *eP* **P** **19 44 33.8 0.0**
comp=Z,32nm,0.6s,mb5.0

MFF **Saint Martin d** **59.40** **45** *eP* **P** **19 44 33.8 0.0**
comp=Z,16nm,0.6s,mb5.0

MFF **Saint Martin d** **59.40** **45** *eP* **P** **19 44 33.8 0.0**
MFF pmax pmax
comp=Z,16nm,0.6s,mb5.0

B05A **Bryant** **59.47** 317 ⇓P **P** **19 44 32.3 -2.0**
baz=60

L02A **Cave Junction** **59.52** 310 ⇓P **P** **19 44 33.7 -1.0**
baz=60

FLN **La Foliniere** **59.60** **42** *eP* **P** **19 44 34.0 -1.1**
comp=Z,83nm,0.6s,mb5.4

FLN **La Foliniere** **59.60** **42** *eP* **P** **19 44 34.0 -1.1**
comp=Z,42nm,0.6s,mb5.4

FLN **La Foliniere** **59.60** **42** *eP* **P** **19 44 34.0 -1.1**
FLN pmax pmax
comp=Z,42nm,0.6s,mb5.5

A05A **Maple Falls** **59.62** 318 ⇑P **P** **19 44 33.9 -1.4**
baz=60

ECK **Cauldkaine Hil** **59.70** **34** *eP* **P** **19 44 35.2 -0.4**

ESK **Eskdalemuir** **59.70** **34** *eP* **P** **19 44 34.9 -0.8**
ESK AMb AMb 19 44 35.4
comp=Z,254nm,1.6s,mb5.8

LFF **La Frestale** **59.73** **47** *eP* **P** **19 44 36.0 -0.1**
comp=Z,134nm,1.1s,mb5.4

LFF **La Frestale** **59.73** **47** *eP* **P** **19 44 36.0 -0.1**
comp=Z,67nm,1.1s,mb5.4

LFF **La Frestale** **59.73** **47** *eP* **P** **19 44 36.0 -0.1**
LFF pmax pmax
comp=Z,67nm,1.1s,mb5.4

EAU **Auchinoon** **59.73** **34** *eP* **P** **19 44 35.8 -0.1**

MDO **Dochfour** **59.80** **32** *eP* **P** **19 44 35.8 -0.5**

LDF **La Druitiere** **59.80** **42** *eP* **P** **19 44 36.2 -0.3**
comp=Z,26nm,0.6s,mb4.9

LDF **La Druitiere** **59.80** **42** *eP* **P** **19 44 36.2 -0.3**
comp=Z,13nm,0.6s,mb4.9

LDF **La Druitiere** **59.80** **42** *eP* **P** **19 44 36.2 -0.3**
LDF pmax pmax
comp=Z,13nm,0.6s,mb4.9

EBH **Black Hill** **59.83** **33** *eP* **P** **19 44 36.2 -0.4**

I02A **Mapleton** **59.92** 312 ⇑P **P** **19 44 37.3 -0.2**
baz=60

EBL **Broad Law** **59.93** **34** *eP* **P** **19 44 37.1 -0.1**

LHO **Holmfirth** **59.93** **36** *eP* **P** **19 44 37.2 -0.1**

C04A **Brinnon** **59.94** 317 ⇓P **P** **19 44 36.4 -1.1**
baz=60

XAL **Allendale** **60.10** **35** *eP* **P** **19 44 38.1 -0.4**

E03A **Lebam** **60.13** 315 ⇑P **P** **19 44 38.4 -0.4**
baz=60

YKA **Yellowknife Ar** **60.15** 335 P **P** **19 44 37.4 -1.2**
comp=Z,23nm,0.4s,mb5.3,baz=104,slow=7.5,SNR=150

YKA pP pP 19 45 12.2 -0.8
comp=Z,5.8nm,0.6s,baz=104,slow=7.3,SNR=2.1

HPK **Haverah Park** **60.17** **36** *eP* **P** **19 44 38.9 0.0**
HPK AMb AMb 19 44 44.8
comp=Z,133nm,1.6s,mb5.5

ESY **Stoneypath** **60.20** **34** *eP* **P** **19 44 39.0 -0.1**

XSO **Sourhope Farm** **60.27** **34** *eP* **P** **19 44 39.3 -0.3**

RJF **Les Rejaudoux** **60.33** **46** *eP* **P** **19 44 39.8 -0.3**
comp=Z,74nm,1.0s,mb5.2

RJF **Les Rejaudoux** **60.33** **46** *eP* **P** **19 44 39.8 -0.3**
comp=Z,37nm,1.0s,mb5.2

RJF **Les Rejaudoux** **60.33** **46** *eP* **P** **19 44 39.8 -0.3**
RJF pmax pmax
comp=Z,37nm,1.0s,mb5.2

B04A **Port Angeles** **60.36** 317 ⇑P **P** **19 44 39.9 -0.5**
baz=60

MCD **Coleburn Disti** **60.41** **32** *eP* **P** **19 44 40.0 -0.5**

NLWA **Neilton Lookou** **60.48** 316 ⇑P **P** **19 44 41.2 0.0**
baz=60

MTLF **Montolieu** **60.56** **49** *eP* **P** **19 44 41.5 -0.3**
comp=Z,88nm,0.9s,mb5.3

MTLF **Montolieu** **60.56** **49** *eP* **P** **19 44 41.5 -0.3**
comp=Z,44nm,0.9s,mb5.3

MTLF **Montolieu** **60.56** **49** *eP* **P** **19 44 41.5 -0.3**
MTLF pmax pmax
comp=Z,44nm,0.9s,mb5.3

MLA1 **Latheron** **60.60** **31** *eP* **P** **19 44 41.6 -0.2**

ETOS **Mallorca** **60.65** **53** P **P** **19 44 33.1 -9.4**
comp=Z,31nm,1.1s,mb5.0

CAF **Calviac** **60.65** **47** *eP* **P** **19 44 42.2 -0.2**
comp=Z,74nm,1.0s,mb5.2

CAF **Calviac** **60.65** **47** *eP* **P** **19 44 42.2 -0.2**
comp=Z,37nm,1.0s,mb5.2

CAF **Calviac** **60.65** **47** *eP* **P** **19 44 42.2 -0.2**
CAF pmax pmax
comp=Z,37nm,1.0s,mb5.2

TORD **Torodi Ar. Bea** **60.94** **83** P **P** **19 44 43.7 -1.1**
comp=Z,13nm,0.5s,mb5.0,baz=282,slow=6.4,SNR=85

TORD **Torodi Ar. Bea** **60.94** **83** P **P** **19 44 43.7 -1.2**

EJON **La Jonquera** **60.95** **50** P **P** **19 44 45.0 +0.6**
comp=Z,26nm,1.1s,mb5.0

TCF **Toulx Ste Croi** **60.95** **45** *eP* **P** **19 44 44.1 -0.3**
comp=Z,42nm,0.8s,mb5.0

TCF **Toulx Ste Croi** **60.95** **45** *eP* **P** **19 44 44.1 -0.3**
comp=Z,21nm,0.8s,mb5.0

TCF **Toulx Ste Croi** **60.95** **45** *eP* **P** **19 44 44.1 -0.3**
TCF pmax pmax
comp=Z,21nm,0.8s,mb5.0

HYF **Humbligny** **61.39** **44** *eP* **P** **19 44 47.3 0.0**

PYM **Petit Puy Mans** **61.42** **46** *eP* **P** **19 44 48.3 +0.7**

BGF **Bois d'Agland** **61.43** **45** *eP* **P** **19 44 47.2 -0.4**
comp=Z,143nm,1.4s,mb5.3

BGF **Bois d'Agland** **61.43** **45** *eP* **P** **19 44 47.2 -0.4**
comp=Z,71nm,1.4s,mb5.3

BGF **Bois d'Agland** **61.43** **45** *eP* **P** **19 44 47.2 -0.4**
BGF pmax pmax

comp=Z,71nm,1.4s,mb5.3
LBL Lubilhac 61.52 47 *e*P **P 19 44 49.1 +0.8**
MENF Mencas 61.64 40 *e*P **P 19 44 49.0 +0.1**
AVF Avril sur Loir 61.80 45 *e*P **P 19 44 49.5 -0.6**
comp=Z,83nm,1.0s,mb5.2
AVF Avril sur Loir 61.80 45 *e*P **P 19 44 49.5 -0.6**
comp=Z,42nm,1.0s,mb5.2
AVF Avril sur Loir 61.80 45 *e*P **P 19 44 49.5 -0.6**
AVF pmax pmax
comp=Z,42nm,1.0s,mb5.2
LASF Ste Croix 61.82 48 *e*P **P 19 44 50.4 +0.1**
comp=Z,149nm,1.4s,mb5.3
PLDF La Plantade 61.88 46 *e*P **P 19 44 51.3 +0.7**
SSF Saint Saulge 61.95 45 *e*P **P 19 44 50.3 -0.7**
comp=Z,102nm,1.0s,mb5.3
SSF Saint Saulge 61.95 45 *e*P **P 19 44 50.3 -0.7**
comp=Z,51nm,1.0s,mb5.3
SSF Saint Saulge 61.95 45 *e*P **P 19 44 50.3 -0.7**
SSF pmax pmax
comp=Z,51nm,1.0s,mb5.3
SMF Signal de Mont 62.12 45 *e*P **P 19 44 51.7 -0.5**
comp=Z,119nm,1.0s,mb5.4
SMF Signal de Mont 62.12 45 *e*P **P 19 44 51.7 -0.5**
comp=Z,60nm,1.0s,mb5.4
SMF Signal de Mont 62.12 45 *e*P **P 19 44 51.7 -0.5**
SMF pmax pmax
comp=Z,60nm,1.0s,mb5.4
LOR Lormes 62.21 44 *e*P **P 19 44 52.1 -0.7**
comp=Z,130nm,0.9s,mb5.5
LOR Lormes 62.21 44 *e*P **P 19 44 52.1 -0.7**
comp=Z,65nm,0.9s,mb5.5
LOR Lormes 62.21 44 *e*P **P 19 44 52.1 -0.7**
LOR pmax pmax
comp=Z,65nm,0.9s,mb5.5
RES Resolute Bay 62.36 350 *e*P **P 19 44 52.5 -0.8**
comp=Z,416nm,0.7s
VIVF Saint-Julien-l 62.49 47 *e*P **P 19 44 55.1 +0.4**
comp=Z,43nm,0.8s,mb5.0
VIVF Saint-Julien-l 62.49 47 *e*P **P 19 44 55.1 +0.4**
comp=Z,22nm,0.8s,mb5.0
VIVF Saint-Julien-l 62.49 47 *e*P **P 19 44 55.1 +0.4**
VIVF pmax pmax
comp=Z,22nm,0.8s,mb5.0
BAIF Baives 62.85 41 *e*P **P 19 44 56.1 -0.9**
comp=Z,20nm,0.8s,mb4.7
BAIF Baives 62.85 41 *e*P **P 19 44 56.1 -0.9**
comp=Z,10nm,0.8s,mb4.7
BAIF Baives 62.85 41 *e*P **P 19 44 56.1 -0.9**
BAIF pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SNF Seneffe 62.97 41 P **P 19 44 57.8 0.0**
SMRF Simiane la Rot 63.05 48 *e*P **P 19 44 59.0 +0.6**
comp=Z,60nm,1.2s,mb5.0
SMRF Simiane la Rot 63.05 48 *e*P **P 19 44 59.0 +0.6**
comp=Z,60nm,1.2s,mb5.3
UCC Uccle 63.06 40 P **P 19 44 58.2 -0.2**
DOU Dourbes 63.10 41 P **P 19 44 58.8 +0.1**
MEZF Maizieres J'vi 63.17 43 *e*P **P 19 44 58.7 -0.4**
comp=Z,156nm,0.8s,mb5.6
MEZF Maizieres J'vi 63.17 43 *e*P **P 19 44 58.7 -0.4**
comp=Z,156nm,0.8s,mb5.9
TAM Tamanrasset 63.22 72 P **P 19 45 00.9 +1.0**
GIVF Givet 63.25 41 *e*P **P 19 44 58.9 -0.7**
comp=Z,95nm,0.9s,mb5.3
GIVF Givet 63.25 41 *e*P **P 19 44 58.9 -0.7**
comp=Z,48nm,0.9s,mb5.3
GIVF Givet 63.25 41 *e*P **P 19 44 58.9 -0.7**
GIVF pmax pmax
comp=Z,47nm,0.9s,mb5.3
ORIF Oris-en-Rattie 63.35 47 *e*P **P 19 45 00.9 +0.5**
comp=Z,88nm,1.3s,mb5.1
ORIF Oris-en-Rattie 63.35 47 *e*P **P 19 45 00.9 +0.5**
comp=Z,44nm,1.3s,mb5.1
ORIF Oris-en-Rattie 63.35 47 *e*P **P 19 45 00.9 +0.5**
ORIF pmax pmax
comp=Z,44nm,1.3s,mb5.1
BCLA Clavier 63.60 41 P **P 19 45 01.9 0.0**
comp=Z,11nm,1.2s,mb4.6
CABF La Chapelle 63.65 45 *e*P **P 19 45 01.0 -1.3**
comp=Z,13nm,0.5s,mb4.7
CABF La Chapelle 63.65 45 *e*P **P 19 45 01.0 -1.3**
comp=Z,6.7nm,0.5s,mb4.7
CABF La Chapelle 63.65 45 *e*P **P 19 45 01.0 -1.3**
CABF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
LMR La Mourre 63.67 49 *e*P **P 19 45 02.1 -0.5**
comp=Z,8.5nm,0.5s,mb4.5
LMR La Mourre 63.67 49 *e*P **P 19 45 02.1 -0.5**
comp=Z,4.3nm,0.5s,mb4.5
LMR La Mourre 63.67 49 *e*P **P 19 45 02.1 -0.5**
LMR pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
THEF They Montfort 63.76 43 *e*P **P 19 45 03.1 +0.1**
FRF La Foret Royal 63.79 49 *e*P **P 19 45 02.8 -0.5**
comp=Z,60nm,1.1s,mb5.0
FRF La Foret Royal 63.79 49 *e*P **P 19 45 02.8 -0.5**
comp=Z,30nm,1.1s,mb5.0
FRF La Foret Royal 63.79 49 *e*P **P 19 45 02.8 -0.5**
FRF pmax pmax
comp=Z,30nm,1.1s,mb5.0
BEBN Eben Emael 63.89 41 P **P 19 45 04.0 +0.2**
comp=Z,15nm,1.1s,mb4.7
MBDF Montbardon 63.96 47 *e*P **P 19 45 04.7 +0.3**
comp=Z,52nm,0.9s,mb5.0
MBDF Montbardon 63.96 47 *e*P **P 19 45 04.7 +0.3**
comp=Z,26nm,0.9s,mb5.1
MBDF Montbardon 63.96 47 *e*P **P 19 45 04.7 +0.3**
MBDF pmax pmax
comp=Z,26nm,0.9s,mb5.1
HAU Haudompre 63.97 44 *e*P **P 19 45 03.5 -0.9**
comp=Z,34nm,1.0s,mb4.8
HAU Haudompre 63.97 44 *e*P **P 19 45 03.5 -0.9**
comp=Z,17nm,1.0s,mb4.8
HAU Haudompre 63.97 44 *e*P **P 19 45 03.5 -0.9**
HAU pmax pmax
comp=Z,17nm,1.0s,mb4.8
LPL La Plagne 64.00 47 *e*P **P 19 45 05.1 +0.5**
comp=Z,63nm,0.8s,mb5.2
LPL La Plagne 64.00 47 *e*P **P 19 45 05.1 +0.5**
comp=Z,31nm,0.8s,mb5.2
LPL La Plagne 64.00 47 *e*P **P 19 45 05.1 +0.5**
LPL pmax pmax
comp=Z,31nm,0.8s,mb5.2
LPG La Plagne 64.01 47 *e*P **P 19 45 05.4 +0.7**
comp=Z,57nm,0.8s,mb5.1
LPG La Plagne 64.01 47 *e*P **P 19 45 05.4 +0.7**
comp=Z,28nm,0.8s,mb5.2
LPG La Plagne 64.01 47 *e*P **P 19 45 05.4 +0.7**
LPG pmax pmax
comp=Z,28nm,0.8s,mb5.1
WLF Walferdange 64.04 42 P **P 19 45 05.1 +0.3**
WLF Walferdange 64.04 42 P **P 19 45 04.9 +0.1**
HGN Heimansgroeve 64.04 41 *e*P **P 19 45 04.5 -0.4**
MEM Membach 64.07 41 P **P 19 45 04.8 -0.1**
comp=Z,17nm,1.0s,mb4.8
HINF Hinteralfeld 64.29 44 *e*P **P 19 45 05.4 -1.1**
comp=Z,30nm,0.8s,mb4.9
HINF Hinteralfeld 64.29 44 *e*P **P 19 45 05.4 -1.1**
comp=Z,15nm,0.8s,mb4.9
HINF Hinteralfeld 64.29 44 *e*P **P 19 45 05.4 -1.1**
HINF pmax pmax
comp=Z,15nm,0.8s,mb4.9
SBF Sospel 64.38 48 *e*P **P 19 45 06.6 -0.5**
comp=Z,55nm,0.8s,mb5.1
SBF Sospel 64.38 48 *e*P **P 19 45 06.6 -0.5**
comp=Z,27nm,0.8s,mb5.1
SBF Sospel 64.38 48 *e*P **P 19 45 06.6 -0.5**
SBF pmax pmax
comp=Z,27nm,0.8s,mb5.1
ECH Echery 64.54 44 *e*P **P 19 45 08.1 0.0**
RUP Ruppelstein 64.63 42 P **P 19 45 09.5 +0.9**
CDF Champ du Feu 64.63 43 *e*P **P 19 45 07.9 -0.8**
WTSB Winterswijk 64.75 39 *e*P **P 19 45 09.0 -0.3**
ABH Alteburg 64.96 42 P **P 19 45 11.6 +0.8**
KIZ Kirchzarten 65.02 44 P **P 19 45 11.0 -0.2**
LANF Langenberg 65.04 43 *e*P **P 19 45 11.8 +0.5**
FELD Feldberg im Sc 65.07 44 *e*P **P 19 45 11.3 -0.2**
IBBN Ibbenburen 65.38 39 P **P 19 45 13.5 +0.1**
PGF Pioggiola 65.46 50 *e*P **P 19 45 13.6 -0.6**
comp=Z,105nm,1.2s,mb5.2
PGF Pioggiola 65.46 50 *e*P **P 19 45 13.6 -0.6**
comp=Z,53nm,1.2s,mb5.2
PGF Pioggiola 65.46 50 *e*P **P 19 45 13.6 -0.6**
PGF pmax pmax
comp=Z,53nm,1.2s,mb5.2
LBG Lerchenberg 65.66 43 P **P 19 45 15.1 -0.2**

SISB Singen-Schiene 65.70 44 P **P 19 45 15.8 +0.2**
KEST Kesra 65.72 57 P **P 19 45 16.6 +0.6**
comp=Z,18nm,0.8s,mb5.0,baz=145,slow=2.1,SNR=79
GUT Gutenstein 65.83 44 P **P 19 45 17.3 +0.9**
TUE Stuetta 65.88 46 *e*P **P 19 45 17.4 +0.6**
STU Stuttgart 65.93 43 *e*P **P 19 45 16.8 -0.3**
comp=Z,48nm,1.0s,mb5.3
STU Stuttgart 65.93 43 *e*P **P 19 45 16.8 -0.3**
STU pmax pmax
comp=Z,48nm,1.0s,mb5.3
DLBC Dease Lake 66.11 328 P **P 19 45 18.5 +0.5**
comp=Z,12nm,0.5s,mb5.0,baz=100,slow=3.1,SNR=20
SIND Sindeldorf 66.25 42 P **P 19 45 19.2 +0.1**
DAVA Damuels 66.29 45⇑ *i*P **P 19 45 20.1 +0.7**
comp=Z,50nm,0.8s,mb5.4,SNR=19
DAVA Damuels 66.29 45 P **P 19 45 20.3 +0.9**
DIB Dawson Inlet, 66.75 322 P **P 19 45 22.7 +0.5**
SNR=12
FETA Feichten 66.86 45⇓ *i*P **P 19 45 23.3 +0.3**
comp=Z,52nm,0.9s,mb5.4,SNR=27
RETA Reutte 66.90 45⇑ *i*P **P 19 45 23.6 +0.3**
comp=Z,25nm,1.0s,mb5.0,SNR=7.1
BSEG Bad Segeberg 67.09 38 P **P 19 45 24.1 -0.2**
SQTA Sankt Quirin 67.19 45⇓ *i*P **P 19 45 25.0 -0.1**
ALE Alert 67.42 360 P **P 19 45 25.3 -0.7**
comp=Z,284nm,0.7s,mb6.2,SNR=8.4
WATA Walderalm 67.45 45⇑ *i*P **P 19 45 26.3 -0.4**
comp=Z,5.0nm,0.5s,mb4.6
ABTA Abfaltersbach 68.07 45⇑ *i*P **P 19 45 30.4 -0.2**
comp=Z,28nm,1.0s,mb5.0
NKC Nový Kostel 68.14 42 *e*P **P 19 45 30.2 -0.8**
WET Wettzell 68.38 43 P **P 19 45 31.3 -1.2**
NB2 NORSAR Subarra 68.42 30 P **P 19 45 32.7 +0.2**
comp=Z,27nm,0.9s,mb5.0,baz=261,slow=6.5
NB2 NORSAR Subarra 68.42 30 P **P 19 45 29.0 -3.5**
NOA NORSAR Array B 68.42 30 P **P 19 45 32.7 +0.2**
comp=Z,17nm,0.8s,mb4.8,baz=262,slow=6.3,SNR=40
CLL Collm 68.54 40⇓ *i*P **P 19 45 32.7 -0.7**
comp=Z,35nm,1.1s,mb5.0
CLL Collm 68.54 40⇓ *i*P **P 19 45 32.7 -0.7**
CLL pmax pmax
comp=Z,35nm,1.1s,mb5.0
CLL Collm 68.54 40⇓ *i*P **P 19 45 32.7 -0.7**
comp=Z,35nm,1.1s,mb5.0
KBA Koelnbreinsper 68.65 45⇓ *i*P **P 19 45 33.7 -0.5**
comp=Z,33nm,0.9s,mb5.1,SNR=11
KBA Koelnbreinsper 68.65 45 P **P 19 45 34.0 -0.2**
KHC Kasperske Hory 68.84 43 *e*P **P 19 45 36.0 +0.7**
MYKA Terra Mystica 68.85 46⇑ *i*P **P 19 45 35.3 -0.1**
comp=Z,18nm,0.7s,mb4.9
GERES GERESS Array B 68.91 43 P **P 19 45 35.5 -0.3**
comp=Z,11nm,0.8s,mb4.5,baz=268,slow=5.5,SNR=21
BRG Berggiesshubel 69.11 41 *i*P **P 19 45 37.0 0.0**
BRG *e* 19 59 04.3
BRG pmax pmax
comp=Z,16nm,1.0s,mb4.7
BRG Berggiesshubel 69.11 41 *i*P **P 19 45 37.0 0.0**
comp=Z,27nm,1.0s,mb4.9
BRG *e* 19 59 04.3
comp=Z,58nm,2.0s
MOA Molln 69.28 44⇓ *i*P **P 19 45 37.8 -0.3**
comp=Z,8.6nm,0.5s,mb4.7
MOA Molln 69.28 44 P **P 19 45 38.6 +0.5**
LJU Ljubljana 69.47 46 P **P 19 45 39.2 -0.1**
OBKA Obir 69.48 46⇓ *i*P **P 19 45 38.7 -0.6**
comp=Z,24nm,0.9s,mb4.9
OBKA Obir 69.48 46 P **P 19 45 39.0 -0.3**
PRU Pruhonice 69.48 42 *e*P **P 19 45 39.2 -0.1**
INK Inuvik 69.48 338 *e*P **P 19 45 37.7 -1.2**
comp=Z,1μm,0.8s
PVCC Panska Ves 69.50 41 *e*P **P 19 45 38.8 -0.6**
HFA0 Hagfors New Ar 69.53 31 P **P 19 45 39.0 -0.4**
SOKA Soboth 69.81 45⇑ *i*P **P 19 45 40.7 -0.6**
comp=Z,10.0nm,0.7s,mb4.6
USHA Ushuaia 69.95 184 P **P 19 45 41.6 -0.2**
comp=Z,9.5nm,0.6s,mb4.7,baz=343,slow=6.8,SNR=11
TREC Trest 70.09 43 *e*P **P 19 45 42.8 -0.2**
CRES Cresnjev 70.12 46 P **P 19 45 43.4 +0.1**
ARSA Arzberg 70.14 45⇑ *i*P **P 19 45 43.0 -0.3**
comp=Z,18nm,0.9s,mb4.8
ARSA Arzberg 70.14 45 P **P 19 45 42.6 -0.7**
CONA Conrad Observa 70.35 44⇑ *i*P **P 19 45 44.7 0.0**
UPC Upice 70.43 41 *e*P **P 19 45 45.0 0.0**
DPC Dobruska-Polom 70.63 42 *e*P **P 19 45 46.1 -0.1**
KRUC Moravsky 70.69 43 P **P 19 45 46.3 -0.4**
VRAC Vranov 70.81 43 P **P 19 45 46.9 -0.5**
ZST Bratislava 71.18 44 P **P 19 45 48.8 -0.8**
ZST Bratislava 71.18 44 *i*P **P 19 45 49.1 -0.5**
ZST pmax pmax
comp=Z,20nm,0.9s,mb4.8
ZST Bratislava 71.18 44 *i*P **P 19 45 49.1 -0.5**
ZST *e* 19 39 09.9
ZST *e* 19 42 48.3
ZST *e*PP PP 19 48 08.3 -21
MODS Modra-Piesok 71.29 44 P **P 19 45 49.4 -0.9**
MODS Modra-Piesok 71.29 44 *i*P **P 19 45 50.4 +0.1**
MODS pmax pmax
comp=Z,17nm,1.0s,mb4.7
MODS Modra-Piesok 71.29 44 *i*P **P 19 45 50.4 +0.1**
MODS *e* 19 36 52.6
MODS *e* 19 39 01.1
MODS *e* 19 39 17.9
MODS *e* 19 42 44.2
MODS *e*PP PP 19 48 16.5 -14
MODS *e* 19 59 01.0
MODS *e* 20 02 14.1
DAWY Dawson 71.30 333 *e*P **P 19 45 49.9 -0.1**
SMOL Smolenice 71.39 43 *e*P **P 19 45 50.9 0.0**
JAVC Velka Javorina 71.53 43 P **P 19 45 52.4 +0.6**
KOLL Kolacno 72.03 43 P **P 19 45 55.3 +0.6**
KOLL Kolacno 72.03 43 *e*P **P 19 45 54.5 -0.2**
KOLL *e* 19 36 51.8
KOLL *e* 19 39 13.0
EGAK Eagle 72.10 334 *e*P **P 19 45 54.2 -0.6**
comp=Z,28nm,0.7s,mb5.1
PKSM Moragy 72.32 46 P **P 19 45 56.3 -0.2**
VYHS Vyhne 72.32 43 P **P 19 45 56.2 -0.3**
VYHS Vyhne 72.32 43 *i*P **P 19 45 56.6 +0.1**
VYHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
VYHS Vyhne 72.32 43 *i*P **P 19 45 56.6 +0.1**
VYHS *e* 19 36 49.8
VYHS *e* 19 39 19.5
VYHS *e* 19 42 41.6
VYHS *e*PP PP 19 48 17.5 -21
VYHS *e* 19 58 55.2
VYHS *e* 20 02 21.0
SPB4 Spitsbergen Ar 72.76 12 *e*P **P 19 45 58.7 +0.1**
OJC Ojcow 72.86 42 *e*P **P 19 46 00.1 +0.5**
BBLS Lazići 73.03 48 P **P 19 46 01.2 +0.5**
MENT Mentasta 73.20 332 *e*P **P 19 46 01.6 +0.2**
NIE Niedzica 73.24 42 P **P 19 46 03.4 +1.5**
STHS Stebnicka Huta 73.85 42 P **P 19 46 07.0 +1.6**
STHS Stebnicka Huta 73.85 42 *i*P **P 19 46 06.4 +1.0**
STHS pmax pmax
comp=Z,11nm,0.9s,mb4.6
STHS Stebnicka Huta 73.85 42 *i*P **P 19 46 06.4 +1.0**
STHS *e* 19 36 43.2
STHS *e* 19 38 31.3
STHS *e* 19 39 05.8
STHS *e* 19 42 26.7
STHS *e* 19 59 03.8
GRUS Gruza 73.97 48 P **P 19 46 07.1 +0.9**
CRVS Cervenica-Dubn 74.03 43 P **P 19 46 07.5 +1.0**
CRVS Cervenica-Dubn 74.03 43 *e*P **P 19 46 07.3 +0.8**
CRVS *e* 19 36 44.6
CRVS *e* 19 38 51.0
CRVS *e* 19 39 01.8
CRVS *e* 19 39 14.4
CRVS *e* 19 42 31.5
BZS Buzias 74.44 46 P **P 19 46 09.4 +0.5**
UZH Uzhgorod 74.60 43⇓ *i*P **P 19 46 09.7 -0.1**
KRUS Krusevo 74.64 51 *e*P **P 19 46 08.4 -1.7**
SKO Skopje 74.71 50 *e*P **P 19 46 10.2 -0.4**
BIA Bitola 74.73 51 *e*P **P 19 46 10.2 -0.6**
KWP Kalwaria 74.78 42 *e*P **P 19 46 11.8 +1.0**
comp=Z,42nm,1.0s,mb5.0
KWP Kalwaria 74.78 42 *e*P **P 19 46 11.8 +1.0**
KWP pmax pmax
comp=Z,41nm,1.0s,mb5.0
ARCES ARCESS Array B 74.83 21 P **P 19 46 10.8 +0.1**
comp=Z,24nm,0.7s,mb4.9,baz=291,slow=5.1,SNR=37
BARS Barje 74.88 49 P **P 19 46 12.1 +0.6**

COLA College 74.96 334 *e*P **P 19 46 10.7 -0.8**
comp=Z,8.9nm,0.8s,mb4.5
COLA College 74.96 334 *e*P **P 19 46 10.7 -0.8**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
OUL Oulu 75.23 26 P **P 19 46 12.5 -0.6**
KEV Kevo 75.34 21 *e*p **P 19 46 13.5 -0.1**
comp=Z,9.1nm,0.6s,mb4.6
KEV Kevo 75.34 21 *e*P **P 19 46 13.5 -0.1**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
SUF Sumiainen 75.52 28 P **P 19 46 14.5 -0.3**
FINES FINESS Array B 75.60 30 P **P 19 46 14.0 -1.3**
VAY Valandovo 75.63 51 *e*P **P 19 46 15.3 -0.5**
KAF Kangasniemi 75.65 29 *e*p **P 19 46 14.5 -1.0**
comp=Z,9.0nm,0.5s,mb4.7,baz=275,slow=5.6
KAF Kangasniemi 75.65 29 *e*P **P 19 46 14.5 -1.0**
KAF pmax pmax
comp=Z,9.0nm,0.5s,mb4.7
VSU Vasula 76.23 33 P **P 19 46 17.6 -1.3**
VSU Vasula 76.23 33⇑ *i*P **P 19 46 17.9 -1.0**
VSU pmax pmax
comp=Z,175nm,3.0s
SOH Sokhos 76.28 51 P **P 19 46 19.8 +0.2**
BUR08 Bucovina Ar. S 76.65 44 *e*P **P 19 46 22.0 +0.5**
JOF Joensuu 77.85 28 *e*p **P 19 46 26.3 -1.6**
comp=Z,10nm,0.8s,mb4.5
RDO Rodhopi 77.87 50 P **P 19 46 28.4 0.0**
IDI Anoyia 78.37 56 P **P 19 46 32.3 +1.0**
JMB Yambol 78.42 49 P **P 19 46 32.4 +1.0**
AKASG Malin Array Be 78.78 40 P **P 19 46 32.8 -0.4**
comp=Z,1.8nm,0.3s,mb4.1,baz=266,slow=4.8,SNR=14
AKASG Malin Array Be 78.78 40 *i*P **P 19 46 32.7 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
SVW2 Sparrevohn 78.94 330 *e*P **P 19 46 33.5 -0.4**
PMSA Palmer Station 79.69 181 P **P 19 46 38.2 +0.6**
comp=Z,17nm,0.9s,mb4.7,baz=309,slow=19,SNR=4.8
OBN Obninsk 82.17 35 *e*P **P 19 46 51.4 +0.2**
comp=Z,49nm,0.8s,mb5.2
OBN Obninsk 82.17 35⇑ *i*P **P 19 46 51.5 +0.3**
OBN pmax pmax
comp=Z,65nm,0.8s,mb5.3
ISP Isparta 82.28 53⇑ *i*P **P 19 46 52.2 0.0**
ANTO Ankara 83.54 51 *e*P **P 19 46 58.8 +0.2**
comp=Z,6.1nm,0.6s,mb4.5
ANTO Ankara 83.54 51 *e*P **P 19 46 58.8 +0.2**
ANTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
BR131 Keskin Array S 84.21 51 *e*P **P 19 47 01.7 -0.3**
comp=Z,9.1nm,0.8s,mb4.6
BRTR Keskin Array B 84.21 51 P **P 19 47 01.6 -0.5**
comp=Z,11nm,0.9s,mb4.6,baz=266,slow=4.0,SNR=34
TSUM Tsumeb 84.78 111 P **P 19 47 05.1 0.0**
comp=Z,6.4nm,1.0s,mb4.3,baz=265,slow=8.1,SNR=6.7
SOC Sochi 87.48 46 *e*P **P 19 47 17.6 -0.4**
SOC pmax pmax
comp=Z,57nm,0.8s,mb5.5
MMLI Mount Malkishu 87.55 57 P **P 19 47 18.6 0.0**
EIL Elat 87.93 60 P **P 19 47 19.8 -0.7**
ASF Jabal al Asfar 88.82 57 P **P 19 47 25.8 +1.2**
comp=Z,7.6nm,0.9s,mb4.7,baz=162,slow=1.8,SNR=12
KIV Kislovodsk 89.38 44 *e*P **P 19 47 27.7 +0.7**
comp=Z,40nm,1.1s,mb5.3
KIV Kislovodsk 89.38 44 *e*P **P 19 47 27.7 +0.7**
KIV pmax pmax
comp=Z,40nm,1.1s,mb5.3
BILL Bilibino 90.27 344⇑ *e*P **P 19 47 26.6 -4.0**
BILL pmax pmax
comp=Z,17nm,1.6s,mb4.7
MBAR Mbarara 92.13 90⇑ *e*P **P 19 47 40.0 -0.3**
ARU Arti 92.95 29⇑ *e*P **P 19 47 42.4 -0.8**
ARU *i* *PP pP 19 48 22.7 +2.5
TIXI Tiksi 93.16 357 *e*P **P 19 47 43.0 -0.9**
comp=Z,1.9nm,0.6s,mb4.4
TIXI Tiksi 93.16 357⇑ *i*P **P 19 47 42.7 -1.2**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LSZ Lusaka 93.42 105 P **P 19 47 45.5 -0.7**
comp=Z,2.0nm,0.6s,mb4.4,baz=308,slow=4.3,SNR=4.4
BVAR Borovoye Array 100.45 27 P Pdif 19 48 16.1 -1.1
comp=Z,0.5nm,0.6s,baz=292,slow=4.2,SNR=3.4
KURK Kurchatov 105.64 25 PKiKP PKiKP 19 52 51.6 -1.1
comp=Z,0.4nm,0.8s,baz=314,slow=2.4,SNR=2.1
MKAR Makanchi Array 110.22 26 PKiKP PKiKP 19 53 00.2 -1.2
comp=Z,0.2nm,0.5s,baz=29,slow=3.3,SNR=2.4
WMQ Urumqi 114.85 24 *e*PDIF Pdif 19 49 19.0 -2.2
WMQ PP PP 19 54 12.0 +2.2
WMQ SKS SKSdf 20 00 01.0 -8.0
WMQ SS SS 20 09 52.0 -0.7
WMQ LR LR
comp=N,8μm,22.0s
WMQ LR LR
comp=E,7μm,22.0s
WMQ LR LR
comp=Z,8μm,22.0s
SONM Songino Array 116.36 9 PKP PKPdf 19 53 12.0 -1.1
comp=Z,0.9nm,0.5s,baz=269,slow=1.2,SNR=8.0
MDJ Mudanjiang 119.72 351 PKP PKPdf 19 53 18.8 -0.9
MDJ PP PP 19 54 43.0 -0.2
CN2 Changchun 121.03 354 *e*PKP PKPdf 19 53 19.0 -3.2
CN2 PP PP 19 54 53.0 +0.8
GTA Gaotai 122.95 17 PKP PKPdf 19 53 25.3 -0.7
GTA PP PP 19 55 07.8 +2.4
GTA PKS 19 56 58.3
GTA SKS SKSdf 20 00 17.3 -7.3
GTA SKKS SKKSac 20 01 42.5 -8.8
GTA SS SS 20 11 33.5 -3.3
GTA LR LR
comp=N,3μm,20.4s
GTA LR LR
comp=E,4μm,18.6s
GTA LR LR
comp=Z,9μm,20.4s
HHC Hu-ho-hao-te 123.92 7 *e*PKP PKPdf 19 53 24.0 -3.8
HHC XPKP 19 54 18.5
HHC PP PP 19 55 13.0 +1.3
HHC PKS 19 56 59.0
HHC SKS SKSdf 20 00 17.5 -8.9
HHC SKKS SKKSac 20 01 48.0 -9.4
HHC SS SS 20 11 46.0 -2.7
HHC LR LR
comp=N,4μm,20.2s
HHC LR LR
comp=E,5μm,19.0s
HHC LR LR
comp=Z,5μm,20.2s
BJI Beijing 125.06 2 PKP PKPdf 19 53 27.5 -2.6
DANN Dangsing 125.12 38 *e*P PKPdf 19 53 30.2 -0.3
comp=Z,32nm,0.8s
MAT Matsushiro 125.40 341 PKP PKPdf 19 53 29.5 -1.3
MJAR Matsushiro Arr 125.40 341 PKP PKPdf 19 53 29.8 -1.0
comp=Z,4.9nm,0.6s,baz=63,slow=0.8,SNR=15
KOLN Koldanda 125.45 39 *e*P PKPdf 19 53 30.3 -0.9
comp=Z,11nm,0.9s
GKN Gorkha 125.90 38 *e*P PKPdf 19 53 31.4 -0.6
comp=Z,34nm,0.9s
KKN Kakani 126.43 37 *e*P PKPdf 19 53 32.4 -0.6
comp=Z,16nm,0.8s
DMN Daman 126.47 38 *e*P PKPdf 19 53 32.4 -0.7
PKI Pulchoki 126.67 37 *e*P PKPdf 19 53 32.7 -0.8
GUN Gumba 126.69 37 *e*P PKPdf 19 53 33.0 -0.5
KSRS Korea Array 126.98 351 PKP PKPdf 19 53 33.1 -0.7
comp=Z,2.7nm,0.9s,baz=13,slow=2.7,SNR=4.6
JIRN Jiri 127.06 37 *e*P PKPdf 19 53 33.4 -0.8
LZH Lanzhou 127.16 15 *e*PKP PKPdf 19 53 30.8 -3.4
LZH XPKP 19 54 19.5
RAMN Ramite 127.84 37 *e*P PKPdf 19 53 34.8 -0.9
TAPN Taplejung 128.16 36 *e*P PKPdf 19 53 35.2 -1.2
ODAN Odare 128.36 36 *e*P PKPdf 19 53 36.2 -0.5
comp=Z,36nm,1.3s
CD2 Chengdu 132.02 17 *e*PKP PKPdf 19 53 41.5 -2.1
CD2 XPKP 19 54 31.5
CD2 PP PP 19 56 07.5 +2.5
CD2 PKS 19 57 16.5
CD2 SKS SKSdf 20 00 37.5 -4.2
CD2 SKKS SKKSac 20 02 43.0 -5.5
CD2 SS SS 20 13 34.5 +5.1
GYA Guiyang 137.04 16 PDIF Pdif 19 50 57.8 -2.0
GYA PKP PKPdf 19 53 52.0 -1.1
GYA PP PP
comp=Z,70nm,6.8s
KMI Kunming 137.07 21 PKP PKPdf 19 53 52.8 -0.4
CMAR Chiang Mai Arr 141.37 31 PKhKP 19 53 54.7

comp=Z,1.0nm,0.6s,baz=308,slow=3.8,SNR=12
CMAR PKP PKPdf 19 54 01.1 -0.1
comp=Z,2.3nm,0.8s,baz=304,slow=3.1,SNR=13
CMAR pPKP pPKPdf 19 54 37.8 -2.1
comp=Z,0.8nm,0.8s,baz=312,slow=4.7,SNR=2.0
CNB Canberra Magne 145.96 228 *eP* PKPdf 19 54 09.8 +1.1
ARMA Armidale 146.19 238 *eP* PKPdf 19 54 11.1 +1.9
TOO Toolangi 147.40 222 *eP* PKPbc 19 54 13.5 -0.2
STKA Stephens Creek 153.28 227 *eP* PKPbc 19 54 27.6 -0.4
comp=Z,4.2nm,0.8s
STKA Stephens Creek 153.28 227 PKP PKPdf 19 54 18.6 -1.8
comp=Z,3.5nm,1.0s,baz=94,slow=1.3,SNR=3.7
STKA PKPbc PKPbc 19 54 27.0 -1.0
comp=Z,4.8nm,0.8s,baz=71,slow=2.7,SNR=11
STKA PKPab PKPab 19 54 39.6 -0.7
comp=Z,2.6nm,0.6s,baz=312,slow=1.5,SNR=6.5
STKA Stephens Creek 153.28 227 PKP PKPdf 19 54 18.6 -1.8
STKA PKPbc PKPbc 19 54 27.0 -1.0
STKA *eP* 19 54 27.6
STKA PKPab PKPab 19 54 39.6 -0.7
CTA Charters Tower 153.29 255 *eP* PKPbc 19 54 27.9 -0.4
comp=Z,7.5nm,0.9s
ASAR Alice Springs 163.34 237 PKP PKPdf 19 54 31.2 -1.4
comp=Z,2.4nm,0.9s,baz=88,slow=1.5,SNR=14
ASAR PKPab PKPab 19 55 22.8 -1.4
comp=Z,1.1nm,0.6s,baz=117,slow=3.9,SNR=9.0
WB2 Warramunga Arr 164.32 250 *eP* PKPab 19 55 28.2 -0.5

*IDC **29** 19:44:17.8±1.2, 1541S×7057W, h140km±10km, mb4.0/12, mb1 4.1/16, mb1mx4.0/24, mbtmp4.0/16, Error ellipse: s-maj=18.7km s-min=10.1km az=46.0*
*ISCJB **29** 19:44:18.4±0.7, 1538S±008×7059W±009, h161km±8km, mb4.1/12, Error ellipse: s-maj=16.7km s-min=9.7km az=137.7*
*NEIC **29** 19:44:19.0±0.5, 1537S×7056W, h151km±5km, mb4.0/2, Error ellipse: s-maj=9.1km s-min=5.9km az=223.0*
ISC 29 19:44:19.2±0.7, 1536S±008×7055W±009, h153km±8km, n29, σ0949/27, mb4.1/12, 1C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.43**	**219**	⇑*iP*		**Pn**	**19 44 47.8**	**-0.4**
ARE				*eS*		**Sn**	**19 45 11.0**	**+0.5**
NNA	**Nana**	**6.97**	**298**	P		**Pn**	**19 45 59.0**	**0.0**
	15nm,0.3s,baz=129,slow=9.9,SNR=18							
NNA				S		**Sn**	**19 47 12.6**	**-4.6**
	12nm,0.3s,baz=233,slow=20,SNR=3.8							
LVC	**Limon Verde**	**7.38**	**168**	P		**Pn**	**19 46 04.0**	**-0.3**
	60nm,0.3s,baz=337,slow=10,SNR=412							
LVC				S		**Sn**	**19 47 20.8**	**-6.1**
	26nm,0.3s,baz=211,slow=23,SNR=8.2							
LVC	**Limon Verde**	**7.38**	**168**	P		**Pn**	**19 46 04.0**	**-0.3**
LVC				S		**Sn**	**19 47 20.8**	**-6.1**
SIV	**San Ignacio**	**9.15**	**95**	P		**Pn**	**19 46 28.1**	**+0.1**
	2.5nm,0.3s,baz=276,slow=14,SNR=16							
ATAH	**Atahualpa**	**11.32**	**316**	P		**Pn**	**19 46 56.2**	**-0.4**
	0.5nm,0.3s,baz=188,slow=7.1,SNR=2.8							
ATAH				S		**Sn**	**19 48 51.6**	**-10**
	0.3nm,0.3s,baz=14,slow=3.4,SNR=4.1							
CFAA	**Coronel Fontan**	**16.31**	**173**	P		**Pn**	**19 47 59.9**	**+0.3**
	0.1nm,0.3s,baz=345,slow=9.0,SNR=4.4							
BDFB	**Brasilia**	**21.72**	**94**	P		**P**	**19 48 58.8**	**+0.4**
	2.8nm,0.4s,mb4.1,baz=86,slow=24,SNR=5.7							
PLCA	**Paso Flores**	**25.28**	**180**	P		**P**	**19 49 30.4**	**-1.0**
	0.9nm,0.4s,mb3.6,baz=349,slow=10,SNR=2.9							
PLCA	**Paso Flores**	**25.28**	**180**	*eP*		**P**	**19 49 30.4**	**-0.9**
	1.3nm,0.6s,mb3.6							
CMIG	**Matias Romero**	**40.20**	**322**	P		**P**	**19 51 41.1**	**+0.2**
	4.2nm,0.7s,mb4.2,baz=133,slow=6.8,SNR=5.8							
PMSA	**Palmer Station**	**49.57**	**176**	P		**P**	**19 52 54.5**	**+0.2**
	11nm,1.0s,mb4.4,baz=326,slow=18,SNR=3.3							
TXAR	**Lajitas Array**	**54.74**	**324**	P		**P**	**19 53 33.0**	**0.0**
	1.5nm,0.7s,mb3.8,baz=147,slow=8.3,SNR=5.5							
PDAR	**Pinedale Array**	**68.04**	**330**	P		**P**	**19 55 02.4**	**+0.3**
	1.0nm,0.7s,mb3.6,baz=120,slow=8.4,SNR=9.6							
DBIC	**Dimbokro**	**68.65**	**76**	P		**P**	**19 55 05.8**	**-0.7**
	3.2nm,0.5s,mb4.3,baz=238,slow=5.9,SNR=11							
DBIC	**Dimbokro**	**68.65**	**76**	*eP*		**P**	**19 55 06.0**	**-0.5**
	4.7nm,0.6s,mb4.4							
ULM	**Lac du Bonnet**	**69.02**	**343**	P		**P**	**19 55 07.6**	**-0.4**
	17nm,0.5s,mb5.0,baz=153,slow=5.5,SNR=12							
NVAR	**Mina Array Bea**	**69.73**	**322**	P		**P**	**19 55 13.5**	**+0.9**
	0.9nm,0.8s,mb3.5,baz=144,slow=6.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**76.87**	**72**	P		**P**	**19 55 54.4**	**-0.6**
	3.3nm,0.4s,mb4.3,baz=244,slow=4.5,SNR=78							
TSUM	**Tsumeb**	**83.35**	**108**	P		**P**	**19 56 30.7**	**+1.0**
	1.4nm,0.7s,mb3.8,baz=247,slow=7.1,SNR=5.0							
YKA	**Yellowknife Ar**	**84.91**	**341**	P		**P**	**19 56 36.6**	**+0.1**
	3.1nm,0.5s,mb4.3,baz=132,slow=5.0,SNR=38							
INK	**Inuvik**	**94.67**	**341**	*eP*		**P**	**19 57 22.1**	**-0.3**
BVAR	**Borovoye Array**	**131.47**	**31**	SKPbc		SKPbc	20 06 24.0	-0.6
	0.5nm,0.5s,baz=329,slow=2.6,SNR=4.6							
KURK	**Kurchatov**	**136.87**	**28**	PKP		PKPdf	20 03 23.9	+0.3
	0.6nm,0.5s,baz=312,slow=2.6,SNR=3.7							
KURK				SKPbc		SKPbc	20 06 41.8	-0.5
	0.5nm,0.7s,baz=289,slow=2.7,SNR=4.0							
ZALV	**Zalesovo Beam**	**136.94**	**21**	PKP		PKPdf	20 03 24.0	+0.4
	1.8nm,0.6s,baz=333,slow=1.7,SNR=8.0							
ZALV				SKPbc		SKPbc	20 06 42.9	+0.5
	0.3nm,0.3s,baz=285,slow=2.8,SNR=4.0							
MKAR	**Makanchi Array**	**141.35**	**30**	PKhKP			20 03 26.5	
	0.3nm,0.5s,baz=328,slow=3.7,SNR=5.6							
MKAR				PKP		PKPdf	20 03 32.0	+0.2
	0.2nm,0.5s,baz=332,slow=1.7,SNR=4.2							
MKAR				SKPbc		SKPbc	20 06 55.8	+1.0
	0.5nm,0.7s,baz=338,slow=2.7,SNR=3.3							
MJAR	**Matsushiro Arr**	**146.84**	**315**	PKPbc		PKPbc	20 03 43.5	-0.3
	3.4nm,0.6s,baz=102,slow=1.7,SNR=9.9							
MAT	**Matsushiro**	**146.84**	**315**	P		PKPbc	20 03 43.9	+0.1
SONM	**Songino Array**	**147.52**	**4**	PKP		PKPdf	20 03 43.5	+1.0
	2.3nm,0.8s,baz=310,slow=1.8,SNR=13							
SONM				PKPbc		PKPbc	20 03 46.2	+0.9
	2.3nm,0.8s,baz=346,slow=3.0,SNR=13							

*TAP **29** 19:51:49.0, 2457N×12058E, h13km, ML2.6, C*
*ISCJB **29** 19:51:49.2±0.7, 2460N±002×12054E±003, h10km±4km, Error ellipse: s-maj=5.4km s-min=3.4km az=34.7*
ISC 29 19:51:49.2±0.8, 2461N±003×12054E±004, h14km±3km, n32, σ0970/59, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TWQ1	**Liyutan**	**0.34**	**140**	*i*P		**Pg**	**19 51 55.6**	**-0.5**
	baz=141							
TWQ1				*i*S		**Sg**	**19 52 00.5**	**-0.1**
	baz=141							
NSTT	**Nanjuang**	**0.42**	**86**	P		**Pg**	**19 51 57.9**	**+0.2**
	baz=93							
NSTT				S		**Sg**	**19 52 04.3**	**+0.9**
	baz=93							
HSN	**Hsinchu**	**0.44**	**63**	*eP*		**Pg**	**19 51 59.0**	**+1.0**
	baz=47							
TCU	**Taichung**	**0.47**	**164**	*eP*		**Pg**	**19 51 59.0**	**+0.4**
	baz=168							
TCU				*eS*		**Sg**	**19 52 05.7**	**+0.8**
	baz=168							
TWT	**Tachien**	**0.68**	**121**	*eP*		**Pg**	**19 52 01.4**	**-1.0**
	baz=121							
TWT				*eS*		**Sg**	**19 52 10.9**	**-0.6**
	baz=121							
WNT	**Mingjian**	**0.74**	**169**	*eP*		**Pg**	**19 52 02.7**	**-0.8**
	baz=172							
WNT				*eS*		**Sg**	**19 52 13.6**	**+0.4**
	baz=172							
NSK	**Sanguang**	**0.75**	**84**	*eP*		**Pg**	**19 52 03.7**	**-0.1**
	baz=95							
NSK				*eS*		**Sg**	**19 52 13.7**	**0.0**
	baz=95							
TYC	**Yuchr**	**0.76**	**157**	*eP*		**Pg**	**19 52 03.4**	**-0.5**
	baz=159							
TYC				S		**Sg**	**19 52 14.7**	**+0.8**
	baz=159							
NNS	**Nan Shan**	**0.78**	**102**	P		**Pg**	**19 52 04.4**	**0.0**
	baz=100							
NNS				*eS*		**Sg**	**19 52 14.2**	**-0.5**
	baz=100							
SMLT	**Sun Moon Lake**	**0.79**	**155**	P		**Pg**	**19 52 04.0**	**-0.6**
	baz=146							
SMLT				*eS*		**Sg**	**19 52 15.3**	**+0.3**
	baz=146							
WHF	**Hehuan Shan**	**0.81**	**124**	P		**Pg**	**19 52 05.2**	**+0.3**
	baz=133							
WHF				*eS*		**Sg**	**19 52 16.2**	**+0.8**
	baz=133							
WGK	**Gukeng**	**0.92**	**179**	*eP*		**Pb**	**19 52 06.8**	**-0.1**
	baz=181							
WGK				*eS*		**Sg**	**19 52 19.5**	**+0.5**
	baz=181							
ENTT	**Nioudou**	**0.94**	**88**	*eP*		**Pb**	**19 52 06.2**	**-1.1**
	baz=101							
TWS1	**Kuangyinshan**	**0.94**	**58**	*eP*		**Pb**	**19 52 07.8**	**+0.4**
	baz=41							
TWS1				*eS*		**Sb**	**19 52 21.2**	**+1.5**
	baz=41							
WSF	**Szhu**	**1.00**	**197**	*eP*		**Pb**	**19 52 07.5**	**-1.0**
	baz=200							
WSF				*eS*		**Sb**	**19 52 22.2**	**+0.6**
	baz=200							
CHN5	**Tsauling**	**1.01**	**173**	*eP*		**Pb**	**19 52 07.9**	**-0.7**
	baz=174							
CHN5				*eS*		**Sb**	**19 52 21.3**	**-0.5**
	baz=174							
TWE	**Neicheng**	**1.03**	**83**	*eP*		**Pb**	**19 52 07.2**	**-1.8**
	baz=81							
CHN2	**Minshiung**	**1.07**	**183**	*eP*		**Pb**	**19 52 09.6**	**0.0**
	baz=171							
CHN2				*eS*		**Sb**	**19 52 24.0**	**+0.5**
	baz=171							
ALS	**Alishan**	**1.12**	**167**	P		**Pb**	**19 52 09.7**	**-0.7**
	baz=169							
ALS				S		**Sb**	**19 52 25.1**	**+0.3**
	baz=169							
ESL	**Shilin**	**1.14**	**134**	*eP*		**Pb**	**19 52 09.3**	**-1.4**
	baz=133							
YUS	**Yu-Shan**	**1.17**	**161**	*eP*		**Pn**	**19 52 11.2**	**-0.1**
	baz=162							
YUS				*eS*		**Sb**	**19 52 26.5**	**+0.1**
	baz=162							
CHN4	**Tsaushan**	**1.25**	**178**	*eP*		**Pn**	**19 52 12.2**	**-0.1**
	baz=179							
CHN4				*eS*		**Sb**	**19 52 29.2**	**+0.6**
	baz=179							
EHY	**Hungye**	**1.31**	**147**	*eP*		**Pn**	**19 52 12.7**	**-0.5**
	baz=139							
EHY				*eS*		**Sb**	**19 52 30.5**	**+0.2**
	baz=139							
TWK	**Hsinying**	**1.33**	**182**	*eP*		**Pn**	**19 52 14.2**	**+0.7**
	baz=184							
TWK				*eS*		**Sb**	**19 52 30.4**	**-0.6**
	baz=184							
WTP	**Ta-pu**	**1.35**	**177**	*eP*		**Pn**	**19 52 13.0**	**-0.8**
	baz=179							
WTP				*eS*		**Sn**	**19 52 30.7**	**-0.9**
	baz=179							
PNG	**Penghu**	**1.37**	**221**	*eP*		**Pn**	**19 52 13.9**	**0.0**
	baz=224							
PNG				*eS*		**Sn**	**19 52 32.9**	**+1.0**
	baz=224							
CHN1	**Nanshi**	**1.41**	**180**	*eP*		**Pn**	**19 52 14.0**	**-0.6**
	baz=182							
CHN1				*eS*		**Sn**	**19 52 33.1**	**+0.1**
	baz=182							
TWF1	**Yuli**	**1.43**	**151**	*eP*		**Pn**	**19 52 14.6**	**-0.2**
	baz=151							
TWF1				*eS*		**Sn**	**19 52 33.5**	**+0.1**
	baz=151							
ELDTW	**Lidau**	**1.48**	**163**	P		**Pn**	**19 52 15.5**	**0.0**
	baz=163							
ELDTW				*eS*		**Sn**	**19 52 34.3**	**-0.3**
	baz=163							
SGST	**Jiashian**	**1.52**	**178**	*eP*		**Pn**	**19 52 16.4**	**+0.5**
	baz=179							
SGST				*eS*		**Sn**	**19 52 35.5**	**-0.1**
	baz=179							
CHKT	**Chengkung**	**1.68**	**153**	*eP*		**Pn**	**19 52 20.0**	**+1.8**
	baz=154							
CHKT				*eS*		**Sn**	**19 52 40.4**	**+0.8**
	baz=154							
NJ2	**Nanjing**	**7.56**	**349**	*e*PKP		**Pn**	**19 53 42.8**	**+3.7**

*LDG **29** 20:11:08.1, 15.11N×6143W, h140km*
*TRN **29** 20:11:09.7, 1506N×61.19W, h154km, MD4.7, M4.1(FDF)*
TRN Felt II Martinique.
*MOS **29** 20:11:09.8±0.9, 1499N×6131W, h155km, mb4.5/30, Error ellipse: s-maj=10.9km s-min=7.2km az=47.1*
*ISCJB **29** 20:11:10.1±0.1, 1504N±002×6123W±002, h153km±1km, mb4.5/60, Error ellipse: s-maj=4.0km s-min=2.7km az=152.3*
*IDC **29** 20:11:11.0±0.7, 1505N×6128W, h146km±6km, mb4.2/21, mb1 4.3/23, mb1mx4.3/24, mbtmp4.1/23, Error ellipse: s-maj=10.9km s-min=9.3km az=73.0*
*NEIC **29** 20:11:11.0±0.2, 1504N×6131W, mb4.5/37, Error ellipse: s-maj=4.8km s-min=4.4km az=167.0*
NEIC Felt at Portsmouth, Dominica. Also felt on Barbados, Grenada, Nevis, Saint Kitts and Saint Martin.
*BJI **29** 20:11:11.0, 1500N×6130W, h144km, mB4.8*
ISC 29 20:11:11.5±0.1, 1502N±002×6126W±002, h146km±1km, h145km±2.5km; pP-P, n458, σ0958/477, mb4.5/60, 158C-133D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	**0.20**	**154**	⇓*iP*		**Pn**	**20 11 31.2**	**-0.1**
PCM	**Pelee Case Pet**	**0.21**	**168**	⇓*iP*		**Pn**	**20 11 31.0**	**-0.4**
PCM	**Pelee Case Pet**	**0.21**	**168**	*i*P		**Pn**	**20 11 31.4**	**0.0**
PCM				*eS*		**Sn**	**20 11 46.1**	**-0.4**
DSHT	**Scott's Head**	**0.22**	**329**	*eP*		**Pn**	**20 11 32.3**	**+0.9**
DSHT				*eS*		**Sn**	**20 11 47.2**	**+0.7**
BAMF	**Morne Balai**	**0.23**	**153**	*i*P		**Pn**	**20 11 31.4**	**0.0**
DSTT	**Stowe**	**0.23**	**349**	⇓*iP*		**Pn**	**20 11 32.2**	**+0.8**
DSTT				*eS*		**Sn**	**20 11 46.8**	**+0.3**
DFBT	**Forest Bistro**	**0.24**	**336**	*eP*		**Pn**	**20 11 32.2**	**+0.8**
GBMF	**Grand Be**	**0.24**	**158**	⇑*iP*		**Pn**	**20 11 31.4**	**0.0**
PML	**Morne Lenard**	**0.25**	**164**	⇑*eP*		**Pn**	**20 11 31.3**	**-0.2**
DBCT	**Belle View Cho**	**0.26**	**341**	*eP*		**Pn**	**20 11 32.1**	**+0.6**
DBCT				*eS*		**Sn**	**20 11 47.8**	**+1.1**
DPMT	**Pointe Michel**	**0.27**	**334**	*eP*		**Pn**	**20 11 32.4**	**+0.9**
DPMT				*eS*		**Sn**	**20 11 48.2**	**+1.5**
FDF	**Fort de France**	**0.30**	**160**	*eP*		**Pn**	**20 11 31.3**	**-0.3**
FDF				*eS*		**Sn**	**20 11 46.9**	**0.0**
FDF	**Fort de France**	**0.30**	**160**	⇑*eP*		**Pn**	**20 11 31.6**	**-0.1**
BVM	**Bellevue**	**0.34**	**147**	⇑*eP*		**Pn**	**20 11 31.0**	**-0.8**
BVM				*eS*		**Sn**	**20 11 46.1**	**-1.0**
ZAM	**Aeronautique**	**0.50**	**154**	⇑*iP*		**Pn**	**20 11 31.9**	**-0.5**
TRMF	**Trois Ilets**	**0.52**	**158**	⇑*eP*		**Pn**	**20 11 32.2**	**-0.3**
LPMF	**Morne Lapointe**	**0.53**	**148**	⇑*iP*		**Pn**	**20 11 31.9**	**-0.7**
LPMF				*eS*		**Sn**	**20 11 47.6**	**-1.0**
BIM	**Bigot**	**0.53**	**160**	⇑*eP*		**Pn**	**20 11 32.4**	**-0.2**
BIM				*eS*		**Sn**	**20 11 48.7**	**+0.1**
DWS	**Wesley**	**0.55**	**354**	⇑*eP*		**Pn**	**20 11 33.3**	**+0.6**
DWS				*i* S		**Sn**	**20 11 49.1**	**+0.3**
MVM	**Montagne Vaucl**	**0.58**	**143**	⇓*iP*		**Pn**	**20 11 32.4**	**-0.5**
SLW	**Petit Monier**	**1.04**	**163**	⇑*eP*		**Pn**	**20 11 35.7**	**-0.6**
SLW	**Petit Monier**	**1.04**	**163**	⇑*iP*		**Pn**	**20 11 37.6**	**+1.4**
SLW				*eS*		**Sn**	**20 11 56.0**	**+0.8**
HMG	**Houelmont**	**1.05**	**336**	*eP*		**Pn**	**20 11 36.4**	**+0.1**
DOG	**Dongo Capester**	**1.06**	**341**	*eP*		**Pn**	**20 11 36.2**	**-0.3**
SCG	**Saint Claude**	**1.08**	**338**	⇓*eP*		**Pn**	**20 11 36.8**	**+0.1**
BCG	**Bois Riant Cap**	**1.11**	**342**	⇑*eP*		**Pn**	**20 11 36.8**	**-0.1**
SLPE	**Piton Saint Es**	**1.20**	**168**	*eP*		**Pn**	**20 11 38.7**	**+1.0**
SLB	**Belfond**	**1.21**	**170**	⇓*iP*		**Pn**	**20 11 38.4**	**+0.6**
LZG	**Guadaloupe-1**	**1.22**	**336**	⇓*eP*		**Pn**	**20 11 38.0**	**+0.1**
SLDE	**Delcer**	**1.23**	**171**	⇓*eP*		**Pn**	**20 11 39.3**	**+1.3**
SLDE				*eS*		**Sn**	**20 11 60.0**	**+1.7**
DEG	**La Desirade**	**1.30**	**8**	⇑*iP*		**Pn**	**20 11 37.6**	**-1.1**
SFAN	**Fancy Village**	**1.63**	**177**	⇑*eP*		**Pn**	**20 11 43.0**	**+0.8**
SSV	**Crater Summit**	**1.69**	**178**	⇑*iP*		**Pn**	**20 11 43.6**	**+0.8**
SVV	**Soufriere Volc**	**1.69**	**179**	⇓*iP*		**Pn**	**20 11 43.9**	**+1.0**
SVV				*eS*		**Sn**	**20 12 07.2**	**+0.2**
BHS	**Barnard House**	**1.72**	**176**	*eP*		**Pn**	**20 11 43.5**	**+0.4**
FCV	**Fort Charlotte**	**1.85**	**180**	⇑*iP*		**Pn**	**20 11 45.3**	**+0.6**
FCV				*eS*		**Sn**	**20 12 10.5**	**+0.3**
MBRY		**1.88**	**333**	⇓*iP*		**Pn**	**20 11 44.6**	**-0.4**
MBRY				*eS*		**Sn**	**20 12 09.9**	**-0.9**
MBLG		**1.91**	**333**	⇓*iP*		**Pn**	**20 11 45.1**	**-0.2**
MBLG				*eS*		**Sn**	**20 12 10.9**	**-0.4**
MLYT	**Lee's Yard**	**1.92**	**332**	⇓*iP*		**Pn**	**20 11 45.4**	**0.0**
MLYT				*eS*		**Sn**	**20 12 11.4**	**-0.1**
MBWH		**1.93**	**332**	⇓*iP*		**Pn**	**20 11 45.3**	**-0.3**
MBWH				*eS*		**Sn**	**20 12 11.7**	**-0.1**
MBGB		**1.94**	**331**	⇓*iP*		**Pn**	**20 11 45.7**	**0.0**
MBGB				*eS*		**Sn**	**20 12 11.5**	**-0.5**
BPA	**Boggy Peak**	**2.10**	**344**	⇓*eP*		**Pn**	**20 11 47.0**	**-0.5**
BPA				*eS*		**Sn**	**20 12 14.1**	**-1.1**
BBGH	**Gun Hill**	**2.49**	**138**	*eP*		**Pn**	**20 11 52.5**	**+0.2**
BBSP	**Saint Philip**	**2.58**	**137**	*eP*		**Pn**	**20 11 53.3**	**-0.2**
BBSP				*eS*		**Sn**	**20 12 24.8**	**-1.1**
ANWB	**Willy Bob**	**2.68**	**349**	*eP*		**Pn**	**20 11 52.7**	**-2.0**
ANWB				*eS*		**Sn**	**20 12 23.3**	**-4.8**
GRW	**Mount Saint Ca**	**2.87**	**188**	⇑*iP*		**Pn**	**20 11 57.1**	**0.0**
GRW				*eS*		**Sn**	**20 12 32.7**	**+0.4**
GRGR	**Grenville**	**2.90**	**188**	*eP*		**Pn**	**20 11 57.2**	**-0.3**
TPR	**Prospect**	**3.84**	**173**	*eP*		**Pn**	**20 12 08.3**	**-1.3**
BOT	**Bacolet**	**3.87**	**172**	*eP*		**Pn**	**20 12 09.0**	**-0.9**
BOT	**Bacolet**	**3.87**	**172**	*eP*		**Pn**	**20 12 09.7**	**-0.2**
TCE	**Chacachacare**	**4.33**	**186**	*eP*		**Pn**	**20 12 15.8**	**-0.1**
TCE				*eS*		**Sn**	**20 13 03.5**	**-2.6**
TRN	**Trinidad (W)**	**4.35**	**182**	*eP*		**Pn**	**20 12 16.4**	**+0.1**
TRN				*eS*		**Sn**	**20 13 04.3**	**-2.4**
TBH	**Brigand Hill**	**4.51**	**178**	⇑*eP*		**Pn**	**20 12 18.0**	**-0.4**
TBH				*eS*		**Sn**	**20 13 08.2**	**-2.4**
TPP	**Pointe-a-Pierr**	**4.68**	**182**	*eP*		**Pn**	**20 12 20.1**	**-0.6**
SJG	**San Juan**	**5.61**	**304**	*eP*		**Pn**	**20 12 33.2**	**+0.3**
	102nm,0.4s							
SJG	**San Juan**	**5.61**	**304**	*eP*		**Pn**	**20 12 33.2**	**+0.3**
SJG					pmax	pmax		
	comp=Z,102nm,0.4s							
PCRV	**Puerto La Cruz**	**5.84**	**215**	P		**Pn**	**20 12 35.1**	**-0.9**
	comp=Z,3.5nm,0.3s,baz=84,slow=4.5,SNR=7.2							
SDDR	**Presa de Saban**	**10.37**	**294**	*eP*		**Pn**	**20 13 36.0**	**-0.5**
	comp=Z,126nm,0.5s							
SDDR				*eS*		**Sn**	**20 15 30.8**	**-0.5**
SDV	**Santo Domingo**	**11.01**	**237**	P		**Pn**	**20 13 45.2**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=68,slow=9.0,SNR=7.6							
SDV				S		**Sn**	**20 15 46.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=287,slow=22,SNR=2.9							
SDV	**Santo Domingo**	**11.01**	**237**	*eP*		**Pn**	**20 13 44.6**	**-0.4**
	comp=Z,22nm,0.8s							
ATAH	**Atahualpa**	**27.70**	**219**	P		**P**	**20 16 46.6**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.1,baz=52,slow=19,SNR=2.0							
TKL	**Tuckaleechee C**	**28.79**	**320**	P		**P**	**20 16 54.4**	**-1.3**
	comp=Z,2.0nm,0.4s,mb4.2,baz=135,slow=5.7,SNR=3.8							
TKL	**Tuckaleechee C**	**28.79**	**320**	P		**P**	**20 16 54.4**	**-1.2**
TKL					pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2							
SIV	**San Ignacio**	**30.81**	**180**	P		**P**	**20 17 13.8**	**+0.2**
	comp=Z,4.1nm,0.5s,mb4.4,baz=9.9,slow=8.2,SNR=29							
SIV					pP	pP	20 17 44.9	+0.1
	comp=Z,3.5nm,0.8s,baz=7.9,slow=9.1,SNR=4.3							
SIV					sP	sP	20 18 02.2	+0.6
	comp=Z,3.5nm,0.7s,baz=16,slow=10,SNR=3.8							
BDFB	**Brasilia**	**33.16**	**156**	P		**P**	**20 17 34.6**	**+0.5**
	comp=Z,0.9nm,0.4s,mb3.9,baz=323,slow=26,SNR=3.1							
BDFB	**Brasilia**	**33.16**	**156**	P		**P**	**20 17 34.6**	**+0.5**
BDFB					pmax	pmax		
	comp=Z,1.0nm,0.4s							
LVC	**Limon Verde**	**38.15**	**191**	P		**P**	**20 18 18.4**	**+1.8**
	comp=Z,28nm,0.4s,mb5.3,baz=7.5,slow=12,SNR=163							
SCHQ	**Schefferville**	**39.96**	**355**	P		**P**	**20 18 31.4**	**+0.1**
	comp=Z,18nm,0.4s,mb5.0,baz=181,slow=7.8,SNR=60							
TXAR	**Lajitas Array**	**41.54**	**297**	P		**P**	**20 18 44.1**	**-0.6**
	comp=Z,1.2nm,0.4s,mb3.9,baz=110,slow=7.1,SNR=44							
TXAR					pP	pP	20 19 17.3	+0.2
	comp=Z,1.6nm,0.8s,baz=110,slow=11,SNR=2.4							
TXAR					PcP	PcP	20 20 40.1	+0.7
	comp=Z,0.5nm,0.6s,baz=134,slow=5.1,SNR=3.5							
TXAR	**Lajitas Array**	**41.54**	**297**	P		**P**	**20 18 44.1**	**-0.6**
TXAR					*PP	pP	20 19 17.3	+0.2
TXAR							20 20 40.1	
TXAR					pmax	pmax		
	comp=Z,1.0nm,0.4s							
TXAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
TXAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
AGMN	**Agassiz Refuge**	**43.72**	**327**	*eP*		**P**	**20 19 01.0**	**-0.9**
	comp=Z,65nm,0.5s,mb5.5							
ULM	**Lac du Bonnet**	**44.93**	**329**	P		**P**	**20 19 09.7**	**-1.9**
	comp=Z,28nm,0.4s,mb5.2,baz=130,slow=7.9,SNR=24							
ANMO	**Albuquerque**	**45.08**	**305**	*eP*		**P**	**20 19 13.0**	**0.0**
	comp=Z,4.3nm,1.0s,mb4.0							
ANMO	**Albuquerque**	**45.08**	**305**	⇑*iP*		**P**	**20 19 13.1**	**+0.1**
ANMO				*i* *PP		pP	20 19 44.

K19A **Absolon Red Bu** 49.16 314 ⇑P P 20 19 44.5 0.0
baz=49
W16A **Flagstaff** 49.17 304 ⇓P P 20 19 45.6 +0.9
baz=49
R17A **Hanksville Air** 49.25 308 ⇓P P 20 19 45.6 +0.4
baz=49
SRU **San Rafael** 49.28 309 ⇑P P 20 19 45.6 +0.1
baz=49
L19A **Farson** 49.29 313 ⇑P P 20 19 45.6 +0.1
baz=49
T16A **Glen Canyon Da** 49.53 306 ⇑P P 20 19 48.0 +0.6
baz=50
P17A **Butcher Ranch,** 49.54 309 ⇓P P 20 19 47.7 +0.3
baz=50
M18A **Lyman** 49.59 312 ⇑P P 20 19 47.8 0.0
baz=50
Y15A **Casa Rosa Ranc** 49.62 302 ⇑P P 20 19 48.7 +0.6
baz=50
X15A **Humboldt** 49.63 303 ⇓P P 20 19 48.4 +0.2
baz=50
BW06 **Boulder Array** 49.64 314 ⇓P P 20 19 48.1 0.0
baz=50,SNR=21
PDAR **Pinedale Array** 49.64 314 P P 20 19 47.9 -0.3
comp=Z,12nm,0.8s,mb4.6,baz=117,slow=9.2,SNR=74
L18A **Fontenelle, Gr** 49.71 313 ⇑P P 20 19 48.4 -0.3
baz=50
Q16A **Castle Valley** 49.72 309 ⇑P P 20 19 48.6 -0.2
baz=50
O17A **Robinson Place** 49.73 310 ⇑P P 20 19 49.1 +0.3
baz=50,SNR=7.8
214A **Organ Pipe Nat** 49.73 299 ⇓P P 20 19 49.1 +0.1
baz=50
S16A **Weppner Ranch,** 49.76 307 ⇑P P 20 19 49.4 +0.3
baz=50
R16A **Teasdale** 49.80 308 ⇑P P 20 19 49.6 +0.1
baz=50,SNR=5.8
V15A **Kaibab Nationa** 49.82 304 ⇓P P 20 19 50.1 +0.5
baz=50
K18A **Toltan Ranch,** 49.94 314 ⇑P P 20 19 50.6 +0.2
baz=50
N17A **Moffit Pass** 50.00 311 ⇑P P 20 19 50.9 0.0
baz=50,SNR=5.8
M17A **Scullys Gap (B** 50.03 312 ⇑P P 20 19 51.2 +0.1
baz=50
U15A **North Rim** 50.03 305 ⇓P P 20 19 51.7 +0.4
baz=50
J18A **Kendall Valley** 50.10 314 ⇑P P 20 19 51.6 -0.1
baz=50,SNR=5.6
I18A **Diamond G Ranc** 50.12 315 ⇓P P 20 19 51.7 -0.1
baz=50,SNR=12
X14A **Yava** 50.16 302 ⇑P P 20 19 52.5 +0.3
baz=50,SNR=6.2
Y14A **Wickenburg** 50.17 302 ⇑P P 20 19 52.9 +0.6
baz=50
T15A **Red Dirt Ranch** 50.23 306 ⇓P P 20 19 53.3 +0.7
baz=50
RLMT **Red Lodge** 50.24 317 eP P 20 19 52.5 -0.2
comp=Z,22nm,1.1s,mb4.7
RLMT **Red Lodge** 50.24 317 ⇑P P 20 19 52.5 -0.1
baz=50,SNR=13
O16A **Springville** 50.29 310 ⇓P P 20 19 53.3 +0.2
baz=50
S15A **Panguitch** 50.35 307 ⇓P P 20 19 54.2 +0.6
baz=50
R15A **Junction** 50.40 307 ⇓P P 20 19 54.5 +0.6
baz=50
N16A **Rees Ranch, Co** 50.43 311 ⇓P P 20 19 54.3 +0.2
baz=50
W14A **Seligman** 50.44 303 ⇑P P 20 19 55.0 +0.7
baz=50
G18A **Lazy EL Ranch,** 50.51 317 ⇑P P 20 19 54.5 -0.1
baz=50
V14A **Boquillas Ranc** 50.53 304 ⇑P P 20 19 55.5 +0.5
baz=50
K17A **Gardner Place,** 50.59 313 ⇓P P 20 19 55.3 +0.1
baz=50
J17A **Brown Place, J** 50.63 314 ⇓P P 20 19 55.8 +0.2
baz=51,SNR=8.6
Q15A **Fillmore** 50.65 308 ⇓P P 20 19 56.3 +0.4
baz=51
M16A **Huntsville** 50.68 311 ⇓P P 20 19 55.9 -0.1
baz=51,SNR=9.9
P15A **Leamington** 50.71 309 ⇓P P 20 19 56.4 +0.2
baz=51
AHID **Auburn Hatcher** 50.72 313 eP P 20 19 56.1 -0.1
comp=Z,12nm,0.8s,mb4.6
L16A **Fish Haven** 50.74 312 ⇓P P 20 19 56.1 -0.3
baz=51
U14A **Mt Trumbull** 50.74 305 ⇓P P 20 19 56.9 +0.4
baz=51
F18A **Big Timber** 50.82 318 ⇑P P 20 19 56.7 -0.3
baz=51,SNR=11
Y13A **Salome** 50.83 301 ⇓P P 20 19 57.6 +0.3
baz=51
X13A **Yucca** 50.95 302 ⇑P P 20 19 58.4 +0.3
baz=51
W13A **Hualapai Mount** 51.07 303 ⇓P P 20 19 59.8 +0.7
baz=51
K16A **Soda Springs** 51.08 313 ⇑P P 20 19 58.9 -0.1
baz=51,SNR=6.5
PDMCI **Parker Dam,Lak** 51.16 302 ⇑P P 20 20 00.1 +0.4
baz=51
E18A **Harlowton** 51.19 318 ⇑P P 20 19 59.5 -0.2
baz=51,SNR=7.6
N15A **Stansbury Isla** 51.22 311 ⇑P P 20 20 00.1 +0.1
baz=51
J16A **Bone** 51.23 314 ⇑P P 20 19 60.0 -0.1
baz=51,SNR=5.6
DUG **Dugway** 51.26 310 ⇑P P 20 20 00.7 +0.4
baz=51
V13A **Grand Canyon W** 51.28 304 ⇓P P 20 20 01.2 +0.7
baz=51,SNR=7.4
G17A **Pierce Place,** 51.29 317 ⇓P P 20 20 00.6 +0.1
baz=51
P14A **Drum Mountains** 51.31 309 ⇓P P 20 20 01.0 +0.3
baz=51,SNR=8.2
I16A **Newdale** 51.33 315 ⇑P P 20 20 01.0 +0.3
baz=51
Q14A **Sevier Lake (B** 51.33 308 ⇓P P 20 20 01.3 +0.4
baz=51,SNR=9.0
D18A **Linhart Farms,** 51.35 319 ⇑P P 20 20 01.3 +0.5
baz=51,SNR=8.3
U13A **Pakoon Wash** 51.36 305 ⇑P P 20 20 01.8 +0.6
baz=51
L15A **Malad City** 51.42 312 ⇓P P 20 20 01.3 -0.2
baz=51,SNR=13
H16A **Russell Place,** 51.42 316 ⇑P P 20 20 02.0 +0.5
baz=51,SNR=8.9
F17A **Fitzpatrick Pl** 51.43 317 ⇑P P 20 20 01.7 +0.2
baz=51,SNR=7.0
EGMT **Eagleton** 51.63 320 ⇓P P 20 20 02.9 -0.1
baz=52,SNR=10
R13A **O'Grain Ranch,** 51.69 307 ⇓P P 20 20 03.8 +0.2
baz=52
N14A **Grayback Hills** 51.70 310 ⇑P P 20 20 03.7 +0.1
baz=52
K15A **Arbon** 51.71 313 ⇑P P 20 20 03.6 0.0
baz=52,SNR=6.5
E17A **Martinsdale** 51.76 318 ⇓P P 20 20 04.1 +0.2
baz=52
B18A **Beardsley Farm** 51.79 321 ⇓P P 20 20 04.3 +0.2
baz=52,SNR=12
U12A **Valley of Fire** 51.82 305 ⇓P P 20 20 04.8 +0.3
baz=52
J15A **Blackfoot** 51.84 314 ⇑P P 20 20 04.5 -0.1
baz=52,SNR=8.2
D17A **Six Diamond Ra** 51.89 319 ⇓P P 20 20 05.1 +0.2
baz=52,SNR=7.5
Q13A **Wheeler Ranch,** 51.89 308 ⇓P P 20 20 05.3 +0.3
baz=52,SNR=10
G16A **Moss Hill, Enn** 51.97 316 ⇑P P 20 20 05.5 0.0
baz=52,SNR=5.9
IRM **Iron Mountain** 51.97 302 ⇓P P 20 20 05.9 +0.2
baz=52,SNR=9.9
M14A **Sheep Mountain** 51.98 311 ⇑P P 20 20 05.6 -0.1
baz=52,SNR=9.7
BOZ **Bozeman (W)** 51.99 317 ⇑P P 20 20 05.5 -0.2
baz=52,SNR=8.6
P13A **Bates Ranch, G** 51.99 309 ⇓P P 20 20 06.2 +0.4
baz=52,SNR=16
T12A **Moapa** 52.01 305 ⇓P P 20 20 06.4 +0.5
baz=52
F16A **Kennard Place,** 52.03 317 ⇑P P 20 20 06.1 +0.2
baz=52
A18A **Metzger Ranch,** 52.04 321 ⇑P P 20 20 05.7 -0.2
baz=52,SNR=10
L14A **Malta** 52.04 312 ⇓P P 20 20 06.2 +0.2
baz=52,SNR=9.8

I15A **Monteview** 52.05 314 ⇓P P 20 20 06.5 +0.4
baz=52
C17A **Wharram Farm,** 52.11 319 ⇓P P 20 20 06.6 +0.1
baz=52
K14A **Jones Ranch, D** 52.13 313 ⇓P P 20 20 06.9 +0.2
baz=52,SNR=13
BC3 **Big Chuckw Mtn** 52.15 301 ⇓P P 20 20 07.6 +0.5
baz=52,SNR=7.3
R12A **Pony Springs,** 52.22 307 ⇓P P 20 20 08.1 +0.7
baz=52,SNR=9.7
E16A **East Helena** 52.31 318 ⇓P P 20 20 08.1 +0.1
baz=52
H15A **Lima** 52.34 315 ⇑P P 20 20 08.8 +0.5
baz=52
B17A **L&G Farms, Che** 52.38 320 ⇓P P 20 20 08.3 -0.2
baz=52,SNR=5.7
D16A **Dana Ranch, Ca** 52.40 318 ⇑P P 20 20 08.6 -0.1
baz=52,SNR=8.0
G15A **Dillon** 52.41 316 ⇓P P 20 20 08.7 0.0
baz=52,SNR=6.5
GMRC **Granite Mounta** 52.47 302 ⇑P P 20 20 09.7 +0.3
baz=52
M13A **Montello** 52.54 311 ⇓P P 20 20 09.8 +0.1
baz=52,SNR=8.2
L13A **Double Diamond** 52.56 312 ⇑P P 20 20 09.7 -0.2
baz=52
A17A **Triple J Farms** 52.56 321 ⇑P P 20 20 09.7 -0.1
baz=52,SNR=15
J14A **Carey** 52.58 313 ⇓P P 20 20 10.2 +0.1
baz=52,SNR=9.1
F15A **Butte** 52.62 317 ⇓P P 20 20 10.2 -0.1
baz=53,SNR=7.5
BELC **Belle Mtn.** 52.65 301 ⇑P P 20 20 10.9 +0.2
baz=53
O12A **Currie** 52.72 309 ⇓P P 20 20 11.6 +0.5
baz=53
TUQ **Turquoise Moun** 52.77 303 ⇑P P 20 20 12.1 +0.5
baz=53
C16A **Fuhringer Ranc** 52.79 319 ⇑P P 20 20 11.3 -0.2
baz=53,SNR=11
K13A **Stover Farm, H** 52.80 312 ⇑P P 20 20 11.6 -0.1
baz=53
H14A **Leadore** 52.84 315 ⇓P P 20 20 12.1 +0.2
baz=53,SNR=8.0
MONP **Monumunt Peak** 52.87 300 ⇑P P 20 20 12.8 +0.4
baz=53,SNR=7.5
E15A **Deer Lodge** 52.91 317 ⇓P P 20 20 12.6 +0.2
baz=53
R11A **Troy Canyon, C** 52.98 307 ⇓P P 20 20 13.6 +0.5
baz=53
S11A **Rachel** 52.98 306 ⇑P P 20 20 13.9 +0.8
baz=53
B16A **M & M Farms, S** 52.99 320 ⇓P P 20 20 12.6 -0.4
baz=53,SNR=15
HEC **Hector,Ludlow** 53.02 302 ⇑P P 20 20 14.1 +0.7
baz=53
D15A **Lincoln** 53.03 318 ⇑P P 20 20 13.1 -0.2
baz=53,SNR=13
J13A **Cove Ranch, Pi** 53.06 313 ⇑P P 20 20 13.7 +0.1
baz=53,SNR=6.2
N12A **Clover Valley,** 53.06 310 ⇑P P 20 20 13.6 -0.1
baz=53,SNR=7.8
EMIN **Mina Concepcio** 53.07 54 P P 20 20 13.7 -0.1
comp=Z,5.0nm,0.8s,mb4.3
G14A **Jackson** 53.08 316 ⇓P P 20 20 13.5 -0.2
baz=53
M12A **Wells** 53.10 311 ⇑P P 20 20 13.9 0.0
baz=53,SNR=11
A16A **West Butte Ran** 53.12 321 ⇓P P 20 20 13.6 -0.2
baz=53,SNR=11
Q11A **Duckwater** 53.12 307 ⇑P P 20 20 14.2 +0.1
baz=53
SHOC **Shoshone** 53.12 304 ⇓P P 20 20 14.4 +0.2
baz=53
I13A **Wildhorse Cree** 53.16 314 ⇓P P 20 20 14.1 -0.2
baz=53,SNR=12
F14A **Wisdom** 53.20 316 ⇓P P 20 20 14.6 0.0
baz=53
TPNV **Topopah Spring** 53.26 305 ⇓P P 20 20 15.5 +0.3
baz=53,SNR=7.1
HLID **Hailey** 53.27 313 ⇑P P 20 20 15.1 0.0
baz=53,SNR=7.9
C15A **Salmond Ranch,** 53.33 319 ⇓P P 20 20 15.2 -0.2
baz=53,SNR=23
L12A **House Creek Ra** 53.34 312 ⇑P P 20 20 15.6 -0.1
baz=53
O11A **Cowboy Ranch,** 53.37 309 ⇑P P 20 20 16.0 +0.1
baz=53,SNR=26
K12A **Draper Farm, C** 53.38 312 ⇑P P 20 20 15.7 -0.3
baz=53,SNR=5.5
H13A **Hallis** 53.43 315 ⇑P P 20 20 16.0 -0.3
baz=53
E14A **Clinton** 53.46 317 ⇓P P 20 20 16.5 0.0
baz=53
GSC **Goldstone** 53.47 303 ⇑P P 20 20 17.0 +0.3
baz=53
B15A **Bradely Ranch,** 53.49 320 ⇑P P 20 20 16.0 -0.6
baz=53,SNR=8.7
R10A **Warm Springs** 53.52 307 ⇓P P 20 20 17.5 +0.5
baz=54
G13A **Cobalt** 53.56 315 ⇑P P 20 20 17.1 -0.1
baz=54
ESPR **Espera** 53.57 55 P P 20 20 18.3 +0.9
comp=Z,34nm,1.6s,mb4.8
J12A **Stokes Ranch,** 53.67 313 ⇑P P 20 20 17.6 -0.4
baz=54,SNR=5.7
D14A **Greenough** 53.68 318 ⇓P P 20 20 17.9 -0.1
baz=54
S10A **Tonopah Range,** 53.69 306 ⇓P P 20 20 18.6 +0.4
baz=54,SNR=12
Q10A **Clear Creek Ra** 53.69 307 ⇑P P 20 20 18.5 +0.2
baz=54,SNR=5.8
M11A **Holland Ranch,** 53.75 311 ⇓P P 20 20 18.8 +0.1
baz=54,SNR=6.3
EJIF **Jimena Fronter** 53.81 56 P P 20 20 21.2 +1.9
comp=Z,5.5nm,0.6s,mb4.5
EJIF **Jimena Fronter** 53.81 56 P P 20 20 21.2 +2.0
EJIF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
A15A **Johnson Ranch,** 53.82 320 ⇑P P 20 20 18.7 -0.4
baz=54,SNR=23
F13A **Darby** 53.83 316 ⇑P P 20 20 18.8 -0.3
baz=54
I12A **Atlanta** 53.83 314 ⇑P P 20 20 19.2 0.0
baz=54
H12A **Diamond D Ranc** 53.84 315 ⇓P P 20 20 18.9 -0.3
baz=54
L11A **Cat Creek Ranc** 53.88 311 ⇑P P 20 20 19.5 -0.1
baz=54,SNR=7.6
E13A **Victor** 53.93 317 ⇓P P 20 20 19.6 -0.2
baz=54,SNR=8.1
B14A **Marquette Ranc** 53.95 319 ⇑P P 20 20 19.9 0.0
baz=54
O10A **Cortez Mining,** 54.04 309 ⇑P P 20 20 20.8 0.0
baz=54
BFSC **Mount Baldy St** 54.04 302 ⇑P P 20 20 20.9 0.0
baz=54
C14A **Swan Lake** 54.05 319 ⇑P P 20 20 20.7 -0.1
baz=54
MDT **Midelt** 54.10 60 P P 20 22.0 +0.6
baz=277,slow=9.8
R09A **Tonopah** 54.11 306 ⇑P P 20 20 21.5 +0.2
baz=54
MPMC **Manual Prospec** 54.12 304 ⇑P P 20 20 21.5 +0.1
baz=54
S09A **Goldfield** 54.15 306 ⇑P P 20 20 21.7 +0.1
baz=54
GRAC **Grapevine Rang** 54.15 305 ⇓P P 20 20 21.8 +0.1
baz=54,SNR=5.1
LRMC **Laurel Mountai** 54.21 303 ⇓P P 20 20 22.3 +0.2
baz=54
K11A **Parker Ranch,** 54.22 312 ⇓P P 20 20 22.3 +0.2
baz=54
MFID **Camas Ranch** 54.23 313 ⇑P P 20 20 22.2 +0.1
baz=54
A14A **Double T Ranch** 54.25 320 ⇓P P 20 20 21.8 -0.3
baz=54,SNR=14
D13A **Huson** 54.30 318 ⇑P P 20 20 22.4 -0.1
baz=54
M10A **I.L. Ranch, Tu** 54.32 311 ⇑P P 20 20 22.7 0.0
baz=54
EDW2 **Edwards Air Fo** 54.38 302 ⇓P P 20 20 23.4 0.0
baz=54,SNR=5.2
L10A **Juniper Basin** 54.38 311 ⇓P P 20 20 23.1 -0.1
baz=54,SNR=12
F12A **Elk City** 54.44 316 ⇓P P 20 20 23.3 -0.2
baz=54
I11A **Placerville** 54.44 314 ⇓P P 20 20 23.4 -0.2
baz=54

O09A **Fish Creek Ran** 54.53 309 ⇑P P 20 20 24.4 0.0
baz=54,SNR=13
C13A **Hot Springs** 54.56 318 ⇑P P 20 20 24.5 +0.1
baz=54
WALA **Waterton Lakes** 54.58 320 eP P 20 20 23.9 -0.6
comp=Z,5.1nm,0.8s,mb4.3
H11A **Donnelly** 54.68 314 ⇓P P 20 20 25.0 -0.3
baz=55
B13A **Whitefish** 54.71 319 ⇑P P 20 20 25.1 -0.3
baz=55
K10A **MacKenzie Ranc** 54.83 312 ⇑P P 20 20 26.1 -0.3
baz=55,SNR=5.4
A13A **Flathead Natio** 54.85 320 ⇓P P 20 20 26.2 -0.3
baz=55
N09A **Rock Creek Ran** 54.91 310 ⇓P P 20 20 26.9 -0.1
baz=55
ELOJ **Sierra Loja** 54.96 55 P P 20 20 29.1 +1.6
comp=Z,2.8nm,0.5s,mb4.2
ELOJ **Sierra Loja** 54.96 55 P P 20 20 29.1 +1.6
ELOJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
M09A **Marrel Ranch,** 54.97 310 ⇑P P 20 20 27.2 -0.3
baz=55
G11A **Walters Elk Ra** 55.03 315 ⇓P P 20 20 27.6 -0.2
baz=55
NVAR **Mina Array Bea** 55.09 307 P P 20 20 28.8 +0.4
comp=Z,5.7nm,0.7s,mb4.4,baz=101,slow=6.3,SNR=34
NVAR pP pP 20 21 01.9 -0.6
comp=Z,0.9nm,0.7s,baz=88,slow=9.1,SNR=1.4
C12B **Naegeli Ranch,** 55.15 318 ⇓P P 20 20 28.3 -0.3
baz=55
H10A **Noah's Angus R** 55.16 314 ⇑P P 20 20 27.8 -1.0
baz=55,SNR=5.6
E11A **Bogner Ranch,** 55.24 316 ⇑P P 20 20 29.1 -0.2
baz=55
O08A **Rochester Mine** 55.28 309 ⇑P P 20 20 29.2 -0.5
baz=55
N08A **GE Springer Mi** 55.35 309 ⇓P P 20 20 30.1 -0.1
baz=55,SNR=7.0
EBAN **Banos Encina** 55.38 54 P P 20 20 30.8 +0.3
comp=Z,3.2nm,0.6s,mb4.2
EBAN **Banos Encina** 55.38 54 P P 20 20 30.8 +0.3
EBAN pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
K09A **Rome** 55.42 312 ⇑P P 20 20 30.5 -0.2
baz=55,SNR=5.4
ECOG **Cogollos-Vega** 55.44 55 P P 20 20 32.7 +1.8
comp=Z,6.4nm,0.8s,mb4.4
ECOG **Cogollos-Vega** 55.44 55 P P 20 20 32.7 +1.8
ECOG pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
ESDC **Sonseca Array** 55.48 52 P P 20 20 31.8 +0.7
comp=Z,3.0nm,0.8s,mb4.1
D11A **Klaveano Farm,** 55.52 317 ⇑P P 20 20 30.6 -0.7
baz=56
G10A **Bishop Farm, J** 55.59 315 ⇑P P 20 20 31.2 -0.6
baz=56
BMO **Blue Mountains** 55.61 314 eP P 20 20 30.0 -1.9
comp=Z,1.8nm,0.6s,mb4.1
A12A **Yaak River Ran** 55.63 319 ⇑P P 20 20 32.0 -0.1
baz=56,SNR=16
M08A **Happy Creek Ra** 55.66 310 ⇑P P 20 20 32.5 +0.1
baz=56,SNR=5.9
C11A **Tepee Creek (N** 55.69 318 ⇑P P 20 20 32.3 -0.2
baz=56
TIC **Toumodi** 55.73 92 eP P 20 20 32.8 -0.6
comp=Z,48nm,0.8s,mb5.4
EDM **Edmonton** 55.75 325 eP P 20 20 31.9 -1.0
L08A **Fields** 55.77 311 ⇑P P 20 20 33.5 +0.3
baz=56,SNR=9.5
H09A **Durkee** 55.81 314 ⇑P P 20 20 32.8 -0.6
baz=56
LIC **Lamto** 55.82 93 eP P 20 20 33.6 -0.4
comp=Z,23nm,0.6s,mb4.9
LIC **Lamto** 55.82 93 eP P 20 20 33.5 -0.5
comp=Z,39nm,0.6s,mb5.4
LIC **Lamto** 55.82 93 eP P 20 20 33.6 -0.4
comp=Z,11nm,0.6s,mb4.9
DBIC **Dimbokro** 55.88 92 P P 20 20 34.2 -0.2
comp=Z,13nm,0.6s,mb4.9,baz=264,slow=7.1,SNR=34
DBIC **Dimbokro** 55.88 92 P P 20 20 34.2 -0.2
DBIC pmax pmax
comp=Z,13nm,0.6s
EQES **Quesada** 55.90 54 P P 20 20 34.9 +0.8
comp=Z,15nm,0.9s,mb4.8
B11A **Sandpoint** 55.93 319 ⇓P P 20 20 33.9 -0.3
baz=56,SNR=7.4
N07B **Gerlach** 55.98 309 ⇑P P 20 20 34.3 -0.4
baz=56,SNR=5.2
R06C **Coleville** 56.00 306 ⇓P P 20 20 35.8 +0.9
baz=56
G09A **Cove** 56.03 315 ⇑P P 20 20 34.5 -0.5
baz=56
KIC **Kosan Boka** 56.07 92 eP P 20 20 35.4 -0.4
comp=Z,61nm,0.7s,mb5.5
A11A **Hall Mountain,** 56.08 319 ⇑P P 20 20 35.4 +0.2
baz=56
J08A **Circle Bar Ran** 56.10 312 ⇓P P 20 20 35.1 -0.3
baz=56,SNR=5.5
PLCA **Paso Flores** 56.13 188 P P 20 20 34.7 -0.9
comp=Z,21nm,0.9s,mb4.0,baz=0.0,slow=12,SNR=2.4
PLCA **Paso Flores** 56.13 188 P P 20 20 34.7 -0.9
PLCA pmax pmax
comp=Z,2.0nm,0.9s
D10A **Wagner Farm, O** 56.14 317 ⇓P P 20 20 34.9 -0.8
baz=56
M07A **Soldier Meadow** 56.23 310 ⇑P P 20 20 36.4 -0.1
baz=56,SNR=8.5
EVIA **Vianos** 56.45 53 P P 20 20 40.3 +2.3
comp=Z,3.7nm,0.7s,mb4.3
EVIA **Vianos** 56.45 53 P P 20 20 40.3 +2.2
EVIA pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
L07A **Adell** 56.47 311 ⇑P P 20 20 37.9 -0.2
baz=56
H08A **Prairie City** 56.48 314 ⇑P P 20 20 38.3 +0.1
baz=56,SNR=5.3
ENIJ **Nijar** 56.48 55 P P 20 20 39.2 +0.9
comp=Z,11nm,0.6s,mb4.9
ENIJ **Nijar** 56.48 55 P P 20 20 39.2 +0.9
ENIJ pmax pmax
comp=Z,11nm,0.6s,mb4.9
O06A **Flanigan** 56.52 308 ⇓P P 20 20 37.9 -0.6
baz=56,SNR=5.4
N06A **Buffalo Meadow** 56.62 309 ⇑P P 20 20 38.5 -0.8
baz=57,SNR=6.1
D09A **Jones Farm, Ri** 56.82 317 ⇓P P 20 20 39.9 -0.7
baz=57
F08A **Pendleton** 56.84 315 ⇓P P 20 20 39.9 -0.8
baz=57
A10A **Northport** 56.84 319 ⇓P P 20 20 40.0 -0.6
baz=57
G08A **Pilot Rock** 56.85 315 ⇓P P 20 20 40.3 -0.4
baz=57
BEKR **Beckwourth** 56.88 308 ⇑P P 20 20 40.5 -0.6
baz=57,SNR=5.2
I07A **Izee** 56.98 313 ⇓P P 20 20 41.4 -0.3
baz=57
C09A **Chrisman Ranch** 56.99 318 ⇑P P 20 20 41.2 -0.5
baz=57
LAVA **Lava Cap Winer** 57.03 307 ⇑P P 20 20 42.4 +0.3
baz=57
B09A **Rice** 57.07 318 ⇑P P 20 20 41.4 -0.8
baz=57
ETOR **Torete** 57.10 51 P P 20 20 43.3 +0.7
comp=Z,8.4nm,1.1s,mb4.5
ETOR **Torete** 57.10 51 P P 20 20 43.3 +0.7
ETOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
H07A **Lands Inn, Kim** 57.12 314 ⇑P P 20 20 41.9 -0.8
baz=57
J06A **Christmas Vall** 57.28 312 ⇑P P 20 20 43.2 -0.6
baz=57
G07A **Ruggs Ranch, H** 57.33 314 ⇑P P 20 20 43.6 -0.5
baz=57
C08A **Higginbotham F** 57.48 317 ⇓P P 20 20 44.6 -0.6
baz=57
A09A **Danville** 57.49 319 ⇑P P 20 20 45.0 -0.2
baz=57
K05A **Summer Lake** 57.72 311 ⇓P P 20 20 47.3 +0.4
baz=58
ROSF **Rostrenen** 57.75 42 eP P 20 20 46.9 -0.1
A08A **Turner Farm, O** 57.92 319 ⇑P P 20 20 47.6 -0.6
baz=58,SNR=5.1
D07A **Quincy** 57.96 317 ⇓P P 20 20 48.0 -0.5
baz=58

SJPF	**Ste Jean**	**58.07**	**48**	*e*P		**P**	**20 20 49.9**	**+0.5**
	comp=Z,9.2nm,0.6s,mb4.5								
SJPF	**Ste Jean**	**58.07**	**48**	*e*P		**P**	**20 20 49.9**	**+0.5**
	comp=Z,4.6nm,0.6s,mb4.5								
SJPF	**Ste Jean**	**58.07**	**48**	*e*P		**P**	**20 20 49.9**	**+0.5**
SJPF					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.5								
B07A	**Winthrop**	**58.35**	**318**	⇑P		**P**	**20 20 50.6**	**-0.6**
	baz=58,SNR=8.3								
A07A	**Ashnola River,**	**58.66**	**319**	⇑P		**P**	**20 20 53.5**	**+0.2**
	baz=59,SNR=7.7								
EPF	**Esparros**	**59.19**	**49**	*e*P		**P**	**20 20 57.8**	**+0.7**
	comp=Z,6.7nm,0.5s,mb4.4								
EPF	**Esparros**	**59.19**	**49**	*e*P		**P**	**20 20 57.8**	**+0.7**
	comp=Z,3.3nm,0.5s,mb4.4								
EPF	**Esparros**	**59.19**	**49**	*e*P		**P**	**20 20 57.8**	**+0.7**
EPF					pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.4								
GRR	**Gorron**	**59.33**	**42**	*e*P		**P**	**20 20 57.8**	**-0.1**
	comp=Z,16nm,0.8s,mb4.6								
GRR	**Gorron**	**59.33**	**42**	*e*P		**P**	**20 20 57.8**	**-0.1**
	comp=Z,7.8nm,0.8s,mb4.6								
GRR	**Gorron**	**59.33**	**42**	*e*P		**P**	**20 20 57.8**	**-0.1**
GRR					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.6								
MFF	**Saint Martin d**	**59.44**	**45**	*e*P		**P**	**20 20 58.9**	**+0.1**
	comp=Z,10nm,0.7s,mb4.5								
MFF	**Saint Martin d**	**59.44**	**45**	*e*P		**P**	**20 20 58.9**	**+0.1**
	comp=Z,5.1nm,0.7s,mb4.5								
MFF	**Saint Martin d**	**59.44**	**45**	*e*P		**P**	**20 20 58.9**	**+0.1**
MFF					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
FLN	**La Foliniere**	**59.65**	**42**	*e*P		**P**	**20 21 00.2**	**0.0**
YKA	**Yellowknife Ar**	**60.27**	**335**	P		**P**	**20 21 02.9**	**-1.2**
	comp=Z,11nm,0.4s,mb5.0,baz=106,slow=7.5,SNR=96								
YKA	**Yellowknife Ar**	**60.27**	**335**	P		**P**	**20 21 02.9**	**-1.2**
YKA	**Yellowknife Ar**	**60.27**	**335**	P		**P**	**20 21 02.9**	**-1.2**
YKA					pmax	pmax			
	comp=Z,11nm,0.4s								
RJF	**Les Rejaudoux**	**60.37**	**46**	*e*P		**P**	**20 21 04.8**	**-0.3**
	comp=Z,15nm,0.8s,mb4.5								
RJF	**Les Rejaudoux**	**60.37**	**46**	*e*P		**P**	**20 21 04.8**	**-0.3**
	comp=Z,7.4nm,0.8s,mb4.6								
RJF	**Les Rejaudoux**	**60.37**	**46**	*e*P		**P**	**20 21 04.8**	**-0.3**
RJF					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.5								
MTLF	**Montolieu**	**60.59**	**49**	*e*P		**P**	**20 21 06.5**	**-0.2**
	comp=Z,11nm,0.8s,mb4.4								
MTLF	**Montolieu**	**60.59**	**49**	*e*P		**P**	**20 21 06.5**	**-0.2**
	comp=Z,5.6nm,0.8s,mb4.5								
MTLF	**Montolieu**	**60.59**	**49**	*e*P		**P**	**20 21 06.5**	**-0.2**
MTLF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.5								
CAF	**Calviac**	**60.69**	**47**	*e*P		**P**	**20 21 07.2**	**-0.1**
	comp=Z,6.3nm,0.6s,mb4.3								
CAF	**Calviac**	**60.69**	**47**	*e*P		**P**	**20 21 07.2**	**-0.1**
	comp=Z,3.2nm,0.6s,mb4.3								
CAF	**Calviac**	**60.69**	**47**	*e*P		**P**	**20 21 07.2**	**-0.1**
CAF					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.3								
TORD	**Torodi Ar. Bea**	**60.91**	**83**	P		**P**	**20 21 08.7**	**-0.6**
	comp=Z,9.9nm,0.5s,mb4.9,baz=280,slow=6.5,SNR=106								
TCF	**Toulx Ste Croi**	**60.99**	**45**	*e*P		**P**	**20 21 09.1**	**-0.2**
	comp=Z,12nm,0.8s,mb4.4								
TCF	**Toulx Ste Croi**	**60.99**	**45**	*e*P		**P**	**20 21 09.1**	**-0.2**
	comp=Z,5.9nm,0.8s,mb4.5								
TCF	**Toulx Ste Croi**	**60.99**	**45**	*e*P		**P**	**20 21 09.1**	**-0.2**
TCF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.5								
BGF	**Bois d'Agland**	**61.47**	**45**	*e*P		**P**	**20 21 11.6**	**-0.9**
AVF	**Avril sur Loir**	**61.85**	**45**	*e*P		**P**	**20 21 14.5**	**-0.6**
	comp=Z,16nm,1.0s,mb4.5								
AVF	**Avril sur Loir**	**61.85**	**45**	*e*P		**P**	**20 21 14.5**	**-0.6**
	comp=Z,8.1nm,1.0s,mb4.5								
AVF	**Avril sur Loir**	**61.85**	**45**	*e*P		**P**	**20 21 14.5**	**-0.6**
AVF					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.5								
SSF	**Saint Saulge**	**61.99**	**44**	*e*P		**P**	**20 21 15.4**	**-0.6**
SMF	**Signal de Mont**	**62.16**	**45**	*e*P		**P**	**20 21 17.1**	**-0.1**
	comp=Z,10.0nm,0.8s,mb4.4								
SMF	**Signal de Mont**	**62.16**	**45**	*e*P		**P**	**20 21 17.1**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.4								
SMF	**Signal de Mont**	**62.16**	**45**	*e*P		**P**	**20 21 17.1**	**-0.1**
SMF					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.4								
LOR	**Lormes**	**62.26**	**44**	*e*P		**P**	**20 21 17.3**	**-0.5**
	comp=Z,9.0nm,0.7s,mb4.4								
LOR	**Lormes**	**62.26**	**44**	*e*P		**P**	**20 21 17.3**	**-0.5**
	comp=Z,4.5nm,0.7s,mb4.4								
LOR	**Lormes**	**62.26**	**44**	*e*P		**P**	**20 21 17.3**	**-0.5**
LOR					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
RES	**Resolute Bay**	**62.48**	**350**	*e*P		**P**	**20 21 18.0**	**-0.8**
	comp=Z,149nm,0.7s								
VIVF	**Saint-Julien-l**	**62.53**	**47**	*e*P		**P**	**20 21 20.3**	**+0.7**
BAIF	**Baives**	**62.90**	**41**	*e*P		**P**	**20 21 21.4**	**-0.6**
SMRF	**Simiane la Rot**	**63.09**	**48**	*e*P		**P**	**20 21 24.0**	**+0.7**
MEZF	**Maizieres J'vi**	**63.22**	**43**	*e*P		**P**	**20 21 23.7**	**-0.4**
GIVF	**Givet**	**63.30**	**41**	*e*P		**P**	**20 21 24.0**	**-0.6**
ORIF	**Oris-en-Rattie**	**63.39**	**47**	*e*P		**P**	**20 21 26.3**	**+1.0**
	comp=Z,8.2nm,0.9s,mb4.3								
ORIF	**Oris-en-Rattie**	**63.39**	**47**	*e*P		**P**	**20 21 26.3**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.3								
ORIF	**Oris-en-Rattie**	**63.39**	**47**	*e*P		**P**	**20 21 26.3**	**+1.0**
ORIF					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
CABF	**La Chapelle**	**63.69**	**45**	*e*P		**P**	**20 21 26.9**	**-0.4**
MBDF	**Montbardon**	**64.00**	**47**	*e*P		**P**	**20 21 30.0**	**+0.7**
	comp=Z,4.2nm,0.6s,mb4.1								
MBDF	**Montbardon**	**64.00**	**47**	*e*P		**P**	**20 21 30.0**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.1								
MBDF	**Montbardon**	**64.00**	**47**	*e*P		**P**	**20 21 30.0**	**+0.7**
MBDF					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.1								
HAU	**Haudompre**	**64.02**	**44**	*e*P		**P**	**20 21 28.6**	**-0.8**
LPL	**La Plagne**	**64.04**	**46**	*e*P		**P**	**20 21 30.2**	**+0.6**
	comp=Z,7.0nm,0.7s,mb4.3								
LPL	**La Plagne**	**64.04**	**46**	*e*P		**P**	**20 21 30.2**	**+0.6**
	comp=Z,3.5nm,0.7s,mb4.3								
LPL	**La Plagne**	**64.04**	**46**	*e*P		**P**	**20 21 30.2**	**+0.6**
LPL					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4								
LPG	**La Plagne**	**64.05**	**46**	*e*P		**P**	**20 21 30.4**	**+0.8**
	comp=Z,8.3nm,0.8s,mb4.3								
LPG	**La Plagne**	**64.05**	**46**	*e*P		**P**	**20 21 30.4**	**+0.8**
	comp=Z,4.2nm,0.8s,mb4.3								
LPG	**La Plagne**	**64.05**	**46**	*e*P		**P**	**20 21 30.4**	**+0.8**
LPG					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.3								
HINF	**Hinteralfeld**	**64.34**	**44**	*e*P		**P**	**20 21 30.5**	**-1.0**
CDF	**Champ du Feu**	**64.68**	**43**	*e*P		**P**	**20 21 32.9**	**-0.8**
KEST	**Kesra**	**65.74**	**57**	P		**P**	**20 21 41.5**	**+0.7**
	comp=Z,5.8nm,0.8s,mb4.5,baz=178,slow=0.4,SNR=39								
DLBC	**Dease Lake**	**66.23**	**328**	*e*P		**P**	**20 21 43.6**	**+0.2**
FETA	**Feichten**	**66.90**	**45**⇑	*i*P		**P**	**20 21 48.7**	**+0.7**
SQTA	**Sankt Quirin**	**67.24**	**45**⇑	*i*P		**P**	**20 21 50.5**	**+0.4**
NOA	**NORSAR Array B**	**68.49**	**30**	P		**P**	**20 21 58.0**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.6,baz=261,slow=6.7,SNR=2.6								
NOA	**NORSAR Array B**	**68.49**	**30**	P		**P**	**20 21 58.0**	**+0.4**
NOA	**NORSAR Array B**	**68.49**	**30**	P		**P**	**20 21 58.0**	**+0.4**
NOA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
GERES	**GERESS Array B**	**68.96**	**43**	P		**P**	**20 21 59.4**	**-1.3**
	comp=Z,0.8nm,0.6s,mb3.6,baz=282,slow=6.4,SNR=6.9								
GERES	**GERESS Array B**	**68.96**	**43**	P		**P**	**20 21 59.4**	**-1.4**
GERES					pmax	pmax			
	comp=Z,1.0nm,0.6s								
MENT	**Mentasta**	**73.32**	**332**	*e*P		**P**	**20 22 27.1**	**+0.4**
ARCES	**ARCESS Array B**	**74.91**	**21**	P		**P**	**20 22 35.6**	**-0.3**
	comp=Z,5.5nm,1.0s,mb4.1,baz=284,slow=4.9,SNR=5.1								
ARCES	**ARCESS Array B**	**74.91**	**21**	P		**P**	**20 22 35.6**	**-0.3**
ARCES					pmax	pmax			
	comp=Z,6.0nm,1.0s								
COLA	**College**	**75.08**	**334**⇓	*e*P		**P**	**20 22 36.3**	**-0.6**
AKASG	**Malin Array Be**	**78.84**	**40**	P		**P**	**20 22 57.5**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.4,baz=290,slow=19,SNR=3.3								
BRTR	**Keskin Array B**	**84.24**	**51**	P		**P**	**20 23 26.2**	**-0.6**
	comp=Z,1.2nm,0.7s,mb3.7,baz=255,slow=4.0,SNR=6.2								
BRTR	**Keskin Array B**	**84.24**	**51**	*i* P		**P**	**20 23 26.8**	**0.0**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
BILL	**Bilibino**	**90.39**	**344**⇓	*i*P		**P**	**20 23 52.6**	**-3.2**
BILL					pmax	pmax			
	comp=Z,23nm,2.3s,mb4.7								
TIXI	**Tiksi**	**93.27**	**357**⇑	*e*P		**P**	**20 24 07.4**	**-1.7**
TIXI					pmax	pmax			
	comp=Z,7.0nm,2.5s,mb4.3								
BOSA	**Boshof**	**94.07**	**118**	P		**P**	**20 24 11.6**	**-2.0**
	comp=Z,3.5nm,0.7s,mb4.6,baz=297,slow=2.3,SNR=9.4								
BOSA	**Boshof**	**94.07**	**118**	P		**P**	**20 24 11.6**	**-2.0**
BOSA					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7								
MDJ	**Mudanjiang**	**119.83**	**351**	PKP		PKPdf	20 29 43.8	-0.8
MDJ				S		Sdif	20 38 43.5	-3.6
CN2	**Changchun**	**121.15**	**354**	*e*PKP		PKPdf	20 29 42.8	-4.3
CN2				PP		PP	20 31 17.5	-0.1
HHC	**Hu-ho-hao-te**	**124.02**	**7**	*e*PKP		PKPdf	20 29 48.5	-4.2
HHC				XPKP			20 30 42.5	
HHC				PP		PP	20 31 38.3	+1.3
HHC				PKS			20 33 24.0	
HHC				SKS		SKSdf	20 36 42.8	-8.3
HHC				LR		LR		
	comp=N,2μm,20.2s								
HHC				LR		LR			
	comp=E,1μm,17.8s								
HHC				LR		LR			
	comp=Z,1μm,19.0s								
LZH	**Lanzhou**	**127.25**	**15**	*e*PKP		PKPdf	20 29 55.8	-3.2
LZH				XPKP			20 30 47.0	
CD2	**Chengdu**	**132.12**	**17**	*e*PKP		PKPdf	20 30 06.3	-2.1
CD2				XPKP			20 30 56.5	
CD2				PP		PP	20 32 32.3	+2.0
CD2				PKS			20 33 41.3	
CD2				SKKS		SKKSac	20 39 07.8	-5.8
CD2				SS		SS	20 49 55.3	+0.2
WHN	**Wuhan**	**134.50**	**5**	PKP		PKPdf	20 30 17.3	+4.4
GYA	**Guiyang**	**137.13**	**16**	PDIF		Pdif	20 27 21.5	-3.4
GYA				PKP		PKPdf	20 30 15.3	-2.6
GYA				XPKP			20 31 08.5	
GYA				PP		PP		
	comp=Z,50nm,6.6s								
KMI	**Kunming**	**137.16**	**22**	PKP		PKPdf	20 30 18.8	+0.8
CMAR	**Chiang Mai Arr**	**141.44**	**31**	*i* PKIKP		PKPdf	20 30 28.8	+2.9

*ISCJB **29** 20:17:06.1±0.3, 1509N±002×6122W±006, h160km±2km, mb4.2/12, Error ellipse: s-maj=10.3km s-min=3.0km az=167.4*
*IDC **29** 20:17:06.6±3.9, 1512N×6124W, h148km±41km, mb3.9/12, mb1 4.1/13, mb1mx3.8/21, mbtmp3.9/13, MS4.8/1, Ms1 4.8/1, ms1mx3.7/20, Error ellipse: s-maj=24.3km s-min=13.5km az=37.0*
*NEIC **29** 20:17:06.7±0.5, 1511N×6122W, h151km±6km, mb4.5/2, Error ellipse: s-maj=11.6km s-min=8.4km az=61.0*
*TRN **29** 20:17:06.3, 1513N×6116W, h152km, MD4.2, M3.6(FDF)*
ISC 29 20:17:07.2±0.3, 1509N±002×6123W±006, h155km±2km, n65, σ0s76/93, mb4.2/12, 15C-16D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSTT	**Stowe**	**0.17**	**336**	⇓*i*P		**Pn**	**20 17 27.7**	**-0.2**
DSTT				*e*S		**Sn**	**20 17 43.2**	**-0.7**
DSHT	**Scott's Head**	**0.18**	**312**	*e*P		**Pn**	**20 17 27.8**	**-0.2**
DSHT				*e*S		**Sn**	**20 17 43.0**	**-0.8**
DFBT	**Forest Bistro**	**0.19**	**321**	*e*P		**Pn**	**20 17 27.7**	**-0.3**
DBCT	**Belle View Cho**	**0.21**	**329**	*e*P		**Pn**	**20 17 28.4**	**+0.4**
DBCT				*e*S		**Sn**	**20 17 43.9**	**-0.1**
DPMT	**Pointe Michel**	**0.22**	**321**	*e*P		**Pn**	**20 17 27.7**	**-0.3**
DPMT				*e*S		**Sn**	**20 17 44.1**	**+0.1**
FDF	**Fort de France**	**0.36**	**167**	*e*P		**Pn**	**20 17 28.1**	**-0.4**
FDF				*e*S		**Sn**	**20 17 43.4**	**-1.3**
FDF	**Fort de France**	**0.36**	**167**⇑	*e*P		**Pn**	**20 17 28.2**	**-0.2**
FDF				⇑*e*S		**Sn**	**20 17 43.9**	**-0.8**
DWS	**Wesley**	**0.48**	**351**⇑	*i*P		**Pn**	**20 17 29.0**	**0.0**
DWS				*e*S		**Sn**	**20 17 44.9**	**-0.7**
BIM	**Bigot**	**0.59**	**165**⇑	*e*P		**Pn**	**20 17 29.1**	**-0.4**
BIM				⇑*e*S		**Sn**	**20 17 47.2**	**+0.6**
MVM	**Montagne Vaucl**	**0.62**	**148**	⇓*i*P		**Pn**	**20 17 29.1**	**-0.6**
HMG	**Houelmont**	**1.00**	**333**	*e*P		**Pn**	**20 17 32.7**	**+0.3**
HMG				*e*S		**Sn**	**20 17 52.9**	**+1.3**
PHG	**Guadaloupe-2**	**1.00**	**337**⇓	*e*P		**Pn**	**20 17 32.5**	**+0.1**
DOG	**Dongo Capester**	**1.01**	**338**⇓	*e*P		**Pn**	**20 17 32.4**	**-0.1**
SCG	**Saint Claude**	**1.03**	**335**	⇓*i*P		**Pn**	**20 17 32.8**	**+0.2**
SCG				⇓*e*S		**Sn**	**20 17 53.0**	**+0.8**
BCG	**Bois Riant Cap**	**1.06**	**339**⇓	*e*P		**Pn**	**20 17 32.9**	**0.0**
SLW	**Petit Monier**	**1.10**	**165**⇑	*e*P		**Pn**	**20 17 33.9**	**+0.7**
SLW	**Petit Monier**	**1.10**	**165**⇑	*i*P		**Pn**	**20 17 34.3**	**+1.0**
SLW				*e*S		**Sn**	**20 17 53.6**	**+0.4**
SFG	**Saint Francois**	**1.16**	**2**⇓	*e*P		**Pn**	**20 17 33.4**	**-0.3**
LZG	**Guadaloupe-1**	**1.17**	**333**⇓	*e*P		**Pn**	**20 17 34.0**	**+0.1**
DEG	**La Desirade**	**1.23**	**8**	*e*P		**Pn**	**20 17 33.6**	**-0.8**
SLPE	**Piton Saint Es**	**1.26**	**169**	*e*P		**Pn**	**20 17 35.5**	**+0.8**
SLB	**Belfond**	**1.27**	**172**	⇓*i*P		**Pn**	**20 17 35.1**	**+0.3**
SLDE	**Delcer**	**1.29**	**172**⇓	*e*P		**Pn**	**20 17 35.7**	**+0.7**
SLDE				*e*S		**Sn**	**20 17 57.1**	**+0.8**
SFAN	**Fancy Village**	**1.70**	**178**⇑	*e*P		**Pn**	**20 17 39.4**	**+0.2**
SSV	**Crater Summit**	**1.75**	**179**⇑	*i*P		**Pn**	**20 17 40.3**	**+0.5**
SSV				*e*S		**Sn**	**20 18 06.2**	**+1.4**
SVV	**Soufriere Volc**	**1.76**	**180**	⇓*i*P		**Pn**	**20 17 40.6**	**+0.7**
SVV				*e*S		**Sn**	**20 18 05.6**	**+0.6**
BHS	**Barnard House**	**1.79**	**177**⇑	*i*P		**Pn**	**20 17 40.4**	**+0.3**
BHS				*e*S		**Sn**	**20 18 06.1**	**+0.6**
MBRY		**1.83**	**331**	⇓*i*P		**Pn**	**20 17 40.8**	**+0.1**
MBRY				*e*S		**Sn**	**20 18 06.4**	**-0.1**
MBLG		**1.86**	**331**	*i* P		**Pn**	**20 17 40.9**	**0.0**
MBLG				*e*S		**Sn**	**20 18 06.9**	**0.0**
MLYT	**Lee's Yard**	**1.87**	**331**	⇓*i*P		**Pn**	**20 17 41.2**	**+0.1**
MBWH		**1.89**	**331**	⇓*i*P		**Pn**	**20 17 41.1**	**-0.2**
MBWH				*e*S		**Sn**	**20 18 07.6**	**+0.1**
MBGB		**1.89**	**330**	⇓*i*P		**Pn**	**20 17 41.4**	**+0.1**
MBGB				⇓*e*S		**Sn**	**20 18 07.2**	**-0.5**
FCV	**Fort Charlotte**	**1.92**	**180**⇑	*i*P		**Pn**	**20 17 41.9**	**+0.2**
FCV				*e*S		**Sn**	**20 18 08.7**	**+0.4**
BPA	**Boggy Peak**	**2.04**	**343**⇑	*i*P		**Pn**	**20 17 43.9**	**+0.9**
BPA				*e*S		**Sn**	**20 18 10.1**	**-0.5**
BBGH	**Gun Hill**	**2.52**	**140**	*e*P		**Pn**	**20 17 49.0**	**+0.2**
BBSP	**Saint Philip**	**2.62**	**139**	*e*P		**Pn**	**20 17 53.1**	**+3.1**
BBSP				*e*S		**Sn**	**20 18 22.1**	**-1.0**
ANWB	**Willy Bob**	**2.62**	**348**	*e*P		**Pn**	**20 17 48.1**	**-1.8**
GRW	**Mount Saint Ca**	**2.94**	**188**⇑	*i*P		**Pn**	**20 17 54.7**	**+0.7**
GRW				*e*S		**Sn**	**20 18 30.4**	**+0.1**
GRGR	**Grenville**	**2.97**	**188**	*e*P		**Pn**	**20 17 53.8**	**-0.5**
TPR	**Prospect**	**3.90**	**173**	*e*P		**Pn**	**20 18 07.1**	**+0.7**
BOT	**Bacolet**	**3.93**	**173**	*e*P		**Pn**	**20 18 06.8**	**+0.2**
TCE	**Chacachacare**	**4.39**	**187**⇓	*i*P		**Pn**	**20 18 13.4**	**+0.7**
TCE				*e*S		**Sn**	**20 19 02.5**	**-1.4**
TRN	**Trinidad (W)**	**4.42**	**182**	*e*P		**Pn**	**20 18 13.4**	**+0.4**
TRN				*e*S		**Sn**	**20 19 02.4**	**-1.9**
TBH	**Brigand Hill**	**4.58**	**178**	*e*P		**Pn**	**20 18 15.8**	**+0.6**
TBH				*e*S		**Sn**	**20 19 05.8**	**-2.4**
TPP	**Pointe-a-Pierr**	**4.75**	**183**	*e*P		**Pn**	**20 18 15.1**	**-2.3**
TPP				*e*S		**Sn**	**20 19 10.6**	**-1.5**
PCRV	**Puerto La Cruz**	**5.91**	**215**	P		**Pn**	**20 18 32.5**	**-0.2**
	2.9nm,0.3s,baz=326,slow=3.0,SNR=5.5							
PCRV				S		**Sn**	**20 19 46.8**	**+7.2**
	2.2nm,0.3s,baz=242,slow=23,SNR=3.4							
PCRV				LR		LR	20 20 45.4	
	comp=Z,9μm,21.7s,baz=355,slow=37							
SDDR	**Presa de Saban**	**10.37**	**293**	*e*P		**Pn**	**20 19 33.3**	**+1.3**
TKL	**Tuckaleechee C**	**28.76**	**320**	P		**P**	**20 22 48.7**	**-1.5**
	6.6nm,0.4s,mb4.7,baz=62,slow=14,SNR=7.5							
TKL	**Tuckaleechee C**	**28.76**	**320**	P		**P**	**20 22 48.7**	**-1.5**
SIV	**San Ignacio**	**30.88**	**180**	P		**P**	**20 23 09.5**	**+0.4**
	4.1nm,0.8s,mb4.2,baz=24,slow=9.4,SNR=7.6							
SCHQ	**Schefferville**	**39.90**	**355**	P		**P**	**20 24 26.2**	**+0.5**
	5.1nm,0.4s,mb4.5,baz=179,slow=7.6,SNR=19							
SCHQ	**Schefferville**	**39.90**	**355**	*e*P		**P**	**20 24 26.0**	**+0.4**
	7.1nm,0.6s,mb4.5							
TXAR	**Lajitas Array**	**41.53**	**297**	P		**P**	**20 24 39.4**	**-0.2**
	0.5nm,0.5s,mb3.4,baz=114,slow=6.9,SNR=14							
ULM	**Lac du Bonnet**	**44.88**	**329**	P		**P**	**20 25 05.3**	**-0.7**
	6.7nm,0.5s,mb4.5,baz=139,slow=8.1,SNR=6.5							
PDAR	**Pinedale Array**	**49.61**	**314**	P		**P**	**20 25 43.0**	**+0.3**
	5.2nm,1.0s,mb4.1,baz=122,slow=9.6,SNR=6.6							
NVAR	**Mina Array Bea**	**55.07**	**306**	P		**P**	**20 26 23.9**	**+0.8**
	1.5nm,0.7s,mb3.8,baz=96,slow=7.5,SNR=12							
NVAR	**Mina Array Bea**	**55.07**	**306**	P		**P**	**20 26 23.9**	**+0.8**
DBIC	**Dimbokro**	**55.86**	**92**	P		**P**	**20 26 29.2**	**+0.1**
	2.3nm,0.5s,mb4.2,baz=137,slow=8.1,SNR=6.8							
DBIC	**Dimbokro**	**55.86**	**92**	*e*P		**P**	**20 26 28.7**	**-0.4**
	2.0nm,0.5s,mb4.2							
YKA	**Yellowknife Ar**	**60.22**	**335**	P		**P**	**20 26 58.0**	**-0.6**
	3.7nm,0.4s,mb4.5,baz=106,slow=7.5,SNR=31							
YKA	**Yellowknife Ar**	**60.22**	**335**	P		**P**	**20 26 58.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**60.87**	**83**	P		**P**	**20 27 03.5**	**-0.3**
	1.1nm,0.5s,mb4.0,baz=288,slow=6.9,SNR=15							
NOA	**NORSAR Array B**	**68.42**	**30**	P		**P**	**20 27 52.4**	**+0.4**
	1.2nm,0.7s,mb3.7,baz=262,slow=6.5,SNR=3.7							
NOA	**NORSAR Array B**	**68.42**	**30**	P		**P**	**20 27 52.4**	**+0.4**
ARCES	**ARCESS Array B**	**74.84**	**21**	P		**P**	**20 28 31.1**	**+0.9**
	5.0nm,1.0s,mb4.1,baz=320,slow=3.6,SNR=3.9							

*ISK **29** 20:33:44.8, 4042N×2591E, h5km, MD3.0*
*CSEM **29** 20:33:44.5±0.1, 4041N×2581E, h10km, MD3.0, Error ellipse: s-maj=1.7km s-min=1.5km az=114.0*
*ISCJB **29** 20:33:44.7±0.5, 4043N±002×2584E±005, h7km±4km, Error ellipse: s-maj=6.2km s-min=3.6km az=12.1*
*DDA **29** 20:33:45.7, 4038N×2596E, h6km±2km, Md2.7*
*THE **29** 20:33:45.2, 4041N×2586E, h10km±1km, ML2.9/3, Error ellipse: s-maj=2.1km s-min=0.7km az=308.0*
*ATH **29** 20:33:45.0, 4045N×2567E, h56km, MD2.8/3*
ISC 29 20:33:45.2±0.5, 4042N±002×2585E±005, h9km±4km, n39, σ0s55/53, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.23**	**170**	*e*PG		**Pg**	**20 33 50.0**	**+0.1**
GADA				*e*SG		**Sg**	**20 33 53.3**	**+0.3**
ENEZ	**Enez**	**0.39**	**36**	*e*PG		**Pg**	**20 33 52.5**	**-0.4**
ENEZ				*e*SG		**Sg**	**20 33 57.8**	**-0.3**
ALN	**Alexandroupoli**	**0.50**	**18**	P		**Pg**	**20 33 54.7**	**-0.2**
ALN				S		**Sg**	**20 34 01.9**	**+0.4**
BOZC	**Bozcaada**	**0.60**	**165**	*i* P		**Pg**	**20 33 56.7**	**0.0**
BOZC				*i* S		**Sg**	**20 34 04.5**	**0.0**
EZN	**Ezine**	**0.70**	**148**	*e*PG		**Pg**	**20 33 58.7**	**+0.1**
LPK	**Lapseki**	**0.70**	**93**	*e*PG		**Pg**	**20 33 57.7**	**-1.0**
LIA	**Limnos Island**	**0.73**	**225**	P		**Pg**	**20 33 59.2**	**0.0**
LIA				S		**Sg**	**20 34 09.5**	**+0.9**
LIA	**Limnos Island**	**0.73**	**225**	*e*P		**Pg**	**20 33 59.2**	**0.0**
LIA				*e*S		**Sg**	**20 34 09.6**	**+1.0**
RDO	**Rodhopi**	**0.76**	**342**	*e*P		**Pg**	**20 33 59.8**	**-0.1**
PRK	**Paraskevi**	**1.22**	**164**	P		**Pn**	**20 34 07.7**	**-0.6**
PRK				S		**Sb**	**20 34 23.8**	**-0.3**
PRK	**Paraskevi**	**1.22**	**164**	*e*P		**Pn**	**20

	baz=205						
YOJ	**Yonaguni jima**	**0.92**	**113**	P	Pg	21 45 55.8	+0.9
YOJ				*e*S	Sg	21 46 07.6	+0.7
HWA	**Hwalien**	**0.95**	**207**	*e*P	Pb	21 45 56.1	+0.8
	baz=213						
HWA				*e*S	Sg	21 46 09.5	+1.8
	baz=213						
NSTT	**Nanjuang**	**1.00**	**259**	*e*P	Pb	21 45 57.5	+1.3
	baz=259						
NSTT				*e*S	Sb	21 46 11.1	+1.8
	baz=259						
TWT	**Tachien**	**1.00**	**236**	*e*P	Pb	21 45 57.4	+1.1
	baz=230						
TWT				*e*S	Sb	21 46 11.7	+2.4
	baz=230						
WHF	**Hehuan Shan**	**1.00**	**228**	⇓*i*P	Pb	21 45 57.0	+0.7
	baz=227						
WHF				S	Sb	21 46 11.2	+1.9
	baz=227						
ESL	**Shilin**	**1.16**	**211**	*e*P	Pb	21 45 59.6	+0.6
	baz=217						
ESL				*e*S	Sb	21 46 16.1	+2.0
	baz=217						
TWQ1	**Liyutan**	**1.28**	**249**	*e*P	Pn	21 46 02.4	+1.8
	baz=248						
TWQ1				*e*S	Sb	21 46 21.6	+4.3
	baz=248						
SMLT	**Sun Moon Lake**	**1.43**	**229**	*e*P	Pn	21 46 04.4	+1.8
	baz=228						
SMLT				*e*S	Sn	21 46 23.0	+1.8
	baz=228						
TYC	**Yuchr**	**1.44**	**231**	*e*P	Pn	21 46 04.5	+1.6
	baz=229						
TYC				*e*S	Sn	21 46 24.1	+2.5
	baz=229						
TCU	**Taichung**	**1.44**	**243**	*e*P	Pn	21 46 04.3	+1.4
	baz=261						
TCU				*e*S	Sn	21 46 25.2	+3.4
	baz=261						
EHY	**Hungye**	**1.48**	**208**	*e*P	Pn	21 46 05.0	+1.6
	baz=220						
EHY				*e*S	Sn	21 46 24.4	+1.7
	baz=220						
IRIF	**Iriomote-Funau**	**1.58**	**108**	P	Pn	21 46 04.8	0.0
IRIF				*e*S	Sn	21 46 23.9	-1.2
TWF1	**Yuli**	**1.63**	**206**	P	Pn	21 46 06.7	+1.2
	baz=217						
TWF1				*e*S	Sn	21 46 27.1	+0.8
	baz=217						
YUS	**Yu-Shan**	**1.68**	**218**	*e*P	Pn	21 46 09.3	+3.2
	baz=201						
YUS				*e*S	Sn	21 46 32.0	+4.5
	baz=201						
HATJ	**Hateruma jima**	**1.75**	**115**	P	Pn	21 46 05.4	-1.7
ALS	**Alishan**	**1.75**	**222**	*e*P	Pn	21 46 10.3	+3.2
	baz=204						
ALS				*e*S	Sn	21 46 35.3	+6.1
	baz=204						
CHN5	**Tsauling**	**1.77**	**227**	*e*P	Pn	21 46 10.5	+3.2
	baz=222						
CHN5				*e*S	Sn	21 46 35.1	+5.4
	baz=222						
WGK	**Gukeng**	**1.79**	**231**	*e*P	Pn	21 46 09.1	+1.5
	baz=221						
CHKT	**Chengkung**	**1.83**	**201**	*e*P	Pn	21 46 10.1	+1.8
	baz=179						
CHKT				*e*S	Sn	21 46 33.0	+1.6
	baz=179						
JKRS	**Kuro-shima**	**1.85**	**108**	P	Pn	21 46 08.9	+0.4
JKRS				*e*S	Sn	21 46 31.2	-0.6
ELDTW	**Lidau**	**1.89**	**211**	*e*P	Pn	21 46 11.1	+2.0
	baz=207						
ELDTW				*e*S	Sn	21 46 35.2	+2.4
	baz=207						
JIJ	**Ishigaki jima**	**1.93**	**103**	P	Pn	21 46 11.5	+1.9
CHN2	**Minshiung**	**1.95**	**229**	*e*P	Pn	21 46 13.6	+3.7
	baz=241						
CHN4	**Tsaushan**	**2.00**	**223**	*e*P	Pn	21 46 14.8	+4.2
	baz=218						
CHN4				*e*S	Sn	21 46 42.4	+7.0
	baz=218						
CHY	**Chiayi**	**2.01**	**229**	*e*P	Pn	21 46 12.4	+1.8
	baz=219						
WTP	**Ta-pu**	**2.06**	**221**	*e*P	Pn	21 46 14.9	+3.5
	baz=214						
WTP				*e*S	Sn	21 46 43.2	+6.2
	baz=214						
TWK	**Hsinying**	**2.12**	**224**	*e*P	Pn	21 46 15.8	+3.5
	baz=216						
TWK				*e*S	Sn	21 46 44.8	+6.3
	baz=216						
CHN1	**Nanshi**	**2.16**	**221**	*e*P	Pn	21 46 15.8	+3.1
	baz=214						
CHN1				*e*S	Sn	21 46 45.9	+6.5
	baz=214						
TWG	**Pinlang**	**2.19**	**205**	*e*P	Pn	21 46 14.6	+1.3
	baz=183						
TWG				*e*S	Sn	21 46 42.2	+1.9
	baz=183						
SGST	**Jiashian**	**2.21**	**219**	*e*P	Pn	21 46 16.3	+2.9
	baz=211						
SGST				*e*S	Sn	21 46 46.4	+5.8
	baz=211						
ECL	**Taimali**	**2.44**	**205**	*e*P	Pn	21 46 19.9	+3.3
	baz=184						
SSD	**Sandimen**	**2.46**	**213**	*e*P	Pn	21 46 20.3	+3.4
	baz=205						
SSD				*e*S	Sn	21 46 53.0	+6.3
	baz=205						
SCZT	**Fangliau**	**2.78**	**209**	*e*P	Pn	21 46 24.2	+2.9
	baz=182						

MAN 29 22:14:40,954N×12563E,h33km,mb4.4,ML3.3,MS3.1,
1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.28**	**329**	*e*P	Pb	22 14 49.9	+2.4
SCPH				*e*S	Sb	22 14 55.8	+3.3
BUTP	**Butuan**	**0.57**	**181**	*e*P	Pb	22 14 52.6	+0.9
BUTP				*e*S	Sb	22 15 06.2	+6.4
MSLP	**Maasin**	**0.96**	**308**	*e*P	Pn	22 14 59.4	+2.2
MSLP				*e*S	Sn	22 15 12.3	+2.5
PLP	**Palo**	**1.74**	**338**	‖*e*P	Pn	22 15 14.8	+6.9
BUKP	**Musuan**	**1.75**	**199**	*e*P	Pn	22 15 10.9	+2.9
TBP	**Tagbilaran**	**1.75**	**275**	*e*P	Pn	22 15 09.5	+1.4
TBP				*e*S	Sn	22 15 30.4	+1.1
TBP	**Tagbilaran**	**1.75**	**275**	*e*P	Pn	22 15 11.8	+3.7
TBP				*e*S	Sn	22 15 30.8	+1.5
OCLP	**Ormoc**	**1.81**	**326**	*e*P	Pn	22 15 14.2	+5.4

NIED ***29*** *22:27:00,3540N×14120E,h65km,Mw4.7 Best double couple: M₀1.34000×10¹⁶ NP1:φ₈23.00000°,δ59.00000°,λ113.00000°. NP2:φ₈164.00000°,δ38.00000°,λ57.00000°.*
BJI ***29*** *22:27:17.7,3539N×14166E,h37km,mB4.8,mb4.3,Ms4.6,Msz4.5*
ISCJB ***29*** *22:27:22.7±0.8,3546N±003×14129E±007,h46km±5km,mb4.4/31,Error ellipse: s-maj=10.0km s-min=5.2km az=172.2*
NEIC ***29*** *22:27:23.7,3551N×141.16E,h37km,mb4.5/2,MW4.7(NIED),After JMA.*
NEIC Recorded [1 JMA] in Chiba Prefecture.
JMA ***29*** *22:27:23.6±0.1,3551N×141.16E,h37km±1km,M4.4*
JMA Felt II J1.
MOS ***29*** *22:27:23.3±1.1,3549N×141.17E,h47km,mb4.7/5,Error ellipse: s-maj=17.6km s-min=8.9km az=127.5*
IDC ***29*** *22:27:29.9±1.9,3536N×14065E,h77km±16km,mb3.9/16,mb1 4.0/19,mb1mx3.9/28,mbtmp3.9/19,MS3.8/1,Ms1 3.8/1,ms1mx3.2/33,Error ellipse: s-maj=22.8km s-min=11.1km az=80.0*
ISC 29 22:27:23.9±0.8,3546N±003×14124E±007,h37km±6km,
n65,σ0s96/73,mb4.4/31,1D,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.40**	**308**	P	**Pn**	**22 27 31.8**	**-1.4**
KTR	**Katsuura**	**0.82**	**248**	P	**Pn**	**22 27 38.6**	**-0.4**
KTR				*e*S	**Sn**	**22 27 49.3**	**-0.6**
BSO1	**Boso 1**	**0.83**	**195**	P	**Pn**	**22 27 39.2**	**+0.1**
BSO1				*e*S	**Sn**	**22 27 50.5**	**+0.3**
JCN	**Nagara**	**0.85**	**268**	P	**Pn**	**22 27 39.2**	**-0.2**
BSO4	**Boso 4**	**0.88**	**238**	P	**Pn**	**22 27 39.3**	**-0.5**
BSO4				*e*S	**Sn**	**22 27 51.7**	**+0.4**
BSO3	**Boso 3**	**0.89**	**223**	P	**Pn**	**22 27 39.6**	**-0.3**
BSO3				S	**Sn**	**22 27 52.1**	**+0.5**
JYT	**Yasato**	**1.15**	**312**	⇓P	**Pn**	**22 27 42.5**	**-1.0**
JYT				S	**Sn**	**22 27 57.2**	**-0.8**
JHO	**Hitachi**	**1.27**	**335**	P	**Pn**	**22 27 44.6**	**-0.6**
JIM2	**Oshima 3**	**1.66**	**244**	P	**Pn**	**22 27 49.4**	**-1.1**
JAG	**Ashikaga**	**1.74**	**304**	P	**Pn**	**22 27 52.8**	**+1.1**
JOD2	**Odawara 2**	**1.77**	**264**	P	**Pn**	**22 27 51.2**	**-0.9**
JHJ	**Hachijo jima 2**	**2.63**	**208**	P	**Pn**	**22 28 05.0**	**+1.2**
	40nm,0.3s,baz=274,slow=24,SNR=3.8						
JHJ				S	**Sn**	**22 28 34.8**	**+0.3**
	172nm,0.3s,baz=273,slow=23,SNR=5.4						
JHJ				LR	LR	22 28 38.3	
	comp=Z,2μm,20.6s,baz=245,slow=29						
MJAR	**Matsushiro Arr**	**2.69**	**295**	P	**Pn**	**22 28 04.9**	**+0.2**
	19nm,0.3s,baz=99,slow=7.1,SNR=67						
MJAR				S	**Sn**	**22 28 39.2**	**+3.2**
	17nm,0.3s,baz=307,slow=39,SNR=6.3						
MAJO	**Matsushiro**	**2.69**	**295**	*e*Pn	**Pn**	**22 28 06.0**	**+1.3**
MAT	**Matsushiro**	**2.69**	**295**	P	**Pn**	**22 28 05.6**	**+0.9**
MAT				*e*S	**Sn**	**22 28 36.5**	**+0.5**
CBIJ	**Chichi jima**	**8.38**	**174**	P	**Pn**	**22 29 22.0**	**-0.8**
	13nm,0.3s,baz=98,slow=19,SNR=4.2						
CBIJ				S	**Sn**	**22 30 49.4**	**-6.8**
	9.4nm,0.3s,baz=280,slow=22,SNR=2.9						
ASAJ	**Asahikawa**	**8.71**	**6**	P	**Pn**	**22 29 27.9**	**+0.5**
	1.9nm,0.3s,baz=214,slow=11,SNR=3.1						
ASAJ	**Asahikawa**	**8.71**	**6**	P	**Pn**	**22 29 27.9**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	**Korea Array**	**10.91**	**284**	P	**Pn**	**22 29 58.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=101,slow=14,SNR=3.3						
CN2	**Changchun**	**14.73**	**309**	*e*P	**Pn**	**22 30 52.8**	**+3.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
PETK	**Petropavlovsk-**	**21.13**	**28**	P	**P**	**22 32 12.8**	**+7.4**
	comp=Z,5.3nm,0.9s,mb3.9,baz=225,slow=16,SNR=2.6						
YAK	**Yakutsk**	**27.58**	**348**	*e*P	**P**	**22 33 07.1**	**-0.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
SONM	**Songino Array**	**28.58**	**306**	P	**P**	**22 33 15.5**	**-0.8**
	comp=N,2.1nm,0.8s,mb3.9,baz=103,slow=11,SNR=5.8						
BOD	**Bodaibo**	**28.80**	**329**	*e*P	**P**	**22 33 18.2**	**0.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
LZH	**Lanzhou**	**30.23**	**282**	*e*P	**P**	**22 33 29.0**	**-2.1**
LZH				AMB	AMB		
	comp=Z,18nm,1.4s,mb4.6						
LZH				AMB	AMB		
	comp=Z,75nm,4.3s						
GYA	**Guiyang**	**30.86**	**263**	P	**P**	**22 33 35.0**	**-1.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GTA	**Gaotai**	**32.93**	**289**	*e*P	**P**	**22 33 55.8**	**+1.0**
GTA				AP	pP	22 34 00.3	-4.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.8s,mb3.9						
CMAR	**Chiang Mai Arr**	**40.99**	**257**	P	**P**	**22 35 01.7**	**-1.7**
	comp=Z,0.3nm,0.3s,mb3.4,baz=45,slow=9.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**42.89**	**314**	P	**P**	**22 35 18.3**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.2,baz=88,slow=7.3,SNR=16						
NVS	**Novosibirsk**	**43.84**	**315**	*e*P	**P**	**22 35 24.9**	**-1.3**
NVS				*e*		22 37 07.7	
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**22 35 34.7**	**+0.2**
	comp=Z,3.5nm,0.8s,mb4.2,baz=93,slow=9.2,SNR=21						
TAPN	**Taplejung**	**45.93**	**275**	*e*P	**P**	**22 35 44.1**	**+0.9**
RAMN	**Ramite**	**47.00**	**275**	*e*P	**P**	**22 35 51.3**	**-0.3**
	comp=Z,28nm,1.1s,mb5.1						
JIRN	**Jiri**	**47.04**	**277**	*e*P	**P**	**22 35 52.3**	**+0.4**
	comp=Z,17nm,0.8s,mb5.0						
GUN	**Gumba**	**47.19**	**277**	*e*P	**P**	**22 35 54.8**	**+1.7**
KKN	**Kakani**	**47.73**	**277**	*e*P	**P**	**22 35 56.9**	**-0.4**
GKN	**Gorkha**	**48.16**	**278**	*e*P	**P**	**22 36 00.8**	**+0.2**
	comp=Z,28nm,1.1s,mb5.2						
BATI	**Baumata**	**48.36**	**203**	P	**P**	**22 36 00.6**	**-1.6**
	comp=Z,10nm,0.5s,mb5.1,baz=72,slow=3.2,SNR=1.7						
DANN	**Dangsing**	**48.73**	**279**	*e*P	**P**	**22 36 05.8**	**+0.8**
	comp=Z,49nm,0.9s,mb5.5						
KOLN	**Koldanda**	**49.09**	**278**	*e*P	**P**	**22 36 07.2**	**-0.6**
BVAR	**Borovoye Array**	**51.54**	**313**	P	**P**	**22 36 24.9**	**-1.0**
	comp=Z,2.8nm,0.9s,mb4.2,baz=98,slow=7.9						
WB2	**Warramunga Arr**	**55.48**	**188**	*e*P	**P**	**22 36 55.9**	**+0.8**
WRA	**Warramunga Array**	**55.48**	**188**	P	**P**	**22 36 54.6**	**-0.5**
	comp=Z,2.0nm,0.5s,mb4.4,baz=3.2,slow=7.6,SNR=11						
SVE	**Sverdlovsk**	**56.24**	**319**	*e*P	**P**	**22 37 00.8**	**+0.6**
SVE				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
ARU	**Arti**	**57.45**	**319**	P	**P**	**22 37 09.2**	**+0.4**
ASAR	**Alice Springs**	**59.21**	**188**	P	**P**	**22 37 23.4**	**+2.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=14,slow=13,SNR=7.8						
AKTK	**Aktyubinsk**	**59.63**	**313**	P	**P**	**22 37 23.2**	**-0.9**
AKTO	**Aktyubinsk**	**59.63**	**313**	P	**P**	**22 37 23.2**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.3,baz=78,slow=14,SNR=6.5						
BHV	**Bhavnagar**	**61.09**	**277**	*e*P	**P**	**22 37 35.2**	**+0.8**
BHV				*e*S	sP	22 37 52.0	+2.2
ARCES	**ARCESS Array B**	**65.42**	**340**	P	**P**	**22 38 02.7**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.4,baz=41,slow=7.2,SNR=3.9						
JOF	**Joensuu**	**67.29**	**332**	*e*p	**P**	**22 38 15.1**	**+0.7**
	comp=Z,1.5nm,0.3s,mb4.5						
KAF	**Kangasniemi**	**69.64**	**333**	*e*p	**P**	**22 38 29.8**	**+0.6**
	comp=Z,0.7nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**69.64**	**333**	*e*P	**P**	**22 38 29.8**	**+0.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
GOF	**Gofitskoye**	**71.05**	**312**	*e*P	**P**	**22 38 35.6**	**-2.5**
GOF				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0						
AKASG	**Malin Array Be**	**75.46**	**322**	P	**P**	**22 39 03.5**	**-0.5**
	comp=Z,2.5nm,0.6s,mb4.3,baz=46,slow=6.6,SNR=7.8						
AKASG	**Malin Array Be**	**75.46**	**322**	P	**P**	**22 39 03.5**	**-0.5**
NB2	**NORSAR Subarra**	**75.59**	**337**	P	**P**	**22 39 05.2**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.2,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.59**	**337**	P	**P**	**22 39 04.8**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.4,baz=39,slow=5.7,SNR=8.7						
NVAR	**Mina Array Bea**	**76.05**	**53**	P	**P**	**22 39 12.1**	**+4.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=317,slow=5.2,SNR=3.5						
NVAR	**Mina Array Bea**	**76.05**	**53**	P	**P**	**22 39 12.1**	**+4.5**
CLL	**Collm**	**82.39**	**330**	*i* P	**P**	**22 39 42.6**	**+0.6**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CLL	**Collm**	**82.39**	**330**	*i* P	**P**	**22 39 42.6**	**+0.6**
	comp=Z,8.0nm,0.9s,mb4.7						
MMAI	**Mount Meron Ar**	**82.77**	**305**	P	**P**	**22 39 44.7**	**+0.4**
	comp=Z,2.2nm,0.8s,mb4.3,baz=67,slow=11,SNR=3.3						
GERES	**GERESS Array B**	**83.98**	**328**	P	**P**	**22 39 51.3**	**+1.2**
	comp=Z,1.2nm,0.8s,mb4.1,baz=54,slow=6.8,SNR=4.8						
TORD	**Torodi Ar. Bea**	**118.34**	**314**	PKP	PKPdf	22 46 08.4	+0.4
	comp=Z,0.2nm,0.6s,baz=72,slow=1.8,SNR=4.4						

NEIC ***29*** *22:27:38.5,6644N×142.20W,h6km,mb4.8/47,ML5.0(AEIC),MW4.8(PGC),MW4.7(SLM),After AEIC.*
NEIC Felt at Fairbanks.
SZGRF ***29*** *22:27:39.9,6582N×143.81W,h10km,mb5.0,Northern Alaska, United States*
BJI ***29*** *22:27:40.5,6640N×142.20W,h15km,mB5.1,mb4.5,Ms4.8,Msz4.7*
IDC ***29*** *22:27:42.6±0.5,6644N×142.22W,h0km,mb4.4/24,mb1 4.6/27,mb1mx4.5/31,mbtmp4.4/27,ML4.5/3,MS4.4/1,Ms1 4.4/1,ms1mx3.4/26,Error ellipse: s-maj=15.7km s-min=8.1km az=49.0*
MOS ***29*** *22:27:42.1±0.9,6638N×142.48W,h10km,mb4.9/52,Error ellipse: s-maj=14.9km s-min=4.6km az=88.6*
ISCJB ***29*** *22:27:42.1±0.1,6637N±002×142.52W±006,h10km,mb4.7/108,MS4.5/6,Error ellipse: s-maj=3.3km s-min=2.7km az=166.8*
PGC ***29*** *22:27:44.2±4.1,6638N×142.07W,h10km,ML5.0/2,Mw4.8,285km northwest of Dawson, Yt Alaska*
ISC 29 22:27:44.1±0.1,6635N±002×14249W±006,h10km,
(h15km±1.4km:pP-P),n284,σ0s96/293,mb4.7/108,MS4.5/6,

21C-14D,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.67**	**160**	P	**Pn**	**22 28 11.2**	**-2.1**
EGAK				S	**Sn**	**22 28 35.3**	**+0.5**
IL1	**Eielson Array**	**2.42**	**231**	P	**Pn**	**22 28 22.7**	**-0.9**
IL1				S	**Sn**	**22 28 57.0**	**+3.9**
DAWY	**Dawson**	**2.64**	**149**	P	**Pn**	**22 28 24.4**	**-2.2**
DAWY				S	**Sn**	**22 28 59.9**	**+1.3**
DAWY	**Dawson**	**2.64**	**149**	⇑Pn	**Pn**	**22 28 24.4**	**-2.2**
DAWY				⇑Sn	**Sn**	**22 28 56.4**	**-2.2**
DAWY				⇓Sg	**Sg**	**22 29 04.9**	**-3.8**
COLA	**College**	**2.67**	**239**	P	**Pn**	**22 28 26.2**	**-0.9**
DOT	**Dot Lake**	**2.79**	**195**	P	**Pn**	**22 28 27.9**	**-0.8**
DOT				S	**Sn**	**22 29 06.6**	**+4.2**
COLD	**Coldfoot**	**3.18**	**290**	*e*Pn	**Pn**	**22 28 35.1**	**+1.0**
BCA3	**Beaver Creek A**	**3.31**	**174**	P	**Pn**	**22 28 34.5**	**-1.3**
MENT	**Mentasta**	**3.46**	**189**	*e*P	**Pn**	**22 28 37.4**	**-0.6**
PAX	**Paxson**	**3.62**	**202**	P	**Pn**	**22 28 40.1**	**-0.1**
MCK	**McKinley**	**3.79**	**229**	P	**Pn**	**22 28 42.1**	**-0.3**
INK	**Inuvik**	**3.99**	**56**	*e*Pn	**Pn**	**22 28 43.3**	**-1.9**
INK	**Inuvik**	**3.99**	**56**	⇓Pn	**Pn**	**22 28 43.7**	**-1.6**
INK				⇑Sn	**Sn**	**22 29 26.4**	**-5.6**
INK				⇑Sg	**Sg**	**22 29 43.3**	**-8.8**
BPAW	**Bear Paw Mtn.**	**4.22**	**242**	P	**Pn**	**22 28 47.1**	**-1.4**
TRF	**Thorofare Moun**	**4.41**	**232**	P	**Pn**	**22 28 50.5**	**-0.5**
KTH	**Kantishna Hill**	**4.55**	**236**	P	**Pn**	**22 28 52.1**	**-0.7**
IM3	**Indian Mountai**	**4.58**	**271**	P	**Pn**	**22 28 52.1**	**-1.2**
SML	**Sawmill**	**5.22**	**212**	P	**Pn**	**22 29 01.9**	**-0.3**
PPLA	**Purkeypile**	**5.42**	**235**	P	**Pn**	**22 29 04.1**	**-0.7**
PMR	**Palmer**	**5.59**	**215**	*e*P	**Pn**	**22 29 08.9**	**+1.7**
SKT	**Skwentna**	**5.90**	**226**	P	**Pn**	**22 29 11.2**	**-0.2**
HYT	**Haines Junctio**	**5.97**	**156**	⇓Pn	**Pn**	**22 29 11.4**	**-1.0**
HYT				⇓Sg	**Sg**	**22 30 47.8**	**-7.7**
EYAK	**Cordova Ski Ar**	**6.00**	**196**	P	**Pn**	**22 29 13.4**	**+0.6**
RC01	**Rabbit Creek A**	**6.18**	**215**	P	**Pn**	**22 29 16.7**	**+1.5**
GCSA	**Galena City Sc**	**6.18**	**262**	P	**Pn**	**22 29 15.2**	**-0.1**
WHY	**Whitehorse**	**6.64**	**146**	P	**Pn**	**22 29 19.6**	**-2.0**
WHY	**Whitehorse**	**6.64**	**146**	⇓Pn	**Pn**	**22 29 19.2**	**-2.4**
WHY				⇑Sg	**Sg**	**22 31 09.1**	**-7.9**
TT01	**Tatalina**	**6.75**	**246**	P	**Pn**	**22 29 21.9**	**-1.3**
SLKM	**Skilak Lake**	**6.80**	**214**	P	**Pn**	**22 29 22.9**	**-0.9**
PNL	**Peninsula**	**6.85**	**167**	P	**Pn**	**22 29 22.9**	**-1.5**
SEW	**Seward**	**7.00**	**210**	P	**Pn**	**22 29 26.9**	**+0.3**
PLBC	**Pleasant Camp**	**7.46**	**155**	Pn	**Pn**	**22 29 32.0**	**-0.7**
PLBC				⇑Sg	**Sg**	**22 31 35.4**	**-7.7**
SKAG	**Skagway**	**7.64**	**151**	P	**Pn**	**22 29 32.7**	**-2.5**
SVW2	**Sparrevohn**	**7.83**	**234**	*e*Pn	**Pn**	**22 29 38.6**	**+0.7**
DLBC	**Dease Lake**	**9.80**	**138**	Pn	**Pn**	**22 30 02.5**	**-2.4**
	4.4nm,0.3s,baz=322,slow=9.8,SNR=55						
DLBC				Sn	**Sn**	**22 31 49.9**	**-4.8**
	1.6nm,0.3s,baz=70,slow=14,SNR=2.2						
DLBC				Lg		22 32 49.9	
	2.3nm,0.3s,baz=120,slow=16,SNR=15						
DLBC	**Dease Lake**	**9.80**	**138**	*e*Pn	**Pn**	**22 30 03.1**	**-1.8**
DLBC	**Dease Lake**	**9.80**	**138**	⇓Pn	**Pn**	**22 30 03.1**	**-1.7**
ROMN	**Roman Lake**	**10.40**	**90**	P	**Pn**	**22 30 08.4**	**-4.6**
OHAK	**Old Harbor**	**10.46**	**214**	*e*Pn	**Pn**	**22 30 14.0**	**0.0**
WRAK	**Wrangell Islan**	**11.06**	**149**	*e*Pn	**Pn**	**22 30 22.4**	**+0.3**
YKW3	**Yellowknife Ar**	**12.55**	**95**	*e*Pn	**Pn**	**22 30 36.9**	**-5.5**
YKA	**Yellowknife Ar**	**12.59**	**95**	Pn	**Pn**	**22 30 37.0**	**-6.0**
	3.5nm,0.3s,baz=299,slow=13,SNR=46						
YKA				Sn	**Sn**	**22 32 49.2**	**-14**
	7.0nm,0.3s,baz=298,slow=23,SNR=9.4						
YKA				Lg		22 34 14.9	
	baz=312,slow=26,SNR=2.6						
YKA	**Yellowknife Ar**	**12.59**	**95**	Pn	**Pn**	**22 30 37.0**	**-6.0**
YKA				Sn	**Sn**	**22 32 49.2**	**-14**
YKA				Lg		22 34 14.9	
YKA	**Yellowknife Ar**	**12.59**	**95**	P	**Pn**	**22 30 37.0**	**-5.9**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BBB	**Bella Bella**	**15.92**	**146**	Pn	**Pn**	**22 31 30.9**	**+3.0**
	comp=Z,0.6nm,0.3s,baz=339,slow=9.7,SNR=5.9						
BBB	**Bella Bella**	**15.92**	**146**	Pn	**Pn**	**22 31 30.9**	**+3.0**
RES	**Resolute Bay**	**17.37**	**41**	*e*Pn	**Pn**	**22 31 41.2**	**-4.9**
	comp=Z,896nm,0.8s						
RES				*e*Sn	**Sn**	**22 34 46.1**	**-13**
RES	**Resolute Bay**	**17.37**	**41**	*e*P	**Pn**	**22 31 41.2**	**-4.9**
RES				pmax	pmax		
	comp=Z,896nm,0.8s						
EDM	**Edmonton**	**19.44**	**118**	*e*P	**Pn**	**22 32 09.5**	**-2.0**
BILL	**Bilibino**	**19.47**	**298**	*e*P	**Pn**	**22 32 11.7**	**-0.1**
	comp=Z,47nm,1.3s						
BILL	**Bilibino**	**19.47**	**298**	⇓*i*P	**Pn**	**22 32 10.4**	**-1.4**
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
LON	**Longmire**	**22.50**	**141**	*e*P	**P**	**22 32 44.7**	**+1.3**
	comp=Z,37nm,1.7s,mb4.5						
LON	**Longmire**	**22.50**	**141**	*e*P	**P**	**22 32 44.7**	**+1.4**
LON				pmax	pmax		
	comp=Z,37nm,1.7s,mb4.5						
FFC	**Flin Flon**	**22.60**	**101**	*e*P	**P**	**22 32 42.4**	**-1.9**
	comp=Z,33nm,1.0s,mb4.7						
FFC	**Flin Flon**	**22

comp=Z,6.0nm,0.7s
BW06 Boulder Array 29.73 126 *e*P **P 22 33 50.1 0.0**
comp=Z,11nm,0.9s,mb4.6
PDAR Pinedale Array 29.73 126 P **P 22 33 50.0 -0.1**
comp=Z,9.3nm,0.8s,mb4.6,baz=347,slow=5.0,SNR=79
PDAR LR LR 22 47 17.0
comp=Z,744nm,18.9s,MS4.3,baz=263,slow=40
ELK Elko 29.84 136 P **P 22 33 52.4 +1.3**
comp=Z,2.9nm,0.9s,mb4.0,baz=324,slow=7.0,SNR=8.8
ELK Elko 29.84 136 P **P 22 33 52.4 +1.3**
ELK pmax pmax
comp=Z,3.0nm,0.9s
HWUT Hardware Ranch 30.14 130 *e*P **P 22 33 54.1 +0.4**
comp=Z,5.9nm,0.9s,mb4.3
SPUT South Promonto 30.14 131 *e*P **P 22 33 54.0 +0.3**
DUG Dugway 31.05 133 *e*P **P 22 34 01.4 -0.4**
comp=Z,11nm,0.9s,mb4.7
DUG Dugway 31.05 133 *e*P **P 22 34 01.4 -0.4**
DUG pmax pmax
comp=Z,11nm,0.9s,mb4.7
NVAR Mina Array Bea 31.19 142 P **P 22 34 04.6 +1.6**
comp=Z,8.6nm,0.7s,mb4.7,baz=334,slow=7.8,SNR=27
NLU North Lily Min 31.49 132 *e*P **P 22 34 07.9 +2.3**
PETK Petropavlovsk- 31.53 275 P **P 22 34 07.1 +1.2**
comp=Z,3.1nm,0.8s,mb4.2,baz=73,slow=11,SNR=3.4
PETK Petropavlovsk- 31.53 275 P **P 22 34 07.1 +1.2**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
TPH Tonopah 31.80 140 *e*P **P 22 34 08.6 +0.2**
comp=Z,16nm,1.1s,mb4.8
TPH Tonopah 31.80 140 *e*P **P 22 34 08.6 +0.2**
TPH pmax pmax
comp=Z,16nm,1.1s,mb4.8
EYMN Ely 32.00 100 *e*P **P 22 34 09.8 -0.2**
comp=Z,20nm,0.9s,mb4.9
SRU San Rafael 32.74 130 *e*P **P 22 34 17.5 +0.9**
MSU Marysvale 32.79 133 *e*P **P 22 34 18.4 +1.3**
TPNV Topopah Spring 33.12 140 *e*P **P 22 34 20.5 +0.6**
comp=Z,9.3nm,0.9s,mb4.7
TPNV Topopah Spring 33.12 140 *e*P **P 22 34 20.5 +0.6**
TPNV pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SFJD Kangerlussuaq 33.26 46 P **P 22 34 20.3 -0.6**
comp=Z,17nm,0.8s,mb5.0,baz=280,slow=12,SNR=3.9
SFJD Kangerlussuaq 33.26 46 P **P 22 34 20.3 -0.6**
SFJD pmax pmax
comp=Z,17nm,0.9s,mb5.0
ISCO Idaho Springs 33.70 124 *e*P **P 22 34 25.8 +0.8**
comp=Z,8.0nm,1.0s,mb4.6
ISCO Idaho Springs 33.70 124 *e*P **P 22 34 25.8 +0.8**
ISCO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SHPR Sheep Range 33.82 138 *e*P **P 22 34 27.0 +0.9**
GSC Goldstone 34.53 141 *e*P **P 22 34 33.8 +1.5**
comp=Z,7.7nm,1.0s,mb4.6
GSC Goldstone 34.53 141 *e*P **P 22 34 33.8 +1.5**
GSC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SDCO Great Sand Dun 35.59 125 *e*P **P 22 34 41.3 0.0**
comp=Z,31nm,2.4s,mb4.8
WUAZ Wupatki 35.81 134 *e*P **P 22 34 43.8 +0.5**
comp=Z,7.6nm,0.9s,mb4.6
SCHQ Schefferville 36.48 71 P **P 22 34 47.2 -1.5**
comp=Z,5.6nm,0.9s,mb4.5,baz=335,slow=14,SNR=2.8
ANMO Albuquerque 37.83 128 *e*P **P 22 35 01.6 +1.1**
comp=Z,10.0nm,1.1s,mb4.5
ANMO Albuquerque 37.83 128 *e*P **P 22 35 01.6 +1.1**
ANMO pmax pmax
comp=Z,10.0nm,1.1s
LENM Lemitar 38.39 129 *e*P **P 22 35 06.4 +1.2**
TUC Tucson 38.98 135 *e*P **P 22 35 10.4 +0.3**
comp=Z,8.4nm,1.2s,mb4.3
TUC Tucson 38.98 135 *e*P **P 22 35 10.4 +0.3**
TUC pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
YSS Yuzh-Sakhalins 42.33 281⇑ *e*P **P 22 35 35.9 -1.8**
YSS pmax pmax
comp=Z,40nm,1.3s,mb4.9
MIAR Mount Ida 42.66 113 *e*P **P 22 35 39.5 -1.1**
comp=Z,18nm,1.8s,mb4.5
MIAR Mount Ida 42.66 113 *e*P **P 22 35 39.5 -1.0**
MIAR pmax pmax
comp=Z,18nm,1.8s,mb4.5
BOD Bodaibo 43.74 311 *e*P **P 22 35 48.1 -0.8**
BOD pmax pmax
comp=Z,9.0nm,1.5s,mb4.3
TXAR Lajitas Array 43.91 128 P **P 22 35 51.0 +0.4**
comp=Z,1.1nm,0.6s,mb3.8,baz=351,slow=6.6,SNR=14
TXAR Lajitas Array 43.91 128 P **P 22 35 51.0 +0.4**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 44.13 6 P **P 22 35 52.6 +0.6**
comp=Z,4.0nm,0.7s,mb4.3,baz=353,slow=7.6,SNR=7.3
ARCES PcP PcP 22 37 34.6 -2.0
comp=Z,5.5nm,0.9s,baz=343,slow=4.8,SNR=4.2
ARCES ARCESS Array B 44.13 6 P **P 22 35 52.6 +0.6**
ARCES 22 37 34.6
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARCES pmax pmax
comp=Z,6.0nm,0.9s
OXF Oxford 44.26 109 *e*P **P 22 35 52.6 -0.8**
comp=Z,88nm,1.0s,mb5.5
OXF Oxford 44.26 109 *e*P **P 22 35 52.6 -0.8**
OXF pmax pmax
comp=Z,88nm,1.0s,mb5.4
MDJ Mudanjiang 49.39 290 P **P 22 36 33.5 +0.1**
MDJ S **S 22 43 38.8 -1.0**
MDJ AMB AMB
comp=Z,5.0nm,1.4s,mb4.3
NB2 NORSAR Subarra 51.45 16 P **P 22 36 48.1 -0.6**
comp=Z,2.0nm,0.7s,mb4.2,baz=349,slow=7.4
NOA NORSAR Array B 51.45 16 P **P 22 36 47.6 -1.1**
comp=Z,4.4nm,0.9s,mb4.4,baz=348,slow=7.6,SNR=6.2
NOA NORSAR Array B 51.45 16 P **P 22 36 47.6 -1.1**
NOA pmax pmax
comp=Z,4.0nm,0.9s
MJAR Matsushiro Arr 52.93 277 P **P 22 37 00.5 +0.5**
comp=Z,0.5nm,0.3s,mb3.9,baz=42,slow=16,SNR=3.2
MJAR Matsushiro Arr 52.93 277 P **P 22 37 00.5 +0.4**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
KLMR Klimovskoe 53.10 359 *e*P **P 22 36 59.9 -1.1**
KLMR pmax pmax
comp=Z,40nm,1.6s,mb5.1
ULN Ulaanbaatar 54.44 309⇑ *i*P **P 22 37 12.2 +1.2**
SONM Songino Array 54.67 310 P **P 22 37 13.2 +0.5**
comp=Z,1.5nm,0.8s,mb4.1,baz=28,slow=6.7,SNR=5.0
SONM Songino Array 54.67 310 P **P 22 37 13.2 +0.5**
SONM pmax pmax
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 54.81 328 P **P 22 37 13.1 -0.5**
comp=Z,1.6nm,0.5s,mb4.3,baz=23,slow=7.3,SNR=5.5
ZALV Zalesovo Beam 54.81 328 P **P 22 37 13.1 -0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
VSU Vasula 55.25 7⇑ *i*P **P 22 37 16.4 -0.2**
VSU pmax pmax
comp=Z,42nm,1.3s,mb5.3
ARU Arti 56.52 346 *c i*P **P 22 37 25.2 -0.6**
ARU *e* 22 39 29.3
ARU *e*S **S 22 45 16.7 0.0**
ARU *e*SS SS 22 49 07.4 +4.5
ARU pmax pmax
comp=Z,13nm,0.8s,mb5.0
BSEG Bad Segeberg 58.29 19 *e*P **P 22 37 39.0 +0.7**
BSEG pmax pmax
comp=Z,15nm,1.1s,mb4.9
BSEG Bad Segeberg 58.29 19 *e*P **P 22 37 39.0 +0.7**
comp=Z,15nm,1.1s,mb4.9
BJI Beijing 58.30 298 P **P 22 37 37.8 -0.8**
BJI AMB AMB
comp=Z,10.0nm,1.5s,mb4.6
BRVK Borovoye 58.35 337 *e*P **P 22 37 39.3 +0.5**
comp=Z,17nm,1.4s,mb4.9
BRVK Borovoye 58.35 337 *e*P **P 22 37 39.3 +0.6**
BRVK pmax pmax
comp=Z,17nm,1.4s,mb4.9
BVAR Borovoye Array 58.37 337 P **P 22 37 38.4 -0.5**
comp=Z,4.8nm,0.9s,mb4.5,baz=8.5,slow=2.9,SNR=7.6
BVAR Borovoye Array 58.37 337 P **P 22 37 38.4 -0.4**
BVAR pmax pmax
comp=Z,5.0nm,1.0s
OBN Obninsk 58.86 1⇑ *i*P **P 22 37 42.2 -0.1**
OBN *i* 22 38 31.2
OBN pmax pmax
comp=Z,23nm,1.6s,mb5.0
KURK Kurchatov 59.13 331 P **P 22 37 44.5 +0.2**
comp=Z,3.8nm,1.0s,mb4.4,baz=15,slow=6.2,SNR=6.5
KURK Kurchatov 59.13 331⇑ *e*P **P 22 37 43.4 -0.8**
KURK pmax pmax
comp=Z,12nm,1.7s,mb4.7
HHC Hu-ho-hao-te 59.20 302 *e*P **P 22 37 44.5 -0.3**
HHC XP sP 22 37 50.5 +1.3
HHC PP PP 22 39 56.5 +1.4
HHC PCS PcS 22 42 33.0 -2.0
HHC S **S 22 45 48.5 -3.6**
HHC SCS ScS 22 47 30.5 -4.0
HHC SS SS 22 49 44.8 -0.8
HHC AMB AMB
comp=Z,15nm,0.5s,mb5.3
HHC AMB AMB
comp=Z,535nm,8.2s
HHC LR LR
comp=N,335nm,21.4s,MS4.7
HHC LR LR
comp=E,481nm,22.6s,MS4.7
HHC LR LR
comp=Z,982nm,20.2s,MS4.9
IBBN Ibbenburen 59.53 21 *e*P **P 22 37 47.7 +0.8**
comp=Z,37nm,1.0s,mb5.4
NRDL Niedersach Rie 59.67 19 *e*P **P 22 37 48.3 +0.4**
comp=Z,13nm,1.1s,mb4.9
CLZ Clausthal 60.34 19 *e*P **P 22 37 53.3 +0.8**
CLZ pmax pmax
comp=Z,22nm,1.1s,mb5.1
CLZ Clausthal 60.34 19 *e*P **P 22 37 53.3 +0.8**
comp=Z,22nm,1.1s,mb5.1
BAIF Baives 61.17 24 *e*P **P 22 37 57.6 -0.6**
comp=Z,18nm,0.9s,mb4.9
CLL Collm 61.20 17 *i*P **P 22 37 57.8 -0.5**
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.9
CLL Collm 61.20 17 *e*P **P 22 37 58.3 0.0**
comp=Z,11nm,1.0s,mb4.9
CLL Collm 61.20 17 *i*P **P 22 37 57.8 -0.5**
comp=Z,11nm,1.0s,mb4.9
GIVF Givet 61.23 23 *e*P **P 22 37 57.9 -0.7**
comp=Z,55nm,1.2s,mb5.3
ROSF Rostrenen 61.47 30 *e*P **P 22 37 58.6 -1.6**
FLN La Foliniere 61.60 28 *e*P **P 22 37 59.9 -1.2**
MOX Moxa 61.68 18 *e*P **P 22 38 01.6 0.0**
comp=Z,13nm,1.2s,mb4.9
MOX Moxa 61.68 18 *e*P **P 22 38 01.6 0.0**
MOX pmax pmax
comp=Z,13nm,1.2s,mb4.9
MOX Moxa 61.68 18 *e*P **P 22 38 01.5 -0.1**
comp=Z,16nm,1.3s,mb5.0
SGMF Saint Gilles 61.69 29 *e*P **P 22 38 00.9 -0.8**
comp=Z,81nm,1.5s,mb5.3
SGMF Saint Gilles 61.69 29 *e*P **P 22 38 00.9 -0.8**
comp=Z,40nm,1.5s,mb5.3
SGMF Saint Gilles 61.69 29 *e*P **P 22 38 00.9 -0.8**
SGMF pmax pmax
comp=Z,40nm,1.5s,mb5.3
BRG Berggiesshubel 61.73 17 *e*P **P 22 38 02.1 +0.1**
comp=Z,14nm,1.2s,mb5.0
LDF La Druitiere 61.83 27 *e*P **P 22 38 01.5 -1.2**
comp=Z,42nm,1.1s,mb5.2
LDF La Druitiere 61.83 27 *e*P **P 22 38 01.5 -1.2**
comp=Z,21nm,1.1s,mb5.2
LDF La Druitiere 61.83 27 *e*P **P 22 38 01.5 -1.2**
LDF pmax pmax
comp=Z,21nm,1.1s,mb5.2
WLF Walferdange 61.86 23 *e*P **P 22 38 03.3 +0.4**
comp=Z,20nm,1.1s,mb5.2
GRR Gorron 61.89 28 *e*P **P 22 38 02.9 -0.2**
comp=Z,164nm,1.7s,mb5.6
QUIF Quistinic 61.89 30 *e*P **P 22 38 02.1 -1.0**
TANN Tannenbergstha 62.01 18 *e*P **P 22 38 03.8 0.0**
comp=Z,8.0nm,1.2s,mb4.7
MKAR Makanchi Array 62.09 327 P **P 22 38 03.6 -0.8**
comp=Z,1.5nm,0.9s,mb4.1,baz=26,slow=5.9,SNR=4.2
MKAR Makanchi Array 62.09 327 P **P 22 38 03.7 -0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
PVCC Panska Ves 62.15 16 *e*P **P 22 38 05.2 +0.4**
NKC Novy Kostel 62.19 18 *e*P **P 22 38 05.5 +0.5**
UPC Upice 62.33 15 *e*P **P 22 38 06.8 +0.8**
MANZ Manzenberg 62.38 18 *e*P **P 22 38 06.6 +0.2**
comp=Z,19nm,1.8s,mb4.9
AKTK Aktyubinsk 62.50 345 P **P 22 38 06.2 -1.0**
AKTO Aktyubinsk 62.50 345 P **P 22 38 06.2 -1.0**
comp=Z,3.9nm,0.7s,mb4.6,baz=27,slow=7.2,SNR=7.3
AKTO Aktyubinsk 62.50 345 P **P 22 38 06.2 -0.9**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
DPC Dobruska-Polom 62.51 15 *e*P **P 22 38 08.0 +0.8**
GRF Grafenberg Arr 62.56 19 *e*P **P 22 38 07.6 +0.1**
GRF pmax pmax
comp=Z,21nm,1.5s,mb5.0
GRF Grafenberg Arr 62.56 19 *e*P **P 22 38 07.6 +0.1**
GRF pmax pmax
comp=Z,21nm,1.5s,mb5.0
GRF Grafenberg Arr 62.56 19 *e*P **P 22 38 07.6 +0.1**
comp=Z,21nm,1.5s,mb5.0
ROTZ Rotzenmuhle 62.61 18 *e*P **P 22 38 08.2 +0.3**
comp=Z,55nm,2.4s,mb5.3
PRU Pruhonice 62.67 16 *e*P **P 22 38 08.9 +0.6**
AKASG Malin Array Be 63.11 6 P **P 22 38 10.2 -1.0**
comp=Z,6.4nm,0.8s,mb4.8,baz=353,slow=6.5,SNR=22
AKASG Malin Array Be 63.11 6 P **P 22 38 10.2 -1.0**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 63.11 6 *e*P **P 22 38 11.2 0.0**
KIEV Kiev 63.12 6 *e*P **P 22 38 11.0 -0.3**
comp=Z,6.0nm,0.8s,mb4.8
KIEV Kiev 63.12 6 *e*P **P 22 38 11.0 -0.2**
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
OKC Ostrava-Krasne 63.21 14 *e*P **P 22 38 12.9 +1.1**
CDF Champ du Feu 63.25 22 *e*P **P 22 38 11.7 -0.5**
comp=Z,24nm,1.1s,mb4.9
WET Wettzell 63.31 18 *e*P **P 22 38 13.5 +1.0**
WET pmax pmax
comp=Z,25nm,1.5s,mb5.1
WET Wettzell 63.31 18 *e*P **P 22 38 13.5 +1.0**
comp=Z,25nm,1.5s,mb5.1
KHC Kasperske Hory 63.41 17 *e*P **P 22 38 14.1 +0.9**
TREC Trest 63.47 16 *e*P **P 22 38 14.0 +0.4**
BFO Black Forest 63.49 21 *e*P **P 22 38 14.0 +0.3**
BFO pmax pmax
comp=Z,16nm,1.6s,mb4.9
BFO Black Forest 63.49 21 *e*P **P 22 38 14.0 +0.3**
comp=Z,16nm,1.6s,mb4.9
HAU Haudompre 63.51 23 *e*P **P 22 38 13.3 -0.6**
VRAC Vranov 63.57 15⇑ *i*P **P 22 38 14.6 +0.3**
VRAC Vranov 63.57 15⇑ *i*P **P 22 38 14.6 +0.3**
HYF Humbligny 63.61 26 *e*P **P 22 38 14.0 -0.5**
WMQ Urumqi 63.62 322 *e*P **P 22 38 17.0 +2.3**
GEC2 GERESS Array S 63.70 17 *e*P **P 22 38 15.8 +0.7**
GEC2 pmax pmax
comp=Z,18nm,1.5s,mb4.9
GEC2 GERESS Array S 63.70 17 *e*P **P 22 38 15.8 +0.7**
comp=Z,18nm,1.5s,mb4.9
GERES GERESS Array B 63.70 17 P **P 22 38 15.3 +0.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=348,slow=6.0,SNR=9.6
GERES GERESS Array B 63.70 17 P **P 22 38 15.3 +0.2**
GERES pmax pmax
comp=Z,1.0nm,0.7s
MFF Saint Martin d 63.74 28 *e*P **P 22 38 14.7 -0.7**
comp=Z,36nm,1.2s,mb5.0
HINF Hinteralfeld 63.77 23 *e*P **P 22 38 15.0 -0.6**
LOR Lormes 63.82 25 *e*P **P 22 38 15.2 -0.7**
comp=Z,30nm,1.3s,mb4.9
STHS Stebnicka Huta 63.90 12 *e*P **P 22 38 17.2 +0.8**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
SSF Saint Saulge 63.96 25 *e*P **P 22 38 16.2 -0.6**
comp=Z,36nm,1.1s,mb5.0
AVF Avril sur Loir 64.19 25 *e*P **P 22 38 17.5 -0.9**
GTA Gaotai 64.32 310 *e*P **P 22 38 20.5 +1.1**
GTA AP pP 22 38 24.8 +2.2
GTA XP sP 22 38 27.8 +4.0
GTA PP PP 22 40 43.8 +3.5
GTA S **S 22 46 56.3 -0.7**
GTA XS sS 22 47 03.5 +1.2
GTA SS SS 22 51 06.8 +1.1
GTA AMB AMB
comp=Z,7.0nm,1.7s,mb4.4
GTA AMB AMB
comp=Z,229nm,6.3s
GTA LR LR
comp=N,402nm,17.4s,MS4.8
GTA LR LR
comp=E,315nm,15.9s,MS4.8
GTA LR LR
comp=Z,753nm,18.0s,MS4.9
BGF Bois d'Agland 64.33 26 *e*P **P 22 38 18.4 -0.9**
comp=Z,53nm,1.2s,mb5.2
BGF Bois d'Agland 64.33 26 *e*P **P 22 38 18.4 -0.9**
comp=Z,26nm,1.2s,mb5.1
BGF Bois d'Agland 64.33 26 *e*P **P 22 38 18.4 -0.9**
BGF pmax pmax
comp=Z,27nm,1.2s,mb5.2
SMF Signal de Mont 64.42 25 *e*P **P 22 38 18.9 -1.0**
NJ2 Nanjing 64.43 291 *e*P **P 22 38 23.5 +3.4**
CRVS Cervenica-Dubn 64.43 12 *e*P **P 22 38 20.6 +0.7**
KOLS Kolonicke sedl 64.46 11 *e*P **P 22 38 20.9 +0.8**
KOLS pmax pmax
comp=Z,12nm,1.4s,mb4.7
KOLL Kolacno 64.48 14 *e*P **P 22 38 20.9 +0.7**
TCF Toulx Ste Croi 64.48 26 *e*P **P 22 38 19.2 -1.1**
comp=Z,25nm,1.1s,mb4.9
TCF Toulx Ste Croi 64.48 26 *e*P **P 22 38 19.2 -1.1**
comp=Z,13nm,1.1s,mb4.9
TCF Toulx Ste Croi 64.48 26 *e*P **P 22 38 19.2 -1.1**
TCF pmax pmax
comp=Z,13nm,1.1s,mb4.9
MODS Modra-Piesok 64.57 15 *e*P **P 22 38 21.7 +0.9**
MODS pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
VYHS Vyhne 64.60 14 *e*P **P 22 38 20.3 -0.7**
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
ZST Bratislava 64.72 15 *e*P **P 22 38 22.5 +0.7**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CABF La Chapelle 64.82 23 *e*P **P 22 38 22.1 -0.4**
comp=Z,16nm,0.9s,mb4.7
CSNA Conrad Observa 64.86 16⇑ *i*pP pP 22 38 23.6 -2.4
comp=Z,14nm,1.5s
CONA Conrad Observa 64.86 16⇑ *i*pP pP 22 38 23.6 -2.3
comp=Z,15nm,1.6s
SQTA Sankt Quirin 64.98 19⇓ *i*pP pP 22 38 24.7 -2.1
WTTA Wattenberg 65.00 19⇓ *i*pP pP 22 38 24.0 -2.9
PSZ Piszkesteto 65.27 13⇑ *i*P **P 22 38 25.4 0.0**
PSZ Piszkesteto 65.27 13⇑ *i*P **P 22 38 25.4 0.0**
TRPA Tarpa 65.28 11⇓ *i*P **P 22 38 26.2 +0.7**
RJF Les Rejaudoux 65.30 27 *e*P **P 22 38 24.6 -1.0**
LFF La Frestale 65.51 28 *e*P **P 22 38 26.1 -0.9**
CAF Calviac 65.77 27 *e*P **P 22 38 27.6 -1.1**
comp=Z,47nm,1.4s,mb5.0
CAF Calviac 65.77 27 *e*P **P 22 38 27.6 -1.1**
comp=Z,24nm,1.4s,mb5.0
CAF Calviac 65.77 27 *e*P **P 22 38 27.6 -1.1**
CAF pmax pmax
comp=Z,24nm,1.4s,mb5.0
MYKA Terra Mystica 65.88 18⇑ *i*pP pP 22 38 29.8 -2.8
comp=Z,7.4nm,1.1s
BURAR Bucovina Array 65.98 9⇑P **P 22 38 30.9 +1.0**
BURAR Bucovina Array 65.98 9⇑ *i*P **P 22 38 31.0 +1.0**
LZH Lanzhou 66.08 306 *e*P **P 22 38 32.5 +1.7**
LZH AP pP 22 38 36.0 +1.9
LZH XP sP 22 38 37.5 +2.2
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,102nm,4.3s
OBKA Obir 66.11 17⇑ *i*pP pP 22 38 31.6 -2.5
comp=Z,20nm,0.8s
PKSM Moragy 66.84 14⇓P **P 22 38 35.4 -0.1**
PKSM Moragy 66.84 14⇓ *i*P **P 22 38 35.4 -0.1**
BZS Buzias 67.70 12⇑P **P 22 38 40.9 -0.1**
BZS Buzias 67.70 12⇑ *i*P **P 22 38 40.9 -0.1**
EKS2 Erkin-Say 67.80 332 P **P 22 38 42.1 +0.4**
comp=Z,5.4nm,0.8s,mb4.6
PLOR Plostina 67.83 8⇓P **P 22 38 43.1 +1.3**
PLOR Plostina 67.83 8⇓ *i*P **P 22 38 43.0 +1.2**
GZR Gura Zlata 68.02 11⇑P **P 22 38 43.9 +0.9**
GZR Gura Zlata 68.02 11⇑ *i*P **P 22 38 43.9 +0.9**
CD2 Chengdu 70.85 304 *e*P **P 22 39 01.3 +0.6**
CD2 AP pP 22 39 06.5 +2.5
CD2 XP sP 22 39 09.0 +3.8
CD2 PP PP 22 41 40.8 +3.6
CD2 S S 22 48 15.0 -0.5
CD2 XS sS 22 48 22.8 +1.9
CD2 SS SS 22 52 49.0 +2.0
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,180nm,16.2s
CD2 LR LR
comp=Z,160nm,14.8s,MS4.4
GYA Guiyang 73.93 299 P **P 22 39 19.8 +0.7**
GYA PP PP 22 42 04.8 +1.2
GYA S S 22 48 47.0 -3.9
GYA SS SS 22 53 31.8 -2.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,60nm,6.3s
GYA LR LR
comp=N,180nm,16.0s,MS4.6
GYA LR LR
comp=E,160nm,15.5s,MS4.6
GYA LR LR
comp=Z,250nm,15.9s,MS4.6
BRTR Keskin Array B 74.22 3 P **P 22 39 20.9 +0.2**
comp=Z,2.1nm,0.9s,mb4.1,baz=356,slow=4.1,SNR=9.4
BRTR Keskin Array B 74.22 3 P **P 22 39 20.9 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
KEST Kesra 75.96 23 P **P 22 39 31.4 +0.6**
comp=Z,1.6nm,0.8s,mb4.0,baz=321,slow=7.3,SNR=4.9
KMI Kunming 76.52 302 P **P 22 39 36.8 +2.7**
KMI AMB AMB
comp=Z,5.0nm,1.0s,mb4.4
ASF Jabal al Asfar 81.80 1 P **P 22 40 03.2 +0.3**
comp=Z,4.8nm,1.0s,mb4.4,baz=180,slow=2.7,SNR=5.0
ASF Jabal al Asfar 81.80 1 P **P 22 40 03.2 +0.4**
ASF pmax pmax
comp=Z,5.0nm,1.0s
CMAR Chiang Mai Arr 83.98 303 P **P 22 40 14.8 +0.5**
comp=Z,11nm,0.8s,mb5.0,baz=1.1,slow=6.0,SNR=36
CMAR Chiang Mai Arr 83.98 303 P **P 22 40 14.8 +0.5**
CMAR pmax pmax
comp=Z,11nm,0.9s
EIL Elat 84.27 2 P **P 22 40 14.5 -1.2**
comp=Z,4.2nm,0.8s,mb4.6,baz=33,slow=7.4,SNR=4.3
SUR Sutherland 144.56 25 PKP PKPdf 22 47 18.1 -1.8
comp=Z,7.4nm,0.7s,baz=204,slow=19,SNR=5.4
VNDA Vanda 147.52 200 PKPbc PKPbc 22 47 26.2 -0.1
comp=Z,3.9nm,0.9s,baz=334,slow=3.3,SNR=13
VNDA Vanda 147.52 200 PKP2 PKPab 22 47 26.2 -2.2
VNDA pmax pmax
comp=Z,4.0nm,0.9s
QSPA South Pole Qui 156.18 180 PKPab PKPab 22 48 06.0 +1.5
comp=Z,1.6nm,0.2s,baz=54,slow=2.9,SNR=4.9

IDC ***29*** *22:36:49.1±4.7, 1080N×9340E, h91km±40km, mb3.5/11, mb1 3.7/12, mb1mx3.5/22, mbtmp3.5/12, Error ellipse: s-maj=33.5km s-min=14.7km az=56.0*
NEIC ***29*** *22:36:51.5±2.5, 1083N×9342E, h115km±21km, mb4.0/1, Error ellipse: s-maj=25.3km s-min=9.4km az=56.0*
ISCJB ***29*** *22:36:53.8±4.5, 109N±02×936E±02, h151km±40km, mb3.5/12, Error ellipse: s-maj=45.5km s-min=14.0km az=144.1*

ISC 29 22:36:53.7±4.4, 109N±02×935E±02, h134km±39km, n23, σ0§66/16, mb3.5/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**9.15**	**34**	*e*Pn	**Pn**	**22 39 03.5**	**+0.9**
	17nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.15**	**34**	P	**Pn**	**22 39 01.6**	**-1.0**
	2.8nm,0.3s,baz=224,slow=15,SNR=47						
LSA	**Lhasa**	**18.83**	**354**	*e*P	**P**	**22 41 03.1**	**0.0**
	6.0nm,0.8s						
MKAR	**Makanchi Array**	**37.02**	**347**	P	**P**	**22 43 50.6**	**+0.3**
	0.7nm,0.7s,mb3.4,baz=170,slow=8.0,SNR=4.2						

MKAR				PcP	PcP	22 46 09.2	+0.9
	0.7nm,0.8s,baz=199,slow=3.2,SNR=3.4							
SONM	**Songino Array**	**38.37**	**14**	PcP	PcP	22 46 13.5	+1.0
	0.9nm,0.6s,baz=217,slow=2.9,SNR=3.6							
KURK	**Kurchatov**	**41.54**	**346**	P	**P**	**22 44 26.9**	**-0.9**
	0.2nm,0.3s,mb3.2,baz=166,slow=8.6,SNR=2.8							
ZALV	**Zalesovo Beam**	**43.49**	**353**	P	**P**	**22 44 44.9**	**+1.4**
	0.3nm,0.3s,mb3.4,baz=184,slow=8.7,SNR=2.4							
BVAR	**Borovoye Array**	**45.95**	**341**	P	**P**	**22 45 02.9**	**-0.1**
	0.2nm,0.3s,mb3.2,baz=146,slow=7.7,SNR=3.1							
BVAR				PcP	PcP	22 46 38.6	+1.0
	0.6nm,0.6s,baz=131,slow=6.1,SNR=3.0							
WRA	**Warramunga Arr**	**50.53**	**127**	P	**P**	**22 45 37.9**	**-0.7**
	0.5nm,0.6s,mb3.4,baz=306,slow=8.6,SNR=4.2							
WRA				PcP	PcP	22 46 55.2	+0.5
	0.5nm,0.5s,baz=322,slow=2.3,SNR=4.4							
WRAB	**Tennant Creek**	**50.53**	**127**	*e*P	**P**	**22 45 39.4**	**+0.7**
	21nm,2.0s,mb4.4							
WB2	**Warramunga Arr**	**50.54**	**127**	*e*P	**P**	**22 45 39.0**	**+0.3**
ASAR	**Alice Springs**	**52.33**	**131**	P	**P**	**22 45 51.5**	**-0.4**
	0.4nm,0.3s,mb3.5,baz=303,slow=7.7,SNR=11							
ASAR				PcP	PcP	22 47 02.3	+0.9
	0.4nm,0.6s,baz=312,slow=4.6,SNR=3.6							
ARCES	**ARCESS Array B**	**72.23**	**340**	P	**P**	**22 48 04.0**	**+0.2**
	6.2nm,1.1s,mb4.2,baz=86,slow=6.7,SNR=7.5							
GERES	**GERESS Array B**	**75.19**	**318**	P	**P**	**22 48 21.4**	**-0.1**
	0.8nm,0.8s,mb3.4,baz=83,slow=5.8,SNR=7.6							
BOSA	**Boshof**	**76.70**	**237**	P	**P**	**22 48 30.8**	**+0.4**
	0.6nm,0.3s,mb3.6,baz=76,slow=8.3,SNR=5.4							
NOA	**NORSAR Array B**	**76.82**	**330**	P	**P**	**22 48 29.4**	**-1.0**
	0.7nm,0.7s,mb3.4,baz=88,slow=12,SNR=2.7							
TORD	**Torodi Ar. Bea**	**89.33**	**283**	P	**P**	**22 49 35.6**	**0.0**
	0.3nm,0.7s,mb3.3,baz=98,slow=5.3,SNR=2.4							
PDAR	**Pinedale Array**	**122.56**	**20**	PKP	PKPdf	22 55 34.7	+1.1
	0.4nm,0.6s,baz=146,slow=1.8,SNR=3.7							
NVAR	**Mina Array Bea**	**122.61**	**29**	PKP	PKPdf	22 55 36.2	+2.3
	0.7nm,0.6s,baz=293,slow=1.5,SNR=6.0							
NVAR	**Mina Array Bea**	**122.61**	**29**	PKP	PKPdf	22 55 36.2	+2.3
TXAR	**Lajitas Array**	**136.69**	**22**	PKP	PKPdf	22 56 03.6	+2.8
	0.3nm,0.5s,baz=346,slow=0.9,SNR=5.6							
PLCA	**Paso Flores**	**147.14**	**203**	PKPbc	PKPbc	22 56 20.9	-0.5
	1.5nm,0.8s,baz=169,slow=5.2,SNR=3.2							
CMIG	**Matias Romero**	**150.96**	**17**	PKPbc	PKPbc	22 56 32.1	+0.5
	1.0nm,0.5s,baz=22,slow=8.5,SNR=3.5							

*IDC **29** 22:38:25.9±8.0, 3606N×70.11E, h50km±77km, mb3.4/3, mb1 3.4/7, mb1mx3.2/25, mbtmp3.3/7, ML3.1/4, Error ellipse: s-maj=71.7km s-min=46.5km az=143.0*
*ISCJB **29** 22:38:29.1±0.6, 3605N±004×705E±0.1, h111km±12km, mb3.7/2, Error ellipse: s-maj=13.7km s-min=6.8km az=4.2*
*MOS **29** 22:38:29.2±2.2, 3614N×7034E, h107km, mb4.1/2, Error ellipse: s-maj=26.4km s-min=10.9km az=80.0*
*NEIC **29** 22:38:30.7±0.7, 3604N×7044E, h108km±11km, mb4.3/2, Error ellipse: s-maj=16.6km s-min=8.3km az=117.0*
*NNC **29** 22:38:33.6±7.6, 3630N×7065E, h138km±147km, mb3.5, mpv4.0, Error ellipse: s-maj=66.9km s-min=45.0km az=6.0*

ISC 29 22:38:30.3±0.6, 3604N±004×705E±01, h104km±11km, n33, σ0§98/38, mb3.7/2, 5C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.91**	**219**		*e*Pn		**Pn**	**22 39 03.0**	**+1.1**
CEP	**Cherat**	**2.50**	**152**		⇑P		**Pn**	**22 39 09.5**	**0.0**
CEP					S		**Sn**	**22 39 39.0**	**-0.5**
NIL	**Nilore**	**3.29**	**136**		*e*Pn		**Pn**	**22 39 20.4**	**+0.4**
CHCP	**Chirah Chowk**	**3.29**	**135**		P		**Pn**	**22 39 19.9**	**-0.1**
SBDP	**Sheikh Budin**	**3.74**	**176**		P		**Pn**	**22 39 25.4**	**-0.6**
AML	**Almayashu**	**6.57**	**21**		*e*Pn		**Pn**	**22 40 05.4**	**+1.1**
	25nm,0.5s								
AML	**Almayashu**	**6.57**	**21**		P		**Pn**	**22 40 05.5**	**+1.2**
	SNR=12								
KK31	**Karatay Array**	**7.05**	**0**		⇓P		**Pn**	**22 40 10.5**	**-0.4**
	6.5nm,0.5s,baz=175,slow=13,SNR=149								
KK31					⇑S		**Sn**	**22 41 27.4**	**-2.1**
	1.2nm,0.3s,baz=179,slow=23,SNR=3.5								
KZA	**Kyzart**	**7.07**	**30**		P		**Pn**	**22 40 11.5**	**+0.4**
	SNR=6.5								
EKS2	**Erkin-Say**	**7.08**	**20**		P		**Pn**	**22 40 12.4**	**+1.2**
	SNR=20								
AAK	**Ala-Archa**	**7.28**	**24**		*e*Pn		**Pn**	**22 40 14.4**	**+0.6**
	7.0nm,0.6s								
AAK	**Ala-Archa**	**7.28**	**24**		*e*PN		**Pn**	**22 40 14.4**	**+0.6**
AAK					pmax	pmax			
	comp=Z,7.0nm,0.6s								
AAK	**Ala-Archa**	**7.28**	**24**		P		**Pn**	**22 40 14.2**	**+0.4**
	SNR=8.5								
SMLA	**Simla**	**7.41**	**129**		*i* P		**Pn**	**22 40 14.0**	**-1.8**
SMLA					*i* S		**Sn**	**22 41 30.8**	**-7.4**
SMLA					*i* S		**Sn**	**22 41 31.8**	**-6.5**
SMLA					*ex*		x	22 41 34.2	
	comp=N,158nm,0.2s								
SMLA					*ex*		x	22 41 36.0	
	comp=E,179nm,0.4s								
CHMS	**Chumysh**	**7.69**	**24**		P		**Pn**	**22 40 19.4**	**0.0**
	SNR=9.0								
USP	**Ospenovka**	**7.85**	**22**		P		**Pn**	**22 40 22.4**	**+0.8**
	SNR=8.5								
TKM2	**Tokmak 2**	**7.92**	**28**		⇑P		**Pn**	**22 40 22.7**	**+0.1**
	comp=E,3.4nm,0.5s								
TKM2					⇑S		**Sn**	**22 41 48.5**	**-2.0**
	comp=E,3.6nm,0.8s								
TKM2	**Tokmak 2**	**7.92**	**28**		*e*Pn		**Pn**	**22 40 23.2**	**+0.6**
	comp=E,5.2nm,0.5s								
TKM2	**Tokmak 2**	**7.92**	**28**		*e*PN		**Pn**	**22 40 23.2**	**+0.6**
TKM2					pmax	pmax			
	comp=Z,5.0nm,0.5s								
TKM2	**Tokmak 2**	**7.92**	**28**		P		**Pn**	**22 40 23.3**	**+0.7**
	SNR=6.6								
MKAR	**Makanchi Array**	**13.90**	**36**		P		**Pn**	**22 41 44.1**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=224,slow=14,SNR=2.5								
AB09	**Akbulak array**	**15.31**	**333**		⇑P		**Pn**	**22 42 00.1**	**-0.5**
	comp=Z,4.5nm,0.5s								
KURK	**Kurchatov**	**15.80**	**19**		P		**Pn**	**22 42 02.8**	**-3.8**
	comp=Z,0.0nm,0.3s,baz=207,slow=11,SNR=3.2								
BVAR	**Borovoye Array**	**16.98**	**360**		P		**Pn**	**22 42 20.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=167,slow=13,SNR=3.7								
AKTK	**Aktyubinsk**	**16.98**	**332**		P		**Pn**	**22 42 17.1**	**-4.2**
AKTO	**Aktyubinsk**	**16.98**	**332**		P		**Pn**	**22 42 17.1**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=139,slow=12,SNR=2.5								
ZAA0	**Zalesovo Array**	**20.50**	**25**		*e*P		**P**	**22 43 00.8**	**+1.0**
ZALV	**Zalesovo Beam**	**20.50**	**25**		P		**P**	**22 43 00.3**	**+0.5**
	comp=Z,2.7nm,0.4s,baz=214,slow=11,SNR=17								
ZALV	**Zalesovo Beam**	**20.50**	**25**		P		**P**	**22 43 00.3**	**+0.5**
ZALV					pmax	pmax			
	comp=Z,3.0nm,0.4s								
ARCES	**ARCESS Array B**	**41.42**	**338**		P		**P**	**22 46 06.2**	**+0.2**
	comp=Z,2.8nm,0.9s,mb4.1,baz=112,slow=12,SNR=4.2								
ARCES	**ARCESS Array B**	**41.42**	**338**		P		**P**	**22 46 06.2**	**+0.2**
ARCES					pmax	pmax			
	comp=Z,3.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**65.30**	**269**		P		**P**	**22 49 00.8**	**-0.6**
	comp=Z,0.2nm,0.4s,mb3.3,baz=51,slow=6.2,SNR=8.6								
TORD	**Torodi Ar. Bea**	**65.30**	**269**		P		**P**	**22 49 00.8**	**-0.6**

*IDC **29** 22:42:21.2±28.0, 4071N×14433E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.8/5, Error ellipse: s-maj=547.0km s-min=198.6km az=147.0*
*NEIC **29** 22:42:35.2, 4183N×14367E, h29km, MG3.6(JMA), After JMA.*
*JMA **29** 22:42:35.1±0.1, 4183N×14367E, h29km±3km, M3.6*

ISC 29 22:42:33.8±2.5, 417N±01×1437E±01, h30km±11km, n14, σ0§32/18, mb3.7/5, 3C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.50**	**305**		*e*Pg		**Pb**	**22 42 43.9**	**-0.2**
ERM					*e*Sg		**Sb**	**22 42 51.3**	**+0.2**
JEM	**Erimo**	**0.50**	**306**		⇓P		**Pb**	**22 42 43.7**	**-0.4**
JEM					*e*S		**Sb**	**22 42 51.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.90**	**308**		⇓P		**Pn**	**22 42 50.6**	**+0.3**
JCH	**Churui**	**0.92**	**344**		⇑P		**Pn**	**22 42 50.4**	**-0.2**
JOB	**Onbets**	**1.18**	**5**		⇑P		**Pn**	**22 42 54.6**	**+0.4**
JBT2	**Biratori 2**	**1.44**	**317**		P		**Pn**	**22 42 58.4**	**+0.6**
JAK	**Akkeshi**	**1.47**	**30**		⇓P		**Pn**	**22 42 58.4**	**+0.3**
JAK					*e*S		**Sn**	**22 43 16.3**	**0.0**
JAR	**Ashorobuto**	**1.57**	**2**		⇑P		**Pn**	**22 42 59.4**	**-0.1**
JAR					*e*S		**Sn**	**22 43 18.5**	**-0.3**
SONM	**Songino Array**	**26.98**	**296**		P		**P**	**22 48 12.9**	**+0.3**
	0.4nm,0.5s,mb3.2,baz=109,slow=8.0,SNR=3.7								
ZALV	**Zalesovo Beam**	**40.22**	**308**		P		**P**	**22 50 07.1**	**-0.2**
	1.0nm,0.6s,mb3.7,baz=90,slow=7.4,SNR=5.4								
ZALV	**Zalesovo Beam**	**40.22**	**308**		P		**P**	**22 50 07.1**	**-0.2**
MKAR	**Makanchi Array**	**43.29**	**298**		P		**P**	**22 50 31.8**	**-0.7**
	0.5nm,0.5s,mb3.5,baz=85,slow=10,SNR=13								
KURK	**Kurchatov**	**44.57**	**305**		P		**P**	**22 50 42.8**	**+0.1**
	1.0nm,0.4s,mb4.0,baz=76,slow=8.7,SNR=3.1								
BVAR	**Borovoye Array**	**48.83**	**310**		P		**P**	**22 51 16.0**	**0.0**
	0.5nm,0.3s,mb4.0,baz=84,slow=9.5,SNR=7.6								

IDC 29 22:59:44.1±1.4, 369S×10090E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/20, mbtmp3.7/7, Error ellipse: s-maj=63.5km s-min=20.0km az=65.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.09**	**355**		P		P	23 04 41.6	+0.6
	1.2nm,0.3s,baz=191,slow=9.1,SNR=4.5								
WRA	**Warramunga Arr**	**36.38**	**119**		P		P	23 06 51.2	+0.8
	0.6nm,0.6s,baz=305,slow=9.2,SNR=4.5								
ASAR	**Alice Springs**	**37.55**	**125**		P		P	23 07 00.2	0.0
	0.1nm,0.3s,baz=297,slow=6.9,SNR=2.8								
SONM	**Songino Array**	**51.53**	**5**		P		P	23 08 51.1	-0.5
	0.6nm,0.6s,baz=189,slow=8.3,SNR=3.0								
MKAR	**Makanchi Array**	**52.88**	**344**		P		P	23 09 02.0	+0.3
	0.6nm,0.6s,baz=152,slow=8.9,SNR=9.7								
ZALV	**Zalesovo Beam**	**58.98**	**349**		P		P	23 09 45.9	+0.6
	0.3nm,0.3s,baz=166,slow=7.4,SNR=3.6								
VNDA	**Vanda**	**80.34**	**169**		P		P	23 11 56.8	0.0
	0.3nm,0.3s,baz=288,slow=6.4,SNR=6.5								
TXAR	**Lajitas Array**	**145.45**	**40**		PKPbc	PKPbc		23 19 22.6	-2.2
	0.5nm,0.7s,baz=215,slow=1.1,SNR=2.5								

TRN 29 23:00:49.1, 1496N×6071W, h142km, MD3.5, M2.6(FDF), Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.44**	**205**		*e*P		Pn	23 01 10.7	+1.5
FDF	**Fort de France**	**0.48**	**243**		*e*P		Pn	23 01 10.4	+1.0
FDF					*e*S		Sn	23 01 26.1	+1.4
BIM	**Bigot**	**0.56**	**219**		*e*P		Pn	23 01 10.8	+1.0
SLW	**Petit Monier**	**0.96**	**194**		*e*P		Pn	23 01 13.5	+0.8
SLW					*e*S		Sn	23 01 31.5	+0.8
SLB	**Belfond**	**1.17**	**196**		*e*P		Pn	23 01 15.8	+1.2
SLB					*e*S		Sn	23 01 35.7	+1.6

*IDC **29** 23:06:10.0±1.2, 4505N×10702W, h0km, mb1 4.0/3, mb1mx3.5/21, mbtmp3.7/3, ML3.1/2, Error ellipse: s-maj=40.3km s-min=8.0km az=132.0*
*ISCJB **29** 23:06:11.6±0.6, 4517N±006×10683W±006, h0km, Error ellipse: s-maj=8.6km s-min=5.3km az=21.0*
*NEIC **29** 23:06:12.4±0.5, 4510N×10689W, h0km, ML3.1, Error ellipse: s-maj=7.9km s-min=6.3km az=50.0, Suspected Mining explosion.*
NEIC 35 km [20 miles] N of Sheridan.

ISC 29 23:06:12.3±0.5, 4519N±005×10681W±005, h0km, n45, σ1§29/51, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLMT	**Red Lodge**	**1.74**	**269**		*e*Pn		**Pn**	**23 06 42.6**	**-1.1**
RLMT					*e*Sn		**Sn**	**23 07 06.1**	**-0.5**
GCMT	**Greycliff**	**2.10**	**288**		*e*Pn		**Pn**	**23 06 48.2**	**-0.5**
GCMT					*e*Sn		**Sn**	**23 07 17.1**	**+1.6**
RSSD	**Black Hills**	**2.25**	**118**		*e*Pn		**Pn**	**23 06 51.1**	**+0.4**
RSSD					*e*Sn		**Sn**	**23 07 20.4**	**+1.3**
LKWY	**Lake**	**2.63**	**257**		*e*Pn		**Pn**	**23 06 56.4**	**+0.4**
BW06	**Boulder Array**	**3.13**	**220**		*e*Pn		**Pn**	**23 07 02.0**	**-0.9**
PD31	**Pinedale Array**	**3.13**	**220**		*e*Pn		**Pn**	**23 07 01.8**	**-1.0**
PDAR	**Pinedale Array**	**3.13**	**220**		P*n*		**Pn**	**23 07 01.4**	**-1.5**
	20nm,0.3s,baz=46,slow=14,SNR=91								
PDAR					Lg			23 07 40.6	
	18nm,0.3s,baz=46,slow=33,SNR=13								
PDAR	**Pinedale Array**	**3.13**	**220**		Pn		**Pn**	**23 07 01.4**	**-1.5**
LOHW	**Long Hollow**	**3.15**	**241**		*e*Pn		**Pn**	**23 07 04.6**	**+1.6**
IMW	**Indian Meadow**	**3.23**	**248**		*e*Pn		**Pn**	**23 07 05.9**	**+1.8**
QLMT	**Earthquake Lak**	**3.30**	**265**		*e*Pn		**Pn**	**23 07 08.5**	**+3.3**
SNOW	**Snow King Moun**	**3.32**	**240**		*e*Pn		**Pn**	**23 07 06.7**	**+1.3**
BOZ	**Bozeman (W)**	**3.43**	**279**		*e*Pn		**Pn**	**23 07 05.8**	**-1.1**
EGMT	**Eagleton**	**3.49**	**325**		*e*Pn		**Pn**	**23 07 08.6**	**+0.9**
RWWY	**Rawlins**	**3.52**	**185**		*e*Pn		**Pn**	**23 07 08.1**	**0.0**
DGMT	**Dagmar**	**3.74**	**28**		*e*Pn		**Pn**	**23 07 13.3**	**+2.2**
PHWY	**Pilot Hill**	**4.01**	**165**		*e*Pn		**Pn**	**23 07 12.9**	**-2.0**
DLMT	**Dillon**	**4.09**	**274**		*e*Pn		**Pn**	**23 07 16.4**	**+0.4**
CHMT	**Chamberlain Mo**	**4.81**	**293**		*e*Pn		**Pn**	**23 07 24.8**	**-1.1**
MSO	**Missoula**	**5.23**	**291**		*e*Pn		**Pn**	**23 07 30.9**	**-0.8**
ULM	**Lac du Bonnet**	**8.93**	**52**		Pn		**Pn**	**23 08 20.9**	**-1.6**
	2.3nm,0.3s,baz=241,slow=11,SNR=8.3								
ULM	**Lac du Bonnet**	**8.93**	**52**		Pn		**Pn**	**23 08 20.9**	**-1.6**
YKA	**Yellowknife Ar**	**17.91**	**348**		P		**Pn**	**23 10 20.3**	**-2.2**
	0.1nm,0.3s,baz=176,slow=12,SNR=5.3								
YKA	**Yellowknife Ar**	**17.91**	**348**		P		**Pn**	**23 10 20.3**	**-2.2**

*ISCJB **29** 23:11:54.9±0.9, 356N±0.1×272E±0.1, h19km±11km, Error ellipse: s-maj=25.5km s-min=9.5km az=147.8*
*NEIC **29** 23:11:54.1, 3556N×2713E, h23km, MD3.0(ATH), After ATH.*
*ATH **29** 23:11:54.1, 3556N×2713E, h23km, MD3.0/3*
*CSEM **29** 23:11:54.9±0.1, 3559N×2713E, h20km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.1km az=166.0*
*THE **29** 23:11:55.0, 3558N×2706E, h0km±7km, Error ellipse: s-maj=16.5km s-min=0.9km az=102.0*

ISC 29 23:11:55.0±0.9, 356N±01×272E±01, h19km±6km, n23, σ0§41/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.05**	**189**		*e*PB		**Pg**	**23 11 58.4**	**-0.1**
KARP					*e*SB		**Sg**	**23 12 01.1**	**+0.3**
ZKR	**Zakros**	**0.92**	**238**		P		**Pb**	**23 12 11.3**	**-1.0**
ZKR					S		**Sb**	**23 12 24.6**	**+0.6**
ARG	**Arkhangelos**	**0.99**	**51**		*e*PN		**Pn**	**23 12 14.2**	**+0.4**
NPS	**Neapolis**	**1.32**	**256**		*e*PN		**Pn**	**23 12 18.0**	**-0.3**
LAST	**Lasithi**	**1.45**	**253**		P		**Pn**	**23 12 20.2**	**+0.1**
THR1	**Thera Island**	**1.59**	**299**		P		**Pn**	**23 12 21.8**	**-0.2**
THR6	**Thira Island,**	**1.62**	**298**		P		**Pn**	**23 12 22.4**	**-0.1**
THR3	**Thira Island,**	**1.65**	**300**		P		**Pn**	**23 12 22.8**	**-0.1**
THR4	**Thira Island,**	**1.68**	**301**		P		**Pn**	**23 12 23.5**	**+0.3**
IDI	**Anoyia**	**1.89**	**261**		*e*Pn		**Pn**	**23 12 25.8**	**-0.4**
IDI					*e*Sn		**Sn**	**23 12 50.0**	**+0.6**
IDI	**Anoyia**	**1.89**	**261**		*e*Pn		**Pn**	**23 12 25.8**	**-0.4**
IDI					*e*Sn		**Sn**	**23 12 50.0**	**+0.6**

GUC 29 23:15:33.0±0.6, 2388S×6742W, h233km±8km, ML3.6, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.86**	**312**		⇑P		Pn	23 16 14.7	+1.8
LVC					*i* S		S	23 16 46.5	+2.5
LVC					AML		AML	23 16 47.9	
	comp=E,84nm,0.5s								
CEN1	**Los Morros**	**2.60**	**280**		⇓P		Pn	23 16 23.3	+3.2
CEN1					*i* S		S	23 17 01.1	+4.0
CEN1					AML		AML	23 17 03.2	
	comp=N,87nm,0.2s								
ANCH	**Antofagasta**	**2.75**	**273**		*e*P		Pn	23 16 23.4	+1.7
ANCH					*i* S		S	23 17 01.5	+1.5
PB01	**Plate Boundary**	**3.41**	**325**		*e*P		Pn	23 16 31.5	+2.4
PB01					*i* S		S	23 17 16.2	+2.7
PB01					AML		AML	23 17 21.1	
	comp=N,57nm,0.2s								

*CSEM **29** 23:18:08.7±0.2, 3981N×2070E, h8km, MD3.1, Error ellipse: s-maj=6.6km s-min=5.0km az=94.0*
*NEIC **29** 23:18:08.4, 3976N×2068E, h17km, MD3.1(ATH), After ATH.*
*SKO **29** 23:18:11.3, 3979N×2081E, h0km*

ATH 29 23:18:08.4, 3976N×2068E, h17km±2km, MD3.1/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**128**		*e*PB		Pg	23 18 12.2	-0.5
JAN					*e*SB		Sg	23 18 15.6	-0.1
KEK	**Kerkira**	**0.68**	**266**		*e*PN		Pn	23 18 21.6	-1.6
EVR	**Evrytania**	**1.22**	**134**		*e*PN		Pn	23 18 31.5	+0.9
BIA	**Bitola**	**1.35**	**21**		*e*Pg		Pg	23 18 33.6	-0.8
BIA					*e*Sg		Sg	23 18 52.9	+0.8
BIA	**Bitola**	**1.35**	**21**		*e*Pg		Pg	23 18 33.7	-0.8
BIA					*e*Sg		Sg	23 18 52.9	+0.8
VLS	**Valsamata**	**1.58**	**183**		*e*PN		Pn	23 18 38.1	+2.5
KRUS	**Krusevo**	**1.67**	**15**		*e*Pn		Pn	23 18 40.4	+3.6
KRUS					*e*Sg		Sg	23 19 02.7	+0.6
KRUS	**Krusevo**	**1.67**	**15**		*e*Pn		Pn	23 18 40.4	+3.6
KRUS					*e*Sg		Sg	23 19 02.8	+0.7
VAY	**Valandovo**	**2.12**	**42**		*e*Pn		Pn	23 18 47.3	+4.2

*IDC **29** 23:32:03.0±0.8, 2344S×7068W, h0km, mb4.0/7, mb1 4.1/9, mb1mx4.0/17, mbtmp4.0/9, ML3.9/2, MS3.1/2, Ms1 3.2/2, ms1mx3.1/14, Error ellipse: s-maj=23.4km s-min=14.3km az=151.0*
*ISCJB **29** 23:32:05.6±0.9, 2337S±004×7081W±007, h28km±5km, mb4.0/7, MS4.0/2, Error ellipse: s-maj=10.6km s-min=5.5km az=15.2*
*NEIC **29** 23:32:07.8, 2338S×7060W, h34km, ML4.0(GUC), After GUC.*
*GUC **29** 23:32:07.8±0.8, 2338S×7060W, h34km±4km, ML4.0*

ISC 29 23:32:06.8±1.2, 2336S±003×7072W±007, h22km±8km, n26, σ1§22/30, mb4.0/7, MS4.0/2, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.35**	**44**		⇓*i*P		**Pb**	**23 32 15.2**	**+0.7**
MECH					*i* S		**Sb**	**23 32 20.9**	**+1.2**
MECH					AML		AML	23 32 27.3	
	comp=N,31μm,0.5s								
ANCH	**Antofagasta**	**0.42**	**139**		⇓*i*P		**Pb**	**23 32 16.7**	**+1.0**
ANCH					*i* S		**Sb**	**23 32 22.1**	**+0.3**
CEN1	**Los Morros**	**0.47**	**94**		⇑*i*P		**Pb**	**23 32 15.4**	**-1.2**
CEN1					*i* S		**Sb**	**23 32 20.8**	**-2.3**
CEN1					AML		AML	23 32 21.2	
	comp=E,29μm,0.4s								
PECH	**Pedro de Valdi**	**1.22**	**52**		⇑*i*P		**Pn**	**23 32 28.4**	**-0.1**
PECH					*e*S		**Sb**	**23 32 44.1**	**-0.5**
PECH					AML		AML	23 32 46.4	
	comp=N,18μm,0.4s								
TOCH	**Tocopilla**	**1.35**	**21**		*e*P		**Pn**	**23 32 30.2**	**-0.1**
TOCH					*i* S		**Sn**	**23 32 47.2**	**-0.3**
TOCH					AML		AML	23 32 50.5	
	comp=E,5μm,0.5s								
MACH	**Maria Elena**	**1.46**	**37**		⇑*i*P		**Pn**	**23 32 32.5**	**+0.7**
MACH					*i* S		**Sn**	**23 32 51.3**	**+1.1**
LVC	**Limon Verde**	**1.82**	**66**		Pn		**Pn**	**23 32 37.7**	**+0.9**
	comp=E,256nm,0.3s,baz=242,slow=11,SNR=1588								
LVC					Lg			23 33 01.9	
	comp=E,468nm,0.3s,baz=25,slow=16,SNR=54								
LVC	**Limon Verde**	**1.82**	**66**		*e*Pn		**Pn**	**23 32 38.5**	**+1.7**
LVC	**Limon Verde**	**1.82**	**66**		*e*P		**Pn**	**23 32 38.1**	**+1.3**
LVC					*i* S		**Sn**	**23 33 01.1**	**+1.9**
LVC					AML		AML	23 33 04.7	
	comp=N,2μm,0.5s								
LCO	**Las Campanas**	**5.63**	**180**		*e*Pn		**Pn**	**23 33 31.1**	**+1.9**
	comp=N,24nm,0.4s								
LCO					*e*Sn		Sn	23 34 58.9	+26
ARE	**Arequipa**	**6.90**	**354**		*e*P		**Pn**	**23 33 46.0**	**-0.7**
CFAA	**Coronel Fontan**	**8.50**	**166**		Pn		**Pn**	**23 34 06.4**	**-2.2**
	comp=N,0.0nm,0.3s,baz=357,slow=19,SNR=3.1								
CFAA					Sn		**Sn**	**23 35 47.1**	**+3.3**
	comp=N,0.1nm,0.3s,baz=340,slow=18,SNR=3.0								
SIV	**San Ignacio**	**11.67**	**53**		Pn		**Pn**	**23 34 49.6**	**-2.4**
	comp=N,1.0nm,0.3s,baz=236,slow=12,SNR=43								
PLCA	**Paso Flores**	**17.32**	**180**		P		**Pn**	**23 36 07.2**	**0.0**
	comp=N,0.1nm,0.3s,baz=17,slow=18,SNR=2.3								
PLCA					LR		LR	23 42 14.3	
	comp=N,162nm,19.1s,baz=39,slow=36		

comp=Z,6.0nm,0.5s
YAK Yakutsk 21.91 342 *e*P **P 00 12 41.1 0.0**
comp=Z,17nm,0.3s,mb5.0
SONM Songino Array 26.89 296 P **P 00 13 29.0 +0.2**
comp=Z,0.6nm,0.7s,mb3.2,baz=92,slow=9.5,SNR=4.2
ZALV Zalesovo Beam 40.13 308 P **P 00 15 23.7 +0.2**
comp=Z,0.9nm,0.7s,mb3.6,baz=78,slow=6.6,SNR=4.7
MKAR Makanchi Array 43.20 298 P **P 00 15 48.0 -0.7**
comp=Z,0.4nm,0.5s,mb3.4,baz=82,slow=9.0,SNR=9.6

IDC ***30*** *01:11:41.4±1.6, 1094S×16226E, h5km±8km, mb4.7/24, mb1 4.8/25, mb1mx4.8/26, mbtmp4.7/25, ML5.3/1, MS4.6/21, Ms1 4.6/21, ms1mx4.5/30, Error ellipse: s-maj=10.6km s-min=8.6km az=92.0*

ISCJB ***30*** *01:11:43.9±1.2, 1103S±004×16224E±003, h30km±8km, mb5.1/101, MS4.7/37, Error ellipse: s-maj=6.0km s-min=4.5km az=164.7*

BJI ***30*** *01:11:45.8, 1100S×16220E, h34km, mB5.3, mb5.0, Ms5.1, Msz4.8*

MOS ***30*** *01:11:46.7±1.0, 1099S×16220E, h54km, mb5.3/40, MS4.7/7, Error ellipse: s-maj=8.4km s-min=7.6km az=139.0*

NEIC ***30*** *01:11:47.9±0.8, 1099S×16222E, h54km±7km, mb5.2/60, Error ellipse: s-maj=5.6km s-min=4.6km az=147.0*

DJA ***30*** *01:12:41, 11815×15866E, h259km, Mw5.4/15*

ISC 30 01:11:46.9±0.7, 1101S±003×16226E±003, h41km±6km, h46km±1.1km:pP-P, n527, σ0°69/457, mb5.1/100, MS4.7/37, 130C-117D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**2.76**	**304**	Pn		**Pn**	**01 12 27.2**	**-1.5**
	549nm,0.3s,baz=151,slow=7.8,SNR=52							
HNR				Sn		**Sn**	**01 13 06.0**	**+5.1**
	2µm,0.3s,baz=151,slow=22,SNR=11							
HNR	**Honiara**	**2.76**	**304**	*e*Pn		**Pn**	**01 12 29.2**	**+0.4**
HNR				*e*Sn		**Sn**	**01 13 00.6**	**-0.3**
NOUC	**Port Laguerre**	**11.69**	**161**	*e*P		**Pn**	**01 14 31.0**	**-0.2**
NOUC				*e*S		**Sn**	**01 16 35.5**	**-4.9**
DZM	**Mont Dzumac**	**11.71**	**160**	*e*P		**Pn**	**01 14 30.5**	**-0.9**
DZM				*e*S		**Sn**	**01 16 33.4**	**-7.4**
DZM	**Mont Dzumac**	**11.71**	**160**	*e*Pn		**Pn**	**01 14 30.8**	**-0.7**
	30nm,0.8s							
DZM				*e*Sn		**Sn**	**01 16 31.3**	**-10**
PMG	**Port Moresby**	**14.95**	**275**	*e*Pn		**Pn**	**01 15 17.6**	**+2.0**
TARA	**Tarawa**	**16.23**	**41**	*e*Pn		**Pn**	**01 15 31.2**	**-0.9**
	273nm,0.9s							
EIDS	**Eidsvold**	**17.78**	**215**	*e*P		**Pn**	**01 15 50.9**	**-0.4**
	126nm,0.9s							
CTA	**Charters Tower**	**17.85**	**238**	*e*P		**Pn**	**01 15 52.9**	**+0.6**
	307nm,1.1s							
CTA				*e*S		**S**	**01 19 02.2**	**-13**
CTA	**Charters Tower**	**17.85**	**238**	P		**Pn**	**01 15 52.4**	**+0.1**
	6.4nm,0.3s,baz=66,slow=13,SNR=59							
CTA				S		**S**	**01 19 15.0**	**-0.7**
	0.3nm,0.3s,baz=0.9,slow=19,SNR=2.6							
CTA	**Charters Tower**	**17.85**	**238**	P		**Pn**	**01 15 52.4**	**+0.1**
CTA				S		**S**	**01 19 15.0**	**-0.7**
CTA				pmax	pmax			
	comp=Z,6.0nm,0.3s							
CTAO	**Charters Tower**	**17.85**	**238**	*e*P		**Pn**	**01 15 52.1**	**-0.2**
	comp=Z,557nm,1.1s							
CTAO	**Charters Tower**	**17.85**	**238**	*e*P		**Pn**	**01 15 52.1**	**-0.2**
CTAO				pmax	pmax			
	comp=Z,557nm,1.1s							
COEN	**Coen**	**18.86**	**259**	⇓*i*P		**Pn**	**01 16 06.3**	**+1.7**
	comp=Z,247nm,1.1s							
ARMA	**Armidale**	**21.69**	**206**	⇓*i*P		**P**	**01 16 34.6**	**+0.3**
ARMA				*e*S		**S**	**01 20 32.2**	**0.0**
AFI	**Afiamalu**	**25.51**	**99**	P		**P**	**01 17 12.3**	**+0.5**
	comp=Z,91nm,0.9s,mb5.3,baz=100,slow=22,SNR=5.9							
AFI				LR		LR	01 25 09.3	
	comp=Z,2µm,21.8s,MS4.7,baz=286,slow=32							
AFI	**Afiamalu**	**25.51**	**99**	*e*P		**P**	**01 17 11.0**	**-0.8**
	comp=Z,111nm,1.0s,mb5.3							
RAO	**Raoul Island**	**25.92**	**137**	LR		LR	01 25 40.3	
	comp=Z,2µm,18.5s,MS4.6,baz=319,slow=32							
CNB	**Canberra**	**26.89**	**204**	*e*P		**P**	**01 17 25.2**	**+1.2**
CNB				*e*S		**S**	**01 22 01.7**	**+3.8**
CAN	**Canberra**	**27.04**	**204**	*e*P		**P**	**01 17 25.7**	**+0.4**
	comp=Z,23nm,1.0s,mb4.7							
CAN	**Canberra**	**27.04**	**204**	*e*P		**P**	**01 17 25.7**	**+0.4**
CAN				pmax	pmax			
	comp=Z,23nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**28.20**	**219**	*e*P		**P**	**01 17 35.5**	**-0.3**
	comp=Z,19nm,0.8s,mb4.8							
STKA				*e*PCP		PcP	01 20 57.0	+8.1
STKA				*e*S		**S**	**01 22 21.0**	**+2.3**
STKA	**Stephens Creek**	**28.20**	**219**	P		**P**	**01 17 36.0**	**+0.2**
	comp=Z,11nm,0.9s,mb4.5,baz=32,slow=11,SNR=11							
STKA				PP		PP	01 18 24.6	-15
	comp=Z,14nm,0.8s,baz=41,slow=14,SNR=3.2							
STKA				S		**S**	**01 22 26.1**	**+7.4**
	comp=Z,2.4nm,0.9s,baz=1.0,slow=19,SNR=1.5							
STKA				ScP		ScP	01 24 28.0	+1.2
	comp=Z,2.8nm,0.7s,baz=0.0,slow=8.1,SNR=3.5							
STKA				LR		LR	01 28 49.1	
	comp=Z,4µm,18.1s,MS5.0,baz=36,slow=36							
WRAB	**Tennant Creek**	**28.28**	**248**	P		**P**	**01 17 35.6**	**-1.1**
	comp=Z,302nm,1.0s,mb5.9,SNR=7.4							
WRAB	**Tennant Creek**	**28.28**	**248**	*e*P		**P**	**01 17 35.7**	**-1.0**
	comp=Z,50nm,1.0s,mb5.1							
WRAB	**Tennant Creek**	**28.28**	**248**	*e*P		**P**	**01 17 35.7**	**-1.0**
WRAB				pmax	pmax			
	comp=Z,49nm,1.0s,mb5.1							
WB2	**Warramunga Arr**	**28.28**	**248**	⇓*i*P		**P**	**01 17 35.3**	**-1.4**
WB2				*e*PCP		PcP	01 20 55.5	+6.2
WB2				*e*S		**S**	**01 22 18.1**	**-2.2**
KAKA	**Kakadu**	**29.22**	**264**	*e*P		Px	01 17 28.1	
	comp=Z,81nm,0.6s							
ASAR	**Alice Springs**	**29.77**	**241**	P		**P**	**01 17 48.1**	**-1.7**
	comp=Z,9.3nm,0.9s,mb4.5,baz=70,slow=9.5,SNR=68							
ASAR				PcP		PcP	01 20 52.1	-0.9
	comp=Z,5.0nm,0.8s,baz=87,slow=3.1,SNR=5.1							
ASAR				ScP		ScP	01 24 33.2	+1.3
	comp=Z,3.1nm,1.0s,baz=58,slow=3.7,SNR=6.4							
GUMO	**Guam**	**29.91**	**324**	S		**S**	**01 22 47.8**	**+1.9**
	comp=Z,20nm,0.4s,baz=170,slow=22,SNR=1.9							
GUMO				LR		LR	01 29 19.5	
	comp=Z,1µm,18.9s,MS4.6,baz=267,slow=35							
URZ	**Urewera**	**30.22**	**156**	P		**P**	**01 17 54.2**	**+0.6**
	comp=Z,12nm,1.0s,mb4.6,baz=351,slow=10,SNR=3.9							
URZ				S		**S**	**01 22 51.5**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=146,slow=14,SNR=1.7							
URZ				LR		LR	01 27 51.0	
	comp=Z,1µm,20.1s,MS4.5,baz=337,slow=32							
TOO	**Toolangi**	**30.44**	**207**	*e*P		**P**	**01 17 56.7**	**+1.1**
TOO				*e*S		**S**	**01 22 57.9**	**+4.2**
RPZ	**Rata Peaks**	**33.47**	**168**	P		**P**	**01 18 22.4**	**+0.4**
	comp=Z,44nm,0.8s,mb5.4,baz=23,slow=1.8,SNR=13							
RPZ				S		**S**	**01 23 48.0**	**+7.2**
	comp=Z,7.4nm,0.9s,baz=360,slow=7.6,SNR=2.2							
FORT	**Forrest**	**37.29**	**233**	⇓*i*P		**P**	**01 18 54.2**	**-1.0**
	comp=Z,60nm,0.7s,mb5.5							
FORT				*e*PCP		PcP	01 21 12.7	-1.4
RAR	**Rarotonga**	**37.77**	**110**	LR		LR	01 31 21.1	
	comp=Z,394nm,19.8s,MS4.2,baz=221,slow=31							
BATI	**Baumata**	**37.92**	**267**	P		**P**	**01 19 00.7**	**0.0**
	comp=Z,124nm,0.6s,mb5.8,baz=163,slow=2.6,SNR=9.6							
BATI				S		**S**	**01 24 51.3**	**+1.3**
	comp=Z,6.8nm,0.3s,baz=50,slow=9.4,SNR=2.2							
BATI				LR		LR	01 35 41.0	
	comp=Z,1µm,18.3s,MS4.7,baz=240,slow=38							
MBWA	**Marble Bar**	**41.97**	**251**	⇓*i*P		**P**	**01 19 33.0**	**-1.2**
	comp=Z,52nm,1.1s,mb5.1							
KAPI	**Kappang**	**42.48**	**275**	P		**P**	**01 19 37.8**	**-0.7**
	comp=Z,814nm,1.1s,mb6.3,SNR=10							
KAPI	**Kappang**	**42.48**	**275**	P		**P**	**01 19 36.8**	**-1.7**
	comp=Z,10nm,0.5s,mb4.7,baz=101,slow=7.7,SNR=12							
KAPI				S		**S**	**01 25 55.8**	**-2.2**
	comp=Z,1.2nm,0.2s,baz=90,slow=16,SNR=2.8							
KAPI	**Kappang**	**42.48**	**275**	*e*P		**P**	**01 19 36.8**	**-1.7**
	comp=Z,140nm,1.0s,mb5.5							
KAPI				*e*			01 21 23.3	
KLBR	**Kellerberrin**	**45.85**	**236**	*e*P		**P**	**01 20 04.0**	**-1.3**
	comp=Z,22nm,0.8s,mb5.2							
NWAO	**Narrogin (SRO)**	**46.66**	**235**	P		**P**	**01 20 12.6**	**+1.0**
	comp=Z,21nm,0.9s,mb5.0,baz=67,slow=8.9,SNR=6.1							
NWAO				PP		PP	01 22 01.7	0.0
	comp=Z,16nm,1.0s,baz=42,slow=4.2,SNR=3.2							
NWAO				S		**S**	**01 27 05.6**	**+7.3**
	comp=Z,5.0nm,0.8s,baz=58,slow=7.1,SNR=2.2							
NWAO				LR		LR	01 40 12.6	
	comp=Z,2µm,18.7s,MS5.1,baz=69,slow=37							
NWAO	**Narrogin (SRO)**	**46.66**	**235**	*e*P		**P**	**01 20 11.2**	**-0.4**
	comp=Z,50nm,1.2s,mb5.3							
NWAO				*e*PP		PP	01 22 01.3	-0.4
NWAO	**Narrogin (SRO)**	**46.66**	**235**	P		**P**	**01 20 12.6**	**+1.0**
NWAO							01 22 01.7	
NWAO				S		**S**	**01 27 05.6**	**+7.3**
NWAO				pmax	pmax			
	comp=Z,21nm,0.9s							
NWAO				pmax	pmax			
	comp=Z,17nm,1.0s							
NWAO				smax				
	comp=N,5.0nm,0.8s							
NWAO				MLR	MLR			
	comp=Z,2µm,18.7s							
PPT	**Papeete**	**47.03**	**104**	*e*LQ			01 31 19.4	
	comp=Z,3µm,28.2s							
PPT				*e*LR		LR	01 33 12.7	
	comp=Z,2µm,25.2s,baz=279							
PPT	**Papeete**	**47.03**	**104**	LR		LR	01 35 17.1	
	comp=Z,832nm,19.4s,MS4.7,baz=90,slow=30							
PPT	**Papeete**	**47.03**	**104**	*e*P		**P**	**01 20 14.6**	**-0.1**
	comp=Z,37nm,1.3s,mb5.2							
PPT				*e*LQ			01 31 19.4	
PPT	**Papeete**	**47.03**	**104**	*e*P		**P**	**01 20 14.6**	**-0.1**
PPT				pmax	pmax			
	comp=Z,37nm,1.3s							
MUN	**Mundaring**	**47.22**	**236**	*e*P		**P**	**01 20 15.7**	**-0.3**
MUN				*e*S		**S**	**01 27 11.0**	**+4.6**
TVO	**Taravao**	**47.34**	**104**	*e*P		**P**	**01 20 17.2**	**0.0**
	comp=Z,453nm,1.1s,mb6.3							
TVO	**Taravao**	**47.34**	**104**	*e*P		**P**	**01 20 17.2**	**0.0**
TVO				pmax	pmax			
	comp=Z,453nm,1.1s,mb6.3							
MEH	**Mehetia**	**48.48**	**104**	*e*P		**P**	**01 20 25.8**	**-0.1**
	comp=Z,798nm,1.1s							
PMOR	**Pomariorio Ree**	**48.66**	**100**	*e*P		**P**	**01 20 28.1**	**+0.8**
	comp=Z,57nm,1.2s,mb5.5							
KKM	**Kota Kinabalu**	**48.86**	**288**	*e*P		**P**	**01 20 29.6**	**+0.7**
	comp=Z,27nm,0.9s,mb5.3							
VAH	**Vaihoa**	**48.91**	**101**	*e*P		**P**	**01 20 29.7**	**+0.4**
	comp=Z,56nm,1.2s,mb5.5							
POHA	**Pohakuloa**	**51.60**	**54**	*e*P		**P**	**01 20 48.9**	**-0.6**
	comp=Z,142nm,1.3s,mb5.7							
MJAR	**Matsushiro Arr**	**52.44**	**336**	P		**P**	**01 20 55.2**	**-0.3**
	comp=Z,4.8nm,0.6s,mb4.6,baz=165,slow=8.6,SNR=11							
MJAR				S		**S**	**01 28 21.7**	**+2.9**
	comp=Z,0.6nm,0.4s,baz=317,slow=55,SNR=3.5							
MAJO	**Matsushiro**	**52.44**	**336**	*e*P		**P**	**01 20 55.6**	**+0.1**
	comp=Z,9.0nm,0.5s,mb5.0							
MAJO	**Matsushiro**	**52.44**	**336**	*e*P		**P**	**01 20 55.6**	**+0.1**
MAJO				pmax	pmax			
	comp=Z,9.0nm,0.5s,mb5.0							
MAT	**Matsushiro**	**52.44**	**336**	P		**P**	**01 20 55.7**	**+0.2**
MAT				S		**S**	**01 28 16.0**	**-2.9**
XMIS	**Christmas Isla**	**55.54**	**265**	*e*P		**P**	**01 21 24.4**	**+5.8**
XMIS	**Christmas Isla**	**55.54**	**265**	*e*P		**P**	**01 21 19.0**	**+0.4**
TAOE	**Nuku Hiva Isla**	**56.70**	**93**	*e*LR		LR	01 37 48.7	
	comp=Z,4µm,24.9s,baz=263							
ASAJ	**Asahikawa**	**57.70**	**343**	P		**P**	**01 21 33.9**	**+0.6**
	comp=Z,39nm,0.8s,mb5.5,baz=224,slow=7.0,SNR=14							
ASAJ				LR		LR	01 42 02.0	
	comp=Z,589nm,20.2s,MS4.7,baz=200,slow=32							
KSRS	**Korea Array**	**57.97**	**328**	P		**P**	**01 21 35.6**	**+0.3**
	comp=Z,13nm,1.1s,mb4.9,baz=142,slow=6.3,SNR=5.5							
KSRS				S		**S**	**01 29 37.7**	**+4.8**
	comp=Z,2.6nm,0.9s,baz=16,slow=38,SNR=3.0							
KSRS				LR		LR	01 44 31.0	
	comp=Z,792nm,18.4s,MS4.9,baz=131,slow=34							
KSRS	**Korea Array**	**57.97**	**328**	P		**P**	**01 21 35.6**	**+0.2**
KSRS				S		**S**	**01 29 37.7**	**+4.8**
KSRS				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.9							
KSRS				smax				
	comp=N,3.0nm,0.9s							
NJ2	**Nanjing**	**59.63**	**317**	*e*P		**P**	**01 21 49.3**	**+2.3**
NJ2				AMB	AMB			
	comp=Z,40nm,1.0s,mb5.4							
QIZ	**Qiongzhong**	**59.66**	**300**	P		**P**	**01 21 47.0**	**-0.5**
QIZ				S		**S**	**01 29 54.0**	**-1.5**
QIZ				AMB	AMB			
	comp=Z,35nm,1.7s,mb5.1							
QIZ				LR		LR		
	comp=E,522nm,28.3s							
QIZ				LR		LR		
	comp=Z,898nm,26.8s,MS4.8							
YSS	**Yuzh-Sakhalins**	**60.28**	**345**	*e*P		**P**	**01 21 50.0**	**-1.1**
YSS				MLR	MLR			
	comp=Z,800nm,16.0s,MS5.0							
YSS				MLR	MLR			
	comp=N,700nm,17.0s							
RKT	**Rikitea**	**60.81**	**110**	*e*LR		LR	01 39 39.4	
	comp=N,2µm,28.0s,baz=282							
MDJ	**Mudanjiang**	**62.77**	**334**	P		**P**	**01 22 09.3**	**+1.3**
MDJ				AP	pP		01 22 21.0	+0.9
MDJ				XP	sP		01 22 25.8	+0.9
MDJ				PCP	PcP		01 22 46.5	+0.2
MDJ				PP	PP		01 24 29.8	+3.1
MDJ				S	**S**		**01 30 33.5**	**-0.6**
MDJ				XS	sS		01 30 47.5	-6.7
MDJ				SCS	ScS		01 31 54.5	-2.8
MDJ				SS	SS		01 34 39.8	-0.1
MDJ				AMB	AMB			
	comp=Z,9.0nm,0.9s,mb4.9							
MDJ				AMB	AMB			
	comp=Z,130nm,4.7s							
MDJ				LR	LR			
	comp=N,427nm,19.1s,MS4.8							
MDJ				LR	LR			
	comp=E,489nm,21.4s,MS4.8							
MDJ				LR	LR			
	comp=Z,674nm,21.9s,MS4.8							
MDJ	**Mudanjiang**	**62.77**	**334**	*e*P		**P**	**01 22 08.2**	**+0.1**
	comp=Z,43nm,1.4s,mb5.4							
PET	**Petropavlovsk**	**63.85**	**358**	*e*P		**P**	**01 22 24.4**	**+9.4**
PET				pmax	pmax			
	comp=Z,40nm,1.0s,mb5.4							
PET				MLR	MLR			
	comp=Z,600nm,15.0s,MS4.9							
HABR	**Khabarovsk**	**63.93**	**340**	*e*P		**P**	**01 22 23.7**	**+8.1**
HABR				*e*			01 22 48.6	
HABR				*e*S		**S**	**01 30 47.0**	**-1.4**
HABR				*e*			01 31 04.5	
HABR				*e*SS		SS	01 34 56.9	-0.9
PETK	**Petropavlovsk-**	**63.98**	**357**	P		**P**	**01 22 15.7**	**-0.2**
	comp=Z,5.7nm,0.7s,mb4.7,baz=165,slow=8.5,SNR=4.9							
PETK				S		**S**	**01 30 56.4**	**+7.6**
	comp=Z,2.5nm,0.9s,baz=42,slow=39,SNR=2.4							
PETK				LR		LR	01 46 58.4	
	comp=Z,331nm,19.8s,MS4.5,baz=159,slow=33							
CN2	**Changchun**	**64.00**	**331**	*e*P		**P**	**01 22 16.8**	**+0.6**
CN2				*e*AP		pP	01 22 30.0	+1.7
CN2				*e*S		**S**	**01 30 49.3**	**-0.2**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8							
CN2				AMB	AMB			
	comp=Z,500nm,5.0s							
CN2				LR	LR			
	comp=N,700nm,19.0s,MS5.0							
CN2				LR	LR			
	comp=E,600nm,19.0s,MS5.0							
CN2				LR	LR			
	comp=Z,700nm,21.0s,MS4.8							
GYA	**Guiyang**	**65.59**	**306**	P		**P**	**01 22 30.3**	**+3.4**
GYA				AP	pP		01 22 43.5	+4.5
GYA				XP	sP		01 22 48.8	+5.0
GYA				PP	PP		01 24 58.3	+6.5
GYA				SCP			01 26 59.3	
GYA				PCS			01 27 04.3	
GYA				S	S		01 31 12.3	+2.6
GYA				SS	SS		01 35 30.0	+5.5
GYA				AMB	AMB			
	comp=Z,20nm,0.7s,mb5.3							
GYA				AMB	AMB			
	comp=Z,150nm,6.9s							
GYA				LR	LR			
	comp=N,450nm,18.0s,MS4.8							
GYA				LR	LR			
	comp=E,390nm,19.7s,MS4.8							
GYA				LR	LR			
	comp=Z,580nm,18.2s,MS4.8							
KLR	**Kul'dur**	**65.72**	**339**	*e*P		**P**	**01 22 23.6**	**-3.6**
BJI	**Beijing**	**66.34**	**323**	P		**P**	**01 22 32.8**	**+1.3**
BJI				S		S	01 31 21.5	+3.2
BJI				SS		SS	01 35 37.8	+2.1
BJI				AMB		AMB		
	comp=Z,22nm,0.3s,mb5.7							
BJI				AMB		AMB		
	comp=Z,257nm,5.6s							
BJI				LR		LR		
	comp=N,534nm,17.5s,MS4.9							
BJI				LR		LR		
	comp=E,317nm,18.0s,MS4.9							
BJI				LR		LR		
	comp=Z,529nm,24.7s							
VNDA	**Vanda**	**66.50**	**180**	P		**P**	**01 22 32.4**	**+0.5**
	comp=Z,7.9nm,0.9s,mb4.8,baz=348,slow=6.8,SNR=46							
VNDA				LR		LR	01 50 26.8	
	comp=Z,441nm,18.1s,MS4.7,baz=19,slow=35							
SBA	**Scott Base**	**66.87**	**179**	*e*P		**P**	**01 22 35.3**	**+1.0**
	comp=Z,286nm,2.8s,mb5.8							
SBA	**Scott Base**	**66.87**	**179**	*e*P		**P**	**01 22 35.3**	**+1.0**
SBA				pmax	pmax			
	comp=Z,286nm,2.8s,mb5.8							
XAN	**Xi'an**	**67.60**	**314**	P		**P**	**01 22 38.3**	**-1.3**
XAN				AP	pP		01 22 51.3	-0.4
XAN				XP	sP		01 22 56.5	0.0
XAN				PP	PP		01 25 08.0	-1.1
XAN				S	S		01 31 27.0	-6.7
XAN				XS	sS		01 31 49.3	-4.7
XAN				AMB	AMB			
	comp=Z,3.0nm,1.0s,mb4.3							
XAN				AMB	AMB			
	comp=Z,111nm,6.0s							
XAN				LR	LR			
	comp=N,155nm,15.9s,MS4.7							
XAN				LR	LR			
	comp=E,358nm,16.7s,MS4.7							
XAN				LR	LR			
	comp=Z,697nm,20.0s,MS4.9							
KMI	**Kunming**	**68.20**	**303**	P		**P**	**01 22 44.8**	**+1.3**
KMI				AP	pP		01 22 59.0	+3.3
KMI				XP	sP		01 23 04.5	+4.0
KMI				PP	PP		01 25 20.3	+5.8
KMI				S	S		01 31 42.5	+1.3
KMI				XS	sS		01 32 04.3	+2.8
KMI				SKS			01 32 36.3	
KMI				SS	SS		01 36 07.8	+2.8
KMI				AMB	AMB			
	comp=Z,11nm,1.1s,mb4.8							
KMI				AMB	AMB			
	comp=Z,234nm,8.2s							
KMI				LR	LR			
	comp=N,278nm,16.1s,MS4.8							
KMI				LR	LR			
	comp=E,427nm,20.7s,MS4.8							
KMI				LR	LR			
	comp=Z,740nm,20.3s,MS4.9							
CMAR	**Chiang Mai Arr**	**68.97**	**295**	P		**P**	**01 22 48.0**	**-0.4**
	comp=Z,2.2nm,0.3s,mb4.5,baz=134,slow=5.0,SNR=5.7							
CMAR				LR		LR	01 52 31.3	
	comp=Z,205nm,21.4s,MS4.3,baz=100,slow=36							
CMAR	**Chiang Mai Arr**	**68.97**	**295**	*i* P		**P**	**01 22 47.2**	**-1.3**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
CHTO	**Chiang Mai**	**69.09**	**295**	*e*P		**P**	**01 22 48.1**	**-1.1**
	comp=Z,16nm,1.4s,mb4.8							
CHTO	**Chiang Mai**	**69.09**	**295**	*e*P		**P**	**01 22 48.1**	**-1.1**
CHTO				pmax	pmax			
	comp=Z,16nm,1.4s,mb4.8							
HHC	**Hu-ho-hao-te**	**69.62**	**321**	*e*P		**P**	**01 22 54.5**	**+2.4**
HHC				AP	pP		01 23 08.5	+4.2
HHC				PP	PP		01 25 31.3	+4.7
HHC				S	S		01 31 59.0	+1.5
HHC				SCS	ScS		01 32 49.0	-1.5
HHC				SS	SS		01 36 30.0	+3.6
HHC				AMB	AMB			
	comp=Z,12nm,0.5s,mb5.1							
HHC				AMB	AMB			
	comp=Z,163nm,5.7s							
HHC				LR	LR			
	comp=N,323nm,17.8s,MS4.8							
HHC				LR	LR			
	comp=E,366nm,17.8s,MS4.8							
HHC				LR	LR			
	comp=Z,474nm,20.2s,MS4.7							
CD2	**Chengdu**	**69.88**	**309**	*e*P		**P**	**01 22 55.5**	**+1.6**
CD2				AP	pP		01 23 08.5	+2.4
CD2				XP	sP		01 23 14.0	+3.2
CD2				PP	PP		01 25 32.5	+3.5
CD2				S	S		01 32 01.5	+0.5
CD2				XS	sS		01 32 23.3	+2.0
CD2				SKS			01 32 48.5	
CD2				SS	SS		01 36 32.8	+2.0
CD2				AMB	AMB			
	comp=Z,20nm,0.6s,mb5.2							
CD2				AMB	AMB			
	comp=Z,120nm,4.8s							
CD2				LR	LR			
	comp=N,530nm,19.2s,MS4.9							
CD2				LR	LR			
	comp=E,570nm,21.6s,MS4.9							
CD2				LR	LR			
	comp=Z,530nm,22.8s,MS4.7							
HIA	**Hailar**	**70.69**	**332**	*e*P		**P**	**01 22 58.0**	**-0.4**
	comp=Z,55nm,1.3s,mb5.3							
HIA	**Hailar**	**70.69**	**332**	*e*P		**P**	**01 22 58.0**	**-0.4**
HIA				pmax	pmax			
	comp=Z,55nm,1.3s							
LZH	**Lanzhou**	**72.22**	**314**	*e*P		**P**	**01 23 10.5**	**+2.5**
LZH				AP	pP		01 23 22.0	+1.8
LZH				XP	sP		01 23 27.0	+2.1
LZH				PP	PP		01 25 53.5	+4.5
LZH				S	S		01 32 29.0	+1.1
LZH				XS	sS		01 32 51.5	+3.2
LZH				SS	SS		01 37 08.0	+1.4
LZH				AMB	AMB			
	comp=Z,42nm,1.5s,mb5.2							
LZH				AMB	AMB			
	comp=Z,210nm,5.3s							
LZH				LR	LR			
	comp=E,445nm,13.7s							
LZH				LR	LR			
	comp=Z,719nm,15.1s,MS5.1							
SEY	**Seymchan**	**74.11**	**355**	*e*P		**P**	**01 23 21.1

comp=Z,417nm,18.0s,MS4.8
TAPN Taplejung 81.61 300 *e*P P 01 24 06.5 +5.5
comp=Z,23nm,1.1s,mb5.0
PMR Palmer 81.73 21 *e*P P 01 24 02.5 +1.6
comp=Z,184nm,2.7s,mb5.5
PMR Palmer 81.73 21 *e*P P
PMR pmax pmax 01 24 02.5 +1.6
comp=Z,184nm,2.7s,mb5.5
ODAN Odare 81.74 299 *e*P P 01 24 07.0 +5.3
comp=Z,25nm,0.8s,mb5.2
RAMN Ramite 82.44 299 *e*P P 01 24 09.9 +4.5
comp=Z,22nm,1.0s,mb5.0
KTH Kantishna Hill 82.46 19 *e*P P 01 24 02.3 -2.3
comp=Z,16nm,1.0s,mb4.9
JIRN Jiri 82.99 300 *e*P P 01 24 13.9 +5.7
comp=Z,16nm,0.7s,mb5.2
MCK McKinley 83.24 20 *e*P P 01 24 07.7 -0.9
comp=Z,35nm,1.2s,mb5.3
MCK McKinley 83.24 20 *e*P P
MCK pmax pmax 01 24 07.7 -0.9
comp=Z,35nm,1.2s,mb5.3
GUN Gumba 83.32 300 *e*P P 01 24 15.6 +5.7
MAW Mawson 83.46 202 *e*P P 01 24 09.7 -0.2
comp=Z,17nm,1.4s,mb4.9
MAW Mawson 83.46 202 P P 01 24 09.8 -0.1
comp=Z,6.7nm,0.7s,mb4.8,baz=113,slow=6.9,SNR=12
MAW LR LR 02 01 40.4
comp=Z,192nm,18.0s,MS4.5,baz=59,slow=36
MAW Mawson 83.46 202 P P
MAW pmax pmax 01 24 09.8 -0.1
comp=Z,7.0nm,0.7s
MAW MLR MLR
comp=Z,192nm,18.0s
PKI Pulchoki 83.63 300 *e*P P 01 24 16.5 +5.0
comp=Z,65nm,1.1s,mb5.7
KKN Kakani 83.80 300 *e*P P 01 24 17.6 +5.2
comp=Z,11nm,0.4s,mb5.4
DMN Daman 83.90 300 *e*P P 01 24 18.4 +5.5
comp=Z,113nm,1.1s,mb5.9
COLA College 84.35 19 *e*P P 01 24 12.9 -1.4
comp=Z,18nm,0.9s,mb5.2
COLA College 84.35 19 *e*P P
COLA pmax pmax 01 24 12.9 -1.4
comp=Z,18nm,0.9s,mb5.2
GKN Gorkha 84.40 300 *e*P P 01 24 20.3 +4.8
comp=Z,103nm,1.1s,mb5.9
VIB Van Inlet 84.50 33 T 02 57 25.3
SNR=7.2
DIB Dawson Inlet, 84.52 33 T 02 57 20.1
SNR=62
MENT Mentasta 84.55 22 *e*P P 01 24 15.0 -0.3
KOLN Koldanda 85.23 299 *e*P P 01 24 24.4 +4.8
comp=Z,39nm,1.0s,mb5.5
DANN Dangsing 85.24 300 *e*P P 01 24 24.1 +4.4
comp=Z,48nm,1.1s,mb5.5
TIXI Tiksi 85.43 350 *e*P P 01 24 20.1 +0.4
comp=Z,27nm,1.4s,mb5.2
TIXI Tiksi 85.43 350 ⇓*i*P P 01 24 21.3 +1.7
TIXI pmax pmax
comp=Z,10.0nm,1.7s,mb4.7
TIXI MLR MLR
comp=Z,300nm,19.0s,MS4.7
V03C Hunter Liggett 85.72 52 ⇑P P 01 24 21.8 -0.1
baz=86
Q03C Winters 85.90 50 ⇓P P 01 24 22.8 +0.1
baz=86
WDC Whiskeytown Da 86.10 48 *e*P P 01 24 23.7 0.0
comp=Z,30nm,1.5s,mb5.3
WDC Whiskeytown Da 86.10 48 *e*P P
WDC pmax pmax 01 24 23.7 +0.1
comp=Z,30nm,1.5s,mb5.3
U04C Hernandez Rese 86.17 52 ⇑P P 01 24 24.1 0.0
baz=86
I02A Mapleton 86.28 44 ⇓P P 01 24 24.7 +0.3
baz=86
SNCC San Nicolas Is 86.31 55 ⇑P P 01 24 24.4 -0.5
baz=86
YBH Yreka Blue Hor 86.33 46 *e*P P 01 24 25.3 +0.5
comp=Z,11nm,1.0s,mb5.0
YBH Yreka Blue Hor 86.33 46 *e*P P
YBH pmax pmax 01 24 25.3 +0.5
comp=Z,11nm,1.0s
BSC Santa Cruz Isl 86.42 55 ⇓P P 01 24 24.9 -0.5
baz=86
OHCM Honcut 86.50 49 *e*P P 01 24 25.4 -0.3
PKM Peak Mountain 86.52 54 ⇓P P 01 24 25.7 -0.2
baz=87
EGAK Eagle 86.55 21 *e*P P 01 24 25.3 +0.1
comp=Z,37nm,1.1s,mb5.5
WMQ Urumqi 86.66 316 *e*P P 01 24 28.0 +1.7
WMQ XP sP 01 24 47.0 +3.5
WMQ PP PP 01 27 52.0 +3.0
WMQ SKS 01 34 48.0
WMQ S S 01 35 00.0 -0.5
WMQ SS SS 01 40 44.0 +1.3
WMQ AMB AMB
comp=Z,27nm,1.0s,mb5.4
WMQ AMB AMB
comp=Z,74nm,6.0s
WMQ LR LR
comp=N,376nm,20.0s,MS4.9
WMQ LR LR
comp=E,325nm,20.0s,MS4.9
WMQ LR LR
comp=Z,457nm,20.0s,MS4.9
DAWY Dawson 86.78 22 *e*P P 01 24 27.2 +0.7
S05C Merced 86.80 51 ⇓P P 01 24 27.3 +0.1
baz=87
CMB Columbia Colle 86.95 50 *e*P P 01 24 25.2 -2.6
comp=Z,8.9nm,1.0s,mb5.0
CMB Columbia Colle 86.95 50 *e*P P
CMB pmax pmax 01 24 25.2 -2.7
comp=Z,9.0nm,1.0s,mb5.0
SCI San Clemente I 87.03 56 ⇓P P 01 24 27.7 -0.7
baz=87
T06C Millerton Lake 87.18 52 ⇑P P 01 24 28.7 -0.3
baz=87
E03A Lebam 87.28 42 ⇑P P 01 24 29.6 +0.3
baz=87
BEKR Beckwourth 87.48 49 ⇑P P 01 24 30.3 -0.2
baz=88
MWC Mount Wilson 87.74 55 *e*P P 01 24 31.1 -0.7
comp=Z,38nm,1.3s,mb5.5
MWC Mount Wilson 87.74 55 *e*P P
MWC pmax pmax 01 24 31.1 -0.7
comp=Z,38nm,1.3s,mb5.5
P06A Stead Airport, 87.77 49 ⇑P P 01 24 31.7 -0.1
baz=88
WCN Washoe City 87.77 49 ⇑P P 01 24 31.1 -0.7
baz=88
R06C Coleville 87.79 50 ⇓P P 01 24 31.7 -0.2
baz=88
WAKR Walker 87.80 50 *e*P P 01 24 31.8 -0.2
F04A Amboy 87.84 43 ⇑P P 01 24 32.2 +0.3
baz=88
K05A Summer Lake 87.92 46 ⇓P P 01 24 32.7 +0.3
baz=88
D04A Dobbs Creek Ra 87.96 41 ⇑P P 01 24 32.8 +0.3
baz=88
EDW2 Edwards Air Fo 87.96 54 ⇑P P 01 24 31.8 -1.0
baz=88,SNR=5.5
BFSC Mount Baldy St 88.06 55 ⇓P P 01 24 32.1 -1.2
baz=88,SNR=8.0
I05A Bend 88.08 44 ⇑P P 01 24 33.2 +0.1
baz=88
MOD Modoc 88.10 47 *e*P P 01 24 32.4 -0.9
comp=Z,12nm,0.9s,mb5.1
N06A Buffalo Meadow 88.12 48 ⇓P P 01 24 33.2 -0.2
baz=88
MTUM Tungsten Hills 88.15 52 *e*P P 01 24 34.0 +0.4
PAHR Pah Rah Range 88.16 49 *e*P P 01 24 33.8 +0.2
comp=Z,9.2nm,0.9s,mb5.0
HOOD Mount Hood Mea 88.17 43 *e*P P 01 24 33.0 -0.5
CWC Cottonwood Cre 88.29 53 ⇑P P 01 24 33.8 -0.6
baz=88
G05A Wamic 88.37 43 ⇓P P 01 24 34.5 0.0
baz=88
F05A White Salmon 88.46 43 ⇓P P 01 24 35.1 +0.1
baz=89
E05A Randle 88.47 42 ⇑P P 01 24 35.1 +0.2
baz=89
D05A Enumclaw 88.51 41 ⇓P P 01 24 35.7 +0.6
baz=89
J06A Christmas Vall 88.59 46 ⇑P P 01 24 35.5 -0.1
baz=89
NVAR Mina Array Bea 88.63 51 P P 01 24 36.0 +0.1
comp=Z,5.5nm,0.7s,mb5.0,baz=233,slow=7.4,SNR=51
MPMC Manual Prospec 88.66 53 ⇓P P 01 24 35.5 -0.6
baz=89,SNR=9.0
O07A Toulon 88.66 49 ⇑P P 01 24 35.9 -0.1
baz=89
MONP Monument Peak 88.74 56 ⇓P P 01 24 35.6 -0.9
baz=89,SNR=17
I06A Prineville 88.75 45 ⇓P P 01 24 36.4 +0.1
baz=89
N07B Gerlach 88.76 48 ⇓P P 01 24 36.4 -0.1
baz=89
M07A Soldier Meadow 88.78 48 ⇓P P 01 24 36.8 +0.3
baz=89
L07A Adell 88.82 47 ⇑P P 01 24 37.1 +0.3
baz=89
C05A Tolt Reservoir 88.86 41 ⇑P P 01 24 36.8 +0.1
baz=89
PFO Pinyon Flat Ob 88.88 56 P P 01 24 36.8 -0.4
comp=Z,96nm,0.4s,SNR=19
PFO Pinyon Flat Ob 88.88 56 *e*P P 01 24 36.5 -0.7
comp=Z,8.5nm,0.4s,mb5.4
PFO Pinyon Flat Ob 88.88 56 ⇓P P 01 24 36.4 -0.8
baz=89
PFO Pinyon Flat Ob 88.88 56 *e*P P
PFO pmax pmax 01 24 36.5 -0.7
comp=Z,9.0nm,0.4s,mb5.5
F06A Goldendale 88.88 43 ⇑P P 01 24 37.1 +0.2
baz=89
H06A Lindquist Farm 88.89 44 ⇓P P 01 24 37.1 +0.2
baz=89
GRAC Grapevine Rang 88.98 52 ⇑P P 01 24 37.2 -0.4
baz=89,SNR=5.9
GSC Goldstone 89.01 54 *e*P P 01 24 38.5 +0.8
comp=Z,5.2nm,1.0s,mb4.8
GSC Goldstone 89.01 54 ⇑P P 01 24 37.4 -0.4
baz=89
GSC Goldstone 89.01 54 *e*P P
GSC pmax pmax 01 24 38.5 +0.7
comp=Z,5.0nm,1.0s,mb4.8
Q08A Gabbs 89.03 50 ⇓P P 01 24 37.5 -0.3
baz=89
K07A Rock Creek Ran 89.07 46 ⇑P P 01 24 38.0 +0.1
baz=89
J07A Hines 89.22 46 ⇓P P 01 24 38.5 0.0
baz=89
O08A Rochester Mine 89.23 49 ⇓P P 01 24 38.7 0.0
baz=89
FURC Furnace Creek, 89.25 53 ⇑P P 01 24 38.4 -0.5
baz=89,SNR=5.4
SWSC Sam W. Stewart 89.26 56 ⇓P P 01 24 38.4 -0.6
baz=89,SNR=5.4
HEC Hector,Ludlow 89.27 54 ⇑P P 01 24 37.9 -1.1
baz=89,SNR=7.4
I07A Izee 89.27 45 ⇑P P 01 24 38.7 -0.1
baz=89
S09A Goldfield 89.28 51 ⇓P P 01 24 38.8 -0.2
baz=89
BELC Belle Mtn. 89.34 55 ⇑P P 01 24 38.3 -1.0
baz=89,SNR=12
M08A Happy Creek Ra 89.36 48 ⇑P P 01 24 39.2 -0.1
baz=89
N08A GE Springer Mi 89.37 48 ⇓P P 01 24 39.2 -0.1
baz=89
H07A Lands Inn, Kim 89.37 44 ⇓P P 01 24 39.3 +0.1
baz=90
WVOR Wild Horse Val 89.44 47 *e*P P 01 24 39.1 -0.5
comp=Z,33nm,1.4s,mb5.5
WVOR Wild Horse Val 89.44 47 *e*P P
WVOR pmax pmax 01 24 39.1 -0.5
comp=Z,33nm,1.4s,mb5.5
G07A Ruggs Ranch, H 89.49 44 ⇑P P 01 24 39.5 -0.3
baz=90
R09A Tonopah 89.52 51 ⇓P P 01 24 39.9 -0.2
baz=90
SHOC Shoshone 89.57 53 ⇓P P 01 24 39.7 -0.7
baz=90,SNR=7.8
L08A Fields 89.58 47 ⇓P P 01 24 40.1 -0.2
baz=90
Q09A Carvers 89.58 50 ⇓P P 01 24 40.2 -0.2
baz=90
K08A Mann Creek Ran 89.62 46 ⇑P P 01 24 40.4 0.0
baz=90
U10A Ash Meadows, A 89.65 53 ⇓P P 01 24 40.6 -0.1
baz=90
BC3 Big Chuckw Mtn 89.70 56 ⇓P P 01 24 40.6 -0.4
baz=90,SNR=6.0
E07A Sunnyside 89.72 42 ⇓P P 01 24 41.2 +0.4
baz=90
TUQ Turquoise Moun 89.74 54 ⇑P P 01 24 40.6 -0.6
baz=90
GMRC Granite Mounta 89.80 55 ⇑P P 01 24 40.8 -0.6
baz=90,SNR=7.5
J08A Circle Bar Ran 89.80 46 ⇑P P 01 24 41.1 -0.1
baz=90
S10A Tonopah Range, 89.81 51 ⇑P P 01 24 41.5 0.0
baz=90
D07A Quincy 89.83 42 ⇑P P 01 24 41.4 +0.1
baz=90
TPNV Topopah Spring 89.84 52 *e*P P 01 24 41.4 -0.2
comp=Z,13nm,1.0s,mb5.2
TPNV Topopah Spring 89.84 52 ⇑P P 01 24 41.0 -0.6
baz=90,SNR=7.9
TPNV Topopah Spring 89.84 52 *e*P P
TPNV pmax pmax 01 24 41.4 -0.2
comp=Z,13nm,1.0s,mb5.2
I08A Drewsey 89.88 45 ⇓P P 01 24 41.8 +0.1
baz=90
C07A Waterville 89.91 41 ⇑P P 01 24 41.7 0.0
baz=90
O09A Fish Creek Ran 89.91 49 ⇓P P 01 24 41.9 0.0
baz=90
BMN Battlefield Mountai 89.95 49 *e*P P 01 24 42.5 +0.5
comp=Z,12nm,1.0s,mb5.2
BMN Battle Mountai 89.95 49 *e*P P
BMN pmax pmax 01 24 42.5 +0.4
comp=Z,12nm,1.0s,mb5.2
H08A Prairie City 89.97 45 ⇓P P 01 24 41.9 -0.1
baz=90
G08A Pilot Rock 89.98 44 ⇓P P 01 24 42.0 -0.1
baz=90
L09A Wilkinson Ranc 90.03 47 ⇑P P 01 24 42.2 -0.2
baz=90
M09A Marrel Ranch, 90.03 48 ⇓P P 01 24 42.4 0.0
baz=90
IRM Iron Mountain 90.06 55 ⇑P P 01 24 42.0 -0.8
baz=90,SNR=11
GLA Glamis 90.08 56 *e*P P 01 24 42.2 -0.6
comp=Z,16nm,1.0s,mb5.3
GLA *e*pP pP 01 24 55.6 +0.2
GLA Glamis 90.08 56 ⇑P P 01 24 42.9 0.0
baz=90,SNR=8.6
GLA Glamis 90.08 56 *e*P P 01 24 42.3 -0.5
GLA *e**PP pP 01 24 55.7 +0.3
GLA pmax pmax
comp=Z,16nm,1.0s,mb5.3
A07A Ashnola River, 90.09 40 ⇑P P 01 24 42.5 +0.1
baz=90
B07A Winthrop 90.09 41 ⇑P P 01 24 42.5 +0.1
baz=90
R10A Warm Springs 90.12 51 ⇓P P 01 24 42.6 -0.3
baz=90
K09A Rome 90.16 47 ⇓P P 01 24 43.3 +0.3
baz=90
112A Yuma 90.16 57 ⇑P P 01 24 43.1 -0.2
baz=90
Q10A Clear Creek Ra 90.17 51 ⇓P P 01 24 43.3 +0.2
baz=90
V11A Goodsprings 90.22 54 ⇑P P 01 24 43.6 +0.2
baz=90
J09A Fry Pan Ranch, 90.30 46 ⇓P P 01 24 43.8 +0.2
baz=90
LDFC Landfair 90.31 54 *e*P P 01 24 43.8 0.0
comp=Z,33nm,1.3s,mb5.5
P10A Eureka 90.32 50 ⇑P P 01 24 44.1 +0.3
baz=90
S11A Rachel 90.39 52 ⇑P P 01 24 44.2 0.0
baz=90
O10A Cortez Mining, 90.45 49 ⇑P P 01 24 44.9 +0.5
baz=90
I09A Lost Marbles R 90.47 45 ⇑P P 01 24 44.5 +0.1
baz=91
D08A Wollman Farm, 90.48 42 ⇓P P 01 24 44.3 0.0
baz=91
Y12C Blythe 90.48 56 ⇑P P 01 24 44.7 0.0
baz=90
N10A Dunphy 90.55 49 ⇑P P 01 24 45.5 +0.6
baz=91
B08A Colville Reser 90.56 41 ⇓P P 01 24 44.4 -0.3
baz=91
SHPR Sheep Range 90.59 53 *e*P P 01 24 45.2 +0.1
C08A Higginbotham F 90.59 41 ⇑P P 01 24 44.9 0.0
baz=91
V12A Nelson 90.66 54 ⇓P P 01 24 45.4 -0.1
baz=91
R11A Troy Canyon, C 90.68 51 ⇑P P 01 24 45.5 0.0
baz=91
T11A Corn Creek, Al 90.71 52 ⇑P P 01 24 46.2 +0.5
baz=91
M10A I.L. Ranch, Tu 90.72 48 ⇑P P 01 24 46.0 +0.4
baz=91
Q11A Duckwater 90.75 51 ⇑P P 01 24 45.8 +0.1
baz=91
A08A Turner Farm, O 90.77 40 ⇑P P 01 24 45.4 -0.2
baz=91
G09A Cove 90.78 44 ⇓P P 01 24 45.8 0.0
baz=91
K10A MacKenzie Ranc 90.79 47 ⇑P P 01 24 46.1 +0.2
baz=91
SYO Syowa Base 90.80 198 ⇑*e*P P 01 24 48.6 +3.1
SYO Syowa Base 90.80 198 ⇓*e*sP sP 01 25 02.4 -0.3
P11A Circle Ranch, 90.83 50 ⇑P P 01 24 46.4 +0.2
baz=91
E09A Wood Farm, Sta 90.85 43 ⇑P P 01 24 46.0 0.0
baz=91
D09A Jones Farm, Ri 90.88 42 ⇑P P 01 24 46.4 +0.2
baz=91
L10A Juniper Basin 90.90 47 ⇓P P 01 24 46.7 +0.3
baz=91
PDMCI Parker Dam,Lak 90.91 55 ⇓P P 01 24 46.2 -0.4
baz=91,SNR=6.1
BMO Blue Mountains 91.00 45 *e*P P 01 24 46.8 0.0
comp=Z,16nm,1.1s,mb5.3
BMO Blue Mountains 91.00 45 *e*P P
BMO pmax pmax 01 24 46.8 0.0
comp=Z,16nm,1.1s,mb5.3
INK Inuvik 91.00 20 *e*P P 01 24 44.8 -1.5
comp=Z,639nm,1.6s
J10A Berg Farm, Mel 91.02 46 ⇓P P 01 24 47.3 +0.3
baz=91
O11A Cowboy Ranch, 91.04 49 ⇑P P 01 24 47.2 +0.1
baz=91
Y13A Salome 91.06 56 ⇑P P 01 24 47.5 +0.1
baz=91
U12A Valley of Fire 91.06 53 ⇓P P 01 24 47.5 +0.2
baz=91
S12A Delamar Landin 91.08 52 ⇑P P 01 24 47.9 +0.5
baz=91
C09A Chrisman Ranch 91.10 42 ⇑P P 01 24 47.1 -0.1
baz=91
N11A Elko Archery C 91.14 49 ⇓P P 01 24 48.1 +0.5
baz=91
I10A Payette 91.16 45 ⇓P P 01 24 47.8 +0.2
baz=91
MK31 Makanchi Array 91.17 317 *e*P P 01 24 46.2 -1.3
MKAR Makanchi Array 91.17 317 P P 01 24 46.1 -1.4
comp=Z,1.5nm,0.7s,mb4.5,baz=95,slow=6.6,SNR=11
MKAR LR LR 02 06 59.9
comp=Z,157nm,19.4s,MS4.5,baz=31,slow=36
A09A Danville 91.21 40 ⇓P P 01 24 47.7 0.0
baz=91
X13A Yucca 91.22 55 ⇓P P 01 24 47.8 -0.4
baz=91
G10A Bishop Farm, J 91.23 44 ⇑P P 01 24 48.2 +0.3
baz=91
M11A Holland Ranch, 91.25 48 ⇓P P 01 24 48.7 +0.6
baz=91
W13A Hualapai Mount 91.29 55 ⇓P P 01 24 48.6 +0.1
baz=91
H10A Noah's Angus R 91.32 45 ⇓P P 01 24 48.3 0.0
baz=91
F10A Beach Ranch, E 91.33 43 ⇑P P 01 24 48.5 +0.2
baz=91
V13A Grand Canyon W 91.37 54 ⇓P P 01 24 48.7 -0.1
baz=91
K11A Parker Ranch, 91.39 47 ⇑P P 01 24 49.1 +0.4
baz=92
Q12A Willow Creek R 91.42 51 ⇑P P 01 24 49.4 +0.5
baz=92
R12A Pony Springs, 91.43 51 ⇓P P 01 24 49.4 +0.4
baz=92
L11A Cat Creek Ranc 91.44 47 ⇓P P 01 24 49.5 +0.5
baz=92
ELK Elko 91.49 49 *e*P P 01 24 49.4 +0.2
comp=Z,16nm,1.1s,mb5.2
ELK Elko 91.49 49 *e*P P
ELK pmax pmax 01 24 49.4 +0.2
comp=Z,16nm,1.1s
214A Organ Pipe Nat 91.50 58 ⇑P P 01 24 50.0 +0.5
baz=92
U13A Pakoon Wash 91.51 53 ⇑P P 01 24 49.7 +0.3
baz=92
ZAA0 Zalesovo Array 91.54 325 *e*P P 01 24 52.4 +3.3
ZALV Zalesovo Beam 91.54 325 P P 01 24 47.0 -2.0
comp=Z,0.5nm,0.5s,mb4.1,baz=134,slow=6.4,SNR=3.8
ZALV LR LR 02 05 16.5
comp=Z,238nm,19.2s,MS4.7,baz=97,slow=35
ZALV Zalesovo Beam 91.54 325 P P
ZALV LR LR 02 05 16.5
D10A Wagner Farm, O 91.56 42 ⇓P P 01 24 49.2 -0.2
baz=92
N12A Clover Valley, 91.67 49 ⇓P P 01 24 50.6 +0.6
baz=92
MFID Camas Ranch 91.68 46 ⇓P P 01 24 50.2 +0.2
baz=92
T13A Saint George 91.68 53 ⇑P P 01 24 50.5 +0.3
baz=92
I11A Placerville 91.71 46 ⇓P P 01 24 50.5 +0.3
baz=92
O12A Currie 91.75 49 ⇑P P 01 24 50.9 +0.4
baz=92
H11A Donnelly 91.85 45 ⇑P P 01 24 50.9 +0.1
baz=92
A10A Northport 91.86 41 ⇓P P 01 24 50.7 0.0
baz=92
M12A Wells 91.88 48 ⇓P P 01 24 51.5 +0.5
baz=92
R13A O'Grain Ranch, 91.89 52 ⇓P P 01 24 51.5 +0.4
baz=92
W14A Seligman 91.95 55 ⇓P P 01 24 51.5 0.0
baz=92
X14A Yava 91.96 55 ⇓P P 01 24 51.5 0.0
baz=92
NEW Newport 91.96 41 *e*P P 01 24 50.9 -0.3
comp=Z,9.1nm,0.9s,mb5.1
NEW Newport 91.96 41 *e*P P
NEW pmax pmax 01 24 50.9 -0.3
comp=Z,9.0nm,0.9s
L12A House Creek Ra 91.97 48 ⇑P P 01 24 51.9 +0.5
baz=92
Q13A Wheeler Ranch, 92.01 51 ⇑P P 01 24 52.1 +0.4
baz=92
V14A Boquillas Ranc 92.03 54 ⇑P P 01 24 52.1 +0.3
baz=92
E11A Bogner Ranch, 92.11 43 ⇓P P 01 24 51.3 -0.6
baz=92
P13A Bates Ranch, G 92.12 50 ⇓P P 01 24 52.4 +0.3
baz=92
U14A Mt Trumbull 92.13 53 ⇑P P 01 24 52.6 +0.3
baz=92
J12A Stokes Ranch, 92.16 46 ⇑P P 01 24 52.9 +0.7
baz=92
K12A Draper Farm, C 92.16 47 ⇑P P 01 24 52.4 +0.1
baz=92
D11A Klaveano Farm, 92.19 43 ⇓P P 01 24 51.9 -0.3
baz=92
Y15A Casa Rosa Ranc 92.30 56 ⇑P P 01 24 53.1 0.0
baz=92
T14A Hurricane 92.34 53 ⇑P P 01 24 53.4 +0.2
baz=92
M13A Montello 92.42 48 ⇑P P 01 24 53.8 +0.3
baz=92
X15A Humboldt 92.49 56 ⇓P P 01 24 54.2 +0.2
baz=92
B11A Sandpoint 92.49 41 ⇑P P 01 24 53.9 +0.2
baz=93
116A Eloy 92.54 57 ⇑P P 01 24 54.5 +0.3
baz=93
Q14A Sevier Lake (B 92.59 51 ⇑P P 01 24 54.6 +0.2
baz=93
A11A Hall Mountain, 92.62 41 ⇑P P 01 24 54.7 +0.5
baz=93
H12A Diamond D Ranc 92.62 45 ⇑P P 01 24 54.5 +0.2
baz=93
NVS Novosibirsk 92.67 325 *e*P P 01 24 57.6 +3.3
NVS pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
NVS pmax pmax

comp=N,9.0nm,1.7s
NVS pmax pmax
comp=E,6.0nm,1.7s
HLID Hailey 92.72 46 *e*P **P 01 24 55.4 +0.6**
comp=E,8.0nm,1.0s,mb5.1
HLID Hailey 92.72 46 ⇓P **P 01 24 54.6 -0.2**
baz=93
L13A Double Diamond 92.74 48 ⇓P **P 01 24 55.0 +0.1**
baz=93
K13A Stover Farm, H 92.76 47 ⇓P **P 01 24 55.3 +0.2**
baz=93
V15A Kaibab Nationa 92.81 54 ⇓P **P 01 24 55.4 0.0**
baz=93
U15A North Rim 92.83 54 ⇓P **P 01 24 55.7 +0.2**
baz=93
J13A Cove Ranch, Pi 92.85 46 ⇓P **P 01 24 55.8 +0.4**
baz=93
P14A Drum Mountains 92.87 50 ⇑P **P 01 24 56.1 +0.5**
baz=93
C12B Naegeli Ranch, 92.91 42 ⇓P **P 01 24 55.3 -0.3**
baz=93
Y16A Circle Bar Ran 92.99 56 ⇓P **P 01 24 56.3 +0.1**
baz=93
I13A Wildhorse Cree 93.00 46 ⇑P **P 01 24 56.5 +0.4**
baz=93
N14A Grayback Hills 93.04 49 ⇑P **P 01 24 56.5 +0.2**
baz=93
H13A Challis 93.05 45 ⇓P **P 01 24 56.6 +0.3**
baz=93
M14A Sheep Mountain 93.05 48 ⇓P **P 01 24 56.7 +0.3**
baz=93
A12A Yaak River Ran 93.07 41 ⇑P **P 01 24 56.5 +0.2**
baz=93
X16A Lo Mia Camp, P 93.12 56 ⇑P **P 01 24 57.0 +0.1**
baz=93
217A Green Valley 93.13 58 ⇓P **P 01 24 57.1 +0.1**
baz=93
G13A Cobalt 93.17 45 ⇑P **P 01 24 56.8 -0.1**
baz=93
DUG Dugway 93.18 50 *e*P **P 01 24 56.6 -0.4**
comp=E,2.6nm,1.0s,mb4.6
DUG Dugway 93.18 50 ⇓P **P 01 24 56.8 -0.2**
baz=93
DUG Dugway 93.18 50 *e*P **P 01 24 56.6 -0.4**
DUG pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
F13A Darby 93.25 44 ⇑P **P 01 24 57.1 -0.2**
baz=93
TUC Tucson 93.26 58 *e*P **P 01 24 57.3 -0.3**
comp=Z,2.4nm,1.0s,mb4.6
TUC Tucson 93.26 58 *e*P **P 01 24 57.3 -0.3**
TUC pmax pmax
comp=Z,2.0nm,1.0s,mb4.5
MSU Marysvale 93.33 52 *e*P **P 01 24 59.4 +1.7**
117A Oracle 93.34 58 ⇑P **P 01 24 58.1 +0.1**
baz=93
K14A Jones Ranch, D 93.39 47 ⇓P **P 01 24 58.3 +0.3**
baz=94
Y17A Roosevelt 93.47 57 ⇑P **P 01 24 58.4 -0.1**
baz=94
I14A Mackay 93.48 46 ⇑P **P 01 24 58.7 +0.4**
baz=94
HVU Hansel Valley 93.53 48 *e*P **P 01 24 59.5 +0.9**
comp=Z,9.8nm,1.0s,mb5.2
HVU Hansel Valley 93.53 48 *e*P **P 01 24 59.5 +0.9**
HVU pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
N15A Stansbury Isla 93.54 49 ⇓P **P 01 24 59.3 +0.7**
baz=94
H14A Leadore 93.68 45 ⇑P **P 01 24 59.7 +0.5**
baz=94
B13A Whitefish 93.71 42 ⇑P **P 01 24 59.6 +0.3**
baz=94
G14A Jackson 93.74 45 ⇑P **P 01 24 59.9 +0.4**
baz=94
318A Bisbee 93.76 59 ⇓P **P 01 24 60.0 +0.1**
baz=94
R16A Teasdale 93.82 52 ⇓P **P 01 25 00.2 +0.2**
baz=94
L15A Malad City 93.86 48 ⇓P **P 01 25 00.0 -0.1**
baz=94
K15A Arbon 93.89 47 ⇓P **P 01 25 00.3 +0.1**
baz=94
F14A Wisdom 93.92 44 ⇓P **P 01 24 59.6 -0.7**
baz=94
118A Homack Ranch, 94.00 58 ⇓P **P 01 25 01.1 +0.1**
baz=94
D14A Greenough 94.08 43 ⇑P **P 01 25 01.0 0.0**
baz=94
J15A Blackfoot 94.09 47 ⇑P **P 01 25 01.6 +0.5**
baz=94
T17A Navajo Res., N 94.11 53 ⇑P **P 01 25 01.3 -0.1**
baz=94
Y18A Canyon Day Jun 94.15 57 ⇑P **P 01 25 01.5 -0.1**
baz=94
H15A Lima 94.18 46 ⇓P **P 01 25 02.2 +0.6**
baz=94
M16A Huntsville 94.28 49 ⇑P **P 01 25 02.3 +0.3**
baz=94
319A Douglas 94.35 59 ⇑P **P 01 25 02.5 -0.1**
baz=94
X18A Snowflake 94.35 56 ⇑P **P 01 25 02.5 -0.1**
baz=94
DLMT Dillon 94.36 45 *e*P **P 01 25 02.7 +0.3**
comp=Z,14nm,1.3s,mb5.2
DLMT *e*pP pP 01 25 14.9 -0.1
DLMT *e*sP sP 01 25 20.6 +1.0
HWUT Hardware Ranch 94.39 49 *e*P **P 01 25 01.9 -0.6**
comp=Z,2.4nm,1.0s,mb4.6
G15A Dillon 94.40 45 ⇓P **P 01 25 02.8 +0.3**
baz=94
KURK Kurchatov 94.43 321 P **P 01 25 00.6 -1.9**
comp=Z,0.9nm,0.9s,mb4.2,baz=110,slow=3.3,SNR=4.6
KURK PKKPbc PKKPbc 01 42 01.2 -2.6
comp=Z,0.5nm,0.3s,baz=284,slow=3.9,SNR=6.2
KURK Kurchatov 94.43 321 ⇑*i*P **P 01 25 03.7 +1.2**
KURK pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
R17A Hanksville Air 94.44 52 ⇓P **P 01 25 02.9 0.0**
baz=94
219A White Tail Can 94.47 58 ⇑P **P 01 25 03.1 -0.1**
baz=94
B14A Marquette Ranc 94.49 42 ⇑P **P 01 25 02.9 0.0**
baz=95
A14A Double T Ranch 94.52 41 ⇓P **P 01 25 02.8 -0.1**
baz=95
F15A Butte 94.52 44 ⇑P **P 01 25 03.1 0.0**
baz=95
LRM Limekiln Ridge 94.55 44 *e*P **P 01 25 03.1 -0.1**
119A Ashpeak Ranch, 94.57 58 ⇑P **P 01 25 03.7 +0.1**
baz=95
J16A Bone 94.66 47 ⇑P **P 01 25 03.6 -0.2**
baz=95
D15A Lincoln 94.73 43 ⇑P **P 01 25 03.8 -0.2**
baz=95
C15A Salmond Ranch, 94.81 42 ⇓P **P 01 25 04.2 -0.2**
baz=95
Y19A Nutrioso 94.82 56 ⇑P **P 01 25 04.3 -0.4**
baz=95
I16A Newdale 94.86 46 ⇑P **P 01 25 05.0 +0.3**
baz=95
G16A Moss Hill, Enn 94.88 45 ⇑P **P 01 25 05.1 +0.4**
baz=95
B15A Bradely Ranch, 94.95 42 ⇓P **P 01 25 04.1 -0.9**
baz=95
A15A Johnson Ranch, 94.96 41 ⇓P **P 01 25 04.6 -0.4**
baz=95
BOZ Bozeman (W) 95.08 45 *e*P **P 01 25 05.5 -0.2**
comp=Z,4.3nm,0.9s,mb4.9
BOZ Bozeman (W) 95.08 45 ⇑P **P 01 25 05.4 -0.2**
baz=95
BOZ Bozeman (W) 95.08 45 *e*P **P 01 25 05.5 -0.1**
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
F16A Kennard Place, 95.11 45 ⇑P **P 01 25 06.1 +0.4**
baz=95
H16A Russell Place, 95.18 46 ⇓P **P 01 25 06.8 +0.7**
baz=95
N18A Larsen Ranch, 95.68 50 ⇓P **P 01 25 08.9 +0.4**
baz=96
E17A Martinsdale 95.75 44 ⇓P **P 01 25 08.7 0.0**
baz=96
D17A Six Diamond Ra 95.99 43 ⇑P **P 01 25 09.3 -0.4**
baz=96
C17A Wharram Farm, 96.02 43 ⇑P **P 01 25 09.4 -0.5**
baz=96
BW06 Boulder Array 96.06 48 ⇓P **P 01 25 09.6 -0.5**
baz=96

PDAR Pinedale Array 96.06 48 P **P 01 25 09.5 -0.6**
comp=Z,1.1nm,0.8s,mb4.3,baz=219,slow=1.2,SNR=7.9
PDAR PKKP PKKPbc 01 42 04.3 +5.2
comp=Z,0.5nm,0.8s,baz=130,slow=4.6,SNR=4.2
PDAR LR LR 02 06 00.6
comp=Z,333nm,18.2s,MS4.8,baz=179,slow=34
B17A L&G Farms, Che 96.10 42 ⇑P **P 01 25 09.8 -0.5**
baz=96
A17A Triple J Farms 96.28 41 ⇓P **P 01 25 10.7 -0.3**
baz=96
E18A Harlowton 96.41 44 ⇓P **P 01 25 11.9 +0.2**
baz=96
F18A Big Timber 96.44 45 ⇑P **P 01 25 12.0 +0.2**
baz=96
YKA Yellowknife Ar 96.52 28 P **P 01 25 09.8 -1.9**
comp=Z,3.0nm,0.8s,mb4.8,baz=257,slow=4.3,SNR=7.1
YKA LR LR 02 10 41.6
comp=Z,154nm,18.4s,MS4.5,baz=175,slow=37
YKA Yellowknife Ar 96.52 28 P **P 01 25 09.8 -2.0**
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA MLR MLR
comp=Z,154nm,18.4s
RLMT Red Lodge 96.63 45 ⇓P **P 01 25 12.3 -0.4**
baz=97
EGMT Eagleton 96.75 42 *e*P **P 01 25 12.9 -0.2**
comp=Z,9.9nm,0.8s,mb5.3
EGMT Eagleton 96.75 42 ⇓P **P 01 25 12.6 -0.5**
baz=97
A18A Metzger Ranch, 96.83 42 ⇑P **P 01 25 12.8 -0.7**
baz=97
SNAA Sanae 96.90 185 *e*P **P 01 25 13.8 +0.4**
comp=Z,4.8nm,0.9s,mb4.9
SNAA Sanae 96.90 185 *e*P **P 01 25 13.8 +0.3**
SNAA pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 97.25 56 *e*P **P 01 25 15.0 -0.8**
comp=Z,2.9nm,1.2s,mb4.6
ANMO Albuquerque 97.25 56 *e*P **P 01 25 15.0 -0.8**
ANMO pmax pmax
comp=Z,3.0nm,1.2s
VNA3 Neumayer Olymp 97.75 183 *e*P **P 01 25 16.0 -1.3**
VNA3 *e* 01 25 23.2
VNA3 *e* 01 25 40.6
VNA2 Neumayer--Watz 97.95 183 *e*P **P 01 25 17.7 -0.5**
VNA2 *e* 01 25 24.9
VNA2 *e* 01 25 42.3
VNA1 Neumayer--Stat 98.27 183 *e*P **P 01 25 18.2 -1.5**
VNA1 *e* 01 25 26.4
TXAR Lajitas Array 98.83 62 P **P 01 25 23.4 +0.4**
comp=Z,0.5nm,0.9s,mb4.0,baz=234,slow=6.0,SNR=4.3
TXAR PKKPbc PKKPbc 01 41 50.0 -0.9
comp=Z,0.3nm,0.6s,baz=101,slow=4.5,SNR=6.9
TXAR PKKP PKKPbc 01 41 56.3 +5.3
comp=Z,0.4nm,0.7s,baz=97,slow=3.0,SNR=5.0
TXAR LR LR 02 04 45.7
comp=Z,379nm,18.7s,MS4.9,baz=80,slow=32
BVAR Borovoye Array 99.82 322 P Pdif 01 25 27.2 +0.3
comp=Z,0.5nm,0.7s,baz=92,slow=5.2,SNR=3.7
DGMT Dagmar 100.49 42 ⇑P Pdif 01 25 29.1 -0.7
baz=100
APA Apatity 114.31 341 *e*PKIKP PKiKP 01 30 12.0 -10
APA pmax pmax
comp=Z,54nm,1.4s
ARCES ARCESS Array B 115.42 345 PKP PKPdf 01 30 22.6 -1.1
comp=Z,1.1nm,0.6s,baz=90,slow=1.6,SNR=6.6
MAK Makhachkala 115.51 312 *i* PKIKP PKPdf 01 30 22.7 -1.9
MAK *e* 01 37 06.7
MAK *e*PS PS 01 41 04.7 -3.1
MAK pmax pmax
comp=Z,95nm,1.4s
RDF Al-Radifah 116.81 297 *e*P PKPdf 01 30 24.8 -2.8
baz=297
RDF AMb AMB 01 30 36.0
comp=Z,30nm,1.1s,baz=297
MIB Mutribah 116.96 298 *e*P PKPdf 01 30 25.0 -2.9
baz=298
MIB AMb AMB 01 30 34.3
comp=Z,17nm,1.2s,baz=298
NAY Al-Naaiem 117.07 297 *e*P PKPdf 01 30 25.9 -2.2
baz=297
NAY AMb AMB 01 30 40.3
comp=Z,10.0nm,1.4s,baz=297
KIV Kislovodsk 118.76 314 *i* PKIKP PKPdf 01 30 29.9 -1.0
OBN Obninsk 118.97 328 ⇑*i*PKIKP PKPdf 01 30 29.9 -1.0
OBN *e* 01 31 52.6
OBN *e* 01 37 27.7
OBN *e*SS SS 01 47 58.2 -9.0
OBN pmax pmax
comp=Z,12nm,1.3s
BOSA Boshof 122.75 225 PKP PKPdf 01 30 38.4 -0.7
comp=Z,2.9nm,0.6s,baz=178,slow=3.9,SNR=13
BOSA Boshof 122.75 225 *e*PKPdf PKPdf 01 30 38.5 -0.5
BOSA Boshof 122.75 225 PKIKP PKPdf 01 30 38.4 -0.7
BOSA pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 124.93 325 PKP PKPdf 01 30 42.1 -0.4
comp=Z,0.3nm,0.3s,baz=71,slow=1.5,SNR=5.4
AKASG Malin Array Be 124.93 325 *i* PKIKP PKPdf 01 30 42.0 -0.5
NB2 NORSAR Subarra 125.72 343 PKPdf PKPdf 01 30 42.0 -1.7
comp=Z,2.2nm,0.7s,baz=35,slow=1.8
NOA NORSAR Array B 125.77 343 PKP PKPdf 01 30 42.9 -0.8
comp=Z,0.8nm,0.8s,baz=235,slow=17,SNR=3.0
BRTR Keskin Array B 126.40 312 PKP PKPdf 01 30 44.0 -1.6
comp=Z,1.7nm,0.9s
ANTO Ankara 126.97 312 *e*PKPdf PKPdf 01 30 46.6 -0.2
LSZ Lusaka 127.54 241 *e*PKPdf PKPdf 01 30 47.4 -1.1
SDV Santo Domingo 127.92 87 *e*PKPdf PKPdf 01 30 48.2 -1.1
CSS Prodhromos 127.95 306 *e*PKPdf PKPdf 01 30 47.2 -1.6
UZH Uzhgorod 129.84 326 ⇓*i*PKIKP PKiKP 01 30 58.0 +5.3
UZH *e* 01 31 17.0
BRG Berggiesshubel 132.54 333 *e*SKPdf SKPdf 01 34 36.5 +7.4
CLL Collm 132.64 334 PKP PKPdf 01 31 05.0 +7.8
CLL Collm 132.64 334 *e*SKPdf SKPdf 01 34 36.9 +7.6
FBE Freiberg 132.77 334 *e*SKPdf SKPdf 01 34 36.5 +7.0
NEUB Neuburg 133.23 335 *e*SKPdf SKPdf 01 34 39.0 +8.6
WERD Werda 133.57 334 *e*SKPdf SKPdf 01 34 39.9 +8.9
GEC2 GERESS Array S 134.09 331 *e*SKPdf SKPdf 01 34 41.5 +9.5
GERES GERESS Array B 134.09 331 PKP PKPdf 01 30 59.2 -0.7
comp=Z,0.6nm,0.7s,baz=50,slow=2.1,SNR=3.9
ROTZ Rotzenmuhle 134.12 333 *e*SKPdf 01 34 41.8
WET Wettzell 134.26 332 *e*SKPdf 01 34 42.8
GRF Grafenberg Arr 134.60 334 *e*SKPdf 01 34 41.5
ABTA Abfaltersbach 136.13 330 ⇑*i*PKPdf PKPdf 01 31 03.0 -0.8
comp=Z,9.6nm,1.3s
FETA Feichten 136.79 332 ⇑*e*PKiKP PKiKP 01 31 06.5 -0.4
comp=Z,6.2nm,1.1s
CDF Champ du Feu 137.25 335 *e*PKIKP PKPdf 01 31 04.4 -1.5
HINF Hinteralfeld 137.89 335 *e*PKIKP PKPdf 01 31 06.0 -1.1
HAU Haudompre 137.95 336 *e*PKIKP PKPdf 01 31 05.7 -1.5
LPL La Plagne 139.75 333 *e*PKIKP PKPdf 01 31 09.2 -1.4
LPG La Plagne 139.76 333 *e*PKIKP PKPdf 01 31 08.8 -1.8
comp=Z,21nm,1.2s
SSF Saint Saulge 139.83 337 *e*PKIKP PKPdf 01 31 08.3 -2.3
comp=Z,14nm,1.1s
BDFB Brasilia 140.01 131 PKhKP 01 31 04.9
comp=Z,1.5nm,0.9s,baz=184,slow=23,SNR=4.8
MBDF Montbardon 140.34 332 *e*PKIKP PKPdf 01 31 09.8 -1.9
comp=Z,13nm,1.1s
ORIF Oris-en-Rattie 140.59 333 *e*PKIKP PKPdf 01 31 11.2 -0.9
comp=Z,27nm,1.3s
TCF Toulx Ste Croi 140.96 338 *e*PKIKP PKPdf 01 31 10.7 -2.0
comp=Z,43nm,1.3s
VIVF Saint-Julien-l 141.16 334 *e*PKIKP PKPdf 01 31 11.9 -1.2
FRF La Foret Royal 141.29 331 *e*PKIKP PKPdf 01 31 11.3 -2.1
comp=Z,92nm,1.6s
MTLF Montolieu 143.43 335 *e*PKIKP PKPdf 01 31 14.1 -3.1
comp=Z,40nm,1.3s
EPF Esarros 144.43 337 *e*PKIKP PKPdf 01 31 16.4 -2.6
comp=Z,32nm,1.2s
EBIE Bielsa 144.80 337 PKP PKPdf 01 31 22.4 +2.8
ETSF Etsaut 144.88 338 *e*PKIKP PKPdf 01 31 17.9 -1.9
comp=Z,54nm,1.0s
EALK Alkurruntz 144.95 339 PKP PKiKP 01 31 24.5 +0.9
ELIZ Elizondo 145.00 339 PKP PKiKP 01 31 22.6 -1.2
KEST Kesra 145.24 319 PKPbc PKPbc 01 31 19.8 -0.6
comp=Z,5.8nm,0.8s,baz=3.0,slow=3.4,SNR=8.6
EPOB Poblet 145.54 335 PKP PKPdf 01 31 19.5 -1.5
ELAN Lanestosa 145.57 341 PKP PKPdf 01 31 21.4 +0.4
ECRI Cripan 145.83 340 PKP PKPdf 01 31 21.6 +0.2
ESAC San Caprasio 145.86 337 PKP PKPdf 01 31 20.9 -0.6
ERTA Horta de San J 146.18 335 PKP PKiKP 01 31 24.7 -1.6
EMOS Mosqueruela 147.01 335 PKP PKPdf 01 31 25.0 +1.5
ETOR Torete 147.24 338 PKP PKPdf 01 31 25.6 +1.7
STS Santiago 147.25 347 PKP PKPbc 01 31 26.9 +0.8

EMAZ Mazaricos 147.28 348 PKP PKPbc 01 31 25.9 -0.3
ECAL Calabor 147.71 345 PKP PKPbc 01 31 27.9 +0.5
ECHE Chera 147.87 335 PKP PKPbc 01 31 27.7 -0.2
GUD Guadarrama 148.14 340 PKP PKPbc 01 31 28.2 -0.4
EBEN Beniarda 148.29 333 PKP PKPbc 01 31 28.6 -0.4
EMHD Djebel Mahouad 148.70 327 P PKPab 01 31 41.0 +7.1
ETOB Tobarra 148.91 335 PKP PKPbc 01 31 28.9 -1.7
EVIA Vianos 149.30 336 PKP PKPbc 01 31 31.0 -0.6
MTE Manteigas 149.37 345 *e*PKPbc PKPbc 01 31 31.9 +0.2
EMUR La Murta 149.45 334 PKP PKPbc 01 31 30.1 -2.0
EHUE Huescar 150.05 336 PKP PKPbc 01 31 32.3 -1.2
ETRT Tiaret 150.19 328 P PKPbc 01 31 35.0 +1.1
EBAN Banos Encina 150.21 337 PKP PKPbc 01 31 32.5 -1.4
EQES Quesada 150.25 336 PKP PKPbc 01 31 32.2 -1.7
EADA Adamuz 150.50 339 PKP PKPbc 01 31 33.4 -1.1
ENIJ Nijar 150.60 334 PKP PKPbc 01 31 33.0 -1.9
EBAD Badajoz 150.76 343 PKP PKPbc 01 31 33.6 -1.6
ELUQ Luque 150.92 338 PKP PKPbc 01 31 32.8 -2.7
ERON Agron 151.22 336 PKP PKPbc 01 31 34.7 -1.6
ELOJ Sierra Loja 151.24 337 PKP PKPbc 01 31 36.7 +0.4
EVO Evora 151.25 344 *e*PKIKP PKPdf 01 31 28.4 -1.9
comp=Z,24nm,0.9s
EGUA Guajares 151.28 336 PKP PKPbc 01 31 35.0 -1.5
EMIN Mina Concepcio 151.56 341 PKP PKPbc 01 31 36.4 -0.6
ESPR Espera 152.11 339 PKP PKPbc 01 31 37.7 -0.6
TAM Tamanrasset 154.89 301 *e*PKPdf PKPdf 01 31 35.9 -0.1
TAM *e*PKPbc PKPbc 01 31 42.8 -2.0
TOA0 Torodi Ar. Sit 160.87 278 *e*PKPdf PKPdf 01 31 49.2 +5.6
TORD Torodi Ar. Bea 160.87 278 PKP PKPdf 01 31 42.3 -1.3
comp=Z,1.4nm,0.9s,baz=126,slow=0.8,SNR=6.4
TORD PKPab PKPab 01 32 23.4 -2.9
comp=Z,1.9nm,1.1s,baz=98,slow=2.8,SNR=2.3

GUC 30 01:38:59.7±0.5, 221.5°S 6868.9 km, h125 km±2 km, ML4.0,3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.55**	**203**	⇑*i*P		Pn	01 39 19.1	+0.6
LVC				*i* S		Sn	01 39 34.2	+1.4
LVC				AML	AML		01 39 35.1	
	comp=E,8μm,0.1s							
SPCH	**San Pedro de A**	**0.92**	**151**	⇑*i*P		Pn	01 39 22.3	+0.9
SPCH				*e*S		Sn	01 39 39.7	+1.9
SPCH				AML	AML		01 39 41.0	
	comp=E,2μm,0.5s							
MACH	**Maria Elena**	**1.00**	**265**	⇑*i*P		Pn	01 39 23.0	+0.8
MACH				*i* S		Sn	01 39 41.0	+1.8
PECH	**Pedro de Valdi**	**1.04**	**242**	*e*P		Pn	01 39 23.4	+0.8
PECH				*e*S		Sn	01 39 41.3	+1.5
PECH				AML	AML		01 39 44.2	
	comp=N,3μm,0.1s							
PB01	**Plate Boundary**	**1.29**	**325**	*e*P		Pn	01 39 24.6	-0.6
PB01				*i* S		Sn	01 39 44.7	+0.1
PB01				AML	AML		01 39 45.4	
	comp=E,1μm,0.2s							
TOCH	**Tocopilla**	**1.41**	**270**	*i* P		Pn	01 39 26.8	+0.4
TOCH				*i* S		Sn	01 39 47.3	+0.6
TOCH				AML	AML		01 39 49.0	
	comp=E,4μm,0.1s							
CEN1	**Los Morros**	**1.90**	**227**	*e*P		Pn	01 39 35.8	+3.7
CEN1				*i* S		Sn	01 40 02.9	+6.0
CEN1				AML	AML		01 40 05.1	
	comp=N,480nm,0.2s							
MECH	**Mejillones**	**1.91**	**238**	AML	AML		01 40 05.4	
	comp=E,672nm,0.8s							
ANCH	**Antofagasta**	**2.24**	**225**	*i* P		Pn	01 39 37.0	+0.7
ANCH				*i* S		Sn	01 40 05.5	+1.0
ANCH				AML	AML		01 40 07.1	
	comp=N,3μm,0.1s							
CPN1	**Cerro Paranal**	**2.97**	**212**	AML	AML		01 40 23.3	
	comp=E,425nm,0.4s							

MOS ***30*** *01:48:56.8±1.0, 4255N±4357E, h8 km, mb4.2/1, Error ellipse: s-maj=13.4km s-min=7.0km az=70.5*
ISCJB ***30*** *01:48:57.1±0.3, 4258N±002±4353E±003, h10 km, Error ellipse: s-maj=3.3km s-min=2.1km az=37.6*
TIF ***30*** *01:48:57.6, 4259N±4361E, h9 km±2km*
CSEM ***30*** *01:49:01.6, 4252N±4100E, h11 km, MD3.3, After ERD*
DDA ***30*** *01:49:01.6, 4252N±4100E, h11 km±6km, Md3.3*

ISC 30 01:48:56.9±0.4, 4258N±002±4349E±003, h2 km±4 km, n37, σ1§00/62, 7C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
ZEI	**Tsey**	**0.36**	**57**	⇓*i*PG		**Pg**	**01 49 03.5**	**-0.2**
ZEI				*i* S		**Sg**	**01 49 08.6**	**+0.3**
LACR	**Lac**	**0.64**	**67**	⇑*i*PG		**Pg**	**01 49 08.3**	**-0.9**
LACR				*i* S		**Sg**	**01 49 16.8**	**-0.7**
KORR	**Kora**	**0.66**	**39**	⇑*i*PG		**Pg**	**01 49 09.5**	**-0.1**
KORR				*i* S		**Sg**	**01 49 19.1**	**+1.0**
LSNR	**Lesken**	**0.74**	**19**	⇓*i*PG		**Pg**	**01 49 11.0**	**0.0**
LSNR				*i* S		**Sg**	**01 49 22.3**	**+1.8**
GOR	**Gori**	**0.75**	**142**	P		**Pg**	**01 49 10.6**	**-0.5**
GOR				S		**Sg**	**01 49 22.0**	**+1.2**
ARNR	**Ardon**	**0.84**	**43**	⇓*i*PG		**Pg**	**01 49 13.4**	**+0.4**
ARNR				*e*S		**Sg**	**01 49 24.5**	**+0.6**
KMSR	**Komsomolskaya**	**0.99**	**36**	⇑*i*PG		**Pg**	**01 49 16.3**	**+0.5**
KMSR				*e*S		**Sg**	**01 49 29.3**	**+0.7**
SNJR	**Sundja**	**1.09**	**63**	⇓*i*PG		**Pg**	**01 49 17.5**	**-0.2**
SNJR				*e*S		**Sg**	**01 49 31.6**	**-0.2**
BTKR	**Batakoyurt**	**1.11**	**44**	*e*PG		**Pn**	**01 49 19.0**	**-0.4**
BTKR				*e*S		**Sn**	**01 49 34.3**	**-1.0**
TBLG	**Delisi**	**1.25**	**132**	P		**Pn**	**01 49 19.6**	**-1.8**
TBLG				S		**Sn**	**01 49 38.6**	**-0.2**
MTA	**Mtatsminda**	**1.31**	**132**	S		**Sn**	**01 49 39.1**	**-1.1**
PRTR	**Priterechnaya**	**1.31**	**26**	⇑*i*PG		**Pg**	**01 49 22.0**	**0.0**
PRTR				*e*S		**Sn**	**01 49 40.4**	**+0.2**
SHAR	**Shatzhatmas**	**1.31**	**333**	⇑*i*PG		**Pg**	**01 49 21.3**	**-0.7**
SHAR				*i* S		**Sg**	**01 49 39.1**	**0.0**
TRKR	**Terskaya**	**1.46**	**38**	*e*PG		**Pg**	**01 49 24.5**	**-0.4**
TRKR				*e*S		**Sb**	**01 49 43.8**	**0.0**
KIV	**Kislovodsk**	**1.50**	**337**	*ce*PG		**Pg**	**01 49 25.7**	**+0.1**
KIV							01 49 46.1	
KIV				pmax	pmax			
	comp=Z,133nm,1.3s							
KIV				smax				
	comp=E,143nm,0.6s							
DOMR	**Dombai**	**1.55**	**298**	⇑*e*PG		**Pn**	**01 49 25.6**	**+0.1**
DOMR				*i* S		**Sn**	**01 49 45.7**	**-0.5**
BCA	**Borcka**	**1.79**	**232**	*e*PN		**Pn**	**01 49 27.9**	**-0.9**
BCA				*e*SN		**Sn**	**01 49 52.9**	**+0.6**
DGRG	**David-gareji**	**1.80**	**128**	P		**Pg**	**01 49 29.7**	**-1.5**
DGRG				S		**Sg**	**01 49 55.6**	**+1.1**
ARTV	**Artvin**	**1.82**	**221**	*i* P		**Pn**	**01 49 28.9**	**-0.3**
ARTV				*i* S		**Sn**	**01 49 51.5**	**-1.2**
DAGI	**Agillar**	**1.91**	**219**	*i* P		**Pn**	**01 49 30.5**	**+0.2**
DAGI				*i* S		**Sn**	**01 49 54.1**	**-0.8**
KARS	**Kars**	**1.98**	**189**	*e*PN		**Pg**	**01 49 32.6**	**-2.3**
KARS				*e*SN		**Sg**	**01 50 01.1**	**+0.5**
DBAD	**Bademkaya**	**2.06**	**221**	*i* P		**Pn**	**01 49 32.9**	**+0.5**
DBAD				*i* S		**Sn**	**01 50 00.1**	**+1.4**
DDEM	**Demirkent**	**2.13**	**218**	*i* P		**Pn**	**01 49 34.4**	**+0.9**
DDEM				*i* S		**Sn**	**01 50 02.0**	**+1.6**
PZAR	**Pazar-Rize**	**2.39**	**235**	*e*PN		**Pn**	**01 49 36.3**	**-0.7**
GOF	**Gofitskoye**	**2.50**	**353**	*e*PN		**Pn**	**01 49 29.0**	**-10**
GOF				pmax	pmax			
	comp=Z,30nm,0.8s							
HOMI	**Horasan**	**2.80**	**206**	*i* P		**Pg**	**01 49 46.0**	**-4.4**
HOMI				*i* S		**Sg**	**01 50 26.4**	**-0.3**
SOC	**Sochi**	**2.94**	**291**	*e*PN		**Pg**	**01 49 52.0**	**-1.3**
SOC				*e*			01 50 27.3	
SOC				pmax	pmax			
	comp=Z,33nm,0.5s							
SOC				smax				
	comp=N,84nm,0.6s							
MAK	**Makhachkala**	**2.98**	**81**	*e*PG		**Sn**	**01 50 09.0**	**-12**
MAK				*e*			01 50 28.3	
MAK				*e*			01 50 32.9	
MAK				pmax	pmax			
	comp=Z,88nm,0.3s							
MAK				smax				
	comp=N,313nm,0.7s							
MAK				smax				
	comp=E,218nm,0.7s							
AGRB	**Hanur-Agry**	**3.02**	**187**	*e*PN		**Pn**	**01 49 46.6**	**+0.9**
ERZM	**Erzurum**	**3.11**	**212**	*i* P		**Pn**	**01 49 49.6**	**+2.6**
ERZM				*i* S		**Sn**	**01 50 29.7**	**+4.9**
EZM	**Erzurum**	**3.12**	**212**	*e*PN		**Pn**	**01 49 48.7**	**+1.7**
MACK	**Trabzon**	**3.23**	**241**	*i* P		**Pn**	**01 49 46.2**	**-2.4**

MACK			*i* S		**Sn**	**01 50 15.4**	**-12**
KOPT	**Kop Dagi**	**3.41 222**	*i* P		**Pn**	**01 49 52.5**	**+1.5**
KOPT			*i* S		**Sn**	**01 50 36.1**	**+4.1**
GUMT	**Gumushane**	**3.68 236**	*e*PN		**Pn**	**01 49 54.7**	**-0.1**
ESPY	**Espiye-Giresun**	**3.93 247**	*e*PN		**Pn**	**01 49 56.5**	**-1.7**
EZC	**Erzincan**	**3.96 226**	*e*PN		**Pn**	**01 50 02.5**	**+3.9**
PTK	**Pertek**	**4.82 222**	*e*P		**Pn**	**01 50 12.2**	**+1.7**

TRN 30 02:14:54.1, 1484N×6072W, h151km, MD3.8, M2.7(FDF), 6C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.33**	**211**	*e*P		Pn	02 15 17.0	+2.2
FDF	**Fort de France**	**0.43**	**256**	*e*P		Pn	02 15 16.1	+0.9
FDF				*e*S		Sn	02 15 32.3	+1.1
BIM	**Bigot**	**0.47**	**227**	*e*P		Pn	02 15 16.4	+1.1
SLW	**Petit Monier**	**0.84**	**195**⇑	*e*P		Pn	02 15 18.8	+1.0
SLW	**Petit Monier**	**0.84**	**195**	*e*P		Pn	02 15 18.8	+1.1
SLW				*e*S		Sn	02 15 36.5	+0.8
SLW				*e*S		Sn	02 15 36.5	+0.8
SLPE	**Piton Saint Es**	**1.03**	**195**⇑	*e*P		Pn	02 15 28.8	+1.6
SLPE				*e*S		Sn	02 15 39.8	+1.4
SLB	**Belfond**	**1.05**	**197**⇑	*e*P		Pn	02 15 21.9	+2.5
SLB				*e*S		Sn	02 15 41.9	+3.1
SLDE	**Delcer**	**1.08**	**198**	*e*S		Sn	02 15 41.0	+1.8
MCLT	**Moule a Chique**	**1.14**	**191**⇑	*e*P		Pn	02 15 21.1	+0.8
MCLT				*e*S		Sn	02 15 40.7	+0.5
SSV	**Crater Summit**	**1.57**	**197**	*e*P		Pn	02 15 25.6	+1.1
SSV				*e*S		Sn	02 15 48.5	+0.7
BHS	**Barnard House**	**1.58**	**194**	*e*P		Pn	02 15 24.5	-0.1
BHS				*e*S		Sn	02 15 48.9	+0.8
SVV	**Soufriere Volc**	**1.59**	**198**	*e*P		Pn	02 15 25.3	+0.6
SVV				*e*S		Sn	02 15 48.0	-0.1
SVB	**Belmont**	**1.64**	**198**⇑	*i*P		Pn	02 15 25.1	-0.2
SVB				*e*S		Sn	02 15 47.0	-2.2
FCV	**Fort Charlotte**	**1.75**	**197**	*e*P		Pn	02 15 27.0	+0.6
FCV				*e*S		Sn	02 15 52.9	+1.7
GRW	**Mount Saint Ca**	**2.82**	**199**	*e*P		Pn	02 15 42.4	+3.1
GRW				*e*S		Sn	02 16 15.3	+1.2
SKI	**Saint Kitts**	**3.15**	**322**	*e*S		Sn	02 16 21.5	0.0
TOSP	**Speyside**	**3.52**	**177**⇑	*e*P		Pn	02 15 49.7	+1.4
TOSP				*e*S		Sn	02 16 28.0	-2.3
TRN	**Trinidad (W)**	**4.22**	**189**	*e*P		Pn	02 15 58.6	+1.3

GUC 30 02:22:01.1±0.8, 2232S×7022W, h36km±4km, MD4.2, ML4.1, 1C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.23**	**4**	*e*P		Pn	02 22 07.8	-0.5
TOCH				*i* S		Sn	02 22 13.0	-0.2
TOCH				AML		AML	02 22 13.3	
	comp=N,52μm,0.1s							
MACH	**Maria Elena**	**0.45**	**74**⇓	*i*P		Pn	02 22 11.2	+0.2
MACH				*i* S		Sn	02 22 18.6	+0.7
MECH	**Mejillones**	**0.81**	**195**⇑	*e*P		Pn	02 22 15.6	-0.3
MECH				*i* S		Sn	02 22 27.4	+0.6
CEN1	**Los Morros**	**1.06**	**179**⇓	*i*P		Pn	02 22 22.2	+2.6
CEN1				*i* S		Sn	02 22 37.8	+4.7
LVC	**Limon Verde**	**1.24**	**104**⇓	*e*P		Pn	02 22 23.1	+1.2
LVC				*i* S		Sn	02 22 40.5	+2.9
ANCH	**Antofagasta**	**1.37**	**187**	*e*P		Pn	02 22 23.7	0.0
ANCH				*i* S		Sn	02 22 40.8	-0.2
CPN1	**Cerro Paranal**	**2.30**	**184**	*e*P		Pn	02 22 36.0	-0.6

*ISCJB **30** 02:30:40.6±0.2, 1490N×002×6130W±005, h169km±1km, mb4.0/30, Error ellipse: s-maj=7.9km s-min=3.0km az=165.1*
*TRN **30** 02:30:40.9, 1493N×6128W, h164km, MD4.0, M3.8(FDF)*
*IDC **30** 02:30:41.1±0.5, 1492N×6135W, h156km±3km, mb3.8/14, mb1 3.9/16, mb1mx3.8/23, mbtmp3.7/16, Error ellipse: s-maj=12.3km s-min=7.7km az=81.0*
*NEIC **30** 02:30:41.2±0.3, 1491N×6134W, h159km±4km, mb4.1/19, Error ellipse: s-maj=6.6km s-min=5.4km az=48.0*

ISC 30 02:30:41.8±0.2, 1490N±002×6132W±005, h163km±1km, n78, σ0°75/104, mb4.0/30, 27C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.23**	**136**	*e*Pn		**Pn**	**02 31 03.4**	**-0.2**
FDF				*e*Sn		**Sn**	**02 31 20.0**	**-0.4**
DSHT	**Scott's Head**	**0.32**	**350**⇑	*e*P		**Pn**	**02 31 04.9**	**+1.0**
DSHT				*e*S		**Sn**	**02 31 21.7**	**+0.8**
DPMT	**Pointe Michel**	**0.36**	**351**	*e*P		**Pn**	**02 31 04.6**	**+0.5**
DPMT				*e*S		**Sn**	**02 31 20.7**	**-0.5**
BIM	**Bigot**	**0.45**	**148**⇑	*e*P		**Pn**	**02 31 04.2**	**-0.2**
BIM				⇑*e*S		**Sn**	**02 31 21.4**	**-0.2**
MVM	**Montagne Vaucl**	**0.53**	**130**⇓	*e*P		**Pn**	**02 31 04.4**	**-0.4**
DWS	**Wesley**	**0.67**	**0**⇑	*i*P		**Pn**	**02 31 05.8**	**+0.4**
DWS				*e*S		**Sn**	**02 31 23.4**	**-0.2**
SLW	**Petit Monier**	**0.95**	**157**⇑	*i*P		**Pn**	**02 31 06.8**	**-0.6**
SLW	**Petit Monier**	**0.95**	**157**⇑	*i*P		**Pn**	**02 31 07.8**	**+0.4**
SLW				⇑*e*S		**Sn**	**02 31 25.8**	**-1.2**
SLW				*e*S		**Sn**	**02 31 26.8**	**-0.2**
SLPE	**Piton Saint Es**	**1.09**	**163**⇑	*i*P		**Pn**	**02 31 09.2**	**+0.6**
SLPE				*e*S		**Sn**	**02 31 29.5**	**+0.4**
SLB	**Belfond**	**1.10**	**166**⇓	*i*P		**Pn**	**02 31 09.2**	**+0.6**
SLDE	**Delcer**	**1.12**	**167**⇑	*i*P		**Pn**	**02 31 09.5**	**+0.7**
SLDE				*e*S		**Sn**	**02 31 30.2**	**+0.7**
HMG	**Houelmont**	**1.14**	**341**⇑	*e*P		**Pn**	**02 31 09.2**	**+0.2**
DOG	**Dongo Capester**	**1.16**	**346**	*e*P		**Pn**	**02 31 09.2**	**+0.1**
SCG	**Saint Claude**	**1.18**	**343**⇑	*e*P		**Pn**	**02 31 09.6**	**+0.3**
BCG	**Bois Riant Cap**	**1.22**	**346**	*e*P		**Pn**	**02 31 09.5**	**-0.1**
LZG	**Guadaloupe-1**	**1.31**	**340**⇑	*e*P		**Pn**	**02 31 10.6**	**+0.1**
DEG	**La Desirade**	**1.43**	**10**⇑	*e*P		**Pn**	**02 31 10.8**	**-0.8**
SFAN	**Fancy Village**	**1.51**	**175**⇑	*i*P		**Pn**	**02 31 13.2**	**+0.7**
SFAN				*e*S		**Sn**	**02 31 36.2**	**+0.1**
SSV	**Crater Summit**	**1.57**	**176**⇑	*i*P		**Pn**	**02 31 13.8**	**+0.7**
SSV				*e*S		**Sn**	**02 31 38.5**	**+1.4**
BHS	**Barnard House**	**1.60**	**173**⇑	*i*P		**Pn**	**02 31 14.1**	**+0.6**
BHS				*e*S		**Sn**	**02 31 38.4**	**+0.6**
FCV	**Fort Charlotte**	**1.73**	**178**⇑	*i*P		**Pn**	**02 31 15.2**	**+0.4**
FCV				*e*S		**Sn**	**02 31 40.1**	**-0.1**
MBRY		**1.97**	**336**⇑	*i*P		**Pn**	**02 31 17.1**	**-0.2**
MBRY				*e*S		**Sn**	**02 31 43.9**	**-0.9**
MBLG		**1.99**	**336**⇑	*i*P		**Pn**	**02 31 17.5**	**0.0**
MBLG				*e*S		**Sn**	**02 31 44.9**	**-0.3**
MLYT	**Lee's Yard**	**2.00**	**335**⇑	*i*P		**Pn**	**02 31 17.8**	**+0.2**
MLYT				*e*S		**Sn**	**02 31 45.6**	**+0.2**
MBWH		**2.02**	**335**⇑	*i*P		**Pn**	**02 31 17.7**	**-0.1**
MBWH				*e*S		**Sn**	**02 31 45.5**	**-0.3**
MBGB		**2.02**	**334**⇑	*i*P		**Pn**	**02 31 18.0**	**+0.1**
BPA	**Boggy Peak**	**2.20**	**346**⇓	*i*P		**Pn**	**02 31 20.2**	**+0.2**
BPA				*e*S		**Sn**	**02 31 48.4**	**-1.1**
BBGH	**Gun Hill**	**2.44**	**135**	*e*Pn		**Pn**	**02 31 22.6**	**-0.2**
BBGH				*e*Sn		**Sn**	**02 31 53.3**	**-1.3**
BBSP	**Saint Philip**	**2.54**	**134**⇑	*i*P		**Pn**	**02 31 24.1**	**+0.1**
BBSP				*e*S		**Sn**	**02 31 56.3**	**-0.3**
GRW	**Mount Saint Ca**	**2.74**	**187**⇑	*i*P		**Pn**	**02 31 27.4**	**+0.9**
GRW				*e*S		**Sn**	**02 32 00.5**	**-0.7**
GRGR	**Grenville**	**2.77**	**187**	*e*Pn		**Pn**	**02 31 26.6**	**-0.2**
ANWB	**Willy Bob**	**2.79**	**351**	*e*Pn		**Pn**	**02 31 25.3**	**-1.8**
TPR	**Prospect**	**3.73**	**172**	*e*P		**Pn**	**02 31 38.5**	**-0.4**
BOT	**Bacolet**	**3.75**	**171**	*e*P		**Pn**	**02 31 39.7**	**+0.5**
TCE	**Chacachacare**	**4.20**	**186**⇑	*e*P		**Pn**	**02 31 46.0**	**+1.1**
TCE				*e*S		**Sn**	**02 32 32.3**	**-2.0**
TRN	**Trinidad (W)**	**4.23**	**181**⇑	*i*P		**Pn**	**02 31 46.4**	**+1.1**
TRN				*e*S		**Sn**	**02 32 33.0**	**-1.3**
TBH	**Brigand Hill**	**4.39**	**177**⇑	*e*P		**Pn**	**02 31 48.2**	**+0.5**
TBH				*e*S		**Sn**	**02 32 36.4**	**-0.5**
TPP	**Pointe-a-Pierr**	**4.56**	**182**⇓	*e*P		**Pn**	**02 31 50.8**	**+1.2**
TPP				*e*S		**Sn**	**02 32 39.9**	**-2.7**
SJG	**San Juan**	**5.63**	**305**	*e*Pn		**Pn**	**02 32 04.7**	**+1.1**
	64nm,0.6s							
PCRV	**Puerto La Cruz**	**5.70**	**215**	P		**Pn**	**02 32 04.3**	**-0.5**
	2.1nm,0.3s,baz=345,slow=8.3,SNR=6.8							
PCRV				S		**Sn**	**02 33 15.8**	**+6.1**
	7.5nm,0.3s,baz=280,slow=14,SNR=7.9							
SDDR	**Presa de Saban**	**10.37**	**294**	*e*Pn		**Pn**	**02 33 08.7**	**+2.2**
	49nm,0.5s							
SDV	**Santo Domingo**	**10.90**	**238**	P		**Pn**	**02 33 13.1**	**-0.3**
	0.2nm,0.3s,baz=34,slow=9.4,SNR=6.1							
SIV	**San Ignacio**	**30.69**	**180**	P		**P**	**02 36 42.0**	**+0.7**
	3.9nm,0.6s,mb4.3,baz=18,slow=8.8,SNR=30							
WVT	**Waverly**	**31.75**	**317**	*e*P		**P**	**02 36 50.5**	**0.0**
	4.4nm,0.6s,mb4.4							
WCI	**Wyandotte Cave**	**32.04**	**321**	*e*P		**P**	**02 36 53.8**	**+0.9**
	5.5nm,0.7s,mb4.4							
SADO	**Sadowa**	**33.39**	**337**	P		**P**	**02 37 04.5**	**-0.1**
	18nm,1.1s,mb4.7,baz=298,slow=11,SNR=4.1							
WMOK	**Wichita Mounta**	**39.02**	**307**	*e*P		**P**	**02 37 51.3**	**-1.2**
	3.2nm,0.6s,mb4.1							
CBKS	**Cedar Bluff**	**41.30**	**313**	*e*P		**P**	**02 38 10.5**	**-0.7**
	11nm,0.7s,mb4.6							
TXAR	**Lajitas Array**	**41.55**	**298**	P		**P**	**02 38 13.4**	**0.0**
	0.3nm,0.5s,mb3.2,baz=116,slow=8.5,SNR=8.9							
AGMN	**Agassiz Refuge**	**43.78**	**327**	*e*P		**P**	**02 38 30.2**	**-0.9**
	14nm,0.6s,mb4.8							
ULM	**Lac du Bonnet**	**45.00**	**329**	P		**P**	**02 38 39.9**	**-0.9**
	8.5nm,0.6s,mb4.5,baz=137,slow=7.7,SNR=8.4							
ULM	**Lac du Bonnet**	**45.00**	**329**	*e*P		**P**	**02 38 39.5**	**-1.2**
	5.7nm,0.6s,mb4.4							
ANMO	**Albuquerque**	**45.10**	**305**	*e*P		**P**	**02 38 42.1**	**+0.3**
	1.6nm,1.0s,mb3.6							
SDCO	**Great Sand Dun**	**45.14**	**309**	*e*P		**P**	**02 38 41.9**	**-0.2**
	1.7nm,0.9s,mb3.7							
TUC	**Tucson**	**48.09**	**300**	*e*P		**P**	**02 39 05.5**	**+0.4**
	1.9nm,0.8s,mb3.8							
BW06	**Boulder Array**	**49.68**	**314**	*e*P		**P**	**02 39 17.0**	**-0.1**
	3.8nm,1.1s,mb3.9							
PDAR	**Pinedale Array**	**49.68**	**314**	P		**P**	**02 39 17.1**	**0.0**
	3.0nm,0.7s,mb4.0,baz=117,slow=9.3,SNR=26							
LOHW	**Long Hollow**	**50.68**	**315**	*e*P		**P**	**02 39 24.4**	**-0.2**
	1.0nm,0.6s,mb3.6							
HWUT	**Hardware Ranch**	**50.75**	**312**	*e*P		**P**	**02 39 25.1**	**-0.1**
	3.5nm,1.0s,mb3.9							
MOOW	**Moose Ponds**	**50.82**	**315**	*e*P		**P**	**02 39 25.6**	**0.0**
	1.6nm,0.9s,mb3.6							
TPAW	**Teton Pass**	**50.88**	**314**	*e*P		**P**	**02 39 26.1**	**+0.1**
	2.3nm,0.6s,mb4.0							
DUG	**Dugway**	**51.30**	**310**	*e*P		**P**	**02 39 29.5**	**+0.3**
	2.7nm,1.1s,mb3.8							
HLID	**Hailey**	**53.31**	**314**	*e*P		**P**	**02 39 44.1**	**+0.1**
	1.4nm,0.6s,mb3.9							
MDT	**Midelt**	**54.22**	**60**	P		**P**	**02 39 52.1**	**+1.3**
	2.4nm,0.8s,mb4.0,baz=271,slow=5.5,SNR=6.2							
NVAR	**Mina Array Bea**	**55.12**	**307**	P		**P**	**02 39 57.8**	**+0.6**
	1.0nm,0.7s,mb3.7,baz=94,slow=7.3,SNR=9.2							
DBIC	**Dimbokro**	**55.94**	**92**	P		**P**	**02 40 03.5**	**+0.2**
	1.8nm,0.5s,mb4.2,baz=240,slow=9.4,SNR=7.1							
DBIC	**Dimbokro**	**55.94**	**92**	*e*P		**P**	**02 40 03.2**	**-0.2**
	2.2nm,0.6s,mb4.2							
PLCA	**Paso Flores**	**56.01**	**188**	P		**P**	**02 40 02.4**	**-0.9**
	1.6nm,0.9s,mb3.9,baz=146,slow=13,SNR=3.4							
NEW	**Newport**	**56.42**	**318**	*e*P		**P**	**02 40 05.5**	**-0.7**
	3.1nm,0.7s,mb4.2							
YKA	**Yellowknife Ar**	**60.35**	**335**	P		**P**	**02 40 32.4**	**-0.8**
	4.0nm,0.6s,mb4.4,baz=106,slow=7.3,SNR=14							
YKA	**Yellowknife Ar**	**60.35**	**335**	P		**P**	**02 40 32.4**	**-0.8**
TOA0	**Torodi Ar. Sit**	**60.98**	**83**	*e*P		**P**	**02 40 37.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**60.98**	**83**	P		**P**	**02 40 38.0**	**-0.3**
	3.5nm,0.8s,mb4.2,baz=280,slow=6.3,SNR=22							
KEST	**Kesra**	**65.86**	**57**	P		**P**	**02 41 11.2**	**+1.2**
	1.4nm,0.7s,mb3.9,baz=261,slow=6.7,SNR=4.6							
GERES	**GERESS Array B**	**69.09**	**43**	P		**P**	**02 41 30.5**	**+0.4**
	0.6nm,0.6s,mb3.5,baz=227,slow=5.1,SNR=3.9							
INK	**Inuvik**	**69.69**	**338**	*e*P		**P**	**02 41 32.3**	**-1.1**
	223nm,1.0s							
MENT	**Mentasta**	**73.40**	**332**	*e*P		**P**	**02 41 56.2**	**+0.5**
BRTR	**Keskin Array B**	**84.36**	**51**	P		**P**	**02 42 56.5**	**+0.7**
	1.2nm,0.6s,mb3.8							

NNC 30 02:56:02.3±1.7, 4224N×7969E, h0km, mb3.6, mpv3.2, 6C-2D, Error ellipse: s-maj=19.6km s-min=6.2km az=147.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**3.10**	**284**	⇑Pn		Pn	02 56 53.4	+0.9
	11nm,0.6s							
TKM2				⇑Lg			02 57 39.9	
	40nm,0.5s							
MK31	**Makanchi Array**	**4.92**	**21**	Pn		Pn	02 57 20.1	+2.6
	0.7nm,0.3s,baz=198,slow=13,SNR=55							
MK31				⇑Sn		Sn	02 58 21.8	+6.8
	1.6nm,0.3s,baz=202,slow=23,SNR=3.9							
MK31				⇓Lg			02 58 37.3	
	8.2nm,0.7s							
KK31	**Karatax Array**	**6.82**	**280**	⇑Pg		Pg	02 58 04.1	-8.9
	0.7nm,0.5s,baz=88,slow=15,SNR=6.5							
KK31				⇑Lg			02 59 37.7	
	2.5nm,0.5s							
KURBB	**Kurchatov Arra**	**8.43**	**355**	⇓Lg			03 00 31.3	
	2.5nm,0.7s							
KURK	**Kurchatov**	**8.51**	**355**	⇑Lg			03 00 33.3	
	6.5nm,0.9s							

IDC 30 03:28:58.1±3.3, 334S×10018E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=148.8km s-min=24.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.33**	**125**	P		P	03 36 21.1	+0.1
	0.7nm,0.4s,baz=297,slow=7.8,SNR=12							
SONM	**Songino Array**	**51.26**	**5**	P		P	03 38 03.9	+0.4
	1.3nm,0.5s,baz=187,slow=9.3,SNR=10							
MKAR	**Makanchi Array**	**52.36**	**345**	P		P	03 38 12.2	+0.3
	0.5nm,0.5s,baz=162,slow=9.1,SNR=7.2							
KURK	**Kurchatov**	**56.94**	**344**	P		P	03 38 44.5	-0.5
	0.4nm,0.4s,baz=138,slow=5.2,SNR=2.7							
ZALV	**Zalesovo Beam**	**58.51**	**349**	P		P	03 38 55.7	-0.3
	0.6nm,0.5s,baz=183,slow=7.2,SNR=5.0							
TXAR	**Lajitas Array**	**145.64**	**39**	PKPbc		PKPbc	03 48 38.3	-1.1
	0.6nm,0.6s,baz=331,slow=1.1,SNR=10							

IDC 30 03:39:56.5±2.8, 1283S×16731E, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.8/16, mbtmp4.1/3, Error ellipse: s-maj=136.1km s-min=43.0km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.23**	**185**	*e*P		Pn	03 42 22.5	+12
DZM				*e*S		Sn	03 43 57.9	+2.4
CTA	**Charters Tower**	**21.43**	**248**	P		P	03 44 48.3	+2.0
	3.0nm,1.0s,baz=67,slow=14,SNR=3.6							
STKA	**Stephens Creek**	**30.28**	**227**	P		P	03 46 09.6	+0.2
	1.7nm,0.6s,baz=59,slow=9.6,SNR=5.9							
ASAR	**Alice Springs**	**33.43**	**246**	P		P	03 46 36.0	-1.2
	2.1nm,0.7s,baz=73,slow=9.8,SNR=27							
ARCES	**ARCESS Array B**	**118.44**	**346**	PKP		PKPdf	03 58 45.6	+0.1
	1.1nm,0.8s,baz=36,slow=2.1,SNR=7.7							

*ISCJB **30** 03:41:28.0±0.5, 307N±005×12257E±009, h571km±8km, mb4.1/13, Error ellipse: s-maj=13.8km s-min=8.1km az=168.1*
*DJA **30** 03:41:27, 3.16N×12286E, h539km, Mw4.9/4*
*NEIC **30** 03:41:28.2±0.6, 303N×12249E, h553km±8km, mb4.4/9, Error ellipse: s-maj=15.2km s-min=7.2km az=58.0*
*IDC **30** 03:41:28.6±1.0, 304N×12258E, h556km±12km, mb3.2/7, mb1 3.4/10, mb1mx3.2/22, mbtmp3.5/10, Error ellipse: s-maj=23.5km s-min=9.5km az=76.0*

ISC 30 03:41:28.5±0.5, 305N±005×12254E±009, h555km±7km, n24, σ0°72/29, mb4.1/13, 2C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**5.02**	**37**	P		**P**	**03 42 59.1**	**+0.3**
	90nm,0.3s,baz=115,slow=3.7,SNR=5.2							
DAV				S		**S**	**03 44 12.6**	**+0.2**
	68nm,0.3s,baz=20,slow=9.2,SNR=3.1							
KKM	**Kota Kinabalu**	**6.97**	**296**	*e*P		**P**	**03 43 14.9**	**-1.5**
	24nm,0.4s							
KAPI	**Kappang**	**8.47**	**199**	P		**P**	**03 43 31.5**	**+0.4**
	7.4nm,0.3s,baz=95,slow=13,SNR=5.7							
KAPI				S		**S**	**03 45 12.2**	**+0.5**
	0.7nm,0.3s,baz=186,slow=16,SNR=6.8							
BATI	**Baumata**	**13.21**	**175**	P		**P**	**03 44 19.5**	**-0.2**
	6.5nm,0.3s,baz=27,slow=4.5,SNR=3.5							
BATI				S		**S**	**03 46 41.0**	**+0.5**
	1.7nm,0.3s,baz=190,slow=12,SNR=3.3							
KAKA	**Kakadu**	**18.49**	**148**	*e*P		Px	03 44 54.0	
	22nm,0.6s							
WRAB	**Tennant Creek**	**25.61**	**154**	*e*P		**P**	**03 46 12.9**	**-1.6**
	2.0nm,0.4s,mb4.1							
WB2	**Warramunga Arr**	**25.62**	**154**⇑	*i*P		**P**	**03 46 13.3**	**-1.3**
WB2				*e*S		**S**	**03 49 57.4**	**-6.8**
ASAR	**Alice Springs**	**28.77**	**158**	P		**P**	**03 46 41.8**	**-0.3**
	2.5nm,0.5s,mb4.1,baz=339,slow=7.6,SNR=51							
ASAR				S		**S**	**03 50 52.2**	**-0.9**
	0.4nm,0.7s,baz=352,slow=21,SNR=4.7							
ASAR				ScP	ScP		03 52 23.6	+0.2
	0.4nm,0.4s,baz=338,slow=3.3,SNR=4.9							
ASAR	**Alice Springs**	**28.77**	**158**	P		**P**	**03 46 41.8**	**-0.3**
ASAR				S		**S**	**03 50 52.2**	**-0.9**
ASAR				ScP	ScP		03 52 23.6	+0.2
CTA	**Charters Tower**	**32.72**	**136**	P		**P**	**03 47 16.1**	**+0.1**
	3.3nm,0.9s,mb3.9,baz=297,slow=8.9,SNR=3.3							
STKA	**Stephens Creek**	**39.17**	**154**⇑	*i*P		**P**	**03 48 09.5**	**+0.4**
	3.8nm,0.8s,mb4.0							
STKA	**Stephens Creek**	**39.17**	**154**	P		**P**	**03 48 09.6**	**+0.5**
	6.1nm,0.8s,mb4.2,baz=327,slow=6.1,SNR=11							
TAPN	**Taplejung**	**41.13**	**309**	*e*P		**P**	**03 48 24.9**	**0.0**
	5.6nm,0.6s,mb4.3							
JIRN	**Jiri**	**42.45**	**309**	*e*P		**P**	**03 48 35.7**	**+0.4**
	6.9nm,0.5s,mb4.4							
GUN	**Gumba**	**42.82**	**309**	*e*P		**P**	**03 48 38.7**	**+0.5**
	14nm,0.7s,mb4.6							
ARMA	**Armidale**	**43.35**	**142**	*e*P		**P**	**03 48 44.3**	**+2.1**
KOLN	**Koldanda**	**44.54**	**307**	*e*P		**P**	**03 48 52.0**	**+0.5**
	14nm,0.7s,mb4.6							
DANN	**Dangsing**	**44.67**	**308**	*e*P		**P**	**03 48 52.5**	**-0.1**
	14nm,0.6s,mb4.7							
SONM	**Songino Array**	**46.74**	**345**	P		**P**	**03 49 08.0**	**+0.1**
	1.5nm,0.7s,mb3.6,baz=156,slow=8.6,SNR=9.1							
MK31	**Makanchi Array**	**55.80**	**328**	*e*P		**P**	**03 50 13.2**	**-0.2**
MKAR	**Makanchi Array**	**55.80**	**328**	P		**P**	**03 50 13.6**	**+0.1**
	0.8nm,0.3s,mb3.4,baz=124,slow=8.3,SNR=16							
PETK	**Petropavlovsk-**	**57.70**	**24**	P		**P**	**03 50 26.2**	**-0.1**
	9.1nm,1.1s,mb3.9,baz=216,slow=4.6,SNR=3.8							
KURK	**Kurchatov**	**60.13**	**329**	P		**P**	**03 50 42.9**	**+0.3**
	0.3nm,0.3s,mb3.1,baz=131,slow=6.9,SNR=3.4							
KURK	**Kurchatov**	**60.13**	**329**	*e*P		**P**	**03 50 42.1**	**-0.6**
	2.2nm,0.5s,mb3.7							

TRN 30 03:50:03.3, 1441N×6066W, h25km, MD3.6, M2.5(FDF), 8C-5D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.26**	**302**⇓	*i*P		Pb	03 50 11.5	+1.7
BIM	**Bigot**	**0.41**	**285**⇓	*i*P		Pb	03 50 14.0	+2.0
BIM				⇓*e*S		Sb	03 50 21.3	+3.4
SLW	**Petit Monier**	**0.47**	**214**⇑	*e*P		Pb	03 50 15.0	+1.9
SLW				⇑*e*S		Sb	03 50 23.5	+3.8
FDF	**Fort de France**	**0.57**	**304**⇓	*i*P		Pb	03 50 15.8	+1.1
FDF				⇓*e*S		Sb	03 50 24.6	+2.2
SLB	**Belfond**	**0.69**	**212**⇑	*i*P		Pb	03 50 18.8	+2.1
SLB				*e*S		Sb	03 50 30.2	+4.3
MCLT	**Moule a Chique**	**0.75**	**201**⇑	*e*P		Pb	03 50 18.7	+1.0
MCLT				*e*S		Sb	03 50 31.4	+3.9
SSV	**Crater Summit**	**1.20**	**205**⇑	*i*P		Pn	03 50 26.1	+1.6
SSV				*e*S		Sn	03 50 44.5	+4.6
BHS	**Barnard House**	**1.20**	**202**	*e*P		Pn	03 50 25.8	+1.3
BHS				*e*S		Sn	03 50 43.4	+3.4
SVV	**Soufriere Volc**	**1.21**	**206**⇑	*e*P		Pn	03 50 26.8	+2.1
SVV				*e*S

TPP Pointe-a-Pierr 4.72 183 *e*P P **04 01 14.6 +4.2**
TPP *e*S **Sn 04 02 03.2 -1.6**
HUMP Col San Antoni 5.39 305 *e*Pn **Pn 04 01 18.6 -0.7**
SJG San Juan 5.62 303 *e*Pn **Pn 04 01 20.4 -1.9**
SJG *e*Sn **Sn 04 02 23.7 -2.3**
PCRV Puerto La Cruz 5.88 215 P **Pn 04 01 25.7 -0.1**
6.4nm,0.3s,baz=37,slow=2.9,SNR=23
PCRV S **Sn 04 02 31.7 -0.9**
5.6nm,0.3s,baz=347,slow=20,SNR=1.7
AOPR Arecibo Observ 6.23 302 *e*Pn **Pn 04 01 30.3 -0.2**
MPR Mayaguez 6.48 300 *e*Pn **Pn 04 01 33.2 -0.6**
SDDR Presa de Saban 10.39 293 *e*Pn **Pn 04 02 25.6 -0.2**
SDDR *e*Sn **Sn 04 04 21.4 +0.6**
SDV Santo Domingo 11.06 237 P **Pn 04 02 35.1 +0.4**
0.3nm,0.3s,baz=23,slow=9.9,SNR=3.4
SDV S **Sn 04 04 38.4 +1.4**
0.6nm,0.3s,baz=329,slow=14,SNR=3.8
SDV Santo Domingo 11.06 237 *e*Pn **Pn 04 02 34.3 -0.4**
BBSR BB Station 17.52 350 *e*P **Pn 04 03 54.7 -1.0**
39nm,0.7s
OTAV Otavalo 22.51 231 *e*P **P 04 04 47.0 -0.9**
19nm,1.0s,mb4.5
OTAV *e*S **S 04 08 48.1 +4.5**
NHSC New Hope 24.87 320 *e*P **P 04 05 09.4 +0.1**
213nm,1.4s,mb5.5
CNNC Cliffs of the 25.06 326 *e*P **P 04 05 10.9 0.0**
101nm,1.0s,mb5.3
TGUH Tegucigalpa,Un 25.23 271⇑*i*P **P 04 05 13.5 +0.8**
52nm,0.8s,mb5.1
TGUH *e*pP pP 04 05 48.3 +4.1
CBN Corbin 27.12 331 *e*P **P 04 05 29.4 -0.1**
42nm,0.8s,mb5.1
GOGA Godfrey 27.20 316 *e*P **P 04 05 29.9 -0.3**
21nm,1.3s,mb4.6
GOGA *e*PcP PcP 04 08 46.2 -0.5
GOGA Godfrey 27.20 316 *e*P **P 04 05 29.9 -0.3**
GOGA *e* 04 08 46.2
GOGA pmax pmax
comp=Z,21nm,1.3s,mb4.6
ATAH Atahualpa 27.75 219 P **P 04 05 36.9 +1.6**
comp=Z,5.1nm,0.6s,mb4.4,baz=60,slow=8.1,SNR=3.5
ATAH pP pP 04 06 07.0 -0.1
comp=Z,9.9nm,1.0s,baz=72,slow=9.3,SNR=2.8
SDMD Soldier's Deli 27.87 333 *e*P **P 04 05 36.2 +0.2**
comp=Z,25nm,1.0s,mb4.9
BLA Blacksburg 27.89 326⇑*i*P **P 04 05 36.4 +0.1**
comp=Z,26nm,0.8s,mb5.0
BLA Blacksburg 27.89 326*i*P **P 04 05 36.4 +0.1**
BLA pmax pmax
comp=Z,26nm,0.8s,mb5.0
MVL Millersville 28.15 335 *e*P **P 04 05 39.2 +0.6**
comp=Z,41nm,0.8s,mb5.2
BRAL Brewton 28.49 308 *e*P **P 04 05 42.6 +0.9**
comp=Z,88nm,0.9s,mb5.5
TKL Tuckaleechee C 28.79 320 P **P 04 05 44.1 -0.2**
comp=Z,4.2nm,0.5s,mb4.4,baz=100,slow=10,SNR=8.0
TKL pP pP 04 06 15.1 -1.2
comp=Z,5.2nm,0.8s,baz=170,slow=8.3,SNR=3.3
CPCT Cooper Cave 29.13 318 *e*P **P 04 05 47.3 0.0**
TZTN Tazewell 29.22 321 *e*P **P 04 05 48.1 0.0**
comp=Z,25nm,1.0s,mb4.9
SSPA Standing Stone 29.33 334⇑*i*P **P 04 05 49.3 +0.3**
comp=Z,19nm,0.8s,mb4.9
LRAL Lakeview Retre 29.44 312⇑*i*P **P 04 05 50.0 -0.1**
MCWV Mont Chateau 29.44 330 *e*P **P 04 05 50.4 +0.4**
comp=Z,32nm,0.9s,mb5.1
BINY Binghamton 29.90 338 *e*P **P 04 05 54.6 +0.7**
comp=Z,29nm,1.0s,mb5.0
SWET Sewanee 29.91 317 *e*P **P 04 05 54.4 +0.1**
EMMW East Machias 30.03 351 *e*P **P 04 05 56.6 +1.4**
HNH Hanover 30.08 344 *e*P **P 04 05 56.5 +0.9**
LBNH Lisbon 30.48 345 *e*P **P 04 06 00.2 +1.1**
comp=Z,37nm,0.8s,mb5.2
LBNH Lisbon 30.48 345 *e*P **P 04 06 00.2 +1.1**
LBNH pmax pmax
comp=Z,37nm,0.8s,mb5.2
MDV Middlebury 30.60 343 *e*P **P 04 06 00.9 +0.8**
SIV San Ignacio 30.85 180 P **P 04 06 03.3 +0.7**
comp=Z,28nm,0.6s,mb5.2,baz=14,slow=8.9,SNR=177
SIV pP pP 04 06 33.1 -1.6
comp=Z,4.7nm,0.7s,baz=360,slow=13,SNR=1.8
SIV sP sP 04 06 50.5 -1.6
comp=Z,4.6nm,0.7s,baz=6.5,slow=11,SNR=2.1
NCB Newcomb 30.88 342 *e*P **P 04 06 03.6 +0.9**
comp=Z,37nm,0.9s,mb5.1
ALLY Alegheny Colle 31.15 332 *e*P **P 04 06 05.7 +0.7**
comp=Z,90nm,0.7s,mb5.6
ACSO Alum Creek Sta 31.46 327⇑*i*P **P 04 06 08.0 +0.2**
comp=Z,82nm,0.6s,mb5.6
VBMS Vicksburg 31.66 308 *e*P **P 04 06 10.3 +0.6**
comp=Z,19nm,0.4s,mb5.2
WVT Waverly 31.70 316 *e*P **P 04 06 09.7 -0.3**
comp=Z,36nm,1.1s,mb5.0
WVT *e*PcP PcP 04 08 57.6 -0.5
WVT Waverly 31.70 316 *e*P **P 04 06 09.7 -0.2**
WVT *e* 04 08 57.6
WVT pmax pmax
comp=Z,36nm,1.1s,mb5.0
OXF Oxford 31.92 312⇑*i*P **P 04 06 11.6 -0.3**
comp=Z,75nm,0.5s,mb5.7
OXF *e*PcP PcP 04 08 58.4 -0.3
OXF Oxford 31.92 312⇑*i*P **P 04 06 11.6 -0.3**
OXF *e* 04 08 58.4
OXF pmax pmax
comp=Z,75nm,0.5s,mb5.7
WCI Wyandotte Cave 31.98 321 *e*P **P 04 06 12.8 +0.5**
comp=Z,36nm,0.8s,mb5.2
WCI *e*PcP PcP 04 08 58.4 -0.4
WCI Wyandotte Cave 31.98 321 *e*P **P 04 06 12.8 +0.4**
WCI *e* 04 08 58.4
WCI pmax pmax
comp=Z,36nm,0.8s,mb5.2
UTMT University of 32.51 316 *e*P **P 04 06 16.9 -0.2**
comp=Z,219nm,1.0s,mb5.8
RCBR Riachuelo 32.56 128 *e*P **P 04 06 17.8 +0.1**
comp=Z,24nm,1.1s,mb4.8
USIN University of 32.66 319 *e*P **P 04 06 18.5 +0.1**
comp=Z,83nm,1.1s,mb5.4
BLO Bloomington 32.72 322 *e*P **P 04 06 18.5 -0.3**
comp=Z,50nm,0.7s,mb5.3
BLO *e*PcP PcP 04 09 00.5 -0.3
BLO Bloomington 32.72 322 *e*P **P 04 06 18.5 -0.3**
BLO *e* 04 09 00.5
BLO pmax pmax
comp=Z,49nm,0.7s,mb5.3
BDFB Brasilia 33.17 156 P **P 04 06 24.2 +1.2**
comp=Z,6.4nm,0.7s,mb4.5,baz=325,slow=15,SNR=24
BDFB Brasilia 33.17 156 *e*P **P 04 06 23.6 +0.7**
comp=Z,14nm,0.9s,mb4.7
BDFB Brasilia 33.17 156 *e*P **P 04 06 23.6 +0.6**
BDFB pmax pmax
comp=Z,14nm,0.9s
AAM Ann Arbor 33.32 329 *e*P **P 04 06 24.5 +0.5**
comp=Z,99nm,0.9s,mb5.5
AAM Ann Arbor 33.32 329 *e*P **P 04 06 24.5 +0.5**
AAM pmax pmax
comp=Z,99nm,0.9s,mb5.5
OLIL Olney 33.40 320 *e*P **P 04 06 24.9 +0.2**
comp=Z,135nm,1.1s,mb5.6
OLIL *e*PP PP 04 07 37.7 -5.7
OLIL *e*PcP PcP 04 09 02.5 -0.3
SIUC Southern Illin 33.51 318 *e*P **P 04 06 26.2 +0.5**
comp=Z,71nm,1.0s,mb5.3
UALR University of 34.17 311 *e*P **P 04 06 30.9 -0.5**
comp=Z,38nm,1.4s,mb4.9
FVM French Village 34.45 317 *e*P **P 04 06 33.5 -0.4**
comp=Z,20nm,0.6s,mb5.0
FVM *e*PcP PcP 04 09 05.6 -0.2
FVM French Village 34.45 317 *e*P **P 04 06 33.5 -0.4**
FVM *e* 04 09 05.6
FVM pmax pmax
comp=Z,20nm,0.6s,mb5.0
MIAR Mount Ida 34.97 310 *e*P **P 04 06 38.1 -0.3**
comp=Z,24nm,1.0s,mb4.8
MIAR Mount Ida 34.97 310 *e*P **P 04 06 38.1 -0.3**
MIAR pmax pmax
comp=Z,24nm,1.0s,mb4.8
CCM Cathedral Cave 35.03 317 *e*P **P 04 06 38.3 -0.6**
comp=Z,49nm,0.9s,mb5.1
CCM *e*PcP PcP 04 09 07.8 +0.3
CCM *e*ScP ScP 04 12 38.5 -0.5
CCM Cathedral Cave 35.03 317 *e*P **P 04 06 38.3 -0.5**
CCM *e* 04 09 07.8
CCM pmax pmax
comp=Z,49nm,0.9s,mb5.1
HKT Hockley 35.08 301 *e*P **P 04 06 38.5 -0.8**
comp=Z,42nm,1.3s,mb4.9
HKT Hockley 35.08 301 *e*P **P 04 06 38.5 -0.9**
HKT pmax pmax
comp=Z,42nm,1.3s,mb4.9
HDIL Hopedale 35.24 322⇑*i*P **P 04 06 40.5 -0.1**
comp=Z,64nm,0.6s,mb5.4
GLMI Grayling 35.67 331⇑*i*P **P 04 06 44.5 +0.3**
comp=Z,278nm,0.6s,mb6.1
JFWS Jewell Farm 37.27 324⇑*i*P **P 04 06 57.3 -0.5**
comp=Z,55nm,0.8s,mb5.2
JFWS Jewell Farm 37.27 324⇑*i*P **P 04 06 57.3 -0.5**
JFWS pmax pmax
comp=Z,55nm,0.8s,mb5.2
LVC Limon Verde 38.19 192 P **P 04 07 04.1 -1.5**
comp=Z,3.1nm,0.5s,mb4.2,baz=358,slow=5.9,SNR=11
LVC Limon Verde 38.19 192 *e*P **P 04 07 04.0 -1.6**
comp=Z,124nm,2.7s,mb5.1
SCIA State Center 38.43 320⇑*i*P **P 04 07 07.1 -0.4**
comp=Z,88nm,0.9s,mb5.4
JCT Junction City 38.53 300⇑*e*P **P 04 07 07.5 -1.0**
comp=Z,68nm,0.8s,mb5.3
JCT *e*pP pP 04 07 40.4 -1.2
JCT *e*PcP PcP 04 09 19.1 +0.9
JCT Junction City 38.53 300⇑*e*P **P 04 07 07.5 -1.0**
JCT *e**PP pP 04 07 40.4 -1.1
JCT *e* 04 09 19.1
JCT pmax pmax
comp=Z,68nm,0.8s,mb5.3
COWI Conover 38.79 329⇑*i*P **P 04 07 10.4 0.0**
comp=Z,37nm,0.8s,mb5.1
WMOK Wichita Mounta 39.00 307⇑*i*P **P 04 07 11.0 -1.4**
comp=Z,48nm,0.6s,mb5.3
WMOK Wichita Mounta 39.00 307*i*P **P 04 07 11.0 -1.4**
WMOK pmax pmax
comp=Z,48nm,0.6s,mb5.3
KSU1 Kansas State U 39.19 315 *e*P **P 04 07 12.1 -1.8**
comp=Z,65nm,0.6s,mb5.4
SCHQ Schefferville 39.93 355 P **P 04 07 20.3 +0.6**
comp=Z,46nm,0.5s,mb5.4,baz=176,slow=7.4,SNR=209
SCHQ Schefferville 39.93 355⇑*i*P **P 04 07 20.3 +0.5**
comp=Z,54nm,0.6s,mb5.3
CAM3 Guarapari 40.96 150 *e*P **P 04 07 29.1 +0.4**
CAM3 *i* 04 07 35.3
EYMN Ely 41.23 329 *e*P **P 04 07 30.3 -0.3**
comp=Z,17nm,0.6s,mb4.9
CBKS Cedar Bluff 41.26 312⇑*i*P **P 04 07 30.3 -0.7**
comp=Z,79nm,0.7s,mb5.5
CBKS Cedar Bluff 41.26 312*i*P **P 04 07 30.3 -0.7**
CBKS pmax pmax
comp=Z,79nm,0.7s,mb5.5
AMTX Amarillo 41.30 306 *e*P **P 04 07 30.3 -1.0**
comp=Z,35nm,0.7s,mb5.1
CAM4 Nova Friburgo 41.43 153 *e*P **P 04 07 32.4 -0.1**
CAM4 *i* 04 07 36.4
CAM4 *i* 04 07 45.4
ECSD EROS,Sioux Fal 41.52 321⇑*i*P **P 04 07 32.2 -0.7**
comp=Z,70nm,0.8s,mb5.3
ECSD *e*PcP PcP 04 09 27.4 -0.2
ECSD *e*ScP ScP 04 13 03.1 -0.5
TXAR Lajitas Array 41.55 297 P **P 04 07 32.6 -0.9**
comp=Z,3.9nm,0.5s,mb4.3,baz=113,slow=7.7,SNR=117
TXAR pP pP 04 08 06.0 -0.8
comp=Z,4.3nm,0.8s,baz=114,slow=12,SNR=4.1
TXAR PcP PcP 04 09 28.0 0.0
comp=Z,4.4nm,0.9s,baz=115,slow=4.3,SNR=5.6
TXAR ScP ScP 04 13 04.3 +0.2
comp=Z,0.4nm,0.7s,baz=123,slow=4.4,SNR=4.5
TXAR LR LR 04 26 48.5
comp=Z,105nm,18.2s,baz=5.0,slow=39
TXAR Lajitas Array 41.55 297 P **P 04 07 32.6 -0.9**
TXAR pP pP 04 08 06.0 -0.8
TXAR PcP PcP 04 09 28.0 0.0
TXAR ScP ScP 04 13 04.3 +0.2
TXAR LR LR 04 26 48.5
TXAR Lajitas Array 41.55 297 P **P 04 07 32.6 -0.9**
TXAR *PP pP 04 08 06.1 -0.8
TXAR 04 09 28.0
GDL2 Guadalupe Moun 42.73 301 *e*P **P 04 07 42.7 -0.3**
OGNE Ogallala 43.74 314 *e*P **P 04 07 49.9 -1.1**
comp=Z,48nm,0.9s,mb5.1
ULM Lac du Bonnet 44.92 329 P **P 04 07 59.0 -1.1**
comp=Z,54nm,0.5s,mb5.5,baz=132,slow=8.4,SNR=53
ULM Lac du Bonnet 44.92 329*i*P **P 04 07 58.8 -1.4**
comp=Z,52nm,0.6s,mb5.3
ULM *e*PcP PcP 04 09 37.7 -1.2
LPM Los Pinos Moun 45.07 304 *e*P **P 04 08 01.9 +0.3**
LPM *e*pP pP 04 08 34.9 -0.5
ANMO Albuquerque 45.09 305 *e*P **P 04 08 01.8 +0.1**
comp=Z,26nm,1.2s,mb4.7
ANMO *e*pP pP 04 08 35.4 -0.2
ANMO *e*PcP PcP 04 09 39.2 -0.7
ANMO Albuquerque 45.09 305 *e*P **P 04 08 01.8 +0.1**
ANMO *e**PP pP 04 08 35.4 -0.2
ANMO *e* 04 09 39.2
ANMO pmax pmax
comp=Z,26nm,1.2s
SDCO Great Sand Dun 45.12 309 *e*P **P 04 08 01.6 -0.3**
comp=Z,20nm,0.8s,mb4.8
SDCO *e*PcP PcP 04 09 40.8 +0.9
Y22D IRIS PASSCAL I 45.25 303⇓P **P 04 08 03.7 +0.7**
baz=45
LENM Lemitar 45.31 303 *e*P **P 04 08 03.8 +0.3**
ISCO Idaho Springs 45.86 311 *e*P **P 04 08 07.8 +0.1**
comp=Z,22nm,0.8s,mb4.8
ISCO *e*PcP PcP 04 09 43.0 +0.6
ISCO Idaho Springs 45.86 311 *e*P **P 04 08 07.8 +0.1**
ISCO *e* 04 09 43.0
ISCO pmax pmax
comp=Z,22nm,0.8s,mb4.8
PHWY Pilot Hill 46.27 313⇑*i*P **P 04 08 10.8 -0.1**
comp=Z,31nm,0.8s,mb5.0
RSSD Black Hills 46.41 317 *e*P **P 04 08 11.4 -0.6**
comp=Z,13nm,0.7s,mb4.7
RSSD *e*ScP ScP 04 13 24.0 +0.4
RSSD Black Hills 46.41 317 *e*P **P 04 08 11.4 -0.5**
RSSD pmax pmax
comp=Z,13nm,0.7s,mb4.7
319A Douglas 46.68 299⇓P **P 04 08 15.1 +0.8**
baz=47
R21A Cimarron 46.84 309⇓P **P 04 08 15.9 +0.5**
baz=47
CFAA Coronel Fontan 46.88 188 P **P 04 08 14.4 -1.3**
comp=Z,1.0nm,0.7s,baz=360,slow=7.3,SNR=17
CFAA pP pP 04 08 47.9 -1.9
comp=Z,2.2nm,1.0s,baz=344,slow=5.4,SNR=5.3
CFAA Coronel Fontan 46.88 188 P **P 04 08 14.4 -1.3**
CFAA pP pP 04 08 47.9 -1.9
119A Ashpeak Ranch, 46.93 301⇑P **P 04 08 17.1 +0.9**
baz=47
Z19A T-Link Ranch, 47.00 302⇓P **P 04 08 17.6 +0.9**
baz=47
Y19A Nutrioso 47.12 302⇓P **P 04 08 18.8 +1.2**
baz=47
X19A St. Johns 47.24 303⇑P **P 04 08 19.4 +0.9**
baz=47
MVCO Mesa Verde 47.25 307 *e*P **P 04 08 18.8 +0.2**
comp=Z,8.0nm,0.8s,mb4.4
MVCO *e*PcP PcP 04 09 47.7 +0.3
MVCO Mesa Verde 47.25 307⇑P **P 04 08 19.4 +0.8**
baz=47
318A Bisbee 47.29 299⇑P **P 04 08 19.5 +0.5**
baz=47
V19A Window Rock 47.32 305⇓P **P 04 08 19.4 +0.2**
baz=47
O21A Pagoda 47.34 311⇑P **P 04 08 19.7 +0.5**
baz=47
218A Dragoon 47.42 300⇓P **P 04 08 20.8 +0.8**
baz=47
W19A Sanders 47.46 304⇑P **P 04 08 20.5 +0.3**
baz=47
118A Homack Ranch, 47.47 301⇓P **P 04 08 21.1 +0.7**
baz=47
N21A Black Mountain 47.55 312⇑P **P 04 08 21.3 +0.4**
baz=48
T19A Beclabito 47.57 306⇑P **P 04 08 21.2 +0.2**
baz=48
Z18A Geronimo 47.60 301⇑P **P 04 08 22.2 +0.9**
baz=48
RWWY Rawlins 47.64 313 *e*P **P 04 08 21.7 +0.2**
comp=Z,28nm,0.9s,mb4.9
M21A Separation Pea 47.72 313⇓P **P 04 08 22.3 +0.2**
baz=48
Y18A Canyon Day Jun 47.72 302⇓P **P 04 08 23.0 +0.7**
baz=48
W18A Petrified Fore 47.74 304⇑P **P 04 08 22.8 +0.4**
baz=48
X18A Snowflake 47.79 303⇓P **P 04 08 23.6 +0.7**
baz=48
L21A Rawlins 47.84 313⇓P **P 04 08 23.0 -0.1**
baz=48
O20A White River Ci 47.88 311⇓P **P 04 08 23.2 -0.2**
baz=48
V18A Ganado 48.02 305⇑P **P 04 08 24.6 0.0**
baz=48
217A Green Valley 48.04 299⇑P **P 04 08 24.9 +0.1**
baz=48
TUC Tucson 48.09 300 *e*P **P 04 08 25.1 0.0**
comp=Z,25nm,0.9s,mb4.8
TUC Tucson 48.09 300 *e*P **P 04 08 25.1 -0.1**
TUC pmax pmax
comp=Z,25nm,0.9s,mb4.8
117A Oracle 48.09 300⇑P **P 04 08 25.6 +0.4**
baz=48
N20A Spence Gulch, 48.11 312⇓P **P 04 08 25.5 +0.3**
baz=48
R19A Curley Farm, L 48.12 308⇓P **P 04 08 25.3 0.0**
baz=48
U18A Rough Rock, Ch 48.13 306⇑P **P 04 08 25.5 +0.1**
baz=48
M20A Sweetwater, Wa 48.26 313⇓P **P 04 08 26.8 +0.5**
baz=48
P19A Cripple Cowboy 48.27 310⇑P **P 04 08 25.9 -0.5**
baz=48
Q19A Hogan Spring (48.30 309⇑P **P 04 08 26.4 -0.3**
baz=48
T18A Mexican Hat 48.30 307⇑P **P 04 08 26.8 +0.1**
baz=48
Y17A Roosevelt 48.37 302⇓P **P 04 08 28.0 +0.7**
baz=48
DGMT Dagmar 48.46 323⇑*i*P **P 04 08 27.7 0.0**
comp=Z,169nm,0.6s,mb5.8
DGMT Dagmar 48.46 323⇑P **P 04 08 28.1 +0.4**
baz=48,SNR=47
S18A Hurst Farm, Bl 48.53 307⇑P **P 04 08 28.4 0.0**
baz=48
L20A Wamsutter 48.54 313⇓P **P 04 08 28.9 +0.4**
baz=48
216A Three Points, 48.61 299⇓P **P 04 08 29.1 0.0**
baz=49
R18A Canyonlands Na 48.62 308⇓P **P 04 08 29.1 0.0**
baz=49
K20A Yellowstone Ra 48.76 314⇓P **P 04 08 30.1 0.0**
baz=49
N19A John Jarvie Ra 48.79 312⇑P **P 04 08 29.9 -0.5**
baz=49
Z16A Peralta Trail, 48.79 301⇑P **P 04 08 31.1 +0.6**
baz=49
U17A Shonto 48.79 306⇓P **P 04 08 30.5 +0.1**
baz=49
116A Eloy 48.90 300⇑P **P 04 08 31.4 +0.1**
baz=49
Y16A Circle Bar Ran 48.92 302⇑P **P 04 08 32.3 +0.8**
baz=49
M19A Rock Springs 48.96 312⇓P **P 04 08 31.2 -0.4**
baz=49
X16A Lo Mia Camp, P 48.98 303⇑P **P 04 08 32.8 +0.9**
baz=49
U16A Tuba City 49.06 305⇑P **P 04 08 32.9 +0.4**
baz=49
WUAZ Wupatki 49.13 304⇑*i*P **P 04 08 33.7 +0.6**
comp=Z,56nm,0.8s,mb5.2
WUAZ *e*PcP PcP 04 09 53.2 -1.1
WUAZ *e*ScP ScP 04 13 34.1 -1.2
WUAZ Wupatki 49.13 304⇑P **P 04 08 33.8 +0.7**
baz=49,SNR=30
S17A Black Ridge (B 49.13 307⇑P **P 04 08 33.7 +0.6**
baz=49
K19A Absolon Red Bu 49.16 314⇑P **P 04 08 32.8 -0.4**
baz=49
N18A Larsen Ranch, 49.17 312⇑P **P 04 08 32.8 -0.5**
baz=49
W16A Flagstaff 49.18 304⇑P **P 04 08 34.5 +1.1**
baz=49
O18A Roosevelt 49.21 311⇓P **P 04 08 33.6 0.0**
baz=49
P18A Preston Nutter 49.21 310⇓P **P 04 08 33.9 +0.3**
baz=49
R17A Hanksville Air 49.25 308⇑P **P 04 08 34.0 +0.1**
baz=49
SRU San Rafael 49.28 309 *e*P **P 04 08 34.3 +0.2**
comp=Z,16nm,0.8s,mb4.7
SRU San Rafael 49.28 309⇓P **P 04 08 34.2 +0.1**
baz=49,SNR=22
SRU San Rafael 49.28 309 *e*P **P 04 08 34.3 +0.1**
SRU pmax pmax
comp=Z,16nm,0.8s,mb4.7
L19A Farson 49.29 313⇑P **P 04 08 34.4 +0.2**
baz=49
Z15A Gila River Ind 49.38 301⇓P **P 04 08 35.2 +0.2**
baz=49
P17A Butcher Ranch, 49.54 309⇓P **P 04 08 36.4 +0.3**
baz=50
M18A Lyman 49.59 312⇓P **P 04 08 36.4 0.0**
baz=50
Y15A Casa Rosa Ranc 49.63 302⇑P **P 04 08 37.2 +0.4**
baz=50
BW06 Boulder Array 49.64 314⇑*i*P **P 04 08 36.3 -0.4**
comp=Z,44nm,0.8s,mb5.1
BW06 Boulder Array 49.64 314⇑P **P 04 08 36.6 -0.2**
baz=50,SNR=62
PDAR Pinedale Array 49.64 314 P **P 04 08 36.6 -0.1**
comp=Z,36nm,0.8s,mb5.1,baz=117,slow=9.4,SNR=255
PDAR pP pP 04 09 10.1 -1.2
comp=Z,7.5nm,0.8s,baz=119,slow=8.3,SNR=1.6
PDAR ScP ScP 04 13 37.3 0.0
comp=Z,3.8nm,0.9s,baz=110,slow=6.2,SNR=13
X15A Humboldt 49.64 303⇑P **P 04 08 37.7 +0.7**
baz=50
L18A Fontenelle, Gr 49.72 313⇑P **P 04 08 37.4 +0.1**
baz=50
O17A Robinson Place 49.73 310⇓P **P 04 08 38.3 +0.8**
baz=50
214A Organ Pipe Nat 49.74 299⇑P **P 04 08 37.9 +0.2**
baz=50
W15A Williams 49.79 303⇓P **P 04 08 39.2 +1.1**
baz=50
R16A Teasdale 49.81 308⇓P **P 04 08 38.7 +0.5**
baz=50
V15A Kaibab Nationa 49.83 304⇑P **P 04 08 39.3 +0.9**
baz=50
K18A Toltan Ranch, 49.94 313⇓P **P 04 08 39.7 +0.7**
baz=50
FCC Fort Churchill 49.97 338 *e*P **P 04 08 38.0 -0.9**
comp=Z,27nm,0.8s,mb4.9
FCC Fort Churchill 49.97 338 *e*P **P 04 08 38.0 -1.0**
FCC pmax pmax
comp=Z,27nm,0.8s,mb4.9
N17A Moffit Pass 50.00 311⇑P **P 04 08 39.7 +0.1**
baz=50
M17A Scullys Gap (B 50.03 312⇑P **P 04 08 39.3 -0.5**
baz=50
U15A North Rim 50.04 305⇑P **P 04 08 40.9 +1.0**
baz=50
Z14A Wintersburg 50.05 301⇓P **P 04 08 40.4 +0.3**
baz=50
J18A Kendall Valley 50.10 314⇓P **P 04 08 39.7 -0.6**
baz=50
I18A Diamond G Ranc 50.12 315⇑P **P 04 08 40.3 -0.1**
baz=50
DAU Daniels Canyon 50.17 310 *e*P **P 04 08 41.6 +0.7**
X14A Yava 50.17 302⇑P **P 04 08 41.7 +0.7**
baz=50
Y14A Wickenburg 50.18 302⇑P **P 04 08 41.4 +0.3**
baz=50
T15A Red Dirt Ranch 50.23 306⇑P **P 04 08 42.0 +0.7**
baz=50
RLMT Red Lodge 50.24 317⇑*e*P **P 04 08 41.3 0.0**
comp=Z,82nm,1.1s,mb5.3
RLMT *e*ScP ScP 04 13 39.9 +0.1
RLMT Red Lodge 50.24 317⇓P **P 04 08 41.4 +0.2**
baz=50,SNR=53
MPU Maple Canyon 50.34 310 *e*P **P 04 08 42.4 +0.2**
comp=Z,23nm,1.0s,mb4.8
S15A Panguitch 50.35 307⇓P **P 04 08 42.8 +0.5**
baz=50
JLU Jordanelle 50.36 311 *e*P **P 04 08 42.7 +0.5**
L17A Cokeville 50.36 313⇓P **P 04 08 42.0 -0.3**
baz=50
MSU Marysvale 50.39 308 *e*P **P 04 08 43.1 +0.6**
R15A Junction 50.40 307⇓P **P 04 08 43.3 +0.7**
baz=50
W14A Seligman 50.45 303⇓P **P 04 08 43.9 +0.8**
baz=50
G18A Lazy EL Ranch, 50.50 317⇑P **P 04 08 43.0 -0.3**

V14A **Boquillas Ranc** 50.54 304 ⇓P P 04 08 44.6 +0.9
baz=50
K17A **Gardner Place,** 50.59 313 ⇓P P 04 08 43.7 -0.2
baz=51
FFC **Flin Flon** 50.59 331 P P 04 08 42.5 -1.3
comp=Z,144nm,1.1s,mb5.5,SNR=8.7
FFC **Flin Flon** 50.59 331 eP P 04 08 42.3 -1.5
comp=Z,24nm,0.9s,mb4.8
FFC **Flin Flon** 50.59 331 eP P 04 08 42.3 -1.5
FFC pmax pmax
comp=Z,24nm,0.9s,mb4.8
J17A **Brown Place, J** 50.63 314 ⇑P P 04 08 44.4 +0.2
baz=51
LOHW **Long Hollow** 50.63 315 eP P 04 08 44.1 -0.1
comp=Z,36nm,1.2s,mb4.9
LOHW ePcP PcP 04 09 58.8 -0.8
113A **Mohawk Valley,** 50.65 300 ⇓P P 04 08 44.4 -0.2
baz=51
NLU **North Lily Min** 50.66 310 eP P 04 08 45.2 +0.7
SNOW **Snow King Moun** 50.69 314 eP P 04 08 44.8 +0.1
comp=Z,18nm,0.8s,mb4.8
I17A **Pilgram Creek** 50.71 315 ⇓P P 04 08 45.0 +0.2
baz=51
P15A **Leamington** 50.72 309 ⇑P P 04 08 45.1 +0.1
baz=51
HWUT **Hardware Ranch** 50.72 312 eP P 04 08 44.6 -0.3
comp=Z,48nm,1.1s,mb5.0
HWUT ePcP PcP 04 09 60.0 0.0
AHID **Auburn Hatcher** 50.72 313⇑iP P 04 08 44.7 -0.2
AHID ePcP PcP 04 09 59.0 -0.9
REDW **Red Top Meadow** 50.73 314 eP P 04 08 44.9 -0.1
comp=Z,33nm,1.1s,mb4.9
REDW eScP ScP 04 13 39.9 -2.1
L16A **Fish Haven** 50.74 312 ⇑P P 04 08 44.9 -0.2
baz=51
U14A **Mt Trumbull** 50.74 305 ⇓P P 04 08 46.1 +0.9
baz=51
MOOW **Moose Ponds** 50.77 315 eP P 04 08 44.9 -0.4
comp=Z,8.2nm,0.9s,mb4.4
MOOW ePcP PcP 04 10 00.4 +0.3
T14A **Hurricane** 50.79 306 ⇑P P 04 08 45.7 +0.2
baz=51
LKWY **Lake** 50.80 316 eP P 04 08 45.2 -0.3
comp=Z,8.5nm,0.8s,mb4.4
LKWY **Lake** 50.80 316 eP P 04 08 45.2 -0.3
LKWY pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
F18A **Big Timber** 50.81 318 ⇓P P 04 08 45.9 +0.4
baz=51
TPAW **Teton Pass** 50.84 314 eP P 04 08 45.8 0.0
comp=Z,34nm,0.9s,mb5.0
TPAW ePcP PcP 04 10 00.2 -0.1
TPAW eScP ScP 04 13 43.0 +0.6
Y13A **Salome** 50.84 301 ⇑P P 04 08 46.5 +0.5
baz=51
NOQ **North Oquirrh** 50.87 310 eP P 04 08 46.6 +0.6
comp=Z,62nm,1.0s,mb5.2
IMW **Indian Meadow** 50.95 315 eP P 04 08 46.5 -0.2
comp=Z,12nm,0.6s,mb4.7
X13A **Yucca** 50.96 302 ⇑P P 04 08 47.2 +0.4
baz=51
DCID1 **Drake Creek** 51.03 314 eP P 04 08 47.8 +0.6
comp=Z,55nm,1.0s,mb5.1
O15A **The Old Anders** 51.03 310 ⇓P P 04 08 47.7 +0.4
baz=51
YNR **Norris Junctio** 51.04 316 eP P 04 08 48.1 +0.8
RRI2 **Red Ridge** 51.05 314⇑iP P 04 08 47.2 -0.2
comp=Z,42nm,1.1s,mb5.0
YFT **Old Faithful** 51.06 315 eP P 04 08 49.5 +2.1
W13A **Hualapai Mount** 51.08 303 ⇑P P 04 08 48.5 +0.8
baz=51
K16A **Soda Springs** 51.08 313 ⇓P P 04 08 47.7 +0.1
baz=51
PDMCI **Parker Dam,Lak** 51.17 302 ⇓P P 04 08 48.4 0.0
baz=51,SNR=7.6
E18A **Harlowton** 51.18 318 ⇓P P 04 08 48.7 +0.4
baz=51
N15A **Stansbury Isla** 51.22 311 ⇑P P 04 08 48.6 -0.1
baz=51
DUG **Dugway** 51.27 310⇑iP P 04 08 49.0 0.0
comp=Z,51nm,1.0s,mb5.1
DUG eScP ScP 04 13 44.8 +0.4
DUG **Dugway** 51.27 310 ⇑P P 04 08 49.3 +0.2
baz=51,SNR=53
DUG **Dugway** 51.27 310⇑iP P 04 08 49.0 0.0
DUG pmax pmax
comp=Z,51nm,1.0s,mb5.1
SPUT **South Promonto** 51.28 311 eP P 04 08 49.0 -0.1
V13A **Grand Canyon W** 51.28 304 ⇑P P 04 08 50.0 +0.7
baz=51
112A **Yuma** 51.30 300 ⇓P P 04 08 49.6 +0.2
baz=51
P14A **Drum Mountains** 51.31 309 ⇑P P 04 08 50.1 +0.6
baz=51
I16A **Newdale** 51.33 315 ⇓P P 04 08 49.8 +0.3
baz=51
Q14A **Sevier Lake (B** 51.34 308 ⇑P P 04 08 50.4 +0.8
baz=51
D18A **Linhart Farms,** 51.34 319 ⇓P P 04 08 50.1 +0.6
baz=51
U13A **Pakoon Wash** 51.37 305 ⇑P P 04 08 50.7 +0.8
baz=51
Y12C **Blythe** 51.41 301 ⇓P P 04 08 50.2 0.0
baz=51
L15A **Malad City** 51.42 312 ⇑P P 04 08 49.8 -0.3
baz=51
H16A **Russell Place,** 51.42 316 ⇓P P 04 08 50.8 +0.7
baz=51
T13A **Saint George** 51.43 305 ⇓P P 04 08 51.1 +0.8
baz=51
GLA **Glamis** 51.57 300 ⇑P P 04 08 51.6 +0.2
baz=52
QLMT **Earthquake Lak** 51.59 316 eP P 04 08 52.5 +1.2
QLMT epP pP 04 09 27.7 +1.7
EGMT **Eagleton** 51.63 320⇑iP P 04 08 51.8 +0.3
comp=Z,90nm,0.8s,mb5.5
EGMT **Eagleton** 51.63 320 ⇑P P 04 08 52.0 +0.4
baz=52,SNR=42
NEE2 **Needles Airpor** 51.63 303 ⇑P P 04 08 52.1 +0.3
baz=52
HVU **Hansel Valley** 51.64 312 eP P 04 08 51.5 -0.2
comp=Z,43nm,1.0s,mb5.0
HVU **Hansel Valley** 51.64 312 eP P 04 08 51.5 -0.3
HVU pmax pmax
comp=Z,43nm,1.0s,mb5.0
R13A **O'Grain Ranch,** 51.70 307 ⇑P P 04 08 53.1 +0.8
baz=52
N14A **Grayback Hills** 51.70 310 ⇓P P 04 08 52.4 +0.2
baz=52
K15A **Arbon** 51.71 313 ⇑P P 04 08 52.3 0.0
baz=52
E17A **Martinsdale** 51.75 318 ⇓P P 04 08 52.8 +0.2
baz=52
B18A **Beardsley Farm** 51.78 321 ⇑P P 04 08 53.2 +0.5
baz=52
U12A **Valley of Fire** 51.82 305 ⇓P P 04 08 53.7 +0.5
baz=52
J15A **Blackfoot** 51.84 314 ⇑P P 04 08 53.5 +0.3
baz=52
D17A **Six Diamond Ra** 51.89 319 ⇓P P 04 08 53.6 +0.1
baz=52
Q13A **Wheeler Ranch,** 51.90 308 ⇑P P 04 08 54.5 +0.8
baz=52
W12A **Cal Nev Ari** 51.91 303 ⇓P P 04 08 54.4 +0.5
baz=52
V12A **Nelson** 51.96 304 ⇓P P 04 08 54.6 +0.3
baz=52
IRM **Iron Mountain** 51.98 302 ⇓P P 04 08 55.0 +0.5
baz=52,SNR=39
M14A **Sheep Mountain** 51.98 311 ⇑P P 04 08 54.2 -0.1
baz=52
BOZ **Bozeman (W)** 51.98 317⇑eP P 04 08 54.2 -0.1
comp=Z,19nm,0.9s,mb4.7
BOZ **Bozeman (W)** 51.98 317 ⇓P P 04 08 54.4 +0.1
baz=52,SNR=34
BOZ **Bozeman (W)** 51.98 317⇑eP P 04 08 54.2 -0.1
BOZ pmax pmax
comp=Z,19nm,0.9s,mb4.7
P13A **Bates Ranch, G** 52.00 309 ⇑P P 04 08 55.3 +0.8
baz=52
T12A **Moapa** 52.01 305 ⇓P P 04 08 55.1 +0.4
baz=52
A18A **Metzger Ranch,** 52.03 321 ⇑P P 04 08 54.7 +0.2
baz=52
LDFC **Landfair** 52.07 303 eP P 04 08 56.3 +1.2
comp=Z,27nm,1.0s,mb4.8

C17A **Wharram Farm,** 52.11 319 ⇓P P 04 08 55.2 +0.1
baz=52
O13A **Hicks Ranch, I** 52.12 309 ⇓P P 04 08 55.8 +0.4
baz=52
EVO **Evora** 52.13 53 eP P 04 08 54.6 -0.8
comp=Z,9.5nm,0.9s,mb4.1
K14A **Jones Ranch, D** 52.13 312 ⇑P P 04 08 55.4 0.0
baz=52
BC3 **Big Chuckw Mtn** 52.16 301 ⇑P P 04 08 56.1 +0.3
baz=52,SNR=17
R12A **Pony Springs,** 52.22 307 ⇓P P 04 08 57.0 +0.9
baz=52
S12A **Delamar Landin** 52.27 306 ⇑P P 04 08 57.4 +0.9
baz=52
E16A **East Helena** 52.31 318 ⇓P P 04 08 56.6 -0.1
baz=52
SHPR **Sheep Range** 52.33 305 eP P 04 08 57.9 +0.9
H15A **Lima** 52.34 315 ⇑P P 04 08 57.6 +0.7
baz=52
SWSC **Sam W. Stewart** 52.37 300 ⇓P P 04 08 57.4 +0.1
baz=52
B17A **L&G Farms, Che** 52.37 320 ⇑P P 04 08 57.1 0.0
baz=52
D16A **Dana Ranch, Ca** 52.40 318 ⇑P P 04 08 57.3 0.0
baz=52
G15A **Dillon** 52.40 316 ⇓P P 04 08 57.6 +0.2
baz=52
V11A **Goodsprings** 52.44 304 ⇓P P 04 08 58.2 +0.4
baz=52
HRY **Holter Researc** 52.47 318 eP P 04 08 57.8 0.0
HRY epP pP 04 09 32.9 +0.3
GMRC **Granite Mounta** 52.48 302 ⇑P P 04 08 58.4 +0.3
baz=52,SNR=12
U11A **Corn Creek** 52.49 304 ⇓P P 04 08 58.7 +0.5
baz=52
T11A **Corn Creek, Al** 52.50 306 ⇑P P 04 08 58.6 +0.4
baz=52
Q12A **Willow Creek R** 52.53 308 ⇑P P 04 08 58.9 +0.5
baz=52
DLMT **Dillon** 52.54 316 eP P 04 08 58.9 +0.6
comp=Z,20nm,0.8s,mb4.9
M13A **Montello** 52.54 311 ⇓P P 04 08 58.4 -0.1
baz=52
A17A **Triple J Farms** 52.56 321 ⇓P P 04 08 58.7 +0.2
baz=53
L13A **Double Diamond** 52.56 312 ⇑P P 04 08 58.3 -0.3
baz=52
J14A **Carey** 52.58 313 ⇓P P 04 08 59.4 +0.7
baz=53
LRM **Limekiln Ridge** 52.58 317 eP P 04 08 59.1 +0.4
DVTC **Desert V Tower** 52.59 300 ⇑P P 04 08 59.6 +0.6
baz=52
F15A **Butte** 52.62 317 ⇓P P 04 08 59.2 +0.2
baz=53
BELC **Belle Mtn.** 52.66 301 ⇑P P 04 08 59.8 +0.3
baz=53,SNR=15
I14A **Mackay** 52.70 314 ⇑P P 04 08 59.9 +0.4
baz=53
O12A **Currie** 52.72 309 ⇓P P 04 09 00.1 +0.3
baz=53
TUQ **Turquoise Moun** 52.78 303 ⇑P P 04 09 00.7 +0.4
baz=53,SNR=10
K13A **Stover Farm, H** 52.80 312 ⇑P P 04 09 00.5 +0.2
baz=53
H14A **Leadore** 52.84 315 ⇓P P 04 09 00.9 +0.3
baz=53
MONP **Monument Peak** 52.88 300 ⇓P P 04 09 01.9 +0.8
baz=53,SNR=30
R11A **Troy Canyon, C** 52.98 307 ⇓P P 04 09 02.1 +0.4
baz=53
B16A **M & M Farms, S** 52.98 320 ⇓P P 04 09 01.5 0.0
baz=53
S11A **Rachel** 52.98 306 ⇓P P 04 09 02.7 +0.9
baz=53
PFO **Pinyon Flat Ob** 52.99 301 ⇑P P 04 09 02.3 +0.4
baz=53,SNR=5.1
PFO **Pinyon Flat Ob** 52.99 301 eP P 04 09 01.8 -0.1
D15A **Lincoln** 53.02 318 ⇑P P 04 09 02.1 +0.2
baz=53
HEC **Hector,Ludlow** 53.03 302 ⇓P P 04 09 02.7 +0.5
baz=53,SNR=20
J13A **Cove Ranch, Pi** 53.06 313 ⇓P P 04 09 02.3 +0.1
baz=53
N12A **Clover Valley,** 53.07 310 ⇓P P 04 09 02.6 +0.3
baz=53
G14A **Jackson** 53.08 316 ⇑P P 04 09 02.4 0.0
baz=53
M12A **Wells** 53.10 311 ⇑P P 04 09 02.7 +0.1
baz=53
A16A **West Butte Ran** 53.11 321 ⇑P P 04 09 02.9 +0.4
baz=53
Q11A **Duckwater** 53.12 307 ⇑P P 04 09 02.9 +0.1
baz=53
SHOC **Shoshone** 53.13 304 ⇓P P 04 09 03.3 +0.4
baz=53,SNR=12
I13A **Wildhorse Cree** 53.16 314 ⇑P P 04 09 03.3 +0.4
baz=53
F14A **Wisdom** 53.19 316 ⇓P P 04 09 03.5 +0.4
baz=53
ELK **Elko** 53.19 310 eP P 04 09 03.2 -0.1
comp=Z,26nm,0.7s,mb5.1
ELK **Elko** 53.19 310 eP P 04 09 03.2 -0.1
ELK pmax pmax
comp=Z,26nm,0.7s
U10A **Ash Meadows, A** 53.25 304 ⇑P P 04 09 04.5 +0.8
baz=53
TPNV **Topopah Spring** 53.26 305⇑eP P 04 09 04.6 +0.7
comp=Z,23nm,0.8s,mb5.0
TPNV **Topopah Spring** 53.26 305 ⇑P P 04 09 04.6 +0.8
baz=53,SNR=24
TPNV **Topopah Spring** 53.26 305⇑eP P 04 09 04.6 +0.8
TPNV pmax pmax
comp=Z,23nm,0.8s,mb5.0
HLID **Hailey** 53.27 313 eP P 04 09 04.1 +0.3
comp=Z,26nm,0.9s,mb5.0
HLID **Hailey** 53.27 313 ⇓P P 04 09 04.0 +0.3
baz=53,SNR=36
C15A **Salmond Ranch,** 53.33 319 ⇓P P 04 09 04.4 +0.3
baz=53
P11A **Circle Ranch,** 53.34 308 ⇓P P 04 09 04.7 +0.3
baz=53
L12A **House Creek Ra** 53.35 312 ⇑P P 04 09 04.4 +0.1
baz=53
O11A **Cowboy Ranch,** 53.38 309 ⇓P P 04 09 05.1 +0.5
baz=53
K12A **Draper Farm, C** 53.38 312 ⇑P P 04 09 04.8 +0.2
baz=53
H13A **Challis** 53.43 315 ⇑P P 04 09 04.5 -0.4
baz=53
BBRC **Big Bear Sol-O** 53.45 302 ⇓P P 04 09 06.1 +0.9
baz=53
109C **Camp Elliot, M** 53.46 300 ⇑P P 04 09 05.3 -0.1
baz=53
CHMT **Chamberlain Mo** 53.46 318 eP P 04 09 05.1 0.0
E14A **Clinton** 53.46 317 ⇑P P 04 09 05.4 +0.3
baz=53
GSC **Goldstone** 53.48 303 eP P 04 09 05.2 -0.2
comp=Z,11nm,0.7s,mb4.7
GSC **Goldstone** 53.48 303 ⇓P P 04 09 05.8 +0.4
baz=53,SNR=9.0
GSC **Goldstone** 53.48 303 eP P 04 09 05.2 -0.2
GSC pmax pmax
comp=Z,11nm,0.7s,mb4.7
B15A **Bradely Ranch,** 53.48 320 ⇑P P 04 09 05.1 -0.1
baz=54
ESPR **Espera** 53.52 55 P P 04 09 06.8 +1.1
comp=Z,5.0nm,0.7s,mb4.3
R10A **Warm Springs** 53.52 307 ⇓P P 04 09 06.6 +0.9
baz=54
N11A **Elko Archery C** 53.58 310 ⇓P P 04 09 06.2 +0.1
baz=54
RRX **Edison Barstow** 53.58 302 ⇓P P 04 09 07.0 +0.8
baz=54
MURC **Murrieta** 53.60 301 ⇑P P 04 09 06.6 +0.3
baz=54,SNR=7.4
J12A **Stokes Ranch,** 53.67 313 ⇓P P 04 09 06.5 -0.2
baz=54
D14A **Greenough** 53.67 318 ⇑P P 04 09 06.5 -0.1
baz=54
FURC **Furnace Creek,** 53.68 304 ⇓P P 04 09 07.3 +0.5
baz=54,SNR=8.6
S10A **Tonopah Range,** 53.69 306 ⇓P P 04 09 07.7 +0.7
baz=54
Q10A **Clear Creek Ra** 53.69 307 ⇓P P 04 09 07.4 +0.5
baz=54
M11A **Holland Ranch,** 53.75 311 ⇑P P 04 09 07.6 +0.3
baz=54
EJIF **Jimena Fronter** 53.77 56 P P 04 09 09.4 +1.9
comp=Z,9.4nm,0.7s,mb4.6
EJIF **Jimena Fronter** 53.77 56 P P 04 09 09.4 +1.9
EJIF pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
A15A **Johnson Ranch,** 53.82 320 ⇓P P 04 09 07.7 0.0
baz=54
F13A **Darby** 53.83 316 ⇓P P 04 09 07.4 -0.3
baz=54
H12A **Diamond D Ranc** 53.84 315 ⇑P P 04 09 07.5 -0.4
baz=54
MSO **Missoula** 53.88 317 eP P 04 09 08.0 -0.1
comp=Z,3.7nm,0.6s,mb4.3
MSO ePcP PcP 04 10 11.9 +0.2
L11A **Cat Creek Ranc** 53.88 311 ⇓P P 04 09 08.3 +0.1
baz=54
P10A **Eureka** 53.89 308 ⇑P P 04 09 08.6 +0.3
baz=54
B14A **Marquette Ranc** 53.94 319 ⇑P P 04 09 08.0 -0.5
baz=54
O10A **Cortez Mining,** 54.04 309 ⇓P P 04 09 09.5 +0.1
baz=54
BFSC **Mount Baldy St** 54.05 301 ⇓P P 04 09 09.7 0.0
baz=54,SNR=11
R09A **Tonopah** 54.11 306 ⇑P P 04 09 10.2 +0.2
baz=54
MPMC **Manual Prospec** 54.13 304 ⇑P P 04 09 10.4 +0.3
baz=54,SNR=15
N10A **Dunphy** 54.13 310 ⇓P P 04 09 10.1 0.0
baz=54
S09A **Goldfield** 54.15 306 ⇓P P 04 09 10.5 +0.2
baz=54
GRAC **Grapevine Rang** 54.16 305 ⇓P P 04 09 10.9 +0.6
baz=54,SNR=14
TPH **Tonopah** 54.20 306 eP P 04 09 10.4 -0.2
comp=Z,12nm,0.8s,mb4.7
TPH **Tonopah** 54.20 306 eP P 04 09 10.4 -0.3
TPH pmax pmax
comp=Z,13nm,0.8s,mb4.7
LRMC **Laurel Mountai** 54.22 303 ⇑P P 04 09 11.0 +0.2
baz=54
K11A **Parker Ranch,** 54.22 312 ⇑P P 04 09 10.6 -0.2
baz=54
MFID **Camas Ranch** 54.23 313 ⇓P P 04 09 10.7 0.0
baz=54
A14A **Double T Ranch** 54.24 320 ⇑P P 04 09 10.5 -0.3
baz=54
Q09A **Carvers** 54.30 307 ⇑P P 04 09 11.7 +0.4
baz=54
D13A **Huson** 54.30 318 ⇑P P 04 09 11.0 -0.2
baz=54
M10A **I.L. Ranch, Tu** 54.32 311 ⇓P P 04 09 11.8 +0.3
baz=54
MWC **Mount Wilson** 54.38 301 eP P 04 09 12.2 +0.2
comp=Z,8.4nm,0.5s,mb4.7
MWC **Mount Wilson** 54.38 301 eP P 04 09 12.2 +0.2
MWC pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
L10A **Juniper Basin** 54.39 311 ⇑P P 04 09 12.2 +0.3
baz=54
P09A **Austin** 54.39 308 ⇓P P 04 09 12.3 +0.3
baz=54
EDW2 **Edwards Air Fo** 54.39 302 ⇓P P 04 09 12.4 +0.3
baz=54,SNR=21
I11A **Placerville** 54.44 314 ⇑P P 04 09 12.1 -0.2
baz=54
PASC **Pasadena Art C** 54.48 301 eP P 04 09 12.5 -0.2
comp=Z,78nm,0.8s,mb5.5
FMP **Fort Macarthur** 54.52 301 ⇓P P 04 09 13.7 +0.6
baz=54
O09A **Fish Creek Ran** 54.54 309 ⇓P P 04 09 13.4 +0.3
baz=54
C13A **Hot Springs** 54.55 318 ⇑P P 04 09 13.0 0.0
baz=54
WALA **Waterton Lakes** 54.58 320 eP P 04 09 12.6 -0.5
comp=Z,14nm,0.5s,mb5.0
DECC **Green Verdugo** 54.60 301 ⇓P P 04 09 13.9 +0.2
baz=55
BMN **Battle Mountai** 54.61 309⇑iP P 04 09 13.5 0.0
comp=Z,67nm,1.0s,mb5.3
BMN epP pP 04 09 48.9 +0.3
BMN ePcP PcP 04 10 15.2 +0.5
BMN **Battle Mountai** 54.61 309⇑iP P 04 09 13.5 0.0
BMN e*PP pP 04 09 48.9 +0.3
BMN e 04 10 15.2
BMN pmax pmax
comp=Z,67nm,1.0s,mb5.3
CWC **Cottonwood Cre** 54.65 304 ⇓P P 04 09 14.4 +0.5
baz=55,SNR=7.5
SCI **San Clemente I** 54.67 300 ⇓P P 04 09 14.4 +0.3
baz=55,SNR=5.6
B13A **Whitefish** 54.70 319 ⇓P P 04 09 13.8 -0.3
baz=55
BSMT **Bassoo Peak** 54.74 318 eP P 04 09 14.8 +0.5
K10A **MacKenzie Ranc** 54.83 312 ⇓P P 04 09 15.1 +0.1
baz=55
Q08A **Gabbs** 54.88 307 ⇑P P 04 09 15.4 -0.2
baz=55
J10A **Berg Farm, Mel** 54.90 313 ⇑P P 04 09 15.2 -0.3
baz=55
ELOJ **Sierra Loja** 54.91 55 P P 04 09 17.4 +1.6
comp=Z,6.2nm,0.7s,mb4.5
ELOJ **Sierra Loja** 54.91 55 P P 04 09 17.4 +1.6
ELOJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
N09A **Rock Creek Ran** 54.91 310 ⇓P P 04 09 16.0 +0.3
baz=55
R08A **Mina** 54.94 306 ⇑P P 04 09 16.5 +0.5
baz=55
M09A **Marrel Ranch,** 54.97 310 ⇑P P 04 09 16.4 +0.3
baz=55
I10A **Payette** 55.08 314 ⇑P P 04 09 16.3 -0.5
baz=55
NVAR **Mina Array Bea** 55.10 306 P P 04 09 17.4 +0.3
comp=Z,20nm,0.7s,mb4.9,baz=102,slow=6.7,SNR=150
NVAR pP pP 04 09 50.9 -1.4
comp=Z,3.7nm,0.7s,baz=99,slow=6.8,SNR=2.9
NVAR PcP PcP 04 10 17.4 +0.7
comp=Z,4.2nm,0.8s,baz=126,slow=4.6,SNR=4.9
NVAR ScP ScP 04 14 03.2 +2.0
comp=Z,0.6nm,0.7s,baz=108,slow=2.9,SNR=4.4
ARVC **Arvin** 55.10 302 P P 04 09 17.9 +0.7
baz=55
C12B **Naegeli Ranch,** 55.14 318 ⇓P P 04 09 17.1 -0.2
baz=55
MTUM **Tungsten Hills** 55.15 305 eP P 04 09 18.3 +0.8
H10A **Noah's Angus R** 55.16 314 ⇓P P 04 09 16.6 -0.8
baz=55
ERON **Agron** 55.17 55 P P 04 09 17.9 +0.2
comp=Z,15nm,0.9s,mb4.7
BLG **Laguna Peak** 55.20 301 ⇑P P 04 09 17.8 -0.1
baz=55
E11A **Bogner Ranch,** 55.24 316 ⇑P P 04 09 17.6 -0.3
baz=55
L09A **Wilkinson Ranc** 55.24 311 ⇓P P 04 09 18.4 +0.3
baz=55
O08A **Rochester Mine** 55.28 309 ⇑P P 04 09 18.3 -0.1
baz=55
EBAN **Banos Encina** 55.34 54 P P 04 09 19.0 +0.2
comp=Z,10nm,0.8s,mb4.6
EBAN **Banos Encina** 55.34 54 P P 04 09 19.0 +0.2
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
N08A **GE Springer Mi** 55.36 309 ⇓P P 04 09 19.0 +0.1
baz=55
VES **Vestal, Richgr** 55.38 303 ⇓P P 04 09 19.5 +0.3
baz=55,SNR=6.5
ECOG **Cogollos-Vega** 55.39 55 P P 04 09 20.9 +1.7
comp=Z,10nm,0.7s,mb4.7
ECOG **Cogollos-Vega** 55.39 55 P P 04 09 20.9 +1.7
ECOG pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
MLAC **Mammoth Lakes** 55.40 305 ⇓P P 04 09 19.6 +0.3
baz=55
K09A **Rome** 55.42 312 ⇑P P 04 09 19.2 -0.1
baz=55
ESDC **Sonseca Array** 55.43 52 P P 04 09 19.9 +0.5
comp=Z,2.9nm,0.7s,mb4.1
ESLA **Sonseca Array** 55.43 52 eP P 04 09 19.7 +0.3
comp=Z,1.4nm,1.0s
B12A **Libby** 55.44 319 ⇓P P 04 09 19.5 +0.1
baz=55
SNCC **San Nicolas Is** 55.51 300 ⇓P P 04 09 20.1 0.0
baz=56
D11A **Klaveano Farm,** 55.51 317 ⇑P P 04 09 19.5 -0.4
baz=56
RCTC **Rector, Farmer** 55.56 304 ⇓P P 04 09 20.2 -0.2
baz=56,SNR=5.1
J09A **Fry Pan Ranch,** 55.58 312 ⇑P P 04 09 19.6 -0.9

baz=56
G10A **Bishop Farm, J** 55.58 315 ⇑P P 04 09 19.6 -0.9
baz=56
BMO **Blue Mountains** 55.61 314 *e*P P 04 09 19.8 -0.8
comp=Z,7.6nm,0.7s,mb4.6
BMO *e*PP pP 04 09 55.2 -0.6
BMO Blue Mountains 55.61 314 *e*P **P** 04 09 19.8 -0.8
BMO *e**PP pP 04 09 55.2 -0.6
BMO pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
A12A **Yaak River Ran** 55.62 319 ⇑P P 04 09 21.2 +0.5
baz=56
BSC **Santa Cruz Isl** 55.66 301 ⇓P P 04 09 21.7 +0.5
baz=56,SNR=7.6
M08A **Happy Creek Ra** 55.66 310 ⇓P P 04 09 21.4 +0.3
baz=56
I09A **Lost Marbles R** 55.71 313 ⇑P P 04 09 20.3 -1.0
baz=56
EDM **Edmonton** 55.74 325⇑*i*P P 04 09 20.6 -0.9
L08A **Fields** 55.77 311 ⇑P P 04 09 21.6 -0.2
baz=56
LIC **Lamto** 55.79 93⇓*i*P P 04 09 22.4 0.0
comp=Z,58nm,0.6s,mb5.3
LIC Lamto 55.79 93⇓*i*P **P** 04 09 22.4 0.0
comp=Z,29nm,0.6s,mb5.3
O07A **Toulon** 55.81 308 ⇓P P 04 09 21.7 -0.4
baz=56
H09A **Durkee** 55.81 314 ⇓P P 04 09 21.6 -0.5
baz=56
F10A **Beach Ranch, E** 55.83 316 ⇓P P 04 09 21.0 -1.2
baz=56
EQES **Quesada** 55.85 54 P P 04 09 23.5 +1.0
comp=Z,11nm,0.7s,mb4.8
DBIC **Dimbokro** 55.85 92 P P 04 09 23.0 +0.1
comp=Z,30nm,0.6s,mb5.3,baz=269,slow=7.4,SNR=78
DBIC pP pP 04 09 58.1 0.0
comp=Z,6.4nm,0.7s,baz=309,slow=5.5,SNR=2.2
DBIC Dimbokro 55.85 92⇓*i*P **P** 04 09 22.7 -0.1
comp=Z,14nm,0.5s,mb5.0
DBIC Dimbokro 55.85 92⇓*i*P **P** 04 09 22.7 -0.2
DBIC pmax pmax
comp=Z,14nm,0.5s
E10A **Myers Farm, Un** 55.88 316 ⇑P P 04 09 21.8 -0.7
baz=56
PKM **Peak Mountain** 55.89 302 ⇓P P 04 09 23.4 +0.6
baz=56,SNR=6.0
B11A **Sandpoint** 55.93 319 ⇑P P 04 09 22.9 +0.1
baz=56
K08A **Mann Creek Ran** 55.98 312 ⇓P P 04 09 23.3 0.0
baz=56
WAKR **Walker** 55.99 306 *e*P P 04 09 24.7 +1.2
R06C **Coleville** 56.01 306 ⇓P P 04 09 24.3 +0.7
baz=56
T06C **Millerton Lake** 56.02 305 ⇓P P 04 09 22.6 -1.1
baz=56
WVOR **Wild Horse Val** 56.03 311 *e*P P 04 09 22.9 -0.7
comp=Z,12nm,1.1s,mb4.6
WVOR Wild Horse Val 56.03 311 *e*P **P** 04 09 23.0 -0.7
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.6
G09A **Cove** 56.03 315 ⇓P P 04 09 23.1 -0.5
baz=56
SMMC **Simmler** 56.07 303 ⇑P P 04 09 24.7 +0.5
baz=56,SNR=6.9
A11A **Hall Mountain,** 56.08 319 ⇑P P 04 09 24.1 +0.3
baz=56
J08A **Circle Bar Ran** 56.10 312 ⇓P P 04 09 23.6 -0.6
baz=56
PAHR **Pah Rah Range** 56.12 308 *e*P P 04 09 24.7 +0.3
D10A **Wagner Farm, O** 56.13 317 ⇓P P 04 09 23.5 -0.9
baz=56
PLCA **Paso Flores** 56.17 189 P P 04 09 23.9 -0.6
comp=Z,4.3nm,0.7s,mb4.4,baz=14,slow=9.0,SNR=13
PLCA pP pP 04 09 59.4 -0.4
comp=Z,3.5nm,0.8s,baz=360,slow=9.2,SNR=3.7
PLCA Paso Flores 56.17 189 *e*P **P** 04 09 23.6 -0.9
comp=Z,4.4nm,0.7s,mb4.4
PLCA Paso Flores 56.17 189 *e*P **P** 04 09 23.6 -0.9
PLCA pmax pmax
comp=Z,4.0nm,0.7s
EHUE **Huescar** 56.23 54 P P 04 09 25.8 +0.7
comp=Z,7.1nm,0.9s,mb4.5
EHUE Huescar 56.23 54 P **P** 04 09 25.8 +0.6
EHUE pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
M07A **Soldier Meadow** 56.23 310 ⇓P P 04 09 25.1 -0.1
baz=56
I08A **Drewsey** 56.28 313 ⇑P P 04 09 24.7 -0.7
baz=56
WCN **Washoe City** 56.35 307 ⇑P P 04 09 26.6 +0.6
baz=56
C10A **Spilker Farm,** 56.36 318 ⇓P P 04 09 25.2 -0.7
baz=56
NEW **Newport** 56.36 318⇑*i*P P 04 09 25.1 -0.8
comp=Z,57nm,0.7s,mb5.5
NEW Newport 56.36 318⇑*i*P **P** 04 09 25.1 -0.8
NEW pmax pmax
comp=Z,57nm,0.7s
ENIJ **Nijar** 56.43 55 P P 04 09 25.5 -1.1
comp=Z,17nm,1.0s,mb4.8
ENIJ Nijar 56.43 55 P **P** 04 09 25.5 -1.1
ENIJ pmax pmax
comp=Z,17nm,1.0s,mb4.8
B10A **Chitwood Farm,** 56.44 318 ⇓P P 04 09 25.8 -0.6
baz=56
L07A **Adell** 56.47 311 ⇓P P 04 09 26.6 -0.2
baz=56
H08A **Prairie City** 56.48 314 ⇓P P 04 09 26.8 0.0
baz=56
P06A **Stead Airport,** 56.51 308 ⇓P P 04 09 26.5 -0.6
baz=56
K07A **Rock Creek Ran** 56.52 311 ⇓P P 04 09 26.8 -0.4
baz=56
O06A **Flanigan** 56.53 308 ⇑P P 04 09 26.5 -0.7
baz=56
S05C **Merced** 56.55 305 ⇓P P 04 09 27.0 -0.4
baz=56
E09A **Wood Farm, Sta** 56.58 316 ⇑P P 04 09 27.6 +0.1
baz=56
N06A **Buffalo Meadow** 56.62 309 ⇓P P 04 09 27.5 -0.4
baz=57
CMB **Columbia Colle** 56.67 306 *e*P P 04 09 28.1 -0.2
comp=Z,5.6nm,0.8s,mb4.5
CMB Columbia Colle 56.67 306 *e*P **P** 04 09 28.1 -0.2
CMB pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
J07A **Hines** 56.70 312 ⇑P P 04 09 27.8 -0.6
baz=57
U04C **Hernandez Rese** 56.81 304 ⇓P P 04 09 28.2 -1.1
baz=57
D09A **Jones Farm, Ri** 56.82 317 ⇑P P 04 09 28.3 -0.9
baz=57
A10A **Northport** 56.84 319 ⇓P P 04 09 28.7 -0.5
baz=57
G08A **Pilot Rock** 56.85 315 ⇓P P 04 09 28.8 -0.6
baz=57
BEKR **Beckwourth** 56.89 308 ⇓P P 04 09 29.3 -0.5
baz=57,SNR=15
I07A **Izee** 56.98 313 ⇑P P 04 09 29.8 -0.5
baz=57
C09A **Chrisman Ranch** 56.98 318 ⇑P P 04 09 29.7 -0.6
baz=57
LAVA **Lava Cap Winer** 57.03 307 ⇓P P 04 09 30.9 0.0
baz=57
R04C **Big Horse Ranc** 57.13 306 ⇑P P 04 09 32.3 +0.8
baz=57
V03C **Hunter Liggett** 57.14 303 ⇑P P 04 09 31.6 0.0
baz=57
MOD **Modoc** 57.16 310 *e*P P 04 09 31.2 -0.4
comp=Z,7.8nm,0.6s,mb4.7
OD2 **Odessa Site #2** 57.17 317 P P 04 09 31.1 -0.5
D08A **Wollman Farm,** 57.22 317 ⇑P P 04 09 31.4 -0.6
baz=57
J06A **Christmas Vall** 57.28 312 ⇑P P 04 09 31.8 -0.6
baz=57
G07A **Ruggs Ranch, H** 57.33 314 ⇑P P 04 09 32.2 -0.6
baz=57
I06A **Prineville** 57.45 313 ⇑P P 04 09 33.2 -0.4
baz=57
HAWA **Hanford** 57.48 316 *e*P P 04 09 33.1 -0.7
C08A **Higginbotham F** 57.48 317 ⇑P P 04 09 33.2 -0.6
baz=58
A09A **Danville** 57.49 319 ⇓P P 04 09 33.2 -0.6
baz=58
F07A **Phinny Hill Vi** 57.64 315 ⇑P P 04 09 34.6 -0.4
baz=58
OHCM **Honcut** 57.68 307 *e*P P 04 09 35.4 +0.1
H06A **Lindquist Farm** 57.69 314 ⇑P P 04 09 35.8 +0.5
baz=58
K05A **Summer Lake** 57.72 311 ⇓P P 04 09 36.2 +0.6
baz=58
E07A **Sunnyside** 57.73 316 ⇑P P 04 09 35.0 -0.6
baz=58
B08A **Colville Reser** 57.81 318 ⇓P P 04 09 35.0 -1.0
baz=58
A08A **Turner Farm, O** 57.92 319 ⇑P P 04 09 36.1 -0.7
baz=58
D07A **Quincy** 57.95 317 ⇓P P 04 09 36.7 -0.4
baz=58
G06A **Carlson Farm,** 57.99 314 ⇓P P 04 09 37.8 +0.4
baz=58
SJPF **Ste Jean** 58.02 48 *e*P P 04 09 38.5 +0.8
comp=Z,9.8nm,0.7s,mb4.5
SJPF Ste Jean 58.02 48 *e*P **P** 04 09 38.5 +0.8
comp=Z,4.9nm,0.7s,mb4.5
SJPF Ste Jean 58.02 48 *e*P **P** 04 09 38.5 +0.8
SJPF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
C07A **Waterville** 58.13 317 ⇓P P 04 09 37.3 -1.0
baz=58
F06A **Goldendale** 58.20 315 ⇓P P 04 09 39.0 +0.1
baz=58
I05A **Bend** 58.24 313 ⇓P P 04 09 39.5 +0.4
baz=58
H05A **Madras** 58.30 313 ⇑P P 04 09 40.3 +0.7
baz=58
B07A **Winthrop** 58.34 318 ⇑P P 04 09 39.2 -0.6
baz=58
TBM **Table Mountain** 58.37 316 P P 04 09 40.0 +0.1
ETSF **Etsaut** 58.47 49 *e*P P 04 09 40.8 0.0
comp=Z,11nm,0.9s,mb4.4
ETSF Etsaut 58.47 49 *e*P **P** 04 09 40.8 0.0
comp=Z,5.4nm,0.9s,mb4.4
ETSF Etsaut 58.47 49 *e*P **P** 04 09 40.8 0.0
ETSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
E06A **Yakima** 58.49 316 ⇑P P 04 09 41.1 +0.3
baz=58
D06A **Cle Elum** 58.53 316 ⇑P P 04 09 40.9 -0.3
baz=58
WDC **Whiskeytown Da** 58.64 309 *e*P P 04 09 39.7 -2.3
comp=Z,8.6nm,1.0s,mb4.5
WDC Whiskeytown Da 58.64 309 *e*P **P** 04 09 39.7 -2.3
WDC pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
A07A **Ashnola River,** 58.65 319 ⇓P P 04 09 42.3 +0.4
baz=59
F05A **White Salmon** 58.69 315 ⇑P P 04 09 42.6 +0.4
baz=59
HOOD **Mount Hood Mea** 58.71 314 *e*P P 04 09 42.5 +0.1
comp=Z,45nm,1.1s,mb5.2
LAMM **Antelope Mount** 58.83 310 P P 04 09 42.1 -1.3
YBH **Yreka Blue Hor** 58.91 310 *e*P P 04 09 42.5 -1.4
comp=Z,11nm,0.6s,mb4.9
YBH Yreka Blue Hor 58.91 310 *e*P **P** 04 09 42.5 -1.4
YBH pmax pmax
comp=Z,11nm,0.6s
H04A **Detroit Lake** 58.98 313 ⇓P P 04 09 43.1 -1.2
baz=59
E05A **Randle** 59.02 316 ⇑P P 04 09 43.8 -0.7
baz=59
SUMG **Summit** 59.03 8 *e*P P 04 09 44.8 +0.7
comp=Z,40nm,1.3s,mb5.1
LON **Longmire** 59.09 316 *e*P P 04 09 44.6 -0.4
EPF **Esparros** 59.15 49 *e*P P 04 09 46.3 +0.9
comp=Z,5.5nm,0.6s,mb4.3
EPF **Esparros** 59.15 49 *e*P P 04 09 46.3 +0.9
comp=Z,2.8nm,0.6s,mb4.3
EPF Esparros 59.15 49 *e*P **P** 04 09 46.3 +0.9
EPF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
B06A **Marblemount** 59.24 318 ⇑P P 04 09 44.6 -1.4
baz=59
GRR **Gorron** 59.28 42 *e*P P 04 09 46.2 -0.1
D05A **Enumclaw** 59.30 316 ⇑P P 04 09 45.3 -1.1
baz=59
F04A **Amboy** 59.35 315 ⇓P P 04 09 46.1 -0.7
baz=59
MFF **Saint Martin d** 59.39 45 *e*P P 04 09 47.3 +0.2
KHMM **Horse Mountain** 59.57 309 *e*P P 04 09 49.5 +1.1
B05A **Bryant** 59.59 317 ⇓P P 04 09 46.4 -2.0
baz=60
FLN **La Foliniere** 59.60 42 *e*P P 04 09 49.1 +0.6
comp=Z,7.8nm,0.5s,mb4.5
FLN La Foliniere 59.60 42 *e*P **P** 04 09 49.1 +0.6
comp=Z,3.9nm,0.5s,mb4.5
FLN La Foliniere 59.60 42 *e*P **P** 04 09 49.1 +0.6
FLN pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
CMW **Cultus Mountai** 59.63 318 P P 04 09 46.8 -1.9
C04A **Brinnon** 60.05 317 ⇑P P 04 09 50.6 -1.0
baz=60
E03A **Lebam** 60.24 315 ⇑P P 04 09 52.5 -0.4
baz=60
YKA **Yellowknife Ar** 60.25 335 P P 04 09 51.6 -1.0
comp=Z,30nm,0.5s,mb5.4,baz=106,slow=7.5,SNR=147
YKA pP pP 04 10 25.9 -2.4
comp=Z,4.8nm,0.7s,baz=109,slow=7.5,SNR=2.7
YKA Yellowknife Ar 60.25 335 P **P** 04 09 51.6 -1.0
YKA *PP pP 04 10 25.9 -2.4
YKW3 **Yellowknife Ar** 60.29 335 *e*P P 04 09 51.1 -1.7
B04A **Port Angeles** 60.47 317 ⇓P P 04 09 54.3 -0.1
baz=60
D03A **Wishkah Elem.** 60.48 316 ⇑P P 04 09 54.6 +0.1
baz=60
PGC **Sidney** 60.55 318 *e*P P 04 09 53.8 -1.1
comp=Z,82nm,0.9s,mb5.6
MTLF **Montolieu** 60.55 49 *e*P P 04 09 55.0 0.0
NLWA **Neilton Lookou** 60.59 316 *e*P P 04 09 55.5 +0.3
comp=Z,31nm,0.8s,mb5.2
NLWA Neilton Lookou 60.59 316 ⇓P **P** 04 09 55.3 +0.1
baz=61
CAF **Calviac** 60.65 47 *e*P P 04 09 55.7 0.0
TOA0 **Torodi Ar. Sit** 60.87 83⇓*i*P P 04 09 57.2 -0.5
TORD **Torodi Ar. Bea** 60.87 83 P P 04 09 57.4 -0.3
comp=Z,259nm,0.8s,mb5.1,baz=279,slow=6.4,SNR=239
TCF **Toulx Ste Croi** 60.95 45 *e*P P 04 09 57.6 -0.1
comp=Z,5.5nm,0.7s,mb4.2
TCF Toulx Ste Croi 60.95 45 *e*P **P** 04 09 57.6 -0.1
comp=Z,2.8nm,0.7s,mb4.2
TCF Toulx Ste Croi 60.95 45 *e*P **P** 04 09 57.6 -0.1
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
AVF **Avril sur Loir** 61.80 45 *e*P P 04 10 03.1 -0.3
comp=Z,4.3nm,0.6s,mb4.2
AVF **Avril sur Loir** 61.80 45 *e*P P 04 10 03.1 -0.3
comp=Z,2.2nm,0.6s,mb4.2
AVF Avril sur Loir 61.80 45 *e*P **P** 04 10 03.1 -0.3
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
SSF **Saint Saulge** 61.94 44 *e*P P 04 10 03.9 -0.4
comp=Z,4.9nm,0.5s,mb4.3
SSF **Saint Saulge** 61.94 44 *e*P P 04 10 03.9 -0.4
comp=Z,2.5nm,0.5s,mb4.3
SSF Saint Saulge 61.94 44 *e*P **P** 04 10 03.9 -0.4
SSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
SMF **Signal de Mont** 62.11 45 *e*P P 04 10 05.3 -0.2
LOR **Lormes** 62.21 44 *e*P P 04 10 05.7 -0.4
comp=Z,12nm,0.7s,mb4.5
LOR **Lormes** 62.21 44 *e*P P 04 10 05.7 -0.4
comp=Z,5.8nm,0.7s,mb4.5
LOR Lormes 62.21 44 *e*P **P** 04 10 05.7 -0.4
LOR pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
RES **Resolute Bay** 62.45 350 *e*P P 04 10 06.8 -0.4
comp=Z,406nm,0.7s
VIVF **Saint-Julien-l** 62.48 47 *e*P P 04 10 08.6 +0.7
BAIF **Baives** 62.85 41 *e*P P 04 10 09.7 -0.6
TAM **Tamanrasset** 63.16 72 *e*P P 04 10 14.2 +1.4
comp=Z,11nm,0.8s,mb4.7
TAM Tamanrasset 63.16 72 *e*P **P** 04 10 14.2 +1.3
TAM pmax pmax
comp=Z,11nm,0.8s,mb4.7
GIVF **Givet** 63.25 41 *e*P P 04 10 12.4 -0.5
CABF **La Chapelle** 63.65 45 *e*P P 04 10 16.0 +0.4
LPL **La Plagne** 63.99 46 *e*P P 04 10 18.7 +0.8
comp=Z,3.9nm,0.6s,mb4.1
LPL La Plagne 63.99 46 *e*P **P** 04 10 18.7 +0.8
comp=Z,2.0nm,0.6s,mb4.1
LPL La Plagne 63.99 46 *e*P **P** 04 10 18.7 +0.8
LPL pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
LPG **La Plagne** 64.00 47 *e*P P 04 10 19.0 +1.0
CDF **Champ du Feu** 64.63 43 *e*P P 04 10 22.0 0.0
KEST **Kesra** 65.70 57 P P 04 10 30.6 +1.5
comp=Z,7.5nm,0.8s,mb4.6,baz=178,slow=2.1,SNR=25
DLBC **Dease Lake** 66.22 328 *e*P P 04 10 32.5 +0.5
FETA **Feichten** 66.86 45⇑*e*P P 04 10 37.3 +1.1
comp=Z,6.4nm,0.7s,mb4.5
SQTA **Sankt Quirin** 67.19 45⇑*i*P P 04 10 39.0 +0.6
ALE **Alert** 67.50 360 P P 04 10 39.0 -0.8
comp=Z,258nm,0.7s,SNR=21
NAO01 **NORSAR Array S** 68.26 30 *e*P P 04 10 45.5 +0.7
NB2 **NORSAR Subarra** 68.45 30 P P 04 10 46.4 +0.4
comp=Z,10nm,0.9s,mb4.6,baz=262,slow=6.5
NOA **NORSAR Array B** 68.45 30 P P 04 10 46.8 +0.8
comp=Z,4.7nm,0.7s,mb4.3,baz=262,slow=6.3,SNR=14
GERES **GERESS Array B** 68.91 43 P P 04 10 49.3 +0.2
comp=Z,1.1nm,0.7s,mb3.7,baz=302,slow=3.0,SNR=7.7
GERES pP pP 04 11 27.3 +1.7
comp=Z,0.9nm,0.8s,baz=305,slow=4.7,SNR=2.8
HFS **Hagfors** 69.56 31 P P 04 10 54.3 +1.4
comp=Z,1.3nm,0.5s,mb4.0,baz=242,slow=3.2,SNR=11
INK **Inuvik** 69.58 338⇑*e*P P 04 10 52.0 -0.9
USHA **Ushuaia** 69.88 184 P P 04 10 55.0 +0.2
comp=Z,14nm,0.6s,mb4.8,baz=358,slow=7.6,SNR=9.4
DAWY **Dawson** 71.40 333⇑*e*P P 04 11 04.1 +0.1
EGAK **Eagle** 72.21 334 *e*P P 04 11 08.3 -0.4
comp=Z,41nm,0.7s,mb5.3
SPB4 **Spitsbergen Ar** 72.81 12 *e*P P 04 11 12.6 +0.4
SPITS **Spitsbergen Ar** 72.82 12 P P 04 11 12.5 +0.3
comp=Z,18nm,0.9s,mb4.8,baz=224,slow=5.4,SNR=9.6
ARCES **ARCESS Array B** 74.87 21 P P 04 11 24.6 +0.4
comp=Z,10.0nm,0.7s,mb4.5,baz=291,slow=5.0,SNR=20
COLA **College** 75.07 334 *e*P P 04 11 25.0 -0.4
comp=Z,19nm,1.0s,mb4.7
COLA College 75.07 334 *e*P **P** 04 11 25.0 -0.4
COLA pmax pmax
comp=Z,19nm,1.0s,mb4.7
MCK **McKinley** 75.62 333 *e*P P 04 11 27.9 -0.7
comp=Z,26nm,1.1s,mb4.8
MCK McKinley 75.62 333 *e*P **P** 04 11 27.9 -0.7
MCK pmax pmax
comp=Z,26nm,1.1s,mb4.8
COLD **Coldfoot** 75.85 336 *e*P P 04 11 29.7 -0.2
comp=Z,12nm,1.0s,mb4.5
PMR **Palmer** 75.90 330 *e*P P 04 11 30.1 -0.2
comp=Z,8.1nm,0.7s,mb4.5
PMR Palmer 75.90 330 *e*P **P** 04 11 30.1 -0.2
PMR pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
TRF **Thorofare Moun** 76.25 332⇑*i*P P 04 11 32.1 -0.1
comp=Z,59nm,0.7s,mb5.3
BPAW **Bear Paw Mtn.** 76.49 333 *e*P P 04 11 32.6 -0.9
comp=Z,37nm,0.8s,mb5.1
KTH **Kantishna Hill** 76.52 333⇑*e*P P 04 11 33.2 -0.5
comp=Z,60nm,1.1s,mb5.1
BUR08 **Bucovina Ar. S** 76.65 44 *e*P P 04 11 35.0 +0.2
CHUM **Lake Minchumin** 77.10 333 *e*P P 04 11 36.2 -0.7
comp=Z,8.8nm,0.6s,mb4.6
PPLA **Purkeypile** 77.17 332 *e*P P 04 11 37.4 0.0
comp=Z,69nm,1.5s,mb5.1
CHGN **Chignik** 81.55 326 *e*P P 04 12 09.7 +8.5
OBN **Obninsk** 82.18 35⇑*e*P P 04 12 05.0 +0.5
OBN *e* 04 15 20.4
OBN pmax pmax
comp=Z,49nm,2.5s,mb4.7
BRTR **Keskin Array B** 84.19 51 P P 04 12 15.6 +0.4
comp=Z,1.6nm,0.8s,mb3.8
TSUM **Tsumeb** 84.67 111 *e*P P 04 12 18.8 +0.9
comp=Z,6.6nm,1.0s,mb4.3
KIV **Kislovodsk** 89.38 45⇑*i*P P 04 12 38.4 -1.8
KIV pmax pmax
comp=Z,11nm,1.7s,mb4.5
BILL **Bilibino** 90.36 344 *e*P P 04 12 44.0 -0.3
comp=Z,14nm,1.3s,mb4.7
BILL Bilibino 90.36 344⇑*i*P **P** 04 12 43.6 -0.7
BILL pmax pmax
comp=Z,18nm,1.7s,mb4.7
SUR **Sutherland** 91.39 123 *e*P P 04 12 50.6 +0.9
comp=Z,9.2nm,0.7s,mb4.9
MBAR **Mbarara** 92.05 90⇑*i*P P 04 12 52.3 -0.9
VNA3 **Neumayer Olymp** 92.86 165 *e*P P 04 12 56.3 +0.7
VNA3 *e* 04 13 01.1
VNA3 *e* 04 13 07.6
VNA2 Neumayer--Watz 93.23 165 *e*P **P** 04 12 58.0 +0.7
baz=306,slow=7.8
VNA2 *e* 04 13 02.5
VNA2 *e* 04 13 08.5
TIXI **Tiksi** 93.24 357 *e*P P 04 12 56.5 -1.0
comp=Z,3.5nm,0.8s,mb4.5
TIXI Tiksi 93.24 357⇓*i*P **P** 04 12 56.8 -0.7
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
LSZ **Lusaka** 93.33 105 *e*P P 04 13 00.1 +1.2
comp=Z,1.9nm,0.6s,mb4.4
LSZ Lusaka 93.33 105 *e*P **P** 04 13 00.2 +1.2
LSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
BOSA **Boshof** 94.06 118 P P 04 13 02.7 +0.6
comp=Z,1.6nm,0.7s,mb4.2,baz=280,slow=8.5,SNR=5.2
BOSA **Boshof** 94.06 118 *e*P P 04 13 02.4 +0.3
SEY **Seymchan** 97.97 345⇑*i*P P 04 13 16.7 -2.5
WMQ **Urumqi** 114.89 24 *e*PKP PKiKP 04 18 22.0 -1.6
CN2 **Changchun** 121.11 354 *e*PKP PKPdf 04 18 34.5 -1.1
CN2 *e*XPKP 04 19 31.0
CN2 *e*PP PP 04 20 09.5 +3.4
HHC **Hu-ho-hao-te** 123.98 7 *e*PKP PKPdf 04 18 39.0 -2.2
HHC XPKP 04 19 33.5
HHC PP PP 04 20 29.3 +3.9
HHC PKS 04 22 14.0
HHC SKS SKSdf 04 25 33.8 -5.3
HHC SKKS SKKSac 04 27 03.0 -7.4
HHC PP PP
comp=Z,226nm,11.9s
HHC LR LR
comp=N,282nm,19.0s
HHC LR LR
comp=E,273nm,20.2s
HHC LR LR
comp=Z,234nm,20.2s
BJI **Beijing** 125.14 2 PKP PKPdf 04 18 43.0 -0.4
BJI LR LR
comp=N,324nm,28.4s
BJI LR LR
comp=E,310nm,27.6s
BJI LR LR
comp=Z,82nm,28.2s
MJAR **Matsushiro Arr** 125.50 341 PKP PKPdf 04 18 43.4 -0.8
comp=Z,3.2nm,0.8s,baz=83,slow=1.5,SNR=7.1
LZH **Lanzhou** 127.21 15 *e*PKP PKPdf 04 18 45.0 -2.5
LZH XPKP 04 19 38.3
LZH SS SS 04 37 50.0 +7.0
LZH PP PP
comp=Z,353nm,7.5s
CD2 **Chengdu** 132.07 17 *e*PKP PKPdf 04 18 54.3 -2.6
CD2 XPKP 04 19 53.3
CD2 PP PP 04 21 21.0 +2.3
CD2 PKS 04 22 29.0
CD2 SKS SKSdf 04 25 47.5 -6.9
CD2 SKKS SKKSac 04 27 54.8 -6.6
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,210nm,21.0s
CD2 LR LR
comp=E,180nm,16.8s
CD2 LR LR
comp=Z,190nm,18.5s
GYA **Guiyang** 137.09 16 PDIF Pdif 04 16 10.5 -2.8
GYA PKP PKPdf 04 19 00.0 -6.4
GYA XPKP 04 19 58.5
GYA PP PP
comp=Z,90nm,6.8s
KMI **Kunming** 137.11 22 PKP PKPdf 04 19 05.5 -1.0
ARMA **Armidale** 146.22 237 *e*PKP PKPdf 04 19 24.6 +2.1
ARMA *e* 04 20 03.4
STKA **Stephens Creek** 153.29 227 PKPbc PKPbc 04 19 40.5 -0.7
comp=Z,3.0nm,0.9s,baz=17,slow=5.5,SNR=3.2
ASAR **Alice Springs** 163.37 237 PKP PKPdf 04 19 45.1 -0.8
comp=Z,0.4nm,0.7s,baz=133,slow=1.1,SNR=6.8
ASAR PKPab PKPab 04 20 36.4 -1.2
comp=Z,0.7nm,0.6s,baz=115,slow=4.0,SNR=8.2

TRN 30 04:20:00.1, 1445N×6072W, h34km, MD3.5, M2.7(FDF), **7C-4D, Windward Islands**

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

MVM	**Montagne Vaucl**	**0.20**	**302**	⇑*iP*	Pb	04 20 07.5 +0.7
BIM	**Bigot**	**0.34**	**282**	⇓*iP*	Pb	04 20 10.0 +1.5
BIM				⇓*eS*	Sb	04 20 17.4 +3.2
SLW	**Petit Monier**	**0.47**	**206**	⇑*eP*	Pb	04 20 11.0 +0.6
SLW	**Petit Monier**	**0.47**	**206**	⇑*eP*	Pb	04 20 12.0 +1.6
SLW				⇑*eS*	Sb	04 20 19.5 +2.1
SLW				*eS*	Sb	04 20 20.2 +2.8
FDF	**Fort de France**	**0.50**	**304**	⇓*eP*	Pb	04 20 11.8 +1.0
FDF				⇓*eS*	Sb	04 20 20.7 +2.6
SLPE	**Piton Saint Es**	**0.66**	**204**	*eP*	Pn	04 20 14.9 +1.9
SLPE				*eS*	Sn	04 20 25.2 +3.1
SLB	**Belfond**	**0.69**	**207**	⇑*iP*	Pn	04 20 14.5 +1.1
SLB				*eS*	Sn	04 20 26.2 +3.2
MCLT	**Moule a Chique**	**0.76**	**196**	⇑*iP*	Pn	04 20 13.2 -1.2
MCLT				*iS*	Sn	04 20 25.3 +0.5
SFAN	**Fancy Village**	**1.15**	**203**	*eP*	Pn	04 20 22.5 +2.8
SVV	**Soufriere Volc**	**1.22**	**203**	*eP*	Pn	04 20 22.7 +2.0
SVV				*eS*	Sn	04 20 42.4 +6.3
SVB	**Belmont**	**1.28**	**204**	⇑*eP*	Pn	04 20 23.3 +1.8
SVB				*eS*	Sn	04 20 41.2 +3.7
FCV	**Fort Charlotte**	**1.38**	**202**	*eP*	Pn	04 20 24.0 +1.1
FCV				*eS*	Sn	04 20 41.7 +1.7
SCG	**Saint Claude**	**1.82**	**330**	*eP*	Pn	04 20 31.5 +2.5
LZG	**Guadaloupe-1**	**1.97**	**329**	*eP*	Pn	04 20 34.1 +3.1

MAN 30 04:28:53,1264N×12483E,h20km,mb4.5,ML3.4,MS3.3, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.21**	**232**	*eP*	Pb	04 29 00.8	+2.5
CNP				*eS*	Sb	04 29 08.1	+6.2
PVCP	**Virac**	**1.16**	**325**	*eP*	Pn	04 29 13.7	-0.4
PVCP				*eS*	Sb	04 29 30.9	+2.0
OTRP	**Odiongan**	**2.76**	**265**	*eP*	Pn	04 29 38.6	+2.5

*ISCJB **30** 04:29:15.7±1.8,358S±007×1314E±0.1,h56km±18km, mb4.0/9,Error ellipse: s-maj=19.6km s-min=9.4km az=153.6*
*NEIC **30** 04:29:17.8±1.0,361S×13135E,h57km±10km,mb4.1/5, Error ellipse: s-maj=14.2km s-min=5.8km az=57.0*
*IDC **30** 04:29:19.8±3.1,370S×13124E,h78km±28km,mb3.7/8, mb1 3.9/10,mb1mx3.8/17,mbtmp3.8/10,Error ellipse: s-maj=35.2km s-min=11.4km az=71.0*

ISC 30 04:29:18.2±1.4,363S±007×1314E±01,h63km±14km,n21, σ0§70/23,mb4.0/9,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 10nm,0.4s	**9.09**	**173**	*eP*	Px	04 31 06.4	
KAKA				*eS*	Sx	04 32 40.1	
BATI	**Baumata** 4.7nm,0.3s,baz=263,slow=5.6,SNR=6.8	**10.05**	**229**	P	**Pn**	**04 31 40.7**	**+0.7**
KAPI	**Kappang** 0.8nm,0.3s,baz=132,slow=9.7,SNR=4.6	**11.65**	**263**	P	**Pn**	**04 32 00.8**	**-1.0**
DAV	**Davao City (W)** 163nm,0.3s,baz=155,slow=3.8,SNR=4.1	**12.09**	**332**	P	**Pn**	**04 32 07.8**	**0.0**
COEN	**Coen**	**15.54**	**132**	*ePn*	**Pn**	**04 32 52.6**	**-1.0**
WRAB	**Tennant Creek** 14nm,0.8s	**16.47**	**170**	*eP*	**Pn**	**04 33 06.2**	**+0.9**
WRAB				*eSn*	**Sn**	**04 35 54.5**	**-13**
WB2	**Warramunga Arr**	**16.48**	**170**	*eP*	**Pn**	**04 32 59.1**	**-6.4**
WB2				*eS*	**Sn**	**04 35 46.6**	**-21**
ASAR	**Alice Springs** 7.5nm,0.7s,baz=356,slow=10,SNR=68	**20.07**	**173**	P	**P**	**04 33 46.5**	**-0.1**
ASAR				S	**S**	**04 37 26.4**	**-2.5**
CTA	**Charters Tower** 1.1nm,0.8s,baz=357,slow=28,SNR=4.6	**21.88**	**140**	P	**P**	**04 34 06.3**	**+0.2**
CTA	**Charters Tower** 4.5nm,0.8s,mb4.0,baz=325,slow=12,SNR=5.7	**21.88**	**140**	P	**P**	**04 34 06.3**	**+0.2**
CTAO	**Charters Tower** 12nm,1.3s,mb4.2	**21.88**	**140**	*eP*	**P**	**04 34 06.8**	**+0.7**
FORT	**Forrest** 14nm,0.7s,mb4.6	**27.19**	**186**	*eP*	**P**	**04 34 55.8**	**-0.2**
STKA	**Stephens Creek** 2.2nm,0.8s,mb3.9	**29.71**	**162**	*eP*	**P**	**04 35 18.6**	**+0.2**
STKA	**Stephens Creek** 3.0nm,0.8s,mb4.1,baz=334,slow=9.0,SNR=7.4	**29.71**	**162**	P	**P**	**04 35 18.8**	**+0.3**
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,mb4.0,baz=137,slow=7.5,SNR=5.2	**38.74**	**306**	P	**P**	**04 36 37.1**	**+0.4**
SONM	**Songino Array** 0.2nm,0.3s,mb3.6,baz=124,slow=7.7,SNR=2.9	**55.72**	**340**	P	**P**	**04 38 48.5**	**+0.2**
MK31	**Makanchi Array**	**66.19**	**325**	*eP*	**P**	**04 39 59.4**	**0.0**
MKAR	**Makanchi Array** 1.5nm,0.8s,mb4.0,baz=128,slow=7.9,SNR=8.1	**66.19**	**325**	P	**P**	**04 39 59.0**	**-0.4**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,mb3.9,baz=104,slow=5.0,SNR=5.3	**69.20**	**333**	P	**P**	**04 40 17.6**	**-0.6**
KURK	**Kurchatov** 3.2nm,0.8s,mb4.3	**70.39**	**328**	*eP*	**P**	**04 40 25.6**	**+0.1**
VNDA	**Vanda** 1.0nm,0.8s,mb3.8,baz=318,slow=8.0,SNR=8.2	**75.62**	**173**	P	**P**	**04 40 57.3**	**+1.3**

*ISCJB **30** 04:37:22.7±0.7,1960N±009×15605W±006,h10km,Error ellipse: s-maj=13.3km s-min=7.0km az=16.3*
*NEIC **30** 04:37:25.0,1961N×15587W,h27km,ML3.9(HVO),After HVO.*
NEIC Felt [IV] at Captain Cook, Kailua Kona and Kealakekua; [III] at Holualoa, Honoka'a and Kamuela; [II] at Waikoloa. Felt at Hakalau, Hawaii National Park, Hilo, Honaunau, Honomu, Kea'au, Kapaau, Kurtistown, Laupahoehoe, Mountain View, Pa'auilo, Papa'ikou, Pepeekeo and Volcano. Also felt at Kihei and Kula, Maui.

ISC 30 04:37:25.0±0.6,1955N±007×15589W±007,h10km,n227, σ0§49/231,109C-114D,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.39**	**140**	⇓*iPg*	**Pg**	**04 37 33.1**	**+0.4**
POHA	**Pohakuloa**	**0.39**	**58**	*ePg*	**Pg**	**04 37 32.5**	**-0.3**
POHA				*eSg*	**Sg**	**04 37 38.0**	**0.0**
STCH	**Steam Cracks**	**0.73**	**102**	*ePg*	**Pn**	**04 37 36.8**	**-4.7**
STCH				*eSg*	**Sg**	**04 37 46.1**	**-2.7**
HON	**Honolulu**	**2.66**	**312**	*ePn*	**Pn**	**04 38 02.4**	**-5.5**
HON				*eSn*	**Sn**	**04 38 31.5**	**-8.7**
KIP	**Kipapa**	**2.73**	**313**	*ePn*	**Pn**	**04 38 03.7**	**-5.3**
KIP				*eSn*	**Sn**	**04 38 31.8**	**-10**
LAVA	**Lava Cap Winer** baz=36	**35.88**	**50**	⇓P	**P**	**04 44 24.8**	**-0.5**
T06C	**Millerton Lake** baz=36	**36.03**	**53**	⇑P	**P**	**04 44 26.4**	**-0.1**
R06C	**Coleville** baz=37	**36.73**	**51**	⇓P	**P**	**04 44 32.8**	**+0.2**
EDW2	**Edwards Air Fo** baz=37	**36.76**	**58**	⇑P	**P**	**04 44 32.4**	**-0.4**
WCN	**Washoe City** baz=37	**36.79**	**50**	⇑P	**P**	**04 44 31.8**	**-1.2**
BFSC	**Mount Baldy St** baz=37	**36.87**	**59**	⇑P	**P**	**04 44 32.8**	**-1.0**
MURC	**Murrieta** baz=37	**37.10**	**60**	⇑P	**P**	**04 44 35.9**	**+0.1**
N06A	**Buffalo Meadow** baz=37	**37.29**	**48**	⇑P	**P**	**04 44 37.8**	**+0.5**
K05A	**Summer Lake** baz=37	**37.42**	**44**	⇑P	**P**	**04 44 39.7**	**+1.4**
MPMC	**Manual Prospec** baz=37	**37.46**	**56**	⇑P	**P**	**04 44 39.3**	**+0.5**
MONP	**Monument Peak** baz=38	**37.60**	**61**	⇓P	**P**	**04 44 40.0**	**+0.1**
O07A	**Toulon** baz=38	**37.74**	**49**	⇑P	**P**	**04 44 41.3**	**+0.3**
E03A	**Lebam** baz=38	**37.75**	**37**	⇓P	**P**	**04 44 41.9**	**+0.9**
GSC	**Goldstone** baz=38	**37.80**	**57**	⇓P	**P**	**04 44 41.9**	**+0.2**
GRAC	**Grapevine Rang** baz=38	**37.81**	**54**	⇑P	**P**	**04 44 42.2**	**+0.4**
I05A	**Bend** baz=38	**37.86**	**42**	⇑P	**P**	**04 44 42.6**	**+0.5**
N07B	**Gerlach** baz=38	**37.91**	**48**	⇓P	**P**	**04 44 42.5**	**0.0**
Q08A	**Gabbs** baz=38,SNR=6.3	**37.96**	**51**	⇑P	**P**	**04 44 42.8**	**-0.2**
FURC	**Furnace Creek,** baz=38	**38.06**	**55**	⇓P	**P**	**04 44 43.9**	**+0.1**
S09A	**Goldfield** baz=38	**38.13**	**53**	⇓P	**P**	**04 44 44.4**	**-0.1**
J06A	**Christmas Vall** baz=38	**38.15**	**44**	⇓P	**P**	**04 44 45.5**	**+1.0**
L07A	**Adell** baz=38	**38.15**	**46**	⇑P	**P**	**04 44 45.3**	**+0.8**
BELC	**Belle Mtn.** baz=38	**38.16**	**60**	⇑P	**P**	**04 44 44.7**	**0.0**
O08A	**Rochester Mine** baz=38	**38.30**	**49**	⇑P	**P**	**04 44 46.3**	**+0.5**
SHOC	**Shoshone** baz=38	**38.36**	**57**	⇑P	**P**	**04 44 46.7**	**+0.3**
R09A	**Tonopah** baz=38	**38.40**	**53**	⇓P	**P**	**04 44 46.8**	**+0.1**
I06A	**Prineville** baz=38	**38.43**	**43**	⇑P	**P**	**04 44 47.8**	**+1.0**
U10A	**Ash Meadows, A** baz=38	**38.46**	**56**	⇑P	**P**	**04 44 47.6**	**+0.4**
K07A	**Rock Creek Ran** baz=38	**38.50**	**45**	⇓P	**P**	**04 44 47.9**	**+0.4**
BC3	**Big Chuckw Mtn** baz=38	**38.54**	**60**	⇑P	**P**	**04 44 48.0**	**+0.1**
TPNV	**Topopah Spring** baz=39	**38.66**	**55**	⇓P	**P**	**04 44 49.4**	**+0.5**
S10A	**Tonopah Range,** baz=39	**38.67**	**53**	⇑P	**P**	**04 44 49.1**	**+0.2**
H06A	**Lindquist Farm** baz=39	**38.72**	**41**	⇑P	**P**	**04 44 50.2**	**+0.9**
C04A	**Brinnon** baz=39	**38.75**	**36**	⇑P	**P**	**04 44 50.4**	**+1.0**
J07A	**Hines** baz=39	**38.75**	**44**	⇑P	**P**	**04 44 50.5**	**+1.0**
IRM	**Iron Mountain** baz=39	**38.88**	**60**	⇓P	**P**	**04 44 51.1**	**+0.3**
L08A	**Fields** baz=39	**38.90**	**46**	⇑P	**P**	**04 44 51.5**	**+0.7**
I07A	**Izee** baz=39	**38.94**	**43**	⇓P	**P**	**04 44 51.9**	**+0.7**
O09A	**Fish Creek Ran** baz=39	**38.95**	**50**	⇓P	**P**	**04 44 51.9**	**+0.6**
R10A	**Warm Springs** baz=39	**39.00**	**53**	⇑P	**P**	**04 44 52.4**	**+0.7**
K08A	**Mann Creek Ran** baz=39	**39.02**	**45**	⇓P	**P**	**04 44 52.8**	**+0.9**
M09A	**Marrel Ranch,** baz=39	**39.22**	**48**	⇑P	**P**	**04 44 54.6**	**+1.1**
S11A	**Rachel** baz=39	**39.23**	**54**	⇑P	**P**	**04 44 54.3**	**+0.6**
P10A	**Eureka** baz=39	**39.29**	**51**	⇓P	**P**	**04 44 54.4**	**+0.3**
J08A	**Circle Bar Ran** baz=39	**39.30**	**44**	⇑P	**P**	**04 44 54.8**	**+0.7**
G07A	**Ruggs Ranch, H** baz=39	**39.39**	**41**	⇓P	**P**	**04 44 55.7**	**+0.7**
V12A	**Nelson** baz=39	**39.45**	**57**	⇑P	**P**	**04 44 55.9**	**+0.3**
I08A	**Drewsey** baz=39,SNR=6.2	**39.47**	**44**	⇓P	**P**	**04 44 55.8**	**+0.2**
O10A	**Cortez Mining,** baz=39	**39.49**	**50**	⇓P	**P**	**04 44 56.3**	**+0.6**
K09A	**Rome** baz=40	**39.52**	**46**	⇓P	**P**	**04 44 56.3**	**+0.3**
T11A	**Corn Creek, Al** baz=40,SNR=5.1	**39.53**	**55**	⇑P	**P**	**04 44 56.0**	**-0.1**
R11A	**Troy Canyon, C** baz=40,SNR=5.7	**39.55**	**53**	⇑P	**P**	**04 44 56.1**	**-0.2**
Q11A	**Duckwater** baz=40	**39.65**	**52**	⇓P	**P**	**04 44 57.3**	**+0.2**
H08A	**Prairie City** baz=40	**39.68**	**43**	⇑P	**P**	**04 44 57.5**	**+0.2**
J09A	**Fry Pan Ranch,** baz=40	**39.77**	**45**	⇑P	**P**	**04 44 57.8**	**-0.2**
113A	**Mohawk Valley,** baz=40	**39.78**	**62**	⇓P	**P**	**04 44 58.1**	**-0.2**
P11A	**Circle Ranch,** baz=40	**39.79**	**51**	⇑P	**P**	**04 44 58.3**	**0.0**
G08A	**Pilot Rock** baz=40,SNR=6.0	**39.85**	**41**	⇑P	**P**	**04 44 58.9**	**+0.2**
M10A	**I.L. Ranch, Tu** baz=40	**39.89**	**48**	⇓P	**P**	**04 44 59.4**	**+0.4**
S12A	**Delamar Landin** baz=40	**39.91**	**54**	⇓P	**P**	**04 44 59.4**	**+0.1**
X13A	**Yucca** baz=40	**40.04**	**59**	⇓P	**P**	**04 45 00.3**	**-0.1**
I09A	**Lost Marbles R** baz=40	**40.04**	**44**	⇓P	**P**	**04 45 00.6**	**+0.3**
O11A	**Cowboy Ranch,** baz=40	**40.04**	**50**	⇓P	**P**	**04 45 00.9**	**+0.6**
W13A	**Hualapai Mount** baz=40	**40.09**	**58**	⇓P	**P**	**04 45 00.4**	**-0.4**
K10A	**MacKenzie Ranc** baz=40	**40.13**	**46**	⇓P	**P**	**04 45 01.7**	**+0.6**
L10A	**Juniper Basin** baz=40	**40.14**	**47**	⇓P	**P**	**04 45 01.3**	**+0.1**
V13A	**Grand Canyon W** baz=40	**40.17**	**57**	⇑P	**P**	**04 45 01.7**	**+0.2**
D07A	**Quincy** baz=40	**40.17**	**38**	⇓P	**P**	**04 45 01.6**	**+0.3**
F08A	**Pendleton** baz=40	**40.20**	**41**	⇓P	**P**	**04 45 01.6**	**0.0**
N11A	**Elko Archery C** baz=40	**40.21**	**49**	⇑P	**P**	**04 45 02.2**	**+0.4**
R12A	**Pony Springs,** baz=40	**40.29**	**53**	⇓P	**P**	**04 45 02.8**	**+0.4**
U13A	**Paroon Wash** baz=40	**40.30**	**56**	⇓P	**P**	**04 45 02.8**	**+0.2**
Q12A	**Willow Creek R** baz=40	**40.32**	**52**	⇓P	**P**	**04 45 03.1**	**+0.4**
C07A	**Waterville** baz=40	**40.38**	**38**	⇑P	**P**	**04 45 03.3**	**+0.3**
H09A	**Durkee** baz=40	**40.38**	**43**	⇓P	**P**	**04 45 02.9**	**-0.3**
214A	**Organ Pipe Nat** baz=40	**40.47**	**63**	⇑P	**P**	**04 45 04.7**	**+0.6**
T13A	**Saint George** baz=40,SNR=6.4	**40.49**	**56**	⇓P	**P**	**04 45 04.1**	**0.0**
G09A	**Cove** baz=40	**40.58**	**42**	⇓P	**P**	**04 45 04.9**	**+0.1**
Y14A	**Wickenburg** baz=40	**40.59**	**60**	⇓P	**P**	**04 45 04.8**	**-0.2**
S13A	**Holt Ranch, En** baz=41	**40.66**	**55**	⇓P	**P**	**04 45 05.8**	**+0.2**
L11A	**Cr Creek Ranc** baz=41	**40.67**	**47**	⇑P	**P**	**04 45 05.6**	**+0.1**
K11A	**Parker Ranch,** baz=41	**40.70**	**46**	⇑P	**P**	**04 45 06.0**	**+0.2**
I10A	**Payette** baz=41	**40.70**	**44**	⇑P	**P**	**04 45 06.2**	**+0.4**
D08A	**Wollman Farm,** baz=41	**40.72**	**39**	⇑P	**P**	**04 45 05.7**	**-0.2**
N12A	**Clover Valley,** baz=41	**40.72**	**50**	⇓P	**P**	**04 45 05.9**	**-0.1**
R13A	**O'Grain Ranch,** baz=41	**40.73**	**54**	⇓P	**P**	**04 45 06.1**	**0.0**
O12A	**Currie** baz=41	**40.75**	**50**	⇓P	**P**	**04 45 06.6**	**+0.4**
B07A	**Winthrop** baz=41	**40.75**	**37**	⇓P	**P**	**04 45 06.4**	**+0.3**
W14A	**Seligman** baz=41	**40.76**	**58**	⇑P	**P**	**04 45 06.2**	**-0.2**
V14A	**Boquillas Ranc** baz=41	**40.82**	**58**	⇑P	**P**	**04 45 07.1**	**+0.2**
Q13A	**Wheeler Ranch,** baz=41	**40.90**	**53**	⇓P	**P**	**04 45 07.9**	**+0.4**
A07A	**Ashnola River,** baz=41	**40.92**	**36**	⇑P	**P**	**04 45 08.1**	**+0.6**
E09A	**Wood Farm, Sta** baz=41	**40.92**	**40**	⇓P	**P**	**04 45 07.8**	**+0.2**
U14A	**Mt Trumbull** baz=41	**40.92**	**57**	⇑P	**P**	**04 45 07.7**	**-0.1**
H10A	**Noah's Angus R** baz=41,SNR=10	**40.95**	**43**	⇓P	**P**	**04 45 08.1**	**+0.3**
M12A	**Wells** baz=41	**41.00**	**49**	⇑P	**P**	**04 45 08.7**	**+0.4**
G10A	**Bishop Farm, J** baz=41	**41.01**	**42**	⇓P	**P**	**04 45 08.3**	**+0.1**
C08A	**Higginbotham F** baz=41	**41.01**	**38**	⇓P	**P**	**04 45 08.6**	**+0.3**
P13A	**Bates Ranch, G** baz=41	**41.04**	**52**	⇑P	**P**	**04 45 08.4**	**-0.2**
MFID	**Camas Ranch** baz=41	**41.08**	**46**	⇓P	**P**	**04 45 08.7**	**-0.2**
D09A	**Jones Farm, Ri** baz=41	**41.09**	**39**	⇑P	**P**	**04 45 08.8**	**-0.1**
B08A	**Colville Reser** baz=41	**41.14**	**37**	⇑P	**P**	**04 45 08.8**	**-0.6**
T14A	**Hurricane** baz=41	**41.14**	**56**	⇓P	**P**	**04 45 09.2**	**-0.3**
Y15A	**Casa Rosa Ranc** baz=41	**41.15**	**61**	⇓P	**P**	**04 45 09.4**	**-0.2**
L12A	**House Creek Ra** baz=41	**41.17**	**48**	⇑P	**P**	**04 45 09.4**	**-0.3**
I11A	**Placerville** baz=41	**41.19**	**45**	⇓P	**P**	**04 45 09.7**	**-0.1**
X15A	**Humboldt** baz=41	**41.31**	**60**	⇑P	**P**	**04 45 10.8**	**-0.1**
Q14A	**Sevier Lake (B** baz=41,SNR=5.1	**41.47**	**53**	⇑P	**P**	**04 45 11.8**	**-0.4**
C09A	**Chrisman Ranch** baz=41	**41.47**	**38**	⇑P	**P**	**04 45 12.1**	**0.0**
H11A	**Donnelly** baz=41	**41.47**	**44**	⇓P	**P**	**04 45 11.8**	**-0.3**
A08A	**Turner Farm, O** baz=41	**41.49**	**36**	⇑P	**P**	**04 45 12.4**	**+0.2**
J12A	**Stokes Ranch,** baz=41	**41.51**	**46**	⇓P	**P**	**04 45 12.5**	**0.0**
G11A	**Walters Elk Ra** baz=42	**41.59**	**43**	⇑P	**P**	**04 45 12.8**	**-0.3**
V15A	**Kaibab Nationa** baz=42	**41.60**	**58**	⇓P	**P**	**04 45 13.2**	**-0.1**
U15A	**North Rim** baz=42	**41.63**	**57**	⇓P	**P**	**04 45 13.6**	**0.0**
P14A	**Drum Mountains** baz=42	**41.78**	**52**	⇑P	**P**	**04 45 15.0**	**+0.2**
Y16A	**Circle Bar Ran** baz=42	**41.84**	**61**	⇓P	**P**	**04 45 15.5**	**+0.2**
S15A	**Panguitch** baz=42	**41.84**	**55**	⇑P	**P**	**04 45 15.7**	**+0.4**
A09A	**Danville** baz=42	**41.88**	**37**	⇓P	**P**	**04 45 15.6**	**+0.2**
L13A	**Double Diamond** baz=42	**41.91**	**48**	⇑P	**P**	**04 45 15.6**	**-0.1**
X16A	**Lo Mia Camp, P** baz=42	**41.95**	**60**	⇓P	**P**	**04 45 16.8**	**+0.6**
W16A	**Flagstaff** baz=42	**41.98**	**59**	⇓P	**P**	**04 45 16.5**	**0.0**
K13A	**Stover Farm, H** baz=42	**42.00**	**47**	⇑P	**P**	**04 45 16.8**	**+0.3**
R15A	**Junction** baz=42	**42.03**	**54**	⇓P	**P**	**04 45 17.2**	**+0.4**
E11A	**Bogner Ranch,** baz=42	**42.04**	**41**	⇑P	**P**	**04 45 16.7**	**-0.1**
N14A	**Grayback Hills** baz=42	**42.06**	**50**	⇓P	**P**	**04 45 17.1**	**+0.1**
HLID	**Hailey** baz=42	**42.09**	**46**	⇑P	**P**	**04 45 17.6**	**+0.3**
M14A	**Sheep Mountain** baz=42	**42.14**	**49**	⇓P	**P**	**04 45 17.4**	**-0.2**
H12A	**Diamond D Ranc** baz=42,SNR=5.4	**42.17**	**44**	⇑P	**P**	**04 45 17.6**	**-0.3**
WUAZ	**Wupatki** baz=42	**42.19**	**58**	⇓P	**P**	**04 45 18.4**	**+0.3**
J13A	**Cove Ranch, Pi** baz=42	**42.20**	**46**	⇑P	**P**	**04 45 18.0**	**0.0**
117A	**Oracle** baz=42	**42.28**	**63**	⇓P	**P**	**04 45 18.9**	**0.0**
Y17A	**Roosevelt** baz=42	**42.34**	**61**	⇑P	**P**	**04 45 19.3**	**0.0**
T16A	**Glen Canyon Da** baz=42	**42.36**	**56**	⇓P	**P**	**04 45 19.4**	**-0.1**
I13A	**Wildhorse Cree** baz=42	**42.42**	**46**	⇓P	**P**	**04 45 20.0**	**+0.1**
S16A	**Weppner Ranch,** baz=42	**42.44**	**55**	⇑P	**P**	**04 45 20.6**	**+0.4**
U16A	**Tuba City** baz=42	**42.49**	**58**	⇑P	**P**	**04 45 20.6**	**0.0**
N15A	**Stansbury Isla** baz=42	**42.55**	**50**	⇓P	**P**	**04 45 20.9**	**-0.1**
H13A	**Challis** baz=42	**42.57**	**45**	⇓P	**P**	**04 45 21.0**	**-0.1**
J14A	**Carey** baz=42	**42.62**	**47**	⇓P	**P**	**04 45 21.8**	**+0.3**
R16A	**Teasdale** baz=43	**42.66**	**54**	⇑P	**P**	**04 45 22.2**	**+0.3**
C11A	**Tepee Creek (N** baz=43	**42.68**	**39**	⇓P	**P**	**04 45 21.7**	**-0.3**
M15A	**Larsen Ranch,** baz=43	**42.77**	**50**	⇑P	**P**	**04 45 22.8**	**0.0**
G13A	**Cobalt** baz=43,SNR=5.4	**42.78**	**44**	⇓P	**P**	**04 45 22.6**	**-0.3**
I14A	**Mackay** baz=43	**42.87**	**46**	⇓P	**P**	**04 45 24.2**	**+0.6**
D12A	**Red Ives Fores** baz=43	**42.88**	**41**	⇑P	**P**	**04 45 23.0**	**-0.6**
T17A	**Navajo Res., N** baz=43	**42.91**	**56**	⇓P	**P**	**04 45 24.6**	**+0.6**
118A	**Homack Ranch,** baz=43	**42.94**	**63**	⇑P	**P**	**04 45 24.5**	**+0.2**
U17A	**Shonto** baz=43	**42.95**	**57**	⇓P	**P**	**04 45 24.5**	**+0.3**
L15A	**Malad City** baz=43	**42.98**	**49**	⇓P	**P**	**04 45 24.5**	**0.0**
F13A	**Darby** baz=43	**42.99**	**43**	⇑P	**P**	**04 45 24.0**	**-0.5**
Y18A	**Canyon Day Jun** baz=43	**43.02**	**61**	⇑P	**P**	**04 45 25.0**	**+0.1**
S17A	**Black Ridge (B** baz=43	**43.04**	**55**	⇑P	**P**	**04 45 24.7**	**-0.3**
A11A	**Hall Mountain,** baz=43	**43.15**	**38**	⇑P	**P**	**04 45 25.8**	**+0.1**
H14A	**Leadore** baz=43	**43.18**	**45**	⇑P	**P**	**04 45 26.2**	**+0.2**
R17A	**Hanksville Air** baz=43	**43.28**	**54**	⇓P	**P**	**04 45 26.8**	**-0.1**
E13A	**Victor** baz=43	**43.35**	**42**	⇑P	**P**	**04 45 27.0**	**-0.4**
G14A	**Jackson** baz=43	**43.35**	**44**	⇓P	**P**	**04 45 27.2**	**-0.1**
V18A	**Ganado** baz=43	**43.38**	**58**	⇑P	**P**	**04 45 27.1**	**-0.6**
J15A	**Blackfoot** baz=43	**43.39**	**47**	⇑P	**P**	**04 45 28.3**	**+0.5**
D13A	**Huson** baz=43	**43.45**	**41**	⇑P	**P**	**04 45 28.2**	**0.0**
P17A	**Butcher Ranch,** baz=43	**43.49**	**53**	⇑P	**P**	**04 45 29.1**	**+0.4**
U18A	**Rough Rock, Ch** baz=44	**43.54**	**57**	⇓P	**P**	**04 45 29.0**	**-0.1**
A12A	**Yaak River Ran** baz=44	**43.55**	**38**	⇑P	**P**	**04 45 28.9**	**0.0**
SRU	**San Rafael** baz=44	**43.57**	**53**	⇓P	**P**	**04 45 29.2**	**-0.1**
C13A	**Hot Springs** baz=44	**43.63**	**40**	⇓P	**P**	**04 45 29.8**	**+0.2**
H15A	**Lima** baz=44	**43.66**	**45**	⇑P	**P**	**04 45 30.2**	**+0.3**
L16A	**Fish Haven** baz=44	**43.66**	**49**	⇑P	**P**	**04 45 30.1**	**+0.1**
T18A	**Mexican Hat** baz=44	**43.67**	**56**	⇑P	**P**	**04 45 29.9**	**-0.2**
O17A	**Robinson Place** baz=44	**43.67**	**52**	⇑P	**P**	**04 45 30.3**	**+0.2**
S18A	**Hurst Farm, Bl** baz=44	**43.68**	**56**	⇓P	**P**	**04 45 30.4**	**+0.3**
Y19A	**Nutrioso** baz=44	**43.68**	**61**	⇑P	**P**	**04 45 29.8**	**-0.4**
E14A	**Clinton** baz=44,SNR=8.2	**43.78**	**42**	⇑P	**P**	**04 45 30.5**	**-0.4**
N17A	**Moffit Pass** baz=44	**43.80**	**51**	⇓P	**P**	**04 45 31.0**	**0.0**
Q18A	**Rafter H Ranch** baz=44	**43.87**	**54**	⇑P	**P**	**04 45 31.2**	**-0.5**
R18A	**Canyonlands Na** baz=44	**43.90**	**55**	⇓P	**P**	**04 45 31.5**	**-0.5**
J16A	**Bone** baz=44	**43.91**	**47**	⇓P	**P**	**04 45 32.0**	**0.0**
G15A	**Dillon** baz=44	**43.96**	**44**	⇑P	**P**	**04 45 31.9**	**-0.4**
D14A	**Greenough** baz=44	**44.04**	**42**	⇑P	**P**	**04 45 32.7**	**-0.2**
C14A	**Swan Lake** baz=44	**44.17**	**41**	⇓P	**P**	**04 45 33.3**	**-0.7**
I16A	**Newdale** baz=44	**44.19**	**47**	⇓P	**P**	**04 45 34.4**	**+0.2**
F15A	**Butte** baz=44	**44.20**	**44**	⇓P	**P**	**04 45 34.1**	**-0.2**
K17A	**Gardner Place,** baz=44	**44.24**	**48**	⇑P	**P**	**04 45 34.5**	**-0.1**
A13A	**Flathead Natio** baz=44	**44.27**	**39**	⇓P	**P**	**04 45 34.2**	**-0.6**
T19A	**Beclabito** baz=44	**44.28**	**57**	⇑P	**P**	**04 45 35.0**	**0.0**
S19A	**Harvey Farm, M** baz=44	**44.36**	**56**	⇓P	**P**	**04 45 35.3**	**-0.4**
R19A	**Curley Farm, L** baz=44	**44.37**	**55**	⇑P	**P**	**04 45 35.3**	**-0.4**
G16A	**Moss Hill, Enn** baz=44	**44.43**	**45**	⇑P	**P**	**04 45 35.9**	**-0.2**
Q19A	**Hogan Spring (** baz=44	**44.50**	**54**	⇓P	**P**	**04 45 36.4**	**-0.3**
H16A	**Russell Place,** baz=44	**44.63**	**46**	⇓P	**P**	**04 45 37.7**	**0.0**

L18A	**Fontenelle, Gr** baz=45	**44.63**	**50**	⇓P		**P**	**04 45 37.0**	**-0.8**
D15A	**Lincoln** baz=45	**44.64**	**42**	⇓P		**P**	**04 45 37.2**	**-0.5**
BOZ	**Bozeman (W)** baz=45	**44.70**	**44**	⇑P		**P**	**04 45 38.0**	**-0.2**
B14A	**Marquette Ranc** baz=45	**44.71**	**40**	⇑P		**P**	**04 45 37.3**	**-1.0**
F16A	**Kennard Place,** baz=45	**44.75**	**44**	⇓P		**P**	**04 45 38.6**	**0.0**
MVCO	**Mesa Verde** baz=45	**44.76**	**57**	⇓P		**P**	**04 45 38.2**	**-0.6**
K18A	**Toltan Ranch,** baz=45	**44.83**	**49**	⇑P		**P**	**04 45 38.8**	**-0.5**
I17A	**Pilgram Creek** baz=45	**44.83**	**47**	⇓P		**P**	**04 45 39.1**	**-0.2**
P19A	**Cripple Cowboy** baz=45	**44.86**	**53**	⇓P		**P**	**04 45 38.7**	**-0.8**
C15A	**Salmond Ranch,** baz=45	**44.87**	**41**	⇑P		**P**	**04 45 38.7**	**-0.9**
A14A	**Double T Ranch** baz=45	**44.88**	**39**	⇓P		**P**	**04 45 38.7**	**-0.9**
B15A	**Bradely Ranch,** baz=45	**45.12**	**40**	⇑P		**P**	**04 45 40.9**	**-0.6**
BW06	**Boulder Array** baz=45	**45.20**	**49**	⇑P		**P**	**04 45 41.8**	**-0.5**
D16A	**Dana Ranch, Ca** baz=45	**45.25**	**42**	⇑P		**P**	**04 45 42.3**	**-0.3**
I18A	**Diamond G Ranc** baz=45	**45.29**	**47**	⇑P		**P**	**04 45 42.2**	**-0.7**
A15A	**Johnson Ranch,** baz=45	**45.29**	**39**	⇓P		**P**	**04 45 42.2**	**-0.7**
C16A	**Fuhringer Ranc** baz=45	**45.42**	**41**	⇓P		**P**	**04 45 42.7**	**-1.2**
F17A	**Fitzpatrick Pl** baz=45	**45.42**	**44**	⇑P		**P**	**04 45 43.5**	**-0.4**
E17A	**Martinsdale** baz=45	**45.49**	**43**	⇓P		**P**	**04 45 43.9**	**-0.5**
R21A	**Cimarron** baz=46	**45.70**	**55**	⇑P		**P**	**04 45 46.1**	**-0.3**
D17A	**Six Diamond Ra** baz=46	**45.84**	**42**	⇓P		**P**	**04 45 46.6**	**-0.7**
G18A	**Lazy EL Ranch,** baz=46	**45.95**	**45**	⇓P		**P**	**04 45 47.9**	**-0.3**
A16A	**West Butte Ran** baz=46	**45.96**	**40**	⇑P		**P**	**04 45 47.0**	**-1.2**
C17A	**Wharram Farm,** baz=46,SNR=7.2	**45.97**	**42**	⇓P		**P**	**04 45 47.5**	**-0.8**
K20A	**Yellowstone Ra** baz=46	**46.04**	**49**	⇑P		**P**	**04 45 47.5**	**-1.4**
F18A	**Big Timber** baz=46	**46.04**	**44**	⇓P		**P**	**04 45 48.7**	**-0.2**
RLMT	**Red Lodge** baz=46	**46.09**	**46**	⇓P		**P**	**04 45 49.1**	**-0.2**
E18A	**Harlowton** baz=46	**46.13**	**43**	⇓P		**P**	**04 45 49.3**	**-0.3**
D18A	**Linhart Farms,** baz=46	**46.42**	**43**	⇑P		**P**	**04 45 51.2**	**-0.7**
M21A	**Separation Pea** baz=46	**46.49**	**51**	⇓P		**P**	**04 45 51.3**	**-1.2**
A17A	**Triple J Farms** baz=46	**46.50**	**40**	⇓P		**P**	**04 45 51.5**	**-1.0**
B18A	**Beardsley Farm** baz=47	**46.86**	**41**	⇓P		**P**	**04 45 54.0**	**-1.3**

*ISCJB **30** 05:06:23.9±0.4, 2393N×1003×12283E×002, h6km, Error ellipse: s-maj=4.8km s-min=2.3km az=167.4*
*JMA **30** 05:06:25.3±0.3, 2397N×12289E, h6km, M3.1*
*TAP **30** 05:06:25.8, 2405N×12283E, h27km±4km, ML3.1, D*
ISC 30 05:06:23.8±0.6, **2393N**±004×**12282E**±002, **h3**km±5km, **n28, σ0§89/45, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**18**	P			**Pg**	**05 06 35.4**	**+0.8**
YOJ				S			**Sg**	**05 06 42.0**	**+0.1**
HATJ	**Hateruma jima**	**0.91**	**82**	P			**Pg**	**05 06 41.2**	**-0.1**
HATJ				S			**Sg**	**05 06 53.0**	**-0.2**
IRIF	**Iriomote-Funau**	**0.93**	**64**	P			**Pg**	**05 06 41.7**	**+0.1**
IRIF				S			**Sg**	**05 06 54.4**	**+0.8**
ENA	**Nanau** baz=305	**1.10**	**297**	P			**Pg**	**05 06 45.2**	**+0.2**
ENA	baz=305			*e*S			**Sg**	**05 07 00.2**	**+0.9**
TWC	**Suao** baz=303	**1.11**	**308**	*e*S			**Sg**	**05 06 59.1**	**-0.6**
TWD	**Chiawan** baz=273	**1.13**	**278**	*e*P			**Pg**	**05 06 45.1**	**-0.4**
JKRS	**Kuro-shima**	**1.13**	**74**	P			**Pg**	**05 06 45.3**	**-0.2**
JKRS				S			**Sg**	**05 07 01.0**	**+0.8**
ESL	**Shilin** baz=261	**1.27**	**265**	*e*P			**Pg**	**05 06 47.2**	**-1.1**
JIJ	**Ishigaki jima**	**1.28**	**70**	P			**Pg**	**05 06 47.7**	**-0.8**
JIJ				S			**Sg**	**05 07 04.4**	**-0.8**
TWB1	**Santiao Chiao** baz=322	**1.31**	**325**	*e*P			**Pn**	**05 06 49.4**	**+0.2**
ENTT	**Nioudou** baz=299	**1.34**	**302**	*e*P			**Pn**	**05 06 49.7**	**+0.1**
ENTT	baz=299			*e*S			**Sb**	**05 07 07.8**	**+0.4**
NNS	**Nan Shan** baz=288	**1.42**	**291**	*e*P			**Pn**	**05 06 50.8**	**+0.3**
EHY	**Hungye** baz=250	**1.44**	**253**	*e*P			**Pn**	**05 06 50.2**	**-0.6**
WHF	**Hehuan Shan** baz=276	**1.44**	**279**	P			**Pn**	**05 06 50.9**	**+0.1**
WHF	baz=276			*e*S			**Sb**	**05 07 10.7**	**+0.7**
NWF	**Wu-fen Shan** baz=318	**1.48**	**320**	*e*P			**Pn**	**05 06 50.0**	**-1.4**
NWF	baz=318			*e*S			**Sn**	**05 07 08.8**	**-2.5**
TWF1	**Yuli** baz=234	**1.51**	**248**	*e*P			**Pn**	**05 06 51.0**	**-0.9**
TWF1	baz=234			*e*S			**Sn**	**05 07 10.5**	**-1.5**
NSK	**Sanguang** baz=282	**1.53**	**299**	*e*P			**Pn**	**05 06 52.6**	**+0.6**
TWA	**Mucha** baz=325	**1.54**	**313**	*e*P			**Pn**	**05 06 51.8**	**-0.4**
TWA	baz=325			*e*S			**Sn**	**05 07 12.4**	**-0.3**
CHKT	**Chengkung** baz=224	**1.57**	**239**	*e*S			**Sn**	**05 07 10.6**	**-2.9**
SMLT	**Sun Moon Lake** baz=267	**1.76**	**269**	P			**Pn**	**05 06 55.8**	**+0.5**
YUS	**Yu-Shan** baz=254	**1.77**	**256**	*e*P			**Pn**	**05 06 55.7**	**+0.4**
YUS	baz=254			S			**Sn**	**05 07 18.3**	**-0.1**
TYC	**Yuchr** baz=268	**1.79**	**270**	P			**Pn**	**05 06 56.6**	**+0.8**
TYC	baz=268			*e*S			**Sn**	**05 07 19.1**	**+0.1**
JTJ	**Tarama**	**1.86**	**67**	P			**Pn**	**05 06 57.4**	**+0.8**
JTJ				S			**Sn**	**05 07 20.8**	**+0.1**
ALS	**Alishan** baz=256	**1.89**	**258**	*e*P			**Pn**	**05 06 57.1**	**0.0**
CHN5	**Tsauling** baz=249	**1.99**	**261**	*e*P			**Pn**	**05 06 57.4**	**-1.1**
CHN5	baz=249			*e*S			**Sn**	**05 07 25.1**	**+1.3**
CHN4	**Tsaushan** baz=243	**2.12**	**255**	*e*P			**Pn**	**05 06 59.6**	**-0.7**
CHN4	baz=243			*e*S			**Sn**	**05 07 29.5**	**+2.4**
WTP	**Ta-pu** baz=239	**2.13**	**252**	*e*P			**Pn**	**05 07 00.3**	**-0.1**
CHN1	**Nanshi** baz=249	**2.23**	**251**	*e*P			**Pn**	**05 07 02.7**	**+1.0**
CHN1	baz=249			*e*S			**Sn**	**05 07 32.1**	**+2.3**

*ISCJB **30** 05:43:53.1±3.7, 09N±02×1236E±04, h271km±37km, mb3.7/6, Error ellipse: s-maj=68.4km s-min=14.3km az=156.6*
*IDC **30** 05:43:56.2±2.9, 074N×12340E, h284km±28km, mb3.5/6, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=56.2km s-min=10.3km az=68.0*
ISC 30 05:43:55.2±3.4, **08N**±02×**1235E**±04, **h275**km±35km, **n10, σ0§37/10, mb3.7/6, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang** 1.2nm,0.3s,baz=88,slow=12,SNR=4.3		**6.84 213**	P			**Pn**	**05 45 34.3**	**0.0**
WB2	**Warramunga Arr**		**23.19 153**	⇑*i*P			**P**	**05 48 37.6**	**-0.5**
ASAR	**Alice Springs** 0.7nm,0.4s,mb3.4,baz=339,slow=7.4,SNR=17		**26.32 158**	P			**P**	**05 49 06.6**	**+0.3**
ASAR	0.9nm,0.9s,baz=351,slow=20,SNR=6.3			S			**S**	**05 53 18.5**	**0.0**
STKA	**Stephens Creek** 2.6nm,0.3s,mb3.8		**36.73 154**	*e*P			**P**	**05 50 36.8**	**+0.2**
STKA	**Stephens Creek** 3.0nm,0.5s,mb4.0,baz=322,slow=7.5,SNR=8.7		**36.73 154**	P			**P**	**05 50 36.9**	**+0.2**
SONM	**Songino Array** 1.4nm,0.5s,mb3.5,baz=158,slow=8.3,SNR=8.8		**49.16 345**	P			**P**	**05 52 15.9**	**+0.4**
MKAR	**Makanchi Array** 0.9nm,0.3s,mb3.6,baz=123,slow=8.7,SNR=20		**58.21 328**	P			**P**	**05 53 21.3**	**+0.4**
MKAR	0.4nm,0.4s,baz=123,slow=4.5,SNR=4.4			PcP		PcP		05 54 09.3	+0.3
ZALV	**Zalesovo Beam** 1.0nm,0.4s,mb3.8,baz=133,slow=7.9,SNR=3.5		**61.81 335**	P			**P**	**05 53 44.4**	**-0.7**
KURK	**Kurchatov** 2.0nm,0.6s,mb3.9,baz=131,slow=5.9,SNR=7.6		**62.55 330**	P			**P**	**05 53 49.9**	**-0.1**
TORD	**Torodi Ar. Bea** 0.2nm,0.3s,baz=72,slow=2.0,SNR=4.6		**120.66 286**	PKP		PKPdf		06 02 15.4	0.0

NEIC 30 06:00:21.8, 3702S×17746E, h140km, MG3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.87**	**129**	P			Pn	06 00 44.4	0.0
MXZ				S			Sn	06 01 02.5	+0.8
PUZ	**Puketiti**	**1.23**	**149**	P			Pn	06 00 47.7	0.0
URZ	**Urewera**	**1.27**	**193**	P			Pn	06 00 48.3	+0.2
MWZ	**Matawai**	**1.31**	**178**	P			Pn	06 00 48.8	+0.2
KUZ	**Kuaotunu**	**1.42**	**281**	P			Pn	06 00 49.8	+0.1
KNZ	**Kokohu**	**2.00**	**175**	P			Pn	06 00 55.9	-0.4
BKZ	**Black Stump Fm**	**2.28**	**199**	P			Pn	06 00 59.5	-0.1
TUVZ	**Tukino**	**2.86**	**212**	P			Pn	06 01 04.6	+0.2
WNVZ	**Wahianoa**	**2.73**	**212**	P			Pn	06 01 05.5	+0.2
MOVZ	**Moawhango**	**2.74**	**209**	P			Pn	06 01 04.4	-1.0
TSZ	**Takapari Road**	**3.25**	**201**	P			Pn	06 01 10.2	-1.8
BFZ	**Birch Farm**	**3.78**	**194**	P			Pn	06 01 16.2	-2.6
MRZ	**Mangatainoka R**	**3.92**	**201**	P			Pn	06 01 17.7	-3.0
KIW	**Kapiti Island**	**4.32**	**207**	P			Pn	06 01 22.6	-3.3
CAW	**Cannon Point**	**4.49**	**204**	P			Pn	06 01 24.4	-3.7
PAWZ	**Paruwai Farm**	**4.63**	**199**	P			Pn	06 01 26.0	-4.1
MSWZ	**Moikau Station**	**4.71**	**201**	P			Pn	06 01 27.2	-3.9
TCW	**Tory Channel**	**4.86**	**210**	P			Pn	06 01 29.1	-4.0
NNZ	**Nelson**	**5.26**	**216**	P			Pn	06 01 35.0	-3.4
QRZ	**Quartz Range**	**5.41**	**224**	P			Pn	06 01 35.7	-4.7
THZ	**Tophouse**	**5.91**	**215**	P			Pn	06 01 43.2	-3.9
KHZ	**Kahutara**	**6.18**	**208**	P			Pn	06 01 46.0	-4.7

NNC 30 06:13:35.5±3.6, 5409N×8664E, h0km, mb3.6, mpv3.2, 7C-3D, Error ellipse: s-maj=27.7km s-min=20.1km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURK	**Kurchatov** 4.1nm,0.6s	**5.96**	**239**	⇑Pn			Pn	06 15 06.3	+1.5
KURK	2.5nm,0.6s			⇑Sn			Sn	06 16 16.4	+2.7
KURK	5.7nm,0.9s			⇓Lg				06 16 46.5	
KURBB	**Kurchatov Arra** 1.3nm,0.7s,baz=54,slow=14	**6.06**	**238**	⇑Pn			Pn	06 15 07.5	+1.3
KURBB	1.3nm,0.6s			⇓Sn			Sn	06 16 18.5	+2.3
KURBB	1.0nm,0.6s,baz=45,slow=28			⇑Lg				06 16 48.5	
MK31	**Makanchi Array** 0.5nm,0.6s,baz=27,slow=14,SNR=20	**7.81**	**203**	⇑Pn			Pn	06 15 33.0	+2.8
MK31	1.6nm,0.8s,baz=16,slow=26,SNR=5.2			Sn			Sn	06 17 04.9	+5.7
MK31	5.1nm,1.0s,baz=26,slow=30,SNR=3.6			⇑Lg				06 17 41.8	
VOSK	**Vostochnaya** 1.8nm,0.9s	**9.46**	**268**	⇓Pn			Pn	06 15 52.0	-0.7
VOSK	2.9nm,1.1s			⇑Sn			Sn	06 17 36.3	-3.3

*ISCJB **30** 06:15:47.8±2.9, 75S±01×1562E±01, h39km±29km, mb4.3/10, MS4.0/2, Error ellipse: s-maj=27.0km s-min=16.2km az=44.1*
*IDC **30** 06:15:49.8±0.8, 748S×15620E, h43km±5km, mb4.0/10, mb1 4.1/12, mb1mx4.0/17, mbtmp4.1/12, ML3.9/2, MS3.8/3, Ms1 3.8/3, ms1mx3.3/16, Error ellipse: s-maj=25.7km s-min=15.7km az=93.0*
ISC 30 06:15:49.8±2.5, **75S**±01×**1562E**±01, **h42**km±26km, **h46**km±4.1km:**pP-P, n16, σ0§85/14, mb4.3**/10, **MS4.0**/2, **1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara** 18nm,0.3s,baz=353,slow=5.7,SNR=3.7		**4.19 117**	P			**Pn**	**06 16 51.0**	**-0.4**
HNR	21nm,0.3s,baz=13,slow=3.3,SNR=3.6			S			**Sn**	**06 17 46.2**	**+7.1**
CTA	**Charters Tower** 0.2nm,0.3s,baz=28,slow=12,SNR=6.1		**15.74 217**	P			**Pn**	**06 19 29.8**	**+1.1**
CTA	comp=Z,123nm,20.0s,baz=50,slow=33			LR			LR	06 24 33.3	
KAKA	**Kakadu** 6.1nm,0.6s		**23.90 256**	*e*P			Px	06 20 44.2	
WB2	**Warramunga Arr**		**24.47 238**	⇓*i*P			**P**	**06 21 04.2**	**-0.9**
ASAR	**Alice Springs** 1.8nm,0.7s,mb3.7,baz=62,slow=8.5,SNR=22		**26.70 231**	P			**P**	**06 21 24.1**	**-1.3**
ASAR	1.9nm,0.4s,baz=62,slow=9.6,SNR=10			pP			pP	06 21 38.9	+2.3
STKA	**Stephens Creek** 1.1nm,0.7s,mb3.6,baz=346,slow=17,SNR=2.3		**27.76 207**	P			**P**	**06 21 35.2**	**+0.4**
STKA	2.0nm,0.6s,baz=357,slow=11,SNR=4.1			pP			pP	06 21 48.3	+2.3
STKA	comp=Z,124nm,20.6s,MS3.5,baz=25,slow=34			LR			LR	06 31 48.8	
KSRS	**Korea Array** 1.5nm,0.5s,mb4.2,baz=147,slow=7.4,SNR=4.6		**51.96 331**	P			**P**	**06 24 55.2**	**+0.5**
PETK	**Petropavlovsk-** 3.7nm,0.9s,mb4.4,baz=196,slow=42,SNR=2.6		**60.42 1**	P			**P**	**06 25 53.7**	**-1.1**
CMAR	**Chiang Mai Arr** 1.5nm,0.4s,mb4.5,baz=108,slow=5.8,SNR=3.8		**62.06 295**	P			**P**	**06 26 07.5**	**+0.8**
CMAR	1.2nm,0.3s,baz=111,slow=4.9,SNR=1.5			pP			pP	06 26 19.3	+0.4
VNDA	**Vanda** 0.4nm,0.6s,mb3.5,baz=0.8,slow=7.2,SNR=6.0		**70.02 179**	P			**P**	**06 26 56.9**	**+0.1**
SONM	**Songino Array** 9.2nm,0.9s,mb4.7,baz=137,slow=6.2,SNR=37		**70.41 327**	P			**P**	**06 27 00.4**	**+0.8**
SONM	3.3nm,0.8s,baz=139,slow=5.2,SNR=6.6			pP			pP	06 27 11.4	-0.6
MKAR	**Makanchi Array** 8.5nm,0.6s,mb5.1,baz=100,slow=6.2,SNR=69		**84.57 318**	P			**P**	**06 28 18.6**	**-0.1**
MKAR	3.9nm,0.7s,baz=104,slow=6.0,SNR=7.5			pP			pP	06 28 31.1	-0.3
ZALV	**Zalesovo Beam** 7.1nm,0.7s,mb4.9,baz=113,slow=5.6,SNR=20		**85.27 326**	P			**P**	**06 28 21.0**	**-1.1**
NVAR	**Mina Array Bea** 0.9nm,1.1s,mb4.0,baz=234,slow=7.7,SNR=3.1		**91.15 52**	P			**P**	**06 28 51.8**	**+1.2**
PDAR	**Pinedale Array** comp=Z,140nm,19.1s,MS4.5,baz=154,slow=32		**98.20 48**	LR			LR	07 07 38.3	
TORD	**Torodi Ar. Bea** 0.6nm,0.9s,baz=0.0,slow=2.9,SNR=2.9		**154.28 285**	PKPbc			PKPbc	06 35 45.7	-0.8
TORD	0.3nm,0.6s,baz=67,slow=2.1,SNR=2.0			pPKPbc			pPKPbc	06 35 59.1	-0.6

*ISCJB **30** 06:33:11.6±0.7, 1035N±003×6286W±003, h11km±6km, Error ellipse: s-maj=5.6km s-min=5.1km az=7.2*
*FUNV **30** 06:33:11.6, 1035N×6281W, h1km, MW3.0*
*TRN **30** 06:33:18.1, 1026N×6247W, h1km, MD3.2*
ISC 30 06:33:11.8±0.6, **1036N**±003×**6285W**±003, **h6**km±5km, **n21, σ1§13/30, 4C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.22**	**205**	⇑*i*P			**Pg**	**06 33 16.4**	**+0.3**
GUNV				*e*S			**Sg**	**06 33 19.9**	**+1.0**
CRUV	**Carupano**	**0.49**	**310**	⇓*i*P			**Pg**	**06 33 20.3**	**-1.1**
CRUV				*e*S			**Sg**	**06 33 27.3**	**-0.5**
GUIV	**Guiria**	**0.68**	**65**	⇑*i*P			**Pg**	**06 33 24.3**	**-0.5**
GUIV				*e*S			**Sg**	**06 33 34.3**	**+0.6**
ITEV	**Isla Los Testi**	**1.03**	**344**	⇓*i*P			**Pg**	**06 33 30.4**	**-1.2**
ITEV				*e*S			**Sg**	**06 33 45.8**	**+0.9**
TCE	**Chacachacare**	**1.13**	**73**	⇑*e*P			**Pg**	**06 33 34.8**	**+1.3**
TCE				*e*S			**Sg**	**06 33 46.4**	**-1.7**
TPP	**Pointe-a-Pierr**	**1.38**	**92**	*e*P			**Pn**	**06 33 38.0**	**+0.5**
TRN	**Trinidad (W)**	**1.45**	**78**	*e*P			**Pn**	**06 33 39.0**	**+0.4**
TRN				*e*S			**Sb**	**06 33 55.2**	**-2.8**
TBH	**Brigand Hill**	**1.76**	**86**	*e*P			**Pn**	**06 33 45.7**	**+2.9**
TBH				*e*S			**Sn**	**06 34 04.8**	**-0.7**
PCRV	**Puerto La Cruz**	**1.77**	**264**	⇑*e*P			**Pn**	**06 33 42.9**	**-0.1**
GRW	**Mount Saint Ca**	**2.14**	**33**	*e*P			**Pn**	**06 33 53.3**	**+5.2**
GRW				*e*S			**Sn**	**06 34 20.9**	**+5.9**
TPR	**Prospect**	**2.20**	**68**	*e*P			**Pn**	**06 33 51.9**	**+3.0**
TPR				*e*S			**Sn**	**06 34 16.3**	**-0.1**
IBAV	**Isla La Blanqu**	**2.24**	**311**	*e*P			**Pn**	**06 33 50.1**	**+0.7**
BOT	**Bacolet**	**2.24**	**69**	*e*P			**Pn**	**06 33 52.4**	**+2.9**
PRGV	**PARIAGUAN**	**2.38**	**228**	*e*P			**Pn**	**06 33 51.7**	**+0.3**
RIOV	**Rio Grande**	**2.49**	**156**	*e*P			**Pn**	**06 33 52.4**	**-0.6**
GURV	**El Guri**	**2.59**	**185**	*e*P			**Pn**	**06 33 53.7**	**-0.6**
CUPV	**Cœpira**	**2.91**	**264**	*e*P			**Pn**	**06 33 59.3**	**+0.6**
CAOV	**Caicara del Or**	**4.57**	**229**	*e*P			**Pn**	**06 34 20.6**	**-0.9**
LUEV	**Luepa**	**4.69**	**163**	*e*P			**Pn**	**06 34 21.7**	**-1.5**
BAUV	**El Baul**	**5.31**	**255**	*e*P			**Pn**	**06 34 31.0**	**-0.7**
DEG	**La Desirade**	**6.17**	**16**	*e*P			**Pn**	**06 34 52.9**	**+9.3**

*NEIC **30** 06:55:54.8, 1708N×9413W, h145km, MD4.1(MEX), After MEX.*
MEX 30 06:55:54.2±0.5, **1703N×9413W, h153**km±7km, **MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.72**	**275**	*i*P			Pn	06 56 15.8	-1.4
CMIG				*i*S			Sn	06 56 32.4	-2.1
TGIG		**1.00**	**104**	*i*P			Pn	06 56 17.9	-1.3
TGIG				*i*S			Sn	06 56 36.3	-1.9
PCIG		**1.58**	**146**	*i*P			Pn	06 56 23.7	-1.2
PCIG				*i*S			Sn	06 56 46.2	-2.2
VHO	**Vista Hermosa**	**2.49**	**271**	*i*P			Pn	06 56 34.5	-0.8
VHO				*i*S			Sn	06 57 05.9	-1.0
THIG		**2.77**	**139**	*i*P			Pn	06 56 39.9	+1.1
THIG				*i*S			Sn	06 57 12.1	-1.3
TPIG	**Tehuac#an**	**3.37**	**295**	*i*P			Pn	06 56 45.2	-1.2
TPIG				*i*S			Sn	06 57 24.9	-1.9
UTMO	**Huajuapan**	**3.59**	**283**	*i*P			Pn	06 56 48.5	-0.7
UTMO				*i*S			Sn	06 57 29.7	-2.2
PNIG	**Pinotepa**	**3.88**	**261**	*e*P			Pn	06 56 47.6	-5.3
PNIG				*i*S			Sn	06 57 30.3	-8.3
PNIG	**Pinotepa**	**3.88**	**261**	*i*P			Pn	06 56 49.8	-3.2
PNIG				*i*S			Sn	06 57 35.7	-2.9

*ISCJB **30** 07:16:11.6±1.6, 201S±01×1776W±02, h484km±31km, mb3.9/3, Error ellipse: s-maj=23.1km s-min=21.1km az=22.3*
*IDC **30** 07:16:12.0±1.9, 2031S×17743W, h486km±27km, mb3.5/3, mb1 3.5/5, mb1mx3.2/18, mbtmp3.5/5, Error ellipse: s-maj=24.9km s-min=16.9km az=113.0*
ISC 30 07:16:12.3±1.9, **203S**±02×**1776W**±02, **h479**km±35km, **n10, σ0§68/10, mb3.9/3, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 4.4nm,0.3s,baz=239,slow=23,SNR=7.7	**8.41**	**42**	P			**P**	**07 18 13.5**	**+0.8**
AFI	8.4nm,0.3s,baz=189,slow=22,SNR=7.5			S			**S**	**07 19 47.5**	**-3.9**
URZ	**Urewera** 1.1nm,0.3s,baz=327,slow=11,SNR=7.4	**18.51**	**193**	P			**P**	**07 19 58.3**	**+0.1**
URZ	0.3nm,0.3s,baz=313,slow=18,SNR=2.7			S			**S**	**07 23 01.8**	**-0.8**
CTA	**Charters Tower** 4.4nm,0.4s,mb4.3,baz=97,slow=12,SNR=12	**33.91**	**264**	P			**P**	**07 22 14.6**	**+0.1**
STKA	**Stephens Creek** 1.7nm,0.8s,mb3.6,baz=92,slow=8.9,SNR=4.0	**38.24**	**244**	P			**P**	**07 22 51.0**	**+0.7**
ASAR	**Alice Springs** 3.8nm,0.7s,mb3.9,baz=94,slow=7.7,SNR=56	**44.96**	**256**	P			**P**	**07 23 43.6**	**-0.2**
WB2	**Warramunga Arr**	**45.01**	**262**	*e*P			**P**	**07 23 43.4**	**-0.9**
WB2				*e*				07 24 01.3	
VNA3	**Neumayer Olymp**	**88.34**	**176**	*e*			**P**	**07 28 12.0**	**+0.3**
VNA3				*e*				07 28 13.9	
VNA2	**Neumayer--Watz** baz=204,slow=4.0	**88.79**	**177**	*e*			**P**	**07 28 14.5**	**+0.7**
VNA2				*e*				07 28 16.7	
AKASG	**Malin Array Be** 0.6nm,0.3s,baz=45,slow=4.0,SNR=6.1	**143.00**	**332**	PKP			PKPdf	07 34 47.6	-3.0
BRTR	**Keskin Array B** 0.4nm,0.5s,baz=66,slow=5.2,SNR=3.4	**146.98**	**313**	PKPbc			PKPbc	07 35 00.7	+0.1

PRE 30 07:17:17.8±0.7, **2644S×2745E, h2**km, **ML3.9, South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.17**	**58**	*e*P			Pg	07 17 21.3	+0.2
KLOF				*e*S			Sg	07 17 23.5	+0.2
KLOF	comp=Z,26μm,0.2s			AML			AML	07 17 24.7	
ERPM	**east rand prop**	**0.72**	**82**	*e*P			Pg	07 17 31.9	+0.3
ERPM				*e*S			Sg	07 17 41.8	+0.9
ERPM	comp=Z,664nm,0.4s			AML			AML	07 17 41.8	
KSR	**Koster**	**0.77**	**320**	*e*P			Pg	07 17 33.0	+0.5
KSR				*e*S			Sg	07 17 43.1	+0.6
KSR	comp=Z,1μm,0.2s			AML			AML	07 17 50.7	
SLR	**Silverton**	**1.03**	**47**	*e*P			Pg	07 17 37.5	0.0
SLR				*e*S			Sg	07 17 52.1	+1.2
SLR	comp=Z,928nm,0.2s			AML			AML	07 17 56.2	
SWZ	**Schweizer**	**2.03**	**248**	*e*P			Pn	07 17 53.8	+0.7
SWZ				*e*S			Sn	07 18 20.2	+1.2
SWZ	comp=Z,2μm,0.7s			AML			AML	07 18 24.0	
LBTB	**Lobatse**	**2.19**	**310**	*e*P			Pn	07 17 56.3	+1.1
LBTB				*e*S			Sn	07 18 23.6	+0.6
LBTB	comp=Z,608nm,0.2s			AML			AML	07 18 27.1	
BOSA	**Boshof**	**2.91**	**221**	*e*P			Pn	07 18 05.8	+0.6
BOSA				*e*S			Sn	07 18 40.7	0.0
BOSA	comp=Z,111nm,0.4s			AML			AML	07 18 48.9	
POGA	**Pongola**	**3.83**	**105**	*e*P			Pn	07 18 19.4	+1.6
POGA				*e*S			Sn	07 19 04.5	+1.1
POGA	comp=Z,93nm,0.5s			AML			AML	07 19 20.1	
KSD	**Kokstad**	**4.44**	**157**	*e*P			Pn	07 18 27.1	+1.0
KSD				*e*S			Sn	07 19 17.4	-0.9
K

	23nm,1.2s								
KAKA				*e*S	Sx	07 23 41.1			
BATI	**Baumata**	**10.26**	**229**	LR	LR	07 26 15.8			
	comp=Z,129nm,21.1s,baz=165,slow=35								
ASAR	**Alice Springs**	**20.19**	**174**	P	P	07 24 42.5	-0.9		
	3.6nm,0.7s,baz=359,slow=10,SNR=34								
ASAR				S	S	07 28 19.3	-8.2		
	0.5nm,0.8s,baz=360,slow=24,SNR=4.1								
CTA	**Charters Tower**	**21.88**	**140**	P	P	07 25 02.4	+0.8		
	6.7nm,1.1s,baz=320,slow=16,SNR=2.7								
STKA	**Stephens Creek**	**29.78**	**163**	P	P	07 26 14.8	-0.2		
	0.9nm,0.5s,baz=346,slow=7.1,SNR=4.5								
JHJ	**Hachijo jima 2**	**37.24**	**12**	LR	LR	07 40 02.1			
	comp=Z,234nm,18.1s,baz=316,slow=32								
CMAR	**Chiang Mai Arr**	**38.80**	**305**	P	P	07 27 33.7	+0.6		
	1.3nm,0.3s,baz=134,slow=7.7,SNR=3.0								
MKAR	**Makanchi Array**	**66.18**	**325**	P	P	07 30 55.3	0.0		
	0.8nm,0.8s,baz=122,slow=4.6,SNR=4.1								
RAR	**Rarotonga**	**68.91**	**111**	LR	LR	07 57 14.0			
	comp=Z,142nm,21.4s,baz=267,slow=32								
ZALV	**Zalesovo Beam**	**69.15**	**333**	P	P	07 31 13.2	-0.7		
	0.5nm,0.3s,baz=134,slow=6.4,SNR=3.7								
VNDA	**Vanda**	**75.73**	**173**	P	P	07 31 53.2	+0.5		
	0.7nm,0.9s,baz=331,slow=5.8,SNR=4.6								

IDC 30 07:40:47.5±11.0, 596S×15540E, h0km, mb4.1/4, mb1 4.1/4, mb1mx3.8/15, mbtmp4.1/4, Error ellipse: s-maj=359.4km s-min=34.8km az=107.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**27.16**	**227**	P	P	07 46 33.0	+0.3
	0.5nm,0.3s,baz=58,slow=9.5,SNR=13						
SONM	**Songino Array**	**68.69**	**327**	P	P	07 51 55.0	+2.1
	1.1nm,0.7s,baz=144,slow=4.6,SNR=6.2						
MKAR	**Makanchi Array**	**82.90**	**319**	P	P	07 53 13.4	-0.7
	1.4nm,0.5s,baz=99,slow=6.2,SNR=17						
MKAR				pP		07 53 23.7	
	0.7nm,0.7s,baz=109,slow=5.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**83.56**	**326**	P	P	07 53 15.9	-1.4
	1.0nm,0.5s,baz=90,slow=7.2,SNR=3.7						

IDC 30 07:45:48.9±3.6, 4689N×15361E, h80km±34km, mb3.4/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, Error ellipse: s-maj=43.3km s-min=23.6km az=140.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.76**	**21**	P	Pn	07 47 25.7	+0.4
	0.5nm,0.3s,baz=183,slow=7.2,SNR=6.0						
ASAJ	**Asahikawa**	**8.21**	**254**	P	Pn	07 47 44.8	-0.4
	0.7nm,0.3s,baz=111,slow=16,SNR=4.4						
MKAR	**Makanchi Array**	**47.18**	**297**	P	P	07 54 13.1	0.0
	0.1nm,0.3s,baz=64,slow=7.8,SNR=4.2						
ASAR	**Alice Springs**	**72.44**	**199**	P	P	07 57 06.8	+0.3
	0.5nm,0.5s,baz=11,slow=5.7,SNR=9.0						
ASAR				pP	pP	07 57 19.3	-8.0
	0.3nm,0.8s,baz=7.1,slow=5.6,SNR=2.6						
TXAR	**Lajitas Array**	**77.13**	**61**	P	P	07 57 33.7	0.0
	0.5nm,0.6s,baz=308,slow=4.4,SNR=9.4						
TXAR				pP	pP	07 57 46.3	-8.4
	0.2nm,0.6s,baz=287,slow=3.7,SNR=2.8						

*ISCJB **30** 08:00:07.0±1.0, 260S±0.1×1795E±0.1, h488km±12km, mb4.0/5, Error ellipse: s-maj=18.6km s-min=16.3km az=38.9*
*IDC **30** 08:00:08.4±1.4, 2614S×17969E, h504km±19km, mb3.5/5, mb1 3.7/7, mb1mx3.4/17, mbtmp3.6/7, Error ellipse: s-maj=32.1km s-min=14.3km az=163.0*
ISC 30 08:00:08.1±1.0, 261S±01×1796E±01, h489km±12km, n19, σ0°73/17, mb4.0/5, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.88**	**145**	P	**P**	**08 01 24.6**	**0.0**
	462nm,0.3s,baz=78,slow=20,SNR=32						
RAO				S	**S**	**08 02 27.6**	**+0.5**
	102nm,0.3s,baz=323,slow=20,SNR=2.8						
URZ	**Urewera**	**12.32**	**189**	P	**P**	**08 02 48.0**	**-1.8**
	2.6nm,0.3s,baz=345,slow=3.8,SNR=14						
URZ				S	**S**	**08 05 03.3**	**0.0**
	2.3nm,0.3s,baz=78,slow=22,SNR=14						
AFI	**Afiamalu**	**14.58**	**36**	P	**P**	**08 03 07.4**	**-6.8**
	2.1nm,0.3s,baz=263,slow=9.1,SNR=4.0						
RPZ	**Rata Peaks**	**18.91**	**199**	P	**P**	**08 03 57.1**	**+0.1**
	2.0nm,0.3s,baz=293,slow=5.0,SNR=9.0						
CTA	**Charters Tower**	**31.15**	**274**	*e*P	**P**	**08 05 44.6**	**-1.5**
	6.3nm,0.9s,mb4.0						
CTA	**Charters Tower**	**31.15**	**274**	P	**P**	**08 05 46.5**	**+0.4**
	3.5nm,0.3s,mb4.2,baz=111,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**33.59**	**251**	*e*P	**P**	**08 06 07.7**	**+1.0**
	1.8nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**33.59**	**251**	P	**P**	**08 06 07.9**	**+1.2**
	2.4nm,0.4s,mb4.0,baz=87,slow=9.0,SNR=11						
ASAR	**Alice Springs**	**41.33**	**263**	P	**P**	**08 07 10.8**	**+0.4**
	5.1nm,0.4s,mb4.3,baz=90,slow=7.7,SNR=42						
ASAR				S	**S**	**08 12 49.0**	**0.0**
	2.8nm,0.8s,baz=98,slow=17,SNR=20						
WB2	**Warramunga Arr**	**41.89**	**269**	↓*i*P	**P**	**08 07 14.7**	**-0.2**
KAKA	**Kakadu**	**46.14**	**277**	*e*P	Px	08 07 31.2	
	15nm,0.4s						
VNA3	**Neumayer Olymp**	**82.73**	**177**	*e*	**P**	**08 11 39.4**	**0.0**
VNA3				*e*		08 11 44.9	
VNA2	**Neumayer--Watz**	**83.14**	**178**	*e*	**P**	**08 11 42.4**	**+0.9**
	baz=187,slow=5.4						
VNA2				*e*		08 11 47.4	
NVAR	**Mina Array Bea**	**86.59**	**44**	P	**P**	**08 11 58.1**	**-0.7**
	1.1nm,0.7s,mb3.7,baz=224,slow=8.2,SNR=8.3						
TXAR	**Lajitas Array**	**91.92**	**58**	P	**P**	**08 12 24.0**	**+0.2**
	1.1nm,0.9s,mb3.8,baz=216,slow=6.6,SNR=11						
ARCES	**ARCESS Array B**	**133.92**	**348**	PKP	PKPdf	08 18 26.6	-1.6
	2.0nm,0.8s,baz=26,slow=3.1,SNR=3.9						
NB2	**NORSAR Subarra**	**144.16**	**350**	PKP	PKPdf	08 18 44.7	-2.2
	comp=Z,1.6nm,0.5s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**144.15**	**350**	PKP	PKPdf	08 18 43.7	-3.2
	comp=Z,3.3nm,0.8s,baz=22,slow=3.8,SNR=9.3						
BRTR	**Keskin Array B**	**148.51**	**304**	PKPbc	PKPbc	08 18 57.1	-2.1
	comp=Z,0.4nm,0.4s,baz=57,slow=2.5,SNR=3.1						

*KRSC **30** 08:29:28.6±1.8, 4941N×15581E, h175km±85km, ML4.2*
*MOS **30** 08:29:32.3±0.8, 5019N×15471E, h103km, mb4.5/1, Error ellipse: s-maj=99.9km s-min=18.2km az=59.2*
ISC 30 08:29:30.9±2.0, 494N±03×1558E±06, h93km±47km, n12, σ0°89/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.32**	**8**	*e*PN	**Pn**	**08 29 53.0**	**-1.5**
SKR				*e*S	**Sn**	**08 30 12.9**	**+0.5**
SKR				pmax	pmax		
	comp=Z,90nm,0.3s						
SKR				smax			
	comp=N,280nm,0.3s						
SKR				smax			
	comp=E,260nm,0.3s						
SKR				smax			
	comp=Z,90nm,0.5s						
RUS	**Russkaya**	**3.50**	**28**	P	**Pn**	**08 30 23.7**	**+0.6**
RUS				S	**Sn**	**08 31 04.2**	**+0.7**
RUS	**Russkaya**	**3.50**	**28**	*e*P	**Pn**	**08 30 23.6**	**+0.5**
RUS				*i* S	**Sn**	**08 31 04.0**	**+0.5**
SDLR	**Sedlovina**	**4.35**	**25**	*e*P	**Pn**	**08 30 35.9**	**+1.3**
SDLR				*i* S	**Sn**	**08 31 24.2**	**+0.1**
NLC	**Nalytchevo**	**4.39**	**29**	P	**Pn**	**08 30 34.8**	**-0.4**
NLC				S	**Sn**	**08 31 23.1**	**-2.1**
NLC	**Nalytchevo**	**4.39**	**29**	*e*P	**Pn**	**08 30 35.2**	**0.0**
NLC				*i* S	**Sn**	**08 31 23.8**	**-1.4**
GNL	**Ganaly**	**4.52**	**16**	*e*P	**Pn**	**08 30 37.5**	**+0.6**
SPN	**Mys Shipunski**	**4.56**	**34**	P	**Pn**	**08 30 38.5**	**+1.0**
SPN				S	**Sn**	**08 31 29.7**	**+0.4**
SPN	**Mys Shipunski**	**4.56**	**34**	*e*P	**Pn**	**08 30 38.4**	**+0.9**
SPN				*i* S	**Sn**	**08 31 29.4**	**+0.1**
MKZ	**Mys Kozlova**	**6.34**	**33**	*e*P	**Pn**	**08 31 00.8**	**-0.8**
KBTR	**Krutoberegovo**	**8.04**	**29**	P	**Pn**	**08 31 24.2**	**-0.6**
KBTR	**Krutoberegovo**	**8.04**	**29**	*e*P	**Pn**	**08 31 23.8**	**-1.0**
KBTR				*i* S	**Sn**	**08 32 47.1**	**-6.9**

TRN 30 08:29:30.4, 1437N×6051W, h11km, MD3.6, M2.8(FDF), 5C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.42**	**297**	↑*i*P	Pg	08 29 41.4	+2.8
MVM				↑*e*S	Sg	08 29 46.6	+2.4
SLW	**Petit Monier**	**0.54**	**230**	↑*e*P	Pg	08 29 44.8	+3.9
SLW	**Petit Monier**	**0.54**	**230**	↑*e*P	Pg	08 29 44.8	+3.9
SLW				*e*S	Sg	08 29 53.3	+5.3
BIM	**Bigot**	**0.56**	**286**	↓*i*P	Pg	08 29 43.9	+2.5
BIM				↓*e*S	Sg	08 29 51.1	+2.4
FDF	**Fort de France**	**0.72**	**301**	↓*i*P	Pg	08 29 45.6	+1.2
FDF				↓*e*S	Sg	08 29 54.6	+0.8
SLB	**Belfond**	**0.74**	**224**	↑*i*P	Pg	08 29 48.5	+3.7
SLB				*e*S	Sg	08 30 00.6	+6.2
MCLT	**Moule a Chique**	**0.77**	**213**	*e*P	Pg	08 29 48.5	+3.2
MCLT				*e*S	Sg	08 30 00.0	+4.5
SVV	**Soufriere Volc**	**1.25**	**213**	*e*S	Sb	08 30 14.0	+4.1
SVB	**Belmont**	**1.30**	**214**	*e*P	Pn	08 29 57.1	+2.6
SVB				*e*S	Sb	08 30 15.2	+3.6
FCV	**Fort Charlotte**	**1.40**	**211**	*e*P	Pn	08 29 57.9	+2.0
FCV				*e*S	Sn	08 30 15.5	+1.3

*GII **30** 08:30:17.0±0.0, 2985N×3642E, h0km, ML1.7/3, EXPLOSION*
*ISCJB **30** 08:30:18.7±1.3, 2989N±005×3631E±008, h0km, Error ellipse: s-maj=10.4km s-min=6.2km az=157.0*
*SGS **30** 08:30:21.1, 30.11N×3619E, h17km*
*CSEM **30** 08:30:21.0, 30.11N×3619E, h17km, ML2.7, After SNSN*
ISC 30 08:30:18.6±1.4, 2989N±005×3633E±008, h0km, n12, σ1°17/17, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.13**	**262**	Pg	**Pg**	**08 30 40.1**	**-0.2**
ZFRI	**Zfri**	**1.20**	**304**	Pg	**Pg**	**08 30 41.4**	**-0.3**
ZFRI				Sg	**Sg**	**08 30 60.0**	**+2.7**
EIL	**Elat**	**1.22**	**260**	Pg	**Pg**	**08 30 42.1**	**0.0**
EIL				Sg	**Sg**	**08 30 59.6**	**+1.7**
MBRI	**Mt Berech**	**1.24**	**266**	Pn	**Pn**	**08 30 41.9**	**-1.3**
PRNI	**Paran**	**1.24**	**292**	Pn	**Pn**	**08 30 42.1**	**-1.2**
PRNI				Sn	**Sn**	**08 31 00.5**	**-0.2**
HQLS		**1.25**	**242**	P	**Pg**	**08 30 42.1**	**-0.6**
HQLS		**1.25**	**242**	P	**Pg**	**08 30 42.1**	**-0.6**
HQLS				S	**Sg**	**08 30 58.0**	**-0.9**
JLOS		**1.36**	**213**	P	**Pg**	**08 30 45.2**	**+0.4**
JLOS		**1.36**	**213**	P	**Pg**	**08 30 45.2**	**+0.4**
JLOS				S	**Sg**	**08 31 03.5**	**+1.0**
TBKS	**Tabuk**	**1.67**	**174**	P	**Pn**	**08 30 51.0**	**+1.9**
BDAS	**Al Bad'**	**1.81**	**217**	S	**Sn**	**08 31 12.5**	**-2.2**
BDAS	**Al Bad'**	**1.81**	**217**	P	**Pn**	**08 30 51.4**	**+0.4**

*CSEM **30** 08:37:38.0±0.1, 3421N×2532E, h10km, MD3.8, Error ellipse: s-maj=3.3km s-min=1.4km az=64.0*
*IDC **30** 08:37:39.5±3.9, 3422N×2511E, h13km±25km, mb4.0/7, mb1 4.0/13, mb1mx3.9/25, mbtmp4.0/13, ML4.3/5, Error ellipse: s-maj=20.1km s-min=16.9km az=80.0*
*MOS **30** 08:37:40.9±1.0, 3424N×2516E, h33km, mb4.1/5, Error ellipse: s-maj=20.1km s-min=10.7km az=93.3*
*ISCJB **30** 08:37:40.5±0.4, 3420N±003×2522E±005, h37km±7km, mb4.0/7, Error ellipse: s-maj=7.3km s-min=3.4km az=149.1*
*HLW **30** 08:37:42.5, 3424N×2524E, h18km, Mb4.2*
*THE **30** 08:37:42.7, 3438N×2500E, h7km±33km, Error ellipse: s-maj=46.5km s-min=3.9km az=172.0*
*ATH **30** 08:37:44.6, 3470N×2514E, h18km±2km, MD3.8/7*
*NEIC **30** 08:37:44.6, 3470N×2514E, h18km, MD3.8(ATH), After ATH.*
*GII **30** 08:37:50.2±1.8, 3397N×2588E, h29km±48km, mb4.1/4, ML3.9/4*
*SZGRF **30** 08:38:19.6, 3625N×2041E, h33km, Central Mediterranean Sea*
ISC 30 08:37:41.7±1.3, 3423N±003×2514E±005, h28km±11km, n70, σ0°81/78, mb4.0/7, 2C-9D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.97**	**17**	P	**Pb**	**08 37 58.8**	**-1.1**
GVD	**Gavdhos**	**1.06**	**305**	*e*PN	**Pn**	**08 38 01.0**	**+0.4**
GVD				*e*SN	**Sn**	**08 38 13.5**	**-0.9**
IDI	**Anoyia**	**1.07**	**349**	Pg	**Pn**	**08 37 59.4**	**-1.4**
	48nm,0.3s,baz=174,slow=19,SNR=111						
IDI				Lg		08 38 16.0	
	63nm,0.3s,baz=234,slow=19,SNR=15						
NPS	**Neapolis**	**1.10**	**21**	*e*PB	**Pn**	**08 37 57.5**	**-3.7**
VAM	**Vamos**	**1.40**	**327**	*e*PN	**Pn**	**08 38 05.0**	**-0.4**
KARP	**Karpathos**	**2.12**	**51**	*e*PN	**Pn**	**08 38 18.0**	**+2.8**
THR6	**Thira Island,**	**2.13**	**6**	P	**Pn**	**08 38 15.9**	**+0.6**
THR3	**Thira Island,**	**2.18**	**6**	P	**Pn**	**08 38 17.2**	**+1.1**
THR5	**Thira Island,**	**2.19**	**4**	P	**Pn**	**08 38 15.4**	**-0.7**
KYTH	**Kithira**	**2.67**	**320**	*e*PN	**Pn**	**08 38 25.0**	**+2.2**
APE	**Apeiranthos**	**2.85**	**6**	P	**Pn**	**08 38 25.0**	**-0.2**
APE				S	**Sn**	**08 38 40.1**	**+0.9**
APE	**Apeiranthos**	**2.85**	**6**	*e*Pb	**Pn**	**08 38 25.0**	**-0.2**
APE				S	**Sn**	**08 38 59.4**	**+0.9**
VLI	**Veliai**	**3.06**	**325**	*e*PN	**Pn**	**08 38 29.0**	**+0.8**
HMAT	**Matruh**	**3.54**	**152**	↑P	**Pn**	**08 38 35.8**	**+1.1**
HMAT				S	**Sn**	**08 39 15.3**	**-0.3**
DID	**Didima**	**3.61**	**335**	P	**Pn**	**08 38 35.5**	**-0.2**
DID				S	**Sn**	**08 39 16.7**	**-0.7**
LTK	**Loutraki**	**4.17**	**336**	P	**Pn**	**08 38 43.4**	**0.0**
CHOS	**Chios island**	**4.21**	**10**	P	**Pn**	**08 38 43.0**	**-0.9**
SWA2		**4.98**	**177**	↓P	**Pn**	**08 38 55.9**	**+1.3**
SWA2				S	**Sn**	**08 39 50.4**	**-0.8**
HFRF	**Wahat Farafira**	**7.57**	**158**	↓P	**Pn**	**08 39 30.1**	**-0.1**
AMAG	**Maghara**	**7.70**	**115**	↑P	**Pn**	**08 39 30.9**	**-1.0**
SUZ		**7.86**	**122**	P	**Pn**	**08 39 34.3**	**+0.2**
RSH		**7.94**	**112**	P	**Pn**	**08 39 35.2**	**0.0**
ZAF		**8.01**	**126**	↓P	**Pn**	**08 39 35.9**	**-0.2**
KZIT	**Kziot**	**8.49**	**110**	Pn	**Pn**	**08 39 41.9**	**-0.8**
KZIT				Sn	**Sn**	**08 41 10.3**	**-7.2**
SLTI	**Sal'it**	**8.53**	**101**	Sn	Sx	08 41 12.2	
HRSH	**Kfar Ka'horesh**	**8.61**	**97**	P	Px	08 39 35.2	
HNKL	**Nakhl**	**8.64**	**117**	↓P	**Pn**	**08 39 44.2**	**-0.5**
HNKL	**Nakhl**	**8.64**	**117**	P	**Pn**	**08 39 44.2**	**-0.6**
MMA0B	**Mount Meron ar**	**8.64**	**95**	Sn	Sx	08 41 15.7	
MMAI	**Mount Meron Ar**	**8.64**	**95**	Pn	**Pn**	**08 39 44.7**	**-0.1**
	1.1nm,0.3s,baz=272,slow=14,SNR=2.7						
MMAI				Sn	Sx	08 41 16.4	
	4.3nm,0.3s,baz=293,slow=19,SNR=5.2						
BRTR	**Keskin Array B**	**8.73**	**49**	Pn	**Pn**	**08 39 47.4**	**+1.4**
	baz=232,slow=15,SNR=2.0						
BRTR	**Keskin Array B**	**8.73**	**49**	P	Pn	**08 39 47.4**	**+1.4**
HMDT	**Nahal Hemdat**	**8.92**	**100**	Pn	**Pn**	**08 39 48.0**	**-0.7**
HMDT				Sn	**Sn**	**08 41 22.7**	**-5.5**
DSI	**Dead Sea**	**9.01**	**104**	Pn	**Pn**	**08 39 49.7**	**-0.1**
DSI				Sn	**Sn**	**08 41 24.4**	**-6.0**
MZDA	**Masada**	**9.09**	**106**	Pn	**Pn**	**08 39 51.0**	**0.0**
MZDA				Sn	**Sn**	**08 41 25.0**	**-7.2**
KRMI	**Paran Flat**	**9.10**	**114**	Pn	**Pn**	**08 39 51.2**	**+0.1**
KRMI				Sn	**Sn**	**08 41 25.7**	**-6.9**
PRNI	**Paran**	**9.20**	**112**	Pn	**Pn**	**08 39 52.9**	**+0.4**
PRNI				Sn	**Sn**	**08 41 28.3**	**-6.8**
ZFRI	**Zfri**	**9.24**	**111**	Sn	Sx	08 41 29.6	
TR2		**9.37**	**126**	↓P	**Pn**	**08 39 54.8**	**-0.1**
HRFI	**Mount Harif**	**9.38**	**114**	Pn	**Pn**	**08 39 55.5**	**+0.6**
HRFI				Sn	Sx	08 41 32.9	
MBRI	**Mt Berech**	**9.40**	**115**	Pn	**Pn**	**08 39 55.6**	**+0.4**
MBRI				Sn	Sx	08 41 33.7	
HDK1	**Dakhla**	**9.41**	**156**	↓P	**Pn**	**08 39 55.5**	**0.0**
HKAT	**Jabal Katrina**	**9.46**	**125**	P	**Pn**	**08 39 55.9**	**-0.2**
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**08 39 56.4**	**-0.1**
	1.6nm,0.3s,baz=270,slow=5.0,SNR=12						
EIL				Sn	Sx	08 41 36.9	
	1.2nm,0.3s,baz=265,slow=21,SNR=5.3						
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**08 39 56.3**	**-0.2**
EIL				Sn	Sx	08 41 36.0	
TR1		**9.77**	**127**	↓P	**Pn**	**08 40 00.0**	**-0.3**
GTR	**Jabal at Tayr**	**9.88**	**150**	↓P	**Pn**	**08 40 02.1**	**+0.3**
HDK2	**Wahat Dakhilah**	**10.42**	**160**	↓P	**Pn**	**08 40 09.3**	**0.0**
VRAC	**Vranov**	**16.34**	**340**	Pn	**Pn**	**08 41 30.1**	**+1.2**
	0.3nm,0.3s,baz=145,slow=6.4,SNR=3.7						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**08 41 33.6**	**-0.2**
	1.4nm,0.3s,baz=200,slow=11,SNR=11						
AKASG	**Malin Array Be**	**16.73**	**9**	P	**Pn**	**08 41 33.6**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GEC2	**GERESS Array S**	**16.89**	**333**	*e*Pn	**Pn**	**08 41 37.3**	**+1.4**
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**Pn**	**08 41 37.0**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=147,slow=12,SNR=32						
GERES	**GERESS Array B**	**16.89**	**333**	P	**Pn**	**08 41 37.0**	**+1.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WET	**Wettzell**	**17.45**	**332**	*e*Pn	**Pn**	**08 41 43.6**	**+0.7**
GRF	**Grafenberg Arr**	**18.55**	**331**	*e*Pn	**Pn**	**08 41 54.7**	**-1.6**
TANN	**Tannenbergstha**	**18.65**	**334**	*e*Pn	**Pn**	**08 41 57.1**	**-0.4**
	comp=Z,13nm,1.2s						
NOA	**NORSAR Array B**	**28.29**	**346**	P	**P**	**08 43 30.9**	**-1.5**
	comp=Z,0.6nm,0.6s,mb3.4,baz=162,slow=9.8,SNR=2.6						
NOA	**NORSAR Array B**	**28.29**	**346**	P	**P**	**08 43 30.9**	**-1.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	**P**	**08 43 47.2**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.1,baz=32,slow=8.4,SNR=19						
BVAR	**Borovoye Array**	**37.00**	**45**	P	**P**	**08 44 49.0**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=256,slow=4.2,SNR=3.0						
BVAR	**Borovoye Array**	**37.00**	**45**	P	**P**	**08 44 49.0**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**41.78**	**50**	P	**P**	**08 45 28.0**	**-0.4**
	comp=Z,2.0nm,0.6s,mb3.9,baz=276,slow=8.2,SNR=12						
KURK	**Kurchatov**	**41.78**	**50**	P	**P**	**08 45 28.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**08 45 48.9**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.0,baz=275,slow=6.1,SNR=11						
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**08 45 48.9**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**08 45 58.9**	**-0.6**
	comp=Z,2.8nm,0.4s,mb4.5,baz=267,slow=8.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**08 45 58.9**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
SONM	**Songino Array**	**60.09**	**50**	P	**P**	**08 47 47.0**	**+0.8**
	comp=Z,1.2nm,0.6s,mb4.1,baz=283,slow=7.3,SNR=8.1						
SONM	**Songino Array**	**60.09**	**50**	P	**P**	**08 47 47.0**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **30** 08:37:52.6±0.6, 4096N±003×3479E±004, h4km±5km, Error ellipse: s-maj=5.7km s-min=4.4km az=160.3*
*ISK **30** 08:37:52.3, 4095N×3475E, h8km, MD2.8*
*DDA **30** 08:37:52.2, 4096N×3487E, h7km±4km, Md2.9*
*CSEM **30** 08:37:52.2±0.1, 4095N×3474E, h8km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=60.0*
ISC 30 08:37:53.3±0.6, 4096N±003×3479E±004, h8km±5km, n16, σ0°77/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTKT	**Corum**	**0.34**	**180**	*i* P	**Pg**	**08 37 58.7**	**-1.2**
CTKT				*i* S	**Sg**	**08 38 04.1**	**-0.3**
BYBT	**Boyabat**	**0.51**	**358**	PG	**Pg**	**08 38 02.9**	**-0.2**
BYBT	**Boyabat**	**0.51**	**358**	*e*Pg	**Pg**	**08 38 02.9**	**-0.2**
BYBT				*e*Sg	**Sg**	**08 38 10.5**	**+0.8**
TOS	**Tosya**	**0.58**	**277**	PG	**Pg**	**08 38 03.6**	**-0.9**
TOS	**Tosya**	**0.58**	**277**	*e*Pg	**Pg**	**08 38 03.6**	**-0.9**
TOS				*e*Sg	**Sg**	**08 38 11.8**	**-0.3**
DIKM	**Dikmen**	**0.77**	**27**	*e*PG	**Pg**	**08 38 08.5**	**+0.3**
ILGA	**Ilgaz**	**0.82**	**277**	*i* P	**Pg**	**08 38 09.4**	**+0.4**
ILGA				*i* S	**Sg**	**08 38 21.6**	**+2.1**
KVT	**Kavak**	**0.96**	**83**	*e*PG	**Pg**	**08 38 11.5**	**-0.2**
BZK	**Bozkurt**	**1.16**	**330**	PN	**Pn**	**08 38 14.5**	**-1.3**
BZK	**Bozkurt**	**1.16**	**330**	*e*Pn	**Pn**	**08 38 14.7**	**-1.1**
BZK				*e*Sn	**Sn**	**08 38 31.2**	**-0.6**
CDAG	**Cicekdag**	**1.38**	**194**	*i* P	**Pn**	**08 38 19.3**	**+0.6**
CDAG				*i* S	**Sb**	**08 38 37.9**	**+1.0**
YOZ	**Yozgat**	**1.38**	**163**	PN	**Pn**	**08 38 18.2**	**-0.7**
YOZ	**Yozgat**	**1.38**	**163**	*e*Pn	**Pn**	**08 38 18.2**	**-0.7**
YOZ				*e*Sn	**Sn**	**08 38 37.6**	**+0.3**
KAMT	**Kaman**	**1.79**	**208**	PN	**Pn**	**08 38 24.2**	**-0.3**
KAMT				SN	**Sn**	**08 38 47.0**	**-0.4**
SVSK	**Karacayir**	**1.98**	**121**	PN	**Pn**	**08 38 27.6**	**+0.4**
SVSK	**Karacayir**	**1.98**	**121**	*e*Pn	**Pn**	**08 38 27.6**	**+0.5**
SVSK				*e*Sn	**Sn**

	comp=Z,37nm,0.6s,mb4.9						
KBL	**Kabul**	**24.12 297**	*e*P	**P**	**08 49 33.5 +2.3**		
	comp=Z,17nm,0.7s,mb4.5						
KBL	**Kabul**	**24.12 297**	*e*P	**P**	**08 49 33.6 +2.3**		
KBL			pmax	pmax			
	comp=Z,17nm,0.7s,mb4.5						
KURK	**Kurchatov**	**27.73 337**	P	**P**	**08 50 03.4 -0.2**		
	comp=Z,1.5nm,0.5s,mb3.8,baz=141,slow=10,SNR=6.2						
KURK			pP	pP	08 50 23.3 -1.8		
	comp=Z,0.7nm,0.4s,baz=156,slow=8.1,SNR=3.8						
KURK	**Kurchatov**	**27.73 337**	*e*P	**P**	**08 50 04.0 +0.4**		
	comp=Z,1.9nm,0.6s,mb3.8						
KURK	**Kurchatov**	**27.73 337**	P	**P**	**08 50 03.4 -0.2**		
KURK			*PP	pP	08 50 23.3 -1.8		
KURK			pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.9						
KURK			pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.7						
ZALV	**Zalesovo Beam**	**28.91 347**	P	**P**	**08 50 14.0 -0.1**		
	comp=Z,1.0nm,0.4s,mb3.8,baz=163,slow=7.1,SNR=4.0						
BVAR	**Borovoye Array**	**32.74 332**	P	**P**	**08 50 48.5 +0.8**		
	comp=Z,1.3nm,0.5s,mb4.0,baz=126,slow=9.0,SNR=6.3						
BVAR			ScP	ScP	08 57 06.3 -0.1		
	comp=Z,0.9nm,0.7s,baz=123,slow=5.5,SNR=4.5						
AKTK	**Aktyubinsk**	**37.46 320**	P	**P**	**08 51 29.2 +0.9**		
AKTO	**Aktyubinsk**	**37.46 320**	P	**P**	**08 51 29.2 +0.9**		
	comp=Z,1.3nm,0.4s,mb4.2,baz=90,slow=6.0,SNR=6.2						
ASAJ	**Asahikawa**	**42.07 52**	LR	LR	09 09 14.6		
	comp=Z,66nm,18.3s,baz=8.7,slow=36						
RDF	**Al-Radifah**	**42.21 285**	*e*P	**P**	**08 52 09.4 +1.4**		
	baz=292						
RDF			AMb	AMB	08 52 13.1		
	comp=Z,39nm,1.2s,mb5.0,baz=292						
MIB	**Mutribah**	**42.28 286**	*e*P	**P**	**08 52 10.2 +1.6**		
	baz=293						
MIB			AMb	AMB	08 52 10.9		
	comp=Z,20nm,0.9s,mb4.8,baz=293						
NAY	**Al-Naaiem**	**42.43 286**	*e*P	**P**	**08 52 11.1 +1.3**		
	baz=292						
NAY			AMb	AMB	08 52 12.5		
	comp=Z,15nm,0.9s,mb4.7,baz=292						
BRTR	**Keskin Array B**	**52.57 301**	P	**P**	**08 53 28.8 +0.6**		
	comp=Z,1.6nm,0.7s,mb4.2,baz=117,slow=7.5,SNR=8.5						
MBWA	**Marble Bar**	**52.60 151**	*e*P	**P**	**08 53 27.3 -1.2**		
	comp=Z,4.0nm,0.5s,mb4.7						
AKASG	**Malin Array Be**	**55.29 315**	P	**P**	**08 53 47.5 -0.2**		
	comp=Z,2.3nm,0.5s,mb4.5,baz=79,slow=6.5,SNR=5.9						
WB2	**Warramunga Arr**	**59.42 136**⇑	*i* P	**P**	**08 54 15.3 -1.9**		
ASAR	**Alice Springs**	**61.98 140**	P	**P**	**08 54 33.0 -1.5**		
	comp=Z,1.5nm,0.5s,mb4.3,baz=324,slow=6.8,SNR=37						
ASAR			pP	pP	08 54 54.5 -3.8		
	comp=Z,0.6nm,0.6s,baz=322,slow=6.6,SNR=3.8						
HFS	**Hagfors**	**63.62 326**	P	**P**	**08 54 44.9 0.0**		
	comp=Z,2.0nm,0.5s,mb4.2,baz=79,slow=7.7,SNR=10						
NB2	**NORSAR Subarra**	**64.72 328**	P	**P**	**08 54 51.6 -0.4**		
	comp=Z,0.9nm,0.6s,mb3.8,baz=82,slow=6.5						
NOA	**NORSAR Array B**	**64.72 328**	P	**P**	**08 54 51.4 -0.7**		
	comp=Z,0.8nm,0.5s,mb3.8,baz=82,slow=6.4,SNR=3.9						
GERES	**GERESS Array B**	**65.47 314**	P	**P**	**08 54 56.4 -0.7**		
	comp=Z,0.8nm,0.6s,mb3.7,baz=51,slow=7.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**87.47 283**	P	**P**	**08 57 02.4 +0.6**		
	comp=Z,0.6nm,0.6s,mb3.7,baz=56,slow=3.8,SNR=4.9						
TORD	**Torodi Ar. Bea**	**87.47 283**	P	**P**	**08 57 02.4 +0.6**		

CSEM ***30*** *08:44:44.1, 3640N×642E, h0km, ML3.6, After ALG*
CRAAG 30 08:44:44.1, 3640N×642E, Ml3.6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CASM	**Ain Smara**	**0.15**	**158**	P	Pg	08 44 48.5	+1.5
CKFL	**Kef-Lekhel**	**0.24**	**90**	P	Pg	08 44 51.0	+2.2
CTEI	**Djebel Teioual**	**0.34**	**182**	P	Pg	08 44 53.0	+2.4
DFRA	**Djebel Bou Aff**	**0.46**	**288**	P	Pg	08 44 55.0	+2.1
CAEH	**'Ain El Ouahch**	**0.51**	**42**	P	Pg	08 44 59.0	+5.1
CMAH	**Djebel Manchou**	**0.84**	**257**	P	Pg	08 45 04.0	+3.9
SET	**Setif**	**0.85**	**257**	P	Pg	08 45 02.0	+1.7
ABSA	**Djebel Ababsia**	**0.86**	**98**	P	Pg	08 45 02.0	+1.3

IDC ***30*** *08:55:27.9±1.3, 3418N×2527E, h0km, mb3.9/4, mb1 3.8/8, mb1mx3.7/22, mbtmp3.8/8, ML3.9/4, Error ellipse: s-maj=22.8km s-min=13.0km az=69.0*
ISCJB ***30*** *08:55:28.7±1.3, 3423N±004×2532E±007, h12km±10km, mb3.8/4, Error ellipse: s-maj=10.5km s-min=6.1km az=154.3*
CSEM ***30*** *08:55:30.4±0.1, 3414N×2519E, h30km, MD3.7, Error ellipse: s-maj=5.9km s-min=2.4km az=56.0*
NEIC ***30*** *08:55:34.1, 3452N×2503E, h28km, MD3.7(ATH), After ATH.*
ATH ***30*** *08:55:34.1, 3452N×2503E, h28km±2km, MD3.7/6*
HLW ***30*** *08:55:37.7, 3391N×2554E, h33km, Mb3.4*
ISC 30 08:55:30.2±1.4, 3427N±004×2524E±007, h11km±10km, n25, σ0§60/25, mb3.8/4, 2C-7D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.03**	**17**	*e*PN	**Pn**	**08 55 50.9**	**+0.4**
IDI	**Anoyia**	**1.05**	**344**	Pg	**Pg**	**08 55 50.3**	**-0.2**
	28nm,0.3s,baz=169,slow=19,SNR=74						
IDI				Lg		08 56 06.1	
	58nm,0.3s,baz=306,slow=19,SNR=16						
GVD	**Gavdhos**	**1.10**	**301**	*e*PN	**Pn**	**08 55 50.5**	**-1.0**
VAM	**Vamos**	**1.42**	**323**	*e*PN	**Pn**	**08 55 56.0**	**+0.2**
KARP	**Karpathos**	**2.03**	**51**	*e*PN	**Pg**	**08 56 08.6**	**-0.4**
SLUM		**2.77**	**180**	⇓P	**Pn**	**08 56 15.0**	**+0.5**
APE	**Apeiranthos**	**2.80**	**5**	*e*PN	**Pn**	**08 56 16.0**	**+1.2**
VLI	**Veliai**	**3.08**	**323**	*e*PN	**Pn**	**08 56 18.5**	**-0.2**
HMAT	**Matruh**	**3.54**	**153**	⇓P	**Pn**	**08 56 24.9**	**0.0**
SWA2		**5.02**	**178**	⇓P	**Pn**	**08 56 45.9**	**+0.5**
SWA2				S	Sx	08 57 35.6	
GLL	**Jalalah**	**7.22**	**129**	⇑P	**Pn**	**08 57 16.0**	**+0.4**
HFRF	**Wahat Farafira**	**7.58**	**159**	⇓P	**Pn**	**08 57 20.2**	**-0.3**
AMAG	**Maghara**	**7.64**	**116**	⇓P	**Pn**	**08 57 21.9**	**+0.4**
SUZ		**7.81**	**122**	⇑P	**Pn**	**08 57 24.4**	**+0.7**
MMAI	**Mount Meron Ar**	**8.57**	**96**	Pn	**Pn**	**08 57 33.6**	**-0.4**
	1.1nm,0.3s,baz=263,slow=11,SNR=2.9						
MMAI				Sn	Sx	08 59 06.0	
	2.3nm,0.3s,baz=297,slow=19,SNR=3.2						
HDK1	**Dakhla**	**9.42**	**156**	⇓P	**Pn**	**08 57 45.3**	**-0.4**
EIL	**Elat**	**9.44**	**116**	Pn	**Pn**	**08 57 45.6**	**-0.4**
	0.5nm,0.3s,baz=11,slow=15,SNR=6.6						
EIL				Sn	Sx	08 59 26.4	
	0.7nm,0.3s,baz=287,slow=20,SNR=3.5						
AKRG	**Al Kharijah**	**9.86**	**151**	⇓P	**Pn**	**08 57 52.1**	**+0.3**
HDK2	**Wahat Dakhilah**	**10.43**	**161**	P	**Pn**	**08 57 59.8**	**+0.1**
AKASG	**Malin Array Be**	**16.67**	**9**	Pn	**Pn**	**08 59 23.8**	**+0.2**
	0.8nm,0.3s,baz=199,slow=10,SNR=6.9						
GERES	**GERESS Array B**	**16.80**	**333**	Pn	**Pn**	**08 59 27.7**	**+1.3**
	0.2nm,0.3s,baz=144,slow=12,SNR=6.8						
TORD	**Torodi Ar. Bea**	**29.98**	**231**	P	**P**	**09 01 37.9**	**-0.8**
	1.8nm,0.5s,mb4.1,baz=32,slow=8.6,SNR=22						
KURK	**Kurchatov**	**41.69**	**50**	P	**P**	**09 03 18.4**	**-0.2**
	0.7nm,0.8s,mb3.3,baz=278,slow=8.7,SNR=3.4						
MKAR	**Makanchi Array**	**44.21**	**56**	P	**P**	**09 03 37.9**	**-1.2**
	0.4nm,0.5s,mb3.4,baz=267,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**45.57**	**46**	P	**P**	**09 03 49.3**	**-0.6**
	1.6nm,0.4s,mb4.3,baz=275,slow=8.6,SNR=2.6						

ISCJB ***30*** *09:12:39.0±0.5, 4689N±007×1458E±0.1, h393km±6km, mb3.6/10, Error ellipse: s-maj=11.7km s-min=10.8km az=19.9*
MOS ***30*** *09:12:38.9±0.6, 4706N×14590E, h395km, mb3.7/4, Error ellipse: s-maj=19.5km s-min=13.2km az=75.0*
IDC ***30*** *09:12:40.1±2.2, 4725N×14571E, h371km±32km, mb3.4/11, mb1 3.5/14, mb1mx3.3/25, mbtmp3.3/14, Error ellipse: s-maj=36.8km s-min=13.6km az=5.0*
NEIC ***30*** *09:12:40.6±0.6, 4709N×14566E, h385km±8km, mb4.3/6, Error ellipse: s-maj=13.0km s-min=9.5km az=154.0*
JMA ***30*** *09:12:41.3±0.6, 4652N×14592E, h402km, M3.7*
ISC 30 09:12:39.9±0.5, 4692N±007×1458E±01, h387km±6km, n55, σ1§24/62, mb3.6/10, 5C, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**2.07**	**272**⇑	*i* Pn	**Pn**	**09 13 36.4**	**+1.3**
YSS	**Yuzh-Sakhalins**	**2.07**	**272**⇑	*i* PN	**Pn**	**09 13 36.0**	**+1.0**
YSS				*e*S	**S**	**09 14 19.8**	**+0.3**
YSS				pmax	pmax		
	comp=Z,120nm,0.8s						
YSS				smax			
	comp=N,120nm,1.0s						

YSS	**Yuzh-Sakhalins**	**2.07**	**272**	*c i* PN	**Pn**	**09 13 36.5**	**+1.5**
JSE	**Soyaes**	**2.97**	**230**	P	**Pn**	**09 13 43.2**	**+1.4**
JRA	**Rausu**	**3.02**	**189**	P	**Pn**	**09 13 42.3**	**0.0**
JWK2	**Keihoku**	**3.14**	**241**	P	**Pn**	**09 13 45.4**	**+2.2**
JTKR	**Abashiri--Toko**	**3.23**	**205**	P	**Pn**	**09 13 44.6**	**+0.5**
NEM2	**Nemuro 2**	**3.55**	**180**	P	**Pn**	**09 13 45.0**	**-2.0**
NEM2				*e*S	**S**	**09 14 36.1**	**-5.1**
ASAJ	**Asahikawa**	**3.58**	**220**	P	**Pn**	**09 13 48.8**	**+1.5**
	comp=N,3.1nm,0.3s,baz=24,slow=5.4,SNR=21						
ASAJ				S	**S**	**09 14 38.4**	**-3.3**
	baz=321,slow=16,SNR=1.7						
ASAJ	**Asahikawa**	**3.58**	**220**	PN	**Pn**	**09 13 48.8**	**+1.5**
ASAJ				S	**S**	**09 14 38.4**	**-3.3**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JAR	**Ashorobuto**	**3.89**	**202**	P	**Pn**	**09 13 50.4**	**+0.3**
JAK	**Akkeshi**	**4.00**	**191**	P	**Pn**	**09 13 49.7**	**-1.5**
JAK				*e*S	**S**	**09 14 44.3**	**-4.5**
JHR	**Hokuryu**	**4.27**	**223**	P	**Pn**	**09 13 55.2**	**+1.4**
JFR	**Furan**	**4.38**	**212**	P	**Pn**	**09 13 55.9**	**+1.0**
JCH	**Churui**	**4.63**	**203**	P	**Pn**	**09 13 56.1**	**-1.4**
JCH				*e*S	**S**	**09 14 55.2**	**-5.2**
JEW	**Eniwo**	**5.11**	**219**	P	**Pn**	**09 14 03.6**	**+1.2**
JNBK	**Urakawa-nobuka**	**5.12**	**206**	P	**Pn**	**09 14 01.2**	**-1.3**
ERM	**Erimo**	**5.25**	**202**⇑	*e*P	**Pn**	**09 14 04.1**	**+0.2**
	comp=Z,186nm,0.6s						
ERM	**Erimo**	**5.25**	**202**⇑	*e*PN	**Pn**	**09 14 04.1**	**+0.2**
ERM				pmax	pmax		
	comp=Z,186nm,0.6s						
JKB	**Kayabe**	**6.07**	**216**	P	**Pn**	**09 14 12.0**	**-0.8**
JKB				*e*S	**S**	**09 15 22.5**	**-5.9**
JOT	**Ohata**	**6.50**	**213**	P	**Pn**	**09 14 16.3**	**-1.3**
JOSM	**Okushiri--Mats**	**6.61**	**225**	P	**Pn**	**09 14 18.5**	**-0.3**
JANG	**Nango**	**7.23**	**207**	P	**Pn**	**09 14 24.4**	**-1.5**
JOM	**Ohasama**	**8.13**	**205**	P	**Pn**	**09 14 35.6**	**-0.6**
KLR	**Kul'dur**	**9.67**	**289**	*e*PN	**Pn**	**09 14 51.1**	**-2.8**
PET	**Petropavlovsk**	**10.29**	**49**	P	**Pn**	**09 15 01.0**	**-0.1**
	comp=Z,104nm,1.5s						
PET	**Petropavlovsk**	**10.29**	**49**	*e*PN	**Pn**	**09 14 55.3**	**-5.8**
MDJ	**Mudanjiang**	**11.54**	**264**	*e*P	**Pn**	**09 15 13.8**	**-2.0**
	comp=Z,3.6nm,0.4s						
MAJO	**Matsushiro**	**11.80**	**211**	*e*P	**Pn**	**09 15 20.4**	**+1.5**
	comp=Z,9.3nm,0.7s						
MAJO	**Matsushiro**	**11.80**	**211**	*e*PN	**Pn**	**09 15 20.4**	**+1.5**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MJAR	**Matsushiro Arr**	**11.80**	**211**	P	**Pn**	**09 15 21.1**	**+2.2**
	comp=Z,0.9nm,0.3s,baz=26,slow=11,SNR=6.6						
MJAR	**Matsushiro Arr**	**11.80**	**211**	*e*PN	**Pn**	**09 15 21.6**	**+2.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**16.23**	**241**	P	**P**	**09 16 08.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=48,slow=11,SNR=6.3						
KSRS	**Korea Array**	**16.23**	**241**	*e*P	**P**	**09 16 08.6**	**+2.4**
HIA	**Hailar**	**17.52**	**287**	*e*P	**P**	**09 16 18.7**	**-1.1**
	comp=Z,4.2nm,0.6s						
HIA	**Hailar**	**17.52**	**287**	*e*P	**P**	**09 16 19.2**	**-0.6**
SONM	**Songino Array**	**26.49**	**287**	P	**P**	**09 17 44.1**	**+0.6**
	comp=Z,1.0nm,0.3s,mb3.7,baz=64,slow=9.8,SNR=3.3						
COLA	**College**	**39.13**	**338**	*e*P	**P**	**09 19 29.5**	**-1.8**
MKAR	**Makanchi Array**	**42.33**	**294**	P	**P**	**09 19 57.5**	**+0.2**
	comp=Z,1.4nm,0.5s,mb3.5,baz=71,slow=7.3,SNR=16						
MKAR	**Makanchi Array**	**42.33**	**294**	*e*P	**P**	**09 19 57.8**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**43.02**	**301**	P	**P**	**09 20 03.1**	**+0.3**
	comp=Z,1.0nm,0.3s,mb3.6,baz=72,slow=8.9,SNR=7.2						
KURK	**Kurchatov**	**43.02**	**301**	*e*P	**P**	**09 20 02.5**	**-0.2**
	comp=Z,1.5nm,0.4s,mb3.7						
KURK	**Kurchatov**	**43.02**	**301**	P	**P**	**09 20 03.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
BVAR	**Borovoye Array**	**46.79**	**307**	P	**P**	**09 20 31.6**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.2,baz=60,slow=8.5,SNR=3.2						
YKA	**Yellowknife Ar**	**53.73**	**35**	P	**P**	**09 21 22.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=226,slow=8.2,SNR=4.8						
YKA	**Yellowknife Ar**	**53.73**	**35**	P	**P**	**09 21 22.8**	**-0.4**
ARCES	**ARCESS Array B**	**55.94**	**338**	P	**P**	**09 21 37.9**	**-0.8**
	comp=Z,2.5nm,0.8s,mb3.6,baz=42,slow=7.3,SNR=2.9						
NB2	**NORSAR Subarra**	**66.30**	**338**	P	**P**	**09 22 47.3**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.7,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**66.30**	**338**	P	**P**	**09 22 47.4**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.7,baz=32,slow=6.3,SNR=4.7						
NOA	**NORSAR Array B**	**66.30**	**338**	*e*P	**P**	**09 22 47.5**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**66.40**	**336**	P	**P**	**09 22 47.7**	**-0.5**
	comp=Z,1.0nm,0.4s,mb3.8,baz=46,slow=6.4,SNR=5.2						
NVAR	**Mina Array Bea**	**66.72**	**58**	P	**P**	**09 22 51.6**	**+0.9**
	comp=Z,1.5nm,0.7s,mb3.7,baz=295,slow=5.5,SNR=9.9						
PDAR	**Pinedale Array**	**68.61**	**50**	P	**P**	**09 23 03.2**	**+1.1**
	comp=Z,1.6nm,0.6s,mb3.8,baz=337,slow=0.9,SNR=15						
TXAR	**Lajitas Array**	**81.68**	**56**	P	**P**	**09 24 17.5**	**+1.3**
	comp=Z,1.3nm,0.7s,mb3.8,baz=291,slow=3.3,SNR=18						
TXAR	**Lajitas Array**	**81.68**	**56**	*e*P	**P**	**09 24 17.7**	**+1.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

MAN 30 09:15:25, 949N×12549E, h19km, mb4.0, ML2.7, MS2.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.29**	**360**	*e*P	Pg	09 15 32.9	+1.4
SCPH				*e*S	Sg	09 15 38.7	+2.7
MSLP	**Maasin**	**0.89**	**316**	*e*P	Pb	09 15 41.6	-0.3
MSLP				*e*S	Sb	09 15 55.5	+2.0
TBP	**Tagbilaran**	**1.62**	**277**	*e*P	Pn	09 15 52.7	+0.1
TBP				*e*S	Sn	09 16 12.9	0.0
BUKP	**Musuan**	**1.65**	**195**	*e*P	Pn	09 15 53.3	+0.3
PAGZ	**Pagadian**	**2.65**	**232**	*e*P	Pn	09 16 02.2	-4.4

NNC ***30*** *09:34:56.5±3.5, 3825N×7107E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=35.1km s-min=19.5km az=48.0*
IDC ***30*** *09:34:57.0±1.0, 3812N×7135E, h0km, mb4.1/7, mb1 4.2/11, mb1mx4.0/25, mbtmp4.1/11, ML3.9/4, MS3.3/2, Ms1 3.3/2, ms1mx2.9/30, Error ellipse: s-maj=18.9km s-min=16.0km az=108.0*
ISCJB ***30*** *09:35:00.8±0.7, 3821N±003×7124E±007, h42km±9km, mb4.1/10, Error ellipse: s-maj=8.9km s-min=4.6km az=175.6*
MOS ***30*** *09:35:02.6±1.1, 3837N×7139E, h47km, mb4.4/3, Error ellipse: s-maj=15.6km s-min=6.5km az=81.7*
BJI ***30*** *09:35:03.1, 3830N×7140E, h35km, mb4.3, ML4.1*
NEIC ***30*** *09:35:03.2±0.6, 3828N×7136E, h35km, mb4.4/4, Error ellipse: s-maj=12.1km s-min=8.5km az=96.0*
ISC 30 09:34:57.9±1.4, 3818N±003×7110E±006, h4km±10km, n68, σ1§34/88, mb4.1/10, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**3.99**	**205**	*e*Pn	**Pn**	**09 36 07.4**	**+7.5**
KBL				*e*Sn	**Sn**	**09 36 47.2**	**+0.2**
CEP	**Cherat**	**4.39**	**171**	⇓P	**Pn**	**09 36 11.3**	**+5.9**
CEP				S	**Sg**	**09 37 19.0**	**0.0**
AML	**Almayashu**	**4.42**	**26**	*e*Pn	**Pn**	**09 36 05.8**	**+0.1**
AML				*e*Sn	**Sn**	**09 36 56.6**	**-1.0**
AML	**Almayashu**	**4.42**	**26**	P	**Pn**	**09 36 12.5**	**+6.7**
	SNR=5.7						
UCH	**Uchtor**	**4.82**	**32**	*e*Pn	**Pn**	**09 36 12.5**	**+1.4**
UCH				*e*Sn	**Sn**	**09 37 08.5**	**+1.1**
CHCP	**Chirah Chowk**	**4.84**	**158**	⇑P	**Pn**	**09 36 15.8**	**+4.3**
NIL	**Nilore**	**4.84**	**158**	*e*Pn	**Pn**	**09 36 15.7**	**+4.2**
NIL				*e*Sn	**Sn**	**09 37 12.0**	**+4.0**
EKS2	**Erkin-Say**	**4.92**	**24**	*e*Pn	**Pn**	**09 36 13.5**	**+0.9**
EKS2				*e*Sn	**Sn**	**09 37 11.9**	**+1.9**
EKS2	**Erkin-Say**	**4.92**	**24**	P	**Pn**	**09 36 18.3**	**+5.7**
	SNR=32						
KK31	**Karatay Array**	**4.94**	**355**	Pn	**Pn**	**09 36 14.0**	**+1.1**
	13nm,0.4s,baz=177,slow=13,SNR=162						
KK31				⇑Sn	**Sn**	**09 37 14.2**	**+3.7**
	77nm,0.7s,baz=171,slow=31,SNR=5.8						
KK31				⇑Lg		09 37 28.8	
	96nm,0.5s						
KK31	**Karatay Array**	**4.94**	**355**	*e*PN	**Pn**	**09 36 14.0**	**+1.1**
KK31				*e*		09 37 14.3	
KK31				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KK31				smax			
	comp=N,89nm,0.5s						

KZA	**Kyzart**	**5.03**	**38**	P	**Pn**	**09 36 12.2**	**-1.9**
	SNR=15						
AAK	**Ala-Archa**	**5.15**	**29**	*e*Pn	**Pn**	**09 36 17.0**	**+1.2**
AAK	**Ala-Archa**	**5.15**	**29**	P	**Pn**	**09 36 17.4**	**+1.6**
	SNR=23						
FRU	**Bishkek**	**5.37**	**29**	*e*PN	**Pn**	**09 36 17.0**	**-1.8**
FRU				*i* S	**Sn**	**09 37 25.0**	**+4.0**
FRU				pmax	pmax		
	comp=Z,160nm,1.8s						
FRU				smax			
	comp=N,750nm,2.0s						
CHMS	**Chumysh**	**5.56**	**29**	P	**Pn**	**09 36 22.7**	**+1.3**
	SNR=16						
USP	**Ospenovka**	**5.70**	**26**	P	**Pn**	**09 36 24.3**	**+0.9**
	SNR=17						
TKM2	**Tokmak 2**	**5.84**	**34**	⇓Pn	**Pn**	**09 36 27.2**	**+1.9**
	comp=N,18nm,0.6s						
TKM2				⇑Lg		09 38 04.7	
	comp=N,57nm,0.8s						
TKM2	**Tokmak 2**	**5.84**	**34**	*e*Pn	**Pn**	**09 36 25.9**	**+0.6**
	comp=N,22nm,0.5s						
TKM2	**Tokmak 2**	**5.84**	**34**	*e*PN	**Pn**	**09 36 25.9**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,22nm,0.5s						
TKM2	**Tokmak 2**	**5.84**	**34**	P	**Pn**	**09 36 26.0**	**+0.7**
	SNR=26						
THN	**Thein Dam**	**6.86**	**145**	*e*P	**Pn**	**09 36 42.4**	**+3.1**
DLH	**Dalhousie**	**6.88**	**143**	*ex*	**Pn**	**09 36 45.0**	**+5.4**
DLH				*ex*	**Sn**	**09 38 02.0**	**+3.6**
KLP	**Kalpa**	**8.85**	**136**	*e*P	**Pn**	**09 37 07.8**	**+1.2**
KLP				*e*S	**Sn**	**09 38 41.6**	**-5.2**
KLP				AML	AML	09 39 10.9	
	comp=N,118nm,0.8s						
KLP				AML	AML	09 39 11.3	
	comp=E,112nm,0.8s						
DDI	**Dehra Dun**	**9.72**	**142**	*ex*	**Pn**	**09 37 16.5**	**-2.0**
DDI				*ex*	**Sn**	**09 39 12.5**	**+4.5**
JOSI	**Joshimath**	**10.32**	**135**	*e*P	**Pn**	**09 37 29.5**	**+2.8**
JOSI				*e*S	**Sn**	**09 39 14.5**	**-8.3**
JOSI				AML	AML	09 39 34.2	
	comp=E,121nm,0.6s						
JOSI				AML	AML	09 39 34.9	
	comp=N,99nm,0.7s						
KHET	**Khetri**	**10.81**	**157**	*e*S	**Sn**	**09 39 27.0**	**-8.1**
KUDL	**Kundal**	**10.97**	**154**	*e*P	**Pn**	**09 37 35.4**	**-0.2**
KUDL				*e*S	**Sn**	**09 39 28.9**	**-10**
SONA	**Sohna**	**11.09**	**151**	*e*P	**Pn**	**09 37 37.3**	**0.0**
SONA				*e*S	**Sn**	**09 39 30.6**	**-11**
MK31	**Makanchi Array**	**11.92**	**40**	Pn	**Pn**	**09 37 48.2**	**-0.3**
	comp=N,7.8nm,0.7s,baz=228,slow=13,SNR=40						
MK31	**Makanchi Array**	**11.92**	**40**	*i* P	**Pn**	**09 37 48.2**	**-0.4**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	**11.92**	**40**	Pn	**Pn**	**09 37 48.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=231,slow=13,SNR=46						
MKAR				Lg		09 41 13.4	
	comp=Z,0.1nm,0.3s,baz=214,slow=31,SNR=2.9						
KURK	**Kurchatov**	**13.63**	**21**	Pn	**Pn**	**09 38 06.0**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=8.7						
KURK				Lg		09 42 00.4	
	comp=Z,0.1nm,0.3s,baz=147,slow=40,SNR=4.7						
AB01	**Akbulak array**	**13.69**	**328**	⇑Pn	**Pn**	**09 38 11.2**	**-1.4**
	comp=Z,3.5nm,0.6s						
AB01				⇓Sn	**Sn**	**09 40 43.1**	**-1.9**
	comp=Z,12nm,0.6s						
AB31	**Akbulak array**	**13.69**	**328**	P	**Pn**	**09 38 11.2**	**-1.5**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DANN	**Dangsing**	**14.41**	**129**	*e*P	**Pn**	**09 38 18.7**	**-4.0**
	comp=Z,27nm,0.8s						
BVA0	**Borovoye Array**	**14.86**	**358**	⇓Pn	**Pn**	**09 38 28.5**	**-0.2**
	comp=Z,1.2nm,1.1s,baz=161,slow=12,SNR=21						
BVA0

GUIM	**Jordan**	**1.52**	**13**	*eP*	Pn	09 36 12.0	-0.5
GUIM				*eS*	Sn	09 36 32.2	+0.7
TBP	**Tagbilaran**	**1.68**	**71**	*e*	Pn	09 36 15.6	+0.7
TBP				*eS*	Sn	09 36 36.4	+0.8
PAGZ	**Pagadian**	**1.70**	**139**	*eP*	Pn	09 36 15.9	+0.7
PAGZ				*eS*	Sn	09 36 37.0	+0.9
LLP	**Lapu-Lapu**	**2.06**	**55⇑**	*eP*	Pn	09 36 20.9	+0.9
LLP				*eS*	Sn	09 36 46.3	+1.4
RCP	**Roxas**	**2.46**	**11⇑**	*eP*	Pn	09 36 28.8	+3.4
RCP				*i* S	Sn	09 36 59.1	+4.4
MSLP	**Maasin**	**2.76**	**69**	*eP*	Pn	09 36 32.4	+2.8
MSLP				*eS*	Sn	09 37 02.8	+0.7
OTRP	**Odiongan**	**3.21**	**356**	*eP*	Pn	09 36 41.6	+5.7
OTRP				*eS*	Sn	09 37 10.7	-2.7
ENPP	**El Nido**	**3.46**	**307**	*eP*	Pn	09 36 39.4	+0.1

NIED ***30*** *09:36:00, 36.40N×140.70E, h62km, Mw4.7 Best double couple: Mo1.12000×10^16 NP1:φs29.00000°, δ74.00000°, λ96.00000°. NP2:φs189.00000°, δ17.00000°, λ71.00000°.*

BJI ***30*** *09:36:55.7, 36.43N×140.89E, h69km, mB5.1, mb4.9, Ms4.3, Msz4.2*

SZGRF ***30*** *09:36:56.4, 36.71N×140.80E, h33km, mb5.1, Near east coast of eastern Honshu, Japan*

JMA ***30*** *09:36:58.0±0.1, 36.43N×140.70E, h53km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs214.00000°, δ27.00000°, λ105.00000°. NP2: φs17.00000°, δ64.00000°, λ83.00000°. Principal axes: T Plg70.0000°, Azm272.0000°; N Plg7.0000°, Azm21.0000°; P Plg19.0000°, Azm113.0000°;*

JMA Felt IV J1.

ISCJB ***30*** *09:36:58.0±0.3, 36.45N±0.03×140.55E±0.02, h57km±2km, mb4.9/127, MS3.9/18 Error ellipse: s-maj=4.6km s-min=3.0km az=165.7*

IDC ***30*** *09:36:58.3±0.6, 36.47N×140.66E, h51km±5km, mb4.4/25, mb1 4.6/27, mb1mx4.5/30, mbtmp4.5/27, MS3.7/12, Ms1 3.7/12, ms1mx3.5/34, Error ellipse: s-maj=12.8km s-min=12.0km az=105.0*

NEIC ***30*** *09:36:58.1, 36.43N×140.70E, h53km, mb5.0/70, MW4.6(NIED), After JMA.*

NEIC Felt at Mito, Tokyo, Tsuchiura and Tsukuba. Recorded [4 JMA] in Ibaraki; [3 JMA] in Tochigi; [2 JMA] in Chiba, Fukushima and Saitama; [1 JMA] in Gumma, Kanagawa, Miyagi and Tokyo Prefectures.

MOS ***30*** *09:36:59.2±0.8, 36.80N×140.50E, h57km, mb5.2/51, Error ellipse: s-maj=8.1km s-min=4.7km az=113.4*

ISC 30 09:36:59.0±0.3, 36.49N±0.03×140.54E±0.02, h52km±2km, h56km±2.1km:pP-P,n568,σ0.69/576, mb4.9/127, MS3.9/18, 152C-150D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
JHO	**Hitachi**	**0.12**	**11**	**⇑P**	**Pn**	**09 37 06.8**	**-0.3**
JHO				*eS*	**Sn**	**09 37 12.7**	**-0.2**
JYT	**Yasato**	**0.38**	**227**	**⇓P**	**Pn**	**09 37 09.0**	**-0.1**
JYT				*eS*	**Sn**	**09 37 16.5**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.65**	**19**	P	**Pn**	**09 37 11.0**	**-1.1**
ONAJ				*eS*	**Sn**	**09 37 20.8**	**-0.8**
JAG	**Ashikaga**	**0.88**	**266**	**⇓P**	**Pn**	**09 37 16.2**	**+1.1**
JAG				*eS*	**Sn**	**09 37 29.2**	**+2.2**
JFK	**Kawauchi**	**0.92**	**17**	P	**Pn**	**09 37 14.4**	**-1.2**
JFT	**Otama**	**1.04**	**351**	**⇓P**	**Pn**	**09 37 17.7**	**+0.4**
JFT				*eS*	**Sn**	**09 37 31.2**	**+0.4**
JKT	**Katashina**	**1.07**	**285**	**⇓P**	**Pn**	**09 37 19.4**	**+1.6**
JFY	**Yanaizu**	**1.13**	**324**	**⇓P**	**Pn**	**09 37 19.8**	**+1.2**
JFY				*eS*	**Sn**	**09 37 33.6**	**+0.5**
JMM	**Marumori**	**1.39**	**8**	**⇓P**	**Pn**	**09 37 21.7**	**-0.3**
JMM				*eS*	**Sn**	**09 37 39.4**	**+0.2**
MJAR	**Matsushiro Arr**	**1.88**	**272**	P	**Pn**	**09 37 30.6**	**+1.9**
	210nm,0.3s,baz=98,slow=9.1,SNR=1751						
MJAR				S	Sx	09 37 45.1	
	268nm,0.3s,baz=89,slow=16,SNR=22						
MAJO	**Matsushiro**	**1.88**	**272**	*e*Pn	**Pn**	**09 37 31.2**	**+2.5**
MAT	**Matsushiro**	**1.88**	**272**	P	**Pn**	**09 37 30.1**	**+1.4**
MAT				S	**Sn**	**09 37 55.4**	**+4.2**
JHJ	**Hachijo jima 2**	**3.42**	**191**	P	**Pn**	**09 37 49.0**	**-0.8**
	148nm,0.3s,baz=96,slow=19,SNR=15						
JHJ				S	**Sn**	**09 38 28.3**	**-0.8**
	529nm,0.3s,baz=90,slow=22,SNR=14						
ERM	**Erimo**	**5.88**	**19**	*e*Pn	**Pn**	**09 38 24.4**	**+0.9**
ASAJ	**Asahikawa**	**7.78**	**11**	P	**Pn**	**09 38 47.4**	**-2.1**
	6.7nm,0.3s,baz=216,slow=13,SNR=43						
ASAJ				S	**Sn**	**09 40 13.8**	**-2.3**
	5.1nm,0.3s,baz=297,slow=31,SNR=6.0						
ASAJ				LR	LR	09 42 42.6	
	comp=Z,153nm,20.8s,baz=146,slow=44						
ASAJ	**Asahikawa**	**7.78**	**11**	P	**Pn**	**09 38 47.4**	**-2.1**
ASAJ				S	**Sn**	**09 40 13.8**	**-2.3**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,153nm,20.8s						
YUK	**Yuzh-Kuril'sk**	**8.56**	**27**	*e*P	**Pn**	**09 38 57.5**	**-2.7**
YUK				*i* S	Sx	09 40 26.6	
YUK				smax			
	comp=E,620nm,0.5s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=N,2μm,2.0s						
YUK				smax			
	comp=E,2μm,2.0s						
CBIJ	**Chichi jima**	**9.47**	**171**	P	**Pn**	**09 39 06.8**	**-6.0**
	comp=E,59nm,0.3s,baz=294,slow=22,SNR=16						
CBIJ				S	Sx	09 40 45.0	
	comp=E,50nm,0.3s,baz=31,slow=19,SNR=7.5						
KSRS	**Korea Array**	**10.14**	**279**	P	**Pn**	**09 39 27.2**	**+5.3**
	comp=E,1.1nm,0.3s,baz=96,slow=14,SNR=31						
KSRS				LR	LR	09 43 12.0	
	comp=E,467nm,20.8s,baz=166,slow=36						
KSRS	**Korea Array**	**10.14**	**279**	P	**Pn**	**09 39 27.2**	**+5.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,467nm,20.8s						
KS15	**Wonju Array Si**	**10.17**	**279**	*e*Pn	**Pn**	**09 39 27.6**	**+5.2**
YSS	**Yuzh-Sakhalins**	**10.59**	**8**	*e*Pn	**Pn**	**09 39 26.4**	**-1.5**
YSS	**Yuzh-Sakhalins**	**10.59**	**8**	*e*P	**Pn**	**09 39 25.8**	**-2.1**
YSS				pmax	pmax		
	comp=Z,19nm,0.6s						
INCN	**Inchon**	**11.17**	**279**	*e*Pn	**Pn**	**09 39 35.5**	**-0.4**
	comp=Z,163nm,2.0s						
MDJ	**Mudanjiang**	**11.62**	**318**	P	**Pn**	**09 39 47.5**	**+5.5**
MDJ				AMB	AMB		
	comp=Z,39nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,136nm,5.1s						
MDJ	**Mudanjiang**	**11.62**	**318**	*e*Pn	**Pn**	**09 39 47.7**	**+5.7**
	comp=Z,58nm,1.1s						
HABR	**Khabarovsk**	**12.64**	**343**	P	**Pn**	**09 39 52.6**	**-3.3**
HABR				*e*		09 42 13.5	
CN2	**Changchun**	**13.65**	**307**	*e*P	**Pn**	**09 40 12.8**	**+3.1**
CN2				*e*AP		09 40 22.3	
CN2				*e*S	**Sn**	**09 42 43.8**	**+4.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,500nm,10.0s						
CN2				LR	LR		
	comp=E,300nm,10.0s						
CN2				LR	LR		
	comp=Z,500nm,12.0s						
JOW	**Kunigami**	**14.19**	**231**	LR	LR	09 45 19.1	
	comp=Z,252nm,19.9s,baz=349,slow=35						
KLR	**Kul'dur**	**14.26**	**336**	*e*P	**Pn**	**09 40 22.0**	**+4.1**
NJ2	**Nanjing**	**18.45**	**262**	*e*P	**Pn**	**09 41 12.3**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s						
TIA	**Tai'an**	**18.86**	**276**	*e*P	**Pn**	**09 41 14.0**	**-1.8**
TIA				AMB	AMB		
	comp=Z,22nm,0.8s						
BJI	**Beijing**	**19.44**	**288**	P	**Pn**	**09 41 21.3**	**-1.4**
BJI				S	**S**	**09 44 58.0**	**-0.1**
BJI				AMB	AMB		
	comp=Z,48nm,0.6s						
BJI				LR	LR		
	comp=N,237nm,18.4s						
BJI				LR	LR		
	comp=E,285nm,19.7s						
BJI				LR	LR		
	comp=Z,199nm,20.4s						
BJT	**Baijiatuau**	**19.45**	**288**	*e*P	**Pn**	**09 41 21.0**	**-1.8**
	comp=Z,33nm,0.4s						
BJT				*e*		09 41 31.3	
BJT	**Baijiatuau**	**19.45**	**288**	*e*P	**Pn**	**09 41 21.0**	**-1.8**
BJT				pmax	pmax		
	comp=Z,33nm,0.4s						
HIA	**Hailar**	**19.80**	**317**	*e*P	**Pn**	**09 41 23.5**	**-3.4**
	comp=Z,7.4nm,0.6s						
HIA	**Hailar**	**19.80**	**317**	*e*P	**Pn**	**09 41 23.5**	**-3.4**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PETK	**Petropavlovsk-**	**20.51**	**31**	P	**P**	**09 41 32.8**	**+0.2**
	comp=Z,7.4nm,1.0s,baz=211,slow=5.0,SNR=3.2						
PETK				LR	LR	09 49 05.0	
	comp=Z,102nm,21.1s,MS3.2,baz=230,slow=36						
WHN	**Wuhan**	**22.59**	**262**	P	**P**	**09 41 52.5**	**-2.6**
WHN				S	**S**	**09 45 55.5**	**-3.9**
WHN				LR	LR		
	comp=Z,823nm,28.4s,MS4.0						
CLNS	**Chul'man**	**22.91**	**338**	*e*P	**P**	**09 41 56.7**	**-1.4**
CLNS				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.6						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK	**Yakutsk**	**26.45**	**348**	*e*P	**P**	**09 42 29.8**	**-1.0**
	comp=E,58nm,1.0s,mb5.1						
YAK	**Yakutsk**	**26.45**	**348**	*c i*P	**P**	**09 42 29.9**	**-0.9**
YAK				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.1						
YAK				MLR	MLR		
	comp=Z,200nm,21.0s,MS3.6						
ULN	**Ulaanbaatar**	**27.09**	**305**	*e*P	**P**	**09 42 36.7**	**0.0**
	comp=Z,17nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**27.09**	**305**	*e*P	**P**	**09 42 36.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
SEY	**Seymchan**	**27.46**	**12⇓**	*i*P	**P**	**09 42 42.8**	**+3.0**
SONM	**Songino Array**	**27.51**	**305**	P	**P**	**09 42 40.6**	**+0.1**
	comp=Z,12nm,0.7s,mb4.6,baz=106,slow=9.3,SNR=56						
SONM				PcP	PcP	09 45 57.5	+0.1
	comp=Z,0.4nm,0.4s,baz=136,slow=3.7,SNR=4.6						
SONM				LR	LR	09 54 12.4	
	comp=Z,145nm,21.1s,MS3.5,baz=175,slow=38						
SONM	**Songino Array**	**27.51**	**305**	P	**P**	**09 42 40.6**	**+0.1**
SONM						09 45 57.5	
BOD	**Bodaibo**	**27.62**	**329**	*e*P	**P**	**09 42 40.7**	**-0.7**
BOD				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
LZH	**Lanzhou**	**29.47**	**280**	*e*P	**P**	**09 42 59.5**	**+1.5**
LZH				AP	pP	09 43 15.8	+4.6
LZH				XP	sP	09 43 22.3	+5.0
LZH				PP	PP	09 43 57.0	-8.2
LZH				*e*S	**S**	**09 47 49.0**	**+0.3**
LZH				XS	sS	09 48 13.0	+2.0
LZH				SS	SS	09 49 23.0	-32
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,200nm,6.3s						
LZH				LR	LR		
	comp=E,790nm,12.0s						
LZH				LR	LR		
	comp=Z,990nm,13.5s,MS4.6						
ZAK	**Zakamensk**	**30.06**	**309**	*e*P	**P**	**09 43 02.4**	**-0.7**
ZAK				*e*		09 46 04.0	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
TLY	**Talaya**	**30.16**	**312**	*e*P	**P**	**09 43 04.3**	**+0.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,64nm,11.0s,MS3.5						
GYA	**Guiyang**	**30.44**	**261⇑**	*i*P	**P**	**09 43 07.0**	**+0.3**
GYA				AP	pP	09 43 20.5	+0.6
GYA				XP	sP	09 43 28.0	+2.0
GYA				PP	PP	09 44 05.8	-10
GYA				PCP	PcP	09 46 05.5	+0.3
GYA				S	**S**	**09 48 00.5**	**-3.6**
GYA				SCP	ScP	09 49 41.3	-2.0
GYA				PCS	PcS	09 49 43.0	-6.0
GYA				SCS	ScS	09 53 35.8	-3.7
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,200nm,5.6s						
GYA				LR	LR		
	comp=N,670nm,18.6s,MS4.4						
GYA				LR	LR		
	comp=E,430nm,19.2s,MS4.4						
GYA				LR	LR		
	comp=Z,800nm,18.0s,MS4.4						
CD2	**Chengdu**	**30.97**	**270**	*e*P	**P**	**09 43 11.5**	**+0.1**
CD2				AP	pP	09 43 26.5	+1.9
CD2				XP	sP	09 43 34.0	+3.3
CD2				PP	PP	09 44 15.8	-6.1
CD2				S	**S**	**09 48 11.3**	**-1.1**
CD2				XS	sS	09 48 36.8	+2.1
CD2				SS	SS	09 49 58.5	-28
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
CD2				AMB	AMB		
	comp=Z,100nm,6.2s						
CD2				LR	LR		
	comp=N,160nm,8.4s						
CD2				LR	LR		
	comp=E,190nm,9.6s						
CD2				LR	LR		
	comp=Z,460nm,8.4s						
DCPH	**Dipolog City**	**31.88**	**214**	*e*P	pP	09 43 34.6	+1.9
GTA	**Gaotai**	**32.06**	**288**	*e*P	**P**	**09 43 20.3**	**-0.5**
GTA				AP	pP	09 43 34.8	+0.8
GTA				XP	sP	09 43 43.0	+2.9
GTA				PCP	PcP	09 46 10.0	+0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.0						
KMI	**Kunming**	**34.19**	**261**	P	**P**	**09 43 39.0**	**-0.5**
KMI				AP	pP	09 43 54.3	+1.5
KMI				XP	sP	09 44 02.5	+3.6
KMI				PP	PP	09 44 57.5	-0.1
KMI				S	**S**	**09 49 02.0**	**-0.4**
KMI				SS	SS	09 51 11.5	-20
KMI				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.8						
KMI				AMB	AMB		
	comp=Z,79nm,5.3s						
KMI				LR	LR		
	comp=N,301nm,7.4s						
KMI				LR	LR		
	comp=E,270nm,8.7s						
KMI				LR	LR		
	comp=Z,318nm,14.8s,MS4.2						
TIXI	**Tiksi**	**35.75**	**354**	*e*P	**P**	**09 43 51.5**	**-0.9**
	comp=Z,13nm,0.9s,mb4.9						
TIXI	**Tiksi**	**35.75**	**354**	*c i*P	**P**	**09 43 51.4**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.6						
KRAR	**Krasnoyarsk**	**37.37**	**317**	*e*P	**P**	**09 44 05.8**	**-0.6**
WMQ	**Urumqi**	**40.46**	**297**	P	**P**	**09 44 33.0**	**+0.6**
WMQ				AP	pP	09 44 48.0	+2.0
WMQ				XP	sP	09 44 56.0	+4.0
WMQ				PP	PP	09 46 11.0	+4.8
WMQ				S	**S**	**09 50 37.0**	**-0.3**
WMQ				SS	SS	09 53 33.0	-5.0
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,75nm,4.0s						
WMQ				LR	LR		
	comp=N,85nm,15.0s,MS3.9						
WMQ				LR	LR		
	comp=E,94nm,15.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,112nm,16.0s,MS3.8						
CHTO	**Chiang Mai**	**40.48**	**256**	*e*P	**P**	**09 44 32.6**	**-0.3**
	comp=Z,7.1nm,1.1s,mb4.3						
CHTO	**Chiang Mai**	**40.48**	**256**	*e*P	**P**	**09 44 32.6**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
CMAR	**Chiang Mai Arr**	**40.68**	**255**	P	**P**	**09 44 34.4**	**-0.2**
	comp=Z,1.2nm,0.4s,mb3.9,baz=44,slow=6.6,SNR=6.6						
CMAR				PcP	PcP	09 46 36.0	+0.5
	comp=Z,1.9nm,0.7s,baz=35,slow=3.0,SNR=5.5						
CMAR				LR	LR	10 02 14.3	
	comp=Z,67nm,18.7s,MS3.5,baz=60,slow=37						
CMAR	**Chiang Mai Arr**	**40.68**	**255**	P	**P**	**09 44 34.4**	**-0.1**
CMAR						09 46 36.0	
LSA	**Lhasa**	**41.56**	**275**	P	**P**	**09 44 43.0**	**+1.3**
LSA	**Lhasa**	**41.56**	**275**	*e*P	**P**	**09 44 43.1**	**+1.5**
	comp=Z,12nm,0.8s,mb4.6						
LSA	**Lhasa**	**41.56**	**275**	*e*P	**P**	**09 44 43.1**	**+1.4**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
ZAA0	**Zalesovo Array**	**41.77**	**313**	*e*P	**P**	**09 44 43.0**	**0.0**
ZALV	**Zalesovo Beam**	**41.77**	**313**	P	**P**	**09 44 42.6**	**-0.4**
	comp=Z,12nm,0.5s,mb4.8,baz=90,slow=7.7,SNR=36						
ZALV				PcP	PcP	09 46 37.7	-0.7
	comp=Z,2.6nm,0.6s,baz=67,slow=3.8,SNR=3.1						
ZALV				LR	LR	10 02 20.4	
	comp=Z,51nm,19.5s,MS3.4,baz=156,slow=36						
ZALV	**Zalesovo Beam**	**41.77**	**313**	P	**P**	**09 44 42.6**	**-0.4**
ZALV						09 46 37.7	
NVS	**Novosibirsk**	**42.71**	**314**	*e*P	**P**	**09 44 48.6**	**-2.1**
NVS				pmax	pmax		
	comp=Z,33nm,1.2s,mb4.9						
NVS				pmax	pmax		
	comp=N,14nm,1.6s						
NVS				pmax	pmax		
	comp=E,28nm,1.2s						
MKAR	**Makanchi Array**	**43.81**	**302**	P	**P**	**09 44 59.6**	**-0.1**
	comp=E,15nm,0.7s,mb4.8,baz=90,slow=9.9,SNR=52						
MKAR				LR	LR	10 04 15.0	
	comp=E,96nm,18.4s,MS3.8,baz=170,slow=37						
TAPN	**Taplejung**	**45.28**	**274**	*e*P	**P**	**09 45 12.0**	**+0.4**
	comp=E,19nm,0.5s,mb5.2						
KAPI	**Kappang**	**45.64**	**210**	P	**P**	**09 45 13.6**	**-0.9**
	comp=E,3.6nm,0.3s,mb4.7,baz=30,slow=8.2,SNR=4.8						
KAPI	**Kappang**	**45.64**	**210**	P	**P**	**09 45 13.6**	**-0.9**
KURK	**Kurchatov**	**45.72**	**308**	P	**P**	**09 45 15.1**	**+0.3**
	comp=E,16nm,0.6s,mb5.2,baz=82,slow=7.7,SNR=23						
KURK				pP	pP	09 45 28.8	+0.3
	comp=E,4.1nm,0.5s,baz=84,slow=7.8,SNR=4.6						
KURK				LR	LR	10 05 46.7	
	comp=E,80nm,18.5s,MS3.7,baz=80,slow=38						
KURK	**Kurchatov**	**45.72**	**308**	*e*P	**P**	**09 45 14.6**	**-0.2**
	comp=E,24nm,0.8s,mb5.2						
KURK	**Kurchatov**	**45.72**	**308**	P	**P**	**09 45 15.1**	**+0.3**
KURK				*PP	pP	09 45 28.8	+0.3
KURK				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
KURK				MLR	MLR		
	comp=Z,80nm,18.5s,MS3.7						
ODAN	**Odare**	**45.75**	**274**	*e*P	**P**	**09 45 15.8**	**+0.5**
	comp=Z,61nm,1.1s,mb5.5						
PMG	**Port Moresby**	**46.07**	**171**	P	**P**	**09 45 16.1**	**-1.8**
	comp=Z,2.0nm,0.4s,mb4.4						
PMG	**Port Moresby**	**46.07**	**171**	P	**P**	**09 45 16.1**	**-1.8**
PMG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RAMN	**Ramite**	**46.34**	**274**	*e*P	**P**	**09 45 20.5**	**+0.5**
	comp=Z,124nm,0.8s,mb5.9						
JIRN	**Jiri**	**46.37**	**275**	*e*P	**P**	**09 45 21.1**	**+0.9**
	comp=Z,88nm,0.8s,mb5.8						
GUN	**Gumba**	**46.51**	**276**	*e*P	**P**	**09 45 22.3**	**+1.0**
	comp=Z,99nm,0.9s,mb5.7						
PKI	**Pulchoki**	**47.03**	**276**	*e*P	**P**	**09 45 25.6**	**+0.2**
	comp=Z,57nm,0.9s,mb5.5						
PKI	**Pulchoki**	**47.03**	**276**	*e*P	**P**	**09 45 25.6**	**+0.2**
PKI				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
KKN	**Kakani**	**47.04**	**276**	*e*P	**P**	**09 45 25.8**	**+0.3**
	comp=Z,58nm,0.8s,mb5.5						
KKN	**Kakani**	**47.04**	**276**	*e*P	**P**	**09 45 25.8**	**+0.3**
KKN				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.6						
DMN	**Daman**	**47.26**	**276**	*e*P	**P**	**09 45 27.4**	**+0.2**
	comp=Z,29nm,0.9s,mb5.2						
GKN	**Gorkha**	**47.47**	**276**	*e*P	**P**	**09 45 29.1**	**+0.3**
	comp=Z,122nm,0.8s,mb5.9						
DANN	**Dangsing**	**48.02**	**277**	*e*P	**P**	**09 45 34.0**	**+0.9**
	comp=Z,160nm,0.8s,mb6.1						
KOLN	**Koldanda**	**48.40**	**277**	*e*P	**P**	**09 45 36.4**	**+0.4**
	comp=Z,38nm,0.7s,mb5.5						
BATI	**Baunata**	**49.09**	**202**	P	**P**	**09 45 40.8**	**-0.5**
	comp=Z,38nm,0.5s,mb5.7,baz=36,slow=3.1,SNR=4.4						
TKM2	**Tokmak 2**	**49.27**	**299**	*e*P	**P**	**09 45 43.6**	**+1.1**
	comp=Z,11nm,0.7s,mb5.0						
TKM2	**Tokmak 2**	**49.27**	**299**	*e*P	**P**	**09 45 43.6**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
MCK	**McKinley**	**49.47**	**33**	*e*P	**P**	**09 45 43.4**	**-0.3**
	comp=Z,7.7nm,0.9s,mb4.7						
MCK	**McKinley**	**49.47**	**33**	*e*P	**P**	**09 45 43.4**	**-0.3**
MCK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
PMR	**Palmer**	**49.48**	**36**	*e*P	**P**	**09 45 43.3**	**-0.4**
	comp=Z,117nm,2.4s,mb5.5						
PMR	**Palmer**	**49.48**	**36**	*e*P	**P**	**09 45 43.3**	**-0.5**
PMR				pmax	pmax		
	comp=Z,117nm,2.4s,mb5.5						
KAKA	**Kakadu**	**49.53**	**190**	*e*P	Px	09 45 27.6	
	comp=Z,11nm,0.9s						
KAKA	**Kakadu**	**49.53**	**190**	*e*P	Px	09 45 27.2	
COLA	**College**	**49.91**	**32**	*e*P	**P**	**09 45 47.0**	**-0.1**
	comp=Z,12nm,0.8s,mb5.0						
COLA	**College**	**49.91**	**32**	*e*P	**P**	**09 45 47.0**	**0.0**
COLA				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
FRU	**Bishkek**	**49.99**	**299⇓**	*i*P	**P**	**09 45 49.0**	**+1.1**
FRU				*e*	pP	09 46 02.0	+0.2
AAK	**Ala-Archa**	**50.13**	**299**	*e*P	**P**	**09 45 49.0**	**0.0**
	comp=Z,11nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**50.13**	**299**	*e*P	**P**	**09 45 49.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
BVA0	**Borovoye Array**	**50.42**	**313**	*i* P	**P**	**09 45 52.7**	**+1.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**50.42**	**313**	P	**P**	**09 45 51.2**	**+0.2**
	comp=Z,7.8nm,0.8s,mb4.8,baz=79,slow=8.0,SNR=9.0						
BRVK	**Borovoye**	**50.48**	**313**	*e*P	**P**	**09 45 51.5**	**0.0**
	comp=Z,14nm,1.0s,mb5.0						
BRVK	**Borovoye**	**50.48**	**313**	*e*P	**P**	**09 45 51.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
AML	**Almayashu**	**50.84**	**298**	*e*P	**P**	**09 45 56.2**	**+1.8**
	comp=Z,20nm,0.7s,mb5.1						
EGAK	**Eagle**	**52.77**	**32**	*e*P	**P**	**09 46 08.4**	**0.0**
	comp=Z,72nm,2.3s,mb5

AKTO **Aktyubinsk** 58.52 312 P P 09 46 49.1 -0.7
comp=Z,4.3nm,0.8s,mb4.5,baz=74,slow=13,SNR=8.8
DLBC **Dease Lake** 59.48 38 eP P 09 46 57.3 +0.9
ASAR **Alice Springs** 60.16 187 P P 09 47 00.0 -1.3
comp=Z,5.5nm,0.8s,mb4.7,baz=11,slow=5.9,SNR=53
MBWA **Marble Bar** 60.62 202 eP P 09 47 03.5 -1.0
comp=Z,58nm,1.8s,mb5.4
APA **Apatity** 62.89 336 ⇑iP P 09 47 19.2 -0.1
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
RES **Resolute Bay** 63.30 14 eP P 09 47 21.5 -0.4
comp=Z,318nm,1.0s
KEV **Kevo** 63.70 339 ep P 09 47 24.1 -0.5
comp=Z,8.2nm,0.7s,mb4.9
KEV **Kevo** 63.70 339 eP P 09 47 24.1 -0.5
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KLMR **Klimovskoe** 63.84 328 eP P 09 47 23.7 -2.0
KLMR pmax pmax
comp=Z,58nm,1.7s,mb5.3
ARCES **ARCESS Array B** 64.26 339 P P 09 47 28.2 -0.1
comp=Z,6.8nm,0.6s,mb4.9,baz=55,slow=8.2,SNR=39
ARCES LR LR 10 18 25.3
comp=Z,116nm,18.9s,MS4.1,baz=254,slow=39
ARCES **ARCESS Array B** 64.26 339 P P 09 47 28.2 -0.1
ARCES LR LR 10 18 25.4
YKA **Yellowknife Ar** 64.63 30 P P 09 47 29.1 -1.7
comp=Z,2.6nm,0.7s,mb4.4,baz=305,slow=6.6,SNR=7.3
JOF **Joensuu** 66.11 332 ep P 09 47 38.7 -1.7
comp=Z,13nm,0.7s,mb5.1
ARMA **Armidale** 67.36 170 eP P 09 47 48.3 -0.3
NLWA **Neilton Lookou** 67.60 47 ⇓P P 09 47 50.6 +0.5
baz=67
FORT **Forrest** 67.93 192 eP P 09 47 51.5 -0.7
comp=Z,37nm,0.6s,mb5.6
STKA **Stephens Creek** 68.02 179 eP P 09 47 51.8 -0.9
comp=Z,1.8nm,0.5s,mb4.4
STKA **Stephens Creek** 68.02 179 P P 09 47 51.7 -1.0
comp=Z,2.4nm,0.5s,mb4.5,baz=351,slow=6.7,SNR=10
STKA **Stephens Creek** 68.02 179 eP P 09 47 51.5 -1.2
comp=Z,1.4nm,1.1s,mb3.9
OBN **Obninsk** 68.11 323 ⇓eP P 09 47 52.7 -0.5
OBN e*PP pP 09 48 13.8 +6.2
OBN e 09 50 19.9
OBN eS S 09 56 49.1 +0.2
OBN pmax pmax
comp=Z,23nm,1.1s,mb5.1
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
KAF **Kangasniemi** 68.47 333 ep P 09 47 53.6 -1.7
comp=Z,14nm,0.6s,mb5.2,baz=50,slow=5.9
KAF **Kangasniemi** 68.47 333 eP P 09 47 53.6 -1.7
KAF pmax pmax
comp=Z,15nm,0.6s,mb5.2
A07A **Ashnola River,** 68.76 44 ⇓P P 09 47 57.3 0.0
baz=68
F04A **Amboy** 69.20 48 ⇓P P 09 47 59.1 -1.1
baz=69
B07A **Winthrop** 69.22 45 ⇓P P 09 47 59.4 -0.9
baz=69
E05A **Randle** 69.27 47 ⇓P P 09 48 00.5 0.0
baz=69
A08A **Turner Farm, O** 69.44 44 ⇑P P 09 48 01.5 -0.1
baz=69
D06A **Cle Elum** 69.47 46 ⇓P P 09 48 01.4 -0.4
baz=69
C07A **Waterville** 69.66 45 ⇑P P 09 48 02.4 -0.5
baz=69
B08A **Colville Reser** 69.72 44 ⇓P P 09 48 03.2 -0.1
baz=70
A09A **Danville** 69.81 44 ⇓P P 09 48 04.0 +0.1
baz=70
D07A **Quincy** 69.97 46 ⇓P P 09 48 04.4 -0.5
baz=70
H04A **Detroit Lake** 69.99 49 ⇑P P 09 48 04.8 -0.2
baz=70
EDM **Edmonton** 70.21 38 eP P 09 48 05.5 -0.7
G05A **Wamic** 70.22 48 ⇓P P 09 48 06.2 -0.2
baz=70
B09A **Rice** 70.35 44 ⇑P P 09 48 07.1 -0.1
baz=70
A10A **Northport** 70.37 43 ⇑P P 09 48 07.4 +0.1
baz=70
E07A **Sunnyside** 70.38 46 ⇑P P 09 48 06.9 -0.5
baz=70
H05A **Madras** 70.59 49 ⇓P P 09 48 08.9 +0.2
baz=70
C09A **Chrisman Ranch** 70.62 45 ⇓P P 09 48 08.4 -0.4
baz=70
G06A **Carlson Farm,** 70.63 48 ⇑P P 09 48 09.3 +0.3
baz=70
D08A **Wollman Farm,** 70.65 45 ⇓P P 09 48 08.9 -0.1
baz=70
F07A **Phinny Hill Vi** 70.70 47 ⇓P P 09 48 09.5 +0.2
baz=70
KIV **Kislovodsk** 70.73 311 eP P 09 48 10.9 +1.4
comp=Z,26nm,0.7s,mb5.3
KIV **Kislovodsk** 70.73 311 c iP P 09 48 09.9 +0.3
KIV pmax pmax
comp=Z,38nm,1.0s,mb5.3
NEW **Newport** 71.01 44 eP P 09 48 11.2 +0.1
comp=Z,92nm,2.8s,mb5.2
NEW **Newport** 71.01 44 eP P 09 48 11.2 0.0
NEW pmax pmax
comp=Z,92nm,2.8s
A11A **Hall Mountain,** 71.04 43 ⇑P P 09 48 11.8 +0.4
baz=71,SNR=5.8
H06A **Lindquist Farm** 71.08 48 ⇓P P 09 48 11.5 -0.2
baz=71
B11A **Sandpoint** 71.33 43 ⇓P P 09 48 13.0 -0.1
baz=71
E09A **Wood Farm, Sta** 71.40 46 ⇑P P 09 48 13.4 -0.2
baz=71
F08A **Pendleton** 71.42 46 ⇑P P 09 48 13.8 0.0
baz=71
A12A **Yaak River Ran** 71.44 42 ⇓P P 09 48 14.3 +0.5
baz=71
D10A **Wagner Farm, O** 71.59 45 ⇑P P 09 48 14.4 -0.3
baz=71
G08A **Pilot Rock** 71.60 47 ⇑P P 09 48 14.4 -0.4
baz=71
C11A **Tepee Creek (N** 71.73 44 ⇑P P 09 48 15.5 0.0
baz=72
K05A **Summer Lake** 71.83 50 ⇓P P 09 48 16.6 +0.4
baz=72
I07A **Izee** 71.94 48 ⇓P P 09 48 17.1 +0.2
baz=72
J06A **Christmas Vall** 72.00 49 ⇓P P 09 48 16.7 -0.6
baz=72
E10A **Myers Farm, Un** 72.01 45 ⇑P P 09 48 17.0 -0.2
baz=72
A13A **Flathead Natio** 72.11 42 ⇑P P 09 48 17.4 -0.4
baz=72
D11A **Klaveano Farm,** 72.13 44 ⇓P P 09 48 17.8 -0.2
baz=72
H08A **Prairie City** 72.19 48 ⇑P P 09 48 18.3 -0.1
baz=72
F10A **Beach Ranch, E** 72.23 46 ⇓P P 09 48 19.1 +0.5
baz=72
C12B **Naegeli Ranch,** 72.23 43 ⇑P P 09 48 18.7 +0.1
baz=72
G09A **Cove** 72.30 47 ⇑P P 09 48 18.9 -0.1
baz=72
B13A **Whitefish** 72.41 43 ⇑P P 09 48 20.3 +0.7
baz=72
J07A **Hines** 72.45 49 ⇓P P 09 48 20.5 +0.6
baz=72,SNR=6.3
E11A **Bogner Ranch,** 72.59 45 ⇓P P 09 48 20.2 -0.5
baz=72
A14A **Double T Ranch** 72.62 42 ⇓P P 09 48 21.2 +0.4
baz=72
G10A **Bishop Farm, J** 72.67 46 P P 09 48 21.3 +0.1
baz=72,SNR=6.9
D12A **Red Ives Fores** 72.68 44 ⇑P P 09 48 20.5 -0.7
baz=72
C13A **Hot Springs** 72.75 43 ⇓P P 09 48 22.0 +0.4
baz=72
BMO **Blue Mountains** 72.81 47 eP P 09 48 22.2 +0.1
comp=Z,59nm,2.6s,mb5.1
K07A **Rock Creek Ran** 72.86 49 ⇓P P 09 48 22.3 -0.1
baz=73
E12A **Beaver Dam Sad** 72.92 45 ⇑P P 09 48 23.1 +0.4
baz=73
J08A **Circle Bar Ran** 72.96 48 ⇓P P 09 48 23.3 +0.4
baz=73
A15A **Johnson Ranch,** 72.99 41 ⇑P P 09 48 22.0 -1.1
baz=73
I09A **Lost Marbles R** 73.05 48 ⇑P P 09 48 23.7 +0.2
baz=73
G11A **Walters Elk Ra** 73.11 46 ⇑P P 09 48 23.7 -0.1
baz=73
C14A **Swan Lake** 73.15 43 ⇑P P 09 48 23.8 -0.2
baz=73
D13A **Huson** 73.15 44 ⇑P P 09 48 23.7 -0.4
baz=73
L07A **Adell** 73.18 50 P P 09 48 24.9 +0.6
baz=73,SNR=8.5
H10A **Noah's Angus R** 73.29 47 P P 09 48 24.7 -0.2
baz=73,SNR=6.8
K08A **Mann Creek Ran** 73.31 49 ⇑P P 09 48 25.1 +0.1
baz=73
Q03C **Winters** 73.36 54 ⇓P P 09 48 25.1 -0.3
baz=73
J09A **Fry Pan Ranch,** 73.40 48 ⇓P P 09 48 25.4 -0.1
baz=73
B15A **Bradely Ranch,** 73.47 42 ⇓P P 09 48 26.0 +0.2
baz=73,SNR=9.9
N06A **Buffalo Meadow** 73.58 51 ⇑P P 09 48 26.7 0.0
baz=73
A16A **West Butte Ran** 73.61 41 ⇑P P 09 48 26.3 -0.4
baz=73
M07A **Soldier Meadow** 73.64 50 ⇓P P 09 48 27.7 +0.7
baz=73
H11A **Donnelly** 73.65 46 ⇑P P 09 48 26.5 -0.5
baz=73
E13A **Victor** 73.69 44 ⇑P P 09 48 26.9 -0.2
baz=73
D14A **Greenough** 73.69 43 ⇑P P 09 48 26.8 -0.4
baz=73
L08A **Fields** 73.70 49 ⇓P P 09 48 27.2 -0.2
baz=74
BEKR **Beckwourth** 73.75 52 ⇓P P 09 48 27.4 -0.3
baz=74
C15A **Salmond Ranch,** 73.77 42 ⇓P P 09 48 28.2 +0.6
baz=74,SNR=8.7
K09A **Rome** 73.79 49 ⇓P P 09 48 28.2 +0.3
baz=74
G12A **Big Creek, Yel** 73.81 46 ⇑P P 09 48 27.2 -0.7
baz=74
B16A **M & M Farms, S** 73.87 41 ⇓P P 09 48 28.2 0.0
baz=74
F13A **Darby** 73.99 45 ⇑P P 09 48 28.1 -0.9
baz=74
A17A **Triple J Farms** 74.08 40 ⇑P P 09 48 29.0 -0.4
baz=74
E14A **Clinton** 74.09 44 ⇓P P 09 48 29.3 -0.2
baz=74
M08A **Happy Creek Ra** 74.10 50 ⇓P P 09 48 29.7 +0.1
baz=74
LAVA **Lava Cap Winer** 74.12 53 ⇑P P 09 48 29.8 -0.1
baz=74
L09A **Wilkinson Ranc** 74.21 49 ⇓P P 09 48 30.4 +0.1
baz=74
C16A **Fuhringer Ranc** 74.22 42 ⇓P P 09 48 30.4 +0.1
baz=74
K10A **MacKenzie Ranc** 74.26 48 ⇑P P 09 48 30.9 +0.3
baz=74
AKASG **Malin Array Be** 74.30 322 P P 09 48 30.1 -0.6
comp=Z,14nm,0.6s,mb5.0,baz=46,slow=5.8,SNR=57
AKASG LR LR 10 26 46.2
comp=Z,89nm,18.7s,MS4.1,baz=315,slow=40
AKBB **Malin Array Si** 74.30 322 eP P 09 48 29.7 -0.9
KIEV **Kiev** 74.31 322 eP P 09 48 29.4 -1.3
comp=Z,21nm,0.8s,mb5.1
KIEV **Kiev** 74.31 322 eP P 09 48 29.4 -1.3
KIEV pmax pmax
comp=Z,21nm,0.8s,mb5.1
NB2 **NORSAR Subarra** 74.41 337 P P 09 48 30.9 -0.2
comp=Z,25nm,0.8s,mb5.2,baz=40,slow=6.2
NOA **NORSAR Array B** 74.41 337 P P 09 48 30.9 -0.2
comp=Z,19nm,0.7s,mb5.1,baz=39,slow=5.8,SNR=10
NOA pP pP 09 48 44.5 -1.3
comp=Z,3.0nm,0.8s,baz=39,slow=5.7,SNR=3.1
H12A **Diamond D Ranc** 74.42 46 ⇓P P 09 48 31.2 -0.3
baz=74,SNR=8.0
B17A **L&G Farms, Che** 74.42 41 ⇓P P 09 48 31.6 +0.2
baz=74
G13A **Cobalt** 74.45 45 ⇓P P 09 48 31.0 -0.7
baz=74,SNR=5.3
MFID **Camas Ranch** 74.51 47 ⇑P P 09 48 31.8 -0.2
baz=74
F14A **Wisdom** 74.52 44 ⇓P P 09 48 32.0 0.0
baz=74
O07A **Toulon** 74.52 51 ⇑P P 09 48 32.4 +0.3
baz=74
A18A **Metzger Ranch,** 74.54 40 ⇓P P 09 48 31.8 -0.3
baz=74,SNR=6.4
FFC **Flin Flon** 74.54 32 eP P 09 48 31.4 -0.5
comp=Z,11nm,0.9s,mb4.8
FFC **Flin Flon** 74.54 32 eP P 09 48 31.5 -0.5
FFC pmax pmax
comp=Z,11nm,0.9s,mb4.8
E15A **Deer Lodge** 74.56 43 ⇑P P 09 48 32.2 -0.1
baz=74,SNR=7.4
N08A **GE Springer Mi** 74.63 51 ⇑P P 09 48 32.2 -0.5
baz=74
H13A **Challis** 74.75 46 ⇓P P 09 48 33.4 0.0
baz=74,SNR=8.8
K11A **Paer Ranch,** 74.76 48 ⇓P P 09 48 33.4 -0.1
baz=74
D16A **Dana Ranch, Ca** 74.79 42 ⇑P P 09 48 33.7 +0.1
baz=74
G14A **Jackson** 74.81 45 ⇑P P 09 48 33.7 0.0
baz=75
HRY **Holter Researc** 74.83 43 eP P 09 48 34.1 +0.3
O08A **Rochester Mine** 74.90 51 ⇓P P 09 48 34.7 +0.3
baz=75
B18A **Beardsley Farm** 74.90 41 ⇓P P 09 48 34.1 -0.1
baz=75
L10A **Juniper Basin** 74.90 49 ⇓P P 09 48 34.6 +0.2
baz=75
F15A **Butte** 74.99 44 ⇓P P 09 48 35.0 +0.2
baz=75
E16A **East Helena** 75.02 43 ⇑P P 09 48 35.2 +0.2
baz=75
LRM **Limekiln Ridge** 75.03 44 eP P 09 48 35.2 +0.3
J12A **Stokes Ranch,** 75.04 47 ⇑P P 09 48 35.3 +0.3
baz=75
EGMT **Eagleton** 75.14 41 eP P 09 48 35.7 +0.1
comp=Z,9.5nm,0.8s,mb4.8
EGMT **Eagleton** 75.14 41 ⇓P P 09 48 35.5 -0.1
baz=75
D17A **Six Diamond Ra** 75.18 42 ⇓P P 09 48 36.2 +0.3
baz=75
M10A **I.L. Ranch, Tu** 75.19 49 ⇑P P 09 48 36.7 +0.7
baz=75,SNR=5.9
I13A **Wildhorse Cree** 75.22 46 ⇑P P 09 48 36.8 +0.7
baz=75
DLMT **Dillon** 75.22 44 eP P 09 48 36.7 +0.6
comp=Z,9.8nm,0.6s,mb4.9
L11A **Cat Creek Ranc** 75.28 48 ⇑P P 09 48 37.3 +0.8
baz=75,SNR=5.5
MIB **Mutribah** 75.30 296 eP P 09 48 36.2 -0.6
baz=296
MIB AMb AMB 09 48 37.3
comp=Z,30nm,1.0s,mb5.2,baz=296
G15A **Dillon** 75.40 44 ⇑P P 09 48 37.3 +0.2
baz=75
QRN **Al-Qurain** 75.47 295 eP P 09 48 37.4 -0.4
baz=295
J13A **Cove Ranch, Pi** 75.49 47 ⇓P P 09 48 38.4 +0.7
baz=75
E17A **Martinsdale** 75.52 43 ⇑P P 09 48 38.2 +0.5
baz=75,SNR=6.6
K12A **Draper Farm, C** 75.52 48 ⇑P P 09 48 38.0 +0.1
baz=75
O09A **Fish Creek Ran** 75.57 51 ⇑P P 09 48 38.0 -0.2
baz=75,SNR=5.8
BOZ **Bozeman (W)** 75.59 44 eP P 09 48 38.1 -0.1
comp=Z,4.9nm,0.8s,mb4.5
BOZ **Bozeman (W)** 75.59 44 ⇑P P 09 48 38.6 +0.4
baz=75
BOZ **Bozeman (W)** 75.59 44 eP P 09 48 38.1 -0.1
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
I14A **Mackay** 75.60 46 ⇓P P 09 48 38.8 +0.5
baz=75
D18A **Linhart Farms,** 75.63 42 ⇑P P 09 48 39.0 +0.6
baz=75
RDF **Al-Radifah** 75.64 295 eP P 09 48 38.3 -0.5
baz=295
RDF AMb AMB 09 48 39.5
comp=Z,73nm,0.9s,mb5.6,baz=295
H15A **Lima** 75.64 45 ⇓P P 09 48 38.4 -0.1
baz=75
NAY **Al-Naaiem** 75.68 296 eP P 09 48 38.4 -0.6
baz=296
NAY AMb AMB 09 48 39.5
comp=Z,31nm,1.2s,mb5.1,baz=296
M11A **Holland Ranch,** 75.69 49 ⇑P P 09 48 39.7 +0.8
baz=76,SNR=5.9
L12A **House Creek Ra** 75.74 48 ⇓P P 09 48 39.3 +0.2
baz=76
G16A **Moss Hill, Enn** 75.75 44 ⇓P P 09 48 39.2 +0.1
baz=76
T06C **Millerton Lake** 75.78 54 ⇓P P 09 48 39.2 -0.3
baz=76
Q08A **Gabbs** 75.86 52 ⇑P P 09 48 39.7 -0.2
baz=76
NVAR **Mina Array Bea** 75.88 53 P P 09 48 39.8 -0.2
comp=Z,3.1nm,0.7s,mb4.4,baz=290,slow=5.4,SNR=23
NVAR pP pP 09 48 54.1 -0.6
comp=Z,2.5nm,0.7s,baz=286,slow=5.3,SNR=8.3
J14A **Carey** 75.92 46 ⇓P P 09 48 41.2 +1.1
baz=76
O10A **Cortez Mining,** 75.93 50 ⇑P P 09 48 40.8 +0.5
baz=76
E18A **Harlowton** 75.96 42 ⇓P P 09 48 41.1 +0.8
baz=76
F17A **Fitzpatrick Pl** 75.97 43 ⇑P P 09 48 40.7 +0.4
baz=76
K13A **Stover Farm, H** 75.99 47 ⇑P P 09 48 41.1 +0.5
baz=76
N11A **Elko Archery C** 76.09 49 ⇓P P 09 48 41.7 +0.6
baz=76
M12A **Wells** 76.23 49 ⇓P P 09 48 42.8 +0.9
baz=76,SNR=6.5
G17A **Pierce Place,** 76.28 43 ⇓P P 09 48 43.1 +0.9
baz=76
P10A **Eureka** 76.34 51 ⇓P P 09 48 42.9 +0.3
baz=76
H16A **Russell Place,** 76.38 44 ⇓P P 09 48 42.7 0.0
baz=76
L13A **Double Diamond** 76.41 48 ⇑P P 09 48 44.0 +1.0
baz=76
F18A **Big Timber** 76.48 43 ⇓P P 09 48 43.8 +0.5
baz=76
N12A **Clover Valley,** 76.49 49 ⇓P P 09 48 44.0 +0.5
baz=76
J15A **Blackfoot** 76.50 46 ⇓P P 09 48 44.5 +1.1
baz=76
O11A **Cowboy Ranch,** 76.54 50 ⇑P P 09 48 43.6 -0.1
baz=76
K14A **Jones Ranch, D** 76.59 47 ⇑P P 09 48 44.0 +0.1
baz=76
M13A **Montello** 76.72 48 ⇓P P 09 48 45.2 +0.5
baz=76,SNR=5.0
I16A **Newdale** 76.76 45 ⇑P P 09 48 46.0 +1.1
baz=76,SNR=16
R09A **Tonopah** 76.77 52 ⇑P P 09 48 45.1 0.0
baz=76,SNR=5.0
Q10A **Clear Creek Ra** 76.85 51 ⇓P P 09 48 45.3 -0.2
baz=77
H17A **Grant Village** 76.95 44 ⇓P P 09 48 48.0 +2.0
baz=77,SNR=6.1
S09A **Goldfield** 76.98 53 ⇓P P 09 48 46.3 +0.1
baz=77
O12A **Currie** 77.02 49 ⇑P P 09 48 46.8 +0.3
baz=77,SNR=12
IMW **Indian Meadow** 77.05 45 eP P 09 48 47.8 +1.3
comp=Z,4.9nm,0.8s,mb4.5
J16A **Bone** 77.06 46 ⇓P P 09 48 47.5 +1.0
baz=77
M14A **Sheep Mountain** 77.12 48 ⇓P P 09 48 47.6 +0.6
baz=77
RRI2 **Red Ridge** 77.18 45 eP P 09 48 47.9 +0.6
comp=Z,8.1nm,1.2s,mb4.5
RLMT **Red Lodge** 77.22 43 eP P 09 48 48.1 +0.7
comp=Z,106nm,2.9s,mb5.3
RLMT **Red Lodge** 77.22 43 ⇑P P 09 48 47.9 +0.4
baz=77
R10A **Warm Springs** 77.23 52 ⇑P P 09 48 47.6 -0.1
baz=77
I17A **Pilgram Creek** 77.25 45 ⇓P P 09 48 49.5 +1.8
baz=77
S10A **Tonopah Range,** 77.26 52 ⇑P P 09 48 47.5 -0.3
baz=77
HVU **Hansel Valley** 77.29 47 eP P 09 48 48.2 +0.3
comp=Z,7.4nm,0.9s,mb4.6
HVU **Hansel Valley** 77.29 47 eP P 09 48 48.3 +0.4
HVU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TPAW **Teton Pass** 77.30 45 eP P 09 48 48.5 +0.6
comp=Z,3.6nm,0.8s,mb4.3
Q11A **Duckwater** 77.31 51 ⇑P P 09 48 47.8 -0.3
baz=77
GRAC **Grapevine Rang** 77.31 53 ⇑P P 09 48 48.3 +0.2
baz=77
K16A **Soda Springs** 77.34 46 ⇑P P 09 48 49.7 +1.5
baz=77
L15A **Malad City** 77.39 47 ⇑P P 09 48 48.8 +0.3
baz=77
P12A **McGill** 77.40 50 ⇑P P 09 48 48.9 +0.3
baz=77
LVV **L'vov** 77.40 324 eP P 09 48 48.6 +0.2
O13A **Hicks Ranch, I** 77.57 49 ⇑P P 09 48 50.3 +0.8
baz=77
N14A **Grayback Hills** 77.61 48 ⇑P P 09 48 50.1 +0.3
baz=77
R11A **Troy Canyon, C** 77.65 51 ⇑P P 09 48 50.0 0.0
baz=77,SNR=6.3
Q12A **Willow Creek R** 77.71 50 ⇑P P 09 48 50.4 +0.1
baz=78
MPMC **Manual Prospec** 77.79 54 ⇑P P 09 48 50.3 -0.5
baz=78
I18A **Diamond G Ranc** 77.81 44 ⇑P P 09 48 51.7 +0.9
baz=78
FURC **Furnace Creek,** 77.95 54 ⇓P P 09 48 51.6 -0.1
baz=78
P13A **Bates Ranch, G** 77.96 50 ⇑P P 09 48 51.9 +0.2
baz=78
N15A **Stansbury Isla** 77.99 48 ⇑P P 09 48 52.6 +0.8
baz=78
J18A **Kendall Valley** 78.00 45 ⇓P P 09 48 52.8 +0.9
baz=78
TPNV **Topopah Spring** 78.06 53 eP P 09 48 51.9 -0.4
comp=Z,77nm,2.7s,mb5.2
TPNV **Topopah Spring** 78.06 53 ⇑P P 09 48 51.8 -0.5
baz=78
TPNV **Topopah Spring** 78.06 53 eP P 09 48 51.9 -0.4
TPNV pmax pmax
comp=Z,77nm,2.7s,mb5.2
EDW2 **Edwards Air Fo** 78.15 55 ⇑P P 09 48 52.8 0.0
baz=78
L17A **Cokeville** 78.21 46 ⇑P P 09 48 53.1 +0.1
baz=78
DUG **Dugway** 78.24 49 ⇑P P 09 48 53.4 +0.1
baz=78
M16A **Huntsville** 78.26 47 ⇑P P 09 48 53.7 +0.4
baz=78
Q13A **Wheeler Ranch,** 78.26 50 ⇑P P 09 48 53.6 +0.2
baz=78,SNR=6.1
R12A **Pony Springs,** 78.28 51 ⇓P P 09 48 53.6 +0.1
baz=78
BUR08 **Bucovina Ar. S** 78.29 321 eP P 09 48 53.4 +0.1
BURAR **Bucovina Array** 78.30 321 ⇑P P 09 48 53.6 +0.2
BURAR **Bucovina Array** 78.30 321 ⇑iP P 09 48 53.6 +0.2
K18A **Toltan Ranch,** 78.35 45 ⇓P P 09 48 54.8 +1.0
baz=78
P14A **Drum Mountains** 78.46 49 ⇓P P 09 48 54.6 +0.2
baz=78,SNR=5.6
T11A **Corn Creek, Al** 78.55 52 ⇓P P 09 48 54.9 0.0
baz=78,SNR=5.8
BW06 **Boulder Array** 78.55 45 eP P 09 48 54.5 -0.4
comp=Z,5.1nm,2.8s,mb5.0
BW06 **Boulder Array** 78.55 45 ⇑P P 09 48 54.8 -0.1
baz=78
PDAR **Pinedale Array** 78.55 45 P P 09 48 54.5 -0.4
comp=Z,2.8nm,0.6s,mb4.4,baz=258,slow=2.1,SNR=31
PDAR pP pP 09 49 08.7 -0.9
comp=Z,2.3nm,0.9s,baz=304,slow=2.1,SNR=6.3
S12A **Delamar Landin** 78.56 52 ⇓P P 09 48 55.0 -0.1
baz=78
SHOC **Shoshone** 78.67 54 ⇑P P 09 48 55.4 -0.3
baz=78
BRTR **Keskin Array B** 78.68 311 P P 09 48 56.1 +0.4
comp=Z,6.4nm,1.0s,mb4.5,baz=79,slow=3.2,SNR=20
VRI **Vrincioaia** 78.68 319 ⇓P P 09 48 56.8 +1.2
VRI **Vrincioaia** 78.68 319 ⇓iP P 09 48 56.8 +1.2
Q14A **Sevier Lake (B** 78.70 50 ⇑P P 09 48 56.2 +0.4
baz=78,SNR=9.2
M17A **Scullys Gap (B** 78.72 47 ⇑P P 09 48 55.8 -0.1
baz=78
L18A **Fontenelle, Gr** 78.81 46 ⇑P P 09 48 57.0 +0.7

	baz=79							
JLU	**Jordanelle**	**78.81**	**48**	*e*P		**P**	**09 48 57.2**	**+0.9**
KOLS	**Kolonicke sedl**	**78.85**	**324**	*e*P		**P**	**09 48 56.2**	**-0.2**
	comp=Z,8.2nm,1.1s,mb4.6							
KOLS	**Kolonicke sedl**	**78.85**	**324**	*e*P		**P**	**09 48 56.2**	**-0.2**
KOLS				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
P15A	**Leamington**	**78.95**	**49**	⇓P		**P**	**09 48 57.3**	**+0.2**
	baz=79							
N17A	**Moffit Pass**	**78.96**	**47**	⇓P		**P**	**09 48 56.7**	**-0.5**
	baz=79							
STHS	**Stebnicka Huta**	**79.00**	**325**	*e*P		**P**	**09 48 57.4**	**+0.2**
	comp=Z,7.7nm,0.8s,mb4.7							
STHS				*e*			09 49 18.0	
STHS	**Stebnicka Huta**	**79.00**	**325**	*e*P		**P**	**09 48 57.4**	**+0.2**
STHS				*e*			09 49 18.0	
STHS				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7							
O16A	**Springville**	**79.02**	**48**	⇓P		**P**	**09 48 58.1**	**+0.6**
	baz=79,SNR=5.2							
MPU	**Maple Canyon**	**79.06**	**48**	*e*P		**P**	**09 48 57.4**	**-0.4**
	comp=Z,6.1nm,0.7s,mb4.6							
MPU				*e*pP		pP	09 49 12.9	+0.4
L19A	**Farson**	**79.08**	**45**	⇓P		**P**	**09 48 58.0**	**+0.2**
	baz=79							
OJC	**Ojcow**	**79.10**	**326**	*e*P		**P**	**09 48 57.4**	**-0.3**
S13A	**Holt Ranch, En**	**79.20**	**51**	⇑P		**P**	**09 48 58.8**	**+0.2**
	baz=79							
Q15A	**Fillmore**	**79.24**	**49**	⇑P		**P**	**09 48 59.1**	**+0.3**
	baz=79							
CRVS	**Cervenica-Dubn**	**79.25**	**324**	*e*P		**P**	**09 48 58.9**	**+0.3**
	comp=Z,5.0nm,0.9s,mb4.4							
CRVS	**Cervenica-Dubn**	**79.25**	**324**	*e*P		**P**	**09 48 58.9**	**+0.3**
CRVS				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
TRPA	**Tarpa**	**79.27**	**323**	⇓*i*P		**P**	**09 48 59.3**	**+0.6**
HEC	**Hector,Ludlow**	**79.28**	**55**	⇓P		**P**	**09 48 58.7**	**-0.3**
	baz=79							
R14A	**James Farms, M**	**79.28**	**50**	⇓P		**P**	**09 48 58.6**	**-0.4**
	baz=79							
MLR	**Muntele Rosu**	**79.34**	**319**	P		**P**	**09 48 58.7**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.4,baz=310,slow=22,SNR=3.7							
MLR	**Muntele Rosu**	**79.34**	**319**	⇓P		**P**	**09 49 00.5**	**+1.4**
MLR	**Muntele Rosu**	**79.34**	**319**	P		**P**	**09 48 58.7**	**-0.5**
MLR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
MLR	**Muntele Rosu**	**79.34**	**319**	⇓*i*P		**P**	**09 49 00.5**	**+1.3**
NIE	**Niedzica**	**79.43**	**325**	*e*P		**P**	**09 49 00.6**	**+1.0**
O17A	**Robinson Place**	**79.49**	**48**	⇑P		**P**	**09 49 00.7**	**+0.6**
	baz=79							
T13A	**Saint George**	**79.51**	**52**	⇓P		**P**	**09 49 00.6**	**+0.3**
	baz=79,SNR=6.0							
N18A	**Larsen Ranch,**	**79.62**	**46**	⇓P		**P**	**09 49 00.7**	**-0.1**
	baz=79							
V12A	**Nelson**	**79.70**	**53**	⇓P		**P**	**09 49 00.5**	**-0.8**
	baz=80							
GMRC	**Granite Mounta**	**79.75**	**54**	⇓P		**P**	**09 49 00.6**	**-1.0**
	baz=80							
R15A	**Junction**	**79.80**	**50**	⇑P		**P**	**09 49 02.3**	**+0.5**
	baz=80							
U13A	**Pakoon Wash**	**79.85**	**52**	⇓P		**P**	**09 49 02.3**	**+0.2**
	baz=80,SNR=5.9							
O18A	**Roosevelt**	**79.87**	**47**	⇑P		**P**	**09 49 03.2**	**+1.1**
	baz=80							
PFO	**Pinyon Flat Ob**	**79.93**	**56**	⇑P		**P**	**09 49 02.1**	**-0.5**
	baz=80							
P17A	**Butcher Ranch,**	**79.94**	**48**	⇑P		**P**	**09 49 03.0**	**+0.4**
	baz=80							
Q16A	**Castle Valley**	**80.03**	**49**	⇑P		**P**	**09 49 03.2**	**+0.2**
	baz=80							
P18A	**Preston Nutter**	**80.14**	**48**	⇑P		**P**	**09 49 04.7**	**+1.1**
	baz=80							
M20A	**Sweetwater, Wa**	**80.15**	**45**	⇓P		**P**	**09 49 04.0**	**+0.4**
	baz=80							
KSP	**Ksiaz**	**80.19**	**328**	*e*P		**P**	**09 49 03.8**	**+0.1**
BSEG	**Bad Segeberg**	**80.22**	**333**	*e*P		**P**	**09 49 04.0**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9							
R16A	**Teasdale**	**80.24**	**49**	⇓P		**P**	**09 49 05.3**	**+1.2**
	baz=80,SNR=6.9							
SRU	**San Rafael**	**80.30**	**48**	*e*P		**P**	**09 49 04.7**	**+0.2**
	comp=Z,6.8nm,0.7s,mb4.7							
SRU	**San Rafael**	**80.30**	**48**	⇑P		**P**	**09 49 04.7**	**+0.2**
	baz=80							
SRU	**San Rafael**	**80.30**	**48**	*e*P		**P**	**09 49 04.7**	**+0.2**
SRU				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.7							
L21A	**Rawlins**	**80.31**	**45**	⇓P		**P**	**09 49 04.4**	**0.0**
	baz=80							
ULM	**Lac du Bonnet**	**80.34**	**33**	P		**P**	**09 49 03.1**	**-1.4**
	comp=Z,4.2nm,0.7s,mb4.5,baz=332,slow=4.6,SNR=3.2							
U14A	**Mt Trumbull**	**80.34**	**52**	⇑P		**P**	**09 49 04.9**	**+0.1**
	baz=80							
IRM	**Iron Mountain**	**80.46**	**55**	⇓P		**P**	**09 49 05.3**	**-0.1**
	baz=80							
T15A	**Red Dirt Ranch**	**80.47**	**51**	⇑P		**P**	**09 49 05.5**	**+0.1**
	baz=80							
S16A	**Weppner Ranch,**	**80.52**	**50**	⇑P		**P**	**09 49 05.8**	**+0.1**
	baz=80							
N20A	**Spence Gulch,**	**80.53**	**46**	⇑P		**P**	**09 49 06.2**	**+0.5**
	baz=80							
Q18A	**Rafter H Ranch**	**80.54**	**48**	⇓P		**P**	**09 49 05.7**	**-0.1**
	baz=80							
DPC	**Dobruska-Polom**	**80.54**	**328**	*e*P		**P**	**09 49 05.9**	**+0.3**
M21A	**Separation Pea**	**80.54**	**45**	⇓P		**P**	**09 49 05.4**	**-0.3**
	baz=80							
UPC	**Upice**	**80.56**	**328**	*e*P		**P**	**09 49 05.9**	**+0.3**
BC3	**Big Chuckw Mtn**	**80.57**	**55**	⇑P		**P**	**09 49 05.6**	**-0.4**
	baz=80							
R17A	**Hanksville Air**	**80.62**	**49**	⇑P		**P**	**09 49 06.3**	**+0.1**
	baz=80,SNR=5.9							
PSZ	**Piszkesteto**	**80.69**	**324**	⇓P		**P**	**09 49 07.2**	**+0.8**
PSZ	**Piszkesteto**	**80.69**	**324**	⇓*i*P		**P**	**09 49 07.2**	**+0.8**
DVTC	**Desert V Tower**	**80.74**	**56**	⇓P		**P**	**09 49 06.8**	**-0.2**
	baz=80							
VYHS	**Vyhne**	**80.77**	**325**	*e*P		**P**	**09 49 06.8**	**0.0**
	comp=Z,5.3nm,1.1s,mb4.4							
VYHS	**Vyhne**	**80.77**	**325**	*e*P		**P**	**09 49 06.8**	**0.0**
VYHS				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4							
V14A	**Boquillas Ranc**	**80.88**	**52**	⇓P		**P**	**09 49 07.3**	**-0.4**
	baz=81							
P19A	**Cripple Cowboy**	**80.88**	**47**	⇑P		**P**	**09 49 07.9**	**+0.3**
	baz=81,SNR=6.1							
U15A	**North Rim**	**80.90**	**51**	⇑P		**P**	**09 49 07.7**	**0.0**
	baz=81							
O20A	**White River Ci**	**80.99**	**46**	⇑P		**P**	**09 49 08.2**	**+0.1**
	baz=81							
N21A	**Black Mountain**	**81.00**	**46**	⇓P		**P**	**09 49 08.6**	**+0.4**
	baz=81							
PDMCI	**Parker Dam,Lak**	**81.03**	**54**	⇑P		**P**	**09 49 08.4**	**-0.1**
	baz=81							
GZR	**Gura Zlata**	**81.05**	**321**	⇓P		**P**	**09 49 08.5**	**+0.1**
GZR	**Gura Zlata**	**81.05**	**321**	⇓*i*P		**P**	**09 49 08.5**	**+0.1**
X13A	**Yucca**	**81.05**	**54**	⇑P		**P**	**09 49 07.7**	**-0.9**
	baz=81							
S17A	**Black Ridge (B**	**81.06**	**50**	⇑P		**P**	**09 49 08.5**	**-0.1**
	baz=81							
M22A	**Cedar Creek Ra**	**81.11**	**45**	⇓P		**P**	**09 49 08.7**	**-0.1**
	baz=81							
Y12C	**Blythe**	**81.12**	**55**	⇑P		**P**	**09 49 09.1**	**+0.1**
	baz=81							
R18A	**Canyonlands Na**	**81.14**	**49**	⇓P		**P**	**09 49 08.7**	**-0.3**
	baz=81,SNR=5.9							
W14A	**Seligman**	**81.15**	**53**	⇑P		**P**	**09 49 08.8**	**-0.3**
	baz=81							
Q19A	**Hogan Spring (**	**81.15**	**48**	⇑P		**P**	**09 49 08.7**	**-0.3**
	baz=81,SNR=5.1							
PVCC	**Panska Ves**	**81.16**	**328**	*e*P		**P**	**09 49 09.0**	**+0.2**
BRG	**Berggiesshubel**	**81.16**	**329**	*e*P		**P**	**09 49 08.6**	**-0.2**
	comp=Z,9.0nm,0.9s,mb4.7							
VRAC	**Vranov**	**81.19**	**327**	⇓P		**P**	**09 49 09.6**	**+0.6**
VRAC	**Vranov**	**81.19**	**327**	⇓*i*P		**P**	**09 49 09.6**	**+0.6**
CLL	**Collm**	**81.22**	**330**	⇑*i*P		**P**	**09 49 08.7**	**-0.4**
CLL				*i*		pP	09 49 28.0	+4.1
CLL				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0							
CLL	**Collm**	**81.22**	**330**	*e*P		**P**	**09 49 08.7**	**-0.4**
	comp=Z,20nm,1.0s,mb5.0							
CLL	**Collm**	**81.22**	**330**	⇑*i*P		**P**	**09 49 08.7**	**-0.4**
	comp=Z,20nm,1.0s,mb5.0							
CLL				*i* (sP)		sP	09 49 28.0	-1.7
ASF	**Jabal al Asfar**	**81.22**	**303**	P		**P**	**09 49 10.2**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.3,baz=254,slow=11,SNR=4.8							
V15A	**Kaibab Nationa**	**81.35**	**52**	⇓P		**P**	**09 49 10.5**	**+0.3**
	baz=81							
NRDL	**Niedersach Rie**	**81.43**	**332**	*e*P		**P**	**09 49 09.7**	**-0.6**
	comp=Z,68nm,2.2s,mb5.2							
T17A	**Navajo Res., N**	**81.47**	**50**	⇑P		**P**	**09 49 11.1**	**+0.3**
	baz=81							
S18A	**Hurst Farm, Bl**	**81.52**	**49**	⇑P		**P**	**09 49 11.0**	**0.0**
	baz=81,SNR=5.3							
Y13A	**Salome**	**81.54**	**54**	⇓P		**P**	**09 49 11.1**	**-0.1**
	baz=81							
MODS	**Modra-Piesok**	**81.57**	**326**	*e*P		**P**	**09 49 09.5**	**-1.6**
	comp=Z,3.8nm,1.1s,mb4.2							
MODS	**Modra-Piesok**	**81.57**	**326**	*e*P		**P**	**09 49 09.5**	**-1.6**
MODS				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3							
PRU	**Pruhonice**	**81.58**	**328**	*e*P		**P**	**09 49 11.2**	**+0.1**
R19A	**Curley Farm, L**	**81.58**	**48**	⇑P		**P**	**09 49 11.9**	**+0.6**
	baz=81							
W15A	**Williams**	**81.69**	**52**	⇓P		**P**	**09 49 12.4**	**+0.4**
	baz=82							
X14A	**Yava**	**81.74**	**53**	⇑P		**P**	**09 49 12.6**	**+0.3**
	baz=82							
U16A	**Tuba City**	**81.81**	**51**	⇑P		**P**	**09 49 13.3**	**+0.7**
	baz=82,SNR=5.7							
CLZ	**Clausthal**	**81.84**	**331**	*e*P		**P**	**09 49 12.5**	**+0.1**
CLZ				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9							
CLZ	**Clausthal**	**81.84**	**331**	*e*P		**P**	**09 49 12.5**	**+0.1**
	comp=Z,16nm,1.0s,mb4.9							
T18A	**Mexican Hat**	**81.95**	**50**	⇑P		**P**	**09 49 12.9**	**-0.4**
	baz=82							
Y14A	**Wickenburg**	**82.00**	**54**	⇑P		**P**	**09 49 13.4**	**-0.2**
	baz=82							
S19A	**Harvey Farm, M**	**82.01**	**49**	⇓P		**P**	**09 49 13.7**	**+0.1**
	baz=82,SNR=6.7							
WUAZ	**Wupatki**	**82.05**	**52**	*e*P		**P**	**09 49 13.9**	**+0.1**
WUAZ	**Wupatki**	**82.05**	**52**	⇑P		**P**	**09 49 14.2**	**+0.4**
	baz=82							
X15A	**Humboldt**	**82.15**	**53**	⇑P		**P**	**09 49 14.2**	**-0.2**
	baz=82							
NKC	**Novy Kostel**	**82.27**	**329**	*e*P		**P**	**09 49 14.9**	**+0.2**
MOX	**Moxa**	**82.29**	**330**	*e*P		**P**	**09 49 14.5**	**-0.3**
	comp=Z,16nm,1.1s,mb4.9							
MOX	**Moxa**	**82.29**	**330**	*e*P		**P**	**09 49 14.5**	**-0.3**
MOX				pmax	pmax			
	comp=Z,16nm,1.1s,mb4.9							
U18A	**Rough Rock, Ch**	**82.41**	**50**	⇑P		**P**	**09 49 16.1**	**+0.4**
	baz=82,SNR=6.1							
Y15A	**Casa Rosa Ranc**	**82.42**	**53**	⇑P		**P**	**09 49 15.5**	**-0.3**
	baz=82							
IBBN	**Ibbenburen**	**82.46**	**333**	*e*P		**P**	**09 49 15.4**	**-0.2**
	comp=Z,29nm,0.6s,mb5.4							
PKSM	**Moragy**	**82.51**	**324**	⇓P		**P**	**09 49 14.8**	**-1.3**
PKSM	**Moragy**	**82.51**	**324**	⇓*i*P		**P**	**09 49 14.8**	**-1.2**
CONA	**Conrad Observa**	**82.54**	**326**	⇑*i*PcP		**P**	**09 49 16.8**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.6							
CSNA	**Conrad Observa**	**82.54**	**326**	⇑*i*P		**P**	**09 49 16.7**	**+0.6**
	comp=Z,10nm,1.3s,mb4.7							
R21A	**Cimarron**	**82.55**	**47**	⇓P		**P**	**09 49 17.0**	**+0.6**
	baz=82							
MANZ	**Manzenberg**	**82.60**	**329**	*e*P		**P**	**09 49 16.2**	**-0.2**
	comp=Z,9.0nm,0.9s,mb4.8							
KHC	**Kasperske Hory**	**82.64**	**328**	*e*P		**P**	**09 49 16.5**	**-0.1**
KHC				*ex*		x	09 49 35.5	
T19A	**Beclabito**	**82.67**	**49**	⇑P		**P**	**09 49 17.5**	**+0.4**
	baz=82							
X16A	**Lo Mia Camp, P**	**82.70**	**52**	⇓P		**P**	**09 49 17.5**	**+0.2**
	baz=82							
ROTZ	**Rotzenmuhle**	**82.72**	**329**	*e*P		**P**	**09 49 17.3**	**+0.2**
	comp=Z,22nm,1.5s,mb5.0							
ISCO	**Idaho Springs**	**82.73**	**45**	*e*P		**P**	**09 49 17.4**	**+0.1**
MVCO	**Mesa Verde**	**82.74**	**49**	⇓P		**P**	**09 49 17.4**	**0.0**
	baz=82							
GEC2	**GERESS Array S**	**82.80**	**328**	*e*P		**P**	**09 49 17.2**	**-0.3**
GEC2				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.7							
GEC2	**GERESS Array S**	**82.80**	**328**	*e*P		**P**	**09 49 17.2**	**-0.3**
	comp=Z,10.0nm,1.3s,mb4.7							
GERES	**GERESS Array B**	**82.80**	**328**	P		**P**	**09 49 17.0**	**-0.5**
	comp=Z,3.3nm,0.5s,mb4.6,baz=37,slow=5.9,SNR=24							
V18A	**Ganado**	**82.83**	**51**	⇓P		**P**	**09 49 17.8**	**-0.1**
	baz=83							
WET	**Wettzell**	**82.92**	**328**	*e*P		**P**	**09 49 18.2**	**+0.1**
WET				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7							
WET	**Wettzell**	**82.92**	**328**	*e*P		**P**	**09 49 18.2**	**+0.1**
	comp=Z,8.0nm,1.0s,mb4.7							
GRA1	**Grafenberg Arr**	**83.19**	**330**	*e*P		**P**	**09 49 19.5**	**0.0**
	comp=Z,25nm,0.9s,mb5.2							
GRF	**Grafenberg Arr**	**83.19**	**330**	*e*P		**P**	**09 49 19.5**	**0.0**
GRF				pmax	pmax			
	comp=Z,25nm,0.9s,mb5.2							
GRF	**Grafenberg Arr**	**83.19**	**330**	*e*P		**P**	**09 49 19.5**	**0.0**
GRF				pmax	pmax			
	comp=Z,25nm,0.9s,mb5.2							
GRF	**Grafenberg Arr**	**83.19**	**330**	*e*P		**P**	**09 49 19.5**	**0.0**
	comp=Z,25nm,0.9s,mb5.2							
MOA	**Molln**	**83.31**	**327**	⇓*i*PcP		**P**	**09 49 21.6**	**+1.5**
	comp=Z,9.3nm,1.4s,mb4.6							
Y17A	**Roosevelt**	**83.54**	**53**	⇓P		**P**	**09 49 21.2**	**-0.4**
	baz=83							
W19A	**Sanders**	**83.55**	**51**	⇓P		**P**	**09 49 21.8**	**+0.1**
	baz=83							
PERS	**Pernice**	**83.84**	**326**	*i* P		**P**	**09 49 22.7**	**-0.2**
SOKA	**Soboth**	**83.85**	**326**	⇓*i*PcP		**P**	**09 49 23.2**	**+0.3**
	comp=Z,13nm,1.0s,mb5.0							
Y18A	**Canyon Day Jun**	**84.01**	**52**	⇓P		**P**	**09 49 24.5**	**+0.5**
	baz=84,SNR=5.4							
RJOB	**Jochberg**	**84.04**	**328**	*e*P		**P**	**09 49 23.9**	**0.0**
	comp=Z,11nm,1.0s,mb4.9							
X19A	**St. Johns**	**84.06**	**51**	⇓P		**P**	**09 49 24.9**	**+0.7**
	baz=84,SNR=7.9							
EIL	**Elat**	**84.08**	**303**	P		**P**	**09 49 24.6**	**+0.1**
	comp=Z,8.3nm,0.9s,mb4.8,baz=360,slow=5.5,SNR=5.5							
SDCO	**Great Sand Dun**	**84.17**	**47**	*e*P		**P**	**09 49 25.3**	**+0.6**
117A	**Oracle**	**84.33**	**53**	⇓P		**P**	**09 49 25.7**	**+0.1**
	baz=84							
Y19A	**Nutrioso**	**84.39**	**52**	⇓P		**P**	**09 49 26.6**	**+0.7**
	baz=84							
MEM	**Membach**	**84.48**	**333**	P		**P**	**09 49 25.7**	**-0.3**
VISS	**Visnje**	**84.60**	**325**	*i* P		**P**	**09 49 19.1**	**-7.7**
BOJS	**Bojanci**	**84.63**	**325**	*i* P		**P**	**09 49 26.6**	**-0.3**
STU	**Stuttgart**	**84.73**	**330**	*e*P		**P**	**09 49 27.2**	**-0.2**
	comp=Z,21nm,0.8s,mb5.3							
118A	**Homack Ranch,**	**84.78**	**53**	⇓P		**P**	**09 49 28.1**	**+0.2**
	baz=85							
217A	**Green Valley**	**84.79**	**54**	⇑P		**P**	**09 49 27.9**	**-0.1**
	baz=85							
JAVS	**Javornik**	**84.88**	**326**	*i* P		**P**	**09 49 27.0**	**-1.2**
BCLA	**Clavier**	**84.89**	**333**	P		**P**	**09 49 27.8**	**-0.3**
	comp=Z,23nm,2.9s,mb4.8							
UCC	**Uccle**	**84.92**	**334**	P		**P**	**09 49 27.9**	**-0.4**
PPT	**Papeete**	**85.02**	**116**	*e*LR		LR	10 15 57.3	
	comp=Z,197nm,30.5s,baz=308							
PPT	**Papeete**	**85.02**	**116**	LR		LR	10 26 02.2	
	comp=Z,127nm,19.0s,MS4.3,baz=285,slow=35							
119A	**Ashpeak Ranch,**	**85.13**	**53**	⇑P		**P**	**09 49 29.6**	**0.0**
	baz=85							
218A	**Dragoon**	**85.16**	**54**	⇓P		**P**	**09 49 30.0**	**+0.1**
	baz=85							
DOU	**Dourbes**	**85.41**	**333**	P		**P**	**09 49 30.2**	**-0.5**
	comp=Z,20nm,3.1s							
BFO	**Black Forest**	**85.43**	**330**	*e*P		**P**	**09 49 30.5**	**-0.4**
BFO				pmax	pmax			
	comp=Z,22nm,1.0s,mb5.2							
BFO	**Black Forest**	**85.43**	**330**	*e*P		**P**	**09 49 30.5**	**-0.4**
	comp=Z,22nm,1.0s,mb5.2							
ANMO	**Albuquerque**	**85.47**	**49**	⇑*i*P		**P**	**09 49 31.4**	**+0.1**
ANMO				pmax	pmax			
	comp=Z,3.0nm,1.0s							
318A	**Bisbee**	**85.54**	**54**	⇓P		**P**	**09 49 31.6**	**-0.1**
	baz=85							
BAIF	**Baives**	**85.58**	**333**	*e*P		**P**	**09 49 31.0**	**-0.6**
DAVA	**Damuels**	**85.63**	**329**	⇑*i*PcP		**P**	**09 49 31.5**	**-0.4**
	comp=Z,14nm,1.0s,mb5.1							
219A	**White Tail Can**	**85.65**	**53**	⇓P		**P**	**09 49 32.6**	**+0.3**
	baz=85							
CDF	**Champ du Feu**	**85.78**	**331**	⇑*i*P		**P**	**09 49 32.1**	**-0.5**
	comp=Z,28nm,0.9s,mb5.2							
CDF	**Champ du Feu**	**85.78**	**331**	⇑*i*P		**P**	**09 49 32.1**	**-0.5**
	comp=Z,14nm,0.9s,mb5.2							
CDF	**Champ du Feu**	**85.78**	**331**	⇑*i*P		**P**	**09 49 32.1**	**-0.5**
CDF				pmax	pmax			
	comp=Z,14nm,0.9s,mb5.2							
HINF	**Hinteralfeld**	**86.43**	**331**	*e*P		**P**	**09 49 34.8**	**-1.0**
	comp=Z,8.0nm,0.7s,mb4.8							
HINF	**Hinteralfeld**	**86.43**	**331**	*e*P		**P**	**09 49 34.8**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.8							
HINF	**Hinteralfeld**	**86.43**	**331**	*e*P		**P**	**09 49 34.8**	**-1.0**
HINF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.8							
HAU	**Haudompre**	**86.47**	**331**	*e*P		**P**	**09 49 35.1**	**-0.9**
	comp=Z,5.4nm,0.4s,mb4.8							
CABF	**La Chapelle**	**87.72**	**330**	*e*P		**P**	**09 49 41.8**	**-0.3**
AQU	**L'Aquila**	**87.89**	**324**	⇓P		**P**	**09 49 43.4**	**+0.4**
AQU	**L'Aquila**	**87.89**	**324**	⇓*i*P		**P**	**09 49 43.4**	**+0.4**
LOR	**Lormes**	**88.04**	**332**	*e*P		**P**	**09 49 42.9**	**-0.7**
LDF	**La Druitiere**	**88.34**	**335**	*e*P		**P**	**09 49 44.0**	**-1.0**
SSF	**Saint Saulge**	**88.34**	**332**	*e*P		**P**	**09 49 44.4**	**-0.6**
LPG	**La Plagne**	**88.36**	**329**	*e*P		**P**	**09 49 44.8**	**-0.3**
	comp=Z,8.2nm,0.7s,mb4.8							
LPG	**La Plagne**	**88.36**	**329**	*e*P		**P**	**09 49 44.8**	**-0.3**
	comp=Z,4.1nm,0.7s,mb4.8							
LPG	**La Plagne**	**88.36**	**329**	*e*P		**P**	**09 49 44.8**	**-0.3**
LPG				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.8							
SMF	**Signal de Mont**	**88.56**	**332**	*e*P		**P**	**09 49 45.7**	**-0.4**
AVF	**Avril sur Loir**	**88.62**	**332**	⇑*i*P		**P**	**09 49 46.0**	**-0.4**
	comp=Z,13nm,0.8s,mb5.0							
AVF	**Avril sur Loir**	**88.62**	**332**	⇑*i*P		**P**	**09 49 46.0**	**-0.4**
	comp=Z,6.3nm,0.8s,mb5.0							
AVF	**Avril sur Loir**	**88.62**	**332**	⇑*i*P		**P**	**09 49 46.0**	**-0.4**
AVF				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb5.0							
MBDF	**Montbardon**	**88.97**	**329**	*e*P		**P**	**09 49 46.9**	**-1.2**
	comp=Z,15nm,0.9s,mb5.0							
MBDF	**Montbardon**	**88.97**	**329**	*e*P		**P**	**09 49 46.9**	**-1.2**
	comp=Z,7.6nm,0.9s,mb5.0							
MBDF	**Montbardon**	**88.97**	**329**	*e*P		**P**	**09 49 46.9**	**-1.2**
MBDF				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0							
ORIF	**Oris-en-Rattie**	**89.19**	**330**	*e*P		**P**	**09 49 48.4**	**-0.7**
TCF	**Toul Ste Croi**	**89.47**	**333**	*e*P		**P**	**09 49 50.1**	**-0.3**
ROSF	**Rostrenen**	**89.60**	**337**	*e*P		**P**	**09 49 50.6**	**-0.3**
	comp=Z,44nm,1.0s,mb5.4							
ROSF	**Rostrenen**	**89.60**	**337**	*e*P		**P**	**09 49 50.6**	**-0.3**
	comp=Z,22nm,1.0s,mb5.4							
ROSF	**Rostrenen**	**89.60**	**337**	*e*P		**P**	**09 49 50.6**	**-0.3**
ROSF				pmax	pmax			
	comp=Z,22nm,1.0s,mb5.4							
MFF	**Saint Martin d**	**90.06**	**334**	*e*P		**P**	**09 49 52.8**	**-0.3**
CAF	**Calviac**	**90.68**	**332**	*e*P		**P**	**09 49 55.3**	**-0.7**
TXAR	**Lajitas Array**	**91.01**	**52**	P		**P**	**09 49 57.5**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.5,baz=300,slow=3.3,SNR=29							
TXAR				pP		pP	09 50 12.6	-0.3
	comp=Z,1.5nm,0.8s,baz=299,slow=2.9,SNR=7.2							
RKT	**Rikitea**	**99.20**	**112**	*e*LR		LR	10 23 02.7	
	comp=Z,287nm,37.5s							
TORD	**Torodi Ar. Bea**	**117.21**	**314**	PKP		PKPdf	09 55 37.8	-1.2
	comp=Z,1.0nm,0.6s,baz=54,slow=1.1,SNR=14							
TORD				PP		PP	09 56 43.1	-6.0
	comp=Z,1.4nm,1.1s,baz=35,slow=6.3,SNR=4.1							
DBIC	**Dimbokro**	**126.20**	**316**	PKP		PKPdf	09 55 55.2	-1.1
	comp=Z,7.1nm,1.2s,baz=251,slow=5.1,SNR=4.5							
VNA2	**Neumayer--Watz**	**141.60**	**196**	*e*PKPdf		PKPdf	09 56 16.4	-6.9
	baz=104,slow=2.3							
VNA2				*e*			09 56 22.9	
VNA2		

σ1§02/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.23**	**336**	*i* P	**Pb**	**09 59 23.9**	**-1.2**
AYVA				*i* S	**Sb**	**09 59 28.2**	**-1.1**
PRK	**Paraskevi**	**0.45**	**290**	P	**Pb**	**09 59 28.2**	**0.0**
PRK				S	**Sb**	**09 59 36.7**	**+2.1**
BLCB	**Balcova**	**0.73**	**166**	P	**Pb**	**09 59 32.1**	**-0.8**
BLCB				S	**Sb**	**09 59 41.8**	**-0.8**
URLA	**Izmir**	**0.76**	**193**	*i* P	**Pb**	**09 59 31.9**	**-1.4**
URLA				*i* S	**Sb**	**09 59 44.4**	**+1.2**
AKHS	**Akhisar**	**0.81**	**105**	*i* P	**Pb**	**09 59 35.1**	**+0.9**
AKHS				*i* S	**Sb**	**09 59 46.1**	**+1.4**
CHOS	**Chios island**	**0.92**	**220**	P	**Pn**	**09 59 35.2**	**-0.7**
CHOS				S	**Sb**	**09 59 48.8**	**+0.8**
BOZC	**Bozcaada**	**0.95**	**322**	*i* P	**Pn**	**09 59 36.9**	**+0.6**
BOZC				*i* S	**Sb**	**09 59 48.8**	**+0.1**
APE	**Apeiranthos**	**2.26**	**207**	P	**Pn**	**09 59 53.7**	**-0.7**

*BJI **30** 10:35:26.5, 54.48N×163.14W, h31km, mB5.2, mb4.8, Ms4.9, Msz4.6*

*ISCJB **30** 10:35:28.8±0.1, 54.15N±003×163.03W±003, h43km, mb4.8/136, MS4.3/36, Error ellipse: s-maj=3.8km s-min=1.9km az=15.4*

*MOS **30** 10:35:28.0±1.3, 54.21N×163.19W, h33km, mb4.9/22, MS4.3/4, Error ellipse: s-maj=19.5km s-min=8.6km az=98.4*

*NEIC **30** 10:35:30.1±0.4, 54.08N×163.07W, h44km±3km, mb4.9/99, ML4.5(AEIC), ML4.4(PMR), Error ellipse: s-maj=4.7km s-min=2.5km az=185.0*

*IDC **30** 10:35:30.9±2.9, 54.10N×163.09W, h54km±26km, mb4.3/23, mb1 4.5/24, mb1mx4.4/27, mbtmp4.3/24, ML4.0/1, MS4.2/25, Ms1 4.2/25, ms1mx4.1/37, Error ellipse: s-maj=21.2km s-min=10.2km az=9.0*

ISC 30 10:35:30.7±0.1,**5413N**±002×**16308W**±002,**h45**km, **h45**km±1.0km:**pP-P**,**n618**,σ**0372**/620,**mb4.8**/136,**MS4.3**/36, **166C-182D**,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.76**	**345**	*e*Pn	**Pn**	**10 35 43.5**	**-1.4**
FALS				*e*Sn	**Sn**	**10 35 56.0**	**+0.7**
AKUT	**Akutan**	**1.59**	**271**	*e*P	**Pn**	**10 35 56.7**	**+0.5**
AKLV	**Akutan Long Va**	**1.69**	**272**	P	**Pn**	**10 35 56.7**	**-1.1**
AKLV				S	**Sn**	**10 36 19.9**	**+1.8**
AKGG	**Akutan Green G**	**1.72**	**273**	P	**Pn**	**10 35 57.3**	**-0.7**
AKGG				S	**Sn**	**10 36 21.7**	**+3.0**
SDPT	**Sand Point**	**1.94**	**50**	*e*Pn	**Pn**	**10 35 59.8**	**-1.3**
SDPT				*e*Sn	**Sn**	**10 36 27.2**	**+3.0**
UNV	**Unalaska Valle**	**2.04**	**263**	*e*Pn	**Pn**	**10 35 59.7**	**-2.8**
UNV				*e*Sn	**Sn**	**10 36 28.9**	**+2.1**
OKCD	**Okmok Cone D**	**3.07**	**259**	P	**Pn**	**10 36 16.3**	**-0.3**
OKCE	**Okmok Cone E**	**3.10**	**259**	P	**Pn**	**10 36 16.2**	**-0.8**
CHGN	**Chignik**	**3.44**	**49**	*e*Pn	Px	10 36 41.3	
CHGN				*e*Sn	**Sn**	**10 37 04.4**	**+3.2**
SPIA	**Saint Paul Isl**	**5.08**	**310**	P	**Pn**	**10 36 45.0**	**+0.9**
OHAK	**Old Harbor**	**6.34**	**57**	P	**Pn**	**10 36 59.2**	**-2.2**
KDAK	**Kodiak Island** 186nm,0.9s	**6.93**	**54**	*e*Pn	**Pn**	**10 37 08.1**	**-1.5**
KDAK				*e*Sn	**Sn**	**10 38 19.1**	**-7.9**
SVW2	**Sparrevohn**	**8.06**	**27**	*e*P	**Pn**	**10 37 27.3**	**+2.4**
ADK	**Adak**	**8.51**	**260**	P	**Pn**	**10 37 32.6**	**+1.5**
ADK	**Adak**	**8.51**	**260**	P	**Pn**	**10 37 32.6**	**+1.4**
SLKM	**Skilak Lake**	**9.43**	**42**	P	**Pn**	**10 37 45.4**	**+1.7**
SEW	**Seward**	**9.52**	**46**	P	**Pn**	**10 37 44.1**	**-0.7**
TT01	**Tatalina**	**9.54**	**20**	P	**Pn**	**10 37 46.1**	**+1.0**
RC01	**Rabbit Creek A** 37nm,0.8s	**9.98**	**40**	*e*Pn	**Pn**	**10 37 50.2**	**-0.9**
RC01				*e*Sn	**Sn**	**10 39 39.1**	**-2.4**
PPLA	**Purkeypile** 230nm,1.5s	**10.46**	**28**	*e*Pn	**Pn**	**10 38 00.1**	**+2.4**
PPLA				*e*Sn	Sn	10 40 13.6	+20
PMR	**Palmer** 5.4nm,0.5s	**10.52**	**39**	*e*P	**Pn**	**10 38 01.2**	**+2.6**
CHUM	**Lake Minchumin** 17nm,0.6s	**11.22**	**25**	*e*Pn	**Pn**	**10 38 08.3**	**+0.1**
KTH	**Kantishna Hill** 101nm,1.0s	**11.33**	**29**	*e*Pn	**Pn**	**10 38 11.7**	**+2.1**
KTH				Sn	**Sn**	**10 40 17.3**	**+2.7**
TRF	**Thorofare Moun** 102nm,1.0s	**11.43**	**30**	*e*Pn	**Pn**	**10 38 11.6**	**+0.6**
TRF				*e*Sn	**Sn**	**10 40 35.5**	**+18**
MCK	**McKinley** 76nm,1.1s	**12.05**	**31**	*e*Pn	**Pn**	**10 38 22.1**	**+2.6**
MCK				*e*Sn	**Sn**	**10 40 49.7**	**+18**
COLA	**College** 36nm,1.1s	**13.21**	**29**	*e*Pn	**Pn**	**10 38 34.3**	**-1.0**
COLA				*e*Sn	**Sn**	**10 40 57.7**	**-2.7**
COLA	**College**	**13.21**	**29**	*e*P	**Pn**	**10 38 34.9**	**-0.4**
MENT	**Mentasta**	**13.36**	**41**	*e*P	**Pn**	**10 38 36.1**	**-1.3**
PNL	**Peninsula** 52nm,0.5s	**14.03**	**57**	*e*Pn	**Pn**	**10 38 44.7**	**-1.8**
COLD	**Coldfoot** 34nm,0.8s	**14.52**	**20**	*e*Pn	**Pn**	**10 38 52.4**	**-0.6**
EGAK	**Eagle** 21nm,0.6s	**15.32**	**37**	*e*Pn	**Pn**	**10 39 01.4**	**-2.2**
DAWY	**Dawson**	**15.61**	**41**	*e*Pn	**Pn**	**10 39 05.6**	**-1.6**
SKAG	**Skagway** 28nm,0.7s	**16.04**	**59**	*e*P	**Pn**	**10 39 13.5**	**+0.8**
DLBC	**Dease Lake** 0.2nm,0.3s,baz=277,slow=11,SNR=21	**18.72**	**63**	P	**Pn**	**10 39 46.2**	**+0.3**
DLBC	comp=Z,884nm,18.2s,baz=289,slow=35			LR	LR	10 46 34.1	
DLBC	**Dease Lake**	**18.72**	**63**	*e*Pn	**Pn**	**10 39 46.6**	**+0.7**
BILL	**Bilibino** 26nm,1.1s	**20.02**	**326**	P	**P**	**10 39 57.7**	**-1.5**
BILL	**Bilibino**	**20.02**	**326**↑	*e*P	**P**	**10 39 58.2**	**-1.1**
BILL				*e*S	**S**	**10 43 35.7**	**-5.8**
BILL	comp=Z,11nm,1.3s			pmax	pmax		
BILL	comp=Z,2μm,18.0s,MS4.4			MLR	MLR		
BBB	**Bella Bella** comp=Z,12nm,0.9s,baz=168,slow=9.3,SNR=3.2	**20.93**	**81**	P	**P**	**10 40 09.3**	**+0.2**
BBB				LR	LR	10 46 45.7	
PET	**Petropavlovsk** comp=Z,37nm,1.0s,mb4.8	**22.57**	**283**	*e*P	**P**	**10 40 26.7**	**0.0**
PET	**Petropavlovsk**	**22.57**	**283**	*e*P	**P**	**10 40 27.7**	**+1.0**
PET				*e*S	**S**	**10 44 29.1**	**-2.0**
PET	comp=Z,50nm,0.9s,mb4.9			pmax	pmax		
PET	comp=Z,700nm,12.0s,MS4.3			MLR	MLR		
PEA0B	**Petropavlovsk-**	**23.09**	**284**	*e*P	**P**	**10 40 32.0**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,25nm,0.8s,mb4.7,baz=80,slow=13,SNR=24	**23.09**	**284**	P	**P**	**10 40 31.9**	**-0.3**
NLWA	**Neilton Lookou** comp=Z,33nm,1.0s,mb4.8	**25.44**	**89**	*e*P	**P**	**10 40 54.7**	**+0.8**
NLWA	**Neilton Lookou** baz=25	**25.44**	**89**	⇓P	**P**	**10 40 54.7**	**+0.8**
C04A	**Brinnon** baz=26	**25.80**	**88**	⇓P	**P**	**10 40 58.2**	**+1.1**
E03A	**Lebam** baz=26	**26.05**	**91**	⇓P	**P**	**10 41 00.4**	**+1.0**
B05A	**Bryant** baz=26	**26.05**	**86**	⇓P	**P**	**10 41 00.2**	**+0.8**
YKA	**Yellowknife Ar** comp=Z,7.0nm,0.7s,mb4.3,baz=270,slow=9.0,SNR=20	**26.21**	**52**	P	**P**	**10 41 01.2**	**+0.6**
YKA	comp=Z,286nm,18.2s,MS3.9,baz=210,slow=38			LR	LR	10 51 56.4	
D04A	**Dobbs Creek Ra** baz=26	**26.21**	**89**	⇓P	**P**	**10 41 01.8**	**+0.9**
F03A	**Seaside** baz=26	**26.38**	**92**	⇓P	**P**	**10 41 04.1**	**+1.7**
D05A	**Enumclaw** baz=26	**26.65**	**88**	⇓P	**P**	**10 41 05.7**	**+0.9**
LON	**Longmire**	**26.98**	**89**	*e*P	**P**	**10 41 08.8**	**+1.1**
F04A	**Amboy** baz=27	**27.05**	**91**	⇑P	**P**	**10 41 08.7**	**+0.3**
E05A	**Randle** baz=27	**27.10**	**89**	⇑P	**P**	**10 41 09.7**	**+0.8**
B07A	**Winthrop** baz=27	**27.12**	**84**	⇑P	**P**	**10 41 10.0**	**+1.0**
D06A	**Cle Elum** baz=27	**27.32**	**87**	⇓P	**P**	**10 41 11.2**	**+0.4**
G04A	**Mulino** baz=27	**27.41**	**92**	⇓P	**P**	**10 41 12.2**	**+0.6**
ASR	**Mount Adams--S**	**27.42**	**90**	P	**P**	**10 41 12.1**	**+0.3**
C07A	**Waterville** baz=27	**27.53**	**86**	⇓P	**P**	**10 41 12.8**	**+0.1**
E06A	**Yakima** baz=27	**27.57**	**89**	⇑P	**P**	**10 41 13.9**	**+0.8**
SSOR	**Sweet Springs**	**27.62**	**93**	P	**P**	**10 41 14.1**	**+0.5**
EBG	**Ellensburg**	**27.62**	**88**	P	**P**	**10 41 14.0**	**+0.5**
B08A	**Colville Reser** baz=28	**27.63**	**84**	⇑P	**P**	**10 41 14.2**	**+0.6**
VLL	**Laurance Lake**	**27.74**	**91**	P	**P**	**10 41 15.1**	**+0.5**
D07A	**Quincy** baz=28	**27.83**	**87**	⇓P	**P**	**10 41 15.8**	**+0.4**
HOOD	**Mount Hood Mea** comp=Z,22nm,0.7s,mb4.9	**27.83**	**91**	*e*P	**P**	**10 41 15.1**	**-0.3**
G05A	**Wamic** baz=28	**28.07**	**91**	⇑P	**P**	**10 41 18.2**	**+0.6**
C08A	**Higginbotham F** baz=28	**28.08**	**85**	⇓P	**P**	**10 41 18.2**	**+0.6**
F06A	**Goldendale** baz=28	**28.10**	**90**	⇑P	**P**	**10 41 18.3**	**+0.4**
E07A	**Sunnyside** baz=28	**28.23**	**88**	⇑P	**P**	**10 41 19.5**	**+0.5**
MDW	**Midway**	**28.25**	**87**	P	**P**	**10 41 19.4**	**+0.2**
B09A	**Rice** baz=28	**28.29**	**83**	⇓P	**P**	**10 41 20.3**	**+0.8**
CROR	**Criterion Ridg**	**28.41**	**91**	P	**P**	**10 41 21.0**	**+0.4**
H05A	**Madras** baz=28	**28.46**	**92**	⇓P	**P**	**10 41 21.0**	**-0.1**
G06A	**Carlson Farm,** baz=28	**28.48**	**91**	⇑P	**P**	**10 41 20.9**	**-0.3**
HAWA	**Hanford** comp=Z,26nm,0.8s,mb5.0	**28.50**	**88**	*e*P	**P**	**10 41 21.2**	**-0.2**
PRW	**Prosser**	**28.51**	**88**	P	**P**	**10 41 21.8**	**+0.4**
D08A	**Wollman Farm,** baz=28	**28.52**	**86**	⇑P	**P**	**10 41 21.3**	**-0.2**
F07A	**Phinny Hill Vi** baz=28	**28.54**	**89**	⇓P	**P**	**10 41 21.7**	**0.0**
H2OWA	**Water**	**28.57**	**88**	P	**P**	**10 41 22.0**	**0.0**
BBOR	**Butler Butte**	**28.64**	**96**	P	**P**	**10 41 23.7**	**+1.0**
I05A	**Bend** baz=29	**28.71**	**93**	⇑P	**P**	**10 41 23.4**	**+0.1**
VIPM	**Ingram Point**	**28.90**	**92**	P	**P**	**10 41 25.3**	**+0.4**
H06A	**Lindquist Farm** baz=29	**28.94**	**91**	⇓P	**P**	**10 41 25.1**	**-0.2**
NEW	**Newport** comp=Z,90nm,2.8s,mb5.0	**28.97**	**83**	*e*P	**P**	**10 41 25.6**	**+0.1**
EDM	**Edmonton**	**28.98**	**71**	*e*P	**P**	**10 41 25.6**	**0.0**
G07A	**Ruggs Ranch, H** baz=29	**29.03**	**90**	⇓P	**P**	**10 41 25.5**	**-0.6**
A11A	**Hall Mountain,** baz=29	**29.08**	**81**	⇑P	**P**	**10 41 27.1**	**+0.7**
E09A	**Wood Farm, Sta** baz=29	**29.25**	**86**	⇑P	**P**	**10 41 27.4**	**-0.6**
F08A	**Pendleton** baz=29	**29.27**	**88**	⇓P	**P**	**10 41 27.8**	**-0.3**
YBH	**Yreka Blue Hor** comp=Z,9.6nm,0.8s,mb4.6,baz=323,slow=3.9,SNR=20	**29.34**	**98**	P	**P**	**10 41 29.4**	**+0.5**
YBH	comp=Z,882nm,18.0s,MS4.4,baz=314,slow=31			LR	LR	10 50 43.4	
G08A	**Pilot Rock** baz=29	**29.44**	**89**	⇓P	**P**	**10 41 29.3**	**-0.3**
I06A	**Prineville** baz=29	**29.46**	**92**	⇑P	**P**	**10 41 29.9**	**-0.1**
H07A	**Lands Inn, Kim** baz=29	**29.47**	**91**	⇑P	**P**	**10 41 30.8**	**+0.8**
D10A	**Wagner Farm, O** baz=29	**29.48**	**85**	⇑P	**P**	**10 41 29.7**	**-0.4**
K05A	**Summer Lake** baz=30	**29.78**	**95**	⇑P	**P**	**10 41 32.8**	**0.0**
I07A	**Izee** baz=30	**29.80**	**92**	⇑P	**P**	**10 41 32.9**	**+0.1**
F09A	**S2 Ranch, Elgi** baz=30	**29.82**	**88**	⇓P	**P**	**10 41 33.0**	**-0.1**
E10A	**Myers Farm, Un** baz=30	**29.88**	**86**	⇓P	**P**	**10 41 33.2**	**-0.4**
J06A	**Christmas Vall** baz=30	**29.90**	**94**	⇑P	**P**	**10 41 34.2**	**+0.3**
D11A	**Klaveano Farm,** baz=30	**30.04**	**84**	⇓P	**P**	**10 41 34.1**	**-0.9**
H08A	**Prairie City** baz=30	**30.04**	**90**	⇓P	**P**	**10 41 35.0**	**0.0**
F10A	**Beach Ranch, E** baz=30	**30.08**	**87**	⇓P	**P**	**10 41 35.1**	**-0.3**
G09A	**Cove** baz=30	**30.14**	**88**	⇑P	**P**	**10 41 35.5**	**-0.4**
J07A	**Hines** baz=30	**30.33**	**93**	⇑P	**P**	**10 41 37.7**	**+0.2**
I08A	**Drewsey** baz=30	**30.45**	**91**	⇑P	**P**	**10 41 38.9**	**+0.3**
E11A	**Bogner Ranch,** baz=30	**30.48**	**85**	⇓P	**P**	**10 41 38.7**	**-0.2**
G10A	**Bishop Farm, J** baz=30	**30.52**	**88**	⇓P	**P**	**10 41 39.2**	**0.0**
H09A	**Durkee** baz=30	**30.55**	**89**	⇑P	**P**	**10 41 39.2**	**-0.3**
D12A	**Red Ives Fores** baz=30	**30.61**	**84**	⇓P	**P**	**10 41 39.6**	**-0.4**
MOD	**Modoc** comp=Z,17nm,0.9s,mb4.9	**30.64**	**96**	*e*P	**P**	**10 41 40.6**	**+0.3**
BMO	**Blue Mountains** comp=Z,18nm,1.5s,mb4.7	**30.65**	**89**	*e*P	**P**	**10 41 40.5**	**+0.1**
LBCM	**Butte Creek Ri**	**30.70**	**98**	P	**P**	**10 41 41.4**	**+0.5**
C13A	**Hot Springs** baz=31	**30.74**	**82**	⇓P	**P**	**10 41 40.9**	**-0.3**
K07A	**Rock Creek Ran** baz=31	**30.77**	**94**	⇓P	**P**	**10 41 41.8**	**+0.3**
A14A	**Double T Ranch** baz=31	**30.77**	**79**	⇓P	**P**	**10 41 41.0**	**-0.5**
E12A	**Beaver Dam Sad** baz=31	**30.82**	**85**	⇑P	**P**	**10 41 41.2**	**-0.7**
J08A	**Circle Bar Ran** baz=31	**30.83**	**92**	⇓P	**P**	**10 41 42.0**	**0.0**
I09A	**Lost Marbles R** baz=31	**30.90**	**90**	⇑P	**P**	**10 41 42.6**	**0.0**
G11A	**Walters Elk Ra** baz=31	**30.96**	**87**	⇓P	**P**	**10 41 42.6**	**-0.5**
L07A	**Adell** baz=31	**31.13**	**95**	⇓P	**P**	**10 41 45.1**	**+0.4**
H10A	**Noah's Angus R** baz=31	**31.13**	**89**	⇓P	**P**	**10 41 45.0**	**+0.4**
A15A	**Johnson Ranch,** baz=31	**31.17**	**79**	⇓P	**P**	**10 41 44.7**	**-0.3**
K08A	**Mann Creek Ran** baz=31	**31.19**	**93**	⇑P	**P**	**10 41 45.4**	**+0.2**
J09A	**Fry Pan Ranch,** baz=31	**31.26**	**91**	⇓P	**P**	**10 41 45.8**	**0.0**
WVOR	**Wild Horse Val** comp=Z,35nm,0.9s,mb5.2	**31.29**	**93**	*e*P	**P**	**10 41 45.5**	**-0.5**
WVOR				*e*pP	pP	10 41 57.0	-1.1
I10A	**Payette** baz=31	**31.39**	**89**	⇑P	**P**	**10 41 47.1**	**+0.2**
H11A	**Donnelly** baz=31	**31.50**	**88**	⇓P	**P**	**10 41 48.1**	**+0.2**
MSO	**Missoula** comp=Z,7.0nm,1.4s,mb4.3	**31.55**	**83**	*e*P	**P**	**10 41 45.9**	**-2.4**
MSO				*e*PcP	PcP	10 44 38.9	-1.0
B15A	**Bradely Ranch,** baz=31	**31.59**	**80**	⇑P	**P**	**10 41 48.8**	**+0.1**
L08A	**Fields** baz=32	**31.61**	**94**	⇑P	**P**	**10 41 49.3**	**+0.4**
E13A	**Victor** baz=32	**31.61**	**84**	⇓P	**P**	**10 41 48.5**	**-0.4**
M07A	**Soldier Meadow** baz=32	**31.62**	**96**	⇓P	**P**	**10 41 49.4**	**+0.4**
N06A	**Buffalo Meadow** baz=32	**31.64**	**97**	⇓P	**P**	**10 41 49.6**	**+0.5**
K09A	**Rome** baz=32	**31.66**	**92**	⇓P	**P**	**10 41 49.5**	**+0.1**
G12A	**Big Creek, Yel** baz=32	**31.66**	**87**	⇑P	**P**	**10 41 49.5**	**+0.2**
D14A	**Greenough** baz=32	**31.67**	**82**	⇑P	**P**	**10 41 49.5**	**+0.1**
Q03C	**Winters** baz=32	**31.76**	**102**	⇓P	**P**	**10 41 51.0**	**+0.8**
J10A	**Berg Farm, Mel** baz=32	**31.79**	**90**	⇑P	**P**	**10 41 50.4**	**0.0**
C15A	**Salmond Ranch,** baz=32	**31.84**	**80**	⇑P	**P**	**10 41 50.3**	**-0.5**
F13A	**Darby** baz=32	**31.88**	**85**	⇓P	**P**	**10 41 51.1**	**-0.1**
BEKR	**Beckwourth** baz=32,SNR=6.7	**31.90**	**99**	⇓P	**P**	**10 41 51.3**	**-0.1**
I11A	**Placerville** baz=32	**31.98**	**89**	⇓P	**P**	**10 41 51.9**	**-0.3**
O06A	**Flanigan** baz=32	**32.02**	**98**	⇑P	**P**	**10 41 52.7**	**+0.2**
E14A	**Clinton** baz=32	**32.03**	**83**	⇑P	**P**	**10 41 52.6**	**0.0**
M08A	**Happy Creek Ra** baz=32	**32.05**	**95**	⇑P	**P**	**10 41 53.1**	**+0.4**
L09A	**Wilkinson Ranc** baz=32	**32.11**	**93**	⇓P	**P**	**10 41 53.5**	**+0.3**
K10A	**MacKenzie Ranc** baz=32	**32.12**	**91**	⇑P	**P**	**10 41 53.6**	**+0.2**
N07B	**Gerlach** baz=32	**32.12**	**96**	⇓P	**P**	**10 41 53.8**	**+0.4**
H12A	**Diamond D Ranc** baz=32	**32.27**	**87**	⇑P	**P**	**10 41 54.3**	**-0.3**
D15A	**Lincoln** baz=32	**32.27**	**82**	⇑P	**P**	**10 41 54.1**	**-0.5**
P06A	**Stead Airport,** baz=32	**32.29**	**99**	⇓P	**P**	**10 41 55.0**	**+0.1**
G13A	**Cobalt** baz=32	**32.32**	**86**	⇓P	**P**	**10 41 54.6**	**-0.5**
C16A	**Fuhringer Ranc** baz=32	**32.33**	**80**	⇓P	**P**	**10 41 54.6**	**-0.5**
MFID	**Camas Ranch** baz=32	**32.35**	**90**	⇑P	**P**	**10 41 55.3**	**0.0**
A17A	**Triple J Farms** baz=32	**32.35**	**77**	⇓P	**P**	**10 41 54.9**	**-0.4**
LAVA	**Lava Cap Winer** baz=32	**32.42**	**101**	⇑P	**P**	**10 41 56.0**	**0.0**
F14A	**Wisdom** baz=32	**32.43**	**84**	⇑P	**P**	**10 41 55.7**	**-0.4**
E15A	**Deer Lodge** baz=32	**32.53**	**83**	⇓P	**P**	**10 41 56.7**	**-0.1**
O07A	**Toulon** baz=32	**32.57**	**97**	⇑P	**P**	**10 41 57.6**	**+0.3**
PAHR	**Pah Rah Range** comp=Z,19nm,1.1s,mb4.9	**32.57**	**98**	*e*P	**P**	**10 41 57.3**	**0.0**
M09A	**Marrel Ranch,** baz=32	**32.61**	**94**	⇓P	**P**	**10 41 58.0**	**+0.4**
N08A	**GE Springer Mi** baz=32	**32.61**	**95**	⇑P	**P**	**10 41 57.7**	**0.0**
H13A	**Challis** baz=32	**32.61**	**87**	⇑P	**P**	**10 41 57.2**	**-0.5**
K11A	**Parker Ranch,** baz=32	**32.61**	**91**	⇓P	**P**	**10 41 57.9**	**+0.2**
WCN	**Washoe City** baz=32	**32.62**	**99**	⇓P	**P**	**10 41 58.0**	**+0.2**
B17A	**L&G Farms, Che** baz=32	**32.62**	**78**	⇓P	**P**	**10 41 57.5**	**-0.2**
R04C	**Big Horse Ranc** baz=32	**32.64**	**102**	⇓P	**P**	**10 41 57.8**	**-0.1**
G14A	**Jackson** baz=32	**32.69**	**85**	⇑P	**P**	**10 41 58.2**	**-0.1**
L10A	**Juniper Basin** baz=33	**32.78**	**92**	⇑P	**P**	**10 41 59.3**	**+0.2**
A18A	**Metzger Ranch,** baz=33	**32.86**	**77**	⇑P	**P**	**10 41 59.2**	**-0.6**
O08A	**Rochester Mine** baz=33	**32.91**	**96**	⇓P	**P**	**10 42 00.6**	**+0.3**
N09A	**Rock Creek Ran** baz=33	**32.92**	**95**	⇑P	**P**	**10 42 00.7**	**+0.3**
C17A	**Wharram Farm,** baz=33	**32.98**	**79**	⇓P	**P**	**10 42 00.6**	**-0.2**
E16A	**East Helena** baz=33	**33.03**	**82**	⇑P	**P**	**10 42 01.5**	**+0.2**
I13A	**Wildhorse Cree** baz=33	**33.06**	**88**	⇓P	**P**	**10 42 01.7**	**+0.1**
M10A	**I.L. Ranch, Tu** baz=33	**33.08**	**93**	⇑P	**P**	**10 42 02.0**	**+0.2**
HLID	**Hailey** comp=Z,8.4nm,1.0s,mb4.6	**33.10**	**88**	*e*P	**P**	**10 42 01.5**	**-0.4**
HLID	**Hailey** baz=33,SNR=13	**33.10**	**88**	⇑P	**P**	**10 42 01.5**	**-0.3**
H14A	**Leadore** baz=33	**33.10**	**86**	⇓P	**P**	**10 42 02.1**	**+0.1**
CMB	**Columbia Colle** comp=Z,10nm,1.1s,mb4.7	**33.11**	**101**	*e*P	**P**	**10 42 01.9**	**-0.2**
RES	**Resolute Bay** comp=Z,683nm,1.5s	**33.12**	**27**	*e*P	**P**	**10 42 01.9**	**+0.1**
DLMT	**Dillon** comp=Z,9.8nm,1.2s,mb4.6	**33.13**	**84**	*e*P	**P**	**10 42 02.4**	**+0.2**
DLMT				*e*PcP	PcP	10 44 44.4	+0.2
L11A	**Cat Creek Ranc** baz=33	**33.14**	**91**	⇑P	**P**	**10 42 02.9**	**+0.6**
B18A	**Beardsley Farm** baz=33	**33.16**	**78**	⇑P	**P**	**10 42 02.4**	**0.0**
TIXI	**Tiksi** comp=Z,5.7nm,0.8s,mb4.5	**33.23**	**328**	*e*P	**P**	**10 42 01.8**	**-0.9**
TIXI	**Tiksi** comp=Z,7.0nm,1.0s,mb4.5	**33.23**	**328**	*e*P	**P**	**10 42 01.8**	**-0.9**
TIXI				pmax	pmax		
D17A	**Six Diamond Ra** baz=33	**33.28**	**80**	⇓P	**P**	**10 42 03.2**	**-0.2**
G15A	**Dillon** baz=33	**33.31**	**84**	⇑P	**P**	**10 42 03.6**	**-0.1**
R06C	**Coleville** baz=33	**33.32**	**100**	⇓P	**P**	**10 42 03.8**	**0.0**
J13A	**Cove Ranch, Pi** baz=33	**33.33**	**88**	⇑P	**P**	**10 42 04.0**	**0.0**
WAKR	**Walker**	**33.34**	**100**	*e*P	**P**	**10 42 04.2**	**+0.1**
P08A	**Dixie Valley** baz=33	**33.34**	**97**	⇑P	**P**	**10 42 04.8**	**+0.8**
K12A	**Draper Farm, C** baz=33	**33.36**	**90**	⇓P	**P**	**10 42 04.1**	**-0.1**
EGMT	**Eagleton** comp=Z,79nm,2.3s,mb5.2	**33.36**	**78**	*e*P	**P**	**10 42 04.2**	**+0.1**
EGMT				*e*PcP	PcP	10 44 44.5	-0.3
EGMT	**Eagleton** baz=33	**33.36**	**78**	⇓P	**P**	**10 42 03.8**	**-0.3**
BMN	**Battle Mountai** comp=Z,15nm,0.8s,mb5.0	**33.37**	**95**	*e*P	**P**	**10 42 03.8**	**-0.5**
I14A	**Mackay** baz=33	**33.45**	**87**	⇓P	**P**	**10 42 05.1**	**+0.1**
H15A	**Lima** baz=33	**33.53**	**85**	⇑P	**P**	**10 42 05.2**	**-0.4**
BOZ	**Bozeman (W)** baz=33	**33.54**	**83**	⇓P	**P**	**10 42 05.7**	**-0.1**
E17A	**Martinsdale** baz=33	**33.55**	**81**	⇓P	**P**	**10 42 05.7**	**-0.1**
O09A	**Fish Creek Ran** baz=33	**33.55**	**96**	⇓P	**P**	**10 42 06.0**	**+0.1**
M11A	**Holland Ranch,** baz=33	**33.58**	**93**	⇑P	**P**	**10 42 06.4**	**+0.3**
L12A	**House Creek Ra** baz=34	**33.59**	**91**	⇓P	**P**	**10 42 06.3**	**+0.1**
N10A	**Dunphy** baz=34	**33.60**	**94**	⇑P	**P**	**10 42 06.8**	**+0.5**
S05C	**Merced** baz=34	**33.61**	**102**	⇓P	**P**	**10 42 06.3**	**-0.1**
G16A	**Moss Hill, Enn** baz=34	**33.67**	**84**	⇓P	**P**	**10 42 06.5**	**-0.4**
J14A	**Carey** baz=34	**33.76**	**88**	⇓P	**P**	**10 42 08.0**	**+0.3**
D18A	**Linhart Farms,** baz=34	**33.77**	**80**	⇓P	**P**	**10 42 07.8**	**+0.2**
K13A	**Stover Farm, H** baz=34	**33.83**	**89**	⇓P	**P**	**10 42 09.1**	**+0.8**
O10A	**Cortez Mining,** baz=34	**33.88**	**95**	⇓P	**P**	**10 42 09.2**	**+0.5**
F17A	**Fitzpatrick Pl** baz=34	**33.97**	**82**	⇓P	**P**	**10 42 09.8**	**+0.4**
I15A	**Monteview** baz=34	**33.97**	**86**	⇑P	**P**	**10 42 09.9**	**+0.3**
Q08A	**Gabbs** baz=34	**33.98**	**98**	⇓P	**P**	**10 42 10.3**	**+0.7**
P09A	**Austin** baz=34	**33.98**	**96**	⇓P	**P**	**10 42 10.4**	**+0.8**
N11A	**Elko Archery C** baz=34	**33.99**	**93**	⇓P	**P**	**10 42 10.4**	**+0.7**
E18A	**Harlowton** baz=34	**34.04**	**81**	⇑P	**P**	**10 42 10.4**	**+0.4**
U04C	**Hernandez Rese** baz=34	**34.04**	**104**	⇑P	**P**	**10 42 10.8**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,14nm,0.7s,mb5.0,baz=298,slow=8.8,SNR=77	**34.05**	**99**	P	**P**	**10 42 10.1**	**-0.1**
NVAR	comp=Z,1.3nm,0.8s,baz=275,slow=2.3,SNR=3.9			PcP	PcP	10 44 46.4	-0.5
NVAR	**Mina Array Bea**	**34.05**	**99**	P	**P**	**10 42 10.1**	**-0.1**
NVAR				PcP	PcP	10 44 46.4	-

K14A **Jones Ranch, D** 34.43 89 ⇑P P 10 42 13.5 0.0
baz=34
Q09A **Carvers** 34.43 97 ⇑P P 10 42 13.9 +0.4
baz=34
O11A **Cowboy Ranch,** 34.48 94 ⇓P P 10 42 14.4 +0.5
baz=34
FFC **Flin Flon** 34.56 64 eP P 10 42 14.2 -0.2
comp=Z,80nm,2.3s,mb5.2
M13A **Montello** 34.58 91 ⇓P P 10 42 15.0 +0.3
baz=34
YNR **Norris Junctio** 34.62 84 eP P 10 42 15.5 +0.4
MTUM **Tungsten Hills** 34.63 101 eP P 10 42 15.9 +0.7
I16A **Newdale** 34.63 86 ⇑P P 10 42 15.8 +0.6
baz=34
YFT **Old Faithful** 34.68 84 ePcP PcP 10 44 51.1 +2.4
K15A **Arbon** 34.73 88 ⇑P P 10 42 16.6 +0.6
baz=35
P11A **Circle Ranch,** 34.79 95 ⇓P P 10 42 17.2 +0.6
baz=35
H17A **Grant Village** 34.87 84 ⇑P P 10 42 17.9 +0.7
baz=35
YAK **Yakutsk** 34.88 311 eP P 10 42 16.5 -0.7
comp=Z,12nm,0.5s,mb5.1
R09A **Tonopah** 34.89 98 ⇑P P 10 42 17.8 +0.3
baz=35
Q10A **Clear Creek Ra** 34.89 97 ⇑P P 10 42 17.9 +0.4
baz=35
V05C **Boulder Hill,** 34.89 104 ⇓P P 10 42 18.0 +0.5
baz=35
J16A **Bone** 34.91 87 ⇓P P 10 42 18.2 +0.6
baz=35
TPH **Tonopah** 34.91 98 eP P 10 42 17.3 -0.4
comp=Z,19nm,1.1s,mb4.9
O12A **Currie** 34.92 93 ⇑P P 10 42 18.0 +0.2
baz=35
G18A **Lazy EL Ranch,** 34.93 82 ⇓P P 10 42 17.8 0.0
baz=35
IMW **Indian Meadow** 34.94 85 eP P 10 42 18.2 +0.3
comp=Z,4.8nm,0.9s,mb4.4
RCTC **Rector, Farmer** 34.96 103 ⇑P P 10 42 18.0 -0.1
baz=35,SNR=8.6
M14A **Sheep Mountain** 34.97 90 ⇓P P 10 42 18.1 0.0
baz=35
RRI2 **Red Ridge** 35.04 86 eP P 10 42 19.0 +0.2
comp=Z,4.9nm,0.8s,mb4.5
HVU **Hansel Valley** 35.13 90 eP P 10 42 19.7 +0.1
comp=Z,14nm,0.8s,mb5.0
S09A **Goldfield** 35.15 99 ⇑P P 10 42 19.9 +0.2
baz=35
TPAW **Teton Pass** 35.17 86 eP P 10 42 19.9 0.0
comp=Z,3.6nm,0.8s,mb4.3
K16A **Soda Springs** 35.19 87 ⇑P P 10 42 20.4 +0.3
baz=35
RLMT **Red Lodge** 35.21 82 eP P 10 42 20.0 -0.2
comp=Z,6.7nm,0.9s,mb4.6
RLMT **Red Lodge** 35.21 82 ⇓P P 10 42 19.7 -0.5
baz=35,SNR=5.5
L15A **Malad City** 35.23 89 ⇑P P 10 42 20.3 0.0
baz=35
SMMC **Simmler** 35.23 104 ⇑P P 10 42 21.0 +0.5
baz=35,SNR=5.5
LOHW **Long Hollow** 35.30 85 eP P 10 42 21.0 0.0
comp=Z,63nm,2.6s,mb5.1
R10A **Warm Springs** 35.31 97 ⇓P P 10 42 21.3 +0.2
baz=35
Q11A **Duckwater** 35.32 96 ⇓P P 10 42 21.1 0.0
baz=35
P12A **McGill** 35.34 94 ⇑P P 10 42 21.6 +0.2
baz=35
VES **Vestal, Richgr** 35.38 103 ⇑P P 10 42 21.5 -0.3
baz=35,SNR=13
S10A **Tonopah Range,** 35.38 98 ⇓P P 10 42 21.9 +0.1
baz=35
O13A **Hicks Ranch, I** 35.46 93 ⇑P P 10 42 22.4 0.0
baz=35
N14A **Grayback Hills** 35.47 91 ⇑P P 10 42 22.9 +0.4
baz=35
GRAC **Grapevine Rang** 35.56 100 ⇑P P 10 42 23.6 +0.3
baz=36,SNR=14
PKM **Peak Mountain** 35.63 105 ⇓P P 10 42 24.3 +0.3
baz=36,SNR=8.0
Q12A **Willow Creek R** 35.67 95 ⇓P P 10 42 24.7 +0.5
baz=36
R11A **Troy Canyon, C** 35.69 96 ⇓P P 10 42 24.5 +0.1
baz=36
I18A **Diamond G Ranc** 35.71 85 ⇑P P 10 42 24.6 +0.1
baz=36
L16A **Fish Haven** 35.78 88 ⇑P P 10 42 25.3 +0.2
baz=36
P13A **Bates Ranch, G** 35.88 94 ⇓P P 10 42 26.3 +0.3
baz=36
J18A **Kendall Valley** 35.89 85 ⇓P P 10 42 26.2 +0.2
baz=36
HWUT **Hardware Ranch** 35.95 89 eP P 10 42 26.6 0.0
comp=Z,5.9nm,1.0s,mb4.5
HWUT ePcP PcP 10 44 52.2 -0.3
SBC **Santa Barbara** 36.02 105 ⇑P P 10 42 27.0 -0.2
baz=36
ARVC **Arvin** 36.03 104 ⇓P P 10 42 27.1 -0.3
baz=36
L17A **Cokeville** 36.06 88 ⇑P P 10 42 27.3 -0.2
baz=36
S11A **Rachel** 36.07 98 ⇓P P 10 42 27.8 +0.3
baz=36
ASAJ **Asahikawa** 36.10 277 LR LR 10 57 30.4
comp=Z,196nm,20.1s,MS3.9,baz=72,slow=37
M16A **Huntsville** 36.10 89 ⇓P P 10 42 27.5 -0.3
baz=36
DUG **Dugway** 36.11 92 eP P 10 42 27.6 -0.3
comp=Z,19nm,0.9s,mb5.0
DUG **Dugway** 36.11 92 ⇑P P 10 42 27.7 -0.2
baz=36,SNR=16
MPMC **Manual Prospec** 36.14 101 ⇓P P 10 42 28.6 +0.3
baz=36,SNR=33
Q13A **Wheeler Ranch,** 36.20 94 ⇓P P 10 42 29.1 +0.3
baz=36
K18A **Toltan Ranch,** 36.22 86 ⇑P P 10 42 29.0 +0.2
baz=36
FURC **Furnace Creek,** 36.22 100 ⇓P P 10 42 29.2 +0.3
baz=36,SNR=44
TPNV **Topopah Spring** 36.25 99 eP P 10 42 28.9 -0.2
comp=Z,38nm,0.9s,mb5.3
TPNV **Topopah Spring** 36.25 99 ⇓P P 10 42 29.2 0.0
baz=36,SNR=27
O15A **The Old Anders** 36.26 91 ⇓P P 10 42 29.3 +0.1
baz=36
R12A **Pony Springs,** 36.27 96 ⇓P P 10 42 29.6 +0.2
baz=36
DGMT **Dagmar** 36.31 74 ⇑P P 10 42 29.4 -0.1
baz=36
P14A **Drum Mountains** 36.35 93 ⇓P P 10 42 29.7 -0.2
baz=36
BSC **Santa Cruz Isl** 36.39 106 ⇑P P 10 42 30.7 +0.3
baz=36
BW06 **Boulder Array** 36.42 86 eP P 10 42 30.2 -0.3
comp=Z,2.6nm,0.8s,mb4.2
BW06 **Boulder Array** 36.42 86 ⇑P P 10 42 30.4 -0.2
baz=36
PDAR **Pinedale Array** 36.42 86 P P 10 42 29.9 -0.7
comp=Z,2.3nm,0.7s,mb4.2,baz=279,slow=3.7,SNR=23
PDAR PcP PcP 10 44 53.0 -0.8
comp=Z,0.8nm,1.0s,baz=282,slow=4.5,SNR=2.9
PDAR LR LR 10 54 29.6
comp=Z,202nm,21.8s,MS3.9,baz=147,slow=31
OSI **Osito Adit** 36.46 104 ⇓P P 10 42 31.5 +0.5
baz=36
N16A **Rees Ranch, Co** 36.48 90 ⇑P P 10 42 31.0 0.0
baz=36
M17A **Scullys Gap (B** 36.56 88 ⇑P P 10 42 31.8 0.0
baz=36
U10A **Ash Meadows, A** 36.57 100 ⇓P P 10 42 32.2 +0.3
baz=36
S12A **Delamar Landin** 36.62 97 ⇓P P 10 42 32.6 +0.4
baz=36
Q14A **Sevier Lake (B** 36.62 94 ⇓P P 10 42 32.3 0.0
baz=36
BLG **Laguna Peak** 36.63 105 ⇑P P 10 42 31.4 -1.1
baz=36,SNR=5.7
T11A **Corn Creek, Al** 36.65 98 ⇓P P 10 42 32.6 0.0
baz=36
JLU **Jordanelle** 36.65 90 eP P 10 42 32.8 +0.3
L18A **Fontenelle, Gr** 36.66 87 ⇓P P 10 42 32.6 +0.1
baz=36
EDW2 **Edwards Air Fo** 36.69 103 ⇑P P 10 42 32.4 -0.5
baz=37
NLU **North Lily Min** 36.70 91 eP P 10 42 32.6 -0.3
R13A **O'Grain Ranch,** 36.75 95 ⇑P P 10 42 32.9 -0.4
baz=37

N17A **Moffit Pass** 36.80 89 ⇓P P 10 42 33.1 -0.7
baz=37
K19A **Absolon Red Bu** 36.81 85 ⇑P P 10 42 33.4 -0.5
baz=37
P15A **Leamington** 36.82 92 ⇓P P 10 42 33.8 -0.2
baz=37
O16A **Springville** 36.87 91 ⇑P P 10 42 34.0 -0.4
baz=37
DAU **Daniels Canyon** 36.88 90 eP P 10 42 34.8 +0.2
MPU **Maple Canyon** 36.92 91 eP P 10 42 34.5 -0.3
comp=Z,7.9nm,0.9s,mb4.5
L19A **Farson** 36.95 86 ⇑P P 10 42 34.3 -0.7
baz=37
M18A **Lyman** 36.95 88 ⇓P P 10 42 34.6 -0.4
baz=37
SHOC **Shoshone** 36.96 100 ⇓P P 10 42 35.4 +0.2
baz=37,SNR=30
SNCC **San Nicolas Is** 37.00 106 ⇓P P 10 42 35.2 -0.4
baz=37
GSC **Goldstone** 37.07 101 eP P 10 42 36.0 -0.2
comp=Z,27nm,0.9s,mb5.1
GSC **Goldstone** 37.07 101 ⇓P P 10 42 36.2 +0.1
baz=37,SNR=33
U11A **Corn Creek** 37.11 99 ⇑P P 10 42 36.4 -0.1
baz=37
MWC **Mount Wilson** 37.12 104 eP P 10 42 36.3 -0.3
comp=Z,17nm,1.0s,mb4.8
Q15A **Fillmore** 37.14 93 ⇑P P 10 42 36.6 -0.1
baz=37
P16A **Fountain Green** 37.16 91 ⇓P P 10 42 37.3 +0.4
baz=37
SHPR **Sheep Range** 37.19 98 eP P 10 42 36.8 -0.3
K20A **Yellowstone Ra** 37.20 85 ⇑P P 10 42 36.9 -0.3
baz=37
S13A **Holt Ranch, En** 37.21 96 ⇑P P 10 42 37.3 0.0
baz=37
T12A **Mona** 37.29 98 ⇓P P 10 42 38.3 +0.2
baz=37
O17A **Robinson Place** 37.33 90 ⇑P P 10 42 38.3 0.0
baz=37
BFSC **Mount Baldy St** 37.34 103 ⇑P P 10 42 38.6 +0.1
baz=37,SNR=23
M19A **Rock Springs** 37.43 87 ⇓P P 10 42 39.1 -0.1
baz=37
N18A **Larsen Ranch,** 37.46 88 ⇓P P 10 42 38.7 -0.7
baz=37
TUQ **Turquoise Moun** 37.49 100 ⇓P P 10 42 40.2 +0.5
baz=37
V11A **Goodsprings** 37.49 99 ⇑P P 10 42 40.0 +0.3
baz=37
T13A **Saint George** 37.56 97 ⇑P P 10 42 40.7 +0.3
baz=37
MSU **Marysvale** 37.58 93 eP P 10 42 41.0 +0.6
U12A **Valley of Fire** 37.60 98 ⇑P P 10 42 40.9 +0.2
baz=38
L20A **Wamsutter** 37.60 86 ⇑P P 10 42 40.1 -0.5
baz=37
HEC **Hector,Ludlow** 37.68 101 ⇓P P 10 42 41.0 -0.3
baz=38,SNR=12
O18A **Roosevelt** 37.71 89 ⇑P P 10 42 41.4 -0.2
baz=38
R15A **Junction** 37.72 94 ⇑P P 10 42 41.9 +0.3
baz=38
BBRC **Big Bear Sol-O** 37.75 103 ⇑P P 10 42 42.0 +0.1
baz=38
SCI **San Clemente I** 37.75 106 ⇑P P 10 42 42.1 +0.2
baz=38
P17A **Butcher Ranch,** 37.79 91 ⇓P P 10 42 42.2 0.0
baz=38
N19A **John Jarvie Ra** 37.80 88 ⇑P P 10 42 41.6 -0.7
baz=38
Q16A **Castle Valley** 37.90 92 ⇓P P 10 42 43.2 0.0
baz=38
V12A **Nelson** 37.91 99 ⇑P P 10 42 43.4 +0.1
baz=38
U13A **Pakoon Wash** 37.95 97 ⇓P P 10 42 44.0 +0.5
baz=38
HABR **Khabarovsk** 37.99 288 eP P 10 42 41.8 -2.0
HABR e 10 44 55.1
HABR eS S 10 48 32.1 -0.4
HABR e 10 48 49.0
M20A **Sweetwater, Wa** 38.01 86 ⇓P P 10 42 44.0 -0.1
baz=38
T14A **Hurricane** 38.02 96 ⇑P P 10 42 44.0 -0.2
baz=38
S15A **Panguitch** 38.02 94 ⇑P P 10 42 44.5 +0.3
baz=38
MURC **Murrieta** 38.07 104 ⇓P P 10 42 44.4 -0.2
baz=38
GMRC **Granite Mounta** 38.10 101 ⇑P P 10 42 44.8 -0.1
baz=38,SNR=20
R16A **Teasdale** 38.14 93 ⇓P P 10 42 45.5 +0.4
baz=38
SRU **San Rafael** 38.16 91 eP P 10 42 45.2 -0.1
comp=Z,16nm,0.7s,mb4.9
SRU **San Rafael** 38.16 91 ⇑P P 10 42 45.4 +0.1
baz=38,SNR=17
W12A **Cal Nev Ari** 38.19 100 ⇑P P 10 42 46.0 +0.4
baz=38
L21A **Rawlins** 38.20 85 ⇓P P 10 42 45.1 -0.5
baz=38
LDFC **Landfair** 38.21 100 eP P 10 42 45.2 -0.6
V13A **Grand Canyon W** 38.32 98 ⇑P P 10 42 47.4 +0.6
baz=38
N20A **Spence Gulch,** 38.38 87 ⇑P P 10 42 47.4 +0.3
baz=38
Q18A **Rafter H Ranch** 38.39 91 ⇓P P 10 42 47.4 +0.1
baz=38
U14A **Mt Trumbull** 38.40 97 ⇑P P 10 42 48.1 +0.7
baz=38
M21A **Separation Pea** 38.42 86 ⇓P P 10 42 47.3 -0.2
baz=38
S16A **Weppner Ranch,** 38.44 94 ⇑P P 10 42 48.5 +0.8
baz=38
T15A **Red Dirt Ranch** 38.46 95 ⇑P P 10 42 48.2 +0.3
baz=38
BELC **Belle Mtn.** 38.47 102 ⇑P P 10 42 47.0 -0.9
baz=38,SNR=11
PFO **Pinyon Flat Ob** 38.49 103 eP P 10 42 47.4 -0.7
comp=Z,14nm,1.0s,mb4.7
PFO **Pinyon Flat Ob** 38.49 103 ⇓P P 10 42 47.6 -0.6
baz=38,SNR=15
R17A **Hanksville Air** 38.50 92 ⇑P P 10 42 47.8 -0.4
baz=38
109C **Camp Elliot, M** 38.64 104 ⇑P P 10 42 49.3 -0.1
baz=38
NEE2 **Needles Airpor** 38.72 100 ⇓P P 10 42 49.8 -0.2
baz=39
P19A **Cripple Cowboy** 38.72 89 ⇑P P 10 42 49.6 -0.4
baz=39
O20A **White River Ci** 38.84 88 ⇓P P 10 42 50.6 -0.4
baz=39
RSSD **Black Hills** 38.84 80 eP P 10 42 50.4 -0.6
comp=Z,7.1nm,0.8s,mb4.5
N21A **Black Mountain** 38.86 87 ⇓P P 10 42 50.6 -0.6
baz=39
W13A **Hualapai Mount** 38.91 99 ⇓P P 10 42 51.9 +0.3
baz=39
U15A **North Rim** 38.91 96 ⇓P P 10 42 52.1 +0.5
baz=39
S17A **Black Ridge (B** 38.97 93 ⇓P P 10 42 52.3 +0.1
baz=39
V14A **Boquillas Ranc** 38.99 98 ⇓P P 10 42 52.9 +0.6
baz=39
T16A **Glen Canyon Da** 39.00 95 ⇑P P 10 42 52.1 -0.2
baz=39
Q19A **Hogan Spring (** 39.00 90 ⇓P P 10 42 51.7 -0.7
baz=39
M22A **Cedar Creek Ra** 39.00 85 ⇑P P 10 42 52.0 -0.4
baz=39
R18A **Canyonlands Na** 39.00 92 ⇑P P 10 42 51.9 -0.5
baz=39
BC3 **Big Chuckw Mtn** 39.03 102 ⇓P P 10 42 51.5 -1.2
baz=39,SNR=7.1
MONP **Monument Peak** 39.03 104 ⇓P P 10 42 52.9 +0.2
baz=39,SNR=24
O21A **Pagoda** 39.24 87 ⇓P P 10 42 53.9 -0.5
baz=39
W14A **Seligman** 39.30 98 ⇓P P 10 42 54.9 0.0
baz=39
X13A **Yucca** 39.30 99 ⇓P P 10 42 54.7 -0.2
baz=39
PDMCI **Parker Dam,Lak** 39.33 100 ⇓P P 10 42 54.3 -0.9
baz=39,SNR=10
SWSC **Sam W. Stewart** 39.35 103 ⇓P P 10 42 54.8 -0.5
baz=39,SNR=8.0
DVTC **Desert V Tower** 39.38 104 ⇓P P 10 42 55.2 -0.4
baz=39,SNR=15

T17A **Navajo Res., N** 39.40 94 ⇑P P 10 42 55.1 -0.6
baz=39
V15A **Kaibab Nationa** 39.40 96 ⇓P P 10 42 56.1 +0.3
baz=39
S18A **Hurst Farm, Bl** 39.41 92 ⇑P P 10 42 55.2 -0.6
baz=39
KLR **Kul'dur** 39.42 290 eP P 10 42 50.7 -5.1
R19A **Curley Farm, L** 39.44 91 ⇓P P 10 42 55.4 -0.6
baz=39
Y12C **Blythe** 39.50 101 ⇑P P 10 42 56.5 -0.1
baz=39
U17A **Shonto** 39.75 94 ⇑P P 10 42 58.2 -0.5
baz=40
U16A **Tuba City** 39.79 95 ⇓P P 10 42 58.8 -0.2
baz=40
W15A **Williams** 39.80 97 ⇓P P 10 42 59.5 +0.5
baz=40
GLA **Glamis** 39.83 102 eP P 10 42 59.4 +0.1
comp=Z,31nm,1.1s,mb5.0
GLA **Glamis** 39.83 102 ⇓P P 10 42 58.9 -0.4
baz=40,SNR=6.8
T18A **Mexican Hat** 39.85 93 ⇓P P 10 42 59.1 -0.4
baz=40
Y13A **Salome** 39.85 100 ⇑P P 10 42 59.7 +0.2
baz=40
S19A **Harvey Farm, M** 39.87 92 ⇑P P 10 42 59.3 -0.4
baz=40
X14A **Yava** 39.93 99 ⇑P P 10 43 00.2 0.0
baz=40
ULM **Lac du Bonnet** 39.98 67 P P 10 42 59.6 -0.7
comp=Z,18nm,0.8s,mb4.9,baz=298,slow=8.9,SNR=13
ULM LR LR 11 00 27.4
comp=Z,369nm,21.9s,MS4.2,baz=316,slow=37
ULM **Lac du Bonnet** 39.98 67 eP P 10 42 59.6 -0.8
comp=Z,15nm,0.7s,mb4.8
WUAZ **Wupatki** 40.08 96 eP P 10 43 01.3 -0.1
comp=Z,31nm,0.8s,mb5.1
WUAZ **Wupatki** 40.08 96 ⇓P P 10 43 01.5 +0.1
baz=40,SNR=21
SMCO **Snowmass** 40.20 88 eP P 10 43 02.2 -0.1
comp=Z,5.4nm,0.9s,mb4.3
Y14A **Wickenburg** 40.24 99 ⇓P P 10 43 02.8 0.0
baz=40
W16A **Flagstaff** 40.28 97 ⇑P P 10 43 03.6 +0.5
baz=40
X15A **Humboldt** 40.30 98 ⇓P P 10 43 03.5 +0.2
baz=40
U18A **Rough Rock, Ch** 40.34 94 ⇑P P 10 43 03.5 -0.1
baz=40
112A **Yuma** 40.34 102 ⇓P P 10 43 03.9 +0.3
baz=40
R21A **Cimarron** 40.39 90 ⇑P P 10 43 04.2 +0.2
baz=40
T19A **Beclabito** 40.56 93 ⇑P P 10 43 05.1 -0.2
baz=40
ISCO **Idaho Springs** 40.60 86 eP P 10 43 05.7 0.0
comp=Z,65nm,2.7s,mb4.8
MVCO **Mesa Verde** 40.61 92 eP P 10 43 05.1 -0.7
comp=Z,7.9nm,0.8s,mb4.4
MVCO **Mesa Verde** 40.61 92 ⇓P P 10 43 04.4 -1.4
baz=40,SNR=7.0
Y15A **Casa Rosa Ranc** 40.62 99 ⇓P P 10 43 05.9 0.0
baz=40
113A **Mohawk Valley,** 40.64 101 ⇓P P 10 43 06.2 +0.1
baz=40
Z14A **Wintersburg** 40.69 100 ⇑P P 10 43 06.6 +0.2
baz=41
V18A **Ganado** 40.79 95 ⇓P P 10 43 07.4 +0.2
baz=41
X16A **Lo Mia Camp, P** 40.81 97 ⇓P P 10 43 07.8 +0.4
baz=41
AGMN **Agassiz Refuge** 41.06 70 eP P 10 43 08.0 -1.4
comp=Z,21nm,0.8s,mb4.8
Y16A **Circle Bar Ran** 41.17 98 ⇓P P 10 43 10.8 +0.4
baz=41
Z15A **Gila River Ind** 41.20 99 ⇑P P 10 43 10.6 -0.1
baz=41
V19A **Window Rock** 41.31 94 ⇓P P 10 43 11.7 +0.1
baz=41
W19A **Sanders** 41.53 95 ⇑P P 10 43 13.6 +0.3
baz=41
Z16A **Peralta Trail,** 41.59 98 ⇑P P 10 43 13.5 -0.4
baz=42
X18A **Snowflake** 41.60 96 ⇓P P 10 43 13.9 0.0
baz=42
Y17A **Roosevelt** 41.67 98 ⇑P P 10 43 14.5 0.0
baz=42
214A **Organ Pipe Nat** 41.79 101 ⇑P P 10 43 15.7 +0.2
baz=42
116A **Eloy** 41.99 100 ⇑P P 10 43 17.1 0.0
baz=42
SDCO **Great Sand Dun** 42.01 89 eP P 10 43 17.0 -0.2
comp=Z,4.2nm,0.9s,mb4.1
X19A **St. Johns** 42.06 95 ⇓P P 10 43 17.7 -0.1
baz=42
Y18A **Canyon Day Jun** 42.09 97 ⇑P P 10 43 17.9 0.0
baz=42
Y19A **Nutrioso** 42.42 96 ⇑P P 10 43 20.8 +0.2
baz=42
216A **Three Points,** 42.54 100 ⇓P P 10 43 21.5 -0.1
baz=42
117A **Oracle** 42.54 99 ⇓P P 10 43 21.9 +0.3
baz=42
Z18A **Geronimo** 42.58 98 ⇑P P 10 43 21.9 0.0
baz=42
TUC **Tucson** 42.70 99 eP P 10 43 22.4 -0.5
comp=Z,16nm,1.0s,mb4.7
Z19A **T-Link Ranch,** 42.88 97 ⇑P P 10 43 24.5 +0.1
baz=43
118A **Homack Ranch,** 42.94 98 ⇑P P 10 43 25.0 +0.1
baz=43
217A **Green Valley** 43.08 100 ⇓P P 10 43 26.0 0.0
baz=43
119A **Ashpeak Ranch,** 43.24 97 ⇓P P 10 43 27.2 0.0
baz=43
ANMO **Albuquerque** 43.36 92 eP P 10 43 28.1 -0.1
comp=Z,94nm,3.0s
ANMO ePcP PcP 10 45 16.2 +0.1
ANMO **Albuquerque** 43.36 92 eP P 10 43 28.0 -0.2
ANMO pmax pmax
comp=Z,5.0nm,1.2s
218A **Dragoon** 43.38 99 ⇓P P 10 43 28.4 0.0
baz=43
MJAR **Matsushiro Arr** 43.50 271 P P 10 43 28.5 -0.8
comp=Z,2.1nm,0.7s,mb4.0,baz=41,slow=8.2,SNR=5.0
MAJO **Matsushiro** 43.50 271 eP P 10 43 30.1 +0.8
comp=Z,17nm,1.0s,mb4.7
MAT **Matsushiro** 43.50 271 P P 10 43 29.7 +0.4
LENM **Lemitar** 43.61 94 eP P 10 43 30.3 +0.1
EYMN **Ely** 43.66 68 eP P 10 43 29.2 -1.2
comp=Z,23nm,0.9s,mb4.9
318A **Bisbee** 43.80 99 ⇓P P 10 43 31.8 0.0
baz=44
BOD **Bodaibo** 43.80 310 eP P 10 43 30.0 -1.5
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
219A **White Tail Can** 43.82 98 ⇓P P 10 43 31.9 0.0
baz=44
319A **Douglas** 44.26 99 ⇓P P 10 43 35.5 0.0
baz=44
CN2 **Changchun** 46.13 288 eP P 10 43 48.5 -1.7
CN2 eXP sP 10 44 00.5 -7.5
CN2 eS S 10 50 29.0 -3.6
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,300nm,12.0s,MS4.6
CN2 LR LR
comp=E,300nm,12.0s,MS4.6
CN2 LR LR
comp=Z,500nm,14.0s,MS4.6
AMTX **Amarillo** 46.22 89 eP P 10 43 50.2 -0.8
comp=Z,8.0nm,0.8s,mb4.7
KSU1 **Kansas State U** 46.32 81 eP P 10 43 50.5 -1.2
comp=Z,15nm,0.8s,mb5.0
JFWS **Jewell Farm** 47.46 72 eP P 10 43 58.9 -1.6
comp=Z,16nm,0.8s,mb5.0
SUMG **Summit** 47.92 20 eP P 10 44 03.9 +0.1
comp=Z,12nm,0.9s,mb4.9
WMOK **Wichita Mounta** 48.02 87 eP P 10 44 03.8 -1.2
comp=Z,16nm,0.8s,mb5.1
SNY **Shenyang** 48.45 287 ⇑P P 10 44 08.8 +0.5
SNY AMB AMB
comp=Z,12nm,0.9s,mb4.9
SNY AMB AMB
comp=Z,112nm,8.1s

SNY LR LR
comp=N,369nm,15.9s,MS4.6
SNY LR LR
comp=E,356nm,18.9s,MS4.6
SNY LR LR
comp=Z,377nm,20.4s,MS4.4
KSRS Korea Array 48.90 280 P **P** **10 44 11.4 -0.3**
comp=Z,7.5nm,0.8s,mb4.8,baz=55,slow=6.6,SNR=16
KSRS LR LR 11 04 12.1
comp=Z,130nm,20.9s,MS3.9,baz=43,slow=35
TXAR Lajitas Array 49.04 96 P **P** **10 44 12.0 -0.9**
comp=Z,9.0nm,0.8s,mb4.9,baz=300,slow=5.2,SNR=101
TXAR PcP PcP 10 45 35.2 -0.9
comp=Z,3.1nm,0.9s,baz=236,slow=0.9,SNR=6.1
TXAR ScP ScP 10 49 26.8 -0.4
comp=Z,0.4nm,0.8s,baz=273,slow=2.1,SNR=3.5
TXAR LR LR 11 02 58.0
comp=Z,315nm,20.1s,MS4.3,baz=5.0,slow=34
HDIL Hopedale 49.55 74 *eP* **P** **10 44 15.0 -1.6**
comp=Z,75nm,0.7s,mb5.8
CCM Cathedral Cave 50.12 78 *eP* **P** **10 44 17.5 -3.6**
comp=Z,9.4nm,0.8s,mb4.9
JCT Junction City 50.47 91 *eP* **P** **10 44 22.0 -1.8**
comp=Z,16nm,0.8s,mb5.1
FVM French Village 50.64 77 *eP* **P** **10 44 22.8 -2.2**
comp=Z,19nm,1.0s,mb5.0
MIAR Mount Ida 51.21 83 *eP* **P** **10 44 27.7 -1.6**
comp=Z,12nm,0.8s,mb4.9
OLIL Olney 51.46 75 *eP* **P** **10 44 29.4 -1.7**
comp=Z,18nm,0.6s,mb5.2
SCHQ Schefferville 51.51 47 P **P** **10 44 30.4 -0.8**
comp=Z,5.7nm,0.7s,mb4.6,baz=301,slow=9.9,SNR=6.1
SIUC Southern Illin 51.52 77 *eP* **P** **10 44 29.8 -1.7**
comp=Z,13nm,0.8s,mb4.9
BLO Bloomington 52.05 73 *eP* **P** **10 44 33.9 -1.6**
comp=Z,19nm,0.8s,mb4.9
TLY Talaya 52.29 308 *eP* **P** **10 44 37.1 +0.1**
comp=Z,10nm,1.0s,mb4.7
TLY Talaya 52.29 308 *eP* **P** **10 44 37.4 +0.3**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,399nm,19.0s,MS4.5
ULN Ulaanbaatar 53.23 303 *eP* **P** **10 44 44.1 0.0**
comp=Z,11nm,0.8s,mb4.8
ULN Ulaanbaatar 53.23 303 *eP* **P** **10 44 43.5 -0.6**
ZAK Zakamensk 53.34 307 *eP* **P** **10 44 42.8 -2.0**
ZAK *e* 10 45 50.4
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
WVT Waverly 53.42 77 *eP* **P** **10 44 44.0 -1.7**
comp=Z,17nm,0.8s,mb5.0
SONM Songino Array 53.58 303 P **P** **10 44 46.9 +0.3**
comp=Z,2.6nm,0.6s,mb4.4,baz=3.9,slow=29,SNR=12
SONM LR LR 11 10 38.3
comp=Z,530nm,18.3s,MS4.6,baz=185,slow=39
OXF Oxford 53.66 80 *eP* **P** **10 44 45.4 -2.0**
comp=Z,47nm,0.8s,mb5.5
BJI Beijing 53.79 290 P **P** **10 44 47.0 -1.3**
BJI S **S** **10 52 18.3 -1.1**
BJI SS SS 10 56 00.5 +0.3
BJI AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
BJI AMB AMB
comp=Z,257nm,6.1s
BJI LR LR
comp=N,517nm,13.7s,MS4.8
BJI LR LR
comp=E,302nm,14.3s,MS4.8
BJI LR LR
comp=Z,231nm,19.0s,MS4.3
TZTN Tazewell 55.57 74 *eP* **P** **10 44 59.8 -1.4**
comp=Z,24nm,1.2s,mb5.1
HHC Hu-ho-hao-te 55.74 294 *eP* **P** **10 45 03.5 +1.1**
HHC AP pP 10 45 15.8 +0.6
HHC PP PP 10 47 10.0 +3.2
HHC PCS PcS 10 50 03.5 +2.1
HHC S **S** **10 52 44.0 -1.6**
HHC XS sS 10 53 05.5 -1.4
HHC SCS ScS 10 54 45.3 -2.1
HHC AMB AMB
comp=Z,25nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,273nm,6.3s
HHC LR LR
comp=N,318nm,15.5s,MS4.7
HHC LR LR
comp=E,381nm,16.6s,MS4.7
HHC LR LR
comp=Z,307nm,15.5s,MS4.5
KEV Kevo 56.21 356 *ep* **P** **10 45 03.9 -1.4**
comp=Z,12nm,0.9s,mb4.9
KEV Kevo 56.21 356 *eP* **P** **10 45 03.9 -1.4**
KEV pmax pmax
comp=Z,12nm,0.9s,mb4.9
ARCES ARCESS Array B 56.49 356 P **P** **10 45 06.0 -1.3**
comp=Z,4.1nm,0.8s,mb4.5,baz=10,slow=7.0,SNR=12
ARCES LR LR 11 08 40.2
comp=Z,248nm,19.1s,MS4.3,baz=355,slow=35
HVS Khovu-Aksy 57.11 313 *eP* **P** **10 45 11.8 -0.2**
NJ2 Nanjing 57.98 281 *eP* **P** **10 45 20.5 +2.1**
NJ2 AMB AMB
comp=Z,60nm,1.2s,mb5.5
ZALV Zalesovo Beam 58.59 320 P **P** **10 45 21.9 -0.4**
comp=Z,1.6nm,0.4s,mb4.5,baz=42,slow=7.0,SNR=6.3
ZALV LR LR 11 12 45.7
comp=Z,342nm,20.1s,MS4.5,baz=53,slow=38
WHN Wuhan 61.68 284 ⇑P P **P** **10 45 45.5 +1.7**
XAN Xi'an 62.13 290 P **P** **10 45 46.3 -0.5**
XAN AP pP 10 45 52.0 -7.7
XAN AMB AMB
comp=Z,5.0nm,1.0s,mb4.6
JOF Joensuu 62.75 353 *ep* **P** **10 45 48.2 -2.3**
comp=Z,5.5nm,0.7s,mb4.8
JOF Joensuu 62.75 353 *eP* **P** **10 45 48.2 -2.3**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
GTA Gaotai 62.95 300 *eP* **P** **10 45 51.8 -0.4**
GTA AP pP 10 46 04.5 -0.6
GTA XP sP 10 46 10.0 -0.3
GTA AMB AMB
comp=Z,8.0nm,1.1s,mb4.8
LZH Lanzhou 63.35 295 *eP* **P** **10 45 55.0 +0.1**
LZH AP pP 10 46 08.0 +0.1
LZH XP sP 10 46 12.5 -0.6
LZH AMB AMB
comp=Z,29nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,235nm,6.0s
KURK Kurchatov 63.47 321 *eP* **P** **10 45 55.1 -0.3**
comp=Z,7.9nm,0.8s,mb4.9
KURK Kurchatov 63.47 321 ⇑*iP* **P** **10 45 55.7 +0.3**
KURK pmax pmax
comp=Z,13nm,1.3s,mb4.9
SVE Sverdlovsk 63.80 335 *eP* **P** **10 45 58.1 +0.6**
SVE pmax pmax
comp=Z,13nm,0.9s,mb5.0
KAF Kangasniemi 63.86 355 *ep* **P** **10 45 56.4 -1.4**
comp=Z,15nm,0.8s,mb5.1,baz=1.4,slow=6.2
KAF Kangasniemi 63.86 355 *eP* **P** **10 45 56.4 -1.4**
KAF pmax pmax
comp=Z,15nm,0.8s,mb5.1
KLMR Klimovskoe 63.96 348 *eP* **P** **10 45 56.9 -1.6**
KLMR pmax pmax
comp=Z,12nm,1.1s,mb4.8
BRVK Borovoye 64.37 328 *eP* **P** **10 46 01.4 +0.1**
comp=Z,6.6nm,0.8s,mb4.7
ARU Arti 64.67 336 *eP* **P** **10 46 02.9 -0.3**
comp=Z,12nm,1.0s,mb4.9
ARU Arti 64.67 336 *c iP* **P** **10 46 02.7 -0.5**
ARU *e* 10 48 20.7
ARU *eS* **S** **10 54 41.6 +2.2**
ARU *e*SS SS 10 58 47.9 -1.8
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.9
NB2 NORSAR Subarra 65.09 3 P **P** **10 46 05.0 -0.8**
comp=Z,4.7nm,0.7s,mb4.6,baz=357,slow=6.5
NOA NORSAR Array B 65.09 3 P **P** **10 46 05.3 -0.5**
comp=Z,7.6nm,0.8s,mb4.8,baz=357,slow=6.6,SNR=23
NOA LR LR 11 15 02.9
comp=Z,75nm,19.1s,MS3.9,baz=305,slow=36
NOA NORSAR Array B 65.09 3 P **P** **10 46 05.3 -0.5**
NOA LR LR 11 15 02.9
MKAR Makanchi Array 65.24 317 P **P** **10 46 06.0 -1.0**
comp=Z,1.4nm,0.6s,mb4.2,baz=37,slow=7.4,SNR=5.7
MKAR LR LR 11 17 18.9
comp=Z,290nm,18.3s,MS4.5,baz=14,slow=38
WMQ Urumqi 65.32 311 *eP* **P** **10 46 09.0 +1.4**
WMQ PP PP 10 48 35.0 +3.8
WMQ S S 10 54 47.0 -0.9
WMQ SCS ScS 10 55 56.0 -2.8
WMQ SS SS 10 59 03.0 +2.5
WMQ AMB AMB
comp=Z,29nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,74nm,5.0s
WMQ LR LR
comp=N,256nm,17.0s,MS4.6
WMQ LR LR
comp=E,214nm,18.0s,MS4.6
WMQ LR LR
comp=Z,216nm,18.0s,MS4.4
TAOE Nuku Hiva Isla 65.67 155 *e*LR LR 11 05 51.5
comp=Z,2µm,22.7s
CD2 Chengdu 67.34 292 *eP* **P** **10 46 21.3 +0.6**
CD2 AP pP 10 46 34.3 +0.5
CD2 XP sP 10 46 39.5 +0.5
CD2 PP PP 10 48 51.3 +2.2
CD2 S S 10 55 11.3 -1.4
CD2 XS sS 10 55 33.0 -1.5
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.5
CD2 AMB AMB
comp=Z,60nm,4.8s
CD2 LR LR
comp=N,250nm,12.0s,MS4.8
CD2 LR LR
comp=E,260nm,14.4s,MS4.8
CD2 LR LR
comp=Z,310nm,13.2s,MS4.7
AFI Afiamalu 68.17 189 LR LR 11 09 09.5
comp=Z,286nm,19.8s,MS4.5,baz=34,slow=30
GYA Guiyang 69.15 286 P **P** **10 46 31.5 -0.7**
GYA AP pP 10 46 43.5 -1.8
GYA XP sP 10 46 48.5 -1.9
GYA PP PP 10 49 04.3 -0.7
GYA SCP 10 50 53.8
GYA PCS 10 50 59.0
GYA S S 10 55 28.0 -6.4
GYA XS sS 10 55 50.0 -6.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,80nm,7.2s
GYA LR LR
comp=N,300nm,18.2s,MS4.7
GYA LR LR
comp=E,210nm,17.6s,MS4.7
GYA LR LR
comp=Z,350nm,18.0s,MS4.6
OBN Obninsk 69.92 348⇑ *eP* **P** **10 46 36.4 -0.1**
OBN *e* 10 49 07.5
OBN *eS* S 10 55 42.6 0.0
OBN pmax pmax
comp=Z,14nm,0.9s,mb4.9
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.4
HNR Honiara 70.59 219 LR LR 11 15 16.1
comp=Z,134nm,18.3s,MS4.2,baz=23,slow=34
TKM2 Tokmak 2 71.11 318 *eP* **P** **10 46 44.7 +0.9**
comp=Z,6.2nm,1.0s,mb4.5
FRU Bishkek 71.56 319 *eP* **P** **10 46 48.0 +1.4**
AAK Ala-Archa 71.78 319 *eP* **P** **10 46 47.5 -0.4**
comp=Z,11nm,0.9s,mb4.8
SUW Suwalki 72.10 356 *eP* **P** **10 46 50.2 +0.6**
PPT Papeete 72.34 166 *e*LR LR 11 08 49.7
comp=Z,582nm,24.2s,baz=352
PPT Papeete 72.34 166 LR LR 11 10 55.9
comp=Z,333nm,19.4s,MS4.6,baz=325,slow=29
KMI Kunming 72.40 288 P **P** **10 46 51.3 -0.6**
KMI AP pP 10 47 03.8 -1.3
KMI S S 10 56 07.0 -5.1
KMI SS SS 11 00 50.5 +0.1
KMI AMB AMB
comp=Z,10.0nm,1.5s,mb4.5
KMI AMB AMB
comp=Z,172nm,6.1s
KMI LR LR
comp=N,175nm,18.7s,MS4.5
KMI LR LR
comp=E,194nm,17.9s,MS4.5
KMI LR LR
comp=Z,223nm,17.9s,MS4.5
CLL Collm 74.88 3 *i*P **P** **10 47 05.3 -0.8**
CLL pmax pmax
comp=Z,13nm,1.0s,mb4.8
CLL Collm 74.88 3 *i*P **P** **10 47 05.3 -0.8**
comp=Z,13nm,1.0s,mb4.8
UCC Uccle 74.91 8 P **P** **10 47 05.3 -0.9**
LSA Lhasa 74.97 300 P **P** **10 47 08.8 +1.9**
LSA Lhasa 74.97 300 *eP* **P** **10 47 08.4 +1.5**
comp=Z,14nm,0.9s,mb4.9
AKASG Malin Array Be 75.03 352 P **P** **10 47 06.0 -0.9**
comp=Z,15nm,0.8s,mb5.0,baz=8.4,slow=5.7,SNR=30
AKASG LR LR 11 21 23.3
comp=Z,215nm,20.4s,MS4.4,baz=10.0,slow=37
AKBB Malin Array Si 75.03 352 *eP* **P** **10 47 05.7 -1.2**
KIEV Kiev 75.04 352 *eP* **P** **10 47 05.8 -1.1**
comp=Z,14nm,0.8s,mb4.9
RAR Rarotonga 75.08 177 LR LR 11 14 21.1
comp=Z,205nm,18.9s,MS4.5,baz=286,slow=31
MEM Memba ch 75.23 7 P **P** **10 47 08.6 +0.6**
comp=Z,8.8nm,1.0s,mb4.6
BRG Berggiesshubel 75.34 2 *eP* **P** **10 47 08.5 -0.2**
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BRG Berggiesshubel 75.34 2 *eP* **P** **10 47 08.5 -0.2**
comp=Z,8.7nm,0.9s,mb4.7
DOU Dourbes 75.63 8 P **P** **10 47 10.0 -0.4**
BAIF Baives 75.64 8 *eP* **P** **10 47 11.2 +0.8**
comp=Z,15nm,0.8s,mb4.7
BAIF Baives 75.64 8 *eP* **P** **10 47 11.2 +0.8**
comp=Z,7.5nm,0.8s,mb4.7
GIVF Givet 75.64 8 *eP* **P** **10 47 11.0 +0.6**
PVCC Panska Ves 75.70 2 *eP* **P** **10 47 10.9 +0.2**
UPC Upice 75.73 1 *eP* **P** **10 47 11.9 +1.0**
PMG Port Moresby 75.89 231 *eP* **P** **10 47 10.5 -1.8**
comp=Z,11nm,1.0s,mb4.7
PMG Port Moresby 75.89 231 *eP* **P** **10 47 10.6 -1.6**
PMG pmax pmax
comp=Z,15nm,1.2s
DPC Dobruska-Polom 75.89 0 *eP* **P** **10 47 12.6 +0.7**
NKC Novy Kostel 75.94 3 *eP* **P** **10 47 12.6 +0.5**
WLF Walferdange 76.18 7 P **P** **10 47 12.6 -0.9**
PRU Pruhonice 76.24 2 *eP* **P** **10 47 14.8 +1.0**
KWP Kalwaria 76.50 356 *eP* **P** **10 47 16.9 +1.6**
STHS Stebnicka Huta 76.76 357 *eP* **P** **10 47 18.3 +1.5**
comp=Z,12nm,0.8s,mb4.9
STHS Stebnicka Huta 76.76 357 *eP* **P** **10 47 18.3 +1.5**
STHS pmax pmax
comp=Z,12nm,0.8s,mb4.9
KHC Kasperske Hory 77.08 2 *eP* **P** **10 47 19.4 +0.8**
comp=Z,9.3nm,0.9s,mb4.7
KHC Kasperske Hory 77.08 2 *eP* **P** **10 47 19.2 +0.6**
KHC *ep*P pP 10 47 32.7 +0.8
KOLS Kolonicke sedl 77.21 356 *eP* **P** **10 47 20.7 +1.4**
comp=Z,5.9nm,1.0s,mb4.5
KOLS Kolonicke sedl 77.21 356 *eP* **P** **10 47 20.7 +1.4**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CRVS Cervenica-Dubn 77.27 357 *eP* **P** **10 47 20.6 +0.9**
comp=Z,7.4nm,1.3s,mb4.5
CRVS Cervenica-Dubn 77.27 357 *eP* **P** **10 47 20.6 +0.9**
CRVS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
GERES GERESS Array B 77.36 2 P **P** **10 47 20.6 +0.4**
comp=Z,4.8nm,0.8s,mb4.5,baz=358,slow=4.1,SNR=22
GERES LR LR 11 22 29.3
comp=Z,105nm,21.0s,MS4.1,baz=98,slow=36
CDF Champ du Feu 77.51 7 *eP* **P** **10 47 21.7 +0.7**
comp=Z,18nm,1.1s,mb4.6
CDF Champ du Feu 77.51 7 *eP* **P** **10 47 21.7 +0.7**
comp=Z,9.2nm,1.1s,mb4.6
VYHS Vyhne 77.74 359 *eP* **P** **10 47 22.8 +0.5**
comp=Z,4.2nm,0.9s,mb4.4
VYHS Vyhne 77.74 359 *eP* **P** **10 47 22.8 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
HAU Haudompre 77.85 7 *eP* **P** **10 47 23.6 +0.7**
MODS Modra-Piesok 77.87 360 *eP* **P** **10 47 24.1 +1.1**
comp=Z,3.4nm,1.0s,mb4.2
MODS Modra-Piesok 77.87 360 *eP* **P** **10 47 24.1 +1.1**
MODS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
HINF Hinteralfeld 78.07 7 *eP* **P** **10 47 24.7 +0.5**
comp=Z,8.7nm,0.7s,mb4.5
HINF Hinteralfeld 78.07 7 *eP* **P** **10 47 24.7 +0.5**
comp=Z,4.3nm,0.7s,mb4.5
BUR08 Bucovina Ar. S 78.36 354 *eP* **P** **10 47 25.4 -0.3**
LOR Lormes 78.37 9 *eP* **P** **10 47 26.5 +0.7**
BURAR Bucovina Array 78.39 354⇓*iP* **P** **10 47 26.2 +0.3**
SSF Saint Saulge 78.54 9 *eP* **P** **10 47 27.3 +0.5**
comp=Z,12nm,0.8s,mb4.6
SSF Saint Saulge 78.54 9 *eP* **P** **10 47 27.3 +0.5**
comp=Z,6.2nm,0.8s,mb4.6
MFF Saint Martin d 78.60 12 *eP* **P** **10 47 27.8 +0.7**
TAPN Taplejung 78.63 301 *eP* **P** **10 47 28.2 +0.6**
AVF Avril sur Loir 78.80 9 *eP* **P** **10 47 28.5 +0.3**
comp=Z,7.4nm,0.8s,mb4.4
AVF Avril sur Loir 78.80 9 *eP* **P** **10 47 28.5 +0.3**
comp=Z,3.7nm,0.8s,mb4.4
SMF Signal de Mont 78.99 9 *eP* **P** **10 47 29.7 +0.5**
comp=Z,32nm,1.1s,mb4.8
SMF Signal de Mont 78.99 9 *eP* **P** **10 47 29.7 +0.5**
comp=Z,16nm,1.1s,mb4.9
GUN Gumba 79.08 303 *eP* **P** **10 47 30.8 +0.7**
comp=Z,38nm,0.8s,mb5.4
JIRN Jiri 79.13 302 *eP* **P** **10 47 30.5 +0.2**
comp=Z,44nm,0.4s,mb5.7
DRGR 79.33 356⇑*iP* **P** **10 47 32.5 +1.4**
KKN Kakani 79.48 303 *eP* **P** **10 47 32.2 0.0**
comp=Z,22nm,0.9s,mb5.1
RAMN Ramite 79.52 302 *eP* **P** **10 47 32.2 -0.2**
comp=Z,20nm,0.6s,mb5.2
PKI Pulchoki 79.59 303 *eP* **P** **10 47 32.8 -0.1**
GKN Gorkha 79.62 304 *eP* **P** **10 47 33.1 +0.1**
comp=Z,27nm,0.9s,mb5.2
DMN Daman 79.71 303 *eP* **P** **10 47 33.5 0.0**
DANN Dangsing 79.75 305 *eP* **P** **10 47 33.8 +0.1**
comp=Z,63nm,0.8s,mb5.6
CMAR Chiang Mai Arr 79.81 287 P **P** **10 47 34.4 +0.2**
comp=Z,6.4nm,0.9s,mb4.5,baz=15,slow=5.4,SNR=12
CMAR LR LR 11 26 59.0
comp=Z,101nm,18.6s,MS4.2,baz=217,slow=39
KOLN Koldanda 80.32 304 *eP* **P** **10 47 37.0 +0.2**
comp=Z,22nm,0.8s,mb5.1
RKT Rikitea 80.66 154 *e*LR LR 11 12 28.5
comp=Z,399nm,31.0s,baz=340
GZR Gura Zlata 80.73 356⇑*iP* **P** **10 47 40.3 +1.6**
MBDF Montbardon 81.14 7 *eP* **P** **10 47 42.0 +1.1**
SDV Santo Domingo 84.30 83 P **P** **10 47 56.2 -1.5**
comp=Z,2.9nm,0.7s,mb4.5,baz=108,slow=4.2,SNR=4.6
BRTR Keskin Array B 85.42 347 P **P** **10 48 02.7 -0.3**
comp=Z,3.1nm,0.9s,mb4.4,baz=29,slow=3.3,SNR=8.2
BRTR LR LR 11 30 29.1
comp=Z,132nm,18.9s,MS4.3,baz=327,slow=39
CTA Charters Tower 85.72 227 LR LR 11 18 13.0
comp=Z,52nm,21.9s,MS3.9,baz=48,slow=30
KAKA Kakadu 85.95 242 *eP* Px 10 47 48.6
comp=Z,9.5nm,0.8s
OTAV Otavalo 86.65 94 *eP* **P** **10 48 08.4 -1.0**
comp=Z,6.3nm,0.8s,mb4.9
HYB Hyderabad 91.52 303 *eP* **P** **10 48 32.0 -0.3**
HYB Hyderabad 91.52 303 *i*P **P** **10 48 32.0 -0.3**
ATAH Atahualpa 92.51 98 P **P** **10 48 36.8 -0.1**
comp=Z,5.1nm,0.9s,mb5.0,baz=303,slow=8.0,SNR=4.1
ARMA Armidale 92.85 218 *eP* **P** **10 48 38.5 +0.5**
ASAR Alice Springs 94.47 235 P **P** **10 48 44.0 -1.6**
comp=Z,1.8nm,0.9s,mb4.5,baz=26,slow=4.5,SNR=11
STKA Stephens Creek 98.05 225 LR LR 11 29 36.4
comp=Z,184nm,18.6s,MS4.6,baz=204,slow=33
RPZ Rata Peaks 99.95 199 LR LR 11 26 56.3
comp=Z,217nm,19.0s,MS4.7,baz=24,slow=31
QSPA South Pole Qui 143.90 180 PKhKP 10 54 54.2
comp=Z,3.3nm,0.7s,baz=291,slow=1.0,SNR=7.6
TSUM Tsumeb 145.13 359 *e*PKPbc PKPbc 10 55 01.0 -1.5
LBTB Lobatse 150.21 344 *e*PKPbc PKPbc 10 55 15.9 -0.4

IDC 30 10:45:17.1±1.8, 4695N×15534E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.5/21, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=95.7km s-min=32.0km az=117.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.35**	**13**	Pn	Pn	10 46 52.2	+0.4
	0.3nm,0.3s,baz=181,slow=12,SNR=6.0						
PETK				Sn	Sn	10 48 13.2	+8.2
	0.2nm,0.3s,baz=130,slow=25,SNR=3.0						
ASAR	**Alice Springs**	**72.91**	**201**	P	P	10 56 48.0	+0.2
	0.4nm,0.8s,baz=11,slow=5.4,SNR=5.1						
TXAR	**Lajitas Array**	**76.06**	**62**	P	P	10 57 06.5	+0.1
	0.6nm,0.6s,baz=298,slow=4.2,SNR=8.9						

NEIC 30 11:02:02.8, 3722S×17674E, h140km, MG4.8(WEL), 1D, After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.77**	**184**	P	Pn	11 02 35.8	+11
KUZ	**Kuaotunu**	**0.94**	**300**	⇓P	Pn	11 02 36.1	+10
KUZ				S	Sn	11 03 02.4	+19
MKRZ	**Makatiti**	**0.94**	**193**	P	Pn	11 02 37.5	+11
TAZ	**Tarawera**	**1.03**	**190**	P	Pn	11 02 37.7	+11
URZ	**Urewera**	**1.08**	**164**	P	Pn	11 02 36.8	+10
MKAZ	**Moumakai**	**1.26**	**274**	P	Pn	11 02 38.2	+9.1
MWZ	**Matawai**	**1.28**	**151**	P	Pn	11 02 38.4	+9.2
MWZ				P		11 02 38.7	
MXZ	**Matakaoa Point**	**1.29**	**106**	P	Pn	11 02 39.1	+10
MXZ				P		11 02 39.4	
PUZ	**Puketiti**	**1.48**	**126**	P	Pn	11 02 40.4	+9.1
OTAZ	**Otara**	**1.48**	**280**	P	Pn	11 02 40.2	+8.9
WATZ	**Wairara**	**1.69**	**208**	P	Pn	11 02 42.1	+8.5
HATZ	**Hinemaiaia**	**1.75**	**197**	P	Pn	11 02 42.0	+7.7
RATZ	**Rangitukua**	**1.81**	**205**	P	Pn	11 02 43.0	+7.9
RITZ	**Rihia Road**	**1.89**	**201**	P	Pn	11 02 43.8	+7.8
KATZ	**Kakaramea**	**1.94**	**205**	P	Pn	11 02 44.4	+7.9
KNZ	**Kokohu**	**1.94**	**158**	P	Pn	11 02 44.0	+7.4
BKZ	**Black Stump Fm**	**1.95**	**186**	P	Pn	11 02 43.2	+6.5
HIZ	**Hauiti**	**1.97**	**229**	P	Pn	11 02 44.3	+7.3
WTVZ	**West Tongariro**	**2.10**	**205**	P	Pn	11 02 45.2	+6.7
NGZ	**Ngauruhoe**	**2.15**	**204**	P	Pn	11 02 46.2	+7.1
TUVZ	**Tukino**	**2.22**	**202**	P	Pn	11 02 46.5	+6.6
FWVZ	**Far West T-bar**	**2.24**	**204**	P	Pn	11 02 47.0	+6.9
MOVZ	**Moawhango**	**2.32**	**199**	P	Pn	11 02 46.8	+5.7
VRZ	**Vera Road**	**2.46**	**219**	P	Pn	11 02 49.1	+6.2
WAZ	**Wanganui**	**2.88**	**208**	P	Pn	11 02 53.1	+4.9
TSZ	**Takapari Road**	**2.90**	**192**	P	Pn	11 02 52.5	+4.1
NEZ	**North Egmont**	**2.92**	**225**	P	Pn	11 02 55.0	+6.3
PKE	**Pukeiti**	**2.93**	**227**	P	Pn	11 02 55.0	+6.2
NWEZ	**Newall Road**	**3.05**	**227**	P	Pn	11 02 55.5	+5.1
BFZ	**Birch Farm**	**3.48**	**186**	P	Pn	11 02 58.5	+2.6
MRZ	**Mangatainoka R**	**3.56**	**194**	P	Pn	11 02 58.8	+1.9
KIW	**Kapiti Island**	**3.91**	**201**	P	Pn	11 03 03.0	+1.5
CAW	**Cannon Point**	**4.09**	**198**	P	Pn	11 03 05.0	+1.0
PAWZ	**Paruwai Farm**	**4.28**	**193**	P	Pn	11 03 07.0	+0.6
MRW	**Makara Radio**	**4.31**	**201**	P	Pn	11 03 07.4	+0.7
WEL	**Wellington**	**4.34**	**200**	P	Pn	11 03 07.8	+0.6
MSWZ	**Moikau Station**	**4.35**	**195**	P	Pn	11 03 07.6	+0.3
SNZO	**South Karori**	**4.38**	**201**	P	Pn	11 03 08.0	+0.3
TCW	**Tory Channel**	**4.42**	**205**	P	Pn	11 03 08.7	+0.4
BHW	**Baring Head**	**4.43**	**199**	P	Pn	11 03 08.6	+0.3
NNZ	**Nelson**	**4.77**	**212**	P	Pn	11 03 12.4	-0.5
QRZ	**Quartz Range**	**4.87**	**221**	P	Pn	11 03 13.4	-0.8
CMWZ	**Cape Campbell**	**4.93**	**203**	P	Pn	11 03 15.4	+0.4
BSWZ	**Blackbirch Sta**	**5.01**	**205**	P	Pn	11 03 15.6	-0.4
THZ	**Tophouse**	**5.42**	**212**	P	Pn	11 03 20.3	-1.3
KHZ	**Kahutara**	**5.75**	**204**	P	Pn	11 03 21.5	-1.4
DSZ	**Denniston Nort**	**5.92**	**219**	P	Pn	11 03 25.0	-3.2
CRLZ	**Canterbury Las**	**7.08**	**205**	P	Pn	11 03 41.0	-2.8
MQZ	**McQueen's Vall**	**7.19**	**204**	P	Pn	11 03 41.6	-3.6
WVZ	**Waitaha Valley**	**7.44**	**216**	P	Pn	11 03 45.3	-3.3
RPZ	**Rata Peaks**	**7.80**	**212**	P	Pn	11 03 49.7	-3.7
FOZ	**Fox Glacier**	**8.31**	**218**	P	Pn	11 03 54.9	-5.4
LBZ	**Lake Benmore**	**8.71**	**213**	P	Pn	11 04 01.2	-4.4
ODZ	**Otahua Downs**	**9.07**	**209**	P	Pn	11 04 06.5	-3.9
JCZ	**Jackson Bay**	**9.14**	**219**	P	Pn	11 04 06.0	-5.4
WKZ	**Wanaka**	**9.58**	**215**	P	Pn	11 04 11.5	-5.7
EAZ	**Earnscleugh**	**9.76**	**213**	P	Pn	11 04 14.1	-5.6
TUZ	**Tuapeka**	**10.22**	**209**	P	Pn	11 04 21.8	-3.9
MLZ	**Mavora Lakes**	**10.36**	**216**	P	Pn	11 04 22.7	-4.9
WHZ	**Wether Hill Ro**	**10.88**	**214**	P	Pn	11 04 28.9	-5.5

IDC 30 11:12:32.2±2.8, 246N×12670E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.4/17, mbtmp3.5/4, Error ellipse: s-maj=326.0km s-min=25.3km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.89**	**165**	P	P	11 18 15.1	+0.1
	0.2nm,0.4s,baz=344,slow=7.7,SNR=8.8						
MKAR	**Makanchi Array**	**58.58**	**326**	P	P	11 22 30.4	-0.5
	0.2nm,0.4s,baz=124,slow=6.4,SNR=3.4						
ZALV	**Zalesovo Beam**	**61.70**	**333**	P	P	11 22 51.6	-0.5
	0.5nm,0.4s,baz=120,slow=8.7,SNR=3.0						
KURK	**Kurchatov**	**62.79**	**328**	P	P	11 23 00.4	+1.0
	0.2nm,0.4s,baz=121,slow=6.7,SNR=4.0						

*ISCJB **30** 11:26:16.4±0.5, 24.80N±0.03×122.12E±0.02, h1km±5km, Error ellipse: s-maj=4.8km s-min=3.4km az=177.2*
*JMA **30** 11:26:16.8±0.1, 24.73N×121.97E, h40km, M2.6*
*TAP **30** 11:26:17.0, 24.82N×122.04E, h11km, ML3.0, C*

ISC 30 11:26:16.9±0.5, 24.81N±0.03×122.12E±0.03, h4km±5km, n35, σ0§76/49, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.23**	**329**	⇓*i* P	**Pg**	**11 26 21.7**	**+0.3**
	baz=344						
TWB1				*i* S	**Sg**	**11 26 24.7**	**+0.2**
	baz=344						
TWC	**Suao**	**0.32**	**231**	⇓*i* P	**Pg**	**11 26 22.9**	**-0.1**
	baz=220						
TWC				*e* S	**Sg**	**11 26 26.8**	**-0.4**
	baz=220						
ILA	**Ilan**	**0.34**	**263**	*e* P	**Pg**	**11 26 23.1**	**-0.4**
	baz=258						
NWF	**Wu-fen Shan**	**0.40**	**310**	⇓*i* P	**Pg**	**11 26 25.1**	**+0.4**
	baz=307						
NWF				*e* S	**Sg**	**11 26 30.2**	**+0.2**
	baz=307						
TWE	**Neicheng**	**0.42**	**258**	*i* P	**Pg**	**11 26 24.8**	**-0.2**
	baz=254						
TWE				S	**Sg**	**11 26 29.6**	**-0.9**
	baz=254						
ENA	**Nanau**	**0.51**	**222**	*e* P	**Pg**	**11 26 27.4**	**+0.6**
	baz=215						
TWA	**Mucha**	**0.52**	**289**	*e* P	**Pg**	**11 26 26.6**	**-0.2**
	baz=279						
TWA				*e* S	**Sg**	**11 26 32.9**	**-0.7**
	baz=279						
ENTT	**Nioudou**	**0.53**	**252**	P	**Pg**	**11 26 27.0**	**-0.2**
	baz=248						
ENTT				*e* S	**Sg**	**11 26 33.2**	**-0.8**
	baz=248						
TWY	**Chenhua**	**0.66**	**315**	*e* P	**Pg**	**11 26 30.0**	**+0.3**
	baz=315						
TWS1	**Kuangyinshan**	**0.70**	**295**	*e* P	**Pg**	**11 26 30.7**	**+0.3**
	baz=293						
NSK	**Sanguang**	**0.70**	**259**	*i* P	**Pg**	**11 26 29.7**	**-0.7**
	baz=257						
NSK				S	**Sg**	**11 26 37.9**	**-1.7**
	baz=257						
NNS	**Nan Shan**	**0.77**	**242**	P	**Pg**	**11 26 31.6**	**-0.2**
	baz=238						
TWD	**Chiawan**	**0.87**	**213**	*e* P	**Pg**	**11 26 33.6**	**0.0**
	baz=201						
TWD				*e* S	**Sg**	**11 26 44.6**	**-0.3**
	baz=201						
YOJ	**Yonaguni jima**	**0.88**	**113**	P	**Pg**	**11 26 34.5**	**+0.7**
YOJ				*e* S	**Sg**	**11 26 47.3**	**+2.1**
WHF	**Hehuan Shan**	**1.02**	**230**	P	**Pg**	**11 26 36.3**	**-0.2**
	baz=227						
WHF				*e* S	**Sg**	**11 26 49.5**	**-0.3**
	baz=227						
TWT	**Tachien**	**1.02**	**237**	P	**Pg**	**11 26 36.2**	**-0.3**
	baz=229						
NSTT	**Nanjuang**	**1.03**	**260**	*e* P	**Pg**	**11 26 37.0**	**+0.2**
	baz=260						
NSTT				*e* S	**Sg**	**11 26 51.5**	**+1.3**
	baz=260						
ESL	**Shilin**	**1.17**	**212**	*e* P	**Pn**	**11 26 38.9**	**-0.4**
	baz=218						
ESL				*e* S	**Sg**	**11 26 54.5**	**-0.1**
	baz=218						
TWQ1	**Liyutan**	**1.31**	**250**	*e* P	**Pn**	**11 26 41.3**	**-0.6**
	baz=262						
SMLT	**Sun Moon Lake**	**1.45**	**231**	*e* P	**Pn**	**11 26 44.1**	**+0.3**
	baz=232						
TYC	**Yuchr**	**1.46**	**232**	*e* P	**Pn**	**11 26 44.0**	**0.0**
	baz=222						
EHY	**Hungye**	**1.49**	**210**	*e* P	**Pn**	**11 26 44.7**	**+0.3**
	baz=204						
IRIF	**Iriomote-Funau**	**1.54**	**107**	P	**Pn**	**11 26 44.0**	**-1.1**
IRIF				*e* S	**Sn**	**11 27 04.3**	**-1.2**
TWF1	**Yuli**	**1.63**	**208**	*e* P	**Pn**	**11 26 47.1**	**+0.7**
	baz=219						
YUS	**Yu-Shan**	**1.69**	**219**	*e* P	**Pn**	**11 26 48.1**	**+0.9**
	baz=200						
HATJ	**Hateruma jima**	**1.71**	**116**	*e* S	**Sn**	**11 27 08.4**	**-1.3**
ALS	**Alishan**	**1.76**	**223**	*e* P	**Pn**	**11 26 49.5**	**+1.3**
	baz=202						
CHN5	**Tsauling**	**1.79**	**228**	*e* P	**Pn**	**11 26 49.9**	**+1.4**
	baz=231						
JKRS	**Kuro-shima**	**1.81**	**108**	P	**Pn**	**11 26 48.2**	**-0.7**
JKRS				*e* S	**Sn**	**11 27 11.1**	**-1.2**
JIJ	**Ishigaki jima**	**1.89**	**103**	P	**Pn**	**11 26 49.5**	**-0.5**
CHN4	**Tsaushan**	**2.01**	**224**	*e* P	**Pn**	**11 26 51.9**	**+0.3**
	baz=228						
STYT	**Tauyuan**	**2.06**	**218**	*e* P	**Pn**	**11 26 52.8**	**+0.5**
	baz=199						
WTP	**Ta-pu**	**2.08**	**222**	*e* P	**Pn**	**11 26 53.7**	**+1.2**
	baz=226						
CHN1	**Nanshi**	**2.17**	**222**	*e* P	**Pn**	**11 26 55.1**	**+1.3**
	baz=227						
SGST	**Jiashian**	**2.22**	**220**	*e* P	**Pn**	**11 26 54.7**	**+0.2**
	baz=199						

IDC 30 11:42:18.0±1.2, 319N×12688E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=65.8km s-min=27.4km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**27.56**	**166**	P	P	11 48 07.0	+0.2
	0.4nm,0.5s,baz=349,slow=7.7,SNR=12						
PETK	**Petropavlovsk-**	**55.87**	**22**	P	P	11 51 57.5	+0.2
	2.8nm,0.9s,baz=169,slow=3.0,SNR=4.6						
MKAR	**Makanchi Array**	**58.08**	**325**	P	P	11 52 13.2	+0.1
	0.4nm,0.5s,baz=125,slow=7.0,SNR=6.5						
TORD	**Torodi Ar. Bea**	**123.23**	**288**	PKP	PKPdf	12 01 17.3	-0.6
	0.2nm,0.5s,baz=50,slow=1.2,SNR=2.9						

*IDC **30** 11:44:29.1±1.0, 7.59N×93.71E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.8/20, mbtmp3.8/9, ML3.7/1, Error ellipse: s-maj=40.2km s-min=22.7km az=65.0*
*ISCJB **30** 11:44:33.4±7.2, 7.78N±0.1×94.0E±0.2, h33km±51km, mb3.9/10, Error ellipse: s-maj=32.5km s-min=14.2km az=159.8*
*NEIC **30** 11:44:34.6±0.6, 7.87N×93.98E, h35km, mb4.2/4, Error ellipse: s-maj=18.7km s-min=11.3km az=69.0*

ISC 30 11:44:35.0±2.5, 7.72N±0.10×93.9E±0.2, h39km±23km, n18, σ1§02/16, mb3.9/10, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**11.74**	**24**	*e* Pn	**Pn**	**11 47 16.9**	**-3.0**
	9.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**11.74**	**24**	Pn	**Pn**	**11 47 21.9**	**+1.9**
	0.1nm,0.3s,baz=170,slow=11,SNR=3.1						
KSM	**Kuching**	**17.45**	**110**	*e* Pn	**Pn**	**11 48 30.1**	**-5.5**
	19nm,0.7s						
COCO	**West Island**	**19.98**	**172**	*e* P	**Pn**	**11 49 06.3**	**+0.1**
	244nm,1.4s						
KKM	**Kota Kinabalu**	**22.18**	**93**	*e* P	**P**	**11 49 27.5**	**-0.5**
	11nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**40.20**	**348**	P	**P**	**11 52 07.7**	**+0.1**
MKAR	**Makanchi Array**	**40.20**	**348**	P	**P**	**11 52 09.5**	**+1.9**
	0.4nm,0.5s,mb3.4,baz=157,slow=7.7,SNR=4.1						
SONM	**Songino Array**	**41.36**	**13**	P	**P**	**11 52 17.6**	**+0.5**
	0.3nm,0.3s,mb3.4,baz=198,slow=9.9,SNR=2.9						
KURK	**Kurchatov**	**44.72**	**346**	*e* P	**P**	**11 52 40.5**	**-3.7**
	2.9nm,1.0s,mb4.1						
ZALV	**Zalesovo Beam**	**46.69**	**353**	P	**P**	**11 52 59.4**	**-0.4**
	1.0nm,0.4s,mb4.1,baz=184,slow=4.5,SNR=6.1						

WRAB	**Tennant Creek**	**48.34**	**125**	*e* P	**P**	**11 53 13.3**	**+0.2**
	1.5nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**49.97**	**130**	P	**P**	**11 53 25.9**	**+0.4**
	0.5nm,0.6s,baz=306,slow=7.9,SNR=9.7						
ASAR				PcP	PcP	11 54 45.9	+0.5
	0.4nm,0.6s,baz=302,slow=4.2,SNR=5.1						
ARCES	**ARCESS Array B**	**75.35**	**340**	P	**P**	**11 56 13.7**	**-0.4**
	2.3nm,0.8s,mb4.1,baz=104,slow=5.7,SNR=6.2						
HFS	**Hagfors**	**78.49**	**330**	P	**P**	**11 56 30.9**	**-1.0**
	0.7nm,0.4s,mb4.0,baz=91,slow=8.9,SNR=4.2						
NOA	**NORSAR Array B**	**79.77**	**331**	P	**P**	**11 56 39.0**	**+0.1**
	1.5nm,0.9s,mb3.9,baz=126,slow=8.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**90.44**	**283**	P	**P**	**11 57 33.0**	**-0.2**
	0.5nm,0.8s,mb3.9,baz=98,slow=5.9,SNR=2.8						
PDAR	**Pinedale Array**	**125.39**	**21**	PKP	PKPdf	12 03 32.8	+0.7
	0.4nm,0.6s,baz=95,slow=3.3,SNR=3.9						
TXAR	**Lajitas Array**	**139.45**	**24**	PKP	PKPdf	12 04 01.7	+2.8
	0.1nm,0.5s,baz=306,slow=3.0,SNR=2.7						

*IDC **30** 11:55:30.2±1.4, 9.18N×122.46E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=84.1km s-min=23.2km az=62.0*
*MAN **30** 11:55:32, 9.15N×122.23E, h31km, mb4.4, ML3.3, MS3.1*
*ISCJB **30** 11:55:33.2±0.6, 9.15N±0.03×122.24E±0.05, h35km±9km, mb3.8/7, Error ellipse: s-maj=7.8km s-min=5.5km az=159.3*
*NEIC **30** 11:55:34.7±0.6, 9.28N×122.39E, h35km, mb4.5/4, Error ellipse: s-maj=15.5km s-min=10.4km az=53.0*

ISC 30 11:55:32.4±1.8, 9.14N±0.04×122.28E±0.04, h18km±12km, n25, σ0§92/34, mb3.8/7, 2C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.97**	**78**	⇓*i* P	**Pb**	**11 55 50.0**	**-0.7**
SNPH				*i* S	**Sb**	**11 56 12.5**	**+9.3**
DCPH	**Dipolog City**	**1.20**	**117**	⇑*e* P	**Pn**	**11 55 53.2**	**-1.1**
IPIL	**Ipil**	**1.37**	**168**	*e* P	**Pn**	**11 55 56.7**	**0.0**
IPIL				*e* S	**Sn**	**11 56 13.3**	**-1.1**
GUIM	**Jordan**	**1.51**	**12**	*e* P	**Pn**	**11 55 57.8**	**-0.8**
GUIM				*e* S	**Sn**	**11 56 16.3**	**-1.6**
TBP	**Tagbilaran**	**1.66**	**71**	*e* P	**Pn**	**11 56 00.6**	**0.0**
TBP				*e* S	**Pb**	**11 56 02.8**	**+0.3**
PAGZ	**Pagadian**	**1.69**	**139**	*e* P	**Pn**	**11 56 01.5**	**+0.5**
PAGZ				*e* S	**Sn**	**11 56 22.3**	**+0.2**
LLP	**Lapu-Lapu**	**2.04**	**55**	*e* P	**Pn**	**11 56 06.1**	**+0.3**
LLP				*e* S	**Sn**	**11 56 31.4**	**+0.6**
CUYO	**Cuyo Island**	**2.10**	**324**	*e* P	**Pn**	**11 56 05.9**	**-0.9**
RCP	**Roxas**	**2.45**	**11**	⇑*e* P	**Pn**	**11 56 12.9**	**+1.4**
RCP				*e* S	**Sn**	**11 56 46.1**	**+5.0**
MSLP	**Maasin**	**2.73**	**69**	*e* P	**Pn**	**11 56 16.3**	**+0.9**
MSLP				*e* S	**Sn**	**11 56 48.4**	**+0.3**
BUKP	**Musuan**	**3.03**	**114**	*e* P	**Pn**	**11 56 23.4**	**+3.9**
OTRP	**Odiongan**	**3.21**	**356**	*e* P	**Pn**	**11 56 22.2**	**+0.2**
ENPP	**El Nido**	**3.48**	**306**	*e* P	**Pn**	**11 56 25.0**	**-0.7**
SJMP	**San Jose**	**3.49**	**341**	*e* P	**Pn**	**11 56 27.5**	**+1.6**
BUSP	**Coron**	**3.50**	**325**	*e* P	**Pn**	**11 56 20.2**	**-5.8**
BUSP				*e* S	**Sn**	**11 57 01.9**	**-5.2**
NACB	**Ninganchiao**	**14.97**	**358**	*e* Pn	**Pn**	**11 59 01.5**	**-1.7**
	18nm,0.8s						
QIZ	**Qiongzhong**	**15.55**	**311**	*e* Pn	**Pn**	**11 59 11.0**	**+0.1**
	66nm,1.6s						
GUMO	**Guam**	**22.58**	**77**	P	**P**	**12 00 31.1**	**-0.9**
	7.0nm,0.4s,mb4.4						
CMAR	**Chiang Mai Arr**	**24.45**	**295**	P	**P**	**12 00 51.4**	**+0.9**
	0.3nm,0.4s,mb3.1,baz=126,slow=9.3,SNR=4.1						
ASAR	**Alice Springs**	**34.53**	**161**	P	**P**	**12 02 20.4**	**+0.5**
	0.9nm,0.6s,mb3.9,baz=347,slow=7.4,SNR=17						
MKAR	**Makanchi Array**	**50.62**	**325**	P	**P**	**12 04 33.4**	**+3.1**
	0.2nm,0.6s,mb3.2,baz=118,slow=9.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**53.80**	**334**	P	**P**	**12 04 53.5**	**-0.3**
	0.2nm,0.3s,mb3.5,baz=131,slow=6.1,SNR=2.9						
KURK	**Kurchatov**	**54.83**	**328**	P	**P**	**12 05 02.6**	**+1.1**
	0.9nm,0.7s,mb3.9,baz=118,slow=9.2,SNR=4.3						
KURK	**Kurchatov**	**54.83**	**328**	*e* P	**P**	**12 05 01.0**	**-0.4**
	1.9nm,0.9s,mb4.1						
CASY	**Casey**	**75.71**	**185**	*e* P	**P**	**12 07 16.9**	**+0.4**
	12nm,1.1s,mb4.8						

TAP 30 12:08:45.8, 21.51N×121.05E, h16km±1km, ML3.7, 3C, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.41**	**341**	⇑*i* P	Pg	12 08 55.2	+1.0
	baz=335						
TSEB				*i* S	Sg	12 09 02.1	+2.4
	baz=335						
TWK1	**Hengchun**	**0.48**	**333**	⇑*i* P	Pg	12 08 56.0	+0.4
	baz=332						
TWK1				*i* S	Sg	12 09 02.9	+0.9
	baz=332						
HEN	**Hengchun**	**0.57**	**330**	⇑*i* P	Pg	12 08 57.8	+0.7
	baz=329						
HEN				*i* S	Sg	12 09 06.0	+1.2
	baz=329						
LAY	**Lan-yu**	**0.70**	**42**	*e* P	Pg	12 08 59.8	+0.1
	baz=41						
LAY				*e* S	Sg	12 09 10.3	+1.3
	baz=41						
TAW	**Tawu**	**0.85**	**351**	*e* P	Pb	12 09 02.5	+0.3
	baz=350						
TAW				*e* S	Sb	12 09 14.6	+1.1
	baz=350						
EAST	**Anshuo**	**0.89**	**348**	*e* P	Pb	12 09 02.6	-0.3
	baz=348						
EAST				*e* S	Sb	12 09 15.8	+1.4
	baz=348						
SCZT	**Fangliau**	**0.94**	**335**	*i* P	Pb	12 09 03.9	+0.1
	baz=335						
SCZT				*i* S	Sb	12 09 17.5	+1.4
	baz=335						
TWP	**Hsiaoliuchiu**	**1.04**	**323**	*e* P	Pb	12 09 06.6	+1.1
	baz=322						
ECL	**Taimali**	**1.08**	**356**	*e* P	Pb	12 09 03.7	-2.5
	baz=355						
SSD	**Sandimen**	**1.29**	**343**	*e* P	Pn	12 09 09.1	-0.1
	baz=342						
SSD				*e* S	Sb	12 09 26.9	+1.0
	baz=342						
TWG	**Pinlang**	**1.30**	**1**	*e* P	Pn	12 09 09.7	+0.4
	baz=1.0						
TWM1	**Shoushan**	**1.43**	**336**	*e* P	Pn	12 09 13.0	+2.0
	baz=336						
CHKT	**Chengkung**	**1.61**	**11**	*e* Pn	Pn	12 09 12.8	-0.7
	baz=10.0						
SGST	**Jiashian**	**1.62**	**345**	*e* P	Pn	12 09 13.9	+0.2
	baz=344						
SGST				*e* S	Sn	12 09 35.7	+1.4
	baz=344						
STYT	**Tauyuan**	**1.67**	**351**	*e* P	Pn	12 09 14.4	+0.1
	baz=350						
STYT				*e* S	Sn	12 09 37.4	+2.0
	baz=350						
ELDTW	**Lidau**	**1.67**	**359**	*e* P	Pn	12 09 15.8	+1.4
	baz=359						
CHN1	**Nanshi**	**1.73**	**344**	*e* P	Pn	12 09 15.5	+0.2
	baz=343						
WTP	**Ta-pu**	**1.77**	**347**	*e* P	Pn	12 09 16.2	+0.4
	baz=346						
TWK	**Hsinying**	**1.82**	**344**	*e* P	Pn	12 09 18.4	+1.9
	baz=343						
TWF1	**Yuli**	**1.85**	**7**	*e* P	Pn	12 09 16.1	-0.7
	baz=7.0						
CHN4	**Tsaushan**	**1.88**	**347**	*e* P	Pn	12 09 18.9	+1.6
	baz=347						
YUS	**Yu-Shan**	**1.97**	**358**	*e* P	Pn	12 09 20.4	+1.9
	baz=357						
ALS	**Alishan**	**2.00**	**354**	*e* P	Pn	12 09 19.7	+0.7
	baz=353						
EHY	**Hungye**	**2.00**	**7**	*e* P	Pn	12 09 19.4	+0.5
	baz=7.0						
CHN5	**Tsauling**	**2.10**	**351**	*e* P	Pn	12 09 20.6	+0.2
	baz=350						
ESL	**Shilin**	**2.32**	**9**	*e* P	Pn	12 09 24.6	+1.3
	baz=8.0						
ESL				*e* S	Sn	12 09 51.7	+0.2
	baz=8.0						
SMLT	**Sun Moon Lake**	**2.36**	**357**	*e* P	Pn	12 09 24.0	0.0
	baz=356						
TYC	**Yuchr**	**2.39**	**356**	*e* P	Pn	12 09 24.5	+0.2
	baz=355						
WHF	**Hehuan Shan**	**2.63**	**4**	*e* P	Pn	12 09 27.5	-0.1
	baz=4.0						
NNS	**Nan Shan**	**2.93**	**6**	*e* P	Pn	12 09 33.5	+1.7
	baz=5.0						
NSK	**Sanguang**	**3.16**	**5**	*e* P	Pn	12 09 34.5	-0.5
	baz=5.0						

NNC 30 12:08:53.7±4.4, 4995N×8761E, h0km, mb3.5, mpv3.1, 4C-4D, Error ellipse: s-maj=33.1km s-min=19.1km az=81.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.74**	**230**	⇓Pn	Pn	12 10 10.5	+4.1
	3.4nm,0.8s,baz=48,slow=13,SNR=21						
MK31				⇑Sn	Sn	12 11 07.9	+5.9
	1.5nm,0.3s,baz=52,slow=23,SNR=5.6						
MK31				Lg		12 11 24.1	
	17nm,0.8s,baz=48,slow=27,SNR=11						
KURK	**Kurchatov**	**5.81**	**281**	⇓Pn	Pn	12 10 19.2	-1.8
	4.0nm,1.2s						
KURK				⇑Sn	Sn	12 11 31.6	+3.4
	2.6nm,0.6s						
KURK				⇓Lg		12 11 57.3	
	9.5nm,0.7s						
KURBB	**Kurchatov Arra**	**5.86**	**280**	⇑Pn	Pn	12 10 19.9	-1.8
	0.8nm,0.8s,baz=87,slow=15						
KURBB				⇑Sn	Sn	12 11 30.6	+1.1
	0.9nm,0.6s						
KURBB				⇓Lg		12 11 58.9	
	2.9nm,0.7s,baz=95,slow=32						

*IDC **30** 12:21:05.6±1.7, 13.42S×166.59E, h0km, mb4.1/5, mb1 4.3/6, mb1mx4.0/17, mbtmp4.2/6, ML4.9/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/28, Error ellipse: s-maj=50.1km s-min=42.2km az=133.0*
*NEIC **30** 12:21:05.3±1.0, 14.09S×166.40E, h10km, mb4.6/5, Error ellipse: s-maj=26.6km s-min=20.7km az=58.0*
*ISCJB **30** 12:21:11.5±1.0, 13.75S±0.1×165.8E±0.1, h33km, mb4.3/9, MS3.2/1, Error ellipse: s-maj=25.2km s-min=11.4km az=135.9*

ISC 30 12:21:12.6±1.0, 136S±02×166.1E±02, h35km, n20, σ1§29/16, mb4.3/9, MS3.1/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.25**	**304**	Pn	**Pn**	**12 22 57.9**	**+1.8**
	18nm,0.3s,baz=209,slow=3.2,SNR=7.6						
HNR				Sn	**Sn**	**12 24 16.6**	**-0.7**
	8.4nm,0.3s,baz=163,slow=20,SNR=2.3						
HNR				LR	LR	12 25 30.8	
	comp=Z,125nm,20.5s,baz=178,slow=35						
DZM	**Mont Dzumac**	**8.47**	**177**	*e* P	**Pn**	**12 23 17.4**	**+4.5**
CTA	**Charters Tower**	**20.02**	**248**	LR	LR	12 31 56.9	
	comp=Z,62nm,21.9s,MS2.9,baz=56,slow=32						
CTAO	**Charters Tower**	**20.02**	**248**	*e* P	**Pn**	**12 25 39.3**	**-5.2**
	10nm,1.1s						
WRAB	**Tennant Creek**	**30.97**	**254**	P	**P**	**12 27 25.8**	**-1.0**
	23nm,2.2s,mb4.6						
ASAR	**Alice Springs**	**32.01**	**247**	P	**P**	**12 27 38.1**	**+2.3**
	1.9nm,0.6s,mb4.1,baz=73,slow=9.6,SNR=47						
ASAR				PcP	PcP	12 30 26.2	+0.8
	0.8nm,0.9s,baz=73,slow=2.2,SNR=6.4						
GUMO	**Guam**	**34.17**	**321**	LR	LR	12 39 50.3	
	comp=Z,51nm,21.2s,MS3.2,baz=85,slow=33						
MBWA	**Marble Bar**	**44.72**	**254**	*e* P	**P**	**12 29 21.0**	**-1.8**
	66nm,1.8s,mb5.2						
VNDA	**Vanda**	**64.00**	**181**	*e* P	**P**	**12 31 33.1**	**-9.0**
	2.0nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**73.39**	**294**	P	**P**	**12 32 43.6**	**+2.0**
	0.3nm,0.3s,mb3.7,baz=132,slow=5.0,SNR=5.3						
SONM	**Songino Array**	**80.86**	**324**	P	**P**	**12 33 22.5**	**-0.4**
	0.7nm,0.8s,mb3.6,baz=116,slow=3.4,SNR=3.4						
SNAA	**Sanae**	**94.64**	**184**	*e* P	**P**	**12 34 24.8**	**-4.8**
	4.7nm,1.3s,mb4.8						
VNA3	**Neumayer Olymp**	**95.35**	**181**	*e*	**P**	**12 34 32.7**	**-0.2**
VNA3				*e*	pP	12 34 44.2	+0.2
MKAR	**Makanchi Array**	**95.54**	**317**	P	**P**	**12 34 34.0**	**0.0**
	0.4nm,0.5s,mb4.1,baz=88,slow=6.2,SNR=4.3						
VNA2	**Neumayer--Watz**	**95.60**	**182**	*e*	**P**	**12 34 34.5**	**+0.5**
	baz=182,slow=5.8						
VNA2				*e*	pP	12 34 46.5	+1.3
ZALV	**Zalesovo Beam**	**95.75**	**324**	P	**P**	**12 34 33.4**	**-1.4**
	0.8nm,0.6s,mb4.3,baz=96,slow=6.0,SNR=5.1						
ARCES	**ARCESS Array B**	**118.83**	**345**	PKP	PKPdf	12 39 55.0	-1.7
	3.5nm,0.9s,baz=44,slow=3.7,SNR=5.6						
ARCES	**ARCESS Array B**	**118.83**	**345**	PKP	PKPdf	12 39 55.0	-1.7
TORD	**Torodi Ar. Bea**	**164.77**	**270**	PKP	PKPdf	12 41 12.2	-1.7
	0.7nm,1.0s,baz=7.3,slow=1.2,SNR=3.7						

*NNC **30** 12:31:20.6±4.3, 37.74N×67.23E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=49.1km s-min=25.3km az=167.0*
*ISCJB **30** 12:31:24.2±1.4, 38.05N±0.07×67.2E±0.1, h10km, Error ellipse: s-maj=16.1km s-min=8.8km az=159.2*

ISC 30 12:31:26.4±1.4, 38.04N±0.07×67.1E±0.1, h10km, n5, σ1§28/8, 3C-1D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.67**	**26**	⇑Pn	**Pn**	**12 32 51.7**	**+1.0**
	0.4nm,0.2s,baz=203,slow=16,SNR=23						
KK31				Pg	**Pg**	**12 33 11.3**	**-3.7**
	1.8nm,0.3s,baz=210,slow=20,SNR=12						
KK31				Lg		12 34 24.9	
	15nm,0.5s,baz=206,slow=29,SNR=7.8						
CEP	**Cherat**	**5.72**	**136**	P	**Pn**	**12 32 53.0**	**+1.7**
CEP				S	**Sn**	**12 33 56.0**	**-1.0**
TKM2	**Tokmak 2**	**8.08**	**50**	⇑Pn	**Pn**	**12 33 22.5**	**-1.2**
	1.6nm,0.3s						
TKM2				⇑Sn	**Sn**	**12 34 56.1**	**+1.0**
	2.7nm,0.7s						
AB09	**Akbulak array**	**12.37**	**337**	⇓Pn	**Pn**	**12 34 23.0**	**+0.6**
	0.7nm,0.6s						
BVA0	**Borovoye Array**	**15.15**	**8**	Pn	**Pn**	**12 34 58.7**	**-1.6**
	0.7nm,1.1s,baz=180,slow=11,SNR=9.3						

*NNC **30** 13:20:02.8±5.0, 37.03N×70.54E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=46.8km s-min=30

KBK	**Karagaybulak**	5.56	31	P		Pn	13 21 43.1	+1.3	
	SNR=14								
FRU	**Bishkek**	5.58	28	*e*PN		Pn	13 21 44.0	+1.9	
FRU				*i*			13 21 57.0		
FRU				*i*			13 22 06.0		
FRU				*i*			13 22 52.0		
FRU				pmax	pmax				
	comp=Z,120nm,1.8s								
FRU				smax					
	comp=E,540μm,2.0s								
CHMS	**Chumysh**	5.77	28	P		Pn	13 21 45.6	+0.8	
	SNR=20								
USP	**Ospenovka**	5.92	25	P		Pn	13 21 51.0	+4.3	
	SNR=6.1								
TKM2	**Tokmak 2**	6.05	34	⇑Pn		Pn	13 21 49.8	+1.3	
	comp=E,25nm,1.1s								
TKM2				⇑Sn		Sb	13 23 11.4	-5.6	
	comp=E,22nm,0.7s								
TKM2	**Tokmak 2**	6.05	34	*e*PN		Pn	13 21 49.3	+0.7	
TKM2	**Tokmak 2**	6.05	34	P		Pn	13 21 49.5	+0.9	
	SNR=18								
THN	**Thein Dam**	6.72	144	*e*P		Pn	13 22 03.6	+5.8	
DLH	**Dalhousie**	6.75	142	*ex*		Pb	13 22 20.0	+3.5	
DLH				*ex*		Sb	13 23 27.0	-10	
KLP	**Kalpa**	8.74	135	*e*P		Pn	13 22 31.3	+5.7	
KLP				*e*S		Sn	13 24 05.4	+1.3	
KLP				AML		AML	13 24 13.6		
	comp=E,125nm,0.6s								
KLP				AML		AML	13 24 13.6		
	comp=N,101nm,0.6s								
DDI	**Dehra Dun**	9.59	141	*e*P		Pn	13 22 46.0	+8.9	
DDI				*ex*		Sn	13 24 32.9	+8.0	
JOSI	**Joshimath**	10.21	134	*e*P		Pn	13 22 51.9	+6.1	
JOSI				*e*S		Sn	13 24 40.3	0.0	
JOSI				AML		AML	13 24 51.1		
	comp=E,77nm,0.8s								
JOSI				AML		AML	13 24 54.2		
	comp=N,85nm,0.4s								
NDI	**New Delhi**	10.60	149	*ex*		x	13 24 44.0		
KHET	**Khetri**	10.64	157	*e*S		Sn	13 24 52.2	+1.3	
KHET				AML		AML	13 25 45.0		
	comp=E,7.7nm,1.2s								
KHET				AML		AML	13 25 45.5		
	comp=N,7.2nm,0.1s								
MK31	**Makanchi Array**	12.12	40	Pn		Pn	13 23 11.3	-0.4	
	comp=N,7.9nm,0.8s,baz=224,slow=14,SNR=22								
MK31	**Makanchi Array**	12.12	40	*e*P		Pn	13 23 10.4	-1.3	
MKAR	**Makanchi Array**	12.12	40	Pn		Pn	13 23 10.8	-0.9	
	comp=N,0.4nm,0.3s,baz=229,slow=14,SNR=16								
KURK	**Kurchatov**	13.85	21	Pn		Pn	13 23 30.8	-4.4	
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=3.3								
KURK				Lg			13 27 24.8		
	comp=N,0.0nm,0.3s,baz=212,slow=23,SNR=4.0								
AB09	**Akbulak array**	13.85	328	⇓Pn		Pn	13 23 33.0	-2.3	
	comp=N,2.6nm,0.6s								
AB09				⇑Sn		Sn	13 26 05.9	-3.1	
	comp=N,4.6nm,0.6s								
DANN	**Dangsing**	14.32	128	*e*P		Pn	13 23 41.9	0.0	
KOLN	**Koldanda**	14.64	130	*e*P		Pn	13 23 43.5	-2.8	
BVA0	**Borovoye Array**	15.07	359	⇓Pn		Pn	13 23 50.0	-1.9	
	comp=N,0.9nm,1.0s,baz=162,slow=16,SNR=8.1								
BVAR	**Borovoye Array**	15.07	359	Pn		Pn	13 23 51.0	-0.9	
	comp=N,0.4nm,0.3s,baz=164,slow=12,SNR=8.1								
BRVK	**Borovoye**	15.10	358	*e*Pn		Pn	13 23 52.9	+0.5	
	comp=N,2.2nm,0.6s								
BRVK	**Borovoye**	15.10	358	*e*P		Pn	13 23 52.9	+0.6	
BRVK				pmax	pmax				
	comp=Z,2.0nm,0.6s								
GKN	**Gorkha**	15.12	127	*e*P		Pn	13 23 52.4	-0.3	
AKTK	**Aktyubinsk**	15.54	327	Pn		Pn	13 23 57.6	-0.5	
AKTK				Sn		Sn	13 26 42.5	-7.7	
AKTK				LR		LR	13 30 31.8		
AKTO	**Aktyubinsk**	15.54	327	Pn		Pn	13 23 57.6	-0.5	
	comp=Z,0.2nm,0.3s,baz=113,slow=8.4,SNR=3.0								
AKTO				Sn		Sn	13 26 42.5	-7.7	
	comp=Z,0.1nm,0.3s,baz=179,slow=21,SNR=2.2								
AKTO				LR		LR	13 30 31.8		
	comp=Z,119nm,21.6s,baz=244,slow=39								
AKTO	**Aktyubinsk**	15.54	327	P		Pn	13 23 57.7	-0.4	
AKTO							13 26 42.5		
KKN	**Kakani**	15.67	126	*e*P		Pn	13 23 58.0	-2.0	
DMN	**Daman**	15.69	127	*e*P		Pn	13 23 58.2	-2.0	
GUN	**Gumba**	15.98	125	*e*P		Pn	13 24 03.8	-0.1	
JIRN	**Jiri**	16.35	125	*e*P		Pn	13 24 06.7	-2.0	
RAMN	**Ramite**	17.10	125	*e*P		Pn	13 24 14.4	-3.8	
	comp=Z,15nm,0.5s								
TAPN	**Taplejung**	17.56	122	*e*P		Pn	13 24 20.9	-3.0	
ODAN	**Odare**	17.67	124	*e*P		Pn	13 24 20.6	-4.8	
	comp=Z,21nm,0.7s								
ZAA0	**Zalesovo Array**	18.58	26	*e*Pn		Pn	13 24 34.1	-2.2	
ZALV	**Zalesovo Beam**	18.58	26	Pn		Pn	13 24 32.9	-3.4	
	comp=Z,0.5nm,0.3s,baz=215,slow=11,SNR=15								
ZALV				Sn		Sn	13 28 03.0	-0.9	
	comp=Z,0.1nm,0.3s,baz=237,slow=16,SNR=2.7								
ZALV	**Zalesovo Beam**	18.58	26	Pn		Pn	13 24 32.9	-3.4	
ZALV				Sn		Sn	13 28 03.0	-0.9	
ARU	**Arti**	20.26	340	*e*P		P	13 24 55.7	+1.3	
	comp=Z,1.6nm,0.4s								
ARU	**Arti**	20.26	340	*e*P		P	13 24 55.7	+1.3	
ARU				pmax	pmax				
	comp=Z,2.0nm,0.4s								
GTA	**Gaotai**	22.48	77	*e*P		P	13 25 20.3	+1.9	
GTA				AP			13 25 24.0		
GTA				XP		sP	13 25 27.5	+4.9	
GTA				AMB		AMB			
	comp=E,5.0nm,0.8s,mb4.0								
SONM	**Songino Array**	27.51	58	P		P	13 26 07.0	+1.5	
	comp=Z,0.5nm,0.6s,mb3.3,baz=261,slow=8.6,SNR=4.0								
ARCES	**ARCESS Array B**	39.81	337	P		P	13 27 53.3	+1.4	
	comp=Z,1.8nm,0.7s,mb3.9,baz=99,slow=7.9,SNR=6.6								
NOA	**NORSAR Array B**	43.23	322	P		P	13 28 22.7	+2.6	
	comp=Z,2.1nm,0.9s,mb3.9,baz=94,slow=7.7,SNR=3.7								
TIXI	**Tiksi**	44.41	23	*e*P		P	13 28 29.5	0.0	
	comp=Z,2.8nm,0.5s,mb4.2								
TIXI	**Tiksi**	44.41	23	*e*P		P	13 28 29.5	0.0	
TIXI				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.3								
TORD	**Torodi Ar. Bea**	65.79	268	P		P	13 31 07.2	+2.5	
	comp=Z,1.6nm,0.5s,mb4.3,baz=46,slow=5.4,SNR=21								
YKA	**Yellowknife Ar**	79.78	3	P		P	13 32 29.3	+2.3	
	comp=Z,0.5nm,0.7s,mb3.5,baz=350,slow=6.2,SNR=2.6								
ASAR	**Alice Springs**	85.07	125	P		P	13 32 55.0	-0.1	
	comp=Z,0.3nm,0.8s,mb3.5,baz=320,slow=4.8,SNR=3.9								

*IDC **30** 13:22:57.0±1.1, 2289S×7055W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/14, mbtmp4.0/3, Error ellipse: s-maj=46.4km s-min=37.9km az=84.0*
*ISCJB **30** 13:23:00.0±0.7, 2283S±003×7075W±005, h33km, mb4.2/5, Error ellipse: s-maj=6.9km s-min=4.8km az=4.0*
*NEIC **30** 13:23:00.8±1.0, 2292S×7075W, h35km, mb4.7/2, Error ellipse: s-maj=23.7km s-min=13.1km az=89.0*
*GUC **30** 13:23:01.3±0.7, 2286S×7058W, h35km±3km, ML4.0*

ISC 30 13:23:01.3±0.6, 2285S±003×7067W±006, h35km, n19, σ1§17/26, mb4.2/5, 1C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MECH	**Mejillones**	0.33	141	⇓*i*P		Pn	13 23 08.3	-1.4
MECH				*i* S		Sn	13 23 14.2	-1.2
MECH				AML		AML	13 23 14.9	
	comp=N,36μm,0.4s							
CEN1	**Los Morros**	0.69	141	⇑*i*P		Pn	13 23 15.2	+0.5
CEN1				*i* S		Sn	13 23 25.3	+1.1
TOCH	**Tocopilla**	0.86	30	⇓*i*P		Pn	13 23 16.6	-0.4
TOCH				*i* S		Sn	13 23 27.9	-0.5
TOCH				AML		AML	13 23 29.7	
	comp=E,11μm,0.4s							
ANCH	**Antofagasta**	0.87	164	⇓*i*P		Pn	13 23 16.3	-0.7
ANCH				*i* S		Sn	13 23 27.8	-0.7
ANCH				AML		AML	13 23 33.8	
	comp=N,5μm,0.5s							
PECH	**Pedro de Valdi**	0.95	75	⇓*i*P		Pn	13 23 17.5	-0.7
PECH				*i* S		Sn	13 23 29.7	-0.9
PECH				AML		AML	13 23 31.9	
	comp=E,10μm,0.2s							
MACH	**Maria Elena**	1.06	53	*e*P		Pn	13 23 19.6	-0.2
MACH				*i* S		Sn	13 23 33.4	+0.1
LVC	**Limon Verde**	1.64	82	⇓*i*Pn		Pn	13 23 28.9	+1.2
LVC				*e*Sn		Sn	13 23 49.5	+1.9
LVC	**Limon Verde**	1.64	82	⇓*i*P		Pn	13 23 28.9	+1.2
LVC				*i* S		Sn	13 23 49.5	+1.9
CPN1	**Cerro Paranal**	1.79	172	AML		AML	13 23 58.4	
	comp=E,3μm,0.5s							
LCO	**Las Campanas**	6.14	180	*e*Pn		Pn	13 24 29.6	0.0
	comp=E,13nm,0.4s							
LCO				*e*Sn		Sn	13 25 57.2	+19
ARE	**Arequipa**	6.40	353	*e*P		Pn	13 24 34.0	+0.9
ARE				*e*S		Sn	13 25 43.0	-1.9
AOPR	**Arecibo Observ**	41.12	6	P		P	13 30 42.3	+0.2
	comp=E,8.6nm,0.6s,mb4.6							
TXAR	**Lajitas Array**	60.83	327	P		P	13 33 12.3	+2.2
	comp=E,0.2nm,0.5s,mb3.5,baz=157,slow=8.1,SNR=4.0							
TXAR	**Lajitas Array**	60.83	327	P		P	13 33 12.3	+2.2
SNAA	**Sanae**	61.56	161	*e*P		P	13 33 12.1	-2.5
	comp=E,7.9nm,1.3s,mb4.7							
QSPA	**South Pole Qui**	67.35	180	P		P	13 33 54.7	+2.4
	comp=E,1.2nm,0.5s,mb4.2,baz=159,slow=5.4,SNR=3.7							
TORD	**Torodi Ar. Bea**	79.34	71	P		P	13 35 04.5	+0.5
	comp=E,2.5nm,0.8s,mb4.2,baz=252,slow=5.2,SNR=18							
ASAR	**Alice Springs**	127.96	209	PKP		PKPdf	13 42 03.2	-1.0
	comp=E,0.3nm,0.7s,baz=143,slow=1.8,SNR=6.2							
MKAR	**Makanchi Array**	147.67	36	PKPbc		PKPbc	13 42 43.6	+1.5
	comp=E,0.9nm,0.7s,baz=322,slow=3.1,SNR=5.3							

*TEH **30** 13:31:34.1, 2693N×5478E, h16km, ML3.9*
*IDC **30** 13:32:55.6±1.1, 2693N×5473E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, Error ellipse: s-maj=24.8km s-min=17.3km az=172.0*
*ISCJB **30** 13:32:56.8±0.3, 2697N±003×5469E±004, h10km, mb3.9/16, Error ellipse: s-maj=4.7km s-min=4.3km az=140.5*
*CSEM **30** 13:32:57.1±0.1, 2678N×5472E, h20km, mb3.9/3, Error ellipse: s-maj=4.1km s-min=2.8km az=169.0*
*MOS **30** 13:32:58.9±1.1, 2698N×5474E, h33km, mb4.2/4, Error ellipse: s-maj=16.9km s-min=13.5km az=85.4*
*THR **30** 13:32:59.3±0.3, 2676N×5490E, h38km±3km, ML3.7*
*NEIC **30** 13:33:02.4, 2700N×5480E, h21km, mb3.9/4, ML3.9(TEH), After TEH.*

ISC 30 13:32:58.5±0.3, 2694N±003×5473E±003, h10km, n78, σ1§39/86, mb3.9/16, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	1.36	70	*e*Pg		Pn	13 33 23.4	-0.2
BNDS				AML		AML	13 33 51.4	
	comp=N,2μm,0.5s							
BNDS				AML		AML	13 33 54.7	
	comp=E,1μm,0.3s							
BNDS	**Bandar-Abbas**	1.36	70	*e*Pg		Pn	13 33 23.4	-0.2
	SNR=100							
BNDS				*e*Sg		Sg	13 33 41.3	-1.1
	SNR=100							
IBND	**Bandar-abas**	1.69	72	*e*Pn		Pn	13 33 29.6	+1.5
IBND	**Bandar-abas**	1.69	72	*e*Pn		Pn	13 33 29.6	+1.5
IBND				*e*			13 34 14.8	
GHIR	**Ghir-Karzin**	2.05	311	*e*Pn		Pg	13 33 36.4	-1.4
GHIR				*e*Sg		Sg	13 34 09.4	+5.1
GHIR				AML		AML	13 34 14.8	
	comp=N,501nm,0.5s							
GHIR				AML		AML	13 34 19.1	
	comp=E,459nm,0.4s							
GHIR	**Ghir-Karzin**	2.05	311	*e*Pn		Pg	13 33 36.4	-1.4
	SNR=54							
GHIR				*e*Sg		Sg	13 34 09.4	+5.1
	comp=E,459nm,0.4s,SNR=95							
NAZ	**Nazwa, Dubai**	2.12	156	Pn		Pn	13 33 34.9	+0.9
FAQ	**Al Faqa, Dubai**	2.32	160	Pn		Pn	13 33 37.6	+0.9
FAQ				Sn		Sn	13 34 07.2	+1.9
ASUD	**Al Ashush, Dub**	2.37	167	Pn		Pn	13 33 38.8	+1.4
	SNR=14							
HATD	**Hatta, Dubai**	2.46	149	Pn		Pn	13 33 39.5	+0.9
	SNR=8.8							
IMOK	**Mouk**	2.75	320	*e*Pn		Pn	13 33 45.4	+2.7
IMOK	**Mouk**	2.75	320	*e*Pn		Pn	13 33 45.4	+2.7
IMOK				*e*			13 34 48.3	
ISRV	**Sarvestan**	2.82	330	*e*Pn		Pn	13 33 46.4	+2.8
ISRV	**Sarvestan**	2.82	330	*e*Pn		Pn	13 33 46.4	+2.8
ISRV				*e*			13 34 58.2	
IPAR	**Pars**	3.25	333	*e*Pn		Pn	13 33 51.9	+2.4
IPAR				*e*Sn		Sn	13 34 29.2	+0.9
IPAR	**Pars**	3.25	333	*e*Pn		Pn	13 33 51.9	+2.4
IPAR				*e*Sn		Sn	13 34 29.2	+0.9
IPAR				*e*			13 35 09.0	
KRBR	**Kerman**	3.52	30	*e*Pn		Pn	13 33 55.0	+1.7
KRBR				AML		AML	13 34 42.5	
	comp=N,129nm,0.8s							
SLWS		4.25	241	P		Pn	13 34 03.5	+0.1
IMEH	**Mehriz**	4.44	359	*e*Pn		Pn	13 34 08.0	+2.1
IMEH	**Mehriz**	4.44	359	*e*Pn		Pn	13 34 08.0	+2.1
IMEH				*e*			13 34 12.3	
BTHS		4.54	231	P		Pn	13 34 07.7	+0.4
IBAF	**Bafgh**	4.69	9	*e*Pn		Pn	13 34 10.5	+1.1
IBAF	**Bafgh**	4.69	9	*e*Pn		Pn	13 34 10.5	+1.1
IBAF				*e*			13 34 12.4	
ISAD	**Sadrabad**	5.04	350	*e*Pn		Pn	13 34 16.2	+2.0
ISAD	**Sadrabad**	5.04	350	*e*Pn		Pn	13 34 16.2	+2.0
ISAD				*e*			13 34 24.4	
ICHK	**Chekchek**	5.29	357	*e*Pn		Pn	13 34 19.1	+1.5
ICHK	**Chekchek**	5.29	357	*e*Pn		Pn	13 34 19.1	+1.5
ICHK				*e*			13 34 25.3	
IGAR	**Gharneh**	5.93	337	*e*Pn		Pn	13 34 28.2	+1.9
IGAR				*e*			13 34 29.4	
KFJS		6.15	283	P		Pn	13 34 29.1	-0.3
HRDDS		6.23	231	P		Pn	13 34 29.7	-0.8
IPIR	**Pirpir**	6.62	331	*e*Pn		Pn	13 34 37.4	+1.5
IPIR				*e*Sn		Sn	13 35 49.7	-1.8
IPIR	**Pirpir**	6.62	331	*e*Pn		Pn	13 34 37.4	+1.5
IPIR				*e*			13 34 40.8	
IPIR				*e*Sn		Sn	13 35 49.7	-1.8
IKLH	**Kolahrood**	6.92	338	*e*Pn		Pn	13 34 40.7	+0.7
IKLH	**Kolahrood**	6.92	338	*e*Pn		Pn	13 34 40.7	+0.7
IDAH	**Dahanechah**	7.30	36	*e*Pn		Pn	13 34 46.4	+1.2
IDAH	**Dahanechah**	7.30	36	*e*Pn		Pn	13 34 46.4	+1.2
IDAH				*e*			13 36 29.4	
IANJ	**Anjilo**	8.53	356	⇓*e*Pn		Pn	13 35 02.1	0.0
IANJ	**Anjilo**	8.53	356	*e*Pn		Pn	13 35 02.1	0.0
IANJ				*e*			13 35 03.5	
IVIS	**Veis**	10.15	320	*e*Pn		Pn	13 35 25.4	+1.1
IVIS				*e*			13 35 32.0	
IGHG	**Ghaleghazi**	10.18	318	*e*Pn		Pn	13 35 24.6	-0.1
IGHG	**Ghaleghazi**	10.18	318	*e*Pn		Pn	13 35 24.6	-0.1
IGHG				*e*			13 35 32.4	
IDHR	**Dehrash**	10.54	319	*e*Pn		Pn	13 35 30.6	+0.9
IDHR	**Dehrash**	10.54	319	*e*Pn		Pn	13 35 30.6	+0.9
ASF	**Jabal al Asfar**	16.36	293	Pn		Pn	13 36 48.4	0.0
	comp=N,0.2nm,0.3s,baz=207,slow=21,SNR=1.9							
EIL	**Elat**	17.63	283	P		Pn	13 36 58.5	-5.8
	comp=N,0.2nm,0.3s,baz=93,slow=23,SNR=2.5							
EIL	**Elat**	17.63	283	P		Pn	13 36 58.5	-5.8
MMAI	**Mount Meron Ar**	17.80	295	P		Pn	13 37 04.6	-1.7
	baz=92,slow=15,SNR=3.0							
BR131	**Keskin Array S**	21.69	311	*e*P		P	13 37 49.4	-0.1
	comp=N,3.8nm,0.6s,mb4.0							
BR131	**Keskin Array S**	21.69	311	*e*P		P	13 37 49.4	-0.1
	comp=N,3.8nm,0.6s,mb4.0							
BRTR	**Keskin Array B**	21.69	311	P		P	13 37 49.8	+0.3
	comp=N,3.9nm,0.7s,mb4.0,baz=134,slow=11,SNR=17							
EKS2	**Erkin-Say**	22.07	40	*e*P		P	13 37 53.2	-0.4
	comp=N,5.3nm,0.8s,mb4.0							
EKS2	**Erkin-Say**	22.07	40	*e*P		P	13 37 53.2	-0.4
	comp=N,5.3nm,0.8s,mb4.0							
AAK	**Ala-Archa**	22.47	41	*e*P		P	13 37 56.9	-0.9
	comp=N,2.3nm,0.8s,mb3.7							
AAK	**Ala-Archa**	22.47	41	*e*P		P	13 37 56.9	-0.9
AAK				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.6							
AAK	**Ala-Archa**	22.47	41	*e*P		P	13 37 56.9	-0.9
	comp=Z,2.3nm,0.8s,mb3.7							
AKTK	**Aktyubinsk**	23.60	5	P		P	13 38 09.0	-0.5
AKTK	**Aktyubinsk**	23.60	5	P		P	13 38 09.0	-0.5
AKTO	**Aktyubinsk**	23.60	5	P		P	13 38 09.0	-0.5
	comp=Z,1.9nm,0.5s,mb3.8,baz=174,slow=7.5,SNR=6.8							
BVAR	**Borovoye Array**	28.55	20	P		P	13 38 52.8	-1.5
	comp=Z,1.1nm,0.5s,mb3.9,baz=216,slow=15,SNR=5.1							
KURK	**Kurchatov**	29.92	31	P		P	13 39 03.7	-2.8
	comp=Z,0.6nm,0.6s,mb3.5,baz=234,slow=8.3,SNR=4.9							
KURK	**Kurchatov**	29.92	31	*e*P		P	13 39 04.4	-2.0
	comp=Z,1.2nm,0.6s,mb3.8							
KURK	**Kurchatov**	29.92	31	*e*P		P	13 39 04.4	-2.0
KURK				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7							
KURK	**Kurchatov**	29.92	31	*e*P		P	13 39 04.4	-2.0
	comp=Z,1.1nm,0.6s,mb3.8							
AKASG	**Malin Array Be**	30.67	328	P		P	13 39 11.2	-1.9
	comp=Z,0.6nm,0.4s,mb3.7,baz=121,slow=9.3,SNR=5.3							
AKASG	**Malin Array Be**	30.67	328	P		P	13 39 11.1	-2.0
ZAA0	**Zalesovo Array**	34.91	31	*e*P		P	13 39 47.9	-2.3
ZAA0	**Zalesovo Array**	34.91	31	*e*P		P	13 39 47.8	-2.3
ZALV	**Zalesovo Beam**	34.91	31	P		P	13 39 48.6	-1.5
	comp=Z,2.2nm,0.5s,mb4.4,baz=246,slow=9.3,SNR=12							
CMAR	**Chiang Mai Arr**	41.48	92	P		P	13 40 46.0	0.0
	comp=Z,0.6nm,0.8s,mb3.3,baz=289,slow=8.5,SNR=3.8							
NOA	**NORSAR Array B**	44.87	332	P		P	13 41 10.0	-2.7
	comp=Z,1.2nm,0.8s,mb3.8,baz=118,slow=7.7,SNR=3.4							
SONM	**Songino Array**	45.09	48	P		P	13 41 13.9	-0.8
	comp=Z,1.1nm,0.9s,mb3.7,baz=267,slow=8.9,SNR=5.1							
ARCES	**ARCESS Array B**	45.91	346	P		P	13 41 19.9	-1.0
	comp=Z,2.2nm,0.8s,mb4.1,baz=137,slow=9.1,SNR=7.4							
BOD	**Bodaibo**	51.34	36	*e*P		P	13 42 00.5	-2.3
BOD				pmax	pmax			
	comp=Z,3.0nm,1.1s,mb4.1							
BOD				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2							
TOA0	**Torodi Ar. Sit**	51.34	265	*e*P		P	13 42 01.2	-2.2
TOA0	**Torodi Ar. Sit**	51.34	265	*e*P		P	13 42 01.2	-2.2
TORD	**Torodi Ar. Bea**	51.34	265	P		P	13 42 01.9	-1.5
	comp=Z,2.4nm,0.6s,mb4.3,baz=61,slow=7.4,SNR=17							
DBIC	**Dimbokro**	59.94	262	P		P	13 43 04.3	-1.0
	comp=Z,1.0nm,0.4s,mb4.2,baz=67,slow=6.8,SNR=3.6							
ASAR	**Alice Springs**	91.50	116	P		P	13 46 03.2	-2.4
	comp=Z,0.2nm,0.5s,mb3.7,baz=302,slow=4.6,SNR=6.4							

MAN 30 13:46:45, 875N×12644E, h15km, mb4.5, ML3.4, MS3.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BIPH	**Bislig**	0.57	188	⇑*i*P		Pg	13 46 59.3	+3.1
BIPH				*i* S		Sg	13 47 07.6	+3.9
BUTP	**Butuan**	0.84	285	*e*P		Pb	13 47 00.3	-1.0
BUTP				*e*S		Sg	13 47 09.8	-2.5
SCPH	**Surigao**	1.39	318	*e*P		Pn	13 47 09.1	-0.8
SCPH				*e*S		Sn	13 47 25.5	-2.5
BUKP	**Musuan**	1.61	238	*e*P		Pn	13 47 13.3	+0.4
BUKP				*e*S		Sn	13 47 34.4	+1.0
MATI	**Mati**	1.80	186	*e*P		Pn	13 47 15.0	-0.5
MATI				*e*S		Sn	13 47 34.7	-3.4
MSLP	**Maasin**	2.08	312	*e*P		Pn	13 47 20.6	+1.3
MSLP				*e*S		Sn	13 47 45.7	+0.7

*NEIC **30** 14:03:06.4, 6557N×14176W, h1km, ML2.8(AEIC), After AEIC.*

PGC 30 14:03:09.1±19.0, 6544N×14188W, h1km, ML3.1/3, 6D, 192km Wnw of Dawson, Yt Alaska, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EGAK	**Eagle**	0.73	155	P		Pg	14 03 22.3	-0.8
EGAK				S		Sg	14 03 33.1	+0.6
DAWY	**Dawson**	1.74	141	P		Pn	14 03 39.1	-1.3
DAWY				S		Sn	14 04 02.2	-1.1
DAWY	**Dawson**	1.74	141	⇑Pn		Pn	14 03 39.3	-1.1
DAWY				⇓Sg		Sg	14 04 03.2	-1.8
DOT	**Dot Lake**	2.03	209	P		Pn	14 03 44.2	-0.2
DOT				S		Sn	14 04 11.5	+1.1
IL1	**Eielson Array**	2.22	255	P		Pn	14 03 45.7	-1.3
BCA3	**Beaver Creek A**	2.38	179	P		Pn	14 03 47.0	-2.3
COLA	**College**	2.59	260	P		Pn	14 03 49.8	-2.2
COLA				S		Sn	14 04 25.1	+1.0
MENT	**Mentasta**	2.64	199	*e*Pn		Pn	14 03 50.5	-2.2
MENT				*e*Sn		Sn	14 04 27.6	+2.2
MCK	**McKinley**	3.49	244	P		Pn	14 04 03.1	-1.3
MCK				S		Sn	14 04 47.8	+1.4
COLD	**Coldfoot**	3.81	302	P		Pn	14 04 06.4	-2.3
TRF	**Thorofare Moun**	4.16	245	P		Pn	14 04 11.9	-1.6
INK	**

	5.4nm,0.3s							
MBWA	**Marble Bar**	**47.61**	**253**	*e*P	P	14 33 00.0	-0.2	
	2.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**75.85**	**293**	P	P	14 36 02.5	+0.6	
	0.7nm,0.4s,baz=112,slow=3.7,SNR=7.4							
SONM	**Songino Array**	**82.21**	**323**	P	P	14 36 35.0	+0.5	
	0.2nm,0.6s,baz=101,slow=2.9,SNR=2.1							
NVAR	**Mina Array Bea**	**84.94**	**49**	P	P	14 36 48.5	+0.3	
	0.3nm,0.5s,baz=236,slow=6.4,SNR=2.4							
ARCES	**ARCESS Array B**	**119.10**	**346**	PKP	PKPdf	14 42 54.8	-0.4	
	1.6nm,0.9s,baz=46,slow=2.6,SNR=7.9							

CSEM ***30*** *14:27:48.3±1.8,3851N×2540E,h10km,MD2.7,Error ellipse: s-maj=64.9km s-min=24.6km az=108.0*
DDA ***30*** *14:27:51.6,3876N×2557E,h7km±4km,Md2.7*

ATH 30 14:27:42.3,3872N×2472E,h10km,MD3.1/3,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**1.32**	**66**	*e*PB	Pb	14 28 07.0	-0.1
URLA	**Izmir**	**1.51**	**103**	*e*P	Pn	14 28 09.0	-0.4
URLA				*e*S	Sn	14 28 19.8	-9.3
BOZC	**Bozcaada**	**1.52**	**42**	*e*P	Pn	14 28 13.8	+4.2
BOZC				*e*S	Sn	14 28 30.1	+0.6
AYVA	**Ayvalik**	**1.64**	**68**	*e*P	Pn	14 28 11.1	-0.1
AYVA				*e*S	Sn	14 28 25.6	-6.8
APE	**Apeiranthos**	**1.77**	**158**	*e*PG	Pn	14 28 15.0	+2.1
SMG	**Samos**	**1.95**	**121**	*e*PN	Pn	14 28 18.0	+2.6

CSEM ***30*** *14:33:27.4±0.2,3873N×3996E,h5km,MD2.8,Error ellipse: s-maj=3.8km s-min=2.5km az=67.0*
ISK ***30*** *14:33:27.0,3871N×3997E,h5km,MD2.8*
DDA ***30*** *14:33:28.8,3866N×3999E,h3km±2km,Md2.9*
ISCJB ***30*** *14:33:29.3±0.5,3869N±003×3991E±004,h10km,Error ellipse: s-maj=4.5km s-min=4.0km az=138.3*

ISC 30 14:33:29.0±0.7,3871N±003×3996E±004,h5km±6km,n11,σ0°82/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.48**	**293**	*e*PG	**Pg**	**14 33 37.2**	**-1.0**
PTK				*e*SG	**Sg**	**14 33 45.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.60**	**238**	*e*PG	**Pg**	**14 33 40.0**	**-0.6**
SVRC				*e*SG	**Sg**	**14 33 49.5**	**+1.0**
DIYA	**Diyarbakir**	**0.79**	**170**	*e*P	**Pg**	**14 33 44.8**	**+0.6**
DIYA				*e*S	**Sg**	**14 33 54.3**	**-0.2**
DIY	**Diyarbakir**	**0.84**	**165**	*e*PG	**Pg**	**14 33 44.2**	**-0.9**
BNGL	**BINGOL**	**0.96**	**75**	*i* P	**Pg**	**14 33 47.1**	**-0.4**
BNGL				*e*S	**Sg**	**14 34 03.2**	**+3.2**
EZC	**Erzincan**	**1.05**	**354**	*e*PN	**Pn**	**14 33 50.0**	**-0.4**
EZC				*e*SN	**Sn**	**14 34 06.8**	**+1.4**
BEST	**Besiri**	**1.31**	**128**	*e*P	**Pn**	**14 33 53.6**	**-0.5**
BEST				*e*S	**Sg**	**14 34 12.1**	**+0.9**
MARD	**Mardin**	**1.53**	**155**	*e*P	**Pn**	**14 33 56.5**	**-0.5**
MARD				*e*S	**Sn**	**14 34 17.5**	**+0.2**
URFA	**Urfa**	**1.55**	**216**	*e*PN	**Pn**	**14 33 56.6**	**-0.6**
URFA				*e*SN	**Sn**	**14 34 18.4**	**+0.7**
EZM	**Erzurum**	**1.62**	**42**	*e*PN	**Pn**	**14 33 57.4**	**-0.8**
GUMT	**Gumushane**	**1.79**	**348**	*e*PN	**Pn**	**14 34 00.1**	**-0.5**

NEIC ***30*** *14:48:05.8±2.1,3125S×17850W,h298km±24km,mb3.4/1, Error ellipse: s-maj=71.9km s-min=13.4km az=96.0*
ISCJB ***30*** *14:48:06.5±0.6,3101S±007×1796W±0.1,h247km±7km, mb3.7/5,Error ellipse: s-maj=20.4km s-min=7.7km az=24.7*
IDC ***30*** *14:48:09.4±1.1,3064S×17926W,h274km±11km,mb3.5/5, mb1 3.6/5,mb1mx3.4/14,mbtmp3.5/5,Error ellipse: s-maj=31.5km s-min=18.9km az=175.0*

ISC 30 14:48:07.3±0.6,3098S±007×1796W±01,h245km±7km,n43,σ1°37/43,mb3.7/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.26**	**41**	P	**Pn**	**14 48 52.8**	**+1.0**
	388nm,0.3s,baz=202,slow=4.6,SNR=20						
RAO				S	**S**	**14 49 26.4**	**-0.5**
	297nm,0.3s,baz=81,slow=23,SNR=7.4						
RAO	**Raoul Island**	**2.26**	**41**	P	**Pn**	**14 48 52.8**	**+1.0**
RAO				S	**S**	**14 49 26.4**	**-0.5**
MXZ	**Matakaoa Point**	**6.79**	**194**	*e*P	**Pn**	**14 49 47.7**	**+2.6**
MXZ				S	**S**	**14 51 05.5**	**+1.9**
PUZ	**Puketiti**	**7.29**	**193**	P	**Pn**	**14 49 51.9**	**+0.4**
MWZ	**Matawai**	**7.71**	**197**	P	**Pn**	**14 49 57.6**	**+0.9**
URZ	**Urewera**	**7.75**	**199**	P	**Pn**	**14 49 58.5**	**+1.3**
	7.1nm,0.3s,baz=45,slow=1.9,SNR=17						
URZ				S	**S**	**14 51 28.9**	**+3.2**
	20nm,0.3s,baz=114,slow=14,SNR=17						
URZ	**Urewera**	**7.75**	**199**	*e*P	**Pn**	**14 49 57.8**	**+0.5**
KNZ	**Kokohu**	**8.33**	**195**	*e*P	**Pn**	**14 50 08.5**	**+3.9**
BKZ	**Black Stump Fm**	**8.77**	**200**	*e*P	**Pn**	**14 50 09.5**	**-0.7**
HIZ	**Hauiti**	**8.79**	**210**	*e*P	**Pn**	**14 50 14.7**	**+4.3**
TUVZ	**Tukino**	**9.13**	**204**	P	**Pn**	**14 50 20.3**	**+5.5**
WNVZ	**Wahianoa**	**9.21**	**204**	*e*P	**Pn**	**14 50 17.7**	**+2.0**
BFZ	**Birch Farm**	**10.25**	**198**	*e*P	**Pn**	**14 50 27.5**	**-1.4**
MRZ	**Mangatainoka R**	**10.42**	**201**	P	**Pn**	**14 50 28.6**	**-2.4**
KIW	**Kapiti Island**	**10.81**	**203**	*e*P	**Pn**	**14 50 33.7**	**-2.3**
CAW	**Cannon Point**	**10.99**	**202**	*e*P	**Pn**	**14 50 35.5**	**-2.6**
PAWZ	**Paruwai Farm**	**11.13**	**200**	*e*P	**Pn**	**14 50 40.5**	**+0.6**
MSWZ	**Moikau Station**	**11.21**	**200**	*e*P	**Pn**	**14 50 39.1**	**-1.8**
MRW	**Makara Radio**	**11.21**	**203**	*e*P	**Pn**	**14 50 40.2**	**-0.8**
TCW	**Tory Channel**	**11.34**	**204**	*e*P	**Pn**	**14 50 40.9**	**-1.7**
NNZ	**Nelson**	**11.68**	**207**	*e*P	**Pn**	**14 50 45.9**	**-0.9**
QRZ	**Quartz Range**	**11.71**	**211**	*e*P	**Pn**	**14 50 47.3**	**+0.1**
THZ	**Tophouse**	**12.33**	**207**	P	**Pn**	**14 50 54.7**	**-0.2**
KHZ	**Kahutara**	**12.66**	**204**	P	**Pn**	**14 50 56.9**	**-2.1**
DSZ	**Denniston Nort**	**12.77**	**210**	*e*P	**Pn**	**14 51 00.6**	**+0.2**
MQZ	**McQueen's Vall**	**14.11**	**204**	P	**Pn**	**14 51 15.0**	**-1.7**
WVZ	**Waitaha Valley**	**14.31**	**210**	P	**Pn**	**14 51 20.2**	**+1.0**
RPZ	**Rata Peaks**	**14.71**	**208**	P	**Pn**	**14 51 24.0**	**+0.1**
	0.7nm,0.3s,baz=309,slow=14,SNR=6.5						
FOZ	**Fox Glacier**	**15.16**	**211**	P	**Pn**	**14 51 28.8**	**-0.6**
CTA	**Charters Tower**	**32.53**	**281**	P	**P**	**14 54 18.4**	**+2.9**
	3.6nm,0.9s,mb3.9,baz=316,slow=0.9,SNR=2.5						
CTA	**Charters Tower**	**32.53**	**281**	P	**P**	**14 54 18.4**	**+2.9**
STKA	**Stephens Creek**	**32.99**	**258**	P	**P**	**14 54 23.0**	**+3.6**
	2.1nm,0.5s,mb3.9,baz=356,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**41.69**	**268**	P	**P**	**14 55 33.2**	**+0.9**
	0.4nm,0.5s,mb3.1,baz=107,slow=7.5,SNR=15						
ASAR				ScP	ScP	15 00 45.6	-5.0
	0.2nm,0.8s,baz=120,slow=5.5,SNR=5.2						
WRAB	**Tennant Creek**	**42.73**	**274**	*e*P	**P**	**14 55 40.5**	**-0.2**
	1.4nm,0.6s,mb3.6						
VNA3	**Neumayer Olymp**	**77.82**	**177**	*e*	**P**	**14 59 37.4**	**+0.3**
VNA3				*e*		14 59 39.3	
VNA3				*e*		14 59 45.5	
VNA2	**Neumayer--Watz**	**78.24**	**177**	*e*	**P**	**14 59 40.2**	**+0.8**
	baz=188,slow=4.3						
VNA2				*e*		14 59 42.1	
VNA2				*e*		14 59 48.0	
VNA1	**Neumayer--Stat**	**78.48**	**177**	*e*	**P**	**14 59 41.9**	**+1.2**
VNA1				*e*		14 59 44.3	
VNA1				*e*		14 59 49.9	
PLCA	**Paso Flores**	**83.13**	**134**	P	**P**	**15 00 06.1**	**+0.3**
	1.0nm,0.5s,mb3.8,baz=237,slow=4.8,SNR=5.9						
PETK	**Petropavlovsk-**	**86.03**	**347**	P	**P**	**15 00 18.2**	**-1.5**
	2.8nm,0.8s,baz=127,slow=7.1,SNR=3.9						
JOF	**Joensuu**	**142.42**	**337**	*ep*	PKPdf	15 07 04.5	-5.4
	0.4nm,0.4s						
KAF	**Kangasniemi**	**144.61**	**339**	*ep*	PKPdf	15 07 11.4	-2.3
	0.9nm,0.3s						
HFS	**Hagfors**	**149.51**	**347**	PKPbc	PKPbc	15 07 24.2	-2.5
	3.8nm,1.1s,baz=31,slow=3.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**162.22**	**184**	PKPab	PKPab	15 08 27.6	-0.5
	2.2nm,0.6s,baz=176,slow=4.0,SNR=13						

MAN 30 14:49:50,1708N×12254E,h94km,mb4.4,ML3.2,MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.11**	**262**	*e*P	Pn	14 50 03.7	+0.5
PALP				*e*S	Sn	14 50 15.2	+2.2
CAUP	**Cauayan**	**0.70**	**259**	*e*P	Pn	14 50 11.5	+4.6
ABRA	**Dolores**	**1.84**	**288**	*e*P	Pn	14 50 21.9	+1.6
ABRA				*e*S	Sn	14 50 44.8	+1.5

DJA ***30*** *14:58:49,105S×12760E,h650km,MLv4.4/4*
ISCJB ***30*** *14:59:03.7±4.0,30S±02×1297E±01,h56km±41km, mb4.1/7,Error ellipse: s-maj=34.7km s-min=14.9km az=33.0*
NEIC ***30*** *14:59:04.0±0.6,289S×12977E,h35km,mb4.2/4,Error ellipse: s-maj=18.6km s-min=11.2km az=53.0*
IDC ***30*** *14:59:13.5±9.4,323S×12932E,h127km±89km,mb3.6/6, mb1 3.8/7,mb1mx3.6/17,mbtmp3.7/7,ML3.9/1,MS3.3/1, Ms1 3.3/1,ms1mx2.2/25,Error ellipse: s-maj=87.3km s-min=23.8km az=56.0*

ISC 30 14:59:05.7±2.9,30S±02×1297E±01,h56km±31km,n15,σ1°06/14,mb4.1/7,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**9.38**	**220**	LR	LR	15 04 37.7	
	comp=Z,155nm,18.0s,baz=128,slow=36						
KAPI	**Kappang**	**10.16**	**258**	P	**Pn**	**15 01 28.6**	**-0.3**
	1.1nm,0.3s,baz=188,slow=18,SNR=9.1						
KAPI	**Kappang**	**10.16**	**258**	P	**Pn**	**15 01 28.6**	**-0.3**
WRAB	**Tennant Creek**	**17.45**	**165**	*e*Pn	**Pn**	**15 03 04.9**	**-0.4**
	17nm,1.5s						
PMG	**Port Moresby**	**18.46**	**111**	*e*P	**Pn**	**15 03 17.4**	**-0.3**
	3.0nm,0.8s						
ASAR	**Alice Springs**	**20.96**	**169**	P	**P**	**15 03 45.5**	**+1.2**
	10nm,0.9s,baz=348,slow=10,SNR=68						
CMAR	**Chiang Mai Arr**	**37.05**	**306**	P	**P**	**15 06 11.3**	**+0.8**
	2.0nm,0.9s,mb3.9,baz=138,slow=7.2,SNR=12						
CHTO	**Chiang Mai**	**37.23**	**307**	*e*P	**P**	**15 06 12.3**	**+0.2**
	5.2nm,0.9s,mb4.4						
SONM	**Songino Array**	**54.56**	**341**	P	**P**	**15 08 29.7**	**+1.6**
	0.4nm,0.7s,mb3.5,baz=164,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**64.74**	**326**	P	**P**	**15 09 38.2**	**0.0**
	1.4nm,0.8s,mb4.1,baz=111,slow=7.9,SNR=7.5						
MKAR	**Makanchi Array**	**64.74**	**326**	P	**P**	**15 09 38.2**	**0.0**
ZALV	**Zalesovo Beam**	**67.88**	**333**	P	**P**	**15 09 58.3**	**+0.2**
	2.7nm,0.8s,mb4.3,baz=117,slow=5.2,SNR=11						
KURK	**Kurchatov**	**68.97**	**328**	*e*P	**P**	**15 10 05.7**	**+0.7**
	6.3nm,0.9s,mb4.5						
KURK				*e*PP	PP	15 12 43.8	+5.8
AKTK	**Aktyubinsk**	**80.75**	**322**	P	**P**	**15 11 10.8**	**-2.2**
AKTO	**Aktyubinsk**	**80.75**	**322**	P	**P**	**15 11 10.8**	**-2.2**
	1.6nm,1.0s,mb3.9,baz=90,slow=5.1,SNR=3.3						

CSEM ***30*** *15:02:44.2±0.3,3667N×2137E,h10km,ML3.6/1,Error ellipse: s-maj=6.5km s-min=2.6km az=13.0*
ISCJB ***30*** *15:02:45.0±1.5,3670N±007×2136E±008,h13km±6km, Error ellipse: s-maj=12.3km s-min=10.2km az=27.5*
THE ***30*** *15:02:45.0,3664N×2139E,h12km±1km,ML3.6/1,Error ellipse: s-maj=2.6km s-min=1.4km az=3.0*
NEIC ***30*** *15:02:45.5,3671N×2138E,h16km,MD3.6(ATH),After ATH.*
ATH ***30*** *15:02:45.5,3671N×2138E,h16km±6km,MD3.6/5*

ISC 30 15:02:45.2±1.7,3667N±007×2136E±008,h11km±7km,n19,σ0°71/23,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.38**	**54**	P	**Pg**	**15 02 52.9**	**+0.2**
PYL				S	**Sg**	**15 02 58.2**	**+0.5**
ITM	**Ithomi**	**0.68**	**42**	*e*PN	**Pg**	**15 02 58.0**	**-0.3**
ITM				*e*SN	**Sg**	**15 03 07.0**	**-0.2**
VLI	**Veliai**	**1.27**	**88**	*e*PN	**Pn**	**15 03 09.8**	**+1.0**
KYTH	**Kithira**	**1.40**	**106**	*e*PN	**Pn**	**15 03 11.5**	**+0.8**
KFL	**Anninata**	**1.50**	**342**	P	**Pn**	**15 03 11.6**	**-0.5**
VLS	**Valsamata**	**1.62**	**338**	P	**Pn**	**15 03 13.2**	**-0.5**
VLS	**Valsamata**	**1.62**	**338**	*e*PN	**Pn**	**15 03 15.5**	**+1.8**
VLS	**Valsamata**	**1.62**	**338**	P	**Pn**	**15 03 13.2**	**-0.5**
VLS	**Valsamata**	**1.62**	**338**	*e*Pn	**Pn**	**15 03 15.5**	**+1.8**
DID	**Didima**	**1.71**	**60**	P	**Pn**	**15 03 14.6**	**-0.3**
DID				S	**Sn**	**15 03 36.6**	**-0.2**
LTK	**Loutraki**	**1.86**	**43**	P	**Pn**	**15 03 16.6**	**-0.3**
EVR	**Evrytania**	**2.27**	**9**	*e*PN	**Pn**	**15 03 24.0**	**+1.5**
LKR	**Lokris**	**2.36**	**33**	P	**Pn**	**15 03 23.5**	**-0.3**
AGG	**Agios Georgios**	**2.46**	**18**	P	**Pn**	**15 03 25.6**	**+0.3**
AGG				S	**Sn**	**15 03 56.2**	**+0.9**
THL	**Klokotos Trika**	**2.93**	**10**	P	**Pn**	**15 03 31.1**	**-0.6**
XOR	**Xorichti**	**3.05**	**28**	P	**Pn**	**15 03 32.7**	**-0.6**
AOS	**Alonnisos**	**3.19**	**38**	P	**Pn**	**15 03 34.4**	**-0.8**
APE	**Apeiranthos**	**3.36**	**82**	P	**Pn**	**15 03 36.5**	**-1.1**
LIT	**Litokhoron**	**3.53**	**14**	P	**Pn**	**15 03 39.5**	**-0.5**

IDC 30 15:02:52.7±1.9,801N×12626E,h0km,mb3.9/4,mb1 4.0/4, mb1mx3.7/18,mbtmp3.9/4,Error ellipse: s-maj=89.7km s-min=27.4km az=63.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**28.51**	**294**	P	P	15 08 50.2	+0.1
	0.4nm,0.4s,baz=131,slow=8.5,SNR=5.2						
ASAR	**Alice Springs**	**32.35**	**167**	P	P	15 09 24.1	+0.1
	1.3nm,0.7s,baz=350,slow=10,SNR=5.7						
MKAR	**Makanchi Array**	**53.82**	**324**	P	P	15 12 17.7	+0.3
	1.1nm,0.9s,baz=126,slow=7.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**56.60**	**332**	P	P	15 12 36.7	-0.6
	0.6nm,0.5s,baz=122,slow=5.4,SNR=4.2						

ISCJB ***30*** *15:03:21.4±0.5,2348N±002×12208E±002,h25km±3km, Error ellipse: s-maj=4.0km s-min=2.5km az=145.8*
TAP ***30*** *15:03:22.7,2350N×12203E,h41km,ML3.2,C*
JMA ***30*** *15:03:23.2±0.2,2344N×122.17E,h60km,M2.6*

ISC 30 15:03:21.9±0.5,2349N±002×12207E±002,h25km±3km, n44,σ0°80/85,8C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.53**	**295**	*e*P	**Pb**	**15 03 33.1**	**+0.5**
	baz=295						
TEGC				*e*S	**Sb**	**15 03 40.8**	**+0.9**
	baz=295						
HWA	**Hwalien**	**0.65**	**319**	*e*P	**Pb**	**15 03 34.7**	**+0.2**
	baz=326						
HWA				*e*S	**Sb**	**15 03 43.9**	**+0.7**
	baz=326						
ESL	**Shilin**	**0.67**	**300**	⇑P	**Pb**	**15 03 34.3**	**-0.5**
	baz=295						
ESL				*e*S	**Sb**	**15 03 43.1**	**-0.6**
	baz=295						
EHY	**Hungye**	**0.68**	**272**	⇑*i*P	**Pb**	**15 03 35.2**	**+0.1**
	baz=277						
EHY				S	**Sb**	**15 03 44.6**	**+0.4**
	baz=277						
TWF1	**Yuli**	**0.72**	**260**	⇑*i*P	**Pb**	**15 03 35.6**	**-0.2**
	baz=250						
TWF1				*e*S	**Sb**	**15 03 45.2**	**0.0**
	baz=250						
TWD	**Chiawan**	**0.73**	**324**	P	**Pb**	**15 03 35.6**	**-0.4**
	baz=333						
TWD				S	**Sb**	**15 03 45.2**	**-0.4**
	baz=333						
CHKT	**Chengkung**	**0.75**	**239**	*e*P	**Pb**	**15 03 35.5**	**-0.8**
	baz=231						
CHKT				*e*S	**Sb**	**15 03 44.8**	**-1.3**
	baz=231						
ENA	**Nanau**	**0.98**	**342**	*e*P	**Pn**	**15 03 39.9**	**-0.2**
	baz=344						
ENA				S	**Sb**	**15 03 52.6**	**-0.2**
	baz=344						
WHF	**Hehuan Shan**	**0.98**	**312**	⇑*i*P	**Pn**	**15 03 39.7**	**-0.3**
	baz=313						
WHF				S	**Sb**	**15 03 52.4**	**-0.5**
	baz=313						
ELDTW	**Lidau**	**1.01**	**253**	*e*P	**Pn**	**15 03 39.5**	**-0.9**
	baz=243						
ELDTW				*e*S	**Sb**	**15 03 51.5**	**-2.0**
	baz=243						
YUS	**Yu-Shan**	**1.02**	**270**	⇑*i*P	**Pn**	**15 03 41.0**	**+0.4**
	baz=269						
YUS				S	**Sb**	**15 03 53.4**	**-0.5**
	baz=269						
TWT	**Tachien**	**1.12**	**313**	*e*P	**Pn**	**15 03 42.2**	**+0.3**
	baz=307						
TWT				*e*S	**Sn**	**15 03 55.7**	**-0.8**
	baz=307						
TWG	**Pinlang**	**1.13**	**234**	*e*P	**Pn**	**15 03 41.3**	**-0.8**
	baz=245						
TWG				*e*S	**Sn**	**15 03 54.9**	**-1.9**
	baz=245						
TWC	**Suao**	**1.14**	**350**	P	**Pn**	**15 03 42.2**	**0.0**
	baz=352						
TWC				S	**Sn**	**15 03 56.8**	**-0.2**
	baz=352						
SMLT	**Sun Moon Lake**	**1.14**	**291**	⇑*i*P	**Pn**	**15 03 42.4**	**+0.2**
	baz=290						
SMLT				*e*S	**Sn**	**15 03 56.3**	**-0.7**
	baz=290						
NNS	**Nan Shan**	**1.14**	**326**	*e*P	**Pn**	**15 03 42.3**	**0.0**
	baz=319						
NNS				*e*S	**Sn**	**15 03 56.3**	**-0.9**
	baz=319						
ALS	**Alishan**	**1.16**	**271**	⇑*i*P	**Pn**	**15 03 43.3**	**+0.8**
	baz=277						
ALS				*e*S	**Sn**	**15 03 56.9**	**-0.6**
	baz=277						
TYC	**Yuchr**	**1.18**	**291**	*e*P	**Pn**	**15 03 42.7**	**-0.1**
	baz=291						
TYC				*e*S	**Sn**	**15 03 57.3**	**-0.8**
	baz=291						
ENTT	**Nioudou**	**1.24**	**338**	*e*P	**Pn**	**15 03 43.9**	**+0.3**
	baz=340						
ENTT				*e*S	**Sn**	**15 03 59.0**	**-0.5**
	baz=340						
STYT	**Tauyuan**	**1.25**	**255**	*e*P	**Pn**	**15 03 43.6**	**0.0**
	baz=249						
STYT				S	**Sn**	**15 03 59.0**	**-0.6**
	baz=249						
CHN5	**Tsauling**	**1.28**	**275**	*e*P	**Pn**	**15 03 45.1**	**+1.0**
	baz=275						
CHN5				*e*S	**Sn**	**15 04 00.6**	**+0.1**
	baz=275						
TWE	**Neicheng**	**1.28**	**344**	*e*P	**Pn**	**15 03 44.7**	**+0.5**
	baz=336						
TWE				*e*S	**Sn**	**15 04 00.3**	**-0.3**
	baz=336						
YOJ	**Yonaguni jima**	**1.30**	**41**	*e*S	**Sn**	**15 04 01.4**	**+0.4**
WNT	**Mingjian**	**1.33**	**287**	*e*P	**Pn**	**15 03 45.3**	**+0.5**
	baz=287						
NSK	**Sanguang**	**1.35**	**331**	*e*P	**Pn**	**15 03 45.6**	**+0.5**
	baz=332						
NSK				*e*S	**Sn**	**15 04 01.5**	**-0.7**
	baz=332						
ECL	**Taimali**	**1.35**	**229**	*e*P	**Pn**	**15 03 44.3**	**-0.9**
	baz=228						
ECL				*e*S	**Sn**	**15 03 59.9**	**-2.4**
	baz=228						
WTP	**Ta-pu**	**1.36**	**260**	⇑P	**Pn**	**15 03 46.1**	**+0.9**
	baz=259						
WTP				*e*S	**Sn**	**15 04 02.7**	**+0.4**
	baz=259						
CHN4	**Tsaushan**	**1.36**	**265**	*e*P	**Pn**	**15 03 46.3**	**+1.0**
	baz=260						
CHN4				*e*S	**Sn**	**15 04 03.7**	**+1.2**
	baz=260						
WGK	**Gukeng**	**1.40**	**279**	*e*P	**Pn**	**15 03 46.1**	**+0.4**
	baz=278						
WGK				*e*S	**Sn**	**15 04 03.6**	**+0.2**
	baz=278						
SGST	**Jiashian**	**1.42**	**254**	*e*P	**Pn**	**15 03 46.8**	**+0.7**
	baz=244						
SGST				*e*S	**Sn**	**15 04 03.4**	**-0.6**
	baz=244						
TCU	**Taichung**	**1.43**	**298**	*e*P	**Pn**	**15 03 47.5**	**+1.3**
	baz=298						
TCU				*e*S	**Sn**	**15 04 04.5**	**+0.2**
	baz=298						
CHN1	**Nanshi**	**1.45**	**258**	*e*P	**Pn**	**15 03 47.4**	**+1.0**
	baz=257						
CHN1				*e*S	**Sn**	**15 04 06.2**	**+1.6**
	baz=257						
TWQ1	**Liyutan**	**1.46**	**306**	*e*P	**Pn**	**15 03 47.9**	**+1.2**
	baz=306						
TWQ1				*e*S	**Sn**	**15 04 05.8**	**+0.8**
	baz=306						
TWK	**Hsinying**	**1.47**	**262**	*e*P	**Pn**	**15 03 47.5**	**+0.8**
	baz=261						
NSTT	**Nanjuang**	**1.50**	**320**	*e*P	**Pn**	**15 03 47.8**	**+0.6**
	baz=320						
NSTT				*e*S	**Sn**	**15 04 05.7**	**-0.2**
	baz=320						
SSD	**Sandimen**	**1.51**	**241**	*e*P	**Pn**	**15 03 47.7**	**+0.3**
	baz=234						
SSD				*e*S	**Sn**	**15 04 05.0**	**-1.2**
	baz=234						
TWA	**Mucha**	**1.55**	**344**	*e*P	**Pn**	**15 03 48.9**	**+1.0**
	baz=335						
TWA				*e*S	**Sn**	**15 04 05.7**	**-1.5**
	baz=335						
TWM1	**Shoushan**	**1.65**	**247**	*e*P	**Pn**	**15 03 51.5**	**+2.3**
	baz=246						
TWM1				*e*S	**Sn**	**15 04 10.0**	**+0.4**
	baz=246						
HATJ	**Hateruma jima**	**1.69**	**70**	P	**Pn**	**15 03 49.9**	**+0.1**
HATJ				*e*S	**Sn**	**15 04 09.9**	**-0.8**
SCZT	**Fangliau**	**1.73**	**231**	*e*P	**Pn**	**15 03 52.4**	**+2.0**
	baz=225						
SCZT				S	**Sn**	**15 04 11.7**	**0.0**
	baz=225						
IRIF	**Iriomote-Funau**	**1.74**	**61**	P	**Pn**	**15 03 51.1**	**+0.6**
IRIF				S	**Sn**	**15 04 11.4**	**-0.5**
JKRS	**Kuro-shima**	**1.93**	**67**	P	**Pn**	**15 03 53.4**	**+0.3**
JKRS				*e*S	**Sn**	**15 04 16.3**	**-0.2**
JIJ	**Ishigaki jima**	**2.09**	**65**	P	**Pn**	**15 03 55.6**	**+0.3**
JIJ				S	**Sn**	**15 04 19.2**	**-1.3**
JTJ	**Tarama**	**2.67**	**64**	P	**Pn**	**15 04 03.6**	**+0.3**
JTJ				*e*S	**Sn**	**15 04 34.1**	**-0.7**

ISCJB ***30*** *15:27:36.3±1.3,5233N±009×168.10W±009,h38km±11km, mb4.0/13,Error ellipse: s-maj=14.5km s-min=8.6km az=167.5*
MOS ***30*** *15:27:36.3±1.4,5258N×168.16W,h33km,mb4.2/11,Error ellipse: s-maj=29.6km s-min=19.2km az=23.5*
NEIC ***30*** *15:27:36.9,5240N×168.00W,h6km,mb3.8/3, ML3.5(AEIC),After AEIC.*
IDC ***30*** *15:27:40.5±6.6,5255N×168.09W,h54km±63km,mb3.7/14, mb1 3.9/14,mb1mx3.8/23,mbtmp3.7/14,MS3.7/1, Ms1 3.7/1,ms1mx2.8/39,Error ellipse: s-maj=33.7km s-min=13.3km az=6.0*

**ISC 30 15:27:37.2±1.7,5240N±007×16

TXAR	**Lajitas Array**	**51.94**	**90**	P	**P**	**15 36 43.1**	**-0.1**
	comp=Z,1.7nm,0.8s,mb4.0,baz=298,slow=5.5,SNR=13						
TXAR	**Lajitas Array**	**51.94**	**90**	P	**P**	**15 36 43.1**	**-0.1**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**51.98**	**301**	P	**P**	**15 36 43.5**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=82,slow=5.3,SNR=6.6						
SONM				PcP	PcP	15 37 55.0	-0.4
	comp=Z,0.2nm,0.5s,baz=55,slow=5.5,SNR=2.1						
SONM	**Songino Array**	**51.98**	**301**	P	**P**	**15 36 43.5**	**+0.2**
SONM						15 37 55.0	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GUMO	**Guam**	**53.83**	**242**	LR	LR	15 58 54.5	
	comp=Z,68nm,19.6s,baz=31,slow=35						
ARCES	**ARCESS Array B**	**57.98**	**354**	P	**P**	**15 37 24.8**	**-1.6**
	comp=Z,8.7nm,1.0s,mb4.7,baz=11,slow=9.7,SNR=3.9						
ARCES	**ARCESS Array B**	**57.98**	**354**	P	**P**	**15 37 24.8**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR	**Makanchi Array**	**64.37**	**314**	P	**P**	**15 38 09.3**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.7,baz=67,slow=8.0,SNR=3.0						
MKAR	**Makanchi Array**	**64.37**	**314**	P	**P**	**15 38 09.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**76.24**	**349**	P	**P**	**15 39 21.4**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=10,slow=5.7,SNR=2.6						
AKASG	**Malin Array Be**	**76.24**	**349**	P	**P**	**15 39 21.4**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**77.40**	**284**	P	**P**	**15 39 30.0**	**+0.5**
	comp=Z,1.5nm,0.9s,mb3.9,baz=20,slow=5.9,SNR=8.7						
CMAR	**Chiang Mai Arr**	**77.40**	**284**	P	**P**	**15 39 30.0**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**15 40 17.4**	**+1.3**
	comp=Z,0.8nm,0.6s,mb4.1,baz=16,slow=2.1,SNR=4.1						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**15 40 17.5**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**91.04**	**231**	P	**P**	**15 40 37.8**	**-0.7**
	comp=Z,0.7nm,1.0s,mb4.0,baz=27,slow=4.5,SNR=4.2						
ASAR	**Alice Springs**	**91.04**	**231**	P	**P**	**15 40 37.8**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						

*IDC **30** 15:46:29.3±3.0, 276.5×141.15E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/16, mbtmp3.7/5, MS3.1/3, Ms1 3.1/3, ms1mx2.8/22, Error ellipse: s-maj=99.7km s-min=30.5km az=87.0*

*ISCJB **30** 15:46:33.3±0.8, 28.5±01.1×1408.1E±02.2, h33km, mb3.6/6, MS3.0/2, Error ellipse: s-maj=25.6km s-min=11.7km az=153.6*

*NEIC **30** 15:46:35.5±0.8, 284.5×14077E, h35km, mb4.1/2, Error ellipse: s-maj=25.9km s-min=11.6km az=63.0*

ISC 30 15:46:35.6±0.8, 28S±01×1408E±02, h35km, n15, σ1§03/11, mb3.6/6, MS3.0/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**9.10**	**136**	*e*Pn	**Pn**	**15 48 43.9**	**-0.6**
	17nm,1.2s						
KAKA	**Kakadu**	**12.82**	**220**	*e*Pn	Px	15 49 19.7	
CTA	**Charters Tower**	**17.96**	**163**	LR	LR	15 57 21.5	
	comp=Z,61nm,20.4s,baz=106,slow=36						
WRAB	**Tennant Creek**	**18.11**	**200**	*e*P	**Pn**	**15 50 44.1**	**-0.4**
	7.1nm,0.9s						
BATI	**Baumata**	**18.50**	**246**	P	**Pn**	**15 50 58.1**	**+8.9**
	1.4nm,0.3s,baz=220,slow=0.5,SNR=6.9						
ASAR	**Alice Springs**	**21.75**	**197**	P	**P**	**15 51 24.6**	**+0.5**
	0.9nm,0.4s,mb3.5,baz=28,slow=9.0,SNR=27						
EIDS	**Eidsvold**	**24.50**	**157**	*e*P	**P**	**15 51 52.9**	**+1.2**
	8.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**28.89**	**179**	LR	LR	16 05 02.8	
	comp=Z,60nm,19.7s,MS3.2,baz=205,slow=38						
STKA	**Stephens Creek**	**28.89**	**179**	P	**P**	**15 52 30.5**	**-0.7**
	0.1nm,0.6s						
QIZ	**Qiongzhong**	**37.39**	**307**	*e*P	**P**	**15 53 43.3**	**-2.1**
	239nm,1.9s						
KSRS	**Korea Array**	**41.83**	**345**	LR	LR	16 09 16.1	
	comp=Z,14nm,18.3s,MS2.9,baz=5.0,slow=33						
CMAR	**Chiang Mai Arr**	**46.30**	**299**	P	**P**	**15 54 59.0**	**+0.8**
	1.1nm,0.7s,mb3.9,baz=118,slow=6.0,SNR=7.9						
MKAR	**Makanchi Array**	**71.16**	**322**	P	**P**	**15 57 52.4**	**+1.7**
	0.3nm,0.5s,mb3.5,baz=129,slow=4.6,SNR=3.1						
KURK	**Kurchatov**	**75.01**	**324**	P	**P**	**15 58 12.6**	**-0.8**
	0.2nm,0.6s,mb3.2,baz=107,slow=7.7,SNR=3.3						
BVAR	**Borovoye Array**	**80.60**	**325**	P	**P**	**15 58 44.6**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=114,slow=7.2,SNR=4.3						

*ISCJB **30** 16:04:41.0±0.3, 3603N×003×23.12E×003, h83km±4km, mb3.8/13, Error ellipse: s-maj=5.3km s-min=3.1km az=42.2*

*MOS **30** 16:04:41.7±1.6, 3607N×23.11E, h69km, mb4.2/9, Error ellipse: s-maj=10.7km s-min=7.6km az=85.1*

*IDC **30** 16:04:42.6±2.1, 3621N×2316E, h60km±23km, mb3.7/12, mb1 3.7/16, mb1mx3.6/28, mbtmp3.6/16, ML3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/46, Error ellipse: s-maj=22.5km s-min=16.3km az=35.0*

*CSEM **30** 16:04:42.6±0.1, 3616N×2320E, h60km, ML3.5, Error ellipse: s-maj=2.4km s-min=1.2km az=29.0*

*NEIC **30** 16:04:43.2, 3619N×2325E, h63km, MG3.5(ATH), After ATH.*

*ATH **30** 16:04:43.2, 3619N×2325E, h63km±3km, ML3.5*

*THE **30** 16:04:43.7, 3615N×2321E, h65km±6km, ML4.0/1, Error ellipse: s-maj=6.4km s-min=0.9km az=58.0*

*HLW **30** 16:04:44.8, 3603N×2374E, h33km, Mb4.5*

ISC 30 16:04:42.3±0.3, 3604N±003×2315E±003, h70km±4km, n110, σ1§09/137, mb3.8/13, 6D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.26**	**339**	*e*P	**Pn**	**16 04 53.5**	**+0.2**
VLI	**Veliai**	**0.70**	**346**	*e*P	**Pn**	**16 04 57.0**	**-0.2**
VAM	**Vamos**	**1.06**	**126**	*e*P	**Pn**	**16 05 03.0**	**+1.4**
GVD	**Gavdhos**	**1.42**	**147**	*e*P	**Pn**	**16 05 10.0**	**+3.8**
PYL	**PYLOS**	**1.42**	**307**	P	**Pn**	**16 05 06.6**	**+0.4**
DID	**Didima**	**1.47**	**3**	P	**Pn**	**16 05 06.9**	**+0.1**
DID				S	**Sn**	**16 05 24.6**	**-0.7**
ITM	**Ithomi**	**1.50**	**320**	*e*P	**Pn**	**16 05 08.5**	**+1.2**
ITM				*e*S	**Sn**	**16 05 26.3**	**+0.1**
IDI	**Anoyia**	**1.60**	**117**	P	**Pn**	**16 05 08.7**	**+0.1**
	13nm,0.3s,baz=302,slow=18,SNR=78						
IDI				S	**Sn**	**16 05 30.7**	**+2.2**
	140nm,0.3s,baz=307,slow=20,SNR=17						
NAIG	**Nisos Aigina**	**1.74**	**9**	*e*P	**Pn**	**16 05 10.5**	**+0.1**
THR5	**Thira Island,**	**1.82**	**77**	P	**Pn**	**16 05 11.8**	**+0.3**
THR6	**Thira Island,**	**1.84**	**79**	P	**Pn**	**16 05 12.8**	**+0.9**
THR3	**Thira Island,**	**1.86**	**78**	P	**Pn**	**16 05 12.4**	**+0.4**
THR4	**Thira Island,**	**1.86**	**76**	P	**Pn**	**16 05 12.6**	**+0.5**
THR4				S	**Sn**	**16 05 34.8**	**0.0**
THR1	**Thera Island**	**1.90**	**79**	P	**Pn**	**16 05 12.9**	**+0.3**
THR1				S	**Sn**	**16 05 34.8**	**-0.8**
ATH	**Athens Observa**	**1.98**	**13**	*e*P	**Pn**	**16 05 14.0**	**+0.3**
ATH				*e*S	**Sn**	**16 05 35.6**	**-2.0**
LTK	**Loutraki**	**1.99**	**356**	P	**Pn**	**16 05 14.3**	**+0.5**
LTK				S	**Sn**	**16 05 37.0**	**-0.7**
PTL	**Penteli**	**2.09**	**16**	*e*P	**Pn**	**16 05 14.5**	**-0.6**
PTL				*e*S	**Sn**	**16 05 37.5**	**-2.6**
NPS	**Neapolis**	**2.15**	**110**	*e*P	**Pn**	**16 05 17.1**	**+1.1**
APE	**Apeiranthos**	**2.17**	**61**	P	**Pn**	**16 05 16.2**	**-0.1**
APE				S	**Sn**	**16 05 41.0**	**-1.3**
APE	**Apeiranthos**	**2.17**	**61**	*e*P	**Pn**	**16 05 16.4**	**+0.1**
APE				*e*S	**Sn**	**16 05 41.0**	**-1.3**
RLS	**Riolos of Patr**	**2.42**	**327**	*e*P	**Pn**	**16 05 20.7**	**+1.0**
RLS				*e*S	**Sn**	**16 05 48.7**	**+0.4**
ZKR	**Zakros**	**2.67**	**109**	P	**Pn**	**16 05 24.8**	**+1.8**
ZKR	**Zakros**	**2.67**	**109**	P	**Pn**	**16 05 26.7**	**+3.7**
KFL	**Anninata**	**2.80**	**318**	P	**Pn**	**16 05 25.1**	**+0.3**
VLS	**Valsamata**	**2.96**	**317**	P	**Pn**	**16 05 26.8**	**-0.1**
VLS				S	**Sn**	**16 06 02.3**	**+1.1**
VLS	**Valsamata**	**2.96**	**317**	*e*P	**Pn**	**16 05 26.9**	**0.0**
VLS				*e*S	**Sn**	**16 06 02.3**	**+1.1**
AGG	**Agios Georgios**	**3.05**	**348**	P	**Pn**	**16 05 29.0**	**+0.8**
AGG				S	**Sn**	**16 06 03.1**	**-0.4**
EVR	**Evrytania**	**3.06**	**340**	*e*P	**Pn**	**16 05 29.5**	**+1.1**
AOS	**Alonnisos**	**3.18**	**10**	P	**Pn**	**16 05 30.3**	**+0.4**
NEO	**Neokhori**	**3.26**	**1**	*e*P	**Pn**	**16 05 32.0**	**+0.9**
NEO	**Neokhori**	**3.26**	**1**	*e*P	**Pn**	**16 05 32.5**	**+1.4**
CHOS	**Chios island**	**3.30**	**44**	P	**Pn**	**16 05 31.6**	**+0.1**
CHOS				S	**Sn**	**16 06 08.6**	**-1.0**
KARP	**Karpathos**	**3.30**	**97**	*e*P	**Pn**	**16 05 33.5**	**+1.9**
XOR	**Xorichti**	**3.32**	**1**	P	**Pn**	**16 05 32.9**	**+1.0**
SMG	**Samos**	**3.39**	**60**	*e*P	**Pn**	**16 05 33.5**	**+0.6**
THL	**Klokotos Trika**	**3.63**	**346**	P	**Pn**	**16 05 37.2**	**+1.1**
PAIG	**Paliouri**	**3.90**	**6**	P	**Pn**	**16 05 40.8**	**+1.0**
JAN	**Janina**	**4.04**	**334**	*e*P	**Pn**	**16 05 43.1**	**+1.4**
PRK	**Paraskevi**	**4.05**	**37**	P	**Pn**	**16 05 41.5**	**-0.3**
PRK	**Paraskevi**	**4.05**	**37**	*e*P	**Pn**	**16 05 42.0**	**+0.2**
LIT	**Litokhoron**	**4.09**	**353**	P	**Pn**	**16 05 43.2**	**+0.9**
LIT				S	**Sn**	**16 06 28.6**	**-0.3**
IGT	**Igoumenitsa**	**4.14**	**328**	P	**Pn**	**16 05 43.2**	**+0.2**
IGT				S	**Sn**	**16 06 30.2**	**0.0**
LIA	**Limnos Island**	**4.17**	**22**	P	**Pn**	**16 05 43.6**	**+0.1**
PLG	**Polygyros**	**4.33**	**3**	P	**Pn**	**16 05 45.9**	**+0.2**
PLG	**Polygyros**	**4.33**	**3**	P	**Pn**	**16 05 48.5**	**+2.8**
OUR	**Ouranopolis**	**4.34**	**8**	P	**Pn**	**16 05 46.2**	**+0.5**
KEK	**Kerkira**	**4.53**	**325**	*e*P	**Pn**	**16 05 49.0**	**+0.7**
HORT	**Hortiatis**	**4.55**	**360**	P	**Pn**	**16 05 49.5**	**+0.8**
SLUM		**4.85**	**159**	⇓P	**Pn**	**16 05 52.3**	**-0.5**
FNA	**Florina**	**4.94**	**344**	P	**Pn**	**16 05 54.6**	**+0.7**
GRG	**Griva**	**4.95**	**353**	P	**Pn**	**16 05 54.4**	**+0.4**
KNT	**Kendrikon**	**5.12**	**358**	P	**Pn**	**16 05 57.6**	**+1.2**
VAY	**Valandovo**	**5.29**	**355**	*e*Pn	**Pn**	**16 06 00.7**	**+1.9**
ALN	**Alexandroupoli**	**5.36**	**24**	P	**Pn**	**16 05 59.5**	**-0.1**
KRUS	**Krusevo**	**5.53**	**345**	*e*Pn	**Pn**	**16 06 02.8**	**+0.8**
KRUS	**Krusevo**	**5.53**	**345**	*e*Pn	**Pn**	**16 06 02.9**	**+0.9**
KRUS				*e*Sg	**Sn**	**16 07 01.8**	**-2.2**
HMAT	**Matruh**	**5.93**	**145**	⇓P	**Pn**	**16 06 06.4**	**-1.2**
HMAT				S	**Sn**	**16 07 06.0**	**-8.1**
TIP	**Timpagrande**	**5.96**	**304**	Pn	**Pn**	**16 06 06.9**	**-1.1**
CEL	**Celeste**	**6.20**	**293**	Pn	**Pn**	**16 06 10.2**	**-1.1**
PE1	**Pezze di Greco**	**6.54**	**318**	*e*Pn	**Pn**	**16 06 15.2**	**-0.7**
SG1	**Sgolgore (BA)**	**6.98**	**315**	*e*Pn	**Pn**	**16 06 21.0**	**-0.9**
CUC	**Castrocucco**	**7.01**	**306**	Pn	**Pn**	**16 06 22.1**	**-0.1**
	83nm,0.4s						
SWA2		**7.05**	**163**	⇓P	**Pn**	**16 06 22.3**	**-0.5**
SWA2				S	**Sn**	**16 07 35.3**	**-6.3**
MGR	**Morigerati**	**7.25**	**307**	Pn	**Pn**	**16 06 25.0**	**-0.6**
	34nm,0.4s						
MS1	**Monte Sant'Ang**	**7.97**	**317**	*e*Pn	**Pn**	**16 06 33.0**	**-2.4**
BRTR	**Keskin Array B**	**9.07**	**63**	P	**Pn**	**16 06 54.5**	**+4.1**
	0.3nm,0.3s,baz=233,slow=12,SNR=8.1						
BR131	**Keskin Array S**	**9.07**	**63**	*e*Pn	**Pn**	**16 06 54.1**	**+3.7**
	0.8nm,0.4s						
BR131	**Keskin Array S**	**9.07**	**63**	*e*Pn	**Pn**	**16 06 54.1**	**+3.7**
	0.8nm,0.4s						
HHAG	**Hagoal**	**9.66**	**126**	P	**Pn**	**16 06 54.6**	**-3.9**
GLL	**Jalalah**	**9.66**	**129**	⇓P	**Pn**	**16 06 54.5**	**-4.0**
MLR	**Muntele Rosu**	**9.68**	**12**	LR	LR	16 10 05.7	
	comp=Z,189nm,18.9s,baz=290,slow=34						
HFRF	**Wahat Farafira**	**9.89**	**152**	⇓P	**Pn**	**16 06 60.0**	**-1.7**
MMAI	**Mount Meron Ar**	**10.55**	**103**	P	**Pn**	**16 07 09.6**	**-1.0**
	1.4nm,0.3s,baz=274,slow=12,SNR=7.0						
MMAI				S	**Sn**	**16 08 57.7**	**-9.4**
	2.9nm,0.3s,baz=297,slow=16,SNR=5.4						
BOJS	**Bojanci**	**11.19**	**330**	*i* Pn	**Pn**	**16 07 16.9**	**-2.3**
BOJS				*i* Sn	**Sn**	**16 09 11.9**	**-11**
VISS	**Visnje**	**11.60**	**330**	*i* Pn	**Pn**	**16 07 23.3**	**-1.6**
VISS				*i* Sn	**Sn**	**16 09 22.2**	**-10**
HDK1	**Dakhla**	**11.76**	**151**	P	**Pn**	**16 07 26.1**	**-1.1**
TR2		**11.76**	**127**	P	**Pn**	**16 07 23.3**	**-3.8**
EIL	**Elat**	**11.78**	**119**	P	**Pn**	**16 07 24.7**	**-2.7**
	0.6nm,0.3s,baz=278,slow=5.8,SNR=10						
EIL				S	**Sn**	**16 09 25.3**	**-12**
	0.8nm,0.3s,baz=18,slow=20,SNR=6.0						
HBST	**Basata**	**11.89**	**122**	⇓P	**Pn**	**16 07 24.4**	**-4.6**
JAVS	**Javornik**	**11.99**	**328**	*i* Pn	**Pn**	**16 07 27.5**	**-2.7**
JAVS				*i* Sn	**Sn**	**16 09 31.4**	**-11**
ASF	**Jabal al Asfar**	**12.03**	**105**	P	**Pn**	**16 07 30.5**	**-0.3**
	0.2nm,0.3s,baz=188,slow=7.1,SNR=2.7						
ASF				S	**Sn**	**16 09 35.0**	**-8.2**
	0.3nm,0.3s,baz=352,slow=15,SNR=2.5						
PERS	**Pernice**	**12.18**	**333**	*i* Pn	**Pn**	**16 07 30.6**	**-2.1**
PERS				*i* Sn	**Sn**	**16 09 35.0**	**-12**
HDK2	**Wahat Dakhilah**	**12.71**	**155**	P	**Pn**	**16 07 38.3**	**-1.8**
GERES	**GERESS Array B**	**14.56**	**334**	P	**Pn**	**16 08 03.4**	**-1.0**
	0.1nm,0.3s,baz=158,slow=8.0,SNR=3.4						
GERES				S	**Sn**	**16 10 37.8**	**-6.7**
	0.2nm,0.3s,baz=153,slow=22,SNR=4.4						
AKASG	**Malin Array Be**	**15.30**	**15**	P	**Pn**	**16 08 12.0**	**-2.0**
	0.7nm,0.3s,baz=207,slow=11,SNR=5.4						
AKASG	**Malin Array Be**	**15.30**	**15**	P	**Pn**	**16 08 12.0**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	**Hagfors**	**24.87**	**349**	P	**P**	**16 09 58.1**	**0.0**
	comp=Z,1.4nm,0.3s,mb3.8,baz=153,slow=11,SNR=25						
HFS	**Hagfors**	**24.87**	**349**	P	**P**	**16 09 58.1**	**0.0**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	**NORSAR Array B**	**26.15**	**347**	P	**P**	**16 10 09.6**	**-0.1**
	comp=Z,0.9nm,0.8s,mb3.2,baz=140,slow=11,SNR=3.2						
NOA	**NORSAR Array B**	**26.15**	**347**	P	**P**	**16 10 09.6**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**26.38**	**325**	P	**P**	**16 10 14.7**	**+2.9**
	comp=Z,1.8nm,0.5s,mb3.8,baz=126,slow=8.9,SNR=13						
EKA	**Eskdalemuir Ar**	**26.38**	**325**	P	**P**	**16 10 14.7**	**+2.9**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKTO	**Aktyubinsk**	**28.89**	**49**	P	**P**	**16 10 33.6**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=254,slow=7.5,SNR=2.7						
AKTO	**Aktyubinsk**	**28.89**	**49**	P	**P**	**16 10 33.6**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
TORD	**Torodi Ar. Bea**	**29.86**	**226**	P	**P**	**16 10 45.3**	**+2.0**
	comp=Z,0.2nm,0.6s,mb3.0,baz=32,slow=9.1,SNR=4.6						
ARCES	**ARCESS Array B**	**33.58**	**1**	P	**P**	**16 11 14.9**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.6,baz=170,slow=8.1,SNR=9.0						
ARCES	**ARCESS Array B**	**33.58**	**1**	P	**P**	**16 11 14.9**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**36.95**	**48**	P	**P**	**16 11 45.0**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=258,slow=7.1,SNR=3.5						
KURK	**Kurchatov**	**41.91**	**52**	P	**P**	**16 12 25.3**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.1,baz=274,slow=8.7,SNR=22						
KURK	**Kurchatov**	**41.91**	**52**	P	**P**	**16 12 25.3**	**-0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
SPITS	**Spitsbergen Ar**	**42.34**	**358**	P	**P**	**16 12 29.8**	**+0.9**
	comp=Z,18nm,1.0s,mb4.7,baz=302,slow=11,SNR=8.5						
SPITS	**Spitsbergen Ar**	**42.34**	**358**	P	**P**	**16 12 29.8**	**+0.9**
SPITS				pmax	pmax		
	comp=Z,18nm,1.0s						
MKAR	**Makanchi Array**	**44.66**	**57**	P	**P**	**16 12 48.2**	**+0.3**
	comp=Z,2.4nm,0.6s,mb4.1,baz=272,slow=7.5,SNR=21						
MKAR	**Makanchi Array**	**44.66**	**57**	P	**P**	**16 12 48.2**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**45.59**	**47**	P	**P**	**16 12 55.2**	**0.0**
	comp=Z,1.5nm,0.5s,mb4.0,baz=267,slow=7.4,SNR=7.9						
ZALV	**Zalesovo Beam**	**45.59**	**47**	P	**P**	**16 12 55.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
SONM	**Songino Array**	**60.19**	**50**	P	**P**	**16 14 43.5**	**+0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=282,slow=7.3,SNR=6.5						
SONM	**Songino Array**	**60.19**	**50**	P	**P**	**16 14 43.5**	**+0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	**79.03**	**52**	P	**P**	**16 16 39.6**	**+0.7**
	comp=Z,1.7nm,0.7s,mb4.0,baz=302,slow=5.0,SNR=4.7						
KSRS	**Korea Array**	**79.03**	**52**	P	**P**	**16 16 39.6**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						

MAN 30 16:16:27, 914N×12219E, h35km, mb4.4, ML3.3, MS3.1, 3C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.05**	**79**	⇓*i* P	Pn	16 16 45.0	-0.3
SNPH				*i* S	Sn	16 16 48.0	-11
DCPH	**Dipolog City**	**1.28**	**116**	⇑*e*P	Pn	16 16 48.5	+0.1
IPIL	**Ipil**	**1.39**	**164**	*e*P	Pn	16 16 52.2	+2.3
IPIL				*e*S	Sn	16 17 08.6	+1.4
GUIM	**Jordan**	**1.53**	**15**	*e*P	Pn	16 16 53.1	+1.3
GUIM				*e*S	Sn	16 17 12.6	+2.0
TBP	**Tagbilaran**	**1.74**	**71**	*e*P	Pn	16 16 56.1	+1.4
TBP				*e*S	Sn	16 17 17.5	+1.7
PAGZ	**Pagadian**	**1.74**	**137**	*e*P	Pn	16 16 56.8	+2.0
PAGZ				*e*S	Sn	16 17 17.1	+1.4
CUYO	**Cuyo Island**	**2.06**	**326**	*e*P	Pn	16 17 01.1	+2.0
LLP	**Lapu-Lapu**	**2.11**	**56**	⇑*e*P	Pn	16 17 02.0	+2.2
LLP				*e*S	Sn	16 17 26.8	+1.9
RCP	**Roxas**	**2.47**	**13**	⇑*e*P	Pn	16 17 09.7	+4.9
MSLP	**Maasin**	**2.81**	**69**	*e*P	Pn	16 17 12.7	+3.2
OCLP	**Ormoc**	**3.05**	**51**	*e*P	Pn	16 17 14.8	+2.0
BUKP	**Musuan**	**3.11**	**114**	*e*P	Pn	16 17 15.1	+1.6
ENPP	**El Nido**	**3.41**	**307**	*e*P	Pn	16 17 20.1	+2.4
BUSP	**Coron**	**3.45**	**326**	*e*P	Pn	16 17 19.6	+1.3
BUSP				*e*S	Sn	16 17 58.9	+0.9

TRN 30 16:22:51.9, 1513N×6101W, h174km, MD3.9, M2.9(FDF), 9C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.42**	**199**	⇑*i* P	Pn	16 23 16.5	+0.7
FDF				⇑*e*S	Sn	16 23 34.6	+0.5
MVM	**Montagne Vaucl**	**0.59**	**169**	⇑*e*P	Pn	16 23 17.4	+1.0
MVM				⇑*e*S	Sn	16 23 36.2	+0.9
BIM	**Bigot**	**0.62**	**186**	⇓*i* P	Pn	16 23 17.2	+0.6
BIM				⇓*e*S	Sn	16 23 36.9	+1.3
PHG	**Guadaloupe-2**	**1.07**	**325**	⇑*i* P	Pn	16 23 20.8	+1.3
DOG	**Dongo Capester**	**1.07**	**327**	⇑*i* P	Pn	16 23 20.6	+1.1
SCG	**Saint Claude**	**1.10**	**324**	⇑*e*P	Pn	16 23 21.0	+1.2
SLW	**Petit Monier**	**1.11**	**177**	*e*P	Pn	16 23 20.3	+0.4
SLW	**Petit Monier**	**1.11**	**177**	*e*P	Pn	16 23 21.1	+1.2
SLW				*e*S	Sn	16 23 41.2	-0.3
BCG	**Bois Riant Cap**	**1.11**	**328**	*e*P	Pn	16 23 20.9	+1.0
DEG	**La Desirade**	**1.17**	**358**	*e*P	Pn	16 23 22.0	+1.6
DEG				*e*S	Sn	16 23 42.9	+0.4
LZG	**Guadaloupe-1**	**1.24**	**324**	⇑*e*P	Pn	16 23 22.0	+1.0
SLPE	**Piton Saint Es**	**1.28**	**179**	*e*P	Pn	16 23 23.1	+1.8
SLPE				*e*S	Sn	16 23 44.6	+0.5
SLB	**Belfond**	**1.30**	**181**	*e*P	Pn	16 23 22.7	+1.2
SLB				*e*S	Sn	16 23 45.0	+0.6
SLDE	**Delcer**	**1.32**	**182**	*e*P	Pn	16 23 23.8	+2.1
SLDE				*e*S	Sn	16 23 45.1	+0.4
SFAN	**Fancy Village**	**1.75**	**185**	*e*P	Pn	16 23 26.9	+1.0
SFAN				*e*S	Sn	16 23 52.7	+0.6
SSV	**Crater Summit**	**1.81**	**186**	*e*P	Pn	16 23 27.0	+0.5
SSV				*e*S	Sn	16 23 54.4	+1.2
SVV	**Soufriere Volc**	**1.82**	**186**	⇓*i* P	Pn	16 23 27.8	+1.1
SVV				*e*S	Sn	16 23 54.1	+0.6
BHS	**Barnard House**	**1.83**	**184**	*e*P	Pn	16 23 27.7	+0.9
BHS				*e*S	Sn	16 23 55.4	+1.7
FCV	**Fort Charlotte**	**1.98**	**187**	⇑*e*P	Pn	16 23 29.0	+0.7
FCV				*e*S	Sn	16 23 57.2	+0.7
BPA	**Boggy Peak**	**2.07**	**337**	⇓*e*P	Pn	16 23 30.1	+0.8
BPA				*e*S	Sn	16 23 56.7	-1.7
GRW	**Mount Saint Ca**	**3.02**	**192**	*e*P	Pn	16 23 41.2	+0.6
GRW				*e*S	Sn	16 24 18.7	+0.2
TPR	**Prospect**	**3.93**	**177**	*e*P	Pn	16 23 52.6	+0.6
BOT	**Bacolet**	**3.95**	**176**	*e*P	Pn	16 23 53.5	+1.2
TCE	**Chacachacare**	**4.47**

1.7nm,0.9s,baz=1.2,slow=2.3,SNR=6.9

*IDC **30** 16:43:07.7±1.0, 176N×8543W, h0km, mb3.7/7, mb1 4.1/11, mb1mx4.0/23, mbtmp4.0/11, ML3.8/4, MS4.4/17, Ms1 4.3/17, ms1mx4.2/24, Error ellipse: s-maj=34.2km s-min=16.8km az=57.0*

*ISCJB **30** 16:43:08.3±2.9, 178N×006-8535W×007, h15km±19km, mb3.9/7, MS4.3/13, Error ellipse: s-maj=12.5km s-min=8.5km az=150.7*

*GCMT **30** 16:43:12.7±0.2, 166N×8525W, h13km±1km, MW5.1/74, Moment Tensor Solution. s39,c56; s74,c121; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.58±.14; Mθθ=0.88±.14; Mϕϕ=-0.30±.15; Mrθ=-1.09±.36; Mrϕ=5.53±.16; Mθϕ=1.31±.41; Best double couple: Mo5.83900×10¹⁶ NP1:ϕs=92.00000°, δ77.00000°, λ-12.00000°. NP2: ϕs=185.00000°, δ78.00000°, λ-167.00000°. Principal axes: T 5.8510, Plg1.0000°, Azm318.0000°; N -0.0250, Plg72.0000°, Azm226.0000°; P -5.8260, Plg18.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **30** 16:43:12.7±0.6, 185N×8529W, h35km, mb4.5/4 Error ellipse: s-maj=17.0km s-min=9.2km az=55.0*

ISC 30 16:43:10.3±3.4, 182N±005×8534W±006, h17km±22km, n34, σ1§06/25, mb3.9/7, MS4.3/13, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**7.07**	**103**	*e*Pn			**Pn**	**16 44 51.2**	**-2.0**
	32nm,1.0s								
OTAV						Sn	**Sn**	**16 46 11.4**	**-1.7**
ATAH	**Atahualpa**	**11.18**	**142**	Pn			**Pn**	**16 45 51.5**	**+2.0**
	1.8nm,0.3s,baz=310,slow=8.2,SNR=13								
ATAH						Sn	**Sn**	**16 47 54.9**	**+0.7**
	0.2nm,0.3s,baz=324,slow=16,SNR=1.7								
ATAH					LR		LR	16 49 41.0	
	comp=Z,4μm,20.2s,baz=316,slow=35								
TGUH	**Tegucigalpa,Un**	**12.30**	**351**	*e*Pn			**Pn**	**16 46 03.6**	**-1.3**
	53nm,0.9s								
NNA	**Nana**	**16.11**	**149**	Pn			**Pn**	**16 46 55.8**	**-0.5**
	0.3nm,0.3s,baz=329,slow=16,SNR=2.4								
NNA					LR		LR	16 52 08.2	
	comp=Z,2μm,21.1s,baz=324,slow=34								
NNA	**Nana**	**16.11**	**149**	*e*Pn			**Pn**	**16 46 56.8**	**+0.5**
	82nm,1.8s								
SDV	**Santo Domingo**	**16.23**	**64**	Pn			**Pn**	**16 46 58.0**	**+0.3**
	0.6nm,0.3s,baz=252,slow=7.2,SNR=16								
SDV						Sn	**Sn**	**16 49 58.6**	**+1.0**
	0.1nm,0.3s,baz=60,slow=20,SNR=1.9								
SDV					LR		LR	16 52 44.2	
	comp=Z,2μm,20.2s,baz=270,slow=35								
SDV	**Santo Domingo**	**16.23**	**64**	*e*Pn			**Pn**	**16 46 58.7**	**+0.9**
	52nm,1.2s								
CMIG	**Matias Romero**	**17.84**	**329**	P			**Pn**	**16 47 18.4**	**+0.4**
	0.1nm,0.3s,baz=160,slow=15,SNR=2.3								
CMIG						S	**Sn**	**16 50 47.8**	**+11**
	0.2nm,0.3s,baz=318,slow=18,SNR=2.3								
CMIG					LR		LR	16 52 51.8	
	comp=Z,2μm,20.4s,baz=131,slow=33								
CMIG	**Matias Romero**	**17.84**	**329**	P			**Pn**	**16 47 18.4**	**+0.4**
CMIG						S	**Sn**	**16 50 47.8**	**+11**
PCRV	**Puerto La Cruz**	**22.18**	**67**	P			**P**	**16 48 07.2**	**+1.2**
	10.0nm,0.9s,mb4.2,baz=275,slow=6.0,SNR=5.0								
LVC	**Limon Verde**	**29.10**	**147**	LR			LR	17 01 00.4	
	comp=Z,980nm,20.2s,MS4.4,baz=350,slow=37								
LVC	**Limon Verde**	**29.10**	**147**	*e*P			**P**	**16 49 10.8**	**+0.5**
	2.8nm,0.3s,mb4.5								
SIV	**San Ignacio**	**29.81**	**127**	P			**P**	**16 49 18.2**	**+1.5**
	0.9nm,0.9s,mb3.5,baz=300,slow=11,SNR=5.7								
TXAR	**Lajitas Array**	**32.45**	**329**	P			**P**	**16 49 40.6**	**+0.8**
	0.2nm,0.5s,baz=144,slow=13,SNR=3.4								
TXAR					LR		LR	17 01 48.1	
	comp=Z,690nm,19.9s,MS4.3,baz=5.0,slow=34								
RPN	**Rapa Nui**	**36.92**	**217**	LR			LR	17 00 51.1	
	comp=Z,614nm,21.1s,MS4.4,baz=235,slow=29								
CFAA	**Coronel Fontan**	**37.00**	**155**	P			**P**	**16 50 17.8**	**-1.3**
	0.4nm,0.9s,baz=327,slow=9.4,SNR=5.5								
BDFB	**Brasilia**	**40.78**	**117**	LR			LR	17 09 13.3	
	comp=Z,662nm,18.0s,MS4.5,baz=68,slow=38								
BDFB	**Brasilia**	**40.78**	**117**	*e*P			**P**	**16 50 50.3**	**-0.8**
	1.9nm,0.6s,mb3.9								
PLCA	**Paso Flores**	**44.45**	**164**	P			**P**	**16 51 20.0**	**-0.6**
	2.6nm,0.8s,mb4.0,baz=344,slow=12,SNR=2.3								
PLCA					LR		LR	17 07 42.9	
	comp=Z,341nm,18.5s,MS4.3,baz=344,slow=33								
PDAR	**Pinedale Array**	**46.16**	**335**	P			**P**	**16 51 33.8**	**-0.3**
	0.5nm,0.9s,mb3.4,baz=134,slow=5.2,SNR=2.9								
PDAR					LR		LR	17 11 32.7	
	comp=Z,727nm,20.1s,MS4.6,baz=147,slow=37								
NVAR	**Mina Array Bea**	**47.30**	**324**	P			**P**	**16 51 43.1**	**0.0**
	0.2nm,0.3s,mb3.5,baz=123,slow=9.8,SNR=2.4								
ULM	**Lac du Bonnet**	**49.07**	**351**	LR			LR	17 12 17.2	
	comp=Z,244nm,20.8s,MS4.2,baz=159,slow=36								
RKT	**Rikitea**	**54.29**	**240**	*e*LR			LR	17 08 23.6	
	650nm,28.8s,baz=55								
SCHQ	**Schefferville**	**54.96**	**13**	LR			LR	17 13 58.6	
	comp=Z,316nm,21.2s,MS4.4,baz=202,slow=34								
TAOE	**Nuku Hiva Isla**	**55.64**	**258**	*e*LR			LR	17 09 03.2	
	4μm,25.4s								
YKA	**Yellowknife Ar**	**64.35**	**345**	LR			LR	17 23 36.5	
	comp=Z,135nm,19.7s,MS4.1,baz=110,slow=38								
PPT	**Papeete**	**66.11**	**250**	*e*S			S	17 03 09.0	+24
	89nm,25.8s								
PPT				*e*LQ				17 11 05.0	
	610nm,30.5s								
PPT				*e*LR			LR	17 13 48.8	
	1μm,24.5s,baz=81								
DBIC	**Dimbokro**	**80.34**	**84**	LR			LR	17 28 24.5	
	comp=Z,138nm,21.5s,MS4.3,baz=254,slow=34								
TORD	**Torodi Ar. Bea**	**86.70**	**77**	LR			LR	17 34 42.4	
	comp=Z,95nm,20.7s,MS4.2,baz=0.0,slow=36								
VNA3	**Neumayer Olymp**	**87.13**	**162**	*e*			**P**	**16 55 55.5**	**+0.5**
VNA3				*e*			pP	16 56 01.8	+1.2
VNA2	**Neumayer--Watz**	**87.78**	**161**	*e*			**P**	**16 55 57.0**	**-1.1**
	baz=270,slow=6.7								
VNA2				*e*			pP	16 56 03.1	-0.6
NOA	**NORSAR Array B**	**91.60**	**29**	LR			LR	17 32 38.6	
	comp=Z,159nm,21.5s,MS4.4,baz=270,slow=32								
KEST	**Kesra**	**92.76**	**54**	LR			LR	17 30 56.2	
	comp=Z,52nm,21.7s,MS4.0,baz=230,slow=31								
ASAR	**Alice Springs**	**136.25**	**237**	PKP			PKPdf	17 02 33.1	+1.2
	0.3nm,0.8s,baz=106,slow=2.6,SNR=4.3								

*BJI **30** 16:55:23.6, 456S×10096E, h35km, mB4.8, mb4.5*

*ISCJB **30** 16:55:29.8±0.9, 36S±0.1×1010E±0.1, h24km, mb4.3/20, MS4.8/2, Error ellipse: s-maj=25.4km s-min=10.9km az=137.9*

*IDC **30** 16:55:32.8±1.2, 356S×10095E, h30km±4km, mb4.0/12, mb1 4.2/13, mb1mx4.0/20, mbtmp4.1/13, ML4.0/1, MS4.8/2, Ms1 4.8/2, ms1mx3.7/30, Error ellipse: s-maj=36.1km s-min=17.0km az=51.0*

*NEIC **30** 16:55:33.2±0.8, 363S×10088E, h35km, mb4.6/5, Error ellipse: s-maj=26.3km s-min=9.9km az=48.0*

*DJA **30** 16:55:35, 185S×10257E, h10km, MLv4.1/3*

ISC 30 16:55:31.3±9.4, 36S±01×1009E±02, h20km±65km, h25km±3.2km:pP-P, n29, σ0§90/25, mb4.3/20, MS4.8/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.82**	**95**	P			**Pn**	**16 59 51.3**	**+0.9**
	0.5nm,0.3s,baz=271,slow=14,SNR=7.1								
CMAR	**Chiang Mai Arr**	**22.01**	**355**	P			**P**	**17 00 23.4**	**-1.1**
	4.0nm,0.9s,mb3.9,baz=187,slow=8.6,SNR=20								
DAV	**Davao City (W)**	**26.79**	**67**	LR			LR	17 11 48.6	
	comp=Z,2μm,20.2s,MS4.7,baz=320,slow=36								
WRAB	**Tennant Creek**	**36.40**	**119**	*e*P			**P**	**17 02 33.3**	**-1.3**
	7.0nm,1.0s,mb4.5								
ASAR	**Alice Springs**	**37.57**	**125**	P			**P**	**17 02 43.5**	**-1.1**
	0.6nm,0.3s,mb3.8,baz=300,slow=8.1,SNR=18								
ASAR				PcP			PcP	17 05 03.0	+0.6
	0.7nm,1.0s,baz=322,slow=5.9,SNR=3.1								
ASAR				pPcP				17 05 11.1	
	0.9nm,0.6s,baz=306,slow=2.6,SNR=7.0								
XAN	**Xi'an**	**38.19**	**11**	P			**P**	**17 02 49.3**	**-0.3**
XAN						AMB	AMB		
	comp=Z,12nm,0.9s,mb4.6								
XAN						AMB	AMB		
	comp=Z,69nm,4.4s								
GTA	**Gaotai**	**42.81**	**359**	*e*P			**P**	**17 03 28.8**	**+1.1**
GTA						AP	pP	17 03 33.0	-1.0
GTA						AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2								
STKA	**Stephens Creek**	**47.40**	**131**	pP			pP	17 04 11.6	+0.8
	comp=Z,3.7nm,0.8s,baz=312,slow=10,SNR=4.4								
STKA					LR		LR	17 22 36.3	
	comp=Z,1μm,19.0s,MS4.8,baz=333,slow=34								
STKA	**Stephens Creek**	**47.40**	**131**	*e*P			**P**	**17 04 06.1**	**+1.7**
	comp=Z,0.2nm,0.3s,mb3.5								
KSRS	**Korea Array**	**47.94**	**29**	P			**P**	**17 04 06.5**	**-1.9**
	comp=Z,5.1nm,0.9s,mb4.5,baz=211,slow=6.8,SNR=8.5								
SONM	**Songino Array**	**51.45**	**5**	P			**P**	**17 04 36.6**	**+1.7**
	comp=Z,4.5nm,0.8s,mb4.4,baz=184,slow=9.0,SNR=37								
SONM						pP	pP	17 04 44.7	+3.3
	comp=Z,5.6nm,0.8s,baz=184,slow=9.1,SNR=20								
ULN	**Ulaanbaatar**	**51.53**	**5**	*e*P			**P**	**17 04 36.6**	**+1.1**
	comp=Z,3.5nm,0.9s,mb4.3								
TKM2	**Tokmak 2**	**51.66**	**336**	*e*P			**P**	**17 04 37.0**	**+0.4**
	comp=Z,5.8nm,0.8s,mb4.6								
CN2	**Changchun**	**52.09**	**22**	*e*P			**P**	**17 04 39.8**	**0.0**
EKS2	**Erkin-Say**	**52.20**	**335**	*e*P			**P**	**17 04 41.1**	**+0.4**
	comp=Z,6.2nm,0.8s,mb4.6								
MKAR	**Makanchi Array**	**52.81**	**344**	P			**P**	**17 04 45.4**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=147,slow=8.1,SNR=18								
MKAR						pP	pP	17 04 53.6	+2.0
	comp=Z,1.7nm,0.8s,baz=162,slow=7.9,SNR=5.8								
MKAR	**Makanchi Array**	**52.81**	**344**	P			**P**	**17 04 45.4**	**+0.3**
MKAR						pP	pP	17 04 53.6	+2.0
MJAR	**Matsushiro Arr**	**52.95**	**38**	P			**P**	**17 04 45.6**	**-0.7**
	comp=Z,2.4nm,0.9s,mb4.1,baz=216,slow=7.7,SNR=6.0								
KURK	**Kurchatov**	**57.40**	**343**	P			**P**	**17 05 17.5**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.4,baz=162,slow=6.9,SNR=4.1								
ZAA0	**Zalesovo Array**	**58.91**	**349**	*e*P			**P**	**17 05 28.3**	**-0.4**
ZALV	**Zalesovo Beam**	**58.91**	**349**	P			**P**	**17 05 28.7**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.5,baz=160,slow=4.7,SNR=18								
ZALV						pP	pP	17 05 36.9	+1.7
	comp=Z,1.6nm,0.5s,baz=149,slow=6.9,SNR=5.8								
ZALV	**Zalesovo Beam**	**58.91**	**349**	P			**P**	**17 05 28.7**	**0.0**
ZALV						pP	pP	17 05 36.9	+1.7
BVAR	**Borovoye Array**	**62.00**	**340**	P			**P**	**17 05 49.0**	**-0.8**
	comp=Z,3.3nm,0.7s,mb4.6,baz=144,slow=8.9,SNR=26								
YSS	**Yuzh-Sakhalins**	**62.35**	**31**	*e*P			**P**	**17 05 53.3**	**+0.9**
	comp=Z,24nm,1.0s,mb5.3								
PETK	**Petropavlovsk-**	**73.74**	**32**	P			**P**	**17 07 03.8**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.2,baz=234,slow=4.6,SNR=2.9								
ARCES	**ARCESS Array B**	**88.29**	**340**	P			**P**	**17 08 21.0**	**+0.1**
	comp=Z,2.8nm,0.9s,mb4.5,baz=106,slow=5.1,SNR=2.5								
GERES	**GERESS Array B**	**90.86**	**319**	P			**P**	**17 08 33.2**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.9,baz=64,slow=8.9,SNR=2.2								
TXAR	**Lajitas Array**	**145.37**	**40**	PKPbc			PKPbc	17 15 09.4	+1.1
	comp=Z,7.1nm,0.8s,baz=286,slow=1.3,SNR=66								
TXAR					pPKPbc		pPKPbc	17 15 18.0	+2.8
	comp=Z,2.0nm,0.7s,baz=176,slow=0.7,SNR=7.8								
TXAR	**Lajitas Array**	**145.37**	**40**	PKPbc			PKPbc	17 15 09.4	+1.1
TXAR					pPKPbc		pPKPbc	17 15 18.0	+2.8

*BJI **30** 17:02:41.8, 434S×13162E, h27km, mB5.2, mb4.8, Ms4.8, Msz4.5*

*IDC **30** 17:02:45.5±0.6, 353S×13143E, h0km, mb4.7/14, mb1 4.9/16, mb1mx4.9/17, mbtmp4.8/16, ML4.7/2, MS4.3/5, Ms1 4.4/5, ms1mx3.9/22, Error ellipse: s-maj=24.0km s-min=12.3km az=81.0*

*ISCJB **30** 17:02:46.8±1.4, 363S±004×13147E±005, h21km±9km, mb4.8/65, MS4.4/19, Error ellipse: s-maj=8.6km s-min=5.2km az=153.7*

*MOS **30** 17:02:47.9±1.0, 358S×13132E, h27km, mb5.0/35, MS4.4/5, Error ellipse: s-maj=14.0km s-min=6.5km az=113.0*

*NEIC **30** 17:02:49.5±2.0, 362S×13137E, h28km±14km, mb4.9/36, Error ellipse: s-maj=8.1km s-min=4.7km az=60.0*

*DJA **30** 17:02:51, 353S×13147E, h43km, Mw5.3/11*

ISC 30 17:02:49.2±1.3, 361S±004×13149E±005, h23km±9km, h29km±2.0km:pP-P, n177, σ1§12/188, mb4.8/65, MS4.4/19, 15C-18D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.09**	**174**	*e*P			Px	17 04 41.6	
	58nm,0.6s								
KAKA				*e*S			Sx	17 06 19.4	
BATI	**Baumata**	**10.16**	**229**	Pn			**Pn**	**17 05 14.3**	**+0.6**
	13nm,0.3s,baz=157,slow=1.2,SNR=44								
BATI						Sn	**Sn**	**17 07 12.5**	**+5.5**
	1.4nm,0.3s,baz=307,slow=20,SNR=2.4								
KAPI	**Kappang**	**11.79**	**263**	⇓P			**Pn**	**17 05 36.6**	**+0.6**
	SNR=18								
KAPI	**Kappang**	**11.79**	**263**	Pn			**Pn**	**17 05 36.1**	**+0.1**
	2.0nm,0.3s,baz=119,slow=4.9,SNR=32								
KAPI	**Kappang**	**11.79**	**263**	*e*Pn			**Pn**	**17 05 35.6**	**-0.4**
	42nm,0.7s								
DAV	**Davao City (W)**	**12.14**	**331**	Pn			**Pn**	**17 05 40.3**	**-0.6**
COEN	**Coen**	**15.45**	**132**	*e*Pn			**Pn**	**17 06 25.1**	**-0.7**
	18nm,0.6s								
COEN				*e*Sn			**Sn**	**17 09 04.1**	**-12**
MYLDM	**Lahad Datu**	**15.64**	**304**	⇓P			**Pn**	**17 06 32.2**	**+3.9**
TSM	**Tawau**	**15.71**	**300**	⇑P			**Pn**	**17 06 29.7**	**+0.5**
OCLP	**Ormoc**	**16.10**	**335**	*e*P			**Pn**	**17 06 33.0**	**-1.1**
WRAB	**Tennant Creek**	**16.46**	**170**	*e*Pn			**Pn**	**17 06 32.8**	**-6.0**
	85nm,0.9s								
WRAB				*e*				17 06 42.4	
WRAB				*e*Sn			**Sn**	**17 09 29.2**	**-12**
WRAB	**Tennant Creek**	**16.46**	**170**	*e*P			**Pn**	**17 06 35.3**	**-3.4**
WB2	**Warramunga Arr**	**16.47**	**170**	*e*P			**Pn**	**17 06 33.4**	**-5.4**
WB2				*e*				17 06 42.5	
WB2				*e*S			**Sn**	**17 09 26.2**	**-15**
PMG	**Port Moresby**	**16.59**	**111**	*e*Pn			**Pn**	**17 06 41.6**	**+1.1**
	32nm,0.8s								
PMG	**Port Moresby**	**16.59**	**111**	⇑*e*P			**Pn**	**17 06 41.9**	**+1.4**
SDKM	**Sandakan**	**16.98**	**303**	⇓P			**Pn**	**17 06 47.7**	**+2.4**
KDM	**Kudat**	**17.98**	**306**	⇑P			**Pn**	**17 07 00.3**	**+2.5**
KKM	**Kota Kinabalu**	**18.02**	**302**	*e*Pn			**Pn**	**17 06 56.2**	**-2.0**
	313nm,1.3s								
KKM	**Kota Kinabalu**	**18.02**	**302**	⇑P			**Pn**	**17 06 59.2**	**+1.0**
BTM	**Bintulu**	**19.60**	**290**	⇑P			**Pn**	**17 07 17.1**	**-0.3**
ASAR	**Alice Springs**	**20.07**	**174**	P			**P**	**17 07 21.6**	**+0.5**
	52nm,0.8s,baz=350,slow=11,SNR=177								
ASAR						S	**S**	**17 10 58.2**	**-7.4**
	7.5nm,0.7s,baz=354,slow=26,SNR=5.2								
ASAR	**Alice Springs**	**20.07**	**174**	P			**P**	**17 07 21.6**	**+0.6**
ASAR						S	**S**	**17 10 58.2**	**-7.4**
ASAR						pmax	pmax		
	comp=Z,52nm,0.8s								
ASAR						smax			
	comp=N,8.0nm,0.7s								
SBUM	**Sibu**	**20.18**	**287**	⇓P			**P**	**17 07 23.8**	**+1.5**
MBWA	**Marble Bar**	**20.85**	**212**	*e*P			**P**	**17 07 26.5**	**-3.0**
	comp=N,36nm,0.7s								
BALP	**Baler**	**21.59**	**333**	*e*P			**P**	**17 07 36.5**	**-1.0**
GUMO	**Guam**	**21.64**	**38**	LR			LR	17 15 48.4	
	comp=N,549nm,19.3s,MS4.0,baz=29,slow=36								
KSM	**Kuching**	**21.76**	**283**	*e*Pn			**P**	**17 07 38.4**	**-1.1**
	comp=N,73nm,0.6s,mb5.3								
KSM	**Kuching**	**21.76**	**283**	⇓P			**P**	**17 07 39.1**	**-0.3**
CTA	**Charters Tower**	**21.80**	**140**	*e*P			**P**	**17 07 41.6**	**+1.8**
	comp=N,18nm,0.8s,mb4.6								
CTA				*e*S			**S**	**17 11 43.0**	**+3.1**
CTA	**Charters Tower**	**21.80**	**140**	P			**P**	**17 07 41.7**	**+1.9**
	comp=N,30nm,0.9s,mb4.7,baz=323,slow=12,SNR=21								
CTA	**Charters Tower**	**21.80**	**140**	*e*P			**P**	**17 07 41.6**	**+1.8**
CTA				*e*S			**S**	**17 11 43.0**	**+3.1**
CTA				pmax			pmax		
	comp=Z,18nm,0.8s								
CTAO	**Charters Tower**	**21.80**	**140**	*e*P			**P**	**17 07 41.8**	**+2.0**
	comp=Z,32nm,0.9s,mb4.8								
CTAO	**Charters Tower**	**21.80**	**140**	*e*P			**P**	**17 07 41.8**	**+2.0**
CTAO				pmax			pmax		
	comp=Z,33nm,0.9s,mb4.8								
CAUP	**Cauayan**	**22.55**	**335**	*e*P			**P**	**17 07 48.0**	**+0.3**
FORT	**Forrest**	**27.21**	**186**	*e*P			**P**	**17 08 31.3**	**0.0**
	comp=Z,82nm,0.7s,mb5.4								
MYKOM	**Kota Tinggi**	**28.14**	**281**	⇑P			**P**	**17 08 40.3**	**+0.4**
KGM	**Kluang**	**28.70**	**281**	⇓P			**P**	**17 08 46.1**	**+1.2**
STKA	**Stephens Creek**	**29.68**	**162**	*e*P			**P**	**17 08 54.1**	**+0.8**
	comp=Z,18nm,0.9s,mb4.8								
STKA	**Stephens Creek**	**29.68**	**162**	P			**P**	**17 08 54.3**	**+1.0**
	comp=Z,19nm,0.8s,mb4.9,baz=335,slow=8.2,SNR=28								
FRIM	**Kepong**	**30.61**	**282**	⇓P			**P**	**17 09 02.5**	**+0.7**
KLBR	**Kellerberrin**	**30.68**	**203**	*e*P			**P**	**17 09 00.8**	**-1.4**
	comp=Z,32nm,0.6s,mb5.3								
QIZ	**Qiongzhong**	**30.98**	**317**	P			**P**	**17 09 03.8**	**-1.2**
QIZ						S	**S**	**17 14 10.0**	**+1.4**
QIZ					LR		LR		
	comp=E,374nm,14.3s								
QIZ					LR		LR		
	comp=Z,390nm,16.0s,MS4.2								

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IPM	**Ipoh**	**31.48**	**285**	⇓P			**P**	**17 09 09.6**	**+0.2**
MUN	**Mundaring**	**31.66**	**205**	*e*P			**P**	**17 09 09.7**	**-1.1**
KULM	**Kulim**	**32.05**	**286**	⇑P			**P**	**17 09 14.2**	**-0.3**
NWAO	**Narrogin (SRO)**	**32.07**	**203**	P			**P**	**17 09 12.8**	**-1.5**
	comp=Z,14nm,0.6s,mb4.9,baz=80,slow=21,SNR=12								
NWAO	**Narrogin (SRO)**	**32.07**	**203**	*e*P			**P**	**17 09 12.4**	**-2.0**
	comp=Z,58nm,1.3s,mb5.2								
NWAO	**Narrogin (SRO)**	**32.07**	**203**	P			**P**	**17 09 12.9**	**-1.5**
NWAO						pmax	pmax		
	comp=Z,14nm,0.6s								
ARMA	**Armidale**	**32.76**	**147**	*e*P			**P**	**17 09 20.5**	**0.0**
CAN	**Canberra**	**35.48**	**155**	*e*P			**P**	**17 09 46.1**	**+2.1**
	comp=Z,23nm,1.0s,mb5.1								
CAN	**Canberra**	**35.48**	**155**	*e*P			**P**	**17 09 46.1**	**+2.1**
CAN						pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1								
CNB	**Canberra Magne**	**35.62**	**154**	*e*P			**P**	**17 09 47.8**	**+2.5**
SSE	**Sheshan**	**35.89**	**345**	P			**P**	**17 09 49.3**	**+1.8**
SSE						XP	sP	17 10 01.8	+4.4
SSE						S	**S**	**17 15 28.3**	**+4.0**
SSE						XS	sS	17 15 43.3	+7.4
SSE						AMB	AMB		
	comp=Z,36nm,0.8s,mb5.3								
SSE						AMB	AMB		
	comp=Z,249nm,4.9s								
SSE					LR		LR		
	comp=N,145nm,19.8s,MS4.2								
SSE					LR		LR		
	comp=E,410nm,19.8s,MS4.2								
SSE					LR		LR		
	comp=Z,372nm,6.9s								
TOO	**Toolangi**	**36.15**	**161**	*e*P			**P**	**17 09 52.1**	**+2.4**
NJ2	**Nanjing**	**37.45**	**342**	*e*P			**P**	**17 10 01.5**	**+0.7**
NJ2						AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8								
WHN	**Wuhan**	**37.71**	**335**	⇓P			**P**	**17 10 04.5**	**+1.4**
WHN						S	**S**	**17 15 48.0**	**-4.1**
WHN					LR		LR		
	comp=N,801nm,28.9s,MS4.7								
WHN					LR		LR		
	comp=E,1μm,24.3s,MS4.7								
WHN					LR		LR		
	comp=Z,994nm,25.0s,MS4.5								
GYA	**Guiyang**	**38.35**	**323**	⇓*i*P			**P**	**17 10 08.8**	**+0.3**
GYA						AP	pP	17 10 18.3	+2.7
GYA						XP	sP	17 10 22.3	+3.9
GYA						PP	PP	17 11 41.8	+5.3
GYA						PCP	PcP	17 12 20.3	-1.8
GYA						S	**S**	**17 16 04.0**	**+2.1**
GYA						XS	sS	17 16 20.0	+6.5
GYA						SS	SS	17 18 47.0	-3.8
GYA						AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7								
GYA						AMB	AMB		
	comp=Z,130nm,6.0s								
GYA					LR		LR		
	comp=N,500nm,13.0s,MS4.6								
GYA					LR		LR		
	comp=E,410nm,12.8s,MS4.6								
GYA					LR		LR		
	comp=Z,610nm,13.2s,MS4.6								
CM31	**Chiang Mai Arr**	**38.84**	**305**	*e*P			**P**	**17 10 17.1**	**+4.3**
	comp=Z,5.8nm,1.1s,mb4.2								
CMAR	**Chiang Mai Arr**	**38.84**	**305**	P			**P**	**17 10 11.9**	**-0.9**
	comp=Z,8.2nm,0.8s,mb4.5,baz=136,slow=7.3,SNR=70								
CMAR	**Chiang Mai Arr**	**38.84**	**305**	*i*P			**P**	**17 10 12.8**	**0.0**
CMAR						pmax	pmax		
	comp=Z,8.0nm,0.8s								
CHTO	**Chiang Mai**	**39.03**	**306**	⇓P			**P**	**17 10 14.8**	**+0.5**
	SNR=9.4								
CHTO	**Chiang Mai**	**39.03**	**306**	*e*P			**P**	**17 10 12.9**	**-1.4**
	comp=Z,18nm,0.8s,mb4.8								
CHTO

comp=N,309nm,18.0s,MS4.5
BJI LR LR
comp=E,344nm,19.0s,MS4.5
BJI LR LR
comp=Z,235nm,22.9s,MS4.1
LZH Lanzhou 47.20 329 ⇑P **P 17 11 21.0 +0.8**
LZH AP pP 17 11 31.0 +3.6
LZH XP sP 17 11 36.3 +6.1
LZH PP PP 17 13 11.5 +0.1
LZH *e*S **S 17 18 10.3 -1.6**
LZH XS sS 17 18 25.5 +1.8
LZH SS SS 17 21 32.3 -7.2
LZH AMB AMB
comp=Z,44nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,230nm,4.2s
LZH LR LR
comp=E,2μm,17.9s
LZH LR LR
comp=Z,2μm,18.9s,MS5.1
CN2 Changchun 47.51 354 *e*P **P 17 11 25.8 +3.3**
CN2 *e*XP sP 17 11 37.5 +5.0
CN2 *e*S **S 17 18 19.0 +3.0**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,200nm,13.0s,MS4.5
CN2 LR LR
comp=E,300nm,13.0s,MS4.5
CN2 LR LR
comp=Z,400nm,15.0s,MS4.5
MDJ Mudanjiang 48.04 358 P **P 17 11 31.5 +4.9**
MDJ AP pP 17 11 36.0 +2.2
MDJ XP sP 17 11 38.5 +1.9
MDJ PP PP 17 13 22.3 +3.3
MDJ S **S 17 18 29.0 +5.5**
MDJ XS sS 17 18 40.0 +4.6
MDJ AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,80nm,4.8s
MDJ LR LR
comp=N,194nm,9.5s
MDJ LR LR
comp=E,229nm,13.9s
MDJ LR LR
comp=Z,358nm,17.5s,MS4.4
SHL Shillong 48.11 309 *e*P **P 17 11 28.0 +0.5**
LSA Lhasa 50.87 313 P **P 17 11 49.0 +0.5**
LSA Lhasa 50.87 313 *e*P **P 17 11 48.9 +0.4**
comp=Z,12nm,0.8s,mb4.9
LSA Lhasa 50.87 313 *e*P **P 17 11 48.9 +0.4**
LSA pmax pmax
comp=Z,12nm,0.8s,mb4.9
GTA Gaotai 51.80 329 P **P 17 11 55.8 +0.6**
GTA AP pP 17 12 03.5 +1.0
GTA XP sP 17 12 06.5 +1.2
GTA PP PP 17 13 55.8 +2.6
GTA S **S 17 19 18.8 +2.6**
GTA XS sS 17 19 32.3 +4.2
GTA SS SS 17 22 55.8 +2.6
GTA AMB AMB
comp=Z,11nm,1.1s,mb4.7
GTA AMB AMB
comp=Z,240nm,7.2s
GTA LR LR
comp=N,256nm,15.9s,MS4.5
GTA LR LR
comp=E,180nm,15.3s,MS4.5
GTA LR LR
comp=Z,228nm,17.7s,MS4.3
KLR Kul'dur 52.63 0 *e*P **P 17 12 00.0 -1.2**
HIA Hailar 53.65 350 P **P 17 12 08.9 +0.2**
comp=Z,12nm,1.4s,mb4.6
HIA Hailar 53.65 350 P **P 17 12 08.9 +0.2**
HIA pmax pmax
comp=Z,12nm,1.4s
ULN Ulaanbaatar 55.56 340 ⇑P **P 17 12 24.4 +1.7**
SNR=8.0
ULN Ulaanbaatar 55.56 340 *e*P **P 17 12 23.0 +0.4**
comp=Z,55nm,1.7s,mb5.3
ULN Ulaanbaatar 55.56 340 *e*P **P 17 12 23.0 +0.4**
ULN pmax pmax
comp=Z,55nm,1.7s,mb5.3
SONM Songino Array 55.76 340 P **P 17 12 24.3 +0.3**
comp=Z,12nm,1.3s,mb4.8,baz=166,slow=5.9,SNR=26
SONM PcP PcP 17 13 24.4 +1.3
comp=Z,1.6nm,0.7s,baz=162,slow=4.6,SNR=2.5
SONM Songino Array 55.76 340 P **P 17 12 24.3 +0.2**
SONM 17 13 24.4
SONM pmax pmax
comp=Z,12nm,1.3s
SONM pmax pmax
comp=Z,2.0nm,0.7s
HYB Hyderabad 56.24 294 *e*P **P 17 12 26.5 -1.6**
HYB Hyderabad 56.24 294 *i* P **P 17 12 26.5 -1.6**
ZAK Zakamensk 59.00 339 *e*P **P 17 12 47.1 +0.2**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
PETK Petropavlovsk- 60.67 18 P **P 17 12 57.7 -0.6**
comp=Z,5.6nm,0.8s,mb4.8,baz=214,slow=4.3,SNR=5.2
PETK Petropavlovsk- 60.67 18 P **P 17 12 57.7 -0.6**
PETK Petropavlovsk- 60.67 18 P **P 17 12 57.7 -0.6**
PETK pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MOY Mondy 60.88 339 *e*P **P 17 13 00.8 +1.0**
WMQ Urumqi 61.43 325 *e*P **P 17 13 04.0 +0.3**
WMQ XP sP 17 13 18.0 +4.2
WMQ PP PP 17 15 21.0 +1.8
WMQ S **S 17 21 20.0 -3.5**
WMQ SCS ScS 17 22 49.0 -4.8
WMQ SS SS 17 25 23.0 -1.7
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.4
WMQ LR LR
comp=N,312nm,16.0s,MS4.6
WMQ LR LR
comp=E,165nm,16.0s,MS4.6
WMQ LR LR
comp=Z,201nm,16.0s,MS4.4
BOD Bodaibo 62.84 350 *e*P **P 17 13 12.6 -0.2**
BOD pmax pmax
comp=Z,9.0nm,1.5s,mb4.7
HVS Khovu-Aksy 63.36 334 *d i*P **P 17 13 16.9 +0.4**
HVS pmax pmax
comp=Z,78nm,1.3s,mb5.7
YAK Yakutsk 65.47 359 *e*P **P 17 13 29.3 -0.8**
comp=Z,24nm,0.8s,mb5.3
YAK Yakutsk 65.47 359⇑ *e*P **P 17 13 30.7 +0.6**
YAK pmax pmax
comp=Z,29nm,0.8s,mb5.4
MK31 Makanchi Array 66.26 325 *e*P **P 17 13 34.7 -0.7**
MK31 Makanchi Array 66.26 325 *i* P **P 17 13 35.4 0.0**
MK31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
MKAR Makanchi Array 66.26 325 P **P 17 13 35.6 +0.2**
comp=Z,6.2nm,0.8s,mb4.7,baz=118,slow=8.0,SNR=39
MKAR Makanchi Array 66.26 325 P **P 17 13 35.6 +0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
KZA Kyzart 68.22 318 P **P 17 13 49.6 +1.7**
SNR=8.6
SEY Seymchan 68.23 10⇑ *e*P **P 17 13 49.3 +1.7**
TKM2 Tokmak 2 68.37 319 *e*P **P 17 13 48.8 -0.1**
comp=Z,3.0nm,0.6s,mb4.5
TKM2 Tokmak 2 68.37 319 *e*P **P 17 13 48.8 -0.1**
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
TKM2 Tokmak 2 68.37 319 P **P 17 13 49.5 +0.6**
SNR=7.2
UCH Uchtor 68.77 318 P **P 17 13 52.1 +0.7**
comp=Z,6.1nm,0.9s,mb4.5
AAK Ala-Archa 68.96 318 *e*P **P 17 13 52.6 0.0**
comp=Z,9.5nm,1.4s,mb4.5
AAK Ala-Archa 68.96 318⇑ *e*P **P 17 13 53.4 +0.8**
AAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
AAK Ala-Archa 68.96 318 P **P 17 13 53.6 +1.0**
SNR=6.2
USP Ospenovka 69.24 319 P **P 17 13 54.7 +0.4**
SNR=8.2
ZAA0 Zalesovo Array 69.25 333 *e*P **P 17 13 52.7 -1.5**
ZALV Zalesovo Beam 69.25 333 P **P 17 13 53.0 -1.2**
comp=Z,6.3nm,0.7s,mb4.6,baz=108,slow=4.8,SNR=31
ZALV Zalesovo Beam 69.25 333 P **P 17 13 53.0 -1.1**
ZALV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AML Almayashu 69.28 318 *e*P **P 17 13 55.0 +0.4**
comp=Z,10.0nm,0.9s,mb4.8
AML Almayashu 69.28 318 P **P 17 13 56.0 +1.4**
SNR=12
EKS2 Erkin-Say 69.45 318 *e*P **P 17 13 56.0 +0.4**
comp=Z,8.4nm,1.1s,mb4.6
EKS2 Erkin-Say 69.45 318 P **P 17 13 56.8 +1.2**
SNR=5.7
KBL Kabul 69.77 309 *e*P **P 17 13 57.1 -0.7**
comp=Z,7.3nm,0.8s,mb4.7
KBL Kabul 69.77 309 *e*P **P 17 13 57.1 -0.7**
KBL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KURK Kurchatov 70.45 327 ⇓P **P 17 14 02.4 +0.8**
SNR=11
KURK Kurchatov 70.45 327 *e*P **P 17 14 01.5 -0.1**
comp=Z,32nm,1.0s,mb5.2
KURK *e* pP 17 14 09.4 +0.3
KURK Kurchatov 70.45 327 *e*P **P 17 14 01.5 -0.1**
KURK *e* pP 17 14 09.4 +0.4
KURK pmax pmax
comp=Z,32nm,1.0s,mb5.2
NVS Novosibirsk 70.53 333 ⇓ *i*P **P 17 14 00.8 -1.2**
NVS pmax pmax
comp=Z,32nm,1.5s,mb5.0
NVS pmax pmax
comp=N,13nm,1.6s
NVS pmax pmax
comp=E,15nm,1.6s
KK31 Karatay Array 71.82 318 *i* P **P 17 14 09.9 -0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TIXI Tiksi 75.14 359 *e*P **P 17 14 28.4 -0.7**
comp=Z,6.3nm,0.7s,mb4.7
TIXI *e* pP 17 14 36.6 +0.1
TIXI Tiksi 75.14 359 *e*P **P 17 14 28.4 -0.7**
TIXI *e* pP 17 14 36.6 0.0
TIXI pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
VOSK Vostochnaya 75.57 327 P **P 17 14 31.4 -0.5**
VOSK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VNDA Vanda 75.61 173 P **P 17 14 32.5 +0.8**
comp=Z,6.3nm,0.8s,mb4.6,baz=311,slow=5.7,SNR=20
VNDA LR LR 17 47 52.3
comp=Z,257nm,20.2s,MS4.5,baz=340,slow=36
VNDA Vanda 75.61 173 P **P 17 14 32.5 +0.7**
VNDA pmax pmax
comp=Z,6.0nm,0.8s
VNDA MLR MLR
comp=Z,257nm,20.2s
BVA0 Borovoye Array 76.03 327 *i* P **P 17 14 33.9 -0.6**
BVA0 pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
BRVK Borovoye 76.10 327 ⇓P **P 17 14 35.6 +0.7**
SNR=6.6
BRVK Borovoye 76.10 327 *e*P **P 17 14 34.7 -0.2**
comp=Z,8.9nm,0.7s,mb4.8
BRVK Borovoye 76.10 327 *e*P **P 17 14 34.7 -0.2**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SMDO Samad 76.25 295 ⇓P **P 17 14 36.4 -0.1**
SNR=6.7
BIDO Bidbid 76.26 295 ⇑P **P 17 14 36.7 +0.2**
SNR=7.1
SBA Scott Base 76.48 173 P **P 17 14 35.6 -1.1**
HOQ Hoqain 77.01 295 ⇓P **P 17 14 40.8 +0.1**
SNR=5.6
PPT Papeete 78.38 107 *e*LR LR 17 39 24.7
comp=Z,130nm,24.8s
MAW Mawson 78.62 201 *e*P **P 17 14 49.5 +0.7**
comp=Z,6.5nm,0.7s,mb4.7
MAW Mawson 78.62 201 P **P 17 14 49.0 +0.2**
comp=Z,7.4nm,0.7s,mb4.7,baz=75,slow=9.9,SNR=18
MAW Mawson 78.62 201 *e*P **P 17 14 49.5 +0.7**
MAW pmax pmax
comp=Z,7.0nm,0.7s
AB31 Akbulak array 80.81 321 P **P 17 15 00.4 -0.6**
AB31 pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AKTO Aktyubinsk 82.33 322 *i* P **P 17 15 08.1 -0.9**
AKTO pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
ARU Arti 83.64 328 *e*P **P 17 15 14.5 -1.2**
comp=Z,8.2nm,1.1s,mb4.8
ARU Arti 83.64 328 *c i*P **P 17 15 15.2 -0.5**
ARU *e* 17 18 25.6
ARU *e*S S 17 25 34.6 -2.0
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
QRN Al-Qurain 86.09 299 *e*P **P 17 15 27.0 -1.6**
baz=299
QRN AMb AMB 17 15 29.3
comp=Z,64nm,0.9s,mb5.8,baz=299
QSPA South Pole Qui 86.34 180 *e*P **P 17 15 28.6 -0.3**
comp=Z,17nm,1.3s,mb5.1
RDF Al-Hadifah 86.43 299 *e*P **P 17 15 28.4 -1.9**
baz=299
RDF AMb AMB 17 15 40.0
comp=Z,54nm,1.3s,mb5.6,baz=299
NAY Al-Naaiem 86.73 299 *e*P **P 17 15 30.3 -1.5**
baz=299
NAY AMb AMB 17 15 32.3
comp=Z,26nm,0.7s,mb5.6,baz=299
SYO Syowa Base 87.33 201⇑ *e*P **P 17 15 32.8 -1.1**
PMR Palmer 88.11 28 *e*P **P 17 15 38.6 +0.9**
comp=Z,19nm,1.3s,mb5.2
PMR Palmer 88.11 28 *e*P **P 17 15 38.6 +0.9**
PMR pmax pmax
comp=Z,19nm,1.3s,mb5.2
MCK McKinley 88.61 26 *e*P **P 17 15 38.6 -1.4**
comp=Z,10nm,1.2s,mb5.0
MCK McKinley 88.61 26 *e*P **P 17 15 38.6 -1.4**
MCK pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
DAWY Dawson 92.84 26 *e*P **P 17 16 00.4 +0.7**
OBN Obninsk 95.76 325⇓ *e*P **P 17 16 12.7 -0.6**
OBN *e*S SKSac 17 26 51.8 +3.7
OBN pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.6
ARCES ARCESS Array B 98.93 340 P **P 17 16 25.0 -2.3**
comp=Z,3.1nm,0.9s,mb4.8,baz=81,slow=5.6,SNR=3.2
ARCES LR LR 18 07 31.6
comp=Z,175nm,19.9s,MS4.6,baz=77,slow=39
ARCES ARCESS Array B 98.93 340 P **P 17 16 25.0 -2.3**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES MLR MLR
comp=Z,175nm,19.9s
SNAA Sanae 99.28 193 *e*P **P 17 16 26.8 -2.0**
BOSA Boshof 102.44 240 P Pdif 17 16 43.9 +0.6
comp=Z,5.8nm,1.2s,baz=170,slow=6.1,SNR=4.5
BOSA Boshof 102.44 240 P Pdif 17 16 43.9 +0.7
BOSA pmax pmax
comp=Z,6.0nm,1.2s
TXAR Lajitas Array 121.90 58 PKP PKPdf 17 21 43.0 +0.8
comp=Z,0.5nm,0.8s,baz=207,slow=5.2,SNR=4.9
TXAR Lajitas Array 121.90 58 PKIKP PKPdf 17 21 43.1 +0.8
TXAR pmax pmax
comp=Z,1.0nm,0.8s
JCT Junction City 124.78 55 *e*PKPdf PKPdf 17 21 48.1 +0.4
TOA0 Torodi Ar. Sit 129.52 284 *e*PKPdf PKPdf 17 21 56.3 -0.9
TORD Torodi Ar. Bea 129.52 284 PKP PKPdf 17 21 57.1 -0.1
comp=Z,2.8nm,0.7s,baz=73,slow=1.6,SNR=15
TORD SKPbc 17 25 18.6
comp=Z,3.8nm,0.9s,baz=71,slow=3.3,SNR=16
BLA Blacksburg 135.57 37 *e*PKPdf PKPdf 17 22 07.5 -0.5

*ISCJB **30** 17:04:36.3±0.9, 3474N×007×3392E×006, h52km±14km, Error ellipse: s-maj=13.3km s-min=5.7km az=26.5*
*CSEM **30** 17:04:36.1, 3481N×3394E, h56km, Mw3.1, After NIC*
*NIC **30** 17:04:36.1±0.2, 3481N×3394E, h56km, ML2.8, MW3.1*
*NEIC **30** 17:04:36.1, 3481N×3394E, h56km, MG2.8(NIC), After NIC.*
*GII **30** 17:04:37.0±0.5, 3471N×3390E, h32km±3km, ML2.7/4*
ISC 30 17:04:36.6±0.9, 3481N×007×3394E×006, h54km±12km, n22, σ0°63/30, 1C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
PHNC	**Paralimni** 11nm,0.1s	**0.20**	**22**⇑	*e*P	**Pn**	**17 04 45.3**	**-0.1**
PHNC				S	**Sn**	**17 04 52.4**	**+0.7**
CSS	**Prodhromos**	**0.52**	**287**	*e*Pg	**Pn**	**17 04 47.7**	**-0.6**
CSS				*e*Sg	**Sn**	**17 04 54.0**	**-2.8**
MAMC	**Mammari**	**0.69**	**301**	P	**Pn**	**17 04 50.4**	**0.0**
SZAC	**Souni-Zanaja** 16nm,0.2s	**0.87**	**266**	P	**Pn**	**17 04 52.8**	**+0.1**
SZAC				S	**Sn**	**17 05 05.5**	**+1.0**
ALFC	**Alevga** 6.6nm,0.1s	**1.15**	**288**	P	**Pn**	**17 04 56.0**	**-0.4**
ALFC				S	**Sn**	**17 05 12.0**	**+0.8**
PPCY	**Paphos**	**1.31**	**274**	P	**Pn**	**17 04 58.4**	**-0.2**
HWQ	**Hawqa**	**1.74**	**107**	*e*P	**Pn**	**17 05 04.5**	**0.0**
RCY	**Rachaya**	**2.05**	**130**	*e*P	**Pn**	**17 05 08.4**	**-0.1**
HRI	**Mount Hermon**	**2.15**	**135**	Pn	**Pn**	**17 05 10.3**	**+0.4**
MMB3	**Mount Meron ar**	**2.16**	**145**	Pn	**Pn**	**17 05 09.7**	**-0.5**
MMA2	**Mount Meron ar**	**2.17**	**145**	Pn	**Pn**	**17 05 09.8**	**-0.5**
MMC4	**Mount Meron ar**	**2.18**	**145**	Pn	**Pn**	**17 05 10.0**	**-0.5**
BLGI	**Bet Lehem HaGe**	**2.32**	**153**	Pn	**Pn**	**17 05 12.2**	**-0.2**
OFRI	**'Ofer**	**2.35**	**158**	Pn	**Pn**	**17 05 12.1**	**-0.7**
KSHT	**Keshet**	**2.40**	**139**	Pn	**Pn**	**17 05 13.7**	**+0.2**
MMLI	**Mount Malkishu**	**2.67**	**152**	Pn	**Pn**	**17 05 17.4**	**+0.2**
MMLI				Sn	**Sn**	**17 05 48.0**	**-0.3**
HMDT	**Nahal Hemdat**	**2.88**	**152**	Pn	**Pn**	**17 05 20.4**	**+0.4**
HMDT				Sn	**Sn**	**17 05 54.1**	**+0.7**
DSI	**Dead Sea**	**3.45**	**159**	Pn	**Pn**	**17 05 28.3**	**+0.5**
DSI				Sn	**Sn**	**17 06 07.0**	**-0.5**
MZDA	**Masada**	**3.69**	**161**	Pn	**Pn**	**17 05 31.7**	**+0.6**
MZDA				Sn	**Sn**	**17 06 14.0**	**+0.6**
RTMI	**Retamim**	**3.80**	**170**	Pn	**Pn**	**17 05 32.2**	**-0.4**
PRNI	**Paran**	**4.54**	**168**	Pn	**Pn**	**17 05 43.6**	**+0.9**
EIL	**Elat**	**5.20**	**170**	Sn	**Sn**	**17 06 49.8**	**-0.7**

MAN 30 17:06:58, 1271N×12209E, h19km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
OTRP	**Odiongan**	**0.35**	**192**	*e*P	Pg	17 07 05.5	+0.1
OTRP				*e*S	Sg	17 07 10.1	-0.4
AUQP	**San Andres**	**0.83**	**43**	*e*P	Pb	17 07 11.1	-2.8
AUQP				*e*S	Sb	17 07 34.0	+9.2
SJMP	**San Jose**	**0.98**	**256**	*e*P	Pb	17 07 17.7	+1.2
SJMP				*e*S	Sb	17 07 33.8	+4.8
GQP	**Guinayangan**	**1.24**	**16**⇓	*e*P	Pn	17 07 20.4	+0.1
GQP				*e*S	Sb	17 07 36.6	+0.2
BUSP	**Coron**	**1.98**	**250**	*e*P	Pn	17 07 30.4	-0.1
BUSP				*e*S	Sn	17 07 56.1	+1.3
POLP	**Polilio Island**	**2.02**	**356**	*e*P	Pn	17 07 31.7	+0.7
POLP				*e*S	Sn	17 07 59.4	+3.7
LUBP	**Lubang**	**2.07**	**300**	*e*P	Pn	17 07 26.9	-4.8
LUBP				*e*S	Sn	17 07 55.9	-1.1
GUIM	**Jordan**	**2.12**	**167**	*e*P	Pn	17 07 34.4	+1.9
GUIM				*e*S	Sn	17 07 57.5	-0.9

*NEIC **30** 17:22:28.8±0.8, 1745S×17882W, h500km, mb3.9/2, Error ellipse: s-maj=64.8km s-min=13.7km az=145.0*
IDC 30 17:22:29.1±18.0, 1731S×17889W, h498km±234km, mb3.2/4, mb1 3.5/4, mb1mx3.1/16, mbtmp3.2/4, Error ellipse: s-maj=191.5km s-min=44.9km az=167.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
EIDS	**Eidsvold** 5.1nm,1.0s	**29.05**	**249**	P	P	17 27 48.4	+0.1
ARMA	**Armidale**	**29.85**	**239**	*e*P	P	17 27 55.6	+0.3
CNB	**Canberra Magne**	**33.43**	**231**	*e*P	P	17 28 25.7	-0.2
TOO	**Toolangi**	**37.19**	**230**	*e*P	P	17 28 55.4	-1.8
STKA	**Stephens Creek** 1.5nm,0.6s	**38.52**	**240**	*e*P	P	17 29 08.0	-0.2
STKA	**Stephens Creek** 1.1nm,0.3s,baz=86,slow=12,SNR=7.7	**38.52**	**240**	P	P	17 29 08.2	0.0
ASAR	**Alice Springs** 6.6nm,0.5s,baz=88,slow=8.2,SNR=89	**44.51**	**254**	P	P	17 29 55.8	-0.1
TXAR	**Lajitas Array** 0.4nm,1.0s,baz=212,slow=8.4,SNR=3.6	**86.07**	**58**	P	P	17 34 17.2	+0.3
PDAR	**Pinedale Array** 0.3nm,0.5s,baz=238,slow=3.1,SNR=2.5	**87.24**	**44**	P	P	17 34 22.3	+0.2
GERES	**GERESS Array B** 0.6nm,0.4s,baz=31,slow=4.0,SNR=7.4	**146.92**	**345**	PKPbc	PKPbc	17 41 14.7	-0.5

MAN 30 17:28:13, 915N×12207E, h33km, mb4.3, ML3.1, MS2.9, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SNPH	**Sibulan**	**1.16**	**81**	*e*P	Pn	17 28 31.5	-1.5
DCPH	**Dipolog City**	**1.38**	**114**	*e*P	Pn	17 28 34.3	-1.7
IPIL	**Ipil**	**1.44**	**160**	*e*P	Pn	17 28 38.0	+1.2
IPIL				*e*S	Sn	17 28 55.2	+0.5
GUIM	**Jordan**	**1.55**	**19**	*e*P	Pn	17 28 38.7	+0.4
GUIM				*e*S	Sn	17 28 58.7	+1.4
PAGZ	**Pagadian**	**1.83**	**135**	*e*P	Pn	17 28 43.5	+1.3
MSLP	**Maasin**	**2.91**	**70**	*e*P	Pn	17 28 58.8	+1.7

MAN 30 17:37:21, 918N×12209E, h95km, mb3.9, ML2.6, MS2.3, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SNPH	**Sibulan**	**1.15**	**82**	*e*P	Pn	17 37 41.0	-1.7
DCPH	**Dipolog City**	**1.38**	**115**	*e*P	Pn	17 37 43.2	-2.3
IPIL	**Ipil**	**1.46**	**161**	*e*P	Pn	17 37 47.7	+1.1
IPIL				*e*S	Sn	17 38 03.7	-2.2
GUIM	**Jordan**	**1.52**	**19**	*e*P	Pn	17 37 47.5	+0.2
GUIM				*e*S	Sn	17 38 08.8	+1.6
PAGZ	**Pagadian**	**1.84**	**136**	*e*P	Pn	17 37 52.3	+1.0
MSLP	**Maasin**	**2.89**	**71**	*e*P	Pn	17 38 06.6	+1.4

IDC 30 17:46:26.6±3.0, 531S×15386E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/16, mbtmp3.6/5, MS3.3/1, Ms1 3.2/1, ms1mx2.9/20, Error ellipse: s-maj=98.4km s-min=39.0km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
ASAR	**Alice Springs** 0.2nm,0.6s,baz=58,slow=9.5,SNR=4.1	**26.51**	**225**	P	P	17 52 05.8	-0.2
STKA	**Stephens Creek** comp=Z,57nm,20.4s,baz=206,slow=37	**28.82**	**202**	LR	LR	18 04 15.3	
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,baz=126,slow=6.4,SNR=4.6	**59.05**	**295**	P	P	17 56 29.4	+0.5
SONM	**Songino Array** 0.2nm,0.5s,baz=134,slow=6.2,SNR=3.7	**67.31**	**327**	P	P	17 57 23.5	+0.2
MKAR	**Makanchi Array** 0.8nm,1.0s,baz=107,slow=7.7,SNR=4.1	**81.40**	**319**	P	P	17 58 45.5	+0.1
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=110,slow=6.3,SNR=4.1	**90.28**	**323**	P	P	17 59 28.4	-0.8
TORD	**Torodi Ar. Bea** 1.2nm,0.5s,baz=60,slow=1.8,SNR=20	**151.47**	**288**	PKPbc	PKPbc	18 06 24.0	+0.3

NEIC 30 17:49:51.6, 4113S×17419E, h53km, ML4.2(WEL), 3C-4D, After WEL., Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
TCW	**Tory Channel**	**0.11**	**142**	⇑P	Pn	17 49 59.4	-0.4
TCW				S	Sn	17 50 04.9	-0.7
MRW	**Makara Radio**	**0.40**	**105**	⇑P	Pn	17 50 01.8	-0.1
SNZO	**South Karori**	**0.43**	**115**	P	Pn	17 50 02.7	-0.1
WEL	**Wellington**	**0.46**	**110**	P	Pn	17 50 02.6	0.0
BHW	**Baring Head**	**0.58**	**119**	⇓P	Pn	17 50 03.8	-0.2
KIW	**Kapiti Island**	**0.61**	**64**	P	Pn	17 50 04.4	+0.1
NNZ	**Nelson**	**0.62**	**261**	⇓P	Pn	17 50 03.7	-0.7
CMWZ	**Cape Campbell**	**0.62**	**178**	P	Pn	17 50 05.0	+0.6
BSWZ	**Blackbirch Sta**	**0.63**	**202**	⇑P	Pn	17 50 04.3	-0.3
CAW	**Cannon Point**	**0.66**	**88**	⇓P	Pn	17 50 05.0	0.0
MSWZ	**Moikau Station**	**0.85**	**110**	P	Pn	17 50 06.7	-0.7
PAWZ	**Paruwai Farm**	**0.97**	**106**	P	Pn	17 50 08.1	-0.8
MRZ	**Mangatainoka R**	**1.15**	**67**	P	Pn	17 50 10.9	-0.5
THZ	**Tophouse**	**1.16**	**236**	P	Pn	17 50 10.9	-0.6
QRZ	**Quartz Range**	**1.29**	**283**	P	Pn	17 50 13.5	+0.2
KHZ	**Kahutara**	**1.38**	**200**	⇓P	Pn	17 50 14.1	-0.3
BFZ	**Birch Farm**	**1.62**	**75**	P	Pn	17 50 16.3	-1.5

RAEZ	**Rainy Point**	**1.85**	**5**	P	Pn	17 50 22.5 +1.7
NEZ	**North Egmont**	**1.86**	**358**	P	Pn	17 50 21.9 +0.9
NWEZ	**Newall Road**	**1.87**	**352**	P	Pn	17 50 21.8 +0.6
DSZ	**Denniston Nort**	**1.90**	**250**	P	Pn	17 50 21.5 0.0
PKE	**Pukeiti**	**1.94**	**355**	P	Pn	17 50 22.9 +0.8
VRZ	**Vera Road**	**2.05**	**12**	P	Pn	17 50 24.4 +0.8
MOVZ	**Moawhango**	**2.09**	**35**	P	Pn	17 50 23.7 -0.5
WNVZ	**Wahianoa**	**2.10**	**31**	P	Pn	17 50 24.8 +0.5
FWVZ	**Far West T-bar**	**2.14**	**30**	P	Pn	17 50 25.6 +0.7
TUVZ	**Tukino**	**2.17**	**32**	P	Pn	17 50 25.7 +0.4
WPVZ	**Whakapapa**	**2.19**	**29**	P	Pn	17 50 26.2 +0.7
LTZ	**Lake Taylor**	**2.19**	**220**	P	Pn	17 50 24.8 -0.7
NGZ	**Ngauruhoe**	**2.23**	**29**	P	Pn	17 50 26.4 +0.3
TWVZ	**Taurewa**	**2.27**	**25**	P	Pn	17 50 27.0 +0.4
KATZ	**Kakaramea**	**2.44**	**29**	P	Pn	17 50 29.6 +0.6
BKZ	**Black Stump Fm**	**2.64**	**43**	P	Pn	17 50 30.4 -1.3
HIZ	**Hauiti**	**2.66**	**11**	P	Pn	17 50 32.8 +0.8
CRLZ	**Canterbury Las**	**2.71**	**205**	P	Pn	17 50 30.9 -1.7
MQZ	**McQueen's Vall**	**2.82**	**203**	P	Pn	17 50 32.1 -2.0
TOZ	**Tahuroa Road**	**3.54**	**17**	P	Pn	17 50 44.1 0.0
MWZ	**Matawai**	**3.80**	**44**	P	Pn	17 50 44.9 -2.6
FOZ	**Fox Glacier**	**4.13**	**232**	P	Pn	17 50 49.4 -2.7
OTAZ	**Otara**	**4.21**	**8**	P	Pn	17 50 54.2 +1.0
LBZ	**Lake Benmore**	**4.39**	**221**	P	Pn	17 50 53.4 -2.3
KUZ	**Kuaotunu**	**4.54**	**16**	P	Pn	17 50 57.7 0.0
ODZ	**Otahua Downs**	**4.70**	**212**	P	Pn	17 50 57.1 -2.7

*NEIC **30** 18:26:03.8, 4369N×1025E, h6km, ML2.6(LDG), ML2.2(ROM), After ROM.*
*ROM **30** 18:26:03.8±0.2, 4369N×1025E, h6km±2km, Md1.9/4, Ml2.2/8, Error ellipse: s-maj=2.5km s-min=2.0km az=116.0*
*GEN **30** 18:26:04.4, 4366N×1029E, h2km, ML2.0*
*LDG **30** 18:26:04.6±0.1, 4362N×1031E, h10km, Ml2.6/21, Error ellipse: s-maj=1.9km s-min=1.1km az=107.0*
*ISCJB **30** 18:26:04.1±0.3, 4370N±002×1021E±004, h30km±4km, Error ellipse: s-maj=4.8km s-min=3.8km az=13.1*
*CSEM **30** 18:26:04.3±0.2, 4367N×1031E, h12km, ML2.6/21, Error ellipse: s-maj=3.8km s-min=2.4km az=160.0*

ISC 30 18:26:04.5±0.4, 4369N±002×1022E±004, h21km±5km, n54, σ0§84/106, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PII	**Pisa**	**0.22**	**80**	⇑*i*Pg	**Pb**	**18 26 08.8**	**-1.2**
PII				Sg	**Sb**	**18 26 11.7**	**-2.1**
MAIM	**Mastiano**	**0.30**	**41**	Pg	**Pb**	**18 26 10.4**	**-0.8**
MAIM				Sg	**Sb**	**18 26 14.3**	**-1.5**
GROG	**Isola di Gorgo**	**0.35**	**223**	Pg	**Pb**	**18 26 12.0**	**0.0**
GROG				Sg	**Sb**	**18 26 17.8**	**+0.6**
	327nm,0.2s						
BDI	**Bagni Di Lucca**	**0.47**	**36**	Pg	**Pb**	**18 26 13.4**	**-0.6**
BDI				Sg	**Sb**	**18 26 19.8**	**-0.6**
	182nm,0.3s						
VLC	**Villacollemand**	**0.49**	**14**	Pg	**Pb**	**18 26 14.0**	**-0.4**
VLC				Sg	**Sb**	**18 26 21.0**	**-0.1**
	86nm,0.4s						
SARO	**Sassorosso**	**0.52**	**15**	P	**Pb**	**18 26 14.4**	**-0.4**
CRMI	**Carmignano**	**0.55**	**79**	Pg	**Pb**	**18 26 15.1**	**-0.3**
CRMI				Sg	**Sb**	**18 26 22.5**	**-0.4**
	143nm,0.7s						
BACM	**Baccana**	**0.60**	**350**	P	**Pb**	**18 26 16.5**	**+0.2**
BACM				S	**Sb**	**18 26 24.8**	**+0.4**
VALM	**Valbona**	**0.66**	**2**	P	**Pb**	**18 26 17.5**	**+0.1**
VALM				S	**Sb**	**18 26 26.4**	**+0.3**
GSCL	**Gusciola**	**0.72**	**22**	Pg	**Pb**	**18 26 19.0**	**+0.8**
GSCL				Sg	**Sb**	**18 26 28.1**	**+0.5**
ERBM	**Eremo**	**0.75**	**11**	Pg	**Pb**	**18 26 19.5**	**+0.7**
ERBM				Sg	**Sb**	**18 26 29.8**	**+1.3**
	179nm,0.8s						
CSNT	**Castellina Chi**	**0.81**	**105**	Pg	**Pb**	**18 26 19.5**	**-0.3**
CSNT				Sg	**Sb**	**18 26 30.4**	**+0.2**
	72nm,1.0s						
FNVD	**Fontana Vidola**	**0.81**	**53**	Pg	**Pb**	**18 26 20.3**	**+0.4**
FNVD				Sg	**Sb**	**18 26 31.6**	**+1.2**
	185nm,0.5s						
GRAM	**Graiana**	**0.81**	**352**	P	**Pb**	**18 26 20.3**	**+0.4**
GRAM				S	**Sb**	**18 26 31.0**	**+0.6**
SFI	**Santa Sofia**	**1.20**	**79**	Pg	**Pn**	**18 26 26.7**	**+0.7**
	31nm,0.4s						
PGF	**Pioggiola**	**1.45**	**219**	*e*Pn	**Pn**	**18 26 29.4**	**0.0**
PGF				*e*Sn	**Sn**	**18 26 47.8**	**+0.1**
	12nm,0.4s						
PGF	**Pioggiola**	**1.45**	**219**	*e*Pn	**Pn**	**18 26 29.4**	**0.0**
PGF				*e*Sn	**Sn**	**18 26 47.8**	**+0.1**
	5.9nm,0.4s						
SBF	**Sospel**	**2.02**	**276**	*e*Pn	**Pn**	**18 26 38.3**	**+0.9**
SBF				*e*Sn	**Sn**	**18 27 02.8**	**+0.8**
	17nm,0.5s						
SBF	**Sospel**	**2.02**	**276**	*e*Pn	**Pn**	**18 26 38.3**	**+0.9**
SBF				*e*Sn	**Sn**	**18 27 02.8**	**+0.8**
	8.6nm,0.5s						
FRF	**La Foret Royal**	**2.60**	**268**	*e*Pn	**Pn**	**18 26 45.5**	**+0.3**
FRF				*e*Sn	**Sn**	**18 27 16.2**	**+0.1**
	9.4nm,0.5s						
FRF	**La Foret Royal**	**2.60**	**268**	*e*Pn	**Pn**	**18 26 45.5**	**+0.3**
FRF				*e*Sn	**Sn**	**18 27 16.2**	**+0.1**
	4.7nm,0.5s						
MBDF	**Montbardon**	**2.69**	**294**	*e*Pn	**Pn**	**18 26 46.9**	**+0.4**
MBDF				*e*Sn	**Sn**	**18 27 19.2**	**+0.8**
	3.6nm,0.4s						
MBDF	**Montbardon**	**2.69**	**294**	*e*Pn	**Pn**	**18 26 46.9**	**+0.4**
MBDF				*e*Sn	**Sn**	**18 27 19.2**	**+0.8**
	1.8nm,0.4s						
LMR	**La Mourre**	**2.72**	**264**	*e*Pn	**Pn**	**18 26 47.6**	**+0.7**
LMR				*e*Sn	**Sn**	**18 27 18.2**	**-1.0**
	4.3nm,0.3s						
LMR	**La Mourre**	**2.72**	**264**	*e*Pn	**Pn**	**18 26 47.6**	**+0.7**
LMR				*e*Sn	**Sn**	**18 27 18.2**	**-1.0**
	2.2nm,0.3s						
LPG	**La Plagne**	**3.07**	**307**	*e*Pn	**Pn**	**18 26 52.9**	**+1.2**
LPG				*e*Sn	**Sn**	**18 27 28.5**	**+0.7**
	1.8nm,0.4s						
LPG	**La Plagne**	**3.07**	**307**	*e*Pn	**Pn**	**18 26 52.9**	**+1.2**
LPG				*e*Sn	**Sn**	**18 27 28.5**	**+0.7**
	0.9nm,0.4s						
LPL	**La Plagne**	**3.09**	**308**	*e*Pn	**Pn**	**18 26 53.0**	**+1.0**
LPL				*e*Sn	**Sn**	**18 27 28.8**	**+0.5**
	2.9nm,0.5s						
LPL	**La Plagne**	**3.09**	**308**	*e*Pn	**Pn**	**18 26 53.0**	**+1.0**
LPL				*e*Sn	**Sn**	**18 27 28.8**	**+0.5**
	1.5nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.35**	**293**	*e*Pn	**Pn**	**18 26 56.3**	**+0.7**
ORIF				*e*Sn	**Sn**	**18 27 35.1**	**+0.4**
	2.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.35**	**293**	*e*Pn	**Pn**	**18 26 56.3**	**+0.7**
ORIF				*e*Sn	**Sn**	**18 27 35.1**	**+0.4**
	1.1nm,0.3s						
SMRF	**Simiane la Rot**	**3.37**	**277**	*e*Pn	**Pn**	**18 26 56.4**	**+0.5**
SMRF				*e*Sn	**Sn**	**18 27 35.0**	**-0.3**
	1.8nm,0.4s						
SMRF	**Simiane la Rot**	**3.37**	**277**	*e*Pn	**Pn**	**18 26 56.4**	**+0.5**
SMRF				*e*Sn	**Sn**	**18 27 35.0**	**-0.3**
	0.9nm,0.4s						
CABF	**La Chapelle**	**4.14**	**316**	*e*Pn	**Pn**	**18 27 07.2**	**+0.8**
CABF				*e*Sn	**Sn**	**18 27 53.5**	**-0.6**
	13nm,1.0s						
CABF	**La Chapelle**	**4.14**	**316**	*e*Pn	**Pn**	**18 27 07.2**	**+0.8**
CABF				*e*Sn	**Sn**	**18 27 53.5**	**-0.6**
	6.6nm,1.0s						
VIVF	**Saint-Julien-l**	**4.15**	**288**	*e*Pn	**Pn**	**18 27 07.3**	**+0.7**
VIVF				*e*Sn	**Sn**	**18 27 54.0**	**-0.5**
	0.4nm,0.3s						
VIVF	**Saint-Julien-l**	**4.15**	**288**	*e*Pn	**Pn**	**18 27 07.3**	**+0.7**
VIVF				*e*Sn	**Sn**	**18 27 54.0**	**-0.5**
	0.2nm,0.3s						
LASF	**Ste Croix**	**4.62**	**277**	*e*Pn	**Pn**	**18 27 13.3**	**+0.3**
LASF				*e*Sn	**Sn**	**18 28 04.7**	**-1.2**
	2.1nm,0.4s						
LASF	**Ste Croix**	**4.62**	**277**	*e*Pn	**Pn**	**18 27 13.3**	**+0.3**
LASF				*e*Sn	**Sn**	**18 28 04.7**	**-1.2**
	1.0nm,0.4s						
HINF	**Hinteralfeld**	**4.76**	**331**	*e*Pn	**Pn**	**18 27 15.6**	**+0.7**
HINF				*e*Sn	**Sn**	**18 28 08.6**	**-0.7**
	3.1nm,0.4s						
HINF	**Hinteralfeld**	**4.76**	**331**	*e*Pn	**Pn**	**18 27 15.6**	**+0.7**
HINF				*e*Sn	**Sn**	**18 28 08.6**	**-0.7**
	1.5nm,0.4s						
HAU	**Haudompre**	**5.10**	**329**	*e*Pn	**Pn**	**18 27 20.3**	**+0.7**
HAU				*e*Sn	**Sn**	**18 28 16.7**	**-1.0**
	8.7nm,0.7s						
HAU	**Haudompre**	**5.10**	**329**	*e*Pn	**Pn**	**18 27 20.3**	**+0.7**
HAU				*e*Sn	**Sn**	**18 28 16.7**	**-1.0**
	4.3nm,0.7s						
CDF	**Champ du Feu**	**5.15**	**338**	*e*Pn	**Pn**	**18 27 20.9**	**+0.6**
CDF				*e*Sn	**Sn**	**18 28 17.9**	**-1.2**
	1.1nm,0.3s						
CDF	**Champ du Feu**	**5.15**	**338**	*e*Pn	**Pn**	**18 27 20.9**	**+0.6**
CDF				*e*Sn	**Sn**	**18 28 17.9**	**-1.2**
	0.6nm,0.3s						
SMF	**Signal de Mont**	**5.39**	**305**	*e*Pn	**Pn**	**18 27 24.1**	**+0.5**
SMF				*e*Sn	**Sn**	**18 28 23.8**	**-1.3**
	3.8nm,0.7s						
SMF	**Signal de Mont**	**5.39**	**305**	*e*Pn	**Pn**	**18 27 24.1**	**+0.5**
SMF				*e*Sn	**Sn**	**18 28 23.8**	**-1.3**
	1.9nm,0.7s						
MTLF	**Montolieu**	**5.83**	**269**	*e*Pn	**Pn**	**18 27 29.7**	**+0.1**
MTLF				*e*Sn	**Sn**	**18 28 33.6**	**-2.2**
	0.6nm,0.3s						
MTLF	**Montolieu**	**5.83**	**269**	*e*Pn	**Pn**	**18 27 29.7**	**+0.1**
MTLF				*e*Sn	**Sn**	**18 28 33.6**	**-2.2**
	0.3nm,0.3s						
CAF	**Calviac**	**5.98**	**285**	*e*Pn	**Pn**	**18 27 31.8**	**+0.1**
CAF				*e*Sn	**Sn**	**18 28 37.3**	**-2.3**
	42nm,1.5s						
CAF	**Calviac**	**5.98**	**285**	*e*Pn	**Pn**	**18 27 31.8**	**+0.1**
CAF				*e*Sn	**Sn**	**18 28 37.3**	**-2.3**
	21nm,1.5s						
MEZF	**Maizieres J'vi**	**6.01**	**325**	*e*Pn	**Pn**	**18 27 32.3**	**+0.2**
MEZF				*e*Sn	**Sn**	**18 28 38.4**	**-1.8**
	4.5nm,0.5s						
MEZF	**Maizieres J'vi**	**6.01**	**325**	*e*Pn	**Pn**	**18 27 32.3**	**+0.2**
MEZF				*e*Sn	**Sn**	**18 28 38.4**	**-1.8**
	2.2nm,0.5s						
EPF	**Esparros**	**7.23**	**268**	*e*Pn	**Pn**	**18 27 48.9**	**0.0**
EPF				*e*Sn	**Sn**	**18 29 07.1**	**-3.2**
	0.4nm,0.3s						

TRN 30 18:31:04.3, 1521N×6089W, h144km, MD4.0, M3.8(FDF), 5C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.53**	**208**	⇓*e*P	Pn	18 31 26.4	+1.3
FDF				⇓*e*S	Sn	18 31 42.1	+1.2
MVM	**Montagne Vaucl**	**0.65**	**180**	⇓*i*P	Pn	18 31 27.5	+1.7
BIM	**Bigot**	**0.70**	**194**	*e*P	Pn	18 31 27.4	+1.2
BIM				*e*S	Sn	18 31 45.1	+2.3
DOG	**Dongo Capester**	**1.08**	**320**	*e*P	Pn	18 31 30.3	+1.1
SCG	**Saint Claude**	**1.12**	**317**	⇓*e*P	Pn	18 31 30.8	+1.3
SCG				⇓*e*S	Sn	18 31 49.5	+0.7
BCG	**Bois Riant Cap**	**1.12**	**321**	*e*P	Pn	18 31 30.6	+1.0
SLW	**Petit Monier**	**1.18**	**182**	⇑*i*P	Pn	18 31 30.9	+0.8
SLW				⇑*e*S	Sn	18 31 50.1	+0.3
LZG	**Guadaloupe-1**	**1.26**	**318**	*e*P	Pn	18 31 31.9	+1.0
SLB	**Belfond**	**1.38**	**186**	⇑*i*P	Pn	18 31 33.7	+1.6
SLB				*e*S	Sn	18 31 53.9	+0.5
SSV	**Crater Summit**	**1.89**	**189**	⇑*i*P	Pn	18 31 38.9	+1.0
SSV				*e*S	Sn	18 32 07.8	+4.3
SVV	**Soufriere Volc**	**1.90**	**190**	⇑*e*P	Pn	18 31 39.0	+1.1
SVV				*e*S	Sn	18 32 08.8	+5.1
BPA	**Boggy Peak**	**2.05**	**333**	*e*P	Pn	18 31 41.9	+2.2
BPA				*e*S	Sn	18 32 07.3	+0.5
FCV	**Fort Charlotte**	**2.06**	**190**	*e*P	Pn	18 31 40.3	+0.4
FCV				*e*S	Sn	18 32 08.1	+1.0
GRW	**Mount Saint Ca**	**3.12**	**194**	*e*P	Pn	18 31 53.3	+0.3
GRW				*e*S	Sn	18 32 31.6	+1.0

*NNC **30** 18:36:52.7±6.6, 3933N×7070E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=52.1km s-min=31.4km az=6.0*

ISC 30 18:36:58.1±3.6, 395N±03×707E±01, h10km, n11, σ1§21/14, 5C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.50**	**40**	P	**Pg**	**18 38 03.6**	**-1.5**
	SNR=7.9						
KK31	**Karatay Array**	**3.63**	**358**	Pn	**Pn**	**18 37 55.2**	**+0.9**
	1.0nm,0.3s,baz=168,slow=12,SNR=57						
KK31				⇑Pg	**Pg**	**18 38 00.0**	**-7.5**
	4.7nm,0.6s,baz=181,slow=16,SNR=20						
KK31				Sn	**Sn**	**18 38 45.0**	**+7.8**
	12nm,0.3s,baz=183,slow=31,SNR=13						
EKS2	**Erkin-Say**	**3.95**	**35**	P	**Pn**	**18 38 00.3**	**+1.6**
	SNR=10						
AAK	**Ala-Archa**	**4.27**	**41**	P	**Pn**	**18 38 04.1**	**+1.0**
	SNR=9.3						
KBK	**Karagaybulak**	**4.52**	**44**	P	**Pn**	**18 38 07.2**	**+0.7**
	SNR=5.4						
CHMS	**Chumysh**	**4.67**	**40**	P	**Pn**	**18 38 08.5**	**0.0**
	SNR=5.9						
USP	**Ospenovka**	**4.75**	**36**	P	**Pn**	**18 38 08.7**	**-1.0**
	SNR=11						
TKM2	**Tokmak 2**	**5.05**	**45**	⇓Pn	**Pn**	**18 38 13.3**	**-0.6**
	7.6nm,0.4s						
TKM2				⇑Sn	**Sn**	**18 39 09.3**	**-3.0**
	3.5nm,0.5s						
TKM2				⇑Lg		18 39 34.3	
	7.4nm,0.7s						
TKM2	**Tokmak 2**	**5.05**	**45**	P	**Pn**	**18 38 13.6**	**-0.3**
	SNR=26						
MK31	**Makanchi Array**	**11.19**	**45**	⇓Pn	Px	18 40 07.4	
	0.1nm,0.4s,baz=83,slow=17,SNR=4.3						
MK31				⇑Lg		18 41 21.0	
	2.6nm,0.5s,baz=80,slow=32,SNR=4.2						
AB09	**Akbulak array**	**12.44**	**325**	⇓Pn	**Pn**	**18 39 53.3**	**-1.8**
	0.8nm,0.7s						
AB09				⇑Sn	**Sn**	**18 42 14.2**	**+0.6**
	3.1nm,1.2s						

*KISR **30** 19:02:13.2, 3170N×5020E, h42km, ML2.6*
*ISCJB **30** 19:02:14.9±0.8, 3168N±005×4997E±007, h10km, Error ellipse: s-maj=8.4km s-min=7.4km az=16.9*
*CSEM **30** 19:02:15.0±0.2, 3167N×5002E, h18km, ML2.6, Error ellipse: s-maj=4.9km s-min=3.4km az=116.0*
*THR **30** 19:02:16.6±0.4, 3171N×4997E, h36km±4km, ML2.6*

ISC 30 19:02:15.9±0.8, 3169N±005×4998E±007, h10km, n10, σ0§54/15, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.09**	**293**	*e*Pg	**Pg**	**19 02 36.5**	**-0.3**
SHGR				*e*Sg	**Sg**	**19 02 51.3**	**+0.3**
SHGR				AML	AML	19 02 54.9	
	comp=N,214nm,0.4s						
SHGR	**Shooshtar-Gavs**	**1.09**	**293**	*e*Pg	**Pg**	**19 02 36.5**	**-0.3**
	SNR=103						
SHGR				*e*Sg	**Sg**	**19 02 51.3**	**+0.3**
	SNR=103						
NASN	**Na'in**	**2.64**	**64**	*e*Pn	**Pn**	**19 02 59.0**	**+0.5**
ASAO	**Ashtian**	**2.85**	**1**	*e*Pn	**Pn**	**19 03 01.7**	**+0.2**
ASAO				*e*Sg	**Sg**	**19 03 43.4**	**-4.2**
UMR	**Umm Al-Rimmam**	**2.89**	**223**	*e*P	**Pn**	**19 03 01.2**	**-0.7**
UMR				*e*S	**Sn**	**19 03 37.7**	**+1.0**
	comp=N,24nm,0.3s						
UMR	**Umm Al-Rimmam**	**2.89**	**223**	*e*P	**Pn**	**19 03 01.2**	**-0.7**
	baz=226						
UMR				*e*S	**Sn**	**19 03 37.7**	**+1.0**
	baz=226						
UMR				AML	AML	19 03 42.9	
	comp=Z,24nm,0.3s,baz=226						
KBD	**Kabd**	**3.19**	**219**	*e*P	**Pn**	**19 03 06.0**	**-0.1**
NAY	**Al-Naaiem**	**3.39**	**225**	*e*P	**Pn**	**19 03 08.8**	**-0.1**
	baz=227						
NAY				AML	AML	19 03 53.0	
	comp=Z,7.0nm,0.5s,baz=227						
QRN	**Al-Qurain**	**3.43**	**212**	*e*P	**Pn**	**19 03 08.7**	**-0.7**
	baz=214						
QRN				AML	AML	19 03 52.8	
	comp=Z,20nm,0.3s,baz=214						
SNGE	**Sanandaj**	**4.05**	**328**	*e*Pn	**Pn**	**19 03 17.9**	**0.0**
SNGE				AML	AML	19 04 18.0	
	comp=N,5.3nm,0.7s						

*ISCJB **30** 19:11:48.1±1.2, 3161N±005×5004E±004, h0km±10km, Error ellipse: s-maj=8.6km s-min=5.7km az=156.5*
*CSEM **30** 19:11:49.7±0.1, 3168N×5001E, h14km, ML2.8, Error ellipse: s-maj=2.7km s-min=1.7km az=129.0*
*KISR **30** 19:11:50.6, 3154N×5002E, h33km, ML3.1*
*THR **30** 19:11:51.0±0.5, 3159N×4992E, h45km±3km, ML2.8*
*SGS **30** 19:11:52.4, 3161N×4998E, h25km*

ISC 30 19:11:49.8±1.3, 3163N±005×5002E±004, h3km±10km, n19, σ0§61/29, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.14**	**295**	*e*Pg	**Pg**	**19 12 11.4**	**-0.3**
SHGR	**Shooshtar-Gavs**	**1.14**	**295**	*e*Pg	**Pg**	**19 12 11.4**	**-0.3**
	SNR=107						
SHGR				*e*Sg	**Sg**	**19 12 26.4**	**-0.1**
	SNR=107						
NASN	**Na'in**	**2.64**	**63**	*e*Pn	**Pn**	**19 12 33.8**	**+0.5**
NASN				*e*Sg	**Sg**	**19 13 15.1**	**+0.6**
UMR	**Umm Al-Rimmam**	**2.87**	**224**	*e*P	**Pn**	**19 12 37.0**	**+0.6**
ASAO	**Ashtian**	**2.91**	**0**	*e*Pn	**Pn**	**19 12 36.8**	**-0.3**
ASAO				AML	AML	19 13 26.5	
	comp=N,28nm,0.5s						
GHVR	**GHOM**	**3.04**	**20**	*e*Pn	**Pn**	**19 12 38.6**	**-0.2**
KBD	**Kabd**	**3.16**	**220**	*e*P	**Pn**	**19 12 41.5**	**+1.0**
KBD				*e*S	**Sn**	**19 13 19.2**	**+0.4**
	comp=N,34nm,0.4s						
KBD	**Kabd**	**3.16**	**220**	*e*P	**Pn**	**19 12 41.5**	**+1.0**
	baz=221						
KBD				*e*S	**Sn**	**19 13 19.2**	**+0.4**
	baz=221						
KBD				AML	AML	19 13 24.4	
	comp=Z,34nm,0.4s,baz=221						
NAY	**Al-Naaiem**	**3.37**	**226**	*e*P	**Pn**	**19 12 44.0**	**+0.6**
NAY				*e*S	**Sn**	**19 13 23.8**	**-0.1**
NAY	**Al-Naaiem**	**3.37**	**226**	*e*P	**Pn**	**19 12 44.0**	**+0.6**
	baz=227						
NAY				*e*S	**Sn**	**19 13 23.8**	**-0.1**
	baz=227						
NAY				AML	AML	19 13 27.7	
	comp=Z,18nm,0.3s,baz=227						
QRN	**Al-Qurain**	**3.40**	**213**	*e*P	**Pn**	**19 12 44.1**	**+0.3**
	baz=214						
QRN				*e*S	**Sn**	**19 13 24.1**	**-0.5**
	baz=214						
QRN				AML	AML	19 13 27.9	
	comp=Z,47nm,0.3s,baz=214						
RDF	**Al-Radifah**	**3.44**	**219**	*e*P	**Pn**	**19 12 44.8**	**+0.5**
RDF				*e*S	**Sn**	**19 13 26.0**	**+0.5**
	comp=Z,56nm,0.3s						
RDF	**Al-Radifah**	**3.44**	**219**	*e*P	**Pn**	**19 12 44.9**	**+0.6**
	baz=220						
RDF				*e*S	**Sn**	**19 13 26.0**	**+0.5**
	baz=220						
RDF				AML	AML	19 13 29.3	
	comp=Z,56nm,0.3s,baz=220						
SNGE	**Sanandaj**	**4.12**	**328**	*e*Pn	**Pn**	**19 12 53.1**	**-0.5**
SNGE				AML	AML	19 13 50.3	
	comp=N,11nm,0.5s						
GHIR	**Ghir-Karzin**	**4.21**	**142**	*e*Pn	**Pn**	**19 12 54.6**	**-0.3**
CHTH	**Charan**	**4.37**	**12**	*e*Pn	**Pn**	**19 12 57.2**	**+0.1**
BTHS		**7.59**	**174**	P	**Pn**	**19 13 40.1**	**-1.2**
BTHS		**7.59**	**174**	P	**Pn**	**19 13 40.1**	**-1.2**
BTHS				S	**Sn**	**19 15 00.7**	**-7.2**
HRDDS		**8.68**	**183**	P	**Pn**	**19 13 54.8**	**-1.5**

MEX 30 19:15:15.3±1.5, 1562N×9321W, h87km±19km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.08**	**357**	*i* P	Pn	19 15 25.9	-1.7
PCIG				*e*S	Sn	19 15 35.7	-1.1
TGIG		**1.15**	**4**	*i* P	Pn	19 15 36.9	+0.2
TGIG				*e*S	Sn	19 15 49.9	-2.8
THIG		**1.16**	**128**	*i* P	Pn	19 15 35.3	-1.4
THIG				*i* S	Sn	19 15 50.9	-1.9
CMIG	**Matias Romero**	**2.17**	**313**	*i* P	Pn	19 15 48.2	-1.4
CMIG				*i* S	Sn	19 16 12.6	-3.3
VHO	**Vista Hermosa**	**3.67**	**294**	*i* P	Pn	19 16 08.5	-1.4
VHO				*i* S	Sn	19 16 51.3	-0.8
PNIG	**Pinotepa**	**4.79**	**280**	*i* P	Pn	19 16 27.2	+2.2

MAN 30 19:44:34, 916N×12216E, h33km, mb4.2, ML3.0, MS2.7, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.08**	**80**	⇑*e*P	Pn	19 44 51.5	-1.3
DCPH	**Dipolog City**	**1.31**	**116**	⇑*e*P	Pn	19 44 54.7	-1.2
IPIL	**Ipil**	**1.42**	**163**	*e*P	Pn	19 44 58.5	+0.9
IPIL				*e*S	Sn	19 45 14.5	-0.6
GUIM	**Jordan**	**1.52**	**16**	*e*P	Pn	19 44 59.1	+0.3
GUIM				*e*S	Sn	19 45 17.9	+0.4
PAGZ	**Pagadian**	**1.78**	**137**	*e*P	Pn	19 45 03.3	+0.8
PAGZ				*e*S	Sn	19 45 25.0	+1.1
MSLP	**Maasin**	**2.83**	**70**	*e*P	Pn	19 45 19.5	+2.6

*IDC **30** 19:48:00.4±1.1, 1646S×17330W, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/18, mbtmp4.0/6, ML2.1/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/25, Error ellipse: s-maj=58.2km s-min=20.1km az=133.0*
*NEIC **30** 19:48:01.7±0.8, 1639S×17335W, h10km, Error ellipse: s-maj=44.8km s-min=13.8km az=128.0*
*ISCJB **30** 19:48:03.9±0.8, 1615±02×1736W±03, h33km, mb4.1/6, MS3.4/3, Error ellipse: s-maj=44.0km s-min=12.8km az=40.2*

ISC 30 19:48:05.2±0.8, 163S±02×1734W±03, h35km, n13, σ1§06/12, mb4.1/6, MS3.4/3, Tonga Islands

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

Plg31.0000°, Azm133.0000°; P -3.5780, Plg58.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC ***30*** *20:04:23.7±0.3,962N×5784E,h10km,mb4.9/50 Error ellipse: s-maj=8.3km s-min=5.5km az=178.0*
ISC 30 20:04:24.0±0.3,960N×005×5786E±004,h10km, (h20km±2.2km:pP-P),n234,σ1≥14/225,mb4.8/84,MS4.0/19, 10C-8D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
RBK	**Rabkut**	**8.62**	**336**	P		**Pn**	**20 06 34.0 +5.1**
	SNR=5.8						
ABTO	**Aybut**	**8.89**	**331**	P		**Pn**	**20 06 38.2 +5.6**
	SNR=5.5						
WHFO	**Wadi Hawf**	**9.17**	**335**	P		**Pn**	**20 06 41.9 +5.5**
	SNR=6.2						
JMDO	**Jabal Madar**	**12.70**	**1**	⇓P		**Pn**	**20 07 27.1 +2.4**
	SNR=13						
BSYO	**Bisya**	**13.07**	**357**	P		**Pn**	**20 07 33.2 +3.4**
	SNR=12						
BSY	**Bisya**	**13.09**	**357**	P		**Pn**	**20 07 33.2 +3.2**
	SNR=12						
SMDO	**Samad**	**13.38**	**1**	P		**Pn**	**20 07 36.4 +2.3**
	SNR=12						
ARQ	**Araqi**	**13.72**	**355**	⇓P		**Pn**	**20 07 41.8 +3.2**
	SNR=6.7						
HOQ	**Hoqain**	**13.91**	**358**	P		**Pn**	**20 07 44.1 +2.8**
	SNR=14						
MSEY	**Mahe Island**	**14.38**	**190**	*e*Pn		**Pn**	**20 07 40.1 -7.6**
TRD	**Trivandrum**	**18.89**	**92**	⇓*e*P		**Pn**	**20 08 57.0 +12**
TRD				*ex*		x	20 12 47.0
QRN	**Al-Qurain**	**21.21**	**335**	*e*P		**P**	**20 09 08.9 -1.0**
	baz=333						
QRN				AMb		AMB	20 09 15.6
	comp=Z,192nm,1.3s,mb5.3,baz=333						
RDF	**Al-Radifah**	**21.52**	**335**	*e*P		**P**	**20 09 12.3 -1.0**
	comp=Z,116nm,0.7s,mb5.4						
RDF	**Al-Radifah**	**21.52**	**335**	*e*P		**P**	**20 09 12.3 -1.0**
	baz=332						
RDF				AMb		AMB	20 09 13.2
	comp=Z,116nm,0.7s,mb5.4,baz=332						
HYB	**Hyderabad**	**21.55**	**67**	*e*P		**P**	**20 09 15.0 +1.3**
HYB				*e*S		**S**	**20 13 24.0 +11**
HYB	**Hyderabad**	**21.55**	**67**	*i* P		**P**	**20 09 15.0 +1.3**
HYB				*e*S		**S**	**20 13 24.0 +11**
KBD	**Kabd**	**21.68**	**335**	*e*P		**P**	**20 09 13.3 -1.7**
	comp=Z,100nm,1.2s,mb5.1						
KBD	**Kabd**	**21.68**	**335**	*e*P		**P**	**20 09 13.3 -1.7**
	baz=333						
KBD				AMb		AMB	20 09 18.4
	comp=Z,100nm,1.2s,mb5.1,baz=333						
UMR	**Umm Al-Rimmam**	**22.00**	**336**	*e*P		**P**	**20 09 17.1 -1.4**
	comp=Z,67nm,1.1s,mb5.0						
UMR	**Umm Al-Rimmam**	**22.00**	**336**	*e*P		**P**	**20 09 17.1 -1.4**
	baz=333						
UMR				AMb		AMB	20 09 23.4
	comp=Z,67nm,1.1s,mb5.0,baz=333						
MIB	**Mutribah**	**22.38**	**335**	*e*P		**P**	**20 09 21.1 -1.4**
	comp=Z,99nm,1.6s,mb5.0						
MIB	**Mutribah**	**22.38**	**335**	*e*P		**P**	**20 09 21.1 -1.4**
	baz=333						
MIB				AMb		AMB	20 09 27.7
	comp=Z,99nm,1.6s,mb5.0,baz=333						
KBL	**Kabul**	**26.86**	**21**	*e*P		**P**	**20 10 07.2 +2.4**
	comp=Z,8.3nm,0.8s,mb4.3						
KBL	**Kabul**	**26.86**	**21**	*e*P		**P**	**20 10 07.2 +2.4**
KBL				pmax		pmax	
	comp=Z,8.0nm,0.8s,mb4.3						
KBL	**Kabul**	**26.86**	**21**	*e*P		**P**	**20 10 07.2 +2.4**
	comp=Z,8.3nm,0.8s,mb4.3						
EIL	**Elat**	**29.29**	**316**	P		**P**	**20 10 29.2 +2.6**
	comp=Z,5.2nm,0.8s,mb4.3,baz=71,slow=4.1,SNR=7.4						
EIL				LR		LR	20 21 16.8
	comp=Z,158nm,20.6s,MS3.6,baz=297,slow=35						
EIL	**Elat**	**29.29**	**316**	P		**P**	**20 10 29.2 +2.6**
EIL				LR		LR	20 21 16.8
ASF	**Jabal al Asfar**	**29.68**	**322**	LR		LR	20 22 27.8
	comp=Z,136nm,18.8s,MS3.6,baz=183,slow=37						
KOLN	**Koldanda**	**30.24**	**50**	*e*P		**P**	**20 10 36.4 +1.3**
	comp=Z,56nm,1.2s,mb5.2						
ABPO	**Ambohimpanom**	**30.31**	**200**	*e*P		**P**	**20 10 36.1 +0.4**
	comp=Z,32nm,1.2s,mb4.9						
ABPO	**Ambohimpanom**	**30.31**	**200**	*e*P		**P**	**20 10 36.1 +0.4**
ABPO				pmax		pmax	
	comp=Z,32nm,1.2s,mb4.9						
ABPO	**Ambohimpanom**	**30.31**	**200**	*e*P		**P**	**20 10 36.1 +0.4**
	comp=Z,32nm,1.2s,mb4.9						
DANN	**Dangsing**	**30.66**	**49**	*e*P		**P**	**20 10 39.9 +1.1**
	comp=Z,25nm,1.0s,mb5.0						
GKN	**Gorkha**	**31.14**	**50**	*e*P		**P**	**20 10 43.9 +0.8**
	comp=Z,41nm,1.3s,mb5.1						
DMN	**Daman**	**31.30**	**51**	*e*P		**P**	**20 10 45.9 +1.4**
	comp=Z,125nm,1.7s,mb5.5						
PKI	**Pulchoki**	**31.52**	**52**	*e*P		**P**	**20 10 47.5 +1.1**
	comp=Z,57nm,1.3s,mb5.2						
PKI	**Pulchoki**	**31.52**	**52**	*e*P		**P**	**20 10 47.5 +1.1**
PKI				pmax		pmax	
	comp=Z,57nm,1.3s,mb5.2						
KKN	**Kakani**	**31.53**	**51**	*e*P		**P**	**20 10 47.7 +1.2**
	comp=Z,66nm,1.2s,mb5.3						
KKN	**Kakani**	**31.53**	**51**	*e*P		**P**	**20 10 47.7 +1.2**
KKN				pmax		pmax	
	comp=Z,67nm,1.2s,mb5.3						
GUN	**Gumba**	**32.05**	**52**	*e*P		**P**	**20 10 52.2 +1.1**
	comp=Z,88nm,1.2s,mb5.5						
RAMN	**Ramite**	**32.16**	**54**	*e*P		**P**	**20 10 53.4 +1.3**
JIRN	**Jiri**	**32.17**	**52**	*e*P		**P**	**20 10 53.3 +1.2**
	comp=Z,49nm,1.1s,mb5.2						
ODAN	**Odare**	**32.75**	**54**	*e*P		**P**	**20 10 57.9 +0.6**
	comp=Z,32nm,1.3s,mb5.1						
TAPN	**Taplejung**	**33.23**	**54**	*e*P		**P**	**20 11 02.6 +1.2**
	comp=Z,81nm,1.5s,mb5.4						
EKS2	**Erkin-Say**	**35.76**	**20**	*e*P		**P**	**20 11 24.8 +1.7**
	comp=Z,90nm,1.8s,mb5.4						
EKS2	**Erkin-Say**	**35.76**	**20**	*e*P		**P**	**20 11 24.8 +1.7**
	comp=Z,90nm,1.8s,mb5.4						
AAK	**Ala-Archa**	**35.99**	**21**	P		**P**	**20 11 27.2 +2.2**
	SNR=7.7						
AAK	**Ala-Archa**	**35.99**	**21**	*e*P		**P**	**20 11 26.3 +1.2**
	comp=Z,15nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**35.99**	**21**	*e*P		**P**	**20 11 26.3 +1.2**
AAK				pmax		pmax	
	comp=Z,15nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**35.99**	**21**	*e*P		**P**	**20 11 26.3 +1.2**
	comp=Z,15nm,1.2s,mb4.8						
TKM2	**Tokmak 2**	**36.64**	**22**	*e*P		**P**	**20 11 27.6 -3.0**
	comp=Z,4.9nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**36.64**	**22**	*e*P		**P**	**20 11 27.6 -3.0**
TKM2				pmax		pmax	
	comp=Z,5.0nm,1.0s,mb4.3						
BR131	**Keskin Array S**	**36.96**	**328**	*e*P		**P**	**20 11 34.5 +1.1**
	comp=Z,2.4nm,0.6s,mb4.2						
BR131	**Keskin Array S**	**36.96**	**328**	*e*P		**P**	**20 11 34.5 +1.1**
	comp=Z,2.4nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**36.96**	**328**	P		**P**	**20 11 34.6 +1.3**
	comp=Z,3.9nm,0.8s,mb4.3,baz=158,slow=8.1,SNR=24						
BRTR				PcP		PcP	20 13 55.4 +0.8
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=3.7						
BRTR	**Keskin Array B**	**36.96**	**328**	P		**P**	**20 11 34.7 +1.3**
BRTR							20 13 55.4
BRTR				pmax		pmax	
	comp=Z,4.0nm,0.8s						
LSA	**Lhasa**	**36.97**	**53**	*e*P		**P**	**20 11 34.1 +0.4**
	comp=Z,47nm,1.6s,mb5.1						
LSA	**Lhasa**	**36.97**	**53**	*e*P		**P**	**20 11 34.1 +0.4**
LSA				pmax		pmax	
	comp=Z,47nm,1.6s,mb5.1						
LSA	**Lhasa**	**36.97**	**53**	*e*P		**P**	**20 11 34.1 +0.4**
	comp=Z,47nm,1.6s,mb5.1						
ANTO	**Ankara**	**37.51**	**328**	*e*P		**P**	**20 11 39.1 +1.1**
	comp=Z,6.3nm,0.6s,mb4.5						
ANTO	**Ankara**	**37.51**	**328**	*e*P		**P**	**20 11 39.1 +1.1**
ANTO				pmax		pmax	
	comp=Z,6.0nm,0.6s,mb4.5						
ANTO	**Ankara**	**37.51**	**328**	*e*P		**P**	**20 11 39.1 +1.1**
	comp=Z,6.3nm,0.6s,mb4.5						
ANTO	**Ankara**	**37.51**	**328**	⇓*i*P		**P**	**20 11 39.2 +1.2**
LSZ	**Lusaka**	**38.41**	**230**	P		**P**	**20 11 47.3 +1.4**
	comp=Z,2.2nm,0.6s,mb4.1,baz=60,slow=8.6,SNR=6.8						
LSZ	**Lusaka**	**38.41**	**230**	*e*P		**P**	**20 11 46.4 +0.4**
	comp=Z,23nm,1.6s,mb4.7						
LSZ	**Lusaka**	**38.41**	**230**	*e*P		**P**	**20 11 46.4 +0.5**
LSZ				pmax		pmax	
	comp=Z,23nm,1.6s,mb4.7						
LSZ	**Lusaka**	**38.41**	**230**	*e*P		**P**	**20 11 46.4 +0.5**
	comp=Z,23nm,1.6s,mb4.7						
AKTK	**Aktyubinsk**	**40.71**	**0**	P		**P**	**20 12 05.1 +0.5**
AKTK				LR		LR	20 29 31.8
AKTK	**Aktyubinsk**	**40.71**	**0**	P		**P**	**20 12 05.1 +0.4**
AKTO	**Aktyubinsk**	**40.71**	**0**	P		**P**	**20 12 05.1 +0.5**
	comp=Z,14nm,0.7s,mb4.7,baz=172,slow=9.2,SNR=57						
AKTO				LR		LR	20 29 31.8
	comp=Z,78nm,21.2s,MS3.5,baz=183,slow=37						
AKTO	**Aktyubinsk**	**40.71**	**0**	P		**P**	**20 12 05.1 +0.4**
AKTO				pmax		pmax	
	comp=Z,14nm,0.7s,mb4.7						
AKTO				MLR		MLR	
	comp=Z,78nm,21.2s,MS3.5						
CM31	**Chiang Mai Arr**	**40.74**	**73**	*e*P		**P**	**20 12 05.6 +0.2**
	comp=Z,24nm,1.1s,mb4.7						
CM31	**Chiang Mai Arr**	**40.74**	**73**	*e*P		**P**	**20 12 05.6 +0.2**
	comp=Z,24nm,1.1s,mb4.7						
CMAR	**Chiang Mai Arr**	**40.74**	**73**	P		**P**	**20 12 06.0 +0.6**
	comp=Z,9.9nm,1.0s,mb4.4,baz=266,slow=8.1,SNR=54						
CMAR				LR		LR	20 29 29.3
	comp=Z,64nm,19.1s,MS3.5,baz=77,slow=37						
CMAR	**Chiang Mai Arr**	**40.74**	**73**	P		**P**	**20 12 06.0 +0.6**
CMAR				pmax		pmax	
	comp=Z,10.0nm,1.0s						
CMAR				MLR		MLR	
	comp=Z,64nm,19.1s						
CMAR	**Chiang Mai Arr**	**40.74**	**73**	P		**P**	**20 12 05.9 +0.5**
CHTO	**Chiang Mai**	**40.78**	**72**	*e*P		**P**	**20 12 05.2 -0.6**
	comp=Z,16nm,1.3s,mb4.5						
CHTO	**Chiang Mai**	**40.78**	**72**	*e*P		**P**	**20 12 05.2 -0.5**
CHTO				pmax		pmax	
	comp=Z,16nm,1.3s,mb4.5						
CHTO	**Chiang Mai**	**40.78**	**72**	*e*P		**P**	**20 12 05.2 -0.5**
	comp=Z,16nm,1.3s,mb4.5						
MK31	**Makanchi Array**	**42.50**	**25**	*e*P		**P**	**20 12 17.4 -2.0**
MK31	**Makanchi Array**	**42.50**	**25**	*e*P		**P**	**20 12 17.4 -2.0**
MKAR	**Makanchi Array**	**42.50**	**25**	P		**P**	**20 12 19.3 -0.1**
	comp=Z,1.7nm,0.7s,mb3.8,baz=217,slow=8.6,SNR=11						
MKAR				PcP		PcP	
	comp=Z,2.5nm,1.0s,baz=250,slow=2.5,SNR=6.2						20 14 11.2 -0.9
MKAR				LR		LR	20 30 29.8
	comp=Z,154nm,20.2s,MS3.9,baz=200,slow=37						
MKAR	**Makanchi Array**	**42.50**	**25**	P		**P**	**20 12 19.3 -0.1**
MKAR				PcP		PcP	20 14 11.2 -0.9
MKAR				LR		LR	20 30 29.8
MKAR	**Makanchi Array**	**42.50**	**25**	P		**P**	**20 12 19.3 -0.1**
MKAR							20 14 11.2
MKAR				pmax		pmax	
	comp=Z,2.0nm,0.7s						
MKAR				pmax		pmax	
	comp=Z,3.0nm,1.0s						
MKAR				MLR		MLR	
	comp=Z,154nm,20.2s						
TIRR	**Tirgusor**	**43.06**	**329**	⇓*i*P		**P**	**20 12 24.2 +0.2**
KURK	**Kurchatov**	**44.43**	**19**	LR		LR	20 32 08.0
	comp=Z,324nm,20.4s,MS4.2,baz=225,slow=38						
KURK	**Kurchatov**	**44.43**	**19**	*e*P		**P**	**20 12 34.8 -0.1**
	comp=Z,12nm,1.2s,mb4.5						
KURK	**Kurchatov**	**44.43**	**19**	*e*P		**P**	**20 12 34.8 -0.1**
KURK				pmax		pmax	
	comp=Z,12nm,1.2s,mb4.5						
KURK	**Kurchatov**	**44.43**	**19**	*e*P		**P**	**20 12 34.8 -0.1**
	comp=Z,12nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**44.47**	**11**	LR		LR	20 31 41.6
	comp=Z,137nm,20.4s,MS3.9,baz=213,slow=37						
BRVK	**Borovoye**	**44.49**	**11**	*e*P		**P**	**20 12 33.8 -1.6**
	comp=Z,6.2nm,0.9s,mb4.3						
BRVK	**Borovoye**	**44.49**	**11**	*e*P		**P**	**20 12 33.8 -1.5**
BRVK				pmax		pmax	
	comp=Z,6.0nm,0.9s,mb4.3						
BRVK	**Borovoye**	**44.49**	**11**	*e*P		**P**	**20 12 33.8 -1.5**
	comp=Z,6.2nm,0.9s,mb4.3						
VRI	**Vrincioaia**	**44.90**	**329**	⇑*i*P		**P**	**20 12 40.5 +1.7**
PLOR	**Plostina**	**44.93**	**329**	⇑*i*P		**P**	**20 12 40.7 +1.7**
MLR	**Muntele Rosu**	**45.04**	**328**	⇑*i*P		**P**	**20 12 41.5 +1.6**
KMI	**Kunming**	**45.30**	**64**	P		**P**	**20 12 42.5 +0.2**
KMI				AMB		AMB	
	comp=Z,18nm,1.2s,mb4.8						
KMI				LR		LR	
	comp=N,182nm,11.3s						
KMI				LR		LR	
	comp=E,209nm,17.0s						
KMI				LR		LR	
	comp=Z,225nm,20.2s						
VOIR		**45.47**	**328**	⇑*i*P		**P**	**20 12 44.0 +0.7**
LBTB	**Lobatse**	**46.61**	**222**	P		**P**	**20 12 54.2 +1.6**
	comp=Z,5.3nm,0.8s,mb4.5,baz=69,slow=12,SNR=6.1						
LBTB	**Lobatse**	**46.61**	**222**	P		**P**	**20 12 54.2 +1.6**
LBTB				pmax		pmax	
	comp=Z,5.0nm,0.8s,mb4.5						
ARU	**Arti**	**46.72**	**1**	⇑*e*P		**P**	**20 12 53.1 +0.2**
ARU	**Arti**	**46.72**	**1**	*e*P		**P**	**20 12 52.5 -0.4**
	comp=Z,31nm,1.2s,mb5.1						
BURAR	**Bucovina Array**	**46.85**	**330**	⇑*i*P		**P**	**20 12 54.6 +0.4**
SVE	**Sverdlovsk**	**47.16**	**2**	*e*P		**P**	**20 12 55.5 -0.9**
SVE				pmax		pmax	
	comp=Z,19nm,0.9s,mb5.0						
AKASG	**Malin Array Be**	**47.29**	**335**	P		**P**	**20 12 56.4 -1.1**
	comp=Z,2.6nm,0.8s,mb4.2,baz=138,slow=7.1,SNR=11						
AKASG				PcP		PcP	20 14 28.5 0.0
	comp=Z,0.5nm,0.5s,baz=124,slow=2.4,SNR=4.4						
AKASG	**Malin Array Be**	**47.29**	**335**	P		**P**	**20 12 56.4 -1.1**
AKASG							20 14 28.5
AKASG				pmax		pmax	
	comp=Z,3.0nm,0.8s						
AKASG				pmax		pmax	
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**47.29**	**335**	P		**P**	**20 12 56.5 -1.1**
AKBB	**Malin Array Si**	**47.29**	**335**	P		**P**	**20 12 56.5 -1.0**
BZS	**Buzias**	**47.45**	**326**	⇑*i*P		**P**	**20 12 58.5 -0.3**
CD2	**Chengdu**	**47.58**	**57**	P		**P**	**20 12 58.5 -1.6**
CD2				AMB		AMB	
	comp=Z,30nm,1.0s,mb5.3						
CD2				AMB		AMB	
	comp=Z,120nm,4.8s						
CD2				LR		LR	
	comp=N,160nm,13.2s,MS4.3						
CD2				LR		LR	
	comp=E,190nm,15.6s,MS4.3						
CD2				LR		LR	
	comp=Z,200nm,14.4s,MS4.2						
GTA	**Gaotai**	**47.71**	**44**	*e*P		**P**	**20 13 00.8 -0.2**
GTA				AP		pP	20 13 05.0 +0.9
GTA				XP		sP	20 13 08.3 +2.9
GTA				AMB		AMB	
	comp=Z,7.0nm,1.6s,mb4.4						
OBN	**Obninsk**	**48.43**	**344**	P		**P**	**20 13 05.6 -0.7**
	comp=Z,48nm,1.3s,mb5.4						
OBN	**Obninsk**	**48.43**	**344**	⇓*e*P		**P**	**20 13 06.1 -0.2**
OBN				*e*			20 15 00.0
OBN				pmax		pmax	
	comp=Z,15nm,0.8s,mb5.1						
OBN	**Obninsk**	**48.43**	**344**	P		**P**	**20 13 05.6 -0.7**
	comp=Z,48nm,1.3s,mb5.4						
MOS	**Moscow**	**48.70**	**345**	*e*P		**P**	**20 13 07.9 -0.5**
MOS				pmax		pmax	
	comp=Z,67nm,1.3s,mb5.5						
TSUM	**Tsumeb**	**48.94**	**234**	*e*P		**P**	**20 13 12.7 +1.9**
	comp=Z,6.6nm,1.0s,mb4.6						
TSUM	**Tsumeb**	**48.94**	**234**	*e*P		**P**	**20 13 12.7 +2.0**
	comp=Z,6.6nm,1.0s,mb4.6						
GYA	**Guiyang**	**49.03**	**63**	⇓*i*P		**P**	**20 13 10.8 -0.6**
GYA				AMB		AMB	
	comp=Z,20nm,1.0s,mb5.1						
KOLS	**Kolonicke sedl**	**49.20**	**330**	*e*P		**P**	**20 13 12.3 0.0**
KOLS				pmax		pmax	
	comp=Z,18nm,1.6s,mb4.8						
KOLS	**Kolonicke sedl**	**49.20**	**330**	*e*P		**P**	**20 13 12.3 0.0**
	comp=Z,18nm,1.6s,mb4.8						
ZAA0	**Zalesovo Array**	**49.21**	**21**	*e*P		**P**	**20 13 11.1 -1.3**
ZAA0	**Zalesovo Array**	**49.21**	**21**	*e*P		**P**	**20 13 11.1 -1.2**
ZALV	**Zalesovo Beam**	**49.21**	**21**	P		**P**	**20 13 11.2 -1.2**
	comp=Z,10nm,0.7s,mb5.0,baz=224,slow=8.3,SNR=51						
ZALV				LR		LR	20 34 38.9
	comp=Z,212nm,20.0s,MS4.1,baz=357,slow=37						
ZALV	**Zalesovo Beam**	**49.21**	**21**	P		**P**	**20 13 11.2 -1.1**
ZALV				pmax		pmax	
	comp=Z,10.0nm,0.7s,mb5.0						
ZALV				MLR		MLR	
	comp=Z,212nm,20.0s,MS4.1						
LZH	**Lanzhou**	**49.29**	**50**	*e*P		**P**	**20 13 13.0 -0.2**
LZH				AP		pP	20 13 19.5 +3.1
LZH				XP		sP	20 13 22.0 +4.4
LZH				AMB		AMB	
	comp=Z,33nm,1.5s,mb5.1						
LZH				AMB		AMB	
	comp=Z,150nm,5.0s						
BOSA	**Boshof**	**49.35**	**219**	P		**P**	**20 13 14.6 +0.9**
	comp=Z,3.7nm,0.8s,mb4.5,baz=50,slow=13,SNR=6.6						
BOSA				LR		LR	20 31 44.4
	comp=Z,381nm,18.8s,MS4.4,baz=16,slow=33						
BOSA	**Boshof**	**49.35**	**219**	P		**P**	**20 13 14.6 +0.9**
BOSA				pmax		pmax	
	comp=Z,4.0nm,0.8s,mb4.5						
BOSA				MLR		MLR	
	comp=Z,381nm,18.8s,MS4.4						
NVS	**Novosibirsk**	**49.41**	**19**	⇓*i*P		**P**	**20 13 12.7 -1.1**
NVS				pmax		pmax	
	comp=Z,22nm,1.2s,mb5.1						
NVS				pmax		pmax	
	comp=N,17nm,1.3s						
NVS				pmax		pmax	
	comp=E,21nm,1.6s						
PKSM	**Moragy**	**49.48**	**325**	⇑*i*P		**P**	**20 13 14.4 -0.1**
CRVS	**Cervenica-Dubn**	**49.59**	**329**	*e*P		**P**	**20 13 15.5 +0.2**
CRVS				pmax		pmax	
	comp=Z,15nm,1.7s,mb4.8						
CRVS	**Cervenica-Dubn**	**49.59**	**329**	*e*P		**P**	**20 13 15.5 +0.2**
	comp=Z,15nm,1.7s,mb4.8						
STHS	**Stebnicka Huta**	**50.03**	**329**	*e*P		**P**	**20 13 18.0 -0.6**
STHS				pmax		pmax	
	comp=Z,3.0nm,1.0s,mb4.3						
STHS	**Stebnicka Huta**	**50.03**	**329**	*e*P		**P**	**20 13 18.0 -0.6**
	comp=Z,2.9nm,1.0s,mb4.3						
VYHS	**Vyhne**	**50.70**	**327**	*e*P		**P**	**20 13 23.4 -0.3**
VYHS				pmax		pmax	
	comp=Z,3.0nm,1.1s,mb4.1						
VYHS	**Vyhne**	**50.70**	**327**	*e*P		**P**	**20 13 23.4 -0.3**
	comp=Z,2.5nm,1.1s,mb4.1						
KEST	**Kesra**	**51.11**	**308**	LR		LR	20 33 06.2
	comp=Z,55nm,21.3s,MS3.5,baz=326,slow=34						
MODS	**Modra-Piesok**	**51.47**	**326**	*e*P		**P**	**20 13 28.8 -0.7**
XAN	**Xi'an**	**52.63**	**54**	P		**P**	**20 13 37.5 -0.9**
XAN				AP		pP	20 13 43.8 +2.2
XAN				AMB		AMB	
	comp=Z,26nm,1.2s,mb5.0						
XAN				AMB		AMB	
	comp=Z,109nm,8.1s						
KSM	**Kuching**	**52.76**	**95**	P		**P**	**20 13 36.7 -3.1**
	comp=Z,54nm,1.5s,mb5.3						
GERES	**GERESS Array B**	**53.72**	**325**	P		**P**	**20 13 44.6 -1.5**
	comp=Z,0.2nm,0.3s,baz=90,slow=2.9,SNR=2.5						
KHC	**Kasperske Hory**	**53.94**	**325**	⇑*e*P		**P**	**20 13 47.3 -0.5**
TOA0	**Torodi Ar. Sit**	**55.09**	**279**	*e*P		**P**	**20 13 57.0 +0.3**
TOA0	**Torodi Ar. Sit**	**55.09**	**279**	*e*P		**P**	**20 13 57.0 +0.3**
TORD	**Torodi Ar. Bea**	**55.09**	**279**	P		**P**	**20 13 58.0 +1.4**
	comp=Z,3.1nm,0.9s,mb4.3,baz=89,slow=6.3,SNR=16						
TORD	**Torodi Ar. Bea**	**55.09**	**279**	P		**P**	**20 13 58.0 +1.3**
CLL	**Collm**	**55.40**	**327**	*e*P		**P**	**20 13 59.0 +0.6**
	comp=Z,6.0nm,1.1s,mb4.5						
SONM	**Songino Array**	**55.78**	**38**	P		**P**	**20 14 01.1 0.0**
	comp=Z,2.9nm,1.1s,mb4.2,baz=235,slow=6.9,SNR=16						
SONM	**Songino Array**	**55.78**	**38**	P		**P**	**20 14 01.1 0.0**
SONM				pmax		pmax	
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**56.19**	**38**	*e*P		**P**	**20 14 03.3 -0.7**
	comp=Z,2.7nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**56.19**	**38**	*e*P		**P**	**20 14 03.3 -0.8**
ULN				pmax		pmax	
	comp=Z,3.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**56.19**	**38**	*e*P		**P**	**20 14 03.3 -0.8**
	comp=Z,2.7nm,0.9s,mb4.3						
WHN	**Wuhan**	**56.39**	**60**	P		**P**	**20 14 05.0 -0.9**
WHN				LR		LR	
	comp=Z,498nm,25.7s,MS4.5						
LPG	**La Plagne**	**56.43**	**319**	*e*P		**P**	**20 14 05.1 -0.6**
LPL	**La Plagne**	**56.43**	**319**	*e*P		**P**	**20 14 05.1 -0.7**
	comp=Z,6.9nm,0.7s,mb4.5						
LPL	**La Plagne**	**56.43**	**319**	*e*P		**P**	**20 14 05.1 -0.7**
LPL				pmax		pmax	
	comp=Z,3.0nm,0.7s,mb4.4						
LPL	**La Plagne**	**56.43**	**319**	*e*P		**P**	**20 14 05.1 -0.7**
	comp=Z,3.5nm,0.7s,mb4.5						
JOF	**Joensuu**	**56.56**	**346**	*e*p		**P**	**20 14 05.0 -1.4**
	comp=Z,5.8nm,0.7s,mb4.7						
CDF	**Champ du Feu**	**57.27**	**322**	*e*P		**P**	**20 14 11.1 -0.6**
	comp=Z,15nm,0.9s,mb4.7						
CDF	**Champ du Feu**	**57.27**	**322**	*e*P		**P**	**20 14 11.1 -0.6**
CDF				pmax		pmax	
	comp=Z,8.0nm,0.9s,mb4.8						
CDF	**Champ du Feu**	**57.27**	**322**	*e*P		**P**	**20 14 11.1 -0.6**
	comp=Z,7.7nm,0.9s,mb4.7						
CABF	**La Chapelle**	**57.27**	**320**	*e*P		**P**	**20 14 11.9 +0.1**
	comp=Z,47nm,0.9s,mb5.2						
CABF	**La Chapelle**	**57.27**	**320**	*e*P		**P**	**20 14 11.9 +0.1**
CABF				pmax		pmax	
	comp=Z,23nm,0.9s,mb5.2						
CABF	**La Chapelle**	**57.27**	**320**	*e*P		**

NOA	**NORSAR Array B**	**61.69**	**336**	P		**P**		**20 14 40.5**	**-1.5**
KIC	**Kosan Boka**	**62.01**	**272**	*e*P		**P**		**20 14 46.2**	**+1.1**
	comp=Z,93nm,1.4s,mb5.7								
DBIC	**Dimbokro**	**62.09**	**272**	P		**P**		**20 14 45.6**	**+0.1**
DBIC	comp=Z,3.0nm,0.7s,mb4.5,baz=87,slow=10,SNR=7.1			LR		LR		20 44 05.6	
	comp=Z,92nm,21.7s,MS3.9,baz=198,slow=38								
DBIC	**Dimbokro**	**62.09**	**272**	*e*P		**P**		**20 14 45.4**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.7								
DBIC				LR		LR		20 44 05.6	
DBIC	**Dimbokro**	**62.09**	**272**	*e*P		**P**		**20 14 45.4**	**-0.2**
DBIC				pmax		pmax			
	comp=Z,6.0nm,0.8s								
DBIC	**Dimbokro**	**62.09**	**272**	*e*P		**P**		**20 14 45.4**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.7								
TIC	**Toumodi**	**62.25**	**272**	*e*P		**P**		**20 14 47.6**	**+0.9**
	comp=Z,41nm,0.9s,mb5.6								
ESLA	**Sonseca Array**	**62.31**	**310**	*e*P		**P**		**20 14 46.9**	**+0.2**
	comp=Z,2.2nm,1.0s,mb4.2								
ESLA	**Sonseca Array**	**62.31**	**310**	*e*P		**P**		**20 14 46.8**	**+0.2**
	comp=Z,2.2nm,1.0s,mb4.2								
LIC	**Lamto**	**62.31**	**272**	*e*P		**P**		**20 14 48.1**	**+1.0**
	comp=Z,9.4nm,0.2s,mb5.6								
ARCES	**ARCESS Array B**	**63.38**	**348**	P		**P**		**20 14 52.6**	**-0.6**
	comp=Z,6.6nm,0.7s,mb4.9,baz=141,slow=6.2,SNR=13								
ARCES				LR		LR		20 45 22.5	
	comp=Z,191nm,22.0s,MS4.2,baz=243,slow=39								
ARCES	**ARCESS Array B**	**63.38**	**348**	P		**P**		**20 14 52.6**	**-0.6**
ARCES				pmax		pmax			
	comp=Z,7.0nm,0.7s								
ARCES				MLR		MLR			
	comp=Z,191nm,22.0s								
KSRS	**Korea Array**	**68.41**	**54**	P		**P**		**20 15 24.1**	**-2.1**
	comp=Z,5.2nm,0.9s,mb4.5,baz=266,slow=7.1,SNR=11								
KSRS				LR		LR		20 46 17.2	
	comp=Z,117nm,21.6s,MS4.1,baz=96,slow=37								
KSRS	**Korea Array**	**68.41**	**54**	P		**P**		**20 15 24.1**	**-2.1**
KSRS				pmax		pmax			
	comp=Z,5.0nm,0.9s,mb4.5								
KSRS				MLR		MLR			
	comp=Z,117nm,21.6s,MS4.1								
KLR	**Kul'dur**	**72.27**	**41**	*e*P		**P**		**20 15 44.9**	**-4.7**
YAK	**Yakutsk**	**73.07**	**28**	*e*P		**P**		**20 15 51.4**	**-2.7**
YAK				pmax		pmax			
	comp=Z,27nm,0.9s,mb5.2								
YAK				pmax		pmax			
	comp=E,12nm,1.2s								
YAK	**Yakutsk**	**73.07**	**28**	*e*P		**P**		**20 15 53.0**	**-1.1**
	comp=E,34nm,0.8s,mb5.3								
TIXI	**Tiksi**	**75.00**	**18**	*e*P		**P**		**20 16 03.6**	**-1.6**
	comp=E,5.2nm,0.5s,mb4.7								
TIXI	**Tiksi**	**75.00**	**18**	*e*P		**P**		**20 16 03.6**	**-1.6**
TIXI				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb4.7								
TIXI	**Tiksi**	**75.00**	**18**	*e*P		**P**		**20 16 03.6**	**-1.6**
	comp=Z,5.2nm,0.5s,mb4.7								
MJAR	**Matsushiro Arr**	**76.62**	**55**	P		**P**		**20 16 14.3**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.8,baz=273,slow=9.5,SNR=4.8								
MJAR				LR		LR		20 50 36.9	
	comp=Z,85nm,20.8s,MS4.0,baz=330,slow=36								
MJAR	**Matsushiro Arr**	**76.62**	**55**	P		**P**		**20 16 14.3**	**-0.9**
MJAR				LR		LR		20 50 36.9	
MJAR	**Matsushiro Arr**	**76.62**	**55**	P		**P**		**20 16 14.3**	**-0.9**
MJAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
MJAR				MLR		MLR			
	comp=Z,85nm,20.8s								
WRAB	**Tennant Creek**	**80.76**	**112**	*e*P		**P**		**20 16 37.2**	**-1.0**
	comp=Z,24nm,1.4s,mb4.9								
WRAB	**Tennant Creek**	**80.76**	**112**	*e*P		**P**		**20 16 37.2**	**-1.0**
WRAB				pmax		pmax			
	comp=Z,24nm,1.4s,mb4.9								
WRAB	**Tennant Creek**	**80.76**	**112**	*e*P		**P**		**20 16 37.2**	**-1.0**
	comp=Z,24nm,1.4s,mb4.9								
WB2	**Warramunga Arr**	**80.76**	**112**	*e*P		**P**		**20 16 37.4**	**-0.9**
ASAR	**Alice Springs**	**81.26**	**116**	P		**P**		**20 16 40.0**	**-0.9**
	comp=Z,3.0nm,0.9s,mb4.2,baz=293,slow=5.2,SNR=22								
ASAR	**Alice Springs**	**81.26**	**116**	P		**P**		**20 16 40.0**	**-0.9**
ASAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
SEY	**Seymchan**	**83.58**	**27**↑	*e*P		**P**		**20 16 52.8**	**+0.6**
PETK	**Petropavlovsk-**	**88.25**	**36**	LR		LR		20 56 31.6	
	comp=Z,108nm,20.9s,MS4.2,baz=120,slow=36								
STKA	**Stephens Creek**	**89.74**	**122**	*e*P		**P**		**20 17 28.4**	**+5.4**
	comp=Z,2.9nm,1.4s,mb4.4								
QSPA	**South Pole Qui**	**99.53**	**180**	LR		LR		20 55 47.2	
	comp=Z,140nm,18.5s,MS4.5,baz=260,slow=31								
PDAR	**Pinedale Array**	**126.63**	**348**	PKP		PKPdf		20 23 27.8	-0.1
	comp=Z,2.2nm,0.7s,baz=59,slow=2.4,SNR=19								
NVAR	**Mina Array Bea**	**132.09**	**356**	PKP		PKPdf		20 23 39.8	+1.4
	comp=Z,1.3nm,0.7s,baz=82,slow=1.2,SNR=6.2								
TXAR	**Lajitas Array**	**137.39**	**336**	PKP		PKPdf		20 23 48.2	-0.4
	comp=Z,0.7nm,0.8s,baz=111,slow=1.1,SNR=6.1								
TXAR	**Lajitas Array**	**137.39**	**336**	PKP		PKPdf		20 23 48.2	-0.4
TXAR	**Lajitas Array**	**137.39**	**336**	PKIKP		PKPdf		20 23 48.2	-0.4
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								

IDC ***30*** *20:22:08.2±2.6, 47.45N×154.34E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.4/22, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=69.8km s-min=33.5km az=174.0*
ISCJB ***30*** *20:22:12.8±2.0, 47.7N±02×154.3E±03, h33km, mb3.6/3, Error ellipse: s-maj=39.8km s-min=19.5km az=144.3*
MOS ***30*** *20:22:12.3±0.7, 47.70N×154.24E, h33km, mb4.2/1, Error ellipse: s-maj=71.4km s-min=28.8km az=78.9*
ISC 30 20:22:14.7±2.0, 47.7N±02×154.4E±03, h35km, n6, σ0.9s7/6, mb3.6/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SKR	**Severo-Kuril's**	**3.19**	**21**	*e*PN		**Pn**	**20 23 01.2**	**-1.0**
SKR					pmax	pmax		
	comp=N,70nm,0.4s							
SKR					pmax	pmax		
	comp=Z,100nm,0.4s							
PETK	**Petropavlovsk-**	**5.80**	**20**	Pn		**Pn**	**20 23 39.1**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=170,slow=12,SNR=44							
MKAR	**Makanchi Array**	**47.25**	**297**	P		**P**	**20 30 43.9**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=62,slow=8.9,SNR=5.4							
KURK	**Kurchatov**	**47.54**	**303**	P		**P**	**20 30 46.3**	**+0.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=70,slow=8.7,SNR=6.4							
KURK	**Kurchatov**	**47.54**	**303**	P		**P**	**20 30 46.3**	**+0.1**
KURK					pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0							
TXAR	**Lajitas Array**	**76.28**	**62**	P		**P**	**20 33 59.8**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=311,slow=4.8,SNR=3.8							

MAN 30 20:25:37, 915N×12217E, h32km, mb4.4, ML3.3, MS3.1, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DCPH	**Dipolog City**	**1.29**	**116**	*e*P		Sn	20 26 23.2	+8.1
TBP	**Tagbilaran**	**1.75**	**72**	*e*P		Pn	20 26 14.8	+10
TBP				*e*S		Sn	20 26 41.9	+15
PAGZ	**Pagadian**	**1.76**	**137**	*e*P		Sn	20 26 27.4	+0.8
LLP	**Lapu-Lapu**	**2.12**	**57**	*e*P		Pn	20 26 16.3	+6.1
LLP				*e*S		Sn	20 26 45.2	+10
OCLP	**Ormoc**	**3.06**	**52**	*e*S		Pn	20 26 27.4	+4.2
PVCP	**Virac**	**4.83**	**24**	*e*P		Pn	20 26 48.5	+1.0

IDC ***30*** *20:40:21.0±1.1, 3380S×178.11W, h0km, mb4.4/4, mb1 4.5/6, mb1mx4.1/16, mbtmp4.4/6, ML4.1/2, MS3.6/5, Ms1 3.6/5, ms1mx3.3/27, Error ellipse: s-maj=37.6km s-min=24.1km az=131.0*
ISCJB ***30*** *20:40:22.3±1.8, 3385S±009×178.0W±03, h33km, mb4.5/6, MS3.6/5, Error ellipse: s-maj=32.9km s-min=8.5km az=16.9*
NEIC ***30*** *20:40:24.3±4.1, 3378S×178.25W, h18km±25km, mb4.6/5, Error ellipse: s-maj=20.7km s-min=10.6km az=105.0*
ISC 30 20:40:25.3±3.3, 3382S±009×178.4W±03, h21km±28km, n32, σ1.9s8/18, mb4.5/6, MS3.6/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAO	**Raoul Island**	**4.57**	**5**	*e*Pn		**Pn**	**20 41 31.4**	**-1.8**
URZ	**Urewera**	**5.75**	**218**	Pn		**Pn**	**20 41 50.1**	**+0.8**
	6.3nm,0.3s,baz=51,slow=4.7,SNR=46							
URZ						Sn	**20 42 59.2**	**+4.5**
	24nm,0.3s,baz=157,slow=11,SNR=12							
SNZO	**South Karori**	**9.28**	**214**	Pn		**Pn**	**20 42 38.9**	**+1.2**
SNZO				*e*Sn		**Sn**	**20 44 18.9**	**-2.5**
RPZ	**Rata Peaks**	**12.86**	**217**	Pn		**Pn**	**20 43 26.4**	**-0.4**
	1.0nm,0.3s,baz=347,slow=13,SNR=4.7							
RPZ						Sn	**20 45 41.2**	**-8.1**
	0.6nm,0.3s,baz=176,slow=16,SNR=5.3							
DZM	**Mont Dzumac**	**17.77**	**307**	*e*P		**Pn**	**20 44 31.8**	**+0.4**
	15nm,0.9s							
PPT	**Papeete**	**30.44**	**65**	*e*LR		LR	20 54 26.1	
	97nm,21.2s							
PPT	**Papeete**	**30.44**	**65**	LR		LR	20 56 10.5	
	comp=Z,121nm,19.6s,MS3.5,baz=89,slow=31							
STKA	**Stephens Creek**	**33.54**	**262**	P		**P**	**20 47 05.0**	**+1.4**
	1.2nm,0.6s,mb4.0,baz=92,slow=4.3,SNR=4.1							
STKA				LR		LR	20 58 39.0	
	comp=Z,114nm,18.9s,MS3.6,baz=178,slow=32							
STKA	**Stephens Creek**	**33.54**	**262**	P		**P**	**20 47 05.0**	**+1.4**
STKA				LR		LR	20 58 39.0	
CTA	**Charters Tower**	**34.19**	**284**	*e*P		**P**	**20 47 10.2**	**+0.9**
	11nm,1.7s,mb4.5							
CTA	**Charters Tower**	**34.19**	**284**	P		**P**	**20 47 10.4**	**+1.2**
	5.4nm,0.6s,mb4.7,baz=102,slow=8.8,SNR=8.6							
CTA				LR		LR	20 58 00.9	
	comp=Z,71nm,19.7s,MS3.4,baz=229,slow=31							
CTAO	**Charters Tower**	**34.19**	**284**	*e*P		**P**	**20 47 09.6**	**+0.4**
	19nm,1.1s,mb4.9							
RKT	**Rikitea**	**39.36**	**86**	*e*LR		LR	20 58 17.5	
	146nm,22.2s							
PMG	**Port Moresby**	**39.89**	**299**	P		**P**	**20 47 57.7**	**-0.1**
	19nm,1.3s,mb4.7							
ASAR	**Alice Springs**	**42.72**	**271**	P		**P**	**20 48 20.8**	**-0.3**
	5.8nm,0.8s,mb4.4,baz=110,slow=7.2,SNR=61							
ASAR				PcP		PcP	20 50 11.8	-0.7
	1.6nm,0.9s,baz=127,slow=4.0,SNR=5.3							
WB2	**Warramunga Ar**	**44.01**	**276**	*e*P		**P**	**20 48 30.8**	**-0.6**
WRAB	**Tennant Creek**	**44.01**	**276**	*e*P		**P**	**20 48 30.6**	**-0.9**
	11nm,1.1s,mb4.5							
KAPI	**Kappang**	**63.95**	**282**	LR		LR	21 16 26.3	
	comp=Z,40nm,19.3s,MS3.6,baz=100,slow=34							
KSRS	**Korea Array**	**86.74**	**320**	LR		LR	21 27 54.0	
	comp=Z,23nm,19.0s,MS3.6,baz=345,slow=33							
PETK	**Petropavlovsk-**	**89.03**	**346**	P		**P**	**20 53 19.1**	**+1.1**
	3.3nm,0.9s,mb4.7,baz=117,slow=8.6,SNR=4.8							
MKAR	**Makanchi Array**	**119.69**	**309**	PKP		PKPdf	20 59 12.2	-1.0
	1.1nm,0.9s,baz=62,slow=2.9,SNR=3.9							
JOF	**Joensuu**	**145.44**	**336**	*e*p		PKPdf	21 00 02.3	+1.6
	0.5nm,0.3s							
KAF	**Kangasniemi**	**147.63**	**338**	*e*p		PKPab	21 00 13.1	+3.7
	1.4nm,0.5s							
LIC	**Lamto**	**151.86**	**166**	*e*P		PKPab	21 00 31.9	+3.8
	42nm,1.3s							
KIC	**Kosan Boka**	**152.05**	**166**	*e*P		PKPab	21 00 30.7	+1.9
	116nm,1.5s							
NB2	**NORSAR Subarra**	**152.06**	**350**	PKP		PKPbc	21 00 17.8	-0.3
	comp=Z,1.3nm,0.6s,baz=20,slow=3.3							
NOA	**NORSAR Array B**	**152.06**	**350**	PKPbc		PKPbc	21 00 17.2	-0.9
	comp=Z,0.9nm,0.8s,baz=14,slow=4.1,SNR=3.0							
NOA				PKPab		PKPab	21 00 25.9	-1.7
	comp=Z,1.3nm,0.8s,baz=21,slow=4.2,SNR=4.8							
NOA	**NORSAR Array B**	**152.06**	**350**	PKPbc		PKPbc	21 00 17.2	-0.9
NOA				PKPab		PKPab	21 00 25.9	-1.7
TIC	**Toumodi**	**152.27**	**166**	*e*P		PKPab	21 00 27.3	-2.5
	comp=Z,8.8nm,0.2s							
AKASG	**Malin Array Be**	**153.73**	**318**	PKPbc		PKPbc	21 00 20.2	-1.9
	comp=Z,0.2nm,0.3s,baz=63,slow=2.4,SNR=4.6							
BRTR	**Keskin Array B**	**153.77**	**292**	PKPbc		PKPbc	21 00 21.4	-1.1
	comp=Z,0.6nm,0.5s,baz=131,slow=3.5,SNR=4.1							
BRTR				PKPab		PKPab	21 00 37.1	+1.5
	comp=Z,0.6nm,0.6s,baz=108,slow=2.6,SNR=4.0							
TORD	**Torodi Ar. Bea**	**159.43**	**180**	PKPab		PKPab	21 01 00.1	-0.2
	comp=Z,0.8nm,0.9s,baz=181,slow=4.0,SNR=7.3							

GUC 30 21:03:18.7±0.8, 2401S×6753W, h222km±11km, ML4.3, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LVC	**Limon Verde**	**1.88**	**317**	*e*P		Pn	21 03 59.6	+1.8
LVC				*i* S		S	21 04 30.8	+2.4
LVC				AML		AML	21 04 33.9	
	comp=E,301nm,0.2s							
PECH	**Pedro de Valdi**	**2.42**	**305**	*e*P		Pn	21 04 05.3	+2.1
PECH				*i* S		S	21 04 40.3	+2.2
PECH				AML		AML	21 04 40.9	
	comp=E,952nm,0.2s							
CEN1	**Los Morros**	**2.53**	**284**	*e*P		Pn	21 04 07.0	+2.6
CEN1				*i* S		S	21 04 43.2	+3.1
CEN1				AML		AML	21 04 45.3	
	comp=N,200nm,0.2s							
ANCH	**Antofagasta**	**2.66**	**276**	*e*P		Pn	21 04 07.4	+1.6
ANCH				*i* S		S	21 04 44.7	+2.1
ANCH				AML		AML	21 04 48.0	
	comp=E,8μm,0.0s							
PB01	**Plate Boundary**	**3.46**	**328**	*e*P		Pn	21 04 16.8	+1.8
PB01				*i* S		S	21 05 01.8	+2.6
PB01				AML		AML	21 05 05.9	
	comp=N,142nm,0.2s							

IDC ***30*** *21:03:58.2±1.8, 44.42N×147.34E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/21, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=48.2km s-min=31.6km az=161.0*
MOS ***30*** *21:04:03.3±0.7, 43.91N×147.67E, h91km, mb3.9/3, Error ellipse: s-maj=30.9km s-min=24.1km az=86.7*
ISCJB ***30*** *21:04:05.8±0.9, 43.99N±008×147.4E±0.1, h85km±7km, mb3.5/5, Error ellipse: s-maj=16.5km s-min=6.4km az=44.7*
JMA ***30*** *21:04:09.0±0.2, 43.89N×147.22E, h81km±4km, M3.7*
ISC 30 21:04:07.0±0.9, 4400N±007×147.4E±01, h79km±7km, n27, σ1.9s21/37, mb3.5/5, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.10**	**272**	↓*i*PN		**Pn**	**21 04 27.9**	**+0.8**
YUK				*i* S		**Sn**	**21 04 41.4**	**-0.8**
YUK				pmax		pmax		
	comp=N,400nm,0.3s							
YUK				pmax		pmax		
	comp=E,380nm,0.3s							
YUK				pmax		pmax		
	comp=Z,1μm,0.3s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=E,2μm,0.5s							
YUK				smax				
	comp=N,3μm,0.8s							
YUK				smax				
	comp=E,3μm,0.8s							
KUR	**Kuril'sk**	**1.28**	**15**	*e*PN		**Pn**	**21 04 27.3**	**-2.1**
KUR				*e*S		**Sn**	**21 04 44.5**	**-1.8**
KUR				pmax		pmax		
	comp=N,150nm,0.7s							
KUR				pmax		pmax		
	comp=E,90nm,0.7s							
KUR				pmax		pmax		
	comp=Z,360nm,0.7s							
KUR				smax				
	comp=N,840nm,0.5s							
KUR				smax				
	comp=E,520nm,0.5s							
KUR				smax				
	comp=N,3μm,1.0s							
KUR				smax				
	comp=E,2μm,1.0s							
NEM2	**Nemuro 2**	**1.35**	**243**	P		**Pn**	**21 04 30.7**	**+0.4**
NEM2				*e*S		**Sn**	**21 04 46.7**	**-1.1**
JRA	**Rausu**	**1.64**	**269**	P		**Pn**	**21 04 35.0**	**+1.0**
JRA				*e*S		**Sn**	**21 04 54.6**	**+0.2**
JNK	**Nakash**	**1.98**	**259**	P		**Pn**	**21 04 39.0**	**+0.6**
JNK				*e*S		**Sn**	**21 05 01.5**	**-0.9**
JAK	**Akkeshi**	**2.20**	**244**	P		**Pn**	**21 04 41.8**	**+0.4**
JAK				*e*S		**Sn**	**21 05 06.0**	**-1.8**
JTKR	**Abashiri--Toko**	**2.51**	**271**	P		**Pn**	**21 04 46.5**	**+0.9**
JAR	**Ashorobuto**	**2.72**	**256**	P		**Pn**	**21 04 50.0**	**+1.6**
JAR				*e*S		**Sn**	**21 05 20.4**	**+0.1**
JOB	**Onbets**	**2.81**	**248**	P		**Pn**	**21 04 50.7**	**+1.1**
JOB				*e*S		**Sn**	**21 05 21.7**	**-0.8**
JMP	**Maruseppu**	**2.91**	**272**	P		**Pn**	**21 04 52.0**	**+1.0**
JCH	**Churui**	**3.25**	**246**	P		**Pn**	**21 04 56.1**	**+0.5**
JCH				*e*S		**Sn**	**21 05 31.4**	**-1.7**
JKK2	**Kamakawa 2**	**3.35**	**269**	P		**Pn**	**21 04 58.5**	**+1.5**
ASAJ	**Asahikawa**	**3.45**	**274**	P		**Pn**	**21 05 00.2**	**+1.8**
JSE	**Soyaes**	**3.57**	**287**	P		**Pn**	**21 05 00.9**	**+1.0**
JEM	**Erimo**	**3.68**	**239**	P		**Pn**	**21 05 03.7**	**+2.2**
JNBK	**Urakawa-nobuka**	**3.80**	**245**	P		**Pn**	**21 05 03.3**	**+0.2**
JNBK				*e*S		**Sn**	**21 05 44.3**	**-2.3**
JWK2	**Keihoku**	**4.13**	**291**	P		**Pn**	**21 05 09.9**	**+2.3**
MAT	**Matsushiro**	**10.22**	**226**	P		**Pn**	**21 06 30.2**	**-0.5**
MJAR	**Matsushiro Arr**	**10.22**	**226**	Pn		**Pn**	**21 06 29.6**	**-1.1**
	comp=E,0.4nm,0.3s,baz=28,slow=14,SNR=10							
SONM	**Songino Array**	**28.53**	**292**	P		**P**	**21 09 54.1**	**-0.9**
	comp=E,0.3nm,0.7s,mb3.0,baz=94,slow=8.0,SNR=3.5							
MKAR	**Makanchi Array**	**44.62**	**297**	P		**P**	**21 12 10.3**	**-1.0**
	comp=E,0.2nm,0.5s,mb3.1,baz=81,slow=7.5,SNR=4.6							
NOA	**NORSAR Array B**	**69.43**	**339**	P		**P**	**21 15 05.8**	**-0.3**
	comp=E,0.9nm,0.8s,mb3.7,baz=31,slow=6.3,SNR=4.5							
NOA	**NORSAR Array B**	**69.43**	**339**	P		**P**	**21 15 05.8**	**-0.3**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
HFS	**Hagfors**	**69.53**	**337**	P		**P**	**21 15 05.2**	**-1.6**
	comp=Z,2.8nm,1.1s,mb4.0,baz=28,slow=6.7,SNR=9.0							
HFS	**Hagfors**	**69.53**	**337**	P		**P**	**21 15 05.2**	**-1.5**
HFS				pmax		pmax		
	comp=Z,3.0nm,1.1s							
TXAR	**Lajitas Array**	**82.37**	**56**	P		**P**	**21 16 21.3**	**+0.9**
	comp=Z,0.5nm,0.5s,mb3.6,baz=299,slow=3.4,SNR=7.4							
TXAR	**Lajitas Array**	**82.37**	**56**	P		**P**	**21 16 21.3**	**+1.0**
TXAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							

IDC ***30*** *21:08:13.4±2.9, 2060S×7026W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/15, mbtmp3.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/23, Error ellipse: s-maj=119.6km s-min=39.4km az=108.0*
ISC 30 21:08:17.5±1.6, 204S±01×705W±01, h35km, n10, σ1.9s37/12, 1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PB01	**Plate Boundary**	**1.16**	**127**	*e*P		**Pn**	**21 08 36.9**	**-0.3**
PB01				*i* S		**Sn**	**21 08 50.1**	**-1.7**
PB01				AML		AML	21 08 56.0	
	comp=E,3μm,0.3s							
TOCH	**Tocopilla**	**1.76**	**172**	*e*P		**Pn**	**21 08 44.4**	**-1.0**
TOCH				*i* S		**Sn**	**21 09 04.7**	**-1.9**
TOCH				AML		AML	21 09 11.6	
	comp=E,1μm,0.5s							
PECH	**Pedro de Valdi**	**2.36**	**162**	*e*P		**Pn**	**21 08 53.4**	**-0.4**
PECH				*i* S		**Sn**	**21 09 25.2**	**+3.6**
PECH				AML		AML	21 09 35.9	
	comp=E,1μm,0.5s							
LVC	**Limon Verde**	**2.69**	**147**↑	*i*P		**Pn**	**21 08 59.9**	**+1.7**
LVC				*i* S		**Sn**	**21 09 35.9**	**+6.4**
LVC				AML		AML	21 09 37.6	
	comp=N,614nm,0.5s							
CEN1	**Los Morros**	**3.04**	**175**	*e*P		**Pn**	**21 09 04.0**	**+0.9**
CEN1				*i* S		**Sn**	**21 09 50.5**	**+12**
CEN1				AML		AML	21 10 02.1	
	comp=E,203nm,0.5s							
PLCA	**Paso Flores**	**20.32**	**180**	P		**P**	**21 12 48.4**	**-2.1**
	comp=E,2.0nm,1.0s,baz=32,slow=9.5,SNR=2.9							
BDFB	**Brasilia**	**21.86**	**81**	LR		LR	21 22 58.4	
	comp=E,44nm,20.2s,baz=102,slow=41							
TORD	**Torodi Ar. Bea**	**78.36**	**71**	P		**P**	**21 20 15.7**	**+0.9**
	comp=E,1.1nm,0.8s,baz=248,slow=5.4,SNR=12							
ZALV	**Zalesovo Beam**	**141.51**	**23**	PKP		PKPdf	21 27 47.7	+3.1
	comp=E,0.8nm,0.4s,baz=299,slow=3.7,SNR=3.6							
MKAR	**Makanchi Array**	**145.53**	**34**	PKPbc		PKPbc	21 27 52.8	+0.7
	comp=E,0.9nm,0.7s,baz=330,slow=4.6,SNR=5.7							

KRSC 30 21:20:52.8±0.4, 5392N×16157E, h5km±5km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MKZ	**Mys Kozlova**	**0.64**	**8**	*e*P		Pg	21 21 05.3	+0.1
MKZ				*e*S		Sg	21 21 13.9	+0.4
SPN	**Mys Shipunski**	**1.24**	**229**	*e*P		Pg	21 21 16.1	-0.4
SPN				*e*S		Sg	21 21 32.7	+0.2
KII	**Karymskiy**	**1.26**	**276**	*e*P		Pg	21 21 16.9	0.0
KII				*e*S		Sg	21 21 34.3	+1.1
NLC	**Nalytchevo**	**1.52**	**241**	*e*P		Pn	21 21 20.5	-0.2
NLC				*e*S		Sn	21 21 40.5	-0.3
TUMR	**Tumrok**	**1.60**	**329**	*e*P		Pn	21 21 22.5	+0.8
TUMR				*e*S		Sn	21 21 44.0	+1.4
AVH	**Avacha**	**1.81**	**250**	*e*P		Pn	21 21 25.9	+1.3
AVH				*e*S		Sn	21 21 50.1	+2.2
PET	**Petropavlovsk**	**1.96**	**244**	S		Sn	21 21 53.1	+1.5
KMNR	**Kamenistaya**	**2.00**	**338**	*e*P		Pn	21 21 28.4	+1.3
KMNR				*e*S		Sn	21 21 53.9	+1.5
**

ARMA Armidale 28.12 238 ⇓*i*P **P** 21 36 12.4 +1.5
CTA Charters Tower 31.14 260 ⇓*i*P **P** 21 36 37.8 +0.7
comp=Z,50nm,0.8s,mb5.2
CTA Charters Tower 31.14 260 ⇓*i*P **P** 21 36 37.8 +0.7
CTA pmax pmax
comp=Z,50nm,0.8s
CTAO Charters Tower 31.14 260 *e*P **P** 21 36 37.7 +0.6
comp=Z,72nm,0.9s,mb5.3
CTAO Charters Tower 31.14 260 *e*P **P** 21 36 37.7 +0.6
CTAO pmax pmax
comp=Z,72nm,0.9s,mb5.3
PMOR Pomariorio Ree 31.81 90 *e*P **P** 21 36 41.2 -1.6
comp=Z,37nm,0.9s,mb5.0
PMG Port Moresby 31.99 280 *e*P **P** 21 36 45.1 +0.7
PMG Port Moresby 31.99 280 *d i*P **P** 21 36 46.0 +1.6
PMG pmax pmax
comp=Z,157nm,0.9s
VAH Vaihoa 32.03 91 *e*P **P** 21 36 42.8 -1.9
comp=Z,32nm,0.9s,mb5.0
COEN Coen 34.68 271 *e*P **P** 21 37 08.3 +1.4
comp=Z,133nm,0.7s,mb5.7
STKA Stephens Creek 36.76 240 ⇓*i*P **P** 21 37 25.0 +1.1
comp=Z,13nm,0.8s,mb4.5
STKA Stephens Creek 36.76 240 P **P** 21 37 25.1 +1.2
comp=Z,17nm,0.8s,mb4.7,baz=87,slow=8.3,SNR=25
STKA S **S** 21 42 24.0 -3.4
comp=Z,3.0nm,0.8s,baz=124,slow=18,SNR=4.0
WB2 Warramunga Arr 42.33 259 ⇓*i*P **P** 21 38 08.1 -0.6
WB2 eS **S** 21 43 43.5 -5.4
WRAB Tennant Creek 42.33 259 *e*P **P** 21 38 08.2 -0.5
comp=Z,19nm,0.9s,mb4.6
WRAB Tennant Creek 42.33 259 *e*P **P** 21 38 08.2 -0.5
WRAB pmax pmax
comp=Z,19nm,0.9s,mb4.6
ASAR Alice Springs 42.59 254 P **P** 21 38 10.8 +0.1
comp=Z,75nm,0.5s,mb5.5,baz=86,slow=8.5,SNR=1685
ASAR PP PP 21 39 53.6 -9.3
comp=Z,7.3nm,0.9s,baz=84,slow=9.1,SNR=6.3
ASAR ScP ScP 21 42 47.1 +1.3
comp=Z,3.3nm,1.0s,baz=93,slow=4.0,SNR=7.9
ASAR S **S** 21 43 50.6 -2.0
comp=Z,7.5nm,0.7s,baz=86,slow=15,SNR=28
ASAR Alice Springs 42.59 254 P **P** 21 38 10.8 +0.1
ASAR pP 21 39 53.6 +1.3
ASAR S **S** 21 43 50.6 -2.0
ASAR pmax pmax
comp=Z,75nm,0.5s
ASAR pmax pmax
comp=Z,7.0nm,0.9s
ASAR pmax pmax
comp=N,3.0nm,1.0s
ASAR smax
comp=N,8.0nm,0.7s
KAKA Kakadu 45.17 269 ⇓*i*P Px 21 38 14.6
comp=N,52nm,0.6s
MIDW Midway 45.50 4 *e*P **P** 21 38 32.6 -0.4
comp=N,60nm,0.6s,mb5.3
GUMO Guam 45.70 310 P **P** 21 38 34.9 +0.2
comp=N,110nm,0.6s,mb5.5,baz=56,slow=20,SNR=8.3
GUMO Guam 45.70 310 *e*P **P** 21 38 34.4 -0.3
comp=N,106nm,0.8s,mb5.4
GUMO Guam 45.70 310 P **P** 21 38 34.9 +0.2
GUMO pmax pmax
comp=Z,110nm,0.6s,mb5.6
FORT Forrest 48.03 244 *e*P **P** 21 38 51.3 -0.8
comp=Z,42nm,0.6s,mb5.2
BATI Baumata 54.11 270 P **P** 21 39 38.1 +1.8
comp=Z,38nm,0.6s,mb4.9,baz=153,slow=2.3,SNR=15
MBWA Marble Bar 55.84 256 *e*P **P** 21 39 48.2 0.0
comp=Z,20nm,0.7s,mb4.5
KLBR Kellerberrin 56.88 243 *e*P **P** 21 39 54.1 -1.1
comp=Z,37nm,0.9s,mb4.6
NWAO Narrogin (SRO) 57.30 242 *e*P **P** 21 39 58.0 0.0
comp=Z,104nm,1.8s,mb4.8
NWAO Narrogin (SRO) 57.30 242 *e*P **P** 21 39 58.1 +0.1
NWAO pmax pmax
comp=Z,104nm,1.8s
MUN Mundaring 58.19 243 *e*P **P** 21 40 04.2 +0.2
KAPI Kappang 59.24 275 *e*P **P** 21 40 11.1 -0.3
VNDA Vanda 60.73 184 P **P** 21 40 20.4 +0.3
comp=Z,1.2nm,1.1s,baz=29,slow=5.2,SNR=2.7
VNDA Vanda 60.73 184 P **P** 21 40 20.4 +0.3
VNDA pmax pmax
comp=Z,1.0nm,1.1s
MJAR Matsushiro Arr 66.10 325 P **P** 21 40 54.8 -0.2
comp=Z,6.4nm,0.6s,mb4.2,baz=154,slow=6.0,SNR=22
MJAR Matsushiro Arr 66.10 325 P **P** 21 40 54.8 -0.2
MJAR pmax pmax
comp=Z,6.0nm,0.6s
MAJO Matsushiro 66.10 325 *e*P **P** 21 40 54.4 -0.5
comp=Z,9.6nm,0.7s,mb4.3
MAJO Matsushiro 66.10 325 *e*P **P** 21 40 54.4 -0.6
MAJO pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
MAT Matsushiro 66.10 325 P **P** 21 40 55.0 0.0
KKM Kota Kinabalu 66.28 285 *e*P **P** 21 40 56.4 -0.3
KSM Kuching 70.22 278 *e*P **P** 21 41 20.0 -0.5
PETK Petropavlovsk- 72.63 347 P **P** 21 41 33.6 0.0
comp=Z,3.9nm,0.8s,mb4.0,baz=126,slow=4.4,SNR=5.3
PETK Petropavlovsk- 72.63 347 P **P** 21 41 33.6 +0.1
PETK pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
KSRS Korea Array 72.75 320 P **P** 21 41 35.8 +1.2
comp=Z,1.9nm,1.0s,mb3.6,baz=205,slow=20,SNR=4.4
KSRS Korea Array 72.75 320 P **P** 21 41 35.8 +1.2
KSRS pmax pmax
comp=Z,2.0nm,1.0s,mb3.6
NJ2 Nanjing 75.77 311 *e*P **P** 21 41 52.5 +0.7
NJ2 AMB AMB
comp=Z,40nm,1.1s,mb4.8
HABR Khabarovsk 76.42 332 *e*P **P** 21 41 59.3 +4.4
HABR *e**PP pP 21 43 55.5 -0.1
HABR *e* 21 51 13.5
HABR eSS SS 21 56 07.7 +2.1
HABR eSSS 21 59 39.1
MDJ Mudanjiang 76.42 326 P **P** 21 41 56.0 +1.0
MDJ AMB AMB
comp=Z,6.0nm,0.9s,mb4.0
MDJ AMB AMB
comp=Z,107nm,6.8s
BSC Santa Cruz Isl 77.58 48 ⇓P **P** 21 42 01.3 -0.3
baz=78
PKM Peak Mountain 77.91 47 ⇓P **P** 21 42 03.3 -0.1
baz=78
U04C Hernandez Rese 78.01 46 ⇑P **P** 21 42 04.2 +0.3
baz=78
KHMM Horse Mountain 78.58 41 *e*P **P** 21 42 06.7 -0.1
ARVC Arvin 78.73 48 P **P** 21 42 06.7 -1.0
baz=79
MWC Mount Wilson 78.82 49 *e*P **P** 21 42 07.9 -0.3
comp=Z,35nm,0.6s,mb4.9
MWC Mount Wilson 78.82 49 *e*P **P** 21 42 07.9 -0.3
MWC pmax pmax
comp=Z,35nm,0.6s,mb4.9
S05C Merced 78.84 45 ⇓P **P** 21 42 08.7 +0.4
baz=79
VES Vestal, Richgr 78.91 47 ⇓P **P** 21 42 08.0 -0.7
baz=79,SNR=5.8
T06C Millerton Lake 79.09 46 ⇑P **P** 21 42 09.4 -0.2
baz=79
BFSC Mount Baldy St 79.12 49 ⇓P **P** 21 42 09.1 -0.7
baz=79,SNR=7.4
MURC Murrieta 79.13 50 ⇑P **P** 21 42 09.1 -0.8
baz=79
OHCM Honcut 79.15 43 *e*P **P** 21 42 09.6 -0.2
WDC Whiskeytown Da 79.16 41 *e*P **P** 21 42 09.6 -0.3
comp=Z,25nm,1.2s,mb4.4
WDC Whiskeytown Da 79.16 41 *e*P **P** 21 42 09.6 -0.3
WDC pmax pmax
comp=Z,25nm,1.2s,mb4.4
CMB Columbia Colle 79.17 44 *e*P **P** 21 42 09.6 -0.4
comp=Z,32nm,0.9s,mb4.7
CMB Columbia Colle 79.17 44 *e*P **P** 21 42 09.6 -0.4
CMB pmax pmax
comp=Z,32nm,0.9s,mb4.7
EDW2 Edwards Air Fo 79.20 48 ⇓P **P** 21 42 09.9 -0.4
baz=79,SNR=19
LAVA Lava Cap Winer 79.32 44 ⇑P **P** 21 42 10.5 -0.3
baz=79
MONP Monument Peak 79.36 51 ⇑P **P** 21 42 11.1 0.0
baz=80,SNR=6.6
DVTC Desert V Tower 79.49 51 ⇓P **P** 21 42 11.6 -0.2
baz=80
PFO Pinyon Flat Ob 79.68 50 ⇑P **P** 21 42 12.3 -0.5
baz=80
YBH Yreka Blue Hor 79.70 40 *e*P **P** 21 42 13.0 +0.3
comp=Z,23nm,0.9s,mb4.5
YBH Yreka Blue Hor 79.70 40 *e*P **P** 21 42 13.0 +0.3
YBH pmax pmax
comp=Z,23nm,0.9s
LRMC Laurel Mountai 79.71 48 ⇑P **P** 21 42 12.7 -0.2
baz=80
SWSC Sam W. Stewart 79.85 51 ⇑P **P** 21 42 13.3 -0.3
baz=80
CWC Cottonwood Cre 79.92 47 ⇑P **P** 21 42 13.7 -0.3
baz=80,SNR=5.3
HUMO Hull Mountain 80.05 39 *e*P **P** 21 42 14.8 +0.3
comp=Z,46nm,1.2s,mb4.7
MTUM Tungsten Hills 80.05 46 *e*P **P** 21 42 14.9 +0.3
R06C Coleville 80.05 44 ⇓P **P** 21 42 15.0 +0.4
baz=80
WAKR Walker 80.05 44 *e*P **P** 21 42 14.9 +0.3
LBCM Butte Creek Ri 80.06 42 P **P** 21 42 14.4 -0.1
TIN Tinemaha 80.13 46 ⇑P **P** 21 42 15.0 0.0
baz=80,SNR=5.2
MPMC Manual Prospec 80.14 47 ⇓P **P** 21 42 15.0 -0.1
baz=80,SNR=20
LTIM Timbered Crate 80.15 41 P **P** 21 42 15.1 0.0
BEKR Beckwourth 80.17 43 ⇓P **P** 21 42 15.0 -0.1
baz=80,SNR=24
BELC Belle Mtn. 80.20 50 ⇑P **P** 21 42 15.3 -0.2
baz=80,SNR=7.7
GSC Goldstone 80.25 48 ⇓P **P** 21 42 13.0 -2.8
baz=80
WCN Washoe City 80.26 44 ⇑P **P** 21 42 15.8 +0.1
baz=80,SNR=9.0
I02A Mapleton 80.33 38 ⇑P **P** 21 42 16.3 +0.4
baz=80
HEC Hector,Ludlow 80.36 49 ⇑P **P** 21 42 15.8 -0.5
baz=80,SNR=16
BC3 Big Chuckw Mtn 80.44 50 ⇑P **P** 21 42 16.8 0.0
baz=81,SNR=5.9
GLA Glamis 80.62 51 *e*P **P** 21 42 18.3 +0.6
comp=Z,44nm,1.3s,mb4.7
GLA Glamis 80.62 51 ⇓P **P** 21 42 17.6 -0.1
baz=81
GLA Glamis 80.62 51 *e*P **P** 21 42 18.3 +0.6
GLA pmax pmax
comp=Z,44nm,1.3s,mb4.7
GRAC Grapevine Rang 80.69 47 ⇑P **P** 21 42 18.0 0.0
baz=81,SNR=16
PAHR Pah Rah Range 80.72 43 *e*P **P** 21 42 18.1 +0.1
comp=Z,46nm,1.1s,mb4.8
NVAR Mina Array Bea 80.77 45 P **P** 21 42 18.4 0.0
comp=Z,17nm,0.6s,mb4.7,baz=226,slow=8.3,SNR=81
FURC Furnace Creek, 80.78 47 ⇓P **P** 21 42 18.2 -0.2
baz=81
GMRC Granite Mounta 80.82 49 ⇓P **P** 21 42 18.3 -0.3
baz=81,SNR=14
IRM Iron Mountain 80.90 50 ⇓P **P** 21 42 19.1 0.0
baz=81,SNR=16
SHOC Shoshone 80.92 48 ⇑P **P** 21 42 19.0 -0.2
baz=81
TUQ Turquoise Moun 80.94 49 ⇑P **P** 21 42 18.9 -0.4
baz=81,SNR=5.9
H03A Soap Creek Ran 81.03 38 ⇓P **P** 21 42 19.7 +0.2
baz=81
Y12C Blythe 81.17 51 ⇑P **P** 21 42 20.8 +0.3
baz=81
113A Mohawk Valley, 81.28 52 ⇓P **P** 21 42 21.3 +0.2
baz=81
MOD Modoc 81.30 41 *e*P **P** 21 42 20.9 -0.1
comp=Z,36nm,0.8s,mb4.8
TPH Tonopah 81.33 46 *e*P **P** 21 42 21.3 +0.1
comp=Z,39nm,1.1s,mb4.8
TPH Tonopah 81.33 46 *e*P **P** 21 42 21.3 +0.1
TPH pmax pmax
comp=Z,39nm,1.1s,mb4.8
LDFC Landfair 81.36 49 *e*P **P** 21 42 21.7 +0.3
NEE2 Needles Airpor 81.57 50 ⇓P **P** 21 42 22.2 -0.4
baz=82
214A Organ Pipe Nat 81.64 53 ⇓P **P** 21 42 23.3 +0.3
baz=82
W12A Cal Nev Ari 81.64 49 ⇑P **P** 21 42 23.3 +0.4
baz=82
H04A Detroit Lake 81.69 38 ⇑P **P** 21 42 22.5 -0.4
baz=82
PDMCI Parker Dam,Lak 81.70 50 ⇑P **P** 21 42 22.9 -0.3
baz=82,SNR=11
M07A Soldier Meadow 81.74 42 ⇓P **P** 21 42 23.6 +0.4
baz=82
BJI Beijing 81.75 316 P **P** 21 42 24.0 +0.7
BJI S S 21 51 48.3 -0.9
BJI AMB AMB
comp=Z,10.0nm,0.4s,mb4.7
BJI AMB AMB
comp=Z,191nm,5.6s
U11A Corn Creek 81.80 48 ⇓P **P** 21 42 24.0 +0.3
baz=82
G04A Mulino 81.81 38 ⇓P **P** 21 42 23.1 -0.4
baz=82
E03A Lebam 81.96 36 ⇑P **P** 21 42 24.4 +0.2
baz=82
SHPR Sheep Range 82.00 48 *e*P **P** 21 42 24.8 +0.1
ENH Enshi 82.00 305 *e*P **P** 21 42 21.6 -3.3
comp=Z,0.6nm,0.5s
X13A Yucca 82.06 50 ⇑P **P** 21 42 25.1 0.0
baz=82
J06A Christmas Vall 82.12 40 ⇑P **P** 21 42 24.9 -0.2
baz=82
RC01 Rabbit Creek A 82.15 15 *e*P **P** 21 42 23.9 -0.9
comp=Z,84nm,1.3s,mb5.1
Z14A Wintersburg 82.16 52 ⇓P **P** 21 42 25.8 +0.2
baz=82
D03A Wishkah Elem. 82.18 35 ⇑P **P** 21 42 25.7 +0.4
baz=82
H05A Madras 82.23 38 ⇓P **P** 21 42 25.6 0.0
baz=82
F04A Amboy 82.26 37 ⇑P **P** 21 42 25.5 -0.2
baz=82
M08A Happy Creek Ra 82.28 42 ⇓P **P** 21 42 26.5 +0.5
baz=82
NLWA Neilton Lookou 82.29 35 *e*P **P** 21 42 25.9 0.0
comp=Z,28nm,0.9s,mb4.8
NLWA Neilton Lookou 82.29 35 ⇓P **P** 21 42 25.7 -0.1
baz=82
OOW Octopus West 82.32 35 P **P** 21 42 26.1 +0.1
HOOD Mount Hood Mea 82.36 38 *e*P **P** 21 42 25.9 -0.3
comp=Z,60nm,1.3s,mb5.0
U12A Valley of Fire 82.41 48 ⇓P **P** 21 42 26.9 +0.2
baz=82
115A Sonoran Desert 82.41 52 ⇑P **P** 21 42 27.0 +0.2
baz=82
T12A Moapa 82.42 48 ⇑P **P** 21 42 26.8 0.0
baz=82
I06A Prineville 82.46 39 ⇑P **P** 21 42 27.2 +0.4
baz=83
G05A Wamic 82.51 38 ⇑P **P** 21 42 27.0 0.0
baz=83
BMN Battle Mountai 82.51 44 *e*P **P** 21 42 27.3 +0.1
comp=Z,43nm,1.0s,mb4.9
BMN Battle Mountai 82.51 44 *e*P **P** 21 42 27.3 +0.1
BMN pmax pmax
comp=Z,43nm,1.0s,mb4.9
V13A Grand Canyon W 82.53 49 ⇑P **P** 21 42 27.6 +0.3
baz=83
TDL Tradedollar La 82.61 37 P **P** 21 42 27.6 +0.1
WVOR Wild Horse Val 82.63 41 P **P** 21 42 27.7 0.0
216A Three Points, 82.69 53 ⇑P **P** 21 42 29.1 +0.8
baz=83
GYA Guiyang 82.70 301 P **P** 21 42 28.5 +0.1
GYA AP pP 21 44 35.0 +3.3
GYA XP sP 21 45 39.5 +9.3
GYA SKS 21 51 50.8
GYA S S 21 51 59.3 +0.1
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
GYA AMB AMB
comp=Z,80nm,5.1s
X14A Yava 82.70 51 ⇓P **P** 21 42 28.8 +0.6
baz=83
Z15A Gila River Ind 82.72 52 ⇑P **P** 21 42 28.8 +0.5
baz=83
S12A Delamar Landin 82.74 47 ⇓P **P** 21 42 29.3 +0.9
baz=83
116A Eloy 82.75 53 ⇑P **P** 21 42 29.0 +0.4
baz=83
SEY Seymchan 82.78 348 ⇑*i*P **P** 21 42 27.5 -0.5
U13A Pakoon Wash 82.81 48 ⇑P **P** 21 42 29.5 +0.8
baz=83
Y15A Casa Rosa Ranc 82.88 51 ⇓P **P** 21 42 29.8 +0.6
baz=83
W14A Seligman 82.89 50 ⇑P **P** 21 42 30.1 +0.9
baz=83
I07A Izee 82.96 40 ⇑P **P** 21 42 29.7 +0.4
baz=83
C04A Brinnon 82.97 35 ⇑P **P** 21 42 29.5 +0.3
baz=83
E05A Randle 82.99 37 ⇑P **P** 21 42 29.3 -0.1
baz=83
V14A Boquillas Ranc 83.07 49 ⇓P **P** 21 42 30.6 +0.5
baz=83
LON Longmire 83.07 36 *e*P **P** 21 42 29.4 -0.4
217A Green Valley 83.09 54 ⇓P **P** 21 42 30.8 +0.5
baz=83
F06A Goldendale 83.11 38 ⇓P **P** 21 42 30.4 +0.3
baz=83
N10A Dunphy 83.13 44 ⇓P **P** 21 42 30.8 +0.6
baz=83
T13A Saint George 83.13 48 ⇑P **P** 21 42 31.0 +0.6
baz=83
X15A Humboldt 83.19 51 ⇓P **P** 21 42 31.2 +0.5
baz=83
H07A Lands Inn, Kim 83.20 39 ⇑P **P** 21 42 30.5 +0.1
baz=83
R12A Pony Springs, 83.25 47 ⇑P **P** 21 42 31.2 +0.3
baz=83
Z16A Peralta Trail, 83.29 52 ⇓P **P** 21 42 31.4 +0.2
baz=83
TUC Tucson 83.34 53 *e*P **P** 21 42 31.5 0.0
comp=Z,15nm,0.9s,mb4.5
TUC Tucson 83.34 53 *e*P **P** 21 42 31.5 0.0
TUC pmax pmax
comp=Z,15nm,0.9s,mb4.5
O11A Cowboy Ranch, 83.40 45 ⇑P **P** 21 42 32.2 +0.6
baz=84
Q12A Willow Creek R 83.44 46 ⇑P **P** 21 42 32.1 +0.3
baz=84
W15A Williams 83.48 50 ⇑P **P** 21 42 32.7 +0.6
baz=84
117A Oracle 83.48 53 ⇓P **P** 21 42 32.5 +0.3
baz=84
MAW Mawson 83.48 200 P **P** 21 42 32.3 +0.7
comp=Z,1.3nm,0.5s,mb3.7,baz=144,slow=7.9,SNR=4.5
MAW Mawson 83.48 200 *e*P **P** 21 42 31.9 +0.3
comp=Z,2.2nm,0.9s,mb3.7
MAW Mawson 83.48 200 P **P** 21 42 32.3 +0.7
MAW pmax pmax
comp=Z,1.0nm,0.5s
Y16A Circle Bar Ran 83.49 52 ⇓P **P** 21 42 32.9 +0.7
baz=84
318A Bisbee 83.58 54 ⇑P **P** 21 42 33.0 +0.3
baz=84
P12A McGill 83.59 45 ⇓P **P** 21 42 32.9 +0.3
baz=84
R13A O'Grain Ranch, 83.62 47 ⇓P **P** 21 42 33.4 +0.7
baz=84
F07A Phinny Hill Vi 83.68 38 ⇓P **P** 21 42 32.9 +0.1
baz=84
T14A Hurricane 83.73 48 ⇑P **P** 21 42 33.7 +0.4
baz=84
X16A Lo Mia Camp, P 83.75 51 ⇑P **P** 21 42 34.3 +0.8
baz=84
218A Dragoon 83.76 54 ⇓P **P** 21 42 34.4 +0.8
baz=84
B05A Bryant 83.77 35 ⇓P **P** 21 42 33.0 -0.3
baz=84
V15A Kaibab Nationa 83.83 50 ⇓P **P** 21 42 34.4 +0.6
baz=84
D06A Cle Elum 83.87 36 ⇓P **P** 21 42 33.7 0.0
baz=84
Y17A Roosevelt 83.89 52 ⇑P **P** 21 42 34.3 +0.2
baz=84
PNL Peninsula 83.91 20 *e*P **P** 21 42 32.9 -0.7
comp=Z,15nm,0.7s,mb4.6
G08A Pilot Rock 83.93 39 ⇓P **P** 21 42 34.4 +0.3
baz=84
ELK Elko 83.98 44 *e*P **P** 21 42 34.4 -0.1
W16A Flagstaff 83.98 51 ⇓P **P** 21 42 34.9 +0.3
baz=84
KTH Kantishna Hill 84.03 13 *e*P **P** 21 42 32.4 -1.7
comp=Z,14nm,0.7s,mb4.6
XAN Xi'an 84.05 308 P **P** 21 42 36.3 +1.3
XAN AMB AMB
comp=Z,8.0nm,0.9s,mb4.2
XAN AMB AMB
comp=Z,91nm,8.5s
TRF Thorofare Moun 84.08 13 *e*P **P** 21 42 33.1 -1.3
comp=Z,32nm,0.8s,mb4.9
118A Homack Ranch, 84.10 53 ⇓P **P** 21 42 35.8 +0.5
baz=84
319A Douglas 84.11 55 ⇓P **P** 21 42 36.0 +0.7
baz=84
N12A Clover Valley, 84.16 44 ⇓P **P** 21 42 35.9 +0.6
baz=84
MDW Midway 84.17 37 P **P** 21 42 35.0 -0.2
T15A Red Dirt Ranch 84.21 48 ⇓P **P** 21 42 36.3 +0.6
baz=84
WUAZ Wupatki 84.28 50 *e*P **P** 21 42 36.6 +0.6
comp=Z,20nm,0.9s,mb4.6
WUAZ Wupatki 84.28 50 ⇑P **P** 21 42 36.1 0.0
baz=84
D07A Quincy 84.36 37 ⇑P **P** 21 42 36.2 +0.1
baz=84
H09A Durkee 84.39 40 ⇓P **P** 21 42 36.5 +0.1
baz=84
Q14A Sevier Lake (B 84.48 46 ⇓P **P** 21 42 37.5 +0.5
baz=85
S15A Panguitch 84.52 48 ⇑P **P** 21 42 38.2 +1.0
baz=85
C07A Waterville 84.58 36 ⇓P **P** 21 42 36.9 -0.3
baz=85
MCK McKinley 84.62 14 *e*P **P** 21 42 35.7 -1.3
comp=Z,20nm,1.1s,mb4.7
MCK McKinley 84.62 14 *e*P **P** 21 42 35.7 -1.3
MCK pmax pmax
comp=Z,20nm,1.1s,mb4.7
G09A Cove 84.64 39 ⇓P **P** 21 42 37.7 +0.1
baz=85
WTV Waterville 84.65 36 P **P** 21 42 36.8 -0.7
119A Ashpeak Ranch, 84.67 53 ⇓P **P** 21 42 38.2 +0.2
baz=85
EPH Ephrata 84.67 37 P **P** 21 42 37.0 -0.6
BMO Blue Mountains 84.70 40 *e*P **P** 21 42 37.2 -0.7
comp=Z,12nm,1.0s,mb4.5
BMO *e*PP PP 21 46 02.4 -2.7
F09A S2 Ranch, Elgi 84.78 39 ⇓P **P** 21 42 38.3 0.0
baz=85
T16A Glen Canyon Da 84.83 49 ⇑P **P** 21 42 39.0 +0.3
baz=85
D08A Wollman Farm, 84.89 37 ⇓P **P** 21 42 38.7 -0.1
baz=85
MFID Camas Ranch 84.90 42 ⇑P **P** 21 42 39.0 +0.1
baz=85
X18A Snowflake 84.91 52 ⇑P **P** 21 42 39.5 +0.4
baz=85
B07A Winthrop 84.97 36 ⇓P **P** 21 42 38.8 -0.3
baz=85
MSU Marysvale 85.03 47 *e*P **P** 21 42 40.2 +0.6
G10A Bishop Farm, J 85.04 39 ⇓P **P** 21 42 39.4 -0.1
baz=85
K12A Draper Farm, C 85.11 43 ⇑P **P** 21 42 39.9 -0.1
baz=85
A07A Ashnola River, 85.15 35 ⇓P **P** 21 42 40.1 +0.2
baz=85
OD2 Odessa Site #2 85.19 37 P **P** 21 42 39.5 -0.7
MENT Mentasta 85.24 16 *e*P **P** 21 42 39.2 -0.8
D09A Jones Farm, Ri 85.25 38 ⇑P **P** 21 42 40.7 +0.3
baz=85
F10A Beach Ranch, E 85.33 39 ⇓P **P** 21 42 40.7 -0.1
baz=85
T17A Navajo Res., N 85.34 49 ⇓P **P** 21 42 41.8 +0.7
baz=86
DUG Dugway 85.35 45 *e*P **P** 21 42 41.0 -0.1
comp=Z,38nm,2.1s,mb4.7
DUG Dugway 85.35 45 ⇓P **P** 21 42 40.7 -0.5
baz=86
DUG Dugway 85.35 45 *e*P **P** 21 42 41.0 -0.1
DUG pmax pmax
comp=Z,38nm,2.1s,mb4.7
B08A Colville Reser 85.36 36 ⇓P **P** 21 42 40.4 -0.6
baz=86
R16A Teasdale 85.42 48 ⇑P **P** 21 42 41.6 +0.1
baz=86
H11A Donnelly 85.42 40 ⇑P **P** 21 42 41.7 +0.3
baz=86
KMI Kunming 85.46 298 P **P** 21 42 40.5 -1.5
KMI AMB AMB
comp=Z,8.0nm,1.4s,mb4.2
M14A Sheep Mountain 85.60 44 ⇑P **P** 21 42 42.7 +0.4
baz=86

S17A **Black Ridge (B** 85.62 48 ⇓P P 21 42 42.6 +0.2
baz=86
E10A **Myers Farm, Un** 85.66 38 ⇑P P 21 42 43.3 +0.9
baz=86
C09A **Chrisman Ranch** 85.66 37 ⇓P P 21 42 42.1 -0.4
baz=86
A08A **Turner Farm, O** 85.71 36 ⇑P P 21 42 42.4 -0.2
baz=86
BILL **Bilibino** 85.73 355 *e*P P 21 42 41.8 -0.5
comp=Z,16nm,0.8s,mb4.7
BILL **Bilibino** 85.73 355 *e*P P 21 42 40.8 -1.5
BILL pmax pmax
comp=Z,32nm,1.2s,mb4.8
COLA **College** 85.85 14 *e*P P 21 42 41.1 -1.8
comp=Z,11nm,0.7s,mb4.6
COLA **College** 85.85 14 *e*P P 21 42 41.1 -1.8
COLA pmax pmax
comp=Z,11nm,0.7s,mb4.6
HLID **Hailey** 85.87 42 *e*P P 21 42 43.7 +0.2
comp=Z,17nm,0.8s,mb4.7
HLID *e*PP PP 21 46 12.8 -1.7
HLID **Hailey** 85.87 42 ⇑P P 21 42 43.6 +0.1
baz=86
Q16A **Castle Valley** 85.91 47 ⇓P P 21 42 44.4 +0.6
baz=86
R17A **Hanksville Air** 86.02 48 ⇑P P 21 42 44.4 +0.1
baz=86
G12A **Big Creek, Yel** 86.06 40 ⇑P P 21 42 44.7 +0.3
baz=86
T18A **Mexican Hat** 86.07 49 ⇑P P 21 42 44.9 +0.3
baz=86
MPU **Maple Canyon** 86.08 46 *e*P P 21 42 44.5 -0.1
comp=Z,7.2nm,0.7s,mb4.4
HVU **Hansel Valley** 86.11 44 *e*P P 21 42 44.5 -0.2
comp=Z,23nm,0.7s,mb4.9
HVU **Hansel Valley** 86.11 44 *e*P P 21 42 44.5 -0.2
HVU pmax pmax
comp=Z,23nm,0.7s,mb4.9
SPUT **South Promonto** 86.11 45 *e*P P 21 42 44.8 0.0
M15A **Larsen Ranch,** 86.18 44 ⇑P P 21 42 44.9 -0.1
baz=86
K14A **Jones Ranch, D** 86.19 43 ⇓P P 21 42 45.6 +0.5
baz=86
J14A **Carey** 86.33 42 ⇑P P 21 42 46.6 +0.9
baz=86
DLBC **Dease Lake** 86.36 24 *e*P P 21 42 45.3 -0.1
F12A **Elk City** 86.41 40 ⇓P P 21 42 45.7 -0.3
baz=86
CMAR **Chiang Mai Arr** 86.44 290 P P 21 42 48.1 +1.3
comp=Z,3.1nm,0.9s,mb3.9,baz=116,slow=3.0,SNR=15
CMAR PKKPbc PKKPbc 22 00 39.0 -0.5
comp=Z,0.6nm,0.5s,baz=286,slow=5.2,SNR=4.2
CMAR **Chiang Mai Arr** 86.44 290 P P 21 42 48.1 +1.3
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.5s
SRU **San Rafael** 86.45 47 *e*P P 21 42 46.3 -0.1
comp=Z,12nm,0.9s,mb4.5
SRU **San Rafael** 86.45 47 ⇑P P 21 42 46.1 -0.3
baz=87
SRU **San Rafael** 86.45 47 *e*P P 21 42 46.3 -0.1
SRU pmax pmax
comp=Z,12nm,0.9s,mb4.5
JLU **Jordanelle** 86.47 46 *e*P P 21 42 46.7 +0.3
L15A **Malad City** 86.47 44 ⇓P P 21 42 46.6 +0.2
baz=87
E12A **Beaver Dam Sad** 86.54 39 ⇓P P 21 42 46.1 -0.5
baz=87
T19A **Beclabito** 86.56 50 ⇑P P 21 42 47.7 +0.7
baz=87
NEW **Newport** 86.56 37 *e*P P 21 42 46.2 -0.5
comp=Z,22nm,1.3s,mb4.7
NEW **Newport** 86.56 37 *e*P P 21 42 46.2 -0.5
NEW pmax pmax
comp=Z,22nm,1.3s
CHTO **Chiang Mai** 86.56 291 *e*P P 21 42 47.1 -0.3
comp=Z,17nm,1.9s,mb4.5
CHTO **Chiang Mai** 86.56 291 *e*P P 21 42 47.1 -0.3
CHTO pmax pmax
comp=Z,17nm,1.9s,mb4.5
R18A **Canyonlands Na** 86.59 48 ⇑P P 21 42 47.2 +0.2
baz=87
N16A **Rees Ranch, Co** 86.60 45 ⇓P P 21 42 47.5 +0.5
baz=87
I14A **Mackay** 86.66 42 ⇓P P 21 42 48.0 +0.8
baz=87
A10A **Northport** 86.69 36 ⇓P P 21 42 47.1 -0.1
baz=87
Q18A **Rafter H Ranch** 86.72 47 ⇓P P 21 42 47.7 0.0
baz=87
O17A **Robinson Place** 86.78 46 ⇓P P 21 42 48.9 +1.1
baz=87
CD2 **Chengdu** 86.78 304 *e*P P 21 42 47.5 -0.6
CD2 AP pP 21 44 57.3 +4.3
CD2 XP sP 21 45 56.3 +5.2
CD2 PP PP 21 46 23.8 +1.9
CD2 SKS 21 52 16.5
CD2 S S 21 52 34.8 -3.5
CD2 XS sS 21 56 23.8 +3.1
CD2 SS SS 21 58 39.5 +1.1
comp=Z,10.0nm,0.8s,mb4.6
CD2 AMB AMB
comp=Z,30nm,5.8s
HWUT **Hardware Ranch** 86.83 45 *e*P P 21 42 47.7 -0.4
comp=Z,15nm,0.8s,mb4.8
HWUT *e*PP PP 21 46 20.0 -2.2
S19A **Harvey Farm, M** 86.86 49 ⇓P P 21 42 48.8 +0.5
baz=87
P18A **Preston Nutter** 86.87 47 ⇑P P 21 42 48.9 +0.6
baz=87
R19A **Curley Farm, L** 87.00 48 ⇑P P 21 42 49.5 +0.5
baz=87
LENM **Lemitar** 87.01 53 *e*P P 21 42 49.5 +0.3
N17A **Moffit Pass** 87.04 46 ⇑P P 21 42 49.3 +0.2
baz=87
B11A **Sandpoint** 87.08 37 ⇓P P 21 42 49.0 -0.1
baz=87
MVCO **Mesa Verde** 87.10 50 ⇑P P 21 42 49.5 0.0
baz=87
PV10 **Paradox Valley** 87.19 48 *e*P P 21 42 49.7 -0.2
C12B **Naegeli Ranch,** 87.24 38 ⇓P P 21 42 49.8 0.0
baz=87
G14A **Jackson** 87.27 41 ⇑P P 21 42 50.4 +0.3
baz=87
DAWY **Dawson** 87.32 17 *e*P P 21 42 49.0 -0.8
LPM **Los Pinos Moun** 87.33 53 *e*P P 21 42 50.4 -0.2
K16A **Soda Springs** 87.37 44 ⇑P P 21 42 51.1 +0.5
baz=88
M17A **Scullys Gap (B** 87.38 45 ⇑P P 21 42 50.4 -0.3
baz=88
EGAK **Eagle** 87.40 16 *e*P P 21 42 49.2 -1.0
comp=Z,19nm,0.8s,mb4.9
COLD **Coldfoot** 87.41 11 *e*P P 21 42 49.4 -0.8
comp=Z,15nm,1.0s,mb4.7
PV01 **Paradox Valley** 87.43 49 *e*P P 21 42 50.7 -0.3
B12A **Libby** 87.55 37 ⇓P P 21 42 51.1 -0.2
baz=88
AHID **Auburn Hatcher** 87.66 44 *e*P P 21 42 52.3 +0.3
comp=Z,57nm,1.8s,mb5.0
ANMO **Albuquerque** 87.71 52 *e*P P 21 42 52.1 -0.3
comp=Z,14nm,0.8s,mb4.7
ANMO **Albuquerque** 87.71 52 *e*P P 21 42 52.1 -0.3
ANMO pmax pmax
comp=Z,14nm,0.8s
BSMT **Bassoo Peak** 87.71 38 *e*P P 21 42 51.7 -0.4
MSO **Missoula** 87.73 39 *e*P P 21 42 51.3 -0.9
comp=Z,10nm,1.4s,mb4.4
P19A **Cripple Cowboy** 87.76 47 ⇑P P 21 42 52.5 0.0
baz=88
M18A **Lyman** 87.77 45 ⇓P P 21 42 52.6 +0.1
baz=88
K17A **Gardner Place,** 87.77 44 ⇑P P 21 42 52.8 +0.3
baz=88
RRI2 **Red Ridge** 87.77 43 *e*P P 21 42 52.8 +0.4
comp=Z,41nm,0.8s,mb5.2
TXAR **Lajitas Array** 87.80 58 P P 21 42 53.3 +0.4
comp=Z,9.6nm,0.9s,mb4.5,baz=215,slow=4.7,SNR=64
TXAR **Lajitas Array** 87.80 58 P P 21 42 53.3 +0.4
TXAR pmax pmax
comp=Z,10.0nm,0.9s
N18A **Larsen Ranch,** 87.84 46 ⇑P P 21 42 53.0 +0.2
baz=88
G15A **Dillon** 87.84 41 ⇑P P 21 42 52.8 0.0
baz=88
DLMT **Dillon** 87.87 41 *e*P P 21 42 52.8 -0.1
comp=Z,12nm,0.8s,mb4.7
I16A **Newdale** 87.90 43 ⇑P P 21 42 53.7 +0.6
baz=88
L18A **Fontenelle, Gr** 88.00 45 ⇑P P 21 42 53.4 -0.2
baz=88
TPAW **Teton Pass** 88.08 43 *e*P P 21 42 54.1 +0.3
comp=Z,18nm,1.1s,mb4.7
REDW **Red Top Meadow** 88.08 43 *e*P P 21 42 54.0 +0.1
comp=Z,32nm,1.0s,mb5.0
D14A **Greenough** 88.11 39 ⇑P P 21 42 53.7 -0.2
baz=88
RW3 **Ridgway** 88.11 49 *e*P P 21 42 52.8 -1.3
RW3 *e*PKKPbc PKKPbc 22 00 32.4 -4.0
F15A **Butte** 88.15 41 ⇓P P 21 42 54.1 -0.1
baz=88
B13A **Whitefish** 88.15 38 ⇓P P 21 42 53.6 -0.5
baz=88
LRM **Limekiln Ridge** 88.17 41 *e*P P 21 42 54.2 -0.1
LRM *e*PP PP 21 46 30.6 -1.9
J17A **Brown Place, J** 88.18 43 ⇓P P 21 42 54.8 +0.5
baz=88
CHMT **Chamberlain Mo** 88.18 39 *e*P P 21 42 53.5 -0.8
SNOW **Snow King Moun** 88.19 43 *e*P P 21 42 55.1 +0.7
comp=Z,30nm,1.0s,mb5.0
YAK **Yakutsk** 88.25 339 *e*P P 21 42 53.9 -0.3
YAK pmax pmax
comp=Z,100nm,4.0s
R21A **Cimarron** 88.25 49 ⇓P P 21 42 55.0 +0.1
baz=88
IMW **Indian Meadow** 88.26 43 *e*P P 21 42 55.0 +0.3
comp=Z,25nm,0.8s,mb5.0
GDL2 **Guadalupe Moun** 88.28 56 *e*P P 21 42 55.3 +0.2
C14A **Swan Lake** 88.29 38 ⇓P P 21 42 54.7 -0.1
baz=88
G16A **Moss Hill, Enn** 88.30 41 ⇓P P 21 42 54.9 0.0
baz=88
K18A **Toltan Ranch,** 88.30 44 ⇓P P 21 42 55.3 +0.3
baz=88
MOOW **Mc Ponds** 88.32 43 *e*P P 21 42 54.9 -0.2
comp=Z,9.9nm,0.9s,mb4.5
E15A **Deer Lodge** 88.33 40 ⇓P P 21 42 55.1 +0.2
baz=88
QLMT **Earthquake Lak** 88.36 42 *e*P P 21 42 55.5 +0.3
M19A **Rock Springs** 88.42 46 ⇓P P 21 42 55.7 +0.2
baz=88
H16A **Russell Place,** 88.42 42 ⇑P P 21 42 56.1 +0.6
baz=88
O20A **White River Ci** 88.48 47 ⇑P P 21 42 56.1 +0.3
baz=89
I17A **Pilgram Creek** 88.51 43 ⇑P P 21 42 56.7 +0.8
baz=89
L19A **Farson** 88.53 45 ⇑P P 21 42 56.0 -0.1
baz=89
J18A **Kendall Valley** 88.57 44 ⇑P P 21 42 56.5 +0.3
baz=89
YFT **Old Faithful** 88.57 42 *e*P P 21 42 57.2 +1.0
BOZ **Bozeman (W)** 88.60 41 *e*P P 21 42 56.0 -0.3
comp=Z,8.9nm,1.2s,mb4.5
BOZ **Bozeman (W)** 88.60 41 ⇑P P 21 42 56.0 -0.3
baz=89
BOZ **Bozeman (W)** 88.60 41 *e*P P 21 42 56.0 -0.3
BOZ pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
F16A **Kennard Place,** 88.67 41 ⇓P P 21 42 56.7 +0.1
baz=89
BW06 **Boulder Array** 88.68 44 *e*P P 21 42 56.1 -0.7
comp=Z,20nm,1.2s,mb4.8
BW06 **Boulder Array** 88.68 44 ⇑P P 21 42 56.1 -0.6
baz=89
PDAR **Pinedale Array** 88.68 44 P P 21 42 56.0 -0.7
comp=Z,6.3nm,0.6s,mb4.6,baz=214,slow=2.8,SNR=55
PDAR PP PP 21 46 32.8 -3.9
comp=Z,1.1nm,0.7s,baz=243,slow=6.3,SNR=6.8
D15A **Lincoln** 88.69 40 ⇓P P 21 42 56.5 -0.1
baz=89
LZH **Lanzhou** 88.69 308 *e*P P 21 42 57.5 +0.6
LZH AP pP 21 45 08.0 +5.6
LZH XP sP 21 46 07.0 +6.7
LZH AMB AMB
comp=Z,18nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,150nm,5.7s
N20A **Spence Gulch,** 88.75 46 ⇓P P 21 42 57.0 -0.1
baz=89
YNR **Norris Junctio** 88.79 42 *e*P P 21 42 57.5 +0.3
WALA **Waterton Lakes** 88.81 37 *e*P P 21 42 57.0 -0.2
comp=Z,10nm,0.9s,mb4.7
B14A **Marquette Ranc** 88.85 38 ⇓P P 21 42 57.2 -0.2
baz=89
HRY **Holter Researc** 88.96 40 *e*P P 21 42 57.8 -0.1
C15A **Salmond Ranch,** 88.97 39 ⇑P P 21 42 57.7 -0.2
baz=89
E16A **East Helena** 88.97 40 ⇑P P 21 42 57.7 -0.2
baz=89
SMCO **Snowmass** 88.99 48 *e*P P 21 42 58.5 +0.2
comp=Z,18nm,0.8s,mb5.0
A14A **Double T Ranch** 89.05 38 ⇑P P 21 42 58.1 -0.2
baz=89
M20A **Sweetwater, Wa** 89.08 46 ⇓P P 21 42 58.5 -0.1
baz=89
L20A **Wamsutter** 89.18 45 ⇑P P 21 42 59.4 +0.3
baz=89
N21A **Black Mountain** 89.24 47 ⇓P P 21 42 59.6 +0.3
baz=89
B15A **Bradely Ranch,** 89.25 38 ⇑P P 21 42 58.3 -0.9
baz=89
F17A **Fitzpatrick Pl** 89.33 41 ⇑P P 21 42 60.0 +0.4
baz=89
A15A **Johnson Ranch,** 89.45 38 ⇑P P 21 42 59.4 -0.7
baz=90
C16A **Fuhringer Ranc** 89.50 39 ⇓P P 21 42 59.8 -0.6
baz=90
M21A **Separation Pea** 89.69 46 ⇓P P 21 43 01.2 -0.2
baz=90
G18A **Lazy EL Ranch,** 89.76 42 ⇑P P 21 43 02.1 +0.5
baz=90
L21A **Rawlins** 89.83 46 ⇑P P 21 43 01.7 -0.3
baz=90
RLMT **Red Lodge** 89.87 42 ⇑P P 21 43 02.2 0.0
baz=90
F18A **Big Timber** 89.92 41 ⇓P P 21 43 02.6 +0.2
baz=90
E18A **Harlowton** 90.08 41 ⇑P P 21 43 03.6 +0.5
baz=90
A16A **West Butte Ran** 90.11 38 ⇓P P 21 43 03.2 0.0
baz=90
ISCO **Idaho Springs** 90.20 48 *e*P P 21 43 03.5 -0.3
comp=Z,6.8nm,0.8s,mb4.5
ISCO **Idaho Springs** 90.20 48 *e*P P 21 43 03.5 -0.4
ISCO pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
B17A **L&G Farms, Che** 90.29 39 ⇓P P 21 43 03.7 -0.4
baz=90
D18A **Linhart Farms,** 90.42 40 ⇑P P 21 43 05.5 +0.9
baz=90
A17A **Triple J Farms** 90.63 38 ⇑P P 21 43 05.4 -0.2
baz=91
EGMT **Eagleton** 90.80 39 ⇓P P 21 43 06.0 -0.4
baz=91
B18A **Beardsley Farm** 90.95 39 ⇑P P 21 43 06.8 -0.3
baz=91
EDM **Edmonton** 91.09 34 *e*P P 21 43 06.5 -1.1
SNAA **Sanae** 91.12 179 *e*P P 21 43 02.0 -5.5
SNAA pmax pmax
comp=Z,8.0nm,1.9s
A18A **Metzger Ranch,** 91.13 39 ⇓P P 21 43 07.4 -0.5
baz=91
ULN **Ulaanbaatar** 91.22 320 *e*P P 21 43 07.6 -0.8
AMTX **Amarillo** 91.33 54 *e*P P 21 43 08.7 -0.5
comp=Z,24nm,1.1s,mb5.0
JCT **Junction City** 91.34 59 *e*P P 21 43 08.8 -0.6
comp=Z,7.6nm,0.8s,mb4.7
JCT **Junction City** 91.34 59 *e*P P 21 43 08.8 -0.5
JCT pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VNA3 **Neumayer Olymp** 91.36 177 *e*P P 21 43 08.1 -0.5
VNA3 *e* 21 43 12.9
SONM **Songino Array** 91.61 320 P P 21 43 10.5 +0.4
comp=Z,0.5nm,0.5s,mb3.8,baz=134,slow=6.1,SNR=4.2
SONM PP PP 21 47 05.9 +6.6
comp=Z,0.9nm,0.9s,baz=110,slow=8.7,SNR=5.3
SONM **Songino Array** 91.61 320 P P 21 43 10.5 +0.3
SONM 21 47 05.9
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM pmax pmax
comp=Z,1.0nm,0.9s
VNA2 **Neumayer--Watz** 91.77 178 *e*P P 21 43 09.9 -0.6
baz=203,slow=2.7
VNA2 *e* 21 43 14.2
INK **Inuvik** 92.07 16 *e*P P 21 43 10.5 -1.3
comp=Z,473nm,1.3s
RSSD **Black Hills** 92.91 45 *e*P P 21 43 15.2 -1.0
comp=Z,10nm,1.2s,mb4.7
RSSD **Black Hills** 92.91 45 *e*P P 21 43 15.2 -1.0
RSSD pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
DGMT **Dagmar** 94.39 41 ⇑P P 21 43 22.9 +0.1
baz=94
YKA **Yellowknife Ar** 94.92 25 P P 21 43 23.6 -1.2
comp=Z,5.2nm,0.8s,mb4.7,baz=250,slow=4.4,SNR=11
TIXI **Tiksi** 95.09 346 *e*P P 21 43 24.2 -1.3
TIXI pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
ZALV **Zalesovo Beam** 106.36 322 PKiKP PKiKP 21 48 22.1 -1.4
comp=Z,0.3nm,0.4s,baz=66,slow=1.8,SNR=3.6
MK31 **Makanchi Array** 107.07 314 *e*PKP PKiKP 21 48 24.1 -1.0
MKAR **Makanchi Array** 107.07 314 PKiKP PKiKP 21 48 23.6 -1.5
comp=Z,0.7nm,0.6s,baz=192,slow=1.0,SNR=7.5
MKAR PKKPbc PKKPbc 21 59 42.4 -2.4
comp=Z,0.5nm,0.9s,baz=265,slow=5.8,SNR=4.2
KURK **Kurchatov** 109.85 318 PKiKP PKiKP 21 48 28.9 -1.2
comp=Z,0.7nm,0.6s,baz=106,slow=1.9,SNR=7.7
KURK PP PP 21 49 17.1 +2.6
comp=Z,1.4nm,1.0s,baz=97,slow=7.5,SNR=4.8
KURK PKKPbc PKKPbc 21 59 33.8 -2.3
comp=Z,0.8nm,0.6s,baz=276,slow=4.0,SNR=5.7
ARU **Arti** 121.10 326 *e*PKPdf PKPdf 21 48 50.6 -1.0
ARU **Arti** 121.10 326 *i* PKiKP PKPdf 21 48 49.2 -2.4
ARU 21 50 31.6
ARCES **ARCESS Array B** 125.40 349 PKP PKPdf 21 48 58.5 -1.0
comp=Z,6.3nm,0.7s,baz=97,slow=2.0,SNR=32
ARCES **ARCESS Array B** 125.40 349 PKiKP PKPdf 21 48 58.5 -1.0
ARCES pmax pmax
comp=Z,6.0nm,0.7s
JOF **Joensuu** 129.35 342 *ep* PKPdf 21 49 06.3 -0.9
comp=Z,6.3nm,0.5s
KAF **Kangasniemi** 131.43 343 *ep* PKPdf 21 49 09.6 -1.5
comp=Z,5.1nm,0.5s
KIV **Kislovodsk** 134.82 315 *e*PKPdf PKPdf 21 49 16.9 -1.2
KIV **Kislovodsk** 134.82 315 *e*PKIKP PKPdf 21 49 16.9 -1.2
NB2 **NORSAR Subarra** 135.58 352 PKP PKPdf 21 49 19.2 +0.3
comp=Z,1.4nm,0.7s,baz=17,slow=2.6
NOA **NORSAR Array B** 135.58 352 PKP PKPdf 21 49 19.7 +0.8
comp=Z,2.8nm,0.8s,baz=14,slow=4.0,SNR=5.7
NOA **NORSAR Array B** 135.58 352 PKiKP PKPdf 21 49 19.7 +0.8
NOA pmax pmax
comp=Z,3.0nm,0.8s
AKASG **Malin Array Be** 138.99 331 PKP PKPdf 21 49 26.6 +1.1
comp=Z,1.3nm,0.5s,baz=44,slow=2.5,SNR=4.9
AKASG **Malin Array Be** 138.99 331 PKiKP PKPdf 21 49 26.6 +1.1
AKASG pmax pmax
comp=Z,1.0nm,0.5s
KWP **Kalwaria** 142.63 335 *e*PKP PKPdf 21 49 29.6 -2.5
BRTR **Keskin Array B** 142.71 314 PKP PKPdf 21 49 30.5 -2.1
comp=Z,2.4nm,1.0s,baz=177,slow=2.1,SNR=6.3
BRTR SKPbc SKPbc 21 52 15.2 -1.4
comp=Z,0.7nm,0.6s,baz=112,slow=1.3,SNR=3.8
BRTR **Keskin Array B** 142.71 314 PKiKP PKPdf 21 49 30.5 -2.1
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR pmax pmax
comp=N,1.0nm,0.6s
TLCR **142.80 325** ⇑ *i*P PKPdf 21 49 28.3 -4.2
BUR08 **Bucovina Ar. S** 143.01 330 *e*PKPdf PKPdf 21 49 31.6 -1.3
BURAR **Bucovina Array** 143.03 330 ⇑ *i*P PKPdf 21 49 31.8 -1.0
RUE **Ruedersdorf** 143.15 345 *e*PKPbc PKPdf 21 49 30.6 -2.3
OJC **Ojcow** 143.28 338 *e*PKP PKPdf 21 49 31.5 -1.7
KOLS **Kolonicke sedl** 143.35 334 *i* PKP PKPdf 21 49 32.2 -1.2
STHS **Stebnicka Huta** 143.39 336 *e*PKP PKPdf 21 49 32.6 -1.8
VRI **Vrincioaia** 143.48 327 ⇑ *i*P PKPdf 21 49 32.5 -1.2
PLOR **Plostina** 143.53 327 ⇑ *i*P PKPdf 21 49 33.1 -0.7
HPK **Haverah Park** 143.54 1 *e*P PKPdf 21 49 31.2 -2.3
UZH **Uzhgorod** 143.58 334 ⇑ *i*PKIKP PKPdf 21 49 33.0 -0.8
CRVS **Cervenica-Dubn** 143.71 335 *e*PKP PKPdf 21 49 33.4 -0.6
NIE **Niedzica** 143.75 336 *e*PKP PKPdf 21 49 33.8 -0.2
TRPA **Tarpa** 143.86 333 ⇓ *i*P PKPdf 21 49 33.6 -0.7
KSP **Ksiaz** 143.92 341 *e*PKP PKPdf 21 49 34.5 +0.1
KSP **Ksiaz** 143.92 341 *e*PKIKP PKPdf 21 49 34.0 -0.3
NRDL **Niedersach Rie** 143.94 349 *e*PKPbc PKPdf 21 49 32.9 -1.4
LHO **Holmfirth** 143.95 1 ⇑ *e*P PKPdf 21 49 32.6 -1.6
MLR **Muntele Rosu** 144.14 327 PKP PKPdf 21 49 35.6 +0.7
comp=N,4.8nm,0.6s,baz=110,slow=20,SNR=3.3
MLR **Muntele Rosu** 144.14 327 PKiKP PKPdf 21 49 35.6 +0.7
MLR pmax pmax
comp=Z,5.0nm,0.6s
OKC **Ostrava-Krasne** 144.19 339 *e*PKP PKPdf 21 49 34.6 -0.2
KBI1 **Birley Grange** 144.24 1 ⇑ *e*P PKPdf 21 49 33.6 -1.2
UPC **Upice** 144.31 341 *e*PKP PKPdf 21 49 35.1 +0.1
DPC **Dobruska-Polom** 144.35 341 *e*PKP PKPdf 21 49 35.3 +0.2
STNC **Stoke** 144.40 1 *e*P PKPdf 21 49 34.7 -0.3
CLL **Collm** 144.42 345 ⇑ *i*PKIKP PKPdf 21 49 35.1 0.0
CLL pmax pmax
comp=Z,62nm,0.9s
CLL **Collm** 144.42 345 *e*PKPbc PKPdf 21 49 35.0 -0.1
CLL **Collm** 144.42 345 ⇑ *i*PKPbc PKPdf 21 49 35.1 0.0
comp=Z,62nm,0.9s
CLL *e*SKPbc SKPbc 21 52 20.0 -0.2
KWE **Weaver Farm** 144.48 1 ⇑ *e*P PKPdf 21 49 34.2 -1.0
CLZ **Clausthal** 144.51 348 *e*PKPbc PKPdf 21 49 35.5 +0.2
IBBN **Ibbenburen** 144.52 351 *e*PKPbc PKPdf 21 49 35.3 0.0
SBD1 **Bryn Du** 144.55 2 ⇑ *e*P PKPdf 21 49 34.6 -0.7
BRG **Berggiesshubel** 144.57 344 *i* PKIKP PKPdf 21 49 35.6 +0.2
BRG pmax pmax
comp=Z,13nm,0.8s
BRG **Berggiesshubel** 144.57 344 *e*PKPbc PKPdf 21 49 35.6 +0.2
BRG **Berggiesshubel** 144.57 344 *i* PKP PKPdf 21 49 35.6 +0.2
comp=Z,21nm,0.8s
VOIR **144.64 328** ⇑ *i*P PKPdf 21 49 36.4 +0.7
FBE **Freiberg** 144.68 344 *e*PKPbc PKPdf 21 49 36.1 +0.5
PVCC **Panska Ves** 144.71 343 *e*PKP PKPdf 21 49 35.8 +0.1
CWF **Charnwood Fore** 144.76 0 *e*P PKPdf 21 49 35.2 -0.5
DRGR **144.79 331** ⇑ *i*P PKPdf 21 49 36.4 +0.5
VYHS **Vyhne** 145.06 337 *i* PKP PKPbc 21 49 37.4 +0.1
PSZ **Piszkesteto** 145.12 335 ⇓ *i*P PKPbc 21 49 38.0 +0.5
KOLL **Kolacno** 145.16 337 *e*PKP PKPbc 21 49 37.8 +0.3
VRAC **Vranov** 145.17 340 PKPbc PKPbc 21 49 36.6 -0.9
comp=Z,4.6nm,0.9s,baz=70,slow=3.8,SNR=3.8
VRAC **Vranov** 145.17 340 PKiKP PKPdf 21 49 36.6 +0.1
VRAC pmax pmax
comp=Z,5.0nm,0.9s
PRU **Pruhonice** 145.20 342 *e*PKP PKPbc 21 49 37.7 +0.1
MOX **Moxa** 145.36 346 *e*PKP PKPdf 21 49 37.7 +0.9
comp=Z,22nm,1.6s
MOX **Moxa** 145.36 346 *e*PKPbc PKPbc 21 49 37.8 -0.3
TANN **Tannenbergstha** 145.37 345 *e*PKPbc PKPbc 21 49 38.0 -0.1
HTR **Trewern Hill** 145.38 3 ⇑ *e*P PKPdf 21 49 37.0 +0.3
WERD **Werda** 145.38 345 *e*PKPbc PKPbc 21 49 38.1 0.0
GUNZ **Gunzen** 145.45 345 *e*PKPbc PKPbc 21 49 38.3 0.0
MCH1 **Michaelchurch** 145.47 2 ⇑ *e*P PKPdf 21 49 37.3 +0.4
WERN **Wernitzgruen** 145.51 345 *e*PKPbc PKPbc 21 49 38.6 +0.1
WERN *e*PKPab PKPab 21 49 40.4 +0.4
NKC **Novy Kostel** 145.54 345 *e*PKP PKPdf 21 49 38.3 +1.2
UBBA **Unterbreizbach** 145.55 348 *e*PKPbc PKPbc 21 49 37.9 -0.7
MODS **Modra-Piesok** 145.73 338 *e*PKP PKPbc 21 49 40.0 +0.8
HGH **Gray Hill** 145.83 2 *e*P PKPdf 21 49 38.3 +0.8
MANZ **Manzenberg** 145.86 345 *e*PKPbc PKPbc 21 49 39.3 -0.2
ZST **Bratislava** 145.95 338 *e*PKP PKPbc 21 49 40.2 +0.4
ROTZ **Rotzenmuhle** 146.03 345 *e*PKPbc PKPbc 21 49 40.1 +0.1
BZS **Buzias** 146.18 331 ⇑ *i*P PKPbc 21 49 39.5 -1.0
KHC **Kasperske Hory** 146.25 343 *i* PKIKP PKPbc 21 49 39.7 -0.9
KHC **Kasperske Hory** 146.25 343 *e*PKP PKPdf 21 49 37.5 -0.8
KHC *ex* x 21 49 40.2
GRF **Grafenberg Arr** 146.34 346 *e*PKPbc PKPbc 21 49 40.9 +0.1
GRF *e*PKPab PKPab 21 49 43.7 +0.4
MEM **Membach** 146.43 352 PKPbc PKPbc 21 49 40.8 -0.2
WET **Wettzell** 146.43 344 *e*PKPbc PKPbc 21 49 41.3 +0.2
WET *e*PKPab PKPab 21 49 44.0 +0.3
UCC **Uccle** 146.44 354 PKP PKPdf 21 49 39.4 +0.8
GEC2 **GERESS Array S** 146.47 342 *e*PKPbc PKPbc 21 49 41.0 -0.2
GERES **GERESS Array B** 146.47 342 PKPbc PKPbc 21 49 41.0 -0.2
comp=Z,7.0nm,0.7s,baz=23,slow=2.8,SNR=37
GERES **GERESS Array B** 146.47 342 PKP2 PKPbc 21 49 41.0 -0.2
GERES pmax pmax
comp=Z,7.0nm,0.7s
CONA **Conrad Observa** 146.60 339 *i* PKiKP PKPbc 21 49 41.8 +0.2
comp=Z,23nm,1.6s,SNR=12
CSNA **Conrad Observa** 146.61 339 ⇑ *i*PKiKP PKPbc 21 49 41.9 +0.2
comp=Z,21nm,1.6s
BCLA **Clavier** 146.70 353 PKPbc PKPbc 21 49 41.2 -0.6

SNF	**Seneffe**	**146.73**	**354**	PKPbc	PKPbc	21 49 41.8	-0.1
PKSM	**Moragy**	**147.01**	**335** ⇑ *i*P		PKPdf	21 49 39.6	-0.1
GIVF	**Givet**	**147.07**	**353** ⇑ *i*PKP1		PKPbc	21 49 42.5	-0.3
	comp=Z,63nm,0.8s						
DOU	**Dourbes**	**147.10**	**353**	PKPbc	PKPbc	21 49 42.7	-0.2
BAIF	**Baives**	**147.18**	**354** ⇑ *i*PKP1		PKPbc	21 49 42.9	-0.2
	comp=Z,32nm,0.6s						
MOA	**Molln**	**147.19**	**341** ⇑ *i*PKPbc		PKPbc	21 49 42.8	-0.3
	comp=Z,6.6nm,0.8s,SNR=6.2						
WLF	**Walferdange**	**147.33**	**351**	PKPbc	PKPbc	21 49 43.8	+0.3
STU	**Stuttgart**	**147.66**	**347** *e*PKPbc		PKPbc	21 49 44.1	-0.2
RJOB	**Jochberg**	**147.73**	**343** *e*PKPbc		PKPbc	21 49 44.2	-0.4
RJOB			*e*PKPab		PKPab	21 49 50.1	+1.1
FUR	**Furstenfeldbru**	**147.75**	**345** *e*PKPbc		PKPbc	21 49 44.4	-0.2
FUR			*e*PKPab		PKPab	21 49 49.3	+0.2
KBA	**Koelnbreinsper**	**148.16**	**341** ⇑ *i*PKPbc		PKPbc	21 49 45.0	-0.7
	comp=Z,6.5nm,0.5s,SNR=6.2						
BFO	**Black Forest**	**148.26**	**348** *e*PKPbc		PKPbc	21 49 45.5	-0.4
JSA	**Saint Aubin**	**148.30**	**2** *e*P		PKPdf	21 49 40.7	-1.0
CDF	**Champ du Feu**	**148.37**	**350** ⇑ *i*PKP1		PKPbc	21 49 45.9	-0.2
	comp=Z,19nm,0.6s						
WATA	**Walderalm**	**148.44**	**344** ⇑ *i*PKPbc		PKPbc	21 49 45.8	-0.6
	comp=Z,6.7nm,0.5s						
MYKA	**Terra Mystica**	**148.47**	**341** ⇓ *i*PKPbc		PKPbc	21 49 45.3	-1.1
	comp=Z,11nm,0.8s						
WTTA	**Wattenberg**	**148.49**	**344** ⇑ *i*PKiKP		PKiKP	21 49 46.2	-1.3
	comp=Z,14nm,0.5s						
MEZF	**Maizieres J'vi**	**148.62**	**352** ⇑ *i*PKP1		PKPbc	21 49 46.7	-0.1
	comp=Z,32nm,0.7s						
ABTA	**Abfaltersbach**	**148.71**	**342** ⇑ *i*PKPbc		PKPbc	21 49 46.1	-1.0
	comp=Z,20nm,1.1s,SNR=11						
FLN	**La Foliniere**	**148.74**	**359** ⇑ *i*PKP1		PKPbc	21 49 46.3	-0.7
	comp=Z,45nm,0.5s						
LDF	**La Druitiere**	**148.91**	**359** ⇑ *i*PKP1		PKPbc	21 49 46.7	-0.7
	comp=Z,24nm,0.5s						
HAU	**Haudompre**	**148.92**	**350** ⇑ *i*PKP1		PKPbc	21 49 47.0	-0.5
	comp=Z,15nm,0.6s						
FETA	**Feichten**	**148.95**	**344** *i* PKiKP		PKiKP	21 49 47.5	-1.0
	comp=Z,18nm,0.9s,SNR=11						
HINF	**Hinteralfeld**	**149.02**	**350** *e*PKP1		PKPbc	21 49 47.1	-0.7
	comp=Z,25nm,0.9s						
ROSF	**Rostrenen**	**149.11**	**3** *e*PKP1		PKPbc	21 49 47.1	-0.9
	comp=Z,16nm,0.6s						
GRR	**Gorron**	**149.12**	**360** ⇑ *i*PKP1		PKPbc	21 49 47.4	-0.6
	comp=Z,56nm,0.6s						
SGMF	**Saint Gilles**	**149.22**	**2** ⇑ *i*PKP1		PKPbc	21 49 47.4	-0.8
	comp=Z,40nm,0.7s						
DAVOX	**Davos/Dischmat**	**149.39**	**345**	PKPbc	PKPbc	21 49 48.7	+0.1
	comp=Z,27nm,0.6s,baz=244,slow=1.4,SNR=53						
QUIF	**Quistinic**	**149.54**	**3** *e*PKP1		PKPbc	21 49 48.2	-0.8
TUE	**Stuetta**	**149.80**	**346** *e*PKPbc		PKPbc	21 49 49.5	-0.1
LOR	**Lormes**	**149.98**	**353** ⇑ *i*PKP1		PKPbc	21 49 49.7	-0.3
	comp=Z,50nm,0.8s						
HYF	**Humbligny**	**150.09**	**355** ⇑ *i*PKP1		PKPbc	21 49 50.3	0.0
SSF	**Saint Saulge**	**150.22**	**354** ⇑ *i*PKP1		PKPbc	21 49 50.3	-0.3
	comp=Z,38nm,0.6s						
CABF	**La Chapelle**	**150.32**	**350** ⇑ *i*PKP1		PKPbc	21 49 51.1	+0.2
	comp=Z,28nm,0.7s						
AVF	**Avril sur Loir**	**150.50**	**354** ⇑ *i*PKP1		PKPbc	21 49 50.5	-0.8
	comp=Z,11nm,0.6s						
SMF	**Signal de Mont**	**150.59**	**353** *e*PKP1		PKPbc	21 49 51.0	-0.5
BGF	**Bois d'Agland**	**150.78**	**355** ⇑ *i*PKP1		PKPbc	21 49 51.5	-0.4
	comp=Z,38nm,0.8s						
MFF	**Saint Martin d**	**150.90**	**359** ⇑ *i*PKP1		PKPbc	21 49 51.6	-0.6
	comp=Z,32nm,0.6s						
IDI	**Anoyia**	**150.94**	**313**	PKPbc	PKPbc	21 49 51.8	-0.8
	comp=Z,5.8nm,0.7s,baz=6.0,slow=18,SNR=5.1						
TCF	**Toulx Ste Croi**	**151.10**	**355** ⇑ *i*PKP1		PKPbc	21 49 52.1	-0.6
	comp=Z,13nm,0.6s						
LPL	**La Plagne**	**151.27**	**349** ⇑ *i*PKP1		PKPbc	21 49 53.4	+0.3
	comp=Z,13nm,0.6s						
LPG	**La Plagne**	**151.28**	**349** ⇑ *i*PKP1		PKPbc	21 49 53.5	+0.4
	comp=Z,20nm,0.8s						
ORIF	**Oris-en-Rattie**	**152.00**	**350** ⇑ *i*PKP1		PKPbc	21 49 54.4	-0.3
	comp=Z,20nm,0.6s						
MBDF	**Montbardon**	**152.02**	**348** ⇑ *i*PKP1		PKPbc	21 49 54.5	-0.3
	comp=Z,18nm,0.6s						
RJF	**Les Rejaudoux**	**152.13**	**356** ⇑ *i*PKP1		PKPbc	21 49 54.4	-0.6
	comp=Z,10nm,0.7s						
VIVF	**Saint-Julien-l**	**152.25**	**351** *e*PKP1		PKPbc	21 49 55.0	-0.3
	comp=Z,14nm,0.7s						
CAF	**Calviac**	**152.47**	**355** ⇑ *i*PKP1		PKPbc	21 49 55.3	-0.4
	comp=Z,13nm,0.8s						
LFF	**La Frestale**	**152.53**	**357** *e*PKP1		PKPbc	21 49 55.3	-0.6
	comp=Z,18nm,0.8s						
SBF	**Sospel**	**152.71**	**347** *e*PKP1		PKPbc	21 49 55.3	-1.0
	comp=Z,14nm,0.6s						
SMRF	**Simiane la Rot**	**152.96**	**350** *e*PKP1		PKPbc	21 49 57.0	+0.2
	comp=Z,24nm,0.9s						
FRF	**La Foret Royal**	**153.16**	**348** *e*PKP1		PKPbc	21 49 56.6	-0.7
	comp=Z,18nm,1.0s						
PGF	**Pioggiola**	**153.56**	**343** *e*PKP1		PKPbc	21 49 57.3	-0.9
	comp=Z,29nm,0.9s						
ETSF	**Etsaut**	**154.61**	**359** *e*PKP1		PKPdf	21 50 01.6	+10
TORD	**Torodi Ar. Bea**	**175.04**	**211**	PKP	PKPdf	21 50 07.5	-1.8
	comp=Z,1.2nm,0.8s,baz=349,slow=0.7,SNR=8.1						

*IDC **30** 21:43:04.9±1.1, 3177S×17757W, h0km, mb4.5/3, mb1 4.5/5, mb1mx4.1/16, mbtmp4.5/5, ML4.2/2, MS3.6/5, Ms1 3.6/5, ms1mx3.4/25, Error ellipse: s-maj=33.2km s-min=24.3km az=113.0*

*ISCJB **30** 21:43:08.3±1.5, 3184S±007×1777W±03, h33km, mb4.5/3, MS3.6/4, Error ellipse: s-maj=32.2km s-min=9.1km az=8.9*

ISC 30 21:43:10.0±1.5, 3189S±007×1778W±03, h35km, n20, σ1§57/12, mb4.5/3, MS3.6/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAO	**Raoul Island**	**2.63**	**358**	Pn		**Pn**	**21 43 46.7**	**-3.4**
	77nm,0.3s,baz=66,slow=20,SNR=2.9							
RAO				Sn		**Sn**	**21 44 20.4**	**-0.4**
	112nm,0.3s,baz=72,slow=20,SNR=2.9							
URZ	**Urewera**	**7.60**	**212**	Pn		**Pn**	**21 44 55.4**	**-2.8**
	1.3nm,0.3s,baz=48,slow=2.9,SNR=8.7							
URZ				Sn		**Sn**	**21 46 18.0**	**-5.0**
	9.3nm,0.3s,baz=158,slow=18,SNR=13							
RPZ	**Rata Peaks**	**14.71**	**213**	Pn		**Pn**	**21 46 35.8**	**+0.4**
	0.6nm,0.3s,baz=15,slow=6.5,SNR=4.1							
RPZ				Sn		**Sn**	**21 48 59.2**	**-18**
	0.7nm,0.3s,baz=342,slow=20,SNR=5.3							
RAR	**Rarotonga**	**19.30**	**61**	LR		LR	21 53 25.0	
	comp=Z,79nm,18.1s,baz=304,slow=32							
PPT	**Papeete**	**29.23**	**68**	LR		LR	21 57 51.7	
	comp=Z,117nm,18.2s,MS3.5,baz=144,slow=31							
HNR	**Honiara**	**30.41**	**312**	LR		LR	21 59 32.4	
	comp=Z,98nm,18.2s,MS3.5,baz=144,slow=32							
CTA	**Charters Tower**	**34.23**	**281**	P		**P**	**21 49 55.1**	**+2.5**
	8.6nm,0.6s,mb4.8,baz=103,slow=12,SNR=11							
CTA				LR		LR	22 02 42.0	
	comp=Z,122nm,19.1s,MS3.6,baz=50,slow=34							
STKA	**Stephens Creek**	**34.33**	**259**	*e*P		**P**	**21 49 55.6**	**+2.2**
	2.7nm,0.8s,mb4.2							
STKA	**Stephens Creek**	**34.33**	**259**	P		**P**	**21 49 55.5**	**+2.2**
	2.6nm,0.7s,mb4.3,baz=112,slow=11,SNR=6.0							
STKA				LR		LR	22 03 15.9	
	comp=Z,170nm,18.6s,MS3.8,baz=195,slow=35							
ASAR	**Alice Springs**	**43.22**	**268**	P		**P**	**21 51 08.3**	**+0.4**
	4.2nm,0.6s,mb4.4,baz=107,slow=7.4,SNR=40							
WB2	**Warramunga Arr**	**44.33**	**274**	*e*P		**P**	**21 51 17.2**	**+0.3**
VNA2	**Neumayer--Watz**	**77.25**	**177**	*e*		**P**	**21 55 01.6**	**+1.5**
	baz=181,slow=4.0							
VNA2				*e*		pP	21 55 12.7	+1.7
VNA2				*e*			21 55 23.6	
MKAR	**Makanchi Array**	**118.85**	**309**	PKP		PKPdf	22 01 54.1	-0.2
	0.5nm,0.8s,baz=64,slow=3.4,SNR=2.6							
KURK	**Kurchatov**	**122.19**	**313**	PKP		PKPdf	22 02 01.6	+1.0
	0.4nm,0.5s,baz=99,slow=1.7,SNR=4.2							
BVAR	**Borovoye Array**	**127.58**	**315**	PKP		PKPdf	22 02 12.5	+1.7
	0.6nm,0.5s,baz=72,slow=4.7,SNR=3.5							
NB2	**NORSAR Subarra**	**150.25**	**351**	PKP		PKPbc	22 02 57.1	+0.5
	comp=Z,0.9nm,0.7s,baz=10,slow=2.6							
NOA	**NORSAR Array B**	**150.25**	**351**	PKPbc		PKPbc	22 02 56.8	+0.2
	comp=Z,1.3nm,0.7s,baz=14,slow=4.2,SNR=3.9							
NOA				PKPab		PKPab	22 03 01.6	-1.2
	comp=Z,0.6nm,0.6s,baz=16,slow=4.1,SNR=3.0							
AKASG	**Malin Array Be**	**152.57**	**321**	PKPbc		PKPbc	22 03 02.0	-0.3
	comp=Z,1.3nm,0.8s,baz=56,slow=1.9,SNR=4.8							
AKASG				PKPab		PKPab	22 03 13.2	+0.4
	comp=Z,0.5nm,0.5s,baz=46,slow=3.3,SNR=4.3							
BRTR	**Keskin Array B**	**153.43**	**296**	PKPbc		PKPbc	22 03 07.1	+2.6
	comp=Z,1.0nm,0.8s,baz=140,slow=2.1,SNR=4.9							
BRTR				PKPab		PKPab	22 03 17.6	+0.8
	comp=Z,0.9nm,0.8s,baz=143,slow=4.1,SNR=4.5							
TORD	**Torodi Ar. Bea**	**161.34**	**178**	PKPab		PKPab	22 03 52.0	+0.7
	comp=Z,0.8nm,0.9s,baz=182,slow=3.9,SNR=4.5							

*ISCJB **30** 22:32:55.8±1.0, 485N×0.1×1530E±0.1, h139km±8km, mb4.0/34, Error ellipse: s-maj=20.8km s-min=9.8km az=140.7*

*NEIC **30** 22:32:56.8±1.3, 4838N×15303E, h139km±9km, mb4.2/17, Error ellipse: s-maj=14.1km s-min=8.5km az=168.0*

*MOS **30** 22:32:56.0±1.1, 4841N×15307E, h144km, mb4.2/16, Error ellipse: s-maj=15.3km s-min=8.0km az=96.1*

*IDC **30** 22:32:58.9±1.1, 4839N×153.10E, h163km±8km, mb3.7/18, mb1 3.8/19, mb1mx3.7/26, mbtmp3.6/19, Error ellipse: s-maj=18.2km s-min=13.9km az=156.0*

ISC 30 22:32:56.8±1.0, 484N±01×1531E±01, h137km±7km, h164km±1.0km: pP-P, n83, σ0§77/84, mb4.0/34, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SKR	**Severo-Kuril's**	**3.00**	**40**	*e*PN		**Pn**	**22 33 43.0**	**-0.5**
SKR				*e*S		**Sn**	**22 34 18.5**	**-1.1**
SKR				pmax		pmax		
	comp=Z,90nm,0.5s							
PEA0B	**Petropavlovsk-**	**5.52**	**30**	*e*Pn		**Pn**	**22 34 17.6**	**+0.8**
PETK	**Petropavlovsk-**	**5.52**	**30**	P		**Pn**	**22 34 18.1**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=180,slow=11,SNR=15							
ERM	**Erimo**	**9.50**	**231**	*e*PN		**Pn**	**22 35 10.2**	**0.0**
YAK	**Yakutsk**	**18.93**	**325**	P		**P**	**22 37 06.2**	**-0.5**
	comp=Z,12nm,0.5s							
YAK	**Yakutsk**	**18.93**	**325**	*e*P		**P**	**22 37 09.3**	**+2.6**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
BILL	**Bilibino**	**20.77**	**14**	*e*P		**P**	**22 37 26.8**	**+0.3**
	comp=Z,3.4nm,0.6s							
BILL	**Bilibino**	**20.77**	**14**	*e*P		**P**	**22 37 26.8**	**+0.4**
BILL				pmax		pmax		
	comp=Z,3.0nm,0.6s							
KSRS	**Korea Array**	**21.35**	**248**	P		**P**	**22 37 33.5**	**+0.6**
	comp=Z,1.5nm,0.7s,mb3.4,baz=55,slow=11,SNR=4.3							
KSRS	**Korea Array**	**21.35**	**248**	P		**P**	**22 37 33.5**	**+0.6**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb3.6							
SONM	**Songino Array**	**30.81**	**287**	P		**P**	**22 39 00.0**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.3,baz=69,slow=8.1,SNR=4.8							
SONM	**Songino Array**	**30.81**	**287**	*e*P		**P**	**22 39 00.9**	**+1.6**
INK	**Inuvik**	**40.25**	**33**	*e*P		**P**	**22 40 20.1**	**+0.5**
	comp=Z,30nm,0.3s,mb5.4							
ZALV	**Zalesovo Beam**	**41.64**	**304**	P		**P**	**22 40 30.6**	**-0.5**
	comp=Z,2.5nm,0.5s,mb4.1,baz=69,slow=6.4,SNR=12							
MKAR	**Makanchi Array**	**46.18**	**296**	P		**P**	**22 41 07.1**	**-0.3**
	comp=Z,1.6nm,0.5s,mb3.9,baz=67,slow=7.6,SNR=30							
MKAR				pP		pP	22 41 43.4	+4.9
	comp=Z,1.8nm,0.9s,baz=71,slow=7.8,SNR=4.6							
MKAR	**Makanchi Array**	**46.18**	**296**	*e*P		**P**	**22 41 07.6**	**+0.1**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.5s							
KURK	**Kurchatov**	**46.45**	**302**	P		**P**	**22 41 09.8**	**+0.4**
	comp=Z,2.7nm,0.4s,mb4.2,baz=70,slow=8.9,SNR=24							
KURK				pP		pP	22 41 45.9	+5.4
	comp=Z,2.5nm,0.7s,baz=68,slow=8.7,SNR=7.5							
KURK	**Kurchatov**	**46.45**	**302**	*e*P		**P**	**22 41 09.1**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.2							
KURK				*e*		pP	22 41 44.8	+4.3
KURK	**Kurchatov**	**46.45**	**302**	P		**P**	**22 41 09.8**	**+0.3**
KURK				*PP		pP	22 41 45.9	+5.4
KURK				pmax		pmax		
	comp=Z,3.0nm,0.4s,mb4.3							
KURK				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.0							
YKA	**Yellowknife Ar**	**49.59**	**38**	P		**P**	**22 41 34.0**	**+0.6**
	comp=Z,1.7nm,0.8s,mb3.7,baz=298,slow=6.8,SNR=3.4							
BVAR	**Borovoye Array**	**49.80**	**308**	P		**P**	**22 41 35.0**	**-0.2**
	comp=Z,5.8nm,0.4s,mb4.6,baz=57,slow=8.0,SNR=51							
BVAR				pP		pP	22 42 11.9	+5.3
	comp=Z,1.0nm,0.5s,baz=68,slow=5.5,SNR=2.7							
BRVK	**Borovoye**	**49.84**	**308**	*e*P		**P**	**22 41 35.2**	**-0.2**
	comp=Z,8.6nm,0.6s,mb4.6							
BRVK	**Borovoye**	**49.84**	**308**	*e*P		**P**	**22 41 35.2**	**-0.3**
BRVK				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.6							
AAK	**Ala-Archa**	**53.10**	**295**	*e*P		**P**	**22 42 00.3**	**+0.4**
	comp=Z,1.5nm,0.4s,mb4.1							
AAK	**Ala-Archa**	**53.10**	**295**	*e*P		**P**	**22 42 00.3**	**+0.5**
AAK				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb3.9							
KEV	**Kevo**	**55.77**	**340**	*e*p		**P**	**22 42 17.4**	**-1.3**
	comp=Z,0.8nm,0.3s,mb4.0							
KEV	**Kevo**	**55.77**	**340**	*e*P		**P**	**22 42 17.4**	**-1.3**
KEV				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.1							
ARCES	**ARCESS Array B**	**56.27**	**340**	P		**P**	**22 42 21.6**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.2,baz=26,slow=7.7,SNR=18							
AKTK	**Aktyubinsk**	**57.61**	**311**	P		**P**	**22 42 31.0**	**-1.0**
AKTO	**Aktyubinsk**	**57.61**	**311**	P		**P**	**22 42 31.0**	**-1.0**
	comp=Z,1.2nm,0.4s,mb4.1,baz=57,slow=4.5,SNR=11							
JOF	**Joensuu**	**59.83**	**333**	*e*p		**P**	**22 42 46.3**	**-0.8**
	comp=Z,1.7nm,0.4s,mb4.2							
KAF	**Kangasniemi**	**61.92**	**335**	*e*p		**P**	**22 43 00.3**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.9							
KAF	**Kangasniemi**	**61.92**	**335**	*e*P		**P**	**22 43 00.3**	**-1.0**
KAF				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.1							
NB2	**NORSAR Subarra**	**66.64**	**341**	P		**P**	**22 43 31.8**	**-0.2**
	comp=Z,9.2nm,1.2s,mb4.5,baz=30,slow=6.5							
NOA	**NORSAR Array B**	**66.64**	**341**	P		**P**	**22 43 31.6**	**-0.4**
	comp=Z,1.7nm,0.7s,mb4.0,baz=26,slow=6.5,SNR=8.3							
HFS	**Hagfors**	**66.89**	**339**	P		**P**	**22 43 32.9**	**-0.7**
	comp=Z,2.5nm,0.3s,mb4.5,baz=55,slow=3.8,SNR=41							
AKASG	**Malin Array Be**	**70.16**	**326**	P		**P**	**22 43 52.8**	**-1.2**
	comp=Z,0.7nm,0.3s,mb3.8,baz=33,slow=6.1,SNR=3.4							
SCHQ	**Schefferville**	**71.77**	**23**	P		**P**	**22 44 03.9**	**+0.2**
	comp=Z,2.2nm,0.5s,mb4.1,baz=234,slow=16,SNR=5.5							
ASAR	**Alice Springs**	**73.79**	**198**	P		**P**	**22 44 14.7**	**-1.2**
	comp=Z,0.9nm,0.7s,mb3.6,baz=14,slow=5.4,SNR=14							
BURAR	**Buryonia Array**	**74.19**	**326** ⇑ *i*P			**P**	**22 44 17.4**	**-0.7**
EKA	**Eskdalemuir Ar**	**74.71**	**346**	P		**P**	**22 44 20.2**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.5,baz=22,slow=4.8,SNR=5.3							
DPC	**Dobruska-Polom**	**74.83**	**333**	*e*P		**P**	**22 44 22.1**	**+0.4**
CLL	**Collm**	**74.94**	**335**	*i* P		**P**	**22 44 22.5**	**+0.2**
CLL				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.2							
CLL	**Collm**	**74.94**	**335**	*i* P		**P**	**22 44 22.5**	**+0.2**
	comp=Z,4.0nm,0.7s,mb4.2							
VOIR		**76.08**	**325** ⇑ *i*P			**P**	**22 44 30.1**	**+1.2**
TXAR	**Lajitas Array**	**76.68**	**61**	P		**P**	**22 44 32.1**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.3,baz=297,slow=5.1,SNR=10							
TXAR	**Lajitas Array**	**76.68**	**61**	*e*P		**P**	**22 44 32.6**	**0.0**
KHC	**Kasperske Hory**	**76.73**	**334**	*e*P		**P**	**22 44 33.3**	**+0.8**
GERES	**GERESS Array B**	**76.95**	**334**	P		**P**	**22 44 33.7**	**0.0**
	comp=Z,0.9nm,0.4s,mb3.7,baz=34,slow=5.8,SNR=8.2							
GZR	**Gura Zlata**	**76.97**	**327** ⇑ *i*P			**P**	**22 44 34.0**	**+0.1**
BRTR	**Keskin Array B**	**77.17**	**316**	P		**P**	**22 44 35.4**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.5,baz=67,slow=3.2,SNR=4.2							
BZS	**Buzias**	**77.20**	**327** ⇓ *i*P			**P**	**22 44 34.4**	**-0.8**
PKSM	**Moragy**	**77.72**	**330** ⇑ *i*P			**P**	**22 44 36.4**	**-1.7**
CDF	**Champ du Feu**	**79.11**	**338**	*e*P		**P**	**22 44 45.7**	**0.0**
	comp=Z,11nm,0.9s,mb4.2							
CDF	**Champ du Feu**	**79.11**	**338**	*e*P		**P**	**22 44 45.7**	**0.0**
	comp=Z,5.4nm,0.9s,mb4.2							
CDF	**Champ du Feu**	**79.11**	**338**	*e*P		**P**	**22 44 45.7**	**0.0**
CDF				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.1							
MEZF	**Maizieres J'vi**	**79.57**	**339**	*e*P		**P**	**22 44 48.6**	**+0.4**
	comp=Z,17nm,0.9s,mb4.4							
MEZF	**Maizieres J'vi**	**79.57**	**339**	*e*P		**P**	**22 44 48.6**	**+0.4**
	comp=Z,17nm,0.9s,mb4.7							
HAU	**Haudompre**	**79.72**	**338**	*e*P		**P**	**22 44 48.9**	**-0.1**
LOR	**Lormes**	**81.01**	**339**	*e*P		**P**	**22 44 55.6**	**-0.3**
SSF	**Saint Saulge**	**81.28**	**340**	*e*P		**P**	**22 44 58.4**	**+1.0**
	comp=Z,5.3nm,0.7s,mb4.0							
SSF	**Saint Saulge**	**81.28**	**340**	*e*P		**P**	**22 44 58.4**	**+1.0**
	comp=Z,2.7nm,0.7s,mb4.0							
SSF	**Saint Saulge**	**81.28**	**340**	*e*P		**P**	**22 44 58.4**	**+1.0**
SSF				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.0							
AVF	**Avril sur Loir**	**81.58**	**340**	*e*P		**P**	**22 44 58.9**	**0.0**
	comp=Z,7.3nm,0.7s,mb4.1							
AVF	**Avril sur Loir**	**81.58**	**340**	*e*P		**P**	**22 44 58.9**	**0.0**
	comp=Z,3.7nm,0.7s,mb4.1							
AVF	**Avril sur Loir**	**81.58**	**340**	*e*P		**P**	**22 44 58.9**	**0.0**
AVF				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.2							
SMF	**Signal de Mont**	**81.60**	**339**	*e*P		**P**	**22 44 59.2**	**+0.2**
	comp=Z,5.7nm,0.7s,mb4.0							
SMF	**Signal de Mont**	**81.60**	**339**	*e*P		**P**	**22 44 59.2**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.0							
SMF	**Signal de Mont**	**81.60**	**339**	*e*P		**P**	**22 44 59.2**	**+0.2**
SMF				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.0							
BGF	**Bois d'Agland**	**81.91**	**340**	*e*P		**P**	**22 45 01.1**	**+0.4**
	comp=Z,6.5nm,0.6s,mb4.2							
BGF	**Bois d'Agland**	**81.91**	**340**	*e*P		**P**	**22 45 01.1**	**+0.4**
	comp=Z,3.3nm,0.6s,mb4.1							
BGF	**Bois d'Agland**	**81.91**	**340**	*e*P		**P**	**22 45 01.1**	**+0.4**
BGF				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.1							
LPL	**La Plagne**	**81.93**	**337**	*e*P		**P**	**22 45 01.8**	**+1.0**
	comp=Z,12nm,0.9s,mb4.2							
LPL	**La Plagne**	**81.93**	**337**	*e*P		**P**	**22 45 01.8**	**+1.0**
	comp=Z,5.9nm,0.9s,mb4.2							
LPL	**La Plagne**	**81.93**	**337**	*e*P		**P**	**22 45 01.8**	**+1.0**
LPL				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.2							
LPG	**La Plagne**	**81.94**	**337**	*e*P		**P**	**22 45 02.1**	**+1.3**
	comp=Z,5.9nm,0.7s,mb4.0							
LPG	**La Plagne**	**81.94**	**337**	*e*P		**P**	**22 45 02.1**	**+1.3**
	comp=Z,3.0nm,0.7s,mb4.0							
LPG	**La Plagne**	**81.94**	**337**	*e*P		**P**	**22 45 02.1**	**+1.3**
LPG				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.0							
TCF	**Toulx Ste Croi**	**82.31**	**340**	*e*P		**P**	**22 45 03.2**	**+0.4**
MBDF	**Montbardon**	**82.65**	**337**	*e*P		**P**	**22 45 05.6**	**+1.1**
ORIF	**Oris-en-Rattie**	**82.71**	**337**	*e*P		**P**	**22 45 05.8**	**+1.0**
	comp=Z,5.4nm,0.6s,mb4.2							
ORIF	**Oris-en-Rattie**	**82.71**	**337**	*e*P		**P**	**22 45 05.8**	**+1.0**
	comp=Z,2.7nm,0.6s,mb4.2							
ORIF	**Oris-en-Rattie**	**82.71**	**337**	*e*P		**P**	**22 45 05.8**	**+1.0**
ORIF				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.2							

MAN 30 22:44:44, 912N×12215E, h72km, mb4.1, ML2.9, MS2.6, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DCPH	**Dipolog City**	**1.30**	**114**	*e*P		Pn	22 45 07.2	+0.8
**G

	SNR=91							
SNGE					Sg	**Sg**	**23 40 33.0**	**-1.6**
SHGR	**Shooshtar-Gavs**	**2.38**	**143**		Pn	**Pn**	**23 40 42.0**	**+2.8**
SHGR	**Shooshtar-Gavs**	**2.38**	**143**		*e*Pn	**Pn**	**23 40 42.3**	**+3.1**
SHGR					AML	AML	23 41 29.2	
	comp=E,409nm,0.5s							
SHGR					AML	AML	23 41 30.4	
	comp=N,486nm,0.7s							
ASAO	**Ashtian**	**2.45**	**77**		Pn	**Pn**	**23 40 43.0**	**+2.9**
ASAO					*e*Sg	**Sg**	**23 41 18.0**	**-1.0**
ASAO	**Ashtian**	**2.45**	**77**		*e*Pn	**Pn**	**23 40 43.6**	**+3.5**
ASAO					AML	AML	23 41 24.2	
	comp=E,280nm,0.5s							
ASAO					AML	AML	23 41 24.4	
	comp=N,255nm,0.5s							
GHVR	**GHOM**	**3.48**	**82**		*e*Pn	**Pn**	**23 40 56.0**	**+1.8**
GHVR	**GHOM**	**3.48**	**82**		*e*Pn	**Pn**	**23 40 56.8**	**+2.5**
GHVR					*e*Sg	**Sg**	**23 41 51.2**	**-0.8**
GHVR					AML	AML	23 42 00.1	
	comp=N,183nm,0.7s							
GHVR					AML	AML	23 42 07.3	
	comp=E,178nm,0.6s							
GHVR	**GHOM**	**3.48**	**82**		*e*Pn	**Pn**	**23 40 56.8**	**+2.6**
	SNR=52							
GHVR					*e*Sg	**Sg**	**23 41 51.2**	**-0.7**
	SNR=90							
THKV	**Tehran--Karaj**	**3.60**	**58**		*e*Pn	**Pn**	**23 40 58.0**	**+2.0**
THKV	**Tehran--Karaj**	**3.60**	**58**		*e*Pn	**Pn**	**23 40 58.6**	**+2.6**
THKV					AML	AML	23 42 12.7	
	comp=N,124nm,0.6s							
CHTH	**Charan**	**3.77**	**59**		*e*Pn	**Pn**	**23 41 00.0**	**+1.7**
CHTH	**Charan**	**3.77**	**59**		*e*Pn	**Pn**	**23 41 01.1**	**+2.8**
MIB	**Mutribah**	**4.23**	**178**		*e*P	**Pn**	**23 41 06.1**	**+1.5**
	baz=178							
MIB					AML	AML	23 41 58.4	
	comp=Z,69nm,0.4s,baz=178							
DAMV	**Damavand**	**4.29**	**67**		*e*Pn	**Pn**	**23 41 08.6**	**+3.3**
DAMV					AML	AML	23 42 26.8	
	comp=N,50nm,0.4s							
DAMV					AML	AML	23 42 28.1	
	comp=E,56nm,0.8s							
UMR	**Umm Al-Rimmam**	**4.50**	**173**		*e*P	**Pn**	**23 41 09.7**	**+1.4**
	baz=174							
UMR					AML	AML	23 42 01.0	
	comp=Z,62nm,0.4s,baz=174							
NAY	**Al-Naaiem**	**4.78**	**179**		*e*P	**Pn**	**23 41 13.4**	**+1.3**
	baz=180							
NAY					AML	AML	23 42 10.0	
	comp=Z,33nm,0.5s,baz=180							
GRMI	**Germi**	**4.80**	**7**		*e*Pn	**Pn**	**23 41 13.7**	**+1.3**
KBD	**Kabd**	**4.87**	**174**		*e*P	**Pn**	**23 41 14.6**	**+1.2**
	baz=175							
KBD					AML	AML	23 42 08.8	
	comp=Z,24nm,0.3s,baz=175							
RDF	**Al-Radifah**	**5.11**	**176**		*e*P	**Pn**	**23 41 17.9**	**+1.2**
	baz=177							
RDF					AML	AML	23 42 16.0	
	comp=Z,70nm,0.4s,baz=177							
KFJS		**5.88**	**173**		P	**Pn**	**23 41 27.7**	**+0.5**
ASYS		**6.94**	**201**		S	**Sn**	**23 42 55.8**	**-5.0**
ASYS		**6.94**	**201**		P	**Pn**	**23 41 40.6**	**-1.3**
BOGSS		**8.37**	**166**		P	**Pn**	**23 42 00.3**	**-1.2**
SLWS		**9.70**	**161**		P	**Pn**	**23 42 19.1**	**-0.7**
BTHS		**10.47**	**161**		S	**Sn**	**23 44 17.2**	**-11**
BTHS		**10.47**	**161**		P	**Pn**	**23 42 28.7**	**-1.6**
EIL	**Elat**	**11.23**	**250**		LR	LR	23 46 37.8	
	comp=Z,40nm,21.4s,baz=210,slow=36							
HRDDS		**11.26**	**169**		P	**Pn**	**23 42 39.7**	**-1.4**
LYLS		**11.96**	**179**		P	**Pn**	**23 42 48.3**	**-2.4**
AKTK	**Aktyubinsk**	**18.23**	**23**		P	**Pn**	**23 44 12.3**	**-0.6**
AKTK	**Aktyubinsk**	**18.23**	**23**		P	**Pn**	**23 44 12.4**	**-0.6**
AKTO	**Aktyubinsk**	**18.23**	**23**		P	**Pn**	**23 44 12.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=270,slow=14,SNR=2.1							
IDI	**Anoyia**	**18.34**	**280**		P	**Pn**	**23 44 13.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=111,slow=10,SNR=5.7							
AKASG	**Malin Array Be**	**21.17**	**327**		P	**P**	**23 44 44.4**	**-1.0**
	comp=Z,0.2nm,0.3s,mb2.9,baz=136,slow=13,SNR=2.6							
AKASG	**Malin Array Be**	**21.17**	**327**		P	**P**	**23 44 44.3**	**-1.0**
BUR08	**Bucovina Ar. S**	**21.35**	**316**		*e*P	**P**	**23 44 47.5**	**+0.3**
BUR08	**Bucovina Ar. S**	**21.35**	**316**		*e*P	**P**	**23 44 47.5**	**+0.2**
BVAR	**Borovoye Array**	**25.19**	**34**		P	**P**	**23 45 24.9**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.4,baz=224,slow=8.2,SNR=5.6							
KURK	**Kurchatov**	**28.33**	**44**		P	**P**	**23 45 54.4**	**+0.5**
	comp=Z,0.8nm,0.8s,mb3.4,baz=249,slow=9.2,SNR=7.3							
KURK	**Kurchatov**	**28.33**	**44**		P	**P**	**23 45 54.3**	**+0.5**
MKAR	**Makanchi Array**	**29.39**	**54**		P	**P**	**23 46 04.1**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.0,baz=250,slow=12,SNR=16							
GKN	**Gorkha**	**32.58**	**90**		*e*P	**P**	**23 46 31.0**	**-0.6**
ZALV	**Zalesovo Beam**	**33.09**	**41**		P	**P**	**23 46 35.6**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=245,slow=9.1,SNR=5.0							
RAMN	**Ramite**	**34.58**	**91**		*e*P	**P**	**23 46 48.6**	**-0.5**
	comp=Z,14nm,0.6s,mb5.0							
TAPN	**Taplejung**	**35.35**	**90**		*e*P	**P**	**23 46 55.9**	**+0.1**
	comp=Z,15nm,0.7s,mb5.0							
SONM	**Songino Array**	**45.76**	**54**		P	**P**	**23 48 22.4**	**+0.9**
	comp=Z,0.5nm,1.0s,mb3.4,baz=263,slow=7.1,SNR=3.7							
TORD	**Torodi Ar. Bea**	**46.09**	**254**		P	**P**	**23 48 24.3**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=53,slow=6.8,SNR=3.4							
CMAR	**Chiang Mai Arr**	**48.50**	**95**		P	**P**	**23 48 42.1**	**-1.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=294,slow=8.5,SNR=7.9							
DBIC	**Dimbokro**	**55.09**	**253**		P	**P**	**23 49 31.4**	**-1.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=344,slow=9.4,SNR=5.0							
YKA	**Yellowknife Ar**	**82.68**	**352**		P	**P**	**23 52 22.5**	**-1.0**
	comp=Z,0.4nm,0.4s,mb3.8,baz=12,slow=4.9,SNR=3.2							

IDC ***30*** *23:43:15.7±2.3, 1052N×146.35E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/21, mbtmp4.1/10, ML4.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/21, Error ellipse: s-maj=76.9km s-min=24.9km az=88.0*

MOS ***30*** *23:43:15.6±0.8, 1052N×146.19E, h10km, mb5.4/2, Error ellipse: s-maj=34.5km s-min=15.1km az=118.3*

ISCJB ***30*** *23:43:17.0±5.7, 1054N±009×146.1E±02, h16km±39km, mb4.5/16, Error ellipse: s-maj=33.6km s-min=14.7km az=172.5*

NEIC ***30*** *23:43:17.6±0.8, 1051N×146.16E, h10km, mb5.1/7, Error ellipse: s-maj=19.6km s-min=11.5km az=91.0*

ISC 30 23:43:19.2±6.4, 1059N±008×1462E±02, h18km±40km, n26, σ0§62/24, mb4.5/16, Eastern Caroline Islands region

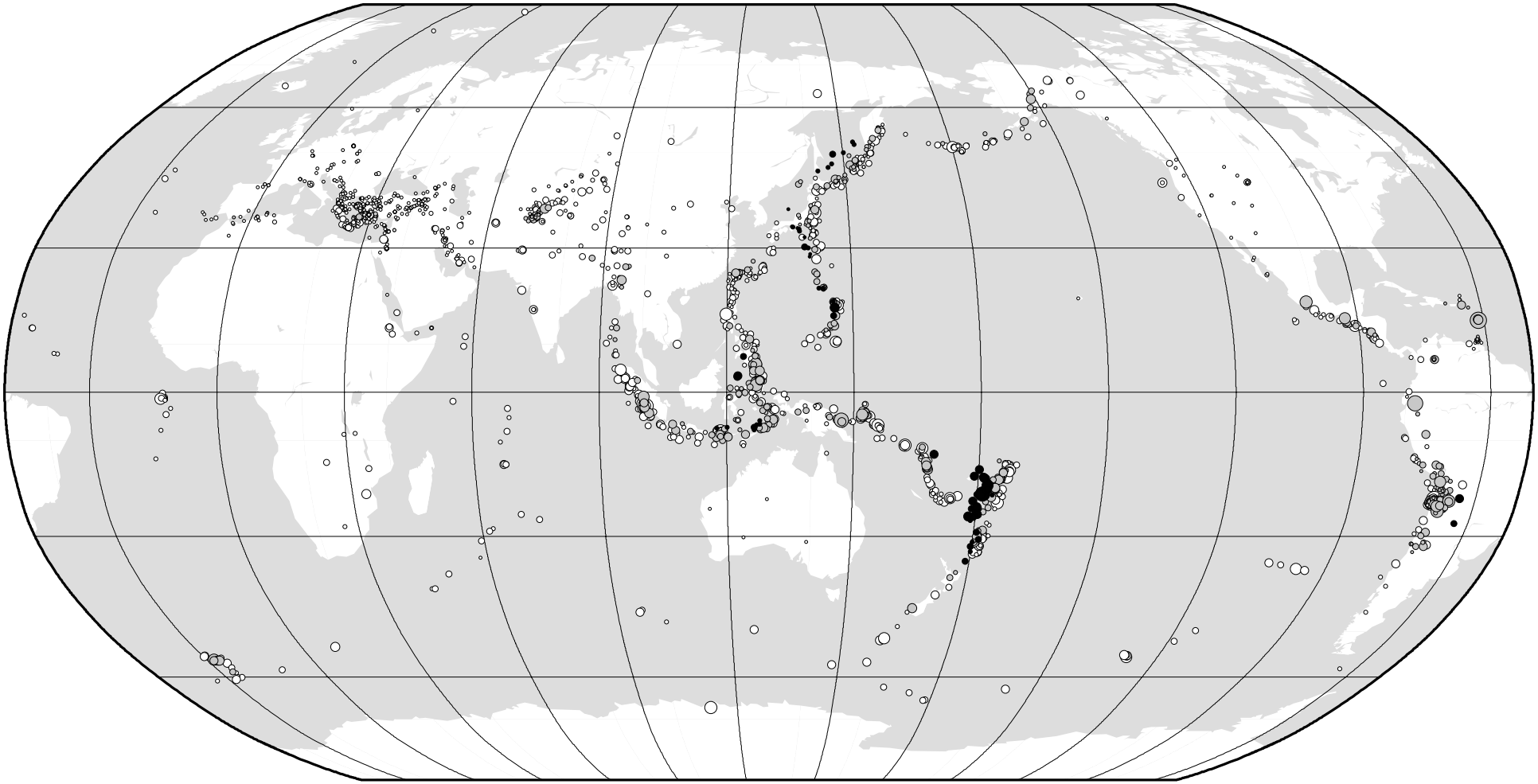
Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.24**	**337**	Pn		**Pn**	**23 44 08.8**	**-0.4**
	49nm,0.3s,baz=171,slow=11,SNR=13							
GUMO				Sn		**Sn**	**23 44 46.5**	**-0.9**
	107nm,0.3s,baz=360,slow=22,SNR=11							
GUMO				LR		LR	23 45 18.1	
	comp=Z,186nm,21.1s,baz=98,slow=36							
GUMO	**Guam**	**3.24**	**337**	P		**Pn**	**23 44 08.8**	**-0.4**
GUMO							23 44 46.5	
HNR	**Honiara**	**24.16**	**145**	LR		LR	23 56 36.3	
	comp=Z,44nm,21.7s,baz=16,slow=33							
MJAR	**Matsushiro Arr**	**26.82**	**346**	P		**P**	**23 48 58.1**	**-0.5**
	3.2nm,0.8s,mb3.9,baz=174,slow=10,SNR=5.4							
KSRS	**Korea Array**	**31.38**	**331**	P		**P**	**23 49 39.9**	**+0.7**
	3.0nm,0.8s,mb4.2,baz=144,slow=9.2,SNR=7.7							
ASAR	**Alice Springs**	**36.09**	**199**	P		**P**	**23 50 18.8**	**-1.4**
	0.7nm,0.9s,mb3.6,baz=16,slow=9.3,SNR=4.1							
CMAR	**Chiang Mai Arr**	**46.26**	**285**	P		**P**	**23 51 44.8**	**+0.7**
	1.5nm,0.3s,mb4.3,baz=86,slow=6.5,SNR=7.7							
SONM	**Songino Array**	**49.90**	**326**	P		**P**	**23 52 13.1**	**+1.4**
	1.6nm,0.7s,mb4.2,baz=141,slow=7.2,SNR=10							
ODAN	**Odare**	**57.48**	**295**	*e*P		**P**	**23 53 07.3**	**-0.4**
RAMN	**Ramite**	**58.20**	**295**	*e*P		**P**	**23 53 12.5**	**-0.2**
JIRN	**Jiri**	**58.61**	**296**	*e*P		**P**	**23 53 15.8**	**+0.2**
GUN	**Gumba**	**58.91**	**296**	*e*P		**P**	**23 53 17.7**	**0.0**
	18nm,0.9s,mb5.1							
KKN	**Kakani**	**59.43**	**296**	*e*P		**P**	**23 53 21.3**	**0.0**
	9.6nm,0.8s,mb4.9							
KKN	**Kakani**	**59.43**	**296**	*e*P		**P**	**23 53 21.3**	**0.0**
KKN				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.9							
DMN	**Daman**	**59.57**	**296**	*e*P		**P**	**23 53 22.1**	**-0.1**
	comp=Z,18nm,1.0s,mb5.1							
GKN	**Gorkha**	**60.01**	**296**	*e*P		**P**	**23 53 24.8**	**-0.5**
	comp=Z,7.6nm,0.8s,mb4.8							
DANN	**Dangsing**	**60.80**	**297**	*e*P		**P**	**23 53 30.7**	**0.0**
	comp=Z,13nm,0.6s,mb5.2							
KOLN	**Koldanda**	**60.91**	**296**	*e*P		**P**	**23 53 31.2**	**-0.2**
	comp=Z,11nm,0.9s,mb5.0							
MKAR	**Makanchi Array**	**64.52**	**317**	P		**P**	**23 53 56.0**	**+0.8**
	comp=Z,0.8nm,0.6s,mb4.0,baz=89,slow=8.3,SNR=13							
ZALV	**Zalesovo Beam**	**64.78**	**325**	P		**P**	**23 53 56.7**	**-0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=99,slow=8.3,SNR=6.0							
KURK	**Kurchatov**	**67.68**	**321**	P		**P**	**23 54 16.1**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.3,baz=105,slow=6.1,SNR=7.1							
BVAR	**Borovoye Array**	**73.05**	**322**	P		**P**	**23 54 48.8**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.3,baz=106,slow=8.0,SNR=13							
FCC	**Fort Churchill**	**95.66**	**27**	*e*P		**P**	**23 56 43.3**	**-0.4**
	comp=Z,20nm,1.5s,mb5.3							
FCC	**Fort Churchill**	**95.66**	**27**	*e*P		**P**	**23 56 43.3**	**-0.4**
FCC				pmax		pmax		
	comp=Z,20nm,1.5s,mb5.3							
DBIC	**Dimbokro**	**146.43**	**299**	PKPbc		PKPbc	00 03 00.6	+0.2
	comp=Z,3.3nm,0.9s,baz=339,slow=2.6,SNR=4.7							
DBIC	**Dimbokro**	**146.43**	**299**	PKPbc		PKPbc	00 03 00.6	+0.2

NNC ***30*** *23:58:55.8±17.0, 37.17N×70.65E, h108km±373km, mb3.2, mpv3.8, Error ellipse: s-maj=137.7km s-min=93.2km az=11.0*

ISC 30 23:58:54.5±2.2, 371N±01×708E±02, h35km, n10, σ0§94/13, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.02**	**358**	⇓P		**Pn**	**00 00 23.0**	**+1.9**
	3.3nm,0.3s,baz=178,slow=13							
KK31				⇑S		**Sn**	**00 01 29.3**	**+0.6**
	2.9nm,0.3s,baz=187,slow=24							
EKS2	**Erkin-Say**	**6.03**	**21**	P		**Pn**	**00 00 22.1**	**+0.9**
	SNR=22							
KZA	**Kyzart**	**6.07**	**33**	P		**Pn**	**00 00 22.0**	**+0.3**
	SNR=5.5							
AAK	**Ala-Archa**	**6.24**	**26**	P		**Pn**	**00 00 24.7**	**+0.7**
	SNR=18							
CHMS	**Chumysh**	**6.65**	**26**	P		**Pn**	**00 00 29.7**	**+0.1**
	SNR=13							
ULHL	**Ulahol**	**6.66**	**37**	P		**Pn**	**00 00 29.4**	**-0.3**
	SNR=5.5							
USP	**Ospenovka**	**6.80**	**24**	P		**Pn**	**00 00 31.4**	**-0.3**
	SNR=5.6							
TKM2	**Tokmak 2**	**6.90**	**31**	⇑P		**Pn**	**00 00 32.6**	**-0.6**
	5.0nm,0.6s							
TKM2				⇑S		**Sn**	**00 01 49.2**	**-1.2**
	3.1nm,0.8s							
TKM2	**Tokmak 2**	**6.90**	**31**	P		**Pn**	**00 00 33.0**	**-0.2**
	SNR=9.0							
AB09	**Akbulak array**	**14.51**	**330**	⇑P		**Pn**	**00 02 15.4**	**-1.8**
	0.5nm,0.4s							
AB09				⇑S		**Sn**	**00 04 51.7**	**-5.0**
	0.5nm,0.5s							

ISC Computed Locations for November 2007



Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

2148 Events